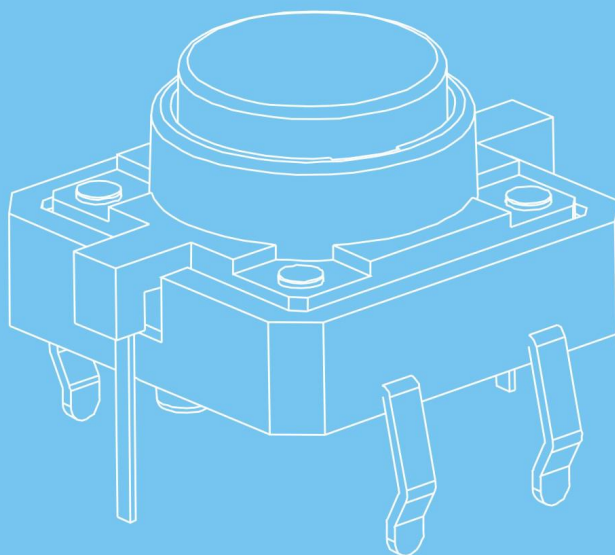


# ILLUMINATED TACT SWITCH

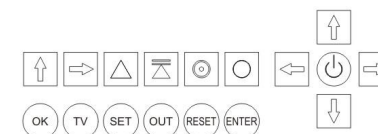
## 帶燈開關系列



**KKG**



### Symbol Type



### Applications

- Consumer Products
- Instrumentation
- Computer Products
- Communication Equipments

### Features

- LED Illuminated, Two color available Long life.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

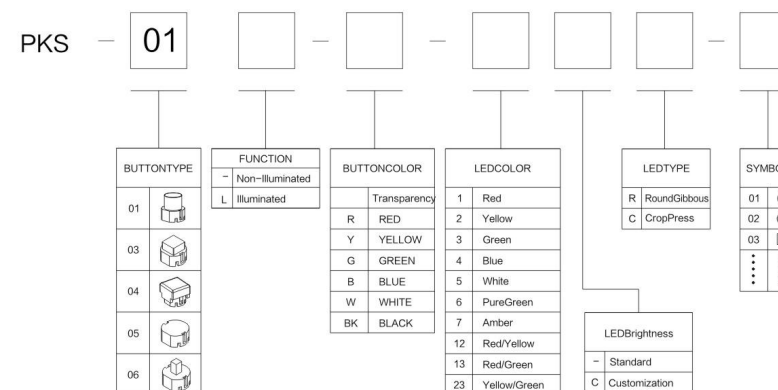
### Switch Specifications

| Color      | VR   | IF   | Recommended<br>Operating<br>Current | VF   |      |
|------------|------|------|-------------------------------------|------|------|
|            |      |      |                                     | Nom. | Max. |
| Red        | DC5V | 20mA | 20mA                                | 2.0V | 2.4V |
| Yellow     | DC5V | 20mA | 20mA                                | 2.3V | 2.5V |
| Green      | DC5V | 20mA | 20mA                                | 2.4V | 2.7V |
| Blue       | DC5V | 20mA | 20mA                                | 3.3V | 3.6V |
| White      | DC5V | 20mA | 20mA                                | 3.0V | 3.6V |
| Full Green | DC5V | 20mA | 20mA                                | 3.0V | 3.6V |
| Amber      | DC5V | 20mA | 20mA                                | 2.3V | 2.5V |

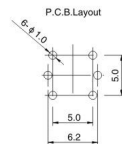
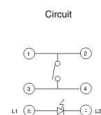
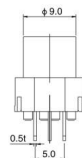
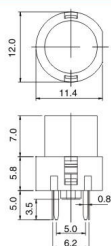
### LED Specifications

| SPECIFICATIONS              |                          |
|-----------------------------|--------------------------|
| Rating                      | 35V DC 10mA              |
| Insulation Resistance       | 100MΩ Min(DC 250V)       |
| Dielectric Strength         | 250V AC 50/60Hz for 1min |
| Contact Resistance          | 50mΩ Max                 |
| Electrically Life           | 100,000/50,000cycles     |
| Operating Temperature Range | -20°C~+70°C              |
| Operating Force             | 130 ± 60g/200 ± 80g      |
| Travel                      | 1.0mm                    |

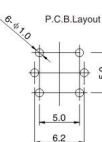
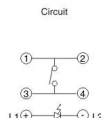
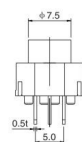
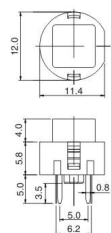
### How To Order



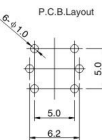
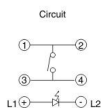
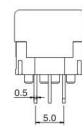
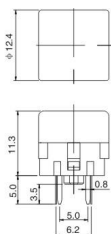
**PKS-01L**  
(With LED)PKS-01L



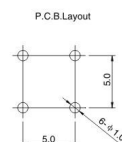
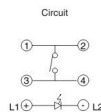
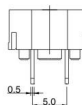
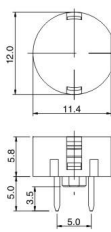
**PKS-03L**  
(With LED)PKS-03



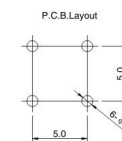
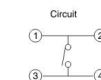
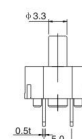
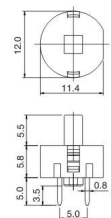
**PKS-04L**  
(With LED)PKS-04



**PKS-05**



**PKS-06**



**Applications**

- Consumer Products
- Instrumentation
- Computer Products
- Communication Equipments

**Features**

- LED Illuminated, Two color available Long life.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

**Switch Specifications**

| SPECIFICATIONS              |                          |
|-----------------------------|--------------------------|
| Rating                      | 12V DC 50mA              |
| Insulation Resistance       | 100MΩ Min(250V DC)       |
| Dielectric Strength         | 250V AC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max                |
| Electrically Life           | 100,000 cycles           |
| Operating Temperature Range | -20°C~+70°C              |
| Operating Force             | 160±50g / 250±80g        |
| Travel                      | 0.25±0.1 mm              |

**LED Specifications**

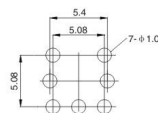
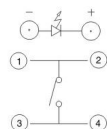
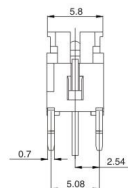
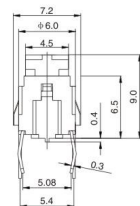
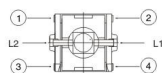
| Color      | VR   | IF   | Recommended Operating Current | VF   |      |
|------------|------|------|-------------------------------|------|------|
|            |      |      |                               | Nom. | Max. |
| Red        | DC5V | 20mA | 20mA                          | 2.0V | 2.4V |
| Yellow     | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |
| Green      | DC5V | 20mA | 20mA                          | 2.4V | 2.7V |
| Blue       | DC5V | 20mA | 20mA                          | 3.3V | 3.6V |
| White      | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Full Green | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Amber      | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |

**How To Order**

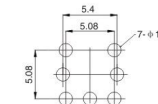
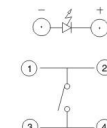
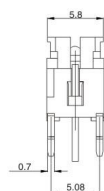
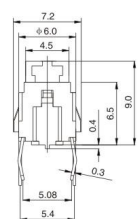
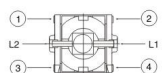
| TC01        | —          | —               | —             | —         | —              |
|-------------|------------|-----------------|---------------|-----------|----------------|
| BUTTON TYPE |            | FUNCTION        |               | LED COLOR |                |
| 1           | Square     | Non-Illuminated |               | 1         | Red            |
| 2           | Round      | -               | Standardtype  | 2         | Yellow         |
| 3           | Bugle form | M               | SMTtype       | 3         | Green          |
|             |            | Illuminated     |               | 4         | Blue           |
|             |            | L               | Standardtype  | 5         | White          |
|             |            | ML              | SMTtype       | 6         | Pure Green     |
|             |            |                 |               | 7         | Amber          |
|             |            |                 |               | 12        | Red / Yellow   |
|             |            |                 |               | 13        | Red / Green    |
|             |            |                 |               | 23        | Yellow / Green |
|             |            | LED Brightness  |               | LED TYPE  |                |
|             |            | -               | Standard      | R         | Round Gibbous  |
|             |            | C               | Customization | C         | Crop Press     |



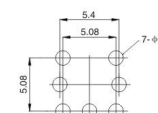
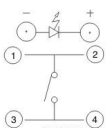
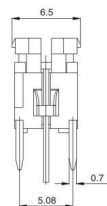
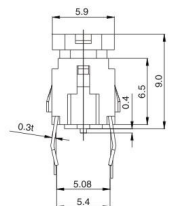
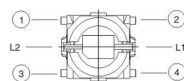
**TC01-1L**  
(With LED) TC01-1



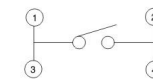
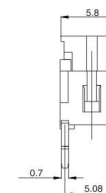
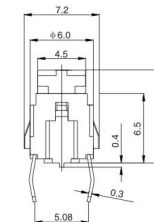
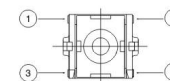
**TC01-2L**  
(With LED) TC01-2



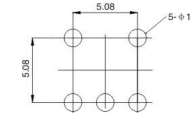
**TC01-3L**  
(With LED) TC01-3



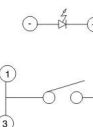
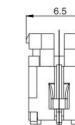
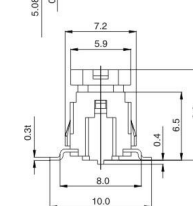
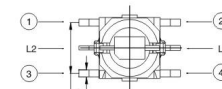
**TC01-4**



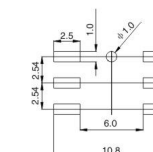
CIRCUIT



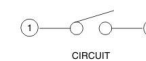
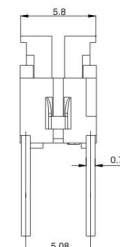
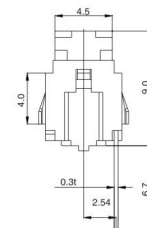
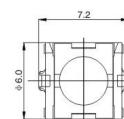
**TC01-3ML**  
(With LED) TC01-3M



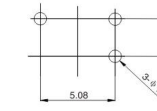
CIRCUIT



**TC01-1G**



CIRCUIT





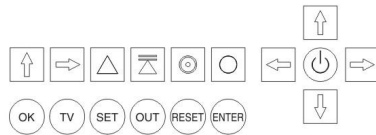
### Applications

- Consumer Products
- Instrumentation
- Computer Products
- Communication Equipments

### Switch Specifications

| SPECIFICATIONS              |                          |
|-----------------------------|--------------------------|
| Rating                      | 12V DC 50mA              |
| Insulation Resistance       | 100MΩ Min(250V DC)       |
| Dielectric Strength         | 250V AC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max                |
| Electrically Life           | 100,000 cycles           |
| Operating Temperature Range | -20℃~+70℃                |
| Operating Force             | 160±50g/250±50g          |
| Travel                      | 0.25±0.1mm               |

### Symbol Type



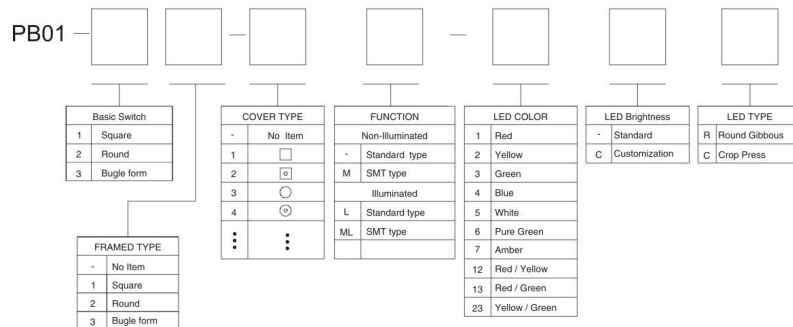
### Features

- LED Illuminated, Two color available Long life.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

### LED Specifications

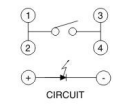
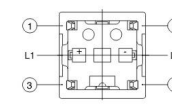
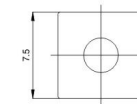
| Color      | VR   | IF   | Recommended Operating Current | VF   |      |
|------------|------|------|-------------------------------|------|------|
|            |      |      |                               | Nom. | Max. |
| Red        | DC5V | 20mA | 20mA                          | 2.0V | 2.4V |
| Yellow     | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |
| Green      | DC5V | 20mA | 20mA                          | 2.4V | 2.7V |
| Blue       | DC5V | 20mA | 20mA                          | 3.3V | 3.6V |
| White      | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Full Green | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Amber      | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |

### How To Order

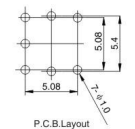
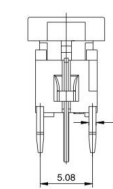
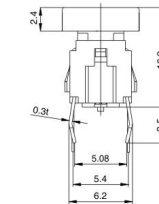


| COVER TYPE     |  |  |  |  |  |  |  |
|----------------|--|--|--|--|--|--|--|
|                |  |  |  |  |  |  |  |
| FRAMED TYPE    |  |  |  |  |  |  |  |
| BASIC SWITCHES |  |  |  |  |  |  |  |

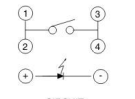
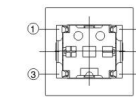
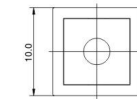
### TB01-102L (With LED) PB01-102



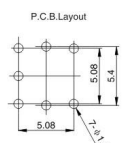
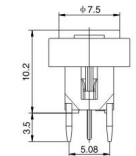
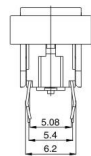
### TB01-101L (With LED) PB01-101



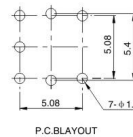
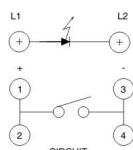
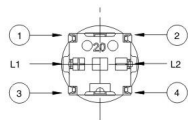
### TB01-112L (With LED) PB01-112



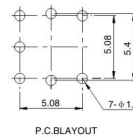
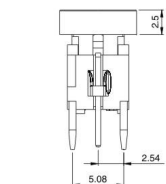
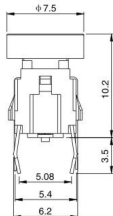
### TB01-111L (With LED) PB01-111



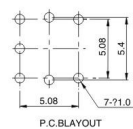
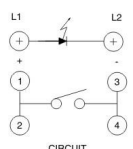
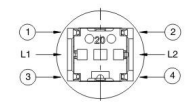
**TB01-204L**  
(With LED) PB01-204



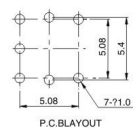
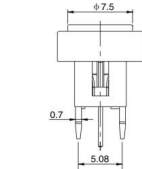
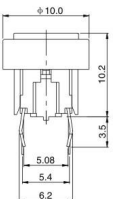
**PB01-203L**  
(With LED) PB01-203



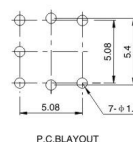
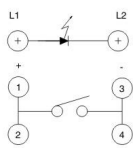
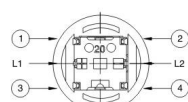
**TB01-224L**  
(With LED) PB01-224



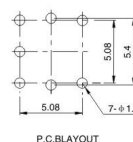
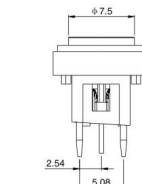
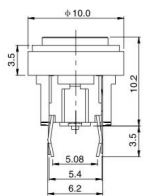
**PB01-223L**  
(With LED) PB01-223



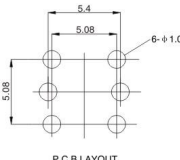
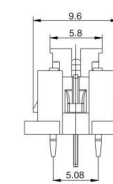
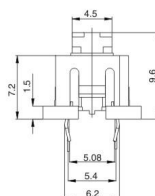
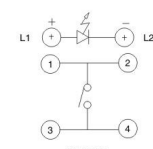
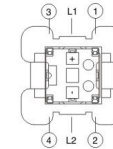
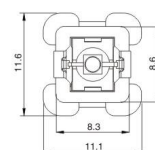
**PB01-254L**  
(With LED) PB01-254



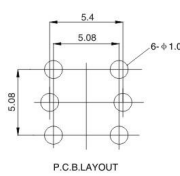
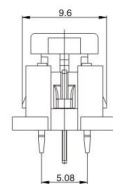
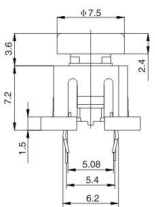
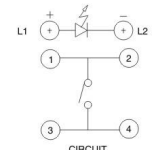
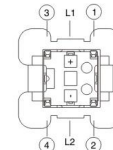
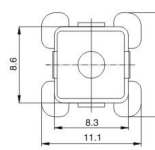
**PB01-253L**  
(With LED) PB01-253



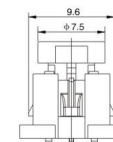
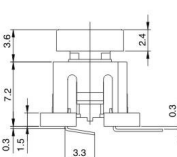
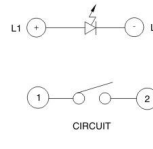
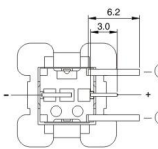
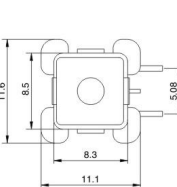
**PB01-142L**  
(With LED) PB01-142



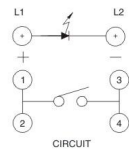
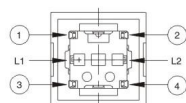
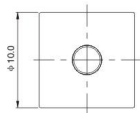
**PB01-141L**  
(With LED) PB01-141



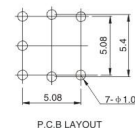
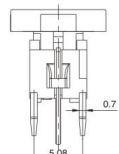
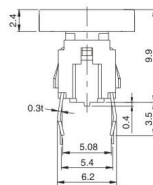
**PB01-142RL**  
(With LED) PB01-142R



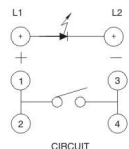
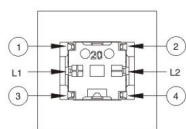
**PB01-1013L**  
(With LED) PB01-1013



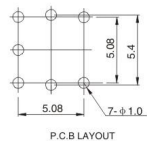
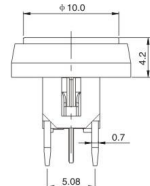
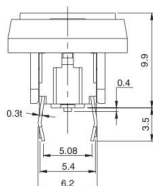
**PB01-108L**  
(With LED) PB01-108



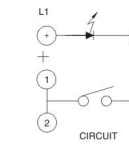
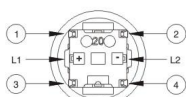
**PB01-1713L**  
(With LED) PB01-1713



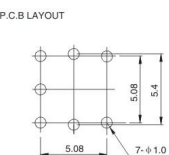
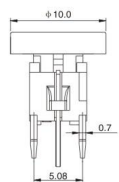
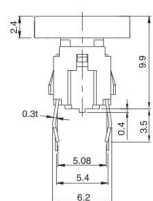
**PB01-178L**  
(With LED) PB01-178



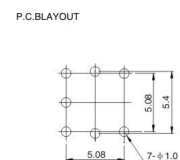
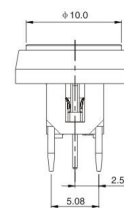
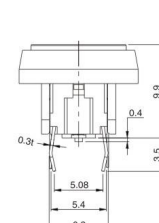
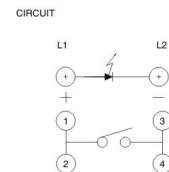
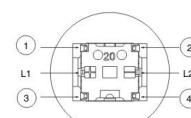
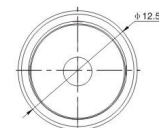
**PB01-1014L**  
(With LED) PB01-1014



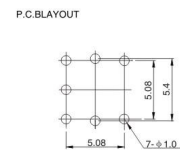
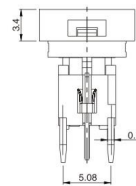
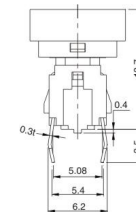
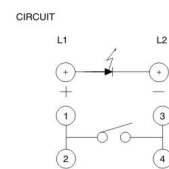
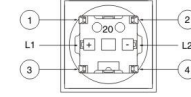
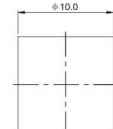
**PB01-1010L**  
(With LED) PB01-1010



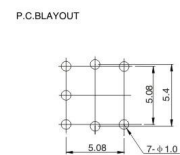
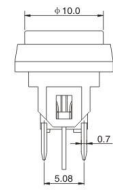
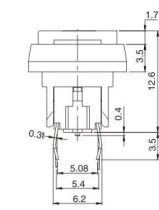
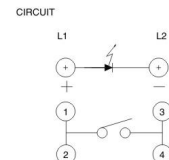
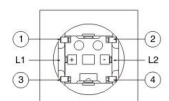
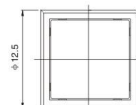
**PB01-1810L**  
(With LED) PB01-1810



**PB01-3011L**  
(With LED) PB01-3011

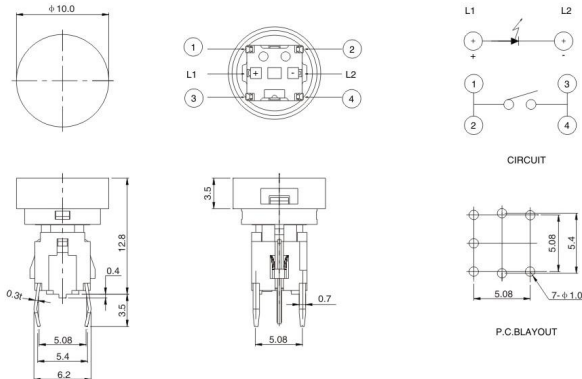


**PB01-3311L**  
(With LED) PB01-3311

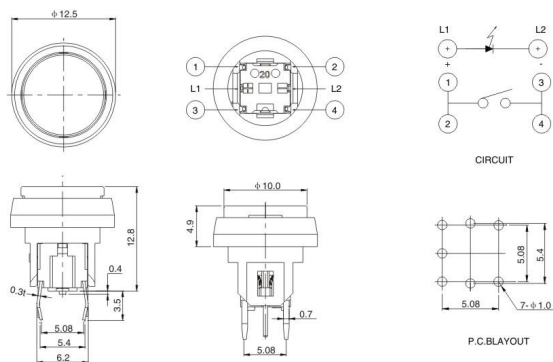




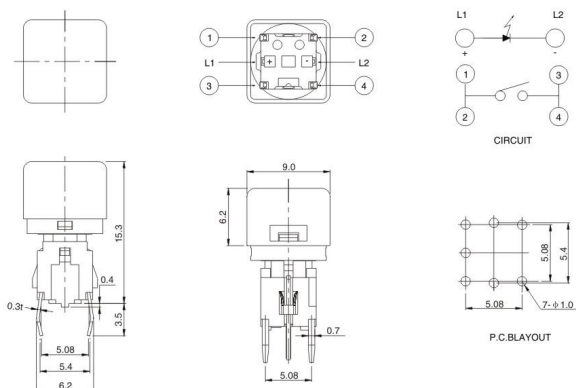
**PB01-3012L**  
(With LED) PB01-3012



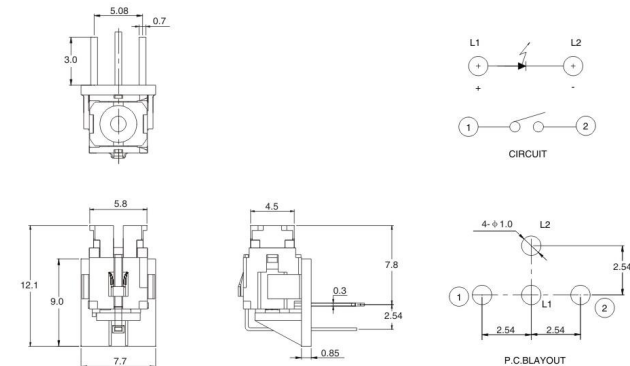
**PB01-3612L**  
(With LED) PB01-3612



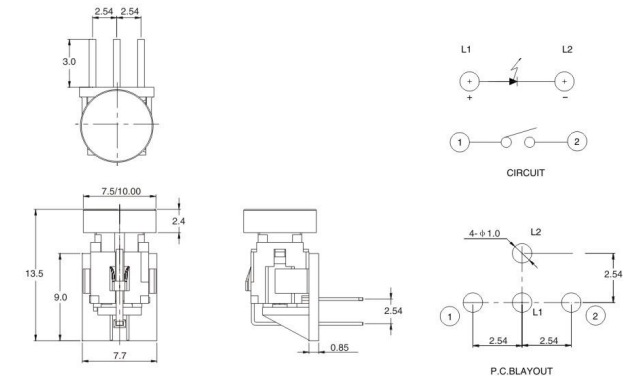
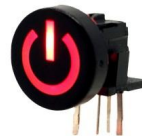
**PB01-305L**  
(With LED) PB01-305



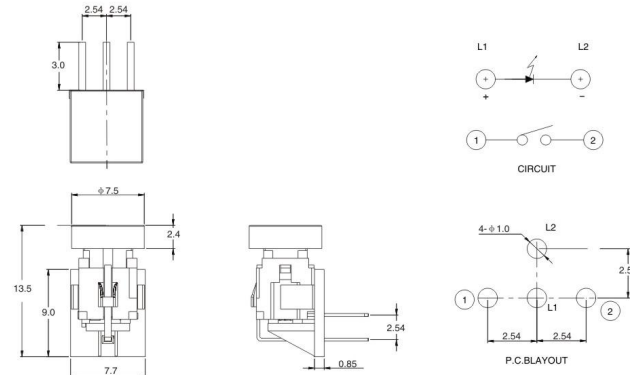
**PB01-2RL**  
(With LED) PB01-2R  
專利產品(側按結構)



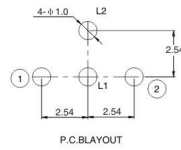
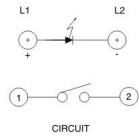
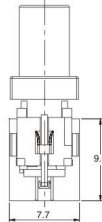
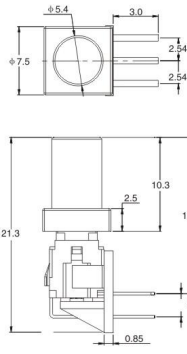
**PB01-203RL**  
(With LED) PB01-203R



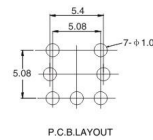
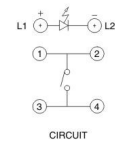
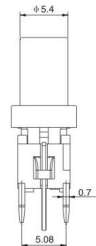
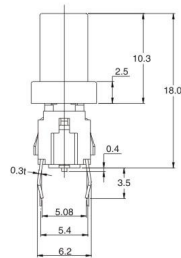
**PB01-101RL**  
(With LED) PB01-101R



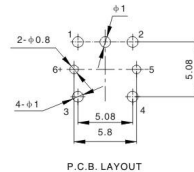
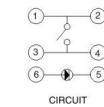
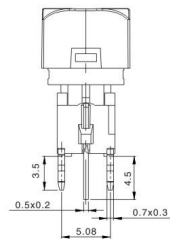
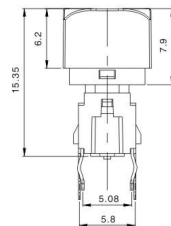
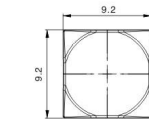
**PB01-107RL**  
(With LED) PB01-107R



**PB01-107L**  
(With LED) PB01-17



**PB01-352L**  
(With LED)



**Applications**

- Consumer Products
- Instrumentation
- Computer Products
- Communication Equipments

**Features**

- LED Illuminated, Two color available Long life.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

**Switch Specifications**

| SPECIFICATIONS              |                          |
|-----------------------------|--------------------------|
| Rating                      | 12V DC 50mA              |
| Insulation Resistance       | 100MΩ Min(250V DC)       |
| Dielectric Strength         | 250V AC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max                |
| Electrically Life           | 100,000/50,000 cycles    |
| Operating Temperature Range | -20°C ~ +70°C            |
| Operating Force             | 160±50g / 250±80g        |
| Travel                      | 0.25±0.1 mm              |

**LED Specifications**

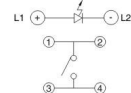
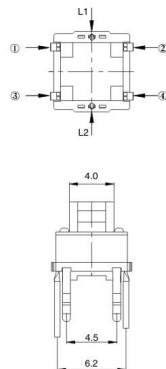
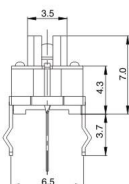
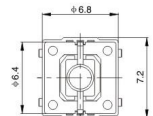
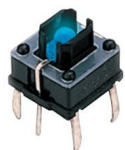
| Color      | VR   | IF   | Recommended Operating Current | VF   |      |
|------------|------|------|-------------------------------|------|------|
|            |      |      |                               | Nom. | Max. |
| Red        | DC5V | 20mA | 20mA                          | 2.0V | 2.4V |
| Yellow     | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |
| Green      | DC5V | 20mA | 20mA                          | 2.4V | 2.7V |
| Blue       | DC5V | 20mA | 20mA                          | 3.3V | 3.6V |
| White      | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Full Green | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Amber      | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |

**How To Order**

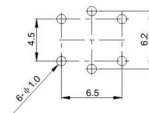
TC02 -

| BUTTON TYPE |  | FUNCTION        |  | LEDCOLOR |              | LEDBrightness |               | LEDTYPE |              |
|-------------|--|-----------------|--|----------|--------------|---------------|---------------|---------|--------------|
| 1           |  | Non-Illuminated |  | 1        | Red          | -             | Standard      | R       | RoundGibbous |
| 2           |  | DIPType         |  | 2        | Yellow       | C             | Customization | C       | CropPress    |
| 3           |  | RightAngle      |  | 3        | Green        |               |               |         |              |
| 4           |  | SMTType         |  | 4        | Blue         |               |               |         |              |
|             |  | ILLUMINATED     |  | 5        | White        |               |               |         |              |
|             |  | DIPType         |  | 6        | PureGreen    |               |               |         |              |
|             |  | SMTType         |  | 7        | Amber        |               |               |         |              |
|             |  | RightAngle      |  | 12       | Red/Yellow   |               |               |         |              |
|             |  |                 |  | 13       | Red/Green    |               |               |         |              |
|             |  |                 |  | 23       | Yellow/Green |               |               |         |              |

**TC02-1L**  
(With LED) TC02-1

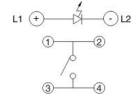
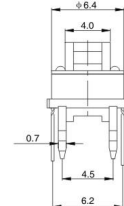
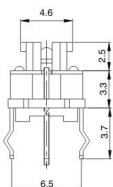
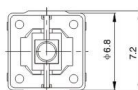


CIRCUIT

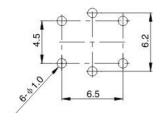


P.C. BLAYOUT

**TC02-2L**  
(With LED) TC02-2

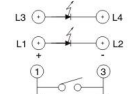
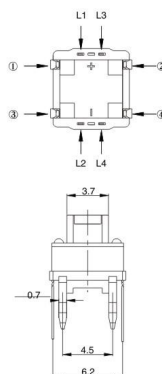
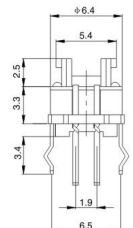
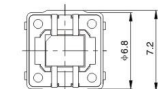


CIRCUIT

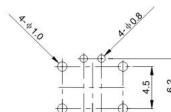


P.C. BLAYOUT

**TC02-4L**  
(With LED) TC02-4

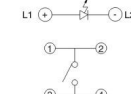
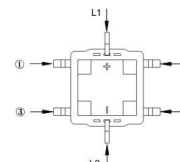
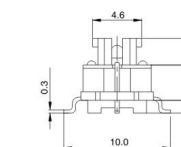
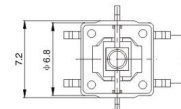


CIRCUIT

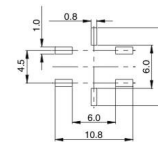


P.C. BLAYOUT

**TC02-2ML**  
(With LED) TC02-2M

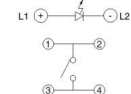
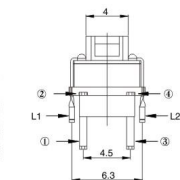
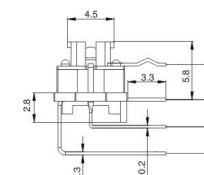
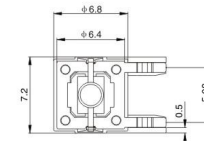


CIRCUIT

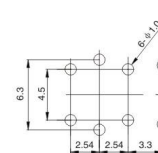


P.C. BLAYOUT

**TC02-2RL**  
(With LED) TC02-2R

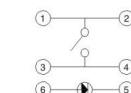
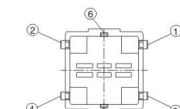
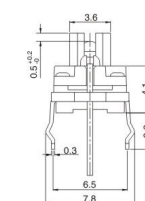
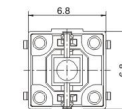


CIRCUIT

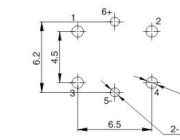


P.C. BLAYOUT

**TS5-00-00X-7.2**  
(With LED) IP67



CIRCUIT



P.C. BLAYOUT



## Applications

- Consumer Products
- Instrumentation
- Computer Products
- Communication Equipments

## Features

- LED Illuminated, Two color available Long life.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

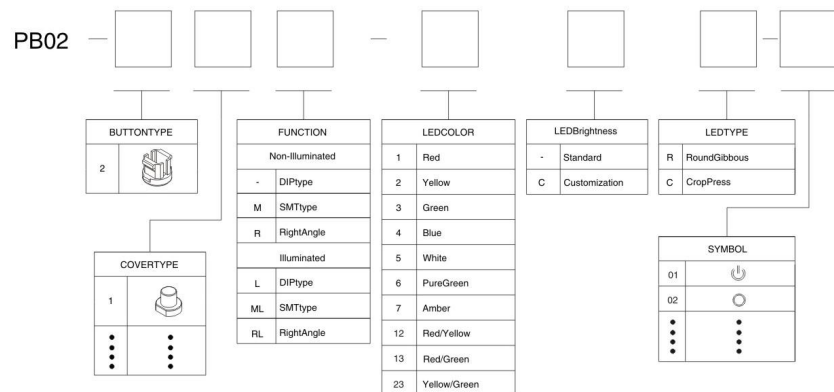
### Switch Specifications

| SPECIFICATIONS              |                          |
|-----------------------------|--------------------------|
| Rating                      | 12V DC 50mA              |
| Insulation Resistance       | 100MΩ Min(250V DC )      |
| Dielectric Strength         | 250V AC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max                |
| Electrically Life           | 100,000/50,000 cycles    |
| Operating Temperature Range | -20℃~+70℃                |
| Operating Force             | 160±50g/250±80g          |
| Travel                      | 0.25±0.1mm               |

## LED Specifications

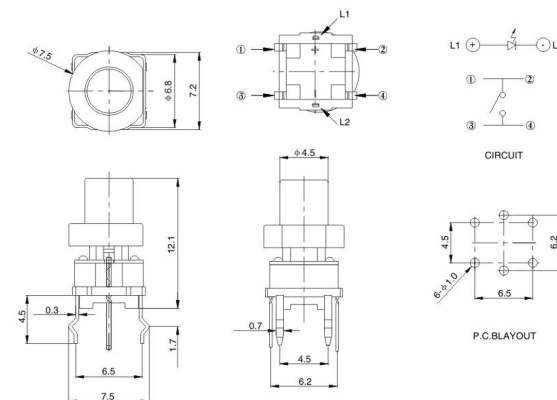
| Color      | VR   | IF   | Recommended<br>Operating<br>Current | VF   |      |
|------------|------|------|-------------------------------------|------|------|
|            |      |      |                                     | Nom. | Max. |
| Red        | DC5V | 20mA | 20mA                                | 2.0V | 2.4V |
| Yellow     | DC5V | 20mA | 20mA                                | 2.3V | 2.5V |
| Green      | DC5V | 20mA | 20mA                                | 2.4V | 2.7V |
| Blue       | DC5V | 20mA | 20mA                                | 3.3V | 3.6V |
| White      | DC5V | 20mA | 20mA                                | 3.0V | 3.6V |
| Full Green | DC5V | 20mA | 20mA                                | 3.0V | 3.6V |
| Amber      | DC5V | 20mA | 20mA                                | 2.3V | 2.5V |

## How To Order

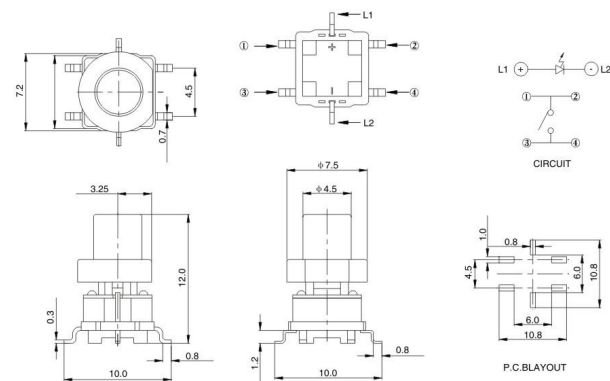


## 帶燈開關 · ILLUMINATED TACT SWITCH SERIES

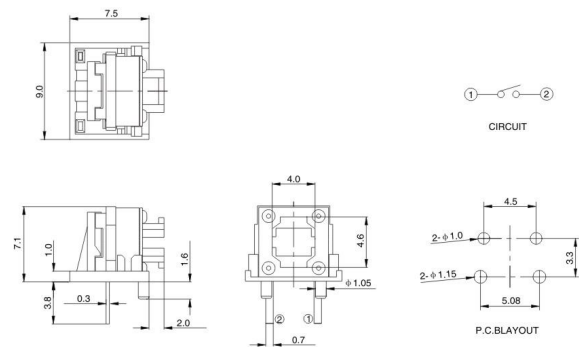
**PB02-211L**  
(With LED) PB02-211



**PB02-211ML**  
(With LED) PB02-211M

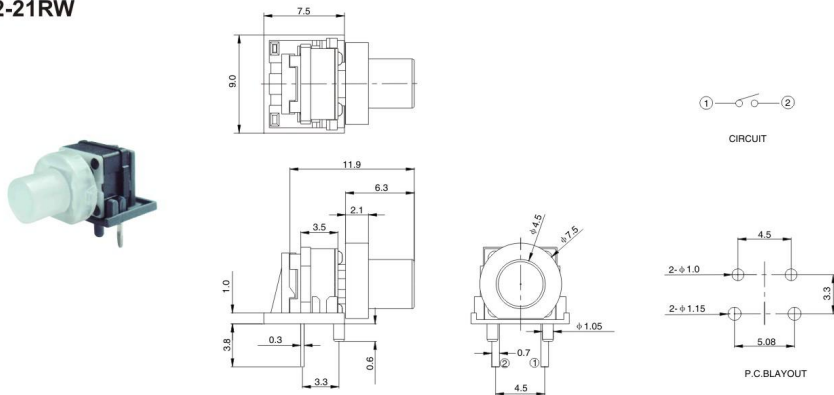


**PB02-2RW**  
(侧按结构)

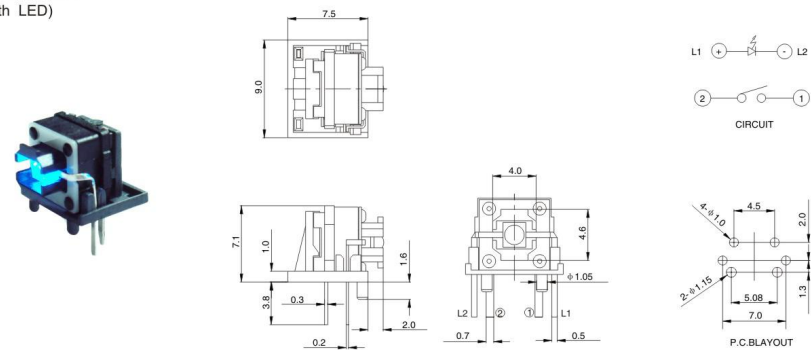




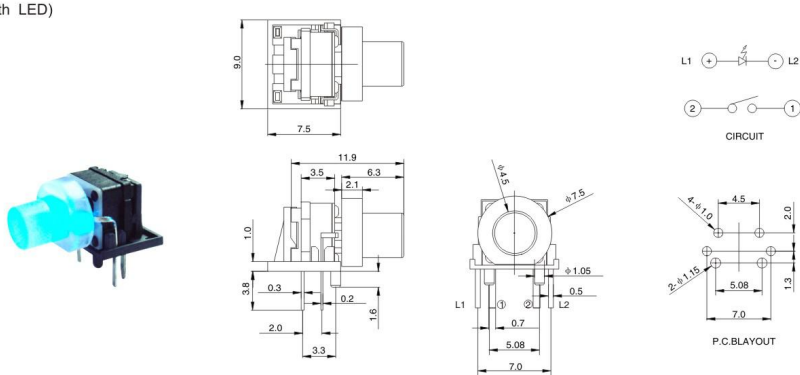
PB02-21RW



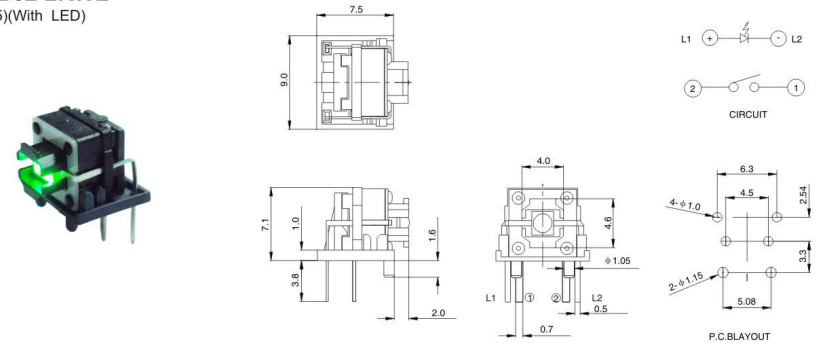
PB02-2RWL  
(25)(With LED)



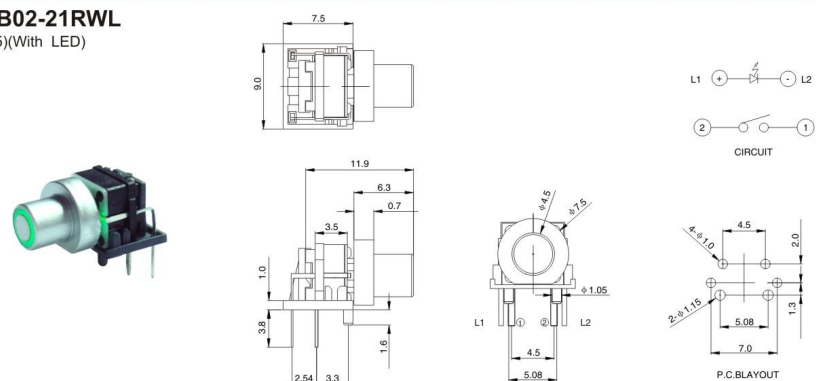
PB02-21RWL  
(25)(With LED)



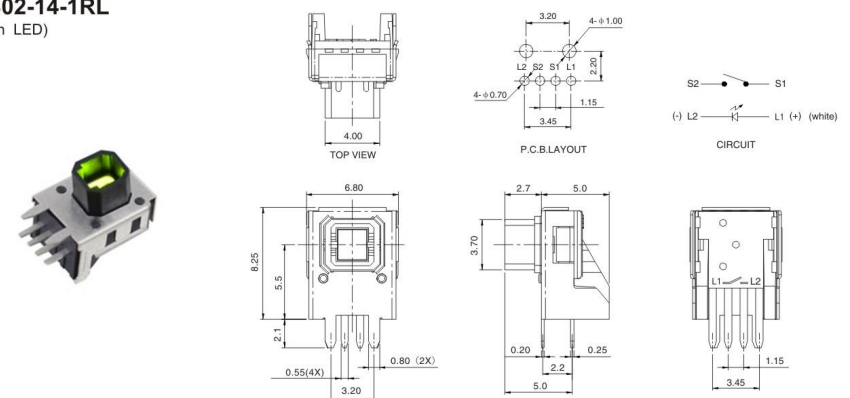
PB02-2RWL  
(45)(With LED)

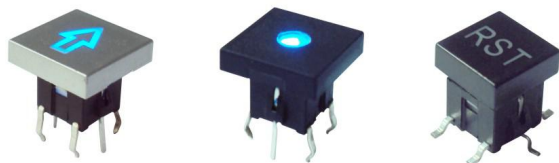


PB02-21RWL  
(45)(With LED)



PB02-14-1RL  
(With LED)





## Applications

- Consumer Products
- Instrumentation
- Computer Products
- Communication Equipments

## Features

- LED Illuminated, Two color available Long life.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

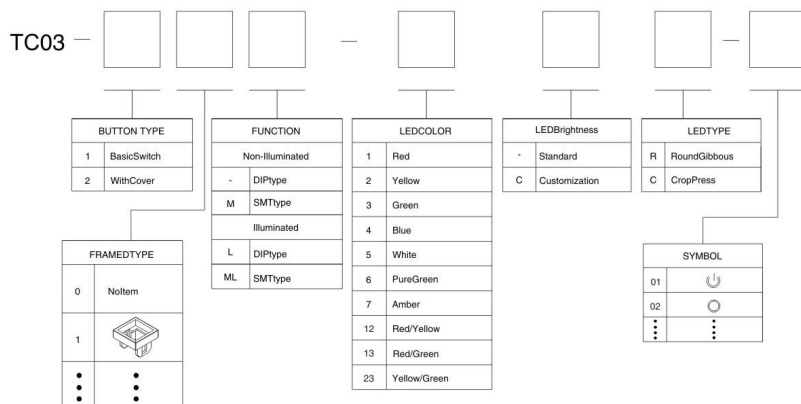
## Switch Specifications

| SPECIFICATIONS              |                          |
|-----------------------------|--------------------------|
| Rating                      | 12V DC 50mA              |
| Insulation Resistance       | 100MQ Min(250V DC)       |
| Dielectric Strength         | 250V AC 50/60Hz for 1min |
| Contact Resistance          | 100mQ Max                |
| Electrically Life           | 100,000 cycles           |
| Operating Temperature Range | -20°C~+70°C              |
| Operating Force             | 160±50g/250±80g          |
| Travel                      | 0.25±0.1mm               |

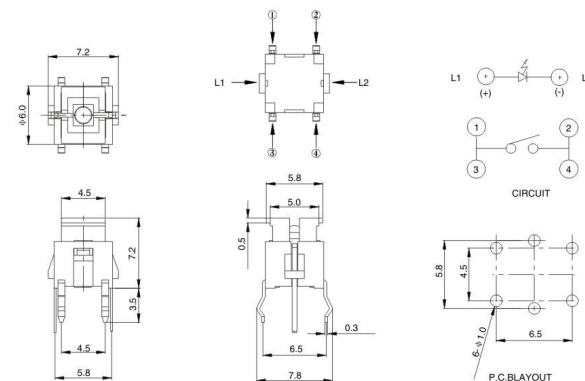
## LED Specifications

| Color      | VR   | IF   | Recommended Operating Current | VF   |      |
|------------|------|------|-------------------------------|------|------|
|            |      |      |                               | Nom. | Max. |
| Red        | DC5V | 20mA | 20mA                          | 2.0V | 2.4V |
| Yellow     | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |
| Green      | DC5V | 20mA | 20mA                          | 2.4V | 2.7V |
| Blue       | DC5V | 20mA | 20mA                          | 3.3V | 3.6V |
| White      | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Full Green | DC5V | 20mA | 20mA                          | 3.0V | 3.6V |
| Amber      | DC5V | 20mA | 20mA                          | 2.3V | 2.5V |

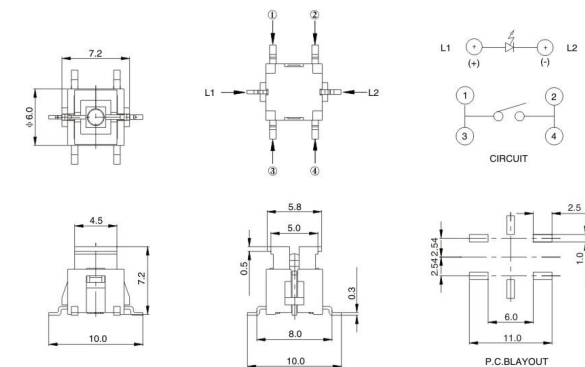
## How To Order



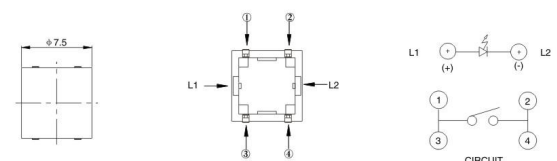
## TC03-1L (With LED) TC03-1



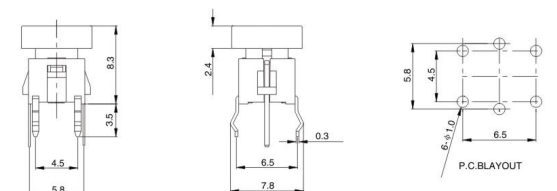
## TC03-1ML (With LED) TC03-1M



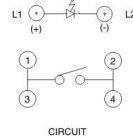
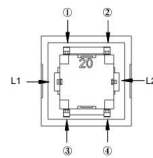
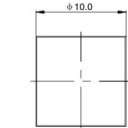
## PB03-101L (With LED) PB03-101



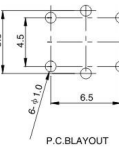
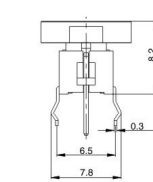
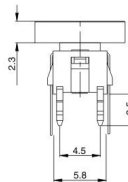
## PB03-102L (With LED) PB03-102



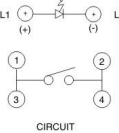
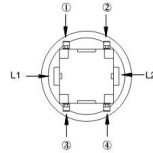
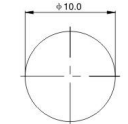
**PB03-108L**  
(With LED) PB03-108



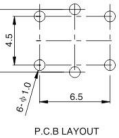
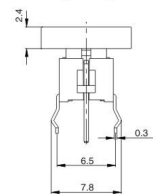
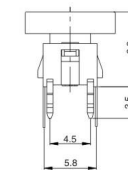
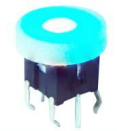
**PB03-1013L**  
(With LED) PB03-1013



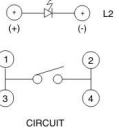
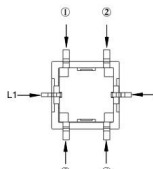
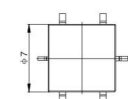
**PB03-1010L**  
(With LED) PB03-1010



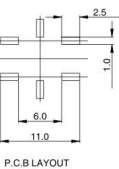
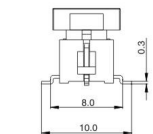
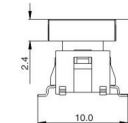
**PB03-1014L**  
(With LED) PB03-1014



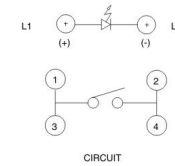
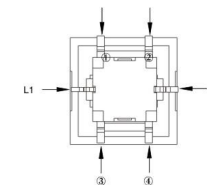
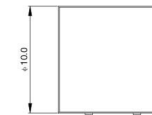
**PB03-101ML**  
(With LED) PB03-101M



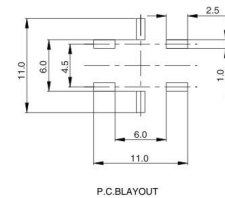
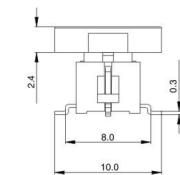
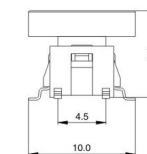
**PB03-102ML**  
(With LED) PB03-102M



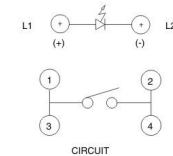
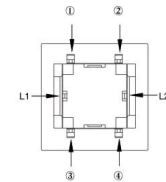
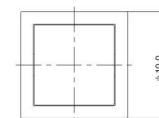
**PB03-108M**  
PB03-108ML



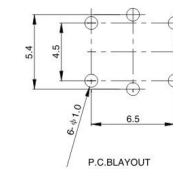
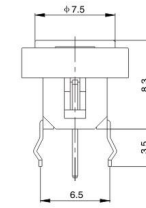
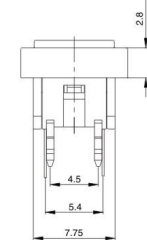
**PB03-1013M**  
PB03-1013ML



**PB03-111**  
PB03-111L



**PB03-112**  
PB03-112L





### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus,
- measuring instruments, TV sets, VCRs, etc.

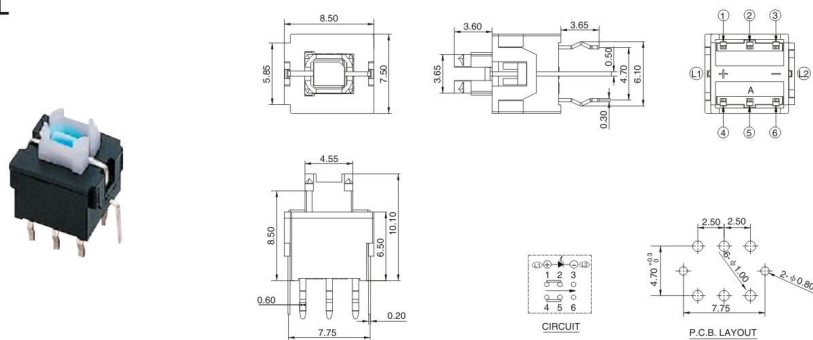
### Features

- LED Illuminated, Two color available Long life.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

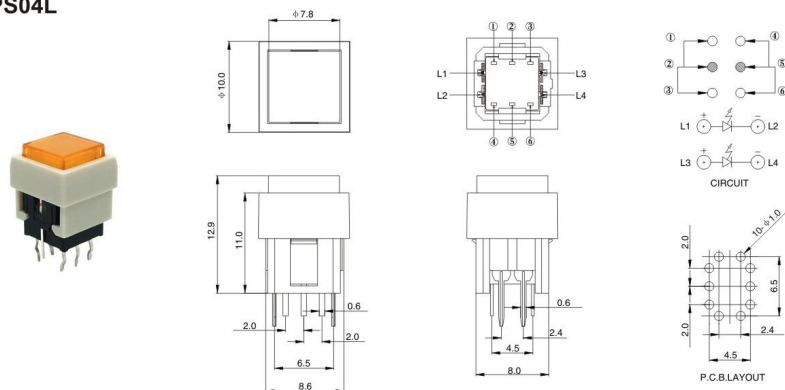
### Switch Specifications

| SPECIFICATIONS              |                                    |
|-----------------------------|------------------------------------|
| Rating                      | 30V DC 10mA                        |
| Insulation Resistance       | 100MΩ Min(250V DC)                 |
| Dielectric Strength         | 250VAC 50/60Hz for 1min            |
| Contact Resistance          | 100mΩ Max                          |
| Electrically Life           | 100,000 Cycles                     |
| Operating Temperature Range | -20°C~+70°C                        |
| Operating Force             | 250±100gf                          |
| Travel                      | full: 1.5±0.2mm<br>lock: 0.5±0.2mm |

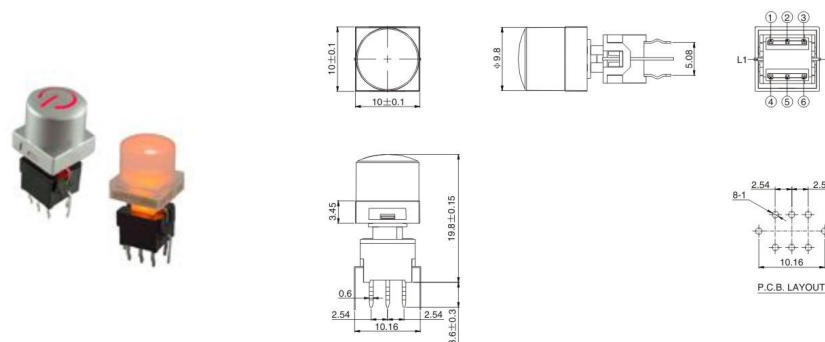
### PB08L



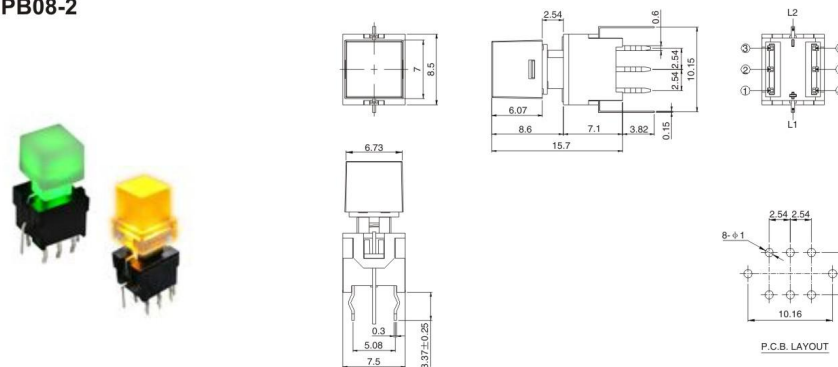
### PB01-PS04L



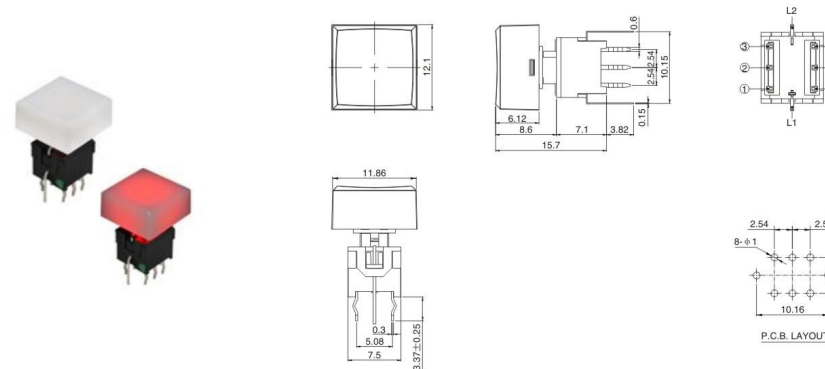
### PB08-1



### PB08-2



### PB08-3







## Features

- Snap-in type, can be mounted directly on P.C. Board.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

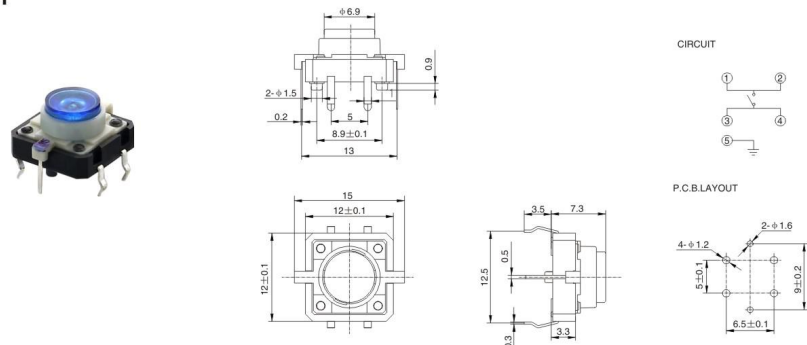
## Switch Specifications

| SPECIFICATIONS              |                         |
|-----------------------------|-------------------------|
| Rating                      | 12V DC 50mA             |
| Insulation Resistance       | 100MΩ Min(250V DC)      |
| Dielectric Strength         | 250VAC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max               |
| Electrically Life           | 100,000 Cycles          |
| Operating Temperature Range | -20℃~+70℃               |
| Operating Force             | 160g, 260g              |
| Travel                      | 0.35±0.1mm              |

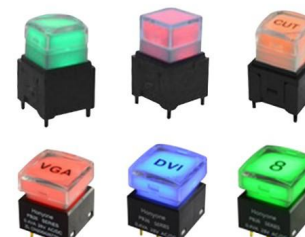
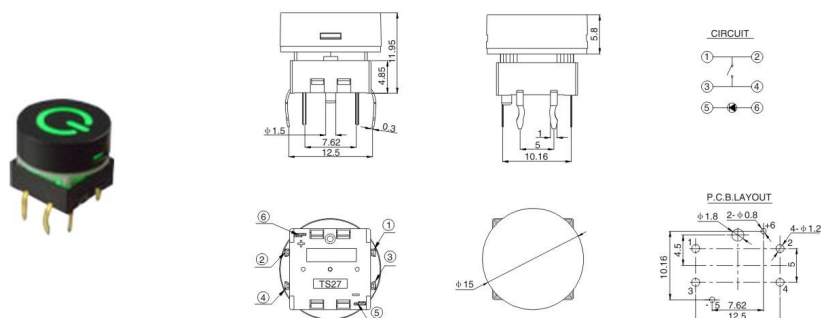
## Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc.

### PB12-1



### PB12-2



## Features

- Snap-in type, can be mounted directly on P.C. Board.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

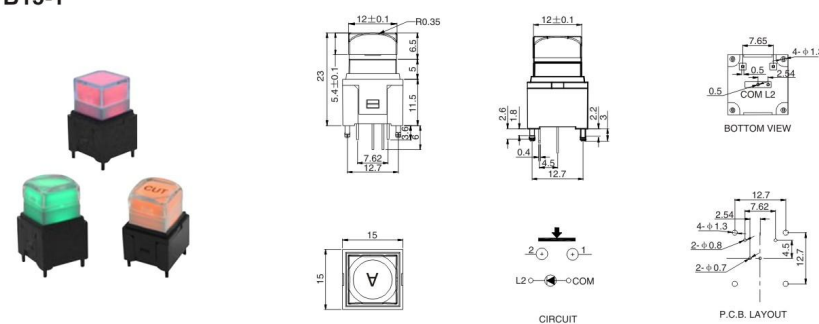
## Switch Specifications

| SPECIFICATIONS              |                         |
|-----------------------------|-------------------------|
| Rating                      | 12V DC 100mA            |
| Insulation Resistance       | 100MΩ Min(250V DC)      |
| Dielectric Strength         | 250VAC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max               |
| Electrically Life           | 100,000 Cycles          |
| Operating Temperature Range | -20℃~+70℃               |
| Operating Force             | 250±100gf               |
| Travel                      | 4.50±0.2mm              |

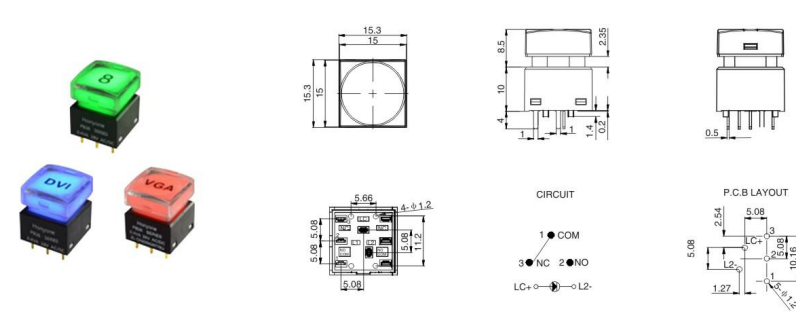
## Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc.

### PB15-1



### PB15-2





## Features

- Snap-in type, can be mounted directly on P.C. Board.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

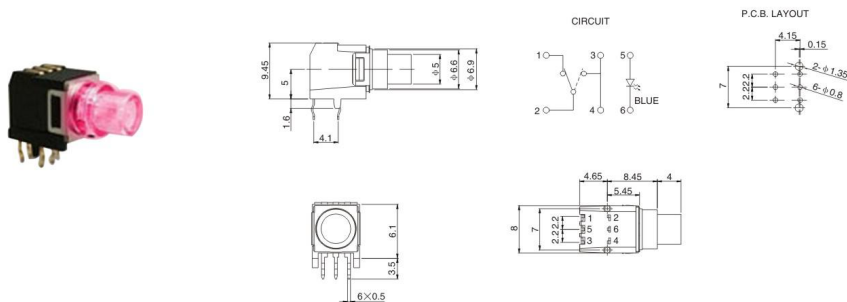
## Switch Specifications

| SPECIFICATIONS              |                         |
|-----------------------------|-------------------------|
| Rating                      | 12V DC 50mA             |
| Insulation Resistance       | 100MΩ Min(250V DC)      |
| Dielectric Strength         | 250VAC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max               |
| Electrically Life           | 100,000 Cycles          |
| Operating Temperature Range | -20°C~+70°C             |
| Operating Force             | 450±100gf               |
| Travel                      | 1.2±0.25mm              |

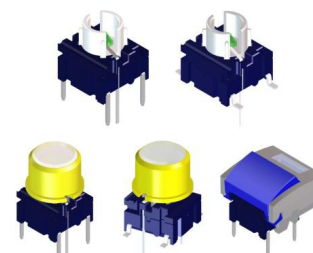
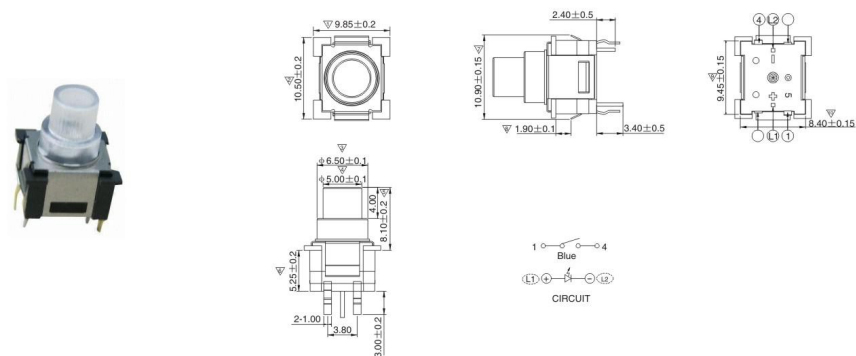
## Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc.

### PB21



### PB21A



## Features

- Snap-in type, can be mounted directly on P.C. Board.
- Parts of output terminals can be used as jumper lead, facilitating circuit design.

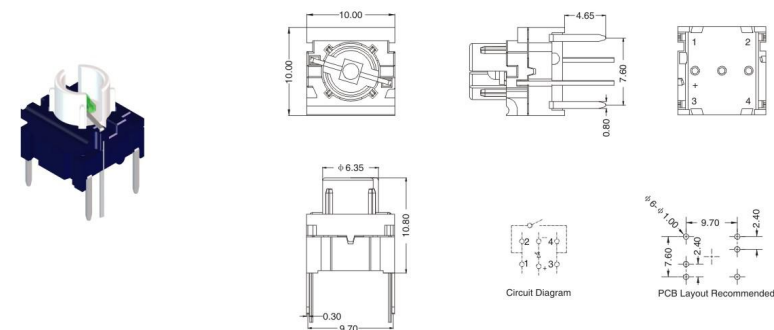
## Switch Specifications

| SPECIFICATIONS              |                         |
|-----------------------------|-------------------------|
| Rating                      | 30V 0.1A                |
| Insulation Resistance       | 100MΩ Min(250V DC)      |
| Dielectric Strength         | 250VAC 50/60Hz for 1min |
| Contact Resistance          | 100mΩ Max               |
| Electrically Life           | 100,000 Cycles          |
| Operating Temperature Range | -20°C~+70°C             |
| Operating Force             | 300±100gf               |
| Travel                      | 0.6±0.3mm               |

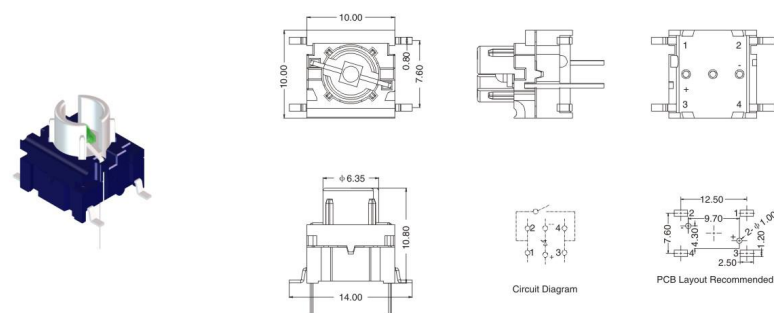
## Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc.

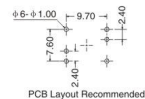
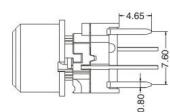
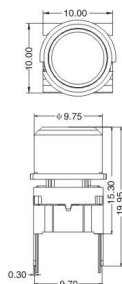
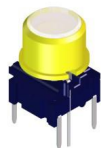
### PB10



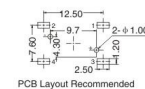
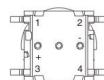
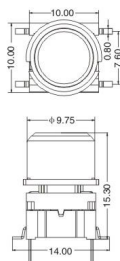
### PB10S



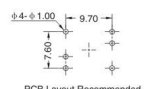
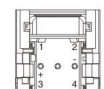
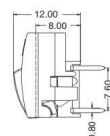
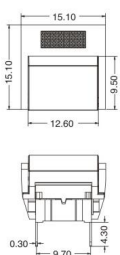
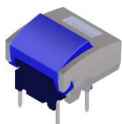
**PB10-1**



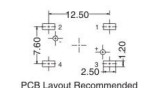
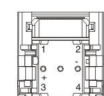
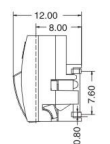
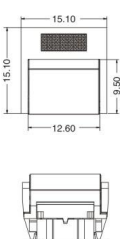
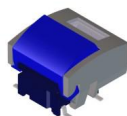
**PB10S-1**



**PB10-L**

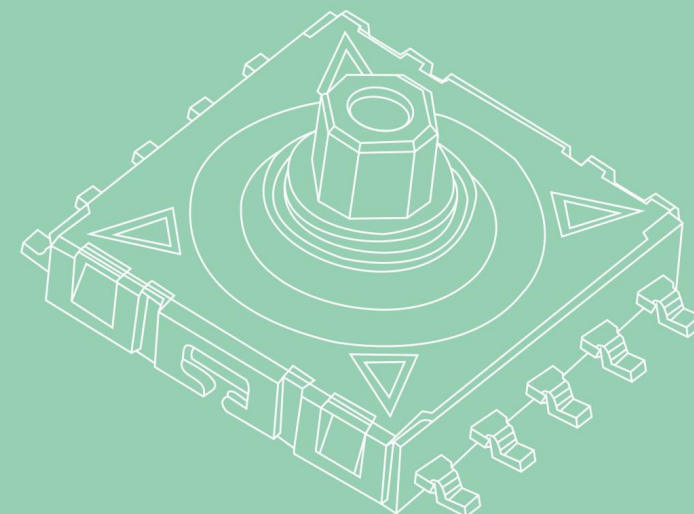


**PB10S-L**



# MULTI-DIRECTIONAL SWITCH SERIES

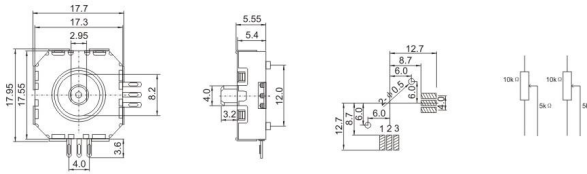
## 多功能開關系列



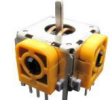
### TM-1085



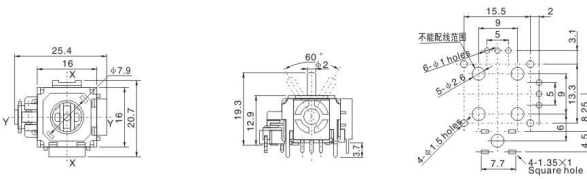
1. Total Resistance: 5KΩ~100KΩ
2. Rated Power: Tape B: 0.0125W
3. Insulation Resistance: More than 100MΩ at DC 250V
4. Travel of the Slide Bar: 2mm
5. Operating Force of Slide Bar: 120±50gf
6. Operating Life: 500,000 Cycles Min
7. Temperature Range: -10℃~+70℃



### TM-1224



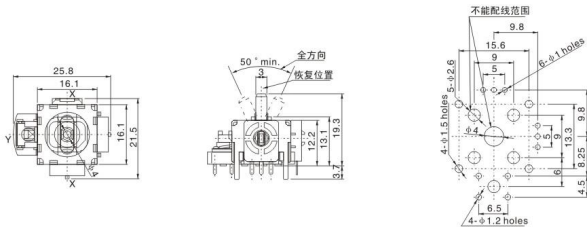
1. Total Resistance: 5KΩ~100KΩ
2. Rated Power: Tape B: 0.0125W
3. Insulation Resistance: More than 100MΩ at DC 250V
4. Travel of the Slide Bar: 60° ±6°
5. Operating Force of Slide Bar: 160±40gf
6. Operating Life: 2000,000 Cycles Min
7. Temperature Range: -10℃~+70℃



### TM-1224A



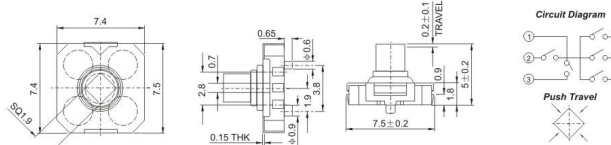
1. Total Resistance: 5KΩ~100KΩ
2. Rated Power: Tape B: 0.0125W
3. Insulation Resistance: More than 100MΩ at DC 250V
4. Travel of the Slide Bar: 60° ±6°
5. Operating Force of Slide Bar: 160±40gf
6. Operating Life: 2000,000 Cycles Min
7. Temperature Range: -10℃~+70℃



### TM-4175



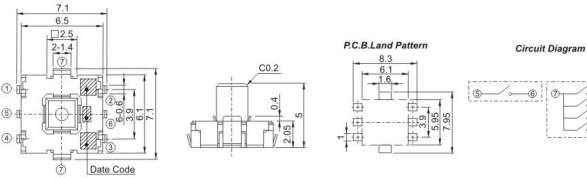
1. Rating: DC12V, 50mA Max.
2. Operating Spec.
  - 1) Center Push
    - a) Operating Force: 260±70gf
    - b) Stroke: 0.15±0.1mm
  - 2) 4-Way Direction
    - a) Operating Force: 160±50gf
    - b) Stroke: 0.2±0.1mm
3. Life Cycles: 50,000 Cycles



### TM-4173



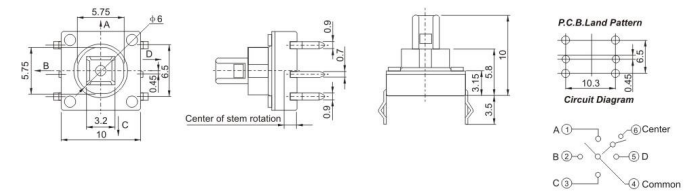
1. Rating: DC12V, 50mA Max.
2. Contact Resistance: 500mΩ Max.
3. Operating Spec.
  - 1) Center Push
    - a) Operating Force: 260±70gf
    - b) Stroke: 0.15±0.1mm
  - 2) 4-Way Direction
    - a) Operating Force: 160±50gf
    - b) Stroke: 0.2±0.1mm
4. Life Cycles: 50,000 Cycles



### TM-1603



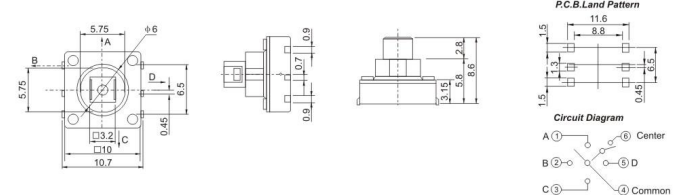
1. Rating: DC12V, 50mA Max.
2. Contact Resistance: 500mΩ Max.
3. Operating Spec.
  - 1) Center Push
    - a) Operating Force: 260±70gf
    - b) Stroke: 0.2±0.1mm
  - 2) 4-Way Direction
    - a) Operating Force: 160±50gf
    - b) Stroke: 0.4±0.1mm
4. Life Cycles: 50,000 Cycles



### TM-1603B



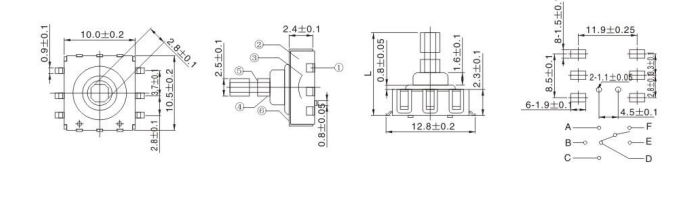
1. Rating: DC12V, 50mA Max.
2. Contact Resistance: 500mΩ Max.
3. Operating Spec.
  - 1) Center Push
    - a) Operating Force: 260±70gf
    - b) Stroke: 0.2±0.1mm
  - 2) 4-Way Direction
    - a) Operating Force: 160±50gf
    - b) Stroke: 0.4±0.1mm
4. Life Cycles: 50,000 Cycles



### TM-1604B



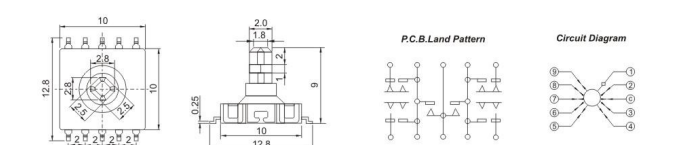
1. Operating force
- 4-Directional: 180gf
- Center push: 320gf
- Travel
- 4-Directional: 0.25mm
- Center push: 0.15mm
3. Rating: 50mA 12V DC
4. Lifetime: 50,000 cycles
5. Initial contact resistance: 500mΩ max
6. With or Without guide bosses



### TM-1604A



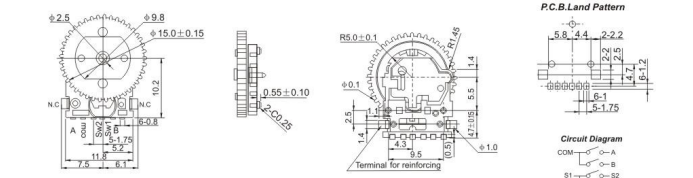
1. Operating force
- 4-Directional: 180gf
- Center push: 320gf
- Travel
- 4-Directional: 0.25mm
- Center push: 0.15mm
3. Rating: 50mA 12V DC
4. Lifetime: 50,000 cycles
5. Initial contact resistance: 500mΩ max
6. With or Without guide bosses



### TM-1511



1. Rating: 1mA 10V DC
2. Travel: 0.3mm
3. Rating Encoder: Push on
4. Detent(pulse)/Travel: 15 pulses 0.3mm
5. Contact Resistance: 1.0 max 100mΩ max.
6. Operating Force: 1mN ~ m to 10mN ~ m 500gf
7. Operating Life: 100,000 Cycles

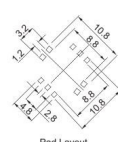
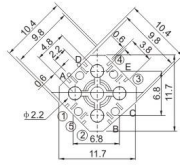




### TM-5206



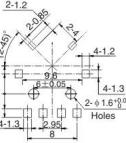
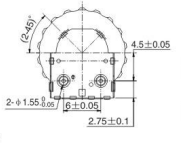
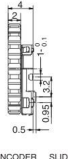
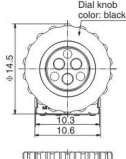
- Specifications
1. Contact rating: 20mA 12V DC
  2. Life Expectancy: 50,000 Actuations in Any Direction (X, Y, or Z)
  3. Contact Resistance: 500mΩ
  4. Insulation Resistance: 100MΩ
  5. Dielectric Strength: 100V AC for 1 Minute
  6. Operating Temperature: -25° to 70



### TM-1023



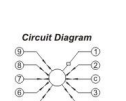
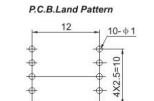
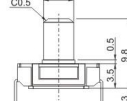
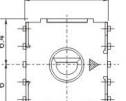
1. Ratings (max.) (Resistive load): 10mA 5V DC (max. 0.1A 15V DC)
2. Contact resistance: 1Ω or less
  3. Operating Force: 2~8N(Slide)
  4. Rotational Torque: 1~10mN · m(Rotary encoder)
  5. Operating Life: 50,000 cycles(Slide)



### TM-1901



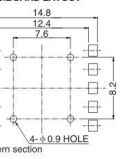
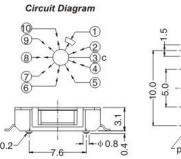
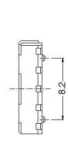
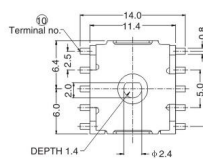
1. Rating: DC 16V 0.1A
2. Circuit & Position: 1C-9P
  3. Contact Resistance: 100mΩ Max.
  4. Life: 5,000 Cycles



### TM-1901AS



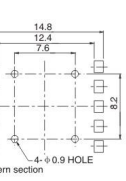
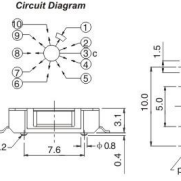
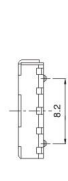
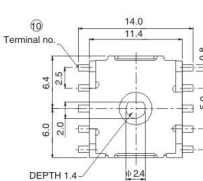
1. Rating: DC 16V 0.1A
2. Circuit & Position: 1C-9P
  3. Contact Resistance: 100mΩ Max.
  4. Life: 5,000 Cycles



### TM-1901S



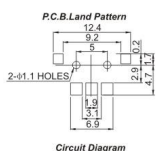
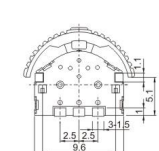
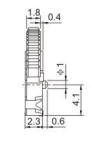
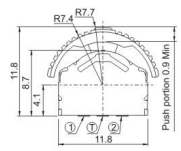
1. Rating: DC12V, 50mA Max.
2. Contact Resistance: 500mΩ Max.
  3. Operating Spec.
    - a) Center Push
      - i) Operating Force: 260±70gf
      - ii) Stroke: 0.15±0.1mm
    - b) 4-Way Direction
      - i) Operating Force: 160±50gf
      - ii) Stroke: 0.2±0.1mm
  4. Life Cycles: 50,000 Cycles



### TM-1502



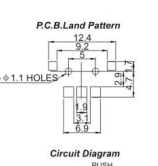
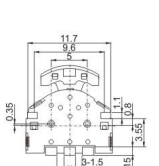
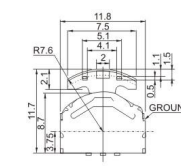
1. Rating: DC 12V 50mA Max
2. Travel Push: 0.7mm
  3. Force/Lever: 0.65±0.3N Center: 2.5±1N
  4. Life: 100,000 Cycles



### TM-1502A



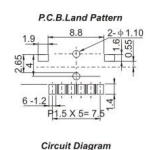
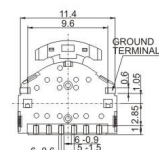
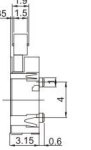
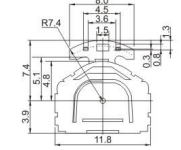
1. Rating: DC 12V 50mA Max
2. Travel Push: 0.7mm
  3. Force/Lever: 0.65±0.3N Center: 2.5±1N
  4. Life: 100,000 Cycles



### TM-1501A



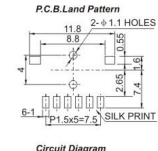
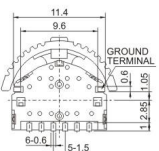
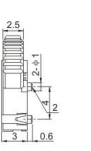
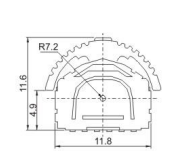
1. Rating: DC 12V 50mA Max
2. Travel Push: 0.7mm
  3. Force/Lever: 0.65±0.3N Center: 2.5±1N
  4. Life: 100,000 Cycles



### TM-1501



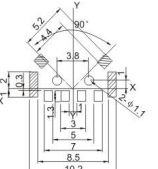
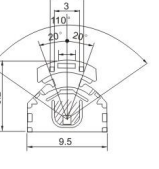
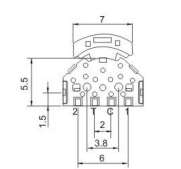
1. Rating: DC 12V 50mA Max
2. Travel Push: 0.7mm
  3. Force/Lever: 0.65±0.3N Center: 2.5±1N
  4. Life: 100,000 Cycles



### TM-1508A



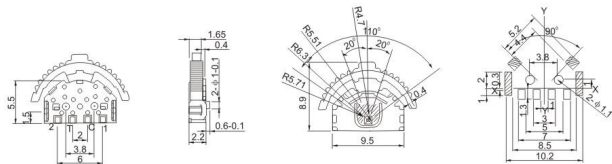
1. Rating: DC 12V 50mA Max
2. Travel Push: 0.7mm
  3. Force/Lever: 0.65±0.3N Center: 2.5±1N
  4. Life: 100,000 Cycles



### TM-1508



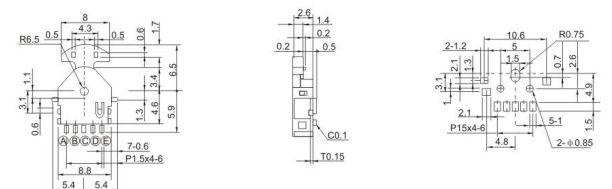
1. Rating: DC 12V 50mA Max
2. Travel Push: 0.7mm
3. Force/Lever: 0.65±0.3N  
Center: 2.5±1N
4. Life: 100,000 Cycles



### TM-1306A



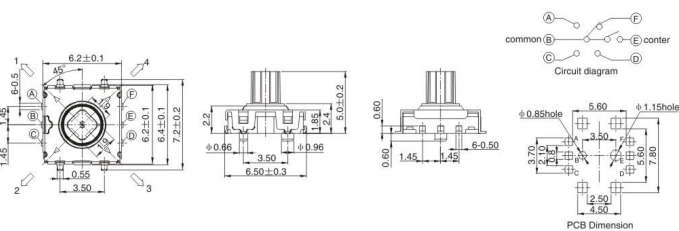
1. Rating: DC 12V 50mA Max
2. Travel Push: 0.7mm
3. Force/Lever: 0.65±0.3N  
Center: 2.5±1N
4. Life: 100,000 Cycles



### TM-4418



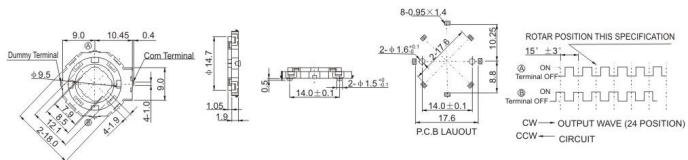
1. Operating force  
4-Directional: 180gf  
Center push: 250gf
2. Travel  
4-Directional: 0.25mm  
Center push: 0.15mm
3. Rating: 50mA 12V DC
4. Lifetime: 50,000 cycles



### TM-1217



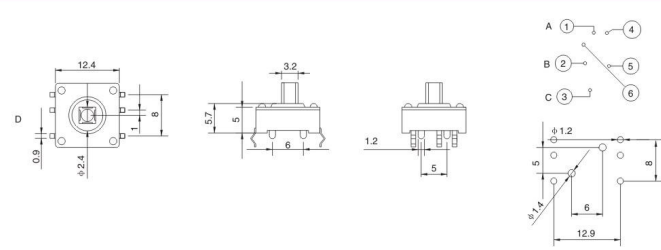
1. Detent Torque: 50±20gf.cm
2. Number and position of detent: 18
3. Resolution: 9/360°
4. Rated voltage: DC 5V
5. Insulation Resistance: 50MΩ 1 Minute  
at DC 250V
6. Rotational life: 50,000 cycles Min



### TM-4173

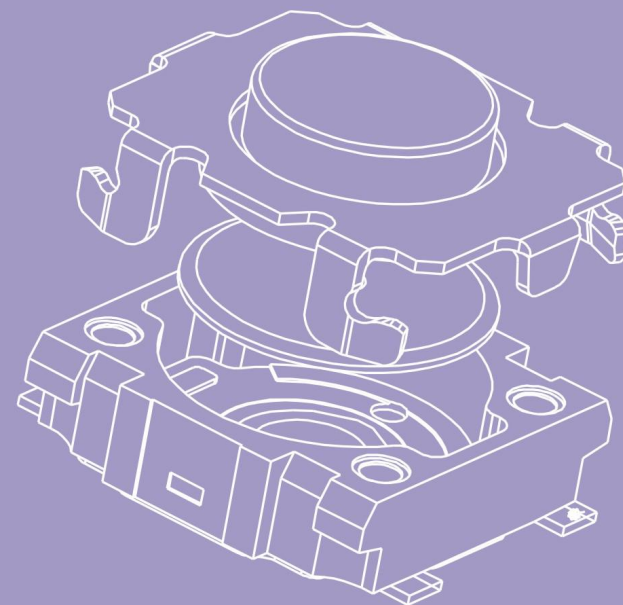


1. Rating: DC12V, 50mA Max.
2. Contact Resistance: 500mΩ Max.
3. Operating Spec.  
a) Center Push  
a) Operating Force: 260 ± 70gf  
b) Stroke: 0.15 ± 0.1mm  
a) 4-Way Direction  
a) Operating Force: 180 ± 50gf  
b) Stroke: 0.2 ± 0.1mm
4. Life Cycles: 50,000 Cycles

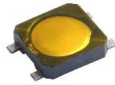


# TACT SWITCH SERIES

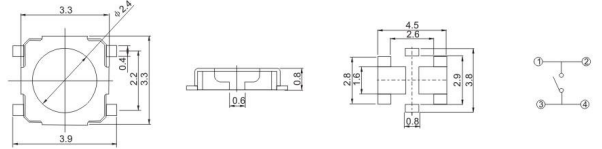
## 輕觸開關系列



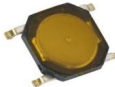
### TK-033B



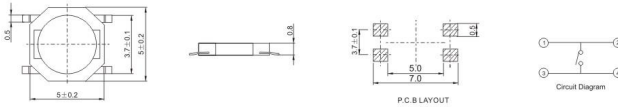
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-052BA



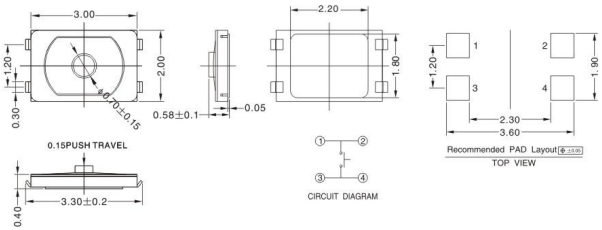
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-2030



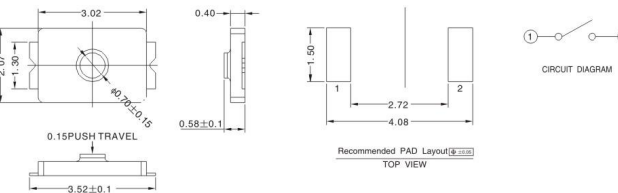
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



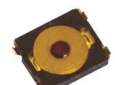
### TK-2031



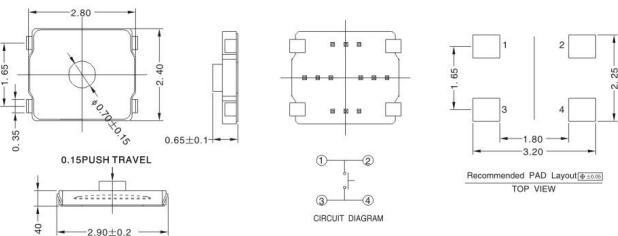
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



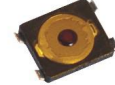
### TK-2428



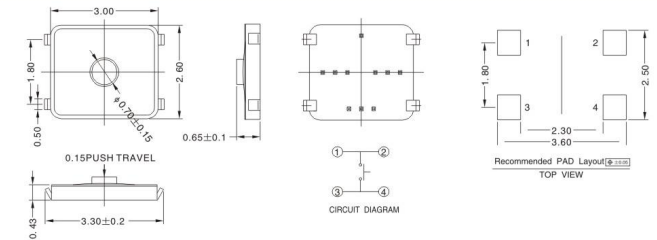
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



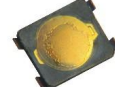
### TK-2630



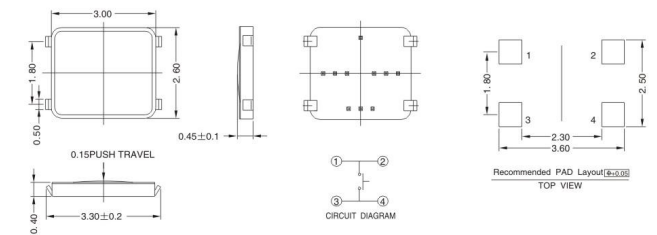
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



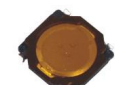
### TK-2631



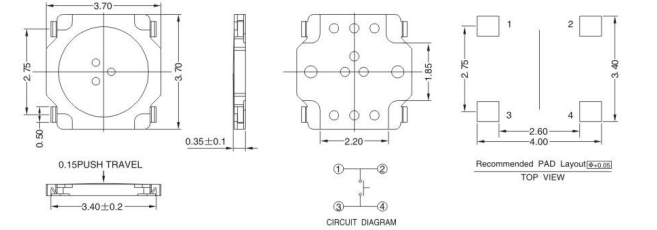
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



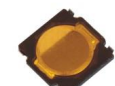
### TK-037



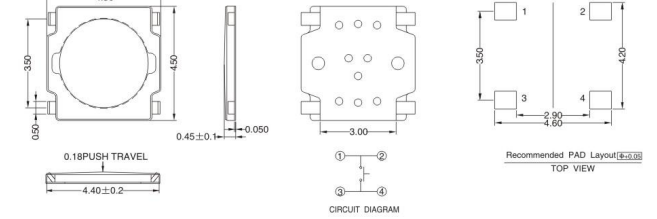
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



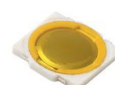
### TK-1055



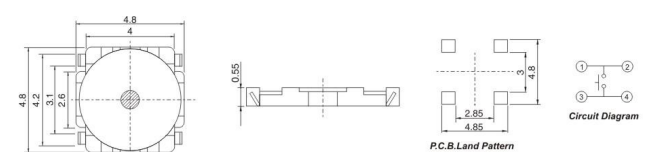
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-1048



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.

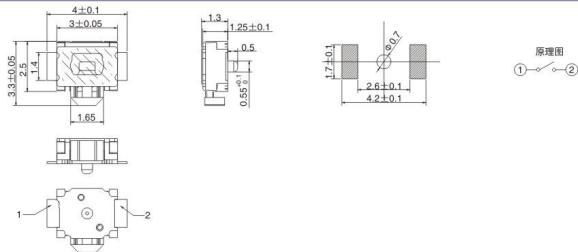




### TK-023C



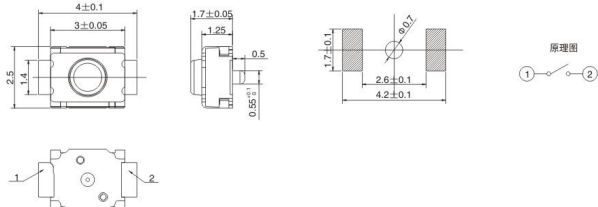
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-023



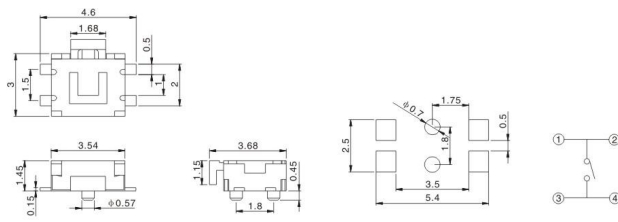
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



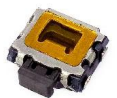
### TK034CA



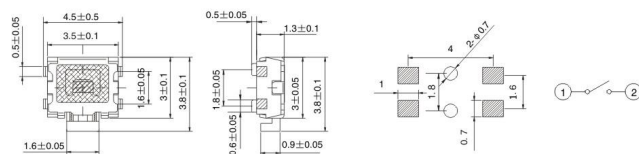
1. Operating temperature range:  $-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Rating: 50MA, 12V DC
- Insulation resistance: 100MΩ min. 100V DC
- Dielectric strength: 250VAC for 1 min
4. Contact resistance: 100mΩ max
5. Life time: 100,000 Cycles
6. Operating fore: B: 180gf C: 250gf
7. Travel:  $0.13 \pm 0.05$ mm



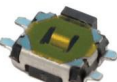
### TK-034



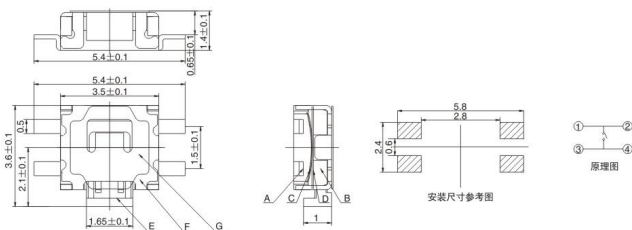
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.05$ mm
3. Operating Force:  $250 \pm 100$ gf
4. Contact Resistance: 100mΩ Max.
5. Life: 1,000,000 Cycles min.



### TK-034CB



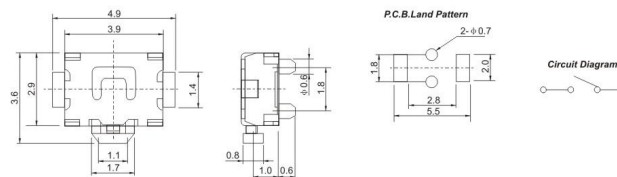
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034C



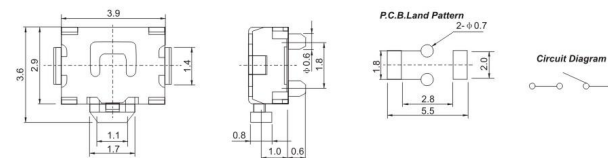
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034CU



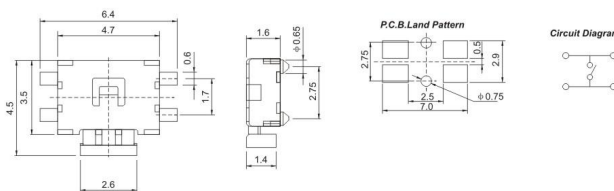
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-053



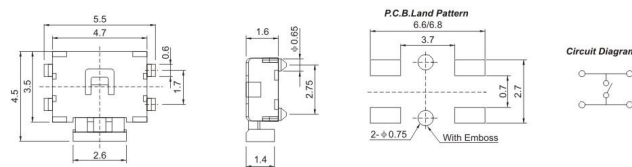
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



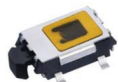
### TK-053U



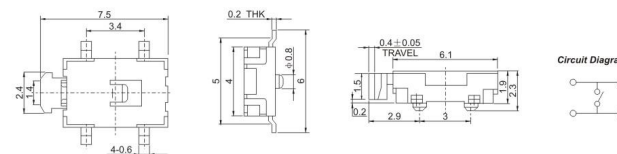
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-074



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.

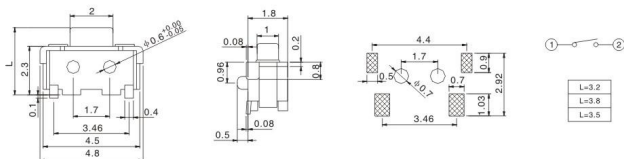




## TK-024



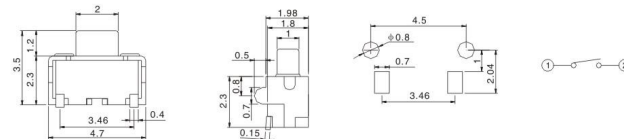
1. Contact: Mechanical Contact
2. Travel: 0.25  $\pm 0.2$  mm
3. Operating Force: 100  $\pm 50$ gf, 160  $\pm 50$ gf,  
260  $\pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-024B



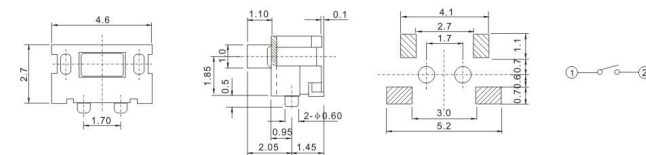
1. Contact: Mechanical Contact
2. Travel:  $0.25^{+0.2}_{-0.1}$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-024D



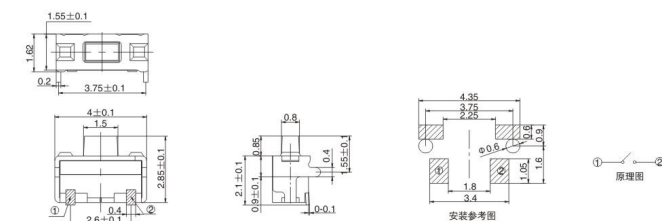
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-023CA



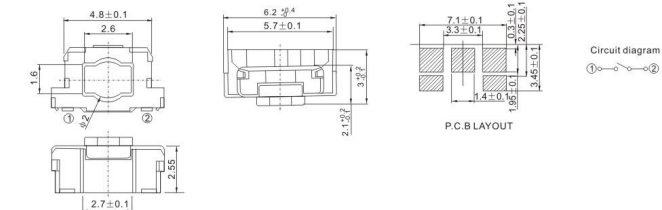
1. Contact: Mechanical Contact
2. Travel:  $0.25^{+0.2}_{-0.1}$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-063



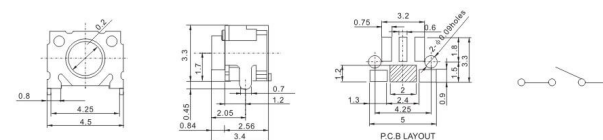
1. Contact: Mechanical Contact
2. Travel: 0.25<sup>+0.2</sup>/<sub>-0.1</sub> mm
3. Operating Force: 100±50gf, 160±50gf,  
260±50gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-043



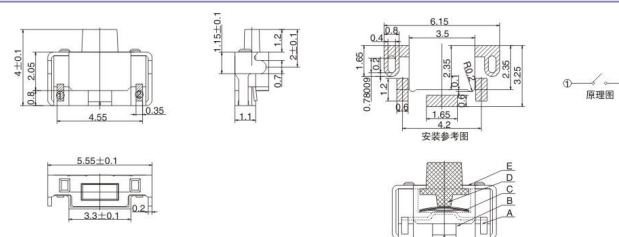
1. Contact: Mechanical Contact
2. Travel:  $0.25^{+0.1}_{-0.1}$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-024E



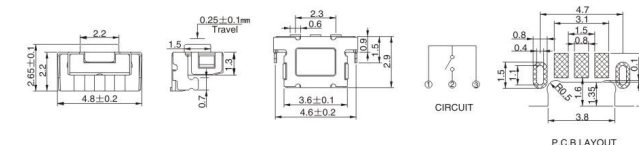
1. Contact: Mechanical Contact
2. Travel:  $0.25^{+0.2}_{-0.1}$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-035A



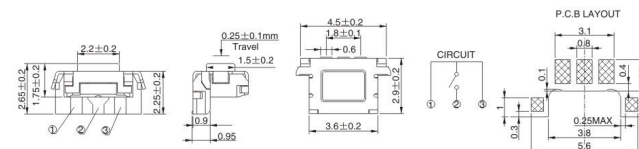
1. Operating temperature range: -30°C to +85°C
2. Rating: 50mA, 12V DC
3. Insulation Resistance: 100mΩ min. 100V DC
4. Dielectric strength: 250V AC for 1min
5. Contact Resistance: 100mΩ max
6. Life time: 100,000 Cycles
7. Operating Force: B: 180gf C: 250gf
8. Travel: 0.13±0.05mm



## TK-035



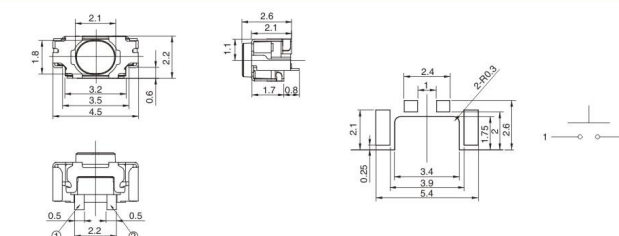
1. Contact: Mechanical Contact
2. Travel:  $0.25^{+0.2}_{-0.1}$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-1245



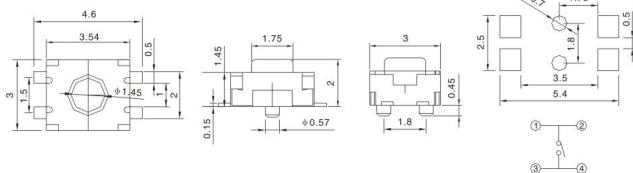
1. Contact: Mechanical Contact
2. Travel:  $0.25^{+0.2}_{-0.1}$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034SA



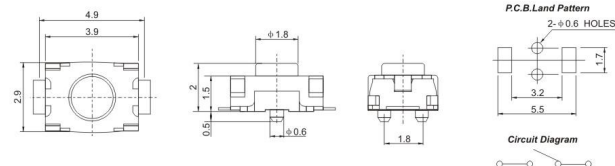
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034S



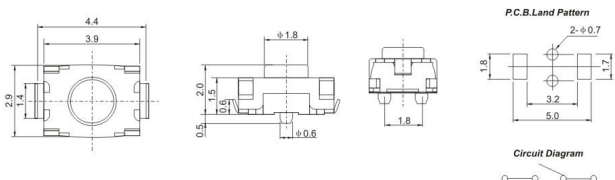
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034SU



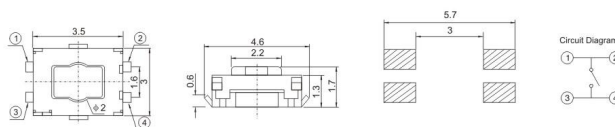
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034MS



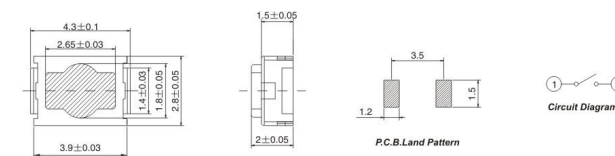
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034M



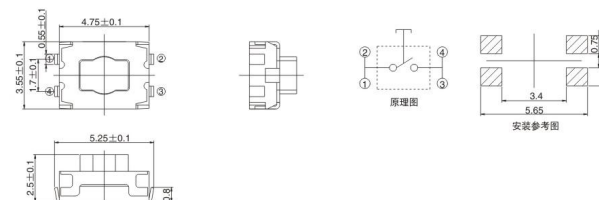
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-034MU



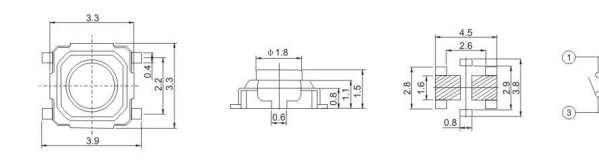
1. Operating temperature range:  $-30^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
2. Rating: 50mA 12V DC
3. Insulation Resistance: 100m  $\Omega$  min. 100V DC
4. Dielectric strength: 250V AC for 1min
5. Contact Resistance: 100m  $\Omega$  max
6. Life time: 100,000 Cycles
7. Operating Force: B: 180gf C: 250gf
8. Travel:  $0.13 \pm 0.05$  mm



### TK-033



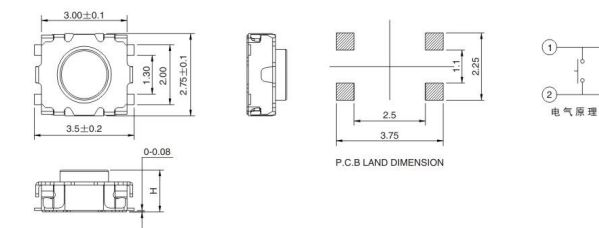
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-1327



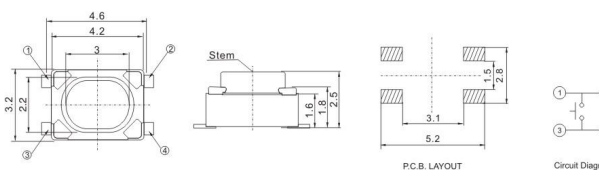
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-1180A



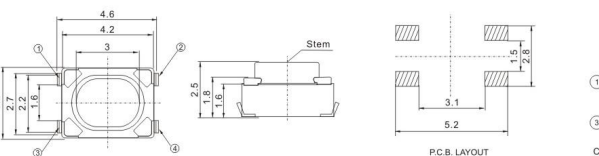
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-1180



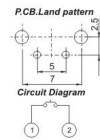
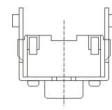
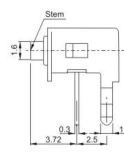
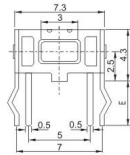
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-036DZ



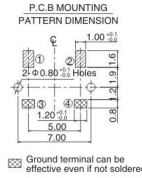
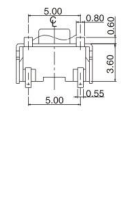
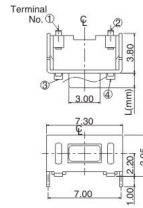
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-036DA



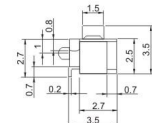
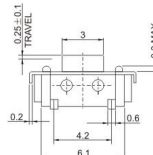
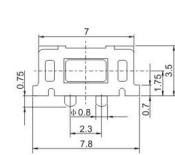
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-2030



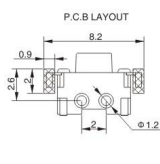
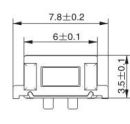
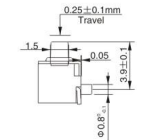
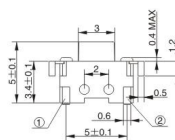
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-2031



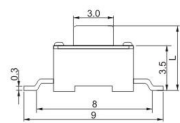
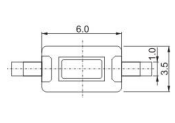
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-2428



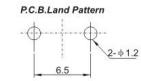
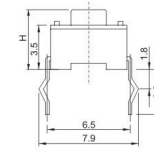
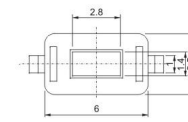
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-036D



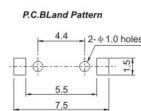
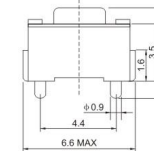
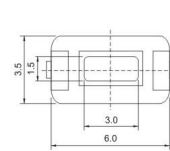
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-036SU



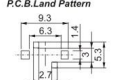
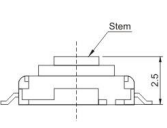
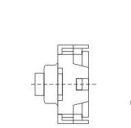
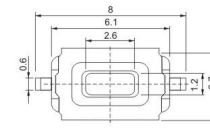
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-3625



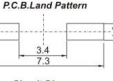
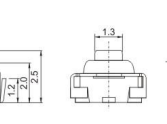
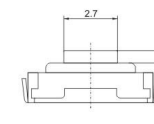
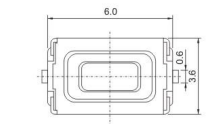
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-3625U



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.

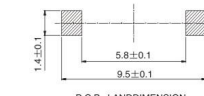
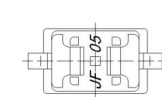
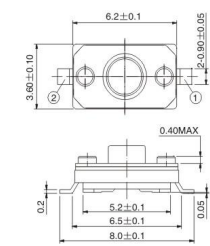


### TK-3625F

IP67



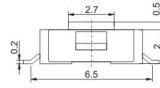
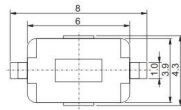
- Note
1. Rating: DC 12V 50mA
  2. Contact Resistance: 100mΩ max



### TK-3609



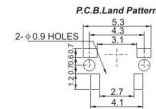
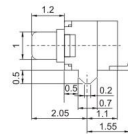
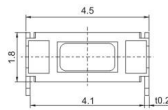
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-3612B



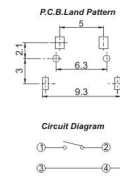
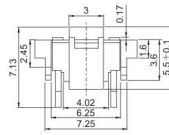
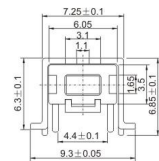
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-3613



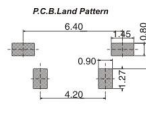
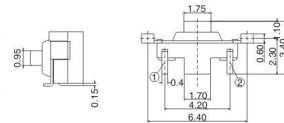
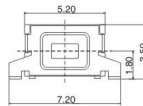
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-3625C



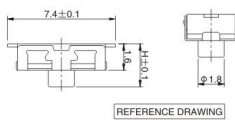
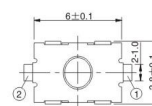
1. Rating: 12V DC, 50mA Max
2. Stroke:  $0.3 \pm 0.1$  mm
3. Contact resistance: 100mΩ Max
4. Operating Force:  $220 \pm 40$ gf
5. Operating Life: 250,000 cycles



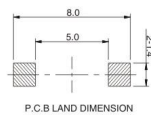
### TK-036B



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



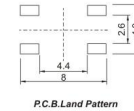
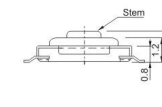
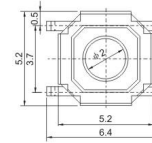
REFERENCE DRAWING



### TK-052



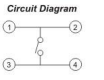
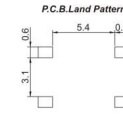
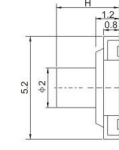
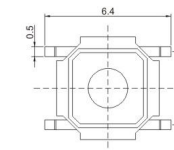
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



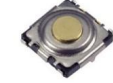
### TK-052L



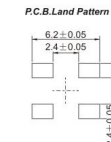
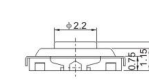
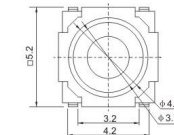
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



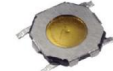
### TK-052U



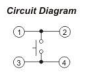
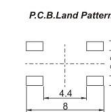
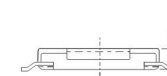
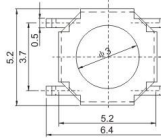
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-052B



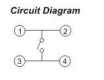
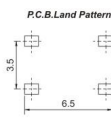
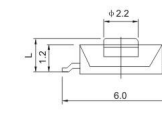
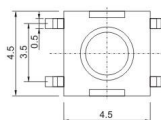
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-1045



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.

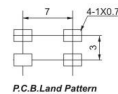
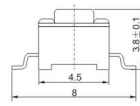
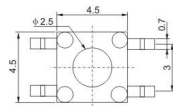




### TK-045S



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.

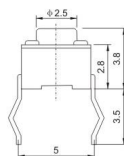
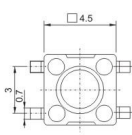


P.C.B. Land Pattern

### TK-045D



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

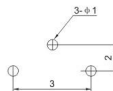
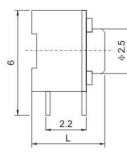
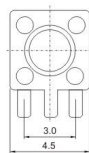


Circuit Diagram

### TK-045C



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

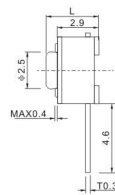
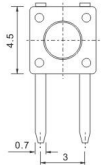


Circuit Diagram

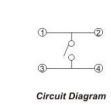
### TK-045CA



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

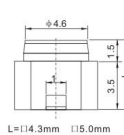
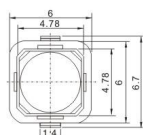


Circuit Diagram

### TK-1066



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. LAYOUT

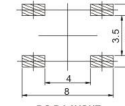
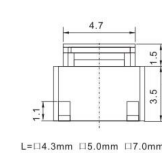
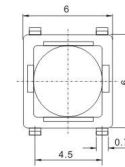


Circuit Diagram

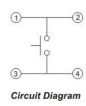
### TK-1066A



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. LAYOUT

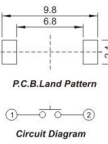
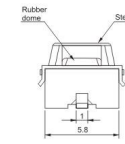
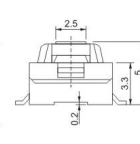
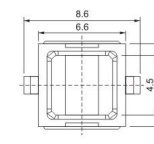


Circuit Diagram

### TK-1066B



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.

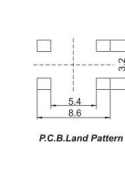
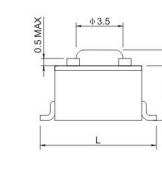
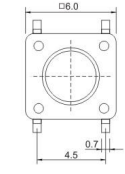


Circuit Diagram

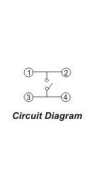
### TK-066S



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

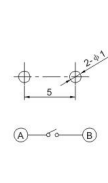
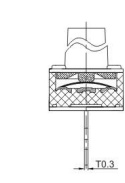
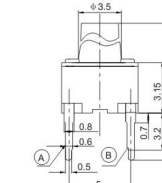
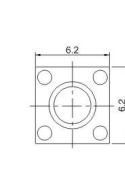


Circuit Diagram

### TK-066D-2P



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.

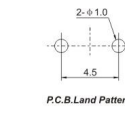
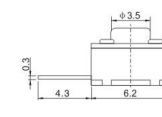
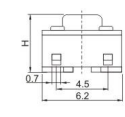


Circuit Diagram

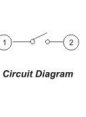
### TK-066DC



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$ mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

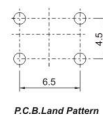
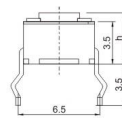
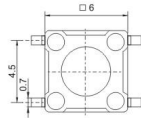


Circuit Diagram

**TK-066D**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

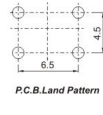
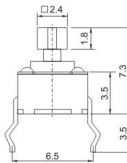
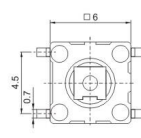


Circuit Diagram

**TK-066DF**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

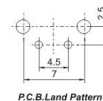
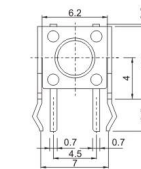


Circuit Diagram

**TK-066H**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

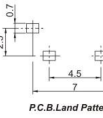
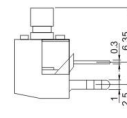
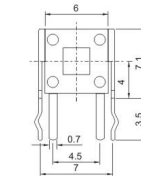


Circuit Diagram

**TK-066HF**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

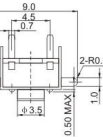
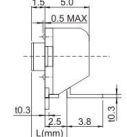
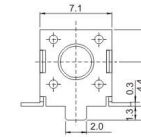


Circuit Diagram

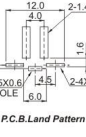
**TK-6619**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern



P.C.B. Land Pattern

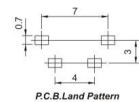
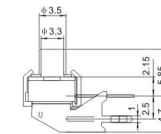
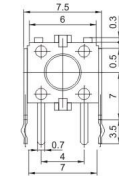
Circuit Diagram

Circuit Diagram

**TK-6617C**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

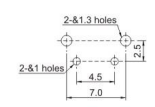
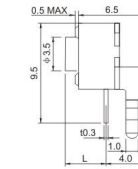
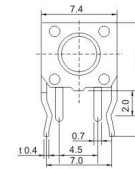


Circuit Diagram

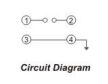
**TK-6620**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

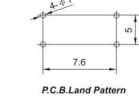
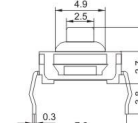
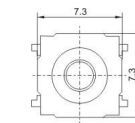


Circuit Diagram

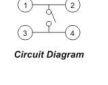
**TK-6622**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

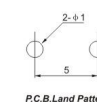
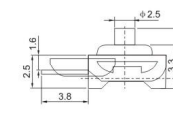
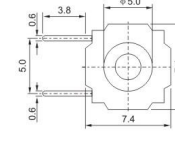


Circuit Diagram

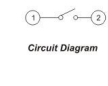
**TK-6614**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

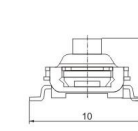
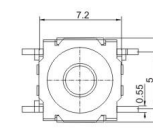


Circuit Diagram

**TK-6622C**



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



P.C.B. Land Pattern

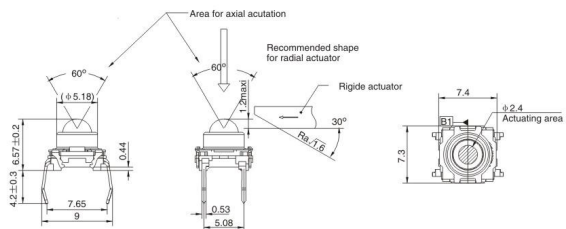


Circuit Diagram

### TK-6674



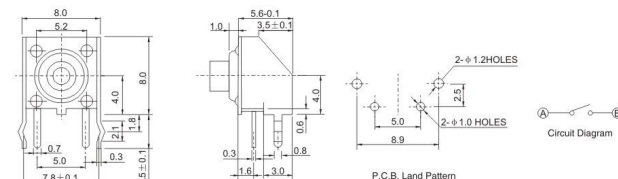
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-6623



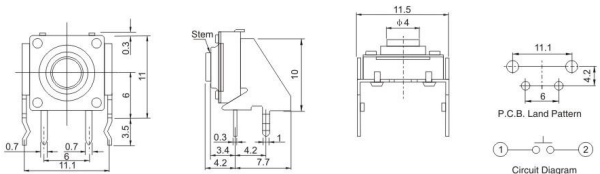
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



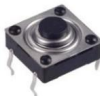
### TK-1202



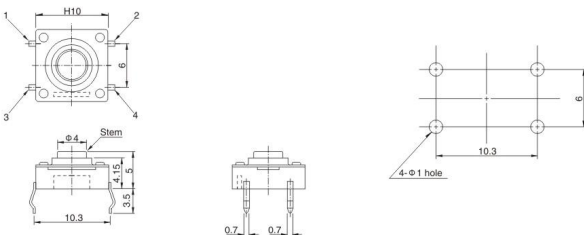
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-1010



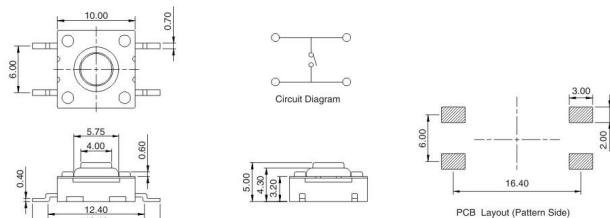
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-1010S



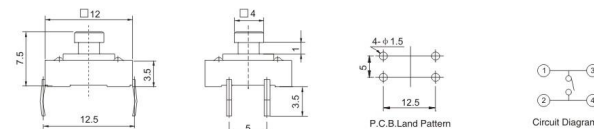
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-012DF



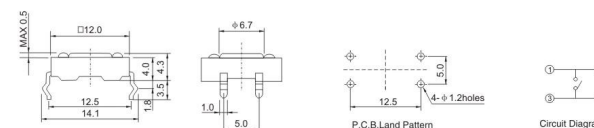
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-012D



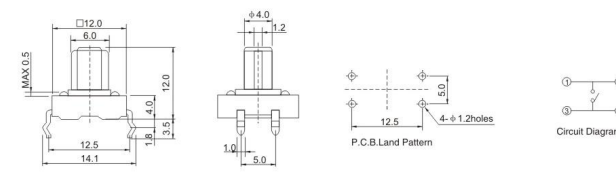
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-012DA



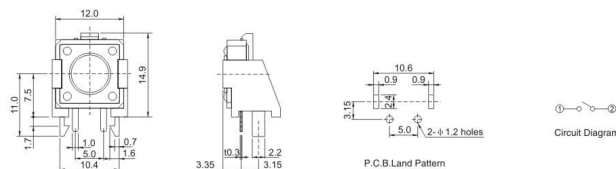
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-012DC



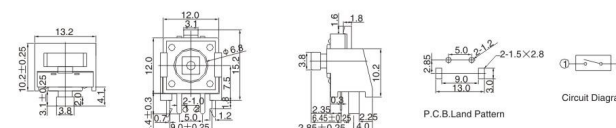
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-012DH



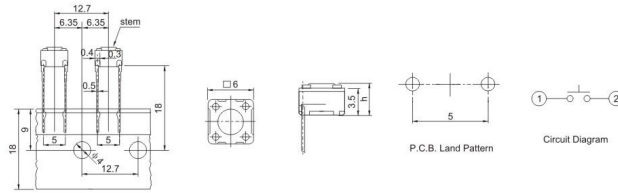
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



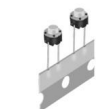
### TK-1103



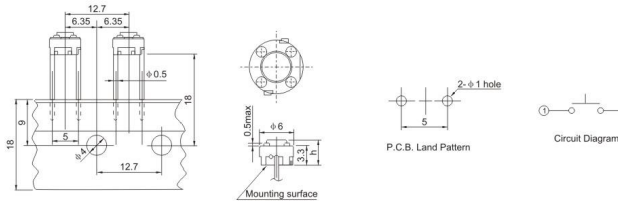
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



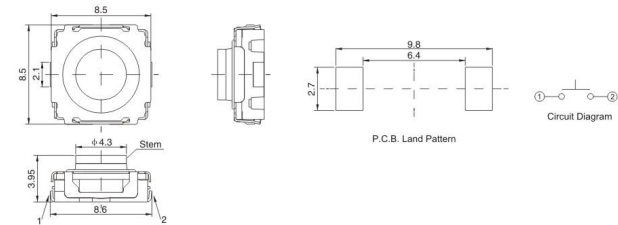
### TK-1106



1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



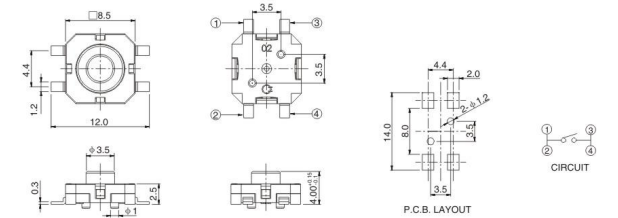
### TK-1085



### TK-1084



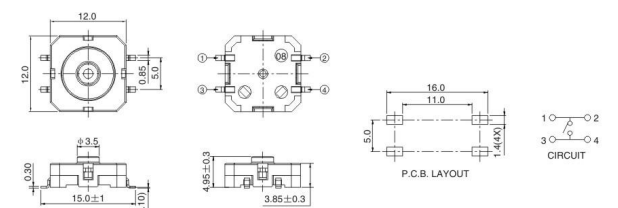
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



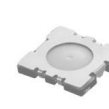
### TK-1012



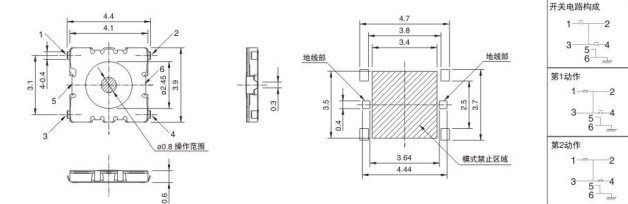
- NOTES:
1. RATING: 12VDC 50mA
  2. CONTACT RESISTANCE: 100mΩ Max (100mΩ)
  3. INSULATION RESISTANCE: 100MΩ (at 50VDC)
  4. DIELECTRIC STRENGTH: 250VAC(50/60Hz) FOR 1MINUTE
  5. OPERATING LIFE: 1,000,000 CYCLES MIN.
  6. OPERATING FORCE: 300±100gf
  7. TRAVEL: 0.7±0.3mm
  8. OPERATING TEMPERATURE: -20°C to 70°C



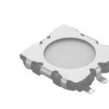
### TK-2044



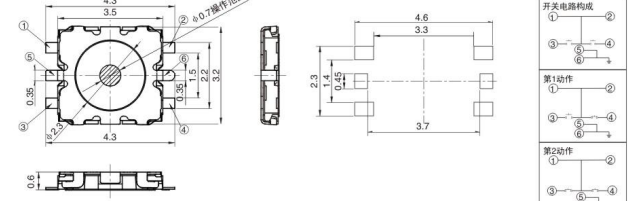
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-2033



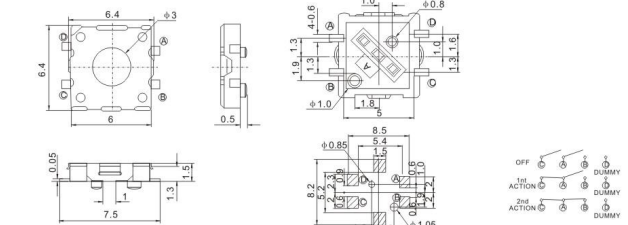
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



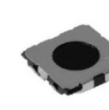
### TK-2122



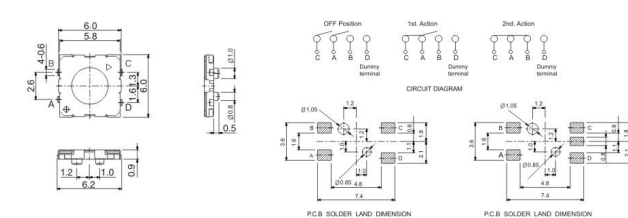
- Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100MΩ min. 100V DC  
Dielectric strength: 250V AC for 1 min.  
Contact resistance: 100mΩ max.  
Life time: 30,000 Cycles  
Operating force: 1st  $100 \pm 50$ gf 2st  $260 \pm 50$ gf  
Travel: 1st  $0.5 \pm 0.1$ mm 2st  $0.7 \pm 0.1$ mm



### TK-2120



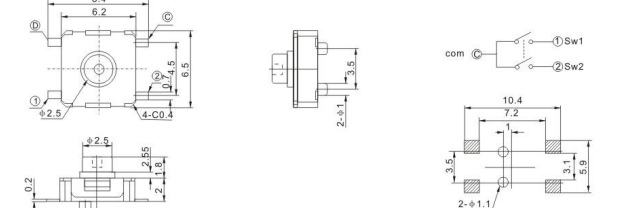
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.1$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



### TK-2066



- Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100MΩ min. 100V DC  
Dielectric strength: 250V AC for 1 min.  
Contact resistance: 100mΩ max.  
Life time: 10,000 Cycles  
Operating force: 1st  $100 \pm 40$ gf 2st  $250 \pm 80$ gf  
Travel: 1st  $0.3 \pm 0.1$ mm 2st  $0.55 \pm 0.1$ mm

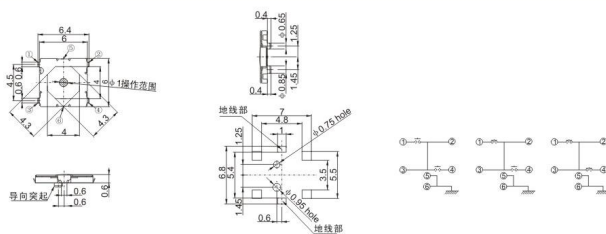




## TK-2121



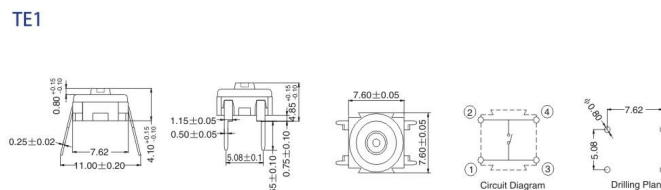
Operating temperature range: -30°C to +85°C  
 Rating: 50mA, 12V DC  
 Insulation resistance: 100M  $\Omega$  min. 100V DC  
 Dielectric strength: 250V AC for 1 min  
 Contact resistance: 100m  $\Omega$  max.  
 Life time: 30,000 Cycles  
 Operating force: 1 st 100 $\pm$ 40gf 2 st 250 $\pm$ 80gf  
 Travel: 1st 0.25 $\pm$ 0.1mm 2st 0.40 $\pm$ 0.1mm



## TK-TE1



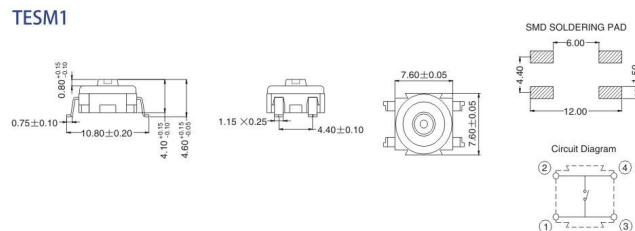
1. Contact: Mechanical Contact
2. Travel: 0.25±0.02 mm
3. Operating Force: 100±50gf, 160±50gf,  
260±50gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-TESM1



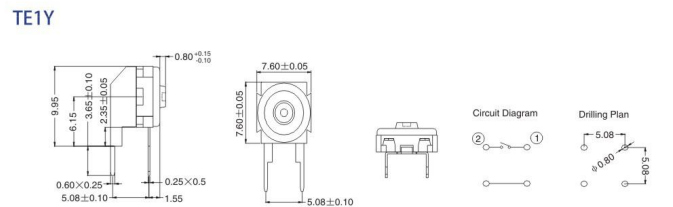
Operating temperature range:  $-30^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
 Rating: 50mA, 12V DC  
 Insulation resistance: 100M  $\Omega$  min. 100V DC  
 Dielectric strength: 250V AC for 1 min  
 Contact resistance: 200m  $\Omega$  max.  
 Life time: 100,000 Cycles  
 Operating force: B: 180gf C: 250gf  
 Travel: 0.13  $\pm$  0.05mm



## TK-TE1Y



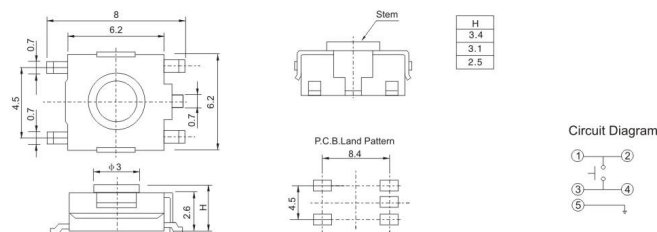
1. Contact: Mechanical Contact
2. Travel:  $0.25 \pm 0.02$  mm
3. Operating Force:  $100 \pm 50$ gf,  $160 \pm 50$ gf,  
 $260 \pm 50$ gf
4. Contact Resistance: 100m Max.
5. Life: 1,000,000 Cycles min.  
5,000,000 Cycles min.



## TK-1662S



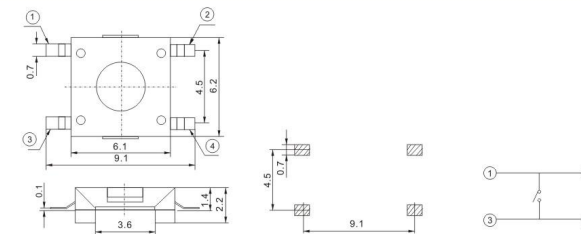
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: B:200,000 Cycles C:100,000 Cycles  
Operating force: B:180gf C250gf  
Travel: 0.25 $\pm$ 0.1mm



## TK-1186UE



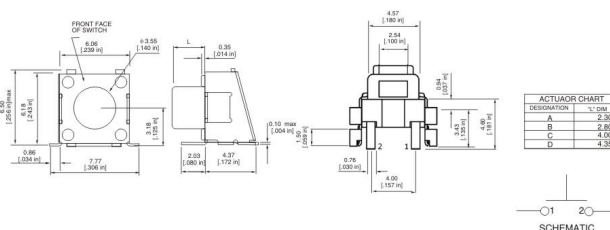
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min. 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: B:200,000 Cycles C:100,000 Cycles  
Operating force: B:180gf C250gf  
Travel: 0.25 $\pm$ 0.1mm



## TK-1062H



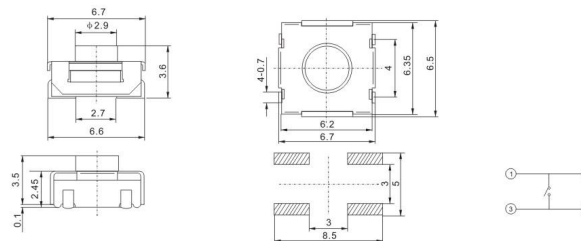
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: B:200,000 Cycles C:100,000 Cycles  
Operating force: B:180gf C250gf  
Travel: 0.25 $\pm$ 0.1mm



## TK-1062



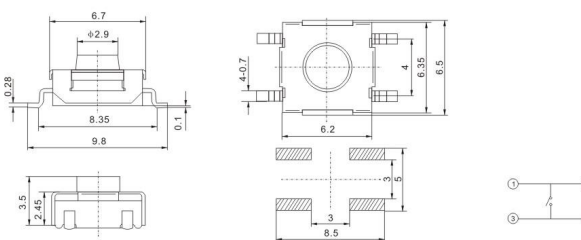
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: A:B:C:100,000 Cycles  
Operating force: C:250gf G:320gf H:400gf  
Travel: 0.35 $\pm$ 0.1mm



## TK-1062S



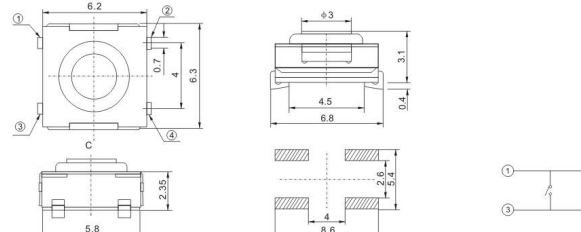
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min. 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: A:B:C 200,000 Cycles  
Operating force: C250gf G:320gf H:400gf  
Travel: 0.35 $\pm$ 0.1mm



## TK-1662



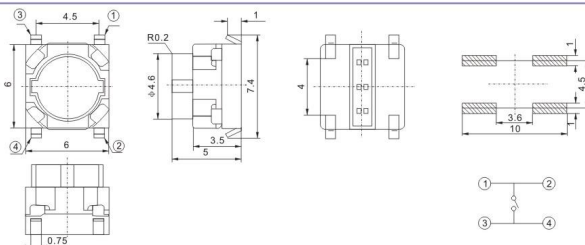
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: B:200,000 Cycles C:100,000 Cycles  
Operating force: B:180gf C250gf  
Travel: 0.25 $\pm$ 0.1mm



### TK-2403



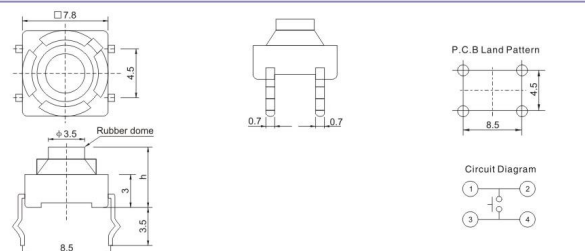
Operating temperature range: -40°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: B: C: 100,000 Cycles  
Operating force: 8-180gf C250gf  
Travel: 1.30  $\pm$  0.1mm



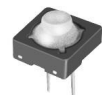
### TK-1078



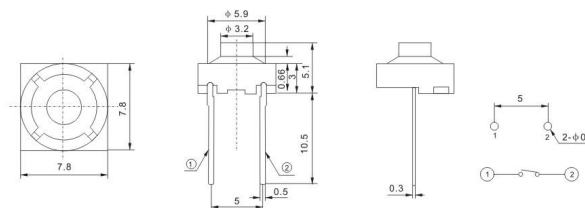
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: E: C: 100,000 Cycles  
Operating force: E: 130gf C250gf  
Travel: 1.20  $\pm$  0.1mm



### TK-1078A



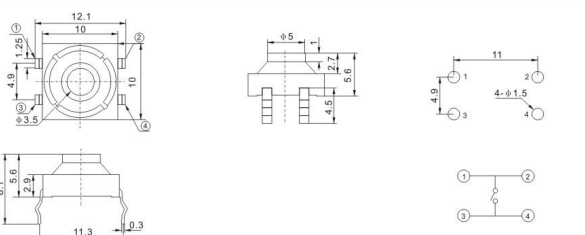
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: E: C: 100,000 Cycles  
Operating force: E: 130gf C250gf  
Travel: 1.20  $\pm$  0.1mm



### TK-1078B



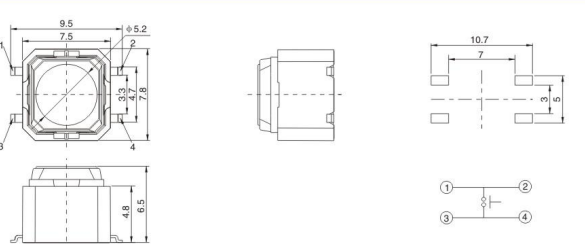
Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: E: C: 100,000 Cycles  
Operating force: E: 130gf C250gf  
Travel: 1.20  $\pm$  0.1mm



### TK-1075

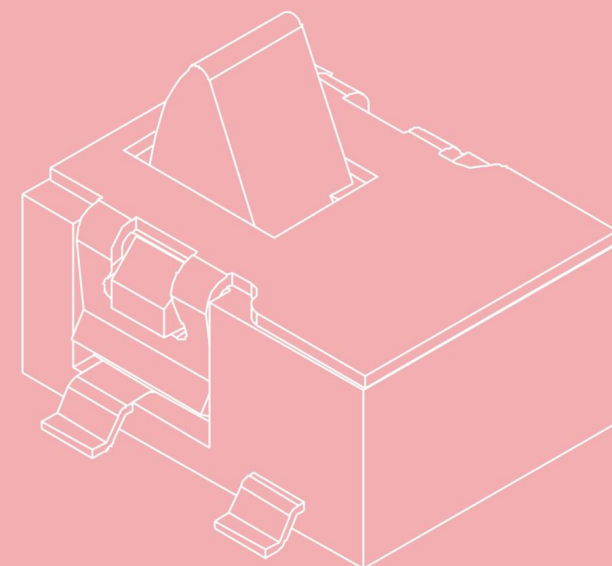


Operating temperature range: -30°C to +85°C  
Rating: 50mA, 12V DC  
Insulation resistance: 100M  $\Omega$  min, 100V DC  
Dielectric strength: 250V AC for 1 min  
Contact resistance: 100m  $\Omega$  max.  
Life time: E: C: 100,000 Cycles  
Operating force: E: 130gf C250gf  
Travel: 1.20  $\pm$  0.1mm



# DETECTOR SWITCH SERIES

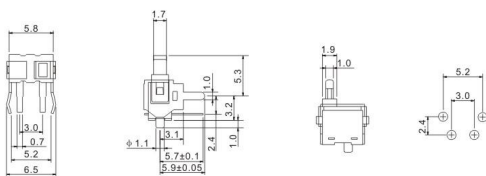
## 檢測開關系列



### DS-001DR



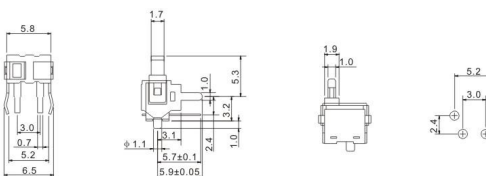
Rating: 0.1A 30VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max~2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



### DS-001DL



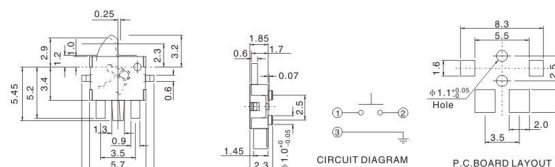
Rating: 0.1A 30VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max~2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



### DS-002SR



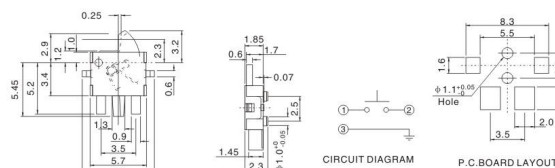
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max~1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



### DS-002SL



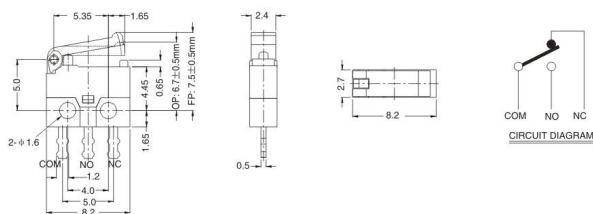
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max~1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



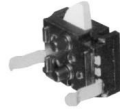
### DS-003D



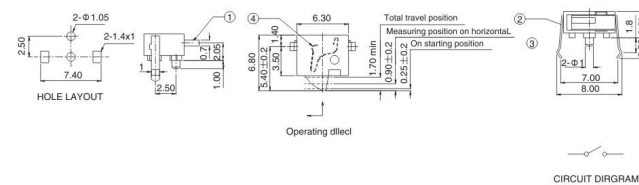
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max~1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



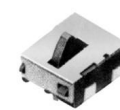
### DS-004D



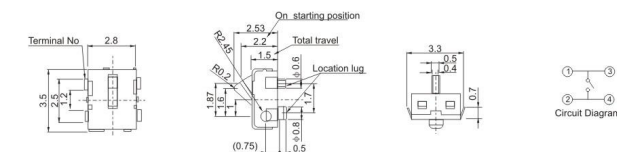
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max~1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



### DS-005S



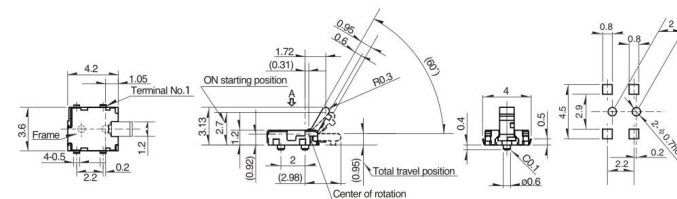
Rating: 1mA 5VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
2 Ω max~5 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



### DS-006S



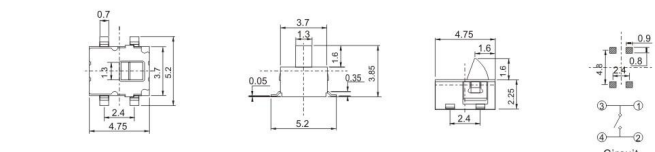
Rating: 1mA 5VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
2 Ω max~5 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



### DS-007S



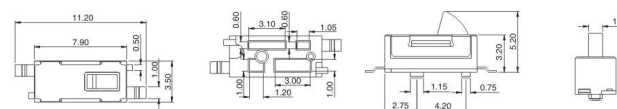
Rating: 1mA 5VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
2 Ω max~5 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



### DS-007SA



Rating: 1mA 5VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
2 Ω max~5 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles

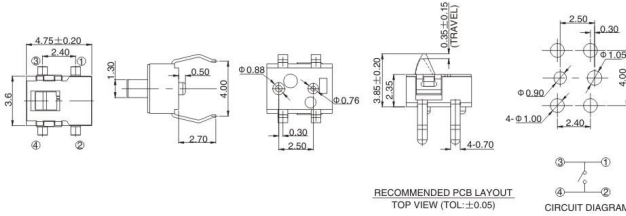




### DS-007D



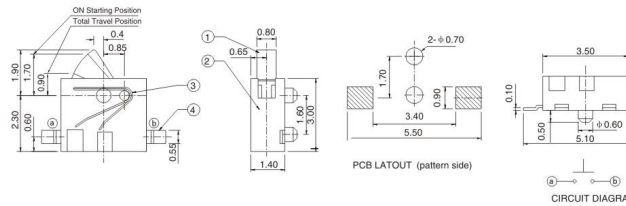
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-008S



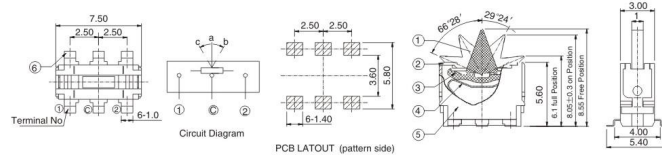
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-009S



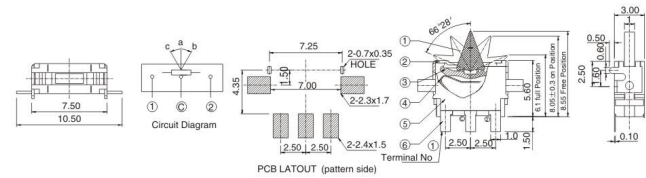
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-009SA



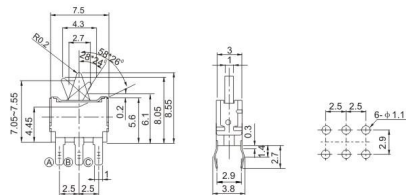
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-009D



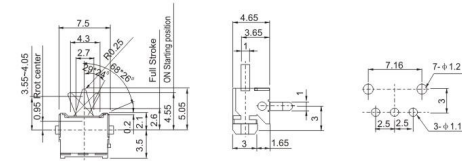
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-009DA



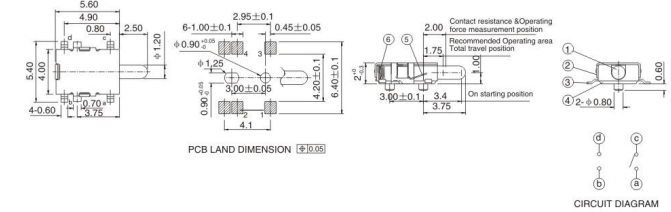
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



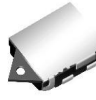
### DS-010S



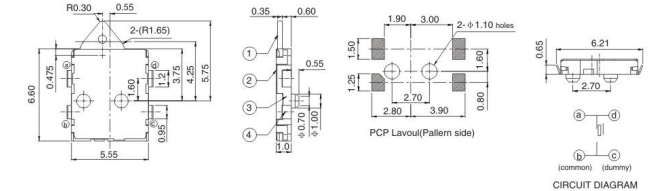
Rating: 1mA 5VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
5Ω max~10Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-011S



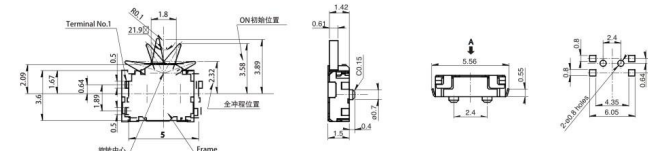
Rating: 1mA 5VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
5Ω max~10Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-012S



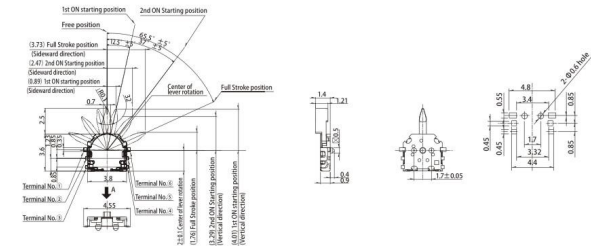
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-013S



Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500mΩ max~1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles

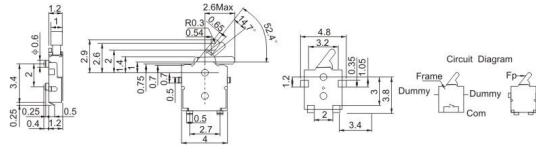




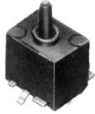
### DS-014SR/L



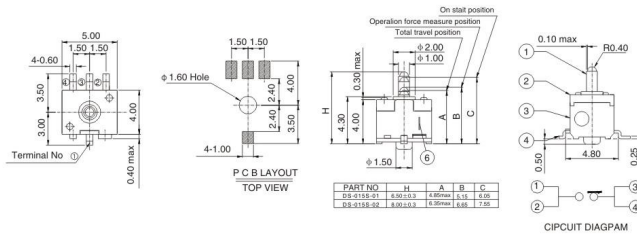
Rating: 50mA 20VDC 100µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
500mΩ max 1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-015S



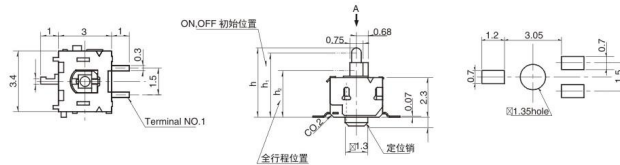
Rating: 1mA 5VDC 50µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
2Ω max 5Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-015SA



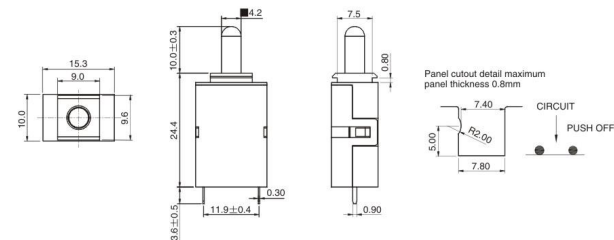
Rating: 50mA 20VDC 100µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
500mΩ max 1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-016D



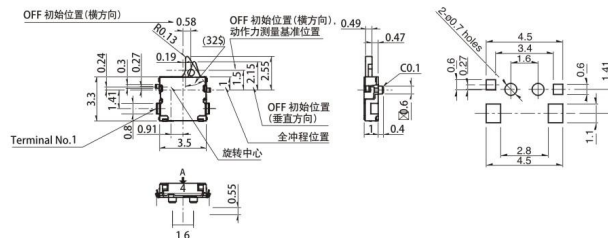
Rating: 50mA 20VDC 100µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
500mΩ max 1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



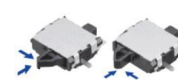
### DS-017SR/L



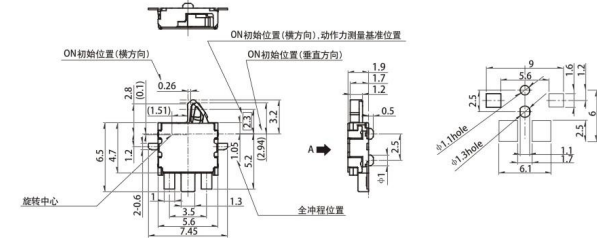
Rating: 50mA 20VDC 100µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
500mΩ max 1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-018SR/L



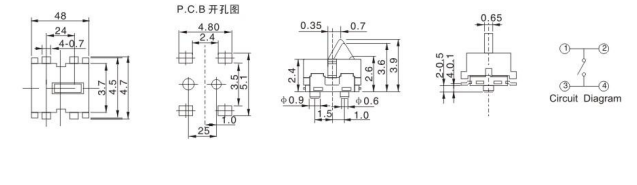
Rating: 50mA 20VDC 100µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
500mΩ max 1Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 100,000Cycles



### DS-019S



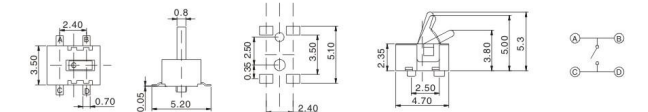
Rating: 1mA 5VDC 50µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
2Ω max 5Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 50,000Cycles



### DS-019SA



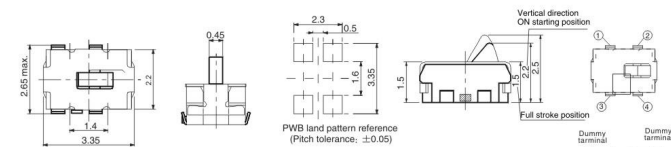
Rating: 1mA 5VDC 50µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
2Ω max 5Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 50,000Cycles



### DS-020S



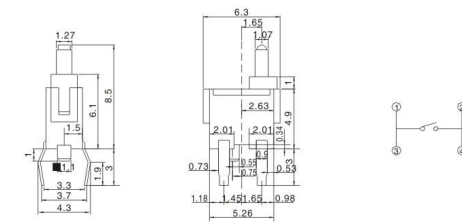
Rating: 1mA 5VDC 50µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
2Ω max 5Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 50,000Cycles



### DS-021D



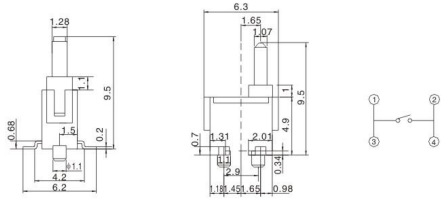
Rating: 0.1A 30VDC 50µA 3V DC  
Temperature: -25 80°C  
Contact Resistance:  
1Ω max 2Ω max  
Insulation Resistance:  
100MΩ min(100V DC)  
Life: 50,000Cycles



**DS-021S**



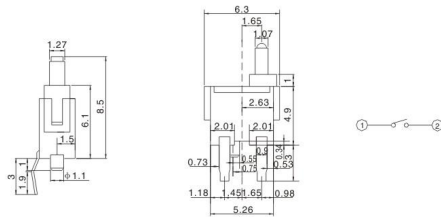
Rating: 0.1A 30VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max-2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-022D**



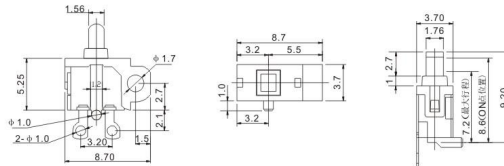
Rating: 0.1A 30VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max-2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-023D**



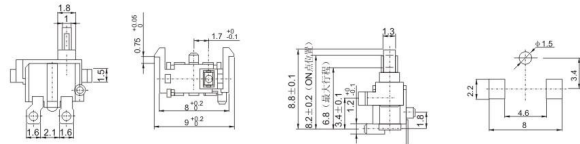
Rating: 0.1A 30VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max-2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-024D**



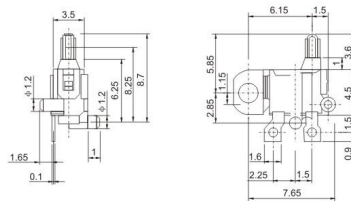
Rating: 0.1A 30VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max-2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-025D**



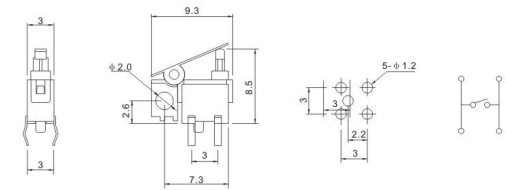
Rating: 0.1A 30VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max-2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-026D**



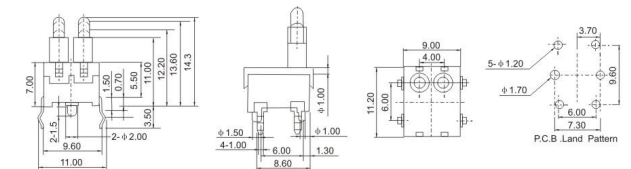
Rating: 0.1A 30VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max-2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-027D**



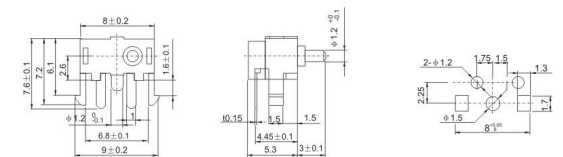
Rating: 50mA 20VDC-100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max-1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



**DS-028D**



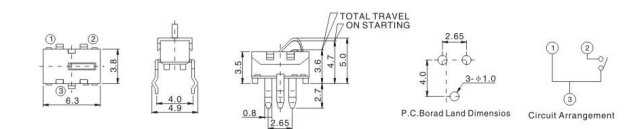
Rating: 1mA 5VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
2 Ω max-5 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-029D**



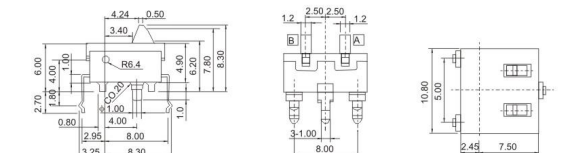
Rating: 0.1A 30VDC-50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max-2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



**DS-030D**



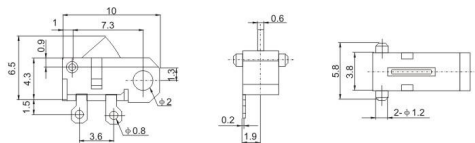
Rating: 50mA 20VDC-100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max-1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



### DS-031D



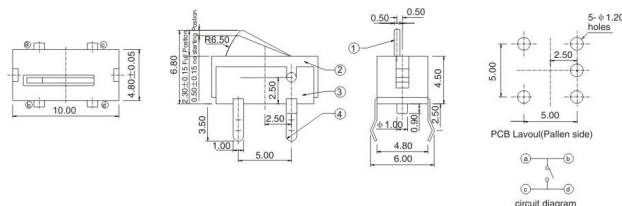
Rating: 1mA 5VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
2 Ω max~5 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



### DS-032D



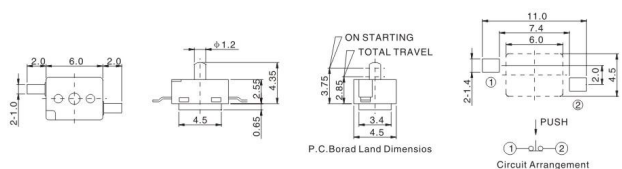
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max~1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



### DS-032S



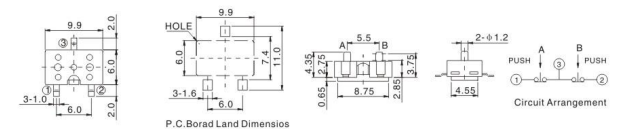
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max~1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



### DS-033S



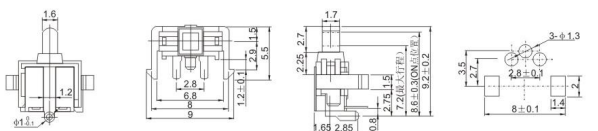
Rating: 50mA 20VDC~100μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
500m Ω max~1 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 100,000Cycles



### DS-209

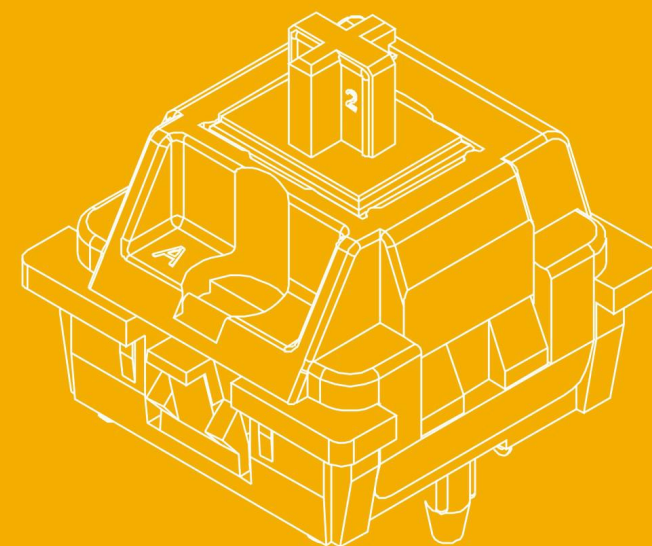


Rating: 0.1A 30VDC~50μA 3V DC  
Temperature: -25~80°C  
Contact Resistance:  
1 Ω max~2 Ω max  
Insulation Resistance:  
100M Ω min(100V DC)  
Life: 50,000Cycles



## KEYBOARD SWITCH SERIES

### 鍵盤開關系列

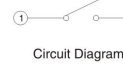
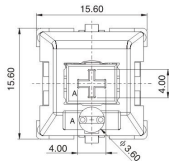




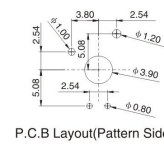
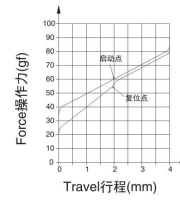
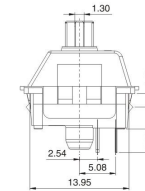
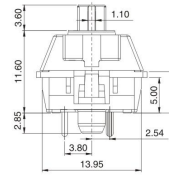
**PK150B**  
无声音 力度重



- Specification:
1. Rating: 12V AC/DC max. 2V DC min  
10mA AC/DC max. 10  $\mu$ A DC min
  2. Contact Resistance: 200m $\Omega$  max
  3. Insulation Resistance: 100M $\Omega$  Min(DC100V)
  4. Withstand Voltage: AC500V(50-60Hz) for 1minute
  5. Bounce Time:  $\leq$  5msec(at 16in/sec.actuation speed)
  6. Operating Force: 60 $\pm$ 10gf
  7. Tactile Force: 50 $\pm$ 10gf
  8. Conduction travel: 2.00mm $\pm$ 0.6mm
  9. Breaking travel: 1.5mm $\pm$ 0.6mm
  10. Total Travel: 4.0 $\pm$ 0.5mm



Circuit Diagram

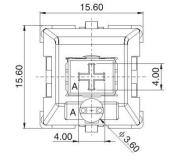


P.C.B Layout (Pattern Side)

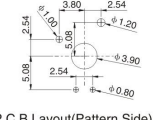
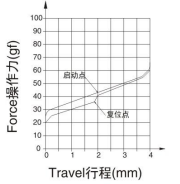
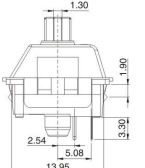
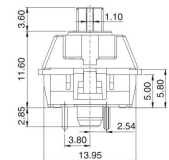
**PK150R**  
有断落感 无声音



- Specification:
1. Rating: 12V AC/DC max. 2V DC min  
10mA AC/DC max. 10  $\mu$ A DC min
  2. Contact Resistance: 200m $\Omega$  max
  3. Insulation Resistance: 100M $\Omega$  Min(DC100V)
  4. Withstand Voltage: AC500V(50-60Hz) for 1minute
  5. Bounce Time:  $\leq$  5msec(at 16in/sec.actuation speed)
  6. Operating Force: 60 $\pm$ 10gf
  7. Tactile Force: 50 $\pm$ 10gf
  8. Conduction travel: 2.00mm $\pm$ 0.6mm
  9. Breaking travel: 1.5mm $\pm$ 0.6mm
  10. Total Travel: 4.0 $\pm$ 0.5mm



Circuit Diagram

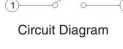
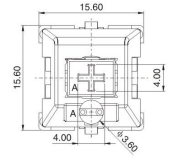


P.C.B Layout (Pattern Side)

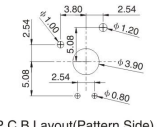
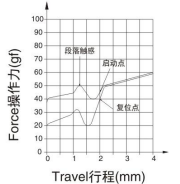
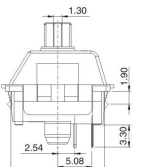
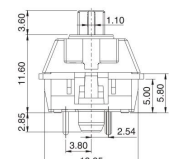
**PK150T**  
无断落感 无声音



- Specification:
1. Rating: 12V AC/DC max. 2V DC min  
10mA AC/DC max. 10  $\mu$ A DC min
  2. Contact Resistance: 200m $\Omega$  max
  3. Insulation Resistance: 100M $\Omega$  Min(DC100V)
  4. Withstand Voltage: AC500V(50-60Hz) for 1minute
  5. Bounce Time:  $\leq$  5msec(at 16in/sec.actuation speed)
  6. Operating Force: 60 $\pm$ 10gf
  7. Tactile Force: 50 $\pm$ 10gf
  8. Conduction travel: 2.00mm $\pm$ 0.6mm
  9. Breaking travel: 1.5mm $\pm$ 0.6mm
  10. Total Travel: 4.0 $\pm$ 0.5mm



Circuit Diagram

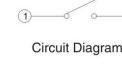
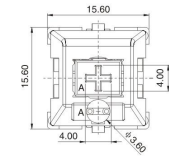


P.C.B Layout (Pattern Side)

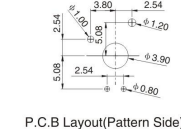
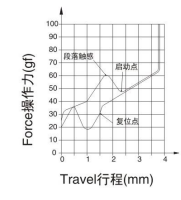
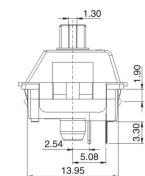
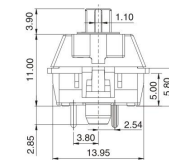
**PK150Q**  
有断落感 有声音



- Specification:
1. Rating: 12V AC/DC max. 2V DC min  
10mA AC/DC max. 10  $\mu$ A DC min
  2. Contact Resistance: 200m $\Omega$  max
  3. Insulation Resistance: 100M $\Omega$  Min(DC100V)
  4. Withstand Voltage: AC500V(50-60Hz) for 1minute
  5. Bounce Time:  $\leq$  5msec(at 16in/sec.actuation speed)
  6. Operating Force: 60 $\pm$ 10gf
  7. Tactile Force: 50 $\pm$ 10gf
  8. Conduction travel: 2.00mm $\pm$ 0.6mm
  9. Breaking travel: 1.5mm $\pm$ 0.6mm
  10. Total Travel: 4.0 $\pm$ 0.5mm



Circuit Diagram

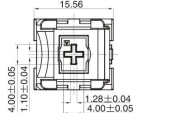


P.C.B Layout (Pattern Side)

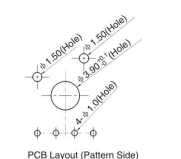
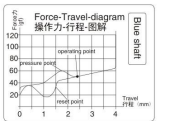
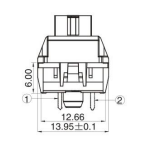
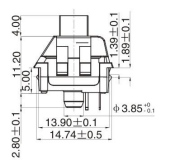
**PK-150F**  
防尘型



- Specification:
1. Rating: 12V AC/DC max. 2V DC min  
10mA AC/DC max. 10  $\mu$ A DC min
  2. Contact Resistance: 200m $\Omega$  max
  3. Insulation Resistance: 100M $\Omega$  Min(DC100V)
  4. Withstand Voltage: AC500V(50-60Hz) for 1minute
  5. Bounce Time:  $\leq$  5msec(at 16in/sec.actuation speed)
  6. Operating Force: 60 $\pm$ 10gf
  7. Tactile Force: 50 $\pm$ 10gf
  8. Conduction travel: 2.00mm $\pm$ 0.6mm
  9. Breaking travel: 1.5mm $\pm$ 0.6mm
  10. Total Travel: 4.0 $\pm$ 0.5mm



Circuit Diagram

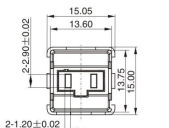


P.C.B Layout (Pattern Side)

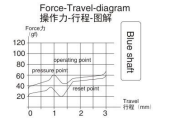
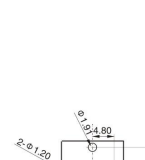
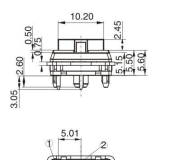
**PK-150H**  
超薄型



- Specification:
1. Rating: 12V AC/DC max. 2V DC min  
10mA AC/DC max. 10  $\mu$ A DC min
  2. Contact Resistance: 200m $\Omega$  max
  3. Insulation Resistance: 100M $\Omega$  Min(DC100V)
  4. Withstand Voltage: AC500V(50-60Hz) for 1minute
  5. Bounce Time:  $\leq$  5msec(at 16in/sec.actuation speed)
  6. Operating Force: 60 $\pm$ 10gf
  7. Tactile Force: 50 $\pm$ 10gf
  8. Conduction travel: 1.50mm $\pm$ 0.5mm
  9. Breaking travel: 3.0mm $\pm$ 0.5mm
  10. Operation number: 50,000,000cycles



Circuit Diagram

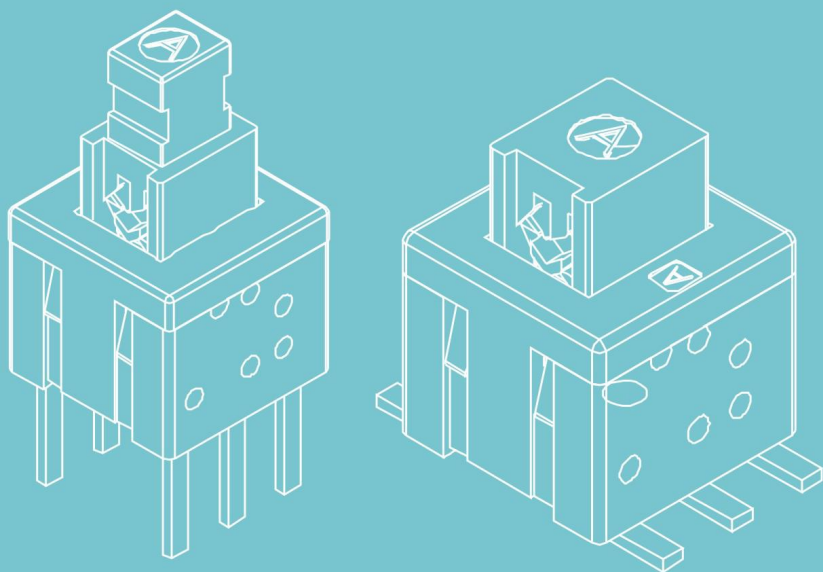


P.C.B Layout (Pattern Side)



# PUSH-KEY SWITCH SERIES

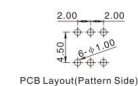
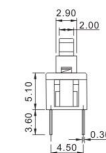
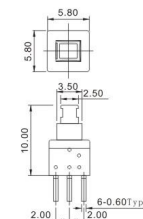
按鍵開關系列



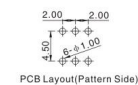
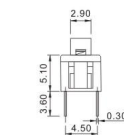
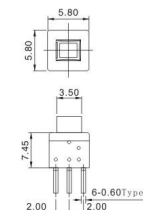
按鍵開關 · PUSH-KEY SWITCH SERIES



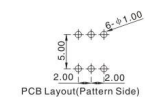
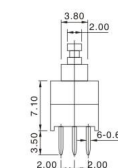
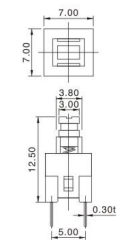
**PB585810D01**



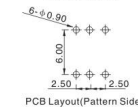
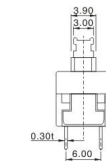
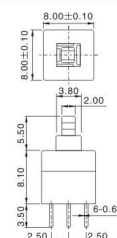
**PB282807D01**



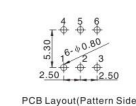
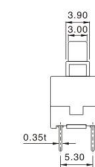
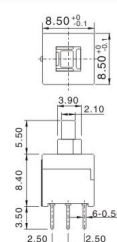
**PB707012D01**



**PB808014D01**

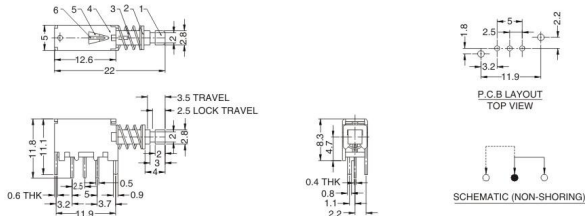


**PB858514D01**

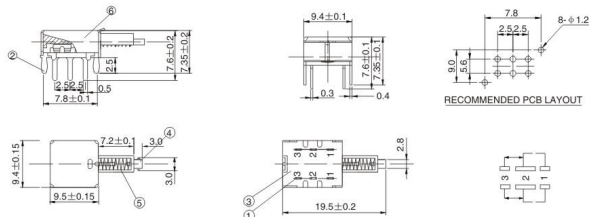
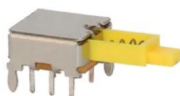




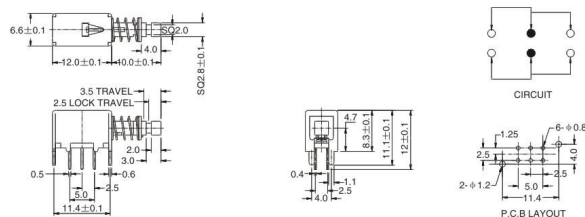
## PS-12E05A



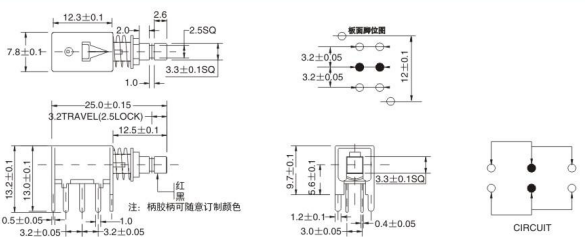
## PS-22E02



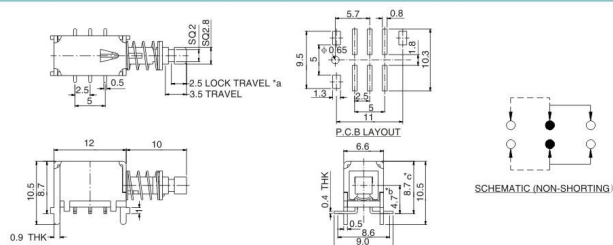
## PS-22E05



## PS-22F03A03



## PS-22E25



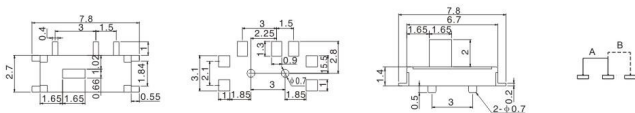
## SLIDE SWITCH SERIES

撥動開關系列

### SS-1201



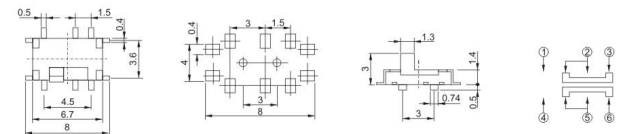
Contact type: 1P2T, travel: 1.5  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 160gf



### SS-2201



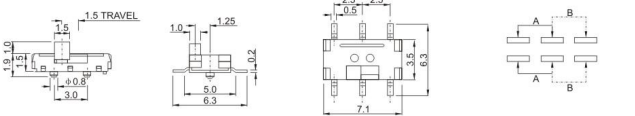
Contact type: 2P2T, travel: 1.5  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 300gf



### SS-2202



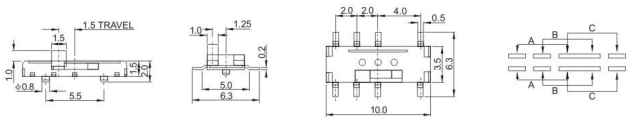
Contact type: 2P2T, travel: 1.5  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 300gf



### SS-2302



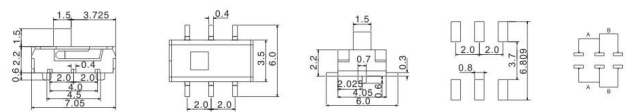
Contact type: 2P3T, travel: 1.5  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 250gf



### SS-2218A



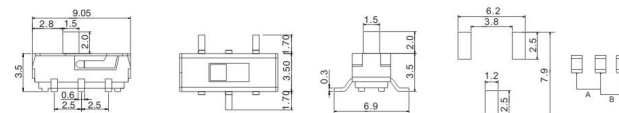
Contact type: 2P2T, travel: 1.5  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 130gf



### SS-1134



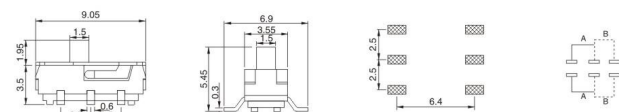
Contact type: 1P2T, travel: 2.0  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SS-2218S



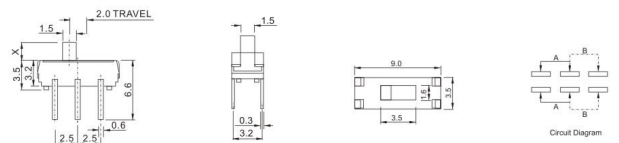
Contact type: 2P2T, travel: 2.0  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SS-2218



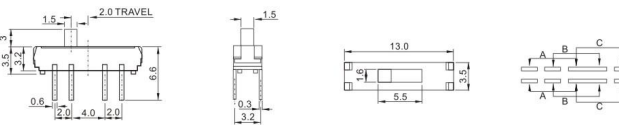
Contact type: 2P2T, travel: 2.0  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



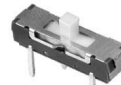
### SS-2318



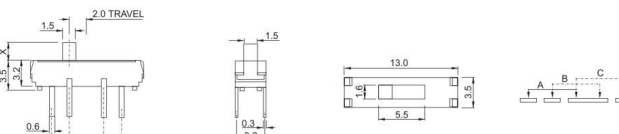
Contact type: 2P3T, travel: 2.0  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SS-1321



Contact type: 1P3T, travel: 2.0  
 1. The rated load DC: 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 300gf

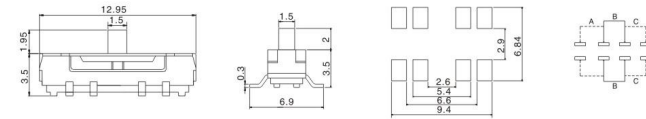




### SS-2318S



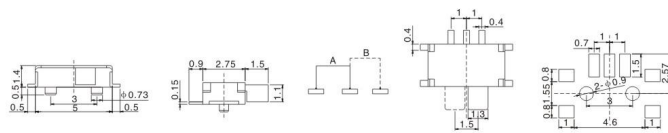
Contact type: 2PST, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 250gf



### SK-1201B



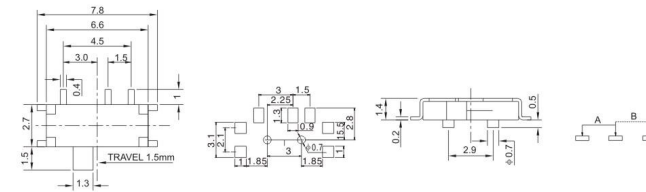
Contact type: 1P2T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 160gf



### SK-1201A



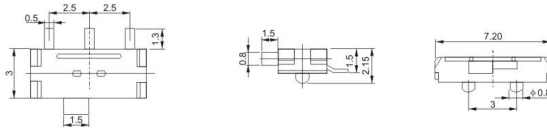
Contact type: 1P2T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 160gf



### SK-1213



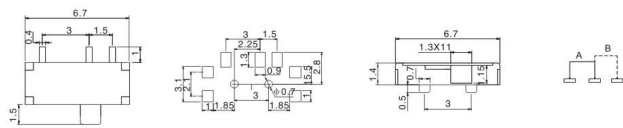
Contact type: 1P2T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 160gf



### SK-1201



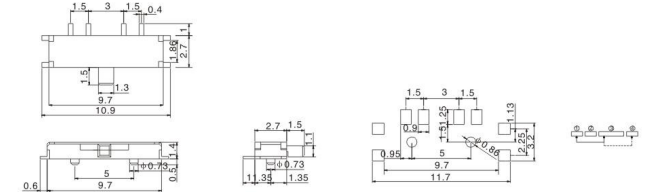
Contact type: 1P2T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 160gf



### SK-1203



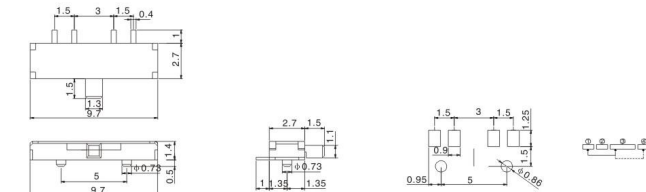
Contact type: 1P3T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-1301



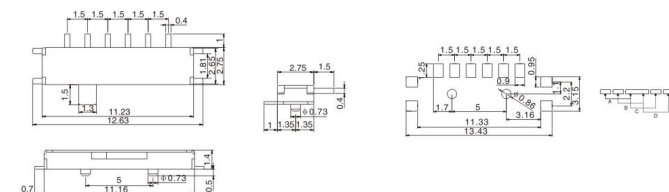
Contact type: 1P3T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-1123



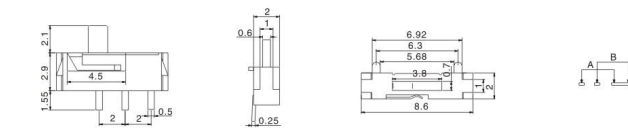
Contact type: 1P4T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-1218A



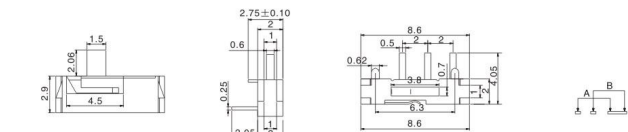
Contact type: 1P2T, Right to reset, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 150gf



### SK-1218



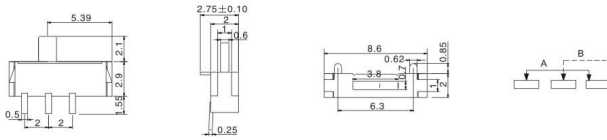
Contact type: 1P2T, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 120gf



### SK-1218B



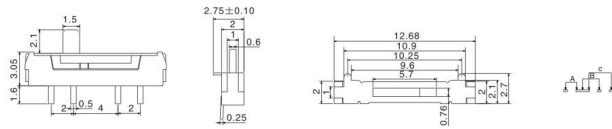
Contact type: 1P2T / Left reset, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 150gf



### SK-1312



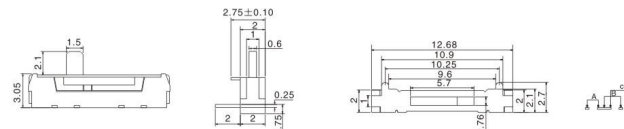
Contact type: 1P3T / reset, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 150gf



### SK-1321A



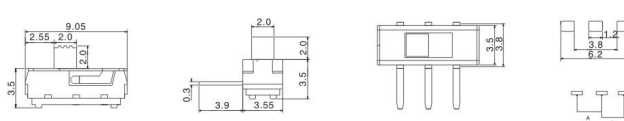
Contact type: 1P3T / reset, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-1219



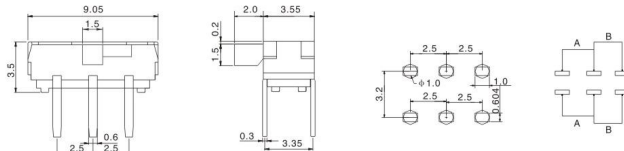
Contact type: 1P2T, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-2218



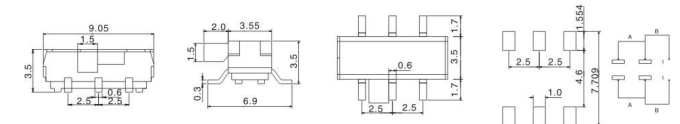
Contact type: 2P2T, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-1220A



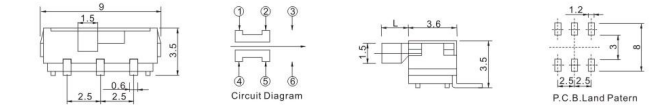
Contact type: 2P2T, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-1200



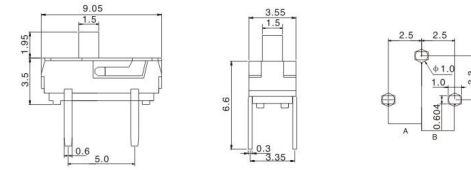
Contact type: 1P2T, travel: 1.5  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 180gf



### SK-1217



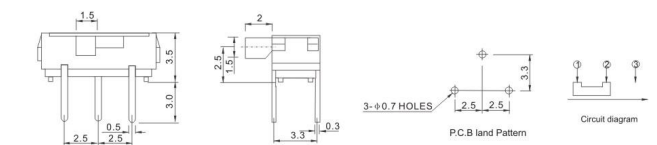
Contact type: 1P2T, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-1220



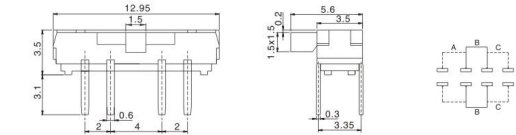
Contact type: 1P2T, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 200gf



### SK-2318



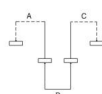
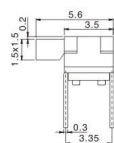
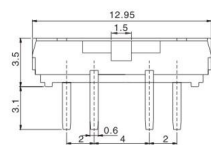
Contact type: 2P3T, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50\text{m}\Omega$   
 3. Insulation impedance:  $\geq 100\text{M}\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5^\circ\text{C}$   
 5. The service life of the: 10,000 cycles  
 6. The use of temperature:  $-25^\circ\text{C}$  to  $80^\circ\text{C}$   
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 250gf



### SK-1321



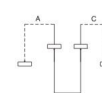
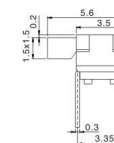
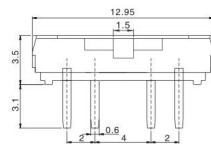
- Contact type: 1PST, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50m\Omega$   
 3. Insulation impedance:  $\geq 100m\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5$  °5s  
 5. The service life of the: 10,000 cycles  
 6. The use of temperature: -25 °C to 80 °C  
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 300gf



### SK-1321A



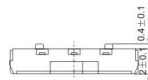
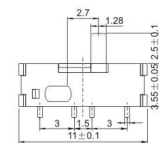
- Contact type: 1PST, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50m\Omega$   
 3. Insulation impedance:  $\geq 100m\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5$  °5s  
 5. The service life of the: 10,000 cycles  
 6. The use of temperature: -25 °C to 80 °C  
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 300gf



### SK-1210A



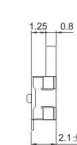
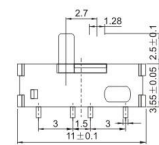
- Contact type: 1P2T/reset, travel: 2.7  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50m\Omega$   
 3. Insulation impedance:  $\geq 100m\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5$  °5s  
 5. The service life of the: 10,000 cycles  
 6. The use of temperature: -25 °C to 80 °C  
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 250gf



### SK-1210



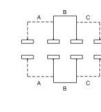
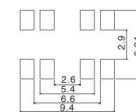
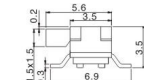
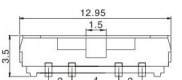
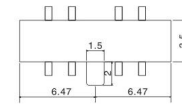
- Contact type: 1P2T/reset, travel: 2.7  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50m\Omega$   
 3. Insulation impedance:  $\geq 100m\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5$  °5s  
 5. The service life of the: 10,000 cycles  
 6. The use of temperature: -25 °C to 80 °C  
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 250gf



### SK-2318S

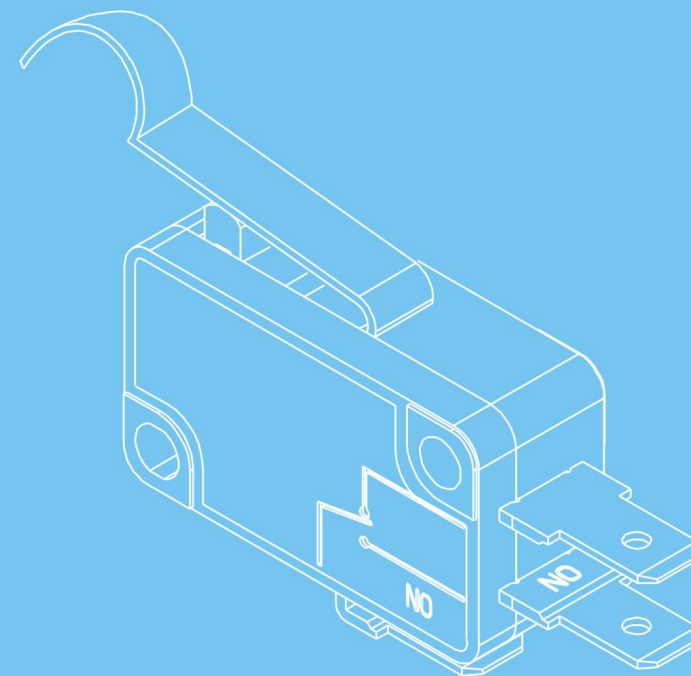


- Contact type: 2PST, travel: 2.0  
 1. The rated load: DC 4V 300mA  
 2. Contact impedance:  $\leq 50m\Omega$   
 3. Insulation impedance:  $\geq 100m\Omega$  DC500V  
 4. Resistance welding temperature:  $250 \pm 5$  °5s  
 5. The service life of the: 10,000 cycles  
 6. The use of temperature: -25 °C to 80 °C  
 7. Use the humidity:  $\leq 85\%$  RH  
 8. Operating force: 250gf

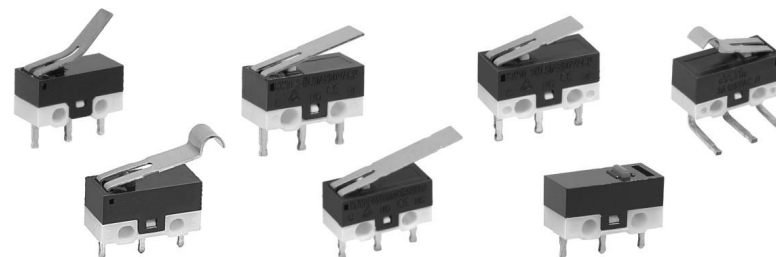
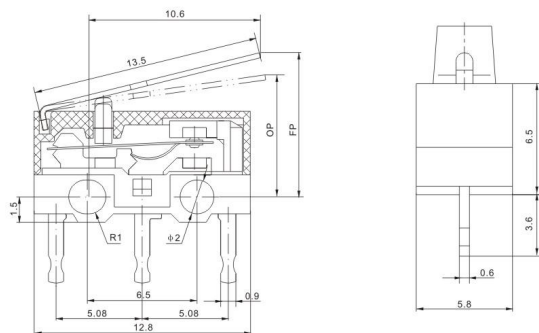
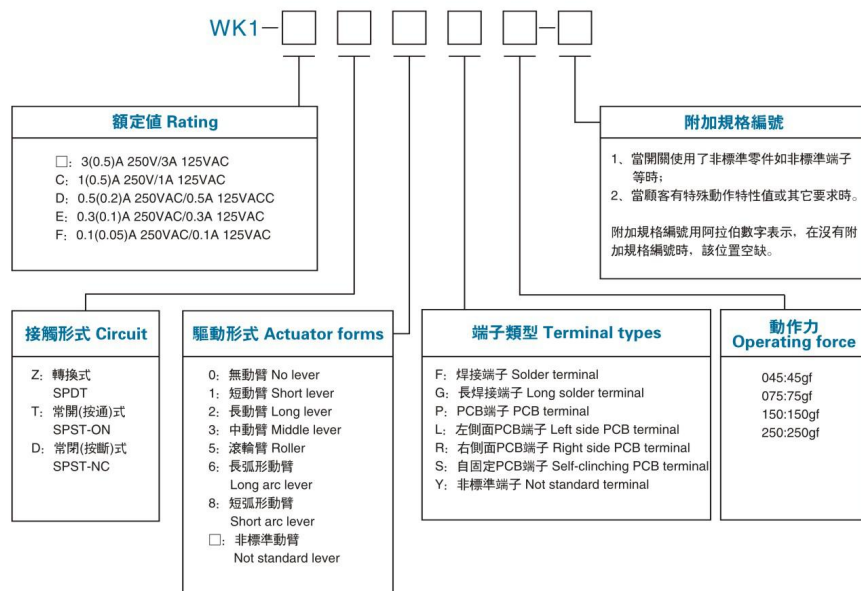


## MICRO SWITCH SERIES

### 微動開關系列



## MICRO SWITCH微动开关 料号编码原则



| 接線端尺寸 Terminal dimensions                                        |                                     |                                         |                                    |
|------------------------------------------------------------------|-------------------------------------|-----------------------------------------|------------------------------------|
| PCB端子<br>PCB Terminal                                            | 長焊接端子<br>Long solder terminal       | 自固定PCB端子<br>Self-clinching PCB terminal |                                    |
| <p>公共端 Common terminal    常開端 NO terminal    常閉端 NC terminal</p> |                                     |                                         |                                    |
| 左側面PCB端子<br>Left side PCB terminal                               | 右側面PCB端子<br>Right side PCB terminal | 焊接端子<br>Solder terminal                 | 焊接小型端子<br>Minitype solder terminal |
|                                                                  |                                     |                                         |                                    |
| 安裝孔尺寸圖 Mounting hole dimensions                                  |                                     |                                         |                                    |
| PCB端子<br>PCB Terminal                                            | 左側面PCB端子<br>Left side PCB terminal  | 右側面PCB端子<br>Right side PCB terminal     |                                    |
|                                                                  |                                     |                                         |                                    |
| 接觸形式說明圖 Circuit illustration                                     |                                     |                                         |                                    |
| 轉換式SPDT                                                          | 常開(按通)式SPST-NO                      | 常閉(按斷)式SPST-NC                          |                                    |
|                                                                  |                                     |                                         |                                    |



## MICRO SWITCH微动开关 料号编码原则



WK2

### 彈簧形式 Spring Type

無標記 No mark:  
黃片 Spring (此系列只有5A)  
S: 拉簧 Pull Spring

### 額定值 Rating

無標記 No mark:  
5A 250V AC/125V AC  
A: 10A 250V AC

### 接觸形式 Circuit

Z: 轉換式 SPDT  
T: 常開 (按通) 式 SPST-NO  
D: 常閉 (按斷) 式 SPST-NC

### 驅動形式 Actuator forms

O: 無動臂 No lever  
1: 短動臂 Short lever  
2: 長動臂 Long lever  
3: 中動臂 Middle lever  
5: 滾動臂 Roller  
6: 弧形動臂 Arc lever  
□: 非標準動臂 Not standard lever  
注: □表示非標準動臂的代號,  
詳見動臂尺寸圖。

### 附加規格編號和外殼顏色代號, 適用於:

- 1、當開關使用了非標準零件如非標準端子等時;
- 2、當顧客有特殊動作特性值或其它要求時。

附加規格編號用阿拉伯數字表示, 在沒有附加規格編號時, 該位置空缺。

### 按鈕規格 Plunger specs

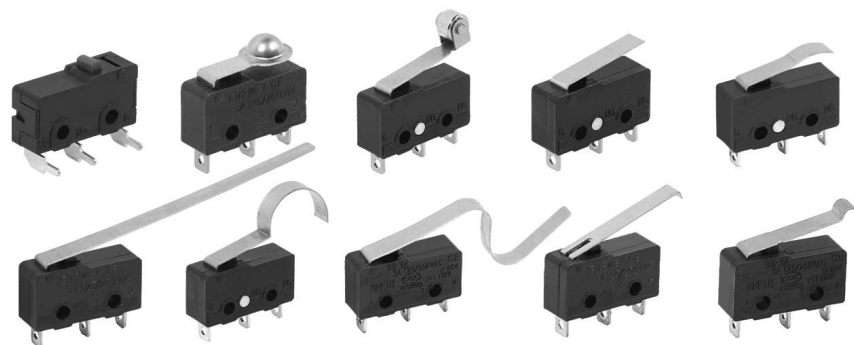
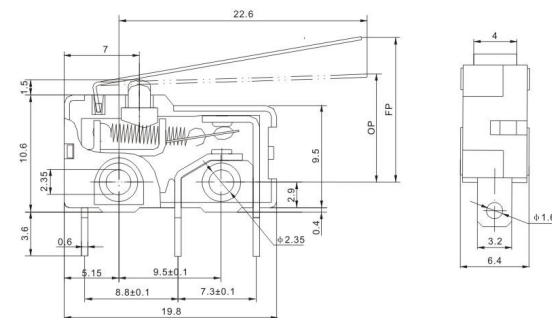
黃片系列  
無標記: 標準按鈕 (1.7mm)  
A: 短按鈕 (1.2mm)  
D: 异形按鈕 (3mm)  
拉簧系列  
無標記: 標準按鈕 (1.5mm)  
A: 短按鈕 (1.3mm)  
B: 長按鈕 (3mm)  
D: 异形按鈕 (3.9mm)

### 動作力 Operating force

100: 100gf  
150: 150gf  
200: 200gf  
300: 300gf  
注: 若是非動作動作力, 用此動作力上限值表示。

### 端子類型 Terminal types

F: 焊接端子 Solder terminal  
P: PCB端子 PCB terminal  
L: 左側面PCB端子 Left side PCB terminal  
R: 右側面PCB端子 Right side PCB terminal  
T: 110快接端子 Quick-connect terminal  
Y: 非標準端子 Not standard terminal



### 按鈕規格說明圖 Plunger spec illustration (拉簧系列)

| 無標記: | A | D |
|------|---|---|
|      |   |   |

### 按鈕規格說明圖 Plunger spec illustration (黃片系列)

| 無標記: | A | B | D |
|------|---|---|---|
|      |   |   |   |

| 接綫端尺寸 Terminal dimensions          |  |                                        |                                     |                                     |  |
|------------------------------------|--|----------------------------------------|-------------------------------------|-------------------------------------|--|
| 焊接端子<br>Solder Terminal            |  | 快捷端子#110<br>Quick connect terminal#110 |                                     | PCB端子<br>PCB terminal               |  |
|                                    |  |                                        |                                     |                                     |  |
| 左側面PCB端子<br>Left side PCB terminal |  |                                        | 右側面PCB端子<br>Right side PCB terminal |                                     |  |
|                                    |  |                                        |                                     |                                     |  |
| 安裝孔尺寸圖 Mounting hole dimensions    |  |                                        |                                     |                                     |  |
| PCB端子<br>PCB terminal              |  | 左側面PCB端子<br>Left side PCB terminal     |                                     | 右側面PCB端子<br>Right side PCB terminal |  |
|                                    |  |                                        |                                     |                                     |  |
| 接觸形式說明圖 Circuit illustration       |  |                                        |                                     |                                     |  |
| 轉換式 SPDT                           |  | 常開(按通)式 SPST-NO                        |                                     | 常閉(按斷)式 SPST-NC                     |  |
|                                    |  |                                        |                                     |                                     |  |

## MICRO SWITCH 微动开关

### 料号编码原则



WK3

#### 額定值 Rating

25:25(4)A 250VAC  
16:16(4)A 250VAC/16A125VAC  
10:10(3)A 250VAC/10A125VAC  
5:5(2)A 250VAC/5A125VAC  
1:1(0.3)A 250VAC/1A125VAC

#### 接觸形式 Circuit

Z: 轉換式 SPDT  
T: 常開(接通)式 SPST-NO  
D: 常閉(按斷)式 SPST-NC

#### 驅動形式 Actuator forms

0: 無動臂No lever  
A1/1: 短動臂Short lever  
A2/2: 長動臂Long lever  
A3/3: 中動臂Middle lever  
A4/4: 短滾輪臂Short roller  
A5/5: 長滾輪臂Long roller  
A6/6: 弧形動臂Arc lever  
A□□: 非標準動臂Not standard lever  
注:  
1)A表示動臂安裝在靠近按鈕的位置。  
無字母A表示動臂安裝在離按鈕較遠的位置。  
2)□表示非標準動臂的代號, 詳見動臂尺寸圖。

#### 外殼材質 Case material

無標記No mark: 熱塑性  
G: 熱固性

#### 外形特徵 Outline characteristic

無標記No mark: 基本形  
B: 平端形  
C: 公共端側面形

#### 附加規格編號和外殼顏色代號, 適用於:

- 當開關使用了非標準零件如非標準端子等時;
- 當顧客有特殊動作特性值或其它要求時。
- 當開關外殼顏色不是默認的灰色時, 如黑色用B表示。

附加規格編號用阿拉伯數字表示, 在沒有附加規格編號時, 該位置空缺。

#### 觸點間隙 Contact gap

無標記 No mark: 0.5mm  
X: 1mm  
Y: 3mm

#### 按鈕規格 Plunger specs

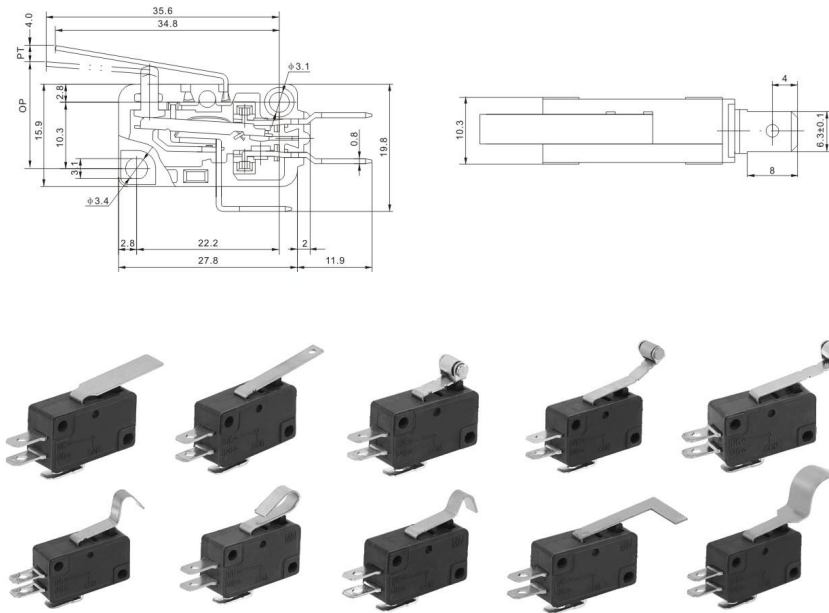
無標記: 標準按鈕 (2.8mm)  
A: 短按鈕 (2.6mm)  
B: 中長按鈕 (3.2mm)  
C: 長按鈕 (6.2mm)  
D: 平端按鈕 (3.8mm)

#### 動作力 Operating force

015: 15gf  
025: 25gf  
050: 50gf  
100: 100gf  
150: 150gf  
200: 200gf  
300: 300gf  
400: 400gf

#### 端子類型 Terminal types

A: 250快捷端子  
Quick-connect terminal  
B: 187快捷端子 (厚0.80mm)  
C: 187快捷端子 (厚0.5mm)  
D: 焊接/187共用端子  
Solder/187 common terminal  
E: 螺孔端子Screw terminal  
F: 焊接端子Solder terminal  
L: 左側面PCB端子  
Left side PCB terminal  
R: 右側面PCB端子  
Right side PCB terminal  
H: 250快捷端子之二  
Y: 非標準端子  
Not standard terminal



按鈕規格說明圖 Plunger spec illustration

| 無標記: | A | B | C | D |
|------|---|---|---|---|
|      |   |   |   |   |

外形特徵說明圖 Outline characteristic illustration

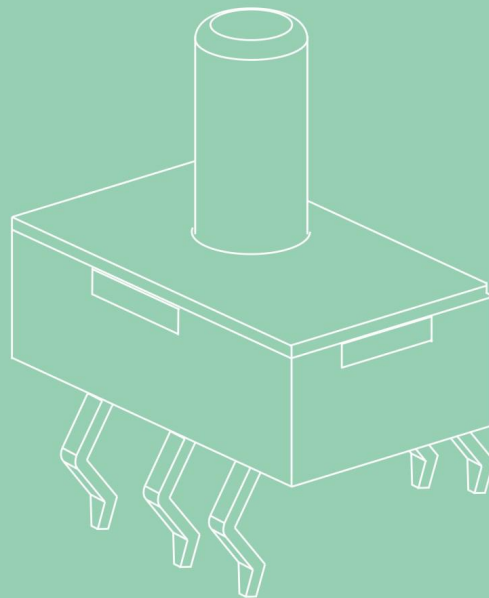
| 基本型Basic form | 平端型Flat form | 公共端側面形<br>Side common terminal |
|---------------|--------------|--------------------------------|
|               |              |                                |

接線端尺寸 Terminal dimensions

| 端子種類                                              | 快捷端子#250<br>Quick connect<br>terminal #250 | 快捷端子#187(t=0.8)<br>Quick connect<br>terminal #187 | 快捷端子#187(t=0.5)<br>Quick connect<br>terminal #187 | 焊接/快捷#187公用端子<br>Solder/Quick connect<br>terminal #187 |
|---------------------------------------------------|--------------------------------------------|---------------------------------------------------|---------------------------------------------------|--------------------------------------------------------|
| 下公共端<br>Bottom<br>Common<br>terminal              |                                            |                                                   |                                                   |                                                        |
| 側公共端<br>Side<br>Common<br>terminal                |                                            |                                                   |                                                   |                                                        |
| 端子尺寸<br>Terminal<br>dimensions                    |                                            |                                                   |                                                   |                                                        |
| 左側面PCB端子<br>Left side PCB<br>terminal             |                                            |                                                   |                                                   |                                                        |
| 右側面PCB端子<br>Right side PCB<br>terminal            |                                            |                                                   |                                                   |                                                        |
| 焊接端子<br>Solder<br>terminal                        |                                            |                                                   |                                                   |                                                        |
| 螺孔端子<br>Screw<br>terminal                         |                                            |                                                   |                                                   |                                                        |
| 快捷端子#250之二<br>Quick connect<br>terminal #250 No.2 |                                            |                                                   |                                                   |                                                        |
| 安裝孔尺寸圖 Mounting hole dimensions                   |                                            |                                                   |                                                   |                                                        |
|                                                   |                                            |                                                   |                                                   |                                                        |

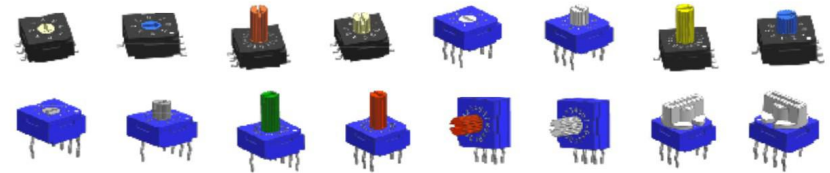
# ROTARY CODED SWITCH SERIES

編碼開關系列



KKG

## R9 Series — Rotary Coded Switch



### Features

- Sealed Construction; No Tape Seal Required.
- Surface Mount or Thru-Hole Style.
- Tube or Tape and Reel Packaging.
- Octal, BCD, and Hexadecimal Code.
- In Real or Complement.
- Standard and Right Angle Mount.
- Flush or Extended Actuators.
- Gold-Plated Contacts.
- Waterproof meet Ip67.

### Specifications

- Contact Rating  
Switching: 5VDC 20mA (Min. AC/DC 20mA)  
Non Switching: Max. 50VDC 100mA
- Contact Resistance: 100mΩ Max
- Insulation Resistance: 1,000MΩ Min. at 100VDC
- Dielectric Strength: 250VAC for 1 minute
- Operating Force: 400gf/cm Max. (Standard)  
200gf/cm Max. (N type)
- Life: 20,000 Steps
- Operating Temperature: -40°C~+85°C  
: -40°C~+125°C(Reflow Soldering)
- Storage Temperature: -40°C~+85°C
- Wave Soldering: 270°C 5 Sec. Max.
- Reflow Soldering: 260°C 10~30 Sec. Max.
- Hand Soldering: 350°C 3 Sec. Max

### Position



### Code Format

| No. of positions   |           | (08 positions) |   |   |   |   |   |   |   | (16 positions) |   |   |   |   |   |   |   |
|--------------------|-----------|----------------|---|---|---|---|---|---|---|----------------|---|---|---|---|---|---|---|
|                    |           | 0              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8              | 9 | A | B | C | D | E | F |
| Code               | Position  | 8              |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |
|                    | Real code | 4              |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |
|                    | 2         | 1              |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |
|                    | 1         |                |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |
| Complementary code | 8         |                |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |
|                    | 4         |                |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |
|                    | 2         |                |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |
|                    | 1         |                |   |   |   |   |   |   |   |                |   |   |   |   |   |   |   |

### Package

| P/N       | No. Of Pole  | Quantity per Tube | P/N       | No. Of Pole  | Quantity per Tube |
|-----------|--------------|-------------------|-----------|--------------|-------------------|
| R92_H/T/S | 08 / 10 / 16 | 50                | R9_0/1S-R | 08 / 10 / 16 | 600               |
| R92_V/Y   | 08 / 10 / 16 | 45                | R9_2/3S-R | 08 / 10 / 16 | 350               |
| R93_H/T/S | 08 / 10 / 16 | 50                | R9_7S-R   | 08 / 10 / 16 | 200               |
| R93_V/Y   | 08 / 10 / 16 | 45                | R9_7H/T-R | 08 / 10 / 16 | 140               |
| R94_H/T/S | 08 / 10 / 16 | 50                |           |              |                   |
| R94_V     | 08 / 10 / 16 | 45                |           |              |                   |

### Knob Order Information



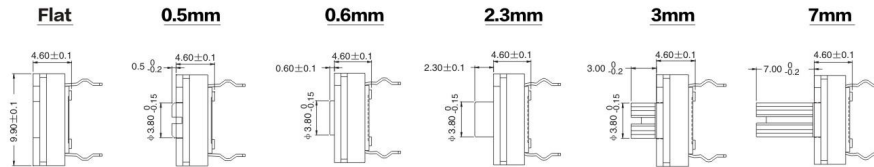
### Order Information

|                                                                          |    |   |   |    |   |   |   |   |    |    |                                                                                                                                                                                                                     |                                           |
|--------------------------------------------------------------------------|----|---|---|----|---|---|---|---|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| None=Tube<br>Contact area with Gold-plated<br>Terminal with Tin-plated   | R9 | K | 3 | 10 | R | 0 | S | N | -R | -U | Halogen Free<br>None=Standard<br>U=Halogen Free                                                                                                                                                                     | Package<br>None=Standard<br>R=Tape & Reel |
| Special Code<br>None=Standard<br>K=Black(Thru-Hole)<br>W=White           |    |   |   |    |   |   |   |   |    |    | Operating Force<br>None=400gf/cm Max. (Standard)<br>N=200gf/cm Max.                                                                                                                                                 |                                           |
| Pin Out<br>2=3+2pin<br>3=3+3pin<br>4=4+1pin                              |    |   |   |    |   |   |   |   |    |    | Terminal Type<br>H=Thru Hole<br>S=SMD<br>V=Right Angle 2.54mm (Thru hole)<br>Y=Right Angle 5.08mm (Thru hole)<br>T=Thru Hole for Reflow Soldering                                                                   |                                           |
| No. of positions<br>08:8 positions<br>10:10 positions<br>16:16 positions |    |   |   |    |   |   |   |   |    |    | Rotor Style<br>0=Flat(Arrow)<br>1=0.5mm(Minus Slot)<br>3=3mm(Minus Slot)<br>7=7mm(Minus Slot)<br>1A=0.6mm(Minus Slot with side arrow)<br>2A=2.3mm(Minus Slot with side arrow)<br>7A=7mm(Minus Slot with side arrow) |                                           |
| Code:<br>R=Real Code<br>C=Complement Code                                |    |   |   |    |   |   |   |   |    |    |                                                                                                                                                                                                                     |                                           |

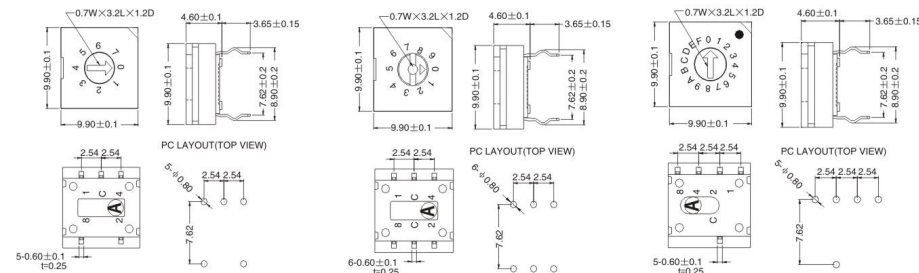


## R9 Series — Rotary Coded Switch

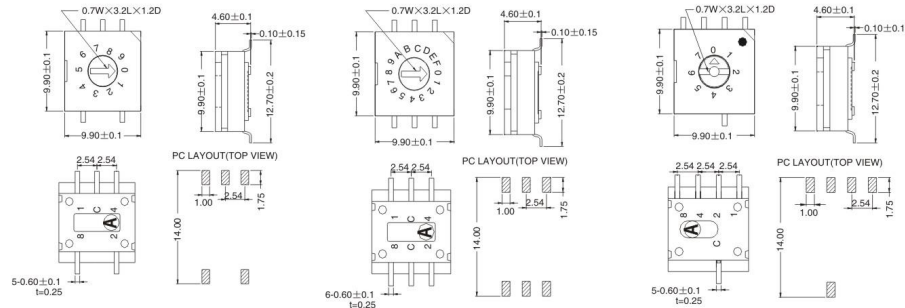
### ● Rotor



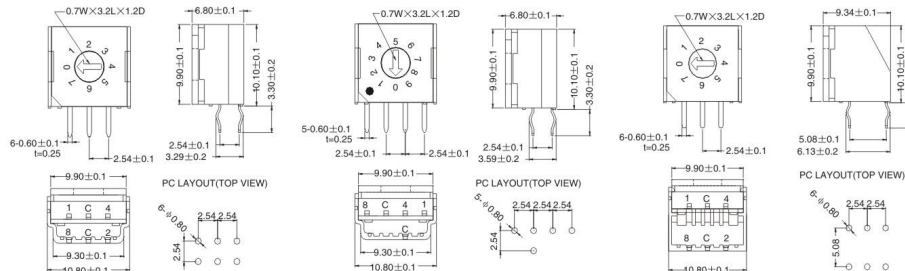
### ● R9—H (Thru-Hole)



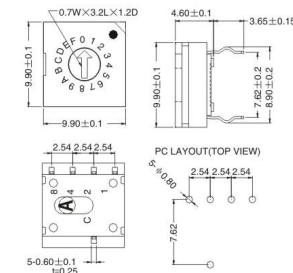
### ● R9—S (SMD)



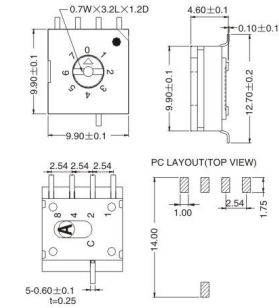
### ● R9—V (Right Angle 2.54mm)



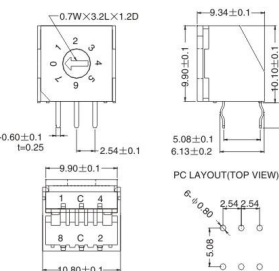
### ● \*A type rotor



### ● \*A type rotor



### ● R9—Y (Right Angle 5.08mm)



## R7 Series — Miniature Rotary Coded Switch



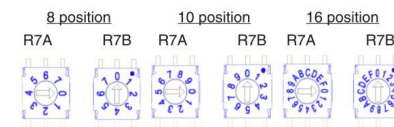
### Features

- Miniature Size, with Stainless Steel cover.
- Sealed Construction; No Tape Seal Required.
- Center Common terminal pins location.
- Surface Mount or Thru-Hole Style.
- Tube or Tape and Reel Packaging.
- Octal, BCD, and Hexadecimal Code.
- In Real or Complement.
- Standard and Right Angle Mount.
- Flush or Extended Actuators.
- Standard: Gold-Plated type
- Waterproof meet IP67.

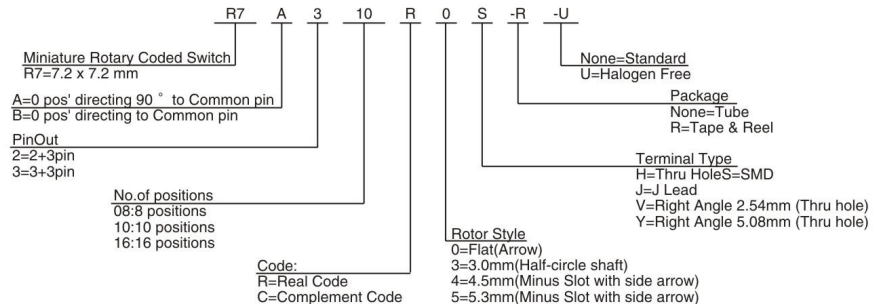
### Specifications

- Contact Rating  
Switching: 5VDC 100mA (Min. AC/DC 20mV 1μA)  
Non Switching: Max. 50VDC 100mA
- Contact Resistance: 100mΩMax
- Insulation Resistance: 1,000MΩMin. at 100VDC
- Dielectric Strength: 250VAC for 1 minute
- Operating Force: 2N Max.
- Life: 10,000 Steps
- Operating Temperature: -40°C~+85°C  
: -40~+125(Reflow Soldering)
- Storage Temperature: -40°C~+85°C
- Wave Soldering: 270°C 5 Sec. Max.
- Reflow Soldering: 260°C 10~30 Sec. Max.
- Hand Soldering: 350°C 3 Sec. Max

### Position

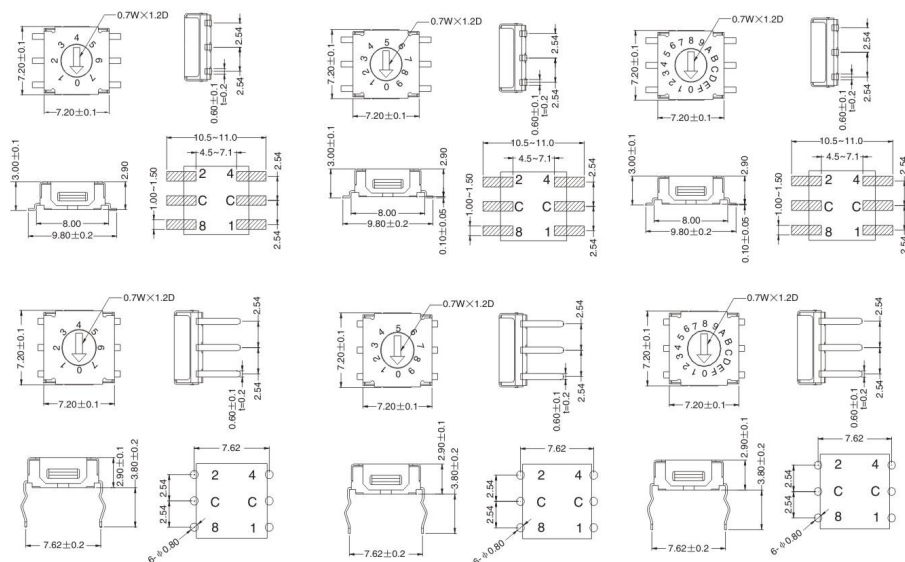


### Order Information

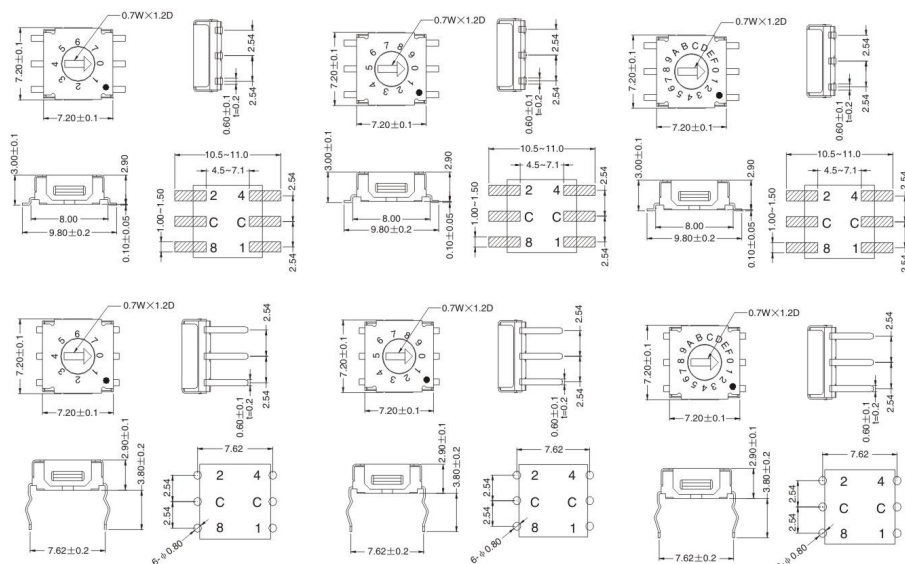


## R7 Series — Miniature Rotary Coded Switch

- **R7A**



● R78



## RS8 Series — Rotary Selector Switch



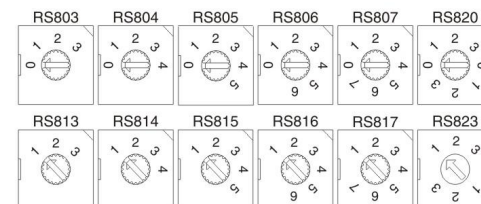
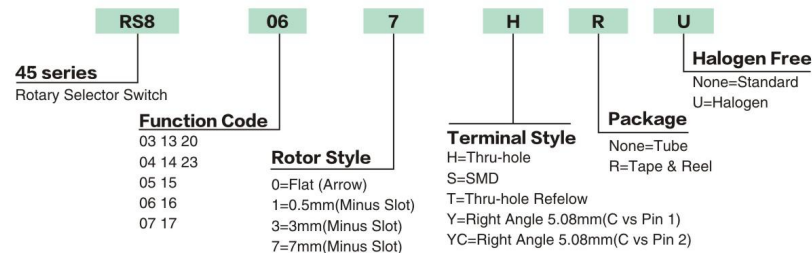
## Features

- Washable Meet IP67
- Gold plated contactor
- RoHS & REACH compliant
- Surface Mount & Thru-Hole style
- Flash & more version extended Rotor & Knob

## Electrical Characteristics

- Contact rating  
Non-switching: DC 50V 10mA  
Switching: DC 5V 100mA  
Minimum: DC 20mV 1  $\mu$ A
- Contact timing: Non-shorting
- Contact resistance (initial/after operating life): 60m $\Omega$ /100m $\Omega$
- Insulation resistance: 100M $\Omega$  (DC 100V)/Max
- Dielectric strength: 300VAC/1 minute

### Order Information



### Rotor Style

| Flat | 0.5mm | 3mm | 7mm |
|------|-------|-----|-----|
|      |       |     |     |

### Standard Specifications

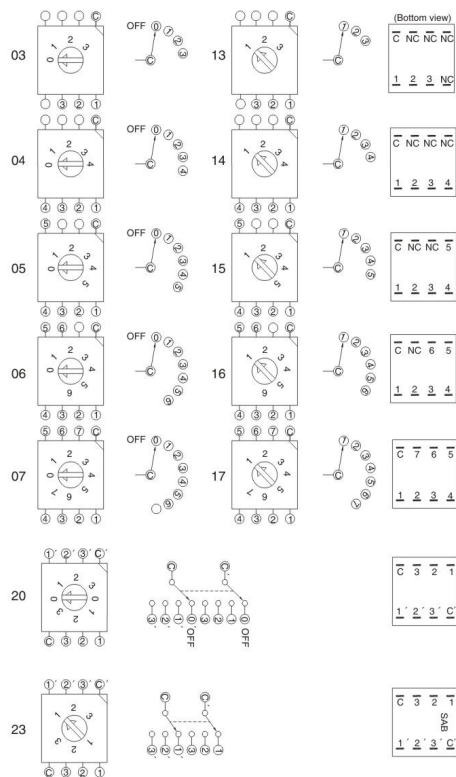
- Operating temperature range: -40℃~ +85℃
- ( Reflow soldering): -40℃~ +125℃
- Storage temperature range: -25℃~ +70℃
- Sealing: Washable by "O" ring
- Mechanical Life: 20,000 Steps

## Soldering Information

- Wave soldering: 270°C 5 Sec.Max.
- Reflow Soldering: 260°C 10~30 Sec.Max.
- Hand Soldering: 350°C 3 Secs.Max

## RS8 Series — Rotary Selector Switch

### ● Schematic & Terminal Connection



- **Package**

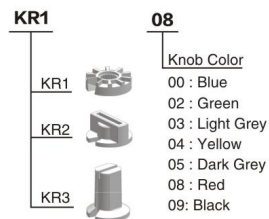
| P/N        | Function Code  | Quantity per Tube |
|------------|----------------|-------------------|
| RS8_H/T    | 03,04,05,06,07 | 50                |
| RS8_H/T    | 13,14,15,16,17 | 50                |
| RS8_H/T    | 20,23          | 50                |
| RS8_S      | 03,04,05,06,07 | 50                |
| RS8_S      | 13,14,15,16,17 | 50                |
| RS8_S      | 20,23          | 50                |
| RS8_Y      | 03,04,05,06,07 | 50                |
| RS8_Y      | 13,14,15,16,17 | 50                |
| RS8_Y      | 20,23          | 50                |
| P/N        | Function Code  | Quantity per Tube |
| RS8_0/1S-R | 03,04,05,06,07 | 600               |
| RS8_0/1S-R | 13,14,15,16,17 | 600               |
| RS8_0/1S-R | 20,23          | 600               |
| RS8_3S-R   | 03,04,05,06,07 | 350               |
| RS8_3S-R   | 13,14,15,16,17 | 350               |
| RS8_3S-R   | 20,23          | 350               |
| RS8_7S-R   | 03,04,05,06,07 | 200               |
| RS8_7S-R   | 13,14,15,16,17 | 200               |
| RS8_7S-R   | 20,23          | 200               |
| RS8_7H/T-R | 03,04,05,06,07 | 140               |
| RS8_7H/T-R | 13,14,15,16,17 | 140               |
| RS8_7H/T-R | 20,23          | 140               |

- **Dummy Terminals**

|             |      |
|-------------|------|
| 3 positions | ④⑤⑥⑦ |
| 4 positions | ⑤⑥⑦  |
| 5 positions | ⑥⑦   |
| 6 positions | ⑦    |
| 7 positions | --   |

\* NC= Dummy terminal

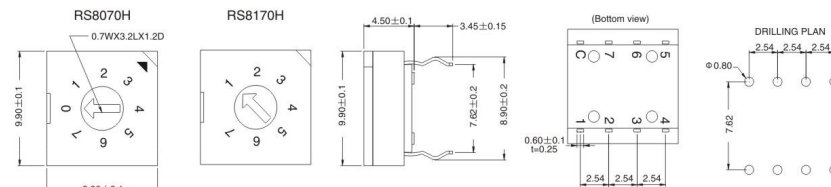
- **Knob Order Information**



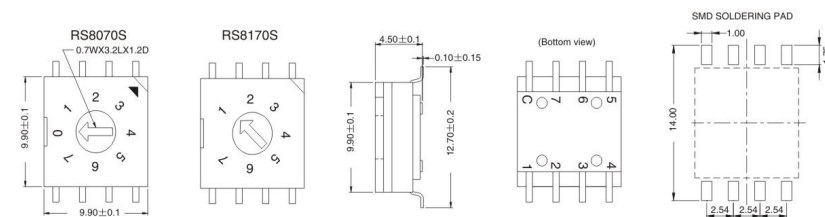
## RS8 Series — Rotary Selector Switch

## Outline Dimensions

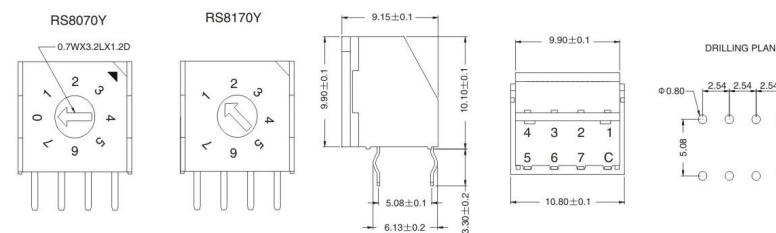
● RS803~07 /13~17 / 20,23\_H (Thru-Hole)



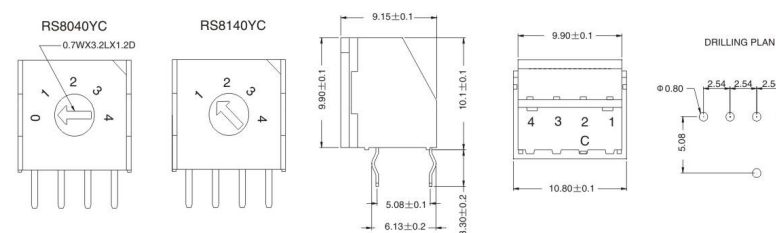
● RS803~17/13~17/20,23\_S (SMD)



● RS803~07/13~17/20,23\_Y (Right Angle 5.08mm, C vs Pin 1)



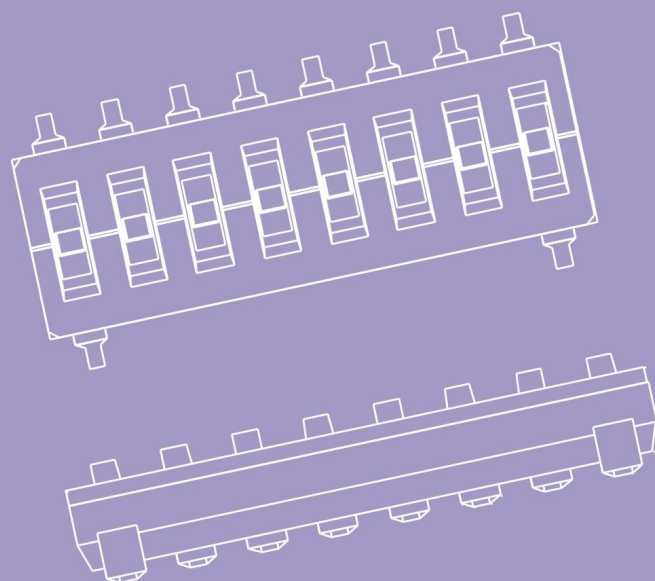
- RS8\_4\_YC (Right Angle 5.08mm, C vs Pin 2)



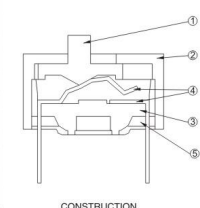
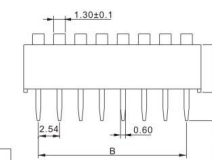
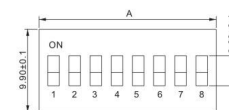
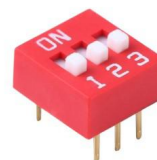


# DIP SWITCH SERIES

撥碼開關系列

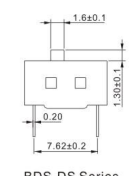


## DIP-DS(R)

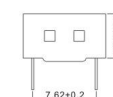


| Prod NO.  | No. of POS | DIM. A | DIM. B |
|-----------|------------|--------|--------|
| DS/DSR-01 | 01         | 3.84   | —      |
| DS/DSR-02 | 02         | 6.08   | 2.54   |
| DS/DSR-03 | 03         | 8.92   | 5.08   |
| DS/DSR-04 | 04         | 11.16  | 7.62   |
| DS/DSR-05 | 05         | 13.70  | 10.16  |
| DS/DSR-06 | 06         | 16.24  | 12.70  |
| DS/DSR-07 | 07         | 19.08  | 15.24  |
| DS/DSR-08 | 08         | 21.32  | 17.78  |
| DS/DSR-09 | 09         | 24.16  | 20.32  |
| DS/DSR-10 | 10         | 26.40  | 22.86  |
| DS/DSR-12 | 12         | 31.48  | 27.94  |

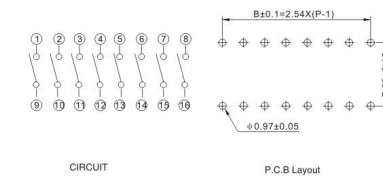
BDS-DS(R)-(XX)-(Color)-R  
 Actuator:  
 ( ): Raised Actuator  
 R: Recessed Actuator  
 Color of cover:  
 BL: Blue  
 R: Red  
 B: Black  
 Positions:  
 01-10, 12



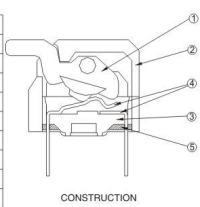
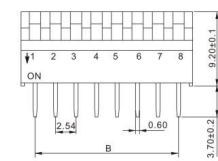
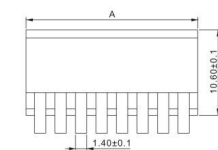
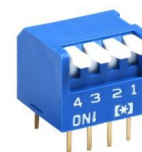
BDS-DS Series



BDS-DSR Series

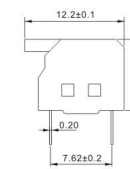


## DIP-DP(L)

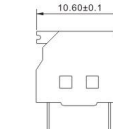


| Prod NO.  | No. of POS | DIM. A | DIM. B |
|-----------|------------|--------|--------|
| DPL-01    | 01         | 4.00   | 0      |
| DP/DPL-02 | 02         | 6.08   | 2.54   |
| DP/DPL-03 | 03         | 8.92   | 5.08   |
| DP/DPL-04 | 04         | 11.16  | 7.62   |
| DP/DPL-05 | 05         | 13.70  | 10.16  |
| DP/DPL-06 | 06         | 16.24  | 12.70  |
| DP/DPL-07 | 07         | 19.08  | 15.24  |
| DP/DPL-08 | 08         | 21.32  | 17.78  |
| DP/DPL-09 | 09         | 24.16  | 20.32  |
| DP/DPL-10 | 10         | 26.40  | 22.86  |
| DP/DPL-12 | 12         | 31.48  | 27.94  |

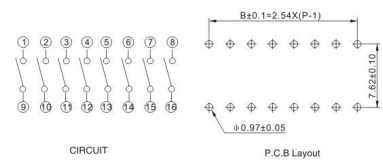
BDS-DP(L)-(XX)-(Color)-R  
 Key:  
 ( ): Short Key  
 L: Long Key  
 Positions:  
 01-10, 12  
 Color of cover:  
 BL: Blue  
 R: Red  
 B: Black



BDS-DP Series

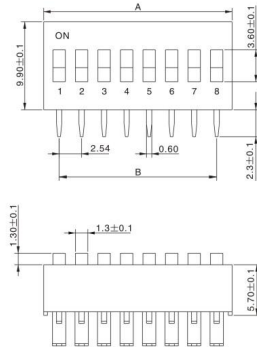


BDS-DPL Series





DIP-DA®

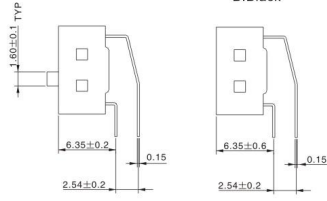


BDS-DA(R)-(XX)-(Color)-R-V

Key:  
( ) Long Key  
R Short Key

Positions:  
02-10,12

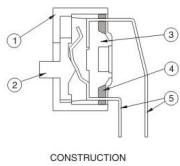
Color of cover:  
BL:Blue  
R:Red  
B:Black



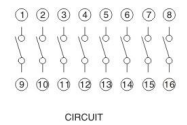
BDS-DA Series

BDS-DAR Series

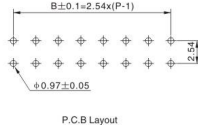
| ProdNo.   | No. of POS | DIM. A | DIM. B |
|-----------|------------|--------|--------|
| DA/DAR-02 | 02         | 6.02   | 2.54   |
| DA/DAR-03 | 03         | 8.92   | 5.08   |
| DA/DAR-04 | 04         | 11.16  | 7.62   |
| DA/DAR-05 | 05         | 13.70  | 10.16  |
| DA/DAR-06 | 06         | 16.24  | 12.70  |
| DA/DAR-07 | 07         | 19.08  | 15.24  |
| DA/DAR-08 | 08         | 21.32  | 17.78  |
| DA/DAR-09 | 09         | 24.16  | 20.32  |
| DA/DAR-10 | 10         | 26.40  | 22.86  |
| DA/DAR-12 | 12         | 31.48  | 27.94  |



CONSTRUCTION

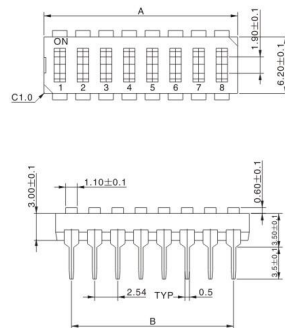
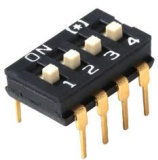


CIRCUIT



P.C.B Layout

DIP-NDI(R)



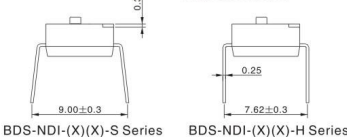
BDS-NDI(R)-(XX)(T)(S/H)-R-V

Key:  
( ) Long Key  
R Short Key

Positions:  
02-10,12

Terminal Type:  
S: Splay Terminal  
H: Straight Terminal

( ) Regular  
T: Top tape sealed



BDS-NDI(X)(X)-S Series

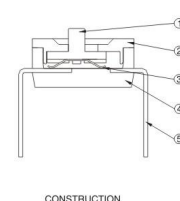
BDS-NDI(X)(X)-H Series



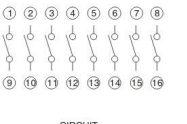
BDS-NDIR(X)(X)-S Series

BDS-NDIR(X)(X)-H Series

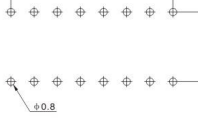
| ProdNo.     | No. of POS | DIM. A | DIM. B |
|-------------|------------|--------|--------|
| NDI/NDIR-02 | 02         | 6.02   | 2.54   |
| NDI/NDIR-03 | 03         | 8.56   | 5.08   |
| NDI/NDIR-04 | 04         | 11.10  | 7.62   |
| NDI/NDIR-05 | 05         | 13.64  | 10.16  |
| NDI/NDIR-06 | 06         | 16.18  | 12.70  |
| NDI/NDIR-07 | 07         | 18.72  | 15.24  |
| NDI/NDIR-08 | 08         | 21.26  | 17.78  |
| NDI/NDIR-09 | 09         | 23.80  | 20.32  |
| NDI/NDIR-10 | 10         | 26.34  | 22.86  |
| NDI/NDIR-12 | 12         | 31.42  | 27.94  |



CONSTRUCTION

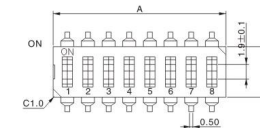


CIRCUIT



P.C.B Layout

DIP-DM(R)



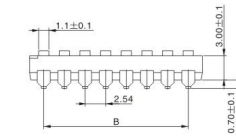
BDS-DM(R)-(XX)(T)-R(X)-V

Actuator Type:  
( ) Raised Actuator  
R Recessed Actuator

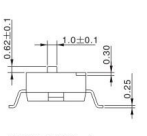
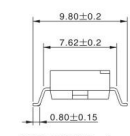
Package:  
( ) Tube  
RP: Reel

Positions:  
02-10,12 Position

( ) Regular  
T: Top tape sealed

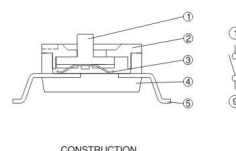


BDS-DMR Series

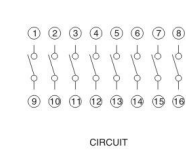


BDS-DM Series

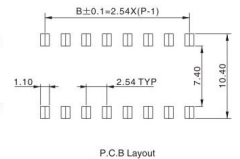
| Prod No.  | No. of pos | DIM. A | DIM. B |
|-----------|------------|--------|--------|
| DM/DMR-02 | 02         | 6.02   | 2.54   |
| DM/DMR-03 | 03         | 8.56   | 5.08   |
| DM/DMR-04 | 04         | 11.10  | 7.62   |
| DM/DMR-05 | 05         | 13.64  | 10.16  |
| DM/DMR-06 | 06         | 16.18  | 12.70  |
| DM/DMR-07 | 07         | 18.72  | 15.24  |
| DM/DMR-08 | 08         | 21.26  | 17.78  |
| DM/DMR-09 | 09         | 23.80  | 20.32  |
| DM/DMR-10 | 10         | 26.34  | 22.86  |
| DM/DMR-12 | 12         | 31.42  | 27.94  |



CONSTRUCTION

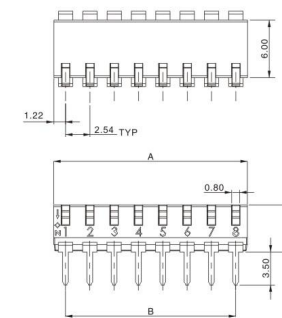
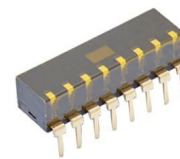


CIRCUIT



P.C.B Layout

DIP-EPI(R)

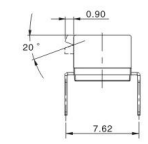


BDS-EPI(R)-(XX)(F)-V

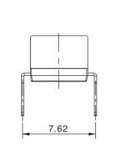
Actuator Type:  
( ) Raised Actuator  
R Recessed Actuator

Positions:  
02,04,06

F=Push Down OFF  
( )=Push Down ON

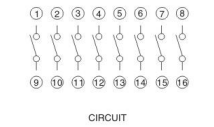


BDS-EPI Series

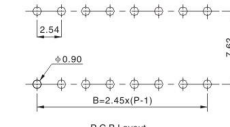


BDS-EPIR Series

| PROD.No.    | No. OF POS. | DIM. A | DIM. B |
|-------------|-------------|--------|--------|
| EPI(R)-10-V | 10          | 25.30  | 22.86  |
| EPI(R)-08-V | 8           | 20.22  | 17.78  |
| EPI(R)-06-V | 6           | 15.14  | 12.70  |
| EPI(R)-04-V | 4           | 10.06  | 7.62   |
| EPI(R)-02-V | 2           | 4.98   | 2.54   |

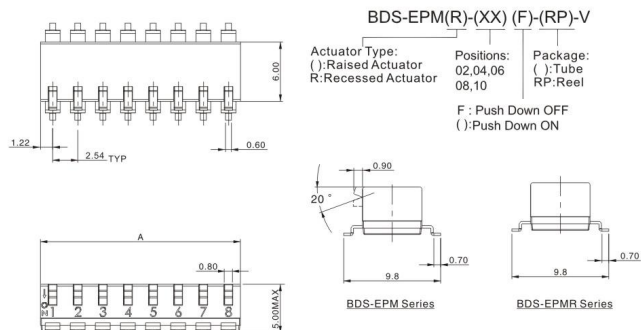
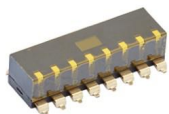


CIRCUIT

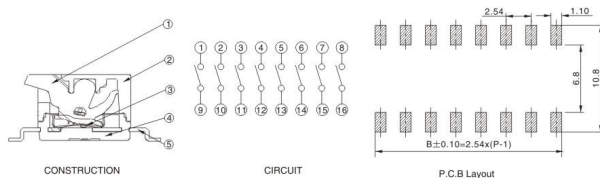


P.C.B Layout

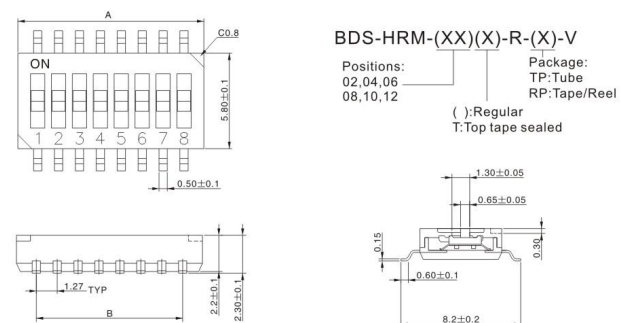
## DIP-EPM(R)



| PROD. NO.   | No. OF POS. | DIM. A | DIM. B |
|-------------|-------------|--------|--------|
| EPM(R)-10-V | 10          | 25.30  | 22.86  |
| EPM(R)-08-V | 8           | 20.22  | 17.78  |
| EPM(R)-06-V | 6           | 15.14  | 12.70  |
| EPM(R)-04-V | 4           | 10.06  | 7.62   |
| EPM(R)-02-V | 2           | 4.98   | 2.54   |



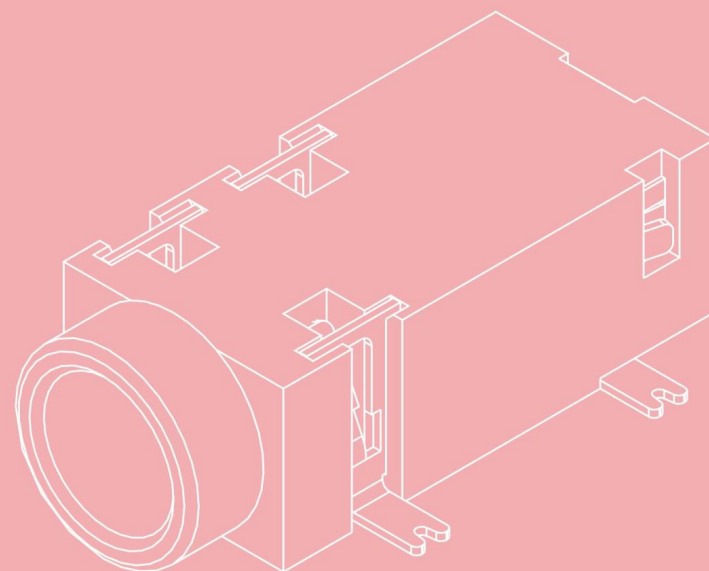
## DIP-HRM(R)



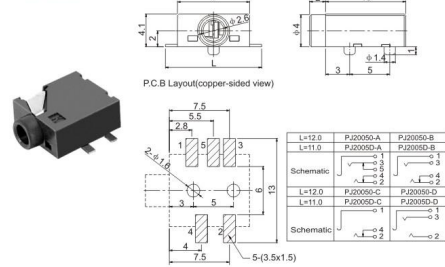
| PROD. NO. | NO. OF POS. | DIM. A | DIM. B |
|-----------|-------------|--------|--------|
| HRM-02    | 2           | 3.68   | 1.27   |
| HRM-04    | 4           | 6.22   | 3.81   |
| HRM-06    | 6           | 8.76   | 6.35   |
| HRM-08    | 8           | 11.30  | 8.89   |
| HRM-10    | 10          | 13.84  | 11.43  |
| HRM-12    | 12          | 16.38  | 13.97  |

# PHONE JACK SERIES

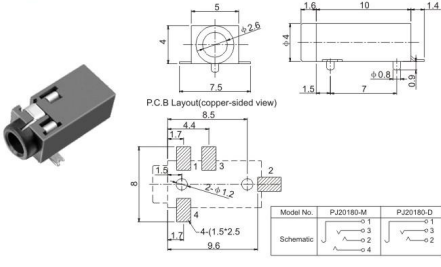
## 耳機插座系列



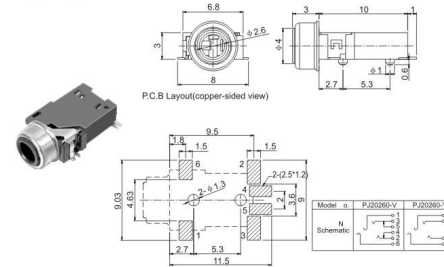
PJ205



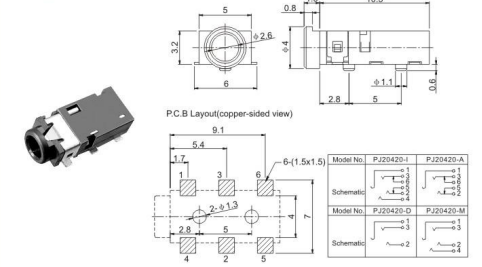
PJ218



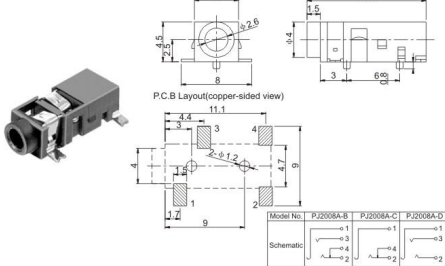
PJ2260



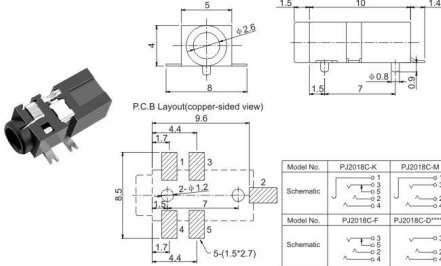
PJ242



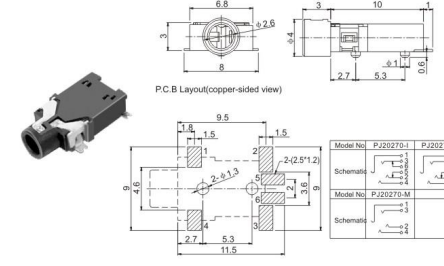
PJ208A



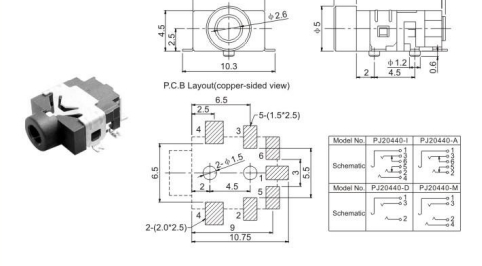
PJ218C



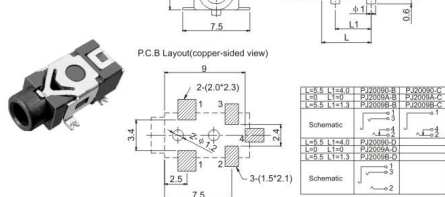
PJ227



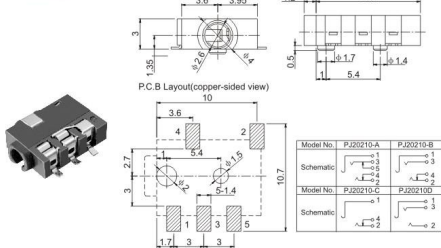
PJ244



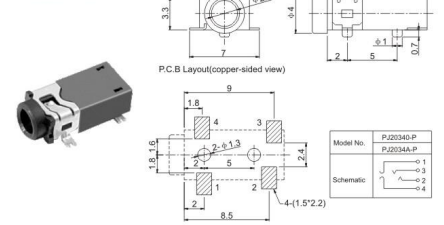
PJ209  
PJ209A  
PJ209B



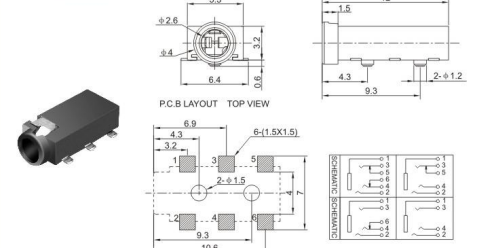
PJ221



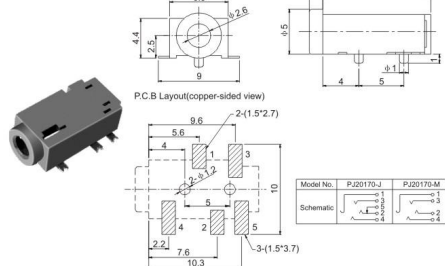
PJ234  
PJ234A



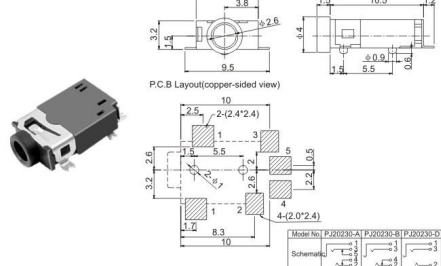
PJ2569



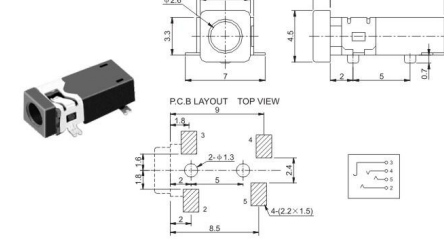
PJ217



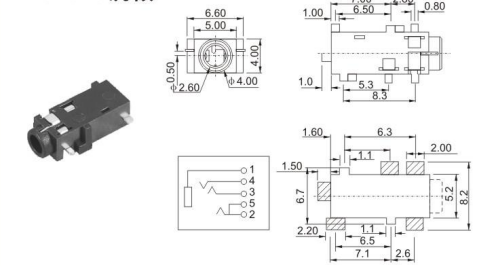
PJ223



PJ235  
PJ235A

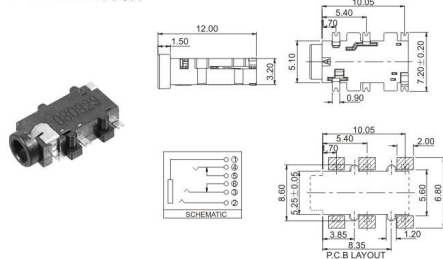


PJ2018沉板

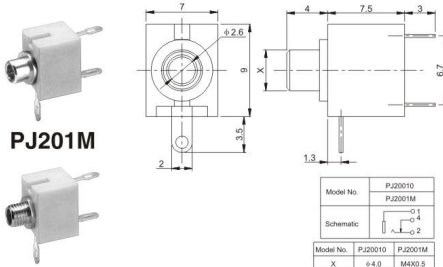




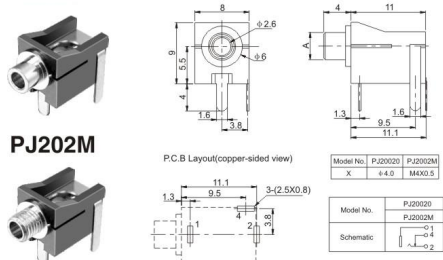
## PJ2059沉板



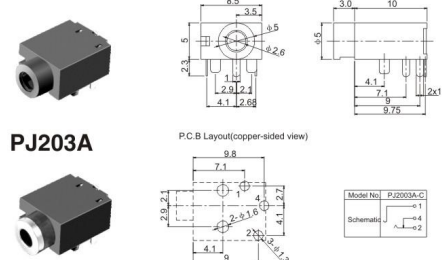
**PJ201**



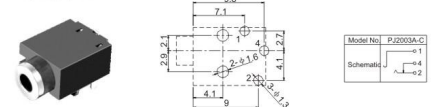
**PJ202**



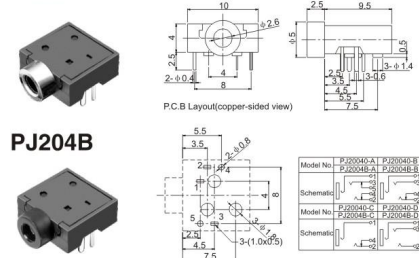
**PJ203**



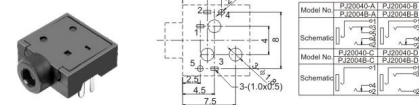
**PJ203A**



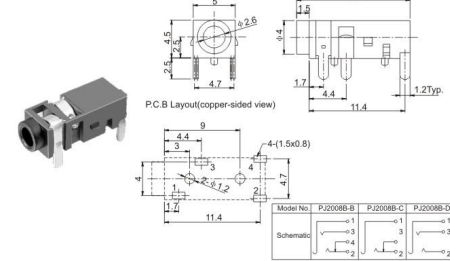
**PJ204**



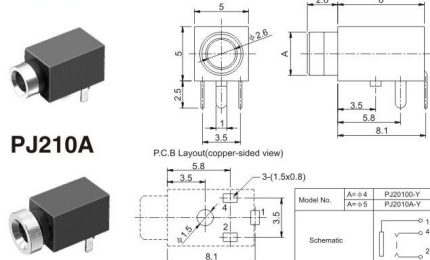
**PJ204B**



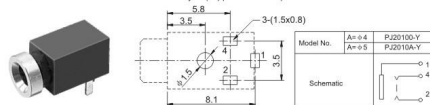
**PJ208B**



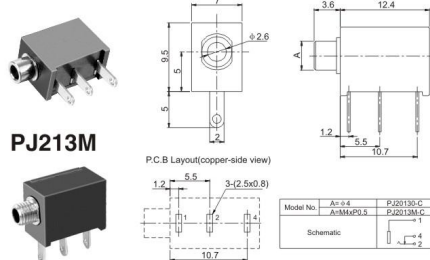
**PJ210**



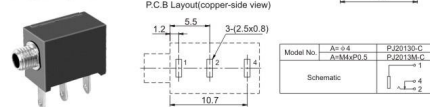
**PJ210A**



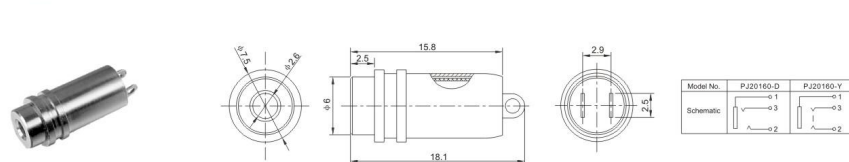
**PJ213**



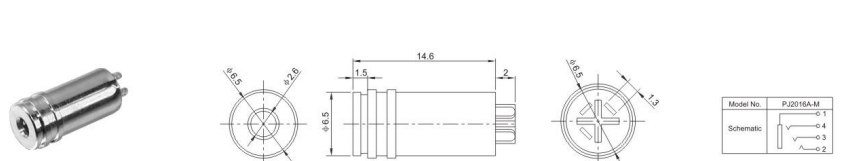
**PJ213M**



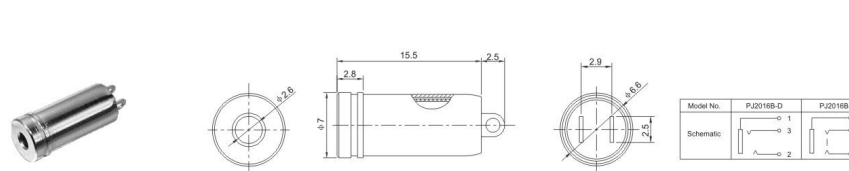
**PJ216**



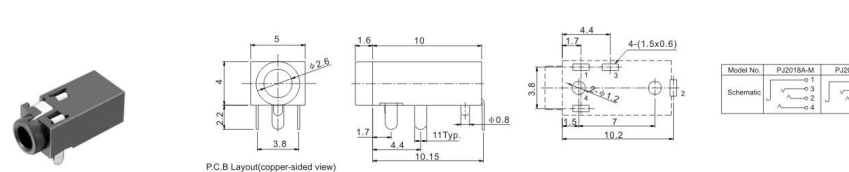
**PJ216A**



**PJ216B**



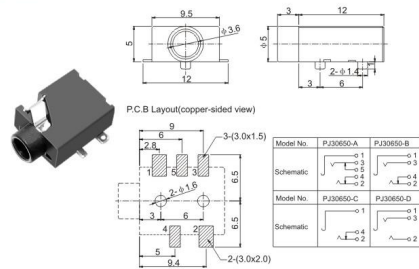
**PJ218A**



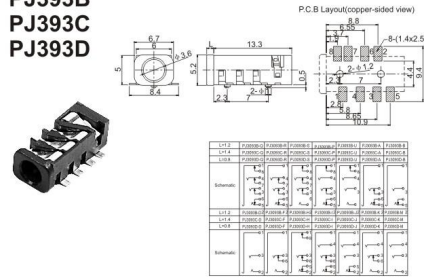




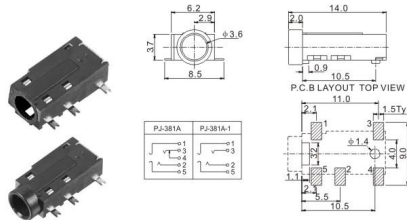
PJ365



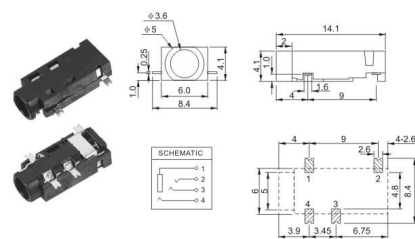
PJ393B  
PJ393C  
PJ393D



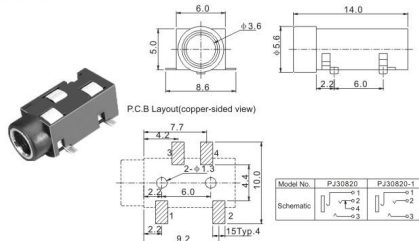
PJ381B-5P



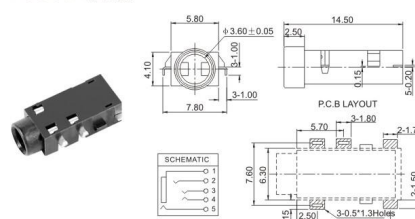
PJ3027沉板



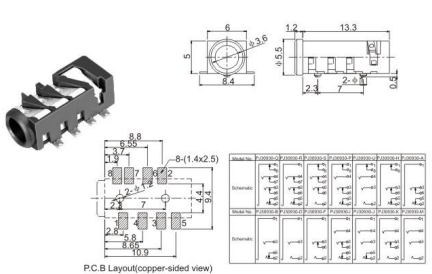
PJ382



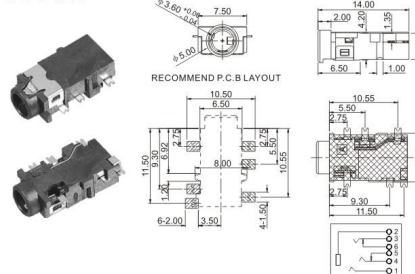
PJ3081沉板



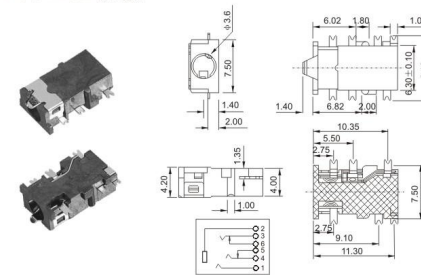
PJ393



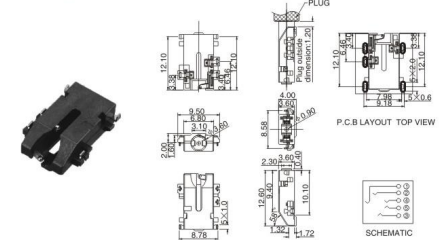
PJ342C



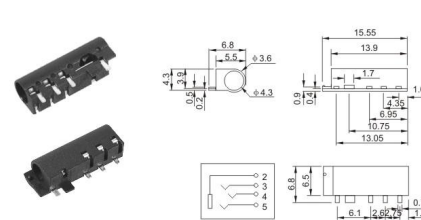
PJ3126B沉板



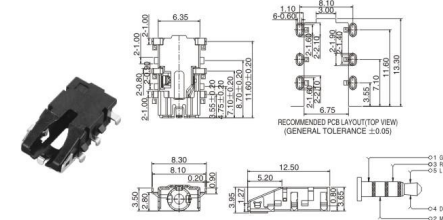
PJ-3202



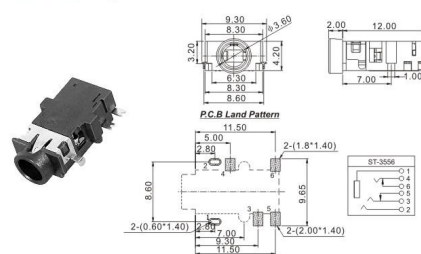
PJ3618沉板



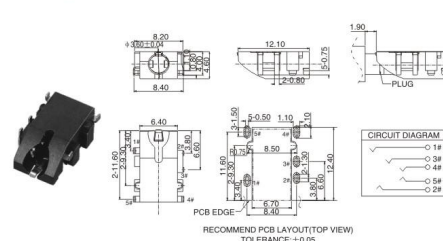
PJ-3203



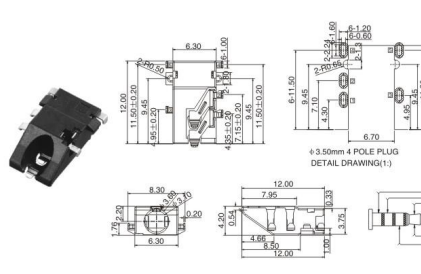
PJ3139沉板



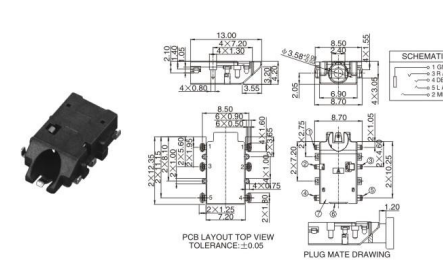
PJ-3204



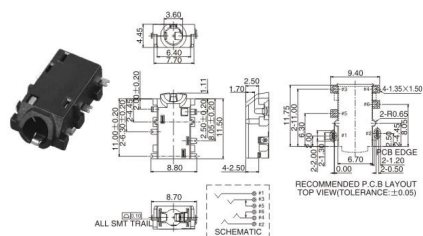
PJ-3201



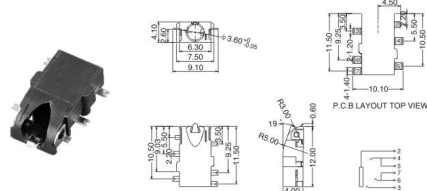
PJ-3205



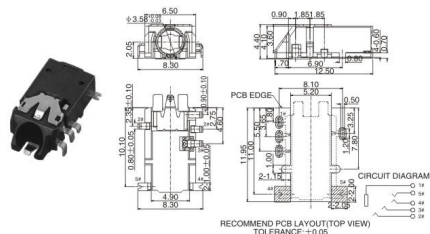
**PJ-3210**



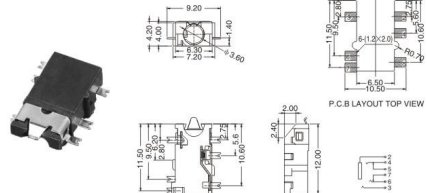
**PJ-3212B**



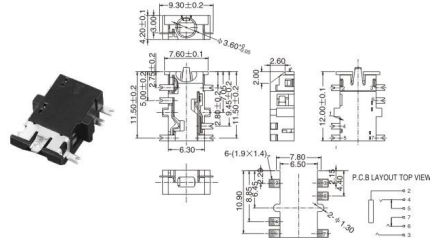
**PJ-3211**



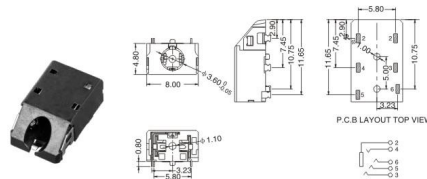
PJ-3212C



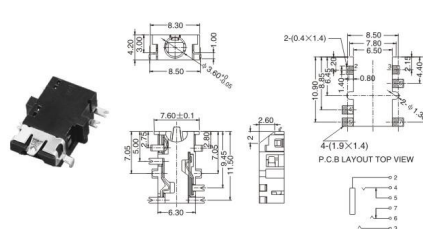
PJ-3212



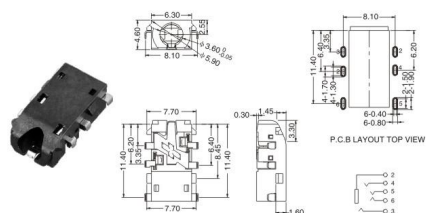
**PJ-3213**



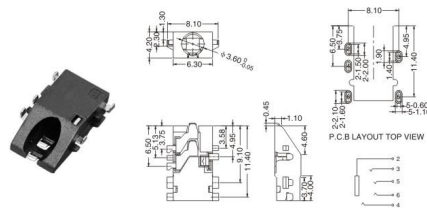
**PJ-3212A**



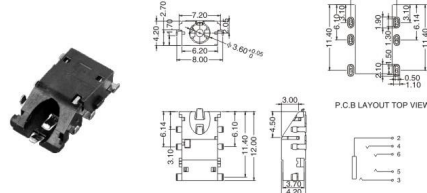
**PJ-3214**



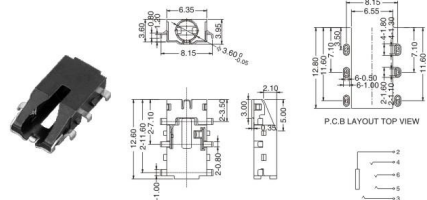
**PJ-3215**



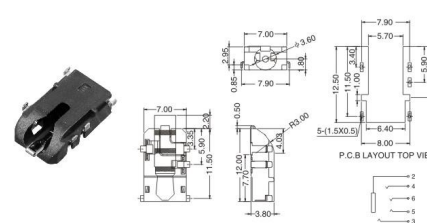
PJ-3215A



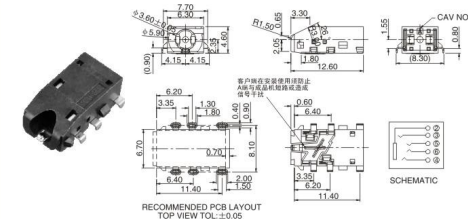
**PJ-3216**



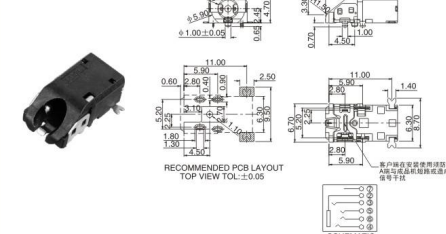
**PJ-3217**



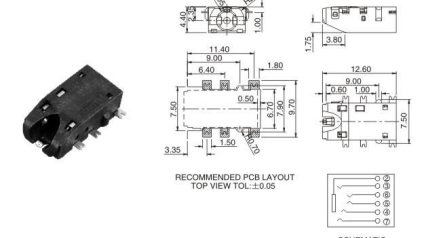
PJ-3267



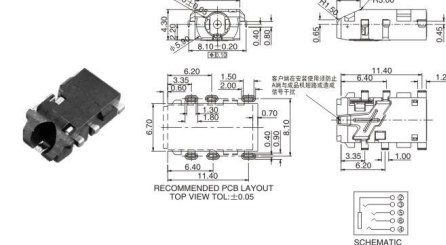
PJ-3268



**PJ-3269**

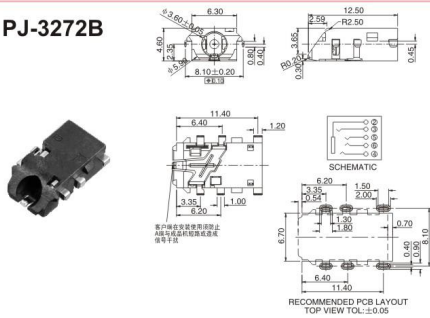


**PJ-3272A**

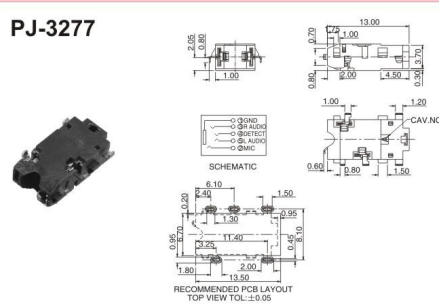




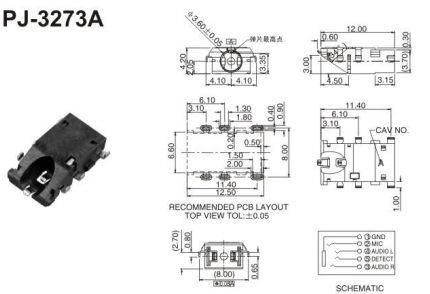
PJ-3272B



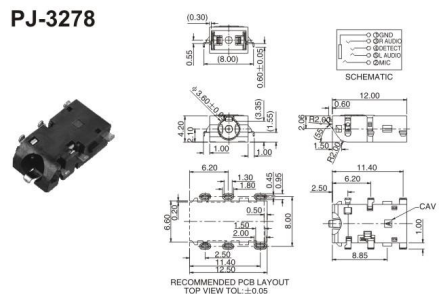
PJ-3277



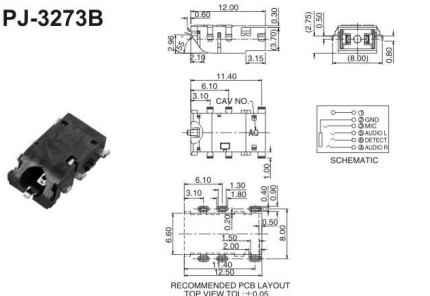
PJ-3273A



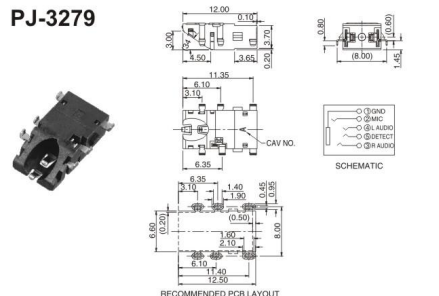
PJ-3278



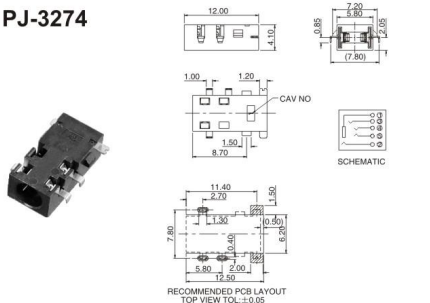
PJ-3273B



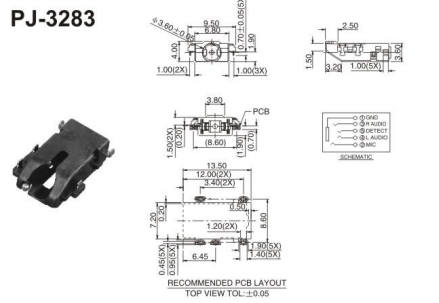
PJ-3279



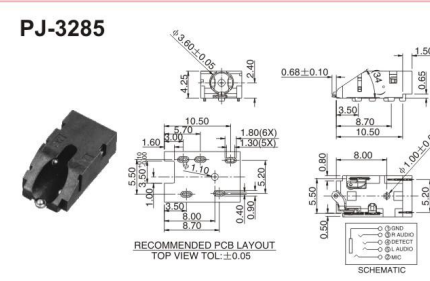
PJ-3274



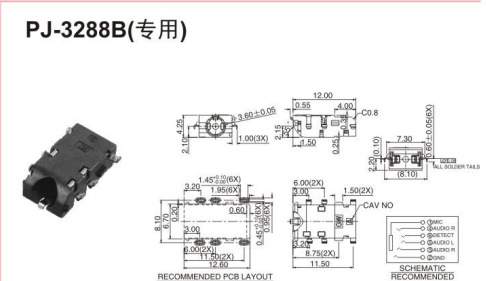
PJ-3283



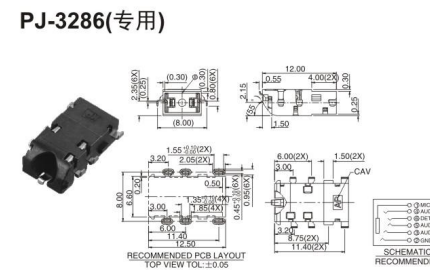
PJ-3285



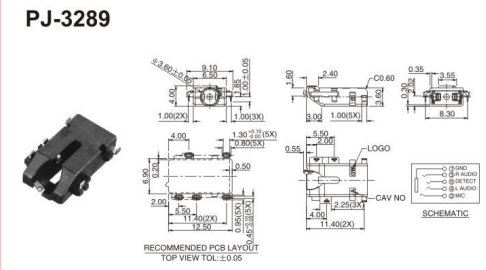
PJ-3288B(专用)



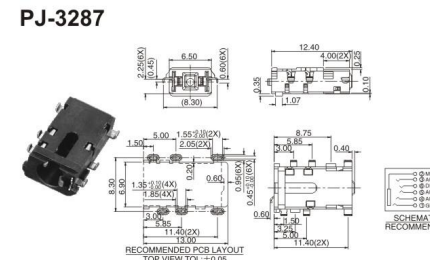
PJ-3286(专用)



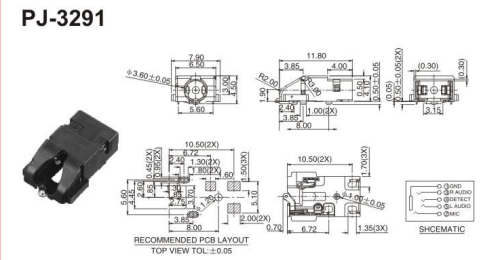
PJ-3289



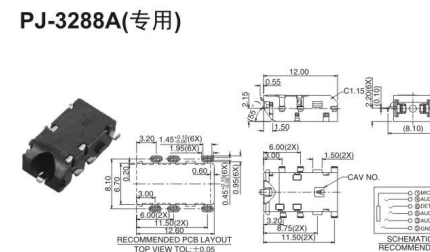
PJ-3287



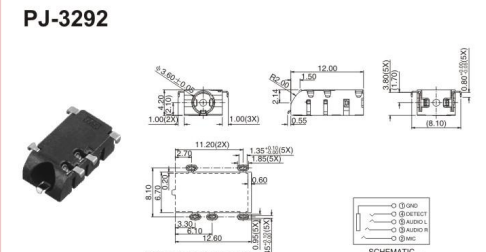
PJ-3291



PJ-3288A(专用)

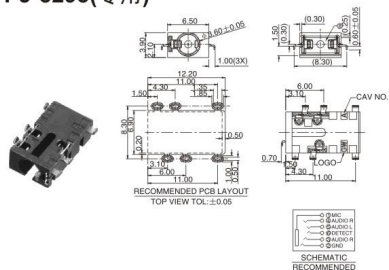


PJ-3292

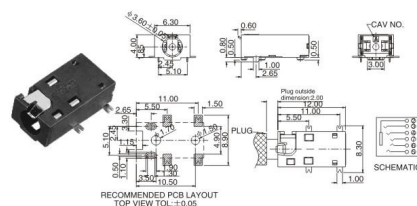




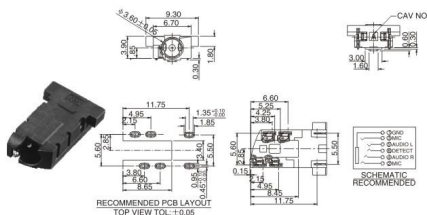
PJ-3293(专用)



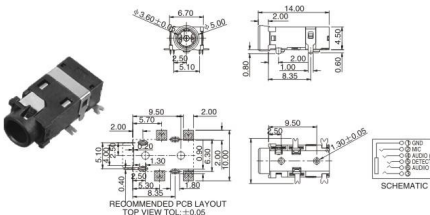
**PJ-3549**



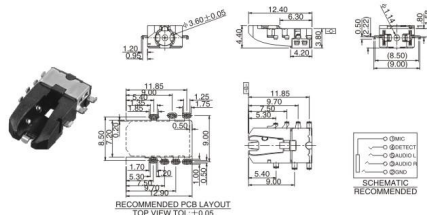
**PJ-3295**



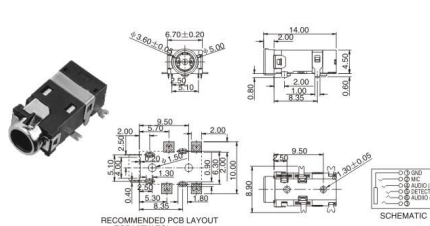
**PJ-3550A**



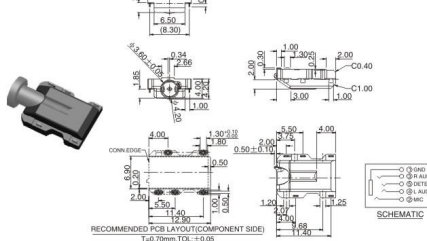
**PJ-3296**



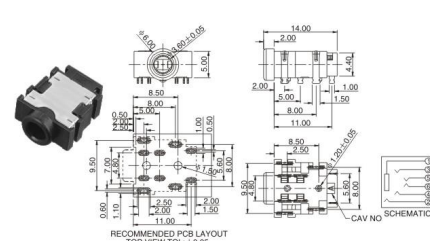
**PJ-3550B**



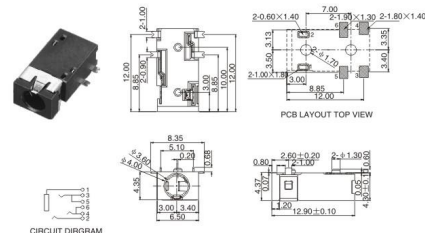
**PJ-3299**



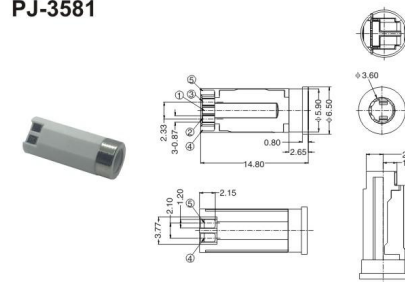
**PJ-3551**



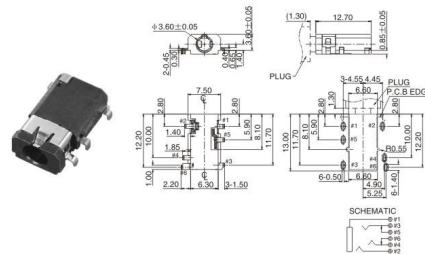
**PJ-3552**



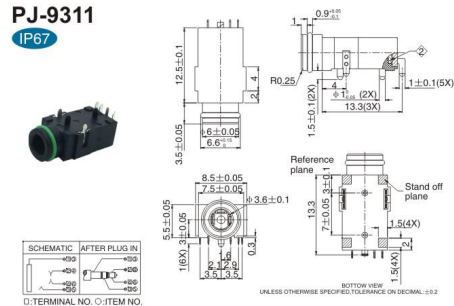
**PJ-3581**



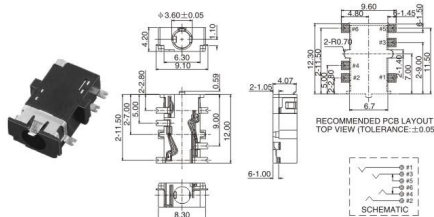
**PJ-3554**



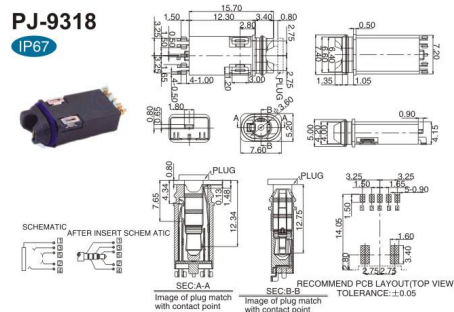
PJ-9311



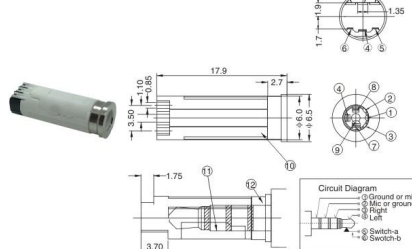
**PJ-3555**



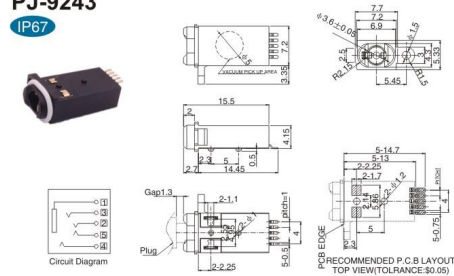
**PJ-9318**



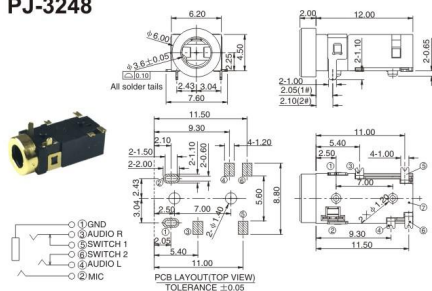
**PJ-3575**



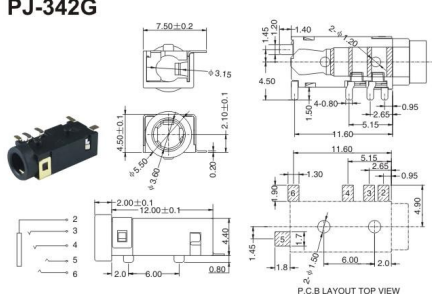
PJ-9243



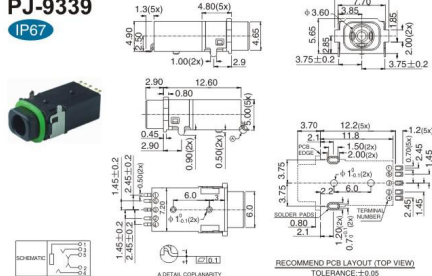
**PJ-3248**



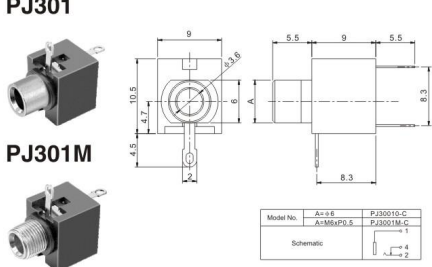
**PJ-342G**



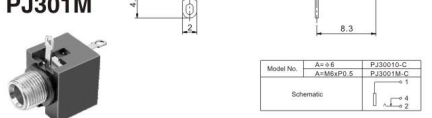
**PJ-9339**



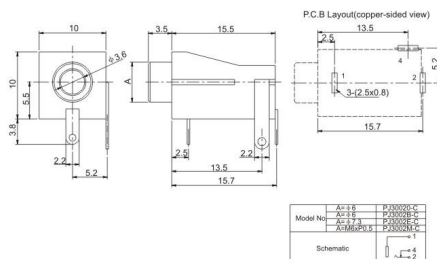
**PJ301**



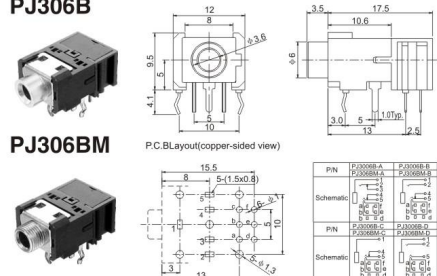
**PJ301M**



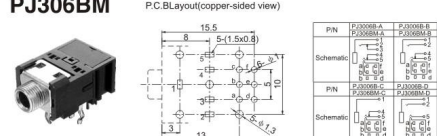
PJ302 PJ302M PJ302B PJ302E



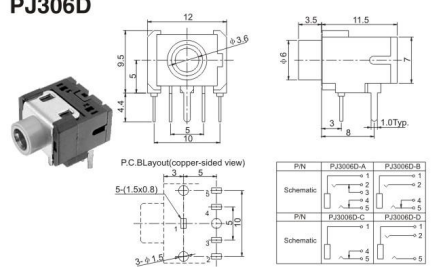
**PJ306B**



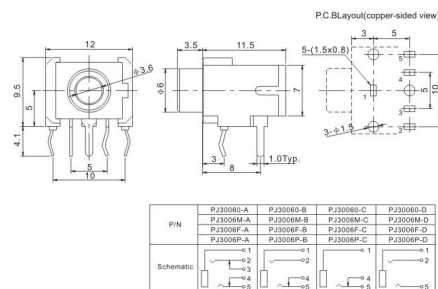
**PJ306BM**



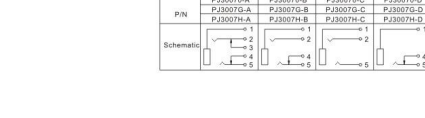
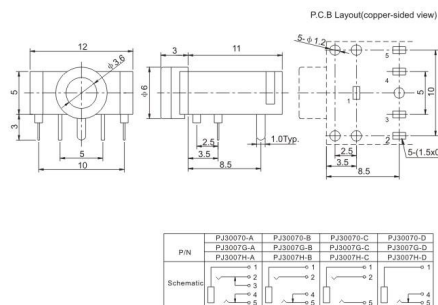
**PJ306D**



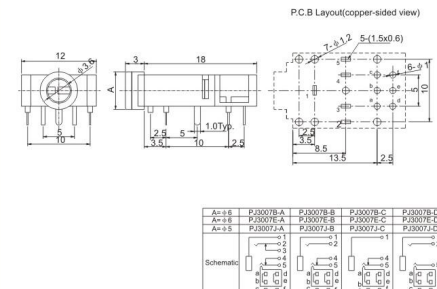
PJ306 PJ306M PJ306F PJ306P



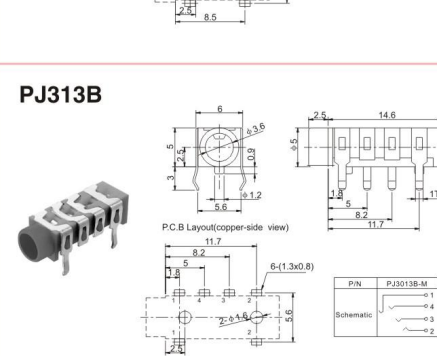
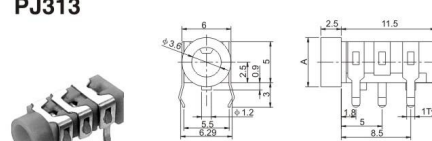
**PJ307**



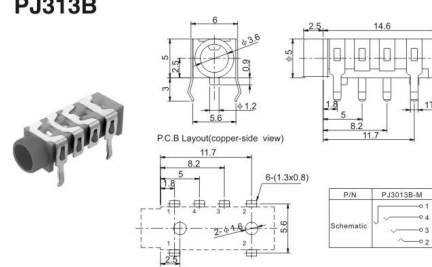
PJ307B      PJ307E      PJ307J



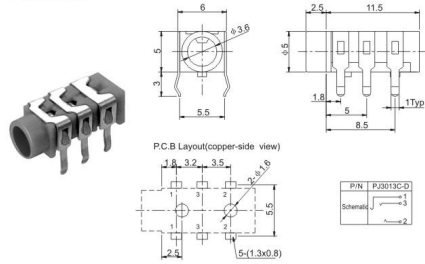
**PJ313**



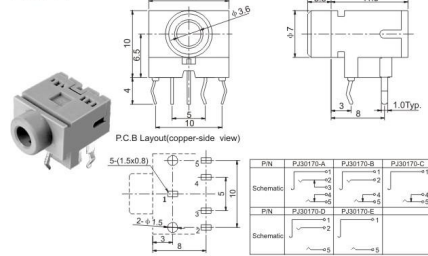
**PJ313B**



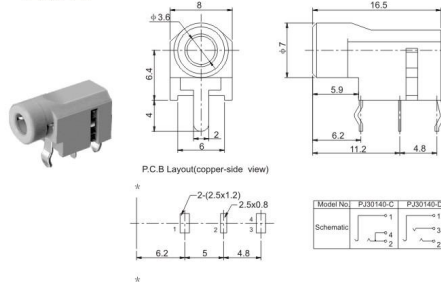
**PJ313C**



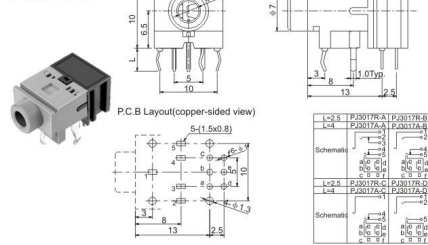
**PJ317**



**PJ314**



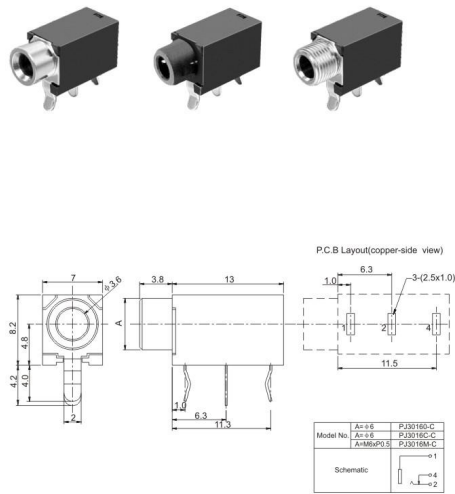
**PJ317A  
PJ317R**



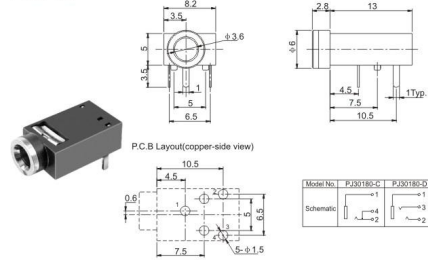
**PJ316**

**PJ316C**

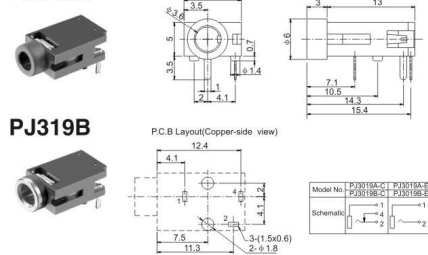
**PJ316M**



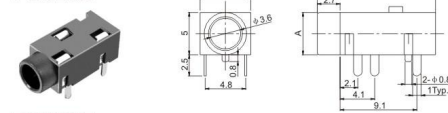
**PJ318**



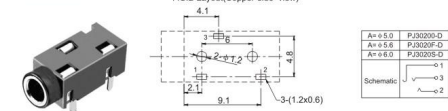
**PJ319A**



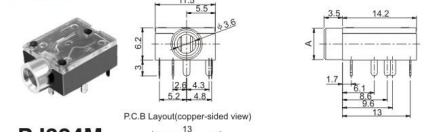
**PJ320  
PJ320S**



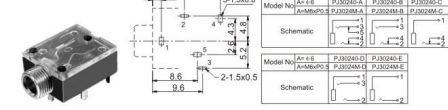
**PJ320F**



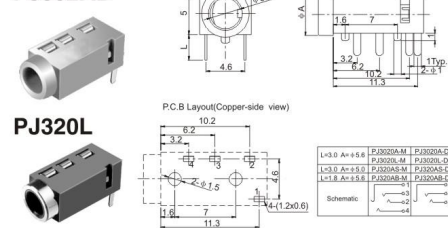
**PJ324**



**PJ324M**



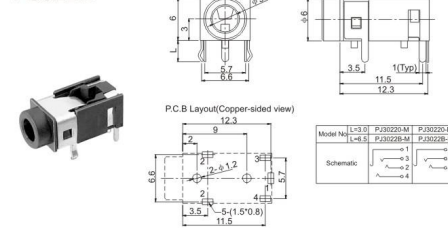
**PJ302A  
PJ302AS  
PJ302AB**



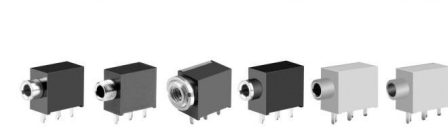
**PJ320L**



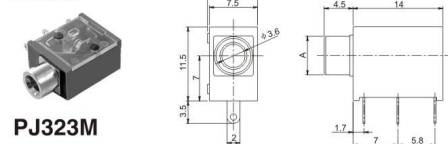
**PJ322  
PJ322B**



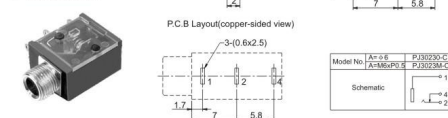
**PJ325 PJ325M PJ325GM PJ325B PJ325C PJ325D**



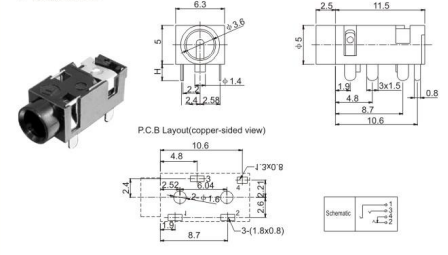
**PJ323**



**PJ323M**

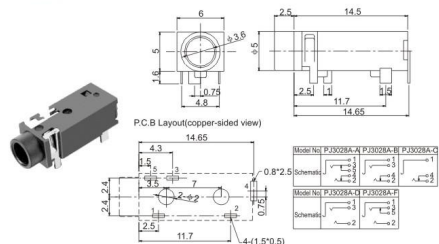


**PJ327D**

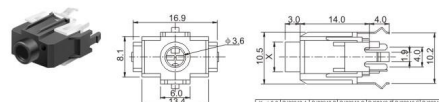




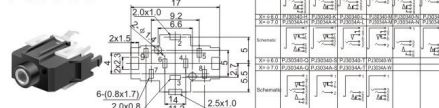
**PJ328A**



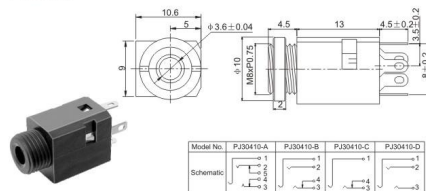
**PJ334**



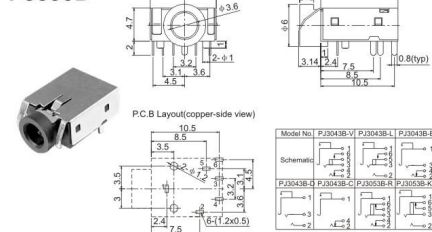
**PJ334A**



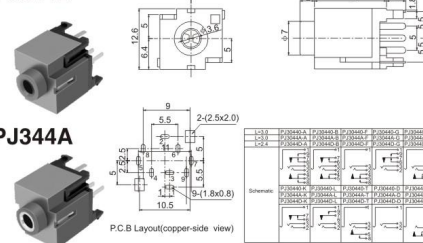
**PJ341**



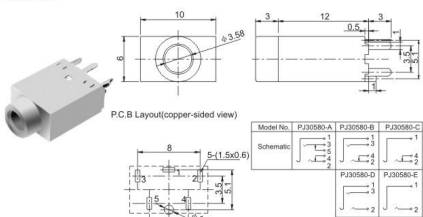
PJ343B  
PJ353B



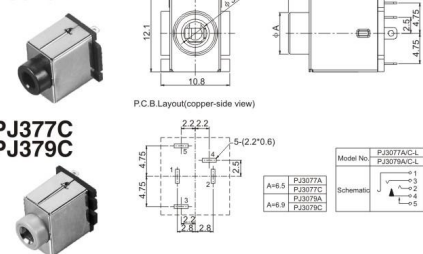
PJ344  
PJ344D



**PJ358**



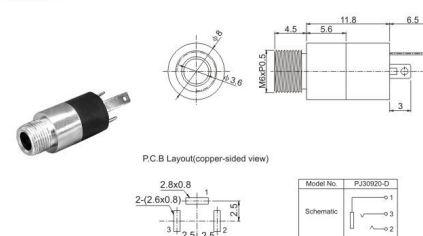
PJ377A  
PJ379A



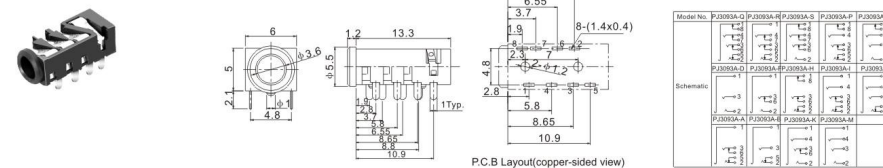
PJ377C  
PJ379C



**PJ392**



**PJ393A**



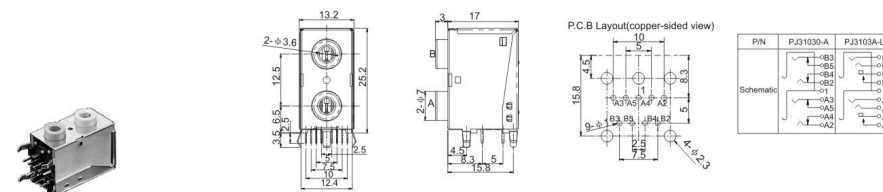
**PJ396**



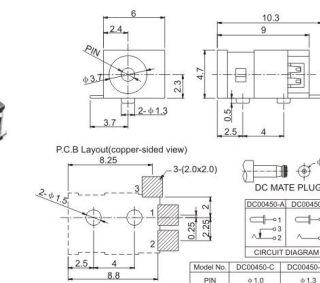
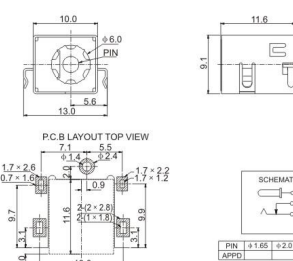
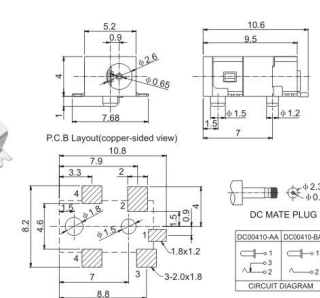
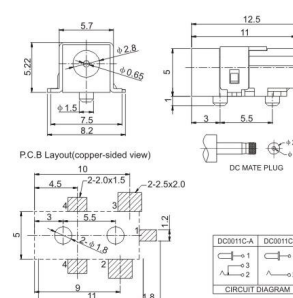
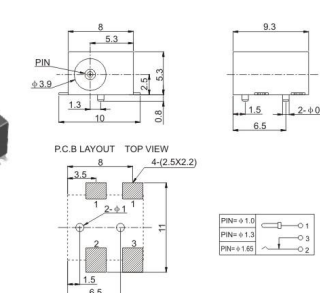
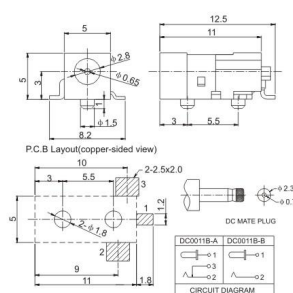
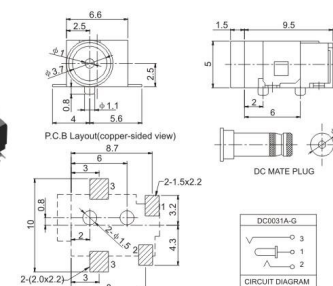
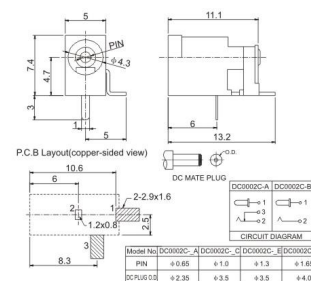
**PJ396F**



PJ3103  
PJ3103A

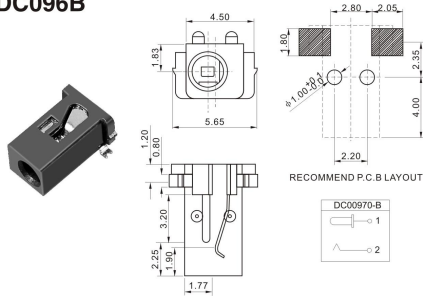




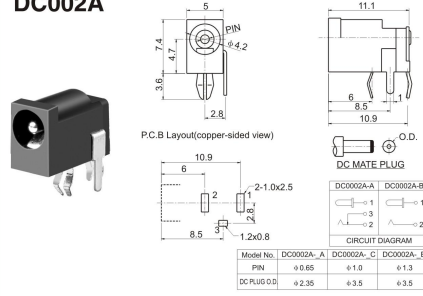




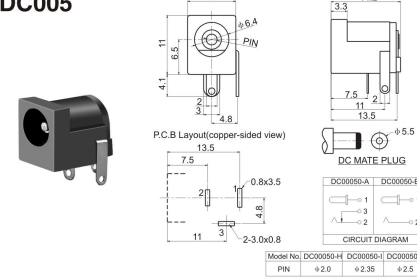
DC096B



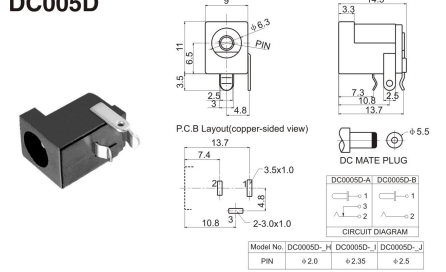
DC002A



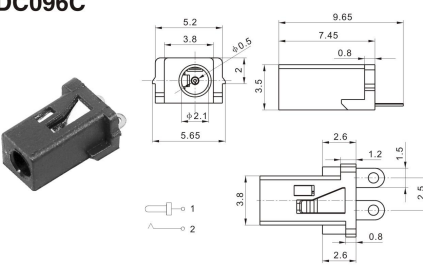
DC005



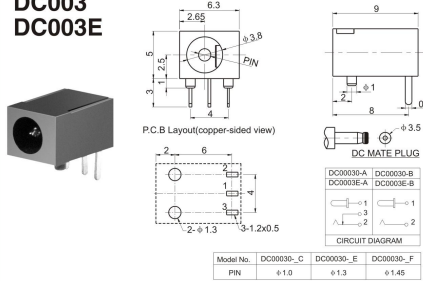
DC005D



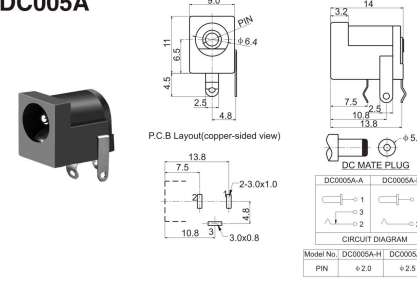
DC096C



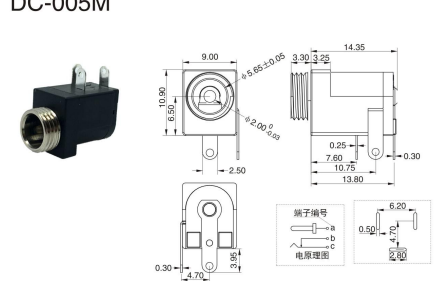
DC003  
DC003E



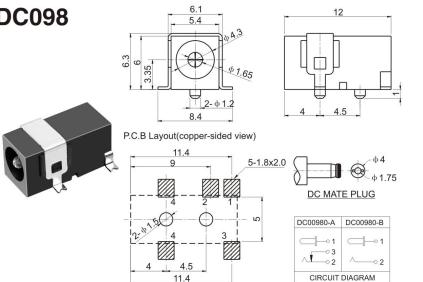
DC005A



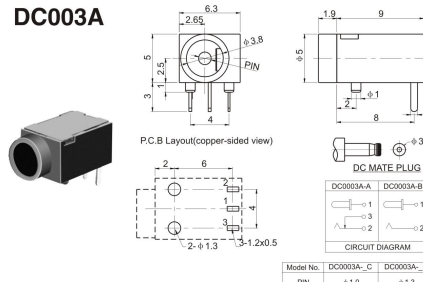
DC-005M



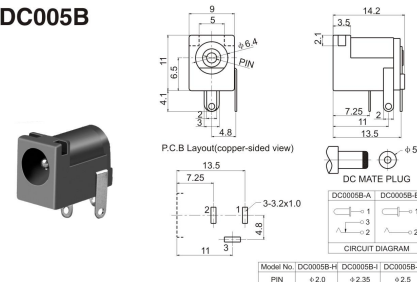
DC098



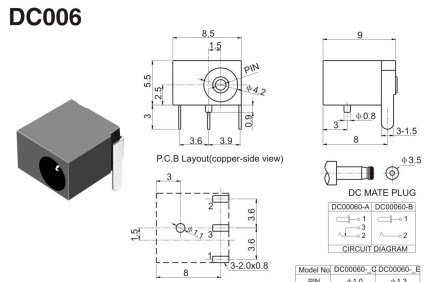
DC003A



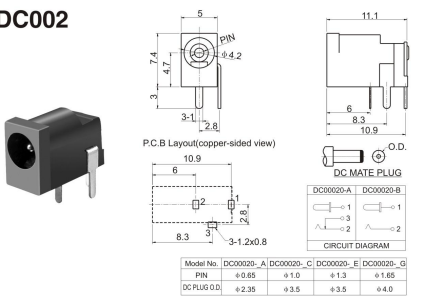
DC005B



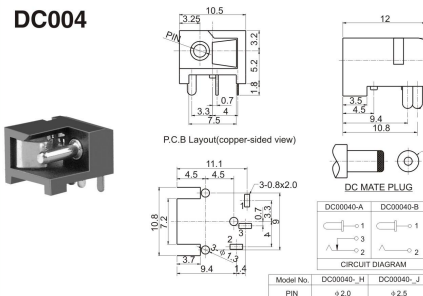
DC006



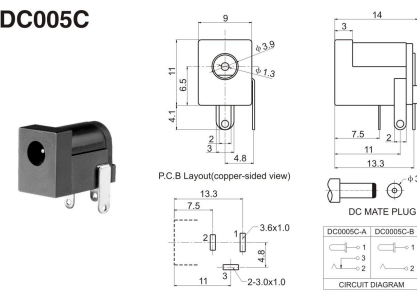
DC002



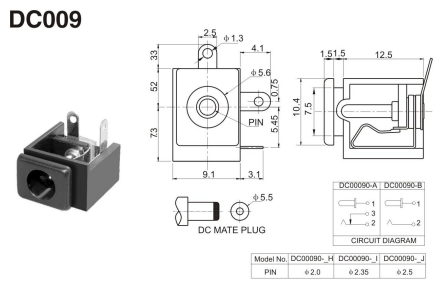
DC004



DC005C

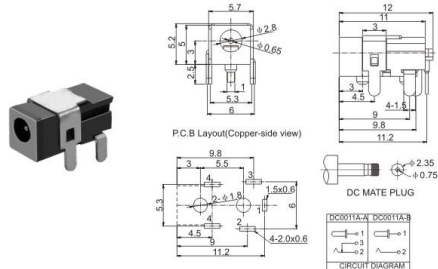


DC009

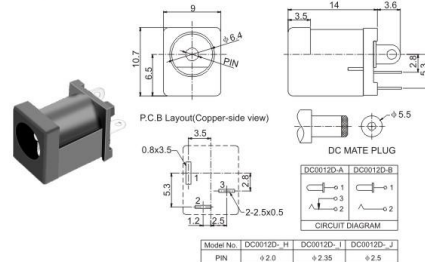




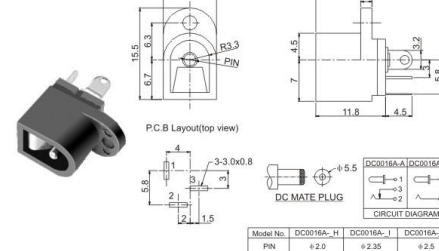
### DC011A



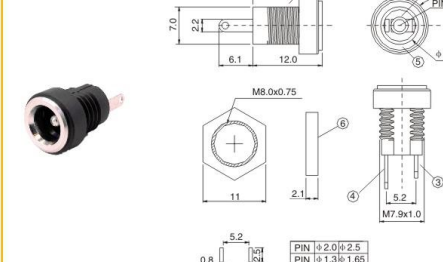
### DC012D



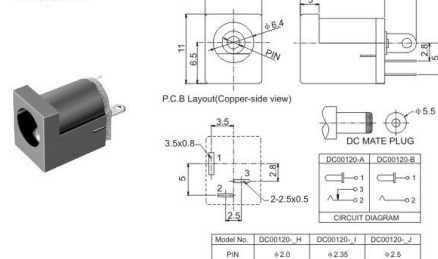
### DC016A



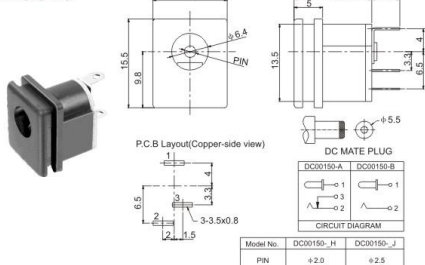
### DC022B



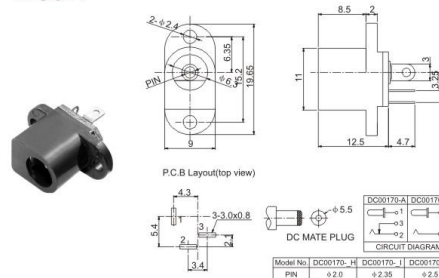
### DC012



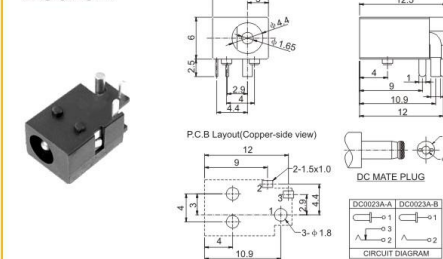
### DC015



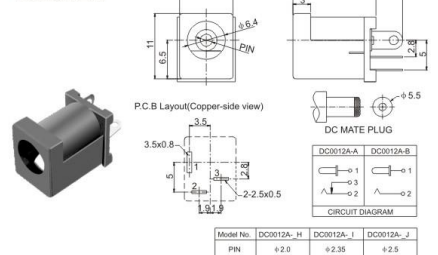
### DC017



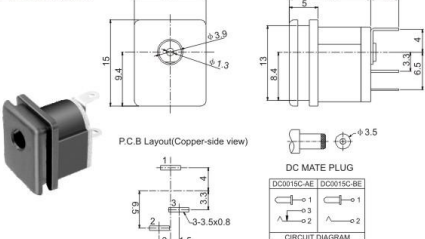
### DC023A



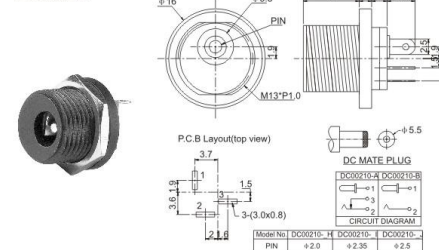
### DC012A



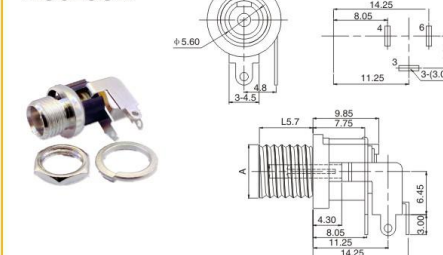
### DC015C



### DC021



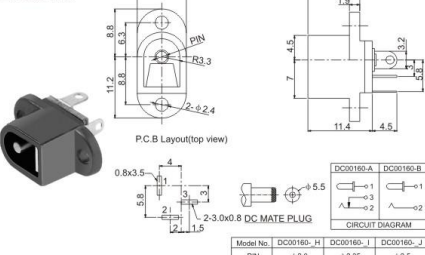
### DC025CM



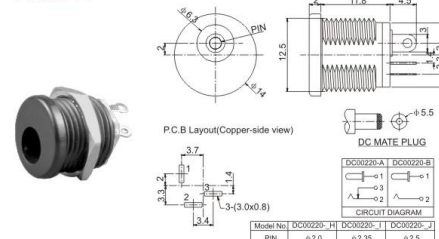
### DC012B



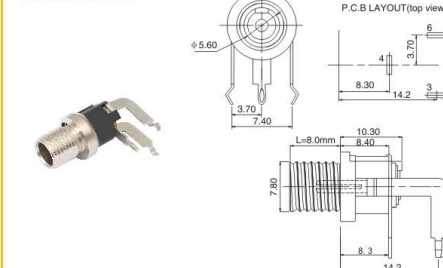
### DC016



### DC022

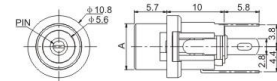


### DC025DM





DC025M



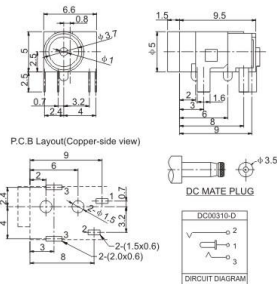
DC025



PCB Layout (Copper-side view)

|           |            |            |            |
|-----------|------------|------------|------------|
| Model No. | DC00250-1  | DC00250-2  | DC00250-3  |
| A         | ±0.0       | ±0.0       | ±0.0       |
| Model No. | DC00250A-1 | DC00250A-2 | DC00250A-3 |
| Schematic | 1          | 2          | 3          |

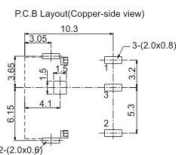
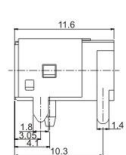
DC031



DC044A

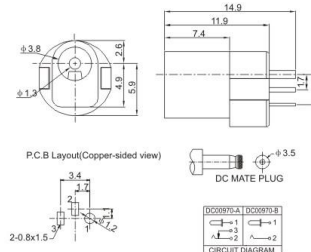
DC044G

DC044H

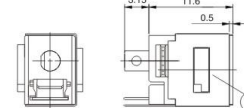


|           |           |           |           |
|-----------|-----------|-----------|-----------|
| Model No. | DC0044A-1 | DC0044A-2 | DC0044A-3 |
| A         | ±0.0      | ±0.0      | ±0.0      |
| Model No. | DC0044G-1 | DC0044G-2 | DC0044G-3 |
| Schematic | 1         | 2         | 3         |

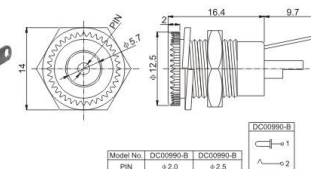
DC097



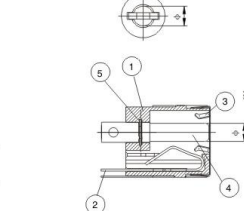
DC112



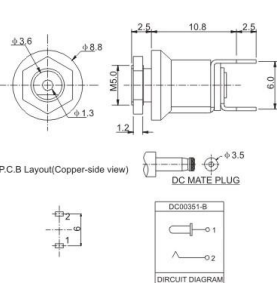
DC099



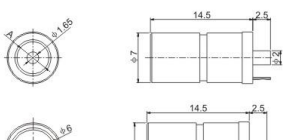
DC118



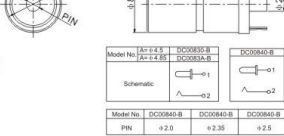
DC0351



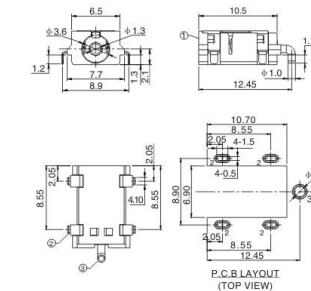
DC083



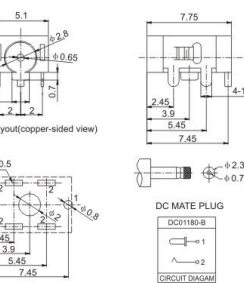
DC084



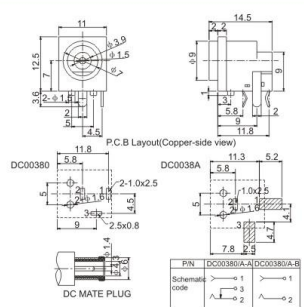
DC108



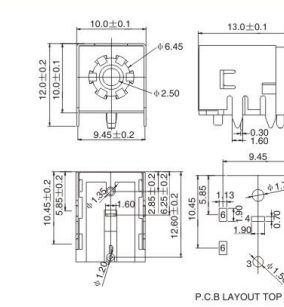
DC118



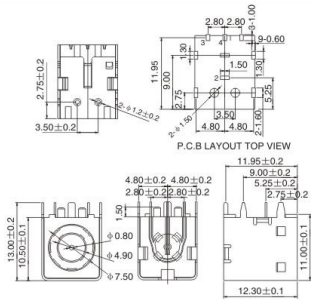
DC038



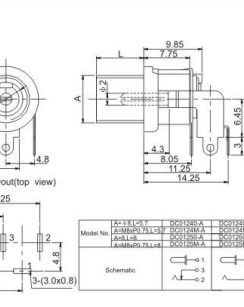
DC091



DC109

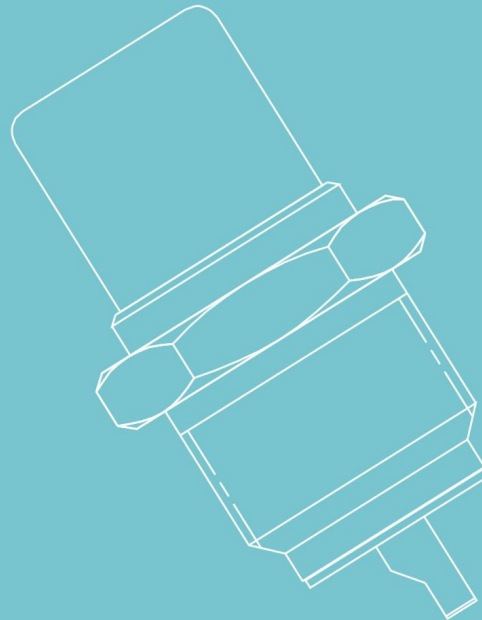


DC026

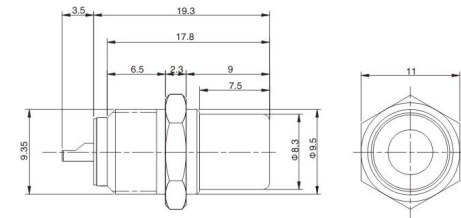


# RCA JACK SERIES

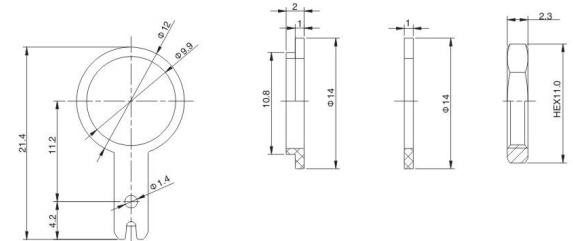
## RCA插座系列



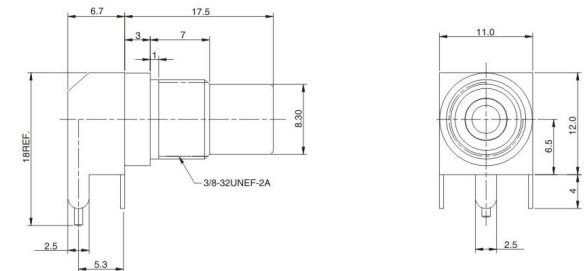
### RCA-001-20



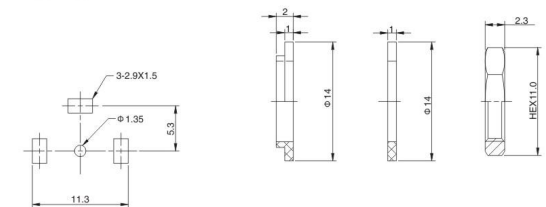
1. MATERIAL
  - 1.1 Insulator: pom, color: white or red.
  - 1.2 Body: brass alloy.
  - 1.3 Pin: brass.
  - 1.4 Soldering lug: brass.
  - 1.5 Screw: brass alloy.
  - 1.6 Washer: pom, color: white or red.
2. FINISH
  - 2.1 Pin: gold flash plated.
  - 2.2 Body: gold flash plated.
  - 2.3 Soldering lug: nickel plated.
  - 2.4 Screw: nickel plated.
3. ELECTRICAL CHARACTERISTICS
  - 3.1 Working voltage: AC 250v.
  - 3.2 Withstand voltage: 1000v, 50Hz, rms.
  - 3.3 Insulation resistance: 1,000m OHM min.
  - 3.4 Impedence: 75 OHM.
4. ENVIRONMENTAL
  - 4.1 Working temperature: -25°C~+65°C.
  - 4.2 Relative humidity: max 90%(40°C±2°C)



### RCA-001-X



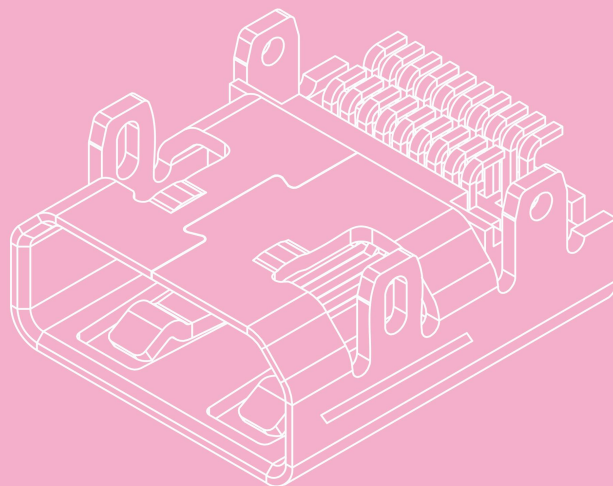
1. MATERIAL
  - 1.1 Insulator: pom, color: white or red.
  - 1.2 Body: brass alloy.
  - 1.3 Shell: spcc.
  - 1.4 Pin: brass.
  - 1.5 Screw: brass alloy.
  - 1.6 Washer: pom, color: white or red.
2. FINISH
  - 2.1 Pin: gold flash plated.
  - 2.2 Body: gold flash plated.
  - 2.3 Shell: gold flash plated.
  - 2.4 Screw: gold flash plated.
3. ELECTRICAL CHARACTERISTICS
  - 3.1 Working voltage: AC 250v.
  - 3.2 Withstand voltage: 1000v, 50Hz, rms.
  - 3.3 Insulation resistance: 1,000m ohm min.
  - 3.4 Impedence: 75 ohm.
4. ENVIRONMENTAL
  - 4.1 Working temperature: -25°C~+65°C.
  - 4.2 Relative humidity: max 90%(40°C±2°C)



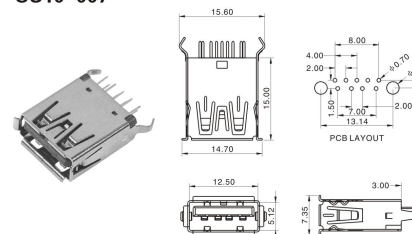
RECOMMEND PCB LAYOUT  
ALL TOLERANCE: ±0.05

# USB JACK SERIES

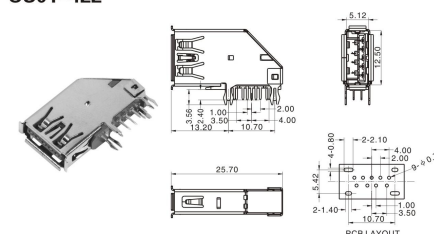
## USB插座系列



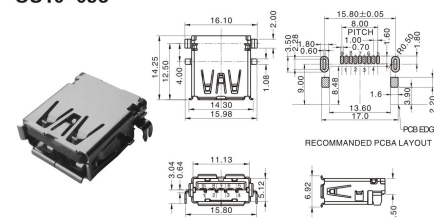
USB 3.0 AF 180度直插弯脚  
US10-007



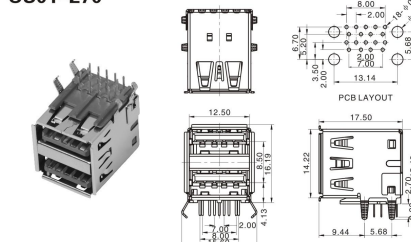
USB 3.0 AF 90度侧插  
US01-422



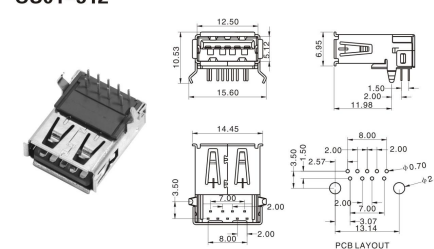
USB 3.0 AF SMT沉板  
US10-096



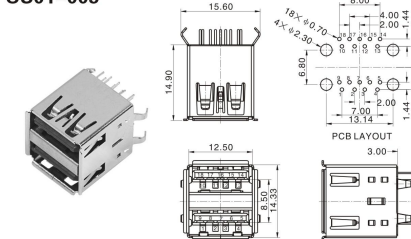
USB 3.0 AF 双层90度侧插  
US01-270



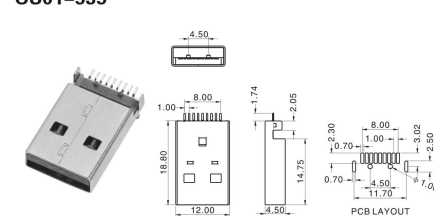
USB 3.0 AF 90度 有卷边  
US01-512



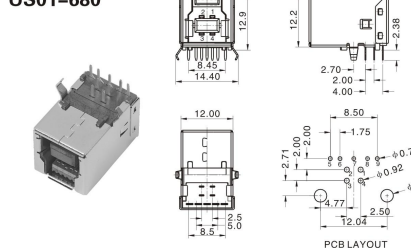
USB 3.0 AF双层 180度  
US01-005



USB 3.0 AM SMT  
US01-535

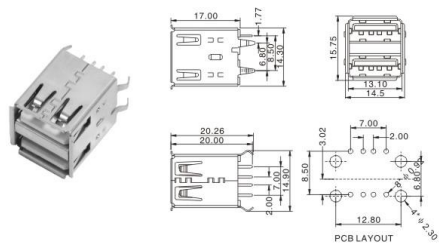


USB 3.0 BF 90度  
US01-680

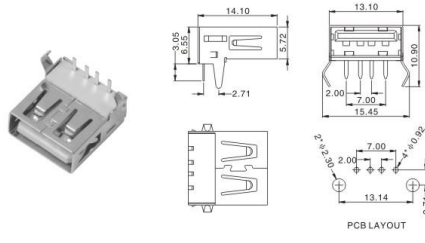




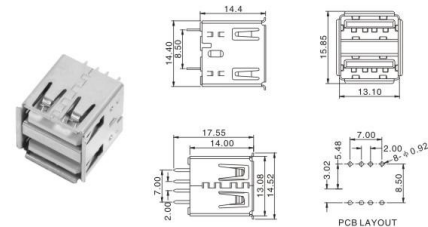
USB AF 180度 双层直插长体  
US01-233



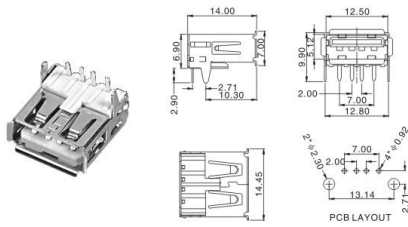
USB AF 90度 一型弯脚有盖无卷边  
US01-088



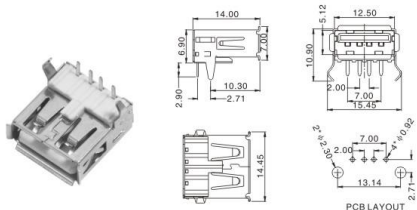
USB AF 180度 双层直插短体  
US01-290



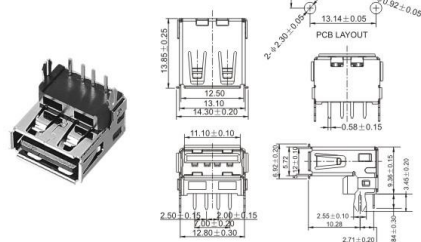
USB AF 90度 直脚有盖有卷边  
US01-120



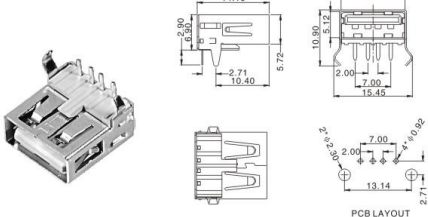
USB AF 90度 弯脚有盖有卷边  
US01-112



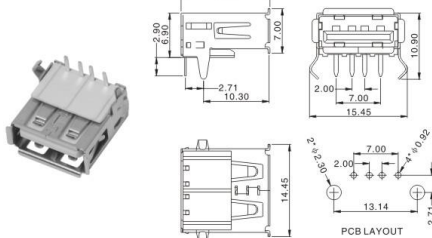
USB AF 90度 加高型鱼叉脚  
US10-105



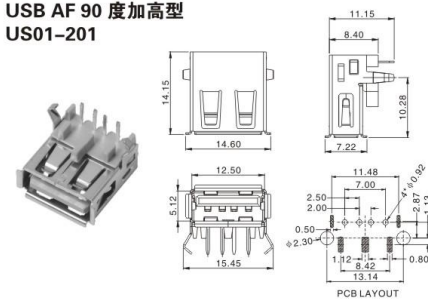
USB AF 90度 弯脚有盖无卷边  
US01-127



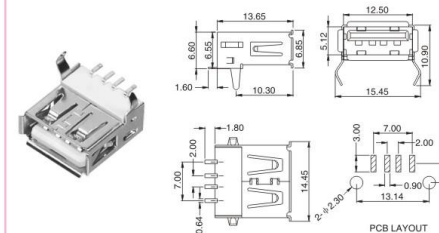
|                      |          |       |
|----------------------|----------|-------|
| USB AF 90 度弯脚有盖有卷边反向 | US01-139 | 14.00 |
|----------------------|----------|-------|



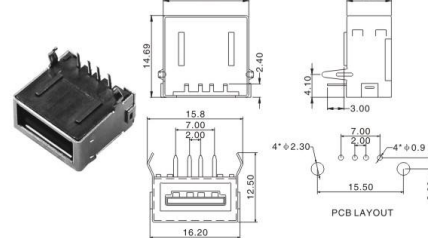
USB AF 90 度加高型  
US01-201



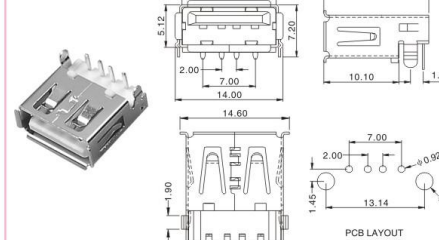
USB AF 一型弯脚无盖有卷边 SMT  
US01-164



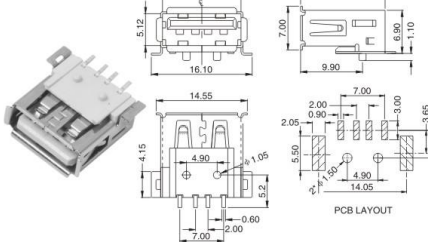
USB AF 90 度全包  
US01-503



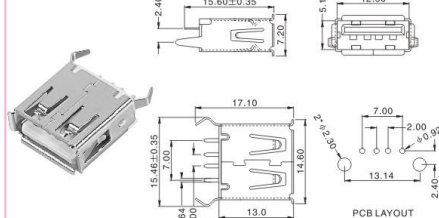
USB AF 90 度沉板有卷边  
US01-144



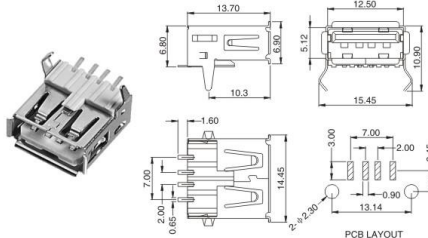
USB AF 全贴片定位柱 1.05  
US01-245



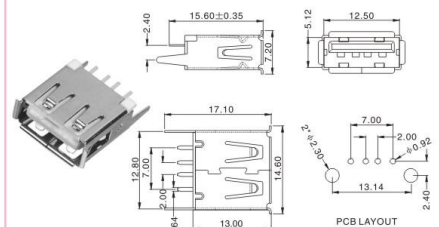
USB AF 180 度直插弯脚 13.0  
US01-190



USB AF 弯脚无盖有卷边 SMT  
US01-146

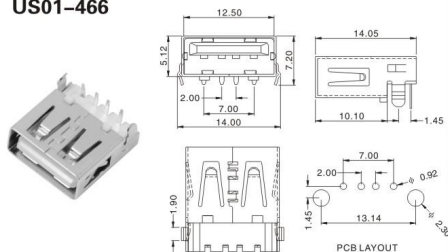


USB AF180 度直插直脚 13.0  
US01-178

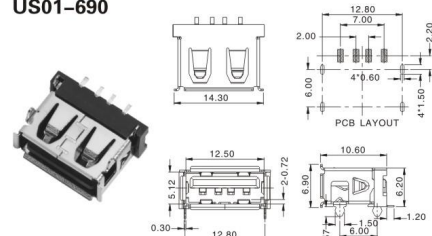




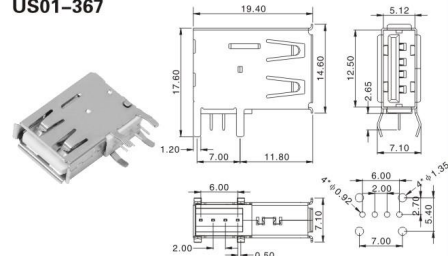
USB AF 90 度沉板无卷边  
US01-466 12.50



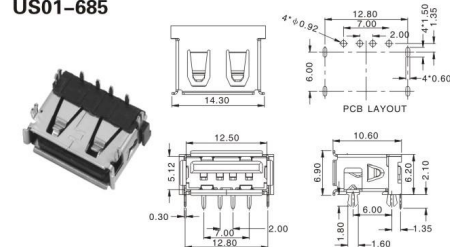
**USB AF 10.6 四锥脚有卷边 SMT  
US01-690**



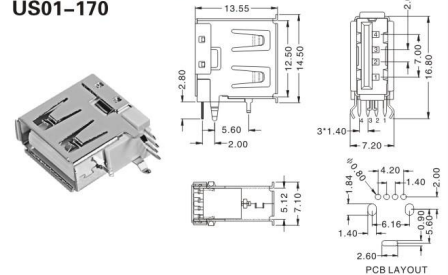
USB AF 侧插长体 C 款有塞  
US01-367



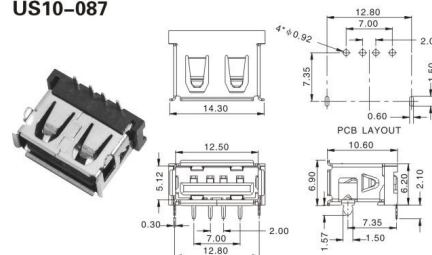
USB AF 10.6 四叉脚有卷边 90 度  
US01-685



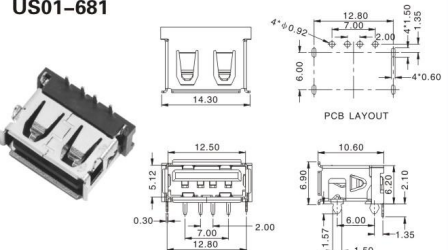
USB AF 侧插短体弯脚  
US01-170



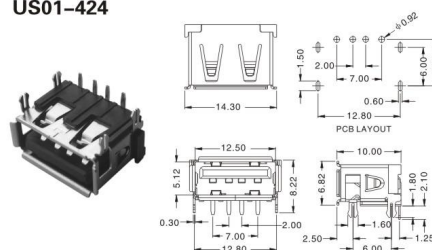
USB AF 10.6 两锥脚有卷边 90 度反向  
US10-087



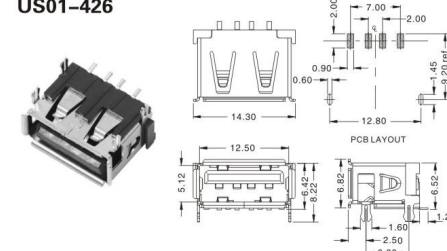
USB AF 10.6 四锥脚有卷边 90 度  
US01-681



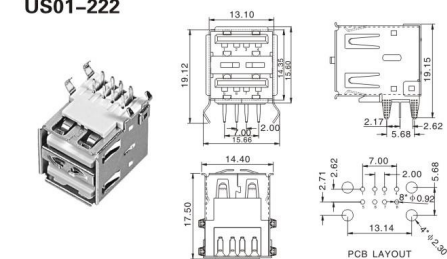
USB AF 10.0 四脚有卷边 90 度  
US01-424



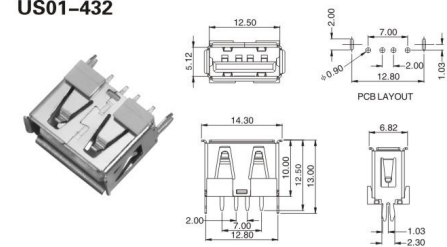
USB AF 10.0 四脚有卷边 SMT  
US01-426



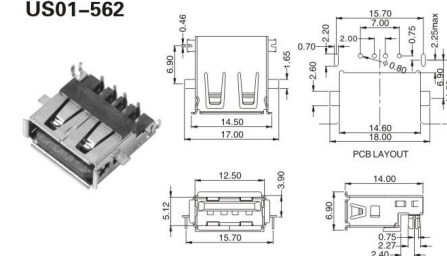
USB AF 90 度双层半包双弹  
US01-222



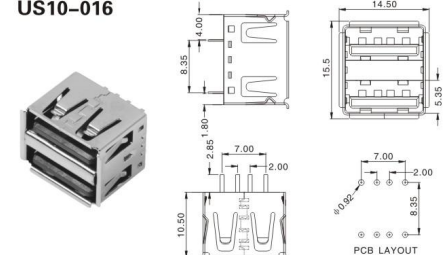
USB AF 10.0 180 度有卷边  
US01-432



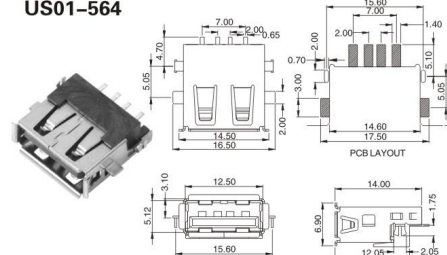
USB AF 沉板板上3.9-3.5-4.9  
US01-562



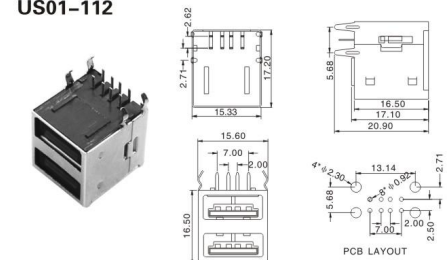
USB AF 10.0 双层 180 度  
US10-016



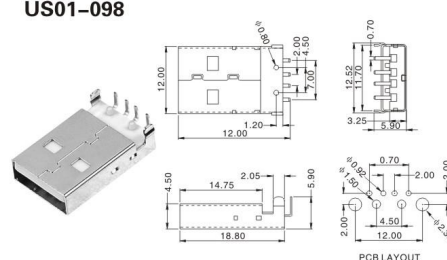
USB AF 沉板 SMT  
US01-564



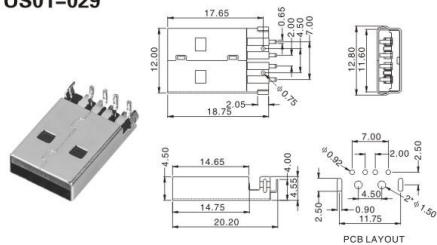
USB AF 90 度双层全包  
US01-112



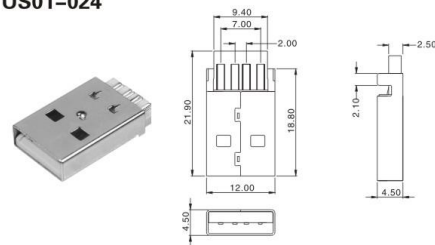
USB AM 90 度  
US01-098



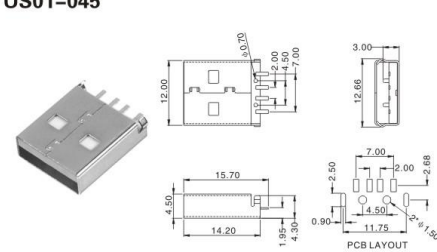
USB AM 沉板 90 度  
US01-029



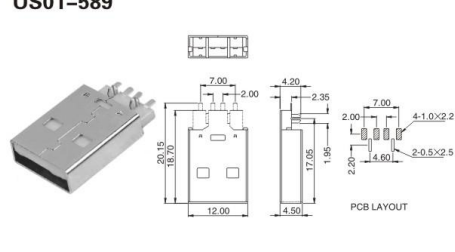
**USB AM 短体焊线式**  
**US01-024**



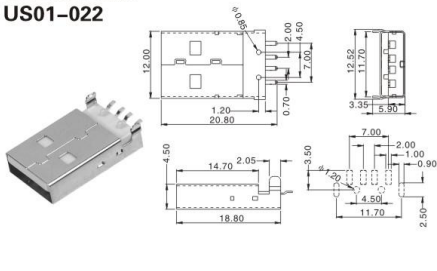
USB AM 沉板短体 SMT  
US01-045



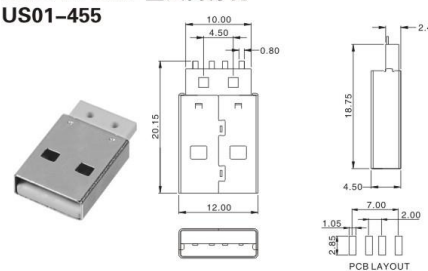
USB AM SMT 鱼叉型  
US01-589



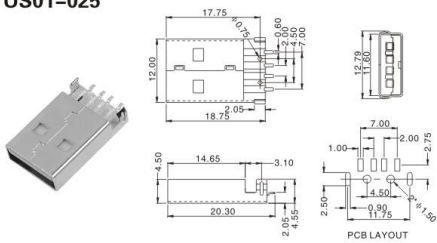
USB AM SMT  
US01-022



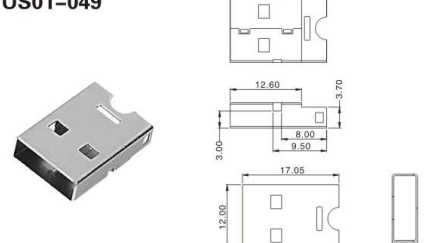
USB AM SMT 鱼叉两方孔  
US01-455 10.00



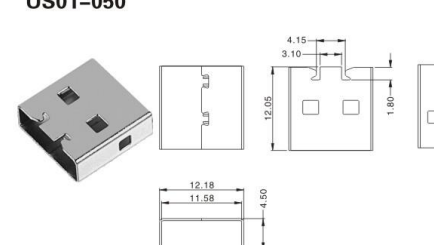
USB AM 沉板 SMT  
US01-025



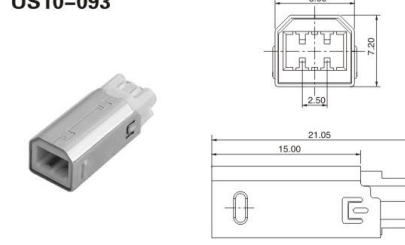
USB AM 读卡器铁壳  
US01-049



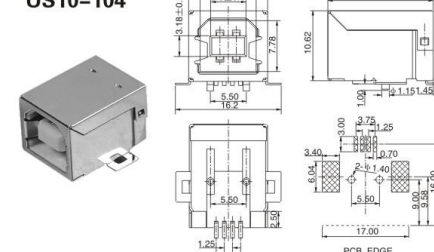
USB AM 蓝牙铁壳  
US01-050



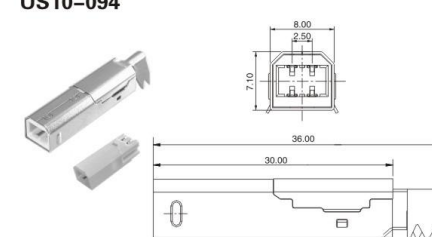
USB BM 焊线短体  
US10-093



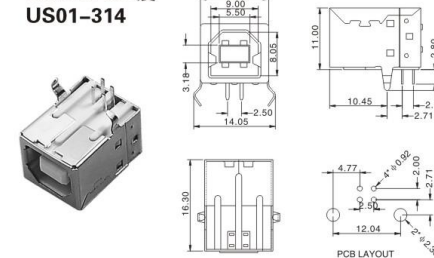
**USB BF SMT**  
**US10-104**



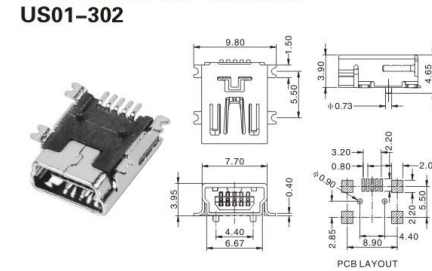
USB BM 焊线三件式  
US10-094



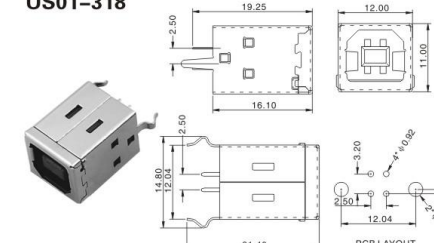
USB BF 90 度  
US01-314



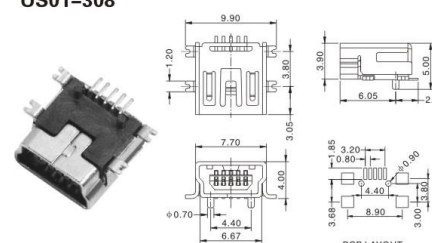
**MINI USB 5 PIN/F SMT(0.4)**  
**US01-302**



USB BF 180 度  
US01-318

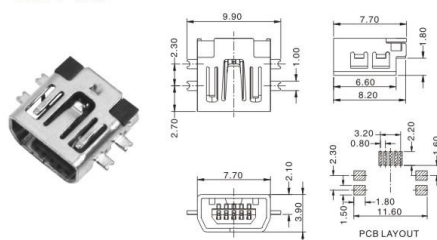


MINI USB 5 PIN/F SMT 短体  
US01-308

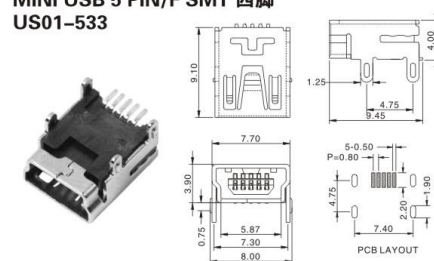




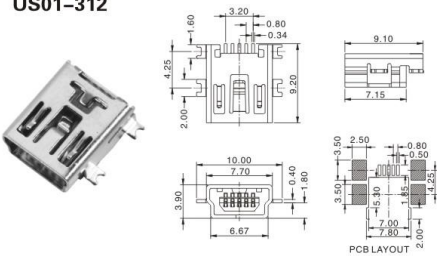
**MINI USB 5 PIN/F SMT AB TYPE 沉板短体  
US01-310**



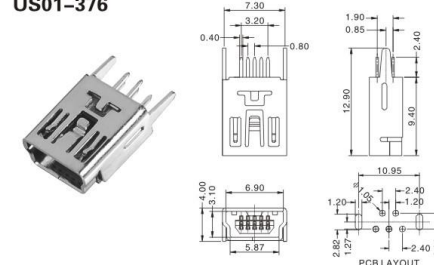
**MINI USB 5 PIN/F SMT 四脚**  
**US01-533**



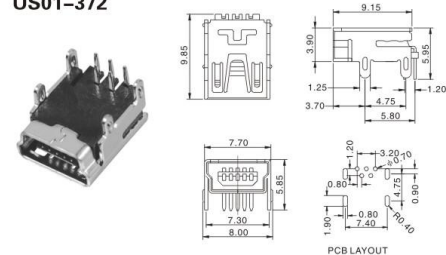
MINI USB 5 PIN/F 沉板  
US01-312



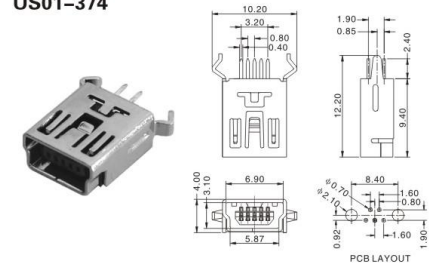
MINI USB 5 PIN/F 180 度直插直脚  
US01-376



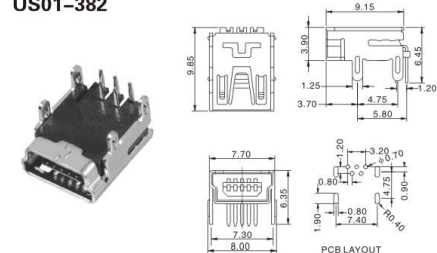
MINI USB 5 PIN/F 90 度四脚  
US01-372



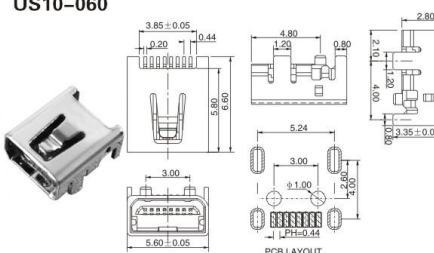
MINI USB 5 PIN/F 180 度直插弯脚  
US01-374



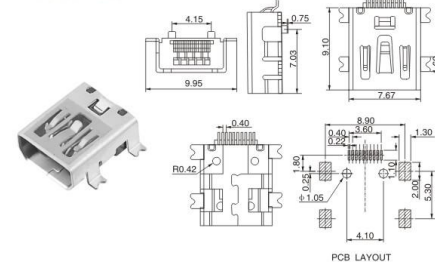
MINI USB 5 PIN/F 90 度四脚加长  
US01-382



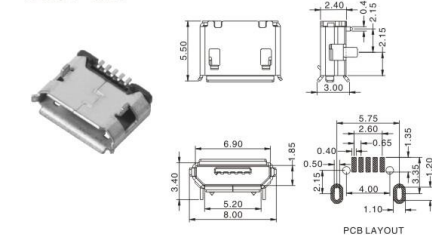
MINI USB 8 PIN/F 四脚插板 SMT  
US10-060



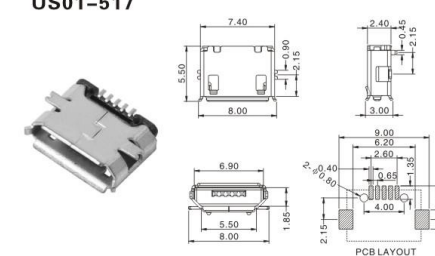
**MINI USB 10 PIN/F SMT**  
**US10-047**



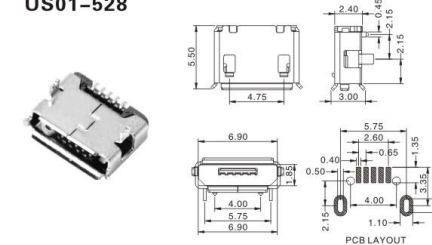
**MICRO USB 5PIN/F SMT B TYPE 插脚**  
**US01-527**



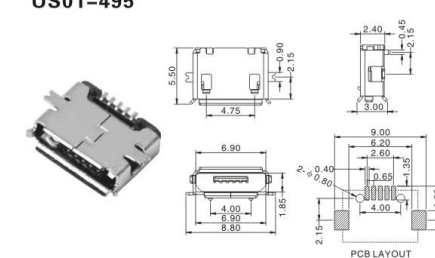
**MICRO USB 5PIN/F SMT B TYPE**  
**US01-517**



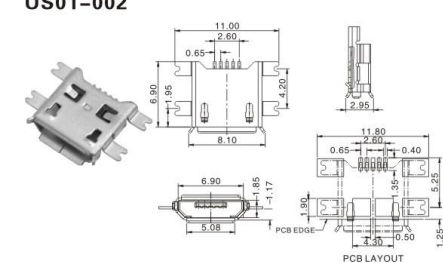
**MICRO USB 5PIN/F SMT AB TYPE 插脚**  
**US01-528**



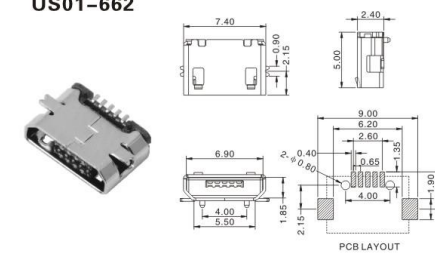
**MICRO USB 5PIN/F SMT AB TYPE**  
**US01-495**



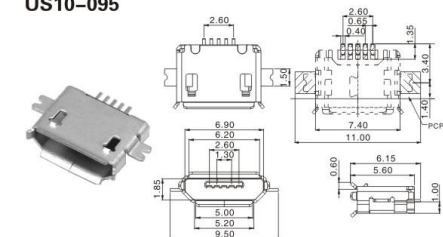
**MICRO USB 5PIN/F 沉板 1.27**  
**US01-002**



**MICRO USB 5PIN/F SMT B TYPE 无卷边**  
**US01-662**

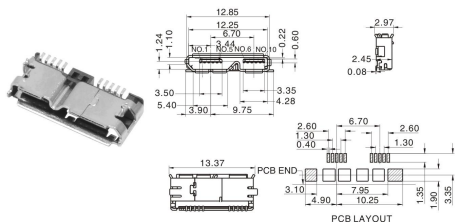


**MICRO USB 5PIN/F沉板式**  
**US10-095**

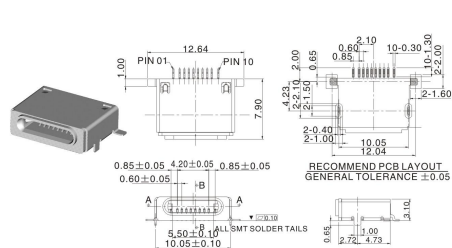




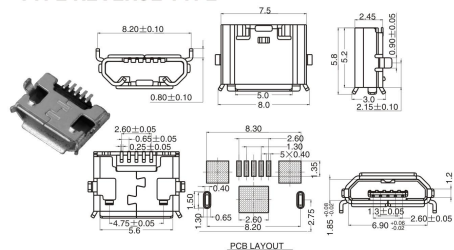
**MICRO USB 3.0母座 SMT  
US10-102**



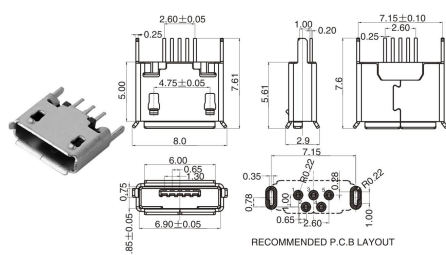
## MC-112A



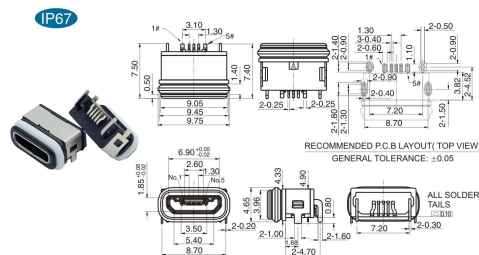
**MICRO USB 5P FEMALE B  
TYPE REVERSE TYPE**



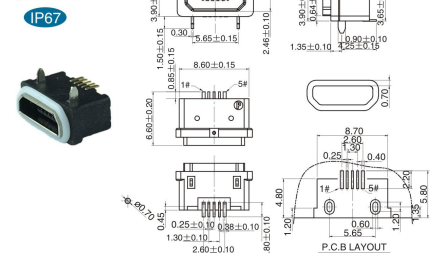
**MICRO USB 5P FEMALE AB TYPE DIP 180°**



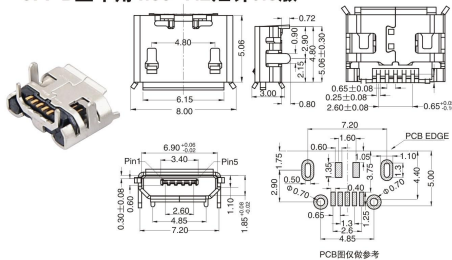
## USB-1118



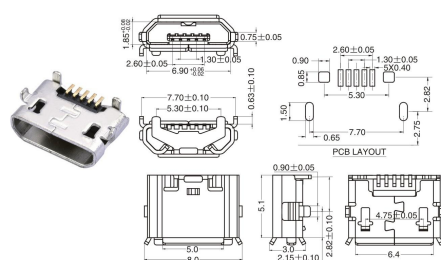
**USB-1186-B3**  
**帶定位柱**



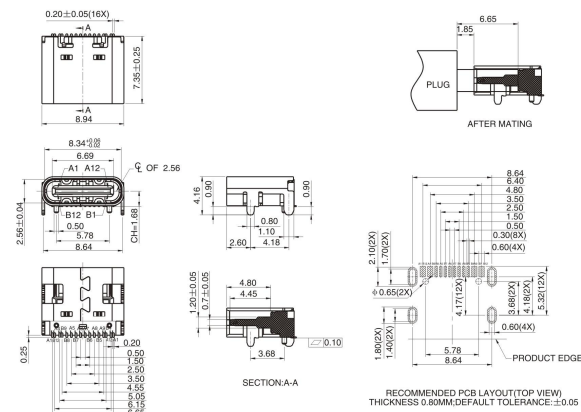
**MIRCO USB**  
**5PF B型牛角4.85-7.2短针0.8版**



**MICRO 5P F B 反向牛角内DIP 0.6(7.7-5.3)**



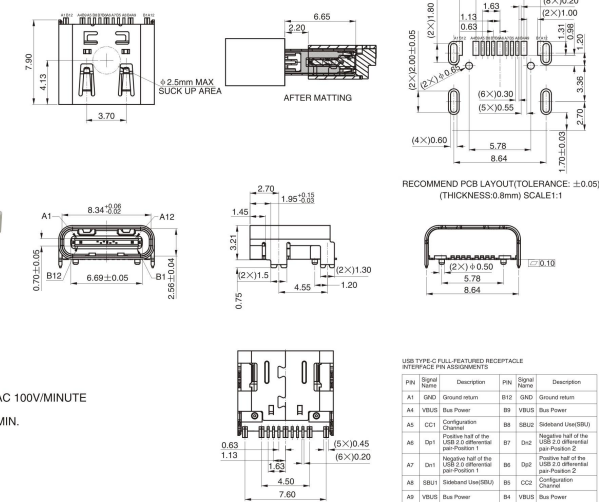
**TYPE-CF-16P-RAT-L7.3**



CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C~85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

| PIN NUMBER | SIGNAL NAME | PIN NUMBER | SIGNAL NAME |
|------------|-------------|------------|-------------|
| A1         | GND         | B12        | GND         |
| A4         | VBUS        | B9         | VBUS        |
| A5         | CC1         | B8         | SBU2        |
| A6         | Dp1         | B7         | Dn2         |
| A7         | Dn1         | B6         | Dp2         |
| A8         | SBU1        | B5         | CC2         |
| A9         | VBUS        | B4         | VBUS        |
| A12        | GND         | B1         | GND         |

TYPE-CF-W-16P-RAT-N



ELECTICAL:

CONTACT RESISTANCE: 40 Milliohm MAX.

DIELECTRIC WITHSTANDING VOLTAGE: AC 100V/MINUTE

INSULATION RESISTANCE: 100 Megohms MIN.

CURRENT RATING: 5A

MECHANICAL:

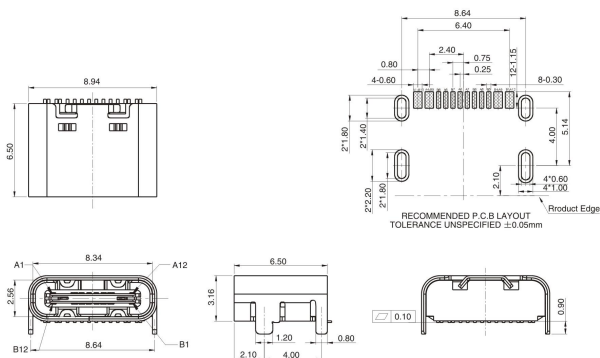
MATING FORCE: 5-20N MAX.

UNMATING FORCE: 6-20N MIN.

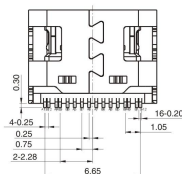
DURABILITY: 10000 CYCLES.

| USB TYPE-A FULL-FEATURE RECEPTACLE<br>INTERFACE PIN ASSIGNMENTS |             |                                                           |     |             |                                                           |
|-----------------------------------------------------------------|-------------|-----------------------------------------------------------|-----|-------------|-----------------------------------------------------------|
| PIN                                                             | Signal Name | Description                                               | PIN | Signal Name | Description                                               |
| A1                                                              | GND         | Ground return                                             | B12 | GND         | Ground return                                             |
| A4                                                              | VBUS        | Bus Power                                                 | B9  | VBUS        | Bus Power                                                 |
| A5                                                              | CC1         | Configuration Channel                                     | B8  | SBL2        | Sideband Use(SB)                                          |
| A6                                                              | Dp1         | Positive half of the USB 2.0 differential pair-Position 1 | B7  | Dm2         | Negative half of the USB 2.0 differential pair-Position 2 |
| A7                                                              | Dn1         | Negative half of the USB 2.0 differential pair-Position 1 | B6  | Dp2         | Positive half of the USB 2.0 differential pair-Position 2 |
| A8                                                              | SBU1        | Sideband Use(SBU)                                         | B5  | CC2         | Configuration Channel                                     |
| A9                                                              | VBUS        | Bus Power                                                 | B4  | VBUS        | Bus Power                                                 |
| A12                                                             | GND         | Ground return                                             | B1  | GND         | Ground return                                             |

## TYPE-CF-16P-RAT-L6.5

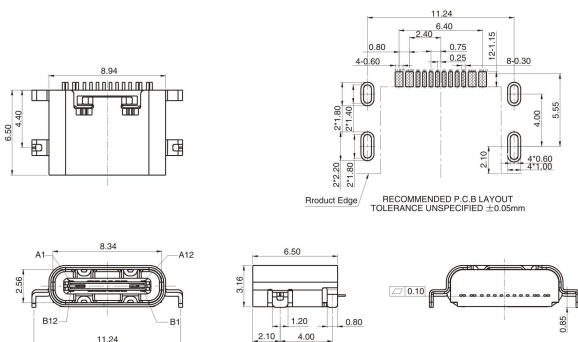


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

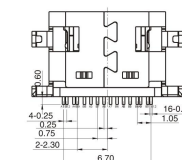


|     |             |     |             |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBU2        |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBU1        | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A12 | GND         | B1  | GND         |
| PIN | SIGNAL NAME | PIN | SIGNAL NAME |

## TYPE-CF-16P-OT0.8

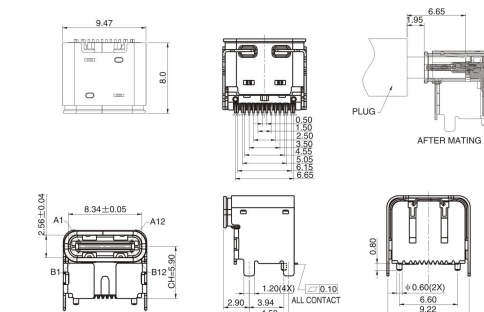


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES



|     |             |     |             |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBU2        |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBU1        | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A12 | GND         | B1  | GND         |
| PIN | SIGNAL NAME | PIN | SIGNAL NAME |

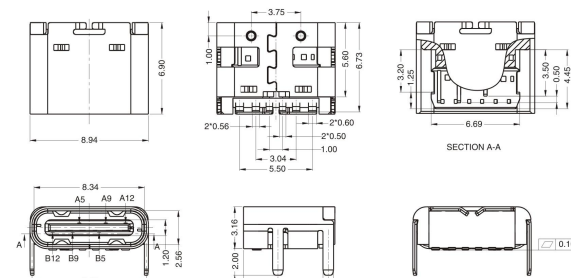
## TYPE-CF-16P-RAT-H5.9



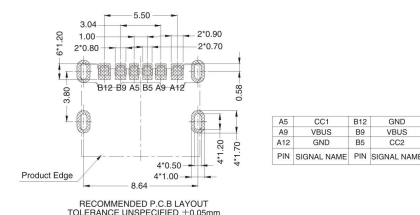
CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

| USB TYPE-C PIN ASSIGNMENTS |             | P.C.B EDGE |             |
|----------------------------|-------------|------------|-------------|
| PIN NUMBER                 | SIGNAL NAME | PIN NUMBER | SIGNAL NAME |
| A1                         | GND         | B12        | GND         |
| A4                         | VBUS        | B9         | VBUS        |
| A5                         | CC1         | B8         | SBU2        |
| A6                         | DP1         | B7         | DP2         |
| A7                         | DN1         | B6         | DP2         |
| A8                         | SBU1        | B5         | CC2         |
| A9                         | VBUS        | B4         | VBUS        |
| A12                        | GND         | B1         | GND         |

## TYPE-CF-6P-RAT-L6.9

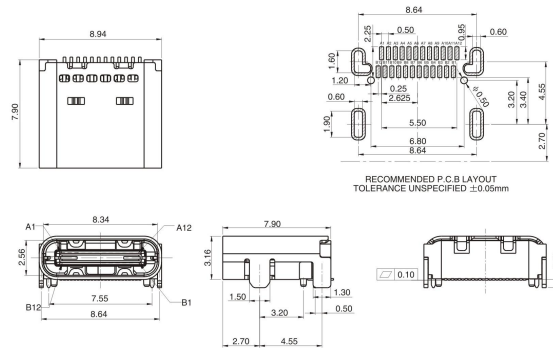


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES



|     |             |     |             |
|-----|-------------|-----|-------------|
| A5  | CC1         | B12 | GND         |
| A9  | VBUS        | B9  | VBUS        |
| A12 | GND         | B5  | CC2         |
| PIN | SIGNAL NAME | PIN | SIGNAL NAME |

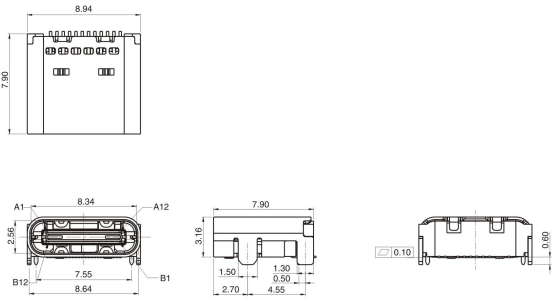
## TYPE-CF-24P-RAT-Z



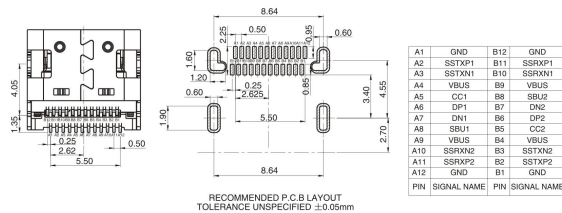
CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES



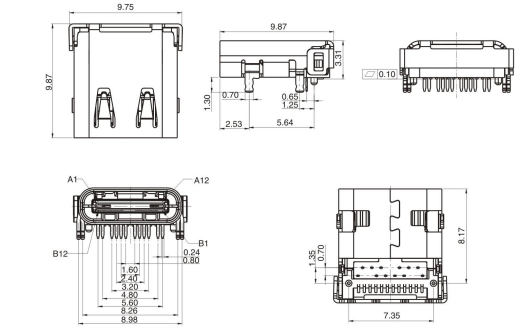
## TYPE-CF-24P-RAT



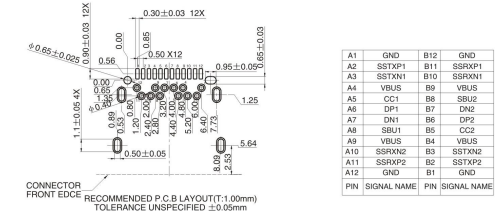
CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES



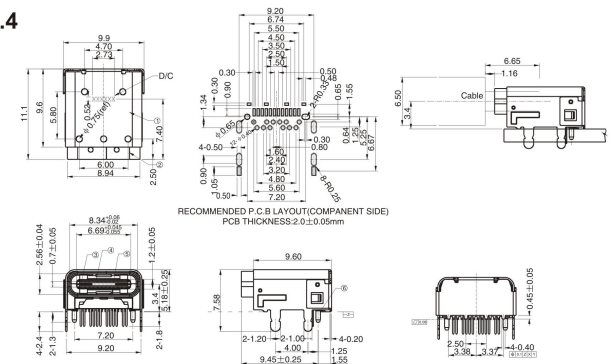
## TYPE-CF-24P-RAT13



CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES



## TYPE-CF-24P-RAT13-H3.4

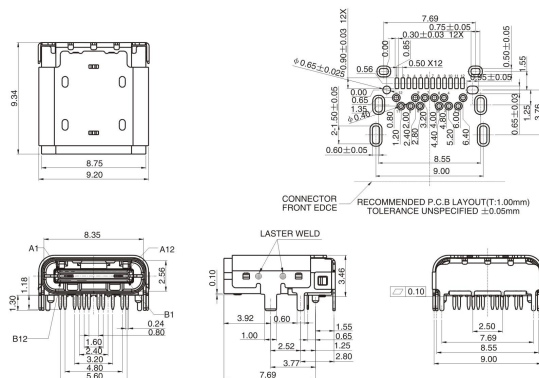


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

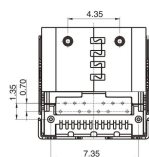




**TYPE-CF-24P-RAT13-H**

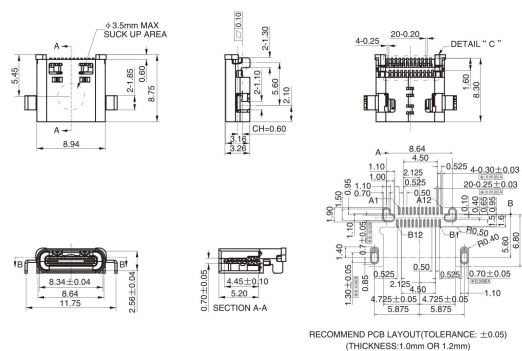


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C~85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES



|     |             |     |             |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRXP1      |
| A3  | SSTXN1      | B10 | SSRXN1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBU2        |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBU1        | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRXN2      | B3  | SSTXN2      |
| A11 | SSRXP2      | B2  | SSTXP2      |
| A12 | GND         | B1  | GND         |
| PIN | SIGNAL NAME | PIN | SIGNAL NAME |

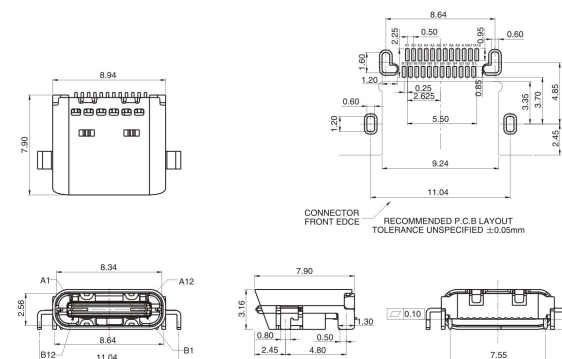
**TYPE-CF-24P-OT1.0-L8.75**



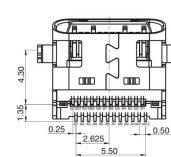
| PSN | Signal Type | Description                                             | PSN | Signal Type | Description                                             |
|-----|-------------|---------------------------------------------------------|-----|-------------|---------------------------------------------------------|
| A1  | GRD         | Ground return                                           | B12 | GRD         | Ground return                                           |
| A2  | STRT1       | Positive half of first SuperSpeed TX differential pair  | B13 | STRT1       | Positive half of first SuperSpeed RX differential pair  |
| A3  | STRT2       | Negative half of first SuperSpeed TX differential pair  | B14 | STRT2       | Negative half of first SuperSpeed RX differential pair  |
| A4  | VBUS        | TX differential pair                                    | B9  | VBUS        | TX differential pair                                    |
| A5  | CC1         | CC Configuration Channel                                | B8  | CC1         | CC Configuration Channel (See USB)                      |
| A6  | DP1         | USB 2.0 differential pair, channel 1                    | B8  | DP2         | USB 2.0 differential pair, channel 2                    |
| A7  | DH1         | High half of the USB 2.0 differential pair, channel 1   | B6  | DP2         | USB 2.0 differential pair, channel 2                    |
| A8  | SH1         | Low half of the USB 2.0 differential pair, channel 1    | B5  | CC2         | CC Configuration Channel                                |
| A9  | VBUS        | TX differential pair                                    | B4  | VBUS        | TX differential pair                                    |
| A10 | STRT1       | Positive half of second SuperSpeed TX differential pair | B3  | STRT1       | Positive half of second SuperSpeed RX differential pair |
| A11 | STRT2       | Negative half of second SuperSpeed TX differential pair | B2  | STRT2       | Negative half of second SuperSpeed RX differential pair |
| A12 | GRD         | Ground return                                           | B1  | GRD         | Ground return                                           |

ELECTRICAL:  
CONTACT RESISTANCE: 40 Milliohm MAX.  
DIELECTRIC WITHSTANDING VOLTAGE: AC 100V/MINUTE  
INSULATION RESISTANCE: 100 Megohms MIN.  
MECHANICAL:  
MATING FORCE: 5-20N MAX.  
UNMATING FORCE: 8-20N MIN.  
DURABILITY: 10000 CYCLES.

**TYPE-CF-24P-OT0.8-S**

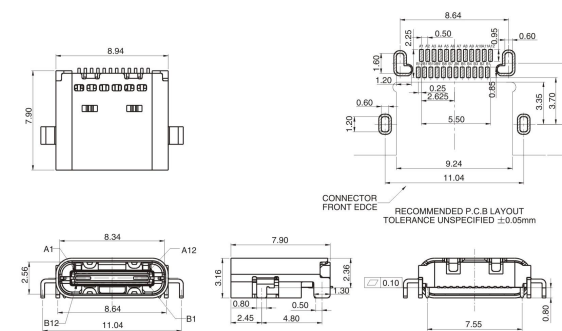


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C ~ 85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N ~ 20N  
UNMATING FORCE: 8N ~ 20N  
DURABILITY: 10,000 CYCLES

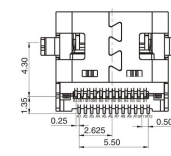


|     |             |     |             |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRX1P1     |
| A3  | SSTXN1      | B10 | SSRXN1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBU2        |
| A6  | DP1         | B7  | DM2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBU1        | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRXN2      | B3  | SSTXN2      |
| A11 | SSRX1P2     | B2  | SSTXP2      |
| A12 | GND         | B1  | GND         |
| PIN | SIGNAL NAME | PIN | SIGNAL NAME |

TYPE-CF-24P-OT0.8

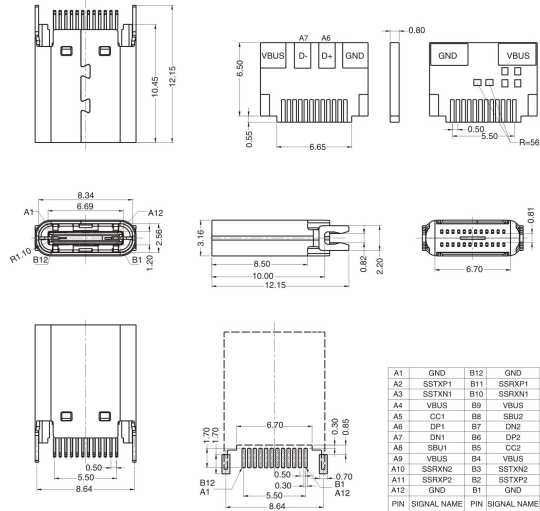


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C ~ 85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N ~ 20N  
UNMATING FORCE: 8N ~ 20N  
DURABILITY: 10,000 CYCLES



|     |             |     |             |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRXP1      |
| A3  | SSTXN1      | B10 | SSRXN1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBU2        |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBU1        | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRXN2      | B3  | SSTXN2      |
| A11 | SSRXP2      | B2  | SSTXP2      |
| A12 | GND         | B1  | GND         |
| PIN | SIGNAL NAME | PIN | SIGNAL NAME |

TYPE-CF-24P-PT0.8-S1

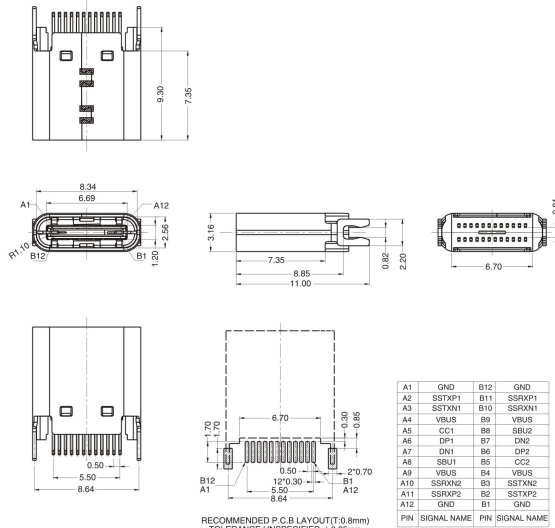


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C ~ 85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N ~ 20N  
UNMATING FORCE: 8N ~ 20N  
DURABILITY: 10,000 CYCLES

| PIN | SIGNAL NAME | PIN | SIGNAL NAME |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRXN1      |
| A3  | SSTXN1      | B10 | SSRXN1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBUS2       |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBUS1       | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRXN2      | B3  | SSTXN2      |
| A11 | SSRXN2      | B2  | SSTXP2      |
| A12 | GND         | B1  | GND         |

RECOMMENDED P.C.B. LAYOUT(T:0.8mm)  
TOLERANCE UNSPECIFIED ±0.05mm

TYPE-CF-24P-PT0.8-S1-L9.3

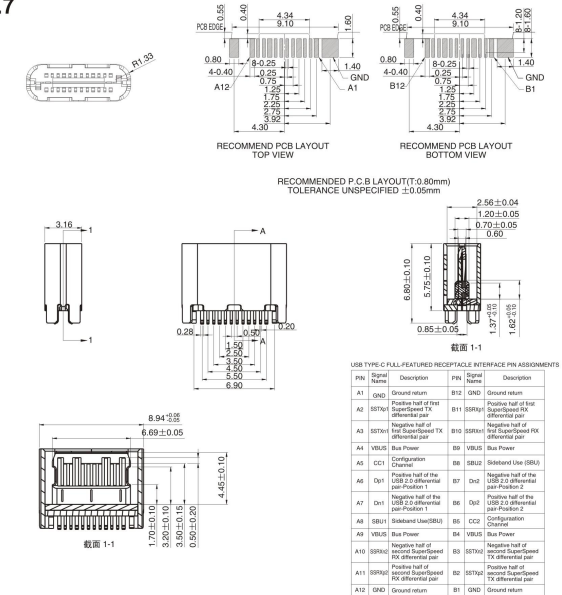


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C ~ 85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N ~ 20N  
UNMATING FORCE: 8N ~ 20N  
DURABILITY: 10,000 CYCLES

| PIN | SIGNAL NAME | PIN | SIGNAL NAME |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRXN1      |
| A3  | SSTXN1      | B10 | SSRXN1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBUS2       |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBUS1       | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRXN2      | B3  | SSTXN2      |
| A11 | SSRXN2      | B2  | SSTXP2      |
| A12 | GND         | B1  | GND         |

RECOMMENDED P.C.B. LAYOUT(T:0.8mm)  
TOLERANCE UNSPECIFIED ±0.05mm

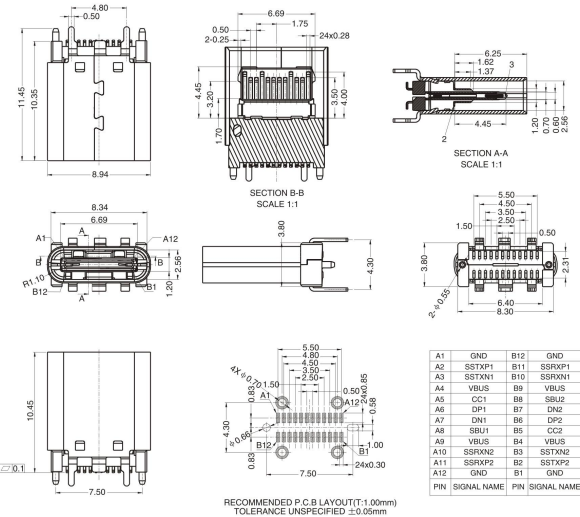
TYPE-CF-24P-PT0.8-S1-L5.7



CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C ~ 85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N ~ 20N  
UNMATING FORCE: 8N ~ 20N  
DURABILITY: 10,000 CYCLES

| PIN | Signal Name | Description                                                    | PIN | Signal Name | Description                                                    |
|-----|-------------|----------------------------------------------------------------|-----|-------------|----------------------------------------------------------------|
| A1  | GND         | Ground return                                                  | B12 | GND         | Ground return                                                  |
| A2  | SSTXP1      | Positive half of the USB 2.0 differential TX differential pair | B11 | SSRXN1      | Negative half of the USB 2.0 differential TX differential pair |
| A3  | SSTXN1      | Negative half of the USB 2.0 differential TX differential pair | B10 | SSRXN1      | Negative half of the USB 2.0 differential TX differential pair |
| A4  | VBUS        | Bus Power                                                      | B9  | VBUS        | Bus Power                                                      |
| A5  | CC1         | Configuration Descriptor                                       | B8  | SBUS2       | Standard Use (SRU)                                             |
| A6  | DP1         | Positive half of the USB 2.0 differential pair-Position 1      | B7  | DN2         | Negative half of the USB 2.0 differential pair-Position 2      |
| A7  | DN1         | Negative half of the USB 2.0 differential pair-Position 1      | B6  | DP2         | Positive half of the USB 2.0 differential TX differential pair |
| A8  | SBUS1       | Standard Use (SRU)                                             | B5  | CC2         | Configuration Descriptor                                       |
| A9  | VBUS        | Bus Power                                                      | B4  | VBUS        | Bus Power                                                      |
| A10 | SSRXN2      | Negative half of the USB 2.0 differential TX differential pair | B3  | SSTXN2      | Negative half of the USB 2.0 differential TX differential pair |
| A11 | SSRXN2      | Positive half of the USB 2.0 differential TX differential pair | B2  | SSTXP2      | Positive half of the USB 2.0 differential TX differential pair |
| A12 | GND         | Ground return                                                  | B1  | GND         | Ground return                                                  |

TYPE-CF-24P-VT

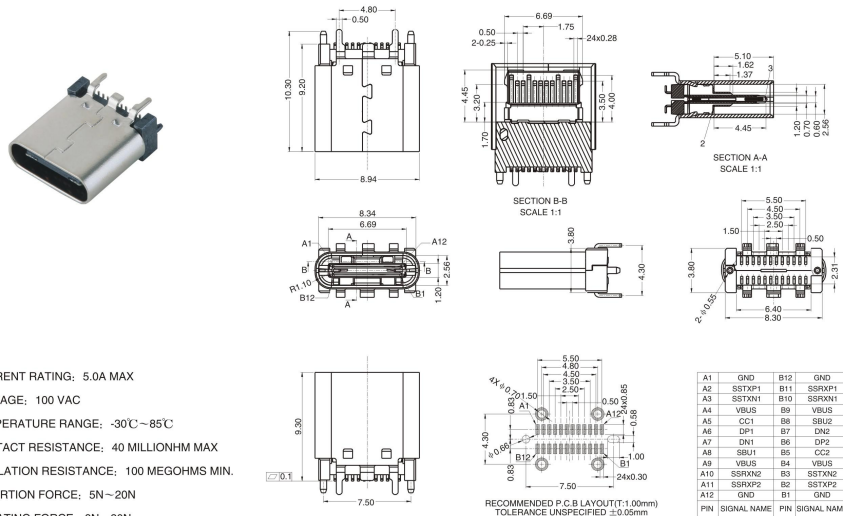


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C ~ 85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N ~ 20N  
UNMATING FORCE: 8N ~ 20N  
DURABILITY: 10,000 CYCLES

| PIN | SIGNAL NAME | PIN | SIGNAL NAME |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRXN1      |
| A3  | SSTXN1      | B10 | SSRXN1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBUS2       |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBUS1       | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRXN2      | B3  | SSTXN2      |
| A11 | SSRXN2      | B2  | SSTXP2      |
| A12 | GND         | B1  | GND         |

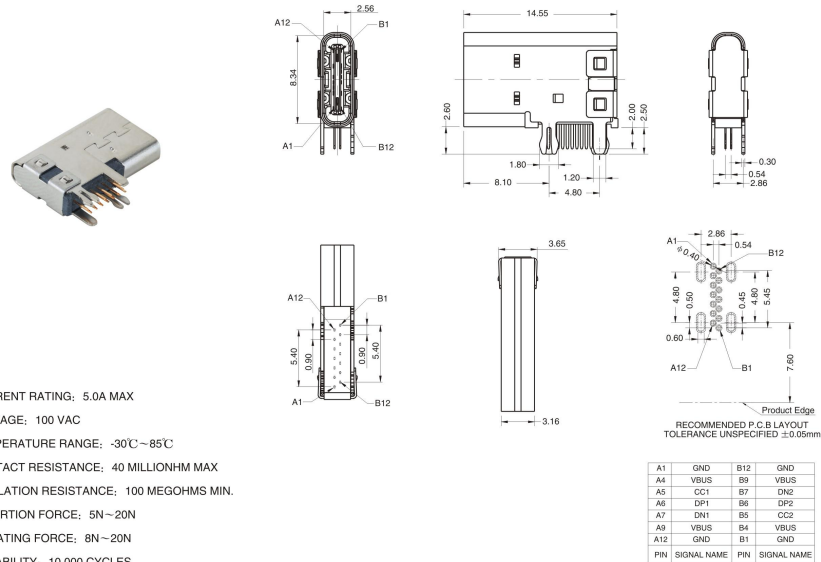
RECOMMENDED P.C.B. LAYOUT(T:1.00mm)  
TOLERANCE UNSPECIFIED ±0.05mm

## TYPE-CF-24P-VT-L9.3



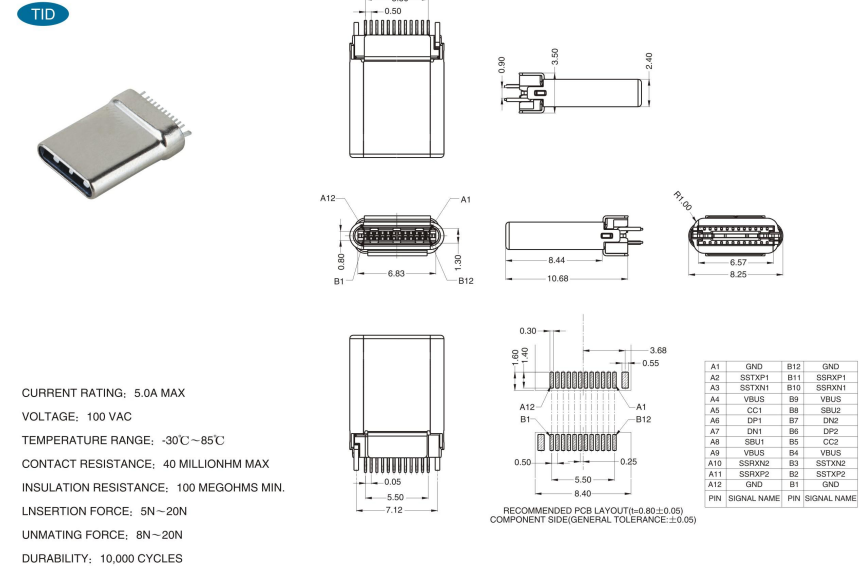
CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

## TYPE-CF-14P-FT



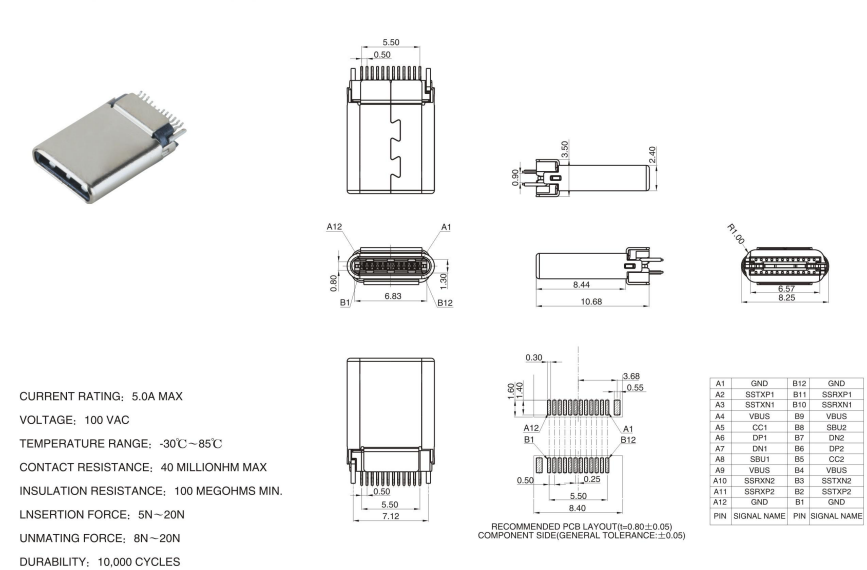
CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

## TYPE-CM-24P-RT1.0-S2



CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

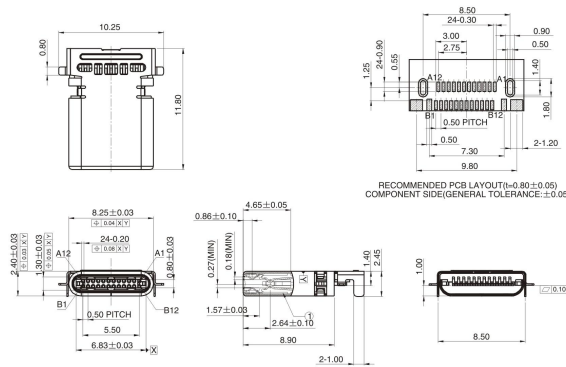
## TYPE-CM-24P-RT1.0-S1



CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE:  $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$   
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES



## TYPE-CM-24P-RAT-L11.8

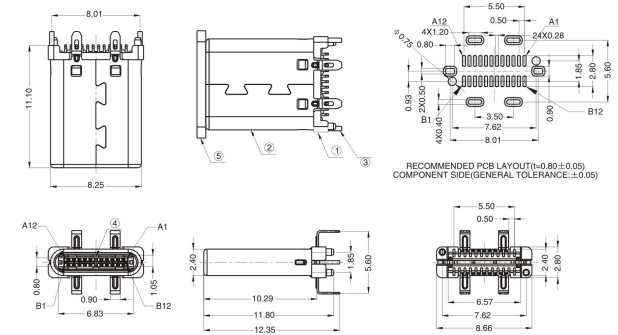


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C~85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

Pin Assignments And Mating Sequence:

| Pin No. | Signal Name | Mating Sequence | Pin No. | Signal Name | Mating Sequence |
|---------|-------------|-----------------|---------|-------------|-----------------|
| A1      | GND         | First           | B1      | GND         | First           |
| A2      | SSTXP1      | Second          | B11     | SSRPX1      | Second          |
| A3      | SSTXN1      | Second          | B10     | SSRPX1      | Second          |
| A4      | VBUS        | First           | B9      | VBUS        | First           |
| A5      | CC1         | Second          | B8      | CC2         | Second          |
| A6      | DP1         | Second          | B7      | DN2         | Second          |
| A7      | DN1         | Second          | B6      | DN2         | Second          |
| A8      | SSRX1       | Second          | B5      | CC2         | Second          |
| A9      | VBUS        | First           | B4      | VBUS        | First           |
| A10     | SSRX2       | Second          | B3      | SSTXN2      | Second          |
| A11     | SSRX2       | Second          | B2      | SSTXN2      | Second          |
| A12     | GND         | First           | B1      | GND         | First           |
| Shell   | GND         | Shell           | Shell   | GND         | Shell           |

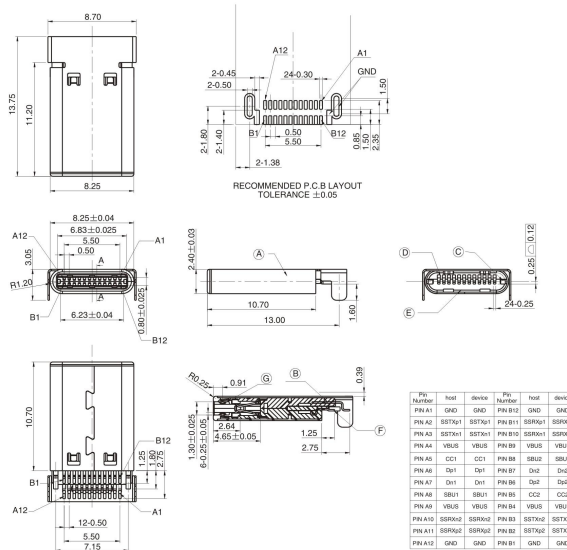
## TYPE-CM-24P-4



CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C~85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

| Pin | SIGNAL NAME | Pin | SIGNAL NAME |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRPX1      |
| A3  | SSTXN1      | B10 | SSRPX1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | CC2         |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DN2         |
| A8  | SSRX1       | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRX2       | B3  | SSTXN2      |
| A11 | SSRX2       | B2  | SSTXN2      |
| A12 | GND         | B1  | GND         |

## TYPE-CF-24P-RAT

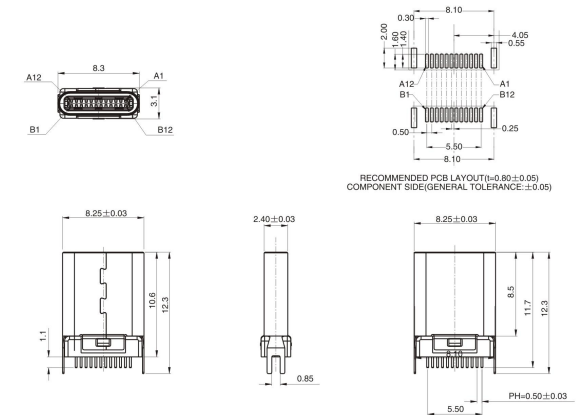


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C~85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

Pin Assignments And Mating Sequence:

| Pin Number | Test device | Pin Number | Test device |
|------------|-------------|------------|-------------|
| PR1A1      | GND         | PR1B12     | GND         |
| PR1A2      | SSTXP1      | PR1B11     | SSRPX1      |
| PR1A3      | SSTXN1      | PR1B10     | SSRPX1      |
| PR1A4      | VBUS        | PR1B9      | VBUS        |
| PR1A5      | CC1         | PR1B8      | CC2         |
| PR1A6      | DP1         | PR1B7      | DN2         |
| PR1A7      | DN1         | PR1B6      | DN2         |
| PR1A8      | SSRX1       | PR1B5      | CC2         |
| PR1A9      | VBUS        | PR1B4      | VBUS        |
| PR1A10     | SSRX2       | PR1B3      | SSTXN2      |
| PR1A11     | SSRX2       | PR1B2      | SSTXN2      |
| PR1A12     | GND         | PR1B1      | GND         |

## TYPE-CM-24P-PT-8.5

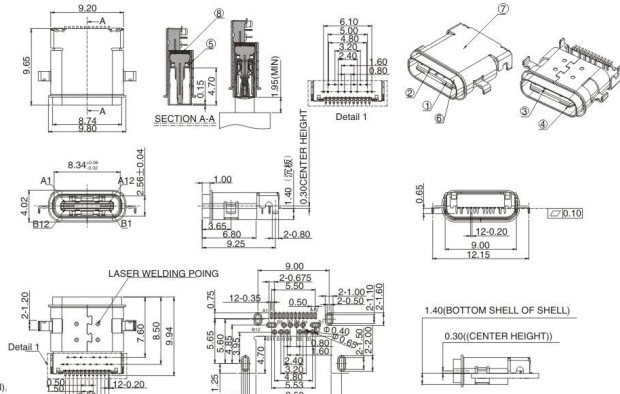


CURRENT RATING: 5.0A MAX  
VOLTAGE: 100 VAC  
TEMPERATURE RANGE: -30°C~85°C  
CONTACT RESISTANCE: 40 MILLIONHM MAX  
INSULATION RESISTANCE: 100 MEGOHMS MIN.  
INSERTION FORCE: 5N~20N  
UNMATING FORCE: 8N~20N  
DURABILITY: 10,000 CYCLES

| Pin | SIGNAL NAME | Pin | SIGNAL NAME |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXP1      | B11 | SSRPX1      |
| A3  | SSTXN1      | B10 | SSRPX1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | CC2         |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DN2         |
| A8  | SSRX1       | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRX2       | B3  | SSTXN2      |
| A11 | SSRX2       | B2  | SSTXN2      |
| A12 | GND         | B1  | GND         |

## U501T24J4FZL2

IP67



- NOTES:
- 1.MATERIAL:SEE "TABLE 1";
  - 2.FINISH:SEE "TABLE 1";
  - 3.ELECTRICAL:
    - 3-1.CONTACT CURRENT RATING:  
5A(VBUS PIN 1.5A(PIN),  
5A(GND PIN 1.25A(PIN MAX),0.25A(PIN(OTHER PIN).
    - 3-2.INSULATION RESISTANCE:  
100 MEGOHMS MIN. AT 250VDC.
    - 3-3.DIELECTRIC WITHSTANDING VOLTAGE:  
100VAC MIN.
    - 3-4.LOW LEVEL CONTACT RESISTANCE:  
INITIAL 40mΩ MAX.  
AFTER 50mΩ MAX.
  - 4.MECHANICAL CHARACTERISTICS:
    - 4-1.MATING FORCE:5-20N;
    - 4-2.UNMATING FORCE:8-20N(INITIAL,  
6-20N(AFTER 10000 CYCLES);
    - 4-3.DURABILITY:10,000 MATING CYCLES.
    - 4-4.OPERATING TEMPERATURE:-40°C TO +80°C

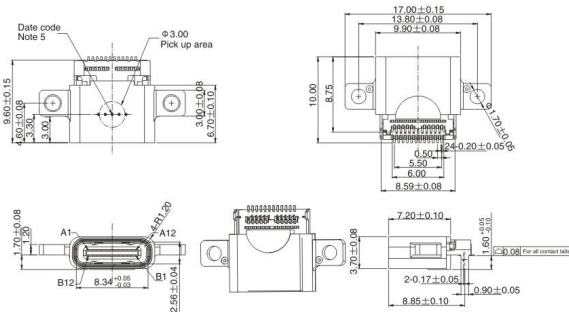
TABLE 1:

| NO. | PART NAME  | QTY | MATERIAL        | DESCRIPTION | REMARK   |
|-----|------------|-----|-----------------|-------------|----------|
| ①   | GLUE WATER | 1   | EPOXY           | BLACK       |          |
| ②   | Shell-2    | 1   | Stainless steel | AU PLATED   | T=0.20mm |
| ③   | Shell-1    | 1   | Stainless steel | NI PLATED   | T=0.20mm |
| ④   | MID PLATE  | 1   | Stainless steel | NI PLATED   | T=0.10mm |
| ⑤   | Terminal-B | 12  | Copper Alloy    | AU PLATED   | T=0.15mm |
| ⑥   | Terminal-A | 12  | Copper Alloy    | AU PLATED   | T=0.15mm |
| ⑦   | Housing    | 1   | HIGH TEMP       | Black       |          |

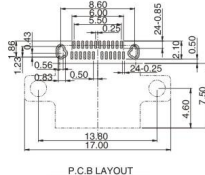
| Pin | Signal Name | Mating Sequence | Pin | Signal Name | Mating Sequence |
|-----|-------------|-----------------|-----|-------------|-----------------|
| A1  | GND         | First           | B12 | GND         | First           |
| A2  | SSTXN1      | Second          | B11 | SSRXN1      | Second          |
| A3  | SSTXN1      | Second          | B10 | SSRXN1      | Second          |
| A4  | VBUS        | First           | B9  | VBUS        | First           |
| A5  | CC1         | Second          | B8  | SBU2        | Second          |
| A6  | DP1         | Second          | B7  | DN2         | Second          |
| A7  | DP1         | Second          | B6  | DP2         | Second          |
| A8  | SBU1        | Second          | B5  | CC2         | Second          |
| A9  | VBUS        | First           | B4  | VBUS        | First           |
| A10 | SSRXN2      | Second          | B3  | SSTXN1      | Second          |
| A11 | SSRXN2      | Second          | B2  | SSTXN1      | Second          |
| A12 | GND         | First           | B1  | GND         | First           |

## UB31AF002-1 M15 (防水TYPE.C 沉板1.6)

IP67



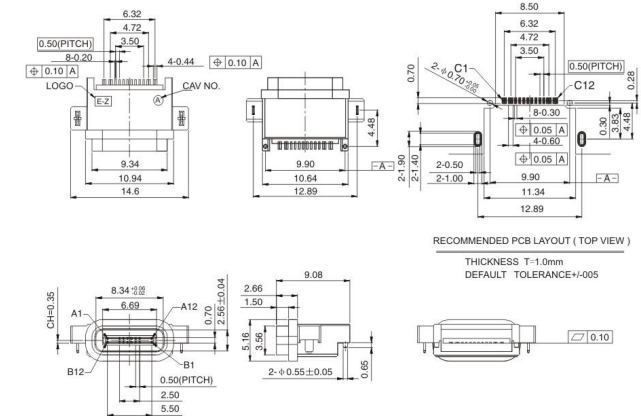
- Specification:
- 1.Current Rating:1.0 AMP
  - 2.Voltage Rating:30V AC,DC
  - 3.Dielectric Strength:500V AC RMS for 1 minute.
  - 4.Contact Resistance:30mΩ Max.
  - 5.Insulator Resistance:500MΩ Min. AT 250V DC.
  - 6.Mating/Unmating cycles:2000cycles
  - 7.Temperature:-20°C TO +60°C



| PIN | SIGNAL NAME | PIN | SIGNAL NAME |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A2  | SSTXN1      | B11 | SSRXN1      |
| A3  | SSTXN1      | B10 | SSRXN1      |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBU2        |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBU1        | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A10 | SSRXN2      | B3  | SSTXN2      |
| A11 | SSRXN2      | B2  | SSRXN2      |
| A12 | GND         | B1  | GND         |

## USBC-1100A-C165-WP

IP67



- NOTE
- SPECIFICATION:
1. CURRENT RATING: 3.0A MAX
  2. DIELECTRIC WITHSTAND VOLTAGE: 100VAC
  3. TEMPERATURE RANGE: -30°C~85°C.
  4. CONTACT RESISTANCE: 40 MILLIONHM MAX
  5. INSULATION RESISTANCE: 100 MEGOHMS MIN
  6. INSERTION FORCE: 5N-20N
  7. UNMATING FORCE: 8N-20N
  8. DURABILITY: 10, 000 CYCLES

IN TERF ACE(FRONT VIEW)

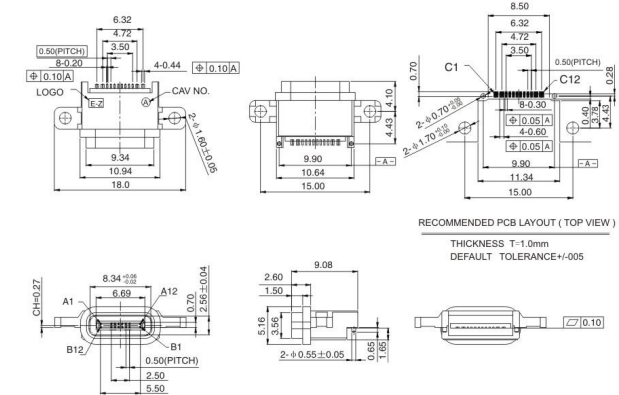
| A1  | A2   | A3  | A4  | A5  | A6   | A7   | A8  | A9  | A10 | A11 | A12 |
|-----|------|-----|-----|-----|------|------|-----|-----|-----|-----|-----|
| GND | VBUS | CC1 | DP1 | DN1 | SBU1 | VBUS | GND | GND | GND | GND | GND |
| B12 | B11  | B10 | B9  | B8  | B7   | B6   | B5  | B4  | B3  | B2  | B1  |

PIN ASSIGNMENT

| PIN NO.     | A1&B12 | A4&B9 | B8    | A5  | B7  | A6  | A7  | B6  | A8    | B5  | A9&B4 | A12&B1 |
|-------------|--------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|--------|
| SIGNAL NAME | GND    | VBUS  | SBUS2 | CC1 | DN2 | DP1 | DN1 | DP2 | SBUS1 | CC2 | VBUS  | GND    |
| PCB PAD NO. | C1     | C2    | C3    | C4  | C5  | C6  | C7  | C8  | C9    | C10 | C11   | C12    |

## USBC-1100-C165-WP

IP67



- NOTE
- SPECIFICATION:
1. CURRENT RATING: 3.0A MAX
  2. DIELECTRIC WITHSTAND VOLTAGE: 100VAC
  3. TEMPERATURE RANGE: -30°C~85°C.
  4. CONTACT RESISTANCE: 40 MILLIONHM MAX
  5. INSULATION RESISTANCE: 100 MEGOHMS MIN
  6. INSERTION FORCE: 5N-20N
  7. UNMATING FORCE: 8N-20N
  8. DURABILITY: 5000 CYCLES

IN TERF ACE(FRONT VIEW)

| A1  | A2   | A3  | A4  | A5  | A6    | A7   | A8  | A9  | A10 | A11 | A12 |
|-----|------|-----|-----|-----|-------|------|-----|-----|-----|-----|-----|
| GND | VBUS | CC1 | DP1 | DN1 | SBUS1 | VBUS | GND | GND | GND | GND | GND |
| B12 | B11  | B10 | B9  | B8  | B7    | B6   | B5  | B4  | B3  | B2  | B1  |

PIN ASSIGNMENT

| PIN NO.     | A1&B12 | A4&B9 | B8    | A5  | B7  | A6  | A7  | B6  | A8    | B5  | A9&B4 | A12&B1 |
|-------------|--------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|--------|
| SIGNAL NAME | GND    | VBUS  | SBUS2 | CC1 | DN2 | DP1 | DN1 | DP2 | SBUS1 | CC2 | VBUS  | GND    |
| PCB PAD NO. | C1     | C2    | C3    | C4  | C5  | C6  | C7  | C8  | C9    | C10 | C11   | C12    |

## USBC-1102

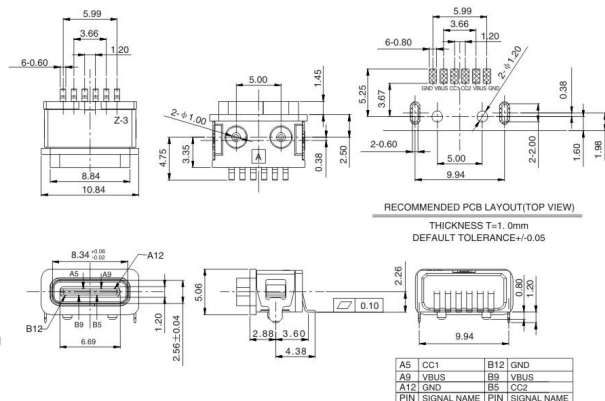
IP67



NOTE

SPECIFICATION:

1. CURRENT RATING: 3.0A MAX
2. DIELECTRIC WITHSTAND VOLTAGE: 100VAC
3. TEMPERATURE RANGE: -30°C~85°C
4. CONTACT RESISTANCE: 40 MILLIONHM MAX
5. INSULATION RESISTANCE: 100 MEGOHMS MIN
6. INSERTION FORCE: 5N~20N
7. UNMATING FORCE: 8N~20N
8. DURABILITY: 5000 CYCLES



## USBC-1103

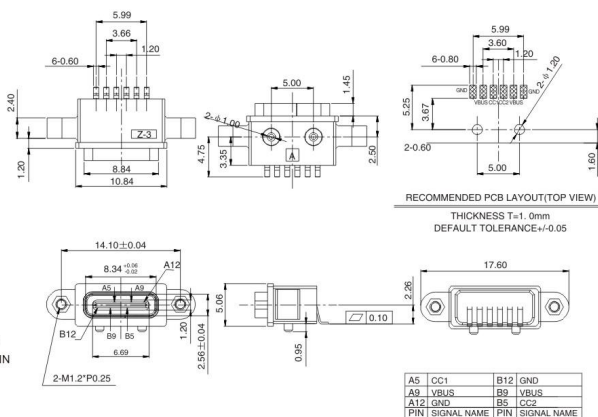
IP67



NOTE

SPECIFICATION:

1. CURRENT RATING: 3.0A MAX
2. DIELECTRIC WITHSTAND VOLTAGE: 100VAC
3. TEMPERATURE RANGE: -30°C~85°C
4. CONTACT RESISTANCE: 40 MILLIONHM MAX
5. INSULATION RESISTANCE: 100 MEGOHMS MIN
6. INSERTION FORCE: 5N~20N
7. UNMATING FORCE: 8N~20N
8. DURABILITY: 5000 CYCLES



## USBC-1103A

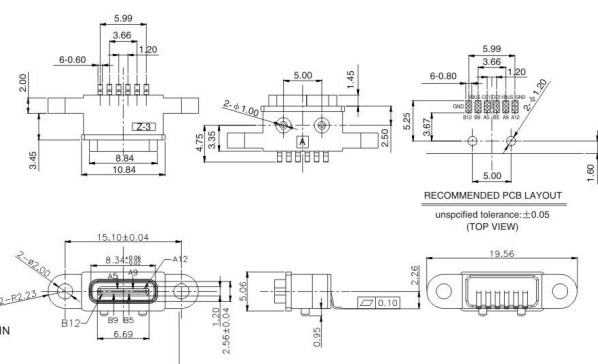
IP67



NOTE

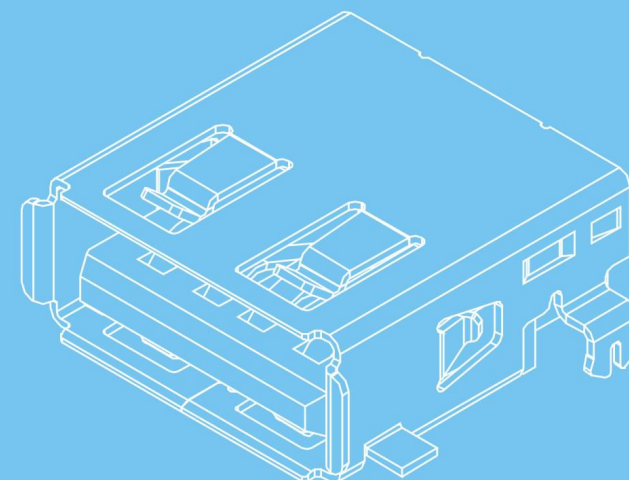
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2. DIELECTRIC WITHSTAND VOLTAGE: 100VAC
3. TEMPERATURE RANGE: -30°C~85°C
4. CONTACT RESISTANCE: 40 MILLIONHM MAX
5. INSULATION RESISTANCE: 100 MEGOHMS MIN
6. INSERTION FORCE: 5N~20N
7. UNMATING FORCE: 8N~20N
8. DURABILITY: 5000 CYCLES



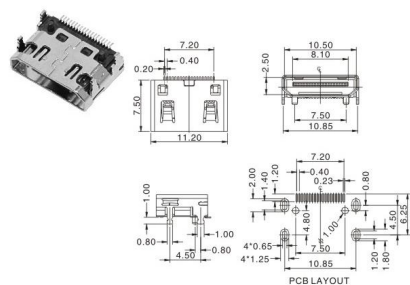
# HDMI JACK SERIES

## HDMI插座系列

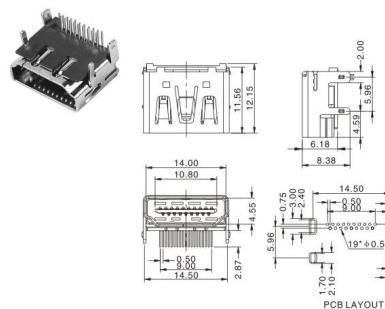




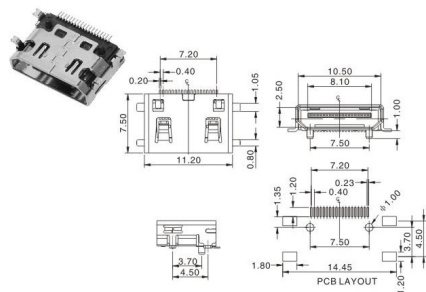
**MINI HDMI 19PIN/F脚90度针贴片**  
**HD01-011**



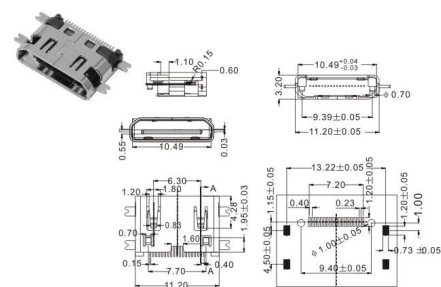
MINI HDMI 19PIN/F90度有凸点  
HD01-001



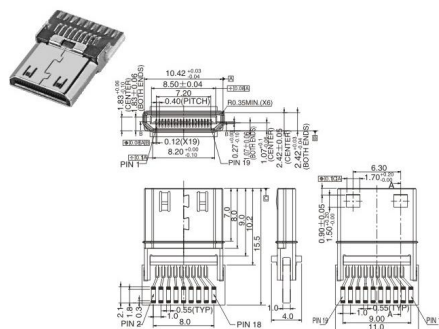
MINI HDMI 19PIN/F全贴  
HD01-012



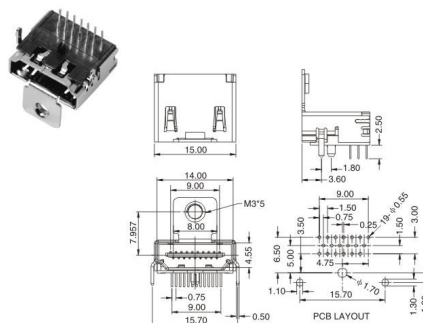
**MINI HDMI 19PIN/F 沉板式**  
**HD10-021**



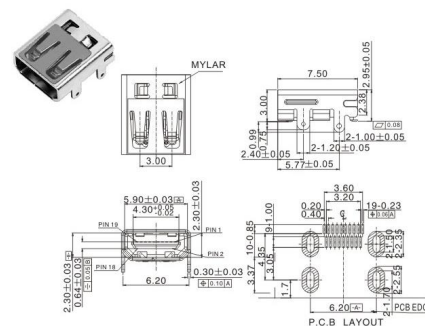
**MINI HDMI 19PIN/M 焊线式**  
**HD10-022**



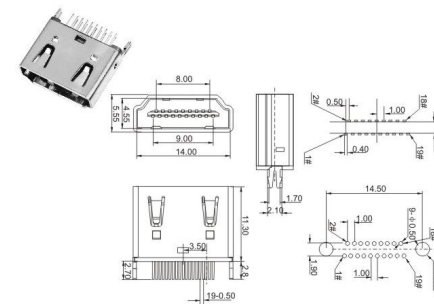
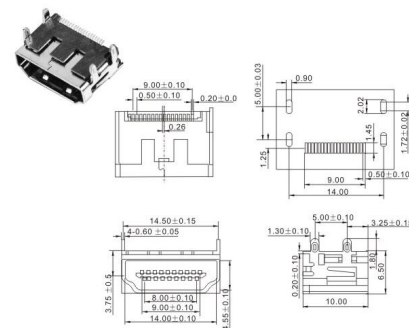
HDMI 19PIN/F 三排90度 单耳 ( 孔距7.975 )  
HD01-026



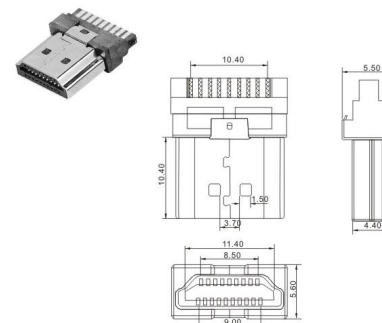
HDH02



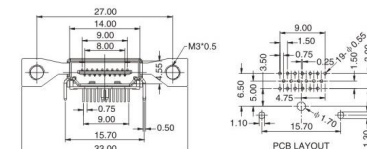
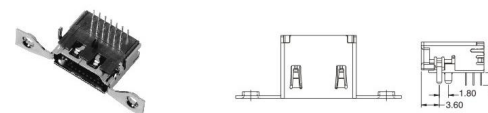
HDMI 19PIN/F 夹板式  
HD10-003

HDMI 19PIN/F SMT 反向  
HD10-006

**MINI HDMI 19PIN/M 短体 焊线式**  
**HD10-010**

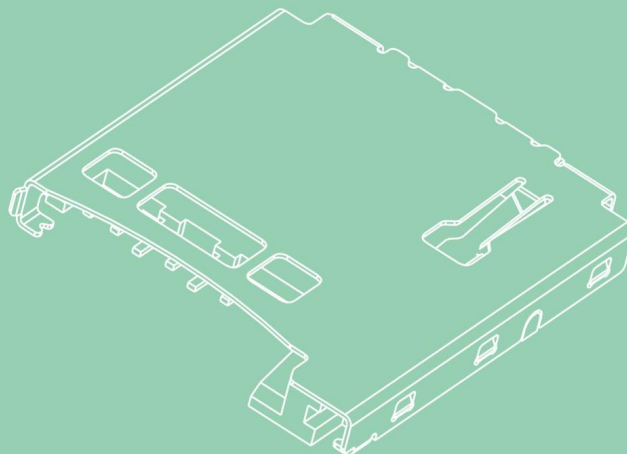


HDMI 19PIN/F 三排90度 双耳  
HD01-028

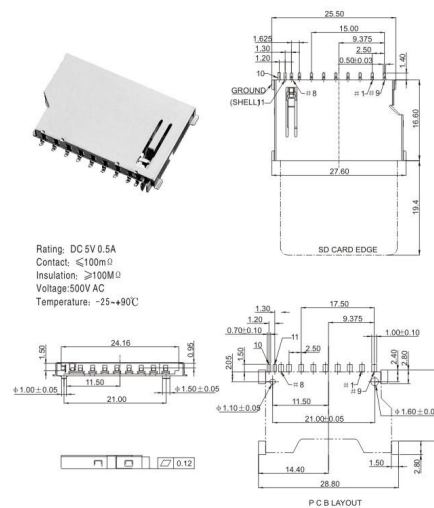


# CARD-SOCKET SERIES

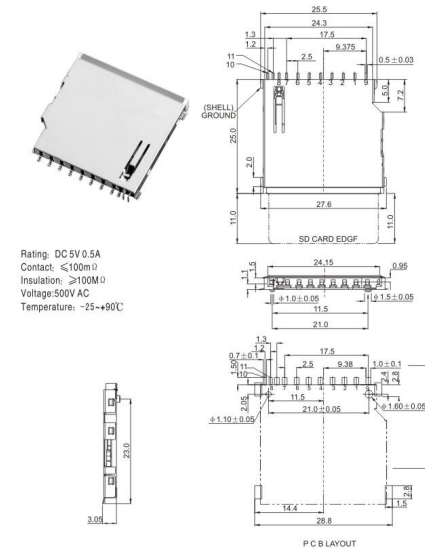
## 卡座系列



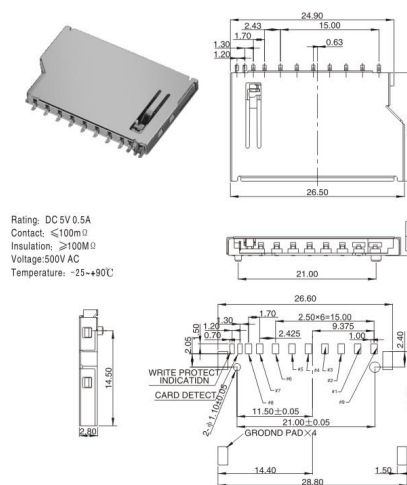
### SD1002



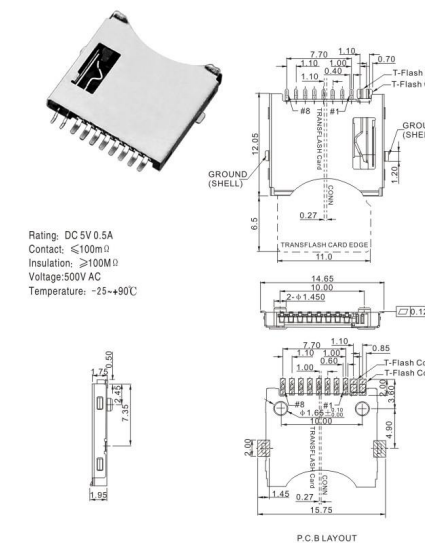
### SD1003



### SD1002B



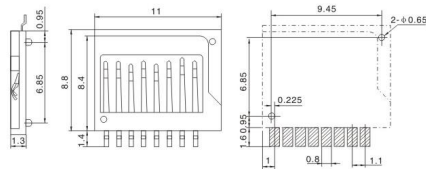
### MINI SD1005



## SD1005G



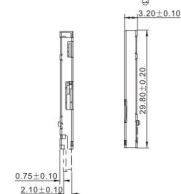
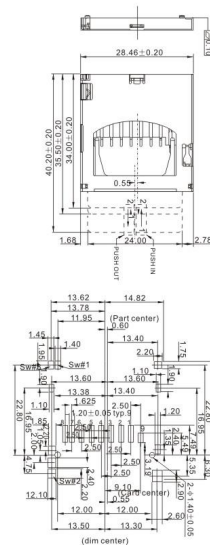
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Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



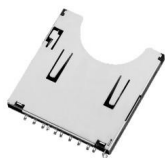
## SD1006A



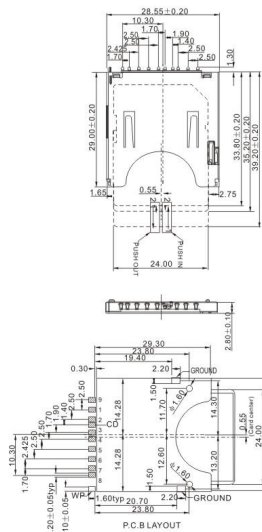
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Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



## SD1006



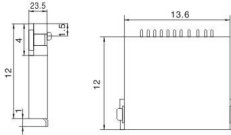
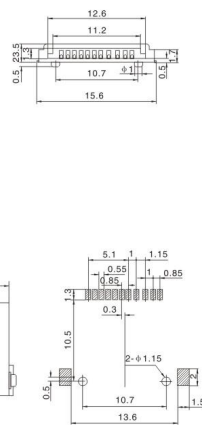
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Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



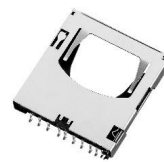
**M-TWO**



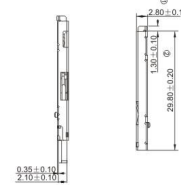
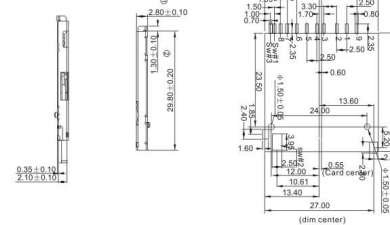
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Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



## SD1006B



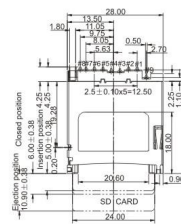
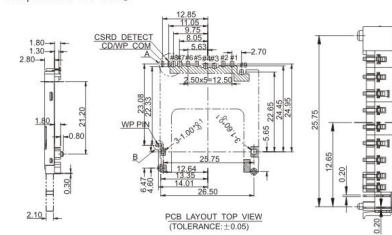
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Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



## SD1008



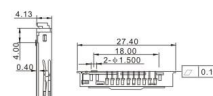
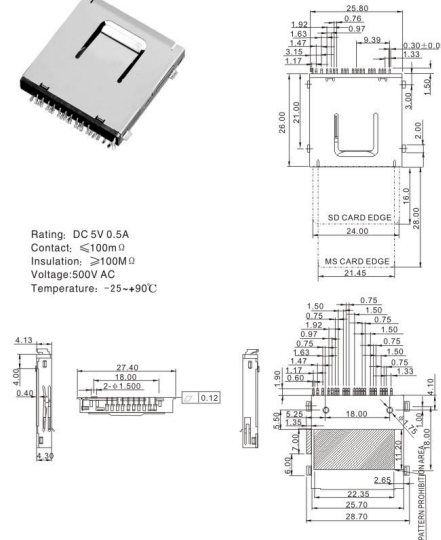
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Temperature:  $-25\sim+90^{\circ}\text{C}$



## SD1007



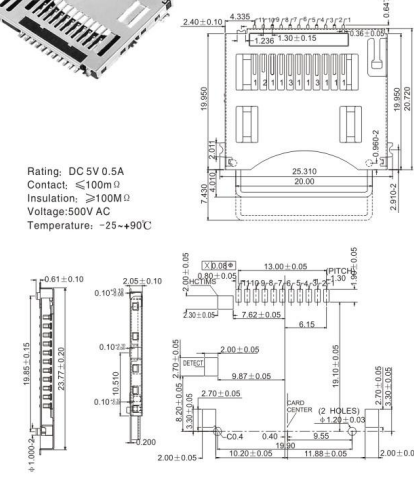
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Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



## SD1009



Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$

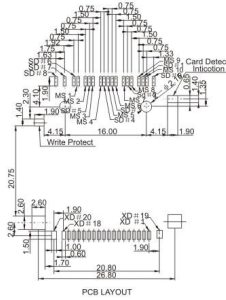
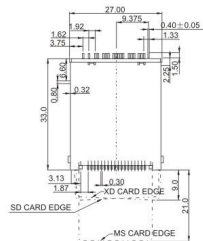




SD1010



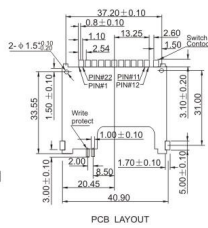
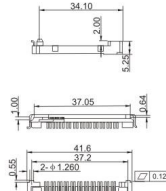
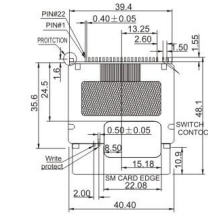
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Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



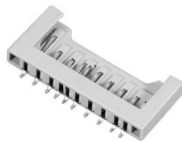
MS1001



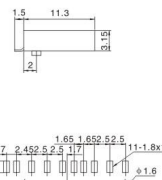
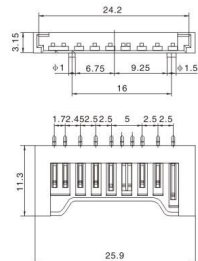
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



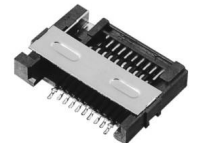
SD1012



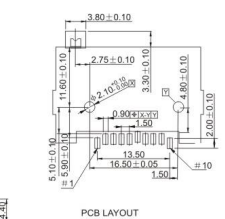
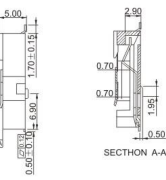
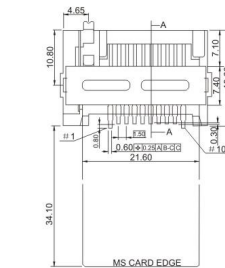
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



MS1002



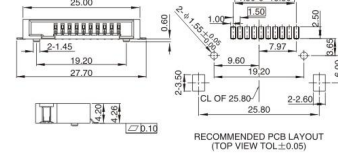
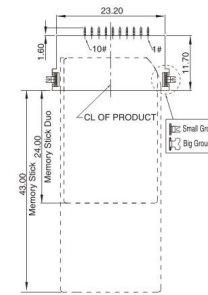
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



MS1010



Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$

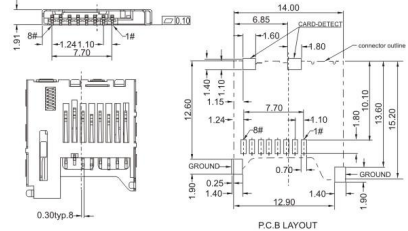
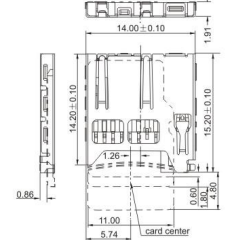


RECOMMENDED PCB LAYOUT  
(TOP VIEW TOL:  $\pm 0.05$ )

TF1007



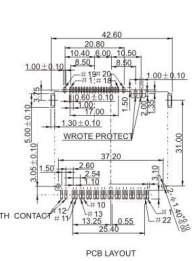
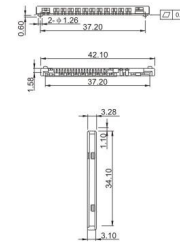
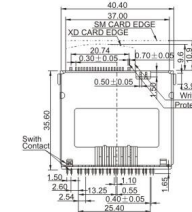
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



SX101



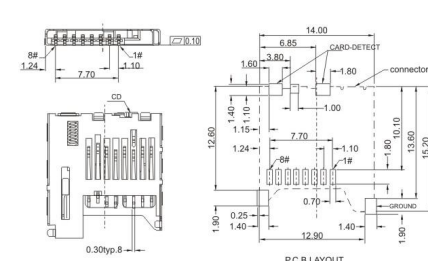
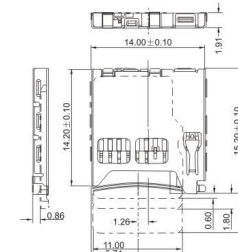
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



TF1007A



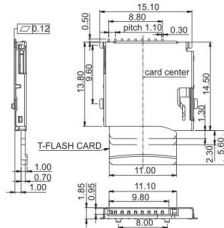
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



TF1007F



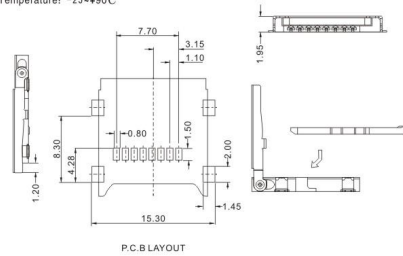
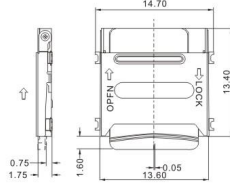
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



TF1009



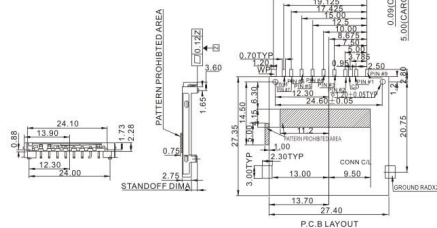
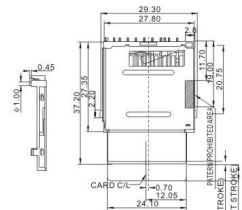
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



TF1008



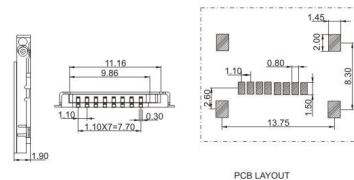
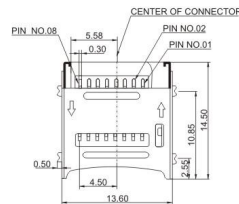
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



TF1010



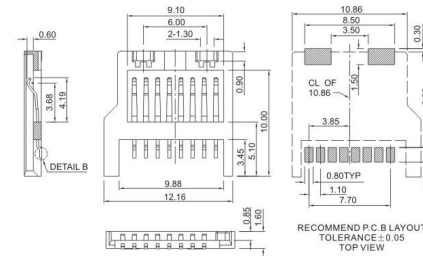
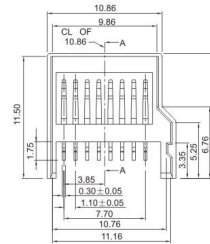
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



TF1011



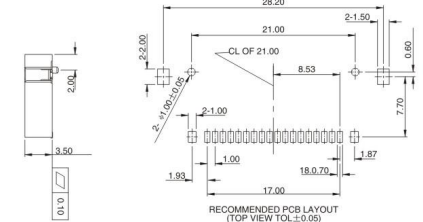
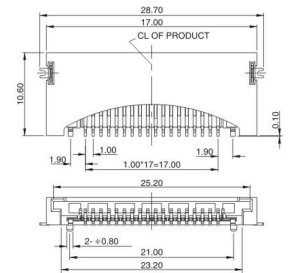
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



XD1011A



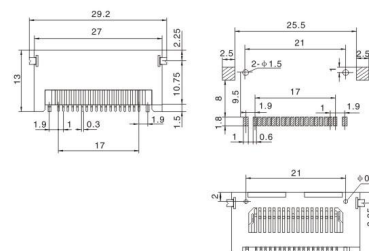
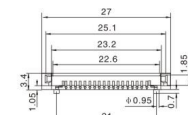
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



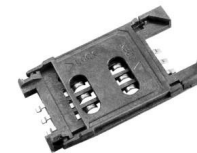
XD1011



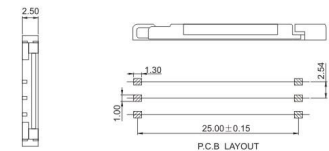
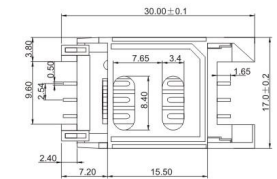
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



SIM-2.54-1



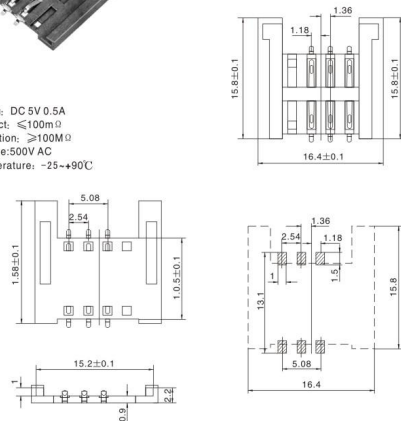
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25 \sim +90^\circ\text{C}$



**SIM-2.54-2.2**



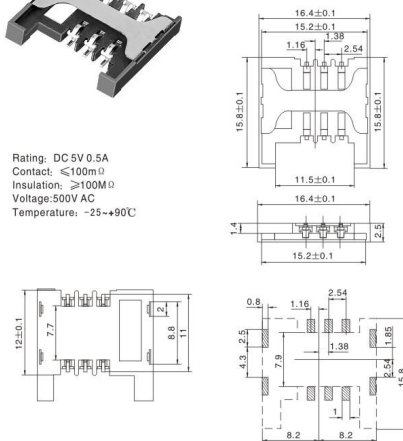
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



**SIM-2.54-2.5**



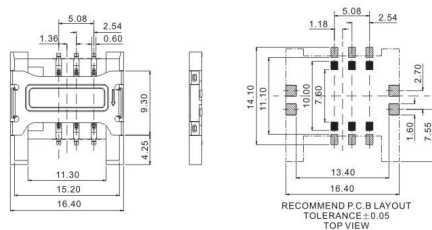
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



**SIM-2.54-1.8B**



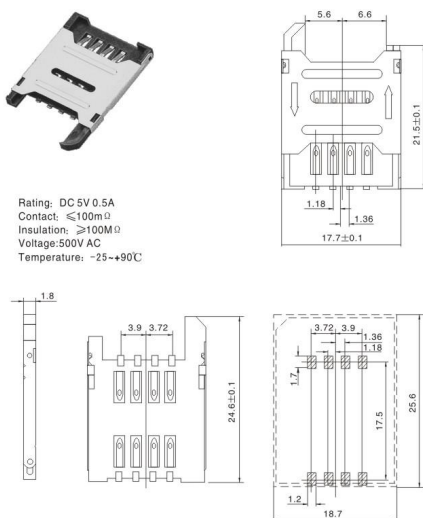
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



**SIM-2.54-4**



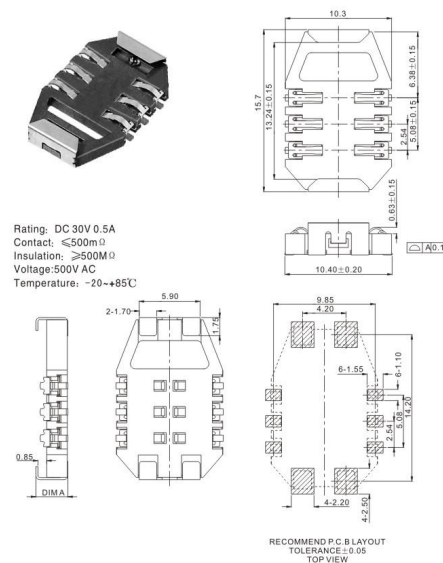
Rating: DC 5V 0.5A  
Contact:  $\leq 100\text{m}\Omega$   
Insulation:  $\geq 100\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-25\sim+90^{\circ}\text{C}$



**SIM-2.54-3.3F**



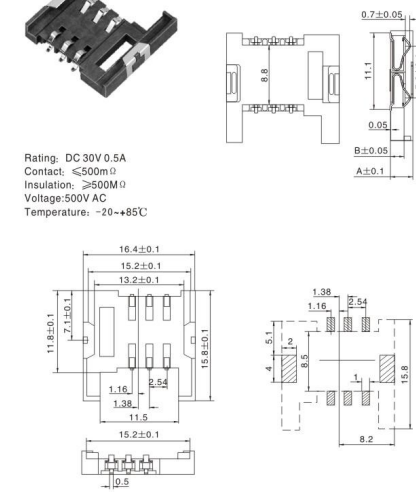
Rating: DC 30V 0.5A  
Contact:  $\leq 500\text{m}\Omega$   
Insulation:  $\geq 500\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-20\sim+85^{\circ}\text{C}$



**SIM-2.54-HC**



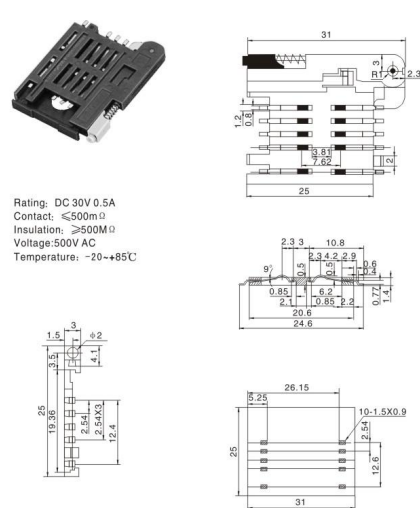
Rating: DC 30V 0.5A  
Contact:  $\leq 500\text{m}\Omega$   
Insulation:  $\geq 500\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-20\sim+85^{\circ}\text{C}$



**SIM-2.54-8F**



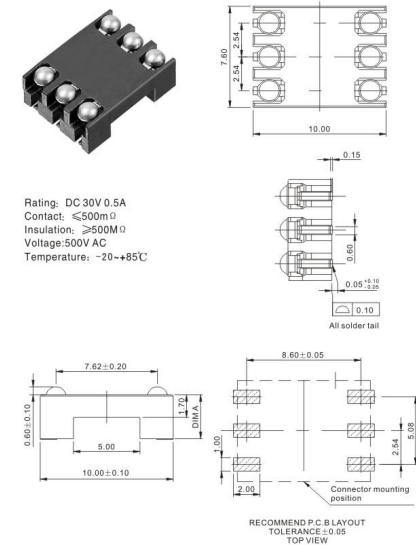
Rating: DC 30V 0.5A  
Contact:  $\leq 500\text{m}\Omega$   
Insulation:  $\geq 500\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-20\sim+85^{\circ}\text{C}$



**SIM-2.54-HD**



Rating: DC 30V 0.5A  
Contact:  $\leq 500\text{m}\Omega$   
Insulation:  $\geq 500\text{M}\Omega$   
Voltage: 500V AC  
Temperature:  $-20\sim+85^{\circ}\text{C}$

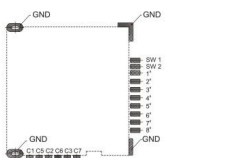
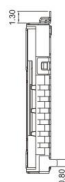
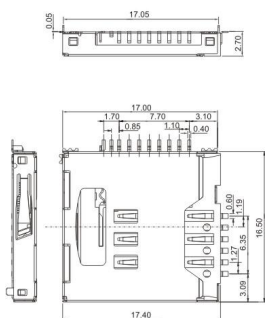




**SIM-09**



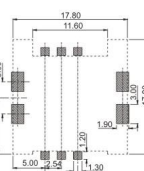
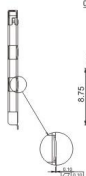
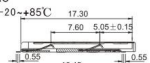
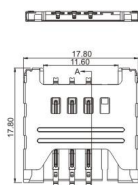
Rating: DC 30V 0.5A  
Contact:  $\leq 500m\Omega$   
Insulation:  $\geq 500M\Omega$   
Voltage: 500V AC  
Temperature:  $-20 \sim +85^\circ C$



**SIM-11**



Rating: DC 30V 0.5A  
Contact:  $\leq 500m\Omega$   
Insulation:  $\geq 500M\Omega$   
Voltage: 500V AC  
Temperature:  $-20 \sim +85^\circ C$

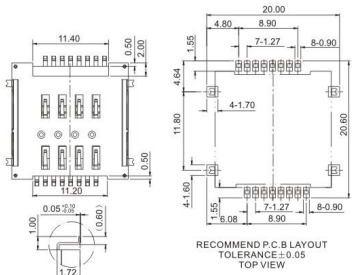
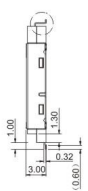
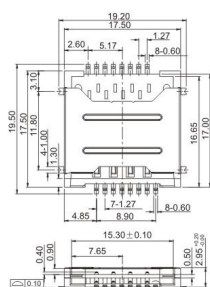


RECOMMEND P.C.B LAYOUT  
TOLERANCE  $\pm 0.05$   
TOP VIEW

**SIM-10**



Rating: DC 30V 0.5A  
Contact:  $\leq 500m\Omega$   
Insulation:  $\geq 500M\Omega$   
Voltage: 500V AC  
Temperature:  $-20 \sim +85^\circ C$

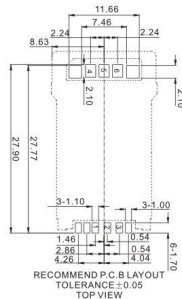
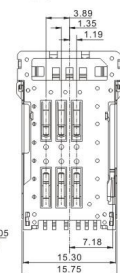
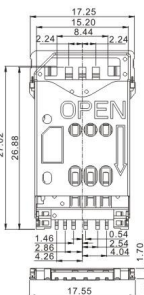


RECOMMEND P.C.B LAYOUT  
TOLERANCE  $\pm 0.05$   
TOP VIEW

**SIM-12**



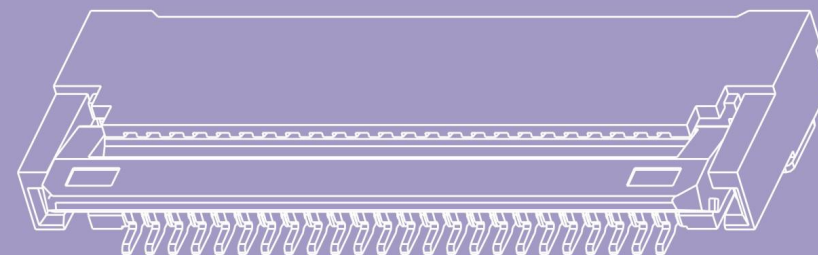
Rating: DC 30V 0.5A  
Contact:  $\leq 500m\Omega$   
Insulation:  $\geq 500M\Omega$   
Voltage: 500V AC  
Temperature:  $-20 \sim +85^\circ C$



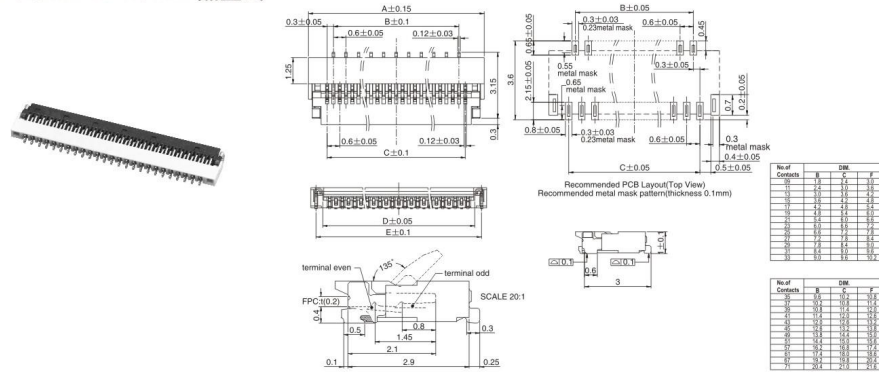
RECOMMEND P.C.B LAYOUT  
TOLERANCE  $\pm 0.05$   
TOP VIEW

# FPC CONNECTOR SERIES

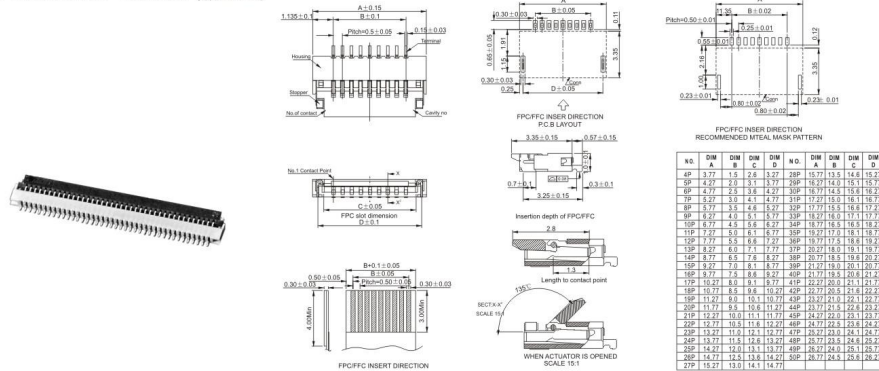
## FPC连接器



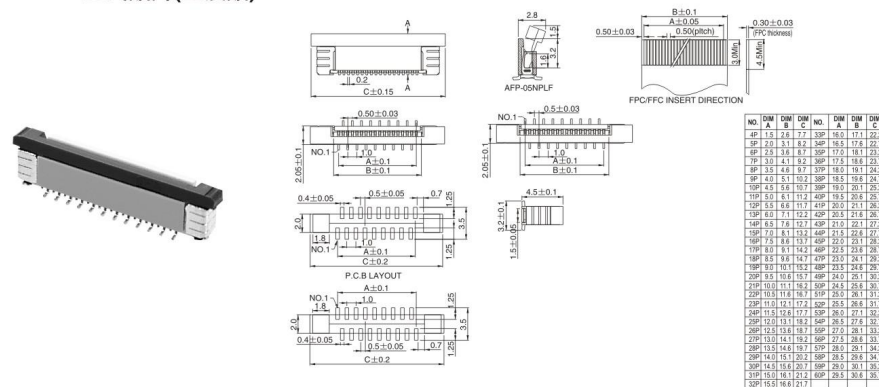
### FPC 0.3mm H=1.0mm 翻盖式



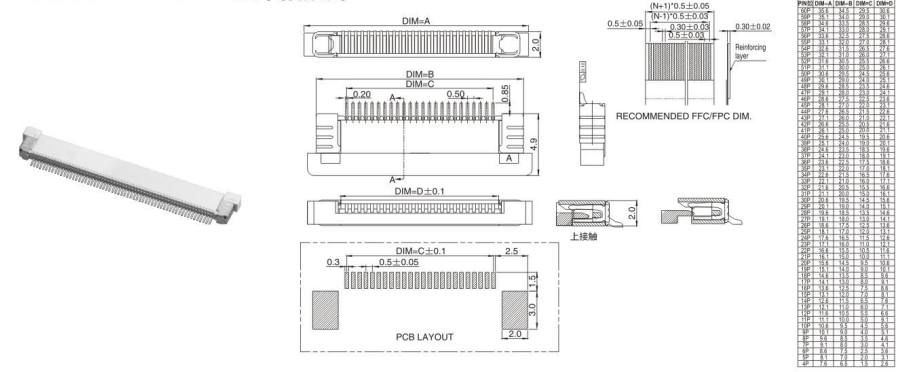
### FPC 0.5mm H=1.0mm 翻盖式



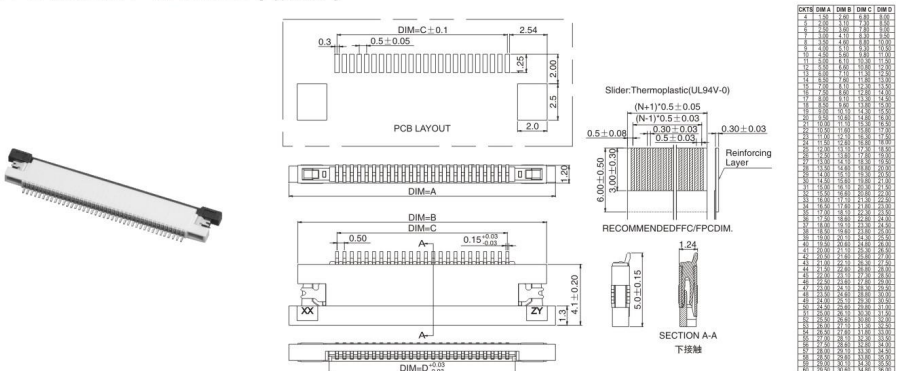
### FPC 0.5mm 立式贴片(正反贴)



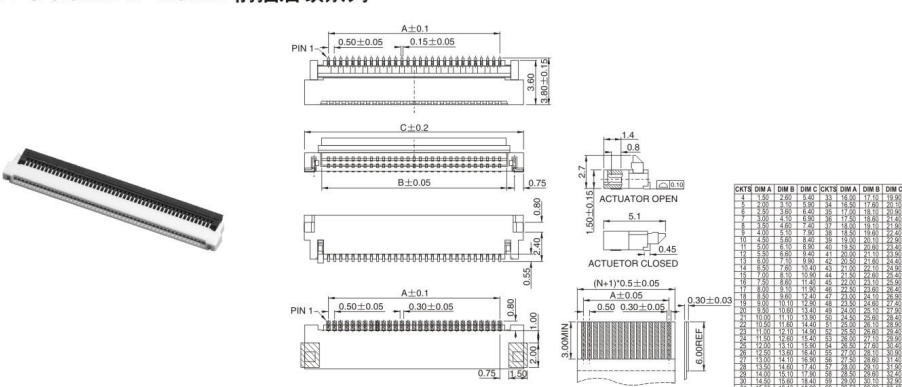
### FPC 0.5mm H=2.0mm 上下接系列



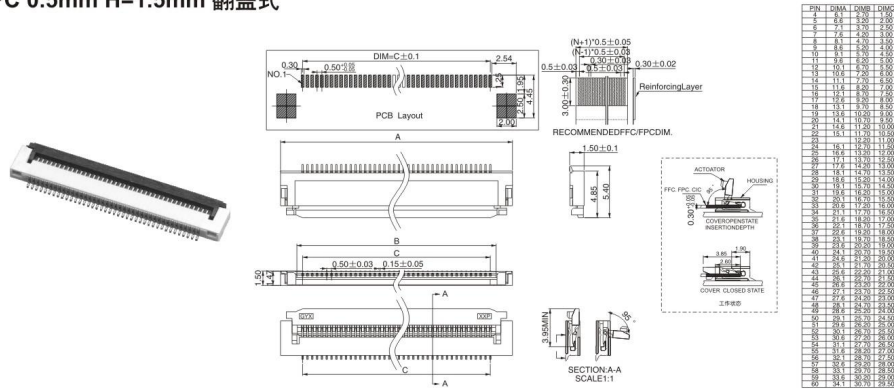
### FPC 0.5mm H=1.2mm 上下接系列



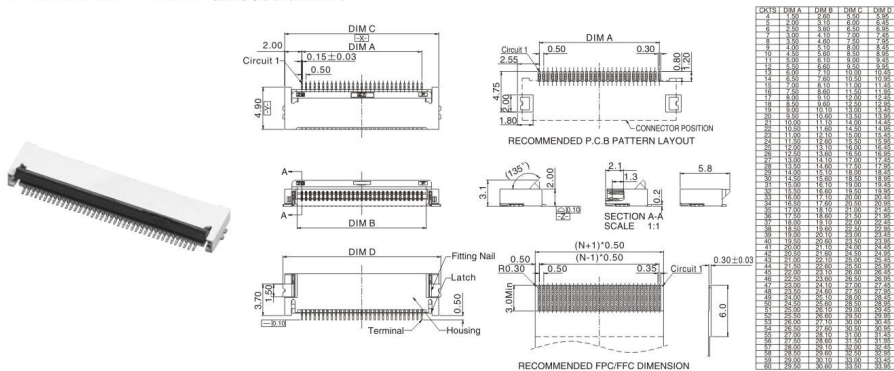
### FPC 0.5mm H=1.5mm 前插后锁系列



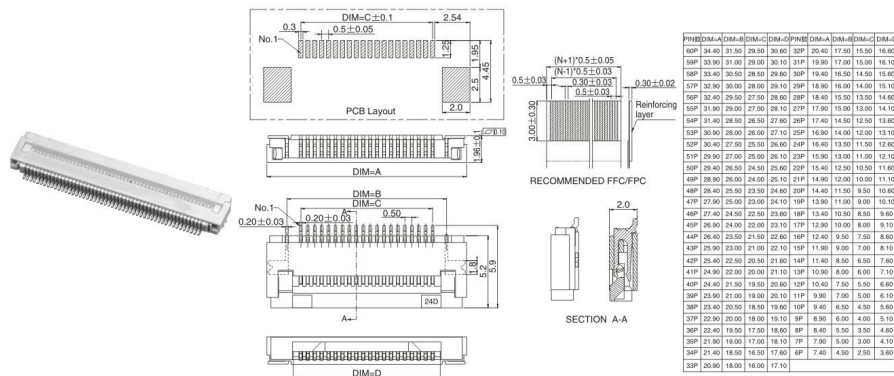
### FPC 0.5mm H=1.5mm 翻盖式



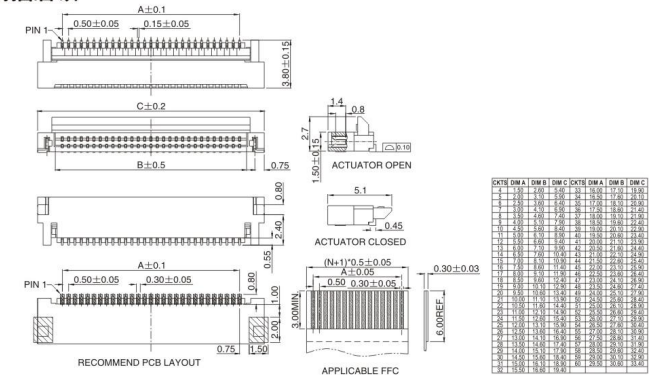
### FPC 0.5mm H=2.0mm 前插后锁系列



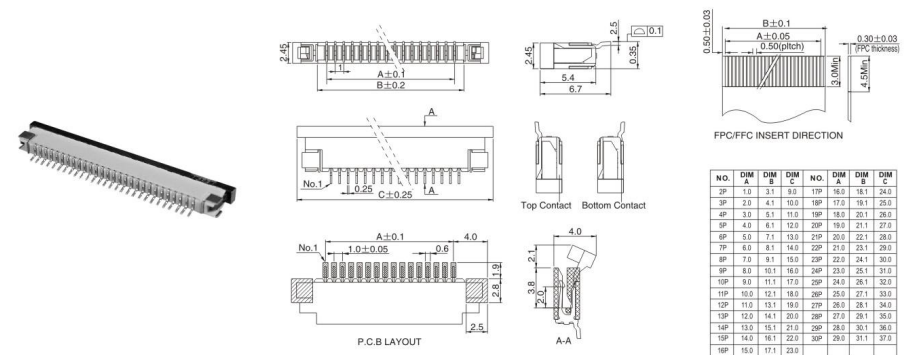
### FPC 0.5mm H=2.0mm 翻盖式



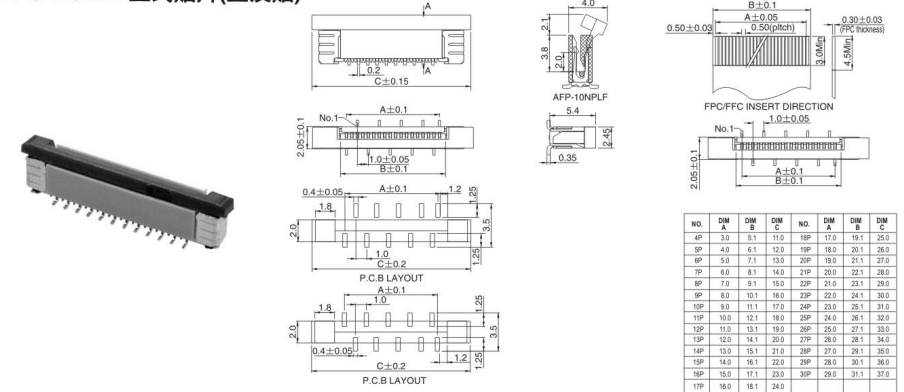
### FPC 0.5mm H=1.5mm 前插后锁



### FPC 1.0mm H=2.5mm 上下接系列

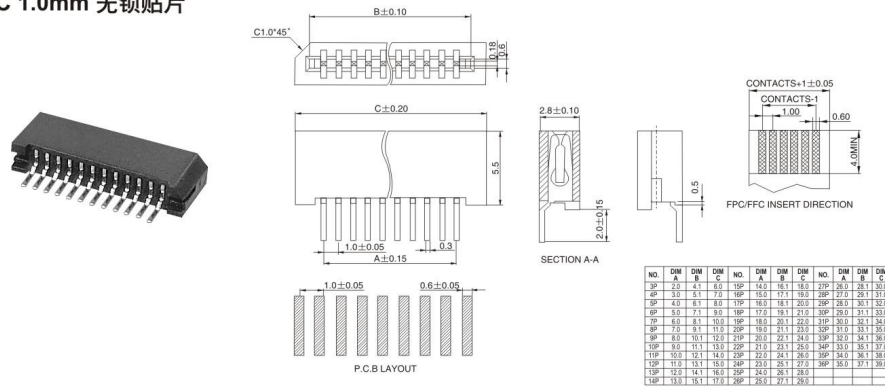


### FPC 1.0mm 立式贴片(正反贴)

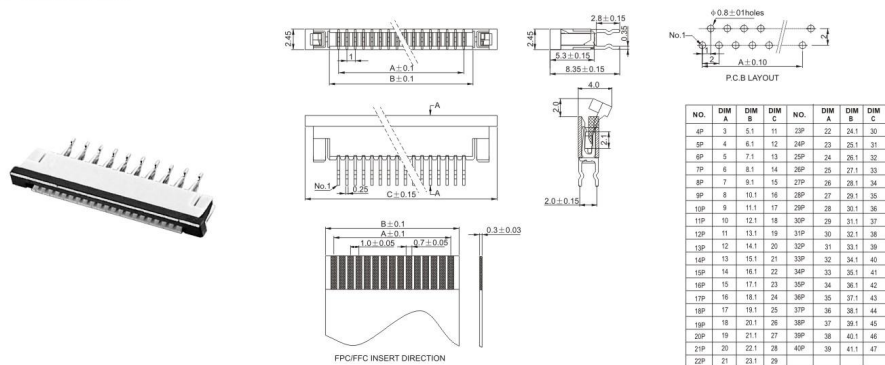




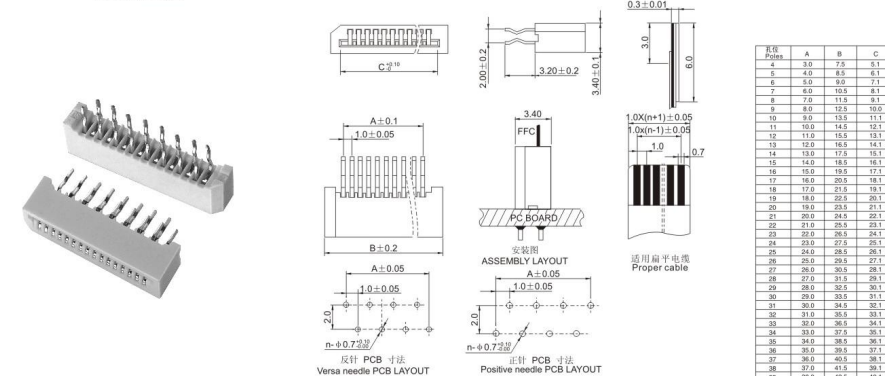
### FPC 1.0mm 无锁贴片



### FPC 1.0mm 180°



### FPC 1.0mm 无锁直插



0.8 刺破线8P To 4P



0.8 刺破线 10P To 10P点胶圆包



1.0 TO 1.0 (N)PIN 卷包定制线



0.8 刺破线10Pi To 10P扁包



FPC0.5指纹头线



0.8/1.25对1.0间距指纹头线



1.0到2.54间距门锁主板线



0.8~2.54端子线



0.8刺破线系列