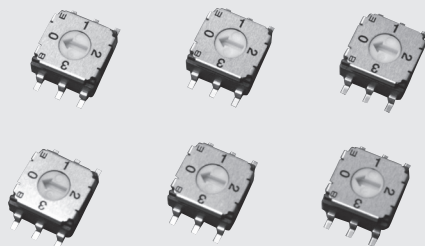


# ROTARY SELECTOR SWITCHES (SMD)

# CS-7

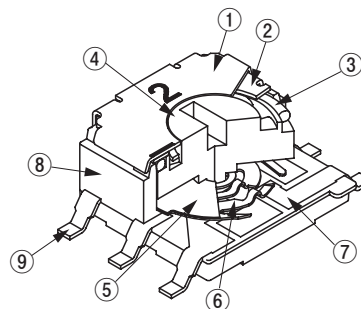
## RoHS compliant



## FEATURES

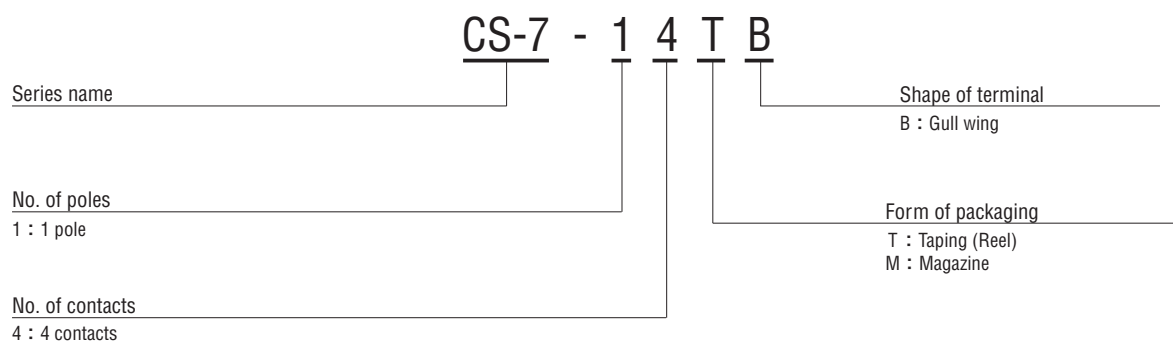
- RoHS compliant
- Easy position setting with wide switching angle
- High digit visibility
- Washable

## INTERNAL STRUCTURE



| Part name |                | Material                  | Flammability |
|-----------|----------------|---------------------------|--------------|
| ①         | Marking cover  | Stainless steel (SUS 304) | —            |
| ②         | Cover          | Stainless steel (SUS 301) |              |
| ③         | “O” ring       | Silicone rubber           | UL94HB       |
| ④         | Rotor          | Polyphenylenesulphide     | UL94V-0      |
| ⑤         | Spacer         | Stainless steel (SUS 304) | —            |
| ⑥         | Slider contact | Copper alloy, Gold-plated |              |
| ⑦         | Fixed contact  |                           |              |
| ⑧         | Housing        | Polyphenylenesulphide     | UL94V-0      |
| ⑨         | Terminal pin   | Copper alloy, Gold-plated | —            |

## PART NUMBER DESIGNATION



※ Please refer to the LIST OF PART NUMBERS when placing orders.

# CS-7

## ROTARY SELECTOR SWITCHES (SMD)

### LIST OF PART NUMBERS

| Circuit type      | Setting position | Form of packaging | B<br>Gull wing | Pieces in package |
|-------------------|------------------|-------------------|----------------|-------------------|
| 1 pole 4 contacts | Top setting      | Taping            | CS-7-14TB      | 500 pcs./reel     |
|                   |                  | Magazine          | CS-7-14MB      | 50 pcs./stick     |

※ Verify the above part numbers when placing orders. Taping and magazine version can be supplied only in reel or stick unit.

### STANDARD SPECIFICATIONS

|                             |                                                        |
|-----------------------------|--------------------------------------------------------|
| Circuit type                | 1 pole 4 contacts                                      |
| Operating temperature range | -40 ~ 85 °C                                            |
| Storage temperature range   |                                                        |
| Sealing                     | Washable by "O"ring<br>※ Please refer to page 150, 151 |
| Net weight                  | Approx. 0.38 g                                         |

### ELECTRICAL CHARACTERISTICS

|                                                         |                                               |
|---------------------------------------------------------|-----------------------------------------------|
| Contact rating<br>Non-switching<br>Switching<br>Minimum | DC50 V 100 mA<br>DC5 V 100 mA<br>DC20 mV 1 μA |
| Contact resistance                                      | 100 mΩ maximum                                |
| Insulation resistance                                   | 1000 MΩ (DC100 V) minimum                     |
| Dielectric strength                                     | AC250 V, 60 s                                 |

### MECHANICAL CHARACTERISTICS

|                   |                                                                                  |
|-------------------|----------------------------------------------------------------------------------|
| No. of positions  | 4                                                                                |
| Adjustment torque | 3~20 mN·m {31~204gf·cm}                                                          |
| Stepping angle    | 90°                                                                              |
| Solderability     | 245 ± 3 °C, 2 ~ 3 s                                                              |
| Soldering heat    | Reflow : Peak temperature 250°C to 255 °C<br>(Please refer to the profile below) |
|                   | Manual soldering :<br>350 ± 10 °C, 3 ~ 4 s                                       |
| Shear (adhesion)  | 5 N {0.51 kgf} 10 s                                                              |
| Substrate bending | Width 90 mm, bend 3 mm, 5 s, 1 time                                              |
| Pull-off strength | 5 N {0.51 kgf} 10s                                                               |

{ } : Reference only

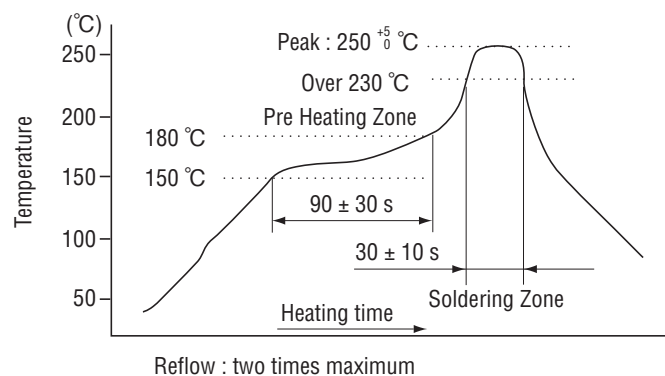
### ENVIRONMENTAL CHARACTERISTICS

|                           |                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------|
| Vibration                 | (Amplitude) 1.5 mmor<br>(Acceleration) 98 m/s <sup>2</sup> ,<br>10-500-10 Hz, 3 directions for 2 h each |
| Shock                     | 490 m/s <sup>2</sup> , 11 ms<br>6 directions for 3 times each                                           |
| Load life                 | 10000 steps minimum, DC5 V, 100 mA                                                                      |
| Humidity (Steady state)   | 40 °C, Relative humidity 90 ~ 95 %,<br>240 h                                                            |
| High temperature exposure | 85 °C, 96 h                                                                                             |
| Low temperature exposure  | -40 °C, 96 h                                                                                            |
| Thermal shock             | -40 (0.5 h) ~ 85 °C ( 0.5 h ), 5 cycles                                                                 |

# CS-7

## ROTARY SELECTOR SWITCHES (SMD)

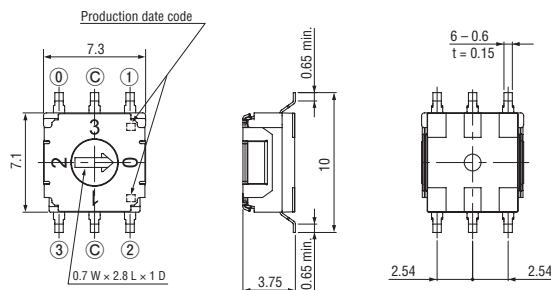
### <Reflow profile for soldering heat evaluation>



### OUTLINE DIMENSIONS

Unless otherwise specified, tolerance:  $\pm 0.3$  (Unit: mm)

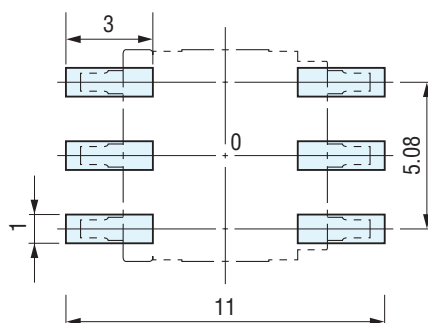
#### CS-7-14B



### RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

#### CS-7-14B

(Unit: mm)



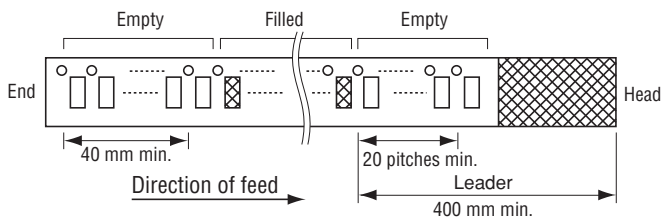
### PACKAGING SPECIFICATIONS

#### <Taping packaging specifications>

- Taping version is packaged in 500 pcs. per reel.  
Orders will be accepted for units of 500 pcs., i.e., 500, 1000, 1500, pcs., etc.
- Taping version is boxed with one reel (500 pcs.).

Maximum number of consecutive missing pieces = 2  
Leader length and reel dimension are shown in the diagrams below:

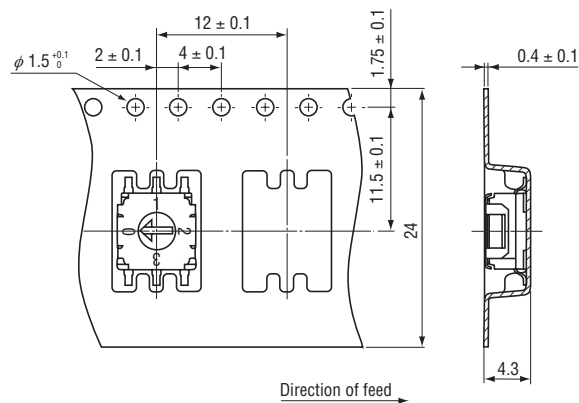
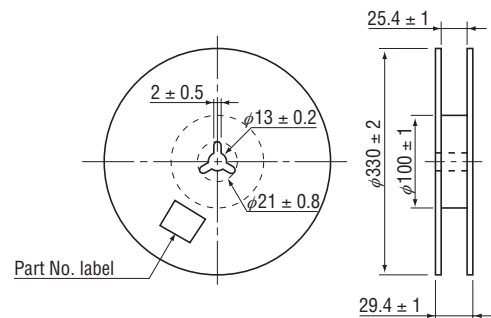
#### ● Embossed tape dimensions



#### ● Reel dimensions

(Unit: mm)

(Conforms to JIS C 0806-3)  
(In accordance with EIAJ ET-7200A)



# CS-7

## ROTARY SELECTOR SWITCHES (SMD)

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### ■ PACKAGING SPECIFICATIONS

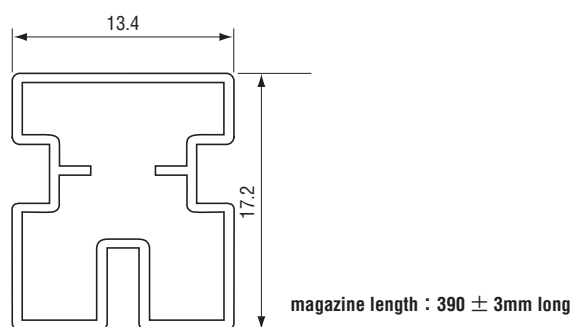
#### <Magazine packaging specifications>

- Please order the multiple numbers of the specific packing quantities.

Pieces in package : 50 pcs./stick

#### ● Magazine dimensions

(Unit : mm)



# Mouser Electronics

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[CS-7-14MB](#) [CS-7-14TB](#)