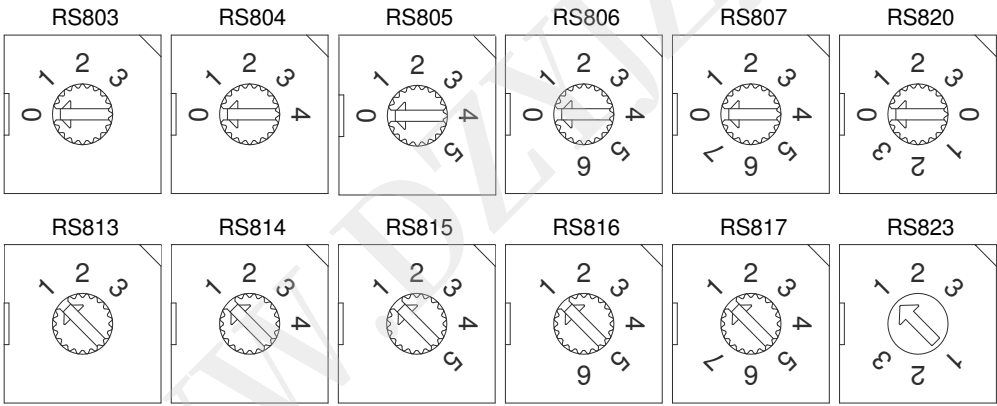
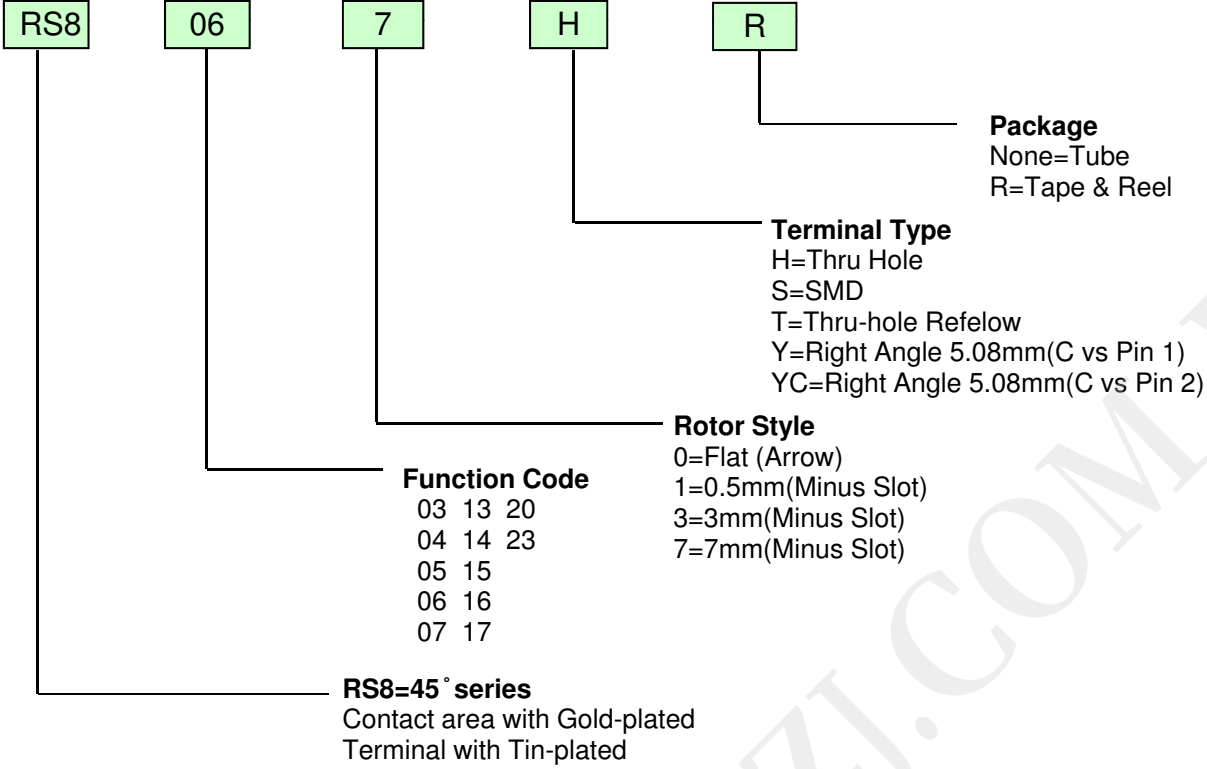
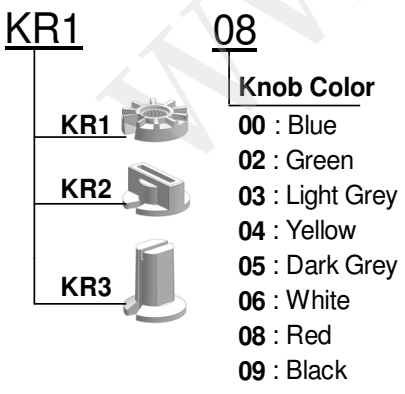


| MODEL                       | SPECIFICATION                                                 |        | Page |
|-----------------------------|---------------------------------------------------------------|--------|------|
| RS8 Series<br>Rotary Switch | Rotary Selector Switch<br>RoHS&REACH Compliant / Halogen Free | SP-001 | 1/6  |

Order Information



Knob Order Information



**Note:**

1. All caps are not allowed to pass through soldering process.

2. All caps should be assembled after all soldering process finished.

| MODEL                                     | SPECIFICATION                                                                   |        | Page |
|-------------------------------------------|---------------------------------------------------------------------------------|--------|------|
| <b>RS8 Series</b><br><b>Rotary Switch</b> | <b>Rotary Selector Switch</b><br><b>RoHS&amp;REACH Compliant / Halogen Free</b> | SP-002 | 2/6  |

## Specifications

|                         |                                        |
|-------------------------|----------------------------------------|
| ◆ Contact Rating        |                                        |
| Switching               | .....5VDC 100mA (Min. AC/DC 100mA 1μA) |
| Non Switching           | .....Max. 50VDC 100mA                  |
| ◆ Contact               | .....100mΩ Max.                        |
| ◆ Insulation Resistance | .....100MΩ Max. at 100 VDC             |
| ◆ Dielectric Strength   | .....300VAC for 1 minute               |
| ◆ Operating Force       | .....250gf/cm                          |
| ◆ Life                  | .....20,000 Steps                      |
| ◆ Operating Temperature | .....-20℃ ~ +70℃                       |
| ◆ Storage Temperature   | .....-20℃ ~ +70℃                       |
| ◆ Waterproof            | .....Meet IP67                         |

## Materials

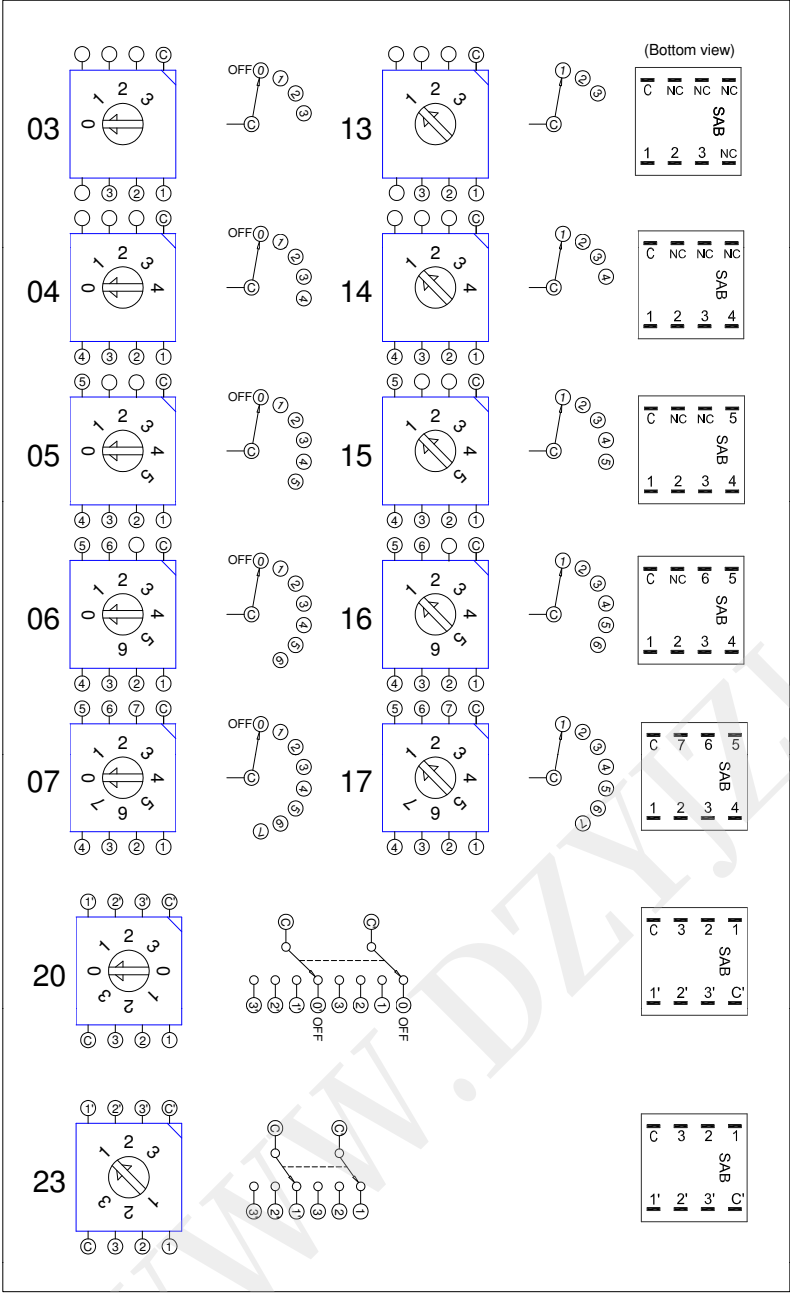
|                    |                                                           |
|--------------------|-----------------------------------------------------------|
| ◆ Cover & Base     | RS8-H/Y Halogen Free..... Thermoplastic UL 94 rate, Blue  |
|                    | RS8-S/T Halogen Free..... Thermoplastic UL 94 rate, Black |
| ◆ Rotor            | Halogen Free..... Thermoplastic UL 94 rate, White         |
| ◆ Knob             | Halogen Free..... Thermoplastic, ABS UL 94 rate           |
| ◆ "O" Ring         | ..... Silicone Rubber                                     |
| ◆ Step             | ..... Stainless Steel                                     |
| ◆ Spacer           | ..... Stainless Steel                                     |
| ◆ Movable Contact  | ..... Gold Plated                                         |
| ◆ Terminal Contact | ..... Gold Plated                                         |
| ◆ Terminal         | ..... Tin Plated                                          |

## Part Number Table

| Function Code | H/T Type<br>Flat Rotor<br>Tube Package | H/T Type<br>3mm Rotor<br>Tube Package | SMD Type<br>Flat Rotor<br>Taping Reel | SMD Type<br>7mm Rotor<br>Tube Package | Y Type<br>Flat Rotor<br>Tube Package | Y Type<br>0.5mm Rotor<br>Tube Package | YC Type<br>0mm Rotor<br>Tube Package | YC Type<br>7mm Rotor<br>Tube Package |
|---------------|----------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|
| 03            | RS8030H/T                              | RS8033H/T                             | RS8030S-R                             | RS8037S                               | RS8030Y                              | RS8031Y                               | RS8030YC                             | RS8037YC                             |
| 04            | RS8040H/T                              | RS8043H/T                             | RS8040S-R                             | RS8047S                               | RS8040Y                              | RS8041Y                               | RS8040YC                             | RS8047YC                             |
| 05            | RS8050H/T                              | RS8053H/T                             | RS8050S-R                             | RS8057S                               | RS8050Y                              | RS8051Y                               |                                      |                                      |
| 06            | RS8060H/T                              | RS8063H/T                             | RS8060S-R                             | RS8067S                               | RS8060Y                              | RS8061Y                               |                                      |                                      |
| 07            | RS8070H/T                              | RS8073H/T                             | RS8070S-R                             | RS8077S                               | RS8070Y                              | RS8071Y                               |                                      |                                      |
| 13            | RS8130H/T                              | RS8133H/T                             | RS8130S-R                             | RS8137S                               | RS8130Y                              | RS8131Y                               | RS8130YC                             | RS8137YC                             |
| 14            | RS8140H/T                              | RS8143H/T                             | RS8140S-R                             | RS8147S                               | RS8140Y                              | RS8141Y                               | RS8140YC                             | RS8147YC                             |
| 15            | RS8150H/T                              | RS8153H/T                             | RS8150S-R                             | RS8157S                               | RS8150Y                              | RS8151Y                               |                                      |                                      |
| 16            | RS8160H/T                              | RS8163H/T                             | RS8160S-R                             | RS8167S                               | RS8160Y                              | RS8161Y                               |                                      |                                      |
| 17            | RS8170H/T                              | RS8173H/T                             | RS8170S-R                             | RS8177S                               | RS8170Y                              | RS8171Y                               |                                      |                                      |
| 20            | RS8200H/T                              | RS8203H/T                             | RS8200S-R                             | RS8207S                               | RS8200Y                              | RS8201Y                               |                                      |                                      |
| 23            | RS8230H/T                              | RS8233H/T                             | RS8230S-R                             | RS8237S                               | RS8230Y                              | RS8231Y                               |                                      |                                      |

| MODEL                                     | SPECIFICATION                                                                   |        | Page |
|-------------------------------------------|---------------------------------------------------------------------------------|--------|------|
| <b>RS8 Series</b><br><b>Rotary Switch</b> | <b>Rotary Selector Switch</b><br><b>RoHS&amp;REACH Compliant / Halogen Free</b> | SP-003 | 3/6  |

Schematic & Terminal Connection



Dummy Terminals

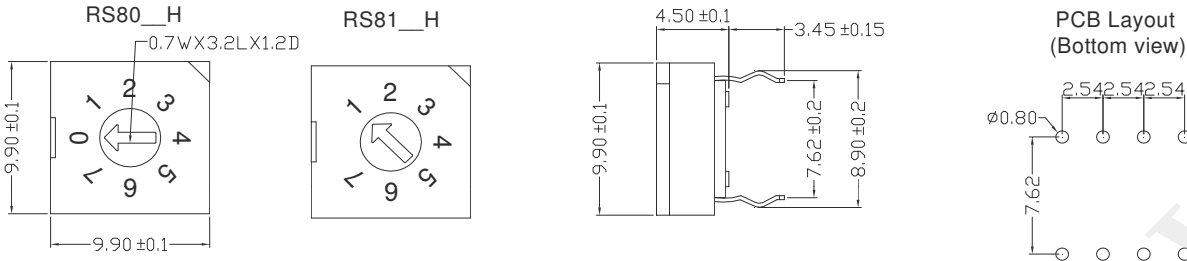
|             |         |
|-------------|---------|
| 3 positions | 4 5 6 7 |
| 4 positions | 5 6 7   |
| 5 positions | 6 7     |
| 6 positions | 7       |
| 7 positions | --      |

\* NC= Dummy terminal

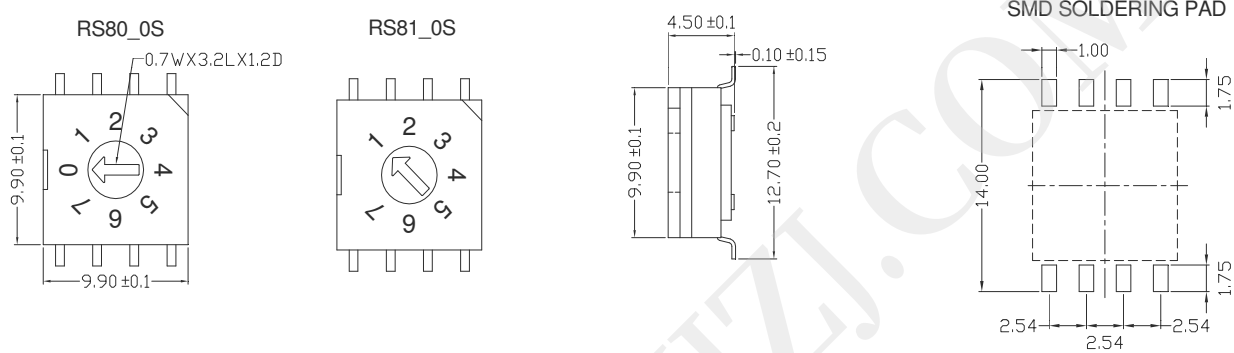
|                             |                                                                                |        |      |
|-----------------------------|--------------------------------------------------------------------------------|--------|------|
| MODEL                       | SPECIFICATION<br>Rotary Selector Switch<br>RoHS&REACH Compliant / Halogen Free | SP-004 | Page |
| RS8 Series<br>Rotary Switch |                                                                                |        | 4/6  |

■ Outline Dimensions

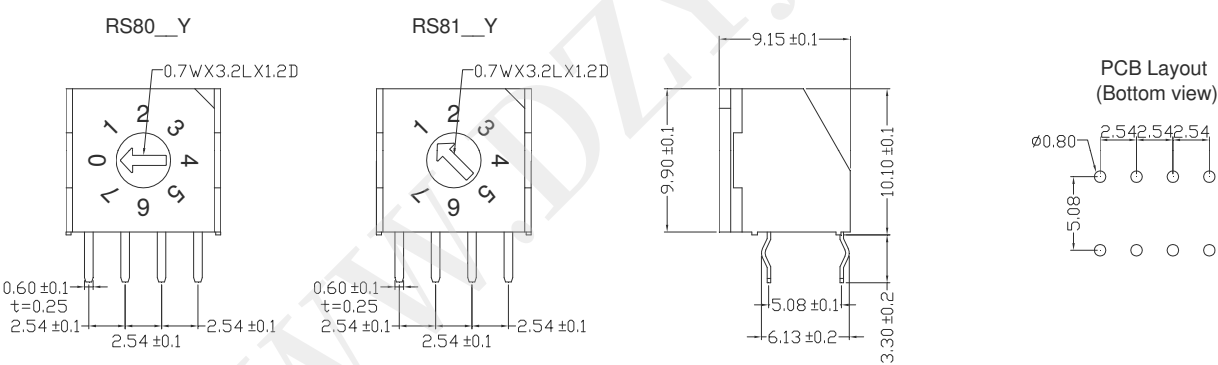
RS803~07 / 13~17 / 20,23\_H ( Thru-Hole )



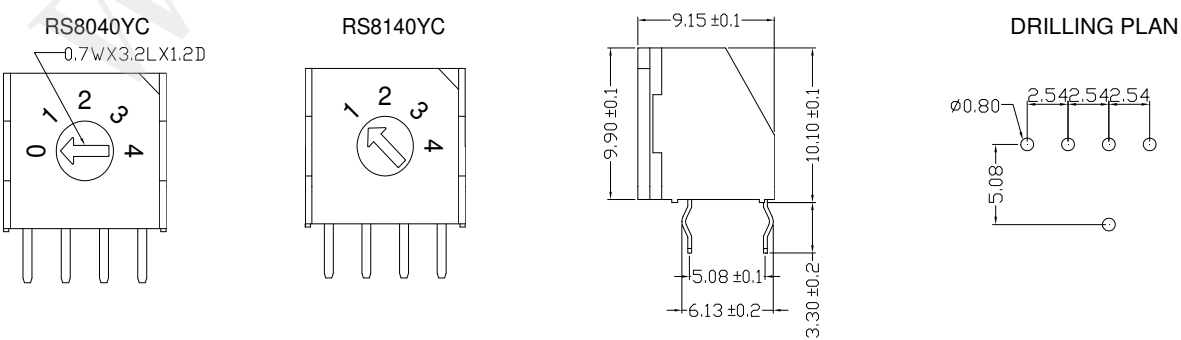
RS803~17/13~17/20,23\_S ( SMD )



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)



|                                           |                                                                               |        |      |
|-------------------------------------------|-------------------------------------------------------------------------------|--------|------|
| MODEL                                     | SPECIFICATION<br>DIP SWITCH<br><b>RoHS&amp;REACH Compliant / Halogen Free</b> | SP-005 | Page |
| <b>RS8 series</b><br><b>Rotary Switch</b> |                                                                               |        | 5/6  |

## Soldering Information

### ◆ Hand Soldering

Soldering iron 30W or under at 350°C for 3 sec. max. or at 270°C for 5 sec. max.

### ◆ Reflow Soldering

260°C +/-5°C within 30sec for reflow, In-line or Batch system.

### ◆ Wave Soldering

- (1) For lead free wave solder simulation of typical components, the solder bath temperature shall be maintained to 270°C / 5~10 seconds.
- (2) **THR:** 280°C/10seconds

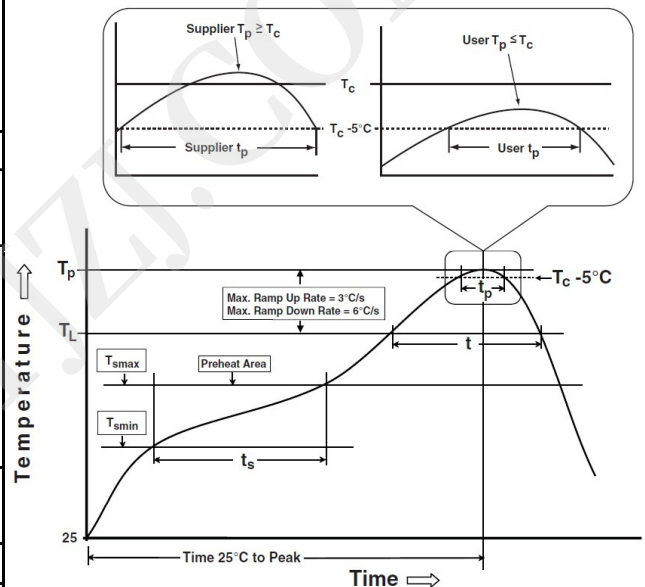
The table copy from IPC/JEDEC J-STD-020 D.1

| Profile Feature                                                                                       | Pb-Free Assembly                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preheat / Soak</b>                                                                                 |                                                                                                                                                                                             |
| Temperature Min ( $T_{smin}$ )                                                                        | 150°C                                                                                                                                                                                       |
| Temperature Max ( $T_{smax}$ )                                                                        | 200°C                                                                                                                                                                                       |
| Time( $t_s$ ) from ( $T_{smin}$ to $T_{smax}$ )                                                       | 60 ~120 seconds                                                                                                                                                                             |
| Ramp-up Rate ( $T_L$ to $T_p$ )                                                                       | 3°C /second max                                                                                                                                                                             |
| Liquidous temperature ( $T_L$ )                                                                       | 217°C                                                                                                                                                                                       |
| Time ( $t_L$ ) maintained above $T_L$                                                                 | 60 ~ 150 seconds                                                                                                                                                                            |
| Peak package body temperature ( $T_p$ )                                                               | For users $T_p$ must not exceed the Classification temp:250°C (Package Thickness>2.5mm)<br>For suppliers $T_p$ must equal or exceed the Classification temp:250°C (Package Thickness>2.5mm) |
| Time ( $t_p$ ) within 5°C of specified classification temperature ( $T_c$ )                           | 30 seconds                                                                                                                                                                                  |
| Ramp-Down Rate ( $T_p$ to $T_L$ )                                                                     | 6°C /second max                                                                                                                                                                             |
| Time 25°C to Peak Temperature                                                                         | 8 minutes max                                                                                                                                                                               |
| * Tolerance for peak profile temperature( $T_p$ ) is defined as a supplier minimum and a user maximum |                                                                                                                                                                                             |

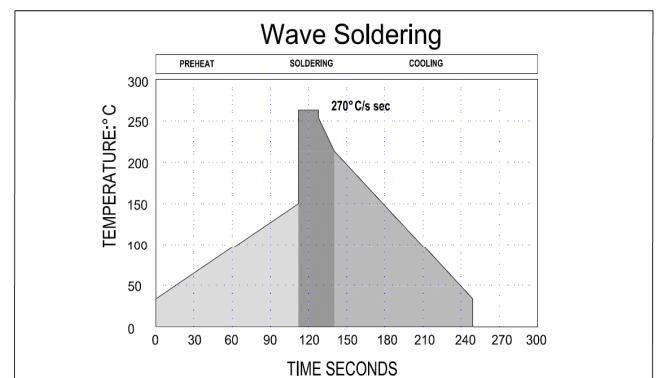
Note 1: All temperatures refer to topside of the package, measured on the package body surface.

Note 2: Time within 5 °C of actual peak temperature ( $t_p$ ) specified for the reflow profiles is a "supplier" minimum and "user" maximum.

## Classification Reflow Soldering Profiles



## Classification Wave Soldering Profiles



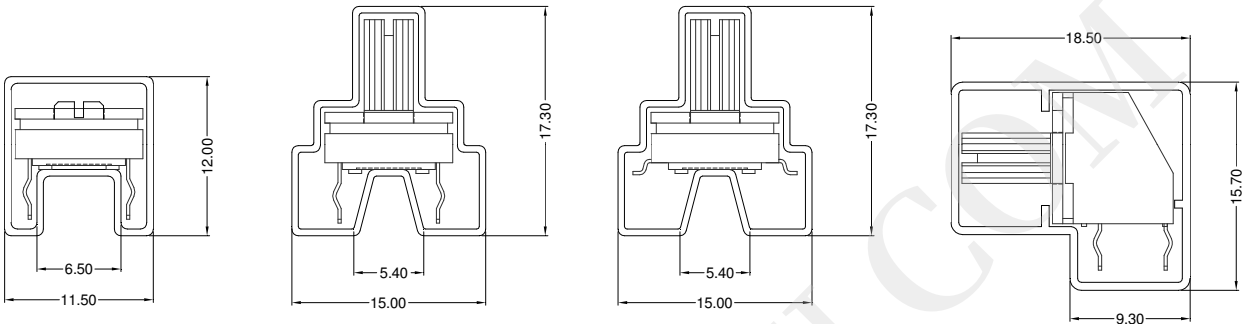
**Maximum dwell time in the solder wave (270°C) shall not exceed 5 seconds.**

|                             |                                                                                |        |      |
|-----------------------------|--------------------------------------------------------------------------------|--------|------|
| MODEL                       | SPECIFICATION<br>Rotary Selector Switch<br>RoHS&REACH Compliant / Halogen Free | SP-006 | Page |
| RS8 Series<br>Rotary Switch |                                                                                |        | 6/6  |

■ Rotor Style

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

■ Tube Dimensions



■ Tube Package

| Terminal Type<br>ROTOR<br>Per TUBE (pcs) | H/T Type<br>Flat / 0.5mm<br>50 | H/T Type<br>3mm / 7mm<br>50 | Y/YC Type<br>Flat / 0.5mm / 3mm / 7mm<br>45 | S Type<br>Flat / 0.5mm / 3mm / 7mm<br>50 |
|------------------------------------------|--------------------------------|-----------------------------|---------------------------------------------|------------------------------------------|
| BOX (pcs)                                | 4000                           | 2000                        | 2025                                        | 2000                                     |
| CTN 1 (pcs)                              | 8000                           | 4000                        | 4050                                        | 4000                                     |
| CTN 2 (pcs)                              | 16000                          | 8000                        | 8100                                        | 8000                                     |

■ Reel Package

| Terminal Type<br>ROTOR<br>Per REEL (pcs) | H/T Type<br>7mm<br>140 | S Type<br>0mm<br>600 | S Type<br>1mm<br>600 | S Type<br>3mm<br>350 | S Type<br>7mm<br>200 |
|------------------------------------------|------------------------|----------------------|----------------------|----------------------|----------------------|
| BOX (pcs)                                | 560                    | 1800                 | 1800                 | 1050                 | 600                  |
| CTN (pcs)                                | 1120                   | 3600                 | 3600                 | 2100                 | 1200                 |

Carton

|        |              |                        |
|--------|--------------|------------------------|
| ◆ Tube | 2 Boxes..... | 58.5cm x 29.0cm x 15cm |
|        | 4 Boxes..... | 58.5cm x 28.0cm x 27cm |
| ◆ Reel | 1 Box.....   | 34.5cm x 34.5cm x 15cm |
|        | 2 Boxes..... | 36.0cm x 27.5cm x 37cm |