

High operation force satisfies the needs in automotive applications. Wide stem & good mountability



#### Typical Specifications



| Items                      | Specifications |
|----------------------------|----------------|
| Rating (max.)              | 50mA 16V DC    |
| Rating (min.)              | 10μA 1V DC     |
| Initial contact resistance | 500mΩ max.     |
| Travel (mm)                | 0.2            |

#### Product Line

##### Standard type

| Product No. | Operating force | Operating direction | Operating life<br>(5mA 5V DC) | Stem color | Minimum order unit (pcs.) |       |
|-------------|-----------------|---------------------|-------------------------------|------------|---------------------------|-------|
|             |                 |                     |                               |            | Japan                     | Japan |
| SKRPABE010  | 1.57N           | Top push            | 100,000cycles                 | Natural    | 4,000                     | 4,000 |
| SKRPACE010  | 2.55N           |                     | 50,000cycles                  |            |                           |       |
| SKRPADE010  | 4N              |                     | 100,000cycles                 | Black      |                           |       |
| SKRPARE010  | 5N              |                     | 300,000cycles                 |            |                           |       |

##### Long-life type

| Product No.       | Operating force | Operating direction | Operating life<br>(5mA 5V DC) | Stem color | Minimum order unit (pcs.) |       |
|-------------------|-----------------|---------------------|-------------------------------|------------|---------------------------|-------|
|                   |                 |                     |                               |            | Japan                     | Japan |
| <b>SKRPANE010</b> | 1.57N           | Top push            | 1,000,000cycles               | Natural    | 4,000                     | 4,000 |
| <b>SKRPASE010</b> | 2.55N           |                     | 500,000cycles                 | Black      |                           |       |

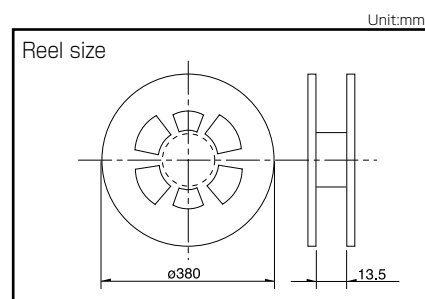
#### Packing Specifications

##### Taping

| Number of packages (pcs.) |                |                         | Tape width<br>(mm) | Export package<br>measurements (mm) |
|---------------------------|----------------|-------------------------|--------------------|-------------------------------------|
| 1 reel                    | 1 case / Japan | 1 case / export packing |                    |                                     |
| 4,000                     | 40,000         | 40,000                  | 12                 | 395×395×205                         |

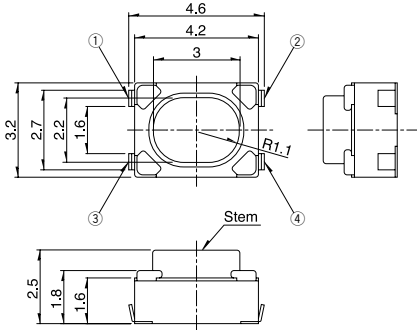
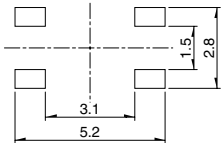
##### Note

For reels of 330mm diameter, please inquire.

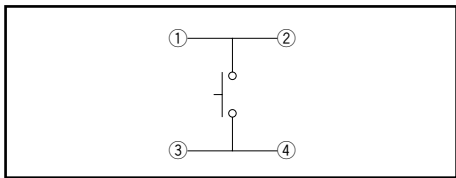


Refer to P.249 for soldering conditions.

■ Dimensions

| Unit:mm                                                                           |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Style                                                                             | PC board land dimensions<br>(Viewed from switch mounting face)                      |
|  |  |

■ Circuit Diagram



| Type                        |                                   | Sharp Feeling Type                                                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|-----------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             |                                   | Surface Mount                                                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Series                      |                                   | SKRK                                                                                                                             | SKTH                                                                                | SKRP                                                                                | SKQM                                                                                | SKQY                                                                                 | SKTQ                                                                                  | SKTR                                                                                  | SKSU                                                                                  |
| Photo                       |                                   |                                                 |    |    |    |    |    |    |    |
| Features                    |                                   | Compact size<br>Low-profile                                                                                                      | Compact size                                                                        | High operation force<br>Compact size                                                | Compact size                                                                        |                                                                                      | Middle travel                                                                         |                                                                                       |                                                                                       |
| Water-proof                 |                                   | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     | ●                                                                                     |
| Dust-proof                  |                                   | —                                                                                                                                | ●                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     | ●                                                                                     |
| IP standard                 |                                   | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     | 67 equivalent                                                                         |
| Operating direction         | Top push                          | ●                                                                                                                                | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                    | ●                                                                                     | ●                                                                                     | ●                                                                                     |
|                             | Side push                         | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     | —                                                                                     |
| Dimensions (mm)             | W                                 | 3.9                                                                                                                              | 3.5                                                                                 | 4.2                                                                                 | 6                                                                                   | 6.1                                                                                  | 5.3                                                                                   | □6.1                                                                                  | 5.3                                                                                   |
|                             | D                                 | 2.9                                                                                                                              | 3.2                                                                                 |                                                                                     | 3.5                                                                                 | 3.7                                                                                  | 5.4                                                                                   |                                                                                       | 5.4                                                                                   |
|                             | H                                 | 1.5/2                                                                                                                            | 1.8/2.5                                                                             | 2.5                                                                                 | 4.3/5                                                                               | 2.5                                                                                  | 4.25                                                                                  | 4.1                                                                                   | 3.85/4.34                                                                             |
| Operation force coverage    | 1N max.                           |                                                 |    |    |    |    |    |    |    |
|                             | 1N to 2N                          |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|                             | 2N to 3N                          |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|                             | 3N to 4N                          |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|                             | 4N to 5N                          |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Travel (mm)                 |                                   | 0.13                                                                                                                             | 0.12                                                                                | 0.2                                                                                 | 0.25                                                                                |                                                                                      | 0.71                                                                                  | 0.72                                                                                  | 0.7/0.9                                                                               |
| Ground terminal             |                                   | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | ○                                                                                    | —                                                                                     | —                                                                                     | —                                                                                     |
| Operating temperature range |                                   | -40℃ to +85℃                                                                                                                     |                                                                                     | -40℃ to +90℃                                                                        |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Automotive use              |                                   | —                                                                                                                                | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                    | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| Life Cycle                  |                                   |                                               |  |  |  |  |  |  |  |
| Electrical performance      | Rating (max.)<br>(Resistive load) | 50mA 12V DC                                                                                                                      |                                                                                     | 25mA 16V DC                                                                         | 50mA 16V DC                                                                         | 50mA 12V DC                                                                          |                                                                                       | 50mA 16V DC                                                                           |                                                                                       |
|                             | Rating (min.)<br>(Resistive load) | 10μA 1V DC                                                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|                             | Insulation resistance             | 100MΩ min. 100V DC 1min.                                                                                                         |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|                             | Voltage proof                     | 250V AC 1min.                                                                                                                    | 100V AC 1min.                                                                       | 250V AC 1min.                                                                       |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Durability                  | Vibration                         | 10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|                             | Lifetime                          | Shall be in accordance with individual specifications.                                                                           |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Environmental performance   | Cold                              | -40℃ 96h                                                                                                                         |                                                                                     | -40℃ 1,000h                                                                         | -40℃ 96h                                                                            |                                                                                      | -40℃ 1,000h                                                                           |                                                                                       |                                                                                       |
|                             | Dry heat                          | 90℃ 96h                                                                                                                          |                                                                                     | 90℃ 1,000h                                                                          | 90℃ 96h                                                                             |                                                                                      | 90℃ 1,000h                                                                            |                                                                                       |                                                                                       |
|                             | Damp heat                         | 60℃, 90 to 95%RH 96h                                                                                                             |                                                                                     | 60℃, 90 to 95%RH 1,000h                                                             | 60℃, 90 to 95%RH 96h                                                                |                                                                                      | 60℃, 90 to 95%RH 1,000h                                                               |                                                                                       |                                                                                       |
| Page                        |                                   | 218                                                                                                                              | 220                                                                                 | 222                                                                                 | 224                                                                                 | 225                                                                                  | 227                                                                                   | 228                                                                                   | 229                                                                                   |

W : Width. The most outer dimension excluding terminal portion.  
D : Depth. The most outer dimension excluding terminal portion.  
H : Height. The minimum dimension if there are variances.

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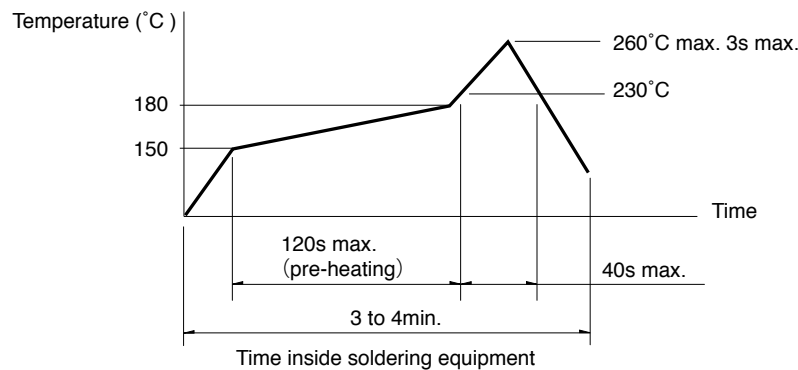
#### Notes

- The automotive operating temperature range to be individually discussed upon request.
- Indicates applicability to all products in the series, while ○ indicates applicability to some products in the series.

## ■ Condition for Reflow

Available for Surface Mount Type.

Temperature profile



### Notes

1. Please confirm the specifications of our product for the detailed condition.
2. Soldering conditions differ depending on reflow soldering machines.  
Prior verification of soldering condition is highly recommended.

## ■ Conditions for Auto-dip

Available for Snap-in Type and Radial Type.

| Items                  | Condition                                                           |
|------------------------|---------------------------------------------------------------------|
| Flux built-up          | Mounting surface should not be exposed to flux                      |
| Preheating temperature | Ambient temperature of the soldered surface of PC board. 100°C max. |
| Preheating time        | 60s max.                                                            |
| Soldering temperature  | 260°C max.                                                          |
| Duration of immersion  | 5s max.                                                             |
| Number of soldering    | 2times max.                                                         |

### SKHH Series

| Items                  | Condition                                                           |
|------------------------|---------------------------------------------------------------------|
| Flux built-up          | Mounting surface should not be exposed to flux                      |
| Preheating temperature | Ambient temperature of the soldered surface of PC board. 110°C max. |
| Preheating time        | 60s max.                                                            |
| Soldering temperature  | 260°C max.                                                          |
| Duration of immersion  | 5s max.                                                             |
| Number of soldering    | 2times max.                                                         |

### SKHLTop Push Type, SKQJ Series

| Items                  | Condition                                                           |
|------------------------|---------------------------------------------------------------------|
| Flux built-up          | Mounting surface should not be exposed to flux                      |
| Preheating temperature | Ambient temperature of the soldered surface of PC board. 100°C max. |
| Preheating time        | 45s max.                                                            |
| Soldering temperature  | 255°C max.                                                          |
| Duration of immersion  | 5s max.                                                             |
| Number of soldering    | 2times max.                                                         |

### Notes

1. Prevent flux penetration from the top side of the TACT Switch™.
2. Switch terminals and a PC board should not be coated with flux prior to soldering.
3. The second soldering should be done after the switch is stable with normal temperature.
4. Use the flux with a specific gravity of min 0.81.  
(EC-19S-8 by TAMURA CORPORATION, or equivalents.)

## ■ Manual Soldering

| Items                      | Condition  |
|----------------------------|------------|
| Soldering temperature      | 350°C max. |
| Duration of soldering      | 3s max.    |
| Capacity of soldering iron | 60W max.   |

### SKHH, SKHW Series

| Items                      | Condition  |
|----------------------------|------------|
| Soldering temperature      | 360°C max. |
| Duration of soldering      | 3s max.    |
| Capacity of soldering iron | 60W max.   |

### SKTD, SKTG, SKQJ Series

| Items                      | Condition  |
|----------------------------|------------|
| Soldering temperature      | 350°C max. |
| Duration of soldering      | 3s max.    |
| Capacity of soldering iron | 20W max.   |