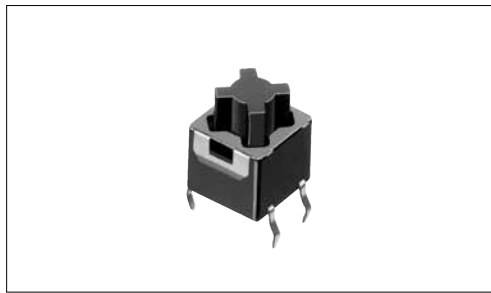


Combination of long travel 1.75mm and high operation force prevents malfunction



#### Typical Specifications



| Items                      | Specifications   |
|----------------------------|------------------|
| Rating (max.)              | 5mA 12V DC       |
| Rating (min.)              | 10 $\mu$ A 1V DC |
| Initial contact resistance | 1k $\Omega$ max. |
| Travel (mm)                | 1.75             |

#### Product Line

| Product No.       | Operating force | Operating direction | Operating life<br>(5mA 5V DC) | Minimum order unit (pcs.) |        |
|-------------------|-----------------|---------------------|-------------------------------|---------------------------|--------|
|                   |                 |                     |                               | Japan                     | Export |
| <b>SKPFACA010</b> | 1.96N           | Top push            | 100,000 cycles                | 1,000                     | 1,000  |
| <b>SKPFAAA010</b> | 3.92N           |                     |                               |                           |        |

#### Packing Specifications

Bulk

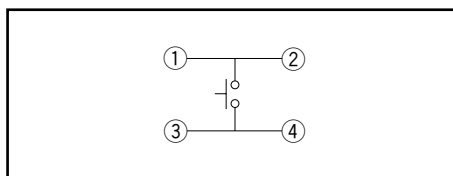
| Number of packages (pcs.) |                         | Export package measurements<br>(mm) |
|---------------------------|-------------------------|-------------------------------------|
| 1 case / Japan            | 1 case / export packing |                                     |
| 4,000                     | 12,000                  | 309×476×347                         |

#### Dimensions

Unit:mm

| Style | PC board mounting hole dimensions<br>(Viewed from switch mounting face) |
|-------|-------------------------------------------------------------------------|
|       |                                                                         |

#### Circuit Diagram



#### Note

Please Using a 1.6mm thick PC board is recommended.

Refer to P.249 for soldering conditions.

| Type                        |                                | Sharp Feeling Type                                                                                                               |                                                                                     |                                                                                     | Soft Feeling Type                                                                   |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|-----------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             |                                | Surface Mount                                                                                                                    |                                                                                     |                                                                                     | Snap-in                                                                             | Surface Mount                                                                       |                                                                                       |                                                                                       |                                                                                       |
| Series                      |                                | SKSC                                                                                                                             | SKRT                                                                                | SKRH                                                                                | SKPF                                                                                | SKPS                                                                                | SKPM                                                                                  | SKPG                                                                                  | SKPR                                                                                  |
| Photo                       |                                |                                                 |    |    |    |   |    |    |    |
| Features                    |                                | Low-profile                                                                                                                      | —                                                                                   | 4-direction switch +push switch                                                     | High operation force<br>Long travel                                                 | Low contact resistance                                                              |                                                                                       | —                                                                                     | High operation force<br>Low contact resistance                                        |
| Water-proof                 |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| Dust-proof                  |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| IP standard                 |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| Operating direction         | Top push                       | —                                                                                                                                | —                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                     | ●                                                                                     | ●                                                                                     |
|                             | Side push                      | ●                                                                                                                                | ●                                                                                   | ●                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| Dimensions (mm)             | W                              | 3.5                                                                                                                              | 4.5                                                                                 | 7.35                                                                                | 8                                                                                   | 5.9                                                                                 |                                                                                       | 6.6                                                                                   | 7.5                                                                                   |
|                             | D                              | 3.55                                                                                                                             | 3.4                                                                                 | 7.5                                                                                 | 9                                                                                   | 6                                                                                   |                                                                                       | 6.3                                                                                   | 7.8                                                                                   |
|                             | H                              | 1.25                                                                                                                             | 3.3                                                                                 | 5                                                                                   | 10                                                                                  | 5                                                                                   |                                                                                       |                                                                                       | 6.5                                                                                   |
| Contact                     |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | Carbon                                                                              | Silver                                                                              |                                                                                       | Carbon                                                                                | Silver                                                                                |
| Operation force coverage    | 1N max.                        |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | 1N to 2N                       | ↕                                                                                                                                | ↕                                                                                   | See the relevant pages for respective product descriptions                          | ↕                                                                                   | ↕                                                                                   | ↕                                                                                     | ↕                                                                                     |                                                                                       |
|                             | 2N to 3N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | 3N to 4N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| 4N to 5N                    |                                |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       | ↕                                                                                     |                                                                                       |
| Travel (mm)                 |                                | 0.2                                                                                                                              |                                                                                     | 1.75                                                                                | See the relevant pages for respective product descriptions                          | 1.05                                                                                | 1.3                                                                                   |                                                                                       | 1                                                                                     |
| Ground terminal             |                                | ○                                                                                                                                | ●                                                                                   | ●                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| Operating temperature range |                                | −30℃ to +85℃                                                                                                                     | −40℃ to +90℃                                                                        | −40℃ to +85℃                                                                        | −40℃ to +90℃                                                                        |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Automotive use              |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| Life Cycle                  |                                |                                               |  |  |  |  |  |  |  |
| Electrical performance      | Rating (max.) (Resistive load) | 50mA<br>12V DC                                                                                                                   |                                                                                     |                                                                                     |                                                                                     | 50mA<br>16V DC                                                                      |                                                                                       | 5mA<br>12V DC                                                                         | 50mA<br>16V DC                                                                        |
|                             | Rating (min.) (Resistive load) | 10μA 1V DC                                                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | Insulation resistance          | 100MΩ min. 100V DC 1min.                                                                                                         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | Voltage proof                  | 100V AC 1min.                                                                                                                    | 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                        |                                | 239                                                                                                                              | 241                                                                                 | 444                                                                                 | 244                                                                                 | 245                                                                                 | 246                                                                                   | 247                                                                                   | 248                                                                                   |

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**

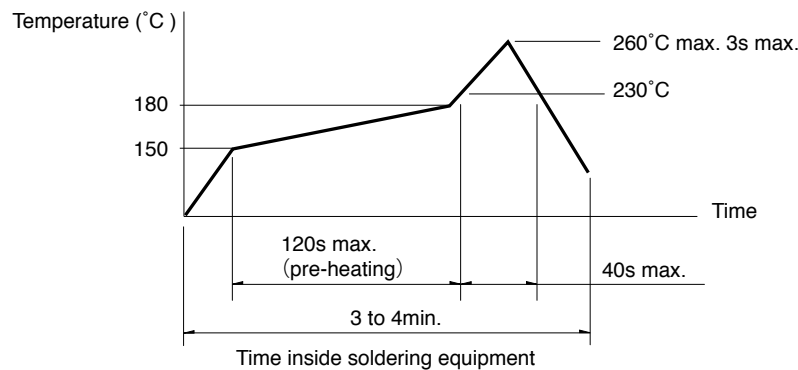
1. The automotive operating temperature range to be individually discussed upon request.

2. ● Indicates applicability to all 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.   |