

Switch with soft operating feel available also as joint stem and sidepush types



TACT Switch™

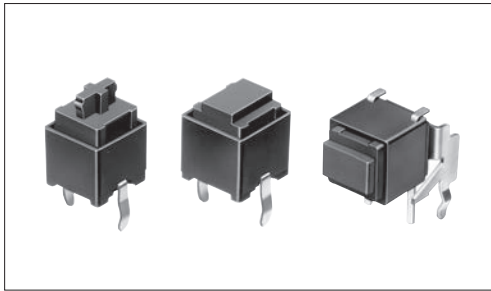
Sharp Feeling

Soft Feeling

Snap-in Type

Surface Mount Type

Radial Type



### 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                |

### Product Line

Top push type

| Product No.       | Operating force | Operating direction | Operating life (1mA 5V DC) | Stem color | Stem       | Minimum order unit (pcs.) |        | Drawing No. |
|-------------------|-----------------|---------------------|----------------------------|------------|------------|---------------------------|--------|-------------|
|                   |                 |                     |                            |            |            | Japan                     | Export |             |
| <b>SKEGACA010</b> | 0.78N           | Top push            | 100,000 cycles             | Ivory      | Joint stem | 1,000                     | 1,000  | 1           |
| <b>SKEGAEA010</b> | 1.96N           |                     |                            | Dark gray  |            |                           |        |             |
| <b>SKEGADA010</b> | 0.78N           |                     |                            | Ivory      | Flat stem  |                           |        | 2           |
| <b>SKEGAF010</b>  | 1.96N           |                     |                            | Dark gray  |            |                           |        |             |

Side push type

| Product No.       | Operating force | Operating direction | Operating life (1mA 5V DC) | Stem color | Minimum order unit (pcs.) |        | Drawing No. |
|-------------------|-----------------|---------------------|----------------------------|------------|---------------------------|--------|-------------|
|                   |                 |                     |                            |            | Japan                     | Export |             |
| <b>SKEGLAA010</b> | 0.78N           | Side push           | 50,000 cycles              | Black      | 1,000                     | 1,000  | 3           |
| <b>SKEGLBA010</b> | 1.96N           |                     |                            | Dark gray  |                           |        |             |

### Packing Specifications

Bulk

| Number of packages (pcs.) |                         | Export package measurements (mm) |
|---------------------------|-------------------------|----------------------------------|
| 1 case / Japan            | 1 case / export packing |                                  |
| 10,000                    | 30,000                  | 309×476×347                      |

### Dimensions

Unit:mm

| No. | Photo | Style | PC board mounting hole dimensions (Viewed from switch mounting face) |
|-----|-------|-------|--|
| 1   |       |       |  |

Refer to P.265 for soldering conditions.

■ Dimensions

Unit:mm

| No. | Photo | Style | PC board mounting hole dimensions (Viewed from switch mounting face) |
|-----|-------|-------|--|
| 2   |       |       |  |
| 3   |       |       |  |

■ Circuit Diagram



**Note**

Please use 1.6mm thick PC boards. (For horizontal type, 1.0mm)

■ Product Line of Knobs

Unit:mm

| Applicable model                                 | Dimensions | Variety                                 |  | Label dimensions |  |
|--|------------|---|--|------------------|--|
|  |            | Color                                   | Model  |                  |  |
| <b>SKEG</b><br><br>Applicable to joint stem type |            | Cap                                     |  |                  |  |
|  |            | Clear                                   | SK2AA00540   |                  |  |
|  |            | Keytop                                  |  |                  | Keytop+Cap   |
|  |            | Red<br>Blue<br>Ivory<br>Black<br>Yellow | SK2AA00310<br>SK2AA00320<br>SK2AA00330<br>SK2AA00340<br>SK2AA00350 |                  | SK2AA00360<br>SK2AA00370<br>SK2AA00380<br>SK2AA00390<br>SK2AA00400 |

**Notes**

1. The knob will be delivered together with the switch but packed separately.
2. The label is not included.

# TACT Switch™

## List of Varieties

TACT Switch™

Sharp Feeling

Soft Feeling

Snap-in Type

Surface Mount Type

Radial Type

| Type                        |                                | Soft Feeling Type  |           |  |                        |                        |                          |  |  |   |
|-----------------------------|--------------------------------|--|-----------|--|------------------------|------------------------|--------------------------|--|--|---|
|                             |                                | Snap-in  |           |  | Surface Mount          |                        |                          |  | Radial   |   |
| Series                      |                                | SKEG   | SKEG      | SKPF   | SKPS                   | SKPM                   | SKPG                     | SKPR   | SKPL   | SKPD  |
| Photo                       |                                |  |           |  |                        |                        |                          |  |  |   |
| Features                    |                                | —  | —         | High operation force<br>Long travel                        | Low contact resistance | Low contact resistance | —                        | High operation force<br>Low contact resistance | Round terminal<br>Low contact resistance                   | —   |
| Water-proof                 |                                | —  | —         | —  | —                      | —                      | —                        | —  | —  | —   |
| Dust-proof                  |                                | —  | —         | —  | —                      | —                      | —                        | —  | —  | —   |
| IP standard                 |                                | —  | —         | —  | —                      | —                      | —                        | —  | —  | —   |
| Operating direction         | Top push                       | ●  | —         | ●  | ●                      | ●                      | ●                        | ●  | ●  | ●   |
|                             | Side push                      | —  | ●         | —  | —                      | —                      | —                        | —  | —  | —   |
| Dimensions (mm)             | W                              | □6   | 7.5       | 8  | 5.9                    |                        | 6.6                      | 7.5  | φ6.45  | □7.8  |
|                             | D                              |  | 9.9       | 9  | 6                      |                        | 6.3                      | 7.8  |  |   |
|                             | H                              | See the relevant pages for respective product descriptions   | 7.3       | 10   | 5                      |                        | 6.5                      | 5  | See the relevant pages for respective product descriptions |   |
| Contact                     |                                | Carbon   |           |  | Silver                 |                        | Carbon                   | Silver   |  | Carbon  |
| Operation force coverage    | 1N max.                        | ↕  | ↕         | ↕  | ↕                      | ↕                      | ↕                        | ↕  | ↕  | ↕   |
|                             | 1N to 2N                       | ↕  | ↕         | ↕  | ↕                      | ↕                      | ↕                        | ↕  | ↕  | ↕   |
|                             | 2N to 3N                       | ↕  | ↕         | ↕  | ↕                      | ↕                      | ↕                        | ↕  | ↕  | ↕   |
|                             | 3N to 4N                       | ↕  | ↕         | ↕  | ↕                      | ↕                      | ↕                        | ↕  | ↕  | ↕   |
| Travel (mm)                 |                                | 1  |           | See the relevant pages for respective product descriptions | 1.05                   | 1.3                    |                          | 1  | 1.3  | See the relevant pages for respective product descriptions  |
| Ground terminal             |                                | —  | —         | —  | —                      | —                      | —                        | —  | —  | —   |
| Operating temperature range |                                | -20°C to +70°C   |           |  | -40°C to +90°C         |                        |                          |  |  |   |
| Automotive use              |                                | ●  | ●         | ●  | ●                      | ●                      | ●                        | ●  | ●  | ●   |
| Life Cycle                  |                                |  |           |  |                        |                        |                          |  |  |   |
| Electrical performance      | Rating (max.) (Resistive load) | 5mA 12V DC   |           |  | 50mA 16V DC            |                        | 5mA 12V DC               | 50mA 16V DC                                    |  | 5mA 12V DC  |
|                             | Rating (min.) (Resistive load) | 10μA 1V DC   |           |  |                        |                        |                          |  |  |   |
|                             | Insulation resistance          | 100MΩ min. 100V DC 1min.   |           |  |                        |                        |                          |  |  | 50MΩ min. 100V DC 1min.<br>SKPDAF: 100MΩ min. 100V DC 1min. |
|                             | Voltage proof                  | 250V AC 1min.  |           |  |                        |                        |                          |  |  | 100V AC 1min.<br>SKPDAF: 250V DC 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                           | -30°C 96h  | -40°C 96h | -40°C 1,000h   | -40°C 96h              | -40°C 1,000h           | -40°C 96h                | -40°C 1,000h                                   | -40°C 96h  |   |
|                             | Dry heat                       | 80°C 96h   | 90°C 96h  | 90°C 1,000h  | 90°C 96h               | 90°C 1,000h            | 90°C 96h                 | 90°C 1,000h                                    | 90°C 96h   |   |
|                             | Damp heat                      | 60°C, 90 to 95%RH 96h  |           | 60°C, 90 to 95%RH 1,000h                                   |                        | 60°C, 90 to 95%RH 96h  | 60°C, 90 to 95%RH 1,000h |  | 60°C, 90 to 95%RH 96h                                      |   |
| Page                        |                                | 256  | 258       | 259  | 260                    | 261                    | 262                      | 263  | 264  |   |

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.

## Condition for Reflow

Available for Surface Mount Type.

1. Temperature measurement: Thermocouple  $\phi$  0.1 to 0.2 CA (K) or CC (T) at solder joints (copper foil surface).  
A heat resistive tape should be used to fix thermocouple.
2. Temperature profile



### Notes

1. The above temperature shall be measured of the top of switch. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the material, size, thickness of PC boards and others.  
The above-stated conditions shall also apply to switch surface temperatures.
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, SKPD 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.   |

### SKQJ, SKQK, SKEG 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.   |

## Manual Soldering

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

### SKHH, SKHW, SKRG, SKPD Series

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

### SKTD, SKTG, SKQJ, SKQK, SKEG Series

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