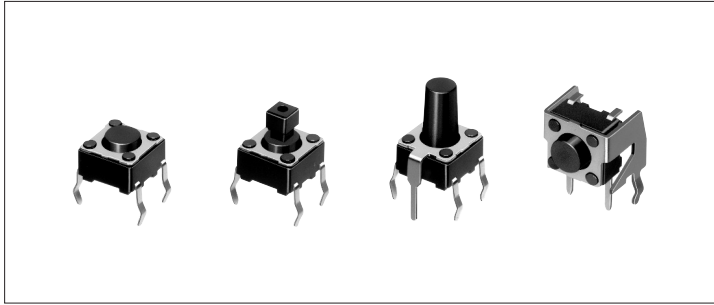


TACT Switch™ 6mm Square (Snap-in Type)

SKHH Series



User friendly 6×6mm type, available in a wide variety.



Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Sharp
Feeling

Soft
Feeling

Snap-in
Type

Surface
Mount Type

Radial
Type



Automotive
Use

Product Line

Vertical Type

| Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem height | Minimum order unit (pcs.) | Drawing No. |
|-------------|-----------------|---------------------|-------------|----------------|---------------|----------------------------|----------------------------|------------|-------------|---------------------------|-------------|
| SKHHAJA010 | 0.98N | Vertical | 0.25 | 50mA 12V DC | 10μA 1V DC | 1,000,000cycles | 100mΩ max. | Black | h=4.3mm | 1,000 | 1 |
| SKHHALA010 | 1.57N | | | | | 500,000cycles | | Dark gray | | | |
| SKHHAQA010 | 2.55N | | | | | 200,000cycles | | Red | | | |
| SKHHAKA010 | 0.98N | | | | | 1,000,000cycles | | Black | h=5mm | | |
| SKHHAMA010 | 1.57N | | | | | 500,000cycles | | Dark gray | | | |
| SKHHARA010 | 2.55N | | | | | 200,000cycles | | Red | | | |
| SKHHCA010 | 3.53N | | | | | 200,000cycles | | Orange | h=7mm | | |
| SKHHCRA010 | 5.10N | | | | | 1,000,000cycles | | Yellow | | | |
| SKHHBVA010 | 0.98N | | | | | 500,000cycles | | Black | | | |
| SKHHBWA010 | 1.57N | | | | | 200,000cycles | | Dark gray | h=9.5mm | | |
| SKHHBYA010 | 2.55N | | | | | 1,000,000cycles | | Red | | | |
| SKHHANA010 | 0.98N | | | | | 500,000cycles | | Black | | | |
| SKHHAPA010 | 1.57N | | | | | 200,000cycles | | Dark gray | h=13mm | | |
| SKHHBSA010 | 2.55N | | | | | 1,000,000cycles | | Red | | | |
| SKHHDTA010 | 0.98N | | | | | 500,000cycles | | Black | | | |
| SKHHDUA010 | 1.57N | | | | | 300,000cycles | | Dark gray | h=17mm | | |
| SKHHDHA010 | 0.98N | | | | | | | Black | | | |
| SKHHDJA010 | 1.57N | | | | | | | Dark gray | | | |

Joint Stem Type

| Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem height | Minimum order unit (pcs.) | Drawing No. |
|-------------|-----------------|---------------------|-------------|----------------|---------------|----------------------------|----------------------------|------------|-------------|---------------------------|-------------|
| SKHHCWA010 | 0.98N | Vertical | 0.25 | 50mA 12V DC | 10μA 1V DC | 1,000,000 cycles | 100mΩ max. | Black | h=7.3mm | 1,000 | 2 |
| SKHHDAA010 | 1.57N | | | | | 500,000 cycles | | Dark gray | | | |
| SKHHDGA010 | 2.55N | | | | | 200,000 cycles | | Red | | | |

Note

Please place purchase orders per minimum order unit N (integer).

Refer to P.334 for soldering conditions.
Refer to P.336 for standard knobs.

Product Line

With Ground Terminal Type

| | Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem height | Minimum order unit (pcs.) | Drawing No. |
|---------------------------|-------------|-----------------|---------------------|-------------|----------------|---------------|----------------------------|----------------------------|------------|-------------|---------------------------|-------------|
| Detector | SKHHPJA010 | 0.98N | Vertical | 0.25 | 50mA 12V DC | 10μA 1V DC | 1,000,000 cycles | 100mΩ max. | Black | h=4.3mm | 1,000 | 3 |
| Push | SKHHPLA010 | 1.57N | | | | | | | Dark gray | | | |
| Slide | SKHHPOA010 | 2.55N | | | | | | | Red | | | |
| Rotary | SKHHPKA010 | 0.98N | | | | | | | Black | h=5mm | | |
| Encoders | SKHHPMA010 | 1.57N | | | | | | | Dark gray | | | |
| Power | SKHHQVA010 | 0.98N | | | | | | | Red | | | |
| Dual-in-line Package Type | SKHHQWA010 | 1.57N | | | | | | | Black | h=7mm | | |
| TACT Switch™ | SKHHQYA010 | 2.55N | | | | | | | Dark gray | | | |
| Custom-Products | SKHHPNA010 | 0.98N | | | | | | | Red | | | |
| | SKHHPPA010 | 1.57N | | | | | | | Black | h=9.5mm | | |
| | SKHHQNA010 | 2.55N | | | | | | | Dark gray | | | |
| | | | | | | | | | Red | | | |

Horizontal Type

| | Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem length | Minimum order unit (pcs.) | Drawing No. |
|--------------------|-------------|-----------------|---------------------|-------------|----------------|---------------|----------------------------|----------------------------|------------|-------------|---------------------------|-------------|
| Sharp Feeling | SKHHLMA010 | 0.98N | Horizontal | 0.25 | 50mA 12V DC | 10μA 1V DC | 1,000,000 cycles | 100mΩ max. | Black | ℓ=3.85mm | 1,000 | 4 |
| Soft Feeling | SKHHLNA010 | 1.57N | | | | | | | Dark gray | | | |
| Snap-in Type | SKHHLPA010 | 2.55N | | | | | | | Red | | | |
| Surface Mount Type | SKHHLQA010 | 0.98N | | | | | | | Black | ℓ=8.35mm | | |
| Radial Type | SKHHLRA010 | 1.57N | | | | | | | Dark gray | | | |
| | SKHHLUA010 | 0.98N | | | | | | | Red | | | |
| | SKHHLVA010 | 1.57N | | | | | | | Black | ℓ=5.85mm | | |
| | SKHHLWA010 | 2.55N | | | | | | | Dark gray | | | |
| | SKHHNHA010 | 0.98N | | | | | | | Red | | | |
| | SKHHNJA010 | 1.57N | | | | | | | Black | ℓ=15.85mm | | |
| | SKHHNKA010 | 2.55N | | | | | | | Dark gray | | | |
| | | | | | | | | | Red | | | |

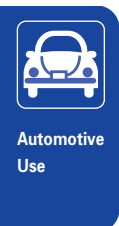
Packing Specifications

Bulk

| Series | Number of packages (pcs.) | | Export package measurements (mm) |
|---|---------------------------|------------------------|----------------------------------|
| | 1 case /Japan | 1 case /export packing | |
| Other | 10,000 | 30,000 | 309 × 476 × 347 |
| SKHHDT,SKHHDU SKHHDH,SKHHDJ SKHHNH,SKHHNJ SKHHNK | 5,000 | 15,000 | |

Note

Please place purchase orders per minimum order unit N (integer).



Dimensions

Unit:mm

| No. | Photo | Style | PC board mounting hole dimensions (Viewed from switch mounting face) | | | | | | | | | | | | | | |
|-----|-------|---|---|---|-----|-----|---|-----|---|-----|-----|---|----|---|----|---|--|
| 1 | | <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>h</th> <th>A</th> </tr> </thead> <tbody> <tr><td>4.3</td><td>3.5</td></tr> <tr><td>5</td><td>3.5</td></tr> <tr><td>7</td><td>3.3</td></tr> <tr><td>9.5</td><td>3</td></tr> <tr><td>13</td><td>3</td></tr> <tr><td>17</td><td>3</td></tr> </tbody> </table> | h | A | 4.3 | 3.5 | 5 | 3.5 | 7 | 3.3 | 9.5 | 3 | 13 | 3 | 17 | 3 | |
| h | A | | | | | | | | | | | | | | | | |
| 4.3 | 3.5 | | | | | | | | | | | | | | | | |
| 5 | 3.5 | | | | | | | | | | | | | | | | |
| 7 | 3.3 | | | | | | | | | | | | | | | | |
| 9.5 | 3 | | | | | | | | | | | | | | | | |
| 13 | 3 | | | | | | | | | | | | | | | | |
| 17 | 3 | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | |
| 3 | | <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>h</th> <th>A</th> </tr> </thead> <tbody> <tr><td>4.3</td><td>3.5</td></tr> <tr><td>5</td><td>3.5</td></tr> <tr><td>7</td><td>3.3</td></tr> <tr><td>9.5</td><td>3</td></tr> </tbody> </table> | h | A | 4.3 | 3.5 | 5 | 3.5 | 7 | 3.3 | 9.5 | 3 | | | | | |
| h | A | | | | | | | | | | | | | | | | |
| 4.3 | 3.5 | | | | | | | | | | | | | | | | |
| 5 | 3.5 | | | | | | | | | | | | | | | | |
| 7 | 3.3 | | | | | | | | | | | | | | | | |
| 9.5 | 3 | | | | | | | | | | | | | | | | |

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Sharp
Feeling

Soft
Feeling

Snap-in
Type

Surface
Mount Type


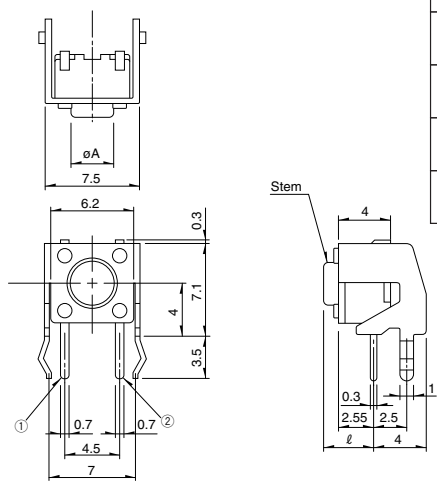
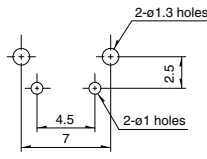
Radial
Type



Automotive
Use

Dimensions

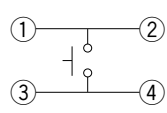
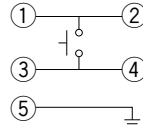
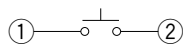
Unit:mm

| No. | Photo | Style | PC board mounting hole dimensions (Viewed from switch mounting face) | | | | | | | | | | |
|---|---|---|---|--------|---|------|-----|------|-----|------|---|-------|---|
| 4 |  |  | <table border="1"> <thead> <tr> <th>ℓ</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>3.85</td> <td>3.5</td> </tr> <tr> <td>5.85</td> <td>3.3</td> </tr> <tr> <td>8.35</td> <td>3</td> </tr> <tr> <td>15.85</td> <td>3</td> </tr> </tbody> </table> | ℓ | A | 3.85 | 3.5 | 5.85 | 3.3 | 8.35 | 3 | 15.85 | 3 |
| | | | ℓ | A | | | | | | | | | |
| | | | 3.85 | 3.5 | | | | | | | | | |
| | | | 5.85 | 3.3 | | | | | | | | | |
| | | | 8.35 | 3 | | | | | | | | | |
| 15.85 | 3 | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |

Note

Please use 1.6mm thick PC boards.

Circuit Diagram

| Vertical type/Joint stem type | With ground terminal type | Horizontal type |
|---|---|---|
|  |  |  |

Sharp Feeling

Soft Feeling

Snap-in Type

Surface Mount Type












Radial Type



Automotive Use

List of Varieties

Sharp Feeling Type

| Series | SKHR | SKHL | SKHH | SKHW | SKRD | SKQJ | SKHL | SKHH | SKQJ | SKQB | SKQU | |
|-----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Photo |  |  |  |  |  |  |  |  |  |  |  | |
| Type | Snap-in | | | | | | | | | | | |
| Features | ————— | | | Dust-proof type | Horizontal type | — | Horizontal type | | | Water-proof | 4-direction switch+push switch | |
| Operating direction | Vertical | ● | ● | ● | ● | — | ● | ————— | | | ● | ● |
| | Horizontal | ————— | | | | ● | — | ● | ● | ● | ————— | |
| Dimensions (mm) | W | □4.5 | 6 | □6 | 6.2 | □6.6 | 7.3 | 7.5 | | □10 | | |
| | D | | 3.5 | | 7.15 | | 7.22 | 7.85 | | | | |
| | H | 3.8 | 4.3 | | 7.4 | 5 | 4.3 | 7.4 | 7.3 | 5 | 7.1 | |
| Operation force coverage | 1N | ↕ | ↕ | ↕ | ↕ | ↕ | ↕ | ↕ | ↕ | ↕ | See the relevant pages for respective product descriptions | |
| | 5N | | ↕ | | | | | | | | | |
| Travel (mm) | 0.25 | | | 0.3 | 0.25 | | | | | 0.3 | | |
| Ground terminal | ————— | | ● | ————— | | | ● | ————— | | | | |
| Operating temperature range | -20°C to +70°C SKHL(Vertical Type)/QJ | | | | | | | | | | | |
| | -30°C to +85°C | | | | | | | | | | | |
| Automotive use | ————— | | ● | ————— | | | | | ● | ————— | | |
| Electrical performance | Insulation resistance | 100MΩ min. 100V DC | | | | | | | | | | |
| | Voltage proof | 250V AC for 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 2hours respectively | | | | | | | | | | |
| | Lifetime | Shall be in accordance with individual specifications. | | | | | | | | | | |
| Environmental performance | Cold | -30±2°C for 96h | | | | | | | | | | |
| | Dry heat | 80±2°C for 96h | | | | | | | | | | |
| | Damp heat | 60±2°C, 90 to 95%RH for 96h | | | | | | | | | | |
| Page | 281 | 282 | 284 | 288 | 289 | 290 | 282 | 284 | 290 | 292 | 485 | |

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.

- TACT Switch™ Soldering Conditions334
- TACT Switch™ Cautions.....335
- Product Line of Knobs for TACT Switch™336

Notes

1. The automotive operating temperature range to be individually discussed upon request.
2. ●marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40°C to +85°C.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Sharp
Feeling

Soft
Feeling

Snap-in
Type

Surface
Mount Type

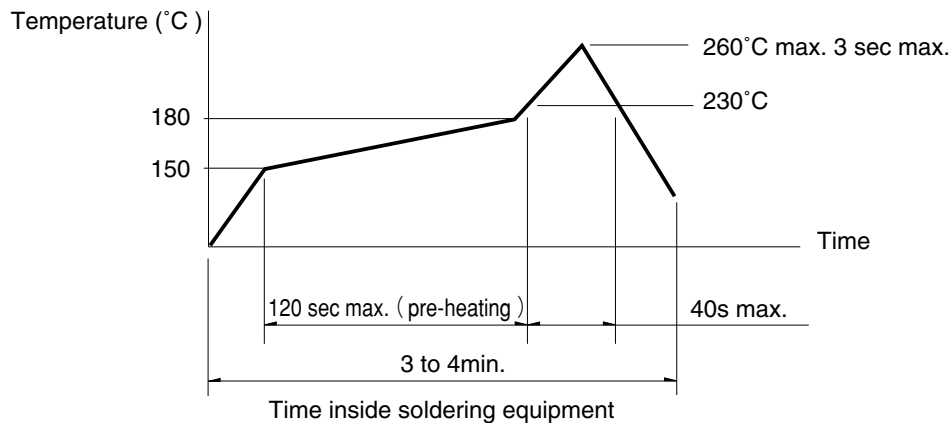
Radial
Type

Soldering Conditions

Condition for Reflow

Available for Surface Mount Type.

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2 ϕ CA (K) or CC (T) at solder joints (copper foil surface). A heat resistive tape should be used to fix thermocouple.
3. 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
(Except, SKHL, 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 | 60s max. |
| Soldering temperature | 260°C max. |
| Duration of immersion | 5s max. |
| Number of soldering | 2times max. |

Notes

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

Manual Soldering (Except SKRT Series)

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

Detector

Push

Slide

Rotary

Encoders

Power


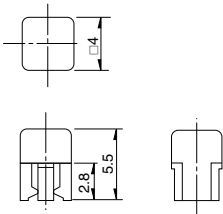

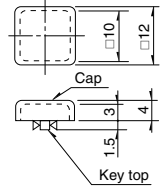
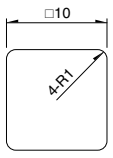
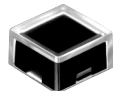
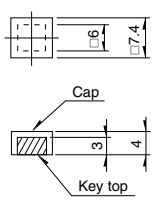
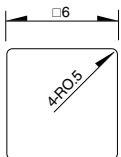
Dual-in-line
Package Type

TACT Switch™

Custom-
ProductsSharp
FeelingSoft
FeelingSnap-in
TypeSurface
Mount TypeRadial
Type

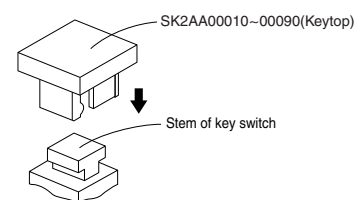
Product Line of Knobs

Unit:mm

| Applicable model | Dimensions | | Variety | | | Label dimensions (Unit:mm) | |
|---|---|---|---|--|--|--|--|
| | | | Color | Model | | | |
| SKHH Applicable to joint stem type |  |  | Keytop | | | | |
| | | | Red Blue Ivory Black Yellow | SK2AA00410 SK2AA00420 SK2AA00430 SK2AA00440 SK2AA00450 | | | |
| SKHC SKQE Applicable to joint stem type |  |  | Cap | | |  Thickness 0.1 | |
| | | | Clear | SK2AA00510 | | | |
| | | | Keytop | | Keytop + Cap | | |
| | | | Red Blue Ivory Black | SK2AA00010 SK2AA00020 SK2AA00030 SK2AA00040 | SK2AA00060 SK2AA00070 SK2AA00080 SK2AA00090 | | |
| SKEG Applicable to joint stem type |  |  | Cap | | |  Thickness 0.1 | |
| | | | Clear | SK2AA00540 | | | |
| | | | Keytop | | Keytop + Cap | | |
| | | | Red Blue Ivory Black Yellow | SK2AA00310 SK2AA00320 SK2AA00330 SK2AA00340 SK2AA00350 | SK2AA00360 SK2AA00370 SK2AA00380 SK2AA00390 SK2AA00400 | | |

Notes

1. The knob will be delivered together with the switch but packed separately.
2. The label is not included.
3. For SK2AA00010 to SK2AA00090 types, please check the mounting direction.



- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- TACT Switch™
- Custom-Products
- Sharp Feeling
- Soft Feeling
- Snap-in Type
- Surface Mount Type
- Radial Type