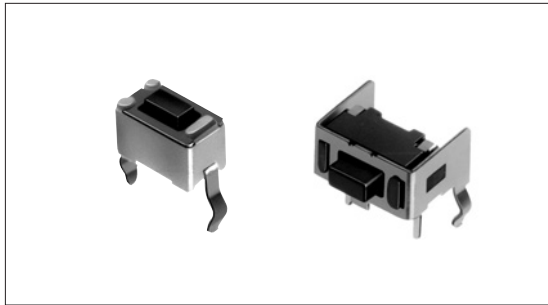


TACT Switch™ 6×3.5mm Compact (Snap-in type)

SKHL Series



A vertical and horizontal type switch contributing to high density mounting.



Features

- Snap-in type allows the switch to be mounted directly onto the PC board.

Applications

- For various operation in audio equipment, office devices, communication devices, measuring devices, TVs, VCRs and in-car components

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Sharp
Feeling

Soft
Feeling

Snap-in
Type

Surface
Mount Type

Radial
Type

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 packing unit (pcs.) | Drawing No. |
|-------------|-----------------|---------------------|-------------|----------------|----------------|----------------------------|----------------------------|------------|-------------|-----------------------------|-------------|
| SKHLAAA010 | 0.98N | Vertical | 0.25 | 50mA 12V DC | 10μ A 1V DC | 50,000 cycles | 500m Ω max. | Black | h=4.3mm | 1,000 | 1 |
| SKHLACA010 | 1.57N | | | | | | | Dark gray | | | |
| SKHLAJA010 | 2.55N | | | | | | | Red | | | |
| SKHLABA010 | 0.98N | | | | | | | Black | h=5mm | | |
| SKHLADA010 | 1.57N | | | | | | | Dark gray | | | |
| SKHLAKA010 | 2.55N | | | | | | | Red | | | |


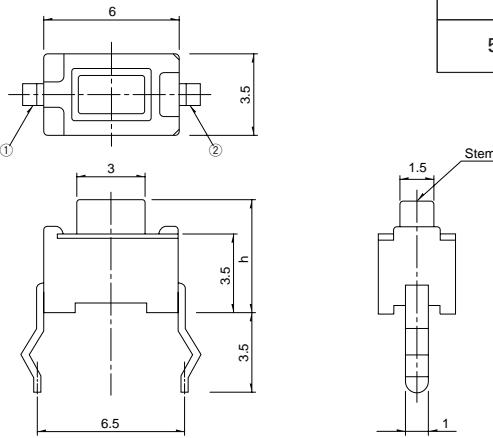
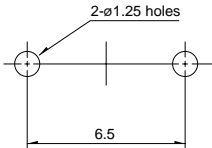

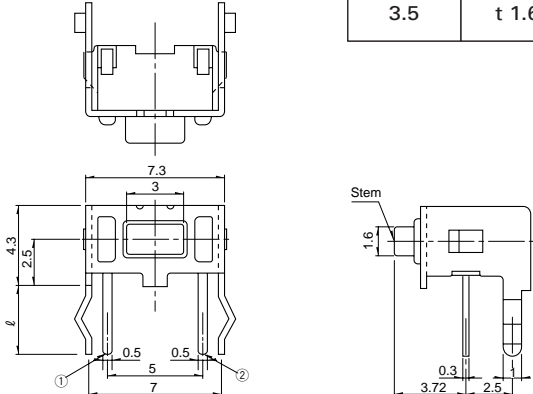
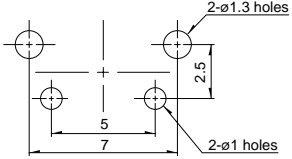
Horizontal Type

| Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (max.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Terminal length | Minimum packing unit (pcs.) | Drawing No. |
|-------------|-----------------|---------------------|-------------|----------------|----------------|----------------------------|----------------------------|------------|-------------------------------|-----------------------------|-------------|
| SKHLLAA010 | 0.98N | Horizontal | 0.25 | 50mA 12V DC | 10μ A 1V DC | 50,000 cycles | 500m Ω max. | Black | ℓ =3.5mm (PC board t: 1.6) | 1,000 | 2 |
| SKHLLBA010 | 1.57N | | | | | | | Dark gray | | | |
| SKHLLFA010 | 2.55N | | | | | | | Red | | | |
| SKHLLCA010 | 0.98N | | | | | | | Black | ℓ =2.5mm (PC board t: 1.0) | | |
| SKHLLDA010 | 1.57N | | | | | | | Dark gray | | | |

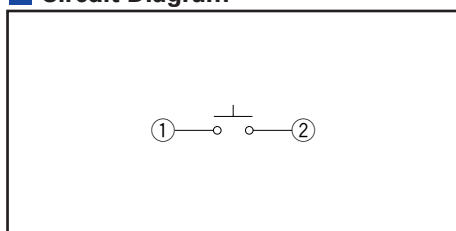
Refer to P.373 for product specifications.
Refer to P.374 for soldering conditions.

Dimensions

Unit:mm

| No. | Photo | Style | PC board mounting hole dimensions (Viewed from switch mounting face) | | | | | | |
|-----|---|--|---|----------|-----|---|-----|-------|---|
| 1 |  | <p>Vertical type</p>  <table border="1" data-bbox="986 360 1099 519"> <tr><td>h</td></tr> <tr><td>4.3</td></tr> <tr><td>5</td></tr> </table> | h | 4.3 | 5 |  | | | |
| h | | | | | | | | | |
| 4.3 | | | | | | | | | |
| 5 | | | | | | | | | |
| 2 |  | <p>Horizontal type</p>  <table border="1" data-bbox="873 1003 1099 1160"> <tr><th>ℓ</th><th>PC board</th></tr> <tr><td>2.5</td><td>t 1.0</td></tr> <tr><td>3.5</td><td>t 1.6</td></tr> </table> | ℓ | PC board | 2.5 | t 1.0 | 3.5 | t 1.6 |  |
| ℓ | PC board | | | | | | | | |
| 2.5 | t 1.0 | | | | | | | | |
| 3.5 | t 1.6 | | | | | | | | |

Circuit Diagram



Product Specifications

| Items | | Series | Sharp feeling type | Soft feeling type |
|---------------------------|-----------------------|---|--------------------|-------------------|
| | | Operating temperature range | | |
| | -30°C to +85°C | | | -40°C to +90°C |
| Electrical performance | Insulation resistance | 100MΩ min. 100V DC SKEY/PD : 50MΩ min. 100V DC | | |
| | Voltage proof | 250V AC for 1minute SKRE/SC/RB/RM/RW/RR/EY/PD : 100V AC for 1minute | | |
| 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 | | |

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package TypeMulti Control
Devices

TACT Switch™

Custom-
Products

Note

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

Specifications of LED (SKHJ)

| Color of illumination | Power dissipation P (mW) | Forward pulse peak current IFP (mA) | Forward current IFDC (mA) | Reverse voltage VR (V) | Forward voltage VF (V) IF=10mA | Reverse current IR (μA) VR=4V | Peak emission wave length λ peak (nm) IF=10mA | Spectral line half width Δλ (nm) IF=10mA | Luminous intensity IV (mcd) IF=10mA | | |
|-----------------------------|-----------------------------|--|------------------------------|---------------------------|--------------------------------------|-------------------------------------|---|--|---|--------|--------------------|
| Red | 40 | 80 | 15 | 4 | 2.7 max. 2.05TYP | 5 max. | 700 TYP | 100 TYP | 0.4min. 1.0 TYP | | |
| Pure green | | | | | | | 555 TYP | 20 TYP | 0.8min. 2.0 TYP | | |
| Amber | | | | | | | 590 TYP | 30 TYP | 0.4min. 1.0 TYP | | |
| Orange (High brightness) | | | | | | 3 | 2.7 max. 2.0 TYP | 10 max. | 630 TYP | 40 TYP | 1.5min. 4.0 TYP |
| Green (High brightness) | | | | | | 4 | 2.7 max. 2.05TYP | | 565 TYP | 30 TYP | 2.0min. 5.0 TYP |

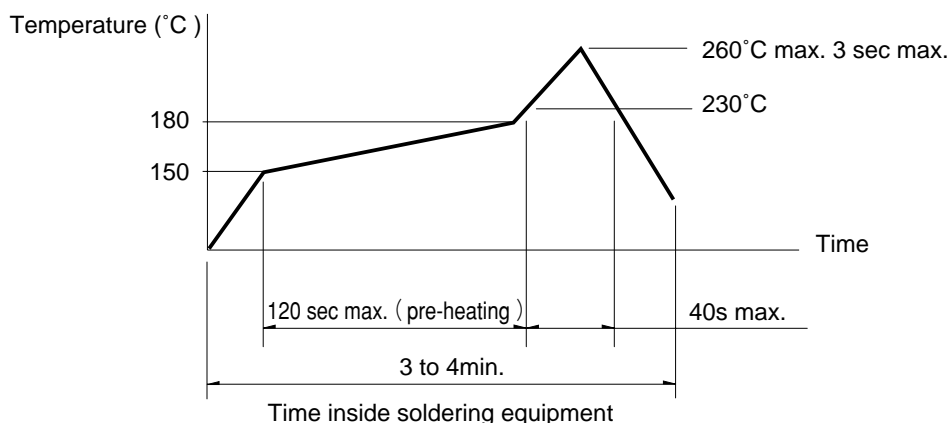
Sharp
FeelingSoft
FeelingSnap-in
TypeSurface
Mount TypeRadial
Type

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



Note

1. The above temperature shall be measured on the mounting surface of a PC board. 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 SKHJ, 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 TACT Switch™ washing conditions.
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 returns to 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
- Multi Control Devices
- TACT Switch™
- Custom-Products

- Sharp Feeling
- Soft Feeling
- Snap-in Type
- Surface Mount Type
- Radial Type