TACT Switch™

6.2×6.5mm (SMD)Type

SKHU Series





Wide varieties such dust protection type suitable for high density mounting.



Features

- 6.2×6.5mm dimension with 2.5 to 3.1mm height is suitable for high density mounting.
- Reflow solderable.
- Available with anti-ESD ground terminal.
- Packaged with a 12mm wide embossed taping.
- Dust protection type is available to have advantage in dusty environment.

Rotary

Detector

Push

Slide

Encoders

Power

Dual-in-line Package Type Multi Control

Devices

Custom-

TACT Switch™

Products

Applications

• For operating various electronic devices such as audio devices, office equipment, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

Products Line **Vertical Type**

| Products No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem height | Drawing No. |
|--------------|-----------------|---------------------|-------------|---------------------|---------------|-------------------------------|----------------------------|---------------|----------------|-------------|
| SKHUAKE010 | 0.98N | | | | | 300,000 cycles | | Green | | |
| SKHUALE010 | 1.57N | Vertical | 0.25 | 0.25 50mA 12V DC | 10μA 1V DC | 300,000 cycles | 100 m Ω max. | Black | h=2.5mm | 1 |
| SKHUAME010 | 2.55N | | | | | 100,000 cycles | | Red | | |

With Ground Terminal Type

| Products No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem height | Drawing No. |
|--------------|-----------------|---------------------|-------------|----------------|---------------|----------------------------|----------------------------|----------------|----------------|-------------|
| SKHUPKE010 | 0.98N | | | | 10μA 1V DC | 300,000 cycles | | Green | | |
| SKHUPLE010 | 1.57N | Vertical | 0.25 | 50mA 12V DC | | • | 300,000 cycles | 100m Ω max. | Black | h=2.5mm |
| SKHUPME010 | 2.55N | | | | | 100,000 cycles | | Red | | |

Dust-proof Type

| Products No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | | Stem color | Stem height | Drawing No. |
|--------------|-----------------|---------------------|-------------|----------------|------------------------|----------------------------|----------------|------------|----------------|-------------|
| SKHUBHE010 | 1.57N | Vertical | 0.25 | 50mA 12V DC | 10 <i>μ</i> A 1V DC | 50,000 cycles | 100m Ω max. | Brown | h=3.1m m | 3 |

Dust-proof and With Ground Terminal Type

| Products No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem height | Drawing No. |
|--------------|-----------------|---------------------|-------------|----------------|---------------|----------------------------|----------------------------|------------|----------------|-------------|
| SKHUQHE010 | 1.57N | Vertical | 0.25 | 50mA 12V DC | 10μA 1V DC | 50,000 cycles | 100m Ω max. | Brown | h=3.1m | 4 |
| SKHUQGE010 | 2.55N | Vertical | 0.25 | | | | | Red | m | 4 |

Sharp Feeling

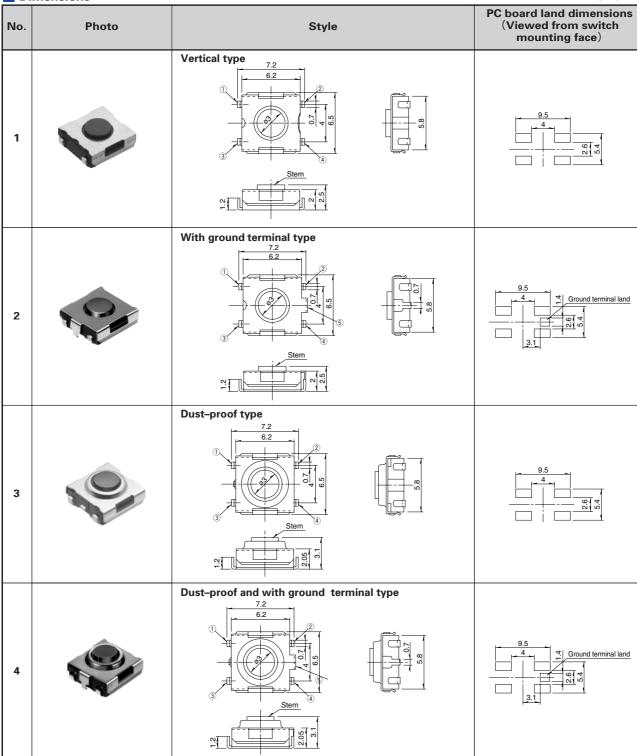
Soft **Feeling**

Snap-in Type

Surface **Mount Type** Radial

Type

Dimensions Unit:mm



Vertical type With ground terminal type 1 2 3 4 5 5 5 5

For other specifications, see **P.369**For soldering conditions, see **P.370**

For specifications for the taping package, see ${\bf P.372}$

Detector

Push

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Dual-in-line Package Type Multi Control Devices

TACT Switch™

Custom-Products

Sharp Feeling Soft Feeling

Snap-in Type Surface Mount Type Radial Type

Products Specifications

| Items | Series | Sharp feeling type | Soft feeling type | | | |
|-----------------------------|-----------------------|--|----------------------|--|--|--|
| Onerati | ng temperature range | −20°C to +70°C SKHJ/HL/QJ/RR/RV/QC/QK | −20℃ to +70℃ SKEG | | | |
| Operating temperature range | | -30°C to +85°C | -40℃ to +90℃ | | | |
| Electrical | Insulation resistance | 100M Ω min. 100V DC SKEY/PD: 50M Ω min. 100V DC | | | | |
| performance | Voltage proof | 250V AC for 1 min. SKRE/SKSC/SKRB/RV/RH/RM/RW/RR/EY/PD : 100V AC for 1min. | | | | |
| D 1377 | 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 | | | | |
| Durability | Lifetime | Shall be in accordance with individual specifications. | | | | |
| | Cold | -30±2℃ for 96h | | | | |
| Environmental performance | Dry heat | 80±2°C for 96h | | | | |
| | Damp heat | 60±2℃, 90 to | 95%RH for 96h | | | |

Note

We can raise the working temperature range for in-vehicle applications upon request. Contact us if you have any requirements of this kind.

Specifications of LED (SKHJ)

| Color of light | 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(μ A) VR=4V | Peak emission wave length λ peak(nm) IF=10mA | Spectral line half width Δ λ (nm) IF=10mA | Luminous intensity IV(mcd) IF=10mA |
|-----------------------------|-------------------------|--|--------------------------|-----------------------------|--------------------------------|---|--|---|---|
| Red | | | | 4 | 2.7 max. 2.05TYP | 5 max. | 700 TYP | 100 TYP | 0.4min. 1.0 TYP |
| Pure green | | 80 | | | | 10 max. | 555 TYP | 20 TYP | 0.8min. 2.0 TYP |
| Amber | 40 | | 15 | | 2.7 max. 2.0 TYP | | 590 TYP | 30 TYP | 0.4min. 1.0 TYP |
| Orange (High brightness) | | | | 3 | | | 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 |

Push

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Dual-in-line Package Type Multi Control Devices

TACT Switch™

Custom-Products

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

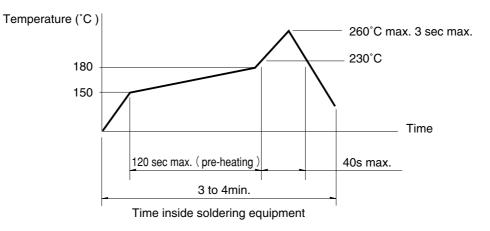
Type

Soldering Conditions

Condition for Reflow

Available for Surface Mount Type. (Except SKRM, SKRR Series)

- 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 soldering portion (copper foil surface). A heat resisting tape should be used for fixed measurement.
- 3. Temperature profile



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Custom-Products

Sharp Feeling

Soft

Feeling

Snap-in Type Surface Mount Type Radial Type

TACT Switch¹¹

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Dual-in-line Package Type

Multi Control Devices

Note

- The condition mentioned above is the temperature 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 PC board's material, size,
 thickness, etc. The above-stated conditions shall also apply to switch surface temperatures.
- 2. Soldering conditions differ depending on reflow soldering machines. You are requested to verify the soldering conditions thoroughly beforehand.

Conditions for Auto-dip

Available for Snap-in Type and Radial Type

(Except SKHJ, SKHL, SKQC, SKQJ, SKQK, SKEG series)

| Items | Condition |
|-------------------------|---|
| Flux built-up | Mounting surface should not be coated with flax |
| Preheating temperature | Ambient temperature of the soldered surface of PC board. 100°C max. |
| Preheating time | 60s max. |
| Soldering temperature | 260°C max. |
| Continuous dipping time | 5s max. |
| Number of soldering | 2times max. |

Manual Soldering (Except SKRT series)

| Items | Condition |
|----------------------------|------------|
| Soldering temperature | 350°C max. |
| Continuous soldering time | 3s max. |
| capacity of soldering iron | 60W max. |

Notes

- 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 at least 0.81. (EC-19S-8 by TAMURA Corporation, or their equivalents.)

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Sharp Feeling Soft Feeling Snap-in Type

Mount Type Radial Type

Specification of Embossed Taping Package

■ Taping Packaging for Auto-insertion

Plastic Reel

Applicable series

SKHM, SKHU, SKQG, SKQL, SKQM, SKQR, SKQY, SKRAAK, SKRAAL, SKRB, SKRE, SKRK, SKRM, SKRN, SKRN, SKRP, SKRT, SKRW, SKPM,SKSC

SKQT, SKRAAM, SKRAAQ, SKRH, SKRR, SKRV, SKPG, SKPN

SKQUBA, SKQUDB

33.5

Unit:mm

| Applicable series | Oty/reel (pcs.) (Minimum packing unit) | Tape dimensions |
|---|---|--|
| SKQM, SKPM | 2,000 | |
| SKHM, SKHU, SKQY, SKRT, SKRAAK, SKRAAL | 3,000 | Pull direction |
| SKQG | 5,000 (Without stem type) 4,000 (With stem type) | 2 4 4 0 Ø1.5 hole |
| SKRP | 4,000 | |
| SKRKAE, SKRKAH | 4,500 | (5.5) |
| SKQR, SKRB SKRM, SKRW | 10,000 | 8 |
| SKRE, SKRN, SKRKAG,SKSC | 5,000 | |
| SKQL | 3,000 | 2 4 4 9 01.5 hole SP III III III III III III III III III |
| SKRH | 1,300 | ø1.5 hole |
| SKRV | 1,500 | Pull direction |
| SKPG | 1,200 | <u>Ø1.5 hole</u> 2 <u> </u> |
| SKRAAM, SKRAAQ | 1,400 | |
| SKQT | 3,000 | 9 2 2 |
| SKRR | 7,000 | |
| SKPN | 1,100 | Pull direction |
| SKQUBA | 750 | 40 40 1.5 82 84 41.5 1.75 80.75 80.75 |
| SKQUDB | 600 | the state of the s |

Note

Consult with us for a ϕ 330 mm diameter reel.