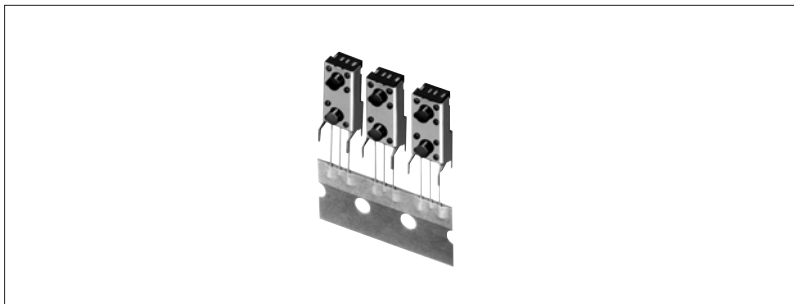


# Side-push™ Double-switch type TACT Switch (Radial)

SKQW Series

10mm pitch double-switch, horizontal type, enabling improved design flexibility.

- Power
- Push
- Slide
- Rotary
- Encoders
- Detector
- Dual-in-line Package Type
- Multi Control Devices
- TACT**
- Custom-Products



## Features

- Use of double-switch type improve flexibility in panel design.
- Switches are supplied with radial taping.
- Allows automatic insertion to PCB holes by radial auto insertion machine.

## Applications

- For operating various electronic devices such as audio devices, office equipments, communication devices, measuring instruments, TVs, video recorders, etc.

## Products Line

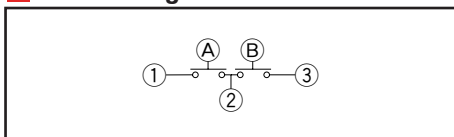
| Products No. | Operating force | Operating direction | Travel (mm) | Rating (max.)  | Operating life (5mA 5V DC) | Initial contact resistance | Stem color |
|--------------|-----------------|---------------------|-------------|----------------|----------------------------|----------------------------|------------|
| SKQWLAD010   | 0.98N           | Horizontal          | 0.25        | 50mA<br>12V DC | 100,000 cycles             | 100mΩ max.                 | Black      |

## Dimensions

Unit:mm

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

## Circuit Diagram



## Note

Using a 1.6mm thick PC board is recommended.

For detailed specifications, see P.415

For soldering conditions, see P.416

For specifications for the taping package, see P.419

## Products Specifications

| Items                       |                       | Series   | Sharp feeling type                | Soft feeling type                      |
|-----------------------------|-----------------------|--|-----------------------------------|--|
|                             |                       | -20°C to +70°C   |                                   |  |
| Operating temperature range |                       |  | -30°C to +85°C<br>SKRM/RW         | -30°C to +80°C<br>SKPG                 |
|                             |                       |  | -30°C to +90°C<br>SKRA/RG/RP      | -40°C to +90°C<br>SKPF/PL/PM/PN        |
| Rating (max.)               |                       |  | 50mA 12V DC<br>SKRP : 50mA 16V DC | 5mA 12V DC<br>SKPL/PM/PN : 50mA 16V DC |
| Rating (min.)               |                       | 10 $\mu$ A 1V DC   |                                   |  |
| Electrical performance      | Insulation resistance | 100M $\Omega$ min. 100V DC<br>SKEY/PD : 50M $\Omega$ min. 100V DC  |                                   |  |
|                             | Voltage proof         | 250V AC for 1 min.<br>SKRB/RH/RM/RW/RR/EY/PD : 100V 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 2 hours respectively |                                   |  |
|                             | Lifetime              | Shall be in accordance with individual specifications.   |                                   |  |
| Environmental performance   | Cold                  | -30 $\pm$ 2°C for 96h  |                                   |  |
|                             | Dry heat              | 80 $\pm$ 2°C for 96h   |                                   |  |
|                             | Damp heat             | 60 $\pm$ 2°C, 90 to 95%RH for 96h  |                                   |  |

Power

Push

Slide

Rotary

Encoders

Detector

Dual-in-line  
Package TypeMulti Control  
Devices

TACT

Custom-  
ProductsSharp  
FeelingSoft  
FeelingSnap-in  
TypeSurface  
Mount TypeRadial  
Type

### 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)

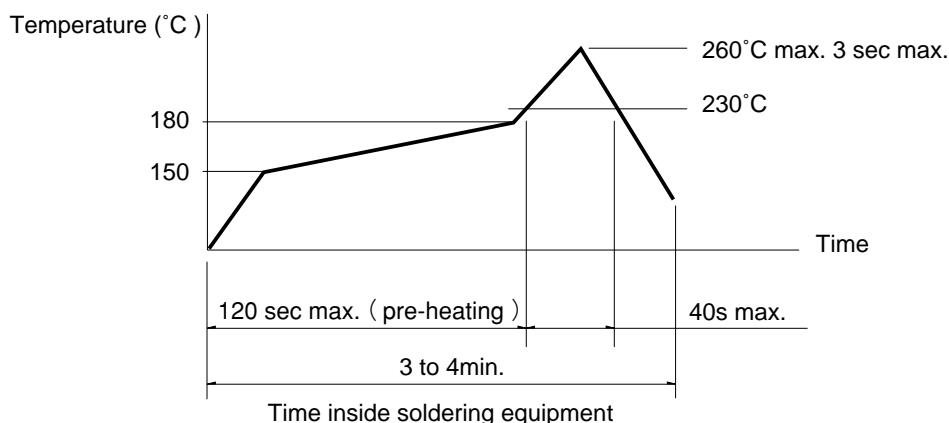
| Color of light              | Power dissipation | Forward pulse peak current | Forward current | Reverse voltage | Forward voltage     | Reverse current        | Peak emission wave length      | Spectral line half width         | Luminous intensity  |
|-----------------------------|-------------------|----------------------------|-----------------|-----------------|---------------------|------------------------|--------------------------------|----------------------------------|---------------------|
|                             | P (mW)            | IFP (mA)                   | IFDC (mA)       | VR (V)          | VF (V)<br>IF=10mA   | IR ( $\mu$ A)<br>VR=4V | $\lambda$ peak (nm)<br>IF=10mA | $\Delta \lambda$ (nm)<br>IF=10mA | IV (mcd)<br>IF=10mA |
| Red                         | 40                | 80                         | 15              | 4               | 2.7 max.<br>2.05TYP | 5 max.                 | 700 TYP                        | 100 TYP                          | 0.4min.<br>1.0 TYP  |
| Pure green                  |                   |                            |                 |                 |                     |                        |                                |                                  | 0.8min.<br>2.0 TYP  |
| Amber                       |                   |                            |                 |                 |                     |                        |                                |                                  | 0.4min.<br>1.0 TYP  |
| Orange<br>(High brightness) |                   |                            |                 | 3               | 2.7 max.<br>2.0 TYP | 10 max.                | 630 TYP                        | 40 TYP                           | 1.5min.<br>4.0 TYP  |
| Green<br>(High brightness)  |                   |                            |                 |                 |                     |                        |                                |                                  | 4                   |

## Soldering Conditions

### Condition for Reflow

Available for Surface Mount Type. (Except SKHM, SKHU, 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



### Notes

1. 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 flux                        |
| Preheating temperature  | Ambient temperature of the soldered surface of PC board.<br>100°C max. |
| Preheating time         | 60s max.   |
| Soldering temperature   | 260°C max.   |
| Continuous dipping time | 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 at least 0.82.  
(EC-19s-8 by TAMURA Corporation, or their equivalents.)

### Manual Soldering

Available for Manual Soldering Type

| Items                     | Condition  |
|---------------------------|------------|
| Soldering temperature     | 350°C max. |
| Continuous soldering time | 3s max.    |

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

# Specification of Radial Taping Package

## Taping Packaging for Auto-insertion

The SKHV, SKQC, SKQK, SKQN, SKQW, SKRC, SKRG, SKRS, SKPD and SKPL series are delivered with taping packaging.

### Box Size

Unit:mm

| Series                                       | A  | B   | C   |
|--|----|-----|-----|
| SKHV<br>SKQC<br>SKQK<br>SKRS<br>SKPD<br>SKQN | 47 | 331 | 291 |
| SKQW   | 61 | 334 | 235 |
| SKRGAL to AS                                 | 48 |     |     |
| SKRGAA to AF                                 | 43 |     |     |
| SKPL   |    |     | 340 |
| SKRC   | 55 | 337 | 370 |

## Quantity Accommodated Per Box

| Series       | Qty/reel (pcs.)<br>(Minimum packing unit) |
|--------------|---|
| SKHV<br>SKQK | 1,000                                     |
| SKQW<br>SKRS | 700                                       |
| SKQC         | 1,500                                     |
| SKPD         | 800                                       |
| SKRG         | 2,000                                     |
| SKQN<br>SKRC | 900                                       |
| SKPL         | 2,700                                     |

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