## 7.8×7.8mm TACT Switch (Radial)

**SKPD** Series

## Varieties of 1.0mm, 1.2mm or 1.75mm travel support wide ranges of applications.

Power

Push

Slide

Rotary

**Encoders** 

Jog Shuttle

Telephone -hook

Detector

Vibration Sensors Dual-in-line

Package Type

Multi Control

Devices

TACT



### Features

- Supplied with radial taping.
- Allows automatic insertion onto printed circuit board with the radial auto insertion machine.

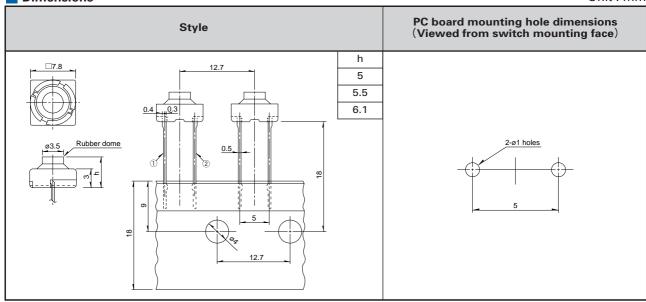
## Applications

 Operating switches in all types of electronic equipment such as audio equipment, office equipment, communication devices, measuring instruments, TV sets, video recorders, etc.

#### Products Line

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Operating life (5mA 5V DC)	Initial contact resistance	Rubber color	height
SKPDALD010	0.78N	Vertical	1	5mA 12V DC	500,000cycles		Light gray	5mm
SKPDAMD010	1.18N					11.0	Light blue	
SKPDACD010	2.45N		1.2		100,000cycles	1kΩ max.	Blue	5.5mm
SKPDAFD010	2.94N	]	1.75				Light gray	6.1mm

**Dimensions** Unit: mm



### Feeling Snap-in

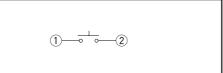
Sharp Feeling

Snap-in Type

Surface Mount Type

Radial Type

### Circuit Diagram



### Note

Using a 1.6mm thick PC board is recommended.

For specifications for the taping package, see  ${\bf P.417}$ 

# **Products Specifications**

Items	Series	Sharp feeling type	Soft feeling type			
Operating temperature range		−20°C to +70°C				
		-30°C to +85°C -30°C to +80°C SKRM / RW SKPG				
		−30°C to +90°C SKRA / RG / RP	-40°C to +90°C SKPF / PL / PM/ PN			
Rating (max.)		50mA 12V DC SKRP : 50mA 16V DC	5mA 12V DC SKPL/PM/PN : 50mA 16V DC			
Rating (min.)		10 μ A 1V DC				
Electrical	Insulation resistance	$\begin{array}{c} 100 \text{M}\Omega \\ \text{SKEY/PD}: 50 \text{M}\Omega \end{array}$				
performance	Voltage proof	250V AC for 1 min. SKRB/RH/RM/RR/EY/PD : 100V AC for 1min.				
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	Reverse voltage VR (V)	Forward voltage  VF(V) IF=10mA	Reverse current IR( $\mu$ 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	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					2.7 max. 2.0 TYP 10 max.	590 TYP	30 TYP	0.4min. 1.0 TYP	
Orange (High brightness)				3		TYP TO ITIAX.	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

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Shuttle
Telephone

Vibration Sensors

-hook

Dual-in-line Package Type Multi Control Devices

TACT

Sharp Feeling Soft

Feeling
Snap-in
Type
Surface
Mount Type

Radial Type Power

**Push** 

Slide

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Telephone -hook

**Detector** 

Vibration

Sensors

Dual-in-line
Package Type

Multi Control

**Devices** 

**TACT** 

Sharp

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

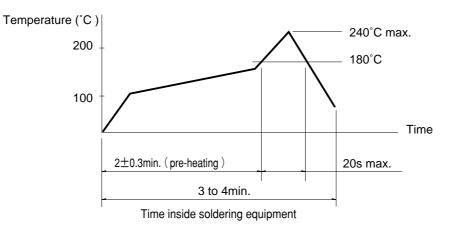
Jog Shuttle

## **Soldering Conditions**

#### Condition for Reflow

Available for Surface Mount Type. (Except SKHM Series)

- 1. Heating method: Double heating method with infrared heater.
- 2. Temperature measurement: Thermocouple 0.1 to 0.2  $\phi$  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

- 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.
  (Except a part of Variety SKRM, SKRR Series)
- 2. Soldering conditions differ depending on reflow soldering machines. You are requested to verify the soldering conditions thoroughly beforehand.
- 3. Ask us for the specifications of lead-free products.

#### Conditions for Auto-dip

Available for Snap-in Type and Radial Type

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	45s max.
Soldering temperature	<b>2</b> 55℃ max.
Continuous dipping time	5s max.
Number of soldering	2times max.

## Manual Soldering

**Available for Manual Soldering Type** 

Items	Condition		
Soldering temperature	350°C max.		
Continuous soldering time	3s 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 0.83. (MH-820V or CF220V by TAMURA Corporation, or their equivalents.)

## **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 Α В С **SKHV** SKQC SKQK 47 331 291 **SKRS SKPD** SKQN 61 SKQW SKRGAL to AS 48 235 SKRGAA to AF 334 43 **SKPL** 340 **SKRC** 55 337 370

Quantity Accommodated Per Box

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

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

Radial Type