

## Horizontal switch with a wide variety of operational force.

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



## Features

- Horizontal type enabling the switch to operate horizontally facing the PC board.
- Reflow solderable.
- Supplied in 16mm width embossed taping.

## Applications

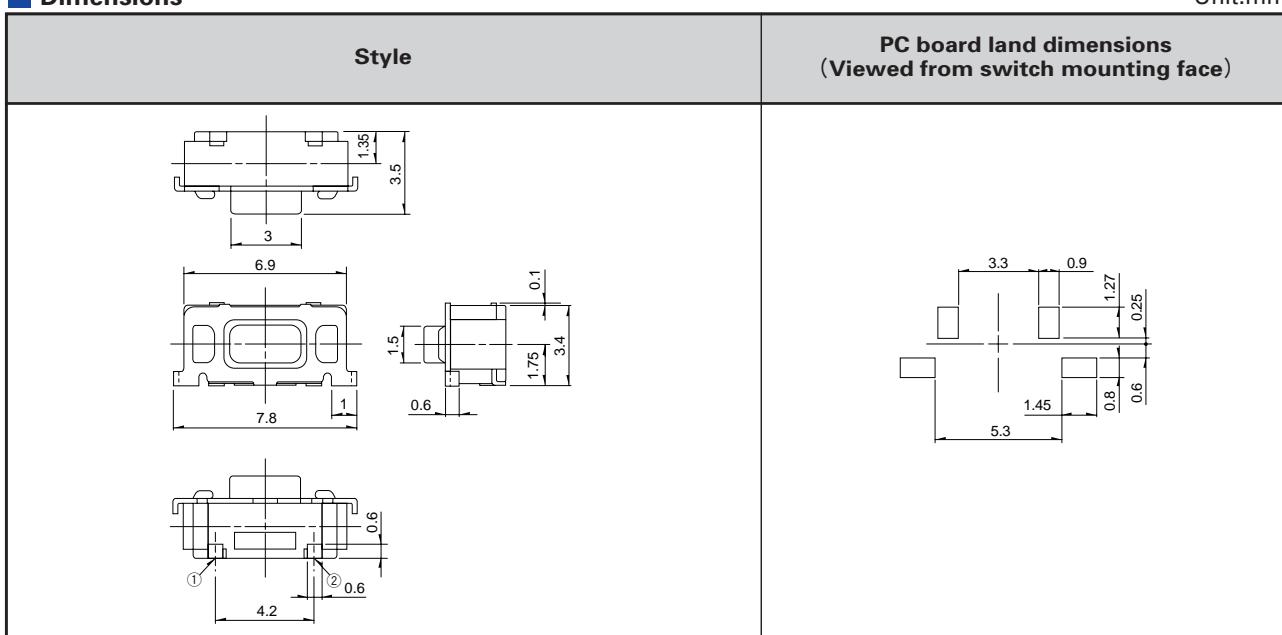
- For various operation in portable devices
- For various operation in devices requiring high density mounting - mobile phones, communication devices and compact electronic devices

## Product Line

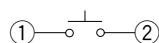
Product No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance
SKQTLCE010	0.98N	Horizontal	0.25	50mA 12V DC	10 $\mu$ A 1V DC	50,000cycles	500m $\Omega$ max.
SKQTLAE010	1.57N						
SKQTLBE010	2.55N					30,000cycles	

## Dimensions

Unit:mm



## Circuit Diagram



Refer to P.373 for product specifications.

Refer to P.374 for soldering conditions.

Refer to P.376 for taping packag specifications.

## Product Specifications

Items	Series	Sharp feeling type	Soft feeling type
Operating temperature range		-20°C to +70°C SKHJ/HL/QJ/RR/QK	-20°C to +70°C SKEG
		-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 1 minute SKRE/SC/RB/RM/RW/RR/EY/PD : 100V AC for 1 minute	
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±2°C for 96h	
	Dry heat	80±2°C for 96h	
	Damp heat	60±2°C, 90 to 95%RH for 96h	

### 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 Δ λ (nm) IF=10mA	Luminous intensity IV (mcd) IF=10mA
Red	40	80	15	4	2.7 max. 2.05 TYP	5 max.	700 TYP	100 TYP	0.4 min. 1.0 TYP
Pure green						10 max.	555 TYP	20 TYP	0.8 min. 2.0 TYP
Amber							590 TYP	30 TYP	0.4 min. 1.0 TYP
Orange (High brightness)				3	2.7 max. 2.0 TYP		630 TYP	40 TYP	1.5 min. 4.0 TYP
Green (High brightness)				4	2.7 max. 2.05 TYP		565 TYP	30 TYP	2.0 min. 5.0 TYP

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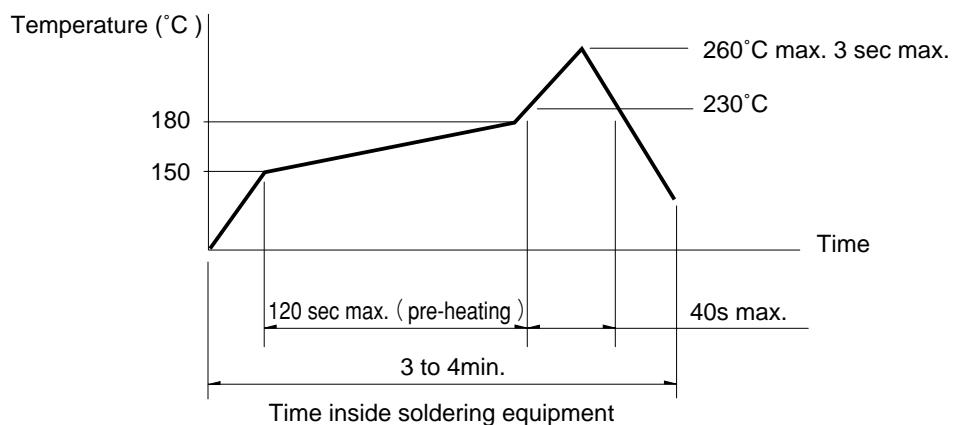
Sharp Feeling
Soft Feeling
Snap-in Type
Surface Mount Type
Radial Type

## 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



### 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.

### Manual Soldering (Except SKRT series)

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

## Specification of Embossed Taping Package

### Taping Packaging for Auto-insertion

Reel Size

Detector	Plastic Reel	Applicable series	Unit:mm
Push		SKHM, SKHU, SKQG, SKQL, SKQM, SKQR, SKQY, SKRAAK, SKRAAL, SKRB, SKRE, SKRK, SKRM, SKRN, SKRP, SKRT, SKRW, SKPM, SKSC, SKSD	13.5
Slide		SKQT, SKRAAM, SKRAAQ, SKRR, SKPG, SKPN	17.5
Rotary		SKQUBA, SKQUDB	33.5

Encoders	Applicable series	Qty/reel (pcs.) (Minimum packing unit)	Tape dimensions
Power	SKQM, SKPM	2,000	
Dual-in-line Package Type	SKHM, SKHU, SKQY, SKRT, SKRAAK, SKRAAL	3,000	
Multi Control Devices	SKQG	5,000 (Without stem type) 4,000 (With stem type)	
TACT Switch™	SKRP	4,000	
Custom-Products	SKRKAЕ, SKRAAH	4,500	
Sharp Feeling	SKQR, SKRB, SKRM, SKRW	10,000	
Soft Feeling	SKRE, SKRN, SKRKAG, SKSC, SKSD	5,000	
Snap-in Type	SKQL	3,000	
Surface Mount Type	SKRH	1,300	
Radial Type	SKRV	1,500	
	SKPG	1,200	
	SKRAAM, SKRAAQ	1,400	
	SKQT	3,000	
	SKRR	7,000	
	SKPN	1,100	
	SKQUBA	750	
	SKQUDB	600	

### Note

For  $\phi$ 330mm diameter reel requirements, please contact us.

# Mouser Electronics

Authorized Distributor

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[SKQTLAE010](#) [SKQTLBE010](#)