

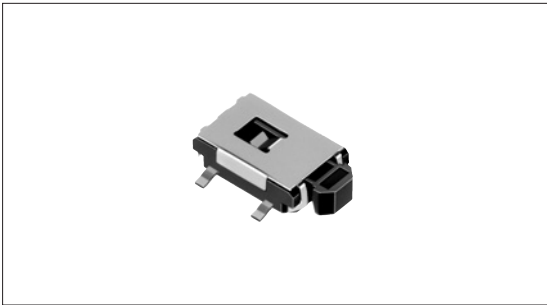
TACT Switch™ 1.8 mm Height Side-push™ (Surface mount type)

SKQL Series



Horizontal type with 4.0mm×7.4mm dimension & 1.8mm height.

- 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

Features

- 4.0×7.4mm dimensions with 1.8mm height suitable for high density mounting.
- Horizontal type enabling the switch to operate horizontally facing the PC board.
- Reflow solderable.
- Supplied in 12mm width embossed taping.

Applications

- For various operation in portable audio devices, video recorders, communication devices, cameras and home appliances
- For notebook PCs

Product Line

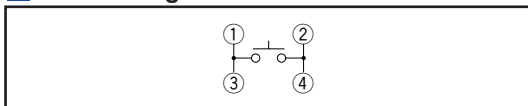
Product No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Variety
SKQLLAE012	1.57N	Horizontal	0.3	50mA 12V DC	10μA 1V DC	50,000cycles	500mΩ max.	With guide bosses
SKQLLCE012	2.16N							Without guide bosses
SKQLLBE012	1.57N							Without guide bosses
SKQLLDE012	2.16N							Without guide bosses

Dimensions

Unit:mm

Style	PC board mounting hole and land dimensions (Viewed from switch mounting face)

Circuit Diagram



Refer to P.373 for product specifications.
Refer to P.374 for soldering conditions.
Refer to P.376 for taping package specifications.

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

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Package TypeMulti Control
Devices

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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

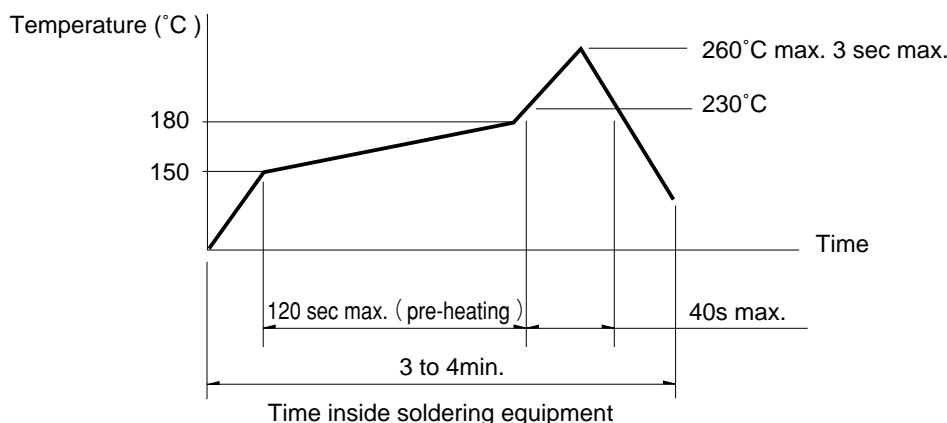
Sharp
FeelingSoft
FeelingSnap-in
TypeSurface
Mount TypeRadial
Type

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.

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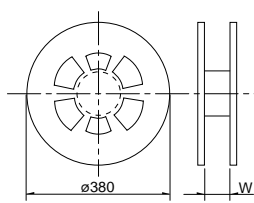
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Specification of Embossed Taping Package

Taping Packaging for Auto-insertion

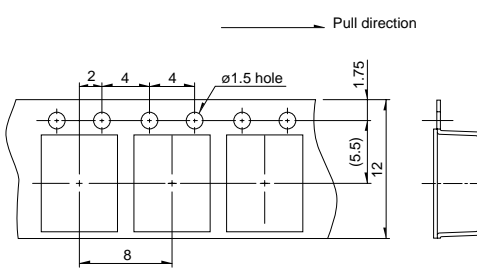
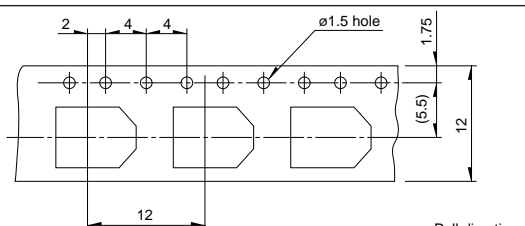
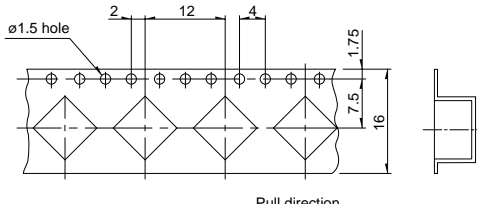
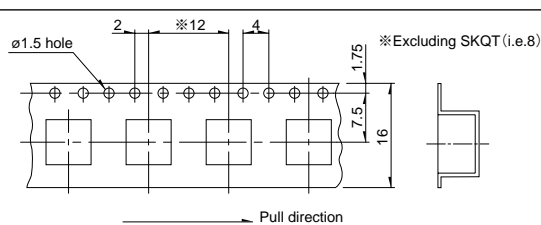
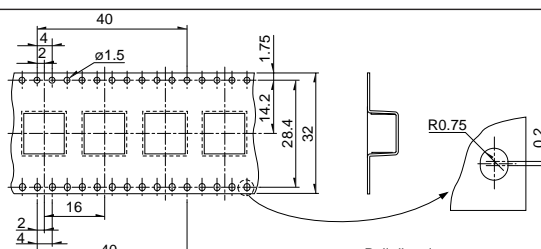
Reel Size

Unit:mm

Plastic Reel 	Applicable series	W
	SKHM, SKHU, SKQG, SKQL, SKQM, SKOR, SKOY, SKRAAK, SKRAAL, SKRB, SKRE, SKRK, SKRM, SKRN, SKRP, SKRT, SKRW, SKPM, SKSC, SKSD	13.5
	SKQT, SKRAAM, SKRAAQ, SKRR, SKPG, SKPN	17.5
	SKQUBA, SKQUBB	33.5

- Detector
- Push
- Slide
- Rotary

Unit:mm

Applicable series	Qty/reel (pcs.) (Minimum packing unit)	Tape dimensions
SKQM, SKPM	2,000	
SKHM, SKHU, SKOY, SKRT, SKRAAK, SKRAAL	3,000	
SKQG	5,000 (Without stem type) 4,000 (With stem type)	
SKRP	4,000	
SKRKAE, SKRKAH	4,500	
SKQR, SKRB SKRM, SKRW	10,000	
SKRE, SKRN, SKRKAG, SKSC, SKSD	5,000	
SKQL	3,000	
SKRH	1,300	
SKRV	1,500	
SKPG	1,200	
SKRAAM, SKRAAQ	1,400	
SKQT	3,000	
SKRR	7,000	
SKPN	1,100	
SKQUBA	750	
SKQUBB	600	

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Note

For ø 330mm diameter reel requirements, please contact us.