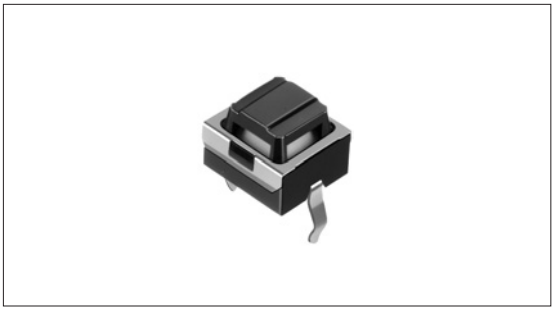
TACT Switch™

Low-profile with High Operation Force (Snap-in type)

SKPE Series

Car Use RoHS applicable

5mm height with high operation force suitable for automotive sets.



Features

- Complies with automotive requirements with high operational force to reduce mis-operations.
- 6.6×6.3mm dimensions improve mounting density of components onto PC board.
- Snap-in type allows the switch to be mounted directly onto the PC board.

Applications

- For various operation in audio equipment, communication devices, measuring devices and in-car components.

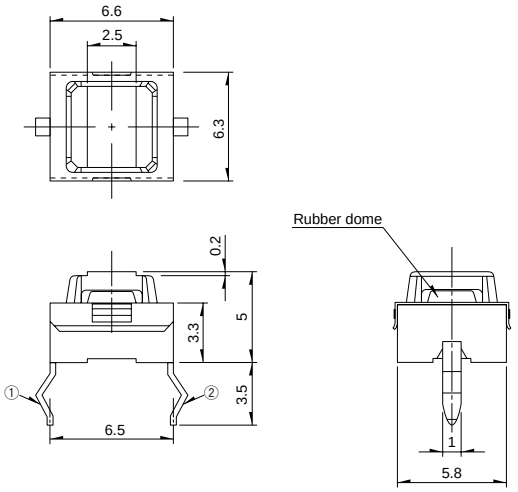
Product Line

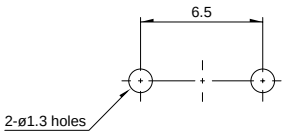
Product No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Rubber color	Minimum packing unit (pcs.)
SKPEADA010	1.18N	Vertical	1.3	5mA 12V DC	10μA 1V DC	50,000cycles	1kΩ max.	Light blue	1,000
SKPEAAA010	2.45N							Green	
SKPEABA010	2.94N							Blue	

Dimensions

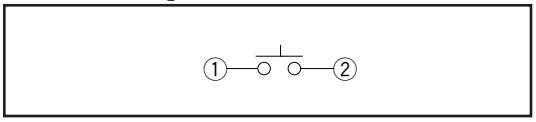
Unit:mm

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





Circuit Diagram



Note

Using a 1.6mm thick PC board is recommended.

Refer to **P.373** for product specifications.
Refer to **P.374** for soldering conditions.

Product Specifications

Items \ Series		Sharp feeling type	Soft feeling type
Operating temperature range		−20℃ to +70℃ SKHJ/HL/QJ/RR/QK	−20℃ to +70℃ SKEG
		−30℃ to +85℃	−40℃ to +90℃
Electrical performance	Insulation resistance	100MΩmin. 100V DC SKEY/PD : 50MΩmin. 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℃ for 96h	
	Dry heat	80±2℃ for 96h	
	Damp heat	60±2℃, 90 to 95%RH for 96h	

Note

The automotive operating temperature range to be individually discussed upon request.

Specifications of LED (SKHJ)

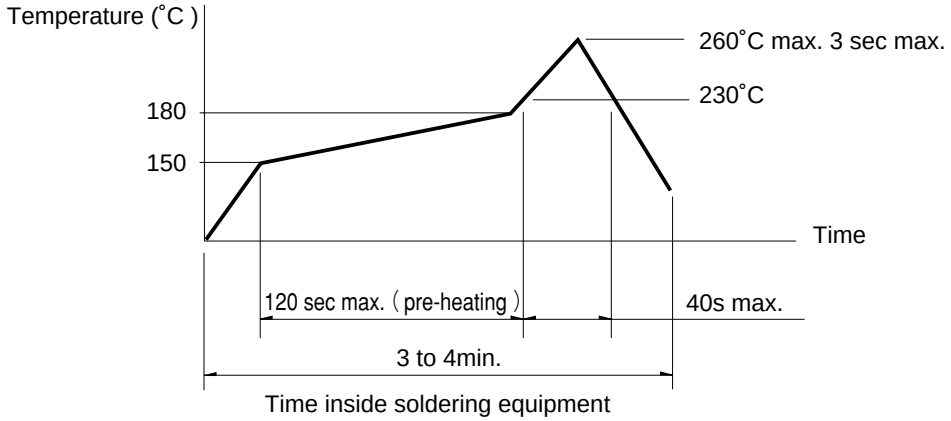
Color of illumination	Power dissipation P (mW)	Forward pulse peak current IFP (mA)	Forward current IFDC (mA)	Reverse voltage VR (V)	Forward voltage VF (V) IF=10mA	Reverse current IR (μA) VR=4V	Peak emission wave length λ peak (nm) IF=10mA	Spectral line half width Δλ (nm) IF=10mA	Luminous intensity IV (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						10 max.	555 TYP	20 TYP	0.8min. 2.0 TYP
Amber					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

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



Time inside soldering equipment

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 flax
Preheating temperature	Ambient temperature of the soldered surface of PC board. 100℃ max.
Preheating time	60s max.
Soldering temperature	260℃ max.
Duration of immersion	5s max.
Number of soldering	2times max.

Manual Soldering (Except SKRT series)

Items	Condition
Soldering temperature	350℃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.)