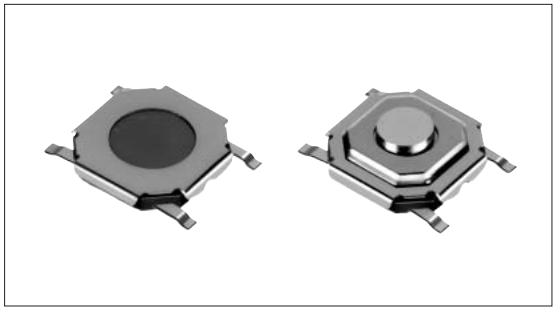
5.2×5.2mm Low-profile (SMD)Type

SKQG Series

Car Use RoHS applicable

Two types, 0.8mm height without stem or 1.5mm height with stem.



Features

- 5.2×5.2mm dimension suitable for high density mounting.
- Much thinner and lighter than conventional products.
- Flat type with 0.8mm height in pursuit, for thin design. "With stem" type in pursuit for easier use.
- Contact sealed construction offers a highly reliable switch.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

Applications

- For operating various electronic devices such as audio devices, video recorders, communication devices, cameras, automotive sets, electnic home appliances, etc.

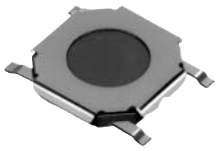
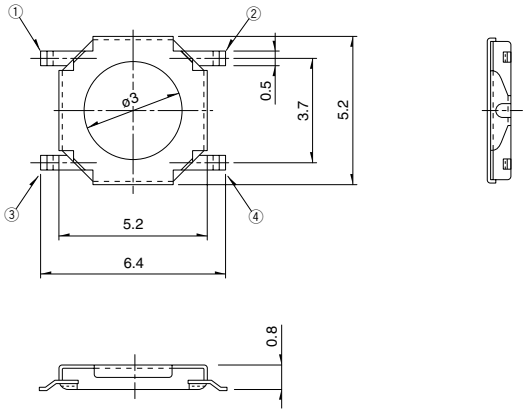
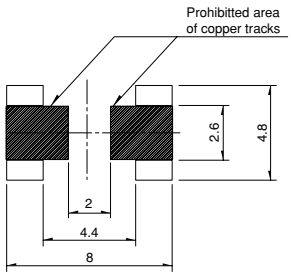
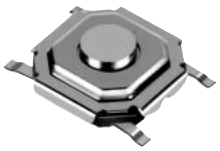
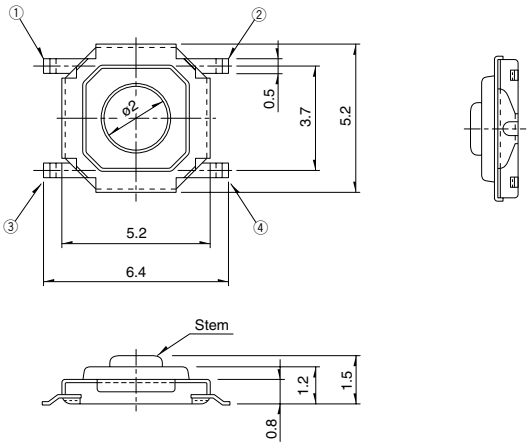
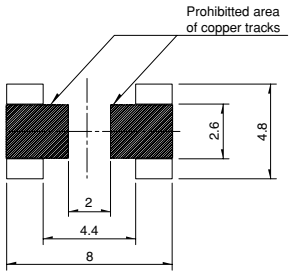
Products Line

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Variety	Drawing No.
SKQGAEE010	0.98N	Vertical	0.25	50mA 12V DC	10μA 1V DC	500,000 cycles	100mΩ max.	Without stem	1
SKQGAAE010	1.57N								
SKQGACE010	2.55N					50,000 cycles			
SKQGAFE010	0.98N					500,000 cycles		With stem	2
SKQGABE010	1.57N								
SKQGADE010	2.55N					100,000 cycles			
SKQGAKE010	3.43N								

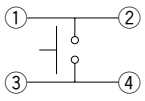
For other specifications, see **P.369**
For soldering conditions, see **P.370**
For specifications for the taping package, see **P.372**

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from switch mounting face)
1	Without stem type 		
2	With stem type 		

Circuit Diagram



Products Specifications

Items \ Series		Sharp feeling type	Soft feeling type
Operating temperature range		−20℃ to +70℃ SKHJ/HL/QJ/RR/RV/QC/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 1 min. SKRE/SKSC/SKRB/RV/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±2℃ for 96h	
	Dry heat	80±2℃ 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)

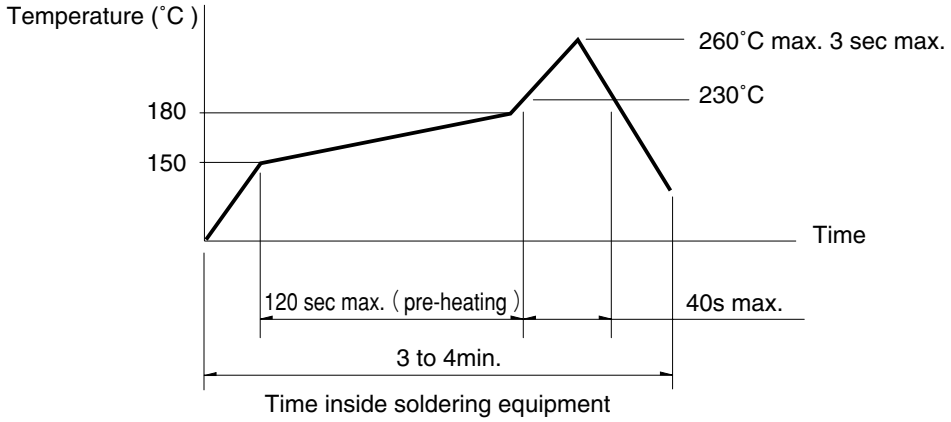
Color of light	Power dissipation P (mW)	Forward pulse peak current IFP (mA)	Forward current IFDC (mA)	Reverse voltage VR (V)	Forward voltage VF (V) IF=10mA	Reverse current IR (μA) VR=4V	Peak emission wave length λpeak (nm) IF=10mA	Spectral line half width Δλ (nm) IF=10mA	Luminous intensity IV (mcd) IF=10mA
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.（Except 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



Note

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

Manual Soldering (Except SKRT series)

Items	Condition
Soldering temperature	350℃max.
Continuous soldering time	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 at least 0.81.
   (EC-19S-8 by TAMURA Corporation, or their equivalents.)

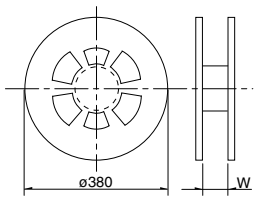
Specification of Embossed Taping Package

Taping Packaging for Auto-insertion

Reel Size

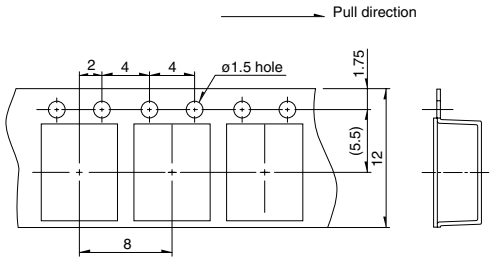
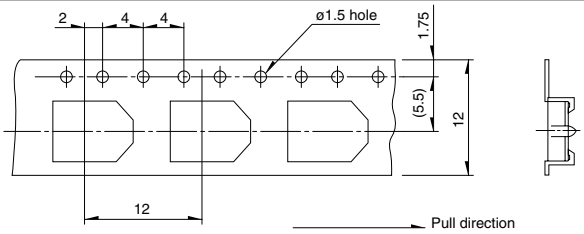
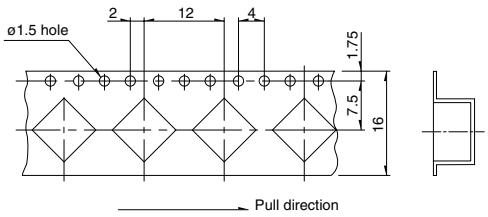
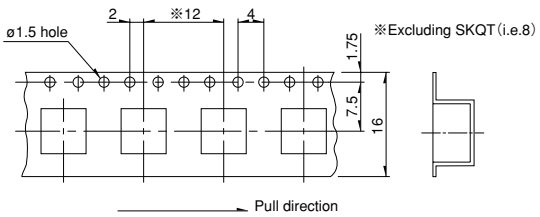
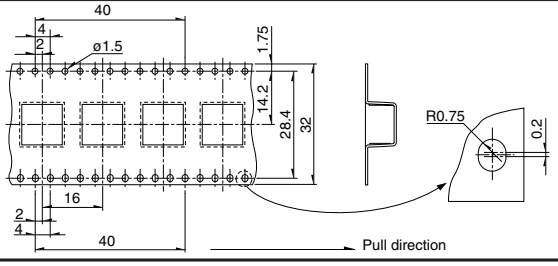
Unit:mm

Plastic Reel



Applicable series	W
SKHM, SKHU, SKQG, SKQL, SKQM, SKQR, SKQY, SKRAAK, SKRAAL, SKRB, SKRE, SKRK, SKRM, SKRN, SKRP, SKRT, SKRW, SKPM,SKSC	13.5
SKQT, SKRAAM, SKRAAQ, SKRH, SKRR, SKRV, SKPG, SKPN	17.5
SKQUBA, SKQUDB	33.5

Unit:mm

Applicable series	Qty/reel (pcs.) (Minimum packing unit)	Tape dimensions
SKQM, SKPM	2,000	
SKHM, SKHU, SKQY, 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	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	
SKQUDB	600	

Note

Consult with us for a ϕ330 mm diameter reel.