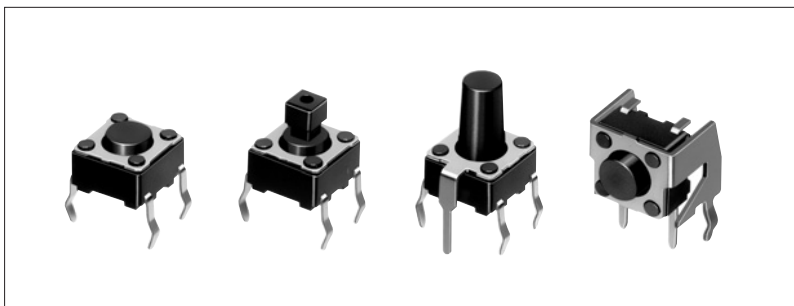


6.0×6.0mm TACT Switch (Snap-in)

SKHH Series

6.0mm square type, which is easy to use and available in wide varieties.

- Power
- Push
- Slide
- Rotary
- Encoders
- Jog Shuttle
- Telephone-hook
- Detector
- Vibration Sensors
- Dual-in-line Package Type
- Multi Control Devices



Car Use

Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit arrangement easy.
- Available with anti-ESD ground terminal.
- Standard knobs are available.

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

Vertical Type

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum packing unit (pcs.)	Drawing No.
SKHHAJA010	0.98N	Vertical	0.25	50mA 12V DC	1,000,000cycles	100mΩ max.	Black	h=4.3mm	1,000	1
SKHHALA010	1.57N				500,000cycles		Dark gray			
SKHHAQA010	2.55N				200,000cycles		Red			
SKHHAKA010	0.98N				1,000,000cycles		Black	h=5mm		
SKHHAMA010	1.57N				500,000cycles		Dark gray			
SKHHARA010	2.55N				200,000cycles		Red			
SKHHCQA010	3.53N				200,000cycles		Orange	h=7mm		
SKHHCRA010	5.10N				1,000,000cycles		Yellow			
SKHHBVA010	0.98N				500,000cycles		Black			
SKHHBWA010	1.57N				200,000cycles		Dark gray	h=9.5mm		
SKHHBYA010	2.55N				1,000,000cycles		Red			
SKHHANA010	0.98N				500,000cycles		Black			
SKHHAPA010	1.57N				200,000cycles		Dark gray	h=13mm		
SKHHBSA010	2.55N				1,000,000cycles		Red			
SKHHDTA010	0.98N				500,000cycles		Black			
SKHHDUA010	1.57N				300,000cycles		Dark gray	h=17mm		
SKHHDHA010	0.98N						Black			
SKHHDJA010	1.57N						Dark gray			

For detailed specifications, see P.413
 For soldering conditions, see P.414
 For standard knobs, see P.418

Products Line

Joint Stem Type

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum packing unit (pcs.)	Drawing No.
SKHHCWA010	0.98N	Vertical	0.25	50mA 12V DC	1,000,000cycles	100mΩ max.	Black	h=7.3mm	1,000	2
SKHHDAA010	1.57N				500,000cycles		Dark gray			
SKHHDGA010	2.55N				200,000cycles		Red			

With Ground Terminal Type

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum packing unit (pcs.)	Drawing No.
SKHHPJA010	0.98N	Vertical	0.25	50mA 12V DC	1,000,000cycles	100mΩ max.	Black	h=4.3mm	1,000	3
SKHHPLA010	1.57N				500,000cycles		Dark gray			
SKHHPOA010	2.55N				200,000cycles		Red			
SKHHPKA010	0.98N				1,000,000cycles		Black	h=5mm		
SKHHPMA010	1.57N				500,000cycles		Dark gray			
SKHHPRA010	2.55N				200,000cycles		Red			
SKHHQVA010	0.98N				1,000,000cycles		Black	h=7mm		
SKHHQWA010	1.57N				500,000cycles		Dark gray			
SKHHQYA010	2.55N				200,000cycles		Red			
SKHHPNA010	0.98N				1,000,000cycles		Black	h=9.5mm		
SKHHPPA010	1.57N				500,000cycles		Dark gray			
SKHHQNA010	2.55N				200,000cycles		Red			

Horizontal Type

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem length	Minimum packing unit (pcs.)	Drawing No.
SKHHLMA010	0.98N	Horizontal	0.25	50mA 12V DC	1,000,000cycles	100mΩ max.	Black	ℓ =3.85mm	1,000	4
SKHHLNA010	1.57N				500,000cycles		Dark gray			
SKHHLPA010	2.55N				200,000cycles		Red			
SKHHLQA010	0.98N				1,000,000cycles		Black	ℓ =8.35mm		
SKHHLRA010	1.57N				500,000cycles		Dark gray			
SKHHLSA010	2.55N				200,000cycles		Red			
SKHHLUA010	0.98N				1,000,000cycles		Black	ℓ =5.85mm		
SKHHLVA010	1.57N				500,000cycles		Dark gray			
SKHHLWA010	2.55N				200,000cycles		Red			
SKHHNHA010	0.98N				500,000cycles		Black	ℓ =15.85mm		
SKHHNJA010	1.57N				300,000cycles		Dark gray			
SKHHNKA010	2.55N				200,000cycles		Red			

Power

Push

Slide

Rotary

Encoders

Jog Shuttle

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

Dimensions

Unit : mm

No.	Style	PC board mounting hole dimensions (Viewed from switch mounting face)	
1	Vertical type 	h	A
		4.3	3.5
		5	3.5
		7	3.3
		9.5	3
		13	3
		17	3
2	Joint stem type 		
3	With ground terminal type 	h	A
		4.3	3.5
		5	3.5
		7	3.3
		9.5	3

- Power
- Push
- Slide
- Rotary
- Encoders
- Jog Shuttle
- Telephone-hook
- Detector
- Vibration Sensors
- Dual-in-line Package Type
- Multi Control Devices

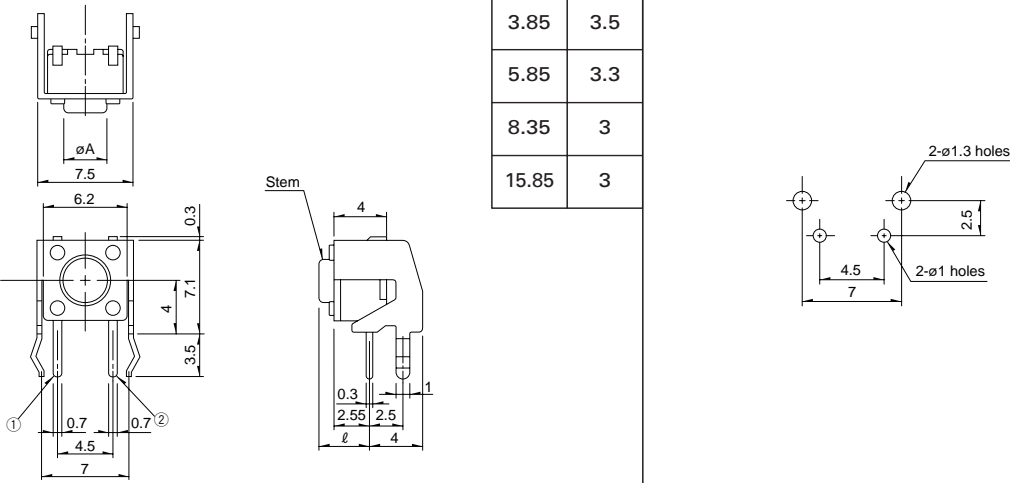
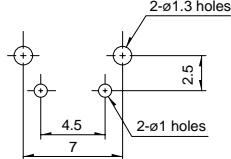
TACT

- Sharp Feeling
- Soft Feeling
- Snap-in Type

- Surface Mount Type
- Radial Type

Dimensions

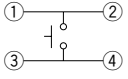
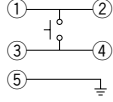
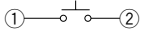
Unit : mm

No.	Style			PC board mounting hole dimensions (Viewed from switch mounting face)
4	<p>Horizontal type</p> 	ℓ	A	
		3.85	3.5	
		5.85	3.3	
		8.35	3	
		15.85	3	

Note

- Using a 1.6mm thick PC board is recommended.
- The models which can be mounted on PC boards of thickness 0.8 to 1mm are also available upon request.

Circuit Diagram

Vertical type/Joint stem type	With ground terminal type	Horizontal type
		

Power

Push

Slide

Rotary

Encoders

Jog Shuttle

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

Products Specifications

Items		Series	Sharp feeling type	Soft feeling type
		-20°C to +70°C		
Operating temperature range			-30°C to +85°C SKRM / RW	-30°C to +80°C 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 performance	Insulation resistance	100M Ω SKEY/PD : 50M Ω		
	Voltage proof	250V AC for 1 min. SKRB/RH/RM/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 \pm 2°C for 96h		
	Dry heat	80 \pm 2°C for 96h		
	Damp heat	60 \pm 2°C, 90 to 95%RH for 96h		

Power

Push

Slide

Rotary

Encoders

Jog Shuttle

Telephone -hook

Detector

Vibration Sensors

Dual-in-line Package Type

Multi Control Devices

TACT

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	Forward pulse peak current	Forward current	Reverse voltage	Forward voltage	Reverse current	Peak emission wave length	Spectral line half width	Luminous intensity
	P (mW)	IFP (mA)	IFDC (mA)	VR (V)	VF (V) IF=10mA	IR (μ A) VR=4V	λ peak (nm) IF=10mA	$\Delta \lambda$ (nm) IF=10mA	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					2.7 max. 2.0 TYP	10 max.	555 TYP	20 TYP	0.8min. 2.0 TYP
Amber							590 TYP	30 TYP	0.4min. 1.0 TYP
Orange (High brightness)				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 Feeling

Soft Feeling

Snap-in Type

Surface Mount Type

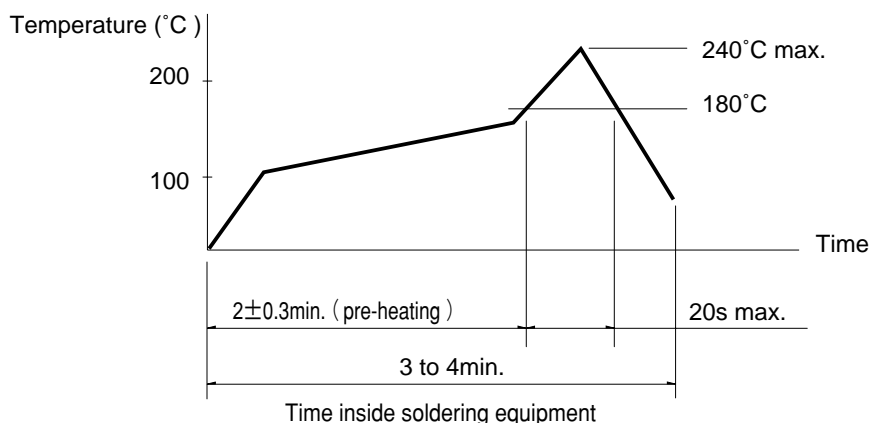
Radial Type

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 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



Notes

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. (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 flux
Preheating temperature	Ambient temperature of the soldered surface of PC board. 100°C max.
Preheating time	45s max.
Soldering temperature	255°C max.
Continuous dipping time	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 at least 0.83. (MH-820V or CF220V by TAMURA Corporation, or their equivalents.)

Manual Soldering

Available for Manual Soldering Type


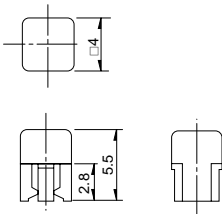

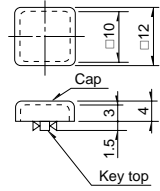
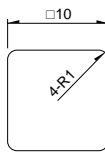

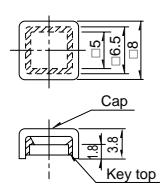
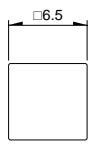

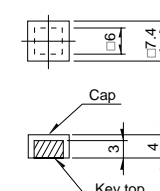
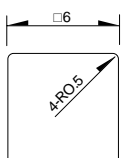
Items	Condition
Soldering temperature	350°C max.
Continuous soldering time	3s max.

- Power
- Push
- Slide
- Rotary
- Encoders
- Jog Shuttle
- 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

Products Line of Knob

Unit : mm

Applicable model	Dimensions		Variety		Label dimensions (Unit:mm)	
			Color	Model		
SKHH Applicable to joint stem type			Keytop			
			Red Blue Ivory Black Yellow	SK2AA00410 SK2AA00420 SK2AA00430 SK2AA00440 SK2AA00450		
SKHC SKQE Applicable to joint stem type			Cap			
			Clear	SK2AA00510		
			Keytop		Keytop + Cap	Thickness 0.1
			Red Blue Ivory Black	SK2AA00010 SK2AA00020 SK2AA00030 SK2AA00040	SK2AA00060 SK2AA00070 SK2AA00080 SK2AA00090	
SKHJ			Cap			
			Clear	SK2AA00520		
			Keytop		Keytop + Cap	Thickness 0.1
			Red Blue Ivory Black Yellow	SK2AA00210 SK2AA00220 SK2AA00230 SK2AA00240 SK2AA00250	SK2AA00260 SK2AA00270 SK2AA00280 SK2AA00290 SK2AA00300	
SKEG Applicable to joint stem type			Cap			
			Clear	SK2AA00540		
			Keytop		Keytop + Cap	Thickness 0.1
			Red Blue Ivory Black Yellow	SK2AA00310 SK2AA00320 SK2AA00330 SK2AA00340 SK2AA00350	SK2AA00360 SK2AA00370 SK2AA00380 SK2AA00390 SK2AA00400	

Notes

1. The knob will be delivered with the switch, unmounted.
2. The label is not included.
3. For SK2AA00010 to SK2AA00100 type, check its mounting direction.

