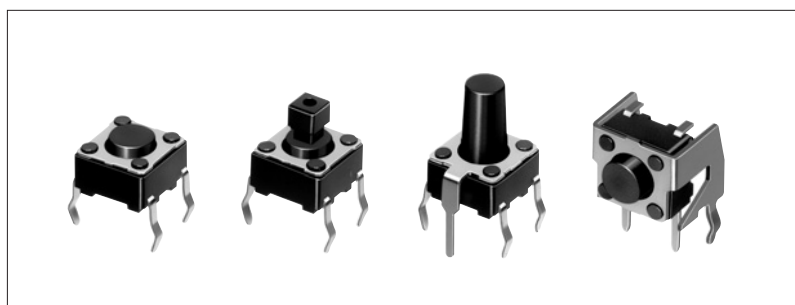


6×6mm TACT Switch (Snap-in)

SKHH Series

6mm square type, which is easy to use and available in wide varieties.



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 design 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, automotive sets, 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	1,000,000 cycles	100m Ω max.	Black	h=4.3mm	1,000	1
SKHHALA010	1.57N				500,000 cycles		Dark gray			
SKHHAQA010	2.55N				200,000 cycles		Red			
SKHHAKA010	0.98N				1,000,000 cycles		Black	h=5mm		
SKHHAMA010	1.57N				500,000 cycles		Dark gray			
SKHHARA010	2.55N				200,000 cycles		Red			
SKHHCQA010	3.53N						Orange			
SKHHCRA010	5.10N						Yellow			
SKHHBVA010	0.98N				1,000,000 cycles		Black	h=7mm		
SKHHBWA010	1.57N				500,000 cycles		Dark gray			
SKHHBYA010	2.55N				200,000 cycles		Red			
SKHHANA010	0.98N				1,000,000 cycles		Black	h=9.5mm		
SKHHAPA010	1.57N				500,000 cycles		Dark gray			
SKHHBSA010	2.55N				200,000 cycles		Red			
SKHHDTA010	0.98N				1,000,000 cycles		Black	h=13mm		
SKHHDUA010	1.57N				500,000 cycles		Dark gray			
SKHHDHA010	0.98N				300,000 cycles		Black	h=17mm		
SKHHDJA010	1.57N						Dark gray			

Power

Push

Slide

Rotary

Encoders

Detector

Dual-in-line
Package Type

Multi Control
Devices

TACT

Custom-
Products

**Sharp
Feeling**

**Soft
Feeling**

**Snap-in
Type**

Surface
Mount Type

**Radial
Type**

For detailed specifications, see **P.415**
For soldering conditions, see **P.416**
For standard knobs, see **P.420**

- Power
- Push
- Slide
- Rotary
- Encoders
- Detector
- Dual-in-line
Package Type
- Multi Control
Devices
- TACT
- Custom-
Products
- Sharp
Feeling
- Soft
Feeling
- Snap-in
Type
- Surface
Mount Type
- Radial
Type

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	1,000,000 cycles	100m Ω max.	Black	h=7.3mm	1,000	2
SKHHDA010	1.57N				500,000 cycles		Dark gray			
SKHHDGA010	2.55N				200,000 cycles		Red			

With Ground Terminal Type

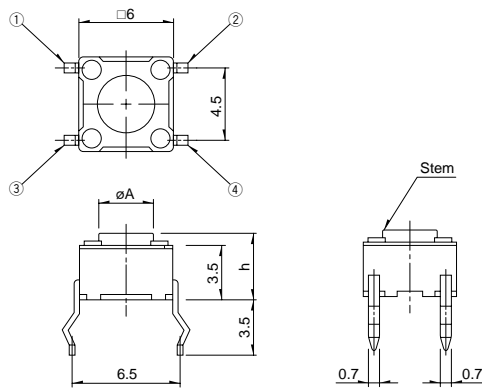
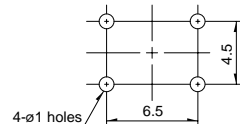
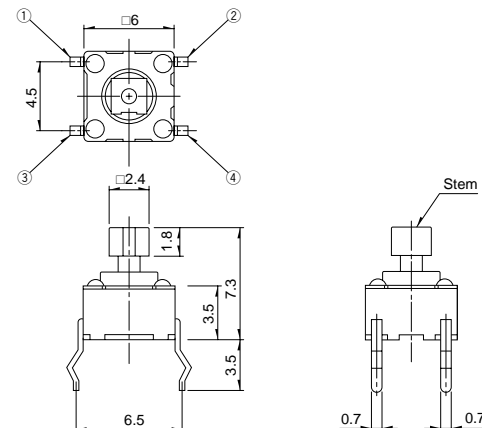
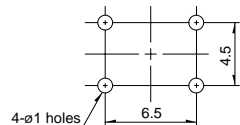
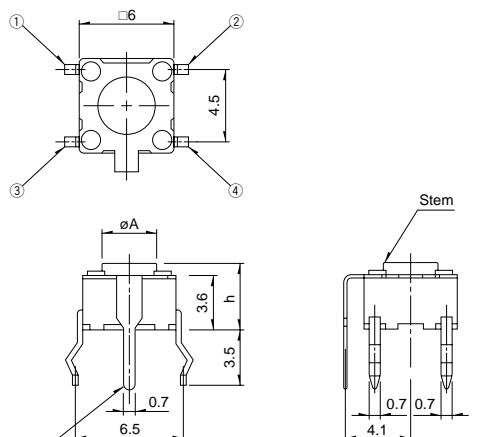
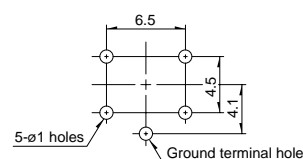
Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum packing unit (pcs.)	Drawing No.
SKHHPJA010	0.98N	Vertical	0.25	50mA 12V DC	1,000,000 cycles	100m Ω max.	Black	h=4.3mm	1,000	3
SKHHPLA010	1.57N				500,000 cycles		Dark gray			
SKHHPQA010	2.55N				200,000 cycles		Red			
SKHHPKA010	0.98N				1,000,000 cycles		Black	h=5mm		
SKHHPMA010	1.57N				500,000 cycles		Dark gray			
SKHHPRA010	2.55N				200,000 cycles		Red			
SKHHQVA010	0.98N				1,000,000 cycles		Black	h=7mm		
SKHHQWA010	1.57N				500,000 cycles		Dark gray			
SKHHQYA010	2.55N				200,000 cycles		Red			
SKHHPNA010	0.98N				1,000,000 cycles		Black	h=9.5mm		
SKHHPPA010	1.57N				500,000 cycles		Dark gray			
SKHHQNA010	2.55N				200,000 cycles		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	1,000,000 cycles	100m Ω max.	Black	ℓ =3.85mm	1,000	4
SKHHLNA010	1.57N				500,000 cycles		Dark gray			
SKHHLPA010	2.55N				200,000 cycles		Red			
SKHHLQA010	0.98N				1,000,000 cycles		Black	ℓ =8.35mm		
SKHHLRA010	1.57N				500,000 cycles		Dark gray			
SKHHLSA010	2.55N				200,000 cycles		Red			
SKHHLUA010	0.98N				1,000,000 cycles		Black	ℓ =5.85mm		
SKHHLVA010	1.57N				500,000 cycles		Dark gray			
SKHHLWA010	2.55N				200,000 cycles		Red			
SKHHNHA010	0.98N				500,000 cycles		Black	ℓ =15.85mm		
SKHHNJA010	1.57N				300,000 cycles		Dark gray			
SKHHNKA010	2.55N				200,000 cycles		Red			

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

Detector

Dual-in-line
Package Type

Multi Control
Devices

TACT

Custom-
Products

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	Horizontal type 	ℓ	A
		3.85	3.5
		5.85	3.3
		8.35	3
		15.85	3

Note

- 1. Using a 1.6mm thick PC board is recommended.
- 2. 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

Products Specifications

Series		Sharp feeling type	Soft feeling type
Items			
Operating temperature range		-20°C to +70°C	
		-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 min. 100V DC SKEY/PD : 50M Ω min. 100V DC	
	Voltage proof	250V AC for 1 min. SKRB/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 \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

Detector

Dual-in-line
Package TypeMulti Control
Devices

TACT

Custom-
ProductsSharp
FeelingSoft
FeelingSnap-in
TypeSurface
Mount TypeRadial
Type

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)

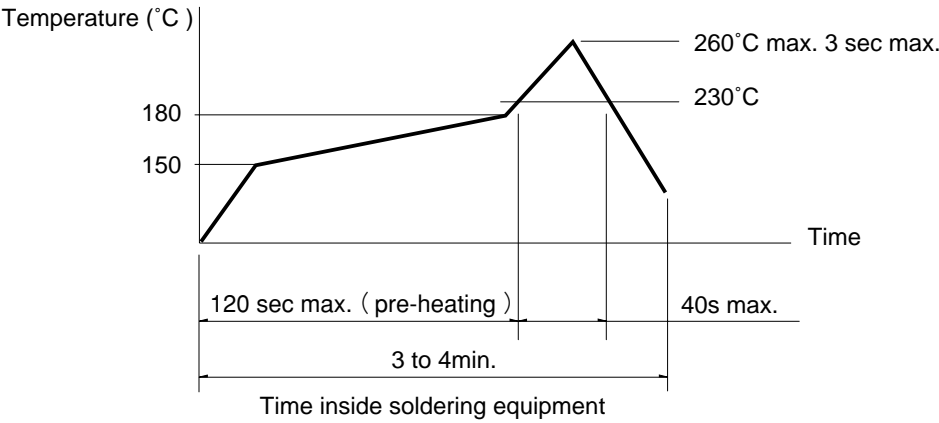
Color of light	Power dissipation P (mW)	Forward pulse peak current IFP (mA)	Forward current IFDC (mA)	Reverse voltage VR (V)	Forward voltage VF (V) IF=10mA	Reverse current IR (μ A) VR=4V	Peak emission wave length λ peak (nm) IF=10mA	Spectral line half width $\Delta \lambda$ (nm) IF=10mA	Luminous intensity 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					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)				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 SKHM, SKHU, 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



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.
- 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°C max.
Preheating time	60s max.
Soldering temperature	260°C max.
Continuous dipping time	5s max.
Number of soldering	2times max.

Manual Soldering

Available for Manual Soldering Type


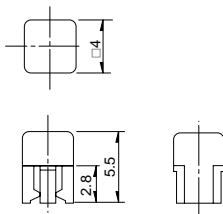

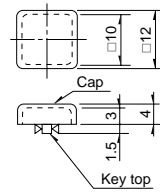
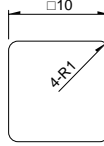

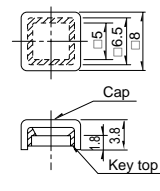
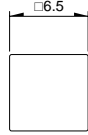

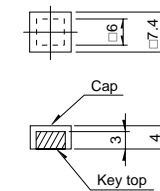
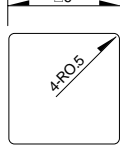
Items	Condition
Soldering temperature	350°C max.
Continuous soldering time	3s max.

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 0.82.
(EC-19s-8 by TAMURA Corporation, or their equivalents.)

Products Line of Knob

Unit:mm

Applicable model	Dimensions		Variety			Label dimensions (Unit:mm)		
			Color	Model				
SKHH			Keytop					
Applicable to joint stem type			Red Blue Ivory Black Yellow	SK2AA00410 SK2AA00420 SK2AA00430 SK2AA00440 SK2AA00450				
SKHC SKQE			Cap					
			Clear	SK2AA00510				
			Applicable to joint stem type	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			Cap					
			Clear	SK2AA00540				
			Applicable to joint stem type	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.

