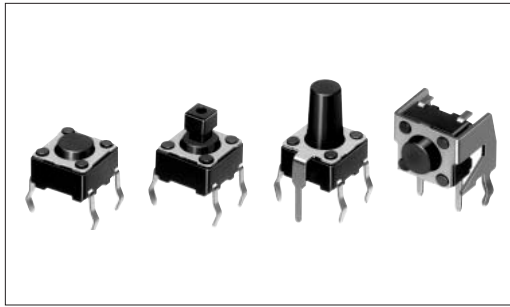


TACT Switch™ 6×6mm (Snap-in) Type

SKHH Series



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



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 devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

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

Products Line

Vertical Type

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	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	10μA 1V DC	1,000,000 cycles	100mΩ max.	Black	h=4.3mm	1,000	1
SKHHALA010	1.57N					Dark gray					
SKHHAQA010	2.55N					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					200,000 cycles		Orange	h=7mm		
SKHHCRA010	5.10N					1,000,000 cycles		Yellow			
SKHHBVA010	0.98N					500,000 cycles		Black			
SKHHBWA010	1.57N					200,000 cycles		Dark gray	h=9.5mm		
SKHHBYA010	2.55N					1,000,000 cycles		Red			
SKHHANA010	0.98N					500,000 cycles		Black			
SKHHAPA010	1.57N					200,000 cycles		Dark gray	h=13mm		
SKHHBSA010	2.55N					1,000,000 cycles		Red			
SKHHDTA010	0.98N					500,000 cycles		Black			
SKHHDUA010	1.57N					300,000 cycles		Dark gray	h=17mm		
SKHHDHA010	0.98N							Black			
SKHHDJA010	1.57N							Dark gray			

Joint Stem Type

Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	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	10μA 1V DC	1,000,000 cycles	100mΩ max.	Black	h=7.3mm	1,000	2
SKHHDAA010	1.57N					500,000 cycles		Dark gray			
SKHHDGA010	2.55N					200,000 cycles		Red			

For other specifications, see P.369
For soldering conditions, see P.370
For standard knobs, see P.374

Products Line
With Ground Terminal Type

	Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum packing unit (pcs.)	Drawing No.
Detector	SKHHPJA010	0.98N	Vertical	0.25	50mA 12V DC	10μ A 1V DC	1,000,000 cycles	100m Ω max.	Black	h=4.3mm	1,000	3
Push	SKHHPLA010	1.57N							Dark gray			
Slide	SKHHPOA010	2.55N							Red			
Rotary	SKHHPKA010	0.98N							Black	h=5mm		
Encoders	SKHHPMA010	1.57N							Dark gray			
Power	SKHHQVA010	2.55N							Red			
Dual-in-line Package Type	SKHHQWA010	1.57N							Black	h=7mm		
Multi Control Devices	SKHHQYA010	2.55N							Dark gray			
TACT Switch™	SKHHPNA010	0.98N							Red			
Custom-Products	SKHHPPA010	1.57N							Black	h=9.5mm		
	SKHHQNA010	2.55N							Dark gray			
									Red			

Horizontal Type

	Products No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem length	Minimum packing unit (pcs.)	Drawing No.
Sharp Feeling	SKHHLMA010	0.98N	Horizontal	0.25	50mA 12V DC	10μ A 1V DC	1,000,000 cycles	100m Ω max.	Black	ℓ =3.85mm	1,000	4
Soft Feeling	SKHHLNA010	1.57N							Dark gray			
Snap-in Type	SKHHLPA010	2.55N							Red			
Surface Mount Type	SKHHLQA010	0.98N							Black	ℓ =8.35mm		
Radial Type	SKHHLRA010	1.57N							Dark gray			
	SKHHLSA010	2.55N							Red			
	SKHHLUA010	0.98N							Black	ℓ =5.85mm		
	SKHHLVA010	1.57N							Dark gray			
	SKHHLWA010	2.55N							Red			
	SKHHNHA010	0.98N							Black	ℓ =15.85mm		
	SKHHNJA010	1.57N							Dark gray			
	SKHHNKA010	2.55N							Red			

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from switch mounting face)														
1		<table border="1"> <thead> <tr> <th>h</th> <th>A</th> </tr> </thead> <tbody> <tr><td>4.3</td><td>3.5</td></tr> <tr><td>5</td><td>3.5</td></tr> <tr><td>7</td><td>3.3</td></tr> <tr><td>9.5</td><td>3</td></tr> <tr><td>13</td><td>3</td></tr> <tr><td>17</td><td>3</td></tr> </tbody> </table>	h	A	4.3	3.5	5	3.5	7	3.3	9.5	3	13	3	17	3	
h	A																
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5	3.5																
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3		<table border="1"> <thead> <tr> <th>h</th> <th>A</th> </tr> </thead> <tbody> <tr><td>4.3</td><td>3.5</td></tr> <tr><td>5</td><td>3.5</td></tr> <tr><td>7</td><td>3.3</td></tr> <tr><td>9.5</td><td>3</td></tr> </tbody> </table>	h	A	4.3	3.5	5	3.5	7	3.3	9.5	3					
h	A																
4.3	3.5																
5	3.5																
7	3.3																
9.5	3																

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Sharp
Feeling

Soft
Feeling


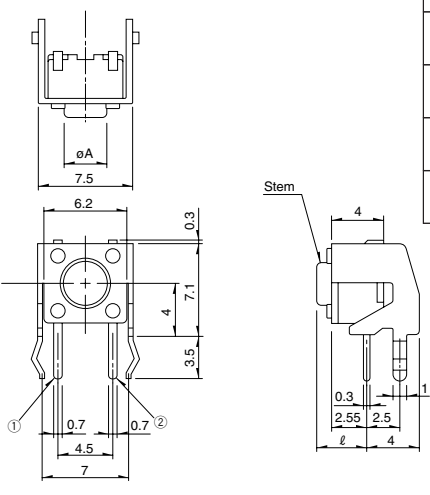
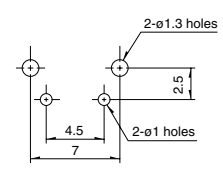
Snap-in
Type

Surface
Mount Type

Radial
Type

Dimensions

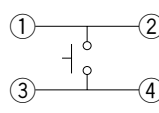
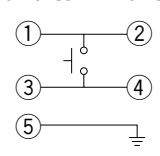
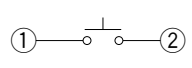
Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from switch mounting face)										
4			<table border="1"> <thead> <tr> <th>ℓ</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>3.85</td> <td>3.5</td> </tr> <tr> <td>5.85</td> <td>3.3</td> </tr> <tr> <td>8.35</td> <td>3</td> </tr> <tr> <td>15.85</td> <td>3</td> </tr> </tbody> </table>	ℓ	A	3.85	3.5	5.85	3.3	8.35	3	15.85	3
			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.

Circuit Diagram

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

- 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

Products Specifications

Items		Series	Sharp feeling type	Soft feeling type
		Operating temperature range		-20°C to +70°C SKHJ/HL/QJ/RR/RV/QC/QK
Electrical performance	Insulation resistance	100MΩ min. 100V DC SKEY/PD : 50MΩ min. 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°C for 96h		
	Dry heat	80±2°C for 96h		
	Damp heat	60±2°C, 90 to 95%RH for 96h		

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package TypeMulti Control
Devices

TACT Switch™

Custom-
Products

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 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						10 max.	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		565 TYP	30 TYP	2.0min. 5.0 TYP	

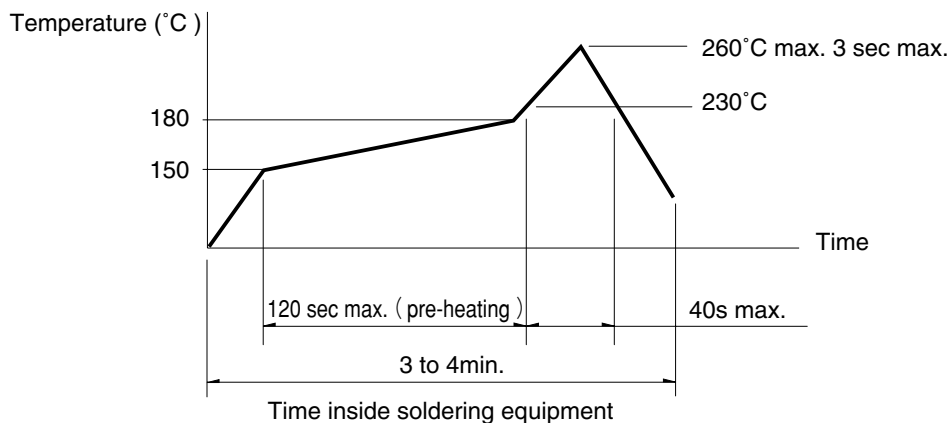
Sharp
FeelingSoft
FeelingSnap-in
TypeSurface
Mount TypeRadial
Type

Soldering Conditions

Condition for Reflow

Available for Surface Mount Type. (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 flux
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 (Except SKRT series)

Items	Condition
Soldering temperature	350°C max.
Continuous soldering time	3s max.
capacity of soldering iron	60W max.

Notes

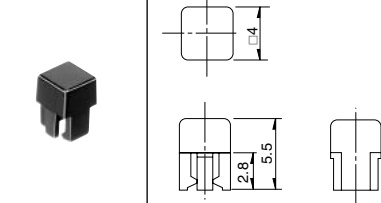
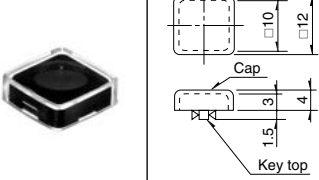
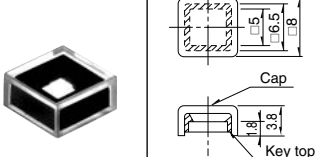
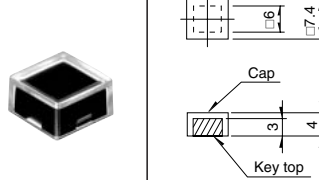
1. Consult with us for TACT Switch™ washing conditions.
2. Prevent flux penetration from the top side of the TACT Switch™.
3. Switch terminals and a PC board should not be coated with flux prior to soldering.
4. The second soldering should be done after the switch returns to normal temperature.
5. Use the flux with a specific gravity of at least 0.81.
(EC-19S-8 by TAMURA Corporation, or their equivalents.)

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

Products Line of Knob

Unit:mm

Applicable model	Dimensions	Variety		Label dimensions (Unit:mm)
		Color	Model	
Detector				
Push				
Slide				
Rotary				
Encoders				
Power				
Dual-in-line Package Type				
Multi Control Devices				
TACT Switch™				
Custom- Products				
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	Red Blue Ivory Black	SK2AA00010 SK2AA00020 SK2AA00030 SK2AA00040
		Keytop + Cap		SK2AA00060 SK2AA00070 SK2AA00080 SK2AA00090
				Thickness 0.1
SKHJ Applicable to joint stem type		Cap	Clear	SK2AA00520
		Keytop	Red Blue Ivory Black Yellow	SK2AA00210 SK2AA00220 SK2AA00230 SK2AA00240 SK2AA00250
		Keytop + Cap		SK2AA00260 SK2AA00270 SK2AA00280 SK2AA00290 SK2AA00300
				Thickness 0.1
SKEG Applicable to joint stem type		Cap	Clear	SK2AA00540
		Keytop	Red Blue Ivory Black Yellow	SK2AA00310 SK2AA00320 SK2AA00330 SK2AA00340 SK2AA00350
		Keytop + Cap		SK2AA00360 SK2AA00370 SK2AA00380 SK2AA00390 SK2AA00400
				Thickness 0.1

Notes

1. The knob will be delivered with the switch, unmounted.
2. The label is not included.
3. For SK2AA00010 to SK2AA00090 type, check its mounting direction.

