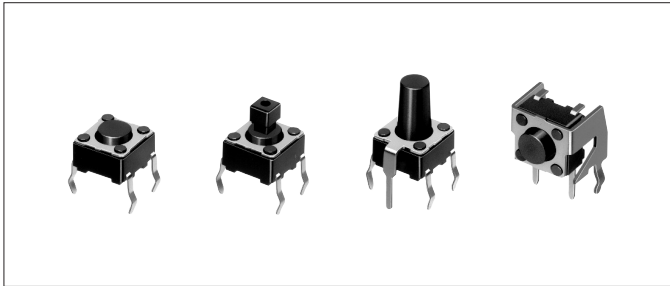


TACT Switch™ 6mm Square (Snap-in Type)

SKHH Series



User friendly 6×6mm type, available in a wide variety.



Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Product Line

Vertical Type

Product No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum order unit (pcs.)	Drawing No.
SKHHAJA010	0.98N	Vertical	0.25	50mA 12V DC	10μA 1V 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			

Sharp
Feeling

Soft
Feeling

Snap-in
Type

Surface
Mount Type

Radial
Type



Automotive
Use

Joint Stem Type

Product No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum order 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			

Note

Please place purchase orders per minimum order unit N (integer).

Refer to P.334 for soldering conditions.

Refer to P.336 for standard knobs.

Product Line

With Ground Terminal Type

	Product No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height	Minimum order unit (pcs.)	Drawing No.
Detector	SKHHPJA010	0.98N	Vertical	0.25	50mA 12V DC	10μA 1V DC	1,000,000 cycles	100mΩ max.	Black	h=4.3mm	1,000	3
Push	SKHHPLA010	1.57N							Dark gray			
	SKHHPQA010	2.55N							Red			
Slide	SKHHPKA010	0.98N							Black	h=5mm		
Rotary	SKHHPMA010	1.57N							Dark gray			
Encoders	SKHHPra010	2.55N							Red			
	Power	SKHHQVA010							0.98N	Black		
SKHHQWA010		1.57N							Dark gray			
Dual-in-line Package Type	SKHHQYA010	2.55N							Red			
TACT Switch™ Custom-Products	SKHHPNA010	0.98N							Black	h=9.5mm		
	SKHHPPA010	1.57N							Dark gray			
	SKHHQNA010	2.55N							Red			

Horizontal Type

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

Packing Specifications

Bulk

Series	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case /export packing	
Other	10,000	30,000	309 × 476 × 347
SKHHD,SKHHDU SKHHDH,SKHHDJ SKHHNH,SKHHNJ SKHHNK	5,000	15,000	

Note

Please place purchase orders per minimum order unit N (integer).

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from switch mounting face)														
1		<table border="1" style="margin-left: 20px;"> <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																
4.3	3.5																
5	3.5																
7	3.3																
9.5	3																
13	3																
17	3																
2																	
3		<table border="1" style="margin-left: 20px;"> <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

TACT Switch™

Custom-
Products

Sharp
Feeling

Soft
Feeling

Snap-in
Type

Surface
Mount Type

Radial
Type


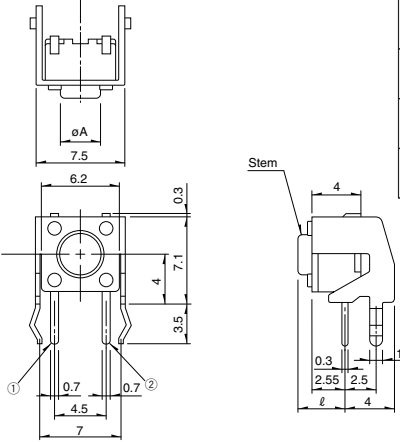
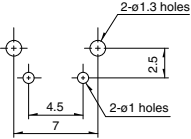


Automotive
Use

Dimensions

Unit:mm

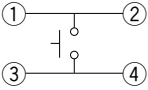
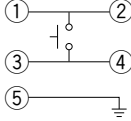
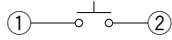
- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- TACT Switch™**
- Custom-Products

No.	Photo	Style	PC board mounting hole dimensions (Viewed from switch mounting face)										
4		<p>Horizontal type</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <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

Please use 1.6mm thick PC boards.

Circuit Diagram












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

- Sharp Feeling
- Soft Feeling
- Snap-in Type**
- Surface Mount Type
- Radial Type



List of Varieties

Sharp Feeling Type

Series		SKHR	SKHL	SKHH	SKHW	SKRD	SKQJ	SKHL	SKHH	SKQJ	SKQB	SKQU
Photo												
Type		Snap-in										
Features		_____			Dust-proof type	Horizontal type	—	Horizontal type			Water-proof	4-direction switch+push switch
Operating direction	Vertical	●	●	●	●	—	●	_____			●	●
	Horizontal	_____				●	—	●	●	●	_____	
Dimensions (mm)	W	□4.5	6	□6		6.2	□6.6	7.3	7.5		□10	
	D		3.5			7.15		7.22	7.85			
	H	3.8	4.3			7.4	5	4.3	7.4	7.3	5	7.1
Operation force coverage		1N	↕	↕	↕	↕	↕	↕	↕	↕	↕	See the relevant pages for respective product descriptions
		5N										
Travel (mm)		0.25			0.3	0.25					0.3	
Ground terminal		—	●	_____			●	_____				
Operating temperature range		-20°C to +70°C SKHL(Vertical Type)/QJ										
		-30°C to +85°C										
Automotive use		—	●	_____						●	—	
Electrical performance	Insulation resistance	100MΩ min. 100V DC										
	Voltage proof	250V 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 2hours 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										
Page		281	282	284	288	289	290	282	284	290	292	485

W : Width. The most outer dimension excluding terminal portion.
D : Depth. The most outer dimension excluding terminal portion.
H : Height. The minimum dimension if there are variances.

- TACT Switch™ Soldering Conditions334
- TACT Switch™ Cautions335
- Product Line of Knobs for TACT Switch™336

Notes

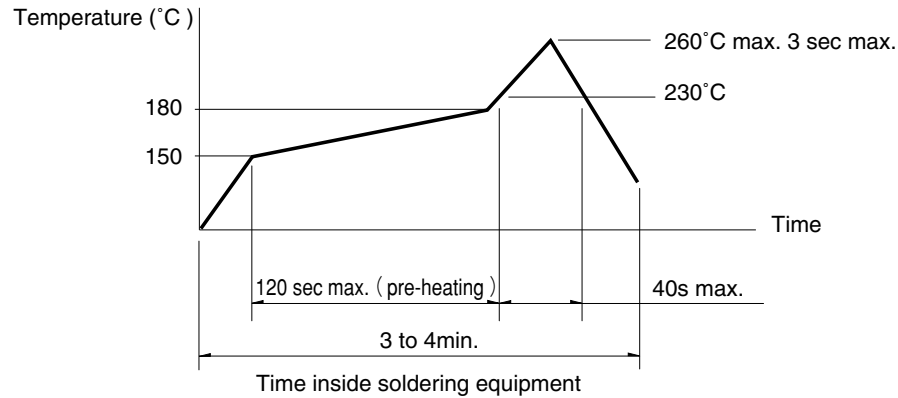
- The automotive operating temperature range to be individually discussed upon request.
- marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40°C to +85°C.

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 0.2φ CA (K) or CC (T) at solder joints (copper foil surface). A heat resistive tape should be used to fix thermocouple.
3. Temperature profile



Notes

1. The above temperature shall be measured of the top of switch. 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, SKHL, SKQJ, SKQK, SKEG series)

Items	Condition
Flux built-up	Mounting surface should not be exposed to fluk
Preheating temperature	Ambient temperature of the soldered surface of PC board. 100°C max.
Preheating time	60s max.
Soldering temperature	260°C max.
Duration of immersion	5s max.
Number of soldering	2times max.

Notes

1. Consult with us for availability of TACT Switch™ washing.
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 is stable with normal temperature.
5. Use the flux with a specific gravity of min 0.81.
(EC-19S-8 by TAMURA Corporation, or equivalents.)

Manual Soldering (Except SKRT Series)

Items	Condition
Soldering temperature	350°Cmax.
Duration of soldering	3s max.
Capacity of soldering iron	60W max.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Sharp
Feeling

Soft
Feeling


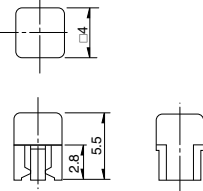

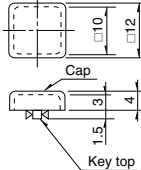


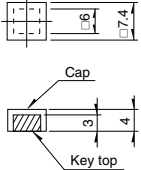
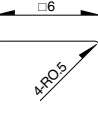
Snap-in
Type

Surface
Mount Type

Radial
Type

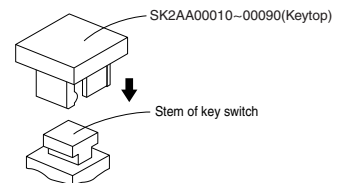
Product Line of Knobs

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	 	Clear	SK2AA00510		
		Keytop			Keytop + Cap
		Red Blue Ivory Black	SK2AA00010 SK2AA00020 SK2AA00030 SK2AA00040	SK2AA00060 SK2AA00070 SK2AA00080 SK2AA00090	Thickness 0.1
		Cap			
SKEG Applicable to joint stem type	 	Clear	SK2AA00540		
		Keytop			Keytop + Cap
		Red Blue Ivory Black Yellow	SK2AA00310 SK2AA00320 SK2AA00330 SK2AA00340 SK2AA00350	SK2AA00360 SK2AA00370 SK2AA00380 SK2AA00390 SK2AA00400	Thickness 0.1
		Cap			

Notes

1. The knob will be delivered together with the switch but packed separately.
2. The label is not included.
3. For SK2AA00010 to SK2AA00090 types, please check the mounting direction.



Detector
Push
Slide
Rotary
Encoders
Power
Dual-in-line Package Type
TACT Switch™
Custom-Products

Sharp Feeling
Soft Feeling
Snap-in Type
Surface Mount Type
Radial Type