

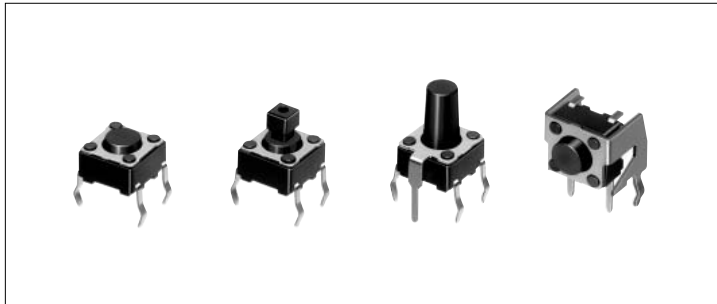
TACT Switch™ 6mm Square (Snap-in Type)

SKHH Series

参考資料



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

Sharp
Feeling

Soft
Feeling

Snap-in
Type

Surface
Mount Type

Radial
Type

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	100m 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			
SKHHCA010	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			

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	100m max.	Black	h=7.3mm	1,000	2
SKHHDAA010	1.57N					500,000 cycles		Dark gray			
SKHHDGA010	2.55N					200,000 cycles		Red			

Refer to P.306 for soldering conditions.
Refer to P.308 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	100m 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	0.98N							Red			
Dual-in-line Package Type	SKHHQWA010	1.57N							Black	h=7mm		
TACT Switch™	SKHHQYA010	2.55N							Dark gray			
Custom-Products	SKHHPNA010	0.98N							Red			
	SKHHPPA010	1.57N							Black	h=9.5mm		
	SKHHQNA010	2.55N							Dark gray			
									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	100m 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	
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4.3	3.5																
5	3.5																
7	3.3																
9.5	3																
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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


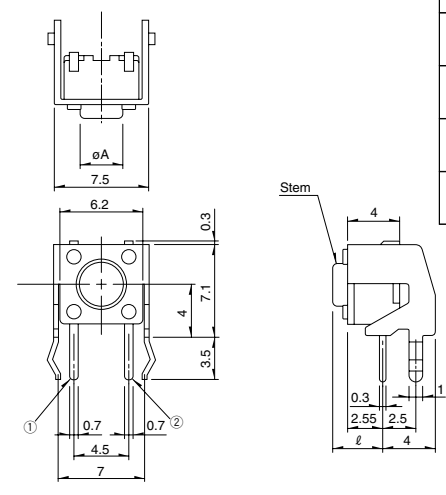
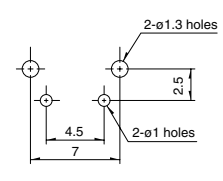
Snap-in
Type

Surface
Mount Type

Radial
Type

Dimensions

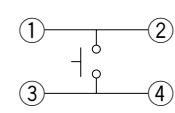
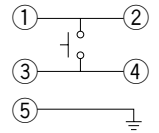
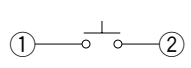
Unit:mm

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

Please use 1.6mm thick PC boards.

Circuit Diagram












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

- 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

List of Varieties

Sharp Feeling Type

Series		SKHR	SKHL	SKHH	SKHW	SKRD	SKQJ	SKHL	SKHH	SKQJ	SKHJ	SKQB
Photo												
Type		Snap-in										
Features					Dust-proof type	Horizontal type	Horizontal type			With LED	Water-proof	
Operating direction	Vertical											
	Horizontal											
Dimensions (mm)	W	4.5	6	6		6.2	6.6	7.3	7.5		8	10
	D		3.5			7.15		7.22	7.85			
	H	3.8	4.3			7.4	5	4.3	7.4	7.3	8.5	5
Operation force coverage	1N	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
	5N			↕								
Ground terminal												
Operating temperature range		-20 to +70 SKHJ/HL(Vertical Type) /QJ										
		-30 to +85										
Electrical performance	Insulation resistance	100M 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 for 96h										
	Dry heat	80 ± 2 for 96h										
	Damp heat	60 ± 2 , 90 to 95%RH for 96h										
Page		252	253	255	259	260	261	253	255	261	263	265

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 Conditions	306
TACT Switch™ Cautions	307
Product Line of Knob for TACT Switch™	308

Note

The automotive operating temperature range to be individually discussed upon request.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

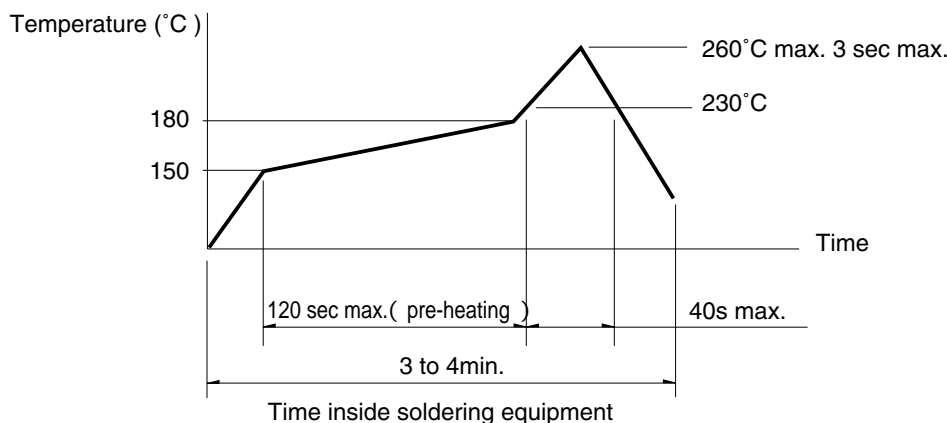
Custom-
ProductsSharp
FeelingSoft
FeelingSnap-in
TypeSurface
Mount TypeRadial
Type

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



Note

1. The above temperature shall be measured 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 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 SKHJ, SKHL, SKQJ, SKQK, SKEG series)

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

Manual Soldering (Except SKRT Series)

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

Notes

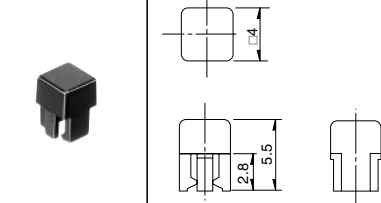
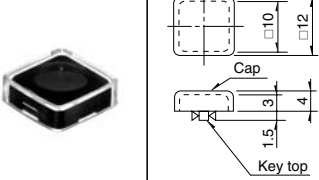
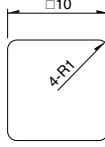
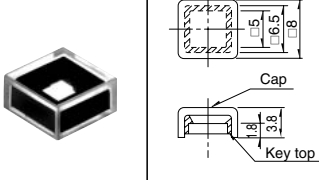
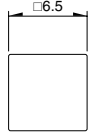
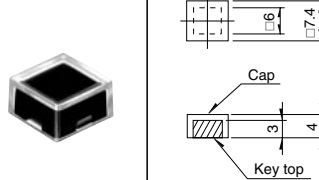
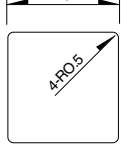
1. Consult with us for availability of TACT Switch™ washing.
2. Prevent flux penetration from the top side of the TACT Switch™.
3. Switch terminals and a PC board should not be coated with flux prior to soldering.
4. The second soldering should be done after the switch is stable with normal temperature.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

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	
Detector				
Push				
Slide				
Rotary				
Encoders				
Power				
Dual-in-line Package Type				
TACT Switch™				
Custom-Products				
SKHH		Red Blue Ivory Black Yellow	SK2AA00410 SK2AA00420 SK2AA00430 SK2AA00440 SK2AA00450	
Applicable to joint stem type				
SKHC SKQE		Clear	SK2AA00510	
Applicable to joint stem type		Red Blue Ivory Black	SK2AA00010 SK2AA00020 SK2AA00030 SK2AA00040	SK2AA00060 SK2AA00070 SK2AA00080 SK2AA00090
SKHJ		Clear	SK2AA00520	
Sharp Feeling		Red Blue Ivory Black Yellow	SK2AA00210 SK2AA00220 SK2AA00230 SK2AA00240 SK2AA00250	SK2AA00260 SK2AA00270 SK2AA00280 SK2AA00290 SK2AA00300
Soft Feeling				
Snap-in Type				
Surface Mount Type				
Radial Type				
SKEG		Clear	SK2AA00540	
Applicable to joint stem type		Red Blue Ivory Black Yellow	SK2AA00310 SK2AA00320 SK2AA00330 SK2AA00340 SK2AA00350	SK2AA00360 SK2AA00370 SK2AA00380 SK2AA00390 SK2AA00400

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.

