

# Multi Control Devices TACT Switch™ 4-direction with Center-push Function (Surface mount type)

SKRH Series

www.DataSheet4U.com



Body height of 1.85mm available with long-life of 1mil life cycles.

Multi Control  
Devices



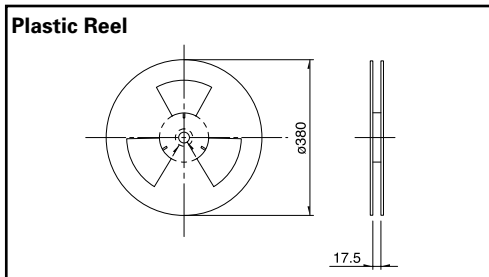
## Product Line

Product No.	Operating force		Travel (mm)		Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Variety	Minimum order unit (pcs.)
	4-direction	Center push	4-direction	Center push							
SKRHAAE010	1.23N	2.35N	0.25	0.15	50mA	10μA	200,000 cycles for each direction	500m max.	Black	Without guide bosses	1,300
SKRHABE010										With guide bosses	
SKRHACE010	1.2N								Natural	Without guide bosses	
SKRHADE010									With guide bosses		

## Specification of Embossed Taping Package (Taping Packaging for Auto-insertion)

Reel Size

Unit:mm



Number of packages (pcs.)			Tape width (mm)
1 reel	1 case /Japan	1 case /export packing	
1,300	10,400	10,400	16

Variable Resistor Type

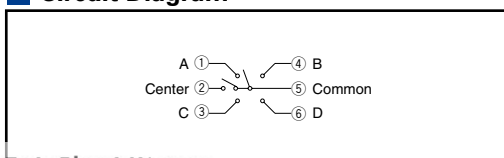
Switch Type

## Dimensions

Unit:mm

Style	PC board mounting hole and land dimensions (Viewed from mounting face)				
	x	h	a	b	c
SKRHAAE010	7.35	1.8	2.14	1	8.6
SKRHABE010	7.35	1.8	2.14	1	8.6
SKRHACE010	7.45	1.85	2.17	1.6	8.7
SKRHADE010	7.45	1.85	2.17	1.6	8.7

## Circuit Diagram















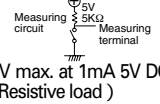
## Notes

- Please place purchase orders for taping products per minimum order unit (1 reel or 1 case).
- 4-directional operating force and travel are measured at 4.3mm height from the bottom of the switch.

Refer to P.492 for soldering conditions.

List of Varieties

Multi Control Devices

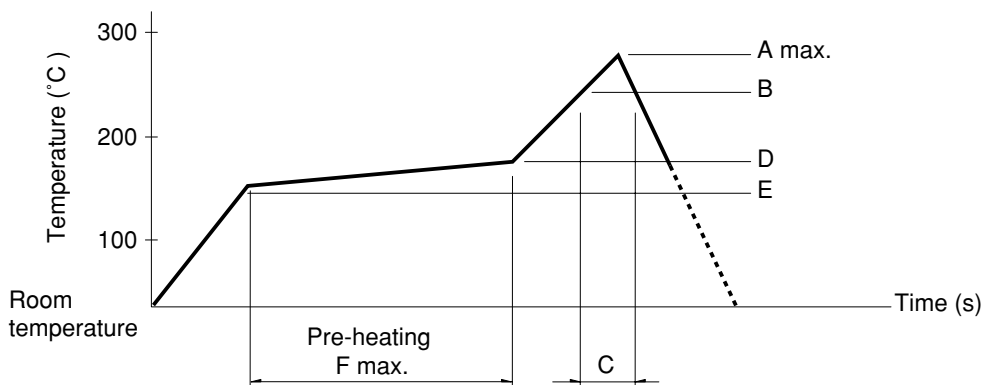
Series		Switch type							
		RKJXT1F	RKJXM	RKJXL	RKJXS	SKRV	SKRH		
Items		<table border="1"> <tr> <td>SKRHAA, SKRHAB</td> <td>SKRHAC, SKRHAD</td> </tr> </table>						SKRHAA, SKRHAB	SKRHAC, SKRHAD
SKRHAA, SKRHAB	SKRHAC, SKRHAD								
Photo									
Function									
Dimensions (typical value) (mm)	W	17	20.5	13	11.7	6.45	7.35/7.45		
	D				12.3	6.4	7.5		
	H	10.5	5.45	6.4	2.3	4	5		
Outlined specifications	Number of operating shafts	Single-shaft	Single-shaft/Dual-shaft	Single-shaft					
	Shaft material	Metal			Resin				
	Directional resolution	4-direction	8-direction			4-direction			
	Directional operating feeling (tactile feeling)	With		Without	With				
	Lever return mechanism	With							
	Center-push switch	With							
	Encoder	With	Without/With	Without					
Operating temperature range		-40 to +85	-30 to +80	-30 to +70	-20 to +70	-30 to +85			
Rating (max. I Resistive load)		10mA 5V DC				50mA 12V DC			
Electrical performance	Output voltage	 1V max. at 1mA 5V DC (Resistive load)							
	Directional resolution	4-direction	8-direction			4-direction			
	Insulation resistance	100M min. 250V DC			50M min. 50V DC	100M min. 100V DC			
	Voltage proof	300V AC for 1min. or 360V AC for 2s			50V AC for 1min.	100V AC for 1min.			
	Directional operating force	40 ± 25mN·m	Direction A, B, C, D 30 ± 20mN·m Direction AB, BC, CD, DA 25 ± 20mN·m	10 ± 7mN·m	0.8 ± 0.5N	1.2 ± 0.6N	1.23 ± 0.69N 1.2 ± 0.69N		
Mechanical performance	Push operating force	5 ± 2N	3 ± 1.5N	4.5 ± 1N	2.5 ± 1.5N	2.4 ± 0.69N	2.35 ± 0.69N		
	Encoder detent torque	15 ± 8mN·m	12 ± 8mN·m						
	Terminal strength	5N for 1min.							
	Actuator strength	Pushing direction	100N			30N			
		Operating direction	0.4N·m	0.3N·m	0.15N·m	20N			
Endurance	Vibration	8.3 ± 1 to 200 ± 4 to 8.3 ± 1Hz, 4.4G fixed (for 15 min./1 cycle) 3 angles each 2 hours				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			
	Operating life without load								
	Operating life with load (at rated load)								
Environmental performance	Cold	-40 ± 2 for 500h			-40 ± 2 for 96h	-30 ± 2 for 96h			
	Dry heat	85 ± 2 for 500h			85 ± 2 for 96h	80 ± 2 for 96h			
	Damp heat	60 ± 2, 90 to 95%RH for 500h			60 ± 2, 90 to 95%RH for 96h				
Soldering	Manual soldering	350 ± 5 3s max.			350 ± 10 3s	350 max. 3s max.			
	Dip soldering	260 ± 5, 5 ± 1s		260 max. 6s max.					
	Reflow soldering	Please see P.492							
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# Soldering Conditions

## Example of Reflow Soldering Condition

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



Series( Reflow type )	A( ) 3s max.	B( )	C(s)	D( )	E( )	F(s)
RKJXS	260	230	40	150	150	120
SLLB, SLLB5	240		20			
SKRV/SKRH/SKQUBA,DB/SSAF/SRBE	260		40	180		

### Notes

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.