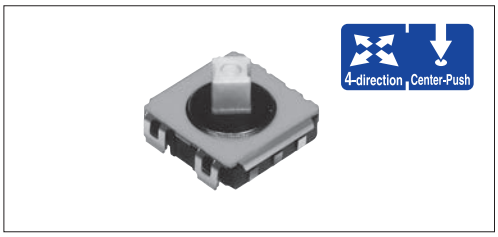
SKRV Low-profile 4-direction with Center-push Function (Surface Mount Type)

Compact, low-profile type with height of 1.55mm



Typical Specifications

Items	Specifications
Rating (max.)	50mA 12V DC
Rating (min.)	10μA 1V DC
Initial contact resistance	500mΩ max.

Product Line

Product No.	Operating force		Travel		Operating life (5mA 5V DC)	Guide bosses	Minimum order unit (pcs.)	
	4-direction	Center-push	4-direction	Center-push			Japan	Export
SKRVAAE010	1.2N	2.4N	0.25mm	0.15mm	200,000 cycles for each direction	Without	1,500	1,500
SKRVABE010						With		

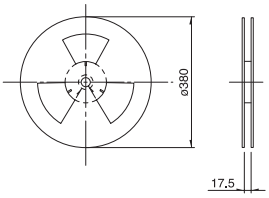
Packing Specifications

Taping

Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case / Japan	1 case / export packing		
1,500	12,000	12,000	16	401×401×214

Unit:mm

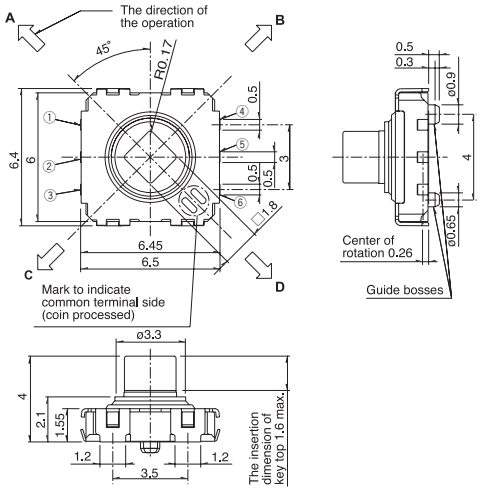
Reel size

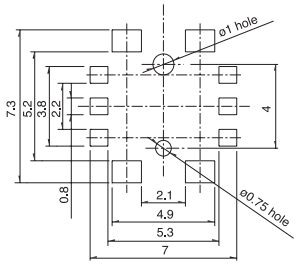


Dimensions

Unit:mm

Style	PC board mounting hole and land dimensions (Viewed from switch mounting face)





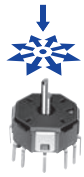
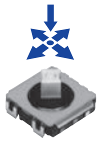
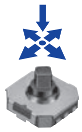
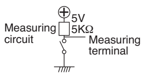
Note

Please always solder the frame to secure switch intensity.

Circuit Diagram



Refer to P.461 for soldering conditions.

Type			Switch type				
Series			**RKJXL**	**RKJXS**	**SKRV**	**SKRH**	
						SKRHAA/AB	**SKRHAC/AD**
Photo							
Dimensions (typical value) (mm)	W		13	11.7	6.45	7.35/7.45	
	D				6.4	7.5	
	H		6.4	2.3	4	5	
Number of operating shafts			Single-shaft				
Shaft material			Metal	Resin			
Directional resolution			8-direction		4-direction		
Directional operating feeling (tactile feeling)			Without	With			
Lever return mechanism			With				
Center-push switch			With				
Encoder			Without				
Operating temperature range			−30℃ to +70℃	−20℃ to +70℃		−40℃ to +85℃	
Operating life	Directional operation		total with 8-direction 100,000 cycles	500,000 cycles for each direction	200,000 cycles for each direction	200,000 cycles for each direction	1,000,000 cycles for each direction
	Center-push		100,000 cycles	500,000 cycles	200,000 cycles	200,000 cycles	1,000,000 cycles
	Encoder		—	—	—	—	
Automotive use			●	—	—	—	
Life cycle (availability)							
Rating (max.) (Resistive load)			10mA 5V DC		50mA 12V DC		
Electrical performance	Output voltage		—	 1V max. at 1mA 5V DC (Resistive load)	—	—	
	Encoder resolution		—	—	—	—	
	Insulation resistance		100MΩ min. 250V DC	50MΩ min. 50V DC	100MΩ min. 100V DC		
	Voltage proof		300V AC for 1min. or 360V AC for 2s	50V AC for 1min. or 60V AC for 2s	100V AC for 1min.		
Mechanical performance	Directional operating force		10±7mN·m	0.8±0.5N	1.2±0.6N	1.23±0.69N	1.2±0.69N
	Push operating force		4.5±1N	2.5±1.5N	2.4±0.69N	2.35±0.69N	
	Encoder detent torque		—	—	—	—	
	Terminal strength		—	—	—	—	
	Actuator strength	Push / pull directions	100N (Push), 50N (Pull)	30N (Push), 10N (Pull)	—	—	
		Operating direction	100N	20N	29.4N		
Environmental performance	Cold		−40℃ 500h	−40℃ 96h	−30℃ 96h	−40℃ 96h	
	Dry heat		85℃ 500h	85℃ 96h	80℃ 96h	90℃ 96h	
	Damp heat		60℃, 90 to 95%RH 500h	60℃, 90 to 95%RH 96h			
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Note ● Indicates applicability to all products in the series.

Reference for Manual Soldering

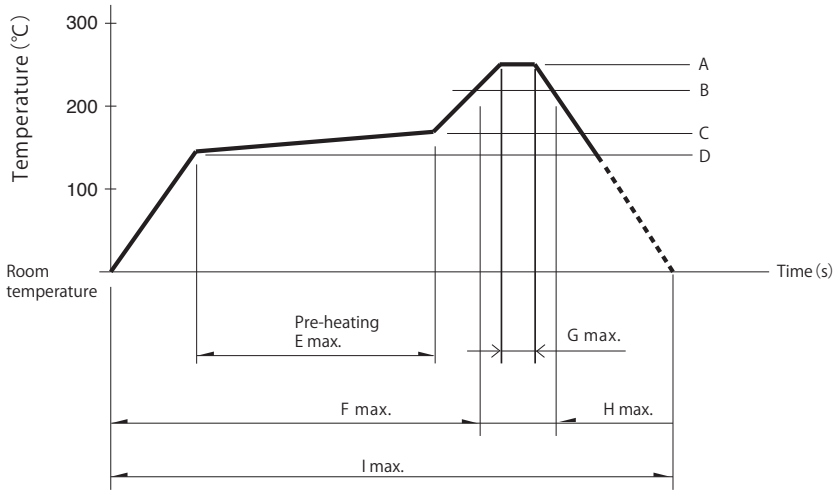
Series	Tip temperature	Soldering time	No. of solders
RKJXT1F, RKJXM, RKJXL, SLLB, SLLB5, SRBE, SKRV, SKRH	350±5℃	3s max.	1 time
RKJXS	350±10℃	3^{+1}_{-0} s	2 time max.

Reference for Dip Soldering

Series	Preheating		Dip soldering		No. of solders
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
RKJXT1F, RKJXM	100℃ max.	2 min. max.	260±5℃	5±1s	2 time max.
RKJXL	120℃ max.	70s max.	260℃ max.	6s max.	2 time max.

Example of Reflow Soldering Condition

Temperature profile



Series	A	B	C	D	E	F	G	H	I	No. of reflows
RKJXS	260℃	230℃	150℃	150℃	2 min.	—	10s	40s	4 min.	1 time
SLLB5	250℃	230℃	150℃	150℃	—	2 min.	—	30s	—	1 time
SKRV, SKRH, SLLB, SRBE	260℃	230℃	180℃	150℃	2 min.	—	—	40s	—	1 time

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.