

## 8-direction center push type switch in 2.3mm low-profile design.

- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- Multi Control Devices
- TACT Switch™
- Custom-Products
- Variable Resistor Type
- Switch Type



### Features

- An 8-direction switch and center push switch put together into thin 2.3mm low-profile design.
- Compact and low profile provide flexibility in set design.
- An excellent feel is achieved with equal operational force.

### Applications

- For mobile phones, personal digital assistants and various portable devices
- For DVD players/recorders, digital camcorders, digital still cameras and flat panel TVs

### Typical Specifications

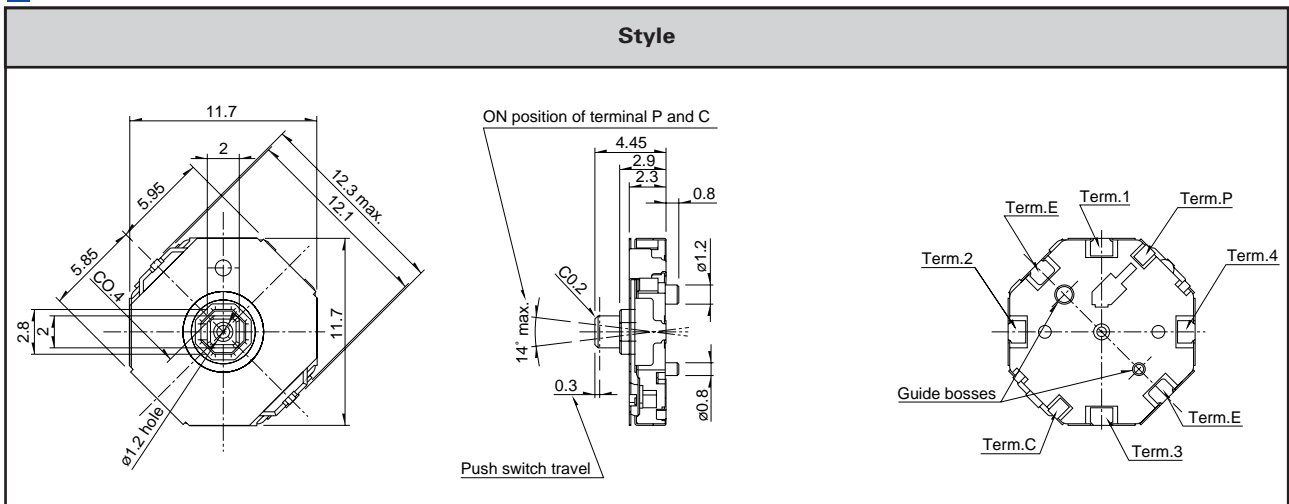
Items	Specifications
Switch ON position	7° max.
Operating force	0.8±0.5N
Push operating force	2.5±1.5N
Travel (Push operation)	0.3±0.2mm
Push strength	30N
Rating (max.) (Resistive load)	10mA 5V DC
Operating life	500,000cycles
Insulation resistance	50MΩ min. 50V DC
Voltage proof	50V AC for 1minute

### Product Line

Maximum resolution	Operating force		Minimum packing unit (pcs.)	Product No.
	Direction (N)	Center-push (N)		
8-direction	0.8±0.5	2.5±1.5	950	RKJXS1004001

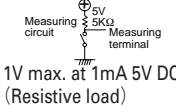
### Dimensions

Unit:mm



Refer to P.309 for product specifications.  
Refer to P.311 for taping package specifications.

# Product Specifications

Items	RKJXT1F	RKJXM	RKJXL	RKJXS	SKRV	SKRH		
						SKRHAA, SKRHAB	SKRHAC, SKRHAD	
Operating temperature range	-40°C to +85°C	-30°C to +80°C	-30°C to +70°C	-20°C to +70°C		-30°C to +85°C		
Rating (max.) (Resistive load)	10mA 5V DC				50mA 12V DC			
Electrical performance	Output voltage							
	Directional resolution	4-direction	8-direction		4-direction			
	Insulation resistance	100MΩ min. 250V DC			50MΩ min. 50V DC	100MΩ min. 100V DC		
	Voltage proof	300V AC for 1minute. or 360V AC for 2s			50V AC for 1minute	100V AC for 1minute		
Mechanical characteristics	Directional operating force	40±25mN·m	Direction A, B, C, D 30±20mN·m	10±7mN·m	0.8±0.5N	1.2±0.6N	1.23±0.69N 1.2±0.69N	
	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 1minute				29.4N for 5s		
	Actuator strength	Pushing direction	100N			30N		
		Operating direction	0.4N·m			20N		
	Solder heat resistance	Manual soldering	350±5°C 3s max.			350±10°C 3 <sup>+1</sup> <sub>0</sub> s	350°C max. 3s max.	
		Dip soldering	260±5°C, 5±1s		260°C max. 6s max.			
		Reflow soldering				Please see P.311		
	Endurance	Vibration	8.3±1 to 200±4 to 8.3±1Hz, 4.4G fixed (for 15 minutes/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		Directional	500,000cycles	100,000cycles	500,000cycles	200,000cycles	1,000,000 cycles	
		Encoder	15,000cycles					
Operating life without load								
Operating life with load (at rated load)								
Environmental test	Cold	-40±2°C for 500h			-40±2°C for 96h	-30±2°C for 96h		
	Dry heat	85±2°C for 500h			85±2°C for 96h			
	Damp heat	60±2°C, 90 to 95%RH for 500h			60±2°C, 90 to 95%RH for 96h			

**Note**

Shall be in accordance with individual specifications.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line Package Type

Multi Control Devices

TACT Switch™

Custom-Products

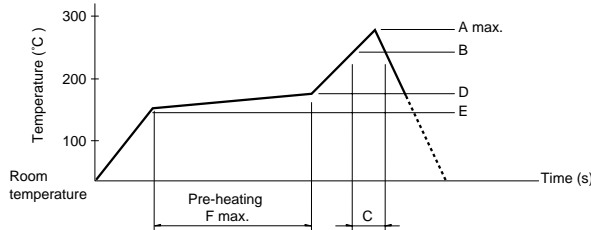
Variable Resistor Type

Switch Type

# 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



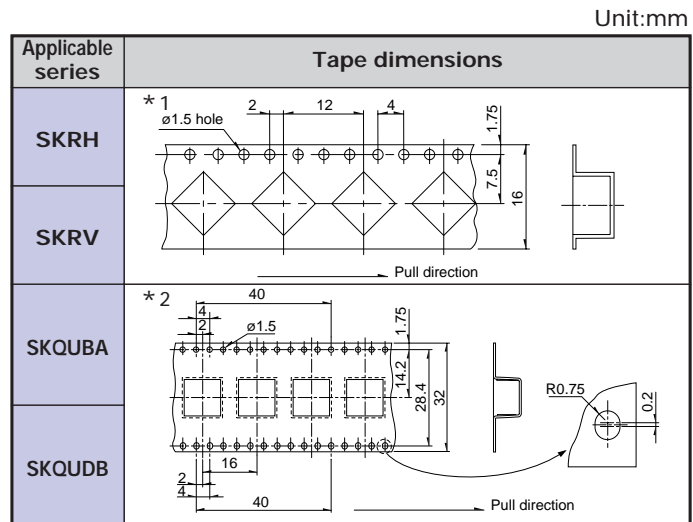
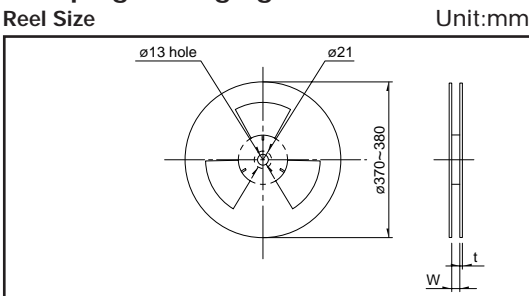
Series( Reflow type )	A( ) 3s max.	B( )	C(s)	D( )	E( )	F(s)
SLLB, SLLB5, SLLQ	240	230	20	150	150	120
RKJXS/SKRV/SKRH/SKQUBA,DB/SSAF/SRBE	260		40	180		

### 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.

# Taping Specifications

## Taping Packaging



Series	Number of packages( pcs. )			Reel width W( mm )	Reel thickness t( mm )	Tape width ( mm )	Tape dimensions
	1 reel	1 case (shipment within Japan)	1 case (shipment outside of Japan)				
SSAF	1,200	2,400	2,400	24.4	2	24	
SRBE	1,300	2,600	5,200	25.4	2	24	
SLLB	1,350	2,700	5,400	24.4	3	24	
SLLB5	1,500	3,000	6,000	24.4	3	24	
SLLQ11	900	1,800	3,600	24.4	3	24	
SLLQ12	1,400	2,800	5,600	24.4	3	24	
RKJXS	950	3,800	3,800	25.5	1.6 to 2	24	
SKRV	1,500	12,000	12,000	17.5	2	16	* 1
SKRH	1,300	10,400	10,400	17.5	2	16	
SKQUBA	750	3,000	3,000	33.5	2	32	* 2
SKQUBB	600	2,400	2,400	33.5	2	32	

### Note

Please place purchase orders for taping products per minimum package units (1 reel or 1 case).