

8-directional Switch with a Center Push

RKJXS Series

Unprecedented 2.3mm thick low-profile design in an 8-direction, center-push type switch.

Power

Push

Slide

Rotary

Encoders

Detector

Dual-in-line
Package Type

Multi Control
Devices

TACT

Custom-
Products



Features

- A main unit as thin as 2.3mm, achieved by incorporating a center push switch into the 8-directional switch.
- Compact and low profile with enhanced freedom of set design.
- Uniform operating force in any operating direction, with excellent operational feel.

Applications

- Portable electronic devices such as mobile phones, PDAs, etc.

Typical Specifications

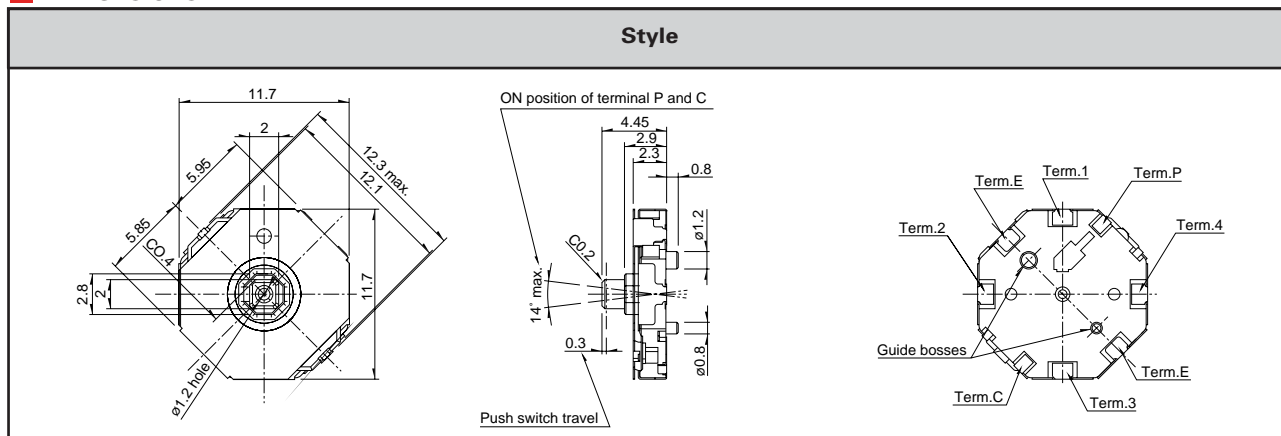
Items	Specifications
Switch ON position	7° max.
Operating force	0.8±0.5N
Push operating force	2.5±1.5N
Travel (Push operation)	0.3±0.2mm
Push strength	30N
Operating life	10mA 5V DC
Rating (max.) (Resistive load)	500,000 cycles
Insulation resistance	50MΩ min. 50V DC
Voltage proof	50V AC for 1min.

Products Line

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

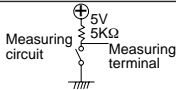
Dimensions

Unit:mm



For other detailed specifications, see P.340
For specifications for the taping package, see P.341

Products Specifications

Items		RKJXT	RKJXM	RKJXL	RKJXS	SLLB	SLLB5	SLLQ		
Operating temperature range		-30°C to +70°C			-20°C to +70°C	-10°C to +60°C		-40°C to +85°C		
Power	Rating (max.) (Resistive load)	10mA 5V DC								
Push	Electrical performance	Output voltage			1V max. at 1mA 5V DC (Resistive load)					
Slide		Directional resolution			8-directional					
Rotary		Insulation resistance			100MΩ min. 250V DC	50MΩ min. 50V DC	100MΩ min. 100V DC			
Encoders		Voltage proof			300V AC for 1min.	50V AC for 1min.	100V AC for 1 min.			
Detector	Mechanical characteristics	Direction application 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			
Dual-in-line Package Type		Push application force		4.5±2N	3±1.5N	4.5±1N	2.5±1.5N			
Multi Control Devices		Encoders Detent torque		15±8mN·m	12±8mN·m					
TACT		Robustness of terminal					3N for 1 min.			
Custom-Products		Robustness of actuator	Pushing direction					30N	50N	30N
			Operating direction					20N	10N	
		Solder heat resistance	Manual soldering		300°C max. 3s max.			350±10°C 3 ¹ / ₂ s	350±5°C 3s max.	
Dip soldering			260±5°C, 5±1s							
Reflow soldering						Please see P.341				
Endurance	Vibration		8.3 to 200 to 8.3Hz, 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	Directions	50,000 cycles	100,000 cycles		500,000 cycles				
		Center detent								
	Encoder		15,000 cycles							
	Operating life without load					100,000 cycles				
Operating life with load (Load : As rating)					100,000 cycles					
Environmental test	Cold		-40±2°C for 500h		-40±2°C for 96h	-20±2°C for 96h	-40±2°C for 96h			
	Long-term heat resistance		85±2°C for 500h		85±2°C for 96h					
	Moisture resistance		90 to 95%RH for 500h, 60±2°C		90 to 95%RH for 96h, 60±2°C	90 to 95%RH for 96h, 40±2°C				

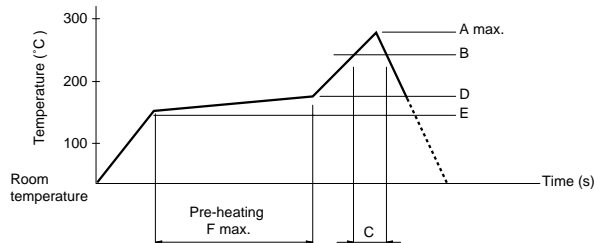
Note

Shall be in accordance with individual specifications.

Soldering Condition

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2 φ CA (K) or CC (T) at soldering portion (copper foil surface). A heat resisting tape should be used for fixed measurement.
3. Temperature profile



Series(Reflow type)	A (°C) 3s max.	B (°C)	C (s)	D (°C)	E (°C)	F (s)
SLLB, SLLQ	240	230	20	150	150	120
RKJXS	260		40	180		

Notes

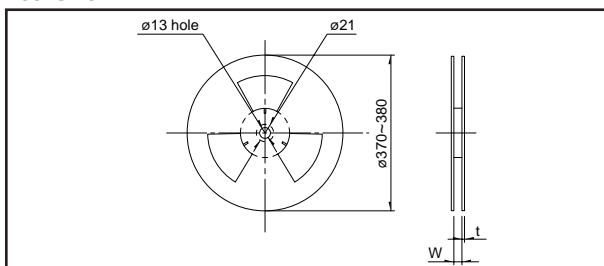
1. The condition mentioned above is the temperature on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the PC board's material, size, thickness, etc. The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines. You are requested to verify the soldering conditions thoroughly beforehand.

Taping Specifications

Taping Packaging

Reel Size

Unit:mm



Note

Order products in N minimum packing units (1 reel or 1 case).

Series	Number of packages (pcs.)			Reel width W (mm)	Reel thickness t (mm)	Tape width (mm)
	1 reel	1 case / domestic	1 case / export packing			
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	1.6~2	24

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Push

Slide

Rotary

Encoders

Detector

Dual-in-line
Package Type

Multi Control
Devices

TACT

Custom-
Products

Variable
Resistor Type

Switch
Type