Push Switch

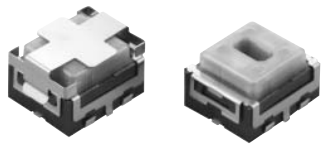
Hollow Slider Momentary Type Push Switch

SPEG Series

RoHS compliant

Hollow type supporting designs such as LED illumination.

NEW



Typical Specifications

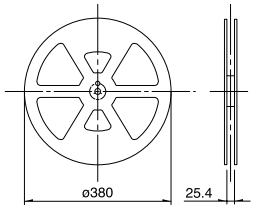
Items	Specifications
Rating (max.) / (min.) (Resistive load)	50mA 16V DC/50μA 3V DC
Contact resistance (Initial /After operating life)	200mΩ max./500mΩ max.
Operating forces	2.16N
Operating life	30,000cycles

Product Line

Travel (mm)	Poles	Ground terminal	Minimum order unit (pcs.)	Product No.
1.1	1	Without	4,800	SPEG110100
		With		SPEG120100

Taping Specification (Taping Packaging)

Reel Size Unit:mm



Number of packages (pcs.)			Tape width (mm)
1 reel	1 case /Japan	1 case /export packing	
1,200	2,400	4,800	24

Note

Please place purchase orders per minimum order unit (integer).

ALPS

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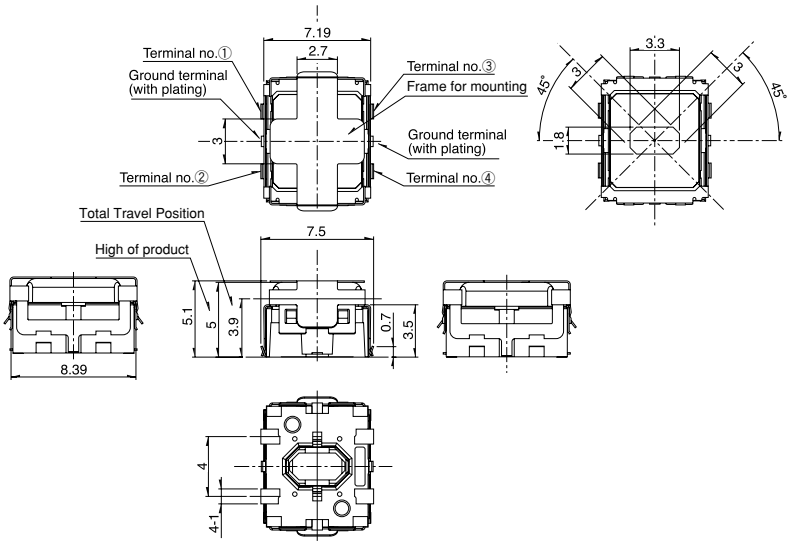
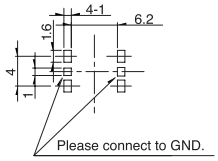
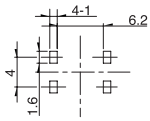
Dimensions

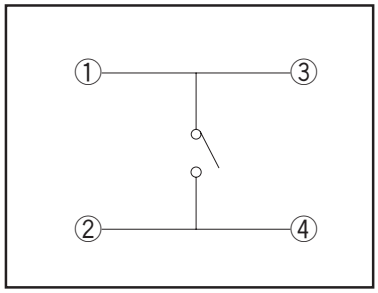
Unit:mm

Style	PC board mounting hole dimensions
	**In case of using ground terminal**  **In case of not using ground terminal** 

Note

Above dimensions indicate "with ground terminal" version.

Circuit Diagram



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Detector
Push
Slide
Rotary
Encoders
Power
Dual-in-line Package Type
TACT Switch™
Custom-Products
Horizontal Type
Vertical Type

List of Varieties

Series			SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ ※1	SPUP ※1	SPUN	SPUN medium curent※1	SPEG	SPPH2
Photo												
Travel (mm)			0.3 0.71	1.5	2.5		2	1.5 2	2.5		—	1
Total travel (mm)			0.9	2.5	3.5		3	2.5 3	3.5		1.2	1.5
Number of poles			1	2	1 2	2	2 4				1	2
Dimensions (mm)		W	4	9	6.6	7.2	7.5		10		7.15	6.5
		D	5		12		15.2 22.7		24 36		8.35	6
		H	1.22	4.5	8.3	9.6	8.8	10.3	13		3.5	6.5
Operating temperature range			−10°C to +60°C		−40°C to +85°C		−10°C to +60°C					
Rating (max.) (Resistive load)			20mA 5V DC	0.2mA 5V DC	0.2mA 30V DC		0.1mA 30V DC			1A 25V DC	50mA 16V DC	0.1A 12V DC
Rating (min.) (Resistive load)			100μA 3V DC	50μA 3V DC							50μA 3V DC	
Electrical performance	Initial contact resistance		※2	20mΩ max.							200mΩ max.	30mΩ max.
	Insulation resistance		10MΩ min. 100V DC	100MΩ min. 500V DC							3MΩ min. 100V DC	100MΩ min. 500V DC
	Voltage proof		100V AC for 1minute	500V AC for 1minute							100V AC for 1minute	500V AC for 1minute
Mechanical performance	Terminal strength		—	5N for 1minute							0.5N for 1minute	5N for 1minute
	Actuator strength	Operating direction	50N		30N		50N				50N	30N
		Pulling direction	———								—	—
Durability	Operating life without load		100,000 cycles	10,000cycles 40mΩ max.					30,000cycles 40mΩ max.	10,000cycles 40mΩ max.	35,000cycles 500mΩ max.	10,000cycles 50mΩ max.
	Operating life without load Load:as rating		100,000 cycles	10,000cycles 40mΩ max.						5,000cycles 40mΩ max.		
Environmental performance	Cold		−40±2°C for 96h	−20±2°C for 96h							−20±2°C for 96h	
	Dry heat		85±2°C for 96h								85±2°C for 96h	
	Damp heat		40±2°C, 90 to 95%RH for 96h								40±2°C, 90 to 95%RH for 96h	
Soldering	Manual soldering		350±10°C 4^{+1}_{0}s	350±10°C 3^{+1}_{0}s			300±10°C 3^{+1}_{0}s		350±10°C 3^{+1}_{0}s		350±5°C 3s max.	350°C max. 3s max.
	Dip soldering		—	260±5°C 5±1s		260±5°C 10±1s	260±5°C 5±1s		260±5°C 10±1s		—	260±5°C 5±1s
	Reflow soldering		Please see P.108	———							Please see P.108	—
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Notes

1. ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for requirements of this kind.
2. ※2. 1V or less, at the present rating of 1mA, 5V DC for output voltage.

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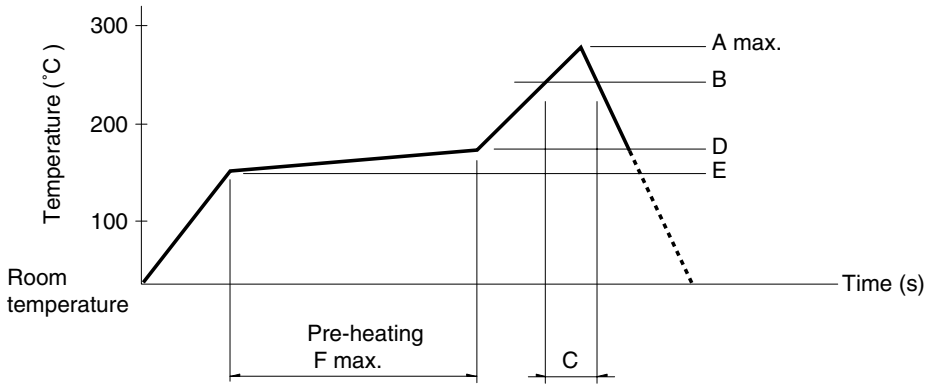
Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2ϕ 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)
SPEE	260	230	40	180	150	120
SPEF, SPEG						

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. Prior verification of soldering condition is highly recommended.

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