

Push Switch Hollow Slider Momentary Type Push Switch

SPEG Series



Hollow type supporting designs such as LED illumination.

Detector

Push

Slide

Rotary

Encoders

Power

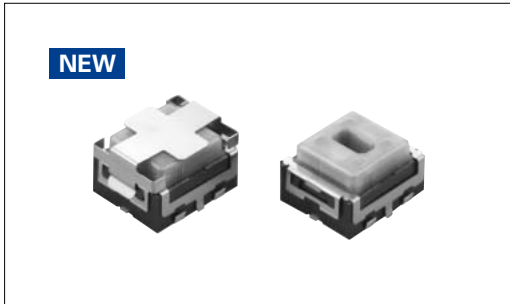
Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type



Typical Specifications

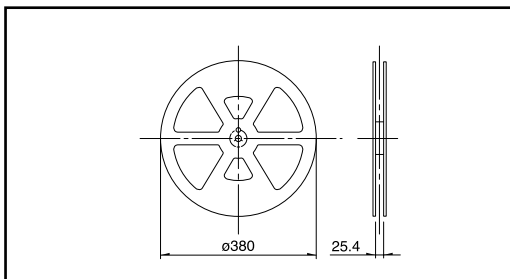
Items	Specifications
Rating(max.)(min.) (Resistive load)	50mA 16V DC/50 μ A 3V DC
Contact resistance (Initial /After operating life)	200m max./500m max.
Operating forces	2.16N
Operating life	30,000cycles

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).

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Dimensions

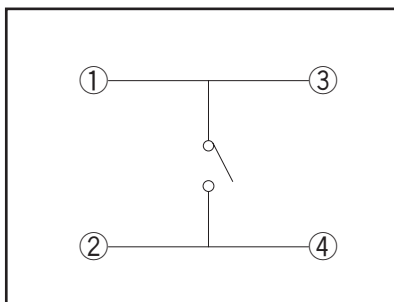
Unit:mm

Style	PC board mounting hole dimensions
	<p>In case of using ground terminal</p>
	<p>In case of not using ground terminal</p>

Note

Above dimensions indicate "with ground terminal" version.

Circuit Diagram



List of Varieties

Series	SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ ₁	SPUP ₁	SPUN	SPUN _{medium current 1}	SPEG	SPPH2		
Detector	Photo											
Push												
Slide	Travel (mm)	0.3 0.71	1.5	2.5		2	1.5 2	2.5		1		
Rotary	Total travel (mm)	0.9	2.5	3.5		3	2.5 3	3.5		1.2 1.5		
Encoders	Number of poles	1	2	1 2	2	2 4		1		2		
Power	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
TACT Switch™	Operating temperature range	- 10°C to + 60°C		- 40°C to + 85°C		- 10°C to + 60°C						
Custom-Products	Rating (max. χ 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. χ Resistive load)	100 μ A 3V DC	50 μ A 3V DC					50 μ A 3V DC				
Horizontal Type	Electrical performance	Initial contact resistance	2	20m max.					200m max.	30m max.		
		Insulation resistance	10M min. 100V DC	100M min. 500V DC					3M min. 100V DC	100M min. 500V DC		
		Voltage proof	100V AC for 1minute	500V AC for 1minute					100V AC for 1minute	500V AC for 1minute		
Vertical Type	Mechanical performance	Terminal strength	5N for 1minute							0.5N for 1minute	5N for 1minute	
		Actuator strength	Operating direction	50N	30N		50N			50N	30N	
Durability	Durability	Operating life without load	100,000 cycles	10,000cycles 40m max.			30,000cycles 40m max.	10,000cycles 40m max.	35,000cycles 500m max.	10,000cycles 50m max.		
		Operating life without load Load:as rating	100,000 cycles	10,000cycles 40m max.			5,000cycles 40m max.					
Environmental performance	Environmental performance	Cold	-40 \pm 2 for 96h	-20 \pm 2 for 96h					-20 \pm 2 for 96h			
		Dry heat	85 \pm 2 for 96h							85 \pm 2 for 96h		
		Damp heat	40 \pm 2 , 90 to 95%RH for 96h							40 \pm 2 , 90 to 95%RH for 96h		
Soldering	Soldering	Manual soldering	350 \pm 10 4 ⁺¹ ₀ s	350 \pm 10 3 ⁺¹ ₀ s		300 \pm 10 3 ⁺¹ ₀ s	350 \pm 10 3 ⁺¹ ₀ s		350 \pm 5 3s max.	350 max. 3s max.		
		Dip soldering		260 \pm 5 5 \pm 1s	260 \pm 5 10 \pm 1s	260 \pm 5 5 \pm 1s	260 \pm 5 10 \pm 1s			260 \pm 5 5 \pm 1s		
		Reflow soldering	Please see P.108							Please see P.108		
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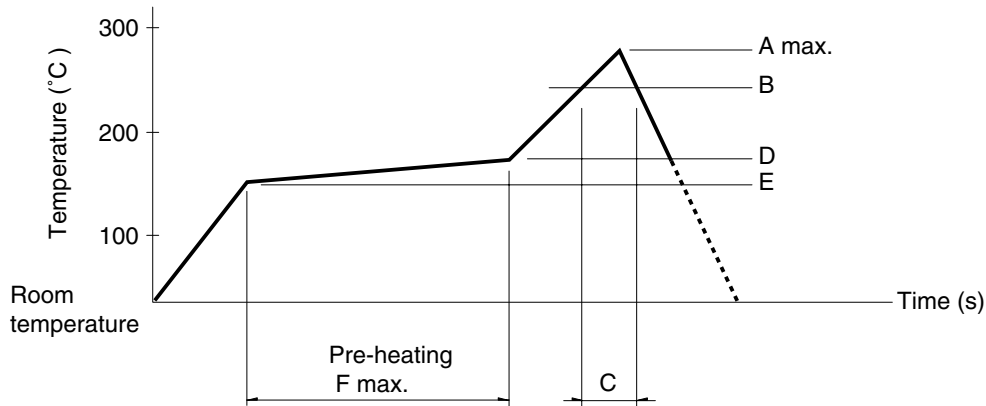
Notes

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

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 soldering portion (copper foil surface). A heat resisting tape should be used for fixed measurement.
3. Temperature profile



Series(Reflow type)	A() 3s max.	B()	C(s)	D()	E()	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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