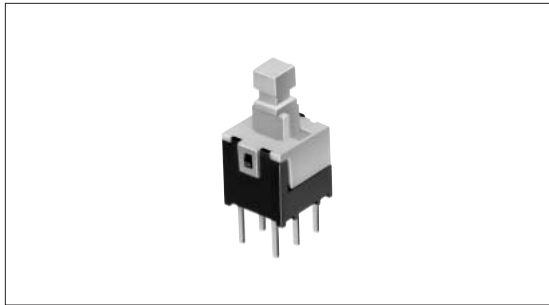


Push Switch 1mm-travel Compact-sized Vertical Type

SPPH2 Series



Short-travel of 1mm.



Features

- 1mm-travel.

Applications

- Printers and peripheral devices
- For switches in sound devices including TVs, plasma display panel, LCD TVs, mini component stereos and audio mixers
- For various switching of house related devices such as air conditioners

Typical Specifications

Items		Specifications
Rating (max.)/(min.) (Resistive load)		0.1A 12V DC/50 μ A 3V DC
Contact resistance (Initial performance/After lifetime)		30m Ω max./50m Ω max.
Operating force		2 \pm 1N
Operating life	Without load	10,000 cycles
	With load	10,000 cycles (0.1A 12V DC)

Products Line

Changeover timing	Travel (mm)	Total travel (mm)	Rating	Mounting method	Poles	Knob style	Operating	Terminal style	Minimum packing unit (pcs.)	Products No.	Drawing No.
Non shorting	1	1.5	—	PC board	2	Standard	Latching	Straight	100	SPPH210100	1
							Momentary				
							Latching	Straight		SPPH260100	2
							Momentary			SPPH230500	1
						Short	Latching	Straight		SPPH220100	3
							Momentary			SPPH220200	
							Latching	Snap-in		SPPH240100	
							Momentary			SPPH240300	

Note

Additional switches not included in the above list are also available. Contact us for details.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type

For other specifications, see P.105

Push Switch

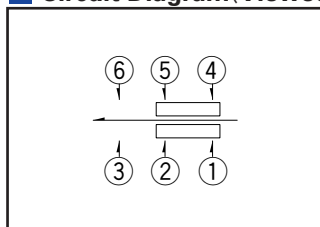
1mm-travel Compact-sized Vertical Type | SPPH2 Series

Dimensions

Unit:mm

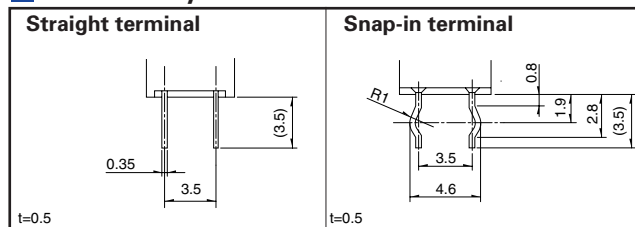
No.	Style	PC board mounting hole dimensions (Viewed from the Direction A)
1		Straight terminal
		Snap-in terminal
2		Snap-in terminal
		Straight terminal
3		Straight terminal
		Snap-in terminal

Circuit Diagram (Viewed from the Direction A)



Terminal Style

Unit:mm



Products Specifications

Series		SPEE	SPPJ6	SPPJ2	SPPJ3	SPUJ SPUP	SPUN	SPUN (medium current)	SPPH2	SPPH4	SPPH1	SPEA	SPEC	SPED2	SPED3	SPED4	SPED5	
Operating temperature range		-10°C to +60°C											-40°C to +85°C					
Rating (max.) (Resistive load)		5V 20mA	0.2A 12V DC	0.2A 30V DC		0.1A 30V DC		1A 25V DC	0.1A 12V DC	0.1A 30V DC				1A 14.5V DC				
Electrical performance	Initial contact resistance	※	20mΩ max.						30mΩ max.	100mΩ max.	20mΩ max.	30mΩ max.		100mΩ max.				
	Insulation resistance	10mΩ min 100V DC	100MΩ min. 500V DC															
	Voltage proof	100V AC for 1min	500V AC for 1 min.											100V AC for 1 min.				
Mechanical performance	Robustness of terminal	—	5N for 1 min.							3N for 1 min.		—						
	Robustness of actuator	Operating direction	50N	30N	50N		30N		50N									
		Pulling direction	—			50N		—	10N	—	50N		—					
	Vibration		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															
	Resistance to soldering heat	Manual soldering	—	350±10°C 3 ⁺¹ ₀ s		300±10°C 3 ⁺¹ ₀ s	350±10°C 3 ⁺¹ ₀ s		350°C max. 3s max.	350±10°C 3 ⁺¹ ₀ s			350±10°C 3±0.5s	—	350±10°C 3±0.5s	—		
		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	260±5°C 10±1s	260±5°C 5±1s	260±5°C 10±1s	260±5°C 5s max.	260±5°C 10±1s	—	260±5°C 10±1s	—		
Reflow		260°C max 10s max	—															
Durability	Operating life without load	100,000 cycles	10,000 cycles 40mΩ max.			30,000 cycles 40mΩ max.	10,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	10,000 cycles 100mΩ max.	10,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	10,000 cycles 50mΩ max.	30,000 cycles 100Ω max.					
	Operating life with load Load : As rating	100,000 cycles	10,000 cycles 40mΩ max.				5,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	10,000 cycles 100mΩ max.	10,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.		30,000 cycles 100mΩ max.					
Environmental performance	Cold	-40±2°C for 96h	-20±2°C for 96h											-40±2°C for 96h				
	Dry heat	85±2°C for 96h																
	Damp heat	40±2°C, 90 to 95%RH for 96h																

Note

1V or less, at the present rating of 1mA, 5V DC for output voltage.

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