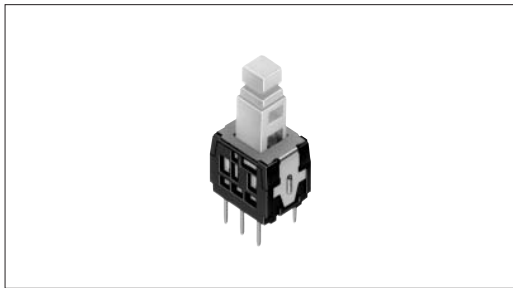


Push Switch 2.2mm-travel Medium-sized Vertical Type

SPPH4 Series



Medium vertical type with high operability.



Features

- Optional location lug is available to prevent mounting direction failure.

Applications

- AV devices, including DVD players, portable CD/MD players, and audio mixers
- For the switching functions of electronic devices, including game consoles

Typical Specifications

Items	Specifications
Rating (max.)/(min.) (Resistive load)	0.1A 30V DC/50 μ A 3V DC
Contact resistance	100m Ω max.
Operating force	2 \pm 1N
Operating life with load	10,000 cycles (0.1A 30V DC)

Products Line

Changeover timing	Travel (mm)	Total travel (mm)	Rating	Mounting method	Poles	Operating	Terminal style	Location lug	Minimum packing unit (pcs.)	Products No.
Non shorting	2.2	3	—	PC board	2	Latching	Straight	With	100	SPPH410100
						Momentary				SPPH410200
						Latching	Without	SPPH420100		
						Momentary	Snap-in	With		SPPH430100
										SPPH430200

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

2.2mm-travel Medium-sized Vertical Type | SPPH4 Series

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

	Dimensions	Unit:mm
	Style	PC board mounting hole dimensions (Viewed from the direction A)

Note
Only the configurations with location lug are indicated in the dimensions.

- Horizontal Type
- Vertical Type**

	Circuit Diagram (Viewed from the Direction A)	Terminal Style	Unit:mm
		<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Straight terminal</p> </div> <div style="text-align: center;"> <p>Snap-in terminal</p> </div> </div>	

Products Specifications

Item		Series														
		SPEE	SPPJ6	SPPJ2	SPPJ3	SPUJ SPUP	SPUN	SPUN (medium current)	SPPH2	SPPH4	SPPH1	SPEA	SPEC	SPED2	SPED3	SPED4
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	※	20m Ω max.					30m Ω max.	100m Ω max.	20m Ω max.	30m Ω max.		100m Ω max.			
	Insulation resistance	10m Ω min 100V DC	100M Ω min. 500V DC										3M Ω 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°C max. 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 40m Ω max.			30,000 cycles 40m Ω max.	10,000 cycles 40m Ω max.	10,000 cycles 50m Ω max.	10,000 cycles 100m Ω max.	10,000 cycles 40m Ω max.	10,000 cycles 50m Ω max.		30,000 cycles 100 Ω max.			
	Operating life with load Load : As rating	100,000 cycles	10,000 cycles 40m Ω max.			5,000 cycles 40m Ω max.	10,000 cycles 50m Ω max.	10,000 cycles 100m Ω max.	10,000 cycles 40m Ω max.	10,000 cycles 50m Ω max.		30,000 cycles 100m Ω 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.

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