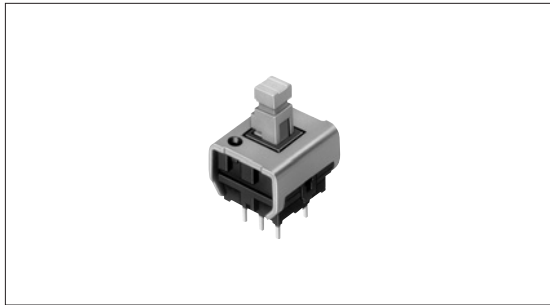


# Push Switch 1.2mm-travel Vertical Type

SPEA Series



Short travel 1.2mm, vertical type, suitable for multiple circuits.



## Features

- 1.2mm-travel.

## Applications

- For switching in printers, audio equipment, telephones, measuring devices and various electronic devices

## Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.1A 30V DC/50 $\mu$ A 3V DC
Contact resistance (Initial /After operating life)		30m $\Omega$ max./50m $\Omega$ max.
Operating force	2-poles	2.5 $\pm$ 1N
	4-poles	3 $\pm$ 1N
Operating life	Without load	10,000cycles
	With load	10,000cycles (0.1A 30V DC)

## Product Line

Changeover timing	Travel (mm)	Total travel (mm)	Rating	Mounting method	Poles	Operation	Terminal Configuration	Minimum packing unit (pcs.)	Product No.	Drawing No.
Non shorting	1.2	1.7	—	PC board	2	Latching	Straight	100	SPEA121800	1
							Snap-in		SPEA122100	
					Momentary	Straight	SPEA122200			
					4	Latching	Snap-in		SPEA123000	2

## Note

Products other than those listed in the above chart are also available. Please contact us for details.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line  
Package Type

Multi Control  
Devices

TACT Switch™

Custom-  
Products

Horizontal  
Type

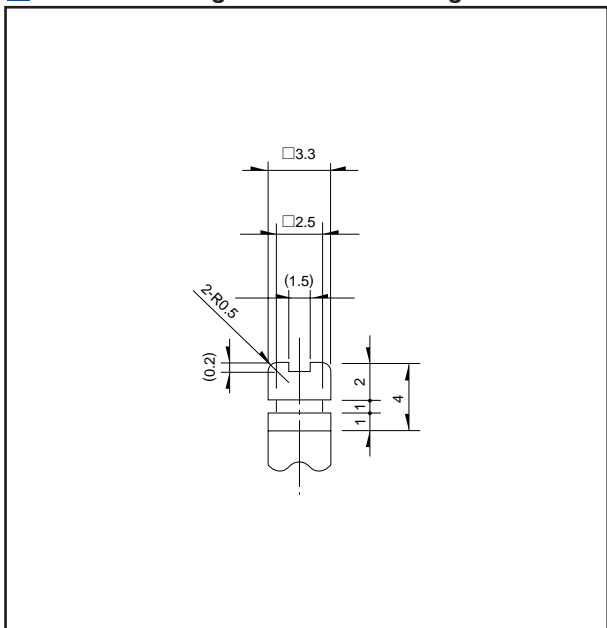
Vertical  
Type

Dimensions

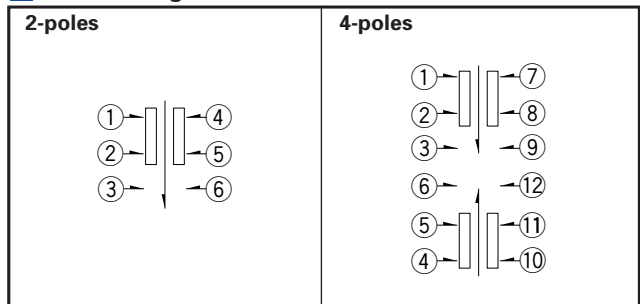
Unit:mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)	
1	<p>2-poles</p>	<p>Straight terminal</p>	<p>Snap-in terminal</p> <p>Thickness of PC board <math>t=1.6\text{mm}</math></p>
		<p>Straight terminal</p>	
2	<p>4-poles</p>	<p>Snap-in terminal</p> <p>Thickness of PC board <math>t=1.6\text{mm}</math></p>	

Actuator configuration at front edge Unit:mm

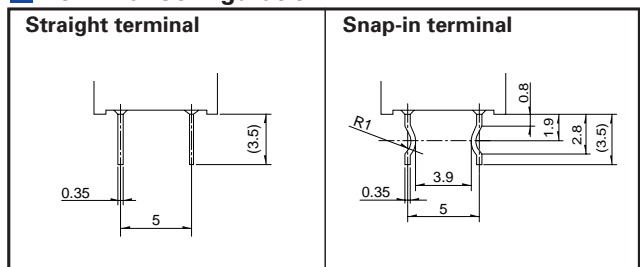


Circuit Diagram (Viewed from the Direction A)



Terminal Configuration

Unit:mm



# Product Specifications

Series		SPEE	SPPJ6	SPPJ2	SPPJ3	SPUJ SPUP ※1	SPUN ※1	SPUN (medium current) ※1	SPPH2	SPPH4	SPPH1	SPEA	SPEC	SPED2	SPED3	SPED4	SPED5	SPEF	
Item	Operating temperature range	-10°C to +60°C		-40°C to +85°C		-10°C to +60°C					-40°C to +85°C	-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	※2	20mΩ max.					30mΩ max.	100mΩ max.	20mΩ max.	30mΩ max.	100mΩ max.							
	Insulation resistance	10mΩ min. 100V DC	100MΩ min. 500V DC															3MΩ min. 500V DC	3MΩ min. 100V DC
	Voltage proof	100V AC for 1minute	500V AC for 1minute											100V AC for 1minute		100V AC for 1minute			
Mechanical performance	Terminal strength	5N for 1minute								3N for 1minute		—							
	Actuator strength	Operating direction	50N	30N	50N		30N		50N					90N					
		Pulling direction	—			24.6350N		—	10N	—	50N		—			30N			
	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 4±0s	350±10°C 3 <sup>+1</sup> ±1s		300±10°C 3 <sup>+1</sup> ±1s	350±10°C 3 <sup>+1</sup> ±1s	350°C max. 3s max.	350±10°C 3 <sup>+1</sup> ±1s			350±10°C 3±0.5s	—	350±10°C 3±0.5s	—	350±5°C 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	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	—	260±5°C 10±1s		
Reflow	Please see P.107																	—	Please see P.107
Durability	Operating life without load	100,000 cycles	10,000 cycles 40mΩ max.			30,000cycles 40mΩ max.	10,000cycles 40mΩ max.	10,000cycles 50mΩ max.	10,000cycles 100mΩ max.	10,000cycles 40mΩ max.	10,000cycles 50mΩ max.	10,000cycles 50mΩ max.		30,000cycles 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.	10,000 cycles 50mΩ max.		30,000cycles 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																	

**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.

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Type

Vertical  
Type

# Mouser Electronics

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