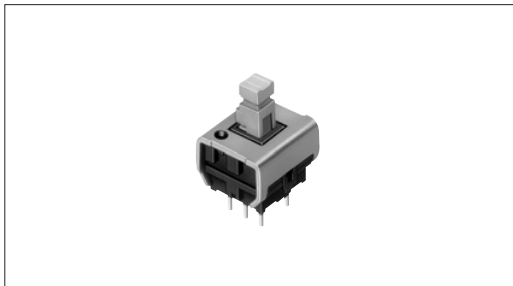


# Push Switch 1.2mm-travel Vertical Type

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

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line  
Package Type

Multi Control  
Devices

TACT Switch™

Custom-  
Products

Horizontal  
Type

Vertical  
Type

## 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	
					4	Latching	Straight		SPEA122200	
							Snap-in		SPEA123000	

## Note

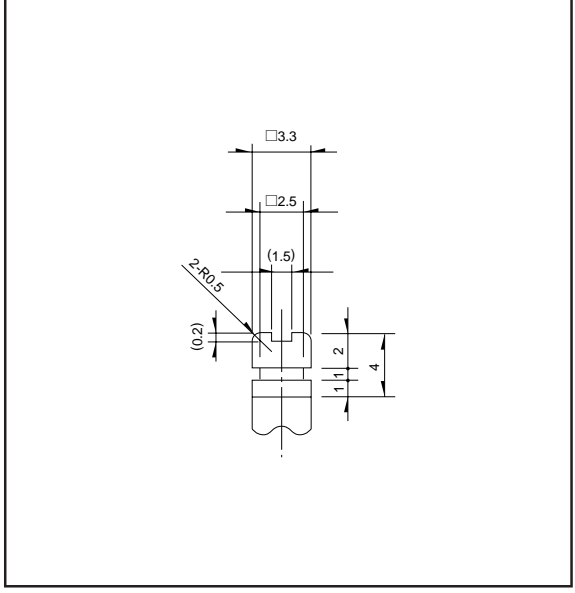
Products other than those listed in the above chart are also available. Please contact us for details.

Refer to P.105 for product specifications.

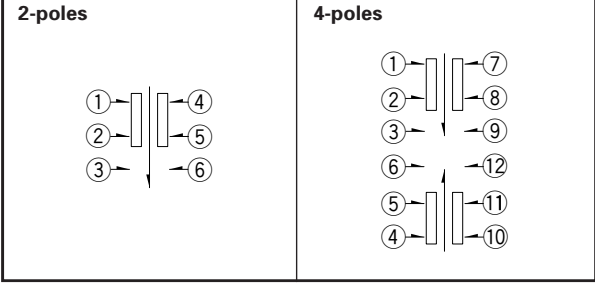
- Detector
- Push**
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- Multi Control Devices
- TACT Switch™
- Custom-Products
- Horizontal Type
- Vertical Type**

Dimensions		Unit:mm	
No.	Style	PC board mounting hole dimensions (Viewed from the direction A)	
1	<b>2-poles</b> 	<b>Straight terminal</b> 	<b>Snap-in terminal</b> 
		<b>Straight terminal</b> 	<b>Snap-in terminal</b> 
2	<b>4-poles</b> 	<b>Snap-in terminal</b> 	

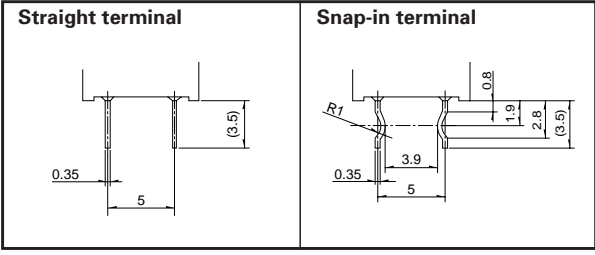
**Actuator configuration at front edge** Unit:mm



**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
<b>Operating temperature range</b>	-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				
<b>Rating (max.) (Resistive load)</b>	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					
<b>Electrical performance</b>	<b>Initial contact resistance</b>	※2		20mΩ max.				30mΩ max.	100mΩ max.	20mΩ max.	30mΩ max.		100mΩ max.				
	<b>Insulation resistance</b>	10mΩ min. 100V DC	100MΩ min. 500V DC										3MΩ min. 500V DC		3MΩ min. 100V DC		
	<b>Voltage proof</b>	100V AC for 1minute	500V AC for 1minute										100V AC for 1minute		100V AC for 1minute		
<b>Mechanical performance</b>	<b>Terminal strength</b>	5N for 1minute							3N for 1minute		—						
	<b>Actuator strength</b>	Operating direction	50N	30N	50N		30N		50N			90N					
		Pulling direction	—		24.6350N		—	10N	—	50N		—		30N			
	<b>Vibration</b>	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															
	<b>Resistance to soldering heat</b>	<b>Manual soldering</b>	350±10°C 4±0s	350±10°C 3 <sup>+1</sup> ±s		300±10°C 3 <sup>+1</sup> ±s	350±10°C 3 <sup>+1</sup> ±s		350°C max. 3s max.	350±10°C 3 <sup>+1</sup> ±s			350±10°C 3±0.5s	—	350±10°C 3±0.5s	—	350±5°C 3s max.
		<b>Dip soldering</b>	—	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°C max. 5s max.	260±5°C 10±1s	—	260±5°C 10±1s	—
<b>Reflow</b>	Please see P.107																
<b>Durability</b>	<b>Operating life without load</b>	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.		30,000cycles 100Ω max.					
	<b>Operating life with load Load : As rating</b>	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.		30,000cycles 100mΩ max.						
<b>Environmental performance</b>	<b>Cold</b>	-40±2°C for 96h	-20±2°C for 96h										-40±2°C for 96h				
	<b>Dry heat</b>	85±2°C for 96h															
	<b>Damp heat</b>	40±2°C, 90 to 95%RH for 96h															

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

- Horizontal Type
- Vertical Type

## 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.