

Push Switch Compact Momentary Type

SPEJ Series

onlinecomponents.com
THE ONLINE DISTRIBUTOR OF ELECTRONIC COMPONENTS



Two poles and two contact points, Comfortable momentary operation with click feel.

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



Typical Specifications

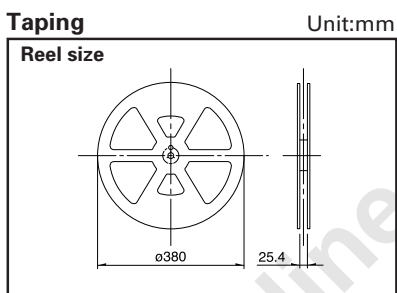
Items	Specifications
Rating (max.) (Resistive load)	0.2A 14V DC
Contact resistance (Initial / After operating life)	150mΩ max./150mΩ max.
Operating forces	3.5±0.7N
Operating life	10,000cycles

Product Line

Travel (mm)	Poles	Positions	Minimum order unit (pcs.)	Product No.
1.7	2	2	2,000	SPEJ110100

Packing Specifications

- Horizontal
Type
- Vertical
Type



Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case /Japan	1 case /export packing		
500	1,000	2,000	24	404 × 397 × 140

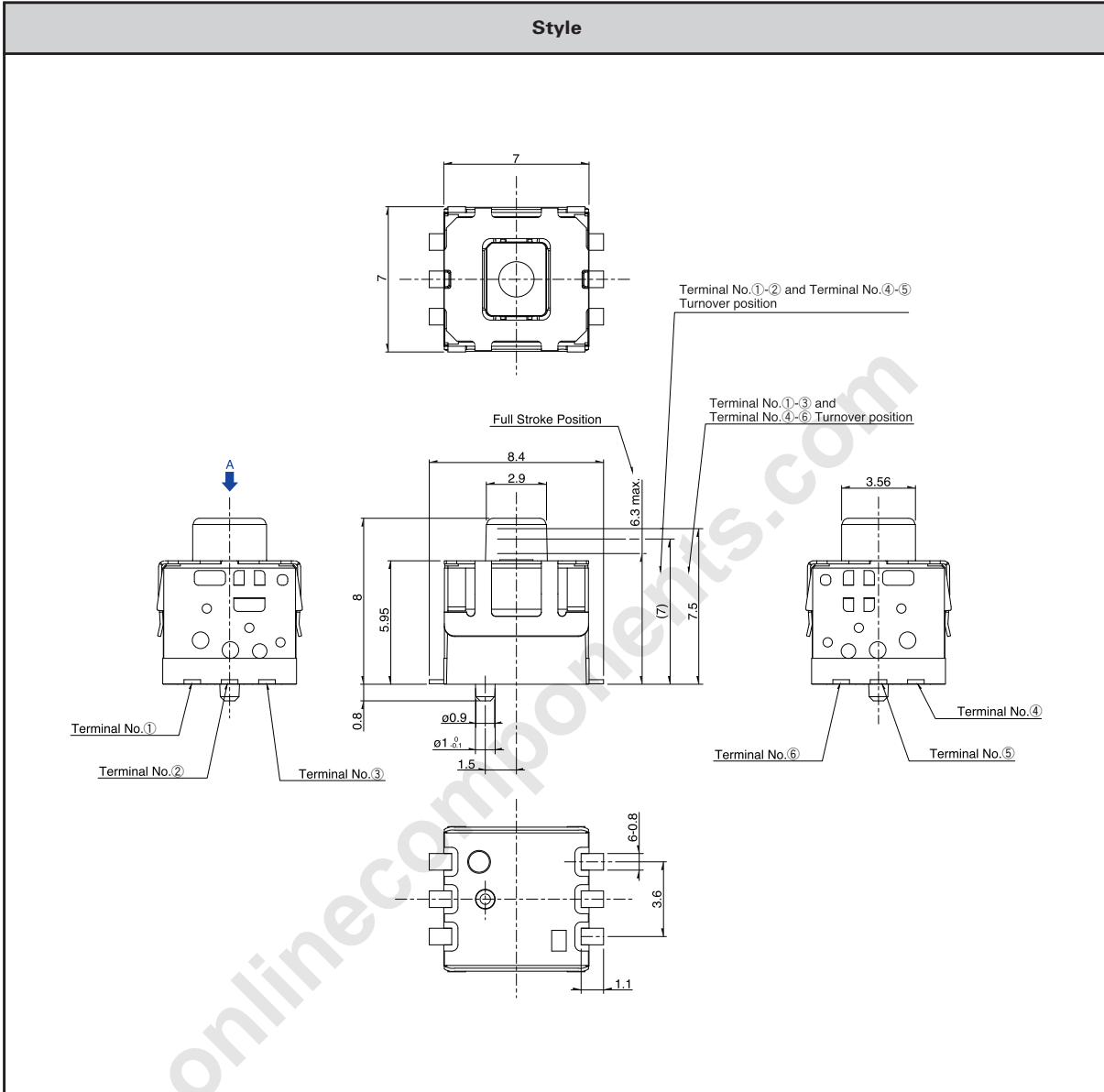
Note

Please place purchase orders per minimum order unit N (integer).



Dimensions

Unit:mm



Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

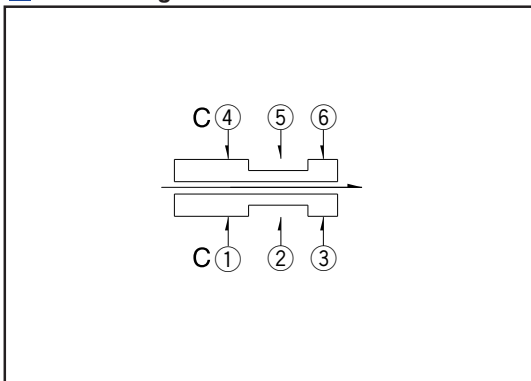
TACT Switch™

Custom-
Products

Horizontal
Type

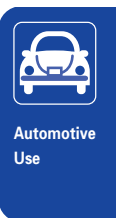
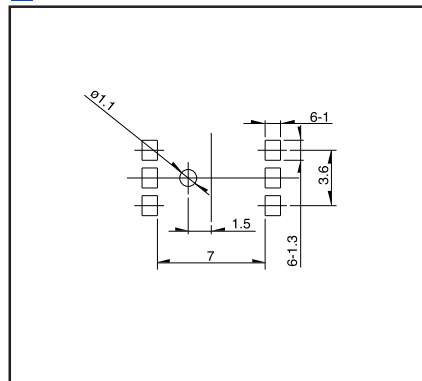
Vertical
Type

Circuit Diagram (Viewed from Direction A)












Recommend Pattern

Unit:mm



List of Varieties

Series	SPEE	SPPJ3	SPPJ2	SPUJ ※1	SPUP ※1	SPUN	SPUN medium current※1	SPEG	SPEJ
Photo									
Travel (mm)	0.3 0.71	2.5		2	1.5 2	2.5		—	1.7
Total travel (mm)	0.9	3.5		3	2.5 3	3.5		1.1	1.7
Number of poles	1	1 2	2	2 4		1		2	
Dimensions (mm)	W	4	6.6	7.2	7.5		10	7.15	7
	D	5	12		15.2 22.7		24 36	8.35	7
	H	1.22	8.3	9.6	8.8	10.3	13	3.5	8
Operating temperature range	-10°C to +60°C	-40°C to +85°C		-10°C to +60°C				-40°C to +85°C	
Automotive use	—	●	●	—				●	
Rating (max.) (Resistive load)	20mA 5V DC	0.2A 30V DC		0.1A 30V DC			1A 25V DC	50mA 16V DC	0.2A 14V DC
Rating (min.) (Resistive load)	100µA 3V DC	50µA 3V DC				50µA 3V DC		—	
Electrical performance	Initial contact resistance	※2	20mΩ max.				200mΩ max.		150mΩ max.
	Insulation resistance	10MΩ min. 100V DC	100MΩ min. 500V DC				3MΩ min. 100V DC		100MΩ min. 500V DC
	Voltage proof	100V AC for 1minute	500V AC for 1minute				100V AC for 1minute		500V AC for 1minute
Mechanical performance	Terminal strength	—	5N for 1minute				0.5N for 1minute		—
	Actuator strength	Operating direction	50N	30N		50N		50N	49N
Pulling direction		—	—		—		—	—	
Durability	Operating life without load	100,000 cycles	10,000cycles 40mΩ max.			30,000cycles 40mΩ max.	10,000cycles 40mΩ max.	30,000cycles 500mΩ max.	10,000 cycles
	Operating life without load Load:as rating	100,000 cycles	10,000cycles 40mΩ max.			5,000cycles 40mΩ max.	500mΩ max.	10,000cycles 0.2A 14V DC	
Environmental performance	Cold	-40±2°C for 96h	-20±2°C for 96h				-40±2°C for 500h		
	Dry heat	85±2°C for 96h						85±2°C for 500h	
	Damp heat	40±2°C, 90 to 95%RH for 96h						60±2°C, 90 to 95% RH for 500h	
Soldering	Manual soldering	350±10°C 4 ⁺¹ ₀ s	350±10°C 3 ⁺¹ ₀ s		300±10°C 3 ⁺¹ ₀ s	350±10°C 3 ⁺¹ ₀ s		350±5°C 3s max.	350±10°C 4s max.
	Dip soldering	—	260±5°C 5±1s	260±5°C 10±1s	260±5°C 5±1s		260±5°C 10±1s	—	
	Reflow soldering	Please see P.127	—						Please see P.133
Page	102	103	105	107	108	109		111	113

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

- Horizontal Type
- Vertical Type**

- Push Switches Attached Parts126
- Soldering Conditions127
- Push Switches Products Caution128

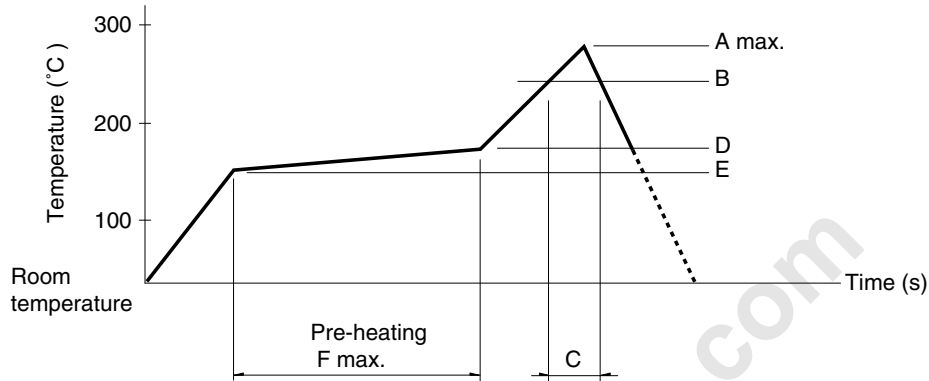
Notes

1. ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
2. ※2. 1V or less, at the present rating of 1mA 5V DC for output voltage.
3. ● marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40°C to +85°C.

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 ϕ 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 (°C) 3s max.	B (°C)	C (s)	D (°C)	E (°C)	F (s)
SPEE	260	230	40	180	150	120
SPEF, SPEG, SPEJ						

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.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type