

Push Switch

Compact momentary switch

SPEJ Series

Comfortable momentary operation with click feel.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type



Typical Specifications

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

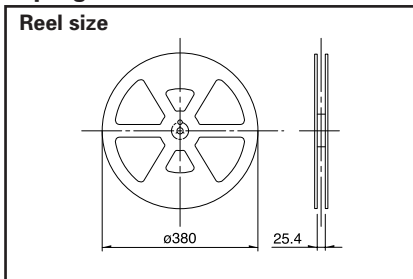
Product Line

Travel (mm)	Poles	Positions	Minimum order unit (pcs.)	Product No.
1.7	2	6	500	SPEJ110100

Packing Specifications

Taping

Unit:mm



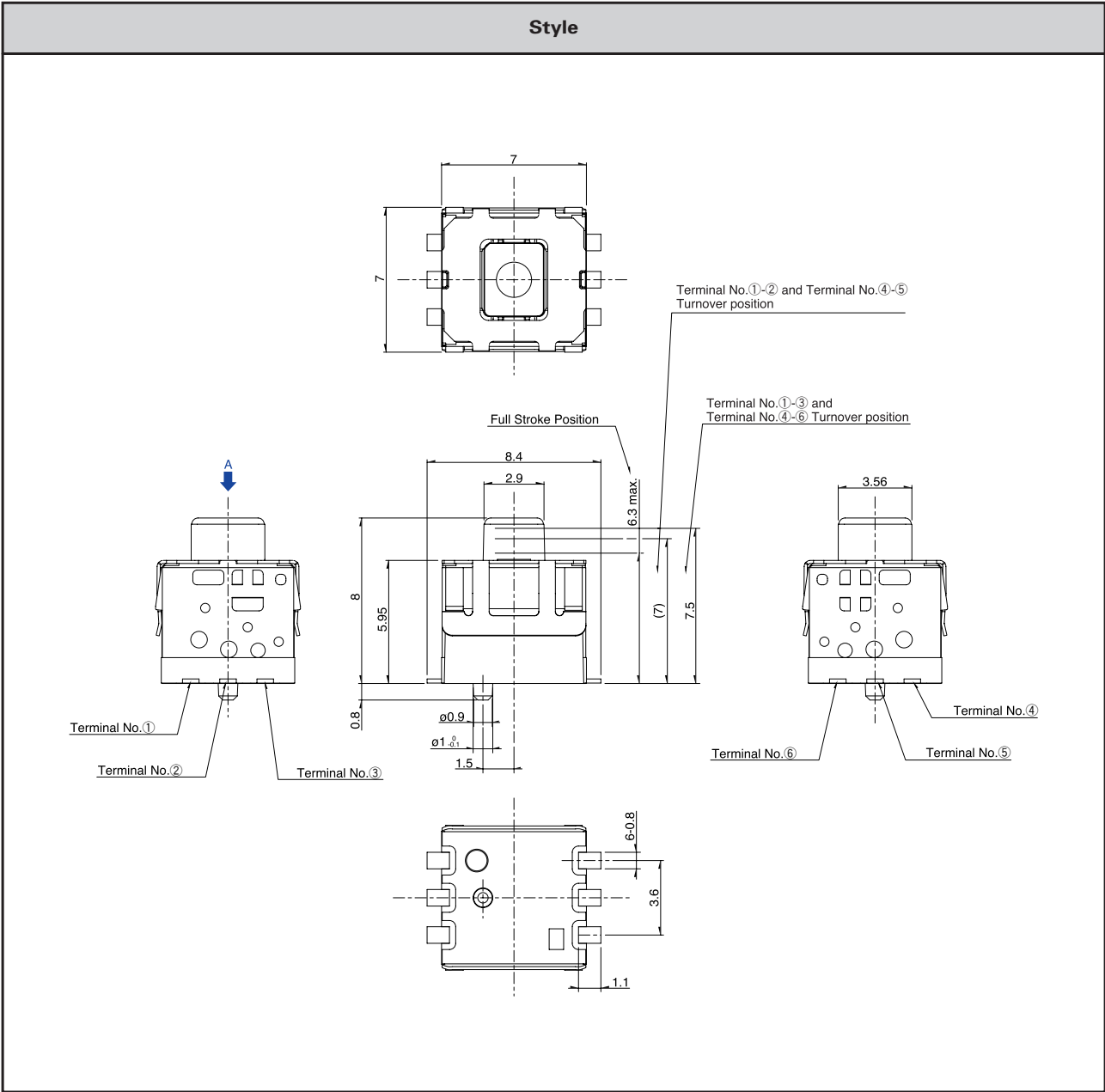
Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case /Japan	1 case /export packing		
500	1,000	2,000	24	404×397×140

Note

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

Dimensions

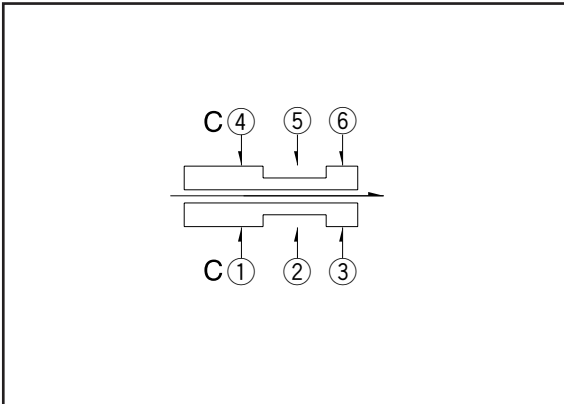
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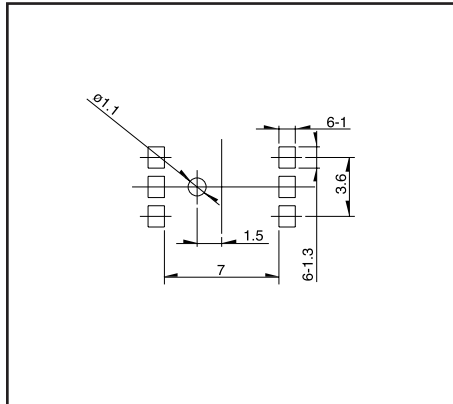
- Horizontal Type
- Vertical Type

Circuit Diagram (Viewed from Direction A)



Recommend Pattern

Unit:mm



List of Varieties

Series		SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ ※1	SPUP ※1	SPUN	SPUN medium current※1	SPEG	SPEJ	
Detector	Photo											
Push	Travel (mm)	0.3 0.71	1.5	2.5		2	1.5 2	2.5		—	1.7	
Slide	Total travel (mm)	0.9	2.5	3.5		3	2.5 3	3.5		1.2	1.7	
Rotary	Number of poles	1	2	1 2	2	2 4				1	2	
Encoders	Dimensions (mm)	W	4	9	6.6	7.2	7.5		10		7.15	7
Power		D	5		12		15.2 22.7		24 36		8.35	7
Dual-in-line Package Type		H	1.22	4.5	8.3	9.6	8.8	10.3	13		3.5	8
TACT Switch™	Operating temperature range	-10°C to +60°C		-40°C to +85°C		-10°C to +60°C				-40°C to +85°C		
Custom-Products	Rating (max.) (Resistive load)	20mA 5V DC	0.2A 12V 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	—	
Horizontal Type	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	
Vertical Type	Mechanical performance	Terminal strength	5N for 1minute								0.5N for 1minute	—
		Actuator strength	Operating direction	50N		30N		50N			50N	49N
Pulling direction	—							—	—			
Durability	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.			10,000cycles 14V DC, 0.2A	
Environmental performance	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	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.133	—								Please see P.133
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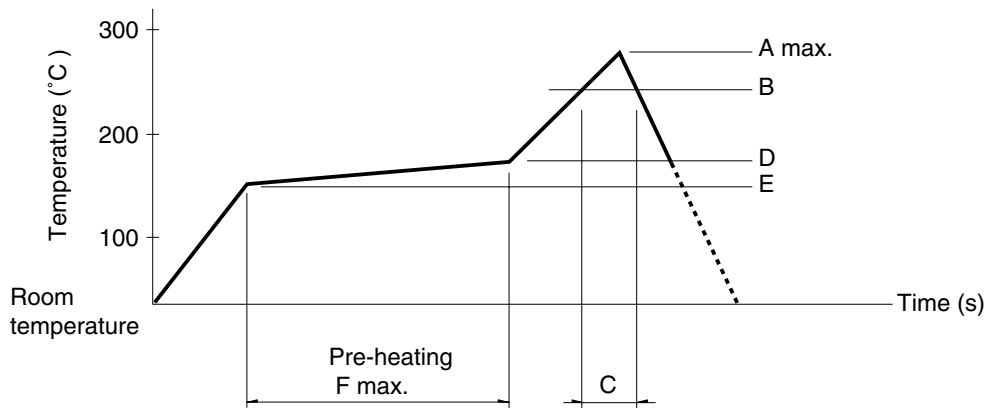
Notes

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.

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.

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