


















Index by function

Series	SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ	SPUP	SPUN	SPPH2	SPPH4	SPPH1	SPEA	SPEC	SPED2	SPED3	SPED4	SPED5	SPEF	
Photo																		
Travel (mm)	0.3 0.71	1.5	2.5		2	1.5 2	2.5	1	2.2	1.5	1.2	2.5	—				1.5	
Total travel (mm)	0.9	2.5	3.5		3	2.5 3	3.5	1.5	3	2.5	1.7	3.4	4.5	3.8			2.7	
Number of poles	1	2	1 2	2	2 4			2			2 4	2	1					
Dimensions (mm)	W	4	9	6.6	7.2	7.5		10	6.5	8.5	10	12		14		13.5	9.4	
	D	5	9	12		15.2 22.7		24 36	6	6.5	10		16.8	18	18.2	9		
	H	1.22	4.5	8.3	9.6	8.8	10.3	13	6.5	8.5		12.5	26.7	20.7		6.9		
Soldering	Manual soldering	●	●	●	●	●	●	●	●	●	●	●	● ※3	—	●	—	●	
	Dip soldering	—	●	●	●	●	●	●	●	●	●	●	● ※3	—	●	—	● ※5	
	Reflow	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	
Minimum packing unit※1※2 (pcs.) ※4	4500		100														165	150
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Notes

- ※1. Place your purchase order in N minimum package units (N: integer).
- ※2. Ask us for the export packaging unit.
- ※3. Applicable to SPED220200 (PC board type) only.
- ※4. For specifications for the taping package, see P.107.
- ※5. Applicable to SPEF110100 only.

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 ⁺¹ ±1s		300±10°C 3 ⁺¹ ±1s	350±10°C 3 ⁺¹ ±1s		350°C max. 3s max.	350±10°C 3 ⁺¹ ±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°C max. 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.	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.		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.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type