

Slide Switch 3.5(H)mm, 2mm-travel Type

SSSS2 Series



Excellent for compact, high density mobile devices.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

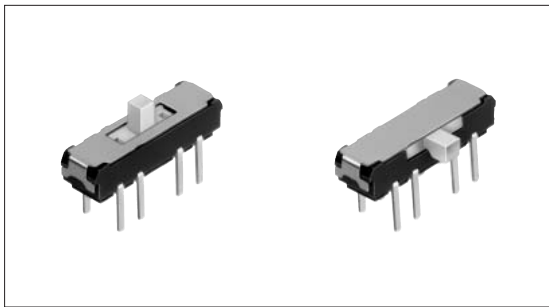
TACT Switch™

Custom-
Products

Small size
General Use type

Big size
General Use type

Other Use type



Features

- 2mm-travel.
- Reflow solderable type is also available.
- All varieties are non-shorting types.

Applications

- Mode changeover for DVD players, LCD TVs, portable CD/MD players, remote controls, etc.
- Switches for vending machines, interphones, and insect repellants

Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.3A 6V DC/50 μ A 3V DC
Contact resistance (Initial performance/After lifetime)		70m Ω max./130m Ω max.
Operating force		Refer to the dimensions.
Operating life	Without load	※ 10,000 cycles
	With load	※ 10,000 cycles (0.3A 6V DC)

Note

※SSSS213202 only 100 cycles

Products Line

Travel (mm)	Operating section directions	Length of operating section (mm)	Poles	Positions	Changeover timing	Soldering	Minimum packing unit (pcs.)	Products No.	Drawing No.	
2	Vertical	2	1	2	Non shorting	Manual, Dip	100	SSSS213000	1	
				3				SSSS211900	2	
			2	2				SSSS222700	3	
				3				SSSS223600	4	
			1	2				1,200	SSSS213202	5
				3				1,000	SSSS212901	6
	4	100		SSSS213100		7				
	2		Manual, Dip	SSSS212200		8				
				2		SSSS212400	9			
				3		SSSS223200	10			
	1			2		1,400	SSSS223900	11		
							4	SSSS224100	12	
							2	SSSS211603	13	
	2			3		1,400	SSSS212301	14		
							SSSS224001	15		

Note

Additional switches not included in the above list are also available. Contact us for details.

For other specifications, see P.149
For specifications for the taping package, see P.150

Dimensions

Vertical Operating Section Type

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from the direction A)
1		<p>Operating force with detent : 1.5N</p>	
2		<p>Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N b → c } 2.5N</p>	
3		<p>Operating force with detent : 1.5N</p>	
4			
5		<p>Operating force with detent: 3N</p>	
6		<p>Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N b → c } 2.5N</p> <p>Natural color</p> <p>Terminal pitch : 2mm</p>	

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Horizontal Operating Section Type

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from the direction A)
7		<p>Operating force with detent : 1.5N</p>	<p>3-ø0.8 holes</p>
8		<p>Operating force with detent : a → b, c → b } 1.5N b → a, b → c } 2.5N</p>	<p>4-ø0.8 holes</p>
9		<p>Operating force with detent : b → a, b → c, c → d, c → b } 2.5N a → b, d → c } 1.5N</p>	<p>10-ø0.9 holes</p>
10		<p>Operating force with detent : 1.5N</p>	<p>6-ø0.8 holes</p>
11		<p>Operating force with detent : a → b, c → b } 1.5N b → a, b → c } 2.5N</p>	<p>8-ø0.8 holes</p>
12		<p>Operating force with detent : b → a, b → c, c → d, c → b } 2.5N a → b, d → c } 1.5N</p>	<p>10-ø0.9 holes</p>

Dimensions

Horizontal Operating Section Type, Reflow

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from the direction A)
13		<p>Operating force with detent : 1.5N</p>	
14		<p>Operating force with detent : a → b, c → b } 1.5N b → a, b → c } 2.5N</p>	
15		<p>Operating force with detent : a → b, c → b } 1.5N b → a, b → c } 2.5N</p>	

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Circuit Diagram (Viewed from the Direction A)

<p>1-pole, 2-positions</p>	<p>1-pole, 3-positions</p>	<p>2-poles, 2-positions</p>	<p>2-poles, 3-positions</p>
<p>1-pole, 2-positions</p>	<p>1-pole, 3-positions</p>	<p>1-pole, 4-positions</p>	
<p>2-poles, 2-positions</p>	<p>2-poles, 3-positions</p>	<p>2-poles, 4-positions</p>	
<p>1-pole, 2-positions</p>	<p>1-pole, 3-positions</p>	<p>2-poles, 3-positions</p>	

Products Specifications

Items		Series	SSAD	SSSS8	SSSS7	SSSS2	SSSS9	SSSF	SSSU	
		Operating temperature range		-10°C to +60°C						
Rating (max.) (Resistive load)		1mA 5V DC	0.3A 4V DC		0.3A 6V DC	0.1A 12V DC	0.1A 30V DC			
Electrical performance	Initial contact resistance	100mΩ max.	70mΩ max.			30mΩ max.	25mΩ max.			
	Insulation resistance	100MΩ min. 100V DC			100MΩ min. 500V DC					
	Voltage proof	100V AC for 1 min.			500V AC for 1 min.					
Mechanical performance	Robustness of terminal	3N for 1 min.					5N for 1 min.			
	Robustness of actuator	Operating direction	5N	10N	20N	30N				
		Pulling direction	5N	10N Static force		10N	30N Static force			
	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	300±5°C 5s max.		260±5°C 3s max.	350±10°C 4s max.	300±10°C 5s max.	350±10°C 5s max.	350±10°C 3 ⁺¹ ₀ s	
		Dip soldering	—			260±5°C 5 ₋₁ s			260±5°C 10±1s	
Reflow soldering		Please see P.161					—			
Durability	Operating life without load	※ 10,000 cycles 100mΩ max.				10,000 cycles 60mΩ max.	10,000 cycles 45mΩ max.			
	Operating life with load Load : As rating	10,000 cycles 200mΩ max.	※ 10,000 cycles 130mΩ max.			10,000 cycles 80mΩ max.	10,000 cycles 65mΩ max.			
Environmental performance	Cold	-20±2°C for 96h								
	Dry heat	85±2°C for 96h								
	Damp heat	40±2°C, 90 to 95%RH for 96h								

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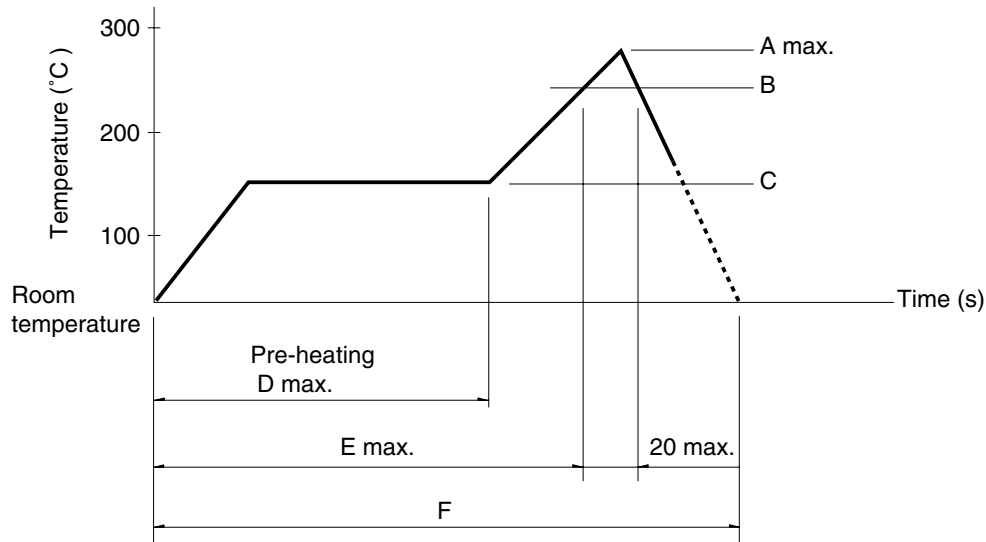
Note

※ SSSS213202 only 100 cycles.

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



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Series (Reflow type)			A (°C) 3s max.	B (°C)	C (°C)	D (s)	E (s)	F (s)
SSSS2	Vertical	1-pole, 3-positions	250	200	150	120	—	—
	Horizontal	1-pole, 2-positions						
	Vertical	1-pole, 2-positions	240					
	Horizontal	1-pole, 3-positions 2-poles, 3-positions						
SSSS7			250					
SSAD			240	220				
SSSS8	Horizontal	1-pole, 2-positions 1-pole, 3-positions (1.5mm)	255	200				
		1-pole, 3-positions (2mm) 1-pole, 4-positions 2-poles, 2-positions	240	220				
	Vertical							
SSST				200				

Notes

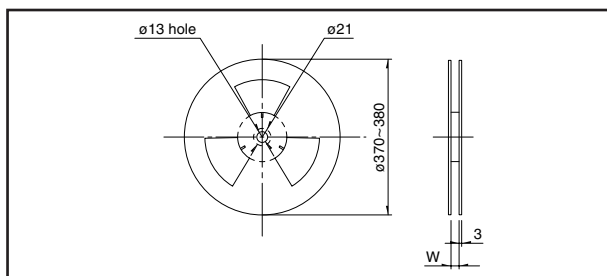
1. The condition mentioned above is the temperature on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the PC board's material, size, thickness, etc. The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines. You are requested to verify the soldering conditions thoroughly beforehand.

Taping Specifications

Taping Packaging

Reel Size

Unit:mm



Series			Number of packages (pcs.)			Reel width W (mm)	Tape width (mm)
			1 reel	1 case/domestic	1 case/export packing		
SSSS2	Vertical	1-pole, 2-positions	1,200	2,400	4,800	24.4	24
		1-pole, 3-positions	1,000	2,000	4,000		
	Horizontal		1,400	2,800	5,600		
SSSS7 ※	SSSS71		2,000	4,000	8,000	16.4	16
	SSSS7A SSSS7B		2,000	4,000	8,000	25.5	24
	SSSS7C		4,800	9,600	19,200	24.4	
SSSS8	Vertical		1,800	3,600	7,200	16.4	16
	Horizontal	1-pole, 2-positions (1.5mm) 1-pole, 2-positions (2mm) 1-pole, 3-positions (1.5mm)	4,500	9,000	18,000		
		1-pole, 3-positions (2mm)	2,500	5,000	10,000		
		1-pole, 4-positions 2-poles, 2-positions					
SSST			1,100	2,200	4,400	16.4	16
SSAD			5,000	10,000	20,000		

Notes

1. Order products in N minimum packing units (1 reel or 1 case).
2. ※For the SSSS7 Series only, the reel is different from what is illustrated.