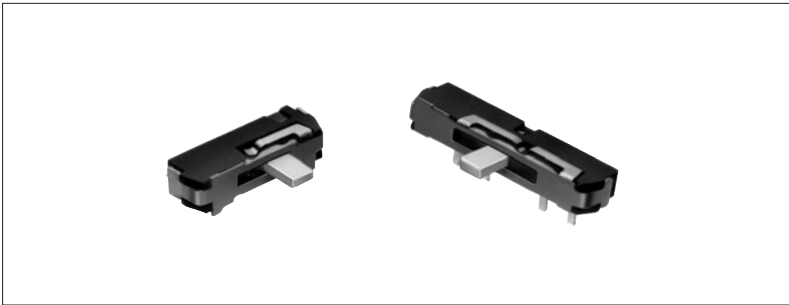


2(H)mm, 2mm-travel Type Slide Switch

SSSS7 Series

Compact general type that can select self-returns.

- Power
- Push
- Slide**
- Rotary
- Encoders
- Jog Shuttle
- Telephone-hook
- Detector
- Vibration Sensors
- Dual-in-line Package Type
- Multi Control Devices
- TACT
- Small size General Use type
- Big size General Use type
- Other Use type



Car Use

Features

- 2mm-travel.
- Suitable for reflow-soldering.

Applications

- Mode changeover for digital video cameras, digital cameras, notebook PCs, Personal digital assistants, memory cards, etc.
- For switching bands of MD players, DVD players, CD players, headphone stereos, silicon audio systems, LCD TVs, and audio mixers

Typical Specifications

Items		Specifications
Rating (max.) (Resistive load)		0.3A 4V DC
Contact resistance (Initial performance / After lifetime)		70mΩ max. / 130mΩ max.
Operating force		Refer to the dimensions.
Operating life	Without load	10,000 cycles
	With load	10,000 cycles (0.3A 4V DC)

Products Line

Travel (mm)	Operating section directions	Length of operating section (mm)	Poles	Positions	Changeover timing	Soldering	Operating	Minimum packing unit (pcs.)	Products No.	Drawing No.		
2	Horizontal	2	1	2	Not specified	Manual	Standard	100	SSSS710100	1		
						Reflow			2,000	SSSS710603	2	
				3	Non shorting	Manual		100	SSSS711100	4		
			Reflow			2,000			SSSS711403	5		
			1	2	2	2		Not specified	Manual	100	SSSS720100	8
									3		Non shorting	Reflow
SSSS7A0202	7											
1.5	Horizontal	0.9	1	2	Not specified	Reflow	Double-side recoil	2,000	SSSS7B0101	3		
									1.5	SSSS7C0101	9	
									SSSS7C0201			

Note

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

For other detailed specifications, see P.150
For specifications for the taping package, see P.153

Power

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Rotary

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TACT

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Other Use type

Dimensions

Unit : mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
1	<p>1-pole, 2-positions</p> <p>Operating force with detent : 1.5±1N</p>	<p>3-$\varnothing 0.6^{+0.1}$ hole</p>
2	<p>1-pole, 2-positions Reflow</p> <p>Operating force with detent : 1.5±1N</p>	<p>2-$\varnothing 0.8^{+0.05}$ hole</p>
3	<p>1-pole, 2-positions reflow Double-side recoil type</p> <p>Operating force with detent : $\begin{matrix} b \rightarrow a \\ b \rightarrow c \end{matrix} 2^{+0.5}N$</p>	<p>2-$\varnothing 0.8^{+0.05}$ hole</p>
4	<p>1-pole, 3-positions</p> <p>Operating force with detent : $\begin{matrix} a \rightarrow b \\ c \rightarrow b \end{matrix} 1.75\pm 1N$ $\begin{matrix} b \rightarrow a \\ b \rightarrow c \end{matrix} 2.5\pm 1N$</p>	<p>4-$\varnothing 0.6^{+0.1}$ hole</p>
5	<p>1-pole, 3-positions Reflow</p> <p>Operating force with detent : $\begin{matrix} a \rightarrow b \\ c \rightarrow b \end{matrix} 1.75\pm 1N$ $\begin{matrix} b \rightarrow a \\ b \rightarrow c \end{matrix} 2.5\pm 1N$</p>	<p>2-$\varnothing 0.8^{+0.05}$ hole</p>

Dimensions

Unit : mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
6	<p>1-pole, 3-positions Reflow Single-side recoil type</p> <p>Operating force with detent : b → c : 2.25±1N c → b : 1.75±1N b → a : 2.1±0.5N</p>	<p>2-ø0.8^{+0.05}/₀ hole</p>
7	<p>1-poles, 3-positions Reflow Single-side recoil type</p> <p>Operating force with detent : b → c : 1.5±0.5 N c → b : 1.6±0.7N b → a : 2.2±0.7N</p>	<p>2-ø0.8^{+0.05}/₀ hole</p>
8	<p>2-poles, 2-positions</p> <p>Operating force with detent : 1.5±1N</p>	<p>6-ø0.6^{+0.1}/₀ hole</p>
9	<p>1-poles, 2-positions Reflow Double-slide recoil type</p> <p>Operating force with detent: 1±0.3 N</p>	<p>Pattern section</p>

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Power

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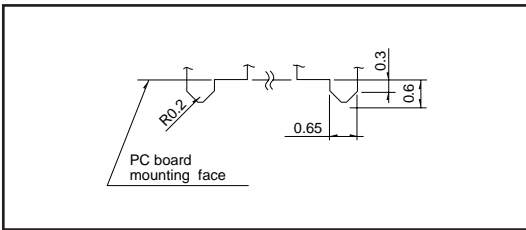
TACT

Small size
General Use type

Big size
General Use type

Other Use type

Detail of (a) Unit : mm



Circuit Diagram (Viewed from the Direction A)

<p>1-pole, 2-positions</p>	<p>1-pole, 2-positions Reflow</p>	<p>1-pole, 2-positions Reflow Double-side recoil type</p> <p>※ : Dummy terminal</p>
<p>1-pole, 3-positions</p>	<p>1-pole, 3-positions Reflow</p>	<p>1-pole, 3-positions Reflow Single-side recoil type</p>
<p>2-poles, 2-positions</p>	<p>1-pole, 2-positions Reflow Double-side recoil type</p>	

Products Specifications

Items		Series	SSAD	SSSS8	SSSS7	SSSS2	SSSS9	SSSF	SSSU
		Operating temperature range		-10°C to +60°C					
Power	Rating (max.) (Resistive load)		1mA 5V DC	0.3A 4V DC		0.3A 6V DC	0.1A 12V DC	0.1A 30V DC	
Push	Electrical performance	Initial contact resistance	100mΩ max.	70mΩ max.			30mΩ max.	25mΩ max.	
Slide		Insulation resistance	100MΩ min. 100V DC		100MΩ min. 500V DC				
Rotary		Voltage proof	100V AC for 1 min.		500V AC for 1 min.				
Encoders	Mechanical performance	Robustness of terminal	3N for 1 min.					5N for 1 min.	
Jog Shuttle		Robustness of actuator	Operating direction	5N	10N	20N	30N		
Telephone-hook			Pulling direction	5N	10N static force		10N	30N static force	
Detector		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						
Vibration Sensors	Solderability		230±5°C, 3±0.5s						
Dual-in-line Package Type	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	
Multi Control Devices		Dip soldering	—			※1 260±5°C 5 ₋₁ s		260±5°C 10±1s	
TACT		Reflow soldering	Please see P.152				—		
Durability	Operating life without load		※2 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.	※2 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						

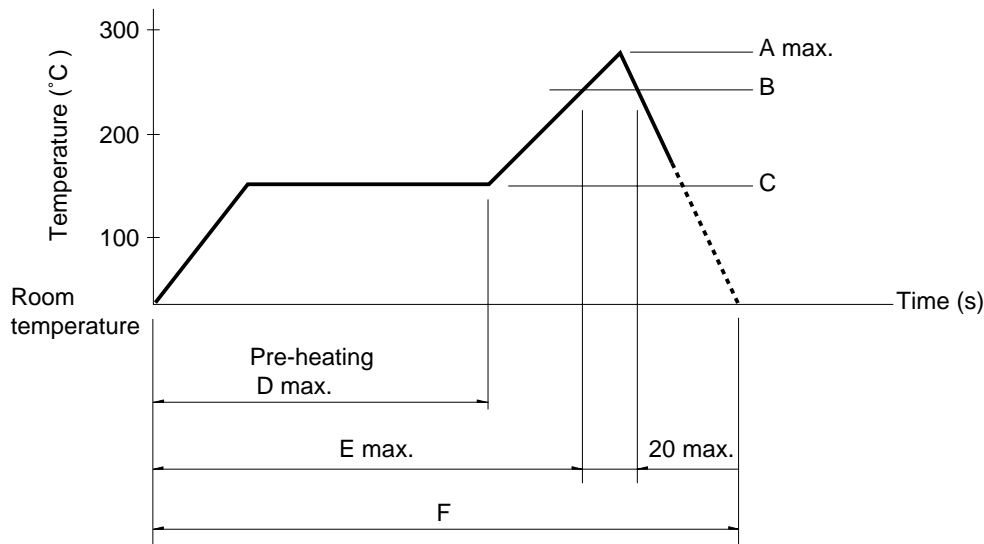
Note

- ※1 Horizontal type products in SSSS2 Series with 1 pole and 2 positions are not dip solderable.
- ※2 SSSS213202 only 100cycles.

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 (°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										
	Horizontal	1-pole, 3-positions 2-poles, 3-positions	240									
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			240	200								

Notes

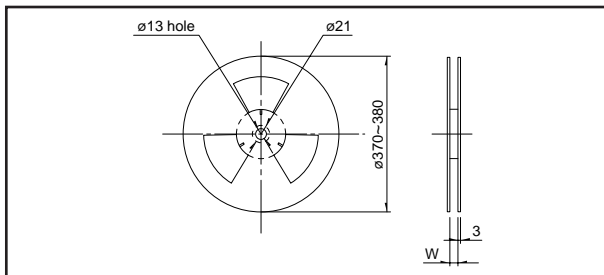
1. The condition mentioned above is the temperature on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the PC board's material, size, thickness, etc. The above-stated conditions shall also apply to switch surface 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		1,400	2,800	5,600	24.4	24	
SSSS7※		2,000	4,000	8,000	25.5		
SSSS8	Vertical	1,800	3,600	7,200	24.4	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		16.4
		1-pole, 3-positions (2mm)	4,500	9,000	18,000		24.4
		1-pole, 4-positions 2-poles, 2-positions	2,500	5,000	10,000		
SSST		1,100	2,200	4,400	16.4	16	
SSAD		5,000	10,000	20,000			

Notes

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

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TACT

Small size
General Use typeBig size
General Use type

Other Use type