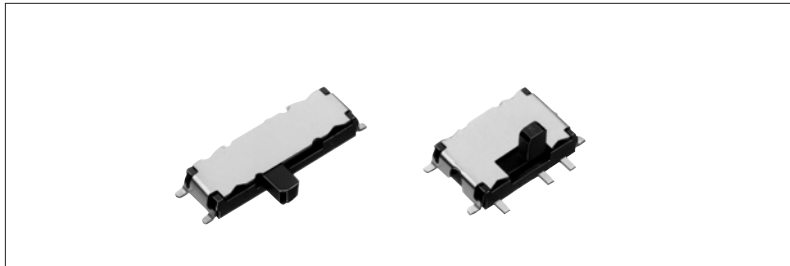


1.4(H)mm, 1.5/2mm-travel Surface Mount Type Slide Switch

SSSS8 Series

A low-profile slide switch whose main body thickness is 1.4mm



Car Use

Features

- Travel lengths of 1.5 mm and 2 mm are available.
- Suitable for reflow-soldering.

Applications

- For selecting modes of digital camcorders and digital cameras
- For keylocking mobile phones
- For switching modes of headphone stereos, LCD TVs, silicon audio systems, portable CD/MD players, IC recorders and VCR/cameras
- For switching function modes of information communication devices including PCs, PDAs, and memory cards
- For switching modes of electronic instruments (e.g., mixers), health appliances and electronic mosquito repellents
- For switching modes of remote controllers

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	Operating section thickness (mm)	Poles	Positions	Changeover timing	Ground terminal	Soldering	Minimum packing unit (pcs.)	Products No.	Drawing No.
1.5	Vertical	t0.8	2	2	Not specified	Without	Reflow	1,800	SSSS820101	1
				3					SSSS820301	2
				2					SSSS820201	1
				3					SSSS820501	2
	Horizontal	t0.4	1	4		Without		2,500	SSSS812801	5
				2					SSSS810701	3
				3					SSSS811501	4
				2					SSSS821801	6
		t1.1	1	4		With		2,500	SSSS812701	5
				2					SSSS811101	3
				3					SSSS812201	4
				2					SSSS810201	7
2	t1.1	1	3	With	4,500	SSSS810301	8			
			3							

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

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

Dimensions

Vertical Operating Section Type 1.5mm-travel

Unit : mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
1	<p>2-poles, 2-positions</p> <p>Terminal No.① 0.4 3 1.5 0.75 With ground terminal dimensions</p> <p>Travel 1.5</p> <p>Operating force : 2±1.5N</p>	<p>2-ø0.9^{+0.05} hole 3 1.5 6-Pattern section</p> <p>4-Pattern section for ground terminal</p>
2	<p>2-poles, 3-positions</p> <p>Terminal No.① 1.5 3 1.5 0.4 With ground terminal dimensions</p> <p>Travel 1.5</p> <p>Operating force : a → b, c → b } 2±1.5N b → a, b → c } 2.5±1.5N</p>	<p>2-ø0.9^{+0.05} hole 1.5 3 1.5 8-Pattern section</p> <p>4-Pattern section for ground terminal</p>

Note Products not marked with ※ in the drawing have no ground terminal.

Circuit Diagram (Viewed from the Direction A)

<p>2-poles, 2-positions</p>	<p>2-poles, 3-positions</p>
------------------------------------	------------------------------------

- 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

Dimensions

Horizontal Operating Section Type 1.5mm-travel

Unit : mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
3	<p>1-pole, 2-positions</p> <p>Terminal No.①</p> <p>With ground terminal dimensions</p> <p>Travel</p> <p>Operating force : 1.5±1N</p>	<p>2-ø0.9^{±0.05} hole</p> <p>3-pattern section</p> <p>4-Pattern section for ground terminal</p>
4	<p>1-pole, 3-positions</p> <p>Terminal No.①</p> <p>With ground terminal dimensions</p> <p>Travel</p> <p>Operating force : a → b } 1.5±1N c → b } b → a } 2±1.5N b → c }</p>	<p>2-ø0.9^{±0.05} hole</p> <p>4-pattern section</p> <p>4-pattern section for ground terminal</p>
5	<p>1-pole, 4-positions</p> <p>Terminal No.①</p> <p>With ground terminal dimensions</p> <p>Travel</p> <p>Operating force : a → b } 1.5±1N d → c } b → c } 2±1.5N c → d } c → b } b → a }</p>	<p>6-pattern section</p> <p>4-pattern section for ground terminal</p> <p>2-ø0.9^{±0.05} hole</p>

Note

Products not marked with ※ in the drawing are of without ground terminal type.

Dimensions

Horizontal Operating Section Type1.5mm-travel

Unit : mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
6	<p>2-poles, 2-positions</p> <p>Terminal No. ①</p> <p>With ground terminal dimensions</p> <p>Operating force : 1.5±1N</p>	<p>6-pattern section</p> <p>4-pattern section for ground terminal</p> <p>2-ø0.9^{+0.05} hole</p>

Horizontal Operating Section Type2mm-travel

Unit : mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
7	<p>1-pole, 2-positions</p> <p>Terminal No. ①</p> <p>With ground terminal dimensions</p> <p>Operating force : 1.5±1N</p>	<p>2-ø0.9^{+0.05} hole</p> <p>4-pattern section</p> <p>4-pattern section for ground terminal</p>
8	<p>1-pole, 3-positions</p> <p>Terminal No. ①</p> <p>With ground terminal dimensions</p> <p>Operating force : a → b } 1.5±1N c → b } 2±1.5N</p>	<p>6-pattern section</p> <p>4-pattern section for ground terminal</p> <p>2-ø0.9^{+0.05} hole</p>

Note

Products not marked with ※ in the drawing have no ground terminal.

Power

Push

Slide

Rotary

Encoders

Jog Shuttle

Telephone-hook

Detector

Vibration Sensors

Dual-in-line Package Type

Multi Control Devices

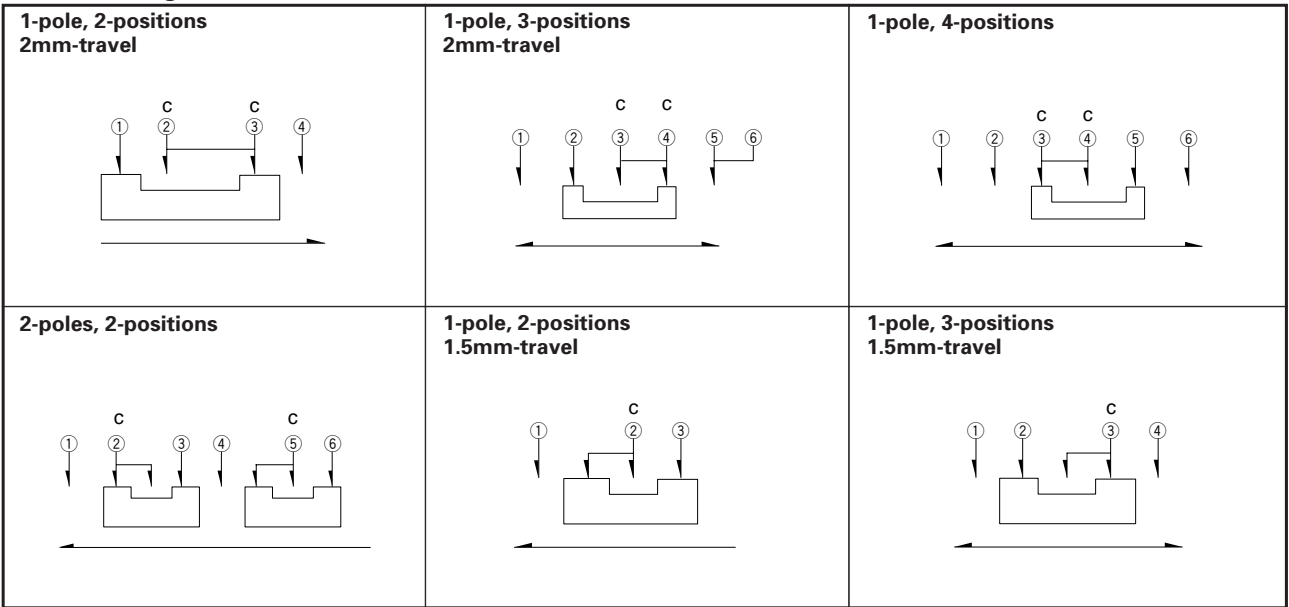
TACT

Small size
General Use type

Big size
General Use type

Other Use type

Circuit Diagram (Viewed from the Direction A)



Products Specifications

Items	Series		SSAD	SSSS8	SSSS7	SSSS2	SSSS9	SSSF	SSSU	
	Power	Operating temperature range		-10°C to +60°C						
Push	Rating (max.) (Resistive load)		1mA 5V DC	0.3A 4V DC		0.3A 6V DC	0.1A 12V DC	0.1A 30V DC		
Slide	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.					
Rotary	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	Mechanical performance	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	Durability	Reflow soldering	Please see P.152				—			
Small size General Use type		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.			
	Big size General Use type	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							
Other Use type										

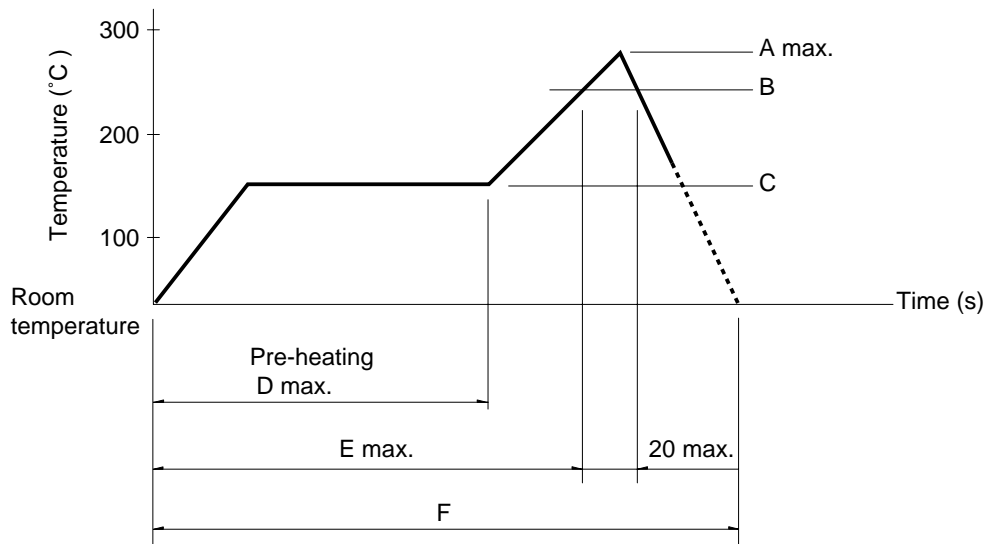
Note

- ※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.

- Power
- Push
- Slide**
- Rotary
- Encoders
- Jog Shuttle
- Telephone-hook
- Detector
- Vibration Sensors
- Dual-in-line Package Type
- Multi Control Devices
- TACT

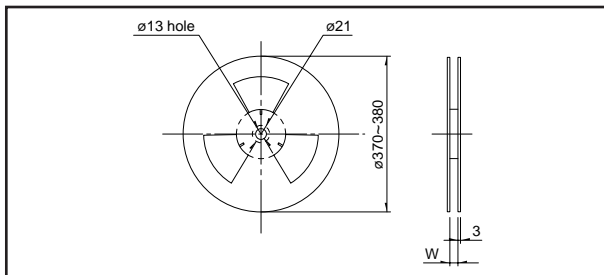
- Small size General Use type
- Big size General Use type
- Other Use type

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.

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 typeBig size
General Use type

Other Use type