

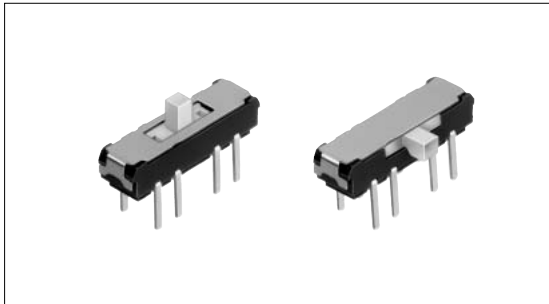
Slide Switch 3.5(H)mm, 2mm-travel Type

SSSS2 Series



Excellent application for designing compact and high density portable devices.

- Detector
- Push
- Slide**
- Rotary
- Encoders
- Power



Typical Specifications

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

Note

Operating life for SSSS213202 is 100 cycles

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Small size
General Use type

Big size
General Use type

Other Use type

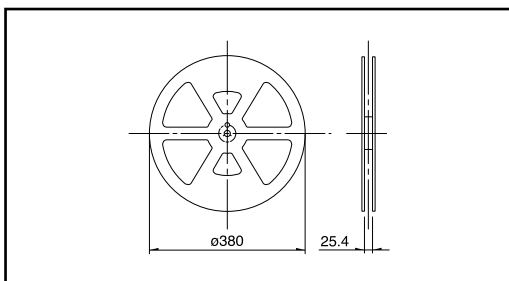
Product Line

Travel (mm)	Actuator direction	Actuator length (mm)	Poles	Positions	Changeover timing	Soldering	Minimum order unit (pcs.)	Products No.	Drawing No.		
2	Vertical	2	1	2	Non shorting	Manual, Dip	10.000	SSSS213000	1		
				3				SSSS211900	2		
			2	2				SSSS222700	3		
				3				SSSS223600	4		
			1	2				SSSS213202	5		
				3				SSSS212901	6		
	Horizontal	1	2	2	Manual, Dip	10.000	SSSS213100	7			
				3			SSSS212200	8			
				4			SSSS212400	9			
		2	2	SSSS223200			10				
			3	SSSS223900			11				
			4	SSSS224100			12				
		1	2	3			2	Reflow	5.600	SSSS211603	13
										SSSS212301	14
		2	3	SSSS224001			15				

Taping Specification (Taping Packaging)

Reel Size

Unit:mm



Series		Number of packages (pcs.)			Tape width (mm)
		1 reel	1 case /Japan	1 case /export packing	
Vertical	1-pole, 2-positions	1,200	2,400	4,800	24
	1-pole, 3-positions	1,000	2,000	4,000	
Horizontal		1,400	2,800	5,600	

Notes

1. Products other than those listed in the above chart are also available. Please contact us for details.
2. Please place purchase orders per minimum order unit(integer).

■ Dimensions

Vertical Actuator 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>	<p>3-ø0.8 holes</p>
2		<p>Operating force with detent : a → b } 1.5N c → b } b → a } 2.5N b → c }</p>	<p>4-ø0.8 holes</p>
3		<p>Operating force with detent : 1.5N</p>	<p>6-ø0.8 holes</p>
4		<p>Operating force with detent : a → b } 1.5N c → b } b → a } 2.5N b → c }</p>	<p>8-ø0.8 holes</p>
5		<p>Operating force with detent: 3N</p>	<p>Patten section</p>
6		<p>Operating force with detent : a → b } 1.5N c → b } b → a } 2.5N b → c }</p>	<p>Pattern section</p>

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Small size
General Use type

Big size
General Use type


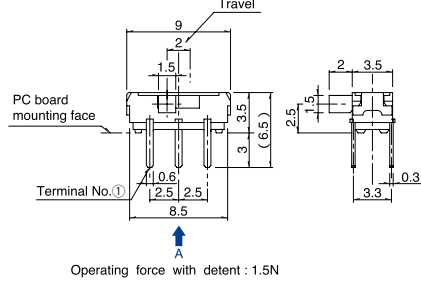
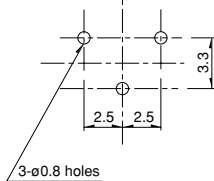
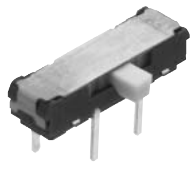
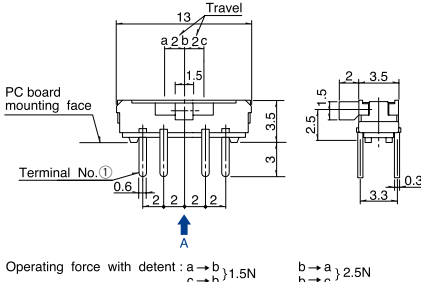
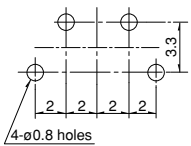

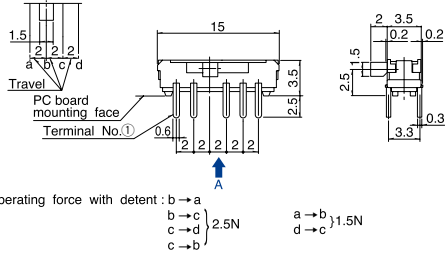
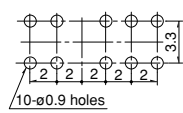

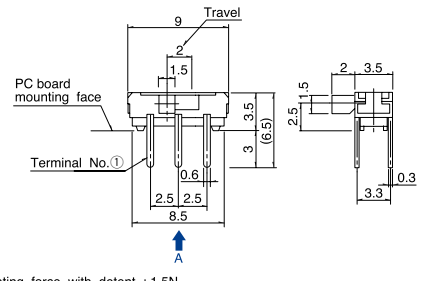
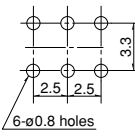
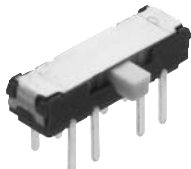
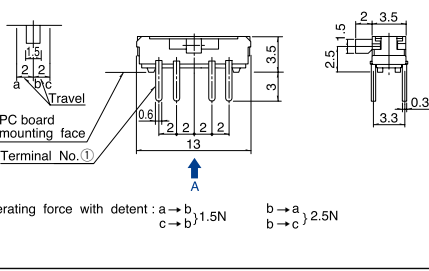
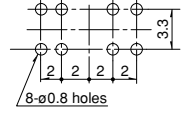
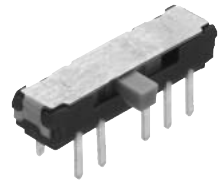
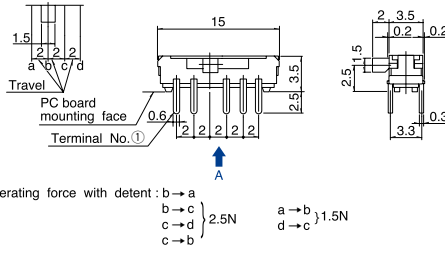
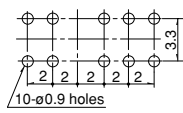
Other Use type

Slide Switch 3.5(H)mm, 2mm-travel Type | SSSS2 Series

Dimensions

Horizontal Actuator 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 Actuator Type, Reflow Type

Unit:mm

No.	Photo	Style	PC board mounting hole and land dimensions (Viewed from the direction A)
13		 Operating force with detent : 1.5N	 Pattern section
14		 Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N	 Pattern section
15		 Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N	 Pattern section

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Small size
General Use type










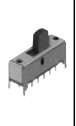
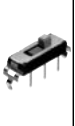


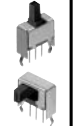
Big size
General Use type

Other Use type

Circuit Diagram (Viewed from Direction A)

1-pole, 2-positions 	1-pole, 3-positions 	2-poles, 2-positions 	2-poles, 3-positions
1-pole, 2-positions 	1-pole, 3-positions 	1-pole, 4-positions 	
2-poles, 2-positions 	2-poles, 3-positions 	2-poles, 4-positions 	
1-pole, 2-positions 	1-pole, 3-positions 	2-poles, 3-positions 	

List of Varieties

Series		SSAG	SSAH	SSAD	SSSS8	SSSS7	SSSS2	SSSS9	SSSF	SSSU	SSSB	SSST	SSAA	SSAC	SSAB		
Photo																	
Outline specifications	Travel (mm)	1.5			1.5 2		2		3		4		2	1.5	1.9 2		
	Actuator direction	Horizontal			Vertical Horizontal	Horizontal	Vertical Horizontal			Vertical		Horizontal		Vertical Horizontal			
	Number of poles	1			1 2		1 2 4		2 4	1	1 2	2	1				
Dimensions (mm)	W	9.05	9.5	6.7	11.2	8.8	13	14	16.5	24.5	29	13	12.4	9.5	9		
	D	3		3.2	2.6	3	3.5	4.7	7		9	4.3	6	5.5	4.2		
	H	1.15	0.9	0.7	1.4	2		5	8.5		12	3.5	5	5.2	8.5		
Operating temperature range		-10 to +60			-40 to +85		-10 to +60										
Rating (max.)(min.) (Resistive load)		10mA 5V DC	1mA 5V DC		0.3A 4V DC		0.3A 6V DC	0.1A 12V DC	0.1A 30V DC		0.3A 30V DC	0.1A 12V DC	0.1A 30V DC	1mA 5V DC	0.1A 12V DC		
		50μA 3V DC															
Electrical performance	Initial contact resistance	200m max.		100m max.	70m max.			30m max.	25m max.		20m max.	70m max.	25m max.	100m max.	30m max.		
	Insulation resistance	100M min. 100V DC				100M min. 500V DC										100M min. 100V DC	100M min. 500V DC
	Voltage proof	100V AC for 1minute				500V AC for 1minute										100V AC for 1minute	500V AC for 1minute
Mechanical performance	Robustness of terminal	3N for 1minute					5N for 1minute			3N for 1minute	5N for 1minute						
	Robustness of actuator	Operating direction	10N		5N	10N	20N	30N		50N	20N	10N	5N	30N			
		Pulling direction	10N		10N Static force			10N	30N Static force		10N	10N	5N	40N			
Durability	Operating life without load	10,000cycles	10,000cycles	10,000cycles 100m max. 2			10,000cycles 60m max.	10,000cycles 45m max.		10,000cycles 40m max.	10,000cycles 100m max.	10,000cycles 45m max.	10,000cycles 200m max.	1,000cycles 60m max.			
	Operating life without load Load as rating	500m max.	300m max.	10,000cycles 200m max.	10,000cycles 130m max. 2			10,000cycles 80m max.	10,000cycles 65m max.		5,000cycles 60m max.	10,000cycles 130m max.	10,000cycles 65m max.	10,000cycles 80m max.			
Environmental performance	Cold	-40 ± 2 for 96h		-20 ± 2 for 96h													
	Dry heat	85 ± 2 for 96h															
	Damp heat	40 ± 2 , 90 to 95%RH for 96h															
Soldering	Manual soldering	350 ± 5 3s max.		300 ± 5 5s max.		260 ± 5 3s max.	350 ± 10 4s max.	300 ± 10 5s max.	350 ± 10 5s max.	350 ± 10 3 ± 1s		350 ± 10 3s max.	300 ± 10 3 ± 1s	300 ± 10 2s	350 ± 10 3 ± 1s		
	Dip soldering						260 ± 5 3 ± 1s	260 ± 5 5 ± 1s		260 ± 5 10 ± 1s		260 ± 5 5 ± 1s	260 ± 10 10 ± 1s	260 ± 10 5 ± 1s	260 ± 5 10 ± 1s		
	Reflow soldering	Please see P.154															
Poles-positions	1-2	—	—								—			—			
	1-3			—											—		
	1-4	—				—					—						
	2-2	—				—									—		
	2-3	—				—									—		
	2-4	—									—						
	4-2	—											—				
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- Detector
- Push
- Slide**
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- TACT Switch™
- Custom-Products

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

Slide Switches Soldering Conditions 154
 Slide Switches Cautions 155

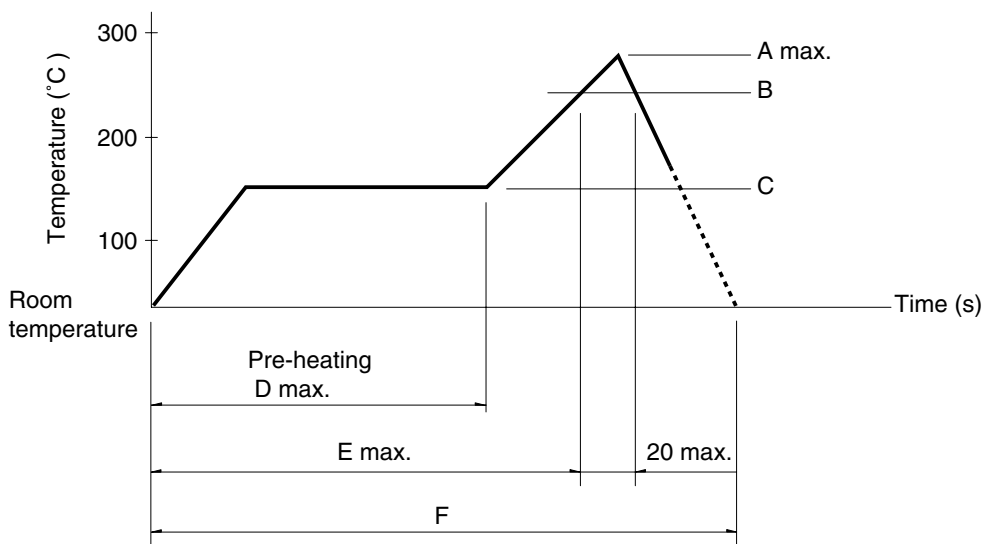
Note

The operating temperature range for automotive applications can be raised upon request. Please contact us for requirements of this kind.

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 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() 3s max.	B()	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					
SSAH, SSAG			260	230	150	120	—	—
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							

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.
3. SSAH and SSAG only 40's.