

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	10,000cycles※
	With load	10,000cycles (0.3A 6V DC)※

Note ※ Operating life for SSSS213202 is 100 cycles

Detector

Slide

Push

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Small size
General Use typeBig size
General Use type

Product Line

Product Line										
Travel (mm)	Actuator direction	Actuator length (mm)	Poles	Positions	Changeover timing	Soldering	Minimum order unit (pcs.)		Products No.	Drawing No.
							Japan	Export		
2	Vertical	2	1	2	Non shorting	Manual, Dip	100	10,000	SSSS213000	1
				3					SSSS211900	2
			2	2					SSSS222700	3
				3					SSSS223600	4
	Horizontal		1	2		Reflow	12,00	4,800	SSSS213202	5
				3			1,000	4,000	SSSS212901	6
				2		Manual, Dip	100	10,000	SSSS213100	7
				3					SSSS212200	8
			4	SSSS212400					9	
			2	2					SSSS223200	10
				3					SSSS223900	11
				4					SSSS224100	12
			1	2		Reflow	1,400	5,600	SSSS211603	13
				3					SSSS212301	14
									2	SSSS224001

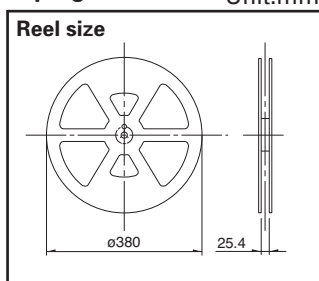
Note

Other varieties are also available. Please inquire.

Packing Specifications

Taping

Unit:mm



Series	Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
	1 reel	1 case / Japan	1 case / export packing		
SSSS213202	1,200	2,400	4,800	24	428 × 413 × 172
SSSS212901	1,000	2,000	4,000		406 × 406 × 190
SSSS211603 SSSS212301 SSSS224001	1,400	2,800	5,600		

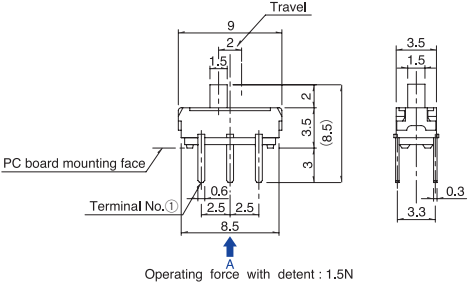
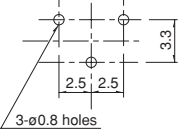
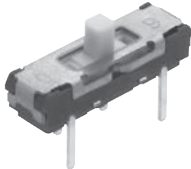
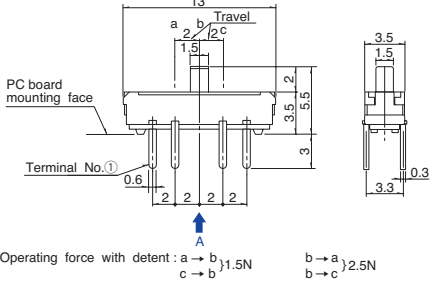
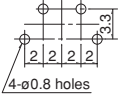
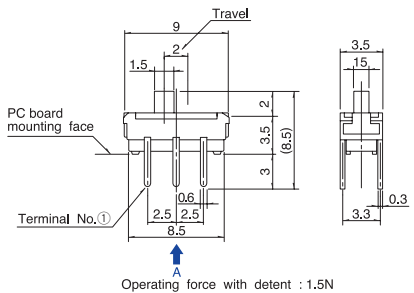
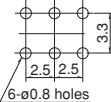
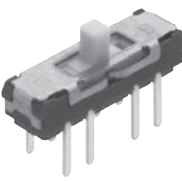
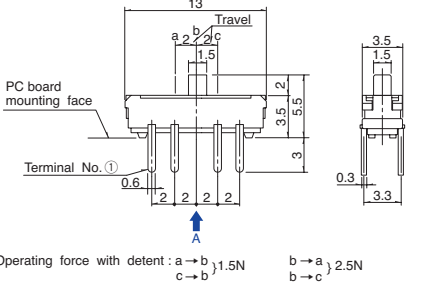
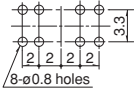
Bulk

Series	Number of packages (pcs.)		Export package measurements (mm)
	1 case / Japan	1 case / export packing	
SSSS211900, SSSS212200, SSSS212400, SSSS213000, SSSS213100, SSSS222700, SSSS223200, SSSS223600, SSSS223900, SSSS224100	2,000	10,000	400 × 270 × 290

Dimensions

Vertical Actuator Type

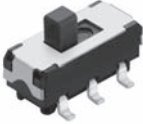
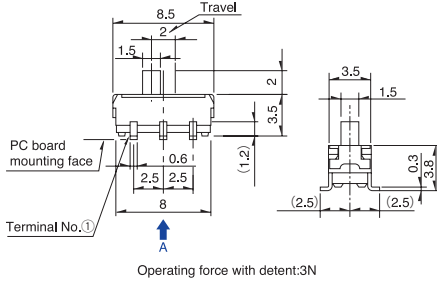
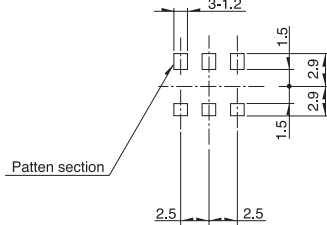
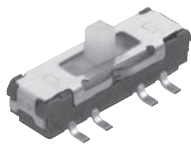
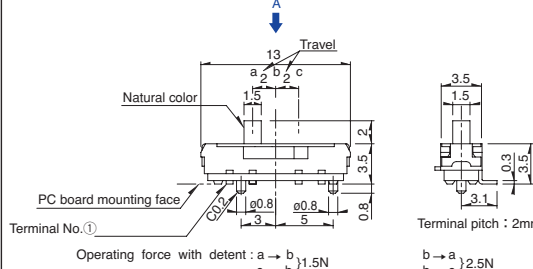
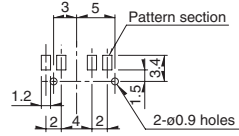
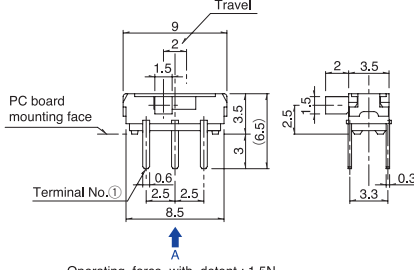
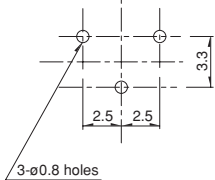
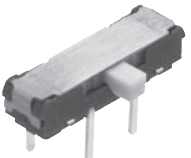
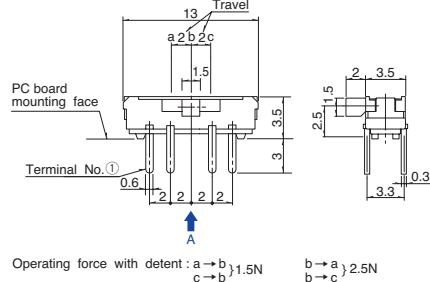
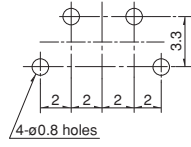
Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from direction A)
1			
2			
3			
4			

Dimensions

Vertical Actuator Type/Horizontal Actuator Type

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from direction A)
5	1-pole, 2-positions Reflow 		
6	1-pole, 3-positions Reflow 		
7	1-pole, 2-positions 		
8	1-pole, 3-positions 		

Detector

Slide

Push

Rotary

Encoders

Power

Dual-in-line
Package Type

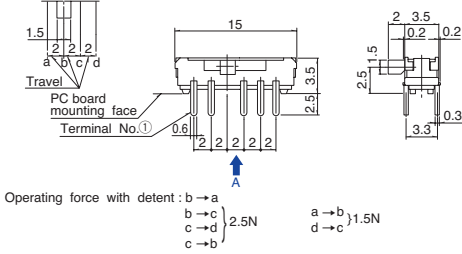
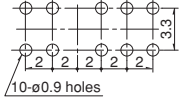
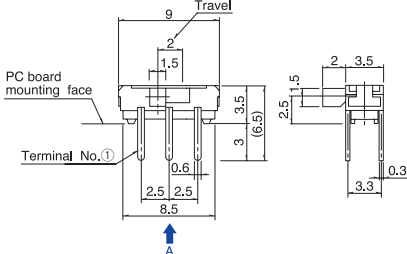
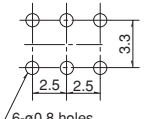
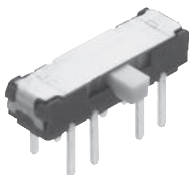
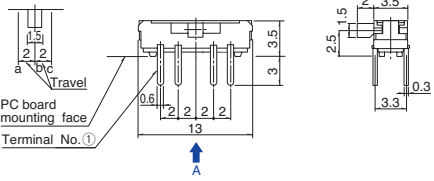
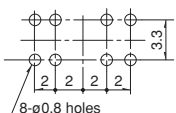
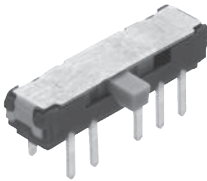
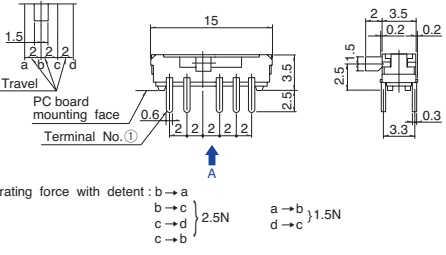
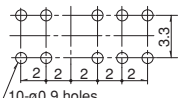
TACT Switch™

Small size
General Use typeBig size
General Use type

Dimensions

Horizontal Actuator Type

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from direction A)
9		 Operating force with detent : $\begin{matrix} b \rightarrow a \\ b \rightarrow c \\ c \rightarrow d \\ c \rightarrow b \end{matrix} \left. \vphantom{\begin{matrix} b \rightarrow a \\ b \rightarrow c \\ c \rightarrow d \\ c \rightarrow b \end{matrix}} \right\} 2.5\text{N}$ $\begin{matrix} a \rightarrow b \\ d \rightarrow c \end{matrix} \left. \vphantom{\begin{matrix} a \rightarrow b \\ d \rightarrow c \end{matrix}} \right\} 1.5\text{N}$	 10-ø0.9 holes
10		 Operating force with detent : 1.5N	 6-ø0.8 holes
11		 Operating force with detent : $\begin{matrix} a \rightarrow b \\ c \rightarrow b \end{matrix} \left. \vphantom{\begin{matrix} a \rightarrow b \\ c \rightarrow b \end{matrix}} \right\} 1.5\text{N}$ $\begin{matrix} b \rightarrow a \\ b \rightarrow c \end{matrix} \left. \vphantom{\begin{matrix} b \rightarrow a \\ b \rightarrow c \end{matrix}} \right\} 2.5\text{N}$	 8-ø0.8 holes
12		 Operating force with detent : $\begin{matrix} b \rightarrow a \\ b \rightarrow c \\ c \rightarrow d \\ c \rightarrow b \end{matrix} \left. \vphantom{\begin{matrix} b \rightarrow a \\ b \rightarrow c \\ c \rightarrow d \\ c \rightarrow b \end{matrix}} \right\} 2.5\text{N}$ $\begin{matrix} a \rightarrow b \\ d \rightarrow c \end{matrix} \left. \vphantom{\begin{matrix} a \rightarrow b \\ d \rightarrow c \end{matrix}} \right\} 1.5\text{N}$	 10-ø0.9 holes

Dimensions

Horizontal Actuator Type, Reflow Type

Unit:mm

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

Detector

Slide

Push

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Small size
General Use typeBig size
General Use type

Circuit Diagram (Viewed from Direction A)

1-pole, 2-positions Drawing No. : 1, 5, 7 	1-pole, 3-positions Drawing No. : 2, 6, 8 	2-poles, 2-positions Drawing No. : 3, 10
2-poles, 3-positions Drawing No. : 4, 11, 15 	1-pole, 4-positions Drawing No. : 9 	2-poles, 4-positions Drawing No. : 12
1-pole, 2-positions Drawing No. : 13 	1-pole, 3-positions Drawing No. : 14 	

Slide Switches

List of Varieties

Series		SSAJ	SSAH	SSSS8	SSAL	SSAG	SSSS7※1	SSSS2	
Photo									
Actuator direction	Horizontal								
	Vertical	—	—		—	—	—		
Dimensions (mm)	W	5.5	9.5	9.7	7.6	9.05	8.8	13	
	D	2.5	3	2.6			3		3.5
	H	0.7	0.9	1.4	1.2	1.15	2		
Poles-positions	1-2		—			—			
	1-3	—			—				
	1-4	—	—	—	—	—	—		
	2-2	—	—		—	—	—		
	2-3	—	—		—	—	—		
	2-4	—	—	—	—	—	—		
	4-2	—	—	—	—	—	—	—	
Travel (mm)		1.4	1.5	1.5 2	2	1.5	2	2	
Operating temperature range		−10℃ to +60℃	−30℃ to +60℃	−40℃ to +85℃	−10℃ to +60℃		−40℃ to +85℃		
Automotive use		—	—		—	—	—	—	
Life cycle									
Rating (max.) (Resistive load)		10mA 5V DC	1mA 5V DC	0.3A 5V DC	10mA 5V DC		0.3A 4V DC	0.3A 6V DC	
Rating (min.) (Resistive load)		50μA 3V DC	—	50μA 3V DC					
Durability	Operating life without load	10,000cycles 500mΩ max.	10,000cycles 300mΩ max.	10,000cycles 100mΩ max.	100,000cycles 10Ω max.	30,000cycles (Lockside) 100,000cycles (Recoilside) 500mΩ max.	10,000cycles 100mΩ max.※2		
	Operating life without load Load:as rating			10,000cycles 130mΩ max.			10,000cycles 130mΩ max.※2		
Electrical performance	Initial contact resistance	300mΩ max.	200mΩ max.	70mΩ max.	10Ω max.	200mΩ max.	70mΩ max.		
	Insulation resistance	100MΩ min. 100V DC					100MΩ min. 500V DC		
	Voltage proof	100V AC for 1minute					500V AC for 1minute		
Mechanical performance	Terminal strength		3N for 1minute						
	Actuator strength	Operating direction	10N	10N	10N	10N	10N	20N	
		Pulling direction		10N Static force			10N Static force		
Environmental performance	Cold		−40±2℃ for 96h		−40±2℃ for 96h		−20±2℃ for 500h		
	Dry heat		85±2℃ for 96h		85±2℃ for 96h		85±2℃ for 500h		
	Damp heat		40±2℃, 90 to 95%RH for 96h	60±2℃, 90 to 95%RH for 240h	60±2℃, 90 to 95%RH for 500h	40±2℃, 90 to 95%RH for 96h		40±2℃, 90 to 95%RH for 500h	
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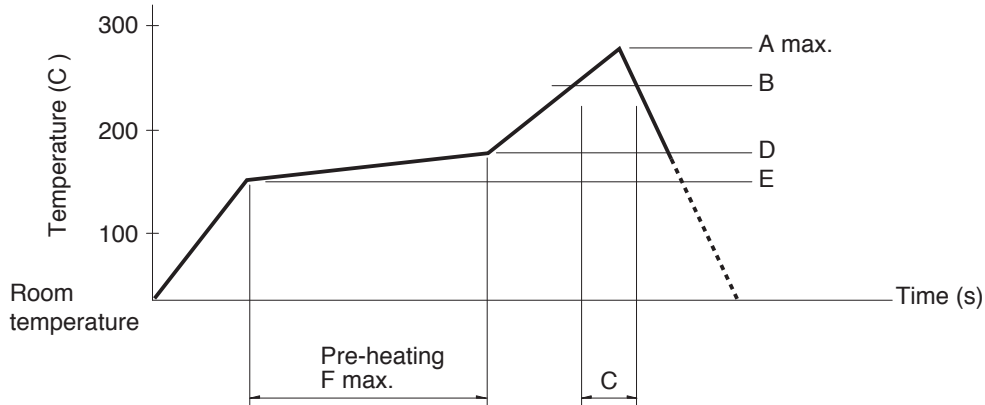
Notes

- ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
- ※2. Operating life for SSSS213202 is 100 cycles
- indicates applicability to all products in the series.

Slide Switches 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 (s)	D (°C)	E (°C)	F (s)
SSSS2	Vertical	1-pole, 3-positions	250	230	40	180	150	120
	Horizontal	1-pole, 2-positions 1-pole, 3-positions 2-poles, 3-positions	260					
	Vertical	1-pole, 2-positions	250					
SSSS7			260					
SSAH, SSAG, SSAJ, SSAL, SSSS8								

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.

Reference for Hand Soldering

Series	Soldering temperature	Soldering time
SSSF, SSSU, SSSB, SSAA	350±10°C	3+1 / 0s
SSSS2	350±10°C	4s max.
SSSS9	350±10°C	3s max.
SSAH, SSAG, SSAJ, SSAL, SSSS8, SSSS7	350±5°C	3s max.
SSAC	300±5°C	2s max.

Reference for Dip Soldering

(For PC board terminal types)

Series	Items		Dip soldering	
	Preheating temperature	Preheating time	Soldering temperature	Duration of immersion
SSSS2	100°C max.	60s max.	260±5°C	3±1s
SSSS9	120°C max.	60s max.	260±5°C	5+ 0 / -1s (2times)
SSAA	100°C max.	60s max.	260±5°C	10±1s
SSSF, SSSU, SSSB	—		260±5°C	10±1s
SSAC	—		260±5°C	5±1s

Detector

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Small size
General Use type

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