

SSSS8 1.4(H)mm, 1.5/2mm-travel Surface Mount Type

A low-profile slide switch with 1.4mm thickness



Typical Specifications

| Items | | Specifications |
|--------------------------------------------------------------|--------------|------------------------------------------|
| Rating (max.)/(min.) (Resistive load) | | 0.3A 5V DC / 50μA 3V DC |
| Contact resistance (Initial performance / After lifetime) | | 70mΩ max. / 130mΩ max. |
| Operating force | | Refer to the dimensions. |
| Operating life | Without load | 10,000 cycles 100mΩ max. |
| | With load | 10,000 cycles 130mΩ max. (0.3A 5V DC) |

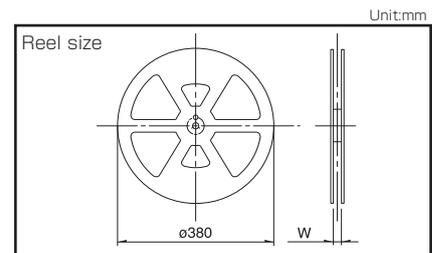
Product Line

| Travel (mm) | Actuator direction | Actuator thickness (mm) | Poles | Positions | Changeover timing | Ground terminal | Soldering | Minimum order unit (pcs.) | | Products No. | Drawing No. |
|-------------|--------------------|-------------------------|-------|-----------|-------------------|-----------------|-----------|---------------------------|-------------------|-------------------|-------------|
| | | | | | | | | Japan | Export | | |
| 1.5 | Vertical | t0.8 | 2 | 2 | Not specified | Without | Reflow | 1,800 | 7,200 | SSSS820101 | 1 |
| | | | | 3 | | | | | | SSSS820301 | 2 |
| | | | | 2 | | | | | | SSSS820201 | 1 |
| | | | | 3 | | | | | | SSSS820501 | 2 |
| | Horizontal | t1.1 | 1 | 2 | Without | Reflow | 4,500 | 18,000 | SSSS810701 | 3 | |
| | | | | 3 | | | | | SSSS811501 | 4 | |
| | | | | 2 | | | | | SSSS811101 | 3 | |
| | | | | 3 | | | | | SSSS812201 | 4 | |
| 2 | | | | 2 | | With | | | SSSS810201 | 5 | |

Packing Specifications

Taping

| Product No. | Number of packages (pcs.) | | | Reel width W (mm) | Tape width (mm) | Export package measurements (mm) |
|-------------------------------------------------------------------------------------------------------|---------------------------|----------------|-------------------------|-------------------|-----------------|----------------------------------|
| | 1 reel | 1 case / Japan | 1 case / export packing | | | |
| SSSS820101 SSSS820301 SSSS820201 SSSS820501 | 1,800 | 3,600 | 7,200 | 25.4 | 24 | 406×406×190 |
| SSSS810701 SSSS811501 SSSS811101 SSSS812201 SSSS810201 | 4,500 | 9,000 | 18,000 | 17.4 | 16 | 417×409×139 |



■ Dimensions

Vertical Actuator Type/Horizontal Actuator Type 1.5mm-travel

Unit:mm

| No. | Photo | Style | PC board mounting hole and land dimensions (Viewed from direction A) |
|-----|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1 | | <p>2-pole, 2-position</p> <p>Terminal No.① 0.4 3 1.5 With ground terminal dimensions</p> <p>Travel 1.5</p> <p>Operating force : 2N</p> | <p>2-ø0.9 hole 3 1.5 0.75 0.7 6-pattern section</p> <p>4-pattern section for ground terminal</p> |
| 2 | | <p>2-pole, 3-position</p> <p>Terminal No.① 1.5 3 1.5 With ground terminal dimensions</p> <p>Travel 1.5</p> <p>Operating force : a → b } 2N c → b } b → a } 2.5N b → c }</p> | <p>2-ø0.9 hole 1.5 3 1.5 0.7 8-pattern section</p> <p>4-pattern section for ground terminal</p> |
| 3 | | <p>1-pole, 2-position</p> <p>Terminal No.① 0.4 3 1.5 With ground terminal dimensions</p> <p>Travel 1.5</p> <p>Operating force : 1.5N</p> | <p>2-ø0.9 hole 3 1.5 0.75 0.7 3-pattern section</p> <p>4-pattern section for ground terminal</p> |
| 4 | | <p>1-pole, 3-position</p> <p>Terminal No.① 1.5 3 1.5 With ground terminal dimensions</p> <p>Travel 1.5</p> <p>Operating force : a → b } 1.5N c → b } b → a } 2N b → c }</p> | <p>2-ø0.9 hole 1.5 3 1.5 0.7 4-pattern section</p> <p>4-pattern section for ground terminal</p> |

Note

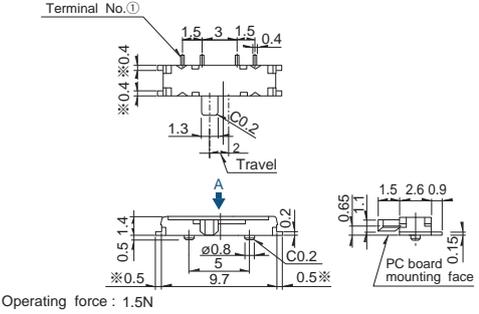
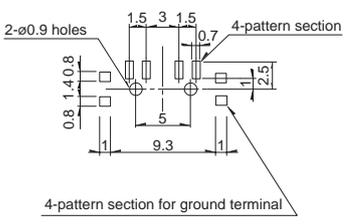
Products not marked with ※ in the drawing have no ground terminal.

SSSS8 1.4(H)mm, 1.5/2mm-travel Surface Mount Type

■ Dimensions

Horizontal Actuator Type 2mm-travel

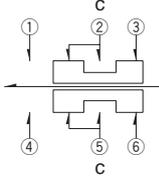
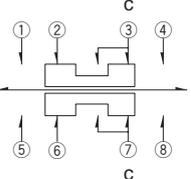
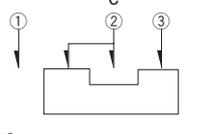
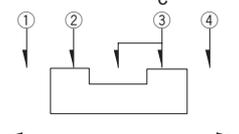
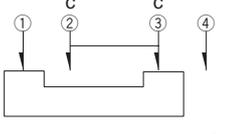
Unit:mm

| No. | Photo | Style | PC board mounting hole and land dimensions (Viewed from direction A) |
|-----|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 5 |  |  |  |

Note

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

■ Circuit Diagram (Viewed from Direction A)

| | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>2-pole, 2-position Drawing No.1</p>  | <p>2-pole, 3-position Drawing No.2</p>  | |
| <p>1-pole, 2-position 1.5mm-travel Drawing No.3</p>  | <p>1-pole, 3-position 1.5mm-travel Drawing No.4</p>  | <p>1-pole, 2-position 2mm-travel Drawing No.5</p>  |

Slide Switches

List of Varieties

| Series | | SSAJ | SSSS8 | SSAL | SSAG | SSSS7 |
|--------------------------------|------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Photo | |  |  |  |  |  |
| Actuator direction | Horizontal | ● | ● | ● | ● | ● |
| | Vertical | — | ● | — | — | — |
| Poles-positions | 1-2 | ● | ● | ● | — | ● |
| | 1-3 | — | ● | — | ● | ● |
| | 1-4 | — | — | — | — | — |
| | 2-2 | — | ● | — | — | — |
| | 2-3 | — | ● | — | — | — |
| | 2-4 | — | — | — | — | — |
| | 4-2 | — | — | — | — | — |
| Travel (mm) | | 1.4 | 1.5, 2 | 2 | 1.5 | 2 |
| Operating temperature range | | -10°C to +60°C | -40°C to +85°C | -10°C to +60°C | | -40°C to +85°C |
| Automotive use | | — | — | — | — | — |
| Life cycle | |  |  |  |  |  |
| Rating (max.) (Resistive load) | | 10mA 5V DC | 0.3A 5V DC | 10mA 5V DC | | 0.3A 4V DC |
| Rating (min.) (Resistive load) | | 50μA 3V DC | | | | |
| Durability | Operating life without load | 10,000 cycles 500mΩ max. | 10,000 cycles 100mΩ max. | 100,000 cycles 10Ω max. | 30,000 cycles (Lock side) 100,000 cycles (Recoil side) 500mΩ max. | 10,000 cycles 100mΩ max. |
| | Operating life with load Load: as rating | | 10,000 cycles 130mΩ max. | | | 10,000 cycles 130mΩ max. |
| Electrical performance | Initial contact resistance | 300mΩ 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 | | | |
| Pulling direction | | | | | | |
| Environmental performance | Cold | -40°C 96h | -40°C 500h | -40°C 96h | | -20°C 500h |
| | Dry heat | 85°C 96h | 85°C 500h | 85°C 96h | | 85°C 500h |
| | Damp heat | 40°C, 90 to 95%RH 96h | 60°C, 90 to 95%RH 500h | 40°C, 90 to 95%RH 96h | | 60°C, 90 to 95%RH 500h |
| Page | | 72 | 74 | 77 | 79 | 82 |

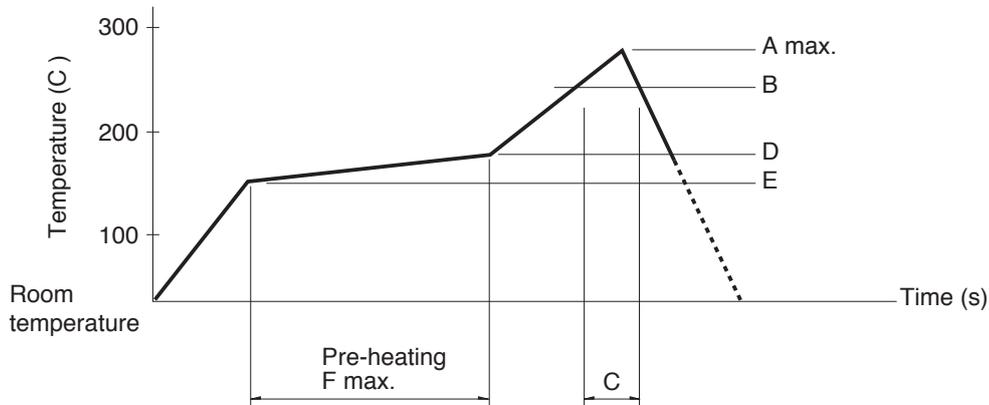
| | |
|-------------------------------------|-----|
| Slide Switches Soldering Conditions | 106 |
| Slide Switches Cautions | 107 |

Note

● Indicates applicability to all products in the series.

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple ϕ 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 (°C) 3s max. | B (°C) | C (s) | D (°C) | E (°C) | F (s) |
|-------------------------------|------------------------------------------------------------------------------|-------------------|--------|-------|--------|--------|-------|
| SSSS2 | Vertical 1-pole, 3-position | 260 | 230 | 40 | 180 | 150 | 120 |
| | Horizontal 1-pole, 2-position 1-pole, 3-position 2-pole, 3-position | | | | | | |
| | Vertical 1-pole, 2-position | 250 | | | | | |
| SSAG, SSAJ, SSAL, SSSS8, SSS7 | | 260 | | | | | |

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 | 350±10°C | 3+1/0s |
| SSSS2 | 350±10°C | 4s max. |
| SSSS9 | 350±10°C | 3s max. |
| SSAG, SSAJ, SSAL | 350±5°C | 3s max. |
| SSSS8 | 330±5°C | 3s max. |
| SSSS7 | 320±5°C | 3s max. |
| SSAC | 300±10°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 (2 times) |
| SSSF, SSSU | 100°C max. | 60s max. | 260±5°C | 10±1s/5±1s |
| SSAC | 100°C max. | 60s max. | 260±5°C | 5±1s |