

8-direction center push type switch in 2.3mm low-profile design.

- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- Multi Control Devices
- TACT Switch™
- Custom-Products
- Variable Resistor Type
- Switch Type



Features

- An 8-direction switch and center push switch put together into thin 2.3mm low-profile design.
- Compact and low profile provide flexibility in set design.
- An excellent feel is achieved with equal operational force.

Applications

- For mobile phones, personal digital assistants and various portable devices
- For DVD players/recorders, digital camcorders, digital still cameras and flat panel TVs

Typical Specifications

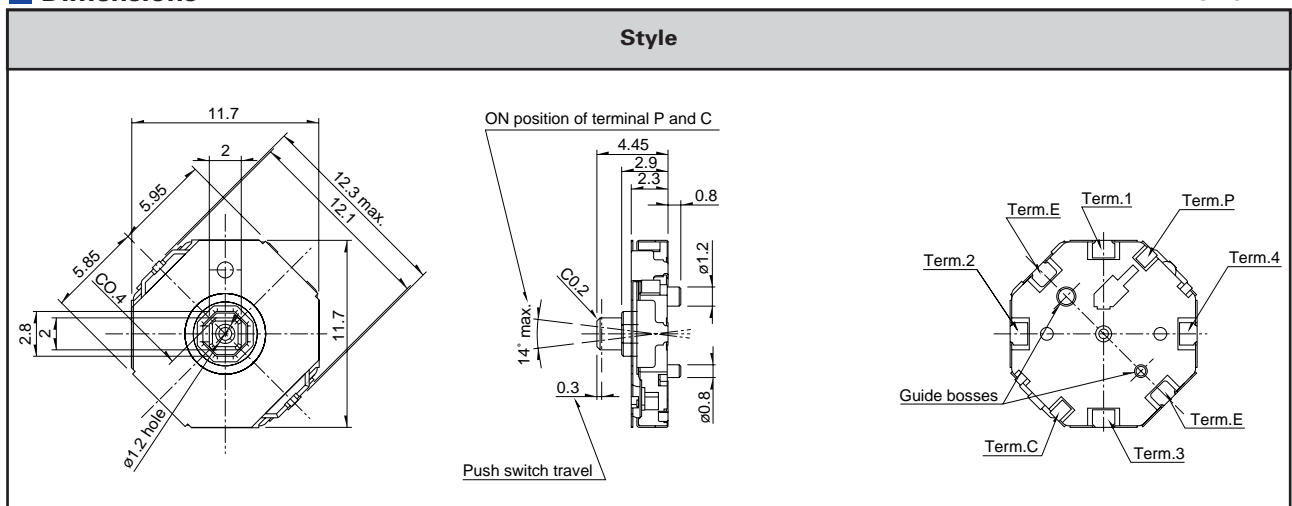
| Items | Specifications |
|--------------------------------|--------------------|
| Switch ON position | 7° max. |
| Operating force | 0.8±0.5N |
| Push operating force | 2.5±1.5N |
| Travel (Push operation) | 0.3±0.2mm |
| Push strength | 30N |
| Rating (max.) (Resistive load) | 10mA 5V DC |
| Operating life | 500,000cycles |
| Insulation resistance | 50MΩ min. 50V DC |
| Voltage proof | 50V AC for 1minute |

Product Line

| Maximum resolution | Operating force | | Minimum packing unit (pcs.) | Product No. |
|--------------------|-----------------|-----------------|-----------------------------|--------------|
| | Direction (N) | Center-push (N) | | |
| 8-direction | 0.8±0.5 | 2.5±1.5 | 950 | RKJXS1004001 |

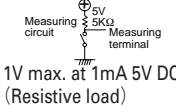
Dimensions

Unit:mm



Refer to P.309 for product specifications.
Refer to P.311 for taping package specifications.

Product Specifications

| Items | RKJXT1F | RKJXM | RKJXL | RKJXS | SKRV | SKRH | | | |
|--|-----------------------------|--|---|----------------|---|---|--|-----------|------------------|
| | | | | | | SKRHAA, SKRHAB | SKRHAC, SKRHAD | | |
| Operating temperature range | -40°C to +85°C | -30°C to +80°C | -30°C to +70°C | -20°C to +70°C | | -30°C to +85°C | | | |
| Rating (max.) (Resistive load) | 10mA 5V DC | | | | 50mA 12V DC | | | | |
| Electrical performance | Output voltage | _____ | | |  1V max. at 1mA 5V DC (Resistive load) | | _____ | | |
| | Directional resolution | 4-direction | 8-direction | | | 4-direction | | | |
| | Insulation resistance | 100MΩ min. 250V DC | | | 50MΩ min. 50V DC | 100MΩ min. 100V DC | | | |
| | Voltage proof | 300V AC for 1minute. or 360V AC for 2s | | | 50V AC for 1minute | 100V AC for 1minute | | | |
| Mechanical characteristics | Directional operating force | 40±25mN·m | Direction A, B, C, D 30±20mN·m | 10±7mN·m | 0.8±0.5N | 1.2±0.6N | 1.23±0.69N | 1.2±0.69N | |
| | Push operating force | 5±2N | 3±1.5N | 4.5±1N | 2.5±1.5N | 2.4±0.69N | 2.35±0.69N | | |
| | Encoder detent torque | 15±8mN·m | 12±8mN·m | _____ | | | | | |
| | Terminal strength | 5N for 1minute | _____ | | | 29.4N for 5s | | | |
| | Actuator strength | Pushing direction | 100N | _____ | | 30N | _____ | | |
| | | Operating direction | 0.4N·m | _____ | | 20N | _____ | | |
| | Solder heat resistance | Manual soldering | 350±5°C 3s max. | | | 350±10°C 3 ⁺¹ ₀ s | 350°C max. 3s max. | | |
| | | Dip soldering | 260±5°C, 5±1s | | 260°C max. 6s max. | _____ | | | |
| | | Reflow soldering | _____ | | | Please see P.311 | | | |
| | Endurance | Vibration | 8.3±1 to 200±4 to 8.3±1Hz, 4.4G fixed (for 15 minutes/1 cycle), 3 angles each 2 hours | | | | 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 | | |
| Operating life | | Directional | 500,000cycles | 100,000cycles | | 500,000cycles | 200,000cycles | | 1,000,000 cycles |
| | | Center push | 15,000cycles | | _____ | | _____ | | |
| | | Encoder | 15,000cycles | | _____ | | _____ | | |
| Operating life without load | | _____ | | | | | | | |
| Operating life with load (at rated load) | _____ | | | | | | | | |
| Environmental test | Cold | -40±2°C for 500h | | | -40±2°C for 96h | -30±2°C for 96h | | | |
| | Dry heat | 85±2°C for 500h | | | 85±2°C for 96h | | | | |
| | Damp heat | 60±2°C, 90 to 95%RH for 500h | | | 60±2°C, 90 to 95%RH for 96h | | | | |

Note

Shall be in accordance with individual specifications.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line Package Type

Multi Control Devices

TACT Switch™

Custom-Products

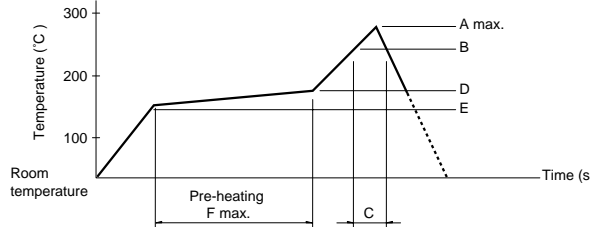
Variable Resistor Type

Switch Type

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 solder joints copper foil surface). A heat resistive tape should be used to fix thermocouple.
3. Temperature profile



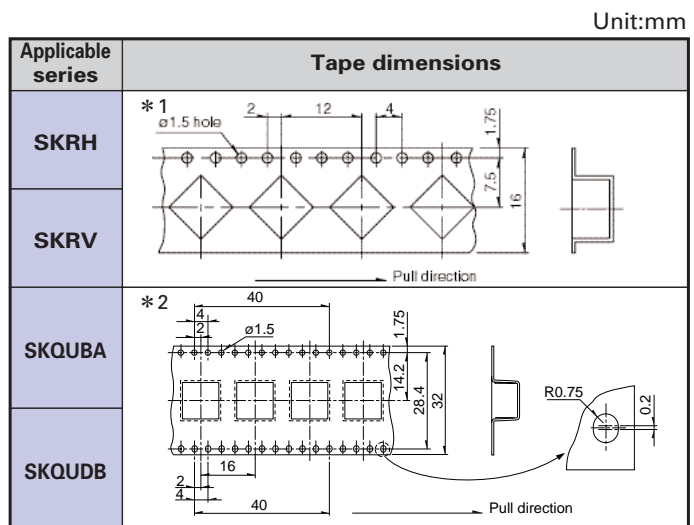
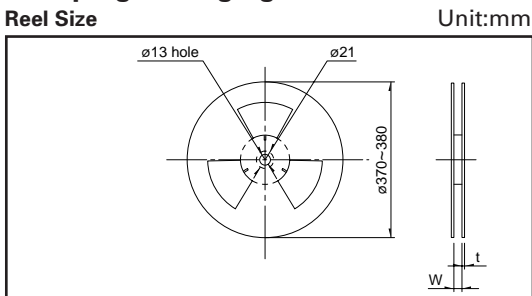
| Series (Reflow type) | A (°C) 3s max. | B (°C) | C (s) | D (°C) | E (°C) | F (s) |
|-------------------------------------|-------------------|--------|-------|--------|--------|-------|
| SLLB, SLLB5, SLLQ | 240 | 230 | 20 | 150 | 150 | 120 |
| RKJXS/SKRV/SKRH/SKQUBA,DB/SSAF/SRBE | 260 | | 40 | 180 | | |

Notes

1. The above temperature shall be measured 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 material, size thickness of PC boards and others. 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.

Taping Specifications

Taping Packaging



| Series | Number of packages (pcs.) | | | Reel width W (mm) | Reel thickness t (mm) | Tape width (mm) | Tape dimensions |
|--------|---------------------------|-----------------|-----------------------|----------------------|--------------------------|--------------------|-----------------|
| | 1 reel | 1 case/domestic | 1 case/export packing | | | | |
| SSAF | 1,200 | 2,400 | 2,400 | 24.4 | 2 | 24 | |
| SRBE | 1,300 | 2,600 | 5,200 | 25.4 | 2 | 24 | |
| SLLB | 1,350 | 2,700 | 5,400 | 24.4 | 3 | 24 | |
| SLLB5 | 1,500 | 3,000 | 6,000 | 24.4 | 3 | 24 | |
| SLLQ11 | 900 | 1,800 | 3,600 | 24.4 | 3 | 24 | |
| SLLQ12 | 1,400 | 2,800 | 5,600 | 24.4 | 3 | 24 | |
| RKJXS | 950 | 3,800 | 3,800 | 25.5 | 1.6 to 2 | 24 | |
| SKRV | 1,500 | 12,000 | 12,000 | 17.5 | 2 | 16 | * 1 |
| SKRH | 1,300 | 10,400 | 10,400 | 17.5 | 2 | 16 | |
| SKQUBA | 750 | 3,000 | 3,000 | 33.5 | 2 | 32 | * 2 |
| SKQUBD | 600 | 2,400 | 2,400 | 33.5 | 2 | 32 | |

Note

Please place purchase orders for taping products per minimum package units (1 reel or a case).

Detector
Push
Slide
Rotary
Encoders
Power
Dual-in-line Package Type
Multi Control Devices
TACT Switch™
Custom-Products

Variable Resistor Type
Switch Type