



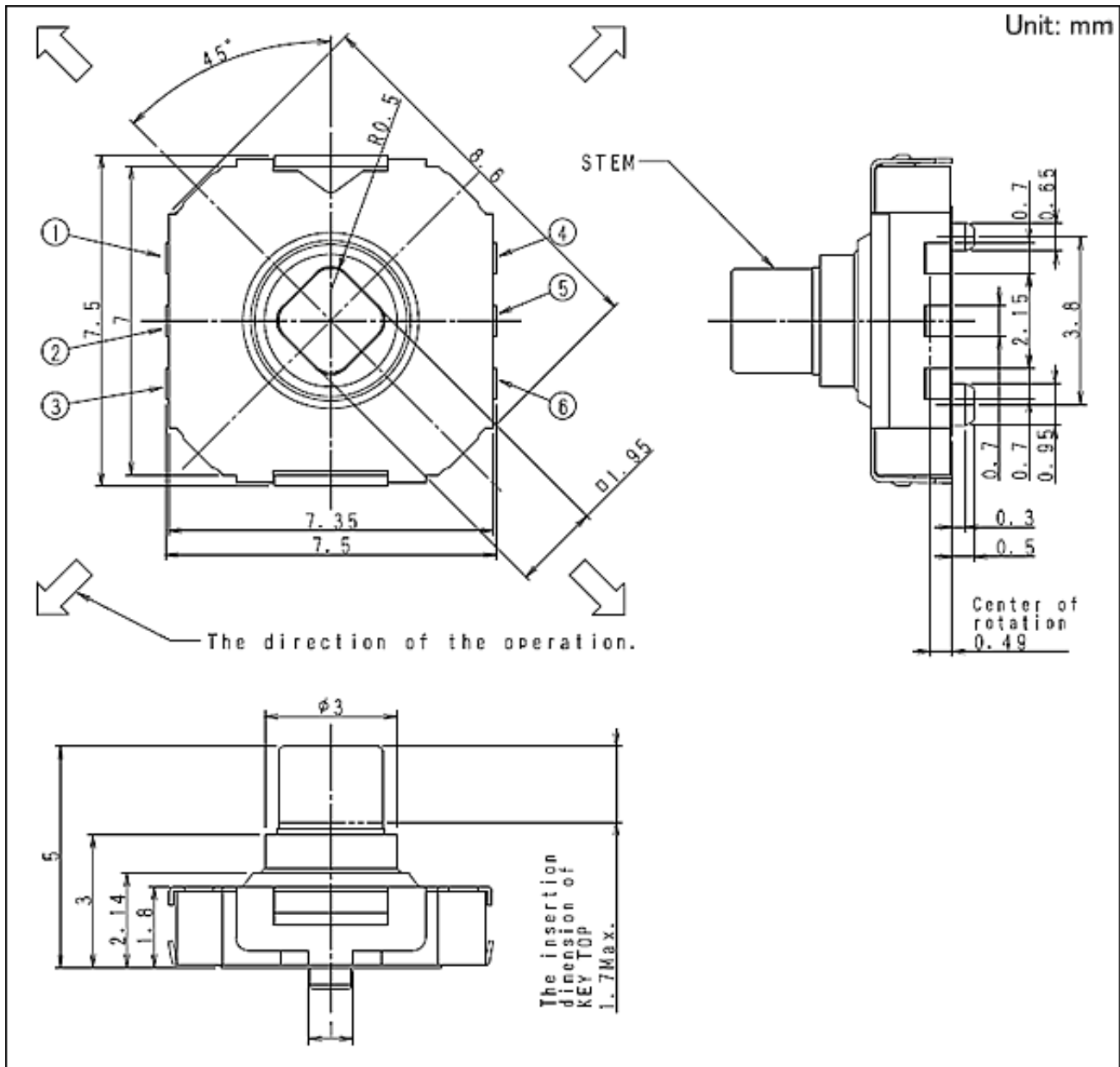
ALPS Manufacturer of Electronic Components/Parts Catalog

4-direction Type with Center-push Function (Surface Mount) SKRH Series

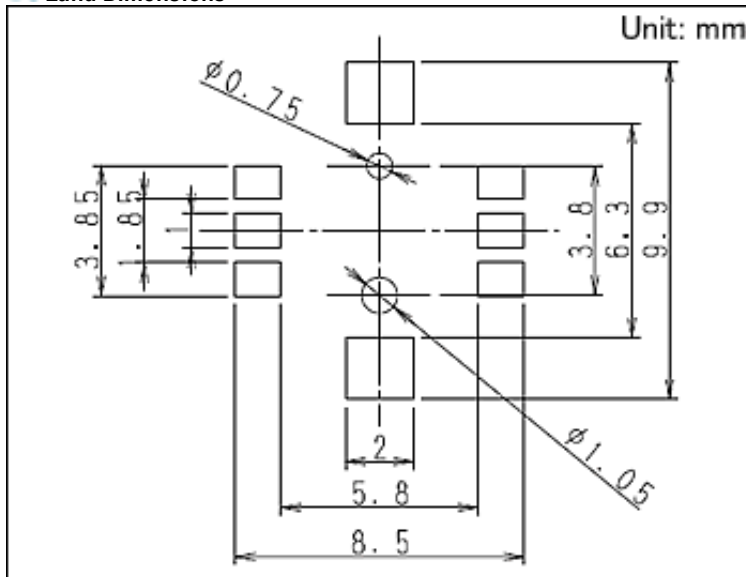
● Detail

| | | | |
|---|-----------------------------|-----------------------------------|-----------------------------|
| Part number | | SKRHABE010 | |
| Type | | Surface mount | |
| Operating force | 4-direction | 1.23N | |
| | Center push | 2.35N | |
| Travel | 4-direction | 0.25mm | |
| | Center push | 0.15mm | |
| Operating life (5mA 5V DC) | | 200,000 cycles for each direction | |
| Initial contact resistance | | 500mΩ max. | |
| Stem color | | Black | |
| Guide bosses | | With | |
| Operating temperature range | | -40°C to +85°C | |
| Ratings (max.)/(min.) (Resistive load) | | 50mA 12V DC/10μA 1V DC | |
| Electrical performance | Directional resolution | | 4-direction |
| | Insulation resistance | | 100MΩ min. 100V DC |
| | Voltage proof | | 100V AC for 1 minute |
| Mechanical performance | Directional operating force | | 1.23±0.69N |
| | Push operating force | | 2.35±0.69N |
| | Actuator strength | Operating direction | 29.4N |
| Durability | Operating life | Center push | 200,000 cycles |
| Environmental performance | Cold | | -40±2°C for 96h |
| | Dry heat | | 90±2°C for 96h |
| | Damp heat | | 60±2°C, 90 to 95%RH for 96h |
| Minimum order unit (pcs.) | Japan | | 1,300 |
| | Export | | 1,300 |
| 3D CAD (STEP) | | | |
| Certificate of Compliance to RoHS regulations | | | |

● Dimensions

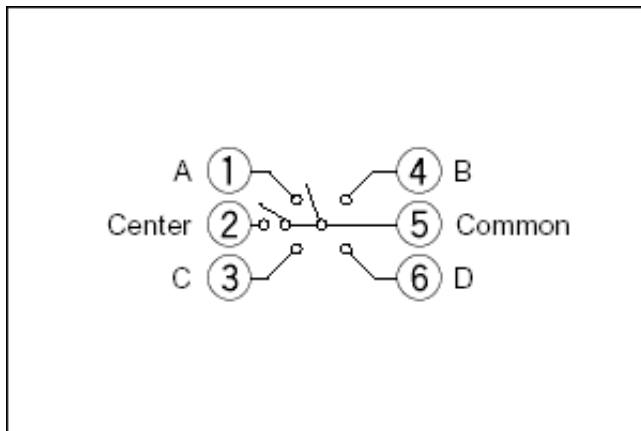


• Land Dimensions



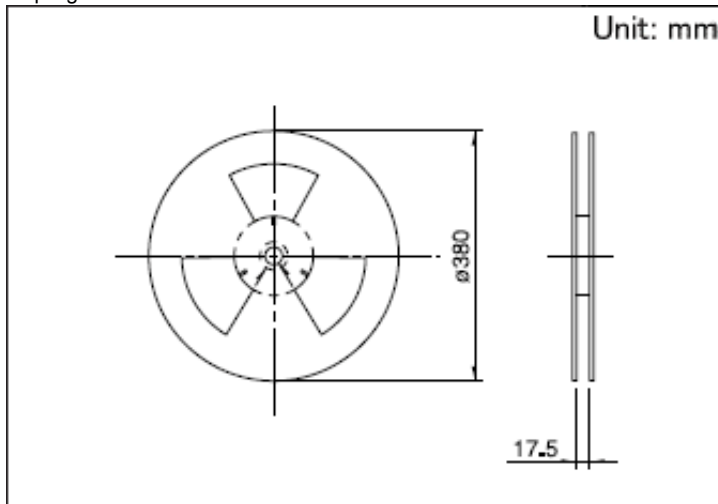
Viewed from mounting face

• Circuit Diagram



●● Packing Specifications

Taping

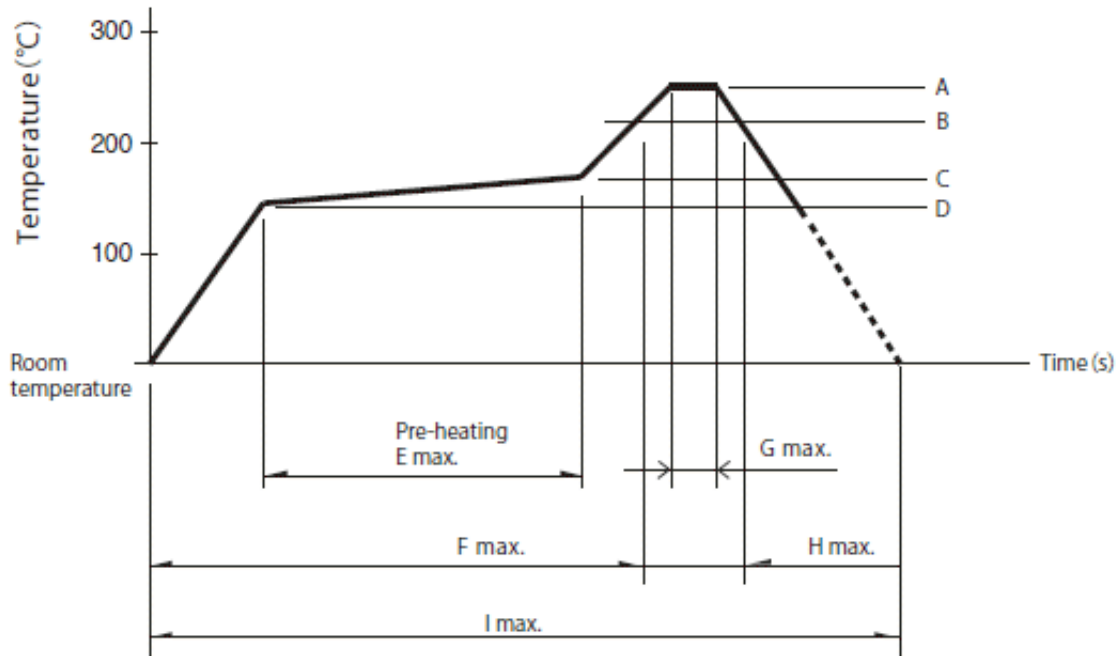


| | | |
|----------------------------------|-------------------------|-------------|
| Number of packages (pcs.) | 1 reel | 1,300 |
| | 1 case / Japan | 10,400 |
| | 1 case / export packing | 10,400 |
| Tape width (mm) | | 16 |
| Export package measurements (mm) | | 401×401×214 |

●● Soldering Condition

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 resisting tape should be used to fix thermocouple.
3. Temperature profile



| A | B | C | D | E | F | G | H | I | No. of reflows |
|-------|-------|-------|-------|--------|---|---|-----|---|----------------|
| 260°C | 230°C | 180°C | 150°C | 2 min. | - | - | 40s | - | 1 time |

(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

| | |
|-----------------|---------|
| Tip temperature | 350±5°C |
| Soldering time | 3s max. |
| No. of solders | 1 time |

NOTE

Notes are common to this series/models.

1. This site catalog shows only outline specifications. When using the products, please obtain formal specifications for supply.
2. 4-directional operating force and travel are measured at 4.3mm height from the bottom of the switch.
3. Please place purchase orders for taping products per minimum order unit (1 reel or a case).



Inquiries about Products

For more information please contact: Products Information Center.

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