

Ultra-low Profile Mechanical Key Switch with a Thickness of Only 0.47 mm

- Surface-mounting model with dimensions of 4.7 x 4.7 x 0.47 mm allows high-density mounting.
- Contributes to making devices with this Mechanical Key Switch more compact, slim, and lightweight.
- Available on embossed tape that enables automatic mounting.
- Dust-sealed construction provides high reliability.
- Available for reflow soldering.



Ordering Information

■ Model Number Legend:

B3B-□□□□□
1 2 3 4 5

- | | |
|--|--|
| <p>1. Size
1: 4.7 mm x 4.7 mm</p> <p>2. Ground Terminal
0: None</p> <p>3. Plunger
0: None</p> | <p>4. Operating Force (OF)
2: 1.58 N</p> <p>5. Shipment Package
P: Embossed tape</p> |
|--|--|

■ List of Models

Item	Model
Embossed tape packing (unit: 10,000 pcs.)	B3B-1002P

Note: The Switches are available in units of 10,000 pieces. Orders must be made in units of 10,000 pieces; no partial units can be shipped.

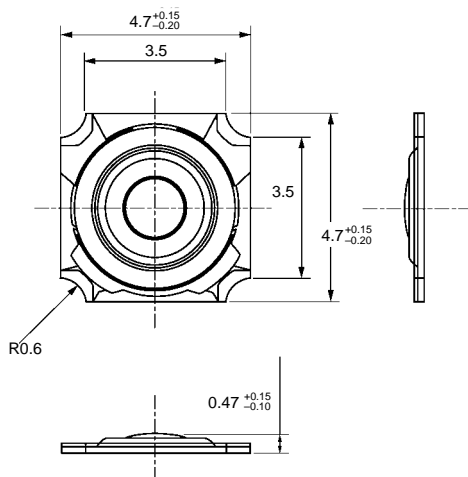
Specifications

■ Ratings/Characteristics

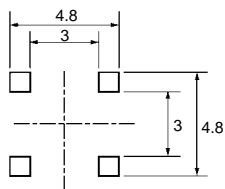
Switching capacity	1 to 20 mA, 5 to 15 VDC, (resistive load)
Insulation voltage	30 VDC
Contact configuration	SPST-NO
Contact material	Silver plating
Contact resistance	10 Ω max. (initial value) (rated: 1 mA, 5 VDC)
Insulation resistance	100 MΩ min. (at 100 VDC)
Dielectric strength	250 VAC, 50/60 Hz for 1 min
Bounce time	10 ms max.
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Destruction: 735 m/s ² min. {approx. 75G min.}
Life expectancy	50,000 operations min.
Ambient temperature	Operating: -25°C to 70°C (with no icing)
Ambient humidity	Operating: 25% to 85%
Weight	Approx. 0.1 g max.

Dimensions

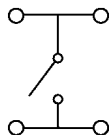
Note: All units are in millimeters unless otherwise indicated.



**PCB Mounting
(Top View)**



**Terminal Arrangement
/Internal Connections
(Top View)**



Operating Characteristics

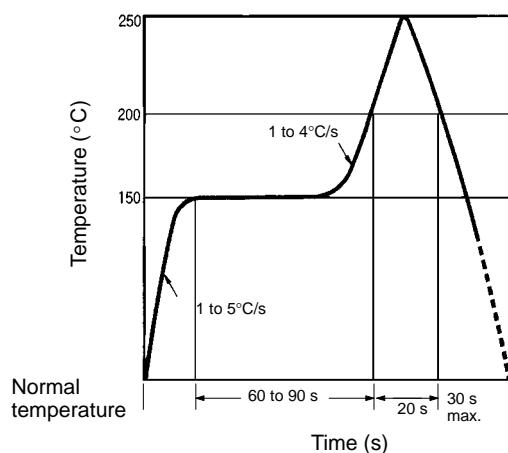
Item	Standard value
Operating force (OF)	1.58 ± 0.49 N { 160 ± 50 gf}
Releasing force (RF)	0.29 N {30 gf} min.
Pretravel (PT)	0.2 ± 0.1 mm

Precautions

Soldering

Soldering Conditions for Reflow Soldering

Carry out soldering within the temperature curve shown in the following illustration.



Note: The above heating curve will apply if the thickness of the circuit board is 1.6 mm.

Since the peak value may vary depending on the reflow soldering device, be sure to conduct a verification test in advance.

Soldering Conditions for Manual Soldering

Soldering temperature: $300 \pm 5^\circ\text{C}$ at the soldering iron tip

Soldering time: 3 seconds max.

Soldering operations must be performed no more than twice including touch-up soldering. Allow at least 5 minutes between the first and second soldering.

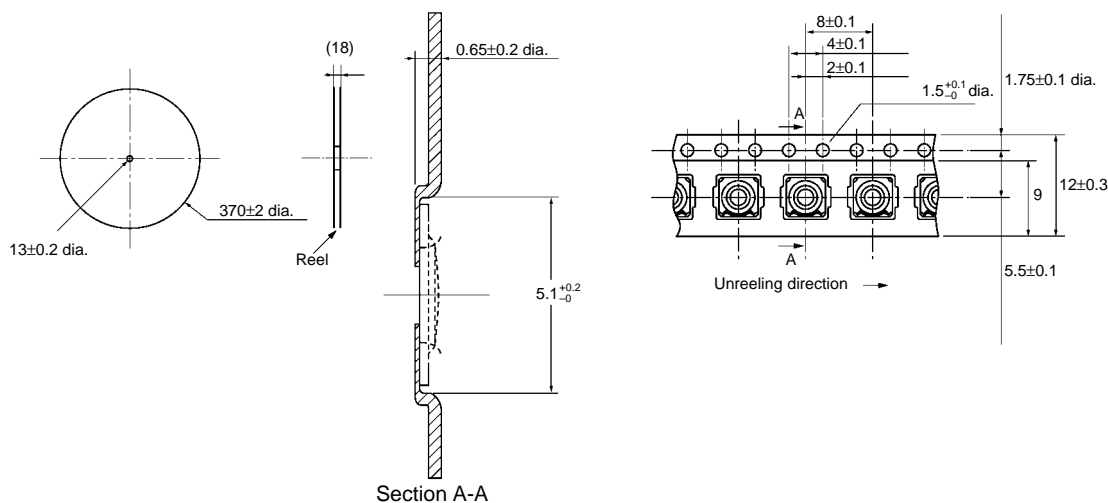
Do not apply flow soldering.

Washing

No washing is allowed after soldering to prevent detergent or flux from entering into the Switch. Doing so may cause malfunction.

Tape Packing Specifications

Standard	Quantity
Conforms to EIAJ Standard	10,000 pieces



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. A110-E1-1 **In the interest of product improvement, specifications are subject to change without notice.**

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