





### Miniature, Space-Saving Tactile Switch Provides Long Service Life and Easy Mounting

- Extended mechanical/electrical service life:  
10 x 10<sup>6</sup> operations for 12 x 12 mm type and  
1 x 10<sup>6</sup> operations for the 6 x 6 mm type
- Ideal for applications such as audio, office and communications equipment, measuring instruments, TVs, VCRs, etc.
- Taped radial type, vertical type, high force type, and gold-plated contact type are available as series versions
- Flux-tight base structure allows automatic soldering of the tactile switches onto a PC board



### Ordering Information

- B3F-1■■■■, B3F-3■■■■  
6 x 6 mm type







| Type              | Plunger   | Switch height x pitch  | Operating Force        | Part number             |                  |                      |                  |
|-------------------|---|------------------------|------------------------|-------------------------|------------------|----------------------|------------------|
|                   |   |                        |                        | Without ground terminal |                  | With ground terminal |                  |
|                   |   |                        |                        | Bags                    | Sticks*          | Bags                 | Sticks*          |
| Standard          |  | 4.3 x 6.5 mm           | General-purpose: 100 g | <b>B3F-1000</b>         | <b>B3F-1000S</b> | <b>B3F-1100</b>      | <b>B3F-1100S</b> |
|                   |   |                        | 150 g                  | <b>B3F-1002</b>         | <b>B3F-1002S</b> | <b>B3F-1102</b>      | <b>B3F-1102S</b> |
|                   |   |                        | High-force: 260 g      | <b>B3F-1005</b>         | <b>B3F-1005S</b> | <b>B3F-1105</b>      | <b>B3F-1105S</b> |
|                   |   | 5.0 x 6.5 mm           | General-purpose: 100 g | <b>B3F-1020</b>         | <b>B3F-1020S</b> | <b>B3F-1120</b>      | <b>B3F-1120S</b> |
|                   |   |                        | 150 g                  | <b>B3F-1022</b>         | <b>B3F-1022S</b> | <b>B3F-1122</b>      | <b>B3F-1122S</b> |
|                   |   |                        | High-force: 260 g      | <b>B3F-1025</b>         | <b>B3F-1025S</b> | <b>B3F-1125</b>      | <b>B3F-1125S</b> |
|                   | 5.0 x 7.5 mm  | General-purpose: 100 g | —                      | —                       | <b>B3F-1110</b>  | —                    |                  |
|                   |  | 7.3 x 6.5 mm           | General-purpose: 100 g | <b>B3F-1050</b>         | <b>B3F-1050S</b> | <b>B3F-1150</b>      | <b>B3F-1150S</b> |
|                   |   |                        | 150 g                  | <b>B3F-1052</b>         | <b>B3F-1052S</b> | <b>B3F-1152</b>      | <b>B3F-1152S</b> |
| High-force: 260 g |   |                        | <b>B3F-1055</b>        | <b>B3F-1055S</b>        | <b>B3F-1155</b>  | <b>B3F-1155S</b>     |                  |
| Vertical          |  | 3.15 mm                | General-purpose: 100 g | —                       | —                | <b>B3F-3100</b>      | —                |
|                   |   |                        | 150 g                  | —                       | —                | <b>B3F-3102</b>      | —                |
|                   |   |                        | High-force: 260 g      | —                       | —                | <b>B3F-3105</b>      | —                |
|                   |   | 3.85 mm                | General-purpose: 100 g | —                       | —                | <b>B3F-3120</b>      | —                |
|                   |   |                        | 150 g                  | —                       | —                | <b>B3F-3122</b>      | —                |
|                   |   |                        | High-force: 260 g      | —                       | —                | <b>B3F-3125</b>      | —                |
|                   |  | 6.15 mm                | General-purpose: 100 g | —                       | —                | <b>B3F-3150</b>      | —                |
|                   |   |                        | 150 g                  | —                       | —                | <b>B3F-3152</b>      | —                |
|                   |   |                        | High-force: 260 g      | —                       | —                | <b>B3F-3155</b>      | —                |

\* Number of switches per stick: Without ground terminal ..... 90/stick  
With ground terminal ..... 75/stick

**Important note:** Switches cannot be water-washed.

■ B3F-4■■■■, B3F-5■■■■

12 x 12 mm type

| Type                                 | Plunger  | Switch height x pitch | Operating Force        | Part number             |                  |                      |                  |
|--------------------------------------|--|-----------------------|------------------------|-------------------------|------------------|----------------------|------------------|
|                                      |  |                       |                        | Without ground terminal |                  | With ground terminal |                  |
|                                      |  |                       |                        | Bags                    | Sticks*          | Bags                 | Sticks*          |
| Standard                             | Flat<br>        | 4.3 x 12.5 mm         | General-purpose: 130 g | <b>B3F-4000</b>         | <b>B3F-4000S</b> | <b>B3F-4100</b>      | <b>B3F-4100S</b> |
|                                      |  |                       | High-force: 260 g      | <b>B3F-4005</b>         | <b>B3F-4005S</b> | <b>B3F-4105</b>      | <b>B3F-4105S</b> |
|                                      | Projected<br>   | 7.3 x 12.5 mm         | General-purpose: 130 g | <b>B3F-4050</b>         | <b>B3F-4050S</b> | <b>B3F-4150</b>      | <b>B3F-4150S</b> |
|                                      |  |                       | High-force: 260 g      | <b>B3F-4055</b>         | <b>B3F-4055S</b> | <b>B3F-4155</b>      | <b>B3F-4155S</b> |
| Long service life                    | Flat<br>        | 4.3 x 12.5 mm         | General-purpose: 130 g | <b>B3F-5000</b>         | <b>B3F-5000S</b> | <b>B3F-5100</b>      | <b>B3F-5100S</b> |
|                                      |  |                       |                        |                         |                  |                      |                  |
|                                      | Projected<br>   | 7.3 x 12.5 mm         | General-purpose: 130 g | <b>B3F-5050</b>         | <b>B3F-5050S</b> | <b>B3F-5150</b>      | <b>B3F-5150S</b> |
|                                      |  |                       |                        |                         |                  |                      |                  |
| High reliability gold-plated contact | Flat<br>        | 4.3 x 12.5 mm         |                        | <b>B3F-5001</b>         | <b>B3F-5001S</b> | <b>B3F-5101</b>      | <b>B3F-5101S</b> |
|                                      | Projected<br> | 7.3 x 12.5 mm         |                        | <b>B3F-5051</b>         | <b>B3F-5051S</b> | <b>B3F-5151</b>      | <b>B3F-5151S</b> |

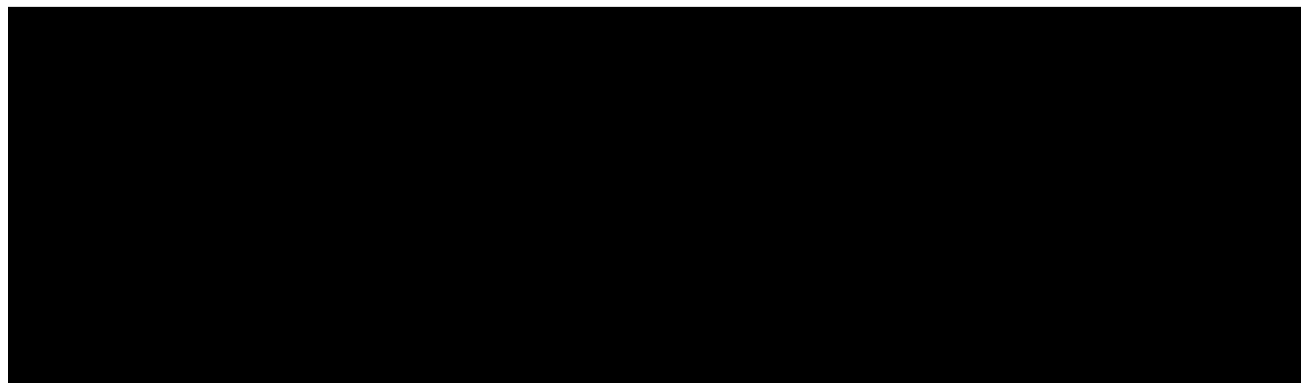
\* Number of switches per stick: Without ground terminal ..... 45/stick  
With ground terminal ..... 40/stick

Important note: Switches cannot be water-washed.

■ B3F-6■■■■

Taped Radial (Auto Insertion)

6 x 6 mm type

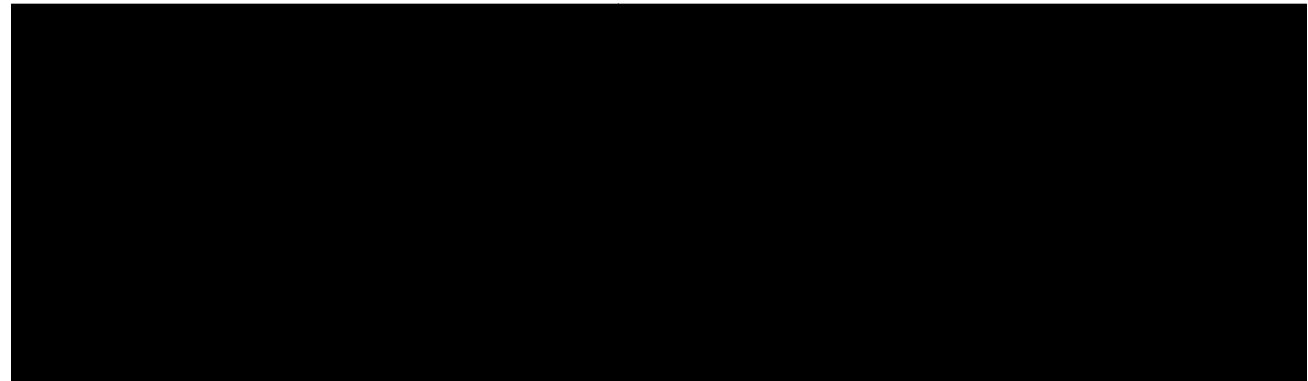
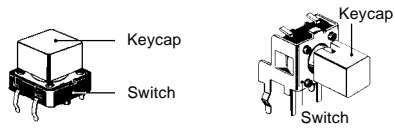


Note: The above switches must be ordered in units of 1,000.

Important note: Switches cannot be water-washed.

■ ACCESSORIES

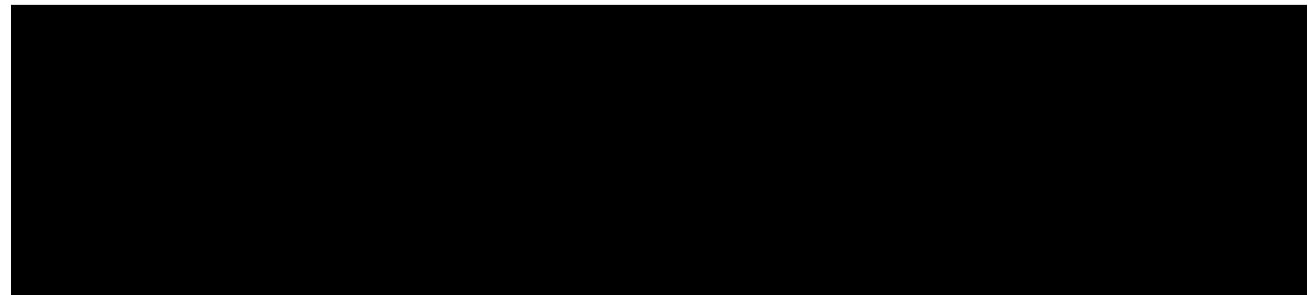
Keycaps



Note: Keycaps are available in different sizes and colors for exclusive use of the 6 x 6 mm and 12 x 12 mm projected plunger versions of Model B3F.

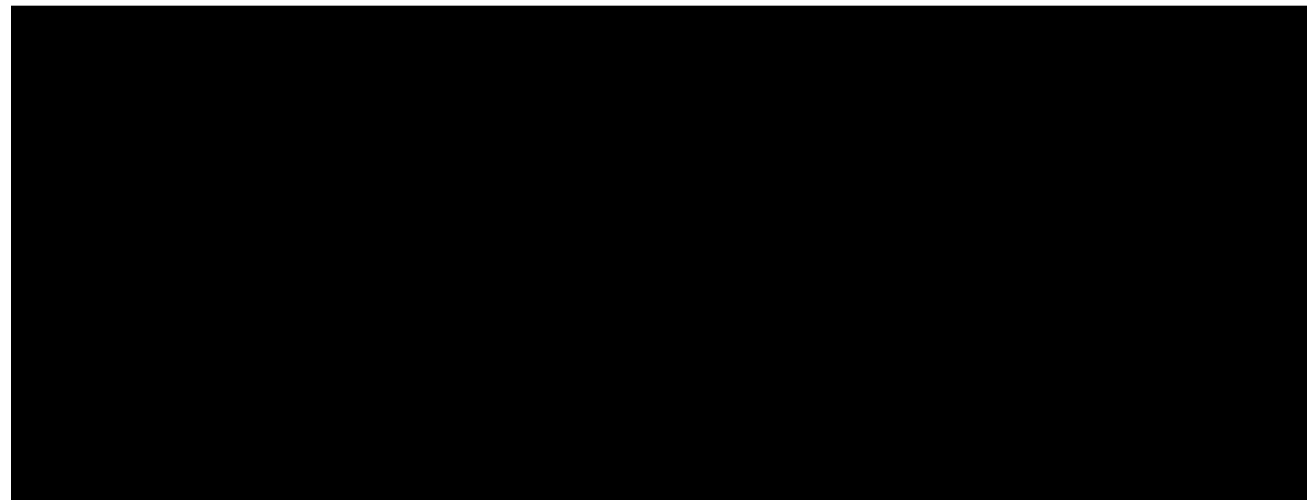
■ PLUNGER IDENTIFICATION TABLE

Use this table to determine tactile switch type by plunger color.



Specifications

■ CHARACTERISTICS

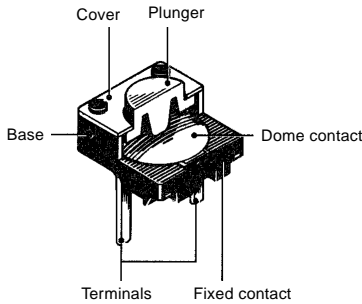


Note: 1. Figure in parentheses denotes the service life of high force type.  
2. Denotes the weight of standard type.  
3. Data shown are of initial value.

■ OPERATING CHARACTERISTICS

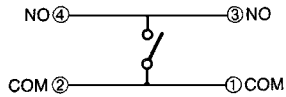
| Characteristics         | Part number                               |   |  |  |   |   |
|-------------------------|---|---|--|--|---|---|
|                         | B3F-1■■■■ / -3■■■■                        |   | B3F-4■■■■ / -5■■■■                       |  | B3F-6■■■■                                 |   |
|                         | General purpose type                      | High force type                           | General purpose type                     | High force type                          | General purpose type                      | High force type                           |
| Operating force (OF)    | 100 ± 30 g                                | 150 ± 50 g                                | 130 ± 50 g                               | 260 ± 70 g                               | 100 ± 30 g                                | 150 ± 50 g                                |
| Release force (RF) min. | 20 g                                      | 50 g                                      | 30 g                                     | 50 g                                     | 20 g                                      | 50 g                                      |
| Pretravel (PT) max.     | 0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm | 0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm | 0.3 <sup>+0.2</sup> / <sub>-0.1</sub> mm | 0.3 <sup>+0.2</sup> / <sub>-0.1</sub> mm | 0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm | 0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm |

■ CONSTRUCTION

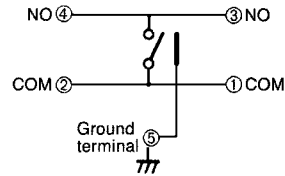


■ CONTACT FORM

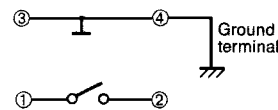
B3F-10■■■  
B3F-40■■■  
B3F-50■■■



B3F-11■■■  
B3F-41■■■  
B3F-51■■■



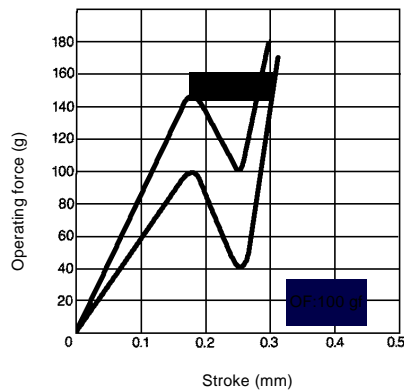
B3F-3■■■■



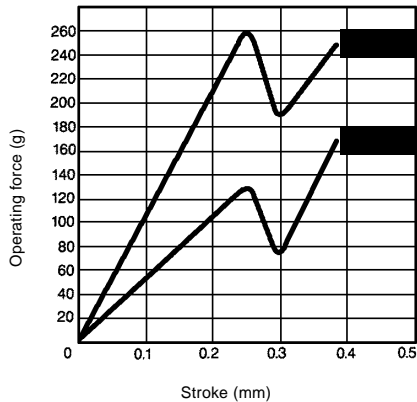
Engineering Data

■ OPERATING FORCE VS STROKE (TYPICAL EXAMPLE)

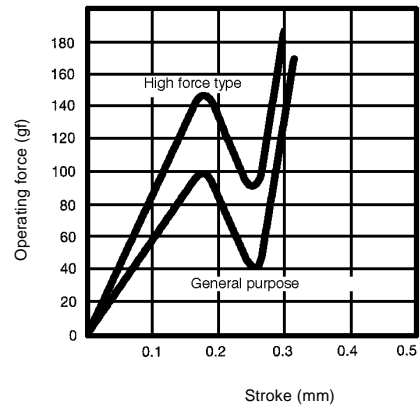
B3F-1■■■■ / -3■■■■



**B3F-4** / **-5**



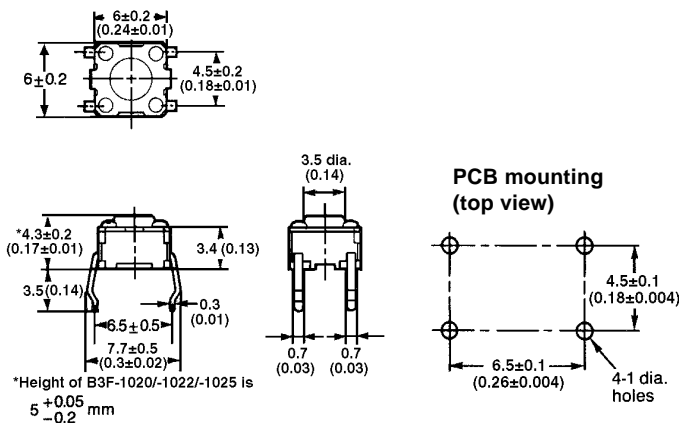
**B3F-6**



**Dimensions**

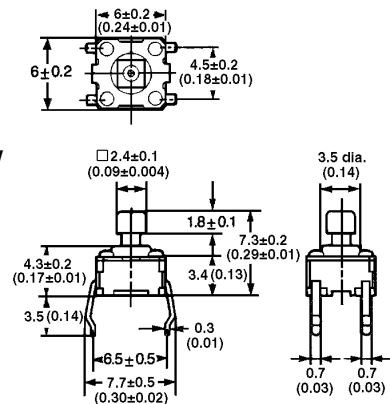
Unit: mm (inch)

**B3F-1000/-1002/-1005/-1020\*/-1022\*/-1025\***

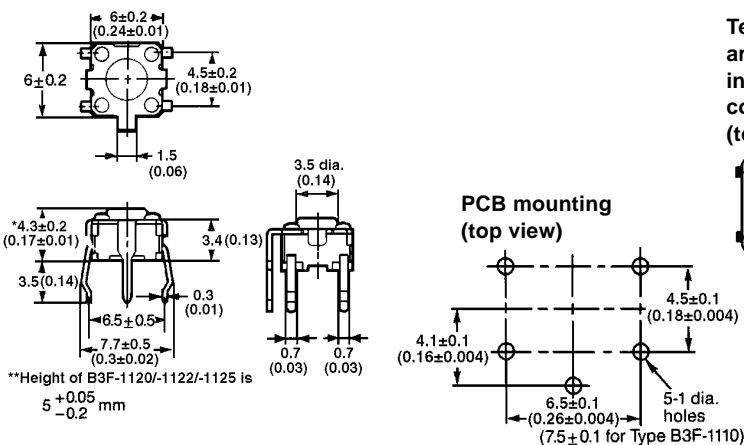


**B3F-1050/-1052/-1055**

Terminal arrangement/  
internal connections  
(top view)

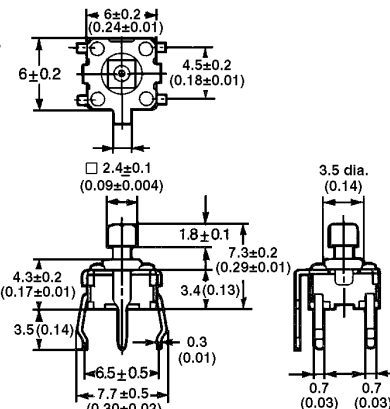


**B3F-1100/-1102/-1105/-1120\*\*/-1122\*\*/-1125\*\***



**B3F-1150/-1152/-1155**

Terminal arrangement/  
internal connections  
(top view)

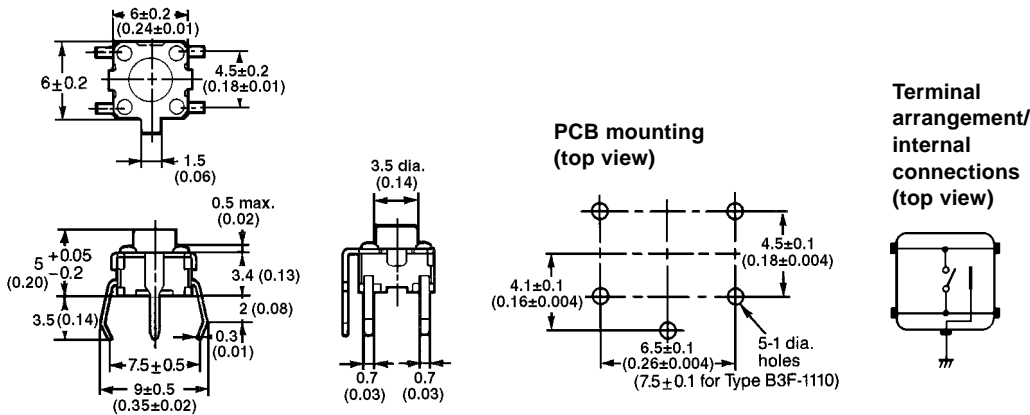


Note: Terminal numbers are not indicated on this switch. With the switch turned over so that the logo mark "OMRON" is visible on the upper part of the rear side of the switch base, the terminal on the right of the logo mark is numbered "1" and that on the bottom right is "3." Accordingly, two terminals on the left side are numbered "2" and "4" respectively.

Note: Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

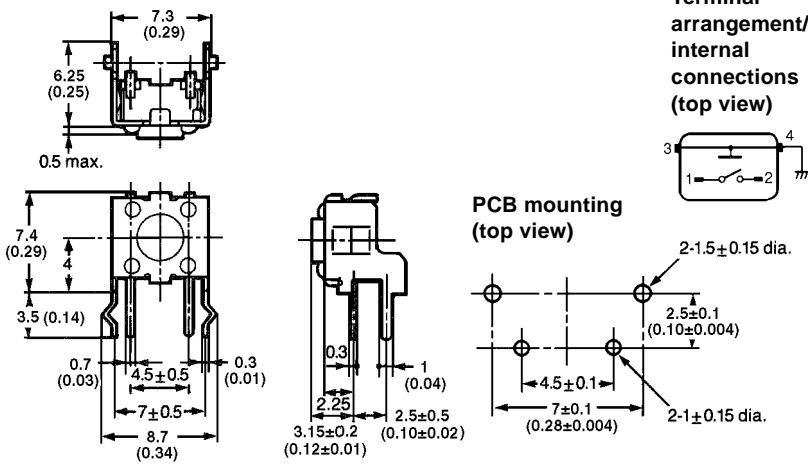
Unit: mm (inch)

■ B3F-1110

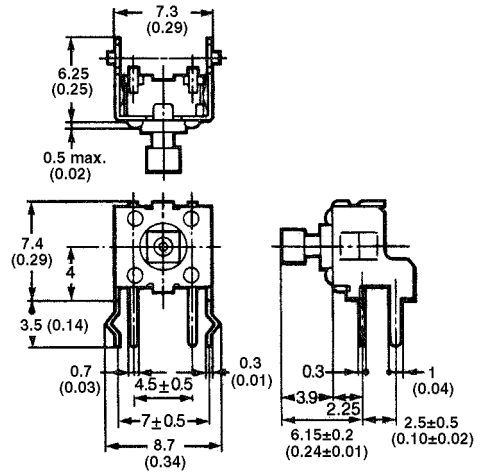


Note: Terminal numbers are not indicated on this switch. With the switch turned over so that the logo mark "OMRON" is visible on the upper part of the rear side of the switch base, the terminal on the right of the logo mark is numbered "1" and that on the bottom right is "3." Accordingly, two terminals on the left side are numbered "2" and "4" respectively.

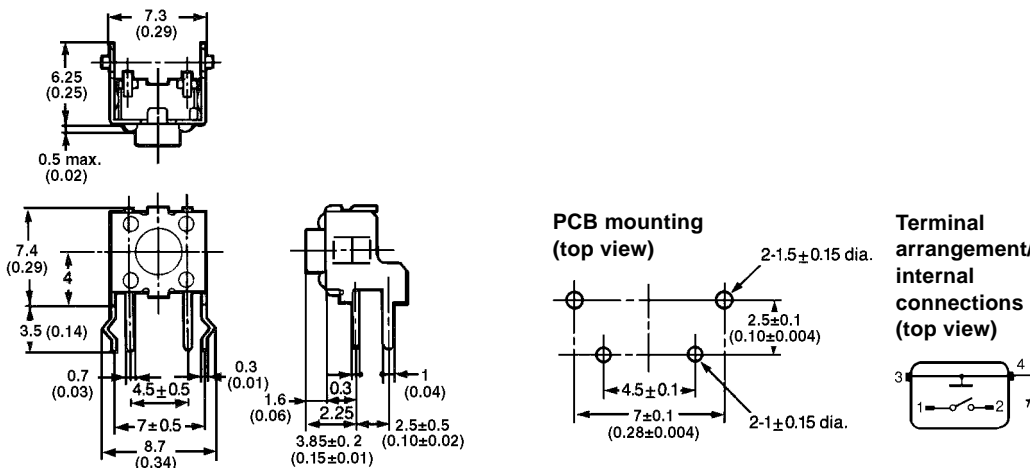
■ B3F-3100/-3102/-3105



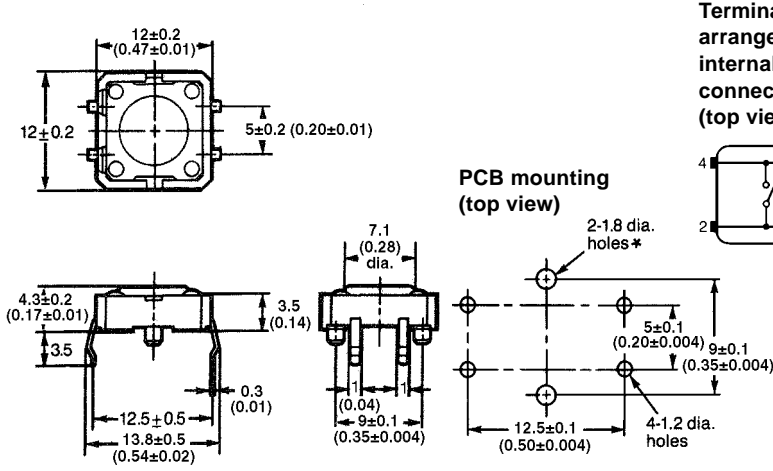
■ B3F-3150/-3152/-3155



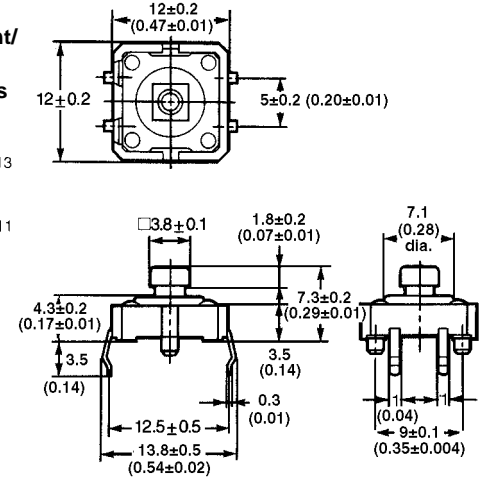
■ B3F-3120/-3122/-3125



■ B3F-4000/-5000/-4005/-5001

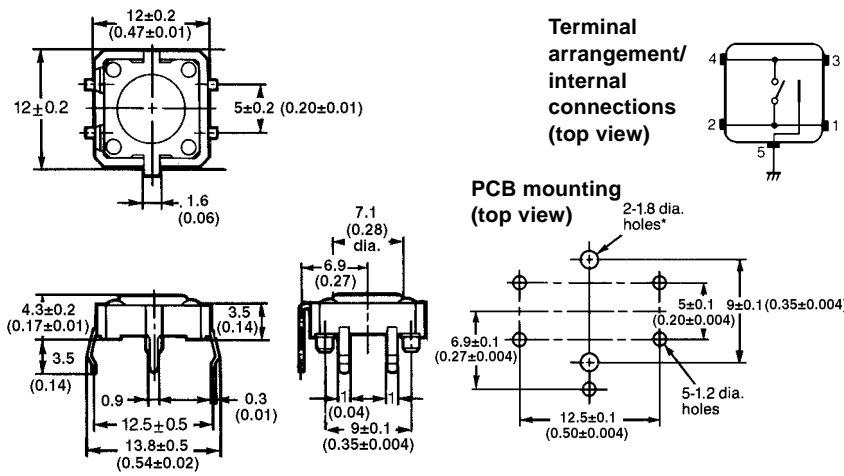


■ B3F-4050/-5050/-4055/-5051

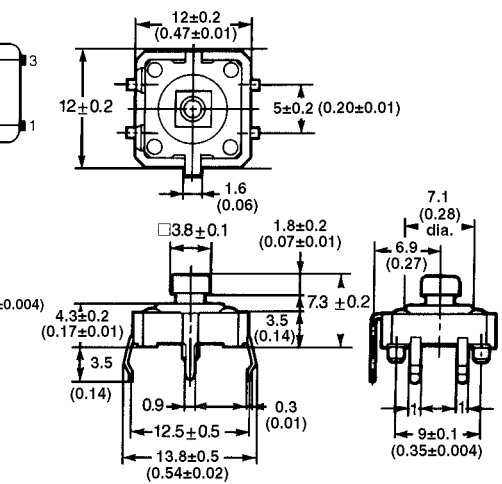


\* Fit the projection of the switch into this hole to secure the switch.

■ B3F-4101/-5100/-4105/-5101

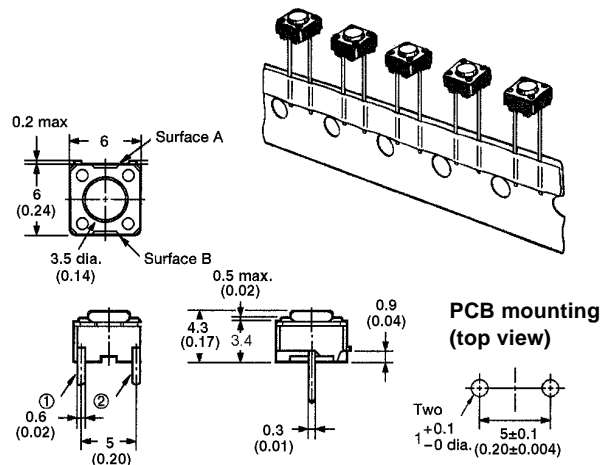


■ B3F-4150/-5150/-4155/-5151

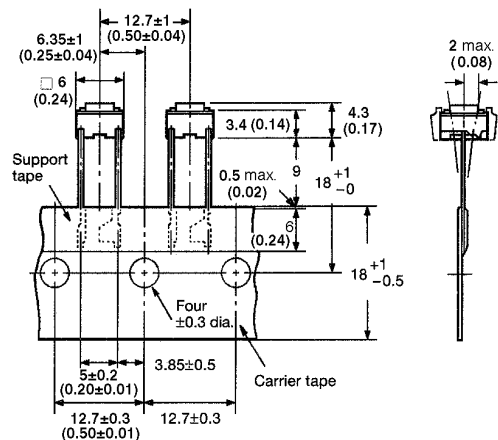


\* Fit the projection of the switch into this hole to secure the switch.

■ B3F-6000/-6002



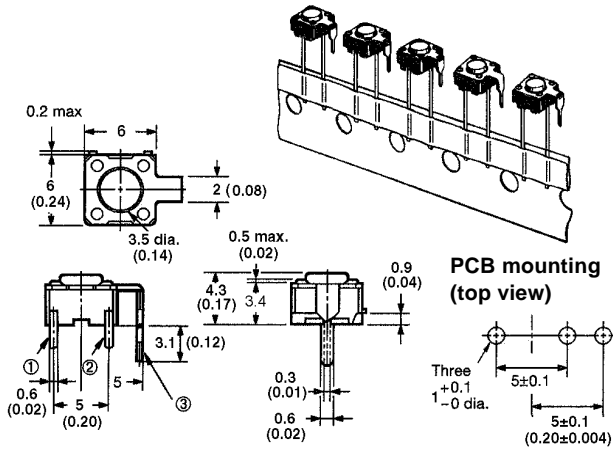
■ TAPE-PACKAGING DIMENSIONS



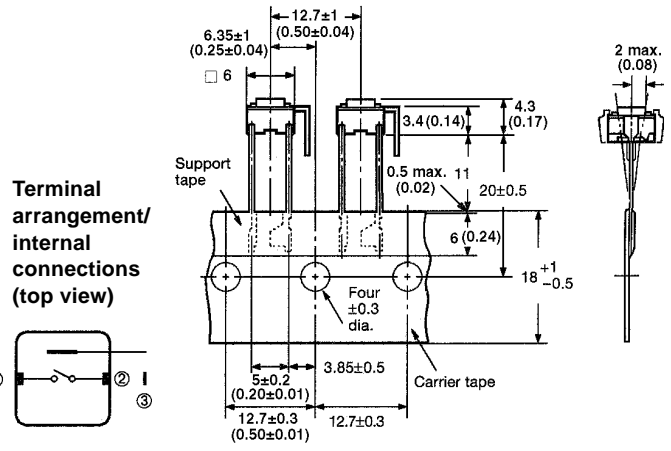
Note: The tape is random between surface A and surface B.

Unit: mm (inch)

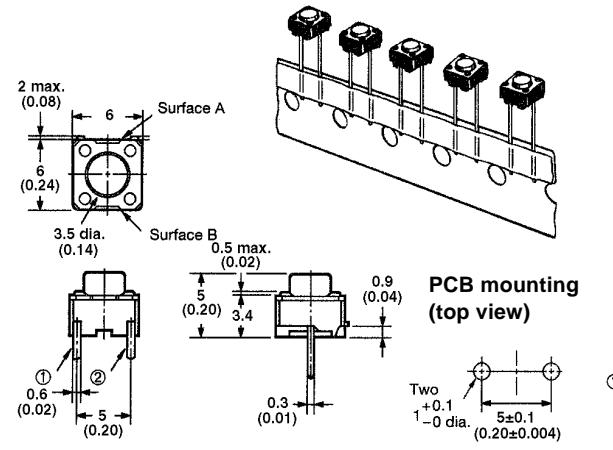
**■ B3F-6100/-6102**



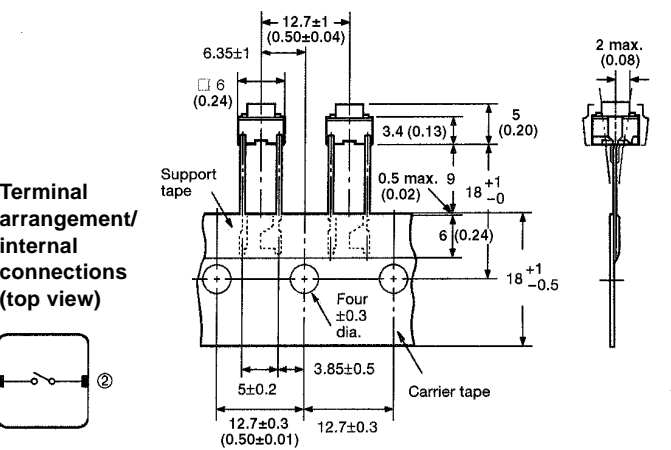
**■ TAPE-PACKAGING DIMENSIONS**



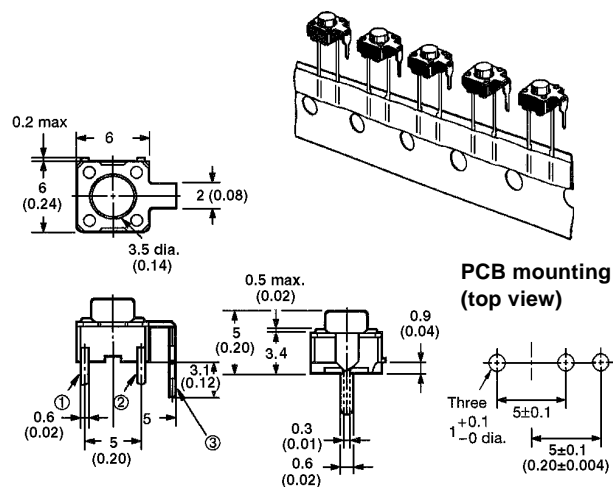
**■ B3F-6020/-6022**



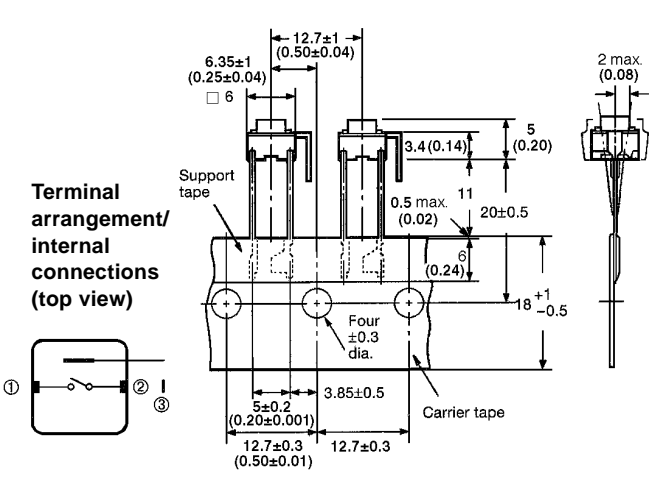
**■ TAPE-PACKAGING DIMENSIONS**



**■ B3F-6120/-6122**

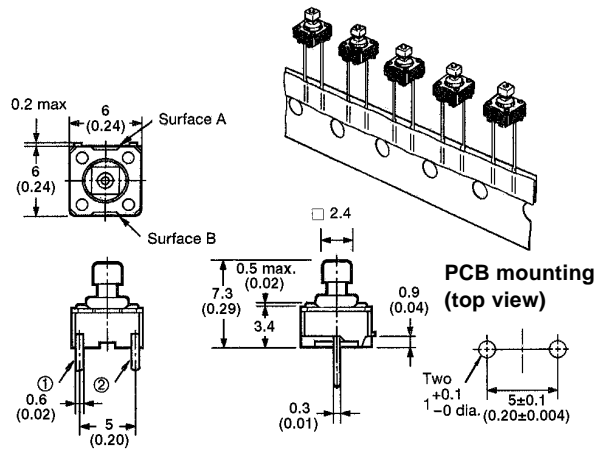


**■ TAPE-PACKAGING DIMENSIONS**

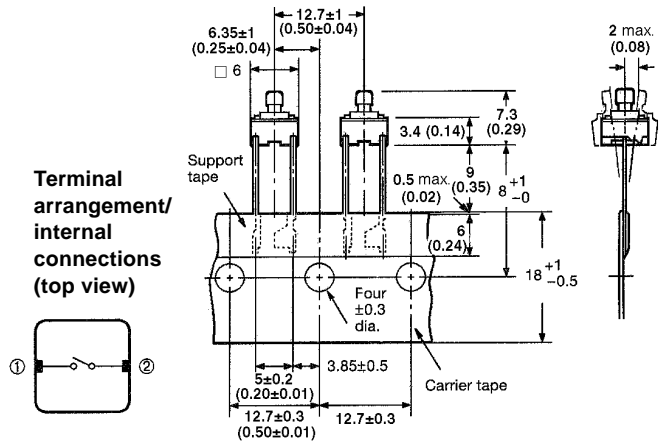




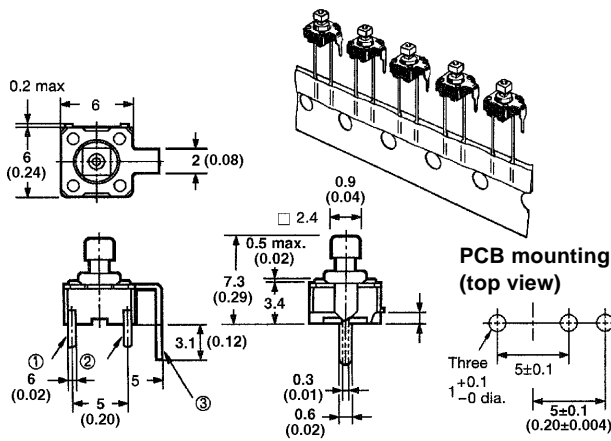
■ B3F-6050/-6052



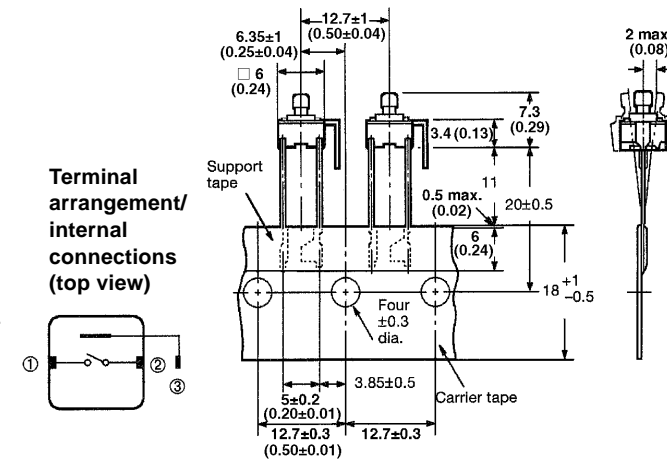
■ TAPE-PACKAGING DIMENSIONS



■ B3F-6150/-6152

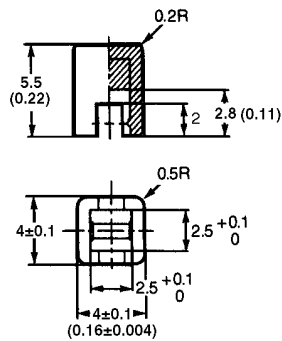


■ TAPE-PACKAGING DIMENSIONS

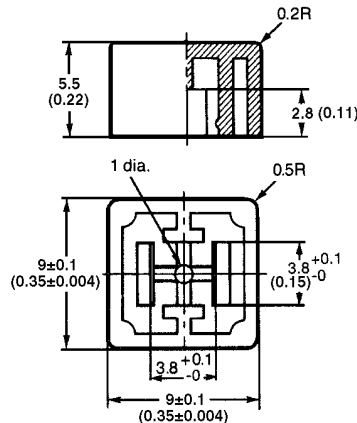


■ KEYCAPS

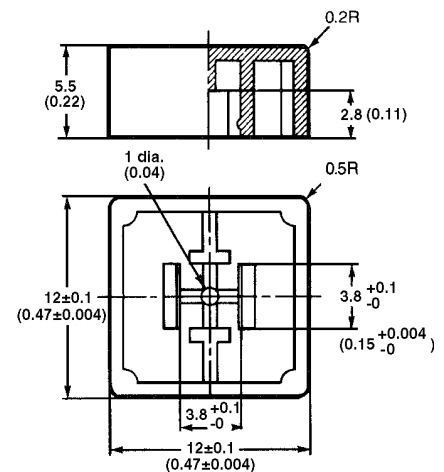
B32-10■0



B32-12■0



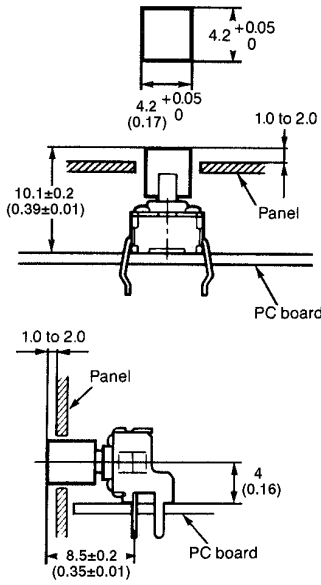
B32-13■0



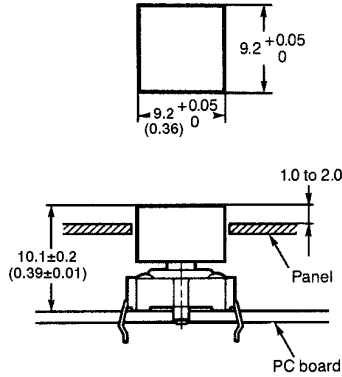
Unit: mm (inch)

**■ PANEL CUTOUTS**

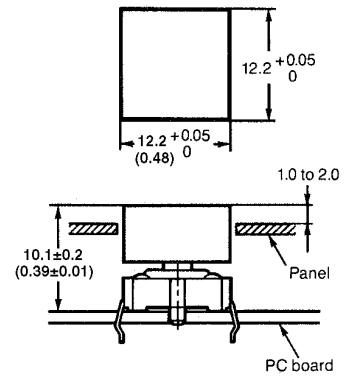
**B32-10■0**



**B32-12■0**



**B32-13■0**

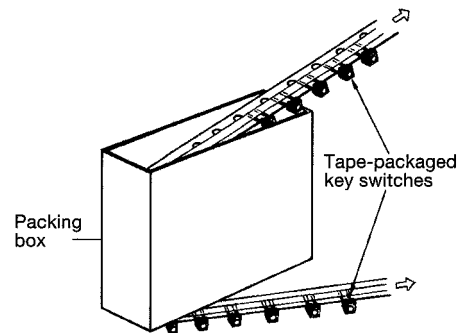
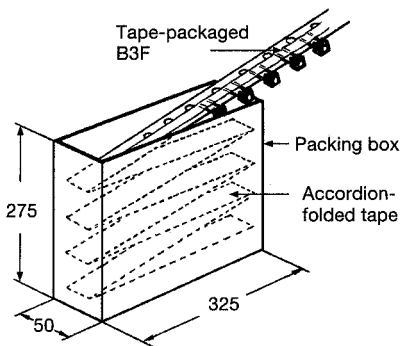


- Note: 1. Unless otherwise specified, a tolerance of  $\pm 0.2$  mm applies to all dimensions.  
 2. Keycaps are available in different sizes and colors for exclusive use of the 6 x 6 mm and 12 x 12 mm projected plunger versions of model B3F.

**Hints on Correct Use**

**■ TAPED RADIAL (AUTO INSERTION) PACKAGING**

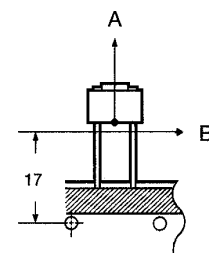
- Tactile switches packed on tape are placed into packing boxes as shown below.
- Number of switches per box: 1,000
- Tape may be drawn from the box either from the top or from the bottom.



**■ TAPING STRENGTH**

The tactile switches will not release from the tape when pulled in directions A and B at the following forces.

- A: 500 g
- B: 100 g



**NOTE: DIMENSIONS ARE SHOWN IN MILLIMETERS. To convert millimeters to inches divide by 25.4.**

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**OMRON****OMRON ELECTRONICS LLC.**

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**1-800-55-OMRON**

Cat. No. GC SW6

04/01

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Specifications subject to change without notice.

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