

### 3.5 mm×2.9 mm SMD Light Touch Switches

Type: **EVPA**



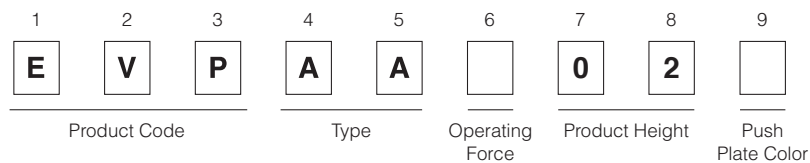
#### ■ Features

- External dimensions : 3.5 mm×2.9 mm, Height 1.7 mm
- High operating force available  
(Operating force : 7.0 N max.)
- Optional ground terminal

#### ■ Recommended Applications

- Operation switches for portable electronic equipments  
(Mobile phones, Digital still cameras, etc.)
- Operating switches for keyless entry systems

#### ■ Explanation of Part Numbers




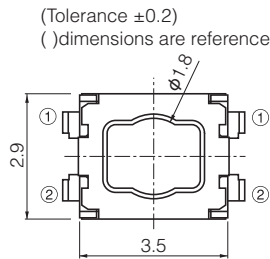
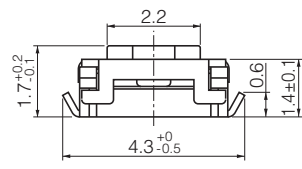
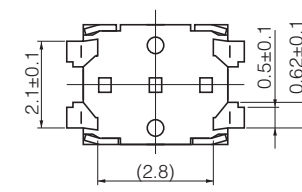
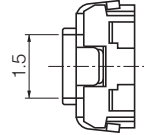
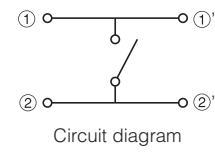
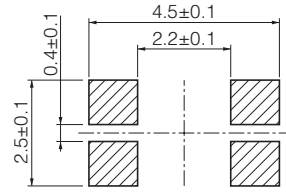
#### ■ Specifications

|                               |                                 |   |
|-------------------------------|---------------------------------|---|
| Type                          |                                 | Snap action/Push-on type SPST   |
| Electrical                    | Rating                          | 10 μA 2 V DC to 20 mA 15 V DC (Resistive load)  |
|                               | Contact Resistance              | 100 mΩ max.   |
|                               | Insulation Resistance           | 100 MΩ min. (at 100 V DC)   |
|                               | Dielectric Withstanding Voltage | 250 V AC for 1 minute   |
|                               | Bouncing                        | 10 ms max. (ON, OFF)  |
| Mechanical                    | Operating Force                 | 1.0 N, 1.6 N, 2.4 N, 3.5 N, 5.0 N, 7.0 N  |
|                               | Travel                          | 0.15 mm±0.1 mm  |
| Endurance                     | Operating Life                  | 1,000,000 cycles min. (1.0 N)<br>500,000 cycles min. (3.5 N)<br>200,000 cycles min. (1.6 N, 2.4 N, 3.5 N)<br>100,000 cycles min. (5.0 N, 7.0 N) |
| Operating Temperature         |                                 | -40 °C to +85 °C  |
| Storage Temperature           |                                 | -40 °C to +85 °C (Bulk)<br>-20 °C to +60 °C (Taping)  |
| Minimum Quantity/Packing Unit |                                 | 5,000 pcs. Embossed Taping (Reel Pack)  |
| Quantity/Carton               |                                 | 25,000 pcs.   |

Note: Non washable


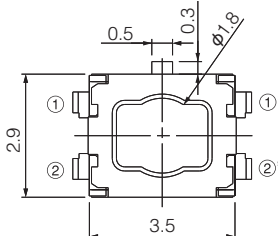
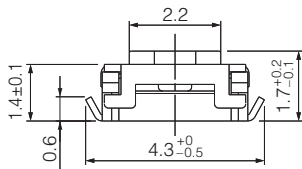
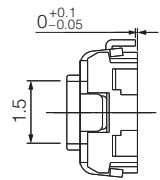
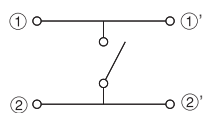
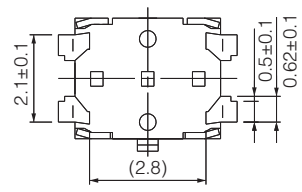
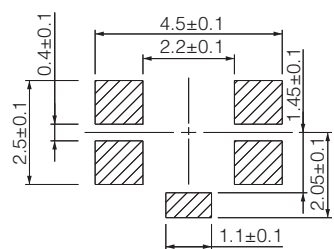
Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.  
Should a safety concern arise regarding this product, please be sure to contact us immediately.

■ Dimensions in mm (not to scale)

|  |  |                 |                  |                                     |
|--|--|-----------------|------------------|-------------------------------------|
| <p>No. 1</p> <p><b>EVPAA</b></p> <p>(Embossed Taping)<br/>         Thickness : 1.7 mm<br/>         With J-bent terminals<br/>         Without<br/>         Ground Terminal</p>  | <p>(Tolerance <math>\pm 0.2</math>)<br/>         ( ) dimensions are reference dimensions.</p>      <p>Circuit diagram</p>  <p>PWB land pattern for reference</p> |                 |                  |                                     |
| Part Numbers   | Ground Terminal  | Operating Force | Push Plate Color | Operating Life                      |
| EVPA002K   | Without  | 1.0 N           | Black            | 1,000,000 cycles                    |
| EVPA202K   | Without  | 1.6 N           | Black            | 200,000 cycles                      |
| EVPA402W   | Without  | 2.4 N           | White            | 200,000 cycles                      |
| EVPA602W   | Without  | 3.5 N           | White            | 200,000 cycles                      |
| EVPAAM02W  | Without  | 3.5 N           | White            | 500,000 cycles                      |
| EVPA802Q   | Without  | 5.0 N           | Gray             | 100,000 cycles                      |
| EVPAAN02Q  | Without  | 5.0 N           | Gray             | 100,000 cycles<br>(High load : 10N) |
| EVPAU02Q   | Without  | 7.0 N           | Gray             | 100,000 cycles                      |

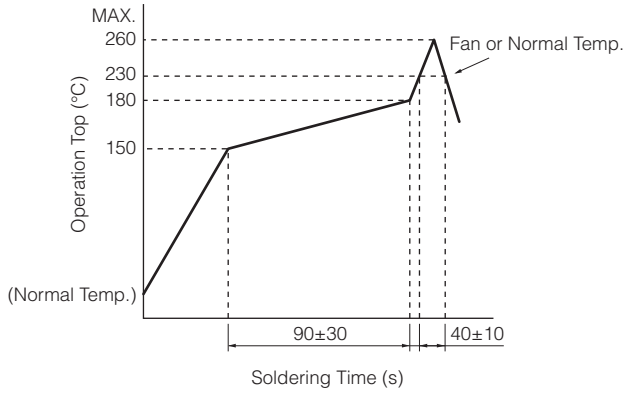
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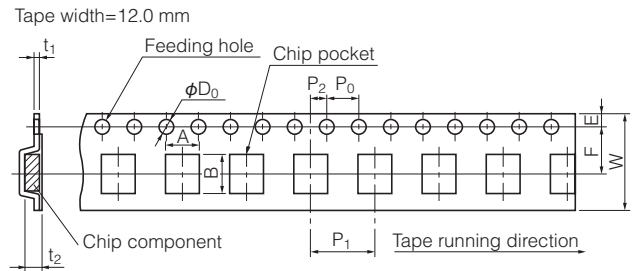
| <p>No. 2</p> <p><b>EVPAA</b></p> <p>(Embossed Taping)<br/>         Thickness : 1.7 mm<br/>         With J-bent terminals<br/>         With<br/>         Ground Terminal</p>  | <p>(Tolerance <math>\pm 0.2</math>)<br/>         ( ) dimensions are reference dimensions.</p> |   |   |  |
|---|---|---|---|--|
|   |              |    |  |  <p>Circuit diagram</p> |
|   |            |  <p>PWB land pattern for reference</p> |   |  |
| Part Numbers  | Ground Terminal   | Operating Force   | Push Plate Color  | Operating Life   |
| EVPAA102K   | With  | 1.0 N   | Black   | 1,000,000 cycles   |
| EVPAA302K   | With  | 1.6 N   | Black   | 200,000 cycles   |
| EVPAA502W   | With  | 2.4 N   | White   | 200,000 cycles   |
| EVPAA702W   | With  | 3.5 N   | White   | 200,000 cycles   |
| EVPAAQ02W   | With  | 3.5 N   | White   | 500,000 cycles   |
| EVPAA902Q   | With  | 5.0 N   | Gray  | 100,000 cycles   |
| EVPAAR02Q   | With  | 5.0 N   | Gray  | 100,000 cycles<br>(High load : 10N)  |

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## ■ Recommended Reflow Soldering Conditions



## ● Embossed Carrier Taping

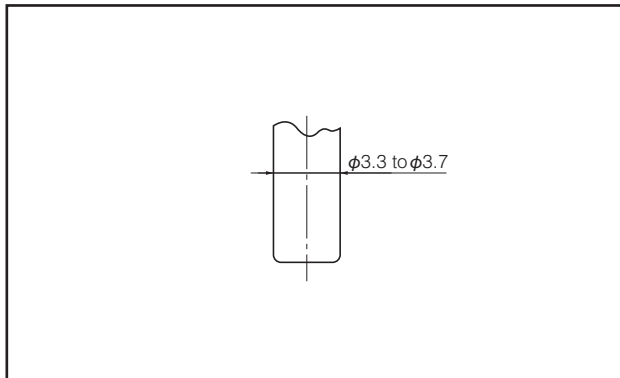


Taping condition : Lack of products in the middle of taping should be one MAX, but total quantity specified in the specifications should be secured.  
 Peeling off strength of top tape : It should be within 0.2N to 1.0N at 165 degree in peeling off angle.  
 Joint of carrier tape : One joint per one reel may exist.

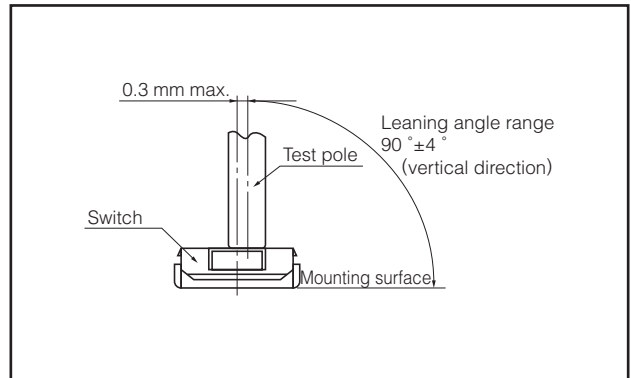
Unit: mm

| Part No. | Height | A       | B       | W        | F       | E         | P <sub>1</sub> | P <sub>2</sub> | P <sub>0</sub> | D <sub>0</sub> Dia  | t <sub>1</sub> | t <sub>2</sub> |
|----------|--------|---------|---------|----------|---------|-----------|----------------|----------------|----------------|---------------------|----------------|----------------|
| EVPAA    | 1.7    | 4.5±0.2 | 3.8±0.2 | 12.0±0.3 | 5.5±0.1 | 1.75±0.10 | 8.0±0.1        | 2.0±0.1        | 4.0±0.1        | 1.5 <sup>+0.1</sup> | 0.3±0.1        | 1.85±0.20      |

## ■ Recommended Shape of Test Pole



## ■ Recommended Operating Conditions



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#### Как с нами связаться

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