

### 3.0 mm×2.0 mm SMD Light Touch Switches

Type: **EVPAW**



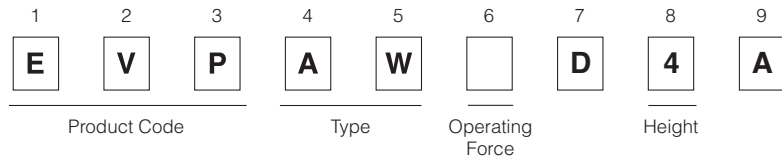
#### ■ Features

- External dimensions : 3.0 mm×2.0 mm, Height 0.6 mm
- High operability equipped with an actuator(push plate)
- IP67

#### ■ Recommended Applications

- Operation switches for portable electronic equipments  
(Mobile phone, Portable audio)

#### ■ Explanation of Part Numbers(Standard specification only)



#### ■ 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              | 500 mΩ max.   |
|                               | Insulation Resistance           | 50 MΩ min. (at 100 V DC)  |
|                               | Dielectric Withstanding Voltage | 250 V AC for 1 minute   |
|                               | Bouncing                        | 10 ms max. (ON, OFF)  |
| Mechanical                    | Operating Force                 | 1.6 N, 2.4 N, 3.3 N   |
|                               | Travel                          | 1.6 N, 2.4 N : 0.13 mm      3.3 N : 0.15 mm                         |
| Endurance                     | Operating Life                  | 1.6 N, 2.4 N : 500,000 cycles min.      3.3 N : 300,000 cycles min. |
| IP67(*1)                      | IP6x (Dust resistance)          | Dust : Talc (Type4) 8h  |
|                               | IPx7 (Water resistance)         | Immersion depth : 1 m 30 min.                                       |
| 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 |                                 | 10,000 pcs. Embossed Taping (Reel Pack)                             |
| Quantity/Carton               |                                 | 50,000 pcs.   |

Note: Non washable

(\*1) IP67 : Switch shall not be operated during test.

Water or dust ingress shall be limited enough to prevent deleterious effect to the switch function.


However, IP67 shall be guaranteed under single product state,

then there is a possibility that IP67 performance become impaired depending on your mounting condition or usage.

So, please ask us in advance, if the switch is applied to important usage for water and dust resistant.

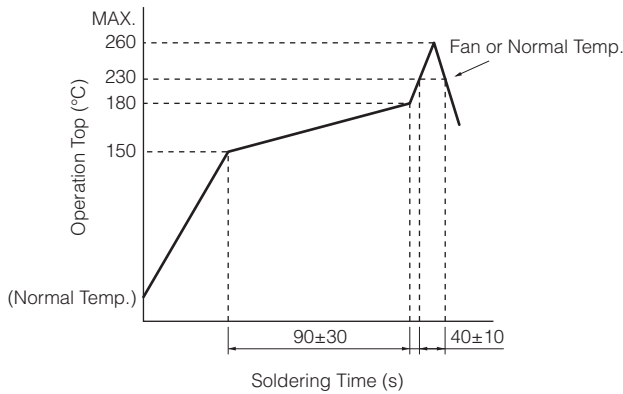
Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.  
Should a safety concern arise regarding this product, please be sure to contact us immediately.

### ■ Dimensions in mm (not to scale)

|   |   |               |                       |
|---|---|---------------|-----------------------|
| <p>EVPAW<br/>(Embossed Taping)</p>  | <p>General dimension tolerance : <math>\pm 0.05</math><br/>( ) dimensions are reference dimensions.</p> <p>This reference specifications are subject to change.</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="534 548 853 817"> </div> <div data-bbox="1077 548 1220 772"> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="566 862 869 1008"> </div> <div data-bbox="1013 840 1236 918"> <p>Circuit diagram</p> </div> </div> <p>The thickness of the solder stencil shall be 0.1 mm, and the opening ratio of the solder stencil to a land pattern shall be 60 to 100 % (recommend 80 %.)</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="566 1064 893 1332"> </div> <div data-bbox="949 1019 1292 1276"> <p>Land pattern plan</p> </div> </div> <p>* Soldering failure may occur depending on applied solder amount, so, please consider to use our recommended stencil and land pattern desing.</p> <p>  : Recommended land pattern area<br/>  : No soldering area     </p> <ul style="list-style-type: none"> <li>• Any land pattern or via holes shall not be provided at  area.</li> <li>• If it's necessary to design land pattern or via holes at  area, please apply resist to them to protect their metal part completely.</li> <li>• If their metal parts are not protected completely, short circuit failure may occur.</li> <li>• Besides, there should be convexoconcave by designing additional pattern, it may cause swith tilt, influence on solder-ability or flux intrusion after reflow soldering.</li> <li>• Therefore, please study any influence of addition land pattern or via holes at  area in advance.</li> </ul> |               |                       |
| <p>Part Numbers</p>   | <p>Operating Force</p>  | <p>Height</p> | <p>Operating Life</p> |
| <p>EVPAWBD4A</p>  | <p>1.6 N</p>  | <p>0.6 mm</p> | <p>500,000 cycles</p> |
| <p>EVPAWCD4A</p>  | <p>2.4 N</p>  | <p>0.6 mm</p> | <p>500,000 cycles</p> |
| <p>EVPAWED4A</p>  | <p>3.3 N</p>  | <p>0.6 mm</p> | <p>300,000 cycles</p> |

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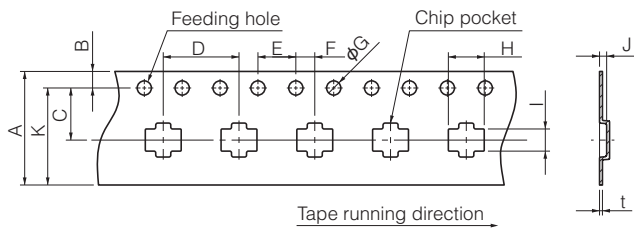
### ■ Recommended Reflow Soldering Conditions



\*Reflow temperature may vary by location even in the same reflow condition. Please check the reflow temperature at terminals and at the top of a switch to make sure the both temperatures are within the specification. If even one of them is out of the specifications, please adjust.

### ● Embossed Carrier Taping

Tape width=12.0 mm



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         | C       | D       | E       | F       | G       | H       | I       | J         | K       | t                                     |
|----------|--------|----------|-----------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------------------------------------|
| EVPAW    | 0.6    | 12.0±0.3 | 1.75±0.10 | 5.5±0.1 | 8.0±0.1 | 4.0±0.1 | 2.0±0.1 | 1.5±0.3 | 3.8±0.2 | 2.3±0.2 | 0.75±0.20 | (10.25) | 0.3 <sup>+0.15</sup> <sub>-0.10</sub> |