

3.0 mm×2.0 mm SMD Light Touch Switches

Type: **EVPAW**



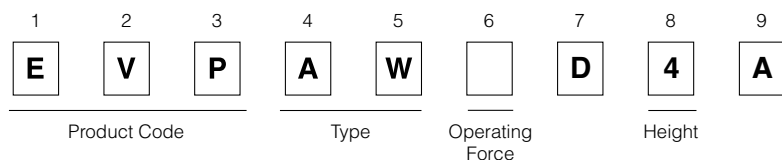
■ Features

- 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.
Protective Structure		IP67(*1) Dust resistance : 4 types of talc 8 h, Water resistance : Immersion depth 1 m 30 min.
Operating Temperature		−40 °C to +85 °C
Storage Temperature		−40 °C to +85 °C (Bulk) −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.


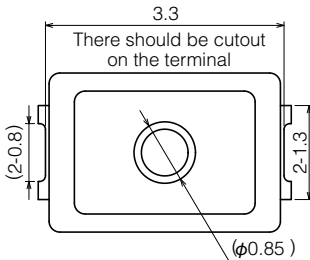
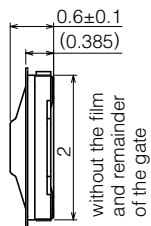
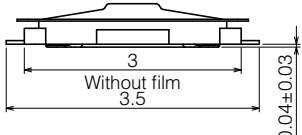
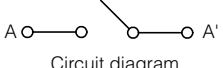
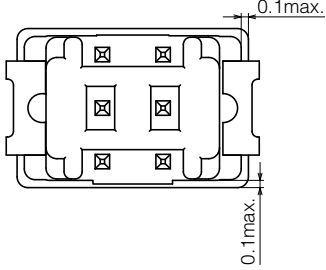
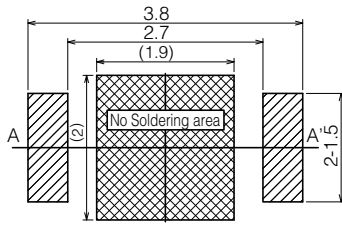
However, IP67 shall be guaranteed under single product state,

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.

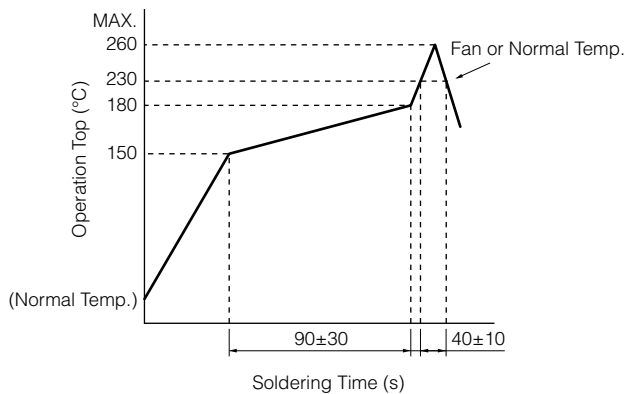
Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.

■ Dimensions in mm (not to scale)

<p>EVPAW</p> <p>(Embossed Taping)</p> 	<p>General dimension tolerance : ± 0.05 () dimensions are reference dimensions.</p> <p>This reference specifications are subject to change.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>There should be cutout on the terminal</p> <p>$\phi 0.85$</p> </div> <div style="text-align: center;">  <p>without the film and remainder of the gate</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">  <p>Without film 3.5</p> <p>0.04±0.03</p> </div> <div style="text-align: center;">  <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: 20px;"> <div style="text-align: center;">  <p>0.1max.</p> <p>0.1max.</p> </div> <div style="text-align: center;">  <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> <div style="display: flex; justify-content: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 20px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); margin-right: 5px;"></div> Recommended land pattern area </div> <div style="display: flex; justify-content: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 20px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, black 2px, black 4px); margin-right: 5px;"></div> No soldering area </div> <ul style="list-style-type: none"> Any land pattern or via holes shall not be provided at area. If it's necessary to design land pattern or via holes at area, please apply resist to them to protect their metal part completely. If their metal parts are not protected completely, short circuit failure may occur. Besides, there should be convexoconcave by designing additional pattern, it may cause switch tilt, influence on solder-ability or flux intrusion after reflow soldering. Therefore, please study any influence of addition land pattern or via holes at area in advance. 		
Part Numbers	Operating Force	Height	Operating Life
EVPAWBD4A	1.6 N	0.6 mm	500,000 cycles
EVPAWCD4A	2.4 N	0.6 mm	500,000 cycles
EVPAWED4A	3.3 N	0.6 mm	300,000 cycles

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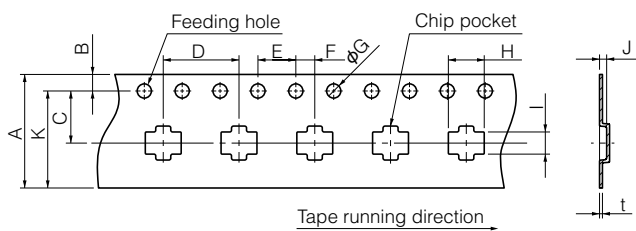
■ Recommended Reflow Soldering Conditions



*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 ^{+0.15} _{-0.10}

Requests to customers

Please refer to "the latest product specifications" when designing your product.

Requests to customers :

<https://industrial.panasonic.com/ac/e/salespolicies/>

Safety Precautions

When using our products, no matter what sort of equipment they might be used for, be sure to confirm the applications and environmental conditions with our specifications in advance.

Please contact

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