# 6 mm Square Long Travel 2 terminals SMD Light Touch Switches

### Type: **EVPAS**

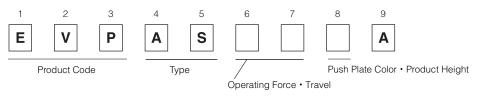
#### ■ Features

- External dimensions: 6.0 mm×6.1 mm, Height 5.0 mm (Including the push plate)
- Steady and low contact resistance (100 m $\Omega$  max.)
- Excellent solderability (J-bent-type terminals)

### ■ Recommended Applications

- Operating switches for car electronic equipments.
- Input on operating switches for telephones, electronic musical instruments, etc.

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



#### Specifications

Rating	Туре		Snap action/Push-on type SPST						
Insulation Resistance   100 MΩ min. (at 100 V DC)	Electrical  Rating  Contact Resistance  Insulation Resistance  Dielectric Withstanding Voltage  Bouncing  Type  Mechanical  Operating Force  Travel  Endurance  Operating Life								
Dielectric Withstanding Voltage   250 V AC for 1 minute		Contact Resistance	100 mΩ max.						
Bouncing   10 ms max. (ON, OFF)		Insulation Resistance	100 MΩ min. (at 100 V DC)						
Type   Standard type   Narrow tolerance operating force type		Dielectric Withstanding Voltage	250 V AC for 1 minute						
Nechanical   Operating Force   Standard type   Operating force type		Bouncing	10 ms max. (ON, OFF)						
Mechanical   Operating Force   2.0 N±0.6 N	Electrical  Mechanical  Endurance  Operating Tem  Storage Tempe  Minimum Quar	Туре	Standa						
Mechanical         Operating Force         -         2.2 N±0.6 N         -           3.0 N±0.8 N         -         3.0 N±0.6 N           3.5 N±1.0 N         -         -           -         -         3.6 N±0.8 N           -         -         4.0 N±0.85 N           Travel         1.3 mm±0.2 mm         1.0 mm±0.2 mm           1.6 N, 2.0 N, 2.2 N, 2.5 N type: 100,000 cycles min.         3.0 N type: 200,000 cycles min.           3.0 N type: 200,000 cycles min.         3.5 N type: 100,000 cycles min.			1.6 N±0.5 N	_	_				
Mechanical         Operating Force         2.5 N±0.6 N         2.5 N±0.6 N         —           3.0 N±0.8 N         —         3.0 N±0.6 N           3.5 N±1.0 N         —         —           —         —         —           4.0 N±0.85 N         —           Travel         1.3 mm±0.2 mm         1.0 mm±0.2 mm           1.6 N, 2.0 N, 2.2 N, 2.5 N type: 100,000 cycles min.         3.0 N type: 200,000 cycles min.           3.0 N type: 200,000 cycles min.         3.5 N type: 100,000 cycles min.			2.0 N±0.6 N	_	_				
2.5 N±0.6 N   2.5 N±0.6 N   -			_	2.2 N±0.6 N	_				
3.5 N±1.0 N — — — 3.6 N±0.8 N — — 4.0 N±0.85 N  Travel 1.3 mm±0.2 mm 1.0 mm±0.2 mm  1.6 N, 2.0 N, 2.2 N, 2.5 N type: 100,000 cycles min. 3.0 N type: 200,000 cycles min. 3.5 N type: 100,000 cycles min. 3.5 N type: 100,000 cycles min.		Operating Force	2.5 N±0.6 N	2.5 N±0.6 N	_				
—     —     3.6 N±0.8 N       —     —     4.0 N±0.85 N       Travel     1.3 mm±0.2 mm     1.0 mm±0.2 mm       1.6 N, 2.0 N, 2.2 N, 2.5 N type: 100,000 cycles min.     3.0 N type: 200,000 cycles min.       3.0 N type: 200,000 cycles min.     3.5 N type: 100,000 cycles min.			3.0 N±0.8 N	_	3.0 N±0.6 N				
—         —         4.0 N±0.85 N           Travel         1.3 mm±0.2 mm         1.0 mm±0.2 mm           1.6 N, 2.0 N, 2.2 N, 2.5 N type: 100,000 cycles min.         3.0 N type: 200,000 cycles min.           3.5 N type: 100,000 cycles min.         3.5 N type: 100,000 cycles min.			3.5 N±1.0 N	_	_				
Travel 1.3 mm±0.2 mm 1.0 mm±0.2 mm  1.6 N, 2.0 N, 2.2 N, 2.5 N type: 100,000 cycles min. 3.0 N type: 200,000 cycles min. 3.5 N type: 100,000 cycles min.			_	_	3.6 N±0.8 N				
1.6 N, 2.0 N, 2.5 N type: 100,000 cycles min. 3.0 N type: 200,000 cycles min. Endurance Operating Life 3.5 N type: 100,000 cycles min.			_	_	4.0 N±0.85 N				
3.0 N type: 200,000 cycles min. Endurance Operating Life 3.5 N type: 100,000 cycles min.		Travel	1.3 mm±0.2 mm	1.0 mm:	±0.2 mm				
4.0 N with Narrow tolerance type: 200,000 cycles min.	Endurance	Operating Life	3.0 N type: 200,000 c 3.5 N type: 100,000 c 3.0 N, 3.6 N with Narr	cycles min. cycles min. row tolerance type: 300	00,000 cycles min.				
Operating Temperature -40 °C to +90 °C	Operating Temperature		−40 °C to +90 °C						
Storage Temperature  -40 °C to +90 °C (Bulk)  -20 °C to +60 °C (Taping)	Storage Temperature		, , ,						
Minimum Quantity/Packing Unit 2,000 pcs. Embossed Taping (Reel Pack)	Minimum Quantity/Packing Unit		2,000 pcs. Embossed Taping (Reel Pack)						
Quantity/Carton 10,000 pcs.			10,000 pcs.						

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)

### General dimension tolerance: ± 0.2 () dimensions are reference dimensions. **EVPAS** (Embossed Taping) 6.0 Knob (B) 3.5 Circuit diagram 7.0±0.3 $1.0\pm0.3$ (4.0)8.0±0.1 4.0±0.1 2.0±0. PWB land pattern for reference Operating Force Travel Height Push Plate Color Operating Life Part Numbers EVPASCB1A 2.2 N 1.0 mm 5.0 mm Black 100,000 cycles 2.5 N EVPASDB1A 1.0 mm 5.0 mm Black 100,000 cycles EVPASAC1A 1.6 N 1.3 mm 5.0 mm Black 100,000 cycles EVPASBC1A 2.0 N Black 100,000 cycles 1.3 mm 5.0 mm EVPASDC1A 2.5 N 1.3 mm 5.0 mm Black 100,000 cycles

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1.3 mm

1.3 mm

3.0 N

3.5 N

5.0 mm

5.0 mm

Black

Black

200,000 cycles

100,000 cycles

EVPASKC1A

EVPASJC1A

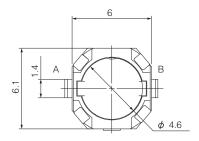
#### ■ Dimensions in mm (not to scale)

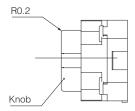
### **EVPAS**

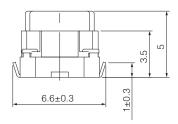
General dimension tolerance :  $\pm$  0.2 ( )dimensions are reference dimensions.

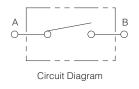
(Embossed Taping)

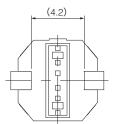
(Narrow tolerance operating force type)

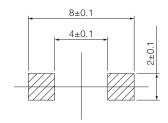












Land pattern plan

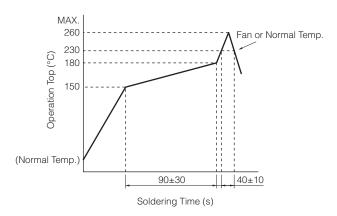
Knob color : BLACK

Solder thickness t=0.15±0.03

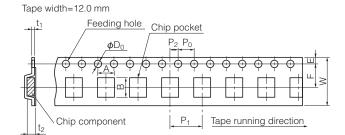
Part Numbers	Operating Force	Travel	Height	Push Plate Color	Operating Life	
EVPAS4D1A	3.0 N	1.0 mm	5.0 mm	Black	300,000 cycles	
EVPAS3D1A	3.6 N	1.0 mm	5.0 mm	Black	300,000 cycles	
EVPAS5D1A	4.0 N	1.0 mm	5.0 mm	Black	200,000 cycles	

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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	А	В	W	F	E	P <sub>1</sub>	P <sub>2</sub>	Po	D₀ Dia.	t1	t2
EVPAS	5.0	6.8±0.2	7.7±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+0.1	0.4±0.1	5.25±0.20

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### 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 ......

# **Panasonic Corporation**

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