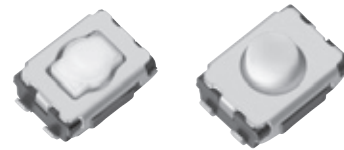


### 4.7 mm×3.5 mm SMD Light Touch Switches

Type: **EVQP2/EVQP9/EVQ3P2**



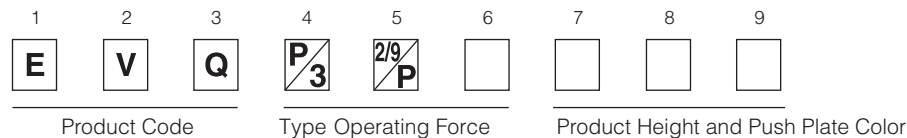
#### ■ Features

- External dimensions : 4.7 mm×3.5 mm,  
Height : Middle Push Travel 2.5 mm  
Short Push Travel 2.1 mm, 2.5 mm
- High operating force and long operational life
- High mountability with J-bent (4 terminals)

#### ■ Recommended Applications

- Operation switches for portable electronic equipment (Mobile phones, Digital still cameras, Camcorders, Portable audio players, etc.)
- Keyless entry systems (automotive)
- Car audio equipment

#### ■ Explanation of Part Numbers



#### ■ Specifications

Travel Type		Middle Push Travel	Short Push Travel
Type		Snap action / Push-on V DC 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 (1 minute)	
	Bouncing	10 ms max. (ON, OFF)	
Mechanical	Operating Force	2.5 N, 3.5 N, 5.0 N	1.0 N, 1.6 N, 2.4 N, 3.5 N, 4.0 N, 5.0 N
	Travel	0.70 mm±0.20 mm	0.25 mm <sup>+0.05</sup> <sub>-0.15</sub> mm
Endurance	Operating Life	2.5 N: 1,000,000 cycles min. 3.5 N: 500,000 cycles min. 5.0 N: 200,000 cycles min.	1.0 N, 1.6 N: 1,000,000 cycles min. 2.4 N: 500,000 cycles min. 3.5 N: 200,000 cycles min. 4.0 N: 200,000 cycles min. 5.0 N: 200,000 cycles 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		4,000 pcs. Embossed Taping (Reel Pack)	
Quantity/Carton		20,000 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.


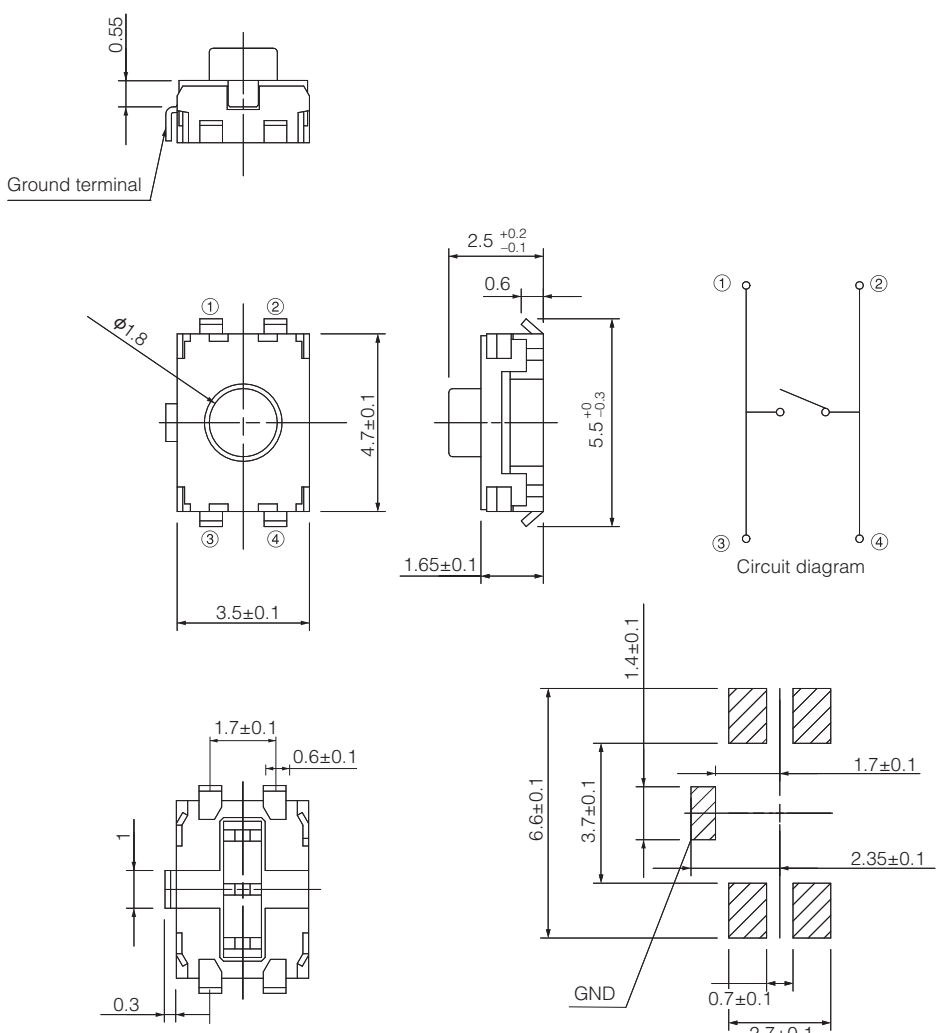
■ Dimensions in mm (not to scale)

<p>No. 1</p> <p>EVQP2 EVQ3P2</p> <p>Middle push travel With J-bent terminals Without Ground Terminal</p>	<p>(General dimension tolerance±0.2)</p>
--	--

Part Numbers	Ground Terminal	Operating Force	Height	Push Plate Color	Operating Life
EVQP2H02B	Without	2.5 N	2.5 mm	Blue	1,000,000 cycles
EVQP2K02Q	Without	3.5 N	2.5 mm	Gray	500,000 cycles
EVQ3P202K	Without	5.0 N	2.5 mm	Black	200,000 cycles

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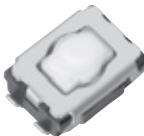
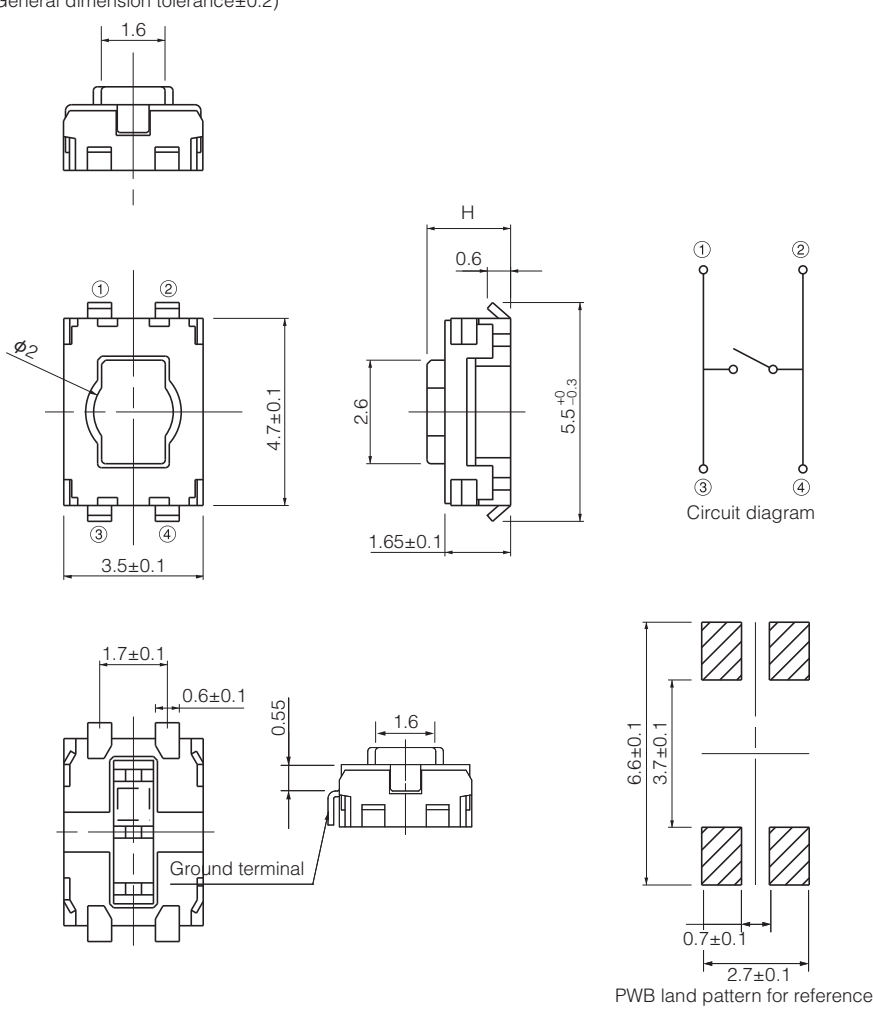
■ Dimensions in mm (not to scale)

<p style="text-align: center;">No. 2</p> <p>EVQP2 EVQ3P2</p> <p>Middle push travel With J-bent terminals With Ground Terminal</p> 	<p style="text-align: center;">(General dimension tolerance : ± 0.2)</p>  <p style="text-align: center;"><b>Land pattern plan</b></p> <p>We recommend to connect the GND land shown in the switch spec. with the GND of your P.C.B for withstanding electric-static discharge.</p>
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Part Numbers	Ground Terminal	Operating Force	Height	Push Plate Color	Operating Life
EVQP2B02B	With	2.5 N	2.5 mm	Blue	1,000,000 cycles
EVQP2D02Q	With	3.5 N	2.5 mm	Gray	500,000 cycles
EVQP2F02K	With	5.0 N	2.5 mm	Black	200,000 cycles

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■ Dimensions in mm (not to scale)

No. 3					
EVQP2 EVQP9  Short push travel With J-bent terminals Without Ground Terminal		(General dimension tolerance±0.2)			
					
		Circuit diagram			
		PWB land pattern for reference			
Part Numbers	Ground Terminal	Operating Force	H=Height	Push Plate Color	Operating Life
EVQP2002M	Without	1.0 N	2.1 mm	White	1,000,000 cycles
EVQP2002W	Without	1.0 N	2.5 mm	White	1,000,000 cycles
EVQP2202M	Without	1.6 N	2.1 mm	White	1,000,000 cycles
EVQP2202W	Without	1.6 N	2.5 mm	White	1,000,000 cycles
EVQP2402M	Without	2.4 N	2.1 mm	White	500,000 cycles
EVQP2402W	Without	2.4 N	2.5 mm	White	500,000 cycles
EVQP2602M	Without	3.5 N	2.1 mm	White	200,000 cycles
EVQP2602W	Without	3.5 N	2.5 mm	White	200,000 cycles
EVQP9W02M	Without	4.0 N	2.1 mm	White	200,000 cycles
EVQP9W02W	Without	4.0 N	2.5 mm	White	200,000 cycles
EVQP9P02M	Without	5.0 N	2.1 mm	White	200,000 cycles
EVQP9P02W	Without	5.0 N	2.5 mm	White	200,000 cycles


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### ■ Dimensions in mm (not to scale)

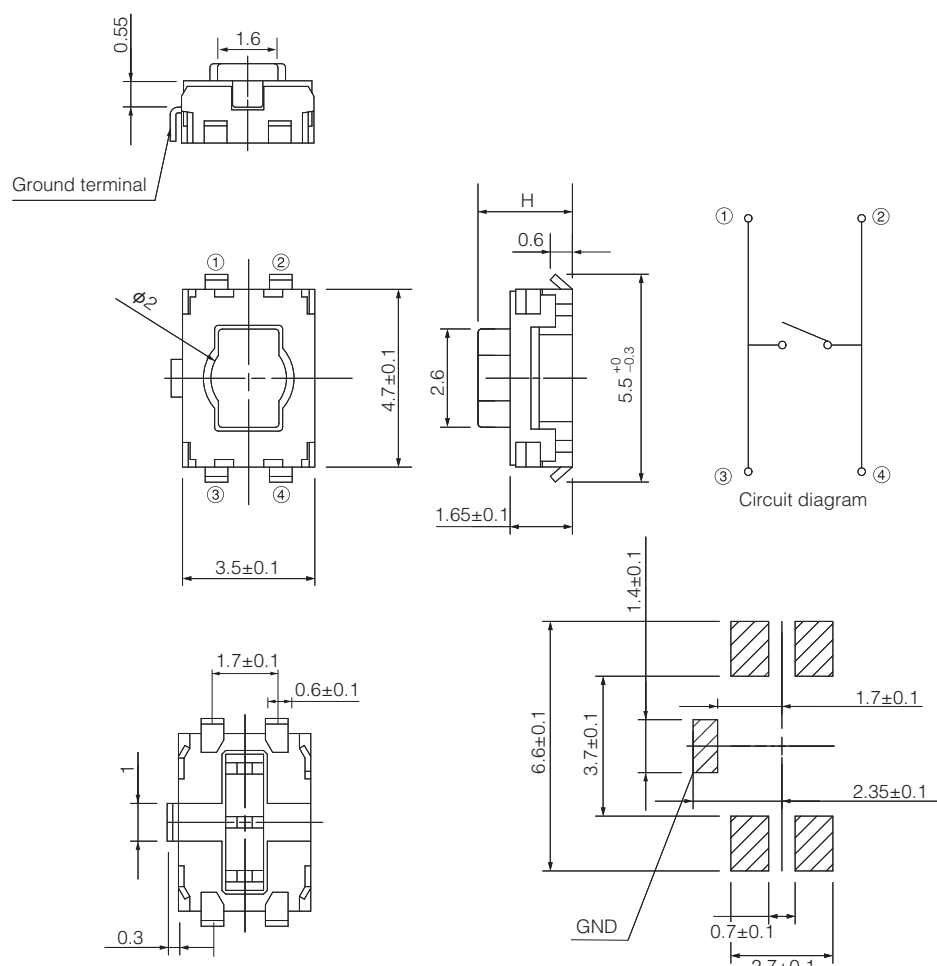
No. 4

EVQP2  
EVQP9

Short push travel  
With J-bent terminals  
With  
Ground Terminal



(General dimension tolerance±0.2)



Circuit diagram

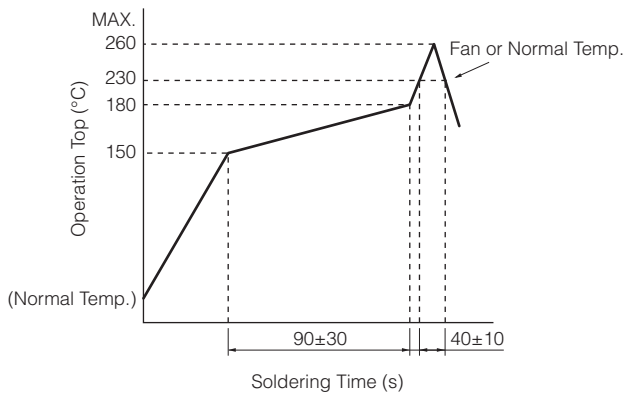
Land pattern plan

We recommend to connect the GND land shown in the switch spec. with the GND of your P.C.B for withstanding electric-static discharge.

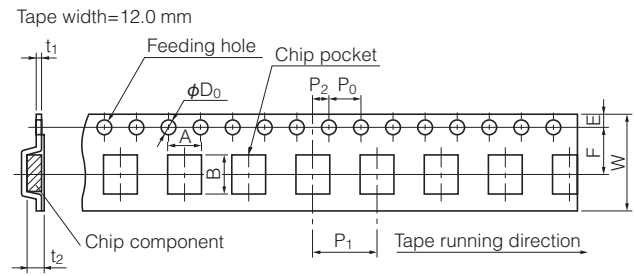
Part Numbers	Ground Terminal	Operating Force	H=Height	Push Plate Color	Operating Life
EVQP2P02M	With	1.0 N	2.1 mm	White	1,000,000 cycles
EVQP2P02W	With	1.0 N	2.5 mm	White	1,000,000 cycles
EVQP2R02M	With	1.6 N	2.1 mm	White	1,000,000 cycles
EVQP2R02W	With	1.6 N	2.5 mm	White	1,000,000 cycles
EVQP2T02M	With	2.4 N	2.1 mm	White	500,000 cycles
EVQP2T02W	With	2.4 N	2.5 mm	White	500,000 cycles
EVQP2V02M	With	3.5 N	2.1 mm	White	200,000 cycles
EVQP2V02W	With	3.5 N	2.5 mm	White	200,000 cycles
EVQP9102M	With	4.0 N	2.1 mm	White	200,000 cycles
EVQP9102W	With	4.0 N	2.5 mm	White	200,000 cycles
EVQP9H02M	With	5.0 N	2.1 mm	White	200,000 cycles
EVQP9H02W	With	5.0 N	2.5 mm	White	200,000 cycles

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### Recommended Reflow Soldering Conditions



### Embossed Carrier Taping

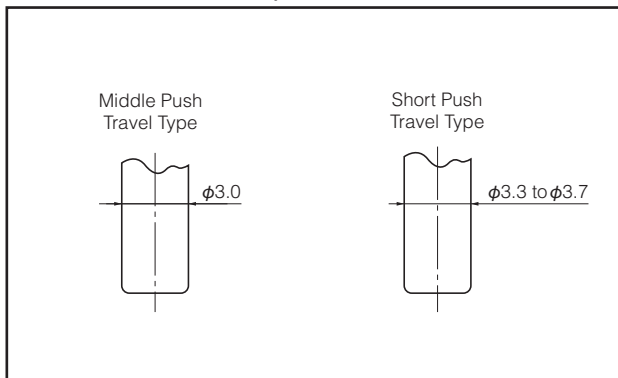


Taping condition : Lack of products in the middle of taping should be one MAX, but total quantity specified in the specifications should be secured.  
 Peeling off strength of top tape : It should be within 0.2N to 1.0N at 165 degree in peeling off angle.  
 Joint of carrier tape : One joint per one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

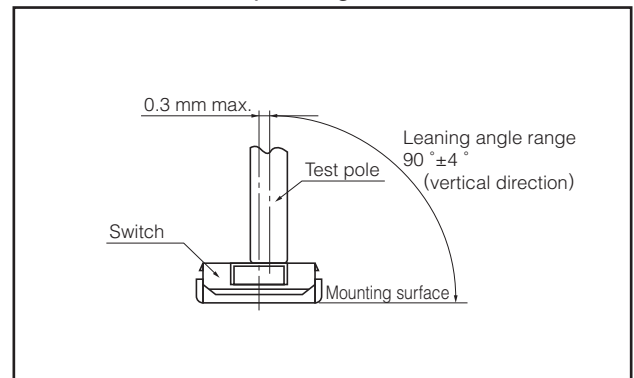
Unit: mm

Part No.	Height	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>
EVQP2	2.1	6.0±0.2	4.7±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 <sup>+0.1</sup> <sub>-0</sub>	0.3±0.1	2.7±0.2
EVQP9	2.5											
EVQ3P2												

### Recommended Shape of Test Pole



### Recommended Operating Conditions



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