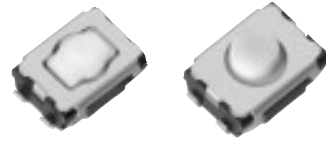


### 4.7 mm×3.5 mm SMD Light Touch Switches

Type: **EVQP2/EVQP9/EVQ3P2**



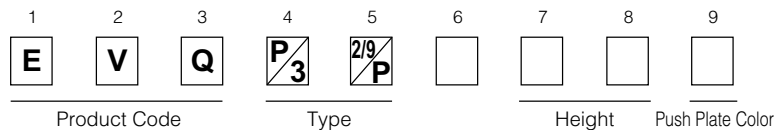
#### ■ Features

- 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

- Keyless entry systems (automotive)
- Car audio equipment

#### ■ Explanation of Part Numbers



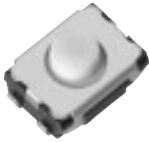
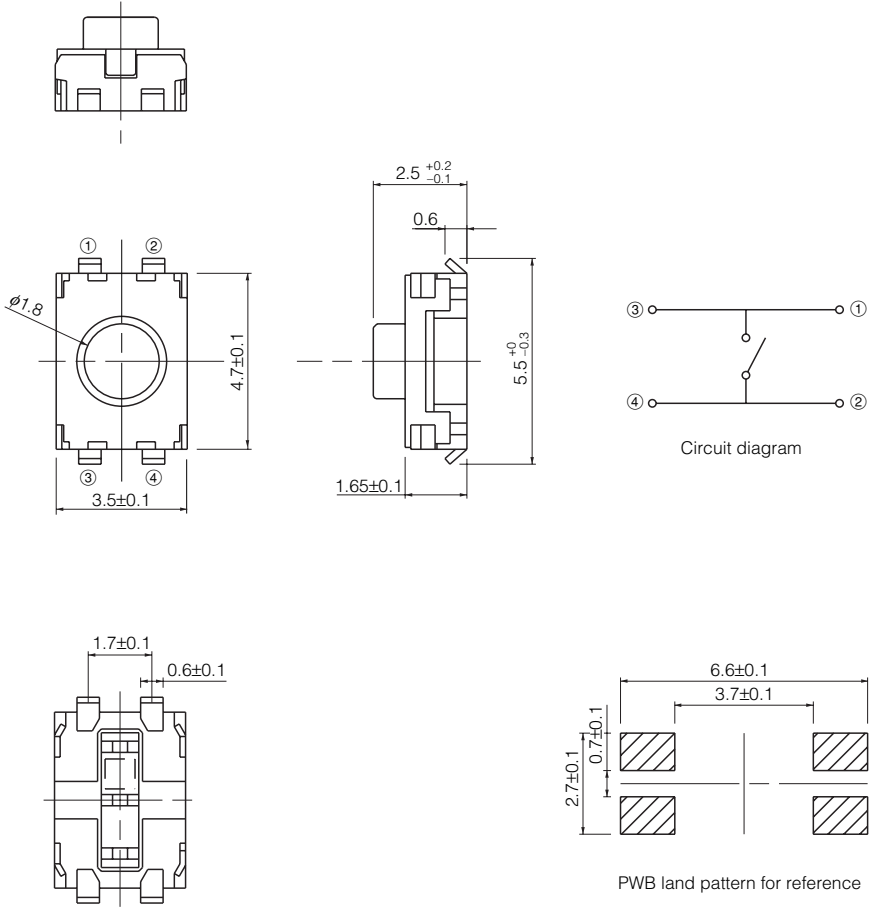
#### ■ Specifications

Travel Type		Middle Push Travel	Short Push Travel
Type		Snap action / Push-on type SPST	
Electrical	Rating	10 μA 2 Vdc to 20 mA 15 Vdc (Resistive load)	
	Contact Resistance	100 mΩ max.	
	Insulation Resistance	100 MΩ min.	
	Dielectric Withstanding Voltage	250 Vac (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, 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: 1000000 cycles min. 3.5 N: 500000 cycles min. 5.0 N: 200000 cycles min.	1.0 N, 1.6 N: 1000000 cycles min. 2.4 N: 500000 cycles min. 3.5 N: 200000 cycles min. 5.0 N: 200000 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		4000 pcs. Embossed Taping (Reel Pack)	
Quantity/Carton		20000 pcs.	

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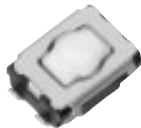
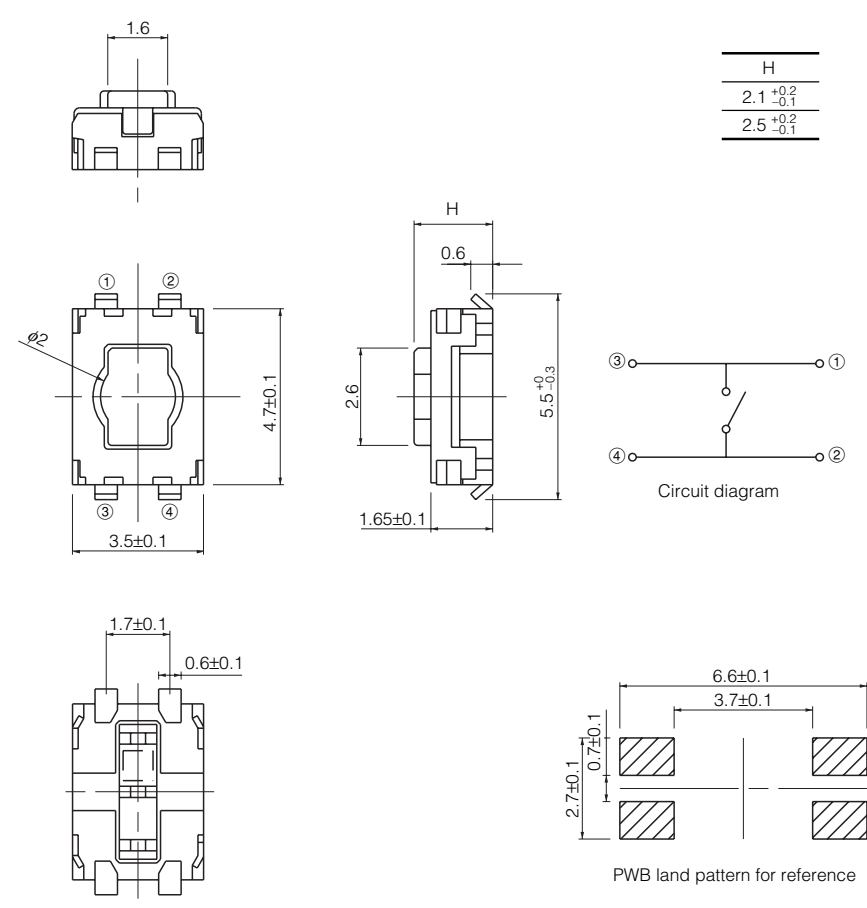
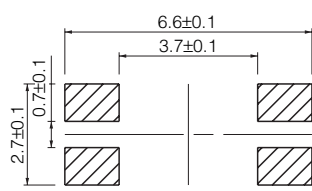
00 Sep. 2010

■ Dimensions in mm (not to scale)

<p>No. 1</p> <p>EVQP2 EVQ3P2</p> <p>Middle push travel With J-bent terminals (With Ground terminal)</p> 	 <p style="text-align: center;">Circuit diagram</p> <p style="text-align: center;">PWB land pattern for reference</p>				
<p>Part Numbers</p>	<p>Ground Terminal</p>	<p>Operating Force</p>	<p>Height</p>	<p>Push Plate Color</p>	<p>Operating Life</p>
<p>EVQP2B02B</p>	<p>With</p>	<p>2.5 N</p>	<p>2.5 mm</p>	<p>Blue</p>	<p>1000000 cycles</p>
<p>EVQP2D02Q</p>	<p>With</p>	<p>3.5 N</p>	<p>2.5 mm</p>	<p>Grey</p>	<p>500000 cycles</p>
<p>EVQP2F02K</p>	<p>With</p>	<p>5.0 N</p>	<p>2.5 mm</p>	<p>Black</p>	<p>200000 cycles</p>
<p>EVQP2H02B</p>	<p>Without</p>	<p>2.5 N</p>	<p>2.5 mm</p>	<p>Blue</p>	<p>1000000 cycles</p>
<p>EVQP2K02Q</p>	<p>Without</p>	<p>3.5 N</p>	<p>2.5 mm</p>	<p>Grey</p>	<p>500000 cycles</p>
<p>EVQ3P202K</p>	<p>Without</p>	<p>5.0 N</p>	<p>2.5 mm</p>	<p>Black</p>	<p>200000 cycles</p>

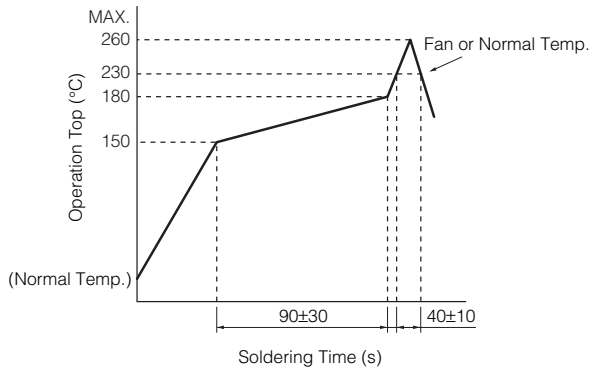
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■ Dimensions in mm (not to scale)

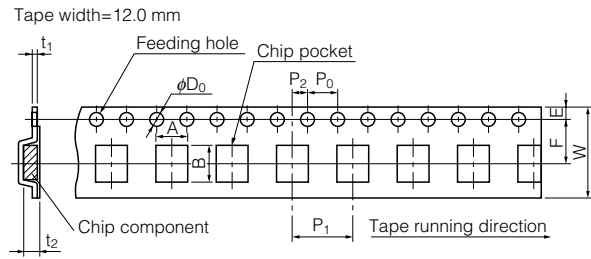
No. 2								
<p><b>EVQP2</b></p> <p>Short push travel With J-bent terminals (With Ground terminal)</p> 		 <p style="text-align: right;"> <table border="1"> <tr><th>H</th></tr> <tr><td>2.1 <math>\pm_{-0.1}^{+0.2}</math></td></tr> <tr><td>2.5 <math>\pm_{-0.1}^{+0.2}</math></td></tr> </table> </p> <p style="text-align: center;">Circuit diagram</p> <p style="text-align: center;">   PWB land pattern for reference         </p>				H	2.1 $\pm_{-0.1}^{+0.2}$	2.5 $\pm_{-0.1}^{+0.2}$
H								
2.1 $\pm_{-0.1}^{+0.2}$								
2.5 $\pm_{-0.1}^{+0.2}$								
Part Numbers	Ground Terminal	Operating Force	H=Height	Push Plate Color	Operating Life			
EVQP2P02M	With	1.0 N	2.1 mm	Natural	1000000 cycles			
EVQP2P02W	With	1.0 N	2.5 mm	Natural	1000000 cycles			
EVQP2R02M	With	1.6 N	2.1 mm	Natural	1000000 cycles			
EVQP2R02W	With	1.6 N	2.5 mm	Natural	1000000 cycles			
EVQP2T02M	With	2.4 N	2.1 mm	Natural	500000 cycles			
EVQP2T02W	With	2.4 N	2.5 mm	Natural	500000 cycles			
EVQP2V02M	With	3.5 N	2.1 mm	Natural	200000 cycles			
EVQP2V02W	With	3.5 N	2.5 mm	Natural	200000 cycles			
EVQP2002M	Without	1.0 N	2.1 mm	Natural	1000000 cycles			
EVQP2002W	Without	1.0 N	2.5 mm	Natural	1000000 cycles			
EVQP2202M	Without	1.6 N	2.1 mm	Natural	1000000 cycles			
EVQP2202W	Without	1.6 N	2.5 mm	Natural	1000000 cycles			
EVQP2402M	Without	2.4 N	2.1 mm	Natural	500000 cycles			
EVQP2402W	Without	2.4 N	2.5 mm	Natural	500000 cycles			
EVQP2602M	Without	3.5 N	2.1 mm	Natural	200000 cycles			
EVQP2602W	Without	3.5 N	2.5 mm	Natural	200000 cycles			
EVQP9H02M	With	5.0 N	2.1 mm	Natural	200000 cycles			
EVQP9H02W	With	5.0 N	2.5 mm	Natural	200000 cycles			
EVQP9P02M	Without	5.0 N	2.1 mm	Natural	200000 cycles			
EVQP9P02W	Without	5.0 N	2.5 mm	Natural	200000 cycles			

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### Recommended Reflow Soldering Conditions



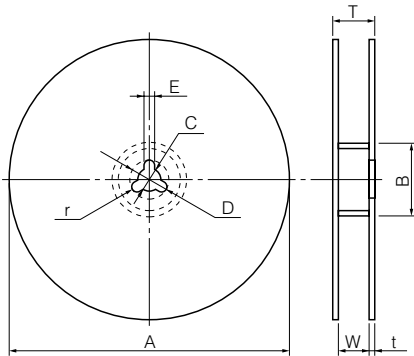
### Embossed Carrier Taping



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											
EVQP9	2.5	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
EVQ3P2												

### Standard Reel Dimensions in mm (not to scale)

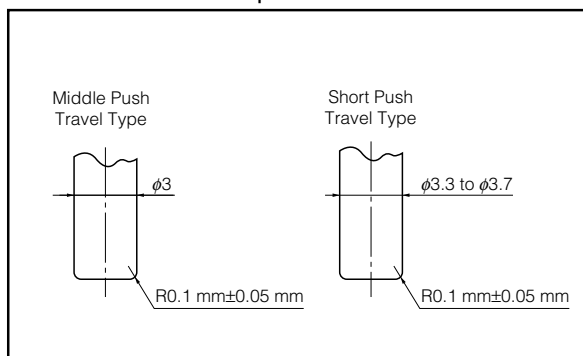


Item	A	B	C	D	E
Rate (mm)	φ370.0±2.0	φ50.0 min.	φ13.0±0.5	φ21.0±1.0	2.0±0.5

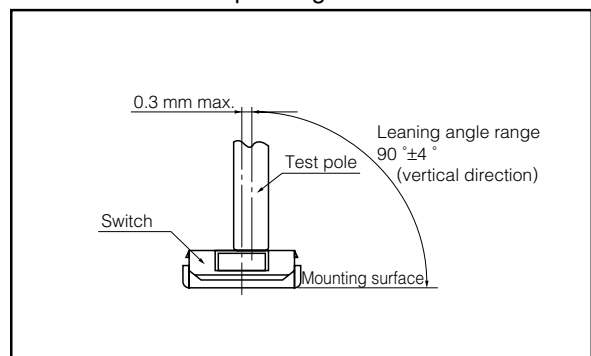
  

Item	W	T	t	r
Rate (mm)	14.0±1.5	—	1.0 to 3.0	1.0±0.5

### Recommended Shape of Test Pole



### Recommended Operating Conditions



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