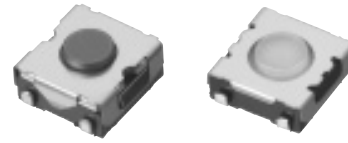


2 mm Thick SMD Light Touch Switches  
for Reflow Soldering (With Push Plate)

Japan

Type: **EVQPH/EVQQX**



Surface-mount type with a push plate

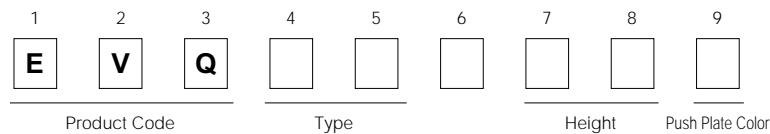
### ■ Features

- Easy operation with push plate
- Reflow soldering
- Wide product variety

### ■ Recommended Applications

- Car electronics equipment

### ■ Explanation of Part Numbers



### ■ Product Chart

Type with Push Plate	Soldering	Reflow soldering				
		Without sealing film		With sealing film		
	Packaging	Taping L=2.0, 2.5, 3.1 mm		Taping L=3.1 mm		
	Ground terminal	Without	With	Without	With	
	Operating Force	1.3 N	EVQQXP	EVQQXM	EVQPH	EVQPHL
		1.6 N	EVQQXS	EVQQXN	EVQPHV	EVQPHN
2.6 N		EVQQXT	EVQQXK	EVQPHU	EVQPHK	

### ■ Specifications


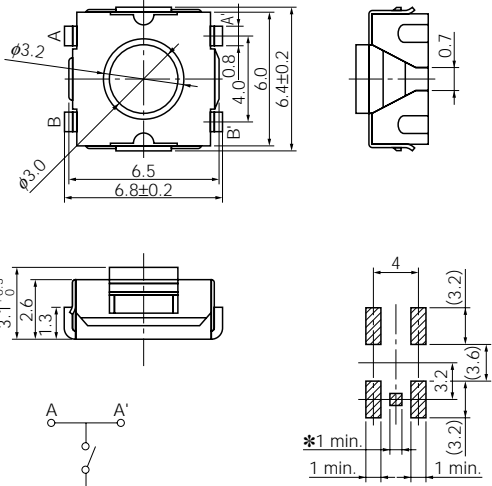
Type		Snap action / Push-on type SPST	
Electrical	Rating	20 mA 15 Vdc max. (Resistive load)	
	Contact Resistance	50 mΩ max.	
	Insulation Resistance	50 MΩ min. (at 100 Vdc)	
	Dielectric Withstanding Voltage	250 Vac for 1 minute	
	Bouncing	3 ms max. (ON) 8 ms max. (OFF)	
Mechanical	Operating Force	1.3 N±0.4 N 1.6 N±0.5 N	2.6 N± 0.6 N
	Travel	0.25 mm±0.10 mm	
Endurance	Operating Life	EVQPH	100000 cycles min.
		EVQQX	1000000 cycles min.
	Operating Temperature	-20 °C to +70 °C (45 % to 85 % RH)	
Storage Temperature	-40 °C to +85 °C (Bulk)		
	-20 °C to +60 °C (Taping)		
Minimum Quantity/Packing Unit	H=2.0 mm	4000 pcs. Embossed Taping (Reel Pack)	
	H=2.5 mm, 3.1 mm	2000 pcs. Embossed Taping (Reel Pack)	
Quantity/Carton	H=2.0 mm	20000 pcs.	
	H=2.5 mm, 3.1 mm	10000 pcs.	

Note: Non washable

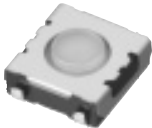
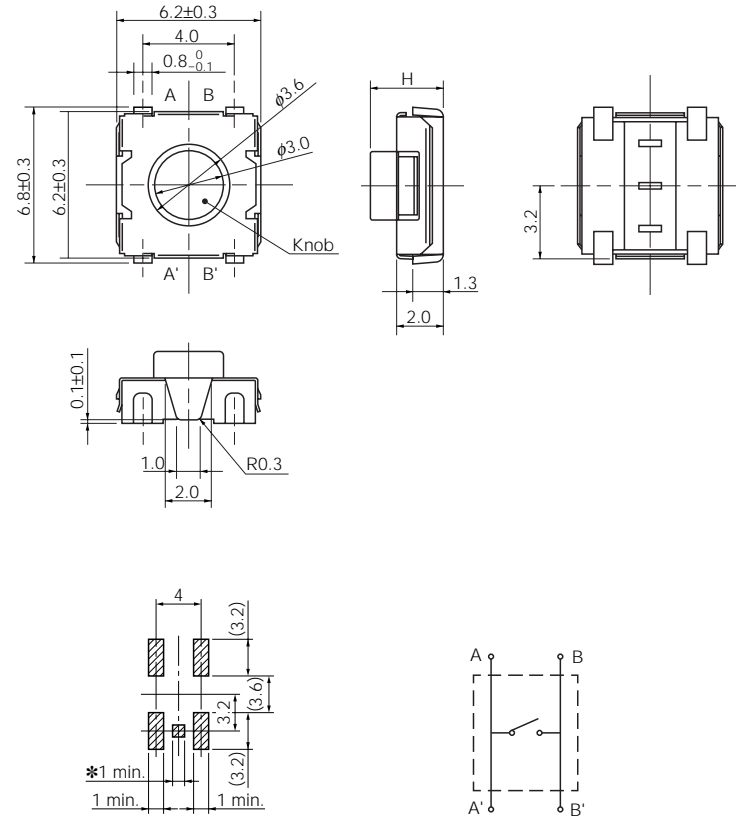
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Feb. 2006

### ■ Dimensions in mm (not to scale)

<p>No. 1</p> <p><b>EVQPH</b></p> <p>(Embossed Taping)</p> <p>With push plate</p> <p>Surface mount</p> <p>For reflow soldering</p> <p>With ground terminal</p> <p>Without ground terminal</p> <p>Notes:</p> <ol style="list-style-type: none"> <li>1. Non-washable in solvents</li> <li>2. Types with ground terminal available</li> </ol> 	 <p style="text-align: center;">Circuit diagram</p> <p style="text-align: center;">Reference of PWB pattern</p> <p style="text-align: center;">* This land not necessary when a ground terminal is not used.</p>				
Part Numbers	Operating Force	Height	Push Plate Color	Ground Terminal	Operating Life
EVQPHP03T	1.3 N	3.1 mm	Brown	Without	100000 cycles
EVQPHV03T	1.6 N	3.1 mm	Brown	Without	100000 cycles
EVQPHU03T	2.6 N	3.1 mm	Brown	Without	50000 cycles
EVQPHL03T	1.3 N	3.1 mm	Brown	With	100000 cycles
EVQPHN03T	1.6 N	3.1 mm	Brown	With	100000 cycles
EVQPHK03T	2.6 N	3.1 mm	Brown	With	50000 cycles

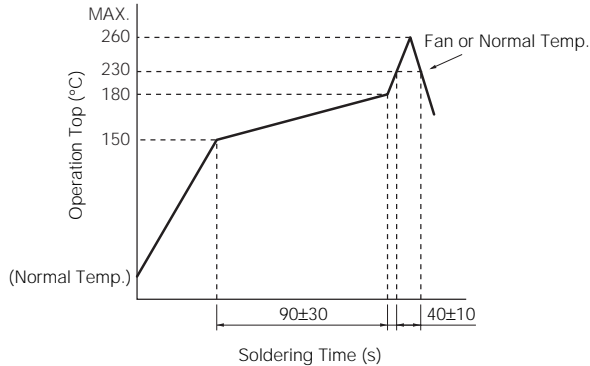
### ■ Dimensions in mm (not to scale)

<p>No. 2</p> <p><b>EVQQX</b></p> <p>(Embossed Taping)</p> <p>With push plate</p> <p>Surface mount</p> <p>For reflow soldering</p> <p>With ground terminal</p> <p>Without ground terminal</p> <p>Notes:</p> <p>1. Non-washable in solvents</p> <p>2. Types with ground terminal available</p> 	 <p>Reference of PWB pattern</p> <p>Circuit Diagram</p> <table border="1" data-bbox="1230 1073 1364 1213"> <thead> <tr> <th>Height</th> </tr> </thead> <tbody> <tr> <td>H</td> </tr> <tr> <td>2.0±0.2</td> </tr> <tr> <td>2.5±0.2</td> </tr> <tr> <td>3.1<sup>+0.3</sup><sub>-0.1</sub></td> </tr> </tbody> </table> <p>* This land not necessary when a ground terminal is not used.</p>					Height	H	2.0±0.2	2.5±0.2	3.1 <sup>+0.3</sup> <sub>-0.1</sub>
Height										
H										
2.0±0.2										
2.5±0.2										
3.1 <sup>+0.3</sup> <sub>-0.1</sub>										
Part Numbers	Operating Force	H=Height	Push Plate Color	Ground Terminal	Operating Life					
EVQQXP01W	1.3 N	2.0 mm	White	Without	1000000 cycles					
EVQQXP02W	1.3 N	2.5 mm	White	Without	1000000 cycles					
EVQQXP03W	1.3 N	3.1 mm	White	Without	1000000 cycles					
EVQQXS01W	1.6 N	2.0 mm	White	Without	1000000 cycles					
EVQQXS02W	1.6 N	2.5 mm	White	Without	1000000 cycles					
EVQQXS03W	1.6 N	3.1 mm	White	Without	1000000 cycles					
EVQQXT01W	2.6 N	2.0 mm	White	Without	100000 cycles					
EVQQXT02W	2.6 N	2.5 mm	White	Without	100000 cycles					
EVQQXT03W	2.6 N	3.1 mm	White	Without	100000 cycles					
EVQQXM01W	1.3 N	2.0 mm	White	With	1000000 cycles					
EVQQXM02W	1.3 N	2.5 mm	White	With	1000000 cycles					
EVQQXM03W	1.3 N	3.1 mm	White	With	1000000 cycles					
EVQQXN01W	1.6 N	2.0 mm	White	With	1000000 cycles					
EVQQXN02W	1.6 N	2.5 mm	White	With	1000000 cycles					
EVQQXN03W	1.6 N	3.1 mm	White	With	1000000 cycles					
EVQQXK01W	2.6 N	2.0 mm	White	With	100000 cycles					
EVQQXK02W	2.6 N	2.5 mm	White	With	100000 cycles					
EVQQXK03W	2.6 N	3.1 mm	White	With	100000 cycles					

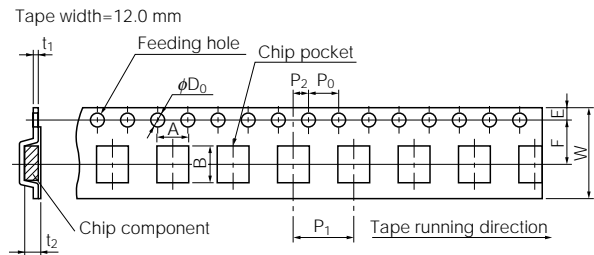
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### Recommended Reflow Soldering Conditions

- Type EVQPH
- Type EVQQX



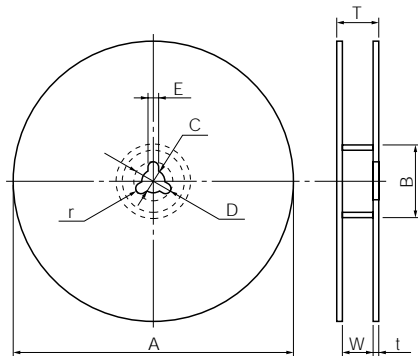
### Embossed Carrier Taping



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>
EVQPH	3.1	7.0±0.2	7.5±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>	0.30±0.05	3.2±0.2
EVQQX	2.0											2.2±0.2
		2.5/3.1										3.2±0.2

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

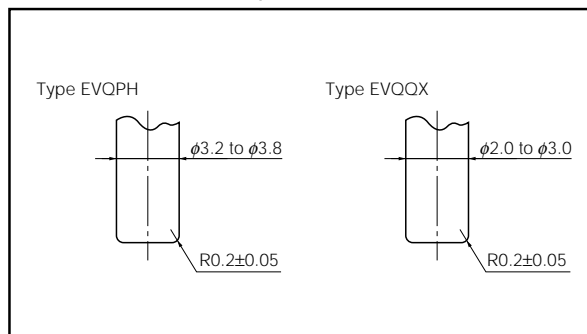


Item	A	B	C	D	E
Rate (mm)	φ370.0±2.0	φ50.0 min.	φ13.0±0.5	φ21.0±1.0	2.0±0.5

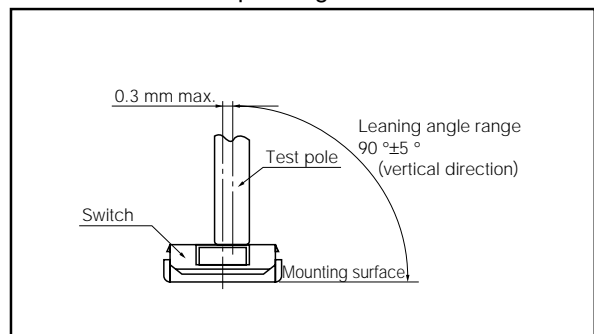
  

Item	W	T	t	r
Rate (mm)	14.0±1.5	—	1.0 to 3.0	1.0±0.5

### Recommended Shape of Test Pole



### Recommended Operating Conditions



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