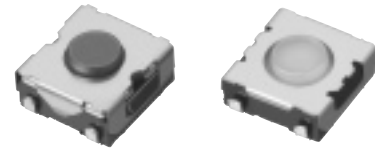


Surface Mount Light Touch Switches with Knob for Reflow Soldering

Japan

Type: **EVQPH/EVQQW**



Surface-mount type with a push button

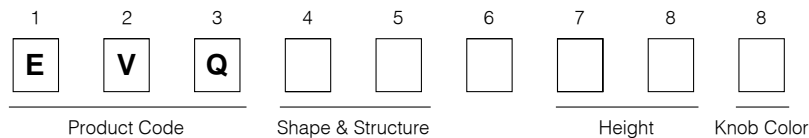
■ Features

- Easy operation type with knob
- Reflow soldering available
- Wide product variety: With or without ground terminal, height, operating force

■ Recommended Applications

- Operating button switches for Camcorders, Headphone Stereos.
- Operating signal input switches for Communication Equipments.

■ Explanation of Part Numbers



■ Product Chart

Type with Knob	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		
Profile 	Operating Force	1.3 N	EVQQWP	EVQQWM	EVQPHP	EVQPHL
		1.6 N	EVQQWS	EVQQWN	EVQPHV	EVQPHN
		2.6 N	EVQQWT	EVQQWK	EVQPHU	EVQPHK


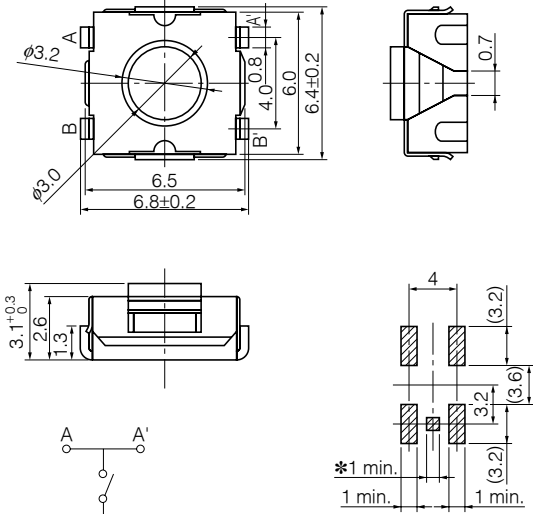
■ Major Specifications

Type	Snap action / Push-on type SPST			
Electrical	Rating	20 mA 15 Vdc max.		
	Contact Resistance	50 mΩ max.		
	Insulation Resistance	50 mΩ min. (at 100Vdc)		
	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.	50000 cycles min.
		EVQQW	1000000 cycles min.	100000 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. (Reel Pack)		
	H=2.5 mm, 3.1 mm	2000 pcs. (Reel Pack)		
Quantity/Carton	H=2.0 mm	20000 pcs.		
	H=2.5 mm, 3.1 mm	10000 pcs.		

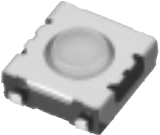
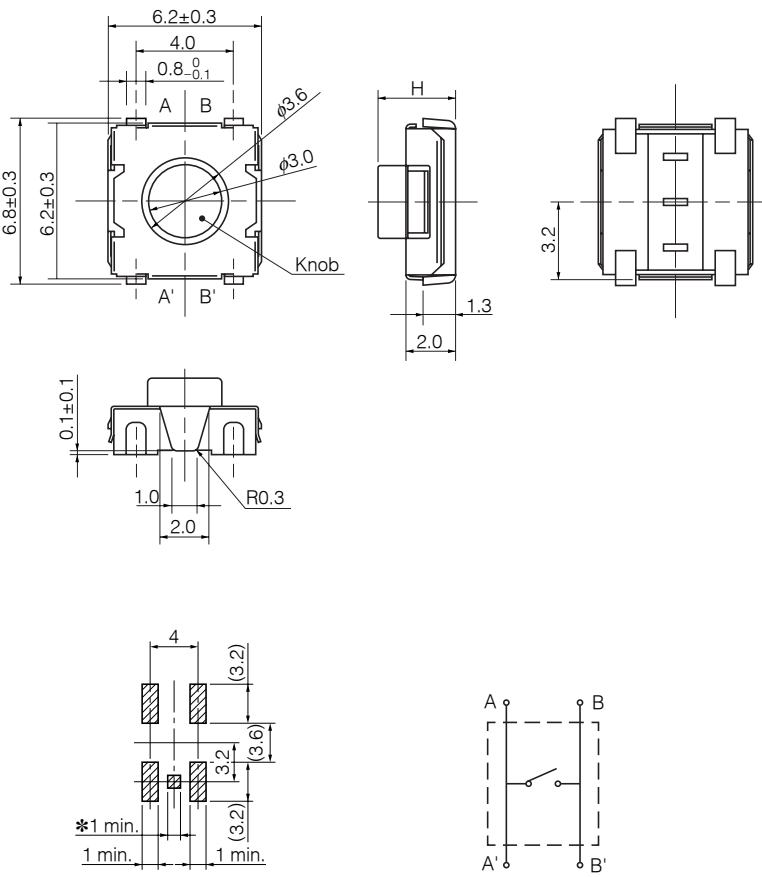
Note: Non washable

Design, Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please inform us immediately for technical consultation without fail.

■ Dimensions in mm (not to scale)

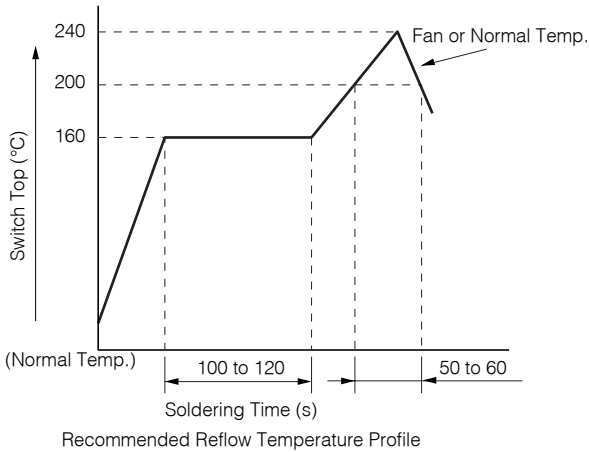
<p>No. 1</p> <p>Japan</p> <p>EVQPH (Embossed Taping)</p> <p>With knob Surface mount For reflow soldering Without ground terminal</p> <p>Notes: 1. Non-washable in solvents 2. Types with ground terminal available</p> 	<p>Registered by EIAJ-SMD Outline Registration System</p>  <p>Circuit diagram</p> <p>Reference of PCB pattern</p> <p>* This land not necessary when a ground terminal is not used.</p>				
Part Numbers	Operating Force	Height	Knob 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)

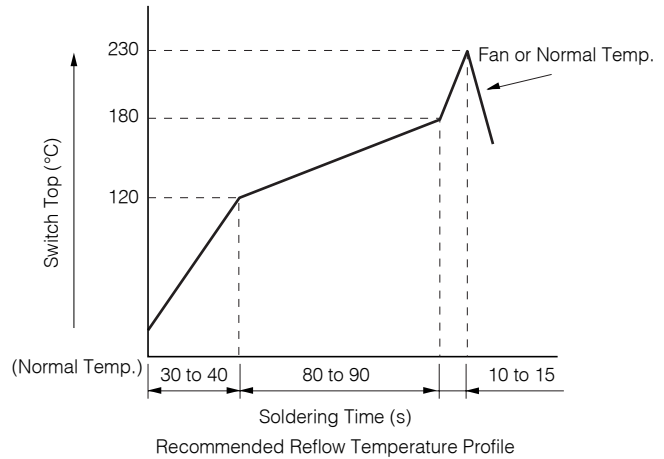
<p>No. 2</p> <p>Japan</p> <p>EVQQW (Embossed Taping)</p> <p>With knob Surface mount For reflow soldering With ground terminal</p> <p>Notes: 1. Non-washable in solvents 2. Types with ground terminal available</p> 	 <p>Reference of PCB pattern</p> <p>Circuit Diagram</p> <table border="1" data-bbox="1276 1187 1420 1310"> <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^{+0.3}_{-0.1}</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 ^{+0.3} _{-0.1}
Height										
H										
2.0±0.2										
2.5±0.2										
3.1 ^{+0.3} _{-0.1}										
<p>Part Numbers</p>	<p>Operating Force</p>	<p>Height</p>	<p>Knob Color</p>	<p>Ground Terminal</p>	<p>Operating Life</p>					
EVQQWP01W	1.3 N	2.0 mm	White	Without	100000 cycles					
EVQQWP02W	1.3 N	2.5 mm	White	Without	100000 cycles					
EVQQWP03W	1.3 N	3.1 mm	White	Without	100000 cycles					
EVQQWS01W	1.6 N	2.0 mm	White	Without	100000 cycles					
EVQQWS02W	1.6 N	2.5 mm	White	Without	100000 cycles					
EVQQWS03W	1.6 N	3.1 mm	White	Without	100000 cycles					
EVQQWT01W	2.6 N	2.0 mm	White	Without	10000 cycles					
EVQQWT02W	2.6 N	2.5 mm	White	Without	10000 cycles					
EVQQWT03W	2.6 N	3.1 mm	White	Without	10000 cycles					
EVQQWM01W	1.3 N	2.0 mm	White	With	100000 cycles					
EVQQWM02W	1.3 N	2.5 mm	White	With	100000 cycles					
EVQQWM03W	1.3 N	3.1 mm	White	With	100000 cycles					
EVQQWN01W	1.6 N	2.0 mm	White	With	100000 cycles					
EVQQWN02W	1.6 N	2.5 mm	White	With	100000 cycles					
EVQQWN03W	1.6 N	3.1 mm	White	With	100000 cycles					
EVQQWK01W	2.6 N	2.0 mm	White	With	10000 cycles					
EVQQWK02W	2.6 N	2.5 mm	White	With	10000 cycles					
EVQQWK03W	2.6 N	3.1 mm	White	With	10000 cycles					

Recommended Reflow Soldering Conditions

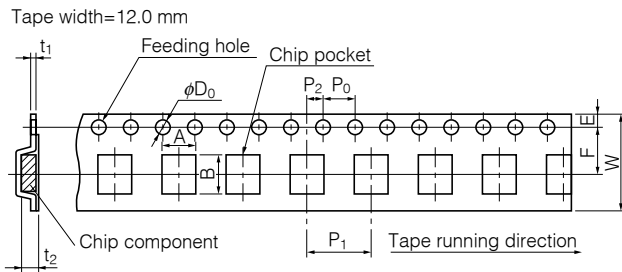
● Type PH



● Type QW



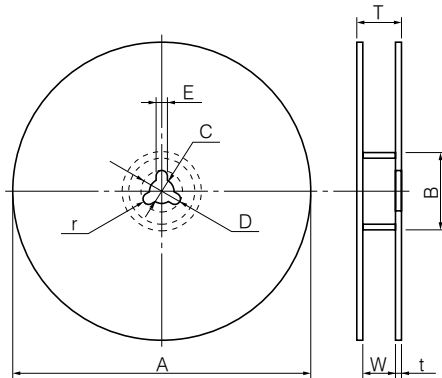
● Embossed Carrier Taping



Unit: mm

Part No.	Height	A	B	W	F	E	P_1	P_2	P_0	D_0 Dia.	t_1	t_2
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 ^{+0.1} ₀	0.30±0.05	3.2±0.2
EVQQW	2.0 2.5/3.1											2.2±0.2 3.2±0.2

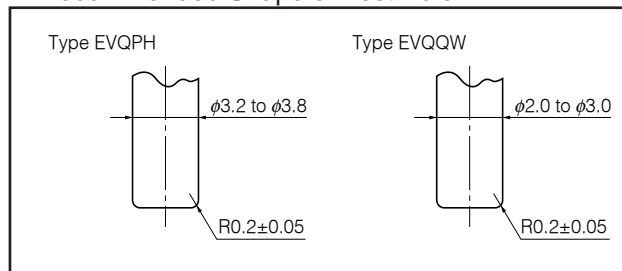
● Standard Reel Dimensions in mm (not to scale)



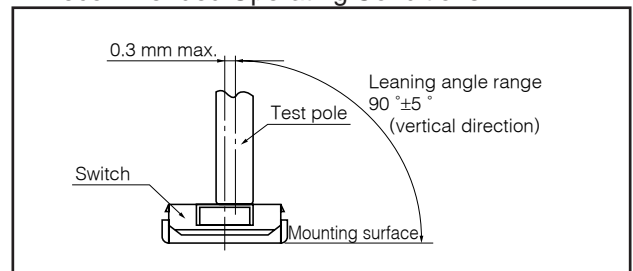
Item	A	B	C	D	E
Rate (mm)	$\phi 370.0 \pm 2.0$	$\phi 50.0$ min.	$\phi 13.0 \pm 0.5$	$\phi 21.0 \pm 1.0$	2.0±0.5

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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