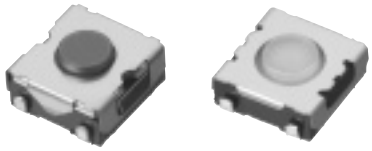
2 mm Thick SMD Light Touch Switches for Reflow Soldering (With Push Plate)

Type: **EVQPH/EVQQX**

Surface-mount type with a push plate

Japan



■ Features

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

■ Recommended Applications

- Car electronics equipment

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9
E	V	Q						
Product Code			Type			Height		Push Plate Color

■ 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
Profile 	Operating Force	1.3 N	EVQQXP	EVQQXM	EVQPHP	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.	50000 cycles min.
		EVQQX	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. 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

■ Dimensions in mm (not to scale)

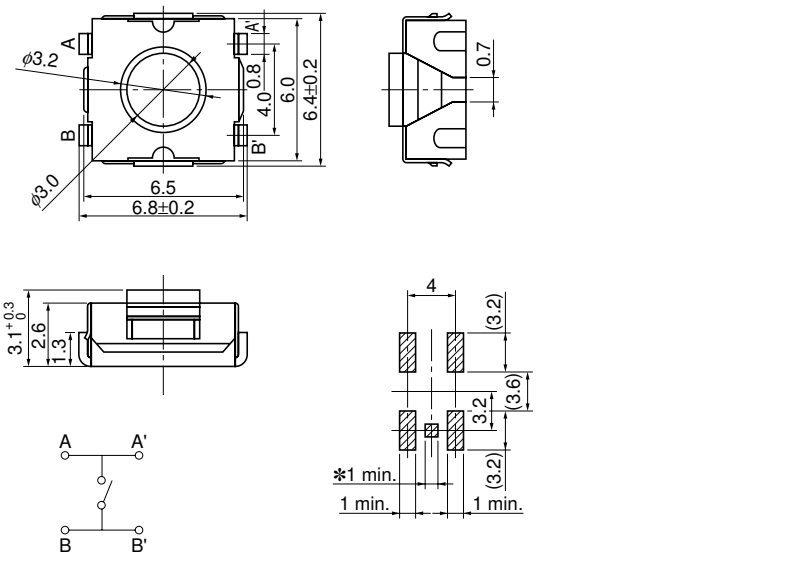
No. 1

EVQPH

(Embossed Taping)

With push plate
Surface mount
For reflow soldering
With ground terminal
Without ground terminal

Notes:
1. Non-washable in solvents
2. Types with ground terminal available



Circuit diagram

Reference of PWB pattern

✻ This land not necessary when a ground terminal is not used.

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)

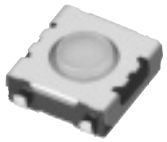
No. 2

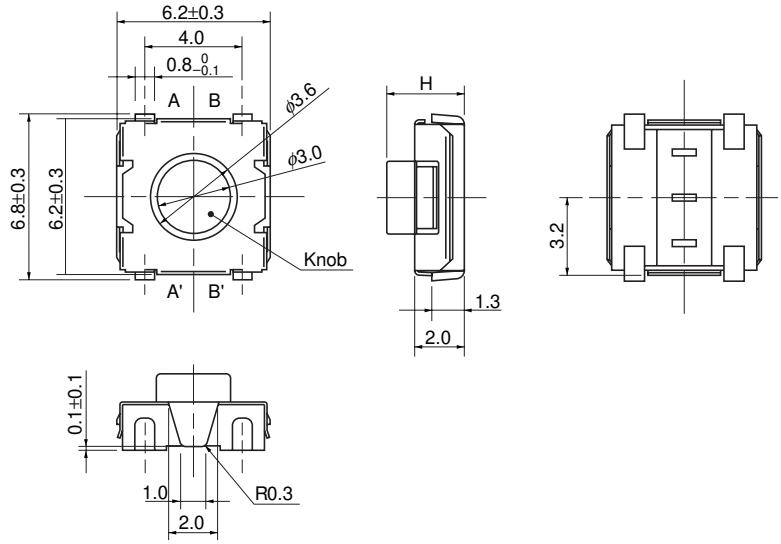
EVQQX

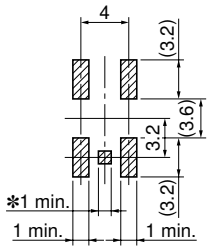
(Embossed Taping)

With push plate
Surface mount
For reflow soldering
With ground terminal
Without ground terminal

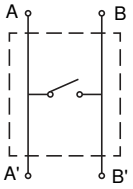
Notes:
1. Non-washable in solvents
2. Types with ground terminal available







Reference of PWB pattern



Circuit Diagram

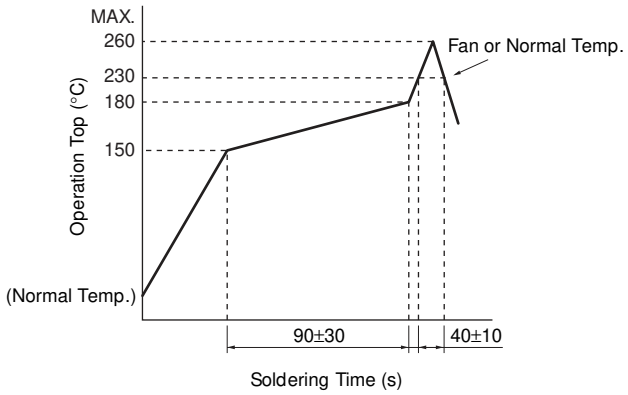
✻ This land not necessary when a ground terminal is not used.

Height
H
2.0±0.2
2.5±0.2
$3.1^{+0.3}_{-0.1}$

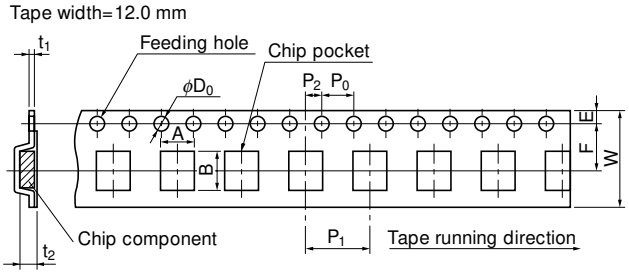
Part Numbers	Operating Force	H=Height	Push Plate Color	Ground Terminal	Operating Life
EVQQXP01W	1.3 N	2.0 mm	White	Without	1000000 cycles
EVQQXP02W	1.3 N	2.5 mm	White	Without	1000000 cycles
EVQQXP03W	1.3 N	3.1 mm	White	Without	1000000 cycles
EVQQXS01W	1.6 N	2.0 mm	White	Without	1000000 cycles
EVQQXS02W	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

■ Recommended Reflow Soldering Conditions

● Type EVQPH
● Type EVQQX



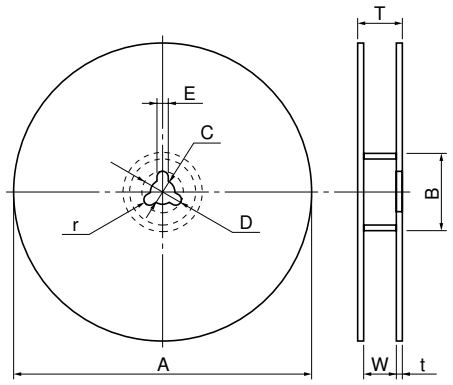
● Embossed Carrier Taping



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
EVQQX	2.0											2.2±0.2
	2.5/3.1											3.2±0.2

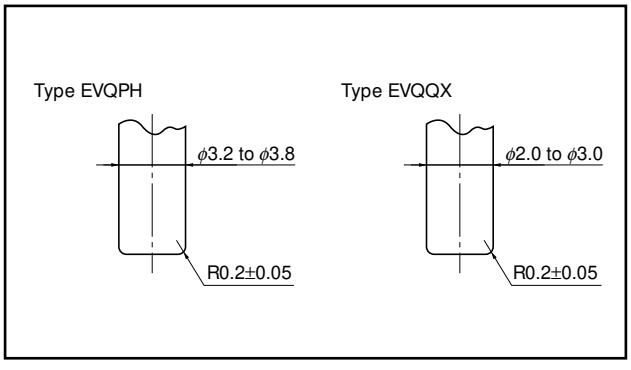
● Standard Reel Dimensions in mm (not to scale)



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