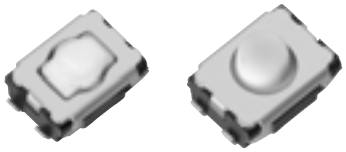
4.7 mm×3.5 mm SMD Light Touch Switches

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

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

■ Specifications

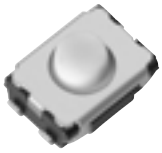
Travel Type		Middle Push Travel	Short Push Travel
Type		Snap action / Push-on type SPST	
Electrical	Rating	10 µA 2 Vdc to 20 mA 15 Vdc (Resistive load)	
	Contact Resistance	100 mΩ max. / 1000 mΩ max. (Switch enduring high load)	
	Insulation Resistance	100 MΩ min. (at 100 Vdc)	
	Dielectric Withstanding 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, 4.0 N, 5.0 N
	Travel	0.70 mm±0.20 mm	0.25 $mm^{+0.05}_{-0.15}$ 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. 4.0 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.	

■ Dimensions in mm (not to scale)

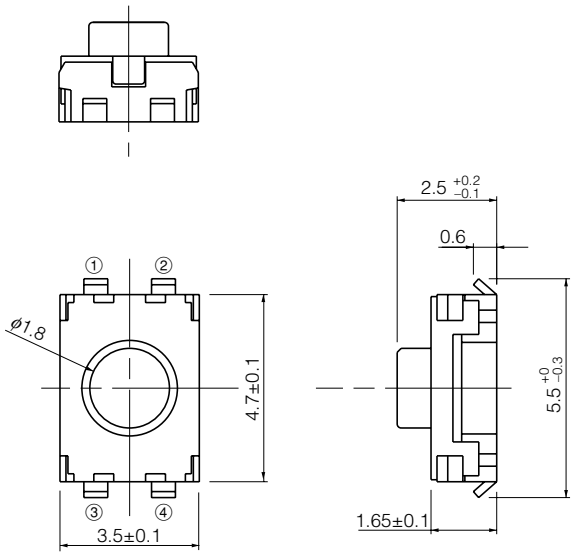
No. 1

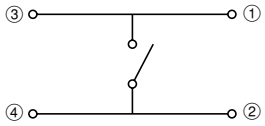
EVQP2
EVQ3P2

Middle push travel
With J-bent terminals
(With Ground terminal)

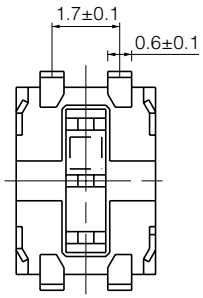


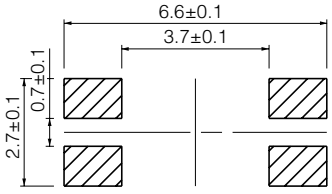
(General dimension tolerance±0.2)





Circuit diagram





PWB land pattern for reference

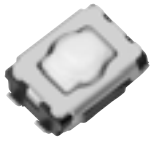
Part Numbers	Ground Terminal	Operating Force	Height	Push Plate Color	Operating Life
EVQP2B02B	With	2.5 N	2.5 mm	Blue	1000000 cycles
EVQP2D02Q	With	3.5 N	2.5 mm	Gray	500000 cycles
EVQP2F02K	With	5.0 N	2.5 mm	Black	200000 cycles
EVQP2H02B	Without	2.5 N	2.5 mm	Blue	1000000 cycles
EVQP2K02Q	Without	3.5 N	2.5 mm	Gray	500000 cycles
EVQ3P202K	Without	5.0 N	2.5 mm	Black	200000 cycles

■ Dimensions in mm (not to scale)

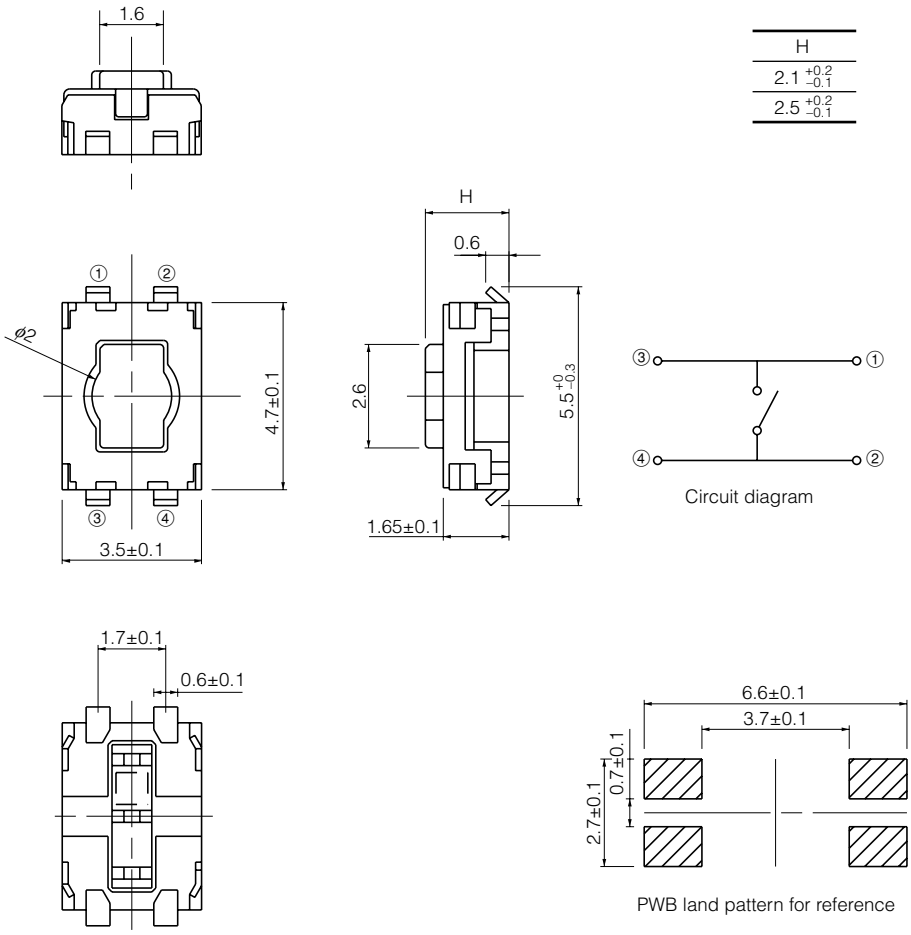
No. 2

EVQP2
EVQP9

Short push travel
With J-bent terminals
(With Ground terminal)

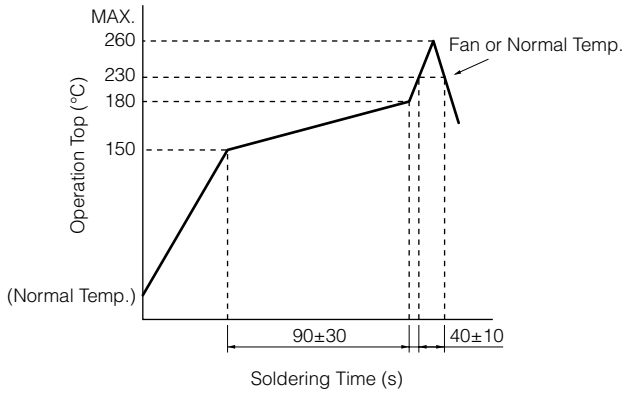


(General dimension tolerance±0.2)

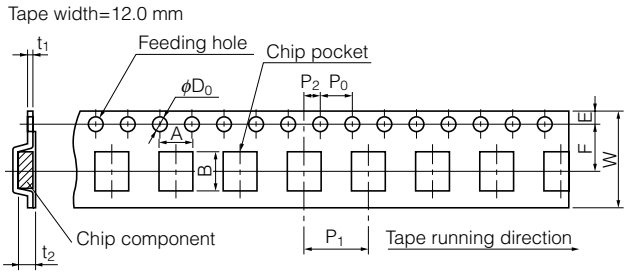


Part Numbers	Ground Terminal	Operating Force	H=Height	Push Plate Color	Operating Life
EVQP2P02M	With	1.0 N	2.1 mm	White	1000000 cycles
EVQP2P02W	With	1.0 N	2.5 mm	White	1000000 cycles
EVQP2R02M	With	1.6 N	2.1 mm	White	1000000 cycles
EVQP2R02W	With	1.6 N	2.5 mm	White	1000000 cycles
EVQP2T02M	With	2.4 N	2.1 mm	White	500000 cycles
EVQP2T02W	With	2.4 N	2.5 mm	White	500000 cycles
EVQP2V02M	With	3.5 N	2.1 mm	White	200000 cycles
EVQP2V02W	With	3.5 N	2.5 mm	White	200000 cycles
EVQP9H02M	With	5.0 N	2.1 mm	White	200000 cycles
EVQP9H02W	With	5.0 N	2.5 mm	White	200000 cycles
EVQP2002M	Without	1.0 N	2.1 mm	White	1000000 cycles
EVQP2002W	Without	1.0 N	2.5 mm	White	1000000 cycles
EVQP2202M	Without	1.6 N	2.1 mm	White	1000000 cycles
EVQP2202W	Without	1.6 N	2.5 mm	White	1000000 cycles
EVQP2402M	Without	2.4 N	2.1 mm	White	500000 cycles
EVQP2402W	Without	2.4 N	2.5 mm	White	500000 cycles
EVQP2602M	Without	3.5 N	2.1 mm	White	200000 cycles
EVQP2602W	Without	3.5 N	2.5 mm	White	200000 cycles
EVQP9W02W	Without	4.0 N	2.5 mm	White	200000 cycles
EVQP9P02M	Without	5.0 N	2.1 mm	White	200000 cycles
EVQP9P02W	Without	5.0 N	2.5 mm	White	200000 cycles

■ Recommended Reflow Soldering Conditions



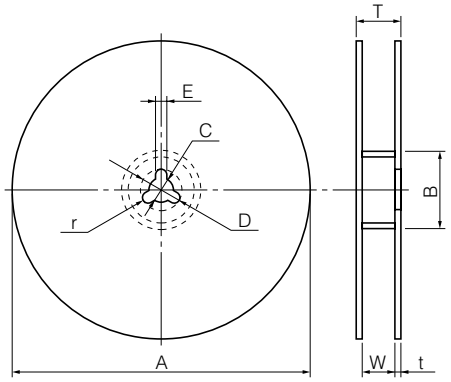
● Embossed Carrier Taping



Unit: mm

Part No.	Height	A	B	W	F	E	P_1	P_2	P_0	D_0 Dia.	t_1	t_2
EVQP2 EVQP9 EVQ3P2	2.1 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	$1.5^{+0.1}_{-0}$	0.3±0.1	2.7±0.2

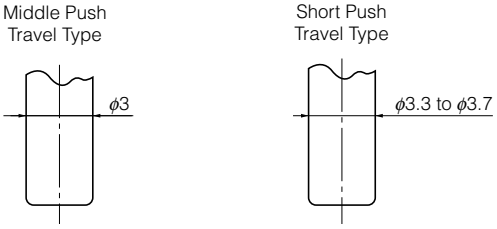
● Standard Reel Dimensions in mm (not to scale)



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