4.5 mm Square SMD Light Touch Switches

Type: **EVQPQ**
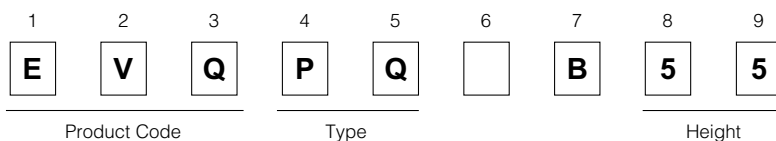
■ Features
● External dimensions: 4.5 mm×4.5 mm, Height 0.55 mm
● Lightweight: 20 mg (1/2 compared with coventional type)

■ Recommended Applications
● Operation switches for portable electronic equipment (Camcorders, Portable audio players, etc.)
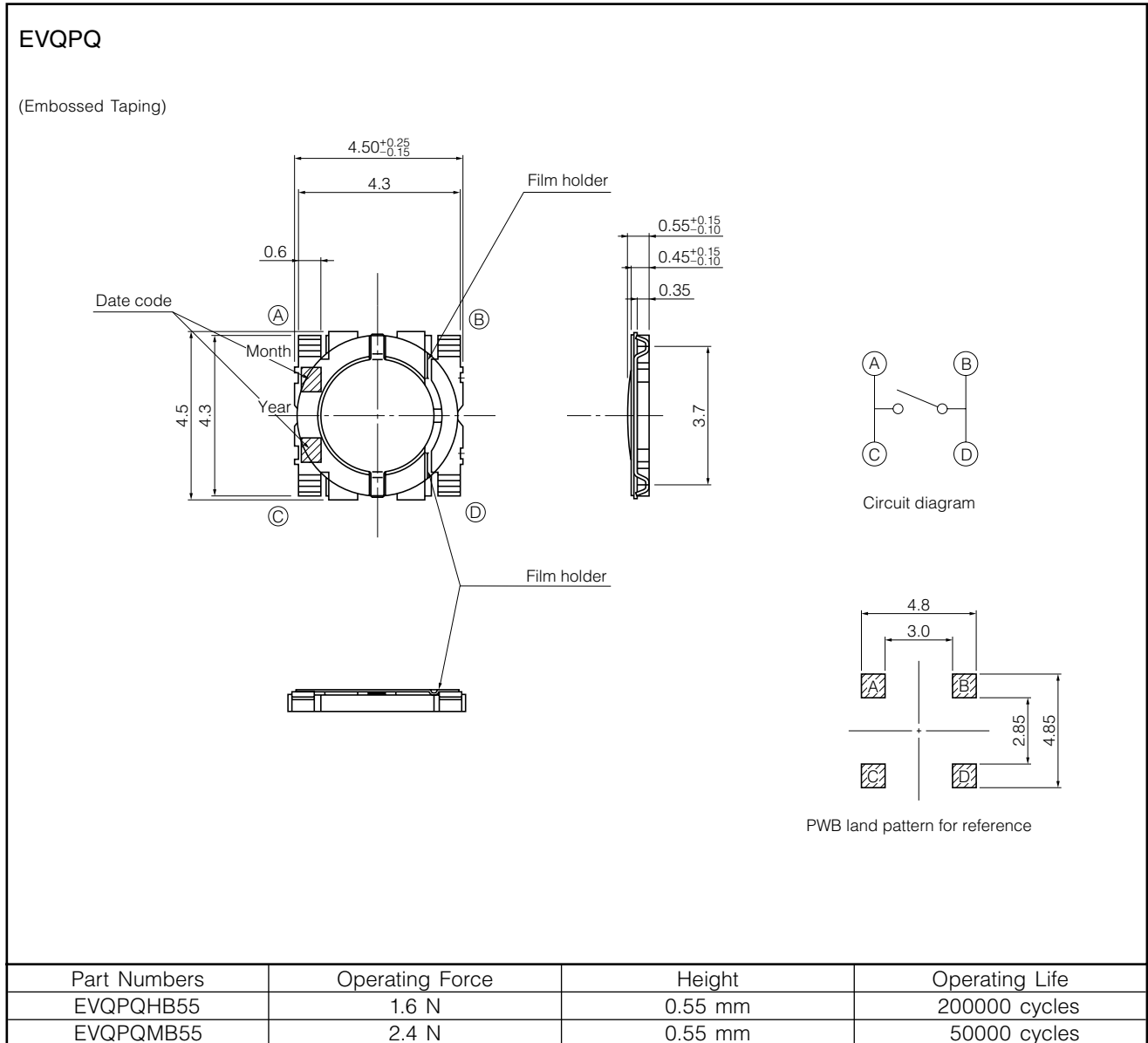
■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9
E	V	Q	P	Q		B	5	5

Product Code (1–3) — Type (4–5) — Height (8–9)

■ Specifications

| 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	50 MΩ min. (at 100 Vdc)
	Dielectric Withstanding Voltage	250 Vac for 1 minute
	Bouncing	3 ms max. (ON) 10 ms max. (OFF)
Mechanical	Operating Force	1.6 N±0.5 N 2.4 N±0.6 N
	Travel	0.2 mm±0.1 mm
Endurance	Operating Life	200000 cycles min. (1.6 N), 50000 cycles min. (2.4 N)
Operating Temperature		−20 °C to +70 °C
Storage Temperature		−40 °C to +85 °C (Bulk) −20 °C to +60 °C (Taping)
Minimum Quantity/Packing Unit		10000 pcs. Embossed Taping (Reel Pack)
Quantity/Carton		50000 pcs.

Note: Non washable

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■ Dimensions in mm (not to scale)

EVQPQ

(Embossed Taping)

4.50$^{+0.25}_{-0.15}$

4.3

0.6

Date code

Month

Year

Ⓐ

Ⓑ

Ⓒ

Ⓓ

4.5

4.3

Film holder

Film holder

0.55$^{+0.15}_{-0.10}$

0.45$^{+0.15}_{-0.10}$

0.35

3.7

Ⓐ   Ⓑ

Ⓒ   Ⓓ

Circuit diagram

4.8

3.0

Ⓐ   Ⓑ

Ⓒ   Ⓓ

2.85

4.85

PWB land pattern for reference

| Part Numbers	Operating Force	Height	Operating Life
EVQPQHB55	1.6 N	0.55 mm	200000 cycles
EVQPQMB55	2.4 N	0.55 mm	50000 cycles

■ Before using this product

● If the inclination of the actuator is widened by using soft materials, such as rubber, for the setting side of the operation section (connecting area between button and acturator), it may cause functional problems.
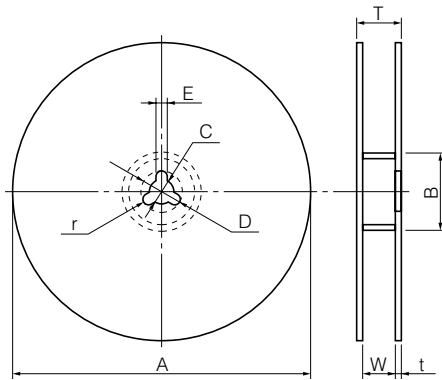
Button

Actuator

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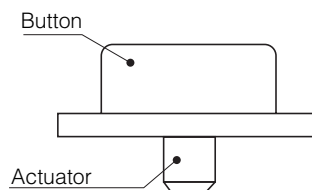
■ Recommended Reflow Soldering Conditions
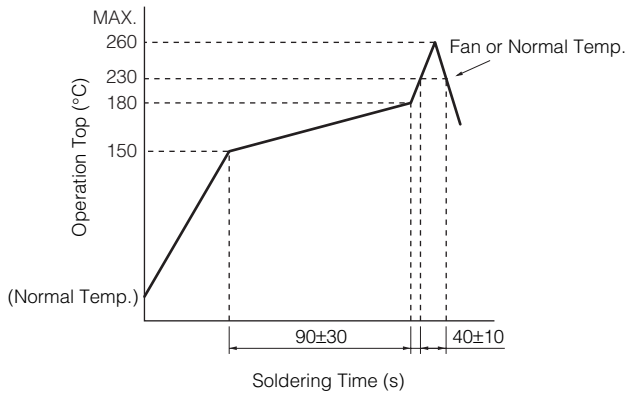
● Embossed Carrier Taping

Tape width=12.0 mm
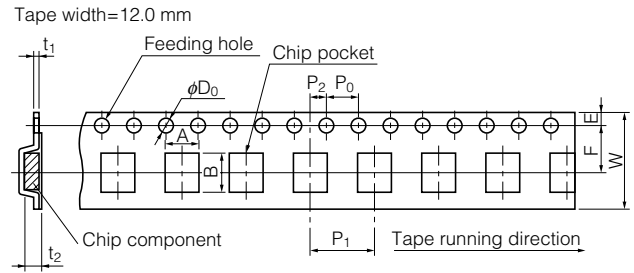
Unit: mm

Part No.	Height	A	B	W	F	E	P₁	P₂	P₀	D₀ Dia.	t₁	t₂
EVQPQ	0.55	$5.0^{+0.30}_{-0.25}$	$4.6^{+0.3}_{-0}$	12.0±0.1	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	$0.65^{+0.2}_{-0.1}$

● 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

for Reflow
soldering
type

φ0.8

R0.1 mm±0.05 mm
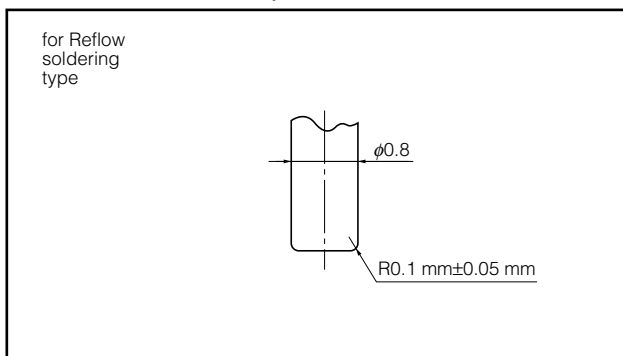
■ Recommended Operating Conditions

0.3 mm max.

Leaning angle range
90 °±4 °
(vertical direction)

Test pole

Switch

Mounting surface

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