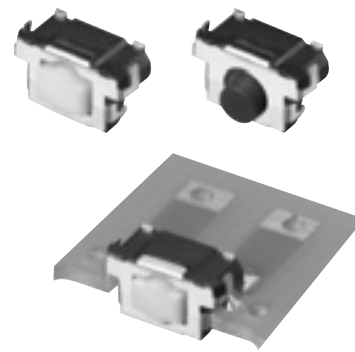


### 6.2 mm×2.5 mm Side-operational Edge Mount

### Light Touch Switches

Type: **EVQP4**



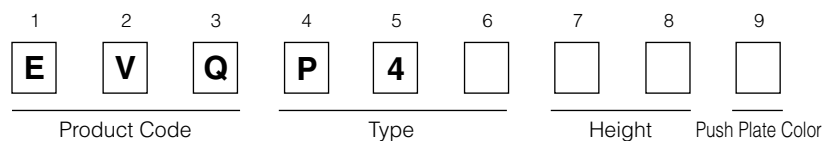
#### ■ Features

- External dimensions : 6.2 mm×2.55 mm (Excluding the push plate), Height 3.5 mm (EVQP4 Type : Printed circuit board being as low as 1.35 mm)
- Side-operational middle stroke type ( 0.7 mm ) with a high operating force (5.0 N)
- Improved soldering strength in the operating direction when mounted on PC board edge

#### ■ Recommended Applications

- Operation switches for portable electronic equipment (Mobile phones, Digital still cameras, Camcorders, Portable audio players, etc.)
- Keyless entry (car electronics)
- Car audio equipment


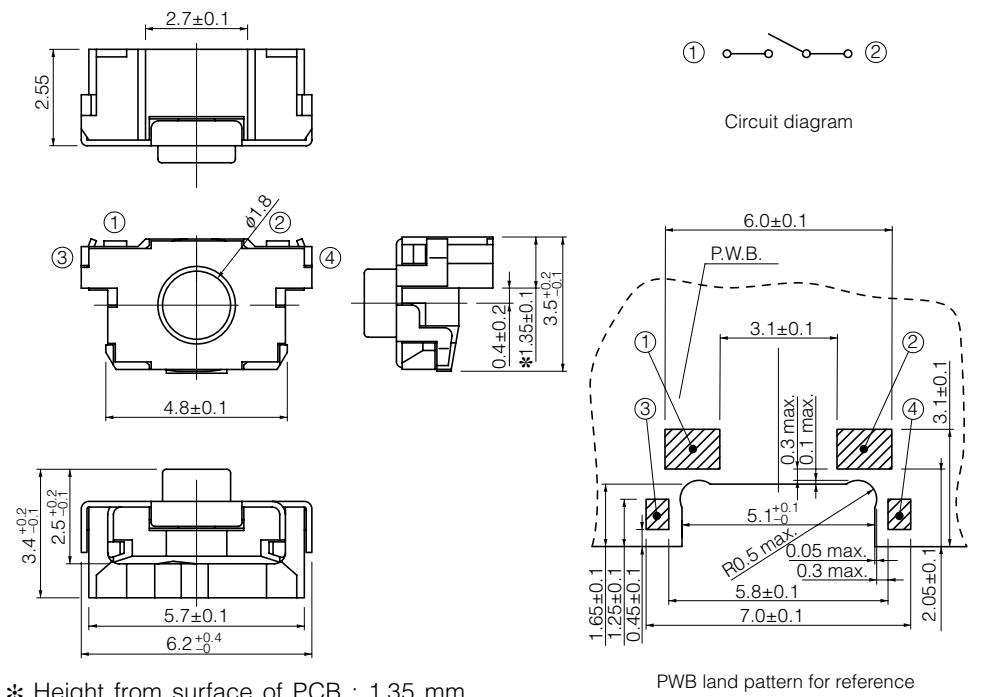

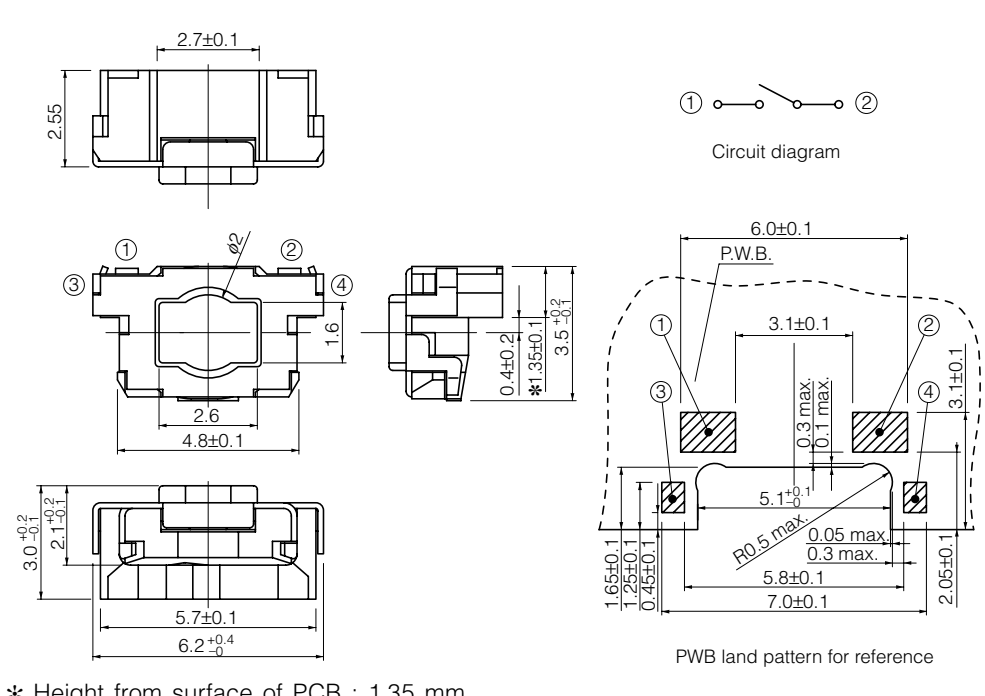
#### ■ Explanation of Part Numbers



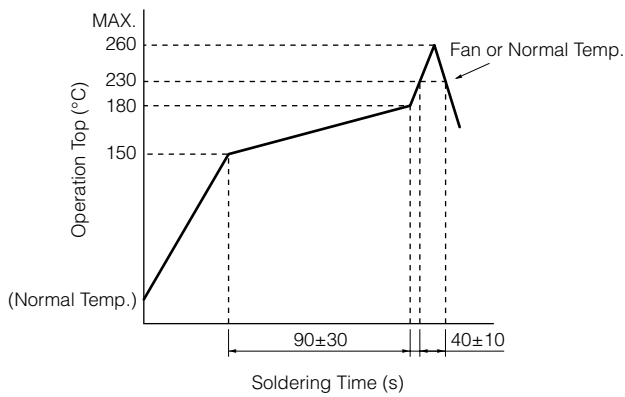
#### ■ Specifications

| Travel Type                   |                                 | Middle Push Travel   | Short Push Travel                 |
|-------------------------------|---------------------------------|--|-----------------------------------|
| Type                          |                                 | Snap action / Push-on type SPST  |                                   |
| Electrical                    | Rating                          | 10 $\mu$ A 2 Vdc to 20 mA 15 Vdc (Resistive load)  |                                   |
|                               | Contact Resistance              | 100 m $\Omega$ max.  |                                   |
|                               | Insulation Resistance           | 100 M $\Omega$ 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        |
|                               | Travel                          | 0.70 mm $\pm$ 0.2 mm   | 0.25 mm $^{+0.05}_{-0.15}$ mm     |
|                               | Push Strength                   | 50 N (1 minute)  |                                   |
| Endurance                     | Operating Life                  | 2.5 N: 1000000 cycles min.   | 1.0 N, 1.6 N: 1000000 cycles min. |
|                               |                                 | 3.5 N: 500000 cycles min.  | 2.4 N: 500000 cycles min.         |
|                               |                                 | 5.0 N: 200000 cycles min.  | 3.5 N: 200000 cycles min.         |
|                               |                                 |  |                                   |
| Operating Temperature         |                                 | -40 $^{\circ}$ C to +85 $^{\circ}$ C   |                                   |
| Storage Temperature           |                                 | -40 $^{\circ}$ C to +85 $^{\circ}$ C (Bulk)<br>-20 $^{\circ}$ C to +60 $^{\circ}$ C (Taping) |                                   |
| Minimum Quantity/Packing Unit |                                 | 2500 pcs. Embossed Taping (Reel Pack)  |                                   |
| Quantity/Carton               |                                 | 12500 pcs.   |                                   |

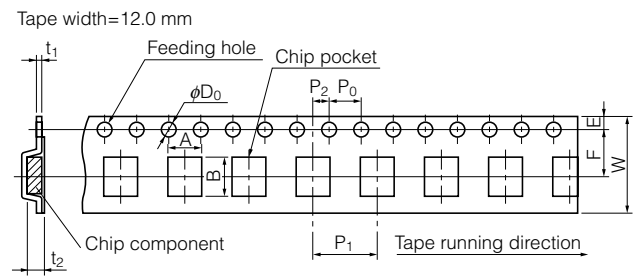
■ Dimensions in mm (not to scale)

|  |  |               |                         |                       |
|--|--|---------------|-------------------------|-----------------------|
| <p>No. 1</p> <p>EVQP4</p> <p>Middle push travel</p>   |  <p>* Height from surface of PCB : 1.35 mm</p>   |               |                         |                       |
| <p>Part Numbers</p>  | <p>Operating Force</p>   | <p>Height</p> | <p>Push Plate Color</p> | <p>Operating Life</p> |
| <p>EVQP4HB3B</p>   | <p>2.5 N</p>   | <p>3.5 mm</p> | <p>Blue</p>             | <p>1000000 cycles</p> |
| <p>EVQP4KB3Q</p>   | <p>3.5 N</p>   | <p>3.5 mm</p> | <p>Gray</p>             | <p>500000 cycles</p>  |
| <p>EVQP4MB3K</p>   | <p>5.0 N</p>   | <p>3.5 mm</p> | <p>Black</p>            | <p>200000 cycles</p>  |
| <p>No. 2</p> <p>EVQP4</p> <p>Short push travel</p>  |  <p>* Height from surface of PCB : 1.35 mm</p> |               |                         |                       |
| <p>Part Numbers</p>  | <p>Operating Force</p>   | <p>Height</p> | <p>Push Plate Color</p> | <p>Operating Life</p> |
| <p>EVQP40B3M</p>   | <p>1.0 N</p>   | <p>3.5 mm</p> | <p>Natural</p>          | <p>1000000 cycles</p> |
| <p>EVQP42B3M</p>   | <p>1.6 N</p>   | <p>3.5 mm</p> | <p>Natural</p>          | <p>1000000 cycles</p> |
| <p>EVQP44B3M</p>   | <p>2.4 N</p>   | <p>3.5 mm</p> | <p>Natural</p>          | <p>500000 cycles</p>  |
| <p>EVQP46B3M</p>   | <p>3.5 N</p>   | <p>3.5 mm</p> | <p>Natural</p>          | <p>200000 cycles</p>  |

### ■ Recommended Reflow Soldering Conditions



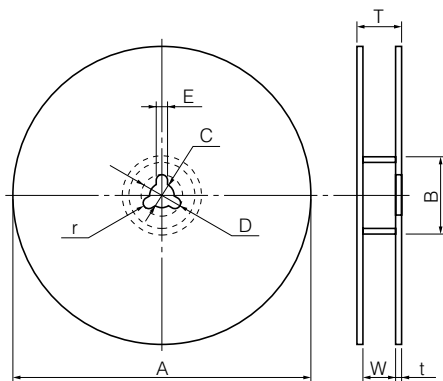
### ● Embossed Carrier Taping



Unit: mm

| Part No. | Height | A       | B       | W        | F       | E         | $P_1$   | $P_2$   | $P_0$   | $D_0$ Dia.                        | $t_1$   | $t_2$     |
|----------|--------|---------|---------|----------|---------|-----------|---------|---------|---------|-----------------------------------|---------|-----------|
| EVQP4    | 3.5    | 6.5±0.2 | 3.9±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> | 0.4±0.1 | 3.75±0.20 |

### ● 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 |