Surface Mount Light Touch Switches with Knob for Reflow Soldering

Type: **EVQPH/EVQQW**

- 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

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>V</td>
<td>Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Product Code**
- **Shape & Structure**
- **Height**
- **Knob Color**

### Product Chart

<table>
<thead>
<tr>
<th>Type with Knob</th>
<th>Soldering</th>
<th>Reflow soldering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without sealing film</td>
<td>With sealing film</td>
</tr>
<tr>
<td>Packaging</td>
<td>Taping</td>
<td>Taping</td>
</tr>
<tr>
<td></td>
<td>L=2.0, 2.5, 3.1 mm</td>
<td>L=3.1 mm</td>
</tr>
<tr>
<td>Ground terminal</td>
<td>Without</td>
<td>With</td>
</tr>
<tr>
<td>1.3 N</td>
<td>EVQQWP</td>
<td>EVQQWM</td>
</tr>
<tr>
<td>1.6 N</td>
<td>EVQQWS</td>
<td>EVQQWN</td>
</tr>
<tr>
<td>2.6 N</td>
<td>EVQQWT</td>
<td>EVQQWK</td>
</tr>
</tbody>
</table>

### Major Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Electrical</th>
<th>Mechanical</th>
<th>Endurance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rating</td>
<td>Contact Resistance</td>
<td>Insulation Resistance</td>
</tr>
<tr>
<td></td>
<td>20 mA 15 Vdc max.</td>
<td>50 mΩ max.</td>
<td>50 mΩ min. (at 100Vdc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **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)

**No. 1**

**EVQPH**

(Embossed Taping)

With knob
Surface mount
For reflow soldering
Without ground terminal

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

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<table>
<thead>
<tr>
<th>Part Numbers</th>
<th>Operating Force</th>
<th>Height</th>
<th>Knob Color</th>
<th>Ground Terminal</th>
<th>Operating Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVQPHP03T</td>
<td>1.3 N</td>
<td>3.1 mm</td>
<td>Brown</td>
<td>Without</td>
<td>100000 cycles</td>
</tr>
<tr>
<td>EVQPHV03T</td>
<td>1.6 N</td>
<td>3.1 mm</td>
<td>Brown</td>
<td>Without</td>
<td>100000 cycles</td>
</tr>
<tr>
<td>EVQPHU03T</td>
<td>2.6 N</td>
<td>3.1 mm</td>
<td>Brown</td>
<td>Without</td>
<td>50000 cycles</td>
</tr>
<tr>
<td>EVQPHL03T</td>
<td>1.3 N</td>
<td>3.1 mm</td>
<td>Brown</td>
<td>With</td>
<td>100000 cycles</td>
</tr>
<tr>
<td>EVQPHN03T</td>
<td>1.6 N</td>
<td>3.1 mm</td>
<td>Brown</td>
<td>With</td>
<td>100000 cycles</td>
</tr>
<tr>
<td>EVQPHK03T</td>
<td>2.6 N</td>
<td>3.1 mm</td>
<td>Brown</td>
<td>With</td>
<td>50000 cycles</td>
</tr>
</tbody>
</table>

*This land not necessary when a ground terminal is not used.*
### Dimensions in mm (not to scale)

#### Part Numbers | Operating Force | Height | Knob Color | Ground Terminal | Operating Life
---|---|---|---|---|---
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

*This land not necessary when a ground terminal is not used.*
**Light Touch Switches/EVQPH/EVQQW**

### Recommended Reflow Soldering Conditions

#### Type PH

- **Recommended Reflow Temperature Profile**
  - Switch Top (°C)
  - Soldering Time (s)
  - Fan or Normal Temp. (Normal Temp.)

#### Type QW

- **Recommended Reflow Temperature Profile**
  - Switch Top (°C)
  - Soldering Time (s)
  - Fan or Normal Temp. (Normal Temp.)

### Embossed Carrier Taping

- Tape width = 12.0 mm
- Feeding hole
- Chip pocket
- Chip component
- Tape running direction

### Standard Reel Dimensions in mm (not to scale)

- **Part No.**
  - EVQPH
  - EVQQW
- **Height**
  - EVQPH: 3.1
  - EVQQW: 2.0, 2.5/3.1
- **Dimensions**
  - A, B, W, F, E, P1, P2, P3, D, Dia., t1, t2

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Height</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>W (mm)</th>
<th>F (mm)</th>
<th>E (mm)</th>
<th>P1 (mm)</th>
<th>P2 (mm)</th>
<th>P3 (mm)</th>
<th>D (mm)</th>
<th>Diameter (mm)</th>
<th>t1 (mm)</th>
<th>t2 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVQPH</td>
<td>3.1</td>
<td>7.0±0.2</td>
<td>7.5±0.2</td>
<td>12.0±0.3</td>
<td>5.5±0.1</td>
<td>1.75±0.10</td>
<td>8.0±0.1</td>
<td>4.0±0.1</td>
<td>1.5±0.1</td>
<td>0.3±0.05</td>
<td>2.2±0.3</td>
<td>3.2±0.2</td>
<td></td>
</tr>
<tr>
<td>EVQQW</td>
<td>2.0</td>
<td>7.0±0.2</td>
<td>7.5±0.2</td>
<td>12.0±0.3</td>
<td>5.5±0.1</td>
<td>1.75±0.10</td>
<td>8.0±0.1</td>
<td>4.0±0.1</td>
<td>1.5±0.1</td>
<td>0.3±0.05</td>
<td>2.2±0.3</td>
<td>3.2±0.2</td>
<td></td>
</tr>
</tbody>
</table>

### Recommended Shape of Test Pole

- **Type EVQPH**
  - ø3.2 to ø3.8
  - R0.2±0.05

- **Type EVQQW**
  - ø2.0 to ø3.0
  - R0.2±0.05

### Recommended Operating Conditions

- **Test pole**
  - Leaning angle range 90° ±5° (vertical direction)
  - Switch
  - Mounting surface

- **Soldering Time (s)**
  - Recommended Reflow Temperature Profile

### Notes

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