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## $3.5 \mathrm{~mm} \times 2.9 \mathrm{~mm}$ Side-operational SMD

## Light Touch Switches

## Type: EVQP7/EVQP3/EVQ9P7

## - Features

- External dimensions : $3.5 \mathrm{~mm} \times 2.9 \mathrm{~mm}$, Height 1.35 mm
- A wide range of terminal type : L-shape, J-bent, Straight
- High mount ability
- Push plate strength enhanced type


## - Recommended Applications

- Car navigation, Car audio

Explanation of Part Numbers


## Specifications

| Type |  | Snap action / Push-on type SPST |
| :---: | :---: | :---: |
| Electrical | Rating | $10 \mu \mathrm{~A} 2 \mathrm{Vdc}$ to 50 mA 12 Vdc (Resistive load) |
|  | Contact Resistance | $500 \mathrm{~m} \Omega$ max. |
|  | Insulation Resistance | $100 \mathrm{M} \Omega \mathrm{min}$. (at 100 Vdc ) |
|  | Dielectric Withstanding Voltage | 250 Vac (1 minute) |
|  | Bouncing | $10 \mathrm{~ms} \mathrm{max}$. (ON, OFF) |
| Mechanical | Operating Force | $1.6 \mathrm{~N}, 2.2 \mathrm{~N}$ |
|  | Push Travel | 0.2 mm |
|  | Push Strength | 30 N (1 minute) |
| Endurance | Operating Life | 100000 cycles min. |
| Operating Temperature |  | $-20^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ |
| Storage Temperature |  | $\begin{aligned} & -40^{\circ} \mathrm{C} \text { to }+85^{\circ} \mathrm{C} \text { (Bulk) } \\ & -20^{\circ} \mathrm{C} \text { to }+60^{\circ} \mathrm{C} \text { (Taping) } \\ & \hline \end{aligned}$ |
| Minimum Quantity/Packing Unit |  | 5000 pcs. Embossed Taping (Reel Pack) |
| Quantity/Carton |  | 25000 pcs. |

Dimensions in mm (not to scale)

| No. 1 | (1) 0 <br> Circuit diagram <br> (1) <br> (2) 0 <br> - (2) |  |  |
| :---: | :---: | :---: | :---: |
| EVQP7A <br> EVQP7J <br> (Embossed Taping) <br> With straight terminals Without boss |  |  |  |
| Part Numbers |  |  |  |
| EVQP7A01K |  |  |  |
| EVQP7J01K |  |  |  |
| No. 2 <br> EVQP7C <br> EVQP7L <br> (Embossed Taping) <br> With straight terminals With boss |  |  |  |
| Part Numbers | Operating Force | Push Plate Color | Operating Life |
| EVQP7C01K | 2.2 N | Black | 100000 cycles |
| EVQP7L01K | 1.6 N | Black | 100000 cycles |

Dimensions in mm (not to scale)

| o. 3 | (1) 0 <br> (2) 0 <br> Circuit diagram <br> (1) 0 <br> Circuit diagram |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| EVQP7B EVQP7K (Embossed Taping) With J-bent terminals Without boss |  |  |  |  |
| Part Numbers |  |  |  |  |
| EVQP7B01K |  |  |  |  |
| EVQP7K01K |  |  |  |  |
| No. 4 <br> EVQP7D EVQP7M <br> (Embossed Taping) <br> With J-bent terminals With boss |  |  |  |  |
| Part Numbers | Operating Force | Height | Push Plate Color | Operating Life |
| EVQP7D01K | 2.2 N | 1.35 mm | Black | 100000 cycles |
| EVQP7M01K | 1.6 N | 1.35 mm | Black | 100000 cycles |

- Dimensions in mm (not to scale)

| No. 5 <br> EVQP3 <br> EVQ9P <br> (Embossed Taping) <br> With L-shape terminals <br> Without boss |  |  | Circuit diagram <br> PWB land pattern for reference |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Part Numbers | Operating Force | Height | Push Plate Color | Operating Life |
| EVQP3401K | 2.2 N | 1.35 mm | Black | 100000 cycles |
| EVQ9P701K | 1.6 N | 1.35 mm | Black | 100000 cycles |

## Recommended Reflow Soldering Conditions



- Embossed Carrier Taping

Tape width $=12.0 \mathrm{~mm}$


- Straight terminals, L-shape terminals type

| Part No. | Height | A | B | W | F | E | $\mathrm{P}_{1}$ | $\mathrm{P}_{2}$ | Po | Do Dia. | t1 | $\mathrm{t}_{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EVQP7, EVQP3 EVQ9P7 | 1.35 | $5.2 \pm 0.2$ | $4.5 \pm 0.2$ | $12.0 \pm 0.3$ | $5.5 \pm 0.1$ | $1.75 \pm 0.10$ | $8.0 \pm 0.1$ | $2.0 \pm 0.1$ | $4.0 \pm 0.1$ | $1.5{ }_{-0}^{0.1}$ | $0.3 \pm 0.1$ | $1.5 \pm 0.2$ |

- J-bent type

| Part No. | Height | A | B | W | F | E | $\mathrm{P}_{1}$ | P2 | Po | Do Dia. | t1 | t2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EVQP7, EVQP3 | 1.35 | $4.5 \pm 0.2$ | $4.5 \pm 0.2$ | $12.0 \pm 0.3$ | $5.5 \pm 0.1$ | $1.75 \pm 0.10$ | $8.0 \pm 0.1$ | $2.0 \pm 0.1$ | $4.0 \pm 0.1$ | $1.5{ }_{-0}^{+0.1}$ | $0.3 \pm 0.1$ | $1.5 \pm 0.2$ |

- Standard Reel Dimensions in mm (not to scale)


| Item | A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rate (mm) | $\phi 380.0 \pm 2.0$ | $\phi 80.0 \pm 1.0$ | $\phi 13.0 \pm 0.5$ | $\phi 21.0 \pm 1.0$ | $2.0 \pm 0.5$ |
| Item | W | T | t | r |  |
|  |  |  |  |  |  |
| Rate (mm) | $13.5 \pm 1.0$ | $17.5 \pm 1.0$ | 1.0 to 3.0 | $1.0 \pm 0.5$ |  |

