## Unique dust-proof structure type is excellent for high density mounting.



## Features

- Supplied with radial taping.
- Allows automatic insertion on to PC board with the radial auto insertion machine.
- Mounting dimensions are compatible with our conventional SKHV series.


## Applications

- For various operations such as various audiovisual apparatuses, TVs, video recorders, and telephones for computerization

Products Line

| Products No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Stem color | Stem height |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SKQKAAD010 | 0.98 N | Vertical | 0.25 | $\begin{gathered} 50 \mathrm{~mA} \\ 12 \mathrm{~V} \text { DC } \end{gathered}$ | $\begin{aligned} & 10 \mu \mathrm{~A} \\ & 1 \mathrm{~V} \text { DC } \end{aligned}$ | 1,000,000 cycles | $100 \mathrm{~m} \Omega$ max. | Black | $\mathrm{h}=5 \mathrm{~mm}$ |
| SKQKABD010 | 1.57 N |  |  |  |  | 500,000 cycles |  | Dark gray |  |
| SKQKADD010 | 0.98 N |  |  |  |  | 1,000,000 cycles |  | Black | $\mathrm{h}=7 \mathrm{~mm}$ |
| SKQKAED010 | 1.57 N |  |  |  |  | 500,000 cycles |  | Dark gray |  |
| SKQKAJD010 | 0.98 N |  |  |  |  | 200,000 cycles |  | Black | $\mathrm{h}=9.5 \mathrm{~mm}$ |
| SKQKAKD010 | 1.57 N |  |  |  |  |  |  | Dark gray |  |

Dimensions

|  |  | Style | PC board mounting hole dimensions (Viewed from switch mounting face) |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} \hline \mathrm{h} \\ \hline 5 \\ \hline 7 \\ \hline 9.5 \\ \hline \end{gathered}$ |  |  |  |

## Circuit Diagram

$\square$

## Note

Using a 1.6 mm thick PC board is recommended.

## Products Specifications

| Series |  | Sharp feeling type | Soft feeling type |
| :---: | :---: | :---: | :---: |
| Operating temperature range |  | $\begin{gathered} -20^{\circ} \mathrm{C} \text { to }+70^{\circ} \mathrm{C} \\ \text { SKHJ/HL/QJ/RR/RV/QC/QK } \end{gathered}$ | $\begin{gathered} -20^{\circ} \mathrm{C} \text { to }+70^{\circ} \mathrm{C} \\ \text { SKEG } \end{gathered}$ |
|  |  | $-30^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ | $-40^{\circ} \mathrm{C}$ to $+90^{\circ} \mathrm{C}$ |
| Electrical performance | Insulation resistance | $100 \mathrm{M} \Omega$ min. 100 V DC <br> SKEY/PD : $50 \mathrm{M} \Omega \mathrm{min}$. 100 V DC |  |
|  | Voltage proof | 250V AC for 1 min . <br> SKRE/SKSC/SKRB/RV/RH/RM/RW/RR/EY/PD : 100V AC for 1min. |  |
| Durability | Vibration | 10 to 55 to $10 \mathrm{~Hz} / \mathrm{min}$., the amplitude is 1.5 mm for all the frequencies, in the 3 direction of $\mathrm{X}, \mathrm{Y}$ and Z for 2 hours respectively |  |
|  | Lifetime | Shall be in accordance with individual specifications. |  |
| Environmental performance | Cold | $-30 \pm 2^{\circ} \mathrm{C}$ for 96 h |  |
|  | Dry heat | $80 \pm 2^{\circ} \mathrm{C}$ for 96 h |  |
|  | Damp heat | $60 \pm 2{ }^{\circ} \mathrm{C}, 90$ to $95 \% \mathrm{RH}$ for 96 h |  |

## Note

We can raise the working temperature range for in-vehicle applications upon request. Contact us if you have any requirements of this kind.

Specifications of LED (SKHJ)

| Color of light | Power dissipation $\mathbf{P}(\mathbf{m W})$ | Forward pulse peak current $\operatorname{IFP}(m A)$ | Forward current $\operatorname{IFDC}(\mathrm{mA})$ | Reverse voltage VR (V) | Forward voltage $\begin{gathered} \mathrm{VF}(\mathrm{~V}) \\ \mathrm{IF}=10 \mathrm{~mA} \end{gathered}$ | Reverse current $\begin{aligned} & \text { IR }(\mu \mathbf{A}) \\ & \text { VR=4V } \end{aligned}$ | Peak emission wave length $\lambda$ peak (nm) IF $=10 \mathrm{~mA}$ | Spectral line half width $\Delta \lambda(\mathrm{nm})$ $\mathrm{IF}=10 \mathrm{~mA}$ | Luminous intensity <br> IV (mcd) $\mathrm{IF}=10 \mathrm{~mA}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Red | 40 | 80 | 15 | 4 | $\begin{aligned} & 2.7 \text { max. } \\ & \text { 2.05TYP } \end{aligned}$ | 5 max. | 700 TYP | 100 TYP | 0.4 min . <br> 1.0 TYP |
| Pure green |  |  |  |  |  | 10 max. | 555 TYP | 20 TYP | 0.8 min . 2.0 TYP |
| Amber |  |  |  |  | $\begin{aligned} & \text { 2.7 max. } \\ & \text { 2.0 TYP } \end{aligned}$ |  | 590 TYP | 30 TYP | 0.4 min . <br> 1.0 TYP |
| Orange (High brightness) |  |  |  | 3 |  |  | 630 TYP | 40 TYP | 1.5 min . 4.0 TYP |
| Green (High brightness) |  |  |  | 4 | $\begin{aligned} & \text { 2.7 max. } \\ & \text { 2.05TYP } \end{aligned}$ |  | 565 TYP | 30 TYP | 2.0 min . 5.0 TYP |

## Soldering Conditions

## Condition for Reflow

Available for Surface Mount Type. (Except SKRM, SKRR Series)

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to $0.2 \phi \mathrm{CA}(\mathrm{K})$ or $\mathrm{CC}(\mathrm{T})$ at soldering portion (copper foil surface). A heat resisting tape should be used for fixed measurement.
3. Temperature profile


| Sharp |
| :--- |
| Feeling |
| Soft |
| Feeling |
| Snap-in |
| Type |
| Surface |
| Mount Type |
| Radial |
| Type |

Conditions for Auto-dip
Available for Snap-in Type and Radial Type
(Except SKHJ, SKHL, SKOC, SKOJ, SKOK, SKEG series)

| Items | Condition |
| :---: | :---: |
| Flux built-up | Mounting surface <br> should not be coated with flax |
| Preheating temperature | Ambient temperature of the soldered <br> surface of PC board. <br> $100^{\circ} \mathrm{C}$ max. |
| Preheating time | 60 s max. |
| Soldering temperature | $260^{\circ} \mathrm{C}$ max. |
| Continuous dipping time | 5 s max. |
| Number of soldering | 2 times max. $^{\text {Num }}$ |

Manual Soldering (Except SKRT series)

| Items | Condition |
| :---: | :---: |
| Soldering temperature | $350^{\circ} \mathrm{C}$ max. |
| Continuous soldering time | $3 s$ max. |
| capacity of soldering iron | 60 W max. |

## Notes

1. Consult with us for TACT Switch ${ }^{\text {TM }}$ washing conditions.
2. Prevent flux penetration from the top side of the TACT Switch ${ }^{\text {TM }}$.
3. Switch terminals and a PC board should not be coated with flux prior to soldering.
4. The second soldering should be done after the switch returns to normal temperature.
5. Use the flux with a specific gravity of at least 0.81 .
(EC-19S-8 by TAMURA Corporation, or their equivalents.)

## Specification of Radial Taping Package

Taping Packaging for Auto-insertion
The SKHV, SKOC, SKOK, SKQN, SKOW, SKRC, SKRG, SKRS, SKPD and SKPL series are delivered with taping packaging.

Box Size



Detector

Push

Slide

Rotary

Encoders

Power
Dual-in-line
Package Type
Multi Control
Devices
TACT Switch ${ }^{\text {Tw }}$
Custom-
Products

Sharp
Feeling
Soft
Feeling
Snap-in
Type
Surface
Mount Type
Radial
Type

