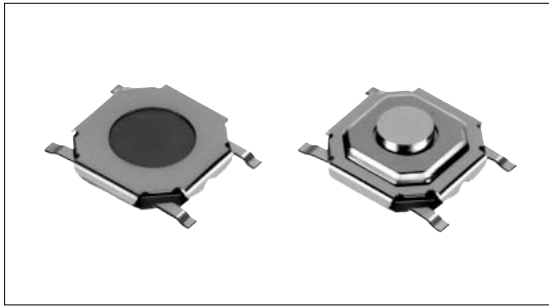


# TACT Switch™ 5.2mm Square Low-profile (Surface Mount Type)

## SKQG Series



Available in two types - 0.8mm height without stem or 1.5mm height with stem.



Detector  
Push  
Slide  
Rotary  
Encoders  
Power

Dual-in-line  
Package Type

TACT Switch™

Custom-  
Products

Sharp  
Feeling

Soft  
Feeling

Snap-in  
Type

Surface  
Mount Type

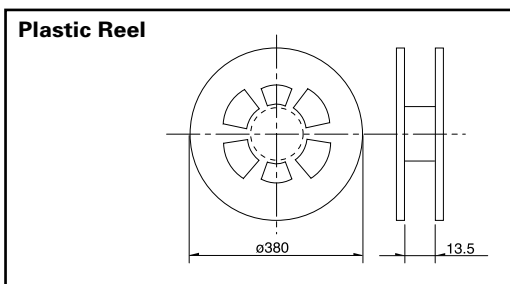
Radial  
Type

### Product Line

| Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.)     | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Variety         | Minimum order unit (pcs.) | Drawing No.   |              |
|-------------|-----------------|---------------------|-------------|-------------------|---------------|----------------------------|----------------------------|-----------------|---------------------------|---------------|--------------|
| SKQGAAE010  | 0.98N           | Vertical            | 0.25        | 50mA<br>12V<br>DC | 10μA<br>1V DC | 500,000cycles              | 100m<br>max.               | Without<br>stem | 5,000                     | 1             |              |
| SKQGAAE010  | 1.57N           |                     |             |                   |               |                            |                            |                 |                           |               | 50,000cycles |
| SKQGACE010  | 2.55N           |                     |             |                   |               |                            |                            |                 |                           |               |              |
| SKQGAFE010  | 0.98N           |                     |             |                   |               | With<br>stem               |                            | 4,000           | 2                         | 100,000cycles |              |
| SKQGAPE010  | 1.57N           |                     |             |                   |               |                            |                            |                 |                           |               |              |
| SKQGADE010  | 2.55N           |                     |             |                   |               |                            |                            |                 |                           |               |              |
| SKQGAKE010  | 3.43N           |                     |             |                   |               |                            |                            |                 |                           |               |              |

### Specification of Embossed Taping Package (Taping Packaging for Auto-insertion)

Reel Size Unit:mm



| Series                                | Number of packages( pcs. ) |               |                        | Tape width ( mm ) |
|---------------------------------------|----------------------------|---------------|------------------------|-------------------|
|                                       | 1 reel                     | 1 case /Japan | 1 case /export packing |                   |
| SKQGAA<br>SKQGAC<br>SKQGAE            | 5,000                      | 50,000        | 50,000                 | 12                |
| SKQGAB<br>SKQGAD<br>SKQGAF<br>SKQGAKE | 4,000                      | 40,000        | 40,000                 |                   |

### Note

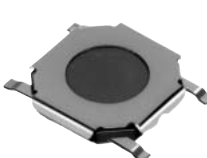
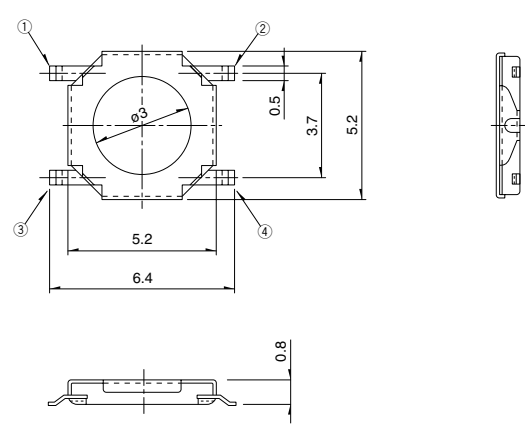
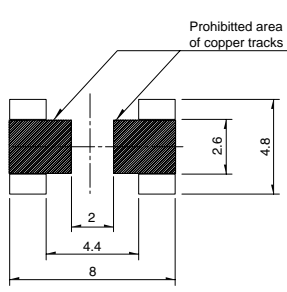
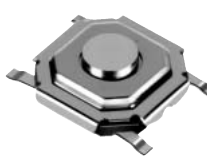
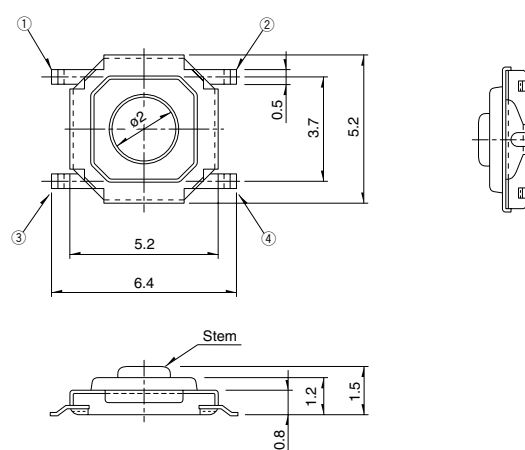
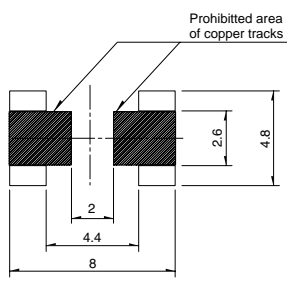
1. Please place purchase orders for taping products per minimum order unit (1 reel or a case).
2. For 330mm diameter reel requirements, please contact us.

Refer to P.306 for soldering conditions.



**Dimensions**

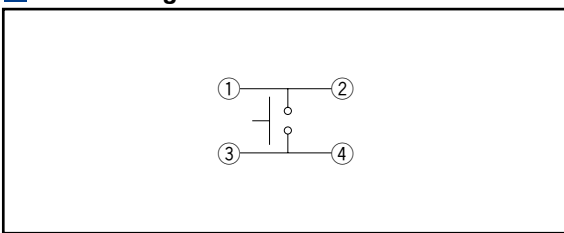
Unit:mm

| No. | Photo   | Style   | PC board mounting hole dimensions<br>(Viewed from switch mounting face)              |
|-----|---|---|--|
| 1   | <p><b>Without stem type</b></p>  |   |   |
| 2   | <p><b>With stem type</b></p>   |  |  |

- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- TACT Switch™
- Custom-Products

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

**Circuit Diagram**



## List of Varieties

### Sharp Feeling Type

| Series                    | SKQU                               | SKQB  | SKQE   | SKHC | SKHK      | SKRW          | SKRM | SKQR | SKRB | SKRR                      | SKQG        |     |
|---------------------------|------------------------------------|---|--|------|-----------|---------------|------|------|------|---------------------------|-------------|-----|
| Detector                  | <b>Photo</b>                       |   |  |      |           |               |      |      |      |                           |             |     |
| Push                      | <b>Type</b> Snap-in                |   |  |      |           | Surface mount |      |      |      |                           |             |     |
| Slide                     | <b>Features</b>                    |   |  |      |           |               |      |      |      |                           |             |     |
| Rotary                    | 4-direction switch + push switch   | Water-proof Horizontal type   | Long Life  |      | Long Stem | Low-profile   |      |      |      | Low-profile and long life | Low-profile |     |
| Encoders                  | <b>Operating direction</b>         | <b>Vertical</b>   |  |      |           |               |      |      |      |                           |             |     |
|                           |                                    | <b>Horizontal</b>   |  |      |           |               |      |      |      |                           |             |     |
| Power                     | <b>Dimensions (mm)</b>             | <b>W</b>  | 11.5   | 12   |           | 3.7           | 4.5  | 4.8  |      | 7.5                       | 5.2         |     |
| Dual-in-line Package Type |                                    | <b>D</b>  | 11.9   |      |           |               |      |      |      | 7                         |             |     |
| TACT Switch™              |                                    | <b>H</b>  | 7.1  | 11.3 | 4.3       |               | 12   | 0.35 | 0.4  | 0.5                       | 0.55        | 0.6 |
| Custom-Products           | <b>Operation force coverage</b>    | 1N  | See the relevant pages for respective product descriptions | ↕    | ↕↕        | •             | ↕    | ↕    | ↕    | ↕↕                        | ↕↕          | ↕↕  |
|                           |                                    | 5N  |  |      |           |               |      |      |      |                           |             |     |
|                           | <b>Ground terminal</b>             |   |  |      |           |               |      |      |      |                           |             |     |
|                           | <b>Operating temperature range</b> |   |  |      |           |               |      |      |      |                           |             |     |
|                           | -30 to +85                         |   |  |      |           |               |      |      |      |                           |             |     |
| Sharp Feeling             | <b>Electrical performance</b>      | <b>Insulation resistance</b>  |  |      |           |               |      |      |      |                           |             |     |
| Soft Feeling              |                                    | 100M min. 100V DC   |  |      |           |               |      |      |      |                           |             |     |
| Snap-in Type              | <b>Durability</b>                  | <b>Voltage proof</b>  |  |      |           |               |      |      |      |                           |             |     |
| Surface Mount Type        |                                    | 250V AC for 1min.<br>SKRW/RM/RB/RR : 100V AC for 1min.  |  |      |           |               |      |      |      |                           |             |     |
| Radial Type               | <b>Environmental performance</b>   | <b>Vibration</b>  |  |      |           |               |      |      |      |                           |             |     |
|                           |                                    | 10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2hours respectively |  |      |           |               |      |      |      |                           |             |     |
|                           | <b>Environmental performance</b>   | <b>Lifetime</b>   |  |      |           |               |      |      |      |                           |             |     |
|                           |                                    | Shall be in accordance with individual specifications.  |  |      |           |               |      |      |      |                           |             |     |
|                           |                                    | <b>Cold</b>   | -30 ± 2 for 96h  |      |           |               |      |      |      |                           |             |     |
|                           |                                    | <b>Dry heat</b>   | 80 ± 2 for 96h   |      |           |               |      |      |      |                           |             |     |
|                           |                                    | <b>Damp heat</b>  | 60 ± 2 , 90 to 95%RH for 96h                               |      |           |               |      |      |      |                           |             |     |
|                           | <b>Page</b>                        | 482   | 265  | 267  | 268       | 270           | 271  | 272  | 273  | 274                       | 275         | 276 |

W : Width. The most outer dimension excluding terminal portion.  
 D : Depth. The most outer dimension excluding terminal portion.  
 H : Height. The minimum dimension if there are variances.

TACT Switch™ Soldering Conditions .....306  
 TACT Switch™ Cautions .....307  
 Product Line of Knob for TACT Switch™ .....308

**Note**

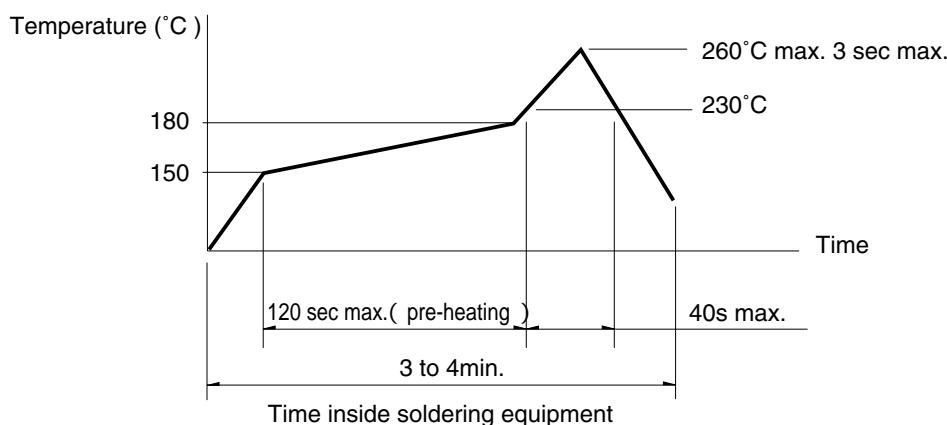
The automotive operating temperature range to be individually discussed upon request.

## Soldering Conditions

### Condition for Reflow

Available for Surface Mount Type.

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2 CA(K) or CC(T) at solder joints( copper foil surface ). A heat resistive tape should be used to fix thermocouple.
3. Temperature profile



### Note

1. The above temperature shall be measured on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the material, size, thickness of PC boards and others. The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines. Prior verification of soldering condition is highly recommended.

### Conditions for Auto-dip

Available for Snap-in Type and Radial Type  
(Except SKHJ, SKHL, SKQJ, SKQK, SKEG series)

| Items                  | Condition  |
|------------------------|--|
| Flux built-up          | Mounting surface should not be exposed to flux                       |
| Preheating temperature | Ambient temperature of the soldered surface of PC board.<br>100 max. |
| Preheating time        | 60s max.   |
| Soldering temperature  | 260 max.   |
| Duration of immersion  | 5s max.  |
| Number of soldering    | 2times max.  |

### Manual Soldering ( Except SKRT Series )

| Items                      | Condition |
|----------------------------|-----------|
| Soldering temperature      | 350 max.  |
| Duration of soldering      | 3s max.   |
| Capacity of soldering iron | 60W max.  |

### Notes

1. Consult with us for availability of TACT Switch™ washing.
2. Prevent flux penetration from the top side of the TACT Switch™.
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 is stable with normal temperature.
5. Use the flux with a specific gravity of min 0.81.  
( EC-19S-8 by TAMURA Corporation, or equivalents. )

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Sharp Feeling  
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