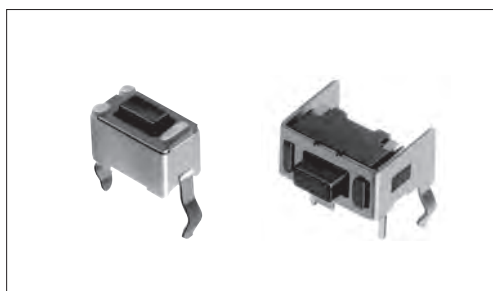


Switch contributing to high-density mounting,  
available with top or side push operation



#### Typical Specifications



| Items                      | Specifications |
|----------------------------|----------------|
| Rating (max.)              | 50mA 12V DC    |
| Rating (min.)              | 10μA 1V DC     |
| Initial contact resistance | 500mΩ max.     |
| Travel (mm)                | 0.25           |

#### Product Line

Top push type

| Product No. | Operating force | Operating direction | Operating life (5mA 5V DC) | Stem color | Height  | Minimum order unit (pcs.) |        | Drawing No. |
|-------------|-----------------|---------------------|----------------------------|------------|---------|---------------------------|--------|-------------|
|             |                 |                     |                            |            |         | Japan                     | Export |             |
| SKHLAAA010  | 0.98N           | Top push            | 50,000 cycles              | Black      | h=4.3mm | 1,000                     | 1,000  | 1           |
| SKHLACA010  | 1.57N           |                     |                            | Dark gray  |         |                           |        |             |
| SKHLAJA010  | 2.55N           |                     | 30,000 cycles              | Red        |         |                           |        |             |
| SKHLABA010  | 0.98N           |                     | 50,000 cycles              | Black      | h=5mm   |                           |        |             |
| SKHLADA010  | 1.57N           |                     |                            | Dark gray  |         |                           |        |             |
| SKHLAKA010  | 2.55N           |                     | 30,000 cycles              | Red        |         |                           |        |             |

Side push type

| Product No. | Operating force | Operating direction | Operating life (5mA 5V DC) | Stem color | Terminal length               | Minimum order unit (pcs.) |        | Drawing No. |
|-------------|-----------------|---------------------|----------------------------|------------|-------------------------------|---------------------------|--------|-------------|
|             |                 |                     |                            |            |                               | Japan                     | Export |             |
| SKHLLAA010  | 0.98N           | Side push           | 50,000 cycles              | Black      | ℓ=3.5mm<br>(PC board t : 1.6) | 1,000                     | 1,000  | 2           |
| SKHLLBA010  | 1.57N           |                     |                            | Dark gray  |                               |                           |        |             |
| SKHLLFA010  | 2.55N           |                     | 30,000 cycles              | Red        |                               |                           |        |             |
| SKHLLCA010  | 0.98N           |                     | 50,000 cycles              | Black      | ℓ=2.5mm<br>(PC board t : 1.0) |                           |        |             |
| SKHLLDA010  | 1.57N           |                     |                            | Dark gray  |                               |                           |        |             |

#### Packing Specifications

Bulk

| Number of packages (pcs.) |                         | Export package measurements (mm) |
|---------------------------|-------------------------|----------------------------------|
| 1 case / Japan            | 1 case / export packing |                                  |
| 10,000                    | 30,000                  | 309×476×347                      |

Refer to P.235 for soldering conditions.

# SKHL 6×3.5mm Compact (Snap-in Type)

TACT Switch™

Sharp Feeling

Soft Feeling

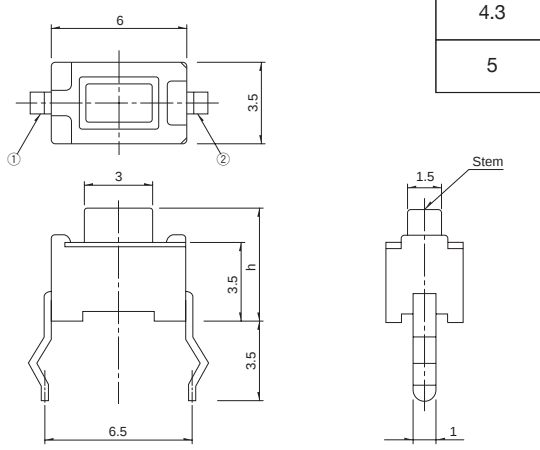
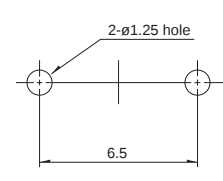
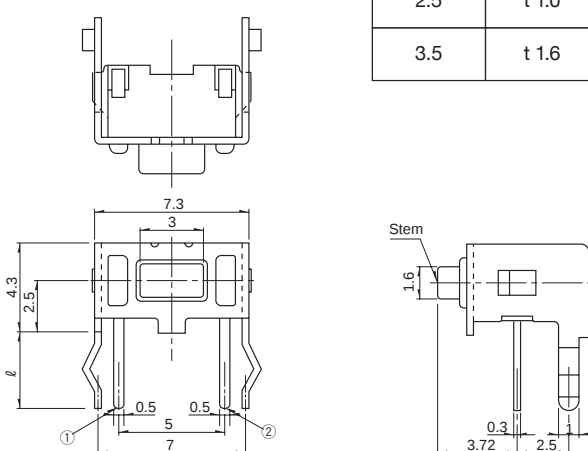
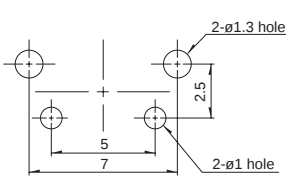
Snap-in Type

Surface Mount type

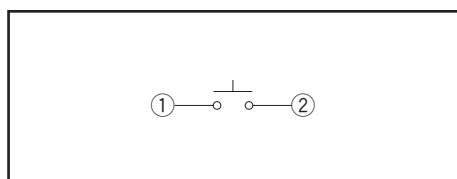
Radial Type

## ■ Dimensions

Unit:mm

| No.           | Photo                | Style                                                                                                                                                                                                                                       | PC board mounting hole dimensions<br>(Viewed from switch mounting face) |     |     |                                                                                                |     |       |                                                                                                  |
|---------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----|-----|------------------------------------------------------------------------------------------------|-----|-------|--------------------------------------------------------------------------------------------------|
| 1             | <div>Top push</div>  | <div></div> <table><tr><td>h</td></tr><tr><td>4.3</td></tr><tr><td>5</td></tr></table>                                                                    | h                                                                       | 4.3 | 5   | <div></div> |     |       |                                                                                                  |
| h             |                      |                                                                                                                                                                                                                                             |                                                                         |     |     |                                                                                                |     |       |                                                                                                  |
| 4.3           |                      |                                                                                                                                                                                                                                             |                                                                         |     |     |                                                                                                |     |       |                                                                                                  |
| 5             |                      |                                                                                                                                                                                                                                             |                                                                         |     |     |                                                                                                |     |       |                                                                                                  |
| 2             | <div>Side push</div> | <div></div> <table><tr><td><math>\varnothing</math></td><td>PWB</td></tr><tr><td>2.5</td><td>t 1.0</td></tr><tr><td>3.5</td><td>t 1.6</td></tr></table> | $\varnothing$                                                           | PWB | 2.5 | t 1.0                                                                                          | 3.5 | t 1.6 | <div></div> |
| $\varnothing$ | PWB                  |                                                                                                                                                                                                                                             |                                                                         |     |     |                                                                                                |     |       |                                                                                                  |
| 2.5           | t 1.0                |                                                                                                                                                                                                                                             |                                                                         |     |     |                                                                                                |     |       |                                                                                                  |
| 3.5           | t 1.6                |                                                                                                                                                                                                                                             |                                                                         |     |     |                                                                                                |     |       |                                                                                                  |

## ■ Circuit Diagram



# TACT Switch™

## List of Varieties

TACT Switch™

Sharp Feeling

Soft Feeling

Snap-in Type

Surface Mount Type

Radial Type

| Type                        |                                | Sharp Feeling Type                                                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|-----------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             |                                | Snap-in                                                                                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Series                      |                                | SKHL                                                                                                                             | SKHH                                                                                | SKHW                                                                                | SKQJ                                                                                | SKQB                                                                                  | SKQE                                                                                  | SKHC                                                                                  |
| Photo                       |                                |                                                 |    |    |    |    |    |    |
| Features                    |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | Long-life                                                                             | —                                                                                     |
| Water-proof                 |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | ●                                                                                     | —                                                                                     | —                                                                                     |
| Dustproof                   |                                | —                                                                                                                                | —                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                     | ●                                                                                     | —                                                                                     |
| IP standard                 |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| Operating direction         | Top push                       | ●                                                                                                                                | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                     | ●                                                                                     | ●                                                                                     |
|                             | Side push                      | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| Dimensions (mm)             | W                              | 6                                                                                                                                | □6                                                                                  |                                                                                     | □6.6                                                                                | □10                                                                                   | □12                                                                                   |                                                                                       |
|                             | D                              | 3.5                                                                                                                              |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | H                              | 4.3/5                                                                                                                            | See the relevant pages for respective product descriptions                          |                                                                                     | 4.3/5                                                                               | 5                                                                                     | 5/13/23.2                                                                             | See the relevant pages for respective product descriptions                            |
| Operation force coverage    | 1N max.                        | ↕                                                                                                                                | ↕                                                                                   | ↕                                                                                   | ↕                                                                                   | ↕                                                                                     | ↕                                                                                     | ↕                                                                                     |
|                             | 1N to 2N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | 2N to 3N                       | ↕                                                                                                                                |                                                                                     | ↕                                                                                   |                                                                                     | ↕                                                                                     | ↕                                                                                     |                                                                                       |
|                             | 3N to 4N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | 4N to 5N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Travel (mm)                 |                                | 0.25                                                                                                                             |                                                                                     | 0.3                                                                                 | 0.25                                                                                | 0.3                                                                                   |                                                                                       |                                                                                       |
| Ground terminal             |                                | —                                                                                                                                | ○                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     |
| Operating temperature range |                                | -40℃ to +90℃                                                                                                                     |                                                                                     |                                                                                     | -20℃ to +70℃                                                                        | -40℃ to +90℃                                                                          |                                                                                       | -40℃ to +85℃                                                                          |
| Automotive use              |                                | ●                                                                                                                                | ●                                                                                   | —                                                                                   | —                                                                                   | ●                                                                                     | —                                                                                     | —                                                                                     |
| Life Cycle                  |                                |                                               |  |  |  |  |  |  |
| Electrical performance      | Rating (max.) (Resistive load) | 50mA 12V DC                                                                                                                      |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | Rating (min.) (Resistive load) | 10μA 1V DC                                                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | Insulation resistance          | 100MΩ min. 100V DC 1min.                                                                                                         |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | Voltage proof                  | 250V AC 1min.                                                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Durability                  | Vibration                      | 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 2 hours respectively |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|                             | Lifetime                       | Shall be in accordance with individual specifications.                                                                           |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Environmental performance   | Cold                           | -40℃ 96h                                                                                                                         |                                                                                     |                                                                                     | -30℃ 96h                                                                            | -40℃ 96h                                                                              |                                                                                       |                                                                                       |
|                             | Dry heat                       | 90℃ 96h                                                                                                                          |                                                                                     |                                                                                     | 80℃ 96h                                                                             | 90℃ 96h                                                                               |                                                                                       |                                                                                       |
|                             | Damp heat                      | 60℃, 90 to 95%RH 96h                                                                                                             |                                                                                     |                                                                                     |                                                                                     | 60℃, 90 to 95%RH 1,000h                                                               | 60℃, 90 to 95%RH 96h                                                                  |                                                                                       |
| Page                        |                                | 173                                                                                                                              | 175                                                                                 | 179                                                                                 | 180                                                                                 | 182                                                                                   | 184                                                                                   | 186                                                                                   |

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 . . . . . 235  
TACT Switch™ Cautions . . . . . 236

### Notes

1. The automotive operating temperature range to be individually discussed upon request.
2. ● Indicates applicability to all products in the series, while ○ indicates applicability to some products in the series.

| Type                        |                                | Sharp Feeling Type                                                                                                               |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|-----------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             |                                | Snap-in                                                                                                                          |                                                                                     |                                                                                     |                                                                                       | Radial                                                                                |
| Series                      |                                | SKHL                                                                                                                             | SKHH                                                                                | SKQJ                                                                                | SKQB                                                                                  | SKRC                                                                                  |
| Photo                       |                                |                                                 |    |    |    |    |
| Features                    |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                     | Round terminal type                                                                   |
| Water-proof                 |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | ●                                                                                     | ●                                                                                     |
| Dustproof                   |                                | —                                                                                                                                | —                                                                                   | ●                                                                                   | ●                                                                                     | ●                                                                                     |
| IP standard                 |                                | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     |
| Operating direction         | Top push                       | —                                                                                                                                | —                                                                                   | —                                                                                   | —                                                                                     | ●                                                                                     |
|                             | Side push                      | ●                                                                                                                                | ●                                                                                   | ●                                                                                   | ●                                                                                     | —                                                                                     |
| Dimensions (mm)             | W                              | 7.3                                                                                                                              | 7.5                                                                                 | 7.5                                                                                 | 11.5                                                                                  | φ9                                                                                    |
|                             | D                              | 7.22                                                                                                                             | 7.85                                                                                | 7.85                                                                                | 11.9                                                                                  |                                                                                       |
|                             | H                              | 4.3                                                                                                                              | 7.4                                                                                 | 7.3                                                                                 | 11.3                                                                                  | 13                                                                                    |
| Operation force coverage    | 1N max.                        |                                                 |    |    |    |    |
|                             | 1N to 2N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                             | 2N to 3N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                             | 3N to 4N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                             | 4N to 5N                       |                                                                                                                                  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Travel (mm)                 |                                | 0.25                                                                                                                             |                                                                                     |                                                                                     | 0.3                                                                                   | 0.25                                                                                  |
| Ground terminal             |                                | ●                                                                                                                                | ●                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     |
| Operating temperature range |                                | −40℃ to +90℃                                                                                                                     |                                                                                     | −20℃ to +70℃                                                                        | −40℃ to +95℃                                                                          | −30℃ to +85℃                                                                          |
| Automotive use              |                                | ●                                                                                                                                | ●                                                                                   | —                                                                                   | ●                                                                                     | —                                                                                     |
| Life Cycle                  |                                |                                               |  |  |  |  |
| Electrical performance      | Rating (max.) (Resistive load) | 50mA 12V DC                                                                                                                      |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                             | Rating (min.) (Resistive load) | 10μA 1V DC                                                                                                                       |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                             | Insulation resistance          | 100MΩ min. 100V DC 1min.                                                                                                         |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                             | Voltage proof                  | 250V AC 1min.                                                                                                                    |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Durability                  | Vibration                      | 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 2 hours respectively |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                             | Lifetime                       | Shall be in accordance with individual specifications.                                                                           |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Environmental performance   | Cold                           | −40℃ 96h                                                                                                                         |                                                                                     | −30℃ 96h                                                                            | −40℃ 96h                                                                              |                                                                                       |
|                             | Dry heat                       | 90℃ 96h                                                                                                                          |                                                                                     | 80℃ 96h                                                                             | 90℃ 96h                                                                               |                                                                                       |
|                             | Damp heat                      | 60℃, 90 to 95%RH 96h                                                                                                             |                                                                                     |                                                                                     | 60℃, 90 to 95%RH 1,000h                                                               |                                                                                       |
| Page                        |                                | 173                                                                                                                              | 175                                                                                 | 180                                                                                 | 182                                                                                   | 228                                                                                   |

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 . . . . . 235  
TACT Switch™ Cautions . . . . . 236

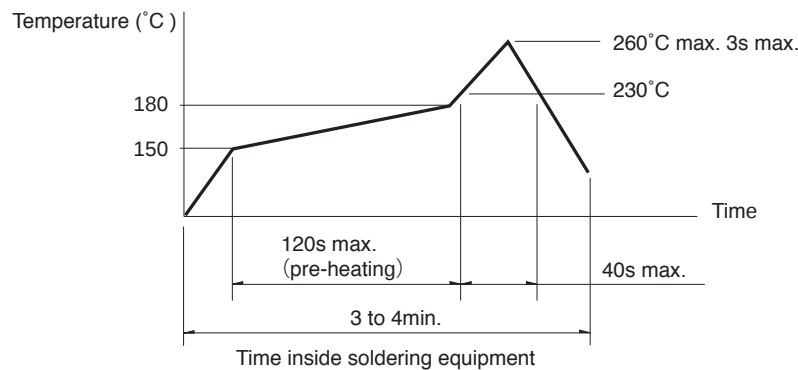
#### Notes

1. The automotive operating temperature range to be individually discussed upon request.
2. ● Indicates applicability to all products in the series.

## Condition for Reflow

Available for Surface Mount Type.

Temperature profile



### Notes

1. Please confirm the specifications of our product for the detailed condition.
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.

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

### SKHH 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. 110°C max. |
| Preheating time        | 60s max.                                                            |
| Soldering temperature  | 260°C max.                                                          |
| Duration of immersion  | 5s max.                                                             |
| Number of soldering    | 2times max.                                                         |

### SKHLTop Push Type, SKQJ 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. 100°C max. |
| Preheating time        | 45s max.                                                            |
| Soldering temperature  | 255°C max.                                                          |
| Duration of immersion  | 5s max.                                                             |
| Number of soldering    | 2times max.                                                         |

### Notes

1. Prevent flux penetration from the top side of the TACT Switch™.
2. Switch terminals and a PC board should not be coated with flux prior to soldering.
3. The second soldering should be done after the switch is stable with normal temperature.
4. Use the flux with a specific gravity of min 0.81.  
(EC-19S-8 by TAMURA CORPORATION, or equivalents.)

## Manual Soldering

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

### SKHH, SKHW Series

| Items                      | Condition  |
|----------------------------|------------|
| Soldering temperature      | 360°C max. |
| Duration of soldering      | 3s max.    |
| Capacity of soldering iron | 60W max.   |

### SKTD, SKTG, SKQJ, SKSN Series

| Items                      | Condition  |
|----------------------------|------------|
| Soldering temperature      | 350°C max. |
| Duration of soldering      | 3s max.    |
| Capacity of soldering iron | 20W max.   |