

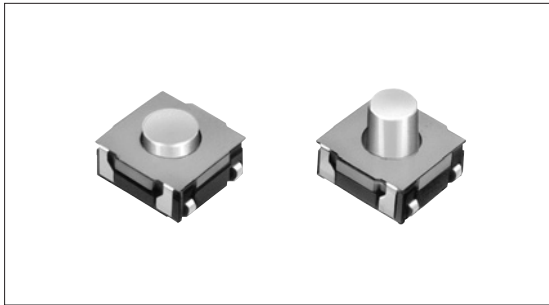
# TACT Switch™ 6.2mm Square with Middle-travel (Surface mount type)

SKRA Series



Rubber stem adoption contributes to middle-travel of 0.3 to 0.55mm.

- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- Multi Control Devices



## Features

- The rubber stem provides excellent pre-travel and over-travel operability.
- Reflow solderable.
- Supplied in 12mm/16mm width embossed taping.
- Highly reliable with dust proof structure.

## Applications

- For home appliances
- For car navigation systems and car audio equipment
- For various operation in audio equipment, office devices, communication devices, measuring devices, TVs and video recorders

TACT Switch™  
Custom-Products

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

## Product Line

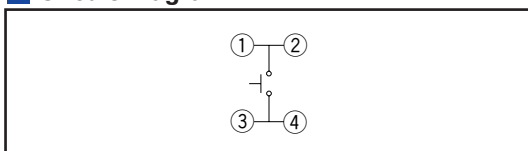
Product No.	Operating force	Operating direction	Travel (mm)	Rating (max.)	Rating (min.)	Operating life (5mA 5V DC)	Initial contact resistance	Stem color	Stem height
SKRAAKE010	2.45N	Vertical	0.3	50mA 12V DC	10μA 1V DC	100,000cycles	100mΩ max.	White	h=3.4mm
SKRAALE010	3.92N		0.35						h=5.1mm
SKRAAME010	1.96N		0.5					h=5.1mm	
SKRAAQE010	3.43N		0.55					Blue	h=5.1mm

## Dimensions

Unit:mm

Style	PC board land dimensions (Viewed from switch mounting face)						
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>h</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>3.4</td> <td>2.9</td> </tr> <tr> <td>5.1</td> <td>2.5</td> </tr> </tbody> </table>	h	A	3.4	2.9	5.1	2.5	
h	A						
3.4	2.9						
5.1	2.5						

## Circuit Diagram



Refer to P.373 for product specifications.  
Refer to P.374 for soldering conditions.  
Refer to P.376 for taping package specifications.

## Product Specifications

Items		Series	Sharp feeling type	Soft feeling type
		Operating temperature range		
	-30°C to +85°C			-40°C to +90°C
Electrical performance	Insulation resistance	100MΩ min. 100V DC SKEY/PD : 50MΩ min. 100V DC		
	Voltage proof	250V AC for 1minute SKRE/SC/RB/RM/RW/RR/EY/PD : 100V AC for 1minute		
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 2hours respectively		
	Lifetime	Shall be in accordance with individual specifications.		
Environmental performance	Cold	-30±2°C for 96h		
	Dry heat	80±2°C for 96h		
	Damp heat	60±2°C, 90 to 95%RH for 96h		

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line  
Package TypeMulti Control  
Devices

TACT Switch™

Custom-  
Products

### Note

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

### Specifications of LED (SKHJ)

Color of illumination	Power dissipation P (mW)	Forward pulse peak current IFP (mA)	Forward current IFDC (mA)	Reverse voltage VR (V)	Forward voltage VF (V) IF=10mA	Reverse current IR (μA) VR=4V	Peak emission wave length λ peak (nm) IF=10mA	Spectral line half width Δλ (nm) IF=10mA	Luminous intensity IV (mcd) IF=10mA		
Red	40	80	15	4	2.7 max. 2.05TYP	5 max.	700 TYP	100 TYP	0.4min. 1.0 TYP		
Pure green							555 TYP	20 TYP	0.8min. 2.0 TYP		
Amber							590 TYP	30 TYP	0.4min. 1.0 TYP		
Orange (High brightness)						3	2.7 max. 2.0 TYP	10 max.	630 TYP	40 TYP	1.5min. 4.0 TYP
Green (High brightness)						4	2.7 max. 2.05TYP		565 TYP	30 TYP	2.0min. 5.0 TYP

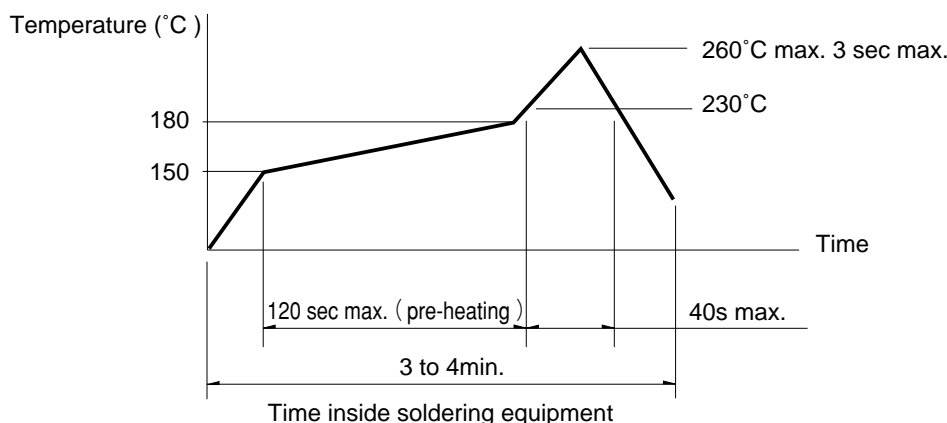
Sharp  
FeelingSoft  
FeelingSnap-in  
TypeSurface  
Mount TypeRadial  
Type

## 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 φ 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. 100°C max.
Preheating time	60s max.
Soldering temperature	260°C max.
Duration of immersion	5s max.
Number of soldering	2times max.

### Notes

1. Consult with us for TACT Switch™ washing conditions.
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 returns to normal temperature.
5. Use the flux with a specific gravity of min 0.81.  
(EC-19S-8 by TAMURA Corporation, or equivalents.)

### Manual Soldering (Except SKRT series)

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

Detector  
Push  
Slide  
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Power  
Dual-in-line Package Type  
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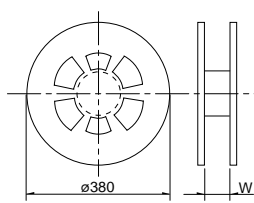
Sharp Feeling  
Soft Feeling  
Snap-in Type  
Surface Mount Type  
Radial Type

# Specification of Embossed Taping Package

## Taping Packaging for Auto-insertion

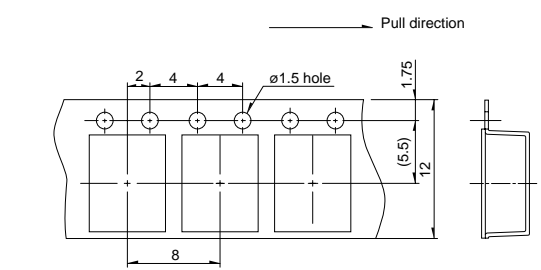
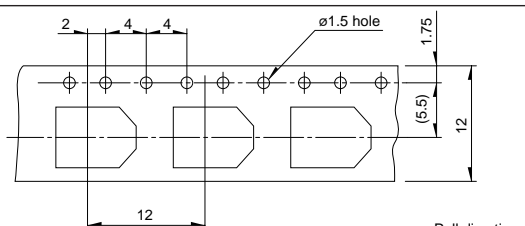
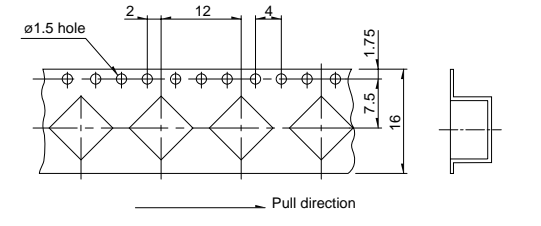
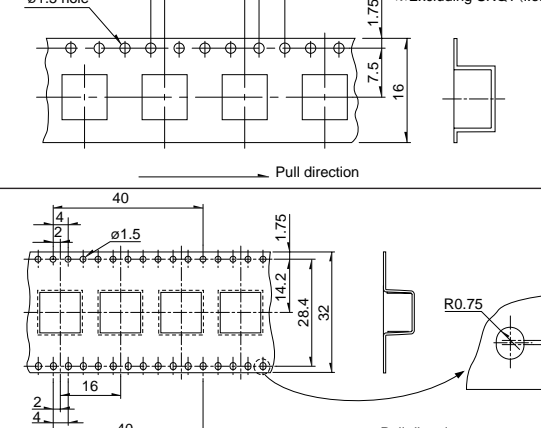
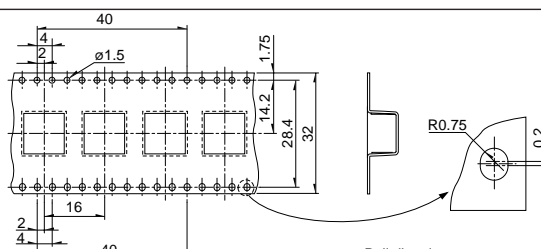
Reel Size

Unit:mm

Plastic Reel 	Applicable series	W
	SKHM, SKHU, SKQG, SKQL, SKQM, SKOR, SKOY, SKRAAK, SKRAAL, SKRB, SKRE, SKRK, SKRM, SKRN, SKRP, SKRT, SKRW, SKPM, SKSC, SKSD	13.5
	SKQT, SKRAAM, SKRAAQ, SKRR, SKPG, SKPN	17.5
	SKQUBA, SKQUBB	33.5

- Detector
- Push
- Slide
- Rotary

Unit:mm

Applicable series	Qty/reel (pcs.) (Minimum packing unit)	Tape dimensions
SKQM, SKPM	2,000	
SKHM, SKHU, SKOY, SKRT, SKRAAK, SKRAAL	3,000	
SKQG	5,000 (Without stem type) 4,000 (With stem type)	
SKRP	4,000	
SKRKAE, SKRKAH	4,500	
SKQR, SKRB SKRM, SKRW	10,000	
SKRE, SKRN, SKRKAG, SKSC, SKSD	5,000	
SKQL	3,000	
SKRH	1,300	
SKRV	1,500	
SKPG	1,200	
SKRAAM, SKRAAQ	1,400	
SKQT	3,000	
SKRR	7,000	
SKPN	1,100	
SKQUBA	750	
SKQUBB	600	

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**Note**

For ø 330mm diameter reel requirements, please contact us.