

High Operation Force with 5mm Height (Surface Mount Type)





Low-profile surface mount type with high operation force most suitable for in-car components.



Typical Specifications

Items	Specifications		
Rating (max.)	5mA 12V DC		
Rating (min.)	10μA 1V DC		
Initial contact resistance	1kΩ max.		
Travel (mm)	1.3		

Product Line

Push

Slide

Rotary

Encoders

Power Dual-in-line Package Type TACT Switch™

Sharp Feeling Soft **Feeling**

Snap-in

Type Surface **Mount Type**

Radial

Type

I TOUGET LINE						
Duaduat Na	On avating favor	Operating	Operating life Rubber color		Minimum order unit (pcs	
Product No.	Operating force	direction	(1mA 5V DC)	Rubber color	Japan	Export
SKPGACE010	1.18N			Light blue		
SKPGAAE010	2.45N	Toppush	50,000cycles	Green	1,200	1,200
SKPGABE010	2.94N			Blue		

Packing Specifications

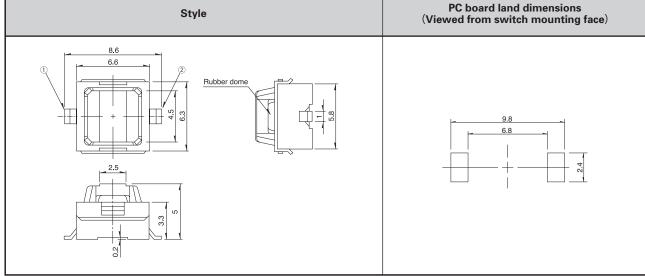
Laping	L	Jnit:mm
Reel size		
-	+	
	ø38017.5	5

Numbe	er of packages	Tang width Export pack			
1 reel	1 case / Japan	1 case / export packing	Tape width (mm)	measurements (mm)	
1,200	9,600	9,600	16	401 × 401 × 214	

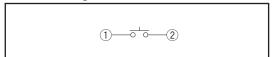
Note

For reels of 330mm diameter, please inquire.

Dimensions Unit:mm PC board land dimensions Style (Viewed from switch mounting face)



Circuit Diagram



TACT Switch™

List of Varieties

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

Sharp Feeling Soft **Feeling**

Snap-in Type Surface **Mount Type**

Radial Type

Series			Shar	p Feeling	Туре	Soft Feeling Type							
Photo Phot	Туре			Radial			Snap-in		Su	rface Mo	unt	Rad	dial
Features Found ferminal f		Series	SKRG	SKGK	SKRC	SKEG	SKEG	SKPF	SKPM	SKPG	SKPR	SKPL	SKPD
Mater-proof Companies Co		Photo		***	8							1000	
Dust-proof Propush		Features	terminal	_	terminal	_	_			_	and Low contact	and low contact	_
Toppush Top	w	ater-proof	_	_	•	_	_	_	_	_	_	_	_
Dimensions (mm) Properties of the propertie	С	Oust-proof	_	_	•	_	_	_	_	_	_	_	_
Sidepush - - - - - - - - -	Operatin	Toppush	•	•	•	•	_	•	•	•	•	•	•
Dimensions (mm) Ph		n	_	_	_	_	•	_	_	_	_	_	_
Note		w	,,,,				7.5	8	5.9	6.6	7.5	10.15	
H		ns D	φ6.2	□ 6.6	φ9	b	9.9	9	6	6.3	7.8	φ6.45	□7.8
Operation force coverage	(,	Н	4.3	5	13	7	7.3	10	Ę	5	6.5	5	5
Note		Contact	_	_	_		Carbon		Silver	Carbon	Silver	Car	bon
Travel (mm) Duability Travel (mm) Duability Travel (mm) Duability Travel (mm) Duability Duabil	force	on 1N~2N 2N~3N	1	1	1	1	1	1	1	1		1	
Cold Fating (min.) Creating (min.) Crea											\$		
Operating temperature range	Т	ravel (mm)		0.25			1	* 1	1.	.3	1	1.3	% 1
Automotive use +90°C +70°C +90°C +20°C to +70°C +20°C to +70°	Gro	und terminal	_	_	_	_	_	_	_	_	_	_	_
	Operat					-20°C to +70°C -40°C to +90°C							
	Aut	omotive use	•	_	_		_	•	•	•	•	•	•
	ı	Life Cycle	* 2	* 2	* 2	* 2	* 2	* 2	*3	*3	*3	* 2	* 2
			50)mA 12V [OC	5	mA 12V D	C					
performanceInsulation resistance $100M\Omega$ min. $100V$ DC for 1min. $100M\Omega$ min. $100V$ DC for 1min.Voltage proof $250V$ AC for 1min. $250V$ AC for 1min. $250V$ AC for 1min. $300M\Omega$ min. $300V$ DC for 1min.DurabilityVibration $100 to 55 to 10Hz/min$, the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2hours respectively $1000M\Omega$ min. $100V$ DC for 1min.LifetimeShall be in accordance with individual specifications.Shall be in accordance with individual specifications.Environmental performanceCold $-40 \pm 2^{\circ}C$ for 96h	Electrical		1	0 μ A 1V D	С				10 μ A	1V DC			
DurabilityVibration10 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 respectively10 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 respectively3LifetimeShall be in accordance with individual specifications.Shall be in accordance with individual specifications.Cold $-40 \pm 2^{\circ}$ C for 96h for 96h for 96h for 96h $-40 \pm 2^{\circ}$ C for 96h for 96h for 96h $-40 \pm 2^{\circ}$ C for 96h for 96h for 96h $-40 \pm 2^{\circ}$ C for 96h for 96h for 96h for 96hDry heat $90 \pm 2^{\circ}$ C $80 \pm 2^{\circ}$ C for 96h f			100M		OV DC	100MΩ min. 100V DC for 1min.							
Vibrationfor all the frequencies, in the 3 direction of X, Y and Z for 2hours respectivelyLifetimeShall be in accordance with individual specifications.Environmental performanceCold $-40 \pm 2^{\circ} \text{C}$ $-30 \pm 2^{\circ} \text{C}$ for 96h for 96		Voltage proof	250	V AC for 1	min.			250	V AC for 1	min.			% 2
LifetimeShall be in accordance with individual specifications.Shall be in accordance with individual specifications.Cold $-40\pm2^{\circ}C$ for 96h fo		Vibration	10 to 55 to 10h for all the free X. Y and	Iz/min., the ampl quencies, in the Z for 2hours res	litude is 1.5mm 3 direction of spectively	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		uencies,	*3				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Durability -	Lifetime	Shall be	in accorda	nce with								
Damp heat for 96h for 96h for 96h for 96h 80±2 C 107 96h 80±2 C 107 96h for 1000h for 96h		Cold				- 30±2°(C for 96h		- 30	0±2°C for	96h		
		Dry heat	90±2℃	80±2℃	90±2℃	80±2℃	for 96h		80	±2℃ for 9	6h	90 ± 2℃	
		Damp heat			60 ± 2°C . 90 to 95%RH for 1000h		60±	:2℃ , 90 to	95%RH fo	r 96h		60 ± 2°C . 90 to 95%RH for 1000h	60 ± 2°C, 90 to 95%RH for 96h
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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
 TACT Switch[™] Cautions 289

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

- Indicates applicability to all products in the series.
 ※ 1 See the relevant pages for respective product descriptions
 ※ 2 50MΩ min. 100V DC for 1min. SKPDAF:100MΩmin. 100V DC for 1min.
 ※ 3 100V AC for 1min.SKPDAF:250V DC for 1min.

TACT Switch™ Soldering Conditions

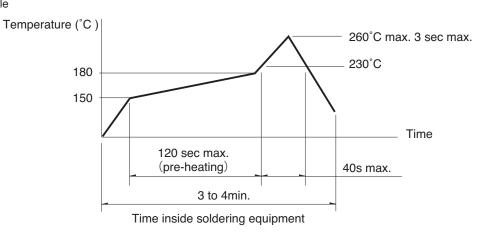
Condition for Reflow

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



Notes

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line Package Type

TACT Switch™

Sharp Feeling Soft

Feeling Snap-in Type Surface Mount Type

Radial Type

- 1. The above temperature shall be measured of the top of switch. 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

Items	Condition
Flux built-up	Mounting surface should not be exposed to fluk
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、SKPD Series

Items	Condition
Flux built-up	Mounting surface should not be exposed to fluk
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.

SKQJ、SKQK、SKEG Series

SKQU, SKQK, SKLQ Selles				
Items	Condition			
Flux built-up	Mounting surface should not be exposed to fluk			
Preheating temperature	Ambient temperature of the soldered surface of PC board. 100°C max.			
Preheating time	45s max.			
Soldering temperature	255℃ max.			
Duration of immersion	5s max.			
Number of soldering	2times max.			

Manual Soldering (Except SKRT Series)

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

SKHH、SKHW、SKRG、SKPD Series

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

SKQJ、SKQK、SKEG Series

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

Notes

- 1. Consult with us for availability of TACT Switch[™] washing.
- 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.
- 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.)