

7.8mm Square TACT Switch (Radial) SKPD Series

Details

Product No.	Type	Operating force	Operating direction	Travel	Operating life (5mA 5V DC)	Initial contact resistance	Rubber contact color	Height	Minimum packing unit (pcs.)
SKPDAFD010	Radial	2.94N	Vertical	1.75mm	100,000 cycles	1kΩ max.	Light gray	6.1mm	Refer to taping specifications

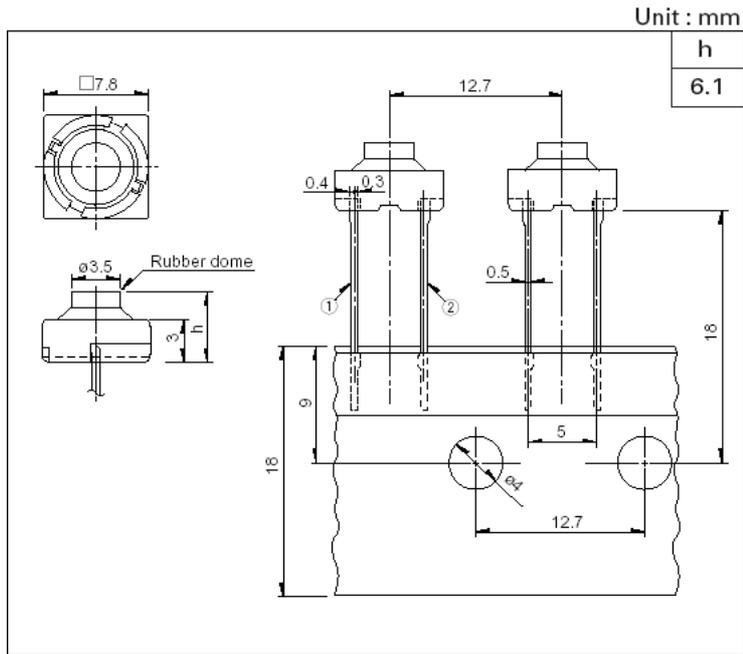
Products Specifications

Series type	Operating temperature range	Rating (max.)	Rating (min.)	Electrical performance	
				Insulation resistance	Voltage proof
Soft feeling type	-20° C to +70° C	5mA 12V DC	10μA 1V DC	50MΩmin. 100V DC	100V AC for 1min.

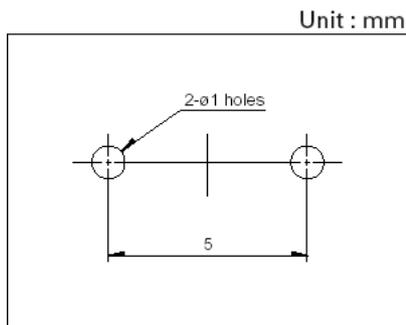
Durability	Environmental test		
Vibration	Cold	Dry heat	Damp heat
10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z and for 2 hours respectively	-30±2° C for 96h	80±2° C for 96h	60±2° C, 90 to 95%RH for 96h

1. For Surface Mount type, 1-reel is the minimum packing units. (Please see taping specifications)
 2. Order taping samples in N minimum packaging units (1-reel). Nonetheless, if you order products for technical study only, we can accept sampling order for a quantity of 200 units or less. (Simplified packaging method: It may not be possible to mount to some automatic loading machines.)
 3. Ask us for the export packaging unit.
 4. Using a 1.6mm thick PC board is recommended.
 5. This products can be used in vehicles.
- Although these products are designed to perform over a wide operating temperature range, please ensure that you receive and read the formal delivery specifications before use.

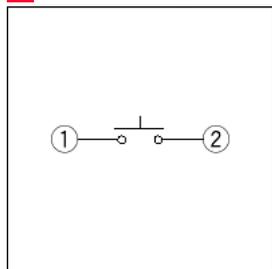
Dimensions



**PC board Mounting Hole Dimensions
(Viewed from Mounting Face)**



Circuit Diagram



Soldering Conditions

Conditions for Auto-dip

Items	Condition
Flux built-up	Mounting surface should not be coated with flux
Preheating temperature	Ambient temperature of the soldered surface of PC board. 100°C max.
Preheating time	45s max.
Soldering temperature	255°C max.
Continuous dipping time	5s max.
Number of soldering	2times max.

Manual Soldering

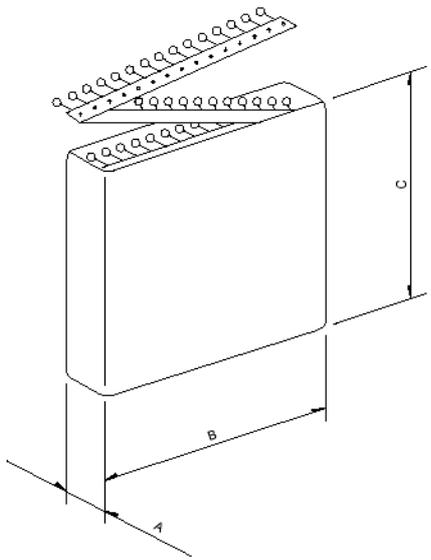
Items	Condition
Soldering temperature	350°C max.
Continuous soldering time	3s max.

CAUTION

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 at least 0.83.
(MH-820V or CF220V by TAMURA Corporation, or their equivalents.)

Taping Specifications

Taping Packaging for Auto-insertion

Box Size (mm)	Size A	Size B	Size C	Quantity Accommodated Per Box
				Storage quantity (pcs.) (Minimum packing unit)
	47	331	291	800

Caution

1. Note that terminals might suffer deformation of the switch and the defects in electrical performance, if the load is applied to the terminals during soldering.
2. If you use a through-hole PC board or a PC board thinner or thicker than the recommendation, there may be greater heat stress. Verify the soldering conditions thoroughly before use.
3. When soldering twice, wait until the first soldered portion cools to normal temperature. Continuous heating will deform the external portions, loosen or dislodge terminals, or may deteriorate their electrical characteristics.
4. Verify soldering conditions under actual mass production conditions.
5. This product is designed and manufactured assuming that it is to be used with the resistance for direct current. If you use other kinds of resistance [inductive (L) or capacitive (C)], consult with us beforehand.
6. For the sizes of holes and patterns on a PC board for mounting a switch, refer to the recommended dimensions in the outline drawings.
7. This switch is designed for manually operated units. Do not use this switch in a mechanical detection unit. For detection purposes, please use our detection switch.
8. The switch will break if you apply a greater stress than that specified. Take great care not to let the switch be subject to greater stress than specified.
9. Do not press the side of the stem.
10. Be sure to push the center position of a flat stem switch. Extreme care is required for a hinge structure type because the stem press position moves when it is pressed.
11. If you put the board with the switch in the oven so as to harden adhesive for other parts, consult with us.
12. When corrosive gas is generated by a peripheral material of a product using the TACT switch, malfunctions such as imperfect contacts can occur. Check this point thoroughly in advance.
13. The contact resistance of a rubber contact type changes depending on pressure load. Confirm that it functions sufficiently when you use this TACT switch with a voltage divider circuit.
14. Be aware of dust intrusion into an unsealed-type TACT switch.
15. Storage method
 - (1) If you do not use the product immediately, store it just as delivered in the following environment : with neither direct sunshine nor corrosive gas and in normal temperatures. However, it is recommended that you should use it as soon as possible or within six months from the date of delivery at the most.
 - (2) After you break the seal, you should put the remainder in a plastic bag to shut out outside air, and store it in the same environment mentioned above. You should use it up as soon as possible.
 - (3) Do not stack too many switches for safety.
 - (4) Store the key switches with the switch in the released position.

Measurement and Test Methods

[Rotational Torque (Operating Force)]

Measures the torque (operating force) necessary to rotate (move) the shaft (lever) . Unless otherwise specified, measurement shall be made at ambient temperature of 5 to 35° C, the shaft rotational speed shall be 60° per second, and the lever traveling speed shall be 20mm per second.

[Withstand Voltage]

Applies AC voltage to the specified spot for a minute and then checks for arc, burning, dielectric breakdown and other abnormalities. Respective terminals may be tested as a group. The sections described below shall be tested unless otherwise specified. However, if the section concerned is so constructed as to conduct, that particular part shall not be tested.

[Insulation Resistance]

Applies specified voltage to the specified locations and then measures the insulation resistance with a megger. The locations described below shall be tested unless otherwise specified. However, if the section concerned is so constructed as to conduct, that particular part shall not be tested.

[Sections to be Tested for Withstand Voltage and Insulation Resistance]

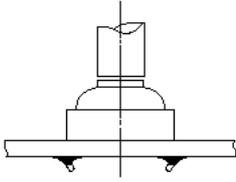
- Between terminal and shaft(lever).
- Between terminal and metal cover(frame).

[Shaft (Lever) Strength against Push/Pull Actions]

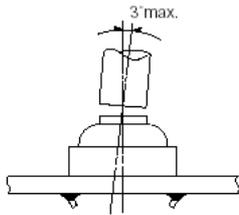
Applies a specified force in the axial direction of the shaft (lever) for 10 seconds and then checks the operating part and other sections for deformation, breakage, operating condition, etc.

■ Rubber Dome Caution

1. Design the rubber dome keying section as illustrated below.



2. Design the inclination of the rubber dome key section within the angle shown below.



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