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TACT SWITCH	

1. GENERAL

- 1.1 Application: This specification is applied to low current circuit tactile switch for electronic equipment.
- 1.2 Operating temperature range: -20~70℃, 45~85% RH
- 1.3 Storage temperature range : -30~80℃ However, 96 hours maximum for continuous storage over a range -20~-30℃ and a range 70~80℃
- 1.4 Test conditions: The standard test conditions shall be 5~35℃ in temperature, 45~85% RH and 860~1060mbar in atmospheric pressure. Should any doubt arise in judgement, test shall be conducted at 20±2℃, 65±5% RH and 860~1060mbar.

2. RATED VOLTAGE AND CURRENT.

DC 12V 50mA

3. ELECTRICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
3.1	Contact		*1 pole, 1 throw
3.1	arrangement		
3.2	Contact	Measured at DC 5V 100mA or by ohmmeter allowing a small	*As per individual
0.2	resistance	current at 1KHz with a load of twice of the actuating force.	manufactured drawing.
3.3	Insulation	DC 100V is applied between terminals and between	*greater than 100MΩ
3.3	resistance	terminals and cover for 1 minute \pm 5 seconds.	
3.4	Dielectric	AC 250V (50~60Hz) is applied between terminals and	*No insulation defect shall
3.4	strength	between terminals and cover for 1 minute.	be observed.
3.5	Bounce	Measured by lightly striking the center of the stem at	*less than 10m sec.
3.5		a rate of 3 operations/sec	

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4. MECHANICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
4.1	Actuating force	A gradually increasing load is applied to the center of the	*As per individual
4.1		stem.	manufactured drawing.
	Return force	After actuating, the load is gradually decreased until the	*160gf, 260gf:
4.2		stem returns to its free position.	greater than 50gf.
			*100gf : greater than 30gf.
	Stop strength	A static force of 3Kgf shall be applied to the direction of	*Shall be free from
4.3		the stem operation for 3 seconds.	mechanical and electrical
			abnormalities.
	Stem withdrawal	A static load of 500gf is applied to the direction of the stem	*Shall be free from
4.4	force	pulling for 3 seconds.	mechanical and electrical
			degradation.
	Solderability	Dip in the solder bath of temperature 230±2℃ for 2±	
		sec after dipping in the flux of room temperature for 5 sec	
4.5		to 10 sec.	
		The solder shall be covered on 90% min of dipping area	
		on the plating surface.	
4.6	Travel		*As per individual
4.0			manufactured drawing.
4.7	Arrangement of		*Tactile feed-back.
7.7	action		

5. DURABILITY

		PROPERTY	TEST CONDITIONS	PERFORMANCE
		Operating life	100,000 cycles operation with a load of 150% of actuating	*Contact resistance:
			force a rate of 2 cycles/sec.	200mΩ max.
	5.1		With a resistive load supplying DC 12V 50mA.	*Bounce: 20m sec max.
				*Actuating force: within
L				±30% of the initial value.

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6. WEATHER PROOF

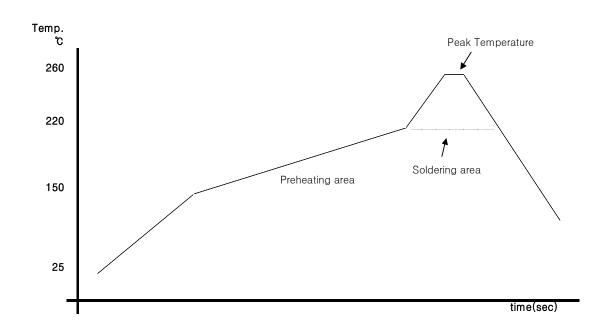
	PROPERTY	TEST CONDITIONS	PERFORMANCE
	Cold heat proof	After testing at -30℃ for 96hours, the sample is allowed	*The requirement in item
6.1		stand under normal temperature and humidity conditions	3 and 4 shall be met.
0.1			
		that. Water drops should be wiped off.	
	Dry heat proof	After testing at 85℃ for 96hours, the sample is allowed to	
6.2		stand under normal temperature for 1hour and measurement	
		is performed within 1hour after that.	
	Damp heat proof	After test at 60±2℃ and 90~95% in relative humidity for	*Insulation resistance:
		96hours, the sample is allowed to stand under normal	10MΩ min.
6.3		temperature and humidity conditions for 1hour, and	*Dielectric strength:
0.5		measurement is performed within 1hour after that.	same as item 3.4.
		Water drops should be wiped off.	*Contact resistance:
			same as item 3.2.
	Thermal cycling	4	*The requirement in item
		1 cycle	3 and 4 shall be met.
6.4		+65°C ————————————————————————————————————	
		After the test conducted under 5 cycles the sample is	
		allowed to stand under normal temperature and humidity	
		conditions for 1 hour, and the measurement is performed	
		within 1 hour.	

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7. REFLOW SOLDERING

- 7.1 Reflow soldering conditions
 - 1) Preheat ----- 150°C \sim 200°C, 120 \pm 20 (sec)
 - 2) Peak temperature --- 260°C max. 10 (sec)
 - 3) Soldering area temperature ----- 217 $^{\circ}$ C, 90 \sim 120 (sec)



< Temperature profile >

7.2 Manual soldering conditions

1) Soldering temperature : less than 350 $\!\!\!^{\,\circ}\!\!\!\!\!^{\,\circ}$

2) Soldering time: within 3 seconds.

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