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DOUBLE ACTION 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°C, 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 30V 20mA

3. ELECTRICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
2.1	Contact		*1 pole, 2 throw
3.1	arrangement		
	Contact	Measured at DC 5V 10mA or by ohmmeter allowing	*less than 200mΩ
3.2	resistance	a small current at 1KHz with a load of twice of	
		the actuating force.	
2.2	Insulation	DC 100V is applied between across terminals and between	*greater than 50MΩ
3.3	resistance	terminals and cover for 1 minute \pm 5 seconds.	
2.4	Dielectric	AC 250V (50~60Hz) is applied between across terminals	*No insulation defect shall
3.4	strength	and between terminals and cover for 1 minute.	be observed.
2.5	Bounce	Measured by lightly striking the center of the stem at a rate	*less than 10m sec
3.5		of 3 operations/sec	

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4. MECHANICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
4 1	Operating force	A gradually increasing load is applied to the center of the	*As per individual
4.1		stem.	manufactured drawing.
4.0	Travel		
4.2			
	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.
1 E	Arrangement of		*Tactile feed-back.
4.3	action		

5. DURABILITY

	PROPERTY	TEST CONDITIONS	PERFORMANCE
	Operating life	10,000 cycles operation with a maximum value of actuating	*Contact resistace :
5 1		force at a rate of 2 cycles/sec. With a resistive load	300mΩ max.
5.1		supplying DC 30V 20mA.	*Bounce:10m sec max.
			*Insulation resistance :
	Cold heat proof	After testing at -30 \pm 2°C for 96hours, the sample is allowed	10MΩ min.
5.0		to stand under normal temperature and humidity conditions	*Dielectric strength :
5.2		for 1hour and measurement is performed within 1hour after	same as item 3.4.
		that. Water drops should be wiped off.	

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5. DURABILITY

	PROPERTY	TEST CONDITIONS	PERFORMANCE
	Dry heat proof	After testing at $85\pm2^\circ$ C for 96hours, the sample is allowed	*Contact resistace :
5.2		to stand under normal temperature and humidity conditions	300mΩ max.
5.5		for 1 hour and measurement is performed within 1 hour after	*Bounce:10m sec max.
		that.	*Actuating force : within
			$\pm 30\%$ of the initial value.
	Damp heat proof	After test at $60\pm2^\circ$ and 90~95% in relative humidity for	*Insulation resistance :
		96hours, the sample is allowed to stand under normal	10MΩ min.
5.4		temperature and humidity conditions for 1hour, and	*Dielectric strength :
		measurement is performed within 1 hour after that.	same as item 3.4.
		Water drops should be wiped off.	
5.5	Thermal cycling	$\begin{array}{c} 1 \text{ cycle} \\ +65^{\circ}\text{C} \\ -10^{\circ}\text{C} \\ \hline \\ 2H \\ 2H \\ 1H \\ 2H \\ 2H \\ 2H \\ 1H \\ 2H \\ 2$	

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6. Refolw soldering

6.1 Reflow soldering conditions

Preheat --- Temperature on the copper foil surface should reach 180℃, 2±0.3 minutes after the PWB entered into the soldering heat zone.

Soldering heat --- Temperture on the copper foil surface should reach the peak temperature of 240°C within 20 seconds after PWB entered into soldering heat zone.





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