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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
0.1	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
3.2	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 5m sec.
3.3		a rate of 3 operations/sec	

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						2	×	19 200 G	DOCUMENT JT 0105-1LF
ZONE	SYMB	DATE	APPD	CHKD	DSGD		,		NO.

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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°C for 2±0.5	
		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		*0.25 +0.2 mm
4.7	Arrangement of		*Tactile feed-back.
4.7	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
			$\pm 30\%$ of the initial value.

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# 6. WEATHER PROOF

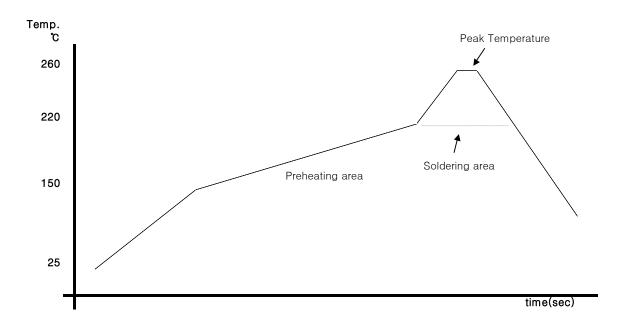
	PROPERTY	TEST CONDITIONS	PERFORMANCE
	Cold heat proof	After testing at -30℃ for 96hours, the sample is allowed to	
6 1		stand under normal temperature and humidity conditions	
6.1		for 1hour and measurement is performed within 1hour after	
	Dry heat proof	After testing at 85℃ for 96hours, the sample 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 $60\pm2^{\circ}$ and $90\sim95\%$ 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	ı 1 cycle	*The requirement in item
		<b>←</b>	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)



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# 재질증명서 (CERTIFICATION OF MATERIAL)

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일 자 DATE	2009년 5월 21일
제품명 ITEM	TACT SWITCH
제품 번호 MODEL No.	JTP-1138A6EM

상기 제품은 하기재료를 사용하고 있음을 증명합니다. (The above item is certified to use with following materials.)

No.	구성부품명 (Part name)	원재료(Material)			난연성	UL	색상	
		Material name	Treatment	Manufacturer	Nationality	(Flame cless)	(File No.)	(Color)
1	CASE	PPS		LG CHEMICAL PHILLIPS	KOREA Japan	UL94V-0	E67171(M) E54700	BROWN
2	COVER	TIN PLATE		DONG BU	KOREA			
3	STEM	PA6T		MITSUI CHEMICAL	JAPAN	UL94V-0	E125671(M)	BLACK
4	TERMINAL	BRASS	Ag plating	POONG SAN	KOREA			
5	CONTACT PLATE	PHOSPHOR BRONZE	Ag clad	POONG SAN	KOREA			
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