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SPECIFICATION

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 DC POWER JACK
 KM02009
 DATE: 2001.05.17

SPECIFICATION

1. Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric condition for making

measurements and tests are as follows:

Ambient temperature : 15° C to 35° C Relative humidity : 25% to 85%

Air pressure : 86kPa to 106kPa

If there is any doubt about the results, measurements shall be made within the follow limits:

Ambient temperature : 20±2°C Relative humidity : 60% to 70%

Air pressure : 86kPa to 106kPa

 \triangle Operating temperature : $-10^{\circ}\text{C} \sim 65^{\circ}\text{C}$

 \triangle Storage temperature : $-25^{\circ}\text{C} \sim 70^{\circ}\text{C}$

2. Mechanical characteristics

	Item	Conditions	Specification
1	Insertion force	Measurement shall be made after insertion and withdrawal using standard plug gauge 3 times.	24.5N (2.5kgf) MAX.
2	Withdrawal force	Measurement shall be made after insertion and withdrawal using standard plug gauge 3 times.	4.9~14.7N (0.5~1.5kgf)
3	Terminal strength	A static load of 4.9N (500gf) shall be applied to the tip of the terminal for 10 sec in any direction	Without cracks or excessive looseness to the terminal. Electrical and mechanical characteristics shall be satisfied.

ISSUE	DATE	WRTN	CHKD	APVD	DESCRIPTIONS
	2001.05.17	陳樹民	夏正雄	龔雲輝	
<u>^</u> ×1	2001.08.27	陳樹民	夏正雄	龔雲輝	修改溫度試驗循環圖表
<u>^</u> 2×4	2008.01.24	劉秀慧	夏正雄	郭遠峰	修改 Solderability/ Resistance to Soldering Heat
<u>∕3</u> ×1	2012.06.18	江浩霆	郭素玲	郭遠峰	Modify the item 4.4

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3. Electrical characteristics

٠.	Electrical circ	i deteriories	
	Item	Conditions	Specification
1	Rating		DC 20V 2A
2	Contact resistance	1K Hz Measured at small current (100mA MAX.)	30mΩ MAX.
3	Insulation resistance	Apply a voltage of 500V DC for 1 minute to following portions after which measurement shall be made: Between body and conductor Between conductors not to be contact Between conductors not to be contact when plug is inserted	100MΩ MIN.
4	Dielectric strength	AC 500V (50~60Hz) For 1 minute. Trip current: 2mA Between body and conductor Between conductors not to be contact Between conductors not to be contact when plug is inserted	Without damage to parts, arcing or breakdown, etc.

4. Endurance characteristics

	Item	Conditions	Specification
1	Solderability	Temperature of solder : $250^{\circ}\text{C}\pm5^{\circ}\text{C}$ Time of dip : 3 ± 0.5 seconds Length of dip : 2 ± 0.5 mm (from top of terminal)	The soldered area shall be covered a minimum of 90% of the surface being immersed.
2	Dry heat	The jack shall be stored at a temperature of $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. And then it shall be subjected to the controlled recovery conditions for 1 hour after which measurement shall be made.	There shall be no damage on appearance.
3	Cold	The jack shall be stored at a temperature of $-40^{\circ}\text{C}\pm2^{\circ}\text{C}$ for 2 hours. And then it shall be subjected to the controlled recovery conditions for 30 minutes after which measurement shall be made.	Mechanical and electrical characteristics shall be satisfied.

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	Item		(Condition		Specifications	
		Wave soldering Pr	rocess				
		D (1) T		Pb-Free A	Assembly		
		Profile Feature		Topside PCB	Padside PCB	3	
		Preheat -Temperature min -Temperature ma -Time (ts min to	X	120°C (Ts1 max)	110°C (Ts min) 150°C (Ts max) 75 sec	Electrical and mechanical characteristics shall be satisf	iec
		Peak/Classification	on	165°C	260°C ±5°C	and not show remarkable	
		Temperature Time within 5°(` of	(Tp ₁)	(Tp) 10 sec (within	failure.	
		actual Tempera			2 times every		
		(tp)) 1 ₋		time 2-3 sec)	_	
	Resistance to	Time 25°C to F temperature			3 minutes ma	x	
		Wave Soldering		erature Profile a	re as below		
		About the pla	stic p	roperties, Pleas	e refer to the d	lata sheet of plastic.	
4	Soldering Heat Test	Temperature					
	À	Тр					
		Ts max Ts min				Tp1 max TS1 max	
		10 11111					
		0				Timo	
				-	— ts —	Time	
		Topside PCB					
		Padside PCB					
		Soldering Iron Test					
		Temperature of soldering Iron: 380±10°C Soldering time: 3±1 seconds			Same as Wave soldering Proce	ess	
		zoracing time .		rtion force		24.5N (2.5kgf) MAX.	
		,		lrawal force		4.9~14.7N (0.5~1.5kgf)	

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	Item	Conditions	Specification
	Composite	The jack shall be subject to 4 continuous cycles each as shown in figure below. Then the jack shall be stored at standard atmospheric conditions for 24 hours recovery after which measurement shall be made. **Temperature shall be reduced from 25°C to-10°C within 30 min. **Humidity uncontrolled at a temperature less than 25°C	There shall be no damage on appearance. Mechanical and electrical characteristics shall be satisfied.
5	temperature / humidity cyclic test	90~96% RH 90~96% RH 65 50 40 30 20 10 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 1 Time in hours (h)	6 17 18 19 20 21 22 23 24
6	Sulfuration	The terminals of miniature jack shall be dipped into a dilute solution of 3% potassium sulfide for 1 minute.	60mΩ MAX.
7		Insertion and withdrawal shall be made with the mating plugs and jacks for 5000 cycles at a speed of 10~30 cycles/min.	Mechanical and electrical characteristics shall be satisfied.
		Insertion force	19.6N(2kgf)MAX 2~15N (0.2~1.53kgf)
		Withdrawal force	$\perp \angle \sim 15$ N (U $\angle \sim 1.53$ Kgf)

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5. Warning

Dc power jack shall be dipped, warning to inferior contact by flux and transform mold.

Resistance to flux: It shall be prevention between PCB and housing.

Transform mold: It must not add direct heat to Dc power jack

Temperature of solder : 265° C MAX. Preheat temperature : 90° C MAX. Preheat time : 2 minute MAX.

6.FACTORY NAME: KUNMING ELECTRONICS(SHENZHEN)CO.,LTD

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