

SWEETA PRODUCTS CORPORATION

SPECIFICATION

TITLE AC POWER SOCKET	SPC. NO. SWHJC-028	PAGE : 1 OF 6 DATE : 2004.02.24
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SPECIFICATION

1. Standard atmospheric condition:

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows:

Ambient temperature: 15°C to 35°C

Relative humidity : 45% to 85%

Air pressure : 86kPa to 106kPa

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

Ambient temperature: 20±2°C

Relative humidity : 60% to 70%

Air pressure : 86kPa to 106kPa

Storage Temperature Range: -20°C to 65°C

Operating Temperature Range: -10°C to 55°C

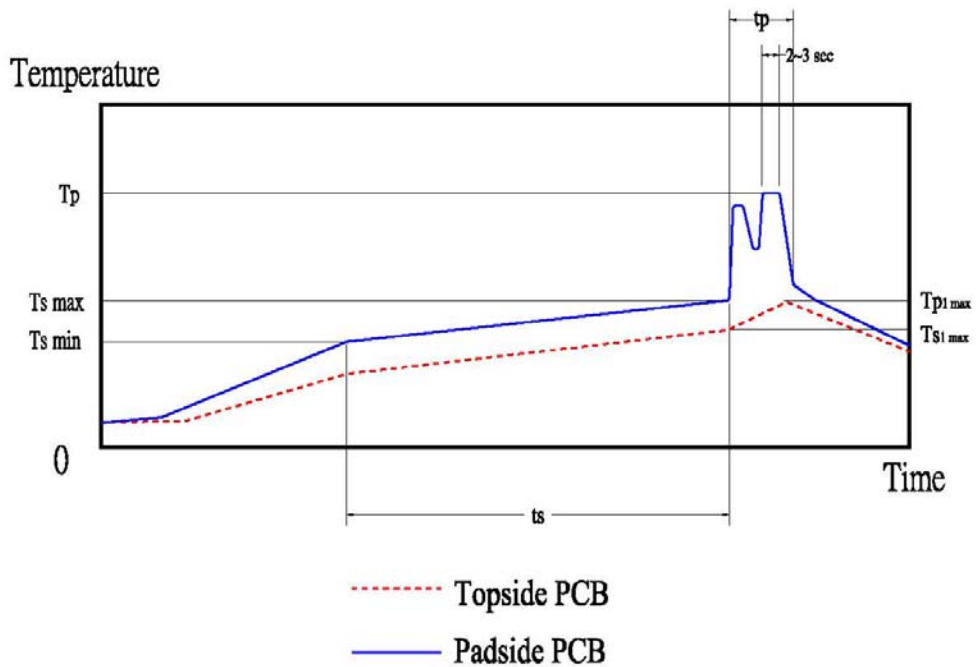
Operating temperature range is the range of ambient temperature for the component that can be operated continuously at rated voltage and rated current.

ISSUE	DATE	WRTN	CHKD	APVD	DESCRIPTIONS
	2004.02.24	STEVEN	KUNG	KUNG	
△x2	2007.12.21	JACKAL	JOHNSON	DICK	修改 Solder ability、Resistance to soldering heat
△x3	2010.09.16	PATRICK	PAUL	HELEN	Modify item 2.2。Add item 7、8。

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2. Electrical characteristics:			
	Item	Condition	Specifications
2.1	Rated voltage Rated current		A.C.250V.2.5A
2.2	Dielectric strength	\triangle Power socket shall withstand 4000V AC (50 to 60Hz). Alternating current between each pin terminal for one minute.	Without damage to parts, arcing or breakdown, etc.
2.3	Insulation resistance	A voltage of 500 V DC shall be applied for 1 minute. After which measurement shall be made.	100M Ω MIN.
2.4	Contact resistance	Measurement shall be made at 1000Hz with small current (AC 100mA max.)	20m Ω MAX.
3. Mechanical characteristics			
	Item	Condition	Specifications
3.1	Operating force	Insertion and withdrawal force shall be measured by using a gauge of standard dimensions.	4.9N \sim 58.8N (0.5Kgf \sim 6.0Kgf)
3.2	Terminal strength	A static load of 19.6N (2Kgf) shall be applied to the tip of the terminals for 5 seconds. in any direction.	Without cracks or excessive looseness to the terminal. Electrical and mechanical characteristics shall be satisfied. Without play in terminal, etc.
3.3	Strength of tapping part	The tapping part shall be capable of a torque of 98N-cm (10Kgf-cm) for 5 seconds by M3X8 tapping tight screw and panel (t=1) .	The terminal shall not break


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4. Endurance characteristics					
	Item	Condition		Specifications	
4.1	Resistance to Soldering Heat Test <div>△_i</div>	Wave soldering Process			
		Profile Feature	Pb-Free Assembly		Electrical and mechanical characteristics shall be satisfied, and not show remarkable failure.
			Topside PCB	Padside PCB	
		Preheat -Temperature min -Temperature max -Time (t _s min to max)	120℃ (T _{sl} max)	110℃ (T _s min) 150℃ (T _s max) 75 sec	
		Peak/Classification Temperature	165℃ (T _{pl} max)	260℃ ±5℃ (T _p)	
		Time within 5℃ of actual Temperature (t _p)		10 sec (within 2 times every time 2-3 sec)	
		Time 25℃ to Peak temperature		3 minutes max	
		Wave Soldering Temperature Profile are as below			
		<div><div>----- Topside PCB ——— Padside PCB</div></div>			
		Soldering Iron Test			
		Temperature of soldering Iron : 380±10℃ Soldering time : 3±1 seconds		Same as Wave soldering Process	
		Insertion force		4.9N～58.8N (0.5kgf～6.0kgf)	
		Withdrawal force		4.9N～58.8N (0.5kgf～6.0kgf)	

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	Item	Condition	Specifications
4.2	Solderability	Δ Temperature of solder : $250^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Time of dip : 3 ± 0.5 seconds Length of dip : $2 \pm 0.5\text{mm}$ (from top of terminal)	The soldered area shall be covered a minimum of 90% of the surface being immersed.
4.3	Humidity test	The socket shall be stored at a temperature of $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and a humidity of 90% ~ 95% for 96 hours, and shall then be returned and allowed to remain at room condition for a period of 30 minutes, and blew off any water drops on the surface of the socket by air.	Electrical and mechanical characteristics shall be satisfied. However damage which don't affect performance will be considered acceptable.
		Contact resistance	100m Ω MAX.
4.4	Dry heat	The socket shall be stored for 96 hours at a temperature of $70 \pm 2^{\circ}\text{C}$, and shall then be returned and allowed to remain at room condition for a period of 30 minutes, after which measurement shall be made.	Electrical and mechanical characteristics shall be satisfied. However damage which don't affect performance will be considered acceptable.
		Contact resistance	100m Ω MAX.
4.5	Cold test	The jack shall be stored for 96 hours at a temperature of $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$, and shall then be returned and allowed to remain at room condition for a period of 30 minutes, after which measurement shall be made.	Electrical and mechanical characteristics shall be satisfied. However damage which don't affect performance will be considered acceptable.
		Contact resistance	100m Ω MAX.

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	Item	Condition	Specifications
4.6	Composite temperature/humidity cyclic test	The power sockets shall be subjected to the conditions as shown in below, and then shall be returned and allowed to remain in room ambient condition for 30 minutes.	Electrical and mechanical characteristics shall be satisfied. However damage which don't affect performance will be considered acceptable.
		Contact resistance	100mΩ MAX.
		 <p style="text-align: center;">Time in hours (h) (2 CYCLES)</p>	
4.7	Operating endurance	The life test shall consist of 5000 times of insertion and withdrawal with the mate plug at a rate of 20 to 30 times per minute under no load. Testing plug with putting electric conducted grease to avoid overheating and friction.	Electrical and mechanical characteristics shall be satisfied. However damage which don't affect performance will be considered acceptable.
		Contact resistance	100mΩ MAX.

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SWHJC-028(C)

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△8. Endurance test sequence

Test group		A	B	C	D	E	F			
Test sequence		A	B	C	D	E	F			
Test Item		A	B	C	D	E	F			
2.2	Dielectric strength	1,6		1,6		1,6	1,6	1,6	1,6	1,6
2.3	Insulation resistance	2,7		2,7		2,7	2,7	2,7	2,7	2,7
2.4	Contact resistance	3,8		3,8		3	3	3	3	3
3.1	Operating force	4,9		4		4,8	4,8	4,8	4,8	4,8
3.2	Terminal strength	5								
3.3	Strength of tapping part		1							
4.1	Resistance to Soldering Heat Test			5						
4.2	Solderability				1					
4.3	Humidity test					5				
4.4	Dry heat						5			
4.5	Cold test							5		
4.6	Composite temperature / humidity cyclic test								5	
4.7	Operating endurance									5

Test sample quality : 2 pcs min. / group