

# Quality Engineering Test Report

**SERIES: S-1500-212 1500W DC-AC TRUE SINEWAVE POWER INVERTER**

**SAMPLE: S-1500-212 I/P:12VDC, O/P:220VAC 50Hz**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION:	RESULT	VERDICT																															
1	DC INPUT VOLTAGE RANGE	I/P : TESTING SPEC: 10~16VDC O/P: 1500W	9.5~16VDC	P																															
2	BATTERY LOW ALARM	I/P: TESTING SPEC: NONE O/P: 1500W	10.2VDC	P																															
3	BATTERY LOW SHUTDOWN	I/P: TESTING SPEC: NONE O/P: 1500W	9.5VDC	P																															
4	LINE REGULATION	I/P: 10~15VDC SPEC : $\pm 3\%$ O/P: 1500W	217~220VAC	P																															
5	LOAD REGULATION	I/P: 12VDC SPEC: NONE O/P: 0~1500W	220~226VAC	P																															
6	OUTPUT FREQUENCY	I/P: 12VDC SPEC: $\pm 0.05\%$ O/P: 1500W	50.0Hz	P																															
7	OUTPUT WAVEFORM	I/P: 12VDC SPEC: SINEWAVE O/P: 1500W	SINE WAVE	P																															
8	NO LOAD CURRENT DRAW	I/P: 12VDC SPEC: <1.5W SAVING O/P: 0W MODE	OK	P																															
9	OUTPUT VOLTAGE WAVEFORM THD.	I/P: 12VDC SPEC: <3% O/P: 1500W	2.76%	P																															
10	DC INPUT CURRENT	I/P: 12VDC SPEC: NONE O/P: 1500W	-----	N																															
11	EFFICIENCY	I/P: 12VDC SPEC: 86% O/P: 1500W	-----	N																															
12	OVER LOAD PROTECTION	I/P: 12VDC SPEC: NONE O/P: TESTING	1650W ALARM 1700W SHUTDOWN	P																															
13	BURN-IN TEST	I/P: 12VDC O/P:1500W TA : 24°C BURN-IN DURATION :2 hrs	NO BREAK	P																															
14	TEMPERATURE RISE TEST T rise OF PARTS	I/P : 12VDC O/P : 1500W AFTER : 2 hrs BURN-IN TA: 24°C		P																															
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">POSITION</th> <th style="width: 20%;">P/N</th> <th style="width: 20%;">TEMP</th> <th style="width: 20%;">T rise</th> </tr> </thead> <tbody> <tr> <td>C28</td> <td>O/P CAPACITOR</td> <td style="text-align: center;">45.0°C</td> <td style="text-align: center;">21.0°C</td> </tr> <tr> <td>C17</td> <td>I/P CAPACITOR</td> <td style="text-align: center;">58.7°C</td> <td style="text-align: center;">34.7°C</td> </tr> <tr> <td>Q33</td> <td>O/P TRANSISTOR</td> <td style="text-align: center;">50.1°C</td> <td style="text-align: center;">26.1°C</td> </tr> <tr> <td>Q21</td> <td>I/P TRANSISTOR</td> <td style="text-align: center;">75.0°C</td> <td style="text-align: center;">51.0°C</td> </tr> <tr> <td>T3</td> <td>TRANSFORMER</td> <td style="text-align: center;">62.4°C</td> <td style="text-align: center;">38.4°C</td> </tr> <tr> <td>L1</td> <td>O/P CHOKE</td> <td style="text-align: center;">49.5°C</td> <td style="text-align: center;">25.5°C</td> </tr> <tr> <td>D11</td> <td>BRIDGE DIODE</td> <td style="text-align: center;">53.1°C</td> <td style="text-align: center;">29.1°C</td> </tr> </tbody> </table>	POSITION	P/N	TEMP	T rise	C28	O/P CAPACITOR	45.0°C	21.0°C	C17	I/P CAPACITOR	58.7°C	34.7°C	Q33	O/P TRANSISTOR	50.1°C	26.1°C	Q21	I/P TRANSISTOR	75.0°C	51.0°C	T3	TRANSFORMER	62.4°C	38.4°C	L1	O/P CHOKE	49.5°C	25.5°C	D11	BRIDGE DIODE	53.1°C	29.1°C	
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15	LIFE CYCLE	SUPPOSE C17 IS THE MOST CRITICAL COMPONENT C17 N.C.C 2700μ/25V LXZ 105°C 2000hrs I/P : 12VDC O/P : 1500W Ta : 24°C Tc17 : 58.7°C LIFE TIME :49522hrs		P
16	CONSTRUCTION INSPECTION (FOR QC INSPECTION REFERENCE ONLY)	1. PACKING : COLOR BOX 2. MARKING : MODEL LABEL 3. TOPOLOGY : MICROCONTROLLER WITH PWM CIRCUIT 4. MECHANICAL : USER MENU		
17	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	I/P FUSE : 40A*6 TRANSFORMER : ETD-44*3 I/P CAPACITOR : N.C.C 2700μ/25V LXZ 105°C*15 O/P CAPACITOR : RUBYCON 220μ/450V MXR 105°C*3 I/P POWER MOSFET : P55NE06*18 O/P POWER MOSFET : G40N60*4 O/P DIODE : IXYS 12-10A*4 TO-220 ALARM : BUZZER FAN : SUNON 24V/8CM KD1208PTB1-6*2		
DATE	SAMPLE	NOTE	TEST	APPROVAL
2000.11.27	S1500-212	PASS	T.K.CHENG	MAX LIN