

Quality Engineering Test Report

SERIES: AD-55 55W AC-DC SINGLE OUTPUT WITH CHARGER

SAMPLE: A.AD-55A

**+V1: 13.8V / 3.5A
+V2:13.4V /0.23A**

B.AD-55B

**+V1:27.6V /1.8A
+V2:26.5V/0.16A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:88~264VAC O/P:FULL LOAD	A:63.16VAC~264VAC	P
2	LINE REGULATION	I/P:88V~264VAC SPEC: O/P:FULL LOAD A :+V1 :±0.5% +V2 :-----% B :+V1 :±0.5% +V2 :-----%	A: +V1: -0.04%~-0.04% +V2: -----%~-----% B: +V1: -0.02%~+0% +V2: -----%~-----%	P
3	LOAD REGULATION	I/P:230VAC SPEC: O/P:MIN. TO FULL LOAD A :+V1 : ±0.5% +V2 : -----% B : +V1 : ±0.5% +V2 : -----%	A: +V1: -0.043%~+0% +V2: -----%~-----% B: +V1: +0.02%~+0.02% +V2: -----%~-----%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:88~264VAC SPEC: O/P:MIN. TO FULL LOAD A :+V1 : ±1% +V2 : ----% B : +V1 : ±1% +V2 : ----%	A: +V1: -0.028%~-0.11% +V2: -----%~-----% B: +V1: -0.02%~+0.02% +V2: -----%~-----%	P
5	RIPPLE&NOISE	I/P:230VAC SPEC: O/P:FULL LOAD A :+V1 :100mV +V2 :----mV A :+V1 :100mV +V2 :----mV	A: +V1: 12mV +V2: ---mV B: +V1: 14mV +V2: ---mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC:1A O/P:FULL LOAD	A:0.607A	P
7	MAX. INRUSH CURREN	I/P:230VAC SPEC:40A O/P: FULL LOAD	A:35.57A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: O/P:MIN. LOAD A: V1:12V~14.5V B: V1:24V~29V	A: 11.634V~16.016V B: 23.98V~32.8V	P
9	SET UP TIME	I/P:230VAC SPEC:800mS O/P:FULL LOAD	A: 502.1mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:60mS O/P:FULL LOAD	A: 122.4mS	P
11	EFFICIENCY	I/P:230VAC SPEC: A:71% O/P:FULL LOAD B:74%	A:77.5% B:81%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC:105%~135% O/P:TESTING	A:119% B:122%	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<1mA N-FG--<1mA	A: L-FG:0.48mA N-FG:0.48mA	P
15	INSULATION RESISTANCE	SPEC: O/P-FG 500VDC/100M Ohms MIN. I/P-O/P 500VDC/100M Ohms MIN. I/P-FG 500VDC/100M Ohms MIN.	A: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms	P
16	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3000VAC/ 1 min. (10mA CUT-OFF) I/P - FG: 1500VAC/ 1 min. (10mA CUT-OFF) O/P - FG: 500VAC/ 1 min. (10mA CUT-OFF)	A: I/P-O/P 4.52mA I/P-FG :3.74mA O/P-FG 3.62mA	P

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT																																			
17	BATTERY LOW PROTECTION	I/P:230VAC SPEC: O/P FULL LOAD A:10~11.5V B:20~22V	A: 10.6V B: 21.7V	P																																			
18	BURN-IN TEST	I/P: 230VAC O/P100% LOAD with 17.8CFM FAN TA:26.5°C BURN-IN DURATION :1.5 hrs	A: NON BREAK	P																																			
19	ENVIRONMENT TEST	1.LOW TEMPERATURE TEST I/P:230 VAC O/P:100% LOAD AMBIENT TEMPERATURE:-9.8°C	A : AFTER 2.5 hrs POWER ON OK	P																																			
		2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:59.1°C with 17.8CFM FAN	A : AFTER 3.5 hrs NON BREAK																																				
		3.HIGH HUMIDITY HIGH VOLTAGE ON/OFF TEST I/P:264VAC O/P:FULL LOAD AMBIENT TEMPERATURE : 25°C AMBIENT HUMIDITY : 95%	A : AFTER 14 hrs POWER ON/OFF NON BREAK																																				
20	TEMPERATURE RISE TEST T rise OF PARTS	A: I/P :230VAC O/P :70%LOAD AFTER 2 hr BURN-IN TA:26.5°C with 17.8CFM FAN	<table border="1"> <thead> <tr> <th></th> <th>POSITION</th> <th>P/N</th> <th>TEMP</th> <th>T rise</th> </tr> </thead> <tbody> <tr> <td></td> <td>BD1</td> <td>BRIDGE DIODE</td> <td>30.4°C</td> <td>3.9°C</td> </tr> <tr> <td></td> <td>Q1</td> <td>MAIN TRANSISTOR</td> <td>35.4°C</td> <td>8.9°C</td> </tr> <tr> <td></td> <td>T1</td> <td>MAIN TRANSFORMER</td> <td>42.4°C</td> <td>15.9°C</td> </tr> <tr> <td></td> <td>D20</td> <td>O/P DIODE</td> <td>48.7°C</td> <td>22.2°C</td> </tr> <tr> <td></td> <td>C17</td> <td>O/P FILTER CAPACITOR</td> <td>40.4°C</td> <td>13.9°C</td> </tr> <tr> <td></td> <td>C5</td> <td>I/P FILTER CAPACITOR</td> <td>30.5°C</td> <td>4°C</td> </tr> </tbody> </table>		POSITION	P/N	TEMP	T rise		BD1	BRIDGE DIODE	30.4°C	3.9°C		Q1	MAIN TRANSISTOR	35.4°C	8.9°C		T1	MAIN TRANSFORMER	42.4°C	15.9°C		D20	O/P DIODE	48.7°C	22.2°C		C17	O/P FILTER CAPACITOR	40.4°C	13.9°C		C5	I/P FILTER CAPACITOR	30.5°C	4°C	P
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21	LIFE CYCLE	A: SUPPOSE C17 IS THE MOST CRITICAL COMPONENT with 17.8CFM FAN I/P:230VAC O/P:100% LOAD Ta:25°C Tc:38.9°C Life:547008hrs I/P:230VAC O/P:100% LOAD Ta:60°C Tc:72.4°C Life:53648hrs		P																																			
22	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	A: FUSE : F 3A/250V CHARGER 15AL/250V BRIDGE DIODE : D3SB60 LINE FILTER : TF-484-R2 EE-25 TRANSFOMER : TF-688 EER-28L POWER SWITCHER : 2SK2645 TO-3P OUTPUT DIODE : BYQ-28X-200 OUTPUT CAPACITOR : RUBYCON 470uF/25V YXG 105°C INPUT CAPACITOR : RUBYCON 150uF/400V 85°C P.C.B : ADD-55-R1																																					
DATE	SAMPLE	TEST RESULT	TEST	APPROVAL																																			
20001007	RD SAMPLE	PASS	VINCENT	Max Lin																																			
20001116	A011B25 AD55A AD55B	PASS	VINCENT	Max Lin																																			
20010706	A106B23A AD55A	PASS	VINCENT	Max Lin																																			