

Quality Engineering Test Report

SERIES: AD-155 155W AC-DC SINGLE OUTPUT WITH CHARGER

**SAMPLE: A.AD-155A +V1: 13.8V / 10.5A B.AD-155B +V1:27.6V /5A
 +V2:13.3V /0.5A
 C.AD-155C +V1:54V /2.7A
 +V2:53.5V/0.2A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:88~264VAC O/P:FULL LOAD	B:66.58VAC~264VAC	P
2	LINE REGULATION	I/P:88V~264VAC SPEC: O/P:FULL LOAD A :+V1 :±0.5% +V2 :-----% B :+V1 :±0.5% +V2 :-----% C :+V1 :±0.5% +V2 :-----%	A: +V1: 0%~0% +V2: -----%~-----% B: +V1: 0%~0% +V2: -----%~-----% C: +V1: 0.011%~0.011% +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 : -----% C :+V1 : ±0.5% +V2 : -----%	A: +V1: -0.043%~+0.043% +V2: -----%~-----% B: +V1: -0.021%~+0.00% +V2: -----%~-----% C: +V1: -0.022%~0.092% +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 : ----% C :+V1 : ±1% +V2 : ----%	A: +V1: -0.086%~+0.043% +V2: -----%~-----% B: +V1: -0.00%~0.043% +V2: -----%~-----% C: +V1: -0.126%~0.024% +V2: -----%~-----%	P
5	RIPPLE&NOISE	I/P:230VAC SPEC: O/P:FULL LOAD A :+V1 :150mV +V2 :----mV B :+V1 :150mV +V2 :----mV C :+V1 :240mV +V2 :----mV	A: +V1: 4mV +V2: ---mV B: +V1: 14mV +V2: ---mV C: +V1: 5mV +V2: ---mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC:1.5A O/P:FULL LOAD	B:0.808A	P
7	MAX. INRUSH CURREN	I/P:230VAC SPEC:40A O/P: FULL LOAD	B:17.406A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: O/P:MIN. LOAD A: V1:12V~14.5V B: V1:24V~29V C: V1:48V~58V	A: 11.566V~16.509V B: 23.18V~30.47V C: 44.6V~60.3V	P
9	SET UP TIME	I/P:230VAC SPEC:900mS O/P:FULL LOAD	B: 666.45mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:20mS O/P:FULL LOAD	B: 37.32mS	P
11	EFFICIENCY	I/P:230VAC SPEC: A:81% O/P:FULL LOAD B:84% C:84%	A:81.1% B:84.86% C:84.66%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC:105%~135%(CH1) O/P:TESTING 0.51A~0.9A(CH2)	A:118%(CH1) 0.8A (CH2) B: 120% 0.7 A C:125.9% 0.7A	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<1mA N-FG--<1mA	A: L-FG:0.39mA N-FG:0.39mA	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.	B: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms	P

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT																																			
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)	B: I/P-O/P :4.6mA I/P-FG 3.2mA O/P-FG :1.2mA	P																																			
17	BATTERY LOW PROTECTION	I/P:230VAC SPEC: O/P FULL LOAD A:9.5~10.5V B:19~20V C:38.5~39.5V	A: 10.5V B: 19.5V C: 39V	P																																			
18	BURN-IN TEST	I/P: 230VAC O/P100% LOAD with 18.6CFM FAN TA:24.6°C BURN-IN DURATION :1hr	A: NON BREAK	P																																			
19	ENVIRONMENT TEST	1.LOW TEMPERATURE TEST I/P:230 VAC O/P:100% LOAD AMBIENT TEMPERATURE:-9.6°C	A :AFTER 15 hrs POWER ON OK	P																																			
		2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:51.1°C with 18.6CFM FAN	A :AFTER 3 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 : AFTER15 hrs POWER ON/OFFNON BREAK																																				
20	TEMPERATURE RISE TEST T rise OF PARTS	A: I/P :230VAC O/P :100%LOAD AFTER 1hr BURN-IN TA:24.6°C with 18.6CFM 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>57.3°C</td> <td>32.7°C</td> </tr> <tr> <td></td> <td>Q1</td> <td>MAIN TRANSISTOR</td> <td>41.5°C</td> <td>16.9°C</td> </tr> <tr> <td></td> <td>T1</td> <td>MAIN TRANSFORMER</td> <td>58.2°C</td> <td>33.6°C</td> </tr> <tr> <td></td> <td>D40</td> <td>O/P DIODE</td> <td>85.5°C</td> <td>60.9°C</td> </tr> <tr> <td></td> <td>C44</td> <td>O/P FILTER CAPACITOR</td> <td>66.9°C</td> <td>42.3°C</td> </tr> <tr> <td></td> <td>C5</td> <td>I/P FILTER CAPACITOR</td> <td>34.2°C</td> <td>9.6°C</td> </tr> </tbody> </table>		POSITION	P/N	TEMP	T rise		BD1	BRIDGE DIODE	57.3°C	32.7°C		Q1	MAIN TRANSISTOR	41.5°C	16.9°C		T1	MAIN TRANSFORMER	58.2°C	33.6°C		D40	O/P DIODE	85.5°C	60.9°C		C44	O/P FILTER CAPACITOR	66.9°C	42.3°C		C5	I/P FILTER CAPACITOR	34.2°C	9.6°C	P
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21	LIFE CYCLE	A: SUPPOSE C44 IS THE MOST CRITICAL COMPONENT with 18.6CFM FAN I/P:230VAC O/P:100% LOAD Ta:24.6°C Tc:66.9°C Life:100008.5hrs I/P:230VAC O/P:100% LOAD Ta:51.1°C Tc:91.9°C Life:19649.8hrs		P																																			
22	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	A: FUSE : 3A/250V CHARGER 15A/250V BRIDGE DIODE : KBJ608G LINE FILTER : LF201 TRANSFOMER : TF-695 POWER SWITCHER : 2SK2039 OUTPUT DIODE : D9202 OUTPUT CAPACITOR : RUBYCON 1000uF/25V YXG 105°C INPUT CAPACITOR : HITACHI 150uF/400V HP3 85°C P.C.B : ADD-155																																					

DATE	SAMPLE	TEST RESULT	TEST	APPROVAL
20001229	RD SAMPLE	PASS	VINCENT	Max Lin
20000130	PRDUCTION SAMPLE A101B30 AD155A AD155B AD155C	PASS	SAM	Max Lin
20010409	PRDUCTION SAMPLE A104C25A AD155A AD155B AD155C	PASS	VINCENT	Max Lin
20010630	PRDUCTION SAMPLE A106B04 AD155A	PASS	VINCENT	Max Lin
20010727	PRDUCTION SAMPLE A107C27 AD155A	PASS	VINCENT	Max Lin
20010901	PRDUCTION SAMPLE A108C01 AD155A	PASS	VINCENT	Max Lin
20011102	PRDUCTION SAMPLE A110C04A AD155B	PASS	VINCENT	Max Lin