

# Quality Engineering Test Report

**SERIES: D-30      30W AC-DC DUAL OUTPUT   SWITCHING POWER SUPPLY**  
**SAMPLE: A.D-30A +V1: 5V / 4A                      B.D-30B +V1: 5V / 2.2A**  
**+V2:12V / 1A    +V2:24V / 1A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING      SPEC:170~264VAC O/P:FULL LOAD	A:108VAC~267VAC	P
2	LINE REGULATION	I/P:170~264VAC      SPEC: O/P:FULL LOAD      A :+V1 :±0.5% +V2 :±1% B :+V1 :±0.5% +V2 :±4%	A: +V1: 0%~0% +V2: -0.1%~+0.42% B: +V1: -0.12%~0% +V2: -0.10%~+0.33%	P
3	LOAD REGULATION	I/P:230VAC      SPEC: O/P:MIN. TO FULL LOAD      A :+V1 : ±0.5% +V2 : ±1% B :+V1 : ±0.5% +V2 : ±1%	A: +V1: -0.24%~+0.24% +V2: -0.69%~+1.17% B: +V1: -0.24%~+0.24% +V2: +0.28%~+0.906%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:230VAC      SPEC: O/P:MIN. TO FULL LOAD      A :+V1 : ±2% +V2 : -7%~+3% B :+V1 : ±2% +V2 : -5%~+3%	A: +V1: -0.5%~+0.12% +V2: -6.4%~+0.516% B: +V1: -0.5%~+0.14% +V2: -0.58%~+4.73%	P
5	RIPPLE&NOISE	I/P:230VAC      SPEC: O/P:FULL LOAD      A :+V1 :50mV +V2 :100mV B :+V1 :50mV +V2 :100mV	A: +V1: 17mV +V2: 13mV B: +V1: 15mV +V2: 20mV	P
6	AC INPUT CURRENT	I/P:230VAC      SPEC:0.45A O/P:FULL LOAD	A:0.39A	P
7	MAX. INRUSH CURREN	I/P:230VAC      SPEC:36A O/P: FULL LOAD	A:22A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC      SPEC: O/P:MIN. LOAD      A: -5%~+10% B: -5%~+10%	A: 4.52V~5.86V B: 4.51V~5.81V	P
9	SET UP TIME	I/P:230VAC      SPEC:200mS O/P:FULL LOAD	A: 18mS	P
10	HOLD UP TIME	I/P:230VAC      SPEC:30mS O/P:FULL LOAD	A: 55mS	P
11	EFFICIENCY	I/P:230VAC      SPEC:A:72% O/P:FULL LOAD      B:74%	A:72.97% B:76.05%	P
12	OVER LOAD PROTECTION	I/P:230VAC      SPEC:105%~150% O/P:TESTING	A:131.5% B:136%	P
13	GROUND LEAKAGE CURRENT	I/P:240VAC      SPEC: L-FG--<0.5mA N-FG--<0.5mA	A: L-FG:0.54mA N-FG:0.48mA	P
14	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
15	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 1.5KVAC/ 1 min. (10mA CUT-OFF) I/P - FG: 1.5KVAC/ 1 min. (10mA CUT-OFF) O/P - FG: 0.5KVAC/ 1 min. (10mA CUT-OFF)	A: I/P-O/P :1.88mA I/P-FG :2.08mA O/P-FG :1.76mA	P

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16	BURN-IN TEST	I/P: 230VAC O/P:FULL LOAD TA:27.8°C BURN-IN DURATION : 1.5 hrs	A:NON BREAK	P																							
17	ENVIRONMENT TEST	HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:41.7°C	A:AFTER 12.5 hrs NON BREAK	P																							
18	TEMPERATURE RISE TEST T rise OF PARTS	A: I/P :230VAC O/P :FULL LOAD TA:27.8°C AFTER 1.5 hr BURN-IN <table border="1"> <thead> <tr> <th>POSITION</th> <th>P/N</th> <th>TEMP</th> <th>T rise</th> </tr> </thead> <tbody> <tr> <td>BD1</td> <td>BRIDGE DIODE</td> <td>67.5°C</td> <td>39.7°C</td> </tr> <tr> <td>Q1</td> <td>MAIN TRANSISTOR</td> <td>59.2°C</td> <td>31.4°C</td> </tr> <tr> <td>T1</td> <td>MAIN TRANSFORMER WIRE</td> <td>81.8°C</td> <td>54°C</td> </tr> <tr> <td>D6</td> <td>O/P DIODE</td> <td>81.4°C</td> <td>53.6°C</td> </tr> <tr> <td>C15</td> <td>O/P FILTER CAPACITOR</td> <td>82.6°C</td> <td>54.8°C</td> </tr> </tbody> </table>	POSITION	P/N	TEMP	T rise	BD1	BRIDGE DIODE	67.5°C	39.7°C	Q1	MAIN TRANSISTOR	59.2°C	31.4°C	T1	MAIN TRANSFORMER WIRE	81.8°C	54°C	D6	O/P DIODE	81.4°C	53.6°C	C15	O/P FILTER CAPACITOR	82.6°C	54.8°C	P
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19	LIFE CYCLE	A: SUPPOSE C15 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°C Tc15:79.8°C Life:11471.6 hrs I/P:230VAC O/P:FULL LOAD Ta:45°C Tc15:96.3°C Life: 3655 hrs		P																							
20	CRITICAL COMPONENT RECORD ( FOR QC INSPECTION REFERENCE ONLY )	A: FUSE :3AL/250V BRIDGE DIODE :LTKBP208G LINE FILTER :3104C TRANSFOMER :TF071N EER-28L POWER SWITCHER :2SC3679 TO-3P OUTPUT DIODE :CTB-24L TO-220 OUTPUT CAPACITOR :1000uF/16V (V) 105°C VENT INPUT CAPACITOR :JAMICON 100uF/200V 85°C P.C.B :T.D-30 CEM-1 1 OZ SS																									
DATE	SAMPLE	TEST RESULT		TEST	APPROVAL																						
980528	D-30	PASS		H.C.LIOU	Max Lin																						