

Quality Engineering Test Report

SERIES: SD-150D 150W AC&DC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A. SD-150D-12 12V / 12.5A

B. SD-150D-24 24V / 6.3A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	DC INPUT VOLTAGE RANGE	I/P : TESTING SPEC : 85~132VAC (72VDC~144VDC) O/P : FULL LOAD	B: 53V~132VAC	P
2	LINE REGULATION	I/P : 85~132VAC SPEC : A:±0.5% O/P : FULL LOAD B:±0.3%	A: -0.05%~-0.05% B: -0.02%~+0 %	P
3	LOAD REGULATION	I/P : 115VAC SPEC : A:±0.5% O/P : MIN. TO FULL LOAD B:±0.3%	A: -0.15%~+0.15% B: :-0.02%~+0.07%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P : 85~132VAC SPEC : A:±1% O/P : MIN. TO FULL LOAD B:±1%	A: -0.56%~-0.05% B: :-0.08%~+0.03%	P
5	RIPPLE&NOISE	I/P : 115VAC SPEC : A:120mVp-p O/P : FULL LOAD B:150mVp-p	A: 32mV B: 20mV	P
6	DC INPUT CURRENT	I/P : 96VDC SPEC : 2.1A O/P : FULL LOAD	B: :1.8A	P
7	MAX. INRUSH CURRENT	I/P : 96VDC SPEC : 25A O/P : FULL LOAD	B: 22.87A	F NOTE1
8	O/P VOLTAGE ADJ. RANGE	I/P : 115VAC SPEC : A:11~16V O/P : MIN. LOAD B:23~30V	A: 9.10~16.28V B: 21.74~32.75V	P
9	SET UP TIME	I/P : 115VAC SPEC : 2S O/P : FULL LOAD	B: 771mS	P
10	HOLD UP TIME	I/P : 115VAC SPEC : 20mS O/P : FULL LOAD	B: 32mS	P
11	EFFICIENCY	I/P : 115VAC SPEC : A:79% O/P : FULL LOAD B:82%	A: 80.28% B: 82.95%	P
12	OVER LOAD PROTECTION	I/P : 115VAC SPEC : 105%~135% O/P : TESTING	A: 125% B: 128%	P
13	OVER VOLTAGE PROTECTION	I/P : 115VAC SPEC : A:16.8V~20V O/P : 10% LOAD B:31.5V~37.5V	A: 18.31V B: 35.17V	P
14	INSULATION RESISTANCE	SPEC : I/P-O/P : 500VDC/100M Ohms MIN. I/P-FG : 500VDC/100M Ohms MIN. O/P-FG : 500VDC/100M Ohms MIN.	B: I/P-O/P : >100M Ohms I/P-FG : >100M Ohms O/P-FG : >100M Ohms	P
15	DIELECTRIC / WITHSTAND VOLTAGE	SPEC : I/P-O/P : 1500VAC/ 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 : <4.56mA I/P-FG : <7.74mA O/P-FG : <3.85mA	P
16	BURN-IN TEST	I/P : 96VDC O/P:FULL LOAD TA : 24°C BURN-IN DURATION :8hrs	B:NON BREAK	P
17	ENVIRONMENT TEST	HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P : 96VDC O/P : FULL LOAD AMBIENT TEMPERATURE : 43.2°C	AFTER 15 hrs NON BREAK	P

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18	TEMPERATURE RISE TEST T rise OF PARTS	B: I/P : 96VDC AFTER 8 hrs BURN-IN O/P : FULL LOAD TA : 24°C <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>POSITION</th> <th>P/N</th> <th>TEMP</th> <th>T rise</th> </tr> </thead> <tbody> <tr> <td>Q6</td> <td>MAIN TRANSISTOR</td> <td>82.8°C</td> <td>58.8°C</td> </tr> <tr> <td>T1</td> <td>MAIN TRANSFORMER COIL</td> <td>80.0°C</td> <td>56.0°C</td> </tr> <tr> <td>D11</td> <td>O/P DIODE</td> <td>77.2°C</td> <td>53.2°C</td> </tr> <tr> <td>C33</td> <td>O/P FILTER CAPACITOR</td> <td>56.2°C</td> <td>32.2°C</td> </tr> <tr> <td>L1</td> <td>O/P CHOCK</td> <td>83.3°C</td> <td>59.3°C</td> </tr> <tr> <td>C5</td> <td>I/P FILTER CAPACITOR</td> <td>63.5°C</td> <td>39.5°C</td> </tr> <tr> <td>LF1</td> <td>LINE FILTER TRANSFORMER</td> <td>68.8°C</td> <td>44.8°C</td> </tr> <tr> <td>BD</td> <td>BRIDGE DIODE</td> <td>94.5°C</td> <td>70.5°C</td> </tr> </tbody> </table>	POSITION	P/N	TEMP	T rise	Q6	MAIN TRANSISTOR	82.8°C	58.8°C	T1	MAIN TRANSFORMER COIL	80.0°C	56.0°C	D11	O/P DIODE	77.2°C	53.2°C	C33	O/P FILTER CAPACITOR	56.2°C	32.2°C	L1	O/P CHOCK	83.3°C	59.3°C	C5	I/P FILTER CAPACITOR	63.5°C	39.5°C	LF1	LINE FILTER TRANSFORMER	68.8°C	44.8°C	BD	BRIDGE DIODE	94.5°C	70.5°C		P
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19	LIFE CYCLE	B: SUPPOSE C33 IS THE MOST CRITICAL COMPONENT I/P : 96VDC O/P : FULL LOAD Ta : 25°C Tc33 : 57.2°C Life:67181 hrs I/P : 96VDC O/P : FULL LOAD Ta : 40°C Tc33 : 68.8°C Life:30064 hrs		P																																				
20	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	B: FUSE : 4AL/250V G INPUT DIODE : LT PUB606 LINE FILTER : TF264 EE-35 TRANSFORMER : TF 299-R2 ETD-34 POWER SWITCHER : IRFP460 TO-3P OUTPUT DIODE : ESAD9202 TO-3P OUTPUT CAPACITOR : JAMICON 330uF/50V 105°C WG INPUT CAPACITOR : RUBYCON 330uF/200V NEG 85°C P.C.B : SD-150-R1 FR-4 2 OZ DS																																						
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980707	SD-150D	NOTE1:DC INRUSH CURRENT OVER SPEC(20A) 實測22.87A	H.C.LIOU																																					