Quality Engineering Test Report

SERIES: LPS-100 100.8 WATTS SIGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A.LPS-100-3.3 3.3V / 20A D.LPS-100-12 12V /8.4A G.LPS-100-24 24V / 4.2A
B.LPS-100-5 5V / 20A E.LPS-100-13.5 13.5V /7.5 A H.LPS-100-27 27V / 3.8A
C.LPS-100-7.5 7.5V / 13.3A F.LPS-100-15 15V / 6.7A I. LPS-100-48 48V / 2.1A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:88~132V 176~264V O/P:FULL LOAD	A : 129V~267VAC	P
2	LINE REGULATION	I/P:176~264VAC SPEC: O/P:FULL LOAD A: ±0.5% B: ±0.5% C: ±0.5% D: ±0.5% E: ±0.5% F: ±0.5% G: ±0.5% H: ±0.5% I : ±0.5%	A: +0.00% ~ +0.00% B: +0.00% ~ +0.00% C: -0.08% ~ +0.00% D: +0.00% ~ +0.00% E: +0.09% ~ -0.06% F: -0.00% ~ +0.04% G: -0.05% ~ +0.03% H: -0.04% ~ +0.11% I : -0.02% ~ +0.06%	P
3	LOAD REGULATION	I/P:230VAC SPEC: O/P:0% LOAD TO FULL LOAD A: ±2% B: ±2% C: ±1.5% D: ±1.5% E: ±1.5% F: ±1.5% G: ±0.5% H: ±0.5% I : ±0.5%	A: -0.18% ~ +0.18% B: -0.35% ~ +0.25% C: -0.33% ~ +0.41% D: -0.10% ~ +0.10% E: -0.04% ~ +0.04% F: -0.12% ~ +0.21% G: -0.03% ~ +0.15% H: -0.15% ~ +0.15% I : -0.06% ~ +0.11%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:176~264VAC SPEC: O/P: 20% LOAD TO FULL LOAD A: ±3% B: ±3% C: ±2% D: ±2% E: ±2% F: ±2% G: ±1% H: ±1% I : ±1%	A: +0.00% ~ +0.36% B: -0.76% ~ +0.00% C: -0.59% ~ +0.08% D: -0.10% ~ +0.05% E: +0.00% ~ -0.13% F: -0.33% ~ +0.00% G: -0.13% ~ +0.10% H: -0.02% ~ +0.39% I : -0.19% ~ +0.03%	P
5	RIPPLE&NOISE	I/P:230VAC SPEC: O/P: FULL LOAD A:150mV B:100mV C:100mV D:100mV E:100mV F:100mV G:150mV H:150mV I :200mV	A: 26mV B: 73mV C: 43mV D: 28mV E: 21mV F: 37mV G: 28mV H: 22mV I : 23mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC: 1.5A O/P:FULL LOAD	D:1.1A	P
7	MAX. INRUSH CURRENT	I/P:230VAC SPEC: 60A O/P:FULL LOAD	D:38A	P

NEXT

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: -5%~+10% O/P:MIN. LOAD A:3.0V~3.6V B:4.5V~5.7V C:6V~9V D:10V~13.2V E:12V~15V F:13.5V~18V G:20V~26.4V H:26V~32V I:41V~56V	A:2.76V~4.04V B:4.44V~6.25V C:5.92V~9.28V D:9.10V~13.70V E:11.36V~16.12V F:12.81V~17.00V G:20.2V~27.6V H:24.4V~32.6V I :37.5V~59.4V	P
9	SET UP TIME	I/P:230VAC SPEC:800ms O/P:FULL LOAD	D : 580mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:20mS O/P:FULL LOAD	D : 47mS	P
11	EFFICIENCY	I/P:230VAC SPEC: O/P: FULL LOAD A:69% B:77% C:77% D:79% E:79% F:80% G:80% H:81% I :81%	A: 71.91% B: 77.64% C: 78.99% D: 79.40% E: 80.22% F: 81.03% G: 83.37% H: 82.70% I : 81.87%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC:105%~140% O/P:TESTING	A: 120% B: 120% C: 112.52% D: 128% E: 125% F: 113.96% G: 119.28% H: 128% I : 123.8%	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC SPEC: 110%~135% O/P: TESTING A:3.8~4.45V B:5.75~6.75V C:9.4V~10.9 D:13.8V~16.2V E:15.5V~18.2V F:18V~21V G:27.6V~32.4V H:33.7V~39.2V I:57.6V~67.2V	A: 4.17V B: 6.30V C: 9.29V D: 15.14V E: 17.31V F: 17.01V G: 28.2V H: 38.0V I : 59.5V	p
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<1mA N-FG--<1mA	D: L-FG:0.75mA N-FG:0.60mA	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.	D: 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 sec (10mA CUT-OFF) I/P - FG: 1500VAC/ 1 sec (10mA CUT-OFF) O/P - FG : 500VAC/1sec (10mA CUT-OFF)	D: I/P-O/P :4.84mA I/P-FG :3.79mA O/P- FG :8.76mA	P
17	BURN-IN TEST	I/P: 230VAC O/P:FULL LOAD TA:27.2°C BURN-IN DURATION : 2.0 hrs	D: NON BREAK	P

PREVIOUS NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td rowspan="3">18</td><td rowspan="3">ENVIRONMENT TEST</td><td>1.LOW TEMPERATURE TEST
I/P:230 VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:-9.9°C</td><td>D :
AFTER 2 hrs
POWER ON OK</td><td rowspan="3">P</td></tr>
<tr><td>2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:42.8°C</td><td>D :
AFTER 18 hrs
NON BREAK</td></tr>
<tr><td>3.ACCELERATED LIFE TEST
I/P:264VAC O/P:FULL LOAD
POWER ON :10 sec POWER OFF :10 sec
AMBIENT TEMPERATURE:25°C
AMBIENT HUMIDITY:95%</td><td>D :
AFTER 13 hrs
NON BREAK</td></tr>
<tr><td>19</td><td>TEMPERATURE RISE TEST T rise OF PARTS</td><td colspan="2">D: I/P :230VAC AFTER 2.0 hrs BURN-IN
O/P :FULL LOAD TA:27.2°C
<table>
<tr><th></th><th>POSITION</th><th>P/N</th><th>TEMP</th><th>T rise</th></tr>
<tr><td></td><td>BD1</td><td>BRIDGE DIODE</td><td>71.3°C</td><td>44.1°C</td></tr>
<tr><td></td><td>Q1</td><td>MAIN TRANSISTOR</td><td>88.3°C</td><td>61.1°C</td></tr>
<tr><td></td><td>T1CORE</td><td>MAIN TRANSFORMER</td><td>74.1°C</td><td>46.9°C</td></tr>
<tr><td></td><td>D11</td><td>O/P DIODE</td><td>86.3°C</td><td>59.1°C</td></tr>
<tr><td></td><td>C42</td><td>O/P FILTER CAPACITOR</td><td>59.6°C</td><td>32.4°C</td></tr>
<tr><td></td><td>L1</td><td>O/P CHOCK</td><td>71.9°C</td><td>44.7°C</td></tr>
<tr><td></td><td>T1COIL</td><td>MAIN TRANSFORMER</td><td>69.4°C</td><td>42.2°C</td></tr>
<tr><td></td><td>C6</td><td>I/P FILTER CAPACITOR</td><td>60.8°C</td><td>33.6°C</td></tr>
<tr><td></td><td>LF1</td><td>I/P FILTER COIL</td><td>50.7°C</td><td>23.5°C</td></tr>
</table></td><td>P</td></tr>
<tr><td>20</td><td>LIFE CYCLE</td><td colspan="2">D : SUPPOSE C42 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULL LOAD Ta:25°C Tc42:57.4°C Life:199510 hrs
I/P:230VAC O/P:FULL LOAD Ta:45°C Tc42:69.1°C Life:89301 hrs</td><td>P</td></tr>
<tr><td>21</td><td>CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">D :
FUSE :4A/250VAC GFE
BRIDGE DIODE :D3SB60
LINE FILTER :TF-485 ET-28H
TRANSFOMER :TF-454-1 EER-28L
POWER SWITCHER :2SK2850 TO-3P
OUTPUT DIODE :S20LC20
OUTPUT CAPACITOR :RUBYCON 2200uF/16V 105°C, LXJ
INPUT CAPACITOR :RUBYCON 330uF/250V,CE,85°C
P.C.B :LPS-100-R1 ,CEM-3 , 2 OZ SS</td></tr>
<tr><th>DATE</th><th>SAMPLE</th><th colspan="2">TEST RESULT</th><th>TEST</th><th>APPROVAL</th></tr>
<tr><td>19980312</td><td>PRODUCTION SAMPLE</td><td colspan="2">PASS</td><td>H.C.LIOU</td><td>Max Lin</td></tr>
<tr><td>19981209</td><td>9812A03A (5V,27V)</td><td colspan="2">PASS</td><td>H.C.LIOU</td><td>Max Lin</td></tr>
<tr><td>19981222</td><td>9812B02B (48V)</td><td colspan="2">PASS</td><td>H.C.LIOU</td><td>Max Lin</td></tr>
<tr><td>19990111</td><td>9901A17A (3.3V)</td><td colspan="2">PASS</td><td>H.C.LIOU</td><td>Max Lin</td></tr>
<tr><td></td><td>A0009C03</td><td colspan="2"></td><td></td><td></td></tr>
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20000930	(3.3V)	PASS	VINCENT	Max Lin
20001021	A0010B05 (12V,13.5V,27V)	PASS	VINCENT	Max Lin

PREVIOUS