

# Quality Engineering Test Report

**SERIES:PS-120 118.7WATTS SIGLE OUTPUT SWITCHING POWER SUPPLY**

**SAMPLE: PS-120-13.8 13.8V /7.2A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:176~264VAC O/P:FULL LOAD	120V~267VAC	P
2	LINE REGULATION	I/P:176~264VAC SPEC: O/P:FULL LOAD ±1%	-0.13 % ~ +0.00 %	P
3	LOAD REGULATION	I/P:230VAC SPEC: O/P:0% TO FULL LOAD ±1%±6%	-0.41% ~ +0.45 %	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:176~264VAC SPEC: O/P:0% TO FULL LOAD ±1%	+0.63% ~ +0.67 %	P
5	RIPPLE & NOISE	I/P:230VAC SPEC: O/P: FULL LOAD 150mV	120mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC: 1.5A O/P:FULL LOAD	1.24A	P
7	MAX. INRUSH CURRENT	I/P:230VAC SPEC: 60A O/P:FULL LOAD	36.7A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC:CH1:12~15V O/P:MIN. LOAD	11.4V~16.17V	P
9	SET UP TIME	I/P:230VAC SPEC:1000mS O/P:FULL LOAD	:299mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:16mS O/P:FULL LOAD	41.5mS	P
11	EFFICIENCY	I/P:230VAC SPEC: O/P:FULL LOAD 80%	82.6%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC:CONSTANT CURRENT O/P:TESTING 105%~135%	122%	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC SPEC: 110%~135% O/P:TESTING	117%	P
14	OVER TEMPERATURE PROTECTION & FAN ON/OFF TEST	I/P:230VAC SPEC: SERIES O/P:FULL LOAD OTP >= 80°C±10°C	OTP : 77°C	P
15	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<1mA N-FG--<1mA	L-FG:0.80mA N-FG:0.60mA	P
16	GROUNDING CONTINUITY	SPEC: FG--CHASSIS<0.10hms/2min	17mOhms	P
17	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100MOhms MIN. I/P-FG: 500VDC/100MOhms MIN. O/P-FG: 500VDC/100MOhms MIN.	O/P-FG >100MOhms I/P-O/P >100MOhms I/P-FG >100MOhms	P
18	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3KVAC/ 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)	I/P-O/P :5.54mA I/P-FG :4.2mA O/P-FG :2.2mA	P

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19	INDICATOR	LED: 0%LOAD<GREEN<25%LOAD 25%LOAD<ORGANGE<50%LOAD 50%LOAD<RED	GREEN 0~28% LOAD ORGANGE 28%~54% LOAD RED 54%~100% LOAD	P																																																								
20	BURN-IN TEST	I/P: 230VAC O/P: FULL LOAD TA:26.9°C BURN-IN DURATION : 2 hrs	NON BREAK	P																																																								
21	ENVIRONMENT TEST	1.LOW TEMPERATURE TEST I/P:230 VAC O/P:FULL LOAD AMBIENT TEMPERATURE:-10.0°C	AFTER 1.5 hrs POWER ON OK	P																																																								
		2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:52.2°C	AFTER 61 hrs NON BREAK																																																									
		3.High Humidity, High Voltage After On/Off Test I/P:272VAC O/P:FULL LOAD AMBIENT TEMPERATURE:25°C AMBIENT HUMIDITY:95%	AFTER 6 hrs POWER ON OK																																																									
22	TEMPERATURE RISE TEST Trise OF PARTS	I/P :230VAC O/P :FULL LOAD Ta:26.9°C AFTER 2hr BURN-IN WITH 18CFM	<table border="1"> <thead> <tr> <th>POSITION</th> <th>P/N</th> <th>TEMP</th> <th>Trise</th> </tr> </thead> <tbody> <tr> <td>BD1</td> <td>BRIDGE DIODE</td> <td>52.5°C</td> <td>25.6°C</td> </tr> <tr> <td>Q1</td> <td>MAIN TRANSISTOR</td> <td>76.5°C</td> <td>49.6°C</td> </tr> <tr> <td>T1</td> <td>MAIN TRANSFORMER COIL</td> <td>44.9°C</td> <td>18.0°C</td> </tr> <tr> <td>T1</td> <td>MAIN TRANSFORMER CORE</td> <td>45.7°C</td> <td>18.8°C</td> </tr> <tr> <td>C8</td> <td>O/P FILTER CAPACITOR</td> <td>32.2°C</td> <td>5.3°C</td> </tr> <tr> <td>LF1</td> <td>LINE FILTER TRANSFORMER</td> <td>42.8°C</td> <td>15.6°C</td> </tr> <tr> <td>D3</td> <td>O/P DIODE</td> <td>73.1°C</td> <td>46.2°C</td> </tr> <tr> <td>L1</td> <td>O/P CHOKE</td> <td>41.9°C</td> <td>15.0°C</td> </tr> <tr> <td>D2</td> <td>CLAMP DIODE</td> <td>61.0°C</td> <td>34.1°C</td> </tr> <tr> <td>RG1</td> <td>REGULATOR</td> <td>39.8°C</td> <td>12.9°C</td> </tr> <tr> <td>RT2</td> <td>RT</td> <td>34.2°C</td> <td>7.3°C</td> </tr> <tr> <td>R17</td> <td>R</td> <td>60.3°C</td> <td>33.4°C</td> </tr> <tr> <td>D1</td> <td>DIODE</td> <td>58.8°C</td> <td>31.9°C</td> </tr> </tbody> </table>	POSITION	P/N	TEMP	Trise	BD1	BRIDGE DIODE	52.5°C	25.6°C	Q1	MAIN TRANSISTOR	76.5°C	49.6°C	T1	MAIN TRANSFORMER COIL	44.9°C	18.0°C	T1	MAIN TRANSFORMER CORE	45.7°C	18.8°C	C8	O/P FILTER CAPACITOR	32.2°C	5.3°C	LF1	LINE FILTER TRANSFORMER	42.8°C	15.6°C	D3	O/P DIODE	73.1°C	46.2°C	L1	O/P CHOKE	41.9°C	15.0°C	D2	CLAMP DIODE	61.0°C	34.1°C	RG1	REGULATOR	39.8°C	12.9°C	RT2	RT	34.2°C	7.3°C	R17	R	60.3°C	33.4°C	D1	DIODE	58.8°C	31.9°C	P
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23	LIFE CYCLE	SUPPOSE C8 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°C Tc8:32.2°C Life: 940272 hrs I/P:230VAC O/P:FULL LOAD Ta:45°C Tc8:79.1°C Life: 36426 hrs		P																																																								
24	CRITICAL COMPONENT RECORD ( FOR QC INSPECTION REFERENCE ONLY )	FUSE :F5A/250V UL BRIDGE DIODE :LT KJ406G LINE FILTER :TF479 TRANSFOMER :TF583 POWER SWITCHER :2SK727 TO-3P OUTPUT DIODE :D9202 OUTPUT CAPACITOR :ELNA 1000uF/25V R/JH 105°C INPUT CAPACITOR :日立330uF/250V HP-3 85°C P.C.B SC-120 1OZS																																																										
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