

# Quality Engineering Test Report

**SERIES: S-25      25W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY**

**SAMPLE: A. S-25-5      5V / 5A**  
**B. S-25-12      12V / 2.1A**  
**C. S-25-15      15V / 1.7A**  
**D. S-25-24      24V /1.1A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING      SPEC:85~264VAC O/P:FULL LOAD	A : 53VAC~267VAC	P
2	LINE REGULATION	I/P:85~264VAC      SPEC: A: ±0.5% B: ±0.5% C: ±0.5% D: ±0.5% O/P:FULL LOAD	A: 0%~ 0% B: 0%~ 0% C: 0%~ 0% D: 0%~ 0%	P
3	LOAD REGULATION	I/P:230VAC      SPEC: A: ±1% B: ±0.5% C: ±0.5% D: ±0.5% O/P:MIN. TO FULL LOAD	A: -0.24%~ +0.24% B: -0.05%~ +0.10% C: -0.08%~ 0% D: -0.02%~ +0.02%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC      SPEC: A: ±2% B: ±1% C: ±1% D: ±1% O/P:0% TO FULL LOAD	A: -0.38%~ +0.12% B: -0.15%~ +0.06% C: -0.13%~ +0.04% D: -0.03%~ +0.08%	P
5	RIPPLE&NOISE	I/P:230VAC      SPEC: A: 50mV B: 100mV C: 100mV D: 100mV O/P:FULL LOAD	A:23mV B:10mV C:12mV D:20mV	P
6	AC INPUT CURRENT	I/P:230VAC      SPEC: 0.35A O/P:FULL LOAD	A : 0.33A	P
7	MAX. INRUSH CURREN	I/P:230VAC      SPEC: 30A O/P: FULL LOAD	A : 27A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC      SPEC: A: -5%~+10% B: ±10% C: ±10% D: ±10% O/P:MIN. LOAD	A:4.53V~5.81V B:9.78V~14.73V C:12.48V~17.52V D:18.55V~27.20V	P
9	SET UP TIME	I/P:230VAC      SPEC:300mS O/P:FULL LOAD	A: 223mS	P
10	HOLD UP TIME	I/P:230VAC      SPEC:80mS O/P:FULL LOAD	A: 95.8mS	P
11	EFFICIENCY	I/P:115VAC      SPEC: A:72% B:76% C:77% D:80% O/P:FULL LOAD	A:73.45% B:78.33% C:78.59% D:80.73%	P
12	OVER LOAD PROTECTION	I/P:230VAC      SPEC: 105%~150% O/P:TESTING	A:137% B:145% C:140.5% D:132%	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC      SPEC: 115%~135% O/P:TESTING	A:123.6% B:123% C:123.6% D:118.6%	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC      SPEC: L-FG--<0.75mA N-FG--<0.75mA	A: L-FG:0.42mA N-FG:0.42mA	P
15	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.	A: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms	P

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16	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3.0KVAC/ 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 :2.43mA I/P-FG :2.46mA O/P-FG :2.56mA	P																													
17	EMS TEST	EFT TEST: EN50082-1 IEC1000-4-4	D: CRITERIA A OK	P																													
		SURGE TEST: EN50082-1 IEC1000-4-5	D: CRITERIA A OK	P																													
18	BURN-IN TEST	I/P: 230VAC O/P: FULL LOAD TA:23°C BURN-IN DURATION : 1 hr	A : NON BREAK	P																													
19	ENVIRONMENT TEST	HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:42.5°C	A: AFTER 5hrs NON BREAK	P																													
20	TEMPERATURE RISE TEST T rise OF PARTS	A: I/P :230VAC AFTER 1 hr BURN-IN O/P :FULL LOAD TA:23°C		P																													
		<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>56.6°C</td> <td>33.6°C</td> </tr> <tr> <td>Q1</td> <td>MAIN TRANSISTOR</td> <td>61.6°C</td> <td>38.6°C</td> </tr> <tr> <td>T1</td> <td>MAIN TRANSFORMER WIRE</td> <td>72.4°C</td> <td>49.4°C</td> </tr> <tr> <td>D4</td> <td>O/P DIODE</td> <td>89.2°C</td> <td>66.2°C</td> </tr> <tr> <td>C21</td> <td>O/P FILTER CAPACITOR</td> <td>79°C</td> <td>56°C</td> </tr> <tr> <td>LF1</td> <td>LINE FILTER TRANSFORMER</td> <td>49°C</td> <td>26°C</td> </tr> <tr> <td>C5</td> <td>I/P FILTER CAPACITOR</td> <td>56.8°C</td> <td>33.8°C</td> </tr> </tbody> </table>	POSITION		P/N	TEMP	T rise	BD1	BRIDGE DIODE	56.6°C	33.6°C	Q1	MAIN TRANSISTOR	61.6°C	38.6°C	T1	MAIN TRANSFORMER WIRE	72.4°C	49.4°C	D4	O/P DIODE	89.2°C	66.2°C	C21	O/P FILTER CAPACITOR	79°C	56°C	LF1	LINE FILTER TRANSFORMER	49°C	26°C	C5	I/P FILTER CAPACITOR
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21	LIFE CYCLE	A: SUPPOSE C21 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°C Tc21:81°C Life: 26026 hrs I/P:230VAC O/P:FULL LOAD Ta:45°C Tc21:100.9°C Life: 6552 hrs		P																													
22	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	A: FUSE : 3AL/250V BRIDGE DIODE : LTKBP208G LINE FILTER : TF-207-R3 TRANSFORMER : TF-228-1-R1 EER-28 POWER SWITCHER : 2SK1118 TO-220F OUTPUT DIODE : CTB-24L TO-220 OUTPUT CAPACITOR : ELNA 2200uF/10V 105°C RJH INPUT CAPACITOR : HITACHI 68uF/400V 85°C HP3 P.C.B : S-25N-R5 CEM-1 2 OZ SS																															
DATE	SAMPLE	TEST RESULT		TEST	APPROVAL																												
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