

MODEL : SD-350D-48

### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 200 mVp-p (Max)	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	V1 : 11 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 43 V- 53 V	I/P: 96 VDC O/P:MIN LOAD Ta:25°C	41.48V- 55.75 V	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 1 %~ -1 % (Max)	I/P:96 VDC / 144 VDC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.03 %~ -0.03 %	P
4	LINE REGULATION	V1: 0.2 %~ -0.2 % (Max)	I/P:96 VDC / 144 VDC O/P:FULL LOAD Ta:25°C	V1: 0.02 %~ -0.02 %	P
5	LOAD REGULATION	V1: 1 %~ -1 % (Max)	I/P: 96 VDC O/P:FULL -MIN LOAD Ta:25°C	V1: 0.03 %~ -0.03 %	P
6	SET UP TIME	300 ms (Max)	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	57 ms	P
7	RISE TIME	50 ms (Max)	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	28 ms	P
8	OVER/UNDERSHOOT TEST	< ±5%	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
9	DYNAMIC LOAD	V1: 4800 mVp-p	I/P: 96 VDC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	199 mVp-p	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	72VDC - 144 VDC	I/P: TESTING O/P: FULL LOAD Ta: 25°C	51 V ~ 144 V	P
			I/P: LOW-LINE-0.2V= 71.8 V HIGH-LINE+5%= 151.2 V O/P: FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN ( AC POWER ON/OFF NO DAMAGE )	TEST: OK	
2	EFFICIENCY	89% (TYP)	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	89.4 %	P
3	INPUT CURRENT	4.2A (TYP)	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	I = 4.1 A	P
4	INRUSH CURRENT	45 A (TYP) COLD START	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	I = 32 A	P

### PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 % ~ 135 %	I/P: 96 VDC O/P: TESTING Ta: 25°C	120 % Shunt down Re-power ON	P
2	OVER VOLTAGE PROTECTION	CH1: 53V ~ 65 V	I/P: 96 VDC O/P: MIN LOAD Ta: 25°C	62.2 V Shunt down Re- power ON	P
3	OVER TEMPERATURE PROTECTION	SPEC: 75 ± 5 °C O.T.P. NO DAMAGE	I/P: 96 VDC O/P: FULL LOAD	O.T.P. Active Shut down o/p voltage , recovers automatically after temperature goes down	P
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	NO DAMAGE Shunt down Re-power ON	P

### CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	FAN SPEED CONTROL	-----	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	Fan Voltage= 11.98 V	P



### SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 1.5 KVAC/min I/P-FG: 1.5 KVAC/min O/P-FG: 0.5 KVAC/min	I/P-O/P: 1.8 KVAC/min I/P-FG: 1.8 KVAC/min O/P-FG: 0.6 KVAC/min Ta:25°C	I/P-O/P: 4.34 mA I/P-FG: 4.64 mA O/P-FG: 6.28 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P: 1G Ω I/P-FG: 1G Ω O/P-FG: 1G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	10 mΩ	P
4	APPROVAL	TUV: Certificate NO : UL: File NO :			N/A

### E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RADIATION	EN55022 CLASS B	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab	P
2	E.S.D	EN61000-4-2 INDUSTRY AIR:8KV / Contact:4KV	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	CRITERIA A	P
3	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	CRITERIA A	P
4	Test by certified Lab & Test Report Prepare				

### M.T.B.F & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C 111 IS THE MOST CRITICAL COMPONENT I/P: 96VDC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 1245380 HRS I/P: 96VDC O/P:FULL LOAD Ta= 50 °C LIFE TIME= 298656 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 209.4K HRS			P
3	DMTBF/Accelerated Life Test	Demonstration Mean Time Between Failure : Above 20,000 hours @ TA 50°C			P



**COMPONENT STRESS TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) <b>Peak Voltage</b>	Q 1 Rated IRFP460A: 500V 20A	I/P:High-Line +3V = 147 VDC O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 283 V (2) 330 V (3) 323 V	P
2	Diode Peak <b>Voltage</b>	D 100 Rated PA095C6 : 600 V 20 A	I/P:High-Line +3V = 147 VDC O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 362 V (2) 420 V (3) 386 V	P
3	<b>Input Capacitor Voltage</b>	C7 Rated : 470 u / 200 V / 85°C	I/P:High-Line +3V = 147 VDC O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 147 V (2) 147 V (3) 149 V	P
4	<b>Control IC Voltage Test</b>	U 1 Rated SG3525 : 35 V	I/P:High-Line +3V = 147 VDC O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 14.1 V (2) 14.1 V (3) 14.1 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2004/6/7	RD SMAPLE	PASS	VINCENT TSENG	MAX LIN
2004/8/20	PRODUCT SMAPLE A407A23	PASS	VINCENT TSENG	MAX LIN
2004/11/25	PRODUCT SMAPLE W0411A25	PASS	VINCENT TSENG	MAX LIN

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