



MODEL : SD-200B-48

## OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 200 mVp-p (Max)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	V1: 4 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 43V- 53 V	I/P: 24 VDC O/P:MIN LOAD Ta:25°C	41.66 V- 55.88 V	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 1 %- -1 % (Max)	I/P:24VDC / 36 VDC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.05 %- -0.05 %	P
4	LINE REGULATION	V1: 0.5 %- -0.5 % (Max)	I/P:24 VDC / 36 VDC O/P:FULL LOAD Ta:25°C	V1: 0.02 %- -0.02 %	P
5	LOAD REGULATION	V1: 1 %- -1 % (Max)	I/P: 24 VDC O/P:FULL -MIN LOAD Ta:25°C	V1: 0.03 %- -0.03 %	P
6	SET UP TIME	300 ms (Max)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	57 ms	P
7	RISE TIME	50 ms (Max)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	31 ms	P
8	OVER/UNDERSHOOT TEST	< ±5%	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
9	DYNAMIC LOAD	V1: 4800 mVp-p	I/P: 24 VDC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	118 mVp-p	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	19VDC- 36 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	15 V- 36 V	P
			I/P: LOW-LINE-0.2V= 18.8 V HIGH-LINE+5%= 37.8 V O/P:FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN ( AC POWER ON/OFF NO DAMAGE )	TEST: OK	
2	EFFICIENCY	86 % (TYP)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	86.4 %	P
3	INPUT CURRENT	10.4 A (TYP)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	I = 9.6 A	P

### PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 %- 135 %	I/P: 24 VDC O/P:TESTING Ta:25°C	121% Shunt down Re-power ON	P
2	OVER VOLTAGE PROTECTION	CH1: 53V- 65V	I/P: 24 VDC O/P:MIN LOAD Ta:25°C	63.3 V Shunt down Re- power ON	P
3	OVER TEMPERATURE PROTECTION	SPEC: 95± 5 °C O.T.P. NO DAMAGE	I/P: 24 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: 24 VDC O/P: FULL LOAD Ta:25°C	NO DAMAGE Shunt down Re-power ON	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: 3.08 mA I/P-FG: 3.15 mA O/P-FG: 5.64 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: 4G Ω I/P-FG: 4G Ω O/P-FG: 3G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	11 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: 24 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: 24 VDC O/P:FULL LOAD Ta:25°C	CRITERIA A	P
3	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 24 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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C111 IS THE MOST CRITICAL COMPONENT I/P: 24 VDC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 215197 HRS I/P: 24 VDC O/P:FULL LOAD Ta= 50 °C LIFE TIME= 46456 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 218.2K HRS			P

**COMPONENT STRESS TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor ( D to S) or (C to E) <b>Peak Voltage</b>	Q 1 Rated PSMM009 100W : 100V 100A	I/P:High-Line +3V =39 VDC O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 77.6 V (2) 95.6 V (3) 38.4 V	P
2	Diode <b>Peak Voltage</b>	D 100 Rated PA095C6 : 600 V 20 A	I/P:High-Line +3V = 39 VDC O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 470 V (2) 466 V (3) 0 V	P
3	<b>Input Capacitor Voltage</b>	C 5 Rated : 3300 u / 50 V / 105°C	I/P:High-Line +3V = 39 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) 39.2 V (2) 40.6 V (3) 39.6 V	P
4	<b>Control IC Voltage Test</b>	U 1 Rated SG3525 : 35 V	I/P:High-Line +3V = 39 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 V (2) 14.3 V (3) 14.3V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2004/6/7	RD SMAPLE	PASS	VINCENT TSENG	MAX LIN
2004/8/20	PRODUCT SMAPLE A407A22	PASS	VINCENT TSENG	MAX LIN
2004/10/27	PRODUCT SMAPLE W0410A17	PASS	VINCENT TSENG	MAX LIN
2004/11/25	PRODUCT SMAPLE W0411A24	PASS	VINCENT TSENG	MAX LIN

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