

MODEL : SD-200B-5

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 100 mVp-p (Max)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	V1: 18 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 4.5 V~ 5.5 V	I/P: 24 VDC O/P:MIN LOAD Ta:25°C	4.2V~ 5.68 V	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 2 %~ -2 % (Max)	I/P:24VDC / 36 VDC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.5 %~ -0.5 %	P
4	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max)	I/P:24 VDC / 36 VDC O/P:FULL LOAD Ta:25°C	V1: 0.12 %~ -0.12 %	P
5	LOAD REGULATION	V1: 1 %~ -1 % (Max)	I/P: 24 VDC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.4 %~ -0.4 %	P
6	SET UP TIME	300 ms (Max)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	44 ms	P
7	RISE TIME	50 ms (Max)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	18 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: 1000 mVp-p	I/P: 24 VDC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	311 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	16 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	79 % (TYP)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	79.4 %	P
3	INPUT CURRENT	10.8 A (TYP)	I/P: 24 VDC O/P:FULL LOAD Ta:25°C	I = 9.1 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	120 % Shunt down Re-power ON	P
2	OVER VOLTAGE PROTECTION	CH1: 5.75 V- 6.75 V	I/P: 24 VDC O/P:MIN LOAD Ta:25°C	6.4 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: 4.84 mA I/P-FG: 5.02 mA O/P-FG: 7.56 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100M Ω I/P-FG: 500VDC>100M Ω O/P-FG:500VDC>100M Ω	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P: 9 G Ω I/P-FG: 9 G Ω O/P-FG: 6 G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 m Ω	40 A / 2min Ta:25°C	11 m Ω	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 C 111 IS THE MOST CRITICAL COMPONENT I/P: 24VDC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 185353 HRS I/P: 24VDC O/P:FULL LOAD Ta= 50 °C LIFE TIME= 40912 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) Peak Voltage	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) 64.8 V (2) 96.8 V (3) 40 V	P
2	Diode Peak Voltage	D 100 Rated MBR6045 : 45 V 60 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) 40.2 V (2) 43 V (3) 0 V	P
3	Input Capacitor Voltage	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) 40.2 V (2) 41 V (3) 40 V	P
4	Control IC Voltage Test	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) 14.1 V (2) 14.3 V (3) 14.3 V	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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