

**MODEL : RS-100-3.3**

**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 80 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1: 31 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 3.2 V~ 3.5 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	2.98V~ 3.55 V/ 230VAC 2.98V~ 3.55 V/ 115VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -3 %~ 3 % (Max)	I/P: 100 VAC / 264 VAC O/P:FULL/ 0 % LOAD Ta:25°C	V1: 0.3 %~ -0.3 %	P
4	LINE REGULATION	V1: -0.5 %~ 0.5 % (Max)	I/P: 100 VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: 0 %~ 0 %	P
5	LOAD REGULATION	V1: -2 %~ 2 % (Max)	I/P:230 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.2%~ -0.2 %	P
6	SET UP TIME	230 VAC /500 ms (Max) 115 VAC/1200 ms (Max)	I/P:230 VAC I/P:115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 165 ms 115VAC/ 303 ms	P
7	RISE TIME	230 VAC/20 ms (Max) 115 VAC/30 ms (Max)	I/P:230 VAC I/P:115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 1 ms 115VAC/ 1 ms	P
8	HOLD UP TIME	230 VAC/ 50 ms (TYP) 115 VAC/ 10 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 91 ms 115VAC/ 16 ms	P
9	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
10	DYNAMIC LOAD	V1: 660 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	292 mVp-p	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	88VAC~ 264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	66 V~ 264 V	P
			I/P: LOW-LINE-3V= 85 V HIGH-LINE+15%= 300 V O/P:FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN ( AC POWER ON/OFF NO DAMAGE )	TEST: OK	
2	INPUT FREQUENCY RANGE	47 HZ ~ 63 HZ NO DAMAGE OSC	I/P: 88 VAC ~ 264 VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	74 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	74.5%	P
4	INPUT CURRENT	230 V/ 1.5 A(TYP) 115 V/ 2.5 A(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.9 A/ 230 VAC I = 1.4 A/ 115 VAC	P
5	INRUSH CURRENT	230 V/ 40 A(TYP) COLD START	I/P:230 VAC O/P:FULL LOAD Ta:25°C	I = 28 A/ 230 VAC	P
6	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P:254 VAC O/P:Min LOAD Ta:25°C	L-FG: 1.1 mA N-FG: 1.1 mA	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 %~ 150 %	I/P: 230 VAC I/P: 115 VAC O/P: TESTING Ta:25°C	117 %/ 230 VAC 120 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 4.45 V~ 3.8 V	I/P: 230 VAC I/P: 115 VAC O/P: MIN LOAD Ta:25°C	3.87 V/ 230 VAC 3.87 V/ 115 VAC Hiccup Model	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P: Full LOAD Ta:25°C	NO DAMAGE Hiccup Mode	P



**SAFETY TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3 KVAC/min I/P-FG: 1.5 KVAC/min O/P-FG: 0.5 KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 1.8 KVAC/min O/P-FG: 0.6 KVAC/min Ta:25°C	I/P-O/P: 4.54 mA I/P-FG: 4.18 mA O/P-FG: 2.03 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: 1 G Ω I/P-FG: 2 G Ω O/P-FG: 2 G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	6 mΩ	P
4	APPROVAL	TUV: Certificate NO : R50045826 UL: File NO : E183223			P

**E.M.C TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab	P
4	E.S.D	EN61000-4-2 INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				



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

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C 64 IS THE MOST CRITICAL COMPONENT I/P: 230 VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 124134 HRS I/P: 230 VAC O/P:FULL LOAD Ta= 40 °C LIFE TIME= 60728 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 260.8K 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>	Q1 Rated 2SK2082 : 800V 9 A	I/P:High-Line +3V =267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 580 V (2) 642 V (3) 680 V	P
2	Diode <b>Peak Voltage</b>	D61 Rated D83-004 : 40 V 30 A	I/P:High-Line +3V =267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 28.8 V (2) 27.8 V (3) 28.8 V	P
3	Clamp Diode <b>Peak Voltage</b>	D1 Rated HER208 :1K V 2 A	I/P:High-Line +3V =267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 558 V (2) 564 V	P
4	<b>Input Capacitor Voltage</b>	C5 Rated RUBYCON : 150u /400 V	I/P:High-Line +3V =267 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 364 V (2) 370 V (3) 370 V	P
5	<b>Control IC Voltage Test</b>	U1 Rated 1203 : 16 V	I/P:High-Line +3V =267 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 12.7 V (2) 12.7 V (3) 12.7 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2004/1/19	RD SMAPLE	PASS	VICENT TSENG	MAX LIN
2004/7/7	PRODUCT SAMPLE A404B33	PASS	VICENT TSENG	MAX LIN
2004/8/16	PRODUCT SAMPLE A407C27	PASS	VICENT TSENG	MAX LIN

2003/12/12 A50-F023