

## MODEL : RS-35-3.3

### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 80 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1: 16 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 2.9 V~ 3.6 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	2.74V~ 3.95 V/ 230VAC 2.74V~ 3.95 V/ 115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 3 %~ -3 % (Max)	I/P: 88 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.2 %~ -0.2 %	P
4	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max)	I/P: 88VAC ~ 264VAC O/P:FULL LOAD Ta:25°C	V1: 0 %~ 0 %	P
5	LOAD REGULATION	V1: 2 %~ -2 % (Max)	I/P: 230VAC O/P:FULL -MIN LOAD Ta:25°C	V1: 0.2 %~ -0.2 %	P
6	SET UP TIME	230VAC/ 500 ms (Max) 115VAC/ 1200 ms (Max)	I/P: 230VAC I/P: 230VAC O/P:FULL LOAD Ta:25°C	230VAC/ 365 ms 115VAC/ 365 ms	P
7	RISE TIME	230VAC/ 50ms (Max) 115VAC/ 50ms (Max)	I/P: 230VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 2 ms 115VAC/ 2 ms	P
8	HOLD UP TIME	230VAC/ 80 ms (TYP) 115VAC/ 15 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 135 ms 115VAC/ 26 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	354 mVp-p	P

## INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	88VAC~264VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	58V~ 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: 88VAC ~ 264VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	76.5 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	77.72 %	P
4	INPUT CURRENT	230V/ 0.55 A(TYP) 115V/ 0.8 A(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.34 A/ 230 VAC I = 0.51 A/ 115 VAC	P
5	INRUSH CURRENT	230V/ 36 A (TYP) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	I = 35 A/ 230 VAC	P
6	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25°C	L-FG: 0.26 mA N-FG: 0.26 mA	P
7	No load power consumption	<0.5W	I/P: 230VAC O/P:NO LOAD Ta:25°C	0.278W	P

## PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 %~ 150 %	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25°C	123 %/ 230 VAC 125 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1:3.8 V~ 4.45 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	4.09 V/ 230 VAC 4.09 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

### ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL : RS-35-5 1. ROOM AMBIENT BURN-IN : 1 HRS I/P: 230 VAC O/P: FULL LOAD Ta= 30.4 °C 2. HIGH AMBIENT BURN-IN : 14 HRS I/P: 230 VAC O/P: FULL LOAD Ta= 43.1 °C			P
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR ( MIN )	I/P: 230 VAC O/P: 142 % LOAD Ta:25°C	TEST : OK	P
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230 VAC O/P: 100% LOAD Ta= -25 °C	TEST : OK	P
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C NO DAMAGE	I/P: 272 VAC O/P:FULL LOAD Ta= 50 °C HUMIDITY= 95 %R.H	TEST : OK	P
5	TEMPERATURE COEFFICIENT	± 0.03 % (0-50°C)	I/P:230 VAC O/P:FULL LOAD	± 0.01 % (0-50°C)	P
6	VIBRATION TEST	1 Set Operating at I/P: 230 VAC NO LOAD (1) Waveform: Sine Wave (2) Frequency:10-500Hz (3) Sweep Time:10min/sweep cycle (4) Acceleration:5G (5) Test Time:1 hour in each axis (X.Y.Z) (6) Ta:25°C		TEST : OK	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: 2.57 mA I/P-FG: 2.23 mA O/P-FG: 1.59 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: 820MΩ I/P-FG: 2.5GΩ O/P-FG: 2.6 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	8 mΩ	P
4	APPROVAL	TUV: Certificate NO : R50046884 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 & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C 56 IS THE MOST CRITICAL COMPONENT I/P: 230 VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 96985 HRS I/P: 230 VAC O/P:FULL LOAD Ta= 45 °C LIFE TIME= 28062 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 249K 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 K2545 : 600 V 6 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) 494 V (2) 498 V (3) 466 V	P
2	Diode <b>Peak Voltage</b>	D 55 Rated MBR1545CT : 45V 15 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) 21.2 V (2) 25.7 V (3) 20.7 V	P
3	Clamp Diode <b>Peak Voltage</b>	D1 Rated HER306 : 600 V 3 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 494 V (2) 494 V	P
4	<b>Input Capacitor Voltage</b>	C 5 Rated : 82 u 400 V 105 °C	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) 382 V (2) 376 V (3) 378 V	P
5	<b>Control IC Voltage Test</b>	U 1 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) 12.8 V (2) 12.8 V (3) 12.8 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2004/4/29	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2004/8/2	PRODUCT SAMPLE A405B06	PASS	VINCENT TSENG	MAX LIN
2005/12/26	PRODUCT SAMPLE W0512B12	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023