

MODEL : RT-65C

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 80 mVp-p (Max) V2: 120 mVp-p (Max) V3: 80 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1: 10 mVp-p (Max) V2: 8 mVp-p (Max) V3: 2 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 4.75 V-5.5 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	-11.1%V-14.8%V/230VC -11.1%V-14.8%V/115VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -2 %~ +2 % (Max) V2: -4 %~ +8 % (Max) V3: -5 %~ +5 % (Max)	I/P:115 VAC / 264 VAC O/P:FULL LOAD Ta:25°C	V1: -0.26 %~ 0 % V2: -0.69 %~ -2.63 % V3: -0.12 %~ -0.05 % V4: %~ %	P
4	LINE REGULATION	V1: -0.5 %~ +0.5 % (Max) V2: -1.5 %~ +1.5 % (Max) V3: -0.5 %~ +0.5 % (Max)	I/P: 115 VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: -0.12 %~ -0.12 % V2: -0.04 %~ -0.76 % V3: 0 %~ 0 %	P
5	LOAD REGULATION	V1: -1 %~ +1 % (Max) V2: -3 %~ +3 % (Max) V3: -1 %~ +1 % (Max)	I/P: 230 VAC O/P:FULL -MIN LOAD Ta:25°C	V1: -0.12 %~ -0.12 % V2: -0.36 %~ -0.52 % V3: 0 %~ -0.04 %	P
6	CROSS REGULATION	V1: -1 %~ +1 % (Max) V2: -3 %~ +3 % (Max) V3: -1 %~ +1 % (Max)	I/P: 230 VAC O/P: Testing O/P 60%LOAD Other O/P 40%LOAD Change Ta:25°C	V1: 0 %~ 0 % V2: -1.13 %~ -1.33 % V3: 0 %~ 0.04 %	P
7	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	230 VAC/ 51.39 ms 115 VAC/ 49.85 ms	P
8	RISE TIME	230VAC/ 20ms (Max) 115VAC/ 30 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 6.59 ms 115 VAC/ 6.58 ms	P
9	HOLD UP TIME	230 VAC/ 50 ms (TYP) 115 VAC/ 12 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 92.71 ms 115 VAC/ 17.22 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: 2.5 %	P
11	DYNAMIC LOAD	V1: 1000 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	178 mVp-p	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	88VAC~264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	59.56 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: 100 VAC ~ 264 VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	78 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	78.57 %	P
4	INPUT CURRENT	230 V/ 1.2 A (TYP) 115 V/ 2 A(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.79 A/ 230 VAC I = 1.29 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 = 23.03 A/ 230 VAC	P
6	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25°C	L-FG: 0.44 mA N-FG: 0.4 mA	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	136.22%/230VAC 138.54%/ 115VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 5.75 V~ 6.75 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	6.40 V/ 230 VAC 6.36 V/ 115 VAC Hiccup Model	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 267 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: 3.0 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 mA I/P-FG: 3.42 mA O/P-FG: 2.31 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: 8.96 G Ω I/P-FG: 6.78 G Ω O/P-FG: 10.2 G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	15 mΩ	P
4	APPROVAL	TUV: Certificate NO : R50045775 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: 230VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 65268 HRS I/P: 230VAC O/P:FULL LOAD Ta= 40 °C LIFE TIME= 31752 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 254.6K 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 2SK2545 : 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) 512 V (2) 574 V (3) 550 V	P
2	Diode <b>Peak Voltage</b>	D55 Rated SBL3040PT : 40 V 30 A  D50 Rated BYQ28X-200 : 200V 10A  D56 Rated HER303 : 200V 3A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 33.6 V (2) 37.6 V (3) 33 V  (1) 77.2 V (2) 76.8 V (3) 74 V  (1) 105 V (2) 119 V (3) 117 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) 566 V (2) 566 V	P
4	<b>Input Capacitor Voltage</b>	C 5 Rated : 150 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) 394 V (2) 372V (3) 372V	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) 12.8V (3) 10.3V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2003/10/01	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023