

MODEL : RPT-75C

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: 230VAC O/P:FULL LOAD Ta:25°C	V1: 15 mVp-p (Max) V2: 22 mVp-p (Max) V3: 17 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	4.63V~ 5.89 V / 230VAC 4.63V~ 5.89 V / 115VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 2 %~ -2 % (Max) V2: 8 %~ -8 % (Max) V3: 5 %~ -5 % (Max)	I/P: 100 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.12 %~ -0.12 % V2: 3 %~ -3 % V3: 0.05 %~ -0.05 %	P
4	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max) V2: 1 %~ -1 % (Max) V3: 1 %~ -1 % (Max)	I/P: 100 VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: 0.12 %~ -0.12 % V2: 0.21 %~ -0.21 % V3: 0 %~ 0 %	P
5	LOAD REGULATION	V1: 1.5 %~ -1.5 % (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: 0.6 %~ -0.6 % V3: 0.04 %~ -0.04 %	P
6	CROSS REGULATION	V1: 1.5 %~ -1.5 % (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: 2.5 %~ -2.5 % V3: 0.04 %~ -0.04 %	P
7	SET UP TIME	230VAC: 500 ms (Max) 115 VAC: 500 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 147 ms 115VAC/ 110 ms	P
8	RISE TIME	230VAC: 30 ms (Max) 115VAC: 30 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 6 ms 115VAC/ 6 ms	P
9	HOLD UP TIME	230VAC: 90 ms (TYP) 115VAC: 20 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 98.8 ms 115VAC/ 21.3 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
11	DYNAMIC LOAD	V1: 1000 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	195 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	90VAC~264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	52V~264V	P
			I/P: LOW-LINE-3V= 87V 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	47HZ ~63 HZ NO DAMAGE OSC	I/P: 90VAC ~ 264 VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	77% (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	76.7 %	P
4	INPUT CURRENT	230V/ 1 A (TYP) 115V/ 1.5 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.85 A/ 230 VAC I = 1.43 A/ 115 VAC	P
5	INRUSH CURRENT	230V/ 50 A (TYP) 115V/ 25 A(TYP) COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 35 A/ 230 VAC I = 18 A/ 115 VAC	P
6	LEAKAGE CURRENT	< 150 uA/ 264 VAC for earth leakage current	I/P: 264 VAC O/P:Min LOAD Ta:25°C	L-FG: 119 uA N-FG: 119 uA	P
		< 100 uA/264 VAC for touch leakage current	I/P: 264 VAC O/P:Min LOAD Ta:25°C	L-V+ : 84 uA L-V-: 84 uA N-V+: 84 uA N-V-: 84 uA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	140 %~ 180 %	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25°C	164 %/ 230 VAC 161 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 5.75V~ 6.75V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	6.4V/ 230 VAC 6.4V/ 115 VAC Shunt down Re- power ON	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	SPECICATION	TEST CONDITION	RESULT	VERDICT																																																																																										
1	TEMPERATURE RISE TEST	MODEL : RPT-75A WITH FAN 1. ROOM AMBIENT BURN-IN : 1HRS I/P: 230VAC O/P: FULL LOAD Ta=31.3℃ 2. HIGH AMBIENT BURN-IN : 1.5HRS I/P: 230VAC O/P: FULL LOAD Ta=52.5℃ <table><tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta=31.3 ℃</th><th>HIGH AMBIENT Ta=52.5 ℃</th></tr><tr><td>1</td><td>BD1</td><td>US4K80 4A/800V SHI</td><td>50.6℃</td><td>70.3℃</td></tr><tr><td>2</td><td>LF2</td><td>TR-719</td><td>52.8℃</td><td>70.7℃</td></tr><tr><td>3</td><td>C6</td><td>100U/400V NCC 105℃</td><td>38.6℃</td><td>59.9℃</td></tr><tr><td>4</td><td>C36</td><td>47U/50V RUB 105℃ YXF</td><td>42.8℃</td><td>64.0℃</td></tr><tr><td>5</td><td>T1COIL</td><td>TF-1524 JSI</td><td>66.6℃</td><td>89.9℃</td></tr><tr><td>6</td><td>D1</td><td>HER308 3A/1KV REC</td><td>55.7℃</td><td>78.6℃</td></tr><tr><td>7</td><td>ZD1</td><td>P6KE250A LT</td><td>39.4℃</td><td>63.9℃</td></tr><tr><td>8</td><td>Q1</td><td>STP9NK70ZFP 7.5A/700V</td><td>55.2℃</td><td>78.8℃</td></tr><tr><td>9</td><td>D100</td><td>STPS2045CT 20A/45V ST</td><td>58.5℃</td><td>83.0℃</td></tr><tr><td>10</td><td>D200</td><td>SF10SC6 10A/60V SHI</td><td>66.6℃</td><td>90.4℃</td></tr><tr><td>11</td><td>RG1</td><td>AN7905T</td><td>69.5℃</td><td>93.0℃</td></tr><tr><td>12</td><td>D300</td><td>SR360 3A/60V</td><td>61.9℃</td><td>82.7℃</td></tr><tr><td>13</td><td>C105</td><td>22000U/16V RUB 105℃</td><td>41.1℃</td><td>64.4℃</td></tr><tr><td>14</td><td>C205</td><td>1000U/16V RUB 105℃ ZLH</td><td>52.6℃</td><td>75.6℃</td></tr><tr><td>15</td><td>C305</td><td>470U/25V NCC 105℃ KY</td><td>56.6℃</td><td>78.4℃</td></tr><tr><td>16</td><td>R3</td><td>68KΩ/2W R/MO</td><td>57.4℃</td><td>78.4℃</td></tr><tr><td>17</td><td>U1</td><td>NCP1230D165R2 ON</td><td>39.2℃</td><td>60.4℃</td></tr></table>			NO	Position	P/N	ROOM AMBIENT Ta=31.3 ℃	HIGH AMBIENT Ta=52.5 ℃	1	BD1	US4K80 4A/800V SHI	50.6℃	70.3℃	2	LF2	TR-719	52.8℃	70.7℃	3	C6	100U/400V NCC 105℃	38.6℃	59.9℃	4	C36	47U/50V RUB 105℃ YXF	42.8℃	64.0℃	5	T1COIL	TF-1524 JSI	66.6℃	89.9℃	6	D1	HER308 3A/1KV REC	55.7℃	78.6℃	7	ZD1	P6KE250A LT	39.4℃	63.9℃	8	Q1	STP9NK70ZFP 7.5A/700V	55.2℃	78.8℃	9	D100	STPS2045CT 20A/45V ST	58.5℃	83.0℃	10	D200	SF10SC6 10A/60V SHI	66.6℃	90.4℃	11	RG1	AN7905T	69.5℃	93.0℃	12	D300	SR360 3A/60V	61.9℃	82.7℃	13	C105	22000U/16V RUB 105℃	41.1℃	64.4℃	14	C205	1000U/16V RUB 105℃ ZLH	52.6℃	75.6℃	15	C305	470U/25V NCC 105℃ KY	56.6℃	78.4℃	16	R3	68KΩ/2W R/MO	57.4℃	78.4℃	17	U1	NCP1230D165R2 ON	39.2℃	60.4℃	P
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P:V1=10A V2=5A V3=1A Ta:25℃	TEST : OK	P																																																																																										
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230 VAC O/P: 100% LOAD Ta= -20℃	TEST : OK	P																																																																																										
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 ℃ NO DAMAGE	I/P: 272 VAC O/P:FULL LOAD Ta= 50 ℃ HUMIDITY= 95 %R.H	TEST : OK	P																																																																																										
5	TEMPERATURE COEFFICIENT	± 0.03 %/℃ (0-50℃)	I/P: 230 VAC O/P:FULL LOAD	± 0.019 %/℃ (0-50℃)	P																																																																																										
6	VIBRATION TEST	1 Carton & 1 Set (1) Waveform: Sine Wave (2) Frequency:10~500Hz (3) Sweep Time:10min/sweep cycle (4) Acceleration:2G (5) Test Time:1 hour in each axis (X.Y.Z) (6) Ta:25℃		TEST : OK	P																																																																																										

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 4 KVAC/min I/P-FG: 2 KVAC/min O/P-FG: 1.5 KVAC/min	I/P-O/P: 4.2 KVAC/min I/P-FG: 2.4 KVAC/min O/P-FG: 1.8 KVAC/min Ta:25°C	I/P-O/P: 1.96 mA I/P-FG: 1.23 mA O/P-FG: 1.23 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: 5 GΩ I/P-FG: 17 GΩ O/P-FG: 17 GΩ NO DAMAGE	P
3	APPROVAL	TUV: Certificate NO : TA 50096088 UL: File NO : E227340			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	EN55011 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55011 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 MEDICAL AIR:8KV / Contact:6KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 MEDICAL INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 MEDICAL L-N :1KV L,N-PE:2KV	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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	RPT-75A WITH FAN : SUPPOSE C105 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 1419902 HRS I/P: 230VAC O/P:FULL LOAD Ta= 50 °C LIFE TIME= 217049 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 521.2K 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	Q1 Rated STP9NK70ZFP : 700V 7.5A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Output Short Ta:25℃	(1) 658 V (2) 670 V	P
2	Diode Peak Voltage	D100 Rated STPS2045CT : 45V 20A D200 Rated YG805C010R : 100V 20 A D300 Rated HER303 : 200V 3A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short Ta:25℃	(1) 35 V (2) 30 V (1) 69 V (2) 59 V (1) 125 V (2) 110 V	P
3	Clamp Diode Peak Voltage	D1 Rated HER308 : 1000V 3A	I/P:High-Line +3V = 267 V O/P: (1) Dynamic Load 90%Duty/1KHz Ta:25℃	(1) 576 V	P
4	Input Capacitor Voltage	C5 Rated : 100u / 400V/ 105℃	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℃	(1) 370 V (2) 372 V (3) 372 V	P
5	Control IC Voltage Test	U1 Rated 1230D165R2G : 18V	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℃	(1) 12.85 V (2) 11.61 V (3) 12.85 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2006/9/5	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2006/11/14	PRODUCT SAMPLE W0610A20	PASS	VINCENT TSENG	MAX LIN
2007/5/9	PRODUCT SAMPLE W0703A31	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023