MODEL：RT-125D

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 80 mVp-p (Max) V2: 150 mVp-p (Max) V3: 120 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	V1: 15 mVp-p (Max) V2: 16 mVp-p (Max) V3: 12 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℃	4.62V~ 5.55 V/230VAC 4.62V~ 5.55 V/115VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -2 %~ 2 % (Max) V2: -5 %~ 5 % (Max) V2: -6 %~ 6 % (Max)	I/P: 176 VAC / 264 VAC O/P:FULL/ MIN 40 % LOAD Ta:25℃	V1: 0.15 %~ -0.15 % V2: 2 %~ -2 % V3: 2.4 %~ -2.4 %	P
4	LINE REGULATION	V1:-0.5 %~ 0.5 % (Max) V2: -1 %~ 1 % (Max) V3: -1 %~ 1 % (Max)	I/P: 176 VAC ~ 264 VAC O/P:FULL LOAD Ta:25℃	V1: 0 %~ 0 % V2: 0.03 %~ -0.03 % V3: 0 %~ 0 %	P
5	LOAD REGULATION	V1: -1 %~ 1 % (Max) V2: -3 %~ 3 % (Max) V3: -6 %~ 6 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: 0.15 %~ -0.15 % V2: 1.6 %~ -1.6 % V3: 2.4 %~ -2.4 %	P
6	CROSS REGULATION	V1: -1 %~ 1 % (Max) V2: -3 %~ 3 % (Max) V3: -6 %~ 6 % (Max)	I/P: 230 VAC O/P: Testing O/P 60%LOAD Other O/P 40%LOAD Change Ta:25℃	V1: 0.15 %~ -0.15 % V2: 1.6 %~ -1.6 % V3: 2.4 %~ -2.4 %	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℃	230 VAC/ 165 ms 115 VAC/ 475 ms	P
8	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℃	230 VAC/ 4 ms 115 VAC/ 4 ms	P
9	HOLD UP TIME	230 VAC/ 20 ms(TYP) 115 VAC/ 10 ms(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230 VAC/ 36 ms 115 VAC/ 32 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: <5 %	P
11	DYNAMIC LOAD	V1: 1000 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25℃	123 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	176 VAC~ 264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25℃	107 V~ 264 V	P
			I/P: LOW-LINE-3V= 173 V HIGH-LINE+15%= 300 V/150V 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: 176 VAC ~ 264 VAC O/P:FULL~MIN LOAD Ta:25℃	TEST: OK	P
3	EFFICIENCY	82 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	82.6%	P
4	INPUT CURRENT	230 V/ 2 A (TYP) 115 V/ 3 A(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I = 1.5 A/230 VAC I = 2.5 A/115 VAC	P
5	INRUSH CURRENT	230 V/ 50 A (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	I = 36 A/230 VAC	P
6	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25℃	L-FG: 0.5 mA N-FG: 0.5 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℃	121 % 230VAC 121 % 115VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 5.75V~ 6.75 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	6.03 V/ 230 VAC 6.03 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℃	NO DAMAGE Hiccup Mode	P

ENVIRONMENT TEST

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>SPECICATION</th><th>TEST CONDITION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>1</td><td>TEMPERATURE RISE TEST</td><td colspan="3">MODEL：RT-125A
1. ROOM AMBIENT BURN-IN：1.5 HRS
I/P: 230 VAC O/P: FULL LOAD Ta= 27.4 ℃
2. HIGH AMBIENT BURN-IN：62 HRS
I/P: 230 VAC O/P: FULL LOAD Ta= 56.1 ℃

<table>
<tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 27.4 ℃</th><th>HIGH AMBIENT Ta= 56.1 ℃</th></tr>
<tr><td>1</td><td>LF1</td><td>TF-096C1 YS</td><td>46.2℃</td><td>72.0℃</td></tr>
<tr><td>2</td><td>BD1</td><td>KBJ608G 6A/800V LT</td><td>71.8℃</td><td>97.4℃</td></tr>
<tr><td>3</td><td>C5</td><td>330U/200V RUB 105℃</td><td>58.8℃</td><td>83.7℃</td></tr>
<tr><td>4</td><td>D1</td><td>HER208 2A/1KV REC</td><td>80.4℃</td><td>105.2℃</td></tr>
<tr><td>5</td><td>D55</td><td>BYQ28X-200 10A/200V PH</td><td>84.2℃</td><td>111.4℃</td></tr>
<tr><td>6</td><td>Q1</td><td>2SK2082 9A/800V FUJI</td><td>70.3℃</td><td>97.9℃</td></tr>
<tr><td>7</td><td>U1</td><td>1203 ON</td><td>71.9℃</td><td>98.9℃</td></tr>
<tr><td>8</td><td>ZD1</td><td>P6KE300A PAN</td><td>78.8℃</td><td>103.7℃</td></tr>
<tr><td>9</td><td>ZD2</td><td>15V/1W</td><td>73.4℃</td><td>99.5℃</td></tr>
<tr><td>10</td><td>T1 CORE</td><td>TF-1062 LS</td><td>85.3℃</td><td>109.3℃</td></tr>
<tr><td>11</td><td>D60</td><td>D83004 30A/40V FUJI</td><td>95.0℃</td><td>122.5℃</td></tr>
<tr><td>12</td><td>T1 COIL</td><td>TF-1062 LS</td><td>89.5℃</td><td>113.4℃</td></tr>
<tr><td>13</td><td>C10</td><td>100U/35V RUB 105℃ YXF</td><td>68.9℃</td><td>94.1℃</td></tr>
<tr><td>14</td><td>L60</td><td>TR-415</td><td>85.9℃</td><td>112.1℃</td></tr>
<tr><td>15</td><td>C62</td><td>2200U/16V RUB 105℃</td><td>70.8℃</td><td>92℃</td></tr>
</table></td><td>P</td></tr>
<tr><td>2</td><td>OVER LOAD BURN-IN TEST</td><td>NO DAMAGE
1 HOUR (MIN)</td><td>I/P: 230 VAC
O/P: 118 % LOAD
Ta:25℃</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>3</td><td>LOW TEMPERATURE
TURN ON TEST</td><td>TURN ON AFTER 2 HOUR</td><td>I/P: 230 VAC
O/P: 100 % LOAD
Ta= -25 ℃</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>4</td><td>HIGH HUMIDITY
HIGH TEMPERATURE
HIGH VOLTAGE
TURN ON TEST</td><td>AFTER 12 HOURS
IN CHAMBER ON
CONTROL 50 ℃
NO DAMAGE</td><td>I/P: 272 VAC
O/P:FULL LOAD
Ta= 50 ℃
HUMIDITY= 95 %R.H</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>5</td><td>TEMPERATURE
COEFFICIENT</td><td>± 0.03 %(0~50℃)</td><td>I/P: 230 VAC
O/P:FULL LOAD</td><td>± 0.01 %(0~50℃)</td><td>P</td></tr>
<tr><td>6</td><td>VIBRATION TEST</td><td colspan="2">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℃</td><td>TEST： OK</td><td>P</td></tr>
</table>

SAFETY TEST

NO	TEST ITEM	SPECICATION	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℃	I/P-O/P: 5.43 mA I/P-FG: 4.56 mA O/P-FG: 3.26 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℃	I/P-O/P: 10G Ω I/P-FG: 10G Ω O/P-FG: 4G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25℃	7 mΩ	P
4	APPROVAL	TUV: Certificate NO ： R50046942 UL: File NO ：E183223			P

E.M.C TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25℃	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25℃	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℃	CRITERIA A	P
5	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	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℃	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 62 IS THE MOST CRITICAL COMPONENT I/P: 230 VAC O/P:FULL LOAD Ta= 25 ℃ LIFE TIME= 91993 HRS I/P: 230 VAC O/P:FULL LOAD Ta= 50 ℃ LIFE TIME= 27365 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 209.3K 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 2SK2082 : 900 V 9 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25℃	(1) 512 V (2) 664 V (3) 712 V	P
2	Diode Peak **Voltage**	D 60 Rated D83-004 : 40 V 30 A D 55 Rated BYQ-28X-200: 200V 10A D 50 Rated SF10SC6: 60V 10A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short (1)Full Load Turn on (2) Full Load (3)Output Short (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25℃	(1) 26.1 V (2) 26.3 V (3) 26.1 V (1) 92.8 V (2) 102 V (3) 100 V (1) 33 V (2) 37.8 V (3) 38.4 V	P
3	Clamp Diode Peak **Voltage**	C 7 Rated HER208: 1K V 2A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25℃	(1) 646 V (2) 648 V	P
4	**Input Capacitor Voltage**	C 5 Rated RUBYCON : 330 u / 200 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 (4)Burn-IN Hour Ta:25℃	(1) 192V (2) 192V (3) 189V (4) 188V	P
5	**Control IC Voltage Test**	U 1 Rated 1203P : 16V	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 (4) Output Short Ta:25℃	(1) 13.5 V (2) 13.5 V (3) 13.4 V (4) 12.7 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2004/2/18	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2004/11/15	PRODUCT SAMPLE W0410B11	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023