MODEL：RID-125-2405

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 120 mVp-p (Max) V2: 80 mVp-p (Max)	I/P: 230VAC O/P:FULL LOAD Ta:25℃	V1: 39 mVp-p (Max) V2: 19 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1:22.8V~ 26.4 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	21.8 V~ 27.39 V/ 230 VAC 21.8 V~ 27.39 V/ 115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 2 %~ -2 % (Max) V2: 3 %~ -3 % (Max)	I/P: 176 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25℃	V1: 0.03 %~ -0.03 % V2: 0.6 %~ -0.6 %	P
4	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max) V2: 0.5 %~ -0.5 % (Max)	I/P: 176VAC ~ 264 VAC O/P:FULL LOAD Ta:25℃	V1: 0 %~ 0 % V2: 0.12 %~ -0.12 %	P
5	LOAD REGULATION	V1: 1 %~ -1 % (Max) V2: 2 %~ -2 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: 0.03 %~ -0.03 % V2: 0.5 %~ -0.5 %	P
6	CROSS REGULATION	V1: 1 %~ -1 % (Max) V2: 2 %~ -2 % (Max)	I/P: 230 VAC O/P: Testing O/P 60%LOAD Other O/P 40%LOAD Change Ta:25℃	V1: 0.03 %~ -0.03 % V2: 0 %~ 0 %	P
7	SET UP TIME	230VAC: 500 ms (Max) 115 VAC: 1200 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 193 ms 115VAC/ 177 ms	P
8	RISE TIME	230VAC: 20 ms (Max) 115VAC: 30 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 5 ms 115VAC/ 5 ms	P
9	HOLD UP TIME	230VAC: 30 ms (TYP) 115VAC: 25 ms(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 40 ms 115VAC/ 37 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: <5 %	P
11	DYNAMIC LOAD	V1: 2400 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25℃	183 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	176VAC~264 VAC)	I/P:TESTING O/P:FULL LOAD Ta:25℃	100 V~264V	P
			I/P: LOW-LINE-3V= 173 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	47HZ ~63 HZ NO DAMAGE OSC	I/P: 176 VAC ~ 264 VAC O/P:FULL~MIN LOAD Ta:25℃	TEST: OK	P
3	EFFICIENCY	83% (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	83.9 %	P
4	INPUT CURRENT	230V/ 2 A (TYP) 115V/ 3 A(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I = 1.27 A/ 230 VAC I = 2.2 A/ 115 VAC	P
5	INRUSH CURRENT	230V/ 40 A (TYP) COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I = 38.7 A/ 230 VAC	P
6	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 264 VAC O/P:Min LOAD Ta:25℃	L-FG: 0.9 mA N-FG: 0.9 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	>175 %	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25℃	201 %/ 230 VAC 203 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 27.6V~ 32.4 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	30.9 V/ 230 VAC 30.9 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：RID-125-1205
1. ROOM AMBIENT BURN-IN：1.5HRS
I/P: 230VAC O/P: FULL LOAD Ta= 24.9 ℃
2. HIGH AMBIENT BURN-IN：2HRS
I/P: 230VAC O/P: FULL LOAD Ta= 45.5 ℃

<table>
<tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 24.9 ℃</th><th>HIGH AMBIENT Ta= 45.5℃</th></tr>
<tr><td>1</td><td>BD1</td><td>KBJ608G 6A/800V</td><td>67.3℃</td><td>88.7℃</td></tr>
<tr><td>2</td><td>D1</td><td>HER208 2A/1KV</td><td>79.4℃</td><td>101.3℃</td></tr>
<tr><td>3</td><td>C6</td><td>330U/200V 105℃ MXR</td><td>64.3℃</td><td>85.1℃</td></tr>
<tr><td>4</td><td>Q1</td><td>K2082 9A/800V</td><td>80.9℃</td><td>104.8℃</td></tr>
<tr><td>5</td><td>T1 COIL</td><td>TF-1577B</td><td>82.1℃</td><td>104.1℃</td></tr>
<tr><td>6</td><td>ZD1</td><td>P6KE300A</td><td>77.4℃</td><td>99.7℃</td></tr>
<tr><td>7</td><td>U1</td><td>1203</td><td>69.4℃</td><td>93.8℃</td></tr>
<tr><td>8</td><td>C10</td><td>100U/50V 105℃ KY</td><td>67.2℃</td><td>89.5℃</td></tr>
<tr><td>9</td><td>D60</td><td>S20LC20U 20A/200V</td><td>92.9℃</td><td>113.7℃</td></tr>
<tr><td>10</td><td>D55</td><td>SF10SC6 10A/60V</td><td>82.2℃</td><td>103.5℃</td></tr>
<tr><td>11</td><td>U4</td><td>2576T-5 3A/5V</td><td>94.4℃</td><td>112.4℃</td></tr>
<tr><td>12</td><td>D56</td><td>SF10SC4 10A/40V</td><td>79.0℃</td><td>100.3℃</td></tr>
<tr><td>13</td><td>L60</td><td>TR-744</td><td>88.0℃</td><td>108.9℃</td></tr>
<tr><td>14</td><td>L56</td><td>TR-059</td><td>74.3℃</td><td>96.8℃</td></tr>
<tr><td>15</td><td>C62</td><td>1200U/16V 105℃ KY</td><td>68.6℃</td><td>89.2℃</td></tr>
<tr><td>16</td><td>C56</td><td>1000U/16V 105℃ ZLH</td><td>63.8℃</td><td>84.9℃</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: 120 % 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 45 ℃
NO DAMAGE</td><td>I/P: 272 VAC
O/P:FULL LOAD
Ta= 45 ℃
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>± 0.005 %(0~50℃)</td><td>P</td></tr>
<tr><td>6</td><td>VIBRATION TEST</td><td colspan="2">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℃</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℃ / 70%RH	I/P-O/P: 9.04 mA I/P-FG: 7.15 mA O/P-FG: 6.41 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: 2G Ω I/P-FG: 2G Ω O/P-FG: 2G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25℃ / 70%RH	11 mΩ	P
4	APPROVAL	TUV: Certificate NO : UL: File NO :			N/A

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 NDUSTRY 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	RID-125-1205 : SUPPOSE C62 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P:FULL LOAD Ta= 25 ℃ LIFE TIME= 104945 HRS I/P: 230VAC O/P:FULL LOAD Ta= 45 ℃ LIFE TIME= 26278 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 218.2K 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 2SK2082-01 : 9A/900V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Output Short Ta:25℃	(1) 752 V (2) 732 V	P
2	Diode Peak **Voltage**	D60 Rated BYQ28X-200 : 10A/200V D55 Rated SF10SC6 : 10A/60V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short Ta:25℃	(1) 140 V (2) 140 V (1) 38 V (2) 37 V	P
3	Clamp Diode Peak **Voltage**	D1 Rated HER208 : 2A/1KV	I/P:High-Line +3V = 267 V O/P: (1) Dynamic Load 90%Duty/1KHz Ta:25℃	(1) 588 V	P
4	**Input Capacitor Voltage**	C5 Rated : 330u/200V 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) 181 V (2) 185 V (3) 185 V	P
5	**Control IC Voltage Test**	U1 Rated NCP1203P60 : 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℃	(1) 9.6 V (2) 8.9 V (3) 9.6 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2007/2/9	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2007/5/9	PRODUCT SAMPLE W0704A47	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023