MODEL：RS-25-24

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 120 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	V1: 12 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 22 V~ 27.6 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	20.78V~ 28.17 V/ 230VAC 20.78V~ 28.17 V/ 115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 1 %~ -1 % (Max)	I/P: 115 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25℃	V1: 0.08 %~ -0.08 %	P
4	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max)	I/P: 115VAC ~ 264VAC O/P:FULL LOAD Ta:25℃	V1: 0.03 %~ -0.05 %	P
5	LOAD REGULATION	V1: 0.5 %~ -0.5 % (Max)	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: 0.05 %~ -0.05 %	P
6	SET UP TIME	230VAC/ 1200 ms (Max) 115VAC/ 2200 ms (Max)	I/P: 230VAC I/P: 230VAC O/P:FULL LOAD Ta:25℃	230VAC/ 424 ms 115VAC/ 791 ms	P
7	RISE TIME	230VAC/ 20ms (Max) 115VAC/ 30ms (Max)	I/P: 230VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 7 ms 115VAC/ 7 ms	P
8	HOLD UP TIME	230VAC/ 50 ms (Min) 115VAC/ 12ms (Min)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 87 ms 115VAC/ 18 ms	P
9	OVER/UNDERSHOOT TEST	＜±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: ＜5 %	P
10	DYNAMIC LOAD	V1: 2400 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25℃	133 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℃	54V~ 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℃	TEST: OK	P
3	EFFICIENCY	84 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	84.08 %	P
4	INPUT CURRENT	230V/ 0.4 A (Max) 115V/ 0.7 A (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I = 0.31 A/ 230 VAC I = 0.5 A/ 115 VAC	P
5	INRUSH CURRENT	230V/ 36 A (Max) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	I = 30 A/ 230 VAC	P
6	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25℃	L-FG: 0.33 mA N-FG: 0.33 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 %~ 180 %	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25℃	142 %/ 230 VAC 136 %/ 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℃	29.7V/ 230 VAC 29.7V/ 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

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL：RS-25-24 1. ROOM AMBIENT BURN-IN：1 HRS I/P: 230 VAC O/P: FULL LOAD Ta= 25.4℃ 2. HIGH AMBIENT BURN-IN： 3 HRS I/P: 230 VAC O/P: FULL LOAD Ta= 49.5 ℃			P
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P: 124 % LOAD 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= -25℃	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	± 0.01 %(0~50℃)	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℃		TEST： OK	P

NO	Position	P/N	ROOM AMBIENT Ta= 25.4 ℃	HIGH AMBIENT Ta= 49.5 ℃
1	BD1	KBJ208G 2A/800V LT	53.0℃	74.2℃
2	T1 CORE	TF-995 LS	60.9℃	80.7℃
3	T1 COIL	TF-995 LS	58.2℃	79.1℃
4	LF1	LF560	50.7℃	72.3℃
5	C60	220U/35V NCC 105℃ LXZ	51.6℃	72.3℃
6	C57	330U/35V NCC 105℃ LXJ	56.1℃	76.1℃
7	D55	BYQ28X-200X 10A/200V	54.2℃	75.1℃
8	Q1	K2545 6A/600V TOS	52.5℃	73.5℃
9	ZD1	P6KE200 PAN	66.6℃	86.8℃
10	C5	56U/400V RUB 105℃ AXF	50.2℃	71.9℃
11	C10	10U/50V NIPPON 105℃	45.5℃	68.5℃
12	D1	EGP20J 2A/600V ZOW	52.2℃	73.6℃

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: 2.34 mA I/P-FG: 2.26 mA O/P-FG: 2.01 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: 12 G Ω I/P-FG: 9 G Ω O/P-FG: 19 G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25℃	4 mΩ	P
4	APPROVAL	TUV: Certificate NO ：R50046664 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 57 IS THE MOST CRITICAL COMPONENT I/P: 230 VAC O/P:FULL LOAD Ta= 25 ℃ LIFE TIME= 109545 HRS I/P: 230 VAC O/P:FULL LOAD Ta= 50 ℃ LIFE TIME= 25733 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 309.7K 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 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℃	(1) 382 V (2) 560 V (3) 576 V	P
2	Diode Peak **Voltage**	D 55 Rated BYQ28X-200 : 200 V 10 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25℃	(1) 107 V (2) 102 V (3) 124 V	P
3	Clamp Diode Peak **Voltage**	D 1 Rated EGP20J : 600 V 2 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25℃	(1) 462 V (2) 482 V	P
4	**Input Capacitor Voltage**	C 5 Rated : 56 u 400 V 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) 376 V (2) 376 V (3) 376 V	P
5	**Control IC Voltage Test**	U Rated SG684 : 30V	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) 16.8 V (2) 16.7 V (3) 16.7 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2004/5/21	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2004/8/2	PRODUCT SAMPLE A406A38	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023