



MODEL : SE-600-36

## OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 200 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1: 120 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 32 V- 40 V	I/P: 230 VAC I/P:115VAC O/P:MIN LOAD Ta:25°C	31.299V-43.627V/230VAC 31.126V-43.989V/115VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -1.0 %- +1.0 % (Max)	I/P: 200 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: -0.03 %- 0.06 %	P
4	LINE REGULATION	V1: -0.5 %- +0.5 % (Max)	I/P: 200 VAC ~ 264VAC O/P:FULL LOAD Ta:25°C	V1: -0.02 %- 0.04 %	P
5	LOAD REGULATION	V1: -0.5 %- +0.5 % (Max)	I/P: 230 VAC O/P:FULL -MIN LOAD Ta:25°C	V1: -0.03 %- 0.06 %	P
6	SET UP TIME	230VAC/ 1000 ms (Max) 115VAC/ 1000 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 146.7 ms 115 VAC/ 150.9 ms	P
7	RISE TIME	230VAC/ 50 ms (Max) 115 VAC/ 50 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 23.4 ms 115 VAC/ 27.6 ms	P
8	HOLD UP TIME	230VAC/ 20 ms (Typ) 115VAC/ 16 ms (Typ)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 24.3 ms 115 VAC/ 18.8 ms	P
9	OVER/UNDERSHOOT TEST	< ± 5 %	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: < 5 %	P
10	DYNAMIC LOAD	V1: 3600 mVp-p	I/P: 230 VAC O/P: FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	500 mVp-p	P

## INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	180VAC~ 264 VAC	I/P: TESTING O/P: FULL LOAD Ta: 25°C	180 V~ 264 V	P
			I/P: LOW-LINE-3V= 177 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: 180 VAC ~264 VAC O/P: FULL-MIN LOAD Ta: 25°C	TEST: OK	P
3	EFFICIENCY	87 % (Typ)	I/P: 230 VAC O/P: FULL LOAD Ta: 25°C	88.6 %	P
4	INPUT CURRENT	230 V/ 7.5 A (Typ) 115 V/ 12 A (Typ)	I/P: 230 VAC I/P: 115 VAC O/P: FULL LOAD Ta: 25°C	I = 4.29 A / 230VAC I = 7.65 A / 115VAC	P
5	INRUSH CURRENT	230 V/ 50 A (Typ) 115 V/ 25 A (Typ) COLD START	I/P: 230 VAC I/P: 115 VAC O/P: FULL LOAD Ta: 25°C	I = 49 A / 230VAC I = 24 A / 115VAC	P
6	LEAKAGE CURRENT	< 2.0 mA / 240VAC	I/P: 254 VAC O/P: MIN LOAD Ta: 25°C	L-FG: 1.024 mA N-FG: 1.042 mA	P

## PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105%~ 125 %	I/P: 230 VAC I/P: 115 VAC O/P: TESTING Ta: 25°C	117 % / 230VAC 116 % / 115 VAC Shut down Re-power ON	P
2	OVER VOLTAGE PROTECTION	CH1: 42 V~ 50 V(Typ)	I/P: 230 VAC I/P: 115 VAC O/P: MIN LOAD Ta: 25°C	43.8 V / 230VAC 44.2 V / 115VAC Shut down Re- power ON	P
3	OVER TEMPERATURE PROTECTION	SPEC: TSW1= 85 °C ± 5 °C O.T.P. NO DAMAGE	I/P: 230 VAC O/P: FULL LOAD	O.T.P. Active Shut down o/p voltage , recovers automatically after temperature goes down	P
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P: FULL LOAD Ta: 25°C	NO DAMAGE Shut down Re-power ON	P

## ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL : SE-600-36 1. ROOM AMBIENT BURN-IN : 2 HRS I/P: 230 VAC O/P: 100% LOAD Ta= 28.1 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P: 230 VAC O/P: 100% LOAD Ta= 43.9 °C			P
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR ( MIN )	I/P: 230 VAC O/P: 116 % LOAD Ta:25°C	TEST : OK	P
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230 VAC O/P: 100% LOAD Ta= -20 °C	TEST : OK	P
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 40 °C NO DAMAGE	I/P: 272 VAC O/P: FULL LOAD Ta= 40 °C HUMIDITY= 95 %R.H	TEST : OK	P
5	TEMPERATURE COEFFICIENT	± 0.05 % (0-50°C)	I/P: 230 VAC O/P: FULL LOAD	± 0.008 % (0-50°C)	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°C		TEST : OK	P

### SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-FG: 1.5 KVAC/min I/P-O/P: 3.0 KVAC/min O/P-FG: 0.5 KVAC/min EN 60950	I/P-FG: 1.8 KVAC/min I/P-O/P: 3.6 KVAC/min O/P-FG: 0.6 KVAC/min Ta:25°C	I/P-FG: 6.84 mA I/P-O/P: 8.09 mA O/P-FG: 6.39 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-FG: 500VDC>100MΩ I/P-O/P:500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-FG: 500 VDC I/P-O/P: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-FG: 2437 MΩ I/P-O/P: >9999 MΩ O/P-FG: 5582 MΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25°C	5 mΩ	P
4	APPROVAL	TUV: Certificate NO : UL: File NO :			NA

### E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
2	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
3	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
4	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
5	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	SE-600-36 :SUPPOSE C 25 I/P: 230 VAC O/P:FULL LOAD I/P: 230 VAC O/P:FULL LOAD	IS THE MOST CRITICAL COMPONENT Ta= 25 °C LIFE TIME= Ta= 40 °C LIFE TIME=	667391 HRS 208277 HRS	P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 197K 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 3 Rated FQA24N50 : 500 V 24 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) 368 V (2) 320 V (3) 166 V	P
2	Diode <b>Peak Voltage</b>	D 14 Rated PA905C6 : 600 V 20 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) 274 V (2) 282 V (3) 7 V	P
3	Clamb Diode <b>Peak Voltage</b>	D 5 Rated BYV26EGP : 1000 V 1 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2)Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 406 V (2) 408 V	P
4	<b>Control IC Voltage Test</b>	U 2 Rated KA3525A : 40 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) 15.3 V (2) 15.3 V (3) 15.3 V	P
5	Power Transistor (D to S) or (C to E) <b>Peak Voltage</b>	U 4 Rated TOP242P : 700 V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn ON (2)Full Load (3)Output Short Ta:25°C	(1) 570 V (2) 502 V (3) 534 V	P
6	<b>Control IC Voltage Test</b>	U 4 Rated TOP242P : 9 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) 6.12 V (2) 6.08 V (3) 6.16 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2008.3.10	PRODUCT SAMPLE DA82084483	PASS	WENNING	LIUWY

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