

MODEL : AS-120P-48

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 240 mVp-p (Max)	I/P: 230VAC O/P:FULL LOAD Ta:25°C	V1: 33 mVp-p (Max))	P
2	OUTPUT VOLTAGE TOLERANCE	V1: 2 %- -2 % (Max)	I/P: 110VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.2 %- -0.2 %	P
3	LINE REGULATION	V1: 1 %- -1 % (Max)	I/P: 110VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: 0 %- 0 %	P
4	LOAD REGULATION	V1: 2 %- -2 % (Max)	I/P: 230 VAC O/P:FULL -MIN LOAD Ta:25°C	V1: 0.2 %- -0.2 %	P
5	SET UP TIME	230VAC: 3000 ms (Max) 115VAC: 3000 ms (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 1344 ms 115VAC/ 1344 ms	P
6	RISE TIME	230VAC: 80 ms (Max) 115VAC: 80 ms (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 10 ms 115VAC/ 11 ms	P
7	HOLD UP TIME	230VAC: 50 ms (TYP) 115VAC: 16 ms (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 70 ms 115VAC/ 21 ms	P
8	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
9	DYNAMIC LOAD	V1: 4800 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	546 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	58V~264V	P
			I/P: LOW-LINE-3V= 107 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: 90VAC ~ 264 VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK	P
3	POWER FACTOR	0.95 / 230 VAC(TYP) 0.98 / 115 VAC(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	PF= 0.954 / 230 VAC PF= 0.995 / 115 VAC	P
4	EFFICIENCY	89% (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	91 %	P
5	INPUT CURRENT	230V/ 0.7 A (TYP) 115V/ 1.4 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.62 A/ 230 VAC I = 1.16 A/ 115 VAC	P
6	INRUSH CURRENT	230V/ 120 A (TYP) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	I = 102 A/ 230 VAC	P
7	LEAKAGE CURRENT	< 1 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25°C	L-FG: 0.6 mA N-FG: 0.6 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110%~135%	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25°C	120 %/ 230 VAC 118 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 53.3V~ 67.2V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	63 V/ 230 VAC 63 V/ 115 VAC Shunt down Re- power ON	P
3	OVER TEMPERATURE PROTECTION	SPEC: 90 ± 15°C (RTH2) Detect on heatsink of power transistor NO DAMAGE	I/P: 230 VAC O/P:FULL LOAD	O.T.P. Active Shunt down Re-power ON	P
4	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

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	NO LOAD POWER CONSUMPTION	<0.75W	I/P: 240 VAC O/P:NO LOAD	0.6 W/240VAC	P

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL : AS-120P-24 1. ROOM AMBIENT BURN-IN : 1.5 HRS I/P: 230VAC O/P: FULL LOAD Ta= 27.5 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P: 230VAC O/P: FULL LOAD Ta= 43.4 °C			P
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P: 112 % 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= 0°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	± 0.03 %(0-50°C)	I/P: 230 VAC O/P:FULL LOAD	± 0.01 %(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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 4.25KVDC/min	I/P-O/P: 5.1K KVDC/min Ta:25°C	I/P-O/P: 0.002 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P: 500 VDC Ta:25°C	I/P-O/P: 30 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	16 mΩ	P
4	APPROVAL	TUV: Certificate NO : S 50079708 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°C	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 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 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 LIGHT INDUSTRY 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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT I/P: 115VAC O/P: 70% LOAD,12hrs / day Ta= 25 °C	LIFE TIME= 101798 HRS		P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 308.9KHRS			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 SPP11N65C3 : 820V 11A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 572 V (2) 558 V (3) 492 V	P
2	Diode Peak Voltage	Q100 Rated STTH2003CT : 300V 20A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 264 V (2) 260 V (3) 193 V	P
3	Clamp Diode Peak Voltage	D2 Rated 1N5406 : 600V 3A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 508 V (2) 510 V	P
4	Input Capacitor Voltage	C5 Rated :120u / 400V/ 105°C	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 1hour Ta:25°C	(1) 392 V (2) 390 V (3) 392 V (4) 392 V	P
5	Control IC Voltage Test	U2 Rated TEA1552 : 20V	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) 16.9 V (2) 15.3 V (3) 16.9 V	P
6	Power Transistor (D to S) or (C to E) Peak Voltage	Q2 Rated 2SK3683 : 500V 19A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 424 V (2) 410 V (3) 392 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2005/12/2	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2006/1/25	PRODUCT SAMPLE W0512C44	PASS	VINCENT TSENG	MAX LIN
2006/7/14	PRODUCT SAMPLE W0606C33	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023