

MODEL : ELN-30-48

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 250 mVp-p (Max)	I/P: 230VAC O/P: 100% LOAD Ta:25°C	V1: 182 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 43.2V- 52.8V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	41.5 V- 54 V/ 230 VAC 41.5 V- 54 V/ 115 VAC	P
3	OUTPUT CURRENT ADJUST RANGE	CH1:0.4725 A-0.6489 A	I/P: 230 VAC I/P: 115 VAC Ta:25°C	0.28 A- 0.97 A/ 230 VAC 0.28 A- 1.06 A/ 115 VAC	P
4	OUTPUT VOLTAGE TOLERANCE	V1: 5 %- -5 % (Max)	I/P: 100 VAC / 264 VAC O/P: 100% LOAD / MIN LOAD Ta:25°C	V1: 0.07 %- -0.07 %	P
5	LINE REGULATION	V1: 1 %- -1 % (Max)	I/P: 100VAC ~ 264 VAC O/P: 100% LOAD Ta:25°C	V1: 0.03 %- -0.03 %	P
6	LOAD REGULATION	V1: 2%- -2 % (Max)	I/P: 230 VAC O/P: 100% LOAD -MIN LOAD Ta:25°C	V1: 0.07 %- -0.07 %	P
7	SET UP TIME	230VAC: 500 ms (Max) 115 VAC: 1000 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P: 100% LOAD Ta:25°C	230VAC/ 336 ms 115VAC/ 672 ms	P
8	RISE TIME	230VAC: 50 ms (Max) 115VAC: 50 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P: 100% LOAD Ta:25°C	230VAC/ 65 ms 115VAC/ 65 ms	P
9	HOLD UP TIME	230VAC: 50 ms (TYP) 115VAC 16 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 109 Ms 115VAC/ 24.3 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P: 100% LOAD Ta:25°C	TEST: < 5 %	P
11	DYNAMIC LOAD	V1: 4800 mVp-p	I/P: 230 VAC O/P: 100% LOAD /Min LOAD 90%DUTY/1KHZ Ta:25°C	345 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	90VAC~264 VAC	I/P: TESTING O/P: 100% LOAD Ta: 25°C	40 V~264V	P
			I/P: LOW-LINE-3V= 87V HIGH-LINE+15%=300 V O/P: 100% LOAD /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: 90 VAC ~ 264 VAC O/P: 100% LOAD ~MIN LOAD Ta: 25°C	TEST: OK	P
3	EFFICIENCY	87 % (TYP)	I/P: 230 VAC O/P: 100% LOAD Ta: 25°C	87.8 %	P
4	INPUT CURRENT	230V/ 0.48 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P: 100% LOAD Ta: 25°C	I = 0.28 A/ 230 VAC	P
		115V/ 0.75 A (TYP)		I = 0.46 A/ 115 VAC	
5	INRUSH CURRENT	230V/ 55 A (TYP)	I/P: 230 VAC O/P: 100% LOAD Ta: 25°C	I = 48 A/ 230 VAC	P
		COLD START			
6	LEAKAGE CURRENT	< 0.25 mA / 240 VAC	I/P: 264 VAC O/P: Min LOAD Ta: 25°C	L-FG: 0.01 mA N-FG: 0.01 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	95 %~110 %	I/P: 230 VAC I/P: 115 VAC O/P: TESTING Ta: 25°C	103 %/ 230 VAC 103%/ 115 VAC Constant Current Limiting	P
2	OVER VOLTAGE PROTECTION	CH1: 54V~ 60V	I/P: 230 VAC I/P: 115 VAC O/P: MIN LOAD Ta: 25°C	56.3V/ 230 VAC 56V/ 115 VAC Shunt down Re- power ON	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P: 100% LOAD Ta: 25°C	NO DAMAGE Constant Current Limiting	P

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL : ELN-30-24 1. ROOM AMBIENT BURN-IN : 1.5 HRS I/P: 230VAC O/P: 100% LOAD Ta= 30.2 °C 2. HIGH AMBIENT BURN-IN : 2.5 HRS I/P: 230VAC O/P: 100% LOAD Ta= 40.6 °C			P
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P: 118 % 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: 100% 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:100% LOAD	± 0.012 %(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-O/P: 3 KVAC/min	I/P-O/P: 3.6KVAC/min Ta:25°C	I/P-O/P: 1.96 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	APPROVAL	TUV: Certificate NO : UL: File NO :			N/A

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 230 VAC/50HZ O/P: 100% LOAD Ta:25°C	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P: 100% LOAD /50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P: 100% 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: 100% 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: 100% 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: 100% 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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	ELN-30-24 : SUPPOSE C105 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P: 100% LOAD Ta= 25 °C LIFE TIME= 94508 HRS I/P: 230VAC O/P: 100% LOAD Ta= 40 °C LIFE TIME=39740 HRS I/P: 230VAC O/P: 75% LOAD Ta= 40 °C LIFE TIME= 78411 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 628.3K HRS			P
3	DMTBF/Accelerated Life Test	Demonstration Mean Time Between Failure(Expected Life) : 20,000 hours @ Tcase 80°C; 50,000 hours @ Tcase 65°C			P



COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated 2SK2645-01MR 9A/600V	I/P:High-Line +3V = 267 V O/P: (1) 100% LOAD Turn on (2) Output Short Ta:25°C	(1) 504 V (2) 400 V	P
2	Diode Peak Voltage	D100 Rated SF10LC40 10A/400V	I/P:High-Line +3V = 267 V O/P: (1) 100% LOAD Turn on (2)Output Short Ta:25°C	(1) 314 V (2) 251 V	P
3	Clamp Diode Peak Voltage	D1 Rated 1A/1KV 1N4007GP	I/P:High-Line +3V = 267 V O/P: (1) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 482 V	P
4	Input Capacitor Voltage	C5 Rated 68u/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 Ta:25°C	(1) 392 V (2) 394 V (3) 394 V	P
5	Control IC Voltage Test	U1 Rated NCP1200D60R2G:16V	I/P:High-Line +3V = 267 V O/P: (1) 100% LOAD Turn on /Off (2) Min load Turn on /Off (3) 100% /Min load Change Ta:25°C	(1) 11.52 V (2) 10.2 V (3) 11.52 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2007/10/15	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2007/11/27	PRODUCT SAMPLE W0710E49	PASS	VINCENT TSENG	MAX LIN
2008/1/10	PRODUCT SAMPLE W0712C07	PASS	SANFORD SU	VINCENT TSENG

2003/12/12 A50-F023