

MODEL : PPS-125-13.5V

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 100 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1:10 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 12.82 V~14.17V)	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	11.8V~15.97V/ 230 VAC 11.8V~15.97V/ 115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: +2 %~ -2 % (Max)	I/P: 264 VAC / 100 VAC O/P:FULL/ 0 % LOAD Ta:25°C	V1: 0.05%~ -0.05 %	P
4	LINE REGULATION	V1: +0.5%~ -0.5 % (Max)	I/P: 264 VAC ~ 100 VAC O/P:FULL LOAD Ta:25°C	V1: 0%~0 %	P
5	LOAD REGULATION	V1: +1 %~ -1 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1:0%~ 0.05 %	P
6	SET UP TIME	230 VAC/ 1000 ms (Max) 115 VAC/ 2000 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 476 ms 115 VAC/ 712 ms	P
7	RISE TIME	230 VAC/ 30 ms (Max) 115 VAC/ 30 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 18 ms 115 VAC/ 18 ms	P
8	HOLD UP TIME	230 VAC/ 20 ms (TYP) 115 VAC/ 20 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 30 ms 115 VAC/ 29 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: 1350 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	119 mVp-p	P

## INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	264 VAC~ 90 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	64V~264V	P
			I/P: LOW-LINE-3V= 87 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: 264 VAC ~ 100 VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	POWER FACTOR	0.93/ 230 VAC(TYP) <u>0.98</u> / 115 VAC(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	PF= 0.98/ 230 VAC PF= 1/ 115 VAC	P
4	EFFICIENCY	80 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	83.2%	P
5	INPUT CURRENT	230 V/ 0.75 A(TYP) 115 V/ 1.7 A(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.56A/ 230 VAC I = 1.13A/ 115 VAC	P
6	INRUSH CURRENT	230V/ 40 A(TYP) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	I =30 A/ 230 VAC	P
7	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P:254 VAC O/P:Min LOAD Ta:25°C	L-FG: .08 mA N-FG: 0.8 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	130 %- 160 %	I/P: 230 VAC I/P: 115 VAC O/P: TESTING Ta:25°C	144 %/ 230 VAC 137 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 15.5 V~ 20.25 V	I/P: 230 VAC I/P: 115 VAC O/P: MIN LOAD Ta:25°C	16.7 V/ 230 VAC 16.7V/ 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°C	NO DAMAGE Hiccup Mode	P

## ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL : PPS-125-5 WITH FAN 17.8CFM 1. ROOM AMBIENT BURN-IN : 2 HRS I/P: 230 VAC O/P: 125% LOAD Ta= 27.2 °C 2. HIGH AMBIENT BURN-IN : 3 HRS I/P: 230 VAC O/P: 125% LOAD Ta=51.6 °C			<b>P</b>
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR ( MIN )	I/P: 230 VAC O/P: 135% LOAD with FAN Ta:25°C	TEST : OK	<b>P</b>
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230VAC O/P: 125% LOAD with FAN Ta= -20 °C	TEST : OK	<b>P</b>
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C NO DAMAGE	I/P: 272 VAC O/P:125% LOAD with FAN Ta= 50 °C HUMIDITY= 95 %R.H	TEST : OK	<b>P</b>
5	TEMPERATURE COEFFICIENT	± 0.05 %(0-50°C)	I/P: 230 VAC O/P:125% LOAD with FAN	± 0.001 %(0-50°C)	<b>P</b>
6	VIBRATION TEST	1 Carton & 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:2G (5) Test Time:1 hour in each axis (X.Y.Z) (6) Ta:25°C		TEST : OK	<b>P</b>

### SAFETY TEST

NO	TEST ITEM	SPECIFICATION	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°C	I/P-O/P: 2.4 mA I/P-FG: 1.4 mA O/P-FG: 0.8 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°C	I/P-O/P: 20G Ω I/P-FG: 20GΩ O/P-FG:20G Ω NO DAMAGE	P
3	APPROVAL	TUV: Certificate NO : R50038987 UL: File NO : E183223			P

### 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: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 C 103 IS THE MOST CRITICAL COMPONENT WITH FAN I/P: 230VAC O/P:125% LOAD Ta=25 °C LIFE TIME=216593.8 HRS I/P: 230VAC O/P:125% LOAD Ta=50 °C LIFE TIME=27843.5 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 111.7K 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 2 Rated 2SK2850 : 900 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°C	(1) 556 V (2) 664 V (3) 856 V	P
2	Diode Peak <b>Voltage</b>	D17 Rated KCH30A10:100 V 30 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) 61.2V (2) 69.2V (3) 72.0 V	P
3	Clamp Diode Peak <b>Voltage</b>	D4 Rated HER208 : 1K V 2 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 676V (2) 740 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2003/10/20	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2003/12/17	PRODUCT SAMPLE A311A38	PASS	VINCENT TSENG	MAX LIN

2003/7/14 A50-F023