

■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage
- PWM control and regulated
- High power density 6.117W/inch³
- LED indicator for power on
- 100% full load burn-in test
- 125W with 18CFM FAN
- 5"x3" compact size
- 3 years warranty

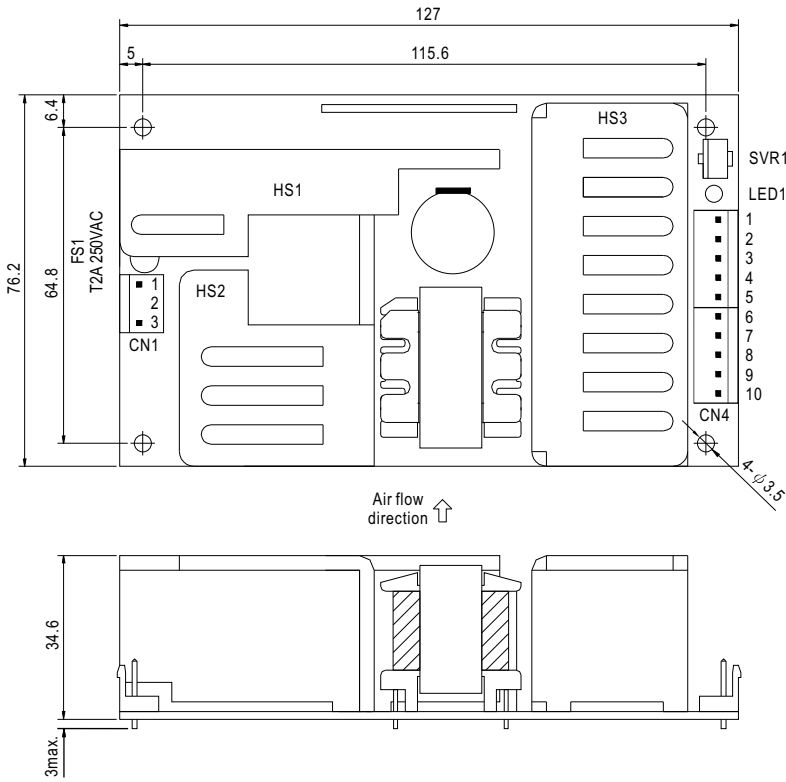


SPECIFICATION

MODEL		PPT-125A			PPT-125B			PPT-125C			PPT-125D		
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3
	DC VOLTAGE	3.3V	5V	12V	5V	12V	-12V	5V	15V	-15V	5V	24V	12V
	RATED CURRENT	10A	8A	0.5A	11.5A	3A	0.5A	11A	2.5A	0.5A	7A	2.5A	0.5A
	CURRENT RANGE (convection)	1 ~ 10A	0.8 ~ 8A	0.05 ~ 0.5A	1 ~ 11.5A	0.3 ~ 3A	0.05 ~ 0.5A	1 ~ 11A	0.25 ~ 2.5A	0.05 ~ 0.5A	1 ~ 7A	0.25 ~ 2.5A	0.05 ~ 0.5A
	CURRENT RANGE (18CFM FAN)	1 ~ 12.5A	0.8 ~ 10A	0.05 ~ 0.63A	1 ~ 14.38A	0.3 ~ 3.75A	0.05 ~ 0.63A	1 ~ 13.75A	0.25 ~ 3.13A	0.05 ~ 0.63A	1 ~ 8.75A	0.25 ~ 3.13A	0.05 ~ 0.63A
	RATED POWER (convection)	79W			99.5W			100W			101W		
	RATED POWER (18CFM FAN)	98.8W			124.46W			125.15W			126.43W		
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	120mVp-p	100mVp-p	120mVp-p	120mVp-p	100mVp-p	150mVp-p	150mVp-p	100mVp-p	240mVp-p	120mVp-p
	VOLTAGE ADJ. RANGE	CH1:3.13 ~ 3.46V			CH1:4.75 ~ 5.25V			CH1:4.75 ~ 5.25V			CH1:4.75 ~ 5.25V		
	VOLTAGE TOLERANCE Note.3	±3.0%	±5.0%	±6.0%	±3.0%	±5.0%	±6.0%	±3.0%	±5.0%	±6.0%	±3.0%	±5.0%	±6.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±3.0%	±3.0%	±5.0%	±3.0%	±3.0%	±5.0%	±3.0%	±3.0%	±5.0%	±3.0%	±3.0%	±5.0%
	SETUP, RISE TIME	1000ms, 30ms/230VAC			2000ms, 30ms/115VAC at full load								
	HOLD UP TIME (Typ.)	24ms/230VAC			24ms/115VAC at full load								
INPUT	VOLTAGE RANGE	90 ~ 264VAC			127 ~ 370VDC								
	FREQUENCY RANGE	47~63Hz											
	POWER FACTOR (Typ.)	PF>0.93/230VAC			PF>0.98/115VAC at full load								
	EFFICIENCY (Typ.)	75%			78%			78%			78%		
	AC CURRENT (Typ.)	1.7A/115VAC			0.75A/230VAC								
	INRUSH CURRENT (Typ.)	COLD START 24A/230VAC											
	LEAKAGE CURRENT	<2mA / 240VAC											
PROTECTION	OVERLOAD	130 ~ 160% rated output power			Protection type : Fold back current limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE	CH1:3.6 ~ 4.45V			CH1:5.75 ~ 6.75V			CH1:5.75 ~ 6.75V			CH1:5.75 ~ 6.75V		
ENVIRONMENT	WORKING TEMP., HUMIDITY	-20 ~ +70°C (Refer to output load derating curve)											
	WORKING TEMP.	20 ~ 90% RH non-condensing											
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
	SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved										
WITHSTAND VOLTAGE		I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC											
ISOLATION RESISTANCE		I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH											
EMI CONDUCTION & RADIATION		Compliance to EN55022 (CISPR22) Class B											
HARMONIC CURRENT		Compliance to EN61000-3-2,-3											
EMS IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A											
OTHERS	MTBF	94.7Khrs min. MIL-HDBK-217F (25°C)											
	DIMENSION	127*76.2*34.6mm (L*W*H)											
	PACKING	0.37Kg; 36pcs/14.3Kg/0.79CUFT											
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Heat Sink HS1,HS2 & HS3 can not be shorted. 												

Mechanical Specification

Unit:mm



AC Input Connector (CN1) : JST B3P-VH or equivalent

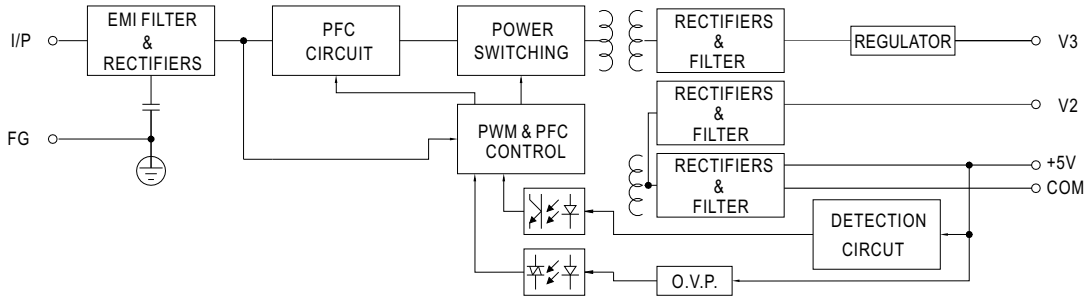
Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/N		

DC Output Connector (CN4) : JST B5P-VH*2 or equivalent

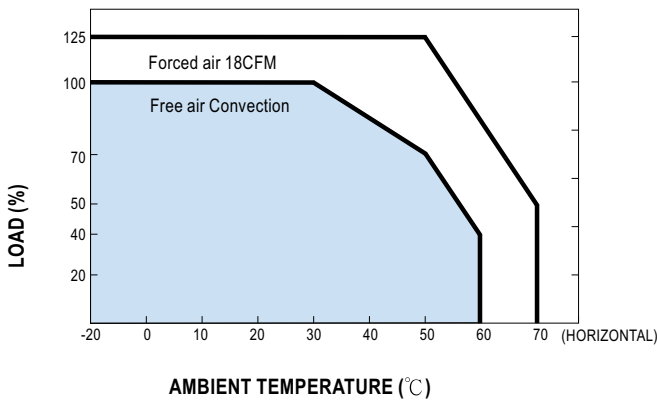
Pin No.	Assignment	Mating Housing	Terminal
1	CH3	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2,3	CH2		
4~8	GND		
9,10	CH1		

⚠ HS1, HS2 & HS3 can not be shorted

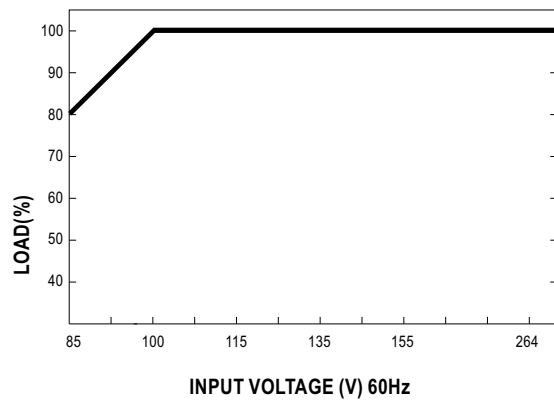
Block Diagram



Derating Curve



Output Derating VS Input Voltage



MODEL : PPT-125A

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 100 mVp-p (Max) V2: 100 mVp-p (Max) V3: 120 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1: 10 mVp-p (Max) V2: 34 mVp-p (Max) V3: 12 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 3.135 V~ 3.465 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	2.84V-3.76 V/230 VAC 2.84V-3.76 V/115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -3 %~ 3 % (Max) V2: -3 %~ 3 % (Max) V3: -6 %~ 6 % (Max)	I/P: 264 VAC / 100 VAC O/P:FULL/ 40 % LOAD Ta:25°C	V1: 1.6 %~ -0.6 % V2: 3.5 %~ -3.5 % V3: 3.6 %~ -3.6 %	P
4	LINE REGULATION	V1: -0.5 %~ 0.5 % (Max) V2: -0.5 %~ 0.5 % (Max) V3: -0.5 %~ 0.5 % (Max)	I/P: 264 VAC ~ 100 VAC O/P:FULL LOAD Ta:25°C	V1: 0 %~ -0.2 % V2: 0 %~ 0 % V3: 0 %~ -0.5 %	P
5	LOAD REGULATION	V1: -3 %~ 3 % (Max) V2: -3 %~ 3 % (Max) V3: -5 %~ 5 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.2 %~ 0 % V2: 0.3%~ -0.2% V3: 1.5 %~ -2.5%	P
6	CROSS REGULATION	V1: -3 %~ 3 % (Max) V2: -3 %~ 3 % (Max) V3: -6 %~ 6 % (Max)	I/P: 230 VAC O/P: Testing O/P 60%LOAD Other O/P 40%LOAD Change Ta:25°C	V1: 0.1 %~ -0.1 % V2: 1.7 %~ -2% V3: 3.6 %~ -2.7 %	P
7	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/ 472 ms 115 VAC/ 721 ms	P
8	RISE TIME	230VAC/ 30 ms (Max) 115VAC/ 30 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 17 ms 115 VAC/ 17 ms	P
9	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/ 33 ms 115 VAC/ 33 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: < 5 %	P
11	DYNAMIC LOAD	V1: 1000 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	158mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	90 VAC~ 264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	59V~ 264 V	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) 0.98/ 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	75 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	77.75%	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 = 0.49 A/ 230 VAC I = 0.94 A/ 115 VAC	P
6	INRUSH CURRENT	230 V/ 40 A(TYP) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	I =24 A/ 230 VAC	P
7	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25°C	L-FG: 1.15 mA N-FG: 1.15 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	142 %/ 230 VAC 138 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 3.6 V~ 4.45 V	I/P: 230 VAC I/P: 115 VAC O/P: MIN LOAD Ta:25°C	4.03 V/ 230 VAC 4.03 V/ 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 : PPT-125B WITH FAN 17.8CFM 1. ROOM AMBIENT BURN-IN : 1.5 HRS I/P: 230 VAC O/P: 125% LOAD Ta= 26.1 °C 2. HIGH AMBIENT BURN-IN : HRS I/P:230 VAC O/P: 125% LOAD Ta=52.4 °C			P	
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	P	
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230 VAC O/P: 125% LOAD WITH FAN Ta= -20 °C	TEST : OK	P	
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	P	
5	TEMPERATURE COEFFICIENT	± 0.05 %(0-50°C)	I/P: 230 VAC O/P: 125% LOAD WITH FAN	± 0.001 %(0-50°C)	P	
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	P	

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3.0 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:1.17 mA/ 3 KVAC I/P-FG: 7.07 mA/ 2.88KVAC O/P-FG: 0.25 mA/ 0.103KVAC 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: 27.8 G Ω I/P-FG: 9.3 G Ω O/P-FG: 25.9 G 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 122 IS THE MOST CRITICAL COMPONENT WITH FAN I/P: 230 VAC O/P:125% LOAD Ta=25 °C LIFE TIME= 216645 HRS I/P: 230 VAC O/P:125% LOAD Ta=50 °C LIFE TIME= 33330 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 94.7K 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	Q2 Rated 2850 : 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) 764 V (2) 764 V (3) 836 V	P
2	Diode Peak Voltage	D19 Rated ESA883-004 : 40 V 60 A D18 Rated BYQ28-200 : 200V 10A D17 Rated BYQ28-200 : 200V 10A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short (1)Full Load Turn on (2) Full Load (3)Output Short (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 13.9 V (2) 16 V (3) 19.1 V (1) 20.3 V (2) 22.2 V (3) 29.1 V (1) 46.4 V (2) 45.8 V (3) 56.2 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2003/10/20	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2003/12/17	PRODUCT SAMPLE A311A39	PASS	VINCENT TSENG	MAX LIN

2003/7/14 A50-F023