MEAN WELL 125W Triple Output with PFC Function **PPT-125 series**

MODEL：PPT-125C

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 100 mVp-p (Max) V2: 150 mVp-p (Max) V3: 150 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	V1: 29 mVp-p (Max) V2: 11 mVp-p (Max) V3: 15 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 4.75 V~ 5.25 V (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	4.38V~5.59 V/230 VAC 4.38V~5.59 V/115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -3 %~ 3 % (Max) V2: -5 %~ 5 % (Max) V3: -6 %~ 6 % (Max)	I/P: 264 VAC / 100 VAC O/P:FULL/ 40 % LOAD Ta:25℃	V1: -1 %~ 1 % V2: -2.9 %~ 2.9 % V3: -2.3 %~ 2.3 %	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℃	V1: 0 %~ 0 % V2: -0.05 %~ 0.05 % V3: 0 %~ 0 %	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℃	V1: 0.3 %~ 0 % V2: 0.6 %~ -0.3 % V3: 0.4 %~ -0.9%	P
6	CROSS REGULATION	V1: -3 %~ 3 % (Max) V2: -3 %~ 3 % (Max) V3: -5 %~ 5 % (Max)	I/P: 230 VAC O/P: Testing O/P 60%LOAD Other O/P 40%LOAD Change Ta:25℃	V1: 0.9 %~ -0.4 % V2: 1.8 %~ -2 % V3: 1.5 %~ -1.6 %	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℃	230 VAC/ 483 ms 115 VAC/ 737 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℃	230 VAC/ 20 ms 115 VAC/ 20 ms	P
9	HOLD UP TIME	230 VAC/ 20 ms (Min) 115 VAC/ 20 ms (Min)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230 VAC/ 30 ms 115 VAC/ 31 ms	P
10	OVER/UNDERSHOOT TEST	＜±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: ＜4 %	P
11	DYNAMIC LOAD	V1: 1000 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25℃	237mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	100 VAC~ 264 VAC (Typ)	I/P:TESTING O/P:FULL LOAD Ta:25℃	63V~ 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 (Typ) NO DAMAGE OSC	I/P: 264 VAC ~ 100 VAC O/P:FULL~MIN LOAD Ta:25℃	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℃	PF= 0.97 / 230 VAC PF= 1 / 115 VAC	P
4	EFFICIENCY	78 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	81.6%	P
5	INPUT CURRENT	230 V/ 0.75 A (Max) 115 V/ 1.7 A (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I = 0.57A/ 230 VAC I = 1.12A/ 115 VAC	P
6	INRUSH CURRENT	230 V/ 40 A (Max) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	I =31A/ 230 VAC	P
7	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25℃	L-FG: 1 mA N-FG: 1 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	130 %~ 160 %(Typ)	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25℃	143%/ 230 VAC 144%/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 5.75 V~ 6.75 V(Typ)	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	6.45V/ 230 VAC 6.44V/ 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℃	NO DAMAGE Hiccup Mode	P

ENVIRONMENT TEST

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>SPECICATION</th><th>TEST CONDITION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>1</td><td>TEMPERATURE RISE TEST</td><td colspan="3">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 ℃
2. HIGH AMBIENT BURN-IN： HRS
I/P:230 VAC O/P: 125% LOAD Ta=52.4 ℃

<table>
<tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta=26.1℃</th><th>HIGH AMBIENT Ta=52.4℃</th></tr>
<tr><td>1</td><td>BD1</td><td>RS606M 6A/800V REC</td><td>49.0℃</td><td>77.5℃</td></tr>
<tr><td>2</td><td>D1</td><td>IN5406 3A/600V DII</td><td>47.5℃</td><td>75.9℃</td></tr>
<tr><td>3</td><td>L1</td><td>TR-341</td><td>53.7℃</td><td>80.7℃</td></tr>
<tr><td>4</td><td>Q2</td><td>2SK2850 6A/900V FUJI</td><td>33.4℃</td><td>61.5℃</td></tr>
<tr><td>5</td><td>D4</td><td>HER208 2A/1KV REC</td><td>32.3℃</td><td>59.7℃</td></tr>
<tr><td>6</td><td>C40</td><td>22U/35V CAPXON ST 105℃</td><td>46.7℃</td><td>74.3℃</td></tr>
<tr><td>7</td><td>Q1</td><td>IRFP450 14A/500V FIR</td><td>44.1℃</td><td>72.2℃</td></tr>
<tr><td>8</td><td>T1 COIL</td><td>TF-922 LS</td><td>54.9℃</td><td>93.0℃</td></tr>
<tr><td>9</td><td>T1 CORE</td><td>TF-922 LS</td><td>45.9℃</td><td>72.5℃</td></tr>
<tr><td>10</td><td>C20</td><td>100U/25V NIPPON 105℃ KY</td><td>43.6℃</td><td>70.9℃</td></tr>
<tr><td>11</td><td>D3</td><td>HFA08TB60 8A/600V IR</td><td>52.1℃</td><td>81.3℃</td></tr>
<tr><td>12</td><td>C5</td><td>68U/400V 105℃ NIPPON KMX</td><td>46.9℃</td><td>74.1℃</td></tr>
<tr><td>13</td><td>D19</td><td>83-004 60A/40V</td><td>58.4℃</td><td>85.2℃</td></tr>
<tr><td>14</td><td>C112</td><td>1200U/16V 105℃ RUB ZL</td><td>47.9℃</td><td>75.6℃</td></tr>
<tr><td>15</td><td>C122</td><td>2200U/6.3V 105℃ RUB YXG</td><td>54.5℃</td><td>82.8℃</td></tr>
</table>
</td><td>P</td></tr>
<tr><td>2</td><td>OVER LOAD BURN-IN TEST</td><td>NO DAMAGE
1 HOUR (MIN)</td><td>I/P: 230 VAC
O/P: 135% LOAD WITH FAN
Ta:25℃</td><td>TEST： OK</td><td>P</td></tr>
<tr><td>3</td><td>LOW TEMPERATURE
TURN ON TEST</td><td>TURN ON AFTER 2 HOUR</td><td>I/P: 230 VAC
O/P: 125% LOAD WITH FAN
Ta= -20 ℃</td><td>TEST： OK</td><td>P</td></tr>
<tr><td>4</td><td>HIGH HUMIDITY
HIGH TEMPERATURE
HIGH VOLTAGE
TURN ON TEST</td><td>AFTER 12 HOURS
IN CHAMBER ON
CONTROL 50 ℃
NO DAMAGE</td><td>I/P: 272 VAC
O/P: 125% LOAD WITH FAN
Ta= 50 ℃
HUMIDITY= 95 %R.H</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>5</td><td>TEMPERATURE
COEFFICIENT</td><td>± 0.05 %(0~50℃)</td><td>I/P: 230 VAC
O/P: 125% LOAD WITH FAN</td><td>± 0.001 %(0~50℃)</td><td>P</td></tr>
<tr><td>6</td><td>VIBRATION TEST</td><td colspan="2">1 Carton & 1 Set Operating at I/P: 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℃</td><td>TEST：</td><td>N/A</td></tr>
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SAFETY TEST

NO	TEST ITEM	SPECICATION	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℃	I/P-O/P:1.13 mA I/P-FG: 6.9 mA O/P-FG: 0.24 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℃	I/P-O/P: 4.6 G Ω I/P-FG: 3.9 G Ω O/P-FG: 5GΩ NO DAMAGE	P
3	APPROVAL	TUV: Certificate NO ：R50038987 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℃	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25℃	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25℃	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℃	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℃	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℃	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 ℃ LIFE TIME= 216645 HRS I/P: 230 VAC O/P:125% LOAD Ta=50 ℃ 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℃	(1) 648 V (2) 728 V (3) 832 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℃	 (1) 24.7 V (2) 24 V (3) 26.6 V (1) 72.8 V (2) 56 V (3) 98.8 V (1) 71.6V (2) 58.8 V (3) 81.6V	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