

Report NO: 10P0A0018_I

ENP-7025B of AGP-3125 Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail Note : There are <u>0</u> defect(s) not list in the report, please check it in the DTS Website. <input type="checkbox"/> Pass with Deviation Comment:			
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date

12/08/2010

Approval

Jansin Lee

Test Engineer

Sean Hsu

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1. Project

ENP-7025B AC-DC Power for AGP-3125

2. Power Manufacturer

Enhance Electronics Co.,LTD

3. Team Member

PM : Alex Hsueh ; H/W : Peter Yao

4. Test Equipment

- 4.1. PCB : IMBI-QM57 A0.1 (BIOS 0.1)
- 4.2. CPU : Intel Celeron P4500 1.87GHz
- 4.3. Memory : DSL DDR3-1066 2GB
- 4.4. HDD : Toshiba , M/N : MK1665GSX , 160GB
- 4.5. Power Supply : Enhance Model : ENP-7025B O/P : 250W
- 4.6. LCD Monitor : CHIMEI , Model : A170E2-T08
- 4.7. USB Mouse : Logitech , Model : M-BT85
- 4.8. USB Keyboard : Logitech , Model : Y-BL49

5. AC Adapter Spec

AC Input : 90VAC~264VAC / 47Hz~63Hz

Parameter	Min	Nom.	Max	Peak	Unit
+3.3V	0.1	-	13		Amps
+5V	0.2	-	14		Amps
+12V1	0.6	-	18	20	Amps
+12V2	0.6	-	18	20	Amps
-12V	0.0	-	0.3		Amps
+5Vsb	0.0	-	2	2.5	Amps

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	3.5A	2.70A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	10.35A	-
	I/P:230VAC	A	13.5A	-
6.3. Input Frequency & Voltage	I/P:90VAC/47HZ	■ON □ OFF	-	PASS
	I/P:90VAC/63HZ	■ON □ OFF	-	PASS
	I/P:264VAC/47HZ	■ON □ OFF	-	PASS
	I/P:264VAC/63HZ	■ON □ OFF	-	PASS
6.4. Switching Test	Switching Time: 0.5 Sec MIN Load / Full Load	@90VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@230VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@264VAC □ON □ OFF	-	-
6.5. Efficiency	I/P:115VAC FULL LOAD	@80%Min	82.001%	PASS
	I/P:230VAC FULL LOAD	@80%Min	84.501%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±5%(3.3V)	0%	PASS
		<±5%(5V)	0%	PASS
		<±5%(12V)	0.016%	PASS
		<±10%(-12V)	0.267%	PASS
		<±5%(5VSB)	0.004%	PASS
6.7. Load Regulation	I/P:115VAC O/P:20%LOAD~FULL LOAD	<±5%(3.3V)	1.742/-0.606%	PASS
		<±5%(5V)	1.3/-1.85%	PASS
		<±5%(12V)	1.83/1.08%	PASS
		<±10%(-12V)	-1.108/-0.5%	PASS
		<±5%(5VSB)	0.1/-0.176%	PASS
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1 : 4.3(MAX)	-	-
		V2 : 7(MAX)	-	-
		V3 : 15.6(MAX)	-	-
6.9. Over-Circuit Protection	O/P: 3.3V	A(MAX)	-	-
	O/P: 5V	A(MAX)	-	-
	O/P: 12V	A(MAX)	-	-
6.10. Over-Load Protection	I/P:115VAC O/P:MIN LOAD	110~150%	135.6%	PASS
	I/P:230VAC O/P:MIN LOAD	110~150%	133.9%	PASS
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	5V&GND Short	-	PASS
	I/P:230VAC O/P:MIN LOAD	5V&GND Short	-	PASS

6.12. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	$\leq 50\text{mv}(3.3\text{V})$	48.1mv	PASS
		$\leq 50\text{mv}(5\text{V})$	23.1mv	PASS
		$\leq 120\text{mv}(12\text{V})$	39.4mv	PASS
		$\leq 120\text{mv}(-12\text{V})$	52.5mv	PASS
	I/P:230VAC O/P:FULL LOAD	$\leq 50\text{mv}(5\text{VSB})$	45.0mv	PASS
		$\leq 50\text{mv}(3.3\text{V})$	49.2mv	PASS
		$\leq 50\text{mv}(5\text{V})$	25.6mv	PASS
		$\leq 120\text{mv}(12\text{V})$	40.5mv	PASS
6.13. Setup Time	I/P:115VAC O/P:FULL LOAD	S(MAX)(5V)	245ms	-
	I/P:230VAC O/P:FULL LOAD	S(MAX) (5V)	212.5ms	-
6.14. Hold up Time	I/P:115VAC O/P:FULL LOAD	16mS(MIN) (5V)	18.3ms	PASS
	I/P:230VAC O/P:FULL LOAD	16mS(MIN) (5V)	17.9ms	PASS
6.15. Rise Time	I/P:115VAC O/P:FULL LOAD	20mS(MAX) (5V)	19.1ms	PASS
	I/P:230VAC O/P:FULL LOAD	20mS(MAX) (5V)	18.7ms	PASS
6.16. Turn on Overshoot	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	PASS
	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	PASS
6.17. Turn off Undershoot	Turn off undershoot shall not exceed 10% over nominal voltages		-	PASS
	Turn off undershoot shall not exceed 10% over nominal voltages		-	PASS
6.18. Remote ON/OFF	Simulate TTL signal to test this function		-	
6.19. Power Good Signal	Shall go high level with a delay of100~500ms		315ms	PASS
6.20. Power On In Low Temperature	I/P:115VAC (0 $^{\circ}$ C) After 2HR Power On			PASS
6.21. Power On In High Temperature	I/P:115VAC (40 $^{\circ}$ C)After 2HR Power On			PASS
6.22. Room Burn-in test	I/P:115VAC O/P: FULL LOAD TA:25 $^{\circ}$ C BURN-IN DURATION : 2 hour			PASS
6.23. On/Off Cycling	Times / on: 20 sec / off: 10 sec			-
6.24. Power Consumption Test	No Run Prime95	I/P: 100 VAC 0.41A 40.6 W	O/P: 3.3V/1.62A 5V/1.25A 12V/1.71A -12V/0.02A 5VSB/0.02A	PASS
	Run Prime95	I/P: 100 VAC 0.59A 58.9 W	O/P: 3.3V/1.54A 5V/1.55A 12V/2.94A -12V/0.02A 5VSB/0.02A	PASS

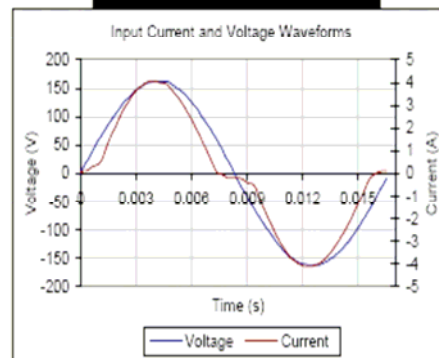
7. 80 PLUS Report

80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	86.11%
AVERAGE EFFICIENCY :	84.41%
80 PLUS COMPLIANT:	YES



Ecos ID #	1303
Manufacturer	ENHANCE ELECTRONICS CO., LTD.
Model Number	ENP-7025
Serial Number	N/A
Year	2009
Type	FLEX-ATX
Test Date	2/19/2009

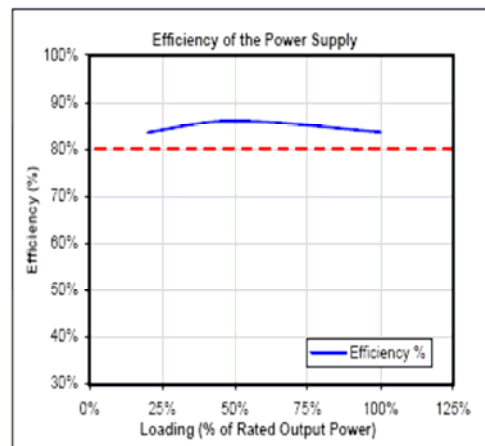
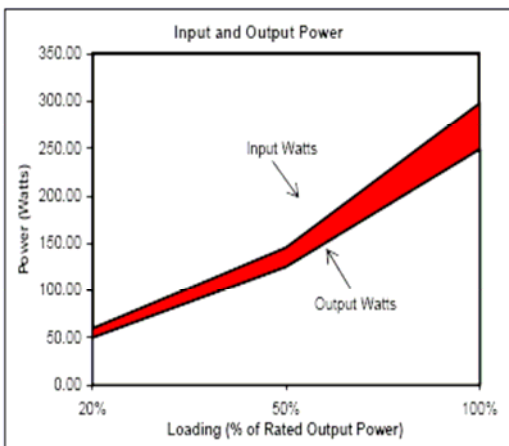


Input AC Current Waveform (ITHD = 24.07%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	3.5-1.5	Amps
Input Frequency	60-50	Hz
Rated Output Power	250	Watts

Note: All measurements were taken with input voltage at 115 V nominal and 60 Hz.

I _{RMS} A	PF	I _{THD} (%)	Load (%)	Fraction of Load	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)					Output Watts	Efficiency %
						12V (cumulative of 12V1, 12V2, etc.)	-12V	3.3V	5V*	5VSB		
0.53	0.9900	99.75%	20%	Light	59.94	12/3.4	11.7/0	3.4/0.9	5.1/0.9	5/0.2	50.08	83.55%
1.31	0.9696	24.07%	50%	Typical	145.81	12/8.6	11.8/0.1	3.3/2.2	5.1/2.3	5.1/0.5	125.55	86.11%
2.65	0.9773	21.00%	100%	Full	298.00	11.9/17.2	11.9/0.1	3.3/4.4	5.1/4.7	5/0.9	249.02	83.56%



These tests were conducted by a third party independent testing firm on behalf of the 80 PLUS[®] Program. 80 PLUS is a certification program to promote highly-efficient power supplies (greater than 80% efficiency in the active mode) in technology applications. <http://www.80plus.org/>

