Report NO: 11P0A0008_I

ENP-7025B
of
AGP-3155
Power Electronics Test Report

Summary	☑ Pass ☐ Fail ☐ 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	Approval	Test Engineer
05/27/2011	**Jansin Lee**	**Sean Hsu**

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1. Project

ENP-7025B AC-DC Power for AGP-3155

2. Power Manufacturer

Enhance Electronics Co.,LTD

3. Team Member

PM：Alex Hsueh； H/W：Jack Peng

4. Test Equipment

4.1. PCB：IMBI-QM57 A0.1 (12/14/2010)
4.2. CPU：Intel Celeron P4500 1.87GHz
4.3. Memory：DSL DDR3-1066 2GB
4.4. HDD：Seagate，M/N：ST3160318AS，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

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6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	3.5A	2.78A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	10.25A	-
	I/P:230VAC	A	12.4A	-
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	82.28%	PASS
	I/P:230VAC FULL LOAD	@80%Min	84.45%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±5%(3.3V)	0%	PASS
		<±5%(5V)	0%	PASS
		<±5%(12V)	0.02%	PASS
		<±10%(-12V)	0.27%	PASS
		<±5%(5VSB)	0.005%	PASS
6.7. Load Regulation	I/P:115VAC O/P:20%LOAD~FULL LOAD	<±5%(3.3V)	1.75/-0.66%	PASS
		<±5%(5V)	1.4/-1.88%	PASS
		<±5%(12V)	1.85/1.10%	PASS
		<±10%(-12V)	-1.11/-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%	136.6%	PASS
	I/P:230VAC O/P:MIN LOAD	110~150%	135.9%	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

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6.12. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	≦50mv(3.3V)	49.1mv	PASS
		≦50mv(5V)	25.1mv	PASS
		≦120mv(12V)	38.4mv	PASS
		≦120mv(-12V)	55.5mv	PASS
		≦50mv(5VSB)	48.0mv	PASS
	I/P:230VAC O/P:FULL LOAD	≦50mv(3.3V)	46.2mv	PASS
		≦50mv(5V)	24.6mv	PASS
		≦120mv(12V)	42.5mv	PASS
		≦120mv(-12V)	53.8mv	PASS
		≦50mv(5VSB)	48.5mv	PASS
6.13. Setup Time	I/P:115VAC O/P:FULL LOAD	S(MAX)(5V)	255ms	-
	I/P:230VAC O/P:FULL LOAD	S(MAX) (5V)	222.5ms	-
6.14. Hold up Time	I/P:115VAC O/P:FULL LOAD	16mS(MIN) (5V)	17.3ms	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)	19.6ms	PASS
	I/P:230VAC O/P:FULL LOAD	20mS(MAX) (5V)	18.8ms	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		325ms	PASS
6.20. Power On In Low Temperature	I/P:115VAC (0℃) After 2HR Power On			PASS
6.21. Power On In High Temperature	I/P:115VAC (40 ℃)After 2HR Power On			PASS
6.22. Room Burn-in test	I/P:115VAC O/P: FULL LOAD TA:25 ℃ 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 0.52A 61.7W	O/P: 3.3V/1.5A 5V/2.42A 12V/3.12A -12V/0.05A 5VSB/0.04A	PASS
	Run Prime95	I/P: 100 VAC 0.78A 76.9 W	O/P: 3.3V/1.5A 5V/3.19A 12V/4.04A -12V/0.05A 5VSB/0.04A	PASS

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7. 80 PLUS Report

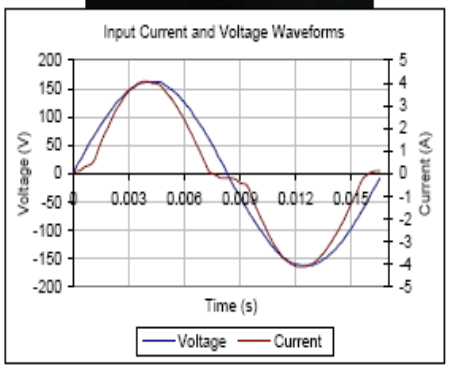
80 PLUS Verification and Testing Report

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

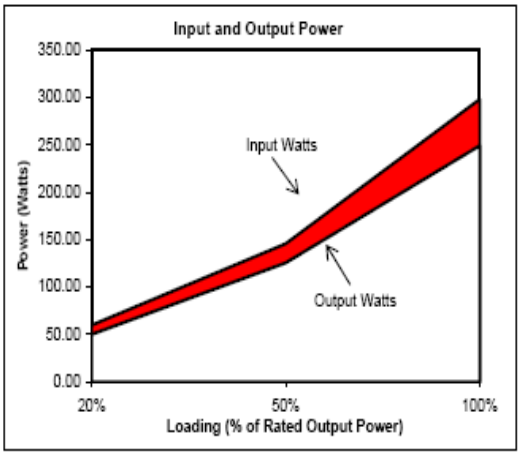
Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	3.5-1.5	Amps
Input Frequency	60-50	Hz
Rated Output Power	250	Watts

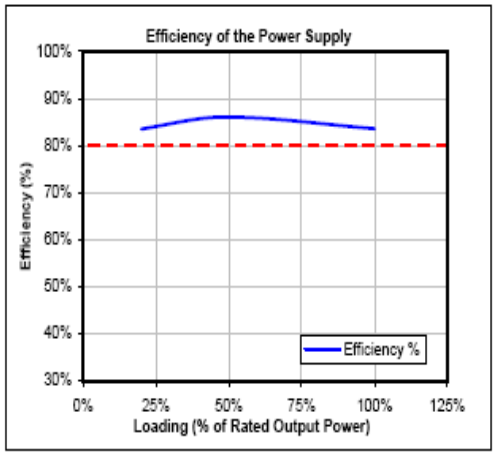
Note: All measurements were taken with input voltage at 115 V nominal and 60 Hz.



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

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%





ecos plug load solutions

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/*

80 PLUS

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