

MPD-807H of GCS-1100I Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <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

07/29/2010

Approval

Jansin Lee

Test Engineer

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1. Project

MPD-807H DC-DC Power Supply for GCS-1100I BIOS REV.0.1 (02/23/2010)

2. Power Manufacturer

MAGIC POWER

3. Team Member

PM : CY Juan ; ISD H/W : William Huang ; ISD ME : Vincent Chang

4. Test Equipment

4.1. CPU Board : EMB-9459T B1.0

4.2. CPU : INTEL ATOM N270 1.6GHz

4.3. Memory : Transcend DDR2-800 2GB /SEC K4T1G08400

4.4. SSD : Transcend , TS32GSSD25S-S 32GB

4.5. DC-DC Power Supply : Magic Power , Model : MPD-807H , O/P : ATX Power , 70Watt

4.6. AC Adapter : FSP , Model : FSP084-DMAA1 , O/P : 12V/7A , 84Watt

4.7. LCD Monitor : CHIMEI , Model : A170E2-T08

4.8. USB Mouse : Logitech , Model : M-BT85

4.9. USB Keyboard : Logitech , Model : Y-BL49

5. DC-DC Power Supply Spec

DC Input : 9~32VDC

Convection cooling		With 8.6CFM forced air-cooling	
Input voltage	Output wattage	Input voltage	Output wattage
9Vdc	60W	9Vdc	80W
10-11Vdc	65W	10-11Vdc	90W
12-32Vdc	70W	12-32Vdc	100W

DC Output : ATX OUTPUT

Output Voltage	Min. Output Current	Rated Output Current	Max output Current ^(Note 1)	Line Regulation	Load Regulation	Ripple & Noise p-p ^(Note 2)	Initial Setting Accuracy
+5V	0.5A	5A	8A	1%	2%	50mV	5.08V to 5.13V
+12V	0A	1.75A	3A	1%	4%	120mV	11.4V to 12.6V
-12V	0A	0.5A		1%	5%	120mV	-11.4V to -12.6V
+3.3V	0A	4A	6A	1%	2%	50mV	3.10V to 3.50V
+5Vsb	0A	0.75A		1%	2%	120mV	4.80V to 5.20V

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. DC Input Current	I/P:9VDC	15A	9.33A	PASS
6.2. MAX Inrush Current	I/P:9VDC	30A	2.75A	PASS
	I/P:32VDC	30A	7.75A	PASS
6.3. Input Frequency & Voltage	I/P:9VDC	■ON □ OFF	-	PASS
	I/P:32VDC	■ON □ OFF	-	PASS
6.4. Switching Test	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC □ON □ OFF	-	-
6.5. Efficiency	I/P:12VDC FULL LOAD	@80%Min	80.276%	PASS
	I/P:24VDC FULL LOAD	@80%Min	82.911%	PASS
6.6. Line Regulation	I/P:11.6VDC~12.6VDC	<±1%(3.3V)	0.015%	PASS
		<±1%(5V)	0.24%	PASS
		<±1%(12V)	-0.983%	PASS
		<±1%(-12V)	-0.987%	PASS
		<±1%(5VSB)	-0.05%	PASS
6.7. Load Regulation	I/P:9VDC O/P:MINLOAD~FULL LOAD	<±2%(3.3V)	1.21/0.212	PASS
		<±2%(5V)	2.45/0.95	PASS
		<±4%(12V)	-1.792/-3.65	PASS
		<±5%(-12V)	-3.275/-4.895	PASS
		<±2%(5VSB)	0.3/-0.75	PASS
6.7. Over-Voltage Protection	I/P:12VDC O/P:MIN LOAD	5V : 5.8~6.8	-	-
6.8. Over-Circuit Protection	O/P: 3.3V	A(MAX)	-	-
	O/P: 5V	A(MAX)	-	-
	O/P: 12V	A(MAX)	-	-
	O/P: -12V	A(MAX)	-	-
	O/P: 5VSB	A(MAX)	-	-
6.9. Over-Load Protection	I/P:9VDC		135%	-
	I/P:12VDC		146%	-
	I/P:32VDC		151%	-
6.10. Short Circuit Protect	I/P:12VDC O/P:MIN LOAD	3.3V&GND Short		PASS
	I/P:12VDC O/P:MIN LOAD	5V&GND Short		PASS
	I/P:12VDC O/P:MIN LOAD	12V&GND Short		PASS
	I/P:12VDC O/P:MIN LOAD	-12V&GND Short		PASS
	I/P:12VDC O/P:MIN LOAD	5VSB&GND Short		PASS
6.11. Ripple & Noise	I/P:12VDC O/P:FULL LOAD	≤ 50mv(3.3V)	29.4	PASS
		≤ 50mv(5V)	22.2	PASS
		≤ 120mv(12V)	26.2	PASS
		≤ 120mv(-12V)	40.0	PASS
		≤ 120mv(5VSB)	36.2	PASS

6.12. Setup Time	I/P:12VDC O/P:FULL LOAD	4S(MAX)	1.415S (5V)	PASS
6.13. Hold up Time	I/P:12VDC O/P:FULL LOAD	3mS(MIN)	5.3mS (5V)	PASS
6.14. Rise Time	I/P:12VDC O/P:FULL LOAD	-	3.64mS (5V)	PASS
6.15. 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
6.16. 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
6.17. Remote ON/OFF	Simulate TTL signal to test this function			-
6.18. Power Good Signal	Shall go high level with a delay of 100~500ms		310mS	PASS
6.19. Power On In Low Temperature	I/P:12VDC (0°C) After 2HR Power On			PASS
6.20. Power On In High Temperature	I/P:12VDC (45 °C)After 2HR Power On			PASS
6.21. Room Burn-in test	I/P:12VDC O/P: FULL LOAD TA:25 °C BURN-IN DURATION : 2 hour			PASS
6.22. On/Off Cycling	Times / on: 20 sec / off: 10 sec			-
6.23. Power Consumption Test (DC-DC POWER SUPPLY)	No Run Prime95	I/P: 9VDC 1.92A 17.28 W	O/P: 3.3V/0.03A 5V/1.64A 12V/0.62A -12V/0.05A 5VSB/0.14A	PASS
	Run Prime95	I/P: 9VDC 2.25A 20.25 W	O/P: 3.3V/0.03A 5V/1.80A 12V/0.74A -12V/0.07A 5VSB/0.14A	PASS
	No Run Prime95	I/P: 30VDC 0.58A 17.40 W	O/P: 3.3V/0.03A 5V/1.65A 12V/0.62A -12V/0.05A 5VSB/0.14A	PASS
	Run Prime95	I/P: 30VDC 0.68A 20.4 W	O/P: 3.3V/0.03A 5V/1.80A 12V/0.74A -12V/0.07A 5VSB/0.15A	PASS
6.24. Power Consumption Test (AC-DC ADAPTER)	No Run Prime95	I/P:100VAC 0.4A 19.2W	O/P:12V/1.47A17.64W	PASS
	Run Prime95	I/P:100VAC 0.45A 22.2W	O/P: 12V/1.68A 20.16W	PASS