

Report NO: 12I0A0002_I

FSP084-DMAA1 of GCS-2500 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

04/16/2012

Approval

Wayne Chen

Test Engineer

Sean Hsu

Table of Contents

1. Project.....	3
2. Power Manufacturer	3
3. Team Member	3
4. Test Equipment	3
5. AC Adapter Spec.....	3
6. Test Item.....	4
6.1. AC Input Current.....	4
6.2. MAX Inrush Current	4
6.3. Input Frequency & Voltage	4
6.4. Switching Test.....	4
6.5. Efficiency.....	4
6.6. Line Regulation.....	4
6.7. Load Regulation	4
6.8. Over-Voltage Protection	4
6.9. Over-Circuit Protection	4
6.10. Over-Load Protection	4
6.11. Short Circuit Protect.....	4
6.12. Line Voltage Surge.....	5
6.13. Line Voltage Sag	5
6.14. Ripple & Noise	5
6.15. Setup Time	5
6.16. Hold up Time.....	5
6.17. Rise Time.....	5
6.18. Turn on Overshoot	5
6.19. Turn off Undershoot	5
6.20. Remote ON/OFF	5
6.21. Power Good Signal.....	5
6.22. Power Consumption Test With DC Power	5
6.23. System Power Consumption Test	5

1. Project

FSP084-DMAA1 AC-DC Adapter for GCS-2500
CPU : INTEL Core I7-620M 2.66GHz

2. Power Manufacturer

FSP

3. Team Member

PM : Jason Liu ; H/W : Gary Lin ; ME : Peter Pan

4. Test Equipment

4.1. CPU Board : IMBI-QM57 REV.A1.2

4.2. Com Port & LAN Port Riser Card : PER-T167 REV.B1.0

4.3. HDD : Toshiba MK1060GSC160GB

4.4. Memory : Transcend DDR3- 1333 4GB*2

4.5. DC-DC Power Supply : MPD-810H , I/P : 10~30VDC O/P : 120Watt

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

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

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

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

5. AC Adapter Spec

AC Input : 100VAC~240VAC / 47Hz~63Hz

DC Output : 12Vdc Min Load : 0A Full Load : 7A / 84W

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	1.3A	0.998A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	4.65A	-
	I/P:230VAC	A	6.38A	-
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	-	PASS
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC ■ON □ OFF	-	PASS
	Switching Time: 0.5 Sec MIN Load / Full Load	@230VAC ■ON □ OFF	-	PASS
	Switching Time: 0.5 Sec MIN Load / Full Load	@264VAC ■ON □ OFF	-	PASS
6.5. Efficiency	I/P:90VAC O/P:5A	@83%Min	86.18%	PASS
	I/P:115VAC O/P:5A	@83%Min	87.42%	PASS
	I/P:230VAC O/P:5A	@83%Min	87.16%	PASS
	I/P:264VAC O/P:5A	@83%Min	86.75%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.043%	-
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<%	1.97%	-
	I/P:230VAC O/P:MIN~FULL LOAD	<%	2.045%	-
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1 : 17 (MAX)	-	-
6.9. Over-Circuit Protection	O/P: 12V	9.4A(MAX)	8.5A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	135%	124%	PASS
	I/P:115VAC O/P:MIN LOAD	135%	123%	PASS
	I/P:230VAC O/P:MIN LOAD	135%	124%	PASS
	I/P:264VAC O/P:MIN LOAD	135%	125%	PASS
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	12V&GND Short	-	PASS
	I/P:230VAC O/P:MIN LOAD	12V&GND Short	-	PASS

6.12. Line Voltage Surge	O/P: FULL LOAD	Surge voltage from 132VAC to 147VAC (0.5sec), back to 132VAC	-	PASS
	O/P: FULL LOAD	Surge voltage from 264VAC to 293VAC (0.5sec), back to 264VAC	-	PASS
6.13. Line Voltage Sag	O/P: FULL LOAD	Sag voltage from 108VAC to 80VAC (0.5sec), back to 108VAC	-	PASS
	O/P: FULL LOAD	Sag voltage from 198VAC to 161VAC (0.5sec), back to 198VAC	-	PASS
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	150mv	116.9mv	PASS
	I/P:230VAC O/P:FULL LOAD	150mv	95.8mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	3S(MAX)	738ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	515ms	PASS
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	20mS(MIN)	35.6ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	87.5ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	4.86ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.86ms	PASS
6.18. 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
6.19. 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
6.20. Remote ON/OFF	Simulate TTL signal to test this function		-	-
6.21. Power Good Signal	Shall go high level with a delay of100~500ms		-	-
6.22. Power Consumption Test With DC Power	No Run Prime95	I/P:10VDC 4.08A 40.8W		PASS
	Run Prime95	I/P:10VDC 6.95A 69.5W		PASS
	No Run Prime95	I/P:30VDC 1.3A 39W		PASS
	Run Prime95	I/P:30VDC 2.25A 67.5W		PASS
6.23. System Power Consumption Test	No Run Prime95	I/P:100VAC 0.43A 46.1W	O/P: 12V/2.94A	PASS
	Run Prime95	I/P:100VAC 0.76A 76.1W	O/P: 12V/5.24A	PASS