

Report NO: 13P0A0019_I

FSP084-DMAA1 of ACP-5210 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 <hr style="width: 80%; margin: 0 auto;"/> 12/11/2013	Approval <hr style="width: 80%; margin: 0 auto;"/> Tom Lin	Test Engineer <hr style="width: 80%; margin: 0 auto;"/> 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 On In Low Temperature	5
6.23. Power On In High Temperature	5
6.24. System Power Consumption Test	5

1. Project

FSP084-DMAA1 AC-DC Adapter for ACP-5210

2. Power Manufacturer

FSP

3. Team Member

PM : Alan Chou ; PPC H/W : Jack Peng

4. Test Equipment

4.1. PCB : GENE-HD05 REV.A1.0 BIOS: R0.1(C5L0AM01) (11/25/2013)

4.2. CPU : AMD G-T56N 1.67GHz

4.3. Memory : DSL DDR3-1066 4GB ELPIDA J2108BDBG-DJ-F

4.4. HDD : TOSHIBA MK2576GSX 2.5" 250G

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

4.6. USB Keyboard : COMPAQ , Model : KB-9963

4.7. USB Mouse : Logitech , M/N : M-CAA43

5. AC Adapter Spec

AC Input : 90VAC~264VAC / 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	0.991A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	4.57A	-
	I/P:230VAC	A	6.32A	-
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	86.007%	PASS
	I/P:115VAC O/P:5A	@83%Min	87.355%	PASS
	I/P:230VAC O/P:5A	@83%Min	87.029%	PASS
	I/P:264VAC O/P:5A	@83%Min	86.674%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.042%	-
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<%	1.975%	-
	I/P:230VAC O/P:MIN~FULL LOAD	<%	2.042%	-
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)	8.4A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	135%	120%	PASS
	I/P:115VAC O/P:MIN LOAD	135%	122%	PASS
	I/P:230VAC O/P:MIN LOAD	135%	120%	PASS
	I/P:264VAC O/P:MIN LOAD	135%	121%	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	$\leq 150\text{mv}$	110.9mv	PASS
	I/P:230VAC O/P:FULL LOAD	$\leq 150\text{mv}$	93.8mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	3S(MAX)	729ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	505ms	PASS
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	20mS(MIN)	32.6ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	84.5ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	4.76ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.76ms	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 of 100~500ms			-
6.22. Power On In Low Temperature	I/P:115VAC (0°C) After 2HR Power On			-
6.23. Power On In High Temperature	I/P:115VAC (40°C)After 2HR Power On			-
6.24. System Power Consumption Test	No Run Prime95	I/P:100VAC 0.50A 24.6W	O/P: 12V/1.98A 23.76W	PASS
	Run Prime95	I/P:100VAC 0.71A 34.5W	O/P: 12V/2.5A 30W	PASS