

Report NO: 13P0A0001\_I

# FSP084-DMAA1 of ACP-2153 Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> <b>Passed</b> <input type="checkbox"/> <b>Failed</b> <input type="checkbox"/> <b>Passed with Deviation</b> <b>Comment:</b> _____			
<b>Test Result Summary</b>				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date  
\_\_\_\_\_  
**01/29/2013**

Approval  
\_\_\_\_\_  
**Tom Lin**

Test Engineer  
\_\_\_\_\_  
**Sean Hsu**

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**1. Project**

FSP084-DMAA1 AC-DC Adapter of ACP-2153

**2. Power Manufacturer**

FSP

**3. Team Member**

PM : Lee Lee ; EE : Peter Yao

**4. Test Equipment**

- 4.1. CPU Board : GENE-CV05 A1.0 BIOS REV. R0.2(08/30/2012)
- 4.2. CPU : INTEL ATOM D2550 1.86GHz
- 4.3. HDD : WD , TOSHIBA MK1060GSC 100GB
- 4.4. MEMORY : TRANSCEND , DDR3-1333 4GB
- 4.5. Power Supply : FSP , Model : FSP084-DMAA1 , O/P : 12V/7A , 84Watt
- 4.6. USB Keyboard : Logitech , Model : Y-BL49
- 4.7. 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	0.98A	Passed
6.2. MAX Inrush Current	I/P:115VAC	A	4.70A	-
	I/P:230VAC	A	6.48A	-
6.3. Input Frequency & Voltage	I/P:90VAC/47HZ	■ON □ OFF	-	Passed
	I/P:90VAC/63HZ	■ON □ OFF	-	Passed
	I/P:264VAC/47HZ	■ON □ OFF	-	Passed
	I/P:264VAC/63HZ	■ON □ OFF	-	Passed
6.4. Switching Test	Switching Time: 0.5 Sec MIN Load / Full Load	@90VAC ■ON □ OFF	-	Passed
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC ■ON □ OFF	-	Passed
	Switching Time: 0.5 Sec MIN Load / Full Load	@230VAC ■ON □ OFF	-	Passed
	Switching Time: 0.5 Sec MIN Load / Full Load	@264VAC ■ON □ OFF	-	Passed
6.5. Efficiency	I/P:90VAC O/P:5A	@83%Min	86.25%	Passed
	I/P:115VAC O/P:5A	@83%Min	87.46%	Passed
	I/P:230VAC O/P:5A	@83%Min	87.20%	Passed
	I/P:264VAC O/P:5A	@83%Min	86.80%	Passed
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.043%	-
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<%	1.92%	-
	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	Passed
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	135%	120%	Passed
	I/P:115VAC O/P:MIN LOAD	135%	121%	Passed
	I/P:230VAC O/P:MIN LOAD	135%	123%	Passed
	I/P:264VAC O/P:MIN LOAD	135%	124%	Passed
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	12V&GND Short	-	Passed
	I/P:230VAC O/P:MIN LOAD	12V&GND Short	-	Passed

6.12. Line Voltage Surge	O/P: FULL LOAD	Surge voltage from 132VAC to 147VAC (0.5sec), back to 132VAC	-	Passed
	O/P: FULL LOAD	Surge voltage from 264VAC to 293VAC (0.5sec), back to 264VAC	-	Passed
6.13. Line Voltage Sag	O/P: FULL LOAD	Sag voltage from 108VAC to 80VAC (0.5sec), back to 108VAC	-	Passed
	O/P: FULL LOAD	Sag voltage from 198VAC to 161VAC (0.5sec), back to 198VAC	-	Passed
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	$\leq 150\text{mv}$	120.9mv	Passed
	I/P:230VAC O/P:FULL LOAD	$\leq 150\text{mv}$	96.8mv	Passed
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	3S(MAX)	745ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	520ms	Passed
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	20mS(MIN)	35.6ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	87.5ms	Passed
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	4.86ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.86ms	Passed
6.18. Turn on Overshoot	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	Passed
	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	Passed
6.19. Turn off Undershoot	Turn off undershoot shall not exceed 10% over nominal voltages		-	Passed
	Turn off undershoot shall not exceed 10% over nominal voltages		-	Passed
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. System Power Consumption Test (DC-DC Power Board)	No Run Prime95	I/P:9VDC 1.90A 17.1W		Passed
	Run Prime95	I/P:9VDC 2.2A 19.8W		Passed
	No Run Prime95	I/P:30VDC 0.6A 18W		Passed
	Run Prime95	I/P:30VDC 0.73A 21.9W		Passed
6.23. System Power Consumption Test (With AC Adapter)	No Run Prime95	I/P:100VAC 0.44A 19.1W	O/P: 12V/1.45A 17.4W	Passed
	Run Prime95	I/P:100VAC 0.51A 22.6W	O/P: 12V/1.7A 20.4W	Passed