

Report NO: 14P0A0007\_I

# FSP084-DMAA1

## with

# ACP-5153

## Power Electronics Test Report

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

Issue date	Approval	Test Engineer
<u>06/09/2014</u>	<u>Tom Lin</u>	<u>Sean Hsu</u>

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**1. Project**

FSP084-DMAA1 AC-DC Adapter for ACP-5153

**2. Power Manufacturer**

FSP

**3. Team Member**

PM : Alan Chou ; PPC H/W : Peter Yao

**4. Test Equipment**

4.1. PCB : GENE-CV05 REV A1.0 BIOS: R0.1(C5F3AM01) (12/19/2013)

4.2. CPU : CPU : Intel ATOM D2550 1.86GHz

4.3. Memory : DSL DDR3-1333 2GB

4.4. HDD : TOSHIBA MK1676GSX 2.5" 160G

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	0.995A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	4.58A	-
	I/P:230VAC	A	6.35A	-
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	86.017%	PASS
	I/P:115VAC O/P:5A	@83%Min	87.385%	PASS
	I/P:230VAC O/P:5A	@83%Min	87.039%	PASS
	I/P:264VAC O/P:5A	@83%Min	86.654%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.052%	-
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-Current Protection	O/P: 12V	9.4A(MAX)	8.3A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	135%	117%	PASS
	I/P:115VAC O/P:MIN LOAD	135%	118%	PASS
	I/P:230VAC O/P:MIN LOAD	135%	119%	PASS
	I/P:264VAC O/P:MIN LOAD	135%	118%	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)	730ms	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)	33.6ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	85.5ms	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)	5.56ms	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 0.42A 20.4W	O/P: 12V/1.37A 16.44W	PASS
	Run Prime95	I/P:100VAC 0.48A 23.6W	O/P: 12V/1.7A 20.4W	PASS
	Sleep Mode	I/P:100VAC 0.06A 2.4W		PASS
	Off Mode	I/P:100VAC 0.06A 2.3W		PASS