

Report NO: 14P0A0013_I

FSP084-DMAA1 with BOXER-6614 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

12/19/2014

Approval

Vincent Chen

Test Engineer

Sean Hsu

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1. Project

FSP084-DMAA1 AC-DC Adapter for BOXER-6614
CPU : INTEL CELERON N2930 1.83GHz

2. Power Manufacturer

FSP

3. Team Member

PM : Jackie Huang ; RD : Sion Weng

4. Test Equipment

- 4.1. CPU Board : GENE-BT05.A1.0 BIOS Rev : R1.0 (B614AM10)(12/05/2014)
- 4.2. HDD : TOSHIBA , MK1060GSC , 100GB
- 4.3. Memory : INNODISK DDR3-1600 8GB
- 4.4. LCD Monitor : CHIMEI , Model : A170E2-T08
- 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	0.995A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	4.72A	-
	I/P:230VAC	A	6.50A	-
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	86.26%	PASS
	I/P:115VAC O/P:5A	@83%Min	87.43%	PASS
	I/P:230VAC O/P:5A	@83%Min	87.18%	PASS
	I/P:264VAC O/P:5A	@83%Min	86.72%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.043%	-
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<%	1.96%	-
	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)	8.6A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	135%	123%	PASS
	I/P:115VAC O/P:MIN LOAD	135%	122%	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	$\leq 150\text{mv}$	118.9mv	PASS
	I/P:230VAC O/P:FULL LOAD	$\leq 150\text{mv}$	97.8mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	3S(MAX)	752ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	526ms	PASS
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	20mS(MIN)	34.6ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	88.5ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	4.88ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.87ms	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 Consumption Test with DC Power	No Run Prime95	I/P:9VDC 0.52A 4.68W		PASS
	Run Prime95	I/P:9VDC 0.93A 8.37W		PASS
	No Run Prime95	I/P:30VDC 0.166A 4.98W		PASS
	Run Prime95	I/P:30VDC 0.32A 9.6W		PASS
6.23. System Power Consumption Test	No Run Prime95	I/P:100VAC 0.17A 7.6W	O/P: 12V/0.4A 4.8W	PASS
	Run Prime95	I/P:100VAC 0.23A 10.5W	O/P: 12V/0.75A 9W	PASS
	SLEEP Mode	I/P:100VAC 0.03A 1.6W		PASS
	OFF Mode	I/P:100VAC 0.03A 1.5W		PASS