

FSP084-DMAA1 of AIS-E2-CV1 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	Approval	Test Engineer
07/16/2013	Tom Lin	Sean Hsu

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1. Project

FSP084-DMAA1 AC-DC Adapter for AIS-E2-CV1

2. Power Manufacturer

FSP

3. Team Member

PM : Jill Chu ; ISD H/W : Gary Lin

4. Test Equipment

4.1. PCB : EMB-CV1 REV.A1.0 BIOS: R1.6(10/23/2012)

4.2. CPU : Intel ATOM D2550 1.86GHz

4.3. Memory : DSL DDR3-1333 4GB*2

4.4. SATA HDD : Toshiba MK1676GSX 160GB

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

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

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

4.8. LCD Monitor : CHIMEI , Model : 22SH-L1920*1080

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	5.2A	-
	I/P:230VAC	A	8.6A	-
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	86.52%	PASS
	I/P:115VAC O/P:5A	@83%Min	87.34%	PASS
	I/P:230VAC O/P:5A	@83%Min	87.62%	PASS
	I/P:264VAC O/P:5A	@83%Min	86.82%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.046%	-
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<%	2.02%	-
	I/P:230VAC O/P:MIN~FULL LOAD	<%	2.15%	-
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%	125%	PASS
	I/P:115VAC O/P:MIN LOAD	135%	124%	PASS
	I/P:230VAC O/P:MIN LOAD	135%	125%	PASS
	I/P:264VAC O/P:MIN LOAD	135%	126%	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

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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	$\leq 150\text{mv}$	115mv	PASS
	I/P:230VAC O/P:FULL LOAD	$\leq 150\text{mv}$	98mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	3S(MAX)	732ms	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)	32.5ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	86.8ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	4.95ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.85ms	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. Power On In Low Temperature	I/P:115VAC (0°C) After 2HR Power On		-	-
6.21. Power On In High Temperature	I/P:115VAC (40°C)After 2HR Power On		-	-
6.22. System Power Consumption Test (With AC Adapter)	No Run Prime95	I/P:100VAC 0.24A 11.4W	O/P: 12V/0.7A 8.4W	PASS
	Run Prime95	I/P:100VAC 0.31A 15.1W	O/P: 12V/0.92A 11.04W	PASS