

Report NO: 13E0A0003_I

FSP084-DMAA1 of ETKD-JPHOKI01-B01 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

10/07/2013

Approval

Tom Lin

Test Engineer

Sean Hsu

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1. Project

FSP084-DMAA1 AC-DC Adapter for ETKD-JPHOKI01-B01
CPU: Intel Atom N2600 , 1.60GHz

2. Power Manufacturer

FSP

3. Team Member

PM : Ben Hsu ; RD : Vic Lin

4. Test Equipment

4.1. CPU Board : PFM-CSV Rev B R1.0 (PFCVBM10) (5/23/2013)

4.2. HDD : FiD 2.5" SATA 10000 PLUS HDD 32GB

4.3. Memory : DSL DDR3-1333 2GB

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:7VDC 2.18A 15.26W		PASS
	Run Prime95	I/P:7VDC 2.68A 18.76W		PASS
	No Run Prime95	I/P:30VDC 0.48A 14.4W		PASS
	Run Prime95	I/P:30VDC 0.55A 16.5W		PASS
6.23. System Power Consumption Test	No Run Prime95	I/P:100VAC 0.32A 15.5W	O/P: 12V/1.15A 13.8W	PASS
	Run Prime95	I/P:100VAC 0.37A 18.0W	O/P: 12V/1.36A 16.32W	PASS