

FSP036-1AD101C of AEC-6841  
**Power Electronics Test Report**

Report NO.: 09P0A0021\_I

*Wenyuan Yang*

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**Approved By**

Sep.17.2009

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**Date**

*Sean Hsu*

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**Issued By**

Sep.17.2009

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**Date**

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**1. Project**

FSP036-1AD101C AC-DC Power for AEC-6841

**2. Power Manufacturer**

FSP GROUP INC.

**3. Team Member**

PM : Linux Wang ; PPC H/W : River Yang

**4. Test Equipments**

- 4.1. CPU : INTEL ATOM N270 1.6GHz
- 4.2. CPU Board : XTX-945GSE A1.0
- 4.3. Memory : DSL , DDR2-667 1GB , M/N : SEC K4T5108306
- 4.4. HDD : FUJITSU , 40GB , M/N : MHW2040AC
- 4.5. AC Adapter : FSP036-1AD101C O/P: 12V/3A
- 4.6. LCD Monitor : Samsung , Model : T190 1440\*900(WXGA+)
- 4.7. PS2 Keyboard : COMPAQ , Model : KB-9963
- 4.8. PS2 Mouse : Logitech , M/N : M-CAA43

**5. Photos of Product**

Fig.5.1. —EUT



## 6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:90VAC	A	0.8A	-
6.2. MAX Inrush Current	I/P:115VAC	15A	5.06A	PASS
	I/P:230VAC	30A	8.12A	PASS
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 FULL LOAD	@75%Min	82.879%	PASS
	I/P:115VAC FULL LOAD	@75%Min	84.007%	PASS
	I/P:230VAC FULL LOAD	@75%Min	84.792%	PASS
	I/P:264VAC FULL LOAD	@75%Min	83.799%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	0.042%	PASS
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±3%	2.625/0.808	PASS
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±3%	2.6/0.808	PASS
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1 : 13.44~15.84(MAX)	-	-
6.9. Over-Circuit Protection	O/P: 12V	-(MAX)	-	-
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	110~150%	130.2	PASS
	I/P:115VAC O/P:MIN LOAD	110~150%	128.4	PASS
	I/P:230VAC O/P:MIN LOAD	110~150%	128.5	PASS
	I/P:264VAC O/P:MIN LOAD	110~150%	128.3	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 132VDC	-	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 198VDC	-	PASS
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	≤120mv	78.1 mv	PASS
	I/P:230VAC O/P:FULL LOAD	≤120mv	76.6mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	S(MAX)	1.021S	-
	I/P:230VAC O/P:FULL LOAD	S(MAX)	402mS	-
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	6mS(MIN)	20.85mS	PASS
	I/P:230VAC O/P:FULL LOAD	6mS(MIN)	96.5mS	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	17.55mS	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	17.15mS	-
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 ( 50 °C ) After 2HR Power On			-
6.24. Room Burn-in test	I/P: 115VAC O/P: FULL LOAD TA: 25 °C BURN-IN DURATION : 2 hour			PASS
6.25. On/Off Cycling	Times / on: 20 sec / off: 10 sec			-
6.26. System Power Consumption Test (DC-DC Power Board)	No Run Prime95	I/P: 9VDC 1.22A 10.98W		PASS
	Run Prime95	I/P: 9VDC 1.29A 11.61W		PASS
	No Run Prime95	I/P: 30VDC 0.367A 11.01W		PASS
	Run Prime95	I/P: 30VDC 0.395A 11.85W		PASS
6.27. Adapter Power Consumption Test	No Run Prime95	I/P: 100VAC 0.28A 13.6W	O/P: 12V/0.87A	PASS
	Run Prime95	I/P: 100VAC 0.29A 14.8W	O/P: 12V/0.952A	PASS

## 7. Test Result and Observation

No fault was found during the test