

# FSP120-AAB of AEC-6924 Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <b>Note : There are <u>0</u> defect(s) not list in the report, please check it in the DTS Website.</b> <input type="checkbox"/> Pass with Deviation <b>Comment:</b> _____			
<b>Test Result Summary</b>				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date

**12/30/2010**

Approval

**Jansin Lee**

Test Engineer

**Sean Hsu**

## Table of Contents

1. Project .....	3
2. Power Manufacturer .....	3
3. Team Member .....	3
4. Test Equipment .....	3
5. AC Adapter Spec .....	3
6. Test Item .....	4
6.1. AC Input Current .....	4
6.2. MAX Inrush Current .....	4
6.3. Input Frequency & Voltage .....	4
6.4. Switching Test .....	4
6.5. Efficiency .....	4
6.6. Line Regulation .....	4
6.7. Load Regulation .....	4
6.8. Over-Voltage Protection .....	4
6.9. Over-Circuit Protection .....	4
6.10. Over-Load Protection .....	4
6.11. Short Circuit Protect .....	4
6.12. Line Voltage Surge .....	4
6.13. Line Voltage Sag .....	5
6.14. Ripple & Noise .....	5
6.15. Setup Time .....	5
6.16. Hold up Time .....	5
6.17. Rise Time .....	5
6.18. Turn on Overshoot .....	5
6.19. Turn off Undershoot .....	5
6.20. Remote ON/OFF .....	5
6.21. Power Good Signal .....	5
6.22. Power On In Low Temperature .....	5
6.23. Power On In High Temperature .....	5
6.24. System 4 Corner test .....	5
6.25. Power Consumption Test With DC Power .....	5
6.26. Power Consumption Test With AC Adapter .....	5

## 1. Project

FSP120-AAB AC-DC Adapter for AEC-6924 BIOSREV. 0.7(12/22/2010)

## 2. Power Manufacturer

FSP

## 3. Team Member

PM : Linux Wang ; PPC H/W : Kevin Liu

## 4. Test Equipment

4.1. CPU Board : COM-45GS REV.A1.0

4.2. CPU : Intel Core2 Duo P9300 2.26GHZ

4.3. Memory : DSL DDR3-1066 4GB

4.4. HDD : TOSHIBA , MK1665GSX , 160GB

4.5. AC Adapter : FSP , Model : FSP120-AAB , O/P : 19V/6.32A , 120Wat

4.6. LCD Monitor : CHIMEI , Model : A170E2-T08

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

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

## 5. AC Adapter Spec

AC Input : 90VAC~264VAC / 47Hz~63Hz

DC Output : 19Vdc Min Load : 0A ; Max Load : 6.32A / 120W

## 6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	1.7A	1.53A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	11.7A	-
	I/P:230VAC	220A	18.3A	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	@86%Min	86.678%	PASS
	I/P:115VAC FULL LOAD	@86%Min	88.115%	PASS
	I/P:230VAC FULL LOAD	@86%Min	89.422%	PASS
	I/P:264VAC FULL LOAD	@86%Min	89.106%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	0.421%	PASS
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±5%	1.105%	PASS
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±5%	1.473%	PASS
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1 : V (MAX)	-	N/A
6.9. Over-Circuit Protection	O/P: 19V	A(MAX)	8.58A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	%	136.00%	-
	I/P:115VAC O/P:MIN LOAD	%	134.58%	-
	I/P:230VAC O/P:MIN LOAD	%	150.41%	-
	I/P:264VAC O/P:MIN LOAD	%	152.00%	-
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	19V&GND Short	-	PASS
	I/P:230VAC O/P:MIN LOAD	19V&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 198VDC	-	PASS
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	≤ 300mv	121.9mv	PASS
	I/P:230VAC O/P:FULL LOAD	≤ 300mv	106.3mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	175ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	176.75ms	-
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	8mS(MIN)	31.1ms	PASS
	I/P:230VAC O/P:FULL LOAD	8mS(MIN)	29.8ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	12.8ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	12.6ms	-
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 of100~500ms		-	-
6.22. Power On In Low Temperature	I/P:115VAC ( 0℃ ) After 2HR Power On		-	-
6.23. Power On In High Temperature	I/P:115VAC ( 40 ℃ )After 2HR Power On		-	-
6.24. System 4 Corner test	I/P:90VAC ( 0℃ ) BURN-IN DURATION : 2 hour I/P:90VAC ( 40℃ ) BURN-IN DURATION : 2 hour I/P:264VAC ( 0℃ ) BURN-IN DURATION : 2 hour I/P:264VAC ( 40℃ ) BURN-IN DURATION : 2 hour		-	-
6.25. Power Consumption Test With DC Power	No Run Prime95	I/P:9VDC 2.03A 18.27W		PASS
	Run Prime95	I/P:9VDC 4.52A 40.68W		PASS
	No Run Prime95	I/P:48VDC 0.48A 23.04W		PASS
	Run Prime95	I/P:48VDC 1.01A 48.48W		PASS
6.26. Power Consumption Test With AC Adapter	No Run Prime95	I/P:100VAC 0.23A 23.1W	O/P: 19V/1.05A	PASS
	Run Prime95	I/P:100VAC 0.49A 48.9W	O/P: 19V/2.37A	PASS