

Report NO: 11P0A0020\_I

# FSP120-AAB of AEC-6876 Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> <b>Pass</b> <input type="checkbox"/> <b>Fail</b> <input type="checkbox"/> <b>Pass with Deviation</b> <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  
12/07/2011

Approval  
**Jansin Lee**

Test Engineer  
**Sean Hsu**

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**1. Project**

FSP120-AAB AC-DC Adapter for AEC-6876 BIOS REV. R0.2(12/01/2011)

**2. Power Manufacturer**

FSP

**3. Team Member**

PM : Barnabas Chen ; PPC H/W : Sion Weng

**4. Test Equipment**

4.1. CPU Board : EMB-QM67 REV.A0.2

4.2. CPU : Intel CoreI5-2510E 2.5GHZ

4.3. Memory : DSL DDR3-1066 4GB\*2

4.4. HDD : TOSHIBA , MK1060GSC , 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	1.55A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	11.8A	-
	I/P:230VAC	220A	19.3A	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	86.778%	PASS
	I/P:115VAC FULL LOAD	@86%Min	88.125%	PASS
	I/P:230VAC FULL LOAD	@86%Min	89.452%	PASS
	I/P:264VAC FULL LOAD	@86%Min	89.126%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	0.45%	PASS
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±5%	1.15%	PASS
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±5%	1.48%	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)	8.6A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	%	138.00%	-
	I/P:115VAC O/P:MIN LOAD	%	136.58%	-
	I/P:230VAC O/P:MIN LOAD	%	152.41%	-
	I/P:264VAC O/P:MIN LOAD	%	154.00%	-
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

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<b>6.13. Line Voltage Sag</b>	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
<b>6.14. Ripple &amp; Noise</b>	I/P:115VAC O/P:FULL LOAD	≤ 300mv	125.9mv	PASS
	I/P:230VAC O/P:FULL LOAD	≤ 300mv	110.3mv	PASS
<b>6.15. Setup Time</b>	I/P:115VAC O/P:FULL LOAD	mS(MAX)	178ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	177.5ms	-
<b>6.16. Hold up Time</b>	I/P:115VAC O/P:FULL LOAD	8mS(MIN)	33ms	PASS
	I/P:230VAC O/P:FULL LOAD	8mS(MIN)	23ms	PASS
<b>6.17. Rise Time</b>	I/P:115VAC O/P:FULL LOAD	mS(MAX)	15.8ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	16.6ms	-
<b>6.18. Turn on Overshoot</b>	Turn on overshoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	PASS
	Turn on overshoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	PASS
<b>6.19. Turn off Undershoot</b>	Turn off undershoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	PASS
	Turn off undershoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	PASS
<b>6.20. Remote ON/OFF</b>	Simulate TTL signal to test this function		-	-
<b>6.21. Power Good Signal</b>	Shall go high level with a delay of100~500ms		-	-
<b>6.22. Power On In Low Temperature</b>	I/P:115VAC ( 0℃ ) After 2HR Power On		-	-
<b>6.23. Power On In High Temperature</b>	I/P:115VAC (40 ℃)After 2HR Power On		-	-
<b>6.24. Power Consumption Test With DC Power</b>	No Run Prime95	I/P:9VDC 1.47A 13.3W		PASS
	Run Prime95	I/P:9VDC 4.54A 40.86W		PASS
	No Run Prime95	I/P:30VDC 0.44A 13.2W		PASS
	Run Prime95	I/P:30VDC 1.38A 41.4W		PASS
<b>6.25. Power Consumption Test With AC Adapter</b>	No Run Prime95	I/P:100VAC 0.16A 13.5W	O/P: 19V/0.72A	PASS
	Run Prime95	I/P:100VAC 0.44A 43.6W	O/P: 19V/1.87A	PASS