

Report NO: 14P0A0001_I

FSP120-AAB of AEC-6913 Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> Passed			
	<input type="checkbox"/> Failed			
<input type="checkbox"/> Passed 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
<u>01/22/2014</u>	<u>Tom Lin</u>	<u>Sean Hsu</u>

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1. Project

FSP120-AAB AC-DC Adapter for AEC-6913
R0.2(A913AM02) (12/13/2013)

2. Power Manufacturer

FSP

3. Team Member

PM : Lee Lee ; H/W : Sion Weng

4. Test Equipment

4.1. CPU Board : COM-KB REV.B1.0

4.2. Carrier Board : DTXP695016913 A0.2

4.3. CPU : INTEL , ATOM D2550 1.86GHz

4.4. HDD : TOSHIBA , MK1060GSC , 100GB

4.5. Memory : TRANSCEND , DDR3- 1333 4GB

4.6. Power Supply : FSP , M/N : FSP120-AAB , O/P : 12V/6.32A 120Watt

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

4.8. USB Mouse : LOGITECH , Model : M-BT85

4.9. USB Keyboard : LOGITECH , Model : Y-BL49

5. AC Adapter Spec

AC Input : 100VAC~240VAC / 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	1.20A	Passed
6.2. MAX Inrush Current	I/P:115VAC	A	14.5A	N/A
	I/P:230VAC	220A	18.6A	Passed
6.3. Input Frequency & Voltage	I/P:90VAC/47HZ	■ON □ OFF	-	Passed
	I/P:90VAC/63HZ	■ON □ OFF	-	Passed
	I/P:264VAC/47HZ	■ON □ OFF	-	Passed
	I/P:264VAC/63HZ	■ON □ OFF	-	Passed
6.4. Switching Test	Switching Time: 0.5 Sec MIN Load / Full Load	@90VAC ■ON □ OFF	-	Passed
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC ■ON □ OFF	-	Passed
	Switching Time: 0.5 Sec MIN Load / Full Load	@230VAC ■ON □ OFF	-	Passed
	Switching Time: 0.5 Sec MIN Load / Full Load	@264VAC ■ON □ OFF	-	Passed
6.5. Efficiency	I/P:90VAC FULL LOAD	@86%Min	87.418%	Passed
	I/P:115VAC FULL LOAD	@86%Min	88.977%	Passed
	I/P:230VAC FULL LOAD	@86%Min	89.984%	Passed
	I/P:264VAC FULL LOAD	@86%Min	89.713%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	-0.942%	Passed
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±5%	1.12%	Passed
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±5%	1.71%	Passed
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.A	Passed
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	%	126.00%	N/A
	I/P:115VAC O/P:MIN LOAD	%	126.66%	N/A
	I/P:230VAC O/P:MIN LOAD	%	126.41%	N/A
	I/P:264VAC O/P:MIN LOAD	%	122.00%	N/A
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	19V&GND Short	-	Passed
	I/P:230VAC O/P:MIN LOAD	19V&GND Short	-	Passed
6.12. Line Voltage Surge	O/P: FULL LOAD	Surge voltage from 132VAC to 147VAC (0.5sec), back to 132VAC		Passed
	O/P: FULL LOAD	Surge voltage from 264VAC to 293VAC (0.5sec), back to 264VAC		Passed

6.13. Line Voltage Sag	O/P: FULL LOAD	Sag voltage from 108VAC to 80VAC (0.5sec), back to 108VAC	-	Passed
	O/P: FULL LOAD	Sag voltage from 198VAC to 161VAC (0.5sec), back to 198VDC	-	Passed
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	$\leq 300\text{mv}$	125.9mv	Passed
	I/P:230VAC O/P:FULL LOAD	$\leq 300\text{mv}$	116.3mv	Passed
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	184ms	N/A
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	182ms	N/A
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	8mS(MIN)	33.1ms	Passed
	I/P:230VAC O/P:FULL LOAD	8mS(MIN)	80ms	Passed
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	22.59ms	N/A
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	11.22ms	N/A
6.18. Turn on Overshoot	Turn on overshoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	Passed
	Turn on overshoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	Passed
6.19. Turn off Undershoot	Turn off undershoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	Passed
	Turn off undershoot shall not exceed 5% over nominal voltages@ 20 % LOAD		-	Passed
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 (°C) After 2HR Power On		-	-
6.23. Power On In High Temperature	I/P:115VAC (°C)After 2HR Power On		-	-
6.24. Power Consumption Test with DC Power	No Run Prime95	I/P:9VDC 2.18A 19.62W		Passed
	Run Prime95	I/P:9VDC 2.48A 22.32W		Passed
	No Run Prime95	I/P:30VDC 0.67A 20.1W		Passed
	Run Prime95	I/P:30VDC 0.764A 22.92W		Passed
6.25. Power Consumption Test with AC Adapter	No Run Prime95	I/P:100VAC 0.23A 23.1W	O/P: 19V/1.03A 19.57W	Passed
	Run Prime95	I/P:100VAC 0.26A 26.3W	O/P: 19V/1.19A 22.61W	Passed