

Report NO: 14P0A0004_I

FSP120-AAB of AHP-2173 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	Approval	Test Engineer
<u>03/13/2014</u>	<u>Tom Lin</u>	<u>Sean Hsu</u>

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1. Project

FSP120-AAB AC-DC Adapter for AHP-2173 BIOS REV. R0.2(H2H3AM02)01/14/2014

2. Power Manufacturer

FSP

3. Team Member

PM : Alan Chou ; PPC H/W : VC Chang

4. Test Equipment

4.1. CPU Board : GENE-CV05 , Rev.A1.0

4.2. CPU : Intel ATOM D25501.86GHz

4.3. Memory : TRANSCEND , DDR3-1333 , 2GB

4.4. HDD : TOSHIBA , 100GB , M/N : MK1060GSC

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

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

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

5. AC Adapter Spec

AC Input : 100VAC~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	1.63A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	12.5A	-
	I/P:230VAC	220A	19.8A	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	86.78%	PASS
	I/P:115VAC FULL LOAD	@86%Min	88.13%	PASS
	I/P:230VAC FULL LOAD	@86%Min	89.46%	PASS
	I/P:264VAC FULL LOAD	@86%Min	89.12%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	0.46%	PASS
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±5%	1.17%	PASS
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±5%	1.50%	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

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	$\leq 300\text{mv}$	125.9mv	PASS
	I/P:230VAC O/P:FULL LOAD	$\leq 300\text{mv}$	118.3mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	174ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	172.5ms	-
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	8mS(MIN)	35ms	PASS
	I/P:230VAC O/P:FULL LOAD	8mS(MIN)	27ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	17.8ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	18.6ms	-
6.18. Turn on Overshoot	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
6.19. Turn off Undershoot	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
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°C) After 2HR Power On		-	-
6.23. Power On In High Temperature	I/P:115VAC (40 °C)After 2HR Power On		-	-
6.24. Power Consumption Test With DC Power	No Run Prime95	I/P:9VDC 3.05A 27.45W		PASS
	Run Prime95	I/P:9VDC 3.26A 29.34W		PASS
	No Run Prime95	I/P:30VDC 0.907A 27.21W		PASS
	Run Prime95	I/P:30VDC 1.02A 30.6W		PASS
6.25. Power Consumption Test With AC Adapter	No Run Prime95	I/P:100VAC 0.31A 30.7W	O/P: 19V/1.5A 28.5W	PASS
	Run Prime95	I/P:100VAC 0.34A 33.9W	O/P: 19V/1.7A 32.3W	PASS
	Sleep Mode(S3)	I/P:100VAC 2.4W		PASS
	Standby Mode	I/P:100VAC 1.6W		PASS