Report NO: 14P0A0005_I

FSP120-AAB
of
AEC-6638
Power Electronics Test Report

Summary	☑ **Passed** ☐ **Failed** ☐ **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
04/24/2014	**Tom Lin**	**Sean Hsu**

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1049
http://www.aaeon.com

Table of Contents

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1049
http://www.aaeon.com

1. Project

FSP120-AAB AC-DC Adapter for AEC-6638
BIOS REV.R0.1 (A638AM01)02/20/2014

2. Power Manufacturer

FSP

3. Team Member

PM：Jackie Huang；H/W：VC Chang

3. Test Equipment

3.1. CPU Board：AAEON，GENE-QM87 REV.A1.0
3.2. CPU：INTEL，Core I5-4400E 2.4GHz
3.3. Memory：DSL，DDR3- 1600， 8GB
3.4.HDD：TOSHIBA，MK1060GSC，100GB
3.5.DC-DC Power Board：AAEON，M/N：PER-P17D
3.6.AC Adapter：FSP，Model：FSP120-AAB，O/P：19V/6.32A，120Wat
3.7. LCD Monitor：CHIMEI，Model：A170E2-T08
3.8. USB Mouse：LOGITECH，Model：M-BT85
3.9. 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

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1049
http://www.aaeon.com

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	1.7A	1.21A	Passed
6.2. MAX Inrush Current	I/P:115VAC	A	15.8A	N/A
	I/P:230VAC	220A	19.5A	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	87.428%	Passed
	I/P:115VAC FULL LOAD	@86%Min	88.987%	Passed
	I/P:230VAC FULL LOAD	@86%Min	89.985%	Passed
	I/P:264VAC FULL LOAD	@86%Min	89.723%	Passed
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	%	124.58%	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

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1049
http://www.aaeon.com

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	≦300mv	125.9mv	Passed
	I/P:230VAC O/P:FULL LOAD	≦300mv	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 of100~500ms		-	-
6.22. Power On In Low Temperature	I/P:115VAC (℃) After 2HR Power On			-
6.23. Power On In High Temperature	I/P:115VAC (℃)After 2HR Power On			-
6.24. Power Consumption Test with DC Power	No Run Prime95	I/P:9VDC 1.45A 13.05W		Passed
	Run Prime95	I/P:9VDC 3.45A 31.05W		Passed
	No Run Prime95	I/P:30VDC 0.42A 12.6W		Passed
	Run Prime95	I/P:30VDC 1.06A 31.8W		Passed
6.25. Power Consumption Test with AC Adapter	Off Mode	I/P:100VAC 0.03A 2.7W	O/P: 19V/0.13A 2.47W	Passed
	Sleep Mode	I/P:100VAC 0.1A 5.2W	O/P: 19V/0.16A 3.04W	Passed
	No Run Prime95	I/P:100VAC 0.17A 15.1W	O/P: 19V/0.71A 13.49W	Passed
	Run Prime95	I/P:100VAC 0.36A 36.1W	O/P: 19V/1.8A 34.2W	Passed

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1049
http://www.aaeon.com