

Report NO: 12P0A0007_I

MPU100-108 of AFP-6123 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
06/26/2012	Vincent Chen	Sean Hsu

Table of Contents

1. Project.....	3
2. Power Manufacturer	3
3. Team Member	3
4. Test Equipments	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. Room Burn-in test	5
6.25. On/Off Cycling	5
6.26. Power Consumption Test with DC Power	5
6.27. Power Consumption Test with AC Adapter	5

1. Project

MPU100-108 AC-DC Power for AFP-6123

2. Power Manufacturer

SINPRO

3. Team Member

PM : Alan Chou ; EE : Peter Yao

4. Test Equipments

4.1. CPU Board : GENE-CV05 REV.A1.0

4.2. CPU : INTEL ATOM D2550 1.86GHz

4.3. HDD : Toshiba MK1060GSC 100GB

4.4. Memory : InnoDisk DDR3- 1333 4GB

4.5. Power Board : PER-P17D REV.B1.0

4.6. AC ADAPTER : SINPRO M/N : MPU100-108 24V/4.16A 100W

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

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

5. AC Adapter Spec

AC Input : 100VAC~240VAC / 47Hz~63Hz

DC Output : 24Vdc Min Load : 0A Full Load : 4.16A / 100W

6. Test Item

Test Item	Test Condition / Specification		Measured	Result
6.1. AC Input Current	I/P:90VAC	A	1.38A	PASS
6.2. MAX Inrush Current	I/P:115VAC	15A	8.30A	-
	I/P:230VAC	30A	10.5A	-
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:115VAC FULL LOAD	@75%Min	85.410%	PASS
	I/P:230VAC FULL LOAD	@75%Min	85.55%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	0%	-
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±2%	0.78/-0.27%	-
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±2%	0.78/-0.26%	-
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1 : 26.88~31.68MAX)	-	-
6.9. Over-Circuit Protection	O/P: 24V	-(MAX)	6.2A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	110~150%	148.5%	PASS
	I/P:115VAC O/P:MIN LOAD	110~150%	148.8%	PASS
	I/P:230VAC O/P:MIN LOAD	110~150%	148.5%	PASS
	I/P:264VAC O/P:MIN LOAD	110~150%	149.4%	PASS
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	24V&GND Short	-	PASS
	I/P:230VAC O/P:MIN LOAD	24V&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 198VAC	-	PASS
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	≤ 240mv	21.2 mv	PASS
	I/P:230VAC O/P:FULL LOAD	≤ 240mv	19.7 mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	2S(MAX)	596 mS	PASS
	I/P:230VAC O/P:FULL LOAD	2S(MAX)	710.0 mS	PASS
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	16mS(MIN)	27.5 mS	PASS
	I/P:230VAC O/P:FULL LOAD	16mS(MIN)	53.8 mS	-
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	57.5 mS	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	35.6 mS	-
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 (50 ℃)After 2HR Power On		-	-
6.24. Room Burn-in test	I/P:115VAC O/P: FULL LOAD TA:25 ℃ BURN-IN DURATION : 2 hour		-	-
6.25. On/Off Cycling	Times / on: 20 sec / off: 10 sec		-	-
6.26. Power Consumption Test with DC Power	No Run Prime95	I/P:9VDC 2.14A 19.26W		PASS
	Run Prime95	I/P:9VDC 2.38A 21.42W		PASS
	No Run Prime95	I/P:30VDC 0.68A 20.4W		PASS
	Run Prime95	I/P:30VDC 0.78A 23.4W		PASS
6.27. Power Consumption Test with AC Adapter	No Run Prime95	I/P:100VAC 0.25A 25.1W	O/P: 24V/0.87A	PASS
	Run Prime95	I/P:100VAC 0.28A 28.1W	O/P: 24V/0.95A	PASS