

MPU100-108 of FOX-121 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

08/18/2010

Approval

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Test Engineer

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1. Project

MPU100-108 AC-DC Adapter for 12.1" 1000 nits XGA LED backlight (FOX-121STT)

2. Power Manufacturer

SINPRO

3. Team Member

PM : Boris Chen : PPC H/W : Peter Yao

4. Test Equipment

4.1. CPU Board : GENE-9455 A1.0

4.2. DC-DC Power Board : PER-P02D REV.A1.1

4.3. CPU : Intel Atom N270 1.6GHz

4.4. Memory : DSL 1GB DDR2- 667MHZ / ELPIDA E5108AJBG-E

4.5. Hard Disk : Seagate ST980817SM/80G

4.6. AC/DC Power Supply : SINPRO POWER , M/N : MPU100-108 100Watt O/P : 24V/4.16A

5. AC Adapter Spec

AC Input : 90VAC~264VAC / 47Hz~63Hz

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

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:90VAC	A	1.32A	-
6.2. MAX Inrush Current	I/P:115VAC	15A	8.19A	PASS
	I/P:230VAC	30A	10A	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	@75%Min	83.820%	PASS
	I/P:115VAC FULL LOAD	@75%Min	85.401%	PASS
	I/P:230VAC FULL LOAD	@75%Min	85.548%	PASS
	I/P:264VAC FULL LOAD	@75%Min	84.892%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	0%	PASS
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±2%	0.779/-0.263	PASS
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±2%	0.779/-0.263	PASS
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)	-	-
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	110~150%	148.5	PASS
	I/P:115VAC O/P:MIN LOAD	110~150%	147.6	PASS
	I/P:230VAC O/P:MIN LOAD	110~150%	148.4	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	21.09 mv	PASS
	I/P:230VAC O/P:FULL LOAD	≤ 240mv	19.84 mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	2S(MAX)	593 mS	PASS
	I/P:230VAC O/P:FULL LOAD	2S(MAX)	706.0 mS	PASS
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	16mS(MIN)	27.0 mS	PASS
	I/P:230VAC O/P:FULL LOAD	16mS(MIN)	53.7 mS	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	57.0 mS	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	35.3 mS	PASS
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 of 100~500ms		-	-
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		-	PASS
6.25. On/Off Cycling	Times / on: 20 sec / off: 10 sec		-	-
6.26. (FOX-121STT) System Power Consumption Test TO PER-P17D (DC-DC Power Board)	No Run Prime95	I/P:9VDC 1.83A 16.5W	-	PASS
	No Run Prime95	I/P:30VDC 0.559A 16.77W	-	PASS
	Run Prime95	I/P:9VDC 2.18A 19.7W	-	PASS
	Run Prime95	I/P:30VDC 0.66 19.8W	-	PASS
6.27. (FOX-121STT) Power Consumption Test TO AC Adapter	No Run Prime95	I/P:90VAC 0.24A 22.4W	O/P: 24V/0.698A	PASS
	Run Prime95	I/P:90VAC 0.25A 25.2W	O/P: 24V/0.824A	PASS