

# MPU100-108 of FOX-81D Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> <b>Pass</b> <input type="checkbox"/> <b>Fail</b> <input type="checkbox"/> <b>Pass with Deviation</b> <b>Comment:</b> _____			
<b>Test Result Summary</b>				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date	Approval	Test Engineer
<b>02/02/2012</b>	<b>Jansin Lee</b>	<b>Sean Hsu</b>

## Table of Contents

1. Project .....	3
2. Power Manufacturer .....	3
3. Team Member .....	3
4. Test Equipment .....	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 .....	4
6.14. Ripple & Noise .....	4
6.15. Setup Time .....	4
6.16. Hold up Time .....	4
6.17. Rise Time .....	4
6.18. Turn on Overshoot .....	4
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 TO AC Adapter .....	5

**1. Project**

MPU100-108 AC-DC Adapter for 8.4" SVGA (800x600) TFT LCD LED B/L Display

**2. Power Manufacturer**

SINPRO

**3. Team Member**

PM : LEE LEE ; PPC H/W : Peter Yao

**4. Test Equipment**

4.1. Panel : AUO 8.4", 800x600, 450 nit, LED B/L

4.2. 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	1.35A	-
6.2. MAX Inrush Current	I/P:115VAC	15A	8.20A	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	83.825%	PASS
	I/P:115VAC FULL LOAD	@75%Min	85.410%	PASS
	I/P:230VAC FULL LOAD	@75%Min	85.55%	PASS
	I/P:264VAC FULL LOAD	@75%Min	84.895%	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%	0.778/-0.265	PASS
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±2%	0.777/-0.264	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%	147.5	PASS
	I/P:115VAC O/P:MIN LOAD	110~150%	146.6	PASS
	I/P:230VAC O/P:MIN LOAD	110~150%	145.4	PASS
	I/P:264VAC O/P:MIN LOAD	110~150%	148.4	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	21.19 mv	PASS
	I/P:230VAC O/P:FULL LOAD	≤240mv	19.54 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

<b>6.19. Turn off Undershoot</b>	Turn off undershoot shall not exceed 10% over nominal voltages		-	PASS
	Turn off undershoot shall not exceed 10% over nominal voltages		-	PASS
<b>6.20. Remote ON/OFF</b>	Simulate TTL signal to test this function			-
<b>6.21. Power Good Signal</b>	Shall go high level with a delay of 100~500ms		-	-
<b>6.22. Power On In Low Temperature</b>	I/P:115VAC ( 0℃ ) After 2HR Power On			PASS
<b>6.23. Power On In High Temperature</b>	I/P:115VAC ( 50℃ )After 2HR Power On			PASS
<b>6.24. Room Burn-in test</b>	I/P:115VAC O/P: FULL LOAD TA:25℃ BURN-IN DURATION : 2 hour			PASS
<b>6.25. On/Off Cycling</b>	Times / on: 20 sec / off: 10 sec			-
<b>6.26. Power Consumption Test TO AC Adapter</b>	No Run Video	I/P:100VAC 0.1A 9.8W	O/P: 24V/0.389A	PASS
	Run Video	I/P:100VAC 0.11A 10.2W	O/P: 24V/0.4A	PASS