

Report NO: 1010A0015_I

FSP300-701UJ of FWS-7800 Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail Note : There are <u>0</u> defect(s) not list in the report, please check it in the DTS Website. <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

12/16/2010

Approval

Jansin Lee

Test Engineer

Sean Hsu

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1. Project

FSP300-701UH AC-DC Power for FWS-7800

2. Power Manufacturer

FSP

3. Team Member

PM : Matthew Wood ; ISD H/W : Enzo Chen

4. Test Equipment

4.1. PCB : FWB-7800 A0.2

4.2. CPU : Intel Xeon X3430 2.4GHz

4.3. Memory : InnoDisk DDR3-1333 4GB / Hynix H5TQ2G83BFR*4

4.4. SATA HDD : Fujitsu M/N : MHW2060BH , 60GB

4.5. Power Supply : FSP Model : FSP300-701UH O/P : 300W

4.6. PCI VGA Board : mpci-8750

4.7. LCD Monitor : CHIMEI , Model : A170E2-T08

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

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

4.10. RJ45&USB&COM Port Board : PER-C30L REV : A1.0

4.11. Two Gigabit Ethernet & Two SFP Fiber LAN Module : PER-C31L REV : A1.0

4.12. Four 10/100/1000Base-TX Ethernet Module : PER-C33L REV : A1.0

5. AC Adapter Spec

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

	Full load (100%)	Typical load (50%)	Light load (20%)
115VAC	82%	85%	82%
230VAC	82%	85%	82%

(loading shown in Amps)

Loading	+12V1	+12V2	+5V	+3.3V	-12V	+5Vsb
Full (100%)	9.14	9.14	8.69	7.61	0.29	1.71
Typical (50%)	4.57	4.57	4.35	3.8	0.14	0.86
Light (20%)	1.83	1.83	1.74	1.52	0.06	0.34

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	5A	3.19A	PASS
	I/P:230VAC	2.5A	1.55A	PASS
6.2. MAX Inrush Current	I/P:115VAC	50A	12.34A	PASS
	I/P:230VAC	100A	15.31A	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	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@230VAC □ON □ OFF	-	-
	Switching Time: 0.5 Sec MIN Load / Full Load	@264VAC □ON □ OFF	-	-
6.5. Efficiency	I/P:115VAC FULL LOAD	@82%Min	82.618%	PASS
	I/P:230VAC FULL LOAD	@82%Min	86.142%	PASS
	I/P:115VAC 50% LOAD	@85%Min	85.388%	PASS
	I/P:230VAC 50% LOAD	@85%Min	87.510%	PASS
	I/P:115VAC 20% LOAD	@82%Min	82.892%	PASS
	I/P:230VAC 20% LOAD	@82%Min	82.233%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC O/P: FULL LOAD	<±5%(3.3V)	0%	PASS
		<±5%(5V)	0.05%	PASS
		<±5%(12V)	0%	PASS
		<±10%(-12V)	0.267%	PASS
		<±5%(5VSB)	0.3%	PASS
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±5%(3.3V)	1.12/-0.757%	PASS
		<±5%(5V)	2.6/-0.45%	PASS
		<±5%(12V)	1.642/1.125%	PASS
		<±10%(-12V)	-4.04/-3.375%	PASS
		<±5%(5VSB)	2.3/0.5%	PASS
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±5%(3.3V)	1.12/-0.757%	PASS
		<±5%(5V)	2.6/-0.4%	PASS
		<±5%(12V)	1.625/1.1%	PASS
		<±10%(-12V)	-4.067/-3.375%	PASS
		<±5%(5VSB)	2.3/0.5%	PASS
6.8. Over-Voltage Protection	O/P: 3.3V	3.5~4.8V	-	N/A
	O/P: 5V	5.5~7V	-	N/A
	O/P: 12V	13.4~16V	-	N/A
6.9. Over-Circuit Protection	O/P: 3.3V	45A(MAX)	32A	PASS
	O/P: 5V	45A(MAX)	40A	PASS
	O/P: 12V	25A(MAX)	-	N/A

6.10. Over-Load Protection	I/P:115VAC O/P:MIN LOAD	-	-	-
	I/P:230VAC O/P:MIN LOAD	-	-	-
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	5V&GND Short	-	PASS
	I/P:230VAC O/P:MIN LOAD	5V&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	≤ 50mv(3.3V)	48.9mv	PASS
		≤ 50mv(5V)	48.5mv	PASS
		≤ 120mv(12V)	100.6mv	PASS
		≤ 120mv(-12V)	89.5mv	PASS
		≤ 50mv(5VSB)	44.6mv	PASS
	I/P:230VAC O/P:FULL LOAD	≤ 50mv(3.3V)	47.6mv	PASS
		≤ 50mv(5V)	46.5mv	PASS
		≤ 120mv(12V)	105.6mv	PASS
		≤ 120mv(-12V)	90.5mv	PASS
		≤ 50mv(5VSB)	43.5mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)(5V)	475ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX) (5V)	270ms	-
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	17mS(MIN) (5V)	23.25ms	PASS
	I/P:230VAC O/P:FULL LOAD	17mS(MIN) (5V)	21.05ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	20mS(MAX) (5V)	5.3ms	PASS
	I/P:230VAC O/P:FULL LOAD	20mS(MAX) (5V)	5.16ms	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		332.5ms	PASS
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 (50 °C) After 2HR Power On			-
6.24. Room Burn-in test	I/P: 115VAC O/P: FULL LOAD TA: 25 °C BURN-IN DURATION : 2 hour			PASS
6.25. On/Off Cycling	Times / on: 20 sec / off: 10 sec			-
6.26. Power Consumption Test	No Run Prime95	I/P: 100 VAC 0.83A 83.4 W	O/P: 3.3V/6.69A 5V/2.8A 12V/2.06A -12V/0.08A -5V/0.08A 5VSB/0.05A	PASS
	Run Prime95	I/P: 100 VAC 1.65A 167.1 W	O/P: 3.3V/6.7A 5V/4.55A 12V/6.78A -12V/0.08A -5V/0.13A 5VSB/0.05A	PASS