Report No: 16P0A0002_I

FSP084-DMAA1
of
AGD-312D V2
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	QE manager	Test Engineer
01/28/2016	**KJ Wang**	**Mike Lee**

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1. Project

FSP084-DMAA1 AC-DC Adapter of AGD-312D V2

2. Power Manufacturer

FSP

3. Team Member

PM：CS Chen；EE：Peter Yao

4. Test Equipment

4.1. System PC Model / Ver.：IER-951 A1.0
4.2. BIOS Rev. R3.2 (EBT1BM32) (10/30/2014)
4.3. CPU：Intel® Atom™ CPU E3825 @1.33GHz
4.4. SATA HDD：HGST HTS725050A7E630 500GB SATAIII 6GB/s
4.5. Memory：ADATA DDR3L 1600 SO-DIMM 4GB (ADDS1600W4G11-BMIE)
4.6. Power Supply：FSP，Model：FSP084-DMAA1，O/P：12V/7A，84Watt

5. AC Adapter Spec

AC Input：100VAC~240VAC / 47Hz~63Hz
DC Output：12Vdc Min Load：0A　Full Load：7A / 84W

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6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	1.3A	0.98A	Passed
6.2. MAX Inrush Current	I/P:115VAC	A	4.70A	-
	I/P:230VAC	A	6.48A	-
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 O/P:5A	@83%Min	86.25%	Passed
	I/P:115VAC O/P:5A	@83%Min	87.46%	Passed
	I/P:230VAC O/P:5A	@83%Min	87.20%	Passed
	I/P:264VAC O/P:5A	@83%Min	86.80%	Passed
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.043%	-
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<%	1.92%	-
	I/P:230VAC O/P:MIN~FULL LOAD	<%	2.045%	-
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1：17 (MAX)	-	-
6.9. Over-Circuit Protection	O/P: 12V	9.4A(MAX)	8.5A	Passed
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	135%	120%	Passed
	I/P:115VAC O/P:MIN LOAD	135%	121%	Passed
	I/P:230VAC O/P:MIN LOAD	135%	123%	Passed
	I/P:264VAC O/P:MIN LOAD	135%	124%	Passed
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	12V&GND Short	-	Passed
	I/P:230VAC O/P:MIN LOAD	12V&GND Short	-	Passed

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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
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 198VAC	-	Passed
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	≦150mv	120.9mv	Passed
	I/P:230VAC O/P:FULL LOAD	≦150mv	96.8mv	Passed
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	3S(MAX)	745ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	520ms	Passed
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	20mS(MIN)	35.6ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	87.5ms	Passed
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	4.86ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.86ms	Passed
6.18. Turn on Overshoot	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	Passed
	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	Passed
6.19. Turn off Undershoot	Turn off undershoot shall not exceed 10% over nominal voltages		-	Passed
	Turn off undershoot shall not exceed 10% over nominal voltages		-	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 Consumption Test with DC Power	VGA			

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	I/P:9VDC	Brightness	50%	0.89A 8.01W	PASS
			100%	1.10A 9.9W	PASS
	I/P:12VDC	Brightness	50%	0.66A 7.92W	PASS
			100%	0.82A 9.84W	PASS
	I/P:24VDC	Brightness	50%	0.35A 8.4W	PASS
			100%	0.42A 10.08W	PASS
	I/P:30VDC	Brightness	50%	0.29A 8.7W	PASS
			100%	0.35A 10.5W	PASS
	DVI				
	I/P:9VDC	Brightness	50%	0.92A 8.28W	PASS
			100%	1.15A 10.35W	PASS
	I/P:12VDC	Brightness	50%	0.69A 8.28W	PASS
			100%	0.86A 10.32W	PASS
	I/P:24VDC	Brightness	50%	0.36A 8.64W	PASS
			100%	0.44A 10.56W	PASS
	I/P:30VDC	Brightness	50%	0.30A 9.0W	PASS
			100%	0.36A 10.8W	PASS
6.23. Power Consumption Test with AC Adapter	VGA				
	50%	Brightness	I/P:100VAC 0.20A/9.2W	O/P:12V/0.74A 8.88W	PASS
	100%	Brightness	I/P:100VAC 0.24A/11.2W	O/P:12V/0.90A 10.8W	PASS
	DVI				
	50%	Brightness	I/P:100VAC 0.21A/9.5W	O/P:12V/0.76A 9.12W	PASS
	100%	Brightness	I/P:100VAC 0.25A/11.7W	O/P:12V/0.96A 11.52W	PASS
6.24. Wide Voltage System Boot Test	VGA	9V±5%	8.55V	Run Prime 95 (Time: over 15 min)	-
		30V±5%	31.5V		-
	DVI	9V±5%	8.55V		-
		30V±5%	31.5V		-

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