

# FSP084-DMAA1 of AEV-6312 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>04/14/2011</b>	<b>Jansin Lee</b>	<b>Sean Hsu</b>

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**1. Project**

FSP084-DMAA1 AC-DC Adapter for AEV-6312

**2. Power Manufacturer**

FSP

**3. Team Member**

PM : Linux Wang ; PPC H/W : Iko Huang

**4. Test Equipment**

4.1. PCB : GENE-LN05 REV.A1.0 BIOS: 0.1 (03/10/2011)

4.2. CPU : Intel Atom D510 1.6GHz

4.3. Memory : iNNDisk DDR2-667 2GB

4.4. SSD : FID , M/N : STAT 10000 , 8GB

4.5. AC Adapter : FSP , Model : FSP084-DMAA1 , O/P : 12V/7A , 84Watt

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

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

4.8. LCD Monitor : Samsung , Model : T190 1440\*900(WXGA+)

**5. AC Adapter Spec**

AC Input : 90VAC~264VAC / 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	0.995A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	4.60A	-
	I/P:230VAC	A	6.8A	-
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 O/P:5A	@83%Min	86.12%	PASS
	I/P:115VAC O/P:5A	@83%Min	87.84%	PASS
	I/P:230VAC O/P:5A	@83%Min	87.52%	PASS
	I/P:264VAC O/P:5A	@83%Min	86.72%	PASS
6.6. Line Regulation	I/P:90VAC~264VAC	<%	0.045%	-
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<%	1.98%	-
	I/P:230VAC O/P:MIN~FULL LOAD	<%	2.12%	-
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	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	135%	122%	PASS
	I/P:115VAC O/P:MIN LOAD	135%	123%	PASS
	I/P:230VAC O/P:MIN LOAD	135%	124%	PASS
	I/P:264VAC O/P:MIN LOAD	135%	125%	PASS
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	12V&GND Short	-	PASS
	I/P:230VAC O/P:MIN LOAD	12V&GND Short	-	PASS

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<b>6.12. Line Voltage Surge</b>	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
<b>6.13. Line Voltage Sag</b>	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
<b>6.14. Ripple &amp; Noise</b>	I/P:115VAC O/P:FULL LOAD	$\leq 150\text{mv}$	112mv	PASS
	I/P:230VAC O/P:FULL LOAD	$\leq 150\text{mv}$	95mv	PASS
<b>6.15. Setup Time</b>	I/P:115VAC O/P:FULL LOAD	3S(MAX)	730ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	510ms	PASS
<b>6.16. Hold up Time</b>	I/P:115VAC O/P:FULL LOAD	20mS(MIN)	33.5ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	85.8ms	PASS
<b>6.17. Rise Time</b>	I/P:115VAC O/P:FULL LOAD	mS(MAX)	4.85ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.83ms	PASS
<b>6.18. Turn on Overshoot</b>	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. Power On In Low Temperature</b>	I/P:115VAC ( 0°C ) After 2HR Power On		-	-
<b>6.21. Power On In High Temperature</b>	I/P:115VAC ( 40°C )After 2HR Power On		-	-
<b>6.22. Power Consumption Test With DC Power</b>	No Run Prime95		I/P:12VDC 0.92A 11.04W	PASS
	Run Prime95		I/P:12VDC1.24A 14.932W	PASS
	No Run Prime95		I/P:24VDC 0.5A 12.0W	PASS
	Run Prime95		I/P:24VDC 0.65A 15.6W	PASS
<b>6.23. System Power Consumption Test (With AC Adapter)</b>	No Run Prime95	I/P:100VAC 0.31A 14.4W	O/P: 12V/0.92A	PASS
	Run Prime95	I/P:100VAC 0.39A 19.2W	O/P: 12V/1.236A	PASS