

Report No:16R0A0004_I

A048112-TD2 with RTC-700B

Power Electronics Test Report

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

Issue date

2016/11/04

QE manager

KJ Wang

Test Engineer

Mike Lee

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1. Project

A048112-TD2 AC-DC Adapter for RTC-700B

2. Power Manufacturer

Atech OEM INC.

3. Team Member

PM : Naomi Lai ; H/W : Changwen Zhou

4. Test Equipment

4.1. LVDS : 7" TFT-LCD / 16:10 N070ICG-LD1 rev C1

4.2. PCB Board : AAEON , RTC-700B Rev A0.3_0_0

4.3. CPU : Intel Atom™ x5-Z8350 CPU ® 1.44GHz CHT-T3 Quad Core up to 1.92GHz
Processor

4.4. Storage : eMMC flash Samsung CJNB4R / 64GB

4.5. Memory : SO-DDR3L / 2GB

5. AC Adapter Spec

AC Input : 90VAC~300VAC / 47Hz~63Hz

DC Output : 12Vdc Min Load : 0A ; Max Load : 4A / 48W

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:90VAC	1.5A	1.10A	Passed
6.2. MAX Inrush Current	I/P:115VAC	A	A	N/A
	I/P:230VAC	A	A	N/A
6.3. Input Frequency & Voltage	I/P:90VAC/47HZ	■ON □ OFF	-	Passed
	I/P:90VAC/63HZ	■ON □ OFF	-	Passed
	I/P:300VAC/47HZ	■ON □ OFF	-	Passed
	I/P:300VAC/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	@300VAC ■ON □ OFF	-	Passed
6.5. Efficiency	I/P:90VAC 25%&50%&75%&100%	@86.5%(MIN)	85.911%	N/A
	I/P:115VAC 25%&50%&75%&100%	@86.5%(MIN)	87.014%	Passed
	I/P:230VAC 25%&50%&75%&100%	@86.5%(MIN)	86.890%	Passed
	I/P:300VAC 25%&50%&75%&100%	@86.5%(MIN)	84.926%	N/A
6.6. Line Regulation	I/P:90VAC~300VAC	<±1%	0.417%	Passed
6.7. Load Regulation	I/P:115VAC O/P:MINLOAD~FULL LOAD	<±5%	-4.392%	Passed
	I/P:230VAC O/P:MINLOAD~FULL LOAD	<±5%	-4.333%	Passed
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1 : V (MAX)	-	N/A
6.9. Over-Load Protection	I/P:90VAC O/P:FULL LOAD	A	5.4A	N/A
	I/P:115VAC O/P:FULL LOAD	A	5.8A	N/A
	I/P:230VAC O/P:FULL LOAD	A	6.1A	N/A
	I/P:300VAC O/P:FULL LOAD	A	6.0A	N/A
6.10. 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

6.11. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	$\leq 120\text{mv}$	24.53mv	Passed
	I/P:230VAC O/P:FULL LOAD	$\leq 120\text{mv}$	18.91mv	Passed
6.12. Turn On Delay	I/P:100VAC O/P:FULL LOAD	3S(MAX)	817ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	285ms	N/A
6.13. Hold up Time	I/P:115VAC O/P:FULL LOAD	8mS(MIN)	13.4ms	Passed
	I/P:230VAC O/P:FULL LOAD	mS(MIN)	66.50ms	N/A
6.14. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	6.40ms	N/A
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	5.60ms	N/A
6.15. 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
6.16. Turn off Undershoot	Turn off undershoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	Passed
	Turn off undershoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	Passed
6.17. Power Consumption Test with AC Adapter	No Run Stability Test v2.7	I/P:100VAC 0.11A 4.6W	O/P: 12V/0.31A 3.72W	Passed
	Run Stability Test v2.7	I/P:100VAC 0.18A 7.5W	O/P: 12V/0.56A 6.72W	Passed