

Report NO: 14P0A0012_I

DELTA GPS-200AB

With

TKS-EMB

Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> Passed			
	<input type="checkbox"/> Failed			
<input type="checkbox"/> 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

Approval

Test Engineer

12/09/2014

Vincent Chen

Sean Hsu

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1. Project

TKS-EMB

2. Power Manufacturer

DELTA

3. Test Equipment

3.1. PCB : EMB-Q77B A1.0 BIOS REV. R1.0 (EQ77BM10)(01/27/2014)

3.2. CPU : Intel ® Core ™ i7-3770S CPU @ 3.10GHz

3.3. Memory : Transcend DDR3 1600 8G * 2

3.4. HDD : TOSHIBA MK2576GSX SATA 2.5" HDD 250G

3.5. AC Adapter : DELTA , Model : GPS-200AB , O/P : 200Watt

3.6. LCD Monitor : CHIMEI , Model : 22SH-L

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

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

4. AC Adapter Spec



POWER SPEC

5. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
5.1. AC Input Current	I/P:100VAC	3.5A	2.85A	PASS
	I/P:200VAC	2A	1.25A	PASS
5.2. 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
5.3. Efficiency	I/P:115VAC FULL LOAD	@70%Min	78.455%	PASS
	I/P:230VAC FULL LOAD	@70%Min	81.352%	PASS
5.4. Line Regulation	I/P:90VAC~264VAC O/P: FULL LOAD	<±5%(3.3V)	0.06%	PASS
		<±5%(5V)	0%	PASS
		<±5%(12V)	0.1%	PASS
		<±10%(-12V)	-0.04%	PASS
		<±5%(5VSB)	0%	PASS
5.5. Load Regulation	I/P:115VAC O/P:MINLOAD	<±5%(3.3V)/0.3A	3.375/2.272%	PASS
		<±5%(5V)/0.3A	5.150/3%	PASS
		<±5%(12V)/1A	12.020/0.167%	PASS
		<±10%(-12V)/0A	-12.027/0.225%	PASS
		<±5%(5VSB)/0A	5.0225/0.45%	PASS
	I/P:230VAC O/P:MINLOAD	<±5%(3.3V)/0.3A	3.375/2.53%	PASS
		<±5%(5V)/0.3A	5.152/3.04%	PASS
		<±5%(12V)/1A	12.015/0.125%	PASS
		<±10%(-12V)/0A	-12.017/0.142%	PASS
		<±5%(5VSB)/0A	5.025/0.5%	PASS
	I/P:115VAC O/P: FULL LOAD	<±5%(3.3V)/6A	3.307/0.212%	PASS
		<±5%(5V)/6.04A	4.9325/-1.35%	PASS
		<±5%(12V)/3.03A	12.167/1.39%	PASS
		<±10%(-12V)/0.3A	-12.345/2.875%	PASS
		<±5%(5VSB)/2A	4.937/-1.26%	PASS
	I/P:230VAC O/P: FULL LOAD	<±5%(3.3V)/6A	3.305/0.152%	PASS
		<±5%(5V)/6.04A	4.93/-1.4%	PASS
		<±5%(12V)/3.03A	12.167/1.39%	PASS
		<±10%(-12V)/0.3A	-12.345/2.875%	PASS
		<±5%(5VSB)/2A	4.937/-1.26%	PASS
5.6. 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
5.7. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	≤ 50mv(3.3V)	38.6mv	PASS
		≤ 50mv(5V)	36.5mv	PASS
		≤ 120mv(12V)	89.4mv	PASS
		≤ 120mv(-12V)	56.8mv	PASS
		≤ 50mv(5VSB)	34.4mv	PASS
5.8. Turn-On Delay Time	I/P:115VAC O/P:FULL LOAD	500mS(MAX)(5V)	354.5ms	PASS
5.9. Hold up Time	I/P:115VAC O/P:FULL LOAD	17mS(MIN) (5V)	19.9ms	PASS
	I/P:230VAC O/P:FULL LOAD	17mS(MIN) (5V)	20.6ms	PASS
5.10. Rise Time	I/P:115VAC O/P:FULL LOAD	20mS(MAX) (5V)	12.45ms	PASS
5.11. 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

5.12. 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
5.13. Remote ON/OFF	Simulate TTL signal to test this function			-
5.14. System Power Consumption Test	No Run Prime95	I/P:100VAC 0.4A 39.4W	O/P: 3.3V/0.66A 5V/0.33A 12V/1.65A -12V/0.03A 5VSB/0.03A 24.138W	PASS
	Run Prime95	I/P:100VAC 0.94A 94.2W	O/P: 3.3V/0.69A 5V/0.33A 12V/5.85A -12V/0.03A 5VSB/0.03A 74.637W	PASS
	Sleep Mode	I/P:100VAC 0.05A 1.6W		PASS
	Off Mode	I/P:100VAC 0.03A 0.8W		PASS