EMB-CV1

Thermal Image Analysis Report

Report NO: 12I080002

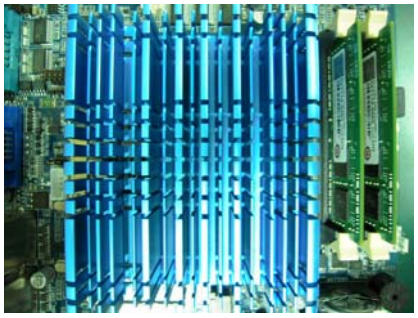
Issued by:	*Matthew Chi*	/	*03/26/2012*
	Test Engineer		**Date**
Reviewed by:	*Wayne Chen*	/	*03/26/2012*
	CTO		**Date**

Configuration of EUT

Test Product: EMB-CV1 A1.01

Sample Configuration & Quantity Under Test:

1. CPU: Intel Atom D2700 2.13GHz
2. BIOS: ECV1AM04
3. Chipset: Intel NM10
4. Memory: Transcend DDRIII 1066 2GBx2
5. HDD: Seagate 3”5 ST500DM002 500GB
6. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
7. AT Power Supply: CWT DSA400P-C
8. Heat Sink:



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Thermal Image Analysis

1. Test Date: 2012-03-26

2. Test Product : EMB-CV1 A1.01

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

1. YOKOGAWA / DARWIN DA-100-13-1D

2. IR Scanner: Infrared Camera

NIPPON AVIONICS CO., LTD.

Model: NEC-G100D

Date of Calibration: 2012/01/03

Serial Number: 1051444

5. Test Condition:

Component Side-1 (Test by DA-100): 25℃ With cooler

6. Take Picture Time:

After power on 2 hours

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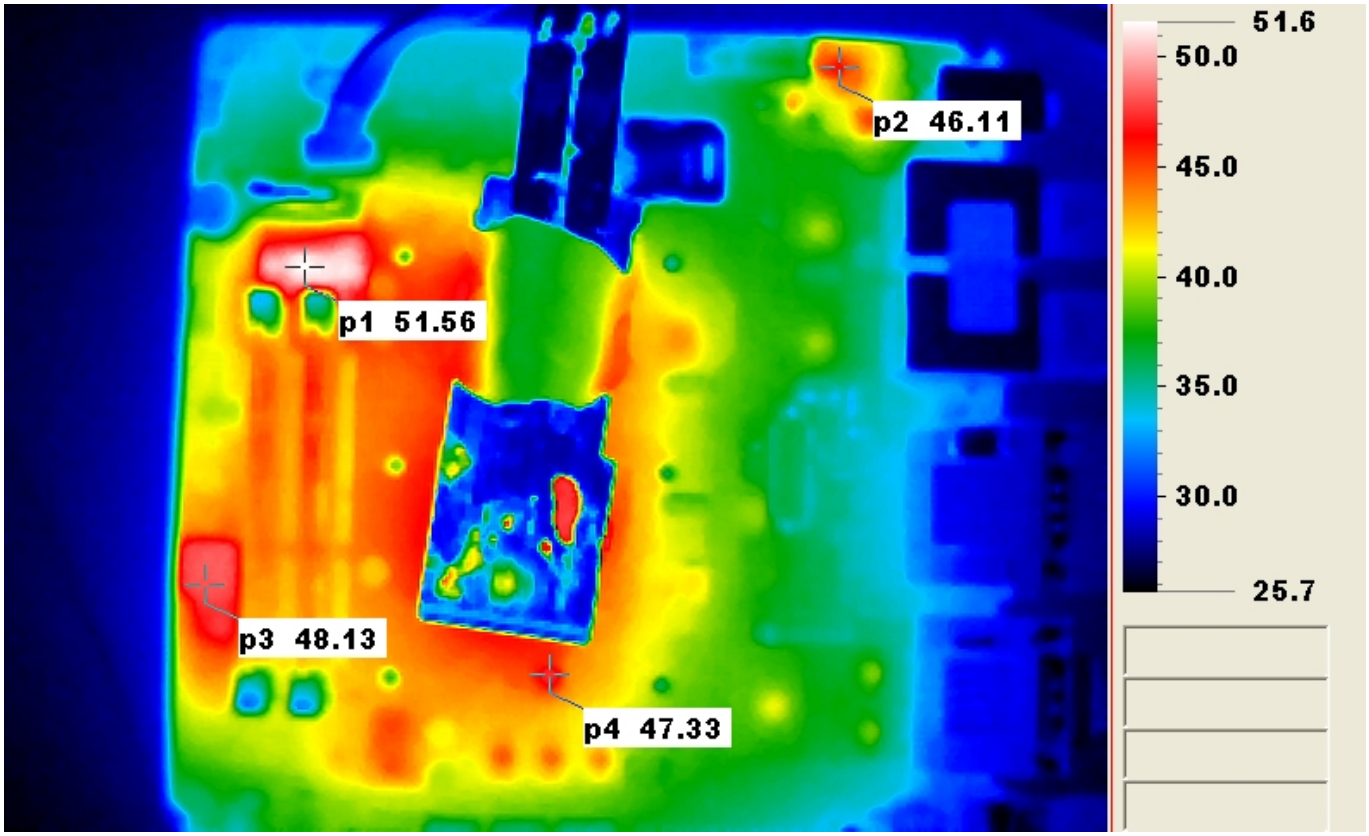
Temperature Profile Test:



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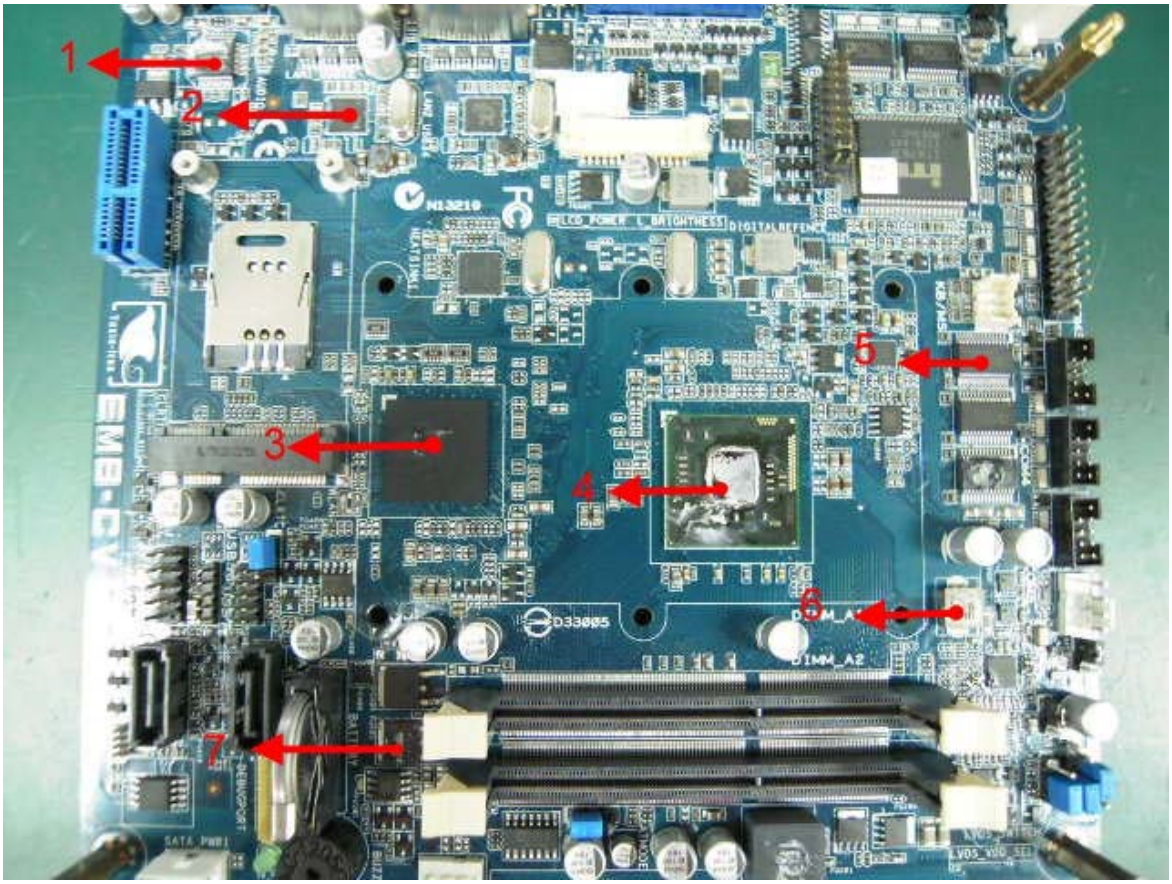

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Using YOKOGAWA / DARWIN DA100-100-13-1D test

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				25℃	60℃	
1.	AU1	C.S VT1708S EUP (CD) LQFP48 VIA TAIWAN/CU-WIRE [HF].SMD	100	44.8	79.8	
2.	LU1	(TF)IC.PCI-express.Gigabit Ethernet.REALTEK.RTL8111E-VL-CG	100	40.7	75.7	
3.	SU1	(TF)IC.SMD.NM10 Express Chipset.INTEL.CG82NM10.SLGXX	115	49.7	84.7	
4.	U1	(TF)INTEL Cedarview CPU.2.13Ghz.D2700.	100	50.7	85.7	
5.	OU11	(TF)IC.SMD.SSOP RS232 Driver ESD 15KV.AD.ADM213EARSZ	100	45.4	80.4	
6.	PL4	INDUCTOR 2.2UH/8A CYNTEC/PCMB063T-2R2MS [HE].SMD	125	42.9	77.9	
7.	PQ404	(TF)PWR.SMD.3P.N-Channel MOSFET.NIKO-SEM.P0903BDL	125	51.8	86.8	
8.	Memory	Transcend DDRIII 1066 2GB	95	48.7	83.7	

Note(*):

1. "Tc" indicates the component's case maximum temperature value specified in its datasheet.

2. "Tm" indicates the measured Tc value under working environmental temperature within product specification.

3. Judgment Criteria:

- **Fail** : Tm > Tc+5℃; The measured value is over specification plus margin.
- **Margin** : Tc+5℃ > Tm > Tc-10℃; The measured value is within specification with margin. For FANLESS system application, it is strongly recommended to add thermal dissipation design for better reliability.
- **Pass** : Tm < Tc-10℃; The measured value is with safety margin.

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