ReportNO: 11I080003

EMB-LN8T

Thermal Image Analysis Report

Summary	☑ **Pass** ☐ **Fail** ☐ **Pass 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
2011 / 08 / 10	Jansin Lee	Rex Chang

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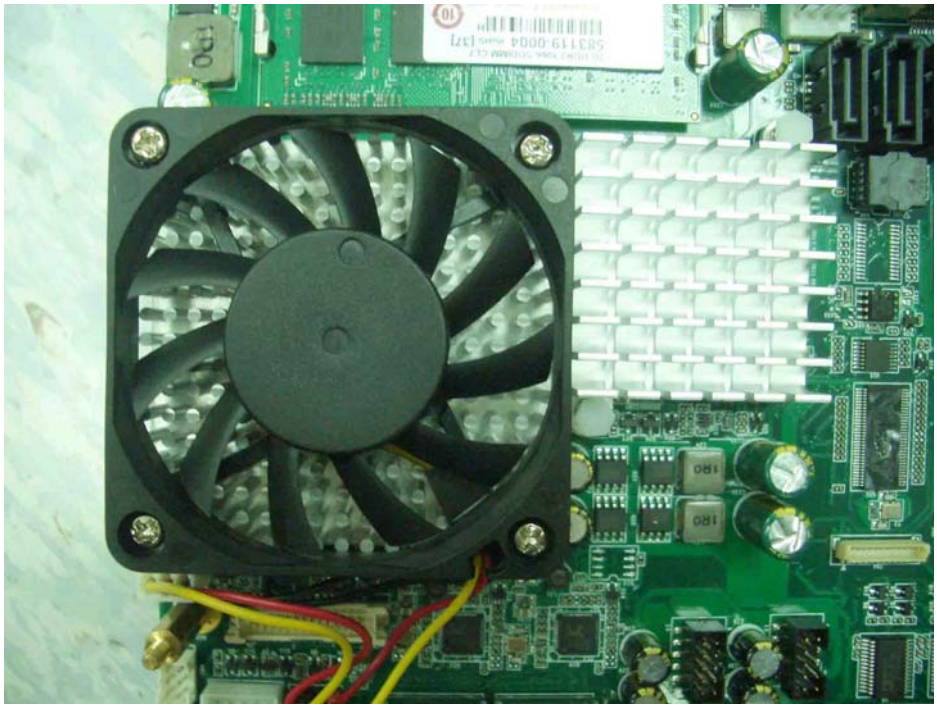
Sample Configuration & Quantity Under Test

- **Model name : EMB-LN8T A0.3_0_0**
- **CPU Board : EMB-LN8T A0.3_0_0**
- **CPU : Intel Atom D525 / 1.8GHz**
- **Memory : Transcend 2GB * 2 / Hynix H5TQ2G830A H9C 105A**
- **3.5” SATA HDD : Toshiba HDD 160GB / MK1165GSX**
- **BIOS : ELN-8T 0.10**
- **Test Software : Windows XP sp3 / Run Prime95 v26.5**
- **Power : AT Power to ATX Mode**
- **Cooler:**



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Thermal Image Analysis

1. Test Date: 2011-08-09

2. Test Product: EMB-LN8T A0.3_0_0

3. Test Site: AAEON Internal Lab.

4. Temperature Measurement:

1. 40 Channel Thermal Recorder:

YOKOGAWA Inc,

Model: DA100-13-1D

Date of Calibration: 2010/11/08

Serial Number: 12A323190

2. IR Scanner: Infrared Camera

NIPPON AVIONICS CO., LTD.

Model: TVS-100

Date of Calibration: 2011/07/11

Serial Number: 0179L2746

5. Test Condition:

Test by DA-100: 26.3℃ with cooler

6. Take Picture Time:

After power on 2 hours

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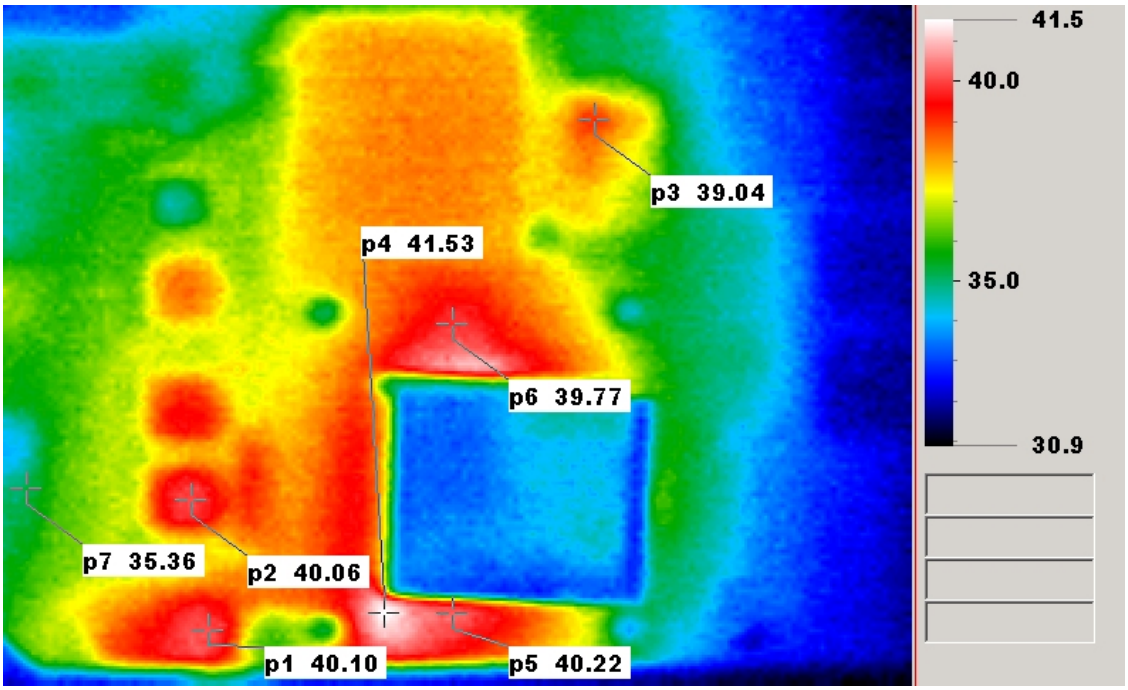
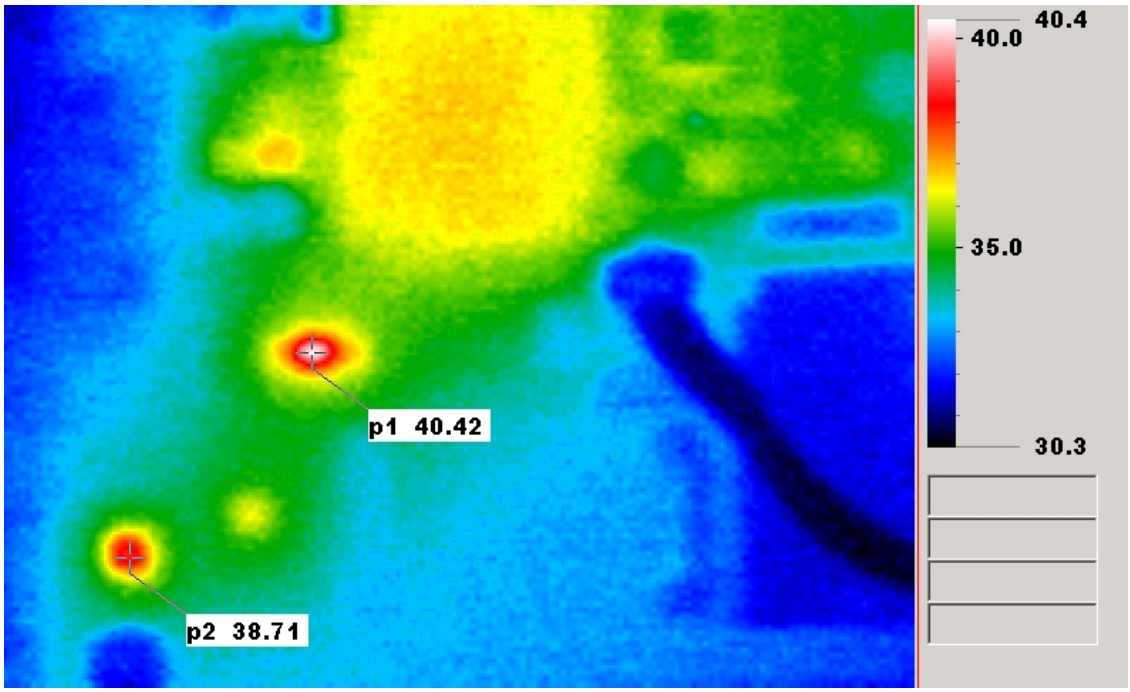
Temperature Profile Test:

Component Side:





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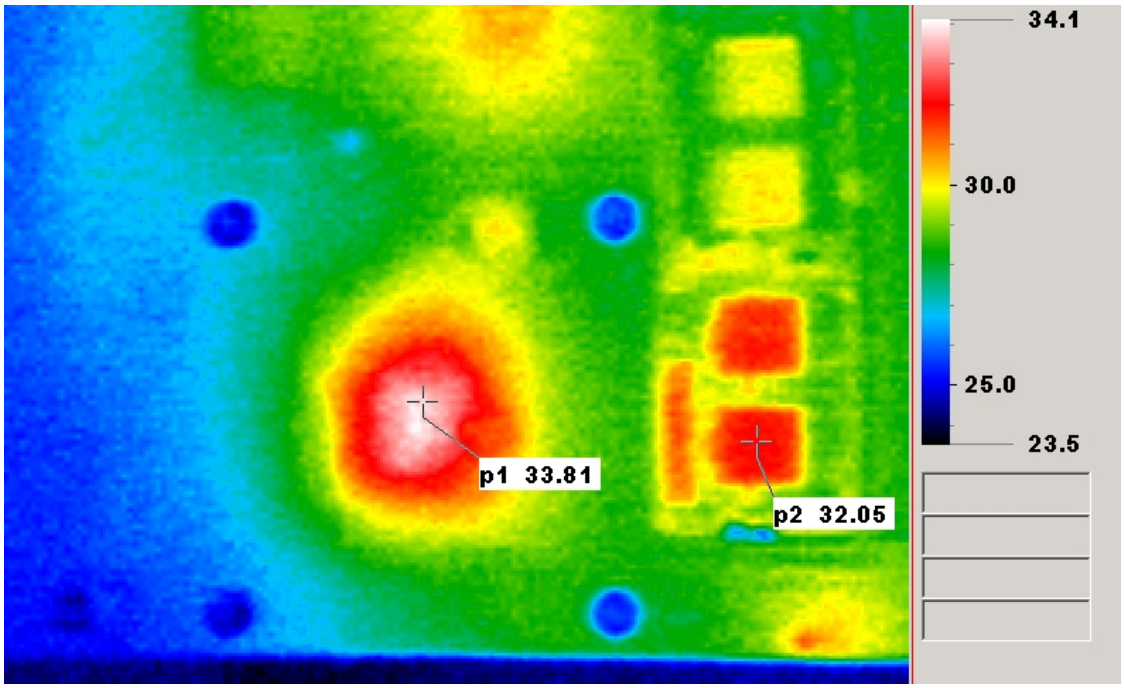
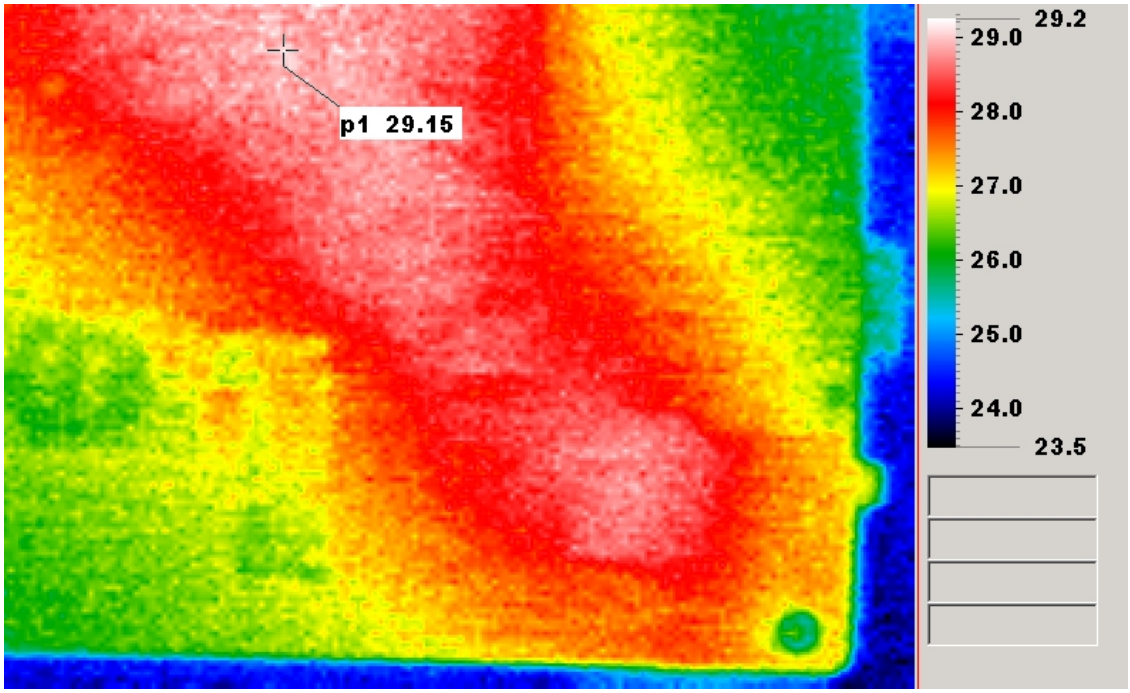
Back Side:





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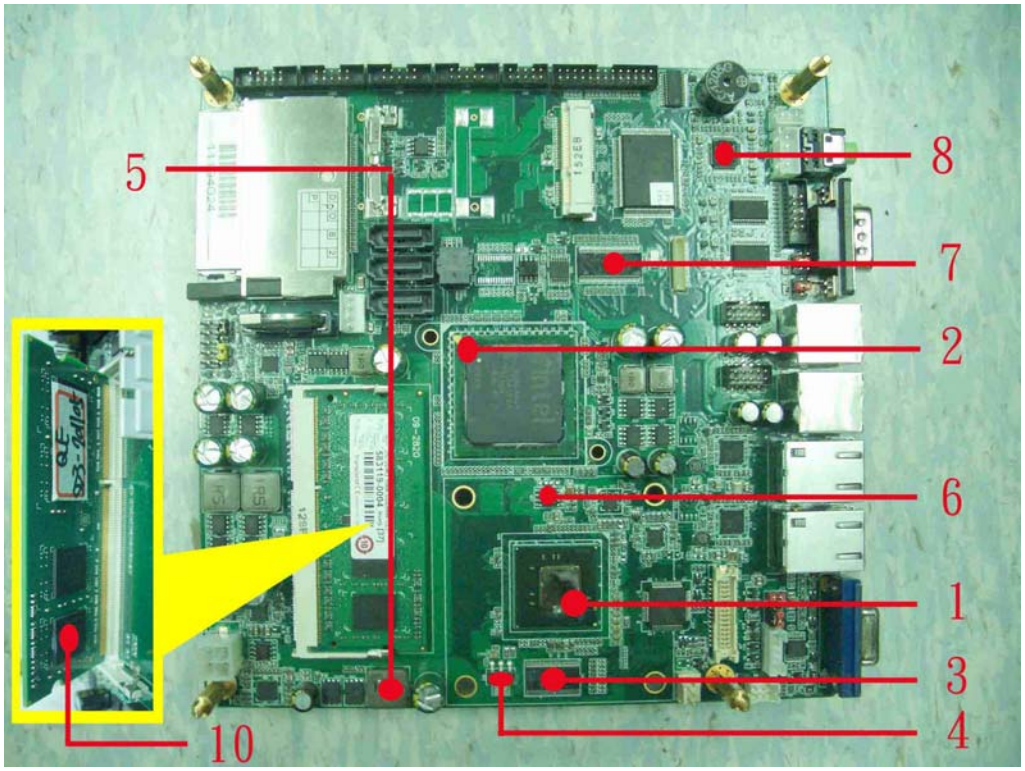
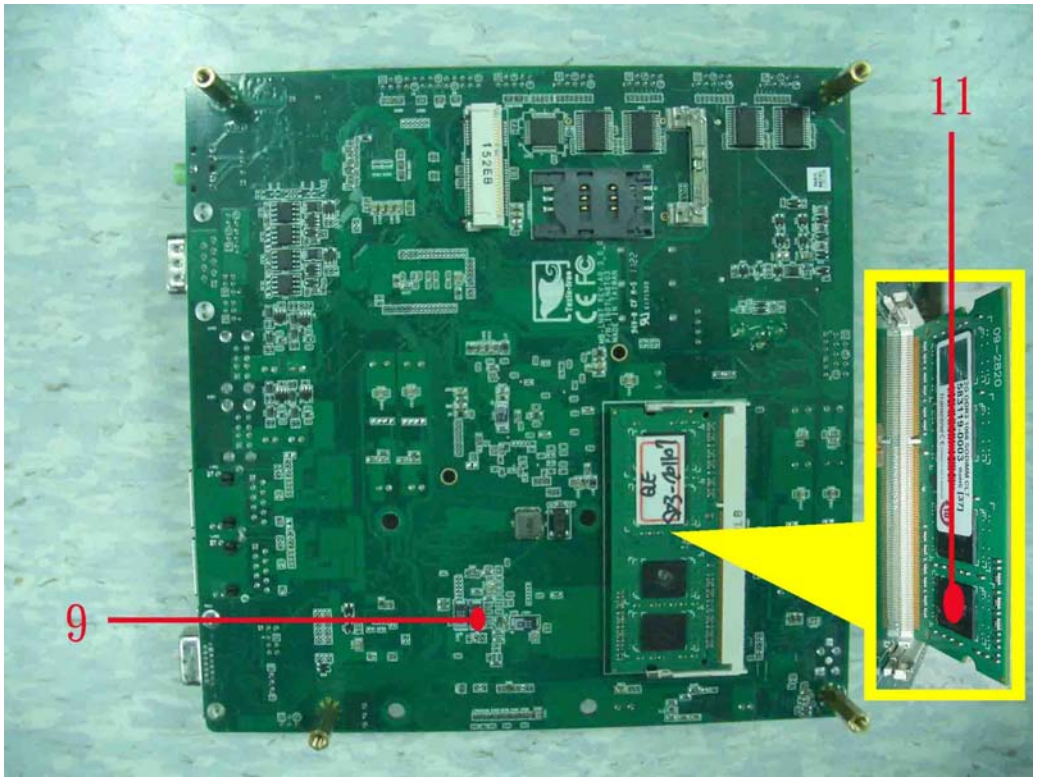
Terminal Recorder:

Measuring Thermal Couple Position：





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

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				26.3℃	60℃	
1	U26	(TF)Intel Atom D525 CPU	100	38.1	71.8	
2	U29	(TF)Chipset ICH8M.INTEL.NH82801HBM.SLB9A	105	33.4	67.1	
3	U27	(TF)LVDS.Receiver.exploretech.EP102	100	40.3	74.0	
4	Q52	(TF)REG.1A Dorpout Regulator.Fiti.FR1117R3GTR	125	41.8	75.5	
5	L31	(TF)COIL.Zenithtek.ZPWM-1040M-1R0M	125	34.7	68.4	
6	Q27	(TF)Dual N-Channel.APEC.AP4226AGM	125	32.7	66.4	
7	U22	(TF)CLOCK GENERATOR.IDT.9LPRS501PGLF	95	43.5	77.2	
8	U12	(TF)7.1Channel HD Audio Codec.VIA.VT1708B	85	38.9	72.6	
9	C403	(TF)POSCAP.SANYO.2R5TPE330MCC2	105	52.2	85.9	
10	-	Memory chipset - 1	95	33.8	67.5	
11	-	Memory chipset - 2	95	40.7	74.4	

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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