COM-LN

Thermal Image Analysis Report

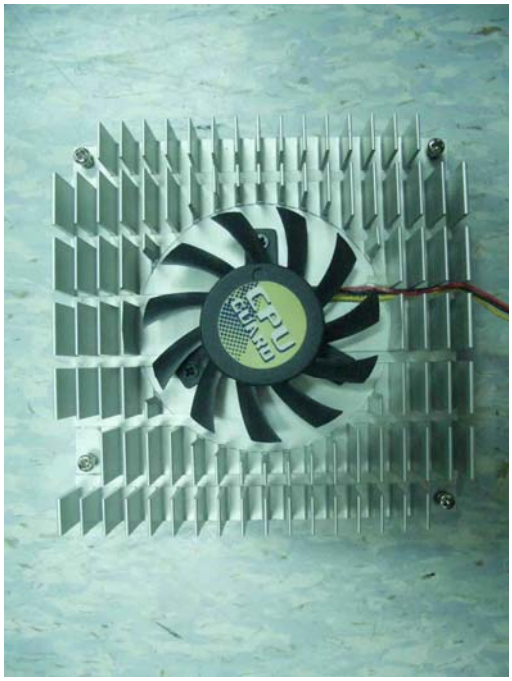
Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: <u>One temperature point need improving</u>**

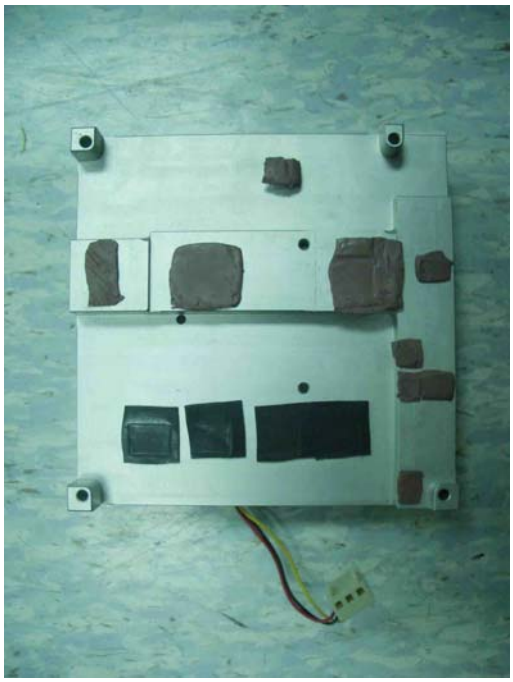
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

Issue date	Approval	Test Engineer
2011 / 09 / 19	Jansin Lee	Rex Chang

Sample Configuration & Quantity Under Test

- **Model name : COM-LN B0.3**
- **CPU Board : COM-LN B0.3**
- **CPU : Intel Atom D525 / 1.8GHz**
- **Memory : DSL 2GB * 2 / DDR3-1066 / ELPIDA J1108BFBG-DJ-F**
- **3.5” SATA HDD : Seagate HDD 160GB / ST3160811AS**
- **BIOS : CLNB 1.0 x64 (08/11/2011)**
- **Test Software : Windows 7 / Run PassMark Burn In Test 6.0 Pro**
- **Power : ATX Power**
- **Cooler:**





Thermal Image Analysis

1. Test Date: 2011-09-16

2. Test Product: COM-LN B0.3

3. Test Site: AAEON QE Dept.

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:

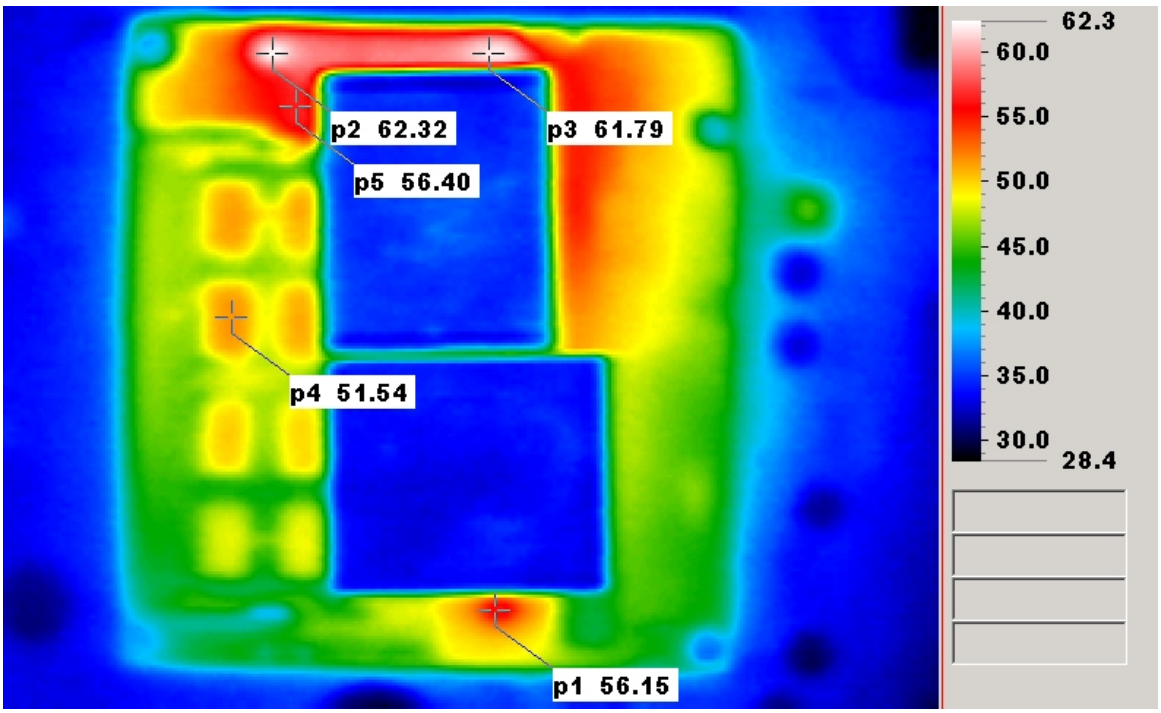
Test by DA-100: 26.0℃ with cooler

6. Take Picture Time:

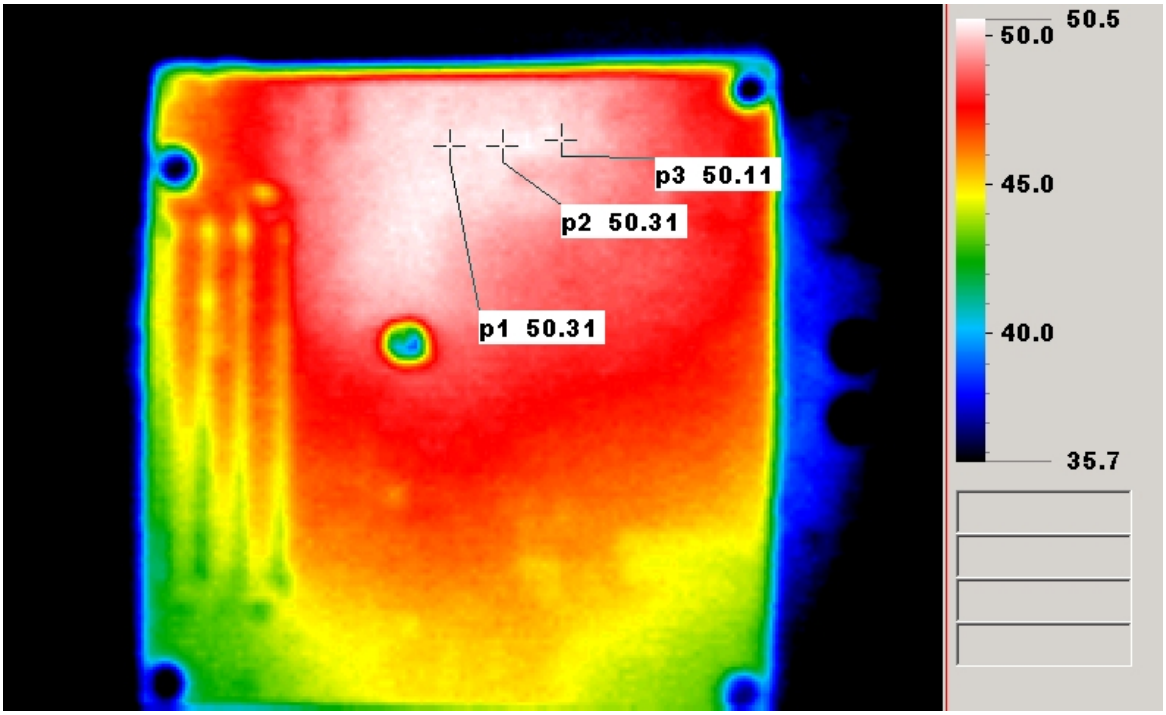
After power on 2 hour

Temperature Profile Test:

Component Side:

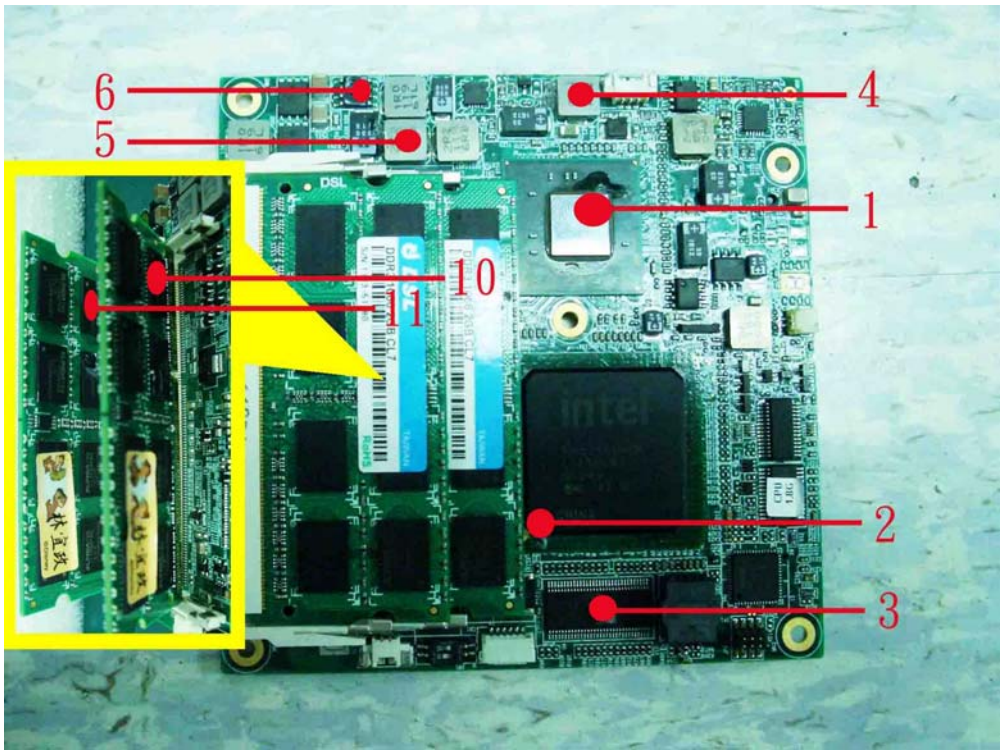


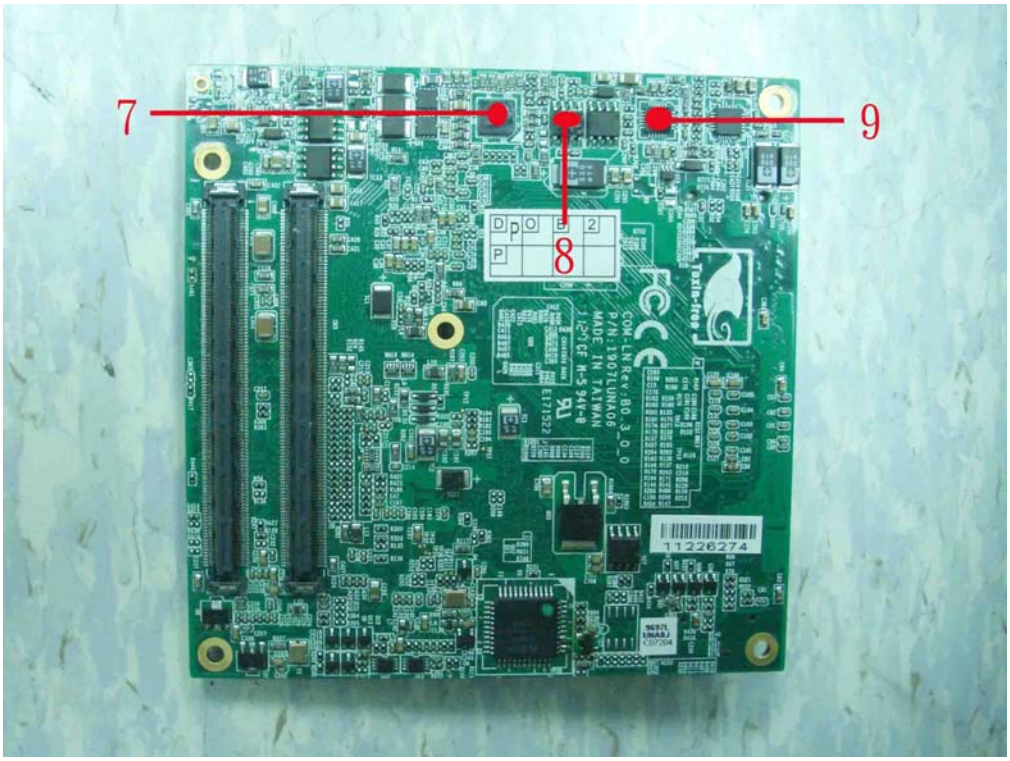
Back Side:



Terminal Recorder:

Measuring Thermal Couple Position：





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

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				26.0℃	60℃	
1	U1	(TF)Intel Atom D525 CPU / 1.80GHz	100	38.5	72.5	
2	U5	(TF)Chipset ICH8M.INTEL.NH82801HBM.SLB9A	105	42.4	76.4	
3	U4	(TF)CLOCK GENERATOR.IDT.9LPRS501PGLF	95	38.2	72.2	
4	L24	(TF)COIL. GOTREND.GSTC063P-1R0MN	125	42.3	76.3	
5	L20	(TF)COIL. GOTREND.GSTC063P-2R2MN	125	41.4	75.4	
6	Q30	(TF)Dual N-Channel.SO-8. APEC.AP4226AGM	125	40.4	74.4	
7	U26	(TF)Single Phase PWM.ON SEMI.NCP5380MNR2G	100	44.8	78.8	
8	Q29	(TF)Dual N-Channel.SO-8. APEC.AP4224GM	125	46.7	80.7	
9	U25	(TF)DUAL SYNCHRONOUS STEP-DOWN CON.TI.TPS51124RGE	100	42.9	76.9	
10	-	Memory chipset - 1	95	51.2	85.2	Note4
11	-	Memory chipset - 2	95	42.8	76.8	

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.

4. Defect NO. E100711QED01