IMBM-H61B

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: Temperature points at 8 components were estimated to be in marginal temperature points in comparion with component datasheets.**

Test Result Summary

	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	8
Defect Unsolved	0	0	0	8

Issue date	Approval	Test Engineer
2013 / 01 / 04	Tom Lin	Rex Chang

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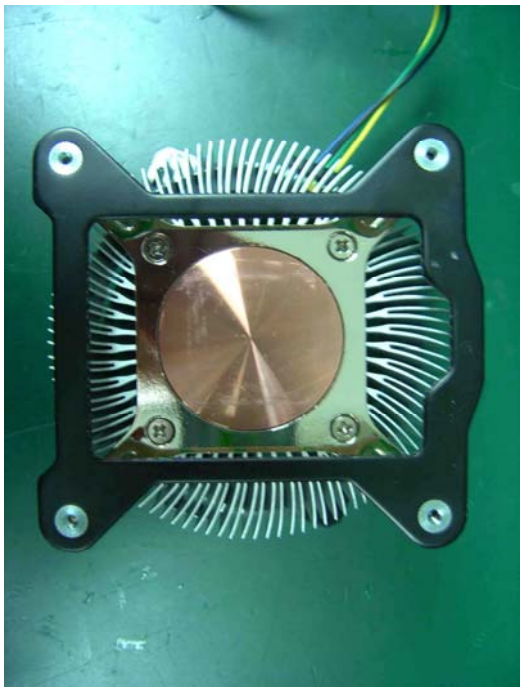
Sample Configuration & Quantity Under Test

- **Model name : IMBM-H61B A1.00**
- **CPU Board : IMBM-H61B A1.00**
- **CPU : Intel Core i7- 2600K / 3.4GHz**
- **Memory : ADATA 8GB * 2 / DDR3 1600 / ADATA 3WCD1211A EL1242V**
- **3.5” SATA HDD : Seagate ST500DM002 / 500GB**
- **BIOS : IMBM-H61B-IPC-99 13 (12/12/2012)**
- **Test Software : Windows 7 / Run PassMark Burn In Test 7.0 Pro**
- **Power : ATX Power**
- **CPU Cooler :**



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Thermal Image Analysis

1. Test Date: 2013-01-02

2. Test Product: IMBM-H61B A1.00

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

4.1. 40 Channel Thermal Recorder:

4.1.1 YOKOGAWA Inc,

4.2.2 Model: DA100-13-1D

Date of Calibration: 2012/10/08

Serial Number: 12A323190

4.2. IR Scanner: Infrared Camera

4.2.1 NEC Avio Infrared Technologies Co., Ltd.

4.2.2 Model: Thermo GEAR G100W2-D

Date of Calibration: 2012/01/03

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 25.1℃ with Heat Sink + FAN (Full speed)

6. Take Picture Time:

After power on 2 hours

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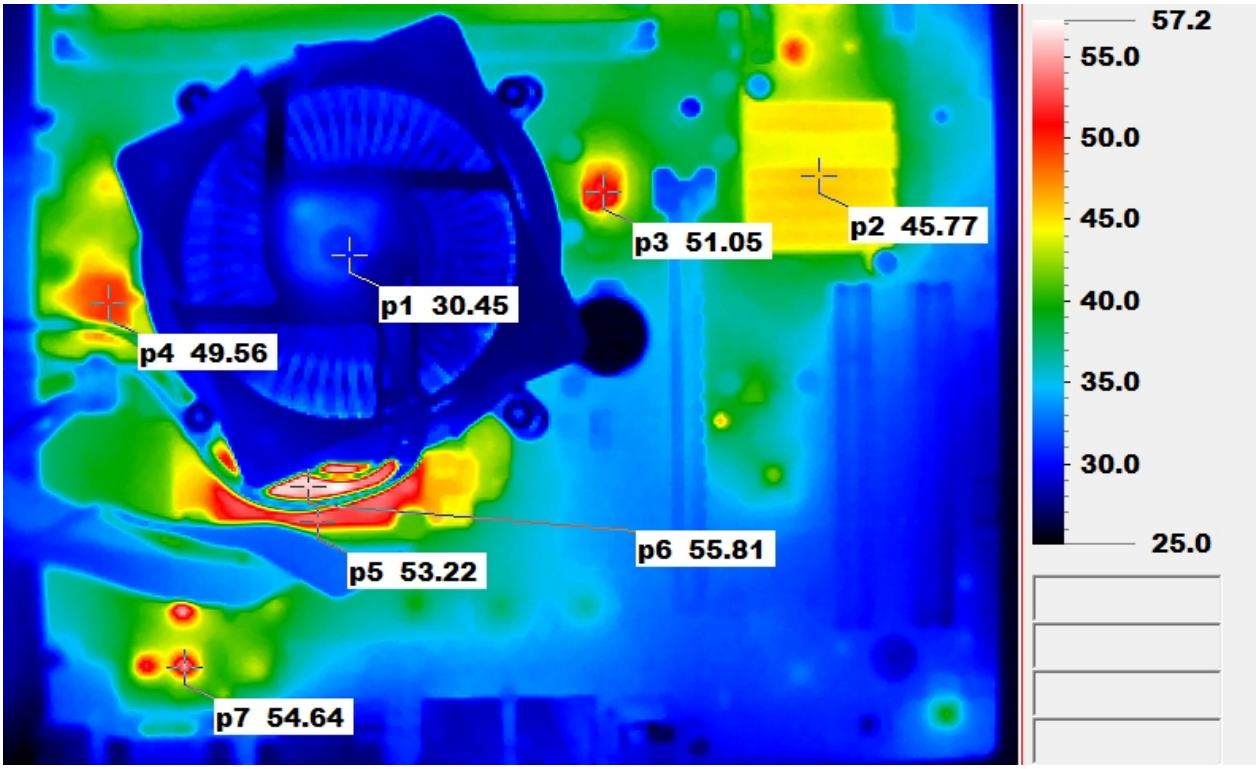
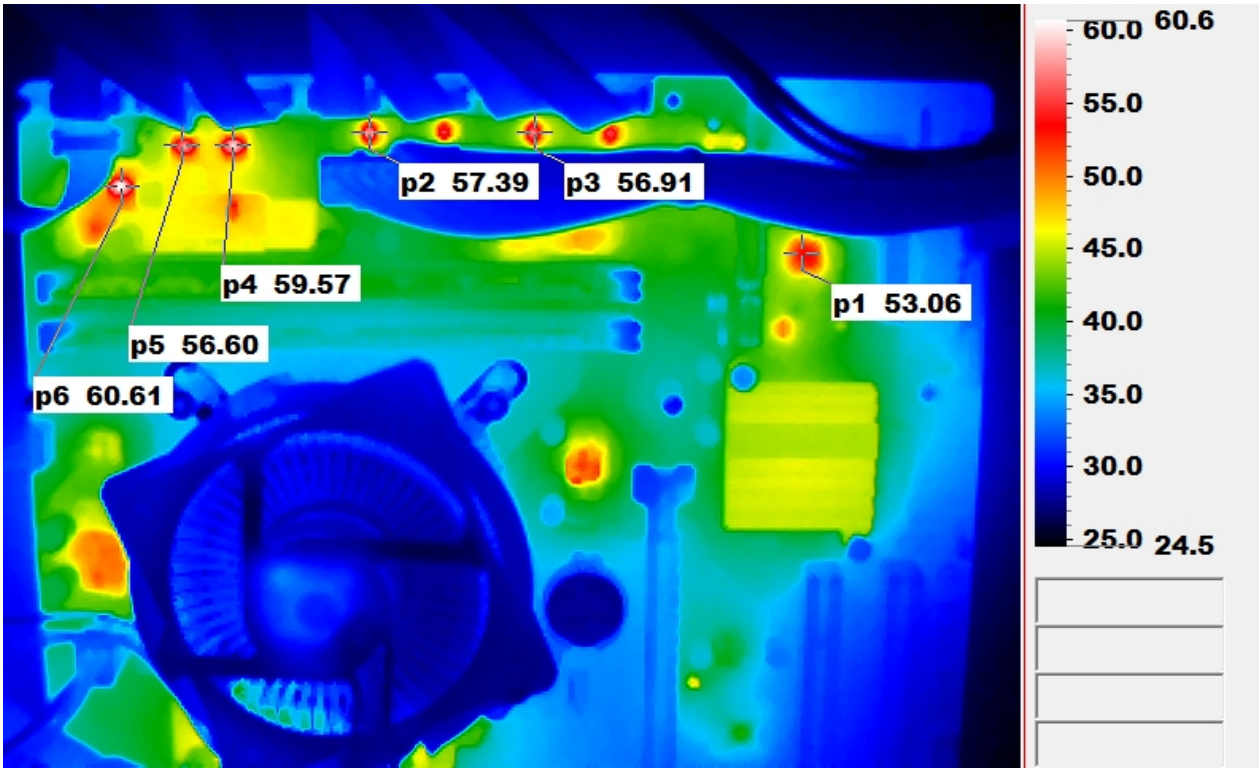
Temperature Profile Test:

Component Side:





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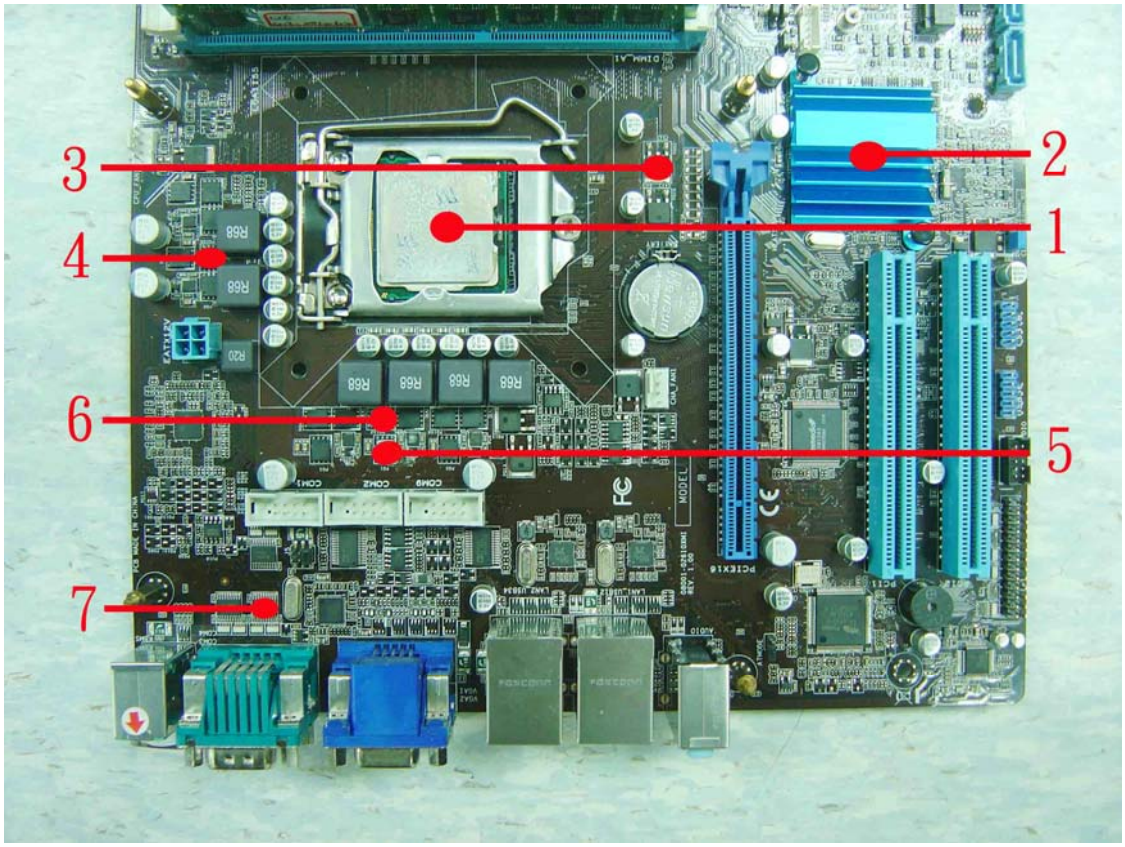
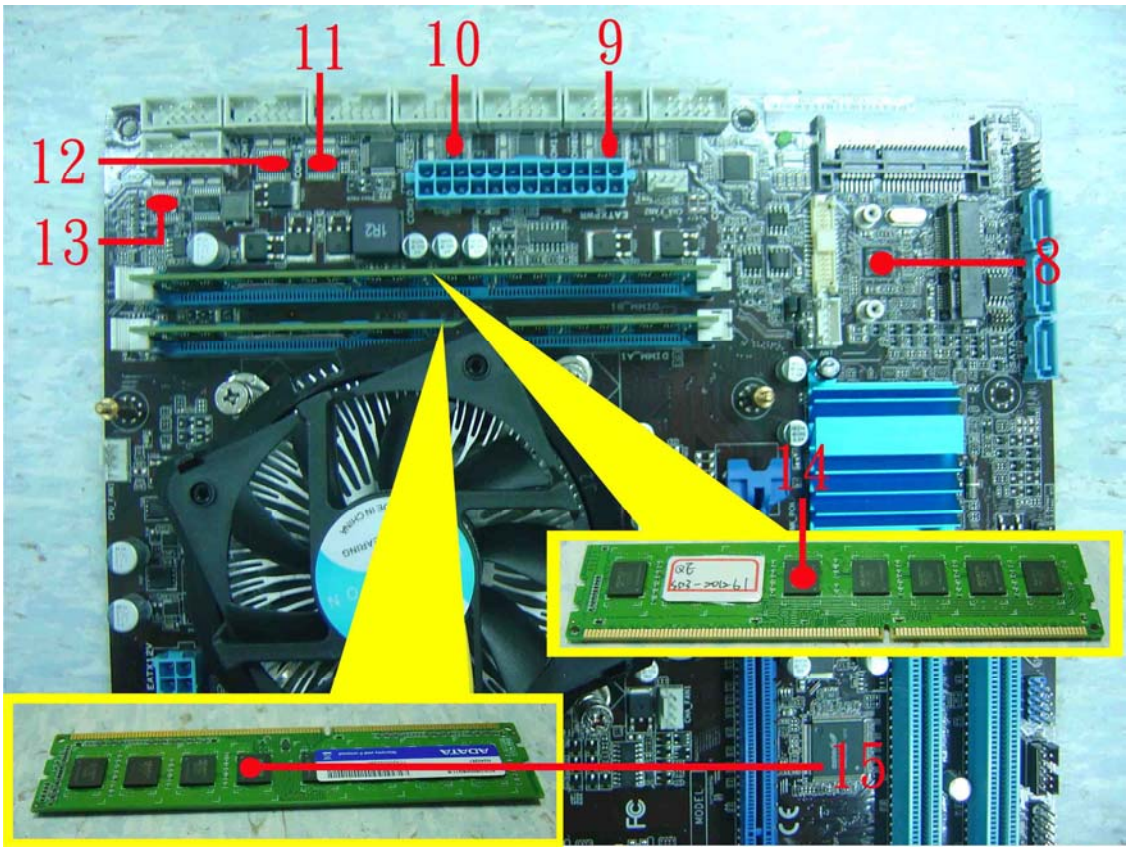
Terminal Recorder:

Measuring Thermal Couple Position：





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

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				24.8℃	60℃	
1	CPU	Intel Core I7-2600K 3.4GHz CPU	72.6	38.3	73.5	Note4
2	PCH	Intel BD82H61 PCH	104	43.0	78.2	
3	PQ22	Field Effect Transistor. N-Channel. NIKO-SEM P0903BDL	125	40.4	75.6	
4	PQ108	PW MOSFET. Single N-Channel. NTMFS4937N	125	39.2	74.4	
5	PQ1	PW MOSFET. Single N-Channel. NTMFS4955N	125	46.8	82.0	
6	PQ102	PW MOSFET. Single N-Channel. NTMFS4937N	125	47.1	82.3	
7	U11	MULTIPLE RS-232 DRIVERS AND RECVIVERS AZ75232	90	48.6	83.8	Note4
8	Lvu1	CH7511B eDP/DP to LVDS Monitor Controller	85	53.7	88.9	Note4
9	Ou9	MULTIPLE RS-232 DRIVERS AND RECVIVERS AZ75232	90	52.3	87.5	Note4
10	Ou5	MULTIPLE RS-232 DRIVERS AND RECVIVERS AZ75232	90	51.6	86.8	Note4
11	Ou10	MULTIPLE RS-232 DRIVERS AND RECVIVERS AZ75232	90	54.4	89.6	Note4
12	Ou8	MULTIPLE RS-232 DRIVERS AND RECVIVERS AZ75232	90	51.3	86.5	Note4
13	Ou4	MULTIPLE RS-232 DRIVERS AND RECVIVERS AZ75232	90	57.1	92.3	Note4
14		Memory chipset - 1	95	38.8	74.0	
15		Memory chipset - 2	95	33.9	69.1	

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. BUL1219LABD02**

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