IMBA-H61A

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: Temperature at one component was estimated to be in marginal temperature point in comparison with component datasheet.**

Test Result Summary

	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

Issue date	Approval	Test Engineer
2013 / 02 / 19	Tom Lin	Matthew Chi

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Sample Configuration & Quantity Under Test

- **Model name :** IMBA-H61A A1.00
- **CPU :** Intel Core i7-2600 3.40GHz
- **Chipset :** Intel H61
- **Memory :** Transcend 8G DDR3 1333 HYKO K4B4G0846B
- **SATA HDD :** TOSHIBA MK1665GSX 2.5” 160G
- **BIOS :** 0104(12/28/2012)
- **Test Software :** Windows 7 / Run PassMark Burn In Test 7.0
- **Power :** AT Power CWT DSA400P-C
- **CPU Fan:**

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Thermal Image Analysis

1. Test Date: 2013-02-19

2. Test Product: IMBA-H61A

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: 2013/10/07

Serial Number: 12A323190

4.2. IR Scanner: Infrared Camera

4.2.1 NIPPON AVIONICS CO., LTD.

4.2.2 Model: NEC-G100D

Date of Calibration: 2014/01/ 09

Serial Number: 1051444

5. Test Condition:

Component Side-1 (Test by DA-100): 25.0℃ With CPU Fan

6. Take Picture Time:

After power on 2 hours

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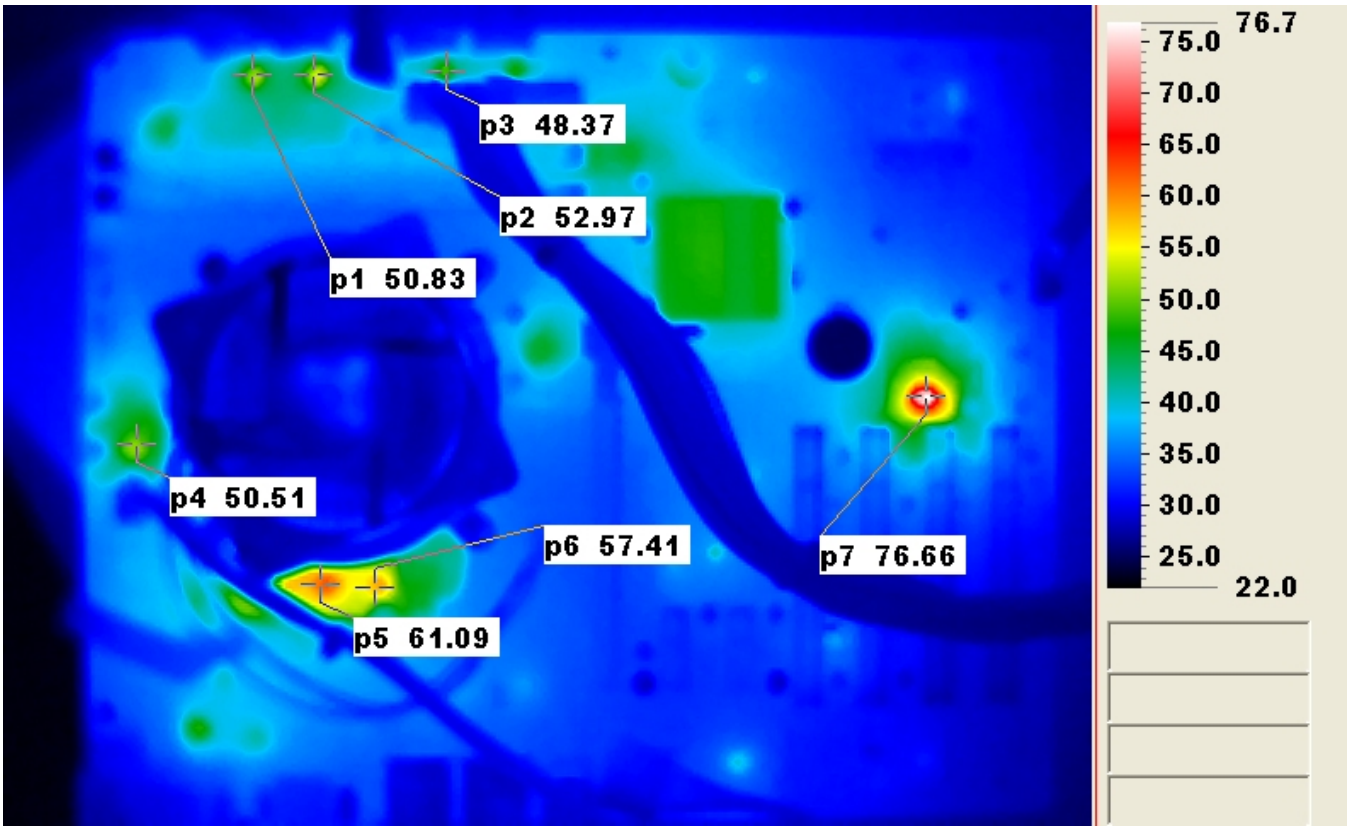
Temperature Profile Test:

Component Side:



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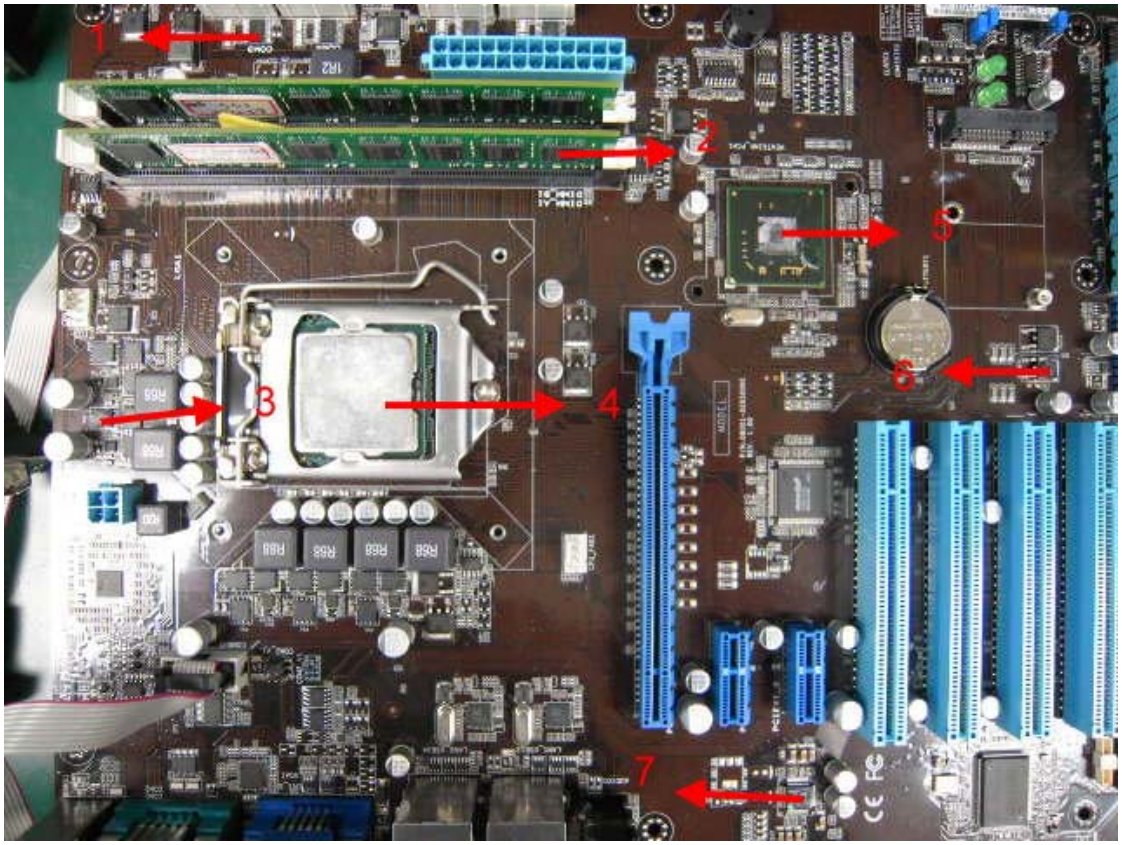
Terminal Recorder:

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
				25℃	60℃	
1	Ou11	MULTIPLE RS-232 DRIVERS AND RECEIVERS AZ75232	100	48.3	83.3	
2	Memory	Transcend 8G DDR3 1333 HYKO K4B4G0846B	85	38.4	73.4	
3	PQ7	Power MOSFET NTMFS4955N	125	28.5	63.5	
4	CPU	Intel Core i7-2600 3.40GHz	72.6	42.2	77.2	
5	Su1	(TF)IC.SMD.Platform Controller Hub.INTEL.BD82H61.SLJ4B	125	48.9	83.9	
6	Oq42	Power MOSFET AP3310GH/J	150	45.7	80.7	
7	Au1	C.S ALC887-VD2-CG LQFP-48//REALTEK	100.5	38.3	73.3	

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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