LIB75A

A0.2

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: Temperature at 1 component was estimated to be in marginal temperature point in comparion with component datasheet.**

Test Result Summary

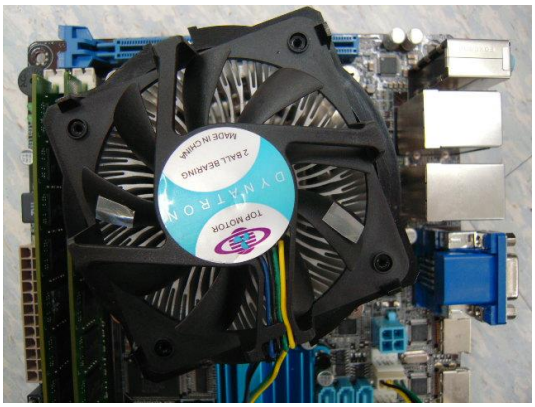
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

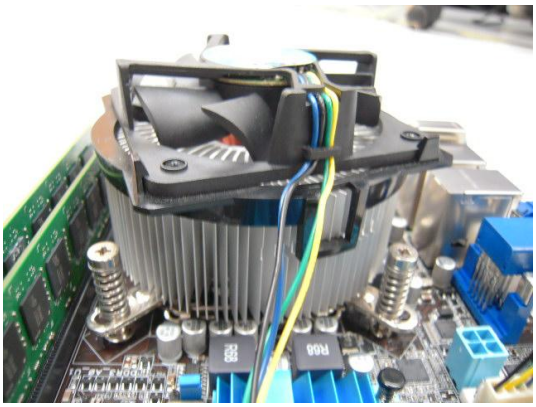
Issue date	Approval	Test Engineer
2012 / 07 / 18	Tom Lin	Clement Chien

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

Sample Configuration & Quantity Under Test

- **Model name :**LIB75A
- **CPU :** Intel core i7-2600 / 3.40GHz
- **Chipset :** Intel B75
- **Memory :** Transcend 4G DDR3 1600 CL11 x2
- **SATA HDD :** HITACHI Z5K320 2.5” 320G
- **BIOS :** EMB-B75A R0.5
- **Test Software :** Windows 7 / Run PassMark Burn In Test 7.0
- **Power :** ATX Power
- **CPU Fan:**





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Thermal Image Analysis

1. Test Date: 2012-07-12

2. Test Product: LIB75A

3. Test Site: AAEON Internal Lab.

4. Temperature Measurement:

4.1. 40 Channel Thermal Recorder:

4.1.1 YOKOGAWA Inc,

4.2.2 Model: DA100-13-1D

Date of Calibration: 2011/10/12

Serial Number: 12A323190

4.2. IR Scanner: Infrared Camera

4.2.1 NIPPON AVIONICS CO., LTD.

4.2.2 Model: TVS-100

Date of Calibration: 2011/07/11

Serial Number: 0179L2746

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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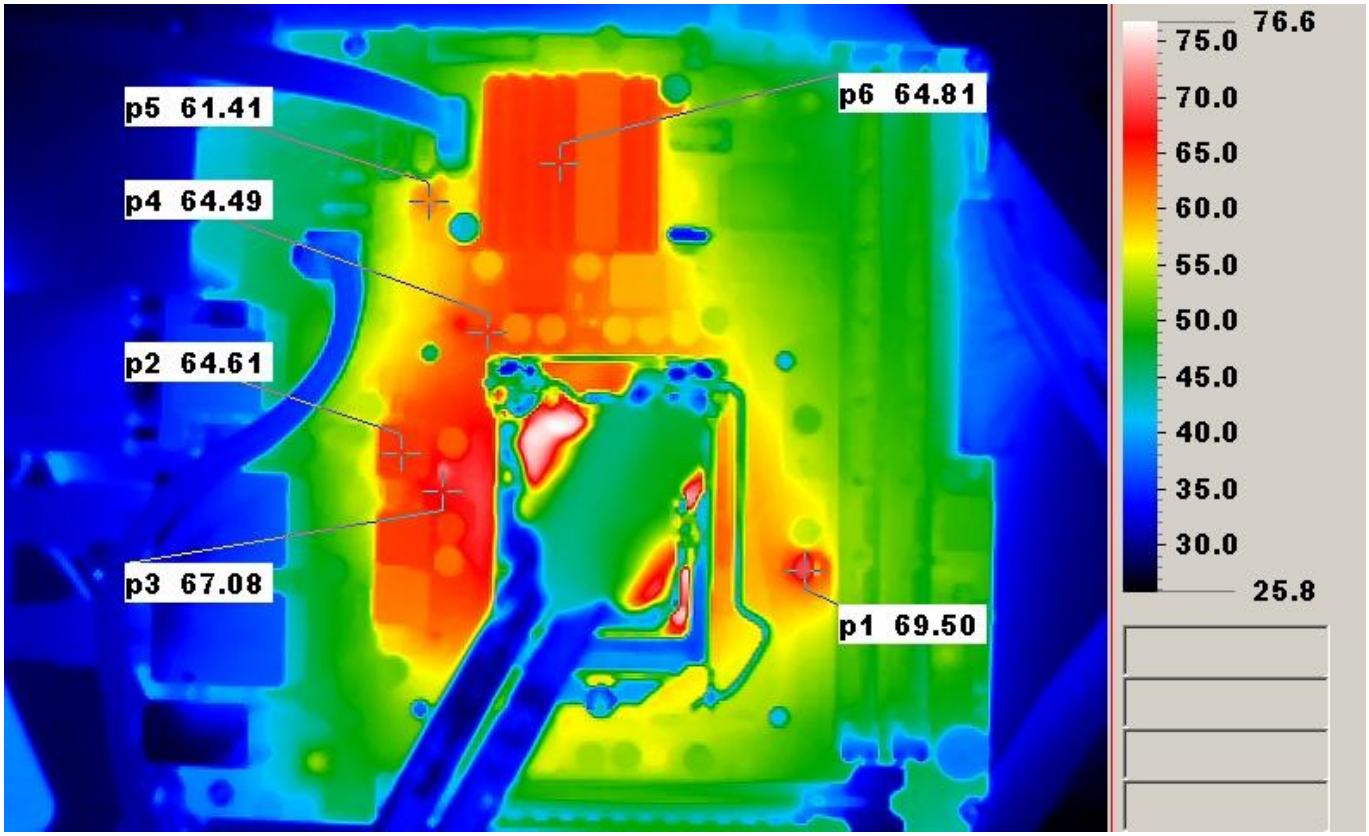
Temperature Profile Test:

Component Side:



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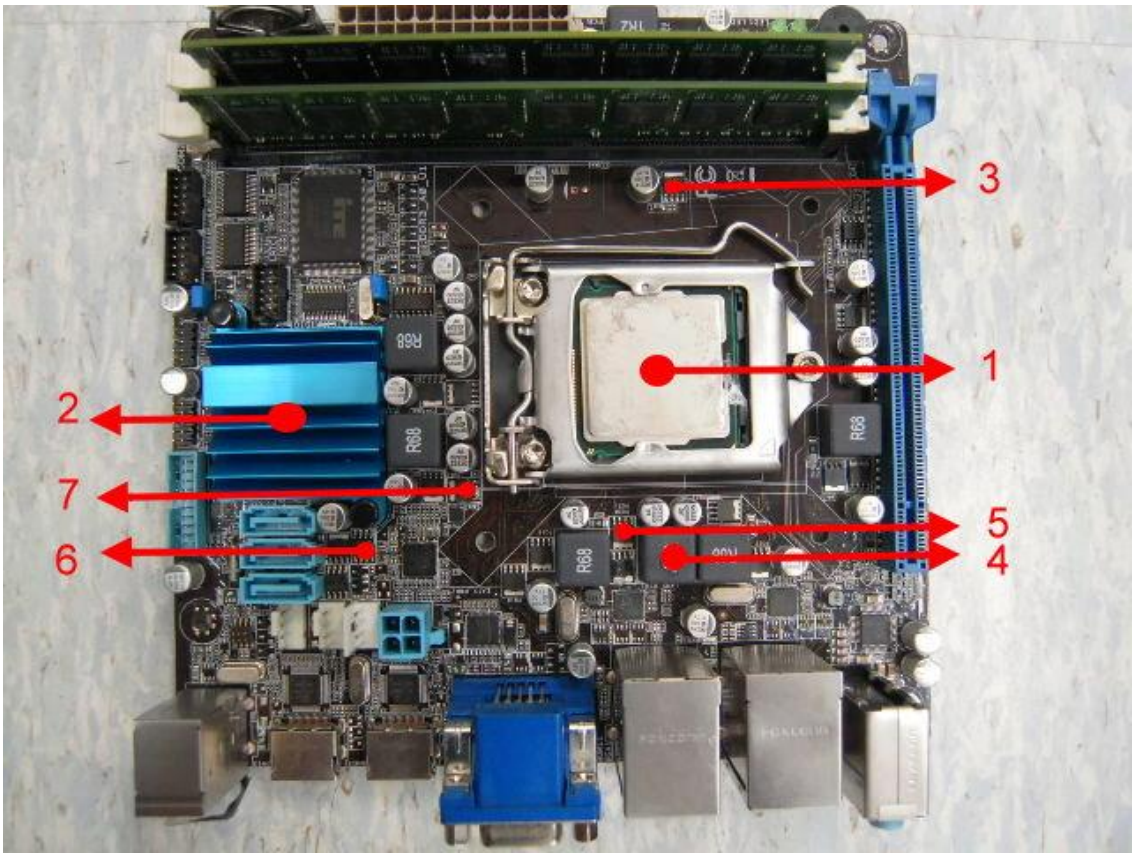
Terminal Recorder:

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	CPU	Intel core i7-2600 / 3.40GHz	72.6	35.4	70.4	
2	B75	Intel C.S BD82B75 FCBGA942	100	37.0	72.0	
3	PQ7	PH7030AL	150	40.4	75.4	
4	PL6	INDUCTOR 0.68UH/35A 1.5φ DI	125	33.6	68.6	
5	PQ26	PH2525L	150	35.4	70.4	
6	U62	APE8955MP	85	34.8	69.8	
7	PQ17	PH2525L	150	39.6	74.6	
8	memory	Transcend DDR3 1600 4GB CL11	85	34.3	69.3	

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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