IMBA-Q77

Thermal Image Analysis Report

Report NO: 12I080003

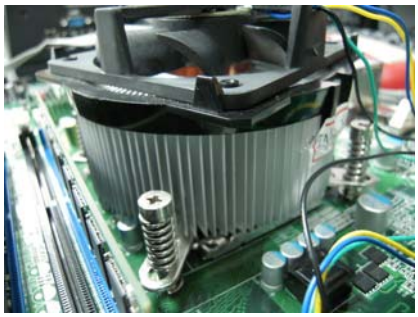
Issued by:	*Matthew Chi*	/	*03/27/2012*
	Test Engineer		**Date**
Reviewed by:	*Wayne Chen*	/	*03/27/2012*
	CTO		**Date**

Configuration of EUT

Test Product: IMBA-Q77 A0.2

Sample Configuration & Quantity Under Test:

1. CPU: Intel Core i7 3770 3.40GHz
2. BIOS: IMBA-Q77 R1.3(IQ77AT13)(03/15/2012)
3. Chipset: Intel Q77(Panther Point)
4. Memory: Panram DDR3-1333 8GB F121X8A0W406 x2
5. HDD: Hitachi 3.5’ SATA HDS721050CLA362
6. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
7. ATX Power Supply: CWT DSA400P-C
8. CPU Fan:

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Thermal Image Analysis

1. Test Date: 2012-03-27

2. Test Product : IMBA-Q77 A0.2

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

1. YOKOGAWA / DARWIN DA-100-13-1D

2. IR Scanner: Infrared Camera

NIPPON AVIONICS CO., LTD.

Model: NEC-G100D

Date of Calibration: 2012/01/03

Serial Number: 1051444

5. Test Condition:

Component Side-1 (Test by DA-100): 25℃ With cooler

6. Take Picture Time:

After power on 2 hours

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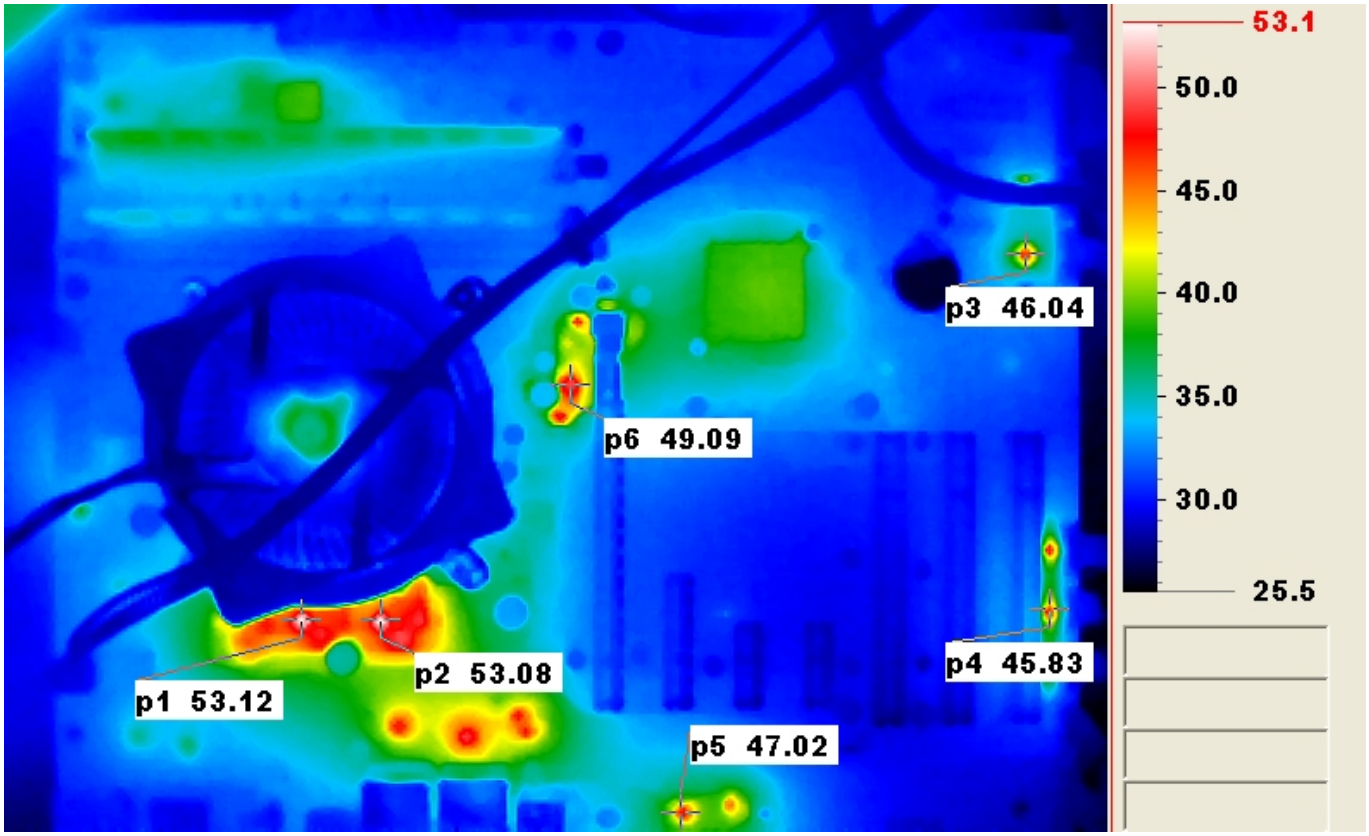
Temperature Profile Test:



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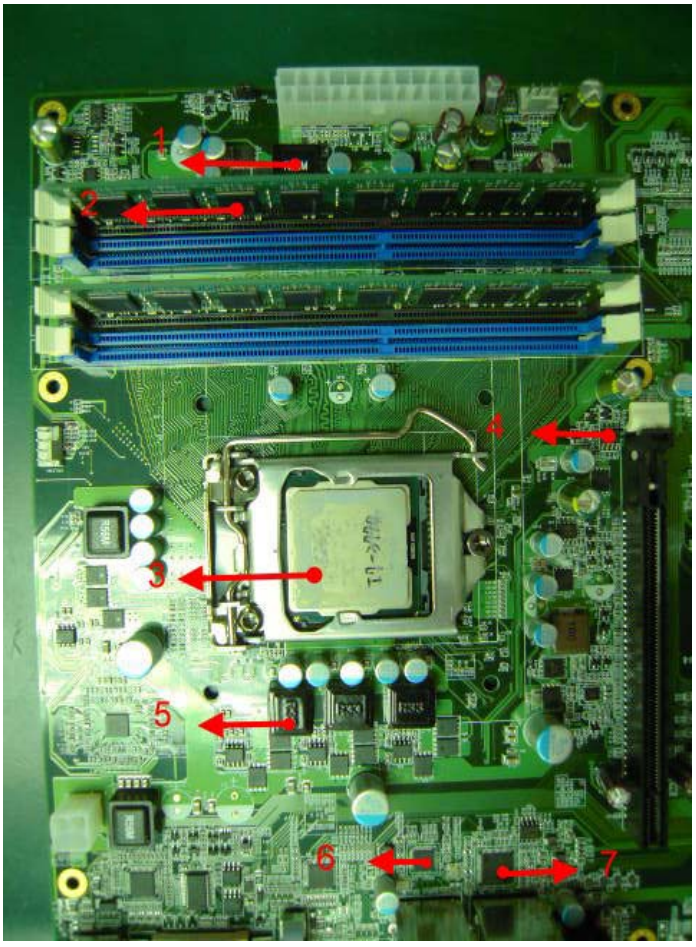

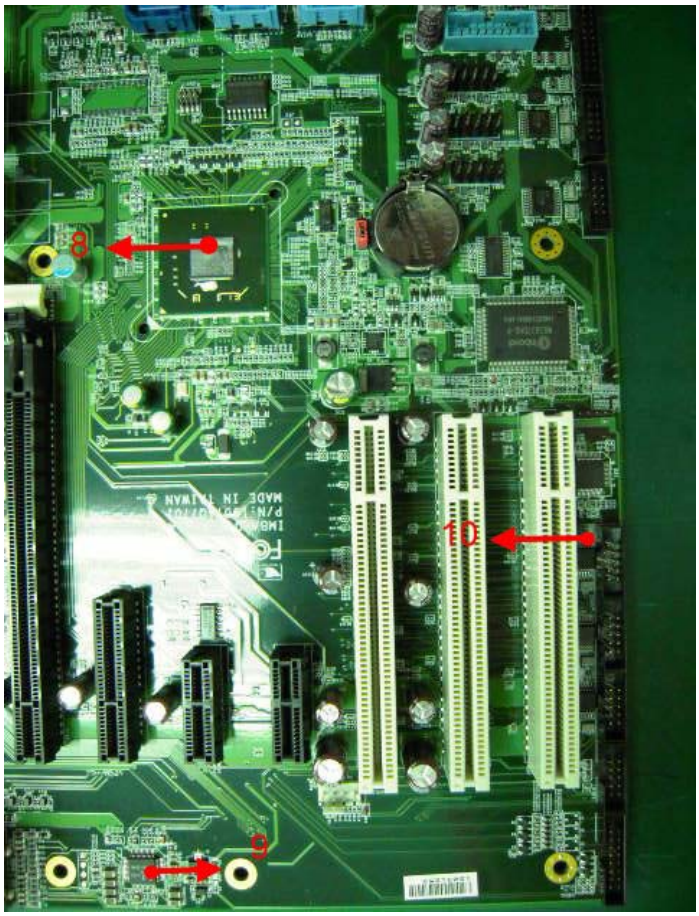

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Using YOKOGAWA / DARWIN DA100-100-13-1D test

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				25℃	60℃	
1.	L18	(TF)COIL.0.56uH.20%.DIP.35A.GOTREND.GMAT-131210-P-R56-M	85	35.8	70.8	
2.	Memory	Panram DDR3-1333 8GB F121X8A0W406	95	36.1	71.1	
3.	U32	Intel Core i7 3770 3.40GHz	100	36.6	71.6	
4.	U36	(TF)IC.SMD.QFN Regulator.INTERSIL.ISL8014AIRZ	85	35.7	70.7	
5.	L13	(TF)COIL.0.33uH.20%.DIP.40A.GOTREND.GMBT131211P-R33M	85	36.1	71.1	
6.	U17	(TF)IC.SMD. GigaBit Ethernet Chipset.Intel.WG82579LM SLHA6	106	40.4	75.4	
7.	U14	(TF)IC.SMD. GigaBit Ethernet Chipset.Intel.WG82583V	85	46.1	81.4	
8.	U42	(TF)IC.SMD.Desktop Panther Point PCH.INTEL.BD82Q77 QPR7	108	39.7	74.7	
9.	U1	(TF)IC.SMD. DEFINITIOND.AUDIO CODEC.REALTEK.ALC662-GR	85	43.5	78.5	
10.	U21	(TF)IC.SMD SSOP.20Pin RS-232 Driver&Receivers.TI.GD75232DBR	85	47.2	82.2	

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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