IMBM-H81B

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment:** _There are two temperature points marginal passed, the functions are stable,_____

Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	2
Defect Unsolved	0	0	0	2

Issue date	QE Manager	Test Engineer
2016 / 06 / 02	KJ Wang	Ben Sun

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Sample Configuration & Quantity Under Test

- **Model name : IMBM-H81B A1.01**
- **CPU : i7-4770k 3.9GHz**
- **Memory : Transcend DDR3L-1600 8GB*2**
- **2.5” SATA HDD : Seagate / 160GB ST9160412AS**
- **BIOS : IMBM-H81B R0.6 (MH81BM06)**
- **Test Software : Windows 8.1 / Run PassMark Burn In Test 8.0 Pro**
- **Power : ATX Power**
- **Heat Sink & Fan :**

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Thermal Image Analysis

1. Test Date: 2015-05-27

2. Test Product: IMBM-H81B A1.01

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: 2015/09/10

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: 2015/12/01

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 26.2℃ with Heat Sink & Fan

6. Take Picture Time:

After power on 2 hours

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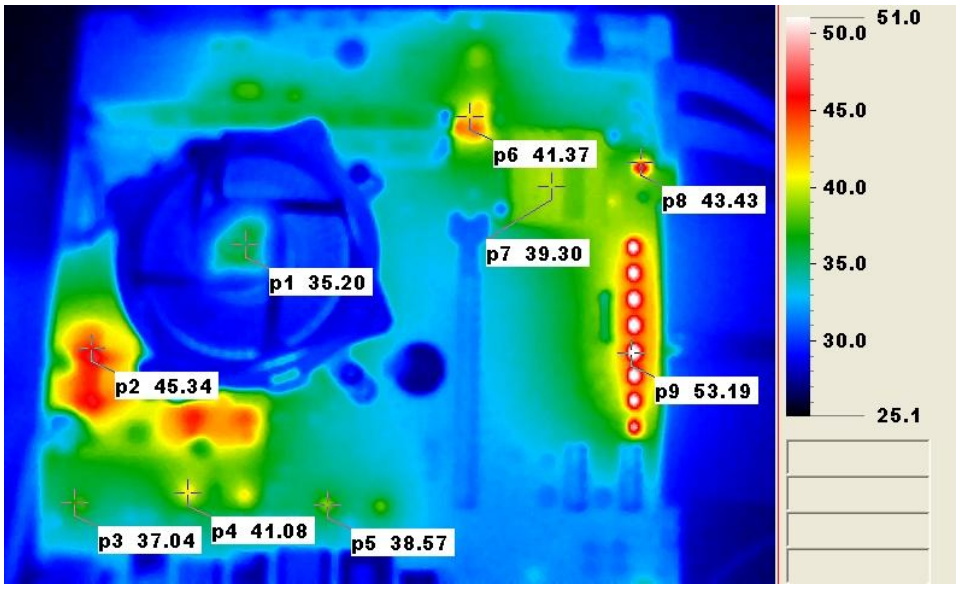
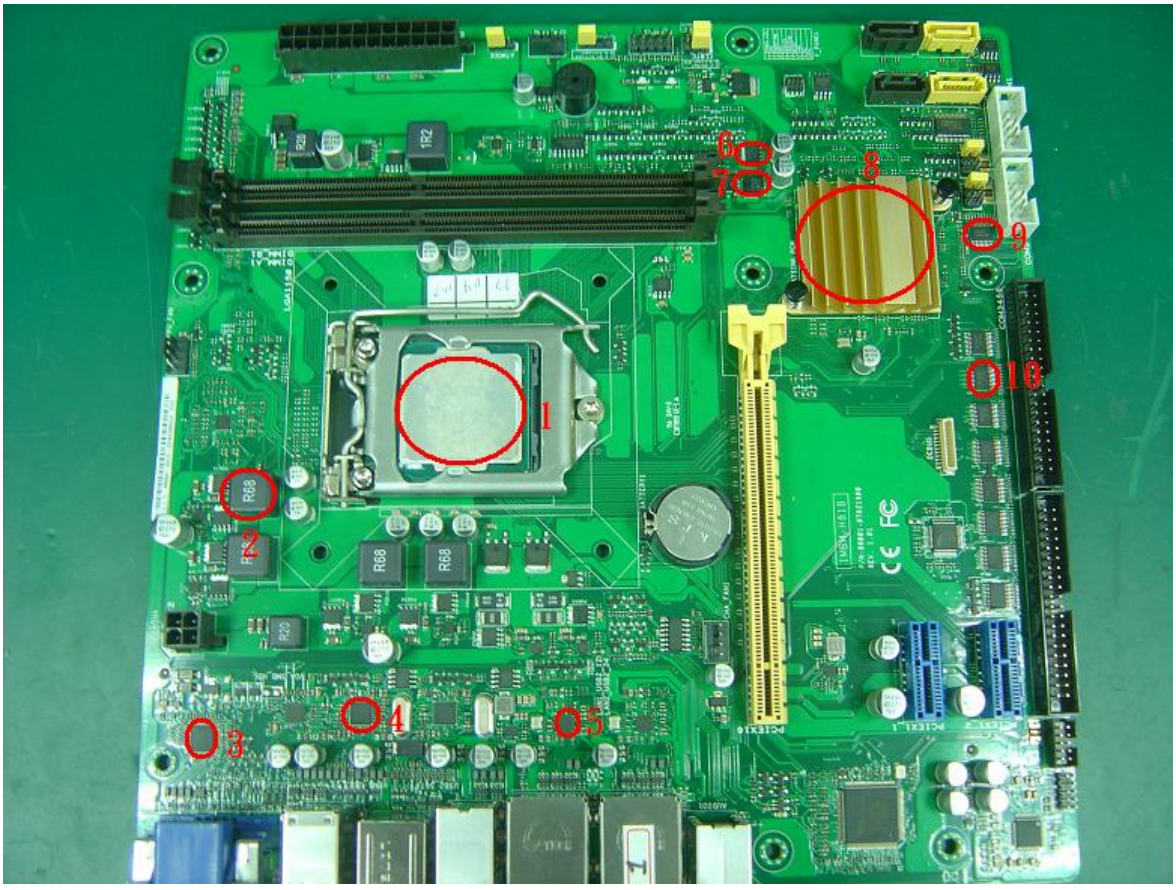
Temperature Profile Test:

Component Side:



Terminal Recorder:

Measuring Thermal Couple Position：



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

Point	Position	Describe	Tc (*1) (℃)	TAT(*2)	TPT(*3)	Note
				26.0℃	50℃	
1	CPU	intel i7-4770k Processor 3.9GHz	72.72	52.6	76.6	NOTE4
2	Pl4	INDUCTOR 0.68UH/35A 1.5φ DIP/ CHUNG SHUO/CS1112-R68-I43U	125	44.5	68.5	
3	Gu402	C.S ASM1442K (A1) QFN-48/ ASMEDIA	85	41.4	65.4	
4	U14	C.S ASM1042A TQFN-48L/ ASMEDIA	85	44.7	68.7	
5	L1u1	C.S RTL8111G-CG QFN-32 / REALTEK	100	41.1	65.1	
6	Pq823	N-MOSFET PH6030DLVX SOT669 / N-MOSFET PH6030DLVX SOT669	150	43.9	67.9	
7	Pq825	N-MOSFET QM3052M6 PRPAK5X6 / UBIQ	150	44.5	68.5	
8	Su1	C.S LYNXPOINT-DT (C2) FCBGA708 / INTEL 929137/82H81/SR177	90	42.2	66.2	
9	BU11,	HF INTERFACE 75232G-P20-R / UTC TSSOP-20	85	49.4	73.4	
10	BU5	HF INTERFACE 75232G-P20-R / UTC TSSOP-20	85	54.2	78.2	NOTE4
11		RAM	85	40.1	64.1	

Note(*):

1. "Tc" indicates the component's case maximum temperature value specified in its datasheet.

2. "TAT" indicates the actual measured temperature under product specification.

3. "TPT" indicates the predicted temperature under 25℃ working environmental.

4. 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.

5. **RTC battery avoid to put on heat position.** Please do not exceed battery temperature specification.

4. Defect NO. W160101E01

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