

IMBM-H110A

Thermal Image Analysis Report

Summary	☐ Pass			
	☐ Fail			
	☒ Pass with Deviation			
	Comment:			
	1. There is a component marginal passed.			
	2. There is a component lack the Tc or Tj specifications,			
	So we can not determine.			
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	2
Defect Unsolved	0	0	0	2

Issue date

2017 / 04 / 24

QE Manager

KJ Wang

Test Engineer

Jerry Chen

Sample Configuration & Quantity Under Test

- Model name : IMBM-H110A
- M/B Name : IMBM-H110A / Rev. 1.01
- CPU : Intel Core i7-6700 3.4 GHz
- BIOS : R0.1 (MH11AM01) (02/20/2017)
- Chipset: Intel H110
- Memory : innodisk / 16GB DDR4 2400 DIMM (SEC K4A8G085WB BCRC) *2
- 3.5" SATA HDD: Seagate / ST500DM002 500GB
- Test Software : Windows 10 / Run PassMark Burn In Test 8.1 Pro
- Power Supply: CWT /DSA400P-C
- CPU Cooler:



Thermal Image Analysis

1. Test Date: 2017-04-21

2. Test Product: IMBM-H110A

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

4.1. 20 Channel Thermal Recorder:

4.1.1 OMRON Inc,

4.2.2 Model: ZR-RX45

Date of Calibration: 12/20/2016

Due date of Calibration: 12/19/2017

Serial Number: H30481978

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: 11/29/2016

Due date of Calibration: 11/28/2017

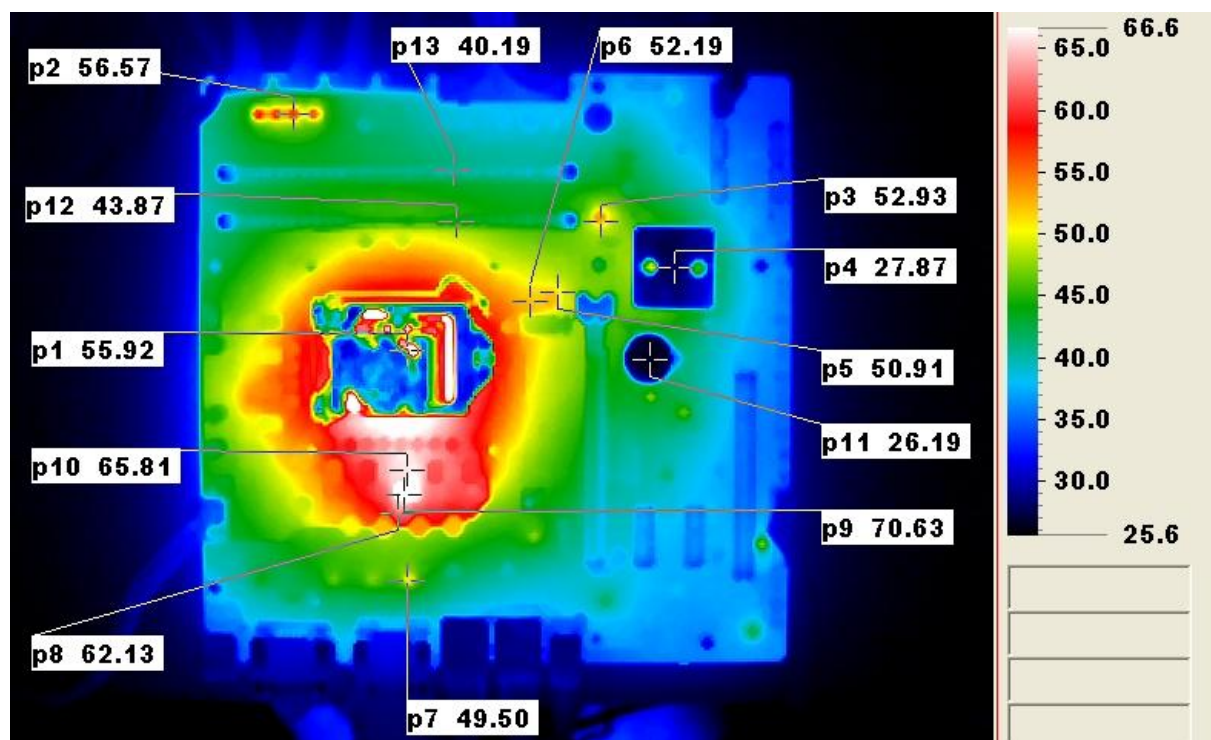
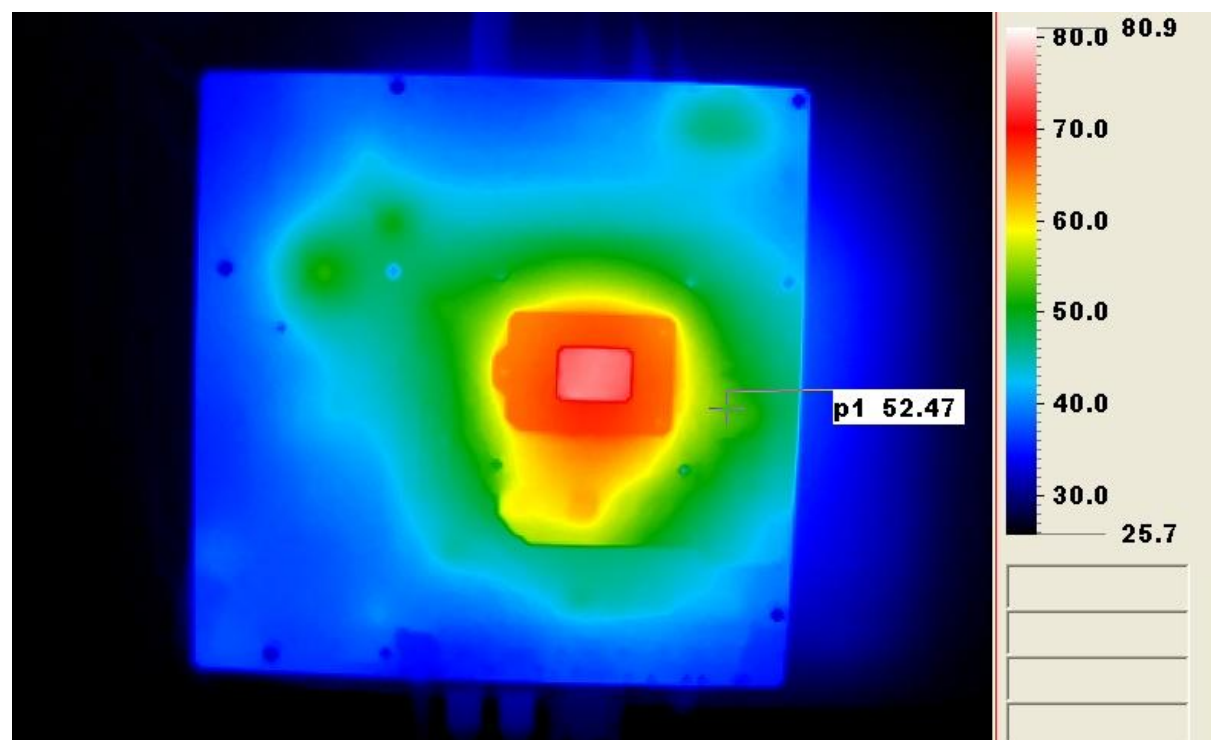
Serial Number: 1051444

5. Test Condition:

Test by DA-100: 25.0°C with Cooler (Fan full speed)

6. Take Picture Time:

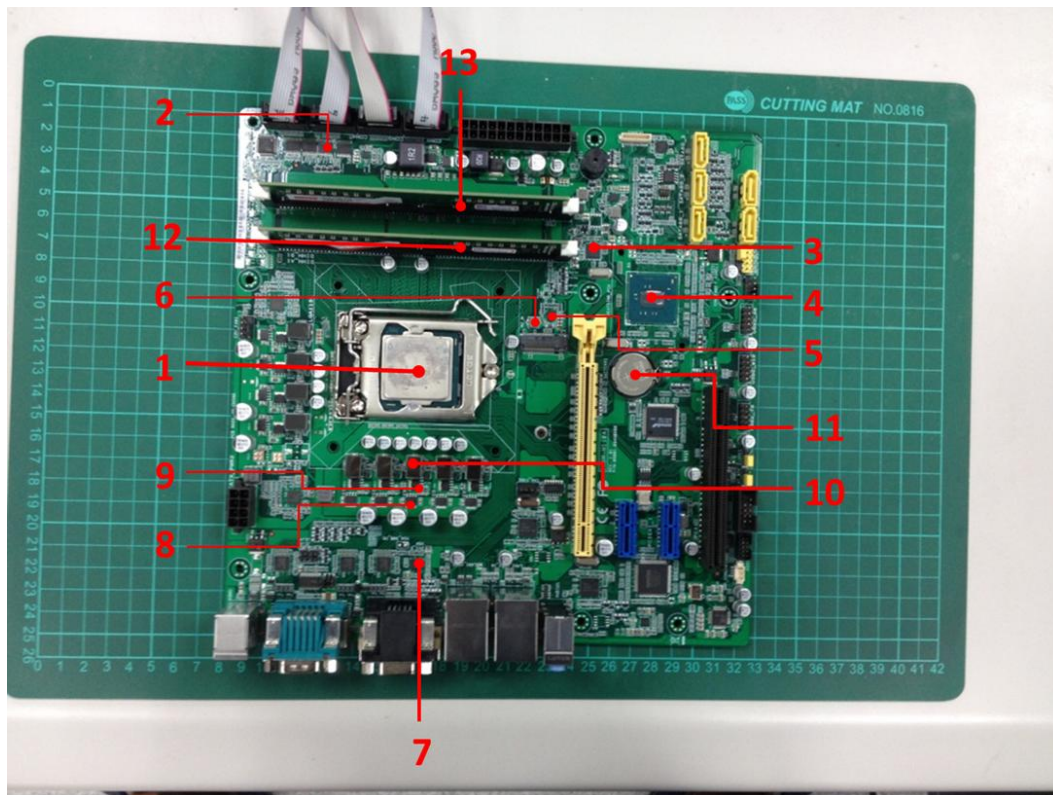
After power on 2 hours

Temperature Profile Test:**Front Side:****Back Side:**

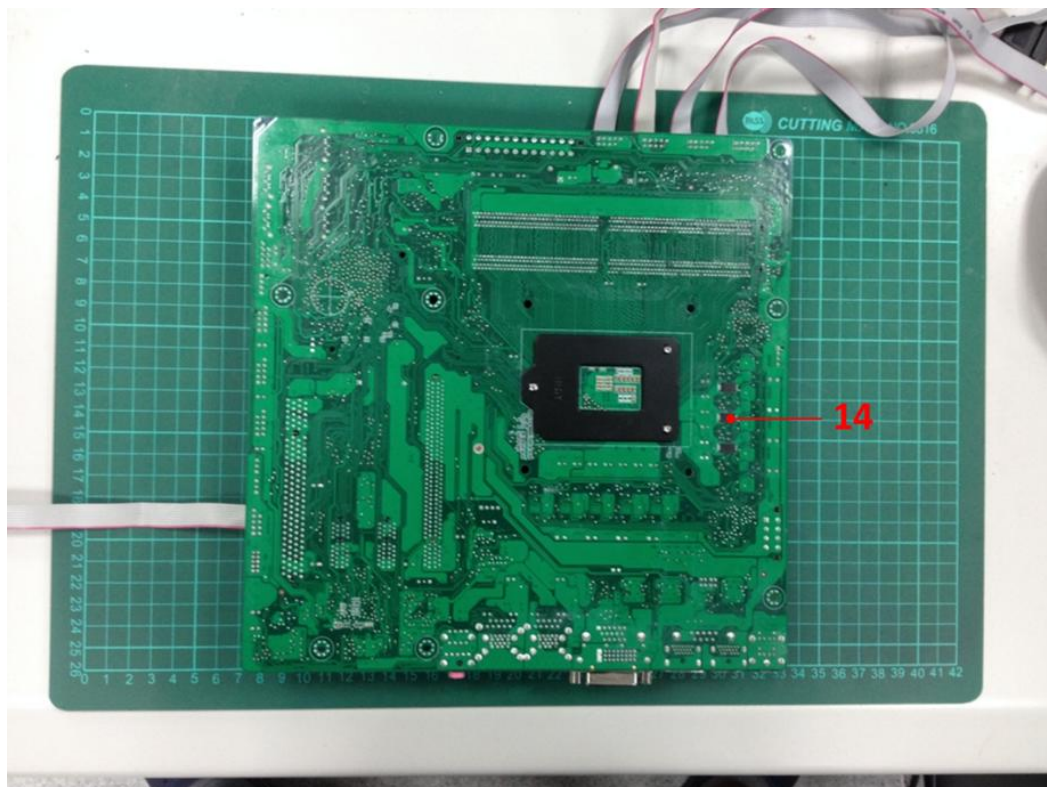
Terminal Recorder:

Measuring Thermal Couple Position :

Front Side:



Back Side:



Using OMRON Inc / ZR-RX45 test

Point	Position	Describe	Tc (*1) (°C)	TAT(*2)	TPT(*3)	Note
				25°C	60°C	
1	LGA1151	CPU –Intel Core i7-6700 3.4 GHz	71	34.9	69.9	Note 6
2	OU13	HF INTERFACE 75232G-P20-R/UTC TSSOP-20	125	55.2	90.2	
3	TU1	C.S ASM1061 (A3) QFN48L/ASMEDIA	95	49.9	84.9	
4	SU1	C.S SKYLAKE GLH110 PCH-H DT	108	47.7	82.7	
5	PL5	INDUCTOR 1.0UH/10.1A SMD 20%/CYNTEC/PCMB053T-1R0MT	125	43.6	78.6	
6	PU5	DOWN CONVERTER HPA02240RVER/TI QFN28PIN	125	41.8	76.8	
7	GU3	BRIDGE RTD2168-ASU-CG QFN32/REALTEK DP TO VGA	100	53.4	88.4	
8	PQ8	N-MOSFET PH6030DLVX SOT669/NXP	150	65.6	100.6	
9	PQ10	N-MOSFET PH4030DLVX SOT669/NXP	150	70.8	105.8	
10	PL11	INDUCTOR 0.215UH/48A 10%/MAGIC/SIHH1075-R22K-R29	125	65.2	100.2	
11	BATTERY2	BATT-LI MAXELL/CR2032 3V/210mAh	85	37.3	72.3	
12	RAM-1	Memory chipset SEC 549 K4A8G085WB BCRC	95	37.9	72.9	
13	RAM-2	Memory chipset SEC 549 K4A8G085WB BCRC	95	36.5	71.5	
14	PCE24	PL EL 150UF/6.3V(7343/D)+10-35/PANASONIC/EEFCX0J151YR	N/A	51.6	86.6	Note 6
15	Air	Air Temperature	N/A	25	60	

Note(*):

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

2. "TAT" indicates the actual measured temperature under 25°C working environmental.

3. "TPT" indicates the predicted temperature under product specification.

4. Judgment Criteria:

- **Fail** : $T_m > T_c + 5^\circ\text{C}$; The measured value is over specification plus margin.- **Margin** : $T_c + 5^\circ\text{C} > T_m > T_c - 10^\circ\text{C}$; 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** : $T_m < T_c - 10^\circ\text{C}$; The measured value is with safety margin.

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

6. Defect NO. : **BUL1612LABE03**