

IMBA-H110A

Thermal Image Analysis Report

Summary	☐ Pass ☐ Fail ☒ Pass with Deviation Comment: There is a component marginal passed.			
	Test Result Summary			
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

Issue date

2017 / 07 / 05

QE Manager

KJ Wang

Test Engineer

Jerry Chen

Sample Configuration & Quantity Under Test

- **Model name : IMBA-H110A**
- **M/B Name : IMBA-H110A / Rev. 1.0**
- **CPU : Intel Core i7-6700 3.4 GHz**
- **BIOS : R0.2 (AH11AM02) (06/12/2017)**
- **Chipset: Intel H110**
- **Memory : Innodisk / 16GB DDR4 2400 DIMM / SEC K4A8G085WB * 2pcs**
- **2.5" SATA HDD: WD / WD3200BEVT / 320GB**
- **Test Software : Windows 10 / Run PassMark Burn In Test 8.1 Pro**
- **ATX Power Supply: CWT /DSA400P-C / 400W**
- **CPU Cooler:**



Thermal Image Analysis

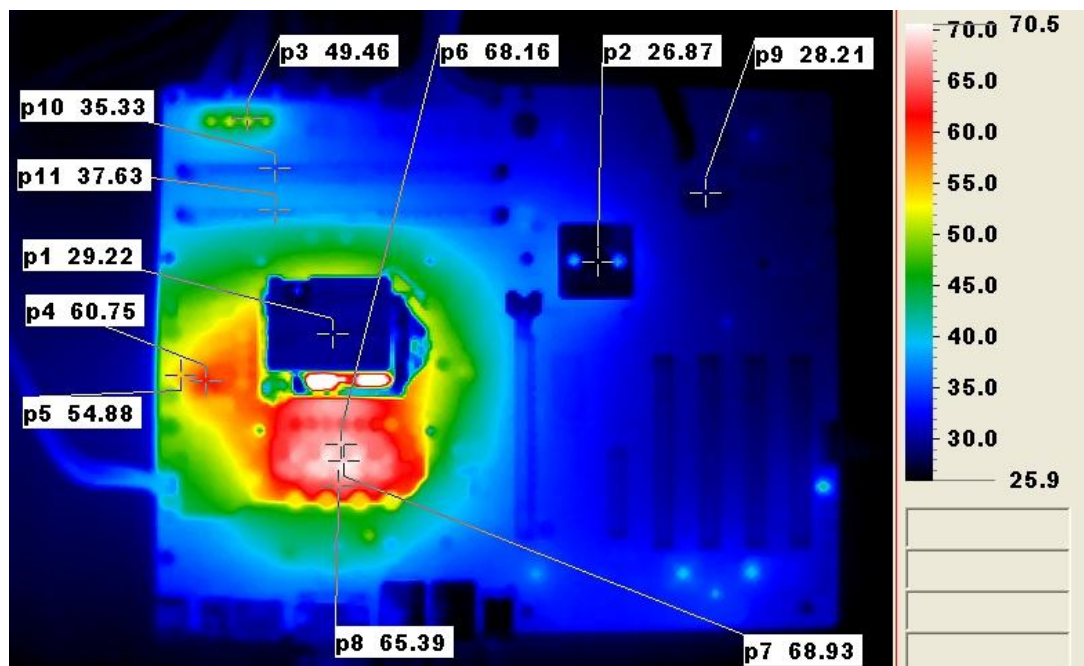
1. Test Date: 2017-07-04
2. Test Product: IMBA-H110A
3. Test Site: AAEON QE Dept.
4. Temperature Measurement:
 - 4.1. 20 Channel Thermal Recorder:
 - 4.1.1 OMRON Inc,
 - 4.2.2 Model: ZR-RX45
Date of Calibration: 12/20/2016
Due date of Calibration: 12/19/2017
Serial Number: H30481978
 - 4.2. IR Scanner: 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

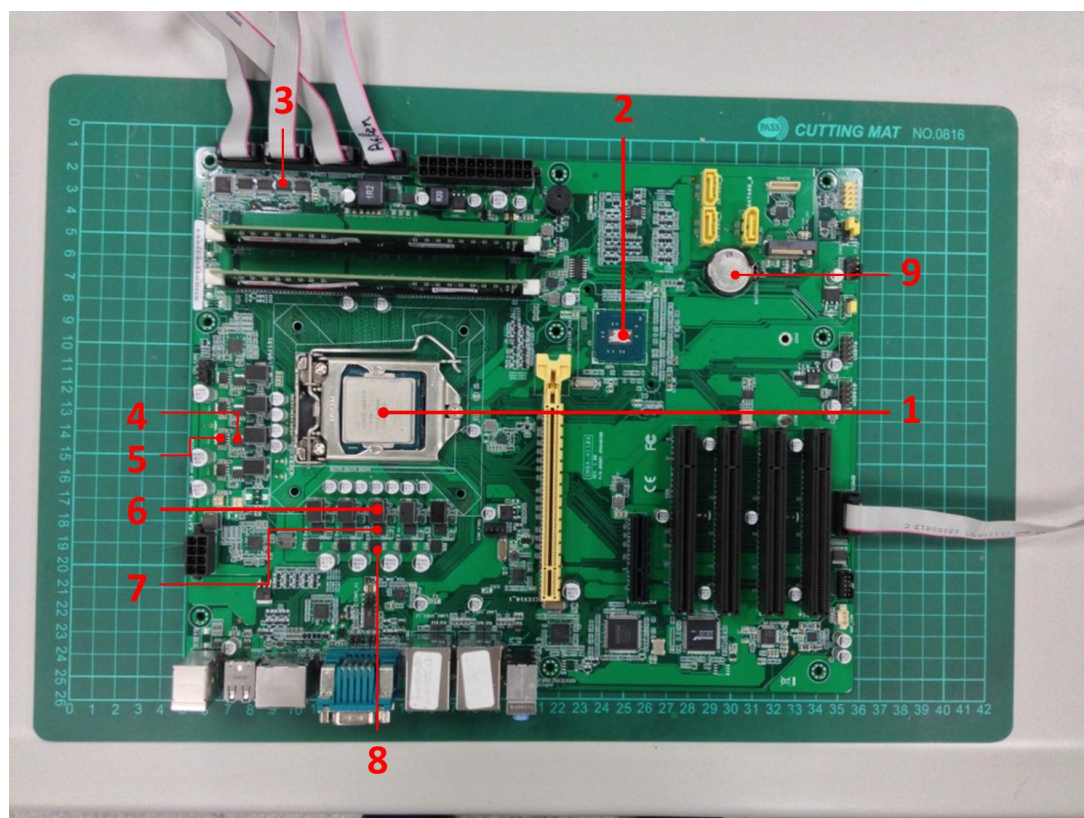
Temperature Profile Test:

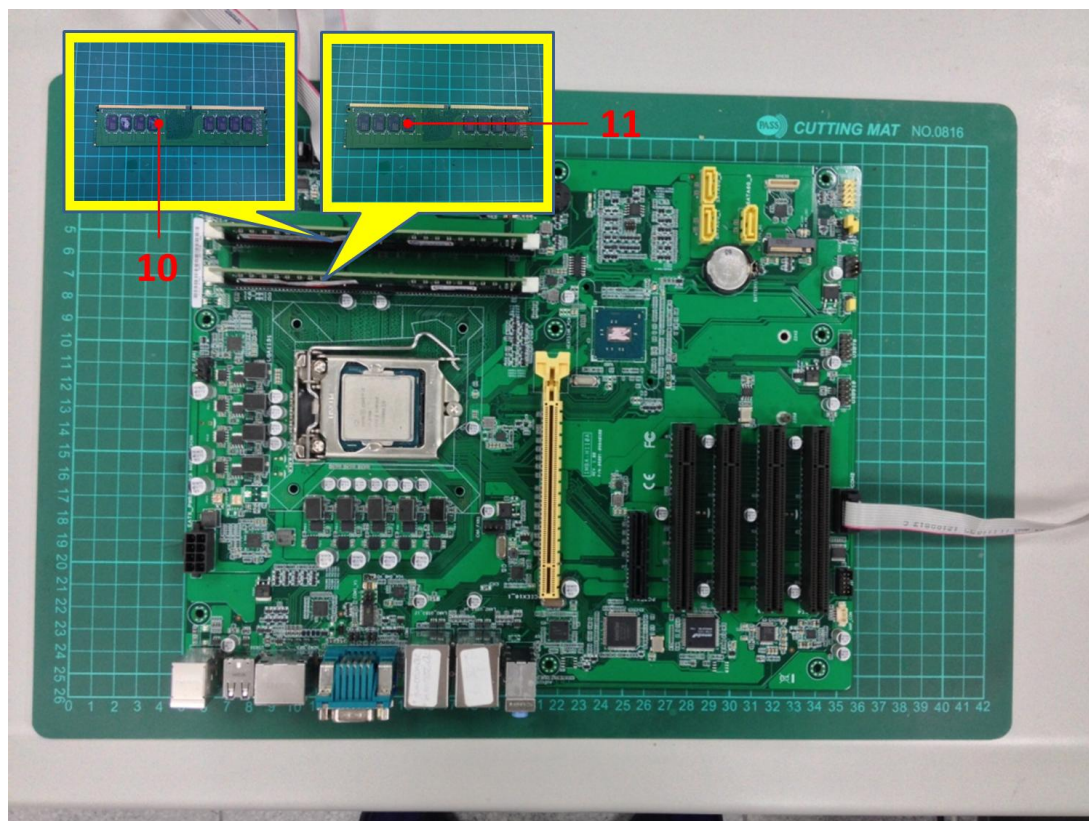
Front Side:

**Terminal Recorder:**

Measuring Thermal Couple Position :

Front 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	40.1	75.1	Note 6
2	SU1	C.S SKYLAKE GLH110 PCH-H DT	108	34.9	69.9	
3	OU12	HF INTERFACE 75232G-P20-R/UTC TSSOP-20	125	48.6	83.6	
4	PQ19	N-MOSFET PH6030DLVX SOT669/NXP	150	40.3	75.3	
5	PQ17	N-MOSFET PH4030DLVX SOT669/NXP	150	38.4	73.4	
6	PL11	INDUCTOR 0.215UH/48A SMD 10%/MAGIC/SIHH1075-R22K-R29	125	38.9	73.9	
7	PQ10	N-MOSFET PH6030DLVX SOT669/NXP	150	47.2	82.2	
8	PQ8	N-MOSFET PH4030DLVX SOT669/NXP	150	43.3	78.3	
9	Battery	BATT-LI MAXELL/CR2032 3V/210mAh	85	29.3	64.3	
10	RAM-1	Memory chipset SEC K4A8G085WB BCRC	95	34.1	69.1	
11	RAM-2	Memory chipset SEC K4A8G085WB BCRC	95	33.7	68.7	
12	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. : **BUL1704LABE01**