EMB-BT7

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment:** There are six temperature point marginal passed, the functions are normal,__

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

Issue date	Approval	Test Engineer
2015 / 06 / 16	KJ Wang	Ben Sun

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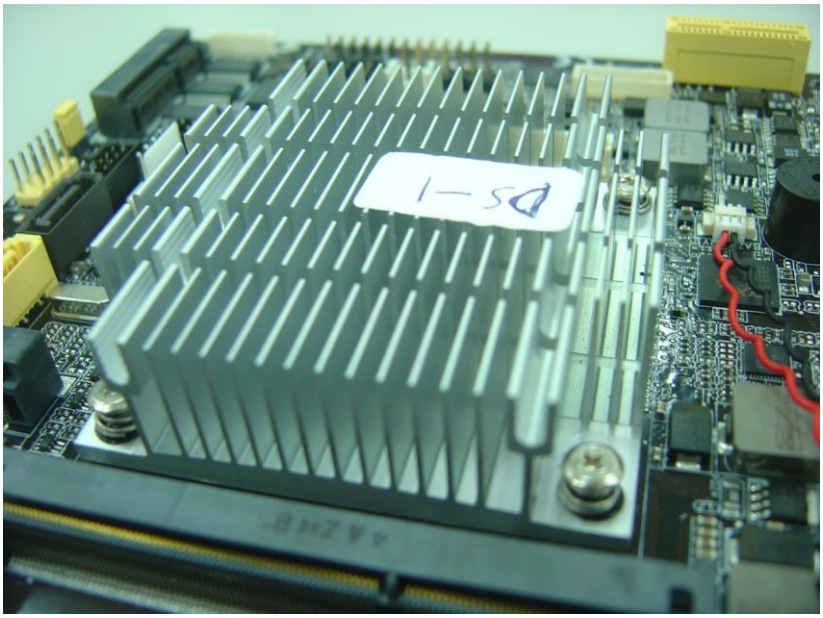
Sample Configuration & Quantity Under Test

- **Model name : EMB-BT7 A1.01**
- **CPU : Intel Atom E3845 1.91GHz**
- **BIOS：R0.5(EBT7BM05)**
- **Memory : Transcend DDR3L 1600 / 8GB / (SEC K4B4G0846B)**
- **Test Software : Windows 8.1 / Run PassMark Burn In Test 8.0 Pro**
- **Power : FPS060-DBAB1**
- **Heat Sink :**



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Thermal Image Analysis

1. Test Date: 2015-06-10

2. Test Product: EMB-BT7

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: 2014/09/11

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: 2014/12/30

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 25.3℃ with Heat Sink

6. Take Picture Time:

After power on 2 hours

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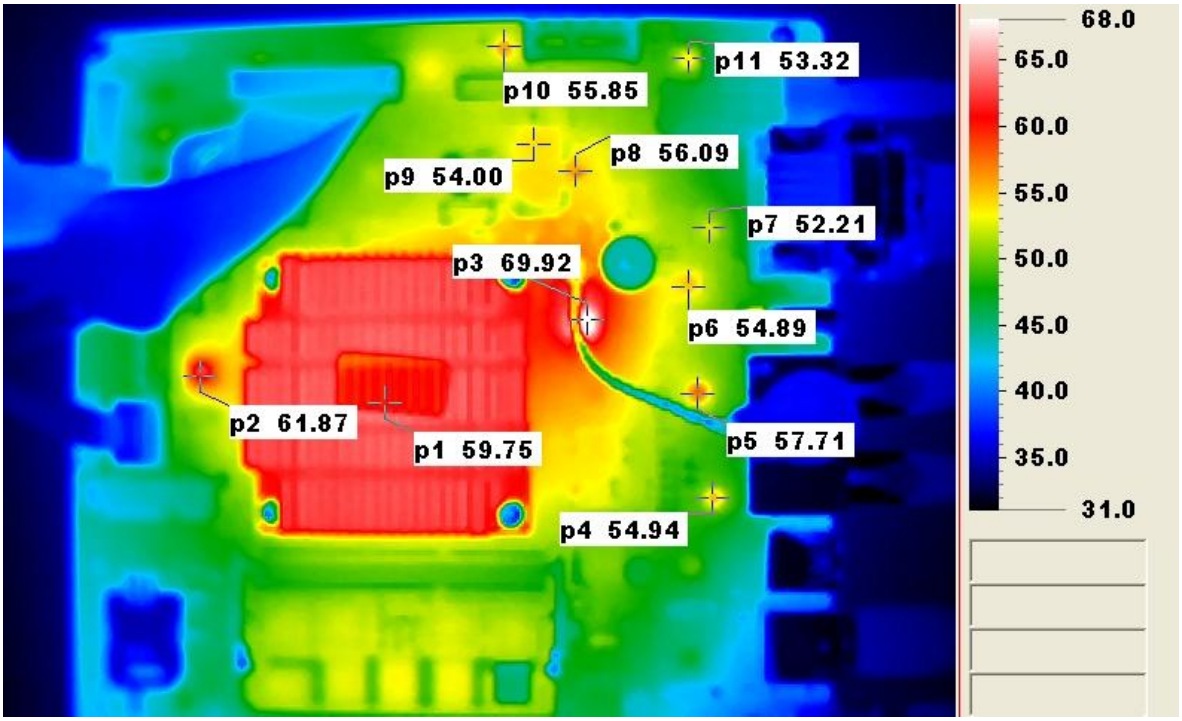
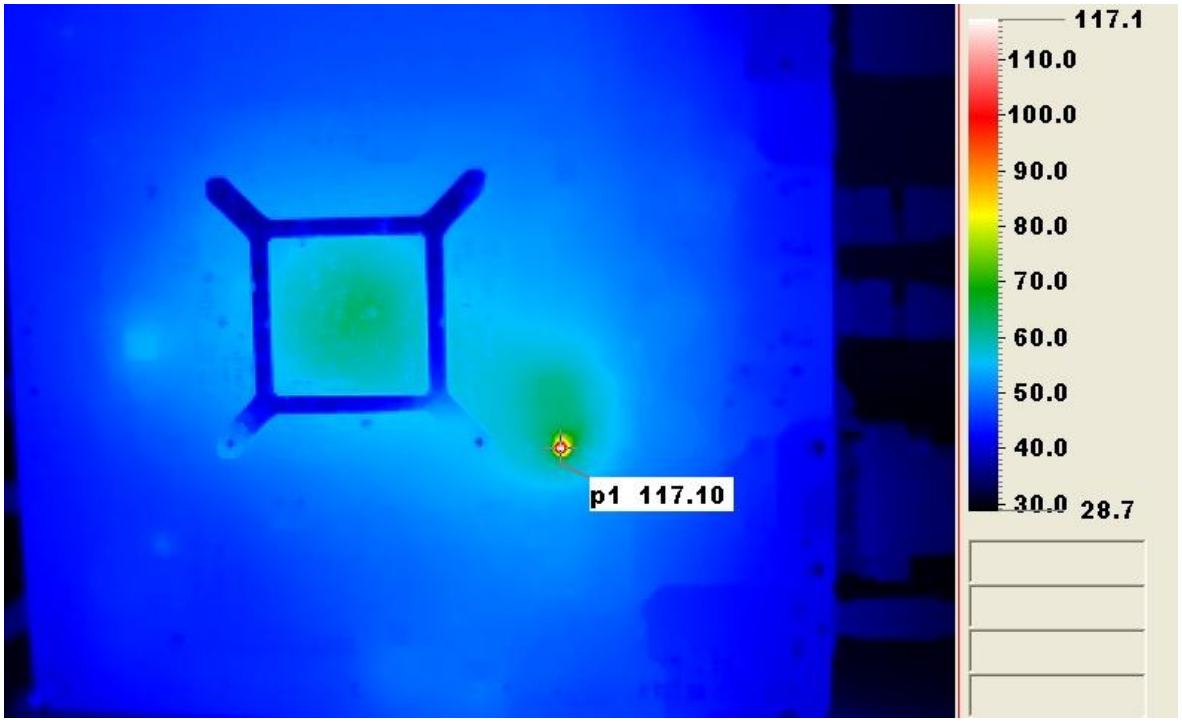
Temperature Profile Test:

Component Side:





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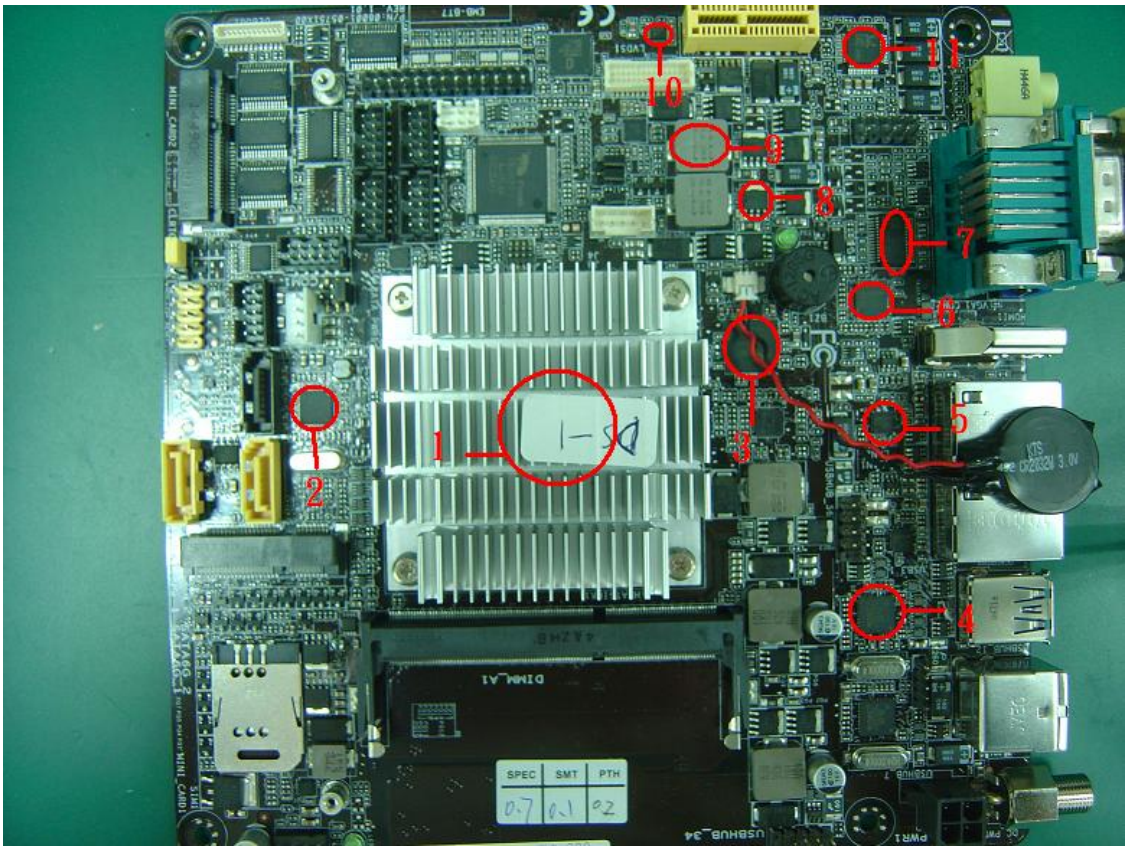
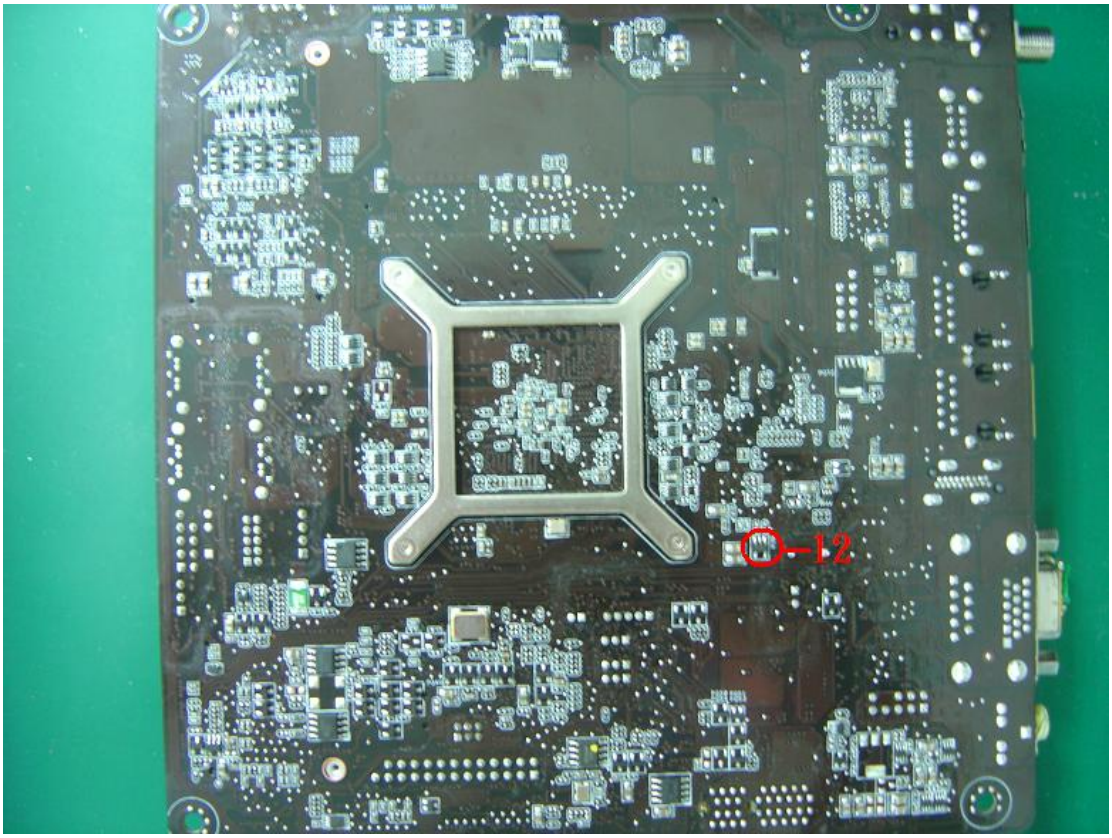
Terminal Recorder:

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
				27.0℃	60℃	
1	U4	INTEL E3845 CPU	110	71.1	104.1	NOTE3
2	TU2	ASMEDIA ASM1061	105	61.5	94.5	
3	U5	PLX PLX8605	100	64.4	97.4	NOTE3
4	U1	SMSC USB4604	85	51.8	84.8	NOTE3
5	U29	REALTEK RTL8111G	100	55.2	88.2	
6	DU1	ASMEDIA ASM1442	100	52.1	85.1	
7	U8	ADM213	100	48.6	81.6	
8	PQ28	MOSFET NXP:PH7030AL	150	47.7	80.7	
9	PL6	Power choke CYNTEC:PCMB104E-3R3MS	125	50.1	83.1	
10	WU2	UP0132	125	51.0	84.0	
11	AU1	REALTEK AL887	85	47.7	80.7	NOTE3
12	PU9	UP0107	125	58.5	91.5	
13		DIMM	85	51.5	84.5	NOTE3
14		RTC Battery	70	39.9	72.9	NOTE3

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.

4. Defect NO. W141205QED08

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