EPIC-KBS7

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment:** _There are 3 temperature points marginal passed, the functions are stable._

Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	3
Defect Unsolved	0	0	0	3

Issue date	QE Manager	Test Engineer
2017 / 04 / 14	KJ Wang	Juno Cheng

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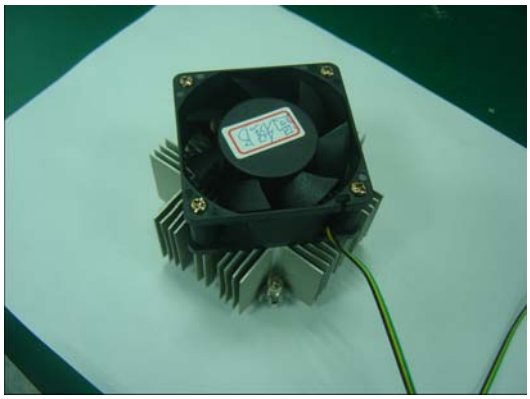
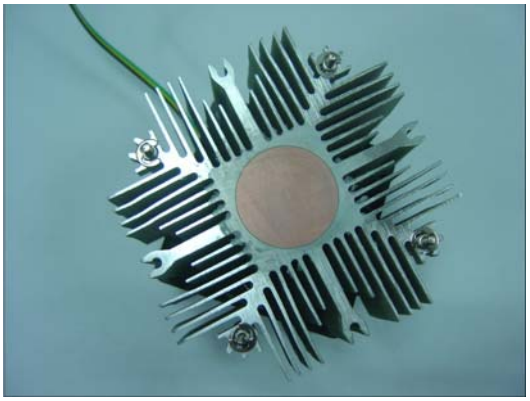
Sample Configuration & Quantity Under Test

- **Model name : EPIC-KBS7 A1.0**
- **CPU : Intel Core i7-6700TE CPU @2.4 GHz**
- **Memory : DSL DDR4 2133 8GB/V75CDG0480APBJM16T *1**
- **HDD : FUJITSU MD72080BH/80 GB**
- **BIOS : EPIC-SKS7 R10 (ESS7AM10) (3/29/2017)**
- **Test Software : Windows 8.1 / Run PassMark Burn In Test 8.1 Pro**
- **Power : HG2-6400P**
- **CPU Cooler :**





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Thermal Image Analysis

1. Test Date: 2017-04-14

2. Test Product: EPIC-KBS7

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

4.1. 10 Channel Thermal Recorder:

4.1.1 OMRON

4.1.2 Model: ZR-RX25

Date of Calibration: 2016/11/30

Serial Number: TH-149

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: 2016/11/29

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 26.0℃ with Heat Sink + Fan

6. Take Picture Time:

After power on 2 hours

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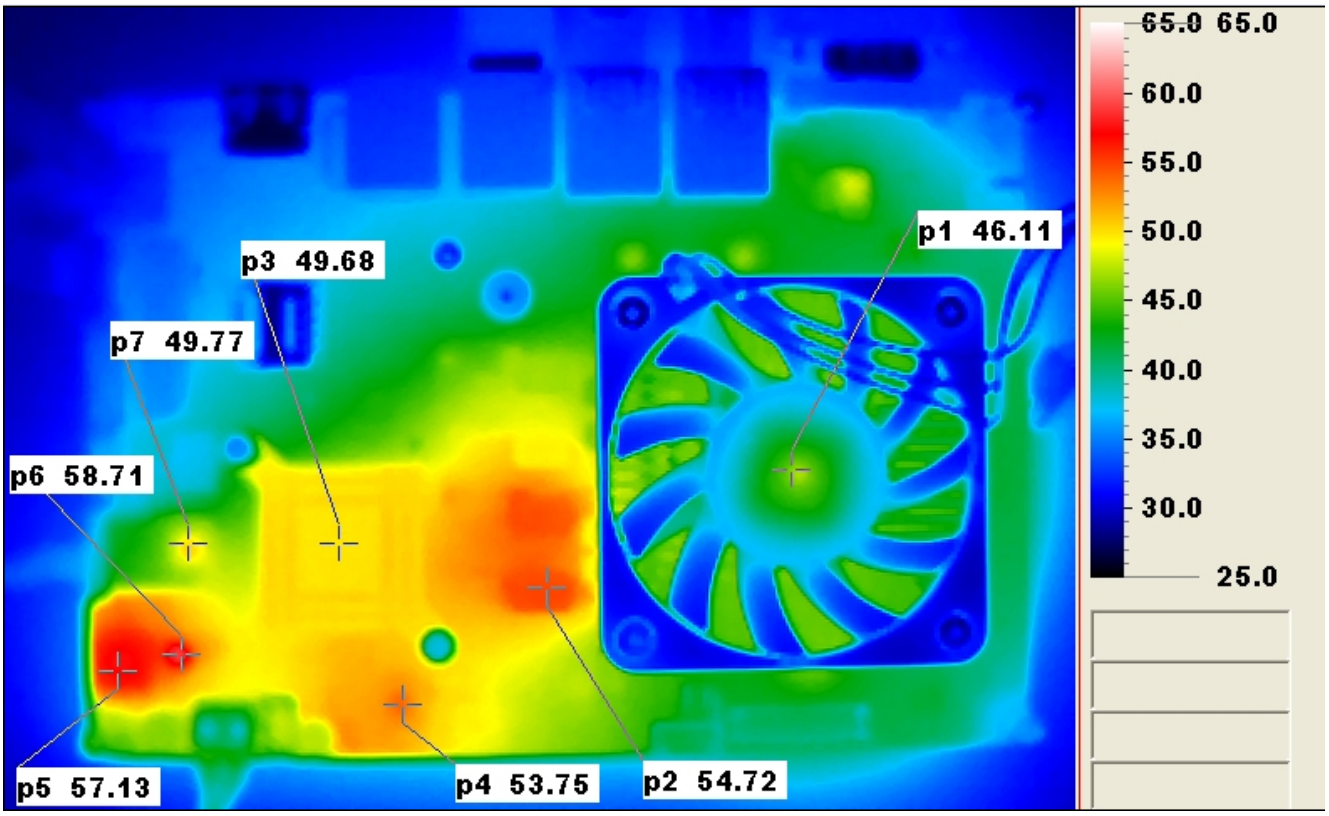
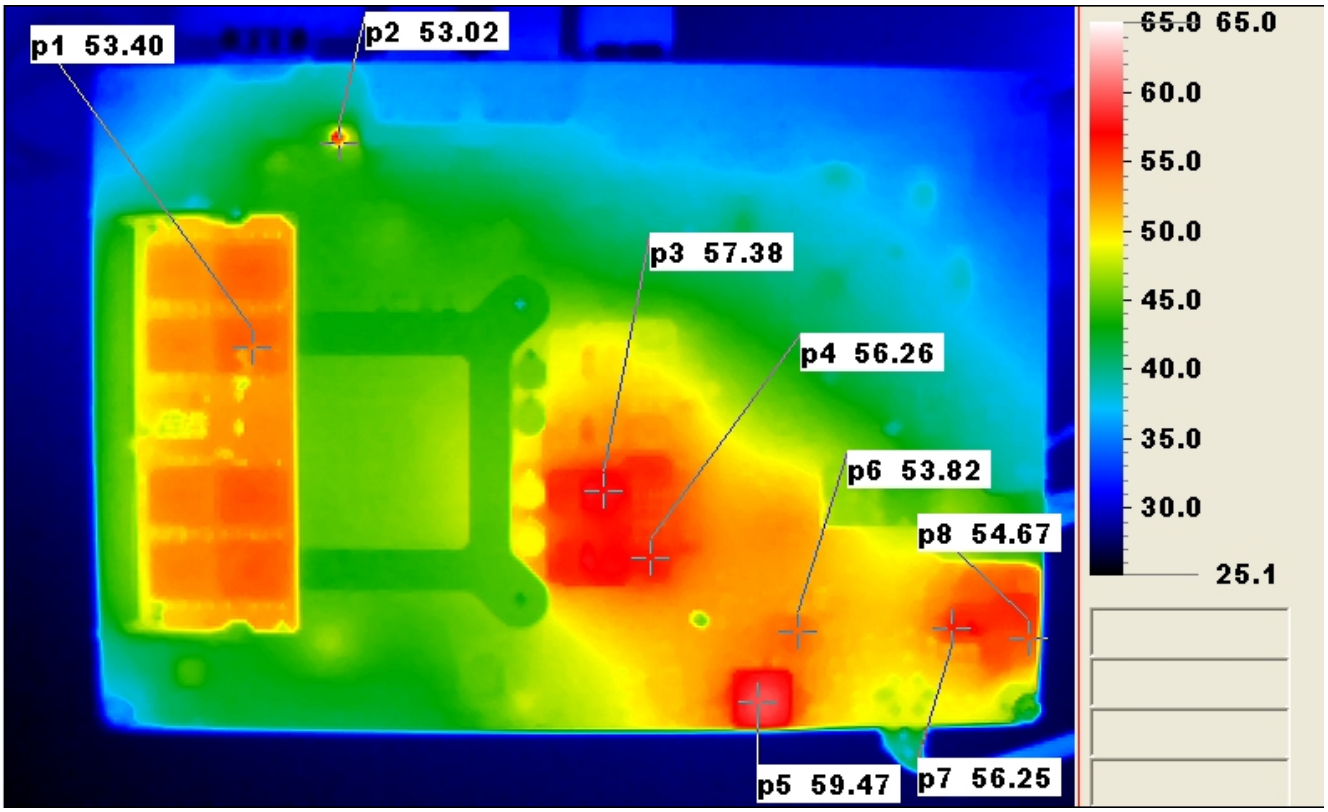
Temperature Profile Test:

Component Side:





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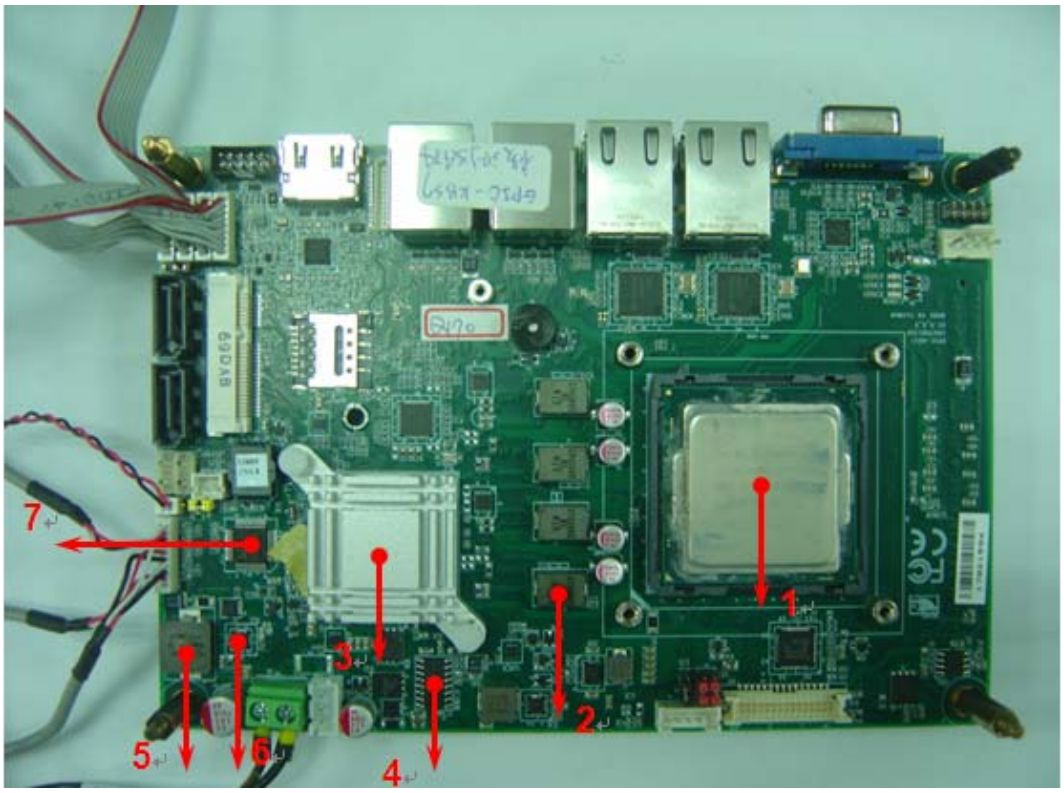
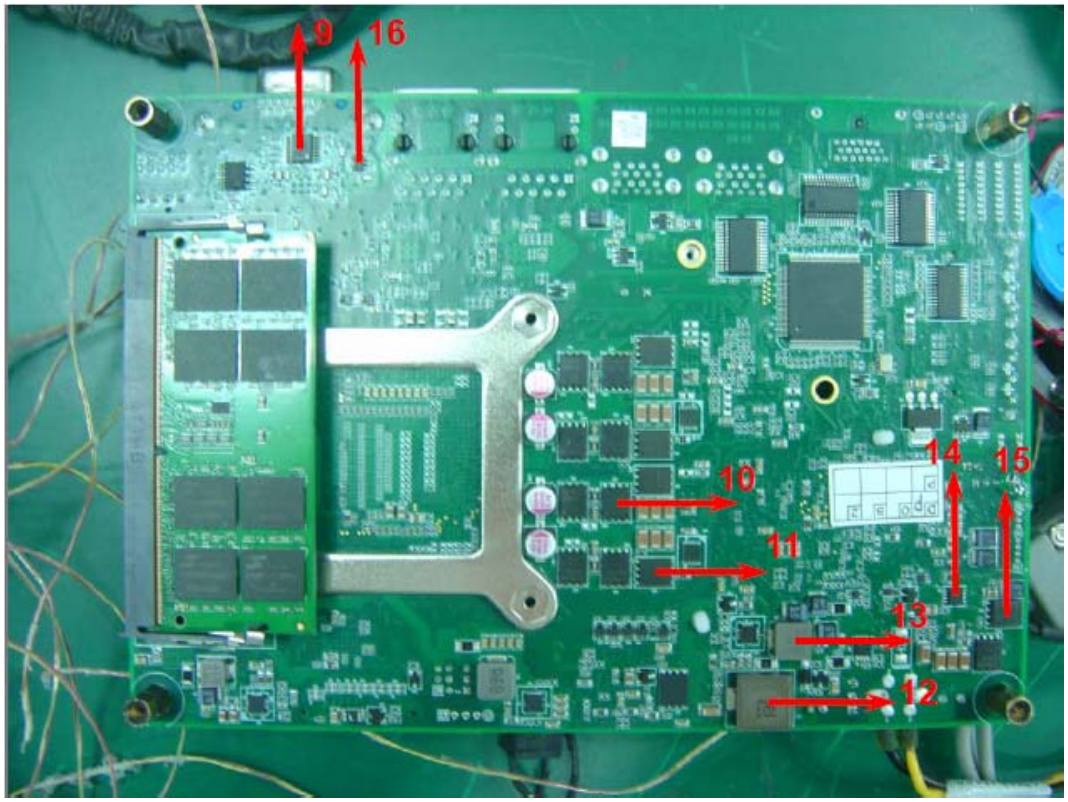
Terminal Recorder:

Measuring Thermal Couple Position：





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Using OMRON / ZR-RX25 test

Point	Position	Describe	Tc (*1) (℃)	TAT(*2) 26.0℃	TPT(*3) 60℃	Note
1	CPU1	INTEL Core i7-6700TE @ 2.40GHz	66.1	32.4	67.4	Note 4
2	L4	INDUCTOR GTV1005PR1-R15K	125	33.3	68.3	
3	U16	INTEL GL82Q170.SR2C5	108	36.9	71.9	
4	U2	Control IC.SOIC 16P.SMD.MICREL.MIC2185YM	100	40.9	75.9	
5	L3	COIL. CYNTEC.PCME104T-1R0MS2R307	125	43.8	78.8	
6	U11	IC.Wide Input Voltage TPS53219ARGTR	125	45.0	80.0	
7	U15	Definition.Audio Codec.LQFP 48P.SMD.REALTEK.ALC892-CG	70	37.0	72.0	Note 4
8		DIMM	85	43.0	78.0	Note 4
9	U60	Protection Array.CMD.CM2009-02QR	85	30.5	65.5	
10	Q38	Infineon.BSC027N04LS G	150	39.4	74.4	
11	Q35	MOSFET Infineon.BSC093N04LS G	150	40.0	75.0	
12	L11	.ZenithTek.ZPWM-1040MB-3R3M	125	46.1	81.1	
13	L14	CYNTEC.PCMB063T-1R0MS	125	41.8	76.8	
14	Q30	MOSFET.FAIRCHILD.FDMC4435BZ	125	42.9	77.9	
15	Q29	Infineon.BSC027N04LS G	125	41.9	76.9	
16	U59	ANPEC.APL5325BI-TRG	125	38.2	73.2	

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. : E161106LABD01

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