EPC-CV1

A1.01

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: Temperature at one component was estimated to be in marginal temperature point in comparison with component datasheet.**

Test Result Summary

	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

Issue date	Approval	Test Engineer
2012 / 12 / 10	Tom Lin	Matthew Chi

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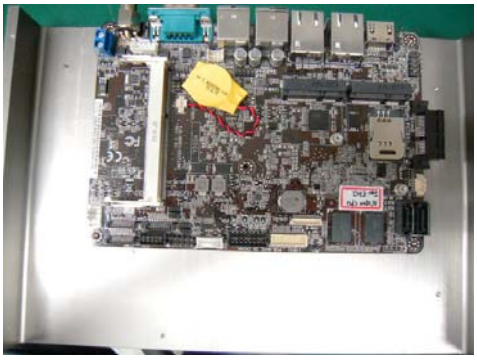
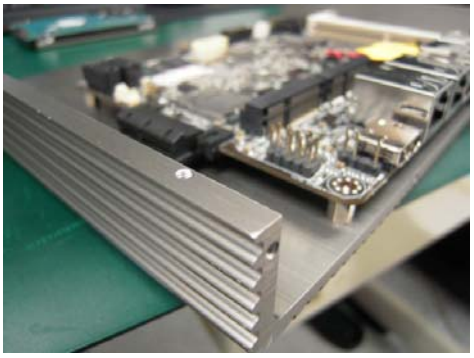
Sample Configuration & Quantity Under Test

- **Model name :** EPC-CV1
- **CPU :** Intel Atom N2800 / 1.86GHz
- **Chipset :** Intel Cedarview
- **Memory :** Transcend 4G DDR3 SODIMM CL7
- **SATA HDD :** TOSHIBA MK1676GSX 2.5” 160G
- **BIOS :** 0201 X64(11/15/2012)
- **Test Software :** Windows 7 / Run PassMark Burn In Test 7.0
- **Power :** AT Power CWT DSA400P-C
- **Heat Sink:**





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Thermal Image Analysis

1. Test Date: 2012-12-10

2. Test Product: EPC-CV1

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: 2011/10/12

Serial Number: 12A323190

4.2. IR Scanner: Infrared Camera

4.2.1 NIPPON AVIONICS CO., LTD.

4.2.2 Model: NEC-G100D

Date of Calibration: 2012/01/03

Serial Number: 1051444

5. Test Condition:

Component Side-1 (Test by DA-100): 25.0℃ With CPU Fan

6. Take Picture Time:

After power on 2 hours

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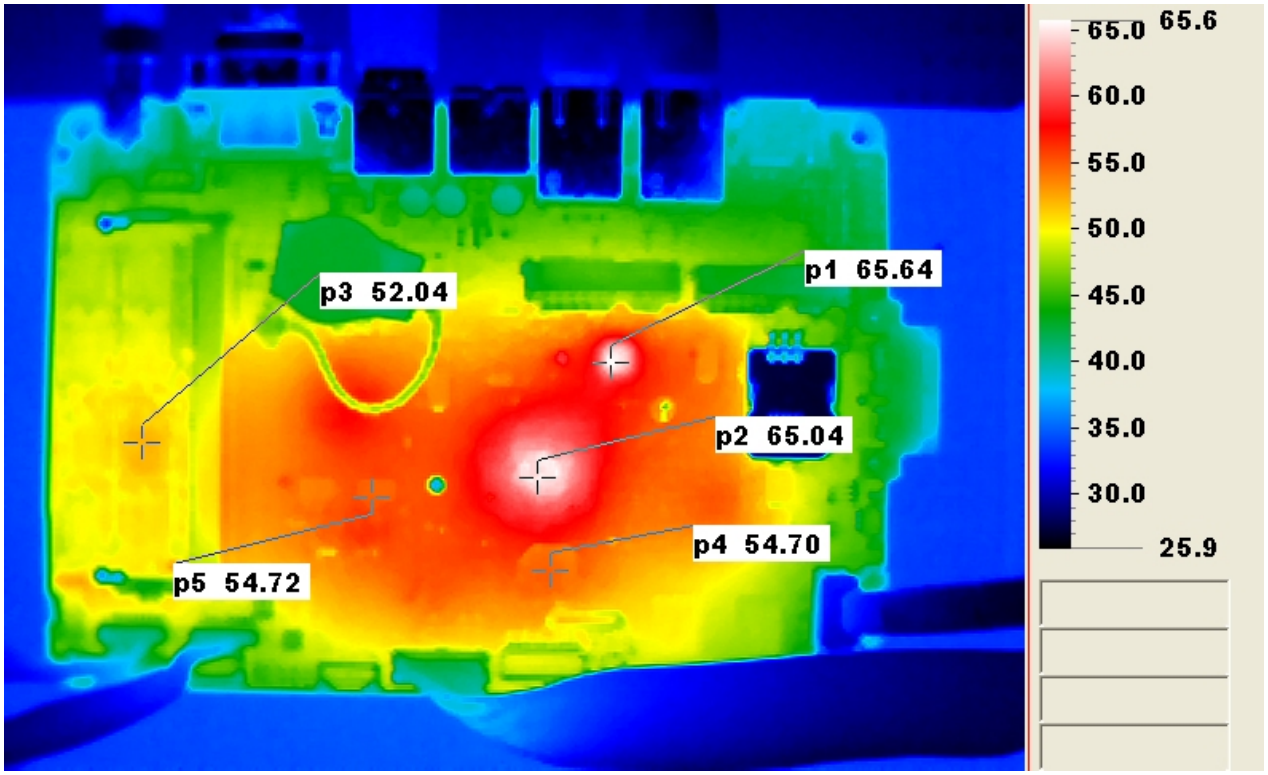
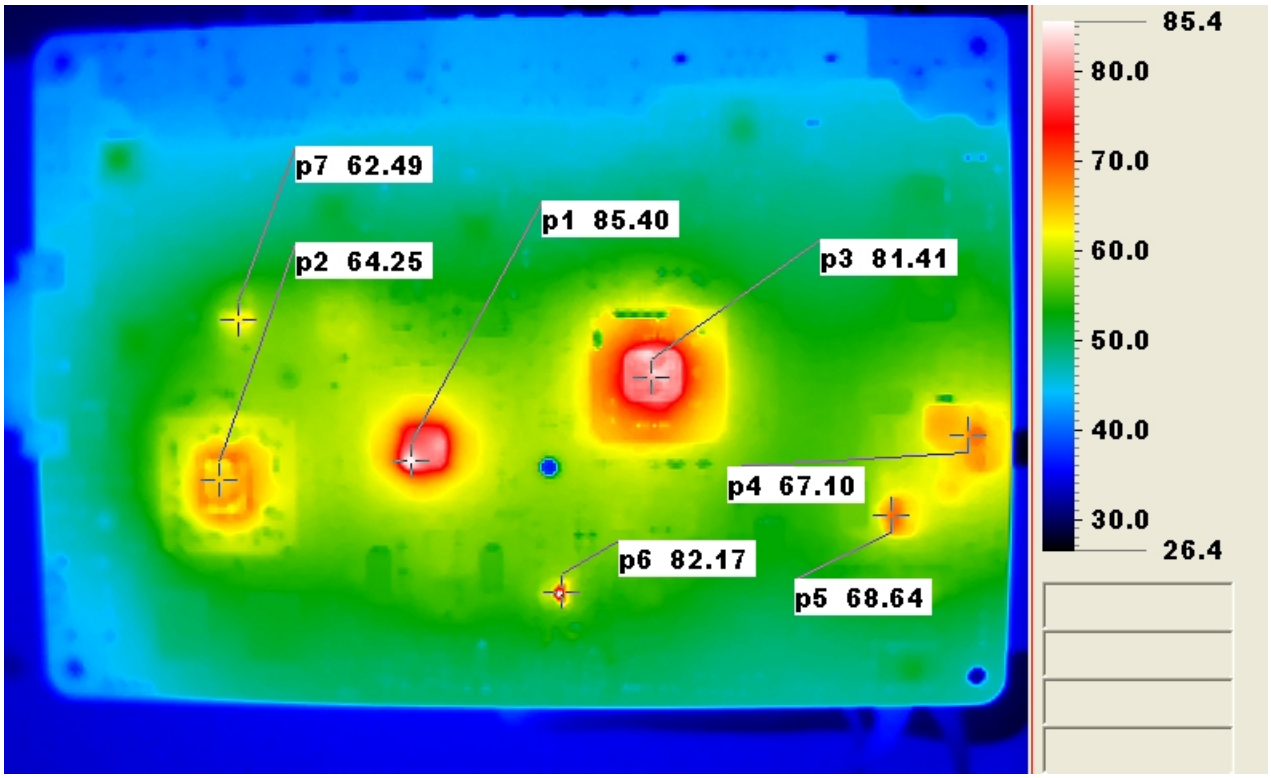
Temperature Profile Test:

Component Side:



Solder Side:



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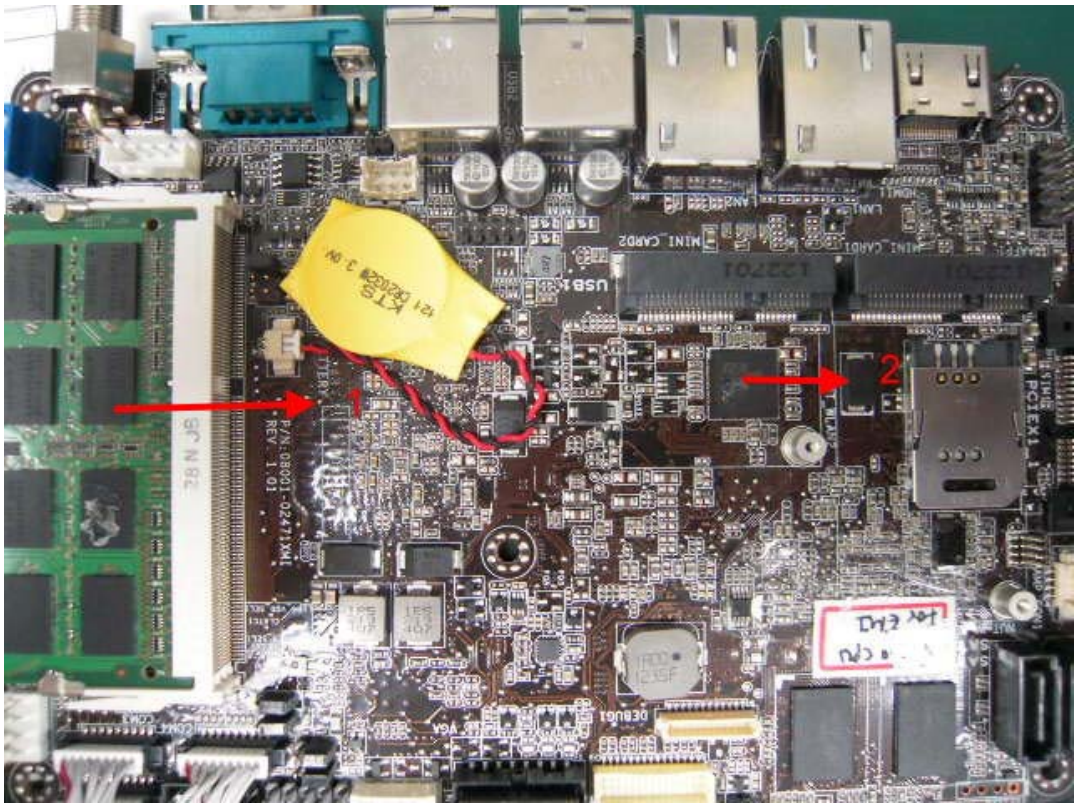
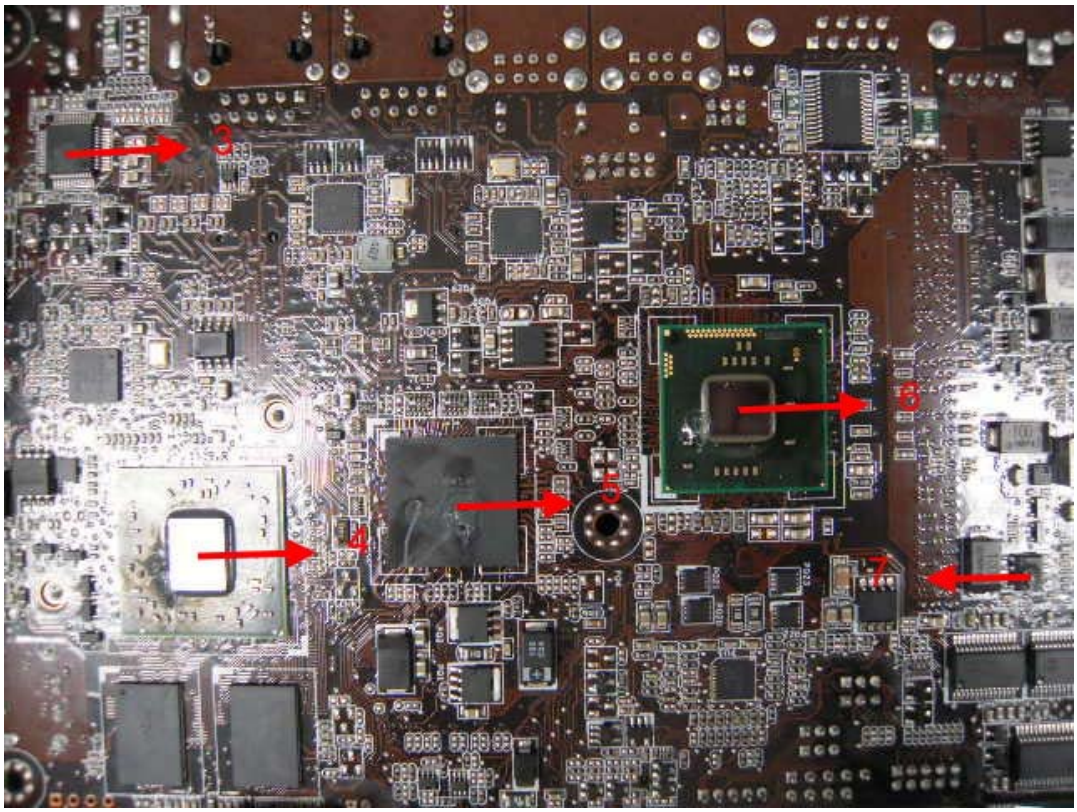
Terminal Recorder:

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
				25℃	55℃	
1	Memory	Transcend 4GB DDR3 SODIMM CL7	95	51.8	81.8	
2	U7	C.S PEX8605-AA50NI G QFN136//PLX	100	63.9	93.9	
3	U10	C.S ALC887-VD2-CG LQFP-48//REALTEK	100.5	49.7	79.7	
4	U27	C.S SEYMOUR-LP S3 FCBGA631//AMD 216-0809020 (A11)	105	46.6	76.3	
5	SU1	C.S CG82NM10 903500 INT TIGERPOINT NM10 SLGXX [HF].SMD	115	69.3	99.3	
6	U1	Intel Atom N2800 1.86GHz	100	51.7	81.7	
7	PU6	LDO REG. APE8955MP ESOP-8//APEC	125	40.1	70.1	

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.

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