PICO-IMX6

Thermal Image Analysis Report

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

Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	2
Defect Unsolved	0	0	0	0

Issue date	Approval	Test Engineer
2015 / 07 / 01	KJ Wang	Ben Sun

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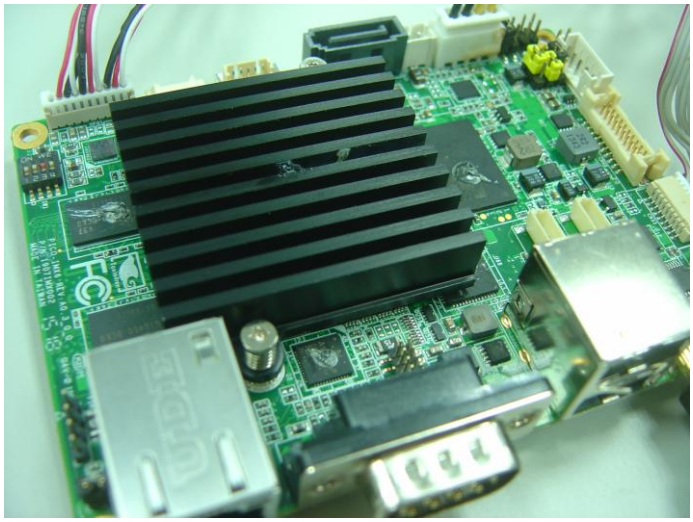
Sample Configuration & Quantity Under Test

- **Model name : PICO-IMX6 A0.3**
- **CPU : Freescale i.MX6 Quad core 1GHz MCIMX6Q6AVT10AC**
- **Memory : Onboard DDRIII-SDRAM.128MX16(bit).1600MHz.SAMSUNG 1GB**
- **Storage: Transcend micro SDHC. class 10. 8G**
- **Test Software : Ubuntu 11.10**
- **Power : AT Power**
- **Heat Sink :**



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Thermal Image Analysis

1. Test Date: 2015-06-30

2. Test Product: PICO-IMX6

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: 24.8℃ with Heatsink

6. Take Picture Time:

After power on 2 hours

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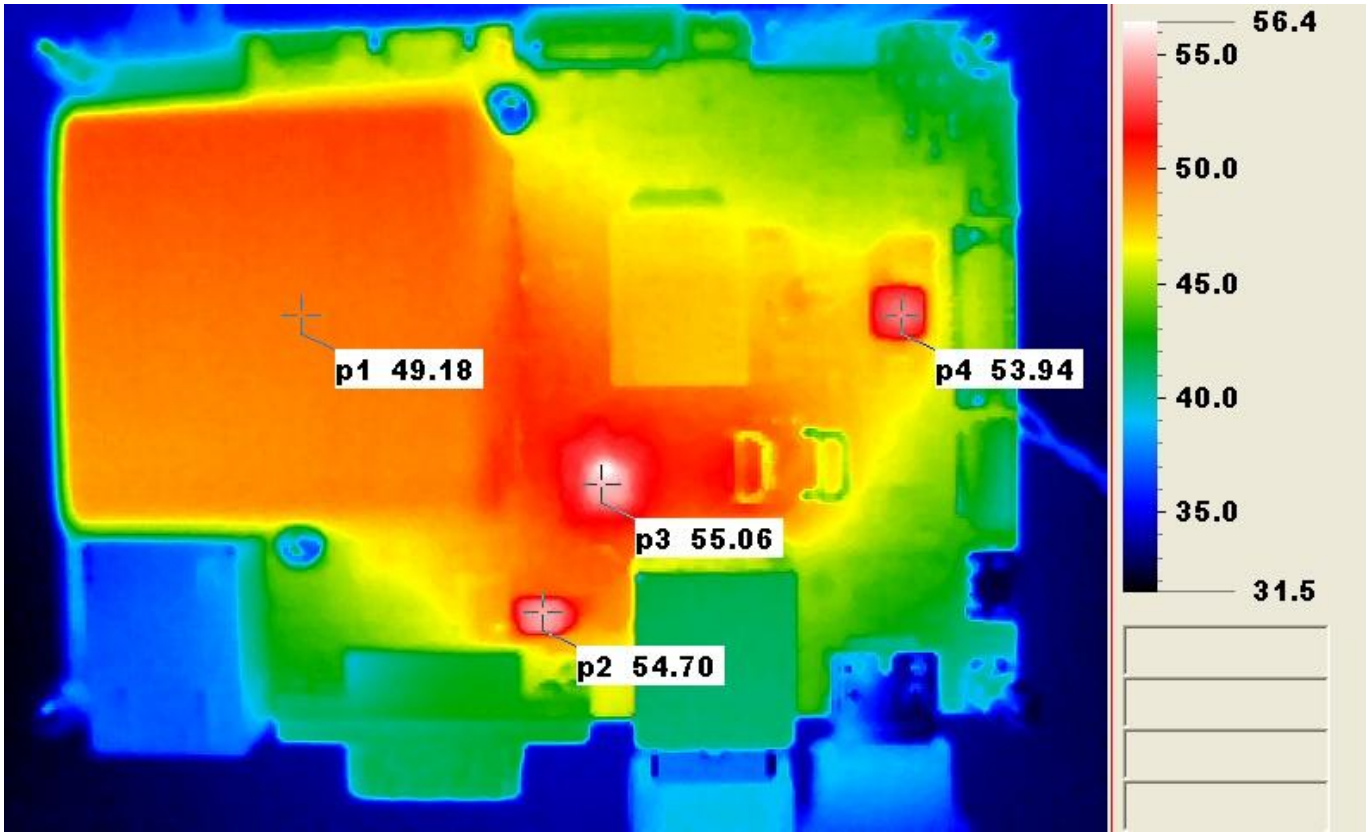
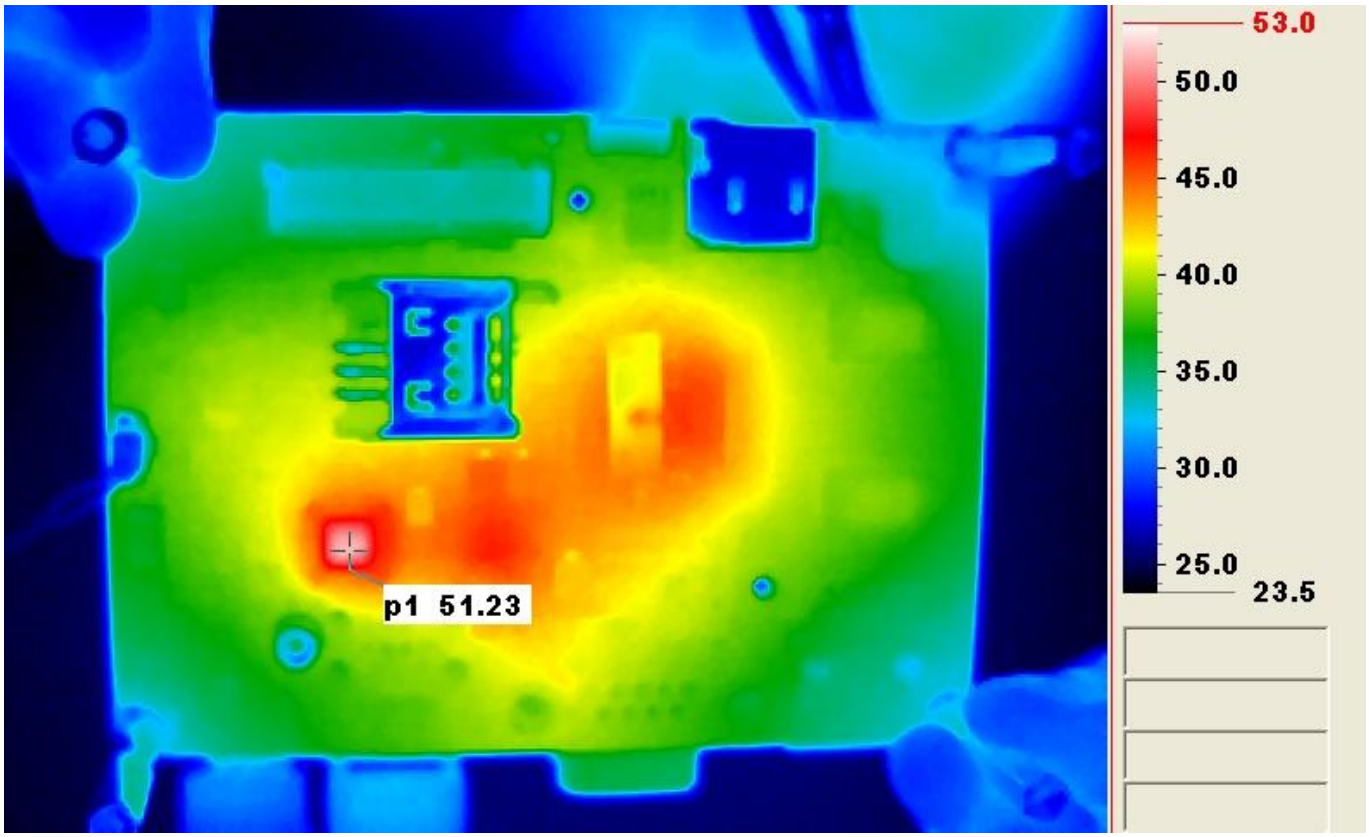
Temperature Profile Test:

Component Side:





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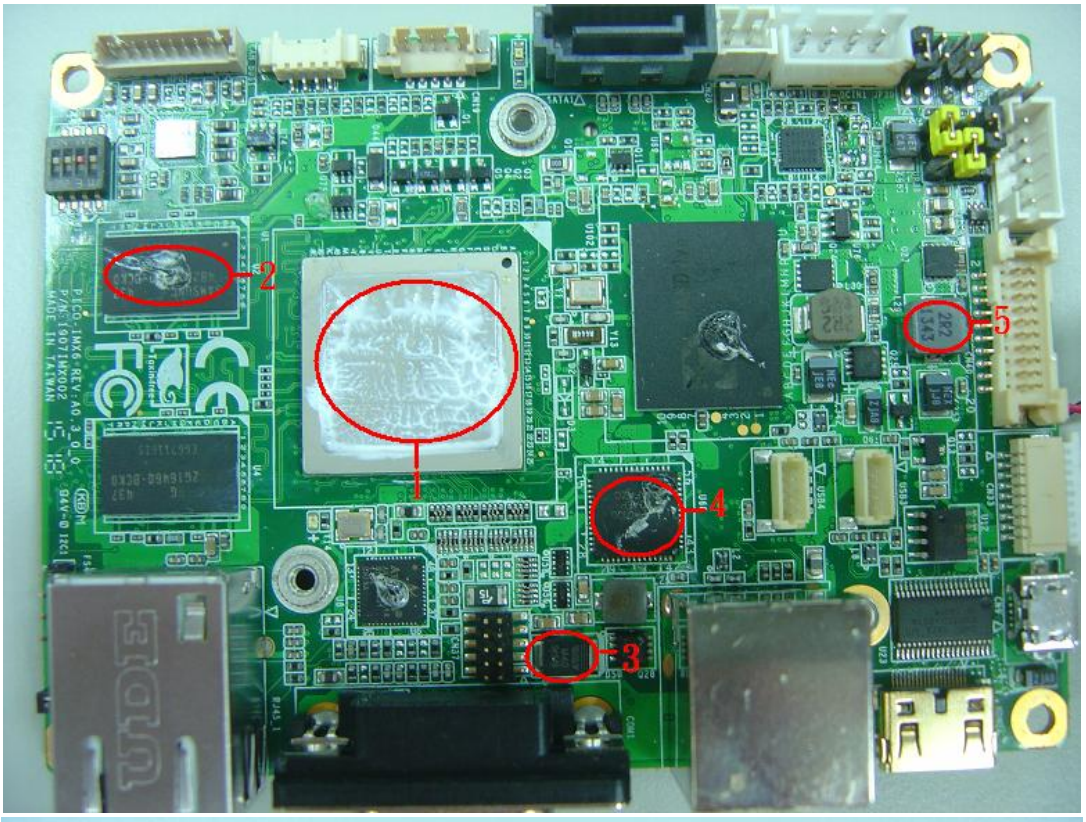
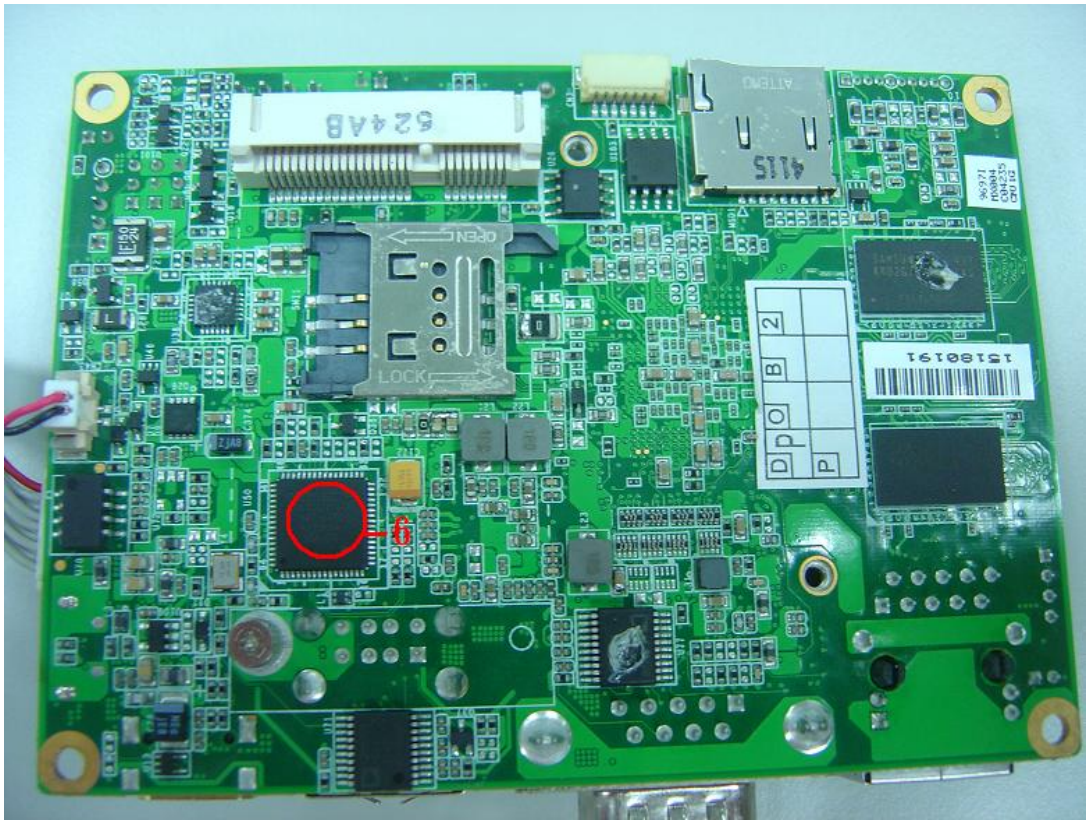
Terminal Recorder:

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
				26.0℃	60℃	
1	U1	(TF)Freescale CPU.i.MX6 Quad.1GHz.FCPBGA.MCIMX6Q6AVT10AC	125	65.3	99.3	
2	U2	(TF)IC.DDRIII-SDRAM.128M X 16(bit).1600MHz.1.5V.FBGA 96P.SMD.SAMSUNG.K4B2G1646Q-BCK0	95	50.5	84.5	
3	D50	(TF)D Schottky.VDC=40V.5A.SMD.DO-214AA.Barrier Rectifiers.WILLAS.SK54B	125	54.0	88.0	
4	U68	(TF)IC.PMIC.for I.MX6.QFN-56P.SMD.Freescale.MMPF0100F0AEP	125	62.3	96.3	
5	L29	(TF)COIL.2.2uH.DCR=25mohm.Idc=5.5Amp.20%.SMD.5.7x5.2 x2.8mm.AG.SMTMI0530CN-2R2M	125	57.1	91.1	
6	U50	(TF)IC.USB2.0 7-PORT HUB CONTROLLER.QFN 64.SMD.SMSC.USB2517i-JZX	100	61.0	95.0	NOTE3
7		RTC Battery	70	32.0	66.0	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. E140604QED04

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