ReportNO: 11E080018

GENE-TC05

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: Two temperature need improving**

Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

Issue date	Approval	Test Engineer
2011 / 11/24	Jansin Lee	Matthew Chi

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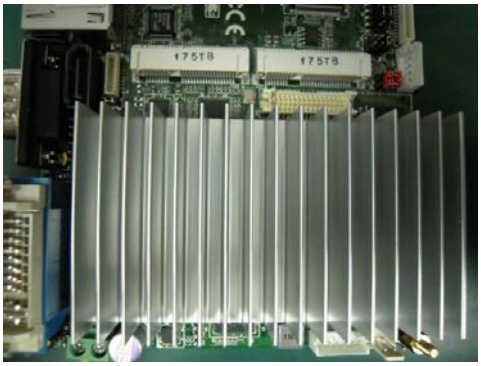
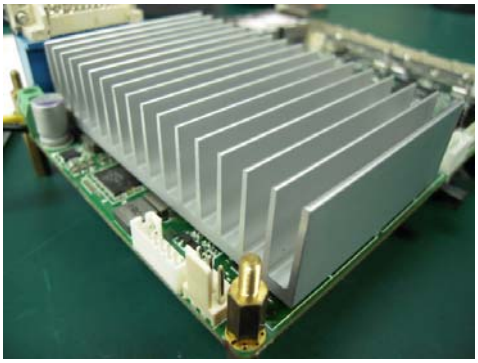
Sample Configuration & Quantity Under Test

- **Model name : GENE-TC05 A0.4**
- **CPU Board : GENE-TC05 A0.4**
- **CPU : Intel Atom E680 1.60GHz**
- **Memory : Onboard DDR2 1GB**
- **HDD : WD800BEVS 2“5 SATA HDD**
- **BIOS :GTC5 0.44(08/25/2011)**
- **Test Software : Windows XP / Run PassMark Burn In Test 6.0 Pro**
- **Power : AT Power**
- **Heat Sink:**





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Thermal Image Analysis

1. Test Date: 2011-11-24

2. Test Product : GENE-TC05 A0.4

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

1. YOKOGAWA / DARWIN DA-100-13-1D

2. IR Scanner: Infrared Camera

NIPPON AVIONICS CO., LTD.

Model: TVS-100

Date of Calibration: 2011/07/11

Serial Number: 0179L2746

5. Test Condition:

Component Side-1 (Test by DA-100): 25℃ With cooler

6. Take Picture Time:

After power on 2 hours

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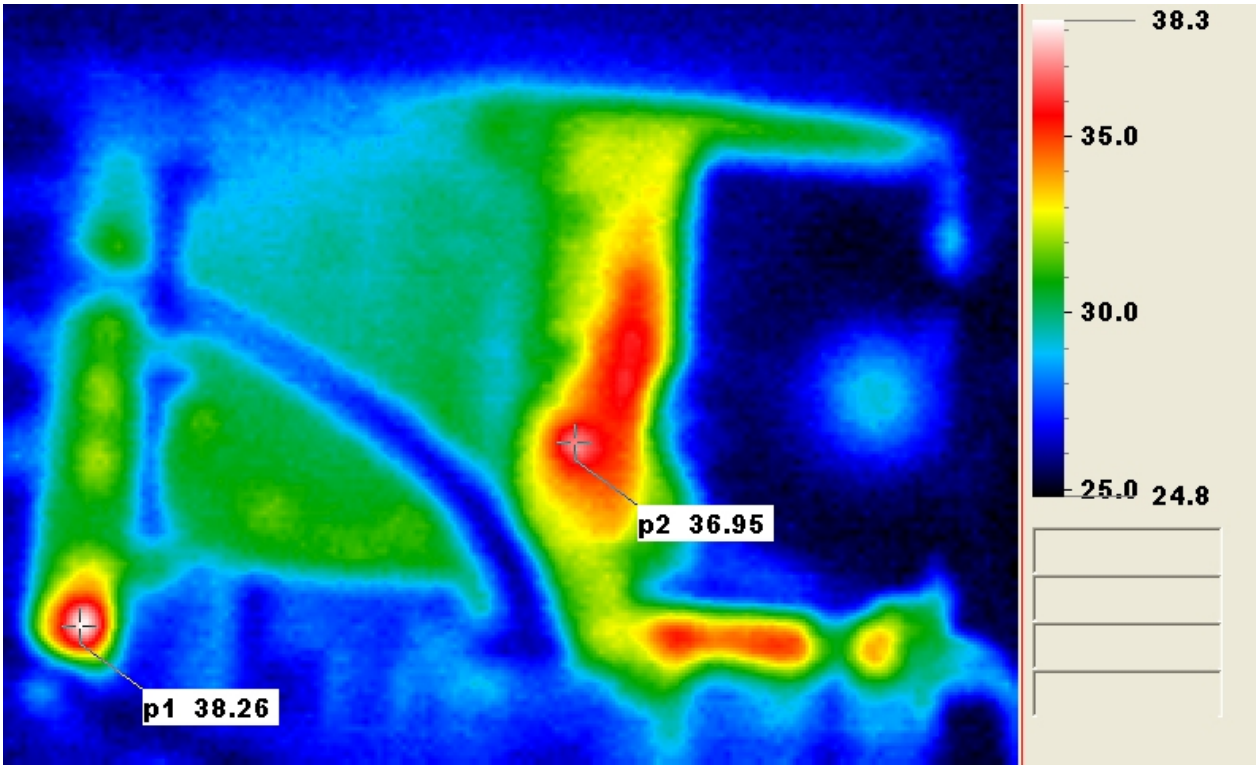
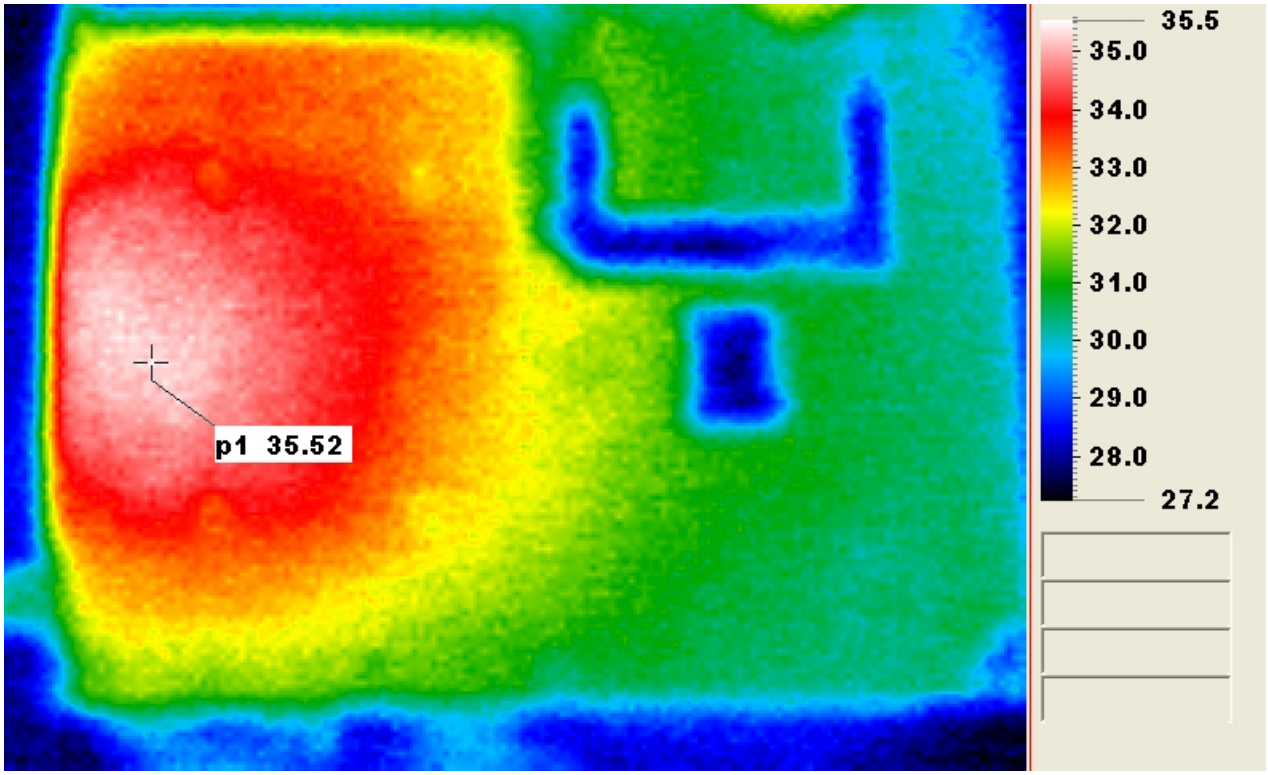
Temperature Profile Test:





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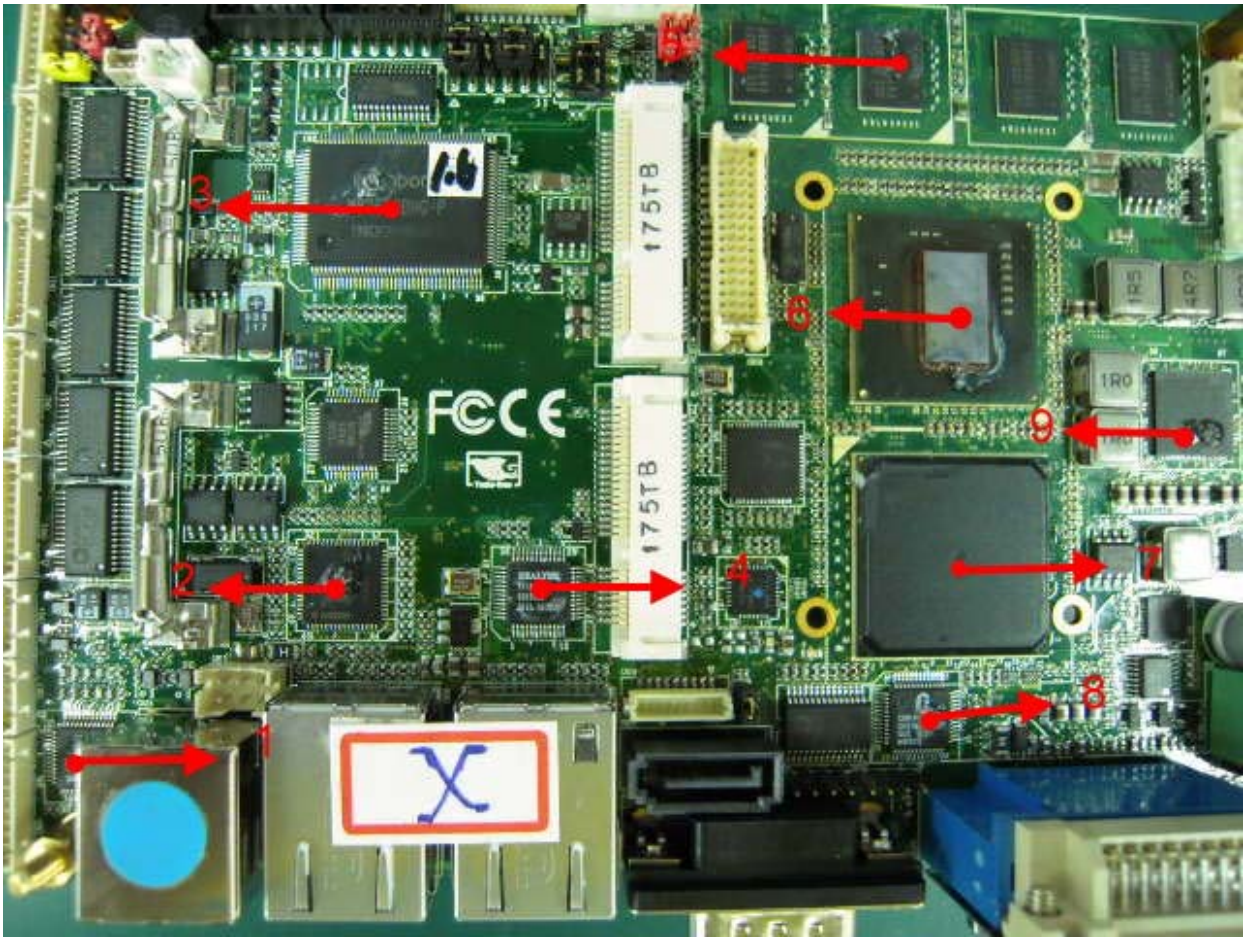

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Using YOKOGAWA / DARWIN DA100-100-13-1D test

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				25℃	60℃	
1	U42	(TF)IC 48P.HIGH.AUDIOCODEC.REALTEK.ALC662-GR	100	47.2	82.2	
2	U13	(TF)IC.SMD.PQFP 128Pin.LPC Super I/O.Winbond.W83627DHG-P	125	40.4	75.4	
3	U37	(TF)IC. 64P.PCI-E GigaBit Ethernet Chipset.Intel.WG82574L SLBA8	109	43.2	78.2	
4	U35	(TF)IC.SMD.Gigabit Enthernet Chip.REALTEK.RTL8211CL-GR	100	46.2	81.2	
5	U2	(TF)IC.SMD.DDRII-SDRAM.128Mbx8(bit).800MHz.	95	60.6	95.6	
6	U19	(TF)Intel CPU.ATOM.E680.1.6GHz.w/512K Cache.FCBGA676.	90	56.1	91.1	
7	U30	(TF)IC.SMD.BGA.376P.IOH.23*23mm.Intel.Topcliff	100	54.2	89.2	
8	U40	(TF)IC.SMD LQFP.48P.DVI Transmitter.CHRONTEL.CH7307C-DEF	125	58.1	93.1	
9	U20	(TF)IC.SMD.QFN.88P.PMIC.for Intel ATOM E6xx Series.	125	67.7	102.7	

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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