# COM-TC

**A0.2**

# Thermal Image Analysis Report

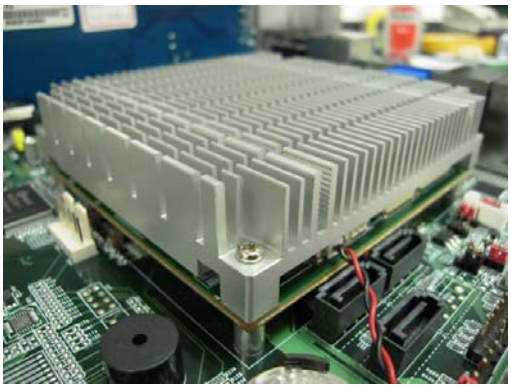
| | |
|---|---|
| Summary | ☑ **Pass**<br>☐ **Fail**<br>☐ **Pass with Deviation**<br>**Comment:** _____ |

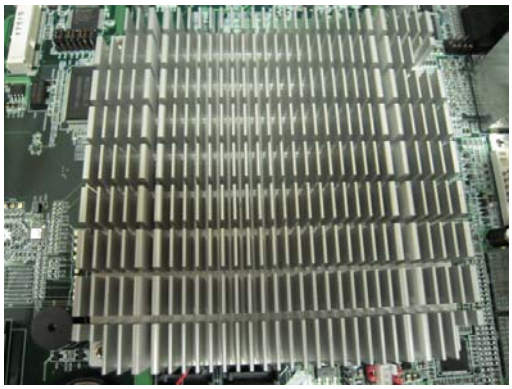
| Test Result Summary | | | | |
|---|---|---|---|---|
| | Critical | Major | Minor | Enhancement |
| Defect Found | 0 | 0 | 0 | 0 |
| Defect Unsolved | 0 | 0 | 0 | 0 |

| Issue date | Approval | Test Engineer |
|---|---|---|
| 2011 / 11 / 22 | Jansin Lee | Clement Chien |

## Sample Configuration & Quantity Under Test

- **Model name :** COM-TC
- **CPU Board :** COM-TC
- **Carrier Board :** ECB-916M B0.2
- **VGA Board :** ADD2-VGA R10
- **CPU :** Intel Atom Processor E620T / 1.30 GHz
- **Memory :** DDRII-SDRAM.800MHz SAMSUNG.K4T1G084QF-BCF7
- **HDD :** Seagate 3.5” SATA HDD 160GB
- **BIOS :** COM-TC T0.8
- **Test Software :** Windows XP / Run PassMark Burn In Test 6.0 Pro
- **Power :** ATX Power
- **Heat Sink:**





# Thermal Image Analysis

**1. Test Date: 2011-11-21**

**2. Test Product: COM-TC**

**3. Test Site: AAEON Internal Lab.**

**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: TVS-100**

**Date of Calibration: 2011/07/11**

**Serial Number: 0179L2746**

**5. Test Condition:**

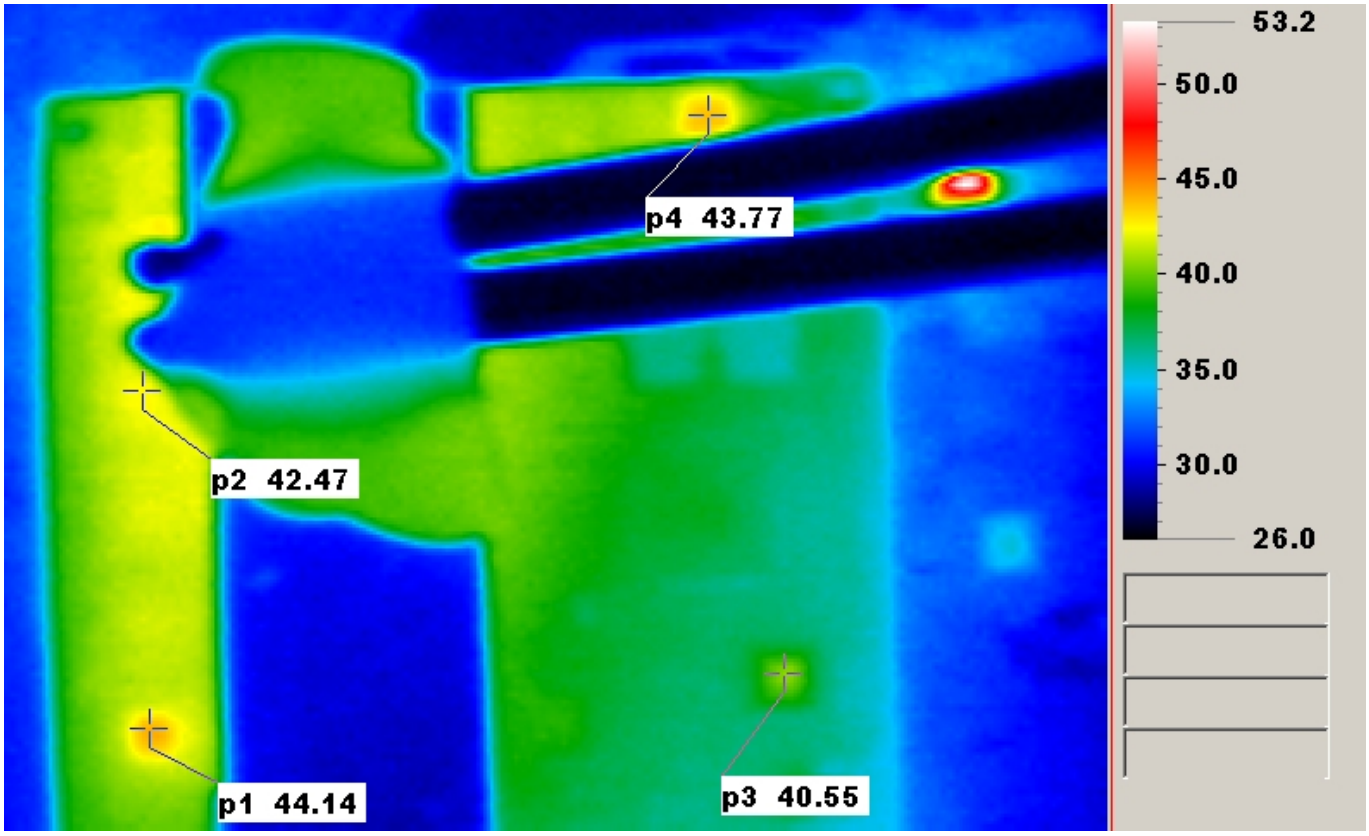
**Component Side-1 (Test by DA-100 ): 25.0℃ With Heat Sink**

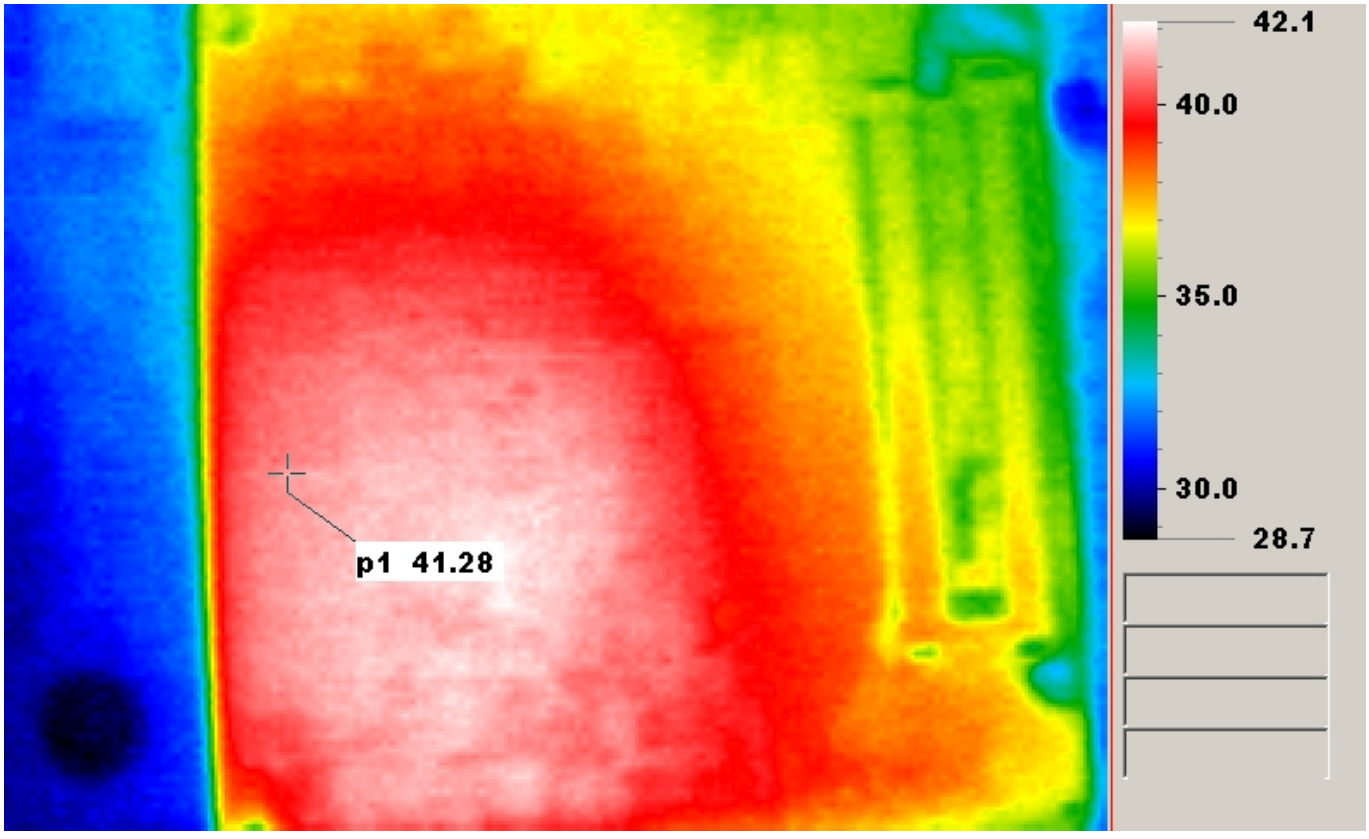
**6. Take Picture Time:**

**After power on 2 hours**

## Temperature Profile Test:

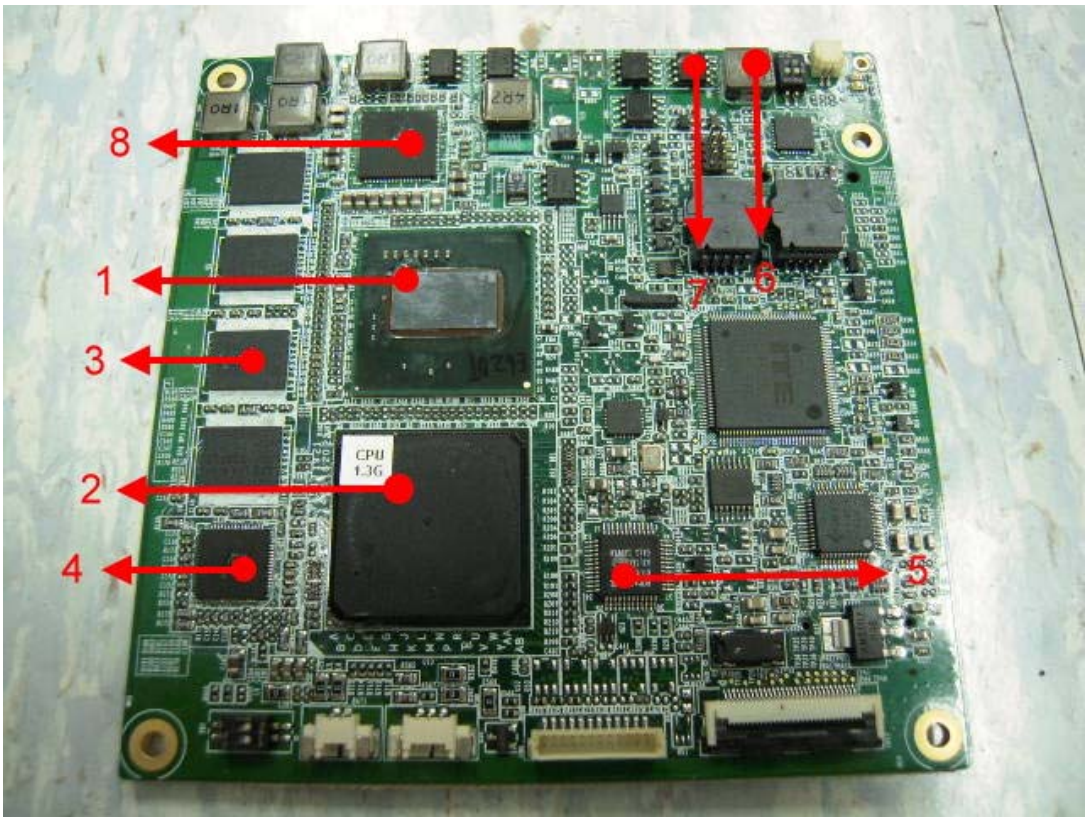
### Component Side:



## Terminal Recorder:

Measuring Thermal Couple Position：




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

| Point | Position | Describe | Tc (*1) (℃) | Tm (*2) Measured Under | | Note |
|---|---|---|---|---|---|---|
| | | | | 25℃ | 60℃ | |
| 1 | U1 | (TF)Intel CPU.Tunnel Creek Processor.1.3GHz(Premium) | 110 | 44.8 | 79.8 | |
| 2 | U13 | (TF)Intel.EG20T.CS82TPCF.SLJ42 | 100 | 43.9 | 78.9 | |
| 3 | U4 | (TF)DDRII-SDRAM.800MHzSAMSUNG.K4T1G084QF-BCF7 | 95 | 43.9 | 78.9 | |
| 4 | U12 | (TF)UQFN64AV8080.CLK GEN.ROHM.BU7335MWV | 100 | 46.3 | 81.3 | |
| 5 | U22 | (TF)PCI-Express.Gigabit Enthernet Chip.REALTEK.RTL8211CL-GR | 100 | 44.2 | 79.2 | |
| 6 | L14 | (TF)COIL.[0.1~100]uH.20%.Zenithtek.ZPWM Series | 125 | 43.7 | 78.7 | |
| 7 | Q24 | (TF)PWR.N-Channel.30V.10A.13.5mΩ.MOSFET.APEC.AP4410GM | 125 | 43.9 | 78.9 | |
| 8 | U27 | (TF)UQFN088.ROHM.BD9591MWV | 100 | 46.0 | 81.0 | |
| 9 | U11 | (TF)DDRII-SDRAM.800MHzSAMSUNG.K4T1G084QF-BCF7 | 95 | 43.9 | 78.9 | |

**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.