# XTX-BSW

## 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 | QE Manager | Test Engineer |
|---|---|---|
| 2016 / 04 / 01 | KJ Wnag | Juno Cheng |



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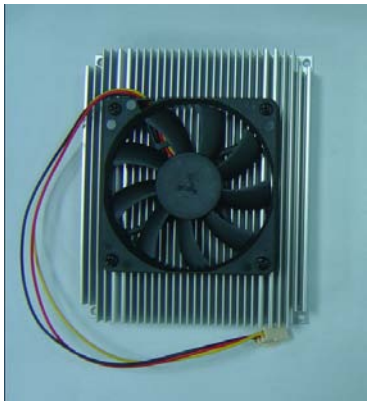
## Sample Configuration & Quantity Under Test

- **Model name :XTX-BSW A0.2**
- **CPU Board : XTX-BSW A0.2**
- **CPU : Intel® Processor N3710 @ 1.6 GHz**
- **Memory : AAEON 4GB / DDR3L 1600 / SEC K4B4G0846D**
- **2.5“ SATA : Western Digital WD800BEVT / 80GB**
- **BIOS : R0.6 (XBSWAM06) (01/27/2016)**
- **Test Software : Windows 8.1 / Run Run BurnIn test 8.1 Pro(1013)**
- **ATX Power : DSA400P-C**
- **Cooler (17592XCV00) :**




- **Heat spreader (M16XBSW000) :**

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# Thermal Image Analysis

**1. Test Date: 2016-04-01**

**2. Test Product: XTX-BSW**

**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: 2015/09/10**

**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: 2015/12/01**

**Serial Number: 1051444**

**5. Test Condition:**

**Test by DA-100: 25.0℃ with Cooler + Heat spreader**

**6. Take Picture Time:**

**After power on 2 hours**



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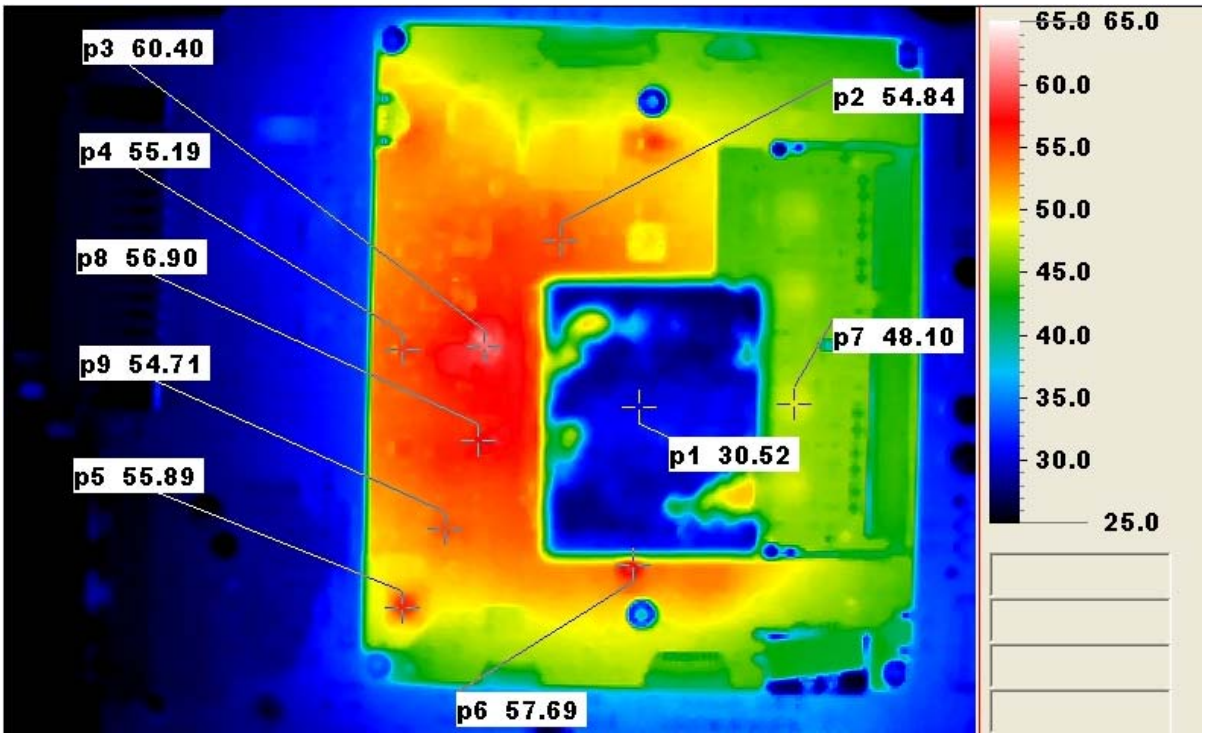
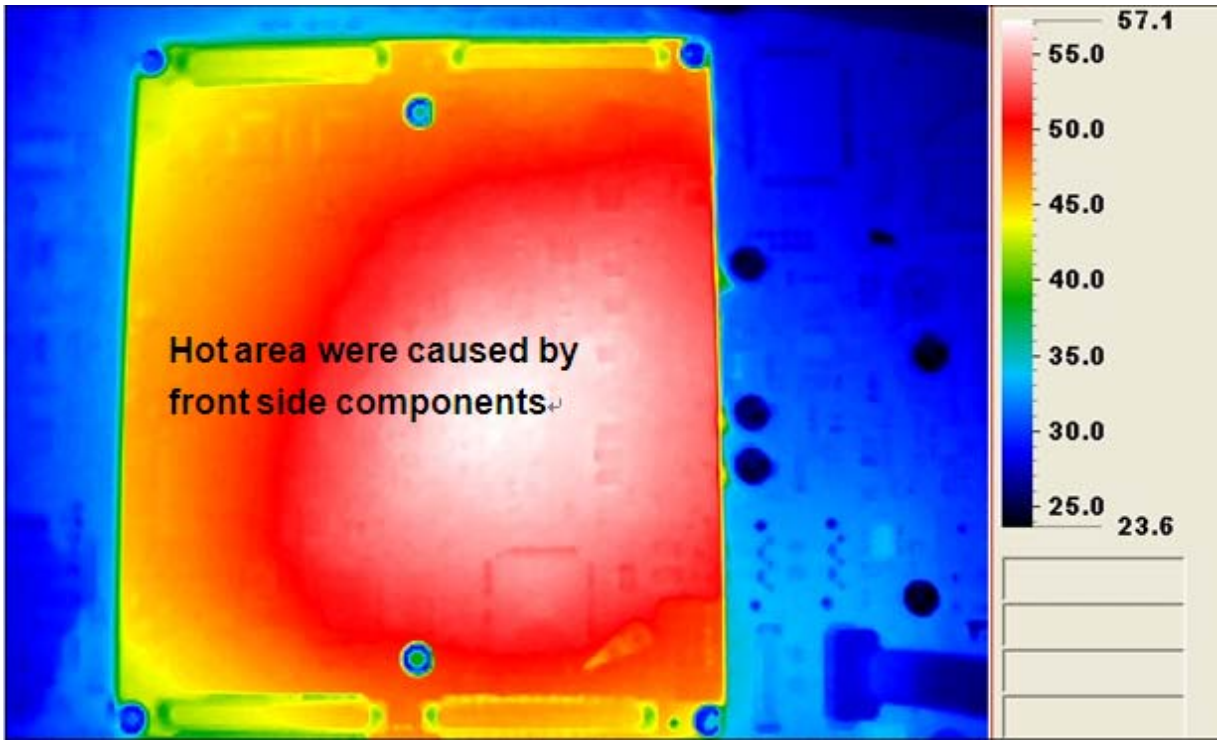
## Temperature Profile Test:

### Component Side:




### Back Side



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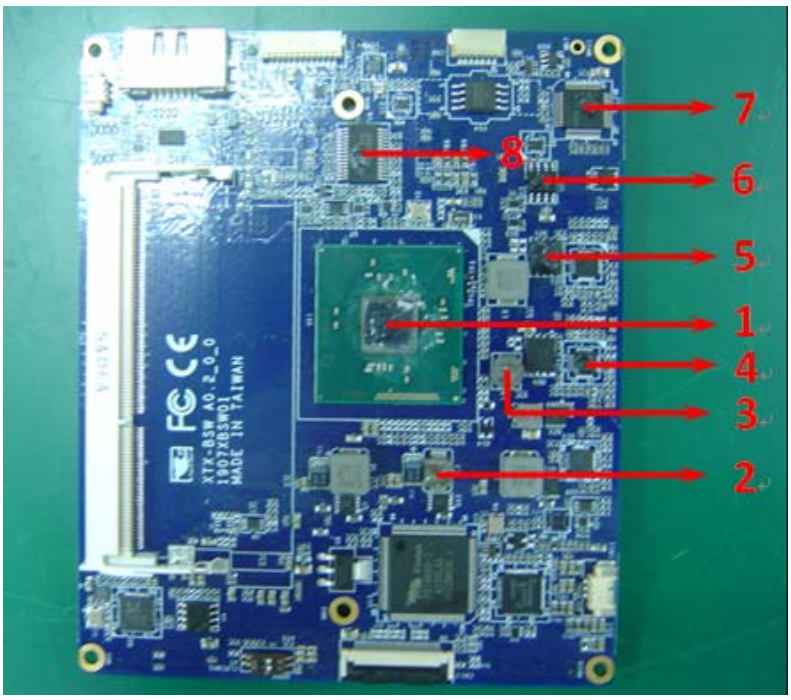
## Terminal Recorder:

Measuring Thermal Couple Position：




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

| Point | Position | Describe | Tc (*1) (℃) | TAT(*2) | TPT(*3) | Note |
|---|---|---|---|---|---|---|
| | | | | 25.0℃ | 60℃ | |
| 1 | U11 | (TF)INTEL CPU.Braswell.N3710.2.56GHz.BGA1170P. | 90 | 32.7 | 67.7 | |
| 2 | L3 | (TF)COIL.NEC/TOKIN.MPLCG0530L1R5 | 120 | 50.5 | 85.5 | |
| 3 | L6 | (TF)COIL.SMD.NEC/TOKIN.MPLCG0530LR22 | 120 | 58.5 | 93.5 | |
| 4 | U24 | (TF)IC.Signle-Phase Controller NCP81241MNTXG | 100 | 49.5 | 84.5 | |
| 5 | Q21 | (TF)N-MOSFET. SMD.ON.NTMFD4C50NT1G | 125 | 50.7 | 85.7 | |
| 6 | U19 | (TF)IC.LDO Linear Regulator.SMD.RICHTEK.RT9025-25PSP | 100 | 48.7 | 83.7 | |
| 7 | U22 | (TF)IC.LQFP 48P.SMD.REALTEK.ALC892-CG | 100.5 | 51.0 | 86.0 | |
| 8 | U9 | (TF)IC.SMD SSOP 28P.Clock Buffer.ICS.ICS9DB104FLFT | 115 | 53.1 | 88.1 | |
| 9 | | DIMM | 95 | 47.0 | 82.0 | |

**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.



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