GENE-BT07

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment:** There are two temperature points marginal passed, the function is normal, hope to get improvement for the next generation. **:**

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

Issue date	Approval	Test Engineer
2015 / 07 / 13	KJ Wnag	Juno Cheng

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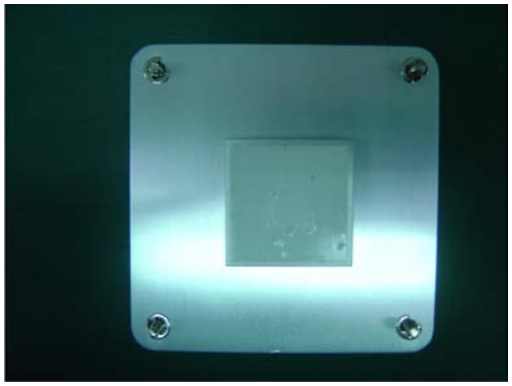
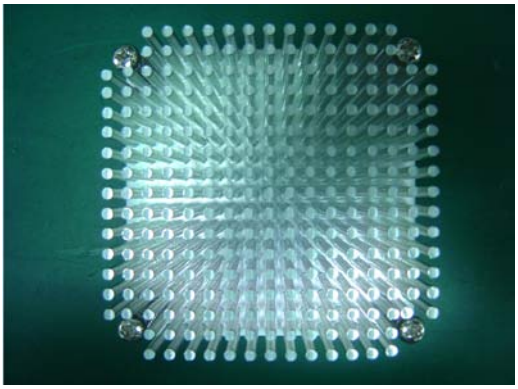
Sample Configuration & Quantity Under Test

- **Model name :GENE-BT07 A1.0**
- **CPU Board : GENE-BT07 A0.1**
- **CPU : Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)/10W**
- **Memory : Innoodisk DDR3L 1600 4GB / W/T SODIMM V73CBG04808RAJJ11**
- **mSATA : Sandisk WSDSA5FK-032G-Q 32GB**
- **BIOS : GENE-BT05 R0.1(GBTAMØ1) (05/28/2015)**
- **Test Software : Windows 8 / Run Run BurnIn test 8.0 Pro**
- **Power : AT Power**
- **Heatsink :**





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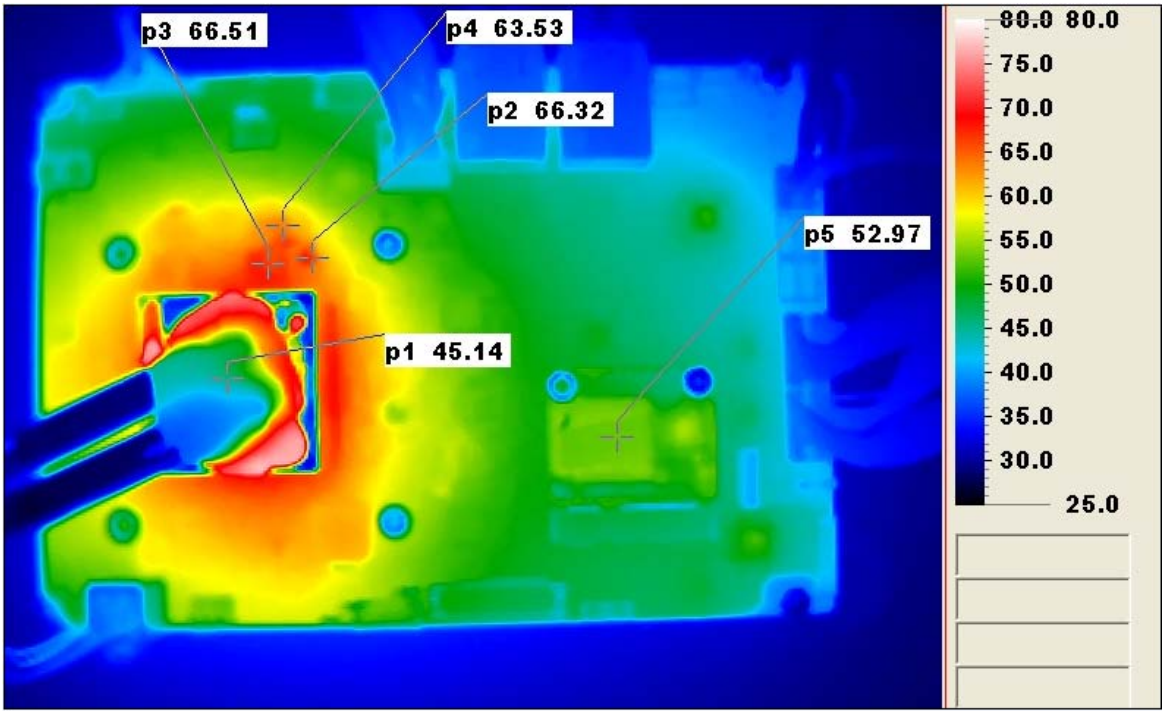
Thermal Image Analysis

1. Test Date: 2015-07-13
2. Test Product: GENE-BT07
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: 2014/10/01
       - 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: 25.0℃ with Heat Sink
6. Take Picture Time:
   - After power on 2 hours

Temperature Profile Test:

Component Side:



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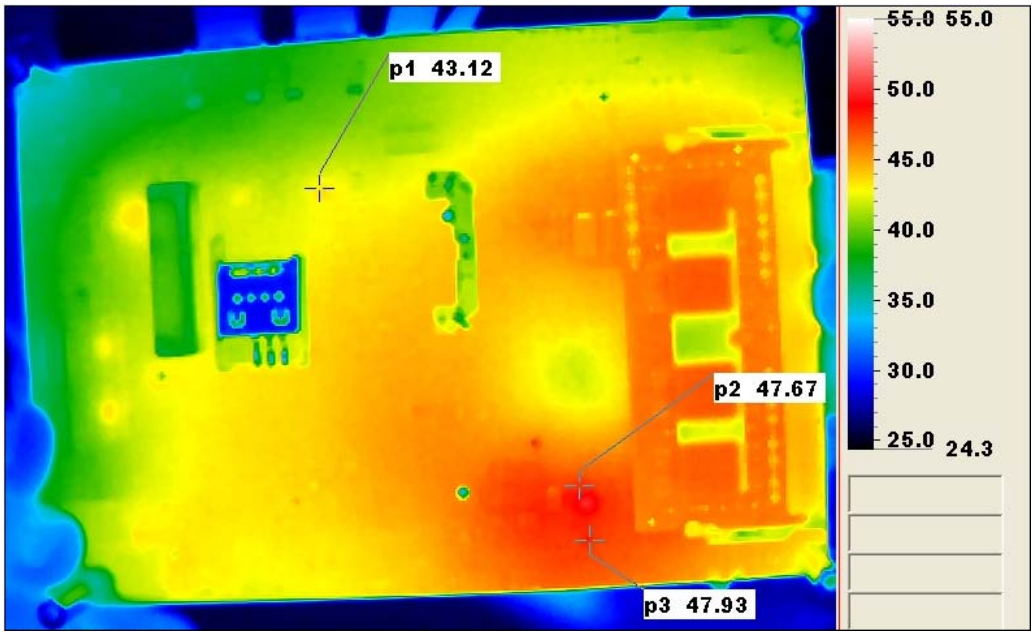
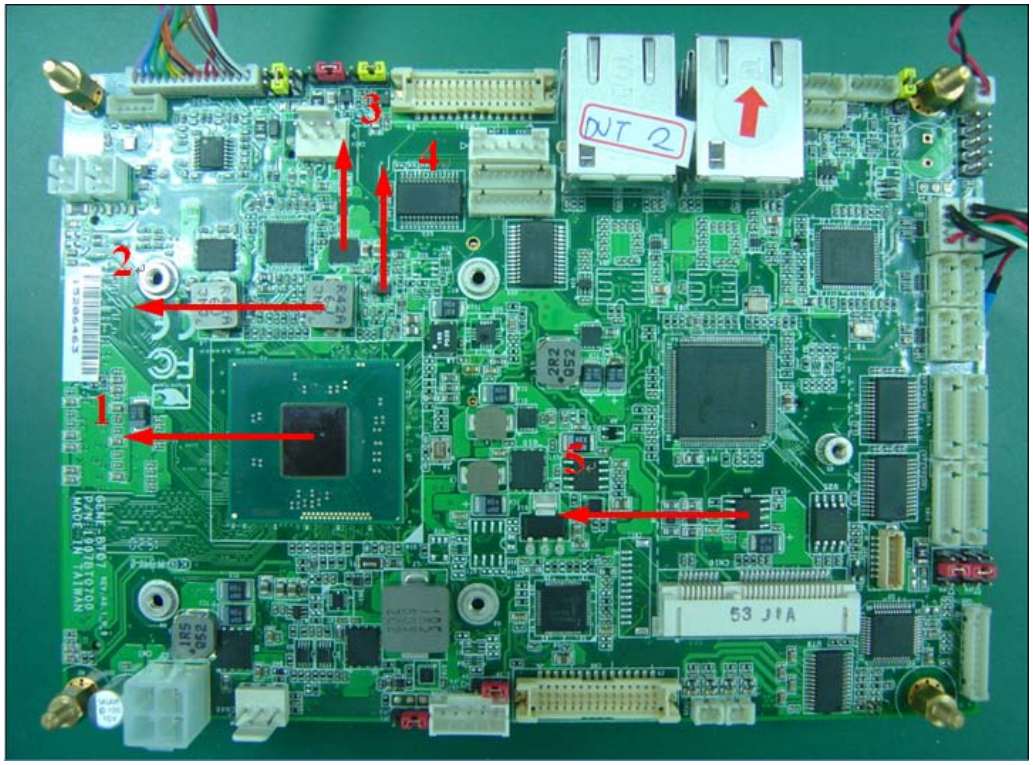
Back Side



Terminal Recorder :

Measuring Thermal Couple Position：



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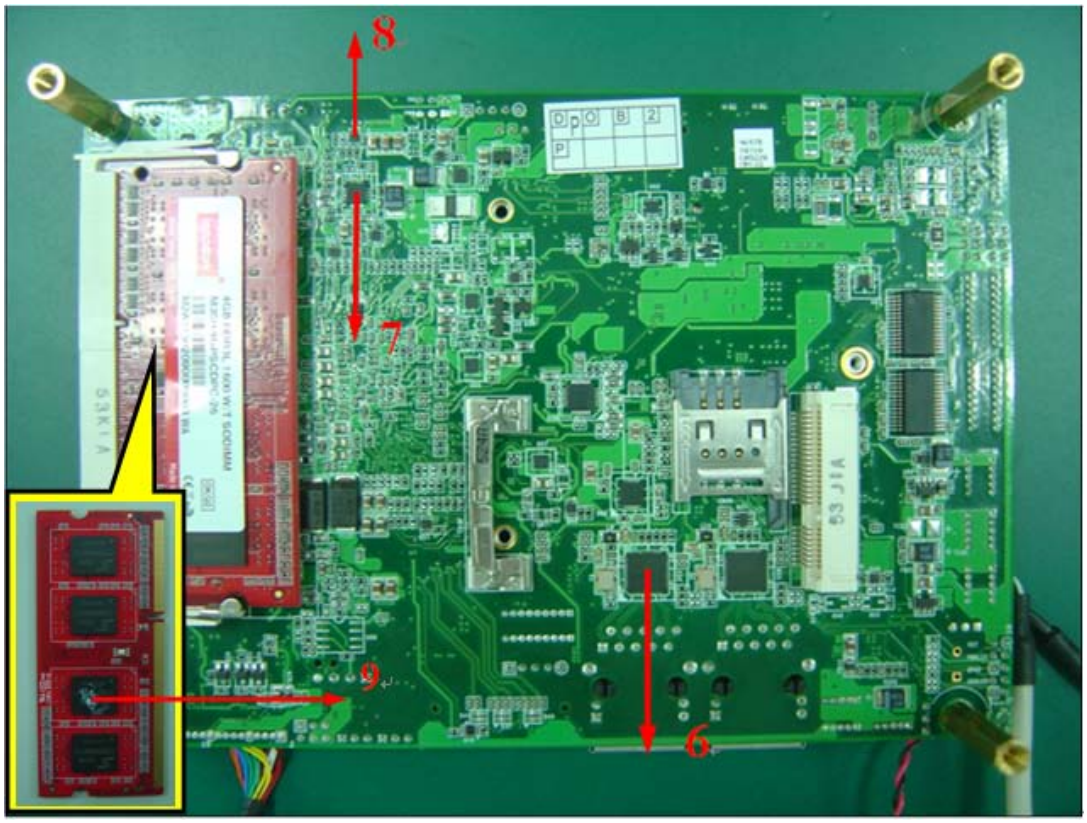

Using YOKOGAWA / DARWIN DA100-100-13-1D test

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				25.0℃	60℃	
1	U16	(TF)INTEL Bay Trail-D.J1900.2GHz.	105	64.4	99.4	Margin
2	L7	(TF)COIL. Panasonic.ETQP4LR42AFM	135	61.5	96.5	
3	U28	(TF)IC.Synchronous Buck NexFETTM.SON SMD.TI.CSD97374Q4M	125	59.9	94.9	
4	U26	(TF)IC.LDO Regulator.EE-A120510;14S3010700;TWN	125	66.7	101.7	
5	U12	(TF)IC.Linear Regulator.EE-A130980;143117ADJ0;TWN	125	49.4	84.4	
6	U21	(TF)IC.PCI. Gigabit Ethernet Chip.REALTEK.RTL8111E-VL-CG	100	47.8	82.8	
7	U41	(TF)IC.Wide Input Voltage. 1430532190;TWN	125	63.3	98.3	
8	Q24	(TF)PWR.Dual N-Channel MOSFET. ROHM.EM6K1GT2R	125	63.8	98.8	
9		Memory chipset	95	54.9	89.9	Margin

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. RTC battery avoid to put on heat position. Please do not exceed battery temperature specification.
5. Defect NO.: BUL1503QEE15

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