GENE-BT05

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: After compared with component datasheet, there were 3 components' surface temperature located in marginal pass criteria.**

Test Result Summary

	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	3
Defect Unsolved	0	0	0	3

Issue date	Approval	Test Engineer
2014 / 06 / 26	Tom Lin	Juno Cheng

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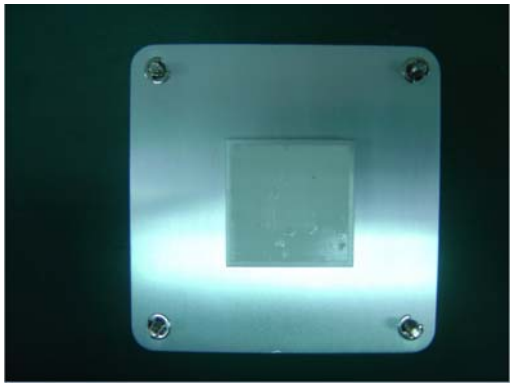
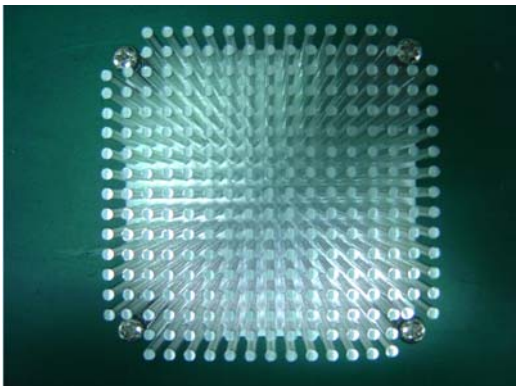
Sample Configuration & Quantity Under Test

- **Model name :GENE-BT05 A0.3**
- **CPU Board : GENE-BT50 A0.2**
- **CPU : Intel Celeron Processor J1900 (2M Cache, up to 2.42 GHz)**
- **Memory : DSL DDR3L 1600 4GB / PROMOS V73CBG04808RAJJ11**
- **2.5“ SATA HDD : WD WD3200BEVT 2.5“ 320GB**
- **BIOS : GENE-BT05 M/D (GBT5BT03)(05/12/2014)**
- **Test Software : Windows 7 / Run PassMark Burn In Test 7.1 Pro**
- **Power : AT Power**
- **Heatsink :**





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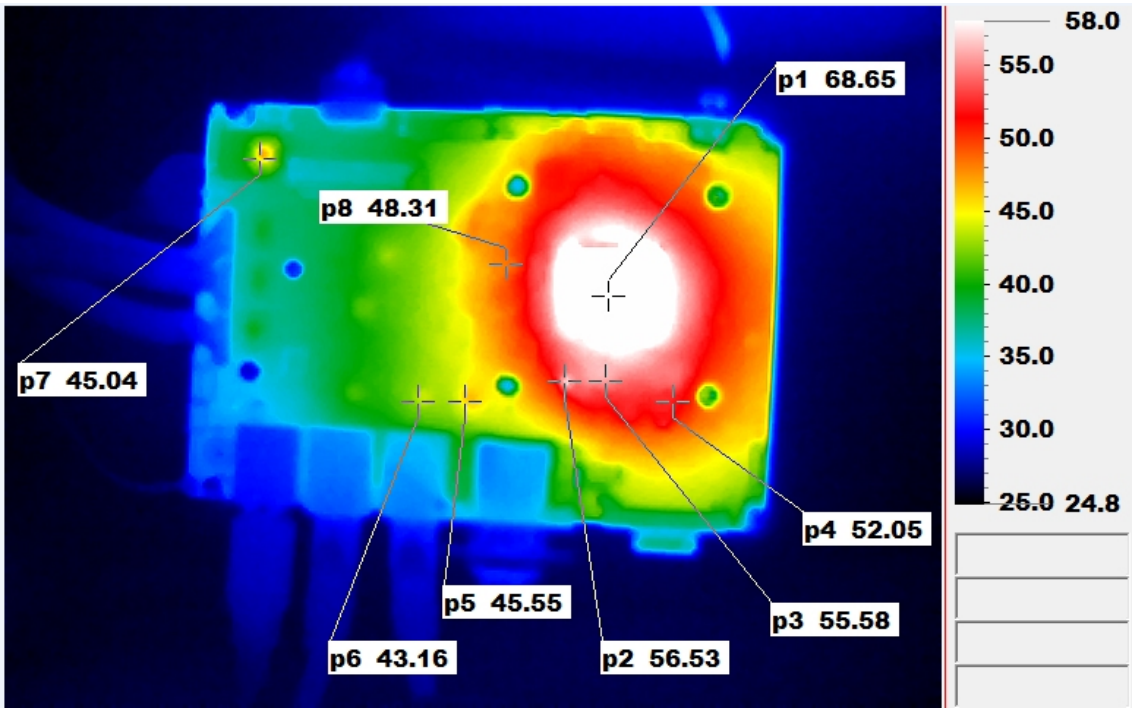
Thermal Image Analysis

1. Test Date: 2014-06-26
2. Test Product: GENE-BT05
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: 2013/10/01
            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: 2013/12/30
            Serial Number: 1051444
5. Test Condition:
        Test by DA-100: 25.0℃ with Heat Sink + FAN (Full speed)
6. Take Picture Time:
        After power on 2 hours

Temperature Profile Test:

Component Side:



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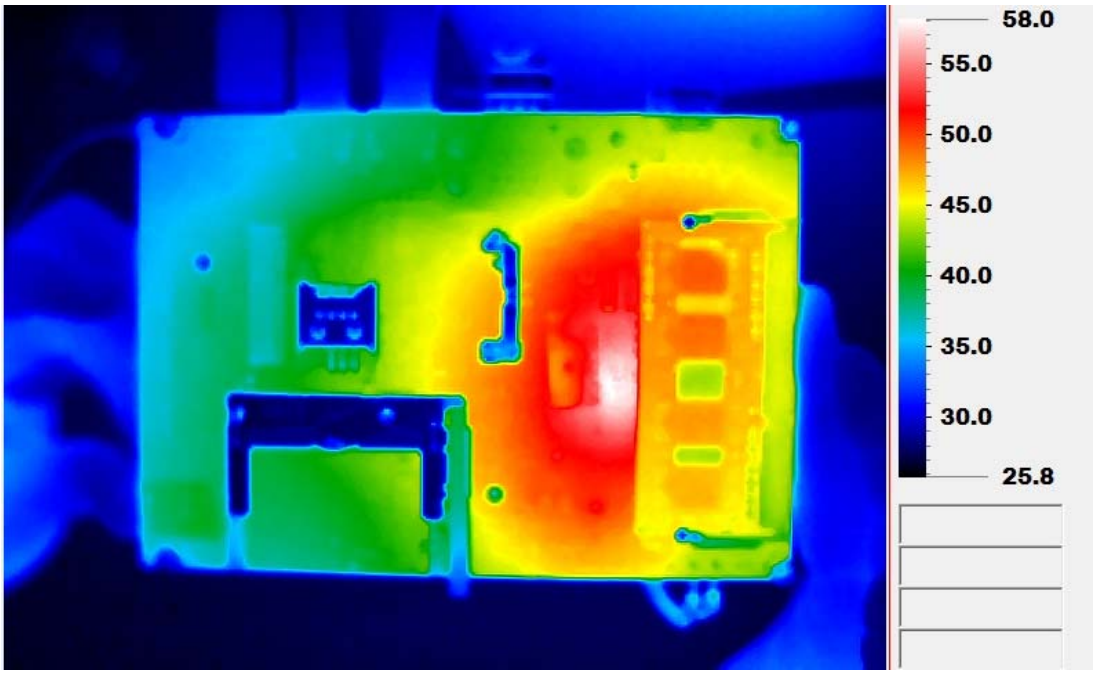
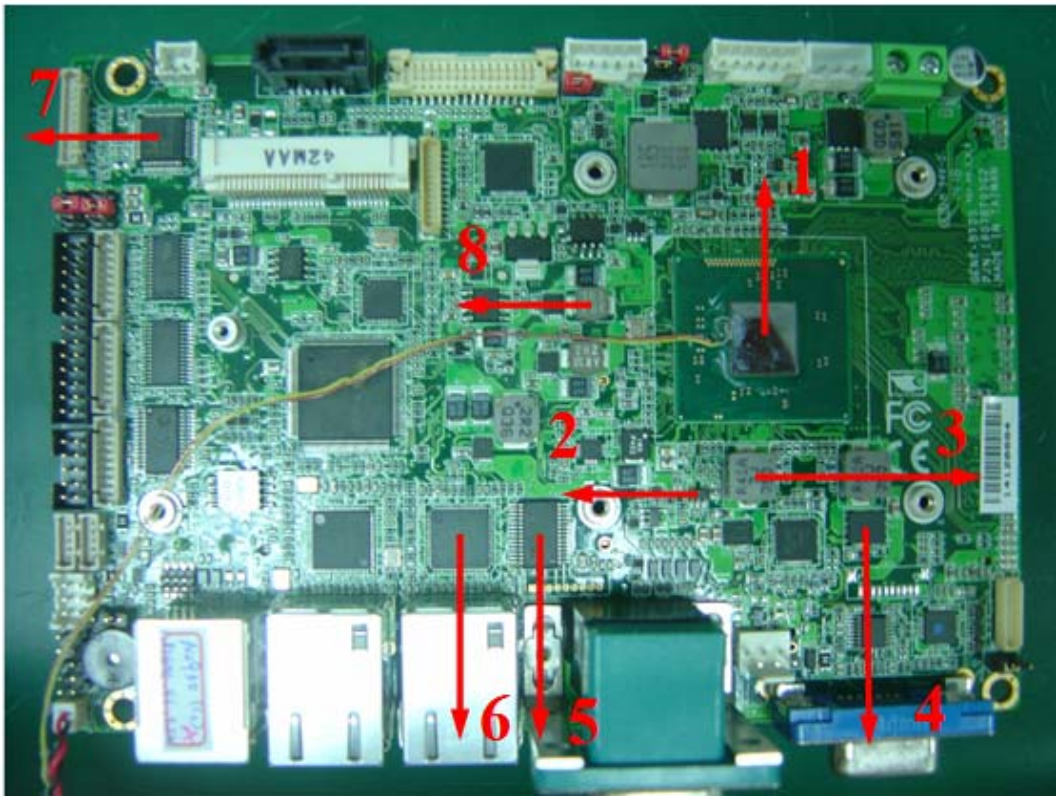
Back Side



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	Bay Trail N2930	105	54.4	89.4	
2	U26	UP0107BMA5-00	100	52.1	87.1	
3	L7	Panasonic.ETQP4LR42AFM	130	59.8	94.8	
4	Q15	NTMFD4901NFT1G	100	52.6	87.6	
5	U24	ADM213EARSZ	100	49.2	84.2	
6	U21	Intel i211AT	85	46.8	81.8	Note3
7	U5	ALC892-CG	100.5	48.3	83.3	
8	L3	MPLCG0530L3R3	135	52.4	87.4	
9	CN31	Battery CR2032-HAT00	70	26.9	61.9	Note3
10		**Memory chipset**	95	53.2	88.2	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. : E130607QEE34

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