GENE-BSW5

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment:** 1. There are 7 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	7
Defect Unsolved	0	0	0	7

Issue date	QE Manager	Test Engineer
2016 / 05 / 25	KJ Wnag	Ben Sun

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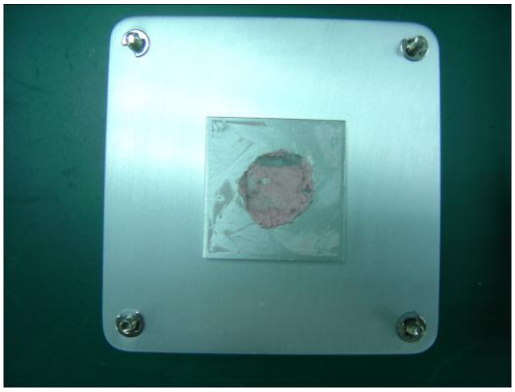
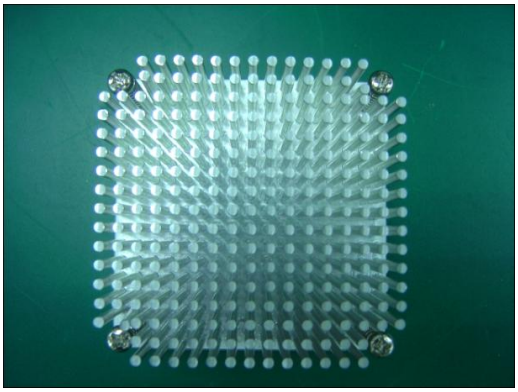
Sample Configuration & Quantity Under Test

- **Model name :GENE-BSW5 A1.1**
- **CPU Board : GENE-BSW5 A1.1**
- **CPU : Intel® N3710@ 1.6 GHz**
- **Memory : Transcend 8GB / DDR3L-1600**
- **2.5“ SATA : Toshiba MK10320GSC / 320GB**
- **BIOS :R1.2 (GBW5AM12)**
- **Test Software : Windows 8.1 / Run Run BurnIn test 8.0 Pro**
- **Power : Zippy HG2-6400P**
- **Heatsink :**





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Thermal Image Analysis

1. Test Date: 2016-05-23

2. Test Product: GENE-BSW5

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 Heat Sink

6. Take Picture Time:

After power on 2 hours

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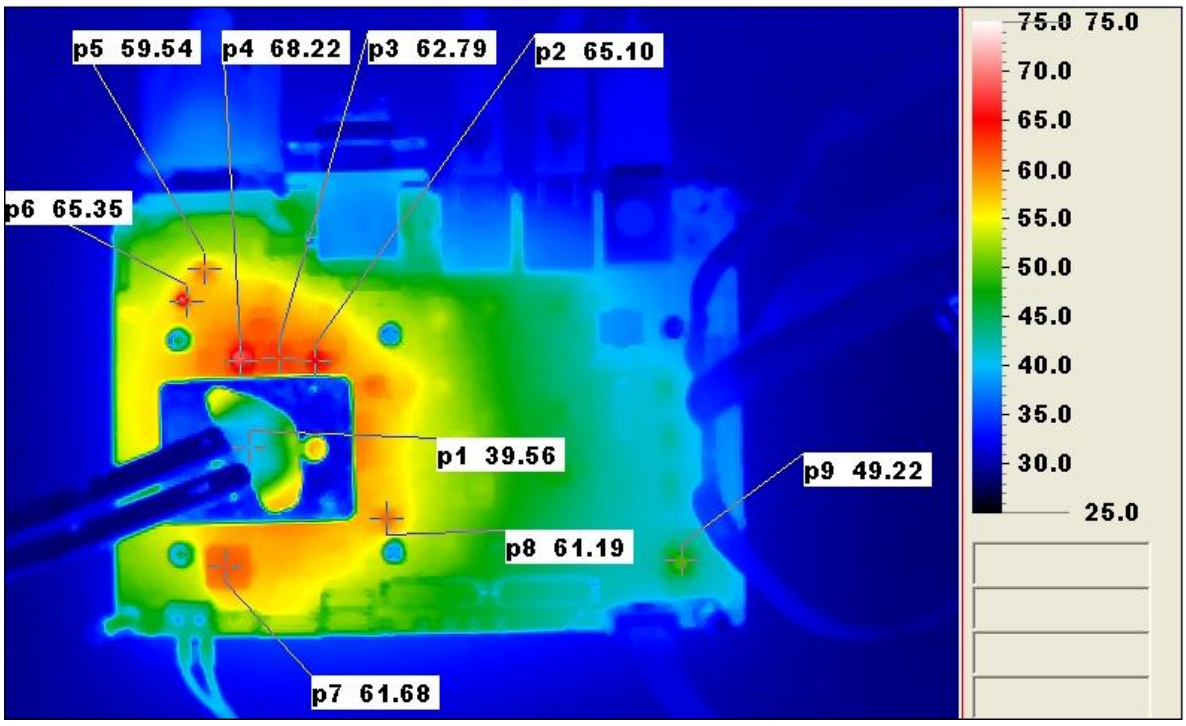
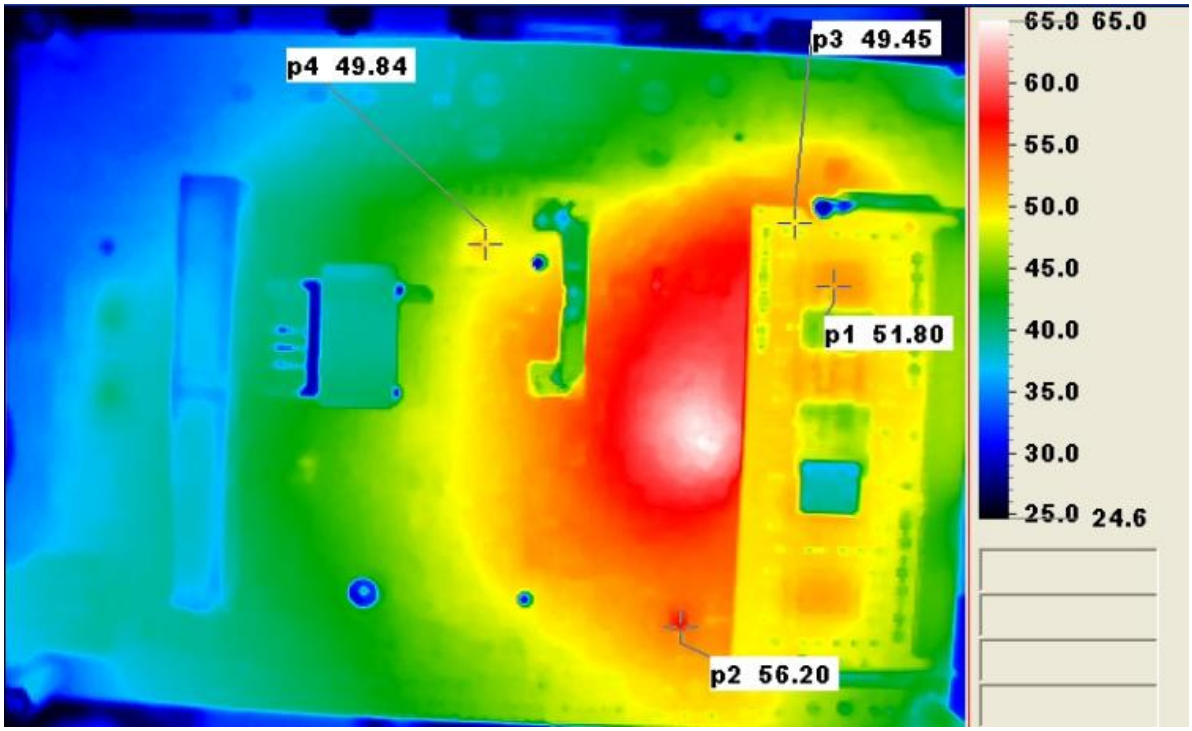
Temperature Profile Test:

Component Side:



Back Side



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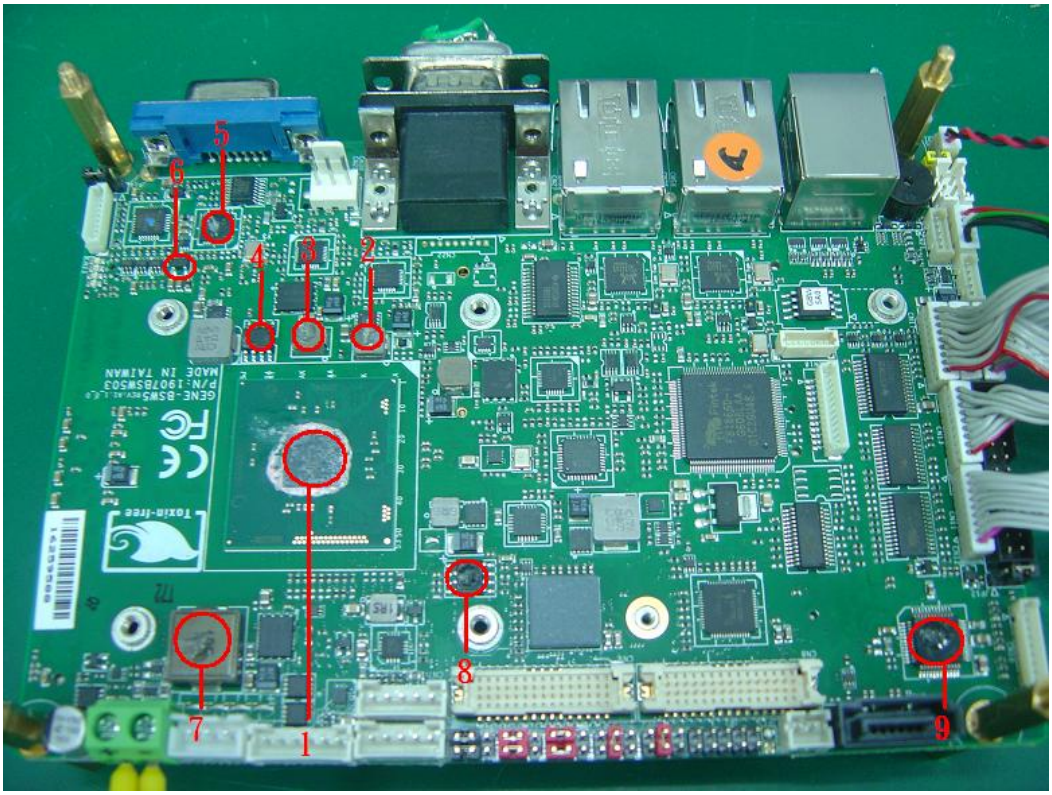
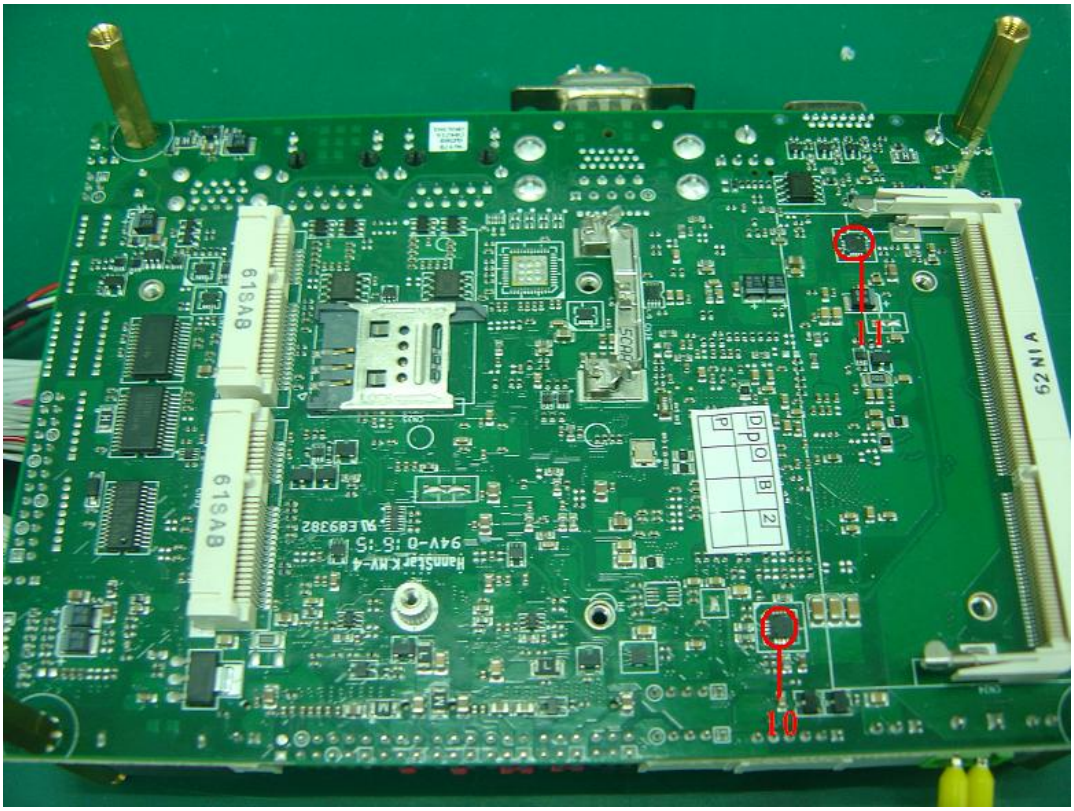
Terminal Recorder :

Measuring Thermal Couple Position：





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

Point	Position	Describe	Tc (*1) (℃)	TAT(*2) 25℃	TPT(*3) 60℃	Note
1	U14	(TF)INTEL CPU.Braswell.N3710. 2.56GHz	90	59.8	94.8	Margin
2	L6	COIL.SMD.NEC/TOKIN.MPLCG0530LR33	120	62.1	97.1	
3	L8	COIL..Panasonic.ETQP4LR36AFM	130	69.5	104.5	
4	U27	(TF)IC.LDO Linear Regulator SMD.RICHTEK.RT9025-25PSP	100	70.0	105.0	Margin
5	U44	(TF)IC.DisplayPort to VGA Converter.SMD.Chrontel.CH7517A-BF	125	58.9	93.9	
6	U38	(TF)IC.LDO Regulator.SMD.UPI.UP0107BMA5-00	100	66.3	101.3	Margin
7	L1	COIL.ZenithTek.ZPWM-1040MB-1R5M	100	58.3	93.3	Margin
8	U6	TF)IC.LDO Linear Regulator.0SMD.RICHTEK.RT9025-25PSP	100	59.7	94.7	Margin
9	U2	(TF)IC.SMD.REALTEK.ALC892-CG	100.5	44.5	79.5	
10	U49	(TF)IC.Wide Input Voltage.SMD.TI.TPS53219ARGTR	125	61.6	96.6	
11	U68	(TF)IC.SMD. BUCK CONTROLLER.3A.TI.TPS51216RUK	100	59.5	94.5	Margin
12		Memory chipset	95	61.6	96.6	Margin

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.

5. Defect NO.: BUL1604D01

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