GENE-A55E

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment:**, **Temperature at 1 component was estimated to be in marginal temperature point in comparison with component datasheet.** **There are 1 component in the absence of Tc and Tj specification, So we are unable to determine.**

Test Result Summary

	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	2
Defect Unsolved	0	0	0	2

Issue date	QE Manager	Test Engineer
2016 / 11 /11	KJ Wang	Juno Cheng

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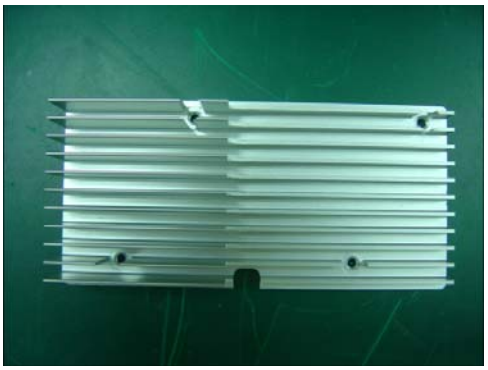
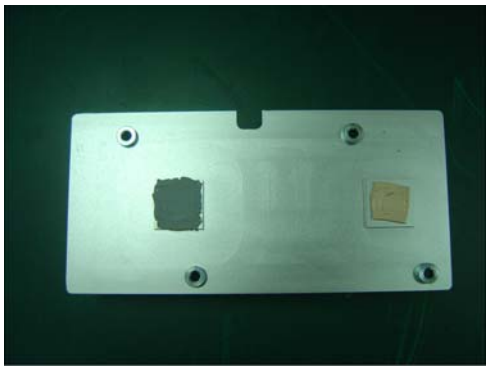
Sample Configuration & Quantity Under Test

- **Model name : GENE-A55E Rev.A1.1**
- **CPU : AMD T46N**
- **Chipset : AMD-A55E**
- **Memory : Transcend DDR3L 1600 SODIMM 4GB/ SEC K4B4G0846D**
- **2.5” HDD : FUJITSU MHW2040BH X 40 GB**
- **BIOS：R1.6 (GA5EAM16) (02/18/2016)**
- **Test Software : Windows 7 / Run Run BurnIn test 8.1**
- **AT Power：HGZ-6400P**
- **Heat Sink (M16A55E020) :**





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Thermal Image Analysis

1. Test Date: 2016-11-11

2. Test Product: GENE-A55E

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: 2016/09/10

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: 2016/12/01

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 23.0℃ with CPU Cooler

6. Take Picture Time:

After power on 2 hours

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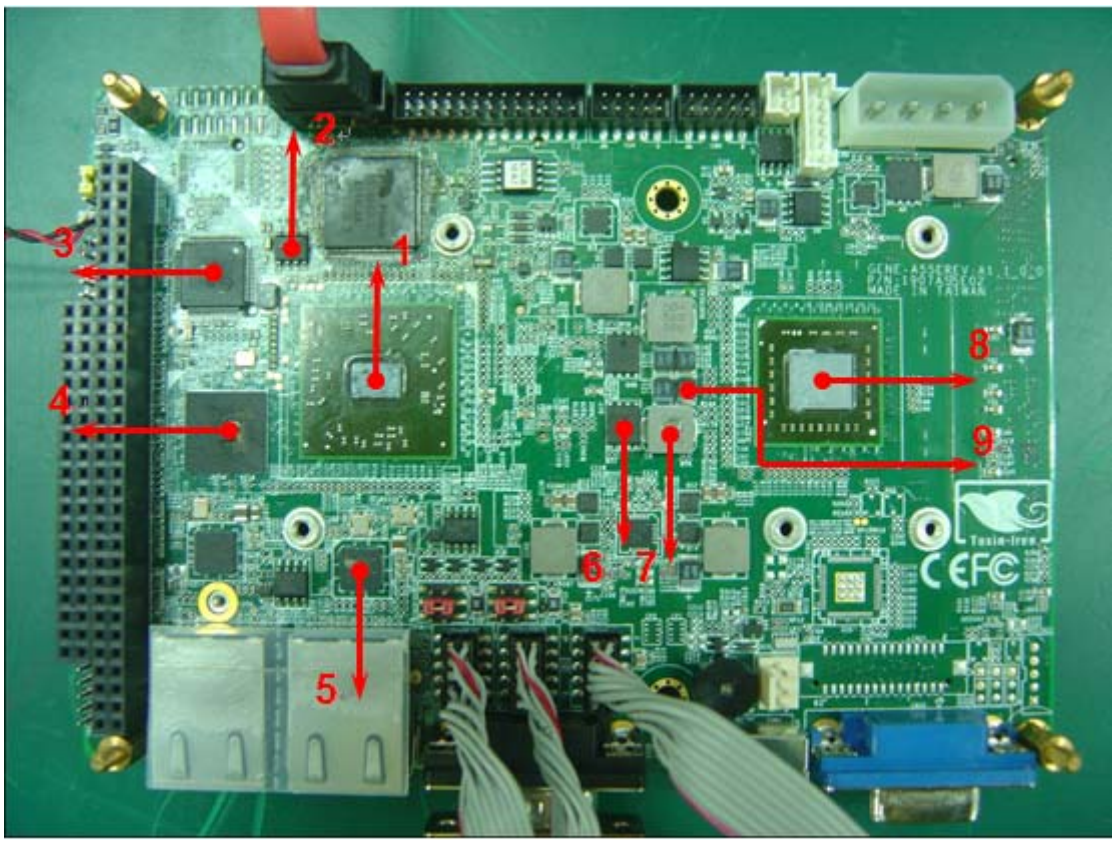
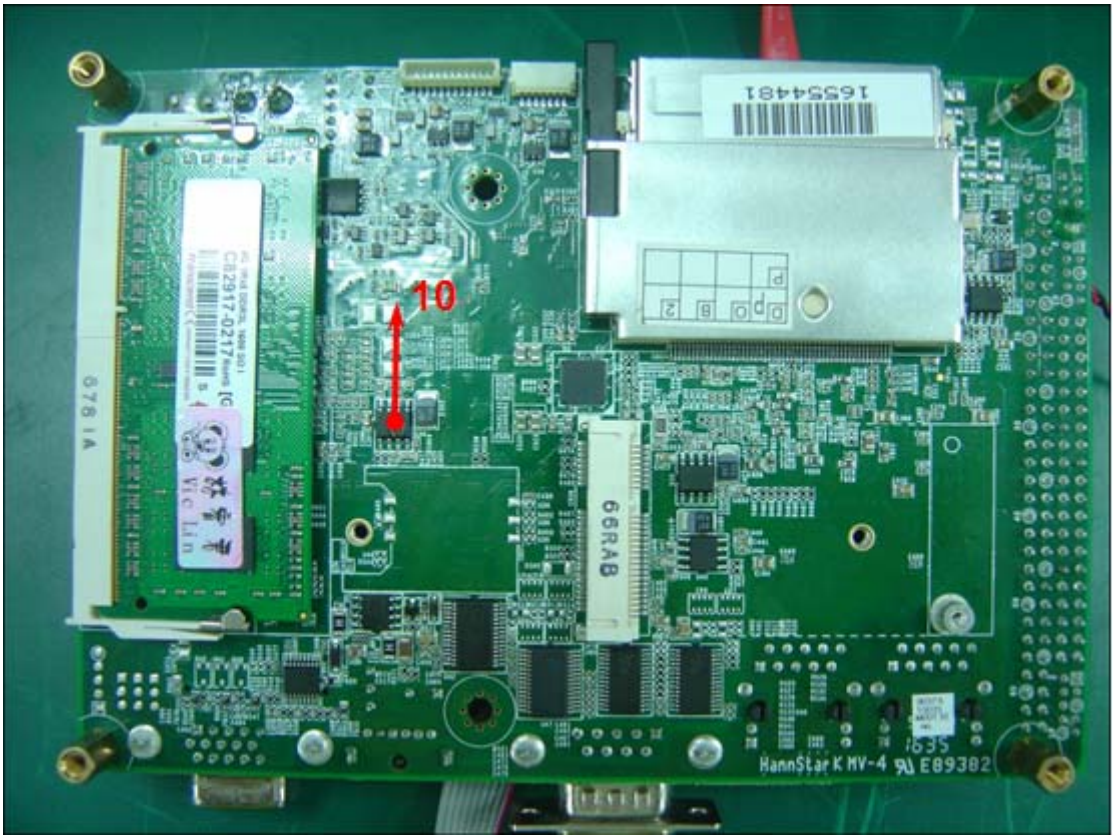
Terminal Recorder:

Measuring Thermal Couple Position：





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

Point	Position	Describe	Tc (*1) (℃)	TAT(*2)	TPT(*3)	Note
				25.0℃	60℃	
1	U13	(TF) CPU AMD.T46R	100	54.8	89.8	
2	U10	(TF)IC.RICHTEK.RT9025-25PSP	100	53.7	88.7	
3	U12	(TF)IC.SATA to IDE/ATA.Jmicron.JMD330-TGAA1D	100	54.1	89.1	
4	U16	(TF)IC.SMD TFBGA.160P.PCI to ISA Bridge Chip.ITE.IT8888G-L	NA	50.9	85.9	Note 6
5	U23	(TF)IC.REALTEK.RTL8111E-VL-CG	100	50.3	85.3	
6	Q37	(TF)PWR.DUALSMD. PQFN8.FAIRCHILD.FDMS3664S	125	52.5	87.5	
7	L9	(TF)COIL. CYNTEC.PCMB063T-1R0MS	140	52.7	87.7	
8	U14	(TF)AMD.FCBGA 413P.GET56NGBB22GVE.T56N	90	52.3	87.3	Note 4
9	C542	(TF)CAP. NEC-TOKIN.TEPSGB20E337M9-8R	120	51.8	86.8	
10	U34	(TF)IC.LDO Linear Regulator. SMD.RICHTEK.RT9025-25PSP	100	56.9	91.9	
11		DIMM	95	46.3	81.3	

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.

6. Defect NO. : BUL1513LABD01

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