EMB-A70M

Thermal Image Analysis Report

Summary	☑ **Pass** ☐ **Fail** ☐ **Pass with Deviation** **Comment: _____**

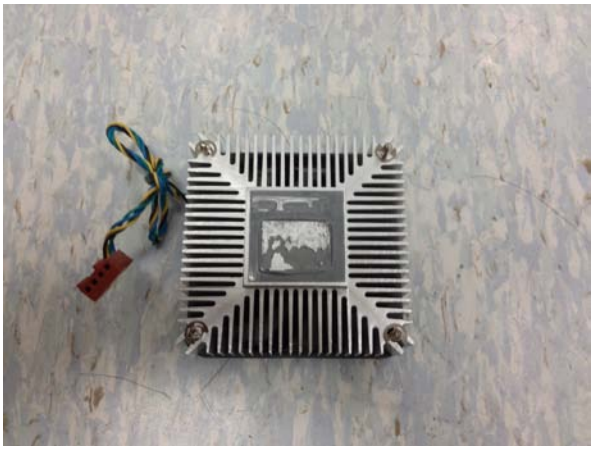
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date	Approval	Test Engineer
2013 / 07 / 09	Tom Lin	Jerry Chen

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

Sample Configuration & Quantity Under Test

- **Model name : EMB-A70M A0.3**
- **CPU Board : EMB- A70M A0.3**
- **CPU : AMD R-460H APU with HD Graphics 2.00GHz**
- **Memory : DDR3 1066 / 4G / SEC K4B2G0846C**
- **2.5” SATA HDD : HITACHI / HTS543216A7A384 / 2.5 SATA HDD / 160GB**
- **BIOS : EMB-A70M R1.0**
- **Test Software : Windows 7 / Run PassMark Burn In Test 7.0 Pro**
- **Power : AT Power**
- **CPU Cooler :**



AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

Thermal Image Analysis

1. Test Date: 2013-07-05

2. Test Product: EMB-A70M A0.3

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: 2012/10/08

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: 2013/01/08

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 25.1℃ with CPU Cooler

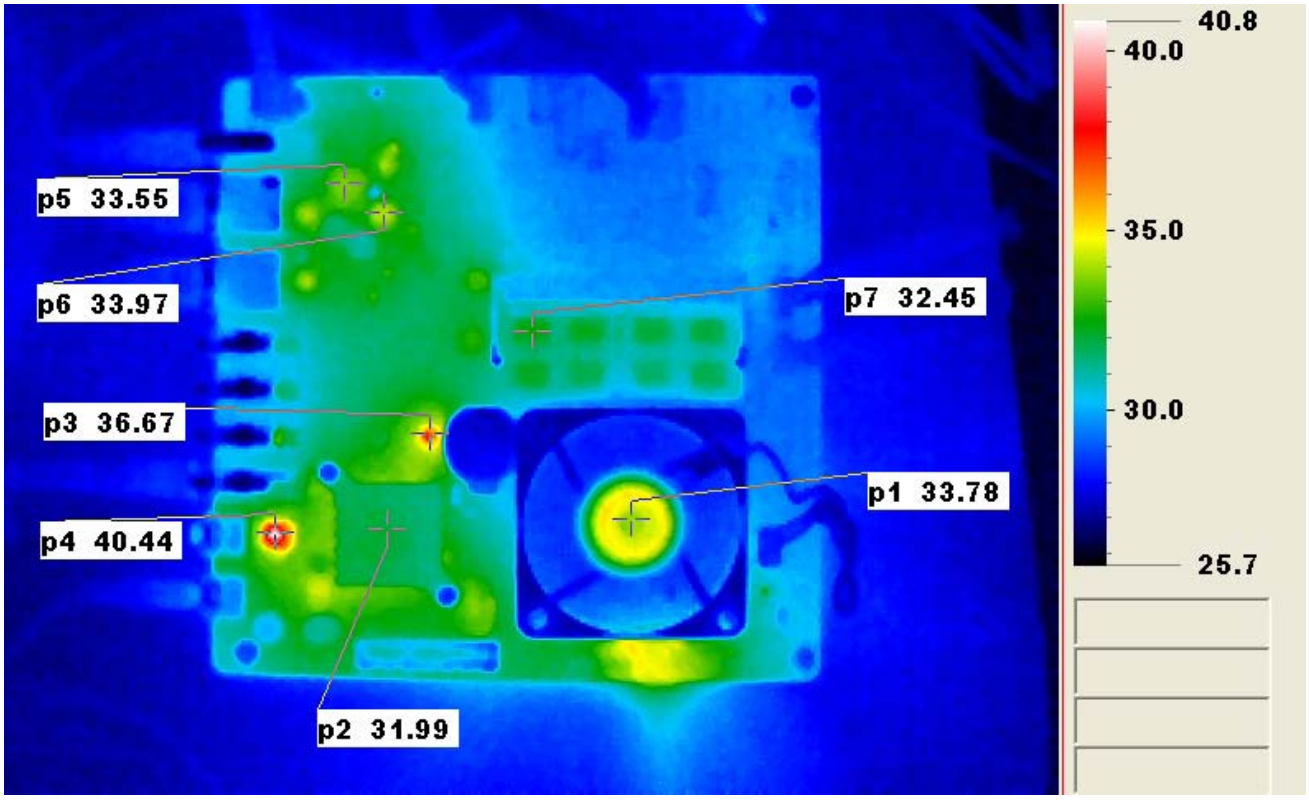
6. Take Picture Time:

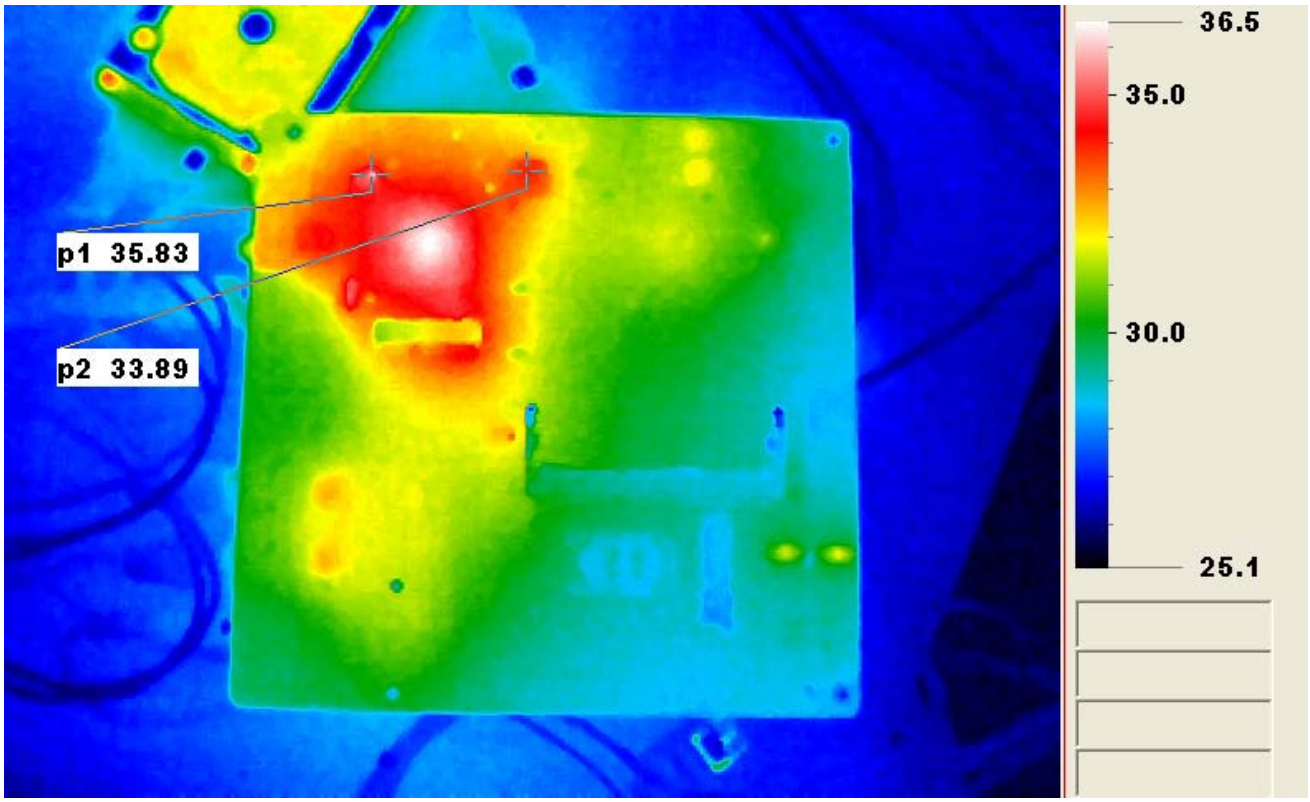
After power on 2 hours

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

Temperature Profile Test:

Component Side:

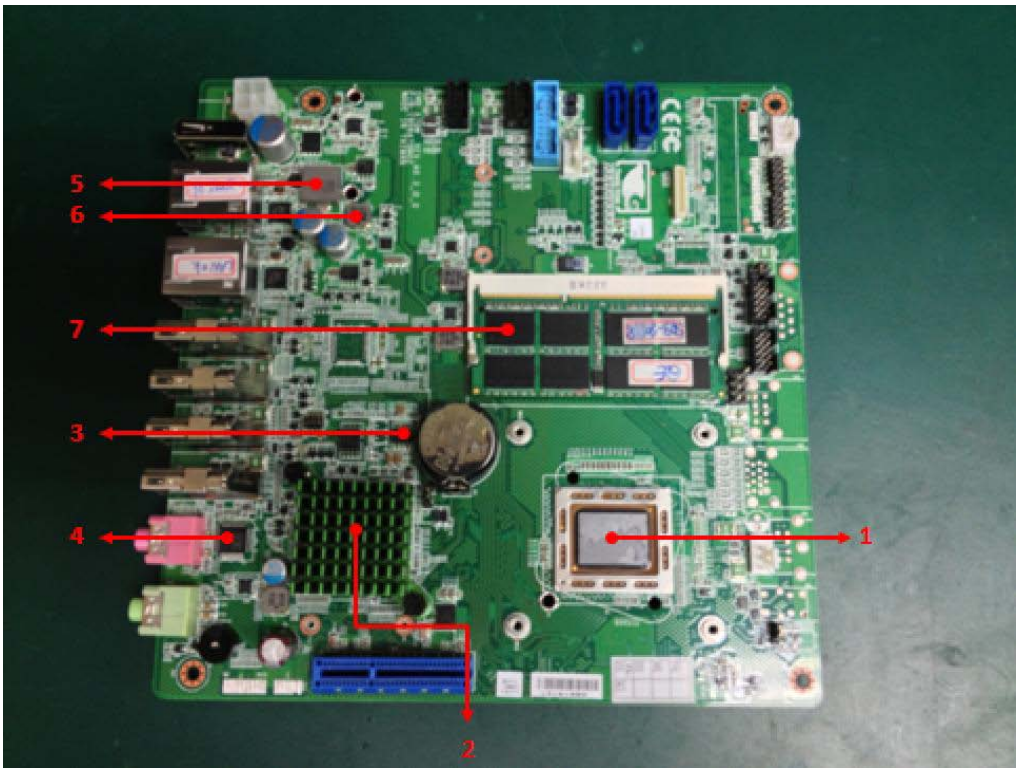


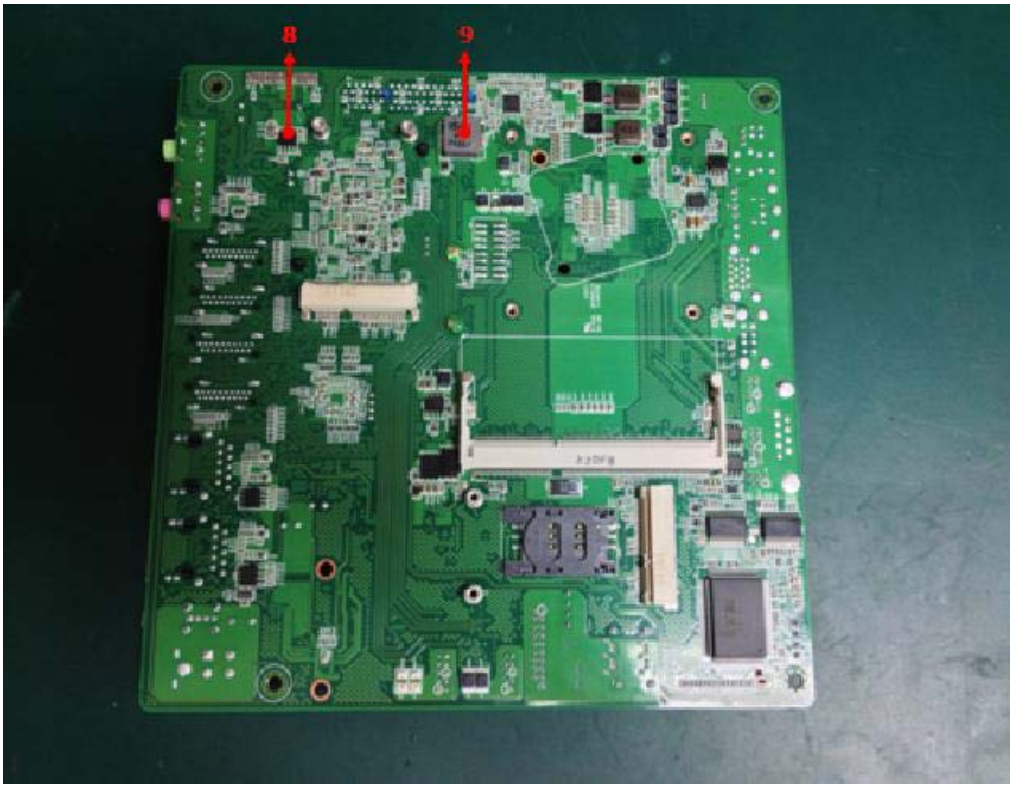


AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

Terminal Recorder:

Measuring Thermal Couple Position：





AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

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

Point	Position	Describe	Tc (*1) (℃)	Tm (*2) Measured Under		Note
				25.1℃	60℃	
1	U22	(TF)AMD APU.R-series.2.0GHz. 827P.RE460LSIE44HJE.R-460L	100	43.5	78.4	
2	U47	(TF) Hudson-M3 Fusion.AMD.A70M	105	33.6	68.5	
3	U46	(TF) Low-Voltage LDO Regulator.UPI.UP0104PSU8	100	35.5	70.4	
4	U61	(TF) 7.1+2 Channel Audio Codec. REALTEK.ALC892-CG	100.5	38.2	73.1	
5	L4	(TF)CYNTEC.PCMB104E-3R3MS	100	31.4	66.3	
6	L3	(TF) Panasonic.ETQP3W4R7WFN	125	32.2	67.1	
7		Memory chipset - 1	95	31.5	66.4	
8	Q72	(TF)PWR.Dual N-Channel MOSFET.SMD.SO-8.IR.IRF8313PbF	150	34.0	68.9	
9	L10	(TF)COIL. Panasonic.ETQP4LR56WFC	100	35.3	70.2	

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. E120807LABD0

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053