UP-CHCR1

(UPC-CHT01)

Scenario Design Power(SDP): 9W

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment: 1. There is one temperature point marginal passed, the functions are stable,**

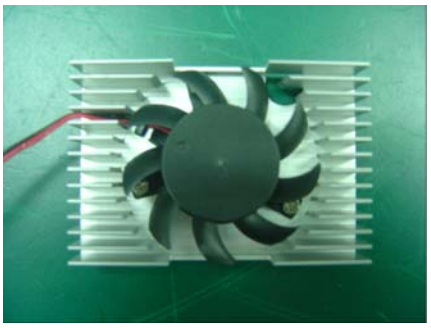
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

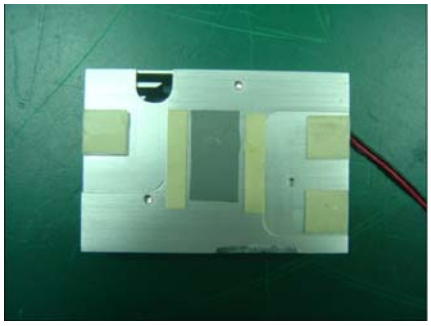
Issue date	QE Manager	Test Engineer
2018 / 04/ 12	KJ Wang	Juno Cheng

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 : UP-CHCR1 A0.2**
- **CPU : Intel® ATOM(TM) X5-Z8350 Processor 1.44 GHz**
- **Chipset: Intel® Cherry Trail**
- **Memory : DDR3L 4GB(Samsung-K4B8G1646D-MYK0)**
- **Storage : EMMC 64GB(Hynix - H26M78208CMR)**
- **BIOS : UCR1BM13(01/18/2018)**
- **Test Software : Windows 10 / Run PassMark Burn In Test 8.1 Pro (1025)**
- **Adapter: GS60A05 5V/6A, 30W MAX.**
- **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: 2018-04-10

2. Test Product: UP-CHCR1

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

4.1. 10 Channel Thermal Recorder:

4.1.1 OMRON

4.1.2 Model: ZR-RX25

Date of Calibration: 2017/11/24

Serial Number: TH-149

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: 2017/11/23

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 26.0℃ with Heat Sink + Fan

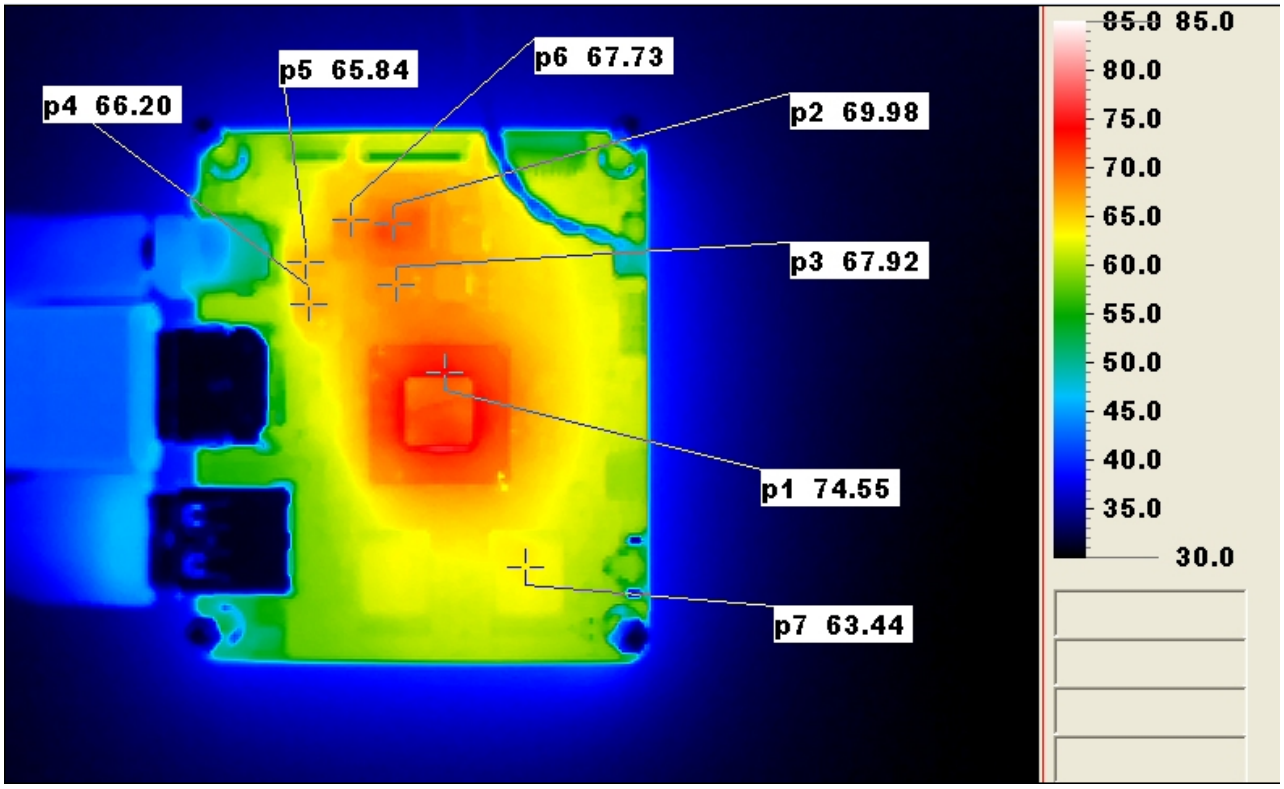
6. Take Picture Time:

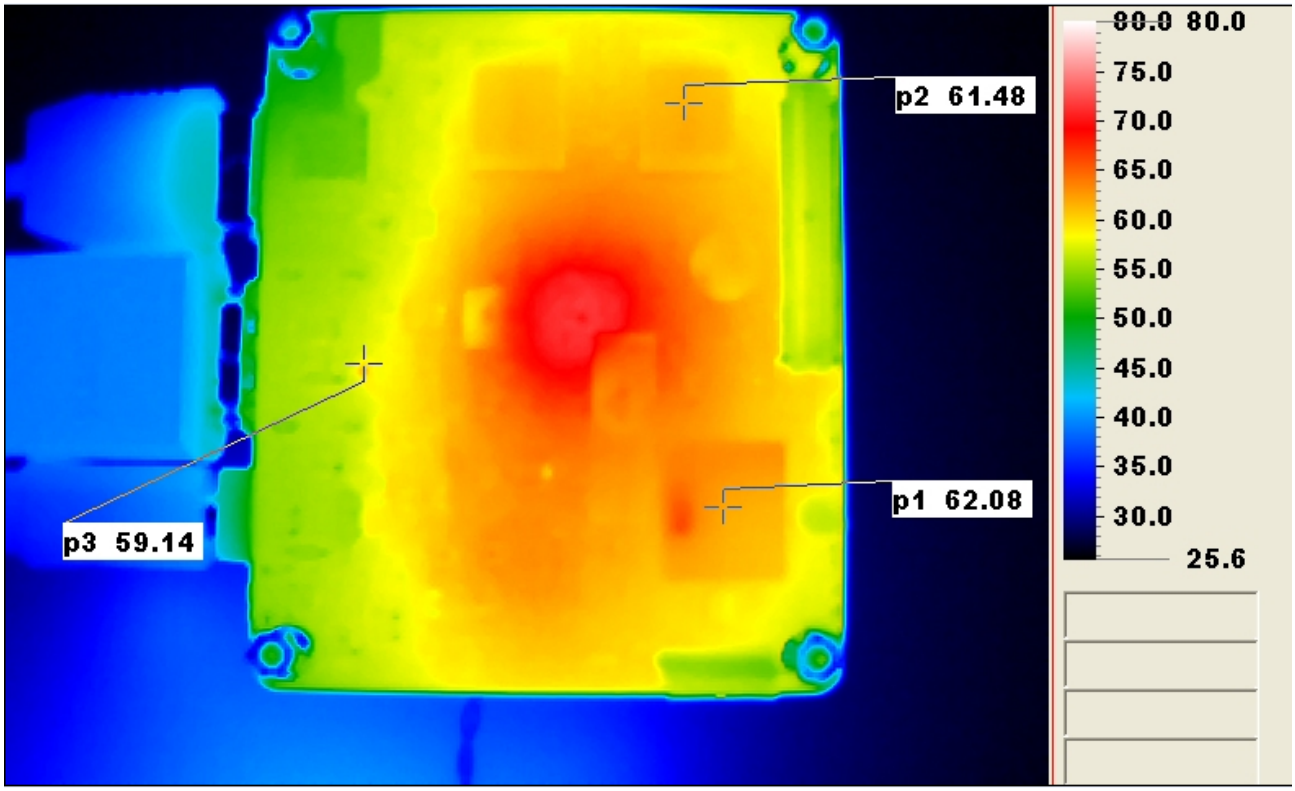
After power on 2 hours

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:

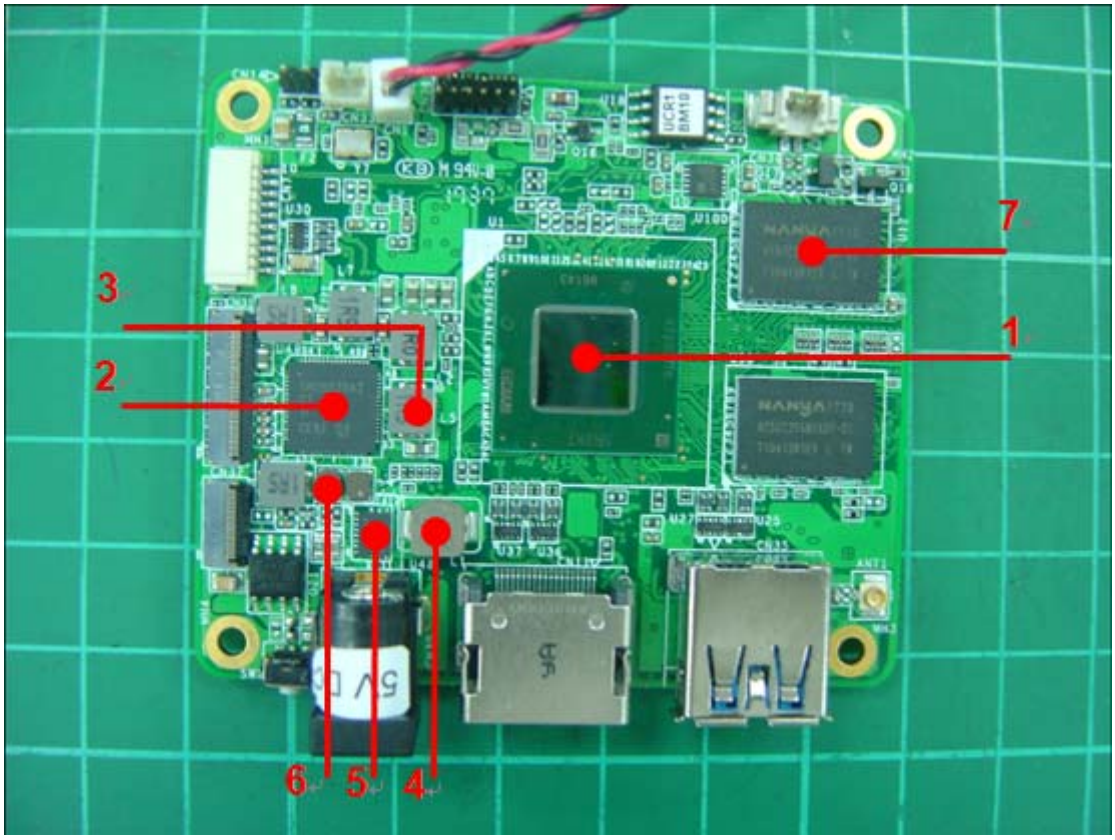


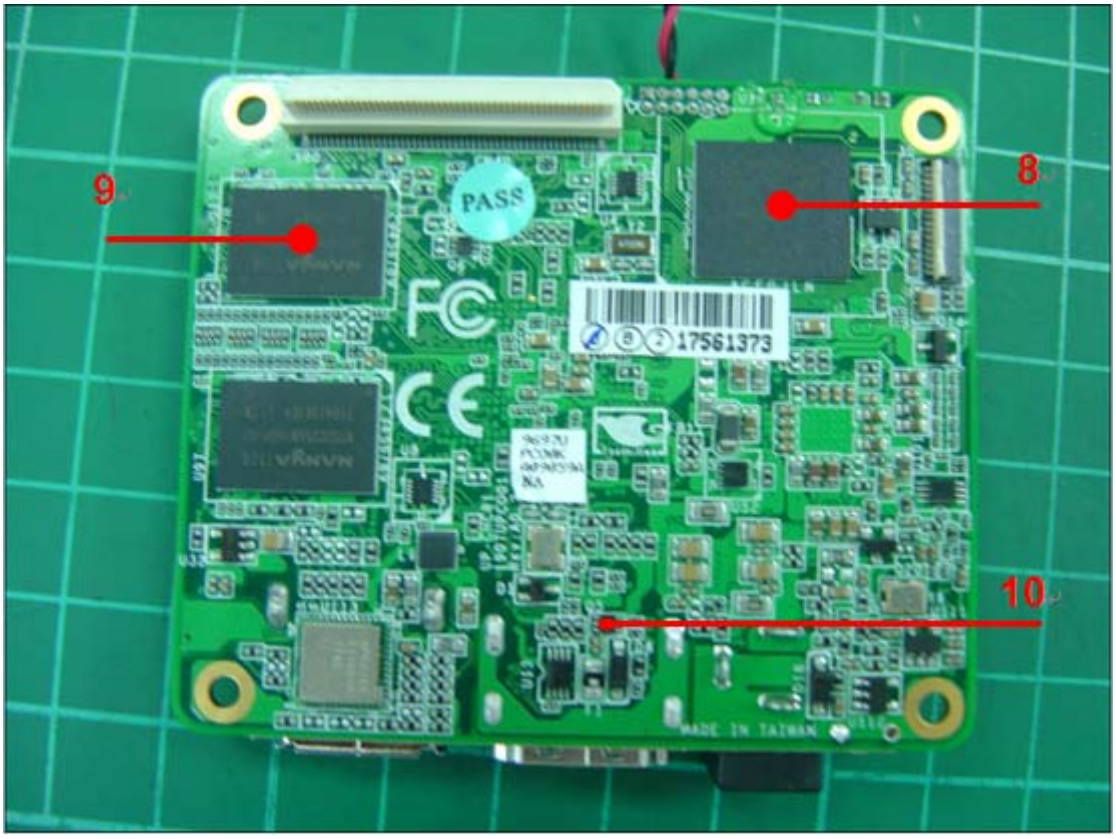


AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

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 OMRON / ZR-RX45 test

Point	Position	Describe	Tc (*1) (℃)	TAT(*2)	TPT(*3)	Note
				25.0℃	60℃	
1	U1	(TF)INTEL CPU.SOC.Cherry Trail-T3.x5-Z8350.1.92GHz.	90	56.0	91.0	Note3
2	U49	(TF)IC.PMIC for Intel Cherry Trail. TI.SND9039A2CTRSKR	110	49.5	84.5	
3	L5	(TF)COIL. SMD.GOTREND.GSTD4020PM-1R0M	125	46.8	81.8	
4	L1	(TF)COIL.NEC/TOKIN.MPLCG0530L1R5	125	41.1	76.1	
5	U48	(TF)IC.Synchronous tep down.SMD.MPS.MP8762GLE-Z	110	43.8	78.2	
6	L3	(TF)COIL. ZenithTek.ZADP-252012MES-R47M	125	43.9	78.9	
7	U12	(TF)IC.4G.DDR3L-1600.SDRAM.I.SMD.NT5CC256M16DP-DI	95	39.4	74.4	
8	U11	(TF)IC.eMMC Flash.SMD.Kingston.EMMC32G-M525-A51	115	55.4	90.4	
9	U19	(TF)IC.4G.DDR3L-1600.SDRAM.SMD.NT5CC256M16DP-DI	95	49.2	84.2	
10	Q5	(TF)PWR.Dual N-Channel MOSFET SMD.ROHM.EM6K1GT2R	150	52.4	87.4	

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.

4. Defect NO.: D161209LABE01

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