PER-TAICX

Thermal Image Analysis Report

Summary	☐ **Pass**
	☐ **Fail**
	☑ **Pass with Deviation**
	Comment: <u>Component U5 lacks Tc specification, so it cannot be determined pass or fail.</u>

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
2019 / 01 / 02	KJ Wang	Ben Sun

Test Product: PER- TAICX

Sample Configuration & Quantity Under Test:

M/B Photo:

MINI-MYX A0.2
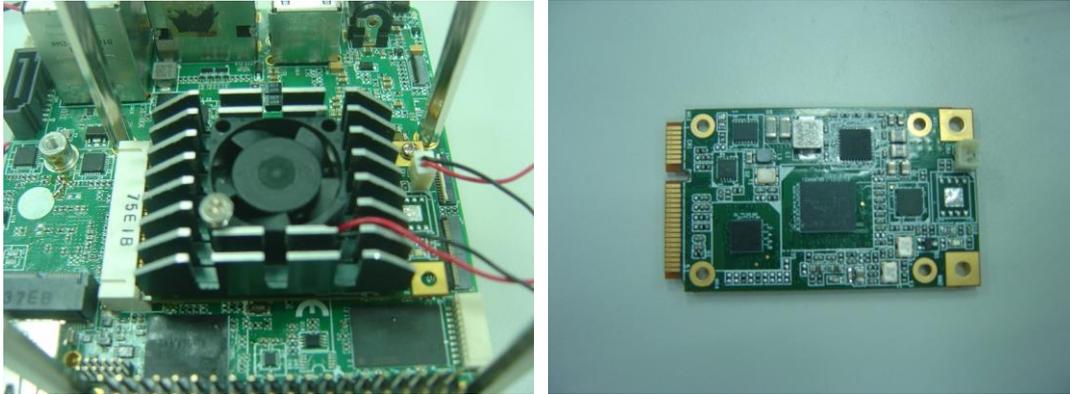
Test System: UP-APL01 A1.0

1. CPU: Intel Apollo lake N4200 2.5GHz

2. BIOS: UPA1AM20

3. Chipset: Intel Apollo Lake

4. Memory: Micron.MT53B512M32D2NP-062WT LPDDR4 3200 2GB*4

5. Storage: Samsung KLMCG4JENB-B041 64GB

6. Test Software: Ubuntu 16.04 / Run test program

7. Adapter: 5V 6A

Thermal Image Analysis

1. Test Date: 2018-12-27

2. Test Product: PER- TAICX

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: 2018/09/07

            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: 2018/11/22**

          Serial Number: 1051444

5. Test Condition:

            Test by DA-100: 25.2℃ with Heat Sink & Fan

**6. Take Picture Time:**

            After power on 2 hours

Temperature Profile Test:
Component Side:
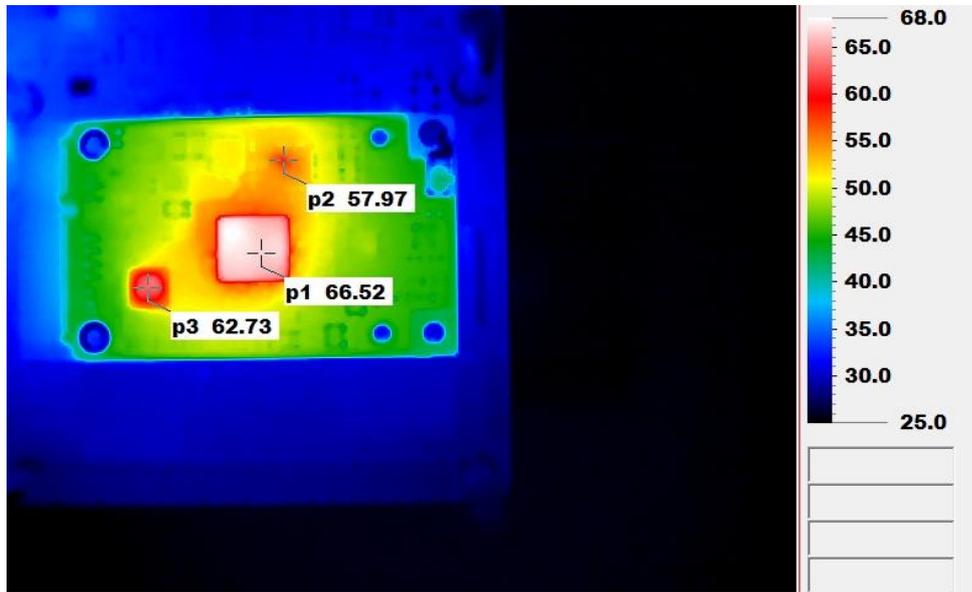
Terminal Recorder:

Measuring Thermal Couple Position：
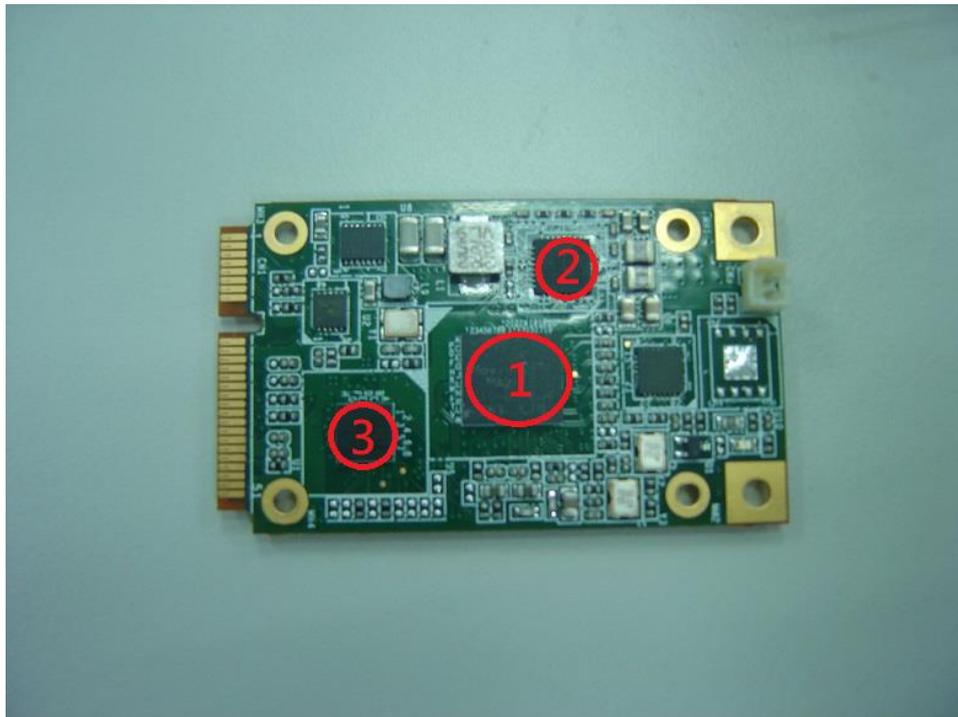
Using YOKOGAWA　/ DARWIN DA100-100-13-1D test

Point	Position	Describe	Tc (*1) (℃)	T$_{AT}$(*2) 25.0℃	T$_{PT}$(*3) 60℃	Note
1	U5	(TF)IC.CHIPSET.VPU.MyriadX.VFBGA 380-ball SMD Movidius MA2485-ES	N/A	43.1	78.1	
2	U3	(TF)IC.Triple Synchronous.Step-Down Converter VQFN32.TI.TPS65266RHBR	100	48.1	83.1	
3	U1	TF)IC.PCIE to 1port USB3.0.Host Controller.TFBGA 64P.SMD.FRESCO.FL1100-1A0-LX	105	38.2	73.2	

Note(*):
1. **"Tc"** indicates the component's case maximum temperature value specified in its datasheet.
2. **"T$_{AT}$"** indicates the actual measured temperature under product specification.
3. **"T$_{PT}$"** 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**.