

PER-TAIX8-A10-PCIE

Thermal Image Analysis Report

Summary	<input type="checkbox"/> Pass			
	<input type="checkbox"/> Fail			
	<input checked="" type="checkbox"/> Pass with Deviation			
	Comment: <u>There is five temperature points marginal passed, the system works properly.</u>			
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	5
Defect Unsolved	0	0	0	5

Issue date

2019 / 05 / 23

QE Supervisor

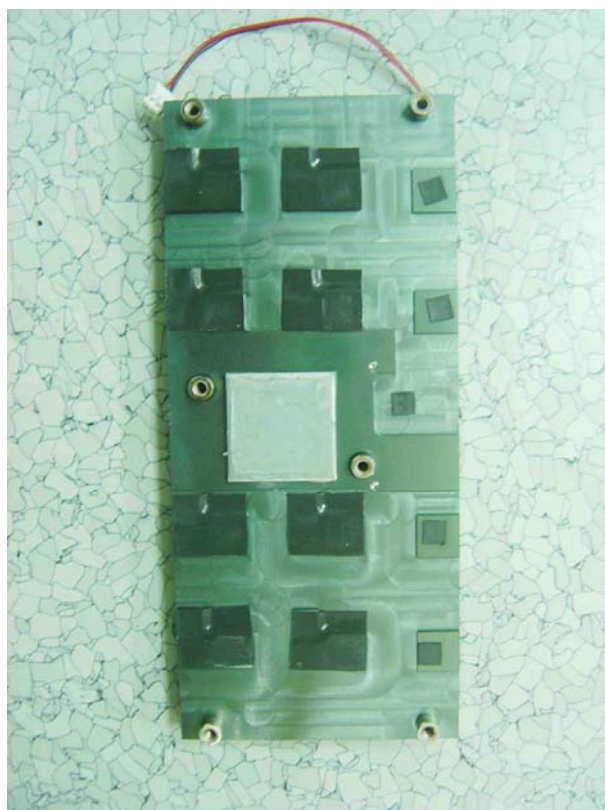
Louie Lee

Test Engineer

Juno Cheng

Sample Configuration & Quantity Under Test

- **Model name : PER-TAIX8-A10-PCIE**
- **PCI-E Riser Card : PER-TAIX2-A10-PCIE A0.2**
- **M.2 Myriadx Card: MZ-MYX80 A0.2 * 4 pcs**
- **Main Board : SMS-002 R1.03**
 1. CPU : Intel Pentium G3260 / 3.3GHz
 2. Memory : Panram 8GB * 1 / DDR3 1333 / F143X8ADW405
 3. 2.5" SSD : Transcend 32GB / SSD370
 4. BIOS : SMS-002 V1.6AddBraswellPatch.7
- **Test Software : Ubuntu 16.04.5 Kernel version : v4.15**
/ Run Open Vino version : R5.1
- **Power : CWT DSA400P-C**
- **Cooler :**



Thermal Image Analysis

1. Test Date: 2019-04-29

2. Test Product: PER-TAIX8-A10-PCIE A0.2

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

4.1. 40 Channel Thermal Recorder:

4.1.1 YOKOGAWA Inc,

4.1.2 Model: DA100-13-1D

Date of Calibration: 09/07/18

Due date of Calibration: 09/06/19

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: 11/06/18

Due date of Calibration: 11/05/19

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 25.0°C with Cooler

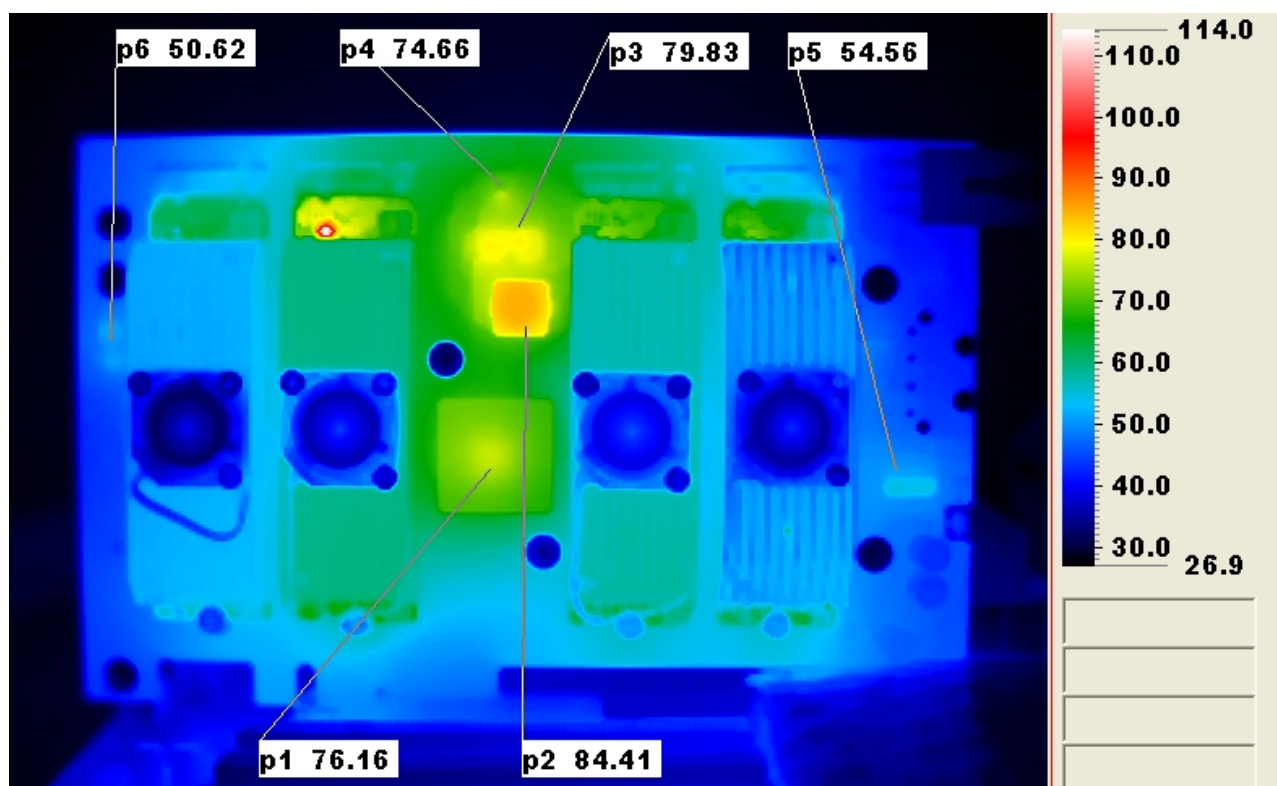
6. Take Picture Time:

After power on 2 hours

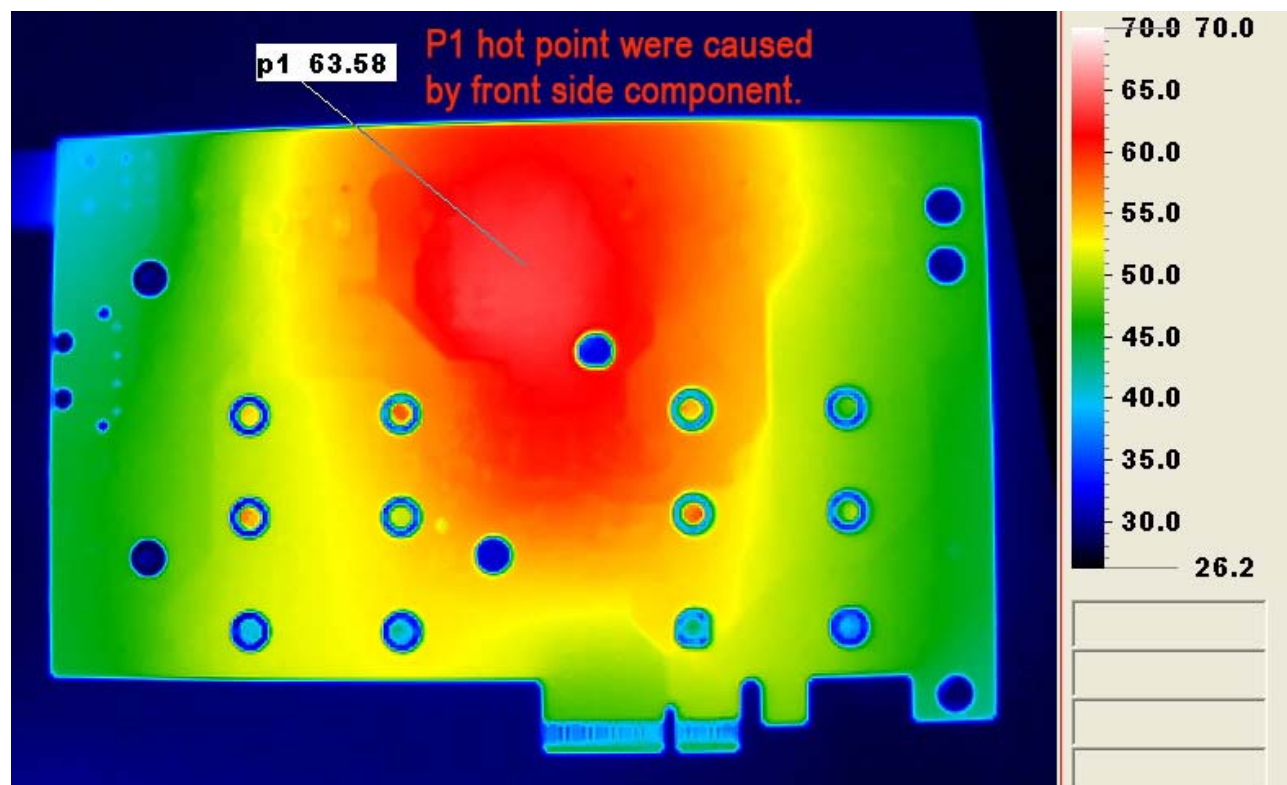
Temperature Profile Test:

PCI-E Riser Card

Component Side:

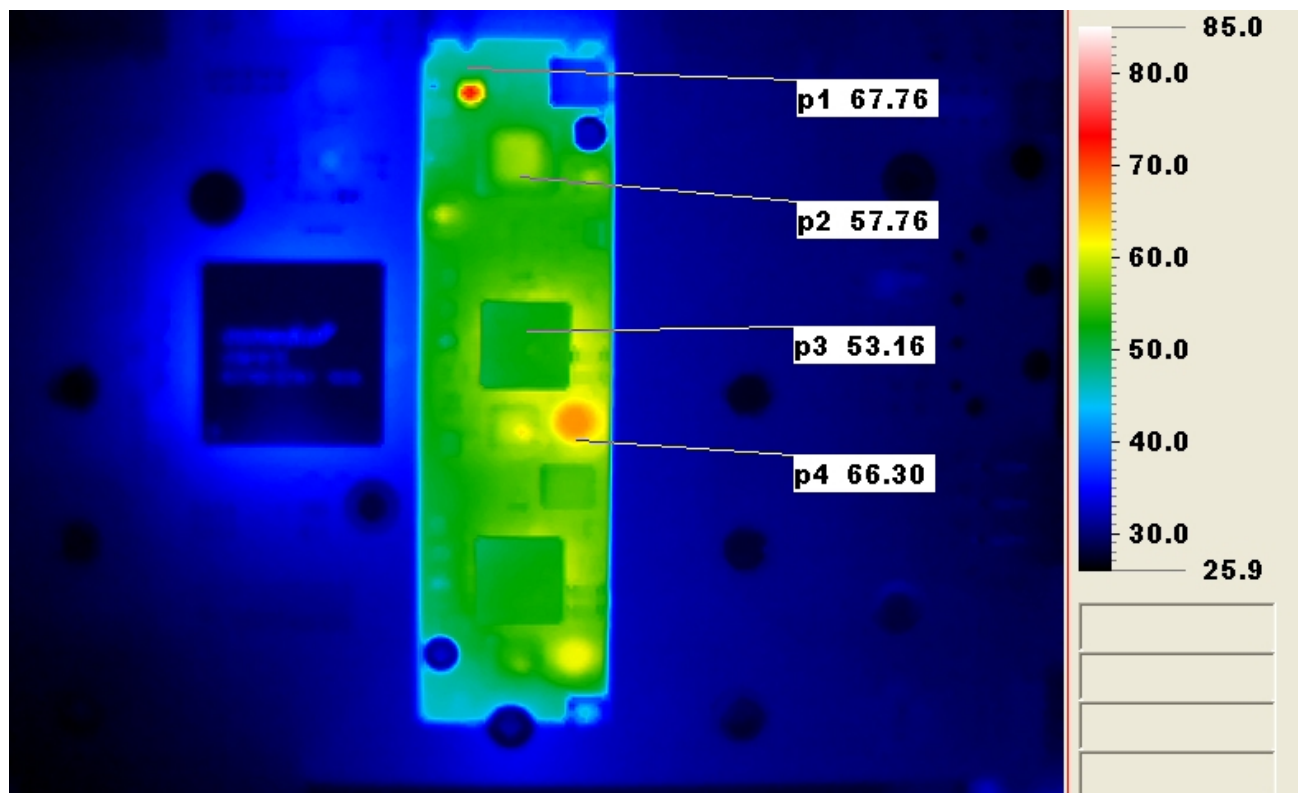


Back Side:

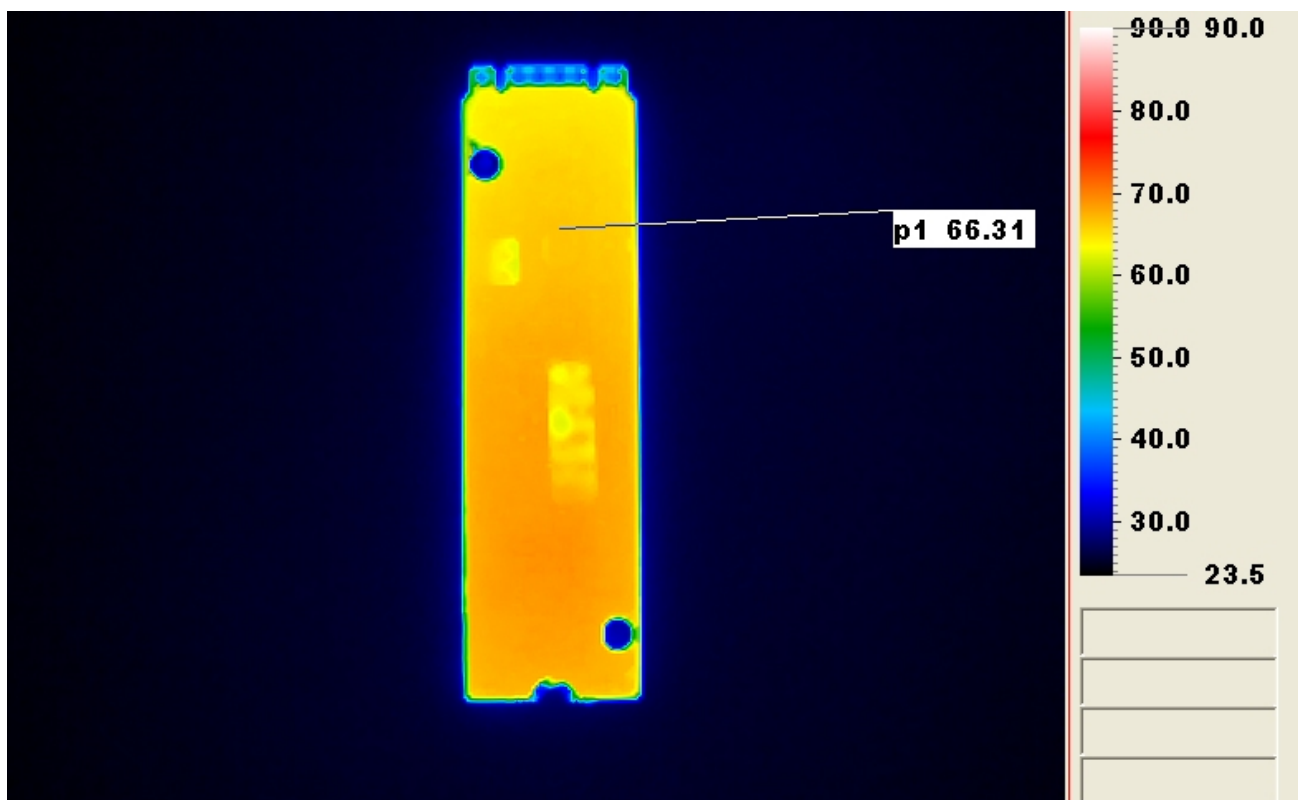


MZ-MYX80 A0.2

Component Side:

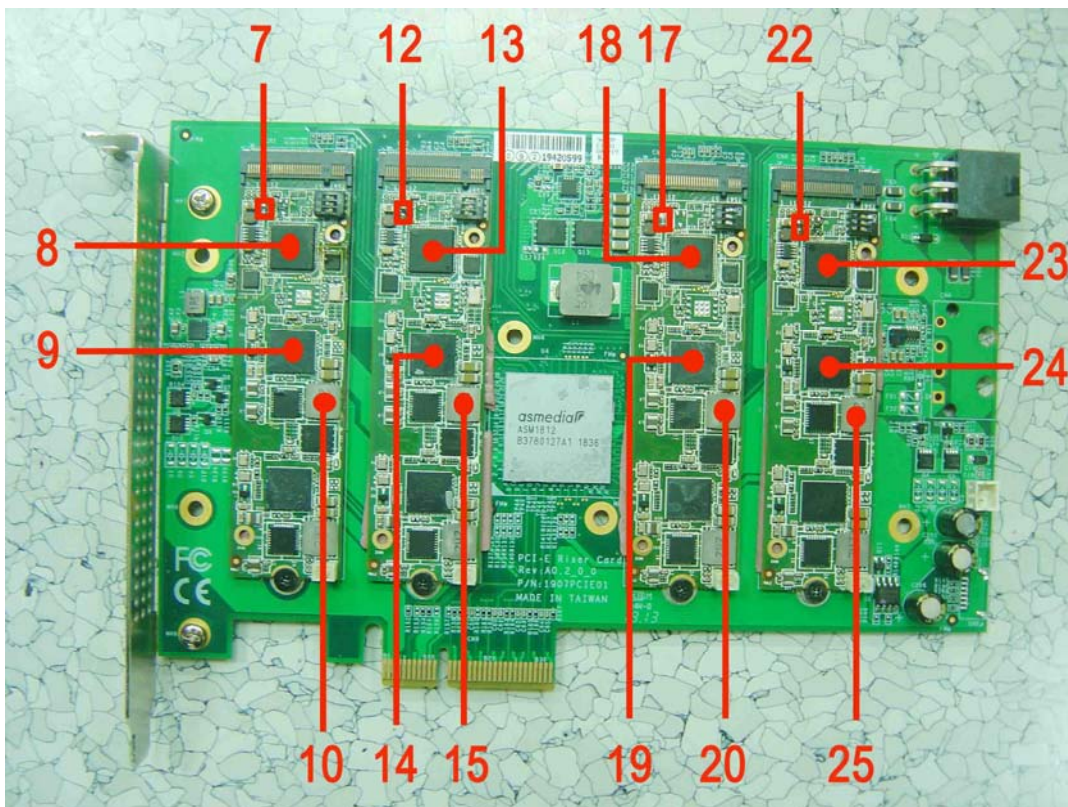
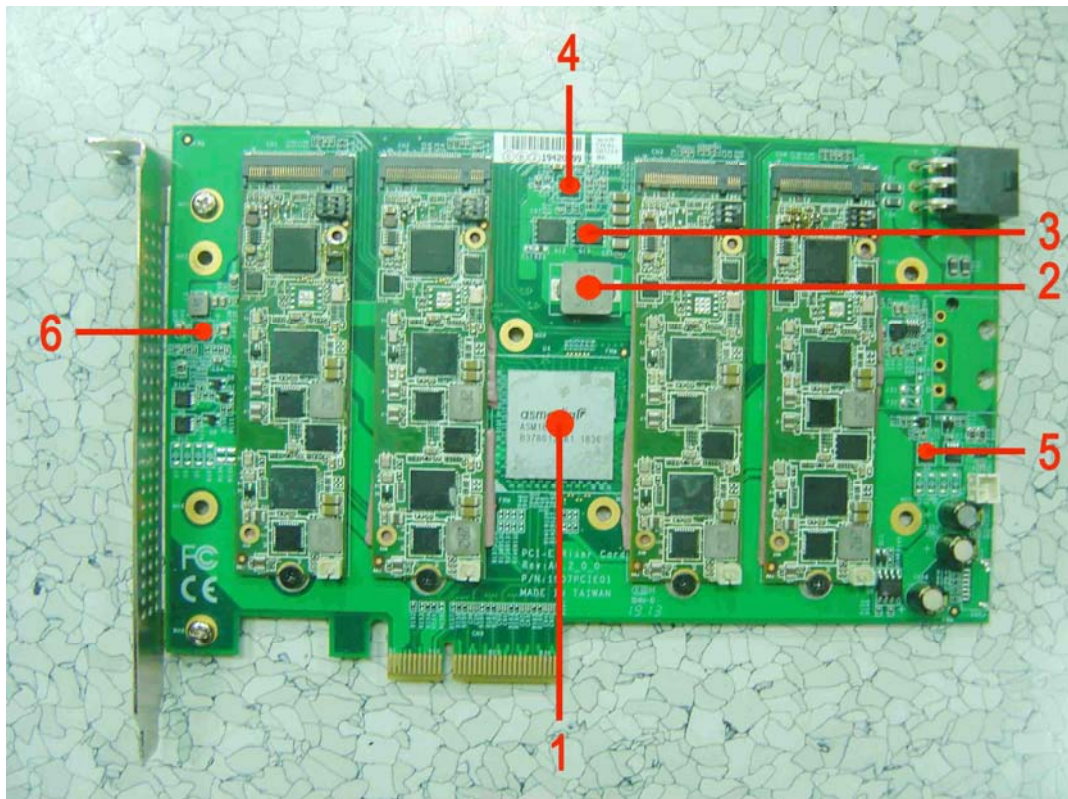


Back Side:

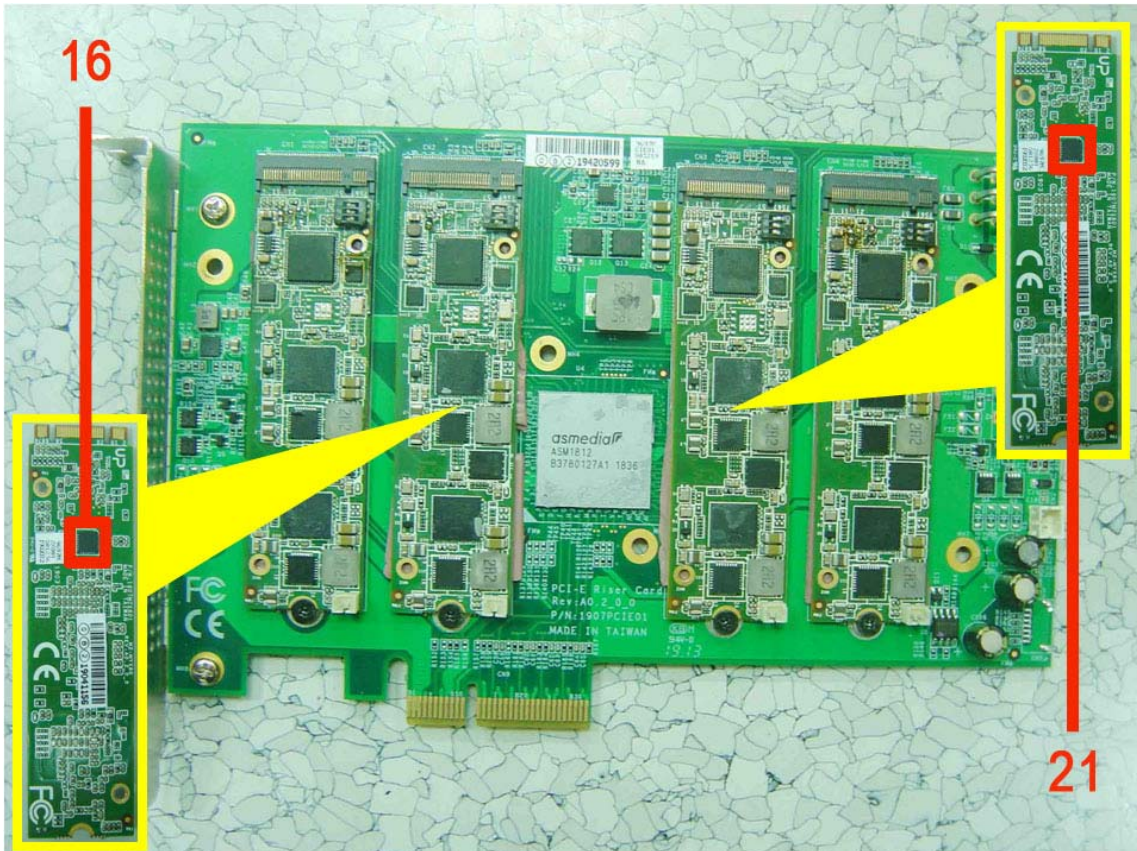
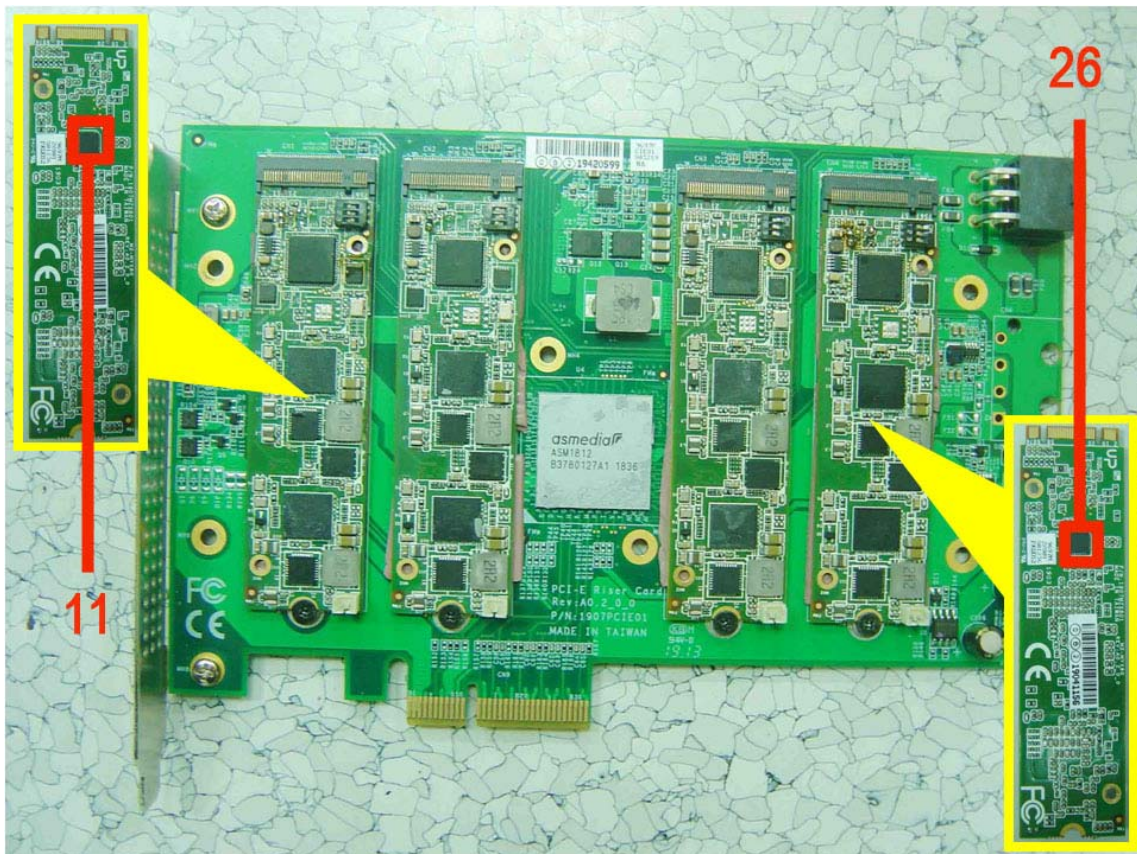


Terminal Recorder:

Measuring Thermal Couple Position :
PCI-E Riser Card



MZ-MYX80 A0.2



Using YOKOGAWA / DA100-13-1D test

Point	Position	Describe	Tc (*1) (°C)	TAT(*2)	TPT(*3)	Note
				25°C	60°C	
PCI-E Riser Card						
1	U4	(TF)IC.PCie Gen2 Switch.PCie SMedia.ASM1812	85	48.0	83.0	Note 4
2	L1	(TF)COIL. CYNTEC.PCMB104T-1R5MS	125	44.6	79.6	
3	Q13	(TF)N-Channel MOSFET NIKO-SEM.PKCK2BB	125	60.6	95.6	
4	U1	(TF)IC.Wide Input Voltage.QFN 16P.SMD.TI.TPS53219ARGTR	125	54.2	89.2	
5	Q4	(TF)PWR. MOSFET.FAIRCHILD.FDMC4435BZ	125	55.3	80.3	
6	U3	(TF)IC.Synchronous Converter.TI.TPS568215RNNR	125	44.5	79.5	

PER-TAIX2-A10-2280

Point	Position	Describe	Tc (*1) (°C)	TAT(*2)	TPT(*3)	Note
				25°C	60°C	
7	FB1	(TF)BEAD.60ohm(100MHz).3.5A.0603. TDK.MPZ1608S600A	125°C	56.3	91.3	
8	U13	(TF)IC.PCIE to 4 port USB3.0.Host Controller. FRESCO.FL1100-1Q0-EX	105°C	42.7	77.7	
9	U6	(TF) VPU.MyriadX. Movidius.MA2485(C0)/MM#999A6H/SLMYP	125°C	39.9	74.9	
10	L11	(TF)COIL.2.2uH.DCR=58mΩ.Idc=4Amp.20%.SMD.7.1*6.6*1.0m m.RLITECH.AMPI0612ED2R2MT	125°C	39.4	74.4	
11	U10	(TF) USB to GPIO.Host Controller. FINTEK.F75114N	85°C	50.9	85.9	Note 4
12	FB1	(TF)BEAD.60ohm(100MHz).3.5A.0603. TDK.MPZ1608S600A	125°C	48.1	83.1	
13	U13	(TF)IC.PCIE to 4 port USB3.0.Host Controller. FRESCO.FL1100-1Q0-EX	105°C	44.2	79.2	
14	U6	(TF) VPU.MyriadX. Movidius.MA2485(C0)/MM#999A6H/SLMYP	125°C	42.2	77.2	
15	L11	(TF)COIL.2.2uH.DCR=58mΩ.Idc=4Amp.20%.SMD.7.1*6.6*1.0m m.RLITECH.AMPI0612ED2R2MT	125°C	39.9	74.3	
16	U10	(TF) USB to GPIO.Host Controller. FINTEK.F75114N	85°C	52.3	87.3	Note 4
17	FB1	(TF)BEAD.60ohm(100MHz).3.5A.0603. TDK.MPZ1608S600A	125°C	53.1	88.1	
18	U13	(TF)IC.PCIE to 4 port USB3.0.Host Controller. FRESCO.FL1100-1Q0-EX	105°C	39.4	74.4	
19	U6	(TF) VPU.MyriadX. Movidius.MA2485(C0)/MM#999A6H/SLMYP	125°C	38.8	73.8	

20	L11	(TF)COIL.2.2uH.DCR=58mΩ.Idc=4Amp.20%.SMD.7.1*6.6*1.0mm.RLITECH.AMPI0612ED2R2MT	105°C	43.2	78.2	
21	U10	(TF) USB to GPIO.Host Controller. FINTEK.F75114N	85°C	51.6	86.6	Note 4
22	FB1	(TF)BEAD.60ohm(100MHz).3.5A.0603. TDK.MPZ1608S600A	125°C	53.6	88.6	
23	U13	(TF)IC.PCIE to 4 port USB3.0.Host Controller. FRESCO.FL1100-1Q0-EX	105°C	40.2	75.2	
24	U6	(TF) VPU.MyriadX. Movidius.MA2485(C0)/MM#999A6H/SLMYP	125°C	41.0	76.0	
25	L11	(TF)COIL.2.2uH.DCR=58mΩ.Idc=4Amp.20%.SMD.7.1*6.6*1.0mm.RLITECH.AMPI0612ED2R2MT	125°C	40.2	75.2	
26	U10	(TF) USB to GPIO.Host Controller. FINTEK.F75114N	85°C	49.5	84.5	Note 4

Note(*):

1. "T_c" 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°C working environmental.

4. Judgment Criteria:

- **Fail** : T_m > T_c+5°C; The measured value is over specification plus margin.

- **Margin** : T_c+5°C > T_m > T_c-10°C; 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** : T_m < T_c-10°C; The measured value is with safety margin.

5. RTC battery avoid to put on heat position. Please do not exceed battery temperature specification.

Defect No: [BUL1913LABE01](#)