IMBA-910

COM Express Carrier Board

Thermal Image Analysis Report

Report NO: 08E080009

Release Date: Jan 31, 2008

2008/05/14	*Wenyuan Yang*	*Allen Hsu*
Issue Stamp	**Manager**	**Test Engineer**

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: +886-2-8919-1056

Thermal Image Analysis

Ⅰ. Model Name: IMBA-910 A0.3(CPU Board : IMBA-910 Rev.A0.3)

Ⅱ. Description: Intel Conroe Broadwater Q965 Solution

Ⅲ. Date: Jan 31, 2008

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Allen Hsu

Ⅵ.Equipment:

TVS-100 series by NIPPON AVIONICS CO., LTD.

Ⅶ. Simulation Environment:

•Temperature: Component Side-1 : 22.9℃ , Component Side-2 : 23.2℃ , Component Side-3 : 22.6℃, Component Side-4 : 24.7℃

•CPU : Intel(R) Pentium(R) D CPU 800 3.20GHz

•RAM : Transcend DDR2/800/1GMb

•BIOS : IMBA-910 BIOS Rev 1.0 (04/16/2008) for 566DM LAN

•CF Card : N/A

•HDD : Seagate 6RA7LG6A 160G

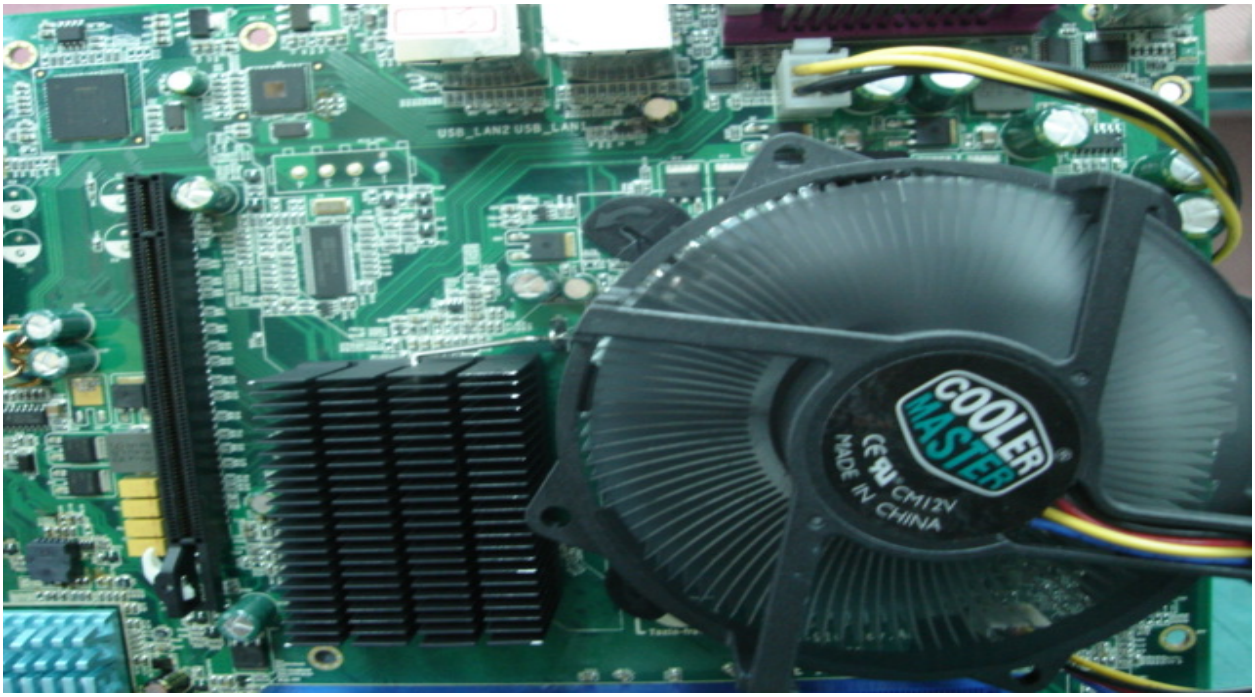
•Application Software: Run Prime95 under Windows XP Professional V2002 Service Pack 2

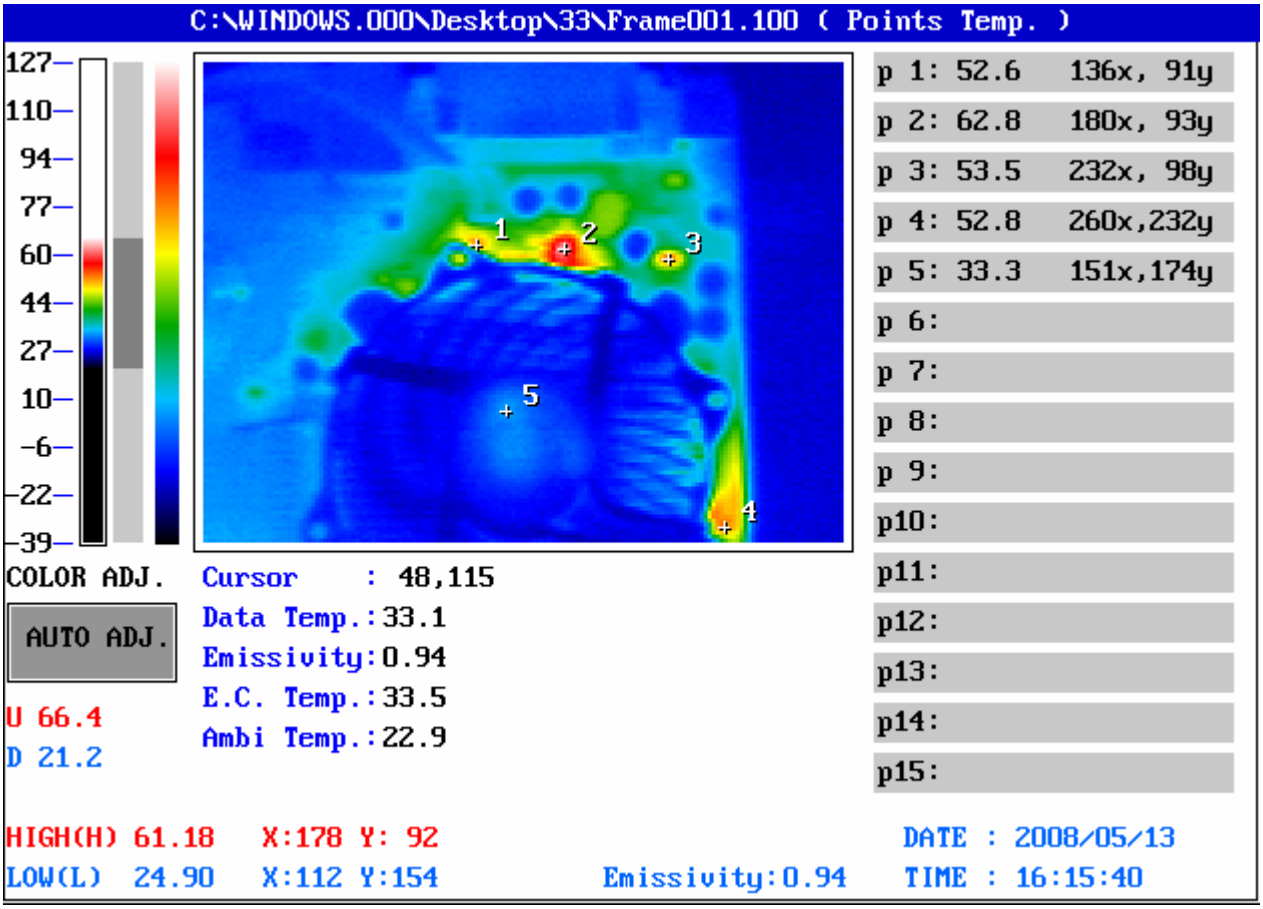
•Take Picture Time: After Power on 2 hours.

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: +886-2-8919-1056

Temperature Profile Test:

Component Side-1:





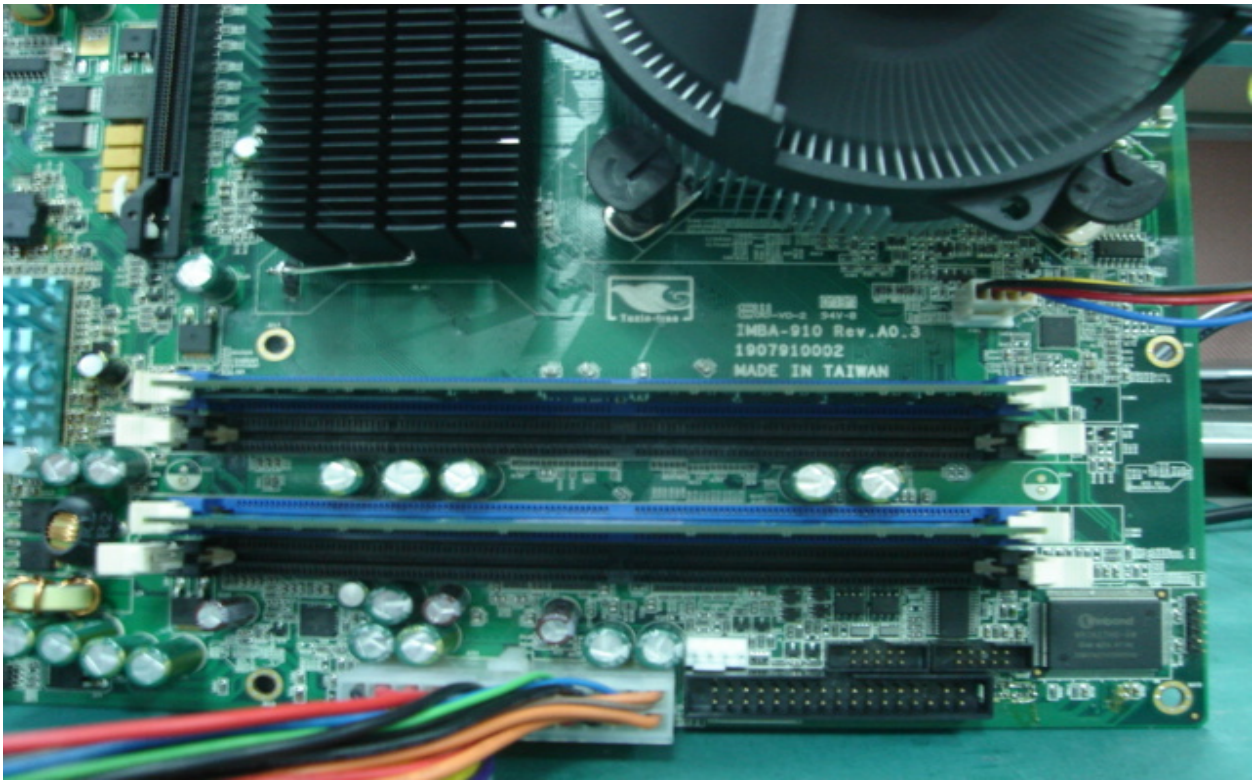
AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

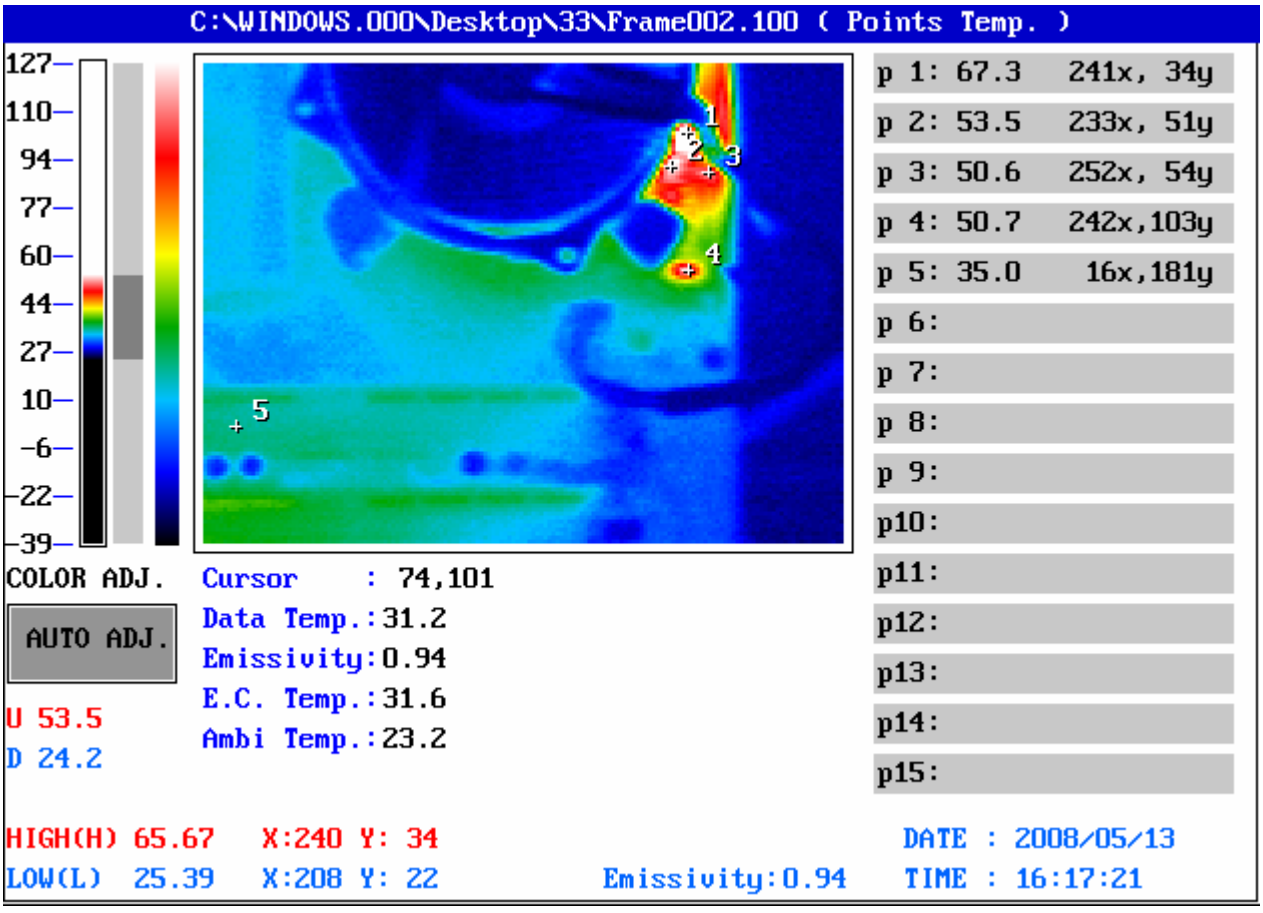
Point	Position	Describe	Tc (℃)	Tm (22.9 ℃)	Tm (60℃)	Note
1	Q13	(TF)PWR.SMD.TO-252.30V 94A.N-channel Power MOSFET.FAIRCHILD.FDD8896_NL	150	52.6	89.7	
2	L14	(TF)COIL.0.56uH.Irms=25A.Isat=40A.20%.SMD(11.5x10.3x4.0).2pin. RDC=1.8m Ohm.GOTREND.GSTC104P-R56MN	125	62.8	99.9	
3	U9	(TF)IC.SMD.SOIC 14Pin.MosFET Driver.Intelsil.ISL6614ACBZ	125	53.5	90.6	
4	Q32	(TF)PWR.SMD TO-252.30V 58A.N-channel Power MOSFET.FAIRCHILD.FDD8880	150	52.8	89.9	
5	U24	(TF)IC.SMD.QFN 40Pin.PWM Controler 4Phase.for P4 CPU VRD10/11.Intelsil.ISL6326CRZ	125	33.3	70.4	

1. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
2. Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification

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: +886-2-8919-1056

Component Side-2:





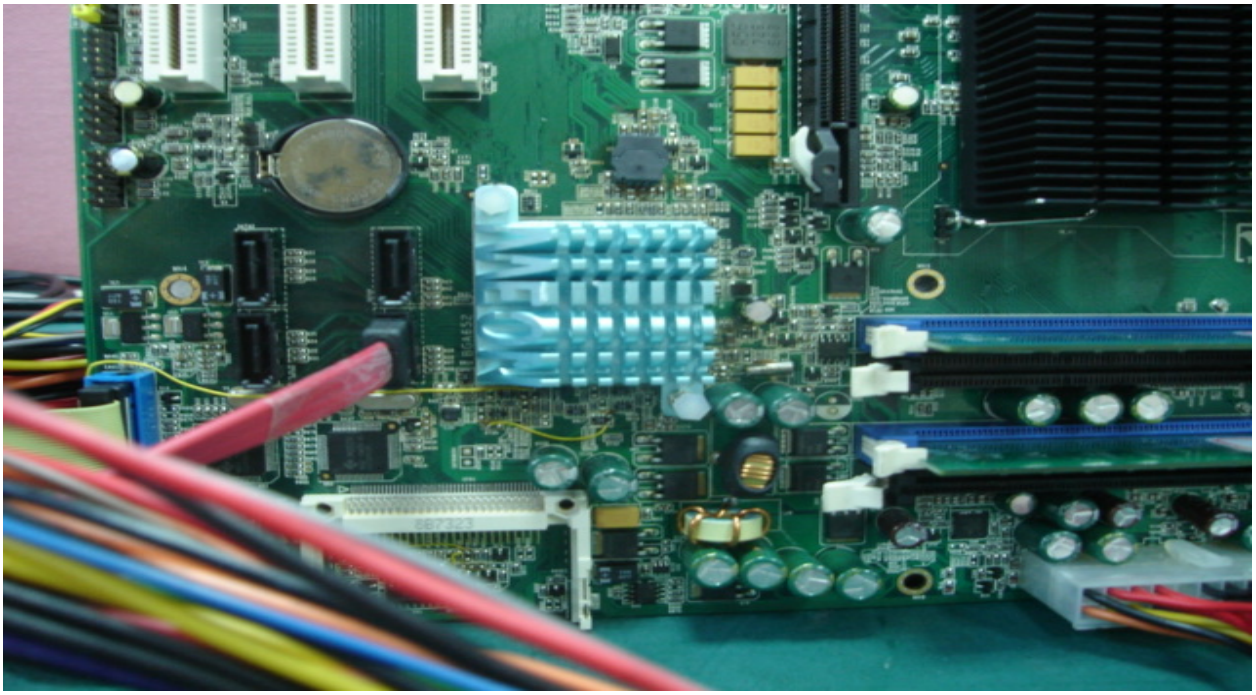
AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

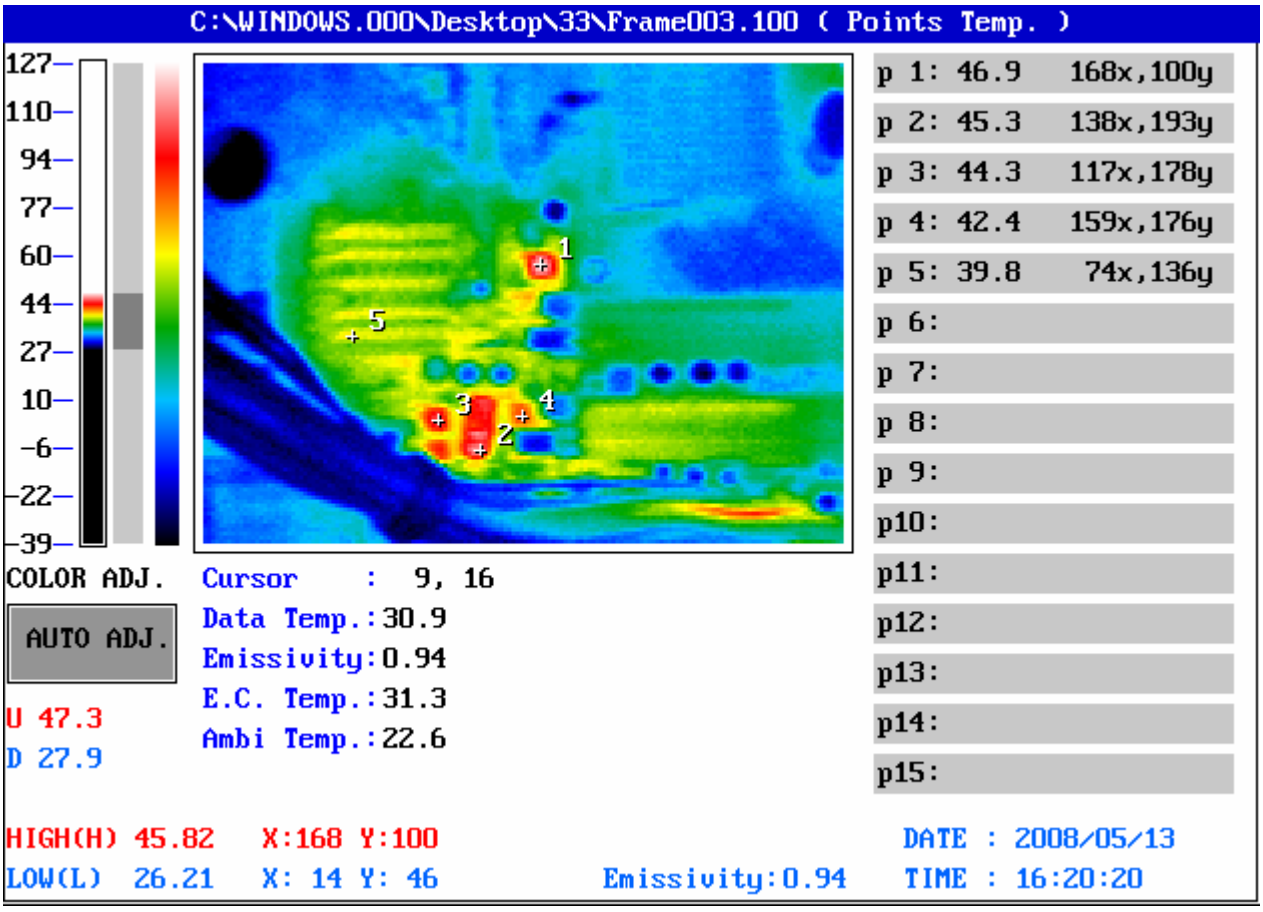
Point	Position	Describe	Tc (℃)	Tm (23.2 ℃)	Tm (60℃)	Note
1	Q33	(TF)PWR.SMD.TO-252.30V 94A.N-channel Power MOSFET.FAIRCHILD.FDD8896_NL	150	67.3	104.1	
2	Q35	(TF)PWR.SMD.TO-252.30V 94A.N-channel Power MOSFET.FAIRCHILD.FDD8896_NL	150	53.5	90.3	
3	R34	(TF)CR.0.1/10W.5%.0603.SMD	125	50.6	87.4	
4	U22	(TF)IC.SMD.SOIC 14Pin.MosFET Driver.Intelsil.ISL6614ACBZ	125	50.7	87.5	
5	U36	(TF)IC.SMD.QFN 28Pin.PWM Controler.for Dual Channel DDR.and ACPI Regulator.Intersil.ISL6532ACRZ	125	35.0	71.8	

3. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
4. Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification

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: +886-2-8919-1056

Component Side-3:





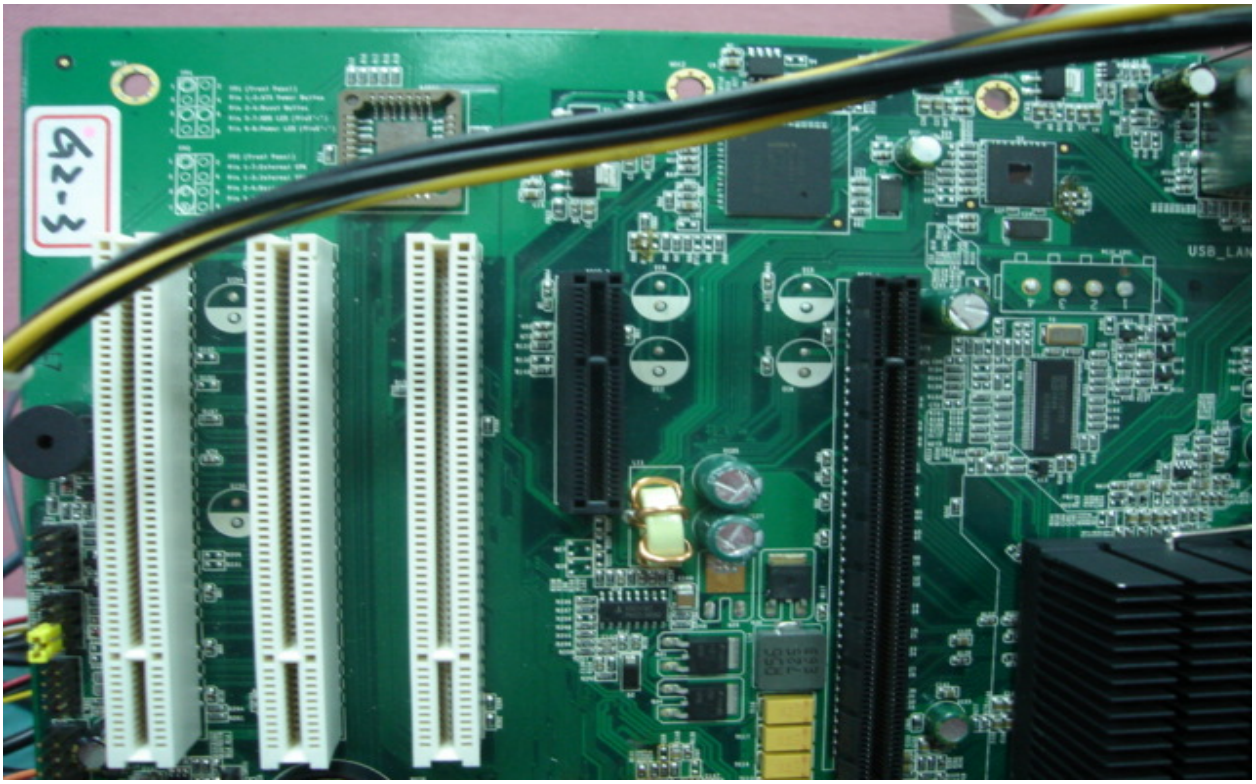
AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

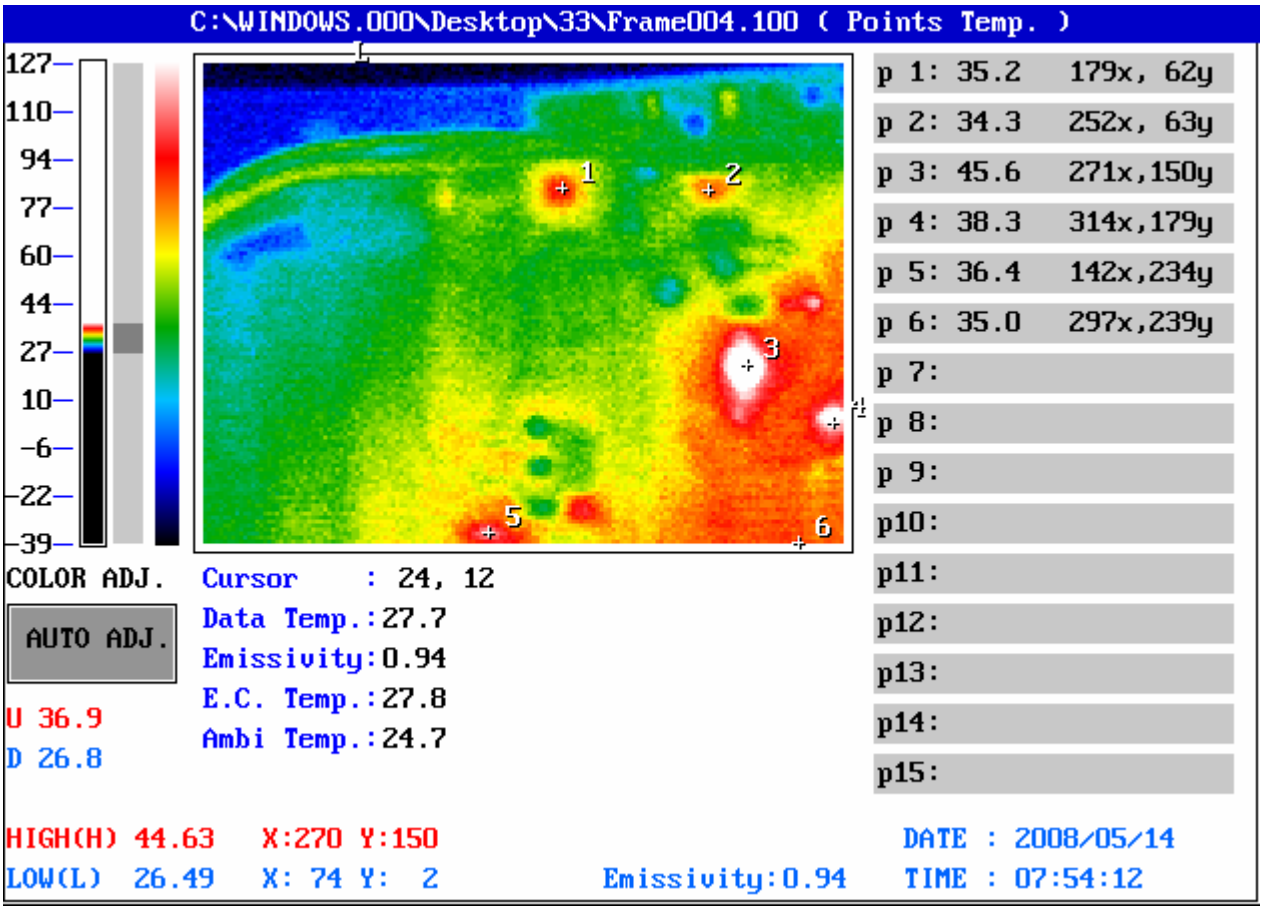
Point	Position	Describe	Tc (℃)	Tm (22.6 ℃)	Tm (60℃)	Note
1	Q52	(TF)PWR.SMD TO-252.30V 58A.N-channel Power MOSFET.FAIRCHILD.FDD8880	150	46.9	84.3	
2	L25	(TF)COIL.1.2uH.20%.DIP Wire Size.1.8mm 18 材 3wire 20Amp.TRIO.LG-12AM11C03	100	45.3	82.7	
3	Q61	(TF)PWR.SMD TO-252.30V 58A.N-channel Power MOSFET.FAIRCHILD.FDD8880	150	44.3	81.7	
4	Q62	(TF)PWR.SMD TO-252.30V 58A.N-channel Power MOSFET.FAIRCHILD.FDD8880	150	42.4	79.8	
5	U25	(TF)IC.SMD.ICH8DO.INTEL.NH82801HO SL9MM	90	39.8	77.2	

5. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
6. Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification

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: +886-2-8919-1056

Component Side-4:





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: +886-2-8919-1056

Point	Position	Describe	Tc (℃)	Tm (24.7 ℃)	Tm (60℃)	Note
1	U6	(TF)IC.SMD.BGA 196P.GigaBit Ethernet Chipset.Intel.PC82573L	100	35.2	70.5	
2	U3	(TF)IC.SMD.BGA 81P.GigaBit Ethernet Chipset.Intel.RU82566DM	125	34.3	69.6	
3	U12	(TF)IC.SMD.TSSOP64P.CLOCK GENERATOR.ICS.ICS9LPR501HGLFT	150	45.6	80.9	
4	Q20	TF)PWR.SMD TO-252.30V 58A.N-channel Power MOSFET.FAIRCHILD.FDD8880	150	38.3	73.6	
5	U16	(TF)IC.SMD.SOIC 16P.PWM Power Controller.Intersil.HIP6521CBZ	100	36.4	71.7	
6	U18	(TF)IC.SMD.FCBGA 1226Pin.Chipset.Intel.LE82Q965 SL9QZ	150	35.0	70.3	

7. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
8. Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification

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: +886-2-8919-1056