EMB-9459T (B)

Intel 945GSE + ICH7M

Thermal Image Analysis Report

Report NO: 09E080021

2009/9/3	*Wenyuan Yang*	*Anderson Lin*
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: EMB-9459T Rev:B1.0

Ⅱ. Description: Intel 945GSE + ICH7-M

Ⅲ. Date: 2009/9/3

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Anderson Lin

Ⅵ.Equipment:

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

Ⅶ. Simulation Environment:

•Temperature: Component Side-1 : 24.9℃ , Component Side-2 : 25.0℃ , Component Side-3 : 24.8℃

•CPU : Intel ATOM N270 1.6GHz

•RAM : Kingston 1GB DDR2 800(KVR800D2N6)

•BIOS : EMB-9459T BIOS RevB. 0.2(08/31/2009)

•CF Card : N/A

•HDD : IDE H.D 80G- Seagate ST380215A

•Application Software: Run Prime95 under Windows XP Professional Service Pack 3

•Take Picture Time: After Power on 2 hours.

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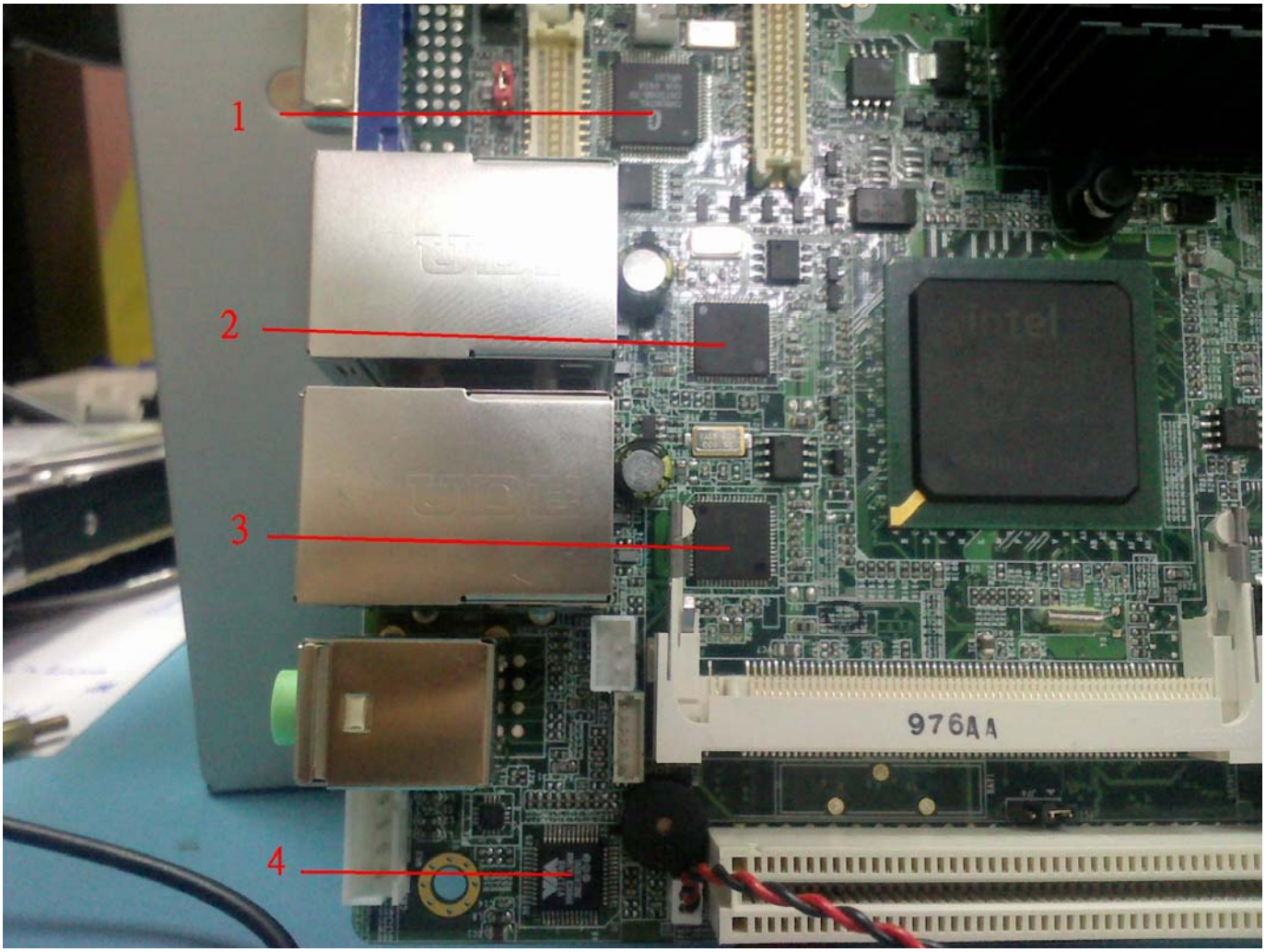
Temperature Profile Test:

Component Side-1:



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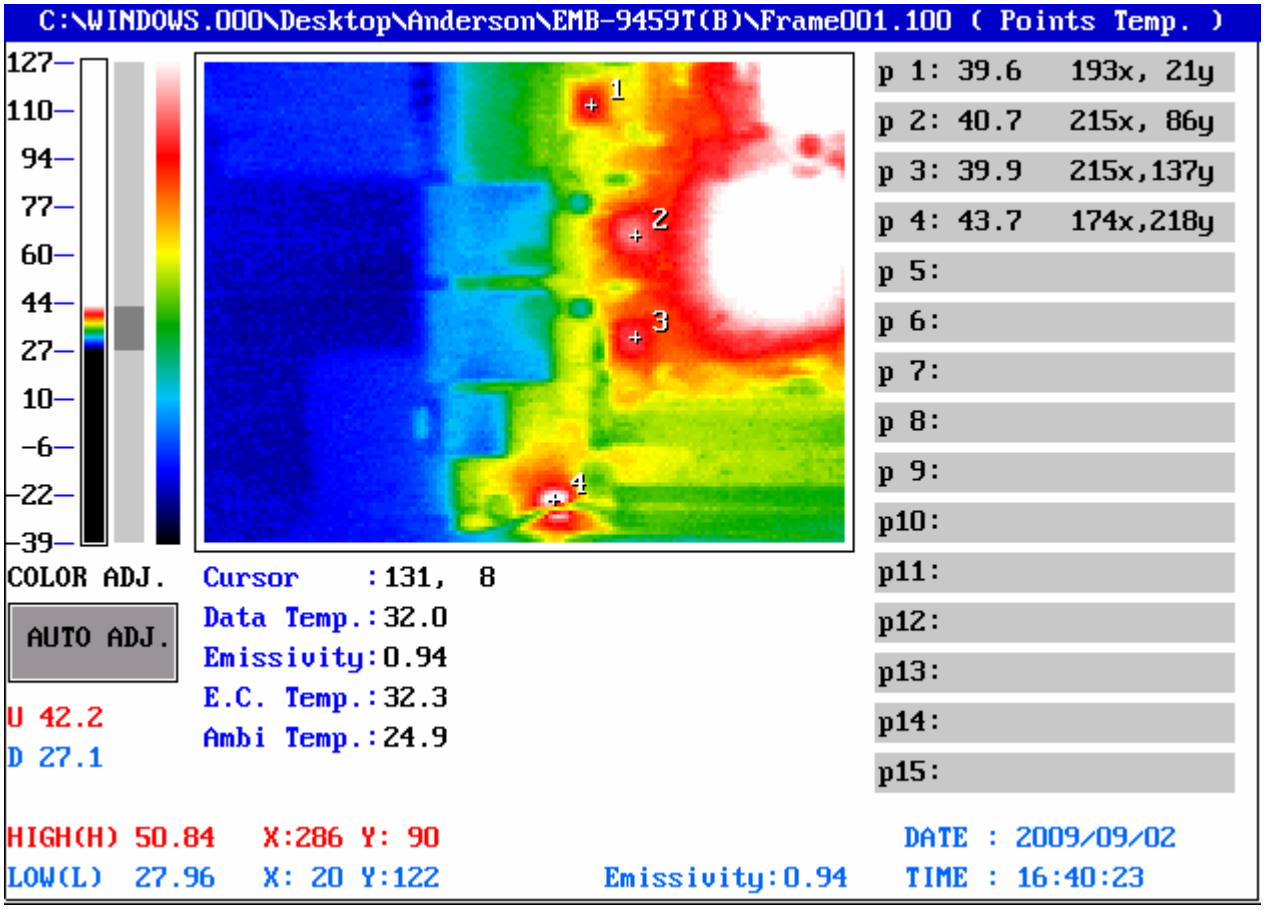

Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				24.9℃	60℃	
1	U49	(TF)IC.SMD.LQFP 64Pin.LVDS Transmitter.CHRONTEL.CH7308B-TF	115	39.6	74.7	
2	U17	(TF)IC.SMD.QFN.64P.PCI-express.Gigabit Ethernet Chip.REALTEK.RTL8111C-VB-GR	100	40.7	75.8	
3	U18	(TF)IC.SMD.QFN.64P.PCI-express.GigabitEthernet Chip.REALTEK.RTL8111C-VB-GR	100	39.9	75	
4	U2	(TF)IC.SMD.LQFP 48P.7.1Channel HD Audio Codec.VIA.VT1708B	85	43.7	78.8	

Note(*):
1. Tc is meaning the component Tcase value that specified in the component datasheet.
2. Tm is meaning the Measured Tcase value when the component operated under temperature stably.
3. The Tm value showed in **BLUE** words which meaning the MEASURED operation temperature within (Tc-10℃)>Tm >(Tc +5℃), particular thermal dissipation design is needed if you wanna to utilize this board in an enclosure box or chassis.
4. Any Tm value showed in **RED** words which meaning the operation temperature is over (Tc+5 degree C). The result is “Failed” and must be solved before the product launched into next design stage.

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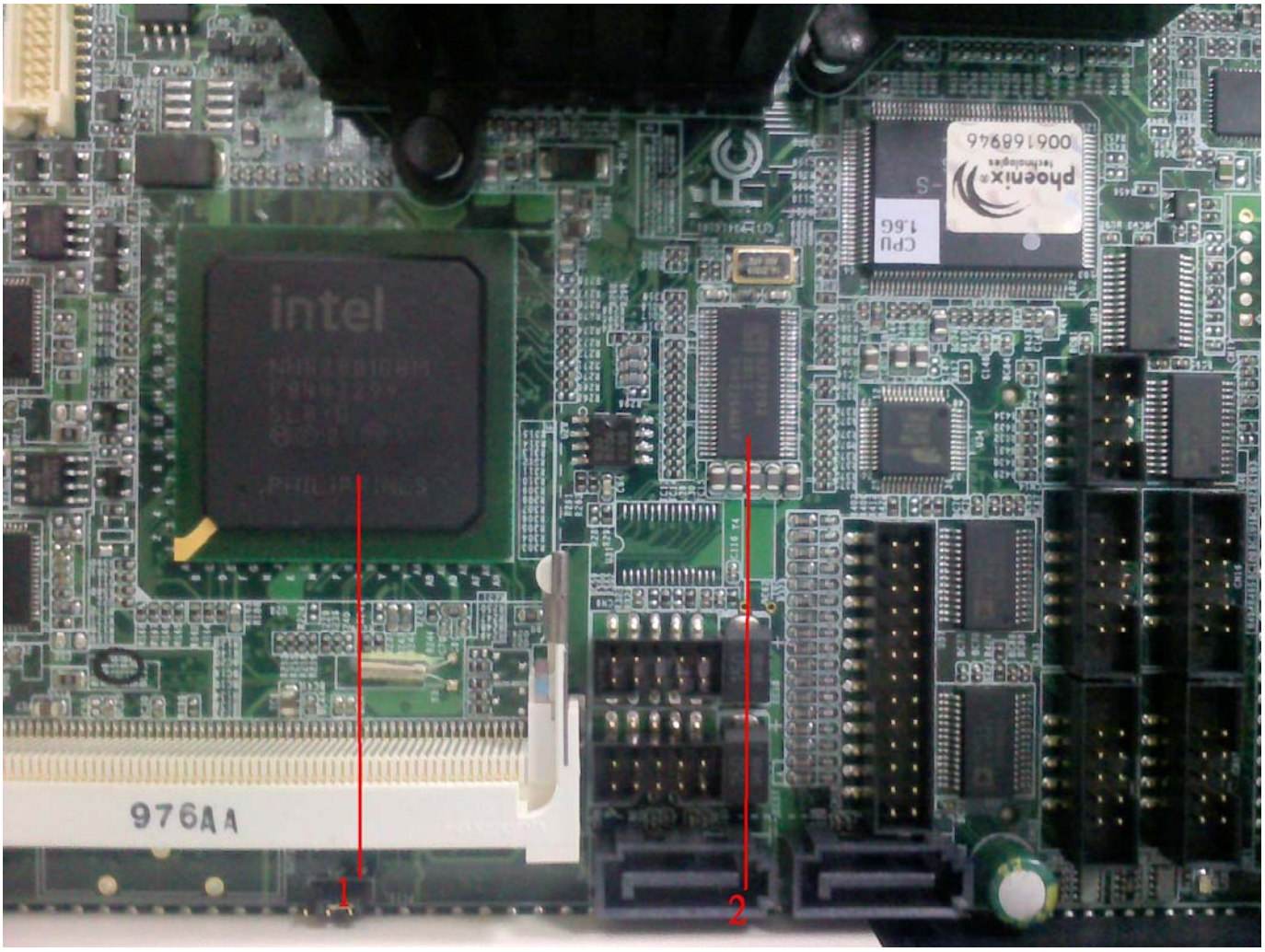
Component Side-2:



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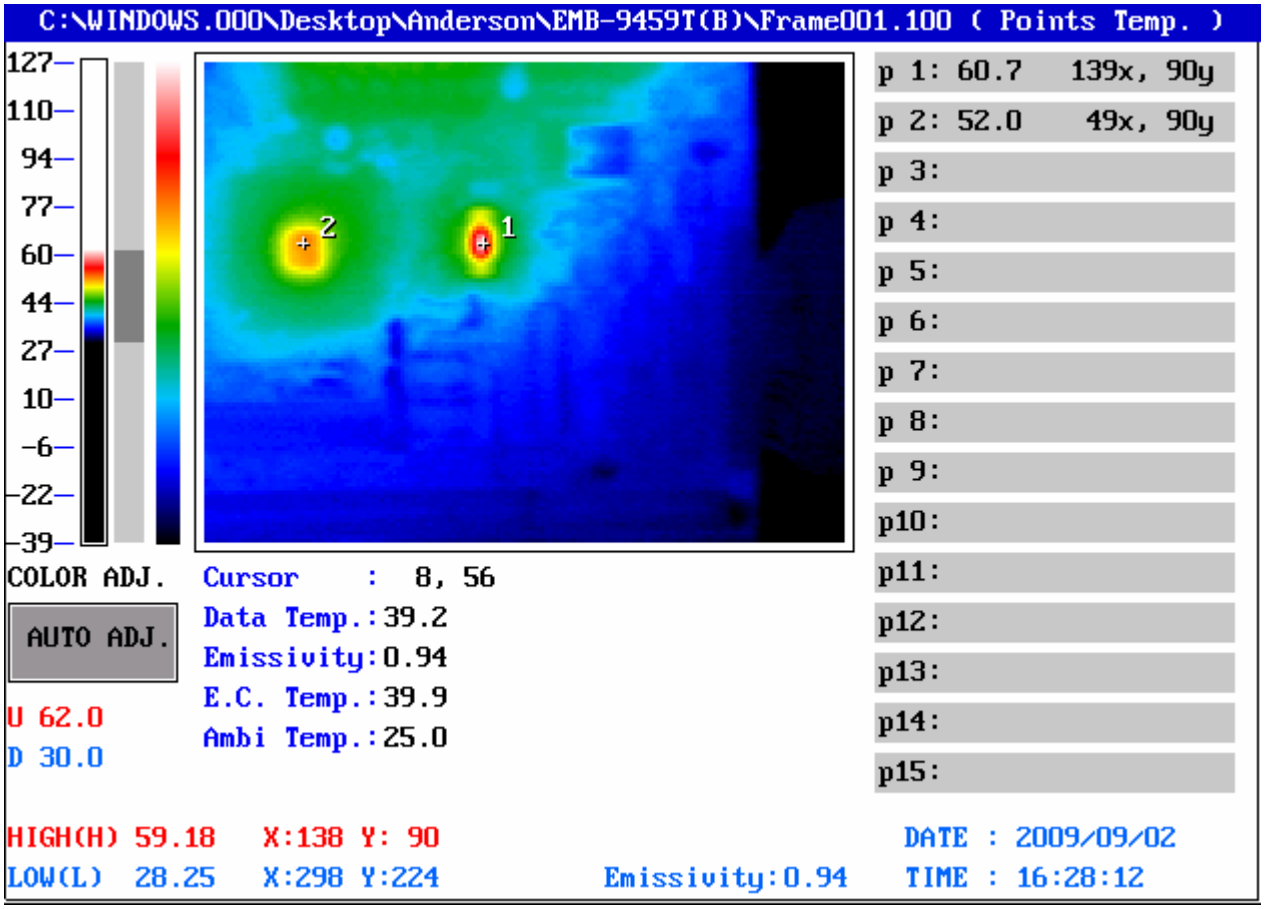

Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				25.0℃	60℃	
1	U33	(TF)IC.SMD.TSSOP 56P.CLOCK GENERATOR.ICS.ICS954226AGLF	115	60.7	95.7	
2	U28	(TF)IC.SMD.Chipset ICH7M.Intel.NH82801GBM SL8YB	100	52.0	87	

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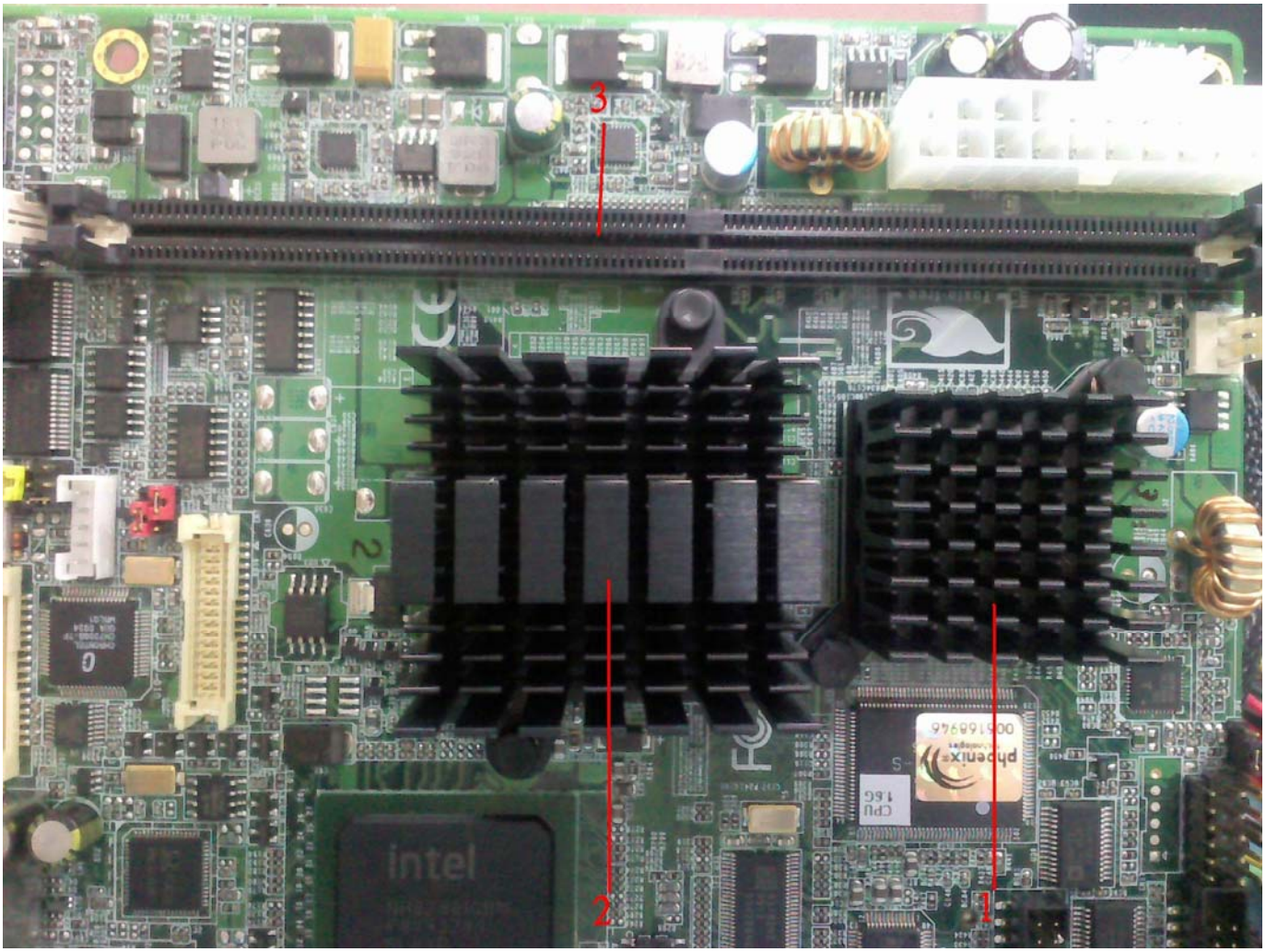
Component Side-3:



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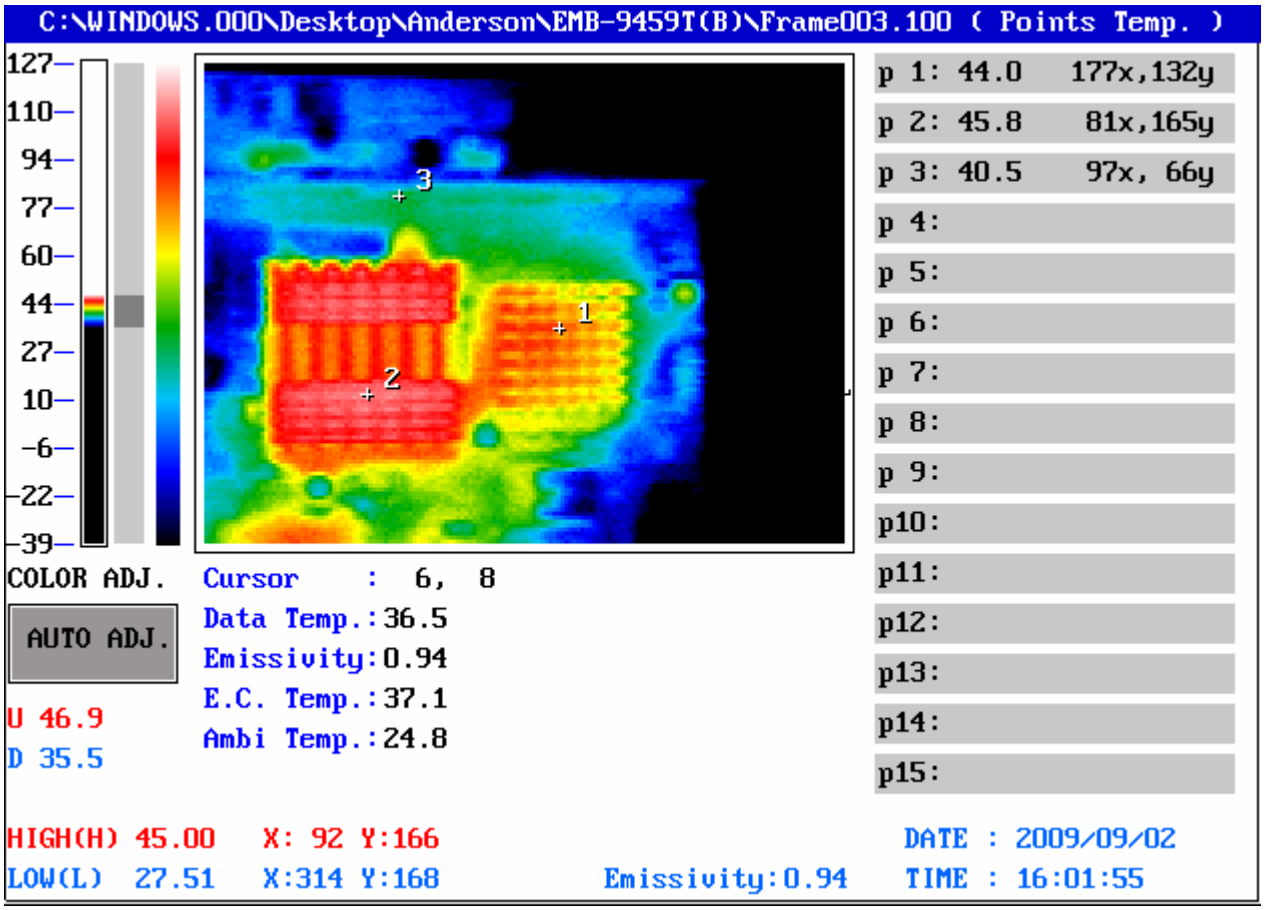

Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				24.8℃	60℃	
1	U38(CPU)	(TF)Intel CPU.Diamondville.N270.1.6GHz/FSB 533MHz.FCBGA8.437Pins.STEPPING CODE:SLB73.AU80586GE025D	90	44.0	79.2	
2	U30(NB)	(TF)IC.SMD.Intel 945GSE Express Chipset.Intel.QG82945GSE SLB2R	105	45.8	81	
3	Memory	Kingston 1GB DDR2 800(KVR800D2N6)	----	40.5	75.7	

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