EMB-9658T

Intel GM965 + ICH8M

Thermal Image Analysis Report

Report NO: 09E080017

2009/7/16	*Wenyuan Yang*	*Anderson Lin*
Issue Stamp	**Manager**	**Test Engineer**

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Thermal Image Analysis

Ⅰ. Model Name: EMB-9658T Rev:A 0.5

Ⅱ. Description: Intel GM965 + ICH8-M

Ⅲ. Date: 2009/7/16

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 : 25.1℃ , Component Side-3 : 24.6℃

•CPU : INTEL Mobile CORE 2 DUO T7500 2.20GHz / 4M / 800MHz

•RAM : Samsung DDR2-800 2GB

•BIOS : EMB-9658T BIOS Rev 1.0 (6/26/2009)

•CF Card : N/A

•HDD : Seagate SATA 2 H.D 160G- ST3160815AS

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

•Take Picture Time: After Power on 2 hours.

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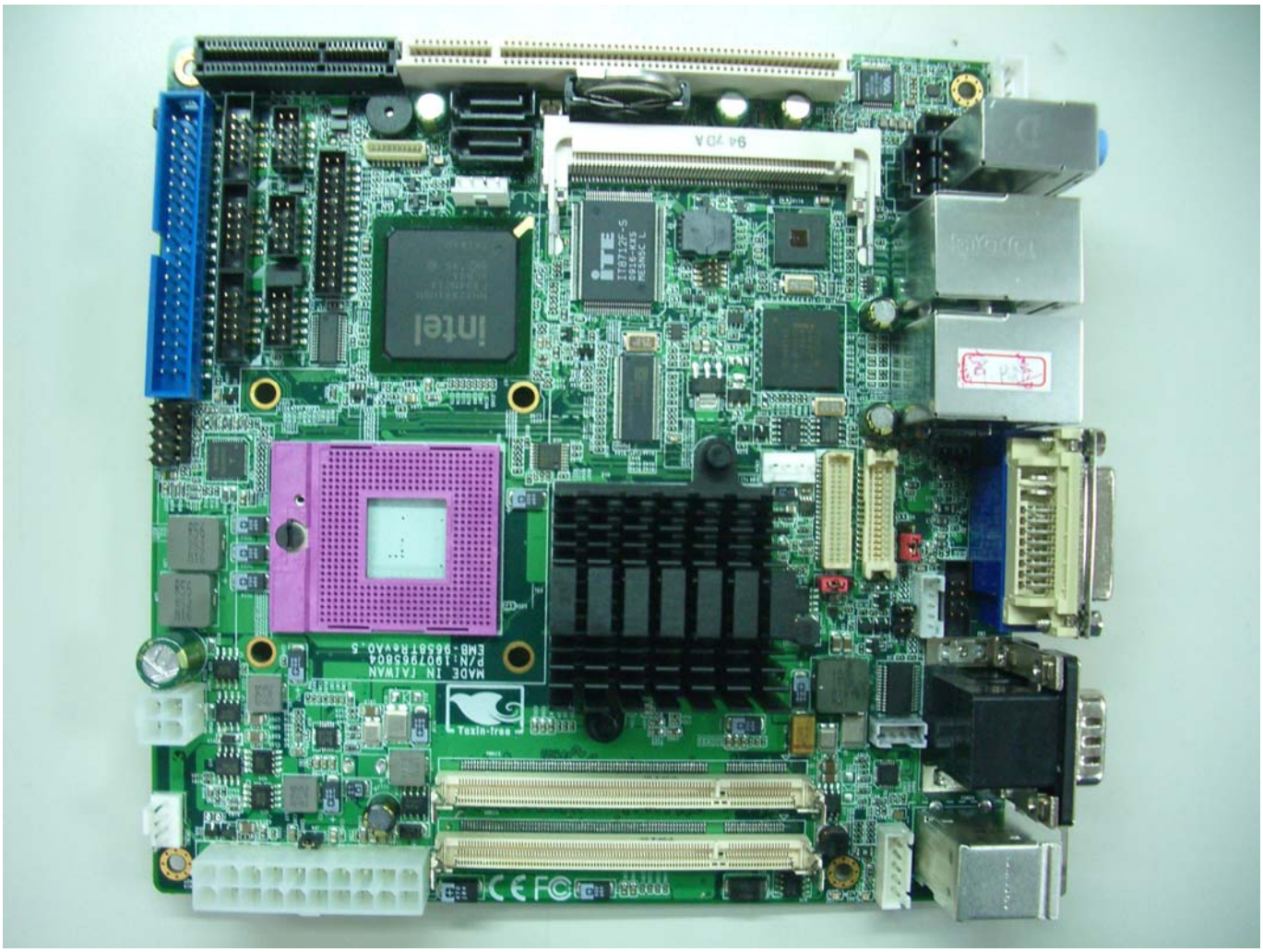
Temperature Profile Test:

Component Side-1:



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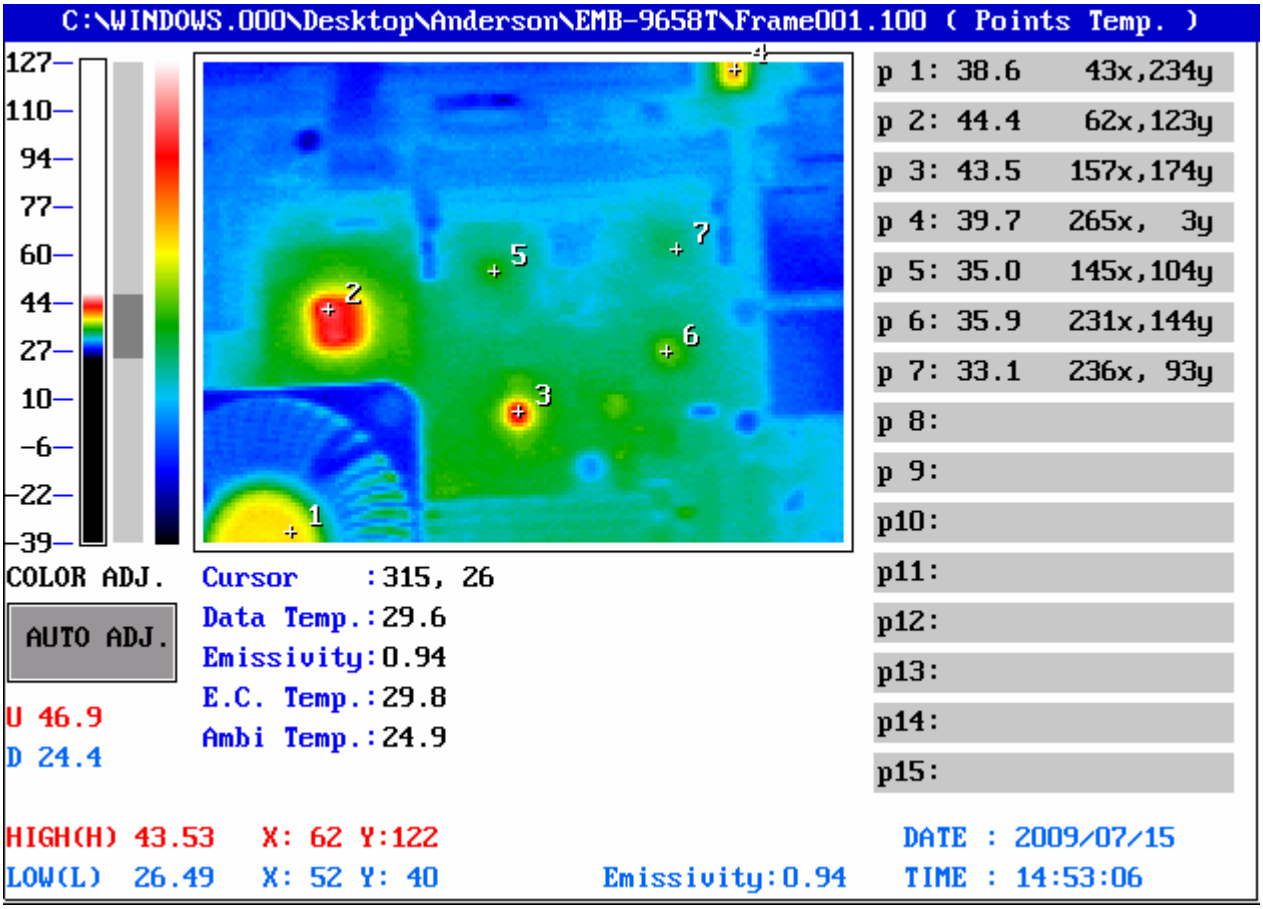

Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				24.9℃	60℃	
1	U18	INTEL Mobile CORE 2 DUO T7500 2.20GHz / 4M / 800MHz	100	38.6	73.7	
2	U17	(TF)IC.SMD.Chipset ICH8M.INTEL.NH82801HBM.SLB9A	------	44.4	79.5	
3	U13	(TF)IC.SMD.TSSOP 64P.CLOCK GENERATOR.ICS.ICS9LP505-1HGLFT	100	43.5	78.6	
4	U3	(TF)IC.SMD.LQFP 48P.7.1Channel HD Audio Codec.VIA.VT1708B	85	39.7	74.8	
5	U14	(TF)IC.SMD.QFP128P Super I/O.ITE.IT8712F/KX-L	100	35.0	70.1	
6	U7	(TF)IC.SMD.BGA 196P.GigaBit Ethernet Chipset.Intel.PC82573L	100	35.9	71	
7	U8	(TF)IC.SMD.BGA81P.GigaBitEthernet Chipset.INTEL.RU82566MM	100	33.1	68.2	

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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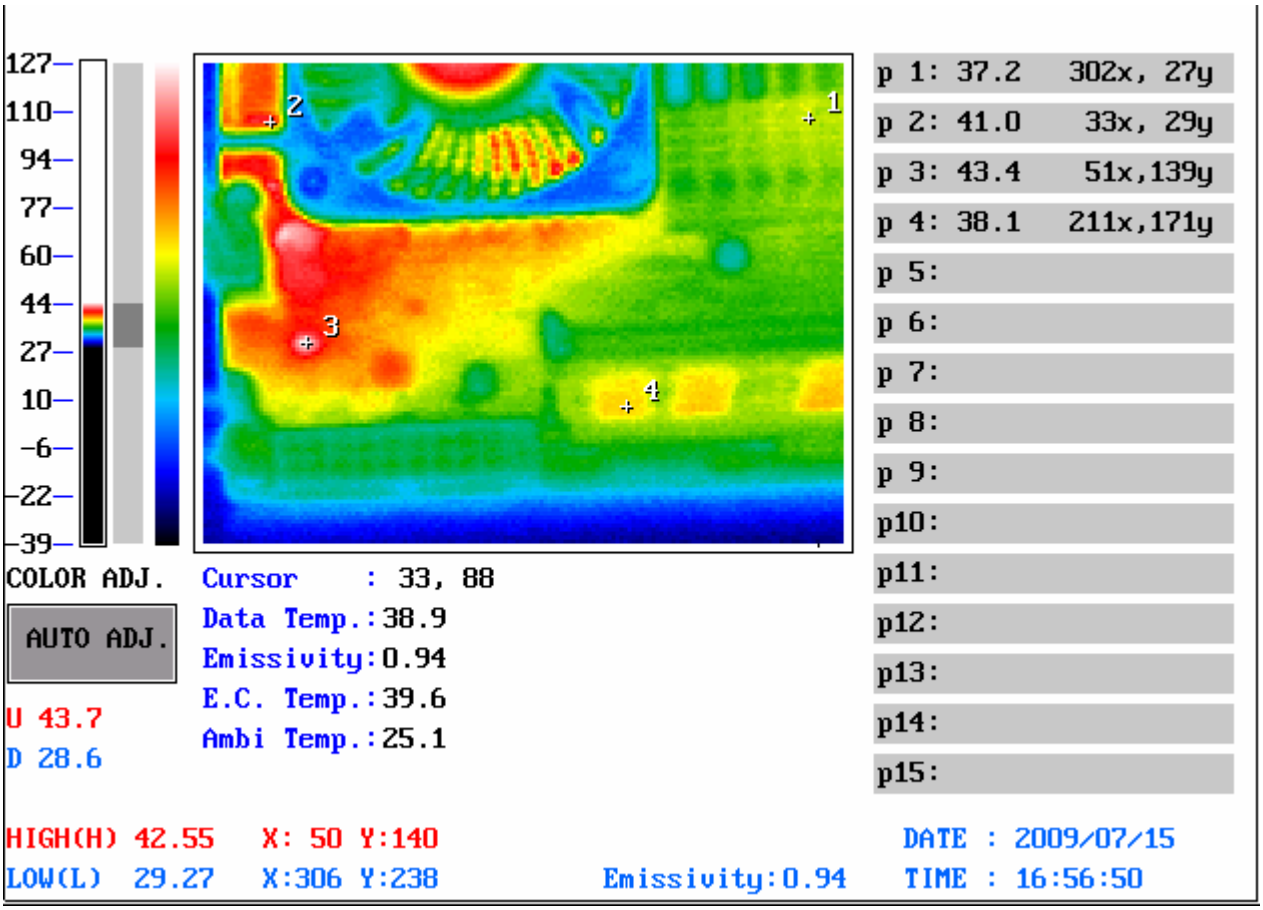
Component Side-2:



Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				25.1℃	60℃	
1	U12	(TF)IC.SMD.FCBGA 1299Pin.Chipset.Intel.LE82GME965.SLA9F.	105	37.2	72.1	
2	L29	(TF)COIL.0.56uH.Irms=25A.Isat=40A.20%.SMD(11.5x10.3x4.0).2pin. RDC=1.8m Ohm.GOTREND.GSTC104P-R56MN	155	41.0	75.9	
3	L17	(TF)COIL.3.3uH.SMD.7.3*6.8*3.0mm.DCR=28m	155	43.4	78.3	
4	DIMM	Samsung DDR2-800 2GB	------	38.1	73	

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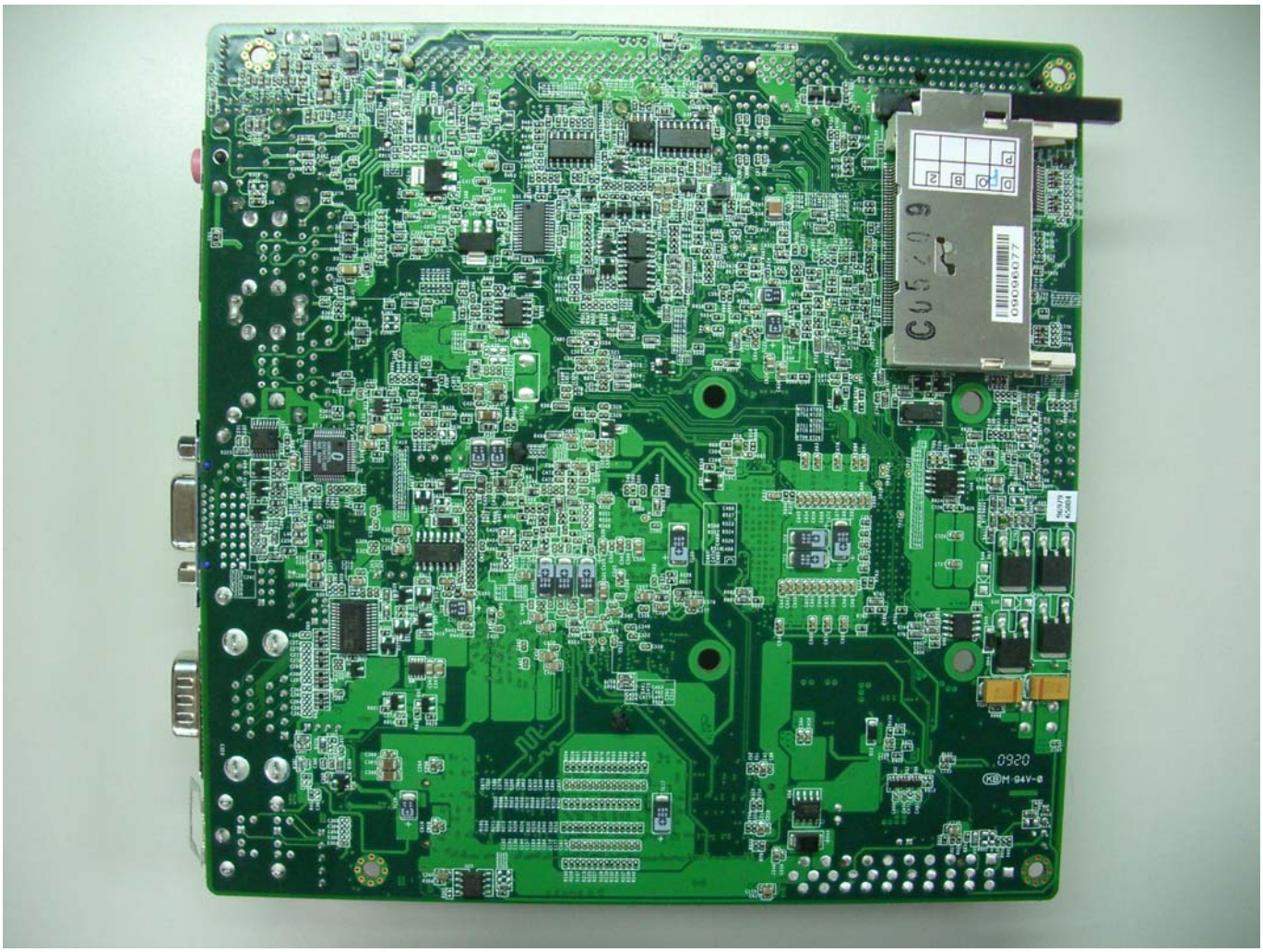
Component Side-3:



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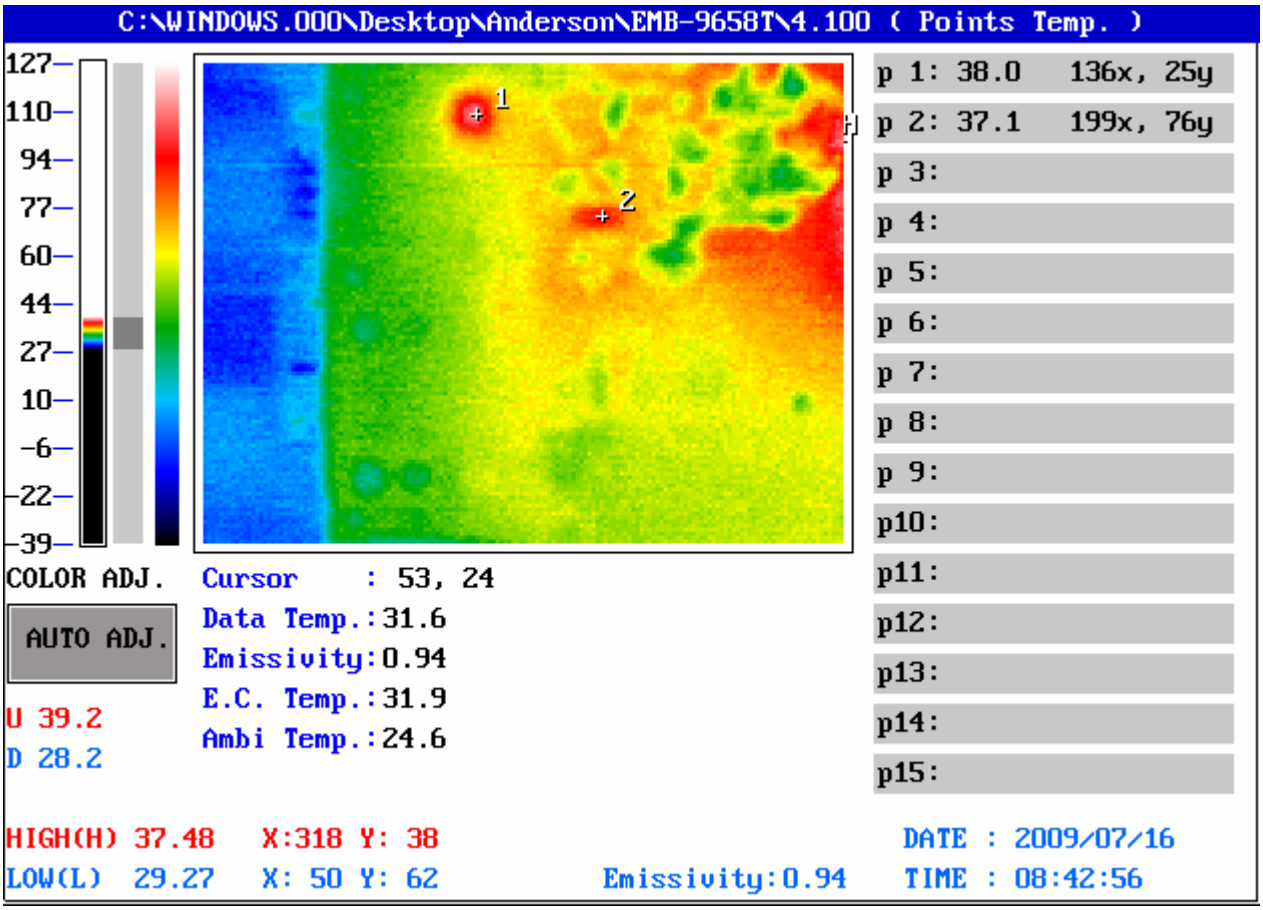

Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				24.6℃	60℃	
1	U23	(TF)IC.SMD LQFP.48P.DVI Transmitter.CHRONTEL.CH7307C-DEF	115	38	73.4	
2	U29	(TF)IC.SMD SO-14.PWM Controller with Linear Reg.Semtech.SC2621ASTRT	------	37.1	72.5	

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