XTX-945GSE

Intel 945GSE+ICH7-M XTX Board

Thermal Image Analysis Report

Report NO: 08E080041

2008/12/08	*Wenyuan Yang*	*Allen Hsu*
Issue Stamp	**Manager**	**Test Engineer**

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Thermal Image Analysis

Ⅰ. Model Name: XTX-945 GSE Rev.A0.2

Ⅱ. Description: Intel 945GSE+ICH7-M XTX Board

Ⅲ. Date: 2008/12/08

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Allen Hsu

Ⅵ.Equipment:

YOKOGAWA PR1000(TH-046)

Ⅶ. Simulation Environment:

- **Temperature: Component Side-1 : 24.6℃ , Component Side-2 : 25.3℃**
- **CPU : Onboard Intel Diamondville Processors(Intel Atom N270 1.60GHz)**
- **RAM : Transcend DDR2 SO-DIMM 667 2G**
- **BIOS : XTX-945GSE BIOS Rev 0.3.1 (10/30/2008)**
- **CF Card : N/A**
- **HDD : WD 80G IDE H.D WD800BB**
- **Application Software: Run Prime95 under Windows XP Professional V2002 Service Pack 3**
- **Take Picture Time: After Power on 2 hours.**

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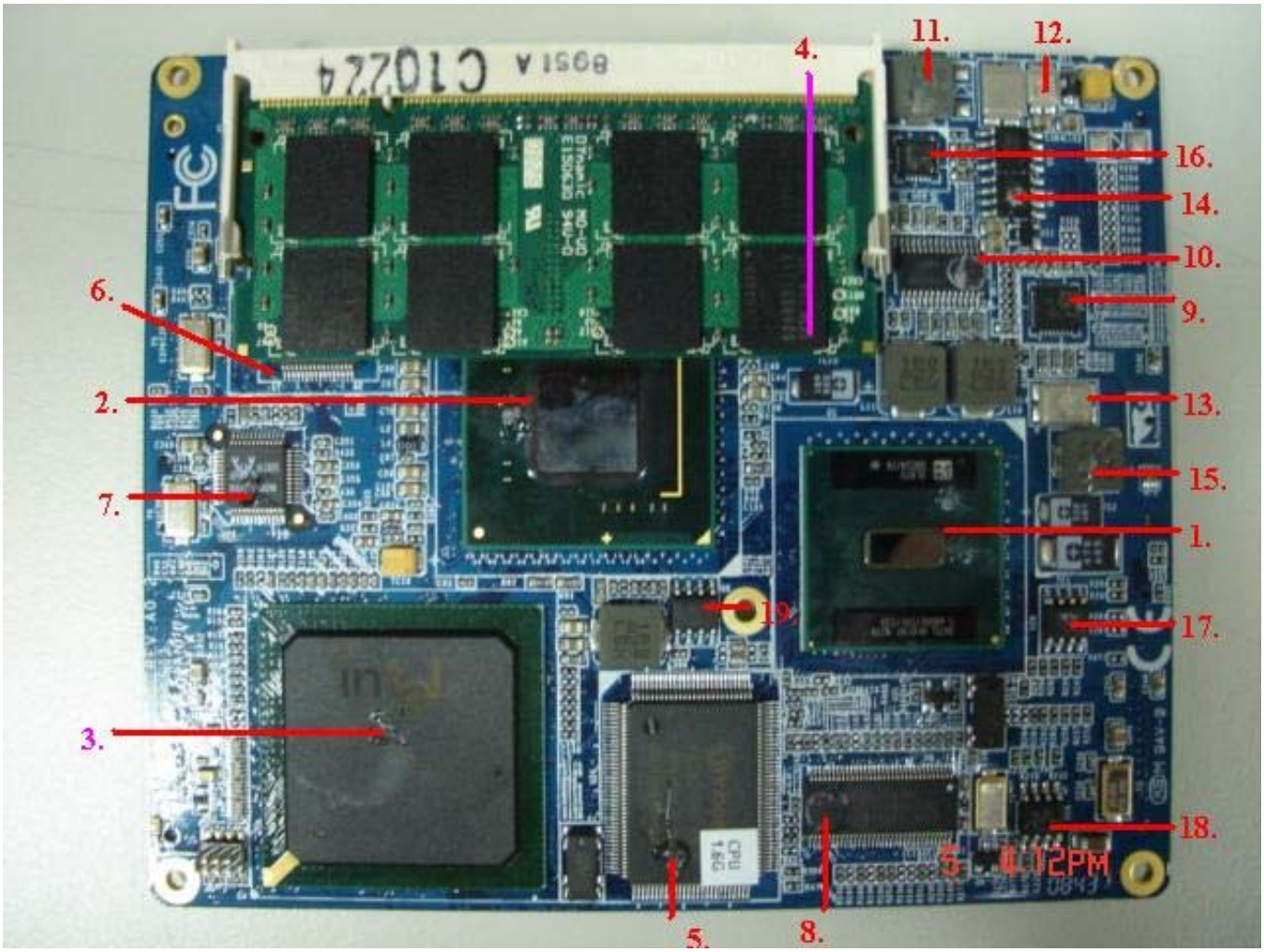
Temperature Profile Test:

Component Side-1:



Rad line: **Frontside**

Pink line: **Backside**

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Point	Position	Describe	Tc (℃)	Tm (24.6 ℃)	Tm (60℃)	Note
1	U1	(TF)IntelCPU.Diamondville.N270.1.6GHz/FSB 533MHz.FCBGA8.437Pins.STEPPINGCODE:SLB73.AU80586GE0 25D;EE-A081317;14S4160020;TWN	90	49.7	85.1	
2	U3	(TF)IC.SMD.Intel 945GSE Express Chipset.Intel.QG82945GSE SLB2R;EE-A081310;14S4294503;TWN	105	33.7	69.1	
3	U4	(TF)IC.SMD.ChipsetICH7M.Intel.NH82801GBM SL8YB;EE-A060320;14S428010D;TWN	----	29.5	64.9	
4	RAM	Transcend DDR2 SO-DIMM 667 2G SEC 801 HCE6 K4T1G084QQ	70	28.3	63.7	
5	U24	(TF)IC.SMD.PQFP128Pin.LPCSuper I/O.Winbond.W83627HG-AW A version;EE-A051465;14S4362704;TWN	100	42.6	78	
6	U27	(TF)IC.SMD.LQFP64Pin.LVDSTransmitter.CHRONTEL.CH7308B -TF;EE-A070801;14S4730802;TWN	125	36.4	71.8	
7	U26	(TF)IC.SMDLQFP48Pin.6ChannelAC'97Audio Codec.REALTEK.ALC655-LF;EE-A040125;14S3065500;TWN	100	39.9	75.3	
8	U9	(TF)IC.SMD.TSSOP64P.CLOCKGENERATOR.IDT.9LPRS501PG LF;EE-A081777;14S3050100;TWN	150(Ts)	46.2	81.6	
9	U23	(TF)IC.SMD.MLP5x5-32P.IMVP6SinglePhase PWM.SEMTECH.SC454MLTRT	----	44.8	80.2	
10	U16	(TF)IC.SMDTSSOP-28.DualPowerSupply Controller.SEMTECH.SC1485ITSTRT;EE-A031097;14S4148500;T WN	100	44.1	79.5	
11	L12	(TF)COIL.1uH.+/-20%.SMD.7.3*6.8*3.0mm.DCR=9mohm.Irms=11 Amp.GOTREND.GSTC063P-1R0MN;EE-A061520;1211000180;TW N	125	39.9	75.3	
12	Q10	(TF)PWR.SMD.DirectFETSQ.N-MOSFET.Vgs=(+/-)20V.Ids=15A.R ds=4.9m/6.8mOHM.Vds=25V.IR.IRF6622TRPBF;EE-A061852;1315 662210;TWN	125	36.3	71.7	
13	Q13	(TF)PWR.SMD.DirectFETMX.N-MOSFET.Vgs=(+/-)20V.Ids=27A.R ds=1.9m/2.5mOHM.Vds=25V.IR.IRF6628TRPBF;EE-A061855;1315 662810;TWN	125	47.2	82.6	
14	Q40	(TF)PWR.SMD.SO-8P.P-ChannelMOSFET.APEC.AP6679GM;EE-A071268;1315667910;TWN	125	39.5	74.9	
15	L13	(TF)COIL.0.33uH.Irms=20A.Isat=30A.20%.SMD(7.3x6.8x3.0).2pin. RDC=3.9mOhm.GOTREND.GSTC063P-R33MN;EE-A070528;1211 103370;TWN	125	46.5	81.9	
16	U20	(TF)IC.SMDMLPQ-24.DDR1/2/3MemoryPowerSupply.Semtech.SC 486IMLTRT;EE-A071159;14S2048600;TWN	125	41.3	76.7	
17	U28	(TF)IC.SMD.SOIC8Pin.2KbitI2CSerialEEPROM.MICROCHIP.24 LC02B-I/SN;EE-A061927;14S6340221;TWN	125	46.0	81.4	
18	U14	(TF)IC.SMD.SOIC8P.2.5V1Kbits.Microchip.93LC46B/SN;EE-A990 454;14S6334610;TWN	125	38.6	74	
19	Q9	(TF)DualN-Channel.SO-8.SMD.Vds=30V.Ids=6A.Rds=21/27mohm. Vgs=10/4.5V.ANPEC.APM7313KC-TRL;EE-A060563;1315731310; TWN	125	44.9	80.3	

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

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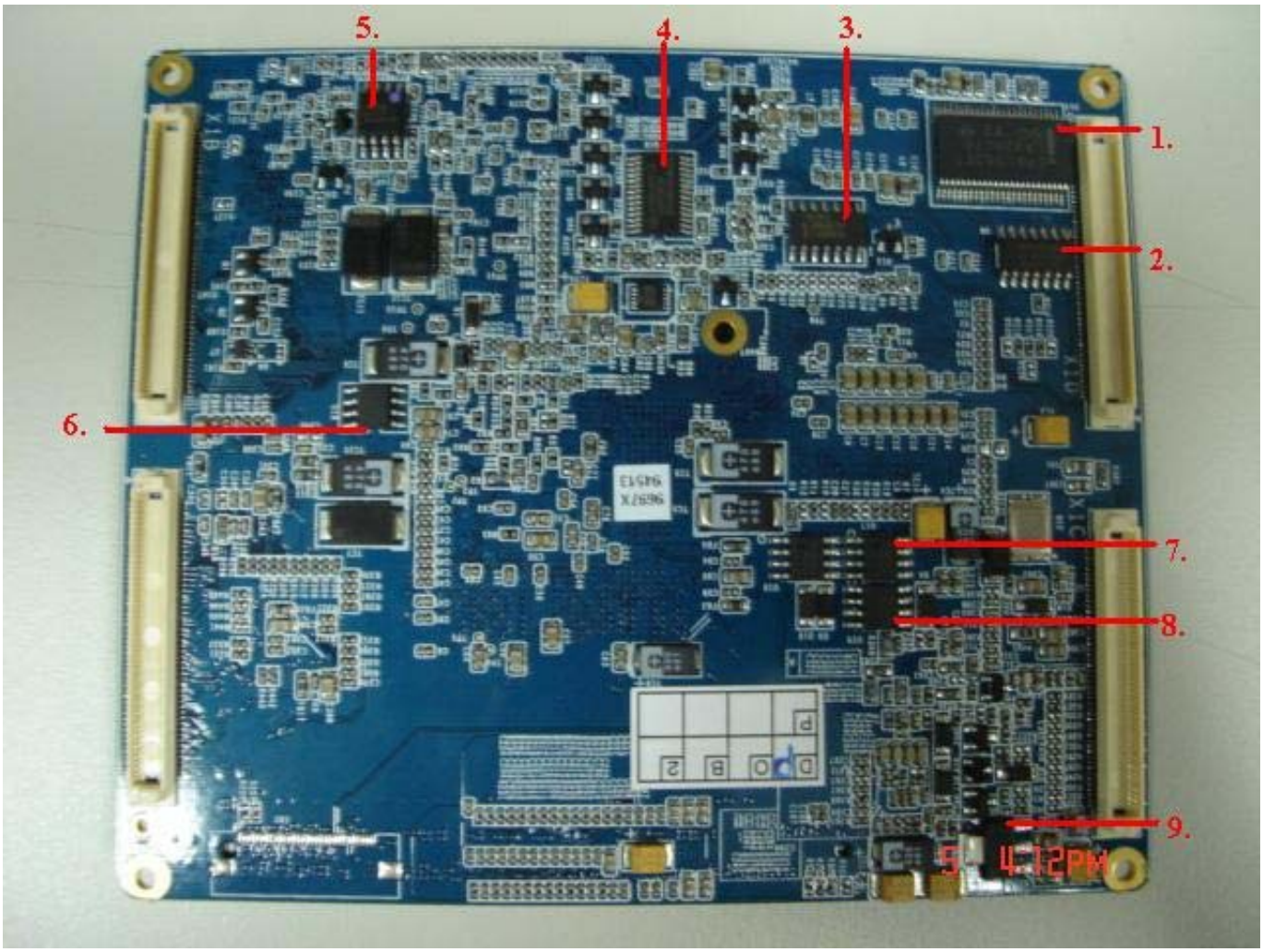
Component Side-2:



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Point	Position	Describe	Tc (℃)	Tm (25.3 ℃)	Tm (60℃)	Note
1	U13	(TF)IC.SMD.SSOP48Chipset.INTEL.EP82562ET;EE-A000456;14S4256200;TWN	135	41.6	76.3	
2	U8	(TF)IC.SMDSO.14Pin.PHILIPS.74LVC07AD-T;EE-A000431;14S5A00700;TWN	150	43.7	78.4	
3	U25	(TF)IC.SMD SO 14Pin.PHILIPS.N74F04D;EE-A990055;14S5500400;	100	45.6	80.3	
4	U10	(TF)IC.SMDTSSOP28.TrustedPlatformModule.Infineon.SLB9635TT1.2;EE-A071258;14S4963500;TWN	100	43.8	78.5	
5	U5	(TF)IC.SMDSO8with200milbodywidth.16MbitSPIFlash.SST.SST25VF016B-50-4C-S2AF;EE-A071251;14S6201601;TWN	125	34.7	69.4	
6	U19	(TF)IC.SMD.SOP-8-P.5A.0.2V.LowdropoutLinearRegulator.ANPEC.APL5912-KAC-TRL;EE-A061338;14S2591200;TWN	125	39.1	73.8	
7	U17	(TF)PWR.SMD.SO8.N-Channel.30V.12A.ANPEC.APM4420KC-TRL;EE-A060271;1315442011;TWN	125	48.6	83.3	
8	U15	(TF)Dual N-Channel.SMD SO-8.2.5V MOSFET.APEC.AP9926GM;EE-A030055;1315992601;TWN	125	47.6	82.3	
9	Q3	(TF)REG.SMD SOT-223.1.5A Linear Regulator.ANPEC.APL1086-V-TRL;EE-A050238;1314108610;TWN	100	39.4	74.1	

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

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