COM-945

Intel 945GME+ICH7-M COM Express Board

Thermal Image Analysis Report

Report NO: 09E080003

Release Date: 01/15/2009

2009/01/15	*Wenyuan Yang*	*Danny Chen*
Issue Stamp	**Manager**	**Test Engineer**

Thermal Image Analysis

Ⅰ. Model Name: COM-945 A2.0

Ⅱ. Description: Intel 945GME+ICH7-M COM Express Board

Ⅲ. Date: 2009/01/15

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Danny Chen

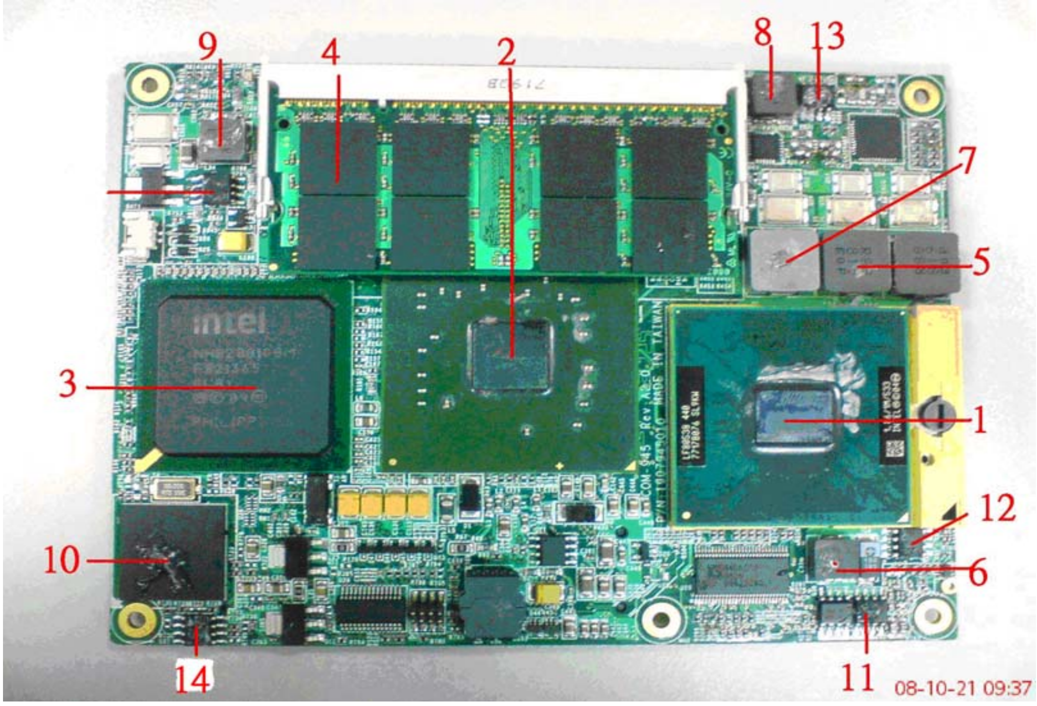
Ⅵ.Equipment: PR1000(TH-046)

Ⅶ. Simulation Environment:

- **Temperature: Component Side-1 : 28.0℃, Component Side-2 : 28.0℃**
- **CPU : Mobile Intel Celeron M 440. 1866MHz**
- **RAM : Transcend DDR2 667 SODIMM 1GB**
- **BIOS : COM-945 A2.0 BIOS Rev 1.1 Legacy Free (10/17/2008)**
- **CF Card : N/A**
- **HDD : Seagate ST340014A 40GB**
- **Application Software: Run Prime95 under Windows XP Professional V2002 Service Pack 3**
- **Take Picture Time: After Power on 2 hours.**

Temperature Profile Test:

Component Side-1:



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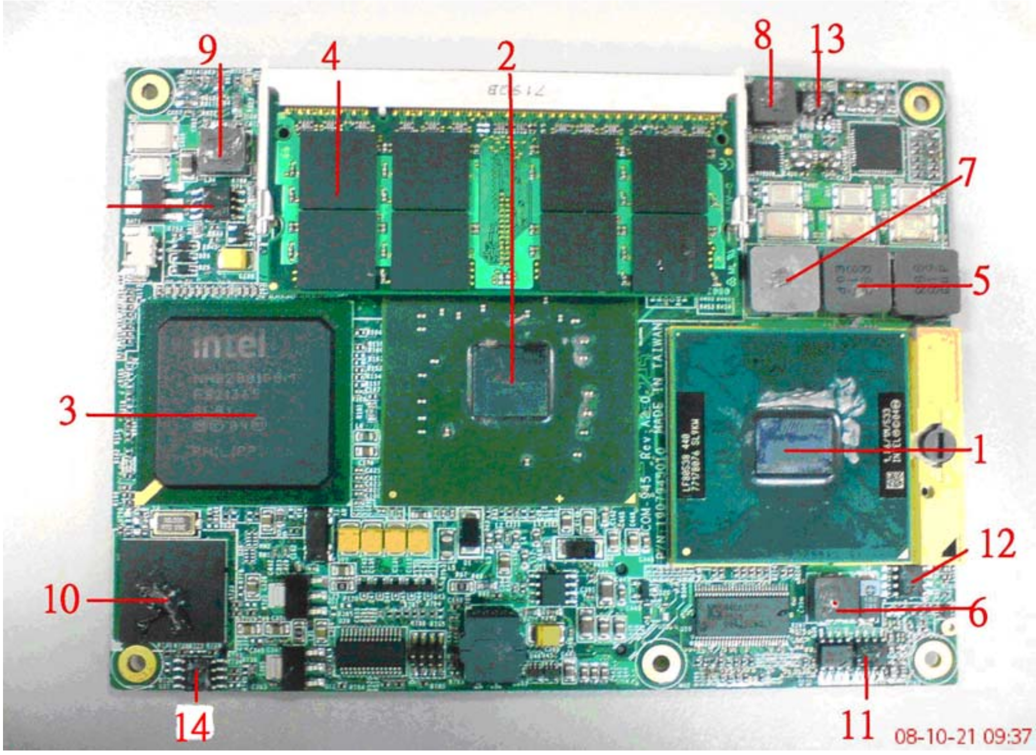
Point	Position	Describe	Tc (℃)	Tm (28.0℃)	Tm (60℃)	Note
1	U1	(TF)ZIF mPGA478M SKT.SMD.W/O A1&A2 for Yonah.FOXCON.PZ4782A-2743-01;EE-A071274;1651611994;TWN Mobile Intel Celeron M 440. 1866MHz	100	55	87	
2	U3	(TF)IC.SMD.Chipset Intel 945GME Express.Intel.QG82945GME SLA9H;EE-A080869;14S4294502;TWN	105	44.5	76.5	
3	U4	(TF)IC.SMD.Chipset ICH7M.Intel.NH82801GBM SL8YB;EE-A060320;14S428010D;TWN	99	51.8	83.8	
4	RAM	Kingston DDR2-667 KVR667D2S5/2G 2GB (ELPIDA E1108ACBG-6E-E)	95	52.7	84.7	
5	L24	(TF)COIL.0.88uH.Irms=20A.Isat=38A.20%.SMD(11.5x10.3x4.0).2pin.RDC=3m Ohm.GOTREND.GSTC104P-R88MN;EE-A080489;1211108870;TWN	125	46	78	

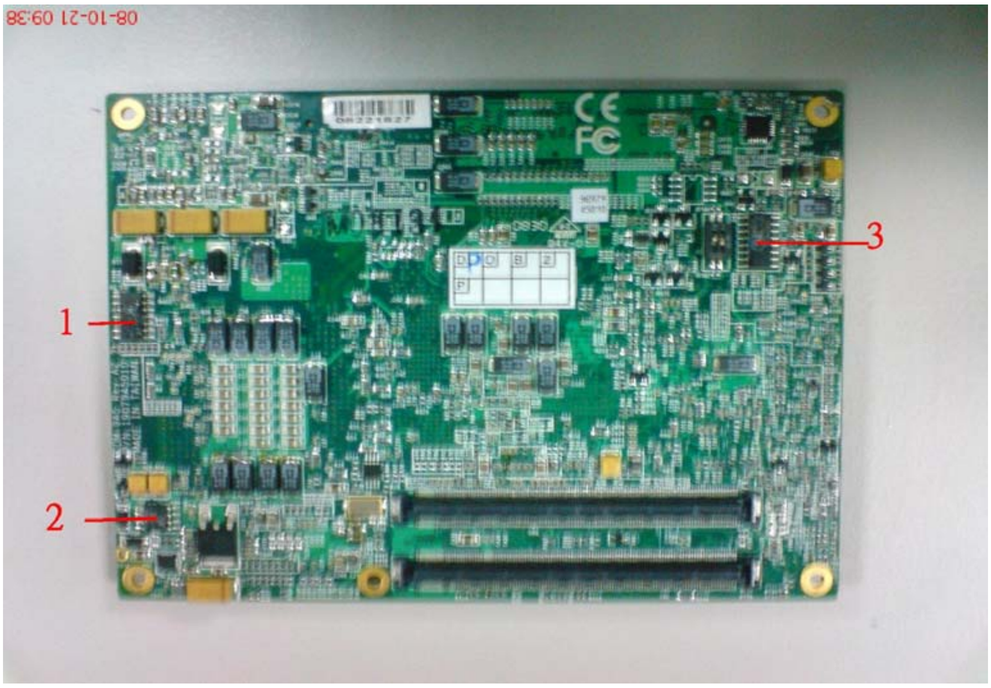
1. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
2. Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification



Point	Position	Describe	Tc (℃)	Tm (28.0℃)	Tm (60℃)	Note
6	L33	(TF)COIL.3.3uH.SMD.7.3*6.8*3.0mm.DCR=28m ohm.Irms=6Amp.GOTREND.GSTC063P-3R3MN;EE-A061502;121110336L;TWN	125	65.9	97.9	
7	L35	(TF)COIL.2.2uH.20%.SMD.11.5x10.3x4.0mm.GOTREND.GSTC104P-2R2MN.DCR=7m ohm.Irms=12Amp;EE-A081705;121110226E;TWN	125	50.5	82.5	
8	L31	(TF)COIL.1.5uH.Irms=9A.Isat=18A.20%.SMD(7.3x6.8x3.0).2pin.RDC=15m.Ohm.GOTREND.GSTC063P-1R5MN;EE-A061612;121110156A;TWN	125	56	88	
9	L34	(TF)COIL.1uH.+/-20%.SMD.7.3*6.8*3.0mm.DCR=9mohm.Irms=11Amp.GOTREND.GSTC063P-1R0MN;EE-A061520;1211000180;TWN	125	39.8	71.8	
10	U36	(TF)IC.SMD.BGA 196P.GigaBit Ethernet Chipset.Intel.PC82573L;EE-A061536;14S4825730;TWN	100	51.8	83.8	
11	Q38	(TF)PWR.SMD.SO-8.N-Channel.30V.10A.13.5mΩ.MOSFET.APEC.AP4410GM;EE-A030505;1315441012;TWN	125	60.3	92.3	

12	**Q36**	**(TF)PWR.SMD..SO-8.P-Channel MOSFET.ANPEC.APM4463KC-TRL;EE-A041711;1315446310;TWN**	**125**	**59.1**	**91.1**	
13	**Q53**	**(TF)Dual N-Channel.SO-8.SMD.Vds=30V.Ids=6A.Rds=21/27mohm.Vgs=10/4.5V.ANPEC.APM7313KC-TRL;EE-A060563;1315731310;TWN**	**125**	**60.5**	**92.5**	
14	**U37**	**(TF)IC.SMD.SOIC.8P.8K..SPI.Bus..Serial EEPROM.ATMEL.AT25080AN-10SU-2.7;EE-A061337;14S6308001;TWN**	**125**	**44.3**	**76.3**	
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						

Component Side-2



Point	Position	Describe	Tc (℃)	Tm (28.0)	Tm (60℃)	Note
1	U5	(TF)IC.SMD SO.14Pin.PHILIPS.74LVC07AD-T;EE-A000431;14S5A00700;TWN	155	52.1	84.1	
2	Q34	(TF)PWR.SMD SO-8.P-Channel MOSFET.ANPEC.APM4463KC-TRL;EE-A041711;1315446310;TWN	125	58.5	90.5	
3	U44	(TF)IC.SMD SO16.PHILIPS.74HCT123D;EE-A010228;14S5812300;TWN	125	41.3	73.3	

5. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
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