NanoCom-U15

Intel Menlow COM Express CPU Module

Thermal Image Analysis Report

Report NO: 09E080011

2009/5/7	*Wenyuan Yang*	*Anderson Lin*
Issue Stamp	**Manager**	**Test Engineer**

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Thermal Image Analysis

Ⅰ. Model Name: NanoCom-U15 Rev:A1.0

Ⅱ. Description: Intel Menlow COM Express CPU Module

Ⅲ. Date: 2009/5/7

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Anderson Lin

Ⅵ.Equipment:

PR1000(TH-046)

Ⅶ. Simulation Environment:

- **Temperature: Component Side-1 : 25.3℃ , Component Side-2 : 25.4℃**
- **CPU : Intel(R) Atom(TM) CPU Z530 1.6GHz**
- **RAM : Onboard 512MB Memory**
- **BIOS : Nano COM-U15 BIOS Rev.0.1(04/29/2009)**
- **CF Card : N/A**
- **HDD : 2.5" Slim HDD.80GB.SATA.FUJITSU.MHZ2080BH**
- **Application Software: Run Prime95 under Windows XP Professional Service Pack 3**
- **Take Picture Time: After Power on 2 hours.**

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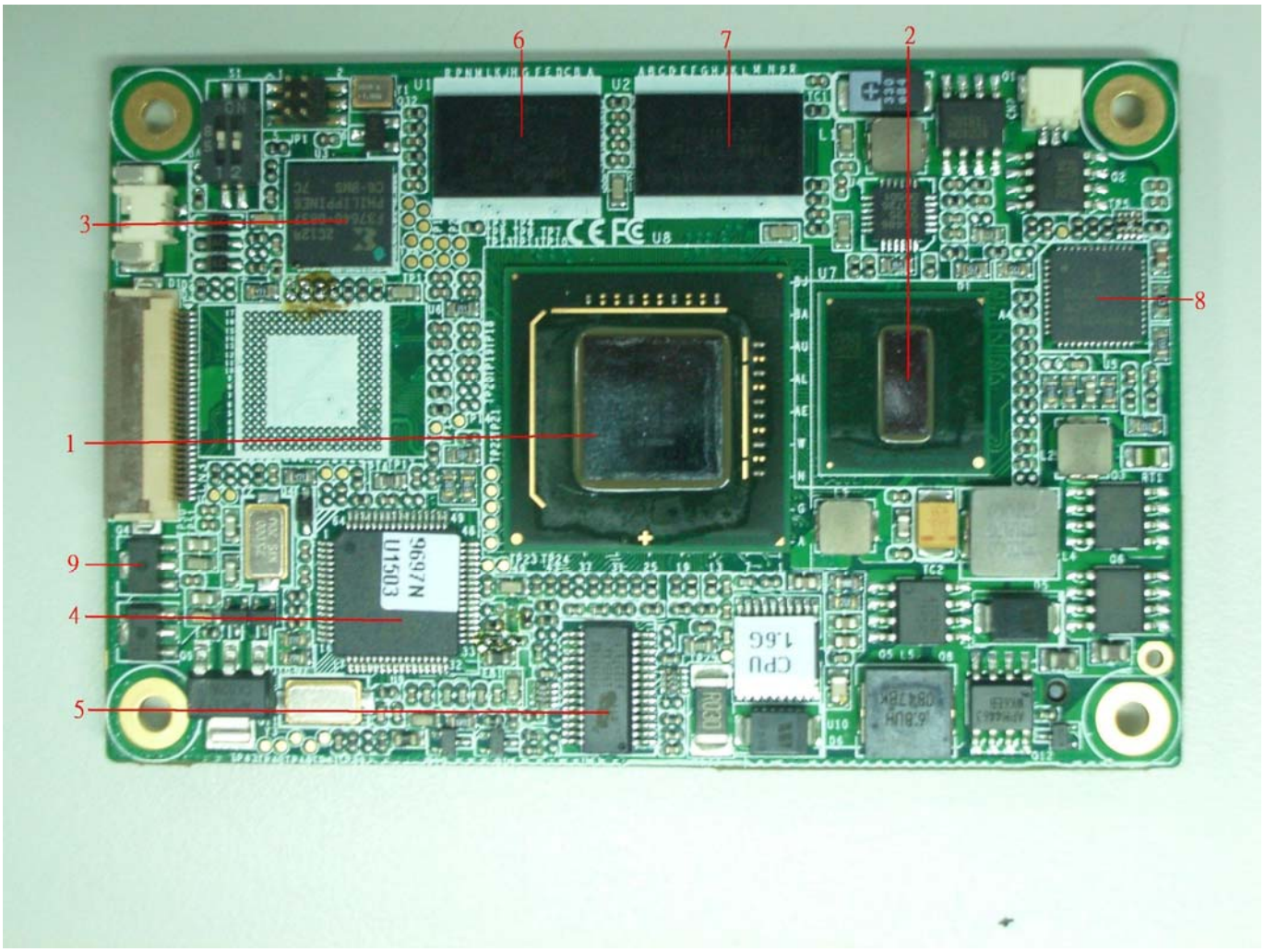
Temperature Profile Test:

Component Side-1:



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Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				25.3℃	60℃	
1	U8	(TF)IC.SMD.Chipset SCH.Poulsbo.INTEL.AF82US15W SLGFQ	90	55.8	90.5	
2	U7	(TF)INTEL CPU.Silverthorne.1.6GHz/533.AC80566UE025DW SLB6P	90	55.9	90.6	
3	U3	(TF)IC.SMD.CP 132P.CoolRunner-II CPLD.USER NB:380A.Power Control.Xilinx.XC2C128-7CPG132C	115	67.3	102	
4	U9	(TF)IC.SMD.TQFP64P.SATAtoIDE/ATA Chip.JMicron.JM20330APC0-TGCA	115	74.7	109.4	
5	U11	(TF)IC.SMD.SSOP 28P.WatchDog.Fintek.F75111RG	115	71.2	105.9	
6	U1	(TF)IC.DDRII-SDRAMDDRII-SDRAM.64Mbx16(bit).SMD.667MHz. TFBGA 84P.1.8V.HYNIX.HY5PS1G1631C(L)FP-Y5	125	62.7	97.4	
7	U2	(TF)IC.DDRII-SDRAMDDRII-SDRAM.64Mbx16(bit).SMD.667MHz. TFBGA 84P.1.8V.HYNIX.HY5PS1G1631C(L)FP-Y5	125	63.4	98.1	
8	U5	(TF)IC.SMD.QFN48P.IMVP6TwoPhase PWM.Intersil.ISL6262ACRZ-T	130	67.1	101.8	
9	Q3	(TF)Dual N-Channel.SO-8.SMD.Vds=30V.Vgs=(+/-)20V.Ids=10/7A.Rds=14/20m ohm.APEC.AP4224GM	125	68.7	103.4	

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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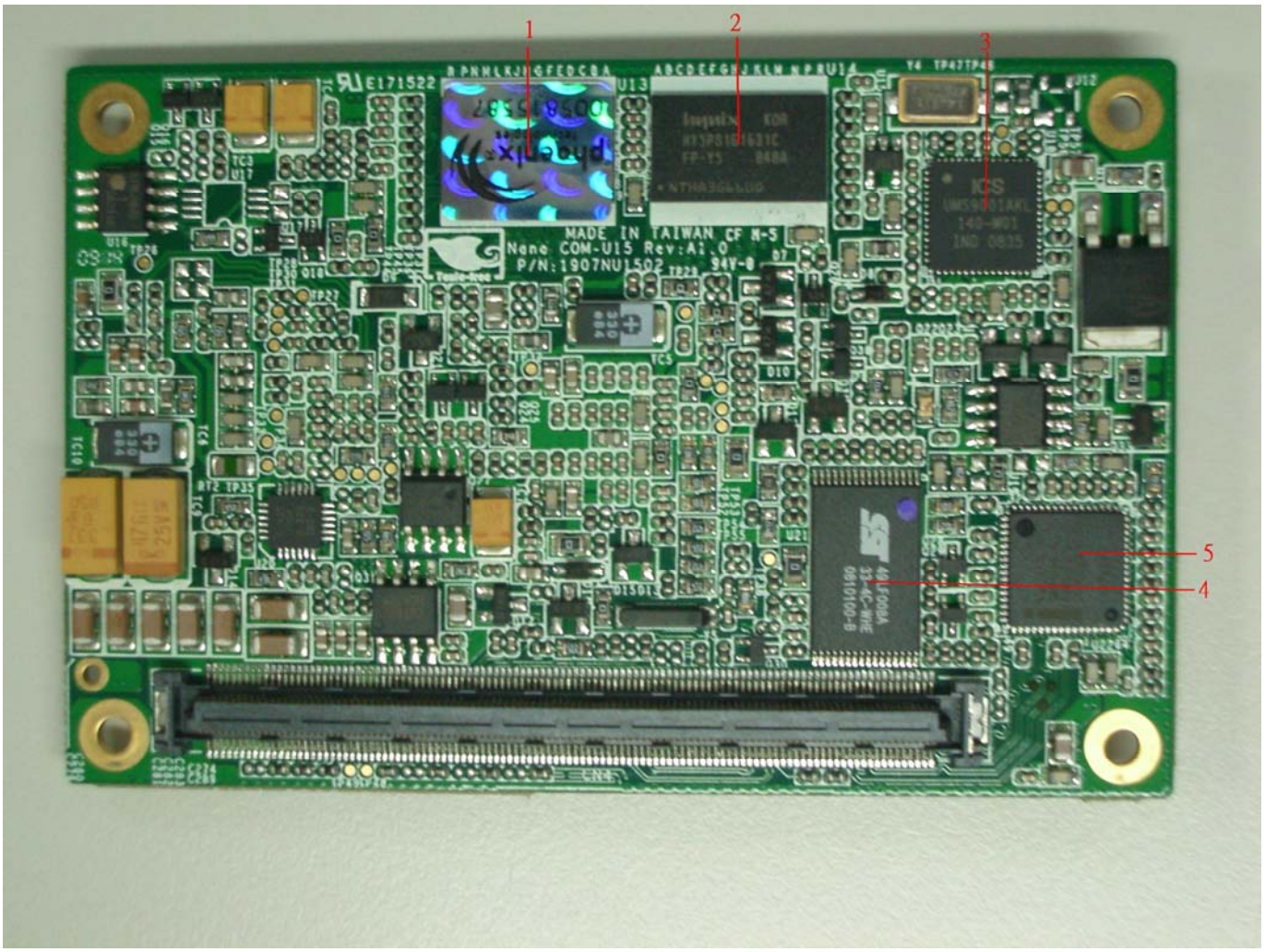
Component Side-2:



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Point	Position	Describe	Tc (℃)*1	Tm*2 Measured Under		Note
				25.4℃	60℃	
1	U13	(TF)IC.DDRII-SDRAMDDRII-SDRAM.64Mbx16(bit).SMD.667MHz. TFBGA 84P.1.8V.HYNIX.HY5PS1G1631C(L)FP-Y5	125	67.1	101.7	
2	U14	(TF)IC.DDRII-SDRAMDDRII-SDRAM.64Mbx16(bit).SMD.667MHz. TFBGA 84P.1.8V.HYNIX.HY5PS1G1631C(L)FP-Y5	125	68.5	103.1	
3	U18	(TF)IC.SMD.MLF 56P.Clock Generator.IDT.ICS9UMS9001AKLFT	100	63.7	98.3	
4	U21	(TF)IC.SMD.TSOP.32P.8M bit Flash Memory.SST.SST49LF008A-33-4C-WHE	115	68.1	102.7	
5	U22	(TF)IC.SMD.QFN 64P.PCI-E GigaBit Ethernet Chipset.Intel.WG82574L SLBA8	109	66.4	101	

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