EPIC-9457

Thermal Image Analysis Report

Report NO : 09E080012

Release Date: May. 8 , 2009

2009/05/08	*Wenyuan Yang*	*Jerry Tsai*
Issue Stamp	**Manager**	**Test Engineer**

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Thermal Image Analysis

Ⅰ. Model Name: EPIC-9457 A1.0

Ⅱ. Description: Intel Navy Pier
EPIC Express Board

Ⅲ. Date: May.8, 2009

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Jerry Tsai

Ⅵ.Equipment:
PR1000(TH-046)

Ⅶ. Simulation Environment:

- **Temperature: Component Side-1 :25.0℃ , Component Side-2 : 25.0℃**
- **CPU : Onboard CPU Intel Atom N270 1.6GHz**
- **RAM : Kingston DDR2-667 2GB KVR667D2S5/2G**
- **BIOS : EPIC-9457 BIOS Rev 1.0 For DVI & LVDS(04/15/2009)**
- **CF Card : N/A**
- **HDD : WD WD400 40GB 3.5" IDE HDD**
- **Application Software: Run Prime95 under Windows XP Professional V2002 Service Pack 3**
- **Take Picture Time: After Power on 2 hours.**

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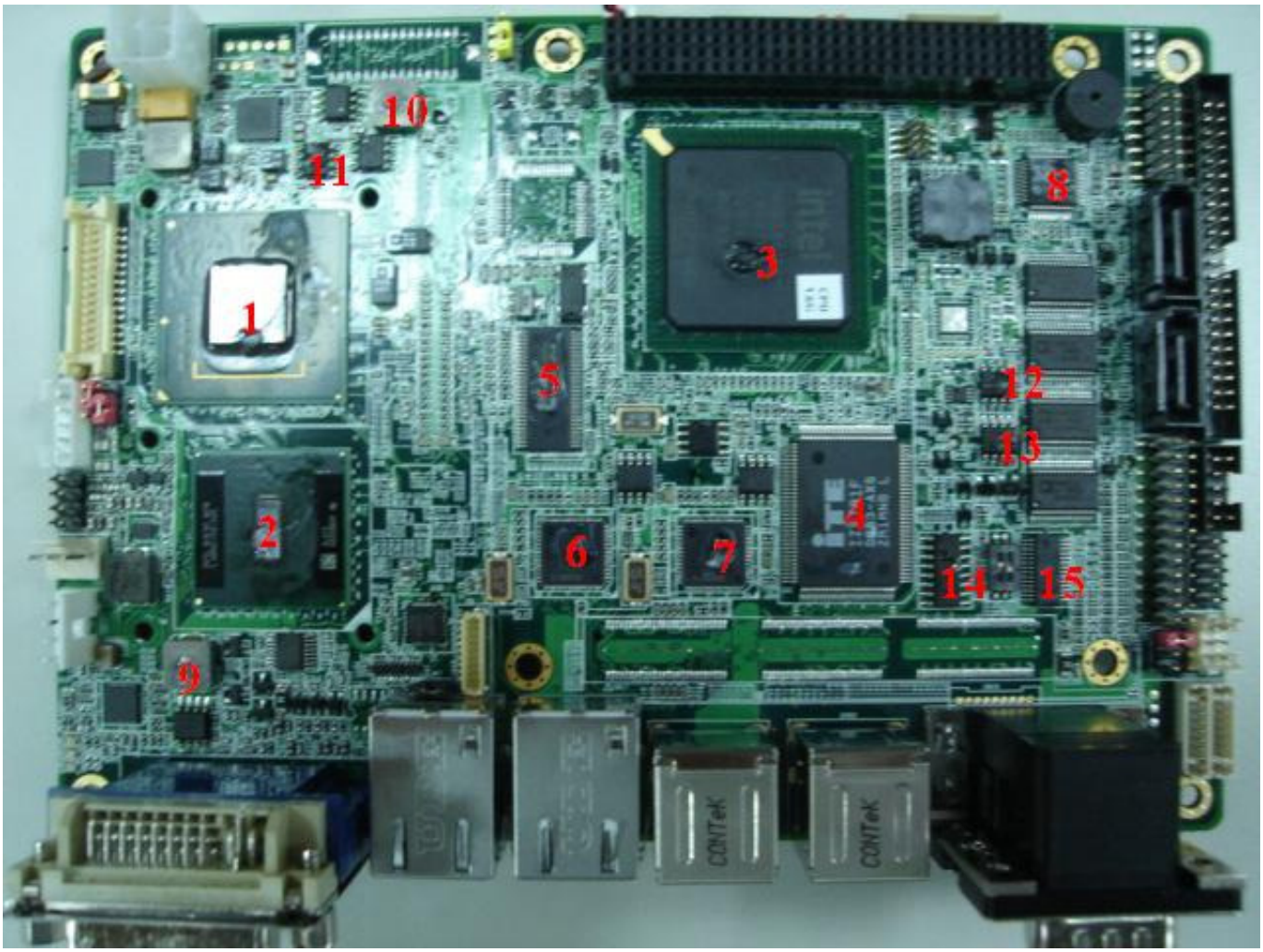
Temperature Profile Test:

Component Side-1:



Point	Position	Describe	Tc (℃)	Tm (25.℃)	Tm (60℃)	Note
1	U10	(TF)IC.SMD.Intel 945GSE Express Chipset.Intel.QG82945GSE SLB2R	105	66	101	
2	U28	(TF)Intel CPU.Diamondville.N270.1.6GHz/FSB 533MHz.FCBGA8.437Pins.STEPPING CODE:SLB73.AU80586GE025D	90	51.9	86.9	
3	U7	(TF)IC.SMD.Chipset ICH7M.Intel.NH82801GBM SL8YB	108	40.1	75.1	

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4	U26	(TF)IC.SMD.QFP128P.Super I/O w/4 COMs.ITE.IT8781F/AX-L	100	57.3	92.3	
5	U18	(TF)IC.SMD.TSSOP 64P.CLOCK GENERATOR.IDT.9LPRS501PGLF	100	52.8	87.8	
6	U29	(TF)IC.SMD.QFN 64P.PCI-E GigaBit Ethernet Chipset.Intel.WG82574L SLBA8	100	49.0	84	
7	U30	(TF)IC.SMD.QFN 64P.PCI-E GigaBit Ethernet Chipset.Intel.WG82574L SLBA8	100	43.2	78.2	
8	U4	(TF)IC.SMD LQFP 48Pin.6 Channel AC'97 Audio Codec.REALTEK.ALC655-LF	100	40.8	75.8	
9	L11	(TF)COIL.1uH.+/-20%.SMD.7.3*6.8*3.0mm.DCR=9mohm.Irms=11Amp.GOTREND.GSTC063P-1R0MN	125	49.6	84.6	
10	L1	(TF)COIL.1uH.+/-20%.SMD.7.3*6.8*3.0mm.DCR=9mohm.Irms=11Amp.GOTREND.GSTC063P-1R0MN	125	48.8	83.8	
11	Q5	(TF)PWR.SMD.SO8.N-Channel.30V.12A.ANPEC.APM4410KC-TRL	125	77.9	112.9	
12	U15	(TF)IC.SMD.SO8.RS-485 Transceiver.Analog.ADM485JRZ	100	34.0	69	
13	U20	(TF)IC.SMD.SO8.RS-485 Transceiver.Analog.ADM485JRZ	100	33.9	68.9	
14	U31	(TF)IC.SMD SO16.PHILIPS.74HCT123D	125	31.9	66.9	
15	U32	(TF)IC.SMD.QSOP 28P.IEEE 1284 Termination Network.CMD.PACSZ1284-04QR	115	31.9	66.9	

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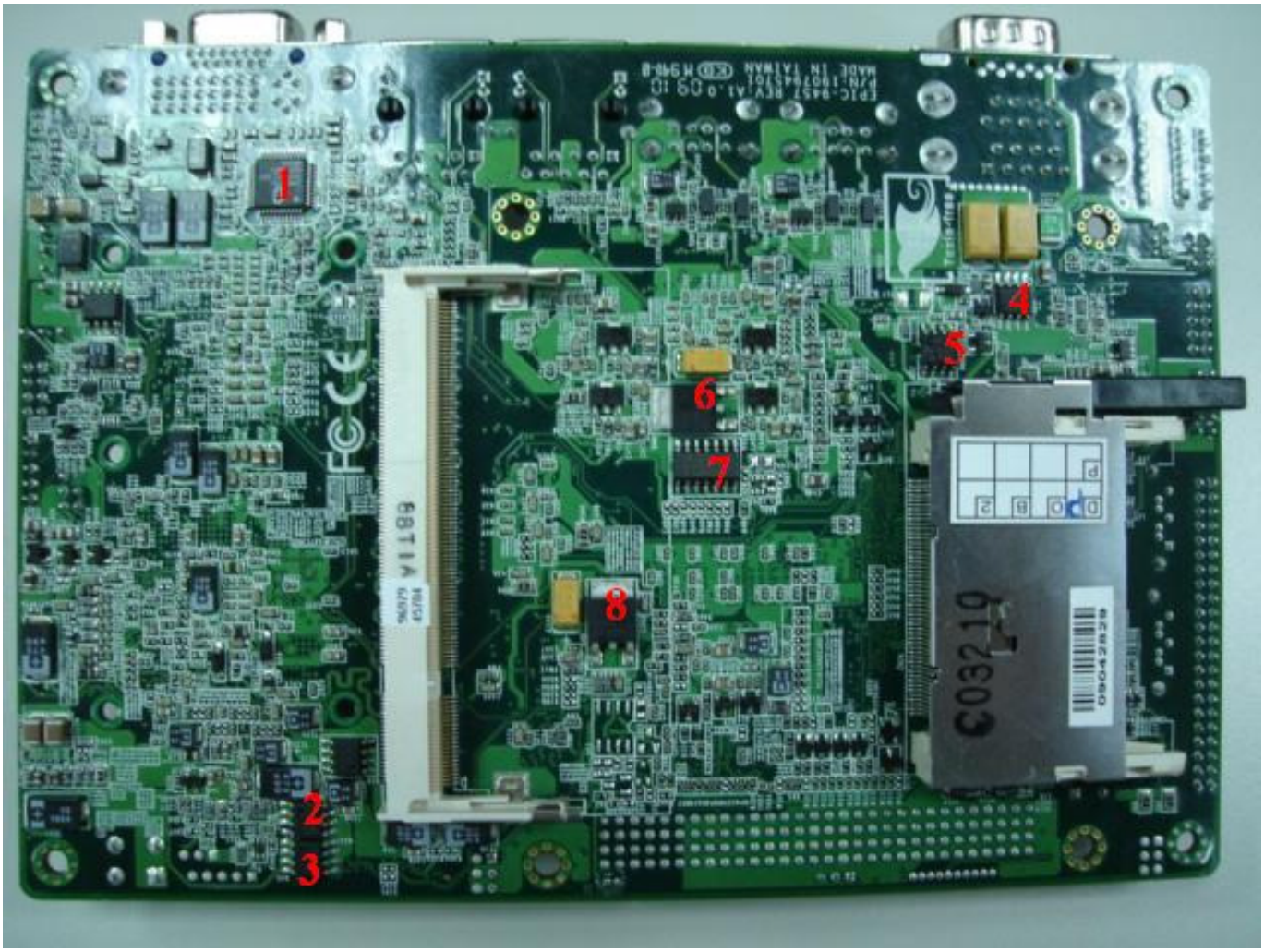
1.Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
2.Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification
3.The Tm value showed in BLUE words which meaning the MEASUREDoperation temperature within (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℃).The result is "Failed" and must be solved before the product launched into next design stage.

.Temperature Profile Test:

Component Side-2:



Point	Position	Describe	Tc (℃)	Tm (25℃)	Tm (60℃)	Note
1	U52	(TF)IC.SMD LQFP.48P.DVI Transmitter.CHRONTEL.CH7307C-DEF	125	54.0	89	
2	Q33	(TF)PWR.SMD.SO8.N-Channel.30V.12A.ANPEC.APM4420KC-TRL	125	49.4	84.4	

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3	Q32	(TF)PWR.SMD.SO8.N-Channel.30V.12A.ANPEC.APM4420KC-TRL	125	52.1	87.1	
4	Q53	(TF)PWR.SMD.SO-8.N-Channel.30V.10A.13.5mΩ.MOSFET.APEC.AP4410GM	125	33.5	69.5	
5	U51	(TF)IC.SO8 SMD.Voltage Detecting.System Resetting IC.MITSUBISHI.M51957A	115	36.1	71.1	
6	U46	(TF)REG.SMD.TO-252 5A Linear Regulator.Diodes.AP1084DL-13	150	48.9	83.9	
7	U44	(TF)IC.SMD SO.14Pin.PHILIPS.74LVC07AD-T	125	44.8	79.8	
8	U40	(TF)REG.SMD.TO-252 5A Linear Regulator.Diodes.AP1084DL-13	150	51.3	86.3	
9	DDR	DDR2 667 2GB HYNIXHY5PS1G831C(上)	95	51.3	86.3	
10	DDR	DDR2 667 2GB HYNIXHY5PS1G831C(下)	95	55.5	90.5	

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