ETX-821

Intel 852GM / ICH4 / Celeron M ETX Board

Thermal Image Analysis Report

Report No: 05E080018

Release Date: May 12, 2005

2005/05/12	*Wenyuan Yang*	*Jojo Lin*
Issue Stamp	**Manager**	**Test Engineer**

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Thermal Image Analysis

Ⅰ. Model Name: ETX-821 A0.1 with ECB-90A A1.0
(CPU: Onboard Intel® Celeron® 600MHz)
(BIOS: ETX-821 A0.1 BIOS Rev:046 (02/23/2005))

Ⅱ. Description: Intel 852GM / ICH4 / Celeron M ETX Board

Ⅲ. Date: May 12, 2005

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Jojo Lin

Ⅵ.Equipment:
1. TVS-100 series by NIPPON AVIONICS CO., LTD.

Ⅶ. Simulation Environment:
- Temperature: Component Side : 28.2℃
  Solder Side : N/A
- CPU: Onboard Intel® Celeron® 600MHz
- RAM: Kingston DDR333 256MB (0410PR V58C2256164SBT5) [SODDR-016]
- CF Card: N/A
- Application Software: Run HCT System Stress Test under Win2000 Professional
- Take Picture Time: After Power on 2 hours.

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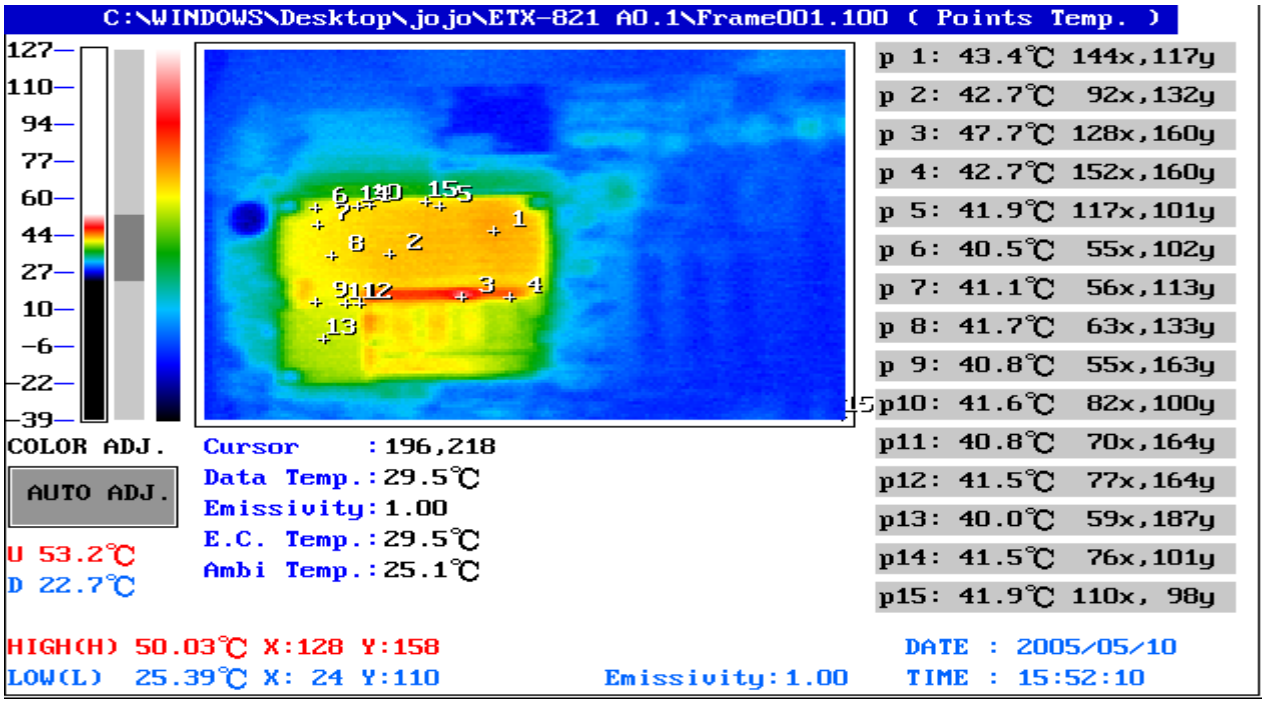
Temperature Profile Test:

Component Side (1) for ETX-821 A0.1 :



Point	Position	Describe	Tc (℃)	Tm (25℃)	Tm (60℃)	Note
1	U1	INTEL CPU.Celeron-M.ULV 600MHz.Zero Cache.mFCBGA479;EE-A041753;14S4060000;TWN	0 ~ 100	43.4	75.2	
2	U3	IC.SMD.BGA732.Chipset.NB82852GM.Intel.RG82852GM-SL6ZK;EE-A041752;14S4285201;TWN	110	42.7	74.5	
3	U2	IC.SMD.SSOP 56PIN.CLOCK GENERATOR.ICS.ICS952601;EE-A040124;14S3260100;TWN	115	47.7	79.5	
4	U12	Winbond/大騰/IC SMD PQFP 128Pin LPC to ISA Bridge Winbond W83626F;EE-A000447;14S4362600;TWN	N/A	42.7	74.5	
5	L5	震 元 /CEP125U-0R8/COIL.0.8uH.SMD.12.5*12.5*5.6mm.DCR=2.5mohm Idc=27.2Amp.;EE-A031124;1211100860;TWN	-60 ~ 110	41.9	73.7	
6	Y3	X'TAL SMD.25.000000MHz.6*3.5*1.1mm.2P.亞陶 .F62500007;EE-A011418;1231325050;TWN	-50 ~ 100	40.5	72.5	
7	U9	INTEL/世平/DA82562ET/SBC-776/IC.SMD.SSOP48 Chipset.INTEL.DA82562ET;EE-A000456;14S4256200;TWN	0 ~ 135	41.1	72.9	
8	U19	IC.SMD.IT8712F 128P Super I/O.ITE.IT8712F/GX;EE-A030386;14S4871201;TWN	-30 ~ 100	41.7	73.5	
9	TC15	KO-CAP.(15~1000)uF.(2~16)V.20%.SMD.KEMET.T520 Series;EE-A040450;118*6*****;TWN	N/A	40.8	72.6	
10	L10	INDUCTOR.3.3uH 3A.20%.SMD 2Pin.震 .SMTDR54-3R3M;EE-A020992;1211103360;TWN	-50 ~ 110	41.6	73.4	
11	Y2	EPSON/兆福/MC306(E-4-306-8)X`TAL SMD 32.768KHZ 4P/88.01.08;EE-A980439;1231332721;TWN	-70 ~ 115	40.8	72.6	
12	L8	VISHAY/IHLP2525CZRZ3R3M01/INDUCTOR.3.3uH.20%.SMD DCR=12mohmIsat=27A.VISHAY.IHLP2525CZRZ3R3M01;EE-A040140;1211103366;TWN	-85 ~ 155	41.5	73.5	
13	U4	INTEL/FW82801DB SL6DM/IC.SMD.Chipset ICH4.INTEL.FW82801DB SL6DM;EE-A031271;14S4280106;TWN	0 ~ 110	40.0	71.8	
14	U35	Dual N-Channel.SMD SO-8.2.5V MOSFET.APEC.AP9926M;EE-A030055;1315992601;TWN	-30 ~ 125	41.5	73.3	
15	U14	PWR.SMD SO8.N-Channel POWER MOSFET.FAIRCHILD.FDS6680S;EE-A021294;1315668011;TWN	-30 ~ 125	41.9	73.7	

1. Operation Temperature (℃):
Tc(Case Temp.) = Ta(Ambient Temp.)+/-30℃ = Tj(Junction Temp.)-/+25℃

Note: The description in red states which temperature is over the specification of the device.

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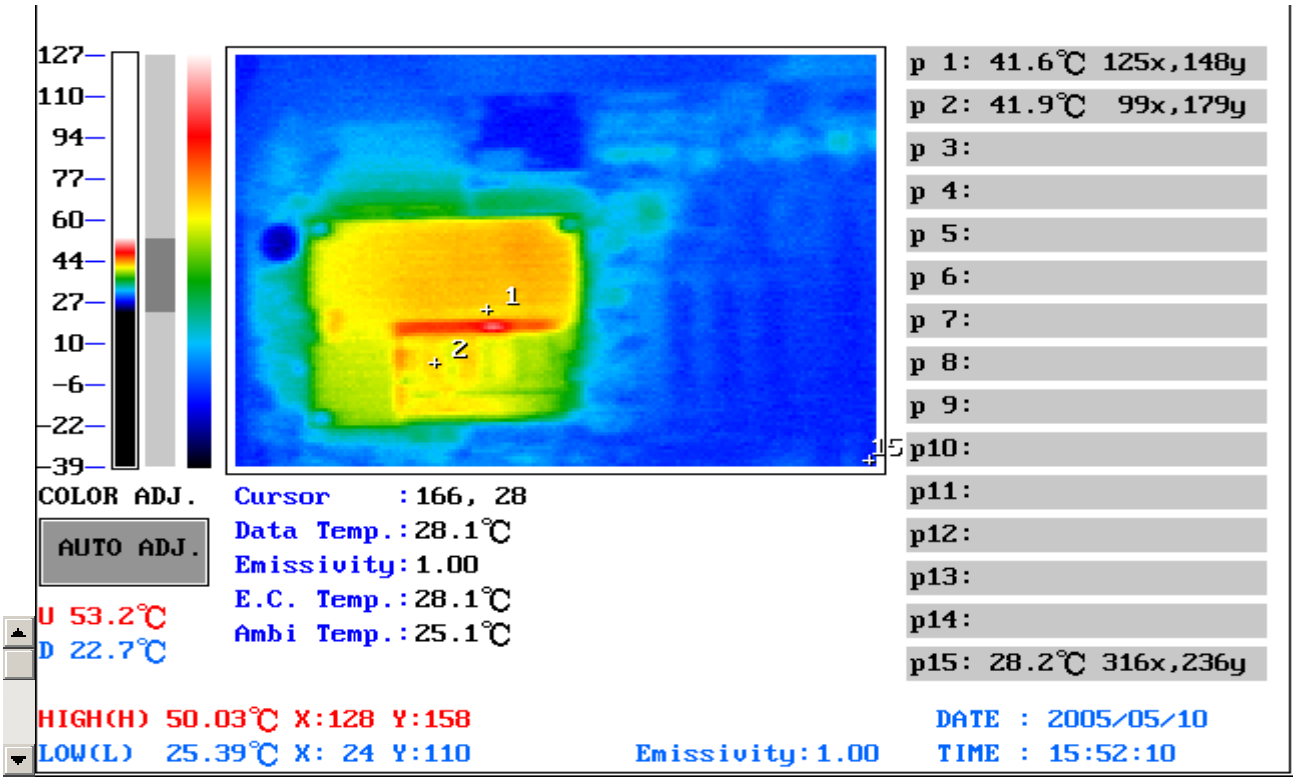
Temperature Profile Test:

Component Side (2) for ETX-821 A0.1 :



Point	Position	Describe	Tc (℃)	Tm (25℃)	Tm (60℃)	Note
1	Y1	X'TAL SMD.14.31818MHz.6*3.5*1.1mm.2P.亞陶. F61430006;EE-A011471;1231314350;TWN	-50 ~ 100	41.6	73.4	
2		Kingston DDR333 256MB (0410PR V58C2256164SBT5)	N/A	41.9	73.7	
15		Ambient Temperature		28.2	60	
1. Operation Temperature (℃): Tc(Case Temp.) = Ta(Ambient Temp.)+/-30℃ = Tj(Junction Temp.)-/+25℃						

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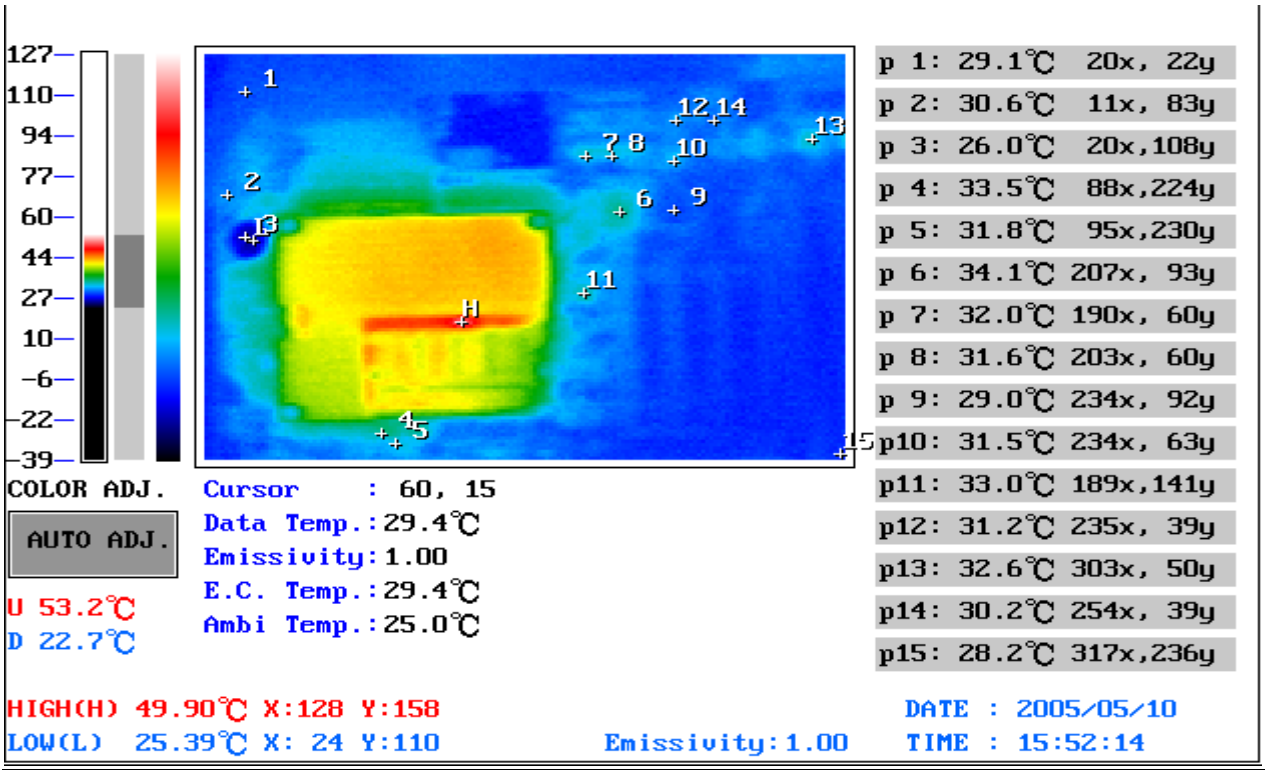
Temperature Profile Test:

Component Side (3) for ECB-901A A1.0 :



Point	Position	Describe	Tc (℃)	Tm (25℃)	Tm (60℃)	Note
1	CT13	EC.100uF.16V.20%.6.3*5mm.P=2.5mm DIP.Pinlength=3.5mm.SANYO.16MV100UAX	-85 ~ 135	29.1	60.9	
2	BZ1	Buzzer.DIP.40mA.85dB P-P=6.5mm.志豐.KC-1206	-70 ~ 115	30.6	62.4	
3	BT1	BATTERY.3V.220mA.SONY.CR2032		26.0	57.8	
4	U17	(TF)IC.SMD SSOP 28P.RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	-30 ~ 100	33.5	65.3	
5	U13	(TF) IC.SMD QSOP 28P.IEEE 1284 Termination Network.CMD.PACS1284-04QR	-30 ~ 100	31.8	63.6	
6	U7	IC.SMD.128P QFP Super I/O.Winbond.W83977EF-AW(H)	-30 ~ 100	34.1	65.9	
7	U6	(TF)IC.SMD SSOP 28P.RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	-30 ~ 100	32.0	63.8	
8	U2	(TF) IC.SMD QSOP 28P.IEEE 1284 Termination Network.CMD.PACS1284-04QR	-30 ~ 100	31.6	63.4	
9	OS1	(TF)OSC.24.000MHz.HALF.DIP.4.CMOS 5V 50PPM.仕野.OOO240H565-50	-40 ~ 100	29.0	60.8	
10	U22	IC.SMD.TQFP44.CS:B250h.DUAL 7 SEGMENT DECODE.for ECB-901A.EPM3032ATC44-10	-95 ~ 165	31.5	63.3	
11	Q6	REG.SMD.5V TO 3.3V 5A TO-263.LINFINY.LX8384-00CDDT	125	33.0	64.8	
12	U9	IC.SMD.SOP.HITACHI.HD74LS32	-50 ~ 105	31.2	63.0	
13	U26	GAL.PLCC.20P Blank.LATTICE.GAL16V8D-25LJ	-85 ~ 155	32.6	64.4	
14	U8	IC.SMD.TSSOP.PHILIPS.74HCT244	-70 ~ 155	30.2	62.0	
15		Ambient Temperature		28.2	60	

1. Operation Temperature (℃):
   Tc(Case Temp.) = Ta(Ambient Temp.)+/-30℃ = Tj(Junction Temp.)-/+25℃

Note: The description in red states which temperature is over the specification of the device.

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Temperature Profile Test:

Solder Side for ETX-821 A0.1 with ECB-901A A1.0 :

1. We can not measure the chip temperature of the ETX-821's solder side because the ECB-901A A1.0 had blocked it
2. There are no any chips in the solder side of ECB-901A A1.0

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