HSB-811P A0.1

Intel Pentium M PICMG/PCI Half-Size SBC

Thermal Image Analysis Report

Report No: 05I080003

Release Date: February 18, 2005

2005/02/18	*Wenyuan Yang*	*Jojo Lin*
Issue Stamp	**Manager**	**Test Engineer**

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Thermal Image Analysis

Ⅰ. **Model Name: HSB-811P A0.1**
(CPU: Intel Celeron-M CPU, FSB:400MHz,On board 600MHz /ZC CPU)
(BIOS: HSB-811P BIOS Rev:0.1 (12/24/2004))

Ⅱ. **Description: Intel Pentium M PICMG/PCI Half-Size SBC**

Ⅲ. **Date: February 18, 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 23.6℃**
  Solder Side 23.6℃
- **CPU: Intel Celeron-M CPU, FSB:400MHz,On board 600MHz /ZC CPU**
- **RAM: ELPIDA DDR333 256MB DD2516AKTA-6B [SODDR-006]**
- **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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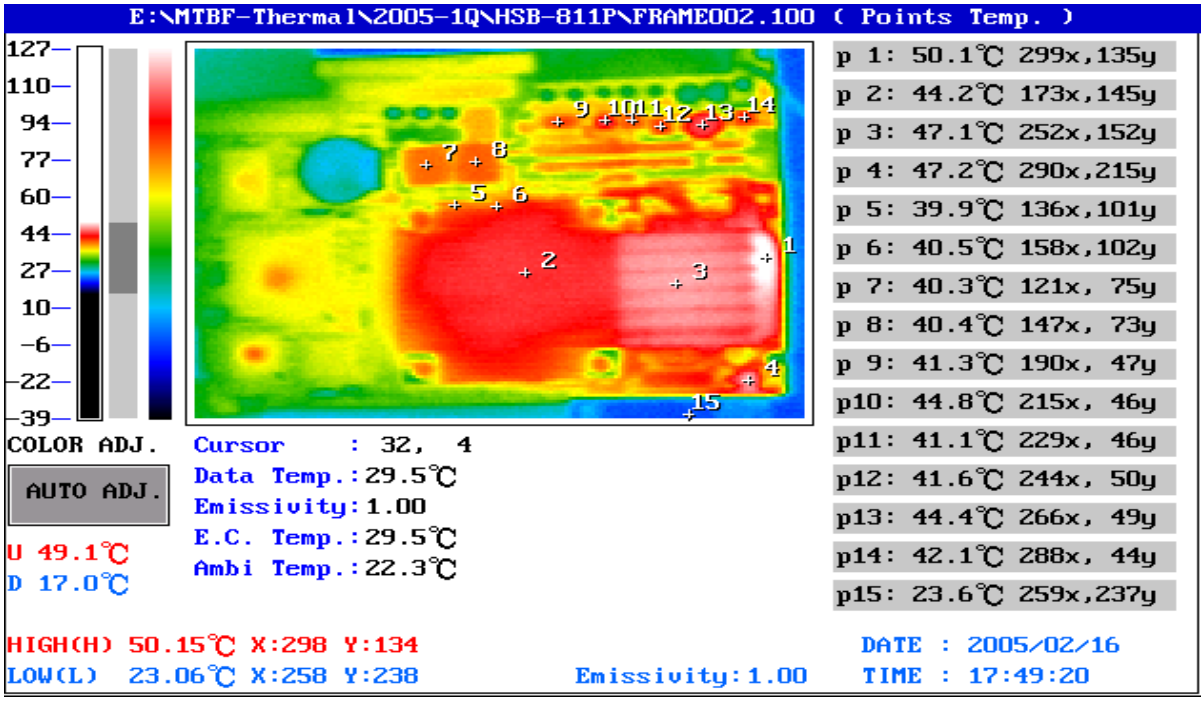
Temperature Profile Test:

Component Side :



Point	Position	Describe	Ts	Tm (25℃)	Tm (60℃)	Note
1	Upper right of U8	IC.SMD.BGA732.Chipset.NB82852GM.Intel.RG82852GM-SL6ZK;EE-A041752;14S 4285201;TWN	110℃	50.1℃	86.5℃	
2	Center of CPU1	INTEL CPU.Celeron-M.ULV 600MHz.Zero Cache.mFCBGA479;EE-A041753;14S4060000;TWN	0℃~100℃	44.2℃	80.6℃	
3	Center of U8	IC.SMD.BGA732.Chipset.NB82852GM.Intel.RG82852GM-SL6ZK;EE-A041752;14S 4285201;TWN	110℃	47.1℃	83.5℃	
4	Q3	REG.SMD.TO-252 5A Linear Regulator.ATC.AP1084D-ADJ;EE-A011431;1314108412;TWN	0℃~150℃	47.2℃	83.6℃	
5	C110	Panasonic/EEFSX0D221YR/SP CAP.220uF.2V.-35~+10%.D(7.3*4.3*1.9mm).9mOhm SMD.Panasonic.EEFSX0D221YR;EE-A040311;1189922180;TWN	-40℃~105℃	39.9℃	76.3℃	
6	C110	Panasonic/EEFSX0D221YR/SP CAP.220uF.2V.-35~+10%.D(7.3*4.3*1.9mm).9mOhm SMD.Panasonic.EEFSX0D221YR;EE-A040311;1189922180;TWN	-40℃~105℃	40.5℃	76.9℃	
7	L9	COIL.1.0uH.SMD.12.8*12.8*6.5mm.DCR=3mohm Idc=25Amp.新世代 ESPI-1206-1R0M;EE-A050013;121110010H;TWN	-25℃~100℃	40.3℃	76.7℃	
8	L10	COIL.1.0uH.SMD.12.8*12.8*6.5mm.DCR=3mohm Idc=25Amp.新世代 ESPI-1206-1R0M;EE-A050013;121110010H;TWN	-25℃~100℃	40.4℃	76.8℃	
9	U1	SEMTECH/SC1476ITSTR/IC.SMD TSSOP-38 IMVP4.Dual Phase PWM Controller.SEMTECH.SC1476;EE-A031099;14S4147600;TWN	74℃	41.3℃	77.7℃	+3.7℃
10	U34	IC.SMD SOP.8Pin Switching PWM Controller.IR.IRU3037CS;EE-A020732;14S2303700;TWN	0℃~125℃	44.8℃	81.2℃	
11	Q25	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD412;EE-A041633;1315041210;TWN	-55℃~175℃	41.1℃	77.5℃	
12	Q26	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD414;EE-A041634;1315041410;TWN	-55℃~175℃	41.6℃	78℃	
13	L5	COIL.3.3uH 6.4A.20%.SMD.永馳.YC0804-3R3;EE-A041504;1211103367;TWN	-25℃~85℃	44.4℃	80.8℃	
14	Q1	REG.SMD TO-252-5.2A Bus Termination Regulator.RichTek.RT9173BCL5;EE-A041772;1314917313;TWN	-40℃~125℃	42.1℃	78.5℃	
15		Ambient Temperature		23.6℃	60℃	

1. Operation Temperature (℃):
Ts = Defined by component specification ; Tm=Measured by QE

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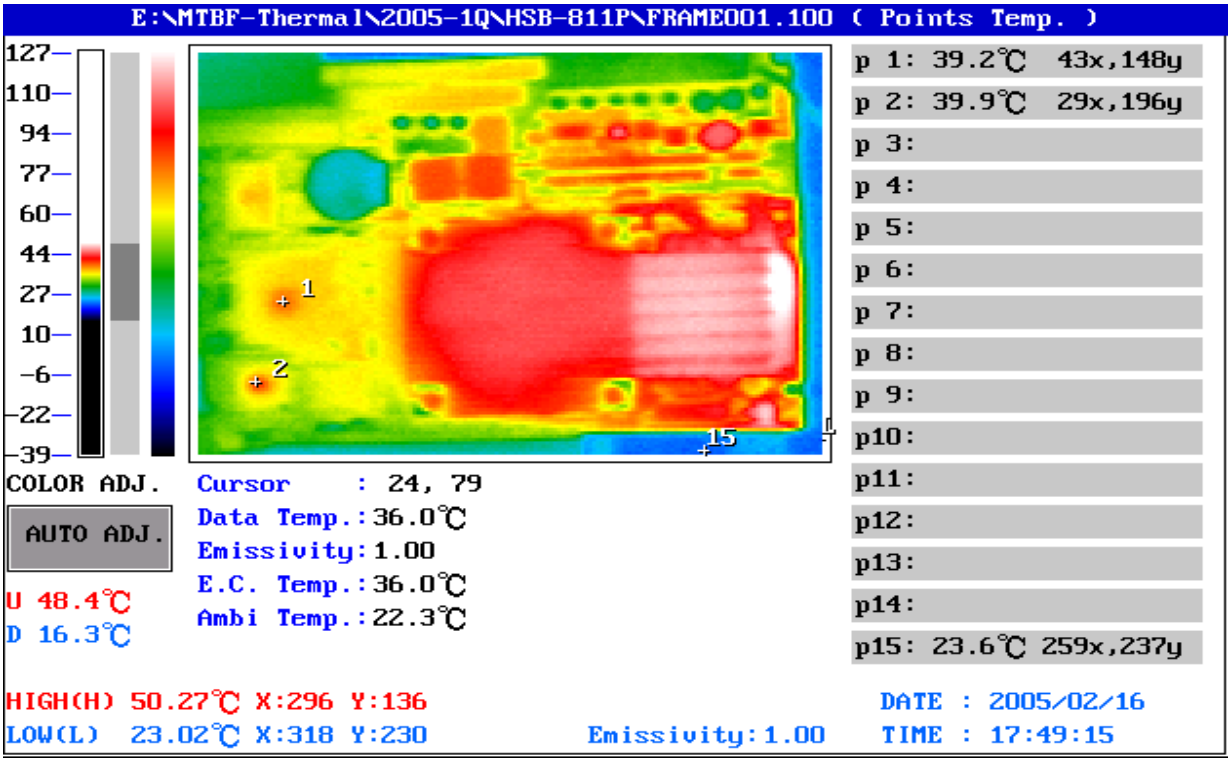
Note: The description in red states which temperature is over the specification of the device.

Temperature Profile Test:

Component Side :



Point	Position	Describe	Ts	Tm (25℃)	Tm (60℃)	Note
1	U5	INTEL/FW82801DB SL6DM/IC.SMD.Chipset ICH4.INTEL.FW82801DB SL6DM;EE-A031271;14S4280106;TWN	0℃~110℃	39.2℃	75.6℃	
2	U9	IC.SMD.BGA 196P Ethernet Chipset.Intel.82562EZ	0℃~135℃	39.9℃	76.3℃	
15		Ambient Temperature		23.6℃	60℃	

1. Operation Temperature (℃):
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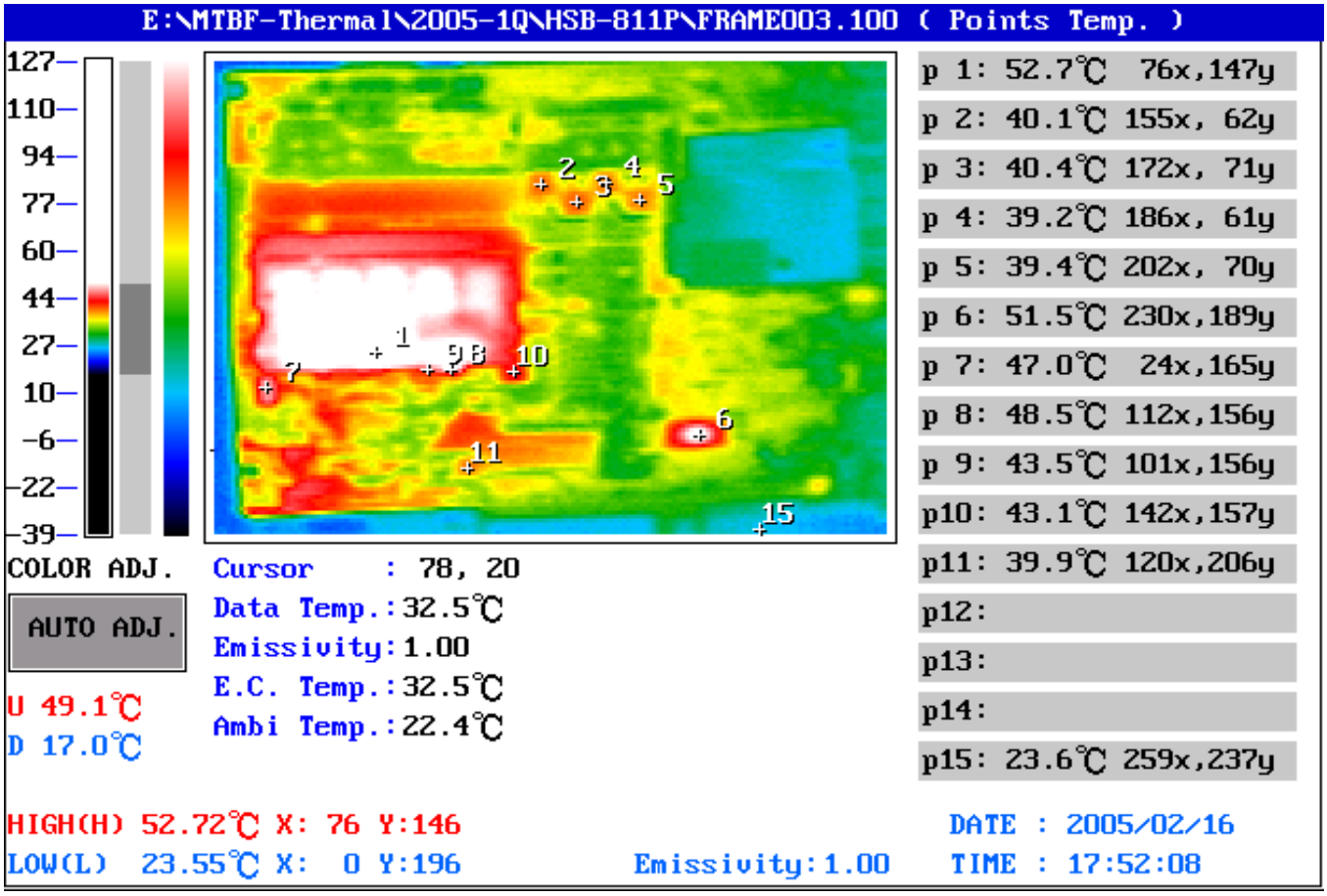
Temperature Profile Test:

Solder Side :



Point	Position	Describe	Ts	Tm (25℃)	Tm (60℃)	Note
1	DIMM0	ELPIDA DDR333 256MB DD2516AKTA-6B [SODDR-006]	0℃~70℃	52.7℃	89.1℃	+19.1℃
2	Q9	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD412;EE-A041633;1315041210;TWN	-55℃~175℃	40.1℃	76.5℃	
3	Q12	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD414;EE-A041634;1315041410;TWN	-55℃~175℃	40.4℃	76.8℃	
4	Q8	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD412;EE-A041633;1315041210;TWN	-55℃~175℃	39.2℃	75.6℃	
5	Q11	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD414;EE-A041634;1315041410;TWN	-55℃~175℃	39.4℃	75.8℃	
6	U30	IC.SMD.SSOP 48Pin Clock Generator.ICS.ICS952607;EE-A041549;14S3260700;TWN	0℃~70℃	51.5℃	87.9℃	+17.9℃
7	C169	Panasonic/EEFSX0D221YR/SP CAP.220uF.2V.-35~+10%.D(7.3*4.3*1.9mm).9mOhm SMD.Panasonic.EEFSX0D221YR;EE-A040311;1189922180;TWN	-40℃~105℃	47.0℃	83.4℃	
8	U27	PWR.SMD SO-8.DUAL N-Channel 30(D-S) MOSFET.VISHAY.SI4920DY;EE-A041765;1315492010;TWN	-55℃~150℃	48.5℃	84.9℃	
9	U28	SEMTECH/SC338IMSTR/IC.SMD MSOP-10.Dual Linear FET Controller.SEMTECH.SC338IMSTR;EE-A031096;14S3033800;TWN	-40℃~150℃	43.5℃	79.9℃	
10	C110	Panasonic/EEFSX0D221YR/SP CAP.220uF.2V.-35~+10%.D(7.3*4.3*1.9mm).9mOhm SMD.Panasonic.EEFSX0D221YR;EE-A040311;1189922180;TWN	-40℃~105℃	43.1℃	79.5℃	
11	U31	TEMIC/台瑪/SI9953DY-T1/SI9953DY Dual P-channel 4.5V(SO-8)MOSFET/87.12.31;EE-A980446;1315995310;TWN	-55℃~150℃	39.9℃	76.3℃	
15		Ambient Temperature		23.6℃	60℃	

1. Operation Temperature (℃):
Ts = Defined by component specification ; Tm1=Measured by QE

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

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