AAEON®

Industrial Computing Platform Partner

HSB-813S

Thermal Image Analysis Report

Report No:06I080002

Release Date: 08 / 08 / 2006

2006-08-08	Wenyuan Yang	Andrew Ku
Issue Stamp	**Manager**	**Test Engineer**

Thermal Image Analysis

Ⅰ. Model Name: HSB-813S A0.1

Ⅱ. Description: PCISA Half-Size SBC

Ⅲ. Date: 08 / 08 / 2006

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by: Andrew Ku

Ⅵ.Equipment:

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

Ⅶ. Simulation Environment:

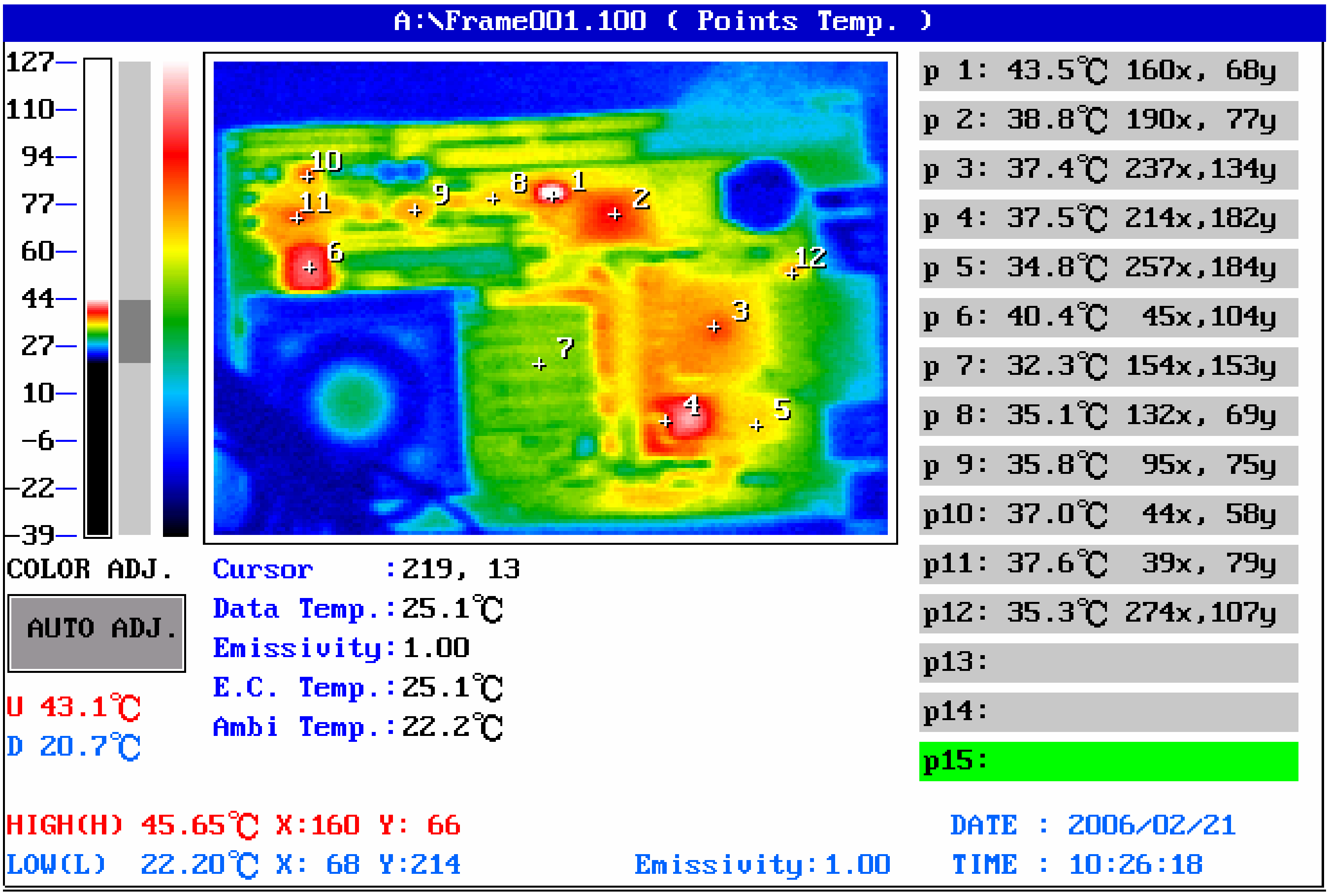
- **Temperature:**

  Component Side – 1: 22.2degrees C
  Solder Side – 2: 22.4 degrees C
- **System Configuration :**

  BIOS ver :0.2
  CPU: Intel Cleron M 1.20GHz (100x12.0)
  Memory: NANYA / NT5DS64M8AF-75B / SODDR-266 /1GB
  HDD: MAXTOR 80GB
- **Application Software: Windows 2000 run HCT9.5**
- **Take Picture Time: After power on 2 hours .**

Temperature Profile Test:

Component Side – 1:



A:\Frame001.100 (Points Temp.)

p 1: 43.5℃ 160x, 68y
p 2: 38.8℃ 190x, 77y
p 3: 37.4℃ 237x,134y
p 4: 37.5℃ 214x,182y
p 5: 34.8℃ 257x,184y
p 6: 40.4℃ 45x,104y
p 7: 32.3℃ 154x,153y
p 8: 35.1℃ 132x, 69y
p 9: 35.8℃ 95x, 75y
p10: 37.0℃ 44x, 58y
p11: 37.6℃ 39x, 79y
p12: 35.3℃ 274x,107y
p13:
p14:
p15:

COLOR ADJ.
AUTO ADJ.
U 43.1℃
D 20.7℃

Cursor :219, 13
Data Temp.:25.1℃
Emissivity:1.00
E.C. Temp.:25.1℃
Ambi Temp.:22.2℃

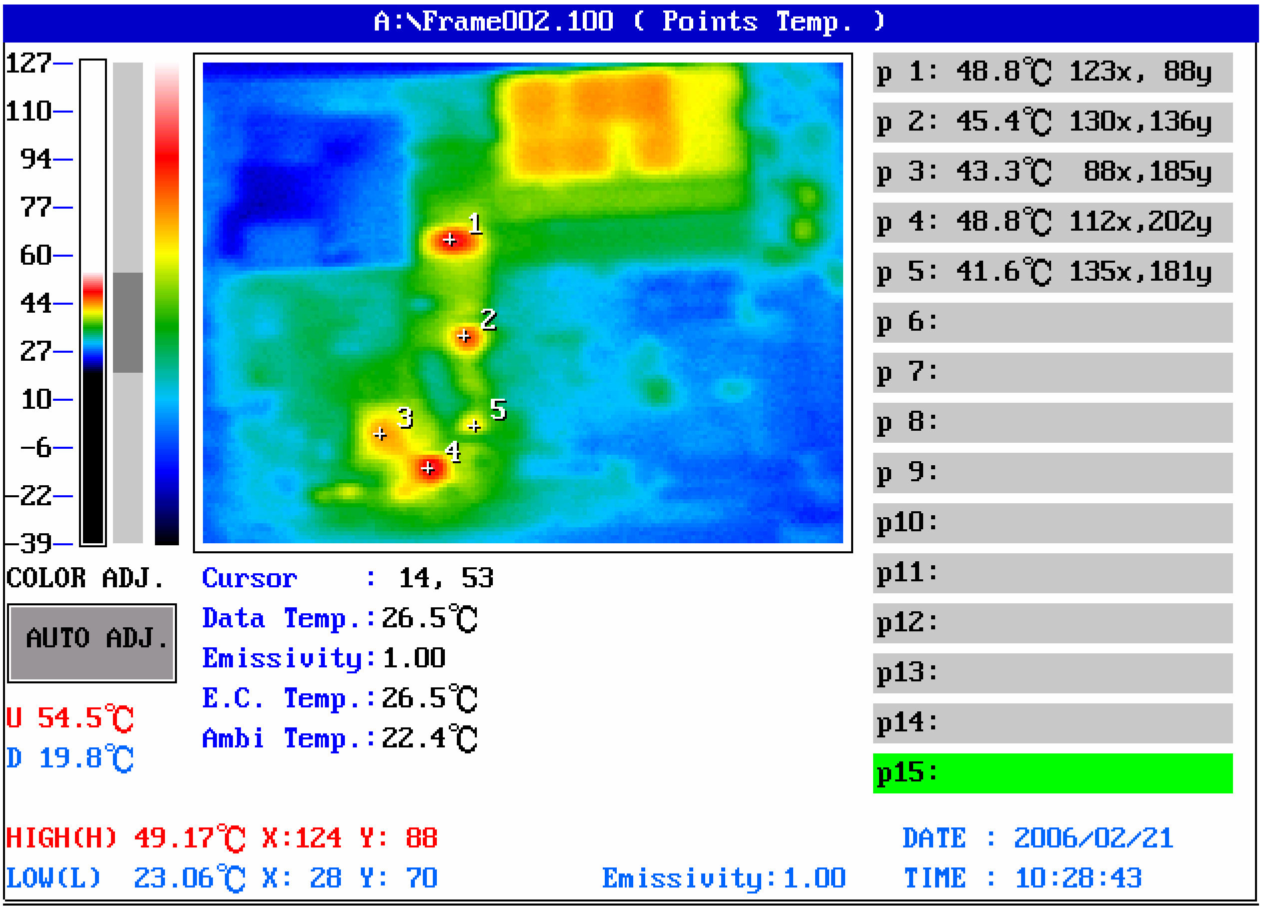
HIGH(H) 45.65℃ X:160 Y: 66
LOW(L) 22.20℃ X: 68 Y:214
Emissivity:1.00
DATE : 2006/02/21
TIME : 10:26:18

Point	Position	Describe	Tc	Tm (25℃)	Tm (60℃)	Note
1	U5	IC.SMD SSOP.20Pin RS-232 Driver&Receivers.TI.GD75232DBR		43.5℃	78.5℃	
2	U10	IC.SMD.QFP128P Super I/O.ITE.IT8712F-A/IX-L	-30℃~100℃	38.8℃	73.8℃	
3	U14	(TF)IC.SMD.Chipset ICH4.INTEL.NH82801DB SL8DE		37.4℃	72.4℃	
4	U20	IC.SMD TFBGA.160P.PCI to ISA Bridge Chip.ITE.IT8888G-L	-10℃~95℃	37.5℃	72.5℃	
5	U21	IC.SMD BGA 196P.GigaBit Ethernet Chipset.INTEL.LU82541P	-30℃~100℃	34.8℃	69.8℃	
6	L7	COIL.1.0uH.SMD.12.8*12.8*6.5mm.DCR=3mohm Idc=25Amp.新世代.ESPI-1206-1R0M	-0℃~125℃	40.4℃	75.4℃	
7	U16	IC.SMD.Chipset MONTARA.INTEL.RG82855GME		32.3℃	67.3℃	
8	U4	IC.SMD SSOP 28P.RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	-30℃~100℃	35.1℃	70.1℃	
9	L6	COIL.3.3uH 6.4A.20%.SMD.永馳.YC0804-3R3	-25℃~85℃	35.8℃	70.8℃	
10	U1	IC.SMD SOP.8Pin Switching PWM Controller.IR.IRU3037CSPbF	-25℃~100℃-	37.0℃	72.0℃	
11	U8	IC.SMD.TSSOP 28P.IMVP4 Single Phase PWM.SEMTECH.SC451ITSTR		37.6℃	72.6℃	
12	U13	IC.SMD.SOP.TI.7407		35.3℃	70.3℃	
13						
14						
15		Ambient Temperature		22.2℃		

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

Thermal Image Analysis

Component Side –2:



A:\Frame002.100 (Points Temp.)

p 1: 48.8℃ 123x, 88y
p 2: 45.4℃ 130x,136y
p 3: 43.3℃ 88x,185y
p 4: 48.8℃ 112x,202y
p 5: 41.6℃ 135x,181y
p 6:
p 7:
p 8:
p 9:
p10:
p11:
p12:
p13:
p14:
p15:

COLOR ADJ.
AUTO ADJ.
U 54.5℃
D 19.8℃

Cursor : 14, 53
Data Temp.:26.5℃
Emissivity:1.00
E.C. Temp.:26.5℃
Ambi Temp.:22.4℃

HIGH(H) 49.17℃ X:124 Y: 88
LOW(L) 23.06℃ X: 28 Y: 70
Emissivity:1.00
DATE : 2006/02/21
TIME : 10:28:43

Point	Position	Describe	Tc	Tm (25℃)	Tm (60℃)	Note
1	U32	IC.SMD.SSOP 48Pin Clock Generator.ICS.ICS952607FLF-T	-30℃~100℃	48.8℃	83.8℃	
2	Q16	PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G	-25℃~150℃	45.4℃	80.4℃	
3	U33	IC.PCI to Serial ATA Controller.Silicon Image.Sil3512ECTU128		43.3℃	78.3℃	
4	Q20	REG.SMD.TO-252 5A Linear Regulator.ATC.AP1084DL-ADJ	-25℃~150℃	48.8℃	83.8℃	
5	Q21	REG.SMD.TO-252 5A Linear Regulator.ATC.AP1084DL-ADJ	-25℃~150℃	41.6℃	76.6℃	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15		Ambient Temperature		22.4℃		

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