



AAEON Technology INC.
ISO-9001/ISO-14001 Certified
Industrial Automation PCs

SBC-780 A0.2

Thermal Image Analysis Report

Release Date: Apr. 25, 2003

2003-04-25

Issue Stamp

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Test Engineer

Thermal Image Analysis

. **Model Name:** SBC-780 Rev.A0.2 (BIOS:0.2)

. **Description:** Full-Size CPU Card (ATX Power)

. **Date:** Apr. 25, 2003

. **Measure Site:** AAEON DV Dept.

. **Issued by :** Rex Chang

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

. **Simulation Environment:**

Temperature: 25.0degrees C

CPU: Intel Pentium 1.4GHz

RAM: 512MB SEITEC PM72V56841CT-6 SDRAM PC133

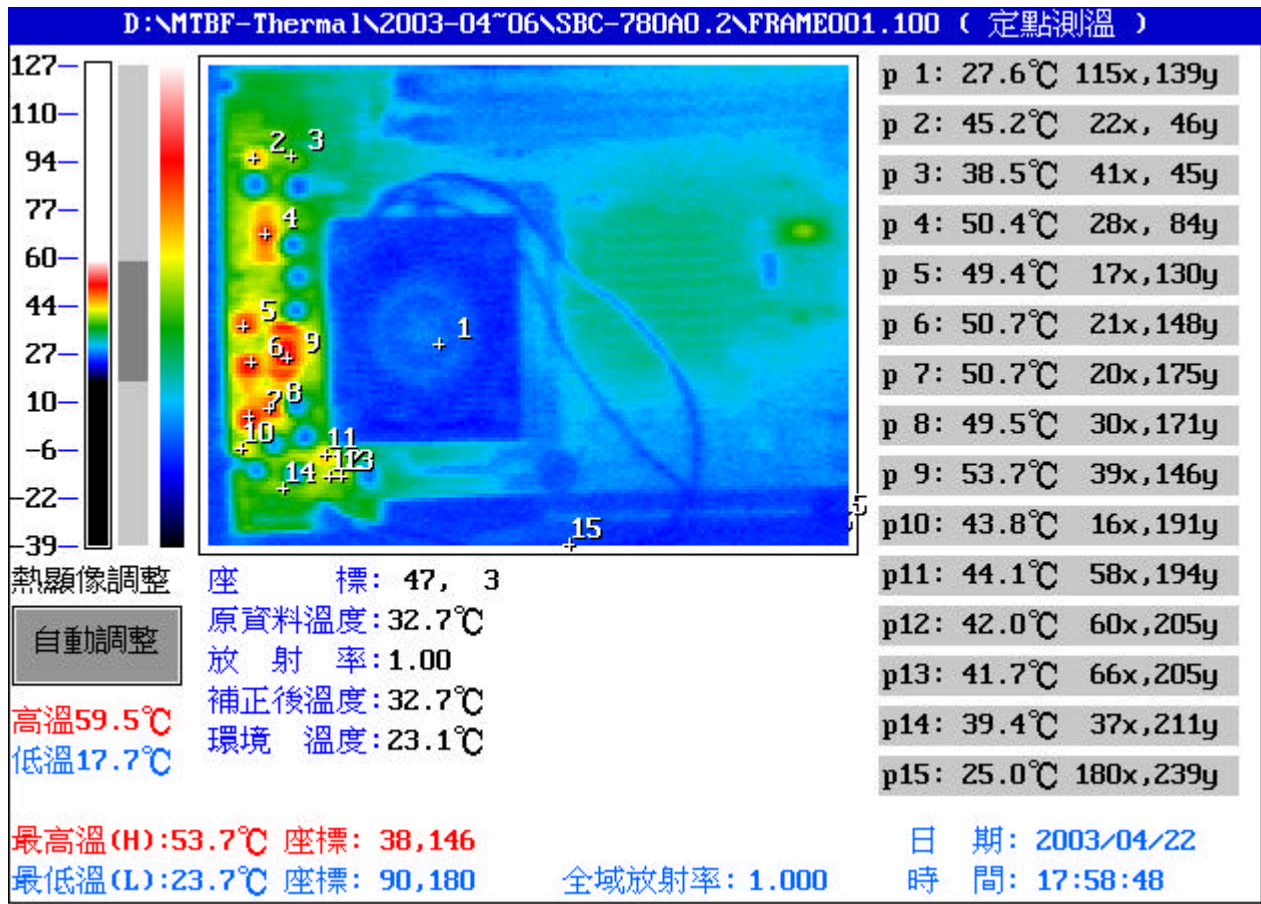
Compact Flash : San Disk 32MB

Application Software: QAPlus5.5

Take Picture Time: Power on 30 minutes after

Temperature Profile Test:

Component Side - 1:



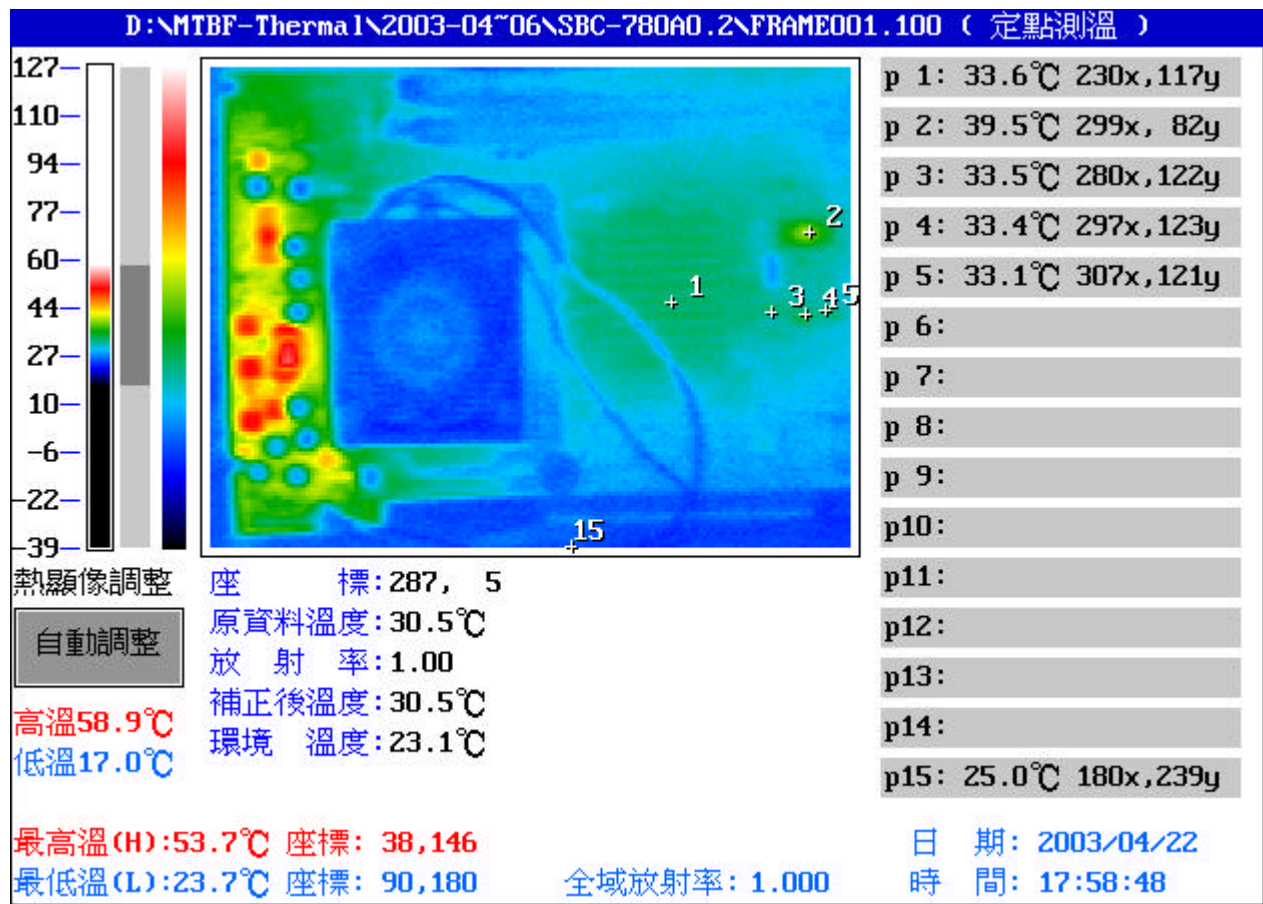
| Point | Position | Describe | Ts | Tm | Note |
|-------|----------|---|----|------|------|
| 1 | U7 | Pentium 1.4GHz + Cooler | | 27.6 | |
| 2 | Q1 | PWR.SMD TO-252.N-Channel logic level MOSFET.FAIRCHILD.FDD6030L | | 45.2 | |
| 3 | Q3 | REG.SMD.TO-252 3A Linear Regulator.AMS.AMS1085CD | | 38.5 | |
| 4 | U3 | IC.SMD.SOIC 24Pin DC-DC Controller.FAIRCHILD.FAN5056V85 | | 50.4 | |
| 5 | Q4 | PWR.SMD TO-252.30V N-Channel Power SyncFET.FAIRCHILD.FDD6680S | | 49.4 | |
| 6 | Q7 | PWR.SMD TO-252.30V N-Channel Power SyncFET.FAIRCHILD.FDD6680S | | 50.7 | |
| 7 | Q8 | PWR.SMD TO-252.30V N-Channel Power MOSFET.FAIRCHILD.FDD6680A | | 49.5 | |
| 8 | Q9 | PWR.SMD TO-252.30V N-Channel Power MOSFET.FAIRCHILD.FDD6680A | | 53.7 | |
| 9 | L1 | COIL.2.5uH.DIP Wire Size 0.7*3Pmm.52 材 3Wire*8 30Amp.震元.TC 5052-2R5M-UL | | 43.8 | |
| 10 | C15 | MCC.1uF.16V.+80/-20%.0805 SMD | | 44.1 | |
| 11 | Q13 | PWR.SMD TO-252.N-Channel logic level MOSFET.FAIRCHILD.FDD6030L | | 42.0 | |
| 12 | Q14 | NPN.SMD.3P CASE318-07.MOTOROL.2N3904 TO-236AB | | 41.7 | |
| 13 | Q15 | PNP.SMD.2N3906 3P (TO-236AB).MOTOROL.MMB T3906LT1 SOT-23 | | 39.4 | |
| 14 | L2 | COIL.1uH.DIP Wire Size 1.2mm.52 材 1Wire*4 10Amp.震元.TC5052-1R0M-UL | | 39.4 | |
| 15 | | The Room Temperature | | 25.0 | |

1. Operation Temperature ():

Ts = Defined by component specification ; Tm = Measured by DV

Temperature Profile Test:

Component Side - 2:



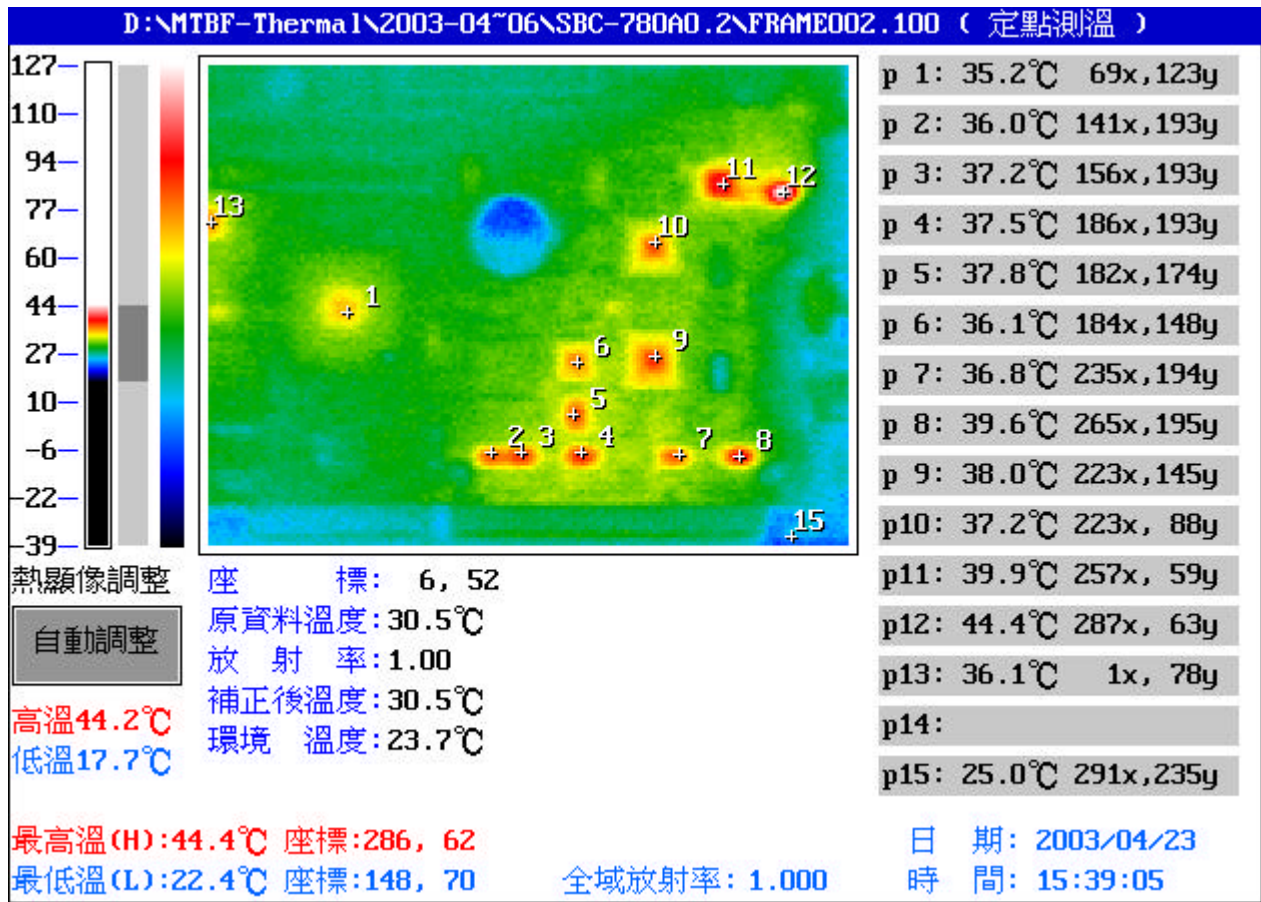
| Point | Position | Describe | Ts | Tm | Note |
|-------|----------|---|----|------|------|
| 1 | U8 | IC.SMD.552P BGA North Bridge.VIA.VT8606 | | 33.6 | |
| 2 | U13 | IC.SMD SSOP.48Pin Clock Generator.CYPRESS.CY28316 | | 39.5 | |
| 3 | U11 | IC.SMD.PHILIPS.74LVC14DT | | 33.5 | |
| 4 | U12 | IC.SMD SOP.8P Clock Output Buffer.ICS.ICS9112-16 | | 33.4 | |
| 5 | U14 | IC.SMD SOP.8P Clock Output Buffer.ICS.ICS9112-16 | | 33.1 | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | The Room Temperature | | 25.0 | |

1. Operation Temperature ():

Ts = Defined by component specification ; Tm = Measured by DV

Temperature Profile Test:

Component Side - 3:



| Point | Position | Describe | Ts | Tm | Note |
|-------|----------|--|----|------|------|
| 1 | U18 | IC.SMD.BGA South Bridge.VIA.VT82C686B | | 35.2 | |
| 2 | U26 | IC.SMD SSOP 20Pin.TI.SN74ALS245ADBLE | | 36.0 | |
| 3 | U27 | IC.SMD SSOP 20Pin.TI.SN74ALS245ADBLE | | 37.2 | |
| 4 | U33 | IC.SMD SSOP 20Pin.TI.SN74ALS245ADBLE | | 37.5 | |
| 5 | U32 | IC.SMD SSOP 20Pin.TI.SN74ALS245ADBLE | | 37.8 | |
| 6 | U31 | IC.SMD TQFP 44P.CS:C5E4Ch.GENE-6310.LATTICS.M4A3 -64/32 | | 36.1 | |
| 7 | U39 | IC.SMD SSOP 20Pin.TI.SN74ALS245ADBLE | | 36.8 | |
| 8 | U41 | IC.SSOP.TI.74F244 | | 39.6 | |
| 9 | U36 | IC.SMD.LQFP 100P PCI Ethernet Chip.RELTEK.RTL8139DL | | 38.0 | |
| 10 | U34 | IC.SMD.LQFP 100P PCI Ethernet Chip.RELTEK.RTL8139DL | | 37.2 | |
| 11 | U43 | IC.SMD.AC'97 Audio Codec.AVANCE LOGIC.ALC201 | | 39.9 | |
| 12 | Q36 | REG.DIP(CASE29).Voltage Regulators.MOTOROLA.MOMC78L05ACPRP | | 44.4 | |
| 13 | U13 | IC.SMD SSOP.48Pin Clock Generator.CYPRESS.CY28316 | | 36.1 | |
| 14 | | | | | |
| 15 | | The Room Temperature | | 25.0 | |

1. Operation Temperature ():

Ts = Defined by component specification ; Tm = Measured by DV