

# COM-45SP

Intel GM45 + ICH9-M COM Express Board

## Thermal Image Analysis Report

Report NO: 08E080036

Release Date: Oct. 21, 2008

2008/10/21

Issue Stamp

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Manager

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# Thermal Image Analysis

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I . Model Name: COM-45SP A0.2

II . Description: Intel GM45 + ICH9-M COM Express Board

III . Date: Oct. 21, 2008

IV. Measure Site: AAEON QE Dept.

V. Issued by : Tina Wang

VI. Equipment:

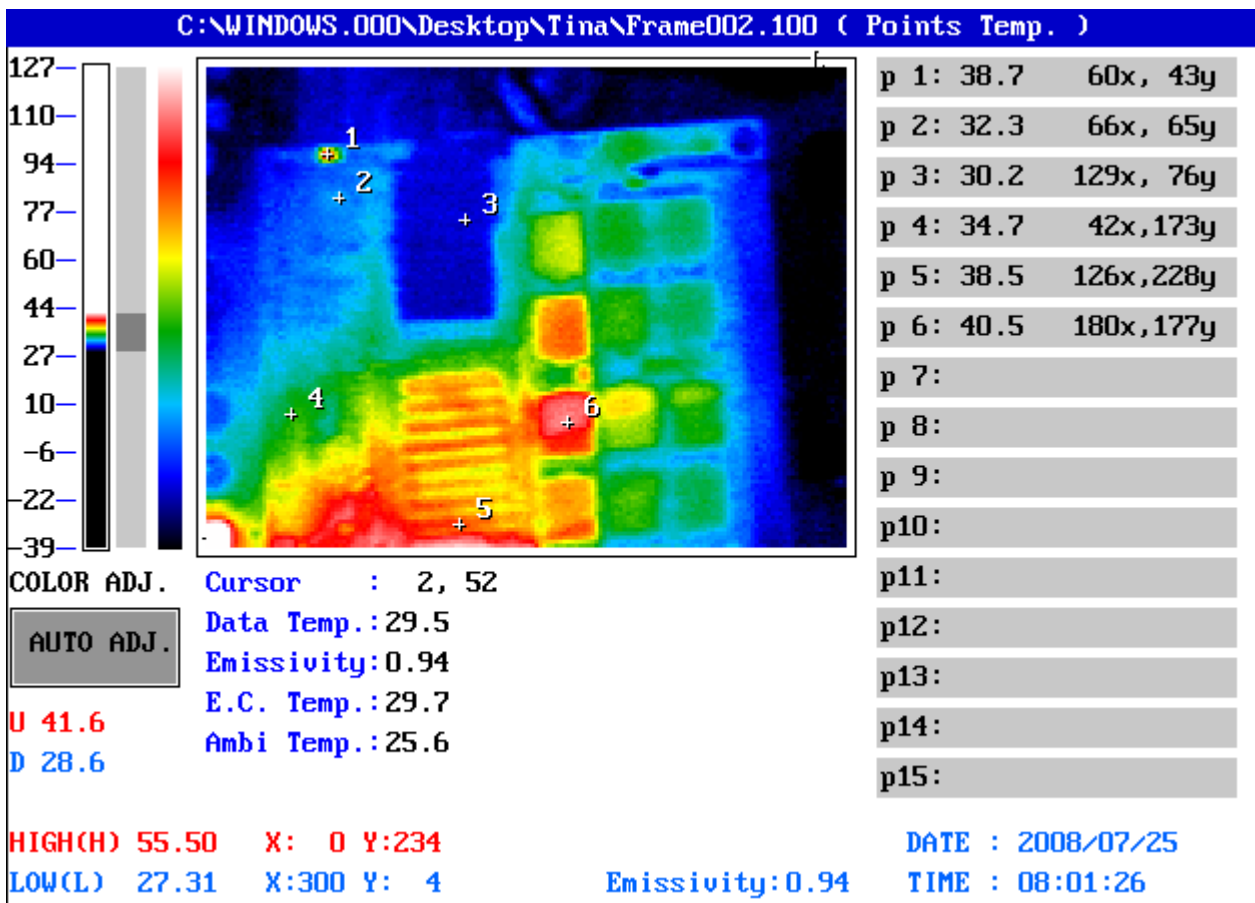
TVS-100 series by NIPPON AVIONICS CO., LTD.

VII. Simulation Environment:

- Temperature: Component Side-1 : 25.6°C  
Component Side-2 : 25.9°C
- CPU : Intel Core2 Duo T8300 / 2.4GHz FSB:800/ 3MB L2 Cache
- RAM : DSL DDR3 SO-DIMM 1066 2G \* 2 pcs (Samsung M471B5673DZ1-CF8)
- PCB:COM-45SP Rev: A0.1
- BIOS : COM-45SP BIOS Rev 0.5 (07/25/2008)
- CF Card : N/A
- HDD : Fujitsu MHY2080BH 80GB 2.5" HDD
- Application Software: Run Prime95 under Windows XP Professional V2002 Service Pack 3
- Take Picture Time: After Power on 2 hours.

## Temperature Profile Test:

### Component Side-1:

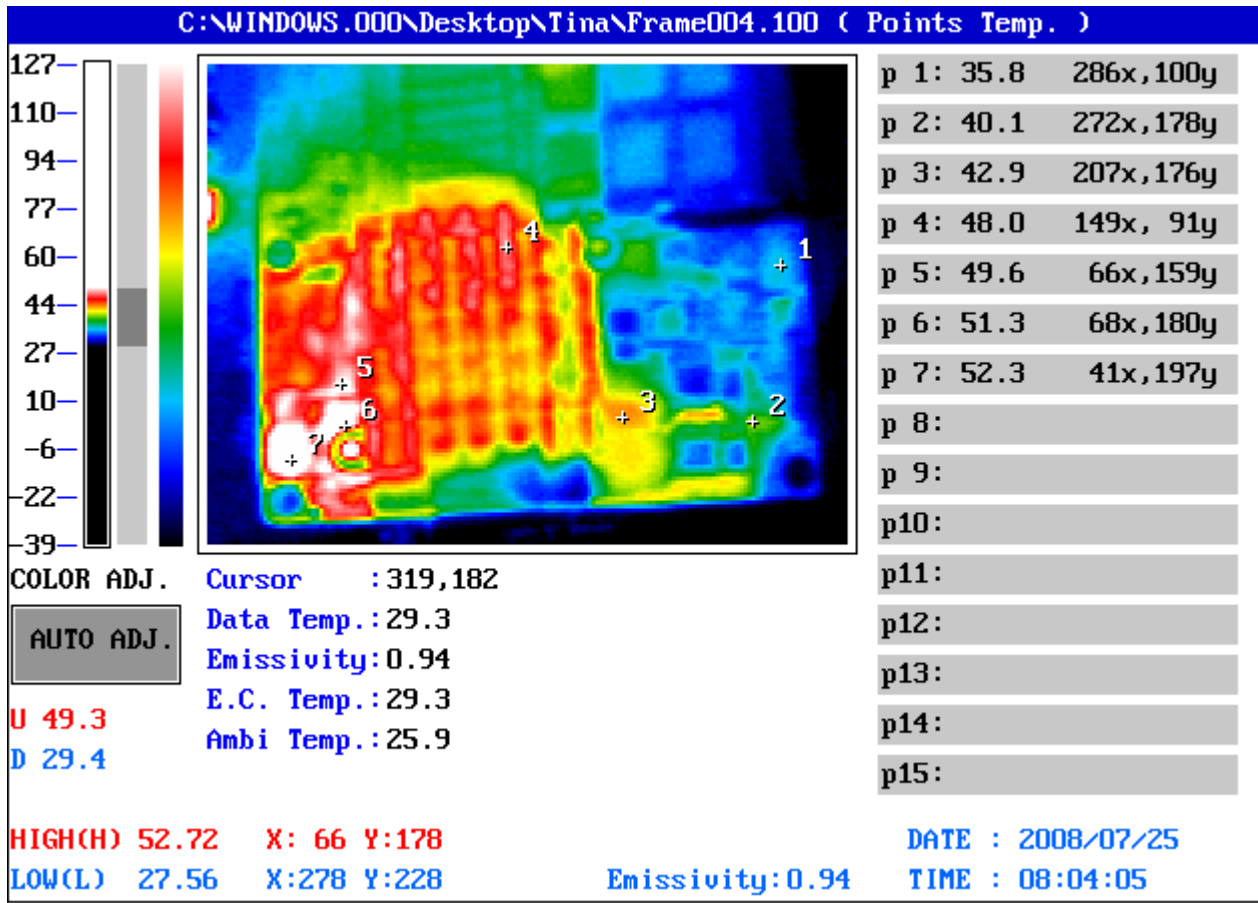


| Point | Position | Describe   | Tc<br>(°C) | Tm<br>(25.6°C) | Tm<br>(60°C) | Note |
|-------|----------|--|------------|----------------|--------------|------|
| 1     | Y6       | (TF)X'TAL SMD.25MHz.6*3.5 mm 20PPM.2P.VIC-DAWN.XSX250-S632-20        | 100        | 38.7           | 73.1         |      |
| 2     | U31      | (TF)IC.SMD.QFN 56P.GigaBit Ethernet Chipset.INTEL.WG82567LM<br>SLAVV | 100        | 32.3           | 66.7         |      |
| 3     | U30      | (TF)IC.SMD.Chipset ICH9M Enhanced.INTEL.AF82801IBM.SLB8Q             | 110        | 30.2           | 64.6         |      |
| 4     | U16      | (TF)IC.SMD.SSOP 28P.WatchDog.Fintek.F75111RG                         | 115        | 34.7           | 69.1         |      |
| 5     | U29      | (TF)IC.SMD.FCBGA 1329P.Chipset.Intel.AC82GM45 SLB94                  | 105        | 38.5           | 72.9         |      |
| 6     | RAM      | DSL DDR3 SO-DIMM 1066 2G (Samsung M471B5673DZ1-CF8)                  | 85         | 40.5           | 74.9         |      |
|       |          |  |            |                |              |      |
|       |          |  |            |                |              |      |
|       |          |  |            |                |              |      |
|       |          |  |            |                |              |      |

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

### Temperature Profile Test:

#### Component Side-2:



| Point | Position | Describe  | Tc (°C) | Tm (25.9°C) | Tm (60°C) | Note |
|-------|----------|---|---------|-------------|-----------|------|
| 1     | U2       | (TF)IC.SMD SO-14.PWM Controller with Linear Reg.Semtech.SC2621ASTRT                               | 105     | 35.8        | 69.9      |      |
| 2     | U1       | (TF)IC.SMD.QFN 48P.IMVP6 Two Phase PWM.Intersil.ISL6262ACRZ-T                                     | 125     | 40.1        | 74.2      |      |
| 3     | L4       | (TF)COIL.0.56uH.Irms=25A.Isat=40A.20%.SMD(11.5x10.3x4.0).2pin.RDC=1.8m Ohm.GOTREND.GSTC104P-R56MN | 155     | 42.9        | 77        |      |
| 4     | U9       | Intel Core2 Duo T8300 / 2.4GHz FSB:800/ 3MB L2 Cache CPU  | 100     | 48.0        | 82.1      |      |
| 5     | Q11      | (TF)PWR.SMD SO-8.P-Channel MOSFET.ANPEC.APM4463KC-TRL   | 180     | 49.6        | 83.7      |      |
| 6     | Q12      | (TF)PWR.SMD.SO-8.N-Channel.30V.10A.13.5mΩ.MOSFET.APEC.AP4410GM                                    | 180     | 51.3        | 85.4      |      |
| 7     | L12      | (TF)COIL.3.3uH.SMD.7.3*6.8*3.0mm.DCR=28mohm.Irms=6Amp.GOTREND.GSTC063P-3R3MN                      | 155     | 52.3        | 86.4      |      |

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