



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

# **PCM-8500 A0.2**

## **Thermal Image Analysis Report**

**Release Date: Sep. 09, 2003**

2003-09-09

**Issue Stamp**

Wayne Chen

**A.V.P.**

Rex Chang

**Test Engineer**

# Thermal Image Analysis

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. **Model Name:** PCM-8500 Rev.A0.2 (BIOS: 1.0)

. **Description:** Compact Board

. **Date:** Sep. 09, 2003

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

. **Issued by :** Rex Chang

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

. **Simulation Environment:**

**Temperature: Component Side : 24.5 degrees C**

**CPU: Intel 478pin Pentium 4 Mobile 2.4GHz**

**RAM: SAMAUNG K4H560838C-TCB0 256MB(DDR266)**

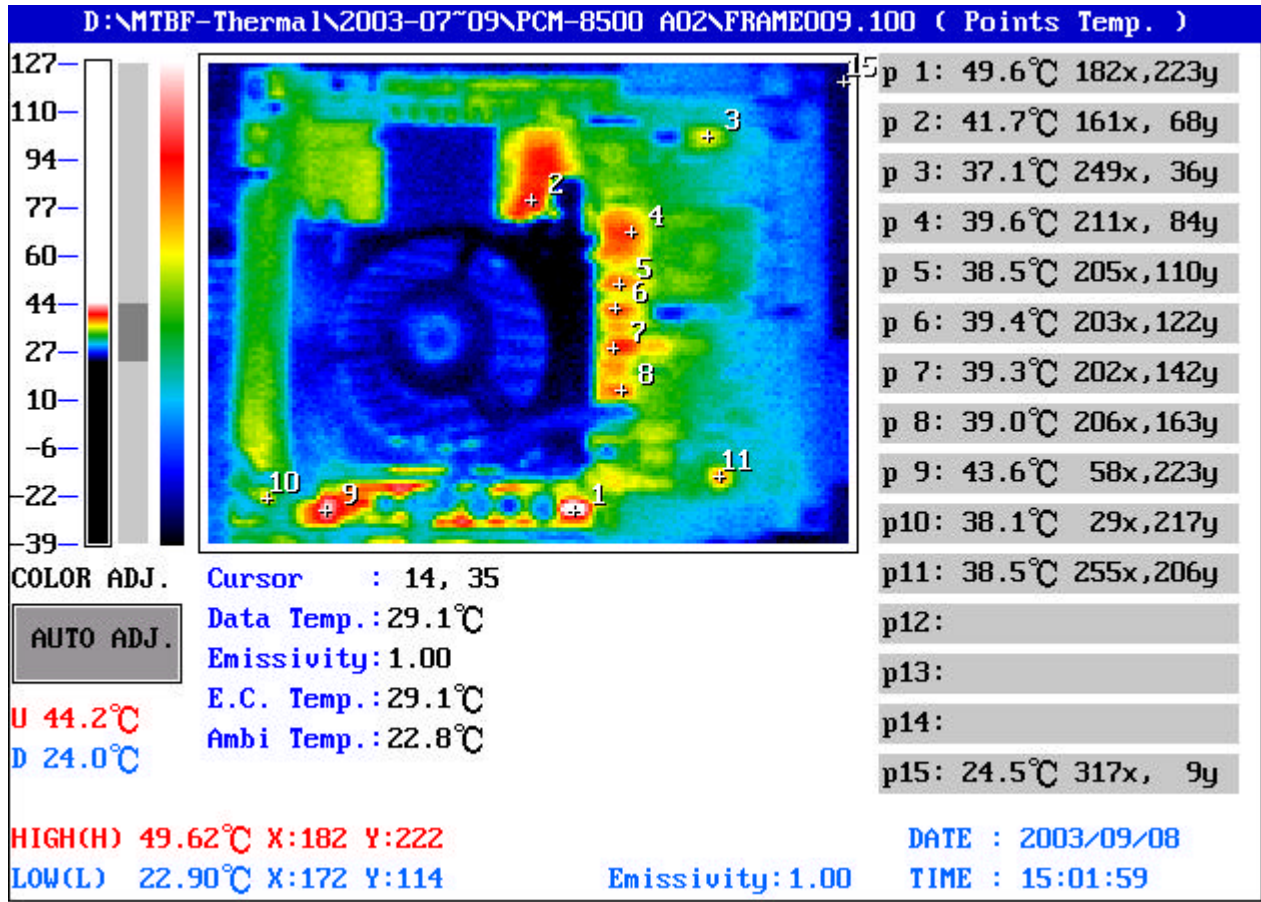
**HDD : IBM DTLA-307030 30.7GB**

**Application Software: Windows 2000 / HCT9.5**

**Take Picture Time: Power on 4 Hours after**

# Temperature Profile Test:

Component Side :



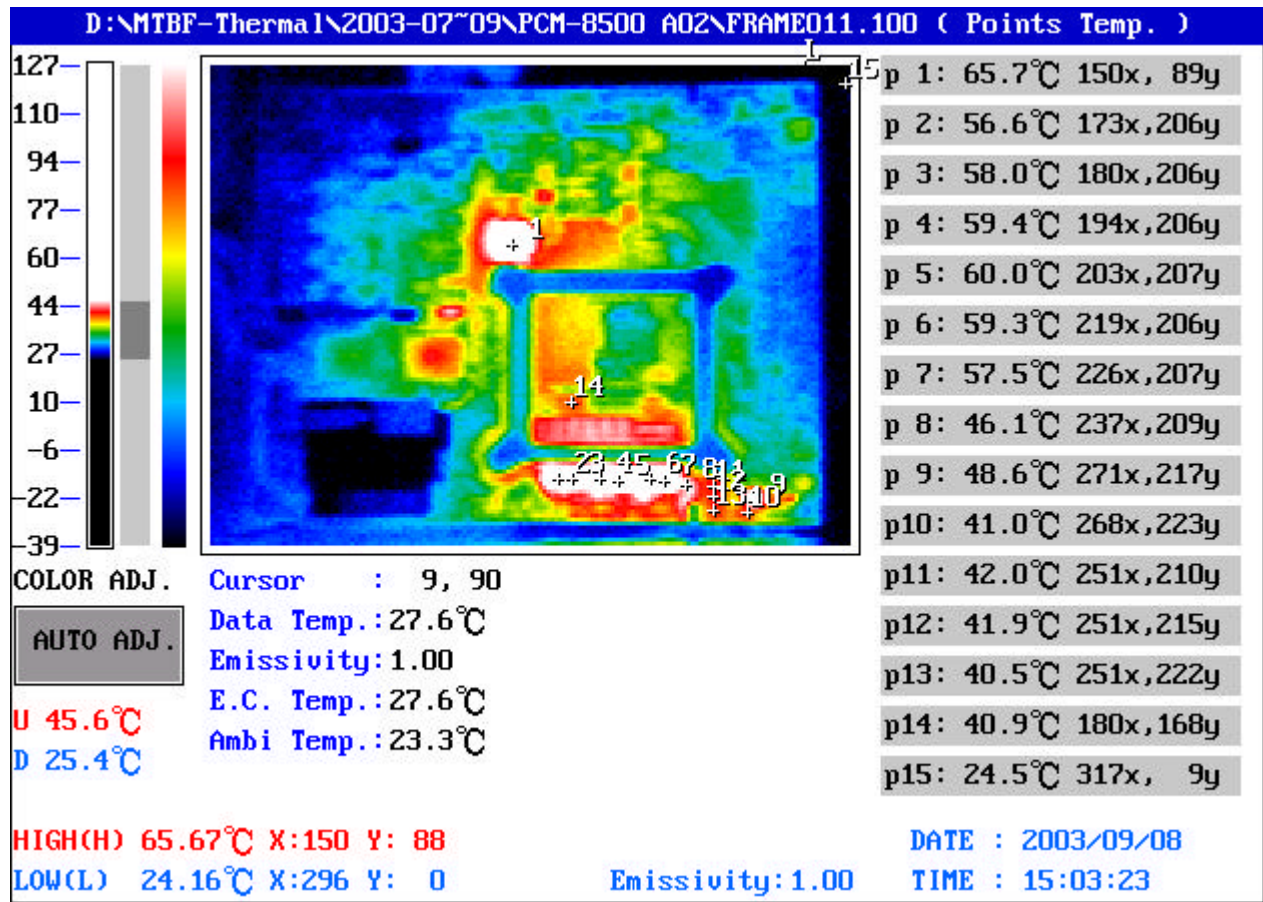
Point	Position	Describe	Ts	Tm	Note
1	U29	IC.SMD SOIC 14Pin.Dual Channel MOSFET Drivers.INTERFIL.HIP6602B		49.6	
2	Q17	Reversed side of PCB ( REG.SMD.8A Linear Regulator TO -263.AMS.AMS1083CM)		41.7	
3	U15	IC.SMD.SSOP48 Chipset.INTEL.DA82562ET		37.1	
4	U37	IC.SMD PBGA 209Pin.PC CARD Controller.TI.PCI1420GHK		39.6	
5	U38	IC.SMD.SSOP 30Pin.PC CARD POWER-INTERFACE SWITCH.TI.TPS2216DB		38.5	
6	U9	IC.SMD SO.14Pin.PHILIPS.74LVC07ADT		39.4	
7	U27	IC.SMD SSOP.RS232 Driver ESD 15KV.INTERFIL.HIN213ECA-T		39.3	
8	U26	IC.SMD SSOP.RS232 Driver ESD 15KV.INTERFIL.HIN213ECA-T		39.0	
9	U31	IC.SMD.SOIC 16Pin Power Controller.Intersil.HIP6501ACB		43.6	
10	Q21	PWR.SMD.SOT-23 P-Channel Power MOSFET.FAIRCHILD.NDS352AP		38.1	
11	U11	IC.SMD LQFP 48Pin.6 Channel AC'97 Audio Codec.REALTEK.ALC650		38.5	
12					
13					
14					
15		The Room Temperature		24.5	

1. Operation Temperature ( ):

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

## Temperature Profile Test:

Solder Side - 1 :



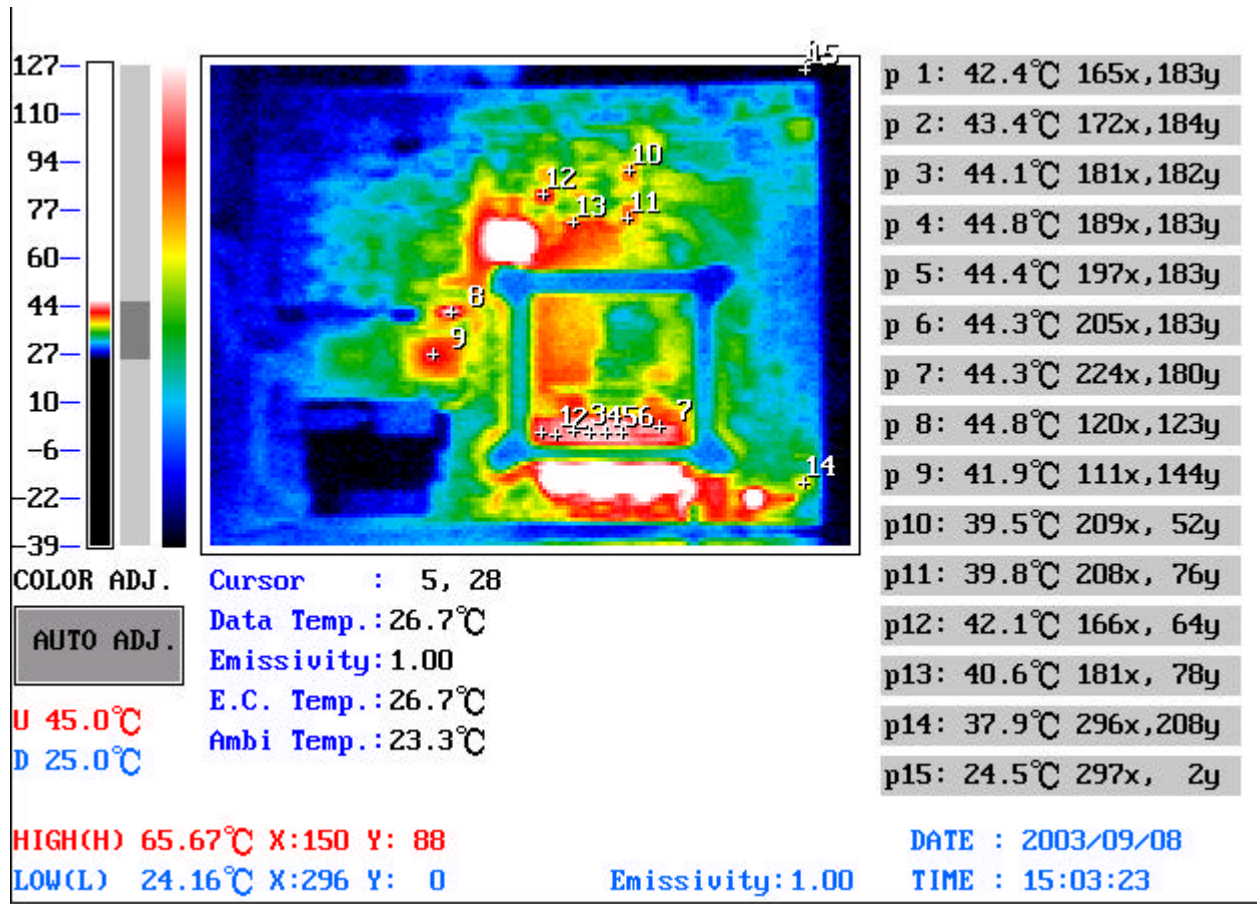
Point	Position	Describe	Ts	Tm	Note
1	Q17	REG.SMD.8A Linear Regulator TO-263.AMS.AMS1083CM		65.7	
2	Q16	PWR.SMD.TO-252.N-Channel Power 25V 60A MOSFET.APEC.AP70T03H		56.6	
3	Q15	PWR.SMD.TO-252.N-Channel Power 30V 55A MOSFET.APEC.AP60N03H		58.0	
4	Q14	PWR.SMD.TO-252.N-Channel Power 25V 60A MOSFET.APEC.AP70T03H		59.4	
5	Q13	PWR.SMD.TO-252.N-Channel Power 30V 55A MOSFET.APEC.AP60N03H		60.0	
6	Q12	PWR.SMD.TO-252.N-Channel Power 25V 60A MOSFET.APEC.AP70T03H		59.3	
7	Q11	PWR.SMD.TO-252.N-Channel Power 30V 55A MOSFET.APEC.AP60N03H		57.5	
8	Q19	PWR.SMD.SOT-223 NPN Current Driver.FAIRCHILD.NZT651		46.1	
9	Q18	NPN.SMD CASE 369A-13.Power Transistor 80V		48.6	
10	C498	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).15Ohm SMD.Panasonic.EEFUE0E221R		41.0	
11	C504	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).15Ohm SMD.Panasonic.EEFUE0E221R		42.0	
12	C500	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).15Ohm SMD.Panasonic.EEFUE0E221R		41.9	
13	C495	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).15Ohm SMD.Panasonic.EEFUE0E221R		40.5	
14	UI	Reversed side of PCB ( Intel 478pin Pentium 4 Mobile 2.4GHz )		40.9	
15		The Room Temperature		24.5	

1. Operation Temperature ( ):

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

## Temperature Profile Test:

Solder Side - 2 :



Point	Position	Describe	Ts	Tm	Note
1	C464	PC-CON.220uF.2V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.2SW220M		42.4	
2	C465	PC-CON.220uF.2V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.2SW220M		43.4	
3	C466	PC-CON.220uF.2V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.2SW220M		44.1	
4	C467	PC-CON.220uF.2V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.2SW220M		44.8	
5	C468	PC-CON.220uF.2V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.2SW220M		44.4	
6	C469	PC-CON.220uF.2V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.2SW220M		44.3	
7	U28	IC.SMD SSOP.28Pin IMVP-III PWM Controller.INTERSil.ISL6215		44.3	
8	U39	IC.SMD.SOIC 14P.TLSN7406		44.8	
9	U25	IC.SMD.IT8712F 128P Super I/O.ITE.IT8712F/GX		41.9	
10	C44	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).15Ohm SMD.Panasonic.EEFUE0E221R		39.5	
11	C43	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).15Ohm SMD.Panasonic.EEFUE0E221R		39.8	
12	C53	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).15Ohm SMD.Panasonic.EEFUE0E221R		42.1	
13	U2	Reversed side of PCB ( IC.SMD.Chipset Brookdale-GV.Intel.RG82845GV-SL6PU )		40.6	
14	U32	PWR.SMD SO-8.Dual N-Channel 30V(D-S) MOSFET.VISHAY.SI9936DY		37.9	
15		The Room Temperature		24.5	

### 1. Operation Temperature ( ):

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