



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

EMB-830 A0.2

Thermal Image Analysis Report

Release Date: Apr. 11, 2003

2003-04-11

Issue Stamp

Wayne Chen

A.V.P.

Rex Chang

Test Engineer

Thermal Image Analysis

. **Model Name:** EMB-830 Rev.A0.2 (BIOS:0.8)

. **Description:** Embedded ATX

. **Date:** Apr. 11, 2003

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

. **Issued by :** Rex Chang

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

. **Simulation Environment:**

Temperature: 22.7degrees C

CPU: Intel Pentium4 3.06GHz

RAM: SAMAUNG K4H560838D-TCB3 256MB DDR-333

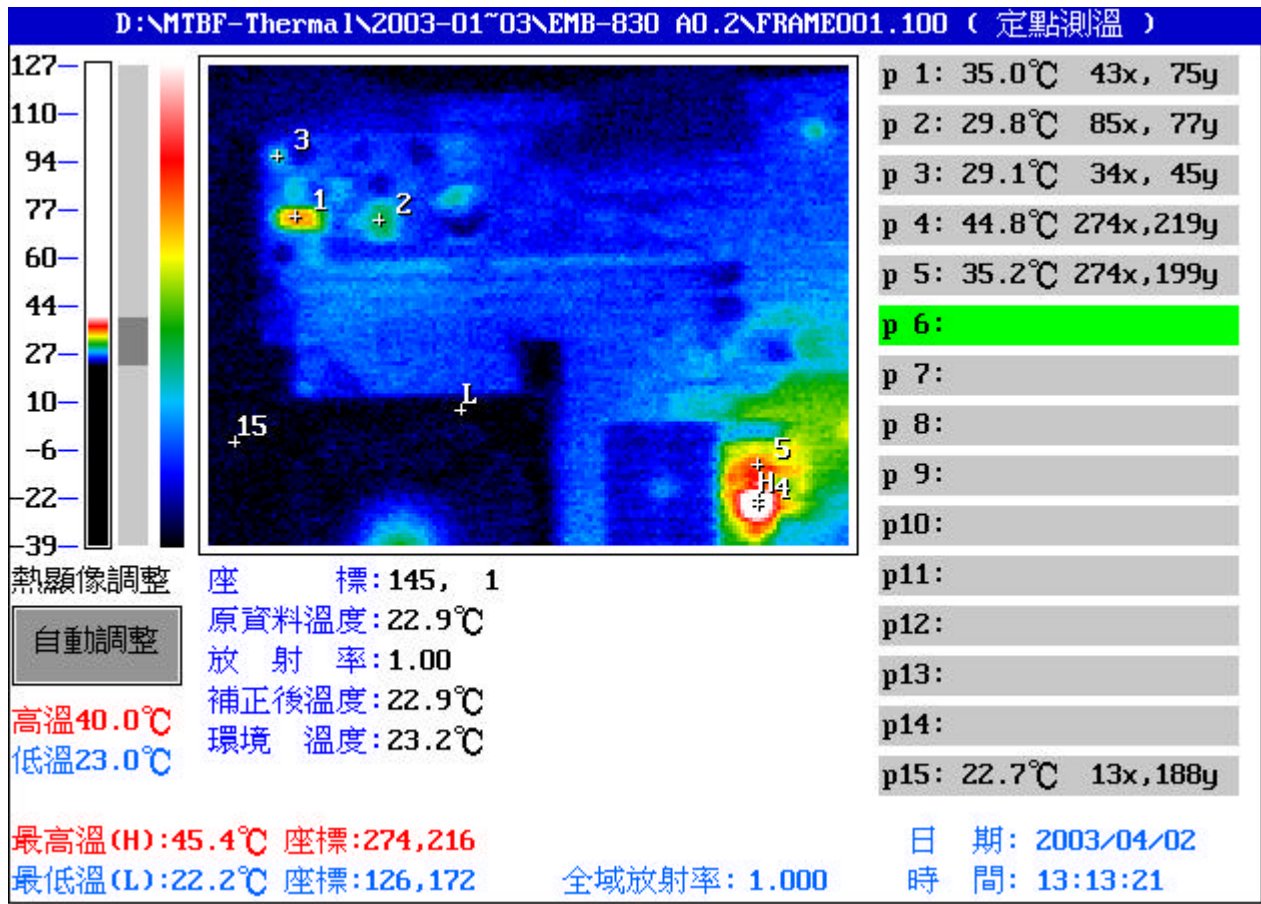
HDD : IBM DJNA-370910 9.1GB

Application Software: Win98SE (VCD Play)

Take Picture Time: Power on 30 minutes after

Temperature Profile Test:

Component Side - 1:



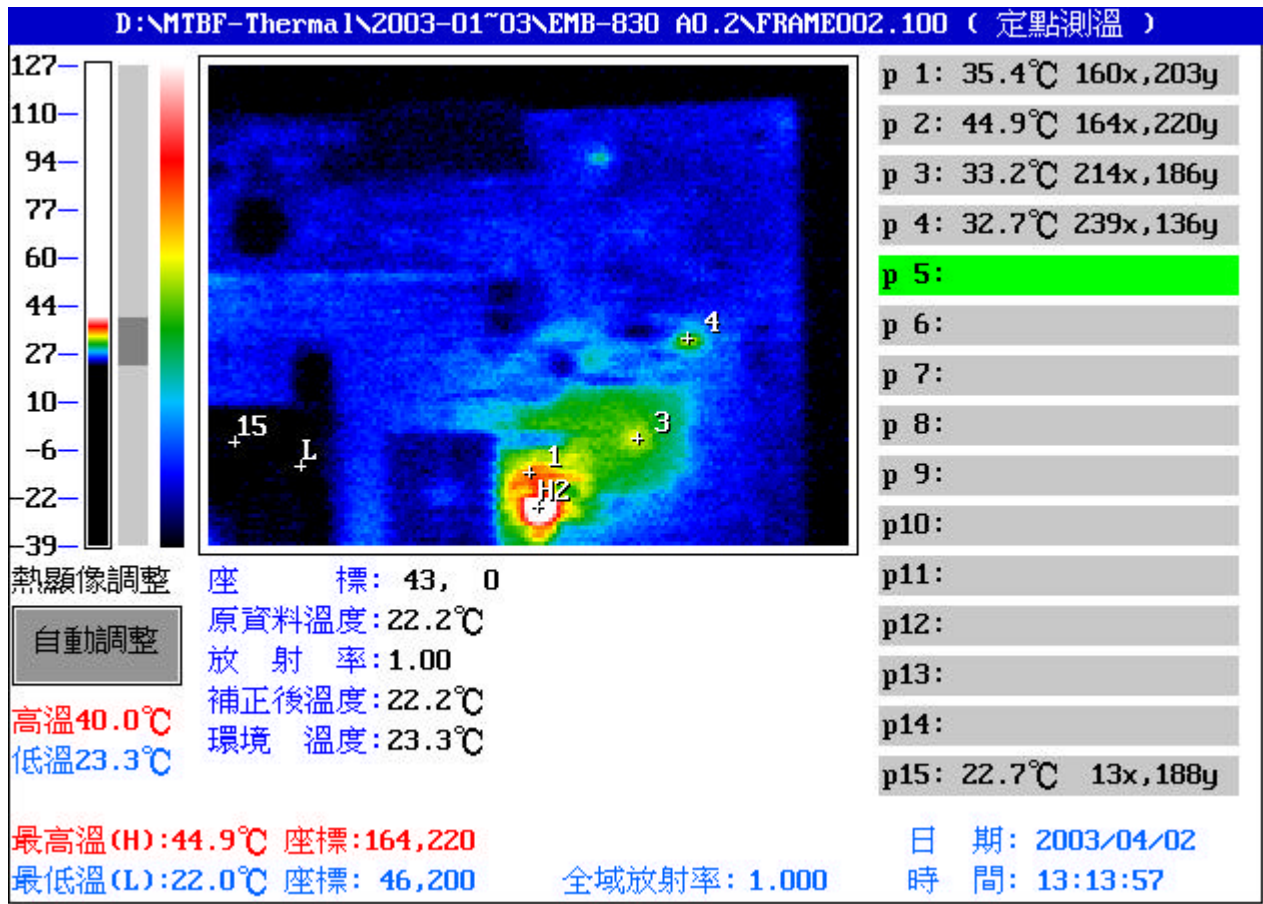
Point	Position	Describe	Ts	Tm	Note
1	L41	COIL.3uH.DIP Wire Size 1.0mm.1wire*8.5 10Amp.GTX.C5026-10A08YDP		35.0	
2	U24	REG.SMD TO -263-5.3A Bus Termination Regulator.RichTek.RT9173A		29.8	
3	U25	IC.SMD SOP.8Pin Switching PWM Controller.IR.IRU3037CS		29.1	
4	Q27	REG.SMD.8A Linear Regulator TO -263.AMS.AMS1083CM		44.8	
5	EC3	PC-CON.100uF.6.3V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.6SW100M		35.2	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15				22.7	

1. Operation Temperature ():

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

Temperature Profile Test:

Component Side - 2:



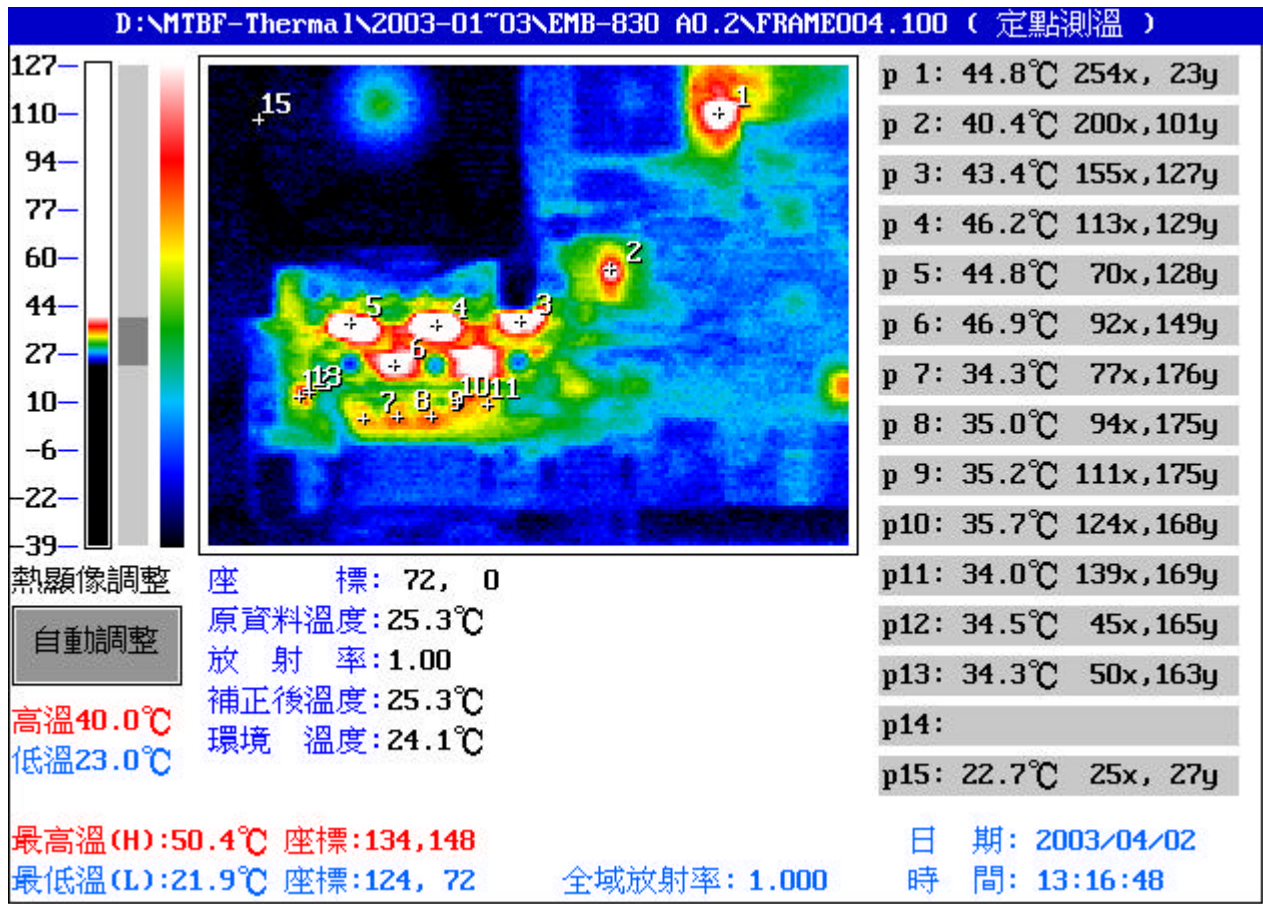
Point	Position	Describe	Ts	Tm	Note
1	EC3	PC-CON.100uF.6.3V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.6SW100M		35.4	
2	Q27	REG.SMD.8A Linear Regulator TO -263.AMS.AMS1083CM		44.9	
3	U5	IC.SMD.Chipset ICH4.INTEL.FW82801DB SL66K		33.2	
4	U32	IC.SMD.SOIC 14P.TLSN7406		32.7	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15		The Room Temperature		22.7	

1. Operation Temperature ():

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

Temperature Profile Test:

Component Side - 3:



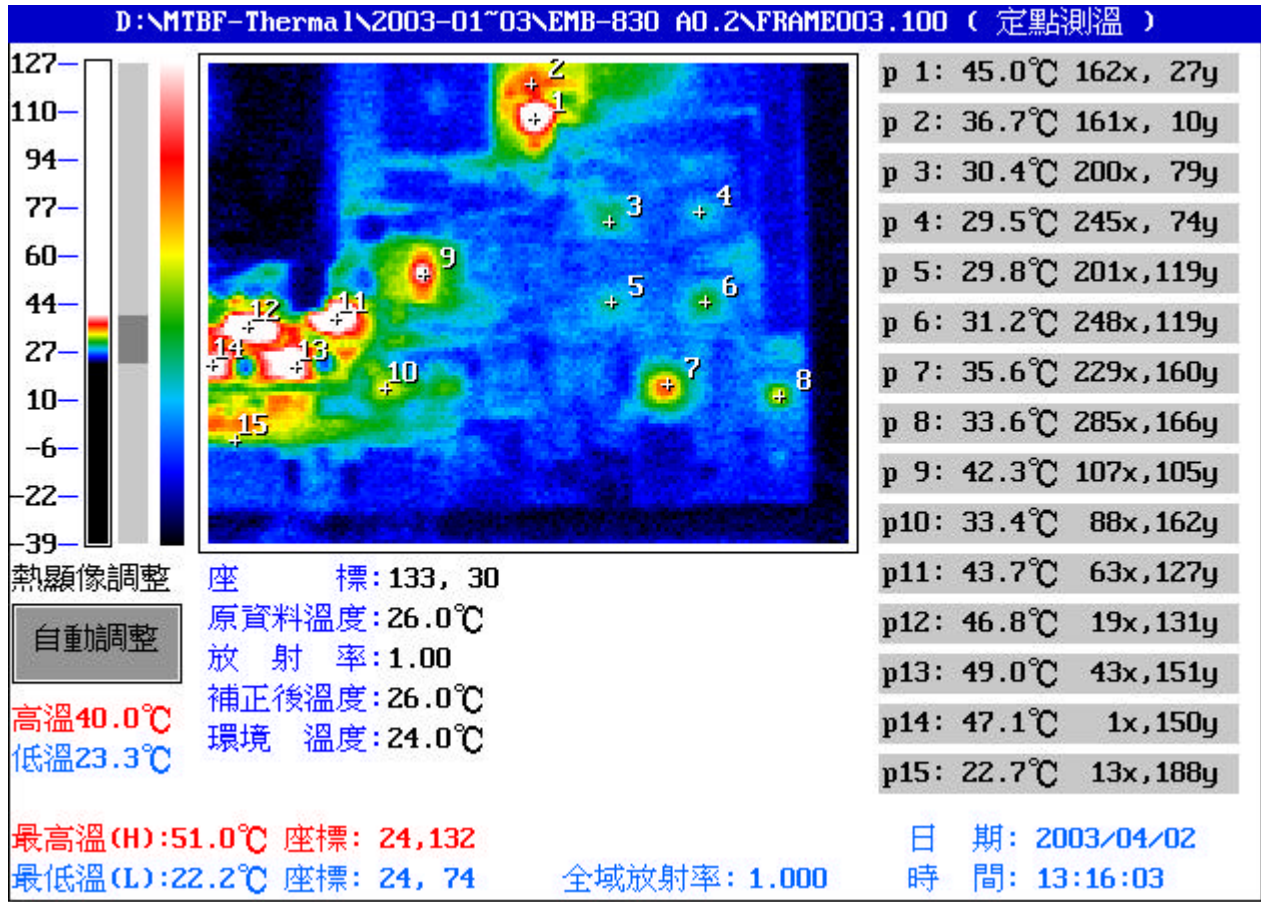
Point	Position	Describe	Ts	Tm	Note
1	Q27	REG.SMD.8A Linear Regulator TO -263.AMS.AMS1083CM		44.8	
2	U2	IC.SMD.SSOP 56Pin Clock Generator.IC5.IC5950201		40.4	
3	L43	COIL.1uH.DIP Wire Size 1.0mm.MPP 3wire*3.525Amp.震元.TC5018-1R0N		43.4	
4	L44	COIL.1uH.DIP Wire Size 1.0mm.MPP 3wire*3.525Amp.震元.TC5018-1R0N		46.2	
5	L46	COIL.1uH.DIP Wire Size 1.0mm.MPP 3wire*3.525Amp.震元.TC5018-1R0N		44.8	
6	U28	IC.SMD.SOIC 8Pin MOSFET Drivers.INTERFIL.HIP6601B		46.9	
7	U11	IC.SMD.213 SSOP RS232 Driver.HARRIS.HIN213CA		34.3	
8	U16	IC.SMD.28Pin QSOP Parallel Term.CMD.Super 1284-04Q		35.0	
9	U13	IC.SMD.213 SSOP RS232 Driver.HARRIS.HIN213CA		35.2	
10	U15	IC.SMD.SIPEX.SP485ECN		35.7	
11	U12	IC.SMD.SIPEX.SP485ECN		34.0	
12	Q18	PNP.SMD SOT23.MOSFET 60V 115mA.MOTOROLA.2N7002LT1		34.5	
13	Q17	PNP.SMD.2N3906 3P (TO -236AB).MOTOROL.MMBT3906LT1 SOT23		34.3	
14					
15		The Room Temperature		22.7	

1. Operation Temperature ():

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

Temperature Profile Test:

Component Side - 4:



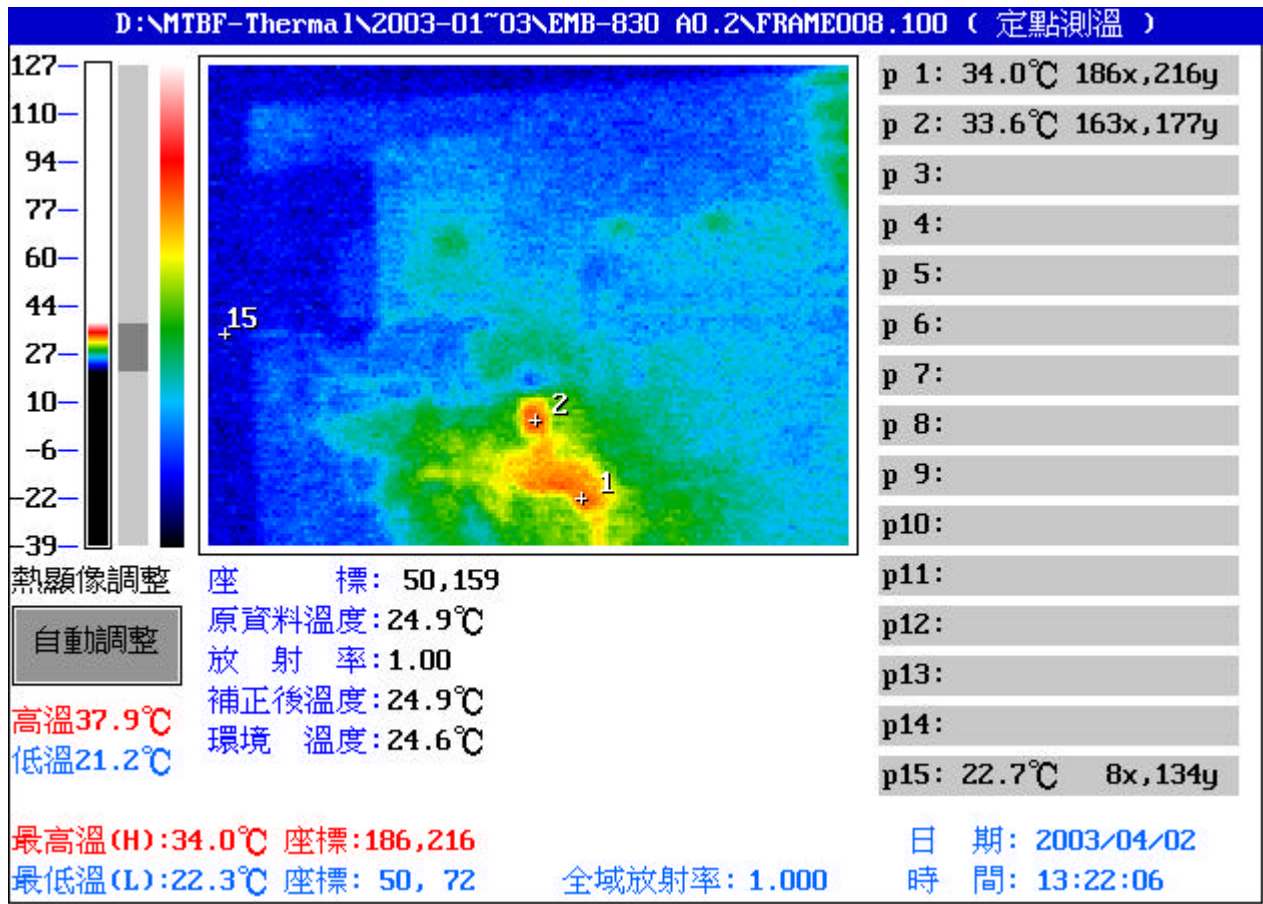
Point	Position	Describe	Ts	Tm	Note
1	EC3	PC-CON.100uF.6.3V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.6SW100M		45	
2	Q27	REG.SMD.8A Linear Regulator TO -263.AMS.AMS1083CM		36.7	
3	U37	IC.SMD LQFP.128P.TV ENCODER/LVDS TRANSMITTER.CHRONTEL.CH7017A		30.4	
4	U38	IC.SMD PQFP.128P.PCI SERIAL PORT CONTROLLER.ITE.IT8874F		29.5	
5	U10	IC.SMD.IT8712F 128P Super I/O.ITE.IT8712F/GX		29.8	
6	U17	IC.SMD.IT8712F 128P Super I/O.ITE.IT8712F/GX		31.2	
7	U22	IC.SMD.196P PCI Ethernet Chipset.INTEL.GD82559		35.6	
8	U7	IC.SMD LQFP 48Pin.6 Channel AC'97 Audio Codec.REALTEK.ALC650		33.6	
9	U2	IC.SMD.SSOP 56Pin Clock Generator.ICS.ICS950201		42.3	
10	U19	IC.SMD.213 SSOP RS232 Driver.HARRIS.HIN213CA		33.4	
11	L43	COIL.1uH.DIP Wire Size 1.0mm.MPP 3wire*3.525Amp.震元.TC5018-1R0N		43.7	
12	L44	COIL.1uH.DIP Wire Size 1.0mm.MPP 3wire*3.525Amp.震元.TC5018-1R0N		46.8	
13	U26	IC.SMD SOIC 14Pin.Dual Channel MOSFET Drivers.INTERSil.HIP6602B		49.0	
14	U28	IC.SMD.SOIC 8Pin MOSFET Drivers.INTERSil.HIP6601B		47.1	
15		The Room Temperature		22.7	

I. Operation Temperature ():

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

Temperature Profile Test:

Solder Side -1:



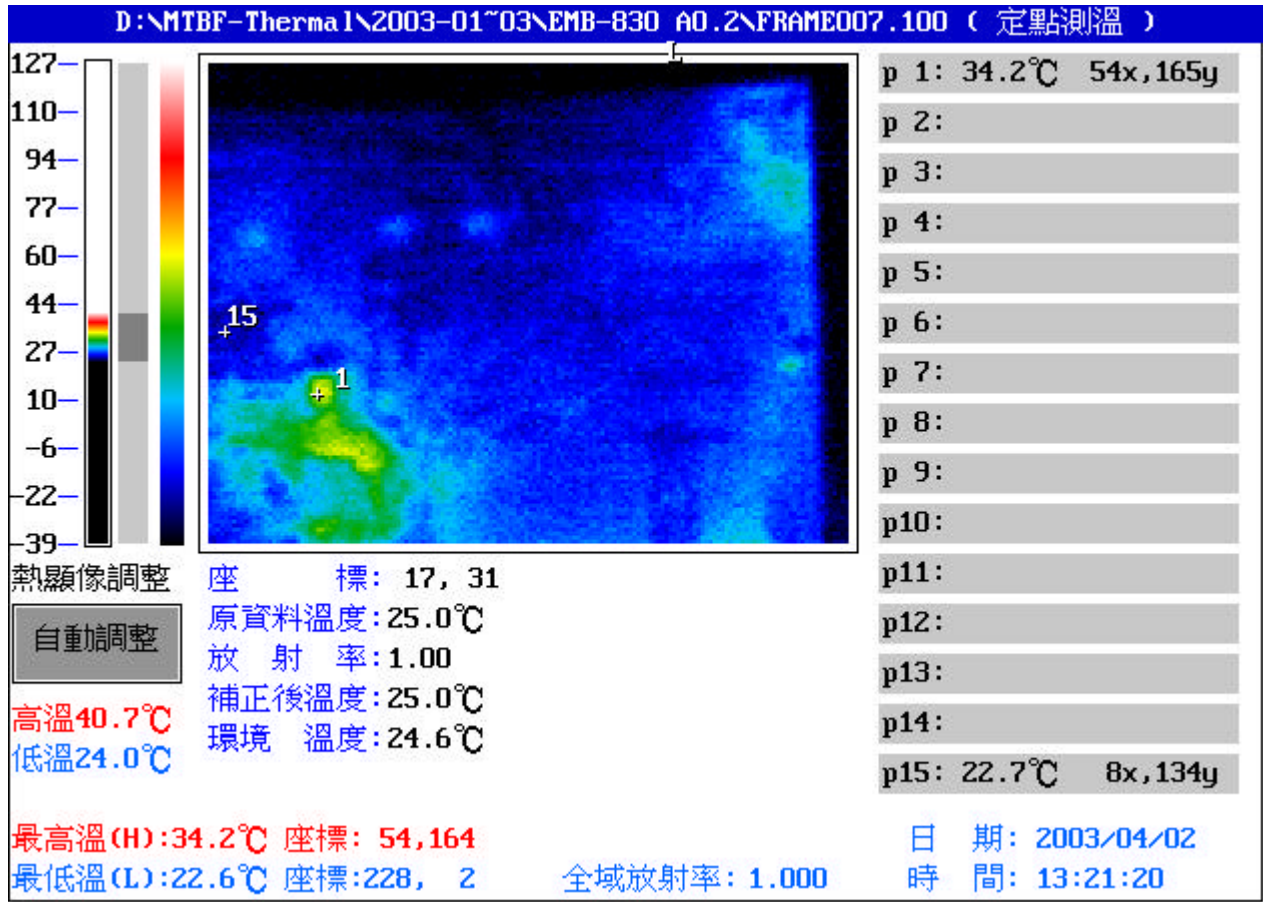
Point	Position	Describe	Ts	Tm	Note
1	EC3	PC-CON.100uF.6.3V.20%.D(7.3*4.3*2.7mm).10mOhm SMD.Japan Carlit.6SW100M		34.0	
2	Q26	REG.SMD.8A Linear Regulator TO -263.AMS.AMS1083CM		33.6	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15		The Room Temperature		22.7	

1. Operation Temperature ():

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

Temperature Profile Test:

Solder Side -2:



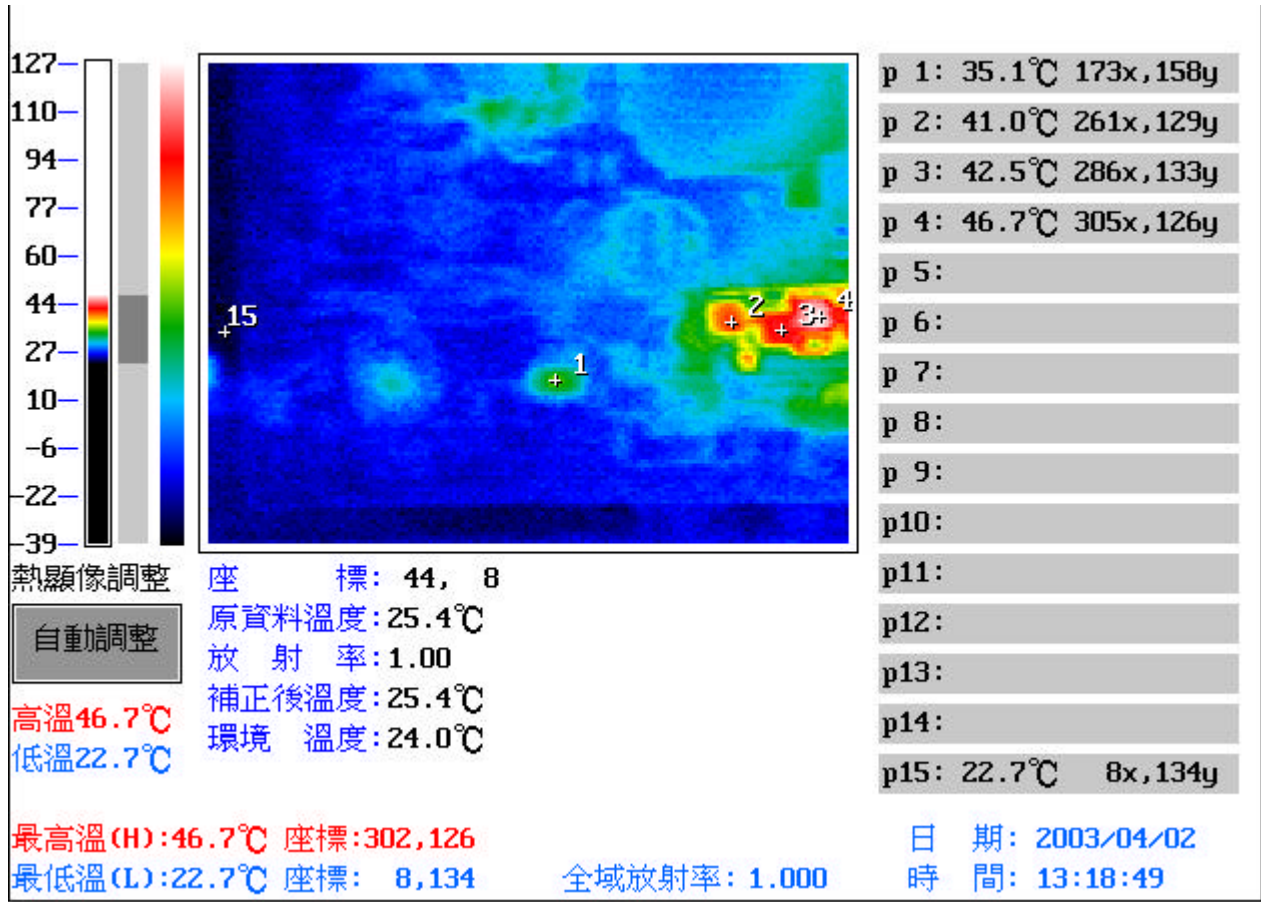
Point	Position	Describe	Ts	Tm	Note
1	Q26	REG.SMD.8A Linear Regulator TO -263.AMS.AMS1083CM		34.2	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15		The Room Temperature		22.7	

1. Operation Temperature ():

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

Temperature Profile Test:

Solder Side -3:



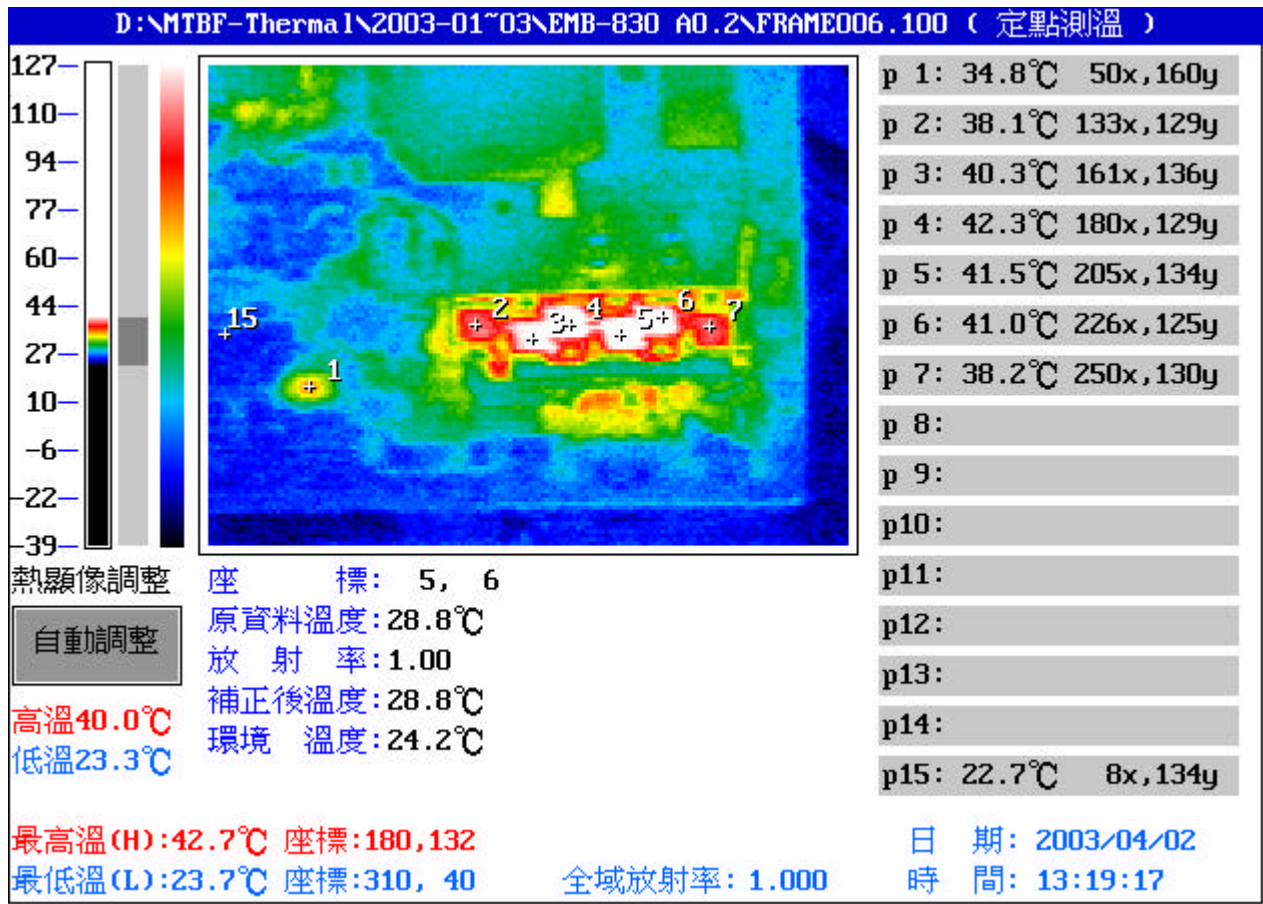
Point	Position	Describe	Ts	Tm	Note
1	U21	IC.SMD.SSOP48 Chipset.INTEL.DA82562ET		35.1	
2	Q30	PWR.SMD TO-263.N-Channel Power MOSFET.APEC.AP85L02S		41.0	
3	Q29	PWR.SMD TO -263 N-Channel.PowerMOSFET Rdson 13.5m .富鼎.AP60N03S		42.5	
4	Q33	PWR.SMD TO -263.N-Channel Power MOSFET.APEC.AP85L02S		46.7	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15		The Room Temperature		22.7	

1. Operation Temperature ():

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

Temperature Profile Test:

Solder Side -4:



Point	Position	Describe	Ts	Tm	Note
1	U21	IC.SMD.SSOP48 Chipset.INTEL.DA82562ET		34.8	
2	Q30	PWR.SMD TO -263.N-Channel Power MOSFET.APEC.AP85L02S		38.1	
3	Q29	PWR.SMD TO -263 N-Channel.PowerMOSFET Rdson 13.5m .富鼎.AP60N03S		40.3	
4	Q33	PWR.SMD TO -263.N-Channel Power MOSFET.APEC.AP85L02S		42.3	
5	Q32	PWR.SMD TO -263 N-Channel.PowerMOSFET Rdson 13.5m .富鼎.AP60N03S		41.5	
6	Q35	PWR.SMD TO -263.N-Channel Power MOSFET.APEC.AP85L02S		41.0	
7	Q34	PWR.SMD TO -263 N-Channel.PowerMOSFET Rdson 13.5m .富鼎.AP60N03S		38.2	
8					
9					
10					
11					
12					
13					
14					
15		The Room Temperature		22.7	

1. Operation Temperature ():

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