FWB-880M

Intel Pentium 4 2U Firewall System

Thermal Image Analysis Report

Report No: 05I080009

Release Date: October 27, 2005

2005/10/27	*Wenyuan Yang*	*Jojo Lin*
Issue Stamp	**Manager**	**Test Engineer**

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Thermal Image Analysis

Ⅰ. Model Name: FWB-880M A0.2

Ⅱ. Description: Intel Pentium 4 2U Firewall System

Ⅲ. Date: October 27, 2005

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Jojo Lin

Ⅵ.Equipment:

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

Ⅶ. Simulation Environment:

- **Temperature: Component Side 26.0℃**
  Solder Side: N/A (because there is no IC on the solder side)
- **CPU: Intel® Pentium® 4 CPU 3.2GHz / 800MHz / L2:1MB LGA775**
- **RAM: KINGMAX DDE2-533 1GB (hynix HY5PS12821 F-C4)**
- **HDD: Seagate ST3120827AS SATA HDD 120GB**
- **BIOS: FWB-880 BIOS Rev 1.0 (10/06/2005)**
- **CF Card: N/A**
- **Power Supply: Aopen AO350-12AHN ATX Power 350W**
- **Application Software: Run ZD Content Creation WinStone 2004**
  under Windows XP Professional Service Pack 2
- **Take Picture Time: After Power on 2 hours.**

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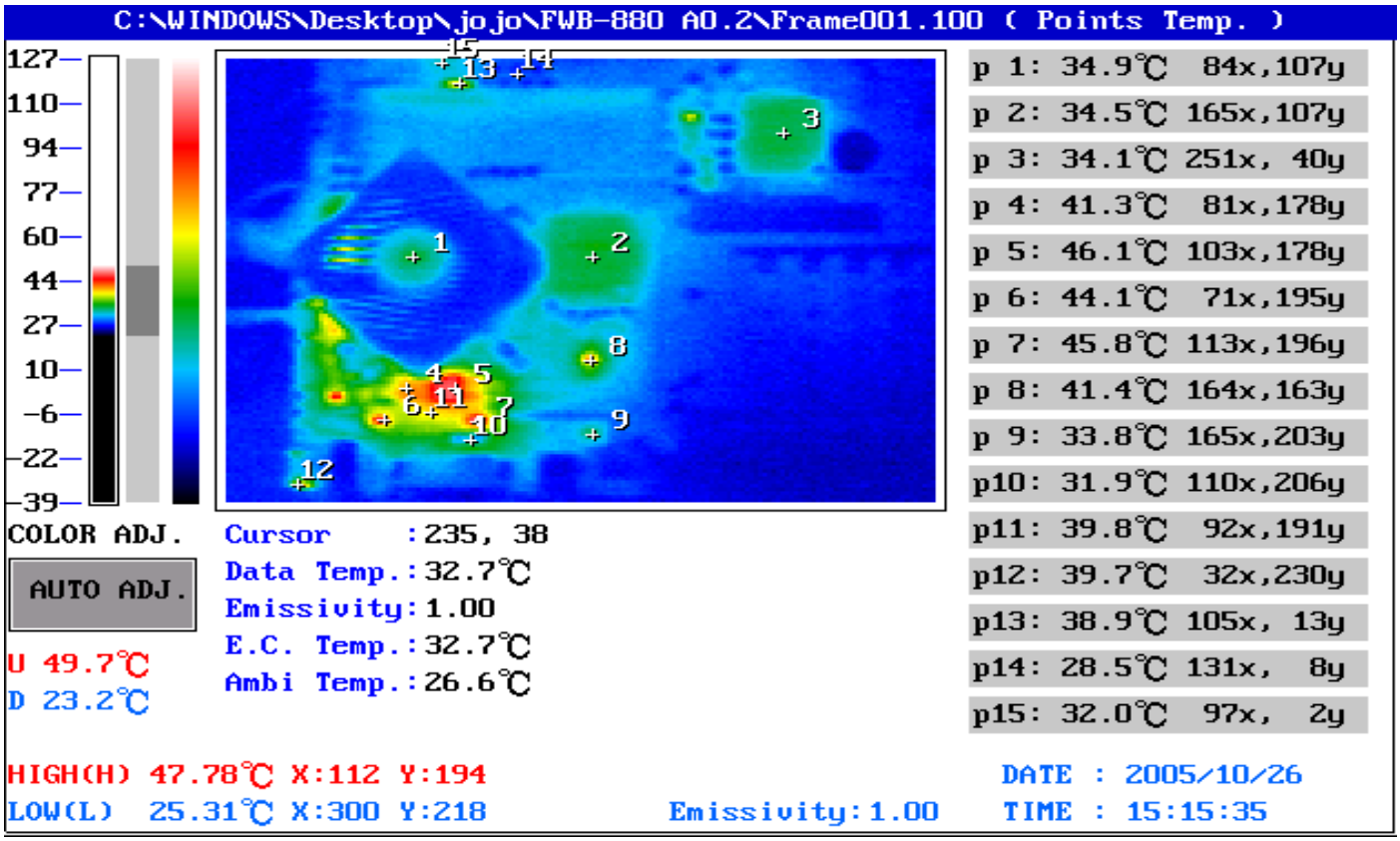
Temperature Profile Test:

Component Side-1 :



Point	Position	Describe	Tc (℃)	Tm (25℃)	Tm (60℃)	Note
1	CPU1	Upon side of CPU FAN	N/A	34.9	68.9	
2	U18	TF)IC.SMD.Chipset LAKEPORT 945G.INTEL.QG82945G SL8FU A2;EE-A051404;14S4294500;TWN	99	34.5	68.5	
3	U22	(TF)IC.SMD.Chipset ICH7.INTEL.NH82801GB SL8FX A1;EE-A051402;14S428010C;TWN	99	34.1	68.1	
4	Q5	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD414;EE-A041634;1315041410;TWN	-30 ~ 150	41.3	75.3	
5	L5	(TF)COIL.0.6uH.DIP Wire Size 1.1*2mm.2wire 35.TRIO.PSG-1410-R60M1;EE-A050786;1211100662;TWN	85	46.1	80.1	
6	U13	IC.SMD.(SOIC,EPSOIC,MLFP)(8,16)Pin Mosfet Drivers.INTERSIL.(HIP6601B, HIP6603B,HIP6604B Series);EE-A030220;14S9660***;TWN	-30 ~ 115	44.1	78.1	
7	U14	IC.SMD.(SOIC,EPSOIC,MLFP)(8,16)Pin Mosfet Drivers.INTERSIL.(HIP6601B,HIP6603B HIP6604B Series);EE-A030220;14S9660***;TWN	-30 ~ 115	45.8	79.8	
8	U17	(TF)IC.SMD.SSOP56.Clock Generator.ICS. ICS954101DFLF;EE-A050718;14S4410100;TWN	115	41.4	75.4	
9	U5	IC.SMD.BGA 196P Ethernet Chipset.Intel.82562EZ;EE-A041739;14S4256201;TWN	0 ~ 135	33.8	67.8	
10	C17	EC.[100~2700]uf.[6.3,10,16,25,35,50]V.20%DIP.Pinlength=3.5mm.Panasonic.EEUFJ Series;EE-A010821;111*6*****;TWN	-55 ~ 135	31.9	65.9	
11	U15	IC.SMD.SOIC 28Pin PWM Controller.Intersil.ISL6556BCB;EE-A041705;14S4655600;TWN	125	39.8	73.8	
12	CN4	Upon side of PS/2 Keyboard and Mouse	N/A	39.7	73.7	
13	L21	(TF)COIL.1.2uH.20%.DIP Wire Size.1.8mm 18 材 3wire 20Amp.TRIO.LG-12AM11C03;EE-A051406;1211101264;TWN	-50 ~ 110	38.9	72.9	
14	C201	EC.(6.8~6800)uF.(6.3~100)V.20%.DIP.Pinlength=3.5mm.NIPPON CHEMI-CON.KZE Series;EE-A041786;111*6*****;TWN	-70 ~ 135	28.5	62.5	
15	U37	(TF)IC.SMD.PQFP 128Pin.LPC Super I/O.Winbond.W83627EHG;EE-A050941;14S4362703;TWN	-30 ~ 100	32.0	66.	

1. Operation Temperature (℃):
Tc(Case Temp.) = Ta(Ambient Temp.)+/-30℃ = Tj(Junction Temp.)-/+25℃

Note: The description in red states which temperature is over the specification of the device.

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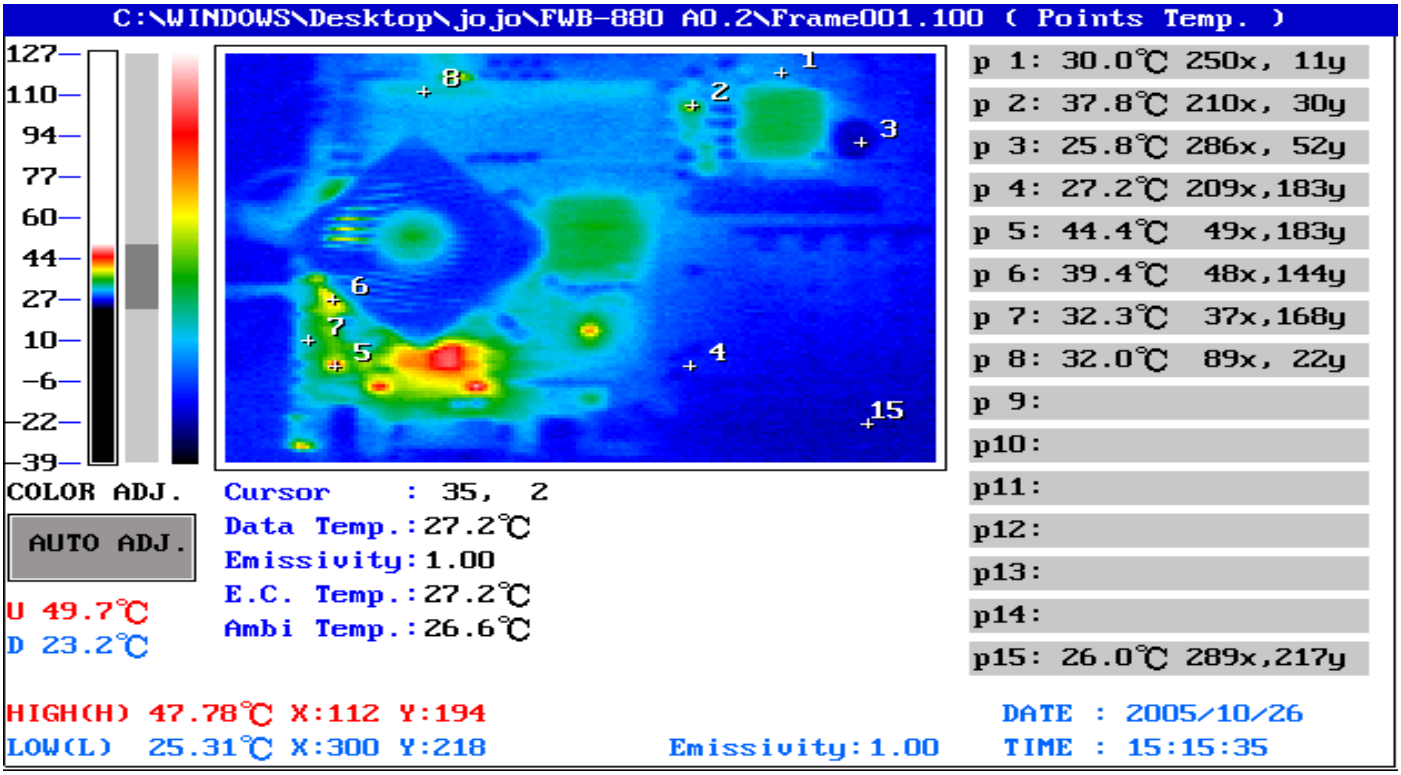
Temperature Profile Test:

Component Side-2 :



Point	Position	Describe	Tc (℃)	Tm (25℃)	Tm (60℃)	Note
1	U36	Flash PLCC BIOS.512k.CS:AC45h.FWB-880.Rev 1.0;EE-A051370;14S6288000;TWN	-85 ~ 155	30.0	64.0	
2	Q15	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD412;EE-A041633;1315041210;TWN	-30 ~ 150	37.8	71.8	
3	BT1	RAYOVAC/廣登/BR2335T3L/BATTERY 3V BR2335T3L/88.05.06;EE-A990250;1750119013;TWN	-70 ~ 130	25.8	59.8	
4	C42	SANYO/合碩/EC.(470~3300)uF.(6.3~16)V.20%.DIP.Pinlength=3.5mm.SANYO.MV-WG Series;EE-A031473;111*6*****;TWN	-70 ~ 135	27.2	61.2	
5	Q4	PWR.SMD.TO-252 N-Channel PowerMosfet.AOS.AOD414;EE-A041634;1315041410;TWN	-30 ~ 150	44.4	78.4	
6	C65	(TF)PS.560uF.2.5V.20%.ESR=0.008 Ir=4700.8*8mm.DIP.NCC.PSA2.5VB560MH08;EE-A050890;1169656190;TWN	-30 ~ 80	39.4	73.4	
7	L7	COIL.1.1uH.DIP Wire Size 2.3mm.35 材 3wire 30Amp. 三集瑞.TCU-5035B-1R1M-02;EE-A041508;1211101161;TWN	-50 ~ 110	32.3	66.3	
8	Memory	KINGMAX DDE2-533 1GB (hynix HY5PS12821 F-C4)	85	32.0	66.0	
15	Ta	Ambient Temperature	N/A	26.0	60	

1. Operation Temperature (℃):
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Temperature Profile Test:

Solder Side :

N/A (because there is no IC on the solder side)

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