FSB-868G

Intel Pentium 4 PICMG Full-Size SBC

Thermal Image Analysis Report

Report NO: 06I080004

Release Date: December 18, 2006

2006/12/18	*Wenyuan Yang*	*Jojo Lin*
Issue Stamp	**Manager**	**Test Engineer**

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

Thermal Image Analysis

Ⅰ. Model Name: FSB-868G-A10-E2

Ⅱ. Description: Intel Pentium 4 PICMG Full-Size SBC

Ⅲ. Date: December 18, 2006

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by : Jojo Lin

Ⅵ.Equipment:

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

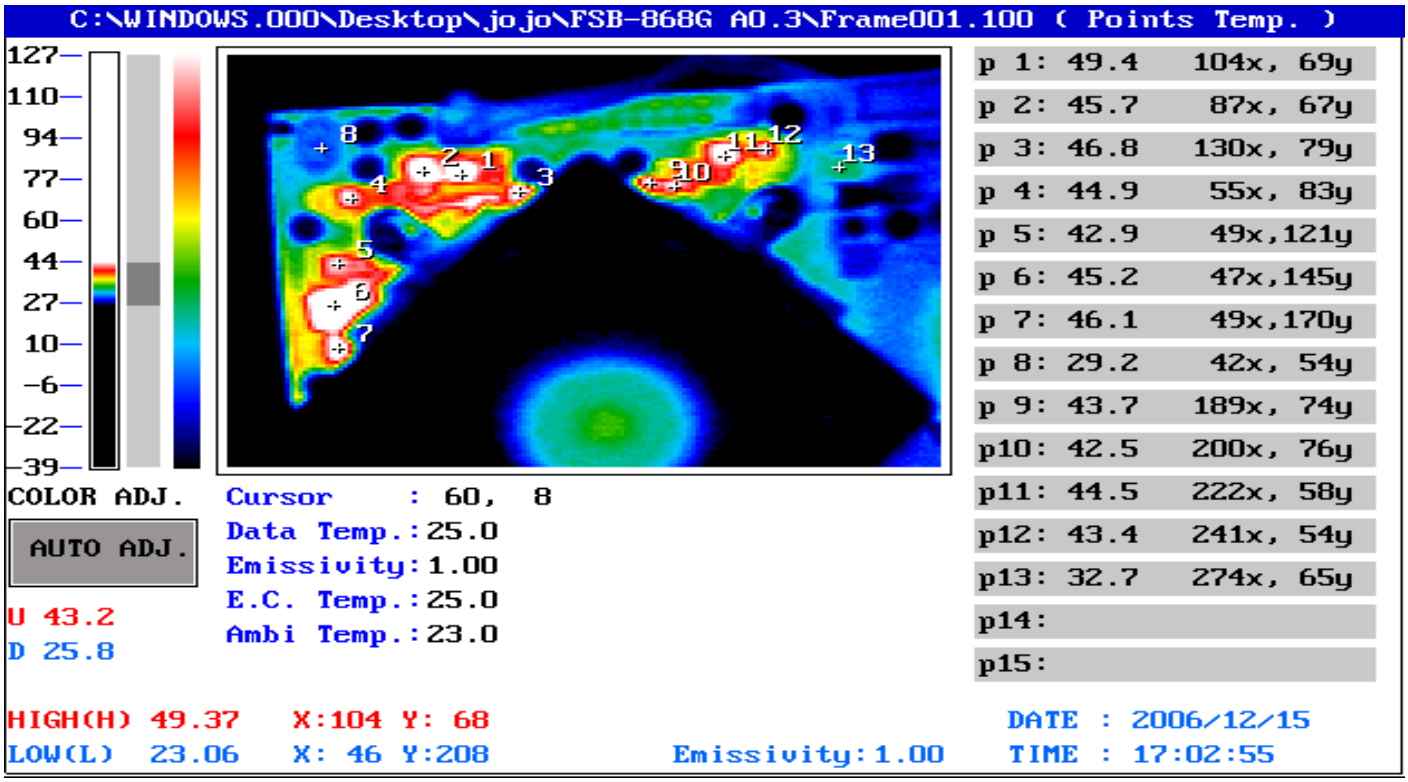
Ⅶ. Simulation Environment:

- **Temperature: Component Side-1: 23.0℃ , Component Side-2: 23.1℃**
  Component Side-3: 23.6℃ , Component Side-4: 23.4℃
- **CPU : Intel Pentium-4 LGA775 531 3.0GHz / 800MHz / 1MB**
- **RAM : KINGMAX DDR2-533 SDRAM 512MB (KINGMAX KKEA88I4NAU-37XX) x 1 pcs**
- **BIOS : FSB-868G BIOS Rev 1.0 (11/14/2006)**
- **CF Card : N/A**
- **HDD: WD800JD-00LSA0 80GB SATA HDD**
- **Application Software: Run Prime95 under Windows XP Professional V2002 Service Pack 2**
- **Take Picture Time: After Power on 2 hours.**

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

Temperature Profile Test:

1. Component Side-1:

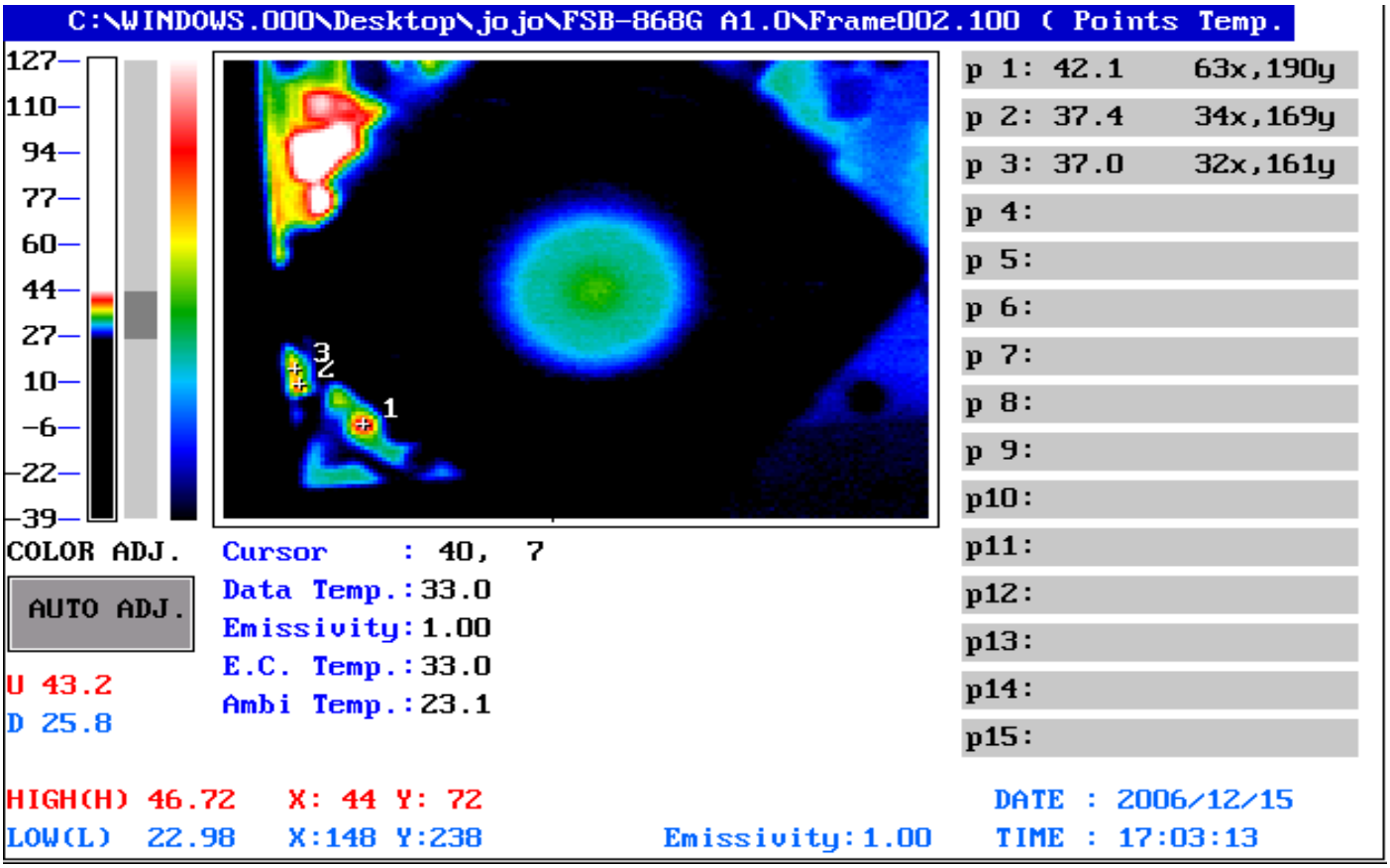


Point	Position	Describe	Tc (℃)	Tm (23.0℃)	Tm (60℃)	Note
1	U9	(TF)IC.SMD.(SOIC,EPSOIC,MLFP)(8,16)Pin Mosfet Drivers.INTERSIL.(HIP6601B,HIP6603B,HIP6604B Series);EE-A030220;14S9660***;TWN	-30 ~ 115	49.4	86.4	
2	Q1	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD60N02RT4G;EE-A060014;1315600210;TWN	-30 ~ 150	45.7	82.7	
3	Q4	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G;EE-A060020;1315780310;TWN	-30 ~ 150	46.8	83.8	
4	U14	(TF)IC.SMD.(SOIC,EPSOIC,MLFP)(8,16)Pin Mosfet Drivers.INTERSIL.(HIP6601B,HIP6603B,HIP6604B Series);EE-A030220;14S9660***;TWN	-30 ~ 115	44.9	81.9	
5	Q6	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G;EE-A060020;1315780310;TWN	-30 ~ 150	42.9	79.9	
6	C49	(TF)PS.560uF.2.5V.20%.ESR=0.008 Ir=4700.8*8mm.DIP.NCC.PSA2.5VB560MH08;EE-A050890;1169656190;TWN	-30 ~ 80	45.2	82.2	
7	Q8	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD60N02RT4G;EE-A060014;1315600210;TWN	-30 ~ 150	46.1	83.1	
8	L7	(TF)COIL.1.1uH.DIP Wire Size 2.3mm.35 材 3wire 30Amp.三集瑞 LG-11AM12J19;EE-A041508;1211101161;TWN	-50 ~ 110	29.2	66.2	
9	L10	(TF)COIL.0.56uH.DIP.Wire Size 1.7mm.1wire.GOTREND.GMAS120911P-0R56M;EE-A051441;1211105672;TWN	-70 ~ 115	43.7	80.7	
10	Q3	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G;EE-A060020;1315780310;TWN	-30 ~ 150	42.5	79.5	
11	Q2	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD60N02RT4G;EE-A060014;1315600210;TWN	-30 ~ 150	44.5	81.5	
12	U8	(TF)IC.SMD.(SOIC,EPSOIC,MLFP)(8,16)Pin Mosfet Drivers.INTERSIL.(HIP6601B,HIP6603B,HIP6604B Series);EE-A030220;14S9660***;TWN	-30 ~ 115	43.4	80.4	
13	L8	(TF)COIL.1uH.Wire Size 1.3mm.1.3mm.1wire 20Amp.高創 C5052BP-12A04YDPS;EE-A060910;121110010X;TWN	-55 ~ 115	32.7	69.7	

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

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

2. Component Side-2:

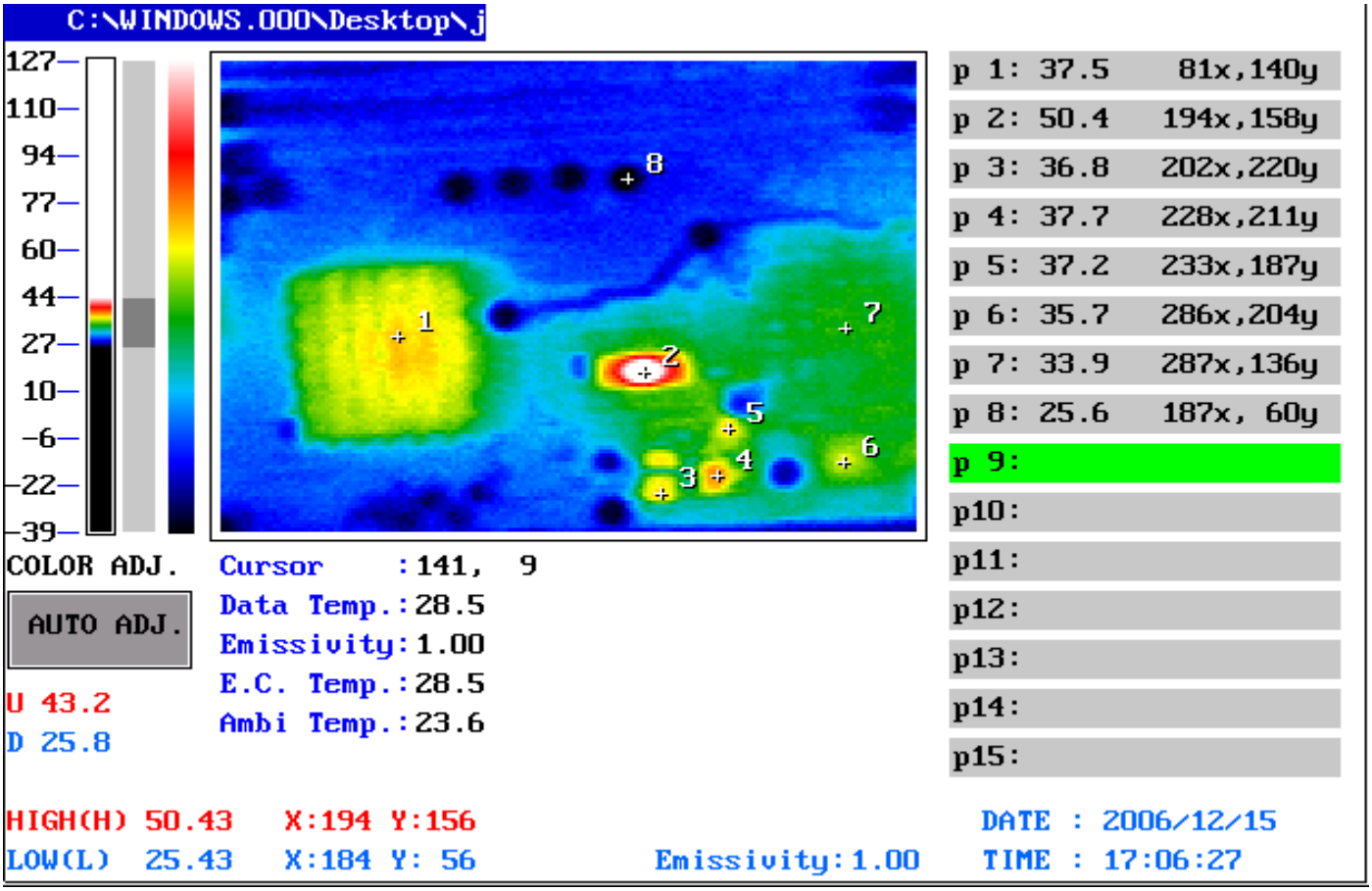


Item	Position	Describe	Tc (℃)	Tm (23.1℃)	Tm (60℃)	Note
1	U29	.SMD.(SOIC,EPSOIC,MLFP)(8,16)Pin Mosfet Drivers.INTERSIL.(HIP6601B,HIP6603B,HIP6604B Series);EE-A030220;14S9660***;TWN	-30 ~ 115	42.1	79	
2	Q11	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G;EE-A060020;1315780310;TWN	-30 ~ 150	37.4	74.3	
3	L13	(TF)COIL.0.56uH.DIP.Wire Size 1.7mm.1wire.GOTREND.GMAS120911P-0R56M;EE-A051441;1211105672;TWN	-70 ~ 115	37.0	73.9	

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

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

3. Component Side-3:

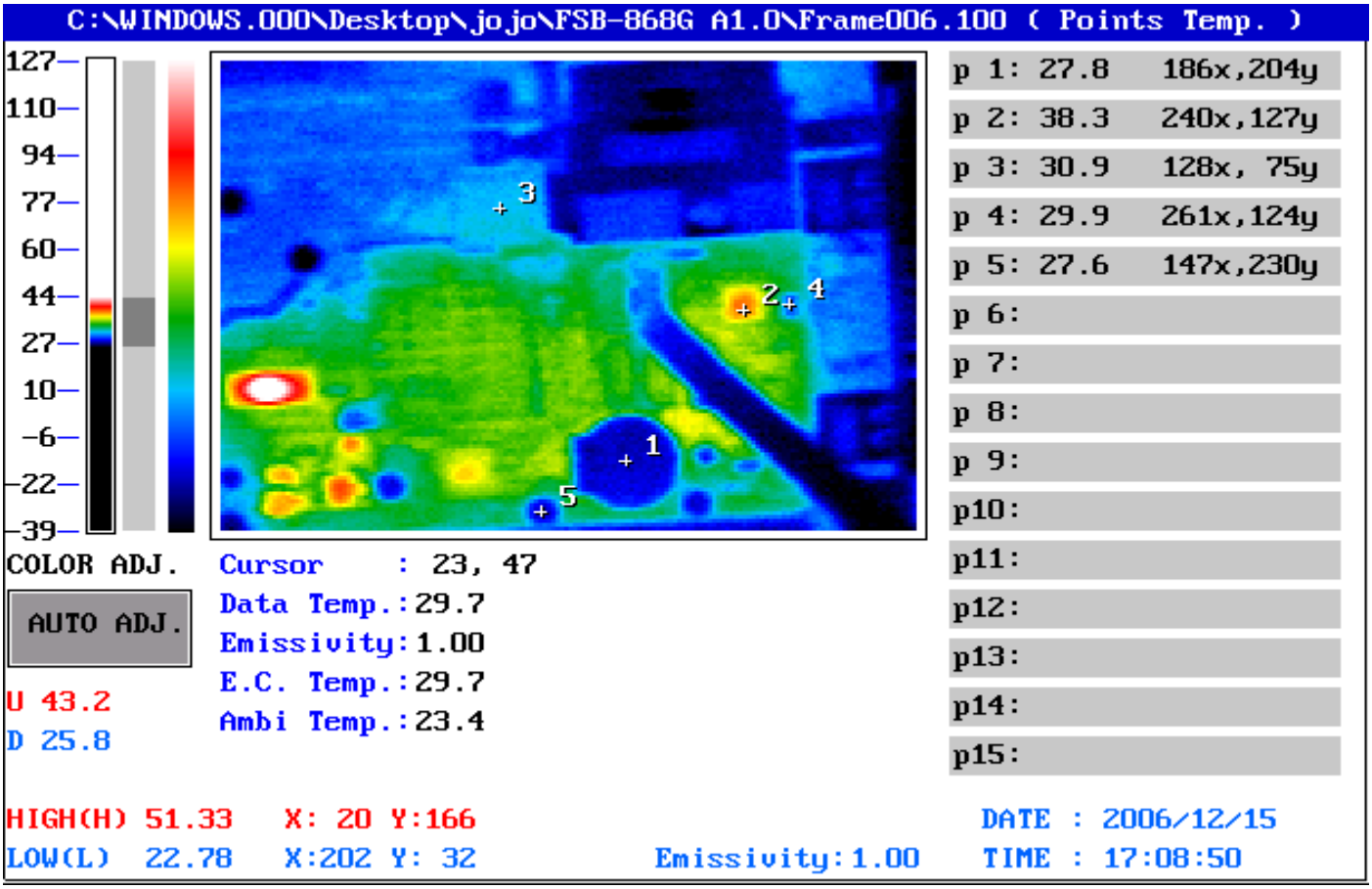


Item	Position	Describe	Tc (℃)	Tm (23.6℃)	Tm (60℃)	Note
1	Heatsink upon U19	(TF)IC.SMD.Chipset LAKEPORT 945G.INTEL.QG82945G SL8FU A2;EE-A051404;14S4294500;TWN	99	37.5	73.9	
2	U21	(TF)IC.SMD.SSOP56.Clock Generator.ICS ICS954101DFLF;EE-A050718;14S4410100;TWN	115	50.4	86.8	
3	L 17	(TF)COIL.1uH.Wire Size 1.3mm.1.3mm.1wire 20Amp.高創 C5052BP-12A04YDPS;EE-A060910;121110010X;TWN	-55 ~ 115	36.8	73.2	
4	Q12	(TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G;EE-A060020;1315780310;TWN	-30 ~ 150	37.7	74.1	
5	U26	(TF)IC.SMD SOP.8Pin Switching PWM Controller.IR.IRU3037CSPbF;EE-A020732;14S2303700;TWN	25 ~ 100	37.2	73.6	
6	U28	(TF)IC.SMD TFBGA.160P.PCI to ISA Bridge Chip.ITE.IT8888G-L;EE-A051091;14S4888801;TWN	-30 ~ 100	35.7	72.1	
7	Heatsink upon U20	(TF)IC.SMD.Chipset ICH7.INTEL.NH82801GB SL8FX A1;EE-A051402;14S428010C;TWN	99	33.9	70.3	
8	C46	(TF)EC.1200uF.6.3V.20%.8*20mm.P=3.5mm DIP.Pinlength=3.5mm.NIPPON CHEMI-CON.KZE6.3VB1200MJ20;EE-A041786;111*6*****;TWN	-70 ~ 135	25.6	62	

3. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
4. Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056

4. Component Side-4:



Item	Position	Describe	Tc (℃)	Tm (23.4℃)	Tm (60℃)	Note
1	BT1	(TF)Battery.DIP.3V.RAYOVAC.BR2335T3L;EE-A990250;1750119013;TWN	-70 ~ 130	27.8	64.4	
2	U18	(TF)IC.SMD.QFN 64P.PCI-E 10/100 Ethernet Chipset.Marvell.88E8036-A1-NNC1;EE-A051001;14S4803601;TWN	-30 ~ 100	38.3	74.9	
3	BIOS	(TF)IC.SMD.4M bit Flash Memory.for intel Firmware Hub).SST.SST49LF004B-33-4C-NHE.(Rev.CA);EE-A060295;14S6200404;TWN	-30 ~ 115	30.9	67.5	
4	Y3	(TF)XTAL SMD.25MHz.6*3.5 mm 20PPM.2P. 仕野.XSX250-S632-20;EE-A050534;1231325058;TWN	-30 ~ 100	29.9	66.5	
5	C139	(TF)EC.1200uF.6.3V.20%.8*20mm.P=3.5mm DIP.Pinlength=3.5mm.NIPPON CHEMI-CON.KZE6.3VB1200MJ20;EE-A041786;111*6*****;TWN	-70 ~ 135	27.6	64.2	

5. Tm (Measured operation temperature) must be less than Tc (Specified case temperature) +5 degree C
6. Any Tm value showed in red words which meaning the value is over the Tc+ 5 degree C of this device specification

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056