GENE-8310 A0.3

SubCompact Board With OnBoard Intel ULV Celeron M 1.3GHz CPU

Thermal Image Analysis Report

Report No: 05E080012

Release Date: MAR 18, 2005

2005/3/18	Wenyuan Yang	LiPing Hsieh
Issue Stamp	Manager	Test Engineer

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Thermal Image Analysis

SubCompact Board. Intel Celeron(R)-M 1300MHz (100x13.0)

Ⅰ. Model Name: GENE-8310 A0.3
(CPU: On Board CPU Intel Celeron(R) M processor 1300 MHz (100x13.0))
(ha))

Ⅱ. Description: Intel ULV Celeron-M SubCompact Board With Onboard Intel ULV Celeron M 1.3GHz CPU

Ⅲ. Date: Mar 18, 2005

Ⅳ. Measure Site: AAEON QE Dept.

Ⅴ. Issued by :Li-Ping Hsieh

Ⅵ.Equipment:

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

Ⅶ. Simulation Environment:

- **Temperature: Component Side : 25.1 ℃**
  Solder Side : 25.1 ℃
- **CPU: On Board CPU Intel Celeron(R) M 1300MHz (100x13.0)**
- **RAM: Hynix /DDR 333 / 512MB**
- **CF Card: N/A**
- **Application Software: Run HCT (9.5)System Stress Test under Windows XP Professional+SP1**
- **Take Picture Time: After Power on 2 hours.**

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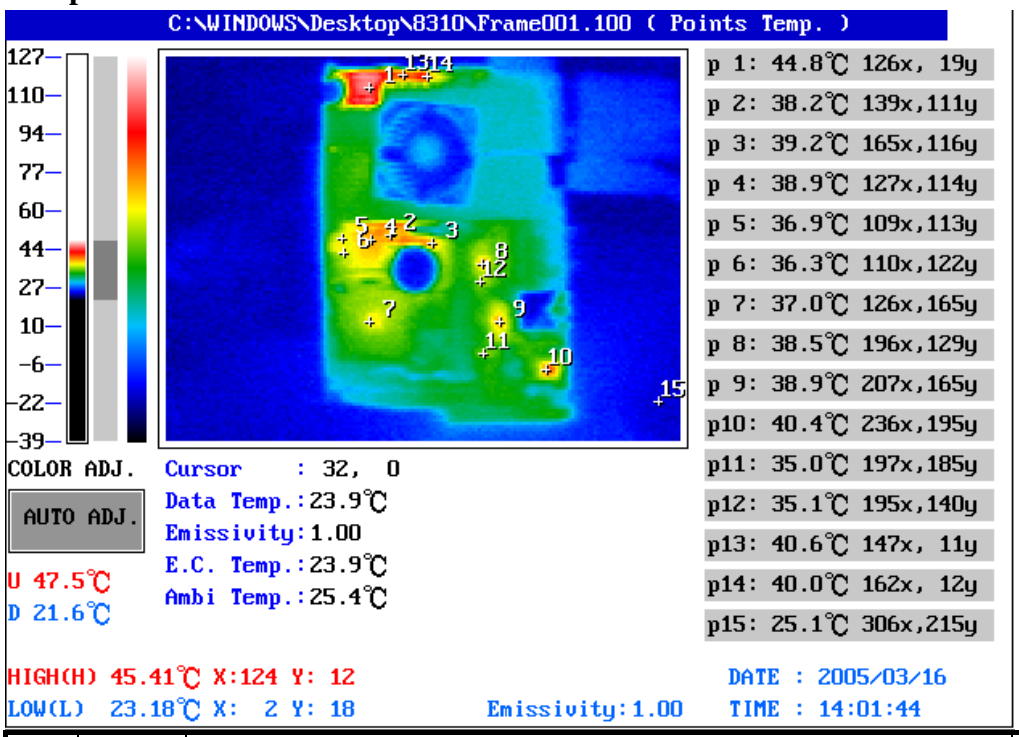
Temperature Profile Test:

Component Side :



Point	Position	Describe	Tc	Tm (25℃)	Tm (60℃)	Note
1	L2	COIL.0.8uH.SMD.12.5*12.5*5.6mm.DCR=2.5mohm Idc=27.2Amp. 震元.CEP125U-0R8	-60~110℃	44.8℃	79.7	
2	L4	INDUCTOR.3.3uH.20%.SMD DCR=12mohm Isat=27A.VISHAY.IHLP2525CZRZ3R3M01	-25~155	38.2℃	73.1	
3	U6	ICS.ICS952601;EE-A040124;14S3260100;TWN	94℃	39.2℃	74.1	
4		IC.SMD.PLCC 32Pin FWH(4MB).SST.49LF004A	-30~115℃	38.9℃	73.8	
5	U1	Dual N-Channel.SMD SO-8.2.5V MOSFET.APEC.AP9926M	-30~125℃	36.9℃	71.8	
6	L1	INDUCTOR.3.3uH 3A.20%.SMD 2Pin.震元.SMTDR54-3R3M	-50~110℃	36.3℃	71.2	
7	U3	IC.SMD.Chipset ICH4.INTEL.FW82801DB SL6DM	0~110℃	37.0℃	71.9	
8	U12	Dual P-Channel MOSFET 2.5V.Vishay.SI9933BDY-T1-E3	125℃	38.5℃	73.4	
9	U13	IC.SMD.SSOP48 Chipset.INTEL.DA82562ET	0~135℃	38.9℃	73.8	
10	U16	IC.SMD LQFP 48Pin.6 Channel AC'97 Audio Codec.REALTEK.ALC655	100℃	40.4℃	75.3	
11	U9	IC.SMD.28Pin QSOP Parallel Term.CMD.Super 1284-04Q	-30~100℃	35.0℃	69.9	
12	U10	IC.SMD SO-8.1.5A.Low Dropout Regulator.Adj(1.2~4.8V).SEMTECH.SC1565IS	-10~115℃	35.1℃	70	
13	L4	INDUCTOR.3.3uH.20%.SMD DCR=12mohm Isat=27A.VISHAY.IHLP2525CZRZ3R3M01	-85~155℃	40.6℃	75.5	
14	R46	CR.(2~10M).(1/16,1/10,1/8,1/4,1/3,3/4,1)W,(+/-1,+/-5)%.(0402,0603,0805,1206,1210,2010,2512).SMD;EE-A011069;105	-85~155℃	40.0℃	74.9	
15		Ambient Temperature		25.1℃		

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.

Temperature Profile Test:

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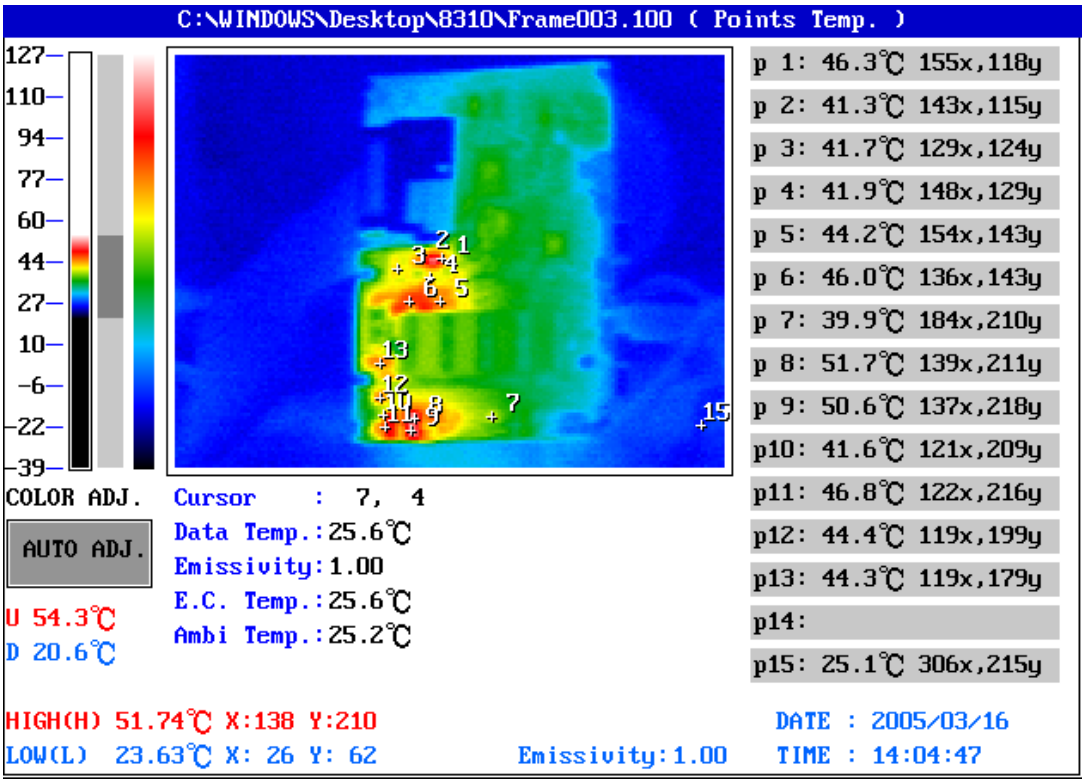
Solder Side:



Point	Position	Describe	Tc	Tm (25℃)	Tm (60℃)	Note
1	U30	Dual N-Channel.SMD SO-8.2.5V MOSFET.APEC.AP9926M	-30~125℃	46.3℃	81.2℃	
2	U29	PWR.SMD SO8.N-Channel MOSFET 30V 15A.FAIRCHILD.FDS7760A	-30~125℃	41.3℃	76.2℃	
3	U21	IC.SMD TSSOP-28. DualPower Supply Controller.SEMTECH.SC1485ITSTR	-15~100℃	41.7℃	76.6℃	
4	C198	MLCC.100uF.6.3V.X5R.+-20%.1210.SMD	-85~155℃	41.9℃	76.8℃	
5	TC12	SP CAP.220uF.2V.-35~+10%.D(7.3*4.3*1.9mm).9mOhm SMD.Panasonic.EEFSX0D221YR	-70~135℃	44.2℃	79.1℃	
6	TC8	SP CAP.220uF.2V.-35~+10%.D(7.3*4.3*1.9mm).9mOhm SMD.Panasonic.EEFSX0D221YR	-70~135℃	46.0℃	80.9℃	
7	U38	IC.SMD.SO8.Step-Down DC/DC Controller.Anpec.APW7057	-30~100℃	39.9℃	74.8℃	
8	U26	PWR.SMD SO8.N-Channel POWER MOSFET.FAIRCHILD.FDS6680S	-30~125℃	51.7℃	86.6℃	
9	U25	PWR.SMD SO8.N-Channel POWER MOSFET.FAIRCHILD.FDS6680S	-30~125℃	50.6℃	85.5℃	
10	U20	PWR.SMD SO8.N-Channel MOSFET 30V 15A.FAIRCHILD.FDS7760A	-30~125℃	41.6℃	76.5℃	
11	U19	PWR.SMD SO8.N-Channel MOSFET 30V 15A.FAIRCHILD.FDS7760A	-30~125℃	46.8℃	81.7℃	
12	U22	IC.SMD SO8.3A Linear Regulator.Anpec.APL5331KC	125℃	44.4℃	79.3℃	
13	C155	MLCC.100uF.6.3V.X5R.+-20%.1210.SMD	-85~155℃	44.3℃	79.2℃	
14						
15		Ambient Temperature		25.1℃		

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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