



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

GENE-6310(VIA Eden 733MHz) Thermal Image Analysis Report

Release Date : Aug .01, 2003

2003-08-01

Issue Stamp

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Test Engineer

Thermal Image Analysis

. **Model Name:** GENE-6310 Rev.A1.0 (BIOS:1.2)

. **Description:** Low-power SubCompact Board.

. **Date:** Aug. 01, 2003

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

. **Issued by :** Rex Chang

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

. **Simulation Environment:**

Temperature:

Component Side: 23.2 degrees C

Solder Side: 23.3 degrees C

Power Module – Top : 23.1 degrees C

CPU: Onboard VIA Eden 733MHz

RAM: 128MB NEC D45128163G5-A80-9JF (PC-100)

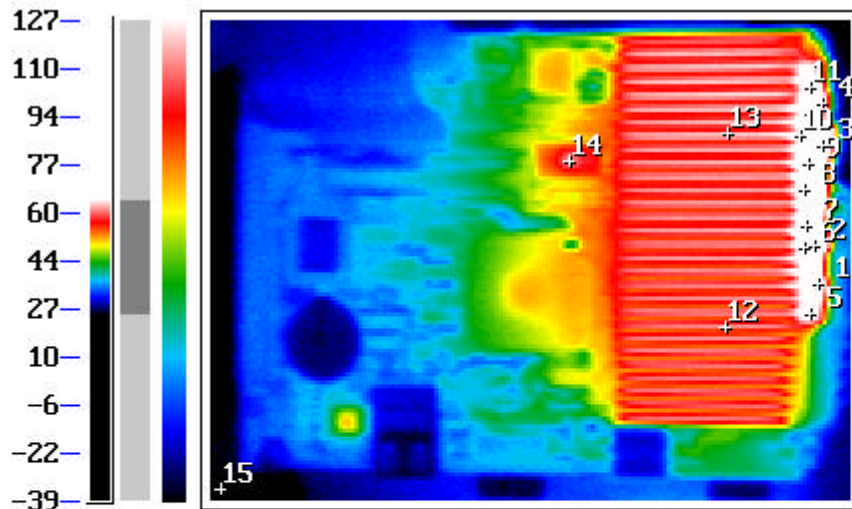
Hardware: Maxtor 33073U4 30.6GB HDD

Application Software: Windows2000 / HCT 9.5

Take Picture Time: Power on 8 hours after

Temperature Profile Test:

Component Side:



p 1:	68.3°C	303x, 131y
p 2:	70.9°C	301x, 112y
p 3:	74.0°C	305x, 62y
p 4:	69.2°C	305x, 41y
p 5:	66.1°C	299x, 146y
p 6:	70.5°C	296x, 113y
p 7:	72.7°C	297x, 102y
p 8:	73.5°C	296x, 84y
p 9:	73.6°C	298x, 71y
p10:	69.2°C	294x, 57y
p11:	67.9°C	299x, 33y
p12:	61.5°C	257x, 153y
p13:	63.1°C	258x, 56y
p14:	61.4°C	179x, 70y
p15:	23.2°C	5x, 234y

COLOR ADJ. Cursor : 21, 8
 Data Temp.: 28.0°C
 Emissivity: 1.00
 E.C. Temp.: 28.0°C
 Ambi Temp.: 22.5°C
 U 65.0°C
 D 25.0°C

HIGH(H) 76.91°C X:300 Y: 76
 LOW(L) 22.33°C X: 34 Y:236

DATE : 2003/07/31
 TIME : 11:33:54
 Emissivity: 1.00

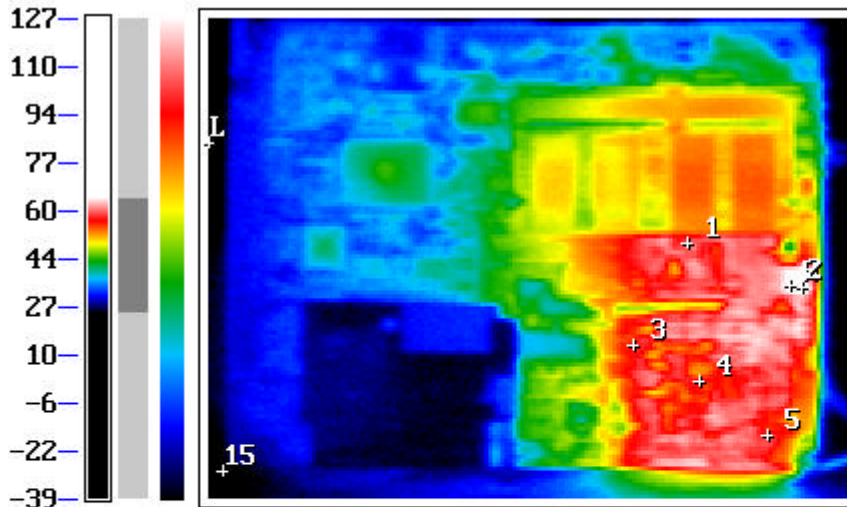
Point	Position	Describe	Ts	Tm	Note
1	Q1	PWR.SMD.TO-252 N-Channel Power MOSFET.APEC.AP70L02H		68.3	
2	U1	IC.SMD SOP.8Pin Switching PWM Controller.IR.IRU3037CS		70.9	
3	Q3	PWR.SMD.TO-252 N-Channel Power MOSFET.APEC.AP70L02H		74.0	
4	D1	D Schottky.SOT-23.FAIRCHILD.BAT54C		69.2	
5	C5	SP CAP.150uF.6.3V.20%.D(7.3*4.3*4.2mm).150hm SMD.Panasonic.EEFUE0J151R		66.1	
6	L1	INDUCTORS.3.2uH 12.8A.20%.SMD 3pin 扁銅線.震元.CEP125U-L13R2M		70.5	
7	C6	SP CAP.150uF.6.3V.20%.D(7.3*4.3*4.2mm).150hm SMD.Panasonic.EEFUE0J151R		72.7	
8	Q2	REG.SMD.TO-252 5A Linear Regulator.ATC.AP1084D-ADJ		73.5	
9	C12	SP CAP.150uF.6.3V.20%.D(7.3*4.3*4.2mm).150hm SMD.Panasonic.EEFUE0J151R		73.6	
10	L2	INDUCTORS.1.8uH 15A.30%.SMD 3Pin 扁銅線.震元.CEP125H-1R8N		69.2	
11	C13	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).150hm SMD.Panasonic.EEFUE0E221R		67.9	
12	U12	IC.SMD.552P BGA North Bridg e.VIA.VT8606		61.5	
13	U2	VIA CPU.EBGA 376P.Eden6000S 667MHz 1.1V		63.1	
14	U3	IC.SMD.SSOP 48P Clock Generator.PhaseLink.PLL202-01		61.4	
15		The Room Temperature		23.2	

I. Operation Temperature ():

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

Temperature Profile Test:

Solder Side:



p 1:	60.9°C	239x, 112y
p 2:	65.5°C	290x, 133y
p 3:	57.1°C	212x, 163y
p 4:	57.3°C	245x, 181y
p 5:	59.0°C	279x, 208y
p 6:		
p 7:		
p 8:		
p 9:		
p10:		
p11:		
p12:		
p13:		
p14:		
p15:	23.3°C	7x, 226y

COLOR ADJ. Cursor : 7, 3
 AUTO ADJ. Data Temp.: 23.4°C
 Emissivity: 1.00
 E.C. Temp.: 23.4°C
 Ambi Temp.: 22.2°C
 U 65.0°C
 D 25.0°C

HIGH(H) 67.14°C X:296 Y:134
 LOW(L) 21.88°C X: 0 Y: 62

Emissivity: 1.00 DATE : 2003/07/31
 TIME : 11:35:29

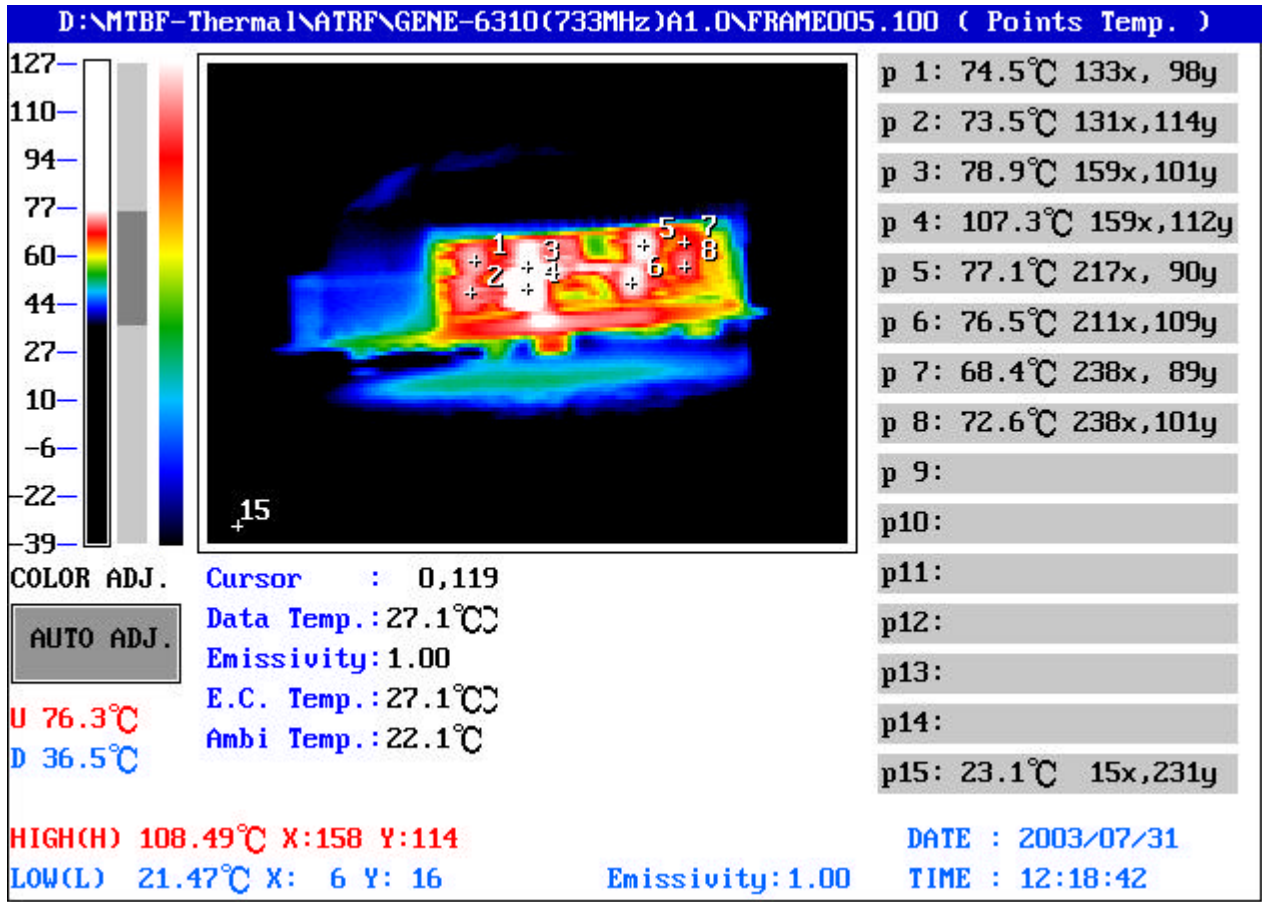
Point	Position	Describe	Ts	Tm	Note
1	C153	SP CAP.33uF.6.3V.20%.D(7.3*4.3*1.1mm).350hm SMD.Panasonic.EEFFF0J330FR		60.9	
2	C137	SP CAP.150uF.6.3V.20%.D(7.3*4.3*4.2mm).150hm SMD.Panasonic.EEFUE0J151R		65.5	
3	C209	SP CAP.82uF.2.5V.20%.D.SMD.Panasonic.EEFC0E820R		57.1	
4	C93	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).150hm SMD.Panasonic.EEFUE0E221R		57.3	
5	C104	SP CAP.220uF.2.5V.20%.D(7.3*4.3*4.2mm).150hm SMD.Panasonic.EEFUE0E221R		59.0	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15		The Room Temperature		23.3	

1. Operation Temperature ():

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

Temperature Profile Test:

Power Module – Top :



Point	Position	Describe	Ts	Tm	Note
1	Q1	PWR.SMD.TO-252 N-Channel Power MOSFET.APEC.AP70L02H		74.5	
2	Q4	PWR.SMD.TO-252 N-Channel Power MOSFET.APEC.AP70L02H		73.5	
3	U1	IC.SMD SOP.8Pin Switching PWM Controller.IR.IRU3037CS		78.9	
4	U3	IC.SMD.SOIC 8P.Ultra Low Dropout Regulator.IR.IRU1150CS		107.3	
5	Q3	PWR.SMD.TO-252 N-Channel Power MOSFET.APEC.AP70L02H		77.1	
6	Q5	PWR.SMD.TO-252 N-Channel Power MOSFET.APEC.AP70L02H		76.5	
7	D1	D Schottky.SOT-23.FAIRCHILD.BAT54C		68.4	
8	U2	IC.SMD SOP.8Pin Switching PWM Controller.Intersil.ISL6520A		72.6	
9					
10					
11					
12					
13					
14					
15		The Room Temperature		23.1	

1. Operation Temperature ():

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