



Industrial Computing Platform Partner

ONYX-170

With HDD

Environment Test Report

Report NO: 07P020017

Issued by:

Sean Hsu

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06/01/2007

Test Engineer

Date

Reviewed by:

Wenyuan Yang

/

06/01/2007

Manager

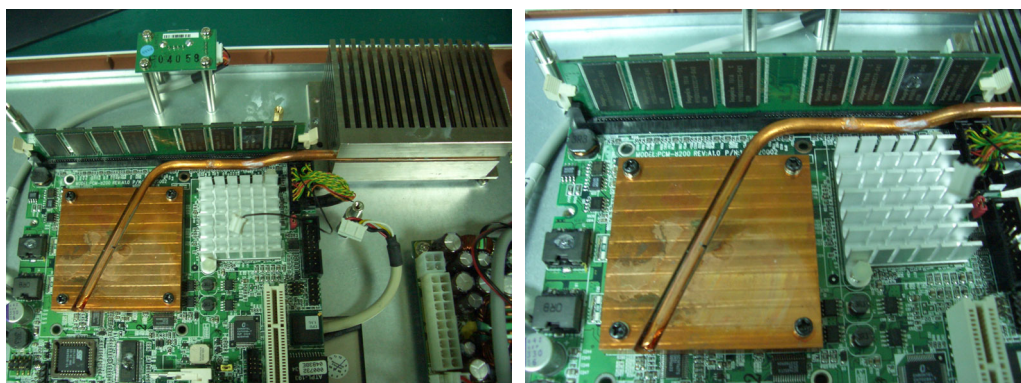
Date

Test item list

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Num	Item	Spec
1.	Low Noise Medical Station:	ONYX-170
	1.LCD	TFT LCD.17" CPT CLAA170EA07 / 4 LAMP
	2.AC ADAPTER	FSP 105-AGB I/P : 100~240VAC O/P:15V/7A
	3.DC/DC POWER SUPPLY	EPD-146 Rev : C
	4. Inverter	HYUNDAI 17" TFT LCD. (4LAMPS) QF132V1.16(S)
2.	CPU Board:	PCM-8200 Rev: A1.0
	1. Bios Ver.	ONYX-193 (03/27/2007)
	2.CPU	Intel Pentium M Processor 1.1G
	3.Memory	DSL 1GB hynix HY5DU12822CTP-D43 (DDR333)
	4.I/O Board	Y010 Ver: A1.3
	5. HDD (SATA)	FUJITSU MHV2080BH / 80GB
	6.Test Software	Windows XP
	7.DVD-ROM	TEAC DV-28SL-R93

Cooler



Temperature cycle test

Test Date: 05-24~25-2007

Test Product: ONYX-170

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

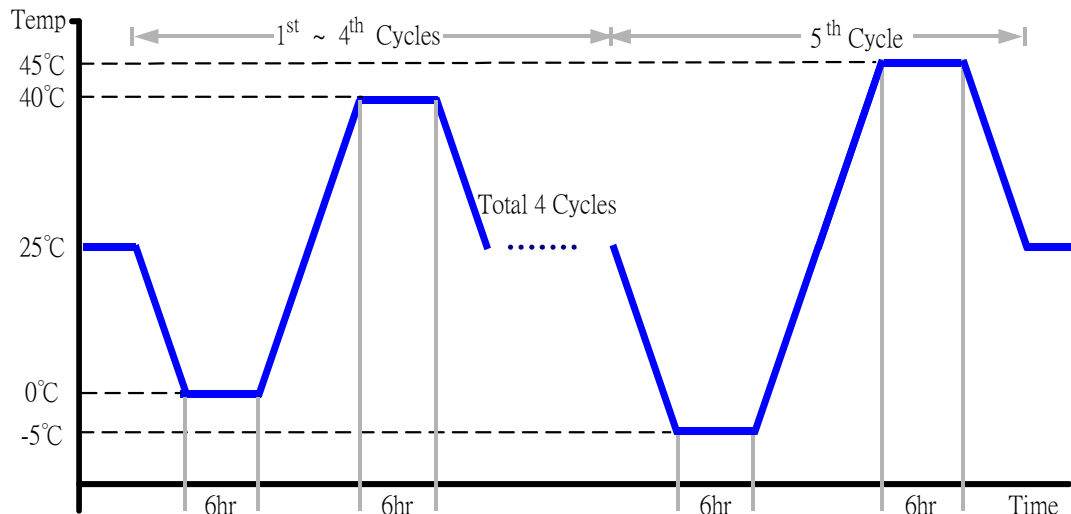
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/11/06
Serial Number: 12A323190

Test Condition:

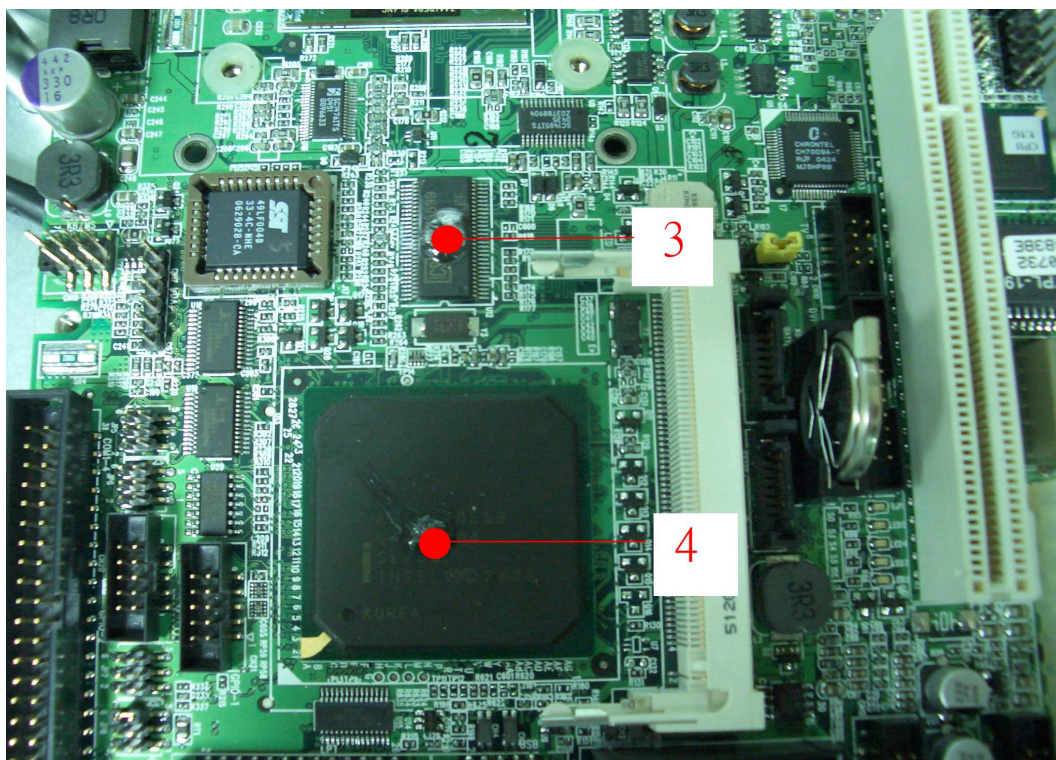
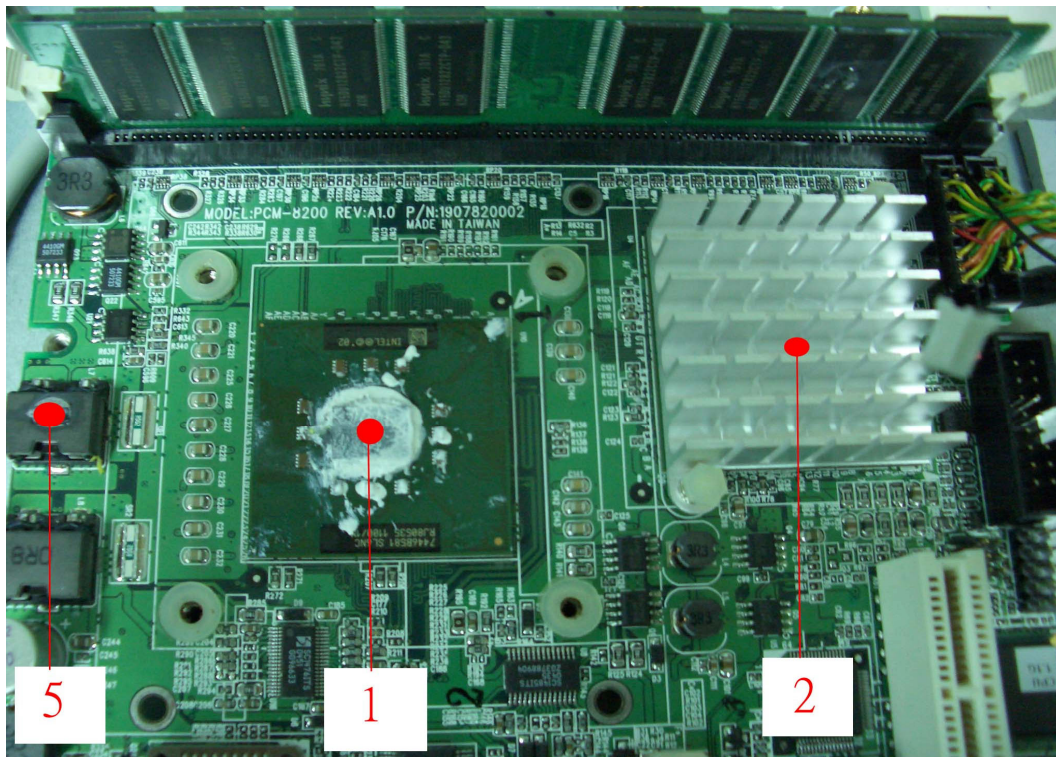
1. Test Low Temperature: 0°C (1~4 cycles)
-5°C (5th cycle)
2. Test High Temperature: 40°C (1~4 cycles)
45°C (5th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2°C/min
5. Test cycle: 5 cycles
6. Test Environment Curve:



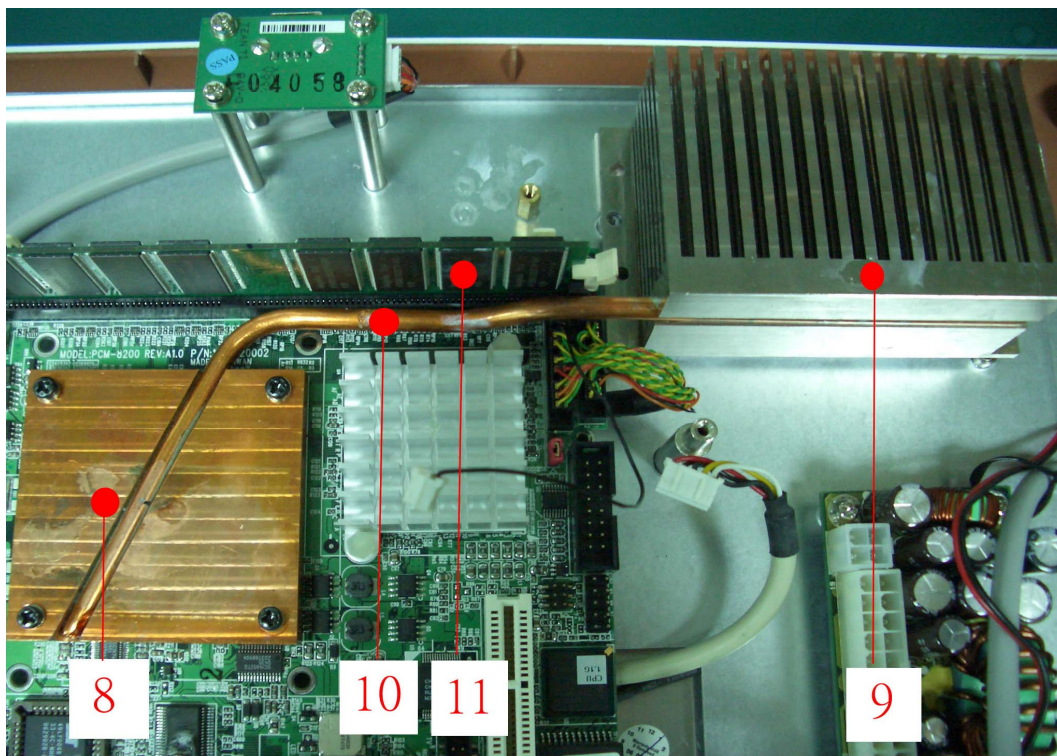
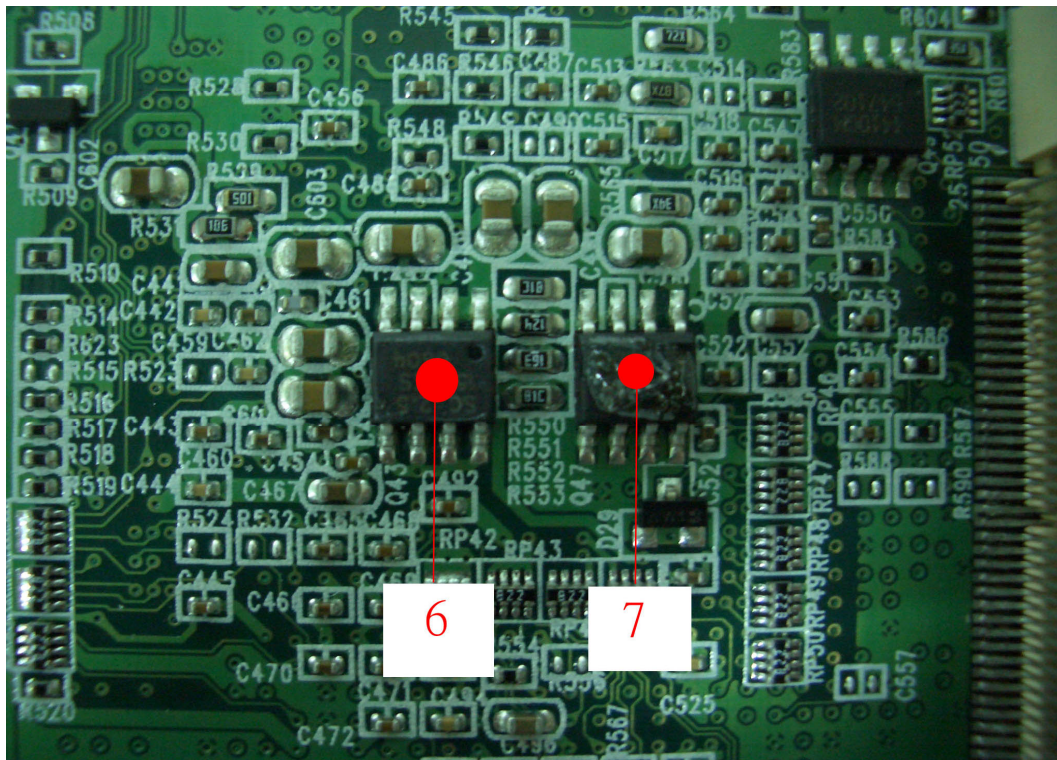
Temperature cycle test

Temperature Recorder:

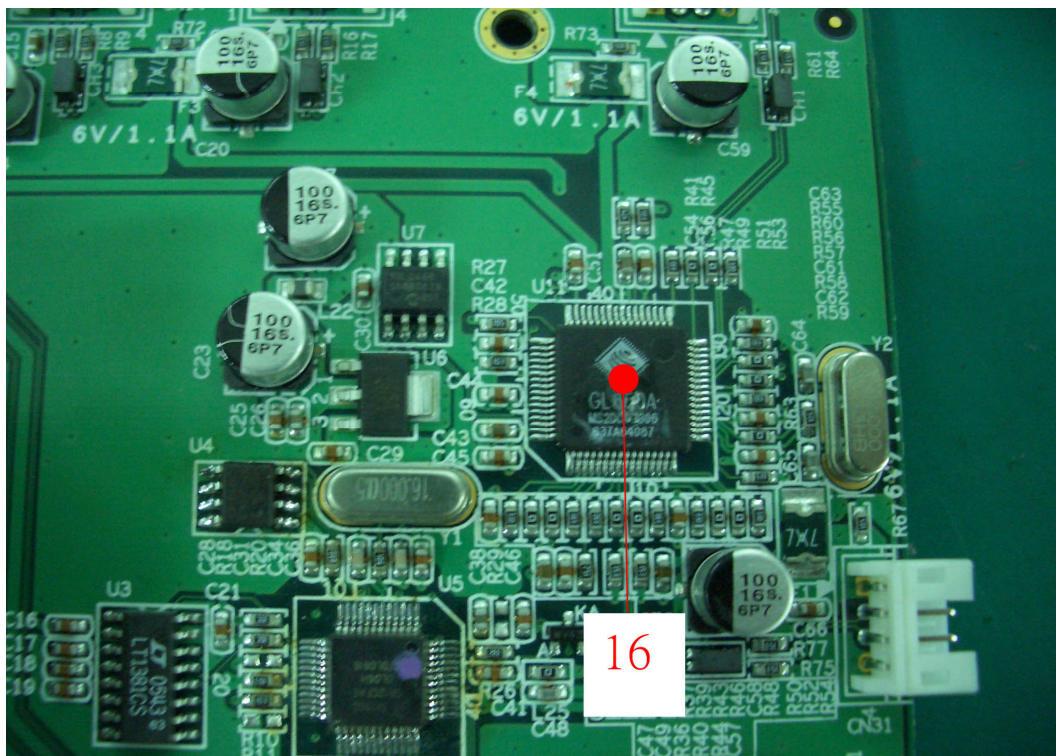
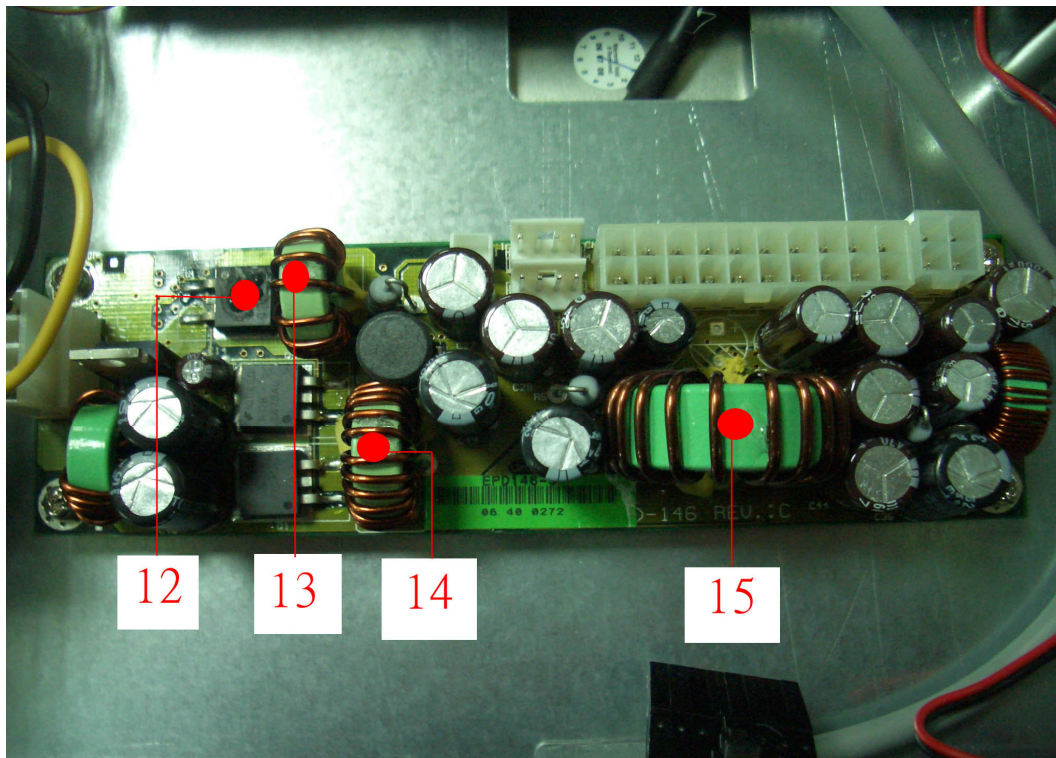
Measuring Thermal Couple Position:



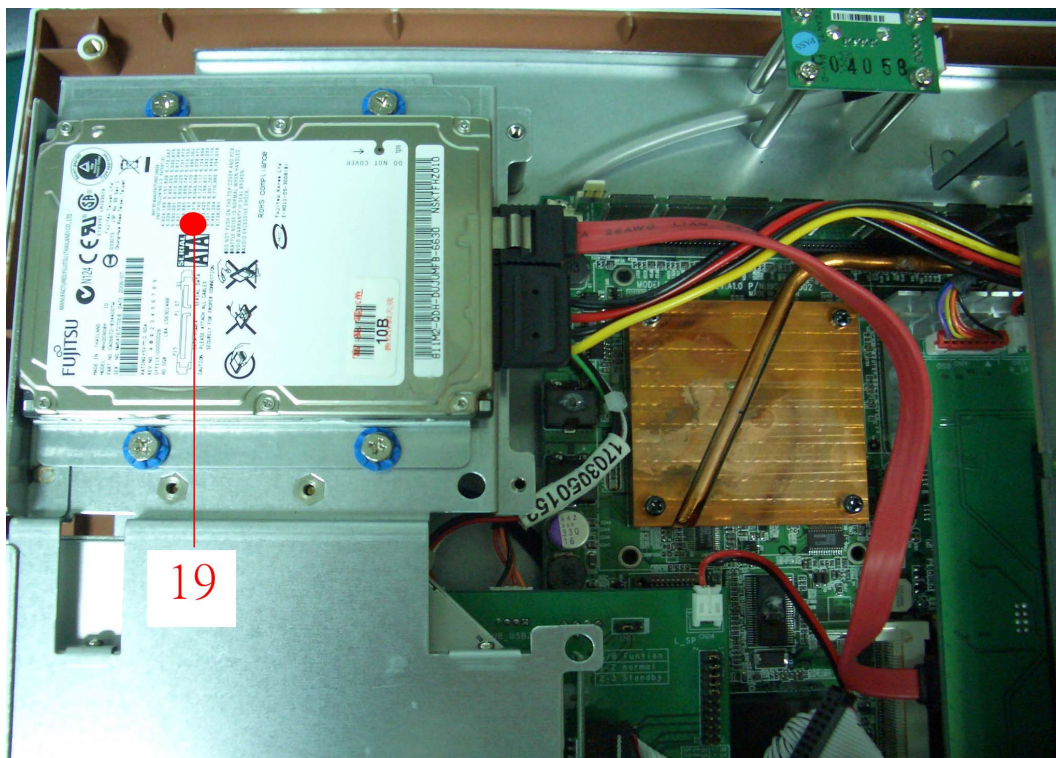
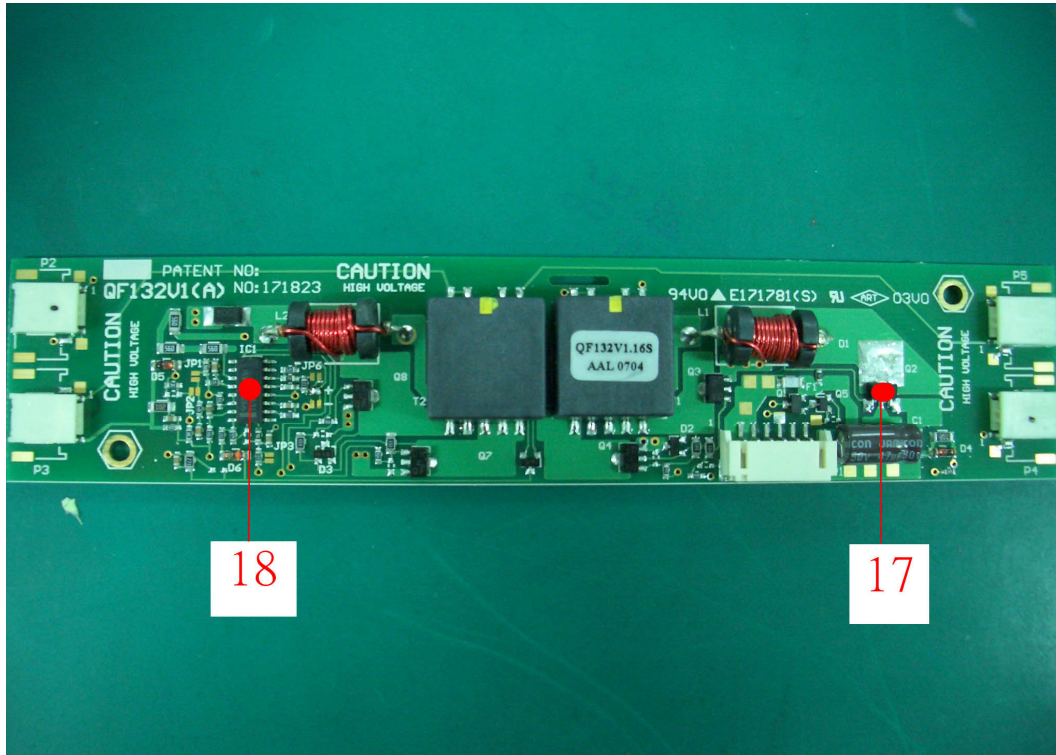
Temperature cycle test



Temperature cycle test



Temperature cycle test



Temperature cycle test



Temperature cycle test

Thermal profile data:

Onyx-170

System							
Point	Temp. Stage(°C)	Spec	45	40	25	0	-5
Board-PCM-8200							
1.CPU- Intel Pentium M Processor 1.1G	100	52.8	47.8	32.8	7.8	2.8	
2.U4-Chipset MONTARA.INTEL.JG82855GME SL7VN	105	84.1	79.1	64.1	39.1	34.1	
3.U12 -CLOCK GENERATOR.ICS.ICS952601	100	79.4	74.4	59.4	34.4	29.4	
4.U13-Chipset Hance Rapids.INTEL.NHE6300ESB SL7XJ	100	52.6	47.6	32.6	7.6	2.6	
5.L7-COIL.1.5uH.20%. GOTREND.GSTC135P-1R5MF	125	75.1	70.1	55.1	30.1	25.1	
6.Q47-Regulator. Adj (1.2~4.8V).SEMTECH.SC1565IS-TRT	100	68.6	63.6	48.6	23.6	18.6	
7.Q43-Regulator. Adj (1.2~4.8V).SEMTECH.SC1565IS-TRT	100	64.5	59.5	44.5	19.5	14.5	
8. Heat -Pipe	N/A	72.5	67.5	52.5	27.5	22.5	
9. Heat -Pipe	N/A	71.6	66.6	51.6	26.6	21.6	
10.Heat -Pipe	N/A	73.4	68.4	53.4	28.4	23.4	
11. Memory- DSL 1GB hynix HY5DU12822CTP-D43(DDRII-333)	70	75.7	70.7	55.7	30.7	25.7	
DC-DC POWER SUPPLY (EPD-146 REV:C)							
12.Q4 FAIRCHILD N-Channel MOSFET 80A/30V FDB6670AL	175	55.7	50.7	35.7	10.7	5.7	
13.T2-COIL	125	57.6	52.6	37.6	12.6	7.6	
14.T1-COIL	125	68.6	63.6	48.6	23.6	18.6	
15.L2-COIL	125	64.3	59.3	44.3	19.3	14.3	
Board-Y010							
16.U11-LQFP.64P.USB2.0 4-PORT HUB CONTROLLER.GENESYS.GL850A-G06	100	76.1	71.1	56.1	31.1	26.1	
Inverter							
17. Inverter - Q2	150	90.1	85.1	70.1	45.1	40.1	
18. Inverter - IC1	85	74.6	69.6	54.6	29.6	24.6	
19-HDD- FUJITSU MHV2080BH / 80GB	70	57	52	37	12	7	
20.Chamber Air Temperature	N/A	46.1	41.1	26.1	1.1	-3.9	
The description in red states which temperature is over the specification of the device.							

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-170)

Test Result:

No problem was found during the temperature operation cycle test.

High temperature storage test

Test Date: 05-26~27-2007

Test Product: ONYX-170

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.

Model: THS-D4L+-100

Date of Calibration: 11/21/05

Serial Number: 2582

Testing Item:

1. Test Temperature: 60°C
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-170)

Test Result:

No problem was found after the high temperature storage test.

Test Date: 05-28~29-2007

Test Product: ONYX-170

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-1
Testing procedures Test Ab: Cold Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber

K.SON. INS. TECH. CORP.

Model: THS-D4L+-100

Date of Calibration: 11/21/05

Serial Number: 2582

Testing Item:

1. Test Temperature: -20°C
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-170)

Test Result:

No problem was found after the low temperature storage test.

Humidity test

Test Date: 05-23~24-2007

Test Product: ONYX-170

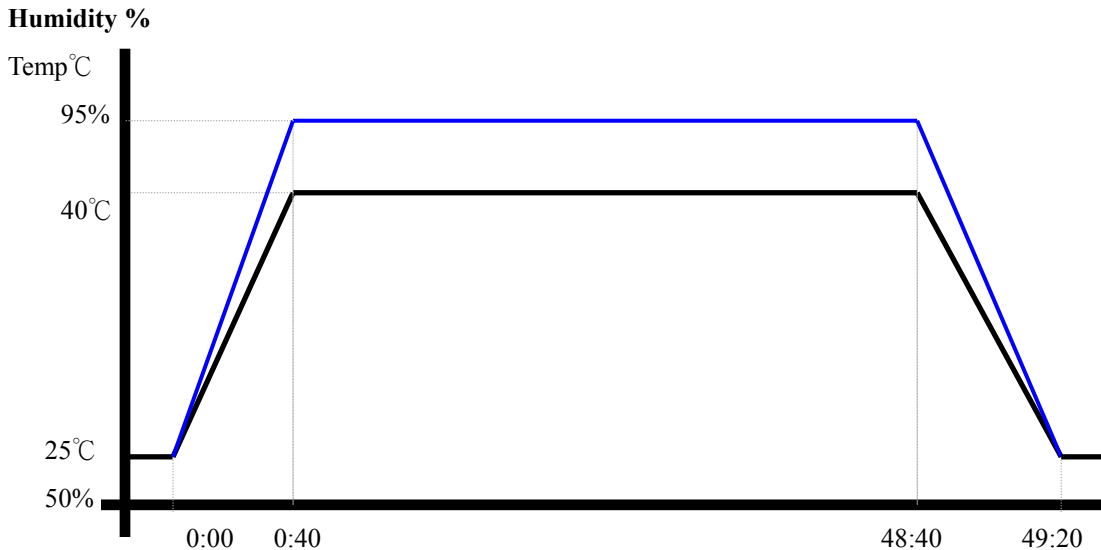
Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Testing Item:

1. Test Temperature: 40°C
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows media Player (Video test soft-MPEG from HDD)
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ONYX-170)

Test Result:
No problem was found after the humidity storage test.

Cold Start test

Test Date: 05-28-2007

Test Product: ONYX-170

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.

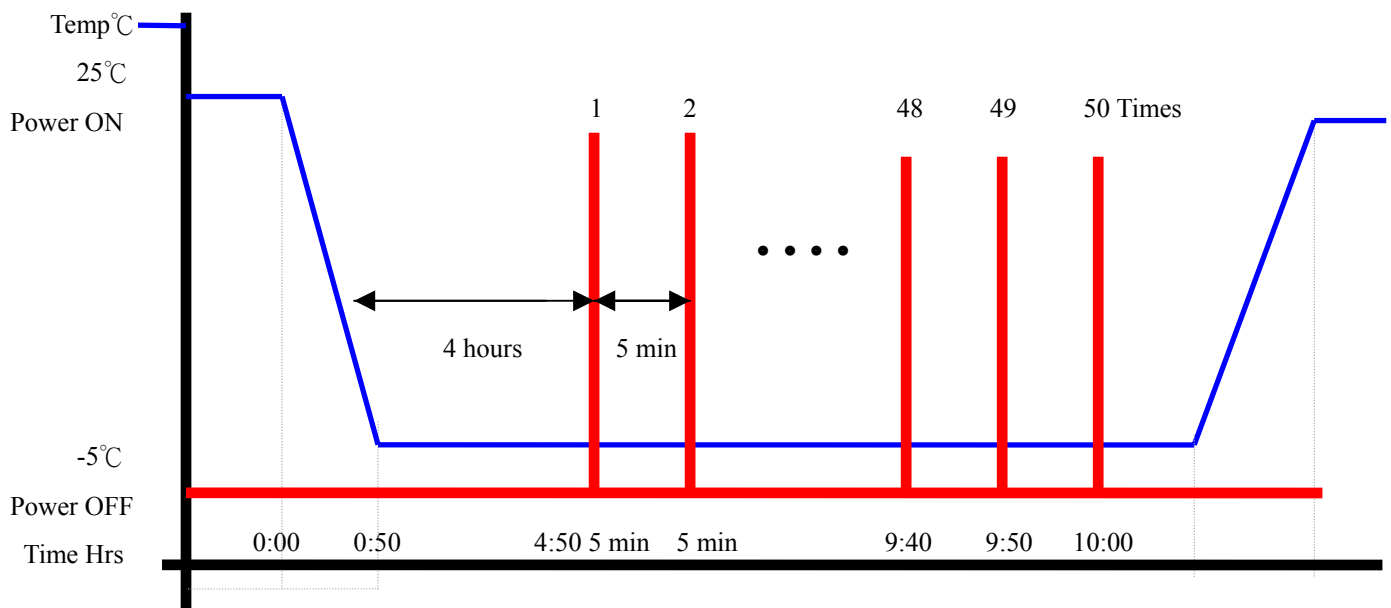
Model: THS-D4L+-100

Date of Calibration: 11/21/05

Serial Number: 2582

Test Condition:

1. Test Temperature: -5°C
2. Test Times: 5 Hours or 50 times of ON/OFF
 - (1) Power off for 4 hours before 1st power on. Then once complete boot, power off immediately.
 - (2) After 5 min later power on again and wait until booting is completed.
 - (3) Repeat (2) for around 4:50
 - (4) Power off then wait for 5 min before final power on operation.
3. Number of test: 50 times
4. Test Software: Windows XP
5. Test Environment Curve:



Cold Start test

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-170)

Test Result:

No problem was found after the Cold Start test.