



Industrial Computing Platform Partner

ONYX-190

With HDD

Environment Test Report

Report NO: 07P020014

Issued by:

Sean Hsu

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05/23/2007

Test Engineer

Date

Reviewed by:

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05/23/2007

Manager

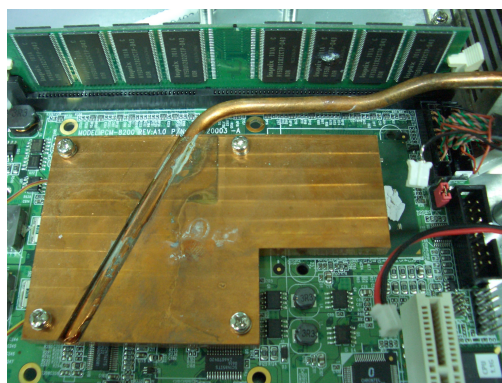
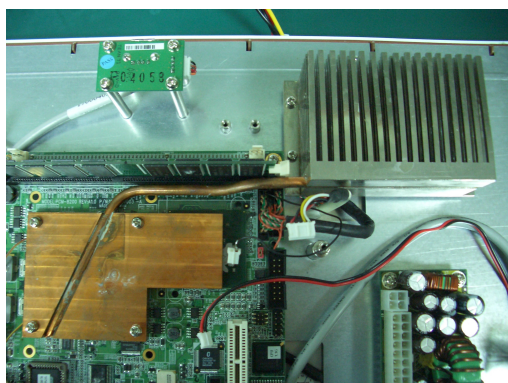
Date

Test item list

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Num	Item	Spec
1.	Low Noise Medical Station:	ONYX-190
	1.LCD	TFT LCD.19" AUO M190EN04.1.400 nits
	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 19" TFT LCD. (4LAMPS) QF132V1(A)
2.	CPU Board:	PCM-8200 Rev: A1.0
	1. Bios Ver.	ONYX-170/190 (04/05/2007)- Not For Sale
	2.CPU	Intel Pentium M Processor 1.1G
	3.Memory	DSL 1GB hynix HY5DU12822CTP-D43 (DDRII-333)
	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: 05-21~23-2007

Test Product: ONYX-190

Test Site: AAEON QA Internal Lab.

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

Test Equipment:

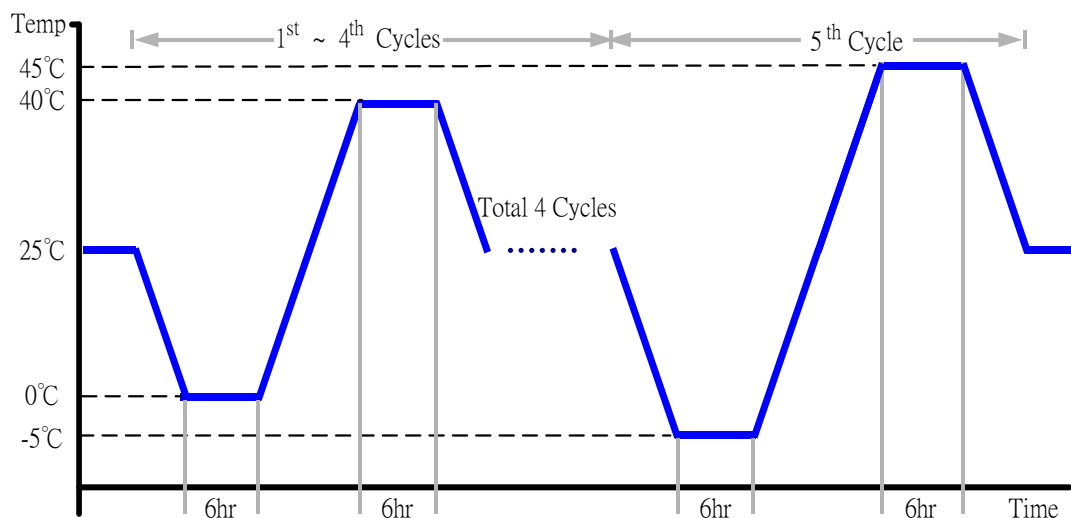
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/19/06
Serial Number: 1241

Temperature Measurement:

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

Test Condition:

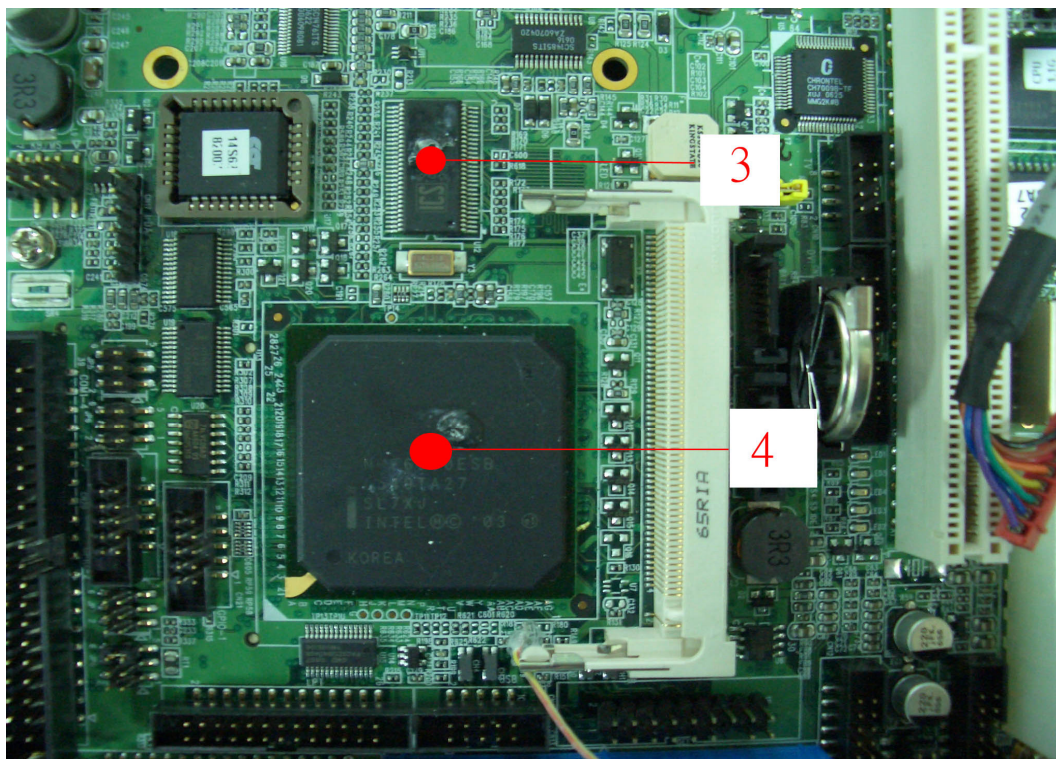
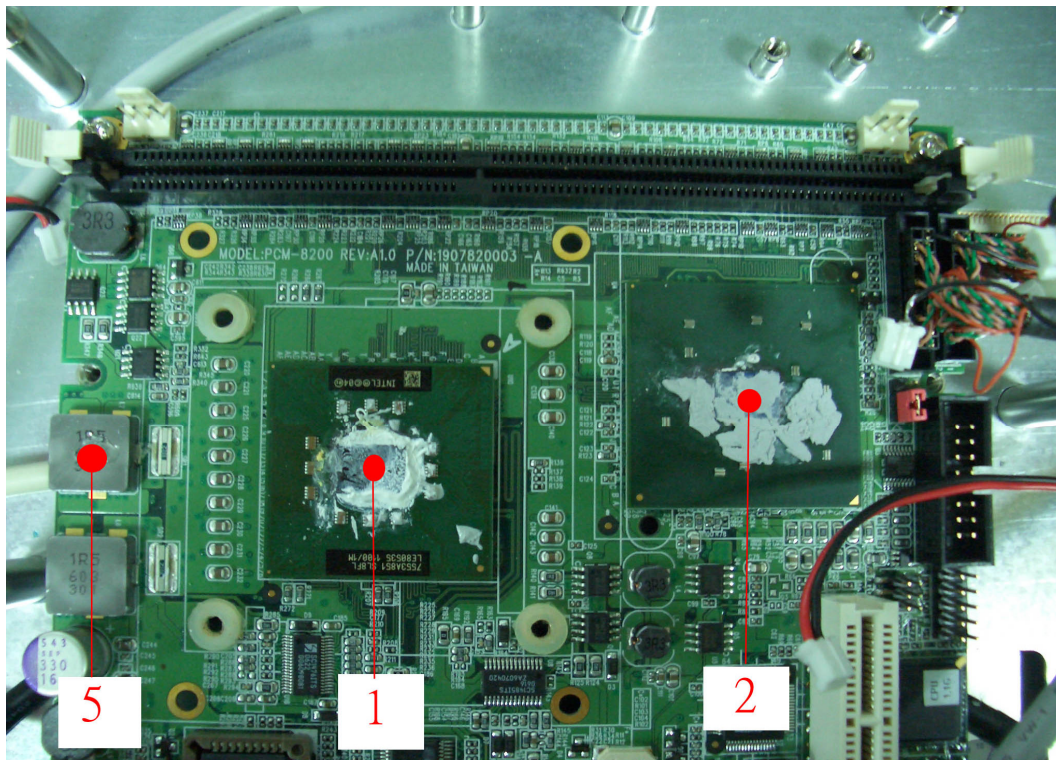
1. Test Low Temperature: 0°C (1~4 cycles)
-5°C (5th cycle)
2. Test High Temperature: 40°C (1~4 cycles)
45°C (5th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2°C/min
5. Test cycle: 5 cycles
6. Test Environment Curve:



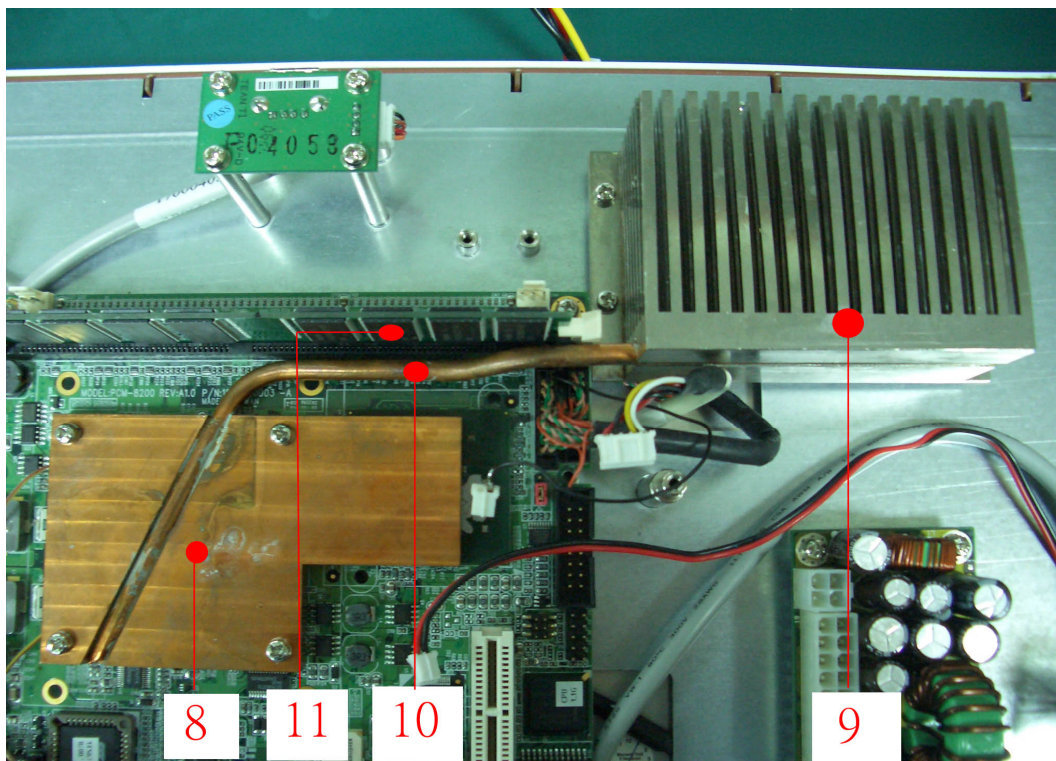
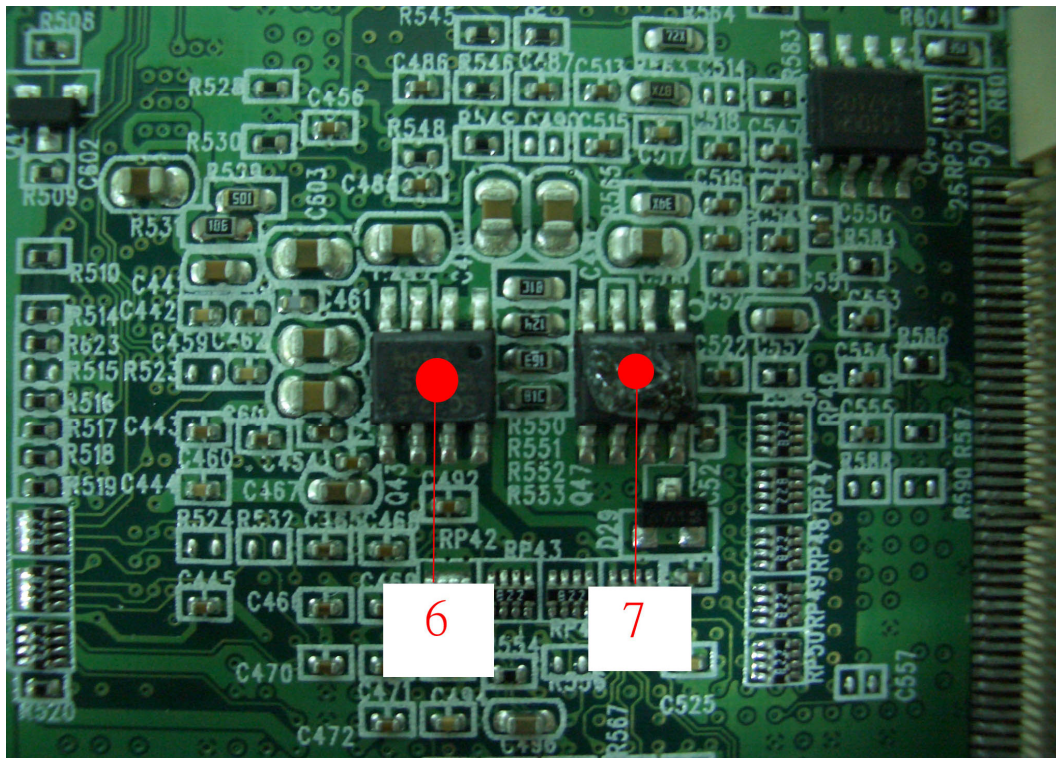
Temperature cycle test

Temperature Recorder:

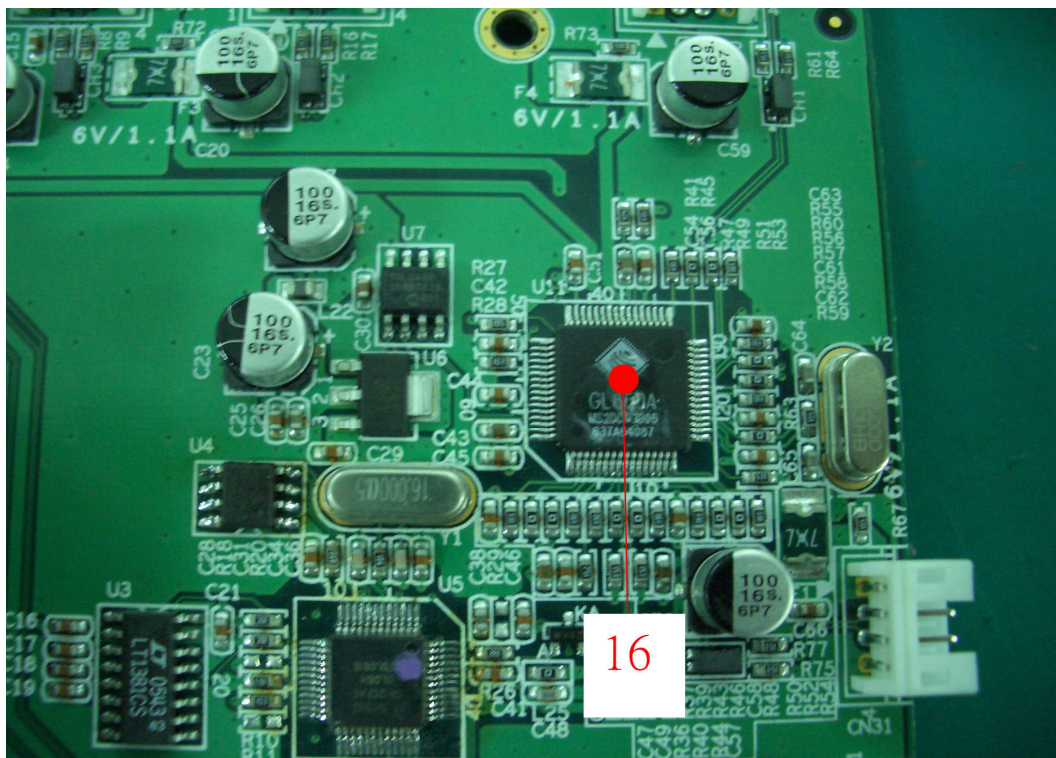
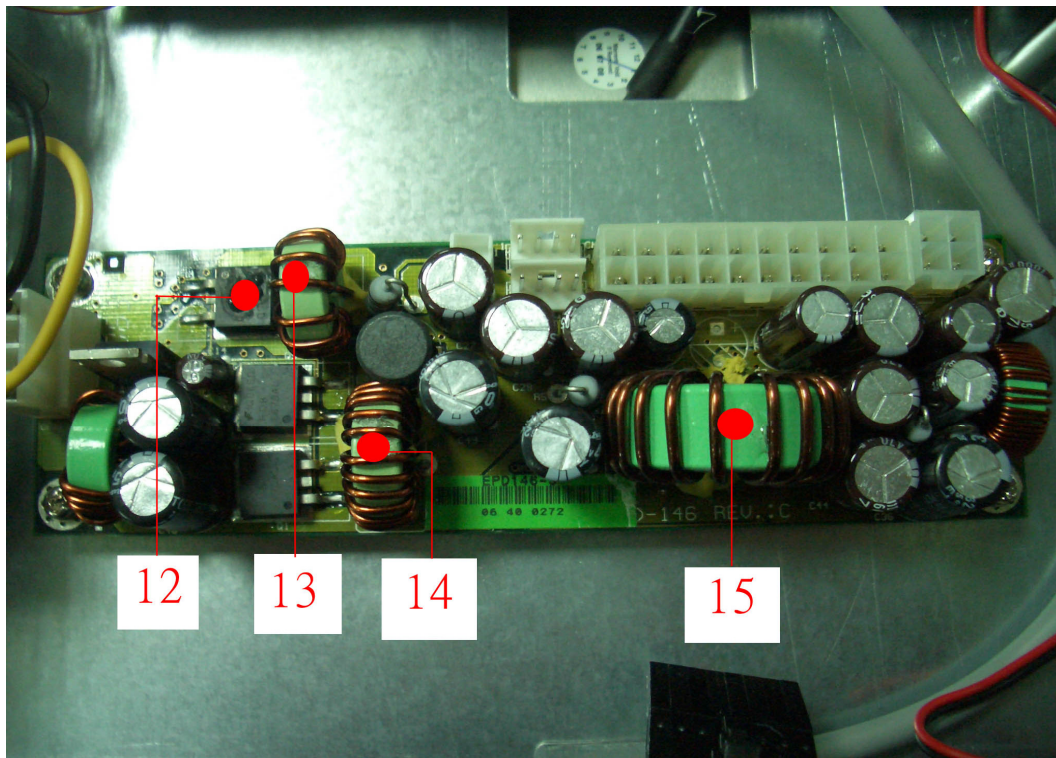
Measuring Thermal Couple Position:



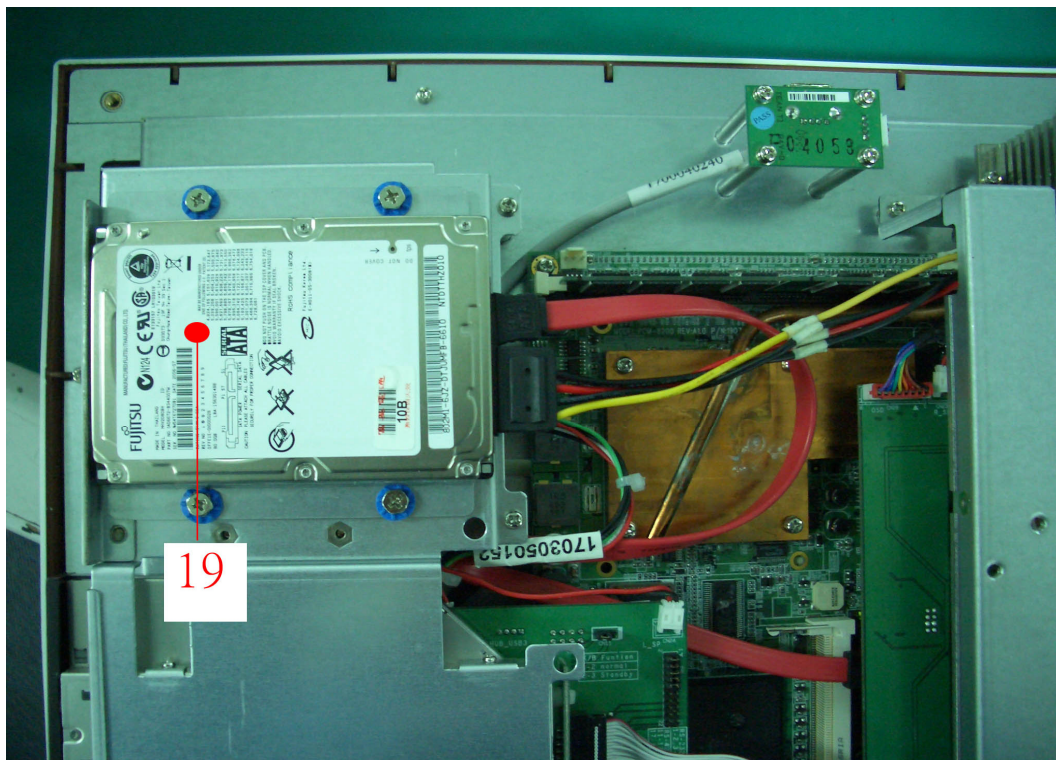
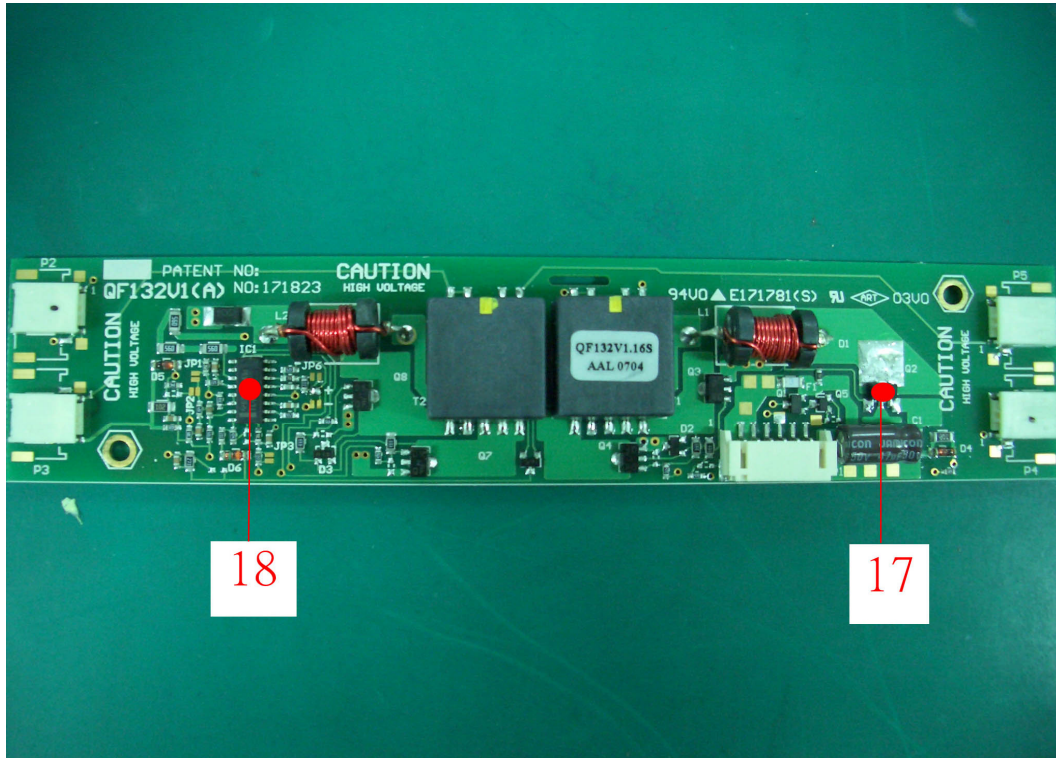
Temperature cycle test



Temperature cycle test



Temperature cycle test



Temperature cycle test



Temperature cycle test

Thermal profile data:

Onyx-190

System							
Point	Temp. Stage(°C)	Spec	45	40	25	0	-5
Board-PCM-8200							
1.CPU- Intel Pentium M Processor 1.1G	100	83.6	78.6	63.6	38.6	33.6	
2.U4-Chipset MONTARA.INTEL.JG82855GME SL7VN	105	82.2	77.2	62.2	37.2	32.2	
3.U12 -CLOCK GENERATOR.ICS.ICS952601	100	87.3	82.3	67.3	42.3	37.3	
4.U13-Chipset Hance Rapids.INTEL.NHE6300ESB SL7XJ	100	81.4	76.4	61.4	36.4	31.4	
5.L7-COIL.1.5uH.20%. GOTREND.GSTC135P-1R5MF	125	90.6	85.6	70.6	45.6	40.6	
6.Q47-Regulator. Adj (1.2~4.8V).SEMTECH.SC1565IS-TRT	100	83.6	78.6	63.6	38.6	33.6	
7.Q43-Regulator. Adj (1.2~4.8V).SEMTECH.SC1565IS-TRT	100	79.0	74.0	59.0	34.0	29.0	
8. Heat -Pipe	N/A	80.8	75.8	60.8	35.8	30.8	
9. Heat -Pipe	N/A	76.1	71.1	56.1	31.1	26.1	
10.Heat -Pipe	N/A	79.2	74.2	59.2	34.2	29.2	
11. Memory- DSL 1GB hynix HY5DU12822CTP-D43(DDRII-333)	70	68.6	63.6	48.6	23.6	18.6	
DC-DC POWER SUPPLY (EPD-146 REV:C)							
12.Q4 FAIRCHILD N-Channel MOSFET 80A/30V FDB6670AL	175	64.8	59.8	44.8	19.8	14.8	
13.T2-COIL	125	64.6	59.6	44.6	19.6	14.6	
14.T1-COIL	125	78.9	73.9	58.9	33.9	28.9	
15.L2-COIL	125	72.0	67.0	52.0	27.0	22.0	
Board-Y010							
16.U11-LQFP.64P.USB2.0 4-PORT HUB CONTROLLER.GENESYS.GL850A-G06	100	76.4	71.4	56.4	31.4	26.4	
Inverter							
17. Inverter - Q2	150	104.4	99.4	84.4	59.4	54.4	
18. Inverter - IC1	85	81.9	76.9	61.9	36.9	31.9	
19-HDD- FUJITSU MHV2080BH / 80GB	70	64.5	59.5	44.5	19.5	14.5	
20.Chamber Air Temperature	N/A	45.7	40.7	25.7	0.7	-4.3	
The description in red states which temperature is over the specification of the device.							

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-190)

Test Result:

No problem was found during the temperature operation cycle test.

High temperature storage test

Test Date: 05-17~18-2007

Test Product: ONYX-190

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-D4H+-100

Date of Calibration: 05/19/06

Serial Number: 1241

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-190)

Test Result:

No problem was found after the high temperature storage test.

Low temperature storage test

Test Date: 05-19~20-2007

Test Product: ONYX-190

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-D4H+-100

Date of Calibration: 05/19/06

Serial Number: 1241

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-190)

Test Result:

No problem was found after the low temperature storage test.

Humidity test

Test Date: 05-15~16-2007

Test Product: ONYX-190

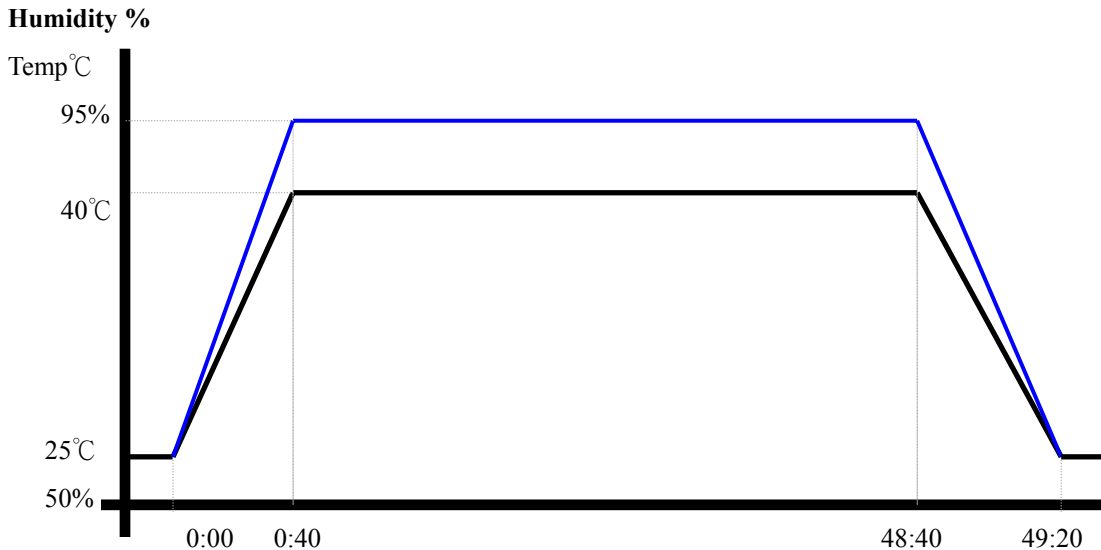
Test Site: AAEON QA Internal Lab.

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-D4H+-100
Date of Calibration: 05/19/06
Serial Number: 1241

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-190)

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

Cold Start test

Test Date: 05-23-2007

Test Product: ONYX-190

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.

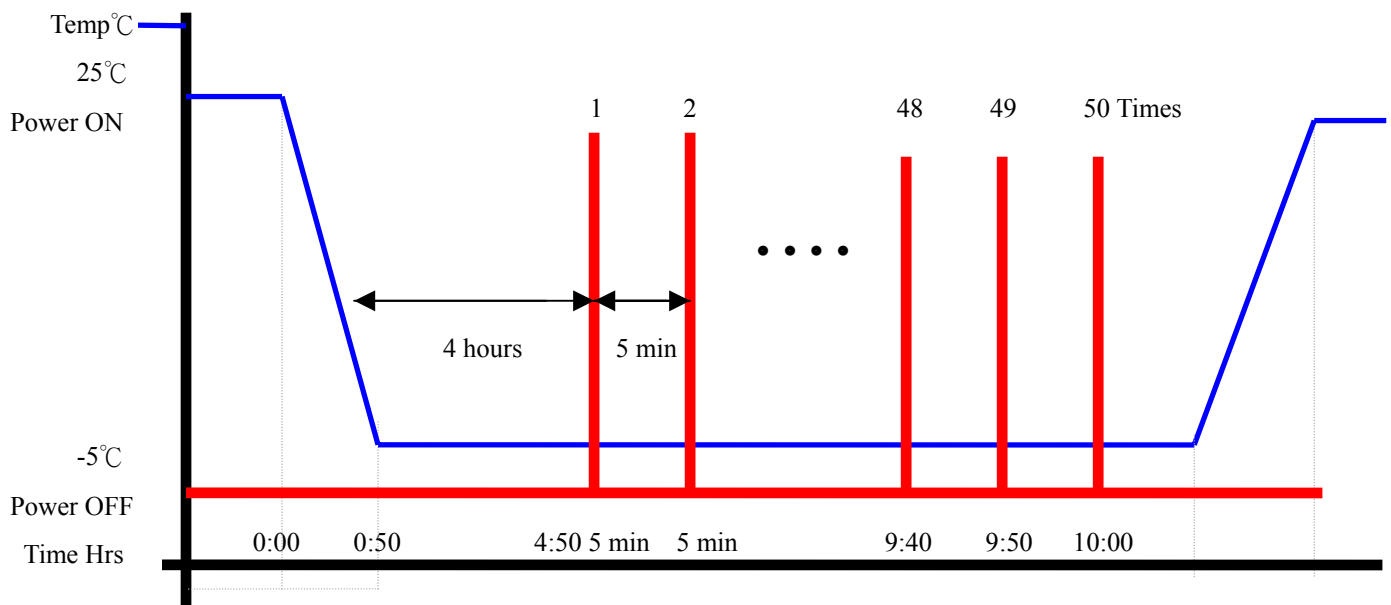
Model: THS-D4H+-100

Date of Calibration: 05/19/06

Serial Number: 1241

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 1'st 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-190)

Test Result:

No problem was found after the Cold Start test.