



Industrial Computing Platform Partner

ONYX-1922

Environment Test Report

Report NO: 09P020030

Issued by: Rex-Chang / 10/19/2009
Test Engineer Date

Reviewed by: Wenyuan Yang / 10/19/2009
Manager Date

Test item list

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Test Configuration:

| Num | Item | Spec |
|-----|-----------------------|--|
| 1. | Panel PC: | ONYX-1922 |
| | 1. 19"LCD | AUO M190EG01 V2 |
| | 2. Inverter | HWA YOUN QF132v1.16 |
| | 3. Power Board | AAEON PER-P17D VER: A1.0 |
| | 4. Power Adapter | SINPRO MPU100-108 |
| 2. | CPU Board: | GENE-9310 A1.0 |
| | 1. Bios Ver. | ONYX-1922 Ver: 0.1 |
| | 2.CPU | Intel U7500 / Merom ULV 1.06GHz |
| | 3.Memory (Wide Temp.) | DSL 1G / ELPIDA E5108AJBG-6E / DDR2 667 |
| | 4. HDD | Fujitsu MHZ2080BH / SATA II / 80GB |
| | 5.Test Software | Windows XP / Run PassMark Burn In Test 5.1 Pro |

Temperature rise test

Test Date: 10-19-2009

Test Product: ONYX-1922

Test Site: AAEON QA Internal Lab.

Test Standard: Reference EN 61131-2(94), UL508 (94)

Temperature Measurement:

40 Channel Thermal Recorder:

YOKOGAWA Inc,

Model: DA100-13-1D

Date of Calibration: 12/13/08

Serial Number: 12A323190

Test Condition:

Ambient temperature: 55dC

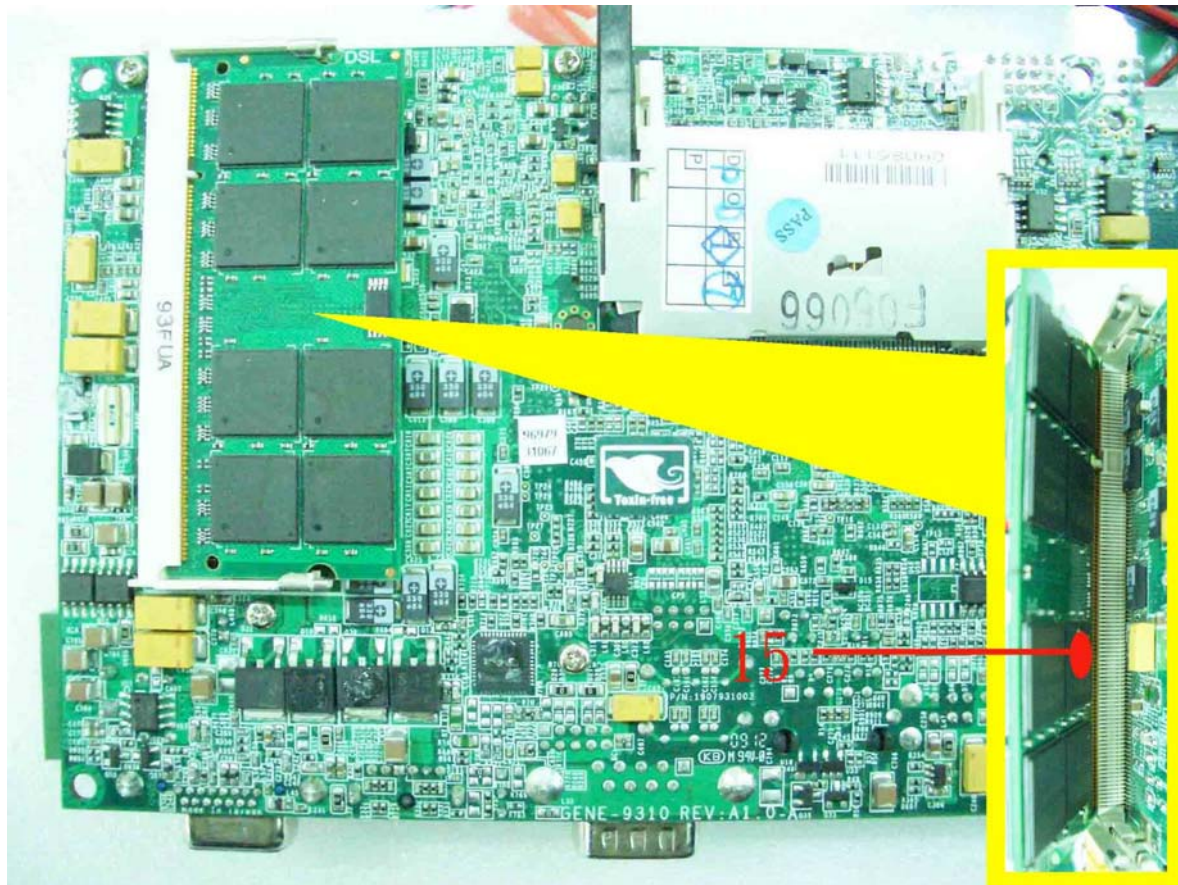
Continuous running till thermal stability (within less than 1°C)

Test Software:

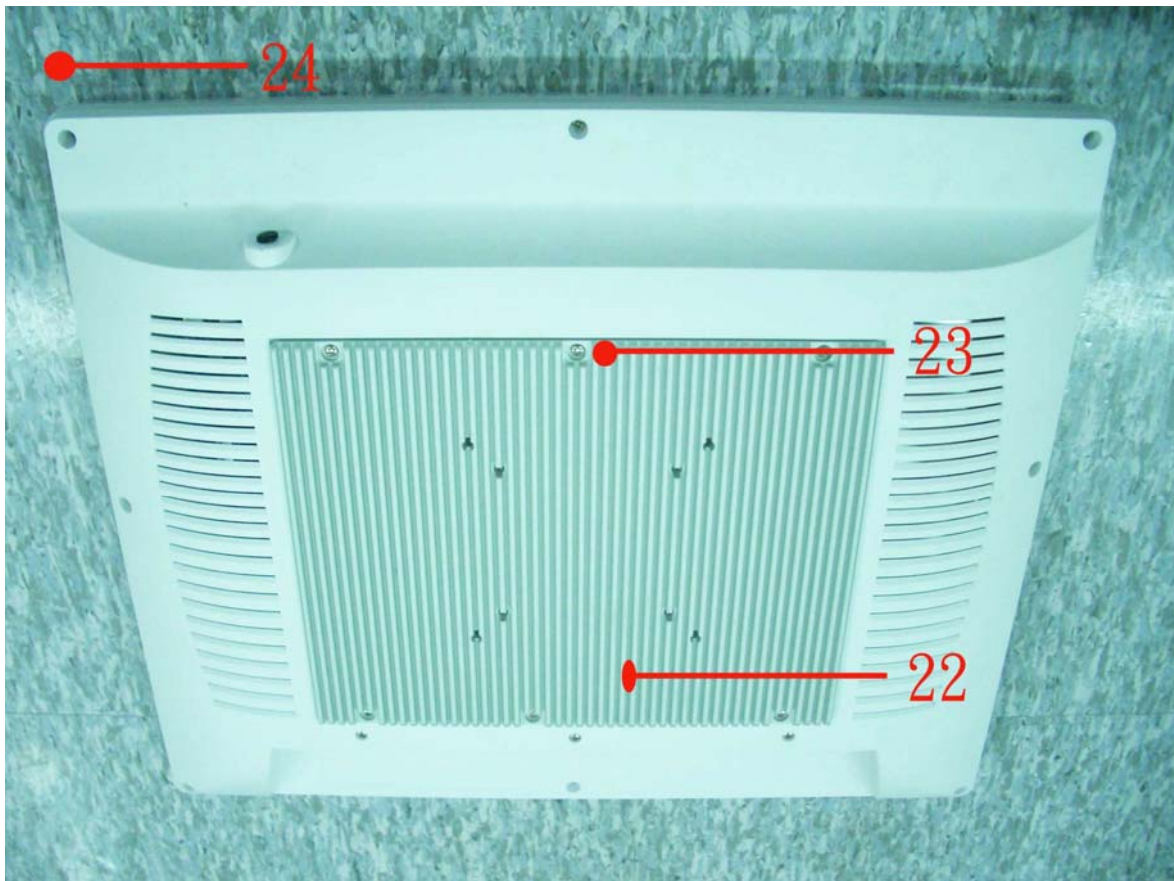
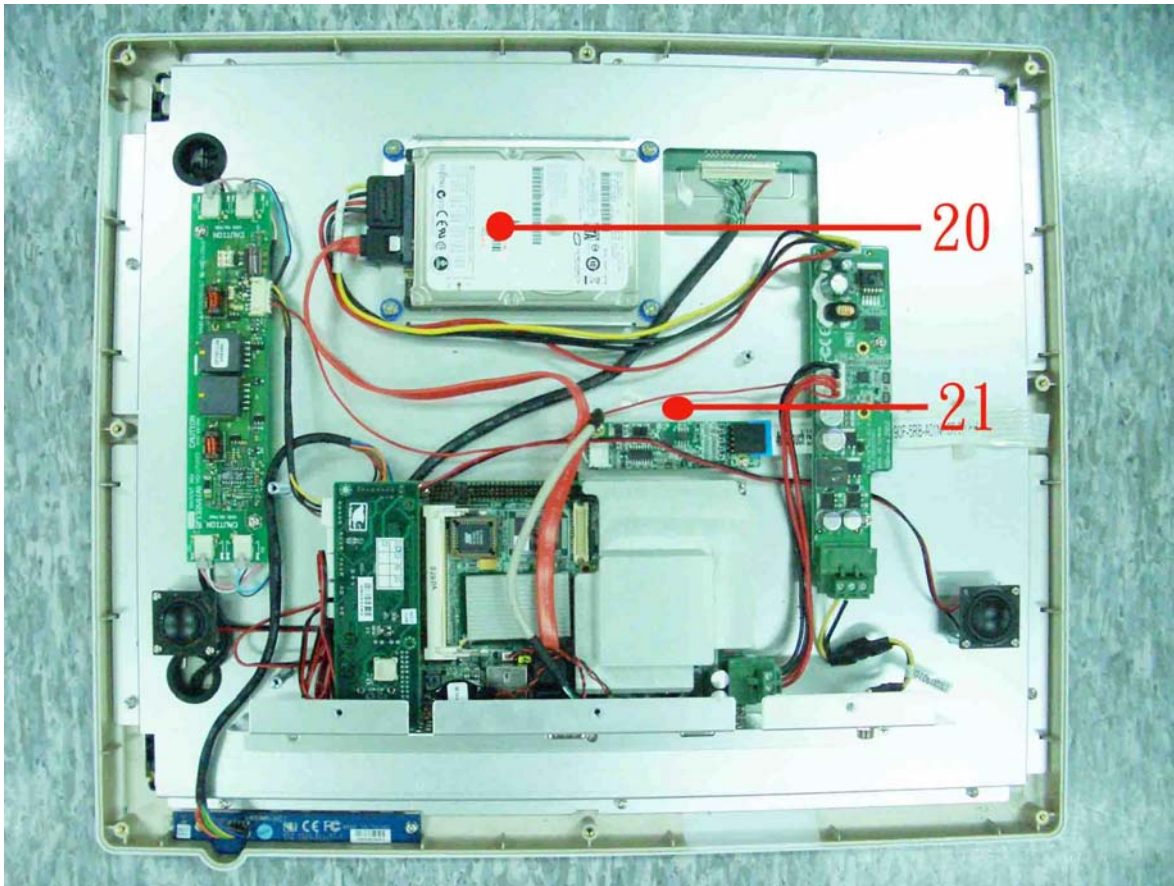
Windows XP / Run PassMark Burn In Test 5.1 Pro

Terminal Recorder:

Measuring Thermal Couple Position :



Temperature rise test



Temperature rise test

Thermal profile data:

ONYX-1922

| Point | Temp. Stage(°C) | Spec | 40 | 25 |
|--|-----------------|------|-------|------|
| GENE-9310 | | | | |
| 01. U8 - (TF) Intel 945GM Express.Intel.QG82945GM | | 105 | 77.8 | 62.8 |
| 02. U16 - (TF) Intel CPU.Merom.ULV 1.06GHz (U7500) | | 100 | 78.2 | 63.2 |
| 03. U10 - (TF) CLOCK GENERATOR.ICS.ICS954226AGLF | | 115 | 85.5 | 70.5 |
| 04. U15 - (TF) ICH7M.Intel.NH82801GBM SL8YB | | 99 | 70.7 | 55.7 |
| 05. U1 - (TF) 6 Channel AC'97 Audio Codec.REALTEK.ALC655-LF | | 95 | 79.5 | 64.5 |
| 06. L15 - (TF) COIL.GOTREND.GSTC104P-R56MN | | 150 | 77.5 | 62.5 |
| 07. L17 - (TF) COIL.GOTREND.GSTC104P-R56MN | | 150 | 74.2 | 59.2 |
| 08. U44 - (TF) Regulator.LINEAR.LTC3728LXCUH#PBF | | 110 | 81.5 | 66.5 |
| 09. U17 - (TF) Power Controller.for Dual Channel DDR.Intersil.ISL6537CRZ | | 95 | 87.1 | 72.1 |
| 10. L84 - (TF) COIL.Vishay.IHLP-5050CE-ER-5R6M01 | | 150 | 74.6 | 59.6 |
| 11. U49 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L | | 95 | 79.0 | 64.0 |
| 12. U19 - (TF) IMVP6 Two Phase PWM.Intersil.ISL6262CRZ-T | | 125 | 78.2 | 63.2 |
| 13. Q36 - (TF) PW.N-Channel Power 25V 60A MOSFET.APEC.AP70T03GH | | 150 | 85.1 | 70.1 |
| 14. Q10 - (TF) PWR.N-Channel PowerMosfet.ON SEMI.NTD60N02RT4G | | 150 | 76.9 | 61.9 |
| 15. Memory | | 95 | 87.1 | 72.1 |
| PER-P17D Power Board | | | | |
| 16. U2 - (TF) REG.Step-Down Voltage Regulator.NS.LM2576S-ADJ | | 125 | 67.8 | 52.8 |
| 17. U1 - (TF) Regulator.LINEAR.LTC3780EUH#PBF | | 150 | 89.1 | 74.1 |
| Inverter | | | | |
| 18. Q2 | | 125 | 107.9 | 92.9 |
| 19. IC1 | | 85 | 72.8 | 57.8 |
| 20. HDD | | 80 | 66.9 | 51.9 |
| 21. Control Box Inside Air Temperature | | N/A | 63.9 | 48.9 |
| 22. Control Box External Surface - 1 | | N/A | 61.6 | 46.6 |
| 23. Control Box External Surface - 2 | | N/A | 57.2 | 42.2 |
| 24. Chamber Air Temperature | | N/A | 40.0 | 25.0 |
| Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification. | | | | |

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-1922)

Test Result:

No problem was found during the temperature rise operation test.

Temperature cycle test

Test Date: 10-07~09-2009

Test Product: ONYX-1922

Test Site: AAEON QA Internal Lab.

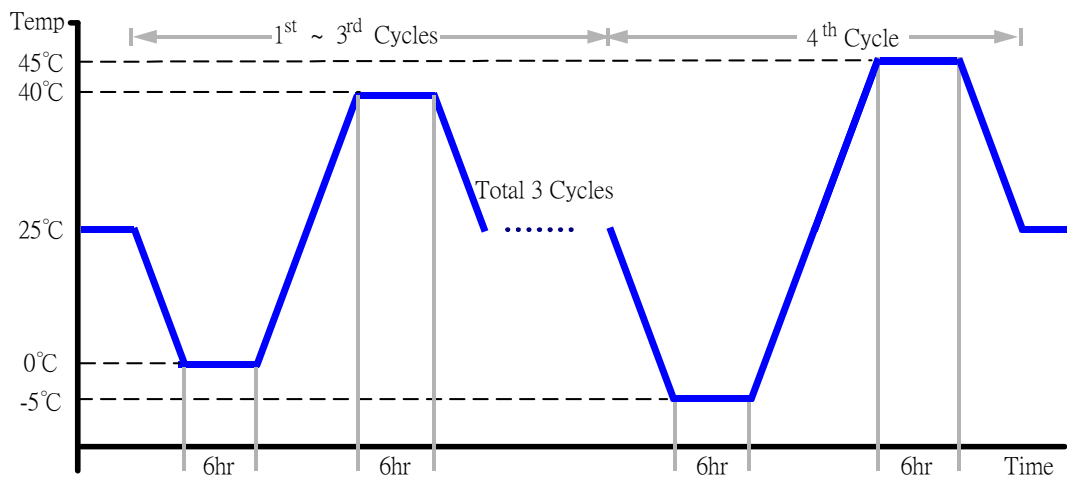
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Test Condition:

1. Test Low Temperature: 0°C (1~3 cycles)
-5°C (4th cycle)
2. Test High Temperature: 40°C (1~3 cycles)
45°C (4th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2°C/min
5. Test cycle: 4 cycles
6. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-1922)

Test Result:

No problem was found during the temperature cycle operation test.

Test Date: 10-12~14-2009

Test Product: ONYX-1922

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.

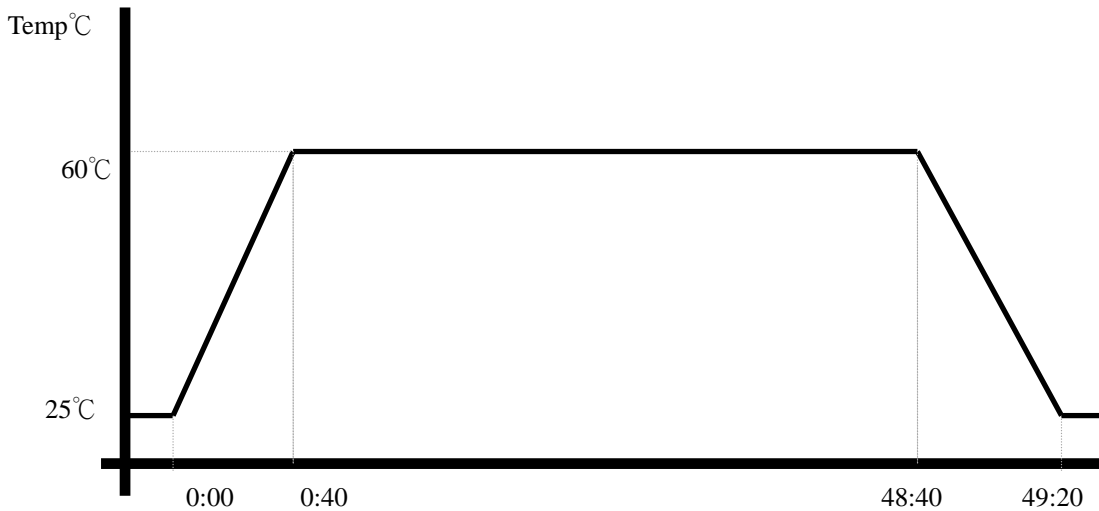
Model: THS-D4L+-100

Date of Calibration: 05/07/09

Serial Number: 1241

Testing Item:

1. Test Temperature: 60°C
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-1922)

Test Result:

No problem was found after the high temperature storage test.

Test Date: 10-16~18-2009

Test Product: ONYX-1922

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: 05/07/09

Serial Number: 1241

Testing Item:

1. Test Temperature: -20°C
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-1922)

Test Result:

No problem was found after the low temperature storage test.

Test Date: 10-09~11-2009

Test Product: ONYX-1922

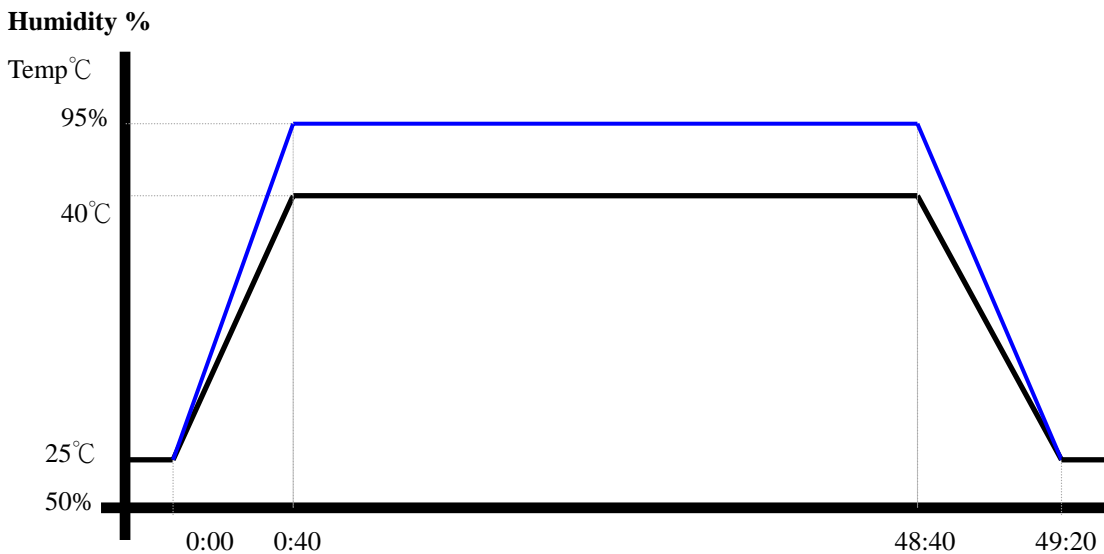
Test Site: AAEON QA Internal Lab.

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: 05/07/09
Serial Number: 12412

Testing Item:

1. Test Temperature: 40°C
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-1922)

Test Result:

No problem was found after the humidity storage test.

Cold start and hot start test

Test Date: 10-06~07-2009

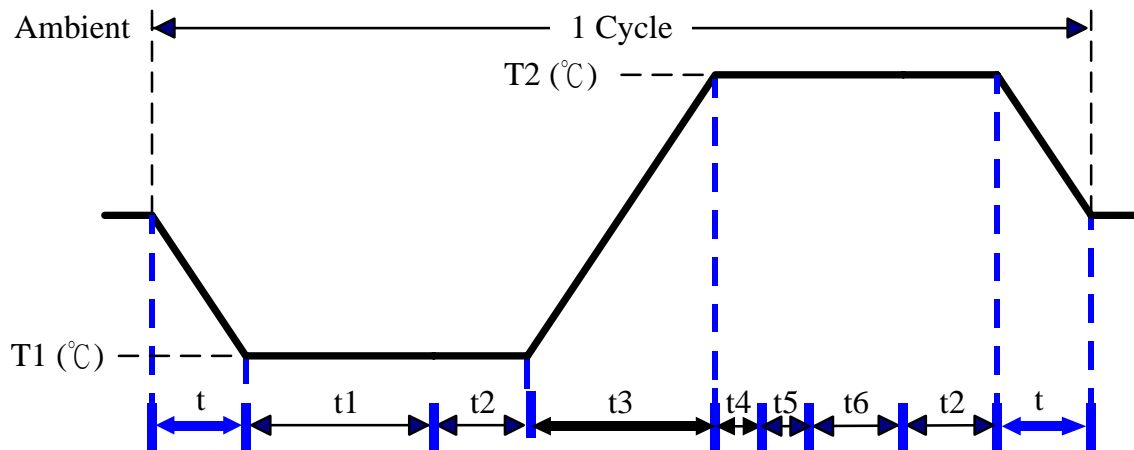
Test Product: ONYX-1922

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-14 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: 05/07/09
Serial Number: 1241

Test Condition:



| Parameters | Description |
|------------|-------------|
| T1 | -5°C |
| T2 | 45°C |
| t1 | 4 hrs |
| t2, t6 | 2 hrs |
| t4, t5 | 1hrs |
| t, t3 | 2°C/min |
| n (Cycle) | 1 |

t = temprature slope
t , t1, t6: Power Off
t2: Power on/off test 10 times (on 2 min / off 5min)
t3, t4: Run PassMark Burn In Test
t5: Win XP Software restart test 3 times
Test Software: Windows XP

Test Result:

- a. No problem was found during the cold start test.
- b. No problem was found during the hot start test