# AOP-8150WT-A4

**With HDD**

# Environment Test Report

**Report NO: 08P020002**

| | | | |
|---|---|---|---|
| **Issued by:** | Rex-Chang | / | *02/01/2008* |
| | **Test Engineer** | | **Date** |
| **Reviewed by:** | Wenyuan Yang | / | *02/01/2008* |
| | **Manager** | | **Date** |

# Test item list


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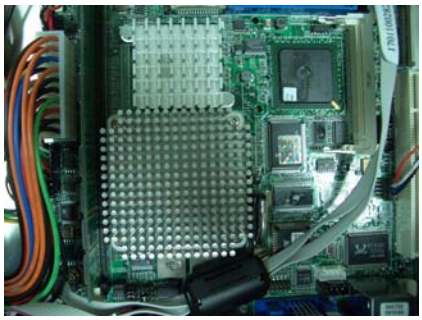
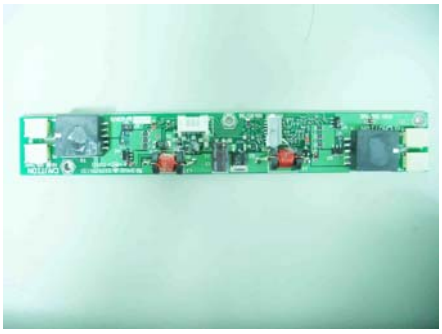
## Test Configuration:

| Num | Item | Spec |
|---|---|---|
| 1. | **Operator Panel**: | AOP-8150WT-A4 |
| | 1.LCD | 15" CPT TFT-LCD CLAA150XP 03 |
| | 2.AC Power | POWER ADD PPS100-31 (71F) (RH) |
| | 4. Inverter | HWA YOUN QF83v3.21 |
| 2. | CPU Board: | EMB-852T Rev: A1.1 |
| | 1. Bios Ver. | AOP-8150WT-AX BIOS Rev:1.3 |
| | 2.CPU | Intel Celeron M Processor 600MHz |
| | 3.Memory | DSL 256MB SAMSUNG K4H560838H-UCB3 (DDR333) |
| | 4. HDD | FUJITSU MHW2040AT / 40GB |
| | 5.Test Software | Windows XP / Run PassMark Burn In Test 5.1 Pro |

## CPU Heat Sink




## Inverter



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# Temperature cycle test

**Test Date:** 01-20~23-2008

**Test Product:** AOP-8150WT-A4

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

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

**Test Equipment:**

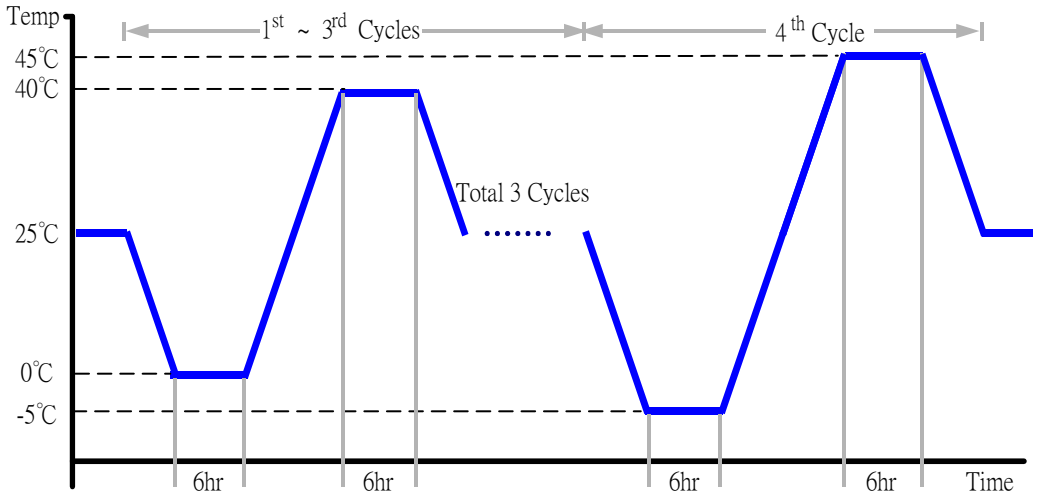
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

**Temperature Measurement:**

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/13/07
Serial Number: 12A323190

**Test Condition:**

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



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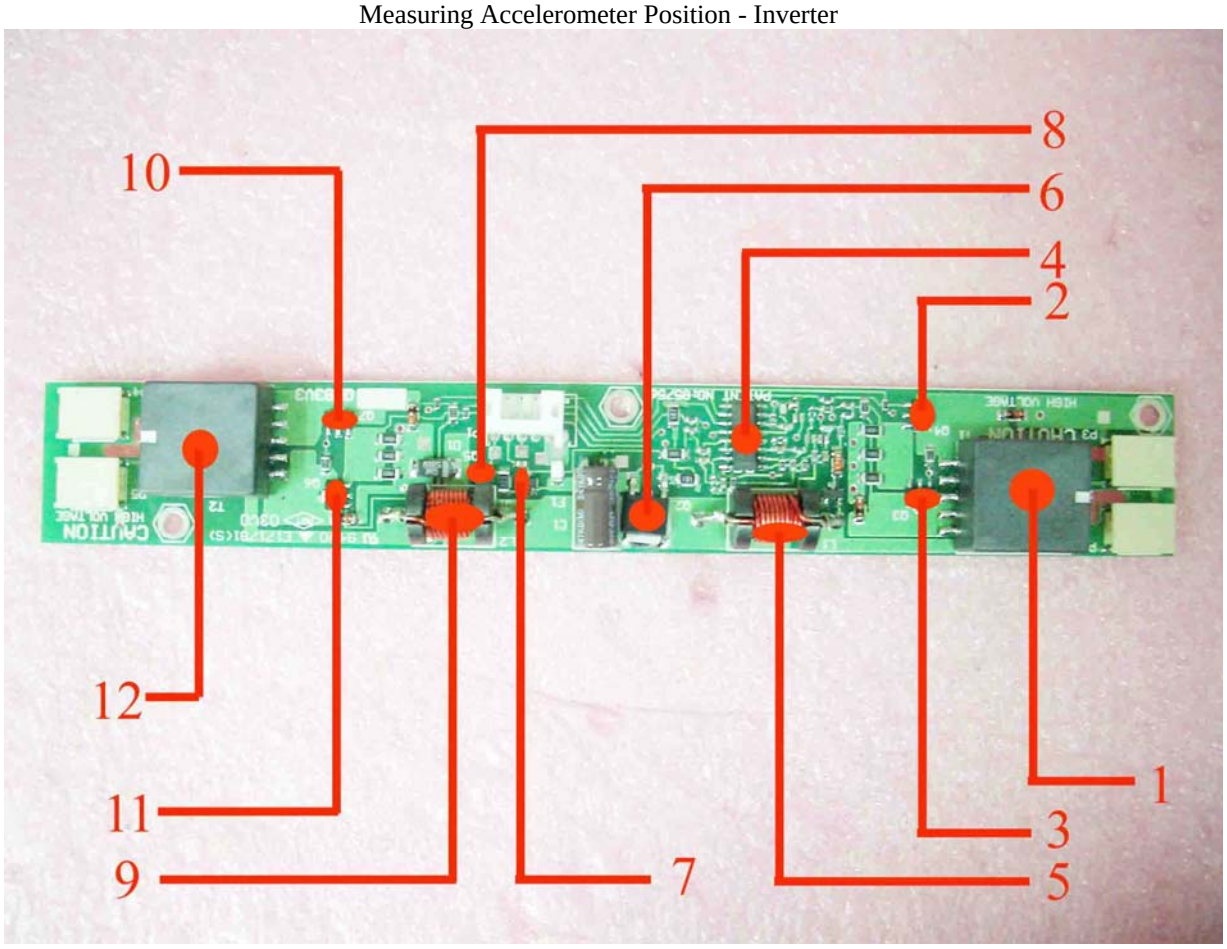
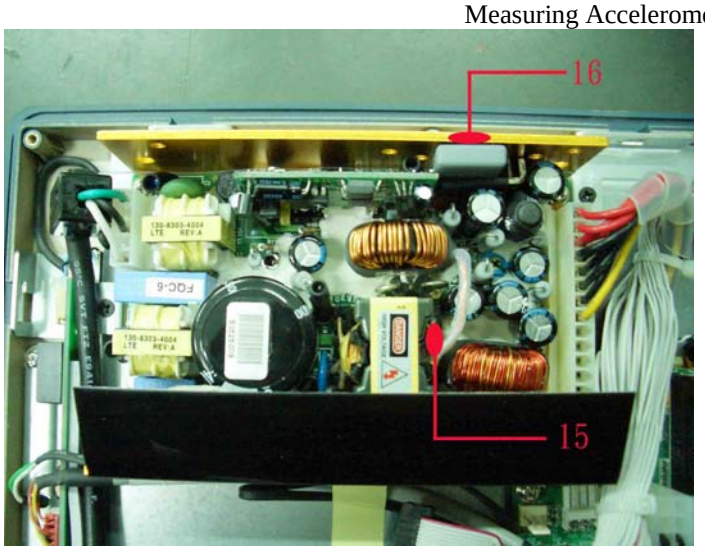
# Temperature cycle test

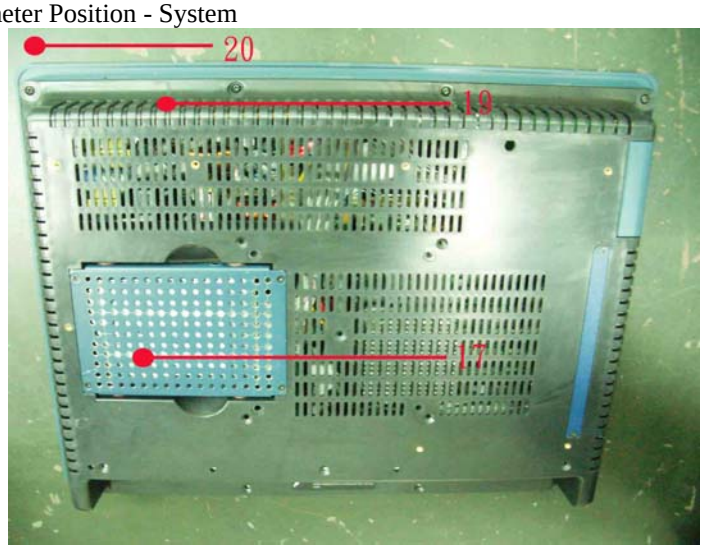
**Terminal Recorder:**

Measuring Accelerometer Position - Inverter




Measuring Accelerometer Position - System



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# Temperature cycle test

**Thermal profile data:**

**AOP-8150WT-A4**

| Point / Temp. Stage(℃) | Spec | 40 | 25 | 0 |
|---|---|---|---|---|
| Inverter | | | | |
| 1. Inverter - T1 | 200 | 81.5 | 66.5 | 41.5 |
| 2. Inverter - Q4 | 150 | 79.9 | 64.9 | 39.9 |
| 3. Inverter - Q3 | 150 | 83.6 | 68.6 | 43.6 |
| 4. Inverter - IC1 | 85 | 81.2 | 66.2 | 41.2 |
| 5. Inverter - L1 | 150 | 86.2 | 71.2 | 46.2 |
| 6. Inverter - Q2 | 150 | 85.3 | 70.3 | 45.3 |
| 7. Inverter - Q1 | 150 | 92.3 | 77.3 | 52.3 |
| 8. Inverter - Q5 | 150 | 91.7 | 76.7 | 51.7 |
| 9. Inverter - L2 | 150 | 80.4 | 65.4 | 40.4 |
| 10. Inverter - Q7 | 150 | 88.3 | 73.3 | 48.3 |
| 11. Inverter - Q6 | 150 | 98.3 | 83.3 | 58.3 |
| 12. Inverter - T2 | 200 | 79.2 | 64.2 | 39.2 |
| EMB-852T | | | | |
| 1. U24-Chipset.NB82852GM.Intel.RG82852GM | 105 | 67.7 | 52.7 | 27.7 |
| 2. U23-INTEL CPU.Celeron-M.ULV 600MHz. | 100 | 66.6 | 51.6 | 26.6 |
| 3. U25-Chipset ICH4.INTEL.FW82801DB | 110 | 64.1 | 49.1 | 24.1 |
| 4. U13-2A Bus Termination Regulator.Winbond.W83310S-R2 | 100 | 72.4 | 57.4 | 32.4 |
| 5. U54-ACPI Power Controller.Intersil.ISL6506BCB | 100 | 67.0 | 52.0 | 27.0 |
| 6. U10-N-Channel.30V.10A.13.5mΩ.MOSFET.APEC.AP4410M | 125 | 69.1 | 54.1 | 29.1 |
| 7. L2- INDUCTOR.3.3uH.20%. VISHAY.IHLP2525CZRZ3R3M01 | 125 | 69.8 | 54.8 | 29.8 |
| 8. U11-Step-Down DC/DC Controller.Anpec.APW7057 | 100 | 68.9 | 53.9 | 28.9 |
| 9. U57-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ | 70 | 55.6 | 40.6 | 15.6 |
| 10. U22-CLOCK GENERATOR.ICS.ICS952601 | 115 | 67.0 | 52.0 | 27.0 |
| 11. U45-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ | 70 | 57.9 | 42.9 | 17.9 |
| 12. U44-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ | 70 | 58.3 | 43.3 | 18.3 |
| 13. TC25-220uF.2V.Panasonic.EEFSX0D221YR | 105 | 69.2 | 54.2 | 29.2 |
| 14. TC27-150uF.6.3V.Panasonic.ECGUD0J151R | 105 | 65.4 | 50.4 | 25.4 |
| 15. Power Supply Heat Sink Surface - 1 | N/A | 75.7 | 60.7 | 35.7 |
| 16. Power Supply Heat Sink Surface - 2 | N/A | 68.7 | 53.7 | 28.7 |
| 17. HDD | 55 | 55.0 | 40.0 | 15.0 |
| 18. Memory | 70 | 65.7 | 50.7 | 25.7 |
| 19. Control Box Surface | N/A | 56.1 | 41.1 | 16.1 |
| 20. Chamber Air Temperature | N/A | 40.4 | 25.4 | 0.4 |

**Any Tm value showed in red words which meaning the value over the Tc + 5 degree C of this device specification**



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# Temperature cycle test

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AOP-8150WT-A4)

**Test Result:**

No problem was found during the temperature operation cycle test.



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# High temperature storage test

**Test Date:** 01-28~30-2008

**Test Product:** AOP-8150WT-A4

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

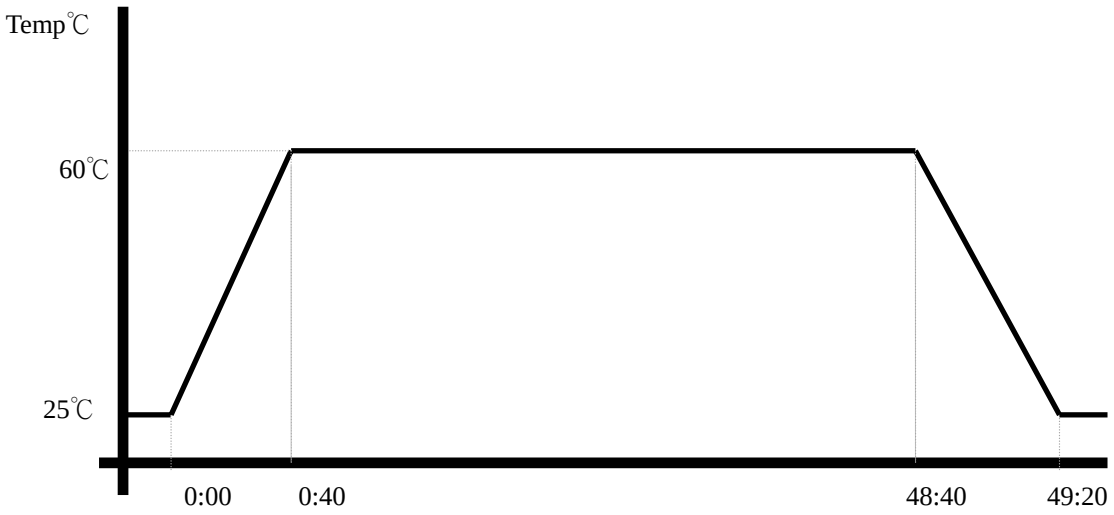
**Test Standard:** Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

**Test Equipment:**

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

**Testing Item:**

1. Test Temperature: 60℃
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 (AOP-8150WT-A4)

**Test Result:**

No problem was found after the high temperature storage test.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# Low temperature storage test

**Test Date:** 01-30-2008~02-01-2008

**Test Product:** AOP-8150WT-A4

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

**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: 05/16/07
Serial Number: 1241

**Testing Item:**

1. Test Temperature: -20℃
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 (AOP-8150WT-A4)

**Test Result:**
No problem was found after the low temperature storage test.


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# Humidity test

**Test Date:** 01-25~27-2008

**Test Product:** AOP-8150WT-A4

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

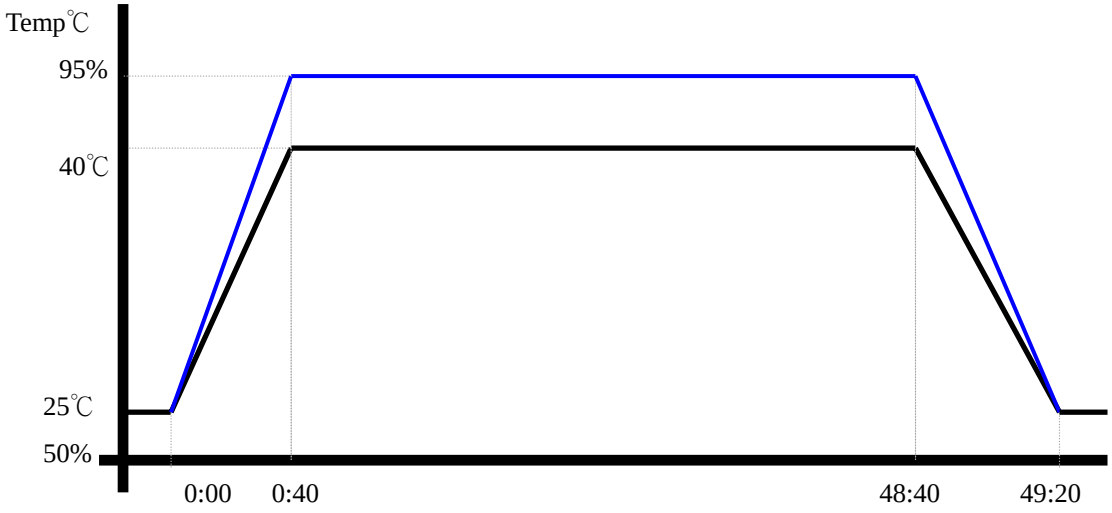
**Test Standard:** Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

**Test Equipment:**
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

**Testing Item:**

1. Test Temperature: 40℃
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:

**Humidity %**




**Sample Configuration & Quantity Under Test:**
Quantity: 1 (AOP-8150WT-A4)

**Test Result:**
No problem was found after the humidity storage test.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# Cold start and hot start test

**Test Date:** 01-23~24-2008

**Test Product:** AOP-8150WT-A4

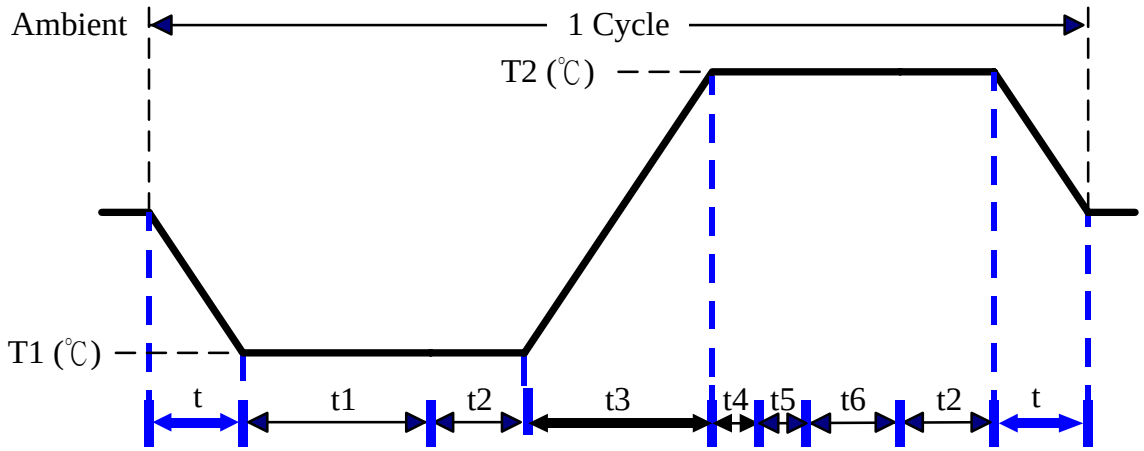
**Test Site:** AAEON QA Internal Lab.

**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-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

**Test Condition:**




| Parameters | Description |
|---|---|
| T1 | -5℃ |
| T2 | 45℃ |
| t1 | 4 hrs |
| t2, t6 | 2 hrs |
| t4, t5 | 1hrs |
| t, t3 | 2℃/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.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