# AMC-250 (HSB-811P)

**With 3.5” HDD**

# Environment Test Report

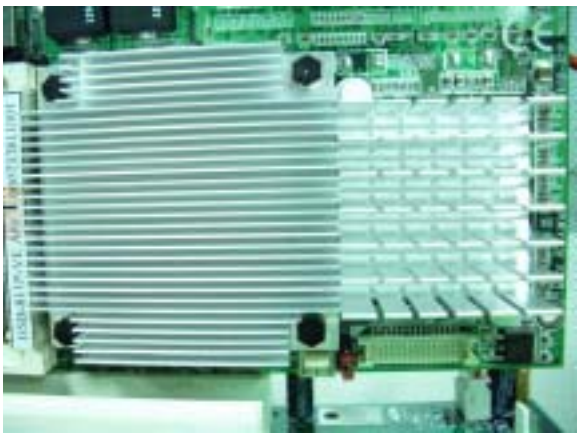
**Report NO: 05I020003**

| | | | |
|---|---|---|---|
| **Issued by:** | Rex-Chang | / | *05/18/2005* |
| | **Test Engineer** | | **Date** |
| **Reviewed by:** | Wenyuan Yang | / | *05/18/2005* |
| | **Manager** | | **Date** |

## Test Configuration:

| Num | Item | Spec |
|---|---|---|
| 1. | Control Box: | AMC- 250 / 5 Slot Wall Mounting Chassis |
| | 1. Backplanes | BP-205SP-P4 Rev A1.1 |
| | 2. Main Board | AAEON HSB-811P A0.1 (BIOS: 1.0) |
| | 3. CPU | Intel Celeron (R) 600MHz (100x6.0) |
| | 4. Memory | 256MB Hynix HY5DU56822BT-043 (DDR 400) |
| | 5. Power Supply | Enhance ENP-1815 / 150W (ATX) |
| | 6. HDD | Seagate ST340014A 40GB |
| | 7. FDD + Card Reader | TEAC FD-CR7 |

**CPU and North Bridge Heat Sink**





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# Temperature cycle test

Report NO. 05I020003

**Test Date:** 05-09~12-2005

**Test Product:** AMC-250 (HSB-811P A0.1).

**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:**

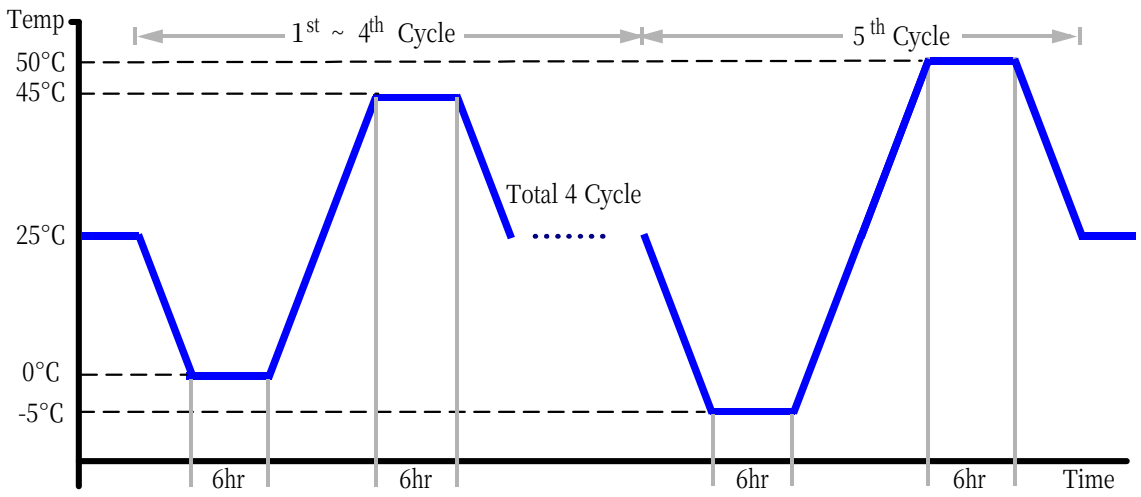
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/24/04
Serial Number: 1241

**Temperature Measurement:**

20 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/25/04
Serial Number: 12A323190

**Test Condition:**

1. Test Low Temperature: 0°C (1~4 cycle)
   -5°C ($5^{th}$ cycle)
2. Test High Temperature: 45°C (1~4 cycle)
   50°C ($5^{th}$ cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 1°C/min
5. Test cycle: 5 cycle
6. Test Environment Curve:



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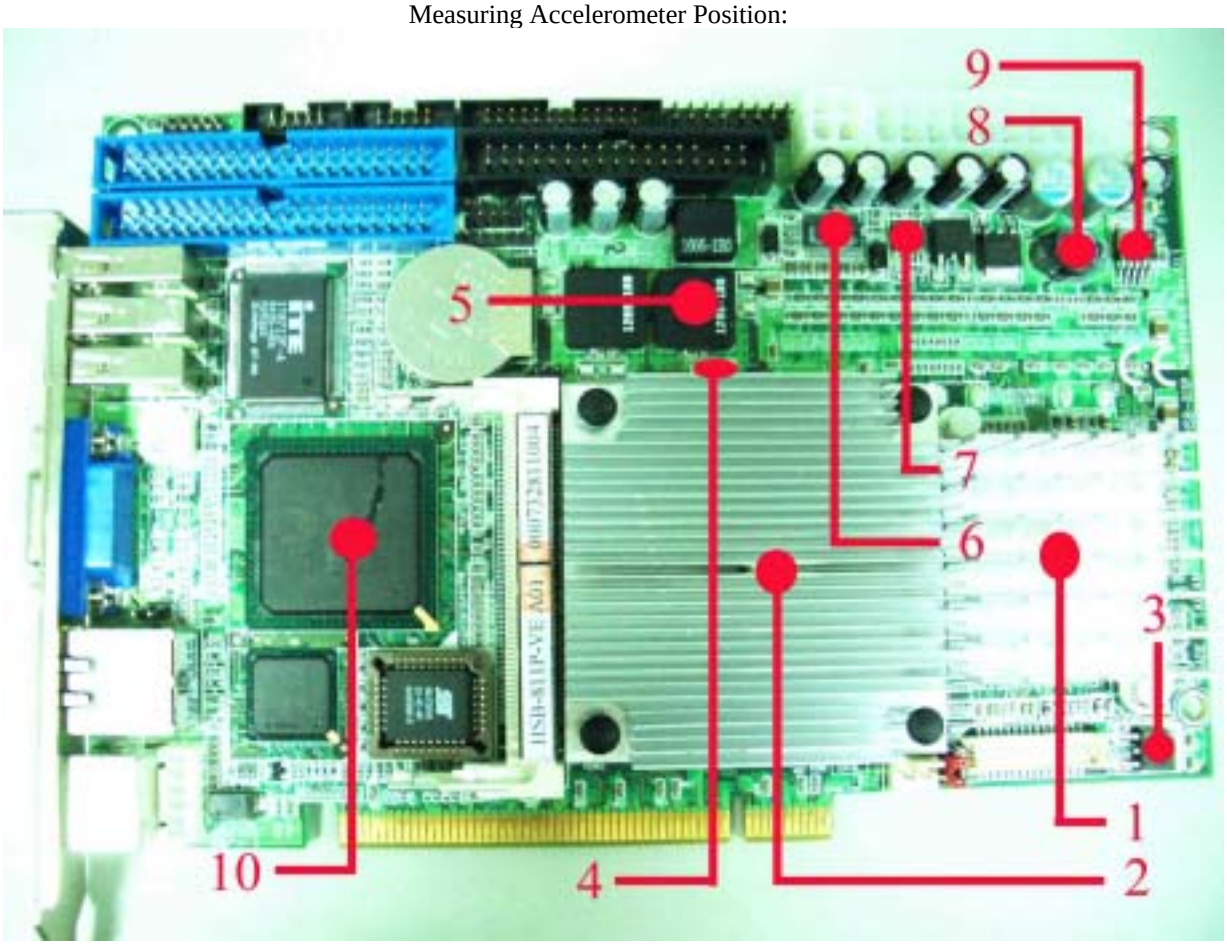
**Test O.S. / Software:**

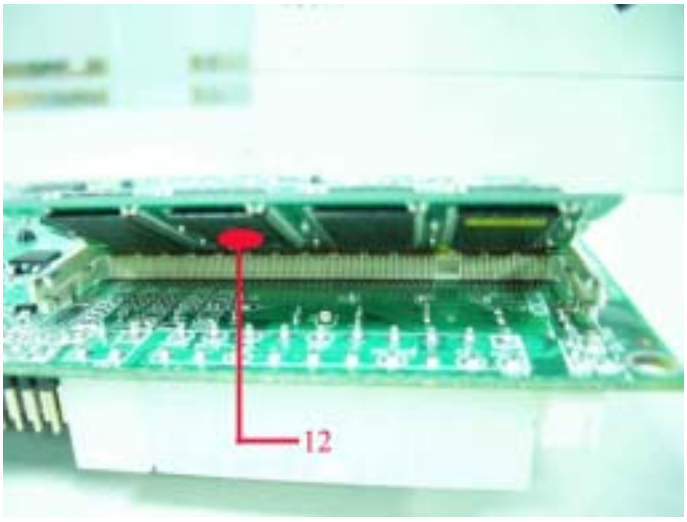
Windows 2000 / Run HCT 9.5

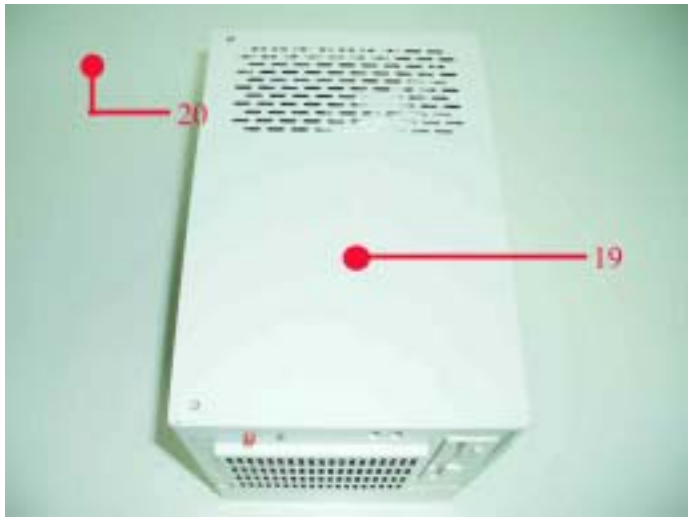
**Sample Configuration & Quantity Under Test:**

Using one AMC-250 (HSB-811P A0.1) Wall-Mount IPC System Recorder:

Measuring Accelerometer Position:



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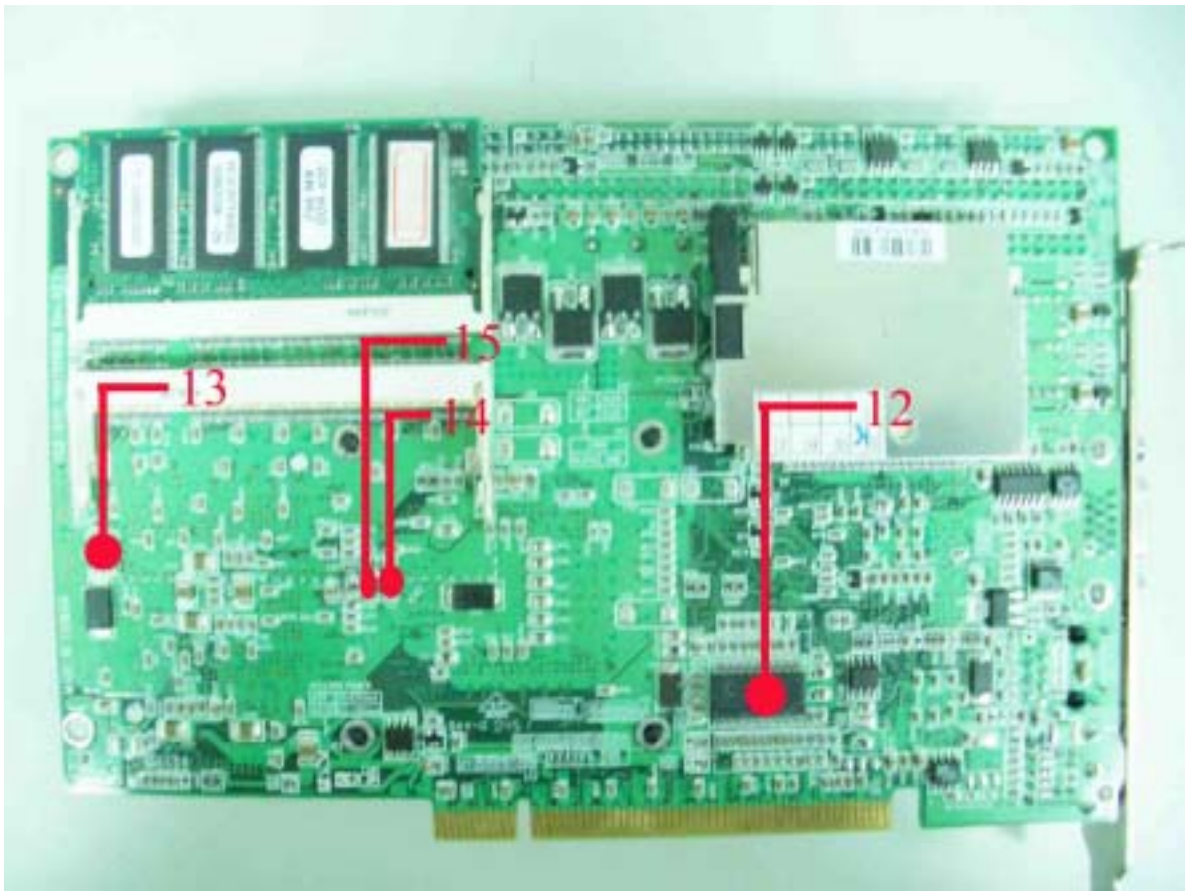


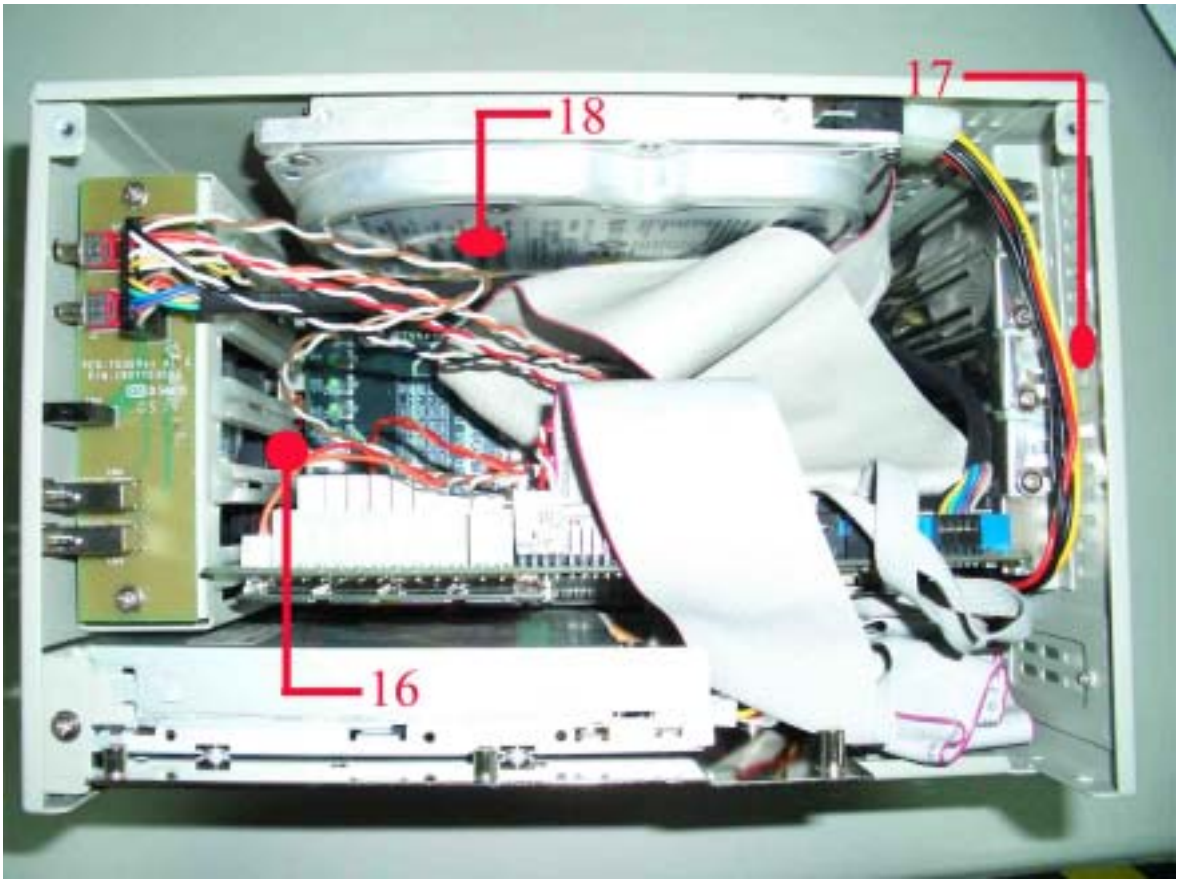




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# Temperature cycle test



**Thermal profile data:**

**AMC-250 (HSB-811P A0.1)**

| Point \ Temp. Stage | 55°C | 50°C | 25°C | 0°C | -5°C | Tc |
|---|---|---|---|---|---|---|
| 1. U8 - Chipset.NB82852GM.Intel.RG82852GM-SL6ZK | 67.7°C | 62.5°C | 37.6°C | 11.9°C | 7.0°C | 110°C |
| 2. CPU1 - INTEL CPU.Celeron-M.ULV 600MHz | 74.3°C | 68.8°C | 42.0°C | 15.4°C | 10.6°C | 0~100°C |
| 3. Q3 - REG.SMD.TO-252 5A LinearRegulator.ATC.AP1084D-ADJ | 69.3°C | 63.8°C | 38.8°C | 12.6°C | 8.0°C | 30~120°C |
| 4. C110 - Panasonic EEFSX0D221YR/SP CAP.220uF.2V.-35~+10%. | 71.4°C | 65.7°C | 39.6°C | 13.5°C | 8.4°C | -40~105°C |
| 5. L10 - COIL.1.0uH.SMD.DCR=3mohm Idc=25Amp.ESPI-1206-1R0M | 68.8°C | 63.5°C | 37.6°C | 12.4°C | 7.2°C | -25~100°C |
| 6. U1 - SEMTECH/SC1476ITSTR/IC.SMD TSSOP-38 IMVP4.Dual Phase PWMControlle | 69.6°C | 63.8°C | 39.1°C | 13.5°C | 8.8°C | 0~125°C |
| 7. U34 - IC.SMD SOP.8Pin Switching PWMController.IR.IRU3037CS | 73.5°C | 67.6°C | 43.4°C | 17.8°C | 13.1°C | 74°C |
| 8. L5 - COIL.3.3uH 6.4A.20%.SMD.YC0804-3R3;EE-A041504 | 66.4°C | 60.3°C | 36.2°C | 10.8°C | 6.0°C | -25~85°C |
| 9. Q1 - REG.SMD TO-252-5.2A Bus TerminationRegulator.RichTek.RT9173BCL5 | 64.9°C | 58.9°C | 34.4°C | 9.5°C | 4.3°C | -10~95°C |
| 10. U5 - INTEL/FW82801DB SL6DM/IC.SMD.Chipset ICH4.INTEL.FW82801DBSL6DM | 68.7°C | 63.4°C | 38.8°C | 13.8°C | 8.5°C | -0~110°C |
| 11. Memory | 73.6°C | 65.5°C | 43.8°C | 18.5°C | 14.5°C | - |
| 12. U30 - IC.SMD.SSOP 48Pin ClockGenerator.ICS.ICS952607 | 83.8°C | 78.0°C | 54.2°C | 29.6°C | 24.6°C | -25~115°C |
| 13. U33 - PWR.SMD SO-8.DUAL N-Channel 30(D-S)MOSFET.VISHAY.SI4920DY | 93.3°C | 86.9°C | 62.7°C | 37.7°C | 31.9°C | -25~100°C |
| 14. U27 - PWR.SMD SO-8.DUAL N-Channel 30(D-S)MOSFET.VISHAY.SI4920DY | 77.3°C | 70.5°C | 46.0°C | 20.1°C | 15.4°C | -25~100°C |
| 15. U28 - IC.SMD MSOP-10.Dual Linear FETController.SEMTECH.SC338IMSTR | 71.9°C | 65.8°C | 40.6°C | 14.6°C | 9.9°C | -40~120°C |
| 16. Inside Air Temperature - 1 | 58.9°C | 53.8°C | 29.2°C | 4.0°C | -1.0°C | - |
| 17. Inside Air Temperature - 2 | 59.1°C | 53.9°C | 29.3°C | 4.0°C | -1.1°C | - |
| 18. HDD | 59.1°C | 53.7°C | 29.5°C | 4.1°C | -0.7°C | 0~60°C |
| 19. Control Box. External Surface | 57.1°C | 52.0°C | 27.4°C | 2.4°C | -2.6°C | - |
| 20. Chamber Air Temperature | 55.5°C | 50.4°C | 25.5°C | 0.6°C | -4.6°C | - |

**Note:** The description in red states which temperature is over the specification of the device.

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMC-250)

**Test Result:**

The system structure doesn't deformation; Function is passed during system test.



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# High temperature storage test

Report NO. 05I020003

**Test Date:** 05-05~08-2005

**Test Product:** AMC-250 (HSB-811P A0.1).

**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-D4L+-100
Date of Calibration: 10/01/04
Serial Number: 2582

**Testing Item:**

1. Test Temperature: 60℃
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 (AMC-250)

**Test Result:**

The system structure doesn't have any deformation; All functions are passed after low temperature storage test.



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# High temperature storage test

Report NO. 05I020003

**Test Date:** 05-14~16-2004

**Test Product:** AMC-250 / 5 Slot Wall Mounting Chassis

**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-D4L+-100
Date of Calibration: 10/17/03
Serial Number: 2582

**Testing Item:**

5. Test Temperature: 80℃
6. Test Times: 48Hrs
7. Test Environment Curve:


**Sample Configuration & Quantity Under Test:**
Quantity: 1 (AMC-250 / 5 Slot Wall Mounting Chassis)

**Test Result:**

After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.



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# Low temperature storage test

Report NO. 05I020003

**Test Date:** 05-02~05-2005

**Test Product:** AMC-250 (HSB-811P A0.1).

**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: TS-F3L+-100
Date of Calibration: 04/01/04
Serial Number: 1467

**Testing Item:**

1. Test Temperature: -20℃
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 (AMC-250)

**Test Result:**

The system structure doesn't have any deformation; All functions are passed after low temperature storage test.



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# Humidity test



**Test Date:** 04-29~05-01-2005

**Test Product:** AMC-250 (HSB-811P A0.1).

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

**Performed By:** Rex Chang

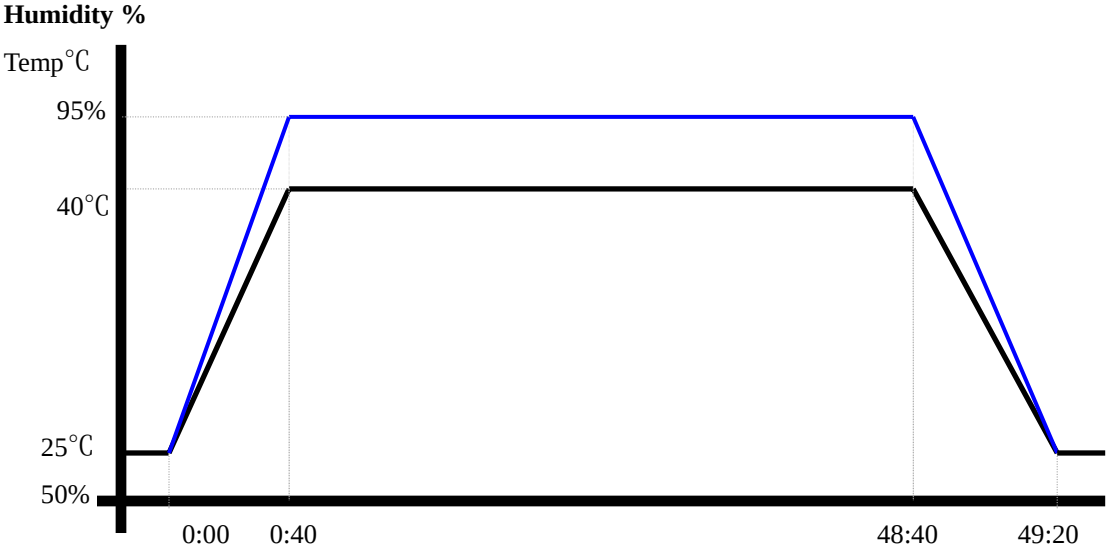
**Test Standard:** Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

**Test Equipment:**

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 10/01/04
Serial Number: 2582

**Testing Item:**

1. Test Temperature: 40℃
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 (AMC-250)

**Test Result:**

The system structure doesn't have any deformation; All functions are passed after humidity test.



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# Cold Start test



**Test Date:** 05-02-2005

**Test Product:** AMC-250 (HSB-811P A0.1).

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

**Performed By:** Rex Chang

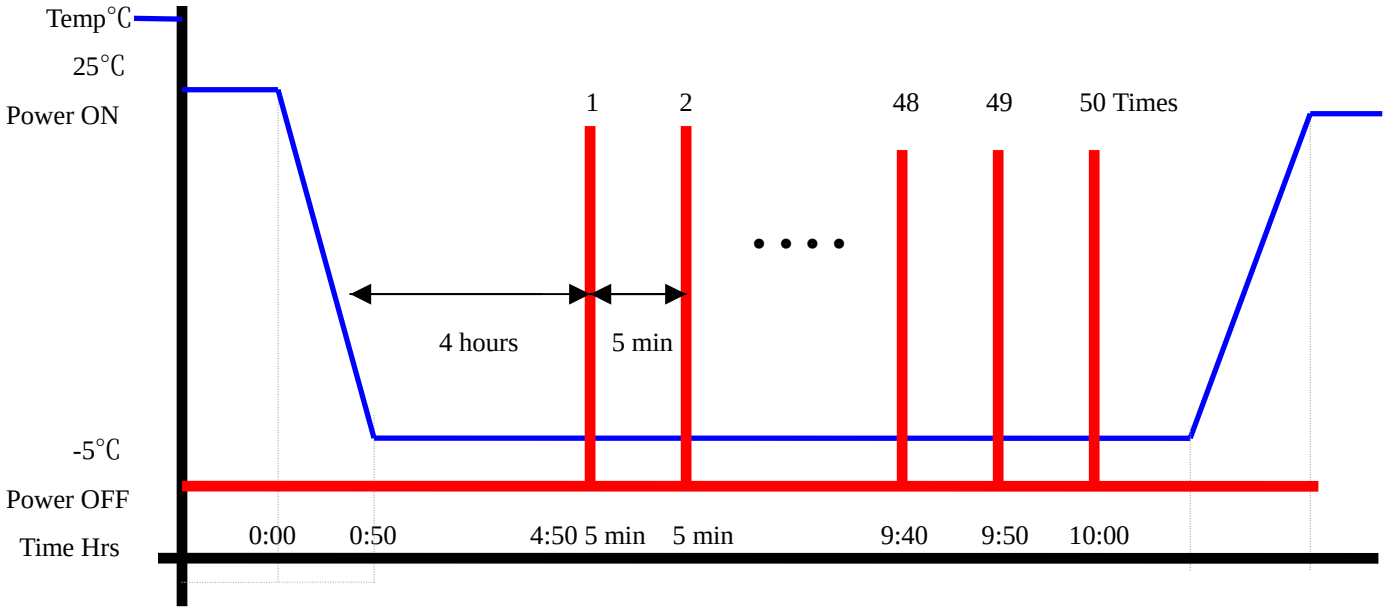
**Test Standard:** Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 10/01/04
Serial Number: 2582

**Test Condition:**

1. Test Temperature: -5℃
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 2000
5. Test Environment Curve:



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# Cold Start test



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMC-250)

**Test Result:**

**Passed.**



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