# ECB-920A

PCB Rev. A0.3_0_0

# Temperature/Humidity Test Report

**Report NO:**

| | |
|---|---|
| **Summary** | ■ Pass<br>☐ Fail<br>Note : There is/are ___ defect(s) not list in the report, please check it in the DTS Website.<br>☐ Pass with Deviation |

| **Issue date** | **Approval** | **Test Engineer** |
|---|---|---|
| **2013-09-09** | **Benson Lee** | **Ronald Lin** |

# Test item list

## Testing Result

| Num | Test item list | Result | Remark |
|---|---|---|---|
| 1 | Temp./humidity power on/off test | Pass | N/A |
| 2 | Temperature variation operation test | Pass | N/A |
| 3 | Cold start and hot start test | Pass | N/A |

# Configuration of EUT

## Test Product: ECB-920A A0.3 + COM-QM87 A0.2

**Sample Configuration & Quantity Under Test:**

1. **CPU**: Intel Haswell i7-4700EQ CPU @2.4GHz
2. **Chipset**: PCH/Lynx Point
3. **VGA**: Intel HD Graphics 4600
4. **Memory**: Transcend 4GB DDR3 1333 SODIMM / TS512MSK64V3N
5. **BIOS Reversion**: COM-QM87 R1.1 (CM87AM11) (08/01/2013)
6. **SATA HDD**: INTEL SATA SSD SSDSC2BW180A4
7. Test Software: Windows 7 32-bit/ Run PassMark BurnInTest Pro v7.0
8. Power Supply: HG2-6300P
9. CPU Cooler

# Temp./humidity power on/off test

**Test Date:** 2013-08-29~08-30

**Test Site:** AAEON Taichung Internal Lab

**Test Standard:** Reference IEC 68-2-30 Testing procedures
Test Db: Damp Heat Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber

TERCHY. TECH. CORP.

Model: MHK-225NK

Date of Calibration: 2013/03/18

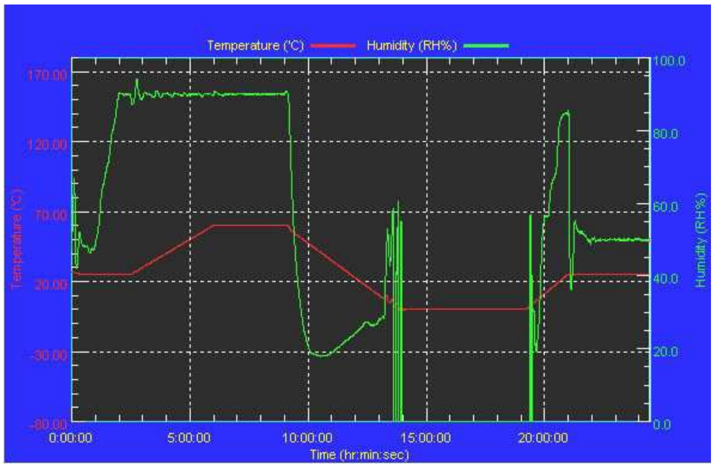
Serial Number: 1000122

**Temperature & Humidity Power On/Off Test:**

**Testing Specification:**

| Step | Temperature (℃) | Humidity (%RH) | Duration (HH:MM) |
|---|---|---|---|
| 1 | 25 | 50 | 00:30 |
| 2 | 25 | 50 | 00:30 |
| 3 | 25 | 90 | 01:00 |
| 4 | 25 | 90 | 00:30 |
| 5 | 60 | 90 | 03:30 |
| 6 | 60 | 90 | 03:00 |
| 7 | 0 | 0 | 04:50 |
| 8 | 0 | 0 | 05:23 |
| 9 | 25 | 50 | 01:47 |
| 10 | 25 | 50 | 03:00 |

**Test Curve:**



**Test Result:**

No problem was found during the temperature & humidity power on/off test.

| Test Method | Actual | Successful | Failure rate |
|---|---|---|---|
| Power On/Off | **2100/ times** | **2100/ times** | **0 %** |
| Note: Failure rate need to under 0.2%. | | | |

# Temperature variation operation test

**Test Date:** 2013-09-03~09-04

**Test Site:** AAEON Taichung Internal Lab

**Test Standard:** Reference IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber

TERCHY. TECH. CORP.

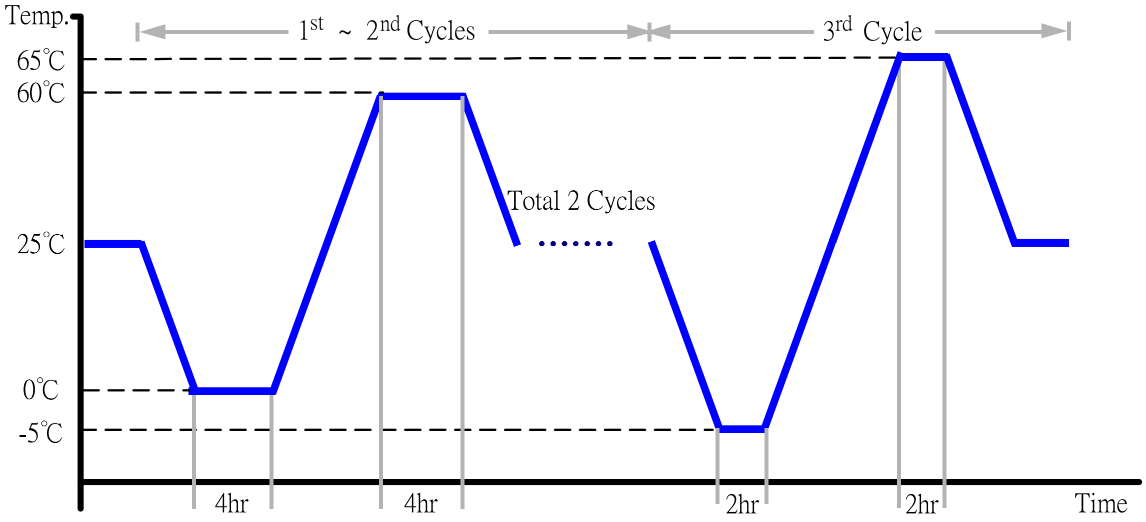
Model: MHK-225NK

Date of Calibration: 2013/03/18

Serial Number: 1000122

**Temperature & Humidity Cycle Test:**

1. Test Low Temperature: **0℃** (1st~2nd cycles)
   **-5℃** (3rd cycle)
2. Test High Temperature: **60℃** (1st~2nd cycles)
   **65℃** (3rd cycle)
3. Test dwell time: **4Hrs** (1st~2nd cycles)
   **2Hrs** (3rd cycle)
4. Temperature slope: **2℃/min**
5. Test cycle: **3 cycles**
6. Test Environment Curve:



**Test Result:**

No problem was found during the temperature variation operation test.

# Cold start and hot start test

**Test Date:** 2013-09-05~09-06

**Test Site:** AAEON Taichung Internal Lab

**Test Standard:** Reference IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber

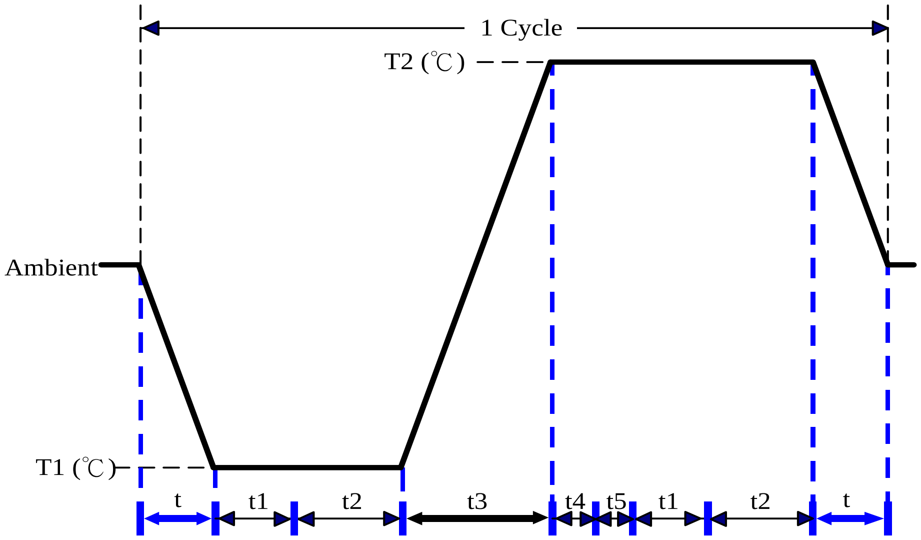
TERCHY. TECH. CORP.

Model: MHK-225NK

Date of Calibration: 2013/03/18

Serial Number: 1000122

**Test Condition:**



| Parameters | Description |
|---|---|
| T1 | -5℃ |
| T2 | 65℃ |
| t1 | 1 hr |
| t2 | 2 hrs |
| t4, t5 | 30 mins |
| t, t3 | 2℃/min |
| n (Cycle) | 1 |

t, t3: Temperature Slope
t, t1: Power Off
t2: Power On/Off test 10 times (On 2 mins / Off 5 mins)
t5: Windows soft restart test 2 times
Test software: Windows 7 Ultimate x32 Edition

**Test Result:**

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