

EMB-H61A

Ver.A0.1

Temperature/Humidity Test Report

Report NO: 12I020008

| | |
|---------|---|
| Summary | <p><input checked="" type="checkbox"/> Pass</p> <p><input type="checkbox"/> Fail</p> <p>Note : There is/are ____ defect(s) not list in the report, please check it in the DTS Website.</p> <p><input type="checkbox"/> Pass with Deviation</p> <p>Comment: _____</p> |
|---------|---|

Issue date

2012-04-17

Approval

Wayne Chen

Test Engineer

Clement Chien

Test item list

-
1. *Test item list* ----- 2
 2. *Configuration of EUT* ----- 3
 3. *Temp./humidity power on/off test* ----- 4
 4. *Temperature variation operation test* ----- 5
 5. *Cold start and hot start test* ----- 6

Testing Result

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

Configuration of EUT

Test Product: EMB-H61A

Sample Configuration & Quantity Under Test:

1. CPU: Intel i5-2390T / 2.70GHz (Bios Ver. EMB-H61A R0.5)
2. North Bridge: Integrate in Intel i5-2390T / 2.70GHz
3. PCH Bridge: Intel H61
4. Memory: Transcend DDR3 1333 8GB Micro IVD22 D9PBC*2
5. HDD: Hitachi Z5K320-160 160GB
6. Test Software: Windows 7 / Run PassMark Burn In Test 7.0
7. Power Supply: AT Power
8. Heat Sink:



Temp./humidity power on/off test

Test Date: 04-12 ~ 13-2012

Test Site: AAEON QE Internal Lab.

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

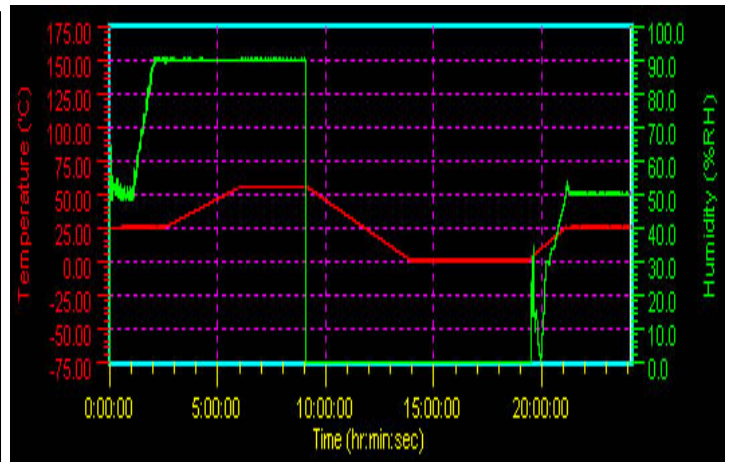
Test Equipment:
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 03/17/11
Serial Number: 6487KT

Temperature & Humidity Power On/Off Test:

Testing Specification:

| Step | Temperature (°C) | 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 | 55 | 90 | 03:30 |
| 6 | 55 | 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:

| Test Method | Actual | Successful | Failure rate |
|--------------|------------|------------|--------------|
| Power On/Off | 1358/times | 1358/times | 0 % |

Note: Failure rate must be under 0.2%.

Temperature variation operation test

Test Date: 04-14 ~ 15-2012

Test Site: AAEON QE Internal Lab.

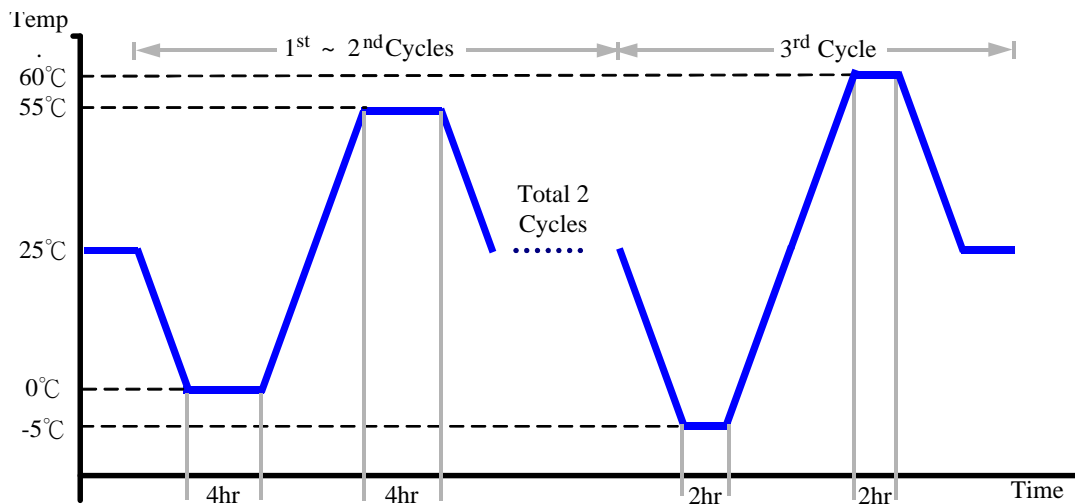
Test Standard: Reference IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 03/17/11
Serial Number: 6487KT

Temperature & Humidity Cycle Test:

1. Test Low Temperature: 0°C (1~2 cycles)
-5°C (3rd cycle)
2. Test High Temperature: 55°C (1~2 cycles)
60°C (3rd cycle)
3. Test dwell time: 4Hrs (1~2 cycles)
2Hrs (3rd cycle)
4. Temperature slope: 2°C/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

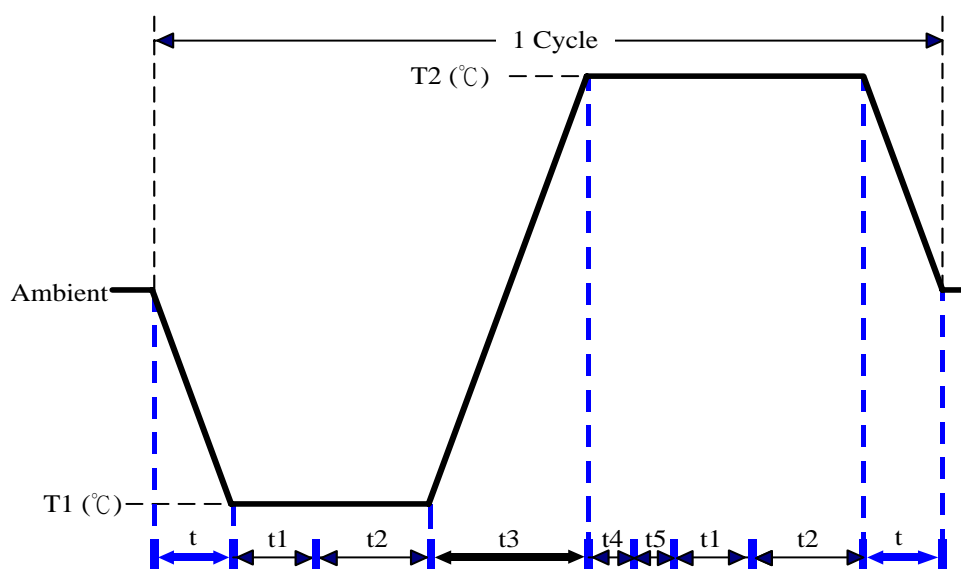
Test Date: 04-16 ~ 17-2012

Test Site: AAEON QE 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-B6T-150+LN2
 Date of Calibration: 03/17/11
 Serial Number: 6487KT

Test Condition:



| Parameters | Description |
|------------|-------------|
| T1 | -5°C |
| T2 | 60°C |
| t1 | 1 hrs |
| t2 | 2 hrs |
| t4, t5 | 30 min |
| t, t3 | 2°C/min |
| n (Cycle) | 1 |

t,t3 = temprature slope
 t, t1: Power Off
 t2: Power on/off test 10 times (on 2 min / off 5min)
 t3,t4: Run PassMark Burn In Test 7.0
 t5: Win 7 Software restart test 2 times
 Test Software:Windows 7

Test Result:

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