

# EMB-Q170A

## Temperature/Humidity Test Report

Report NO: 16IP020011



Summary	<p><input type="checkbox"/> <b>Pass</b></p> <p><input type="checkbox"/> <b>Fail</b></p> <p>Note : There is/are ___ defect(s) not list in the report, please check it in the DTS Website.</p> <p><input checked="" type="checkbox"/> <b>Pass with Deviation</b></p> <p><b>Comment:</b> The Network testing failed (Error message shows “Timeout waiting for packet”) when LAN load was setting on 100% with running “PassMark Burn In Test 8.1 Pro”. Therefore change the LAN load 100% to 99% and then test again, the test result was pass. Please refer to for PASSMARK SOFTWARE explanation as below. <a href="http://www.passmark.com/forum/showthread.php?2931-How-to-test-burnin-test-with-Network">http://www.passmark.com/forum/showthread.php?2931-How-to-test-burnin-test-with-Network</a></p>
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Issue date

2016-08-16

QE Manager

KJ Wang

Test Engineer

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# Test item list

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## 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-Q170A Rev. 1.02

### Sample Configuration & Quantity Under Test:

1. CPU: Intel Core i7-6700 3.40 GHz
2. BIOS Ver. R0.D (E17AAM0D) (06/28/2016)
3. Chipset: Intel Q170
4. Memory: Transcend / DDR4 2133 SO 16GB \*2 / SEC K4A8G085WB
5. USB Flash: Transcend 8 GB (For DOS Mode Power On/Off Test)
6. 2.5" SATA HDD: Seagate / ST9120823AS 120GB
7. Test Software: Windows 8.1 / Run PassMark Burn In Test 8.1 Pro
8. ATX Power Supply: CWT / DSA400P-C 400W
9. CPU Cooler:



# Temp./humidity power on/off test

**Test Date:** 08-10 ~ 11-2016

**Test Site:** AAEON QE Dept.

**Test Standard:** Refer to IEC 68-2-30 Testing procedures  
 Test Db: Damp Heat Test  
 Refer to IEC 68-2-1 Testing procedures  
 Test Ad: Cold Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber: (K.SON. INS. TECH. CORP.)  
 Model: THS-D7TS-100+LN2  
 Date of Calibration: 09/10/2015  
 Due date of Calibration: 09/09/2016  
 Serial Number: A0004

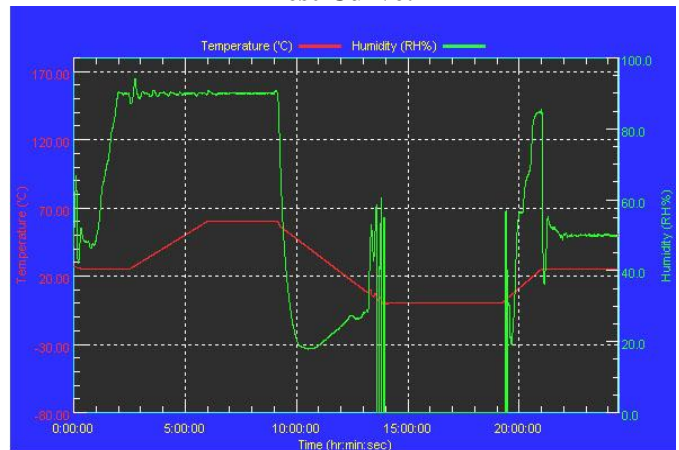
**Temperature & Humidity Power On/Off Test:**

1. Test High Temp./Humidity: 60°C @90%RH
2. Test Low Temperature: 0°C
3. Test Time: 24Hours / Cycle
4. Test Cycle: 1 Cycles
5. Test Software: DOS Mode / Run Boot Up Record Program ver 1.41

**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	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:**

	Actual	Successful	Failure rate	Test Result
Power On/Off	1009/times	1009/times	0 %	Pass

**Note:** 1. Failure rate need to under 0%.  
 2. Power on/off fixture setting: button - 1 sec. / on/off - 40 sec.

# Temperature variation operation test

**Test Date:** 08-12 ~ 15-2016

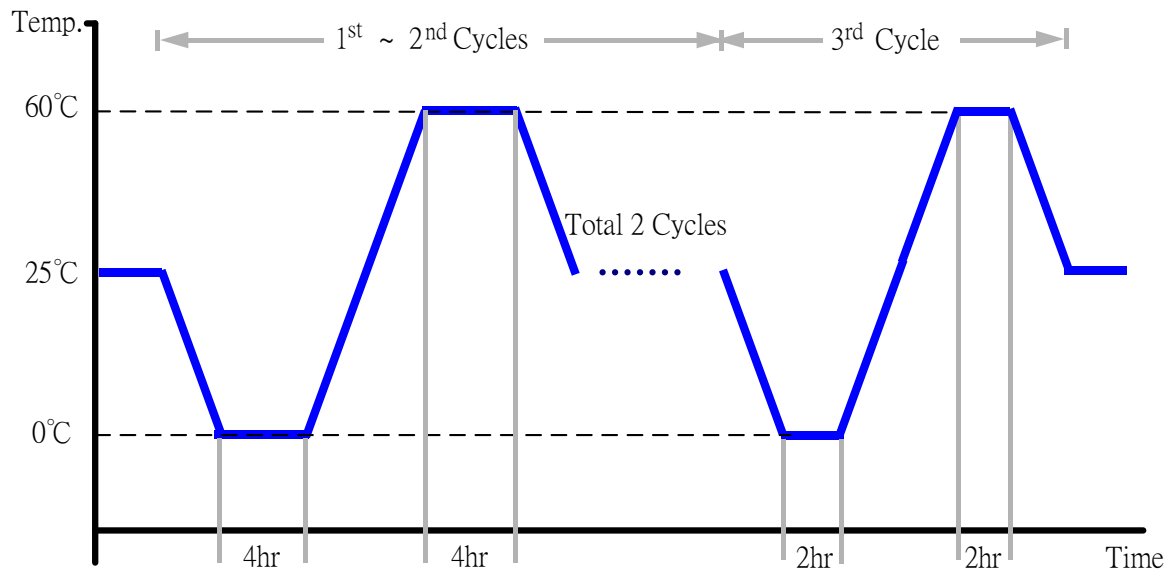
**Test Site:** AAEON QE Dept.

**Test Standard:** Refer to 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-D7TS-100+LN2  
Date of Calibration: 09/10/2015  
Due date of Calibration: 09/09/2016  
Serial Number: A0004

## Temperature & Humidity Cycle Test:

1. Test Low Temperature: 0°C (1~3 cycles)
2. Test High Temperature: 60°C (1~3 cycles)
3. Test dwell time: 4Hrs (1~2 cycles)  
2Hrs (3<sup>rd</sup> cycle)
4. Temperature slope: 2°C/min
5. Test cycle: 3 cycles
6. Test Environment Curve:



## Test Result:

No issues were found during the temperature variation operation test.

# Cold start and hot start test

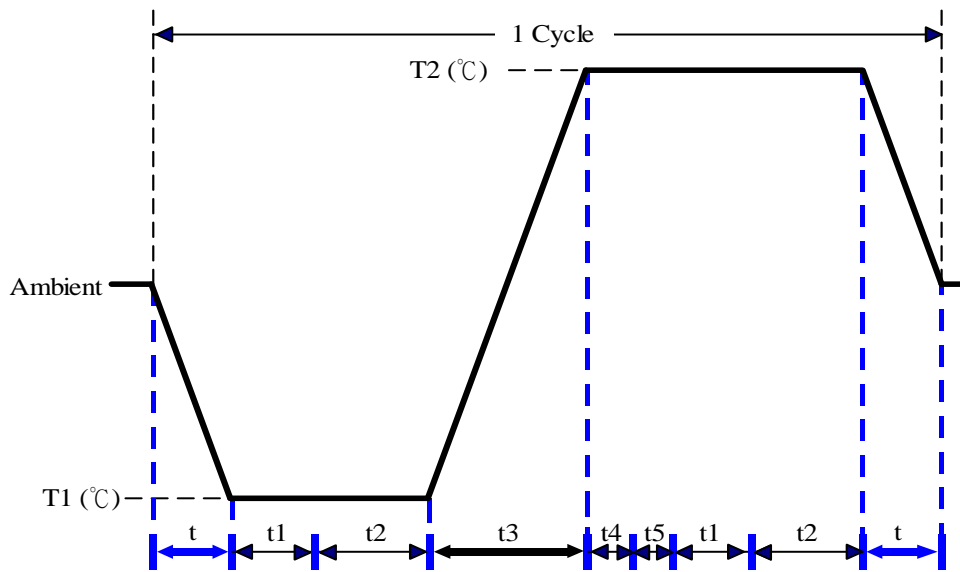
**Test Date:** 08-11 ~ 12-2016

**Test Site:** AAEON QE Dept.

**Test Standard:** Refer to 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-D7TS-100+LN2  
Date of Calibration: 09/10/2015  
Due date of Calibration: 09/09/2016  
Serial Number: A0004

**Test Condition:**



Parameters	Description
T1	0°C
T2	60°C
t1	1 hrs
t2	2 hrs
t4, t5	30 min
t, t3	2°C/min
n (Cycle)	1

- t, t3 = temperature slope
- t, t1: Power Off
- t2: Power on/off test 10 times (on 2 min / off 5min)
- t3, t4: Run PassMark Burn In Test
- T5: Win. 8.1 Software restart test 2 times
- Test Software: Windows 8.1

**Test Result:**

- a. No issues were found during the cold start test.
- b. No issues were found during the hot start test.