

EMB-Q170C

Temperature/Humidity Test Report

Report NO: 16IP020009



Summary	<p><input type="checkbox"/> Pass</p> <p><input type="checkbox"/> Fail Note : There is/are ___ defect(s) not list in the report, please check it in the DTS Website.</p> <p><input checked="" type="checkbox"/> Pass with Deviation Comment: The Network testing failed, 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 http://www.passmark.com/forum/showthread.php?2931-How-to-test-burnin-test-with-Network</p>
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Issue date

2016-07-20

QE Manager

KJ Wang

Test Engineer

Jerry Chen

Test item list

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Testing Result

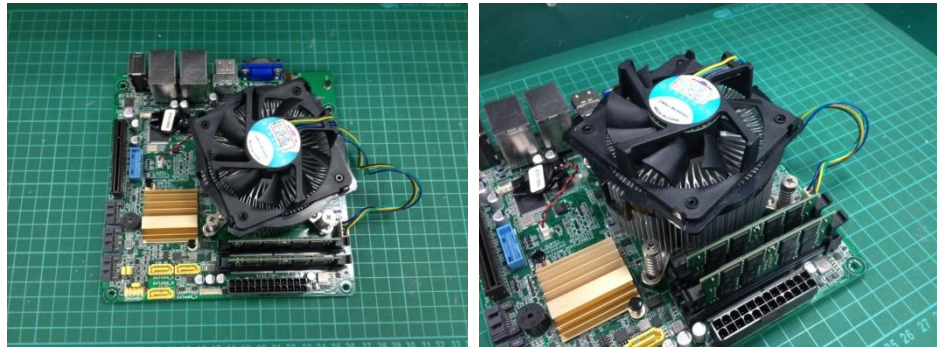
Num	Test item list	Result	Remark
1	Temp./humidity power on/off test	Pass	
2	Temperature variation operation test	Pass	
3	Cold start and hot start test	Pass	

Configuration of EUT

Test Product: EMB-Q170C Rev. 1.00

Sample Configuration & Quantity Under Test:

1. CPU: Intel Core i7-6700 3.40 GHz
2. BIOS Ver. R0.3 (EQH0CM03) (06/08/2016)
3. Chipset: Intel Q170 Express Chipset
4. Memory: innodisk / DDR4 2133 SODIMM 16GB *2 / SEC K4A8G085WB
5. USB Flash: Transcend 8 GB (For DOS Mode Power On/Off Test)
6. 2.5" SATA HDD: WD / WD5000LPVX 500GB
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: 07-18 ~ 19-2016

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

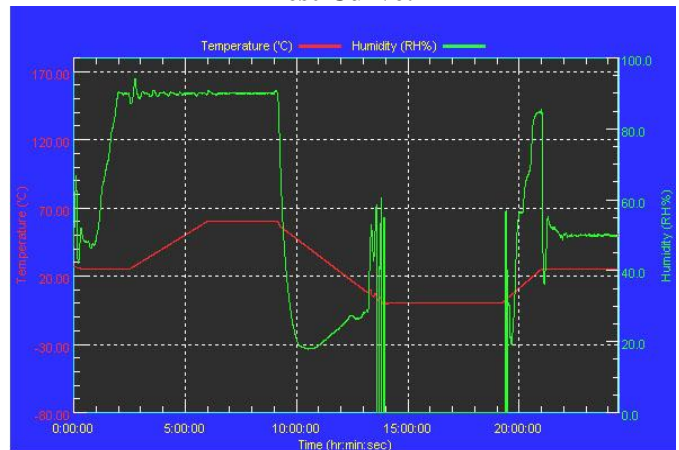
Temperature & Humidity Power On/Off Test:

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	1005/times	1005/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: 07-15 ~ 18-2016

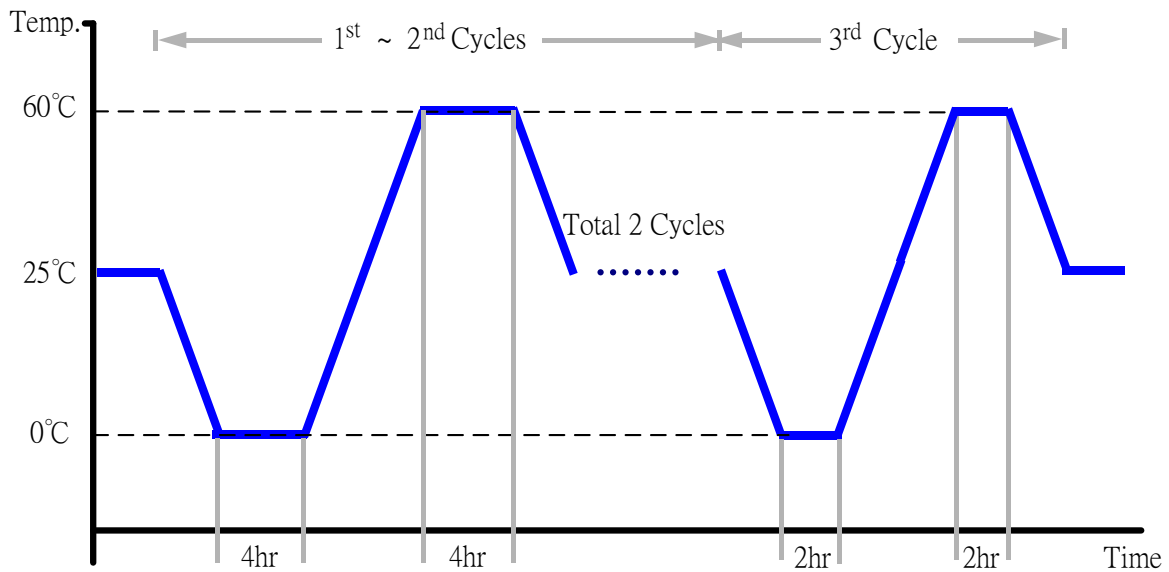
Test Site: AAEON QE Dept.

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 (3rd 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

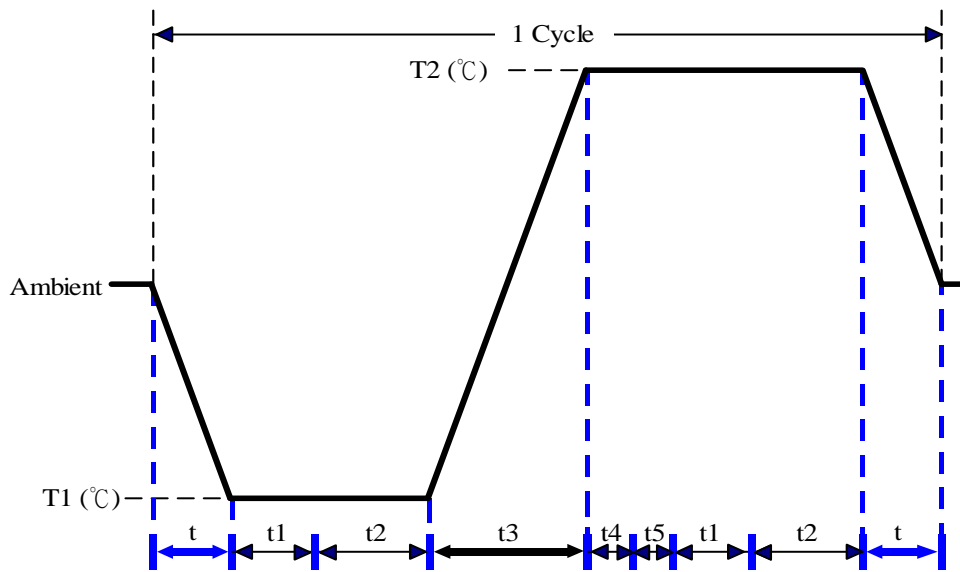
Test Date: 07-14 ~ 15-2016

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

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.