UP-APL01

Temperature/Humidity Test Report

Report NO: 17D020008

Summary	☑ **Pass** ☐ **Fail** Note : There is/are ___ defect(s) not list in the report, please check it in the DTS Website. ☐ **Pass with Deviation** **Comment:** _____

Issue date	QE Manager	Test Engineer
2017-06-06	**KJ Wang**	**Ben Sun**

Test item list

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: UP-APL01 A0.3

Sample Configuration & Quantity Under Test:

1. CPU: INTEL Apollo Lake.Pentium N4200.2.5GHz
2. BIOS Ver. R1.0
3. Chipset: INTEL Apollo Lake
4. Memory: 4GB, Samsung.K4F8E304HB-MGCH
5. Storage: eMMC.32GB.Kingston.EMMC32G-M525-A51
6. Test Software: Windows 10 / Run PassMark Burn In Test 8.1 Pro
7. Adapter: AD36AM050600 5V/6A
8. CPU Cooler:

Temp./humidity power on/off test

Test Date: 05-29 ~ 31-2017

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-B6T-150+LN2
Date of Calibration: 06/03/16
Due date of Calibration: 06/02/17
Serial Number: 9095KT

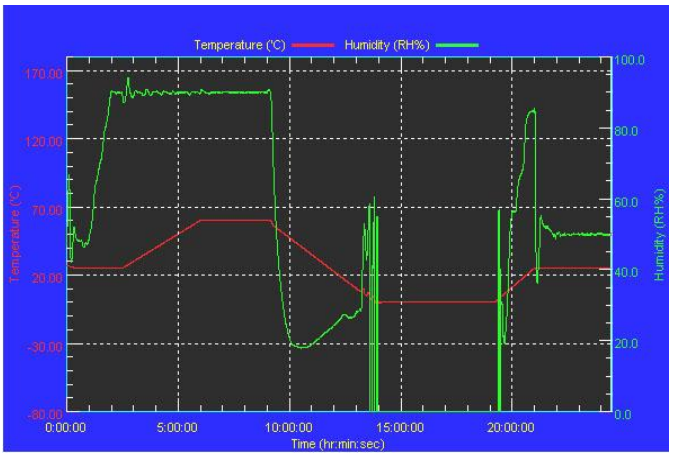
Temperature & Humidity Power On/Off Test:

1. Test High Temp./Humidity: 60℃@90%RH
2. Test Low Temperature: 0℃
3. Test Time: 24Hours / Cycle
4. Test Cycle: 2 Cycles
5. Test Software: Windows 10 / Run PassMark Rebooter

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:

	Actual	Successful	Failure rate	Test Result
Power On/Off	1179/times	1179/times	0 %	Pass

Note: 1. Failure rate need to under 0%.

2. Power on/off fixture setting: on - 150 sec / off - 5 sec

Temperature variation operation test

Test Date: 06-05 ~ 06-2017

Test Site: AAEON QE Dept.

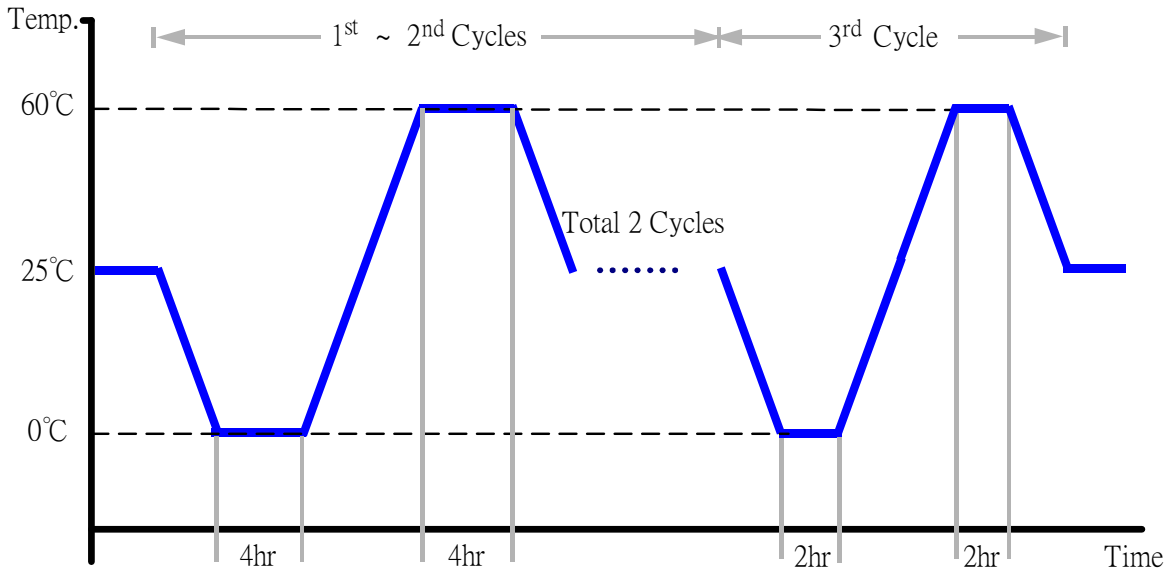
Test Standard: Refer to IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber: (K.SON. INS. TECH. CORP.)
Model: THS-D4H+-100
Date of Calibration: 10/08/16
Due date of Calibration: 10/07/17
Serial Number: 2582

Temperature & Humidity Cycle Test:

1. Test Low Temperature: 0℃ (1~3 cycles)
2. Test High Temperature: 60℃ (1~3 cycles)
3. Test dwell time: 4Hrs (1~2 cycles)
   2Hrs (3rd cycle)
4. Temperature slope: 2℃/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: 06-01 ~ 02-2017

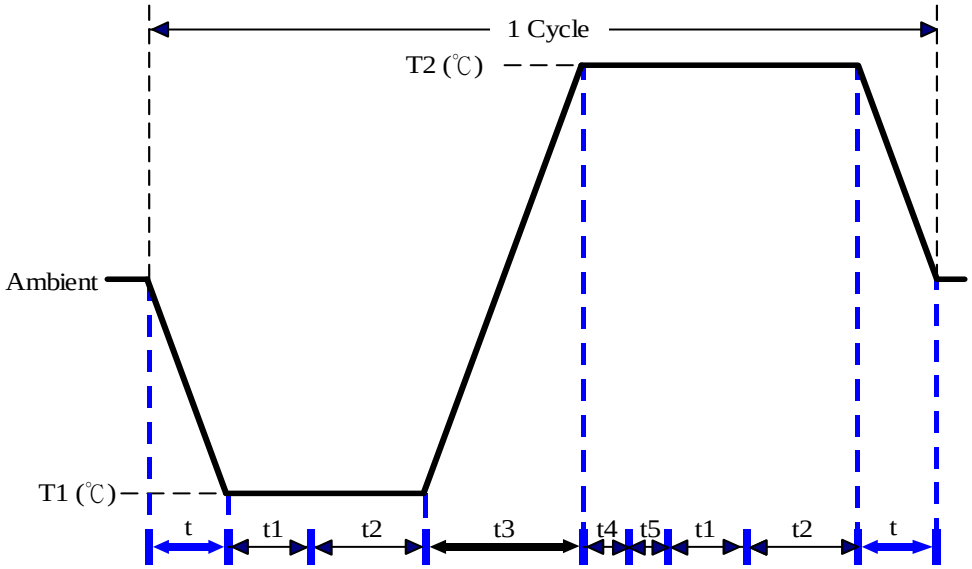
Test Site: AAEON QE Dept.

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-D4H+-100
Date of Calibration: 10/08/16
Due date of Calibration: 10/07/17
Serial Number: 2582

Test Condition:



Parameters	Description
T1	0℃
T2	60℃
t1	1 hrs
t2	2 hrs
t4, t5	30 min
t, t3	2℃/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
t5: Windows 10 Software restart test 2 times
Test Software:Windows 10

Test Result:

a. No issues were found during the cold start test.

b. No issues were found during the hot start test.