

FWS-2253

With CFD

Environment Test Report

Report NO: 16I020005



Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____
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Issue date

QE Manager

Test Engineer

2016-04-14

KJ Wang

Rex Chang

Test item list

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Testing Result

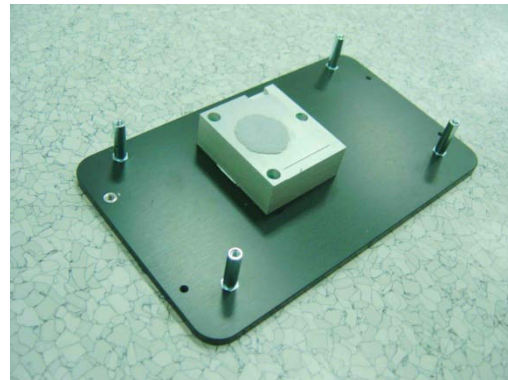
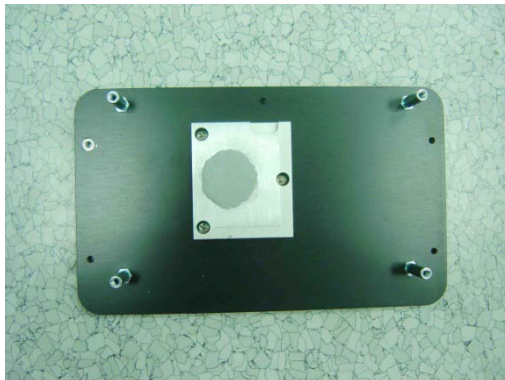
Num	Test item list	Result	Remark
1	Power on/off test	Pass	
2	Cold start and hot start test	Pass	
3	Low temperature operation test	Pass	
4	Low temperature storage test	Pass	
5	High temperature operation test	Pass	
6	High temperature storage test	Pass	
7	Humidity test	Pass	
8	Variation temperature operation test	Pass	

Configuration of EUT

Sample Define:

Sample No.	S/N	FWS-2253
Sample 1		P1620232
Sample 2		P1620234
Sample 3		P1620235
Sample 4		P1620238

Num	Item	Spec
1.	Main Board:	FWB-2250 Ver. A1.1
	1.BIOS	FWS-2253 R1.1(K253AM11)(01/27/2016) x64
	2.CPU	Intel® Bay Trail N2807 SOC / 1,58GHz
	3.Wide Temp. Memory	Transcend 8GB * 1 / DDR3L-1333 / SEC K4B4G0846D
2.	Wide Temp. CFD	Innodisk / 16GB / DECFC-16GD53BW1SC-26
3.	Test Software	Windows 8 / Run Burn In Test 8.1 Pro
4.	USB Keyboard	KINYO KBX66
5.	USB Mouse	Microsoft Basic Optical Mouse v2.0
6.	Adapter	FSP / FSP040-RHAN2 / Output 12V, 3.33A, 40W



Test Condition:

Item	Testing Method	BurnIn configuration	Sample volume
CPU	PassMark BurnIn Test 8.1 Pro	Loading 100%	4 set
2D Graphic	PassMark BurnIn Test 8.1 Pro	Loading 100%	4 set
3D Graphic	PassMark BurnIn Test 8.1 Pro	Loading 100%	4 set
Memory	PassMark BurnIn Test 8.1 Pro	Loading 100%	4 set
Disk	PassMark BurnIn Test 8.1 Pro	Loading 100%	4 set
Serial Port	PassMark BurnIn Test 8.1 Pro with loop back	Loading 100%	4 set
LAN	PassMark BurnIn Test 8.1 Pro internal loop back	Loading 100%	4 set
USB	USB Keyboard and Mouse	-	4 set

Power On/Off Test

Test Date: 03-25 ~ 26-2015

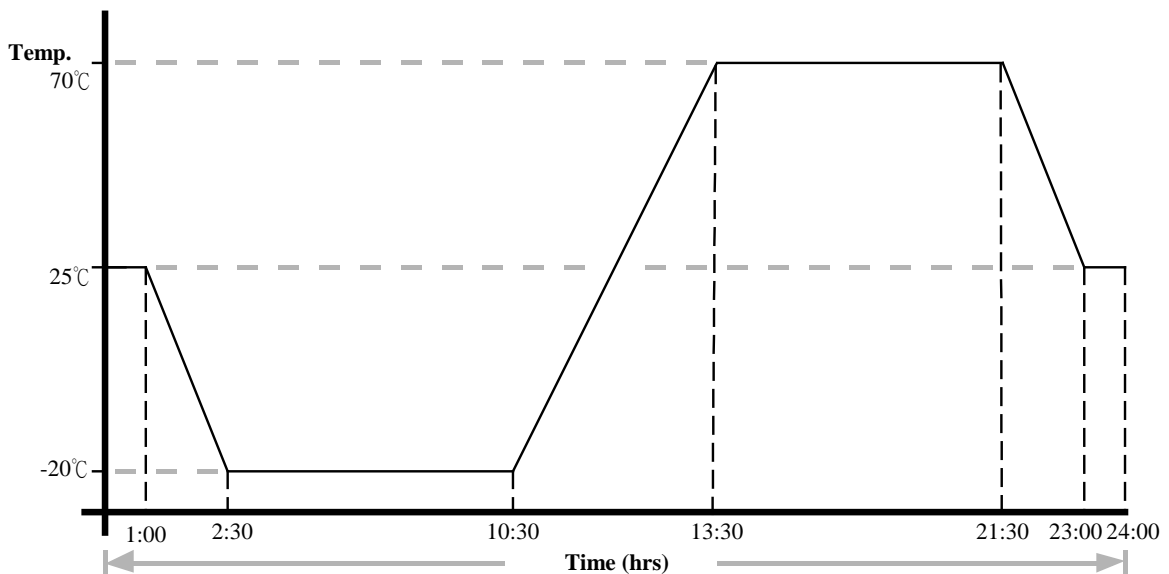
Test Site: AAEON QE Dept.

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-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

Test Condition:

1. Test Low Temperature: -20°C
2. Test High Temperature: 70°C
3. Test Times: 24 hrs
4. Power On/Off Time: 45sec / 5sec
4. Test Software: DOS Mode / Boot Up Record Program ver 1.41
5. Test Environment Curve:



Sample Quantity Under Test:
Quantity: 6

Test Result:

Sample 1 Power on/off test failed five times at 70°C high temperature.

Sample No.	Actual	Successful	Failure rate	On time	Off Time	Test Result	Note
Sample 1	1698times	1693 times	0.3%	45 sec	5 sec	Fail	Note 1
Sample 2	1698times	1698 times	0%	45 sec	5 sec	Pass	
Sample 3	1698times	1698 times	0%	45 sec	5 sec	Pass	
Sample 4	1698times	1698 times	0%	45 sec	5 sec	Pass	

Note: 1> 3 of 4 set need pass testing.
2> Failure rate need to under 0%.

Cold start and hot start test

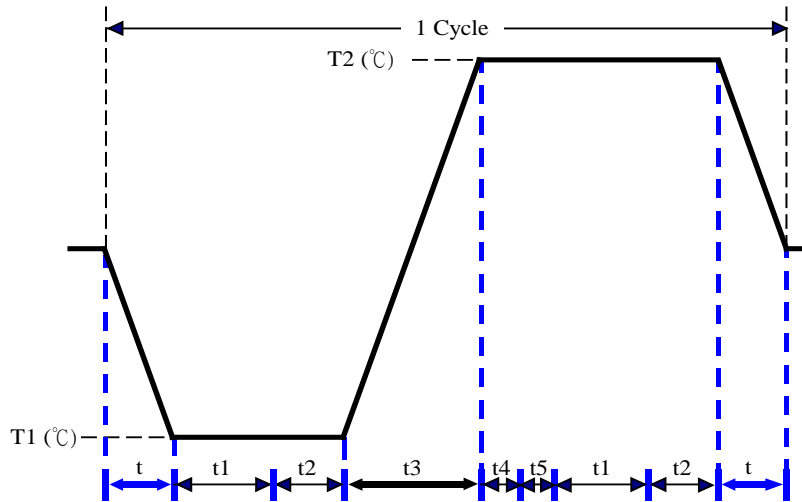
Test Date: 03-24 ~ 25-2016

Test Site: AAEON QE Dept.

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-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

Test Condition:



Parameters	Description
T1	-20°C
T2	70°C
t1	2 hrs
t2	1.5 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
t5: Software restart test 2 times
Test Software: Windows 8

Sample Quantity Under Test:

Quantity: 4

Test Result:

Sample No.	Cold Start Test	Hot Start Test	Test Result	Note
Sample 1	Pass	Pass	Pass	
Sample 2	Pass	Pass	Pass	
Sample 3	Pass	Pass	Pass	
Sample 4	Pass	Pass	Pass	

Note: 3 of 4 set need pass testing.

Low temperature operation test

Test Date: 04-06 ~ 07-2015

Test Site: AAEON QE Dept.

Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ad: Cold Test

Test Equipment:
Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

- Test Condition:**
1. Test Temperature: -20°C
 2. Test Times: 24Hrs
 3. Test Software: Windows 8 / Run PassMark Burn In Test 8.1 Pro
 4. Test Environment Curve:



Sample Quantity Under Test:
Quantity: 4

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	Pass	

Note: 3 of 4 set need pass testing.

Low temperature storage test

Test Date: 03-28-2015 ~ 04-01-2016

Test Site: AAEON QE Dept.

Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ad: Cold Test

Test Equipment:
Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

Test Condition:

1. Test Temperature: -20°C
2. Test Times: 96Hrs
3. Test Environment Curve:



Sample Quantity Under Test:
Quantity: 4

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	Pass	

Note: 3 of 4 set need pass testing.

High temperature operation test

Test Date: 04-07~ 08-2016

Test Site: AAEON QE Dept.

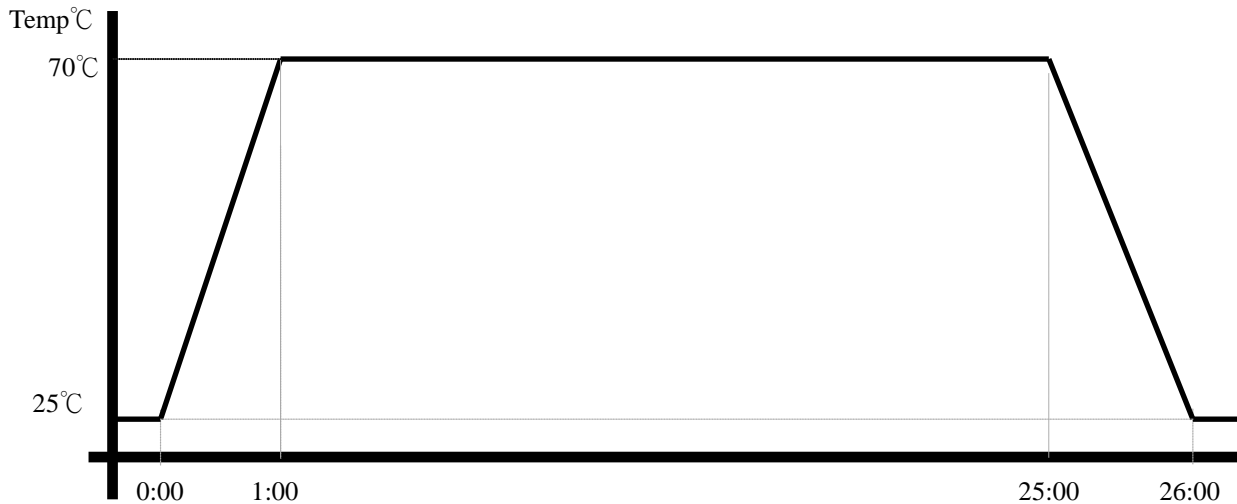
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bd: Dry Heat Test

Test Equipment:

Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

Test Condition:

1. Test Temperature: 70°C
2. Test Times: 24Hrs
3. Test Software: Windows 8 / Run PassMark Burn In Test 8.1 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 4

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	Pass	

Note: 3 of 4 set need pass testing.

High temperature storage test

Test Date: 04-01 ~ 06-2016

Test Site: AAEON QE Dept.

Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bd: Dry Heat Test

Test Equipment:

Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

Test Condition:

1. Test Temperature: 70°C
2. Test Times: 96Hrs
3. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 4

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	Pass	

Note: 3 of 4 set need pass testing.

Humidity Test

Test Date: 04-08~11-2016

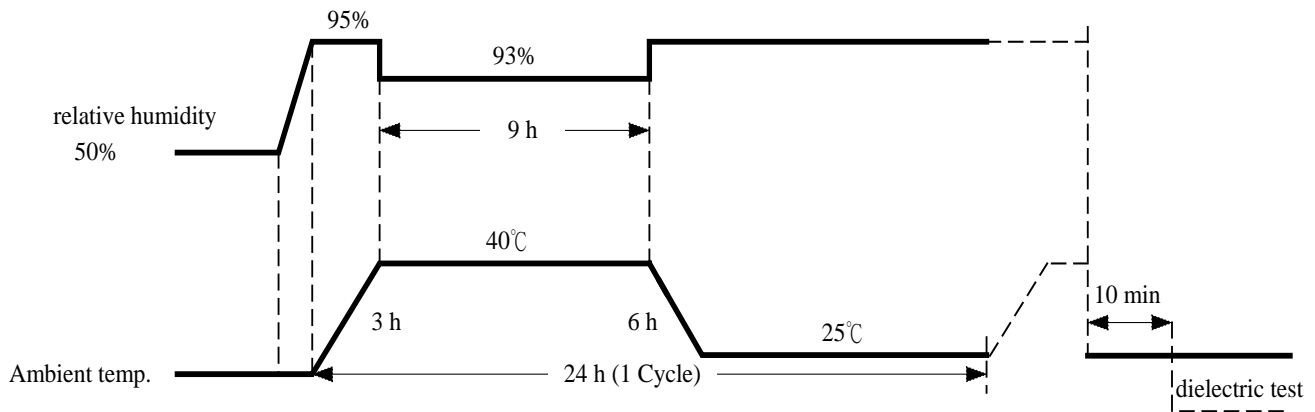
Test Site: AAEON QE Dept.

Test Standard: Reference IEC 68-2-30 Testing procedures
Test Db: Damp Heat Test (Non-operation)

Test Equipment:
Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

Testing Item:

1. Test Temperature: 25°C / 40°C
2. Test Humidity: 93~95%RH
3. Test Cycle: 2 Cycle
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 4

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	Pass	

Note: 3 of 4 set need pass testing.

Variation Temperature Operation test

Test Date: 04-11 ~ 13-2016

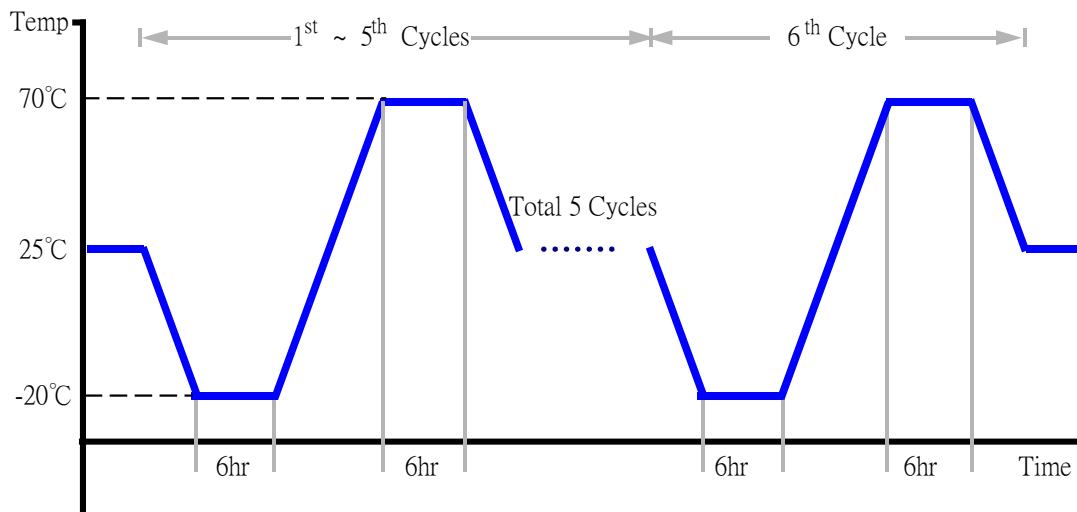
Test Site: AAEON QE Dept.

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-D7S-100+L N2
Date of Calibration: 10/08/15
Serial Number: 3898

Test Condition:

1. Test Low Temperature: -20°C
2. Test High Temperature: 70°C
3. Test dwell time: 6Hrs
4. Temperature slope: 10°C/min
5. Test cycle: 6 cycles
6. Test Environment Curve:



Sample Quantity Under Test:

Quantity: 6

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	Pass	

Note: 3 of 4 set need pass testing.