

BOXER-6639

With 2.5" SATA HDD

Environment Test Report

Report NO: 16P020014



Summary	<p><input type="checkbox"/> Pass</p> <p><input type="checkbox"/> Fail</p> <p><input checked="" type="checkbox"/> Pass with Deviation</p> <p>Comment: <u>Sample shortage thus only 3 EUT for environment test.</u></p>
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Issue date

2016-09-05

QE Manager

KJ Wang

Test Engineer

Rex Chang

Test item list

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Testing Result

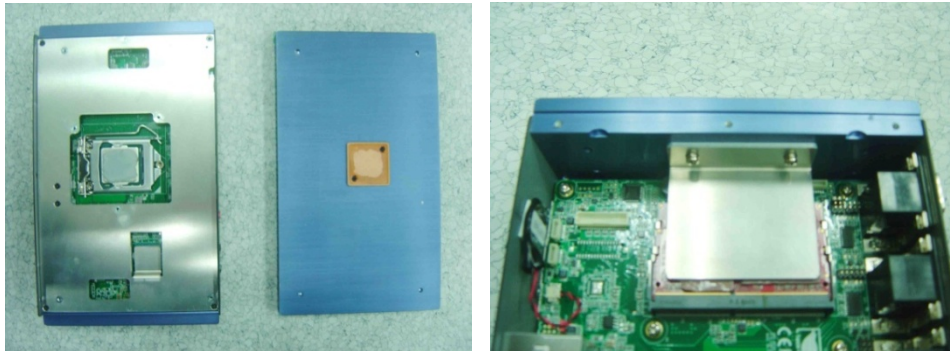
Num	Test item list	Result	Remark
1	Power on/off test	Pass	
2	Cold start and hot start test	Pass	
3	Low temperature operation test	Pass	
4	Low temperature storage test	Pass	
5	High temperature operation test	Pass	
6	High temperature storage test	Pass	
7	Humidity test	Pass	
8	Variation temperature operation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

Configuration of EUT

Sample Define:

Sample No.	S/N	BOXER-6639 A1.0
Sample 1		P1633401
Sample 2		P1633402
Sample 3		P1633403
Sample 4		N/A

Num	Item	Spec
1.	Main Board:	PBA-SKS01 D0.1
	1.BIOS	BOXER-6639 R0.8 (B639AM08) (06/24/2016)
	2.CPU	Intel® Core i7-6700TE / 2.4GHz
	3.Wide Temp. Memory	INNODISK 4GB * 2 / DDR4-2133 / SEC K4B4G0846D
2.	Wide Temp. HDD	TOSHIBA 100GB / MQ01AAD010C
3.	Test Software	Windows 10 / Run Burn In Test 8.1 Pro
4.	USB Keyboard	KINYO KBX66
5.	USB Mouse	Microsoft Basic Optical Mouse v2.0
6.	Adapter	FSP / FSP084-dmaa1 / Output 12V, 7.0A / 84W MAX



Test Condition:

Item	Testing Method	BurnIn configuration	Sample volume
CPU	PassMark BurnIn Test 8.1 Pro	Loading 50%	3 set
GP/GPU	PassMark BurnIn Test 8.1 Pro	Loading 50%	3 set
2D Graphic	PassMark BurnIn Test 8.1 Pro	Loading 50%	3 set
3D Graphic	PassMark BurnIn Test 8.1 Pro	Loading 50%	3 set
Video	PassMark BurnIn Test 8.1 Pro	Loading 50%	3 set
Memory	PassMark BurnIn Test 8.1 Pro	Loading 100%	3 set
Disk	PassMark BurnIn Test 8.1 Pro	Loading 70%	3 set
Serial Port	PassMark BurnIn Test 8.1 Pro with loop back	Loading 70%	3 set
LAN	PassMark BurnIn Test 8.1 Pro internal loop back	Loading 70%	3 set
Sound	PassMark BurnIn Test 8.1 Pro	Loading 70%	3 set
USB	USB Keyboard and Mouse	-	3 set

Power On/Off Test

Test Date: 08-19 ~ 20-2016

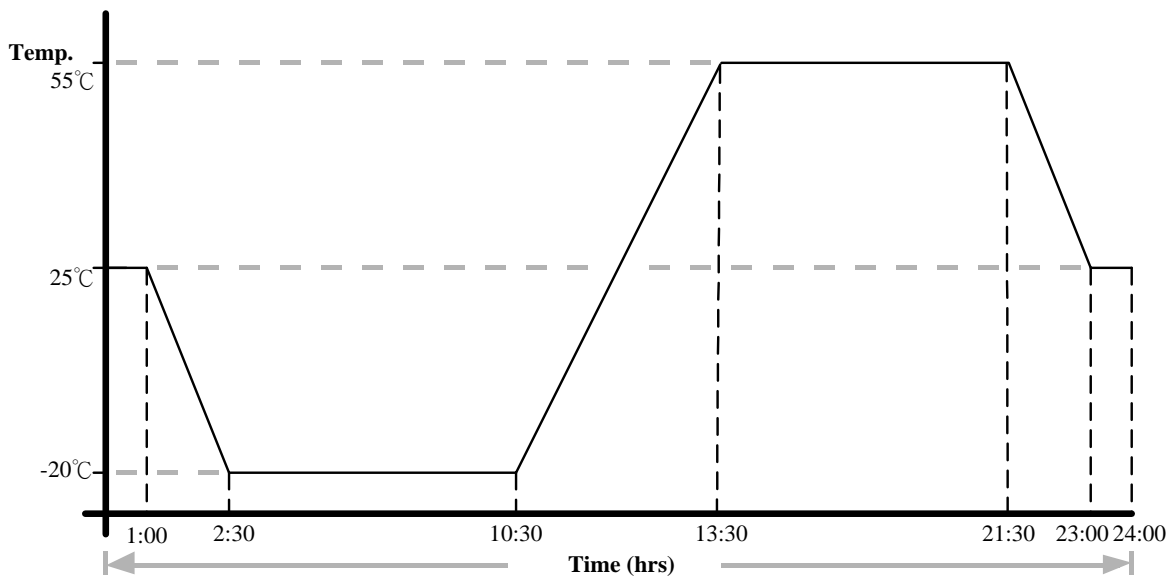
Test Site: AAEN QE Dept.

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
Due date of Calibration: 10/07/16
Serial Number: 3898

Test Condition:

1. Test Low Temperature: -20°C
2. Test High Temperature: 55°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: 3

Test Result:

Sample No.	Actual	Successful	Failure rate	On time	Off Time	Test Result	Note
Sample 1	1003times	1003 times	0%	44 sec	44 sec	Pass	Note 1
Sample 2	1003times	1003 times	0%	44 sec	44 sec	Pass	Note 1
Sample 3	1003times	1003 times	0%	44 sec	44 sec	Pass	Note 1
Sample 4	N/A	N/A	0%	N/A	N/A	N/A	

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

Cold start and hot start test

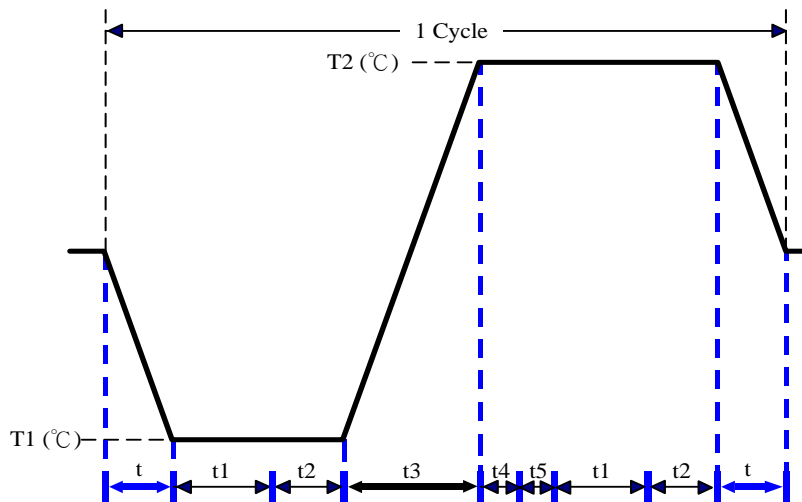
Test Date: 08-18~ 19-2016

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
Due date of Calibration: 10/07/16
Serial Number: 3898

Test Condition:



Parameters	Description
T1	-20°C
T2	55°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 10

Sample Quantity Under Test:

Quantity: 3

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	N/A	N/A	N/A	

Note: 3 of 4 set need pass testing.

Low temperature operation test

Test Date: 08-22 ~ 23-2015

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
Due date of Calibration: 10/07/16
Serial Number: 3898

Test Condition:

1. Test Temperature: -20°C
2. Test Times: 24Hrs
3. Test Software: Windows 10 / Run PassMark Burn In Test 8.1 Pro
4. Test Environment Curve:



Sample Quantity Under Test:
Quantity: 3

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	N/A	

Note: 3 of 4 set need pass testing.

Low temperature storage test

Test Date: 08-23~ 25-2016

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
Due date of Calibration: 10/07/16
Serial Number: 3898

Test Condition:

1. Test Temperature: -45°C
2. Test Times: 48Hrs
3. Test Environment Curve:



Sample Quantity Under Test:

Quantity: 3

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	N/A	

Note: 3 of 4 set need pass testing.

High temperature operation test

Test Date: 08-25~ 26-2016

Test Site: AAEON QE Dept.

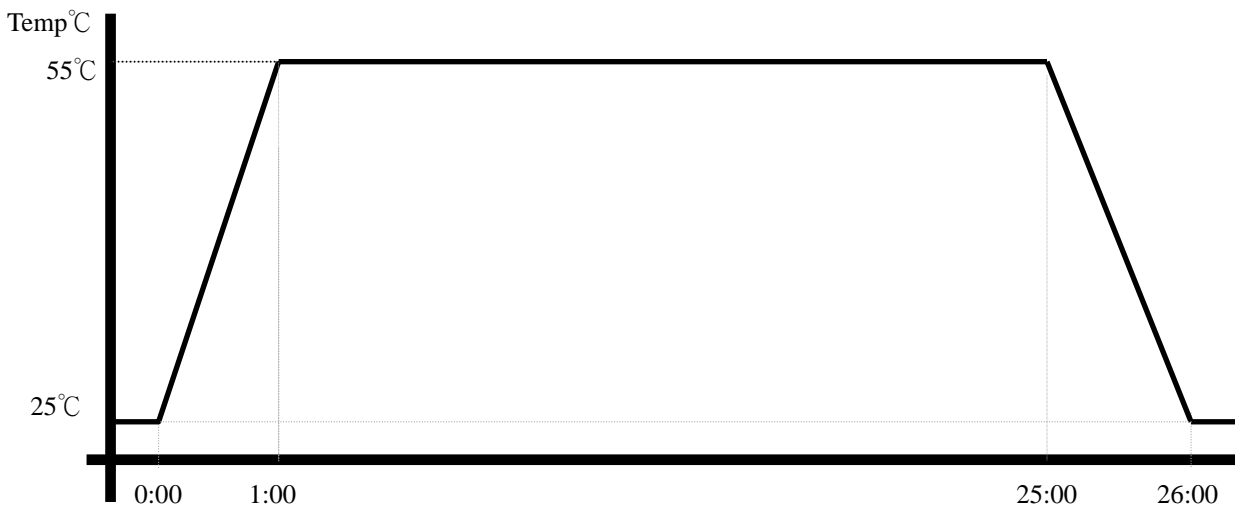
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bd: Dry Heat Test

Test Equipment:

Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Due date of Calibration: 10/07/16
Serial Number: 3898

Test Condition:

1. Test Temperature: 55°C
2. Test Times: 24Hrs
3. Test Software: Windows 10 / Run PassMark Burn In Test 8.1 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 3

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	N/A	

Note: 3 of 4 set need pass testing.

High temperature storage test

Test Date: 08-26 ~ 29-2016

Test Site: AAEON QE Dept.

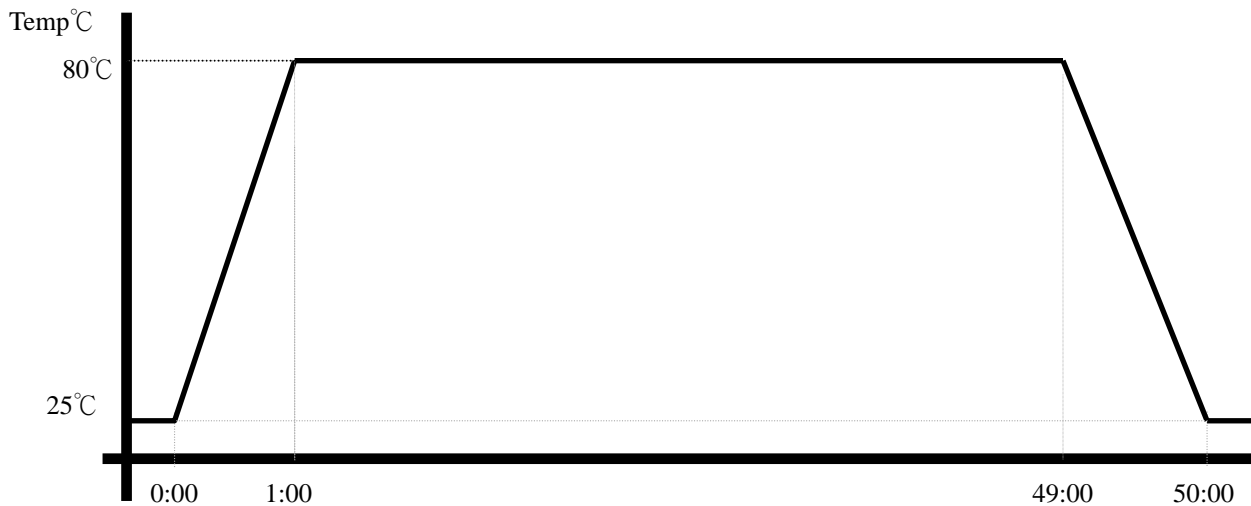
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bd: Dry Heat Test

Test Equipment:

Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Due date of Calibration: 10/07/16
Serial Number: 3898

Test Condition:

1. Test Temperature: 80°C
2. Test Times: 48Hrs
3. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 3

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	N/A	

Note: 3 of 4 set need pass testing.

Humidity Test

Test Date: 09-02~05-2016

Test Site: AAEON QE Dept.

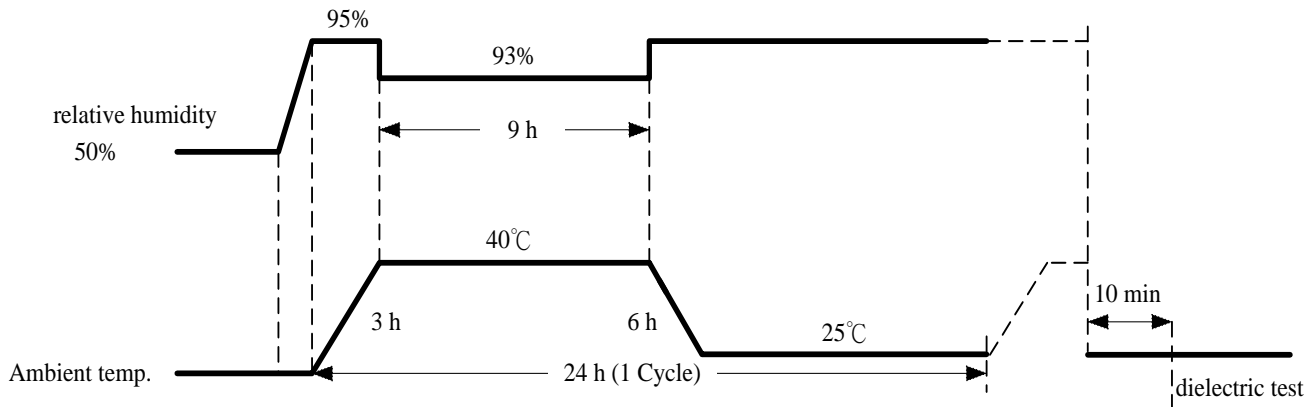
Test Standard: Reference IEC 68-2-30 Testing procedures
Test Db: Damp Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Due date of Calibration: 10/07/16
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: 3

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	N/A	

Note: 3 of 4 set need pass testing.

Variation Temperature Operation test

Test Date: 08-29 ~ 09-01-2016

Test Site: AAEON QE Dept.

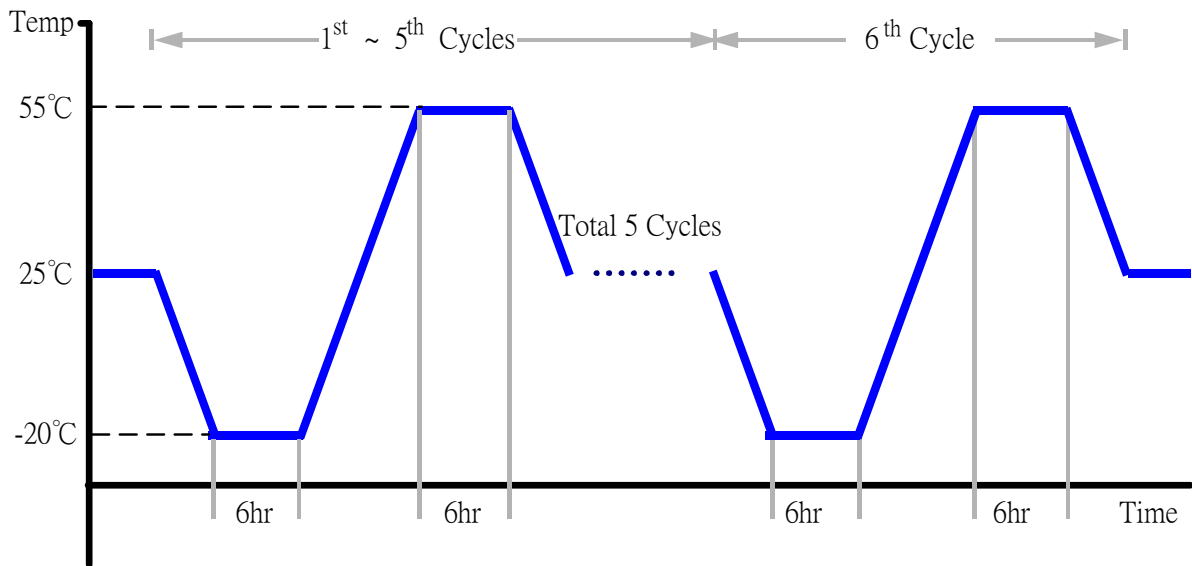
Test Standard: Reference IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber (K.SON. INS. TECH. CORP.)
Model: THS-D7S-100+L N2
Date of Calibration: 10/08/15
Due date of Calibration: 10/07/16
Serial Number: 3898

Test Condition:

1. Test Low Temperature: -20°C
2. Test High Temperature: 55°C
3. Test dwell time: 6Hrs
4. Temperature slope: 2~3°C/min
5. Test cycle: 6 cycles
6. Test Software: Windows 10 / Run PassMark Burn In Test 8.1 Pro
7. Test Environment Curve:



Sample Quantity Under Test:

Quantity: 3

Test Result:

Sample No.	Test Result	Note
Sample 1	Pass	
Sample 2	Pass	
Sample 3	Pass	
Sample 4	N/A	

Note: 3 of 4 set need pass testing.