



**Computing Platform Service Partner**

# ACP-5152

With 2.5" SATA HDD

## Environment Test Report

Report NO: 10P020022

Issued by:

**Rex Chang**

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**12/03/2010**

\_\_\_\_\_  
Test Engineer

\_\_\_\_\_  
Date

Reviewed by:

**Jansin Lee**

/

**12/03/2010**

\_\_\_\_\_  
Sr. Manager

\_\_\_\_\_  
Date

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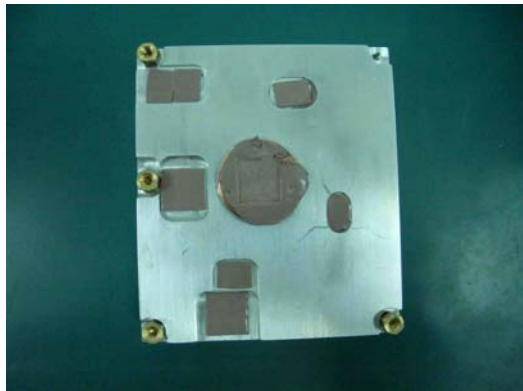
## Testing Result

Num	Test item list	Result	Remark
1	Temperature rise test	Pass	
2	Temperature cycle operation test	Pass	
3	High temperature storage test	Pass	
4	Low temperature storage test	Pass	
5	Humidity test	Pass	
6	Cold start and hot start test	Pass	

# Configuration of EUT

Num	Item	Spec
1.	Fanless Touch Panel	ACP-5152
	1. LCD	AUO G156XW010 1366*768 24bit
	2. Main Board	AAEON GENE-LN05 Rev. A0.2 (BIOS Ver: 0.2)
	3. CPU	Intel Atom D510 / 1.66GHz
	4. Memory	DSL 2GB * 1 / DDR2 667 / SEC K4T1G084QE
	5. Industrial SATA HDD	Seagate ST980817SM / 80GB
	6. I/O Board	PER-T189
	7. Inverter	GPSI GP1802-01A
	8. Test Software	Windows XP / Run PassMark Burn In Test 5.1 Pro
2.	Adapter	SINPRO MPU100-105

## Heat Sink



# Temperature rise test

**Test Date:** 12-03-2010

**Test Product:** ACP-5152

**Test Site:** AAEON QE Internal Lab.

**Test Standard:** Reference EN 61131-2(94), UL508 (94)

**Temperature Measurement:**

40 Channel Thermal Recorder:  
YOKOGAWA Inc,  
Model: DA100-13-1D  
Date of Calibration: 11/08/10  
Serial Number: 12A323190

**Test Condition:**

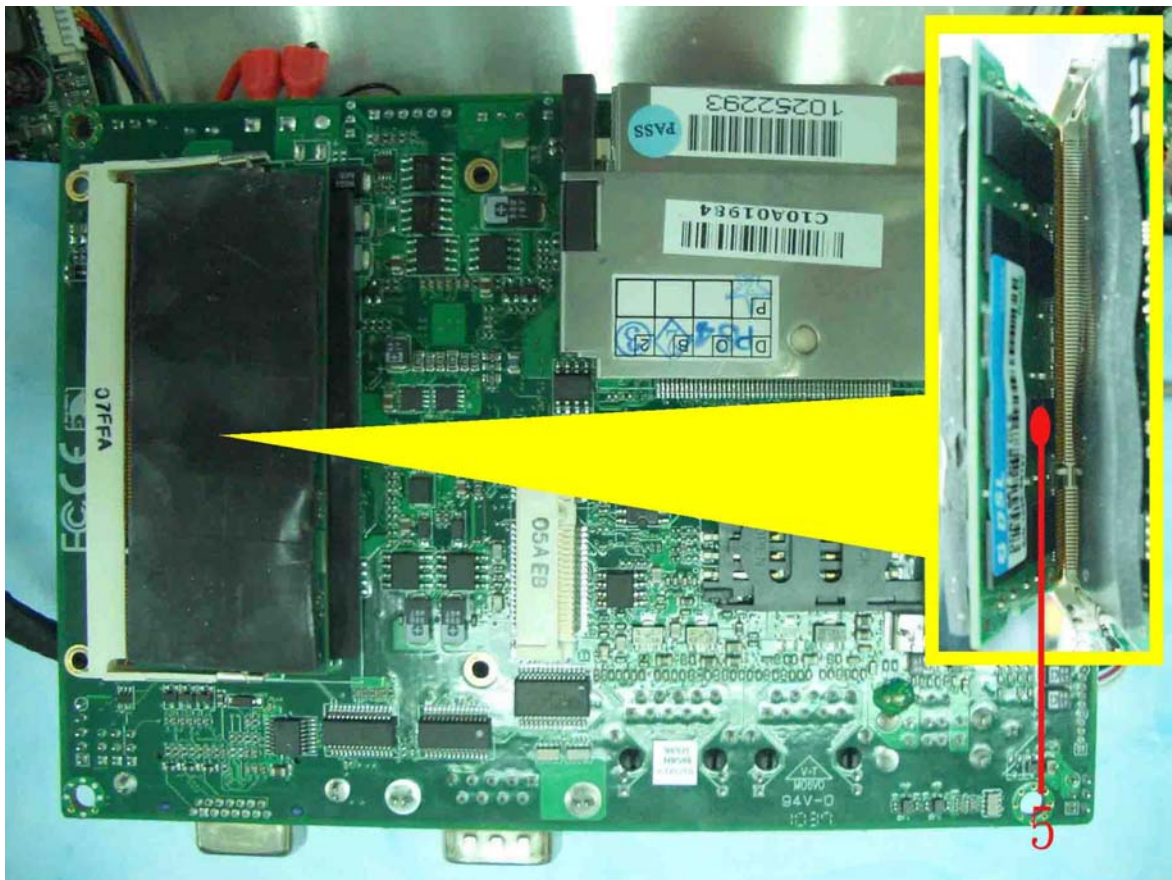
Ambient temperature: 40°C  
Continuous running till thermal stability (within less than 1°C)

**Test Software:**

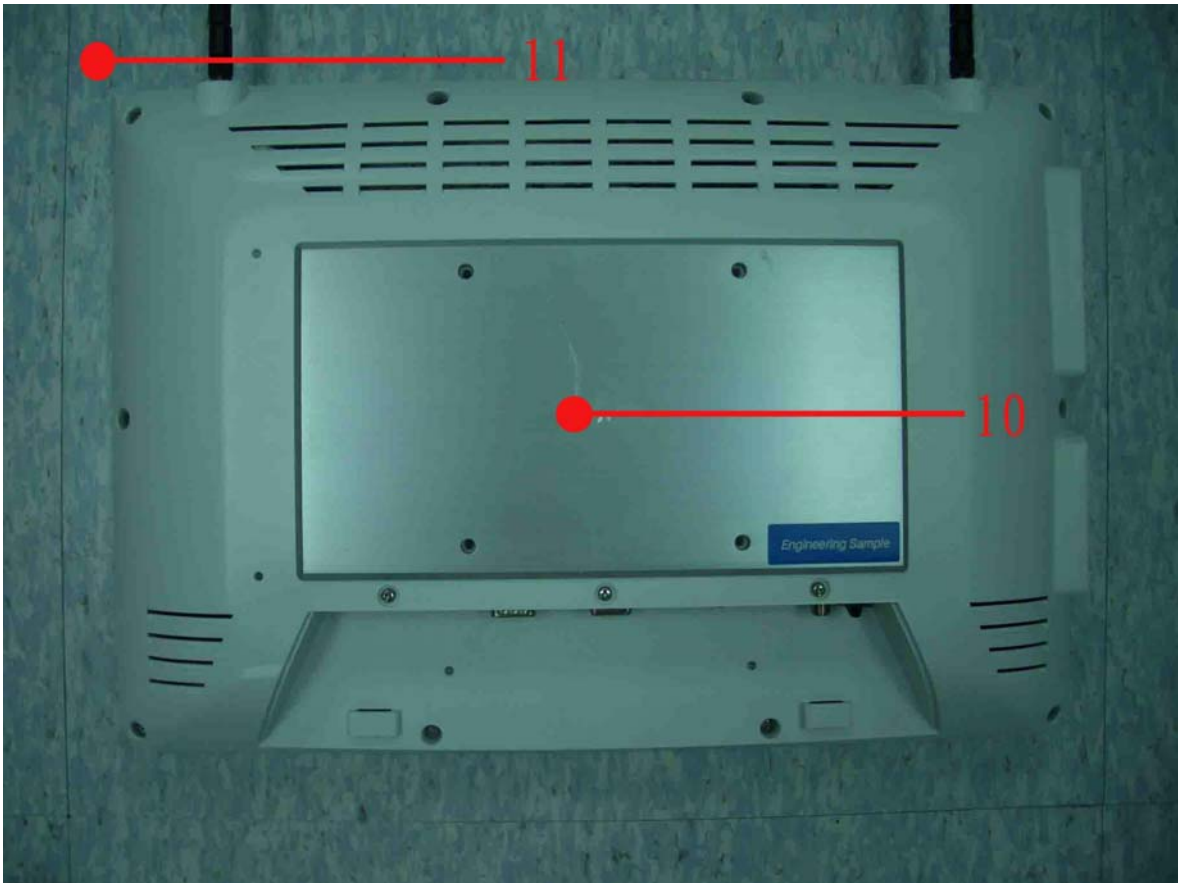
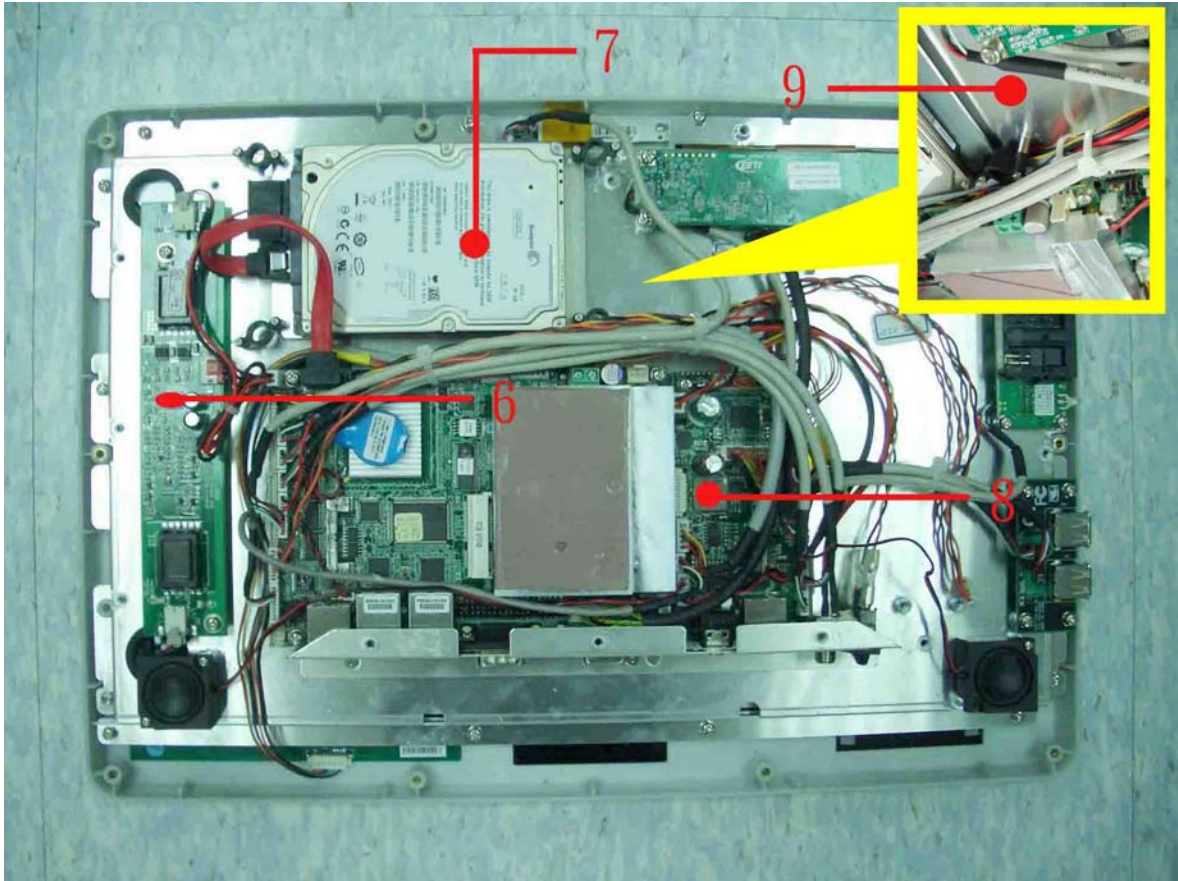
Windows XP / Run PassMark Burn In Test 5.1 Pro

**Terminal Recorder:**

Measuring Thermal Couple Position :



# Temperature rise test



# Temperature rise test

**Thermal profile data:**

**ACP-5152**

Point	Temp. Stage(°C)	Spec	40	25
<b>GENE-LN05</b>				
01. U19 - (TF) Intel CPU.Pineview D.DUAL CORE.D510.1.66GHz. SLBLA		100	73.1	58.1
02. U11 - (TF) Chipset ICH8M.INTEL.NH82801HBM.SLB9A		105	80.7	65.7
03. U15 - (TF) CLOCK GENERATOR.IDT.9LPRS501PGLF		115	82.0	67.0
04. U37 - (TF) Audio Codec.REALTEK.ALC888-GR		95	76.4	61.4
05. Memory		95	72.6	57.6
06. Inverter - U1		85	70.0	55.0
07. HDD Surface		85	72.4	57.4
08. PER-T189 - L1 - (TF) COIL.ZenithTek.ZPWM-1250M-2R2M		N/A	79.8	64.8
09. Control Box Inside Air Temperature		N/A	67.4	52.4
10. Control Box External Surface		N/A	65.4	50.4
11. Chamber Air Temperature		N/A	40.0	25.0
<b>Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification.</b>				

**Temperature Measurement Table:**

Location	TA=40.0°C	Temp. Rise (Thermal Couple)	SpeedFan 4.31 (Read from BIOS)
CPU		73.1	N/A
System Temp. 1 (North Bridge)		N/A	N/A
System Temp. 2 (South Bridge)		80.7°C	76.0°C

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ACP-5152)

**Test Result:**

No problem was found during the temperature rise operation test.

# Temperature cycle test

**Test Date:** 11-29-2010 ~ 12-01-2010

**Test Product:** ACP-5152

**Test Site:** AAEON QE Internal Lab.

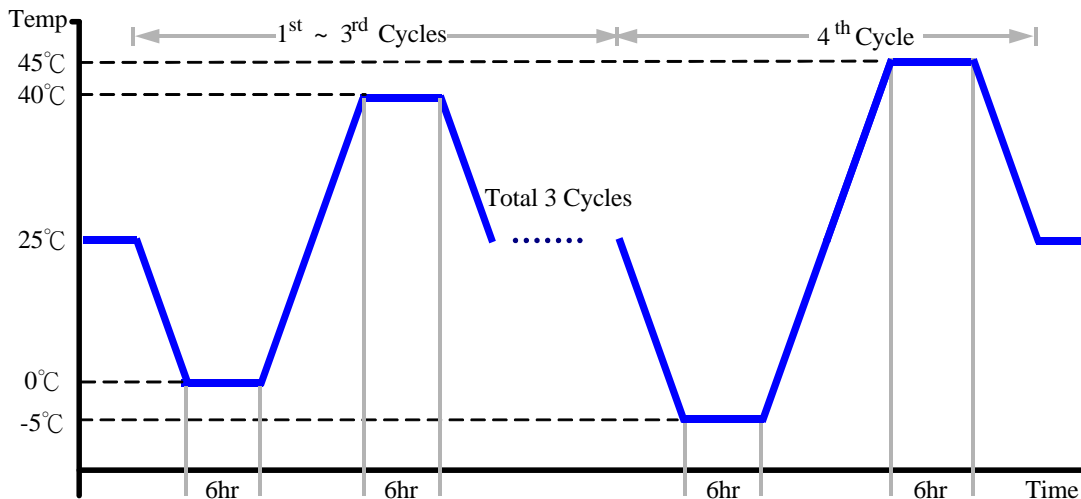
**Test Standard:** Reference IEC68-2-14 Testing procedures  
Test N: Change of temperature Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model: THS-D7S-100+1 N2  
Date of Calibration: 12/08/09  
Serial Number: 3898

**Test Condition:**

1. Test Low Temperature: 0°C (1~3 cycles)  
-5°C (4<sup>th</sup> cycle)
2. Test High Temperature: 40°C (1~3 cycles)  
45°C (4<sup>th</sup> cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2°C/min
5. Test cycle: 4 cycles
6. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ACP-5152)

**Test Result:**

No problem was found during the temperature operation cycle test.

**Test Date:** 11-22~24-2010

**Test Product:** ACP-5152

**Test Site:** AAEON QE Internal Lab.

**Test Standard:** Reference IEC 68-2-2 Testing procedures  
Test Bb: Dry Heat Test (Non-operation)

**Test Equipment:**

Programmable Temperature & Humidity Chamber

K.SON. INS. TECH. CORP.

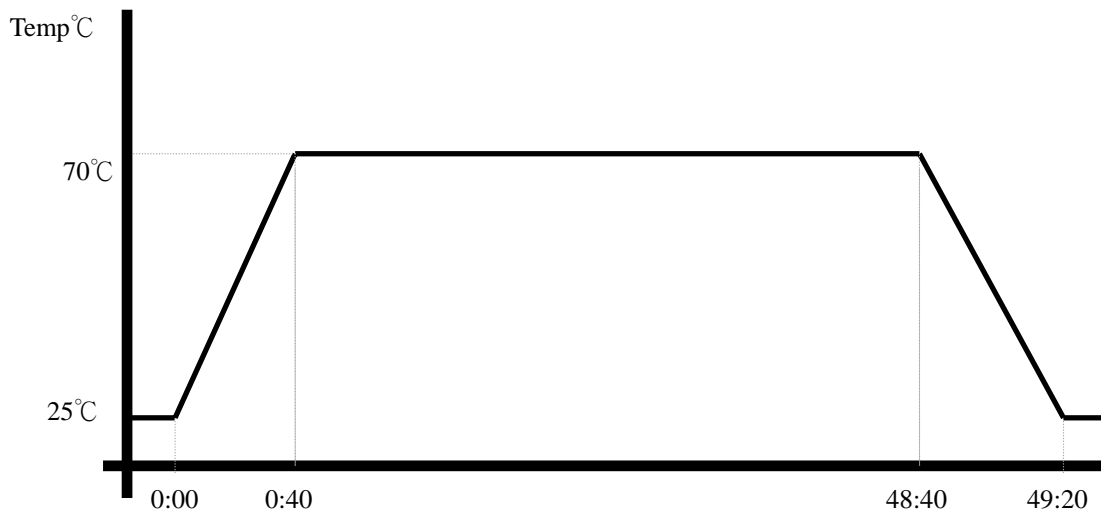
Model: THS-D7S-100+1 N2

Date of Calibration: 12/08/09

Serial Number: 3898

**Testing Item:**

1. Test Temperature: 70°C
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ACP-5152)

**Test Result:**

No problem was found after the high temperature storage test.



**Test Date:** 11-24~26-2010

**Test Product:** ACP-5152

**Test Site:** AAEON QE Internal Lab.

**Test Standard:** Reference IEC 68-2-1 Testing procedures  
Test Ab: Cold Test (Non-operation)

**Test Equipment:**

Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.

Model: THS-D7S-100+1 N2

Date of Calibration: 12/08/09

Serial Number: 3898

**Testing Item:**

1. Test Temperature: -20°C
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ACP-5152)

**Test Result:**

No problem was found after the low temperature storage test.

**Test Date:** 11-26~29-2010

**Test Product:** ACP-5152

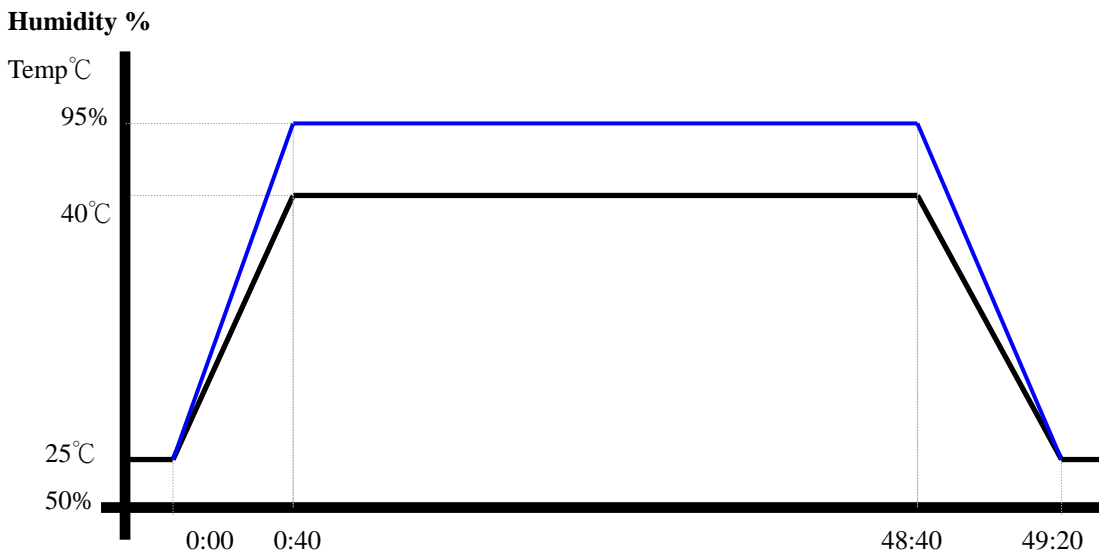
**Test Site:** AAEON QE Internal Lab.

**Test Standard:** Reference IEC 68-2-3 Testing procedures  
Test Ca: Damp heat, steady state (Non-operation)

**Test Equipment:**  
Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model: THS-D7S-100+1 N2  
Date of Calibration: 12/08/09  
Serial Number: 3898

**Testing Item:**

1. Test Temperature: 40°C
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
5. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**  
Quantity: 1 (ACP-5152)

**Test Result:**  
No problem was found after the humidity storage test.

# Cold start and hot start test

**Test Date:** 12-01~02-2010

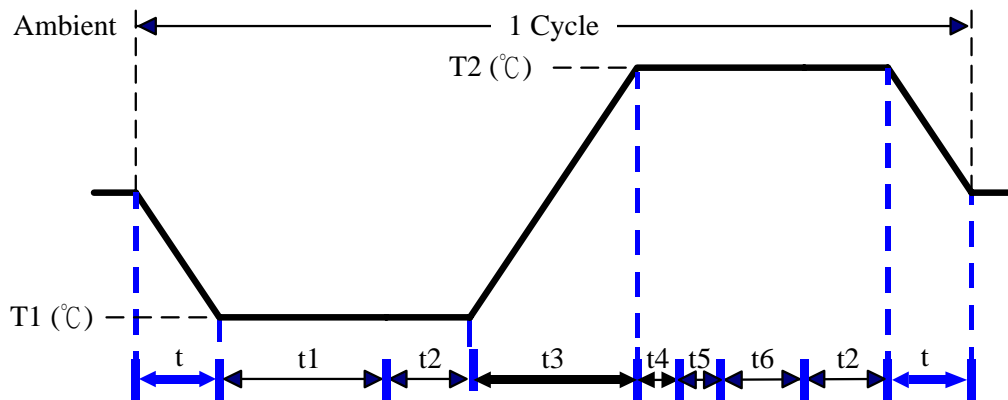
**Test Product:** ACP-5152

**Test Site:** AAEON QE Internal Lab.

**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+1 N2  
Date of Calibration: 12/08/09  
Serial Number: 3898

**Test Condition:**



Parameters	Description
T1	-5°C
T2	45°C
t1	4 hrs
t2, t6	2 hrs
t4, t5	1hrs
t, t3	2°C/min
n (Cycle)	1

t = temperature slope  
t, t1, t6: Power Off  
t2: Power on/off test 10 times (on 2 min / off 5min)  
t3, t4: Run PassMark Burn In Test  
t5: Win XP Software restart test 3 times  
Test Software: Windows XP

**Test Result:**

- a. No problem was found during the cold start test.
- b. No problem was found during the hot start test.