

# AHP-2153

(With 2.5" SATA HDD)

## Environment Test Report

Report NO: 12P020006

Summary	<input type="checkbox"/> Pass  <input type="checkbox"/> Fail  Note : There is/are ____ defect(s) not list in the report, please check it in the DTS Website.  <input checked="" type="checkbox"/> Pass with Deviation  Comment: <u>1. Under PassMark Burn In Test 7.0 Pro, COM port baud rate 115200 test fail COM1, COM2 and COM3 fail (COM port detected a Receive Overrun Error).</u>
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Issue date

Approval

Test Engineer

2012-03-28

Wayne Chen

Rex Chang

# Test item list

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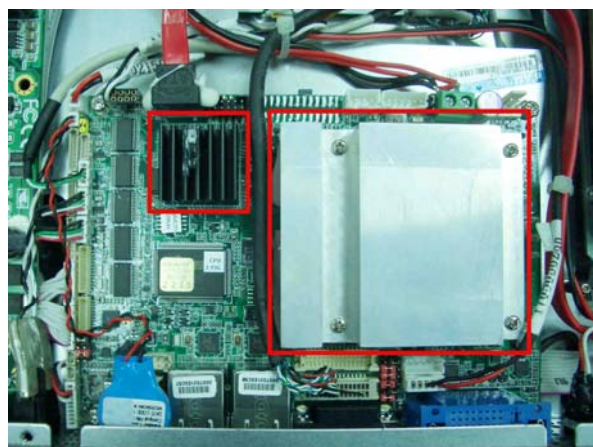
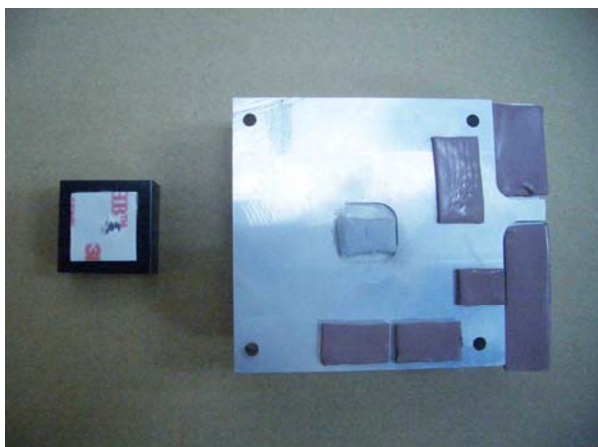
## Testing Result

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.	<b>15" Panel PC:</b>	AHP-2153
	1. LCD	TFT LCD.15".AUO.G150XG01 V3.1024*768.18&24 Bits
	2. Inverter	SAMPO YIVLAA0734D21 Ver: A
	3. Main Board	GENE-CV05 A1.0
	4. BIOS Ver.	AHP-2153 R0.4(2153AM04) (03/06/2012)
	5. CPU	Intel® Atom™ CPU D2700 @ 2.13GHz
	6. Memory	DSL / ELPIDA J2108BASE-DJ-F / DDR3 1066 / 4GB
	7. 2.5" SATA HDD	TOSHIBA MK1060GSC / 100GB
	8. Test Software	Windows 7 / Run PassMark Burn In Test 7.0 Pro
	9. POWER BORAD	PER-P17D.Rev.B1.0
2.	<b>AC Adapter</b>	FSP. FSP084-DMAA1

## Heat Sink



## HDD Kit



# Temperature rise test

**Test Date:** 03-27-2012

**Test Product:** AHP-2153

**Test Site:** AAEON QE Dept.

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

**Temperature Measurement:**

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

**Test Condition:**

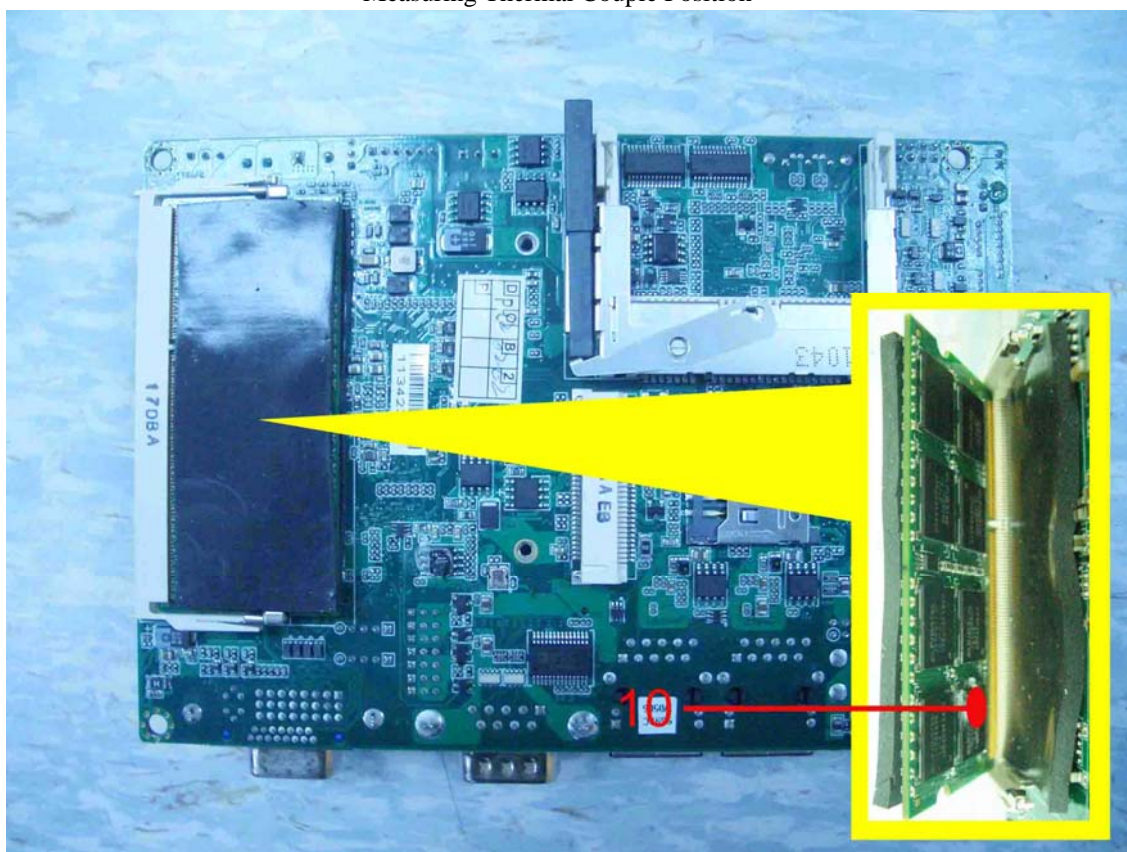
Ambient temperature: 60°C  
 Continuous running till thermal stability (within less than 1°C)

**Test Software:**

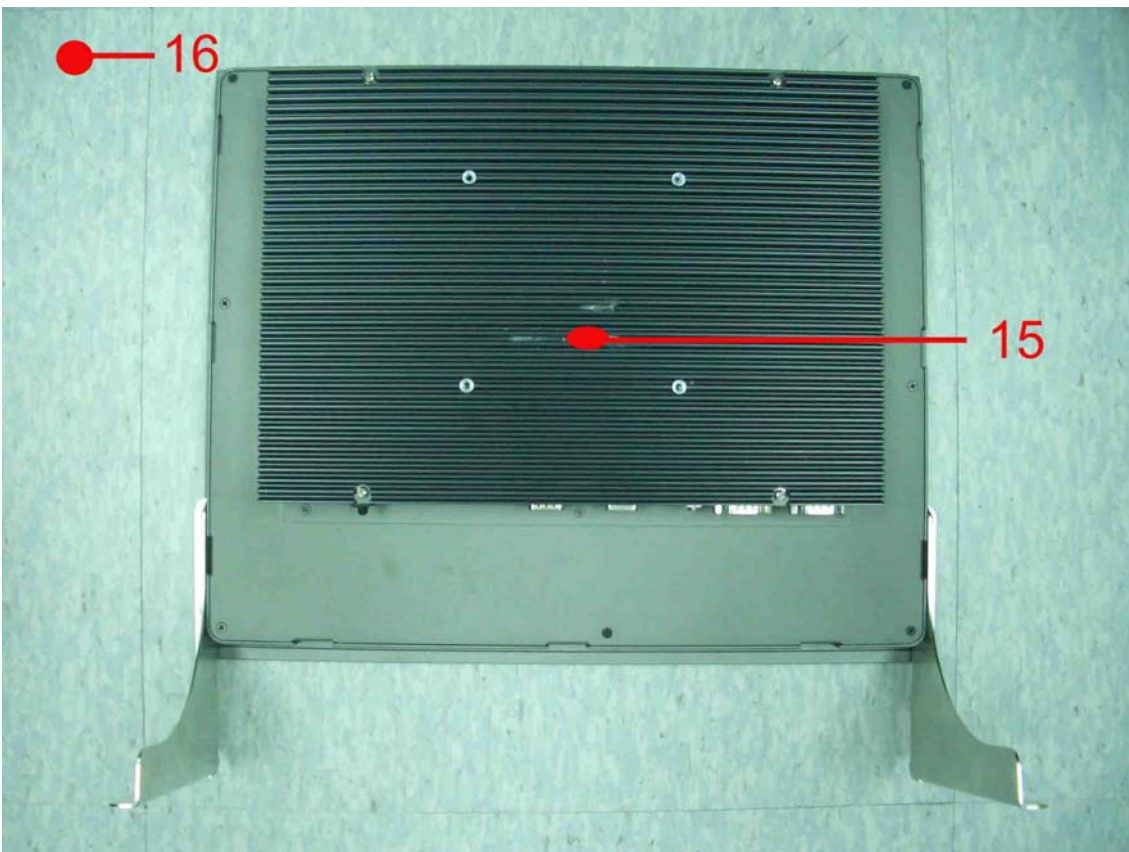
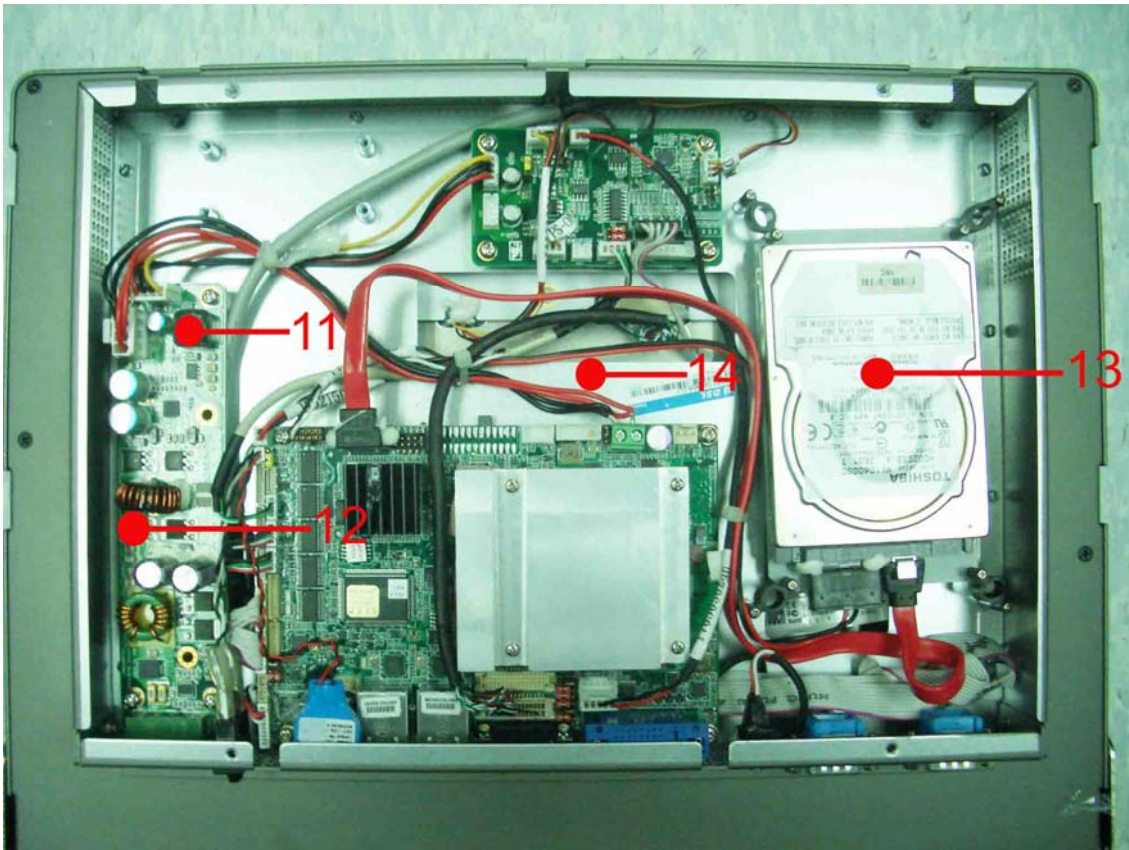
Windows 7 / Run PassMark Burn In Test 7.0 Pro

**Terminal Recorder:**

Measuring Thermal Couple Position :



# Temperature rise test



# Temperature rise test

## AHP-2153

Point	Temp. Stage(°C)	Spec	60	Note
<b>GENE-CV05 A1.0</b>				
01. U17 - (TF)INTEL Cedarview CPU.FCBGA 559 pin.2.13Ghz.D2700		100	81.2	
02. U7 - (TF)NM10 Express Chipset.INTEL.CG82NM10.SLGXX		115	91.6	
03. U13 - (TF)CLOCK GENERATOR.IDT.9LPRS501PGLF		95	77.8	
04. U29 - (TF)DisplayPort to LVDS Converter.Chrontel.CH7511B-BF		85	79.1	
05. U31 - (TF)Digital Video Level Shifter..PERICOM.PI3VDP411LSZBE		85	77.5	
06. L1 - (TF)COIL.ZenithTek.ZPWM-6030M-1R5M		125	88.0	
07. L2 - (TF)COIL.ZenithTek.ZPWM-1040MB-3R3M		125	78.0	
08. U42 - (TF)AUDIO CODEC.REALTEK.ALC662-GR		100.5	85.9	
09. U57 - (TF)Regulator.ANPEC.APL5912-KAC-TRL		100	80.8	
10. Memory		95	79.5	
<b>PER-P17D B1.0</b>				
11. L1		150	76.3	
12. Q5		85	77.7	
13. HDD		85	79.7	
14. Control Box Inside Air Temperature		105	79.3	
15. Control Box External Surface		N/A	75.1	
16. Chamber Air Temperature		N/A	60.0	
<b>Note:</b>				
1. Any Tm value showed in <b>red words</b> which meaning the value over the Tc degree C of this device specification.				
2. The measured value is within specification with margin.				

### Temperature Measurement Table:

Location	TA=60.0°C	Temp. Rise (Thermal Couple)	SpeedFan 4.42 (Read from BIOS)	
			Core 0	Core 1
CPU		80.2°C	Core 0	85°C
			Core 1	84°C
			Core 2	88°C
			Core 3	87°C

### Sample Configuration & Quantity Under Test:

Quantity: 1 (AHP-2153)

### Test Result:

No problem was found during the temperature rise test.

# Temperature cycle operation test

**Test Date:** 03-23~26-2012

**Test Product:** AHP-2153

**Test Site:** AAEON QE Dept.

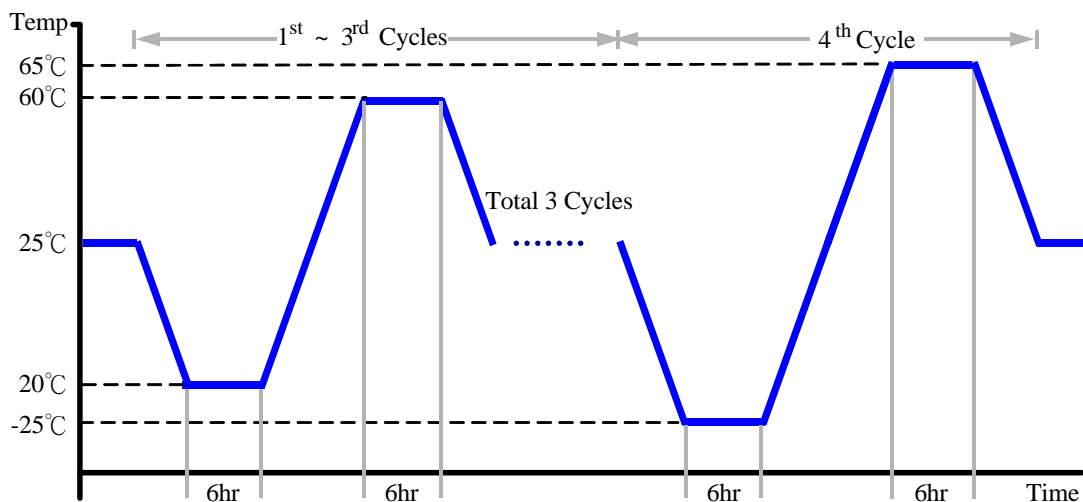
**Test Standard:** Reference IEC68-2-14 Testing procedures  
 Test N: Change of temperature Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber  
 K.SON. INS. TECH. CORP.  
 Model: THS-D4H+-100  
 Date of Calibration: 10/13/11  
 Serial Number: 2582

**Test Condition:**

1. Test Low Temperature: -20°C (1~3 cycles)  
 -25°C (4<sup>th</sup> cycle)
2. Test High Temperature: 60°C (1~3 cycles)  
 65°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 (AHP-2153)

**Test Result:**

No problem was found during the temperature operation cycle test.

# High temperature storage test

**Test Date:** 03-20 ~ 22-2012

**Test Product:** AHP-2153

**Test Site:** AAEON QE Dept.

**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-D4H+-100  
Date of Calibration: 10/13/11  
Serial Number: 2582

**Testing Item:**

1. Test Temperature: 70°C
2. Test Times: 48Hrs
3. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AHP-2153)

**Test Result:**

No problem was found after the high temperature storage test.



# Low temperature storage test

**Test Date:** 03-18~20-2012

**Test Product:** AHP-2153

**Test Site:** AAEON QE Dept.

**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-D4H+-100  
 Date of Calibration: 10/13/11  
 Serial Number: 2582

**Testing Item:**

1. Test Temperature: -20°C
2. Test Times: 48Hrs
3. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AHP-2153)

**Test Result:**

No problem was found after the low temperature storage test.

# Humidity test

**Test Date:** 03-15 ~ 18-2012

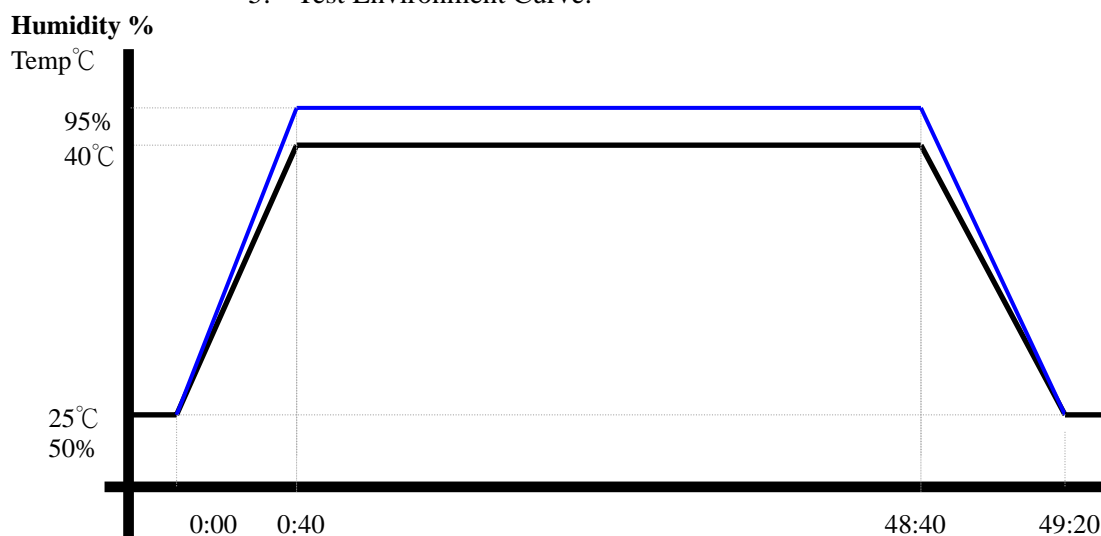
**Test Product:** AHP-2153

**Test Site:** AAEON QE Dept.

**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-D4H+-100  
 Date of Calibration: 10/13/11  
 Serial Number: 2582

- Testing Item:**
1. Test Temperature: 40°C
  2. Test Humidity: 95%RH
  3. Test Times: 48Hrs
  4. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
  5. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**  
 Quantity: 1 (AHP-2153)

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

# Cold start and hot start test

**Test Date:** 03-22~23-2012

**Test Product:** AHP-2153

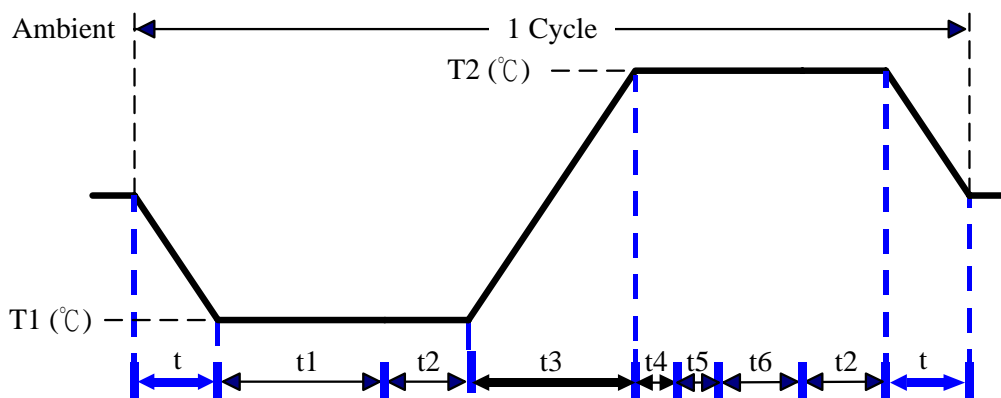
**Test Site:** AAEON QE Dept.

**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-D4H+-100  
 Date of Calibration: 10/13/11  
 Serial Number: 2582

**Test Condition:**



Parameters	Description
T1	-25°C
T2	65°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 BurnIn Test 7.0 Pro  
 t5: Win 7 Software restart test 3 times  
 Test Software: Windows 7

**Test Result:**

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