AHP-1152

With 2.5” SATA HDD

Environment Test Report

Report NO: 10P020011

Issued by:	Rex Chang	/	*10/05/2010*
	Test Engineer		**Date**
Reviewed by:	Jansin Lee	/	*10/05/2010*
	Sr. Manager		**Date**

Test item list

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	Temperature variation operation test	Pass	
6	Cold start and hot start test	Pass	

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056
http://www.aaeon.com.tw

Configuration of EUT

Num	Item	Spec
1.	Fanless Touch Panel	AHP-1152
	1. LCD	15” AUO G150XG03 V3.LVDS 18&24bits.250 nits
	2. Main Board	AAEON GENE-LN05 Rev. A0.3 (BIOS Ver: 0.1)
	3. CPU	Intel Atom D510 / 1.66GHz
	4. Memory	DSL 1GB * 1 / DDR2 667 / ELPIDA E1108AFSE-8E-E
	5. Industrial SATA HDD	Seagate ST980817SM / 80GB
	6. Inverter	2 LAMP ATBEL AB-B502-16L35M
	7. Test Software	Windows XP / Run PassMark Burn In Test 5.3 Pro
2.	Power Adapter	FSP FSP084-DMAA1

Heat Sink

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Temperature rise test

Test Date: 10-04-2010

Test Product: AHP-1152

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: 12/08/09
Serial Number: 12A323190

Test Condition:

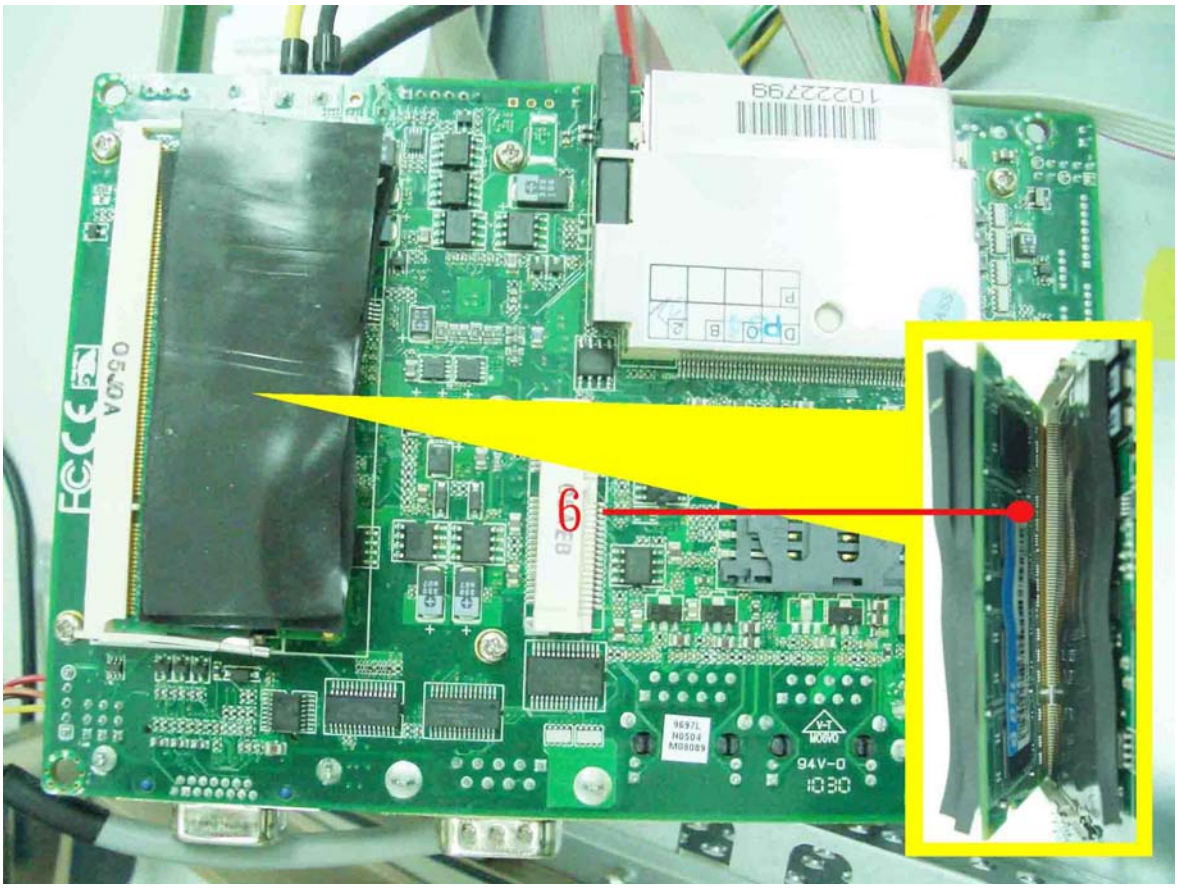
Ambient temperature: 50℃
Continuous running till thermal stability (within less than 1℃)

Test Software:

Windows XP / Run PassMark Burn In Test 5.3 Pro

Terminal Recorder:

Measuring Thermal Couple Position：



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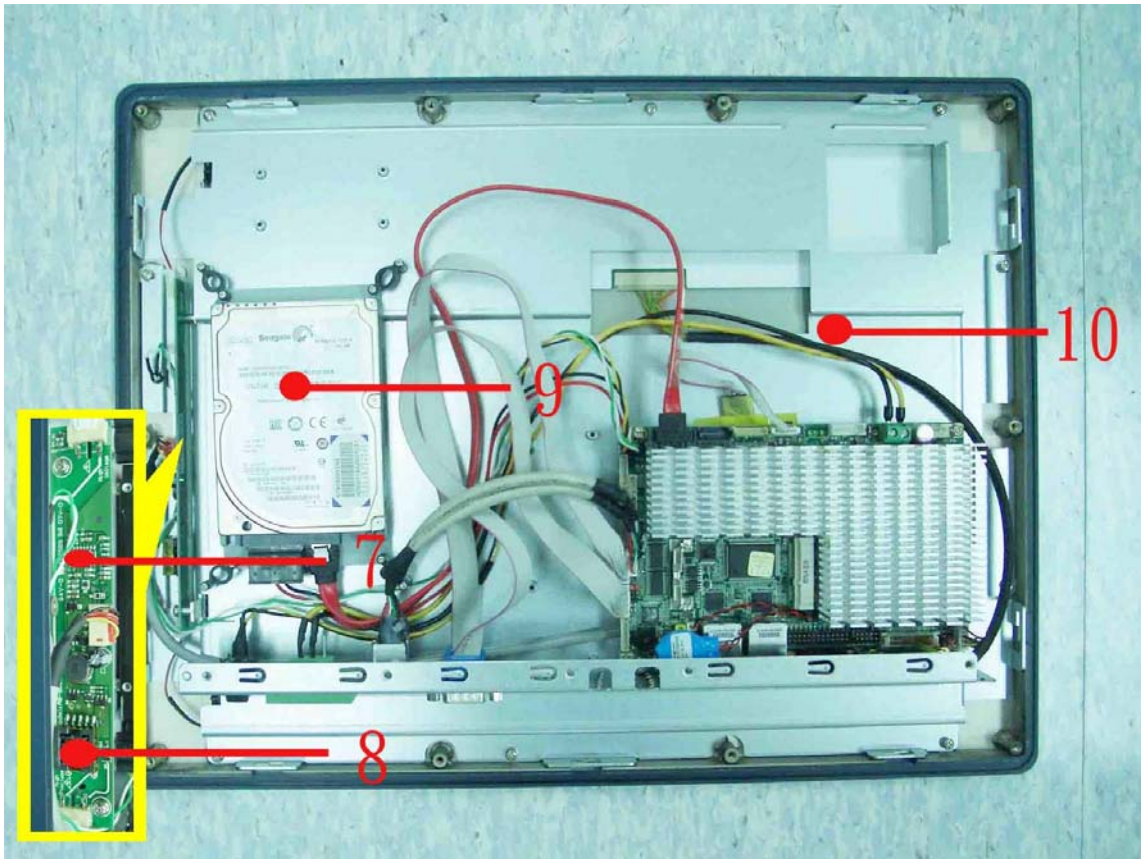
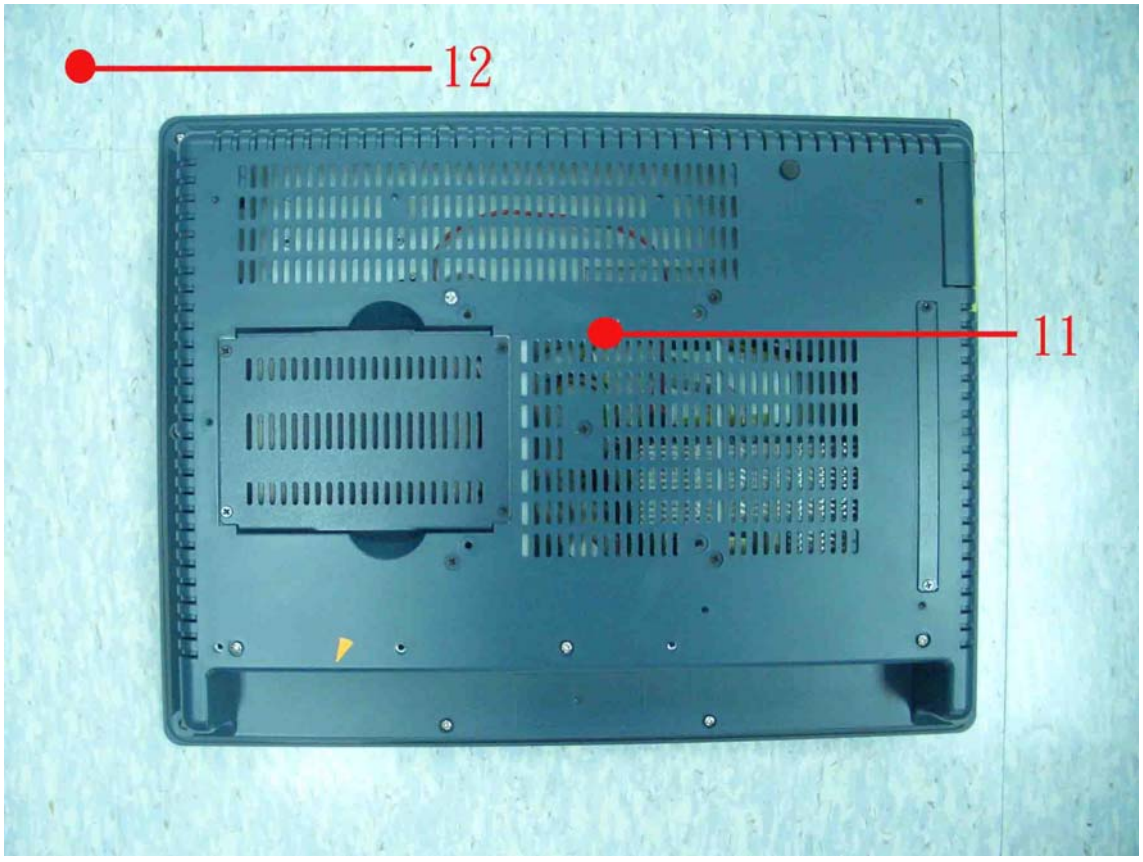
Temperature rise test





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Temperature rise test

Thermal profile data:

AHP-1152

Point \ Temp. Stage(℃)	Spec	50	25
GENE-LN05			
01. U19 - (TF) Intel CPU.Pineview D.DUAL CORE.D510.1.66GHz. SLBLA	100	99.0	74.0
02. U11 - (TF) Chipset ICH8M.INTEL.NH82801HBM.SLB9A	105	88.2	63.2
03. U15 - (TF) CLOCK GENERATOR.IDT.9LPRS501PGLF	115	94.7	69.7
04. U37 - (TF) Audio Codec.REALTEK.ALC888-GR	95	83.7	58.7
05. U21 - (TF) LPC to 4 UART.FINTEK.F81216DG	95	82.5	57.5
06. Memory	95	92.4	67.4
07. Inverter - 1	85	76.5	51.5
08. Inverter - 2	155	71.2	46.2
09. HDD Surface	85	68.6	43.6
10. Control Box Inside Air Temperature	N/A	68.3	43.3
11. Control Box External Surface	N/A	54.1	29.1
12. Chamber Air Temperature	N/A	49.9	24.9
Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification.			

Temperature Measurement Table:

T_A=50.0℃ / **Location**	**Temp. Rise (Thermal Couple)**	**SpeedFan 4.31 (Read from BIOS)**
CPU	99.0℃	N/A
System Temp. 1	N/A	N/A
System Temp. 2 (South Bridge)	88.2℃	101℃

Sample Configuration & Quantity Under Test:

Quantity: 1 (AHP-1152)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 10-01~04-2010

Test Product: AHP-1152

Test Site: AAEON QE Internal Lab.

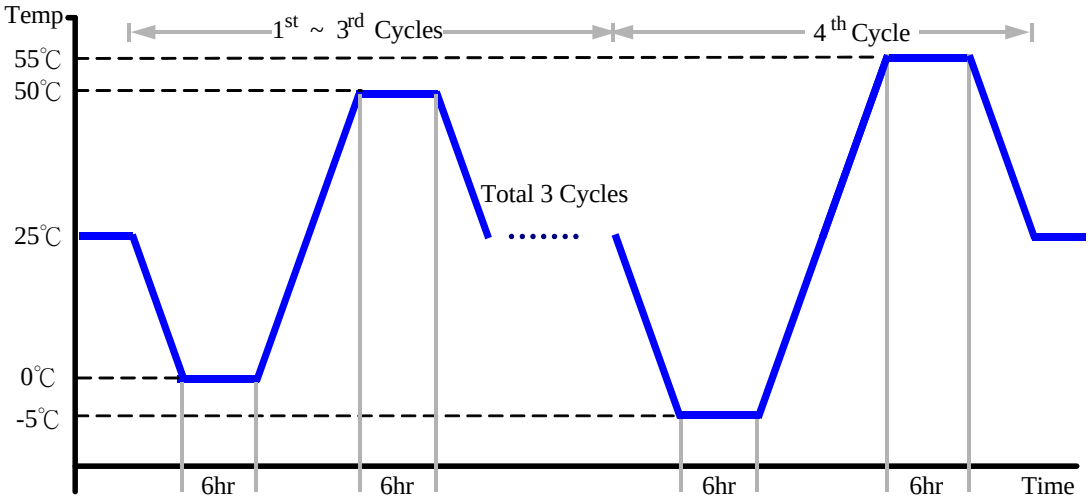
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

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℃ (1~3 cycles)
   -5℃ (4^{th} cycle)
2. Test High Temperature: 50℃ (1~3 cycles)
   55℃ (4^{th} cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2℃/min
5. Test cycle: 4 cycles
6. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (AHP-1152)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 09-28~30-2010

Test Product: AHP-1152

Test Site: AAEON QE Internal Lab.

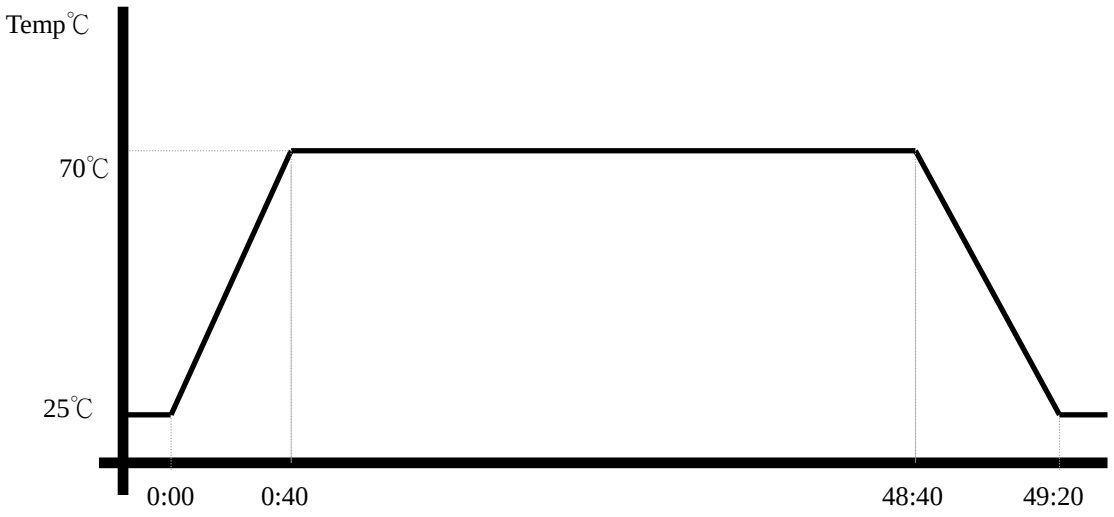
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

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℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.3 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (AHP-1152)

Test Result:

No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 09-22~24-2010

Test Product: AHP-1152

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℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.3 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (AHP-1152)

Test Result:
No problem was found after the low temperature storage test.

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Humidity test

Test Date: 09-24~27-2010

Test Product: AHP-1152

Test Site: AAEON QE Internal Lab.

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

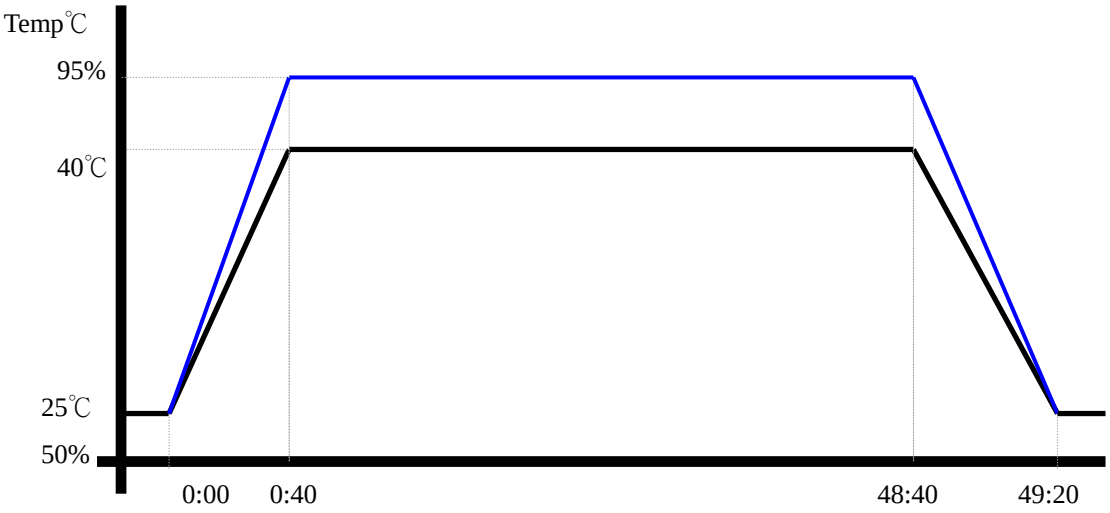
Test Equipment:

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℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows XP / Run PassMark Burn In Test 5.3 Pro
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (AHP-1152)

Test Result:

No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 09-30-2010 ~ 10-01-2010

Test Product: AHP-1152

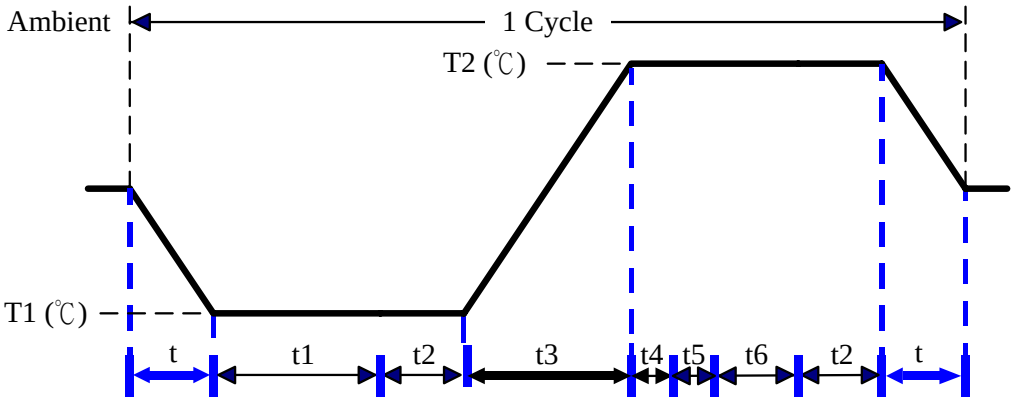
Test Site: AAEON QE Internal Lab.

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℃
T2	55℃
t1	4 hrs
t2, t6	2 hrs
t4, t5	1hrs
t, t3	2℃/min
n (Cycle)	1

t = temprature 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.

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