ONYX-2122

Environment Test Report

Report NO: 09P020022

Issued by:	Rex-Chang	/	*07/27/2009*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*07/27/2009*
	Manager		**Date**

Test item list

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Test Configuration:

Num	Item	Spec
1.	**Panel PC**:	ONYX-2122
	1. 21.6" LCD	CMO M216H1-L01
	2. Inverter	GP GP1904-10 R:A
	3. Power Board	AAEON PER-P17D VER: A1.0
	4. Power Adapter	SINPRO MPU100-108
2.	CPU Board:	GENE-9310 A1.0
	1. Bios Ver.	GENE-9310 Ver: 2.0
	2.CPU	Intel U7500 / Merom ULV 1.06GHz
	3.Memory (Wide Temp.)	DSL 1G / ELPIDA E5108AJBG-6E / DDR2 667
	4. HDD (Wide Temp.)	Fujitsu MHY2080BH / SATA II / 80GB
	5.Test Software	Windows XP / Run PassMark Burn In Test 5.1 Pro

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Temperature rise test

Test Date: 07-24-2009

Test Product: ONYX-2122

Test Site: AAEON QA 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: 12/13/08
Serial Number: 12A323190

Test Condition:

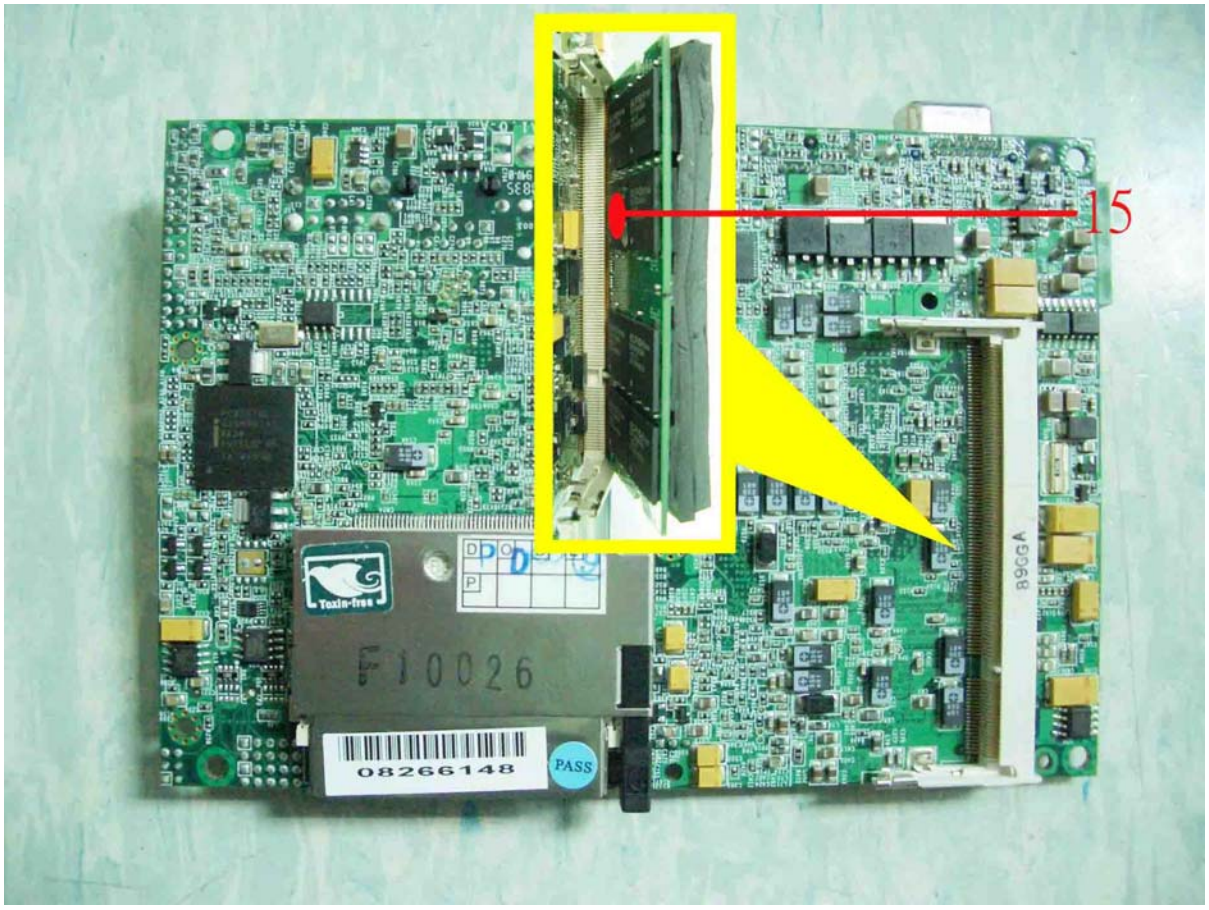
Ambient temperature: 40dC
Continuous running till thermal stability (within less than 1℃)

Test Software:

Windows XP / Run PassMark Burn In Test 5.1 Pro

Terminal Recorder:

Measuring Thermal Couple Position：



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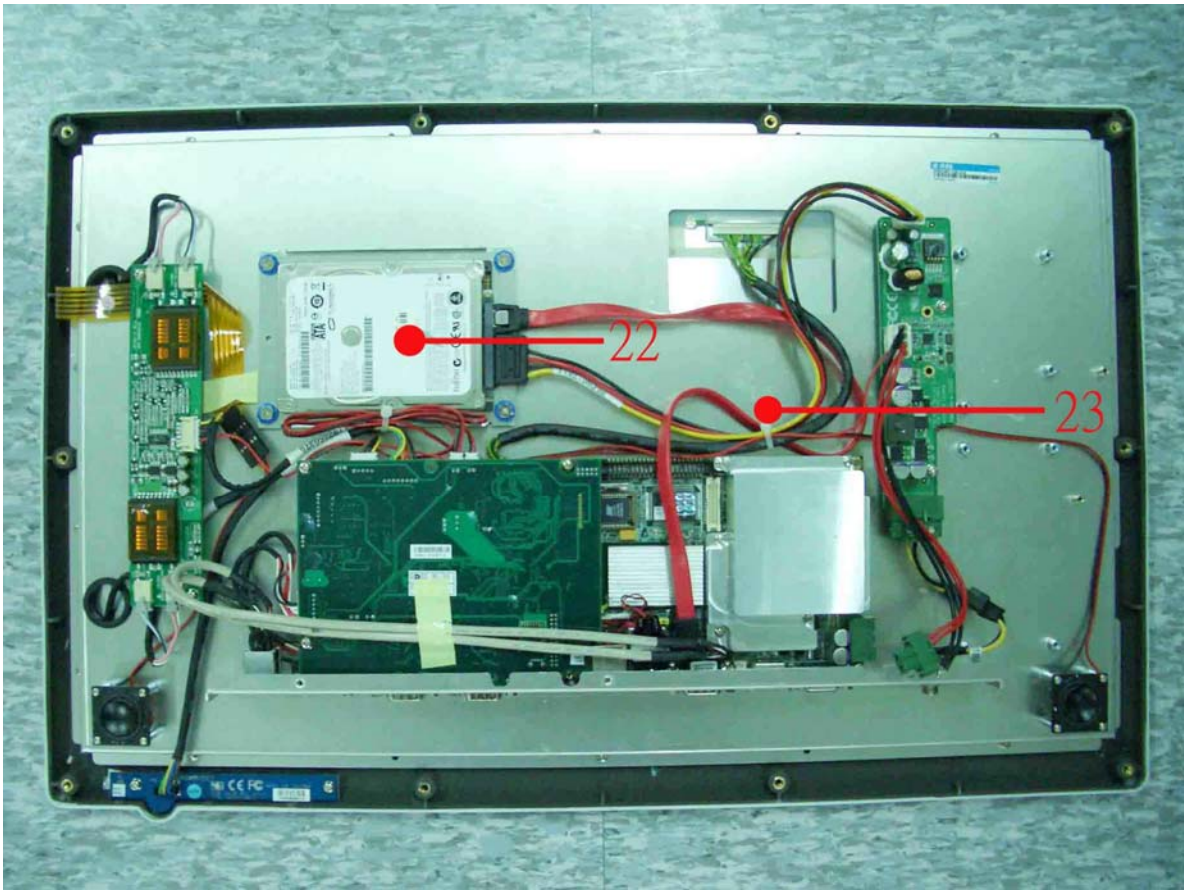
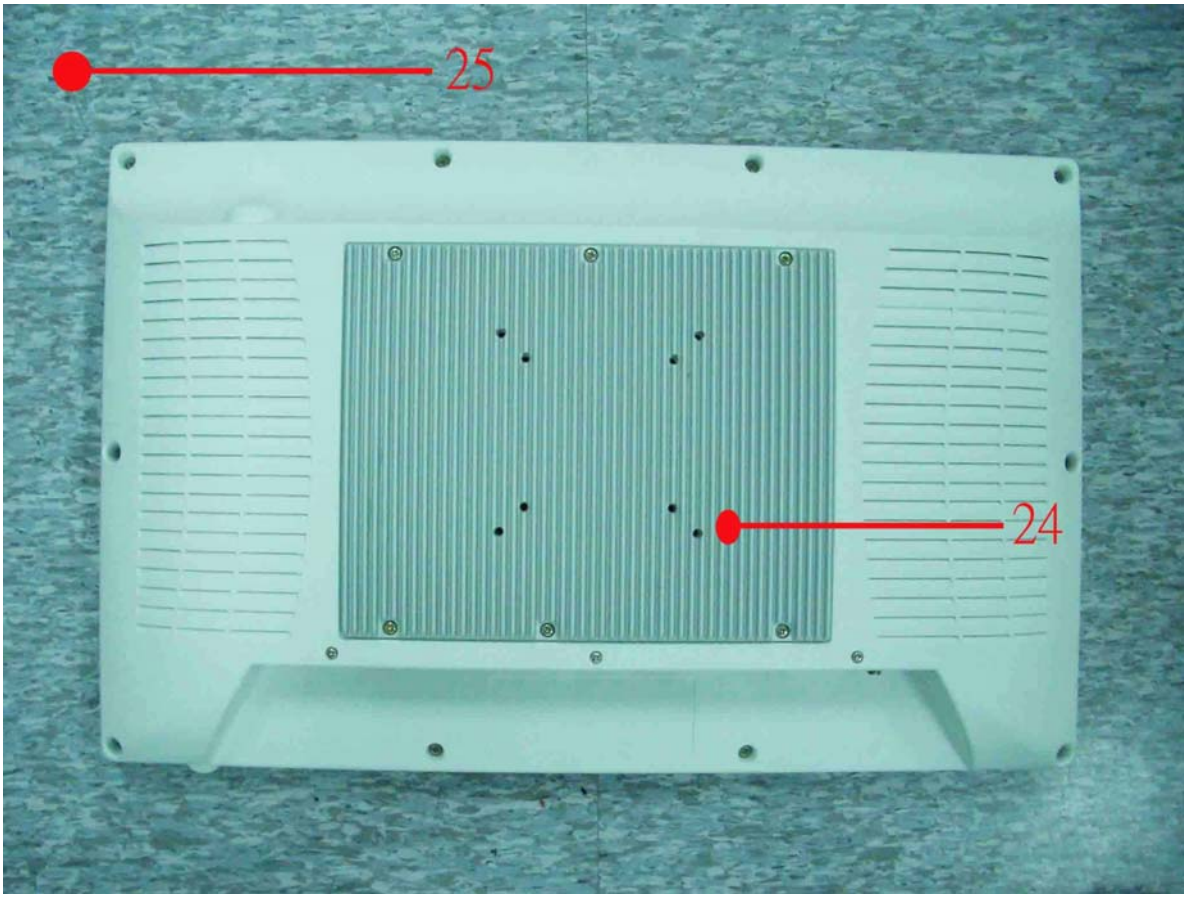
Temperature rise test





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Temperature rise test

Thermal profile data:

ONYX-2122

Point \ Temp. Stage(℃)	Spec	55	25
GENE-9310			
01. U8 - (TF) Intel 945GM Express.Intel.QG82945GM	105	79.1	64.1
02. U16 - (TF) Intel CPU.Merom.ULV 1.06GHz (U7500)	100	81.8	66.8
03. U10 - (TF) CLOCK GENERATOR.ICS.ICS954226AGLF	115	87.0	72.0
04. U15 - (TF) ICH7M.Intel.NH82801GBM SL8YB	99	82.6	67.6
05. U1 - (TF) 6 Channel AC'97 Audio Codec.REALTEK.ALC655-LF	95	75.5	60.5
06. L15 - (TF) COIL.GOTREND.GSTC104P-R56MN	150	79.2	64.2
07. L17 - (TF) COIL.GOTREND.GSTC104P-R56MN	150	78.4	63.4
08. U44 - (TF) Regulator.LINEAR.LTC3728LXCUH#PBF	110	80.5	65.5
09. U17 - (TF) Power Controller.for Dual Channel DDR.Intersil.ISL6537CRZ	95	88.5	73.5
10. L84 - (TF) COIL.Vishay.IHLP-5050CE-ER-5R6M01	150	75.7	60.7
11. U49 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L	95	81.9	66.9
12. U19 - (TF) IMVP6 Two Phase PWM.Intersil.ISL6262CRZ-T	125	77.7	62.7
13. Q36 - (TF) PW.N-Channel Power 25V 60A MOSFET.APEC.AP70T03GH	150	84.1	69.1
14. Q10 - (TF) PWR.N-Channel PowerMosfet.ON SEMI.NTD60N02RT4G	150	77.3	62.3
15. Memory	95	75.4	60.4
PER-P17D Power Board			
16. U2 - (TF) REG.Step-Down Voltage Regulator.NS.LM2576S-ADJ	125	68.7	53.7
17. U1 - (TF) Regulator.LINEAR.LTC3780EUH#PBF	110	74.8	59.8
18. L1 - (TF) COIL.GOTREND.GSTC135P-3R3MF	150	86.5	71.5
Inverter			
19. IC1	85	66.0	51.0
20. Q6	150	68.0	53.0
21. T2	105	64.6	49.6
22. HDD	80	62.8	47.8
23. Control Box Inside Air Temperature	N/A	66.6	51.6
24. Control Box External Surface	N/A	60.0	45.0
25. Chamber Air Temperature	N/A	39.7	24.7
Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification.			

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-2122)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 07-17~19-2009

Test Product: ONYX-2122

Test Site: AAEON QA Internal Lab.

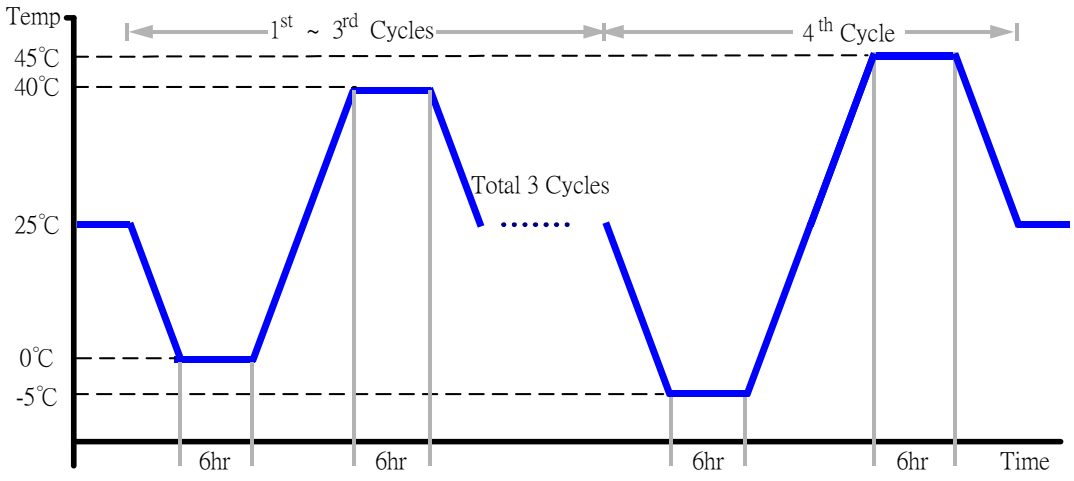
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4^{th} cycle)
2. Test High Temperature: 40℃ (1~3 cycles)
   45℃ (4^{th} cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2℃/min
5. Test cycle: 4 cycles
6. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-2122)

Test Result:

No problem was found during the temperature cycle operation test.

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High temperature storage test

Test Date: 07-15~17-2009

Test Product: ONYX-2122

Test Site: AAEON QA 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-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Testing Item:

1. Test Temperature: 60℃
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 (ONYX-2122)

Test Result:

No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 07-24~27-2009

Test Product: ONYX-2122

Test Site: AAEON QA 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-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Testing Item:

1. Test Temperature: -20℃
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 (ONYX-2122)

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

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Humidity test

Test Date: 07-20~22-2009

Test Product: ONYX-2122

Test Site: AAEON QA Internal Lab.

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

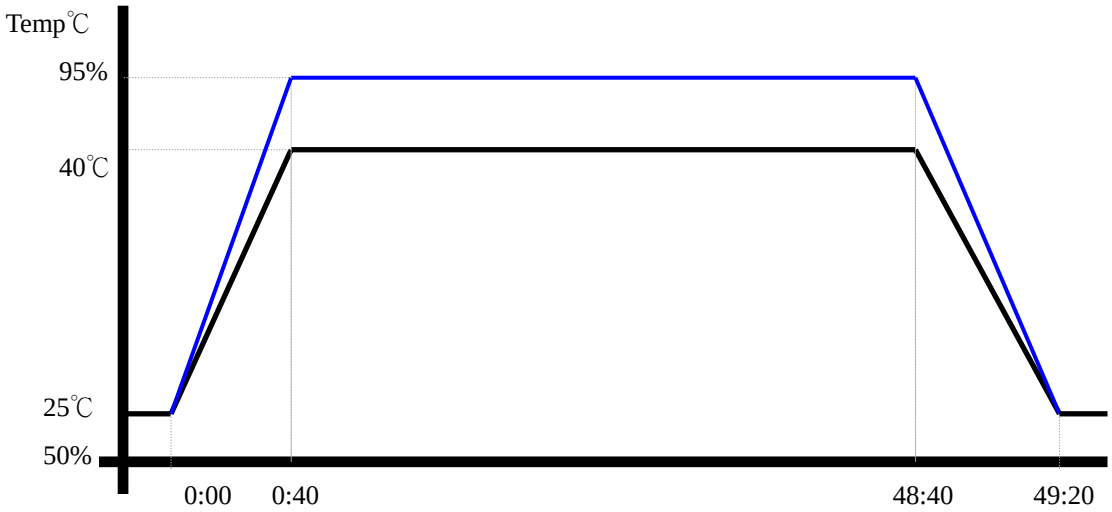
Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

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 5.1 Pro
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (ONYX-2122)

Test Result:

No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 07-22~23-2009

Test Product: ONYX-2122

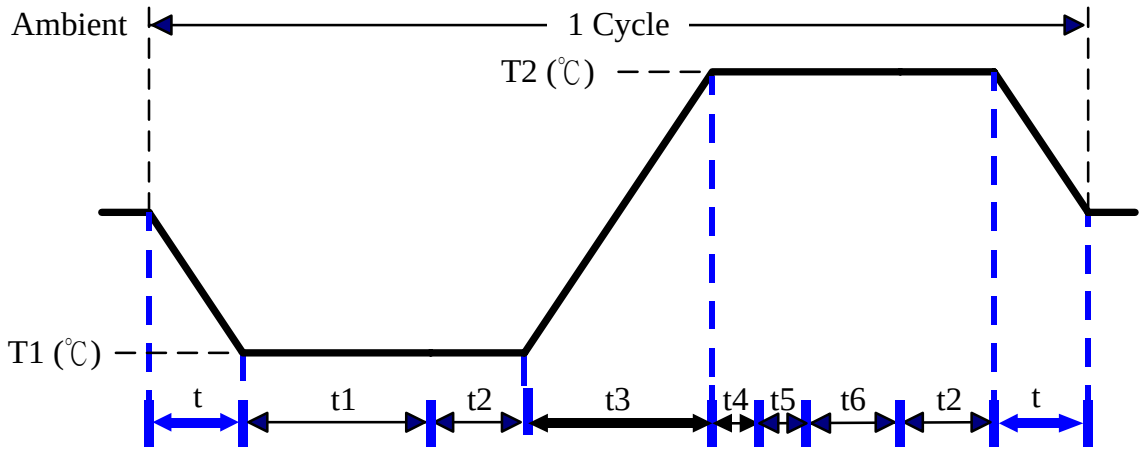
Test Site: AAEON QA Internal Lab.

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-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Test Condition:



Parameters	Description
T1	-5℃
T2	45℃
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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