ARC-636M (FWB-880N)

With 3.5” HDD

Environment Test Report

Report NO: 05I020018

Issued by:	Rex-Chang	/	*12/26/2005*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*12/26/2005*
	Manager		**Date**

Test item list

Test Configuration:

Num	Item	Spec
1.	Control Box:	ARC-636M / 3U Rack Mount Firewall Chassis
	1. Main Board	AAEON FWB-880N A0.2 (BIOS: 1.0)
	2. CPU	Intel Pentium 4 / 3.2GHz
	3. Memory	512B ELPIDA E5108AB-5C-E (DDR2-533)
	4. HDD	Quantum CX6400AT / 6.4GB
	7. Power Supply	I-STAR TC-3U46 / 460W (ATX)
	8. CD-ROM	Acer 540A-106

CPU Cooler

AAEON Technology Inc.
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Temperature cycle test

Test Date: 12-02~05-2005

Test Product: ARC-636M (FWB-880N A0.2).

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

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

Test Equipment:

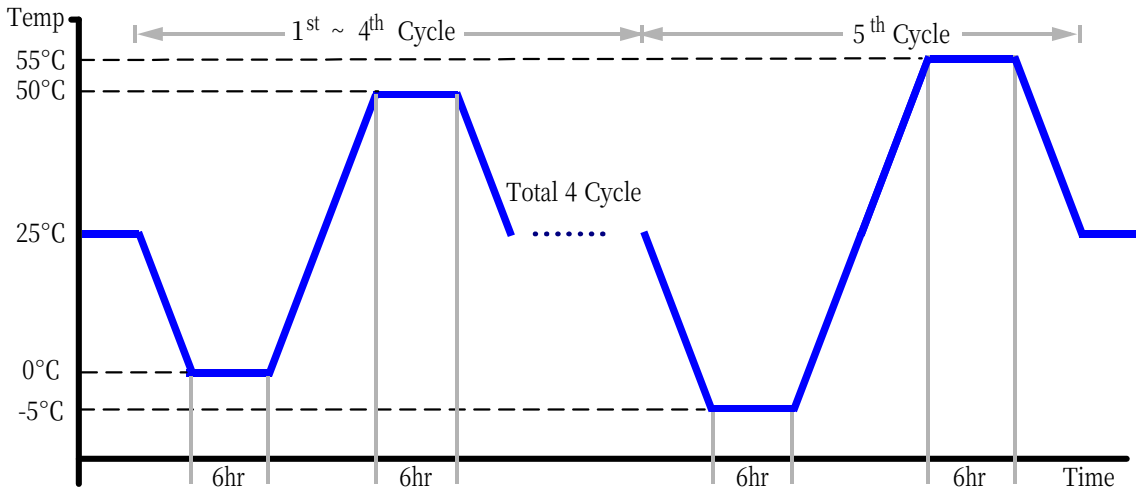
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/23/05
Serial Number: 1241

Temperature Measurement:

20 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/25/04
Serial Number: 12A323190

Test Condition:

1. Test Low Temperature: 0°C (1~4 cycle)
   -5°C (5th cycle)
2. Test High Temperature: 50°C (1~4 cycle)
   55°C (5th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2°C/min
5. Test cycle: 5 cycles
6. Test Environment Curve:



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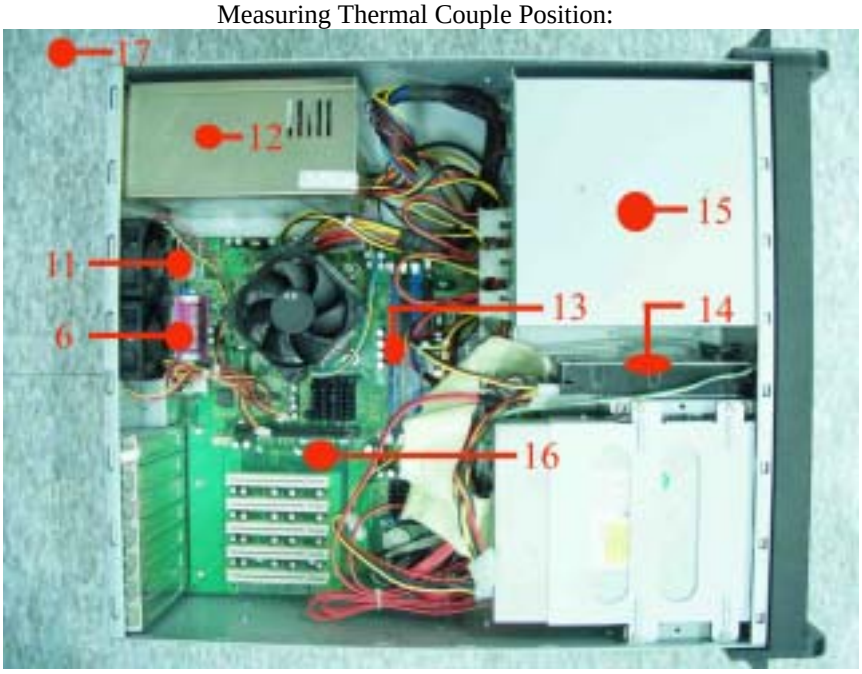
Temperature cycle test

Test O.S. / Software:

Windows 2000 / Run PassMark Burn In Test Pro 4.0

Temperature Recorder:

Measuring Thermal Couple Position:



Thermal profile data:

ARC-636M (FWB-880N A0.2)

Point / Temp. Stage(℃)	Spec	55	50	25	0	-5
1. CPU1 - CPU Surface	70.8	74.0	69.0	44.0	19.0	14.0
2. U18 - LAKEPORT 945G.INTEL.QG82945G SL8FU A2 Heat Sink Surface	99	73.1	68.1	43.1	18.1	13.1
3. U22 - ICH7R.INTEL.NH82801GR SL8FY A1 Heat Sink Surface	99	65.8	60.8	35.8	10.8	5.8
4. L5 - (TF)COIL.0.6uH.DIP Wire Size 1.1*2mm.2wire 35.TRIO.PSG-1410-R60M1	85	88.1	83.1	58.1	33.1	28.1
5. L14 - (TF)COIL.0.6uH.DIP Wire Size 1.1*2mm.2wire 35.TRIO.PSG-1410-R60M1	85	88.7	83.7	58.7	33.7	28.7
6. Control Box Inside Air Temperature - 1	N/A	66.7	61.7	36.7	11.7	6.7
7. U15 - PWM Controller.Intersil.ISL6556BCB	105	75.4	70.4	45.4	20.4	15.4
8. U17 - (TF) Clock Generator.ICS. ICS954101DFLF	95	79.1	74.1	49.1	24.1	19.1
9. L6 - (TF)COIL.0.6uH.DIP Wire Size 1.1*2mm.2wire 35.TRIO.PSG-1410-R60M1	85	75.3	70.3	45.3	20.3	15.3
10. L8 - (TF)COIL.0.6uH.DIP Wire Size 1.1*2mm.2wire 35.TRIO.PSG-1410-R60M1	85	74.2	69.2	44.2	19.2	14.2
11. Control Box Inside Air Temperature - 2	N/A	64.5	59.5	34.5	9.5	4.5
12. Power Case Surface	50	65.8	60.8	35.8	10.8	5.8
13. Memory	70	67.3	62.3	37.3	12.3	7.3
14. HDD Surface	55	59.3	54.3	29.3	4.3	-0.7
15. Control Box Inside Air Temperature - 3	N/A	56.4	51.4	26.4	1.4	-3.6
16. Control Box Inside Air Temperature - 4	N/A	62.2	57.2	32.2	7.2	2.2
17. Chamber Air Temperature	N/A	55.8	50.8	25.8	0.8	-4.2

Note: The description in red states which temperature is over the specification of the device.

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Temperature cycle test

Sample Configuration & Quantity Under Test:

Quantity: 1 (ARC-636M / 3U Rack Mount Firewall Server)

Test Result:

No problem was found during the temperature cycle test.

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High temperature storage test

Test Date: 12-15~15-2005

Test Product: ARC-636M (FWB-880N A0.2).

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

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: 12/28/04
Serial Number: 3898

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-636M / 3U Rack Mount Firewall Server)

Test Result:

No problem was found after the high temperature storage test.

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High temperature storage test

Test Date: 12-07~09-2004

Test Product: ARC-636M / 3U Rack Mount Firewall Chassis

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

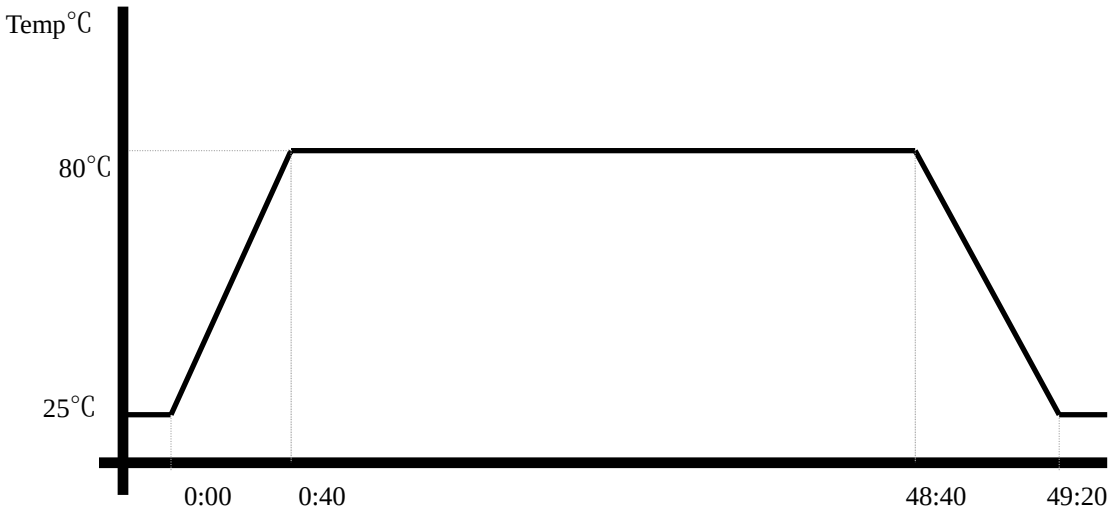
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/28/04
Serial Number: 3898

Testing Item:

5. Test Temperature: 80℃
6. Test Times: 48Hrs
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-636M / 3U Rack Mount Firewall Chassis)

Test Result:

After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.

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Low temperature storage test

Test Date: 12-05~07-2005

Test Product: ARC-636M (FWB-880N A0.2)

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

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: 12/28/04
Serial Number: 3898

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-636M / 3U Rack Mount Firewall Server)

Test Result:

No problem was found after the low temperature storage test.

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Humidity test

Test Date: 12-03~05-2005

Test Product: ARC-636M (FWB-880N A0.2)

Test Site: AAEON QA Internal Lab.

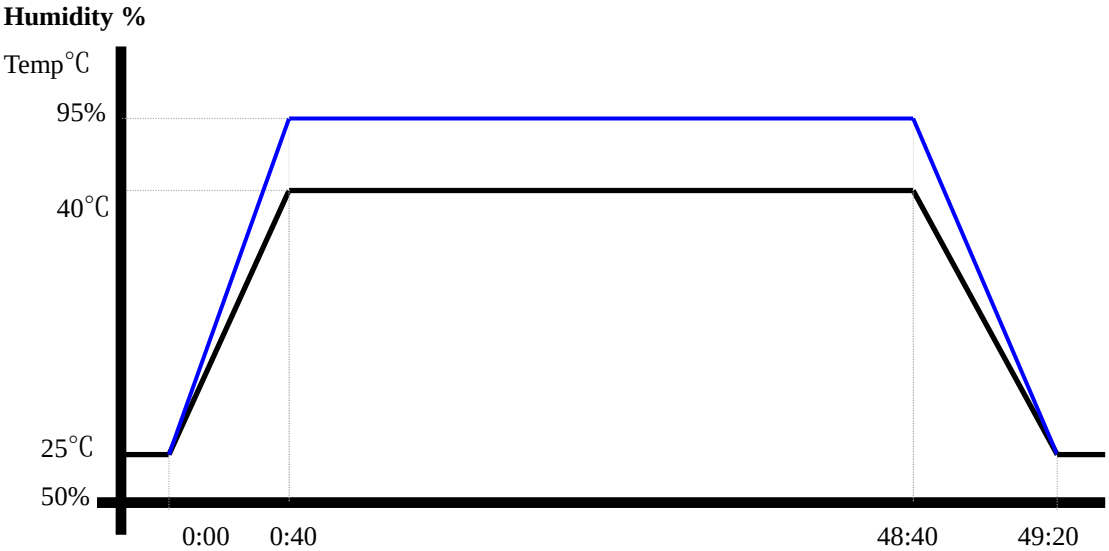
Performed By: Rex Chang

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: 12/28/04
Serial Number: 3898

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows media Player (Video test soft-MPEG from HDD)
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-636M / 3U Rack Mount Firewall Server)

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

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Cold Start test

Test Date: 12-13~14-2005

Test Product: ARC-636M (FWB-880N A0.2)

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

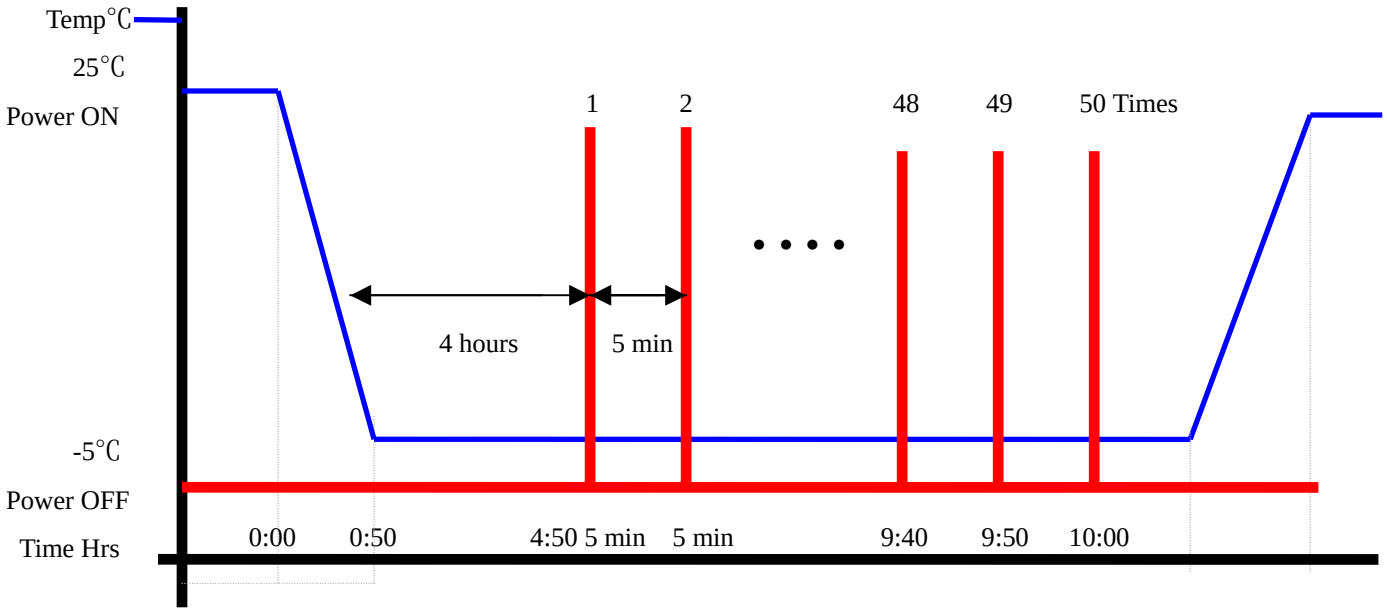
Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/28/05
Serial Number: 3898

Test Condition:

1. Test Temperature: -5℃
2. Test Times: 5 Hours or 50 times of ON/OFF
   (1) Power off for 4 hours before 1'st power on. Then once complete boot, power off immediately.
   (2) After 5 min later power on again and wait until booting is completed.
   (3) Repeat (2) for around 4:50
   (4) Power off then wait for 5 min before final power on operation.
3. Number of test: 50 times
4. Test Software: Windows 2000
5. Test Environment Curve:



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Cold Start test

Sample Configuration & Quantity Under Test:

Quantity: 1 (ARC-636M / 3U Rack Mount Firewall Server)

Test Result:

Passed.

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