ARC-615M

1U Rack Mounting Chassis

Environment Test Report

Report NO: 07I020012

Issued by:	Rex Chang	/	*10/16/2007*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*10/16/2007*
	Manager		**Date**

Test item list

Num	Item	Spec
1.	1U Chassis:	**ARC-615M**
2.	Main Board	AAEON FWB-880 A1.0
	1. BIOS	FWB-880/FWS-825 BIOS Rev 1.1
	2. CPU	Intel Pentium 4 / 3.4GHz /LGA775
	3. Chipset	Intel 945G + Intel 82801FB (ICH7R)
	4. VGA	Integrated VGA on Intel 945G
	5. Memory	512MB / DDR2 667 / ELPIDA E5108AG-6E-E * 2
3.	**HDD**	Seagate ST380815AS / 80GB Seagate ST3160811AS / 160GB
4.	Power Supply	Zippy P1H-6400P ATX Power

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Temperature cycle test

Test Date: 10-12~14-2007

Test Product: ARC-615M

Test Site: AAEON QA Internal Lab.

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

Test Equipment:

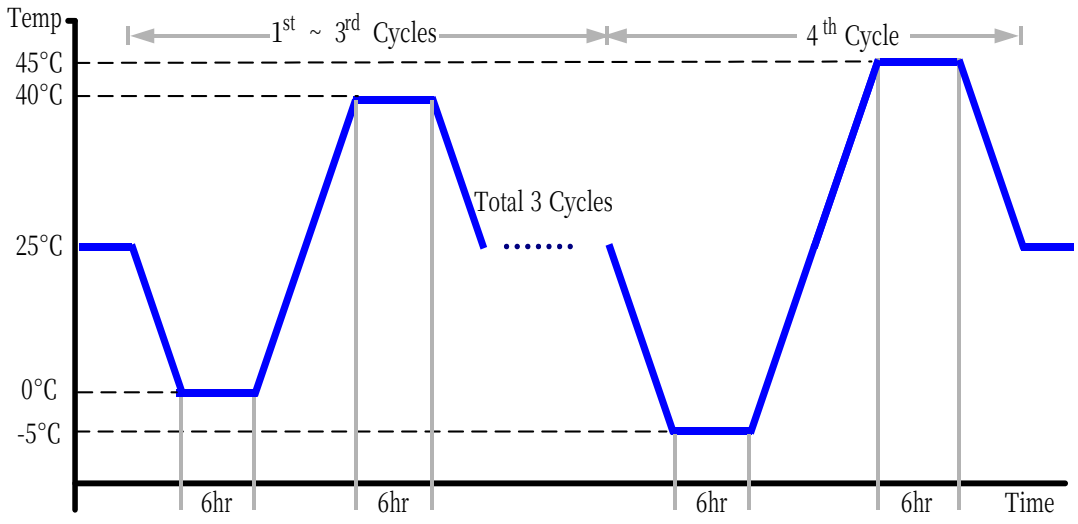
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/11/06
Serial Number: 12A323190

Test Condition:

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



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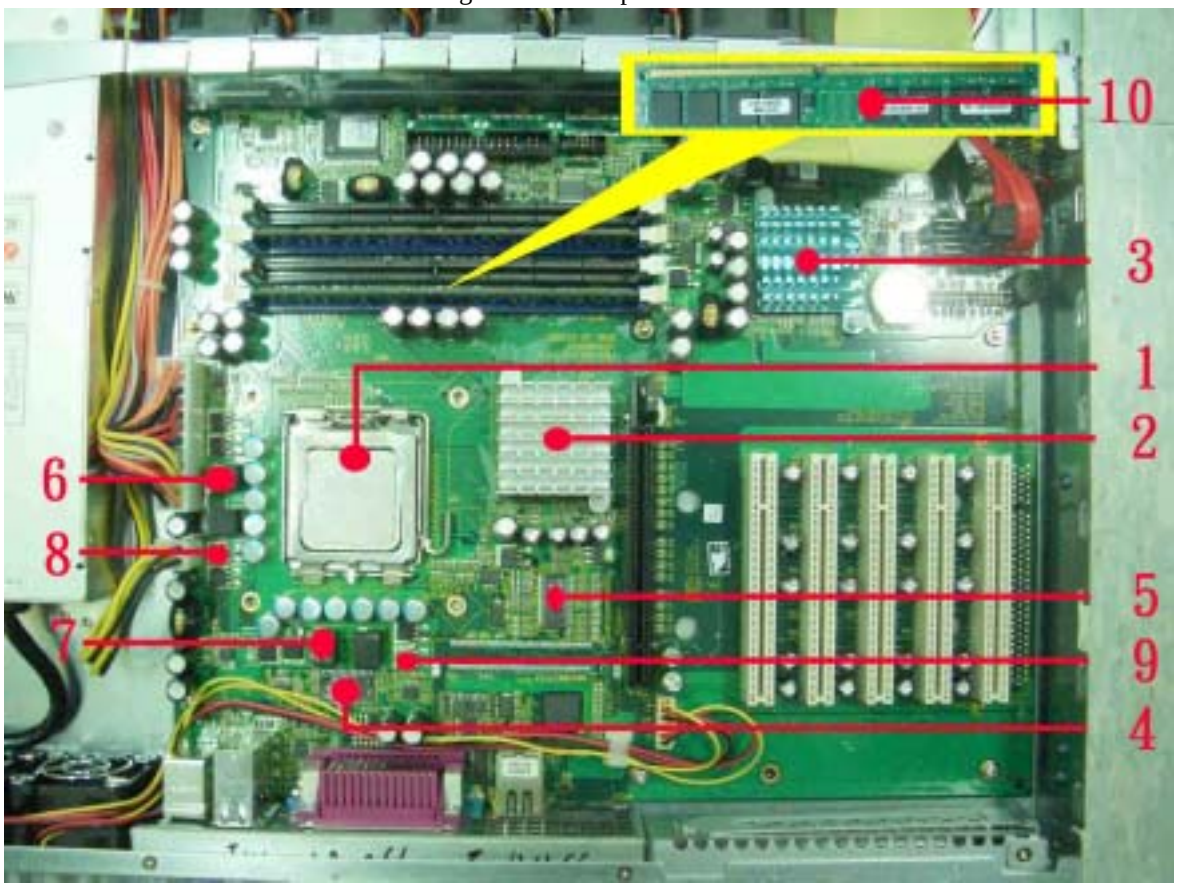
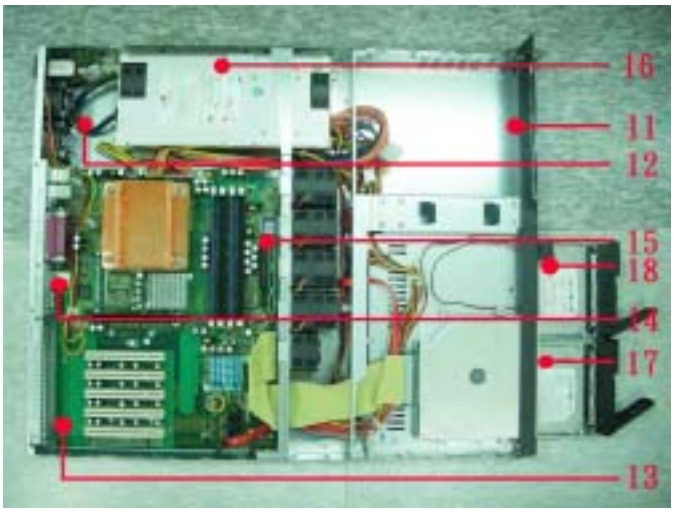
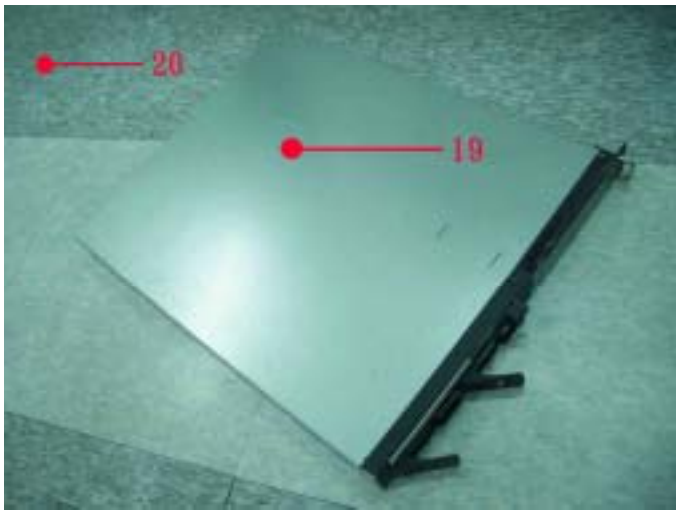
Temperature cycle test

Temperature Recorder:

Measuring Thermal Couple Position：







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Temperature cycle test

Thermal profile data:

ARC-615M

Point / Temp. Stage(°C)	Spec	40	25	0
1. Intel Pentium 4 3.4GHz / LGA775 CPU	67	66.8	51.8	26.8
2. U18- (TF) IC.SMD.Chipset LAKEPORT 945G.INTEL.QG82945G SL8FU A2	99	60.7	45.7	20.7
3. U22 - (TF) IC.SMD.Chipset ICH7R.INTEL.NH82801GR SL8FY A1	100	54.3	39.3	14.3
4. U15 - (TF)IC.SMD.SOIC 28Pin PWM Controller.Intersil.ISL6556BCBZ	70	57.1	42.1	17.1
5. U17 - (TF)IC.SMD.SSOP56.Clock Generator.ICS. ICS954101DFLF	115	59.9	44.9	19.9
6. L14 - (TF)COIL.0.56uH.20%.DIP.Wire Size.GMAS120911P-0R56M	85	68.3	53.3	28.3
7. L6 - (TF)COIL.0.56uH.20%.DIP.Wire Size.GMAS120911P-0R56M	85	69.7	54.7	29.7
8. Q9 - (TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G	150	65.3	50.3	25.3
9. Q3 - (TF)PWR.SMD.TO-252.N-Channel PowerMosfet.ON SEMI.NTD78N03T4G	150	61.0	46.0	21.0
10. Memory	70	49.5	34.5	9.5
11. Control box inside air temperature - 1	N/A	42.3	27.3	2.3
12. Control box inside air temperature - 2	N/A	48.8	33.8	8.8
13. Control box inside air temperature - 3	N/A	45.3	30.3	5.3
14. Control box inside air temperature - 4	N/A	46.4	31.4	6.4
15. Control box inside air temperature - 5	N/A	43.7	28.7	3.7
16. Power supply external surface	50	49.7	34.7	9.7
17. HDD - 1	55	43.0	28.0	3.0
18. HDD - 2	55	42.8	27.8	2.8
19. Control box external surface	N/A	43.3	28.3	3.3
20. Chamber Air Temperature	N/A	40.9	25.9	0.9
1. Any Tm value showed in red words which meaning the value over the Tc + 5 degree C of this device specification.				

Sample Configuration & Quantity Under Test:

Quantity: 1 (ARC-615M)

Test Result:

No problem was found during the temperature cycle operation test.

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High temperature storage test

Test Date: 10-12~14-2007

Test Product: ARC-615M Chassis

Test Site: AAEON QA Internal Lab.

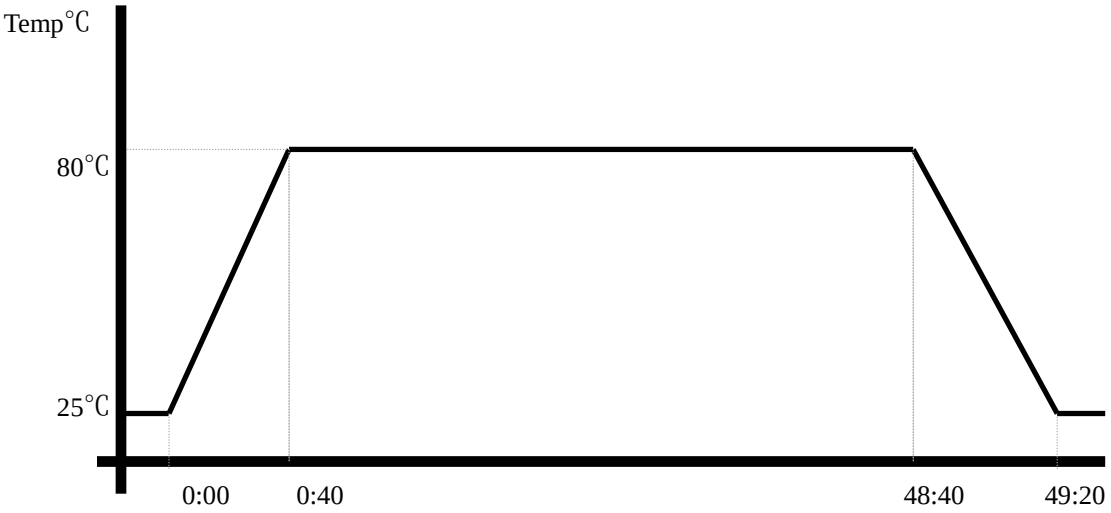
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/11/06
Serial Number: 3898

Testing Item:

1. Test Temperature: 80℃
2. Test Times: 48Hrs
3. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-615M Chassis)

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

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High temperature storage test

Test Date: 10-14~16-2007

Test Product: ARC-615M

Test Site: AAEON QA Internal Lab.

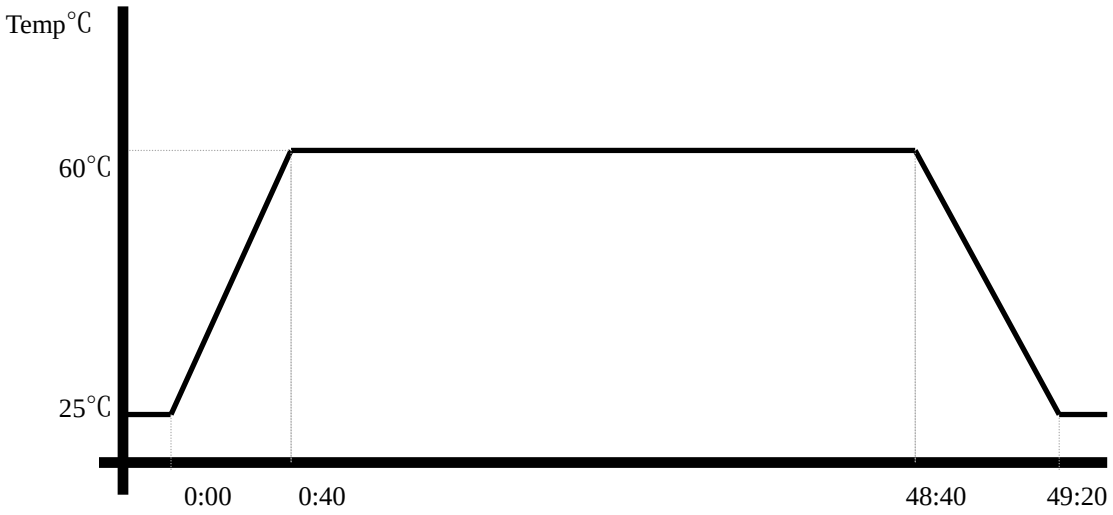
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/11/06
Serial Number: 3898

Testing Item:

4. Test Temperature: 60℃
5. Test Times: 48Hrs
6. Test Software: Windows XP / Run PassMark Burn In Test Pro 4.0
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-615M)

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

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Low temperature storage test

Test Date: 10-07~09-2007

Test Product: ARC-615M

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-D7S-100+1 N2
Date of Calibration: 12/11/06
Serial Number: 3898

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test Pro 4.0
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-615M)

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

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Humidity test

Test Date: 10-09~11-2007

Test Product: ARC-615M

Test Site: AAEON QA Internal Lab.

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

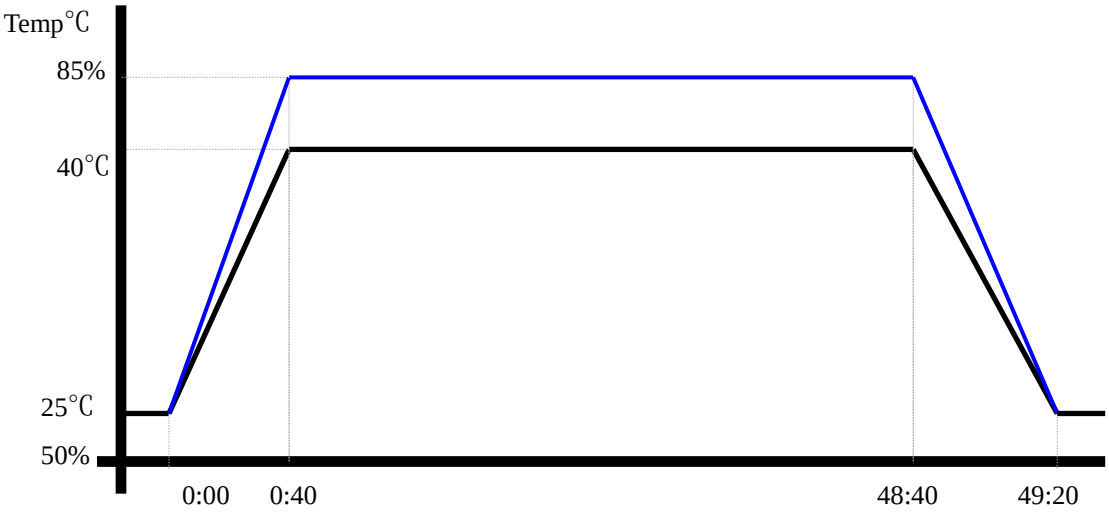
Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/11/06
Serial Number: 3898

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 85%RH
3. Test Times: 48Hrs
4. Test Software: Windows XP / Run PassMark Burn In Test Pro 4.0
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-615M)

Test Result:

No problem was found after the humidity test.

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Cold start and hot start test

Test Date: 10-15~16-2007

Test Product: ARC-615M

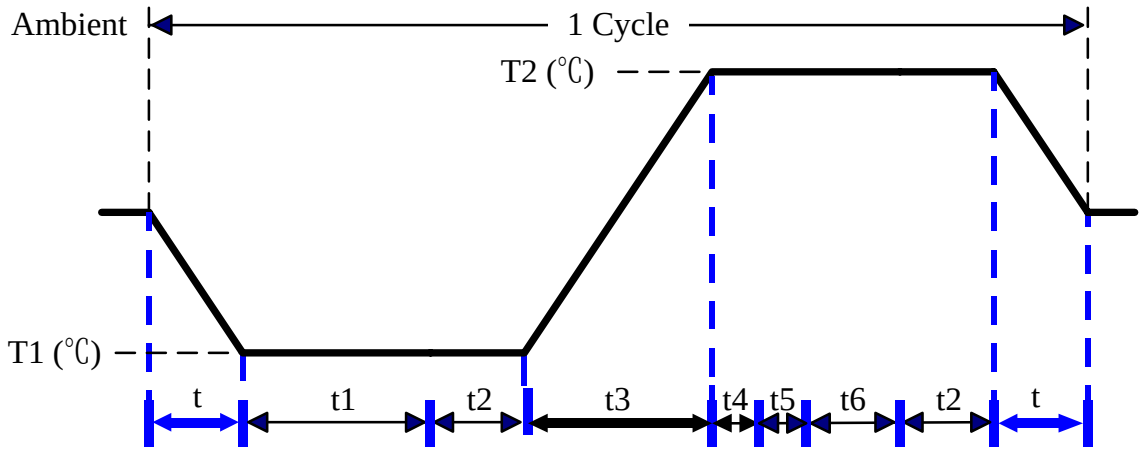
Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-14 Testing procedures
Test Nb: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
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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