ARC-615H (HSB-811P)
Environment Test Report

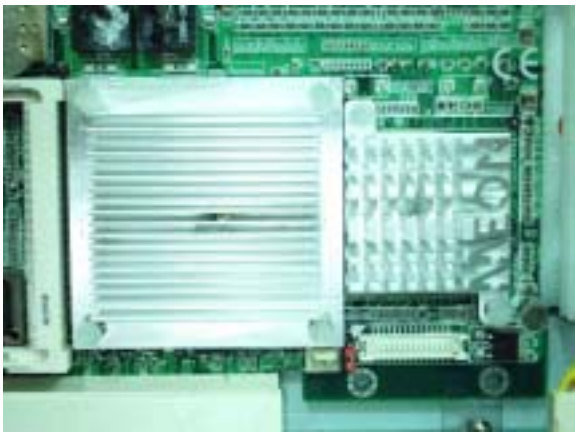
Report NO: 05I020017

Issued by:	Rex-Chang	/	*11/24/2005*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*11/24/2005*
	Manager		**Date**

Test item list

Num	Item	Spec
1.	Control Box:	ARC- 615H / 1U Rack Mount Chassis
	1. Main Board	AAEON HSB-811P Rev. A1.0 (BIOS: 1.0)
	2. CPU	Intel Celeron – M ULV 600MHz)
	3. Memory	512MB ELPIDA DD2508AMTA
	4. Power Supply	Enhance ENH6020
	5. HDD	Seagate ST340014A 40GB
	6. CD-ROM	NEC CD-2800E
	7. FDD	TEAC FD-235HF

CPU and North Bridge Heat Sink



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Temperature cycle test

Test Date: 11-18~21-2005

Test Product: ARC-615H (HSB-811P A1.0) / 1U Rack Mount Chassis

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:

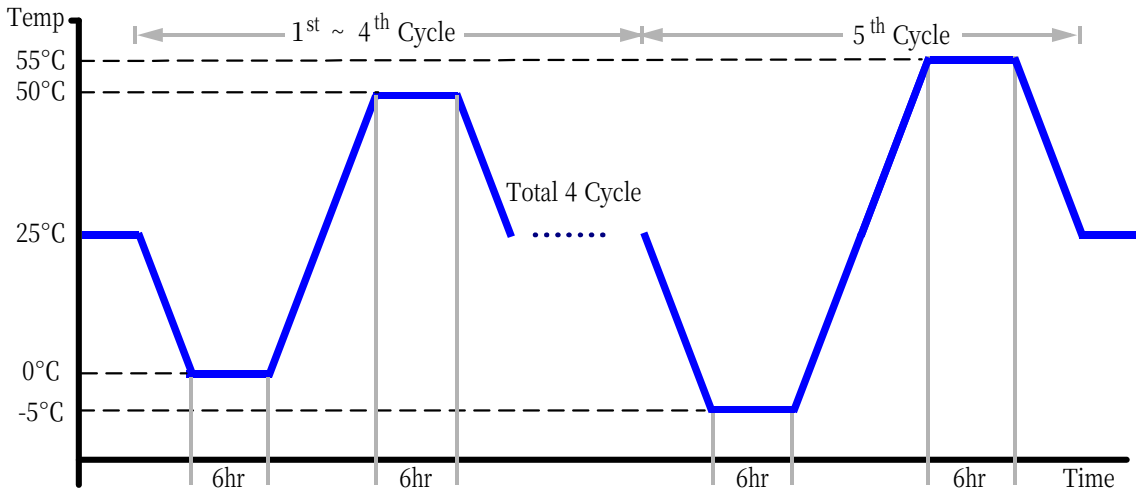
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/30/04
Serial Number: 2582

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



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Temperature cycle test

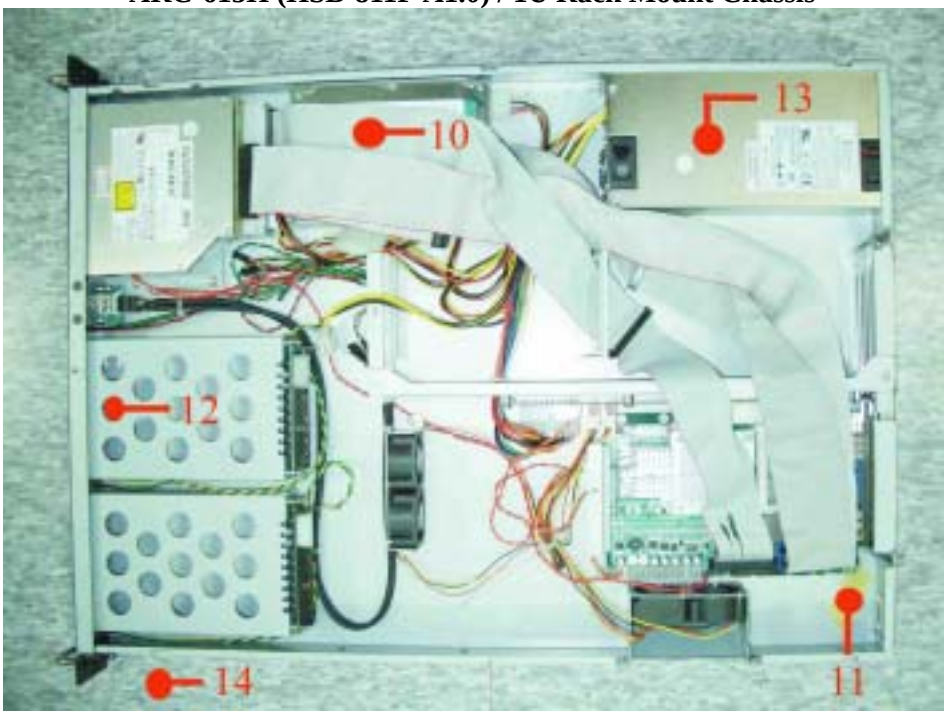
Test O.S. / Software:

Windows 2000 / Run PassMark Burn In Test Pro 4.0

Temperature Recorder:

Measuring Accelerometer Position:

ARC-615H (HSB-811P A1.0) / 1U Rack Mount Chassis



Thermal profile data:

ARC-615H (HSB-811P A1.0) / 1U Rack Mount Chassis

Point / Temp. Stage(℃)	Spec	55	50	25	0	-5
1. CPU1 - INTEL CPU.Celeron-M.ULV 600MHz	100	75.8	70.8	45.8	20.8	15.8
2. U8 - Intel.RG82852GM Chipset.	110	78.0	73.0	48.0	23.0	18.0
3. U6 - ICH4.INTEL.FW82801DB Chipset	110	67.9	62.9	37.9	12.9	7.9
4. U1 - SEMTECH/SC1476ITSTR/IC.Dual Phase PWMController	74	69.8	64.8	39.8	14.8	9.8
5. L5 - COIL.3.3uH 6.4A.20%.SMD.YC0804-3R3	85	70.4	65.4	40.4	15.4	10.4
6. L10 - COIL.1.0uH.12.8*12.8*6.5mm.DCR=3mohm Idc=25Amp.ESPI-1206-1R0M	100	69.8	64.8	39.8	14.8	9.8
7. L9 - COIL.1.0uH.12.8*12.8*6.5mm.DCR=3mohm Idc=25Amp.ESPI-1206-1R0M	100	69.3	64.3	39.3	14.3	9.3
8. U30 - ClockGenerator.ICS.ICS952607	70	79.0	74.0	49.0	24.0	19.0
9. Memory	70	69.0	64.0	39.0	14.0	9.0
10. HDD Surface	55	67.3	62.3	37.3	12.3	7.3
11. Control Box Inside Air Temperature - 1	N/A	58.9	53.9	28.9	3.9	-1.1
12. Control Box Inside Air Temperature - 2	N/A	56.9	51.9	26.9	1.9	-3.1
13. Power Case Surface	50	59.9	54.9	29.9	4.9	-0.1
14. Chamber Air Temperature	N/A	55.3	50.3	25.3	0.3	-4.7

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-615H / 1U Rack Mount Chassis)

Test Result:

The system structure doesn’t deformation; Function is passed during system test.

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Cold Start test

Test Date: 12-01~02-2005

Test Product: ARC-615H (HSB-811P A1.0) / 1U Rack Mount Chassis

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

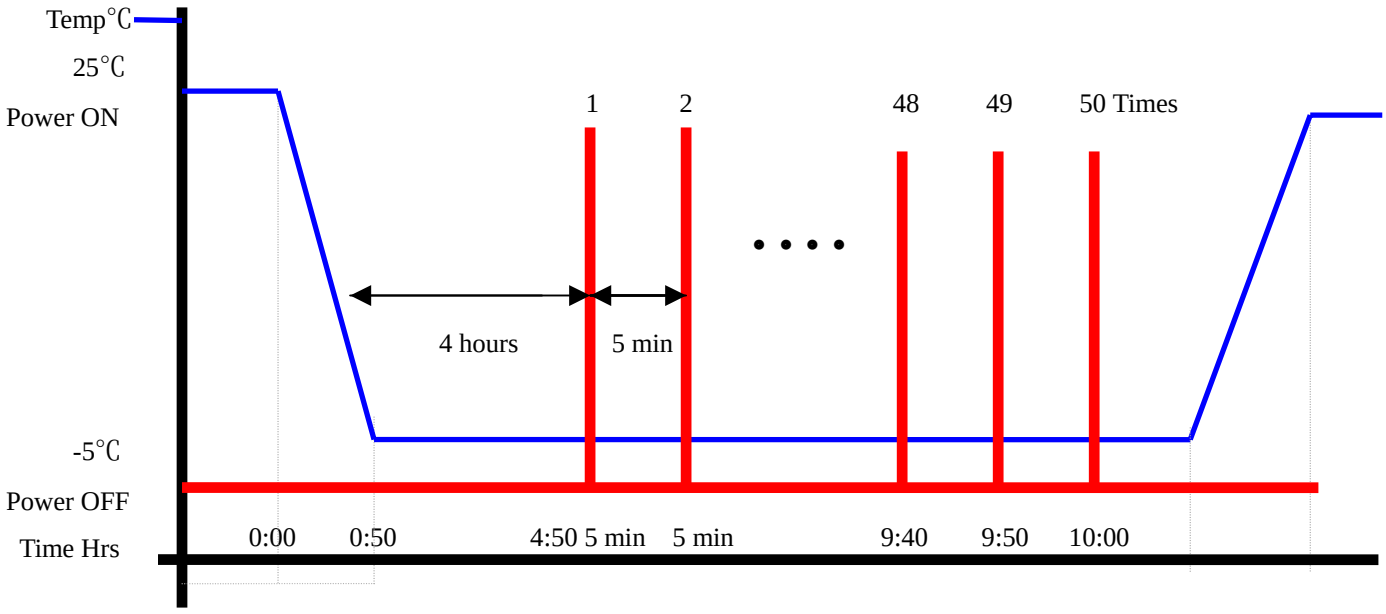
Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

Test Equipment:

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

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-615H / 1U Rack Mount Chassis)

Test Result:

Passed.

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High temperature storage test

Test Date: 11-21~23-2005

Test Product: ARC-615H (HSB-811P A1.0) / 1U Rack Mount Chassis

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

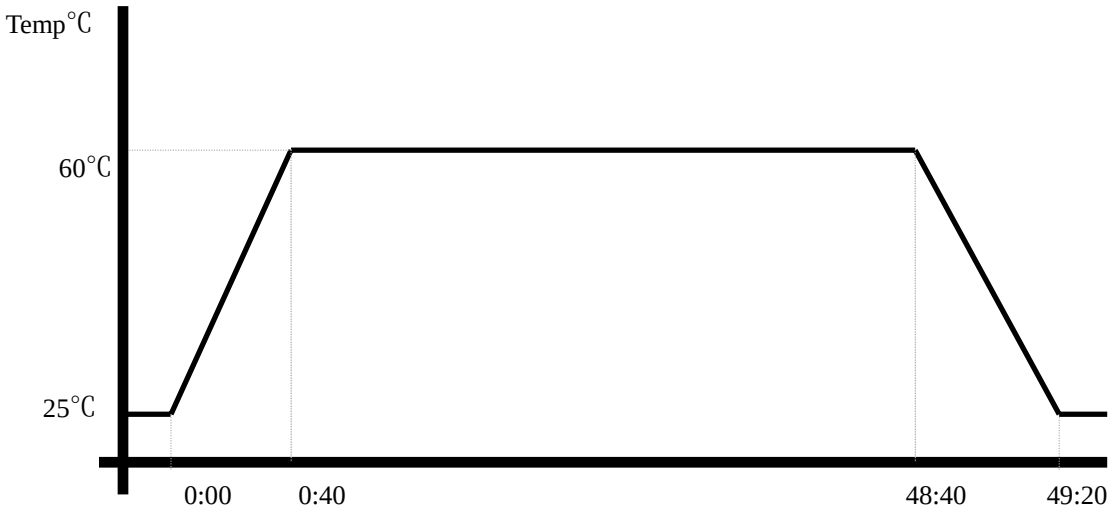
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/30/04
Serial Number: 2582

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-615H / 1U Rack Mount Chassis)

Test Result:

1.After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.
2. The system all functions are OK after high temperature storage test.

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High temperature storage test

Test Date: 11-16~18-2005

Test Product: ARC-615H / 1U Rack Mount 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:

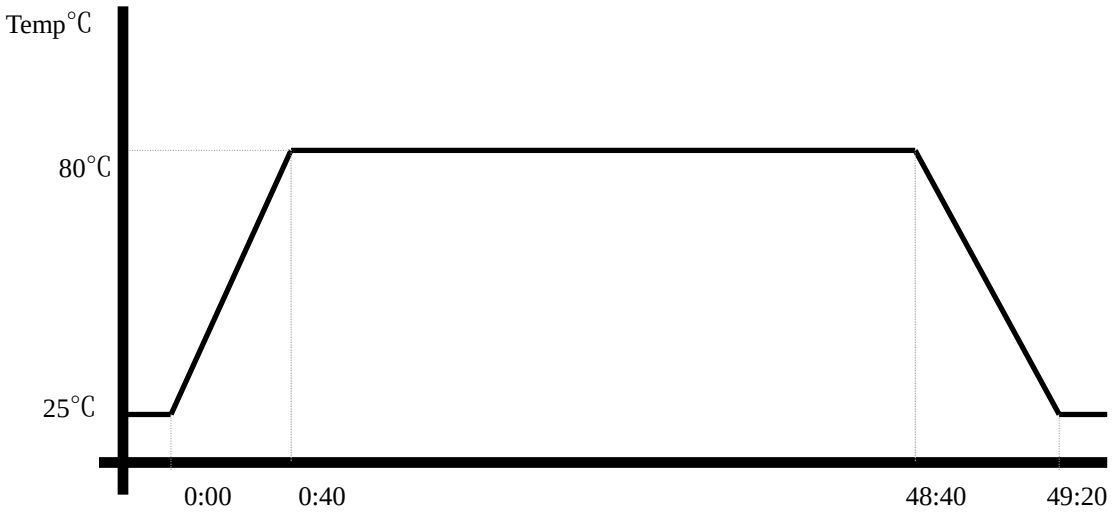
K.SON. INS. TECH. CORP.

Model: THS-D4L+-100

Date of Calibration: 11/30/04
Serial Number: 2582

Testing Item:

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



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-615H / 1U Rack Mount 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: 11-14~16-2005

Test Product: ARC-615H (HSB-811P A1.0) / 1U Rack Mount Chassis

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-D4L+-100
Date of Calibration: 11/30/04
Serial Number: 2582

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Environment Curve:

Sample Configuration & Quantity Under Test:

Quantity: 1 (ARC-615H / 1U Rack Mount Chassis)

Test Result:

1.After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.
2. The system all functions are OK after low temperature storage test.

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Humidity test

Test Date: 11-24~26-2004

Test Product: ARC-615H (HSB-811P A1.0) / 1U Rack Mount Chassis

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

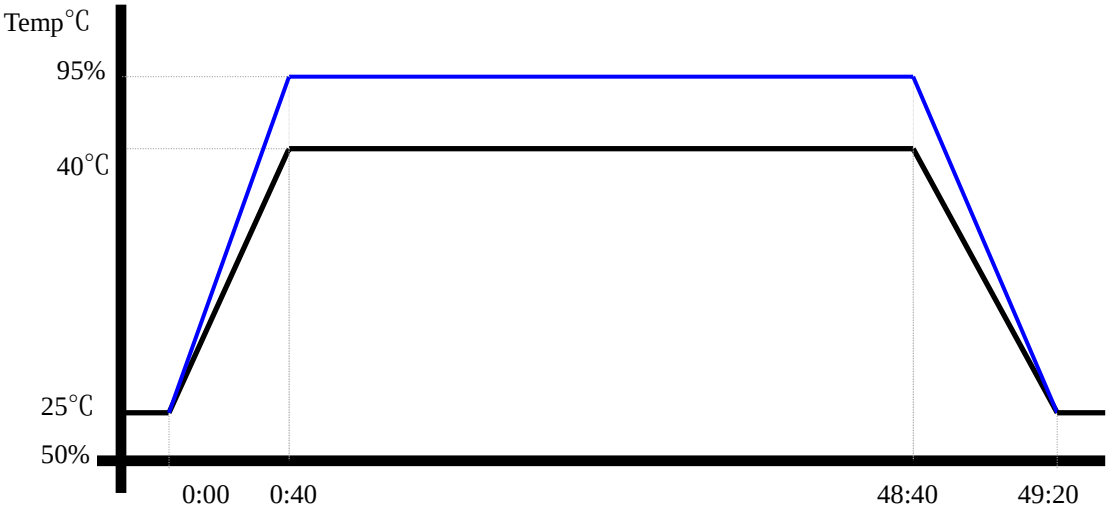
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/30/04
Serial Number: 2582

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (ARC-615H / 1U Rack Mount Chassis)

Test Result:

1.After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.
2. The system all functions are passed after humidity storage test.

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