



AMB-2450 (SBC-780 A0.2) Environment Test Report

Report NO : 03P020021

Issued by:

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09/29/2003

Rex-Chang
DV Engineer

Date

Reviewed by:

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09/29/2003

Wayne-Chen
A.V.P

Date

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3. High temperature storage test -----	5
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5. Humidity test -----	7
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Num	Item	Spec
1.	Industrial Workstations:	AMB-2450
	1.LCD	15" AU M150XN05
	2.Power	SPS.ATX 100-240V 300W AC With PFC.UMEC.UPF300-AF
	3. Inverter	SUMIDA IV25185/T
2.	CPU Board:	SBC-780 Rev:A0.2 (Bios Ver.1.0)
	1.CPU	Pentium 1GHz (133*7.5)
	2.Memory	ELPIDA D45128841G5-A75-9JF PC-133 SDRAM 256MB
	3.HDD	Maxtor Fireball 3 ATA/133 HDD 40GB
	4.CD-ROM	Quanta Storage SCR-242

AMB-2450 (SBC-780 Rev:A0.2)

Test Date: 09-24~26-2003

Test Product : AMB-2450 (SBC-780 Rev:A0.2) Industrial Workstations.

Test Site : AAEON DV Internal Lab.

Performed By : Rex Chang

Test Standard :

Reference IEC 68-2-61 Testing procedures
 Test Z/ABD : Climatic Sequence Test

Test Equipment:

Programmable Temperature & Humidity Chamber
 K.SON. INS. TECH. CORP.
 Model : THS-D4H+-100
 Date of Calibration : 06/03/03
 Serial Number: 1241

Temperature Measurement :

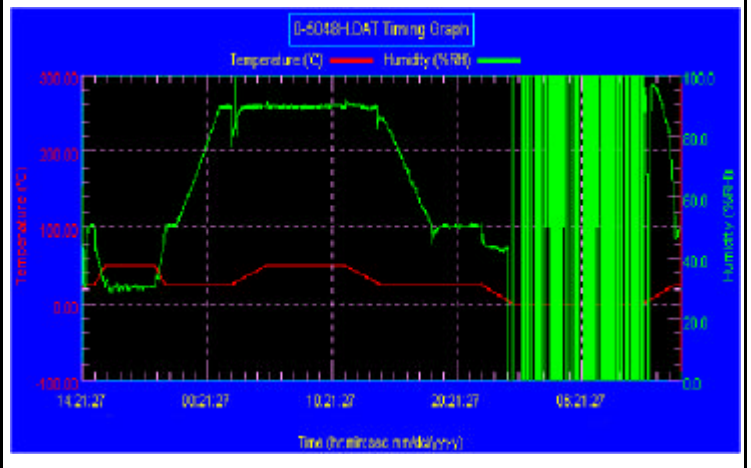
20 Channel Thermal Recorder:
 YOKOGAWA Inc,
 Model : DA100-13-1D
 Date of Calibration : 01/03/03
 Serial Number: 12A323190

Temperature & Humidity Cycle Test:

Testing Specification

Step	Temperature ()	Humidity (%RH)	Duration (HH:MM)
1	25	50	00:30
2	25	50	00:30
3	50	30	00:50
4	50	30	04:00
5	25	50	00:50
6	25	50	00:50
7	25	90	03:30
8	25	90	01:00
9	50	90	02:46
10	50	90	06:21
11	25	90	02:46
12	25	50	04:07
13	25	50	03:30
14	25	50	00:30
15	0	0	02:30
16	0	0	10:30
17	25	50	02:30
18	25	50	00:30

Test Curve:



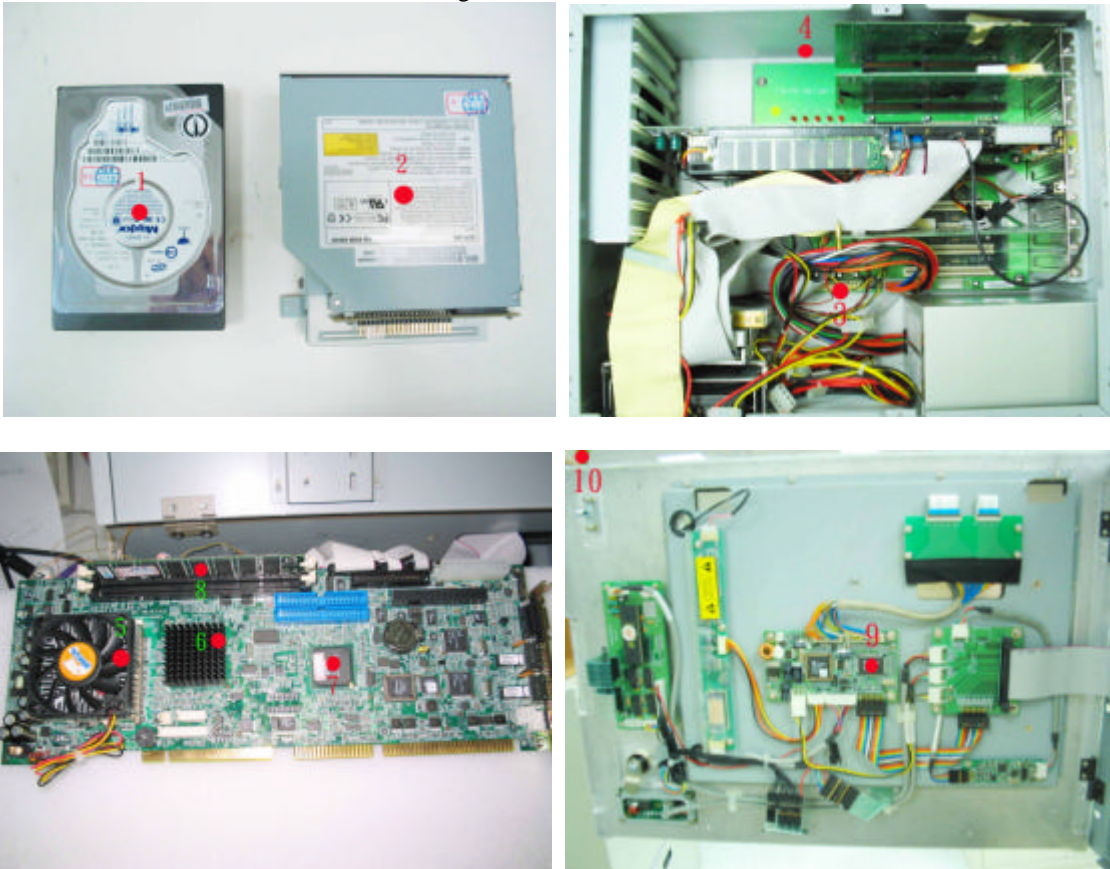
Sample Configuration & Quantity Under Test :

Using one AMB-2450 Industrial Workstations.

AMB-2450 (SBC-780 Rev:A0.2)

Temperature Recorder :

Measuring Accelerometer Position:



Note : 1.Dummy load : 5V/1A(5W);12V/0.5A(6W) x 3 pcs

Thermal profile data :

AMB-2450 Industrial Workstations

Point	Temp. Stage		
	50	25	0
1. HDD Surface	61.4	37.6	14.8
2. CD-ROM Surface	56.9	31.9	6.9
3. Inside Air Temperature (1)	61.3	36.3	10.7
4. Inside Air Temperature (2)	56.1	31.4	6.4
5. CPU	74.3	48.4	22.6
6. VIA VT8686T Chipset	67.9	42.6	16.9
7. VIA VT82C686B Chipset	71.4	45.7	19.6
8. Memory	67.4	41.1	16.0
9. A/D Board V201 - U4	86.7	62.3	37.5
10. Chamber Air Temperature	51.1	26.8	1.8

Sample Configuration & Quantity Under Test:

Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result:

Passed.

The AMB-2450 Industrial Workstations meets temperature cycle test

AMB-2450 (SBC-780 Rev:A0.2)

Test Date: 09-22~24-2003

Test Product : AMB-2450 (SBC-780 Rev:A0.2) Industrial Workstations

Test Site : AAEON DV 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-D4H+-100
Date of Calibration : 06/03/03
Serial Number: 1241

Testing Item :

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



Sample Configuration & Quantity Under Test:
Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result:

Passed.

The AMB-2450 Industrial Workstations meets High temperature storage test.

AMB-2450 (SBC-780 Rev:A0.2)**Test Date:** 08-15~18-2003**Test Product :** AMB-2450 (SBC-780 Rev:A0.2) Industrial Workstations**Test Site :** AAEON DV 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-D4H+-100

Date of Calibration : 06/03/03

Serial Number: 1241

Testing Item:

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

**Sample Configuration & Quantity Under Test :**

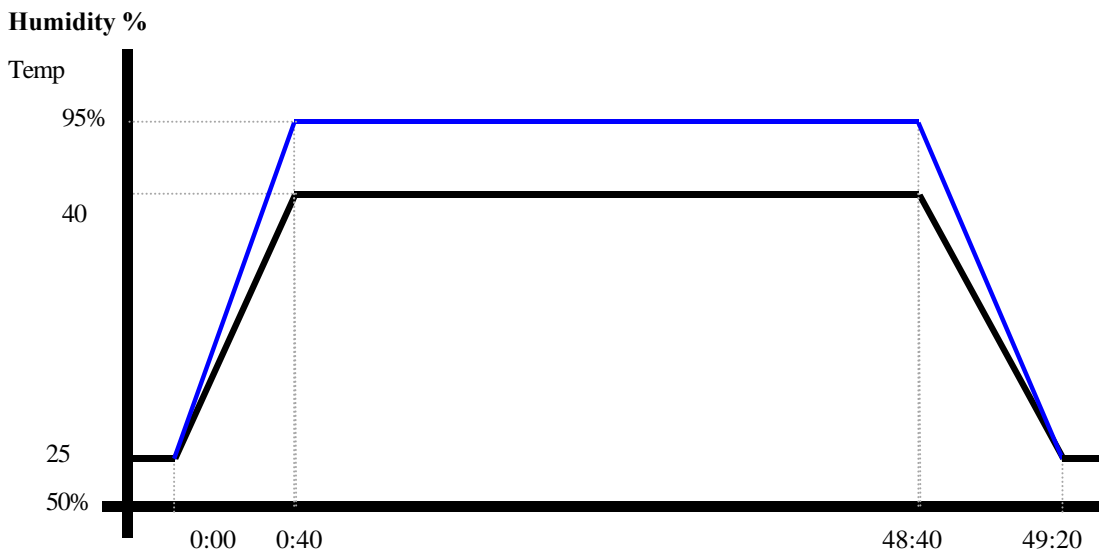
Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result :**Passed.**

The AMB-2450 Industrial Workstations meets Low temperature storage test

AMB-2450 (SBC-780 Rev:A0.2)**Test Date:** 09-17~19-2003**Test Product :** AMB-2450 (SBC-780 Rev:A0.2) Industrial Workstations**Test Site :** AAEON DV Internal Lab.**Performed By :** Rex Chang**Test Standard :** Reference IEC 68-2-30 Testing procedures
Test Db : Humidity test (Non-operation)**Test Equipment :**
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model : THS-D4H+-100
Date of Calibration : 06/03/03
Serial Number: 1241**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 form HDD)
5. Test Environment Curve:

**Sample Configuration & Quantity Under Test :**

Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result :**Passed.**

The AMB-2450 Industrial Workstations meets Humidity test

AMB-2450 (SBC-780 Rev:A0.2)

Test Date: 09-17-2003

Test Product : AMB-2450 (SBC-780 Rev:A0.2) Industrial Workstations

Test Site : AAEON DV Internal Lab.

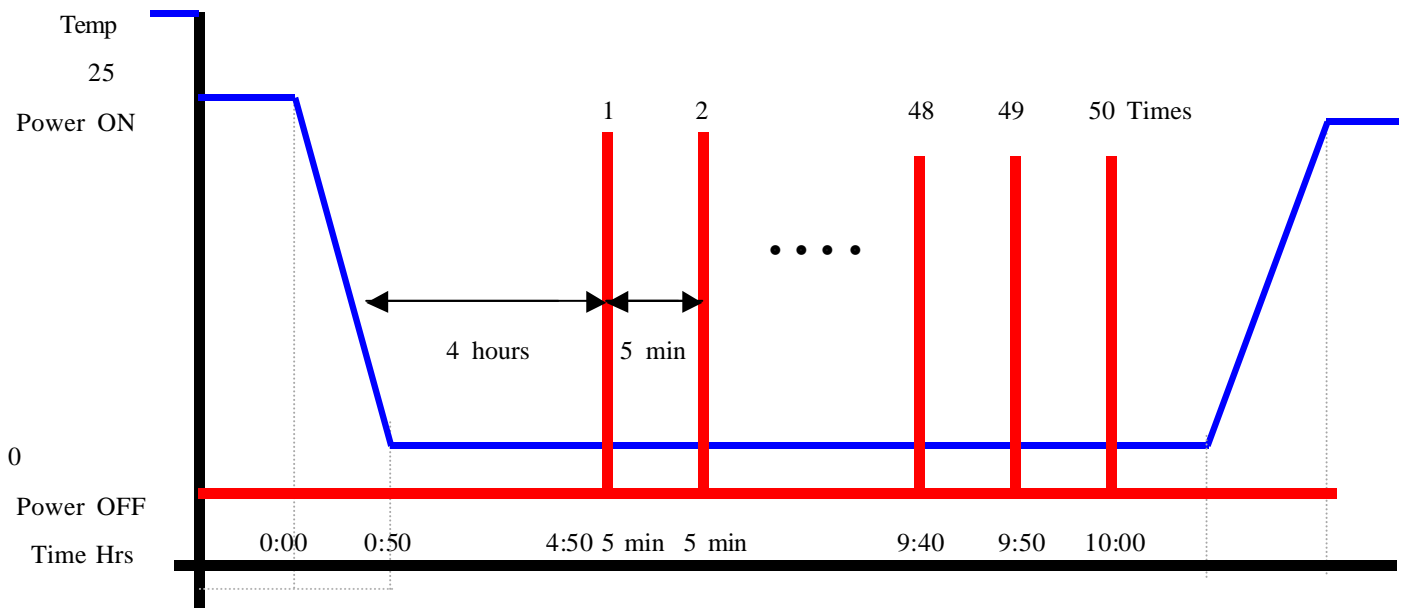
Performed By : Rex Chang

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 : 06/03/03
Serial Number: 1241

Test Condition :

1. Test Temperature : 0
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 XP
5. Test Environment Curve :



AMB-2450 (SBC-780 Rev:A0.2)

Sample Configuration & Quantity Under Test :

Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result :

Passed.

The AMB-2450 Industrial Workstations meets Cold start test.



AMB-2450 (SBC-860 A1.2) Environment Test Report

Report NO : 03P020029

Issued by:

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12/15/2003

Rex-Chang
DV Engineer

Date

Reviewed by:

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12/15/2003

Wenquan Yang
Manager

Date

1. Test item list -----	2
2 Temperature cycle operation test -----	3
3. High temperature storage test -----	5
4. Low temperature storage test -----	6
5. Humidity test-----	7
6. Cold start test-----	8

Num	Item	Spec
1.	Industrial Workstations:	AMB-2450
	1.LCD	15" AU M150XN05
	2.Power	SPS.ATX 100-240V 300W AC With PFC.UMEC.UPF300-AF
	3. Inverter	SUMIDA IV25185/T
2.	CPU Board:	SBC-860 Rev:A1.2 (Bios Ver.1.0)
	1.CPU	Pentium4 3.06GHz
	2.Memory	SAMSUNG K4H560838C-TCB0 256MB(DDR 266)
	3.HDD	Maxtor Fireball 3 ATA/133 HDD 40GB
	4.CD-ROM	Quanta Storage SCR-242

CPU Cooler :

ARKUA 866S-7G (for Socket 478)



Speed: 4500 ± 10% RPM

AMB-2450 (SBC-860 Rev:A1.2)

Test Date: 12-01~03-2003

Test Product : AMB-2450 (SBC-860 Rev:A1.2) Industrial Workstations.
Test Site : AAEON QA Internal Lab.

Performed By : Rex Chang

Test Standard :

Reference IEC 68-2-61 Testing procedures
 Test Z/ABD : Climatic Sequence Test

Test Equipment:

Programmable Temperature & Humidity Chamber
 K.SON. INS. TECH. CORP.
 Model : THS-D4H+-100
 Date of Calibration : 06/03/03
 Serial Number: 1241

Temperature Measurement :

20 Channel Thermal Recorder:
 YOKOGAWA Inc,
 Model : DA100-13-1D
 Date of Calibration : 01/03/03
 Serial Number: 12A323190

Test O.S. / Software:

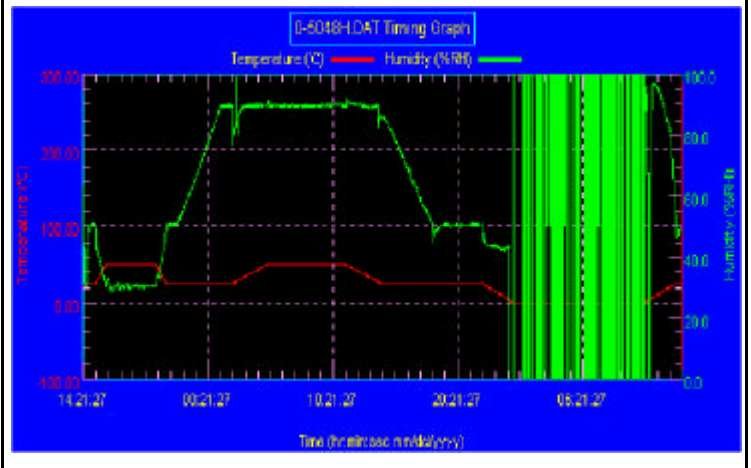
Windows 2000 / Run six Microsoft media player simultaneously.

Temperature & Humidity Cycle Test:

Testing Specification

Step	Temperature ()	Humidity (%RH)	Duration (HH:MM)
1	25	50	00:30
2	25	50	00:30
3	50	30	00:50
4	50	30	04:00
5	25	50	00:50
6	25	50	00:50
7	25	90	03:30
8	25	90	01:00
9	50	90	02:46
10	50	90	06:21
11	25	90	02:46
12	25	50	04:07
13	25	50	03:30
14	25	50	00:30
15	0	0	02:30
16	0	0	10:30
17	25	50	02:30
18	25	50	00:30

Test Curve:



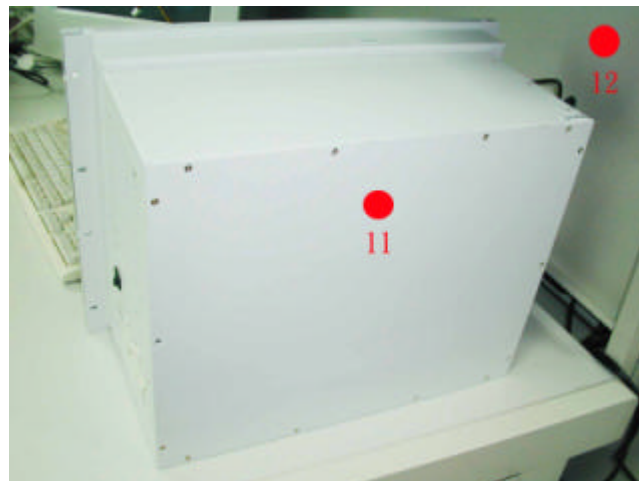
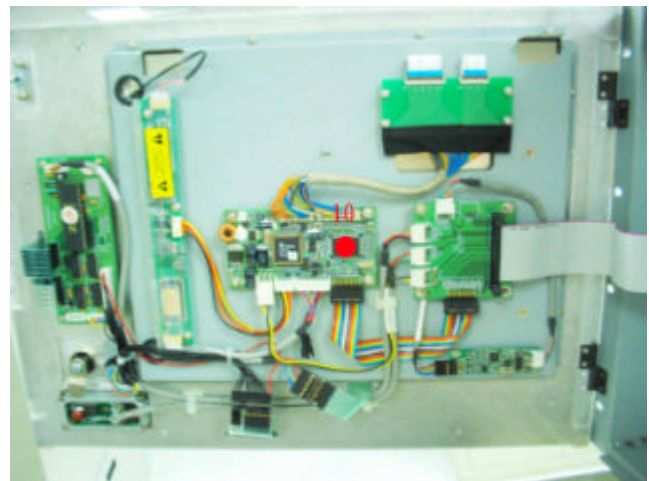
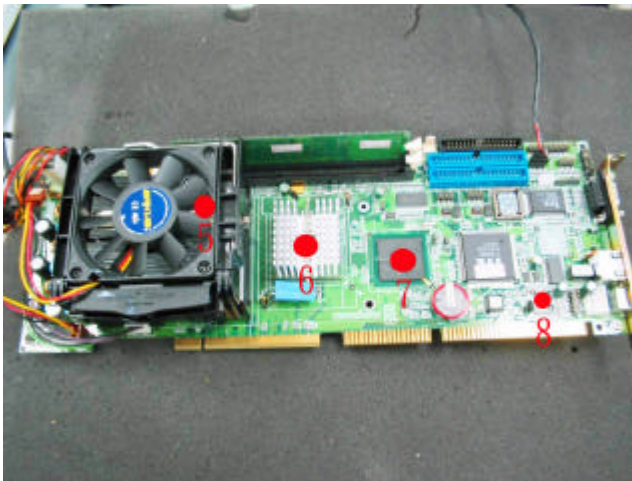
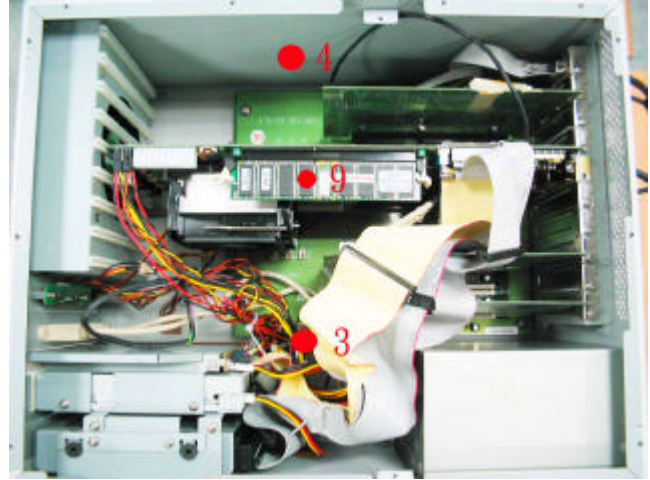
Sample Configuration & Quantity Under Test :

Using one AMB-2450 Industrial Workstations.

AMB-2450 (SBC-860 Rev:A1.2)

Temperature Recorder :

Measuring Accelerometer Position:



Note : 1.Dummy load : 5V/1A(5W);12V/0.5A(6W) x 3 pcs

Thermal profile data :**AMB-2450 Industrial Workstations**

Point	Temp. Stage		
	50	25	0
1. HDD Surface	62.3	38.1	11.2
2. CD-ROM Surface	70.8	48.8	25.7
3. Inside Air Temperature (1)	66.5	45.1	17.9
4. Inside Air Temperature (2)	67.3	43.3	16.3
5. Pentium 4 3.06GHz CPU	85.0	65.8	35.5
6. VIA VT8686T Chipset	76.7	54.9	26.4
7. VIA VT82C686B Chipset	80.5	58.9	30.6
8. AC'97 Audio Codec	80.1	58.6	30.6
9. Memory	70.9	49.9	22.4
10. A/D Board V201 - U4	86.6	62.1	36.2
11. Control Box. External Surface	54.4	29.6	4.5
12. Chamber Air Temperature	50.9	26.3	1.5

Sample Configuration & Quantity Under Test:

Quantity: 1 (AMB-2450 Industrial Workstations)

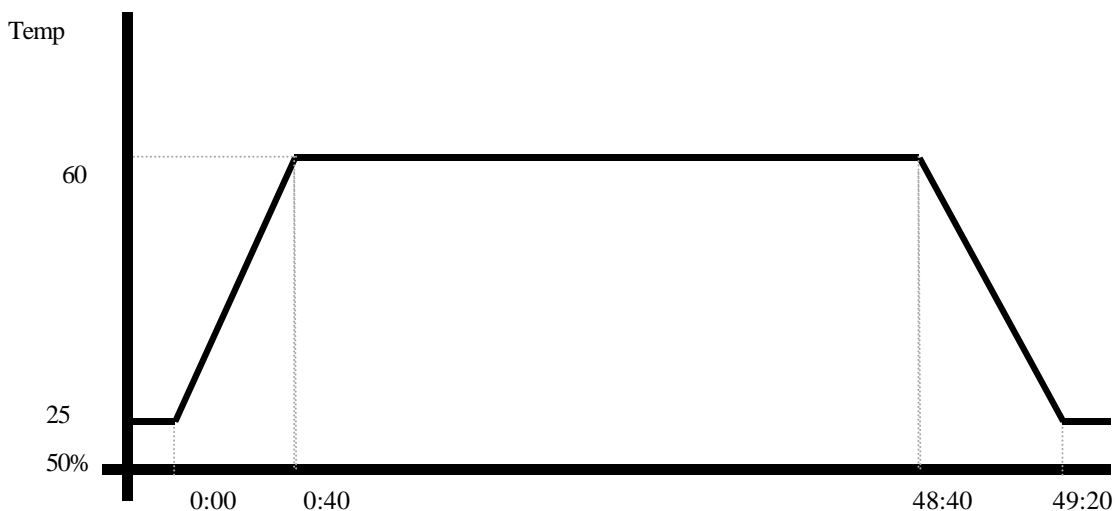
Test Result:**Passed.**

The AMB-2450 Industrial Workstations meets temperature cycle test

AMB-2450 (SBC-860 Rev:A1.2)

Test Date: 12-10~12-2003**Test Product :** AMB-2450 (SBC-860 Rev:A1.2) Industrial Workstations**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-D4H+-100
Date of Calibration : 06/03/03
Serial Number: 1241**Testing Item :**

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

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result:**Passed.**

The AMB-2450 Industrial Workstations meets High temperature storage test.

AMB-2450 (SBC-860 Rev:A1.2)**Test Date:** 12-08~10-2003**Test Product :** AMB-2450 (SBC-860 Rev:A1.2) Industrial Workstations**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-D4H+-100

Date of Calibration : 06/03/03

Serial Number: 1241

Testing Item:

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

**Sample Configuration & Quantity Under Test :**

Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result :**Passed.**

The AMB-2450 Industrial Workstations meets Low temperature storage test

AMB-2450 (SBC-860 Rev:A1.2)**Test Date:** 12-12~15-2003**Test Product :** AMB-2450 (SBC-860 Rev:A1.2) Industrial Workstations**Test Site :** AAEON QA Internal Lab.**Performed By :** Rex Chang**Test Standard :** Reference IEC 68-2-30 Testing procedures
Test Db : Humidity test (Non-operation)**Test Equipment :**

Programmable Temperature & Humidity Chamber

K.SON. INS. TECH. CORP.

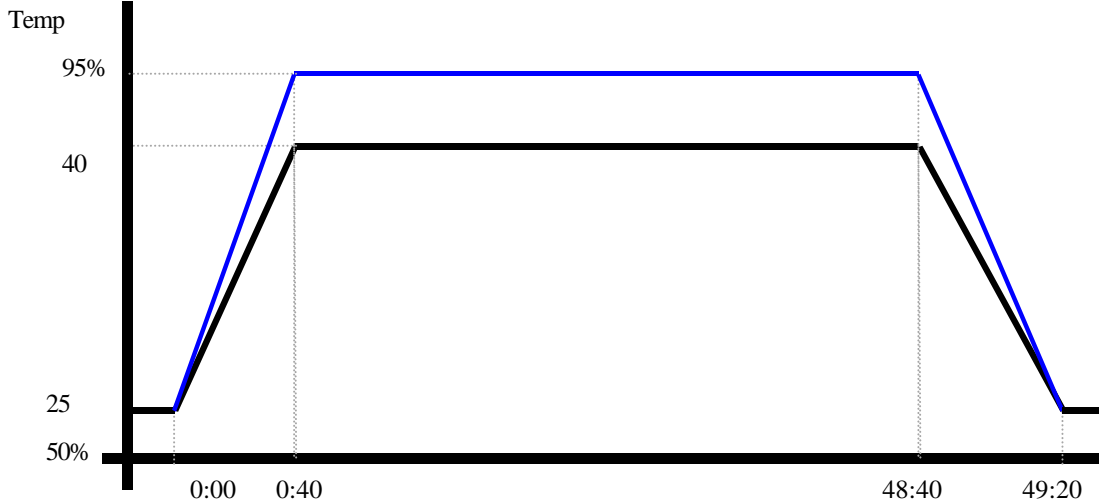
Model : THS-D4H+-100

Date of Calibration : 06/03/03

Serial Number: 1241

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 form HDD)
5. Test Environment Curve:

Humidity %**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result :**Passed.**

The AMB-2450 Industrial Workstations meets Humidity test

AMB-2450 (SBC-860 Rev:A1.2)

Test Date: 12-08-2003**Test Product :** AMB-2450 (SBC-860 Rev:A1.2) Industrial Workstations**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.

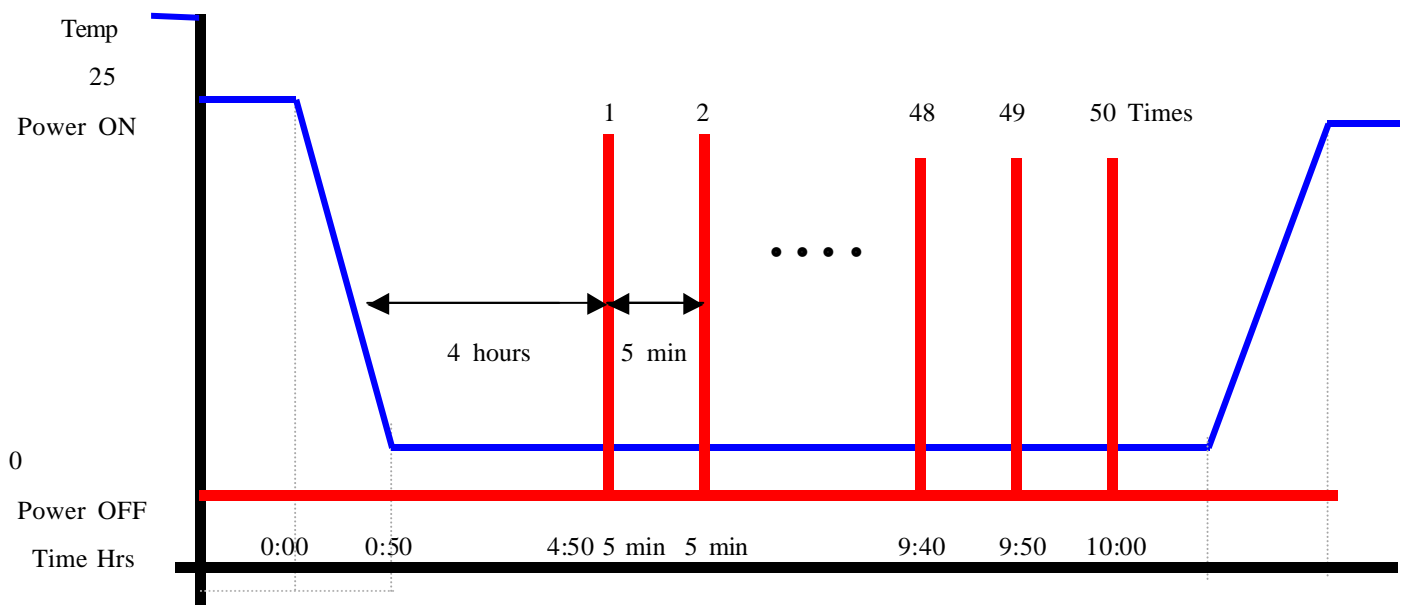
Model : THS-D4H+-100

Date of Calibration : 06/03/03

Serial Number: 1241

Test Condition :

1. Test Temperature : 0
2. Test Times : 5 Hours or 50 times of ON/OFF
 - (1) Power off for 4 hours before 1st 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 XP
5. Test Environment Curve :



AMB-2450 (SBC-860 Rev:A1.2)

Sample Configuration & Quantity Under Test :

Quantity: 1 (AMB-2450 Industrial Workstations)

Test Result :

Passed.

The AMB-2450 Industrial Workstations meets Cold start test.