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ADVANTECH CO., LTD.

QA Test Report

IPC-603MB

(Product Reliability Test)

Report No : 05S054A0

Report Date : November 22, 2005

	Charles Chang	*Jeff Yang*	*Knight Hu*
Issue Stamp	**Manager of QA Department**	**Approval**	**Test Engineer**

台北市內湖區瑞光路 26 巷 20 弄 1 號 5 樓 QA_LAB
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QA Lab Reliability test

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3	Humidity test	Passed	
4	Temperature cycle test	Passed	
5	Cold start test	Passed	
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7	Low temperature storage test	Passed	
8	Thermal Profile Test	Passed	
9	Random vibration test	Passed	
10	Sine vibration test	Passed	
11	Package Vibration Test	Passed	
12	Package drop Test	Passed	

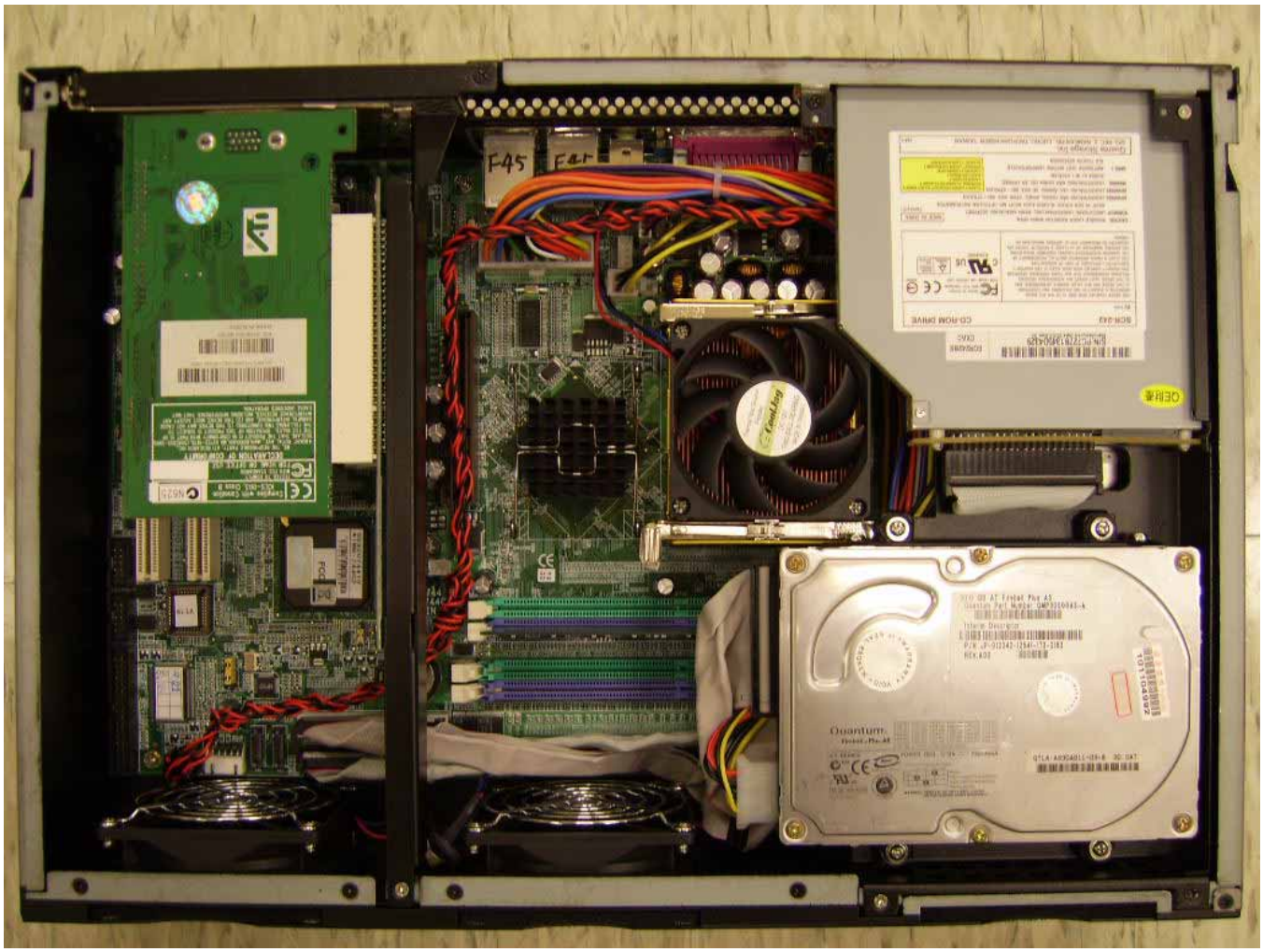
QA Lab Reliability test

Num	Item	Specification
1	Bus Expansion	Up to 3 PCI
2	Dimension (WxHxD)	198 mm (W) x 213 mm (H) x 393 mm (D) (7.8" x 8.4" x 15.5")
3	Weight	6 Kg (13.2 lb) with 300W power supply
4	Power supply	
	AC model	Output rating : 300W Input voltage : 100 ~ 240 Vac @ 50 ~ 60 Hz (Full range) Output voltage : +5 V @ 25 A, +3.3 V @ 14A , +12 V @ 16 A, -12 V @ 1A, -5 V @ 0.5 A, +5 Vsb @ 1.5 A (peak 2 A)

Photo I:

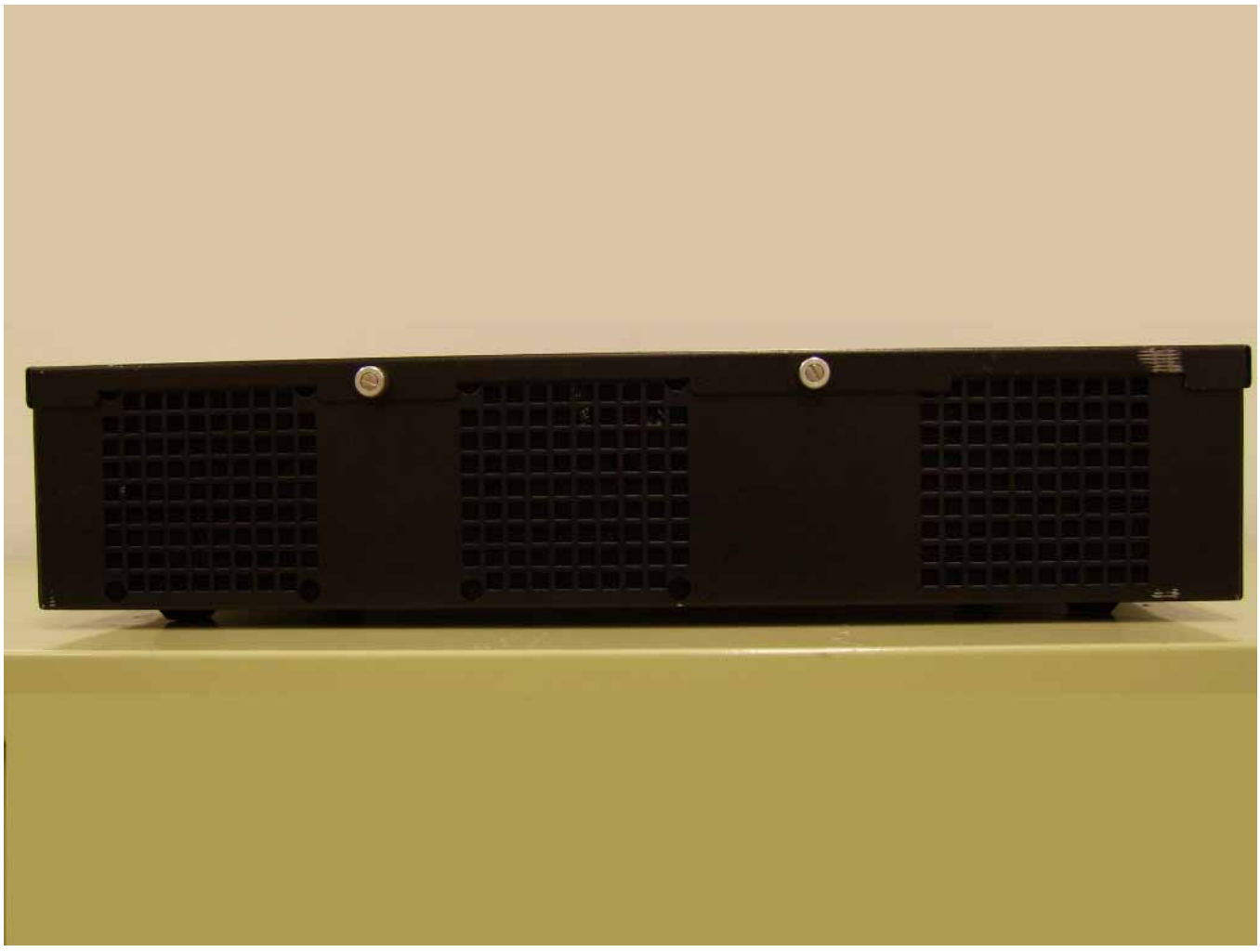
IPC-603MB front view

Photo II:



IPC-603MB structure photo

Photo III:



IPC-603MB rear side view

IPC-603MB # High Temp. Operation Test **Report No.05S054A0**

QA Lab Reliability test

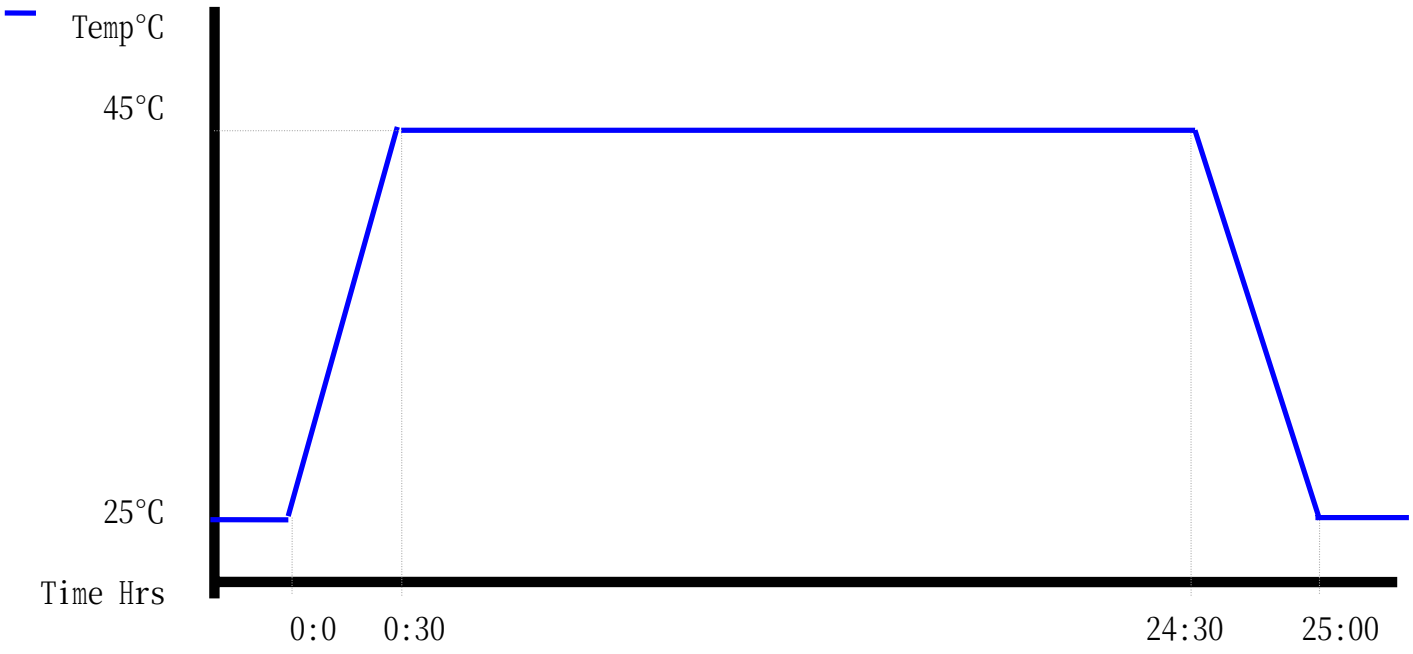
Test Date : September 19, 2005 ~ September 20, 2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test

Test Standard : Reference IEC68-2-2 Testing procedures
Test Bb : Dry Heat Test

Test Condition :

1. Test Temperature : 45℃
2. Test Times : 24Hrs
3. Test Software : Running HCT 11.2 test program in WinXP
4. Test Environment Curve :



IPC-603MB # High Temp. Operation Test **Report No.05S054A0**

QA Lab Reliability test

Test Equipment : Programmable Temperature & Humidity Chamber
K.SON. CO. LTD.
Model : THS-DL4+/-150
Date of Calibration : 5/16/2005

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The switch button and cover slot should work properly without any interference.
2. All screws should be tightened up appropriately.

IPC-603MB # High Temp. Operation Test **Report No.05S054A0**

QA Lab Reliability test

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets high temperature operation test.

IPC-603MB test photo

IPC-603MB # Low Temp. Operation Test **Report No.05S054A0**

QA Lab Reliability test

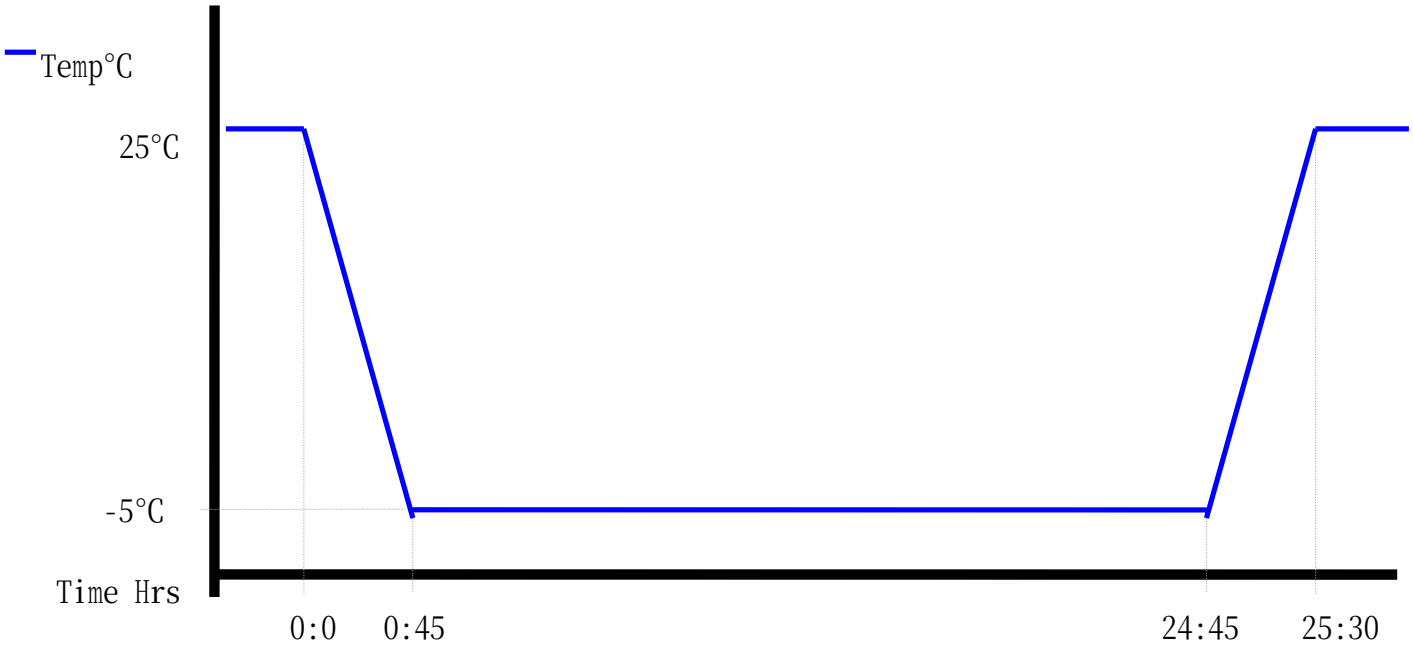
Test Date : September 20 2005 ~ September 21, 2005
Test Site : Advantech QA Environment Lab
Performed By: Knight Hu

Purpose : The DVT test.

Test Standard : Reference IEC68-2-1 Testing procedures
Test Ab : Cold Test

Test Condition :

1. Test Temperature : -5℃
2. Test Times : 24Hrs
3. Test Software : Running HCT 11.2 test program in WinXP
4. Test Environment Curve :



IPC-603MB # Low Temp. Operation Test **Report No.05S054A0**

QA Lab Reliability test

Test Equipment : Programmable Temperature & Humidity Chamber
K.SON. CO. LTD.
Model : THS-DL4+/-150
Date of Calibration : 5/16/2005

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The switch button and cover slot should work properly without any interference.
2. All screws should be tightened up appropriately.

IPC-603MB # Low Temp. Operation Test **Report No.05S054A0**

QA Lab Reliability test

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets low temperature operation test.

IPC-603MB test photo

IPC-603MB # Humidity Test **Report No. 05S054A0**

QA Lab Reliability test

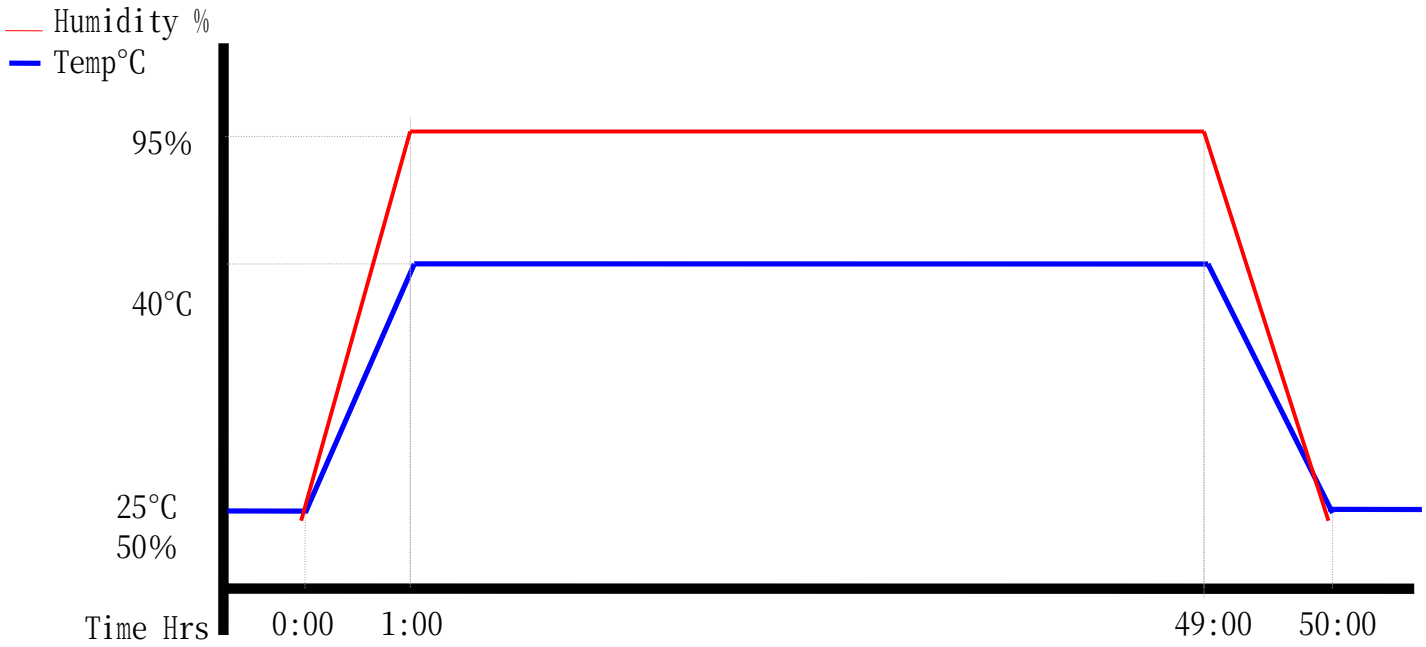
Test Date : September 21, 2005 ~ September 22, 2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test.

Test Standard : Reference IEC68-2-3 Testing procedures
Test Ca : Damp Heat steady state Test

Test Condition :

1. Test Temperature : 40℃
2. Test Humidity : 95%
3. Test Times : 48Hrs
4. Test Software : Running HCT 11.2 test program in WinXP
5. Test Environment Curve :



Humidity Test

QA Lab Reliability test

Test Equipment : Programmable Temperature & Humidity Chamber
K.SON. CO. LTD.
Model : THS-DL4+/-100
Date of Calibration : 5/16/2005

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The switch button and cover slot should work properly without any interference.
2. All screws should be tightened up appropriately.

IPC-603MB # Humidity Test **Report No. 05S054A0**

QA Lab Reliability test

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets humidity test.

IPC-603MB test photo

IPC-603MB # Temperature cycle test **Report No.05S054A0**

QA Lab Reliability test

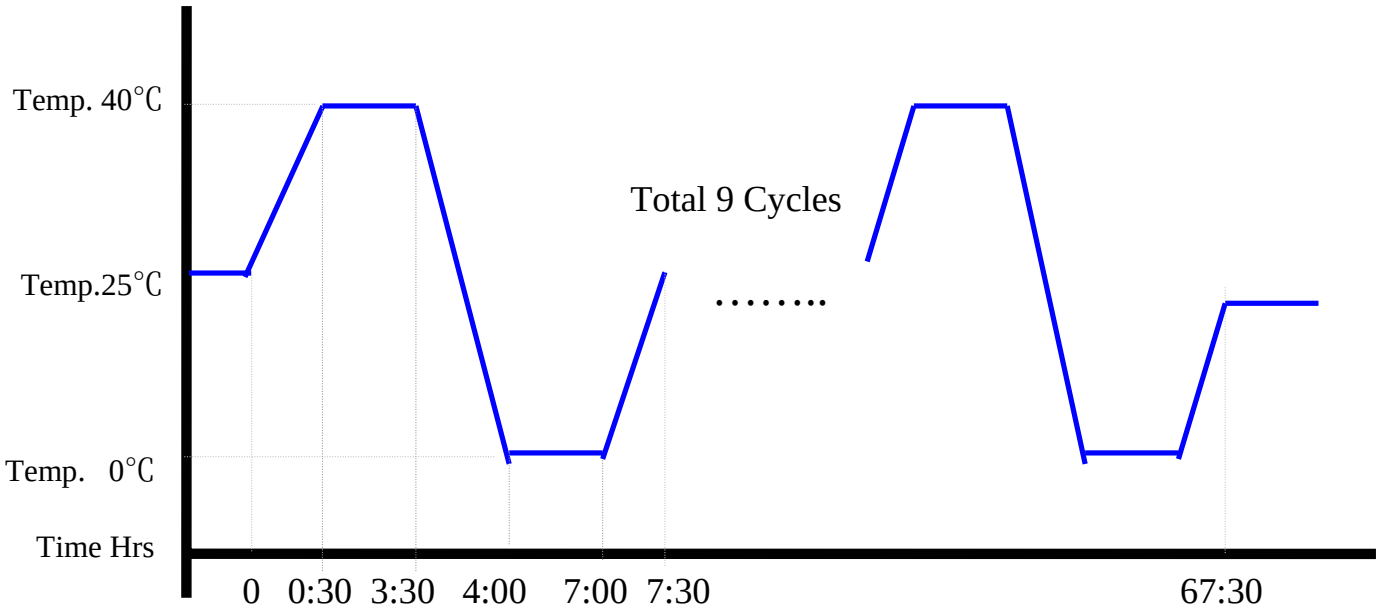
Test Date : September 27, 2005 ~ September 30, 2005
Test Site : Advantech QA Environment Lab
Performed By: Knight Hu

Purpose : The DVT test.

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

Test Condition :

1. Test High Temperature: 40℃
2. Test Low Temperature: 0℃
3. Test dwell time: 3Hrs
4. Temperature slope: 40℃/hr
5. Test cycle: 9 cycles
6. Test Software: Running HCT 11.2 test program in WinXP
7. Test Environment Curve:



QA Lab Reliability test

Test Equipment : Programmable Temperature & Humidity Chamber
K.SON. CO. LTD.
Model : THS-DL4+/-150
Date of Calibration : 5/16/2005

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The switch button and cover slot should work properly without any interference.
2. All screws should be tightened up appropriately.

QA Lab Reliability test

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets temperature cycle test.

IPC-603MB test photo

QA Lab Reliability test

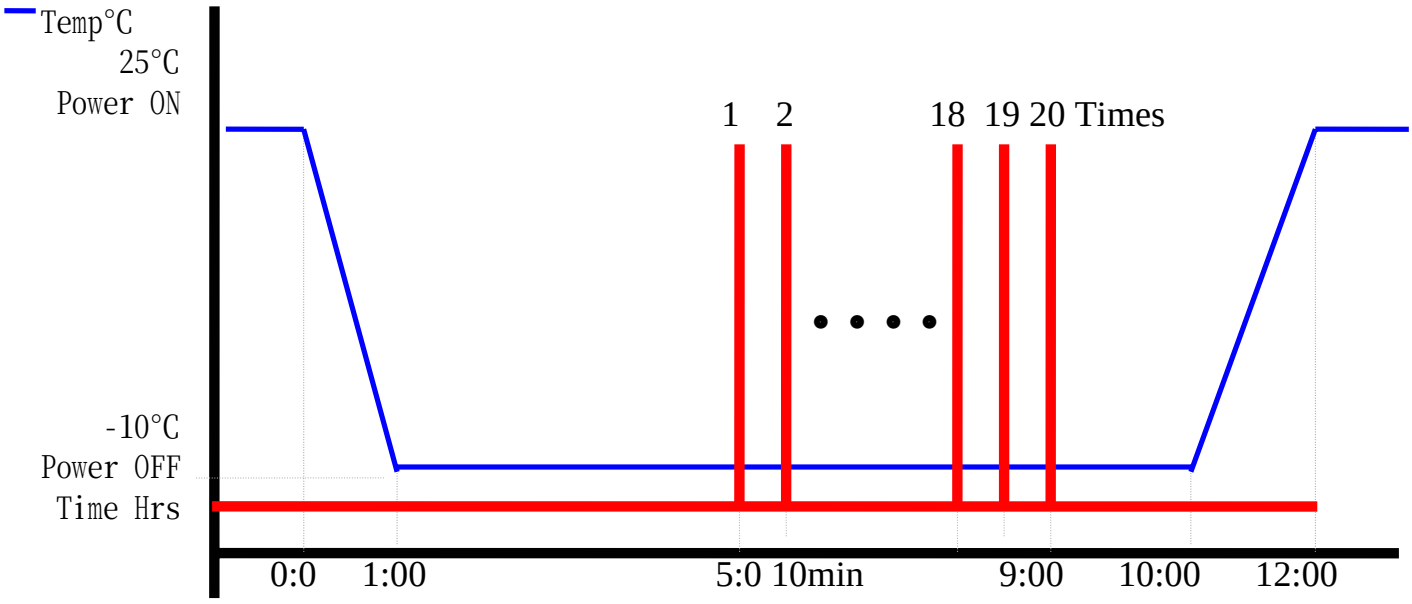
Test Date : September 5, 2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test.

Test Standard : Reference IEC68-2-1 Testing procedures
Test Ab : Cold Test

Test Condition :

1. Test Temperature : -10℃
2. Test Times : 8Hrs
   Step: A. System power off 4 hours.
   B. System power on , then 2 minutes later, system power off.
   C. After 10 minutes, system power on again.
   D. Two minutes later, system power off again.
   E. Recycle step C& D for 20 times.
3. Number of test : 20 times
4. Test Software : WINXP
5. Test Environment Curve :



Test Equipment : Programmable Temperature & Humidity Chamber
K.SON. CO. LTD.
Model : THS-DL4+/-150
Date of Calibration : 5/16/2005

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.

The IPC-603MB Industrial Panel PC meets cold start test.

IPC-603MB # High temp./humi. Storage test **Report No.05S054A0**

QA Lab Reliability test

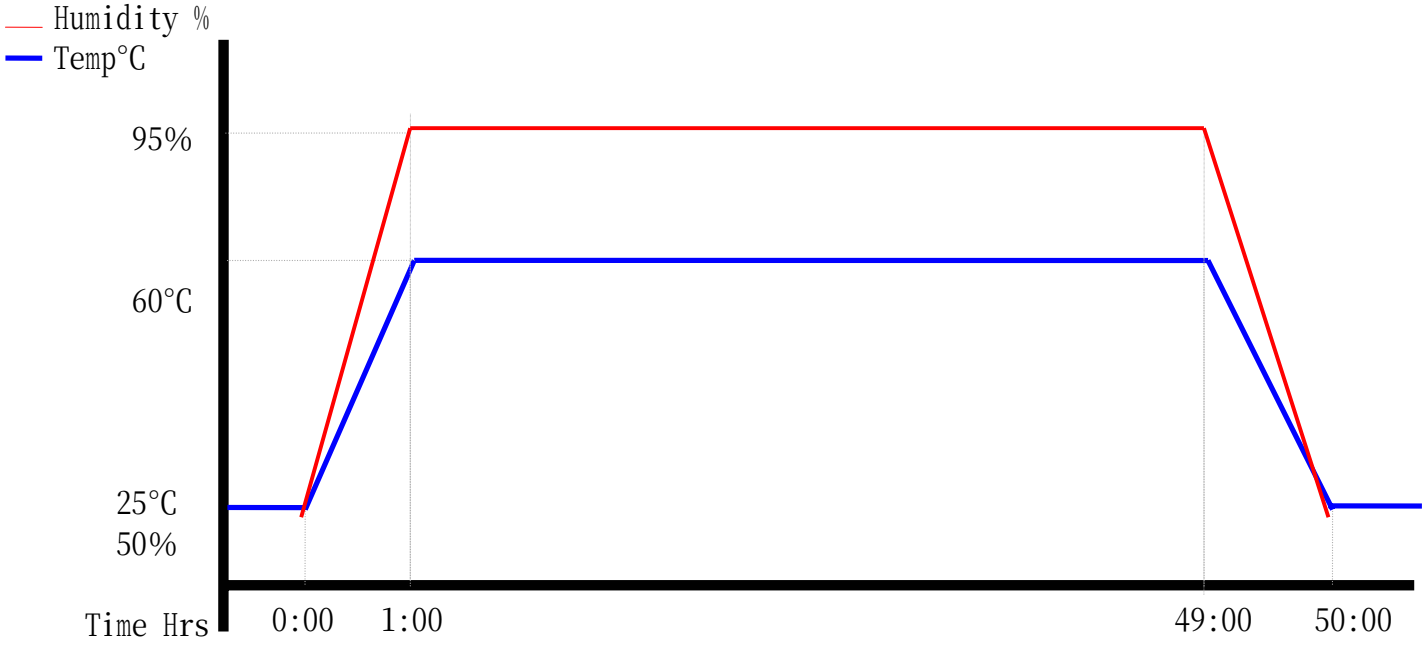
Test Date : November 3, 2005 ~ November 5,2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test.

Test Standard : Reference IEC68-2-3 Testing procedures
Test Ca : Damp heat steady state test

Test Condition :

1. Test Temperature : 60°C
2. Test Humidity : 95%
3. Test Times : 48Hrs
4. Test Environment Curve :



Test Equipment : Programmable Temperature & Humidity Chamber
K.SON. CO. LTD.
Model : THS-DL4+/-150
Date of Calibration : 5/16/2005

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1.The switch button covers, slot can work properly without any interference.
2.All screws are tighten up appropriately.
3.All gaps on the surface are appropriately.
4.Assembling/disassembling the system enclosure or mechanical parts must be smooth, and no deformed parts found.

QA Lab Reliability test

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets high temperature and humidity storage test.

IPC-603MB # Low Temp. Storage Test **Report No.05S054A0**

QA Lab Reliability test

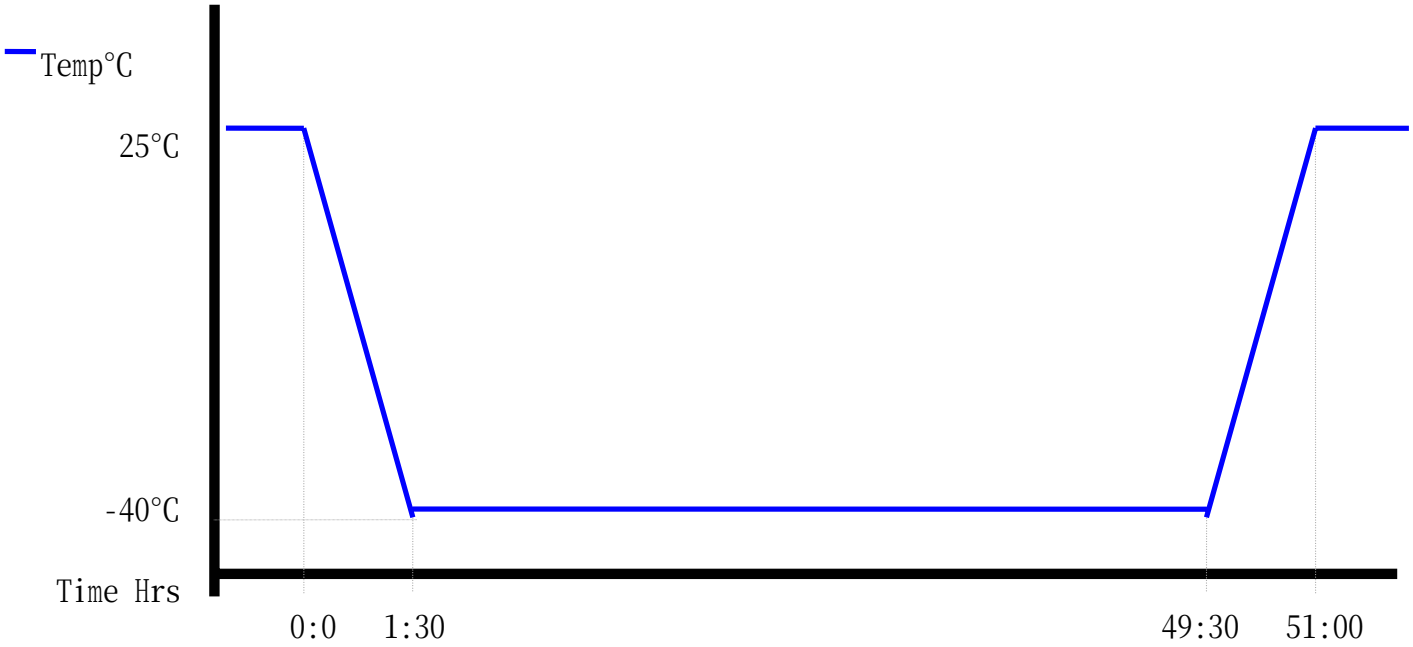
Test Date : November 5, 2005 ~ November 7, 2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test.

Test Standard : Reference IEC68-2-1 Testing procedures
Test Ab : Cold Test

Test Condition :

1. Test Temperature : -40℃
2. Test Times : 48Hrs
3. Test Environment Curve :



IPC-603MB # Low Temp. Storage Test **Report No.05S054A0**

QA Lab Reliability test

Test Equipment : Programmable Temperature & Humidity Chamber
K. SON. INS. Tech. Corp.
Model : THS-DL4+- 150
Date of Calibration : 05/16/2005

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1.The switch button covers, slot can work properly without any interference.
2.All screws are tighten up appropriately.
3.All gaps on the surface are appropriately.
4.Assembling/disassembling the system enclosure or mechanical parts must be smooth, and no deformed parts found.

IPC-603MB # Low Temp. Storage Test **Report No.05S054A0**

QA Lab Reliability test

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets low temperature storage test.

IPC-603MB # Thermal Profile Test **Report No.05S054A0**

QA Lab Reliability test

Test Date **:** September 28, 2005
Test Site **:** Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test.

Test Standard : Reference IEC68-2-2 Testing procedures
Test Bb : Dry Heat Test

Test Condition :

1. Test Temperature : 25℃/40℃/45℃
2. Test Times : Each temperature 4 Hrs
3. Test Software : Running HCT 11.2 test program in WinXP

Test Equipment : Programmable Temperature & Humidity Chamber
K.SON. INS. Tech. Corp..
Model : THS-DL4 +-150
Date of Calibration : 05/16/2005

DATA LOGGER
YOKOGAWA CO. LTD.
Model : uP-1800
S/N : 47XS0063
Date of Calibration : 8/26/2005

QA Lab Reliability test

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-760 REV.A1
2. CPU: Intel P4 3.4GHz 775
3. CPU fan: Delta AFB0612HH/F00
4. RAM: Transcend 512MB*2
5. HDD: Seagate ST380817AS
6. CD-ROM: Quantum SCR-242
7. Power: Zippy P1G-6300P
8. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The cover and connectors should work properly without any interference.
2. All screws should be tightened up appropriately.

IPC-603MB # Thermal Profile Test **Report No.05S054A0**

QA Lab Reliability test

Test Data :

NUM	Parts List	25℃	40℃	45℃
1.	CPU	53.7	71.5	77.1
2.	Power	48.3	59.7	64.9
3.	North bridge	43.4	56.9	61.8
4.	HDD	36.0	49.6	54.6
5.	Intel FW82801FB	60.0	74.3	79.4
6.	Ambient	27.3	41.6	46.4

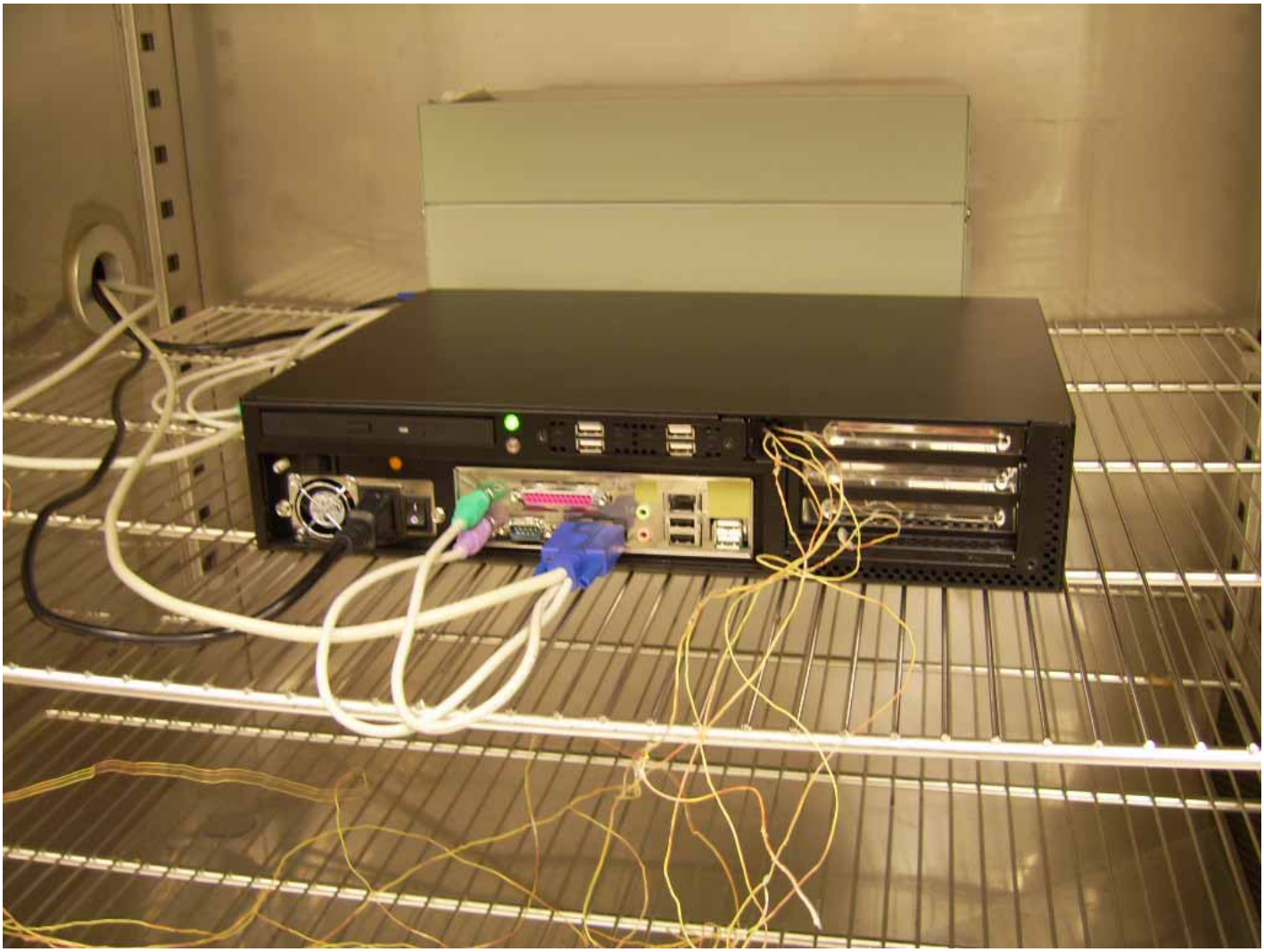
Test Result :

1. The system specification of thermal profile is 40 degree C.
2. There is no damage in electronic functions or degradation has not been found.
3. Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed

The IPC-603MB Industrial Panel PC meets thermal profile test.



IPC-603MB test photo

QA Lab Reliability test

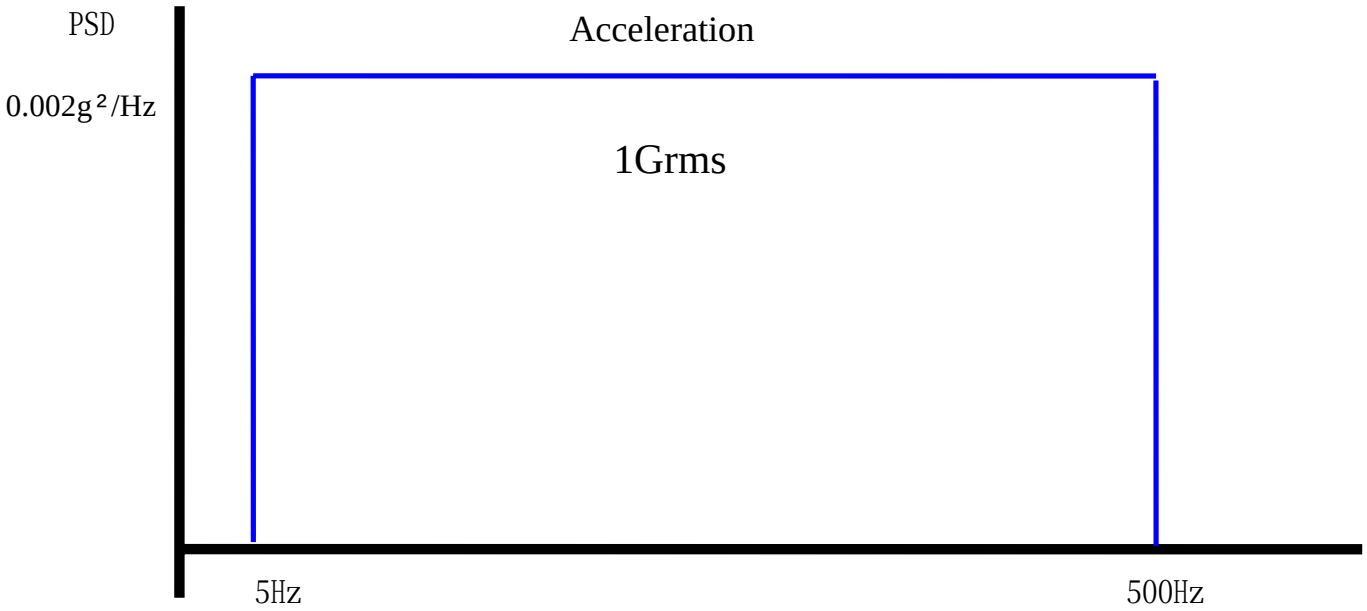
Test Date : October 12, 2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test

Test Standard : Reference IEC68-2-64 Testing procedures
Test Fh : Vibration Board Band Random Test

Test Condition :

1. Test PSD : 0.002G²/Hz (1Grms)
2. Test Frequency :5-500Hz
3. Test Axis : X,Y Z-axis
4. Test Time : 1Hr pre axis
5. Test Software : Running Soft mpeg in WinXP
6. Test Vibration Curve :



QA Lab Reliability test

Test Equipment : Vibration Simulator System
KING DESIGN Co. LTD.
Model: 9363EM-600F2K-40N120
S / N: MC107142493
Date of Calibration: 09/20/2004

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-744 REV.A2
2. CPU: Intel P4 2.8GHz 478
3. CPU fan: Cooljag CJC66PC-3D
4. RAM: Transcend 512MB*2
5. HDD: Quantum AS30A011-03B
6. CD-ROM: Quantum SCR-242
7. VGA card: ATI 109-40600-10
8. Power: Zippy P1G-6300P
9. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. Running soft mpeg file during testing, system should be fine and passed this test.
2. Running WinXP for O.S., the system cannot have degradation of the performance.

Mechanical function check:

1. The switch button ,covers ,slot can work properly without any interference.
2. All screws are tighten up appropriately.
3. All gaps on the surface are appropriately.
4. Assembling/disassembling the system enclosure or mechanical parts must be smooth, and no deformed parts found.

QA Lab Reliability test

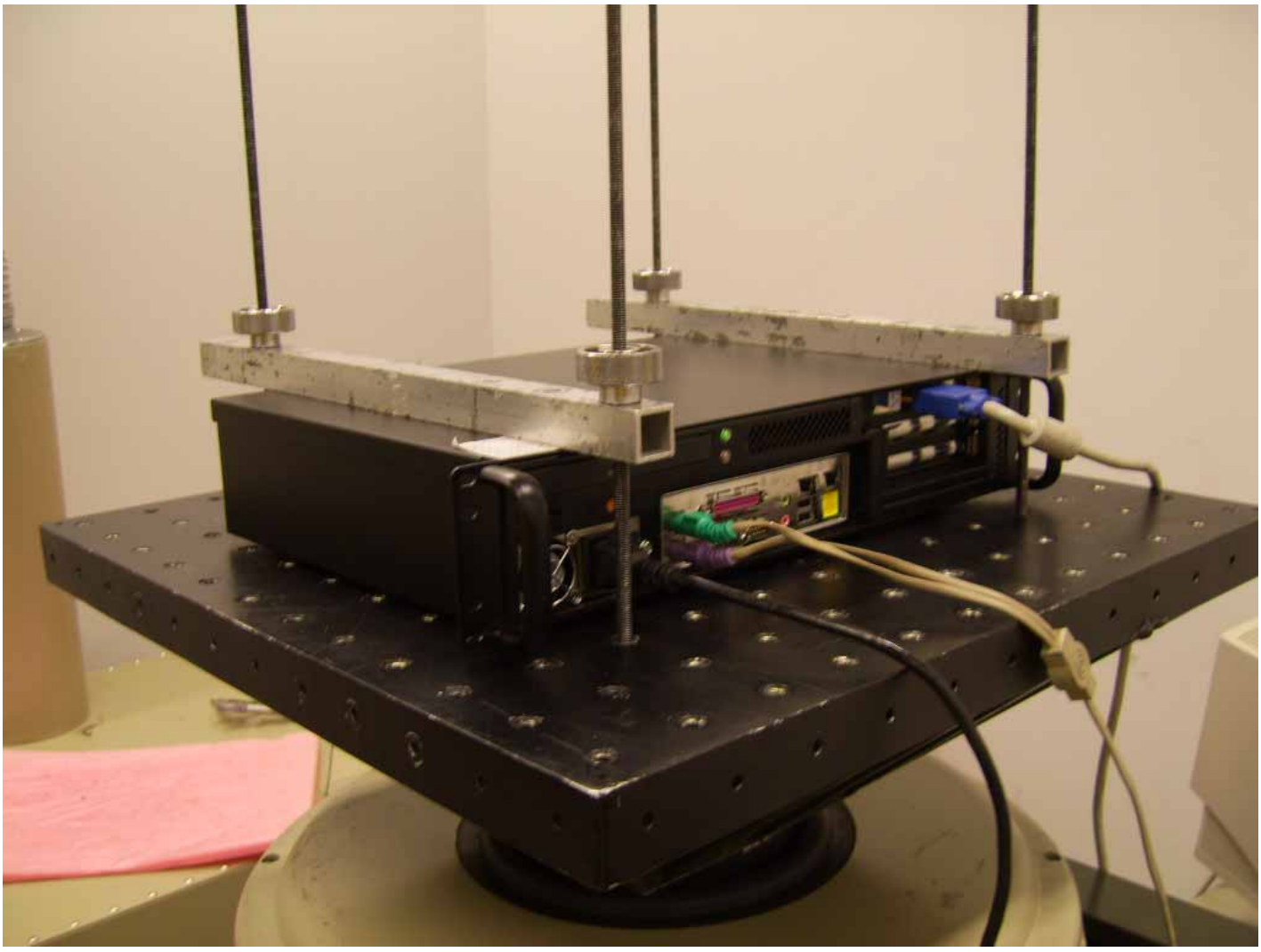
Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

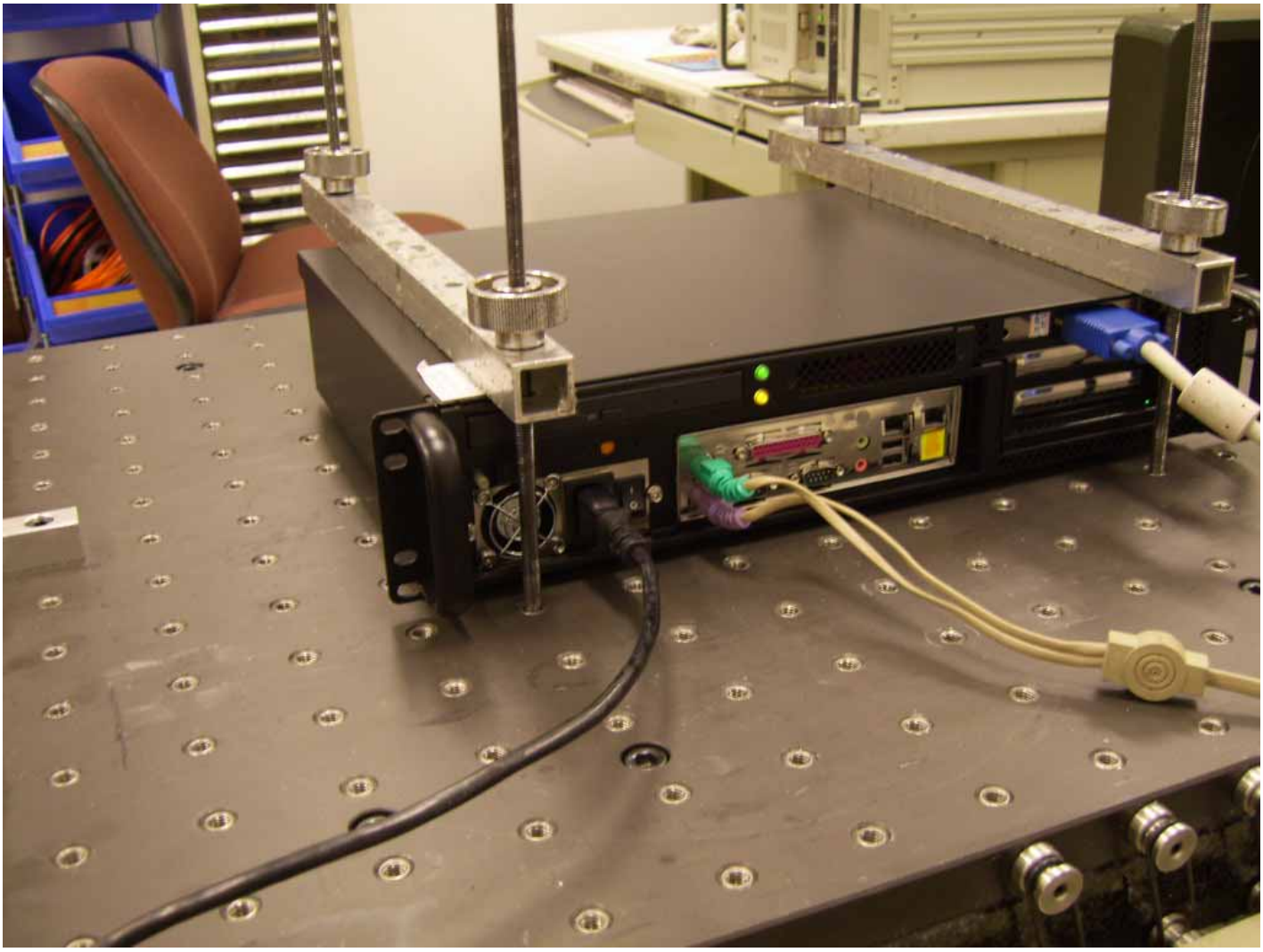
Passed.
The IPC-603MB Industrial Panel PC meets random vibration operation test.

PHOTO I:



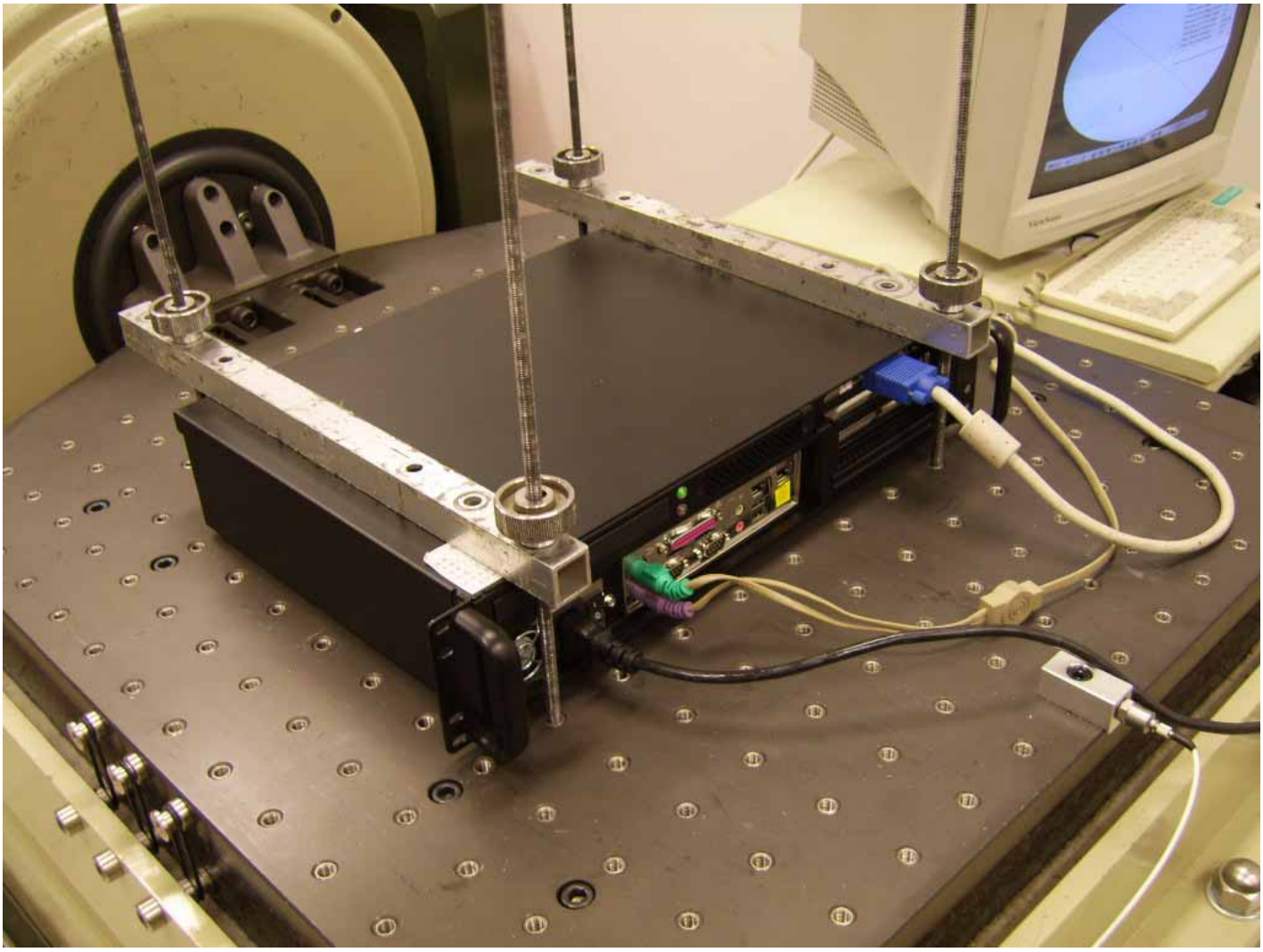
IPC-603MB Random vibration test Z axis

PHOTO II:



IPC-603MB Random vibration test X axis

PHOTO III:



IPC-603MB Random vibration test Y axis

IPC-603MB # Sine vibration non-operation test **Report No.05S054A0**

QA Lab Reliability test

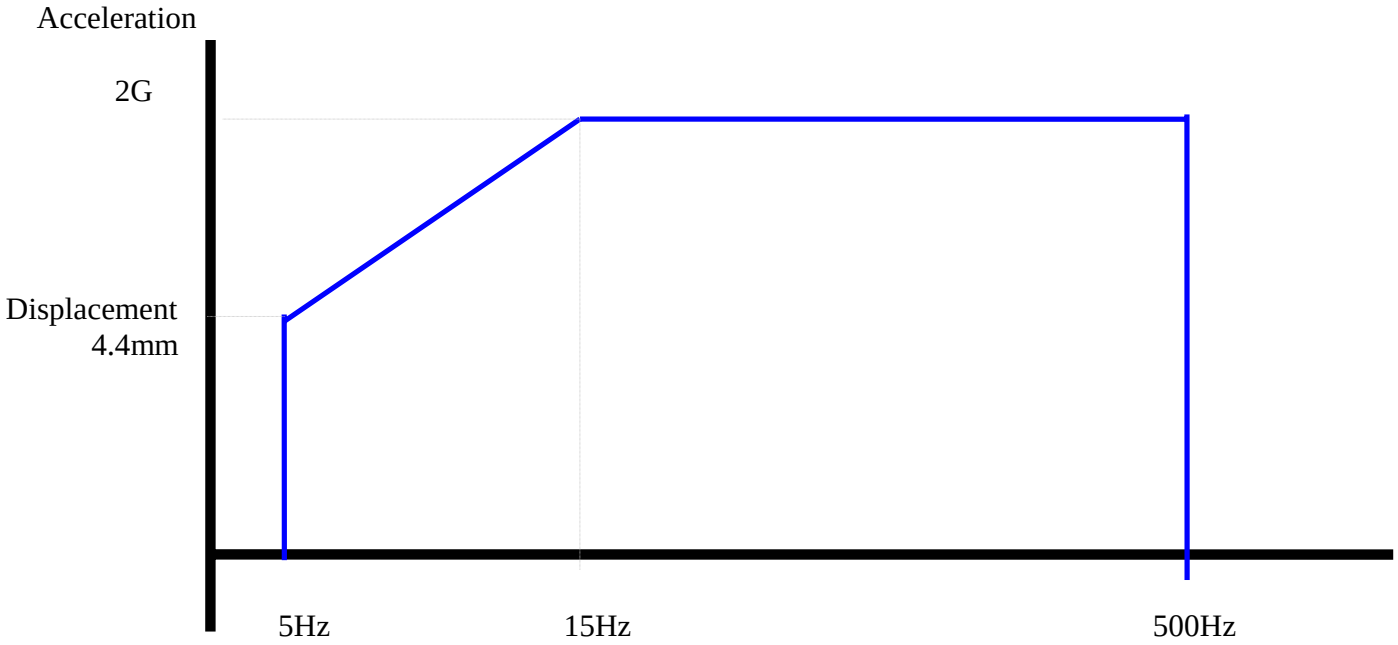
Test Date : October 12, 2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test

Test Standard : Reference IEC68-2-6 Testing procedures
Test Fc: Vibration sinusoidal Test

Test Condition :

1. Test Acceleration: 2G
2. Test Frequency :5-500Hz
3. Test Axis : X,Y ,Z axis
4. Test Time : 1Hr pre axis
5. Test Vibration Curve :



QA Lab Reliability test

Test Equipment : Vibration Simulator System
KING DESIGN Co. LTD.
Model: 9363EM-600F2K-40N120
S / N: MC107142493
Date of Calibration: 09/20/2004

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-744 REV.A2
2. CPU: Intel P4 2.8GHz 478
3. CPU fan: Cooljag CJC66PC-3D
4. RAM: Transcend 512MB*2
5. HDD: Quantum AS30A011-03B
6. CD-ROM: Quantum SCR-242
7. VGA card: ATI 109-40600-10
8. Power: Zippy P1G-6300P
9. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The switch button ,covers ,slot can work properly without any interference.
2. All screws are tighten up appropriately.
3. All gaps on the surface are appropriately.
4. Assembling/disassembling the system enclosure or mechanical parts must be smooth ,and no deformed parts found.

QA Lab Reliability test

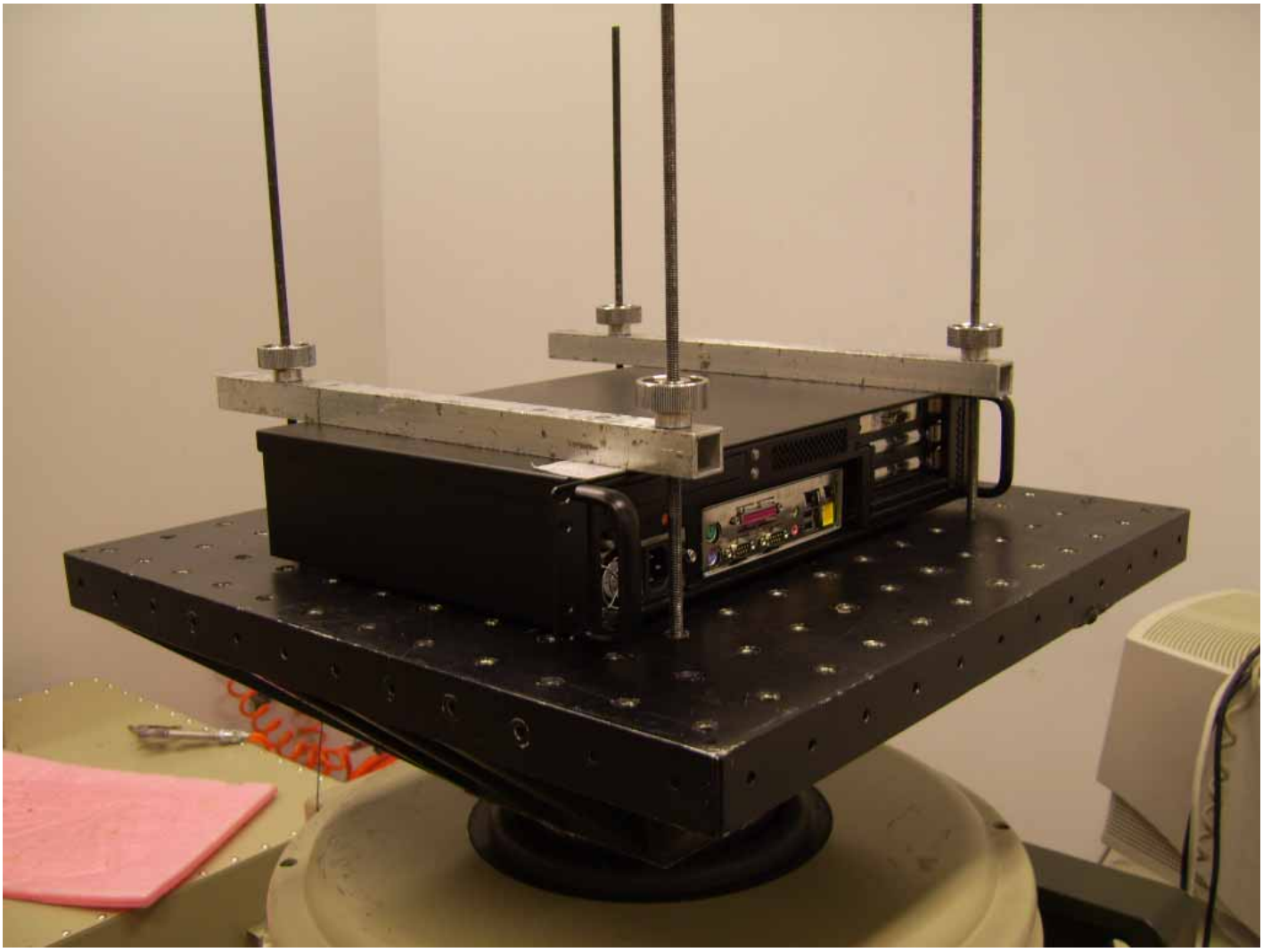
Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

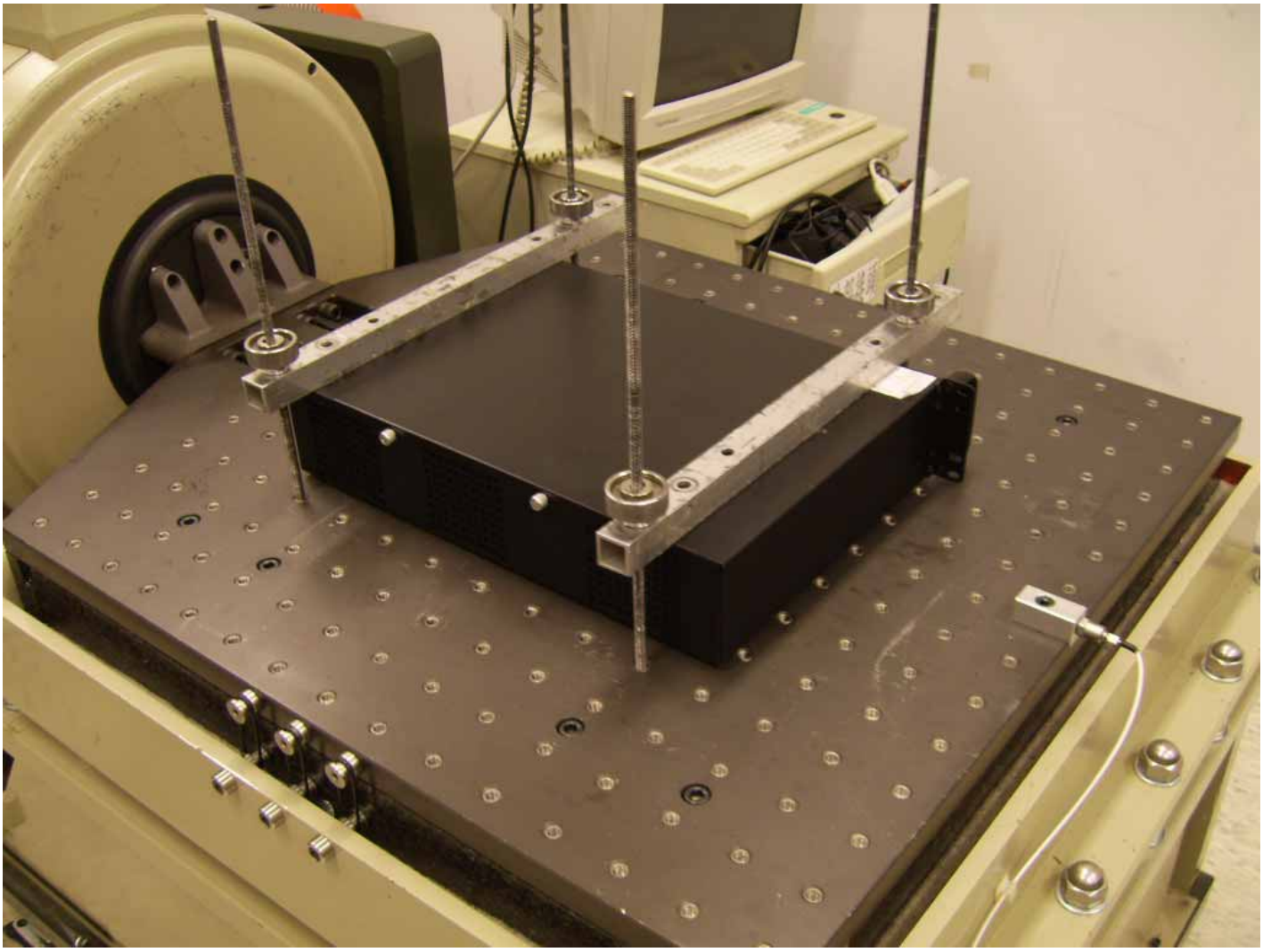
Passed.
The IPC-603MB Industrial Panel PC meets sine vibration non-operation test.

PHOTO I:



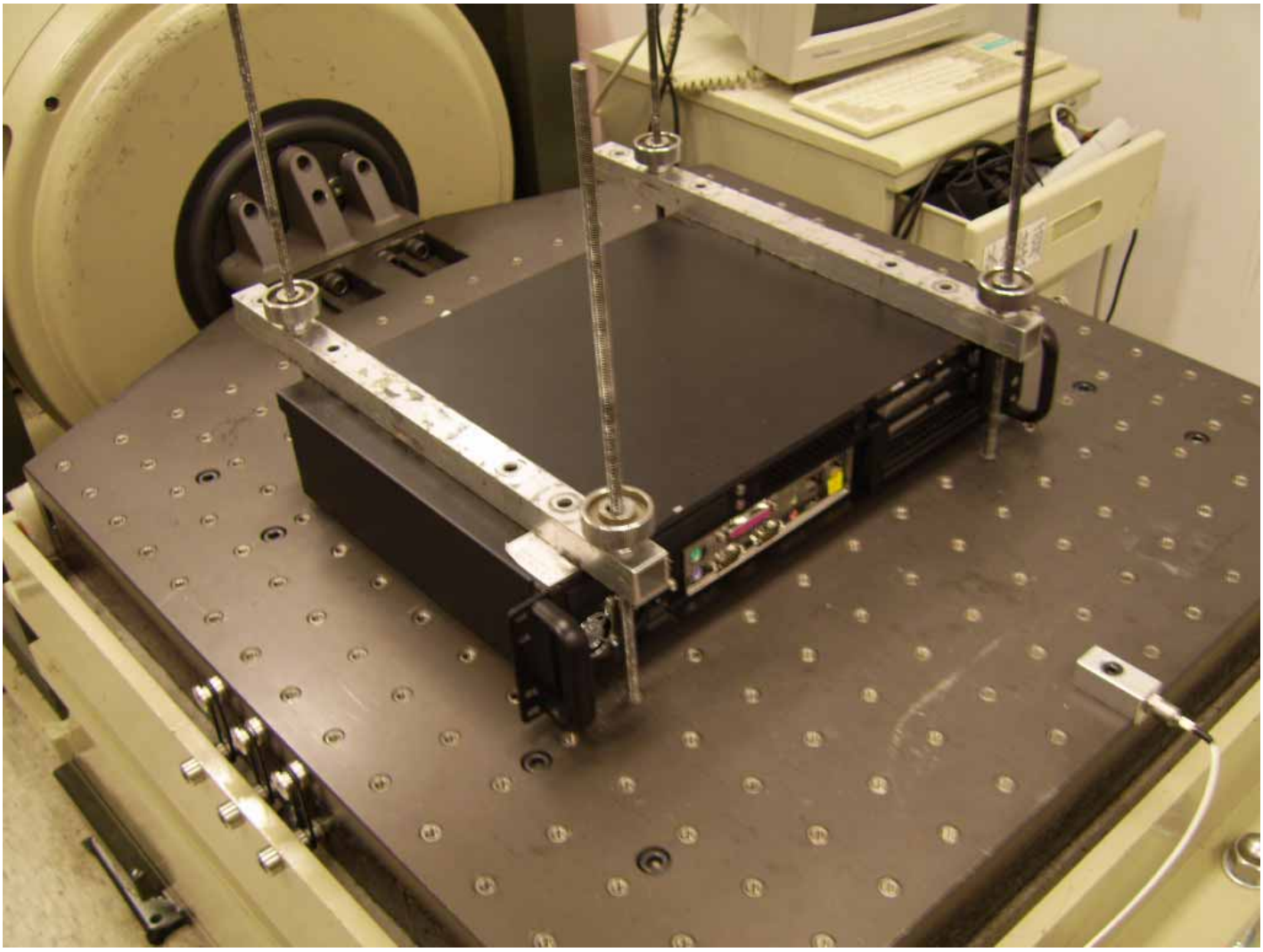
IPC-603MB Sine vibration test Z axis

PHOTO II:



IPC-603MB Sine vibration test X axis

PHOTO III:



IPC-603MB Sine vibration test Y axis

IPC-603MB # Package Vibration Test **Report No.05S054A0**

QA Lab Reliability test

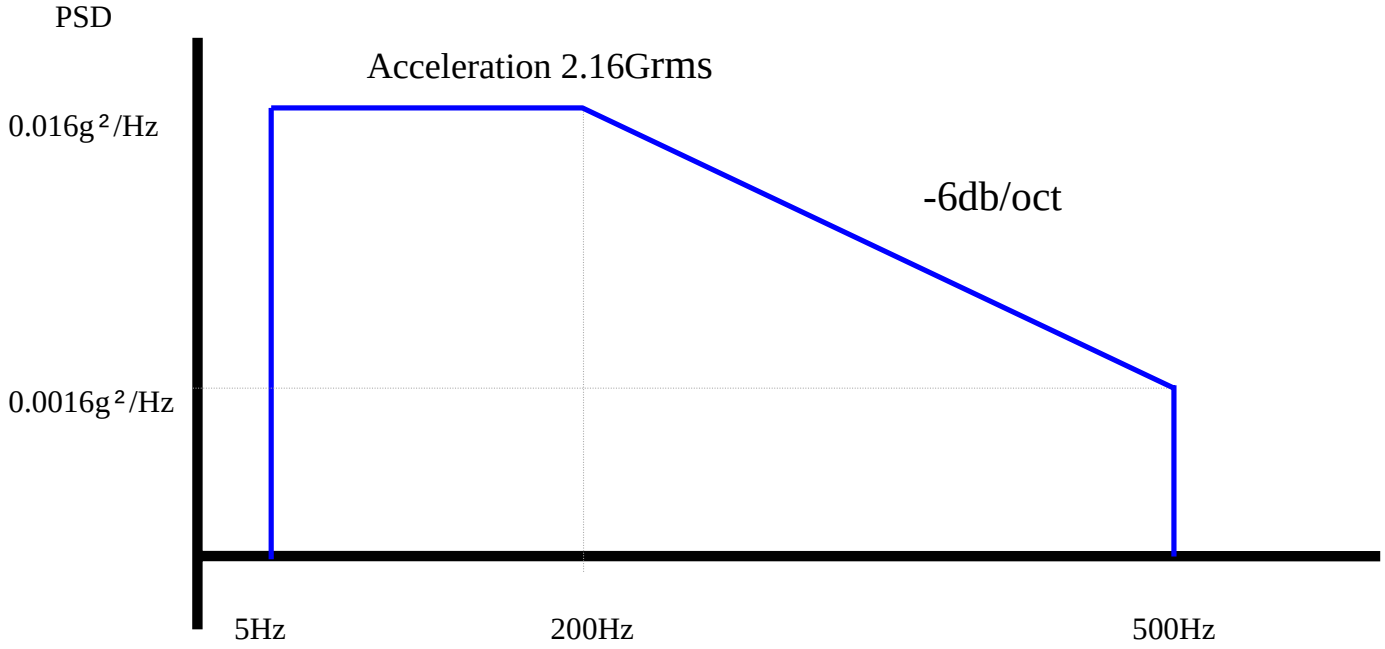
Test Date : October 11, 2005
Test Site : Advantech QA Environment Lab
Performed By : Knight Hu

Purpose : The DVT test.

Test Standard : Reference IEC68-2-64 Testing procedures
Test Fh : Vibration broadband random test

Test Condition :

1. Test PSD : 0.016G²/Hz (2.16Grms)
2. Test Frequency : 5-500Hz
3. Test Axis : X,Y and Z axis
4. Test Time : 30 mins per each axis
5. Test Curve :



QA Lab Reliability test

Test Equipment : Vibration Simulator System
KING DESIGN Co. LTD.
Model: 9363EM-600F2K-40N120
S / N: MC107142493
Date of Calibration: 09/20/2004

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-744 REV.A2
2. CPU: Intel P4 2.8GHz 478
3. CPU fan: Cooljag CJC66PC-3D
4. RAM: Transcend 512MB*2
5. HDD: Quantum AS30A011-03B
6. CD-ROM: Quantum SCR-242
7. VGA card: ATI 109-40600-10
8. Power: Zippy P1G-6300P
9. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The switch button covers, slot can work properly without any interference.
2. All screws are tighten up appropriately.
3. All gaps on the surface are appropriately.
4. Assembling/disassembling the system enclosure or mechanical parts must be smoothes, and no deformed parts found.

QA Lab Reliability test

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

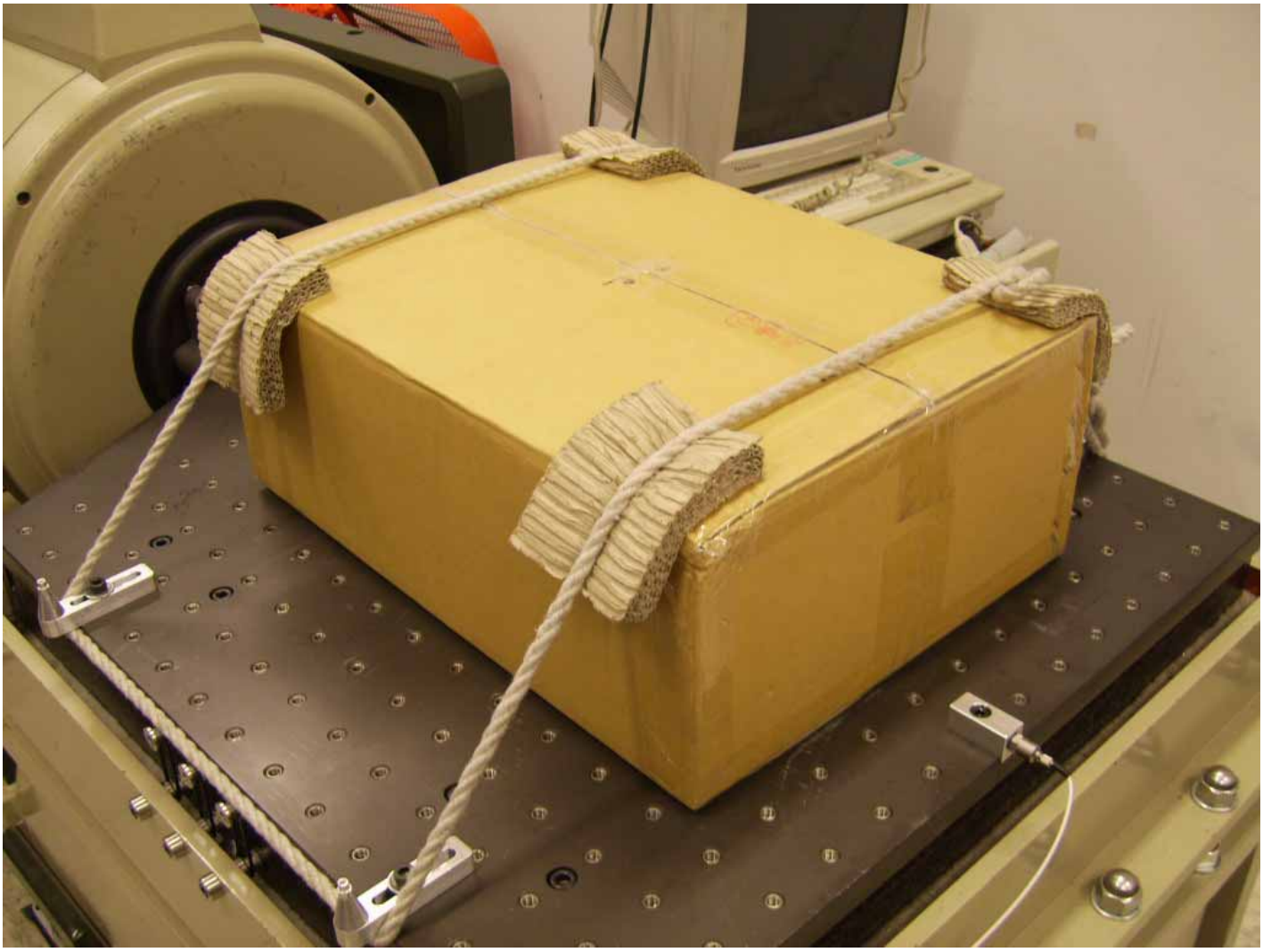
Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets package vibration test.

PHOTO I:

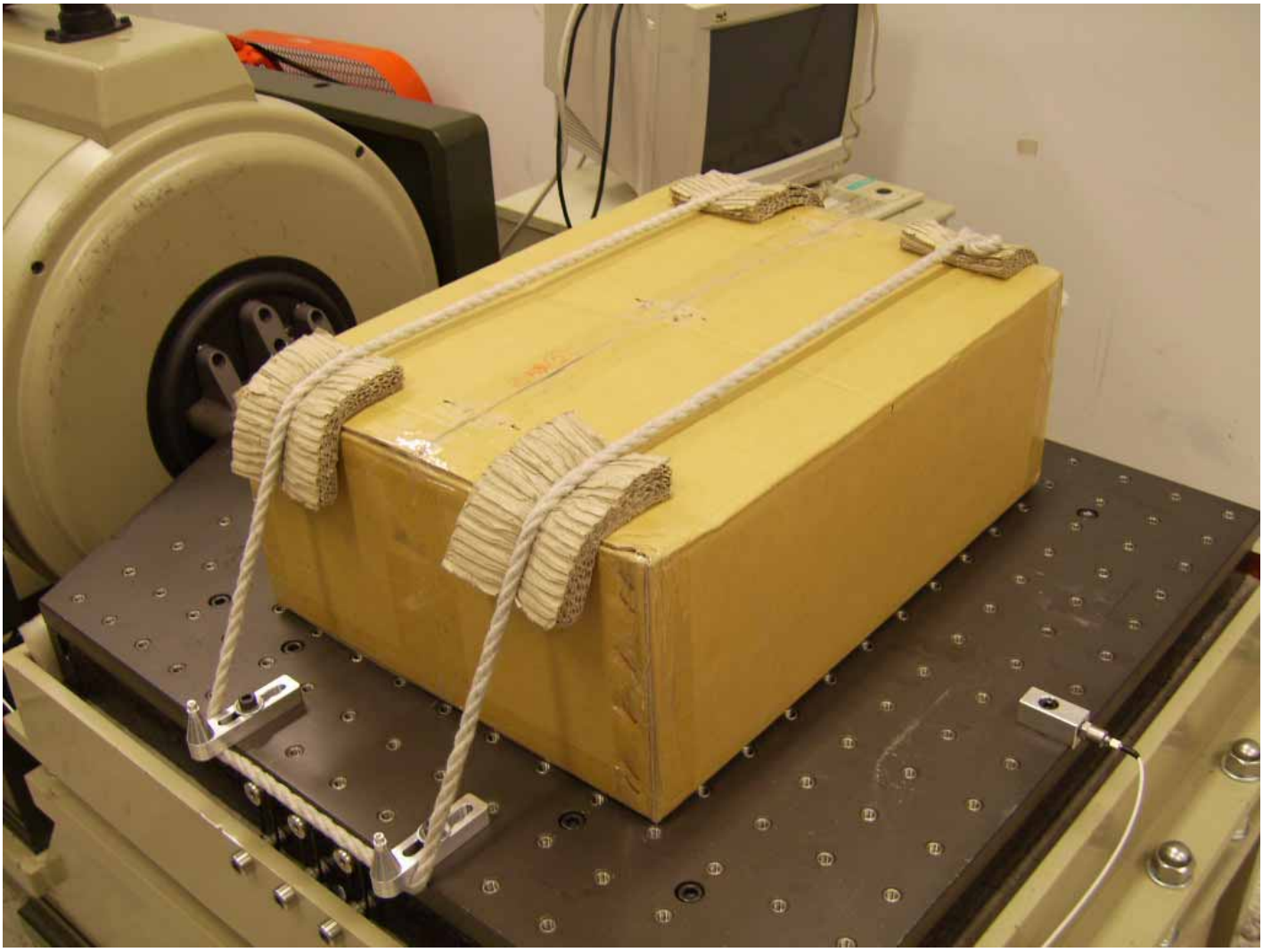
IPC-603MB package vibration test Z axis

PHOTO II:



IPC-603MB package vibration test X axis

PHOTO III:



IPC-603MB package vibration test Y axis

IPC-603MB # Package drop Test **Report No.05S054A0**

QA Lab Reliability test

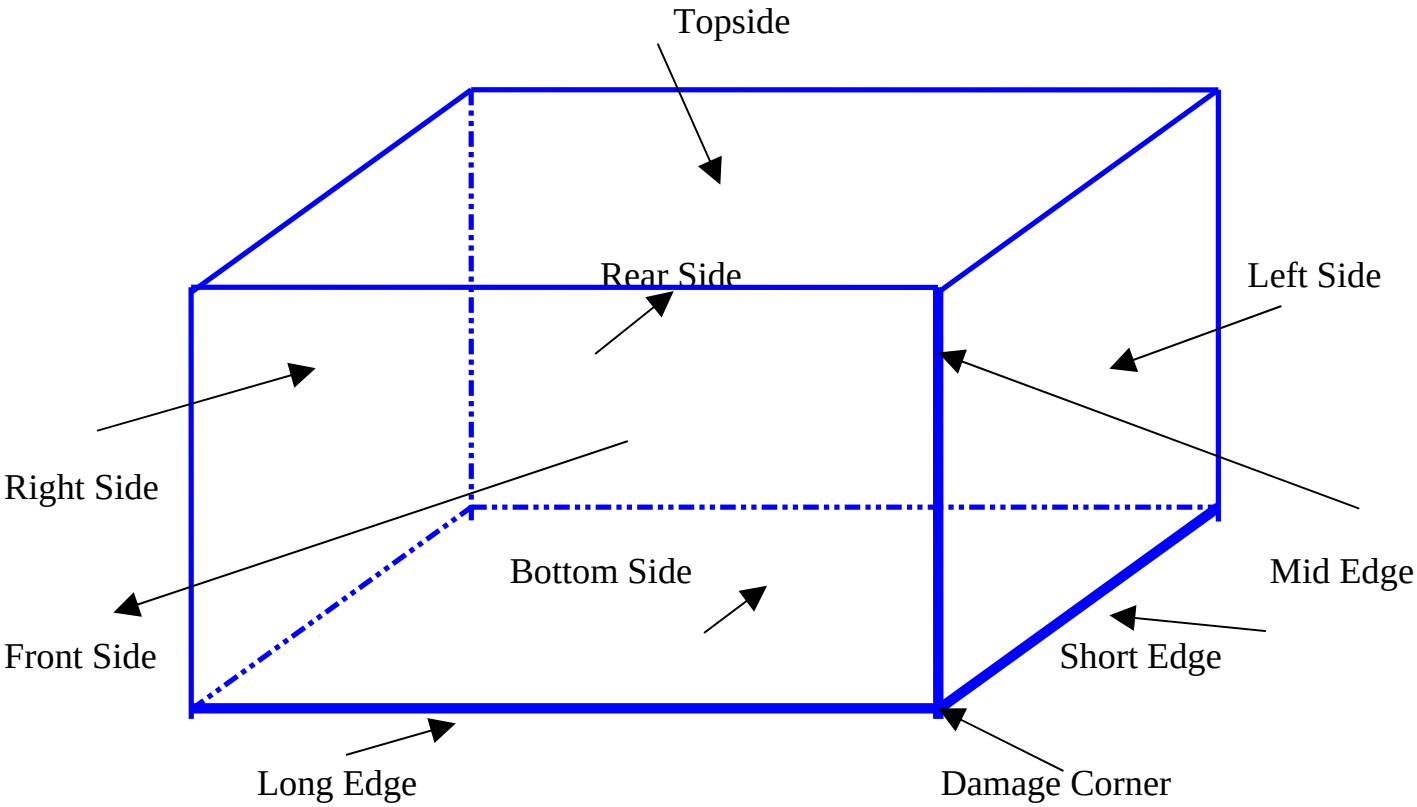
Test Date : November 16, 2005
Test Site : Advantech QA Environment Lab
Performed By: Knight Hu

Purpose : The DVT test.

Test Standard : Reference Federal Standard 101 Method 5007 Testing procedure B
Test Ea : Drop Test

Test Condition :

1. Test Phase : One corner
   Three edges
   Six faces
2. Test High: 76cm
3. Package Weight: 15.6Kg
4. Package Dimension: 62.0cm*33.3cm*53.0cm
5. Test Drawing :



IPC-603MB # Package drop Test **Report No.05S054A0**

QA Lab Reliability test

Test Equipment : Drop Tester Machine
TOSHIDA SEIKI Co. LTD.
Model : DT-100B

Sample Configuration & Quantity Under Test :

Using one IPC-603MB Industrial Panel PC with the following options installed :

1. M/B: AIMB-744 REV.A2
2. CPU: Intel P4 2.8GHz 478
3. CPU fan: Cooljag CJC66PC-3D
4. RAM: Transcend 512MB*2
5. HDD: Quantum AS30A011-03B
6. CD-ROM: Quantum SCR-242
7. VGA card: ATI 109-40600-10
8. Power: Zippy P1G-6300P
9. System fan: Delta AFB0812SH*2

Performance Criteria :

Electronic function check:

1. All system functions must be checked with appropriate testing programs and should pass the inspection.
2. Running WinXP for OS, the system should not have degradation in its performance.

Mechanical function check:

1. The switch button covers, slot can work properly without any interference.
2. All screws are tighten up appropriately.
3. All gaps on the surface are appropriately.
4. Assembling/disassembling the system enclosure or mechanical parts must be smoothes, and no deformed parts found.

Test Data:

Side	Acceleration
Front	**46.2G**
Rear	**48.2G**
Right	**42.1G**
Left	**41.2G**
Top	**64.3G**
Bottom	**51.6G**

Test Result :

There is no damage in electronic and mechanical functions.
Degradation has not been found.
Performance is maintained with no incurable physical damage or degradation.

Conclusion :

Passed.
The IPC-603MB Industrial Panel PC meets Package drop test.

PHOTO I:

IPC-603MB test photo

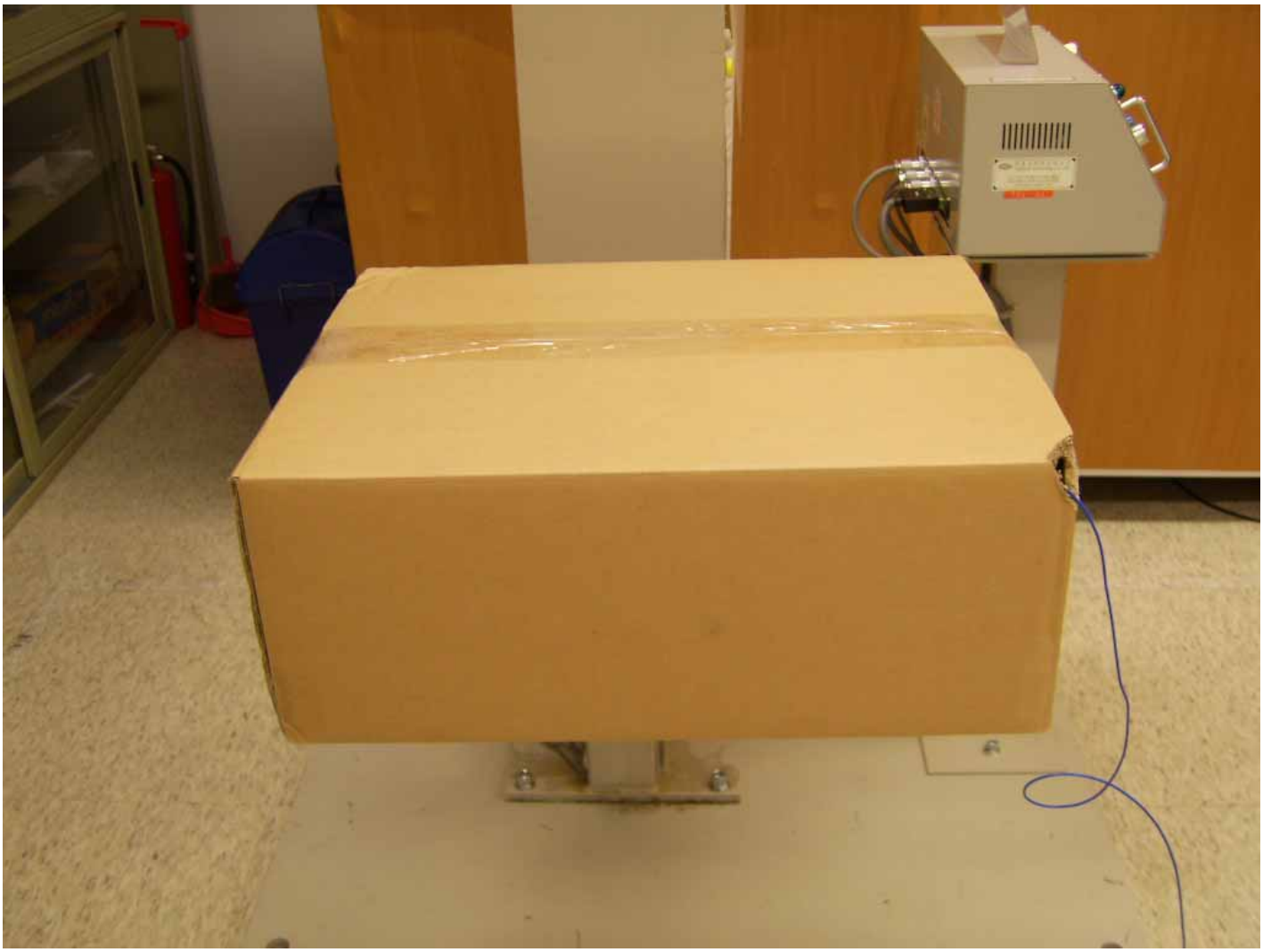
PHOTO II:

IPC-603MB corner test photo

PHOTO III:

IPC-603MB edge test photo

PHOTO IV:



IPC-603MB face test photo