



**FCC 47 CFR PART 18**

**TEST REPORT**

**For**

**Medical Station**

**Model: ONYX-173; ONYX-153**

**Trade Name: AAEON**

Issued to

**AAEON Technology Inc.  
5F, No.135, Lane 235, Pao Chiao Rd.,  
Hsin-Tien City, Taipei, Taiwan, R.O.C.**

Issued by



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# 1 TEST RESULT CERTIFICATION

**Applicant:** AAEON Technology Inc.  
5F, No.135, Lane 235, Pao Chiao Rd.,  
Hsin-Tien City, Taipei, Taiwan, R.O.C.

**Manufacturer:** AAEON Technology Inc.  
5F, No.135, Lane 235, Pao Chiao Rd.,  
Hsin-Tien City, Taipei, Taiwan, R.O.C.

**Equipment Under Test:** Medical Station

**Trade Name:** AAEON

**Model:** ONYX-173; ONYX-153

**Detailed EUT Description:** See Item 2 of this report

**Date of Test:** March 22, 2005 ~ March 29, 2005

| Applicable Standard                       | Class / Limit | Test Result             |
|---|---------------|-------------------------|
| FCC Part 18                               | ---           | No non-compliance noted |
| <b>Deviation from Applicable Standard</b> |               |                         |
| None                                      |               |                         |

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in the FCC Rules and Regulations Part 18 and the measurement procedures were according to FCC/OST MP-5. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

*Approved by:*

*Reviewed by:*

David Wang  
 Manager of Hsintien Laboratory  
 Compliance Certification Services Inc.

Vince Chiang  
 Assistant Manager of Hsintien Laboratory  
 Compliance Certification Services Inc.



## 2 EUT DESCRIPTION

|                                  |                               |
|----------------------------------|-------------------------------|
| <b>Product</b>                   | Medical Station               |
| <b>Trade Name</b>                | AAEON                         |
| <b>Model</b>                     | ONYX-173; ONYX-153            |
| <b>Housing Type</b>              | Plastic                       |
| <b>EUT Power Rating</b>          | 100 ~ 240VAC                  |
| <b>AC Power During Test</b>      | 120VAC / 60Hz                 |
| <b>Power Supply Manufacturer</b> | FSP                           |
| <b>Power Supply Model Number</b> | FSP180-50MP                   |
| <b>AC Power Cord Type</b>        | Unshielded, 1.8m (Detachable) |
| <b>OSC/Clock Frequencies</b>     | 14.31818MHz; 25MHz; 32.768kHz |

### MODEL DIFFERENCE

|                   | <b>Model Name</b> | <b>Panel</b>             | <b>Tested (Checked)</b>             |
|-------------------|-------------------|--------------------------|-------------------------------------|
| <b>Original</b>   | ONYX-173          | CHUNGHWA / CLAA170EA-07Y | <input checked="" type="checkbox"/> |
| <b>Additional</b> | ONYX-153          | CHUNGHWA / CLAA150XP03   | <input checked="" type="checkbox"/> |

### EUT DEVICES

| <b>No</b> | <b>Equipment</b> | <b>Model #</b>    | <b>Serial #</b> | <b>FCC ID / BSMI ID</b> | <b>Trade Name</b> |
|-----------|------------------|-------------------|-----------------|-------------------------|-------------------|
| 1.        | HDD              | MHT2020AT         | N/A             | N/A                     | FUJITSU           |
| 2.        | Power Supply     | FSP180-50MP       | N/A             | N/A                     | FSP               |
| 3.        | DVD ROM          | DV-28SL           | N/A             | N/A                     | TEAC              |
| 4.        | CPU (1.6GHz)     | Pentium-M 1.6 GHz | N/A             | N/A                     | INTEL             |
| 5.        | Memory (512MB)   | DDR333MHZ         | N/A             | N/A                     | DSL               |
| 6.        | Motherboard      | PCM-8200          | N/A             | N/A                     | AAEON             |



**I/O PORT OF EUT**

| <b>I/O PORT TYPE</b>             | <b>Q'TY</b> | <b>TESTED WITH</b> |
|----------------------------------|-------------|--------------------|
| 1). PIO Port                     | 1           | 1                  |
| 2). SIO Port                     | 3           | 3                  |
| 3). PS/2 Keyboard Port           | 1           | 1                  |
| 4). PS/2 MOUSE Port              | 1           | 1                  |
| 5). VIDEO-OUT Port (VGA)         | 1           | 1                  |
| 6). AUDIO IN Port                | 1           | 1                  |
| 7). Microphone Port              | 1           | 1                  |
| 8). EARPHONE Port                | 1           | 1                  |
| 9). LAN Port                     | 1           | 1                  |
| 10). USB Port                    | 5           | 5                  |
| 11). S-VIDEO OUT Port            | 1           | 1                  |
| 12). CF / SD / SM / MS Card Slot | 4           | 4                  |

*Note: None.*



### 3 TEST METHODOLOGY

#### 3.1 EUT SYSTEM OPERATION

1. Windows 2000 boots system.
2. Run Emctest.exe to activate all peripherals and display "H" pattern on monitor screen.
3. Press the start menu, select exective and type ping 192.168.0.2 -t(EUT), ping 192.168.0.1 -t(Server Notebook).
4. Run Winemc.exe and choose E:/ & F:/ & G:/ & H:/ & I:/ & J:/ to test USB 2.0 HDD (external) and internal HDD, choose Midiplay to play music.

*Note: Test program is self-repeating throughout the test.*

#### 3.2 DECISION OF FINAL TEST MODE

1. The following test mode(s) were scanned during the preliminary test:

##### Conduction Mode(s):

|    |          |  |
|----|----------|--|
| 1. |          | 1280X1024, VF=60Hz / PANEL + LCD MODE    |
| 2. | ONYX-173 | 1024X768, VF=60Hz / PANEL + S-VIDEO MODE |
| 3. |          | 800X600, VF=60Hz / PANEL + S-VIDEO MODE  |
| 4. |          | 1280X1024, VF=60Hz / PANEL + LCD MODE    |
| 5. | ONYX-153 | 1024X768, VF=60Hz / PANEL + S-VIDEO MODE |
| 6. |          | 800X600, VF=60Hz / PANEL + S-VIDEO MODE  |

##### Radiation Mode(s):

|    |          |  |
|----|----------|--|
| 1. |          | 1280X1024, VF=60Hz / PANEL + LCD MODE    |
|    | ONYX-173 | 1-8GHz                                   |
| 2. |          | 1024X768, VF=60Hz / PANEL + S-VIDEO MODE |
| 3. |          | 800X600, VF=60Hz / PANEL + S-VIDEO MODE  |
| 4. |          | 1280X1024, VF=60Hz / PANEL + LCD MODE    |
| 5. | ONYX-153 | 1024X768, VF=60Hz / PANEL + S-VIDEO MODE |
| 6. |          | 800X600, VF=60Hz / PANEL + S-VIDEO MODE  |

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

**Conduction:** Mode 1

**Radiation:** Mode 1

Then, the EUT configuration and cable configuration of the above highest emission mode was recorded for all final test items.



## 4 SETUP OF EQUIPMENT UNDER TEST

### Setup Diagram

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

### Support Equipment

| No  | Equipment       | Model       | Serial No.          | FCC ID / BSMI ID      | Trade Name       | Data Cable                          | Power Cord                         |
|-----|-----------------|-------------|---------------------|-----------------------|------------------|-------------------------------------|------------------------------------|
| 1.  | PS/2 Mouse      | M071KC      | 443029438           | DoC<br>BSMI: R41108   | DELL             | Shielded,<br>1.8m                   | N/A                                |
| 2.  | PS/2 Keyboard   | SK-8110     | N/A                 | DoC<br>BSMI: T3A002   | DELL             | Shielded,<br>1.8m                   | N/A                                |
| 3.  | USB 2.0 HDD     | F12-U       | N/A                 | BSMI ID:<br>4912A002  | TeraSys          | Shielded,<br>1.4m                   | N/A                                |
| 4.  | USB 2.0 HDD     | F12-U       | N/A                 | BSMI ID:<br>4912A002  | TeraSys          | Shielded,<br>1.4m                   | N/A                                |
| 5.  | USB 2.0 HDD     | F12-U       | N/A                 | BSMI ID:<br>4912A002  | TeraSys          | Shielded,<br>1.4m                   | N/A                                |
| 6.  | USB 2.0 HDD     | F12-U       | N/A                 | BSMI ID:<br>4912A002  | TeraSys          | Shielded,<br>1.4m                   | N/A                                |
| 7.  | USB 2.0 HDD     | F12-U       | N/A                 | BSMI ID:<br>4912A002  | TeraSys          | Shielded,<br>1.4m                   | N/A                                |
| 8.  | Modem           | 5JEG4033MKO | N/A                 | 5RJTAI-35500-<br>M5-E | TOP-<br>SOLUTION | Shielded,<br>0.9m                   | Unshielded,<br>1.8m                |
| 9.  | Modem           | 5JEG4033MKO | N/A                 | 5RJTAI-35500-<br>M5-E | TOP-<br>SOLUTION | Shielded,<br>0.9m                   | Unshielded,<br>1.8m                |
| 10. | Modem           | 1414        | N/A                 | IFAXDM1414            | ACEEX            | Shielded,<br>0.9m                   | Unshielded,<br>1.8m                |
| 11. | Player          | RQ-L11LT    | N/A                 | BSMI ID:<br>3912A162  | Panasonic        | Unshielded,<br>1.4m                 | N/A                                |
| 12. | Ear. / Mic.     | MSB301      | N/A                 | N/A                   | e-Sense          | Unshielded,<br>1.8m                 | N/A                                |
| 13. | Monitor (LCD)   | 710V        | GS17H9NXA0585<br>3A | DoC<br>BSMI: R33475   | SAMSUNG          | Shielded,<br>1.8m<br>with two cores | Unshielded,<br>1.8m                |
| 14. | Printer         | C60         | N/A                 | BSMI ID:<br>3902E006  | EPSON            | Shielded,<br>1.8m                   | Unshielded,<br>1.8m                |
| 15. | Monitor (TV)    | KD17NS      | 7728                | BSMI: R33475          | SAMAUNG          | Unshielded,<br>1.6m                 | Unshielded,<br>1.8m<br>with a core |
| 16. | Server Notebook | 2659-FT1    | AK-VHXOH<br>02/10 C | ANOPSIWLIV            | IBM              | Unshielded,<br>20m                  | Unshielded,<br>1.8m                |

**Note:** All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

**Grounding:** Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

## 5 FACILITIES AND ACCREDITATIONS





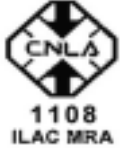


### 5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at CCS Taiwan Hsintien Lab at No. 165, Chungshen Road, Hsintien City, Taipei Hsien, Taiwan.

The measurement facilities are constructed in conformance with the requirements of CISPR 16-1, ANSI C63.4 and other equivalent standards.

### 5.2 LABORATORY ACCREDITATIONS AND LISTINGS

The test facilities used to perform Electromagnetic compatibility tests are registered or accredited by the organizations listed in the following table which includes the recognized scope specifically.

| Country | Agency          | Scope of Accreditation   | Logo  |
|---------|-----------------|--|---|
| USA     | A2LA            | CFR 47, FCC Part 15/18 using ANSI 63.4; AS/NZS 3548; VCCI V3; CNS 13438; CNS 13439; CNS 13783; CNS 14115; CISPR 11/EN 55011; CISPR 14-1/EN 55014-1; CISPR 15/EN 55015; CISPR 22/EN 55022; EN 50081-1/EN 61000-6-3; EN 50082-1/EN 61000-6-4; IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6, IEC/EN 61000-4-8, IEC/EN 61000-4-11, IEC/EN 61000-3-2, IEC/EN 61000-3-3; CISPR 24/EN 55024; CISPR 14-2/EN 55014-2; EN 50081-2/EN 61000-6-1; EN 50082-2/EN 61000-6-2. |   |
| USA     | FCC             | 3/10 meter Open Area Test Sites to perform FCC Part 15/18 measurements   | <br>250366   |
| Japan   | VCCI            | 3/10 meter Open Area Test Sites and Line Conducted Test Room to perform conducted/radiated measurements  | <br>R-1434/1630~4<br>C-1511/1882                                     |
| Norway  | NEMKO           | EN 50081-1/2, EN 50082-1/2, IEC 61000-6-1/2/3/4, EN 50091-2, EN 50130-4, EN 55011, EN 55013, EN 55014-1/2, EN 55015, EN 55022, EN 55024, EN 61000-3-2/3, EN 61326-1, IEC 61000-4-2/3/4/5/6/8/11, Cisprr 16-1/2/3/4   | <br>ELA 103  |
| Taiwan  | CNLA            | 47 CFR FCC Part 15 Subpart B, EN 61000-3-2, EN 61000-3-3, CNS 13439, CNS 13783-1, CNS 13438, AS/NZS 3548, VCCI, CNS 13022-1/2/3, EN 55022, EN 55013, EN 55014-1, EN 61000-4-2/3/4/5/6/8/11, ENV 50204, ENV 50141, ENV 50142  | <br>1108<br>ILAC MRA   |
| Taiwan  | BSMI            | CNS 13438, CNS 13783-1, CNS 13439  | <br>SL2-IN-E-0005<br>SL2-A1-E-0005<br>SL2-R1-E-0005<br>SL2-R2-E-0005 |
| Canada  | Industry Canada | RSS212, Issue 1  | <br>IC 4752  |

**Note:** No part of this report may be used to claim or imply product endorsement by CNLA, A2LA or other government agency.





## 6 INSTRUMENT AND CALIBRATION

### 6.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 6.2 TEST AND MEASUREMENT EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1, ANSI C63.2 and other equivalent standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective manual.

#### Equipment Used for Emission Measurement

| Open Area Test Site # I    |           |           |               |                         |
|----------------------------|-----------|-----------|---------------|-------------------------|
| EQUIPMENT                  | MFR       | MODEL     | SERIAL NUMBER | CAL. DUE                |
| SITE NSA                   | CCS       | I Site    | N/A           | 09/17/2005              |
| MEASURE RECEIVER           | SCHAFFNER | SCR3501   | 338           | 07/05/2005              |
| SPECTRUM ANALYZER          | ADVANTEST | R3132     | 120900008     | No Calibration Required |
| ANTENNA                    | SCHAFFNER | CBL 6112B | 2809          | 09/24/2005              |
| AMPLIFIER                  | SCHAFFNER | CPA9231A  | 3626          | 10/08/2005              |
| CABLE                      | BELDEN    | 9913      | N-TYPE #12    | 02/18/2006              |
| ATTENUATOR                 | MCL       | UNAT-6    | AT06-3        | 10/08/2005              |
| THERMO-HYGRO METER         | TFA       | N/A       | NO.2          | 11/09/2005              |
| Above 1GHz Used            |           |           |               |                         |
| EMC ANALYZER (100Hz-22GHz) | HP        | 8566B     | 2937A06102    | 07/26/2005              |
| ANTENNA (1-18GHz)          | EMCO      | 3115      | 5761          | 01/17/2006              |
| AMPLIFIER (1-18GHz)        | HP        | 8449B     | 3008A01266    | 02/16/2006              |
| CABLE (1-18GHz)            | JYEBAO    | LL142     | SMA#RS1&2     | 02/16/2006              |

*Note: The measurement uncertainty is less than +/- 3.36dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.*



| <b>Conducted Emission Test Site # B</b> |            |              |                      |                 |
|---|------------|--------------|----------------------|-----------------|
| <b>EQUIPMENT</b>                        | <b>MFR</b> | <b>MODEL</b> | <b>SERIAL NUMBER</b> | <b>CAL. DUE</b> |
| TEST RECEIVER                           | R&S        | ESHS10       | 843743/015           | 04/07/2005      |
| LISN (EUT)                              | EMCO       | 3825/2       | 9106-1810            | 01/16/2006      |
| LISN                                    | EMCO       | 3825/2       | 1382                 | 01/16/2006      |
| BNC CABLE                               | MIYAZAKI   | 5D-FB        | BNC B1               | 07/18/2005      |
| Pulse Limiter                           | R&S        | ESH3-Z2      | 100374               | 08/26/2005      |
| THERMO-HYGRO METER                      | TOP        | HA-202       | 9303-3               | 03/02/2006      |

*Note: The measurement uncertainty is less than +/- 2.83dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.*



## 7 LINE CONDUCTED & RADIATED EMISSION TEST

### 7.1 LIMIT

#### Maximum permissible level of Line Conducted Emission

(All Other Part 18 Consumer Devices)

| Frequency (MHZ) | (dBuV)     |         |
|-----------------|------------|---------|
|                 | Quasi-peak | Average |
| 0.15-0.5        | 66-56*     | 56-46*  |
| 0.50 - 5.0      | 56         | 46      |
| 5.0 - 30.0      | 60         | 50      |

\* Decreases with the logarithm of the frequency.

#### Maximum permissible level of Radiated Emission measured

(Any Non-ISM Frequency Below 500W)

| Range Of Frequency   | Limit at 300m (uV/m) | Limit at 10m (dBuV/m) | Limit at 3m (dBuV/m) |
|--|----------------------|-----------------------|----------------------|
| Lowest Frequency Generated In The Device Or 100MHz To Tenth Harmonic | 15                   | 53                    | 63.5                 |

Notes: Frequency Below Or Equal 1000MHz. Used Quasi-Peak Detector. Frequency Above 1000MHz Used Average Detector And Peak Detector(Limit + 20dB).



## 7.2 TEST PROCEDURE OF LINE CONDUCTED EMISSION

### Procedure of Preliminary Test

- The EUT was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per FCC/OST MP-5 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per FCC/OST MP-5
- All I/O cables were positioned to simulate typical actual usage as per FCC/OST MP-5
- The test equipment EUT installed received AC power, 120VAC/60Hz, through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane.
- All support equipment received power from a second LISN.
- The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a EMI Test Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to the Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Receiver.
- The Receiver scanned from 9kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.2 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.2 producing the highest emission level.
- The EUT configuration and cable configuration of the above highest emission level were recorded for reference of the final test.



**Procedure of Final Test**

- EUT and support equipment were set up on the test bench as per step 10 of the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the AV. limit in Q.P. mode, then the emission signal was re-checked using an AV. detector.
- The test data of the worst-case condition(s) was recorded.

**Data Sample:**

| Freq. MHz | Read Level dBuV | Factor dB | Level dBuV | Limit dBuV | Over Limit dB | Reading Type (P/Q/A) | Line (L1/L2) |
|-----------|-----------------|-----------|------------|------------|---------------|----------------------|--------------|
| x.xx      | 42.95           | 0.55      | 43.50      | 56         | -12.50        | Q                    | L1           |

- Freq. = Emission frequency in MHz
- Read Level = Uncorrected Analyzer/Receiver reading
- Factor = Insertion loss of LISN + Cable Loss
- Level = Read Level + Factor
- Limit = Limit stated in standard
- Over Limit = Reading in reference to limit
- P = Peak Reading
- Q = Quasi-peak Reading
- A = Average Reading
- L1 = Hot side
- L2 = Neutral side

**Calculation Formula**

Over Limit (dB) = Level (dBuV) – Limit (dBuV)



## 7.3 TEST PROCEDURE OF RADIATED EMISSION

### Procedure of Preliminary Test

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per FCC/OST MP-5.
- All I/O cables were positioned to simulate typical usage as per FCC/OST MP-5.
- The EUT received AC power source, 120VAC/60Hz, from the outlet socket under the turntable. All support equipment received power from another socket under the turntable.
- The antenna was placed at 3 meter away from the EUT as stated in FCC/OST MP-5. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 0.009-30MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT and loop antenna to 360 degrees, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- The test mode(s) described in Item 3.2 were scanned during the preliminary test:
- After the preliminary scan, we found the test mode described in Item 3.2 producing the highest emission level.
- The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.



**Procedure of Final Test**

- EUT and support equipment were set up on the turntable as per step 8 of the preliminary test.
- The Analyzer / Receiver scanned from 0.009MHz to 30MHz. Emissions were scanned and measured rotating the EUT and loop antenna to 360 degrees, varying cable placement, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.
- The test data of the worst case condition(s) was recorded.

**Data Sample:**

| Freq. MHz | Amptd dBuV/m | Margin dB | Limit dBuV/m | Reading dBuV | Factor dB/m | Reading Type (P/Q/A) | Pol. (H/V) |
|-----------|--------------|-----------|--------------|--------------|-------------|----------------------|------------|
| x.xx      | 29.34        | -7.66     | 37           | 32.00        | -2.66       | Q                    | H          |

- Freq. = Emission frequency in MHz
- Reading = Uncorrected Analyzer/Receiver reading
- Factor = Antenna Factor + Cable Loss + Attenuator (3/6/10dB) – Amplifier Gain
- Amptd = Uncorrected Analyzer/Receiver reading + Factor
- Limit = Limit stated in standard
- Margin = Reading in reference to limit
- P = Peak Reading
- Q = Quasi-peak Reading
- A = Average Reading
- H = Antenna Polarization: Horizontal
- V = Antenna Polarization: Vertical

**Calculation Formula**

Margin (dB) = Amptd (dBuV/m) – Limit (dBuV/m)



### 7.4 TEST RESULTS

#### Line Conducted Emission

**Model:** ONYX-173

**Test Mode:** Mode 1

**Temperature:** 22°C

**Humidity:** 60% RH

**Test Results:** Passed

**Tested by:** Alex Pan

(The chart below shows the highest readings taken from the final data, see **Appendix II** for details.)

| Six Highest Conducted Emission Readings |                   |             |              |                   |                 |                      |              |
|---|-------------------|-------------|--------------|-------------------|-----------------|----------------------|--------------|
| Frequency Range Investigated            |                   |             |              | 150 kHz to 30 MHz |                 |                      |              |
| Freq (MHz)                              | Read Level (dBuV) | Factor (dB) | Level (dBuV) | Limit Line (dBuV) | Over Limit (dB) | Reading Type (P/Q/A) | Line (L1/L2) |
| 1.065                                   | 35.04             | 10.00       | 45.04        | 56.00             | -10.96          | P                    | L1           |
| 1.352                                   | 35.46             | 10.04       | 45.50        | 56.00             | -10.50          | P                    | L1           |
| 11.139                                  | 41.32             | 10.39       | 51.71        | 60.00             | -8.29           | P                    | L1           |
| 11.139                                  | 28.21             | 10.39       | 38.60        | 50.00             | -11.40          | A                    | L1           |
| 0.775                                   | 33.60             | 9.99        | 43.59        | 56.00             | -12.41          | P                    | L2           |
| 1.054                                   | 33.78             | 9.99        | 43.77        | 56.00             | -12.23          | P                    | L2           |
| 11.317                                  | 43.34             | 10.32       | 53.66        | 60.00             | -6.34           | P                    | L2           |
| 11.317                                  | 31.00             | 10.32       | 41.32        | 50.00             | -8.68           | A                    | L2           |

*NOTE: The emission level was or more than 2dB below the Average limit, so no re-check anymore.*





**Radiated Emission**

**Model:** ONYX-173

**Test Mode:** Mode 1

**Temperature:** 25°C

**Humidity:** 56% RH

**Test Results:** Passed

**Tested by:** Kevin Chang

(The chart below shows the highest readings taken from the final data, see **Appendix II** for details.)

| <b>Six Highest Radiated Emission Readings</b> |                           |                        |                           |                                  |                          |                                     |                       |
|---|---------------------------|------------------------|---------------------------|----------------------------------|--------------------------|-------------------------------------|-----------------------|
| <b>Frequency Range Investigated</b>           |                           |                        |                           | <b>30 MHz to 1000 MHz at 10m</b> |                          |                                     |                       |
| <b>Freq<br/>(MHz)</b>                         | <b>Amptd<br/>(dBuV/m)</b> | <b>Margin<br/>(dB)</b> | <b>Limit<br/>(dBuV/m)</b> | <b>Reading<br/>(dBuV)</b>        | <b>Factor<br/>(dB/m)</b> | <b>Reading<br/>Type<br/>(P/Q/A)</b> | <b>Pol.<br/>(H/V)</b> |
| <b>68.1000</b>                                | <b>24.52</b>              | <b>-5.48</b>           | <b>30.00</b>              | <b>40.84</b>                     | <b>-16.32</b>            | <b>P</b>                            | <b>V</b>              |
| <b>182.1600</b>                               | <b>24.88</b>              | <b>-5.12</b>           | <b>30.00</b>              | <b>36.80</b>                     | <b>-11.92</b>            | <b>P</b>                            | <b>V</b>              |
| <b>498.5600</b>                               | <b>33.04</b>              | <b>-3.96</b>           | <b>37.00</b>              | <b>34.20</b>                     | <b>-1.16</b>             | <b>P</b>                            | <b>V</b>              |
| <b>133.2660</b>                               | <b>24.01</b>              | <b>-5.99</b>           | <b>30.00</b>              | <b>34.00</b>                     | <b>-9.99</b>             | <b>Q</b>                            | <b>H</b>              |
| <b>194.4500</b>                               | <b>25.71</b>              | <b>-4.29</b>           | <b>30.00</b>              | <b>37.50</b>                     | <b>-11.79</b>            | <b>Q</b>                            | <b>H</b>              |
| <b>366.4800</b>                               | <b>32.72</b>              | <b>-4.28</b>           | <b>37.00</b>              | <b>37.29</b>                     | <b>-4.57</b>             | <b>P</b>                            | <b>H</b>              |

*NOTE: None.*



## APPENDIX I - PHOTOGRAPHS OF TEST SETUP

### LINE CONDUCTED EMISSION TEST





## RADIATED EMISSION TEST





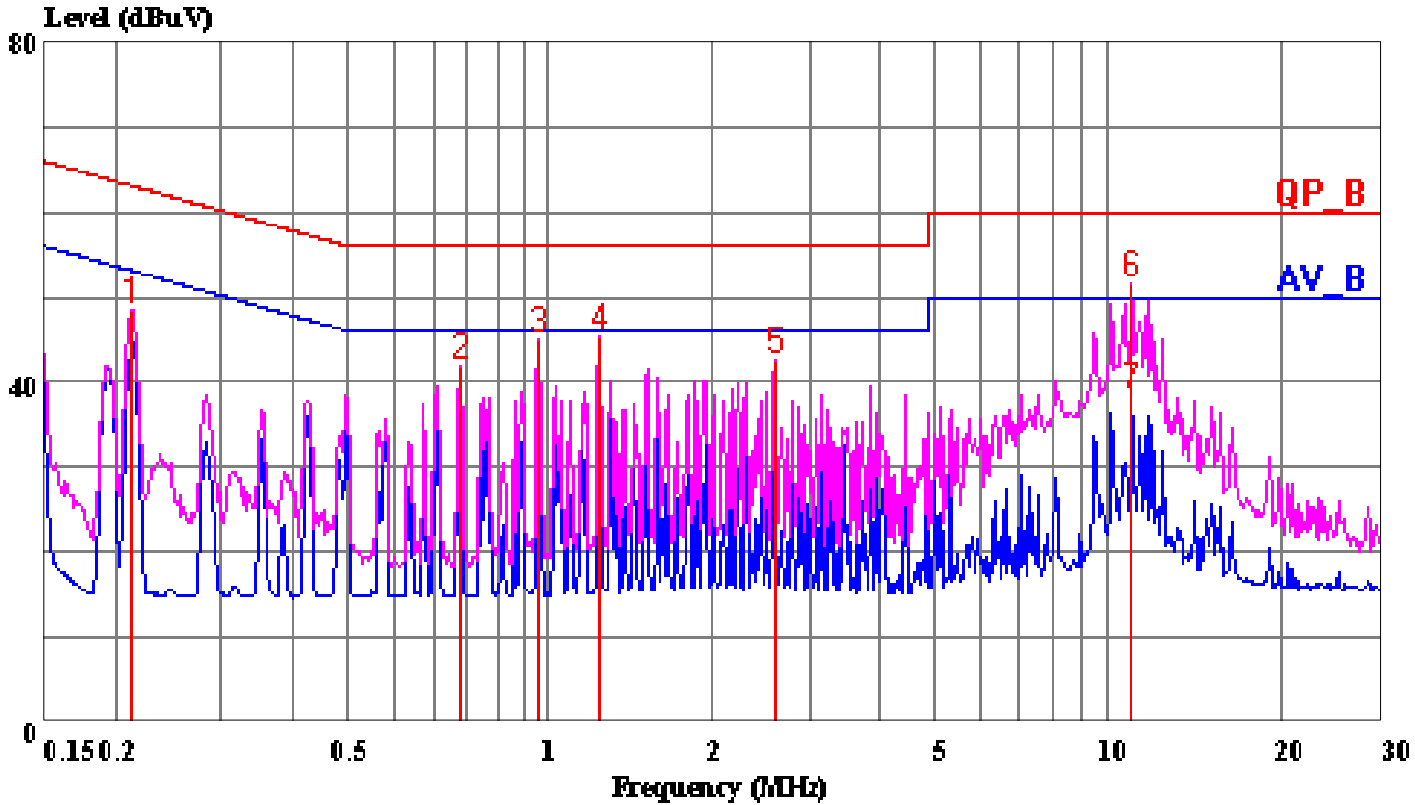
## **APPENDIX II - TEST RESULT OF FINAL DATAS**

**Conducted Emission Plot**

**Radiated Emission Data**

Data#: 26 File#: 50318208cb.EMI

Date: 2005-03-22 Time: 18:26:46



**(CCS Conduction B)**

Trace: 4 3

Ref Trace:

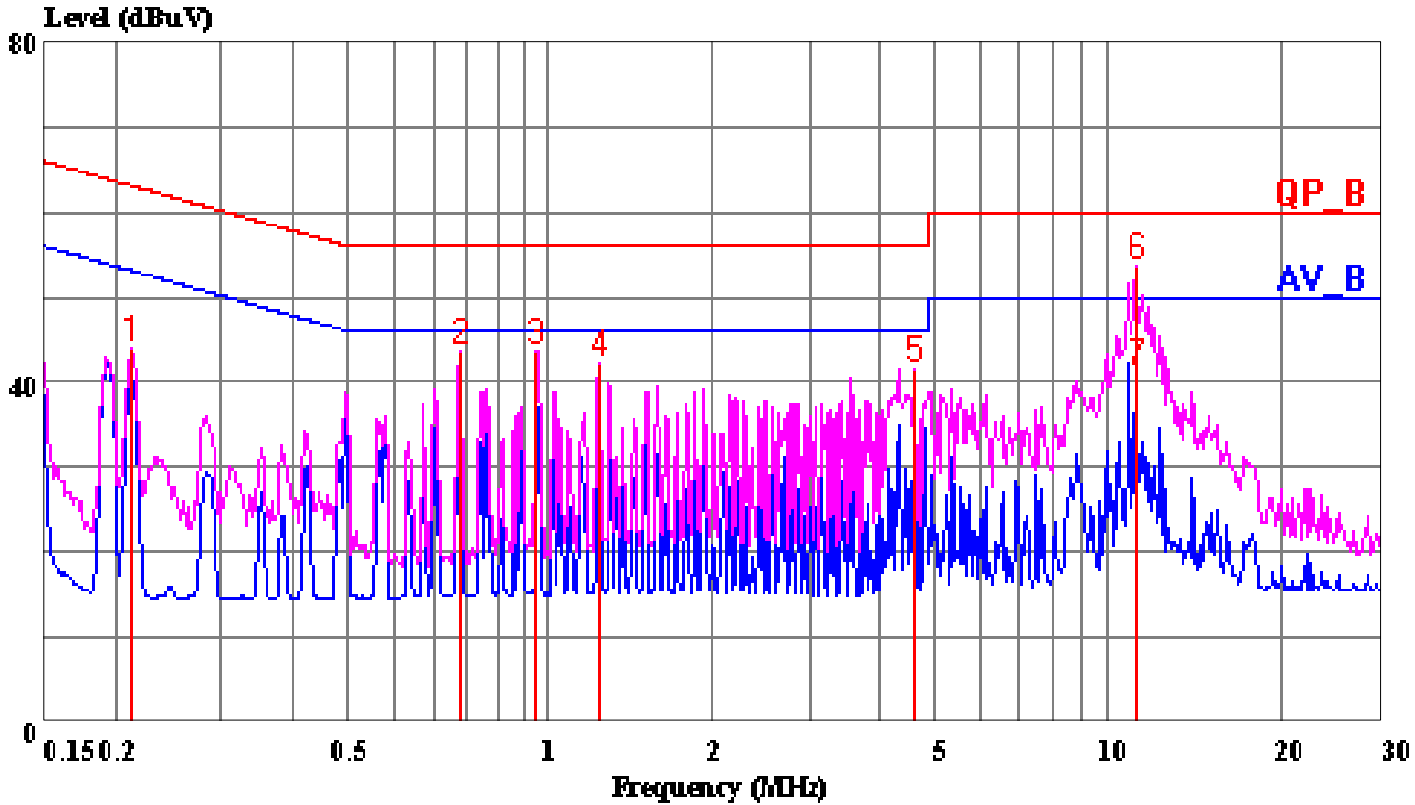
Condition: LINE  
Report No. : 50318208  
Test Engr. : ALEX PAN  
Company : AAeon Technology Inc.  
EUT : ONYX-173  
Test Config : EUT / ALL PERIPHERALS  
Type of Test: FCC CLASS B  
Mode of Op. : 1280X1024, VF=60Hz / PANEL + LCD MODE  
: / WORST

Page: 1

|   | Freq   | Read Level | Factor | Level | Limit Line | Over Limit | Remark  |
|---|--------|------------|--------|-------|------------|------------|---------|
|   | MHz    | dBuV       | dB     | dBuV  | dBuV       | dB         |         |
| 1 | 0.211  | 38.42      | 9.97   | 48.39 | 63.18      | -14.79     | Peak    |
| 2 | 0.775  | 31.84      | 9.99   | 41.83 | 56.00      | -14.17     | Peak    |
| 3 | 1.065  | 35.04      | 10.00  | 45.04 | 56.00      | -10.96     | Peak    |
| 4 | 1.352  | 35.46      | 10.04  | 45.50 | 56.00      | -10.50     | Peak    |
| 5 | 2.707  | 32.44      | 10.13  | 42.57 | 56.00      | -13.43     | Peak    |
| 6 | 11.139 | 41.32      | 10.39  | 51.71 | 60.00      | -8.29      | Peak    |
| 7 | 11.139 | 28.21      | 10.39  | 38.60 | 50.00      | -11.40     | Average |

Data#: 28 File#: 50318208cb.EMI

Date: 2005-03-22 Time: 18:30:53



**(CCS Conduction B)**

Trace: 11 10

Ref Trace:

Condition: NEUTRAL  
Report No. : 50318208  
Test Engr. : ALEX PAN  
Company : AAEON Technology Inc.  
EUT : ONYX-173  
Test Config : EUT / ALL PERIPHERALS  
Type of Test: FCC CLASS B  
Mode of Op. : 1280X1024, VF=60Hz / PANEL + LCD MODE  
: / WORST

Page: 1

|   | Read Freq | Level | Factor | Level | Limit | Over   | Remark  |
|---|-----------|-------|--------|-------|-------|--------|---------|
|   | MHz       | dBuV  | dB     | dBuV  | dBuV  | dB     |         |
| 1 | 0.211     | 34.08 | 9.97   | 44.05 | 63.18 | -19.13 | Peak    |
| 2 | 0.775     | 33.60 | 9.99   | 43.59 | 56.00 | -12.41 | Peak    |
| 3 | 1.054     | 33.78 | 9.99   | 43.77 | 56.00 | -12.23 | Peak    |
| 4 | 1.352     | 32.30 | 10.00  | 42.30 | 56.00 | -13.70 | Peak    |
| 5 | 4.721     | 31.50 | 10.11  | 41.61 | 56.00 | -14.39 | Peak    |
| 6 | 11.317    | 43.34 | 10.32  | 53.66 | 60.00 | -6.34  | Peak    |
| 7 | 11.317    | 31.00 | 10.32  | 41.32 | 50.00 | -8.68  | Average |

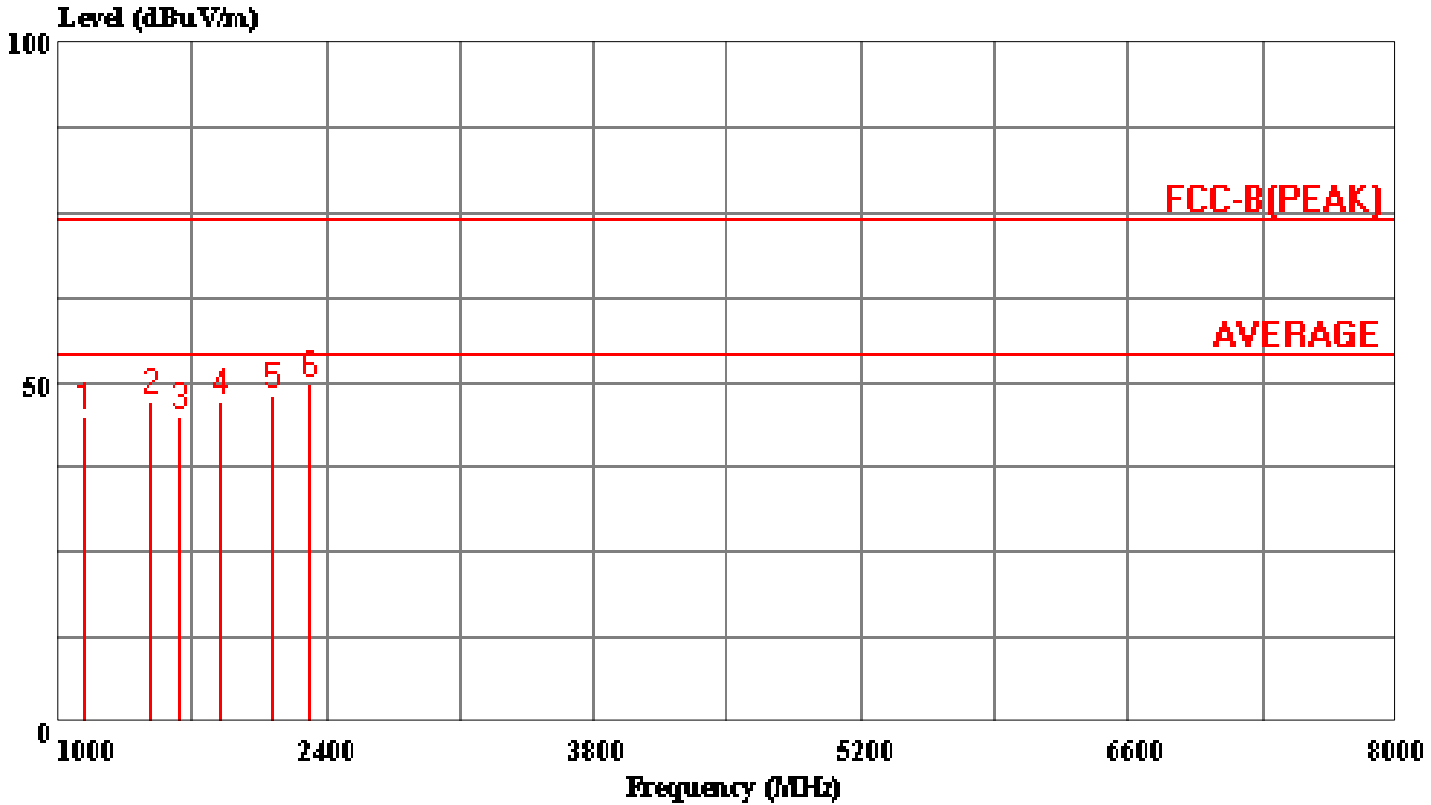






Data#: 11 File#: 50318208RS.EMI

Date: 2005-03-22 Time: 22:45:44



(Chamber RS)

Trace:

Ref Trace:

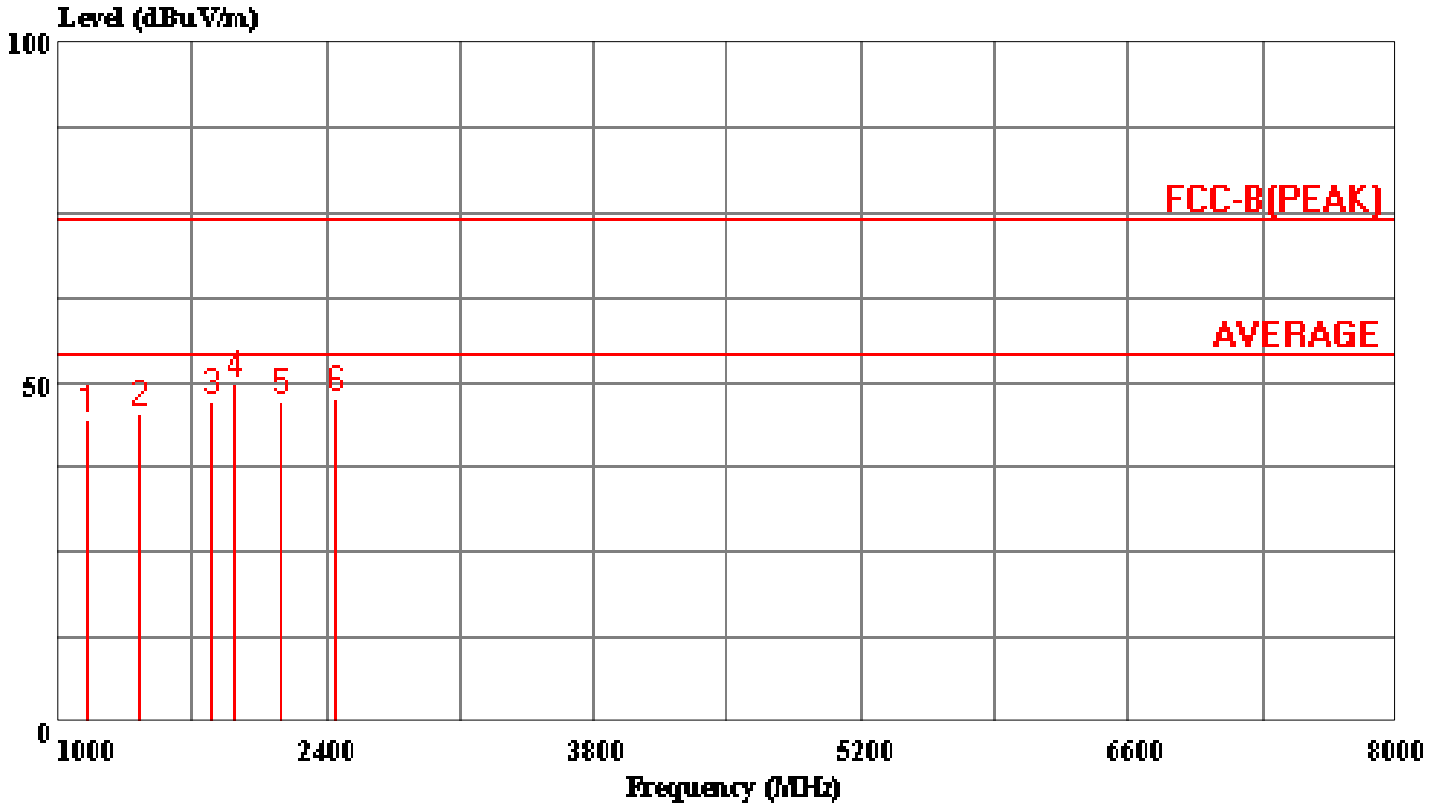
Condition: VERTICAL /3M  
Report No. : 50318208  
Test Engr. : ALEX PAN  
Company : AAeon Technology Inc.  
EUT : ONYX-173  
Test Config : EUT / ALL PERIPHERALS  
Type of Test: FCC CLASS B  
Mode of Op. : 1-8GHz  
: All test data under the average limit

Page: 1

|   | Freq     | Read Level | Factor | Level  | Limit Line | Over Limit | Remark |
|---|----------|------------|--------|--------|------------|------------|--------|
|   | MHz      | dBuV       | dB     | dBuV/m | dBuV/m     | dB         |        |
| 1 | 1132.000 | 55.55      | -10.69 | 44.87  | 74.00      | -29.13     | Peak   |
| 2 | 1484.500 | 55.92      | -8.73  | 47.19  | 74.00      | -26.81     | Peak   |
| 3 | 1634.500 | 52.94      | -7.95  | 44.99  | 74.00      | -29.01     | Peak   |
| 4 | 1852.000 | 54.05      | -6.81  | 47.24  | 74.00      | -26.76     | Peak   |
| 5 | 2114.500 | 53.72      | -5.56  | 48.16  | 74.00      | -25.84     | Peak   |
| 6 | 2320.000 | 54.73      | -4.78  | 49.95  | 74.00      | -24.05     | Peak   |

Data#: 14 File#: 50318208RS.EMI

Date: 2005-03-22 Time: 22:47:02



(Chamber RS)

Trace:

Ref Trace:

Condition: HORIZONTAL /3M  
Report No. : 50318208  
Test Engr. : ALEX PAN  
Company : AAeon Technology Inc.  
EUT : ONYX-173  
Test Config : EUT / ALL PERIPHERALS  
Type of Test: FCC CLASS B  
Mode of Op. : 1-8GHz  
: All test data under the average limit

Page: 1

|   | Freq     | Read Level | Factor | Level  | Limit Line | Over Limit | Remark |
|---|----------|------------|--------|--------|------------|------------|--------|
|   | MHz      | dBuV       | dB     | dBuV/m | dBuV/m     | dB         |        |
| 1 | 1151.500 | 55.13      | -10.56 | 44.57  | 74.00      | -29.43     | Peak   |
| 2 | 1420.000 | 54.72      | -9.07  | 45.64  | 74.00      | -28.36     | Peak   |
| 3 | 1798.000 | 54.30      | -7.05  | 47.25  | 74.00      | -26.75     | Peak   |
| 4 | 1919.500 | 56.42      | -6.42  | 50.00  | 74.00      | -24.00     | Peak   |
| 5 | 2161.000 | 52.53      | -5.39  | 47.14  | 74.00      | -26.86     | Peak   |
| 6 | 2444.500 | 51.93      | -4.30  | 47.63  | 74.00      | -26.37     | Peak   |