

## MEASUREMENT/TECHNICAL REPORT

**APPLICANT:** Sparkle Computer Co., Ltd.

**MODEL NO.: SP7000**

**FCC ID:** M697000

|                                                                                                                                                                                                                                                                                                               |                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| This report concerns ( check one ) : <b>Original Grant</b> _____ ✓<br><b>Class II Change</b> _____                                                                                                                                                                                                            |                                                                                                                      |
| <b>Equipment type:</b>                                                                                                                                                                                                                                                                                        | VGA Card                                                                                                             |
| Deferred grant requested per 47CFR 0.457(d)(1)(ii)?<br>Yes _____ No _____ ✓ If yes, defer until: _____ (date)<br>We, the undersigned, agree to notify the Commission by (date) _____ / _____ / _____<br>of the<br>intended date of announce ment of the product so that the grant can be issued on that date. |                                                                                                                      |
| Transiyion Rules Request per 15.37? Yes _____ No _____ ✓<br>If no, assumed Part 15, Subpart B for unintentional radiator the new 47 CFR (10-1-90 Edition)<br>provision.                                                                                                                                       |                                                                                                                      |
| <b>Report Prepared</b><br><br><b>by Testing House :</b> Neutron Engineering Inc.<br><br><b>for Company Name:</b> Sparkle Computer Co., Ltd.<br><br><b>Address:</b> 13F, No. 2, Sec. 1, Fu Hsing S. Rd., Taipei, Taiwan, R.O.C.                                                                                |                                                                                                                      |
| <b>Applicant Signature :</b>                                                                                                                                                                                                                                                                                  | <br>_____<br>Jack Hsiao/ Manager |

## CERTIFICATION

**We hereby certify that:**

The test data , data evaluation , test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (1992)/ CISPR22(1997) and the energy emitted by the sample EUT tested as described in this report is in compliance with CLASS B conducted and radiated emission limits of FCC Rules Part 15, Subpart B/ CISPR22(1996).

**Prepared by :** Lydia Chiang



**Reviewed by :** Vincent Su



**Approved by :** George Yao



**Issued Date :** Sep. 14, 2001

**Report No. :** NEI-FCCB-01103

**Company Stamp :**



**NEUTRON ENGINEERING INC.**

No. 132-1, Lane 329, Sec. 2, Palain Rd.,  
Shijr Jen, Taipei, Taiwan

TEL : (02) 2646-5426 FAX : (02) 2646-6815

## Table of Contents

|                                                |    |
|------------------------------------------------|----|
| <b>1. General Information.....</b>             |    |
| 1-1 Product Description.....                   | 4  |
| 1-2 Related Submittal(s)/Grant(s).....         | 4  |
| 1-3 Tested System Details.....                 | 5  |
| 1-4 Test Methodology.....                      | 6  |
| 1-5 Test Facility.....                         | 6  |
| <b>2. System Test Configuration.....</b>       |    |
| 2-1 Justification.....                         | 7  |
| 2-2 EUT Exercise Software.....                 | 7  |
| 2-3 Special Accessories.....                   | 8  |
| 2-4 Equipment Modifications.....               | 8  |
| 2-5 Configuration of Tested System.....        | 9  |
| Figure 2-1 Configuration of Tested System..... | 11 |
| <b>3. Block Diagram(s).....</b>                | 13 |
| <b>4. Conducted Emission Datas.....</b>        | 14 |
| <b>5. Radiated Emission Datas .....</b>        |    |
| 5-1 Radiated Emission Data.....                | 19 |
| 5-2 Field Strength Calculation.....            | 24 |
| 5-3 Correction Factor Table VS Frequency.....  | 25 |
| <b>6. Attachment .....</b>                     |    |
| Photos of Tested EUT.....                      | 26 |
| User' s Manual.....                            | 27 |

## 1. GENERAL INFORMATION

### 1-1. Product Description

The Sparkle Computer Co., Ltd. Model: SP7000(referred to as the EUT in this report) is a VGA Card 64MB on Board with DDR or SDRAM.

The summarized feature of EUT as following:

- Windows2000,WindowsNT 4.0/5.0,Windows98 and Windows95

A more detailed and/or technical description of EUT is attached in **User's Manual**.

### 1-2. Related Submittal(s) / Grant (s)

#### 1-2-1. Models Covered

Models covering in this test report is : SP7000

#### 1-2-2. Models Difference

N/A

**1-3. Tested System Details**

The FCC IDs for all equipment, plus descriptions of all cables used in the tested system (including inserted cards, which have grants) are:

| Model No. | FCC ID        | Equipment | Cable                                                        |
|-----------|---------------|-----------|--------------------------------------------------------------|
| SP7000    | M697000       | VGA Card  | Add-On Card , Shielded Data Cable                            |
| CM753ET   | N/A (3)       | Monitor   | Shielded Data Cable <sup>(2)</sup><br>Un-Shielded Power Cord |
| 444       | N/A (3)       | PC        | Un-Shielded Power Cord.                                      |
| DPU-414   | N/A (3)       | Printer   | Shielded Serial Data Cable<br>Un-Shielded Power Cord         |
| DM-1414V  | N/A (3)       | Modem     | Shielded Parallel Data Cable<br>Un-Shielded Power Cord       |
| FDA-104GA | F42FDA-104G   | Keyboard  | Shielded Data Cable                                          |
| M-S34     | N/A (3)       | Mouse     | Shielded Data Cable                                          |
| PVM-1390  | AK896APVM1390 | TV        | Shielded Data Cable <sup>(2)</sup><br>Un-Shielded Power Cord |
| PRIMAX    | N/A (3)       | Projector | Shielded Data Cable <sup>(2)</sup><br>Un-Shielded Power Cord |
|           |               |           |                                                              |
|           |               |           |                                                              |
|           |               |           |                                                              |

Notes:

- (1) EUT submitted for grant.
- (2) Monitor' s attached video cable without ferrite core.
- (3) The support equipment was authorized by Declaration of Conformity.

**1-4. Test Methodology**

Both conducted and reedited testing were performed according to the procedures in ANSI C63.4 (1992)/CISPR 22(1997). Radiated testing was performed at an antenna to EUT distance 10 meters.

**1-5. Test Facility**

The open area test site and conducted measurement facility used to collect the radiated data is located on the address of No. 132-1, Lane 329, Sec. 2, Palain Road, Shijr 221, Taipei, Taiwan, R.O.C. of NEUTRON ENGINEERING INC. This site has been fully described in report dated Jun. 25, 1999 Submitted to your office, and accepted in a letter dated Sep. 02, 1999 (Reg. No. 95335).

## 2. System Test Configuration

### 2-1. Justification

The system was configured for testing in a typical fashion (as a customer would normally use it ). The EUT (VGA Card) was Added-On to a support equipment-Personal Computer. Peripherals of PC, such as monitor, keyboard, modem and printer were contained in this system in order to comply with the ANSI C63.4/CISPR 22 Rules requirement.

The system was investigated/evaluated by pre-scanning the pixel resolution in follows mode(s):

- (1)640x480/31.5KHz(VGA&DVI Mode)
- (2)800x600/47KHz(VGA&DVI Mode)
- (3)1024x768/60KHz(VGA&DVI Mode)
- (4)1280x1024/94 KHz (VGA Mode)
- (5)1600x1200/106 KHz (VGA Mode)
- (6)S-Video

The system operated in following mode(s) was(were) found to be the worst case during the pre-scanning. This operating mode(s) was(were) tested and used to collect the data included.

- (1)VGA Mode:1280x1024/85Hz/94KHz  
1600x1200/85Hz/106KHz
- (2)VGA Mode:800x600/75Hz/47KHz  
1024x768/75Hz/60KHz
- (3)S-Video Mode

### 2-2. EUT Exercise Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The software, contained on a 3-1/2 inch disk, was inserted into driver A and is auto-starting on power-up. Once loaded, the program sequentially exercises each system component in turn. The sequence used is:

- 1. Read(write) from(to) mass storage device (Disk).
- 2. Send "H" pattern to video port device (Monitor or Projector).
- 3. Send "H" pattern to video port device (TV)
- 4. Send " H " pattern to parallel port device (Printer).
- 5. Send " H " pattern to serial port device (Modem).
- 6. Repeated from 2 to 5 continuously.

As the keyboard and mouse are strictly input devices, no data is transmitted to (from) them during test. They are, however, continuously scanned for data input activity.

**2-3. Special Accessories**

Not available for this EUT intended for grant.

**2-4. Equipment Modifications**

Not available for this EUT intended for grant.

Applicant Signature :

*Jack Hsiao*

Date:

Jul. 02, 2001

Type/Printed Name:

Jack Hsiao

Position:

Manager

## 2.5 Configuration of Tested System

The configuration of tested system is described as the block diagram shown in next page Figure 3.1 and details information of I/O cable and power cord connection are tabulated as Table A and B. The monitor is powered from a floor mounted receptacle (referred to as the wall outlet in the previous described) was tested.

**TABLE A - Test Equipment**

| Item | Equipment | Mfr.    | Model/Type No. | I/O Port     | FCC ID        | Remark |
|------|-----------|---------|----------------|--------------|---------------|--------|
| E-1  | VGA Card  | Sparkle | SP7000         | Card Slot    | M69700        | EUT    |
| E-2  | Monitor   | Hitachi | CM753ET        | VGA Port     | N/A(3)        |        |
| E-3  | PC        | IBM     | 444            |              | N/A(3)        |        |
| E-4  | Printer   | SII     | DPU-414        | Printer Port | N/A(3)        |        |
| E-5  | Modem     | ACEEX   | DM-1414V       | Com Port     | N/A(3)        |        |
| E-6  | Keyboard  | Forward | FDA-104GA      | PS/2 Port    | F42FDA-104G   |        |
| E-7  | Mouse     | HP      | M-S34          | PS/2 Port    | DZL211029     |        |
| E-8  | TV        | SONY    | PVM-1390       | S-Video Port | AK896APVM1390 |        |
| E-9  | Projector | PRIMAX  | 38VIV101-01    | DVI Port     | N/A(3)        |        |
|      |           |         |                |              |               |        |
|      |           |         |                |              |               |        |

**Remark:**

- (1) Unless otherwise denoted as EUT in 'Remark' column, device(s) used in tested system is a support equipment.
- (2) Unless otherwise marked as in 'Remark' column, Neutron consigns the supporting equipment(s) to the tested system.
- (3) The support equipment was authorized by Declaration of Conformity.

**Table B. - Informations Cable Information**

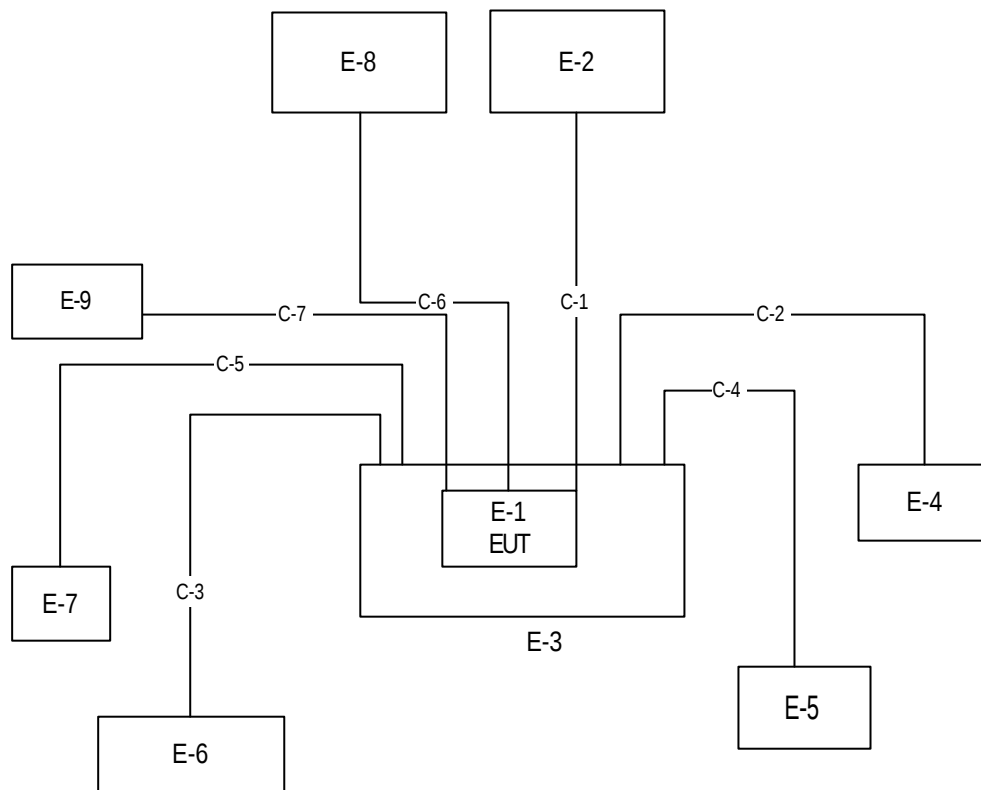
| Item | I/O Cable        | Device Connected | Shielded | Ferrite Core | Detachable/Permanently            | Note |
|------|------------------|------------------|----------|--------------|-----------------------------------|------|
| C-1  | Video Cable      | EUT-Monitor      | Yes      | No           | Permanently attached on Monitor   |      |
| C-2  | Centronics Cable | PC-Printer       | Yes      | No           | Part of Printer, Detachable       |      |
| C-3  | Keyboard Cable   | PC-Keyboard      | Yes      | No           | Permanently attached on KB        |      |
| C-4  | RS-232 Cable     | PC-Modem         | Yes      | No           | Part of Modem, Detachable         |      |
| C-5  | Mouse Cable      | PC-Mouse         | Yes      | No           | Permanently attached on Mouse     |      |
| C-6  | Video Cable      | PC-TV Set        | Yes      | No           | Permanently attached on TV Set    |      |
| C-7  | Video Cable      | PC-Projector     | Yes      | No           | Permanently attached on Projector |      |
|      |                  |                  |          |              |                                   |      |
|      |                  |                  |          |              |                                   |      |
|      |                  |                  |          |              |                                   |      |
|      |                  |                  |          |              |                                   |      |
|      |                  |                  |          |              |                                   |      |
|      |                  |                  |          |              |                                   |      |

**Note:**

- (1) Unless otherwise marked as in (Remark) column, Neutron consigns the supporting equipment(s) to the tested system.

**Figure 2.1 Configuration of Tested System**

Fig. 2-1 Configuration of Tested System



## 2-2 Test Equipment

| Item | Instruments        | Mfr/Brand       | Model/Type No.  | Serial No.  | Calibrated Date | Next Cali. Date | Note |
|------|--------------------|-----------------|-----------------|-------------|-----------------|-----------------|------|
| 1    | Log-Bicon Antenna  | MESS-ELEKTRONIK | VULB 9160       | 3058        | 2000-10-28      | 2001-10-27      | ✓    |
| 2    | Log-Bicon Antenna  | MESS-ELEKTRONIK | VULB 9160       | 3060        | 2000-10-21      | 2001-10-20      | ✓    |
| 3    | Log-Bicon Antenna  | MESS-ELEKTRONIK | VULB 9161       | 4022        | 2001-07-04      | 2002-07-03      |      |
| 4    | LISN               | EMCO            | 3825/2          | 9605-2539   | 2001-06-22      | 2002-06-21      |      |
| 5    | LISN               | Rolf Heine      | NNB-2/16Z       | 98083       | 2000-10-21      | 2001-10-20      | ✓    |
| 6    | LISN               | Rolf Heine      | NNB-2/16Z       | 98053       | 2000-11-23      | 2001-11-22      | ✓    |
| 7    | Horn Antenna       | EMCO            | 3115            | 9605-4803   | 2001-05-09      | 2002-05-08      |      |
| 8    | Quasi-Peak Adapter | HP              | 85650A          | 2521A00844  | 2001-03-25      | 2001-09-24      | ✓    |
| 9    | RF Pre-Selector    | HP              | 85685A          | 2648A00417  | 2001-03-25      | 2001-09-24      | ✓    |
| 10   | Spectrum Analyzer  | HP              | 85680B          | 2634A03025  | 2001-03-25      | 2001-09-24      | ✓    |
| 11   | Spectrum Monitor   | HP              | 85662B          | 2648A13616  | 2001-03-25      | 2001-09-24      | ✓    |
| 12   | Pre-Amplifier      | Anritsu         | MH648A          | M09961      | 2000-12-04      | 2001-12-03      | ✓    |
| 13   | Test Receiver      | R&S             | ESMI            | 843977/005  | 2000-11-07      | 2001-11-06      |      |
| 14   | Pre-Amplifier      | R&S             | ESMI-Z7         | 1045.5020   | 2001-05-21      | 2002-05-20      |      |
| 15   | Test Receiver      | R&S             | ESH3            | 860156/018  | 2000-10-24      | 2001-10-23      |      |
| 16   | Test Receiver      | R&S             | ESVP            | 860687/009  | 2000-10-24      | 2001-10-23      |      |
| 17   | Test Receiver      | MEB             | SMV41           | 130         | 2000-12-20      | 2001-12-19      | ✓    |
| 18   | Absorbing Clamp    | R&S             | MDS-21          | 841077/011  | 2001-08-18      | 2002-08-17      |      |
| 19   | Voltage Probe      | R&S             | ESH2-Z3         | 841.800/023 | 200-08-20       | 2002-08-19      |      |
| 20   | Pulse Limiter      | Electro-Metrics | EM-7600         | 112644      | 2001-02-09      | 2002-02-08      | ✓    |
| 21   | Spectrum Analyzer  | ADVAN TEST      | R3261C          | 81720298    | 2001-08-17      | 2002-08-16      |      |
| 22   | Oscilloscope       | Tektronix       | 2465B           | J305135     | 2000-11-02      | 2001-11-01      |      |
| 23   | Impedance PAD      | HRS             | HI-NNF-PJ-50/75 | 0264        | 2001-03-15      | 2002-03-14      |      |
| 24   | Attenuator         | Stack           | 10dB            | 1           | 2001-03-15      | 2002-03-14      |      |
| 25   | Audio Generator    | Good Will       | GAG808A         | 21845       | N/A             | N/A             |      |
| 26   | Antenna Mast       | Chance Most     | CMTB-1.5        | N/A         | N/A             | N/A             | ✓    |
| 27   | Turn Table         | Chance Most     | CMTB-1.5        | N/A         | N/A             | N/A             | ✓    |
| 28   | Signal Generator   | HP              | 8648A           | 3426A01034  | 2000-02-10      | 2002-02-09      |      |
| 29   | Test Receiver      | PMM             | PMM 9000        | 4310J01002  | 2000-11-26      | 2001-11-27      |      |

Remark :

✓ indicates the instrument used in Test Report.

N/A denotes No Model No. / Serial No. and No Calibration specified.

### 3. Block Diagram(s)

Figure 3.1 Block diagram of system, Page 13.A

#### 4. Conducted Emission Datas

4.1 The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Judgement: Passed by **-8.59 dB** in mode of **Line** terminal **0.15 MHz**  
 Test Mode: VGA 1280x1024/85Hz/94KHz

| Freq.<br>(MHz) | Terminal<br>L/N | Measured(dBuV) |         | Limits(dBuV) |         | Safe Margins<br>(dBuV) |      |
|----------------|-----------------|----------------|---------|--------------|---------|------------------------|------|
|                |                 | QP-Mode        | AV-Mode | QP-Mode      | AV-Mode |                        | Note |
| 0.15           | Line            | 55.56          | 47.30   | 65.89        | 55.89   | -8.59                  | (AV) |
| 0.43           | Line            | 37.61          | *       | 57.23        | 47.23   | -19.62                 | (QP) |
| 0.92           | Line            | 36.21          | *       | 56.00        | 46.00   | -19.79                 | (QP) |
| 2.87           | Line            | 35.96          | *       | 56.00        | 46.00   | -20.04                 | (QP) |
| 4.09           | Line            | 42.42          | *       | 56.00        | 46.00   | -13.58                 | (QP) |
| 6.19           | Line            | 38.83          | *       | 60.00        | 50.00   | -21.17                 | (QP) |
| 0.15           | Neutral         | 54.36          | 46.42   | 65.78        | 55.78   | -9.36                  | (AV) |
| 0.43           | Neutral         | 36.81          | *       | 57.33        | 47.33   | -20.52                 | (QP) |
| 0.91           | Neutral         | 35.41          | *       | 56.00        | 46.00   | -20.59                 | (QP) |
| 2.65           | Neutral         | 37.99          | *       | 56.00        | 46.00   | -18.01                 | (QP) |
| 4.14           | Neutral         | 42.41          | *       | 56.00        | 46.00   | -13.59                 | (QP) |
| 6.19           | Neutral         | 38.23          | *       | 60.00        | 50.00   | -21.77                 | (QP) |

Remark :

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz ; SPA setting in RBW=100KHz,VBW =100KHz, Swp. Time = 0.3 sec./MHz。 Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz。
- (2) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a " \*" marked in AVG Mode column of Interference Voltage Measured。
- (3) Measuring frequency range from 150KHz to 30MHz。

Review:

Timant Su

Test Engr.:

David

Test Date :

Sep. 02, 2001

#### 4. Conducted Emission Datas

- 4.1 The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Judgement: Passed by **-6.80 dB** in mode of **Neutral** terminal **0.99 MHz**  
 Test Mode:VGA 1600x1200/85Hz/106KHz

| Freq.<br>(MHz) | Terminal<br>L/N | Measured(dBuV) |         | Limits(dBuV) |         | Safe Margins<br>(dBuV) |      |
|----------------|-----------------|----------------|---------|--------------|---------|------------------------|------|
|                |                 | QP-Mode        | AV-Mode | QP-Mode      | AV-Mode |                        | Note |
| 0.16           | Line            | 53.17          | *       | 65.36        | 55.36   | -12.19                 | (QP) |
| 0.32           | Line            | 40.21          | *       | 59.84        | 49.84   | -19.63                 | (QP) |
| 0.58           | Line            | 36.21          | *       | 56.00        | 46.00   | -19.79                 | (QP) |
| 2.84           | Line            | 37.36          | *       | 56.00        | 46.00   | -18.64                 | (QP) |
| 4.18           | Line            | 43.20          | *       | 56.00        | 46.00   | -12.80                 | (QP) |
| 7.85           | Line            | 42.69          | *       | 60.00        | 50.00   | -17.31                 | (QP) |
| 0.16           | Neutral         | 51.57          | *       | 65.36        | 55.36   | -13.79                 | (QP) |
| 0.99           | Neutral         | 49.20          | *       | 56.00        | 46.00   | -6.80                  | (QP) |
| 0.92           | Neutral         | 35.41          | *       | 56.00        | 46.00   | -20.59                 | (QP) |
| 2.84           | Neutral         | 38.56          | *       | 56.00        | 46.00   | -17.44                 | (QP) |
| 4.07           | Neutral         | 42.82          | *       | 56.00        | 46.00   | -13.18                 | (QP) |
| 7.98           | Neutral         | 41.92          | *       | 60.00        | 50.00   | -18.08                 | (QP) |

Remark :

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz ; SPA setting in RBW=100KHz,VBW =100KHz, Swp. Time = 0.3 sec./MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz.
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 'Note'. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a " \*" marked in AVG Mode column of Interference Voltage Measured.
- (3) Measuring frequency range from 150KHz to 30MHz.

Review:

Timent Su

Test Engr.:

David

Test Date :

Sep. 02,2001

#### 4. Conducted Emission Datas

4.1 The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Judgement: Passed by **-7.64 dB** in mode of **Line** terminal **0.15 MHz**  
 Test Mode: DVI 800x600/75Hz/47KHz

| Freq.<br>(MHz) | Terminal<br>L/N | Measured(dBuV) |         | Limits(dBuV) |         | Safe Margins<br>(dBuV) |      |
|----------------|-----------------|----------------|---------|--------------|---------|------------------------|------|
|                |                 | QP-Mode        | AV-Mode | QP-Mode      | AV-Mode |                        | Note |
| 0.15           | Line            | 56.96          | 48.30   | 65.94        | 55.94   | -7.64                  | (AV) |
| 0.43           | Line            | 39.01          | *       | 57.29        | 47.29   | -18.28                 | (QP) |
| 1.24           | Line            | 32.77          | *       | 56.00        | 46.00   | -23.23                 | (QP) |
| 2.87           | Line            | 35.76          | *       | 56.00        | 46.00   | -20.24                 | (QP) |
| 4.20           | Line            | 42.20          | *       | 56.00        | 46.00   | -13.80                 | (QP) |
| 6.22           | Line            | 38.84          | *       | 60.00        | 50.00   | -21.16                 | (QP) |
| 0.15           | Neutral         | 53.96          | 48.20   | 65.89        | 55.89   | -7.69                  | (AV) |
| 0.22           | Neutral         | 46.01          | *       | 62.86        | 52.86   | -16.85                 | (QP) |
| 0.43           | Neutral         | 36.41          | *       | 57.23        | 47.23   | -20.82                 | (QP) |
| 0.90           | Neutral         | 35.21          | *       | 56.00        | 46.00   | -20.79                 | (QP) |
| 4.20           | Neutral         | 43.00          | *       | 56.00        | 46.00   | -13.00                 | (QP) |
| 6.19           | Neutral         | 38.63          | *       | 60.00        | 50.00   | -21.37                 | (QP) |

Remark :

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz ; SPA setting in RBW=100KHz,VBW =100KHz, Swp. Time = 0.3 sec./MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz.
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 'Note'. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a " \*" marked in AVG Mode column of Interference Voltage Measured.
- (3) Measuring frequency range from 150KHz to 30MHz.

Review: Timothy Sw Test Engr.: David Test Date : Sep. 02,2001

#### 4. Conducted Emission Datas

4.1 The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Judgement: Passed by **-8.64 dB** in mode of **Line** terminal **0.15 MHz**  
 Test Mode: DVI 1024x768/75Hz/60KHz

| Freq.<br>(MHz) | Terminal<br>L/N | Measured(dBuV) |         | Limits(dBuV) |         | Safe Margins<br>(dBuV) |      |
|----------------|-----------------|----------------|---------|--------------|---------|------------------------|------|
|                |                 | QP-Mode        | AV-Mode | QP-Mode      | AV-Mode |                        | Note |
| 0.15           | Line            | 55.56          | 47.30   | 65.94        | 55.94   | -8.64                  | (AV) |
| 0.43           | Line            | 38.01          | *       | 57.29        | 47.29   | -19.28                 | (QP) |
| 1.24           | Line            | 33.57          | *       | 56.00        | 46.00   | -22.43                 | (QP) |
| 2.84           | Line            | 36.76          | *       | 56.00        | 46.00   | -19.24                 | (QP) |
| 4.09           | Line            | 42.82          | *       | 56.00        | 46.00   | -13.18                 | (QP) |
| 6.22           | Line            | 38.64          | *       | 60.00        | 50.00   | -21.36                 | (QP) |
| 0.16           | Neutral         | 52.97          | *       | 65.67        | 55.67   | -12.70                 | (QP) |
| 0.43           | Neutral         | 37.21          | *       | 57.29        | 47.29   | -20.08                 | (QP) |
| 0.93           | Neutral         | 35.61          | *       | 56.00        | 46.00   | -20.39                 | (QP) |
| 2.77           | Neutral         | 36.57          | *       | 56.00        | 46.00   | -19.43                 | (QP) |
| 4.20           | Neutral         | 42.20          | *       | 56.00        | 46.00   | -13.80                 | (QP) |
| 26.84          | Neutral         | 38.45          | *       | 60.00        | 50.00   | -21.55                 | (QP) |

Remark :

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz ; SPA setting in RBW=100KHz,VBW =100KHz, Swp. Time = 0.3 sec./MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz.
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 'Note'. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a " \*" marked in AVG Mode column of Interference Voltage Measured.
- (3) Measuring frequency range from 150KHz to 30MHz.

Review:

Vincent Su

Test Engr.:

David

Test Date :

Sep. 02,2001

#### 4. Conducted Emission Datas

4.1 The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Judgement: Passed by **-2.20 dB** in mode of **Neutral** terminal **3.60 MHz**  
Test Mode: S Mode

| Freq.<br>(MHz) | Terminal<br>L/N | Measured(dBuV) |         | Limits(dBuV) |         | Safe Margins<br>(dBuV) |      |
|----------------|-----------------|----------------|---------|--------------|---------|------------------------|------|
|                |                 | QP-Mode        | AV-Mode | QP-Mode      | AV-Mode |                        | Note |
| 0.15           | Line            | 55.16          | 48.80   | 65.84        | 55.84   | -7.04                  | (AV) |
| 0.20           | Line            | 51.21          | *       | 63.53        | 53.53   | -12.32                 | (QP) |
| 0.42           | Line            | 39.81          | *       | 57.43        | 47.43   | -17.62                 | (QP) |
| 0.90           | Line            | 36.41          | *       | 56.00        | 46.00   | -19.59                 | (QP) |
| 3.62           | Line            | 49.57          | 43.20   | 56.00        | 46.00   | -2.80                  | (AV) |
| 12.85          | Line            | 41.27          | *       | 60.00        | 50.00   | -18.73                 | (QP) |
| 0.16           | Neutral         | 54.77          | 49.60   | 65.67        | 55.67   | -6.07                  | (AV) |
| 0.22           | Neutral         | 46.61          | *       | 62.93        | 52.93   | -16.32                 | (QP) |
| 0.58           | Neutral         | 36.61          | *       | 56.00        | 46.00   | -19.39                 | (QP) |
| 0.73           | Neutral         | 35.21          | *       | 56.00        | 46.00   | -20.79                 | (QP) |
| 3.60           | Neutral         | 49.08          | 43.80   | 56.00        | 46.00   | -2.20                  | (AV) |
| 12.52          | Neutral         | 41.87          | *       | 60.00        | 50.00   | -18.13                 | (QP) |

Remark :

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz ; SPA setting in RBW=100KHz,VBW =100KHz, Swp. Time = 0.3 sec./MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz.
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 'Note'. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a " \*" marked in AVG Mode column of Interference Voltage Measured.
- (3) Measuring frequency range from 150KHz to 30MHz.

Review: Timent Su Test Engr.: David Test Date : Sep. 02,2001

## 5. Radiated Emission Datas

5.1 The following data lists the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections ), the corrected reading, as well as the limit. Explanation of the Correction Factor is given in paragraph 7.2.

Judgement: Passed by **-5.59 dB** in polarity of **Vertical** 109.70 **MHz**  
 Test Mode :VGA 1280x1024/85Hz/94KHz

| Freq.<br>(MHz) | Ant.<br>H/V | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits(QP)<br>(dBuV/m) | Safe Margins<br>(dBuV/m) | Note |
|----------------|-------------|-----------------------|-------------------------|--------------------------|------------------------|--------------------------|------|
| 109.70         | V           | 40.45                 | - 16.04                 | 24.41                    | 30.00                  | - 5.59                   |      |
| 121.14         | H           | 37.50                 | - 14.62                 | 22.88                    | 30.00                  | - 7.12                   |      |
| 121.18         | V           | 39.77                 | - 14.62                 | 25.15                    | 30.00                  | - 4.85                   |      |
| 133.26         | H           | 36.20                 | - 13.63                 | 22.57                    | 30.00                  | - 7.43                   |      |
| 133.27         | V           | 37.17                 | - 13.63                 | 23.54                    | 30.00                  | - 6.46                   |      |
| 178.82         | H           | 35.25                 | - 14.36                 | 20.89                    | 30.00                  | - 9.11                   |      |
| 222.79         | V           | 35.40                 | - 14.64                 | 20.76                    | 30.00                  | - 9.24                   |      |
| 227.40         | H           | 38.32                 | - 14.36                 | 23.96                    | 30.00                  | - 6.04                   |      |
| 238.90         | V           | 37.65                 | - 13.93                 | 23.72                    | 37.00                  | - 13.28                  |      |
| 373.70         | V           | 34.47                 | - 9.04                  | 25.43                    | 37.00                  | - 11.57                  |      |
| 410.30         | H           | 36.50                 | - 8.12                  | 28.38                    | 37.00                  | - 8.62                   |      |
| 488.00         | H           | 34.45                 | - 5.69                  | 28.76                    | 37.00                  | - 8.24                   |      |

### Remark :

- (1) Test Receiver or Spectrum Analyzer measurement condition setting are Res. BW=1 MHz, Video BW =1MHz , Sweep. Time = 0.2 sec./MHz
- (2) All readings are Peak unless otherwise stated QP in column of 'Note'
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.
- (5) If the peak scan value lower limit less than 20dB, then this signal data will be listed. But if these signal datas more than 10 frequencies, then only the Top 10 be listed.

Review: Timothé L... Test Engr.: David Test Date : July 05,2001

## 5. Radiated Emission Datas

5.1 The following data lists the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections ), the corrected reading, as well as the limit. Explanation of the Correction Factor is given in paragraph 7.2.

Judgement: Passed by **-4.33 dB** in polarity of **Vertical** 42.90 **MHz**  
 Test Mode :VGA 1600x1200/85Hz/106KHz

| Freq.<br>(MHz) | Ant.<br>H/V | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits(QP)<br>(dBuV/m) | Safe Margins<br>(dBuV/m) | Note |
|----------------|-------------|-----------------------|-------------------------|--------------------------|------------------------|--------------------------|------|
| 42.90          | V           | 39.50                 | - 13.83                 | 25.67                    | 30.00                  | - 4.33                   |      |
| 63.02          | H           | 41.05                 | - 15.96                 | 25.09                    | 30.00                  | - 4.91                   |      |
| 127.39         | V           | 35.85                 | - 14.09                 | 21.76                    | 30.00                  | - 8.24                   |      |
| 141.03         | H           | 38.00                 | - 13.05                 | 24.95                    | 30.00                  | - 5.05                   |      |
| 176.26         | V           | 39.97                 | - 14.11                 | 25.86                    | 30.00                  | - 4.14                   |      |
| 176.27         | H           | 36.82                 | - 14.11                 | 22.71                    | 30.00                  | - 7.29                   |      |
| 193.89         | V           | 38.45                 | - 15.35                 | 23.10                    | 30.00                  | - 6.90                   |      |
| 227.40         | H           | 38.52                 | - 14.36                 | 24.16                    | 30.00                  | - 5.84                   |      |
| 229.10         | V           | 37.10                 | - 15.35                 | 21.75                    | 30.00                  | - 8.25                   |      |
| 240.00         | V           | 39.47                 | - 14.28                 | 25.19                    | 37.00                  | - 11.81                  |      |
| 403.40         | H           | 38.87                 | - 8.38                  | 30.49                    | 37.00                  | - 6.51                   |      |
| 437.70         | H           | 33.87                 | - 6.99                  | 26.88                    | 37.00                  | - 10.12                  |      |

### Remark:

- (1) Test Receiver or Spectrum Analyzer measurement condition setting are Res. BW=1 MHz, Video BW =1MHz , Sweep. Time = 0.2 sec./MHz
- (2) All readings are Peak unless otherwise stated QP in column of 'Note'
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.
- (5) If the peak scan value lower limit less than 20dB, then this signal data will be listed. But if these signal datas more than 10 frequencies, then only the Top 10 be listed.

Review: Timothy Su Test Engr.: David Test Date : July 05,2001

## 5. Radiated Emission Datas

5.1 The following data lists the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections ), the corrected reading, as well as the limit. Explanation of the Correction Factor is given in paragraph 7.2.

Judgement: Passed by **-3.04 dB** in polarity of **Horizontal** 111.69 **MHz**  
 Test Mode : DVI 800x600/75Hz/47KHz

| Freq.<br>(MHz) | Ant.<br>H/V | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits(QP)<br>(dBuV/m) | Safe Margins<br>(dBuV/m) | Note |
|----------------|-------------|-----------------------|-------------------------|--------------------------|------------------------|--------------------------|------|
| 63.42          | V           | 40.00                 | - 16.73                 | 23.27                    | 30.00                  | - 6.73                   |      |
| 73.40          | H           | 42.40                 | - 18.04                 | 24.36                    | 30.00                  | - 5.64                   |      |
| 111.69         | H           | 42.60                 | - 15.64                 | 26.96                    | 30.00                  | - 3.04                   |      |
| 140.80         | V           | 37.85                 | - 13.46                 | 24.39                    | 30.00                  | - 5.61                   |      |
| 142.00         | H           | 38.70                 | - 13.39                 | 25.31                    | 30.00                  | - 4.69                   |      |
| 145.90         | V           | 36.30                 | - 13.17                 | 23.13                    | 30.00                  | - 6.87                   |      |
| 224.96         | V           | 39.49                 | - 15.23                 | 24.26                    | 30.00                  | - 5.74                   |      |
| 299.97         | V           | 44.10                 | - 11.79                 | 32.31                    | 37.00                  | - 4.69                   |      |
| 416.00         | H           | 39.50                 | - 8.72                  | 30.78                    | 37.00                  | - 6.22                   |      |
| 664.00         | H           | 34.00                 | - 1.38                  | 32.62                    | 37.00                  | - 4.38                   |      |
| 692.00         | H           | 31.30                 | - 0.67                  | 30.63                    | 37.00                  | - 6.37                   |      |
| 692.00         | V           | 31.93                 | - 0.67                  | 31.26                    | 37.00                  | - 5.74                   |      |

### Remark:

- (1) Test Receiver or Spectrum Analyzer measurement condition setting are Res. BW=1 MHz, Video BW =1MHz , Sweep. Time = 0.2 sec./MHz
- (2) All readings are Peak unless otherwise stated QP in column of 'Note'
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.
- (5) If the peak scan value lower limit less than 20dB, then this signal data will be listed. But if these signal datas more than 10 frequencies, then only the Top 10 be listed.

Review: Timothé Sw Test Engr.: David Test Date : July 05,2001

## 5. Radiated Emission Datas

5.1 The following data lists the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections ), the corrected reading, as well as the limit. Explanation of the Correction Factor is given in paragraph 7.2.

Judgement: Passed by **-4.19 dB** in polarity of **Horizontal** 299.97 **MHz**  
 Test Mode : DVI 1024x768/75Hz/60KHz

| Freq.<br>(MHz) | Ant.<br>H/V | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits(QP)<br>(dBuV/m) | Safe Margins<br>(dBuV/m) | Note |
|----------------|-------------|-----------------------|-------------------------|--------------------------|------------------------|--------------------------|------|
| 40.50          | H           | 39.50                 | - 15.15                 | 24.35                    | 30.00                  | - 5.65                   |      |
| 73.50          | V           | 41.80                 | - 18.04                 | 23.76                    | 30.00                  | - 6.24                   |      |
| 77.60          | H           | 42.60                 | - 18.60                 | 24.00                    | 30.00                  | - 6.00                   |      |
| 118.10         | H           | 38.20                 | - 15.26                 | 22.94                    | 30.00                  | - 7.06                   |      |
| 135.71         | V           | 37.00                 | - 13.79                 | 23.21                    | 30.00                  | - 6.79                   |      |
| 153.90         | V           | 36.80                 | - 12.94                 | 23.86                    | 30.00                  | - 6.14                   |      |
| 249.96         | V           | 45.10                 | - 14.20                 | 30.90                    | 37.00                  | - 6.10                   |      |
| 299.97         | H           | 44.60                 | - 11.79                 | 32.81                    | 37.00                  | - 4.19                   |      |
| 422.38         | H           | 38.90                 | - 8.54                  | 30.36                    | 37.00                  | - 6.64                   |      |
| 486.56         | H           | 37.50                 | - 6.81                  | 30.69                    | 37.00                  | - 6.31                   |      |
| 599.92         | V           | 34.50                 | - 3.28                  | 31.22                    | 37.00                  | - 5.78                   |      |
| 645.40         | V           | 33.20                 | - 1.85                  | 31.35                    | 37.00                  | - 5.65                   |      |

### Remark:

- (1) Test Receiver or Spectrum Analyzer measurement condition setting are Res. BW=1 MHz, Video BW =1MHz , Sweep. Time = 0.2 sec./MHz
- (2) All readings are Peak unless otherwise stated QP in column of 'Note'
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.
- (5) If the peak scan value lower limit less than 20dB, then this signal data will be listed. But if these signal datas more than 10 frequencies, then only the Top 10 be listed.

Review: Timant Su Test Engr.: David Test Date : July 05,2001

## 5. Radiated Emission Datas

5.1 The following data lists the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections ), the corrected reading, as well as the limit. Explanation of the Correction Factor is given in paragraph 7.2.

Judgement: Passed by **-4.94 dB** in polarity of **Horizontal** 227.40 **MHz**  
Test Mode : S Mode

| Freq.<br>(MHz) | Ant.<br>H/V | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits(QP)<br>(dBuV/m) | Safe Margins<br>(dBuV/m) | Note |
|----------------|-------------|-----------------------|-------------------------|--------------------------|------------------------|--------------------------|------|
| 70.06          | H           | 40.62                 | - 17.19                 | 23.43                    | 30.00                  | - 6.57                   |      |
| 118.60         | V           | 38.65                 | - 14.94                 | 23.71                    | 30.00                  | - 6.29                   |      |
| 133.20         | V           | 37.57                 | - 13.63                 | 23.94                    | 30.00                  | - 6.06                   |      |
| 149.50         | V           | 35.95                 | - 12.63                 | 23.32                    | 30.00                  | - 6.68                   |      |
| 150.01         | H           | 34.75                 | - 12.63                 | 22.12                    | 30.00                  | - 7.88                   |      |
| 178.82         | H           | 36.00                 | - 14.36                 | 21.64                    | 30.00                  | - 8.36                   |      |
| 227.40         | H           | 39.42                 | - 14.36                 | 25.06                    | 30.00                  | - 4.94                   |      |
| 238.90         | V           | 39.05                 | - 13.93                 | 25.12                    | 37.00                  | - 11.88                  |      |
| 372.60         | V           | 33.80                 | - 9.14                  | 24.66                    | 37.00                  | - 12.34                  |      |
| 410.30         | H           | 35.72                 | - 8.12                  | 27.60                    | 37.00                  | - 9.40                   |      |
| 488.00         | H           | 34.40                 | - 5.69                  | 28.71                    | 37.00                  | - 8.29                   |      |
| 550.90         | V           | 32.72                 | - 4.25                  | 28.47                    | 37.00                  | - 8.53                   |      |

### Remark:

- (1) Test Receiver or Spectrum Analyzer measurement condition setting are Res. BW=1 MHz, Video BW =1MHz , Sweep. Time = 0.2 sec./MHz
- (2) All readings are Peak unless otherwise stated QP in column of 'Note'
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.
- (5) If the peak scan value lower limit less than 20dB, then this signal data will be listed. But if these signal datas more than 10 frequencies, then only the Top 10 be listed.

Review: Timant Su Test Engr.: David Test Date : July 05,2001

## 5-2. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where FS = Field Strength

RA = Receiver Amplitude

AF = Antenna Factor (1)

CL = Cable Attenuation Factor (1)

AG = Amplifier Gain (1) (2)

**Remark :**

(1) The Correction Factor = AF + CL - AG, as shown in the data tables' Correction Factor column.

(2) AG is not available for Neutron's Open Site Facility

### Example of Calculation:

Assume a Receiver Reading of 23.7 dBuV is obtained with an Antenna Factor of 7.2 dB and a Cable Factor of 1.1 dB. Then:

1. The Correction Factor will be calculated by

$$\text{Correction Factor} = AF + CL - AG = 7.2 + 1.1 - 0 = 8.3 \text{ (dB)}$$

as shown in the data tables' Correction Factor column.

2. The Field Strength will be calculated by

$$FS = RA + \text{Correction Factor} = 23.7 + 8.3 = 32 \text{ (dBuV/m)}.$$

FS is the value shown in the data tables' Corrected Reading column and RA is the value shown in the data tables' Receiver Reading column. The 32 dBuV/m value was mathematically converted to its corresponding level in uV/m as:

$$\text{Log}^{-1}\{(32.0\text{dBuV/m})/20\} = 39.8 \text{ (uV/m)}$$

**5-3. Correction Factor VS Frequency**

| <b>Frequency (MHz)</b> | <b>Antenna Factor (dB)</b> | <b>Cable Loss (dB)</b> |
|------------------------|----------------------------|------------------------|
| 30.00                  | 11.10                      | 0.90                   |
| 35.00                  | 10.80                      | 0.50                   |
| 40.00                  | 11.20                      | 1.00                   |
| 45.00                  | 11.50                      | 0.80                   |
| 50.00                  | 11.30                      | 1.00                   |
| 55.00                  | 10.50                      | 1.30                   |
| 60.00                  | 9.90                       | 1.00                   |
| 65.00                  | 8.70                       | 1.50                   |
| 70.00                  | 7.60                       | 1.20                   |
| 75.00                  | 6.40                       | 1.40                   |
| 80.00                  | 6.10                       | 1.30                   |
| 85.00                  | 7.00                       | 1.40                   |
| 90.00                  | 8.00                       | 1.70                   |
| 95.00                  | 10.00                      | 1.50                   |
| 100.00                 | 11.20                      | 1.90                   |
| 110.00                 | 12.60                      | 2.00                   |
| 120.00                 | 13.00                      | 1.80                   |
| 130.00                 | 12.50                      | 1.80                   |
| 140.00                 | 12.00                      | 2.00                   |
| 150.00                 | 12.00                      | 2.20                   |
| 160.00                 | 13.20                      | 2.40                   |
| 170.00                 | 14.80                      | 2.50                   |
| 180.00                 | 16.30                      | 2.50                   |
| 190.00                 | 17.00                      | 2.50                   |
| 200.00                 | 17.30                      | 2.40                   |
| 225.00                 | 10.50                      | 2.70                   |
| 250.00                 | 11.70                      | 3.10                   |
| 275.00                 | 12.80                      | 3.70                   |
| 300.00                 | 14.50                      | 4.00                   |
| 325.00                 | 14.00                      | 4.50                   |
| 350.00                 | 14.20                      | 4.50                   |
| 375.00                 | 14.60                      | 4.60                   |
| 400.00                 | 15.10                      | 4.80                   |
| 450.00                 | 16.20                      | 5.40                   |
| 500.00                 | 17.60                      | 6.50                   |
| 550.00                 | 17.80                      | 7.00                   |
| 600.00                 | 18.40                      | 7.10                   |
| 650.00                 | 19.50                      | 7.10                   |
| 700.00                 | 20.80                      | 7.20                   |
| 750.00                 | 20.50                      | 7.50                   |
| 800.00                 | 21.10                      | 8.00                   |
| 850.00                 | 22.40                      | 8.60                   |
| 900.00                 | 23.50                      | 8.90                   |
| 950.00                 | 24.00                      | 9.70                   |
| 1000.00                | 24.80                      | 10.30                  |

**6. Photos of Tested EUT:**

**1. Photo # 1 Front View, Rear View**

**2. Photo # 2 Side View**

## **Attachment**

### **User' s Manual**