# Partial FCC Test Report

| | | |
|---|---|---|
| **APPLICANT** | : | **Acer Inc.** |
| **EQUIPMENT** | : | **WLAN Module** |
| **BRAND NAME** | : | **Acer, Gateway, PackardBell** |
| **MODEL NAME** | : | **AR5B95** |
| **FCC ID** | : | **HLZ-AR5B95** |
| **STANDARD** | : | **FCC Part 15 Subpart C §15.247** |
| **CLASSIFICATION** | : | **Digital Transmission System (DTS)** |

**This is a partial report which is only valid combined with the Integrated WLAN Module (brand name: Atheros / model name: AR5B95, FCC ID: PPD-AR5B95) Report.**

**The product sample received on May 15, 2009 and completely tested on May 18, 2009. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.**

**The EUT was installed into Acer laptop PC, brand name: Acer, Gateway, PackardBell / model name: ZA8, Aspire one, during test.**

**The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.**

**Reviewed by:**

**Roy Wu / Manager**

Testing Laboratory 1190

***SPORTON INTERNATIONAL INC.***
***No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.***

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# REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| FR951502-01 | Rev. 01 | Initial issue of report | May 23, 2009 |
| FR951502-01 | Rev. 02 | Update FCC ID | May 27, 2009 |
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# SUMMARY OF TEST RESULT

| Report Section | FCC Rule | IC Rule | Description | Limit | Result | Remark |
|---|---|---|---|---|---|---|
| 3.1 | 15.247(d) | A8.5 | Frequency Band Edges | ≤ 20dBc | Pass | - |
| 3.2 | 15.207 | Gen 7.2.2 | AC Conducted Emission | 15.207(a) | Pass | Under limit 10.8 dB at 15.726 MHz |
| 3.3 | 15.247(d) | A8.5 | Transmitter Radiated Emission | 15.209(a) & 15.247(d) | Pass | Under limit 10.21 dB at 33.78 MHz |
| 3.4 | 15.203 & 15.247(b) | A8.4 | Antenna Requirement | N/A | Pass | - |

# 1 General Description

## 1.1 Applicant

**Acer Inc.**
8F, No. 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221 Taiwan, R.O.C.

## 1.2 Manufacturer

**Quanta Computer Inc.**

1. No. 2, Lane 58, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China
2. No. 4, Wen Ming 1st Street, Kuei Shan Hsiang, Taoyuan Shien 333, Taiwan, R.O.C.
3. No. 8, Dongjing Rd., Songjiang Industrial Zone, Shanghai, P.R. China
4. No. 4, Lane 58, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China
5. North to Songsheng Road, Songjiang Industrial Zone, Shanghai, P.R. China
6. B#, No. 1, South Rongteng Road, Songjiang Export Processing Zone, Shanghai, P.R. China
7. Standard Factory, South to Valqua, Rongxin Road, Songjiang Export Processing Zone, Shanghai, P.R. China
8. C#, No. 1, South Rongteng Road, Songhjang Export Processing Zone, Shanghai, P.R. China
9. No. 6, Lane 66, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China
10. No. 6, Lane 58, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China
11. Huade Building , No. 18, ChuangYe Rd., ShandDi Zone, HaiDian District, Beijing, P.R.C.
12. No. 68, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China
13. 2F, C Building, XinYe Rd., Export Processing District In Torch, Zhongshan, Guangdong, P.R.C.

## 1.3 Feature of Equipment Under Test

| Product Feature & Specification | |
|---|---|
| **Equipment** | WLAN Module |
| **Brand Name** | Acer, Gateway, PackardBell |
| **Model Name** | AR5B95 |
| **FCC ID** | HLZ-AR5B95 |
| **Tx/Rx Frequency Range** | 2400 MHz ~ 2483.5 MHz |
| **Channel Spacing** | 5 MHz |
| **Antenna Type** | Main Antenna : PIFA Antenna with gain -1.41 dBi<br>Aux. Antenna : Monopole Antenna with gain -1.36 dBi |
| **Type of Antenna Connector** | N/A |
| **Host Laptop PC** | Brand Name : Acer, Gateway, PackardBell<br>Model Name : ZA8, Aspire one |
| **Type of Modulation** | 802.11b: DSSS (BPSK / QPSK / CCK)<br>802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) |
| **EUT Stage** | Production Unit |

**Remark:**

1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).
3. Please refer to the user's manual for more detailed information of host laptop PC (Brand name: Acer, Gateway, PackardBell / Model name: ZA8, Aspire one).
4. The conducted test result can be referred to WLAN module report (brand name: Atheros / model name: AR5B95, FCC ID: PPD-AR5B95).

## 1.4 Testing Site

| | | | |
|---|---|---|---|
| **Test Site** | SPORTON INTERNATIONAL INC. | | |
| **Test Site Location** | No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,<br>Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.<br>TEL: +886-3-3273456 / FAX: +886-3-3284978 | | |
| **Test Site No.** | **Sporton Site No.** | | **FCC/IC Registration No.** |
| | CO05-HY | 03CH06HY | TW1022/4086B-1 |

## 1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ANSI C63.4-2003
- IC RSS-210 Issue 7

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

## 1.6 Ancillary Equipment List

| Item | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | WLAN AP | D-Link | DIR-628 | KADIR628A2 | N/A | Unshielded, 1.8 m |
| 2. | Notebook | DELL | Vostro 1510 | FCC DoC | N/A | AC I/P: Unshielded, 1.2 m<br>DC O/P: Shielded, 1.8 m |
| 3. | LCD Monitor | Lenovo | 6135-AB1 | FCC DoC | Shielded, 1.6 m | Unshielded, 1.8 m |
| 4. | (mic) Earphone | Kolin | Kit-7460E | FCC DoC | Unshielded, 1.6 m | N/A |
| 5. | i-pod | Apple | A1199 | FCC DoC | Shielded, 1.0 m | N/A |
| 6. | i-pod | Apple | A1223 | FCC DoC | Shielded, 1.0 m | N/A |

# 2 Test Configuration of Equipment Under Test

## 2.1 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

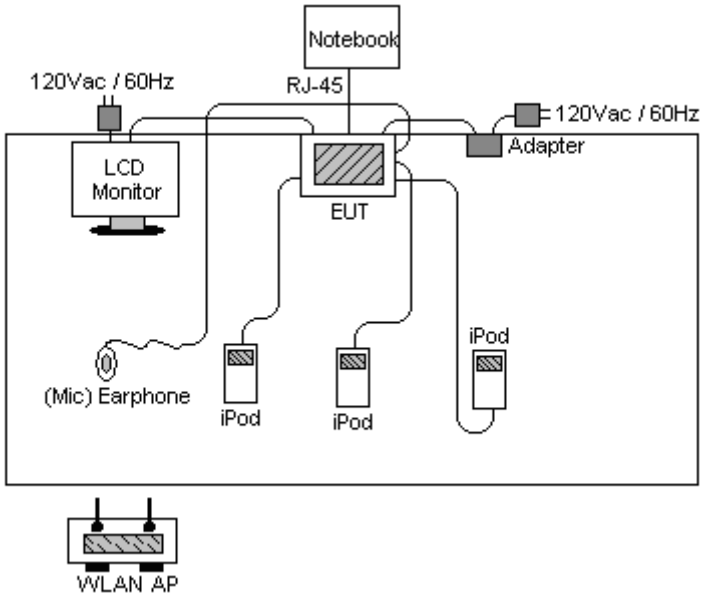
The following tables are showing the test modes as the worst cases and recorded in this report.

| | **Test Cases** |
|---|---|
| **Test Item** | **802.11b (Modulation : DSSS)**<br>**802.11g/n (Modulation : OFDM)** |
| **Radiated TCs** | ■ Mode 1: 802.11b_CH01_2412 MHz<br>■ Mode 2: 802.11b_CH06_2437 MHz<br>■ Mode 3: 802.11b_CH11_2462 MHz<br>■ Mode 4: 802.11g_CH01_2412 MHz<br>■ Mode 5: 802.11g_CH06_2437 MHz<br>■ Mode 6: 802.11g_CH11_2462 MHz<br>■ Mode 7: 802.11n_CH01_2412 MHz (BW 20M)<br>■ Mode 8: 802.11n_CH06_2437 MHz (BW 20M)<br>■ Mode 9: 802.11n_CH11_2462 MHz (BW 20M)<br>■ Mode 10: 802.11n_CH03_2422 MHz (BW 40M)<br>■ Mode 11: 802.11n_CH06_2437 MHz (BW 40M)<br>■ Mode 12: 802.11n_CH09_2452 MHz (BW 40M) |
| **AC Conducted Emission** | Mode 1 : WLAN Link + TC + Adapter |

**Remark:**

1. TC stands for Test Configuration, and consists of iPod, monitor, earphone, and RJ-45.
2. Please refer to CCS report number 81029005 for conducted test results.
3. Radiated TCs Mode 10 ~ 12 only verified bandedge.

## 2.2 Connection Diagram of Test System




**Remark:** The EUT is WLAN Module which was installed in the host laptop PC (brand name: Acer, Gateway, PackardBell / model name: ZA8, Aspire one).

## 2.3 RF Utility

The programmed RF Utility “ART” is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

# 3 Test Result

## 3.1 Band Edges Measurement

### 3.1.1 Limit of Band Edges

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

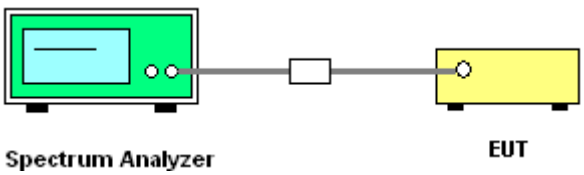
### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.1.3 Test Procedures

1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) > RBW, scan up through 10th harmonic. Band edge emissions must be at least 20 dB below the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the output power of this device was measured by power meter, the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c).

### 3.1.4 Test Setup



### 3.1.5 Test Result of Radiated Band Edges

| | | | |
|---|---|---|---|
| **Test Mode :** | Mode 1 | **Temperature :** | 21~23°C |
| **Test Band :** | 802.11b | **Relative Humidity :** | 41~44% |
| **Test Channel :** | 01 | **Test Engineer :** | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency ( MHz )** | **Level ( dBuV/m )** | **Over Limit ( dB )** | **Limit Line ( dBuV/m )** | **Read Level (dBuV)** | **Antenna Factor ( dB )** | **Cable Loss ( dB )** | **Preamp Factor ( dB )** | **Ant Pos ( cm )** | **Table Pos ( deg )** | **Remark** |
| 2389.99 | 48.73 | -25.27 | 74.00 | 49.11 | 31.98 | 3.92 | 36.28 | 100 | 318 | Peak |
| 2389.99 | 36.37 | -17.63 | 54.00 | 36.75 | 31.98 | 3.92 | 36.28 | 100 | 318 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency ( MHz )** | **Level ( dBuV/m )** | **Over Limit ( dB )** | **Limit Line ( dBuV/m )** | **Read Level (dBuV)** | **Antenna Factor ( dB )** | **Cable Loss ( dB )** | **Preamp Factor ( dB )** | **Ant Pos ( cm )** | **Table Pos ( deg )** | **Remark** |
| 2389.99 | 44.82 | -29.18 | 74.00 | 45.20 | 31.98 | 3.92 | 36.28 | 100 | 317 | Peak |
| 2389.99 | 32.20 | -21.80 | 54.00 | 32.58 | 31.98 | 3.92 | 36.28 | 100 | 317 | Average |

| | | | |
|---|---|---|---|
| **Test Mode :** | Mode 3 | **Temperature :** | 21~23°C |
| **Test Band :** | 802.11b | **Relative Humidity :** | 41~44% |
| **Test Channel :** | 11 | **Test Engineer :** | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency ( MHz )** | **Level ( dBuV/m )** | **Over Limit ( dB )** | **Limit Line ( dBuV/m )** | **Read Level (dBuV)** | **Antenna Factor ( dB )** | **Cable Loss ( dB )** | **Preamp Factor ( dB )** | **Ant Pos ( cm )** | **Table Pos ( deg )** | **Remark** |
| 2496.77 | 49.26 | -24.74 | 74.00 | 49.41 | 32.10 | 4.05 | 36.30 | 101 | 58 | Peak |
| 2496.77 | 36.03 | -17.97 | 54.00 | 36.18 | 32.10 | 4.05 | 36.30 | 101 | 58 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency ( MHz )** | **Level ( dBuV/m )** | **Over Limit ( dB )** | **Limit Line ( dBuV/m )** | **Read Level (dBuV)** | **Antenna Factor ( dB )** | **Cable Loss ( dB )** | **Preamp Factor ( dB )** | **Ant Pos ( cm )** | **Table Pos ( deg )** | **Remark** |
| 2497.53 | 51.29 | -22.71 | 74.00 | 51.44 | 32.10 | 4.05 | 36.30 | 100 | 314 | Peak |
| 2497.53 | 36.11 | -17.89 | 54.00 | 36.26 | 32.10 | 4.05 | 36.30 | 100 | 314 | Average |

| Test Mode : | Mode 4 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Band : | 802.11g | Relative Humidity : | 41~44% |
| Test Channel : | 01 | Test Engineer : | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2389.99 | 52.93 | -21.07 | 74.00 | 53.31 | 31.98 | 3.92 | 36.28 | 100 | 317 | Peak |
| 2389.99 | 36.13 | -17.87 | 54.00 | 36.51 | 31.98 | 3.92 | 36.28 | 100 | 317 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2389.99 | 51.70 | -22.30 | 74.00 | 52.08 | 31.98 | 3.92 | 36.28 | 100 | 316 | Peak |
| 2389.99 | 34.34 | -19.66 | 54.00 | 34.72 | 31.98 | 3.92 | 36.28 | 100 | 316 | Average |

| Test Mode : | Mode 6 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Band : | 802.11g | Relative Humidity : | 41~44% |
| Test Channel : | 11 | Test Engineer : | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2483.85 | 54.31 | -19.69 | 74.00 | 54.48 | 32.08 | 4.05 | 36.30 | 100 | 60 | Peak |
| 2483.85 | 34.92 | -19.08 | 54.00 | 35.09 | 32.08 | 4.05 | 36.30 | 100 | 60 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2483.85 | 52.24 | -21.76 | 74.00 | 52.41 | 32.08 | 4.05 | 36.30 | 100 | 317 | Peak |
| 2483.85 | 33.88 | -20.12 | 54.00 | 34.05 | 32.08 | 4.05 | 36.30 | 100 | 317 | Average |

| Test Mode : | Mode 7 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Band : | 802.11n (BW 20MHz) | Relative Humidity : | 41~44% |
| Test Channel : | 01 | Test Engineer : | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2389.42 | 53.35 | -20.65 | 74.00 | 53.73 | 31.98 | 3.92 | 36.28 | 119 | 317 | Peak |
| 2389.42 | 38.10 | -15.90 | 54.00 | 38.48 | 31.98 | 3.92 | 36.28 | 119 | 317 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2388.85 | 51.04 | -22.96 | 74.00 | 51.42 | 31.98 | 3.92 | 36.28 | 100 | 317 | Peak |
| 2388.85 | 36.79 | -17.21 | 54.00 | 37.17 | 31.98 | 3.92 | 36.28 | 100 | 317 | Average |

| Test Mode : | Mode 9 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Band : | 802.11n (BW 20MHz) | Relative Humidity : | 41~44% |
| Test Channel : | 11 | Test Engineer : | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2483.66 | 54.71 | -19.29 | 74.00 | 54.88 | 32.08 | 4.05 | 36.30 | 100 | 59 | Peak |
| 2483.66 | 37.69 | -16.31 | 54.00 | 37.86 | 32.08 | 4.05 | 36.30 | 100 | 59 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2483.66 | 53.95 | -20.05 | 74.00 | 54.12 | 32.08 | 4.05 | 36.30 | 100 | 316 | Peak |
| 2483.66 | 36.61 | -17.39 | 54.00 | 36.78 | 32.08 | 4.05 | 36.30 | 100 | 316 | Average |

| Test Mode : | Mode 10 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Band : | 802.11n (BW 40MHz) | Relative Humidity : | 41~44% |
| Test Channel : | 03 | Test Engineer : | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2385.81 | 56.27 | -17.73 | 74.00 | 56.65 | 31.98 | 3.92 | 36.28 | 120 | 318 | Peak |
| 2385.81 | 41.25 | -12.75 | 54.00 | 41.63 | 31.98 | 3.92 | 36.28 | 120 | 318 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2388.66 | 53.45 | -20.55 | 74.00 | 53.83 | 31.98 | 3.92 | 36.28 | 102 | 316 | Peak |
| 2388.66 | 38.60 | -15.40 | 54.00 | 38.98 | 31.98 | 3.92 | 36.28 | 102 | 316 | Average |

| Test Mode : | Mode 12 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Band : | 802.11n (BW 40MHz) | Relative Humidity : | 41~44% |
| Test Channel : | 09 | Test Engineer : | Kai Wang |

| ANTENNA POLARITY : HORIZONTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2483.50 | 55.87 | -18.13 | 74.00 | 56.04 | 32.08 | 4.05 | 36.30 | 119 | 314 | Peak |
| 2483.50 | 38.76 | -15.24 | 54.00 | 38.93 | 32.08 | 4.05 | 36.30 | 119 | 314 | Average |

| ANTENNA POLARITY : VERTICAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency ( MHz ) | Level ( dBuV/m ) | Over Limit ( dB ) | Limit Line ( dBuV/m ) | Read Level (dBuV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
| 2483.66 | 54.96 | -19.04 | 74.00 | 55.13 | 32.08 | 4.05 | 36.30 | 102 | 313 | Peak |
| 2483.66 | 37.21 | -16.79 | 54.00 | 37.38 | 32.08 | 4.05 | 36.30 | 102 | 313 | Average |

## 3.2 AC Conducted Emission Measurement

### 3.2.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

| Frequency of emission (MHz) | Conducted limit (dBuV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15-0.5 | 66 to 56* | 56 to 46* |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

*Decreases with the logarithm of the frequency.

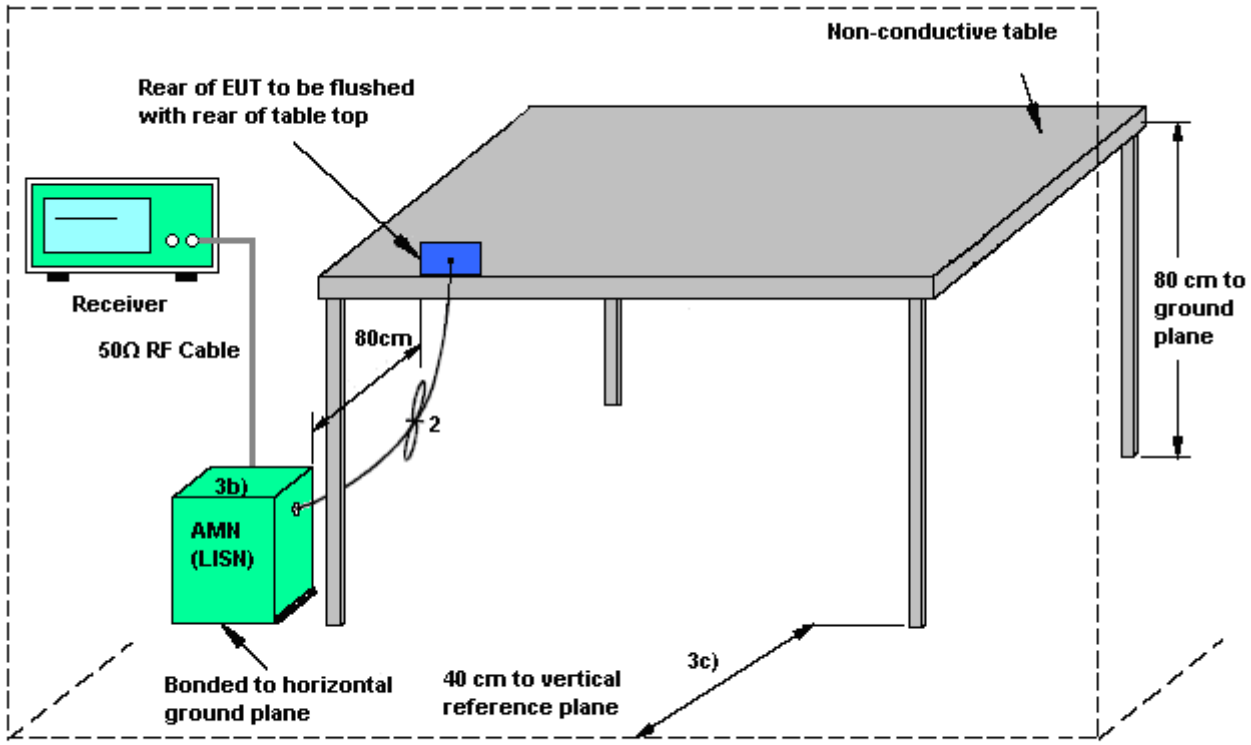
### 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

4. The testing follows the guidelines in ANSI C63.4-2003.
5. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
6. Connect EUT to the power mains through a line impedance stabilization network (LISN).
7. All the support units are connecting to the other LISN.
8. The LISN provides 50 ohm coupling impedance for the measuring instrument.
9. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
10. Both sides of AC line were checked for maximum conducted interference.
11. The frequency range from 150 kHz to 30 MHz was searched.
12. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

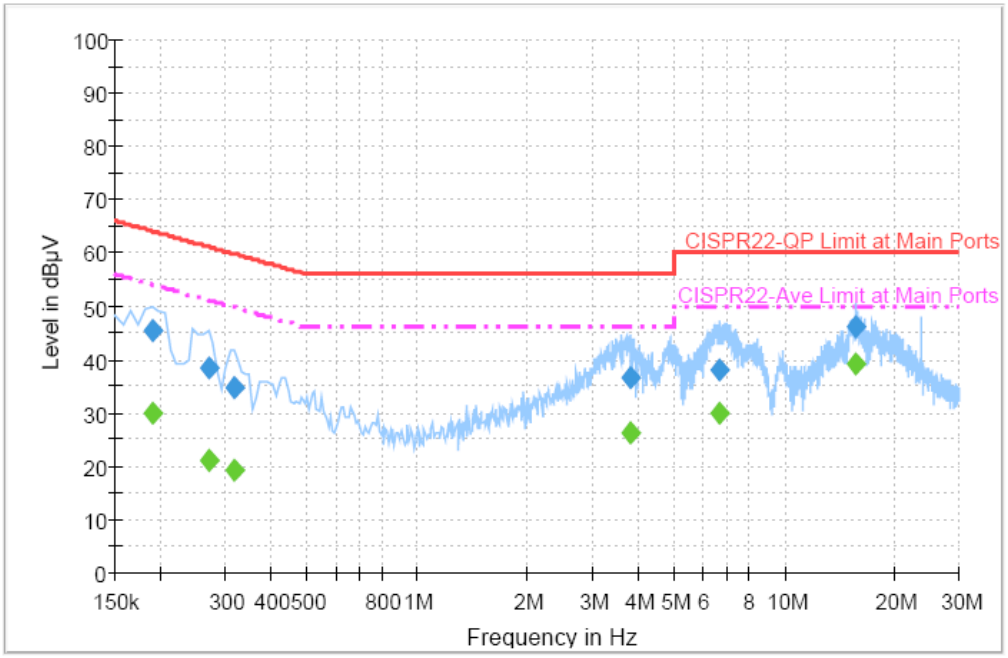
### 3.2.4 Test Setup




AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

### 3.2.5 Test Result of AC Conducted Emission

| | | | |
|---|---|---|---|
| **Test Mode :** | Mode 1 | **Temperature :** | 23~24℃ |
| **Test Engineer :** | Cona Huang | **Relative Humidity :** | 42~43% |
| **Test Voltage :** | 120Vac / 60Hz | **Phase :** | Line |
| **Function Type :** | WLAN Link + TC + Adapter | | |
| **Remark :** | All emissions not reported here are more than 10 dB below the prescribed limit. | | |



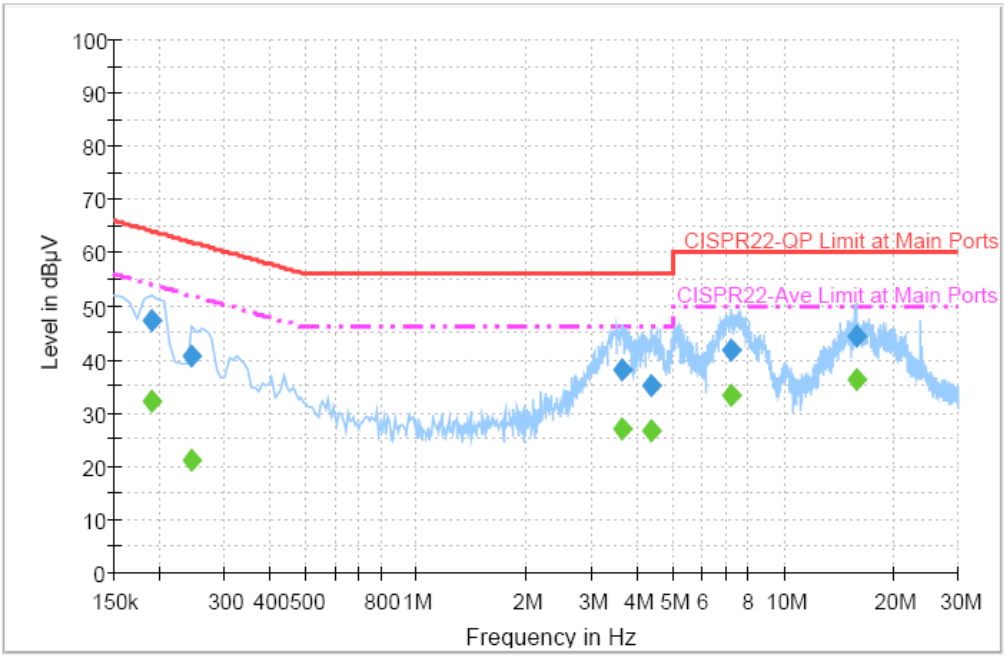

**Final Result 1**

| Frequency (MHz) | QuasiPeak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.190000 | 45.4 | Off | L1 | 19.4 | 18.6 | 64.0 |
| 0.270000 | 38.3 | Off | L1 | 19.3 | 22.8 | 61.1 |
| 0.318000 | 34.7 | Off | L1 | 19.3 | 25.1 | 59.8 |
| 3.822000 | 36.4 | Off | L1 | 19.5 | 19.6 | 56.0 |
| 6.702000 | 38.0 | Off | L1 | 19.5 | 22.0 | 60.0 |
| 15.726000 | 46.3 | Off | L1 | 19.8 | 13.7 | 60.0 |

**Final Result 2**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.190000 | 29.7 | Off | L1 | 19.4 | 24.3 | 54.0 |
| 0.270000 | 21.0 | Off | L1 | 19.3 | 30.1 | 51.1 |
| 0.318000 | 19.3 | Off | L1 | 19.3 | 30.5 | 49.8 |
| 3.822000 | 26.0 | Off | L1 | 19.5 | 20.0 | 46.0 |
| 6.702000 | 29.8 | Off | L1 | 19.5 | 20.2 | 50.0 |
| 15.726000 | 39.2 | Off | L1 | 19.8 | 10.8 | 50.0 |

| Test Mode : | Mode 1 | Temperature : | 23~24℃ |
|---|---|---|---|
| Test Engineer : | Cona Huang | Relative Humidity : | 42~43% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Neutral |
| Function Type : | WLAN Link + TC + Adapter | | |
| Remark : | All emissions not reported here are more than 10 dB below the prescribed limit. | | |




**Final Result 1**

| Frequency (MHz) | QuasiPeak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.190000 | 47.1 | Off | N | 19.4 | 16.9 | 64.0 |
| 0.246000 | 40.6 | Off | N | 19.4 | 21.3 | 61.9 |
| 3.630000 | 38.0 | Off | N | 19.5 | 18.0 | 56.0 |
| 4.398000 | 35.2 | Off | N | 19.5 | 20.8 | 56.0 |
| 7.190000 | 41.5 | Off | N | 19.5 | 18.5 | 60.0 |
| 15.782000 | 44.3 | Off | N | 19.8 | 15.7 | 60.0 |

**Final Result 2**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.190000 | 32.0 | Off | N | 19.4 | 22.0 | 54.0 |
| 0.246000 | 21.1 | Off | N | 19.4 | 30.8 | 51.9 |
| 3.630000 | 26.8 | Off | N | 19.5 | 19.2 | 46.0 |
| 4.398000 | 26.6 | Off | N | 19.5 | 19.4 | 46.0 |
| 7.190000 | 33.3 | Off | N | 19.5 | 16.7 | 50.0 |
| 15.782000 | 36.2 | Off | N | 19.8 | 13.8 | 50.0 |

## 3.3 Radiated Emission Measurement

### 3.3.1 Limit of Radiated Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 0.009 – 0.490 | 2400/F(kHz) | 300 |
| 0.490 – 1.705 | 24000/F(kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |
| 30 – 88 | 100 | 3 |
| 88 – 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

### 3.3.2 Measuring Instruments

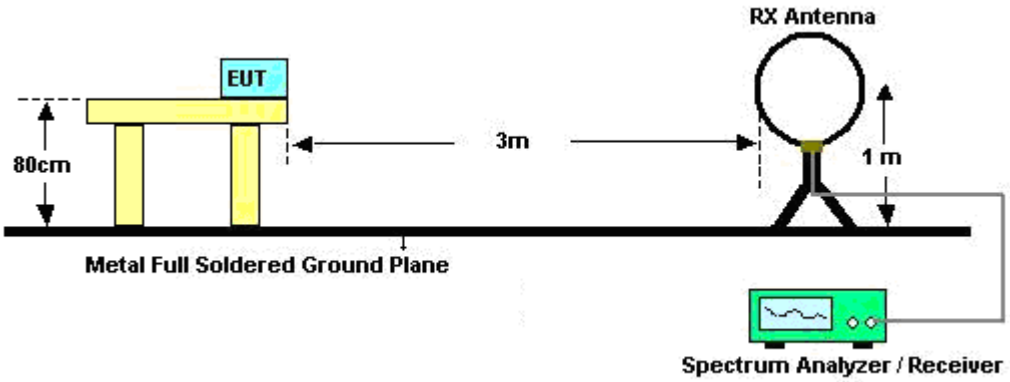
See list of measuring instruments of this test report.

### 3.3.3 Test Procedures

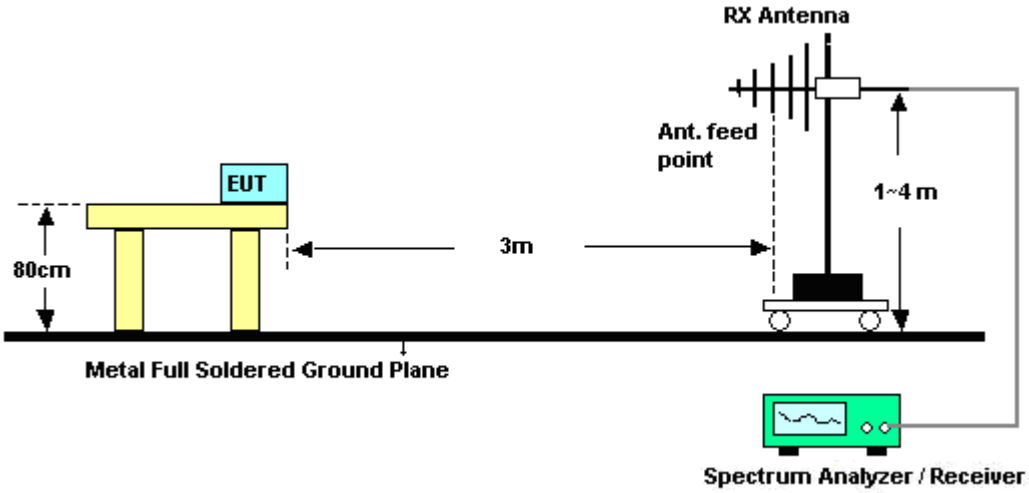
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
   Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
3. Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

### 3.3.4 Test Setup

**For radiated emissions below 30MHz**




**For radiated emissions above 30MHz**



### 3.3.5 Test Results of Radiated Emissions (below 30MHz)

| Test Engineer : | Kai Wang | Temperature : | 21~23°C |
|---|---|---|---|
| | | Relative Humidity : | 41~44% |

| Frequency (MHz) | Level (dBuV) | Over Limit (dB) | Limit Line (dBuV) | Remark |
|---|---|---|---|---|
| - | - | - | - | See Note |

**Note:**

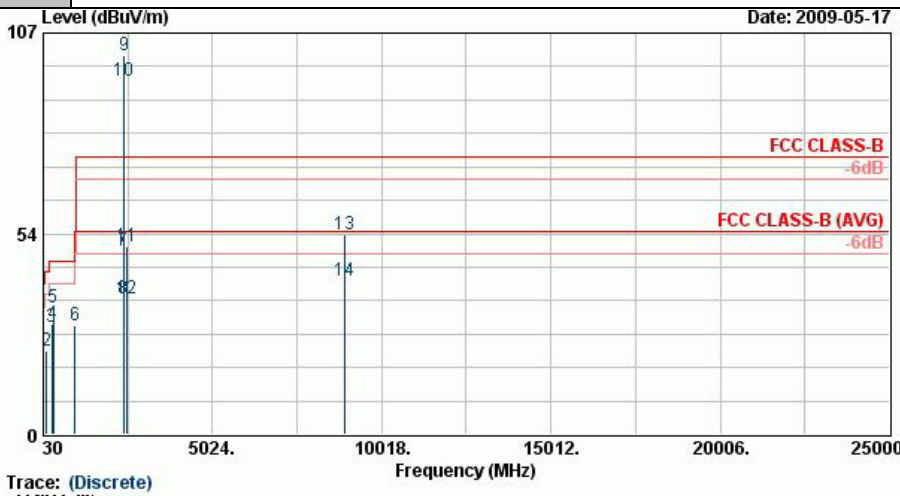
The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

### 3.3.6 Test Result of Radiated Emission (above 30MHz)

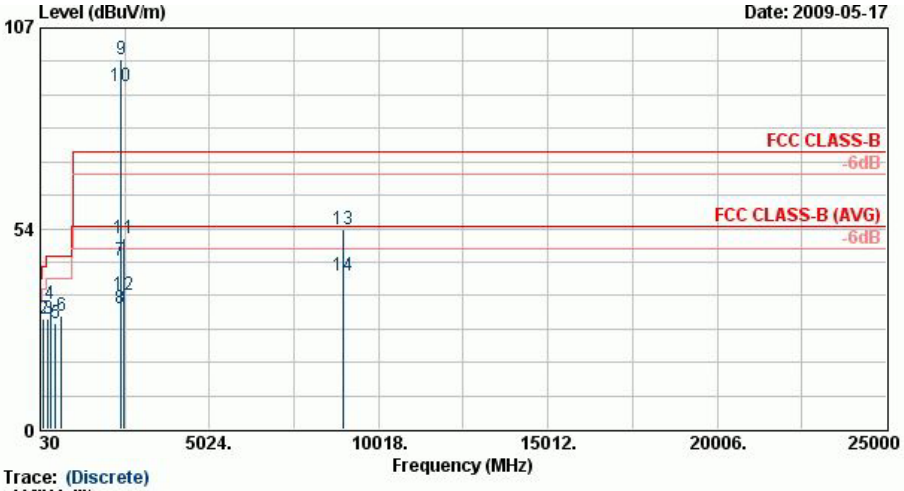
| Test Mode : | Mode 1 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 01 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 1

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.00 | 19.33 | -20.67 | 40.00 | 30.69 | 19.90 | 0.30 | 31.56 | --- | --- | Peak |
| 2 | 137.73 | 22.27 | -21.23 | 43.50 | 41.59 | 11.90 | 0.50 | 31.72 | --- | --- | Peak |
| 3 | 275.43 | 28.61 | -17.39 | 46.00 | 46.38 | 13.50 | 0.70 | 31.97 | --- | --- | Peak |
| 4 | 308.40 | 29.34 | -16.66 | 46.00 | 46.49 | 14.14 | 0.78 | 32.07 | --- | --- | Peak |
| 5 | 332.90 | 33.64 | -12.36 | 46.00 | 49.87 | 14.82 | 0.80 | 31.85 | 100 | 74 | Peak |
| 6 | 955.90 | 29.19 | -16.81 | 46.00 | 37.15 | 22.11 | 1.26 | 31.34 | --- | --- | Peak |
| 7 | 2389.99 | 48.73 | -25.27 | 74.00 | 49.11 | 31.98 | 3.92 | 36.28 | 100 | 318 | Peak |
| 8 | 2389.99 | 36.37 | -17.63 | 54.00 | 36.75 | 31.98 | 3.92 | 36.28 | 100 | 318 | Average |
| 9 X | 2412.00 | 101.13 | | | 101.46 | 32.00 | 3.95 | 36.28 | 100 | 318 | Peak |
| 10 @ | 2412.00 | 94.31 | | | 94.64 | 32.00 | 3.95 | 36.28 | 100 | 318 | Average |
| 11 | 2500.00 | 50.03 | -23.97 | 74.00 | 50.18 | 32.10 | 4.05 | 36.30 | 100 | 318 | Peak |
| 12 | 2500.00 | 36.10 | -17.90 | 54.00 | 36.25 | 32.10 | 4.05 | 36.30 | 100 | 318 | Average |
| 13 | 8916.00 | 53.34 | -20.66 | 74.00 | 46.37 | 36.12 | 7.71 | 36.86 | 100 | 129 | Peak |
| 14 | 8916.00 | 41.12 | -12.88 | 54.00 | 34.15 | 36.12 | 7.71 | 36.86 | 100 | 129 | Average |

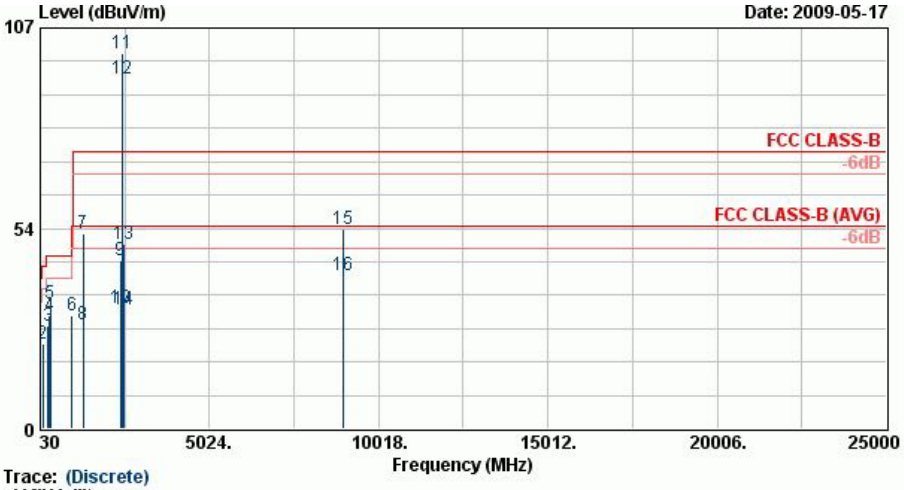
| Test Mode : | Mode 1 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 01 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 1

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 43.23 | 29.37 | -10.63 | 40.00 | 49.21 | 11.58 | 0.30 | 31.71 | 100 | 208 | Peak |
| 2 | 126.39 | 29.41 | -14.09 | 43.50 | 48.16 | 12.46 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 256.53 | 29.57 | -16.43 | 46.00 | 47.21 | 13.50 | 0.70 | 31.84 | --- | --- | Peak |
| 4 | 330.80 | 33.44 | -12.56 | 46.00 | 49.74 | 14.76 | 0.80 | 31.87 | --- | --- | Peak |
| 5 | 479.90 | 28.40 | -17.60 | 46.00 | 41.84 | 17.62 | 1.00 | 32.06 | --- | --- | Peak |
| 6 | 663.30 | 30.36 | -15.64 | 46.00 | 41.78 | 19.55 | 1.06 | 32.04 | --- | --- | Peak |
| 7 | 2389.99 | 44.82 | -29.18 | 74.00 | 45.20 | 31.98 | 3.92 | 36.28 | 100 | 317 | Peak |
| 8 | 2389.99 | 32.20 | -21.80 | 54.00 | 32.58 | 31.98 | 3.92 | 36.28 | 100 | 317 | Average |
| 9 X | 2412.00 | 98.72 | | | 99.06 | 32.00 | 3.95 | 36.28 | 100 | 317 | Peak |
| 10 @ | 2412.00 | 91.65 | | | 91.98 | 32.00 | 3.95 | 36.28 | 100 | 317 | Average |
| 11 | 2492.00 | 51.10 | -22.90 | 74.00 | 51.25 | 32.10 | 4.05 | 36.30 | 100 | 317 | Peak |
| 12 | 2492.00 | 35.73 | -18.27 | 54.00 | 35.88 | 32.10 | 4.05 | 36.30 | 100 | 317 | Average |
| 13 | 8976.00 | 53.30 | -20.70 | 74.00 | 46.26 | 36.17 | 7.77 | 36.89 | 100 | 261 | Peak |
| 14 | 8976.00 | 41.08 | -12.92 | 54.00 | 34.03 | 36.17 | 7.77 | 36.89 | 100 | 261 | Average |

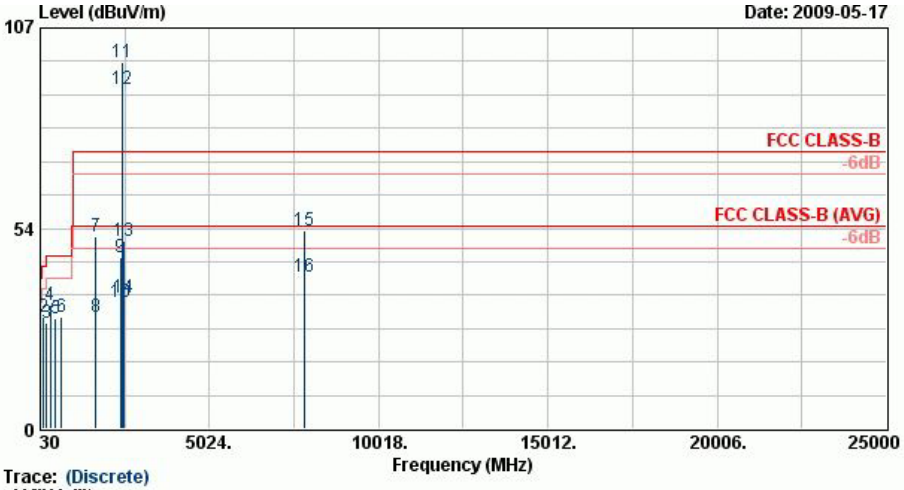
| Test Mode : | Mode 2 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HV
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 2

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.00 | 19.53 | -20.47 | 40.00 | 30.89 | 19.90 | 0.30 | 31.56 | --- | --- | Peak |
| 2 | 103.44 | 22.59 | -20.91 | 43.50 | 42.14 | 11.92 | 0.50 | 31.97 | --- | --- | Peak |
| 3 | 257.34 | 27.35 | -18.65 | 46.00 | 44.99 | 13.50 | 0.70 | 31.84 | --- | --- | Peak |
| 4 | 301.40 | 30.04 | -15.96 | 46.00 | 47.50 | 13.95 | 0.72 | 32.13 | --- | --- | Peak |
| 5 | 330.80 | 33.39 | -12.61 | 46.00 | 49.69 | 14.76 | 0.80 | 31.87 | 100 | 80 | Peak |
| 6 | 959.40 | 30.40 | -15.60 | 46.00 | 38.29 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 1300.00 | 52.29 | -21.71 | 74.00 | 58.54 | 27.96 | 2.57 | 36.78 | 100 | 132 | Peak |
| 8 | 1300.00 | 27.82 | -26.18 | 54.00 | 34.07 | 27.96 | 2.57 | 36.78 | 100 | 132 | Average |
| 9 | 2390.00 | 44.79 | -29.21 | 74.00 | 45.17 | 31.98 | 3.92 | 36.28 | 119 | 317 | Peak |
| 10 | 2390.00 | 32.33 | -21.67 | 54.00 | 32.71 | 31.98 | 3.92 | 36.28 | 119 | 317 | Average |
| 11 @ | 2437.00 | 100.19 | | | 100.47 | 32.02 | 3.99 | 36.29 | 119 | 317 | Peak |
| 12 @ | 2437.00 | 93.58 | | | 93.84 | 32.04 | 3.99 | 36.29 | 119 | 317 | Average |
| 13 | 2500.00 | 49.32 | -24.68 | 74.00 | 49.47 | 32.10 | 4.05 | 36.30 | 119 | 317 | Peak |
| 14 | 2500.00 | 31.83 | -22.17 | 54.00 | 31.98 | 32.10 | 4.05 | 36.30 | 119 | 317 | Average |
| 15 | 8982.00 | 53.12 | -20.88 | 74.00 | 46.02 | 36.18 | 7.80 | 36.89 | 100 | 102 | Peak |
| 16 | 8982.00 | 41.01 | -12.99 | 54.00 | 33.92 | 36.18 | 7.80 | 36.89 | 100 | 102 | Average |

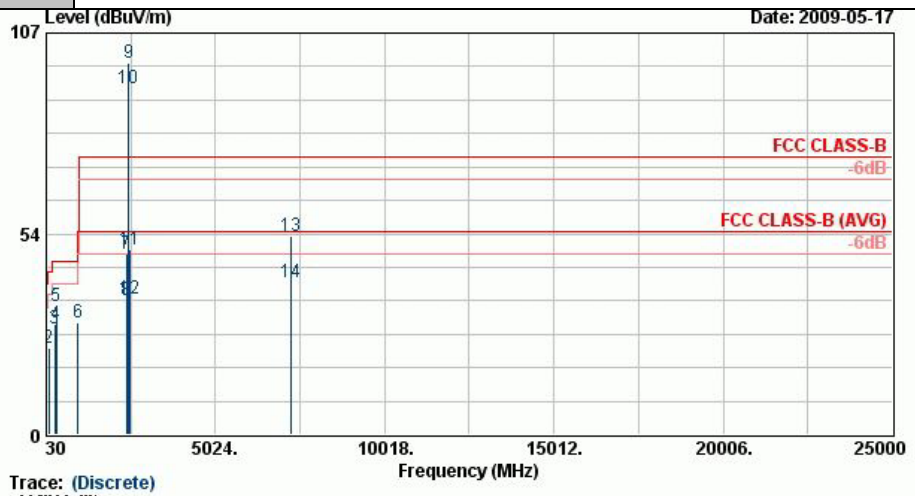
| Test Mode : | Mode 2 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HV
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 2

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 @ | 36.48 | 29.44 | -10.56 | 40.00 | 45.22 | 15.70 | 0.30 | 31.77 | 100 | 301 | Peak |
| 2 | 125.04 | 29.92 | -13.58 | 43.50 | 48.63 | 12.50 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 214.68 | 28.19 | -15.31 | 43.50 | 49.01 | 10.62 | 0.64 | 32.09 | --- | --- | Peak |
| 4 | 332.90 | 32.87 | -13.13 | 46.00 | 49.10 | 14.82 | 0.80 | 31.85 | --- | --- | Peak |
| 5 | 479.90 | 29.40 | -16.60 | 46.00 | 42.84 | 17.62 | 1.00 | 32.06 | --- | --- | Peak |
| 6 | 663.30 | 29.66 | -16.34 | 46.00 | 41.08 | 19.55 | 1.06 | 32.04 | --- | --- | Peak |
| 7 | 1660.00 | 51.20 | -22.80 | 74.00 | 55.42 | 29.17 | 3.01 | 36.41 | 100 | 176 | Peak |
| 8 | 1660.00 | 29.78 | -24.22 | 54.00 | 34.01 | 29.17 | 3.01 | 36.41 | 100 | 176 | Average |
| 9 | 2390.00 | 45.82 | -28.18 | 74.00 | 46.20 | 31.98 | 3.92 | 36.28 | 102 | 314 | Peak |
| 10 | 2390.00 | 33.63 | -20.37 | 54.00 | 34.01 | 31.98 | 3.92 | 36.28 | 102 | 314 | Average |
| 11 @ | 2437.00 | 97.90 | | | 98.19 | 32.02 | 3.99 | 36.29 | 102 | 314 | Peak |
| 12 @ | 2437.00 | 90.76 | | | 91.02 | 32.04 | 3.99 | 36.29 | 102 | 314 | Average |
| 13 | 2500.00 | 50.16 | -23.84 | 74.00 | 50.31 | 32.10 | 4.05 | 36.30 | 102 | 314 | Peak |
| 14 | 2500.00 | 34.83 | -19.17 | 54.00 | 34.98 | 32.10 | 4.05 | 36.30 | 102 | 314 | Average |
| 15 | 7836.00 | 52.77 | -21.23 | 74.00 | 46.37 | 35.63 | 7.44 | 36.67 | 100 | 215 | Peak |
| 16 | 7836.00 | 40.52 | -13.49 | 54.00 | 34.11 | 35.63 | 7.44 | 36.67 | 100 | 215 | Average |

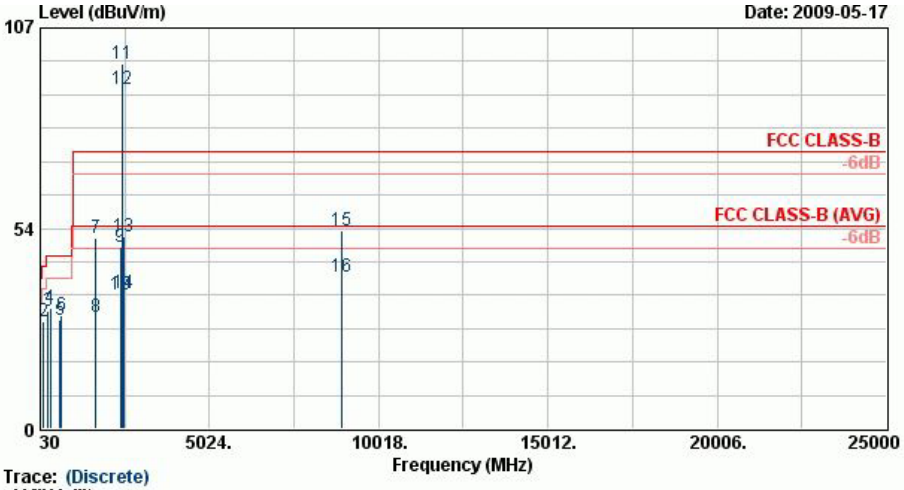
| Test Mode : | Mode 3 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 11 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 3

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.00 | 20.46 | -19.54 | 40.00 | 31.82 | 19.90 | 0.30 | 31.56 | --- | --- | Peak |
| 2 | 108.84 | 22.93 | -20.57 | 43.50 | 41.74 | 12.57 | 0.50 | 31.88 | --- | --- | Peak |
| 3 | 276.78 | 28.25 | -17.75 | 46.00 | 46.03 | 13.50 | 0.70 | 31.98 | --- | --- | Peak |
| 4 | 300.00 | 29.37 | -16.63 | 46.00 | 46.92 | 13.90 | 0.70 | 32.15 | --- | --- | Peak |
| 5 | 332.90 | 34.28 | -11.72 | 46.00 | 50.51 | 14.82 | 0.80 | 31.85 | 100 | 77 | Peak |
| 6 | 959.40 | 29.77 | -16.23 | 46.00 | 37.66 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 2390.00 | 48.31 | -25.69 | 74.00 | 48.70 | 31.98 | 3.92 | 36.28 | 101 | 58 | Peak |
| 8 | 2390.00 | 35.97 | -18.03 | 54.00 | 36.35 | 31.98 | 3.92 | 36.28 | 101 | 58 | Average |
| 9 X | 2462.00 | 99.03 | | | 99.25 | 32.06 | 4.02 | 36.29 | 101 | 58 | Peak |
| 10 @ | 2462.00 | 92.42 | | | 92.63 | 32.06 | 4.02 | 36.29 | 101 | 58 | Average |
| 11 | 2496.77 | 49.26 | -24.74 | 74.00 | 49.41 | 32.10 | 4.05 | 36.30 | 101 | 58 | Peak |
| 12 | 2496.77 | 36.03 | -17.97 | 54.00 | 36.18 | 32.10 | 4.05 | 36.30 | 101 | 58 | Average |
| 13 | 7257.00 | 52.84 | -21.16 | 74.00 | 46.56 | 35.60 | 7.18 | 36.50 | 100 | 299 | Peak |
| 14 | 7257.00 | 40.57 | -13.43 | 54.00 | 34.29 | 35.60 | 7.18 | 36.50 | 100 | 299 | Average |

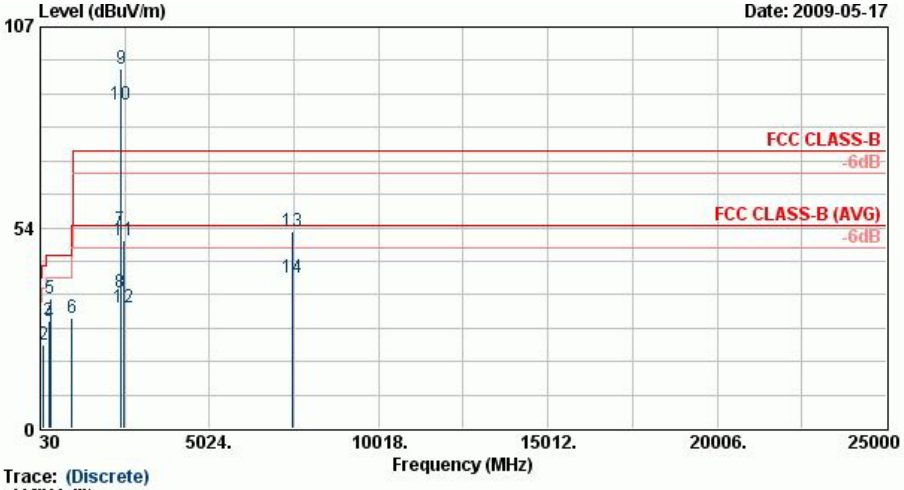
| Test Mode : | Mode 3 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 11 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 3

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 33.78 | 29.50 | -10.50 | 40.00 | 43.48 | 17.50 | 0.30 | 31.78 | 100 | 308 | Peak |
| 2 | 126.93 | 28.73 | -14.77 | 43.50 | 47.52 | 12.42 | 0.50 | 31.70 | --- | --- | Peak |
| 3 | 261.93 | 31.36 | -14.64 | 46.00 | 48.80 | 13.74 | 0.70 | 31.87 | --- | --- | Peak |
| 4 | 332.90 | 32.41 | -13.59 | 46.00 | 48.64 | 14.82 | 0.80 | 31.85 | --- | --- | Peak |
| 5 | 623.40 | 28.93 | -17.07 | 46.00 | 40.62 | 19.29 | 1.06 | 32.04 | --- | --- | Peak |
| 6 | 663.30 | 30.05 | -15.95 | 46.00 | 41.47 | 19.55 | 1.06 | 32.04 | --- | --- | Peak |
| 7 | 1660.00 | 51.03 | -22.97 | 74.00 | 55.26 | 29.17 | 3.01 | 36.41 | 100 | 172 | Peak |
| 8 | 1660.00 | 29.63 | -24.37 | 54.00 | 33.86 | 29.17 | 3.01 | 36.41 | 100 | 172 | Average |
| 9 | 2390.00 | 48.43 | -25.57 | 74.00 | 48.81 | 31.98 | 3.92 | 36.28 | 100 | 314 | Peak |
| 10 | 2390.00 | 35.93 | -18.07 | 54.00 | 36.31 | 31.98 | 3.92 | 36.28 | 100 | 314 | Average |
| 11 X | 2462.00 | 97.60 | | | 97.81 | 32.06 | 4.02 | 36.29 | 100 | 314 | Peak |
| 12 @ | 2462.00 | 90.67 | | | 90.88 | 32.06 | 4.02 | 36.29 | 100 | 314 | Average |
| 13 | 2497.53 | 51.29 | -22.71 | 74.00 | 51.44 | 32.10 | 4.05 | 36.30 | 100 | 314 | Peak |
| 14 | 2497.53 | 36.11 | -17.89 | 54.00 | 36.26 | 32.10 | 4.05 | 36.30 | 100 | 314 | Average |
| 15 | 8916.00 | 52.78 | -21.22 | 74.00 | 45.81 | 36.12 | 7.71 | 36.86 | 100 | 193 | Peak |
| 16 | 8916.00 | 40.59 | -13.41 | 54.00 | 33.62 | 36.12 | 7.71 | 36.86 | 100 | 193 | Average |

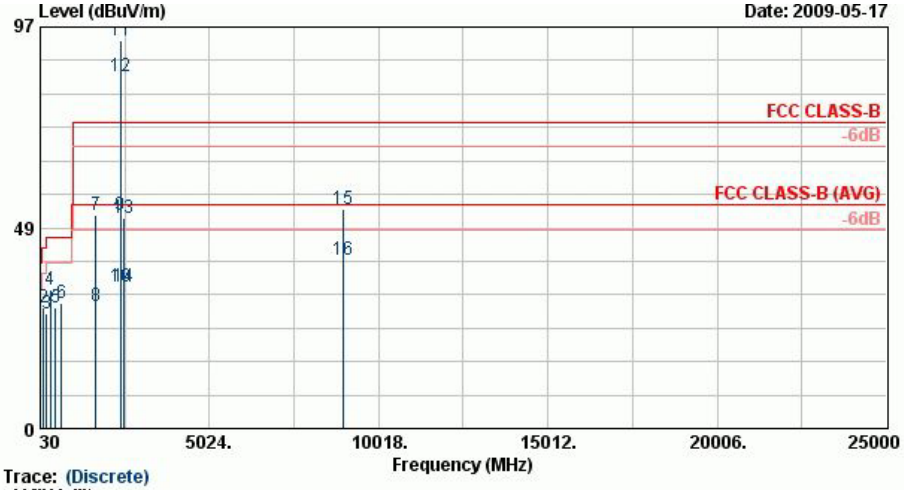
| Test Mode : | Mode 4 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 01 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 4

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.00 | 19.57 | -20.43 | 40.00 | 30.93 | 19.90 | 0.30 | 31.56 | --- | --- | Peak |
| 2 | 137.73 | 22.28 | -21.22 | 43.50 | 41.60 | 11.90 | 0.50 | 31.72 | --- | --- | Peak |
| 3 | 274.08 | 28.48 | -17.52 | 46.00 | 46.24 | 13.50 | 0.70 | 31.97 | --- | --- | Peak |
| 4 | 300.00 | 28.37 | -17.63 | 46.00 | 45.92 | 13.90 | 0.70 | 32.15 | --- | --- | Peak |
| 5 | 330.80 | 34.48 | -11.52 | 46.00 | 50.79 | 14.76 | 0.80 | 31.87 | 100 | 78 | Peak |
| 6 | 959.40 | 29.62 | -16.38 | 46.00 | 37.51 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 2389.99 | 52.93 | -21.07 | 74.00 | 53.31 | 31.98 | 3.92 | 36.28 | 100 | 317 | Peak |
| 8 | 2389.99 | 36.13 | -17.87 | 54.00 | 36.51 | 31.98 | 3.92 | 36.28 | 100 | 317 | Average |
| 9 X | 2412.00 | 95.90 | | | 96.23 | 32.00 | 3.95 | 36.28 | 100 | 317 | Peak |
| 10 @ | 2412.00 | 86.46 | | | 86.79 | 32.00 | 3.95 | 36.28 | 100 | 317 | Average |
| 11 | 2500.00 | 50.30 | -23.70 | 74.00 | 50.45 | 32.10 | 4.05 | 36.30 | 100 | 317 | Peak |
| 12 | 2500.00 | 32.03 | -21.97 | 54.00 | 32.18 | 32.10 | 4.05 | 36.30 | 100 | 317 | Average |
| 13 | 7452.00 | 52.50 | -21.50 | 74.00 | 46.31 | 35.51 | 7.25 | 36.58 | 100 | 126 | Peak |
| 14 | 7452.00 | 40.31 | -13.69 | 54.00 | 34.12 | 35.51 | 7.25 | 36.58 | 100 | 126 | Average |

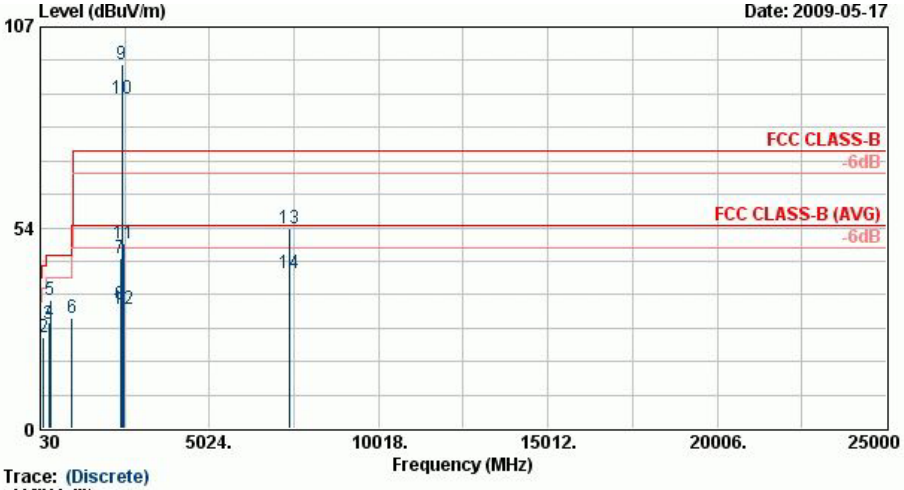
| Test Mode : | Mode 4 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 01 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 4

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 36.48 | 29.16 | -10.84 | 40.00 | 44.93 | 15.70 | 0.30 | 31.77 | 100 | 305 | Peak |
| 2 | 125.04 | 29.15 | -14.35 | 43.50 | 47.86 | 12.50 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 214.68 | 27.78 | -15.72 | 43.50 | 48.61 | 10.62 | 0.64 | 32.09 | --- | --- | Peak |
| 4 | 330.80 | 33.39 | -12.61 | 46.00 | 49.69 | 14.76 | 0.80 | 31.87 | --- | --- | Peak |
| 5 | 479.90 | 29.33 | -16.67 | 46.00 | 42.77 | 17.62 | 1.00 | 32.06 | --- | --- | Peak |
| 6 | 663.30 | 30.34 | -15.66 | 46.00 | 41.76 | 19.55 | 1.06 | 32.04 | --- | --- | Peak |
| 7 | 1660.00 | 51.39 | -22.61 | 74.00 | 55.61 | 29.17 | 3.01 | 36.41 | 100 | 175 | Peak |
| 8 | 1660.00 | 29.65 | -24.35 | 54.00 | 33.88 | 29.17 | 3.01 | 36.41 | 100 | 175 | Average |
| 9 | 2389.99 | 51.70 | -22.30 | 74.00 | 52.08 | 31.98 | 3.92 | 36.28 | 100 | 316 | Peak |
| 10 | 2389.99 | 34.34 | -19.66 | 54.00 | 34.72 | 31.98 | 3.92 | 36.28 | 100 | 316 | Average |
| 11 X | 2412.00 | 93.71 | | | 94.07 | 32.00 | 3.92 | 36.28 | 100 | 316 | Peak |
| 12 @ | 2412.00 | 84.96 | | | 85.29 | 32.00 | 3.95 | 36.28 | 100 | 316 | Average |
| 13 | 2494.00 | 50.93 | -23.07 | 74.00 | 51.08 | 32.10 | 4.05 | 36.30 | 100 | 316 | Peak |
| 14 | 2494.00 | 34.09 | -19.91 | 54.00 | 34.24 | 32.10 | 4.05 | 36.30 | 100 | 316 | Average |
| 15 | 8961.00 | 53.07 | -20.93 | 74.00 | 46.03 | 36.15 | 7.77 | 36.88 | 100 | 217 | Peak |
| 16 | 8961.00 | 40.87 | -13.13 | 54.00 | 33.83 | 36.15 | 7.77 | 36.88 | 100 | 217 | Average |

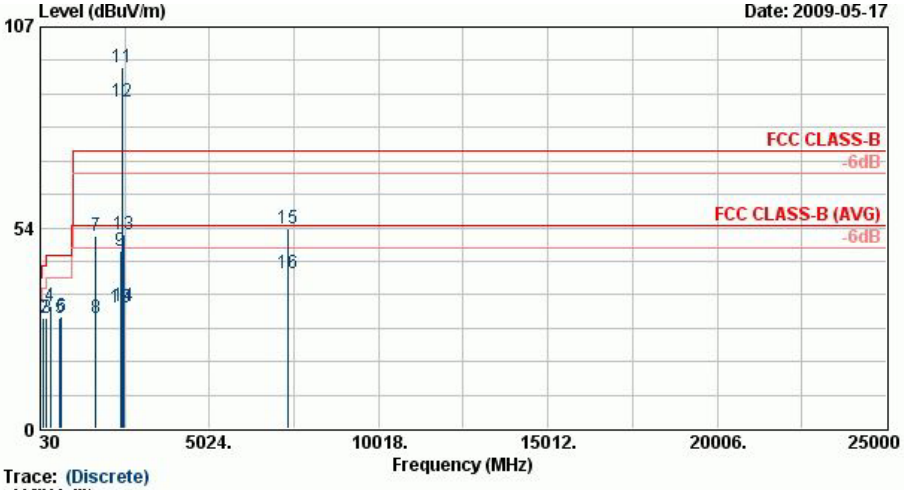
| Test Mode : | Mode 5 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HV
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 5

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 31.08 | 20.14 | -19.86 | 40.00 | 32.16 | 19.30 | 0.30 | 31.61 | --- | --- | Peak |
| 2 | 137.73 | 24.45 | -19.05 | 43.50 | 43.77 | 11.90 | 0.50 | 31.72 | --- | --- | Peak |
| 3 | 292.98 | 27.81 | -18.19 | 46.00 | 45.45 | 13.76 | 0.70 | 32.10 | --- | --- | Peak |
| 4 | 300.00 | 28.21 | -17.79 | 46.00 | 45.76 | 13.90 | 0.70 | 32.15 | --- | --- | Peak |
| 5 | 332.90 | 34.35 | -11.65 | 46.00 | 50.59 | 14.82 | 0.80 | 31.85 | 100 | 75 | Peak |
| 6 | 959.40 | 29.43 | -16.57 | 46.00 | 37.32 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 2390.00 | 45.35 | -28.65 | 74.00 | 45.74 | 31.98 | 3.92 | 36.28 | 100 | 313 | Peak |
| 8 | 2390.00 | 32.90 | -21.10 | 54.00 | 33.28 | 31.98 | 3.92 | 36.28 | 100 | 313 | Average |
| 9 X | 2437.00 | 97.01 | | | 97.29 | 32.02 | 3.99 | 36.29 | 100 | 313 | Peak |
| 10 @ | 2437.00 | 87.91 | | | 88.17 | 32.04 | 3.99 | 36.29 | 100 | 313 | Average |
| 11 | 2500.00 | 49.34 | -24.66 | 74.00 | 49.49 | 32.10 | 4.05 | 36.30 | 100 | 313 | Peak |
| 12 | 2500.00 | 31.87 | -22.13 | 54.00 | 32.02 | 32.10 | 4.05 | 36.30 | 100 | 313 | Average |
| 13 | 7371.00 | 53.30 | -20.70 | 74.00 | 47.08 | 35.55 | 7.22 | 36.55 | 100 | 281 | Peak |
| 14 | 7371.00 | 41.25 | -12.75 | 54.00 | 35.03 | 35.55 | 7.22 | 36.55 | 100 | 281 | Average |

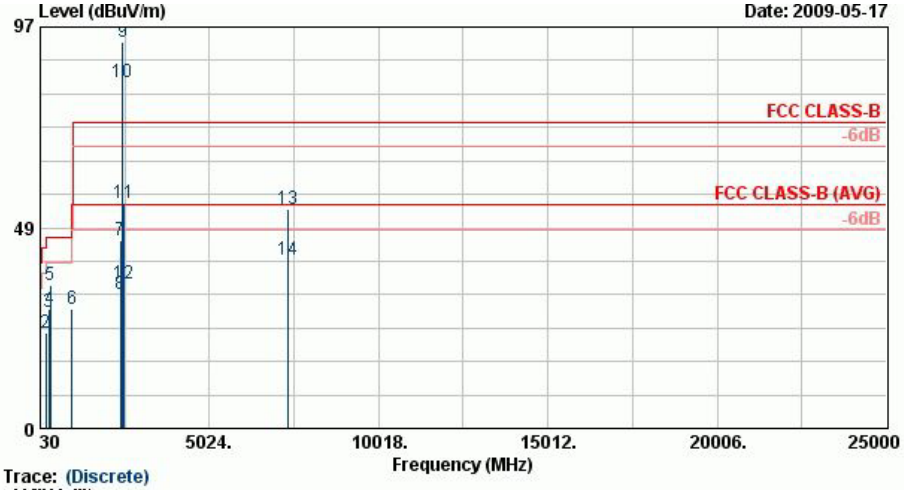
| Test Mode : | Mode 5 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 5

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 33.78 | 29.28 | -10.72 | 40.00 | 43.26 | 17.50 | 0.30 | 31.78 | 100 | 310 | Peak |
| 2 | 124.23 | 29.41 | -14.09 | 43.50 | 48.09 | 12.54 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 214.68 | 29.42 | -14.08 | 43.50 | 50.25 | 10.62 | 0.64 | 32.09 | --- | --- | Peak |
| 4 | 330.80 | 32.57 | -13.43 | 46.00 | 48.87 | 14.76 | 0.80 | 31.87 | --- | --- | Peak |
| 5 | 623.40 | 29.46 | -16.54 | 46.00 | 41.15 | 19.29 | 1.06 | 32.04 | --- | --- | Peak |
| 6 | 665.40 | 29.94 | -16.06 | 46.00 | 41.40 | 19.56 | 1.05 | 32.06 | --- | --- | Peak |
| 7 | 1660.00 | 51.24 | -22.76 | 74.00 | 55.47 | 29.17 | 3.01 | 36.41 | 100 | 174 | Peak |
| 8 | 1660.00 | 29.39 | -24.61 | 54.00 | 33.62 | 29.17 | 3.01 | 36.41 | 100 | 174 | Average |
| 9 | 2390.00 | 47.23 | -26.77 | 74.00 | 47.62 | 31.98 | 3.92 | 36.28 | 100 | 314 | Peak |
| 10 | 2390.00 | 32.35 | -21.65 | 54.00 | 32.73 | 31.98 | 3.92 | 36.28 | 100 | 314 | Average |
| 11 X | 2437.00 | 96.44 | | | 96.72 | 32.02 | 3.99 | 36.29 | 100 | 314 | Peak |
| 12 @ | 2437.00 | 87.13 | | | 87.39 | 32.04 | 3.99 | 36.29 | 100 | 314 | Average |
| 13 | 2500.00 | 51.51 | -22.49 | 74.00 | 51.66 | 32.10 | 4.05 | 36.30 | 100 | 314 | Peak |
| 14 | 2500.00 | 32.70 | -21.30 | 54.00 | 32.85 | 32.10 | 4.05 | 36.30 | 100 | 314 | Average |
| 15 | 7326.00 | 53.35 | -20.65 | 74.00 | 47.10 | 35.57 | 7.21 | 36.53 | 100 | 118 | Peak |
| 16 | 7326.00 | 41.33 | -12.67 | 54.00 | 35.08 | 35.57 | 7.21 | 36.53 | 100 | 118 | Average |

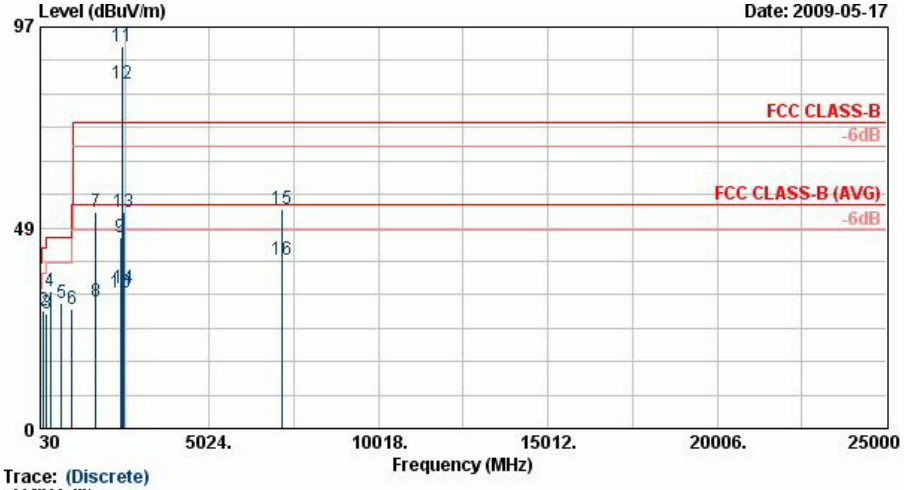
| Test Mode : | Mode 6 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 11 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 6

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.54 | 19.63 | -20.37 | 40.00 | 31.64 | 19.30 | 0.30 | 31.61 | --- | --- | Peak |
| 2 | 199.29 | 23.16 | -20.34 | 43.50 | 44.37 | 10.30 | 0.60 | 32.11 | --- | --- | Peak |
| 3 | 274.89 | 28.22 | -17.78 | 46.00 | 45.98 | 13.50 | 0.70 | 31.97 | --- | --- | Peak |
| 4 | 300.00 | 28.75 | -17.25 | 46.00 | 46.30 | 13.90 | 0.70 | 32.15 | --- | --- | Peak |
| 5 | 332.90 | 34.66 | -11.34 | 46.00 | 50.89 | 14.82 | 0.80 | 31.85 | 100 | 79 | Peak |
| 6 | 959.40 | 28.96 | -17.04 | 46.00 | 36.85 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 2390.00 | 45.35 | -28.65 | 74.00 | 45.74 | 31.98 | 3.92 | 36.28 | 100 | 60 | Peak |
| 8 | 2390.00 | 32.53 | -21.47 | 54.00 | 32.91 | 31.98 | 3.92 | 36.28 | 100 | 60 | Average |
| 9 X | 2462.00 | 93.26 | | | 93.47 | 32.06 | 4.02 | 36.29 | 100 | 60 | Peak |
| 10 @ | 2462.00 | 83.50 | | | 83.71 | 32.06 | 4.02 | 36.29 | 100 | 60 | Average |
| 11 | 2483.85 | 54.31 | -19.69 | 74.00 | 54.48 | 32.08 | 4.05 | 36.30 | 100 | 60 | Peak |
| 12 | 2483.85 | 34.92 | -19.08 | 54.00 | 35.09 | 32.08 | 4.05 | 36.30 | 100 | 60 | Average |
| 13 | 7341.00 | 52.96 | -21.04 | 74.00 | 46.73 | 35.56 | 7.21 | 36.54 | 100 | 231 | Peak |
| 14 | 7341.00 | 40.69 | -13.31 | 54.00 | 34.46 | 35.56 | 7.21 | 36.54 | 100 | 231 | Average |

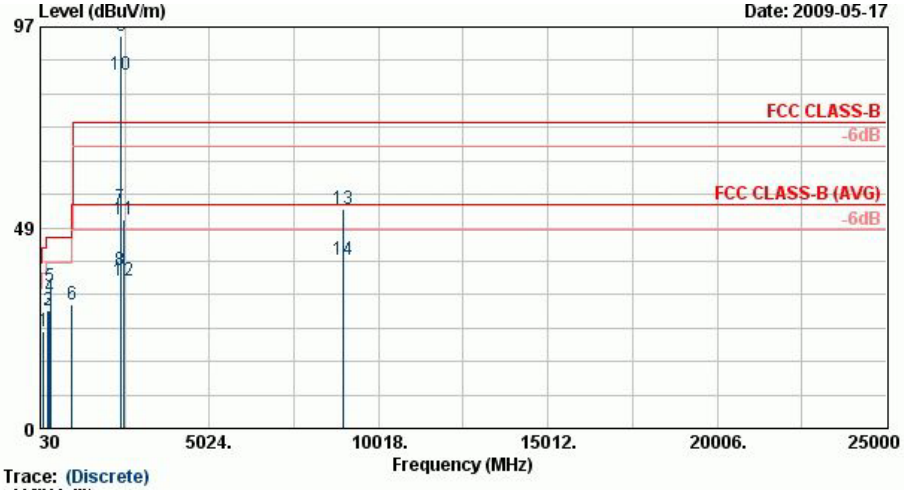
| Test Mode : | Mode 6 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 11 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 6

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 34.59 | 28.97 | -11.03 | 40.00 | 43.60 | 16.90 | 0.30 | 31.83 | 100 | 260 | Peak |
| 2 | 125.04 | 28.63 | -14.87 | 43.50 | 47.34 | 12.50 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 214.68 | 27.67 | -15.83 | 43.50 | 48.50 | 10.62 | 0.64 | 32.09 | --- | --- | Peak |
| 4 | 330.80 | 33.06 | -12.94 | 46.00 | 49.36 | 14.76 | 0.80 | 31.87 | --- | --- | Peak |
| 5 | 665.40 | 30.15 | -15.85 | 46.00 | 41.61 | 19.56 | 1.05 | 32.06 | --- | --- | Peak |
| 6 | 959.40 | 28.99 | -17.01 | 46.00 | 36.87 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 1660.00 | 52.37 | -21.63 | 74.00 | 56.60 | 29.17 | 3.01 | 36.41 | 100 | 178 | Peak |
| 8 | 1660.00 | 30.66 | -23.34 | 54.00 | 34.89 | 29.17 | 3.01 | 36.41 | 100 | 178 | Average |
| 9 | 2390.00 | 46.11 | -27.89 | 74.00 | 46.49 | 31.98 | 3.92 | 36.28 | 100 | 317 | Peak |
| 10 | 2390.00 | 32.66 | -21.34 | 54.00 | 33.04 | 31.98 | 3.92 | 36.28 | 100 | 317 | Average |
| 11 X | 2462.00 | 92.30 | | | 92.52 | 32.06 | 4.02 | 36.29 | 100 | 317 | Peak |
| 12 @ | 2462.00 | 83.37 | | | 83.58 | 32.06 | 4.02 | 36.29 | 100 | 317 | Average |
| 13 | 2483.85 | 52.24 | -21.76 | 74.00 | 52.41 | 32.08 | 4.05 | 36.30 | 100 | 317 | Peak |
| 14 | 2483.85 | 33.88 | -20.12 | 54.00 | 34.05 | 32.08 | 4.05 | 36.30 | 100 | 317 | Average |
| 15 | 7146.00 | 53.01 | -20.99 | 74.00 | 46.69 | 35.64 | 7.14 | 36.46 | 100 | 115 | Peak |
| 16 | 7146.00 | 40.63 | -13.37 | 54.00 | 34.31 | 35.64 | 7.14 | 36.46 | 100 | 115 | Average |

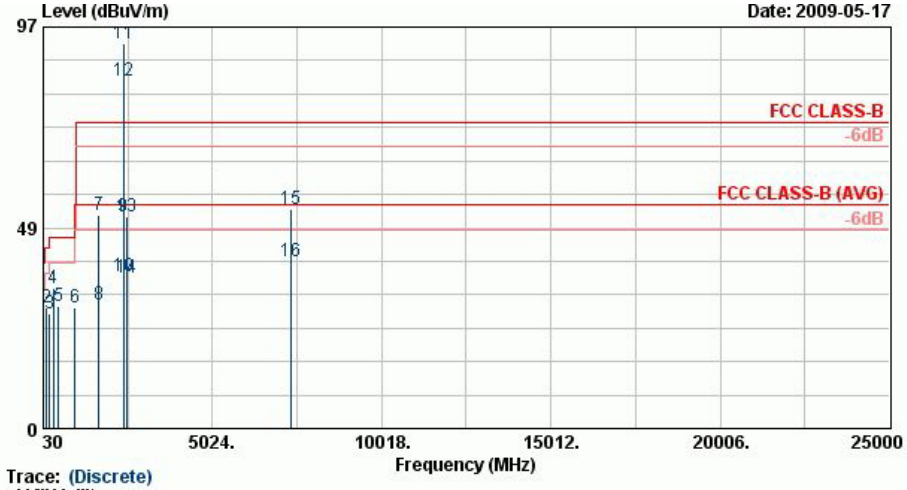
| Test Mode : | Mode 7 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 01 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 7

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 138.54 | 23.59 | -19.91 | 43.50 | 42.97 | 11.85 | 0.50 | 31.73 | --- | --- | Peak |
| 2 | 265.44 | 28.32 | -17.68 | 46.00 | 45.90 | 13.62 | 0.70 | 31.90 | --- | --- | Peak |
| 3 | 274.89 | 28.35 | -17.65 | 46.00 | 46.11 | 13.50 | 0.70 | 31.97 | --- | --- | Peak |
| 4 | 318.90 | 31.72 | -14.28 | 46.00 | 48.46 | 14.44 | 0.80 | 31.97 | --- | --- | Peak |
| 5 | 332.90 | 34.12 | -11.88 | 46.00 | 50.36 | 14.82 | 0.80 | 31.85 | 100 | 74 | Peak |
| 6 | 959.40 | 29.83 | -16.17 | 46.00 | 37.71 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 2389.42 | 53.35 | -20.65 | 74.00 | 53.73 | 31.98 | 3.92 | 36.28 | 119 | 317 | Peak |
| 8 | 2389.42 | 38.10 | -15.90 | 54.00 | 38.48 | 31.98 | 3.92 | 36.28 | 119 | 317 | Average |
| 9 X | 2412.00 | 94.83 | | | 95.16 | 32.00 | 3.95 | 36.28 | 119 | 317 | Peak |
| 10 @ | 2412.00 | 85.50 | | | 85.83 | 32.00 | 3.95 | 36.28 | 119 | 317 | Average |
| 11 | 2492.00 | 50.33 | -23.67 | 74.00 | 50.48 | 32.10 | 4.05 | 36.30 | 119 | 317 | Peak |
| 12 | 2492.00 | 35.57 | -18.43 | 54.00 | 35.72 | 32.10 | 4.05 | 36.30 | 119 | 317 | Average |
| 13 | 8961.00 | 53.04 | -20.96 | 74.00 | 46.00 | 36.15 | 7.77 | 36.88 | 100 | 92 | Peak |
| 14 | 8961.00 | 40.62 | -13.38 | 54.00 | 33.58 | 36.15 | 7.77 | 36.88 | 100 | 92 | Average |

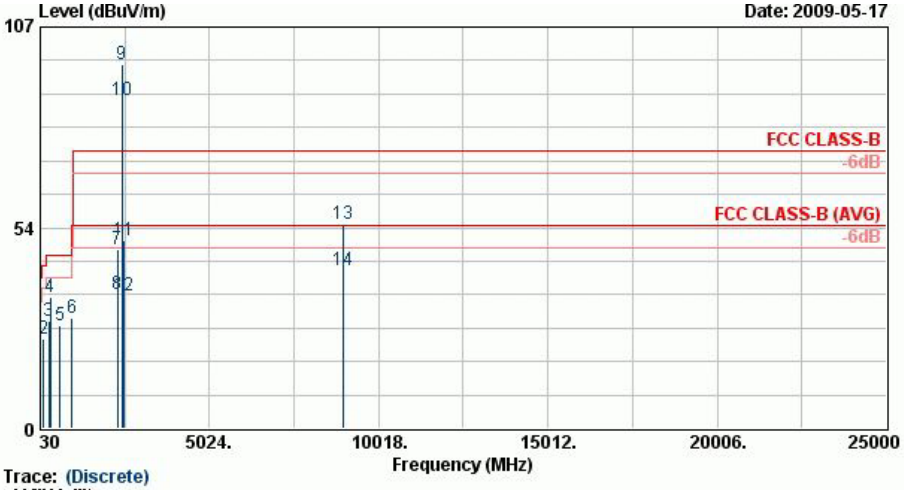
| Test Mode : | Mode 7 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 01 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 7

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 40.53 | 29.41 | -10.59 | 40.00 | 47.48 | 13.32 | 0.30 | 31.70 | 100 | 200 | Peak |
| 2 | 124.23 | 29.37 | -14.13 | 43.50 | 48.04 | 12.54 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 214.68 | 27.68 | -15.82 | 43.50 | 48.51 | 10.62 | 0.64 | 32.09 | --- | --- | Peak |
| 4 | 330.80 | 33.78 | -12.22 | 46.00 | 50.09 | 14.76 | 0.80 | 31.87 | --- | --- | Peak |
| 5 | 479.90 | 29.61 | -16.39 | 46.00 | 43.05 | 17.62 | 1.00 | 32.06 | --- | --- | Peak |
| 6 | 959.40 | 29.39 | -16.61 | 46.00 | 37.27 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 1660.00 | 51.62 | -22.38 | 74.00 | 55.85 | 29.17 | 3.01 | 36.41 | 100 | 179 | Peak |
| 8 | 1660.00 | 29.89 | -24.11 | 54.00 | 34.12 | 29.17 | 3.01 | 36.41 | 100 | 179 | Average |
| 9 | 2388.85 | 51.04 | -22.96 | 74.00 | 51.42 | 31.98 | 3.92 | 36.28 | 100 | 317 | Peak |
| 10 | 2388.85 | 36.79 | -17.21 | 54.00 | 37.17 | 31.98 | 3.92 | 36.28 | 100 | 317 | Average |
| 11 X | 2412.00 | 92.98 | | | 93.35 | 32.00 | 3.92 | 36.28 | 100 | 317 | Peak |
| 12 @ | 2412.00 | 84.00 | | | 84.33 | 32.00 | 3.95 | 36.28 | 100 | 317 | Average |
| 13 | 2494.00 | 51.37 | -22.63 | 74.00 | 51.52 | 32.10 | 4.05 | 36.30 | 100 | 317 | Peak |
| 14 | 2494.00 | 36.33 | -17.67 | 54.00 | 36.48 | 32.10 | 4.05 | 36.30 | 100 | 317 | Average |
| 15 | 7362.00 | 52.90 | -21.10 | 74.00 | 46.67 | 35.56 | 7.22 | 36.54 | 100 | 319 | Peak |
| 16 | 7362.00 | 40.44 | -13.56 | 54.00 | 34.21 | 35.56 | 7.22 | 36.54 | 100 | 319 | Average |

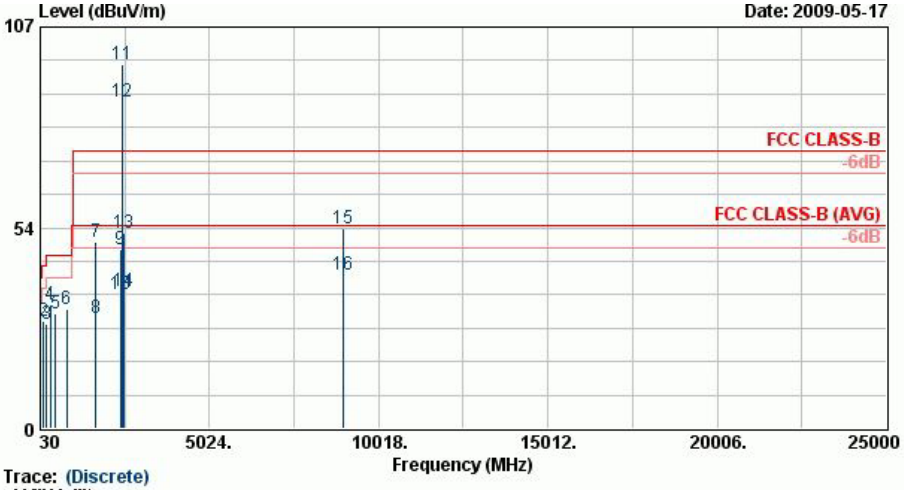
| Test Mode : | Mode 8 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HV
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 8

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.54 | 18.87 | -21.13 | 40.00 | 30.88 | 19.30 | 0.30 | 31.61 | --- | --- | Peak |
| 2 | 137.73 | 23.80 | -19.70 | 43.50 | 43.13 | 11.90 | 0.50 | 31.72 | --- | --- | Peak |
| 3 | 273.54 | 28.81 | -17.19 | 46.00 | 46.57 | 13.50 | 0.70 | 31.96 | --- | --- | Peak |
| 4 | 332.90 | 34.97 | -11.03 | 46.00 | 51.21 | 14.82 | 0.80 | 31.85 | 100 | 70 | Peak |
| 5 | 623.40 | 27.39 | -18.61 | 46.00 | 39.08 | 19.29 | 1.06 | 32.04 | --- | --- | Peak |
| 6 | 959.40 | 29.48 | -16.52 | 46.00 | 37.37 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 2318.00 | 47.87 | -26.13 | 74.00 | 48.42 | 31.89 | 3.82 | 36.27 | 100 | 312 | Peak |
| 8 | 2318.00 | 35.67 | -18.33 | 54.00 | 36.22 | 31.89 | 3.82 | 36.27 | 100 | 312 | Average |
| 9 X | 2437.00 | 97.14 | | | 97.42 | 32.02 | 3.99 | 36.29 | 100 | 312 | Peak |
| 10 @ | 2437.00 | 87.67 | | | 87.93 | 32.04 | 3.99 | 36.29 | 100 | 312 | Average |
| 11 | 2500.00 | 49.95 | -24.05 | 74.00 | 50.10 | 32.10 | 4.05 | 36.30 | 100 | 312 | Peak |
| 12 | 2500.00 | 35.46 | -18.54 | 54.00 | 35.61 | 32.10 | 4.05 | 36.30 | 100 | 312 | Average |
| 13 | 8967.00 | 54.42 | -19.58 | 74.00 | 47.37 | 36.17 | 7.77 | 36.88 | 100 | 178 | Peak |
| 14 | 8967.00 | 42.08 | -11.92 | 54.00 | 35.02 | 36.17 | 7.77 | 36.88 | 100 | 178 | Average |

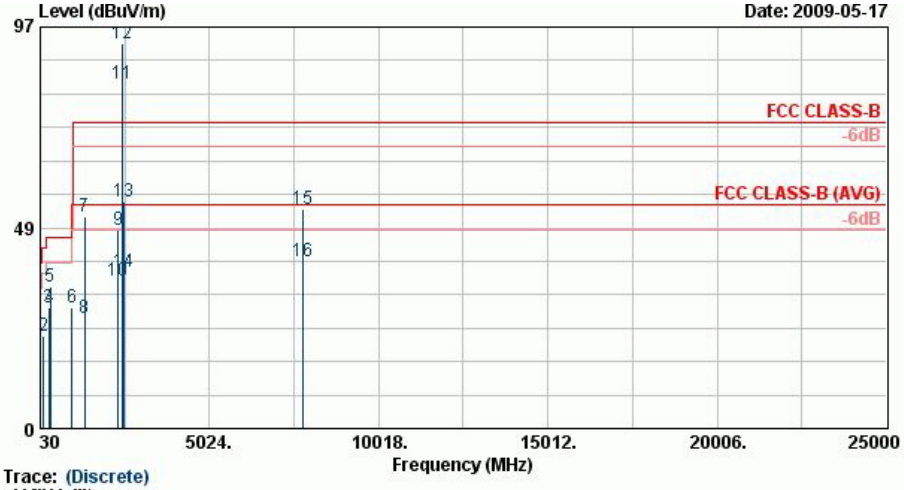
| Test Mode : | Mode 8 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HV
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 8

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 33.78 | 29.09 | -10.91 | 40.00 | 43.06 | 17.50 | 0.30 | 31.78 | 100 | 310 | Peak |
| 2 | 124.23 | 28.84 | -14.66 | 43.50 | 47.51 | 12.54 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 214.68 | 28.03 | -15.47 | 43.50 | 48.86 | 10.62 | 0.64 | 32.09 | --- | --- | Peak |
| 4 | 330.80 | 33.20 | -12.80 | 46.00 | 49.51 | 14.76 | 0.80 | 31.87 | --- | --- | Peak |
| 5 | 479.90 | 30.64 | -15.36 | 46.00 | 44.08 | 17.62 | 1.00 | 32.06 | --- | --- | Peak |
| 6 | 806.80 | 32.02 | -13.98 | 46.00 | 42.15 | 20.88 | 1.20 | 32.21 | --- | --- | Peak |
| 7 | 1660.00 | 49.80 | -24.20 | 74.00 | 54.03 | 29.17 | 3.01 | 36.41 | 100 | 168 | Peak |
| 8 | 1660.00 | 29.57 | -24.43 | 54.00 | 33.80 | 29.17 | 3.01 | 36.41 | 100 | 168 | Average |
| 9 | 2388.00 | 47.93 | -26.07 | 74.00 | 48.31 | 31.98 | 3.92 | 36.28 | 102 | 315 | Peak |
| 10 | 2388.00 | 35.69 | -18.31 | 54.00 | 36.07 | 31.98 | 3.92 | 36.28 | 102 | 315 | Average |
| 11 X | 2437.00 | 97.03 | | | 97.31 | 32.02 | 3.99 | 36.29 | 102 | 315 | Peak |
| 12 @ | 2437.00 | 87.22 | | | 87.48 | 32.04 | 3.99 | 36.29 | 102 | 315 | Average |
| 13 | 2500.00 | 51.97 | -22.03 | 74.00 | 52.12 | 32.10 | 4.05 | 36.30 | 102 | 315 | Peak |
| 14 | 2500.00 | 36.40 | -17.60 | 54.00 | 36.55 | 32.10 | 4.05 | 36.30 | 102 | 315 | Average |
| 15 | 8976.00 | 53.11 | -20.89 | 74.00 | 46.06 | 36.17 | 7.77 | 36.89 | 100 | 261 | Peak |
| 16 | 8976.00 | 40.81 | -13.19 | 54.00 | 33.76 | 36.17 | 7.77 | 36.89 | 100 | 261 | Average |

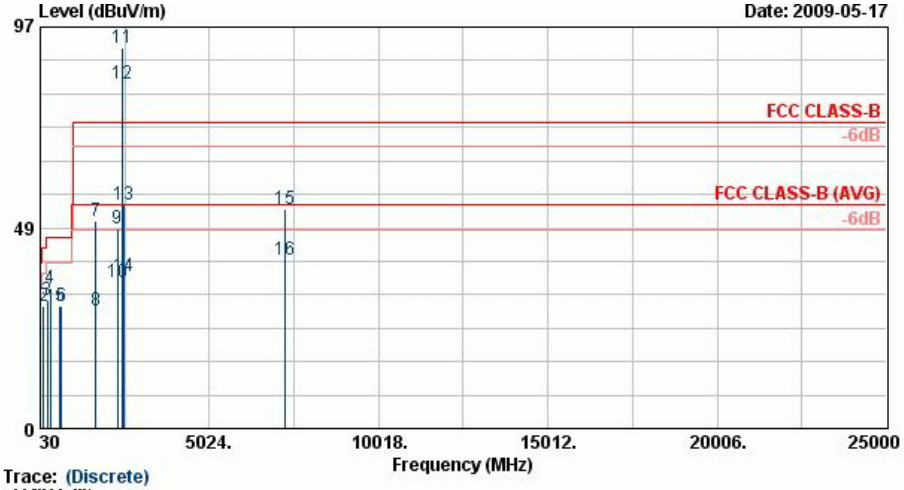
| Test Mode : | Mode 9 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 11 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 951502-01
Memo : Mode 9

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.54 | 20.29 | -19.71 | 40.00 | 32.30 | 19.30 | 0.30 | 31.61 | --- | --- | Peak |
| 2 | 138.54 | 22.50 | -21.00 | 43.50 | 41.88 | 11.85 | 0.50 | 31.73 | --- | --- | Peak |
| 3 | 274.08 | 29.17 | -16.83 | 46.00 | 46.94 | 13.50 | 0.70 | 31.97 | --- | --- | Peak |
| 4 | 300.00 | 29.16 | -16.84 | 46.00 | 46.71 | 13.90 | 0.70 | 32.15 | --- | --- | Peak |
| 5 | 332.90 | 34.23 | -11.77 | 46.00 | 50.46 | 14.82 | 0.80 | 31.85 | 100 | 76 | Peak |
| 6 | 959.40 | 29.12 | -16.88 | 46.00 | 37.01 | 22.12 | 1.29 | 31.30 | --- | --- | Peak |
| 7 | 1332.00 | 51.03 | -22.97 | 74.00 | 57.18 | 27.97 | 2.62 | 36.75 | 100 | 130 | Peak |
| 8 | 1332.00 | 26.86 | -27.14 | 54.00 | 33.01 | 27.97 | 2.62 | 36.75 | 100 | 130 | Average |
| 9 | 2342.00 | 47.96 | -26.04 | 74.00 | 48.46 | 31.91 | 3.86 | 36.27 | 100 | 59 | Peak |
| 10 | 2342.00 | 35.53 | -18.47 | 54.00 | 36.03 | 31.91 | 3.86 | 36.27 | 100 | 59 | Average |
| 11 @ | 2462.00 | 83.34 | | | 83.67 | 32.00 | 3.95 | 36.28 | 100 | 59 | Average |
| 12 X | 2462.00 | 93.11 | | | 93.32 | 32.06 | 4.02 | 36.29 | 100 | 59 | Peak |
| 13 | 2483.66 | 54.71 | -19.29 | 74.00 | 54.88 | 32.08 | 4.05 | 36.30 | 100 | 59 | Peak |
| 14 | 2483.66 | 37.69 | -16.31 | 54.00 | 37.86 | 32.08 | 4.05 | 36.30 | 100 | 59 | Average |
| 15 | 7797.00 | 52.96 | -21.04 | 74.00 | 46.59 | 35.62 | 7.41 | 36.66 | 100 | 109 | Peak |
| 16 | 7797.00 | 40.49 | -13.51 | 54.00 | 34.12 | 35.62 | 7.41 | 36.66 | 100 | 109 | Average |

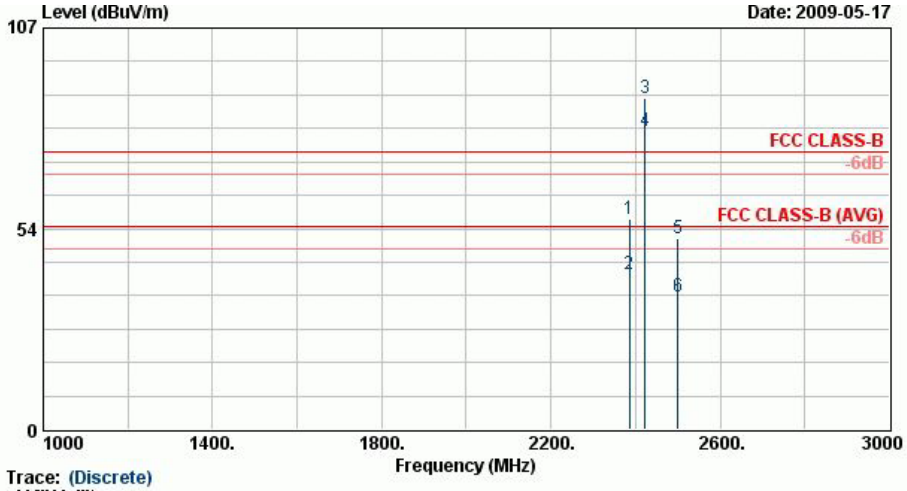
| Test Mode : | Mode 9 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 11 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |




Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 951502-01
Memo : Mode 9

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 33.78 | 29.79 | -10.21 | 40.00 | 43.76 | 17.50 | 0.30 | 31.78 | 100 | 311 | Peak |
| 2 | 124.23 | 29.58 | -13.92 | 43.50 | 48.25 | 12.54 | 0.50 | 31.71 | --- | --- | Peak |
| 3 | 249.24 | 30.90 | -15.10 | 46.00 | 49.26 | 12.74 | 0.70 | 31.80 | --- | --- | Peak |
| 4 | 332.90 | 33.93 | -12.07 | 46.00 | 50.17 | 14.82 | 0.80 | 31.85 | --- | --- | Peak |
| 5 | 623.40 | 29.51 | -16.49 | 46.00 | 41.20 | 19.29 | 1.06 | 32.04 | --- | --- | Peak |
| 6 | 663.30 | 29.69 | -16.31 | 46.00 | 41.11 | 19.55 | 1.06 | 32.04 | --- | --- | Peak |
| 7 | 1660.00 | 50.17 | -23.83 | 74.00 | 54.40 | 29.17 | 3.01 | 36.41 | 100 | 169 | Peak |
| 8 | 1660.00 | 28.54 | -25.46 | 54.00 | 32.77 | 29.17 | 3.01 | 36.41 | 100 | 169 | Average |
| 9 | 2310.00 | 48.20 | -25.80 | 74.00 | 48.76 | 31.87 | 3.82 | 36.26 | 100 | 316 | Peak |
| 10 | 2310.00 | 35.32 | -18.68 | 54.00 | 35.89 | 31.87 | 3.82 | 36.26 | 100 | 316 | Average |
| 11 X | 2462.00 | 92.04 | | | 92.25 | 32.06 | 4.02 | 36.29 | 100 | 316 | Peak |
| 12 @ | 2462.00 | 83.21 | | | 83.42 | 32.06 | 4.02 | 36.29 | 100 | 316 | Average |
| 13 | 2483.66 | 53.95 | -20.05 | 74.00 | 54.12 | 32.08 | 4.05 | 36.30 | 100 | 316 | Peak |
| 14 | 2483.66 | 36.61 | -17.39 | 54.00 | 36.78 | 32.08 | 4.05 | 36.30 | 100 | 316 | Average |
| 15 | 7266.00 | 53.12 | -20.88 | 74.00 | 46.86 | 35.59 | 7.18 | 36.51 | 100 | 282 | Peak |
| 16 | 7266.00 | 40.57 | -13.43 | 54.00 | 34.31 | 35.59 | 7.18 | 36.51 | 100 | 282 | Average |

| Test Mode : | Mode 10 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 03 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #3 and #4 are Fundamental Signals which can be ignored. | | |

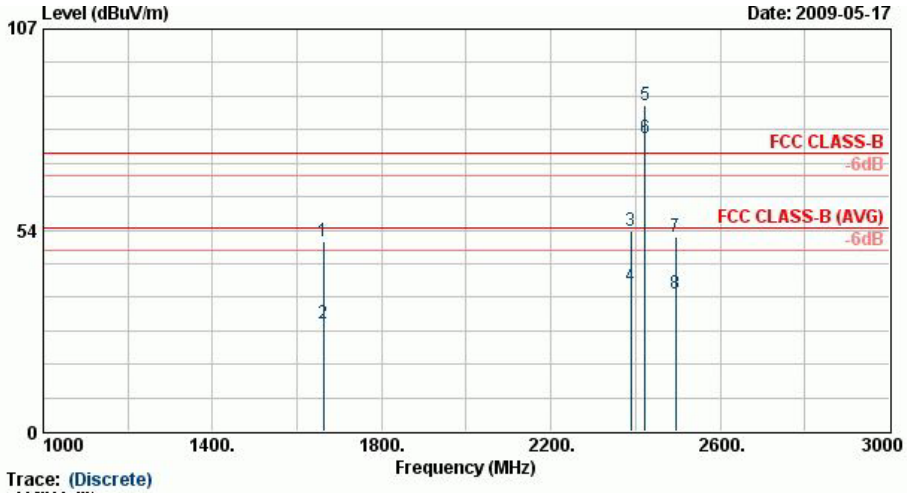



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT_080821 HORIZONTAL
Project : FR 951502-01
Memo : Mode 10

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 2385.81 | 56.27 | -17.73 | 74.00 | 56.65 | 31.98 | 3.92 | 36.28 | 120 | 318 | Peak |
| 2 | 2385.81 | 41.25 | -12.75 | 54.00 | 41.63 | 31.98 | 3.92 | 36.28 | 120 | 318 | Average |
| 3 X | 2422.00 | 88.31 | | | 88.64 | 32.00 | 3.95 | 36.28 | 120 | 318 | Peak |
| 4 X | 2422.00 | 79.43 | | | 79.75 | 32.02 | 3.95 | 36.29 | 120 | 318 | Average |
| 5 | 2500.00 | 50.99 | -23.01 | 74.00 | 51.14 | 32.10 | 4.05 | 36.30 | 120 | 318 | Peak |
| 6 | 2500.00 | 35.58 | -18.42 | 54.00 | 35.73 | 32.10 | 4.05 | 36.30 | 120 | 318 | Average |

| Test Mode : | Mode 10 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 03 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #5 and #6 are Fundamental Signals which can be ignored. | | |

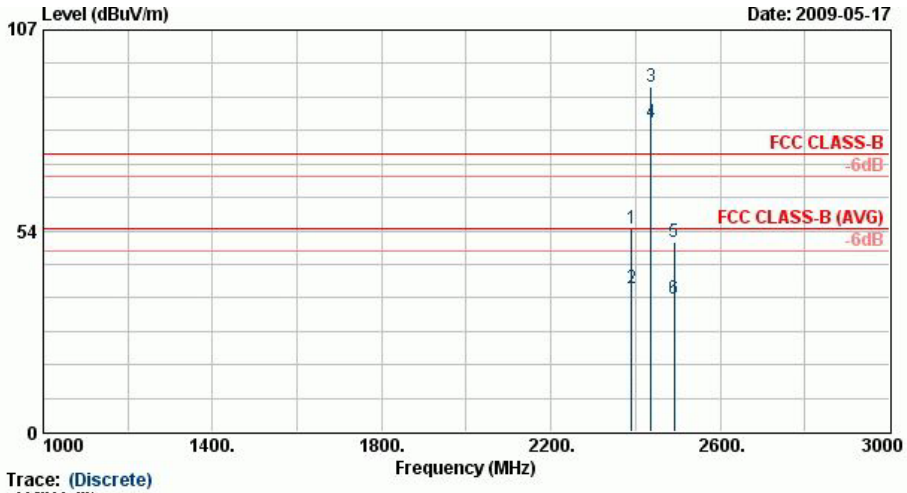



Trace: (Discrete)

Site : 03CH06-HV
Condition : FCC CLASS-B 3m HF-ANT_080821 VERTICAL
Project : FR 951502-01
Memo : Mode 10

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 1662.00 | 50.45 | -23.55 | 74.00 | 54.67 | 29.17 | 3.01 | 36.41 | 100 | 181 | Peak |
| 2 | 1662.00 | 28.56 | -25.44 | 54.00 | 32.79 | 29.17 | 3.01 | 36.41 | 100 | 181 | Average |
| 3 | 2388.66 | 53.45 | -20.55 | 74.00 | 53.83 | 31.98 | 3.92 | 36.28 | 102 | 316 | Peak |
| 4 | 2388.66 | 38.60 | -15.40 | 54.00 | 38.98 | 31.98 | 3.92 | 36.28 | 102 | 316 | Average |
| 5 X | 2422.00 | 86.91 | | | 87.22 | 32.02 | 3.95 | 36.29 | 102 | 316 | Peak |
| 6 X | 2422.00 | 77.80 | | | 78.12 | 32.02 | 3.95 | 36.29 | 102 | 316 | Average |
| 7 | 2494.00 | 51.72 | -22.28 | 74.00 | 51.87 | 32.10 | 4.05 | 36.30 | 102 | 316 | Peak |
| 8 | 2494.00 | 36.46 | -17.54 | 54.00 | 36.61 | 32.10 | 4.05 | 36.30 | 102 | 316 | Average |

| Test Mode : | Mode 11 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #3 and #4 are Fundamental Signals which can be ignored. | | |

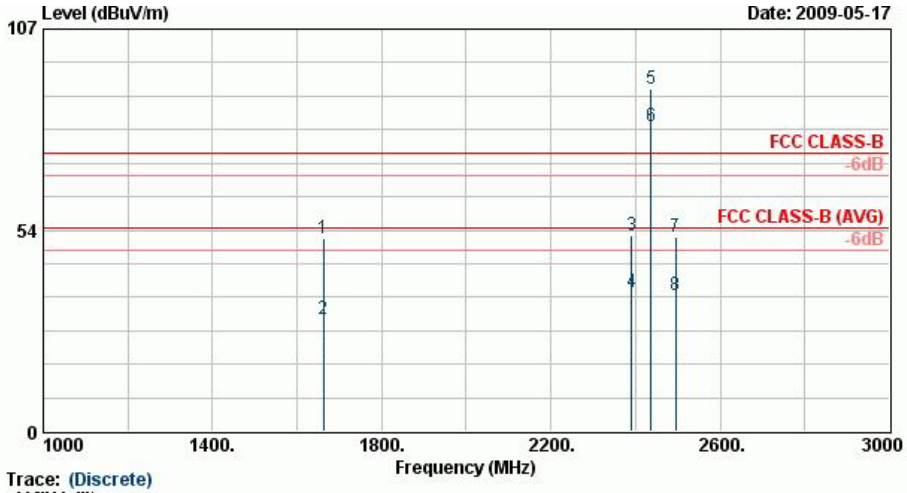



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT_080821 HORIZONTAL
Project : FR 951502-01
Memo : Mode 11

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 2390.00 | 53.97 | -20.03 | 74.00 | 54.35 | 31.98 | 3.92 | 36.28 | 100 | 311 | Peak |
| 2 | 2390.00 | 38.06 | -15.94 | 54.00 | 38.44 | 31.98 | 3.92 | 36.28 | 100 | 311 | Average |
| 3 X | 2437.00 | 91.96 | | | 92.24 | 32.02 | 3.99 | 36.29 | 100 | 311 | Peak |
| 4 @ | 2437.00 | 82.30 | | | 82.56 | 32.04 | 3.99 | 36.29 | 100 | 311 | Average |
| 5 | 2492.00 | 50.45 | -23.55 | 74.00 | 50.60 | 32.10 | 4.05 | 36.30 | 100 | 311 | Peak |
| 6 | 2492.00 | 35.56 | -18.44 | 54.00 | 35.71 | 32.10 | 4.05 | 36.30 | 100 | 311 | Average |

| Test Mode : | Mode 11 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 06 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #5 and #6 are Fundamental Signals which can be ignored. | | |

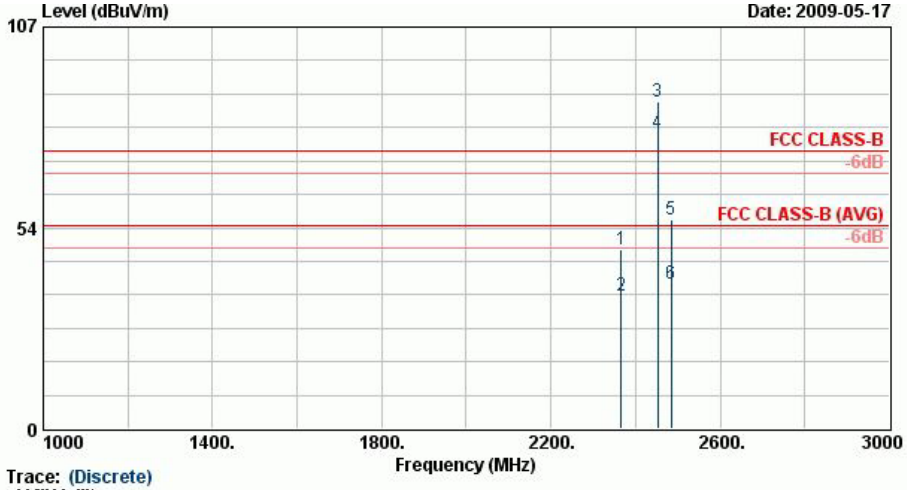



Trace: (Discrete)

Site : 03CH06-HV
Condition : FCC CLASS-B 3m HF-ANT_080821 VERTICAL
Project : FR 951502-01
Memo : Mode 11

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 1662.00 | 51.36 | -22.64 | 74.00 | 55.59 | 29.17 | 3.01 | 36.41 | 100 | 172 | Peak |
| 2 | 1662.00 | 29.68 | -24.32 | 54.00 | 33.91 | 29.17 | 3.01 | 36.41 | 100 | 172 | Average |
| 3 | 2390.00 | 51.99 | -22.01 | 74.00 | 52.38 | 31.98 | 3.92 | 36.28 | 100 | 314 | Peak |
| 4 | 2390.00 | 36.85 | -17.15 | 54.00 | 37.23 | 31.98 | 3.92 | 36.28 | 100 | 314 | Average |
| 5 X | 2437.00 | 90.96 | | | 91.27 | 32.02 | 3.95 | 36.29 | 100 | 314 | Peak |
| 6 @ | 2437.00 | 81.19 | | | 81.45 | 32.04 | 3.99 | 36.29 | 100 | 314 | Average |
| 7 | 2494.00 | 51.64 | -22.36 | 74.00 | 51.79 | 32.10 | 4.05 | 36.30 | 100 | 314 | Peak |
| 8 | 2494.00 | 36.01 | -17.99 | 54.00 | 36.16 | 32.10 | 4.05 | 36.30 | 100 | 314 | Average |

| Test Mode : | Mode 12 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 09 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Horizontal |
| Remark : | #3 and #4 are Fundamental Signals which can be ignored. | | |

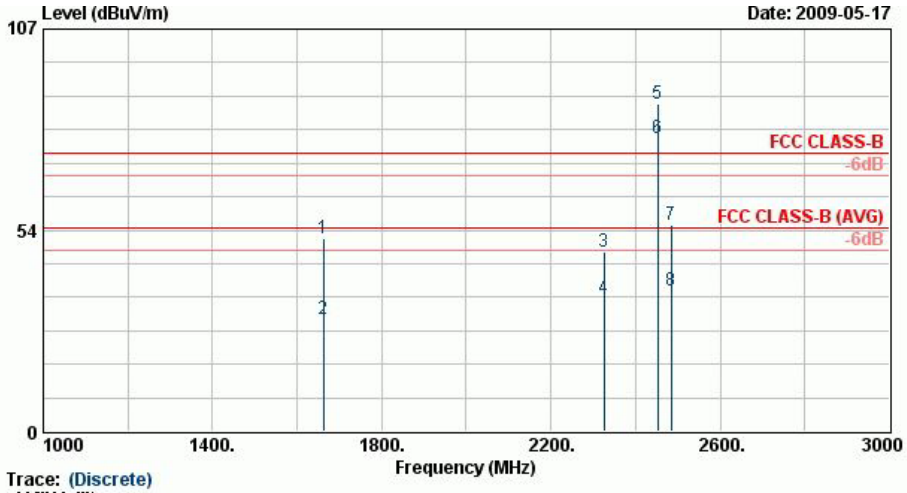



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT_080821 HORIZONTAL
Project : FR 951502-01
Memo : Mode 12

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 2366.00 | 47.63 | -26.37 | 74.00 | 48.08 | 31.93 | 3.89 | 36.28 | 119 | 314 | Peak |
| 2 | 2366.00 | 35.22 | -18.78 | 54.00 | 35.67 | 31.93 | 3.89 | 36.28 | 119 | 314 | Average |
| 3 X | 2452.00 | 87.26 | | | 87.53 | 32.04 | 3.99 | 36.29 | 119 | 314 | Peak |
| 4 X | 2452.00 | 78.64 | | | 78.91 | 32.04 | 3.99 | 36.29 | 119 | 314 | Average |
| 5 | 2483.50 | 55.87 | -18.13 | 74.00 | 56.04 | 32.08 | 4.05 | 36.30 | 119 | 314 | Peak |
| 6 | 2483.50 | 38.76 | -15.24 | 54.00 | 38.93 | 32.08 | 4.05 | 36.30 | 119 | 314 | Average |

| Test Mode : | Mode 12 | Temperature : | 21~23°C |
|---|---|---|---|
| Test Channel : | 09 | Relative Humidity : | 41~44% |
| Test Engineer : | Kai Wang | Polarization : | Vertical |
| Remark : | #5 and #6 are Fundamental Signals which can be ignored. | | |




Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT_080821 VERTICAL
Project : FR 951502-01
Memo : Mode 12

| | Freq | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 1662.00 | 51.34 | -22.66 | 74.00 | 55.56 | 29.17 | 3.01 | 36.41 | 100 | 176 | Peak |
| 2 | 1662.00 | 29.82 | -24.18 | 54.00 | 34.05 | 29.17 | 3.01 | 36.41 | 100 | 176 | Average |
| 3 | 2326.00 | 47.87 | -26.13 | 74.00 | 48.42 | 31.89 | 3.82 | 36.27 | 102 | 313 | Peak |
| 4 | 2326.00 | 35.32 | -18.68 | 54.00 | 35.87 | 31.89 | 3.82 | 36.27 | 102 | 313 | Average |
| 5 X | 2452.00 | 86.98 | | | 87.27 | 32.02 | 3.99 | 36.29 | 102 | 313 | Peak |
| 6 X | 2452.00 | 77.83 | | | 78.10 | 32.04 | 3.99 | 36.29 | 102 | 313 | Average |
| 7 | 2483.66 | 54.96 | -19.04 | 74.00 | 55.13 | 32.08 | 4.05 | 36.30 | 102 | 313 | Peak |
| 8 | 2483.66 | 37.21 | -16.79 | 54.00 | 37.38 | 32.08 | 4.05 | 36.30 | 102 | 313 | Average |

## 3.4 Antenna Requirements

### 3.4.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

### 3.4.2 Antenna Connected Construction

The antennas type used in this product is PIFA Antenna with connector and it is considered to meet antenna requirement.

### 3.4.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

# 4 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|
| EMI Receiver | R&S | ESCS 30 | 100356 | 9kHz~2.75GHz | Aug. 01, 2008 | Jul. 31, 2009 | Conduction (CO05-HY) |
| Two-LISN | R&S | ENV216 | 11-100081 | 9kHz~30MHz | Nov. 26, 2008 | Nov. 25, 2009 | Conduction (CO05-HY) |
| Two-LISN | R&S | ENV216 | 11-100080 | 9kHz~30MHz | Nov. 26, 2008 | Nov. 25, 2009 | Conduction (CO05-HY) |
| AC Power Source | APC | APC-1000W | N/A | N/A | N/A | N/A | Conduction (CO05-HY) |
| Spectrum Analyzer | Agilent | E4408B | MY44211030 | 9kHz~26.5GHz | Oct. 24, 2008 | Oct. 23, 2009 | Radiation (03CH06-HY) |
| Spectrum Analyzer | R&S | FSP40 | 100057 | 9kHz~40GHz | Oct. 16, 2008 | Oct. 15, 2009 | Radiation (03CH06-HY) |
| EMI Test Receiver | R&S | ESVS10 | 834468/003 | 20MHz~1000MHz | Apr. 28, 2009 | Apr. 27, 2010 | Radiation (03CH06-HY) |
| Bilog Antenna | SCHAFFNER | CBL6112B | 2885 | 30MHz~2GHz | Nov. 12, 2008 | Nov. 11, 2009 | Radiation (03CH06-HY) |
| Double Ridge Horn Antenna | EMCO | 3117 | 00066583 | 1G~18GHz | Aug. 18, 2008 | Aug. 17, 2009 | Radiation (03CH06-HY) |
| Double Ridge Horn Antenna | Training Research | AF-0801 | 95119 | 8G~18G | Oct. 28, 2008 | Oct. 27, 2009 | Radiation (03CH06-HY) |
| SHF-EHF Horn | SCHWARZBECK | BBHA 9170 | BBHA9170251 | 15G~40GHz | Oct. 16, 2008 | Oct. 15, 2009 | Radiation (03CH06-HY) |
| Pre Amplifier | Agilent | 8449B | 3008A01917 | 1G~26.5GHz | Nov. 11, 2008 | Nov. 10, 2009 | Radiation (03CH06-HY) |
| Pre Amplifier | Agilent | 310N | 186713 | 9kHz~1GHz | Apr. 20, 2009 | Apr. 19, 2010 | Radiation (03CH06-HY) |
| Loop Antenna | R&S | HFH2-Z2 | 860004/001 | 9 kHz~30 MHz | May 22, 2008 | May 21, 2010 | Radiation (03CH06-HY) |

# 5 Uncertainty of Evaluation

**Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)**

| Contribution | Uncertainty of $x_i$ | | $u(x_i)$ |
|---|---|---|---|
| | dB | Probability Distribution | |
| Receiver reading | 0.10 | Normal(k=2) | 0.05 |
| Cable loss | 0.10 | Normal(k=2) | 0.05 |
| AMN insertion loss | 2.50 | Rectangular | 0.63 |
| Receiver Spec | 1.50 | Rectangular | 0.43 |
| Site imperfection | 1.39 | Rectangular | 0.80 |
| Mismatch | +0.34/-0.35 | U-shape | 0.24 |
| **Combined standard uncertainty Uc(y)** | **1.13** | | |
| **Measuring uncertainty for a level of confidence of 95% U=2Uc(y)** | **2.26** | | |

**Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)**

| Contribution | Uncertainty of $x_i$ | | $u(x_i)$ |
|---|---|---|---|
| | dB | Probability Distribution | |
| Receiver reading | 0.41 | Normal(k=2) | 0.21 |
| Antenna factor calibration | 0.83 | Normal(k=2) | 0.42 |
| Cable loss calibration | 0.25 | Normal(k=2) | 0.13 |
| Pre Amplifier Gain calibration | 0.27 | Normal(k=2) | 0.14 |
| RCV/SPA specification | 2.50 | Rectangular | 0.72 |
| Antenna Factor Interpolation for Frequency | 1.00 | Rectangular | 0.29 |
| Site imperfection | 1.43 | Rectangular | 0.83 |
| Mismatch | +0.39/-0.41 | U-shaped | 0.28 |
| **Combined standard uncertainty Uc(y)** | **1.27** | | |
| **Measuring uncertainty for a level of confidence of 95% U=2Uc(y)** | **2.54** | | |

**Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)**

| Contribution | Uncertainty of $x_i$ | | $u(x_i)$ | $Ci$ | $Ci*u(x_i)$ |
|---|---|---|---|---|---|
| | dB | Probability Distribution | | | |
| Receiver reading | ±0.10 | Normal(k=1) | 0.10 | 1 | 0.10 |
| Antenna factor calibration | ±1.70 | Normal(k=2) | 0.85 | 1 | 0.85 |
| Cable loss calibration | ±0.50 | Normal(k=2) | 0.25 | 1 | 0.25 |
| Receiver Correction | ±2.00 | Rectangular | 1.15 | 1 | 1.15 |
| Antenna Factor Directional | ±1.50 | Rectangular | 0.87 | 1 | 0.87 |
| Site imperfection | ±2.80 | Triangular | 1.14 | 1 | 1.14 |
| Mismatch<br>Receiver VSWR Γ1= 0.197<br>Antenna VSWR Γ2= 0.194<br>Uncertainty=20log(1-Γ1*Γ2) | +0.34/-0.35 | U-shaped | 0.244 | 1 | 0.244 |
| **Combined standard uncertainty Uc(y)** | **2.36** | | | | |
| **Measuring uncertainty for a level of confidence of 95% U=2Uc(y)** | **4.72** | | | | |

# 6 Certification of TAF Accreditation

Certificate No. : L1190-090417

財團法人全國認證基金會
Taiwan Accreditation Foundation

## Certificate of Accreditation

This is to certify that

**Sporton International Inc.**
**EMC & Wireless Communications Laboratory**
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

**is accredited in respect of laboratory**

| | | |
|---|---|---|
| **Accreditation Criteria** | : | ISO/IEC 17025:2005 |
| **Accreditation Number** | : | 1190 |
| **Originally Accredited** | : | December 15, 2003 |
| **Effective Period** | : | January 10, 2007 to January 09, 2010 |
| **Accredited Scope** | : | Testing Field, see described in the Appendix |
| **Specific Accreditation Program** | : | Accreditation Program for Designated Testing Laboratory for Commodities Inspection<br>Accreditation Program for Telecommunication Equipment Testing Laboratory<br>Accreditation Program for BSMI Mutual Recognition Arrangment with Foreign Authorities |

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : April 17, 2009

P1, total 20 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix

# Appendix A. Photographs of EUT

Please refer to Sporton report number EP951502-01 as below.