

Partial FCC RF Test Report

APPLICANT : Acer Inc.
EQUIPMENT : WLAN Module
BRAND NAME : Acer, Gateway, PackardBell
MODEL NAME : AR5B93
FCC ID : HLZ-AR5B93
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : Digital Transmission System (DTS)

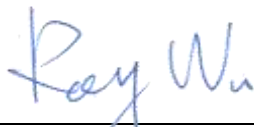
This is a partial report which is only valid combined with the integrated WLAN module (Brand Name: Atheros / Model Name: AR5B93 / FCC ID: PPD-AR5B93) report.

The product was installed into Acer Notebook Computer (Brand Name: Acer, Gateway, PackardBell, Model Name: ZH6, Marketing Name: FerrariFO 200 series) during test.

The product was received on Aug. 31, 2009 and completely tested on Nov. 02, 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 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



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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APPENDIX A. PHOTOGRAPHS OF EUT

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REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|-------------|---------|-------------------------|---------------|
| FR983104-04 | Rev. 01 | Initial issue of report | Nov. 06, 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 | $\leq 20\text{dBc}$ | Pass | - |
| 3.2 | 15.207 | Gen 7.2.2 | AC Conducted Emission | 15.207(a) | Pass | Under limit 16.4 dB at 0.198 MHz |
| 3.3 | 15.247(d) | A8.5 | Transmitter Radiated Emission | 15.209(a) & 15.247(d) | Pass | Under limit 0.33 dB at 2483.50 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, Songjiang 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 | AR5B93 |
| FCC ID | HLZ-AR5B93 |
| Host (Notebook Computer) | Brand Name : Acer, Gateway, PackardBell Model Name : ZH6 Marketing Name: FerrariFO 200 series Antenna Type: <Main> PIFA Antenna with gain -2.10 dBi <Aux.> PIFA Antenna with gain 0.85 dBi HW Version : E3A SW Version : v1.3105 |
| Tx/Rx Frequency Range | 2400 MHz ~ 2483.5 MHz |
| Type of Modulation | 802.11b : DSSS (BPSK / QPSK / CCK) 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).

List of Accessory for Host (Notebook Computer):

| Specification of Accessory | | |
|----------------------------|--------------------|---|
| AC Adapter | Brand Name | Liteon |
| | Model Name | PA-1650-22 |
| | Power Rating | I/P:100-240Vac, 50-60Hz, 1.6A; O/P: 19Vdc, 3.42A |
| | DC Power Cord Type | 1.8 meter shielded cable with ferrite core |
| Battery | Brand Name | Simplo |
| | Model Name | UM09E71 |
| | Power Rating | 11.1Vdc, 4400mAh, 48Wh |
| | Type | Li-ion |
| WWAN Module | Brand Name | Qualcomm |
| | Model Name | UNDP-1 |
| Bluetooth Module | Brand Name | Foxconn |
| | Model Name | BCM92046 |

Remark: Please refer to the user's manual for more detailed information of host notebook computer (Brand Name: Acer, Gateway, PackardBell / Model Name: ZH6 / Marketing Name: FerrariFO 200 series).

1.4 Testing Site

| | | |
|---------------------------|--|--------------------------------|
| Test Site | SPORTON INTERNATIONAL INC. | |
| Test Site Location | No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978 | |
| Test Site No. | Sporton Site No. | FCC/IC Registration No. |
| | 03CH07HY | 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 | KA2DIR628A2 | N/A | Unshielded, 1.8 m |
| 2. | Notebook | DELL | Vostro 1510 | FCC DoC | N/A | AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m |
| 3. | Bluetooth Earphone | Nokia | BH-102 | PYAHS-107W | N/A | N/A |
| 4. | Earphone | Ergotech | ET-E200 | FCC DoC | Unshielded, 1.8 m | N/A |
| 5. | USB Cable | Apple | N/A | N/A | Shielded, 1.0 m | N/A |
| 6. | LCD Monitor | Lenovo | 6135-AB1 | FCC DoC | Shielded, 1.6 m | Unshielded, 1.8 m |

2 Test Configuration of Equipment Under Test

2.1 RF Power

| Channel | Frequency (MHz) | 802.11b RF Power (dBm) | | |
|---------|-----------------|------------------------|---------|-----------|
| | | Data Rate: 1Mbps | | |
| | | Chain A | Chain B | Chain A+B |
| CH 01 | 2412 MHz | 14.52 | 16.73 | 18.77 |
| CH 06 | 2437 MHz | 13.97 | 16.56 | 18.47 |
| CH 11 | 2462 MHz | 13.45 | 15.81 | 17.80 |

| Channel | Frequency (MHz) | 802.11g RF Power (dBm) | | |
|---------|-----------------|------------------------|---------|-----------|
| | | Data Rate: 6Mbps | | |
| | | Chain A | Chain B | Chain A+B |
| CH 01 | 2412 MHz | 18.07 | 19.24 | 21.70 |
| CH 06 | 2437 MHz | 19.42 | 20.82 | 23.19 |
| CH 11 | 2462 MHz | 17.68 | 19.24 | 21.54 |

| Channel | Frequency (MHz) | 802.11n (BW 20MHz) RF Power (dBm) | | |
|---------|-----------------|-----------------------------------|---------|-----------|
| | | Data Rate: 6.5Mbps | | |
| | | Chain A | Chain B | Chain A+B |
| CH 01 | 2412 MHz | 17.62 | 19.34 | 21.57 |
| CH 06 | 2437 MHz | 19.50 | 20.66 | 23.13 |
| CH 11 | 2462 MHz | 17.73 | 19.15 | 21.51 |

| Channel | Frequency (MHz) | 802.11n (BW 40MHz) RF Power (dBm) | | |
|---------|-----------------|-----------------------------------|---------|-----------|
| | | Data Rate: 13.5Mbps | | |
| | | Chain A | Chain B | Chain A+B |
| CH 03 | 2422 MHz | 17.56 | 15.63 | 19.71 |
| CH 06 | 2437 MHz | 19.32 | 21.06 | 23.29 |
| CH 09 | 2452 MHz | 16.06 | 18.29 | 20.33 |

Remark: The EUT is programmed to transmit signals continuously for all testing.



2.2 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).

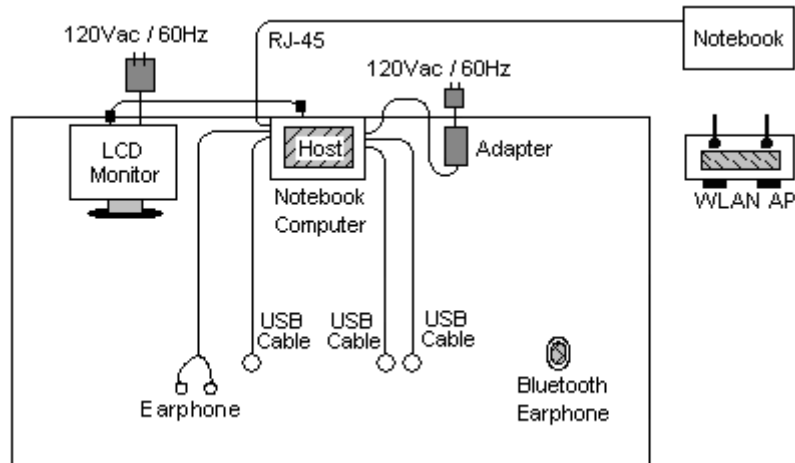
Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

The following table is showing the total pre-scanned test modes, and the worst modes are recorded in this report only.

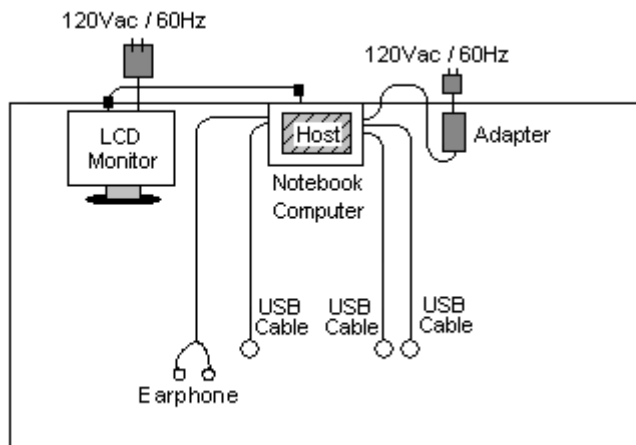
| Test Cases | |
|--|---|
| Test Item | 802.11b (Modulation : DSSS) 802.11g/n (Modulation : OFDM) |
| Radiated TCs | Mode 1: 802.11b_CH01_2412 MHz Mode 2: 802.11b_CH06_2437 MHz Mode 3: 802.11b_CH11_2462 MHz Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n_CH01_2412 MHz (BW 20MHz) Mode 8: 802.11n_CH06_2437 MHz (BW 20MHz) Mode 9: 802.11n_CH11_2462 MHz (BW 20MHz) Mode 10: 802.11n_CH03_2442 MHz (BW 40MHz) Mode 11: 802.11n_CH06_2437 MHz (BW 40MHz) Mode 12: 802.11n_CH09_2452 MHz (BW 40MHz) |
| AC Conducted Emission | Mode 1 : Bluetooth Link + WLAN Link + TC |
| Remark: 1. TC stands for Test Configuration, and consists of adapter, USB Cable, LCD monitor, earphone, and RJ-45. 2. Only the radiated emission and conducted emission tests of the WLAN Module on this Notebook Computer was performed in this report and the conducted test cases can be referred to the integrated WLAN module (Brand Name: Atheros / Model Name: AR5B93 / FCC ID: PPD-AR5B93 / CCS Report No.: 81203004) report. | |

2.3 Connection Diagram of Test System

<Conducted Emission Test>



<Radiated Emission Test>



Note: The EUT is a WLAN Module which was installed in the host laptop computer (Brand Name: Acer, Gateway, PackardBell / Model Name: ZH6 / Marketing Name: FerrariFO 200 series).

2.4 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.

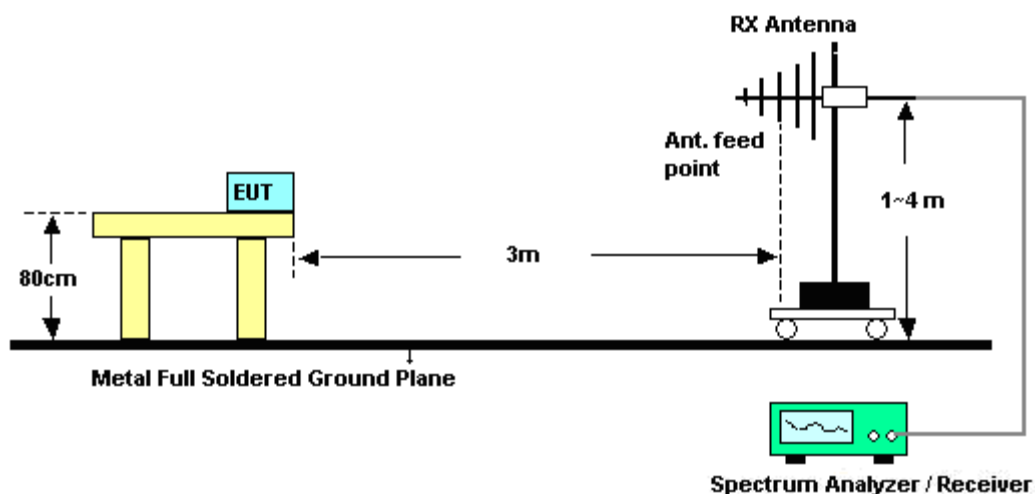
3.1.2 Measuring Instruments

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. 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 : | 24~25°C |
| Test Band : | 802.11b | Relative Humidity : | 42~43% |
| Test Channel : | 01 | Test Engineer : | Kay Wu and 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 |
| 2325.58 | 48.95 | -25.05 | 74.00 | 45.78 | 32.02 | 5.51 | 34.37 | 100 | 330 | Peak |
| 2325.58 | 39.03 | -14.97 | 54.00 | 35.86 | 32.02 | 5.51 | 34.37 | 100 | 330 | 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 | 49.61 | -24.39 | 74.00 | 46.40 | 32.13 | 5.46 | 34.38 | 105 | 321 | Peak |
| 2389.99 | 39.51 | -14.49 | 54.00 | 36.30 | 32.13 | 5.46 | 34.38 | 105 | 321 | Average |

| | | | |
|----------------|---------|---------------------|---------------------|
| Test Mode : | Mode 3 | Temperature : | 24~25°C |
| Test Band : | 802.11b | Relative Humidity : | 42~43% |
| Test Channel : | 11 | Test Engineer : | Kay Wu and 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 | 52.36 | -21.64 | 74.00 | 49.10 | 32.27 | 5.38 | 34.40 | 120 | 327 | Peak |
| 2483.85 | 41.23 | -12.77 | 54.00 | 37.97 | 32.27 | 5.38 | 34.40 | 120 | 327 | 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 | 53.77 | -20.23 | 74.00 | 50.51 | 32.27 | 5.38 | 34.40 | 105 | 313 | Peak |
| 2483.66 | 42.92 | -11.08 | 54.00 | 39.66 | 32.27 | 5.38 | 34.40 | 105 | 313 | Average |



| | | | |
|----------------|---------|---------------------|---------------------|
| Test Mode : | Mode 4 | Temperature : | 24~25°C |
| Test Band : | 802.11g | Relative Humidity : | 42~43% |
| Test Channel : | 01 | Test Engineer : | Kay Wu and 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 | 54.69 | -19.31 | 74.00 | 51.48 | 32.13 | 5.46 | 34.38 | 100 | 330 | Peak |
| 2389.99 | 39.41 | -14.59 | 54.00 | 36.20 | 32.13 | 5.46 | 34.38 | 100 | 330 | 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 |
| 2389.61 | 57.21 | -16.79 | 74.00 | 54.00 | 32.13 | 5.46 | 34.38 | 104 | 320 | Peak |
| 2389.61 | 40.62 | -13.38 | 54.00 | 37.41 | 32.13 | 5.46 | 34.38 | 104 | 320 | Average |

| | | | |
|----------------|---------|---------------------|---------------------|
| Test Mode : | Mode 6 | Temperature : | 24~25°C |
| Test Band : | 802.11g | Relative Humidity : | 42~43% |
| Test Channel : | 11 | Test Engineer : | Kay Wu and 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 | 54.35 | -19.65 | 74.00 | 51.09 | 32.27 | 5.38 | 34.40 | 100 | 315 | Peak |
| 2483.50 | 36.44 | -17.56 | 54.00 | 33.18 | 32.27 | 5.38 | 34.40 | 100 | 315 | 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 | 63.75 | -10.25 | 74.00 | 60.49 | 32.27 | 5.38 | 34.40 | 104 | 313 | Peak |
| 2483.85 | 45.72 | -8.28 | 54.00 | 42.46 | 32.27 | 5.38 | 34.40 | 104 | 313 | Average |



| | | | |
|----------------|--------------------|---------------------|---------------------|
| Test Mode : | Mode 7 | Temperature : | 24~25°C |
| Test Band : | 802.11n (BW 20MHz) | Relative Humidity : | 42~43% |
| Test Channel : | 01 | Test Engineer : | Kay Wu and 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 |
| 2389.61 | 57.56 | -16.44 | 74.00 | 54.35 | 32.13 | 5.46 | 34.38 | 100 | 329 | Peak |
| 2389.61 | 39.74 | -14.26 | 54.00 | 36.53 | 32.13 | 5.46 | 34.38 | 100 | 329 | 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 |
| 2389.61 | 60.74 | -13.26 | 74.00 | 57.53 | 32.13 | 5.46 | 34.38 | 107 | 320 | Peak |
| 2389.61 | 42.51 | -11.49 | 54.00 | 39.30 | 32.13 | 5.46 | 34.38 | 107 | 320 | Average |

| | | | |
|----------------|--------------------|---------------------|---------------------|
| Test Mode : | Mode 9 | Temperature : | 24~25°C |
| Test Band : | 802.11n (BW 20MHz) | Relative Humidity : | 42~43% |
| Test Channel : | 11 | Test Engineer : | Kay Wu and 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 | 71.46 | -2.54 | 74.00 | 68.20 | 32.27 | 5.38 | 34.40 | 117 | 327 | Peak |
| 2483.85 | 51.13 | -2.87 | 54.00 | 47.87 | 32.27 | 5.38 | 34.40 | 117 | 327 | 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 |
| 2483.50 | 73.67 | -0.33 | 74.00 | 70.41 | 32.27 | 5.38 | 34.40 | 104 | 313 | Peak |
| 2483.50 | 53.50 | -0.50 | 54.00 | 50.24 | 32.27 | 5.38 | 34.40 | 104 | 313 | Average |



| | | | |
|----------------|--------------------|---------------------|---------------------|
| Test Mode : | Mode 10 | Temperature : | 24~25°C |
| Test Band : | 802.11n (BW 40MHz) | Relative Humidity : | 42~43% |
| Test Channel : | 03 | Test Engineer : | Kay Wu and 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 | 59.28 | -14.72 | 74.00 | 56.07 | 32.13 | 5.46 | 34.38 | 100 | 329 | Peak |
| 2389.42 | 42.35 | -11.65 | 54.00 | 39.14 | 32.13 | 5.46 | 34.38 | 100 | 329 | 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 | 57.24 | -16.76 | 74.00 | 54.03 | 32.13 | 5.46 | 34.38 | 100 | 337 | Peak |
| 2389.99 | 39.97 | -14.03 | 54.00 | 36.76 | 32.13 | 5.46 | 34.38 | 100 | 337 | Average |

| | | | |
|----------------|--------------------|---------------------|---------------------|
| Test Mode : | Mode 12 | Temperature : | 24~25°C |
| Test Band : | 802.11n (BW 40MHz) | Relative Humidity : | 42~43% |
| Test Channel : | 09 | Test Engineer : | Kay Wu and 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 | 64.31 | -9.69 | 74.00 | 61.05 | 32.27 | 5.38 | 34.40 | 121 | 329 | Peak |
| 2483.50 | 46.80 | -7.20 | 54.00 | 43.54 | 32.27 | 5.38 | 34.40 | 121 | 329 | 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 | 66.26 | -7.74 | 74.00 | 63.00 | 32.27 | 5.38 | 34.40 | 104 | 319 | Peak |
| 2483.85 | 48.94 | -5.06 | 54.00 | 45.68 | 32.27 | 5.38 | 34.40 | 104 | 319 | 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.

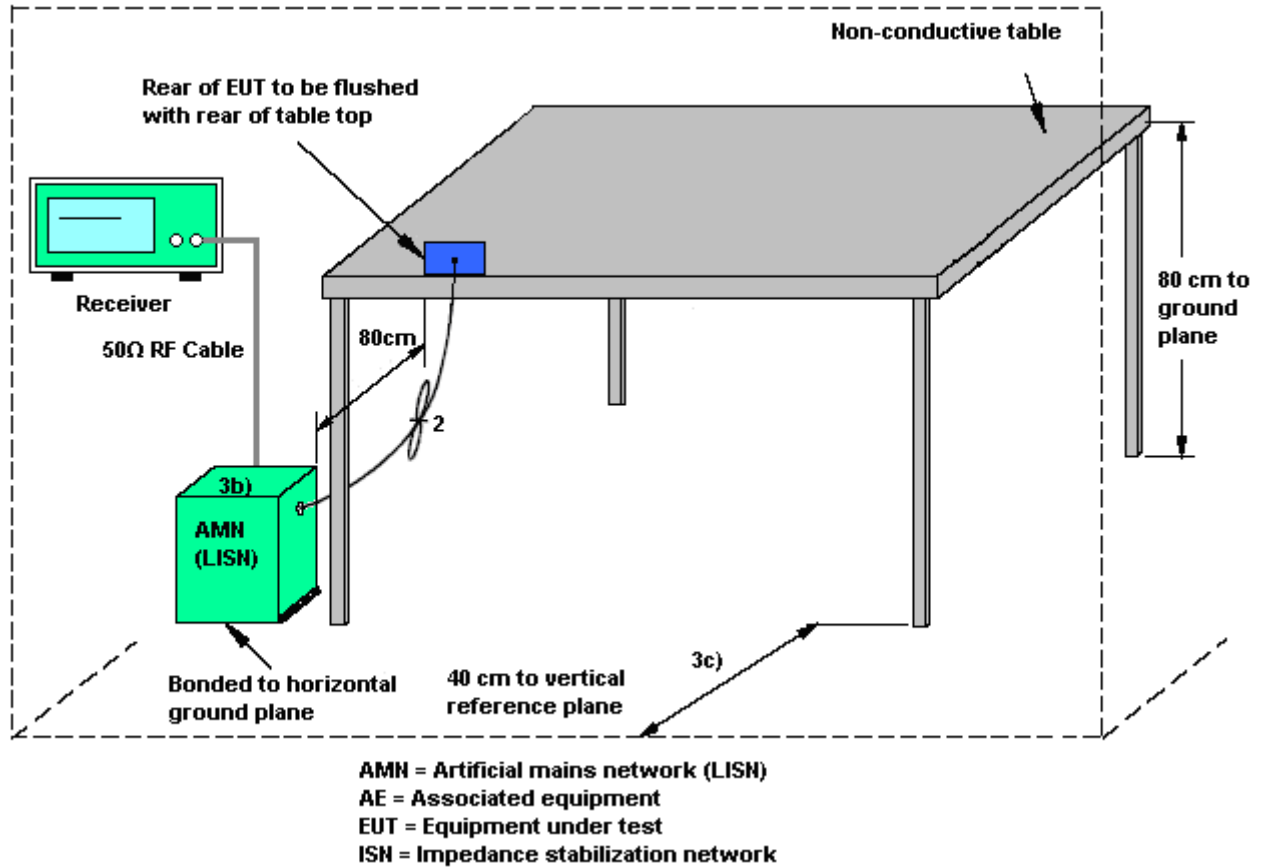
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

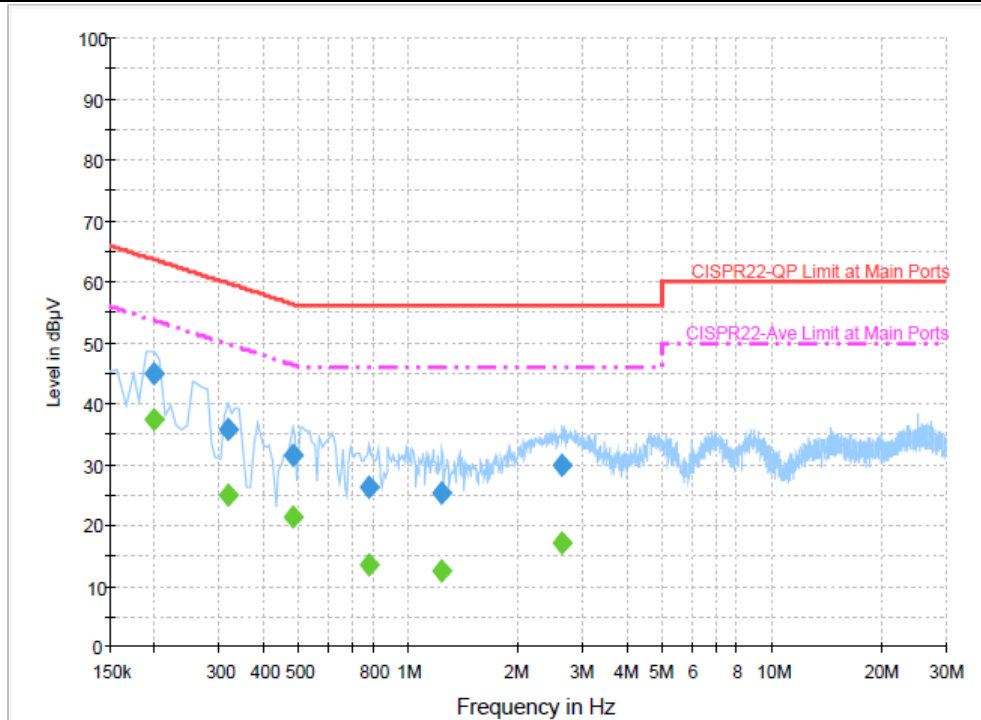
3. The testing follows the guidelines in ANSI C63.4-2003.
4. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
5. Connect EUT to the power mains through a line impedance stabilization network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

3.2.4 Test Setup



3.2.5 Test Result of AC Conducted Emission

| | | | |
|-----------------|---|---------------------|---------|
| Test Mode : | Mode 1 | Temperature : | 23~24°C |
| Test Engineer : | Cona Huang | Relative Humidity : | 52~56% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Line |
| Function Type : | Bluetooth Link + WLAN Link + TC | | |
| Remark : | All emissions not reported here are more than 10 dB below the prescribed limit. | | |



Final Result 1

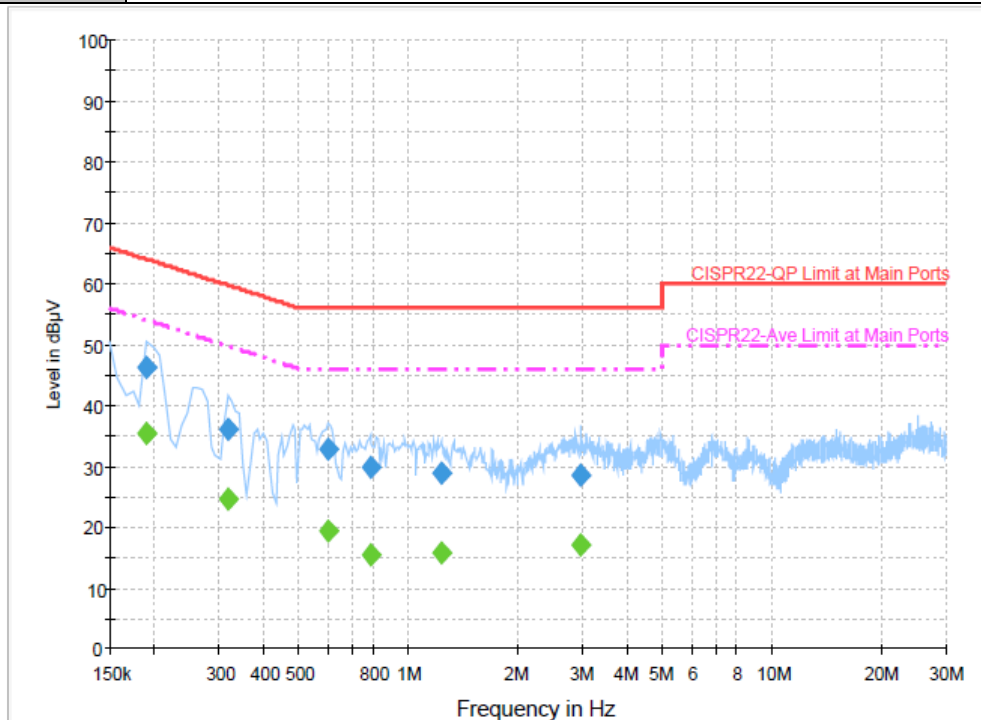
| Frequency (MHz) | QuasiPeak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|------------------|--------|------|------------|-------------|--------------|
| 0.198000 | 44.8 | Off | L1 | 19.5 | 18.9 | 63.7 |
| 0.318000 | 35.6 | Off | L1 | 19.4 | 24.2 | 59.8 |
| 0.478000 | 31.4 | Off | L1 | 19.4 | 25.0 | 56.4 |
| 0.774000 | 26.2 | Off | L1 | 19.5 | 29.8 | 56.0 |
| 1.230000 | 25.1 | Off | L1 | 19.5 | 30.9 | 56.0 |
| 2.638000 | 29.7 | Off | L1 | 19.5 | 26.3 | 56.0 |

Final Result 2

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.198000 | 37.3 | Off | L1 | 19.5 | 16.4 | 53.7 |
| 0.318000 | 24.8 | Off | L1 | 19.4 | 25.0 | 49.8 |
| 0.478000 | 21.4 | Off | L1 | 19.4 | 25.0 | 46.4 |
| 0.774000 | 13.5 | Off | L1 | 19.5 | 32.5 | 46.0 |
| 1.230000 | 12.4 | Off | L1 | 19.5 | 33.6 | 46.0 |
| 2.638000 | 17.0 | Off | L1 | 19.5 | 29.0 | 46.0 |



| | | | |
|-----------------|---|---------------------|---------|
| Test Mode : | Mode 1 | Temperature : | 23~24°C |
| Test Engineer : | Cona Huang | Relative Humidity : | 52~56% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Neutral |
| Function Type : | Bluetooth Link + WLAN Link + TC | | |
| 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 | 46.1 | Off | N | 19.5 | 17.9 | 64.0 |
| 0.318000 | 36.0 | Off | N | 19.5 | 23.8 | 59.8 |
| 0.598000 | 32.9 | Off | N | 19.5 | 23.1 | 56.0 |
| 0.782000 | 29.8 | Off | N | 19.5 | 26.2 | 56.0 |
| 1.222000 | 28.7 | Off | N | 19.5 | 27.3 | 56.0 |
| 2.958000 | 28.5 | Off | N | 19.5 | 27.6 | 56.0 |

Final Result 2

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.190000 | 35.3 | Off | N | 19.5 | 18.7 | 54.0 |
| 0.318000 | 24.6 | Off | N | 19.5 | 25.2 | 49.8 |
| 0.598000 | 19.2 | Off | N | 19.5 | 26.8 | 46.0 |
| 0.782000 | 15.4 | Off | N | 19.5 | 30.6 | 46.0 |
| 1.222000 | 15.6 | Off | N | 19.5 | 30.4 | 46.0 |
| 2.958000 | 16.9 | Off | N | 19.5 | 29.1 | 46.0 |

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

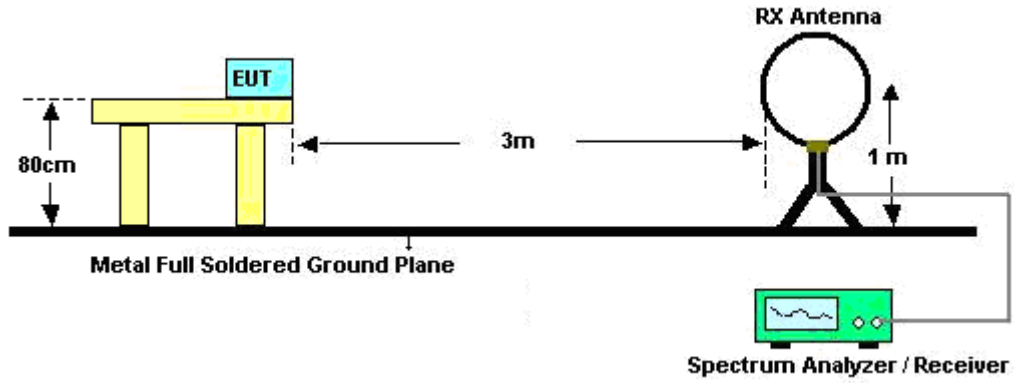
See list of measuring instruments of this test report.

3.3.3 Test Procedures

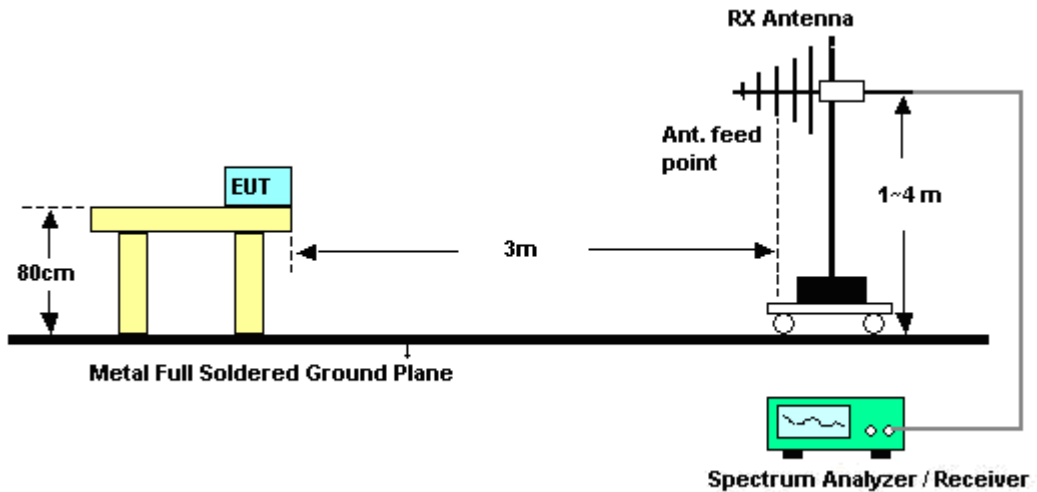
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz; VBW \geq RBW; Sweep = auto; 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 (9kHz ~ 30MHz)

| Test Engineer : | Kay Wu and Kai Wang | Temperature : | 24~25°C | |
|-----------------|---------------------|---------------------|-------------------|----------|
| | | Relative Humidity : | 42~43% | |
| 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.

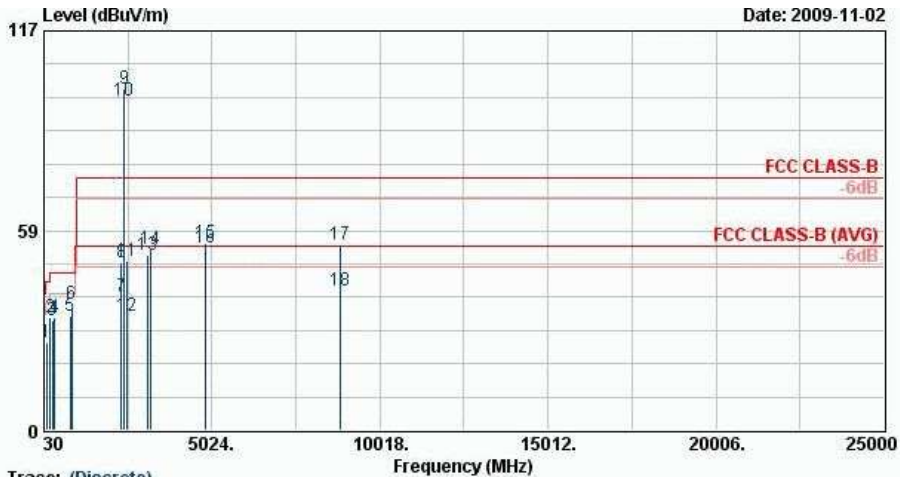
Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB);

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



3.3.6 Test Result of Radiated Emission (30MHz ~ 10th Harmonic)

| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 1 | Temperature : | 24~25°C |
| Test Channel : | 01 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



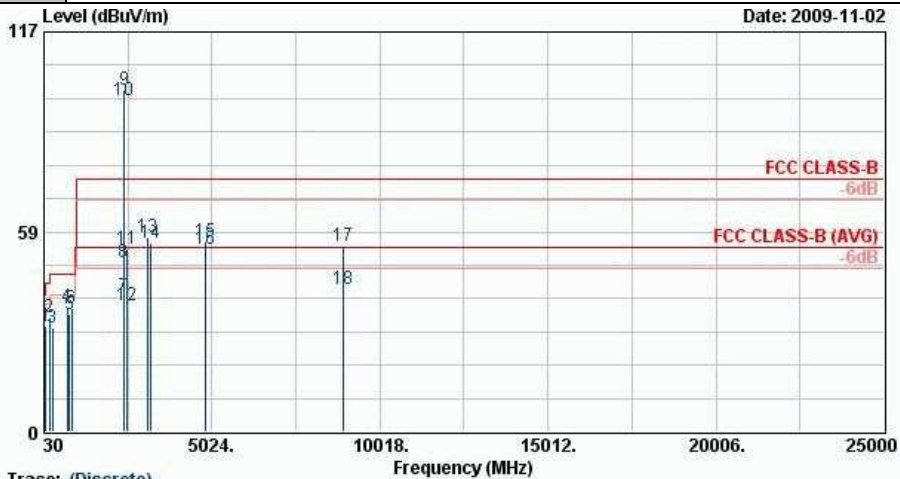
Site
Condition
Project
Mode

Trace: (Discrete)
03CH07-HY
FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
FR 983104-04
Mode 1

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 97.50 | 25.63 | -17.87 | 43.50 | 45.94 | 10.24 | 1.15 | 31.70 | --- | --- | Peak |
| 2 | 215.49 | 32.84 | -10.66 | 43.50 | 52.19 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 286.77 | 32.19 | -13.81 | 46.00 | 48.04 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 358.10 | 32.94 | -13.06 | 46.00 | 46.45 | 15.39 | 2.38 | 31.28 | --- | --- | Peak |
| 5 | 802.60 | 33.70 | -12.30 | 46.00 | 38.60 | 21.94 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 864.20 | 36.77 | -9.23 | 46.00 | 40.48 | 22.97 | 4.02 | 30.70 | 100 | 85 | Peak |
| 7 | 2325.58 | 39.03 | -14.97 | 54.00 | 35.86 | 32.02 | 5.51 | 34.37 | 100 | 330 | Average |
| 8 | 2325.58 | 48.95 | -25.05 | 74.00 | 45.78 | 32.02 | 5.51 | 34.37 | 100 | 330 | Peak |
| 9 X | 2412.00 | 100.07 | | | 96.85 | 32.16 | 5.44 | 34.38 | 100 | 330 | Peak |
| 10 X | 2412.00 | 96.38 | | | 93.16 | 32.16 | 5.44 | 34.38 | 100 | 330 | Average |
| 11 | 2500.00 | 49.60 | -24.40 | 74.00 | 46.33 | 32.30 | 5.37 | 34.40 | 100 | 330 | Peak |
| 12 | 2500.00 | 33.58 | -20.42 | 54.00 | 30.31 | 32.30 | 5.37 | 34.40 | 100 | 330 | Average |
| 13 | 3126.00 | 51.31 | -22.69 | 74.00 | 46.84 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3213.00 | 53.19 | -20.81 | 74.00 | 48.66 | 33.00 | 6.17 | 34.64 | 100 | 0 | Peak |
| 15 | 4824.00 | 54.67 | -19.33 | 74.00 | 47.33 | 34.33 | 7.81 | 34.80 | 100 | 161 | Peak |
| 16 ! | 4824.00 | 53.37 | -0.63 | 54.00 | 46.03 | 34.33 | 7.81 | 34.80 | 100 | 161 | Average |
| 17 | 8829.00 | 54.30 | -19.70 | 74.00 | 43.18 | 36.20 | 10.29 | 35.37 | 100 | 119 | Peak |
| 18 | 8829.00 | 41.00 | -13.00 | 54.00 | 29.88 | 36.20 | 10.29 | 35.37 | 100 | 119 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 1 | Temperature : | 24~25°C |
| Test Channel : | 01 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



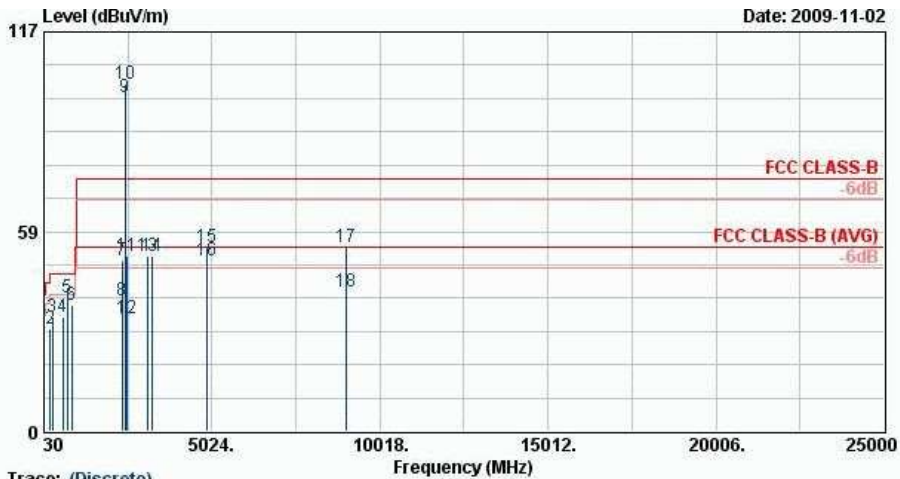
Site
Condition
Project
Mode

Trace: (Discrete)
03CH07-HV
FCC CLASS-B 3m SHF-EHF HORN VERTICAL
FR 983104-04
Mode 1

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 84.54 | 30.73 | -9.27 | 40.00 | 53.15 | 8.24 | 1.04 | 31.70 | 100 | 74 | Peak |
| 2 | 201.18 | 33.50 | -10.00 | 43.50 | 53.17 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 286.77 | 30.40 | -15.60 | 46.00 | 46.25 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 721.40 | 36.43 | -9.57 | 46.00 | 42.39 | 21.29 | 3.61 | 30.86 | --- | --- | Peak |
| 5 | 797.70 | 34.46 | -11.54 | 46.00 | 39.43 | 21.89 | 3.84 | 30.71 | --- | --- | Peak |
| 6 | 864.20 | 36.23 | -9.77 | 46.00 | 39.95 | 22.97 | 4.02 | 30.70 | --- | --- | Peak |
| 7 | 2389.99 | 39.51 | -14.49 | 54.00 | 36.30 | 32.13 | 5.46 | 34.38 | 105 | 321 | Average |
| 8 | 2389.99 | 49.61 | -24.39 | 74.00 | 46.40 | 32.13 | 5.46 | 34.38 | 105 | 321 | Peak |
| 9 X | 2412.00 | 100.16 | | | 96.93 | 32.16 | 5.44 | 34.38 | 105 | 321 | Peak |
| 10 @ | 2412.00 | 96.85 | | | 93.63 | 32.16 | 5.44 | 34.38 | 105 | 321 | Average |
| 11 | 2500.00 | 53.31 | -20.69 | 74.00 | 50.04 | 32.30 | 5.37 | 34.40 | 105 | 321 | Peak |
| 12 | 2500.00 | 37.05 | -16.95 | 54.00 | 33.78 | 32.30 | 5.37 | 34.40 | 105 | 321 | Average |
| 13 | 3117.00 | 56.98 | -17.02 | 74.00 | 52.51 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3213.00 | 55.31 | -18.69 | 74.00 | 50.78 | 33.00 | 6.17 | 34.64 | 100 | 0 | Peak |
| 15 | 4824.00 | 55.59 | -18.41 | 74.00 | 48.25 | 34.33 | 7.81 | 34.80 | 100 | 183 | Peak |
| 16 ! | 4824.00 | 53.45 | -0.55 | 54.00 | 46.11 | 34.33 | 7.81 | 34.80 | 100 | 183 | Average |
| 17 | 8925.00 | 54.35 | -19.65 | 74.00 | 43.17 | 36.25 | 10.31 | 35.38 | 100 | 27 | Peak |
| 18 | 8925.00 | 41.69 | -12.31 | 54.00 | 30.51 | 36.25 | 10.31 | 35.38 | 100 | 27 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 2 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

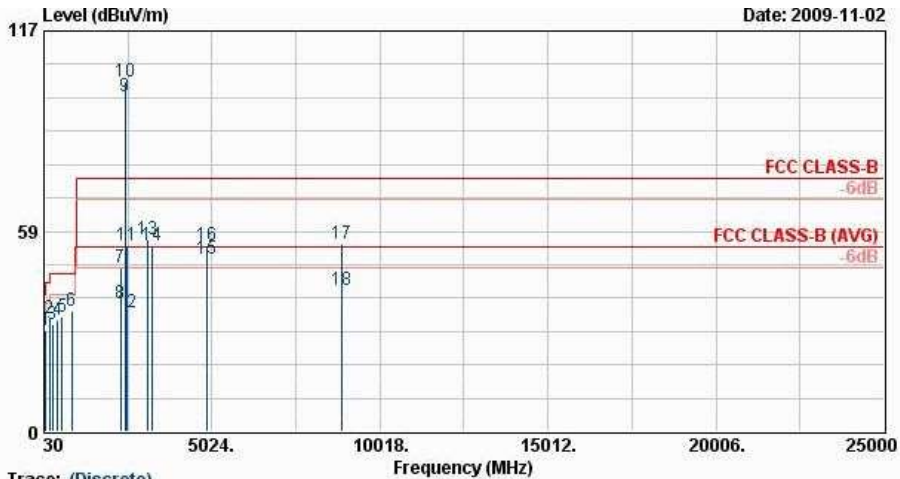


Trace: (Discrete)
 Site : D3CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 2

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.00 | 22.51 | -17.49 | 40.00 | 33.67 | 19.90 | 0.64 | 31.70 | --- | --- | Peak |
| 2 | 215.49 | 30.01 | -13.49 | 43.50 | 49.36 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 286.77 | 33.44 | -12.56 | 46.00 | 49.29 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 598.90 | 33.63 | -12.37 | 46.00 | 41.92 | 19.48 | 3.24 | 31.00 | --- | --- | Peak |
| 5 | 721.40 | 38.97 | -7.03 | 46.00 | 44.92 | 21.29 | 3.61 | 30.86 | 100 | 111 | Peak |
| 6 | 862.10 | 37.12 | -8.88 | 46.00 | 40.83 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2350.00 | 50.00 | -24.00 | 74.00 | 46.81 | 32.05 | 5.50 | 34.37 | 100 | 329 | Peak |
| 8 | 2350.00 | 38.06 | -15.94 | 54.00 | 34.88 | 32.05 | 5.50 | 34.37 | 100 | 329 | Average |
| 9 X | 2437.00 | 97.78 | | | 94.54 | 32.22 | 5.41 | 34.39 | 100 | 329 | Average |
| 10 X | 2437.00 | 101.89 | | | 98.65 | 32.22 | 5.41 | 34.39 | 100 | 329 | Peak |
| 11 | 2500.00 | 51.38 | -22.62 | 74.00 | 48.11 | 32.30 | 5.37 | 34.40 | 100 | 329 | Peak |
| 12 | 2500.00 | 33.14 | -20.86 | 54.00 | 29.87 | 32.30 | 5.37 | 34.40 | 100 | 329 | Average |
| 13 | 3117.00 | 51.20 | -22.80 | 74.00 | 46.73 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3246.00 | 51.13 | -22.87 | 74.00 | 46.57 | 33.00 | 6.20 | 34.65 | 100 | 0 | Peak |
| 15 | 4874.00 | 53.73 | -20.27 | 74.00 | 46.33 | 34.35 | 7.85 | 34.80 | 100 | 69 | Peak |
| 16 ! | 4874.00 | 49.93 | -4.07 | 54.00 | 42.53 | 34.35 | 7.85 | 34.80 | 100 | 69 | Average |
| 17 | 9000.00 | 54.13 | -19.87 | 74.00 | 42.89 | 36.30 | 10.34 | 35.40 | 100 | 18 | Peak |
| 18 | 9000.00 | 40.75 | -13.25 | 54.00 | 29.51 | 36.30 | 10.34 | 35.40 | 100 | 18 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 2 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



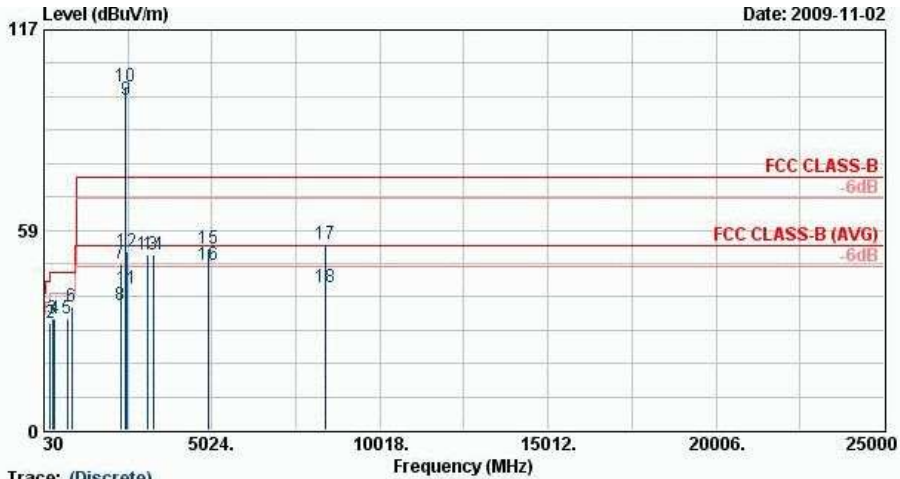
Site
Condition
Project
Mode

Trace: (Discrete)
D3CH07-HY
FCC CLASS-B 3m SHF-EHF HORN VERTICAL
FR 983104-04
Mode 2

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.70 | 29.73 | -10.27 | 40.00 | 51.80 | 8.56 | 1.07 | 31.70 | 100 | 38 | Peak |
| 2 | 200.37 | 32.85 | -10.65 | 43.50 | 52.53 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 287.58 | 31.45 | -14.55 | 46.00 | 47.26 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 430.90 | 32.54 | -13.46 | 46.00 | 44.03 | 16.95 | 2.73 | 31.17 | --- | --- | Peak |
| 5 | 575.80 | 33.69 | -12.31 | 46.00 | 42.33 | 19.21 | 3.17 | 31.02 | --- | --- | Peak |
| 6 | 864.20 | 35.37 | -10.63 | 46.00 | 39.08 | 22.97 | 4.02 | 30.70 | --- | --- | Peak |
| 7 | 2310.00 | 47.78 | -26.22 | 74.00 | 44.61 | 32.00 | 5.53 | 34.36 | 105 | 320 | Peak |
| 8 | 2310.00 | 37.60 | -16.40 | 54.00 | 34.44 | 32.00 | 5.53 | 34.36 | 105 | 320 | Average |
| 9 @ | 2437.00 | 98.03 | | | 94.79 | 32.22 | 5.41 | 34.39 | 105 | 320 | Average |
| 10 X | 2437.00 | 102.10 | | | 98.87 | 32.19 | 5.43 | 34.39 | 105 | 320 | Peak |
| 11 | 2494.00 | 54.18 | -19.82 | 74.00 | 50.91 | 32.30 | 5.37 | 34.40 | 105 | 320 | Peak |
| 12 | 2494.00 | 34.99 | -19.01 | 54.00 | 31.72 | 32.30 | 5.37 | 34.40 | 105 | 320 | Average |
| 13 | 3126.00 | 55.92 | -18.08 | 74.00 | 51.45 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3246.00 | 54.33 | -19.67 | 74.00 | 49.78 | 33.00 | 6.20 | 34.65 | 100 | 0 | Peak |
| 15 ! | 4874.00 | 50.64 | -3.36 | 54.00 | 43.24 | 34.35 | 7.85 | 34.80 | 100 | 103 | Average |
| 16 | 4874.00 | 54.49 | -19.51 | 74.00 | 47.08 | 34.35 | 7.85 | 34.80 | 100 | 103 | Peak |
| 17 | 8877.00 | 54.61 | -19.39 | 74.00 | 43.46 | 36.22 | 10.30 | 35.37 | 100 | 195 | Peak |
| 18 | 8877.00 | 41.28 | -12.72 | 54.00 | 30.14 | 36.22 | 10.30 | 35.37 | 100 | 195 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 3 | Temperature : | 24~25°C |
| Test Channel : | 11 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

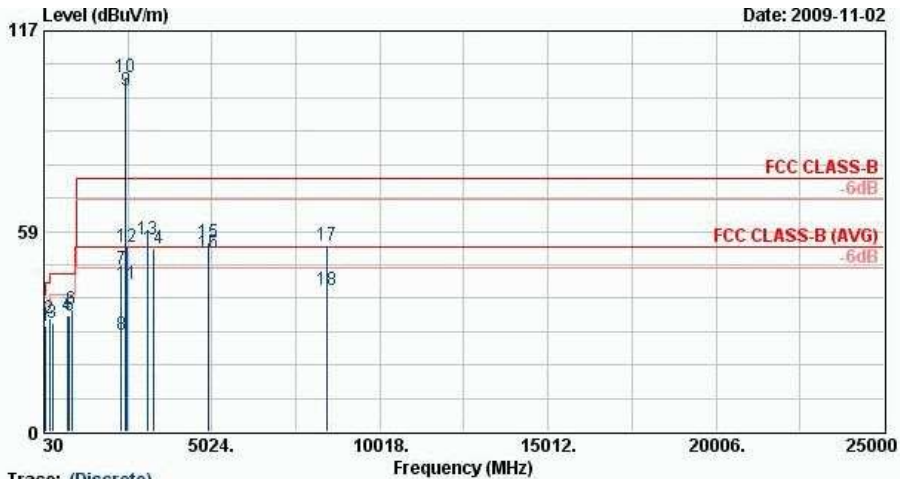


Trace: (Discrete)
 Site : D3CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 3

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBUV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBUV/m | dBUV | dB/m | dB | dB | cm | deg | |
| 1 | 48.09 | 30.42 | -9.58 | 40.00 | 51.32 | 10.00 | 0.79 | 31.70 | 100 | 31 | Peak |
| 2 | 215.49 | 31.43 | -12.07 | 43.50 | 50.78 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 287.85 | 32.72 | -13.28 | 46.00 | 48.54 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 358.10 | 32.66 | -13.34 | 46.00 | 46.18 | 15.39 | 2.38 | 31.28 | --- | --- | Peak |
| 5 | 719.30 | 32.62 | -13.38 | 46.00 | 38.62 | 21.25 | 3.61 | 30.86 | --- | --- | Peak |
| 6 | 864.20 | 36.25 | -9.75 | 46.00 | 39.97 | 22.97 | 4.02 | 30.70 | --- | --- | Peak |
| 7 | 2318.00 | 48.83 | -25.17 | 74.00 | 45.66 | 32.02 | 5.51 | 34.37 | 120 | 327 | Peak |
| 8 | 2318.00 | 36.32 | -17.68 | 54.00 | 33.15 | 32.02 | 5.51 | 34.37 | 120 | 327 | Average |
| 9 X | 2462.00 | 96.61 | --- | --- | 93.36 | 32.24 | 5.40 | 34.39 | 120 | 327 | Average |
| 10 X | 2462.00 | 100.36 | --- | --- | 97.11 | 32.24 | 5.40 | 34.39 | 120 | 327 | Peak |
| 11 | 2483.85 | 41.23 | -12.77 | 54.00 | 37.97 | 32.27 | 5.38 | 34.40 | 120 | 327 | Average |
| 12 | 2483.85 | 52.36 | -21.64 | 74.00 | 49.10 | 32.27 | 5.38 | 34.40 | 120 | 327 | Peak |
| 13 | 3114.00 | 51.48 | -22.52 | 74.00 | 47.02 | 33.00 | 6.09 | 34.62 | 100 | 0 | Peak |
| 14 | 3282.00 | 51.43 | -22.57 | 74.00 | 46.86 | 33.00 | 6.23 | 34.66 | 100 | 0 | Peak |
| 15 | 4926.00 | 53.02 | -20.98 | 74.00 | 45.55 | 34.37 | 7.89 | 34.80 | 100 | 68 | Peak |
| 16 ! | 4926.00 | 48.21 | -5.79 | 54.00 | 40.74 | 34.37 | 7.89 | 34.80 | 100 | 68 | Average |
| 17 | 8397.00 | 54.49 | -19.51 | 74.00 | 43.68 | 36.00 | 10.11 | 35.30 | 100 | 152 | Peak |
| 18 | 8397.00 | 41.60 | -12.40 | 54.00 | 30.79 | 36.00 | 10.11 | 35.30 | 100 | 152 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 3 | Temperature : | 24~25°C |
| Test Channel : | 11 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

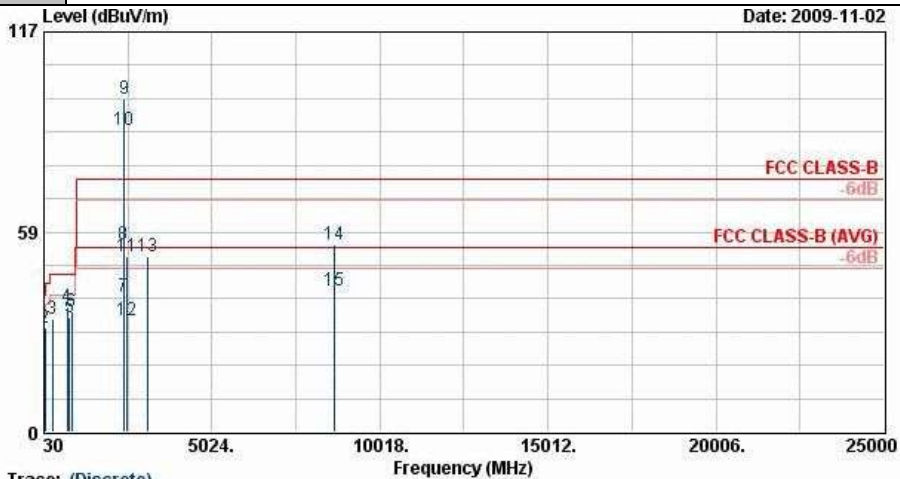


Trace: (Discrete)
 Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 3

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|--------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.70 | 31.02 | -8.98 | 40.00 | 53.09 | 8.56 | 1.07 | 31.70 | 100 | 85 | Peak |
| 2 | 200.37 | 32.95 | -10.55 | 43.50 | 52.63 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 287.85 | 31.54 | -14.46 | 46.00 | 47.36 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 716.50 | 34.03 | -11.97 | 46.00 | 40.10 | 21.20 | 3.60 | 30.87 | --- | --- | Peak |
| 5 | 799.80 | 34.09 | -11.91 | 46.00 | 39.04 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 861.40 | 35.81 | -10.19 | 46.00 | 39.52 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2340.00 | 47.38 | -26.62 | 74.00 | 44.20 | 32.05 | 5.50 | 34.37 | 105 | 313 | Peak |
| 8 | 2340.00 | 28.15 | -25.85 | 54.00 | 24.97 | 32.05 | 5.50 | 34.37 | 105 | 313 | Average |
| 9 @ | 2462.00 | 99.69 | | | 96.44 | 32.24 | 5.40 | 34.39 | 105 | 313 | Average |
| 10 X | 2462.00 | 103.68 | | | 100.43 | 32.24 | 5.40 | 34.39 | 105 | 313 | Peak |
| 11 | 2483.66 | 42.92 | -11.08 | 54.00 | 39.66 | 32.27 | 5.38 | 34.40 | 105 | 313 | Average |
| 12 | 2483.66 | 53.77 | -20.23 | 74.00 | 50.51 | 32.27 | 5.38 | 34.40 | 105 | 313 | Peak |
| 13 | 3126.00 | 56.20 | -17.80 | 74.00 | 51.72 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3282.00 | 53.63 | -20.37 | 74.00 | 49.05 | 33.00 | 6.23 | 34.66 | 100 | 0 | Peak |
| 15 | 4926.00 | 55.41 | -18.59 | 74.00 | 47.94 | 34.37 | 7.89 | 34.80 | 100 | 109 | Peak |
| 16 ! | 4926.00 | 52.39 | -1.61 | 54.00 | 44.92 | 34.37 | 7.89 | 34.80 | 100 | 109 | Average |
| 17 | 8421.00 | 54.30 | -19.70 | 74.00 | 43.47 | 36.00 | 10.13 | 35.30 | 100 | 295 | Peak |
| 18 | 8421.00 | 41.11 | -12.89 | 54.00 | 30.28 | 36.00 | 10.13 | 35.30 | 100 | 295 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 4 | Temperature : | 24~25°C |
| Test Channel : | 01 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

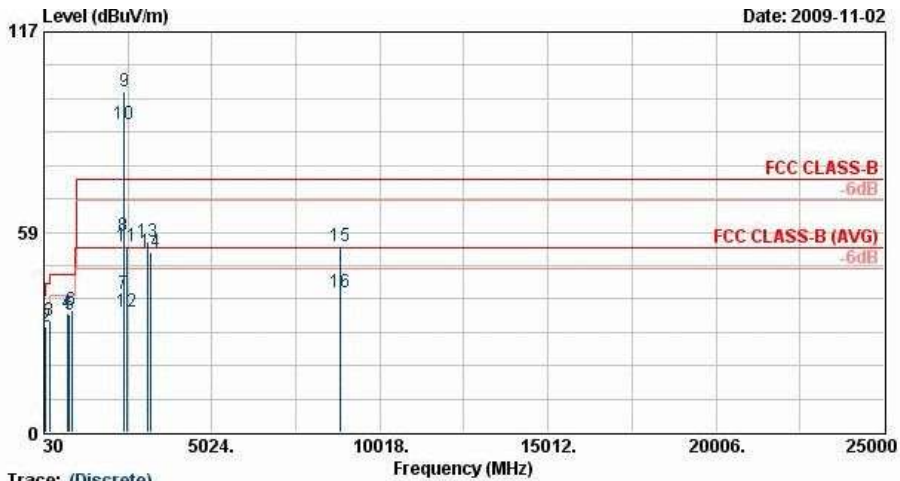


Trace: (Discrete)
 Site : D3CR07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 4

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBUV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBUV/m | dBUV | dB/m | dB | dB | cm | deg | |
| 1 | 45.93 | 31.39 | -8.61 | 40.00 | 51.15 | 11.20 | 0.74 | 31.70 | 100 | 174 | Peak |
| 2 | 52.95 | 30.31 | -9.69 | 40.00 | 52.94 | 8.21 | 0.85 | 31.70 | --- | --- | Peak |
| 3 | 287.58 | 33.04 | -12.96 | 46.00 | 48.85 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 719.30 | 36.42 | -9.58 | 46.00 | 42.42 | 21.25 | 3.61 | 30.86 | --- | --- | Peak |
| 5 | 797.70 | 33.66 | -12.34 | 46.00 | 38.63 | 21.89 | 3.84 | 30.71 | --- | --- | Peak |
| 6 | 861.40 | 35.04 | -10.96 | 46.00 | 38.76 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2389.99 | 39.41 | -14.59 | 54.00 | 36.20 | 32.13 | 5.46 | 34.38 | 100 | 330 | Average |
| 8 | 2389.99 | 54.69 | -19.31 | 74.00 | 51.48 | 32.13 | 5.46 | 34.38 | 100 | 330 | Peak |
| 9 X | 2412.00 | 97.46 | | | 94.24 | 32.16 | 5.44 | 34.38 | 100 | 330 | Peak |
| 10 X | 2412.00 | 88.15 | | | 84.93 | 32.16 | 5.44 | 34.38 | 100 | 330 | Average |
| 11 | 2500.00 | 51.19 | -22.81 | 74.00 | 47.92 | 32.30 | 5.37 | 34.40 | 100 | 330 | Peak |
| 12 | 2500.00 | 32.75 | -21.25 | 54.00 | 29.48 | 32.30 | 5.37 | 34.40 | 100 | 330 | Average |
| 13 | 3117.00 | 51.15 | -22.85 | 74.00 | 46.67 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 8670.00 | 54.76 | -19.24 | 74.00 | 43.76 | 36.10 | 10.23 | 35.33 | 100 | 274 | Peak |
| 15 | 8670.00 | 41.21 | -12.79 | 54.00 | 30.21 | 36.10 | 10.23 | 35.33 | 100 | 274 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 4 | Temperature : | 24~25°C |
| Test Channel : | 01 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

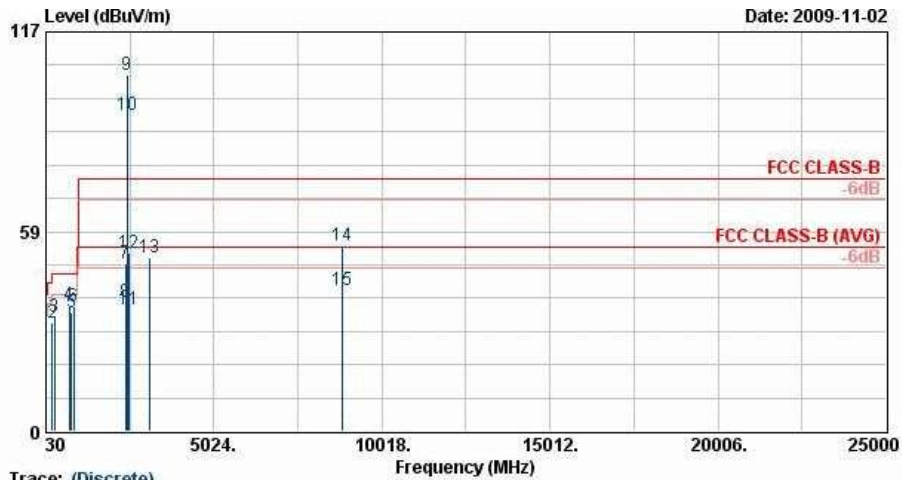


Trace: (Discrete)
 Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 4

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 44.58 | 31.80 | -8.20 | 40.00 | 51.18 | 11.60 | 0.72 | 31.70 | 100 | 215 | Peak |
| 2 | 86.70 | 30.98 | -9.02 | 40.00 | 53.05 | 8.56 | 1.07 | 31.70 | --- | --- | Peak |
| 3 | 196.86 | 32.69 | -10.81 | 43.50 | 52.65 | 9.96 | 1.69 | 31.60 | --- | --- | Peak |
| 4 | 721.40 | 34.59 | -11.41 | 46.00 | 40.55 | 21.29 | 3.61 | 30.86 | --- | --- | Peak |
| 5 | 799.80 | 34.30 | -11.70 | 46.00 | 39.25 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 861.40 | 35.47 | -10.53 | 46.00 | 39.19 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2389.61 | 40.62 | -13.38 | 54.00 | 37.41 | 32.13 | 5.46 | 34.38 | 104 | 320 | Average |
| 8 | 2389.61 | 57.21 | -16.79 | 74.00 | 54.00 | 32.13 | 5.46 | 34.38 | 104 | 320 | Peak |
| 9 X | 2412.00 | 99.70 | | | 96.47 | 32.19 | 5.43 | 34.39 | 104 | 320 | Peak |
| 10 @ | 2412.00 | 90.09 | | | 86.87 | 32.16 | 5.44 | 34.38 | 104 | 320 | Average |
| 11 | 2494.00 | 54.50 | -19.50 | 74.00 | 51.23 | 32.30 | 5.37 | 34.40 | 104 | 320 | Peak |
| 12 | 2494.00 | 35.26 | -18.74 | 54.00 | 31.99 | 32.30 | 5.37 | 34.40 | 104 | 320 | Average |
| 13 | 3117.00 | 55.72 | -18.28 | 74.00 | 51.24 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3213.00 | 52.62 | -21.38 | 74.00 | 48.09 | 33.00 | 6.17 | 34.64 | 100 | 0 | Peak |
| 15 | 8850.00 | 54.18 | -19.82 | 74.00 | 43.05 | 36.21 | 10.29 | 35.37 | 100 | 154 | Peak |
| 16 | 8850.00 | 40.80 | -13.20 | 54.00 | 29.67 | 36.21 | 10.29 | 35.37 | 100 | 154 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 5 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

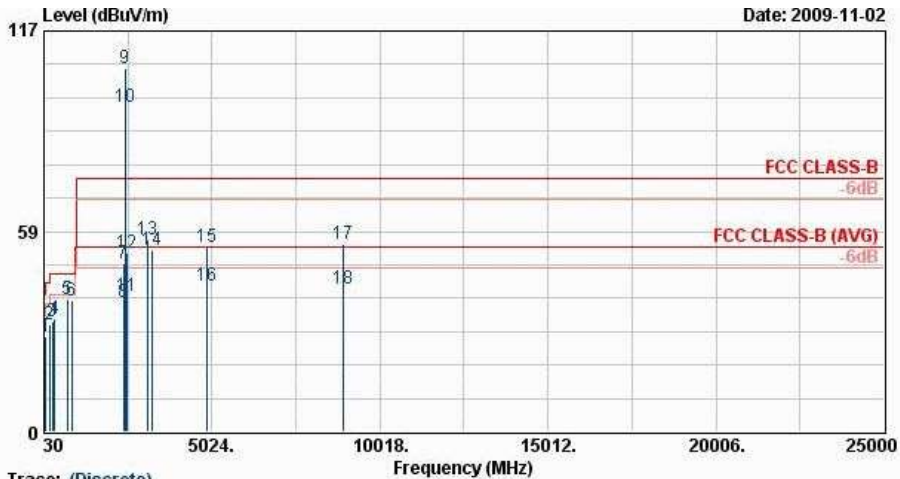


Trace: (Discrete)
 Site : D3CH07-BY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 5

| | Freq | Level | Over | Limit | ReadAntenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------------|-------|--------|-------|-------|-------------|
| | MHz | dBuV/m | Limit | Line | Level | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB | dB | cm | deg | |
| 1 | 30.81 | 25.17 | -14.83 | 40.00 | 36.86 | 19.36 | 0.65 | 31.70 | --- | Peak |
| 2 | 215.49 | 31.75 | -11.75 | 43.50 | 51.10 | 10.45 | 1.77 | 31.57 | --- | Peak |
| 3 | 286.77 | 33.36 | -12.64 | 46.00 | 49.22 | 13.51 | 2.06 | 31.43 | --- | Peak |
| 4 | 719.30 | 37.14 | -8.86 | 46.00 | 43.14 | 21.25 | 3.61 | 30.86 | 100 | 108 Peak |
| 5 | 799.80 | 34.62 | -11.38 | 46.00 | 39.57 | 21.90 | 3.85 | 30.70 | --- | Peak |
| 6 | 864.20 | 36.41 | -9.59 | 46.00 | 40.13 | 22.97 | 4.02 | 30.70 | --- | Peak |
| 7 | 2390.00 | 49.18 | -24.82 | 74.00 | 45.97 | 32.13 | 5.46 | 34.38 | 100 | 329 Peak |
| 8 | 2390.00 | 37.66 | -16.34 | 54.00 | 34.45 | 32.13 | 5.46 | 34.38 | 100 | 329 Average |
| 9 X | 2437.00 | 104.42 | | | 101.18 | 32.22 | 5.41 | 34.39 | 100 | 329 Peak |
| 10 X | 2437.00 | 92.84 | | | 89.60 | 32.22 | 5.41 | 34.39 | 100 | 329 Average |
| 11 | 2500.00 | 35.62 | -18.38 | 54.00 | 32.35 | 32.30 | 5.37 | 34.40 | 100 | 329 Average |
| 12 | 2500.00 | 52.15 | -21.85 | 74.00 | 48.88 | 32.30 | 5.37 | 34.40 | 100 | 329 Peak |
| 13 | 3126.00 | 51.09 | -22.91 | 74.00 | 46.61 | 33.00 | 6.10 | 34.62 | 100 | 0 Peak |
| 14 | 8826.00 | 54.16 | -19.84 | 74.00 | 43.05 | 36.19 | 10.28 | 35.36 | 100 | 192 Peak |
| 15 | 8826.00 | 41.25 | -12.75 | 54.00 | 30.14 | 36.19 | 10.28 | 35.36 | 100 | 192 Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 5 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

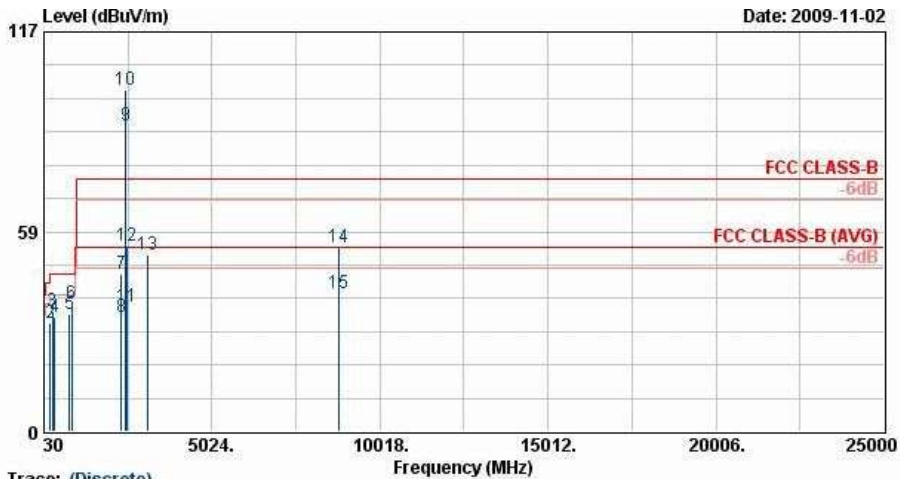


Trace: (Discrete)
 Site : D3CH07-RY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 5

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|--------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.97 | 27.89 | -12.11 | 40.00 | 49.79 | 8.72 | 1.08 | 31.70 | --- | --- | Peak |
| 2 | 200.37 | 31.44 | -12.06 | 43.50 | 51.11 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 287.58 | 32.00 | -14.00 | 46.00 | 47.81 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 358.10 | 33.26 | -12.74 | 46.00 | 46.77 | 15.39 | 2.38 | 31.28 | --- | --- | Peak |
| 5 | 719.30 | 38.69 | -7.31 | 46.00 | 44.69 | 21.25 | 3.61 | 30.86 | 100 | 275 | Peak |
| 6 | 862.10 | 38.41 | -7.59 | 46.00 | 42.13 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2388.00 | 48.98 | -25.02 | 74.00 | 45.77 | 32.13 | 5.46 | 34.38 | 103 | 319 | Peak |
| 8 | 2388.00 | 37.68 | -16.32 | 54.00 | 34.47 | 32.13 | 5.46 | 34.38 | 103 | 319 | Average |
| 9 X | 2437.00 | 106.34 | | | 103.10 | 32.22 | 5.41 | 34.39 | 103 | 319 | Peak |
| 10 @ | 2437.00 | 94.91 | | | 91.67 | 32.22 | 5.41 | 34.39 | 103 | 319 | Average |
| 11 | 2500.00 | 39.45 | -14.55 | 54.00 | 36.18 | 32.30 | 5.37 | 34.40 | 103 | 319 | Average |
| 12 | 2500.00 | 52.41 | -21.59 | 74.00 | 49.14 | 32.30 | 5.37 | 34.40 | 103 | 319 | Peak |
| 13 | 3126.00 | 56.11 | -17.89 | 74.00 | 51.63 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3246.00 | 53.28 | -20.72 | 74.00 | 48.72 | 33.00 | 6.20 | 34.65 | 100 | 0 | Peak |
| 15 | 4874.00 | 53.78 | -20.22 | 74.00 | 46.38 | 34.35 | 7.85 | 34.80 | 100 | 107 | Peak |
| 16 | 4874.00 | 42.44 | -11.56 | 54.00 | 35.04 | 34.35 | 7.85 | 34.80 | 100 | 107 | Average |
| 17 | 8925.00 | 54.81 | -19.19 | 74.00 | 43.63 | 36.25 | 10.31 | 35.38 | 100 | 198 | Peak |
| 18 | 8925.00 | 41.59 | -12.41 | 54.00 | 30.41 | 36.25 | 10.31 | 35.38 | 100 | 198 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 6 | Temperature : | 24~25°C |
| Test Channel : | 11 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

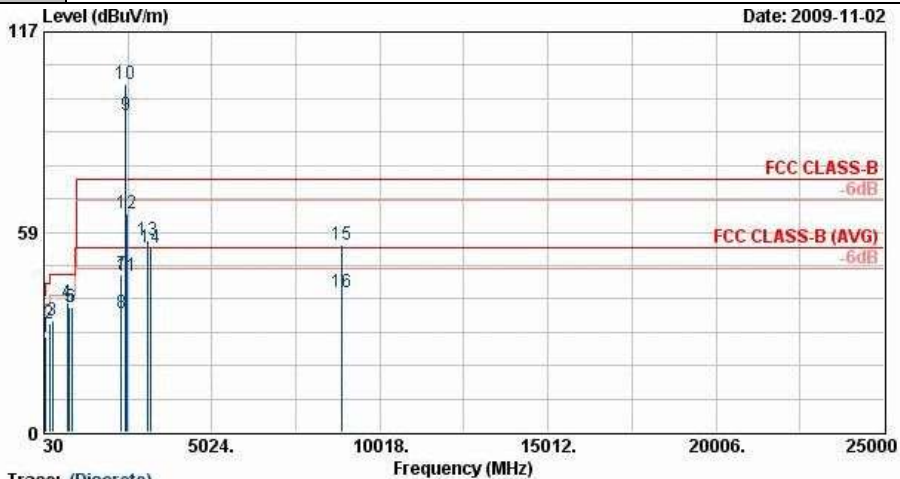


Trace: (Discrete)
 Site : D3CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 6

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.81 | 29.51 | -10.49 | 40.00 | 41.20 | 19.36 | 0.65 | 31.70 | --- | --- | Peak |
| 2 | 215.22 | 31.70 | -11.80 | 43.50 | 51.04 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 286.77 | 35.02 | -10.98 | 46.00 | 50.87 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 358.10 | 33.52 | -12.48 | 46.00 | 47.03 | 15.39 | 2.38 | 31.28 | --- | --- | Peak |
| 5 | 797.70 | 34.56 | -11.44 | 46.00 | 39.53 | 21.89 | 3.84 | 30.71 | --- | --- | Peak |
| 6 | 861.40 | 37.43 | -8.57 | 46.00 | 41.15 | 22.98 | 4.01 | 30.70 | 100 | 67 | Peak |
| 7 | 2340.00 | 46.29 | -27.71 | 74.00 | 43.10 | 32.05 | 5.50 | 34.37 | 100 | 315 | Peak |
| 8 | 2340.00 | 33.34 | -20.66 | 54.00 | 30.16 | 32.05 | 5.50 | 34.37 | 100 | 315 | Average |
| 9 X | 2462.00 | 89.40 | | | 86.15 | 32.24 | 5.40 | 34.39 | 100 | 315 | Average |
| 10 X | 2462.00 | 100.25 | | | 97.00 | 32.24 | 5.40 | 34.39 | 100 | 315 | Peak |
| 11 | 2483.50 | 36.44 | -17.56 | 54.00 | 33.18 | 32.27 | 5.38 | 34.40 | 100 | 315 | Average |
| 12 | 2483.50 | 54.35 | -19.65 | 74.00 | 51.09 | 32.27 | 5.38 | 34.40 | 100 | 315 | Peak |
| 13 | 3117.00 | 51.65 | -22.35 | 74.00 | 47.17 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 8802.00 | 53.98 | -20.02 | 74.00 | 42.88 | 36.18 | 10.28 | 35.36 | 100 | 176 | Peak |
| 15 | 8802.00 | 40.51 | -13.49 | 54.00 | 29.41 | 36.18 | 10.28 | 35.36 | 100 | 176 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 6 | Temperature : | 24~25°C |
| Test Channel : | 11 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



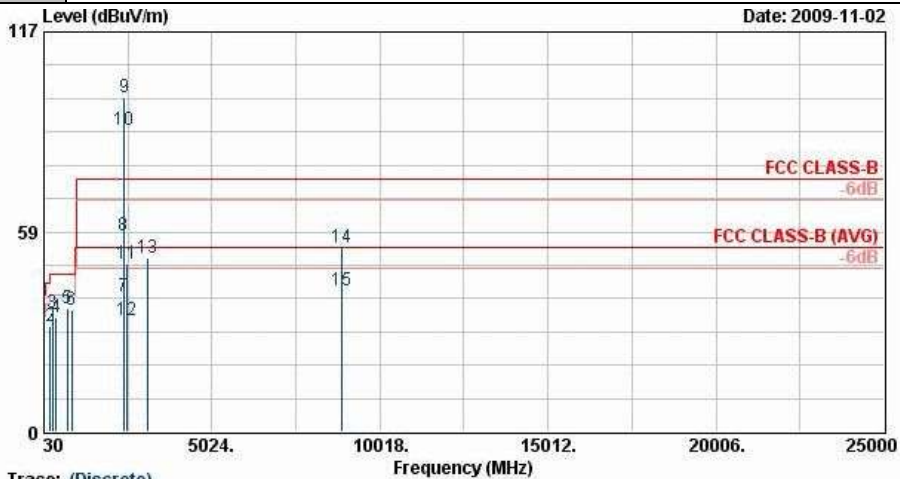
Site
Condition
Project
Mode

Trace: (Discrete)
03CH07-HY
FCC CLASS-B 3m SHF-EHF HORN VERTICAL
FR 983104-04
Mode 6

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.70 | 27.90 | -12.10 | 40.00 | 49.97 | 8.56 | 1.07 | 31.70 | --- | --- | Peak |
| 2 | 201.18 | 31.92 | -11.58 | 43.50 | 51.60 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 287.85 | 32.45 | -13.55 | 46.00 | 48.26 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 719.30 | 37.95 | -8.05 | 46.00 | 43.95 | 21.25 | 3.61 | 30.86 | 100 | 131 | Peak |
| 5 | 800.50 | 36.72 | -9.28 | 46.00 | 41.67 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 861.40 | 36.61 | -9.39 | 46.00 | 40.33 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2340.00 | 46.28 | -27.72 | 74.00 | 43.09 | 32.05 | 5.50 | 34.37 | 104 | 313 | Peak |
| 8 | 2340.00 | 34.98 | -19.02 | 54.00 | 31.80 | 32.05 | 5.50 | 34.37 | 104 | 313 | Average |
| 9 @ | 2462.00 | 92.65 | | | 89.40 | 32.24 | 5.40 | 34.39 | 104 | 313 | Average |
| 10 X | 2462.00 | 101.81 | | | 98.56 | 32.24 | 5.40 | 34.39 | 104 | 313 | Peak |
| 11 | 2483.85 | 45.72 | -8.28 | 54.00 | 42.46 | 32.27 | 5.38 | 34.40 | 104 | 313 | Average |
| 12 | 2483.85 | 63.75 | -10.25 | 74.00 | 60.49 | 32.27 | 5.38 | 34.40 | 104 | 313 | Peak |
| 13 | 3117.00 | 56.21 | -17.79 | 74.00 | 51.73 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3198.00 | 53.79 | -20.21 | 74.00 | 49.26 | 33.00 | 6.16 | 34.64 | 100 | 0 | Peak |
| 15 | 8889.00 | 54.78 | -19.22 | 74.00 | 43.63 | 36.23 | 10.30 | 35.38 | 100 | 210 | Peak |
| 16 | 8889.00 | 41.03 | -12.97 | 54.00 | 29.87 | 36.23 | 10.30 | 35.38 | 100 | 210 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 7 | Temperature : | 24~25°C |
| Test Channel : | 01 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



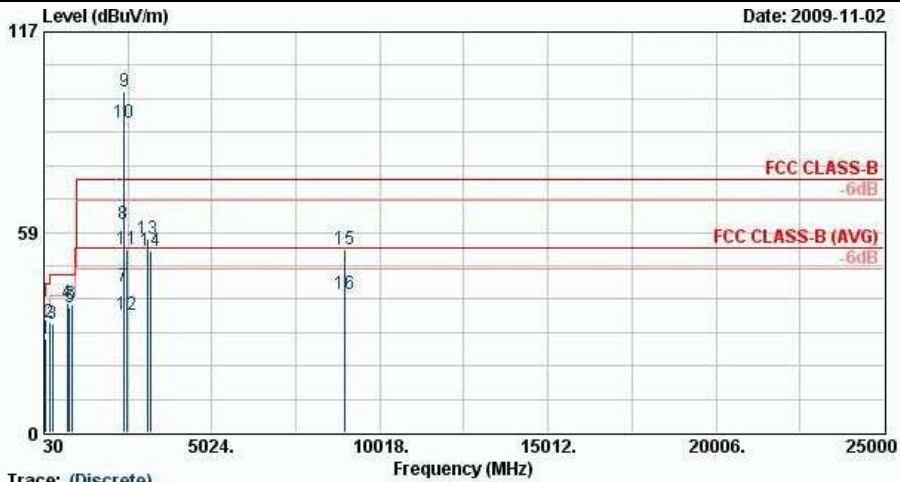
Site
Condition
Project
Mode

Trace: (Discrete)
D3CH7-HY
FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
FR 983104-04
Mode 7

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.00 | 22.34 | -17.66 | 40.00 | 33.50 | 19.90 | 0.64 | 31.70 | --- | --- | Peak |
| 2 | 215.49 | 30.82 | -12.68 | 43.50 | 50.17 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 287.85 | 34.61 | -11.39 | 46.00 | 50.43 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 385.40 | 33.46 | -12.54 | 46.00 | 46.15 | 16.05 | 2.50 | 31.23 | --- | --- | Peak |
| 5 | 721.40 | 36.08 | -9.92 | 46.00 | 42.03 | 21.29 | 3.61 | 30.86 | 100 | 85 | Peak |
| 6 | 861.40 | 35.85 | -10.15 | 46.00 | 39.57 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2389.61 | 39.74 | -14.26 | 54.00 | 36.53 | 32.13 | 5.46 | 34.38 | 100 | 329 | Average |
| 8 | 2389.61 | 57.56 | -16.44 | 74.00 | 54.35 | 32.13 | 5.46 | 34.38 | 100 | 329 | Peak |
| 9 X | 2412.00 | 97.72 | | | 94.49 | 32.19 | 5.43 | 34.39 | 100 | 329 | Peak |
| 10 @ | 2412.00 | 88.14 | | | 84.92 | 32.16 | 5.44 | 34.38 | 100 | 329 | Average |
| 11 | 2500.00 | 49.01 | -24.99 | 74.00 | 45.74 | 32.30 | 5.37 | 34.40 | 100 | 329 | Peak |
| 12 | 2500.00 | 32.76 | -21.24 | 54.00 | 29.49 | 32.30 | 5.37 | 34.40 | 100 | 329 | Average |
| 13 | 3114.00 | 50.88 | -23.12 | 74.00 | 46.42 | 33.00 | 6.09 | 34.62 | 100 | 0 | Peak |
| 14 | 8874.00 | 54.04 | -19.96 | 74.00 | 42.90 | 36.22 | 10.30 | 35.37 | 100 | 174 | Peak |
| 15 | 8874.00 | 41.12 | -12.88 | 54.00 | 29.98 | 36.22 | 10.30 | 35.37 | 100 | 174 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 7 | Temperature : | 24~25°C |
| Test Channel : | 01 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

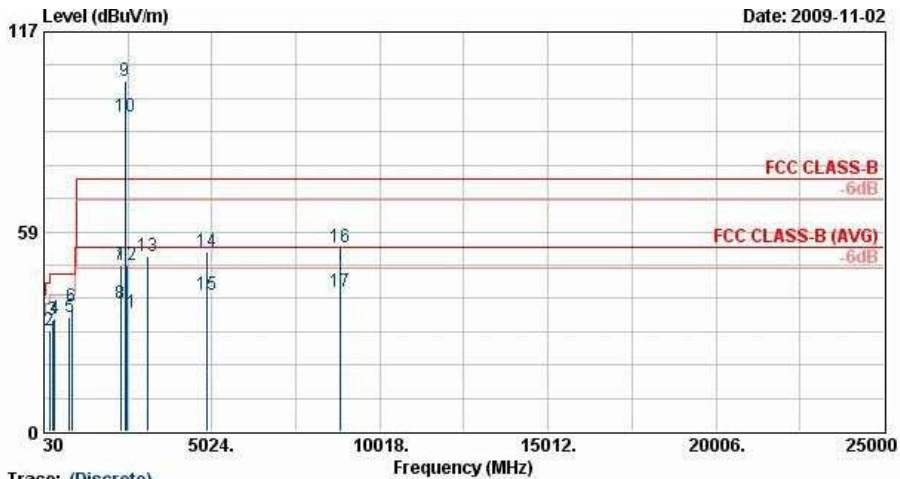


Site : D3CH7-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 7

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.70 | 27.61 | -12.39 | 40.00 | 49.69 | 8.56 | 1.07 | 31.70 | --- | --- | Peak |
| 2 | 201.45 | 32.13 | -11.37 | 43.50 | 51.78 | 10.24 | 1.71 | 31.60 | --- | --- | Peak |
| 3 | 286.77 | 31.72 | -14.28 | 46.00 | 47.57 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 721.40 | 37.97 | -8.03 | 46.00 | 43.93 | 21.29 | 3.61 | 30.86 | 100 | 208 | Peak |
| 5 | 800.50 | 36.46 | -9.54 | 46.00 | 41.41 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 859.30 | 37.39 | -8.61 | 46.00 | 41.11 | 22.98 | 4.00 | 30.70 | --- | --- | Peak |
| 7 | 2389.61 | 42.51 | -11.49 | 54.00 | 39.30 | 32.13 | 5.46 | 34.38 | 107 | 320 | Average |
| 8 | 2389.61 | 60.74 | -13.26 | 74.00 | 57.53 | 32.13 | 5.46 | 34.38 | 107 | 320 | Peak |
| 9 X | 2412.00 | 99.69 | | | 96.46 | 32.19 | 5.43 | 34.39 | 107 | 320 | Peak |
| 10 @ | 2412.00 | 90.59 | | | 87.37 | 32.16 | 5.44 | 34.38 | 107 | 320 | Average |
| 11 | 2500.00 | 53.45 | -20.55 | 74.00 | 50.18 | 32.30 | 5.37 | 34.40 | 107 | 320 | Peak |
| 12 | 2500.00 | 34.51 | -19.49 | 54.00 | 31.24 | 32.30 | 5.37 | 34.40 | 107 | 320 | Average |
| 13 | 3117.00 | 56.72 | -17.28 | 74.00 | 52.25 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3213.00 | 52.97 | -21.03 | 74.00 | 48.44 | 33.00 | 6.17 | 34.64 | 100 | 0 | Peak |
| 15 | 8949.00 | 53.71 | -20.29 | 74.00 | 42.51 | 36.27 | 10.32 | 35.39 | 100 | 187 | Peak |
| 16 | 8949.00 | 40.57 | -13.43 | 54.00 | 29.37 | 36.27 | 10.32 | 35.39 | 100 | 187 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 8 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

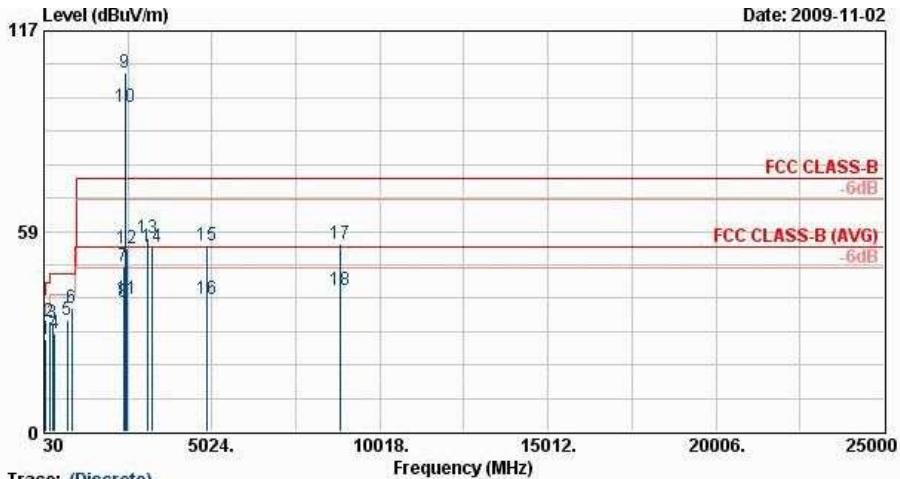


Trace: (Discrete)
 Site : D3CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 8

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBUV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBUV/m | dBUV | dB/m | dB | dB | cm | deg | |
| 1 | 30.81 | 23.36 | -16.64 | 40.00 | 35.05 | 19.36 | 0.65 | 31.70 | --- | --- | Peak |
| 2 | 198.21 | 29.62 | -13.88 | 43.50 | 49.49 | 10.04 | 1.69 | 31.60 | --- | --- | Peak |
| 3 | 287.85 | 32.66 | -13.34 | 46.00 | 48.48 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 358.10 | 33.04 | -12.96 | 46.00 | 46.55 | 15.39 | 2.38 | 31.28 | --- | --- | Peak |
| 5 | 797.70 | 33.63 | -12.37 | 46.00 | 38.60 | 21.89 | 3.84 | 30.71 | --- | --- | Peak |
| 6 | 861.40 | 36.50 | -9.50 | 46.00 | 40.22 | 22.98 | 4.01 | 30.70 | 100 | 286 | Peak |
| 7 | 2310.00 | 48.53 | -25.47 | 74.00 | 45.36 | 32.00 | 5.53 | 34.36 | 100 | 329 | Peak |
| 8 | 2310.00 | 37.30 | -16.70 | 54.00 | 34.14 | 32.00 | 5.53 | 34.36 | 100 | 329 | Average |
| 9 X | 2437.00 | 102.54 | | | 99.31 | 32.19 | 5.43 | 34.39 | 100 | 329 | Peak |
| 10 @ | 2437.00 | 92.35 | | | 89.11 | 32.22 | 5.41 | 34.39 | 100 | 329 | Average |
| 11 | 2484.00 | 34.96 | -19.04 | 54.00 | 31.70 | 32.27 | 5.38 | 34.40 | 100 | 329 | Average |
| 12 | 2484.00 | 48.84 | -25.16 | 74.00 | 45.58 | 32.27 | 5.38 | 34.40 | 100 | 329 | Peak |
| 13 | 3117.00 | 51.36 | -22.64 | 74.00 | 46.89 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 4874.00 | 52.76 | -21.24 | 74.00 | 45.35 | 34.35 | 7.85 | 34.80 | 100 | 39 | Peak |
| 15 | 4874.00 | 39.89 | -14.11 | 54.00 | 32.49 | 34.35 | 7.85 | 34.80 | 100 | 39 | Average |
| 16 | 8850.00 | 53.87 | -20.13 | 74.00 | 42.74 | 36.21 | 10.29 | 35.37 | 100 | 137 | Peak |
| 17 | 8850.00 | 41.00 | -13.00 | 54.00 | 29.87 | 36.21 | 10.29 | 35.37 | 100 | 137 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 8 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

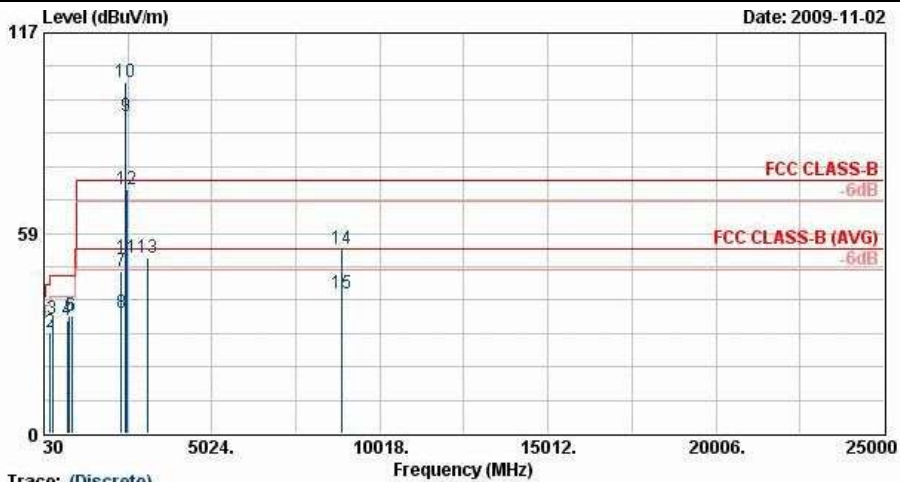


Trace: (Discrete)
 Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 8

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|--------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.97 | 26.88 | -13.12 | 40.00 | 48.79 | 8.72 | 1.08 | 31.70 | --- | --- | Peak |
| 2 | 200.10 | 32.11 | -11.39 | 43.50 | 51.81 | 10.20 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 287.85 | 31.64 | -14.36 | 46.00 | 47.46 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 358.10 | 28.52 | -17.48 | 46.00 | 42.04 | 15.39 | 2.38 | 31.28 | --- | --- | Peak |
| 5 | 719.30 | 32.41 | -13.59 | 46.00 | 38.41 | 21.25 | 3.61 | 30.86 | --- | --- | Peak |
| 6 | 864.20 | 36.31 | -9.69 | 46.00 | 40.03 | 22.97 | 4.02 | 30.70 | 100 | 14 | Peak |
| 7 | 2388.00 | 48.09 | -25.91 | 74.00 | 44.88 | 32.13 | 5.46 | 34.38 | 104 | 320 | Peak |
| 8 | 2388.00 | 37.72 | -16.28 | 54.00 | 34.51 | 32.13 | 5.46 | 34.38 | 104 | 320 | Average |
| 9 X | 2437.00 | 104.69 | | | 101.44 | 32.22 | 5.41 | 34.39 | 104 | 320 | Peak |
| 10 @ | 2437.00 | 94.88 | | | 91.64 | 32.22 | 5.41 | 34.39 | 104 | 320 | Average |
| 11 | 2500.00 | 38.52 | -15.48 | 54.00 | 35.25 | 32.30 | 5.37 | 34.40 | 104 | 320 | Average |
| 12 | 2500.00 | 53.45 | -20.55 | 74.00 | 50.18 | 32.30 | 5.37 | 34.40 | 104 | 320 | Peak |
| 13 | 3117.00 | 56.53 | -17.47 | 74.00 | 52.05 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3246.00 | 54.07 | -19.93 | 74.00 | 49.51 | 33.00 | 6.20 | 34.65 | 100 | 0 | Peak |
| 15 | 4874.00 | 54.29 | -19.71 | 74.00 | 46.89 | 34.35 | 7.85 | 34.80 | 100 | 107 | Peak |
| 16 | 4874.00 | 38.64 | -15.36 | 54.00 | 31.24 | 34.35 | 7.85 | 34.80 | 100 | 107 | Average |
| 17 | 8826.00 | 54.75 | -19.25 | 74.00 | 43.64 | 36.19 | 10.28 | 35.36 | 100 | 195 | Peak |
| 18 | 8826.00 | 41.52 | -12.48 | 54.00 | 30.41 | 36.19 | 10.28 | 35.36 | 100 | 195 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 9 | Temperature : | 24~25°C |
| Test Channel : | 11 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

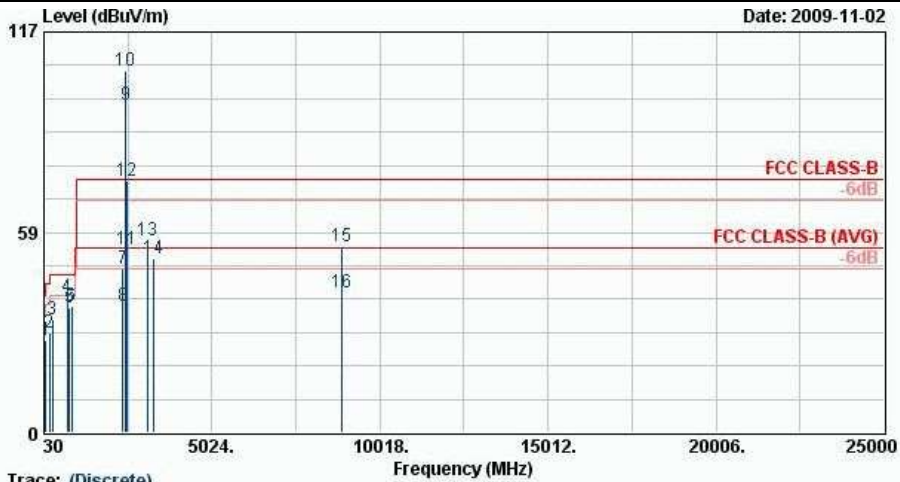


Trace: (Discrete)
 Site : D3CH07-RY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 9

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.81 | 22.61 | -17.39 | 40.00 | 34.30 | 19.36 | 0.65 | 31.70 | --- | --- | Peak |
| 2 | 215.22 | 29.55 | -13.95 | 43.50 | 48.90 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 287.85 | 33.48 | -12.52 | 46.00 | 49.30 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 721.40 | 33.13 | -12.87 | 46.00 | 39.08 | 21.29 | 3.61 | 30.86 | --- | --- | Peak |
| 5 | 797.70 | 34.33 | -11.67 | 46.00 | 39.30 | 21.89 | 3.84 | 30.71 | --- | --- | Peak |
| 6 | 862.10 | 34.46 | -11.54 | 46.00 | 38.17 | 22.98 | 4.01 | 30.70 | 100 | 75 | Peak |
| 7 | 2334.00 | 47.56 | -26.44 | 74.00 | 44.39 | 32.02 | 5.51 | 34.37 | 117 | 327 | Peak |
| 8 | 2334.00 | 35.19 | -18.81 | 54.00 | 32.02 | 32.02 | 5.51 | 34.37 | 117 | 327 | Average |
| 9 X | 2462.00 | 92.47 | | | 89.22 | 32.24 | 5.40 | 34.39 | 117 | 327 | Average |
| 10 X | 2462.00 | 102.81 | | | 99.56 | 32.24 | 5.40 | 34.39 | 117 | 327 | Peak |
| 11 ! | 2483.85 | 51.13 | -2.87 | 54.00 | 47.87 | 32.27 | 5.38 | 34.40 | 117 | 327 | Average |
| 12 ! | 2483.85 | 71.46 | -2.54 | 74.00 | 68.20 | 32.27 | 5.38 | 34.40 | 117 | 327 | Peak |
| 13 | 3117.00 | 51.32 | -22.68 | 74.00 | 46.84 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 8862.00 | 53.93 | -20.07 | 74.00 | 42.80 | 36.21 | 10.29 | 35.37 | 100 | 45 | Peak |
| 15 | 8862.00 | 41.09 | -12.91 | 54.00 | 29.96 | 36.21 | 10.29 | 35.37 | 100 | 45 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 9 | Temperature : | 24~25°C |
| Test Channel : | 11 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

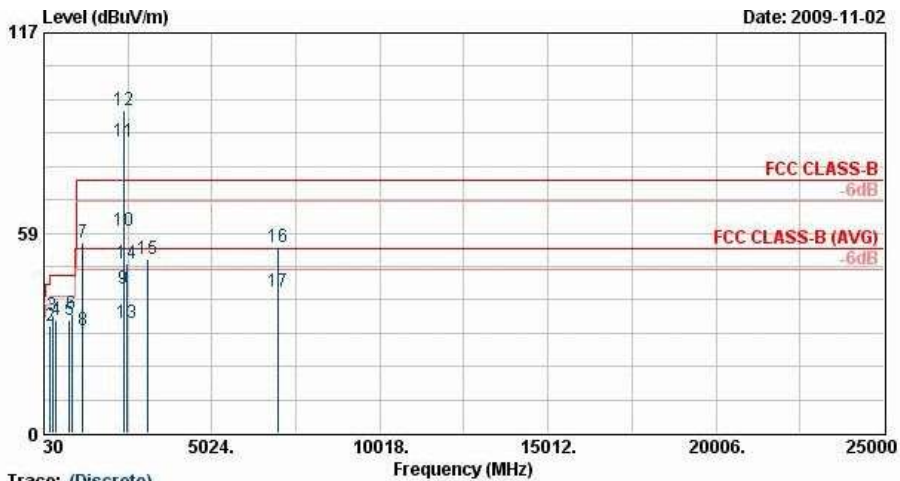


Site : D3CH7-RY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 9

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|--------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.70 | 26.91 | -13.09 | 40.00 | 48.98 | 8.56 | 1.07 | 31.70 | --- | --- | Peak |
| 2 | 197.13 | 29.18 | -14.32 | 43.50 | 49.13 | 9.96 | 1.69 | 31.60 | --- | --- | Peak |
| 3 | 286.77 | 33.14 | -12.86 | 46.00 | 49.00 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 718.60 | 39.53 | -6.47 | 46.00 | 45.56 | 21.24 | 3.61 | 30.86 | 100 | 74 | Peak |
| 5 | 800.50 | 36.38 | -9.62 | 46.00 | 41.33 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 861.40 | 36.87 | -9.13 | 46.00 | 40.58 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2366.00 | 47.68 | -26.32 | 74.00 | 44.49 | 32.08 | 5.49 | 34.37 | 104 | 313 | Peak |
| 8 | 2366.00 | 36.79 | -17.21 | 54.00 | 33.60 | 32.08 | 5.49 | 34.37 | 104 | 313 | Average |
| 9 @ | 2462.00 | 95.85 | | | 92.60 | 32.24 | 5.40 | 34.39 | 104 | 313 | Average |
| 10 X | 2462.00 | 105.72 | | | 102.47 | 32.24 | 5.40 | 34.39 | 104 | 313 | Peak |
| 11 ! | 2483.50 | 53.50 | -0.50 | 54.00 | 50.24 | 32.27 | 5.38 | 34.40 | 104 | 313 | Average |
| 12 ! | 2483.50 | 73.67 | -0.33 | 74.00 | 70.41 | 32.27 | 5.38 | 34.40 | 104 | 313 | Peak |
| 13 | 3117.00 | 56.13 | -17.87 | 74.00 | 51.65 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3282.00 | 50.95 | -23.05 | 74.00 | 46.38 | 33.00 | 6.23 | 34.66 | 100 | 0 | Peak |
| 15 | 8862.00 | 54.34 | -19.66 | 74.00 | 43.21 | 36.21 | 10.29 | 35.37 | 100 | 178 | Peak |
| 16 | 8862.00 | 40.97 | -13.03 | 54.00 | 29.84 | 36.21 | 10.29 | 35.37 | 100 | 178 | Average |



| | | | |
|-----------------|---|---------------------|------------|
| Test Mode : | Mode 10 | Temperature : | 24~25°C |
| Test Channel : | 03 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #11 and #12 are Fundamental Signals which can be ignored. | | |

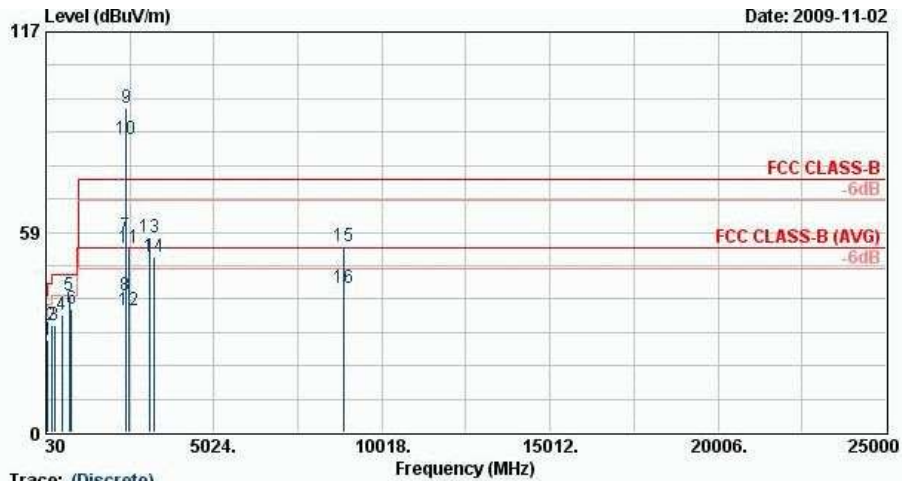


Trace: (Discrete)
 Site : D3CH07-RY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 10

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | | | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 39.18 | 26.33 | -13.67 | 40.00 | 42.43 | 14.88 | 0.72 | 31.70 | --- | --- | Peak |
| 2 | 215.49 | 31.17 | -12.33 | 43.50 | 50.52 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 286.77 | 34.48 | -11.52 | 46.00 | 50.33 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 386.10 | 32.91 | -13.09 | 46.00 | 45.57 | 16.07 | 2.50 | 31.23 | --- | --- | Peak |
| 5 | 800.50 | 33.16 | -12.84 | 46.00 | 38.11 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 862.10 | 34.95 | -11.05 | 46.00 | 38.66 | 22.98 | 4.01 | 30.70 | 100 | 158 | Peak |
| 7 | 1196.00 | 55.68 | -18.32 | 74.00 | 58.97 | 27.78 | 3.68 | 34.75 | 100 | 274 | Peak |
| 8 | 1196.00 | 30.15 | -23.85 | 54.00 | 33.44 | 27.78 | 3.68 | 34.75 | 100 | 274 | Average |
| 9 | 2389.42 | 42.35 | -11.65 | 54.00 | 39.14 | 32.13 | 5.46 | 34.38 | 100 | 329 | Average |
| 10 | 2389.42 | 59.28 | -14.72 | 74.00 | 56.07 | 32.13 | 5.46 | 34.38 | 100 | 329 | Peak |
| 11 X | 2422.00 | 85.10 | | | 81.87 | 32.19 | 5.43 | 34.39 | 100 | 329 | Average |
| 12 X | 2422.00 | 94.35 | | | 91.11 | 32.22 | 5.41 | 34.39 | 100 | 329 | Peak |
| 13 | 2500.00 | 32.36 | -21.64 | 54.00 | 29.09 | 32.30 | 5.37 | 34.40 | 100 | 329 | Average |
| 14 | 2500.00 | 49.47 | -24.53 | 74.00 | 46.20 | 32.30 | 5.37 | 34.40 | 100 | 329 | Peak |
| 15 | 3114.00 | 50.89 | -23.11 | 74.00 | 46.43 | 33.00 | 6.09 | 34.62 | 100 | 0 | Peak |
| 16 | 6981.00 | 54.28 | -19.72 | 74.00 | 43.31 | 35.89 | 10.07 | 35.00 | 100 | 125 | Peak |
| 17 | 6981.00 | 41.15 | -12.85 | 54.00 | 30.19 | 35.89 | 10.07 | 35.00 | 100 | 125 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 10 | Temperature : | 24~25°C |
| Test Channel : | 03 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

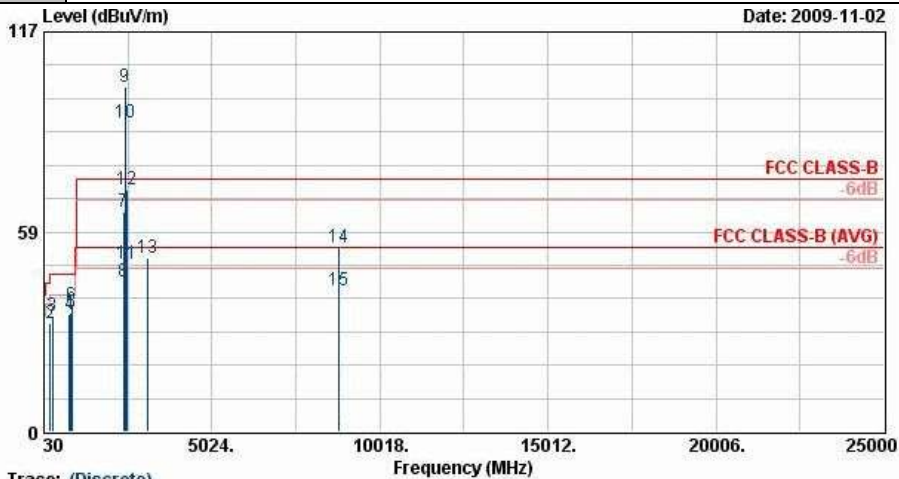


Trace: (Discrete)
 Site : 03CR07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 10

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.97 | 27.07 | -12.93 | 40.00 | 48.97 | 8.72 | 1.08 | 31.70 | --- | --- | Peak |
| 2 | 201.18 | 31.48 | -12.02 | 43.50 | 51.15 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 287.85 | 31.27 | -14.73 | 46.00 | 47.09 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 503.00 | 34.28 | -11.72 | 46.00 | 44.19 | 18.24 | 2.95 | 31.10 | --- | --- | Peak |
| 5 ! | 721.40 | 40.15 | -5.85 | 46.00 | 46.10 | 21.29 | 3.61 | 30.86 | 100 | 291 | Peak |
| 6 | 797.70 | 36.22 | -9.78 | 46.00 | 41.19 | 21.89 | 3.84 | 30.71 | --- | --- | Peak |
| 7 | 2389.99 | 57.24 | -16.76 | 74.00 | 54.03 | 32.13 | 5.46 | 34.38 | 100 | 337 | Peak |
| 8 | 2389.99 | 39.97 | -14.03 | 54.00 | 36.76 | 32.13 | 5.46 | 34.38 | 100 | 337 | Average |
| 9 X | 2422.00 | 94.92 | | | 91.69 | 32.19 | 5.43 | 34.39 | 100 | 337 | Peak |
| 10 @ | 2422.00 | 85.71 | | | 82.48 | 32.19 | 5.43 | 34.39 | 100 | 337 | Average |
| 11 | 2500.00 | 53.89 | -20.11 | 74.00 | 50.62 | 32.30 | 5.37 | 34.40 | 100 | 337 | Peak |
| 12 | 2500.00 | 35.79 | -18.21 | 54.00 | 32.52 | 32.30 | 5.37 | 34.40 | 100 | 337 | Average |
| 13 | 3117.00 | 57.19 | -16.81 | 74.00 | 52.71 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3225.00 | 51.36 | -22.64 | 74.00 | 46.82 | 33.00 | 6.19 | 34.64 | 100 | 0 | Peak |
| 15 | 8874.00 | 54.49 | -19.51 | 74.00 | 43.35 | 36.22 | 10.30 | 35.37 | 100 | 285 | Peak |
| 16 | 8874.00 | 42.19 | -11.81 | 54.00 | 31.05 | 36.22 | 10.30 | 35.37 | 100 | 285 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 11 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



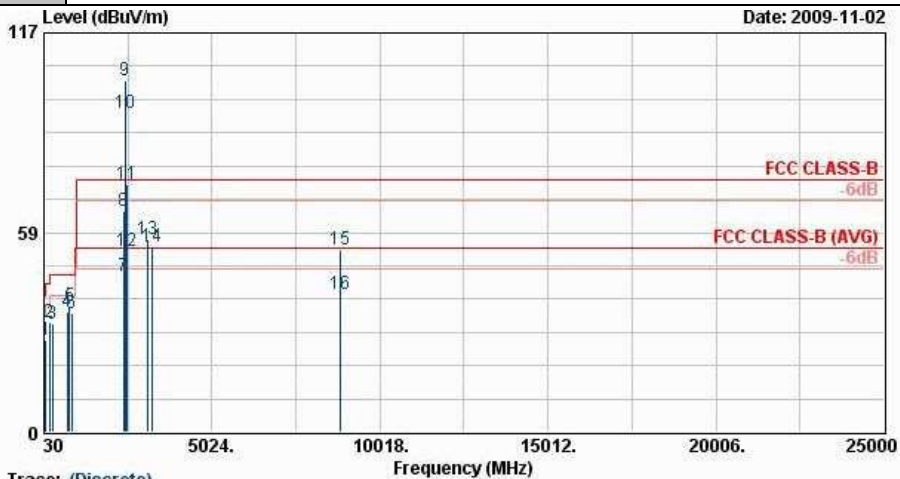
Site
Condition
Project
Mode

Trace: (Discrete)
03CH07-HY
FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
FR 983104-04
Mode 11

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 39.18 | 29.70 | -10.30 | 40.00 | 45.80 | 14.88 | 0.72 | 31.70 | --- | --- | Peak |
| 2 | 215.22 | 31.71 | -11.79 | 43.50 | 51.05 | 10.45 | 1.77 | 31.57 | --- | --- | Peak |
| 3 | 287.58 | 33.83 | -12.17 | 46.00 | 49.65 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 797.70 | 34.33 | -11.67 | 46.00 | 39.30 | 21.89 | 3.84 | 30.71 | --- | --- | Peak |
| 5 | 836.20 | 34.98 | -11.02 | 46.00 | 39.05 | 22.70 | 3.93 | 30.70 | --- | --- | Peak |
| 6 | 862.10 | 36.92 | -9.08 | 46.00 | 40.64 | 22.98 | 4.01 | 30.70 | 100 | 125 | Peak |
| 7 | 2390.00 | 64.57 | -9.43 | 74.00 | 61.36 | 32.13 | 5.46 | 34.38 | 100 | 328 | Peak |
| 8 | 2390.00 | 43.96 | -10.04 | 54.00 | 40.75 | 32.13 | 5.46 | 34.38 | 100 | 328 | Average |
| 9 X | 2437.00 | 101.11 | | | 97.87 | 32.22 | 5.41 | 34.39 | 100 | 328 | Peak |
| 10 X | 2437.00 | 90.42 | | | 87.18 | 32.22 | 5.41 | 34.39 | 100 | 328 | Average |
| 11 ! | 2484.00 | 48.95 | -5.05 | 54.00 | 45.69 | 32.27 | 5.38 | 34.40 | 100 | 328 | Average |
| 12 ! | 2484.00 | 70.86 | -3.14 | 74.00 | 67.60 | 32.27 | 5.38 | 34.40 | 100 | 328 | Peak |
| 13 | 3117.00 | 50.92 | -23.08 | 74.00 | 46.44 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 8805.00 | 53.80 | -20.20 | 74.00 | 42.70 | 36.18 | 10.28 | 35.36 | 100 | 195 | Peak |
| 15 | 8805.00 | 41.24 | -12.76 | 54.00 | 30.14 | 36.18 | 10.28 | 35.36 | 100 | 195 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 11 | Temperature : | 24~25°C |
| Test Channel : | 06 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



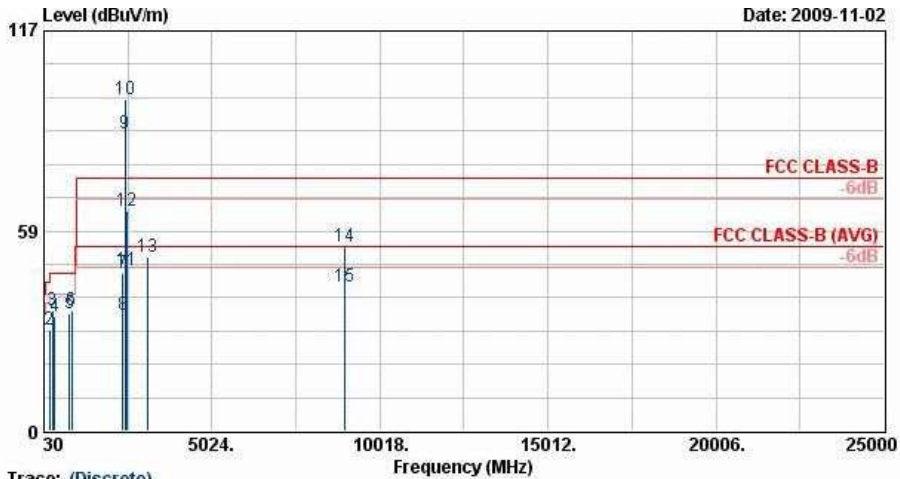
Site
Condition
Project
Mode

Trace: (Discrete)
D3CR07-HY
FCC CLASS-B 3m SHF-EHF HORN VERTICAL
FR 983104-04
Mode 11

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 86.97 | 27.09 | -12.91 | 40.00 | 48.99 | 8.72 | 1.08 | 31.70 | --- | --- | Peak |
| 2 | 201.18 | 32.00 | -11.50 | 43.50 | 51.67 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 286.77 | 31.72 | -14.28 | 46.00 | 47.58 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 719.30 | 35.43 | -10.57 | 46.00 | 41.43 | 21.25 | 3.61 | 30.86 | --- | --- | Peak |
| 5 | 800.50 | 37.14 | -8.86 | 46.00 | 42.09 | 21.90 | 3.85 | 30.70 | 100 | 192 | Peak |
| 6 | 862.10 | 34.66 | -11.34 | 46.00 | 38.38 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2390.00 | 45.82 | -8.18 | 54.00 | 42.61 | 32.13 | 5.46 | 34.38 | 102 | 319 | Average |
| 8 | 2390.00 | 64.65 | -9.35 | 74.00 | 61.43 | 32.13 | 5.46 | 34.38 | 102 | 319 | Peak |
| 9 X | 2437.00 | 103.17 | | | 99.93 | 32.22 | 5.41 | 34.39 | 102 | 319 | Peak |
| 10 @ | 2437.00 | 93.49 | | | 90.25 | 32.22 | 5.41 | 34.39 | 102 | 319 | Average |
| 11 ! | 2484.00 | 72.62 | -1.38 | 74.00 | 69.36 | 32.27 | 5.38 | 34.40 | 102 | 319 | Peak |
| 12 ! | 2484.00 | 53.28 | -0.72 | 54.00 | 50.02 | 32.27 | 5.38 | 34.40 | 102 | 319 | Average |
| 13 | 3117.00 | 56.37 | -17.63 | 74.00 | 51.89 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3246.00 | 54.47 | -19.53 | 74.00 | 49.92 | 33.00 | 6.20 | 34.65 | 100 | 0 | Peak |
| 15 | 8838.00 | 53.63 | -20.37 | 74.00 | 42.51 | 36.20 | 10.29 | 35.37 | 100 | 192 | Peak |
| 16 | 8838.00 | 40.60 | -13.40 | 54.00 | 29.48 | 36.20 | 10.29 | 35.37 | 100 | 192 | Average |



| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 12 | Temperature : | 24~25°C |
| Test Channel : | 09 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Horizontal |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |

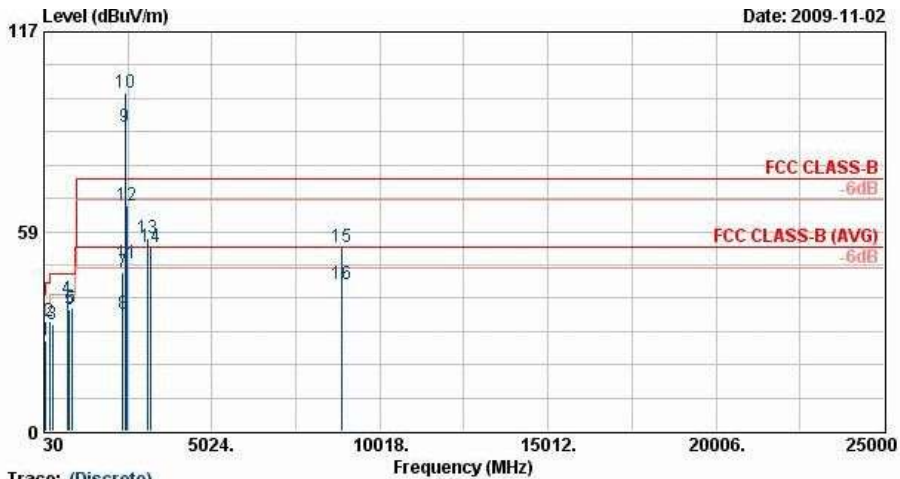


Trace: (Discrete)
 Site : D3CH07-RY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 983104-04
 Mode : Mode 12

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBuV/m | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | |
| | | | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.81 | 29.58 | -10.42 | 40.00 | 41.27 | 19.36 | 0.65 | 31.70 | 100 | 163 | Peak |
| 2 | 200.37 | 29.75 | -13.75 | 43.50 | 49.42 | 10.22 | 1.70 | 31.60 | --- | --- | Peak |
| 3 | 286.77 | 35.37 | -10.63 | 46.00 | 51.22 | 13.51 | 2.06 | 31.43 | --- | --- | Peak |
| 4 | 358.10 | 33.44 | -12.56 | 46.00 | 46.96 | 15.39 | 2.38 | 31.28 | --- | --- | Peak |
| 5 | 800.50 | 34.49 | -11.51 | 46.00 | 39.44 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 861.40 | 35.13 | -10.87 | 46.00 | 38.85 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2372.00 | 45.93 | -28.07 | 74.00 | 42.72 | 32.11 | 5.47 | 34.38 | 121 | 329 | Peak |
| 8 | 2372.00 | 33.86 | -20.14 | 54.00 | 30.66 | 32.11 | 5.47 | 34.38 | 121 | 329 | Average |
| 9 X | 2452.00 | 87.08 | | | 83.84 | 32.22 | 5.41 | 34.39 | 121 | 329 | Average |
| 10 X | 2452.00 | 96.98 | | | 93.74 | 32.22 | 5.41 | 34.39 | 121 | 329 | Peak |
| 11 | 2483.50 | 46.80 | -7.20 | 54.00 | 43.54 | 32.27 | 5.38 | 34.40 | 121 | 329 | Average |
| 12 | 2483.50 | 64.31 | -9.69 | 74.00 | 61.05 | 32.27 | 5.38 | 34.40 | 121 | 329 | Peak |
| 13 | 3117.00 | 50.79 | -23.21 | 74.00 | 46.31 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 8949.00 | 53.79 | -20.21 | 74.00 | 42.59 | 36.27 | 10.32 | 35.39 | 100 | 176 | Peak |
| 15 | 8949.00 | 41.98 | -12.02 | 54.00 | 30.78 | 36.27 | 10.32 | 35.39 | 100 | 176 | Average |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 12 | Temperature : | 24~25°C |
| Test Channel : | 09 | Relative Humidity : | 42~43% |
| Test Engineer : | Kay Wu and Kai Wang | Polarization : | Vertical |
| Remark : | #9 and #10 are Fundamental Signals which can be ignored. | | |



Trace: (Discrete)
 Site : D3CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 983104-04
 Mode : Mode 12

| | Freq | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Remark |
|------|---------|--------|--------|--------|-------|---------|-------|--------|-----|-------|---------|
| | MHz | dBUV/m | dB | dBUV/m | dBUV | dB/m | dB | dB | cm | deg | |
| 1 | 86.97 | 26.40 | -13.60 | 40.00 | 48.30 | 8.72 | 1.08 | 31.70 | --- | --- | Peak |
| 2 | 196.86 | 32.13 | -11.37 | 43.50 | 52.09 | 9.96 | 1.69 | 31.60 | --- | --- | Peak |
| 3 | 287.58 | 31.52 | -14.48 | 46.00 | 47.33 | 13.54 | 2.07 | 31.42 | --- | --- | Peak |
| 4 | 719.30 | 38.83 | -7.17 | 46.00 | 44.83 | 21.25 | 3.61 | 30.86 | 100 | 285 | Peak |
| 5 | 800.50 | 35.50 | -10.50 | 46.00 | 40.45 | 21.90 | 3.85 | 30.70 | --- | --- | Peak |
| 6 | 862.10 | 35.97 | -10.03 | 46.00 | 39.68 | 22.98 | 4.01 | 30.70 | --- | --- | Peak |
| 7 | 2380.00 | 46.36 | -27.64 | 74.00 | 43.15 | 32.11 | 5.47 | 34.38 | 104 | 319 | Peak |
| 8 | 2380.00 | 34.20 | -19.80 | 54.00 | 31.00 | 32.11 | 5.47 | 34.38 | 104 | 319 | Average |
| 9 @ | 2452.00 | 89.10 | | | 85.86 | 32.22 | 5.41 | 34.39 | 104 | 319 | Average |
| 10 X | 2452.00 | 99.16 | | | 95.92 | 32.22 | 5.41 | 34.39 | 104 | 319 | Peak |
| 11 ! | 2483.85 | 48.94 | -5.06 | 54.00 | 45.68 | 32.27 | 5.38 | 34.40 | 104 | 319 | Average |
| 12 | 2483.85 | 66.26 | -7.74 | 74.00 | 63.00 | 32.27 | 5.38 | 34.40 | 104 | 319 | Peak |
| 13 | 3117.00 | 56.35 | -17.65 | 74.00 | 51.88 | 33.00 | 6.10 | 34.62 | 100 | 0 | Peak |
| 14 | 3201.00 | 53.75 | -20.25 | 74.00 | 49.23 | 33.00 | 6.16 | 34.64 | 100 | 0 | Peak |
| 15 | 8886.00 | 54.07 | -19.93 | 74.00 | 42.92 | 36.23 | 10.30 | 35.38 | 100 | 132 | Peak |
| 16 | 8886.00 | 43.03 | -10.97 | 54.00 | 31.87 | 36.23 | 10.30 | 35.38 | 100 | 132 | 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 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 |
|---------------------------|--------------|-----------|-------------|----------------------|------------------|---------------|-----------------------|
| Bilog Antenna | SCHAFFNER | CBL6111C | 2726 | 30MHz ~ 1GHz | Nov. 20, 2008 | Nov. 19, 2009 | Radiation (03CH07-HY) |
| Spectrum Analyzer | R&S | FSP | 101067 | 9KHz ~ 30GHz | Dec. 02, 2008 | Dec. 01, 2009 | Radiation (03CH07-HY) |
| Double Ridge Horn Antenna | ESCO | 3117 | 00075962 | 1GHz ~ 18GHz | Aug. 20, 2009 | Aug. 19, 2010 | Radiation (03CH07-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170251 | 15GHz- 40GHz | Oct. 14, 2009 | Oct. 13, 2010 | Radiation (03CH07-HY) |
| Pre Amplifier | Agilent | 8449B | 3008A02362 | 1GHz~ 26.5GHz | Dec. 17, 2008 | Dec. 16, 2009 | Radiation (03CH07-HY) |
| Pre Amplifier | COM-POWER | PA-103A | 161241 | 10-1000MHz.32dB.GAIN | Mar. 27, 2009 | Mar. 26, 2010 | Radiation (03CH07-HY) |
| Loop Antenna | R&S | HFH2-Z2 | 860004/001 | 9 KHz~30 MHz | May 22, 2008 | May 21, 2010 | Radiation (03CH07-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 Specification | 1.50 | Rectangular | 0.43 |
| Site Imperfection | 1.39 | Rectangular | 0.80 |
| Mismatch | +0.34 / -0.35 | U-Shape | 0.24 |
| Combined Standard Uncertainty $U_c(y)$ | 1.13 | | |
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$) | 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-Shape | 0.28 |
| Combined Standard Uncertainty $U_c(y)$ | 1.27 | | |
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$) | 2.54 | | |



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

| Contribution | Uncertainty of X_i | | $u(X_i)$ | C_i | $C_i * u(X_i)$ |
|--|----------------------|--------------------------|----------|-------|----------------|
| | dB | Probability Distribution | | | |
| Receiver Reading | ±0.10 | Normal (k=2) | 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 Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\text{Log}(1-\Gamma_1*\Gamma_2)$ | +0.34 / -0.35 | U-Shape | 0.244 | 1 | 0.244 |
| Combined Standard Uncertainty $U_c(y)$ | 2.36 | | | | |
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$) | 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 Accreditation Program for Telecommunication Equipment Testing Laboratory Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities |


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

Pl, 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 EP983104-04 as below.