



FCC CFR47 PART 15 SUBPART C  
INDUSTRY CANADA RSS-210 ISSUE 8

CERTIFICATION TEST REPORT

FOR

2.4GHz FHSS RFID ELECTRONIC LABELING LARGE TAG

MODEL NUMBER: ATAG400E

FCC ID: W22-ATAG400E  
IC: 9005A-ATAG400E

REPORT NUMBER: 11U14079-1, Revision A

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NVLAP®

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Revision History

| Rev. | Issue Date | Revisions            | Revised By |
|------|------------|----------------------|------------|
| --   | 11/09/11   | Initial Issue        | T. Chan    |
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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** ALTIERRE CORPORATION  
1980 CONDOURSE DRIVE  
SAN JOSE, CA95131, USA

**EUT DESCRIPTION:** 2.4GHz FHSS RFID ELECTRONIC SHELF LABEL

**MODEL:** ATAG400E

**SERIAL NUMBER:** Unit # 3 for RF Radiated Test  
Unit # 1 for RF Conducted Test

**DATE TESTED:** OCTOBER 5 to NOVEMBER 7, 2011

| APPLICABLE STANDARDS                    |              |
|---|--------------|
| STANDARD                                | TEST RESULTS |
| CFR 47 Part 15 Subpart C                | Pass         |
| INDUSTRY CANADA RSS-210 Issue 8 Annex 8 | Pass         |
| INDUSTRY CANADA RSS-GEN Issue 3         | Pass         |

Compliance Certification Services (UL CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:



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THU CHAN  
ENGINEERING MANAGER  
UL CCS

Tested By:



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THANH NGUYEN  
EMC ENGINEER  
UL CCS

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

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

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER                             | UNCERTAINTY |
|---------------------------------------|-------------|
| Conducted Disturbance, 0.15 to 30 MHz | 3.52 dB     |
| Radiated Disturbance, 30 to 1000 MHz  | 4.94 dB     |

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a 2.4GHz FHSS RFID Electronic Shelf Label, which is operated by 3.0 Volts coin batteries.

The radio module is manufactured by Altierre Corp.

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

| Frequency Range (MHz) | Mode       | Output Power (dBm) | Output Power (mW) |
|-----------------------|------------|--------------------|-------------------|
| 2401.5 - 2479.5       | Binary FSK | 5.42               | 3.48              |

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PCB antenna, with a maximum gain of 0 dBi.

### 5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was the Large Tag provisioning revision 1.17.

The test utility software used during testing was ADT UTIL10042011/eSignDockLinker.exe

### 5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power.

## 5.6. DESCRIPTION OF TEST SETUP

### FOR RF RADIATED TEST

#### SUPPORT EQUIPMENT

| PERIPHERAL SUPPORT EQUIPMENT LIST |                   |                |                        |        |
|-----------------------------------|-------------------|----------------|------------------------|--------|
| Description                       | Manufacturer      | Model          | Serial Number          | FCC ID |
| Laptop                            | Lenovo            | Thinkpad T61   | L3-D0532               | DoC    |
| AC Adapter                        | Note Book Adapter | F21B007B0R11P7 | 11S02K6963Z2UF2763P3M4 | DoC    |
| ATD (dock)                        | Altierre          | N/S            | ATD00333               | DoC    |

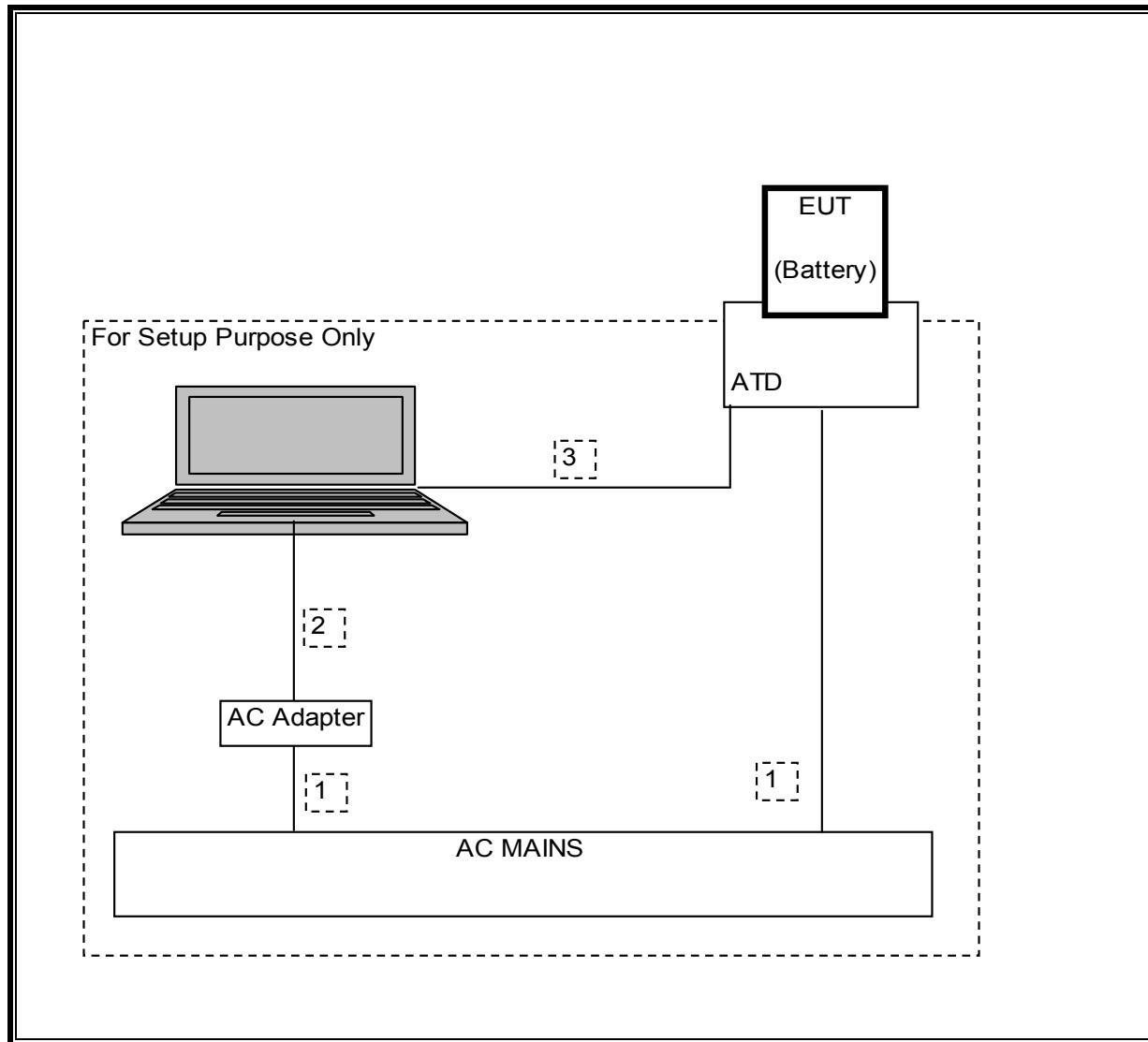
#### I/O CABLES

| I/O CABLE LIST |      |                      |                |            |              |                         |
|----------------|------|----------------------|----------------|------------|--------------|-------------------------|
| Cable No.      | Port | # of Identical Ports | Connector Type | Cable Type | Cable Length | Remarks                 |
| 1              | AC   | 2                    | US115V         | Unshielded | 1.5m         |                         |
| 2              | DC   | 1                    | DC             | Unshielded | 1m           | A ferrite at laptop end |
| 3              | USB  | 1                    | USB            | shielded   | 1m           |                         |

#### TEST SETUP

The EUT is a stand alone device during the tests; all support equipments will be removed after all parameters were configured via ATD (dock) and laptop computer.

**SETUP DIAGRAM**



**FOR RF CONDUCTED TEST**

**SUPPORT EQUIPMENT**

| PERIPHERAL SUPPORT EQUIPMENT LIST |                   |                |                        |        |
|-----------------------------------|-------------------|----------------|------------------------|--------|
| Description                       | Manufacturer      | Model          | Serial Number          | FCC ID |
| Laptop                            | Lenovo            | Thinkpad T61   | L3-D0532               | DoC    |
| AC Adapter                        | Note Book Adapter | F21B007B0R11P7 | 11S02K6963Z2UF2763P3M4 | DoC    |
| Access Point                      | Netgear           | FS605V3        | 1FM218B08739           | DoC    |
| PoE                               | PowerDSine        | 9001G          | D10046500000780A00     | DoC    |
| 3.0 Volts Battery                 | N/A               | N/A            | N/A                    |        |

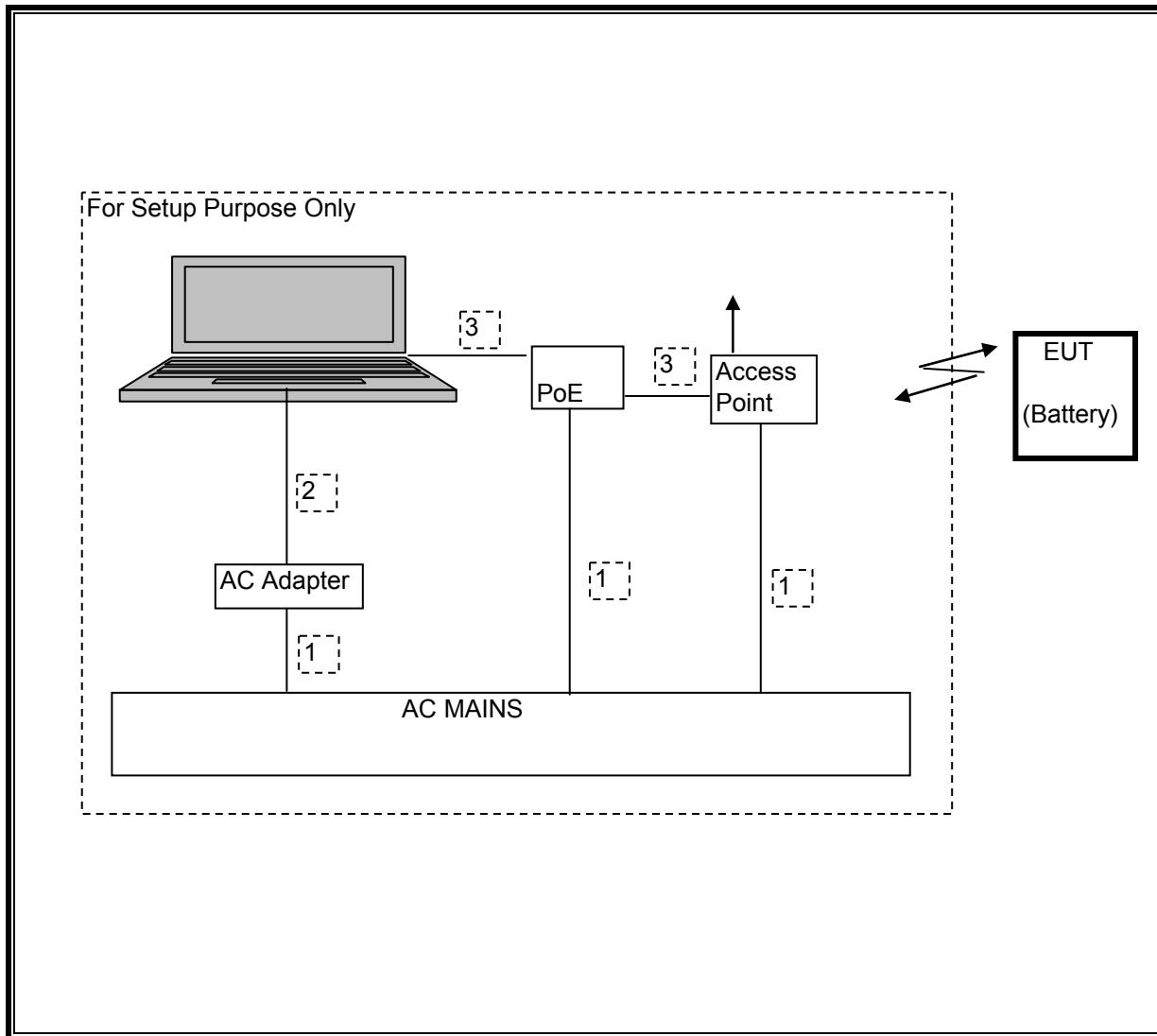
**I/O CABLES**

| I/O CABLE LIST |          |                      |                |            |              |                         |
|----------------|----------|----------------------|----------------|------------|--------------|-------------------------|
| Cable No.      | Port     | # of Identical Ports | Connector Type | Cable Type | Cable Length | Remarks                 |
| 1              | AC       | 2                    | US115V         | Unshielded | 1.5m         |                         |
| 2              | DC       | 1                    | DC             | Unshielded | 1.0m         | A ferrite at laptop end |
| 3              | Ethernet | 2                    | RJ45           | shielded   | .80m         |                         |

**TEST SETUP**

The EUT is a stand alone device during the tests; all support equipments will be removed after all parameters were configured via access point and laptop computer.

**SETUP DIAGRAM**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST         |                |            |        |          |
|-----------------------------|----------------|------------|--------|----------|
| Description                 | Manufacturer   | Model      | Asset  | Cal Due  |
| Spectrum Analyzer, 26.5 GHz | Agilent / HP   | E4446A     | T200   | 08/15/12 |
| Antenna, Bilog, 2 GHz       | Sunol Sciences | JB1        | C01011 | 07/16/12 |
| Antenna, Horn, 18 GHz       | EMCO           | 3115       | C00945 | 06/28/12 |
| Preamplifier, 1300 MHz      | Agilent / HP   | 8447D      | C00885 | 01/28/12 |
| Preamplifier, 1-26GHz       | Agilent / HP   | 8449B      | C01052 | 07/06/12 |
| Antenna, Horn, 26.5 GHz     | ARA            | MWH-1826/B | C00589 | 06/28/12 |
| Peak Power Meter            | Agilent / HP   | E4416A     | C00963 | 12/04/11 |
| Peak / Average Power Sensor | Agilent / HP   | E9327A     | C00964 | 12/04/11 |

## 7. ANTENNA PORT TEST RESULTS

### 7.1. BINARY FSK MODULATION

#### 7.1.1. 20 dB AND 99% BANDWIDTH

##### LIMIT

None; for reporting purposes only.

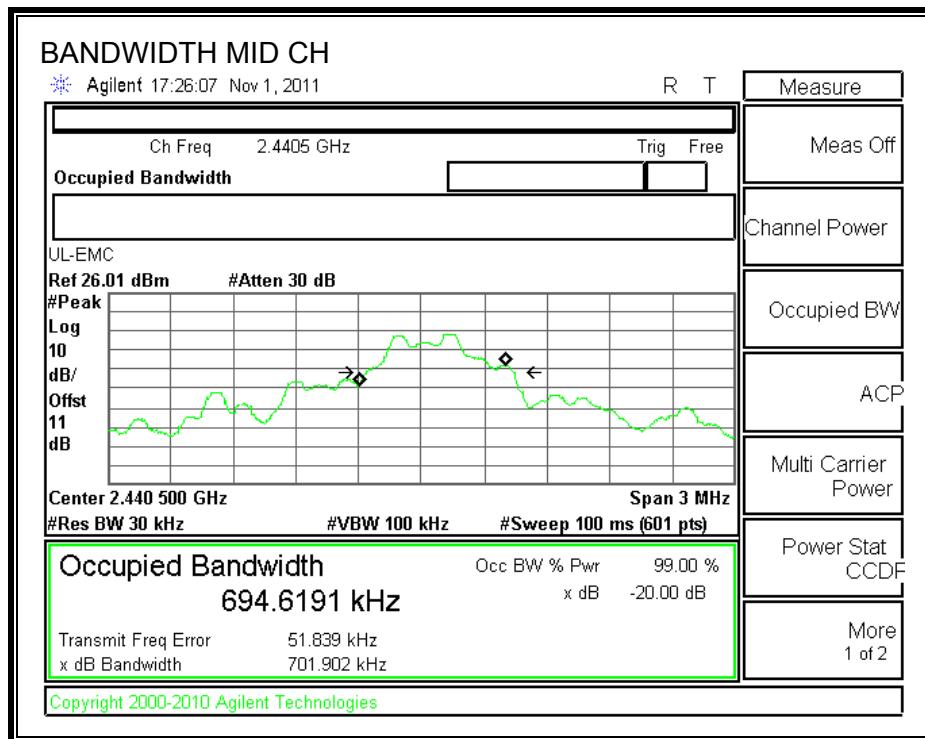
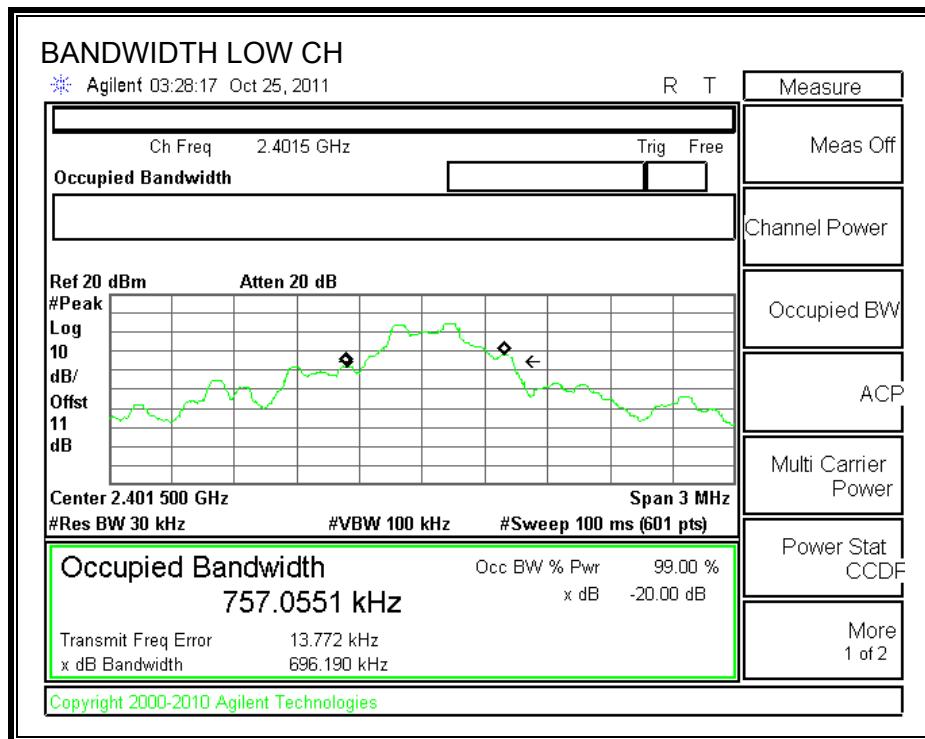
##### TEST PROCEDURE

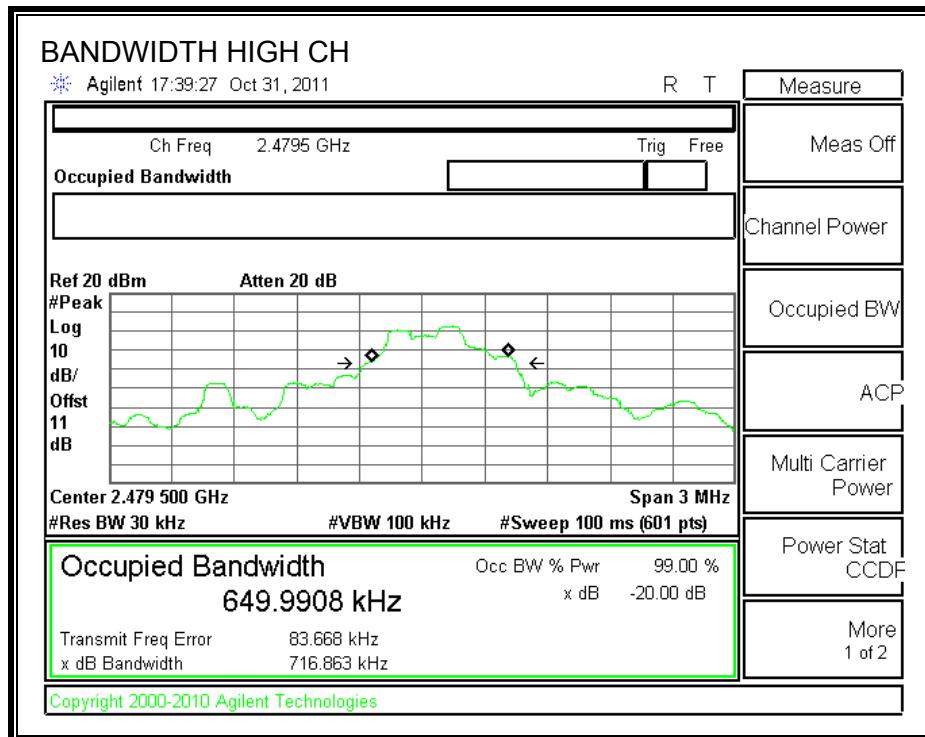
The transmitter output is connected to a spectrum analyzer. The RBW is set to  $\geq 1\%$  of the 20 dB bandwidth. The VBW is set to  $\geq$  RBW. The sweep time is coupled.

##### RESULTS

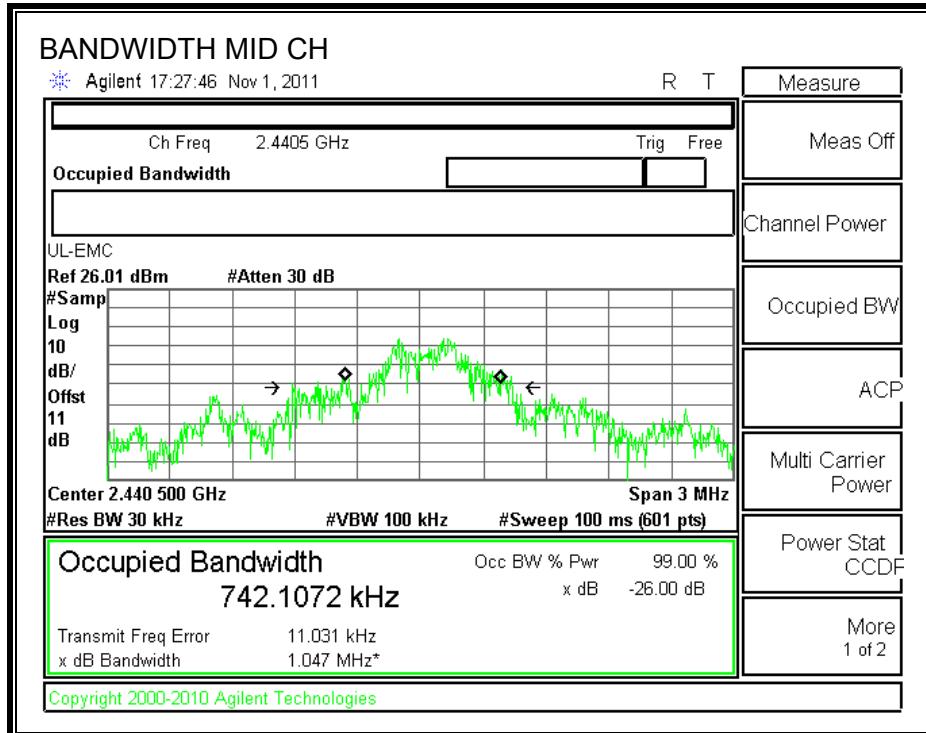
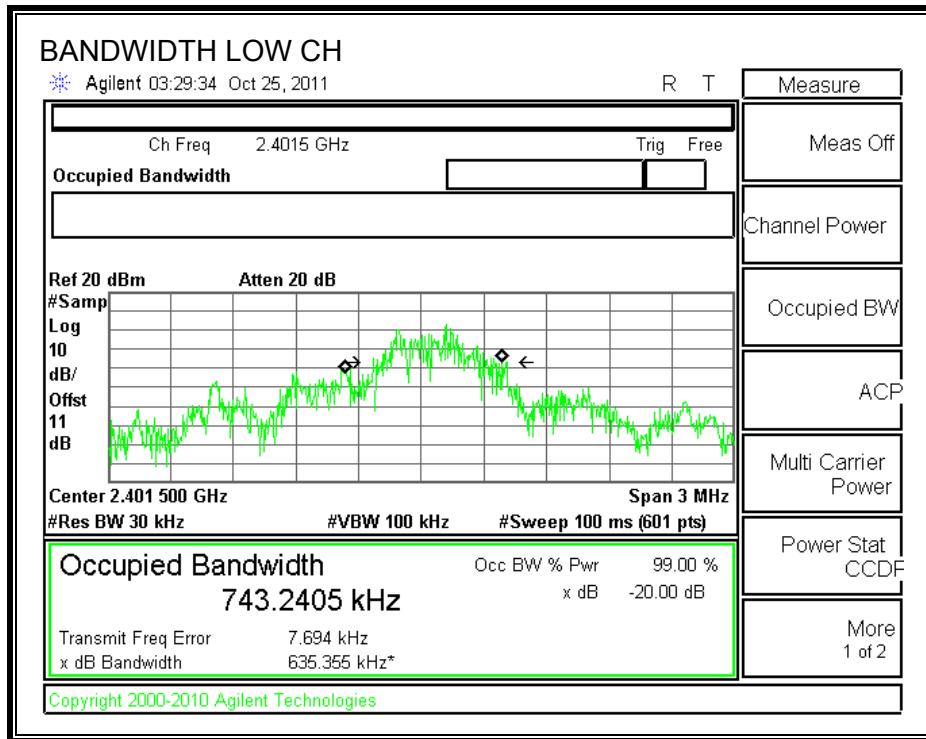
| Channel | Frequency (MHz) | 20 dB Bandwidth (kHz) | 99% Bandwidth (kHz) |
|---------|-----------------|-----------------------|---------------------|
| Low     | 2401.5          | 696.190               | 743.241             |
| Middle  | 2440.5          | 701.902               | 742.107             |
| High    | 2479.5          | 716.863               | 661.261             |

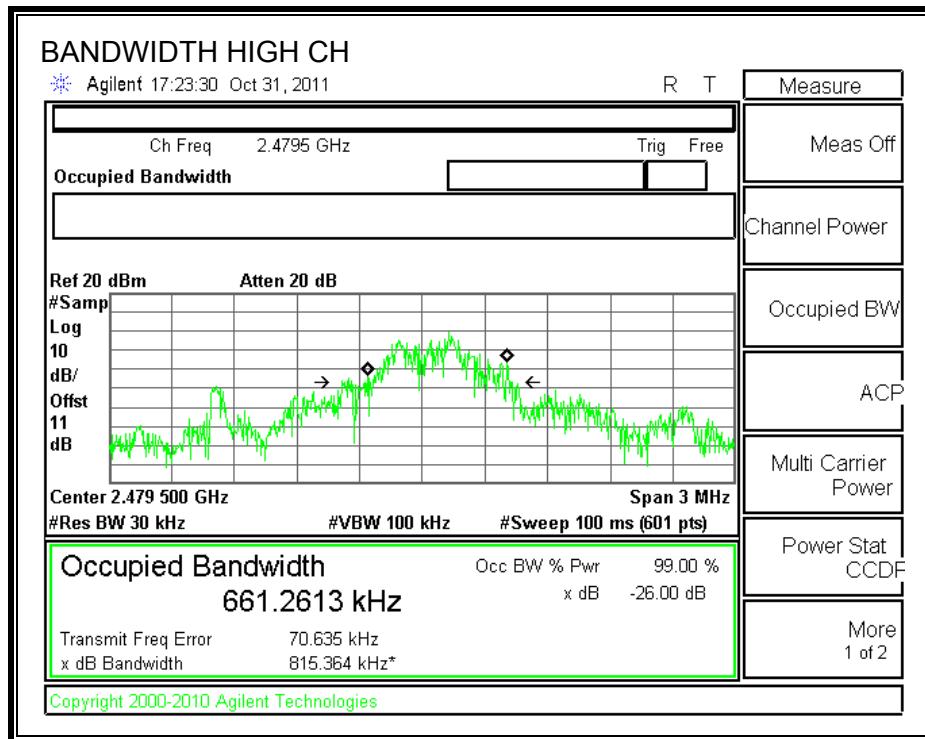
## 20 dB BANDWIDTH





**99% BANDWIDTH**





### 7.1.2. HOPPING FREQUENCY SEPARATION

#### LIMIT

FCC §15.247 (a) (1)

IC RSS-210 A8.1 (b)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

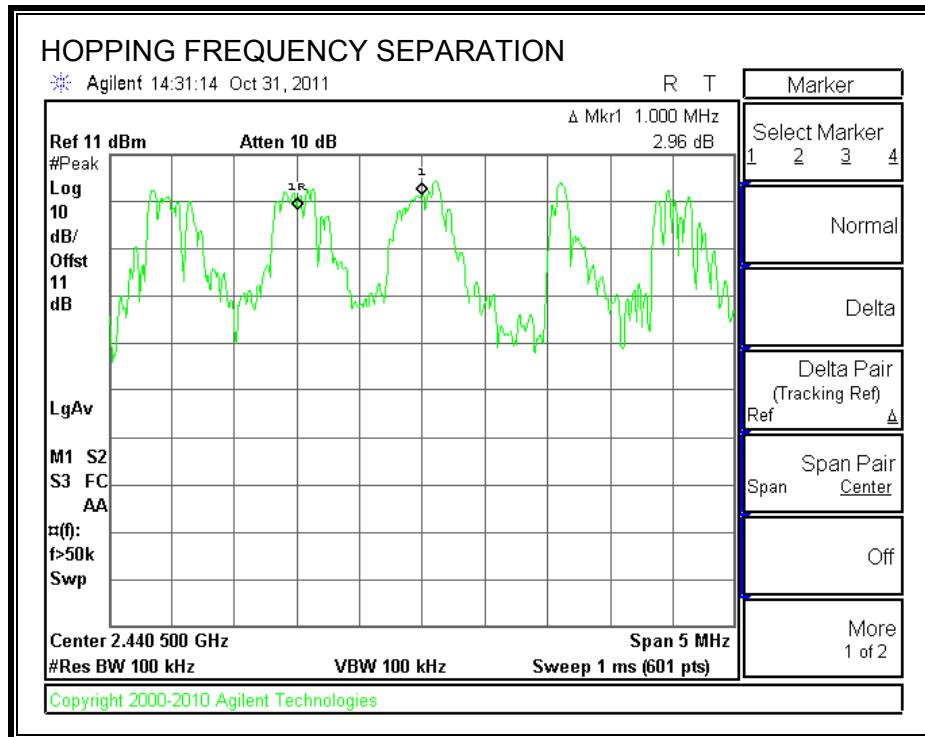
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

#### TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 100 kHz. The sweep time is coupled.

#### RESULTS

## HOPPING FREQUENCY SEPARATION



### 7.1.3. NUMBER OF HOPPING CHANNELS

#### LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

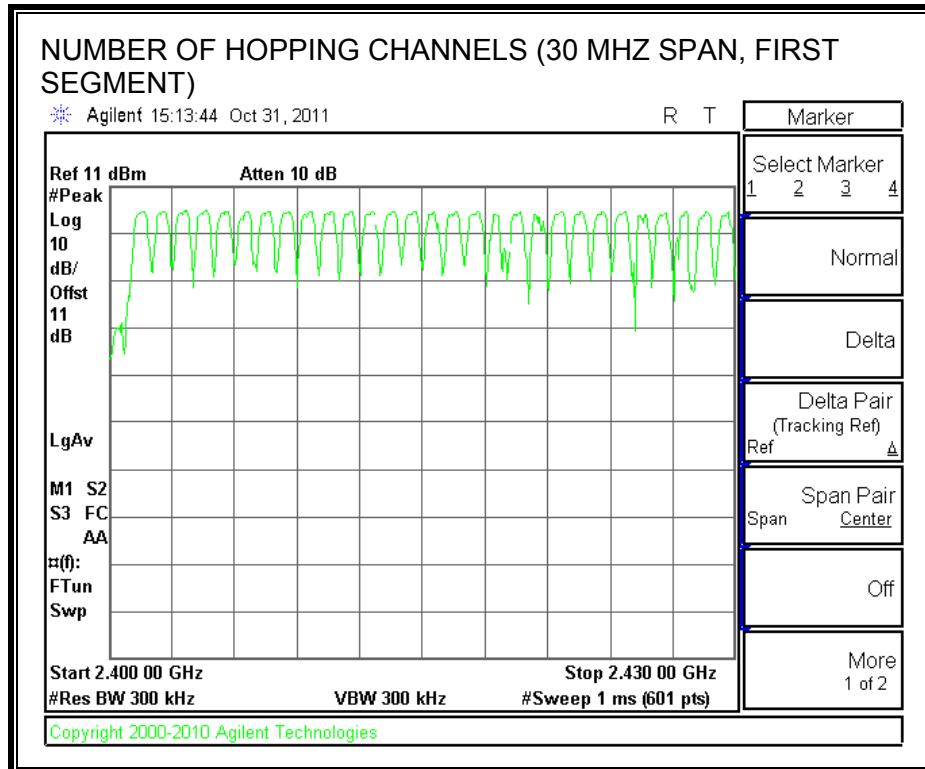
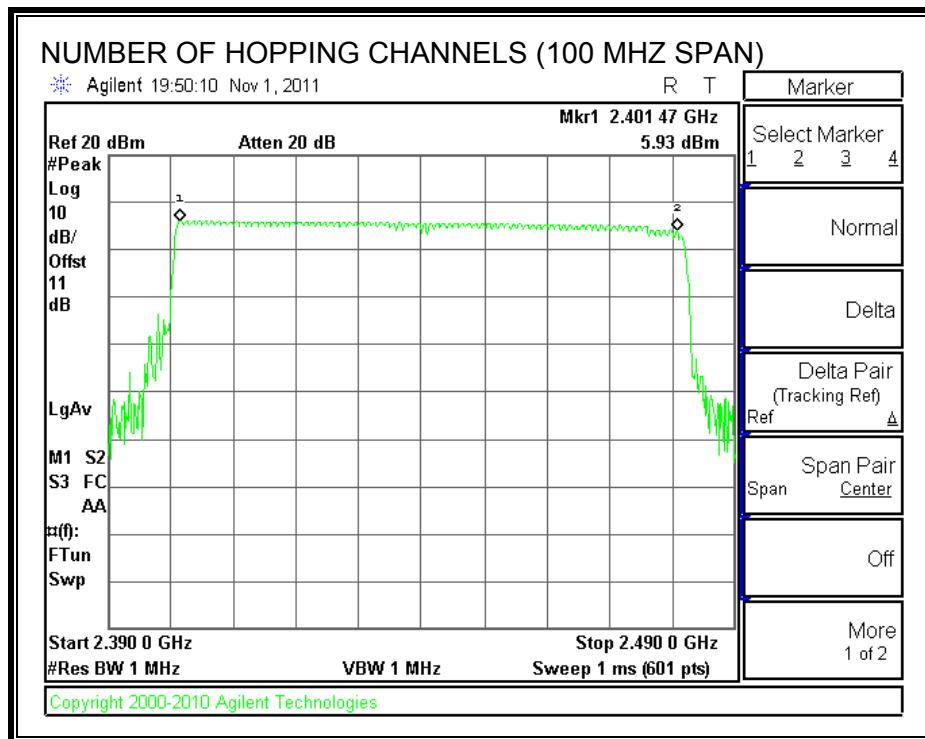
#### TEST PROCEDURE

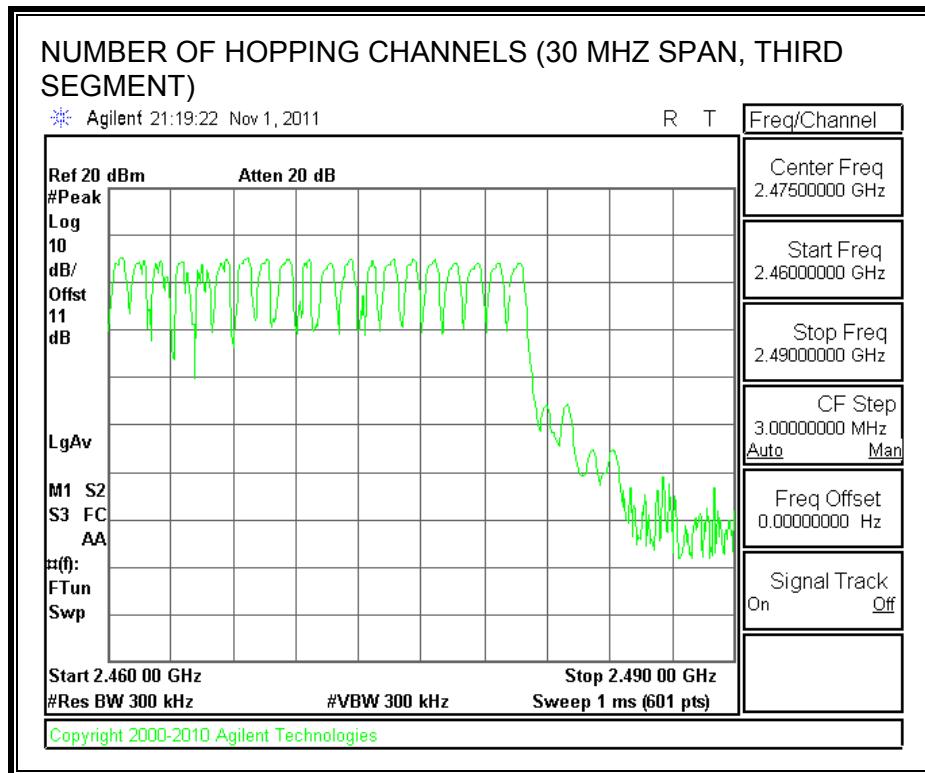
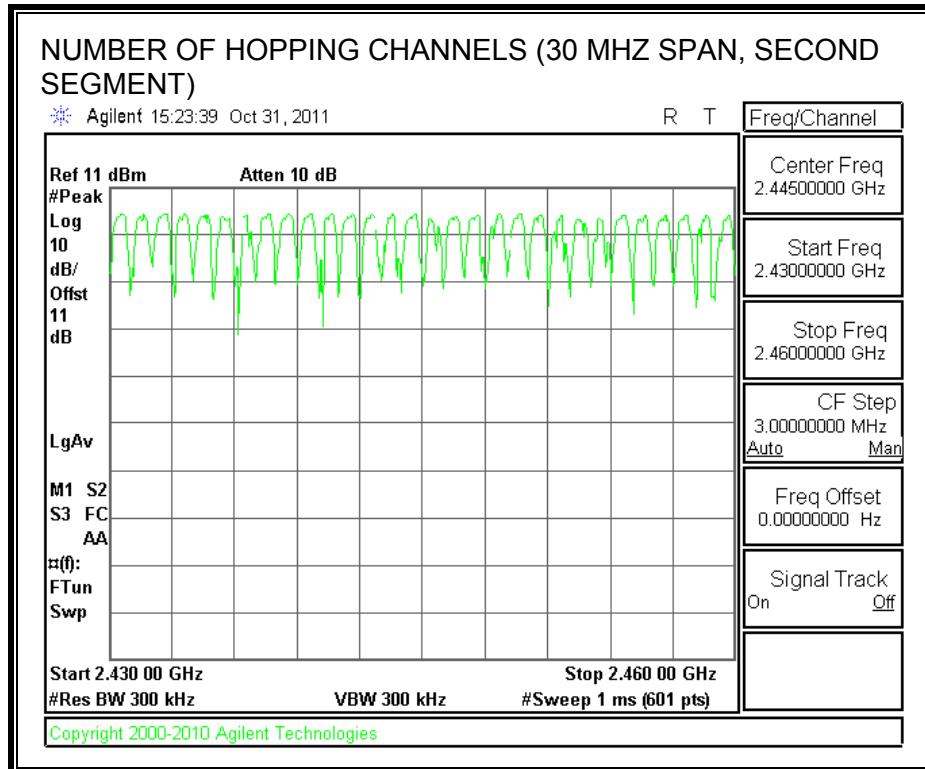
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

#### RESULTS

79 Channels observed.

## NUMBER OF HOPPING CHANNELS





#### 7.1.4. DUTY CYCLE

##### LIMITS

None; for reporting purposes only.

##### RESULTS

| Mode       | Tx on<br>(msec) | Tx on + Tx off<br>(msec) | Duty Cycle<br>(%) | Correction Factor<br>(dB) |
|------------|-----------------|--------------------------|-------------------|---------------------------|
| Binary FSK | 0.58            | 855                      | 0.07              | 31.69                     |

### 7.1.5. AVERAGE TIME OF OCCUPANCY

#### LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

#### TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

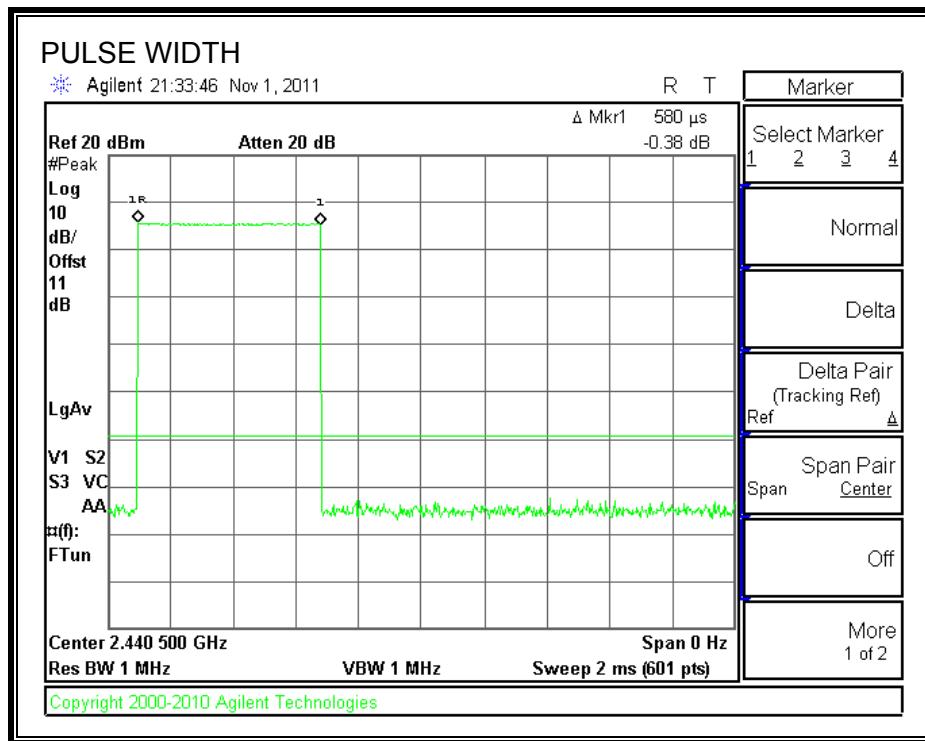
The average time of occupancy in the specified 31.6 second period (79 channels \* 0.4 s) is equal to  $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$ .

#### RESULTS

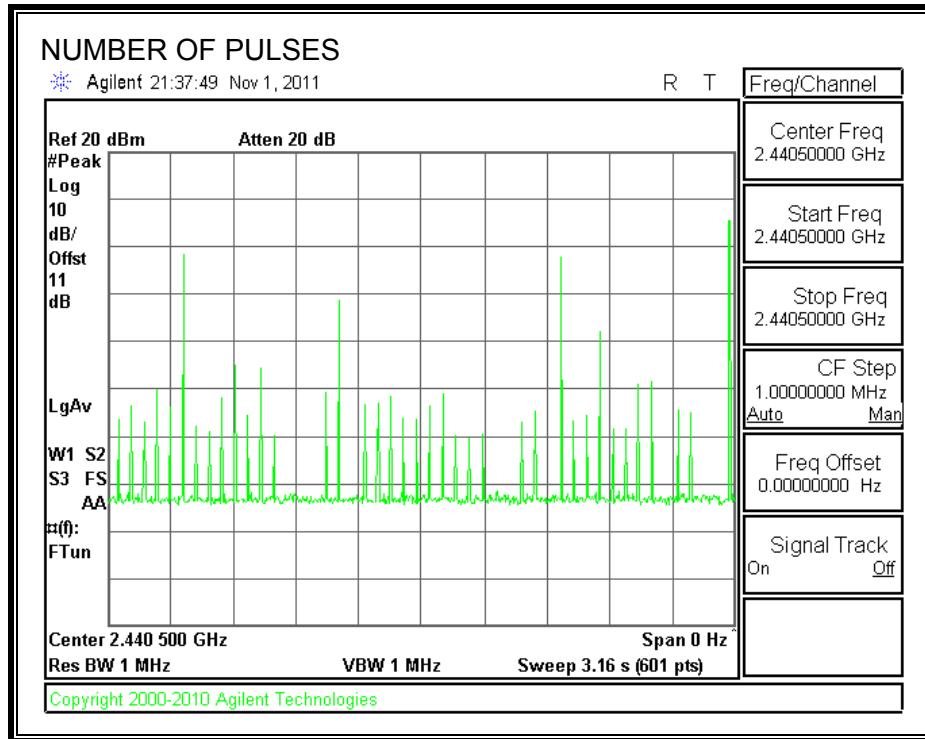
Time of Occupancy =  $10 * \text{xx pulses} * \text{yy msec} = \text{zz msec}$

| Pulse Width (msec) | Number of Pulses in 3.16 seconds | Average Time of (sec) | Limit (sec) | Margin (sec) |
|--------------------|----------------------------------|-----------------------|-------------|--------------|
| 0.58               | 3                                | 0.017                 | 0.4         | 0.383        |

## PULSE WIDTH



## NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD



### 7.1.6. OUTPUT POWER

#### LIMIT

§15.247 (b) (1)

RSS-210 Issue 7 Clause A8.4

The maximum antenna gain is less than 6 dBi, therefore the limit is 30 dBm.

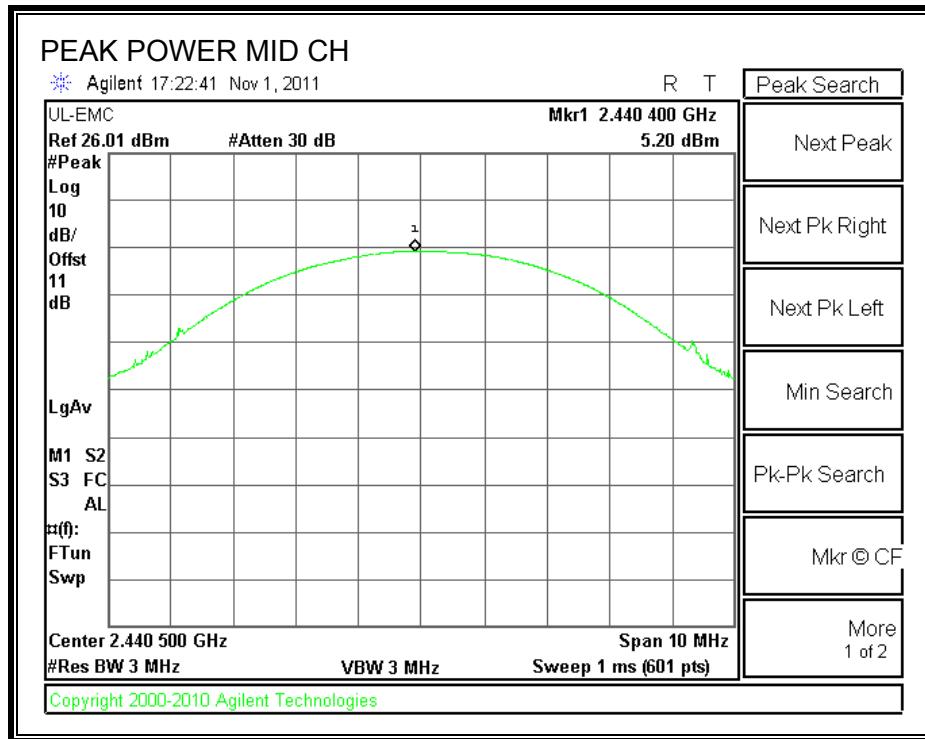
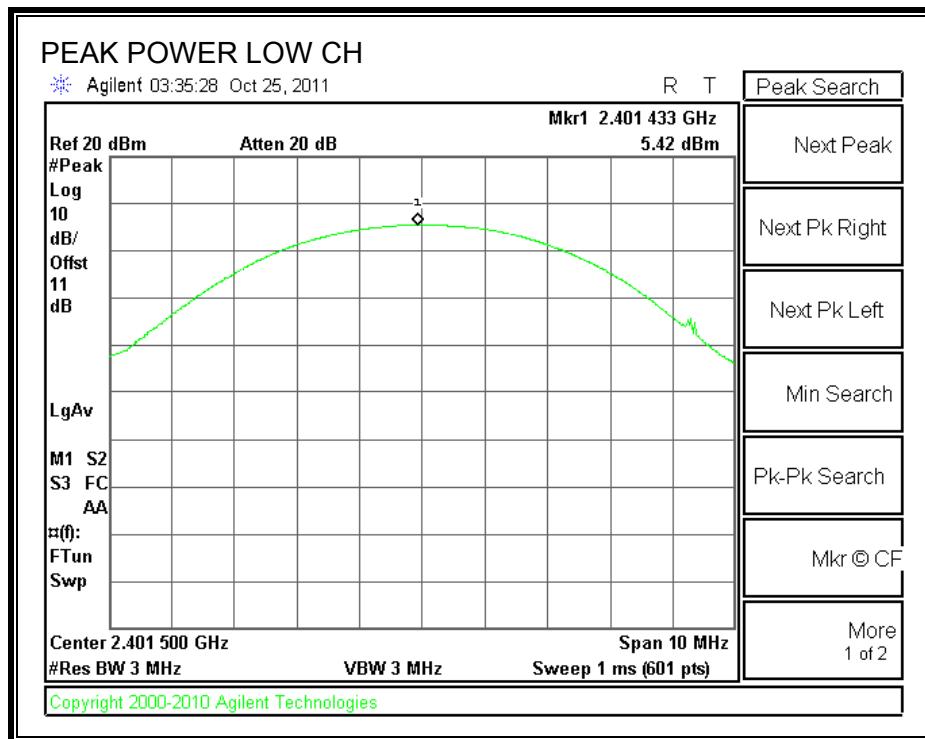
#### TEST PROCEDURE

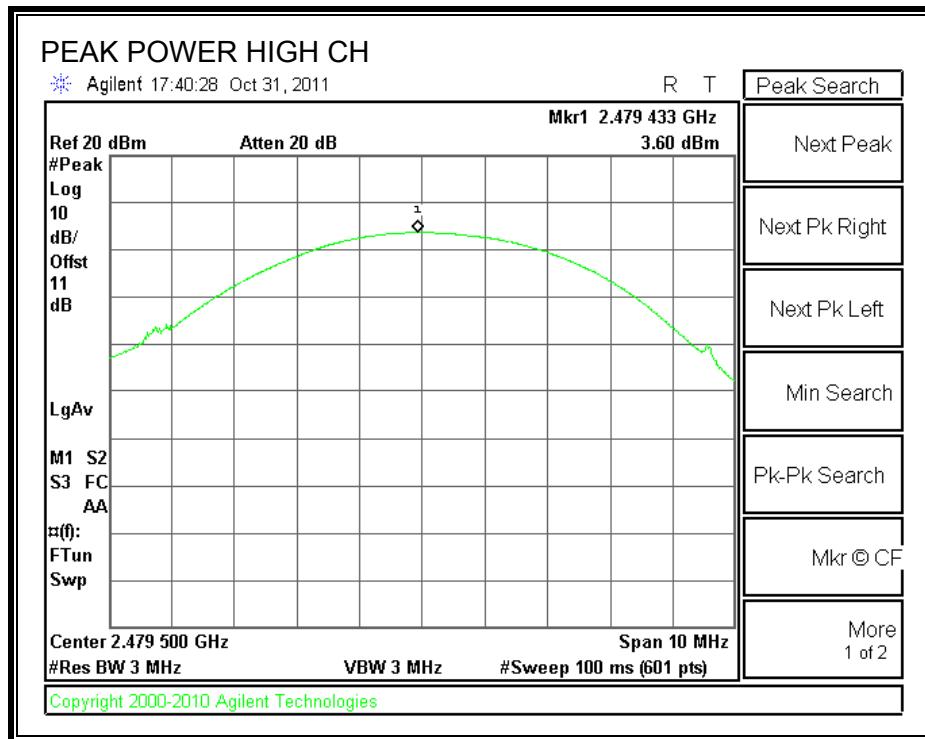
The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

#### RESULTS

| Channel | Frequency (MHz) | Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---------|-----------------|--------------------|-------------|-------------|
| Low     | 2401.5          | 5.42               | 30          | -24.58      |
| Middle  | 2440.5          | 5.20               | 30          | -24.80      |
| High    | 2479.5          | 3.60               | 30          | -26.40      |

## OUTPUT POWER





### 7.1.7. AVERAGE POWER

#### LIMIT

None; for reporting purposes only.

#### TEST PROCEDURE

The transmitter output is connected to a power meter.

#### RESULTS

The cable assembly insertion loss of 10.5dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

| Channel | Frequency (MHz) | Average Power (dBm) |
|---------|-----------------|---------------------|
| Low     | 2401.5          | 3.80                |
| Middle  | 2440.5          | 2.80                |
| High    | 2479.5          | 1.40                |

### 7.1.8. CONDUCTED SPURIOUS EMISSIONS

#### LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Limit = -20 dBc

#### TEST PROCEDURE

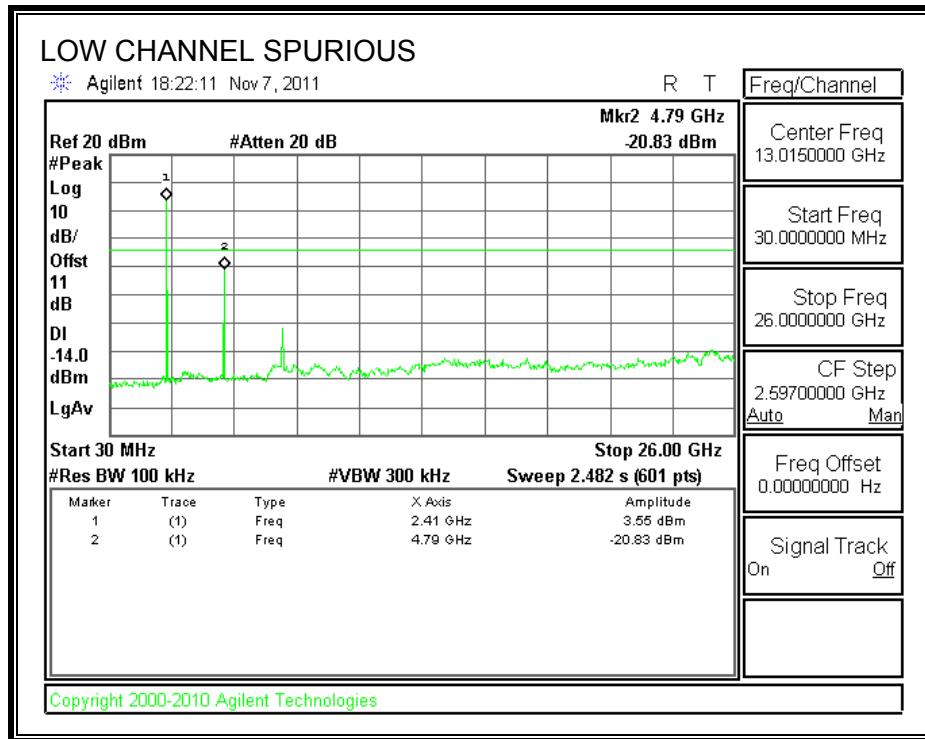
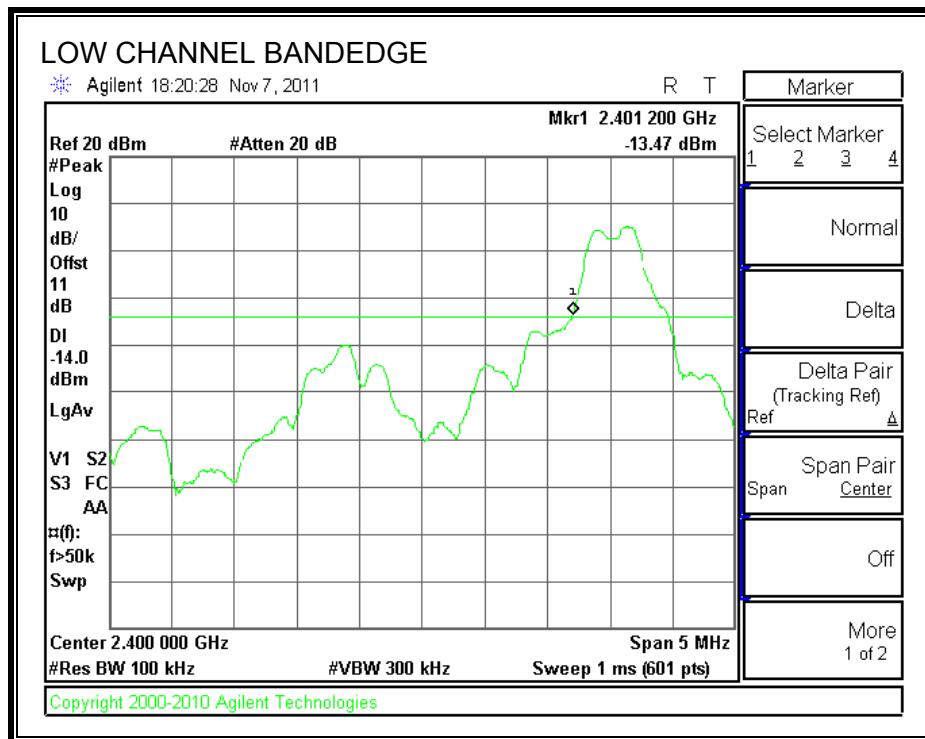
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

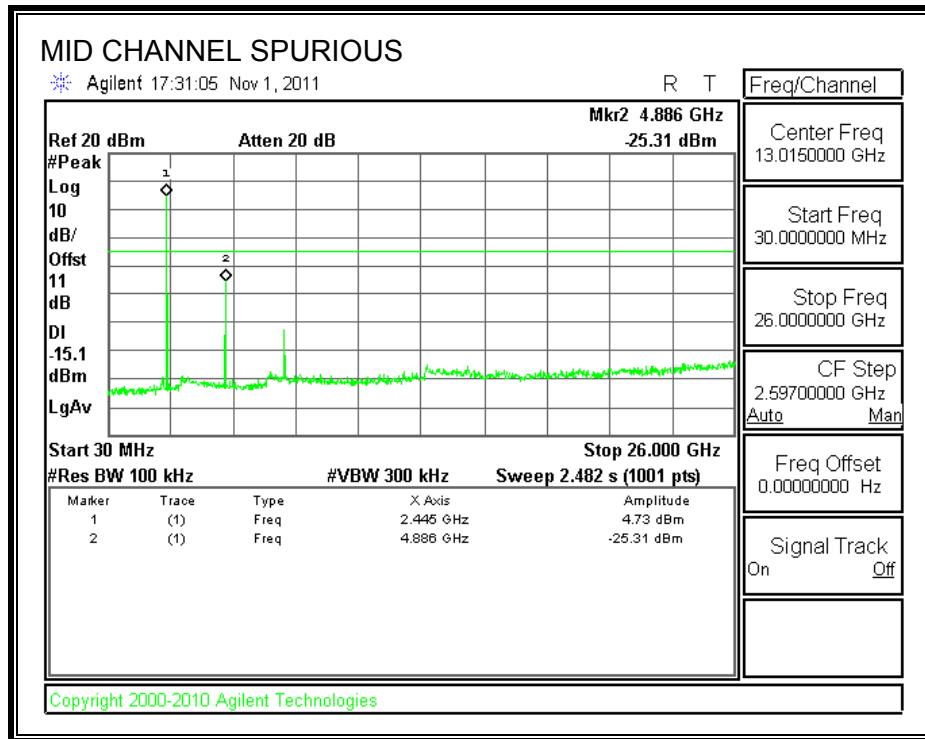
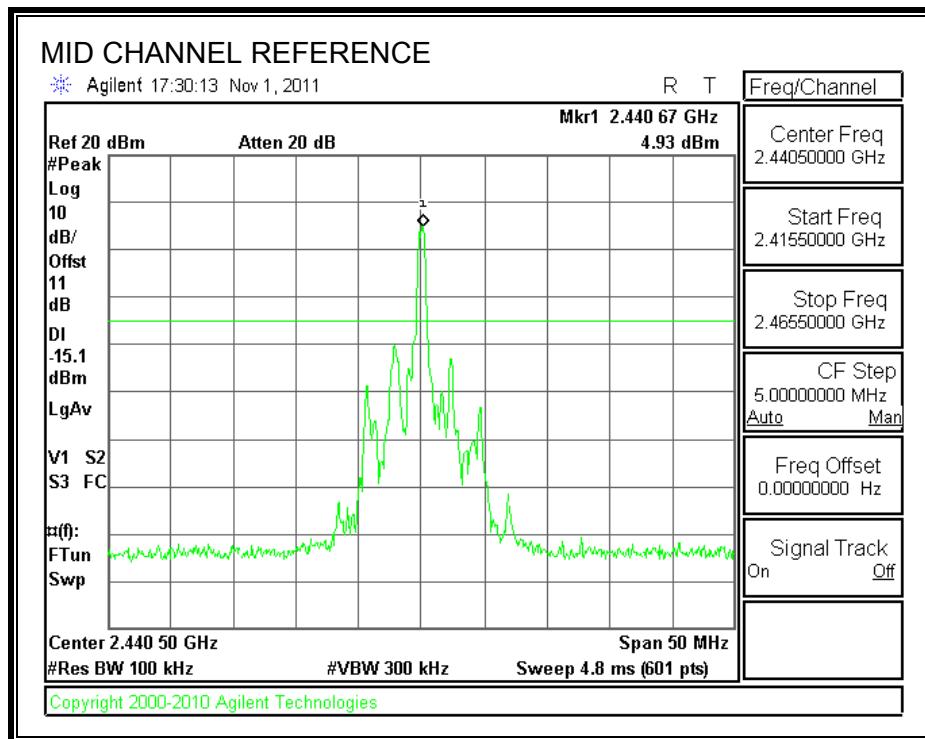
The band edges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

#### RESULTS

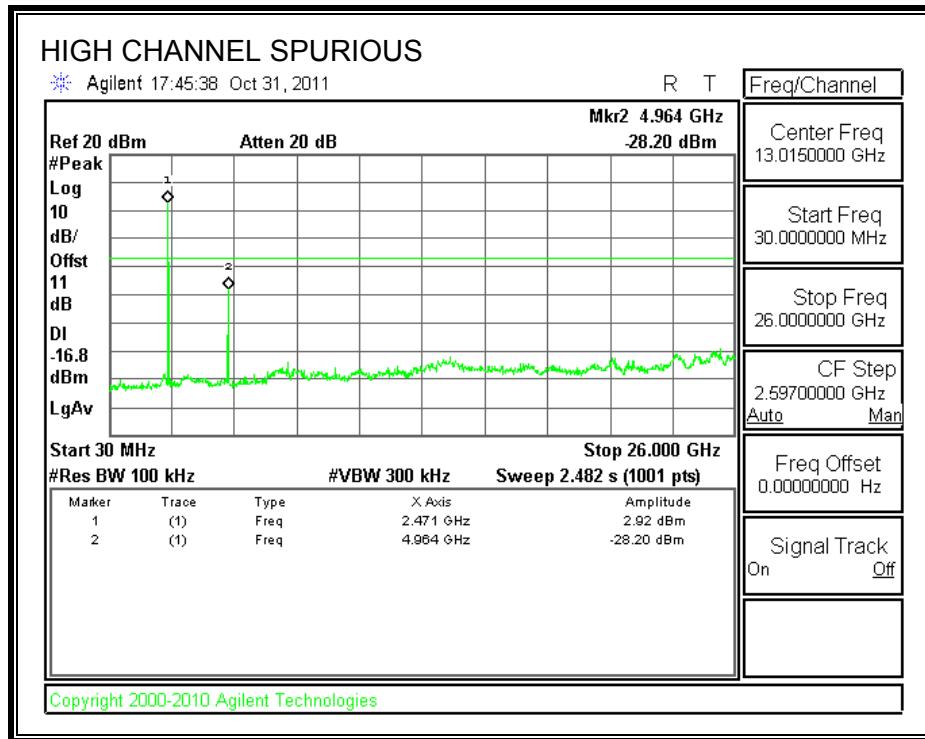
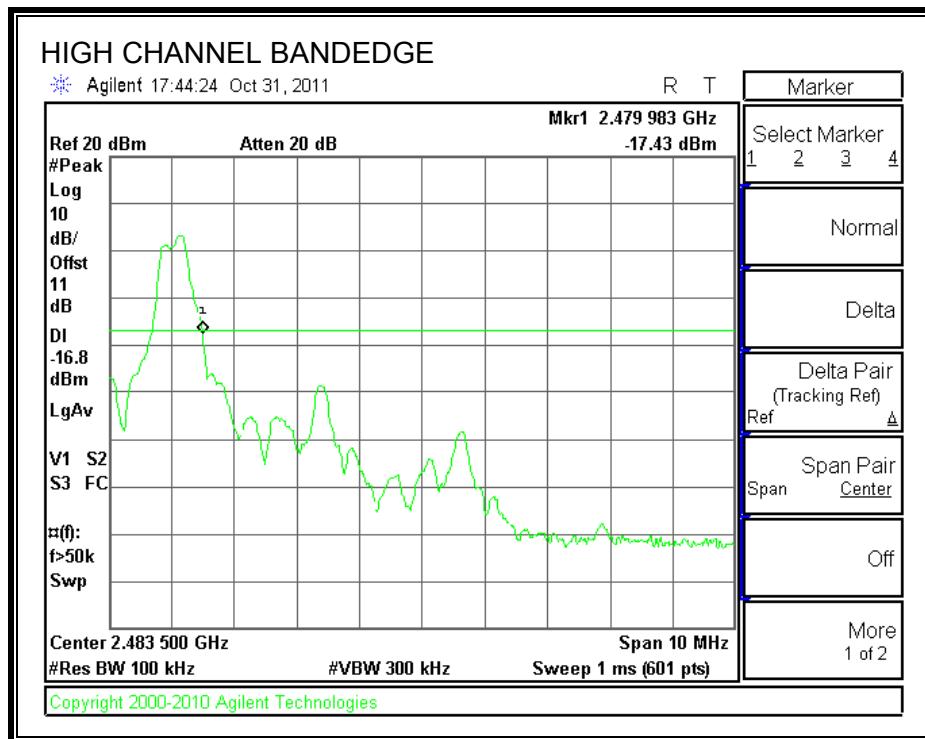
SPURIOUS EMISSIONS, LOW CHANNEL



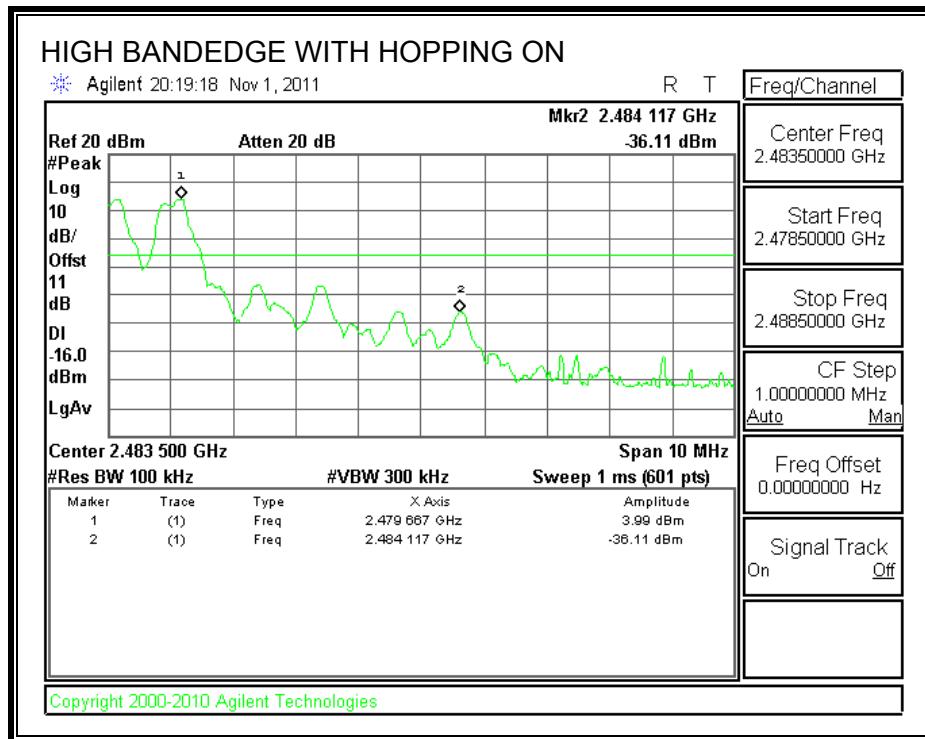
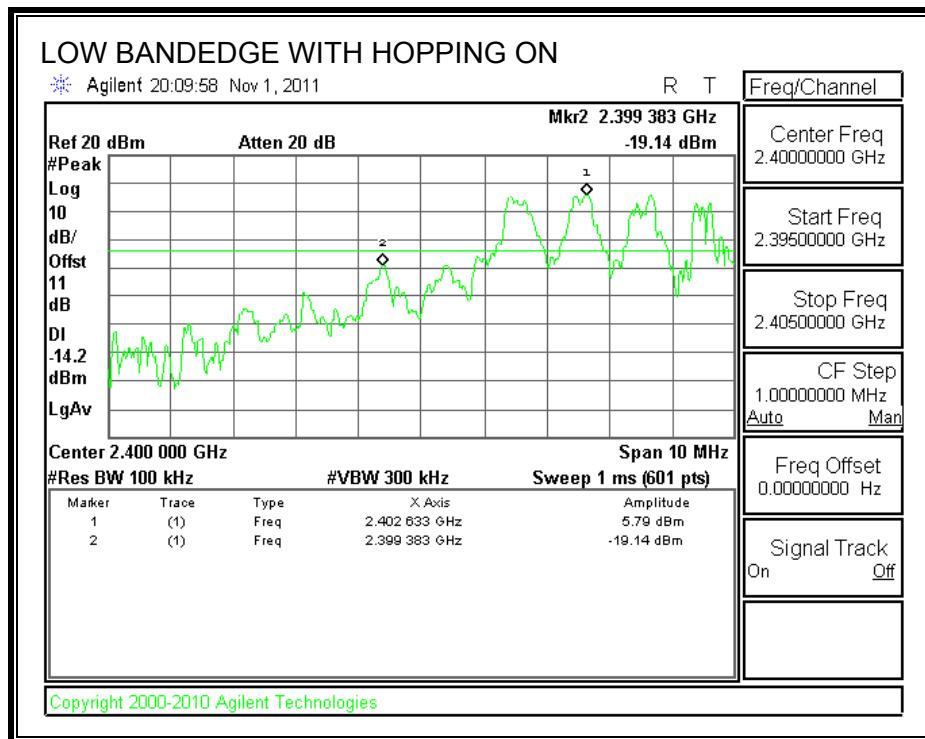
## SPURIOUS EMISSIONS, MID CHANNEL



**SPURIOUS EMISSIONS, HIGH CHANNEL**



**SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON**



## 8. RADIATED TEST RESULTS

### 8.1. LIMITS AND PROCEDURE

#### LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
|-----------------------|------------------------------------|--------------------------------------|
| 30 - 88               | 100                                | 40                                   |
| 88 - 216              | 150                                | 43.5                                 |
| 216 - 960             | 200                                | 46                                   |
| Above 960             | 500                                | 54                                   |

#### TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

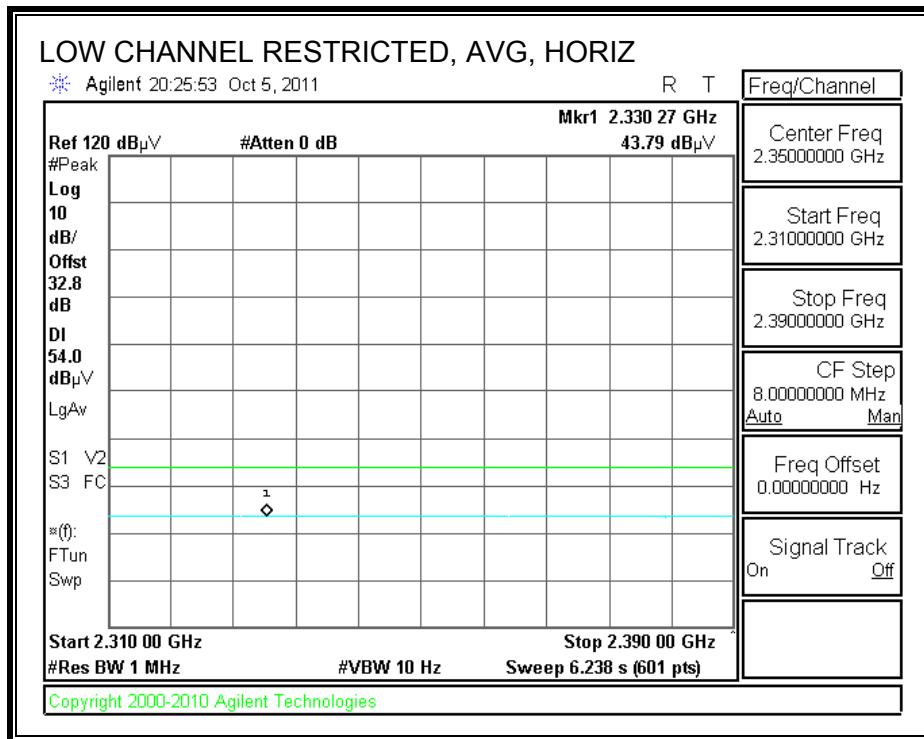
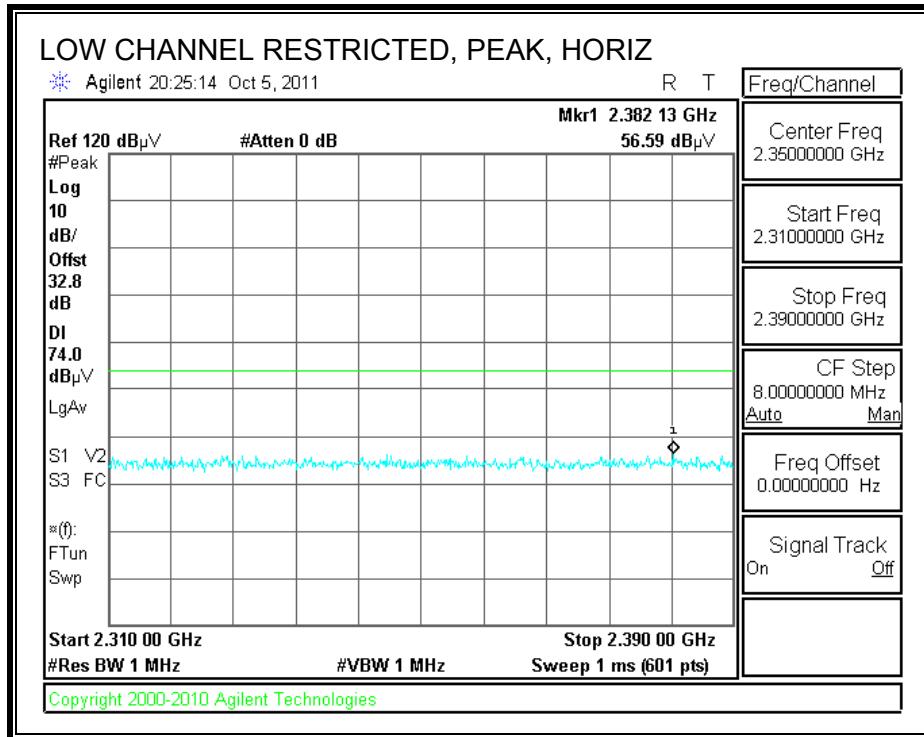
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

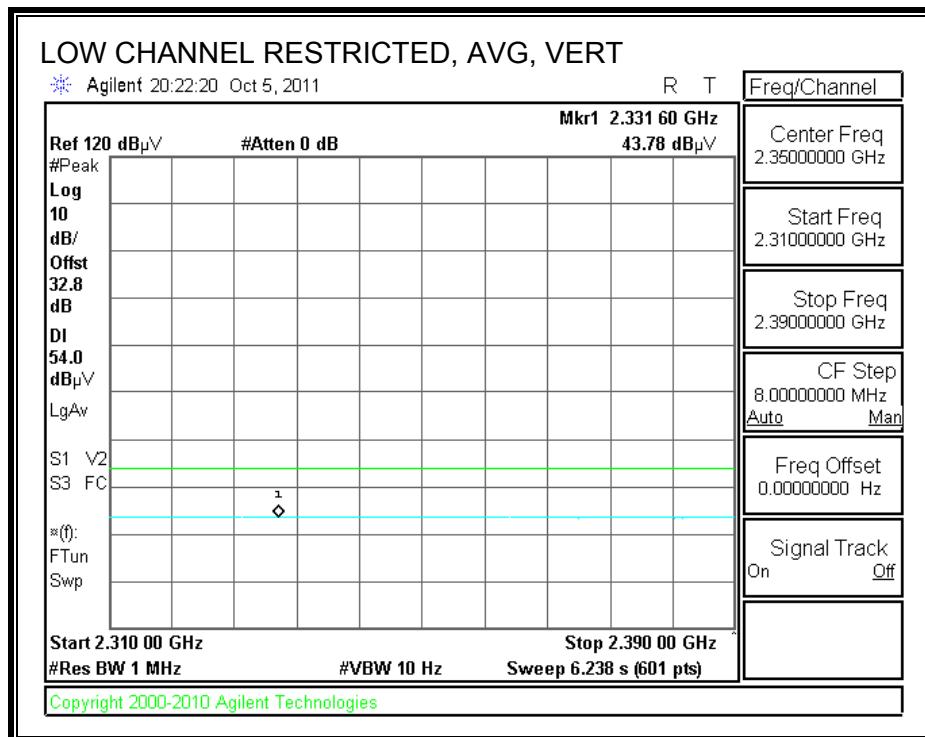
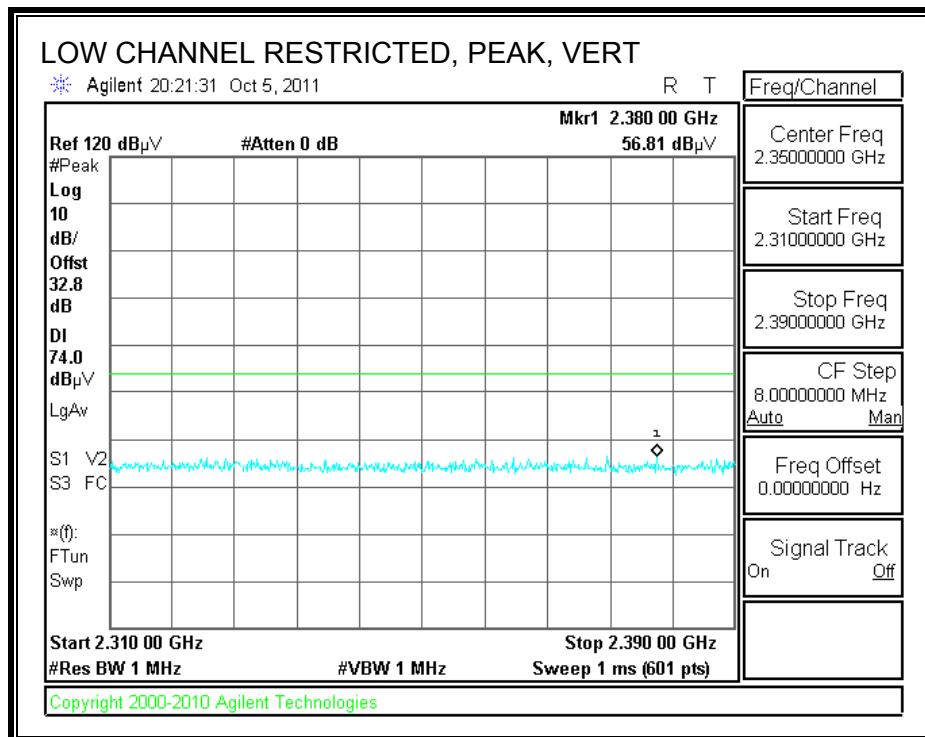
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

## 8.2. TRANSMITTER ABOVE 1 GHz

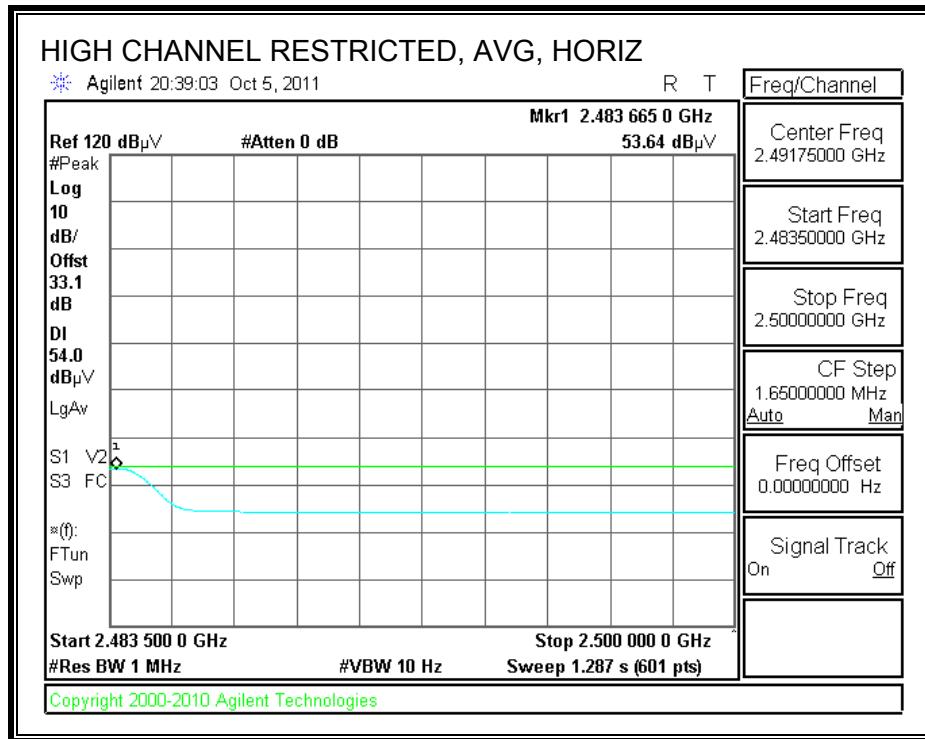
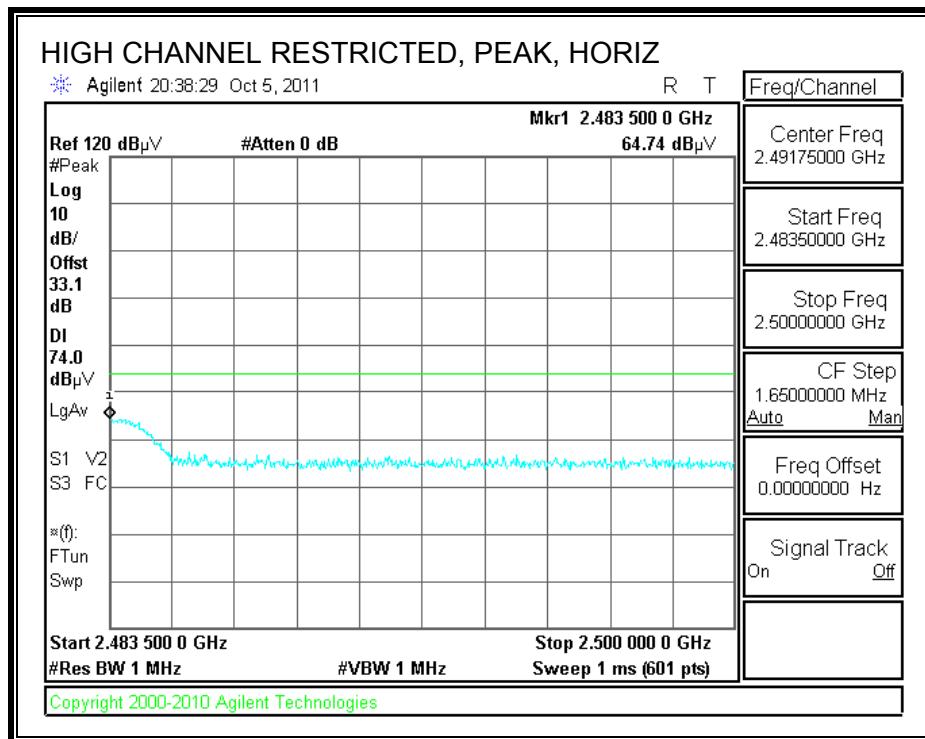
### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



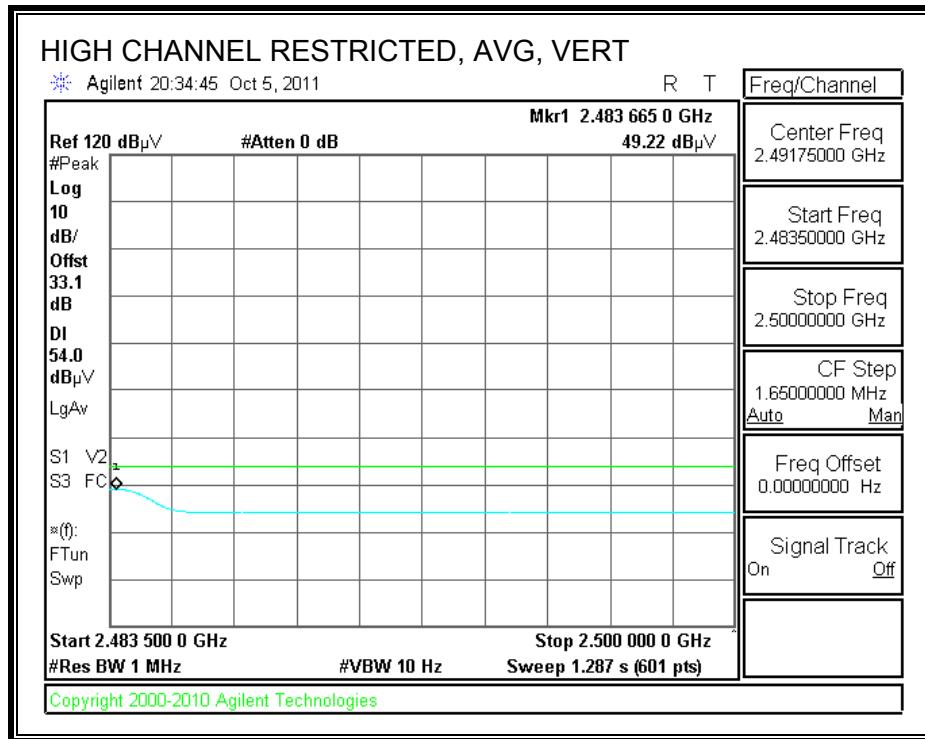
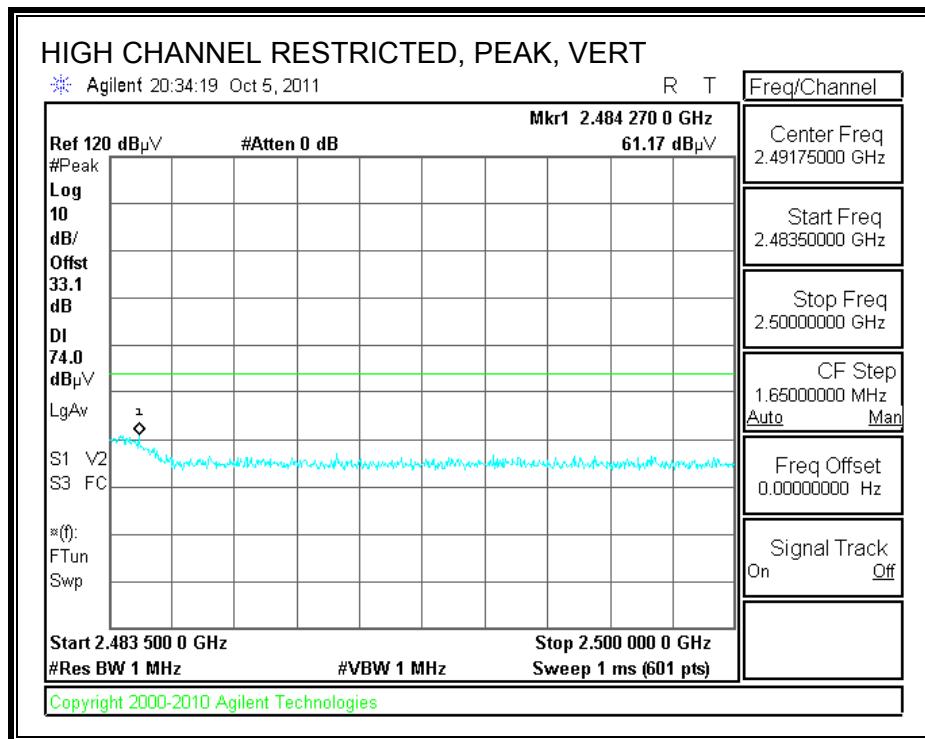
**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**



**RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)**



**RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)**



## HARMONICS AND SPURIOUS EMISSIONS

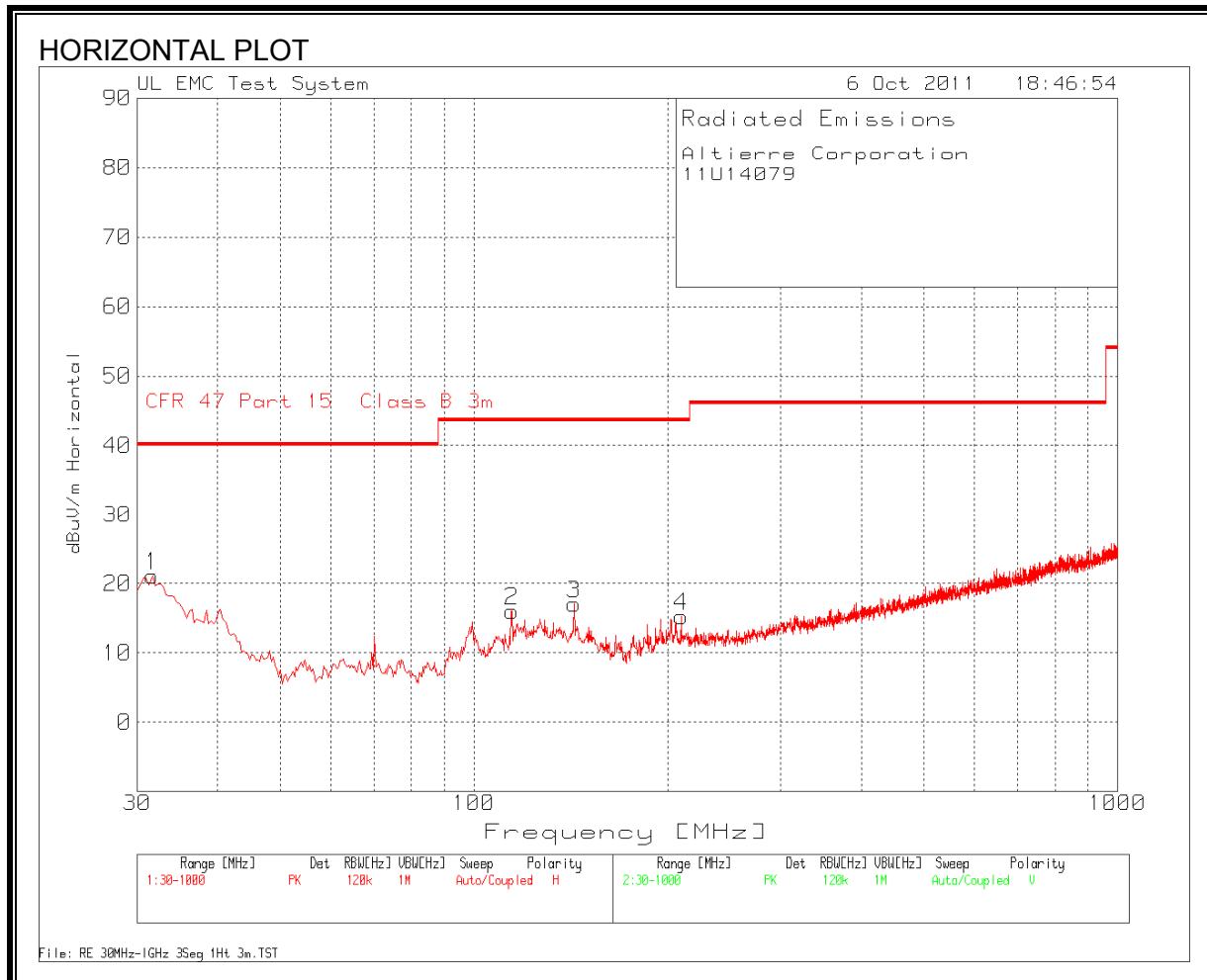
| High Frequency Measurement<br>Compliance Certification Services, Fremont 3m Chamber   |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
|---|-----------------------|------------------------|--------------------------------|---------------|---|-----------|--------------|------------|----------------|---------------|------------------|-------------------|--------------|---------------|----------------|--|--|--------------|-----------------------|------------------------|--------------|-------|--------------------|--------------|--|------------------------------|------------|---------------------|--|--|--|--|-------------------|--------------------|--------------------|-----|---------------|-----------------------------------|-------------------|--------------------|--------------------|--|--|---|----------|-------------|-----------------|-------------------|------------|----------|-----------|--------------|------------|----------------|---------------|------------------|-------------------|--------------|---------------|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|-------|-----|------|------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|-----------------------|-----|-------------|---------|------------------------------|------|---------------------|--------|------------------------------|--------|---------------------------|------|------------------|-----|------------------------------|---------|--------------------------|----|----------------|------|--------------------------------|--------|-----------------------|----|------------|-----|------------------|--|--|
| <p>Company: Altierre<br/>Project #: 11U14079<br/>Date: 10/7/2011<br/>Test Engineer: Thanh Nguyen<br/>Configuration: EUT batteries Powered, worst position<br/>Mode: Transmit</p> <p><b>Test Equipment:</b></p> <table border="1"> <tr> <td>Horn 1-18GHz</td> <td>Pre-amplifier 1-26GHz</td> <td>Pre-amplifier 26-40GHz</td> <td>Horn &gt; 18GHz</td> <td>Limit</td> </tr> <tr> <td>T60; S/N: 2238 @3m</td> <td>T34 HP 8449B</td> <td></td> <td>T125; ARA 18-26GHz; S/N:1007</td> <td>FCC 15.205</td> </tr> <tr> <td colspan="5">Hi Frequency Cables</td> </tr> <tr> <td>3' cable 22807700</td> <td>12' cable 22807600</td> <td>20' cable 22807500</td> <td>HPF</td> <td>Reject Filter</td> <td>Peak Measurements<br/>RBW=VBW=1MHz</td> </tr> <tr> <td>3' cable 22807700</td> <td>12' cable 22807600</td> <td>20' cable 22807500</td> <td></td> <td></td> <td>Average Measurements<br/>RBW=1MHz ; VBW=10Hz</td> </tr> </table> <p><b>Measurement Data:</b></p> <table border="1"> <thead> <tr> <th>f<br/>GHz</th> <th>Dist<br/>(m)</th> <th>Read Pk<br/>dBuV</th> <th>Read Avg.<br/>dBuV</th> <th>AF<br/>dB/m</th> <th>CL<br/>dB</th> <th>Amp<br/>dB</th> <th>D Corr<br/>dB</th> <th>Fltr<br/>dB</th> <th>Peak<br/>dBuV/m</th> <th>Avg<br/>dBuV/m</th> <th>Pk Lim<br/>dBuV/m</th> <th>Avg Lim<br/>dBuV/m</th> <th>Pk Mar<br/>dB</th> <th>Avg Mar<br/>dB</th> <th>Notes<br/>(V/H)</th> </tr> </thead> <tbody> <tr> <td colspan="16"><b>Duty Cycle Correction Factor = 20log ((0.58ms x 2) / 100) = -38.71dB</b></td> </tr> <tr> <td colspan="16"><b>Low Channel 2401.5MHz</b></td> </tr> <tr> <td>4.803</td> <td>3.0</td> <td>52.9</td> <td>32.9</td> <td>33.9</td> <td>6.8</td> <td>-34.1</td> <td>0.0</td> <td>0.0</td> <td>59.5</td> <td>39.5</td> <td>74</td> <td>54</td> <td>-14.5</td> <td>-14.5</td> <td>H</td> </tr> <tr> <td>4.803</td> <td>3.0</td> <td>46.6</td> <td>26.6</td> <td>33.9</td> <td>6.8</td> <td>-34.1</td> <td>0.0</td> <td>0.0</td> <td>53.1</td> <td>33.1</td> <td>74</td> <td>54</td> <td>-20.9</td> <td>-20.9</td> <td>V</td> </tr> <tr> <td colspan="16"><b>Mid Channel 2445.5MHz</b></td> </tr> <tr> <td>4.891</td> <td>3.0</td> <td>52.3</td> <td>32.3</td> <td>34.0</td> <td>6.8</td> <td>-34.0</td> <td>0.0</td> <td>0.0</td> <td>59.1</td> <td>39.1</td> <td>74</td> <td>54</td> <td>-14.9</td> <td>-14.9</td> <td>H</td> </tr> <tr> <td>4.891</td> <td>3.0</td> <td>44.8</td> <td>24.8</td> <td>34.0</td> <td>6.8</td> <td>-34.0</td> <td>0.0</td> <td>0.0</td> <td>51.5</td> <td>31.5</td> <td>74</td> <td>54</td> <td>-22.5</td> <td>-22.5</td> <td>V</td> </tr> <tr> <td>7.336</td> <td>3.0</td> <td>43.9</td> <td>23.9</td> <td>36.6</td> <td>9.1</td> <td>-33.1</td> <td>0.0</td> <td>0.0</td> <td>56.5</td> <td>36.5</td> <td>74</td> <td>54</td> <td>-17.5</td> <td>-17.5</td> <td>V</td> </tr> <tr> <td>7.336</td> <td>3.0</td> <td>43.3</td> <td>23.3</td> <td>36.6</td> <td>9.1</td> <td>-33.1</td> <td>0.0</td> <td>0.0</td> <td>55.9</td> <td>35.9</td> <td>74</td> <td>54</td> <td>-18.1</td> <td>-18.1</td> <td>H</td> </tr> <tr> <td colspan="16"><b>High channel 2479.5MHz</b></td> </tr> <tr> <td>4.959</td> <td>3.0</td> <td>51.5</td> <td>31.5</td> <td>34.0</td> <td>6.9</td> <td>-34.0</td> <td>0.0</td> <td>0.0</td> <td>58.4</td> <td>38.4</td> <td>74</td> <td>54</td> <td>-15.6</td> <td>-15.6</td> <td>H</td> </tr> <tr> <td>7.484</td> <td>3.0</td> <td>41.3</td> <td>21.3</td> <td>36.7</td> <td>9.1</td> <td>-33.0</td> <td>0.0</td> <td>0.0</td> <td>54.1</td> <td>34.1</td> <td>74</td> <td>54</td> <td>-19.9</td> <td>-19.9</td> <td>H</td> </tr> <tr> <td>4.959</td> <td>3.0</td> <td>47.0</td> <td>27.0</td> <td>34.0</td> <td>6.9</td> <td>-34.0</td> <td>0.0</td> <td>0.0</td> <td>53.9</td> <td>33.9</td> <td>74</td> <td>54</td> <td>-20.1</td> <td>-20.1</td> <td>V</td> </tr> <tr> <td>7.484</td> <td>3.0</td> <td>40.5</td> <td>20.5</td> <td>36.7</td> <td>9.1</td> <td>-33.0</td> <td>0.0</td> <td>0.0</td> <td>53.3</td> <td>33.3</td> <td>74</td> <td>54</td> <td>-20.7</td> <td>-20.7</td> <td>V</td> </tr> <tr> <td colspan="16">No other emissions were detected above the system noise floor</td> </tr> </tbody> </table> <p>Rev. 07.08.11</p> <p><b>Definitions:</b></p> <table> <tr> <td>f</td> <td>Measurement Frequency</td> <td>Amp</td> <td>Preamp Gain</td> <td>Avg Lim</td> <td>Average Field Strength Limit</td> </tr> <tr> <td>Dist</td> <td>Distance to Antenna</td> <td>D Corr</td> <td>Distance Correct to 3 meters</td> <td>Pk Lim</td> <td>Peak Field Strength Limit</td> </tr> <tr> <td>Read</td> <td>Analyzer Reading</td> <td>Avg</td> <td>Average Field Strength @ 3 m</td> <td>Avg Mar</td> <td>Margin vs. Average Limit</td> </tr> <tr> <td>AF</td> <td>Antenna Factor</td> <td>Peak</td> <td>Calculated Peak Field Strength</td> <td>Pk Mar</td> <td>Margin vs. Peak Limit</td> </tr> <tr> <td>CL</td> <td>Cable Loss</td> <td>HPF</td> <td>High Pass Filter</td> <td></td> <td></td> </tr> </table> |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  | Horn 1-18GHz | Pre-amplifier 1-26GHz | Pre-amplifier 26-40GHz | Horn > 18GHz | Limit | T60; S/N: 2238 @3m | T34 HP 8449B |  | T125; ARA 18-26GHz; S/N:1007 | FCC 15.205 | Hi Frequency Cables |  |  |  |  | 3' cable 22807700 | 12' cable 22807600 | 20' cable 22807500 | HPF | Reject Filter | Peak Measurements<br>RBW=VBW=1MHz | 3' cable 22807700 | 12' cable 22807600 | 20' cable 22807500 |  |  | Average Measurements<br>RBW=1MHz ; VBW=10Hz | f<br>GHz | Dist<br>(m) | Read Pk<br>dBuV | Read Avg.<br>dBuV | AF<br>dB/m | CL<br>dB | Amp<br>dB | D Corr<br>dB | Fltr<br>dB | Peak<br>dBuV/m | Avg<br>dBuV/m | Pk Lim<br>dBuV/m | Avg Lim<br>dBuV/m | Pk Mar<br>dB | Avg Mar<br>dB | Notes<br>(V/H) | <b>Duty Cycle Correction Factor = 20log ((0.58ms x 2) / 100) = -38.71dB</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | <b>Low Channel 2401.5MHz</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4.803 | 3.0 | 52.9 | 32.9 | 33.9 | 6.8 | -34.1 | 0.0 | 0.0 | 59.5 | 39.5 | 74 | 54 | -14.5 | -14.5 | H | 4.803 | 3.0 | 46.6 | 26.6 | 33.9 | 6.8 | -34.1 | 0.0 | 0.0 | 53.1 | 33.1 | 74 | 54 | -20.9 | -20.9 | V | <b>Mid Channel 2445.5MHz</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4.891 | 3.0 | 52.3 | 32.3 | 34.0 | 6.8 | -34.0 | 0.0 | 0.0 | 59.1 | 39.1 | 74 | 54 | -14.9 | -14.9 | H | 4.891 | 3.0 | 44.8 | 24.8 | 34.0 | 6.8 | -34.0 | 0.0 | 0.0 | 51.5 | 31.5 | 74 | 54 | -22.5 | -22.5 | V | 7.336 | 3.0 | 43.9 | 23.9 | 36.6 | 9.1 | -33.1 | 0.0 | 0.0 | 56.5 | 36.5 | 74 | 54 | -17.5 | -17.5 | V | 7.336 | 3.0 | 43.3 | 23.3 | 36.6 | 9.1 | -33.1 | 0.0 | 0.0 | 55.9 | 35.9 | 74 | 54 | -18.1 | -18.1 | H | <b>High channel 2479.5MHz</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4.959 | 3.0 | 51.5 | 31.5 | 34.0 | 6.9 | -34.0 | 0.0 | 0.0 | 58.4 | 38.4 | 74 | 54 | -15.6 | -15.6 | H | 7.484 | 3.0 | 41.3 | 21.3 | 36.7 | 9.1 | -33.0 | 0.0 | 0.0 | 54.1 | 34.1 | 74 | 54 | -19.9 | -19.9 | H | 4.959 | 3.0 | 47.0 | 27.0 | 34.0 | 6.9 | -34.0 | 0.0 | 0.0 | 53.9 | 33.9 | 74 | 54 | -20.1 | -20.1 | V | 7.484 | 3.0 | 40.5 | 20.5 | 36.7 | 9.1 | -33.0 | 0.0 | 0.0 | 53.3 | 33.3 | 74 | 54 | -20.7 | -20.7 | V | No other emissions were detected above the system noise floor |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | f | Measurement Frequency | Amp | Preamp Gain | Avg Lim | Average Field Strength Limit | Dist | Distance to Antenna | D Corr | Distance Correct to 3 meters | Pk Lim | Peak Field Strength Limit | Read | Analyzer Reading | Avg | Average Field Strength @ 3 m | Avg Mar | Margin vs. Average Limit | AF | Antenna Factor | Peak | Calculated Peak Field Strength | Pk Mar | Margin vs. Peak Limit | CL | Cable Loss | HPF | High Pass Filter |  |  |
| Horn 1-18GHz  | Pre-amplifier 1-26GHz | Pre-amplifier 26-40GHz | Horn > 18GHz                   | Limit         |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| T60; S/N: 2238 @3m  | T34 HP 8449B          |                        | T125; ARA 18-26GHz; S/N:1007   | FCC 15.205    |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| Hi Frequency Cables   |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 3' cable 22807700   | 12' cable 22807600    | 20' cable 22807500     | HPF                            | Reject Filter | Peak Measurements<br>RBW=VBW=1MHz           |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 3' cable 22807700   | 12' cable 22807600    | 20' cable 22807500     |                                |               | Average Measurements<br>RBW=1MHz ; VBW=10Hz |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| f<br>GHz  | Dist<br>(m)           | Read Pk<br>dBuV        | Read Avg.<br>dBuV              | AF<br>dB/m    | CL<br>dB                                    | Amp<br>dB | D Corr<br>dB | Fltr<br>dB | Peak<br>dBuV/m | Avg<br>dBuV/m | Pk Lim<br>dBuV/m | Avg Lim<br>dBuV/m | Pk Mar<br>dB | Avg Mar<br>dB | Notes<br>(V/H) |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| <b>Duty Cycle Correction Factor = 20log ((0.58ms x 2) / 100) = -38.71dB</b>   |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| <b>Low Channel 2401.5MHz</b>  |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 4.803   | 3.0                   | 52.9                   | 32.9                           | 33.9          | 6.8   | -34.1     | 0.0          | 0.0        | 59.5           | 39.5          | 74               | 54                | -14.5        | -14.5         | H              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 4.803   | 3.0                   | 46.6                   | 26.6                           | 33.9          | 6.8   | -34.1     | 0.0          | 0.0        | 53.1           | 33.1          | 74               | 54                | -20.9        | -20.9         | V              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| <b>Mid Channel 2445.5MHz</b>  |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 4.891   | 3.0                   | 52.3                   | 32.3                           | 34.0          | 6.8   | -34.0     | 0.0          | 0.0        | 59.1           | 39.1          | 74               | 54                | -14.9        | -14.9         | H              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 4.891   | 3.0                   | 44.8                   | 24.8                           | 34.0          | 6.8   | -34.0     | 0.0          | 0.0        | 51.5           | 31.5          | 74               | 54                | -22.5        | -22.5         | V              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 7.336   | 3.0                   | 43.9                   | 23.9                           | 36.6          | 9.1   | -33.1     | 0.0          | 0.0        | 56.5           | 36.5          | 74               | 54                | -17.5        | -17.5         | V              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 7.336   | 3.0                   | 43.3                   | 23.3                           | 36.6          | 9.1   | -33.1     | 0.0          | 0.0        | 55.9           | 35.9          | 74               | 54                | -18.1        | -18.1         | H              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| <b>High channel 2479.5MHz</b>   |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 4.959   | 3.0                   | 51.5                   | 31.5                           | 34.0          | 6.9   | -34.0     | 0.0          | 0.0        | 58.4           | 38.4          | 74               | 54                | -15.6        | -15.6         | H              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 7.484   | 3.0                   | 41.3                   | 21.3                           | 36.7          | 9.1   | -33.0     | 0.0          | 0.0        | 54.1           | 34.1          | 74               | 54                | -19.9        | -19.9         | H              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 4.959   | 3.0                   | 47.0                   | 27.0                           | 34.0          | 6.9   | -34.0     | 0.0          | 0.0        | 53.9           | 33.9          | 74               | 54                | -20.1        | -20.1         | V              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| 7.484   | 3.0                   | 40.5                   | 20.5                           | 36.7          | 9.1   | -33.0     | 0.0          | 0.0        | 53.3           | 33.3          | 74               | 54                | -20.7        | -20.7         | V              |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| No other emissions were detected above the system noise floor   |                       |                        |                                |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| f   | Measurement Frequency | Amp                    | Preamp Gain                    | Avg Lim       | Average Field Strength Limit                |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| Dist  | Distance to Antenna   | D Corr                 | Distance Correct to 3 meters   | Pk Lim        | Peak Field Strength Limit                   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| Read  | Analyzer Reading      | Avg                    | Average Field Strength @ 3 m   | Avg Mar       | Margin vs. Average Limit                    |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| AF  | Antenna Factor        | Peak                   | Calculated Peak Field Strength | Pk Mar        | Margin vs. Peak Limit                       |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |
| CL  | Cable Loss            | HPF                    | High Pass Filter               |               |   |           |              |            |                |               |                  |                   |              |               |                |  |  |              |                       |                        |              |       |                    |              |  |                              |            |                     |  |  |  |  |                   |                    |                    |     |               |                                   |                   |                    |                    |  |  |   |          |             |                 |                   |            |          |           |              |            |                |               |                  |                   |              |               |                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |       |     |      |      |      |     |       |     |     |      |      |    |    |       |       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |                       |     |             |         |                              |      |                     |        |                              |        |                           |      |                  |     |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |

### 8.3. RECEIVER ABOVE 1 GHz

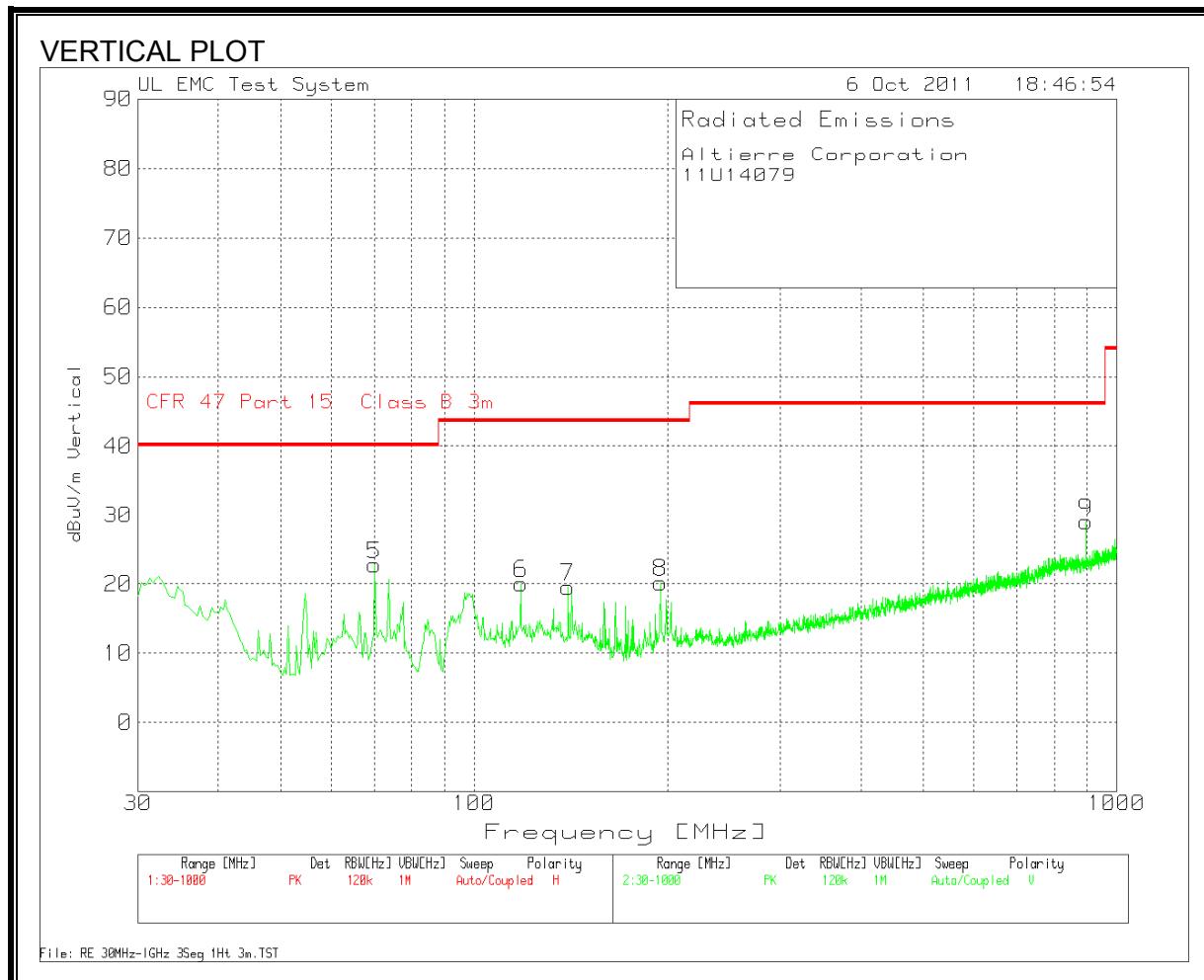
| High Frequency Measurement<br>Compliance Certification Services, Fremont 3m Chamber  |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|-----------------------|------------------------|--------------------------------|------------|------------------------------|-----------|---------------|--|----------------|---------------|------------------|-------------------|--------------|---------------|----------------|-----------------------|------------------------|-------------------|------------|------------------------------|-----------|---------------------|--------------------|------------------------------|---------------|------------------------------|-------------------|------------------|---------------|------------------------------|---------------------|--------------------------|------|----------------|------|--------------------------------|--------|-----------------------|-----|------------|------|------------------|----|-------|-------|-------------------|--------------------|--------------------|------|------|------|-----|---------------|--|-----|------|------|----|----|-------|-------------------|--------------------|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <p>Company: Altierre<br/>Project #: 11U14079<br/>Date: 10/5/2011<br/>Test Engineer: Thanh Nguyen<br/>Configuration: EUT batteries Powered, worst position<br/>Mode: Receive Mode</p>   |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Test Equipment:</b></p> <table border="1"><tr><td>Horn 1-18GHz</td><td>Pre-amplifier 1-26GHz</td><td>Pre-amplifier 26-40GHz</td><td colspan="4">Horn &gt; 18GHz</td><td>Limit</td></tr><tr><td>T60; S/N: 2238 @3m</td><td>T34 HP 8449B</td><td></td><td colspan="4">T125; ARA 18-26GHz; S/N:1007</td><td>RX RSS 210</td></tr><tr><td colspan="15">Hi Frequency Cables</td></tr><tr><td>3' cable 22807700</td><td>12' cable 22807600</td><td>20' cable 22807500</td><td colspan="4">HPF</td><td>Reject Filter</td><td colspan="7">Peak Measurements<br/>RBW=VBW=1MHz<br/>Average Measurements<br/>RBW=1MHz ; VBW=10Hz</td></tr><tr><td>3' cable 22807700</td><td>12' cable 22807600</td><td>20' cable 22807500</td><td colspan="4"></td><td></td><td></td><td colspan="7"></td></tr></table>  |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               | Horn 1-18GHz   | Pre-amplifier 1-26GHz | Pre-amplifier 26-40GHz | Horn > 18GHz      |            |                              |           | Limit               | T60; S/N: 2238 @3m | T34 HP 8449B                 |               | T125; ARA 18-26GHz; S/N:1007 |                   |                  |               | RX RSS 210                   | Hi Frequency Cables |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       | 3' cable 22807700 | 12' cable 22807600 | 20' cable 22807500 | HPF  |      |      |     | Reject Filter | Peak Measurements<br>RBW=VBW=1MHz<br>Average Measurements<br>RBW=1MHz ; VBW=10Hz |     |      |      |    |    |       | 3' cable 22807700 | 12' cable 22807600 | 20' cable 22807500 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Horn 1-18GHz   | Pre-amplifier 1-26GHz | Pre-amplifier 26-40GHz | Horn > 18GHz                   |            |                              |           | Limit         |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T60; S/N: 2238 @3m   | T34 HP 8449B          |                        | T125; ARA 18-26GHz; S/N:1007   |            |                              |           | RX RSS 210    |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hi Frequency Cables  |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3' cable 22807700  | 12' cable 22807600    | 20' cable 22807500     | HPF                            |            |                              |           | Reject Filter | Peak Measurements<br>RBW=VBW=1MHz<br>Average Measurements<br>RBW=1MHz ; VBW=10Hz |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3' cable 22807700  | 12' cable 22807600    | 20' cable 22807500     |                                |            |                              |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <table border="1"><thead><tr><th>f<br/>GHz</th><th>Dist<br/>(m)</th><th>Read Pk<br/>dBuV</th><th>Read Avg.<br/>dBuV</th><th>AF<br/>dB/m</th><th>CL<br/>dB</th><th>Amp<br/>dB</th><th>D Corr<br/>dB</th><th>Fltr<br/>dB</th><th>Peak<br/>dBuV/m</th><th>Avg<br/>dBuV/m</th><th>Pk Lim<br/>dBuV/m</th><th>Avg Lim<br/>dBuV/m</th><th>Pk Mar<br/>dB</th><th>Avg Mar<br/>dB</th><th>Notes<br/>(V/H)</th></tr></thead><tbody><tr><td>1.039</td><td>3.0</td><td>46.3</td><td>32.9</td><td>24.8</td><td>2.8</td><td>-37.8</td><td>0.0</td><td>0.0</td><td>36.1</td><td>22.7</td><td>74</td><td>54</td><td>-37.9</td><td>-31.3</td><td>V</td></tr><tr><td>1.120</td><td>3.0</td><td>46.9</td><td>33.0</td><td>25.1</td><td>2.9</td><td>-37.6</td><td>0.0</td><td>0.0</td><td>37.3</td><td>23.4</td><td>74</td><td>54</td><td>-36.7</td><td>-30.6</td><td>H</td></tr></tbody></table> |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               | f<br>GHz       | Dist<br>(m)           | Read Pk<br>dBuV        | Read Avg.<br>dBuV | AF<br>dB/m | CL<br>dB                     | Amp<br>dB | D Corr<br>dB        | Fltr<br>dB         | Peak<br>dBuV/m               | Avg<br>dBuV/m | Pk Lim<br>dBuV/m             | Avg Lim<br>dBuV/m | Pk Mar<br>dB     | Avg Mar<br>dB | Notes<br>(V/H)               | 1.039               | 3.0                      | 46.3 | 32.9           | 24.8 | 2.8                            | -37.8  | 0.0                   | 0.0 | 36.1       | 22.7 | 74               | 54 | -37.9 | -31.3 | V                 | 1.120              | 3.0                | 46.9 | 33.0 | 25.1 | 2.9 | -37.6         | 0.0  | 0.0 | 37.3 | 23.4 | 74 | 54 | -36.7 | -30.6             | H                  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| f<br>GHz   | Dist<br>(m)           | Read Pk<br>dBuV        | Read Avg.<br>dBuV              | AF<br>dB/m | CL<br>dB                     | Amp<br>dB | D Corr<br>dB  | Fltr<br>dB   | Peak<br>dBuV/m | Avg<br>dBuV/m | Pk Lim<br>dBuV/m | Avg Lim<br>dBuV/m | Pk Mar<br>dB | Avg Mar<br>dB | Notes<br>(V/H) |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.039  | 3.0                   | 46.3                   | 32.9                           | 24.8       | 2.8                          | -37.8     | 0.0           | 0.0  | 36.1           | 22.7          | 74               | 54                | -37.9        | -31.3         | V              |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.120  | 3.0                   | 46.9                   | 33.0                           | 25.1       | 2.9                          | -37.6     | 0.0           | 0.0  | 37.3           | 23.4          | 74               | 54                | -36.7        | -30.6         | H              |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>No other emissions were detected above the system noise floor</p>   |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>Rev. 07.08.11</p>   |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <table><tr><td>f</td><td>Measurement Frequency</td><td>Amp</td><td>Preamp Gain</td><td>Avg Lim</td><td>Average Field Strength Limit</td></tr><tr><td>Dist</td><td>Distance to Antenna</td><td>D Corr</td><td>Distance Correct to 3 meters</td><td>Pk Lim</td><td>Peak Field Strength Limit</td></tr><tr><td>Read</td><td>Analyzer Reading</td><td>Avg</td><td>Average Field Strength @ 3 m</td><td>Avg Mar</td><td>Margin vs. Average Limit</td></tr><tr><td>AF</td><td>Antenna Factor</td><td>Peak</td><td>Calculated Peak Field Strength</td><td>Pk Mar</td><td>Margin vs. Peak Limit</td></tr><tr><td>CL</td><td>Cable Loss</td><td>HPF</td><td>High Pass Filter</td><td></td><td></td></tr></table>  |                       |                        |                                |            |                              |           |               |  |                |               |                  |                   |              |               | f              | Measurement Frequency | Amp                    | Preamp Gain       | Avg Lim    | Average Field Strength Limit | Dist      | Distance to Antenna | D Corr             | Distance Correct to 3 meters | Pk Lim        | Peak Field Strength Limit    | Read              | Analyzer Reading | Avg           | Average Field Strength @ 3 m | Avg Mar             | Margin vs. Average Limit | AF   | Antenna Factor | Peak | Calculated Peak Field Strength | Pk Mar | Margin vs. Peak Limit | CL  | Cable Loss | HPF  | High Pass Filter |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| f  | Measurement Frequency | Amp                    | Preamp Gain                    | Avg Lim    | Average Field Strength Limit |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dist   | Distance to Antenna   | D Corr                 | Distance Correct to 3 meters   | Pk Lim     | Peak Field Strength Limit    |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Read   | Analyzer Reading      | Avg                    | Average Field Strength @ 3 m   | Avg Mar    | Margin vs. Average Limit     |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AF   | Antenna Factor        | Peak                   | Calculated Peak Field Strength | Pk Mar     | Margin vs. Peak Limit        |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CL   | Cable Loss            | HPF                    | High Pass Filter               |            |                              |           |               |  |                |               |                  |                   |              |               |                |                       |                        |                   |            |                              |           |                     |                    |                              |               |                              |                   |                  |               |                              |                     |                          |      |                |      |                                |        |                       |     |            |      |                  |    |       |       |                   |                    |                    |      |      |      |     |               |  |     |      |      |    |    |       |                   |                    |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |

## 8.4. WORST-CASE BELOW 1 GHz

### SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**

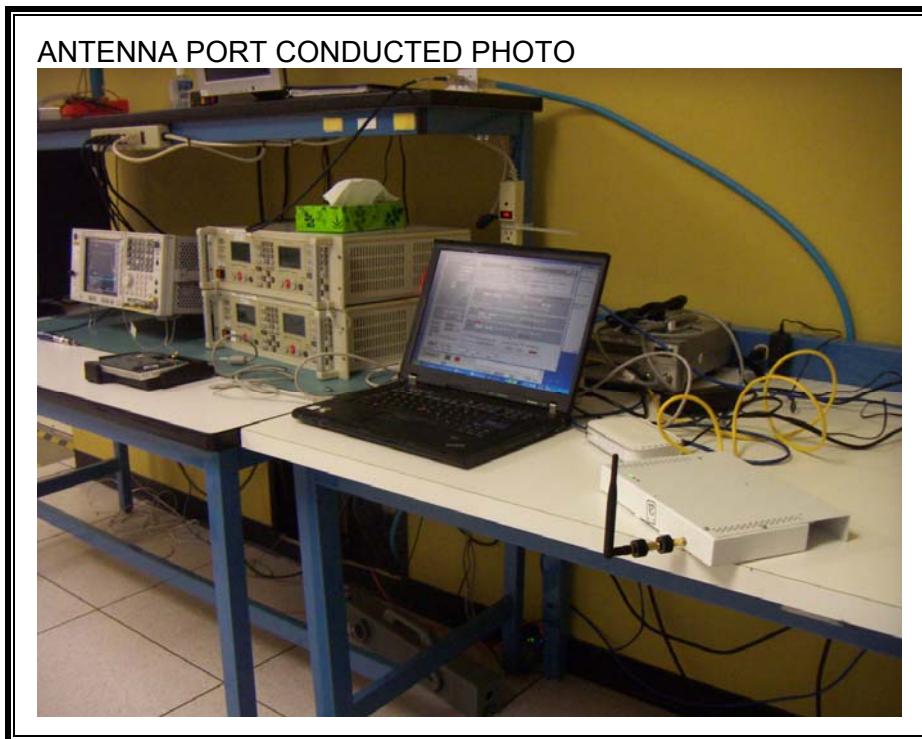
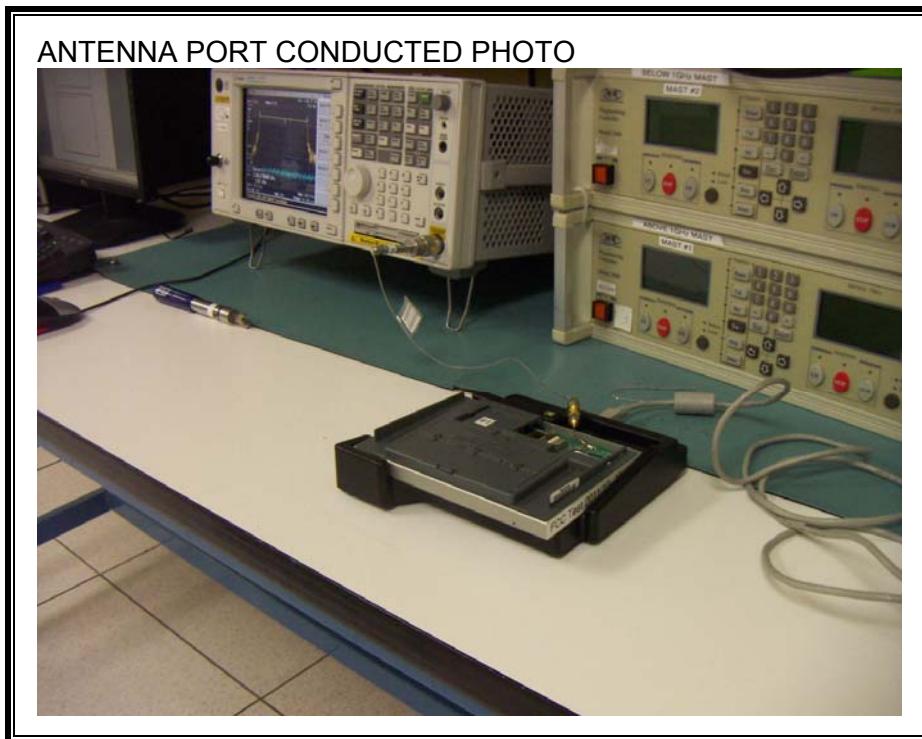


HORIZONTAL & VERTICAL DATA

| Altierre Corporation |                      |          |                 |                   |                     |        |                           |        |             |          |
|----------------------|----------------------|----------|-----------------|-------------------|---------------------|--------|---------------------------|--------|-------------|----------|
| 11U14079             |                      |          |                 |                   |                     |        |                           |        |             |          |
| Range 1 30 - 1000MHz |                      |          |                 |                   |                     |        |                           |        |             |          |
| Test Freq. (MHz)     | Meter Reading (dBuV) | Detector | Cable Loss [dB] | Pre-Amp Gain [dB] | Antenna Factor [dB] | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 31.6156              | 30.13                | PK       | 0.9             | -29.5             | 19.6                | 21.13  | 40                        | -18.87 | 100         | Horz     |
| 114.6569             | 31.14                | PK       | 1.5             | -29.3             | 12.7                | 16.04  | 43.5                      | -27.46 | 100         | Horz     |
| 143.0913             | 31.41                | PK       | 1.7             | -29.1             | 13                  | 17.01  | 43.5                      | -26.49 | 100         | Horz     |
| 209.9767             | 30.16                | PK       | 2               | -28.9             | 12                  | 15.26  | 43.5                      | -28.24 | 100         | Horz     |
| Range 2 30 - 1000MHz |                      |          |                 |                   |                     |        |                           |        |             |          |
| Test Freq. (MHz)     | Meter Reading (dBuV) | Detector | Cable Loss [dB] | Pre-Amp Gain [dB] | Antenna Factor [dB] | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 70.0666              | 42.62                | PK       | 1.2             | -29.4             | 8.3                 | 22.72  | 40                        | -17.28 | 109         | Vert     |
| 118.2112             | 34.35                | PK       | 1.5             | -29.2             | 13.4                | 20.05  | 43.5                      | -23.45 | 109         | Vert     |
| 140.1832             | 33.86                | PK       | 1.7             | -29.2             | 13.2                | 19.56  | 43.5                      | -23.94 | 109         | Vert     |
| 195.1133             | 35.59                | PK       | 1.9             | -28.9             | 11.6                | 20.19  | 43.5                      | -23.31 | 109         | Vert     |
| 897.2485             | 32.06                | PK       | 4.1             | -28.6             | 21.5                | 29.06  | 46                        | -16.94 | 109         | Vert     |

## 9. SETUP PHOTOS

### ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP



**RADIATED RF MEASUREMENT SETUP**

RADIATED FRONT PHOTO



RADIATED BACK PHOTO



**END OF REPORT**