



**FCC CFR47 PART 15 SUBPART C**

**CERTIFICATION TEST REPORT**

**FOR**

**GSM/WCDMA BAND PHONE WITH BT, WLAN, AND NFC**

**MODEL NUMBER: LG-P880g, LGP880g, P880g, LG-P880G, LGP880G, P880G**

**FCC ID: ZNFP880G**

**REPORT NUMBER: 12U14550-5, REVISION A**

**ISSUE DATE: SEPTEMBER 19, 2012**

*Prepared for*  
**LG ELECTRONICS MOBILECOMM U.S.A., INC.**  
**1000 SYLVAN AVE.**  
**ENGLEWOODS CLIFFS, NJ 07632**

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**NVLAP LAB CODE 200065-0**

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Revision History

| <u>Rev.</u> | <u>Issue Date</u> | <u>Revisions</u>        | <u>Revised By</u> |
|-------------|-------------------|-------------------------|-------------------|
| --          | 08/27/2012        | Initial Issue           | T. LEE            |
| A           | 09/19/2012        | Corrected Antenna Gains | T. LEE            |



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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC.  
1000 SYLVAN AVE.  
ENGLEWOODS CLIFFS, NJ 07632

**EUT DESCRIPTION:** GSM/WCDMA DUAL-BAND PHONE WITH BT, WLAN, AND NFC

**MODEL:** LG-P880g, LGP880g, P880g, LG-P880G, LGP880G, P880G

**SERIAL NUMBER:** 207KPLC217104 for Conducted, 207KPED217106 for Emissions

**DATE TESTED:** August 9- 25, 2012

| APPLICABLE STANDARDS     |              |
|--------------------------|--------------|
| STANDARD                 | TEST RESULTS |
| CFR 47 Part 15 Subpart C | Pass         |

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:



TIM LEE  
STAFF ENGINEER  
UL CCS

Tested By:



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 GSM/WCDMA Tri-Band Phone that also supports BLUETOOTH, WLAN and NFC operating at 13.56MHz.

The unit supports AFH mode. The manufacturer attested the following.

- It is in compliance with Bluetooth Specification 1.2 or later specification.
- The number of hopping channel in AFH mode is 20 channels
- The output power do not transmit over than 125 mW
- The channel separation is based upon 2/3 of 20 dB channel bandwidth

### 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) |
|-----------------------|---------------|--------------------|-------------------|
| 2402 - 2480           | Basic GFSK    | 9.66               | 9.25              |
| 2402 - 2480           | Enhanced 8PSK | 9.62               | 9.16              |

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna, with a maximum gain of -2.19 dBi.

### 5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was Kernel, Version 2.6.39.4

The test utility software used during testing was LG-P880g-V09a July 3, 2012.

The driver installed was Android Version 2.6.39.4

## 5.5 MODEL DIFFERENCES

Model P880G is identical to Models LGP880G and LG-P880G except for model designation.

## 5.6 WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

It was determined that DH5 produced the worse-case data rate.

## 7.1. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

| Support Equipment List |              |          |               |        |
|------------------------|--------------|----------|---------------|--------|
| Description            | Manufacturer | Model    | Serial Number | FCC ID |
| AC Adapter             | LG           | MCS-01WD | DA260003271   | DoC    |
| Earphone               | LG           | N/A      | N/A           | N/A    |

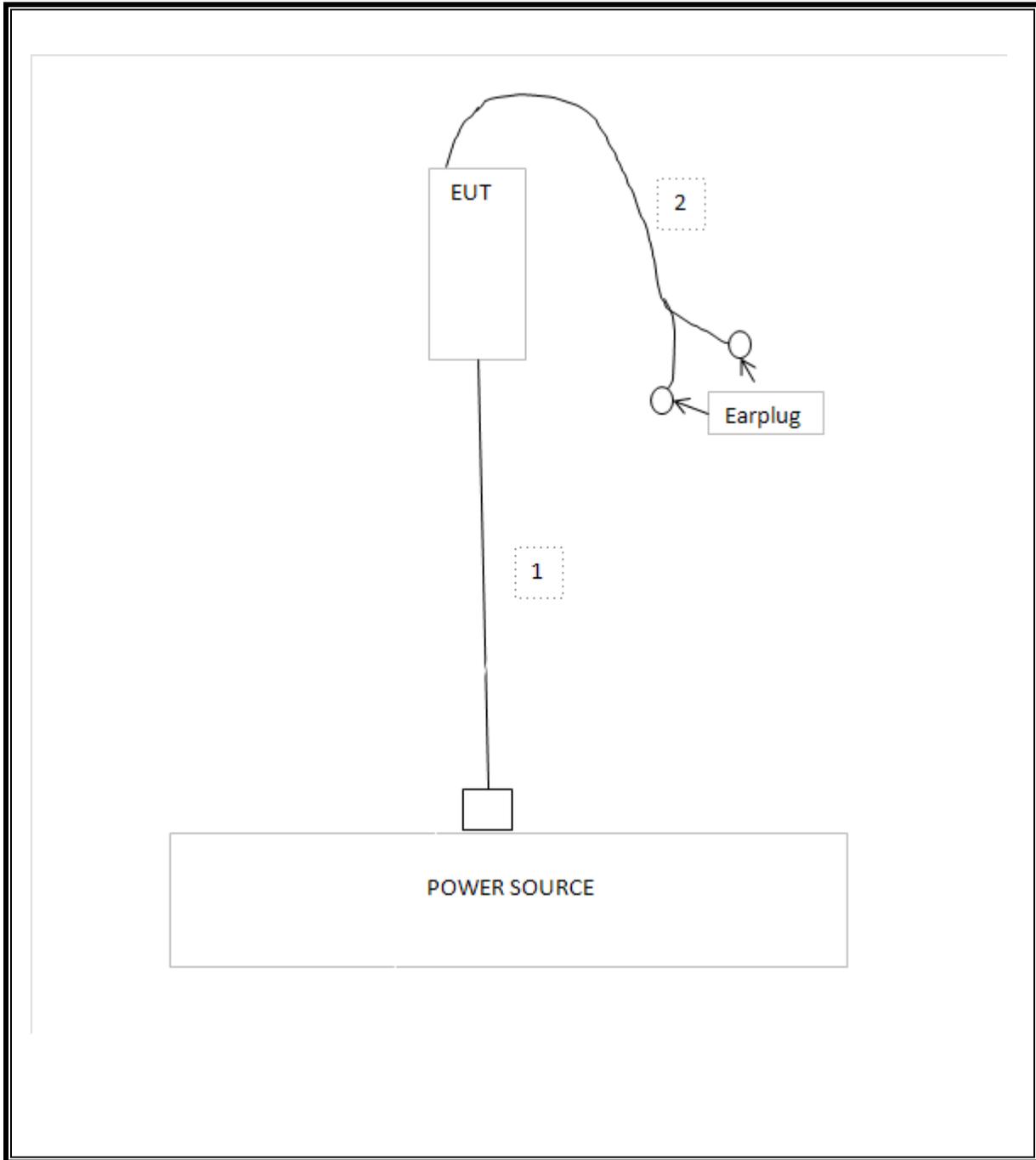
### I/O CABLES

| I/O Cable List |          |                      |                |             |                  |         |
|----------------|----------|----------------------|----------------|-------------|------------------|---------|
| Cable No       | Port     | # of identical ports | Connector Type | Cable Type  | Cable Length (m) | Remarks |
| 1              | DC Power | 1                    | Mini-USB       | Shielded    | 1.2 m            | NA      |
| 2              | Audio    | 1                    | Mini-Jack      | Un-Shielded | 1.5 m            | NA      |

### TEST SETUP

The EUT is setup to transmit continuously.

**SETUP DIAGRAM FOR TESTS**



## 8. 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 Date  | Cal Due   |
| Antenna, Bilog, 2 GHz       | Sunol Sciences | JB1             | C01011 | 01/00/00  | 10/13/12  |
| Preamplifier, 1300 MHz      | Agilent / HP   | 8447D           | C00580 | 11/11/11  | 11/11/12  |
| 1-18GHz Horn Ant            | EMCO           | 3115            | C00783 | 04/15/12  | 04/15/13  |
| Preamplifier, 26.5 GHz      | Agilent / HP   | 8449B           | C00749 | 09/27/11  | 09/27/12  |
| Antenna, Horn, 26.5 GHz     | ARA            | SWH-28          | C01015 | 10/06/11  | 10/06/12  |
| PSA                         | Agilent / HP   | E4446A          | C01012 | 09/02/11  | 12/02/12  |
| Power Meter                 | HP             | 437B            | T226   | 07/25/12  | 07/25/13  |
| Power Sensor                | HP             | HP8481A         | T269   | 07/26/12  | 07/26/13  |
| LISN, 30 MHz                | FCC            | LISN-50/250-25- | N02625 | 11/15/11  | 11/15/12  |
| Antenna, Bilog, 30MHz-1 GHz | Sunol Sciences | JB1             | C01011 | 3/23/2012 | 3/23/2013 |
| EMI Test Receiver           | R&S            | ESHS 20         | N02396 | 08/06/12  | 08/06/13  |
| CBT Bluetooth Tester        | R&S            | CBT             | T258   | 05/15/12  | 05/15/13  |

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## 9. ANTENNA PORT TEST RESULTS

### 9.1. BASIC DATA RATE GFSK MODULATION

#### 9.1.1. 20 dB AND 99% BANDWIDTH

##### LIMIT

None; for reporting purposes only.

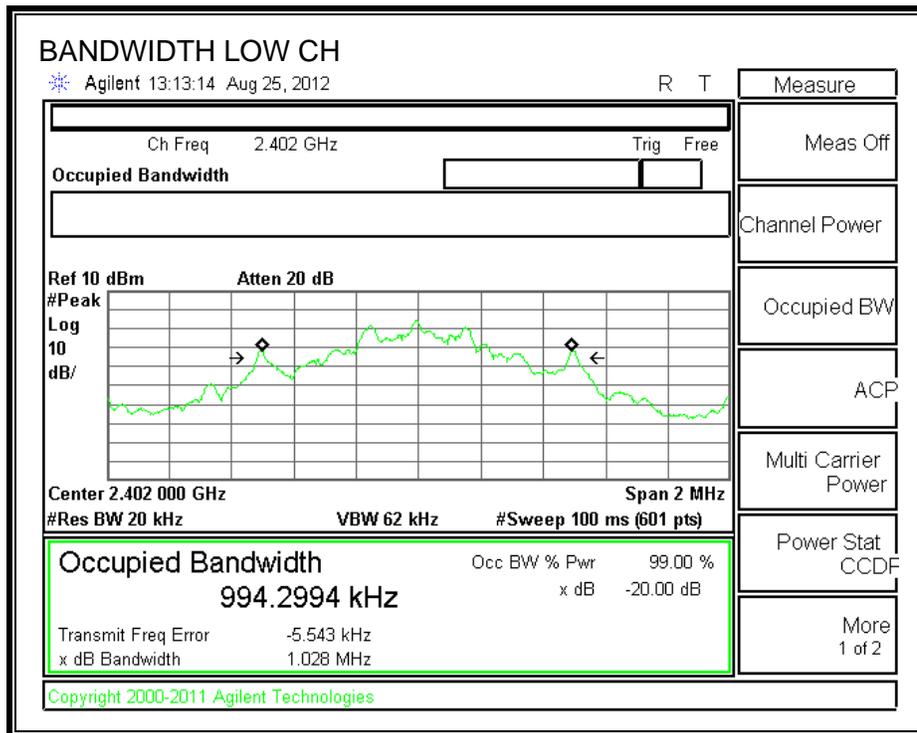
##### TEST PROCEDURE

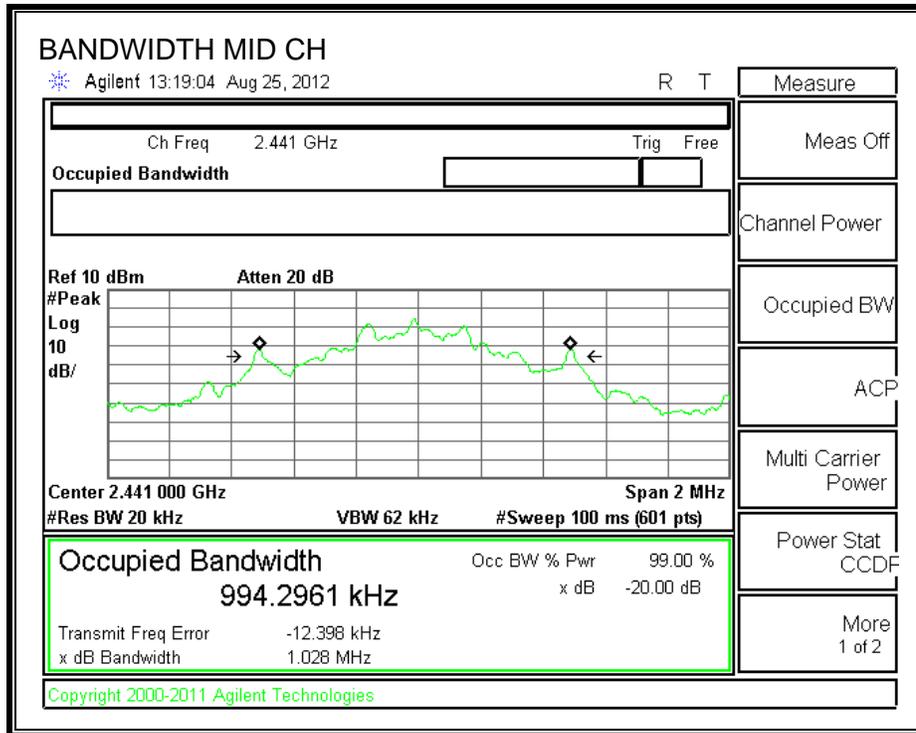
The transmitter output is connected to a spectrum analyzer. The RBW is set to  $\geq 1\%$  of the 20 dB bandwidth. The VBW is set to  $\geq$  RBW. The sweep time is coupled.

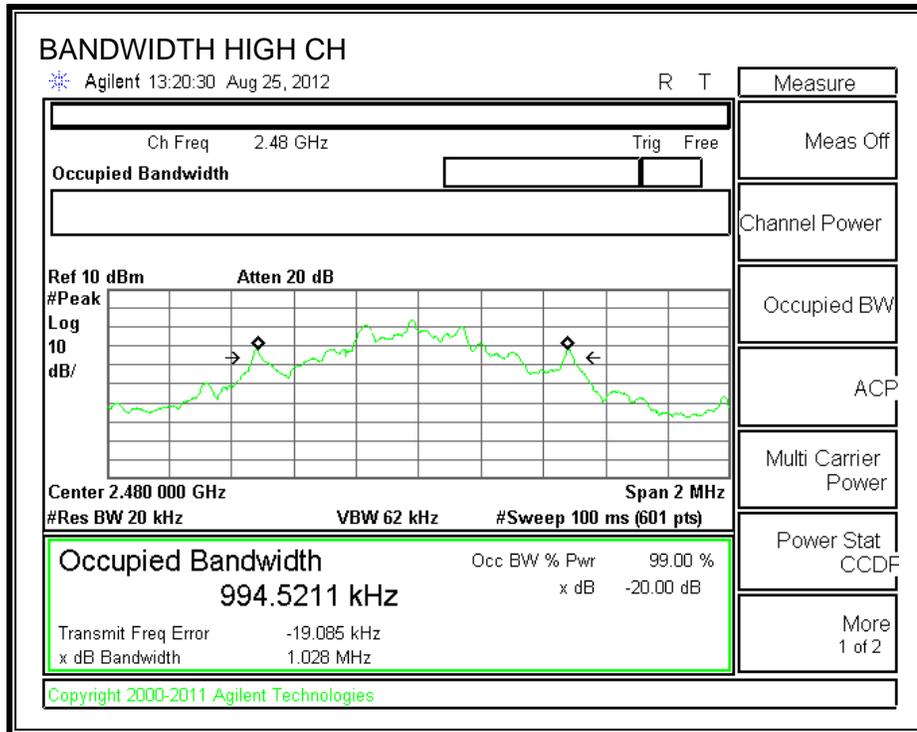
##### RESULTS

| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
|---------|-----------------|-----------------------|---------------------|
| Low     | 2402            | 1.028                 | 1.0396              |
| Middle  | 2441            | 1.028                 | 1.0210              |
| High    | 2480            | 1.028                 | 1.0226              |

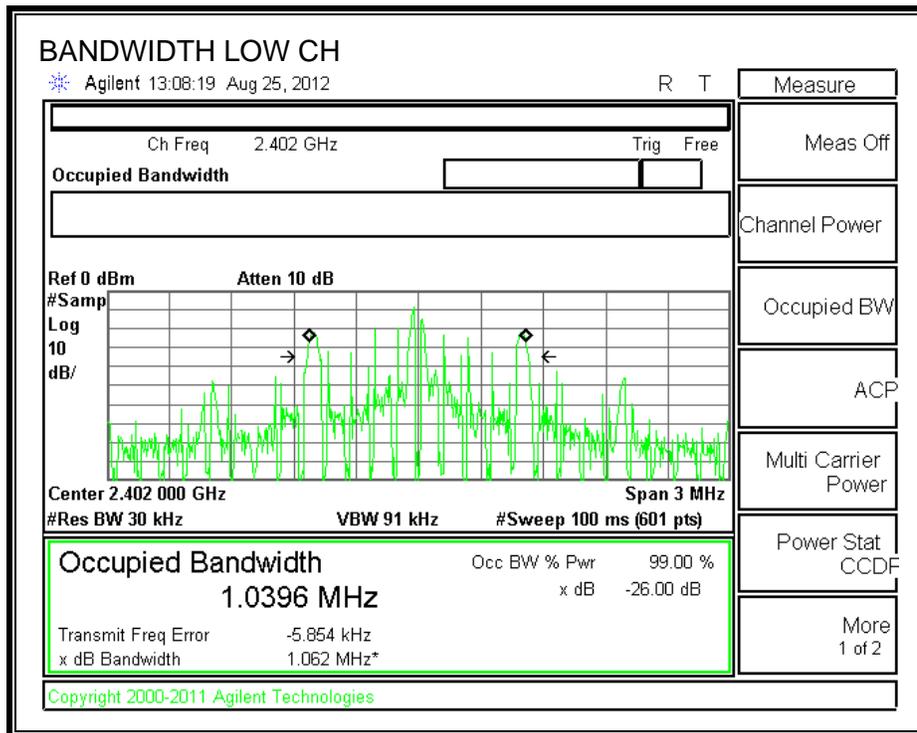
**20 dB BANDWIDTH**

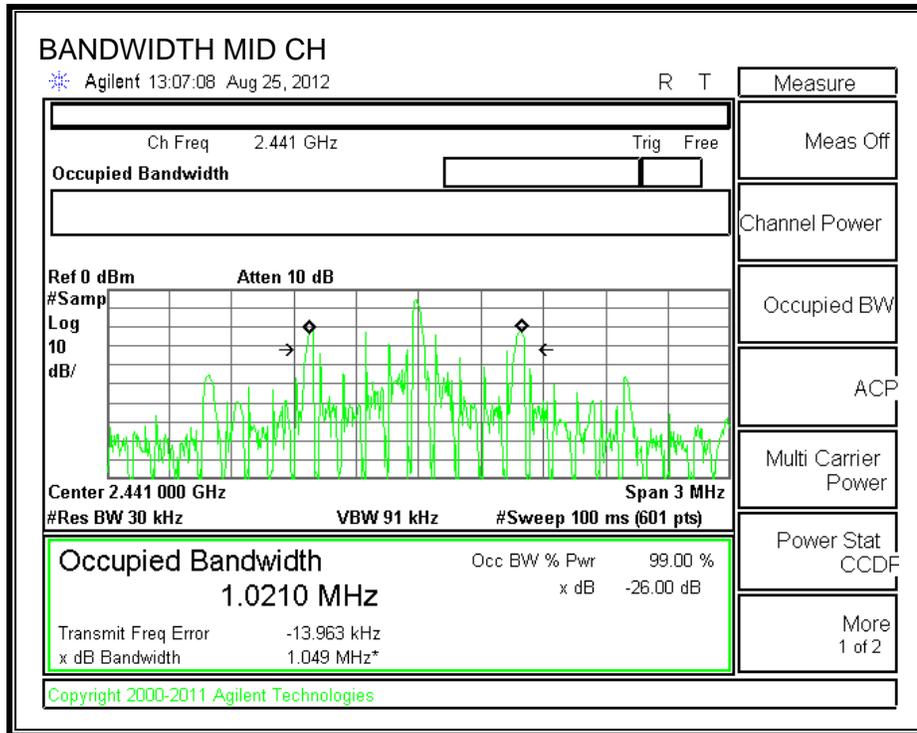


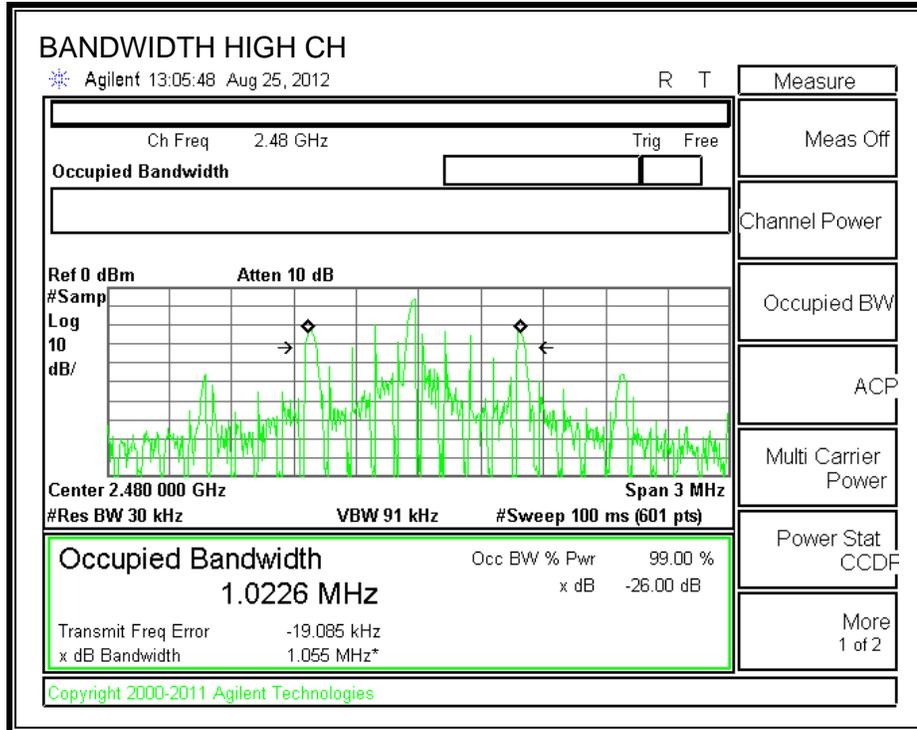




**99% BANDWIDTH**







## 9.1.2. 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.

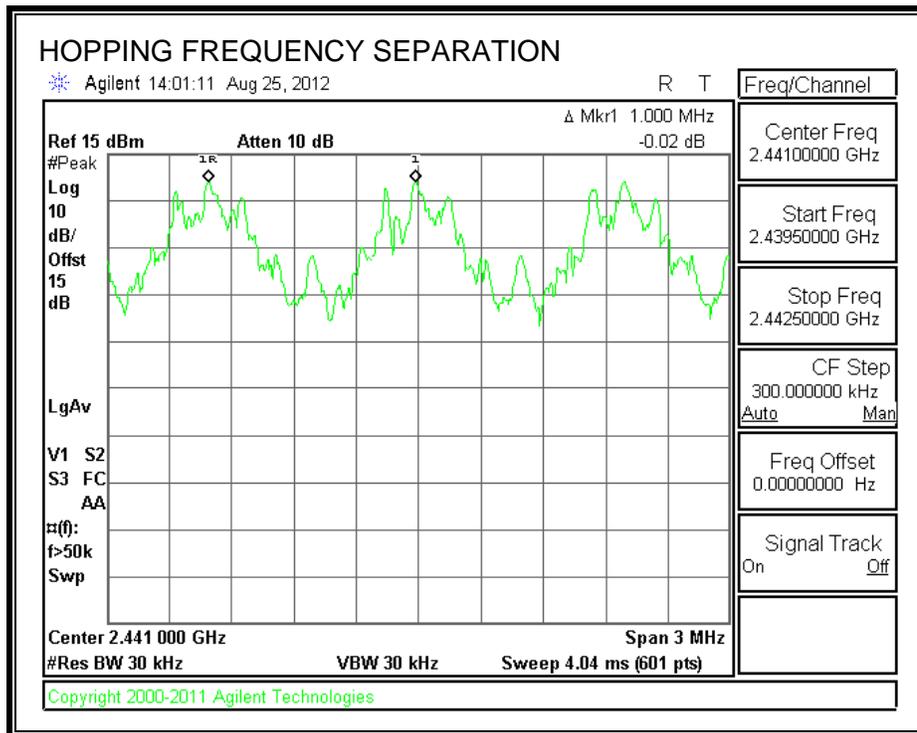
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than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



### **9.1.3. 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.

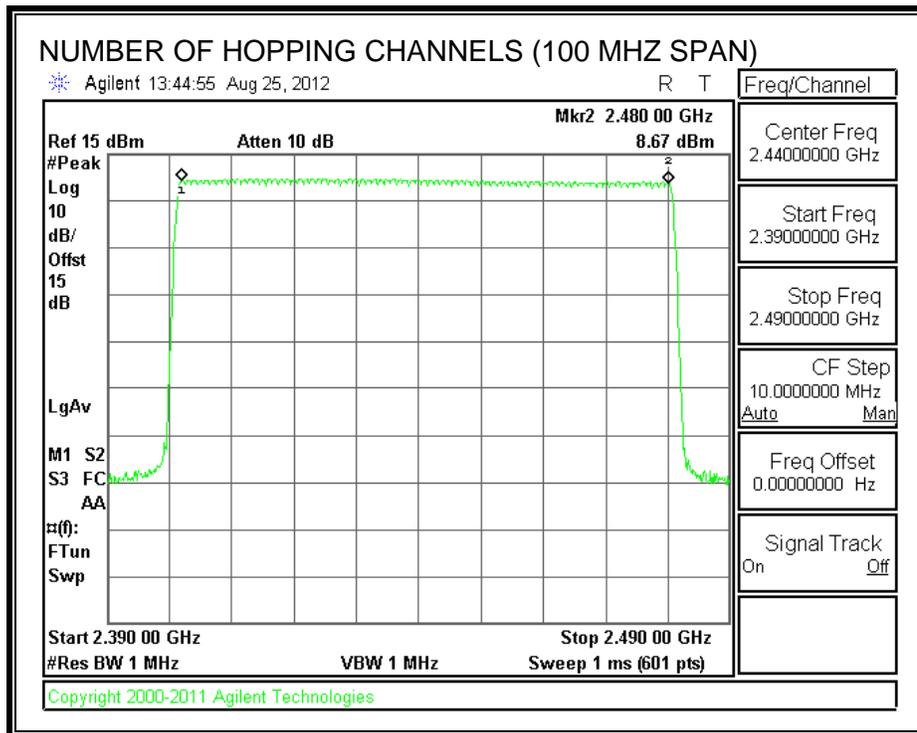
#### **TEST PROCEDURE**

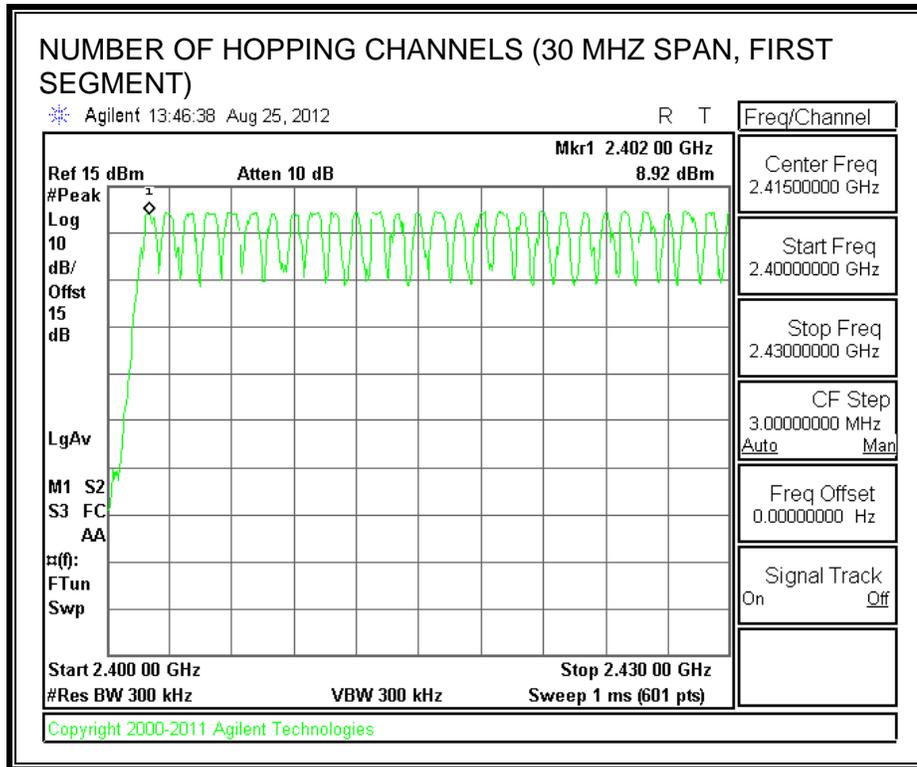
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

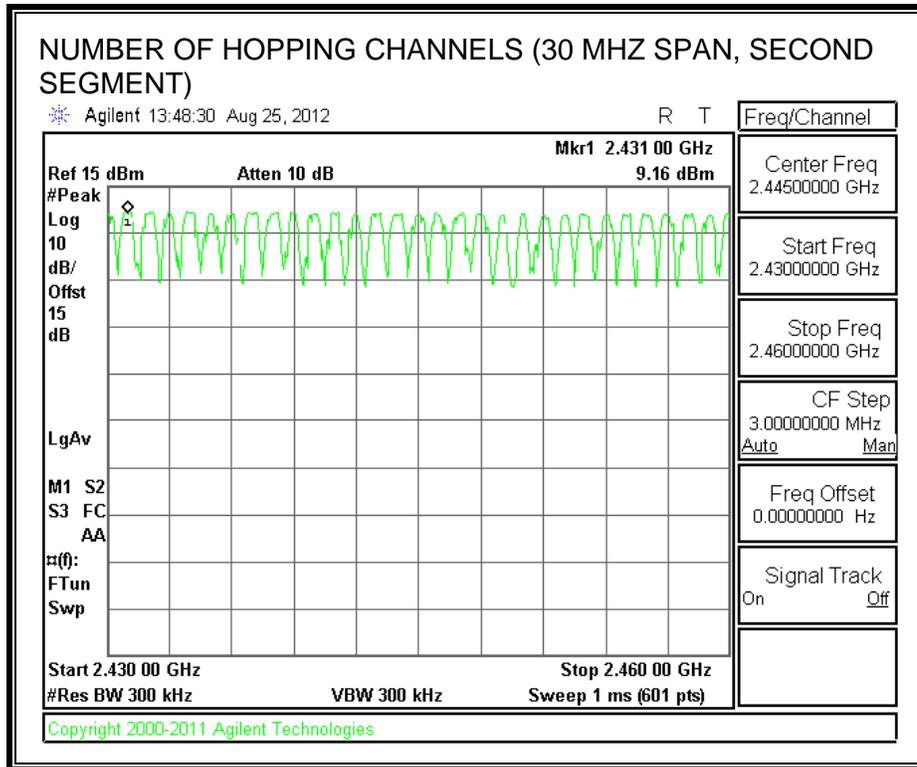
#### **RESULTS**

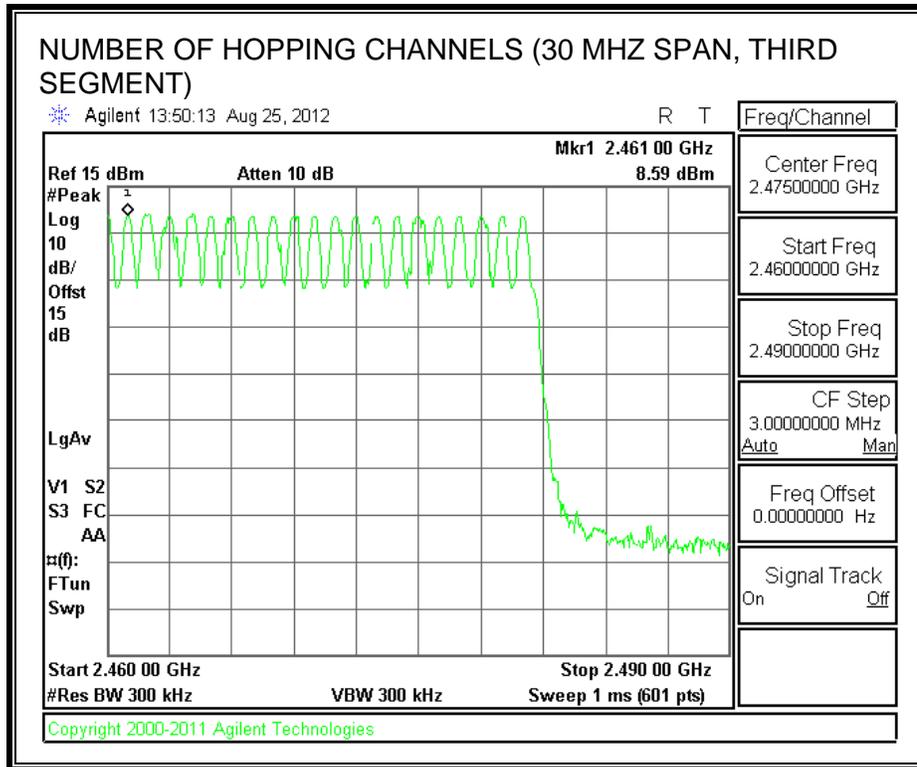
79 Channels observed.

**NUMBER OF HOPPING CHANNELS**









### 9.1.4. 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  $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{ pulse width}$ .

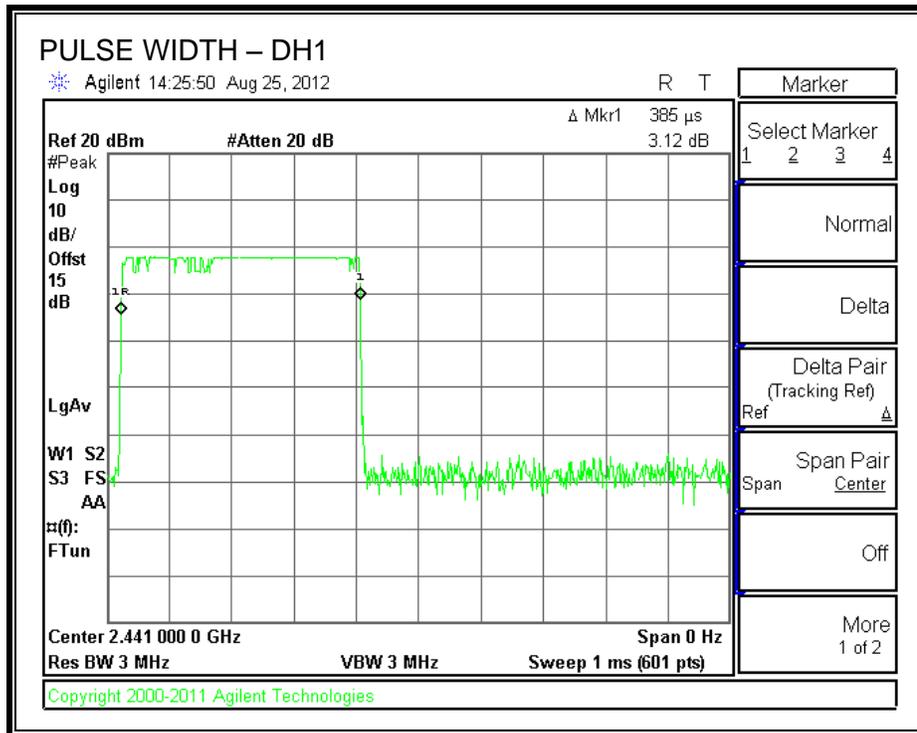
#### RESULTS

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

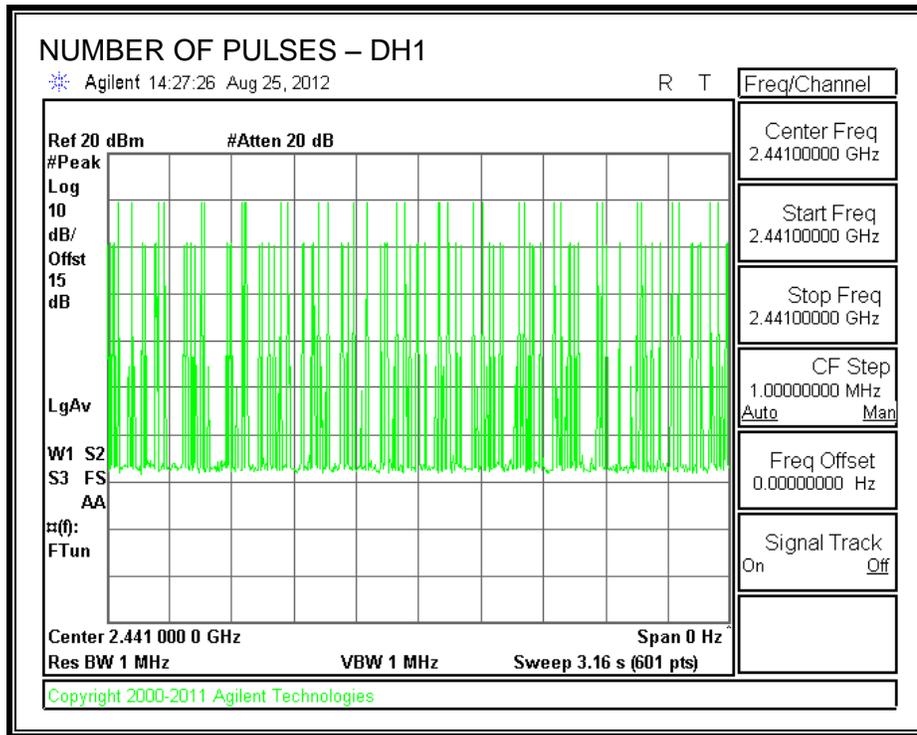
#### GFSK Mode

| DH Packet | Pulse Width (msec) | Number of Pulses in 3.16 seconds | Average Time of (sec) | Limit (sec) | Margin (sec) |
|-----------|--------------------|----------------------------------|-----------------------|-------------|--------------|
| DH1       | 0.385              | 32                               | 0.123                 | 0.4         | -0.277       |
| DH3       | 1.640              | 12                               | 0.197                 | 0.4         | -0.203       |
| DH5       | 2.882              | 11                               | 0.317                 | 0.4         | -0.083       |

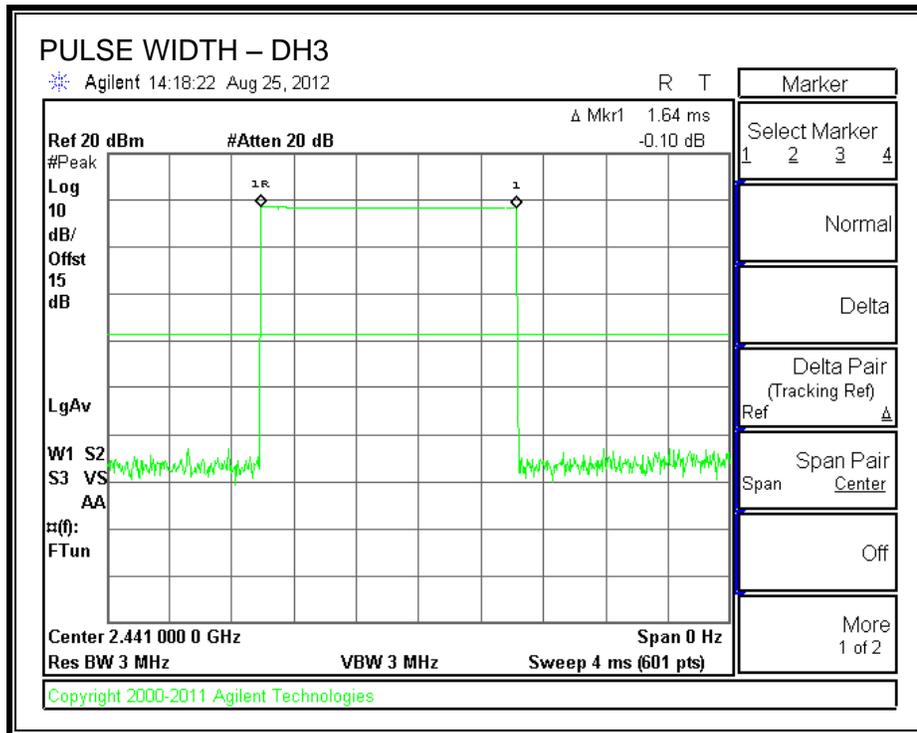
**PULSE WIDTH - DH1**



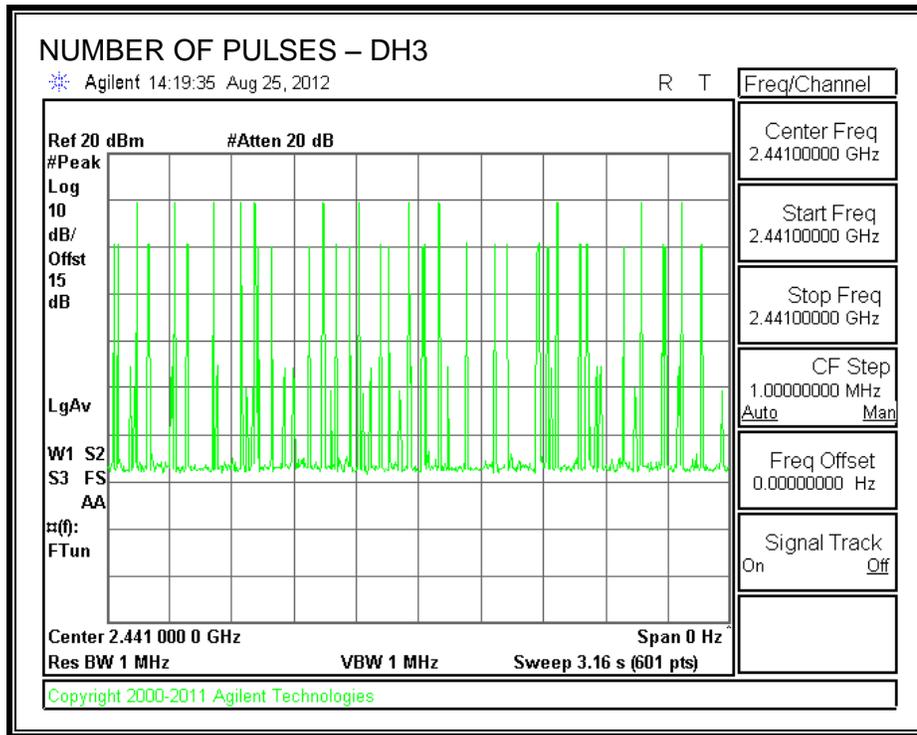
**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH1**



**PULSE WIDTH – DH3**

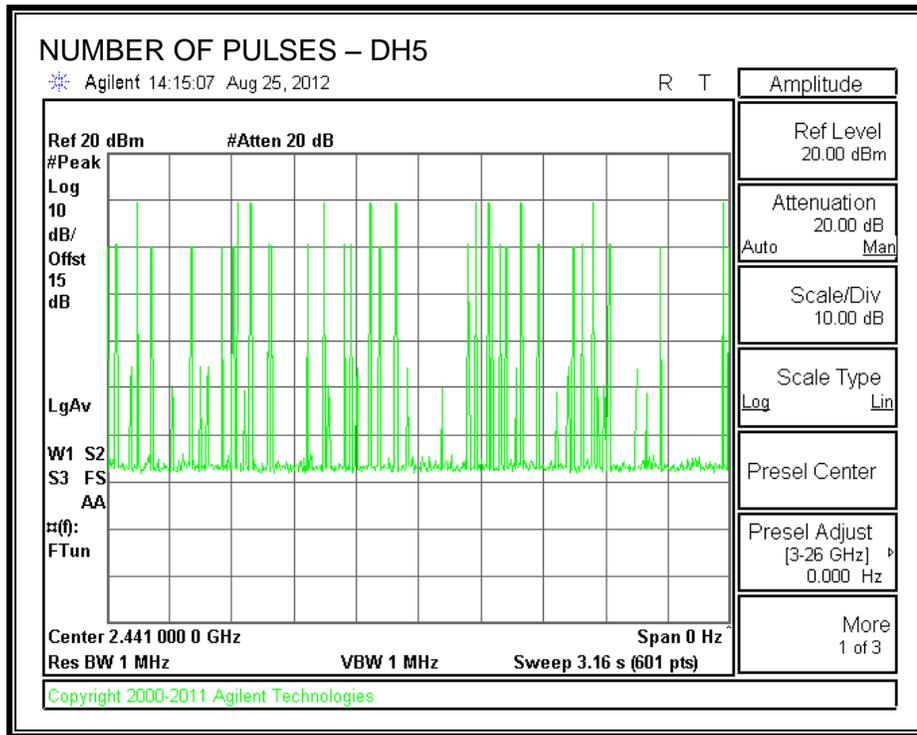


**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3**





**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH5**



### 9.1.5. 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.

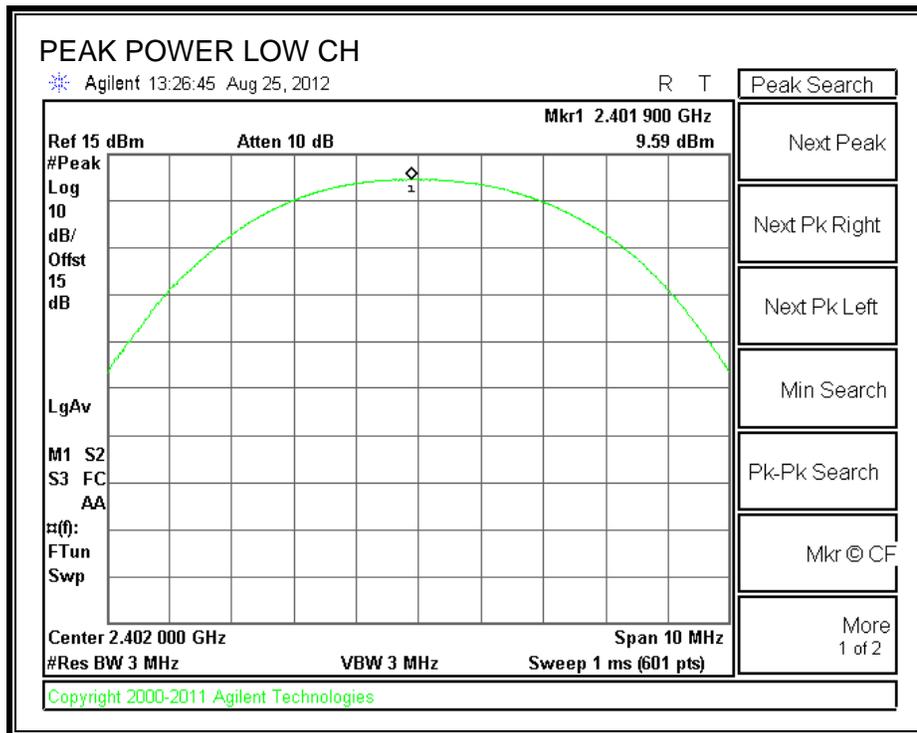
#### TEST PROCEDURE

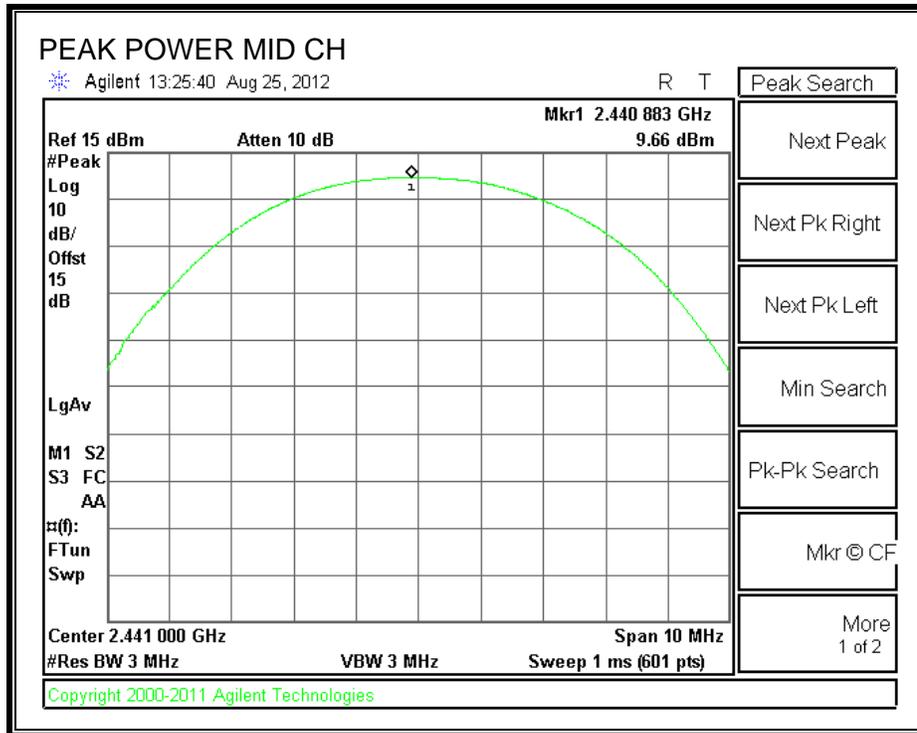
The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

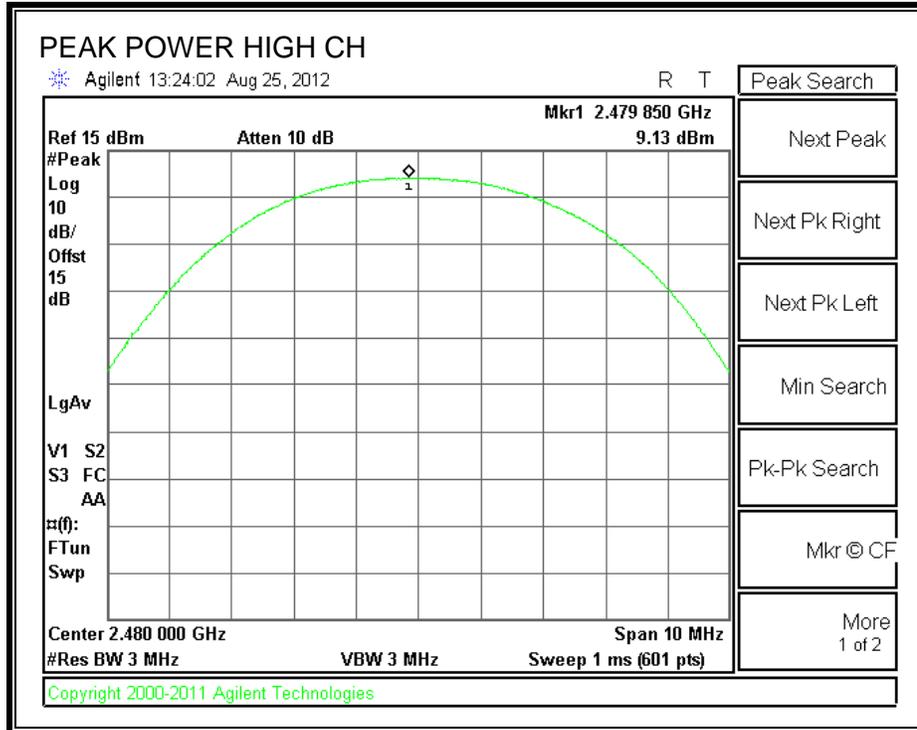
#### RESULTS

| Channel | Frequency (MHz) | Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---------|-----------------|--------------------|-------------|-------------|
| Low     | 2402            | 9.59               | 30          | -20.41      |
| Middle  | 2441            | 9.66               | 30          | -20.34      |
| High    | 2480            | 9.13               | 30          | -20.87      |

**OUTPUT POWER**







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### 9.1.6. 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 13 dB (including 12 dB pad and 1 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     | 2402            | 8.70                |
| Middle  | 2441            | 9.00                |
| High    | 2480            | 8.30                |

### **9.1.7. CONDUCTED SPURIOUS EMISSIONS**

#### **LIMITS**

FCC §15.247 (d)

IC RSS-210 A8.5

Limit = -20 dBc

#### **TEST PROCEDURE**

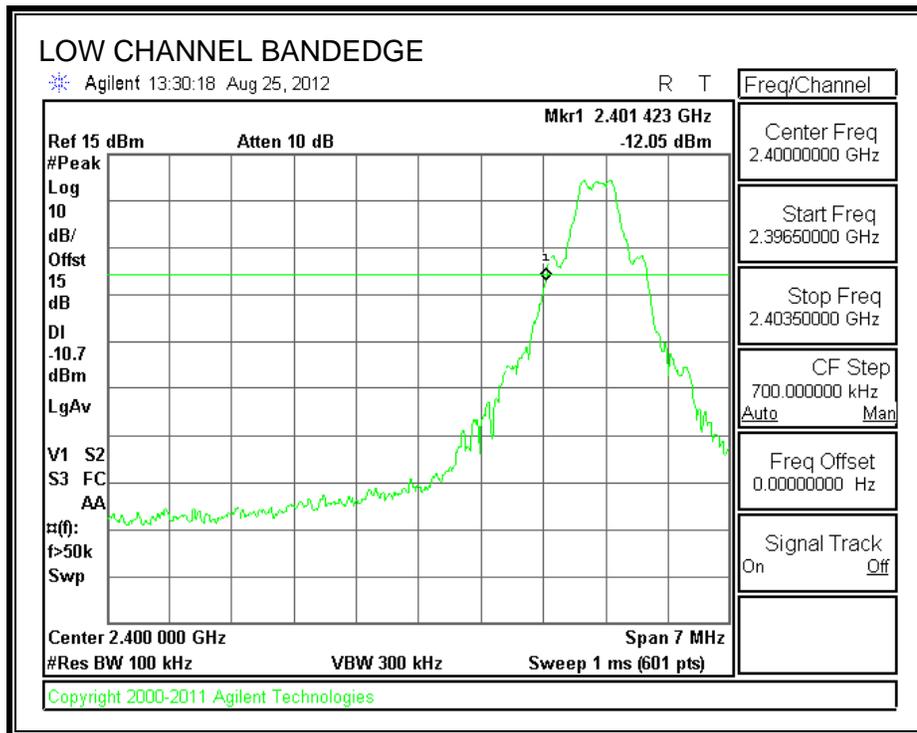
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

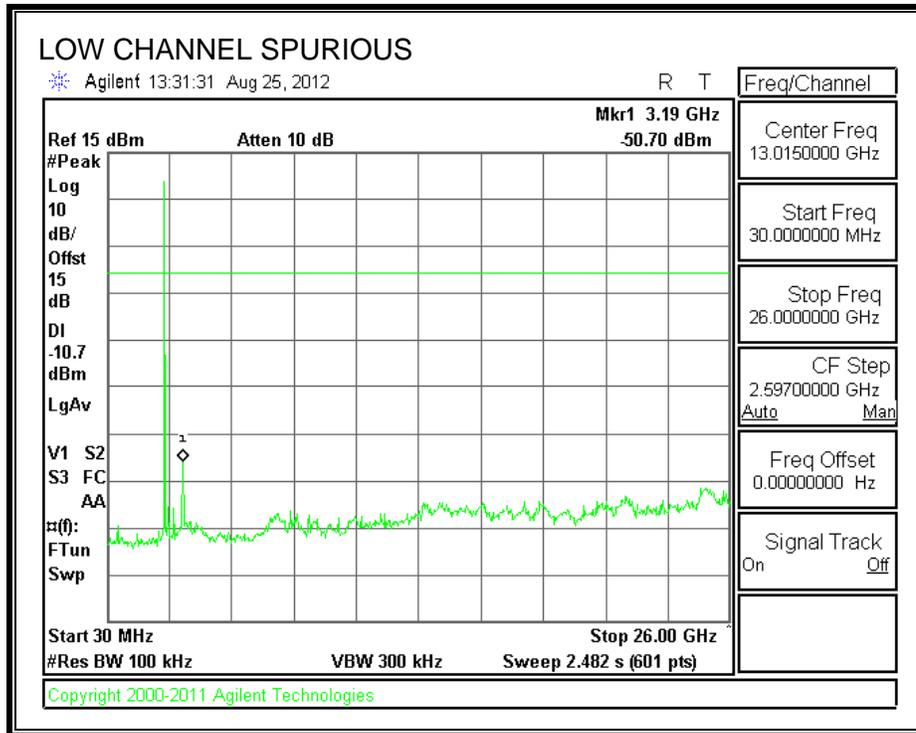
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

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

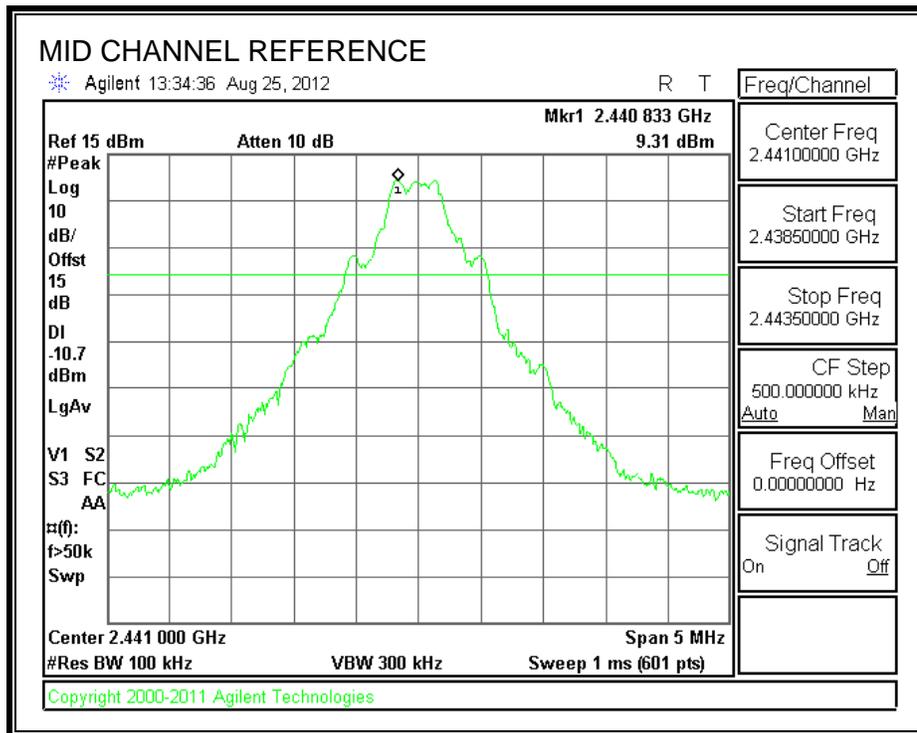
#### **RESULTS**

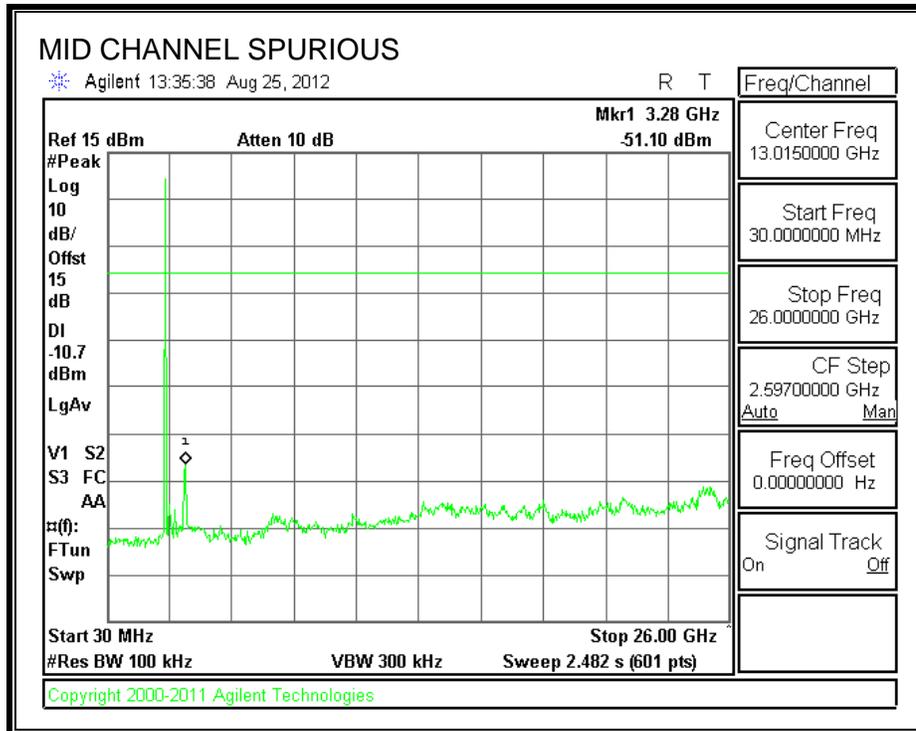
**SPURIOUS EMISSIONS, LOW CHANNEL**



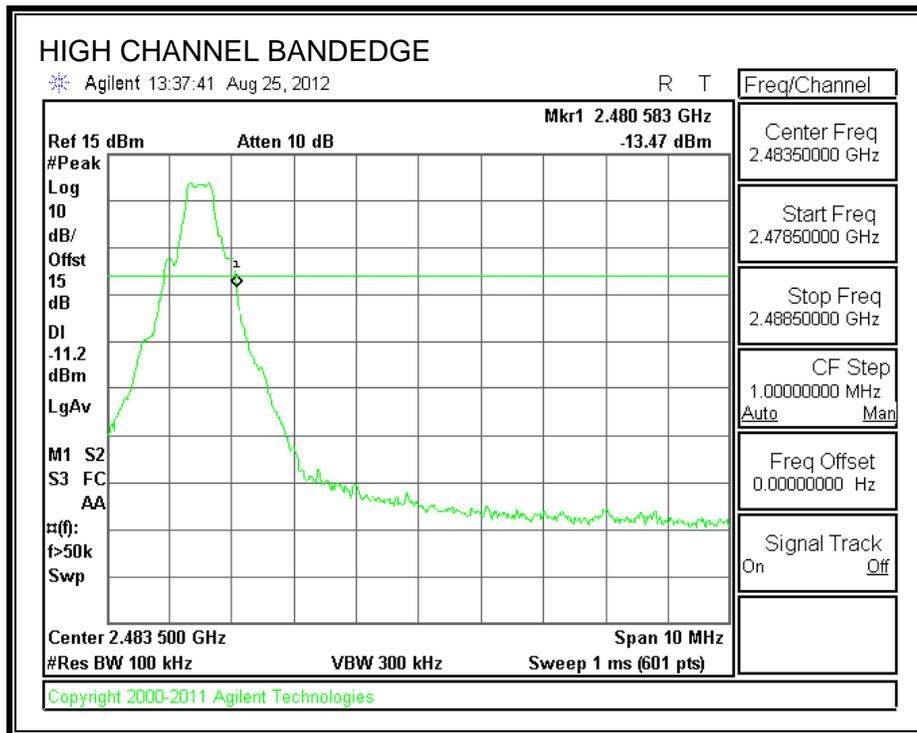


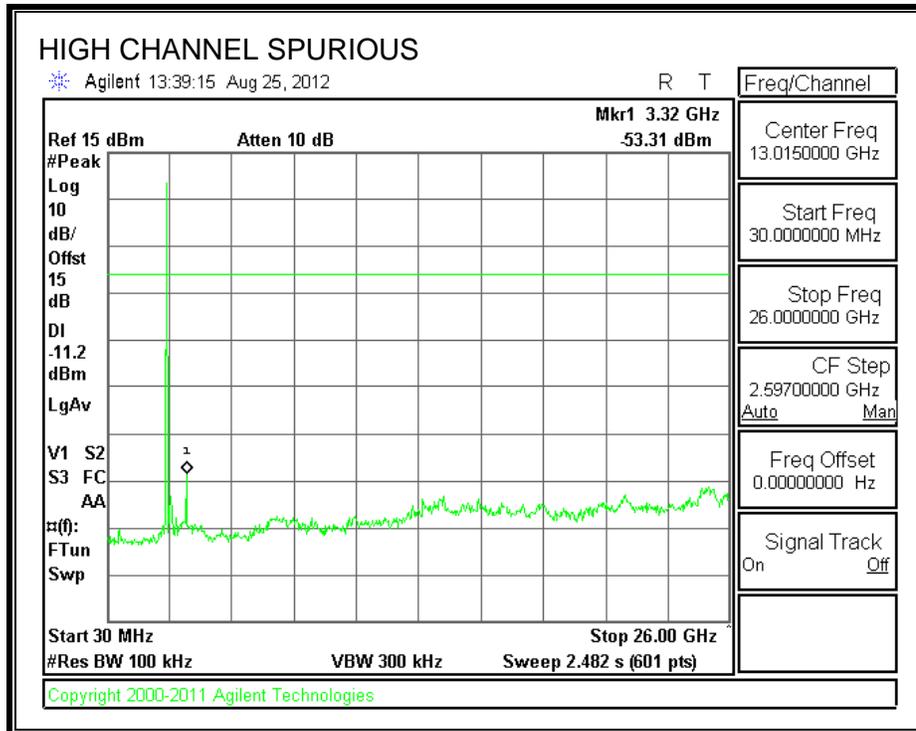
**SPURIOUS EMISSIONS, MID CHANNEL**



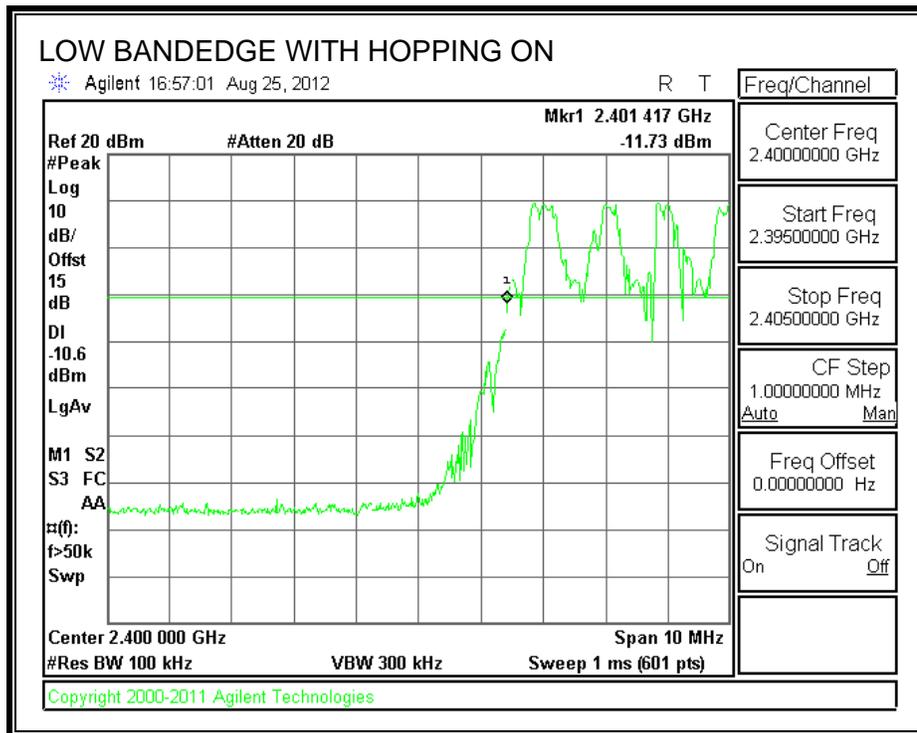


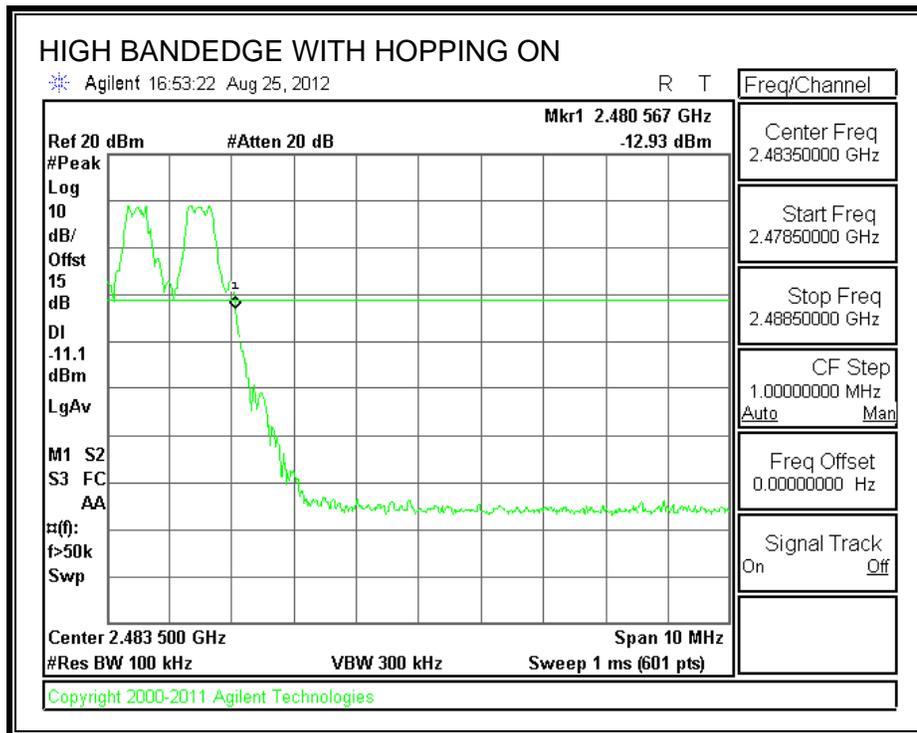
**SPURIOUS EMISSIONS, HIGH CHANNEL**





**SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON**





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## 9.2. ENHANCED DATA RATE 8PSK MODULATION

### 9.2.1. 20 dB AND 99% BANDWIDTH

#### LIMIT

None; for reporting purposes only.

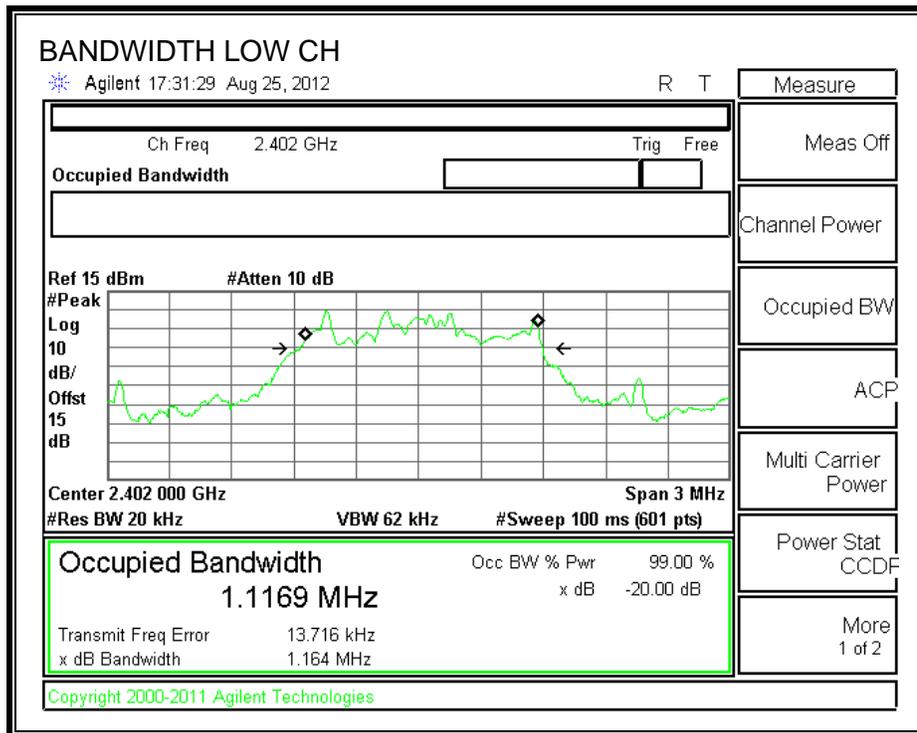
#### TEST PROCEDURE

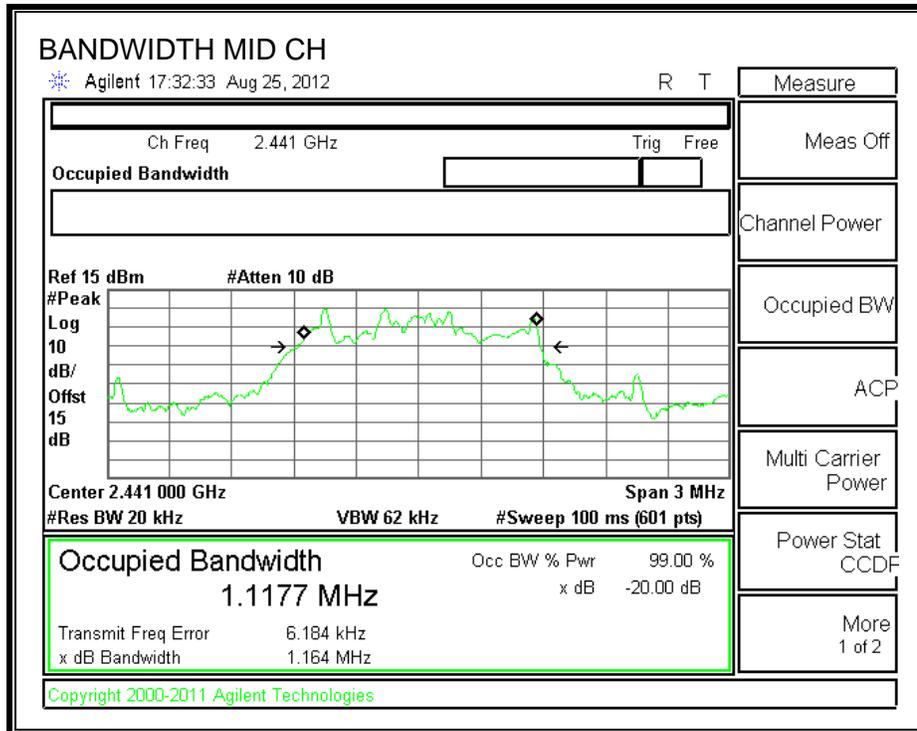
The transmitter output is connected to a spectrum analyzer. The RBW is set to  $\geq 1\%$  of the 20 dB bandwidth. The VBW is set to  $\geq$  RBW. The sweep time is coupled.

#### RESULTS

| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
|---------|-----------------|-----------------------|---------------------|
| Low     | 2402            | 1.1169                | 1.075               |
| Middle  | 2441            | 1.1164                | 1.0319              |
| High    | 2480            | 1.1165                | 1.0307              |

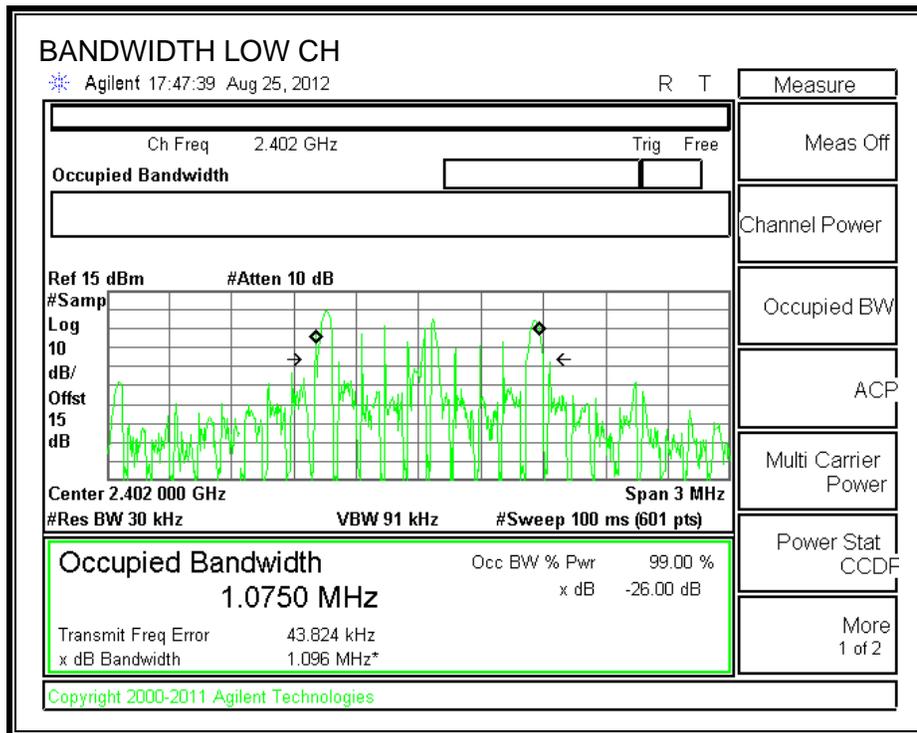
**20 dB BANDWIDTH**

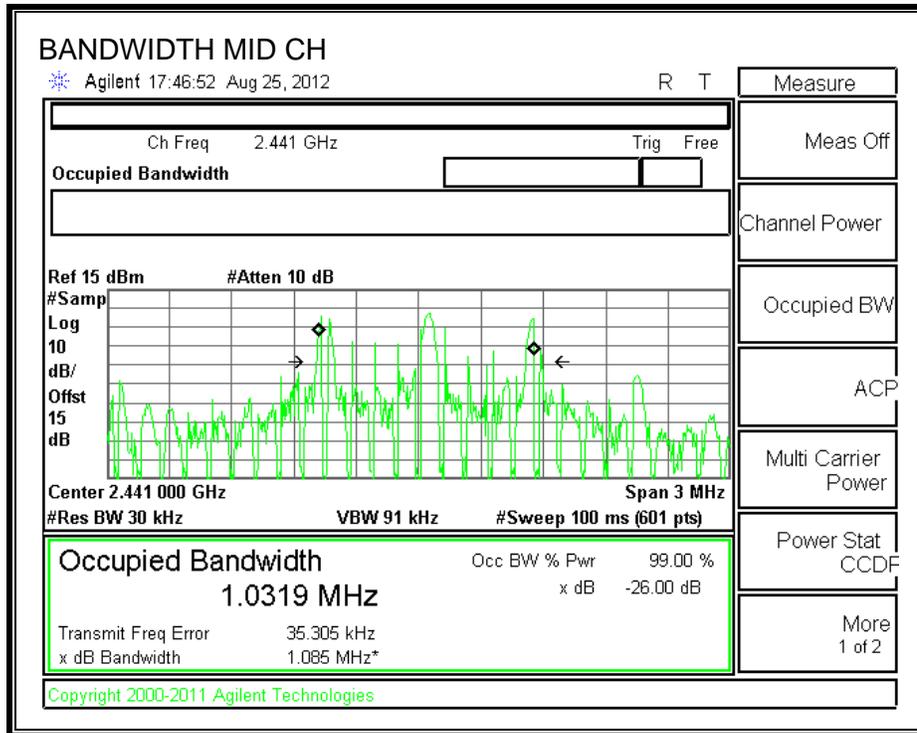


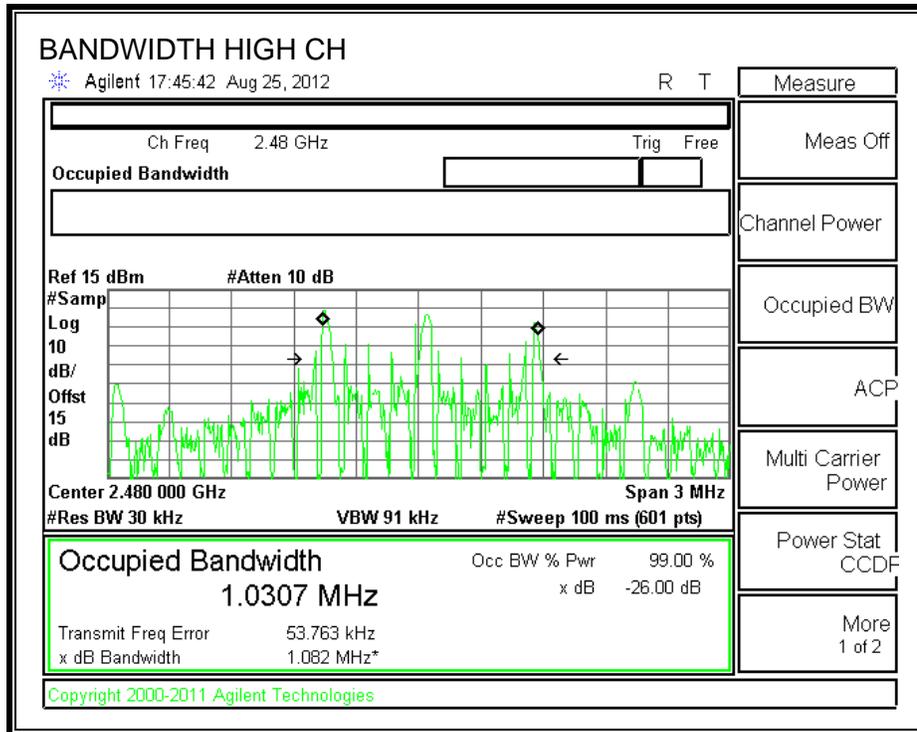




**99% BANDWIDTH**







## 9.2.2. 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.

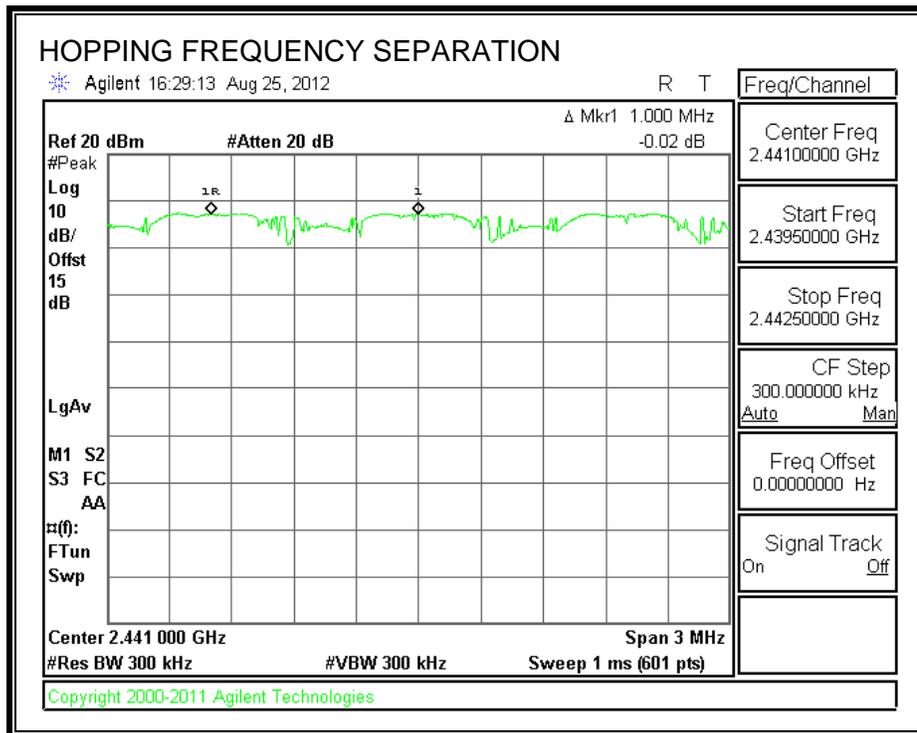
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than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



### **9.2.3. 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.

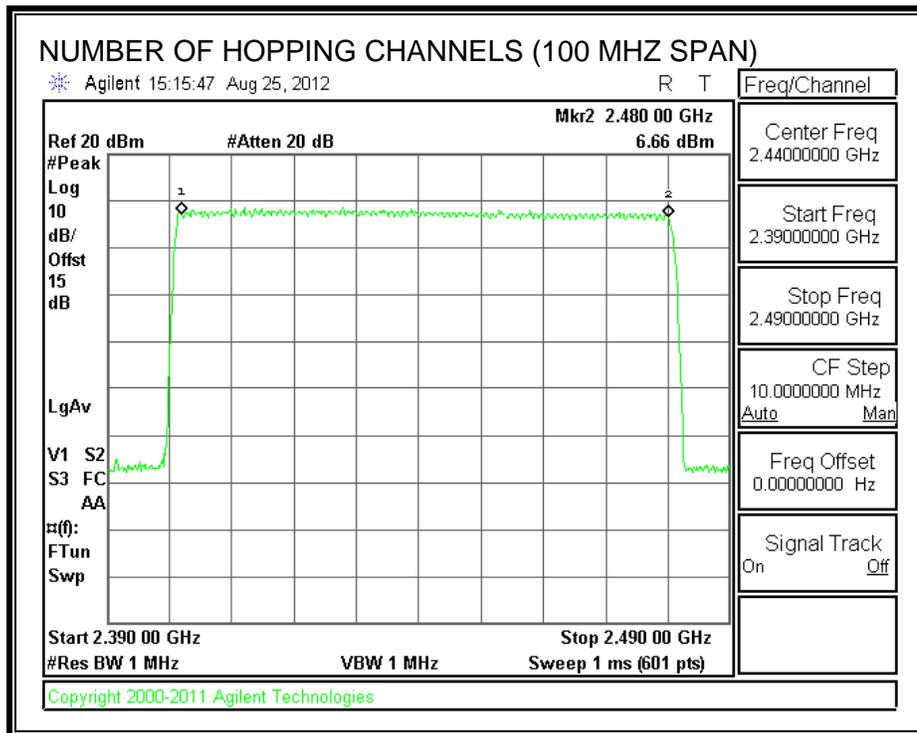
#### **TEST PROCEDURE**

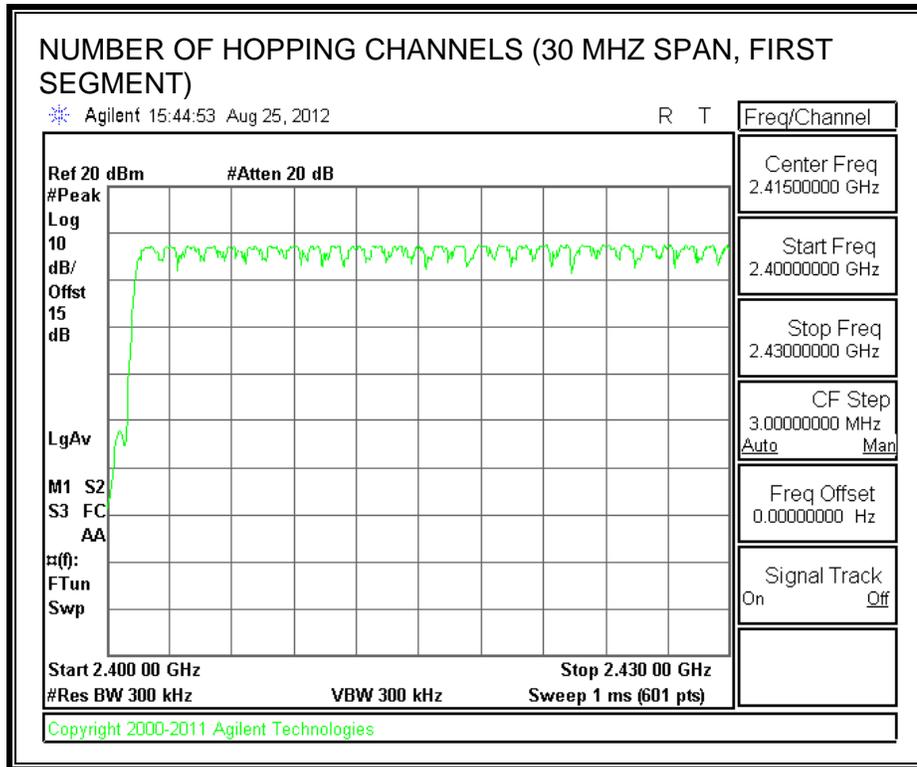
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

#### **RESULTS**

79 Channels observed.

**NUMBER OF HOPPING CHANNELS**









### 9.2.4. 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  $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{ pulse width}$ .

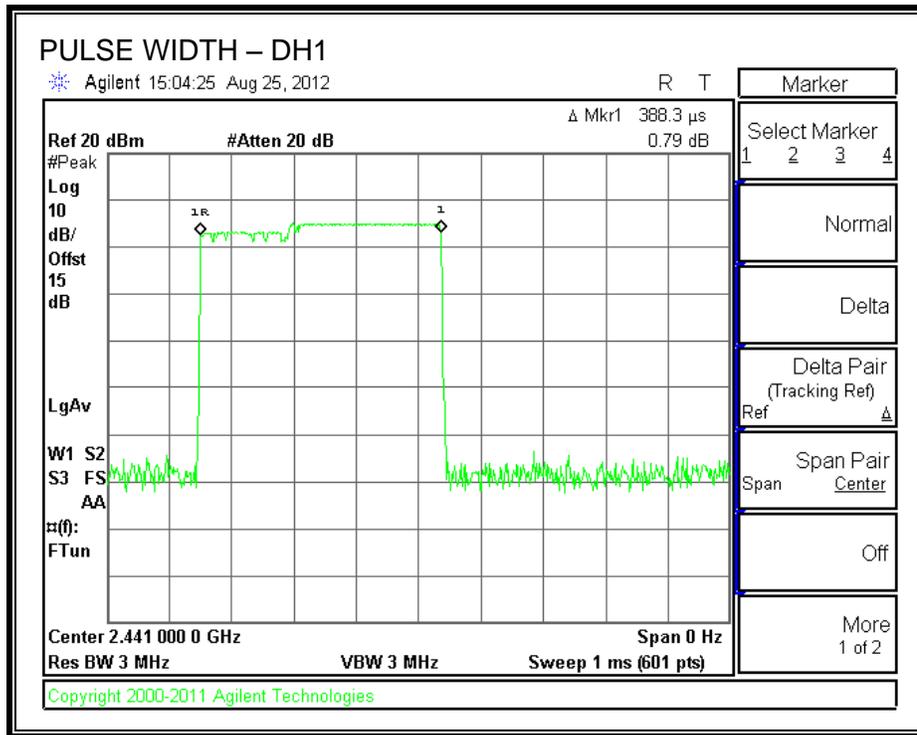
#### RESULTS

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

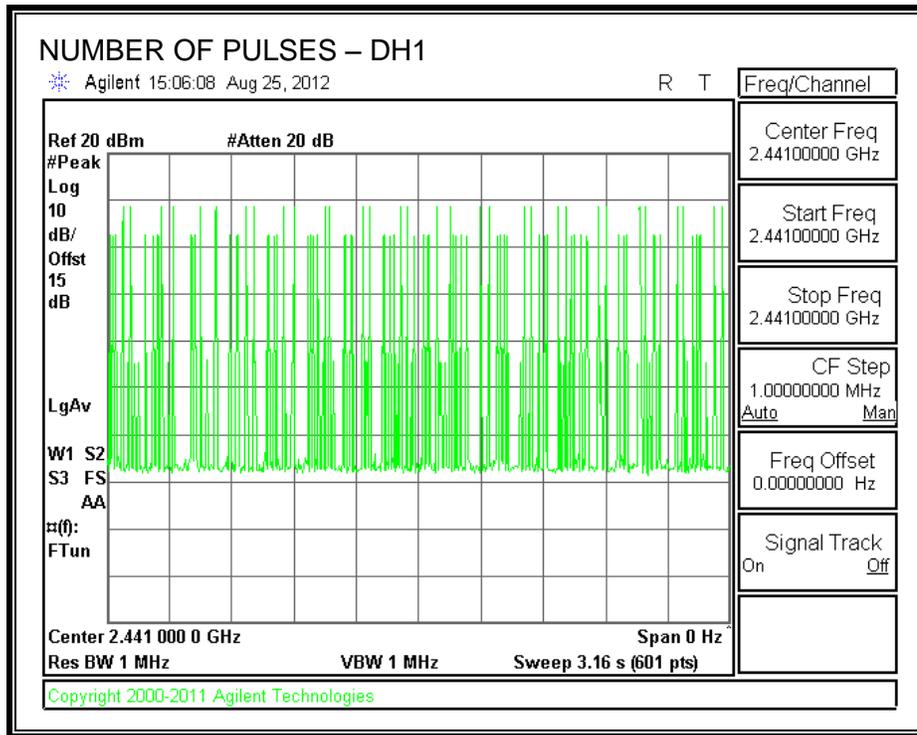
#### 8PSK (EDR) Mode

| DH Packet | Pulse Width (msec) | Number of Pulses in 3.16 seconds | Average Time of (sec) | Limit (sec) | Margin (sec) |
|-----------|--------------------|----------------------------------|-----------------------|-------------|--------------|
| DH1       | 0.3883             | 32                               | 0.124                 | 0.4         | -0.276       |
| DH3       | 1.64               | 16                               | 0.262                 | 0.4         | -0.138       |
| DH5       | 2.892              | 11                               | 0.318                 | 0.4         | -0.082       |

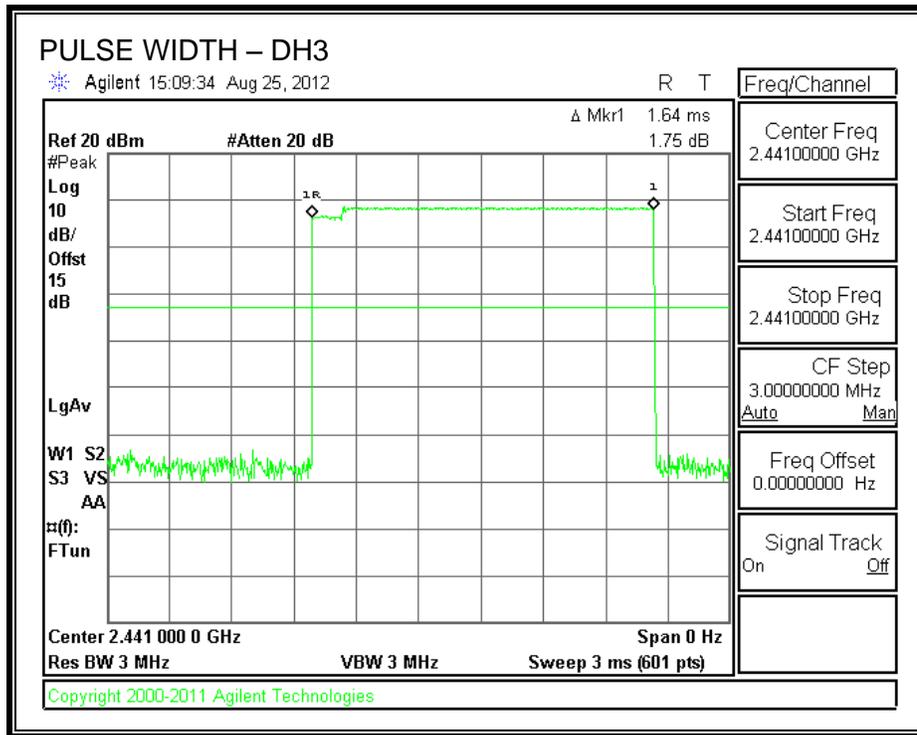
**PULSE WIDTH - DH1**



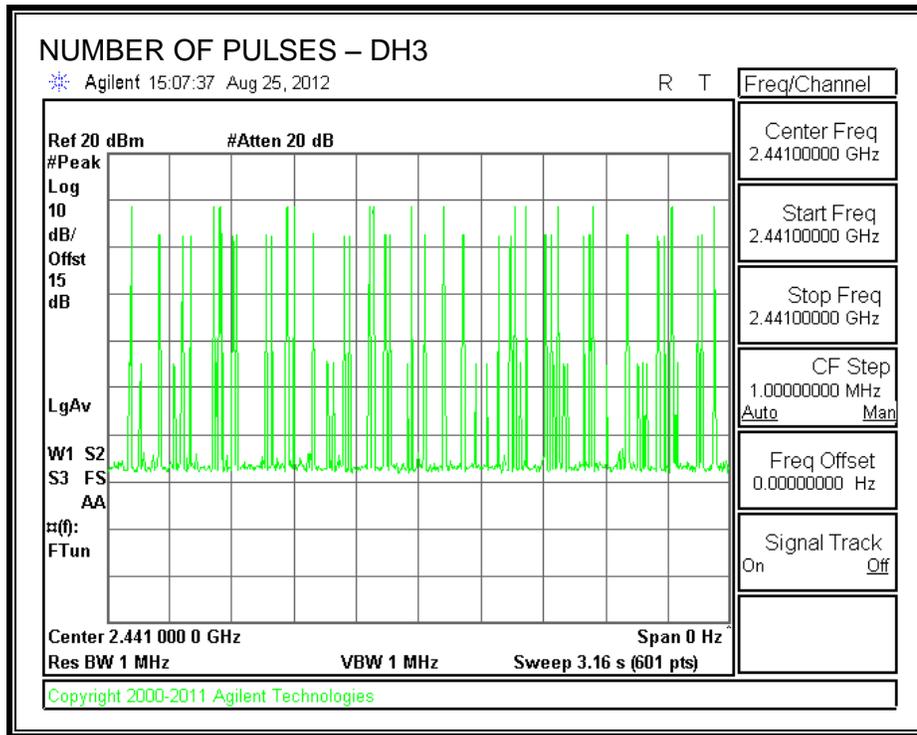
**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH1**



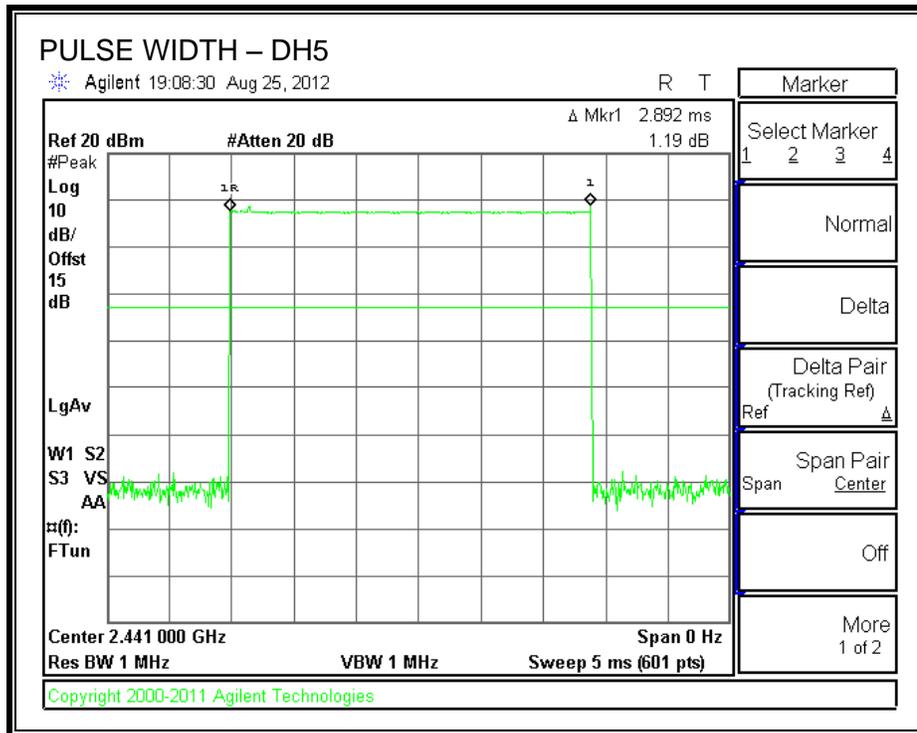
**PULSE WIDTH – DH3**



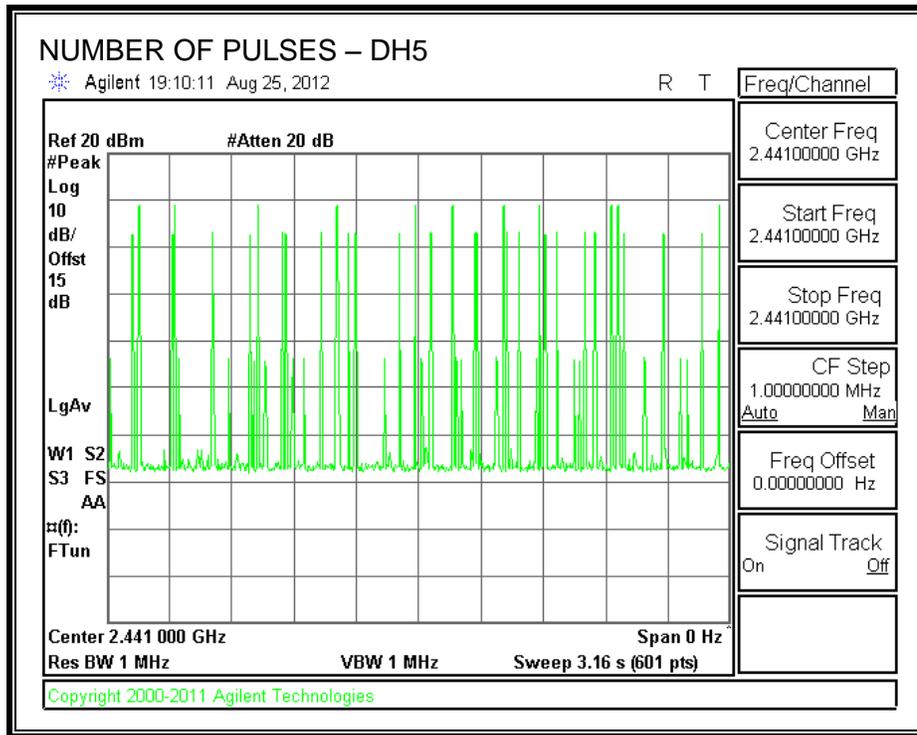
**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3**



**PULSE WIDTH – DH5**



**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH5**



## 9.2.5. 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.

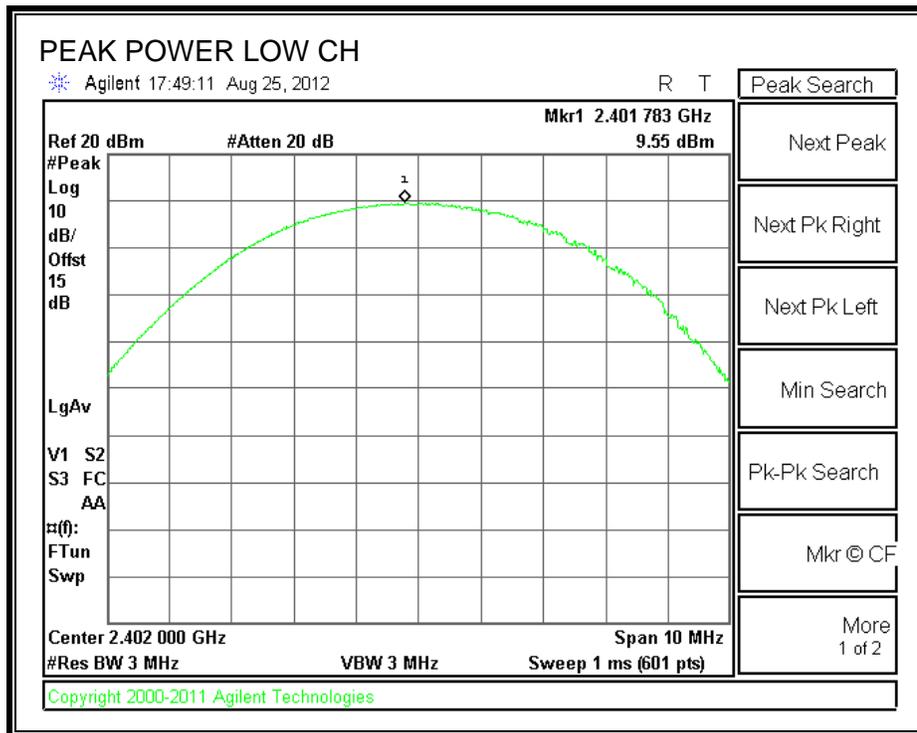
### TEST PROCEDURE

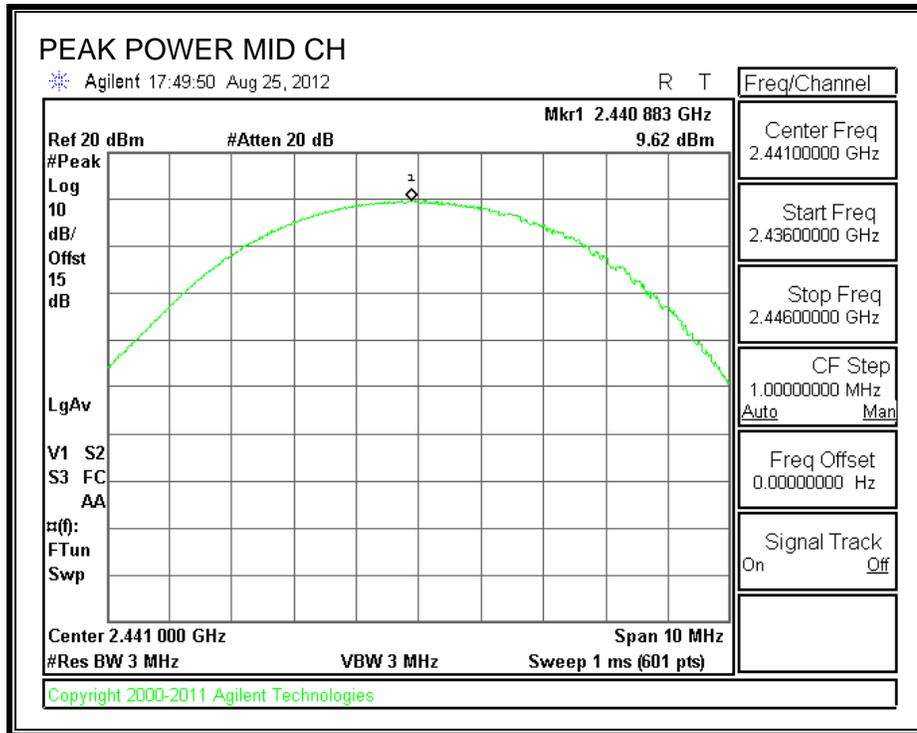
The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

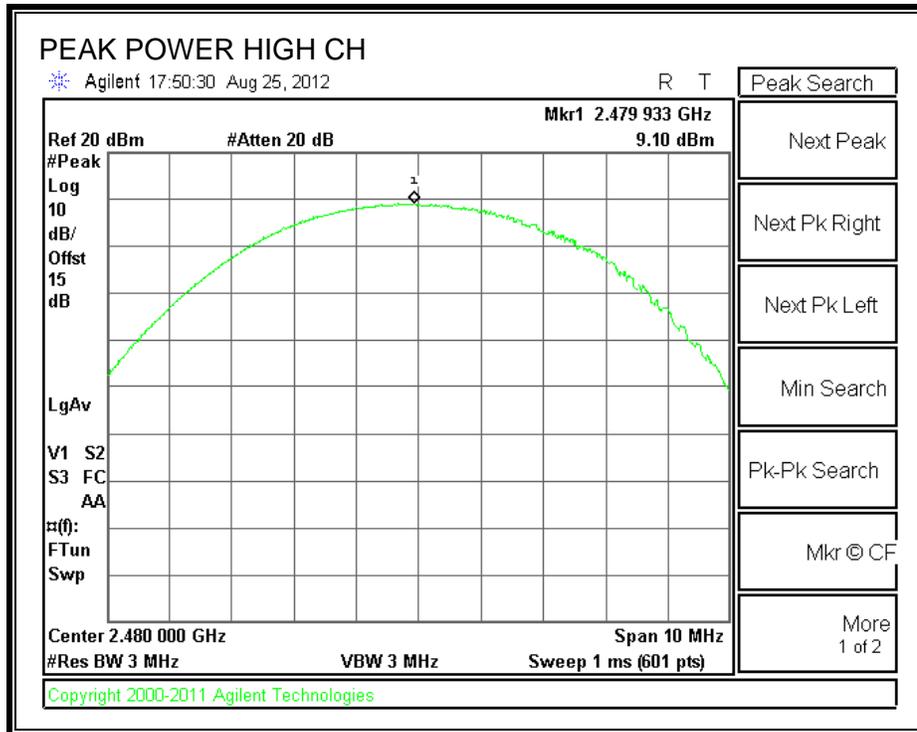
### RESULTS

| Channel | Frequency (MHz) | Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---------|-----------------|--------------------|-------------|-------------|
| Low     | 2402            | 9.55               | 30          | -20.45      |
| Middle  | 2441            | 9.62               | 30          | -20.38      |
| High    | 2480            | 9.10               | 30          | -20.90      |

**OUTPUT POWER**







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### 9.2.6. 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 10.7dB (including 10 dB pad and .7 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     | 2402            | 6.60                |
| Middle  | 2441            | 6.90                |
| High    | 2480            | 6.20                |

## **9.2.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

IC RSS-210 A8.5

Limit = -20 dBc

### **TEST PROCEDURE**

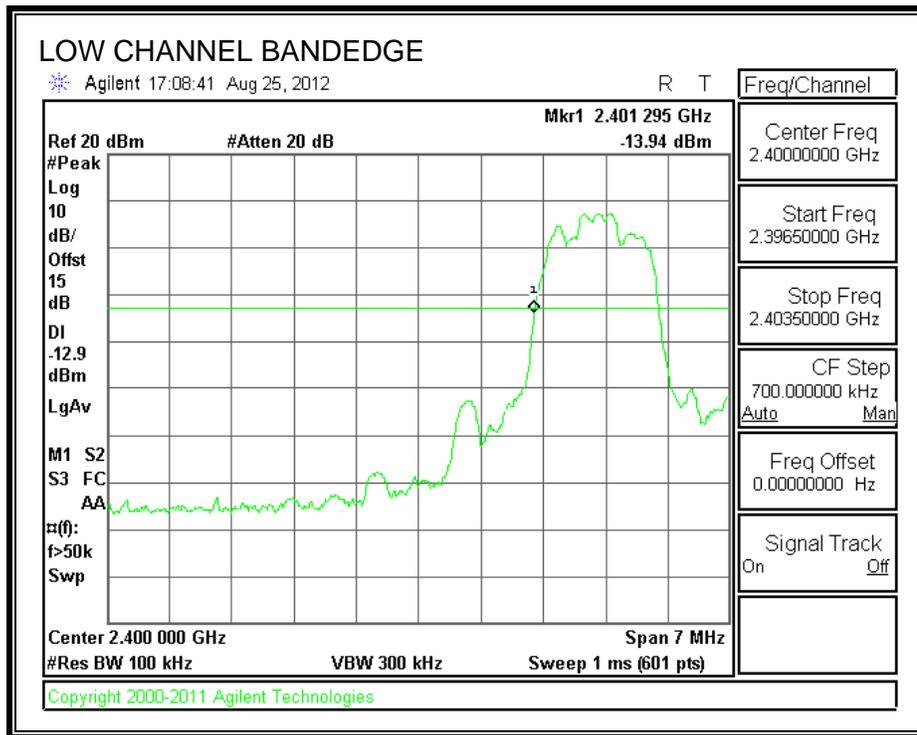
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

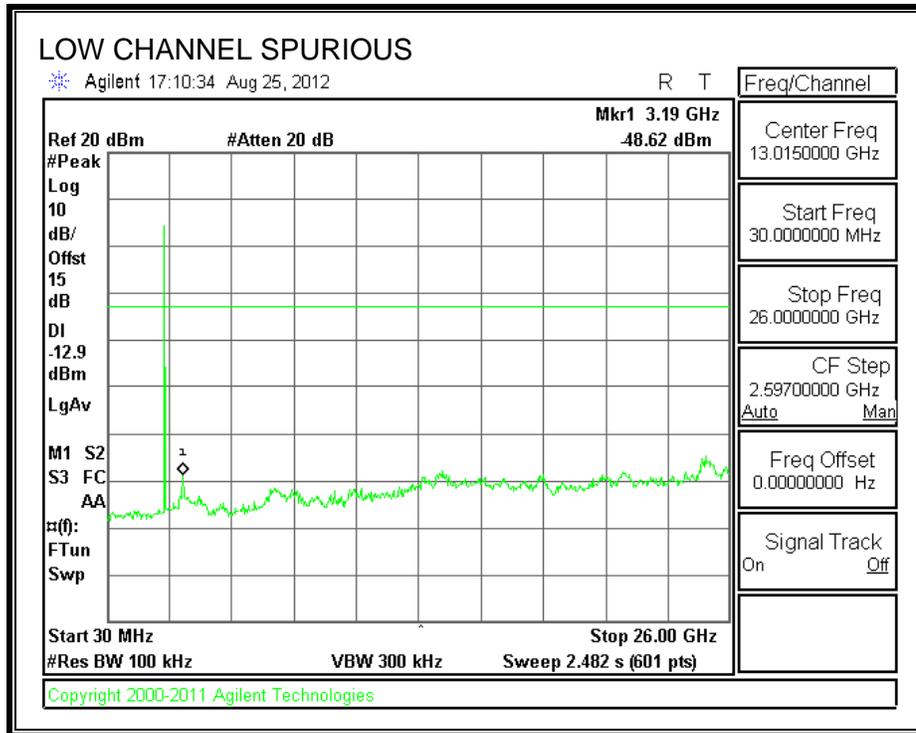
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

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

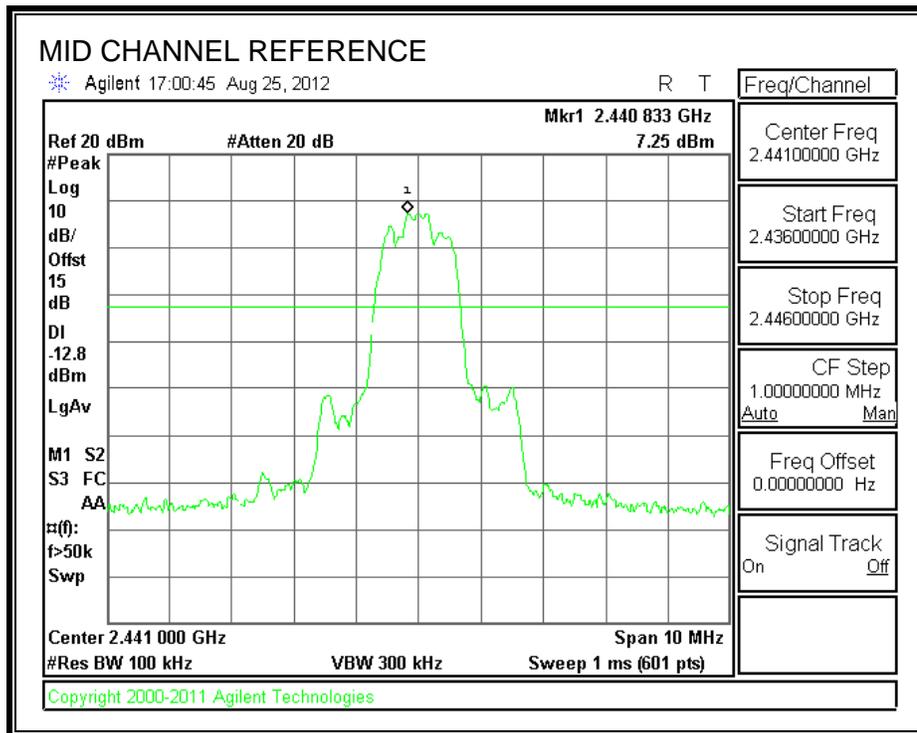
### **RESULTS**

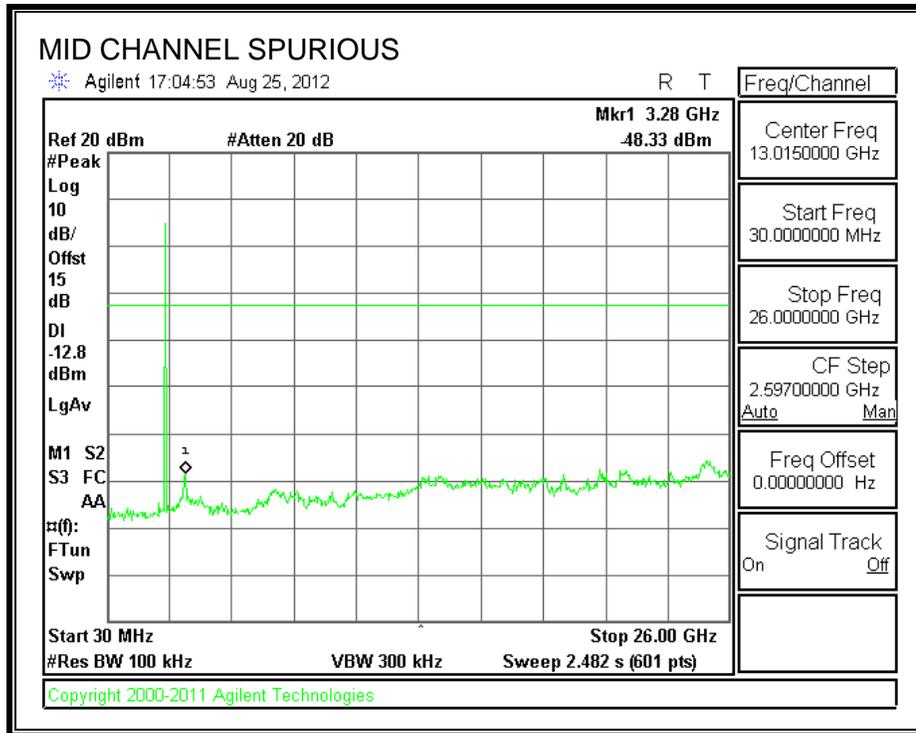
**SPURIOUS EMISSIONS, LOW CHANNEL**



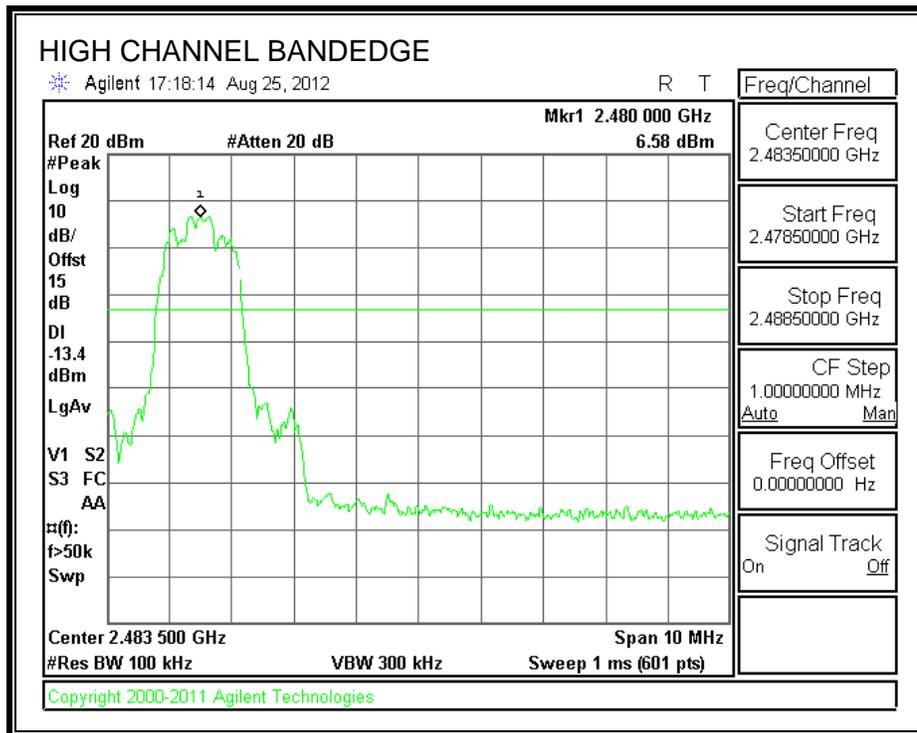


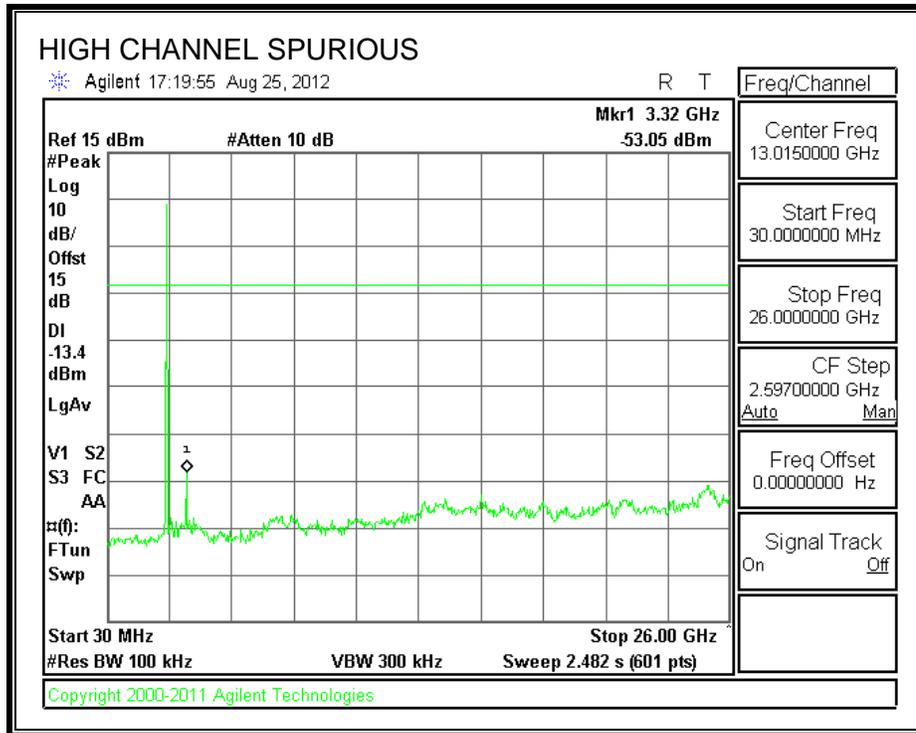
**SPURIOUS EMISSIONS, MID CHANNEL**



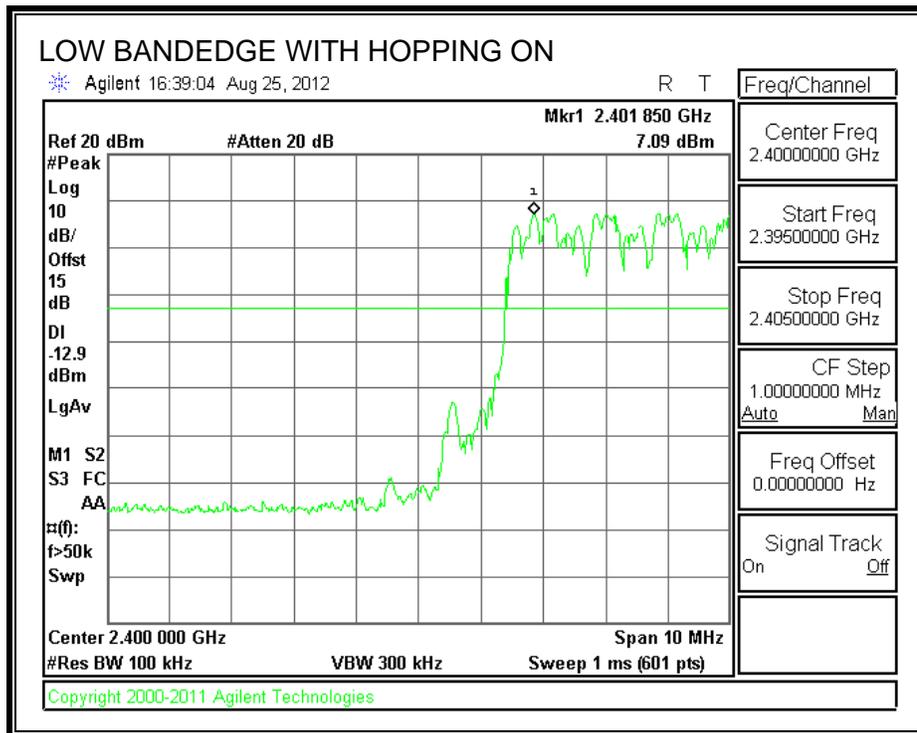


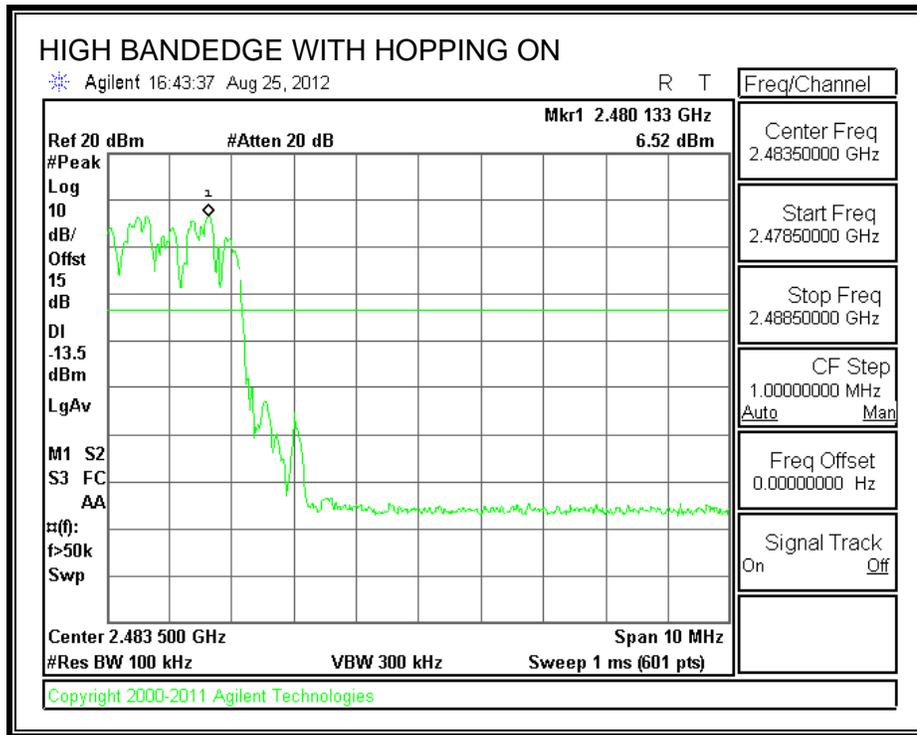
**SPURIOUS EMISSIONS, HIGH CHANNEL**





**SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON**





## 10. RADIATED TEST RESULTS

### 10.1. 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, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

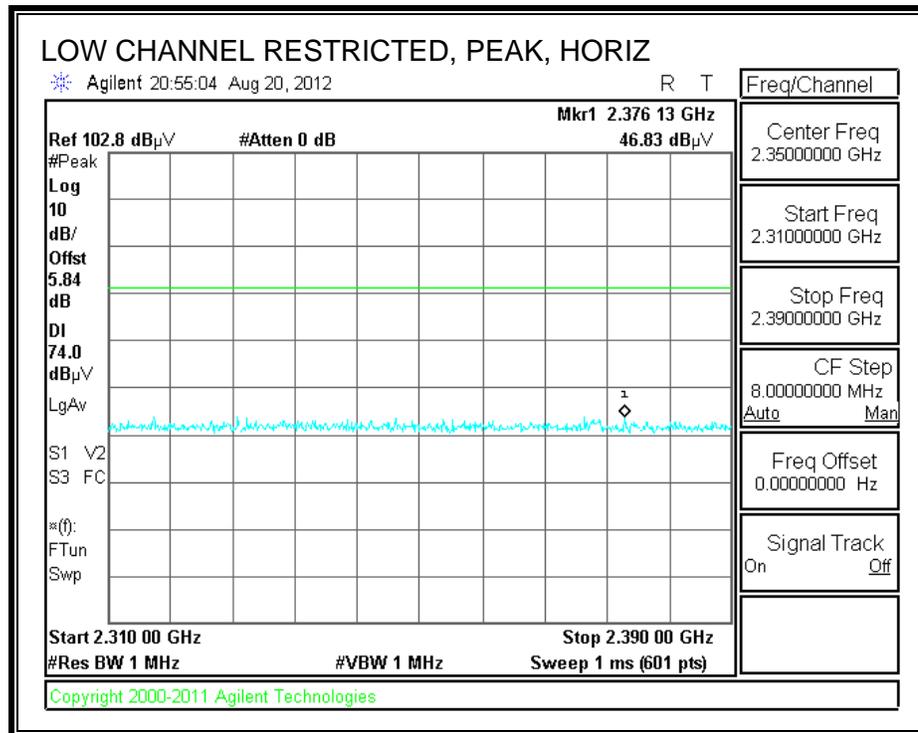
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

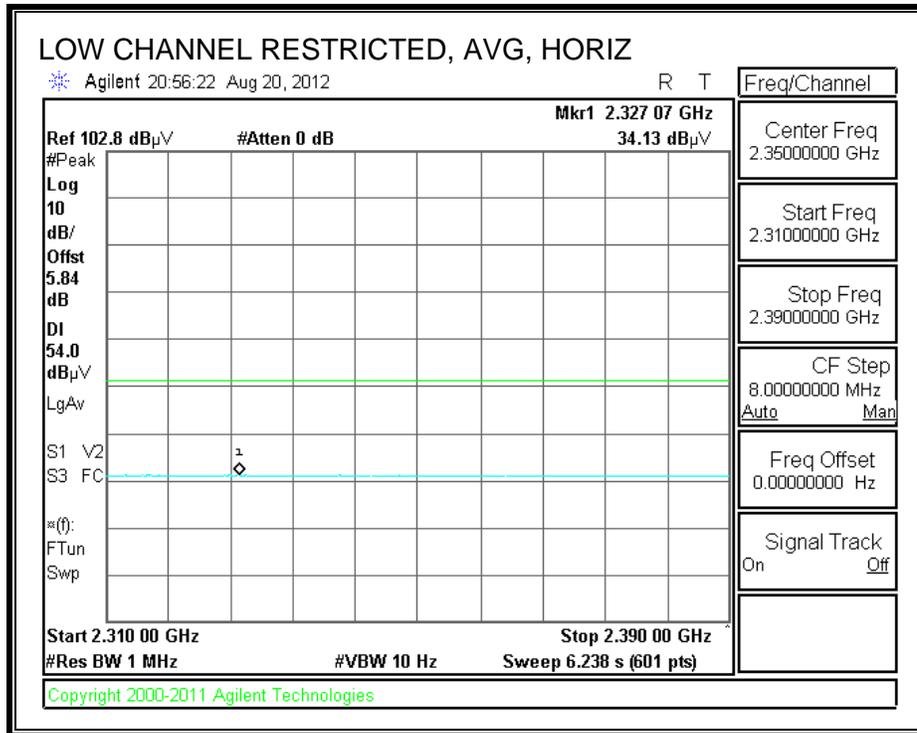
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

## 10.2. TRANSMITTER ABOVE 1 GHz

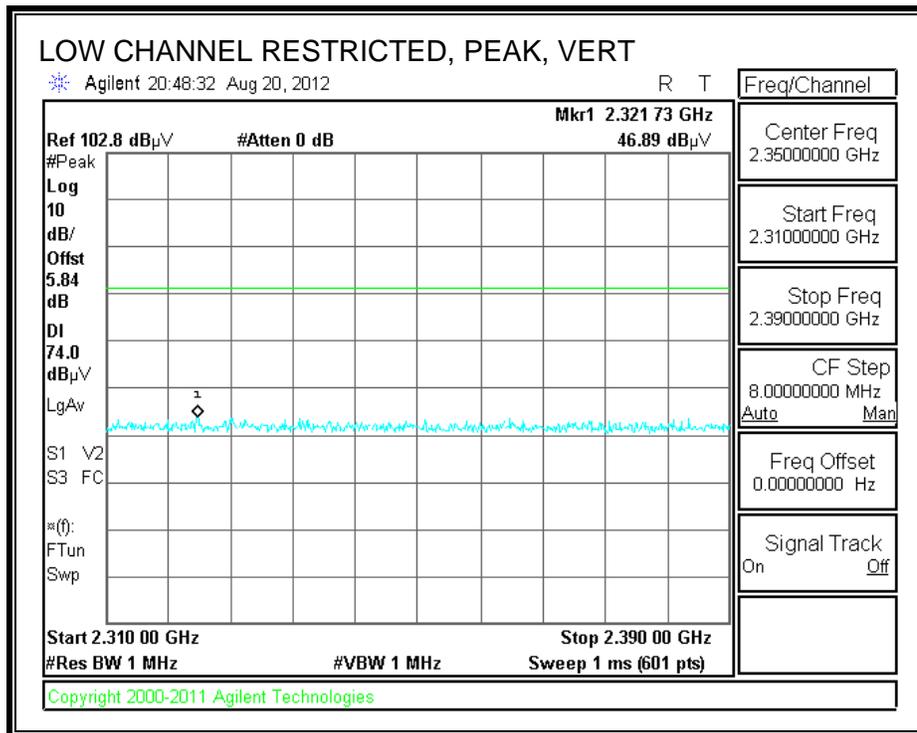
### 10.2.1. BASIC DATA RATE GFSK MODULATION

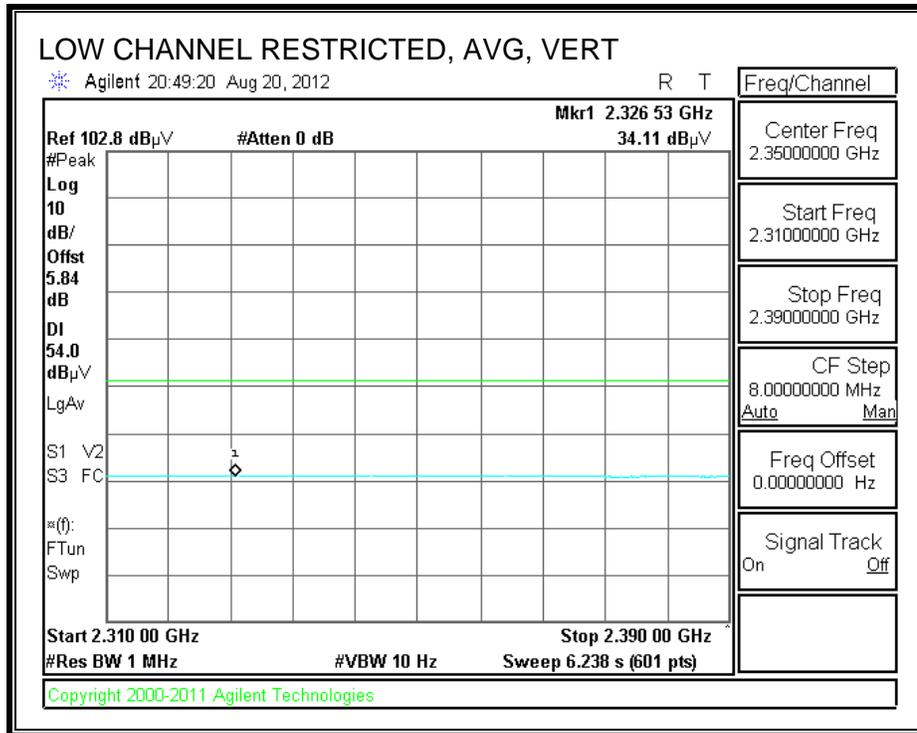
#### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



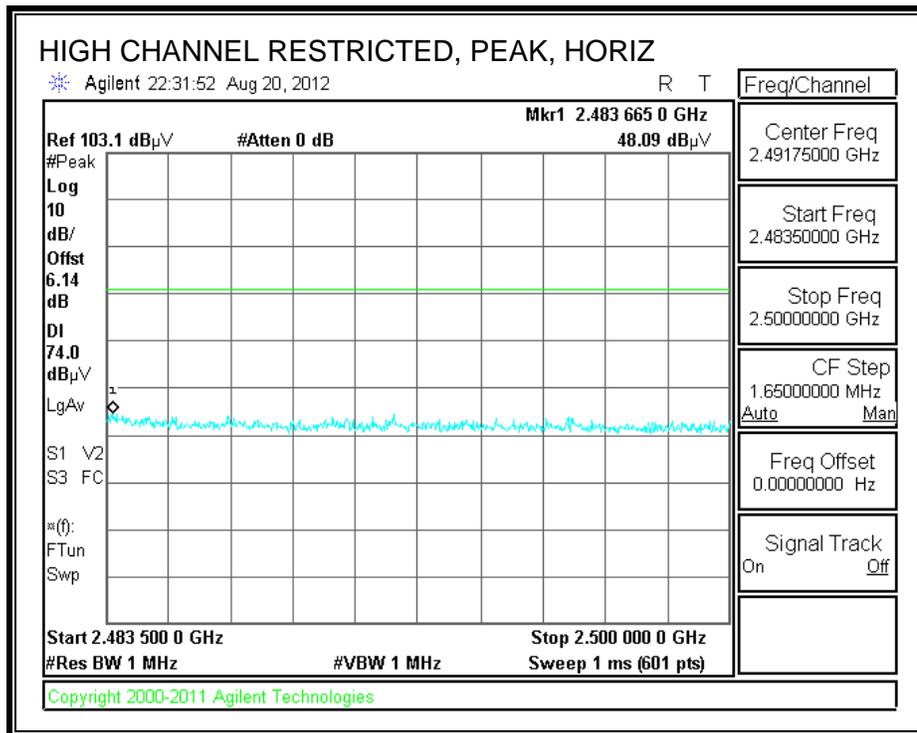


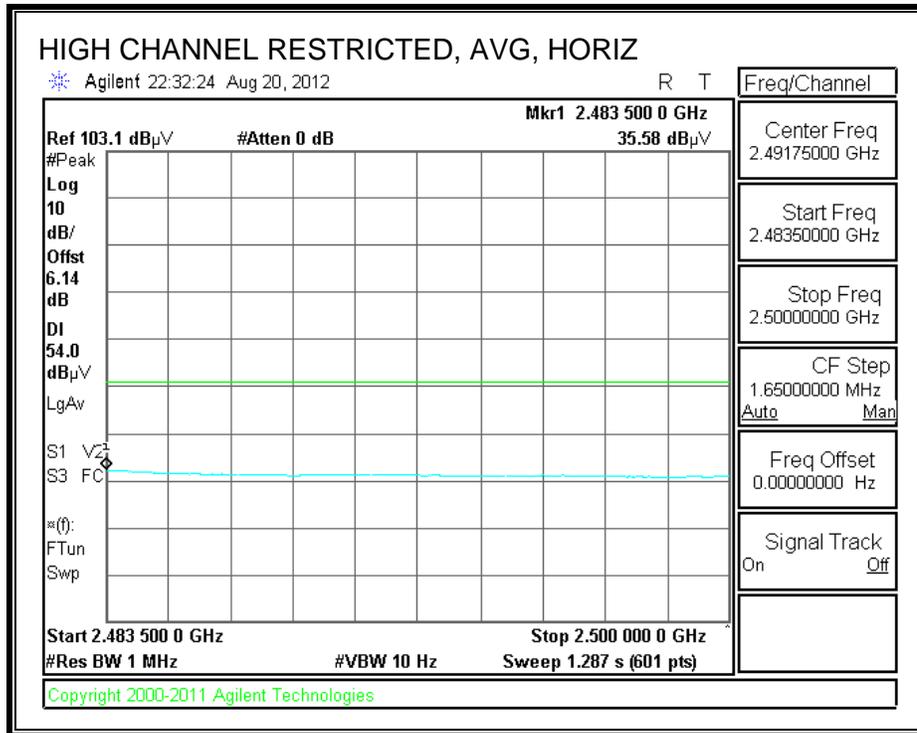
**RESTRICTED BANEDGE (LOW CHANNEL, VERTICAL)**



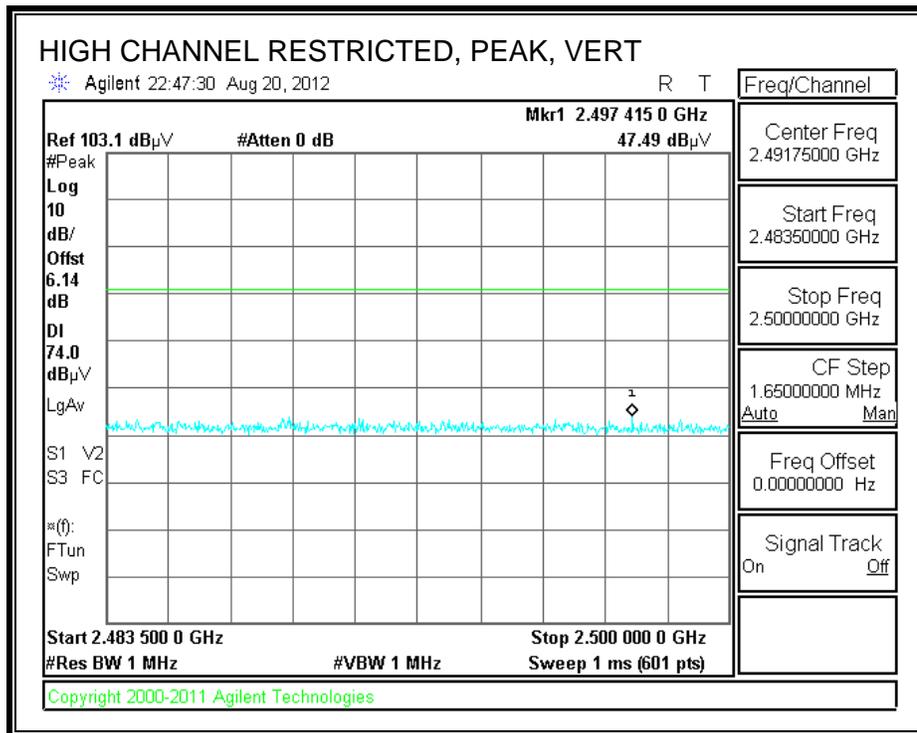


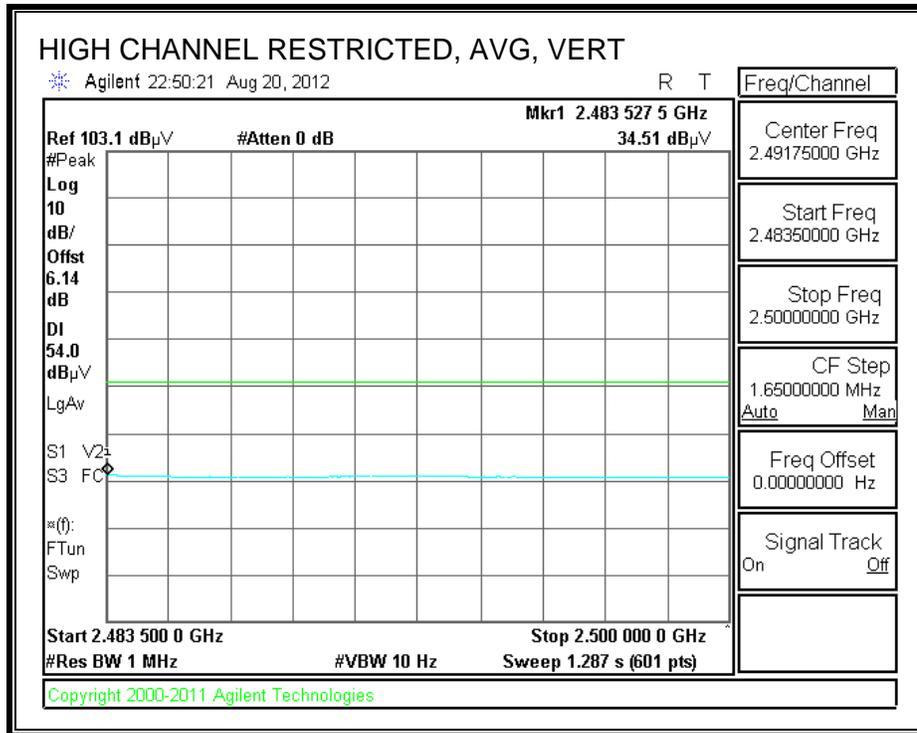
**RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)**





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



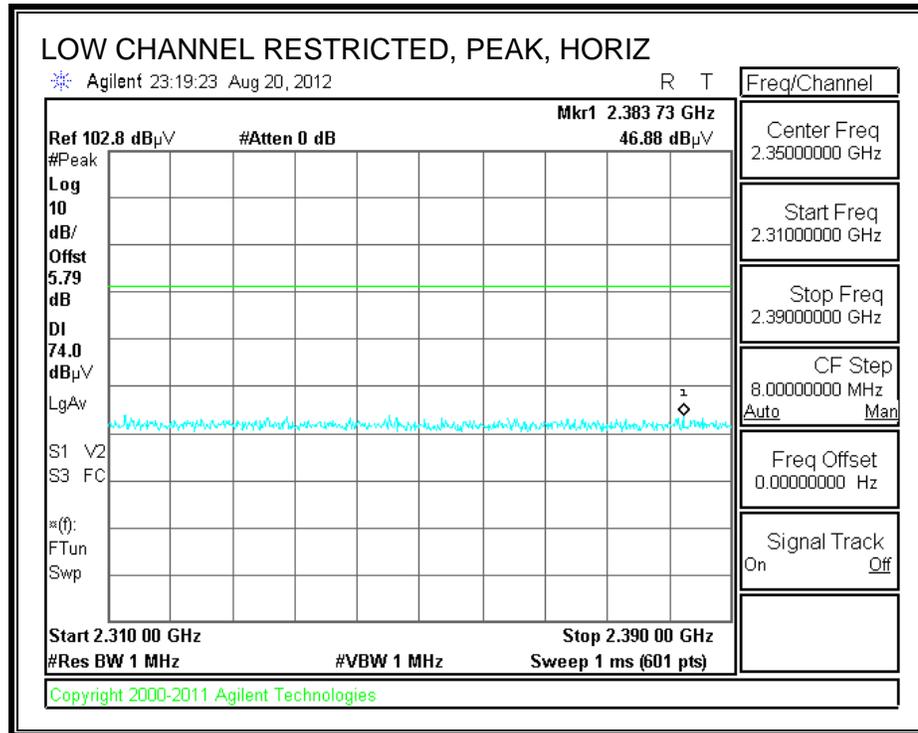


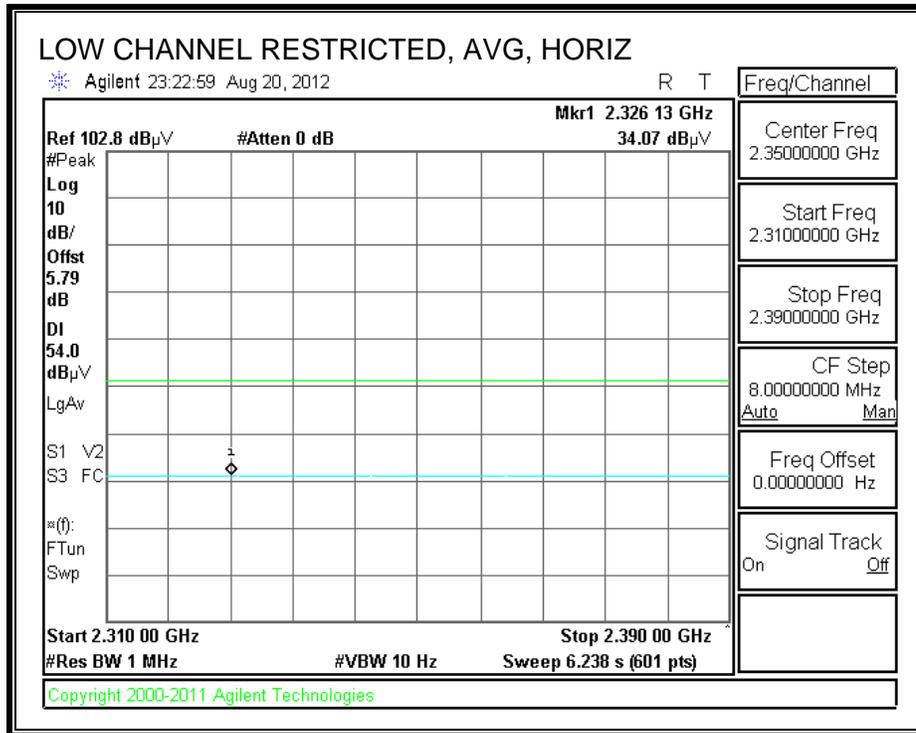
**HARMONICS AND SPURIOUS EMISSIONS**

| <b>High Frequency Measurement</b><br>Compliance Certification Services, Fremont 5m Chamber-A   |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
|--|-----------------------|---------------------------------|--------------------------------|-----------------------|------------------------------|--------|-----------|------------------------|-------------|------------|---------------|-----------------------------|-----------|------------|---------------|---------------|-----------------------|--------------|----------------|---------|------------------------------|--------|---------------------|---------|------------------------------|------------|---------------------------|----------------|------------------|------------|------------------------------|---------|--------------------------|----|----------------|------|--------------------------------|--------|-----------------------|----|------------|-----|------------------|--|--|--|--|-------|-----|-------|-------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---------------|-------|-----|-------|-------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---------------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-----|-------|-------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---------------|-------|-----|-------|-------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---------------|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-----|-------|-------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---------------|-------|-----|-------|-------|------|-----|-------|-----|-----|------|------|----|----|-------|-------|---------------|
| Company:   |                       | LG Electronics Mobilecomm U.S.A |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Project #:   |                       | 12U14550                        |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Date:  |                       | 8/21/2012                       |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Test Engineer:   |                       | Thanh Nguyen                    |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Configuration:   |                       | EUT at worst position           |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Mode:  |                       | Transmit GFSK                   |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| <b>Test Equipment:</b>   |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Horn 1-18GHz   |                       |                                 |                                | Pre-amplifier 1-26GHz |                              |        |           | Pre-amplifier 26-40GHz |             |            |               | Horn > 18GHz                |           |            |               | Limit         |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| T73; S/N: 6717 @3m   |                       |                                 |                                | T144 Miteq 3008A00931 |                              |        |           |                        |             |            |               | T39; ARA 18-26GHz; S/N:1013 |           |            |               | FCC 15.205    |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Hi Frequency Cables  |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 3' cable 22807700  |                       |                                 |                                | 12' cable 22807600    |                              |        |           | 20' cable 22807500     |             |            |               | HPF                         |           |            |               | Reject Filter |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 3' cable 22807700  |                       |                                 |                                | 12' cable 22807600    |                              |        |           | 20' cable 22807500     |             |            |               |                             |           |            |               | R_001         |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <thead> <tr> <th>f GHz</th> <th>Dist (m)</th> <th>Read Pk dBuV</th> <th>Read Avg. dBuV</th> <th>AF dB/m</th> <th>CL dB</th> <th>Amp dB</th> <th>D Corr dB</th> <th>Fltr dB</th> <th>Peak dBuV/m</th> <th>Avg dBuV/m</th> <th>Pk Lim dBuV/m</th> <th>Avg Lim dBuV/m</th> <th>Pk Mar dB</th> <th>Avg Mar dB</th> <th>Notes (V/H)</th> </tr> </thead> <tbody> <tr> <td colspan="16" style="padding: 2px;">Low ch</td> </tr> <tr> <td>4.804</td> <td>3.0</td> <td>41.43</td> <td>27.34</td> <td>33.4</td> <td>6.2</td> <td>-35.5</td> <td>0.0</td> <td>0.0</td> <td>45.5</td> <td>31.4</td> <td>74</td> <td>54</td> <td>-28.5</td> <td>-22.6</td> <td>Noise floor/V</td> </tr> <tr> <td>4.804</td> <td>3.0</td> <td>41.23</td> <td>27.36</td> <td>33.4</td> <td>6.2</td> <td>-35.5</td> <td>0.0</td> <td>0.0</td> <td>45.3</td> <td>31.5</td> <td>74</td> <td>54</td> <td>-28.7</td> <td>-22.5</td> <td>Noise floor/H</td> </tr> <tr> <td colspan="16" style="padding: 2px;">Mid Ch</td> </tr> <tr> <td>4.882</td> <td>3.0</td> <td>40.63</td> <td>27.22</td> <td>33.5</td> <td>6.2</td> <td>-35.5</td> <td>0.0</td> <td>0.0</td> <td>44.9</td> <td>31.5</td> <td>74</td> <td>54</td> <td>-29.1</td> <td>-22.5</td> <td>Noise floor/V</td> </tr> <tr> <td>4.882</td> <td>3.0</td> <td>40.52</td> <td>27.50</td> <td>33.5</td> <td>6.2</td> <td>-35.5</td> <td>0.0</td> <td>0.0</td> <td>44.8</td> <td>31.7</td> <td>74</td> <td>54</td> <td>-29.2</td> <td>-22.3</td> <td>Noise floor/H</td> </tr> <tr> <td colspan="16" style="padding: 2px;">High ch</td> </tr> <tr> <td>4.960</td> <td>3.0</td> <td>40.23</td> <td>27.36</td> <td>33.6</td> <td>6.3</td> <td>-35.5</td> <td>0.0</td> <td>0.0</td> <td>44.6</td> <td>31.7</td> <td>74</td> <td>54</td> <td>-29.4</td> <td>-22.3</td> <td>Noise floor/V</td> </tr> <tr> <td>4.960</td> <td>3.0</td> <td>40.63</td> <td>27.33</td> <td>33.6</td> <td>6.3</td> <td>-35.5</td> <td>0.0</td> <td>0.0</td> <td>45.0</td> <td>31.7</td> <td>74</td> <td>54</td> <td>-29.0</td> <td>-22.3</td> <td>Noise floor/H</td> </tr> </tbody> </table> |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               | f GHz         | Dist (m)              | Read Pk dBuV | Read Avg. dBuV | AF dB/m | CL dB                        | Amp dB | D Corr dB           | Fltr dB | Peak dBuV/m                  | Avg dBuV/m | Pk Lim dBuV/m             | Avg Lim dBuV/m | Pk Mar dB        | Avg Mar dB | Notes (V/H)                  | Low ch  |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  | 4.804 | 3.0 | 41.43 | 27.34 | 33.4 | 6.2 | -35.5 | 0.0 | 0.0 | 45.5 | 31.4 | 74 | 54 | -28.5 | -22.6 | Noise floor/V | 4.804 | 3.0 | 41.23 | 27.36 | 33.4 | 6.2 | -35.5 | 0.0 | 0.0 | 45.3 | 31.5 | 74 | 54 | -28.7 | -22.5 | Noise floor/H | Mid Ch |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4.882 | 3.0 | 40.63 | 27.22 | 33.5 | 6.2 | -35.5 | 0.0 | 0.0 | 44.9 | 31.5 | 74 | 54 | -29.1 | -22.5 | Noise floor/V | 4.882 | 3.0 | 40.52 | 27.50 | 33.5 | 6.2 | -35.5 | 0.0 | 0.0 | 44.8 | 31.7 | 74 | 54 | -29.2 | -22.3 | Noise floor/H | High ch |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4.960 | 3.0 | 40.23 | 27.36 | 33.6 | 6.3 | -35.5 | 0.0 | 0.0 | 44.6 | 31.7 | 74 | 54 | -29.4 | -22.3 | Noise floor/V | 4.960 | 3.0 | 40.63 | 27.33 | 33.6 | 6.3 | -35.5 | 0.0 | 0.0 | 45.0 | 31.7 | 74 | 54 | -29.0 | -22.3 | Noise floor/H |
| f GHz  | Dist (m)              | Read Pk dBuV                    | Read Avg. dBuV                 | AF dB/m               | CL dB                        | Amp dB | D Corr dB | Fltr dB                | Peak dBuV/m | Avg dBuV/m | Pk Lim dBuV/m | Avg Lim dBuV/m              | Pk Mar dB | Avg Mar dB | Notes (V/H)   |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Low ch   |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 4.804  | 3.0                   | 41.43                           | 27.34                          | 33.4                  | 6.2                          | -35.5  | 0.0       | 0.0                    | 45.5        | 31.4       | 74            | 54                          | -28.5     | -22.6      | Noise floor/V |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 4.804  | 3.0                   | 41.23                           | 27.36                          | 33.4                  | 6.2                          | -35.5  | 0.0       | 0.0                    | 45.3        | 31.5       | 74            | 54                          | -28.7     | -22.5      | Noise floor/H |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Mid Ch   |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 4.882  | 3.0                   | 40.63                           | 27.22                          | 33.5                  | 6.2                          | -35.5  | 0.0       | 0.0                    | 44.9        | 31.5       | 74            | 54                          | -29.1     | -22.5      | Noise floor/V |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 4.882  | 3.0                   | 40.52                           | 27.50                          | 33.5                  | 6.2                          | -35.5  | 0.0       | 0.0                    | 44.8        | 31.7       | 74            | 54                          | -29.2     | -22.3      | Noise floor/H |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| High ch  |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 4.960  | 3.0                   | 40.23                           | 27.36                          | 33.6                  | 6.3                          | -35.5  | 0.0       | 0.0                    | 44.6        | 31.7       | 74            | 54                          | -29.4     | -22.3      | Noise floor/V |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| 4.960  | 3.0                   | 40.63                           | 27.33                          | 33.6                  | 6.3                          | -35.5  | 0.0       | 0.0                    | 45.0        | 31.7       | 74            | 54                          | -29.0     | -22.3      | Noise floor/H |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| Rev. 10.24.11  |                       |                                 |                                |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |
| <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">f</td> <td style="width: 35%;">Measurement Frequency</td> <td style="width: 10%;">Amp</td> <td style="width: 15%;">Preamp Gain</td> <td style="width: 10%;">Avg Lim</td> <td style="width: 15%;">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               |                       |                              |        |           |                        |             |            |               |                             |           |            |               |               |                       |              |                |         |                              |        |                     |         |                              |            |                           |                |                  |            |                              |         |                          |    |                |      |                                |        |                       |    |            |     |                  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |       |     |       |       |      |     |       |     |     |      |      |    |    |       |       |               |

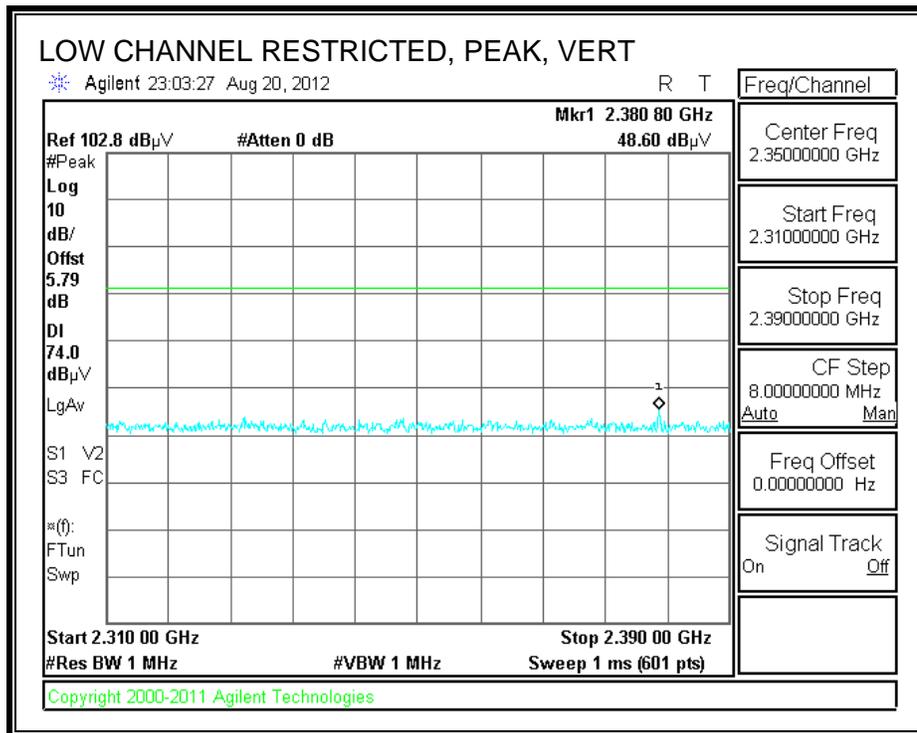
## 10.2.2. ENHANCED DATA RATE 8PSK MODULATION

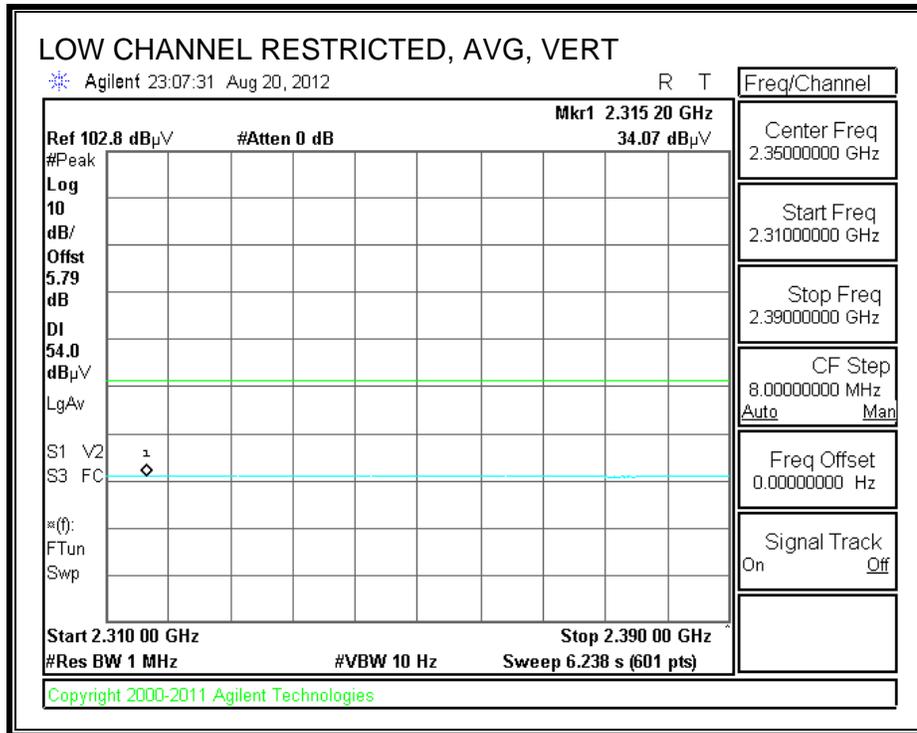
### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



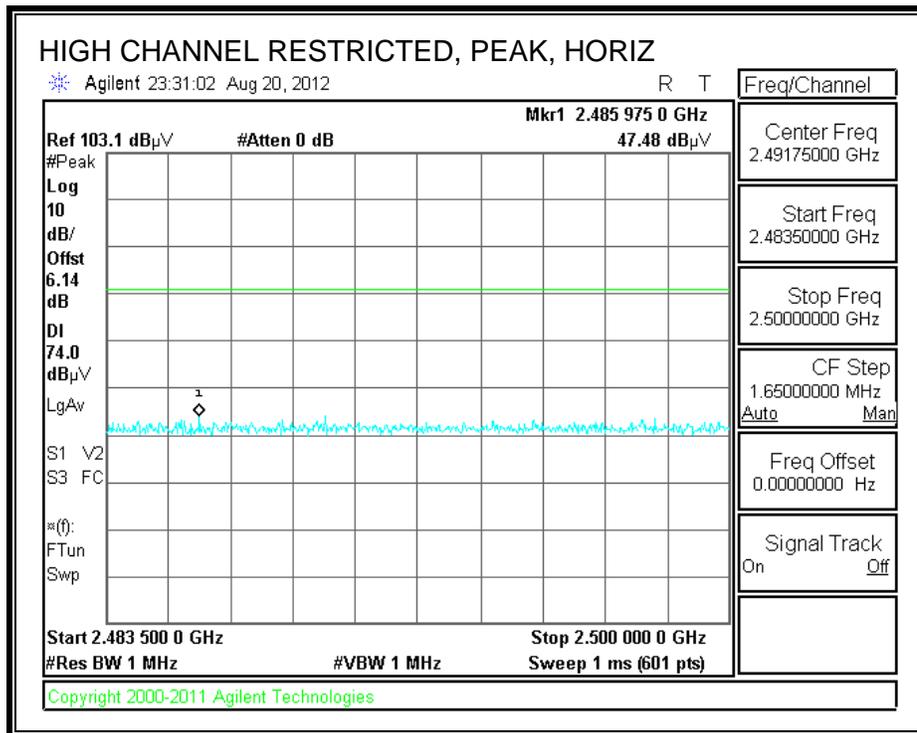


**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**



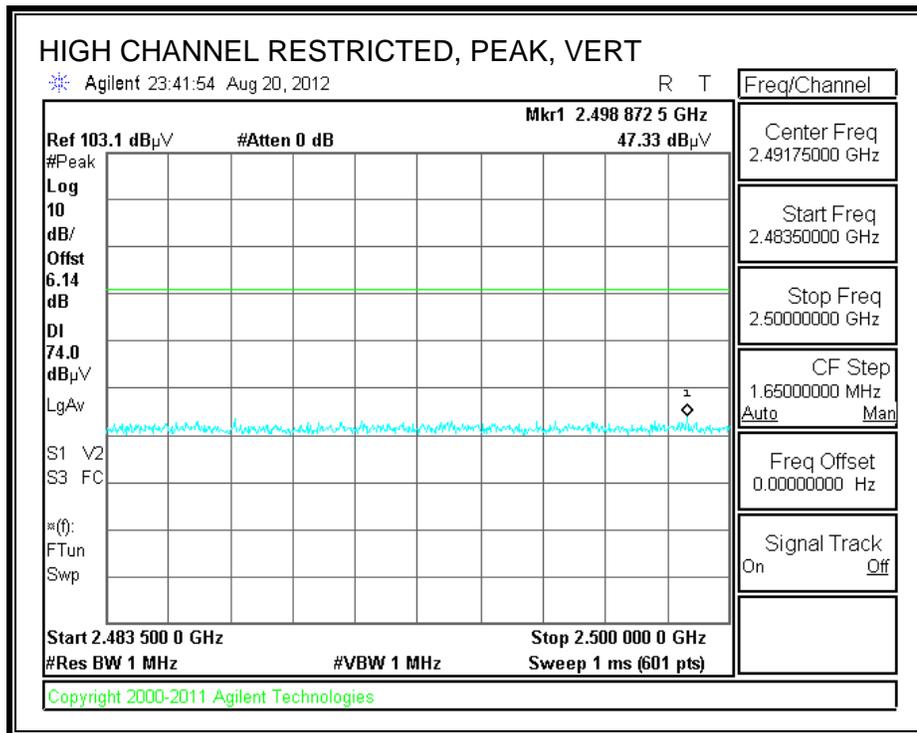


**RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)**





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





**HARMONICS AND SPURIOUS EMISSIONS**

**High Frequency Measurement**  
 Compliance Certification Services, Fremont 5m Chamber-A

Company: LG Electronics Mobilecomm U.S.A  
 Project #: 12U14550  
 Date: 8/21/2012  
 Test Engineer: Thanh Nguyen  
 Configuration: EUT at worst position  
 Mode: Transmit 8PSK

**Test Equipment:**

|                    |                       |                        |                             |            |
|--------------------|-----------------------|------------------------|-----------------------------|------------|
| Horn 1-18GHz       | Pre-amplifier 1-26GHz | Pre-amplifier 26-40GHz | Horn > 18GHz                | Limit      |
| T73; S/N: 6717 @3m | T144 Miteq 3008A00931 |                        | T39; ARA 18-26GHz; S/N:1013 | FCC 15.205 |

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 |     | R_001         |  |

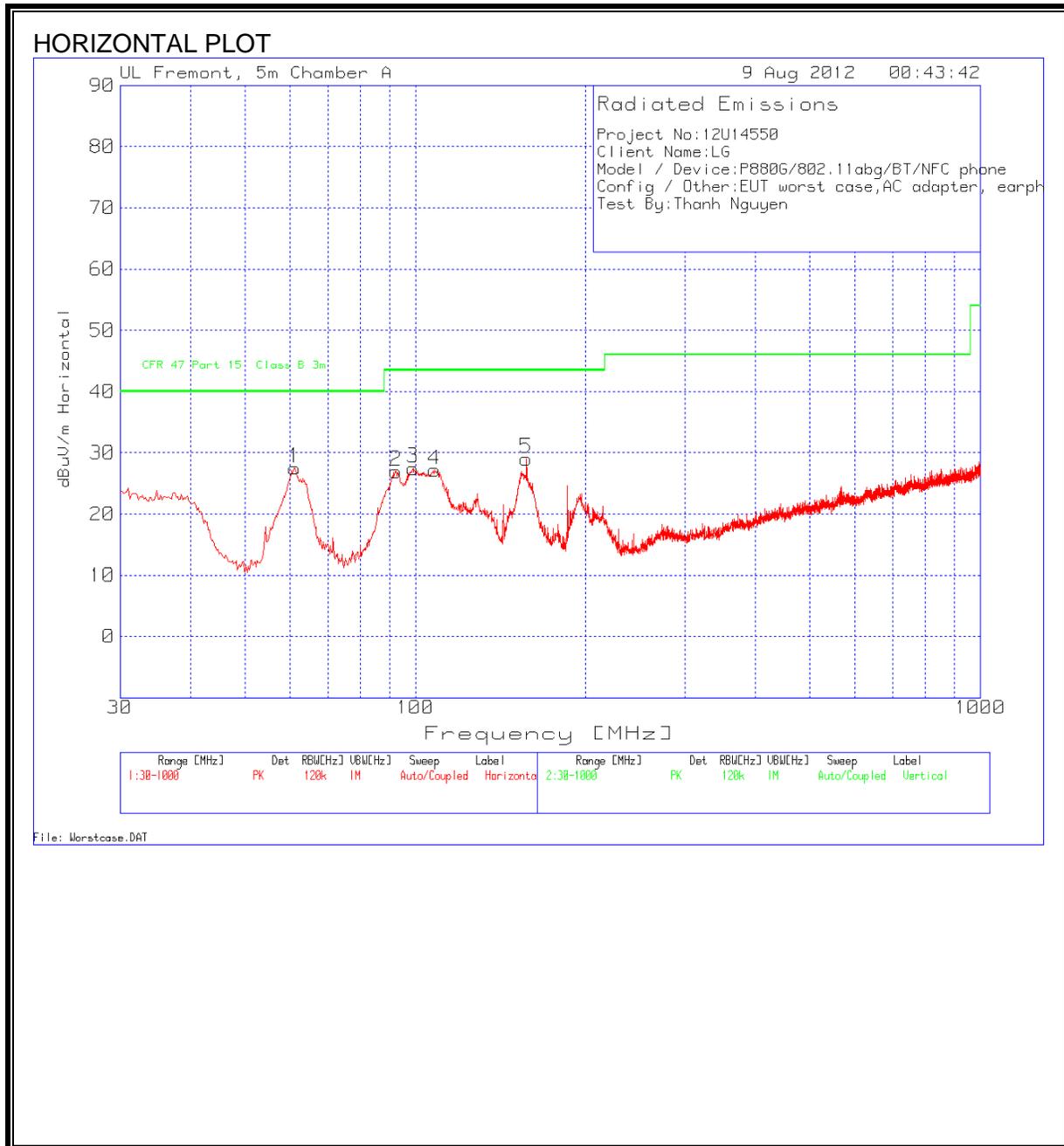
| f<br>GHz       | Dist<br>(m) | Read Pk<br>dBuV | Read Avg.<br>dBuV | AF<br>dB/m | CL<br>dB | Amp<br>dB | D Corr<br>dB | Filtr<br>dB | Peak<br>dBuV/m | Avg<br>dBuV/m | Pk Lim<br>dBuV/m | Avg Lim<br>dBuV/m | Pk Mar<br>dB | Avg Mar<br>dB | Notes<br>(V/H) |
|----------------|-------------|-----------------|-------------------|------------|----------|-----------|--------------|-------------|----------------|---------------|------------------|-------------------|--------------|---------------|----------------|
| <b>Low ch</b>  |             |                 |                   |            |          |           |              |             |                |               |                  |                   |              |               |                |
| 4.804          | 3.0         | 41.33           | 27.69             | 33.4       | 6.2      | -35.5     | 0.0          | 0.0         | 45.4           | 31.8          | 74               | 54                | -28.6        | -22.2         | Noise floor/V  |
| 4.804          | 3.0         | 41.01           | 27.72             | 33.4       | 6.2      | -35.5     | 0.0          | 0.0         | 45.1           | 31.8          | 74               | 54                | -28.9        | -22.2         | Noise floor/H  |
| <b>Mid Ch</b>  |             |                 |                   |            |          |           |              |             |                |               |                  |                   |              |               |                |
| 4.882          | 3.0         | 40.50           | 27.63             | 33.5       | 6.2      | -35.5     | 0.0          | 0.0         | 44.7           | 31.9          | 74               | 54                | -29.3        | -22.1         | Noise floor/V  |
| 4.882          | 3.0         | 40.54           | 27.58             | 33.5       | 6.2      | -35.5     | 0.0          | 0.0         | 44.8           | 31.8          | 74               | 54                | -29.2        | -22.2         | Noise floor/H  |
| <b>High ch</b> |             |                 |                   |            |          |           |              |             |                |               |                  |                   |              |               |                |
| 4.960          | 3.0         | 39.98           | 27.41             | 33.6       | 6.3      | -35.5     | 0.0          | 0.0         | 44.4           | 31.8          | 74               | 54                | -29.6        | -22.2         | Noise floor/V  |
| 4.960          | 3.0         | 41.23           | 27.63             | 33.6       | 6.3      | -35.5     | 0.0          | 0.0         | 45.6           | 32.0          | 74               | 54                | -28.4        | -22.0         | Noise floor/H  |

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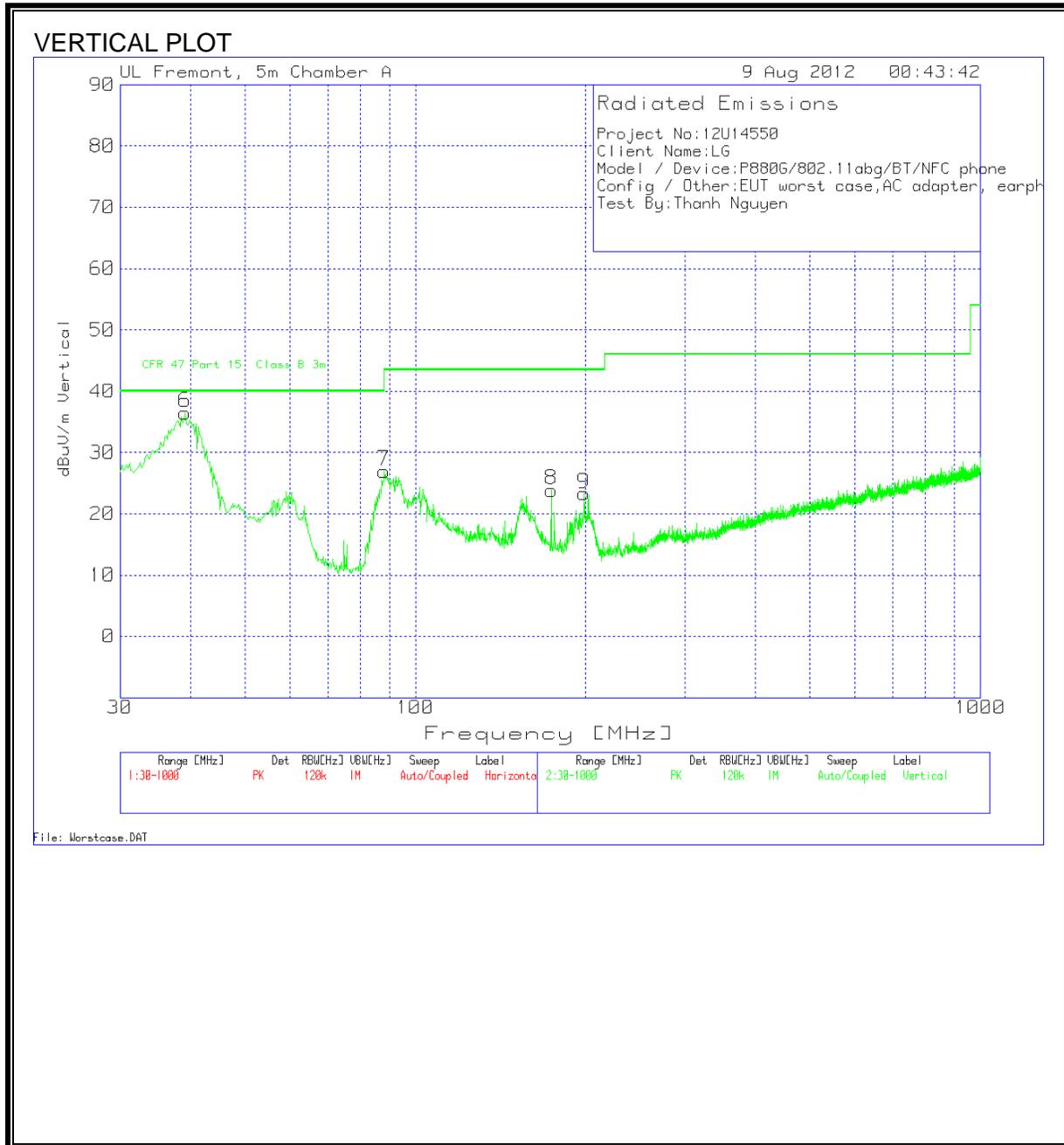
|      |                       |        |                                |         |                              |
|------|-----------------------|--------|--------------------------------|---------|------------------------------|
| f    | Measurement Frequency | Amp    | Preamp Gain                    | 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               |         |                              |

### 10.3. 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 AND VERTICAL DATA**

|   |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|
| <b>Project No:</b> 12U14550                             |  |  |  |  |  |  |  |  |  |
| <b>Client Name:</b> LG                                  |  |  |  |  |  |  |  |  |  |
| <b>Model / Device:</b> P880G/802.11abg/BT/NFC phone     |  |  |  |  |  |  |  |  |  |
| <b>Config / Other:</b> EUT worst case,AC adapter, earph |  |  |  |  |  |  |  |  |  |
| <b>Test By:</b> Thanh Nguyen                            |  |  |  |  |  |  |  |  |  |

| <b>Horizontal 30 - 1000MHz</b> |               |          |                                      |                           |        |                           |        |             |          |
|--------------------------------|---------------|----------|--------------------------------------|---------------------------|--------|---------------------------|--------|-------------|----------|
| Test Frequency                 | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplifie d.TX (dB) | T243 Sunol Bilog.TXT (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 61.209                         | 47.33         | PK       | -27.2                                | 7.4                       | 27.53  | 40                        | -12.47 | 300         | Horz     |
| 92.4181                        | 45.89         | PK       | -27                                  | 8.1                       | 26.99  | 43.5                      | -16.51 | 200         | Horz     |
| 99.0088                        | 44.42         | PK       | -26.9                                | 9.9                       | 27.42  | 43.5                      | -16.08 | 300         | Horz     |
| 108.3133                       | 41.65         | PK       | -26.8                                | 12.3                      | 27.15  | 43.5                      | -16.35 | 300         | Horz     |
| 157.3561                       | 43.49         | PK       | -26.5                                | 12                        | 28.99  | 43.5                      | -14.51 | 200         | Horz     |

| <b>Vertical 30 - 1000MHz</b> |               |          |                                      |                           |        |                           |        |             |          |
|------------------------------|---------------|----------|--------------------------------------|---------------------------|--------|---------------------------|--------|-------------|----------|
| Test Frequency               | Meter Reading | Detector | 25MHz-1GHz ChmbrA Amplifie d.TX (dB) | T243 Sunol Bilog.TXT (dB) | dBuV/m | CFR 47 Part 15 Class B 3m | Margin | Height [cm] | Polarity |
| 39.1107                      | 49.24         | PK       | -27.4                                | 14.6                      | 36.44  | 40                        | -3.56  | 100         | Vert     |
| 39.117                       | 43.71         | QP       | -27.4                                | 14.6                      | 30.91  | 40                        | -9.09  | 344         | Vert     |
| 88.1535                      | 46.52         | PK       | -27                                  | 7.4                       | 26.92  | 43.5                      | -16.58 | 100         | Vert     |
| 174.2206                     | 38.85         | PK       | -26.4                                | 11.4                      | 23.85  | 43.5                      | -19.65 | 100         | Vert     |
| 199.0328                     | 37.28         | PK       | -26.2                                | 12.2                      | 23.28  | 43.5                      | -20.22 | 100         | Vert     |

## 11. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

\*Decreases with the logarithm of the frequency.

### TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

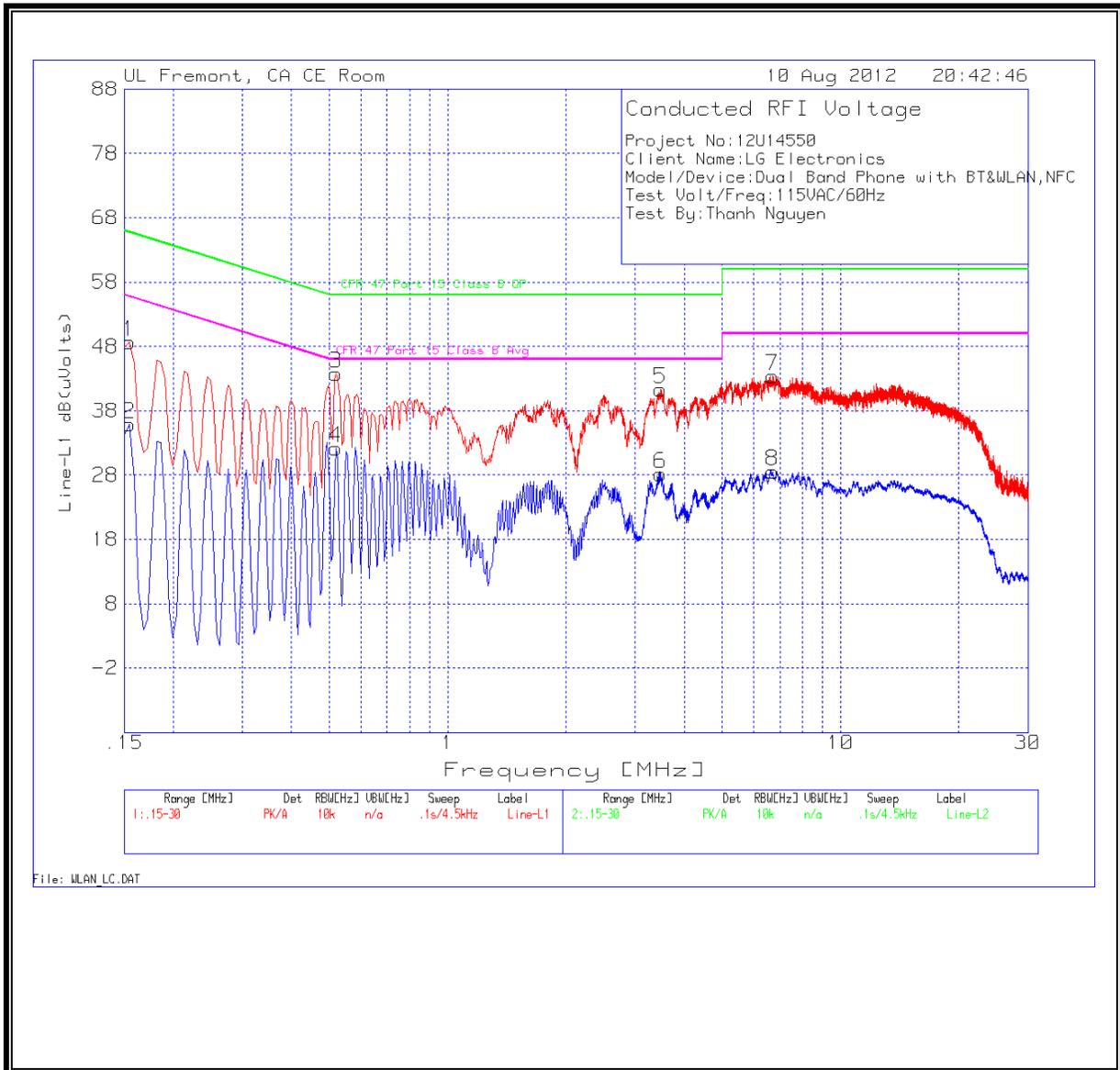
Line conducted data is recorded for both NEUTRAL and HOT lines.

### RESULTS

**6 WORST EMISSIONS**

| Project No:12U14550                            |               |          |                    |                        |            |                           |        |                            |        |
|--|---------------|----------|--------------------|------------------------|------------|---------------------------|--------|----------------------------|--------|
| Client Name:LG Electronics                     |               |          |                    |                        |            |                           |        |                            |        |
| Model/Device: Dual Band Phone with BT&WLAN,NFC |               |          |                    |                        |            |                           |        |                            |        |
| Test Volt/Freq:115VAC/60Hz                     |               |          |                    |                        |            |                           |        |                            |        |
| Test By:Thanh Nguyen                           |               |          |                    |                        |            |                           |        |                            |        |
| Line-L1 .15 - 30MHz                            |               |          |                    |                        |            |                           |        |                            |        |
| Test Frequency                                 | Meter Reading | Detector | T24 IL L1.TXT (dB) | LC Cables 1&3.TXT (dB) | dB(uVolts) | CFR 47 Part 15 Class B QP | Margin | CFR 47 Part 15 Class B Avg | Margin |
| 0.1545   | 48.52         | PK       | 0.1                | 0                      | 48.62      | 65.8                      | -17.18 | -                          | -      |
| 0.1545   | 35.78         | Av       | 0.1                | 0                      | 35.88      | -                         | -      | 55.8                       | -19.92 |
| 0.519  | 43.72         | PK       | 0.1                | 0                      | 43.82      | 56                        | -12.18 | -                          | -      |
| 0.519  | 32.03         | Av       | 0.1                | 0                      | 32.13      | -                         | -      | 46                         | -13.87 |
| 3.489  | 41.11         | PK       | 0.1                | 0.1                    | 41.31      | 56                        | -14.69 | -                          | -      |
| 3.489  | 27.99         | Av       | 0.1                | 0.1                    | 28.19      | -                         | -      | 46                         | -17.81 |
| 6.7155   | 43.15         | PK       | 0.1                | 0.1                    | 43.35      | 60                        | -16.65 | -                          | -      |
| 6.7155   | 28.33         | Av       | 0.1                | 0.1                    | 28.53      | -                         | -      | 50                         | -21.47 |
| Line-L2 .15 - 30MHz                            |               |          |                    |                        |            |                           |        |                            |        |
| Test Frequency                                 | Meter Reading | Detector | T24 IL L1.TXT (dB) | LC Cables 1&3.TXT (dB) | dB(uVolts) | CFR 47 Part 15 Class B QP | Margin | CFR 47 Part 15 Class B Avg | Margin |
| 0.3705   | 41.86         | PK       | 0.1                | 0                      | 41.96      | 58.5                      | -16.54 | -                          | -      |
| 0.3705   | 28.8          | Av       | 0.1                | 0                      | 28.9       | -                         | -      | 48.5                       | -19.6  |
| 0.555  | 42.36         | PK       | 0.1                | 0                      | 42.46      | 56                        | -13.54 | -                          | -      |
| 0.555  | 30.17         | Av       | 0.1                | 0                      | 30.27      | -                         | -      | 46                         | -15.73 |
| 0.681  | 41.83         | PK       | 0.1                | 0                      | 41.93      | 56                        | -14.07 | -                          | -      |
| 0.681  | 29.44         | Av       | 0.1                | 0                      | 29.54      | -                         | -      | 46                         | -16.46 |
| 6.153  | 39.25         | PK       | 0.1                | 0.1                    | 39.45      | 60                        | -20.55 | -                          | -      |
| 6.153  | 23.77         | Av       | 0.1                | 0.1                    | 23.97      | -                         | -      | 50                         | -26.03 |

**LINE 1 RESULTS**



**LINE 2 RESULTS**

