



**MOBILE DEVICES BUSINESS**

**PRODUCT SAFETY AND COMPLIANCE  
EMC LABORATORY**

**EMC TEST REPORT**

**Test Report Number** – 25258-1WLAN

The test results contained herein relate only to the model(s) identified. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics.

As the responsible EMC Engineer, I hereby declare that the equipment tested as specified in this report conforms to the requirements indicated.

Signature:  Name: Albert J. Patapack

Title: EMC Engineer Date: February 16, 2013

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2404

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**Test Report Details**

Tests Performed By: ADR Testing Service  
Location Code: ADR LV  
Motorola Mobility Inc  
Product Safety and Compliance Group  
600 North US Hwy 45  
Libertyville, IL 60048  
PH (847) 523-6167 Fax (847) 523-4538  
FCC Registration Number: 316588  
Industry Canada Number: 1090-1

Tests Requested By: Motorola Mobility, Inc.  
Mobile Devices Business  
600 North US Hwy 45  
Libertyville, IL 60048

Product Type : Cellular Phone

Signaling Capability: WCDMA 850/1900, GSM 850/1900,  
EDGE 850/1900, HSDPA, HSUPA, GPRS,  
Bluetooth LE + EDR, 802.11b/g/n

FCC ID: IHDP56ND1

Serial Numbers: 353208050050346, 353208050050717

Testing Complete Date: January 30, 2013

**Applicable Standards**

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

  X   Part 15 Subpart C – Intentional Radiators

Applicable Standards: ANSI 63.4 2003, RSS-210 Issue 8

All testing was performed according to KDB 558074 v02.

**Summary of Testing**

Test	Test Name	Pass/Fail
1	Spectrum Bandwidth	Pass
2	Peak Power	Pass
3	Power Spectral Density	Pass
4	Spurious RF Conducted Emissions	Pass
5	AC Line Conducted Emissions	Pass

Test	Test Name	Results
1	Spectrum Bandwidth	See plots
2	Peak Power	See plots
3	Power Spectral Density	See tables
4	Spurious RF Conducted Emissions	See plots
5	AC Line Conducted Emissions	See Plots

**General and Special Conditions**

This product utilizes an internal battery that is not removable. When applicable, EMC testing was performed with the internal battery fully charged.

All testing was done in an indoor controlled environment. The temperature and the relative humidity were maintained within the ANSI C63.4 2003 Standard requirements during the entire duration of testing.

**Equipment and Cable Configurations**

The EUT was tested in a stand-alone configuration that is representative of typical use.

## Measuring Equipment and Calibration Information

Manufacturer	Equipment Type	Model No.	Serial Number	Calibration Due Date
Rohde Schwarz	Receiver	ESIB40	100226	5/15/2013
Agilent	Signal Analyzer	N9020A	US46470586	01/20/2014
Attenuator	Weinschel	AS-6	6675	NCR
Attenuator	Weinschel	AS-6	6677	NCR
ETS	LISN	3810/2	00062907	8/7/2013
ETS	LISN	3810/2	00062912	8/6/2013
Agilent	Power Meter	N1912A	MY45100116	03/04/2013
Agilent	Power Sensor	N1921A	MY45240662	03/13/2013

Note that the signal analyzer and power meter are on a two-year calibration cycle. All test equipment was within their calibration date during the time of testing. When equipment went out of calibration during testing it was replaced using a similar piece of calibrated equipment. All these equipments are listed in the equipment list. All equipment is on a one-year calibration cycle.

## Description of WLAN Transmitter

The EUT offers WLAN as a feature. The WLAN antenna is mounted inside of the EUT. The antenna installation is permanent. For a more thorough description of the functionality please refer to Exhibit 12 of this package.

As a WLAN transmitter, it is designed operate with other WLAN devices as defined by the industrial standard. In this application, the device is battery operated.

### **De Facto EIRP Limit – Pursuant 47 CFR 15.247(b)(4); RSS-210 Section A8.4.**

Criterion: The conducted output power limit of 1-watt is based on the use of antennas with directional gains that do not exceed 6dB<sub>i</sub>. If transmitting antennas of directional gain greater than 6dB<sub>i</sub> are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dB<sub>i</sub>.

The antenna employed by this transmitter is intended to be omni-directional, and thus will not exhibit directional gain in excess of 6dB<sub>i</sub>. The conducted power is less than the limits set forth (see elsewhere in this report for details).

## **Measurement Procedures and Data**

### **Spectrum Bandwidth**

CFR 47 Part 15.247

### **Measurement Procedure**

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. The fully charged internal battery was used for the supply voltage.

The spectrum analyzer used the following settings:

1. RBW  $\geq$  100 kHz
2. VBW  $\geq$  300 kHz
3. Sweep = auto couple
4. Detector function = peak
5. Trace = max hold
6. Span = 30MHz or 50MHz (wide enough to capture the entire waveform)

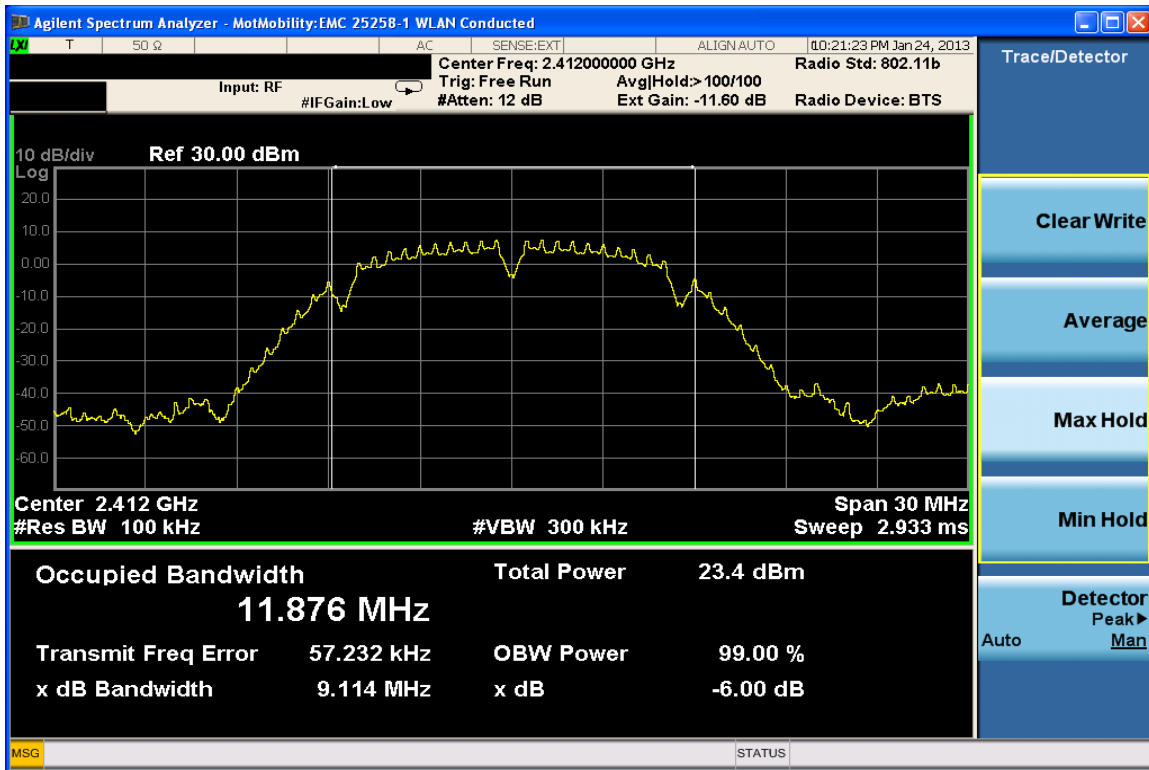
The trace was allowed to stabilize. The EUT was transmitting at its maximum data rate. The automatic occupied bandwidth measurement function of the spectrum analyzer, set to 6dB or 26dB, is used.

All modes of operation and data rates were investigated. The test results shown below represent the worst case condition.

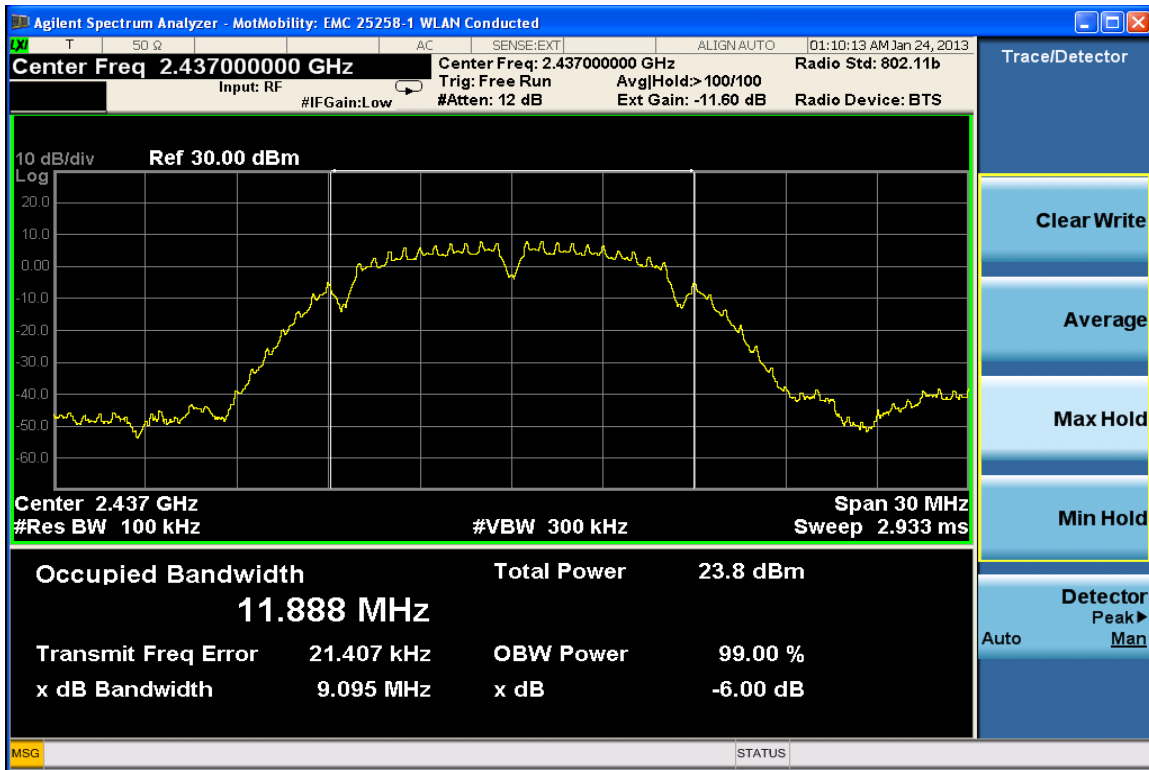
### **Measurement Results**

See attached

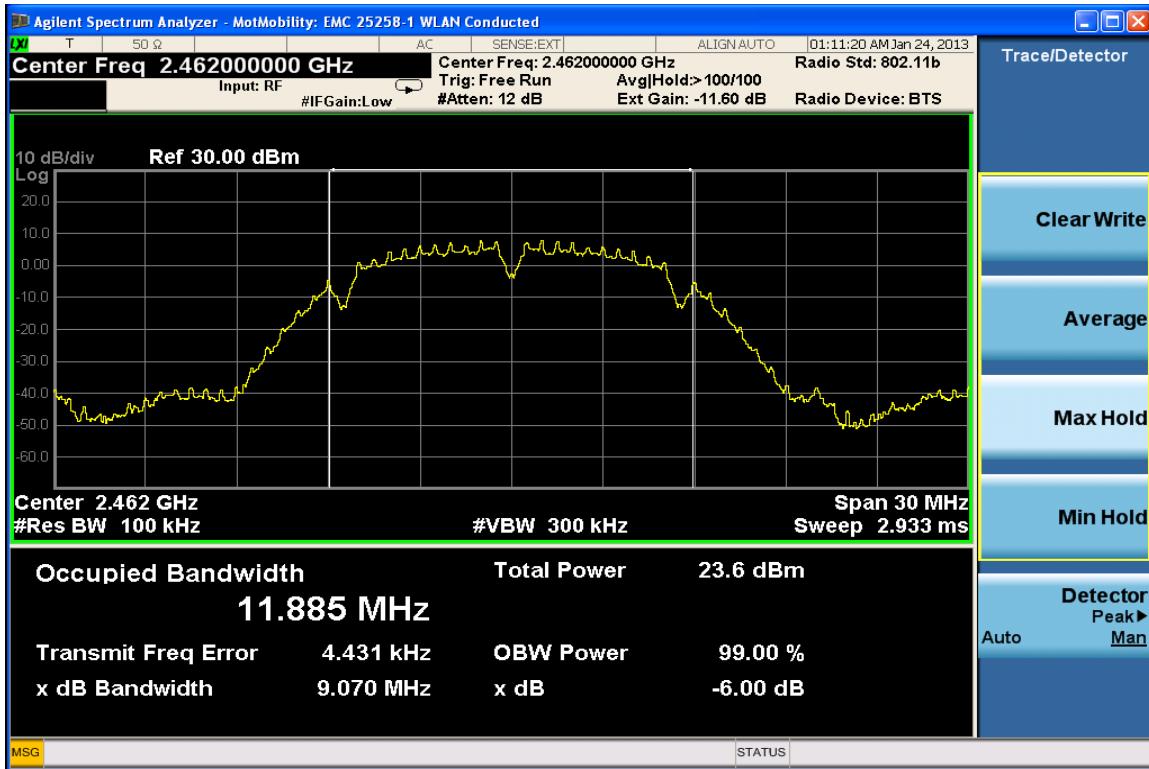
**802.11b Mode**



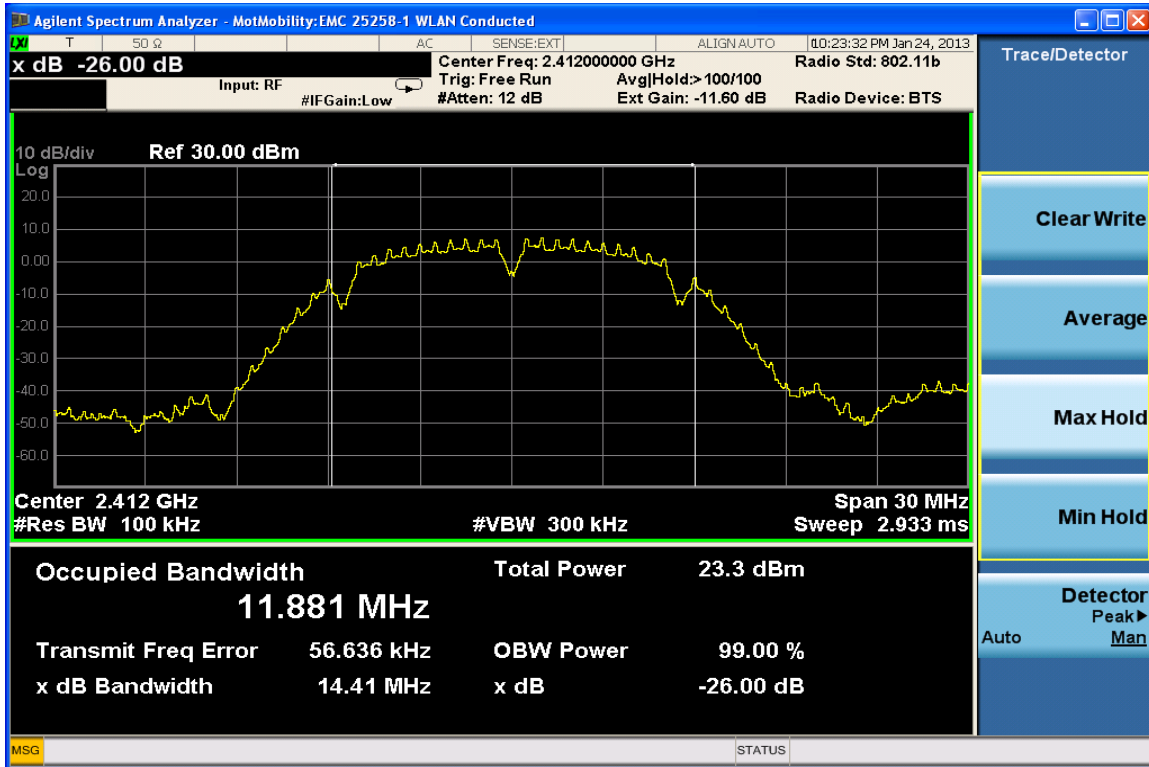
**6dB Bandwidth Channel 1 @ 1Mbps**



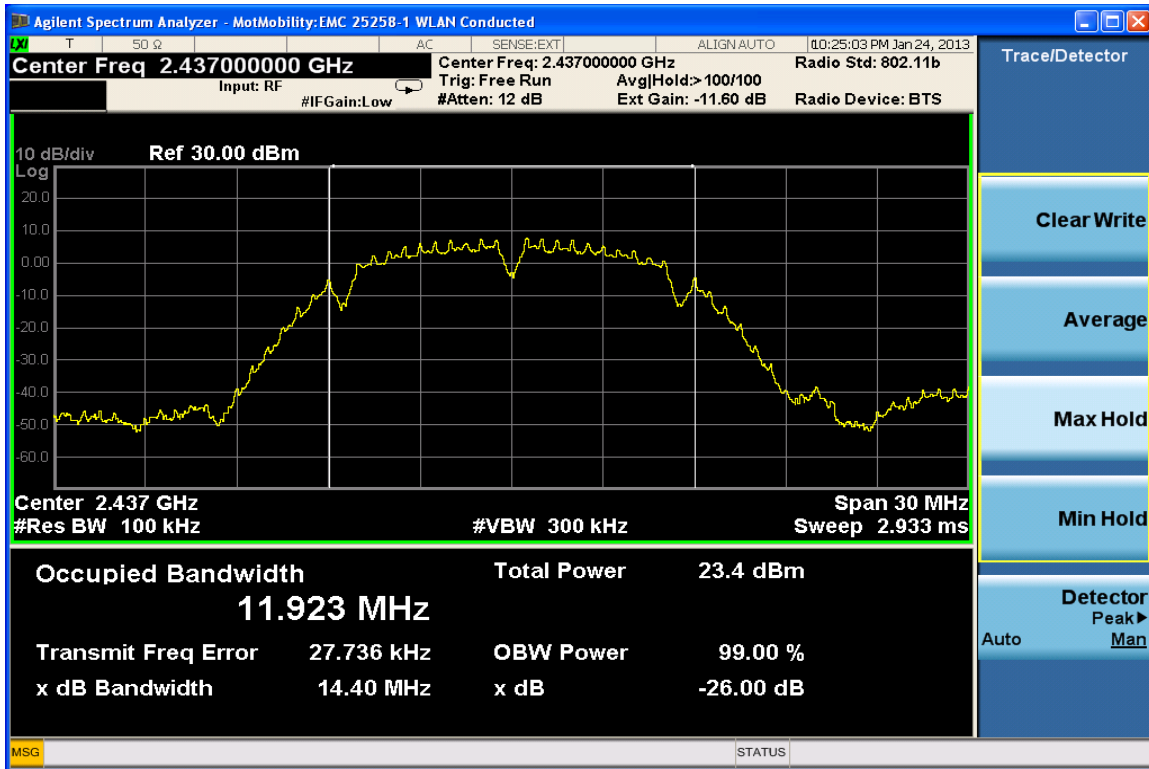
**6dB Bandwidth Channel 6 @ 1Mbps**



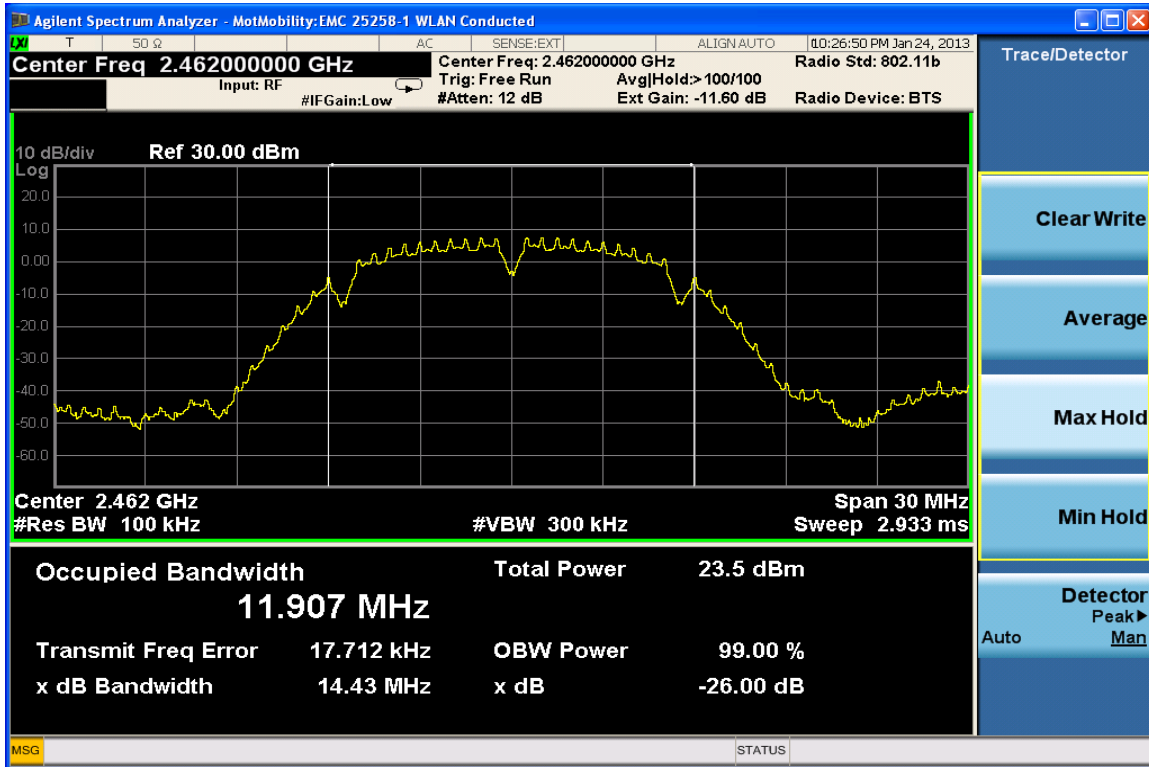
6dB Bandwidth Channel 11 @ 1Mbps



26dB Bandwidth Channel 1 @ 1Mbps

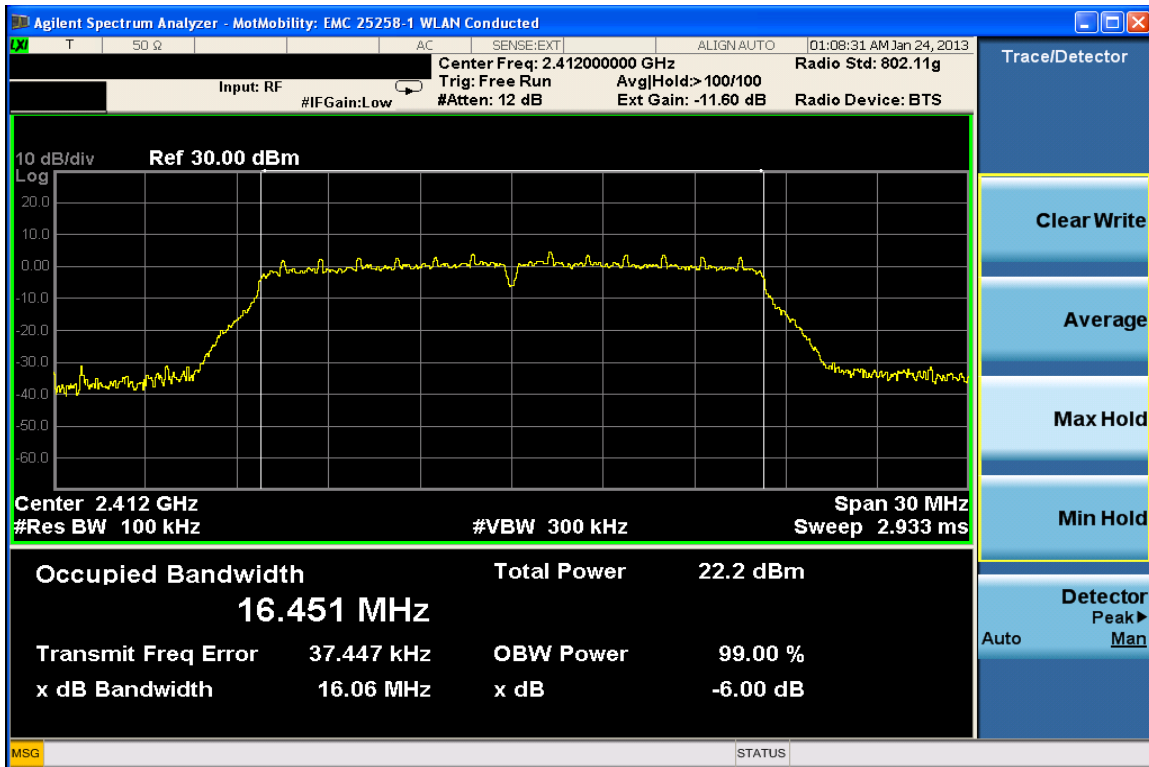


26dB Bandwidth Channel 6 @ 1Mbps

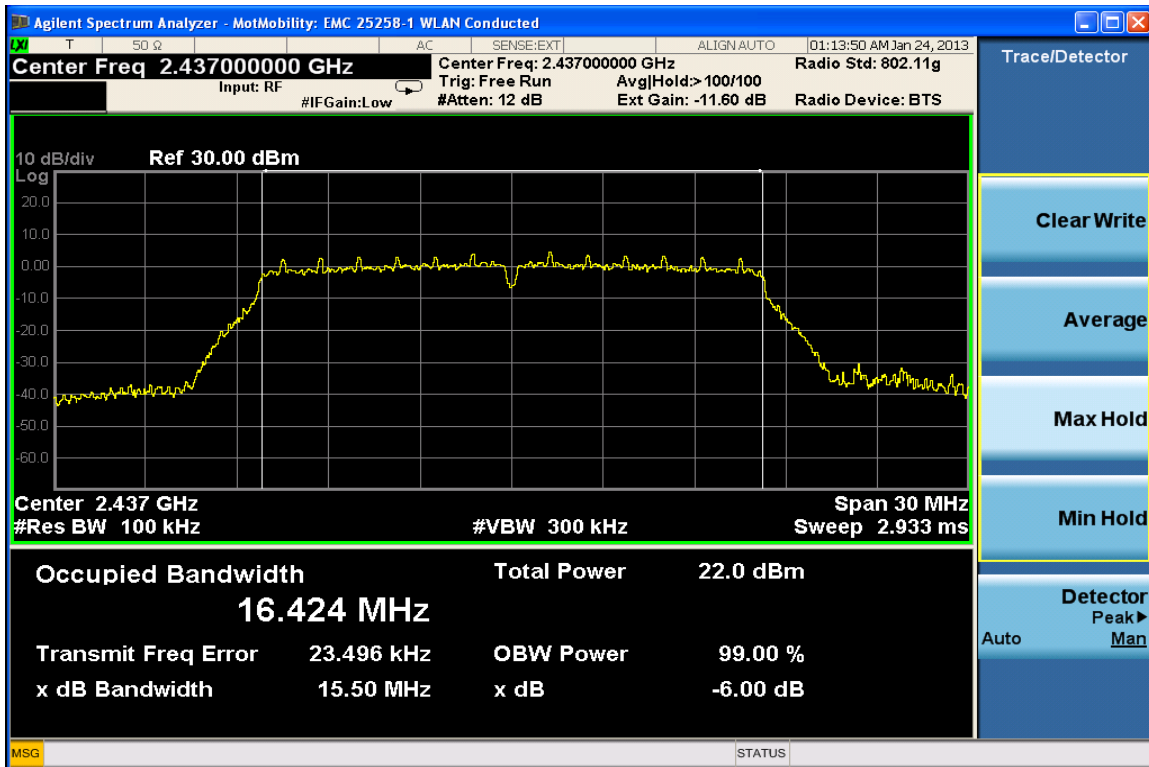


26dB Bandwidth Channel 11 @ 1Mbps

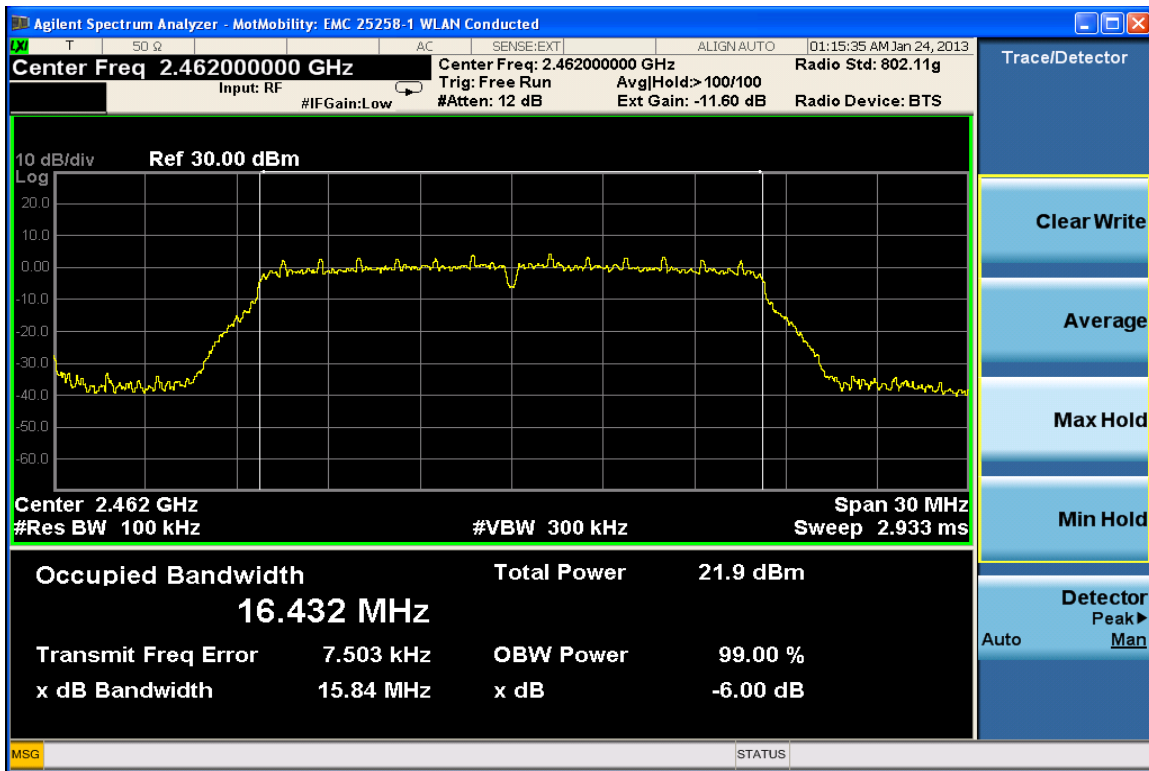
**802.11g Mode**



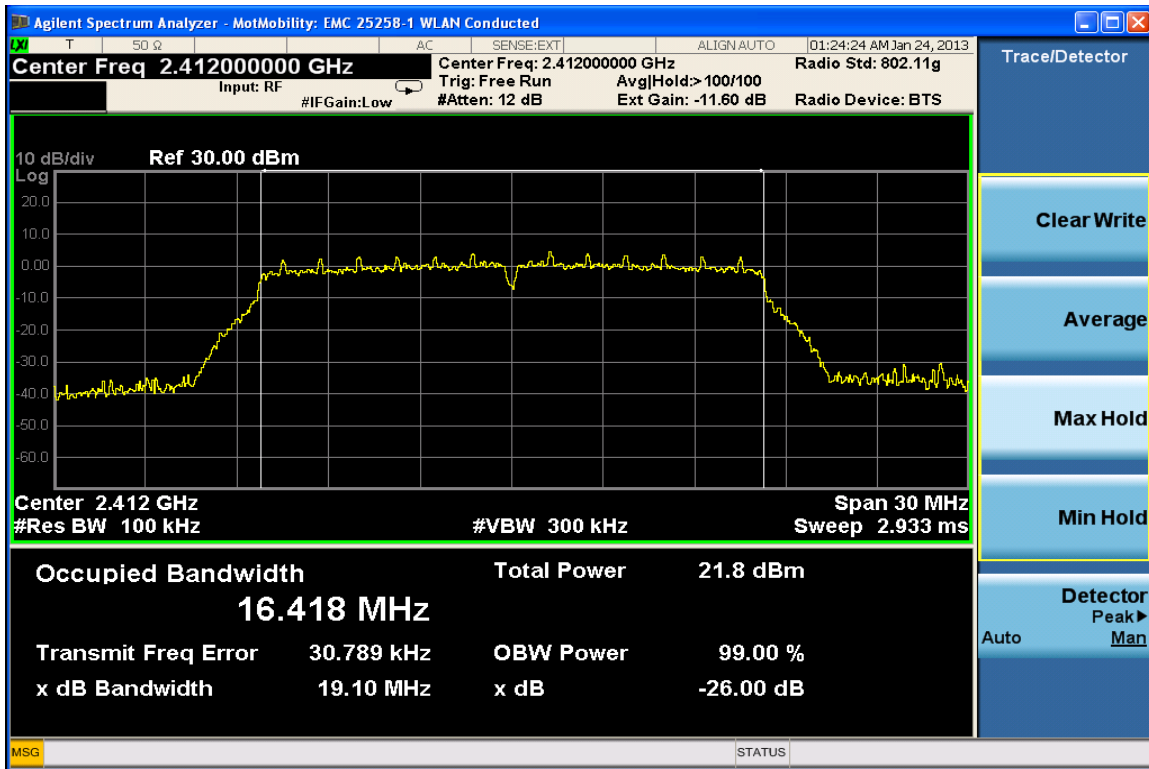
**6dB Bandwidth Channel 1 @ 6Mbps**



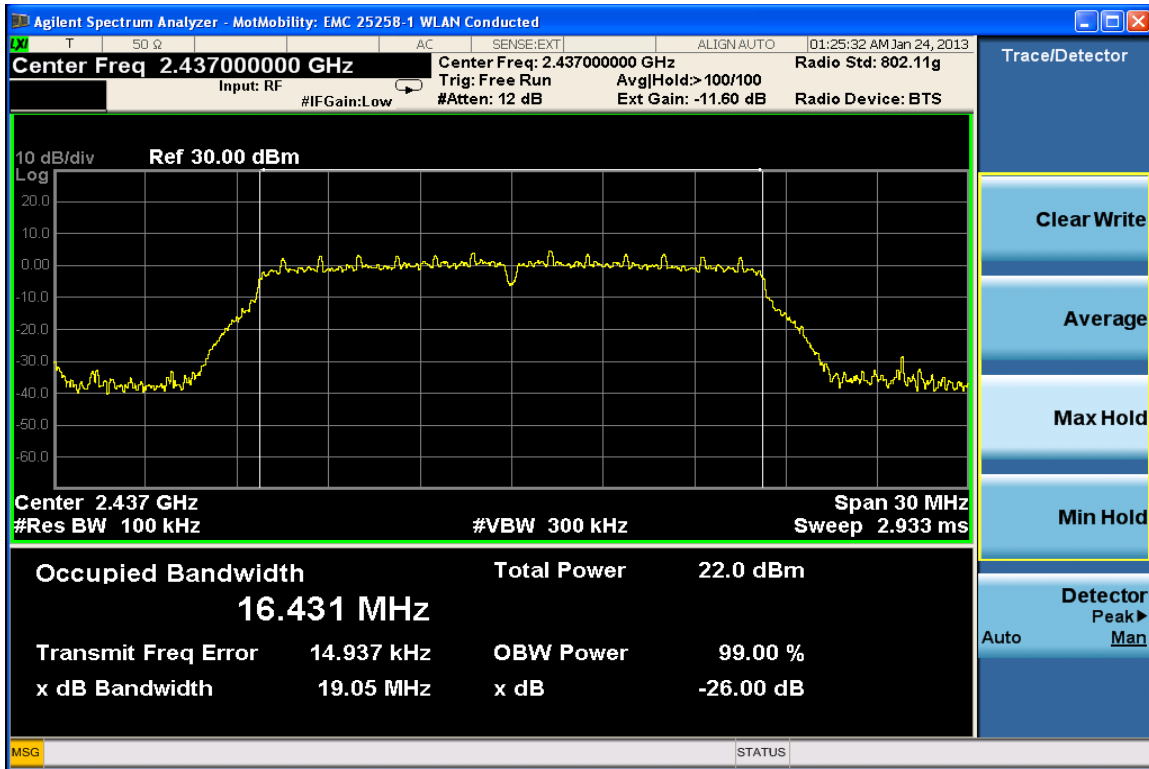
**6dB Bandwidth Channel 6 @ 6Mbps**



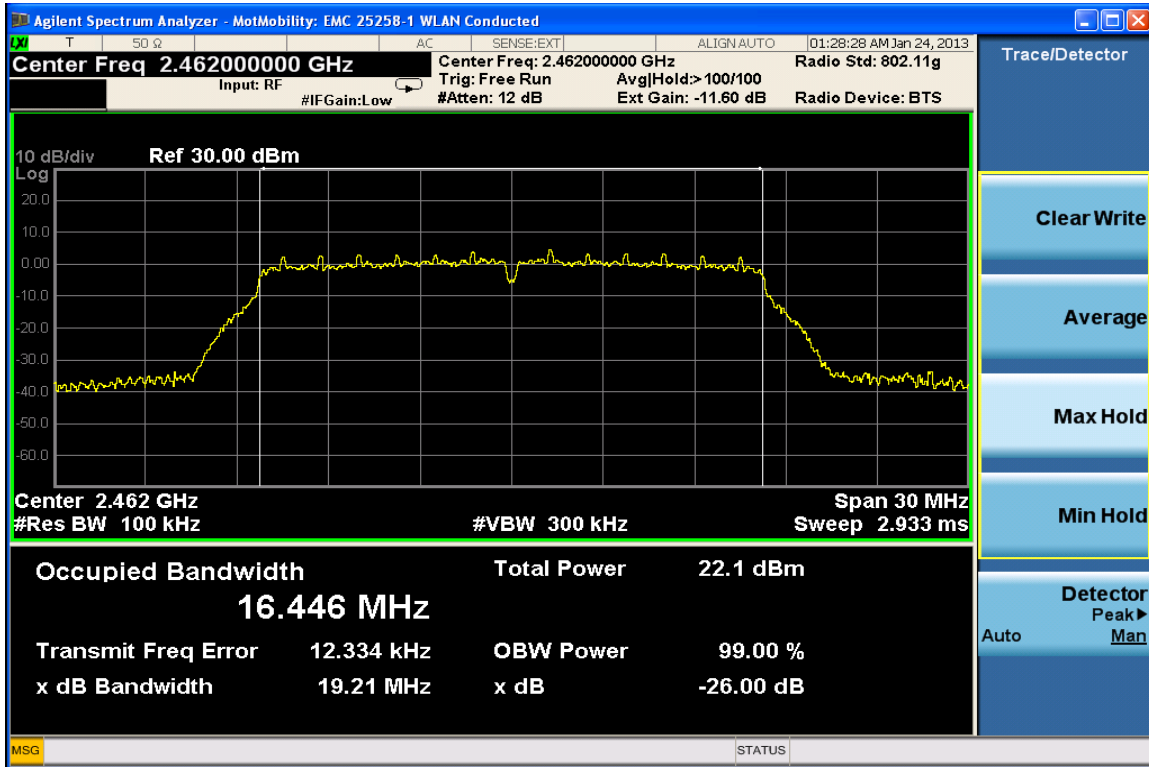
6dB Bandwidth Channel 11 @ 6Mbps



26dB Bandwidth Channel 1 @ 6Mbps

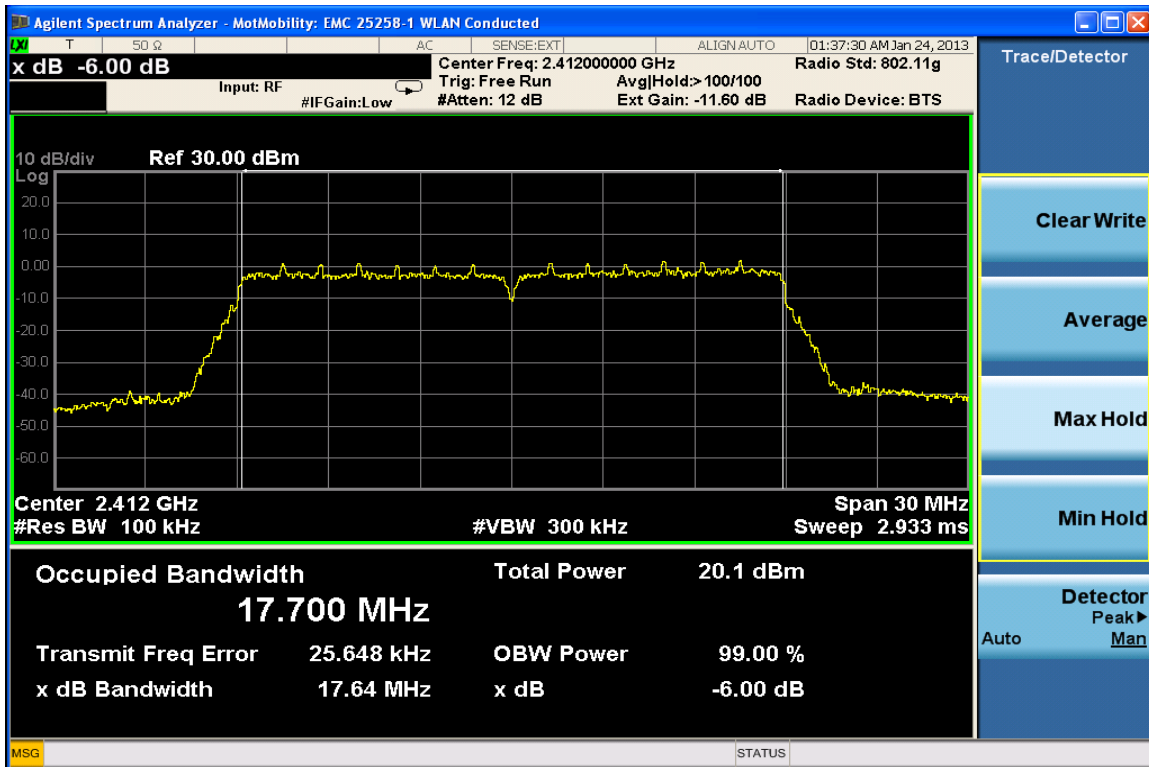


26dB Bandwidth Channel 6 @ 6Mbps

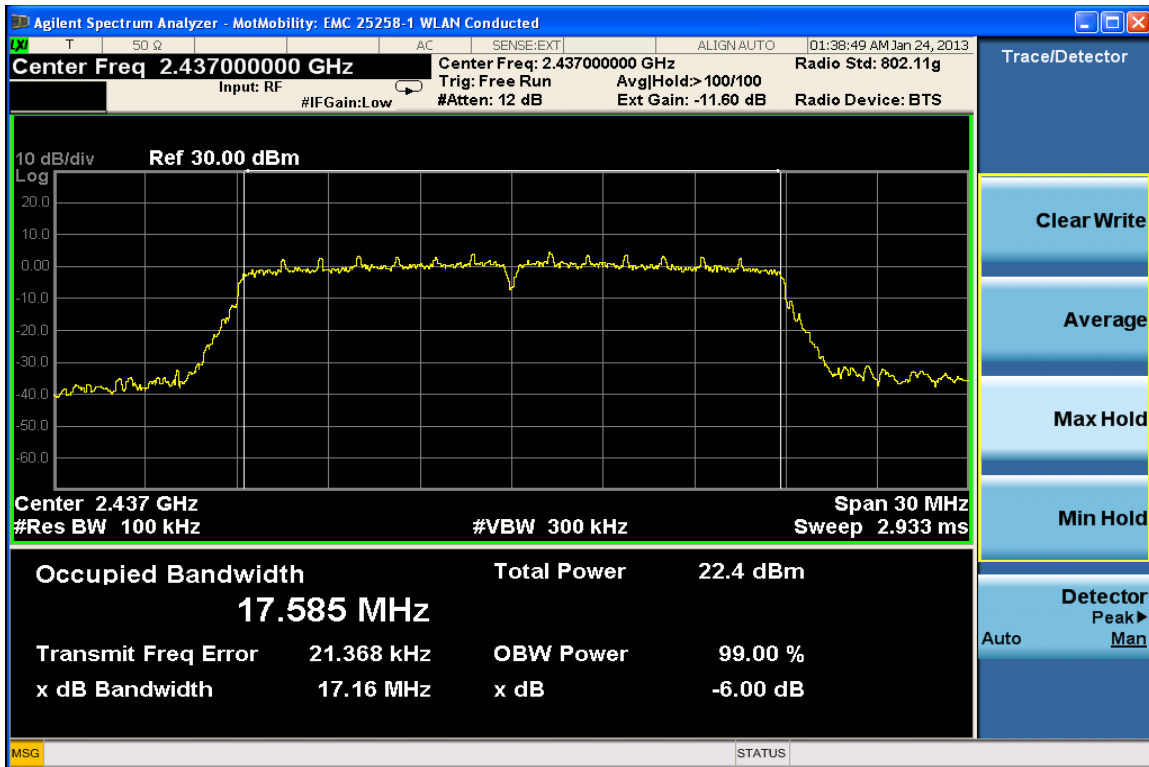


26dB Bandwidth Channel 11 @ 6Mbps

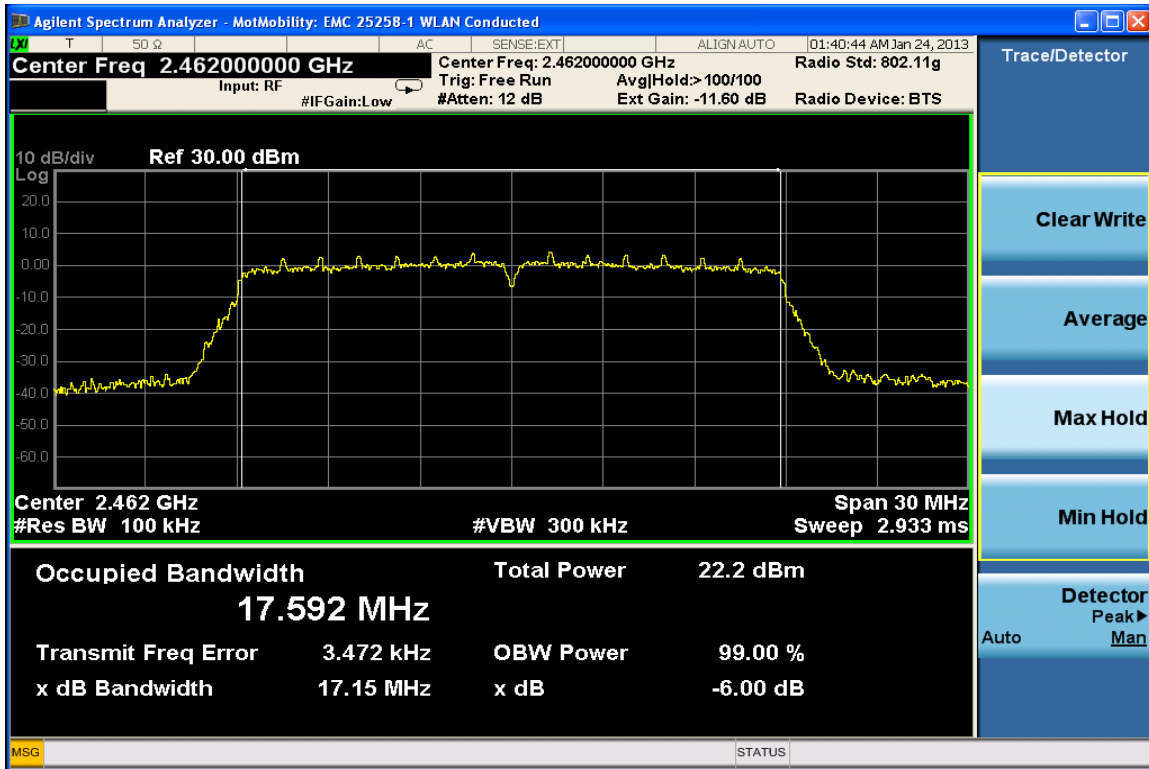
**802.11n 400ns GI Mode 20MHz BW**



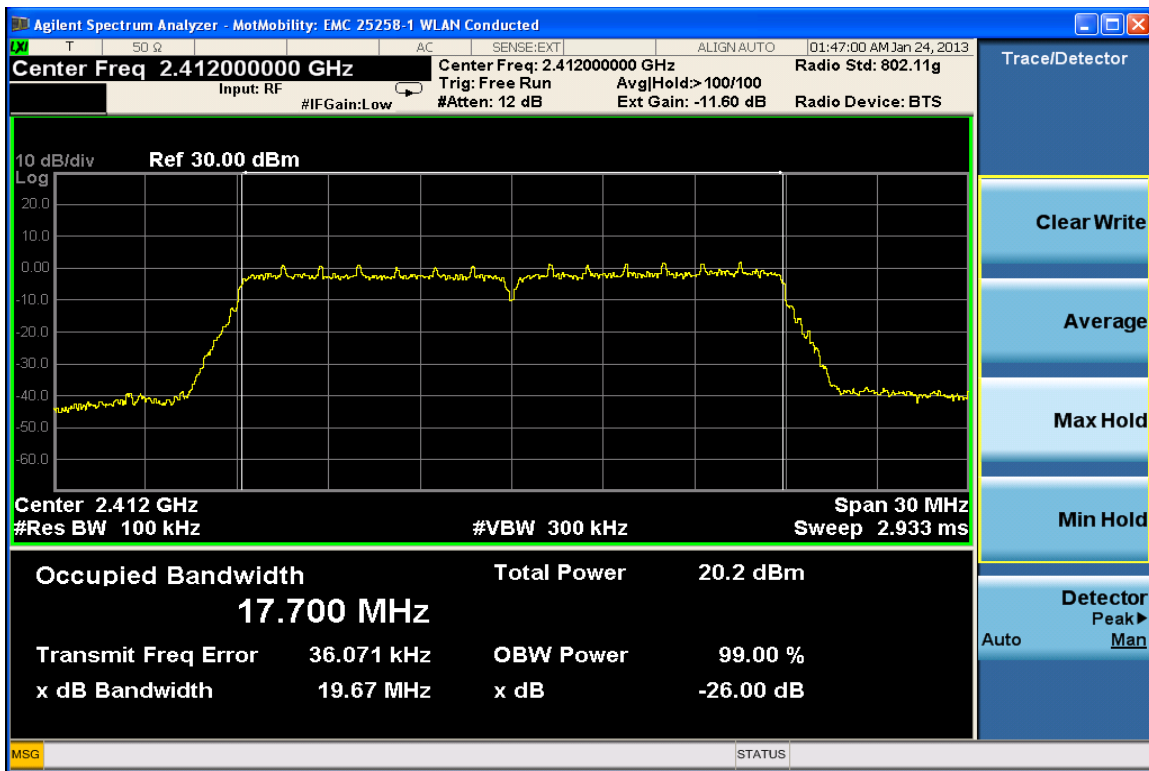
**6dB Bandwidth Channel 1 @ 7.2Mbps**



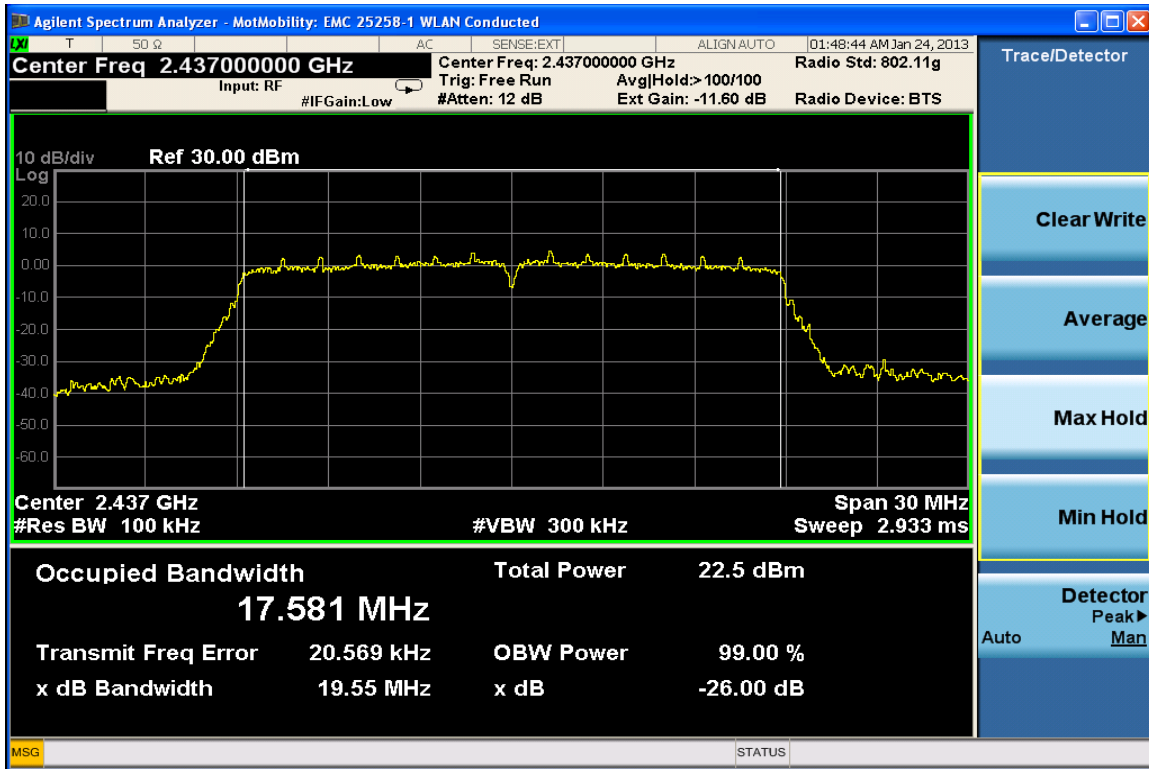
**6dB Bandwidth Channel 6 @ 7.2Mbps**



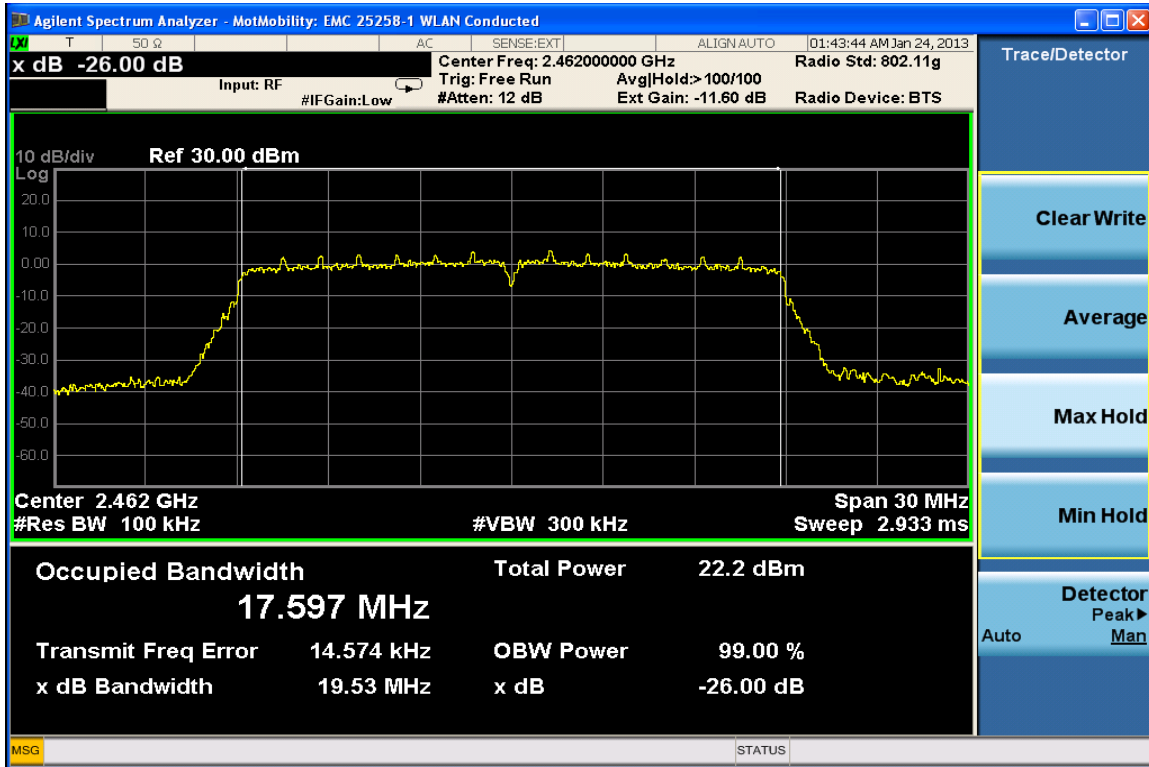
6dB Bandwidth Channel 11 @ 7.2Mbps



26dB Bandwidth Channel 1 @ 7.2Mbps

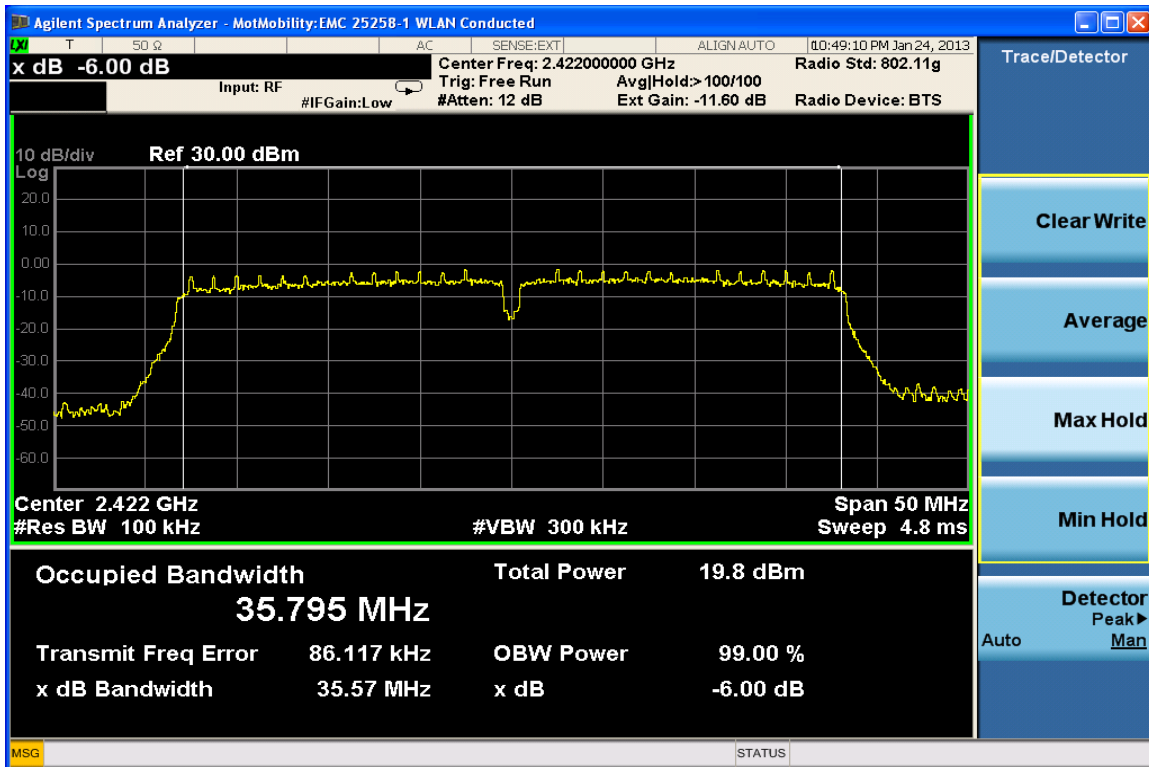


26dB Bandwidth Channel 6 @ 7.2Mbps

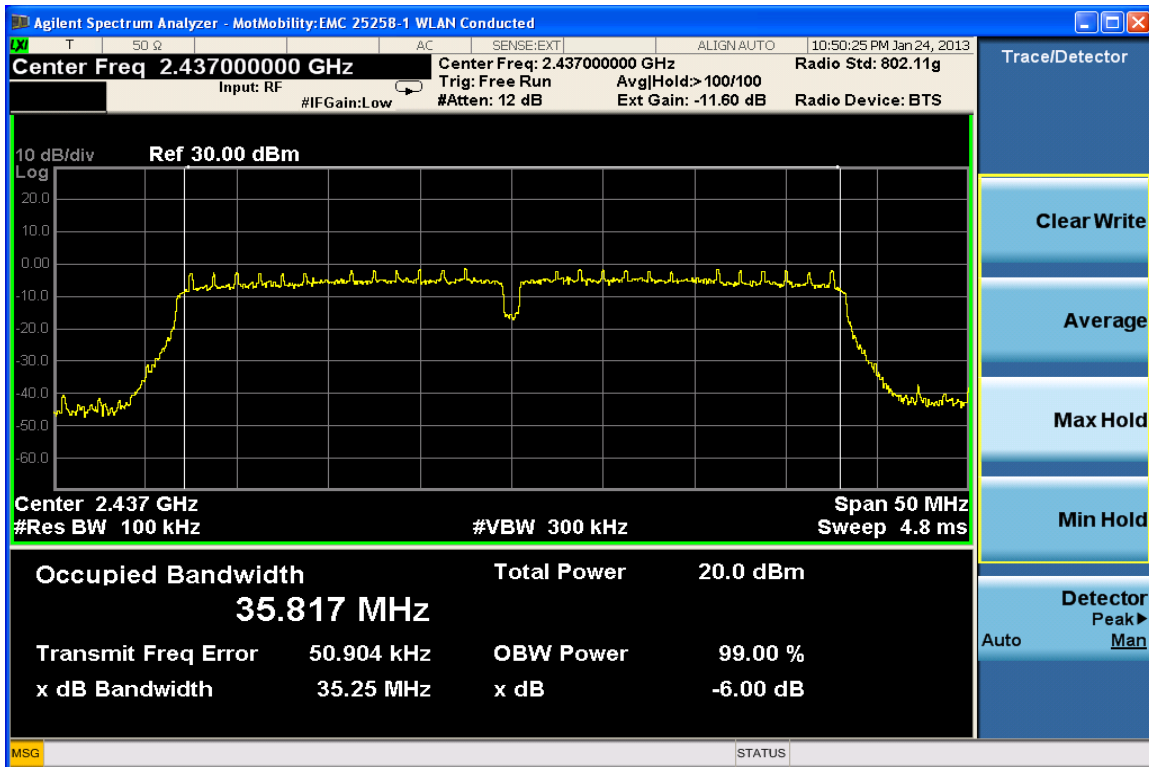


26dB Bandwidth Channel 11 @ 7.2Mbps

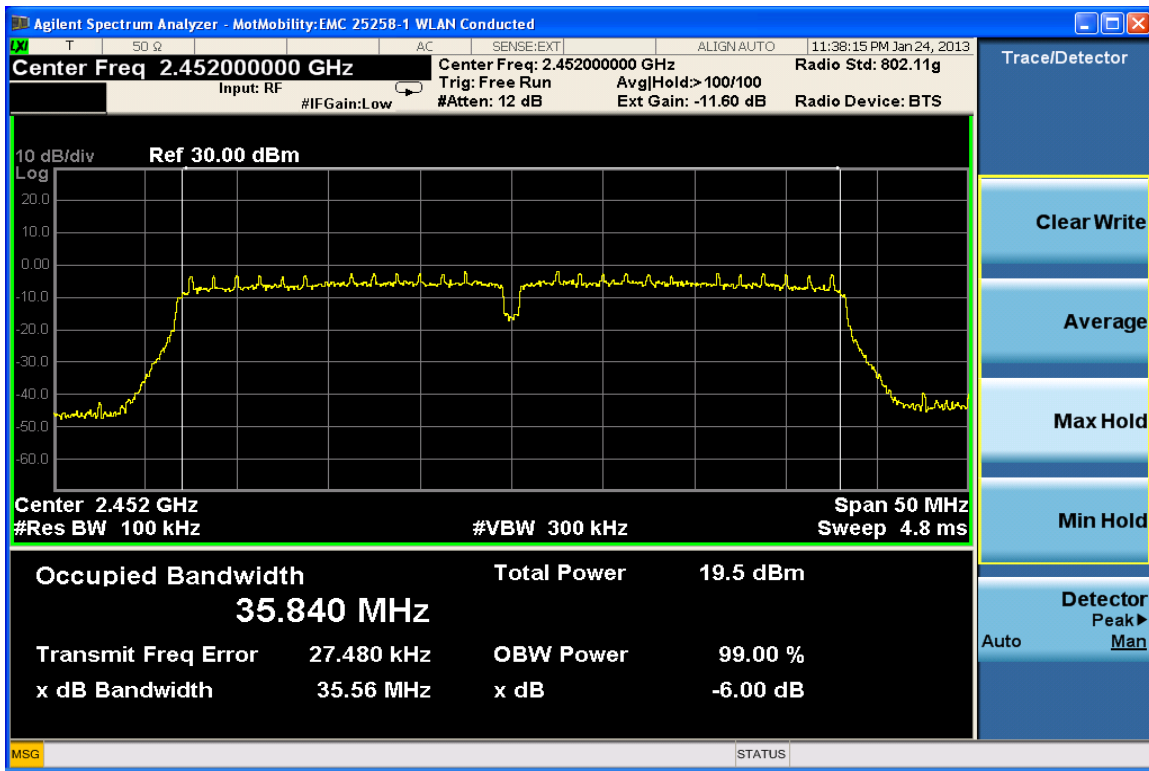
**802.11n 400ns GI Mode 40MHz BW**



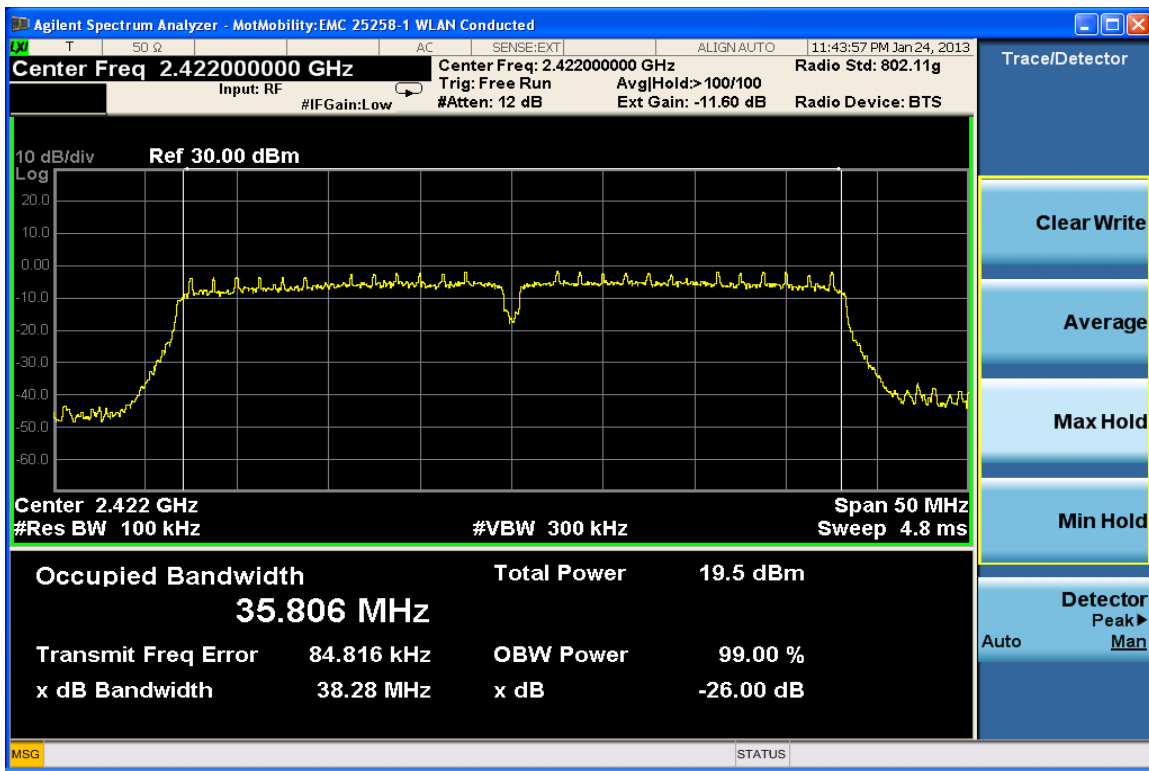
**6dB Bandwidth Channel 3 @ 7.2Mbps**



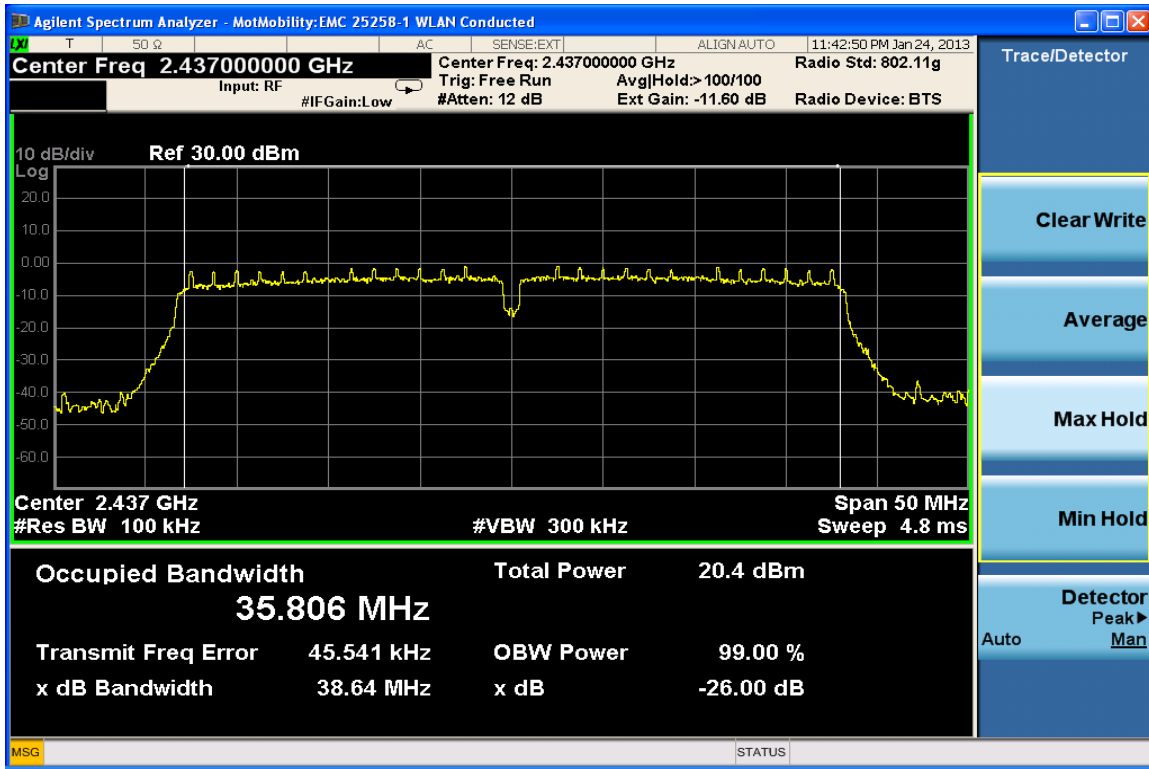
**6dB Bandwidth Channel 6 @ 7.2Mbps**



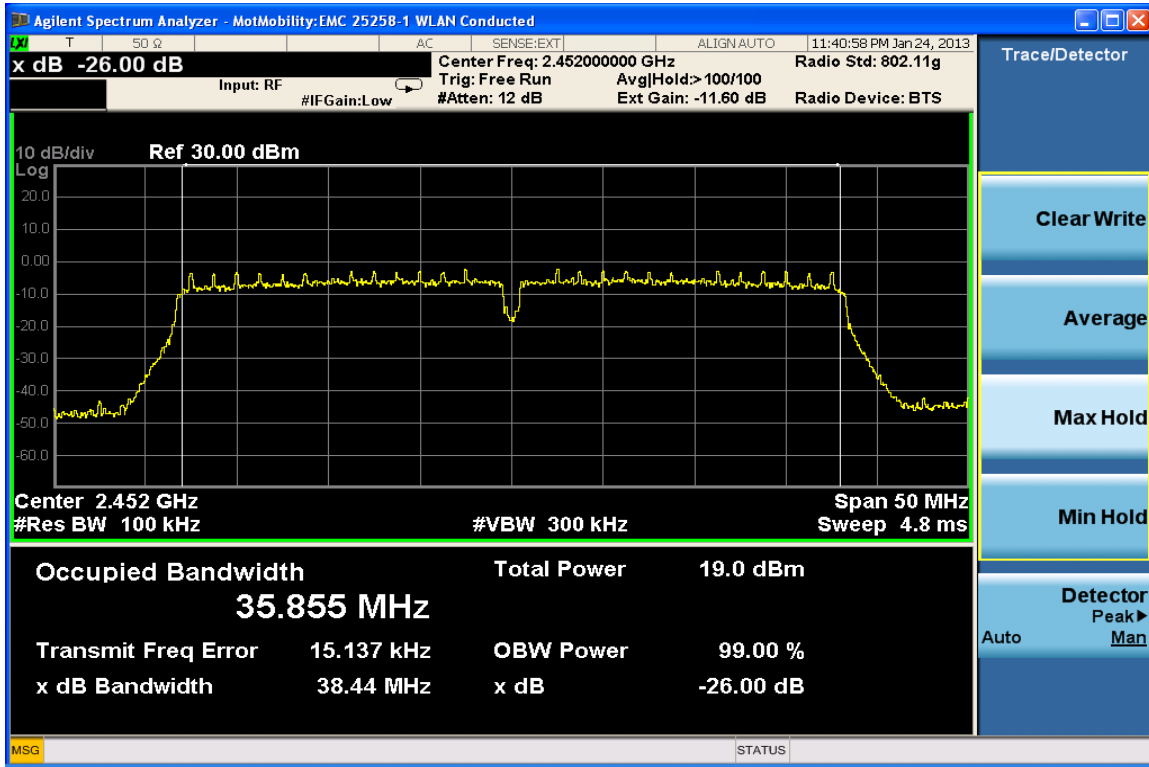
6dB Bandwidth Channel 9 @ 7.2Mbps



26dB Bandwidth Channel 3 @ 7.2Mbps

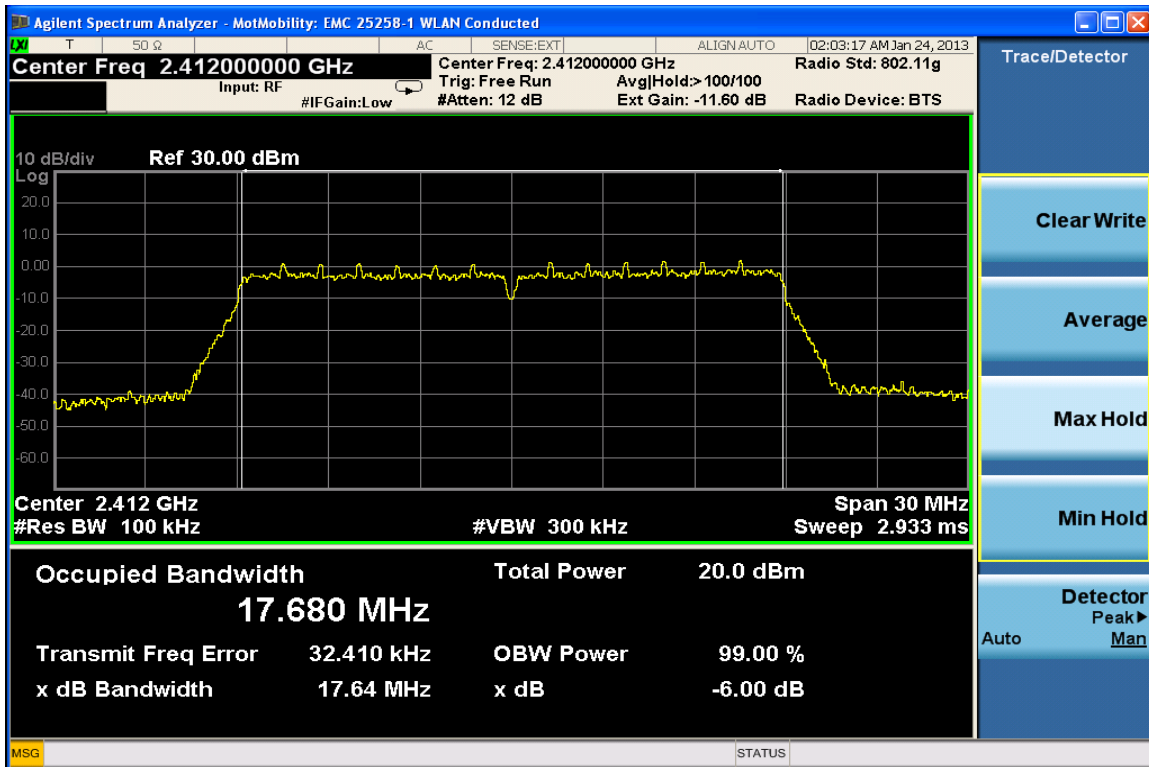


26dB Bandwidth Channel 6 @ 7.2Mbps

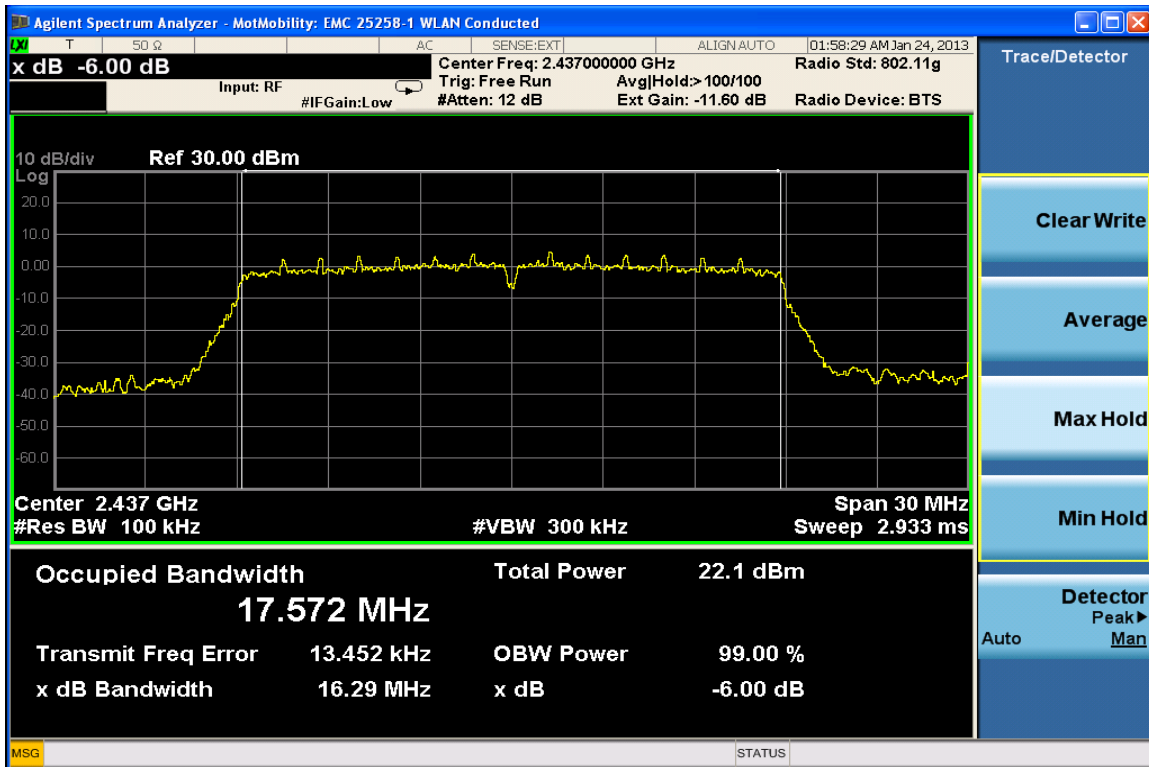


26dB Bandwidth Channel 9 @ 7.2Mbps

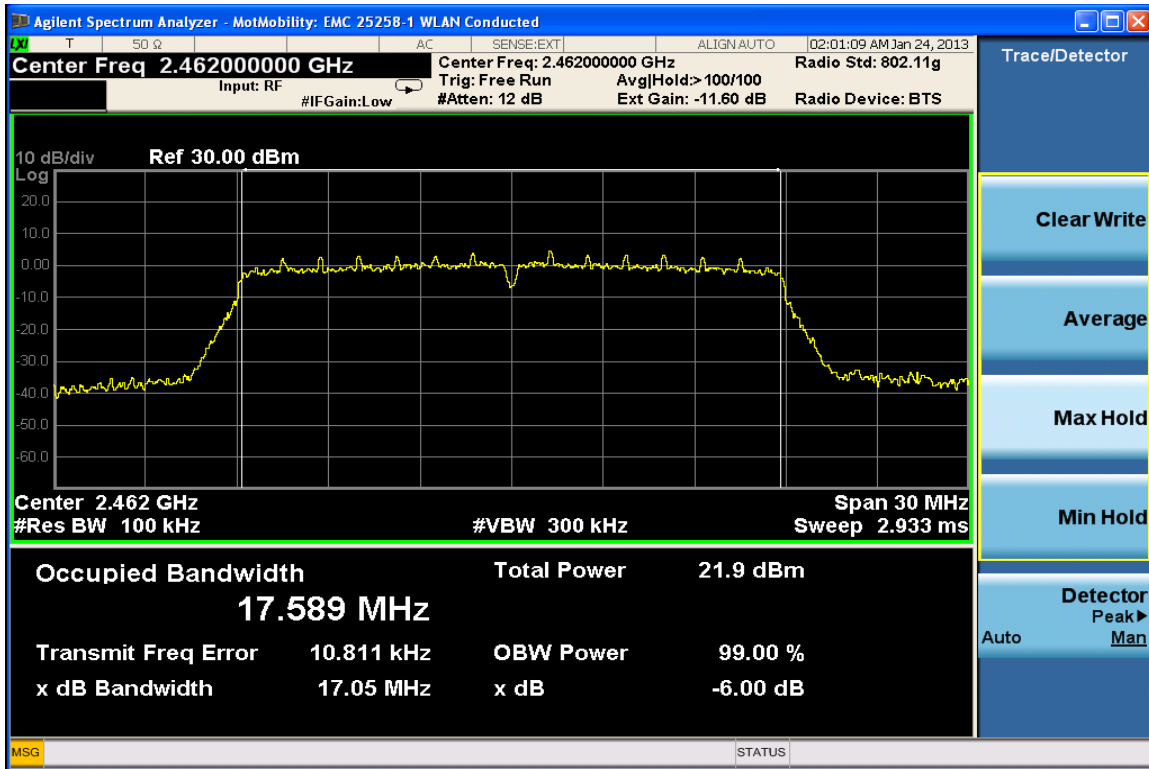
**802.11n 800ns GI Mode 20MHz BW**



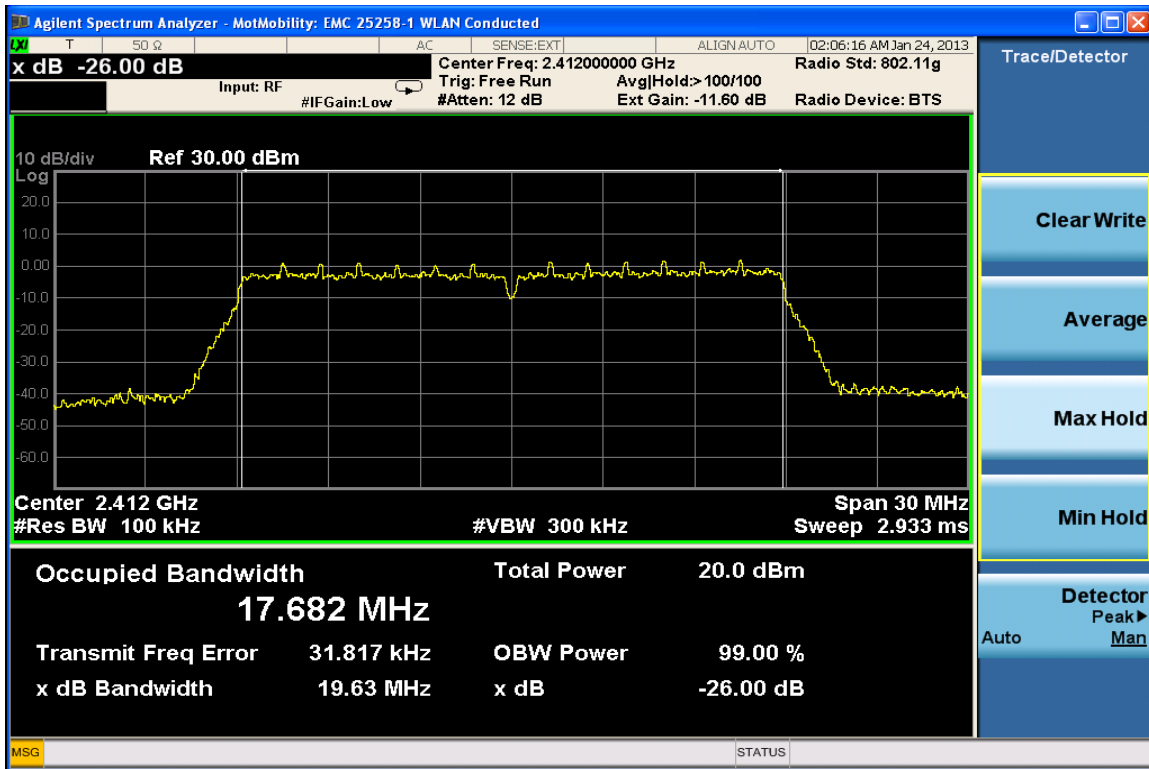
**6dB Bandwidth Channel 1 @ 6.5Mbps**



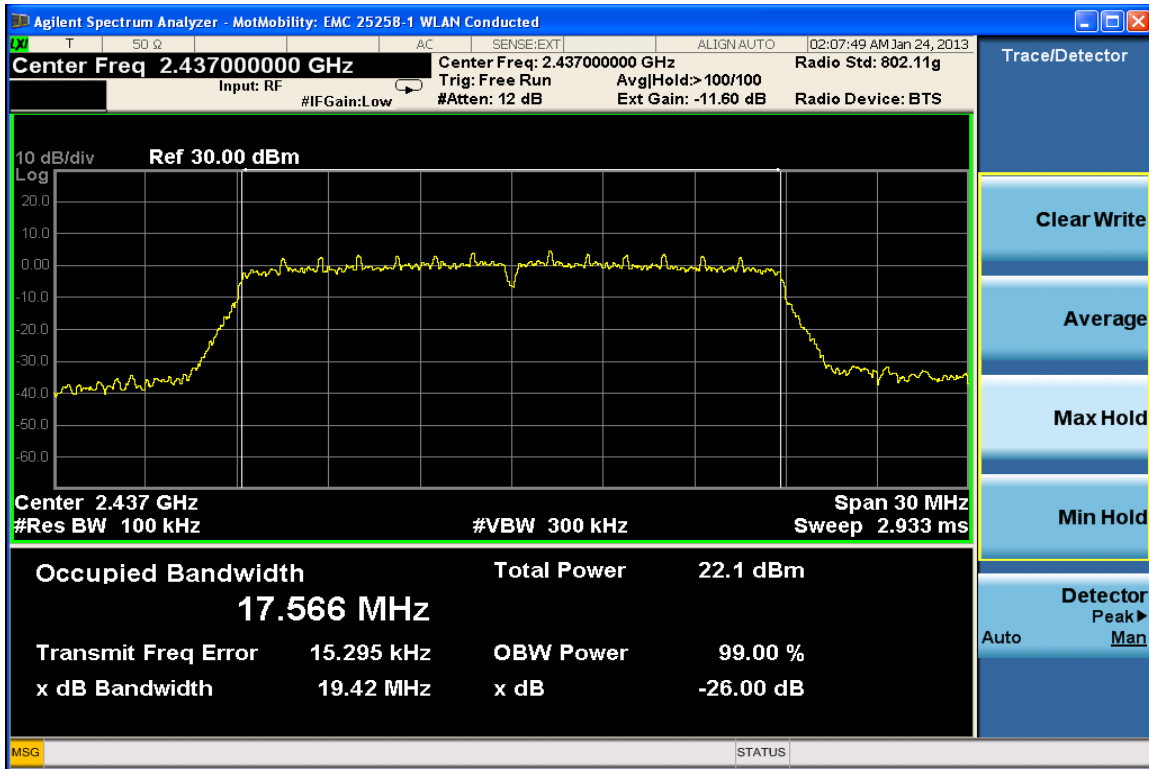
**6dB Bandwidth Channel 6 @ 6.5Mbps**



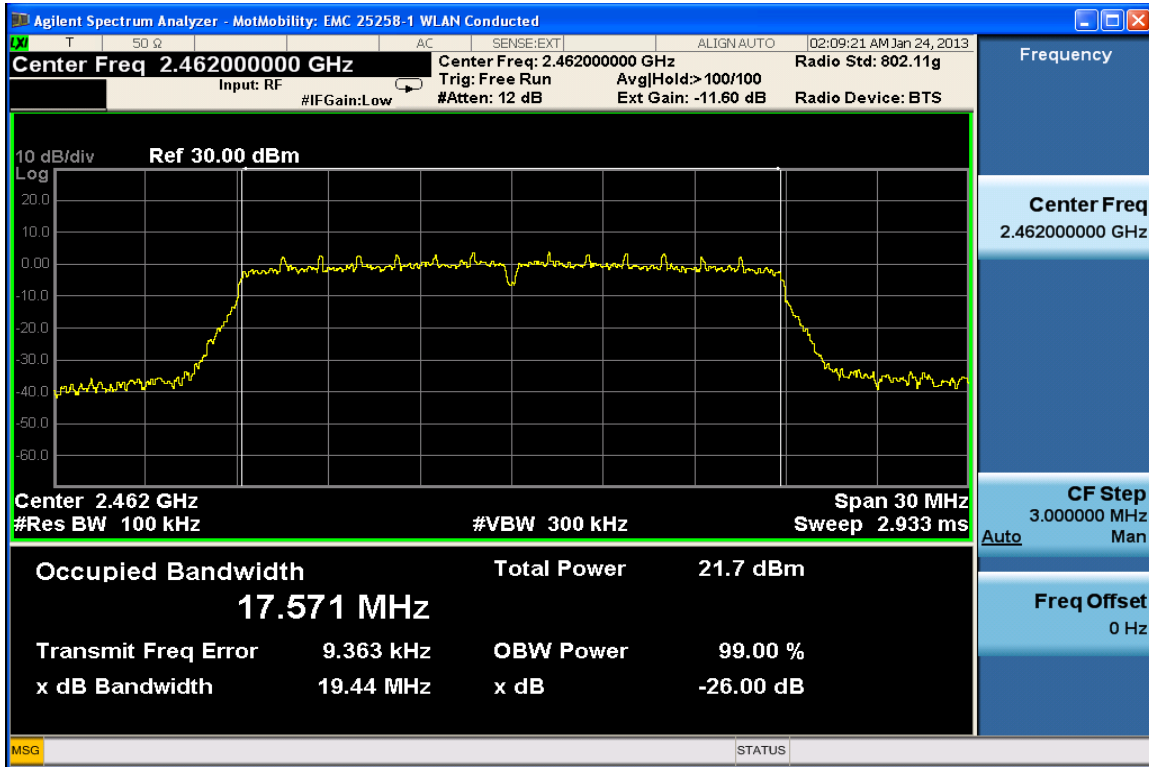
6dB Bandwidth Channel 11 @ 6.5Mbps



26dB Bandwidth Channel 1 @ 6.5Mbps

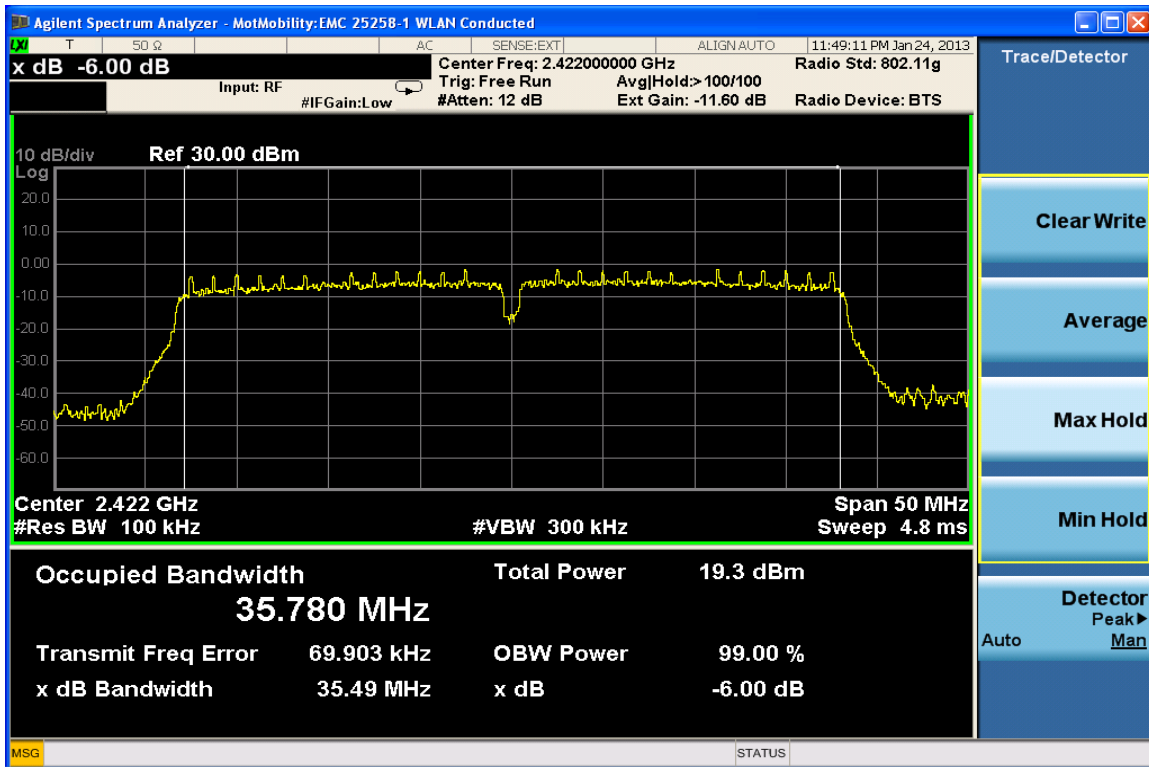


26dB Bandwidth Channel 6 @ 6.5Mbps

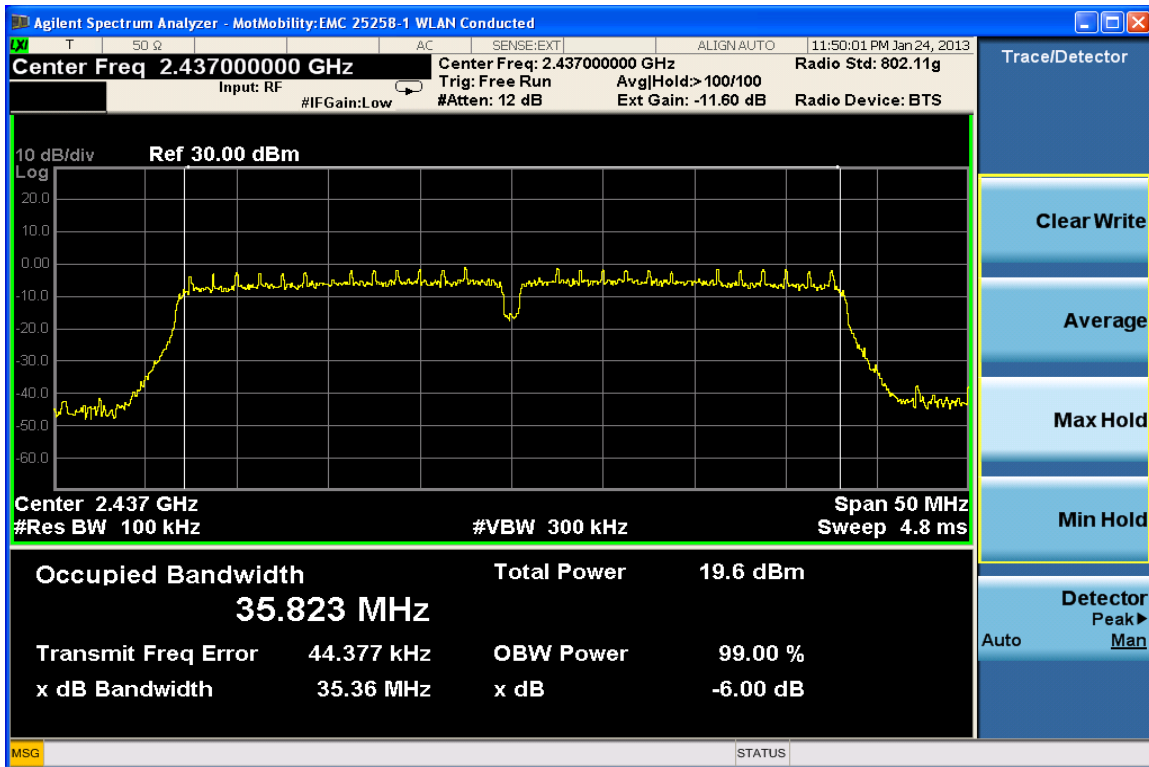


26dB Bandwidth Channel 11 @ 6.5Mbps

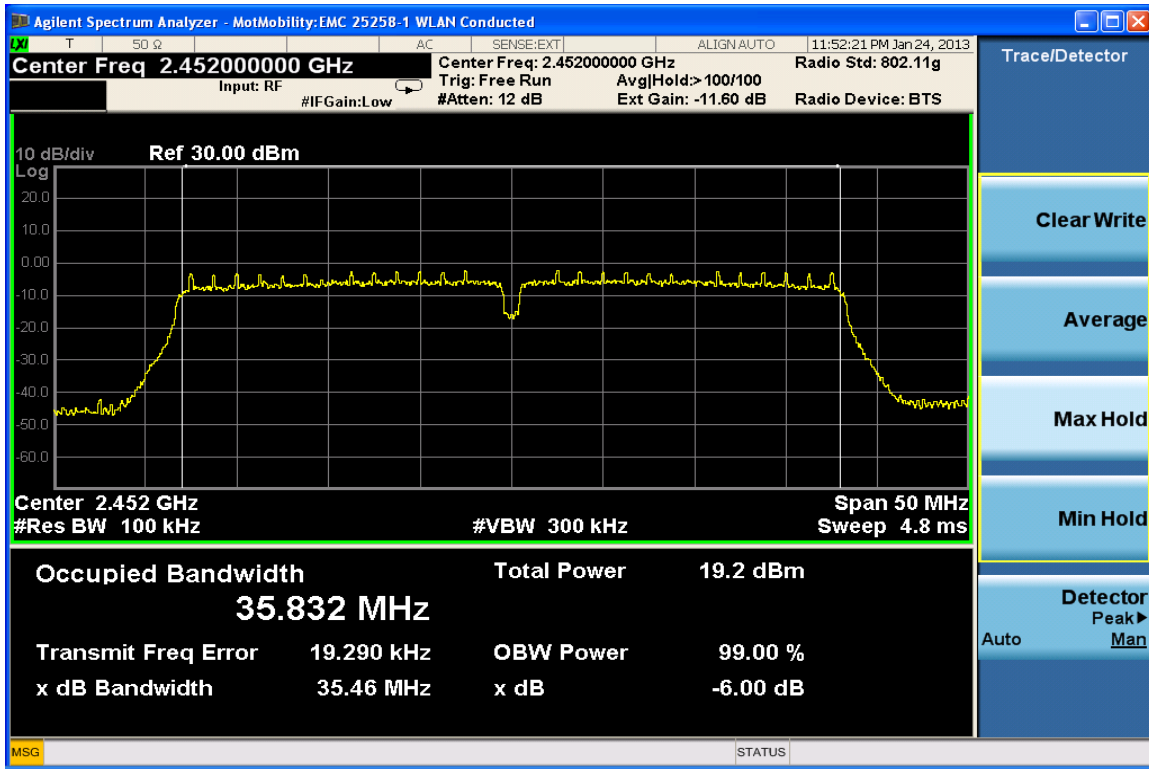
**802.11n 800ns GI Mode 40MHz BW**



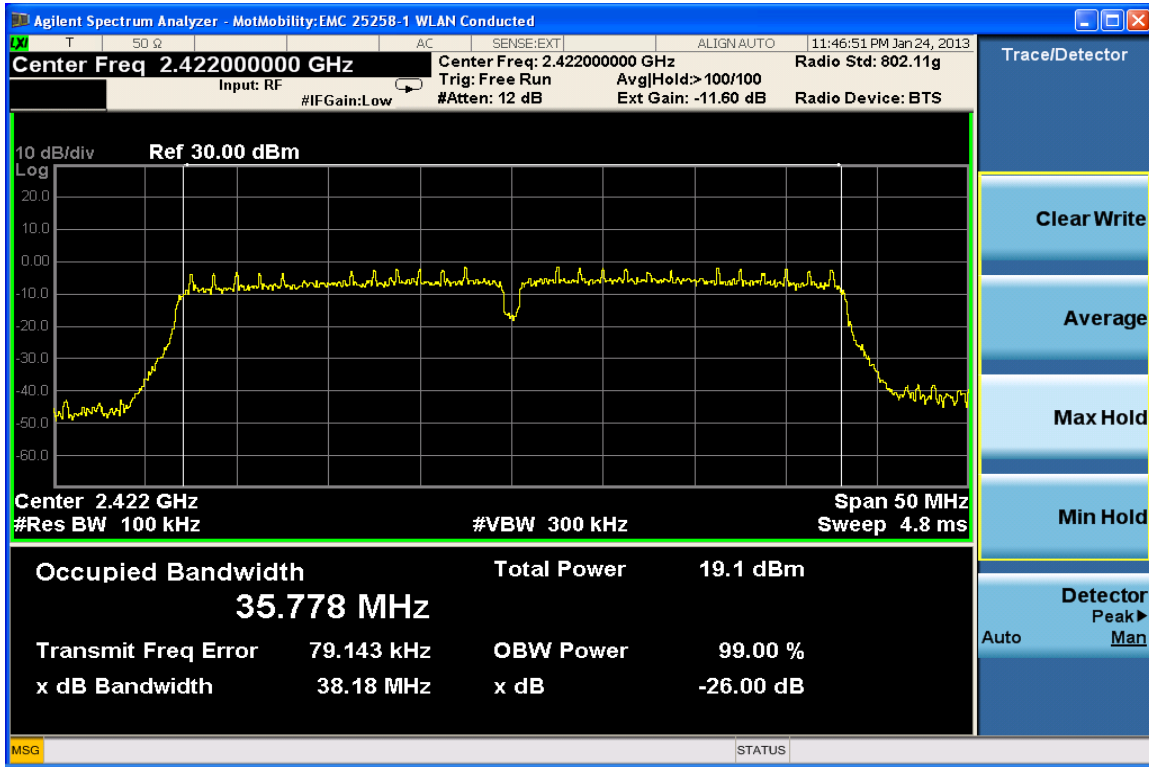
**6dB Bandwidth Channel 3 @ 6.5Mbps**



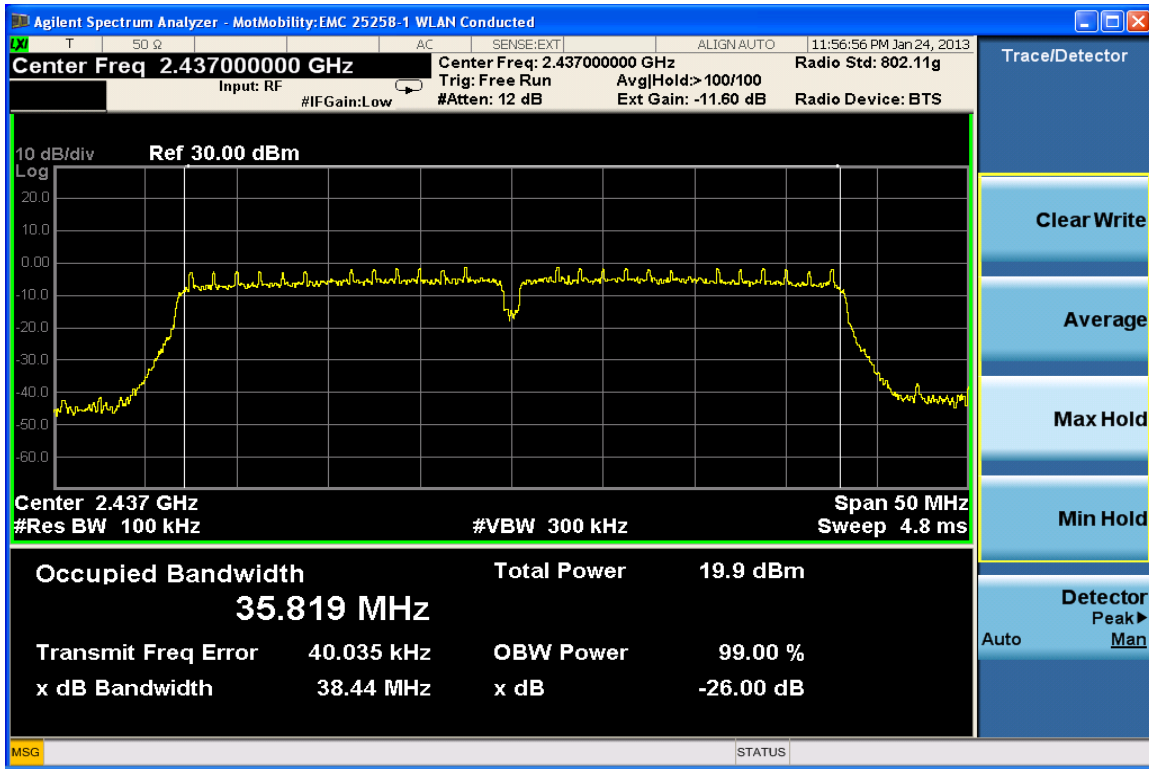
**6dB Bandwidth Channel 6 @ 6.5Mbps**



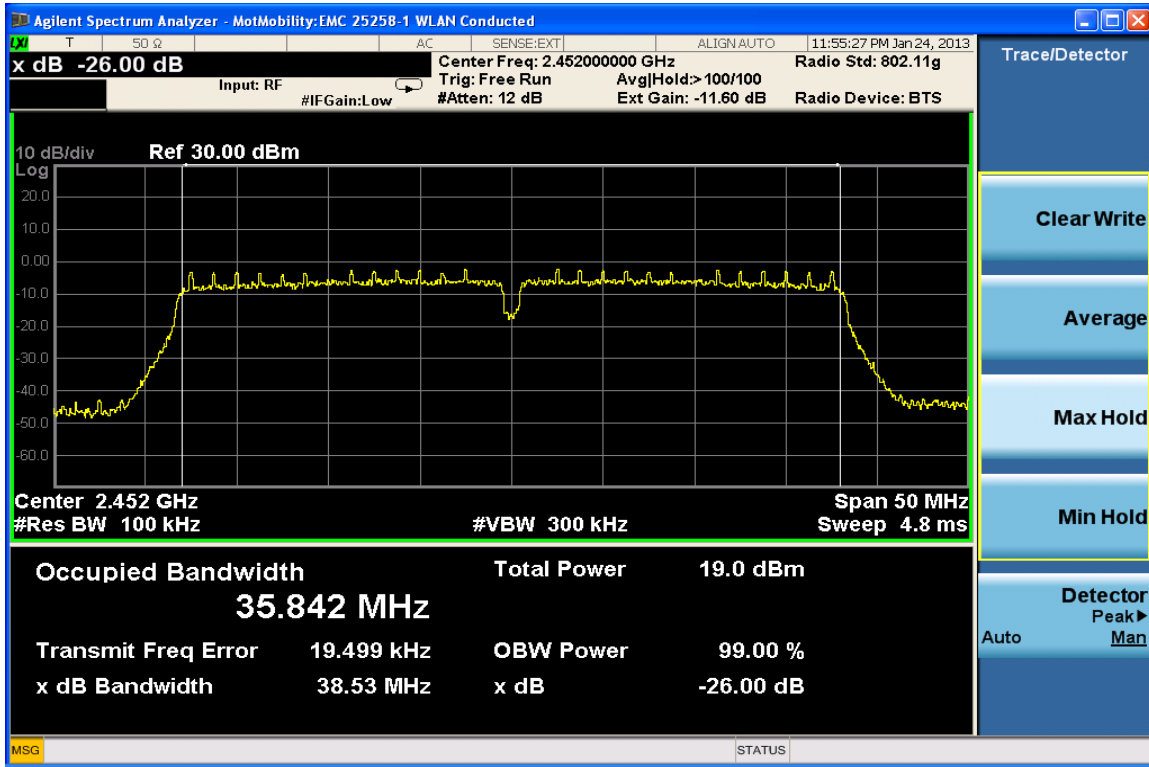
6dB Bandwidth Channel 9 @ 6.5Mbps



26dB Bandwidth Channel 3 @ 6.5Mbps



26dB Bandwidth Channel 6 @ 6.5Mbps



26dB Bandwidth Channel 9 @ 6.5Mbps

## **Peak Output Power**

CFR 47 Part 15.247

### **Measurement Procedure**

The RF output port of the Equipment-Under-Test is directly coupled to the input of the broad band power meter through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The power meter is capable of measuring both peak and average power measurements.

The EUT was transmitting at 100 percent duty cycle.

### **Measurement Results**

See Attached

Channel	Average power (dBm) for <u>802.11b</u> Data Rates			
	1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
1	14.85	14.82	14.85	14.87
6	15.34	15.12	15.14	15.21
11	15.16	14.92	14.93	14.98

Channel	Average power (dBm) for <u>802.11g</u> Data Rates							
	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
1	13.45	13.52	13.57	13.45	13.57	13.51	13.16	13.25
6	13.68	13.50	13.48	13.55	13.53	13.47	13.55	13.60
11	13.26	13.23	13.24	13.32	13.54	13.50	13.60	13.34

Channel	Average power (dBm) for <u>802.11n</u> Data Rates							
	20 MHz BW, 400 ns GI							
	7.2 Mbps	14.4 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps
1	10.70	10.59	10.87	10.79	9.84	9.62	9.69	10.16
6	13.54	13.53	13.31	13.58	13.55	12.69	13.48	13.56
11	13.35	13.37	12.87	13.33	13.28	13.50	13.51	13.36

Channel	Average power (dBm) for <u>802.11n</u> Data Rates							
	40 MHz BW, 400 ns GI							
	7.2 Mbps	14.4 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps
3	11.07	10.4	10.81	9.80	9.98	9.41	8.59	8.70
6	11.63	11.69	11.72	8.82	11.44	10.03	10.25	8.72
9	10.18	9.43	10.30	8.74	10.11	8.10	8.88	8.92

Channel	Average power (dBm) for <u>802.11n</u> Data Rates							
	20 MHz BW, 800 ns GI							
	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
1	10.12	10.62	10.85	10.24	10.51	9.97	10.33	9.8
6	11.00	12.22	13.53	13.46	13.57	9.05	12.73	13.24
11	13.30	13.27	13.34	13.26	12.49	13.13	13.08	11.72

Channel	Average power (dBm) for <u>802.11n</u> Data Rates							
	40 MHz BW, 800 ns GI							
	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
3	10.12	10.62	10.85	10.24	10.51	9.97	10.33	9.8
6	11.00	12.22	13.53	13.46	13.57	9.05	12.73	13.24
9	13.30	13.27	13.34	13.26	12.49	13.13	13.08	11.72

Channel	Peak power (dBm) for <u>802.11b</u> Data Rates			
	1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
1	18.37	18.39	17.28	18.15
6	18.90	18.72	17.61	18.37
11	18.71	18.50	17.38	18.25

Channel	Peak power (dBm) for <u>802.11g</u> Data Rates							
	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
1	22.96	22.87	23.07	22.60	23.11	22.60	23.08	22.99
6	22.49	22.87	22.32	22.32	23.29	22.06	23.18	23.56
11	22.58	22.39	22.00	23.07	22.92	22.71	22.91	23.37

Channel	Peak power (dBm) for <u>802.11n</u> Data Rates							
	20 MHz BW, 400 ns GI							
	7.2 Mbps	14.4 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps
1	19.70	20.48	20.91	20.42	20.28	20.41	22.13	21.44
6	22.35	23.16	23.44	23.26	22.34	22.70	22.85	22.77
11	22.44	22.61	22.10	22.19	22.72	22.11	22.48	22.39

Channel	Peak power (dBm) for <u>802.11n</u> Data Rates							
	40 MHz BW, 400 ns GI							
	7.2 Mbps	14.4 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps
3	21.60	20.30	20.58	21.26	21.34	21.83	21.16	20.99
6	21.88	21.82	22.39	20.01	21.26	21.87	21.72	21.14
9	20.82	21.41	20.47	20.00	20.39	21.32	20.48	21.23

Channel	Peak power (dBm) for <u>802.11n</u> Data Rates							
	20 MHz BW, 800 ns GI							
	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
1	20.54	20.83	20.15	19.37	19.94	20.41	19.86	19.13
6	22.17	21.90	21.79	23.13	22.40	19.20	22.62	22.34
11	22.03	22.26	21.34	22.69	22.04	21.18	21.14	22.73

Channel	Peak power (dBm) for <u>802.11n</u> Data Rates							
	40 MHz BW, 800 ns GI							
	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
3	21.36	21.34	21.79	21.84	20.92	21.86	21.57	21.39
6	24.36	20.42	21.30	22.76	22.61	22.04	21.01	22.53
9	20.57	19.26	20.59	20.44	19.42	20.80	20.92	21.21

## **Power Spectral Density**

CFR 47 Part 15.247

### **Measurement Procedure**

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. The fully charged internal battery was used for the supply voltage. The WLAN function of the EUT was enabled.

The spectrum analyzer used the following settings:

1. Span = 1.5 x 6dB BW (DTS Bandwidth)
2. RBW = 100 kHz
3. VBW= 300 kHz
4. Sweep = Auto
5. Detector function = peak
6. Trace = max hold

The trace was allowed to stabilize. The peak power is measured by the spectrum analyzer, using the peak marker function to determine the peak amplitude level. The All modes of operation and data rates were investigated. The test results shown below represent the worst case condition.

### **Measurement Results**

See Attached

<b>2412 MHz</b>	<b>2437MHz</b>	<b>2462MHz</b>
7.123	7.385	7.232

**802.11 b 1 Mbps**

<b>2412 MHz</b>	<b>2437MHz</b>	<b>2462MHz</b>
3.868	4.047	3.787

**802.11 g 6 Mbps**

<b>2412 MHz</b>	<b>2437MHz</b>	<b>2462MHz</b>
1.180	4.104	3.943

**802.11n(400ns) 7.2 Mbps 20MHz**

<b>2412 MHz</b>	<b>2437MHz</b>	<b>2462MHz</b>
1.115	3.949	3.826

**802.11n(800ns) 6.5 Mbps 20MHz**

<b>2422 MHz</b>	<b>2437MHz</b>	<b>2452MHz</b>
-1.799	-1.395	-2.448

**802.11n(400ns) 7.2 Mbps 40MHz**

<b>2422 MHz</b>	<b>2437MHz</b>	<b>2452MHz</b>
-1.785	-1.413	-2.449

**802.11n(800ns) 6.5 Mbps 40MHz**

## **Spurious RF Conducted Emissions**

CFR 47 Part 15.247

### **Measurement Procedure**

The RF output port of the Equipment-Under-Test is directly coupled to the input of the spectrum analyzer through a specialized RF connector and a 10dB passive attenuator. The fully charged internal battery was used for the supply voltage. The WLAN function of the EUT was enabled. The EUT was transmitting at its maximum data rate. The trace was allowed to stabilize.

The reference level for 20 dB down is calculated based on the peak power measurement made using the 100 kHz RBW settings within the fundamental emissions.

The peak power of the carrier signal is measured by the spectrum analyzer, using the peak marker function to determine the peak amplitude level. The spectrum analyzer used the following settings:

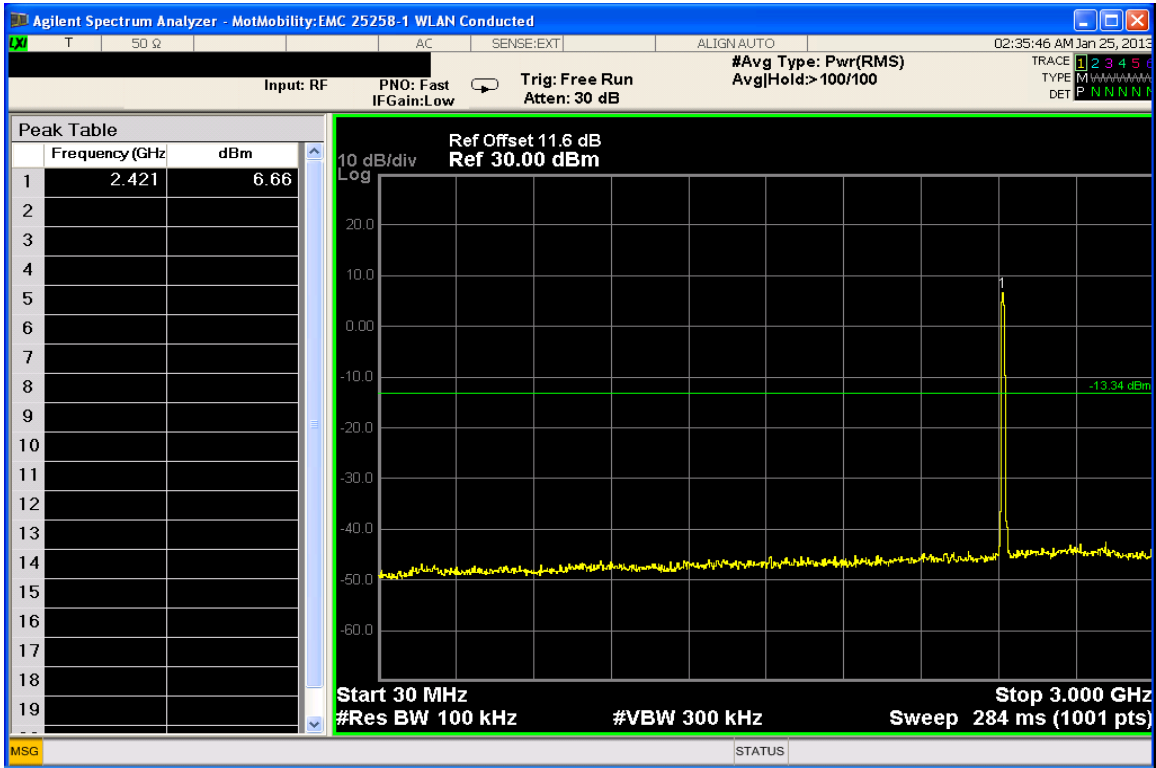
1. RBW = 100kHz
2. VBW  $\geq$  300kHz
3. Detector function = peak
4. Sweep = auto couple
5. Trace = max hold

All modes of operation and data rates were investigated. The test results shown below represent the worst case condition.

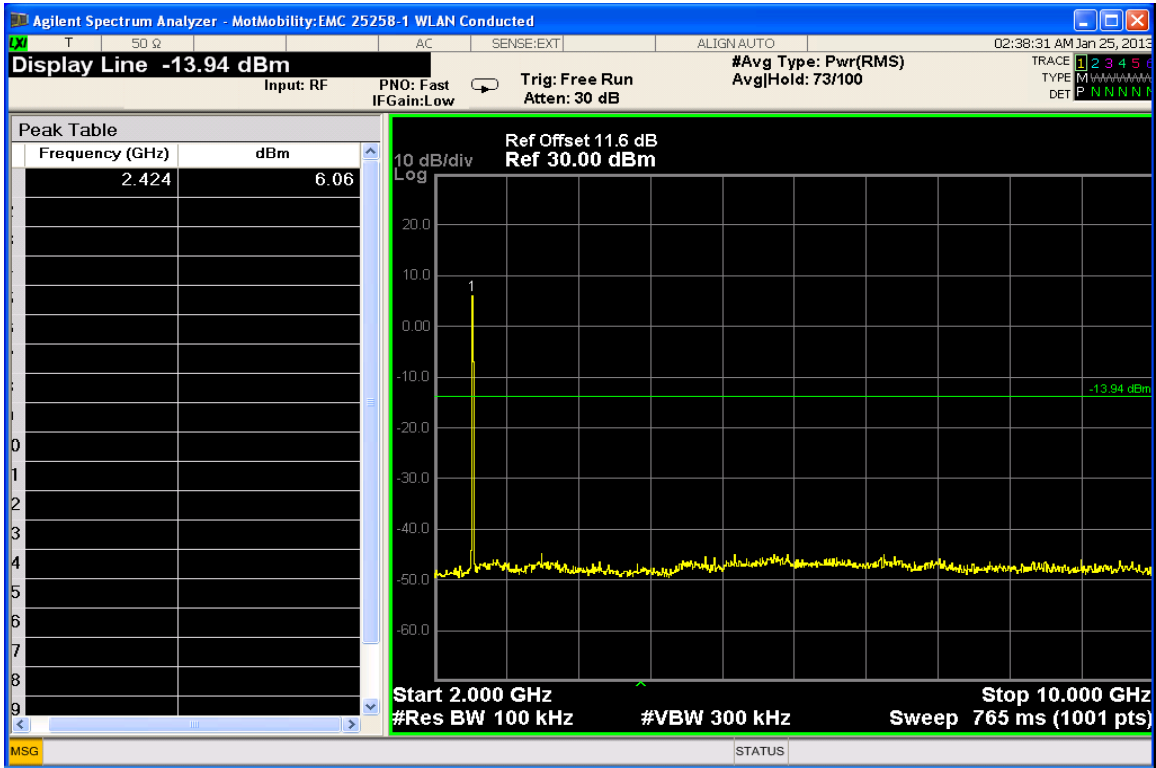
### **Measurement Results**

See attached:

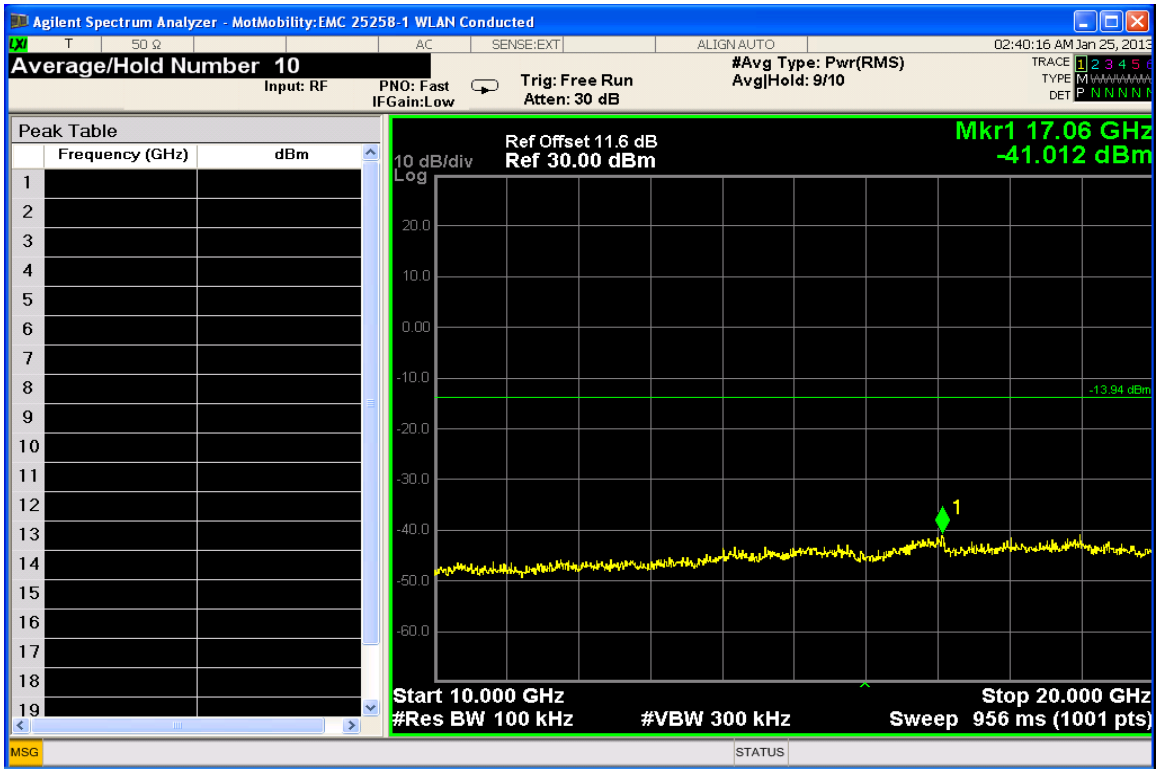
### 802.11b Mode @ 1Mbps



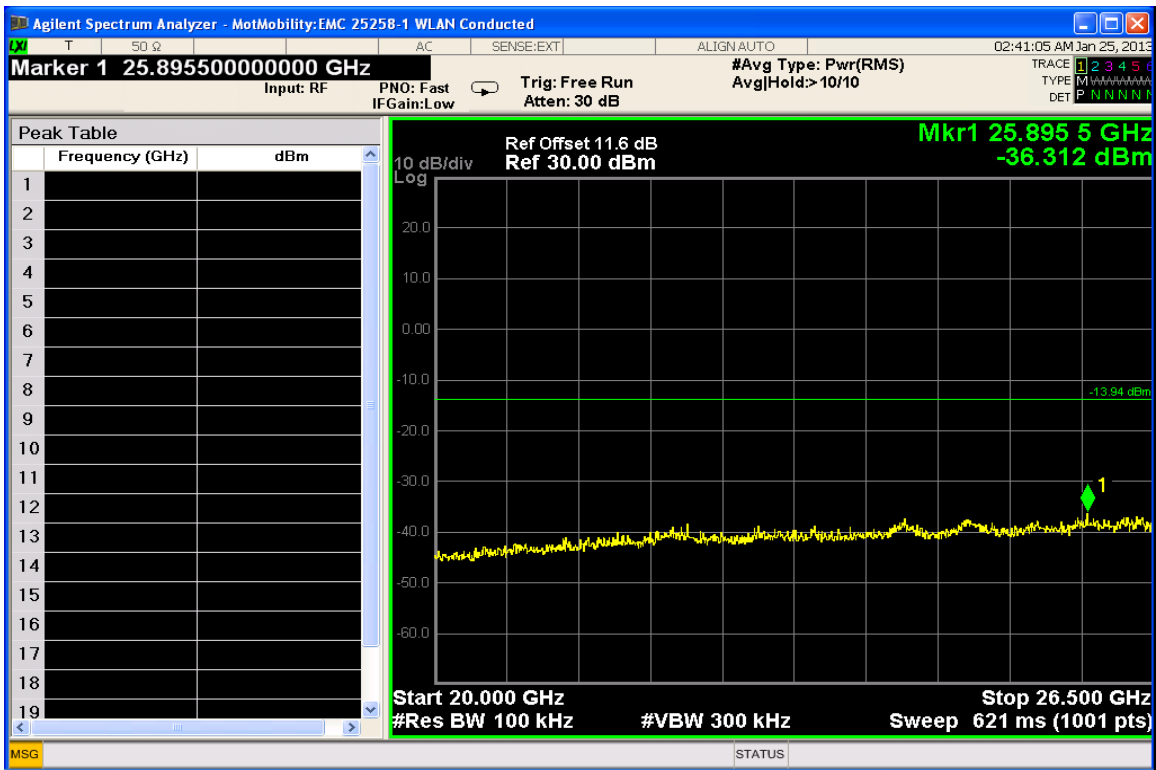
Conducted Spurious Emissions 30MHz-3000MHz (Low Channel)



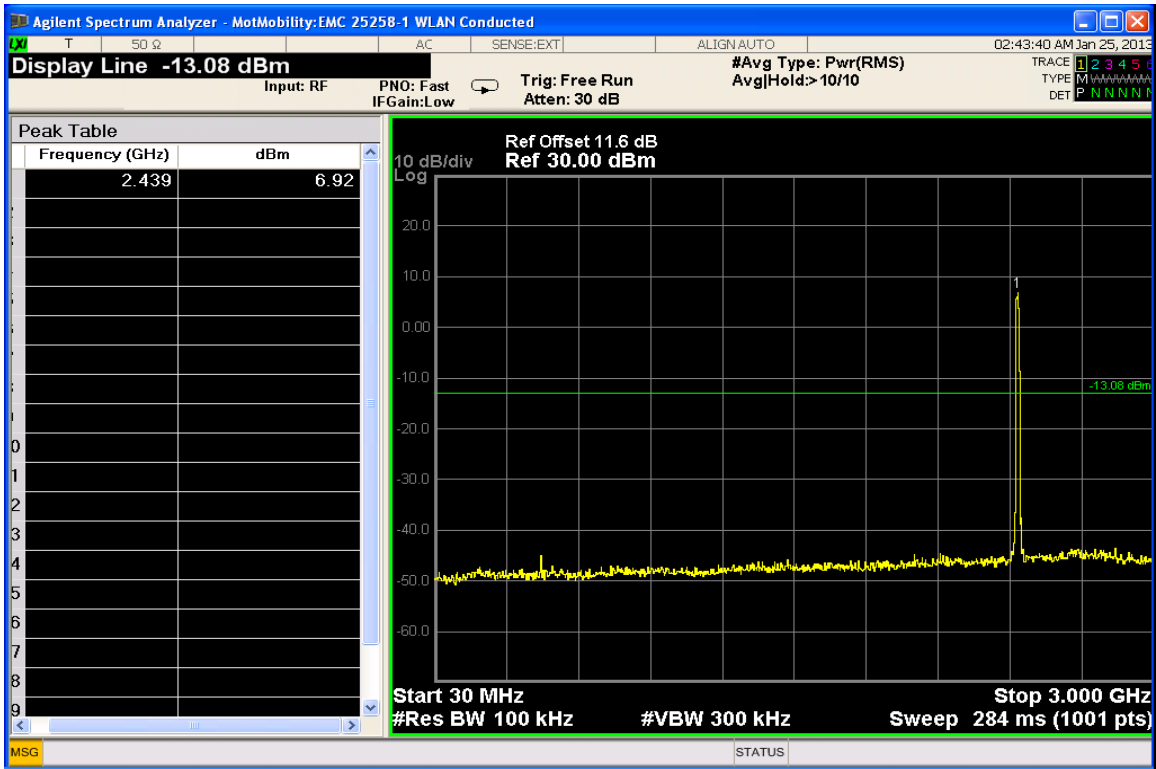
Conducted Spurious Emissions 2GHz-10GHz (Low Channel)



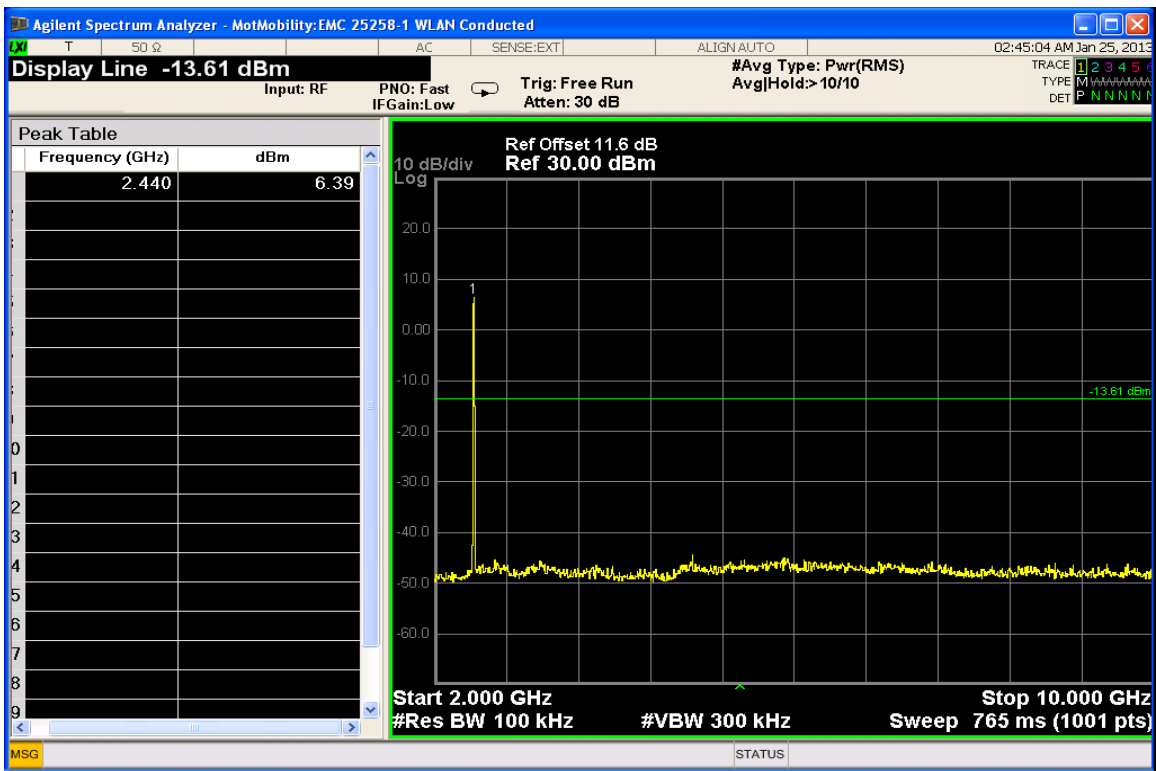
Conducted Spurious Emissions 10GHz-20GHz (Low Channel)



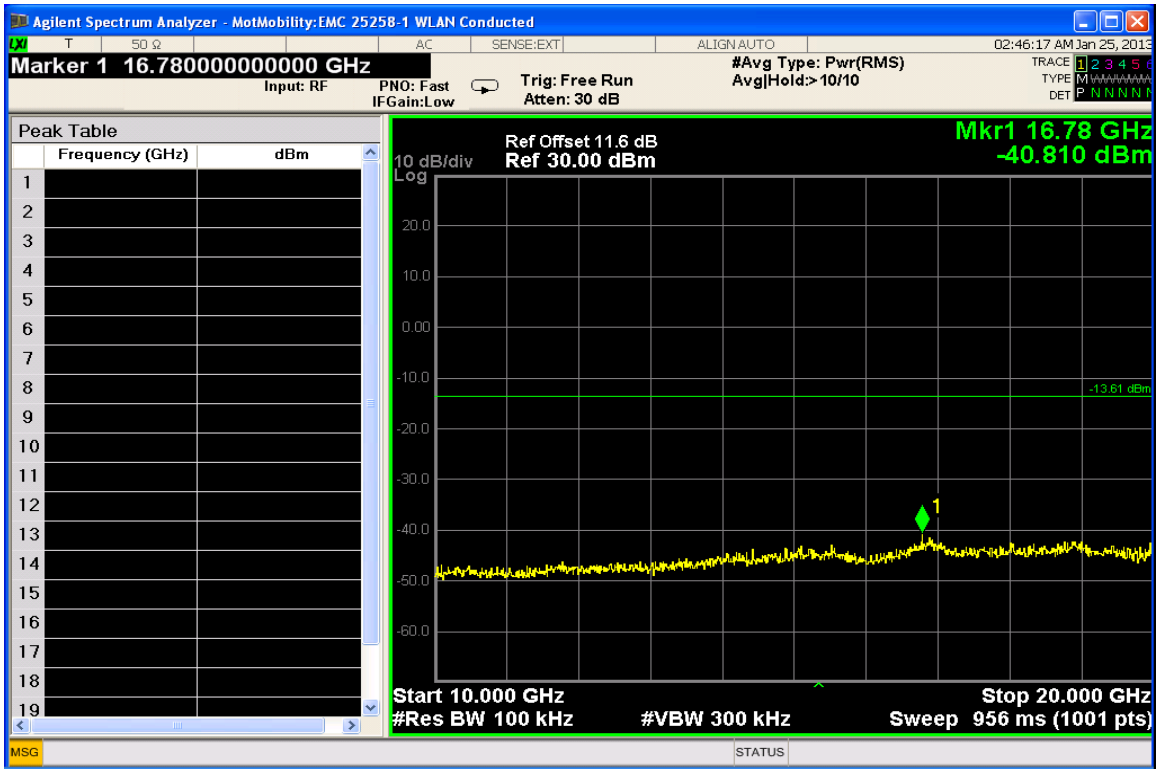
Conducted Spurious Emissions 20GHz-26.5GHz (Low Channel)



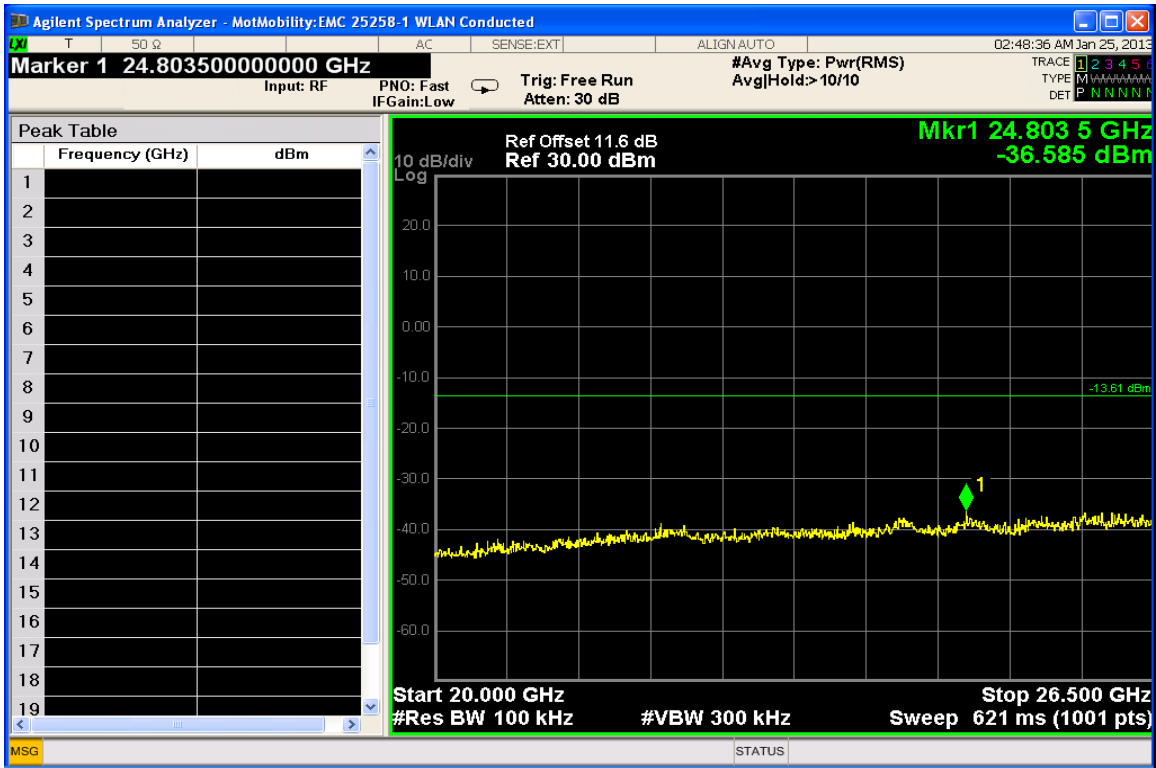
**Conducted Spurious Emissions 30MHz-3000MHz (Mid Channel)**



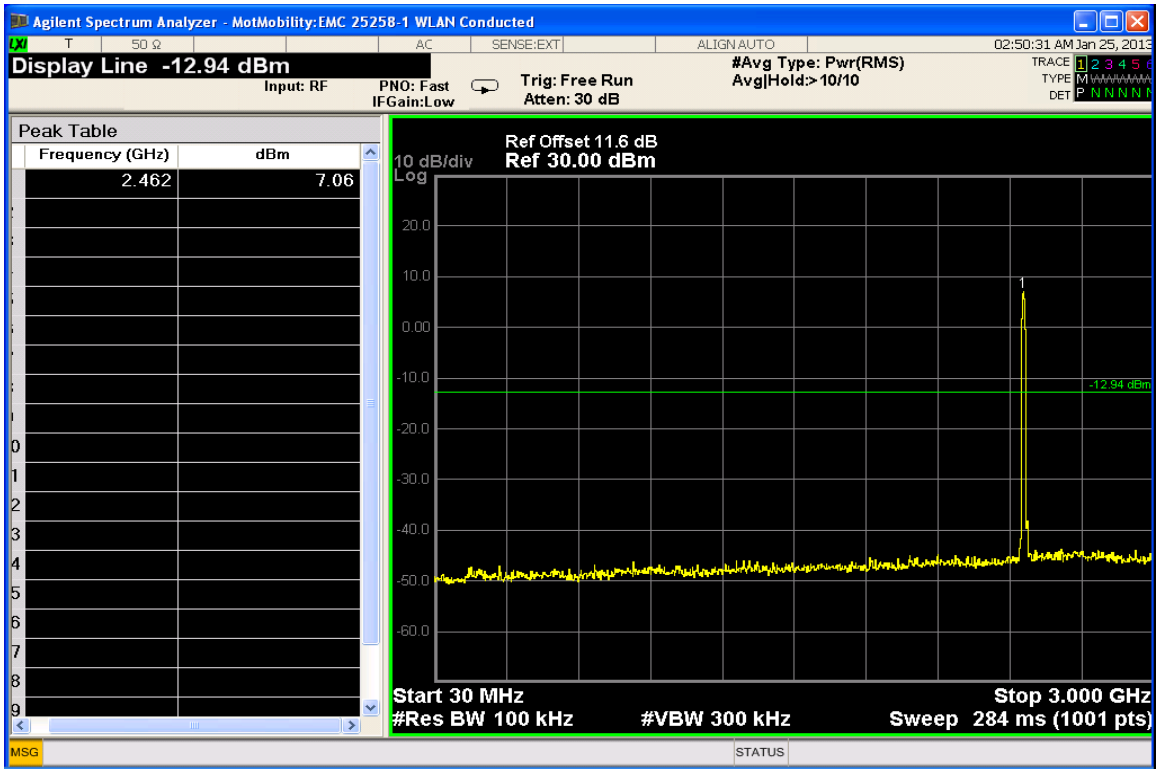
**Conducted Spurious Emissions 2GHz-10GHz (Mid Channel)**



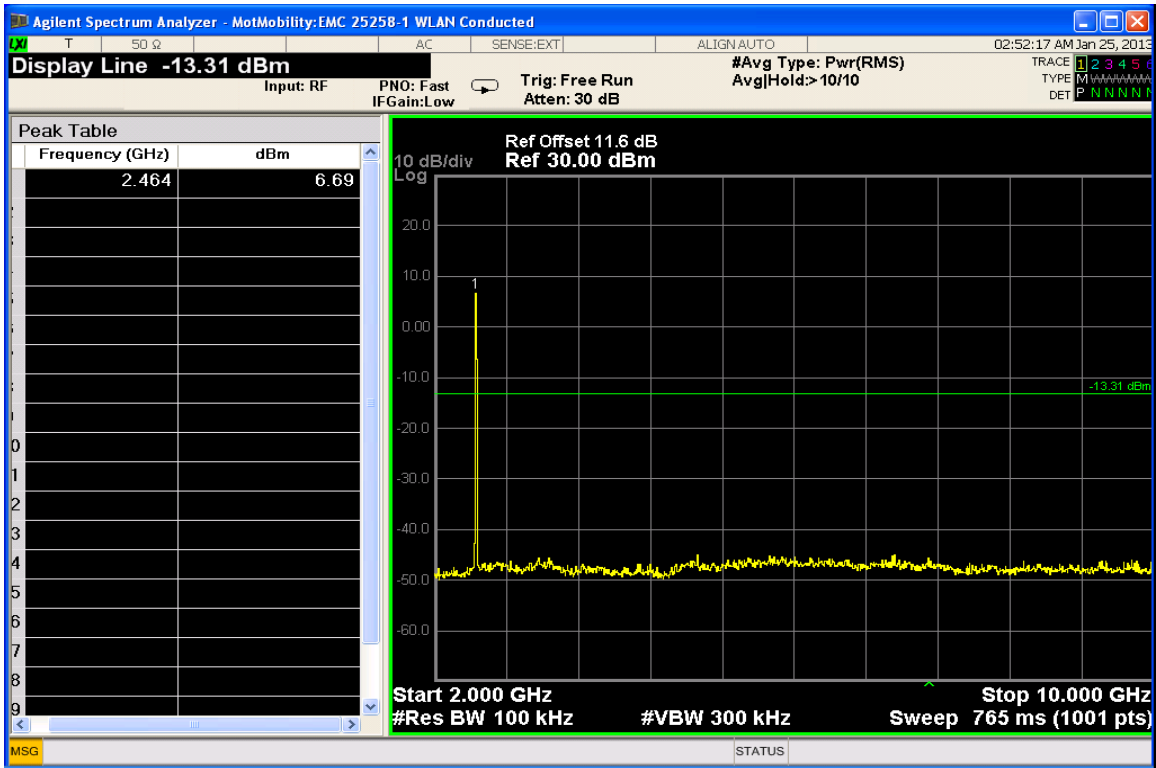
Conducted Spurious Emissions 10GHz-20GHz (Mid Channel)



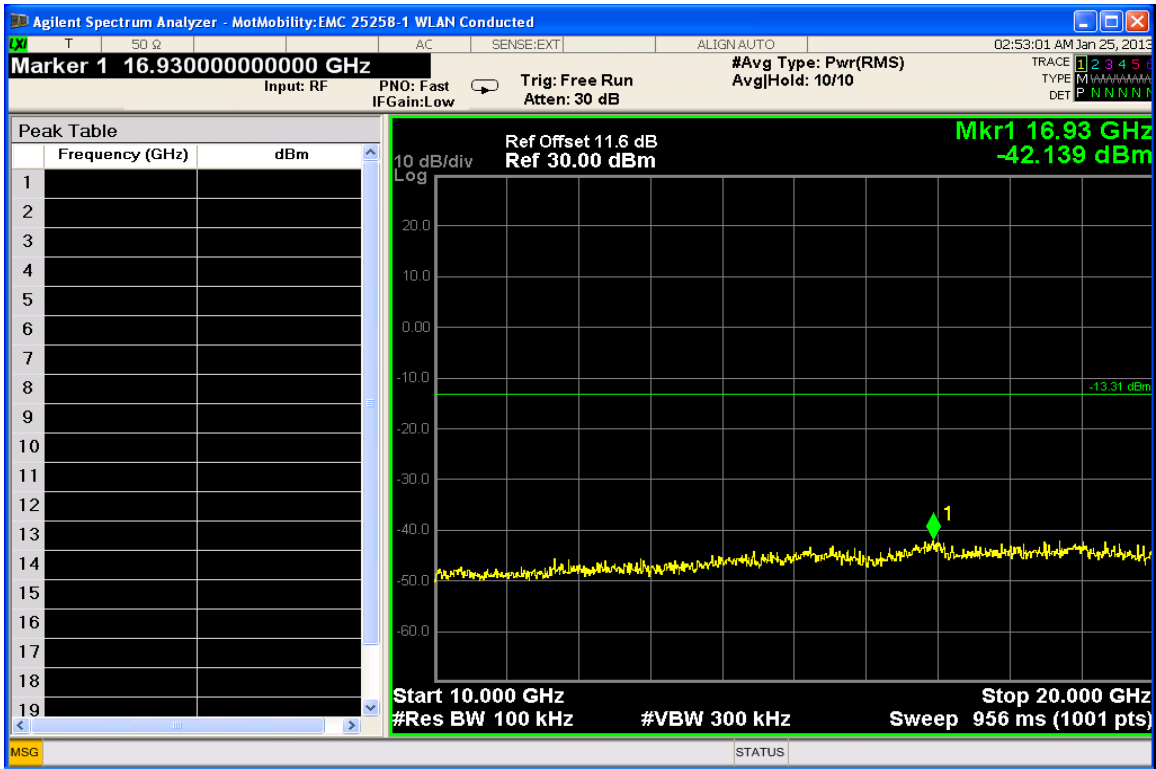
Conducted Spurious Emissions 20GHz-26.5GHz (Mid Channel)



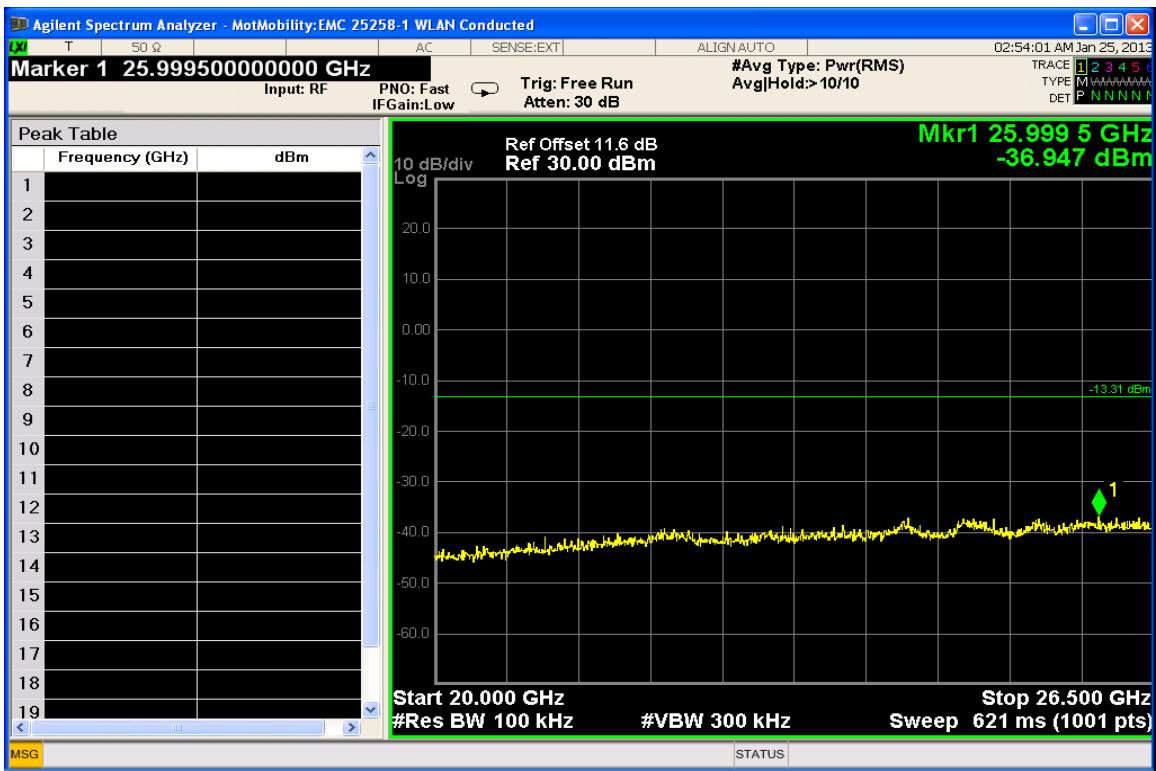
**Conducted Spurious Emissions 30MHz-3000MHz (High Channel)**



**Conducted Spurious Emissions 2GHz-10GHz (High Channel)**

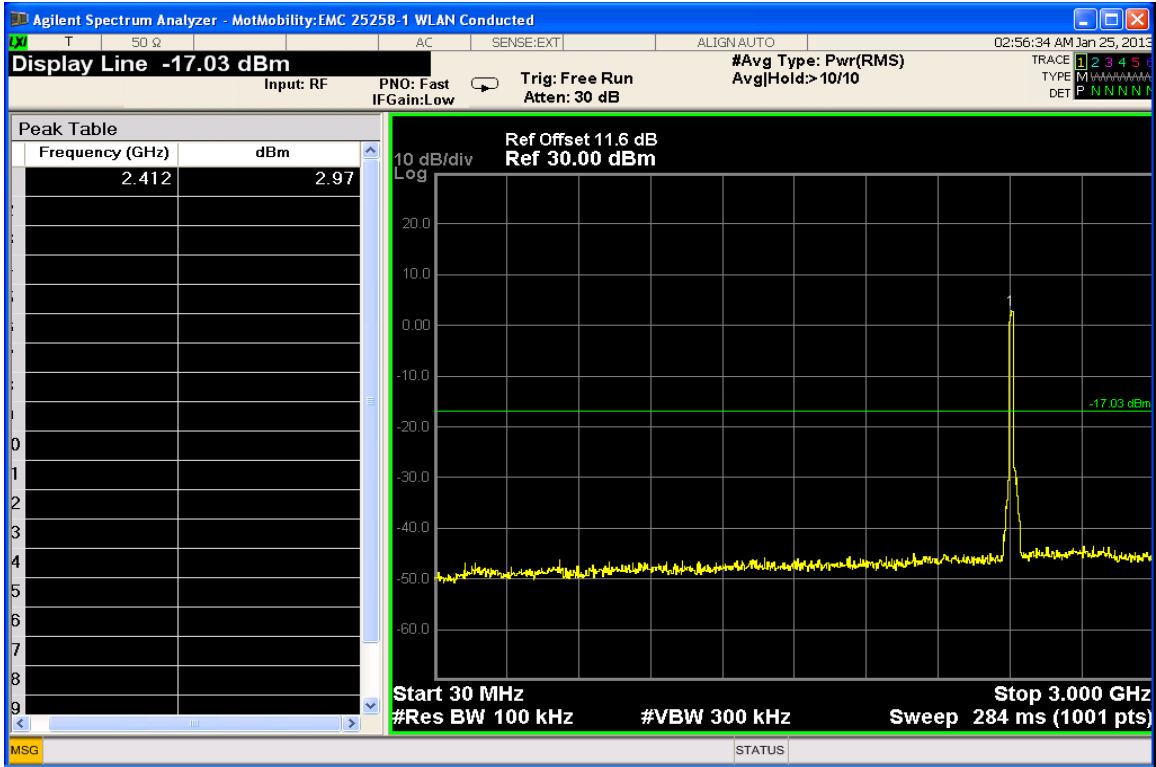


Conducted Spurious Emissions 10GHz-20GHz (High Channel)

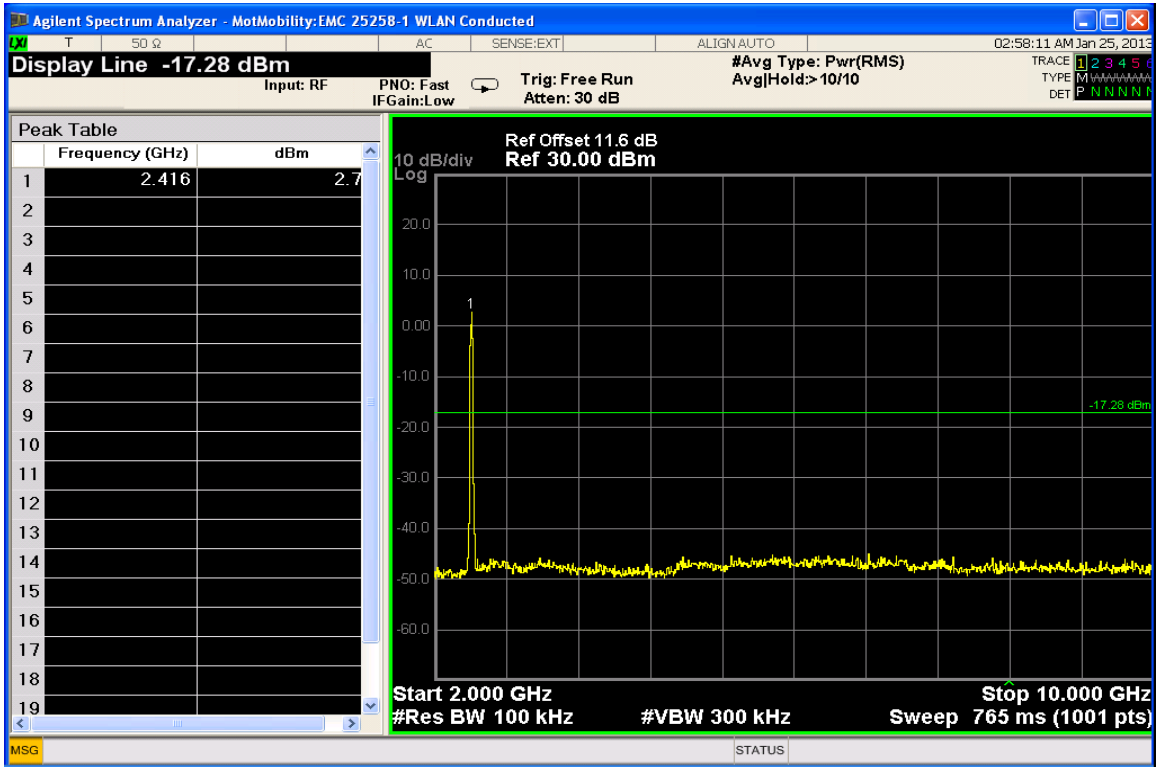


Conducted Spurious Emissions 20GHz-26.5GHz (High Channel)

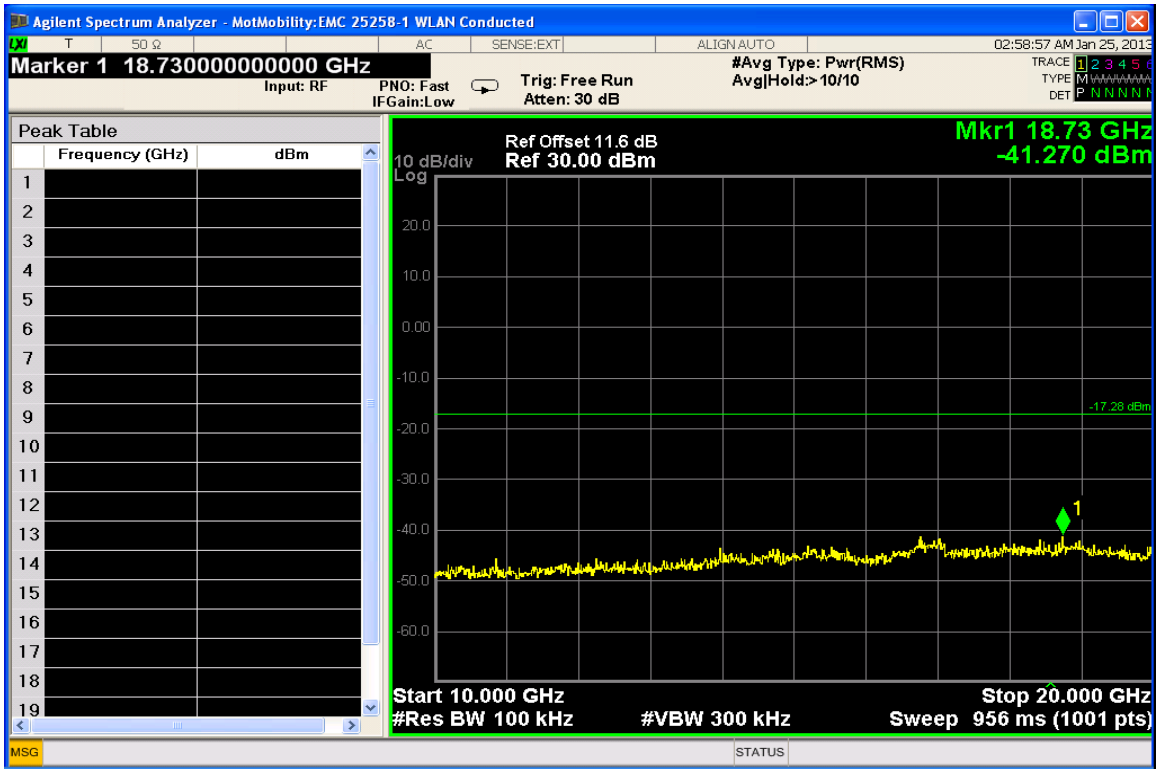
**802.11 g @ 6Mbps**



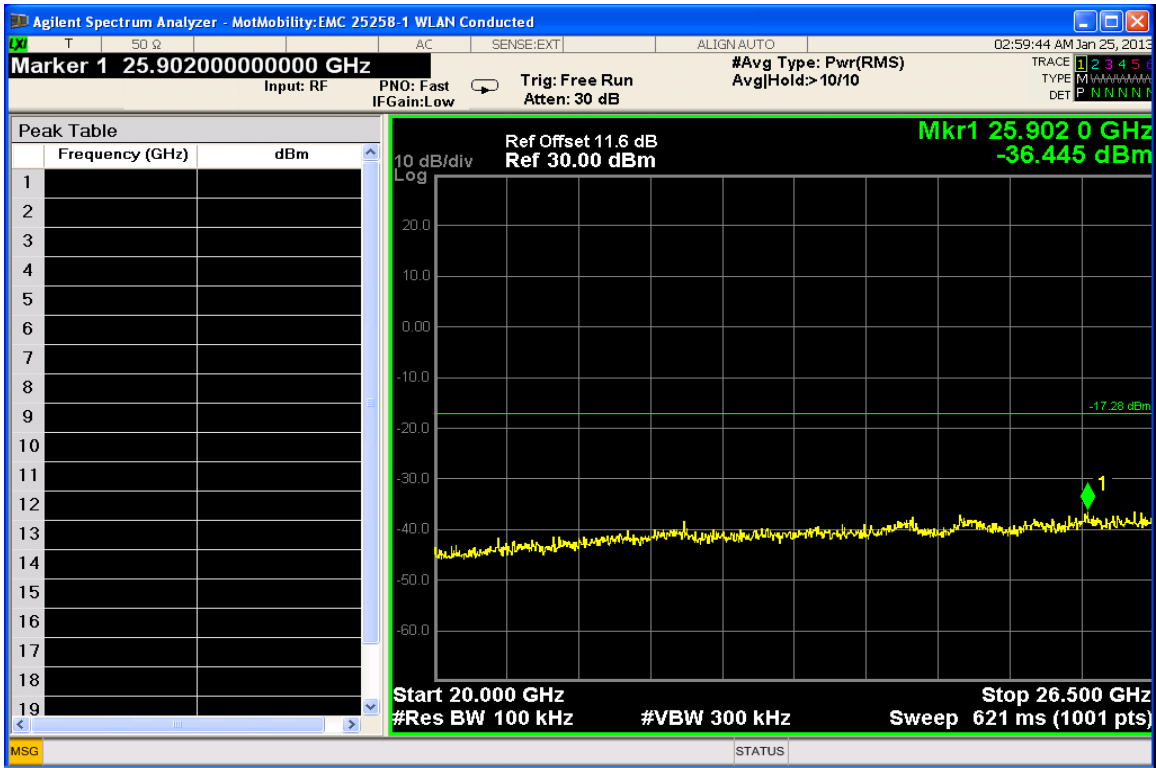
**Conducted Spurious Emissions 30MHz-3000MHz (Low Channel)**



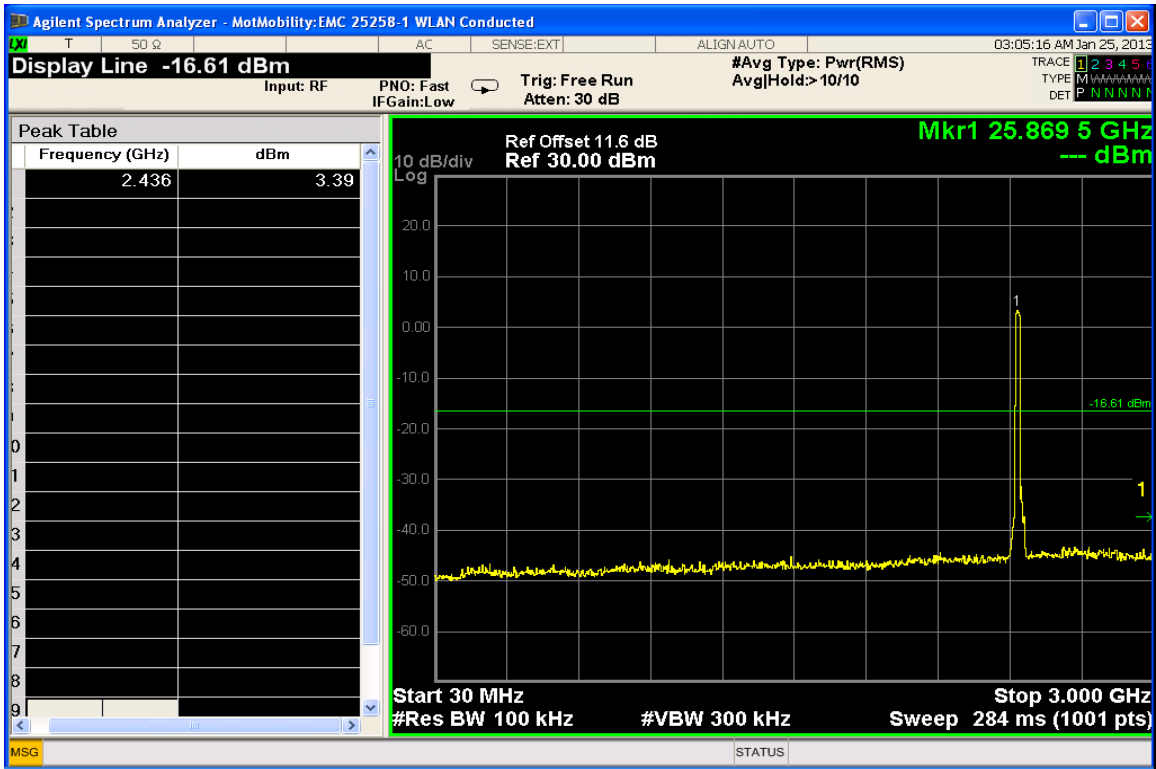
**Conducted Spurious Emissions 2GHz-10GHz (Low Channel)**



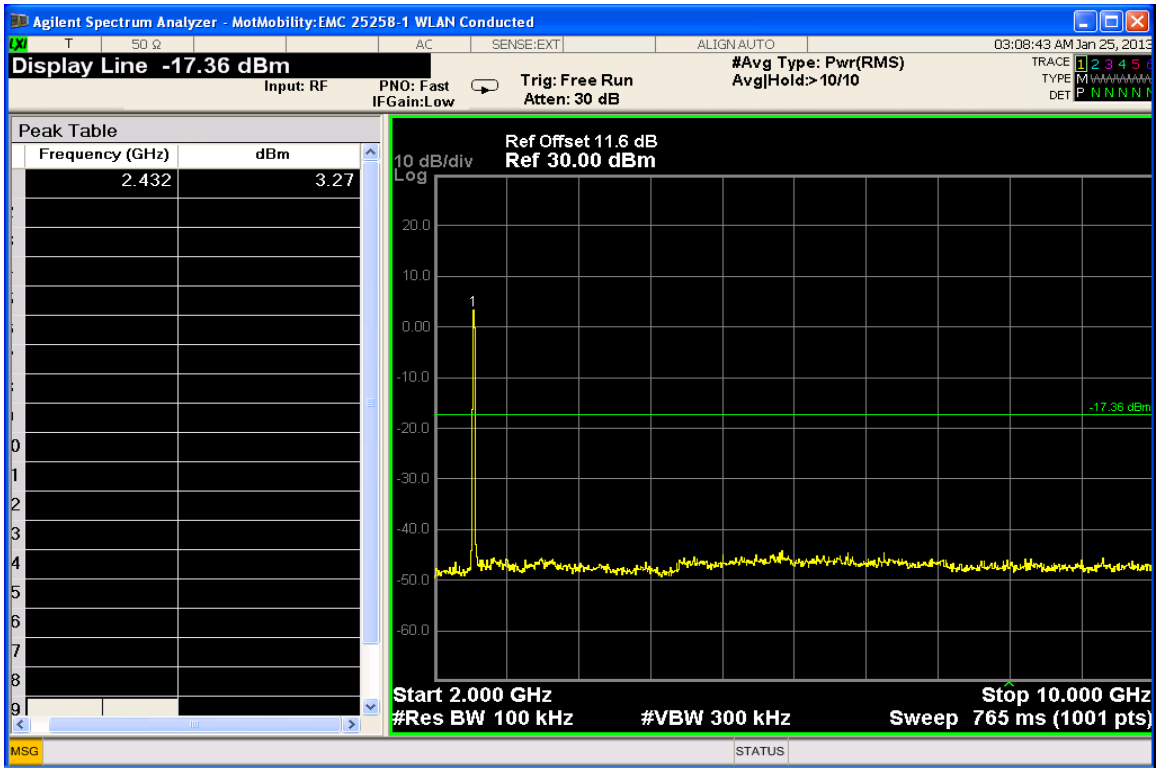
Conducted Spurious Emissions 10GHz-20GHz (Low Channel)



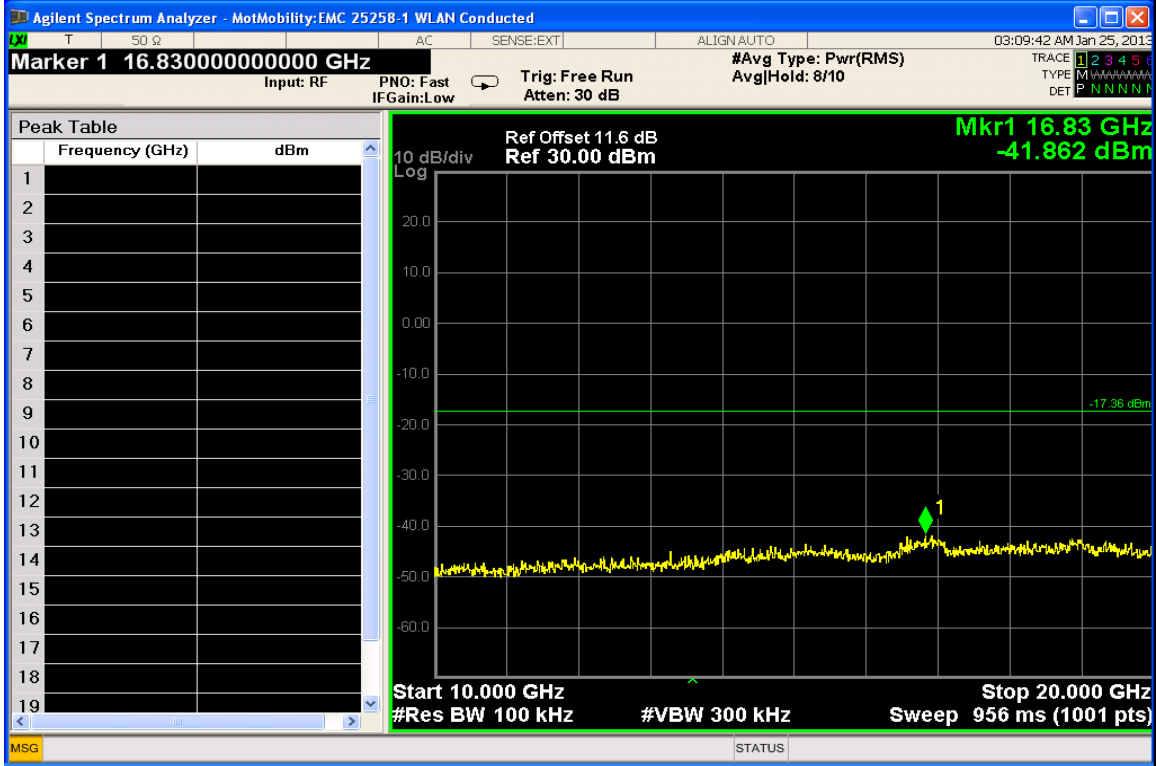
Conducted Spurious Emissions 20MHz-26.5GHz (Low Channel)



**Conducted Spurious Emissions 30MHz-3000MHz (Mid Channel)**



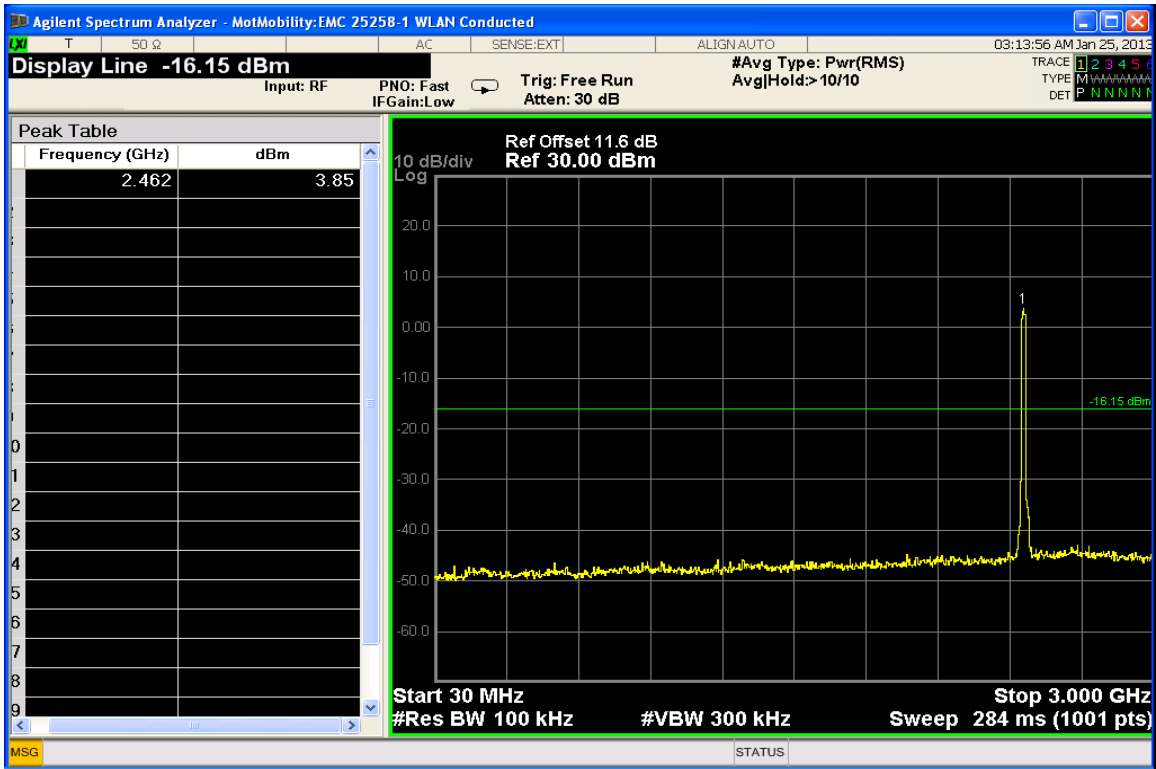
**Conducted Spurious Emissions 2GHz-10GHz (Mid Channel)**



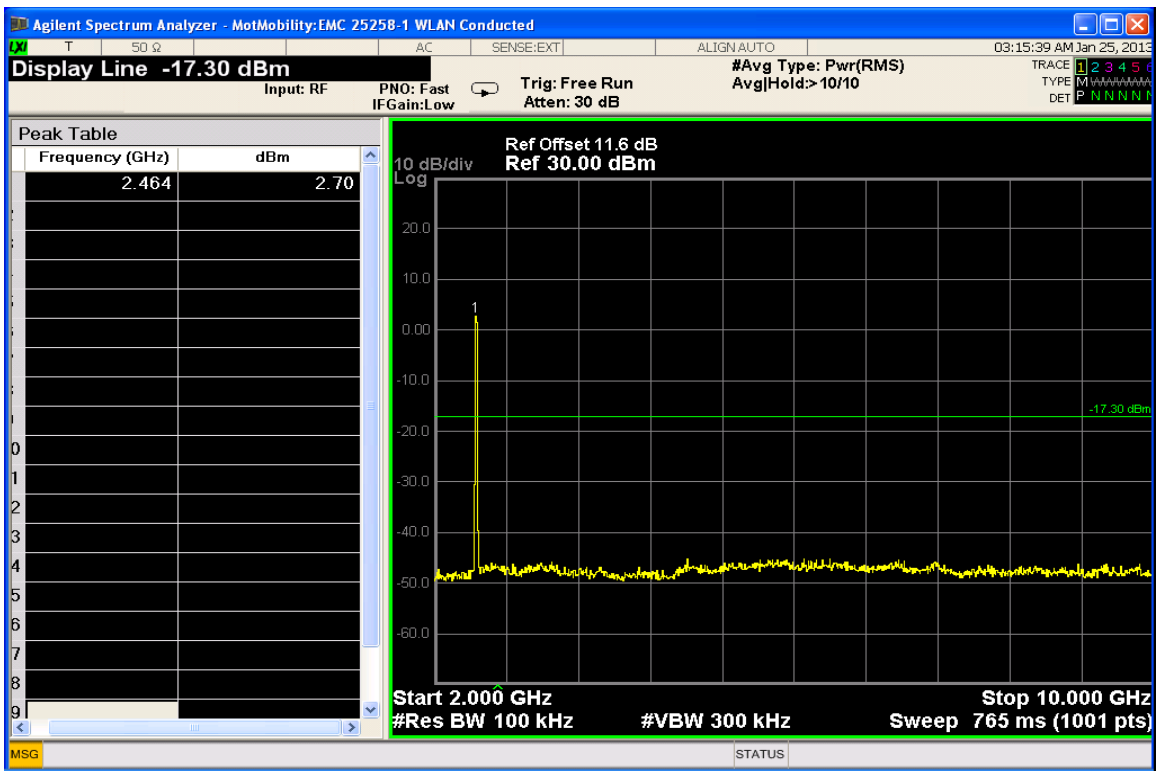
Conducted Spurious Emissions 10GHz-20GHz (Mid Channel)



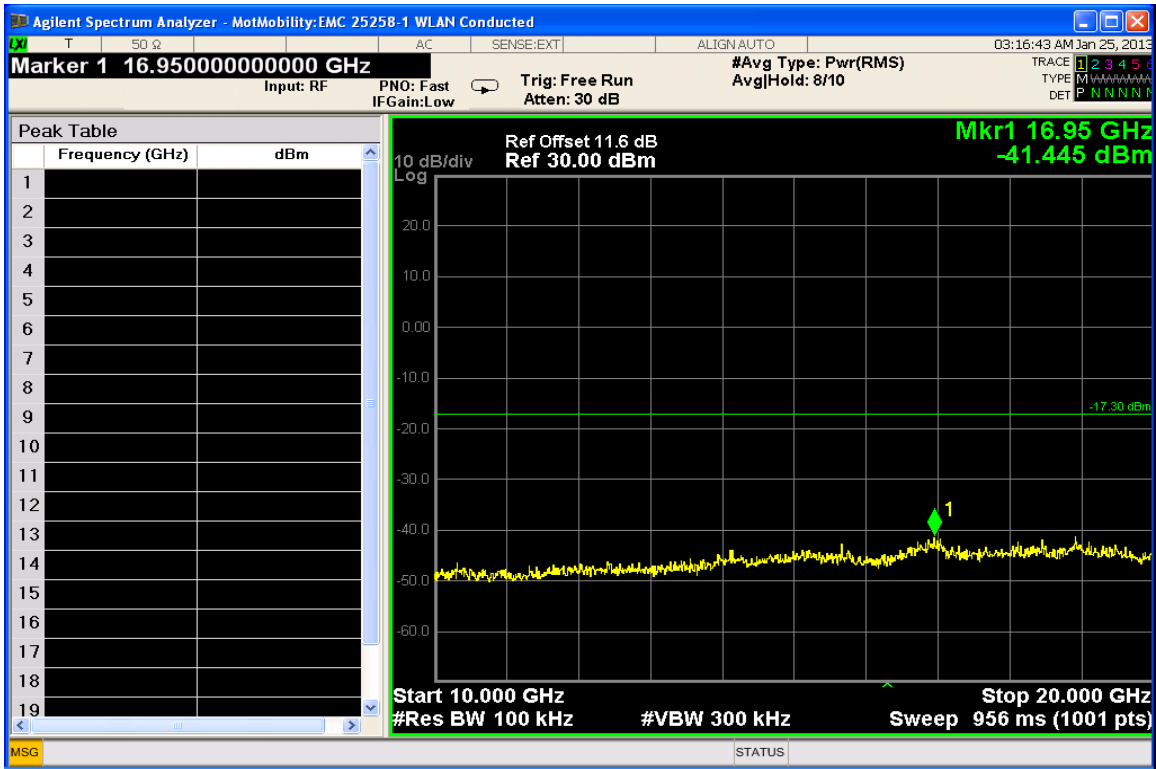
Conducted Spurious Emissions 20GHz-26.5GHz (Mid Channel)



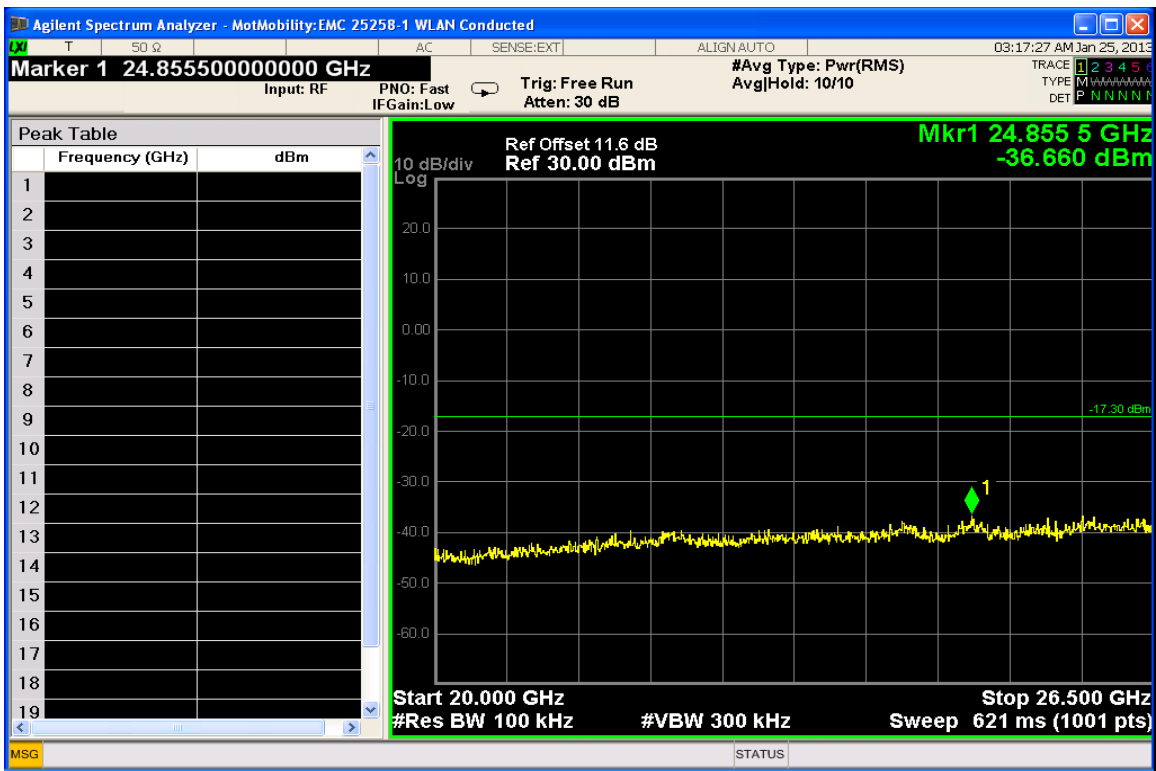
**Conducted Spurious Emissions 30MHz-3000MHz (High Channel)**



**Conducted Spurious Emissions 2GHz-10GHz (High Channel)**



**Conducted Spurious Emissions 10GHz-20GHz (High Channel)**



**Conducted Spurious Emissions 20GHz-26.5GHz (High Channel)**

## **Conducted Spurious Emissions at the Band Edge**

CFR 47 Part 15.247

### **Measurement Procedure**

The RF output port of the Equipment-Under-Test is directly coupled to the input of the spectrum analyzer through a specialized RF connector and a 10dB passive attenuator. The fully charged internal battery was used for the supply voltage. The WLAN function of the EUT was enabled. The EUT was transmitting at its maximum data rate. The trace was allowed to stabilize.

The spectrum analyzer used the following settings:

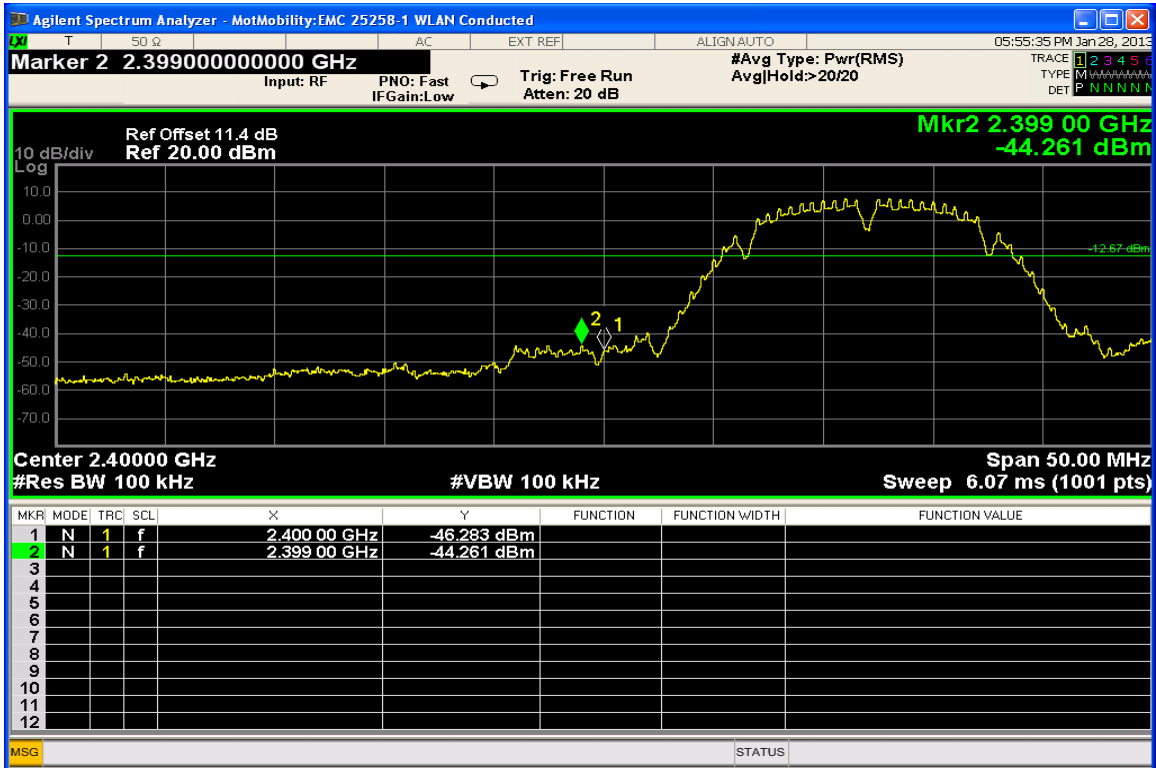
1. Center Frequency = 2.4GHz (lower band edge) or 2.4835GHz (upper band edge)
2. Span = 50MHz (for 20MHz BW) or 100MHz (for 40MHz BW)
3. RBW = 100kHz
4. VBW  $\geq$  300kHz
5. Detector function = peak
6. Sweep = auto couple
7. Trace = max hold
8. Sweep = Auto

All modes of operation and data rates were investigated. The test results shown below represent the worst case condition.

### **Measurement Results**

See attached:

**802.11b @ 1Mbps Band edge**

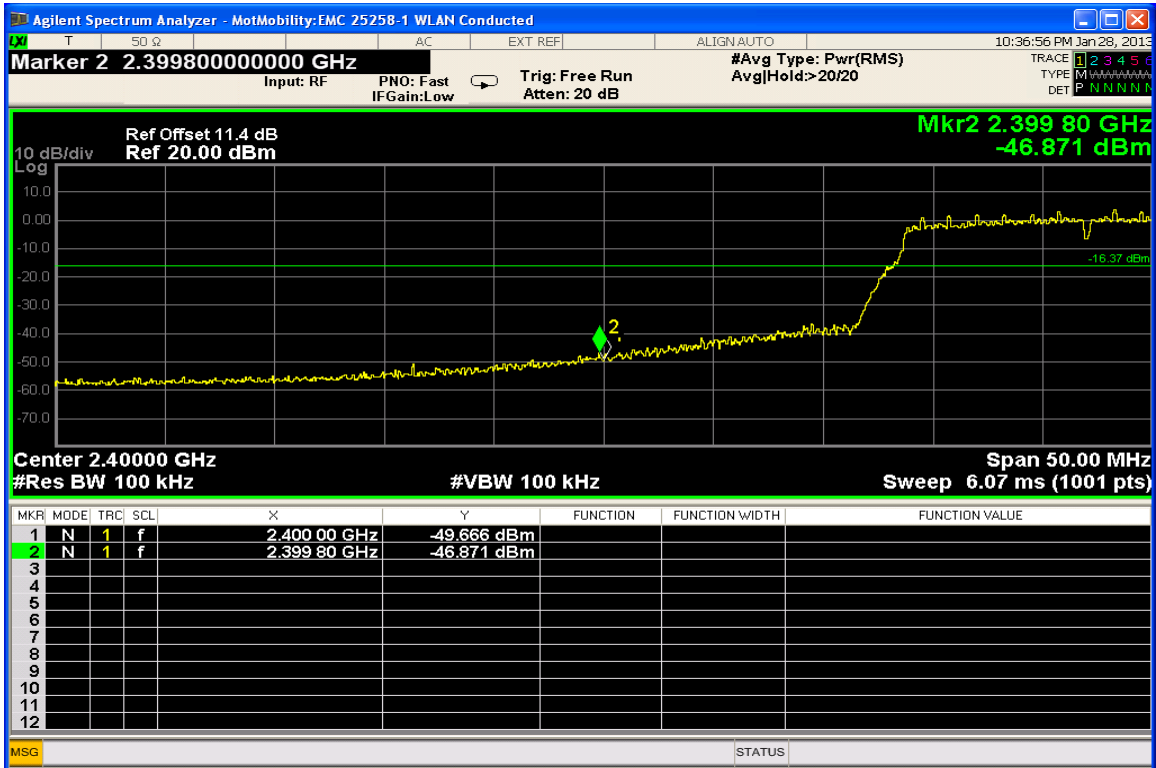


**Channel 1 – Lower Band Edge**

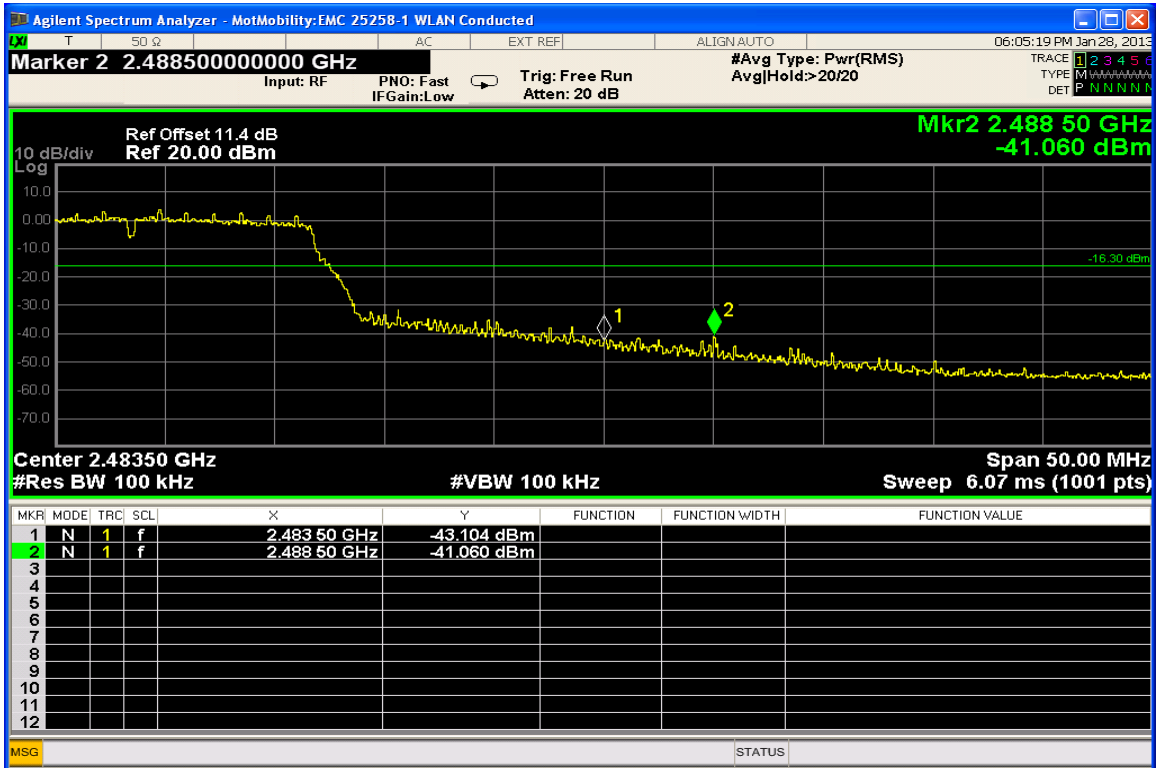


**Channel 11 – Upper Band Edge**

**802.11g @ 6Mbps Band Edge**

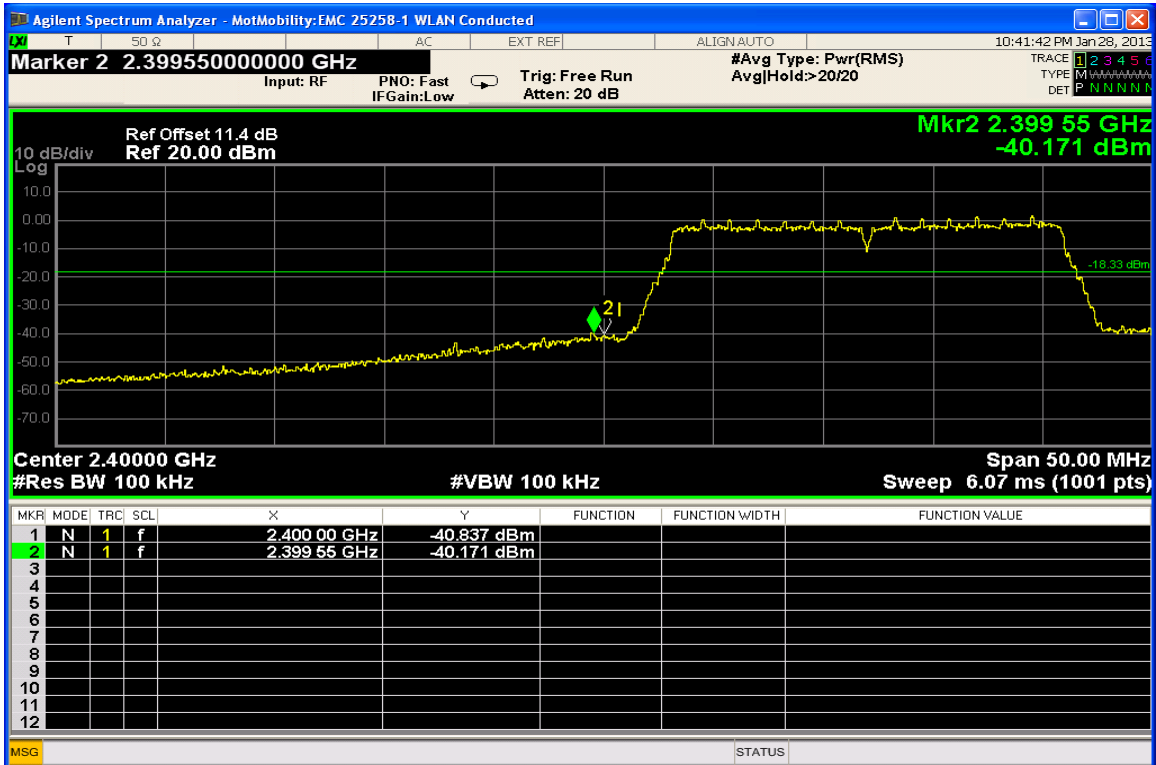


**Channel 1 – Lower Band Edge**



**Channel 11 – Upper Band Edge**

**802.11n 400ns GI 20MHz BW @ 7.2Mbps Band Edge**

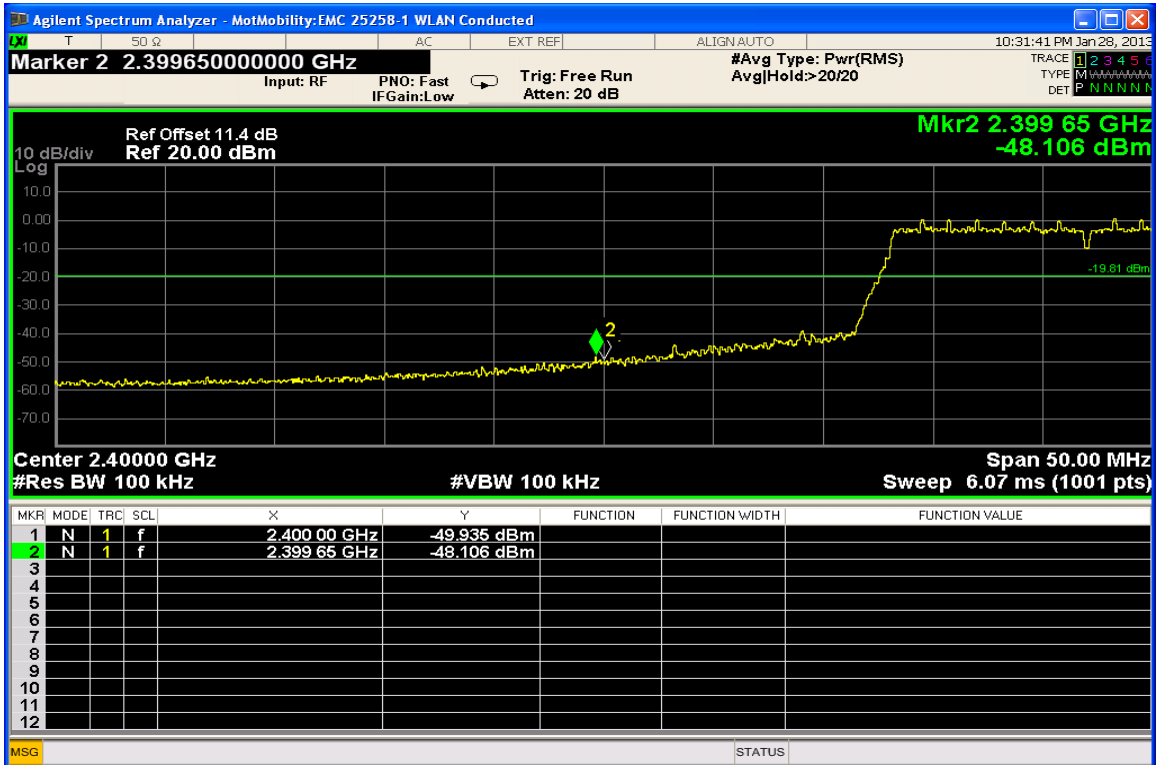


**Channel 1 – Lower Band Edge**



**Channel 11 – Upper Band Edge**

**802.11n 800ns GI 20MHz BW @ 6.5Mbps Band Edge**

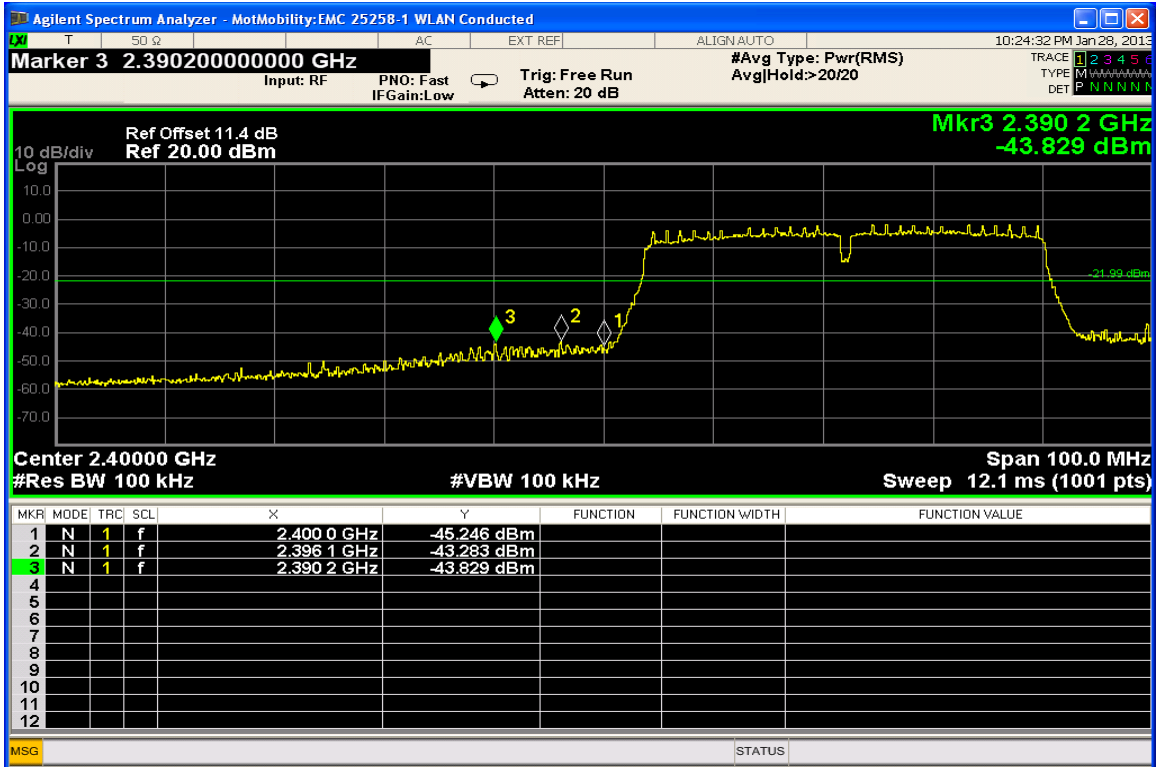


**Channel 1 – Lower Band Edge**



**Channel 11 – Upper Band Edge**

**802.11n 400ns GI 40MHz BW @ 7.2Mbps Band Edge**

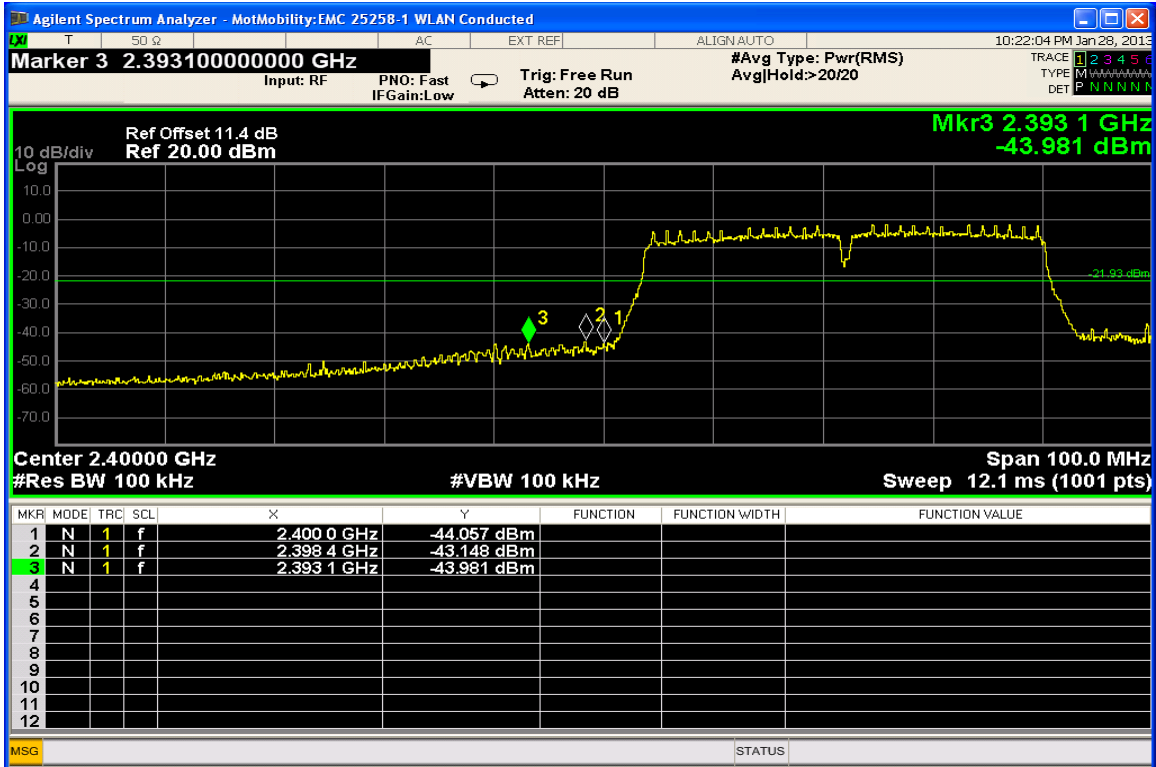


**Channel 1 – Lower Band Edge**

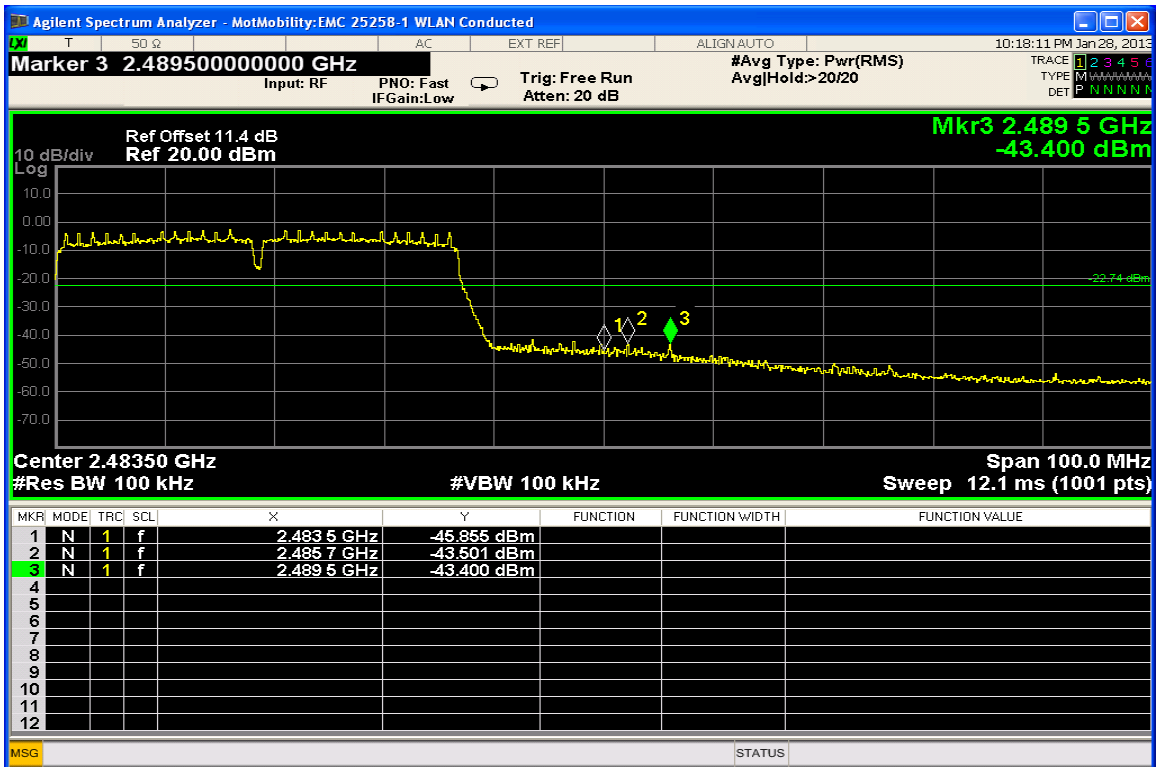


**Channel 11 – Upper Band Edge**

**802.11n 800ns GI 40MHz BW @ 6.5Mbps Band Edge**



**Channel 1 – Lower Band Edge**



**Channel 11 – Upper Band Edge**

## **AC Line Conducted Emissions**

CFR 47 Part 15.207

### **Measurement Procedure**

Measured levels of ac power line conducted emission shall be the radio-noise voltage from the line probe or across the 50  $\Omega$  LISN port, where permitted, terminated into a 50  $\Omega$  noise meter, or where permitted or required, the radio-noise current on the power line sensed by a current probe.

All radio-noise voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord or calibrated extension cord by the use of mating plugs and receptacles on the EUT and LISN. Equipment shall be tested with power cords that are normally supplied using an LISN, the 50  $\Omega$  measuring port is terminated by a 50  $\Omega$  radio-noise meter or a 50  $\Omega$  resistive load. All other ports are terminated in 50  $\Omega$ .

Detectors – Quasi Peak and Average Detector.

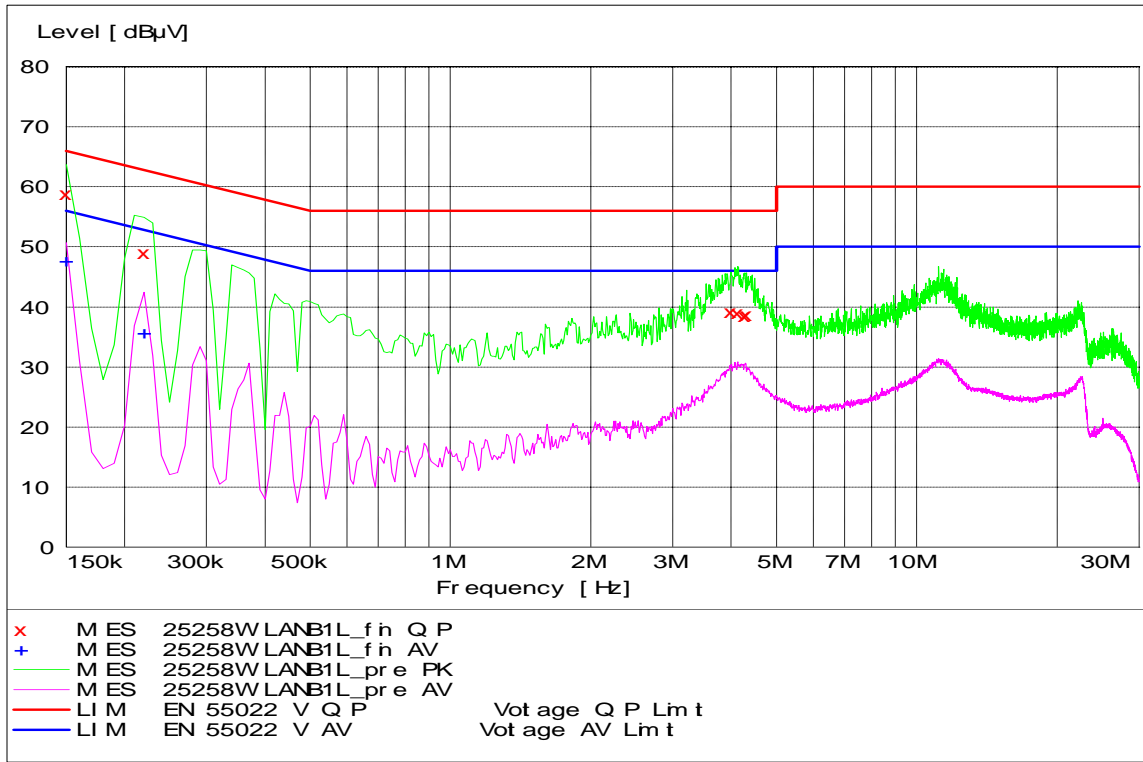
All modes of operation and data rates were investigated. The test results shown below represent the worst case condition.

### **Measurement Results**

See attached:

**802.11b @ 1Mbps**

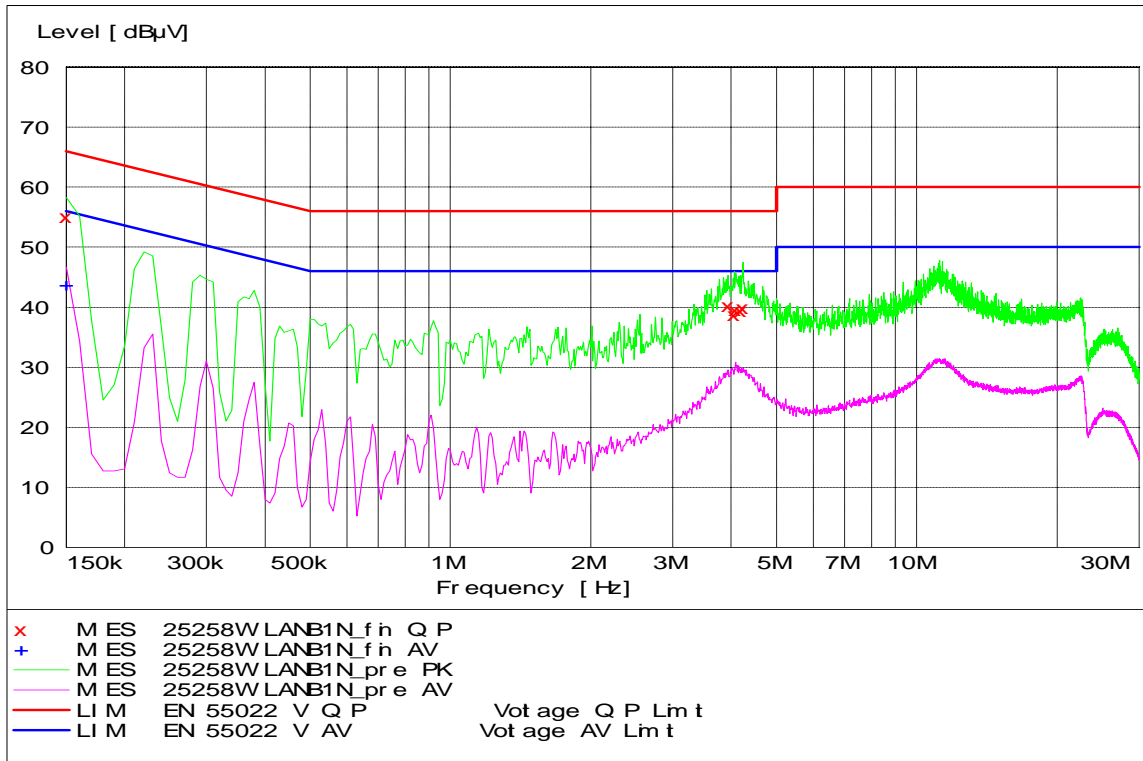
**WLAN Channel 1 - TX Mode - Line Coupling**



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
0.15	58.8	10	66	7.2
0.22	49.1	10	63	13.7
4.00	39.2	10	56	16.8
4.13	39.0	10	56	17.0
4.28	38.6	10	56	17.4

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
0.15	47.7	10	56	8.3
0.22	35.7	10	53	17.1

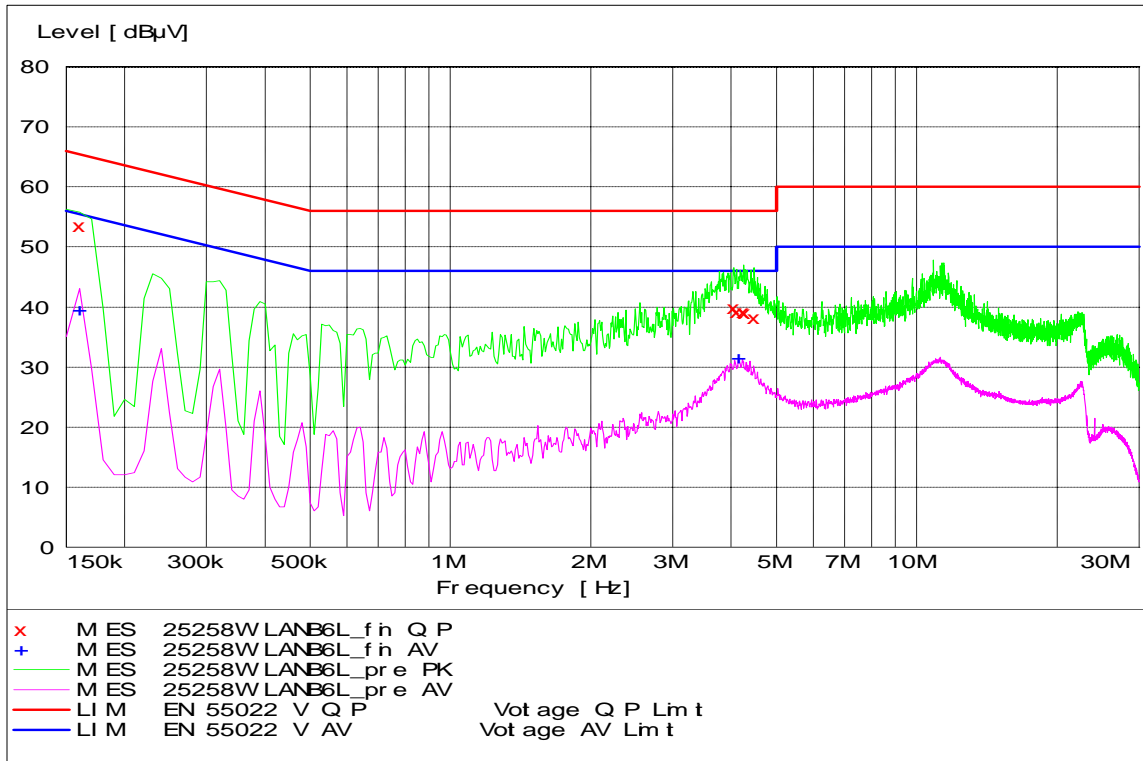
### WLAN Channel 1 - TX Mode – Neutral Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
0.15	55.1	10	66	10.9
3.94	40.3	10	56	15.7
4.06	38.8	10	56	17.2
4.09	39.6	10	56	16.4
4.20	39.4	10	56	16.6

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
0.15	43.7	10	56	12.3

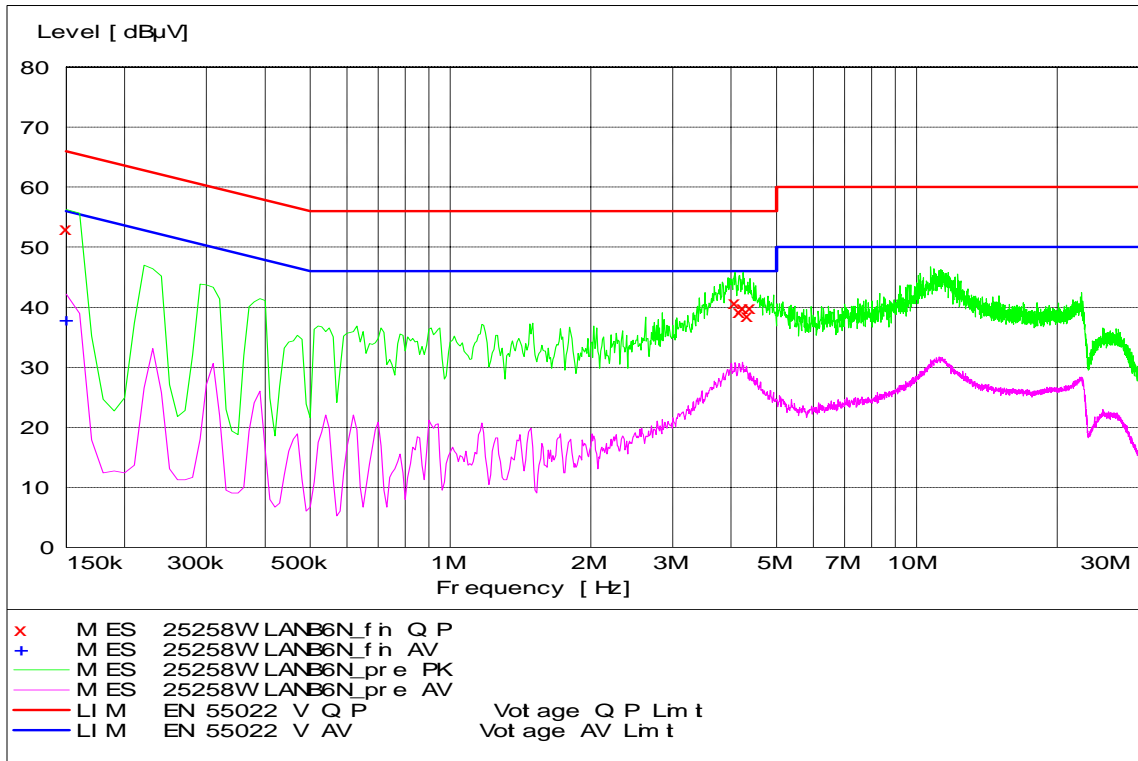
**WLAN Channel 6 - TX Mode - Line Coupling**



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
0.16	53.5	10	66	11.9
4.05	39.9	10	56	16.1
4.11	39.3	10	56	16.7
4.26	39.3	10	56	16.7
4.28	39.1	10	56	16.9

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
0.16	39.6	10	56	15.9
4.15	31.5	10	46	14.5

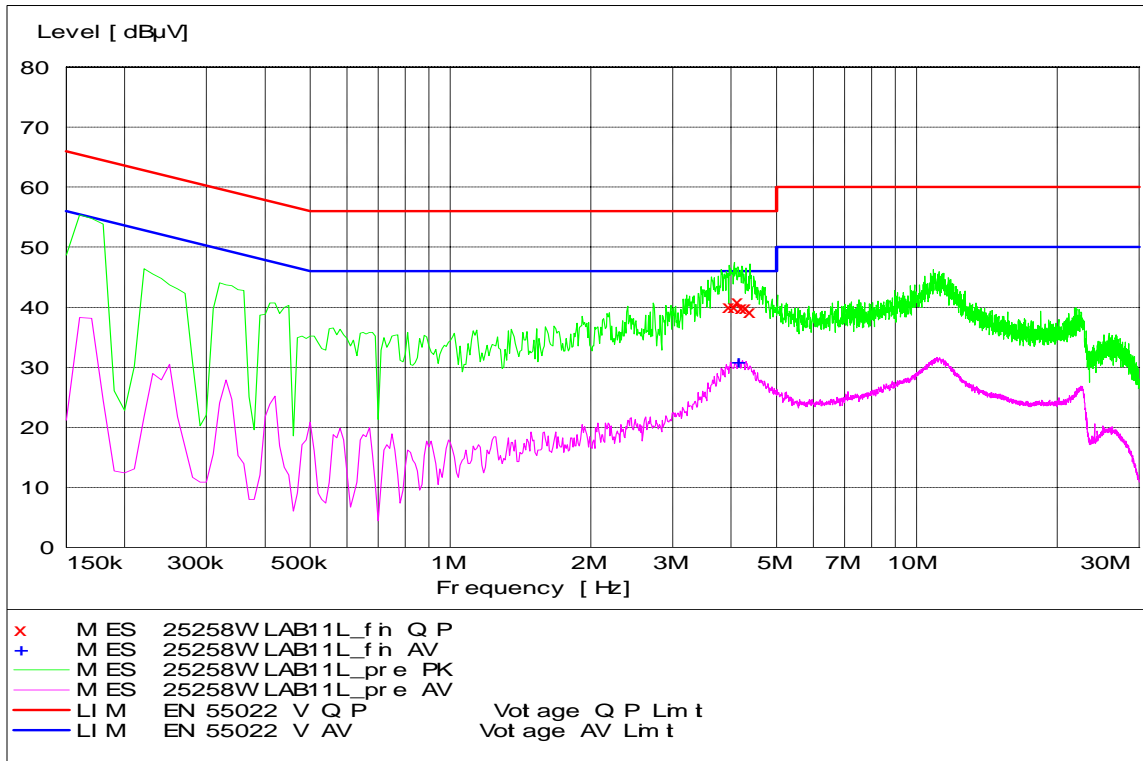
### WLAN Channel 6 - TX Mode - Neutral Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
0.15	53.2	10	66	12.8
4.08	40.8	10	56	15.2
4.17	39.3	10	56	16.7
4.24	39.9	10	56	16.1
4.34	38.6	10	56	17.4

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
0.15	37.9	10	56	18.1

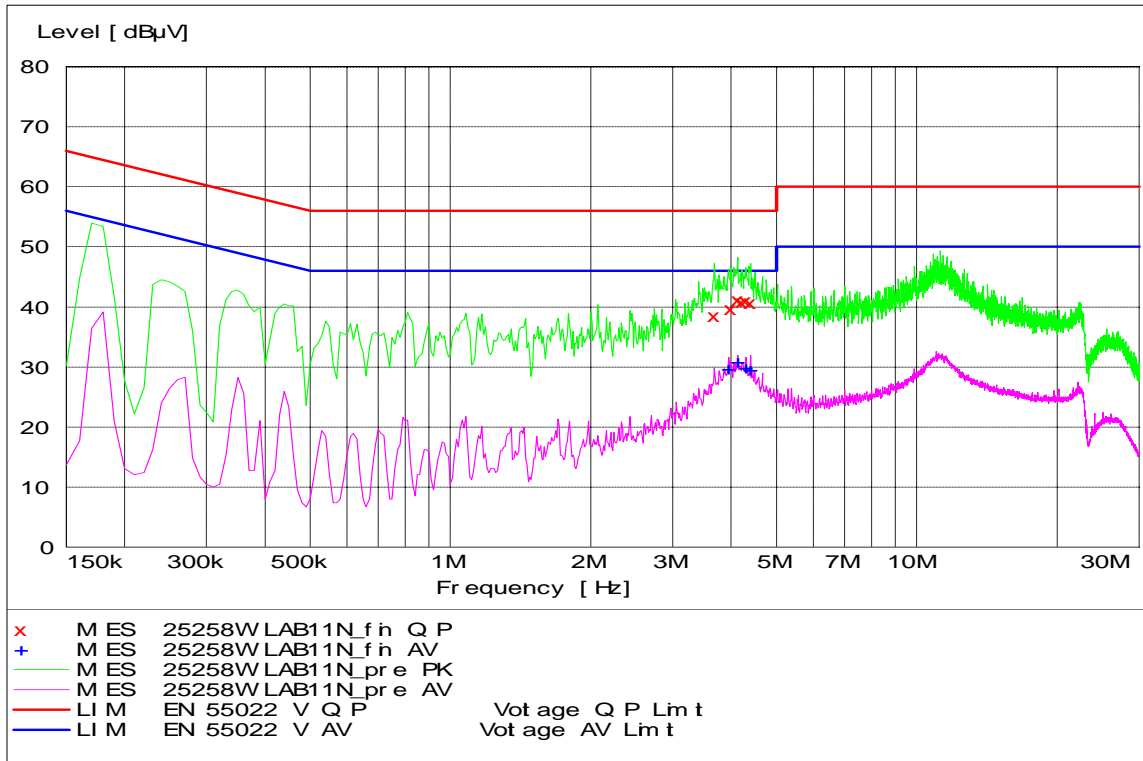
### WLAN Channel 11 - TX Mode - Line Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.96	40.2	10	56	15.8
4.06	40.2	10	56	15.8
4.14	41.0	10	56	15.0
4.22	40.0	10	56	16.0
4.31	39.9	10	56	16.1

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
4.15	30.9	10	46	15.1

**WLAN Channel 11 - TX Mode - Neutral Coupling**

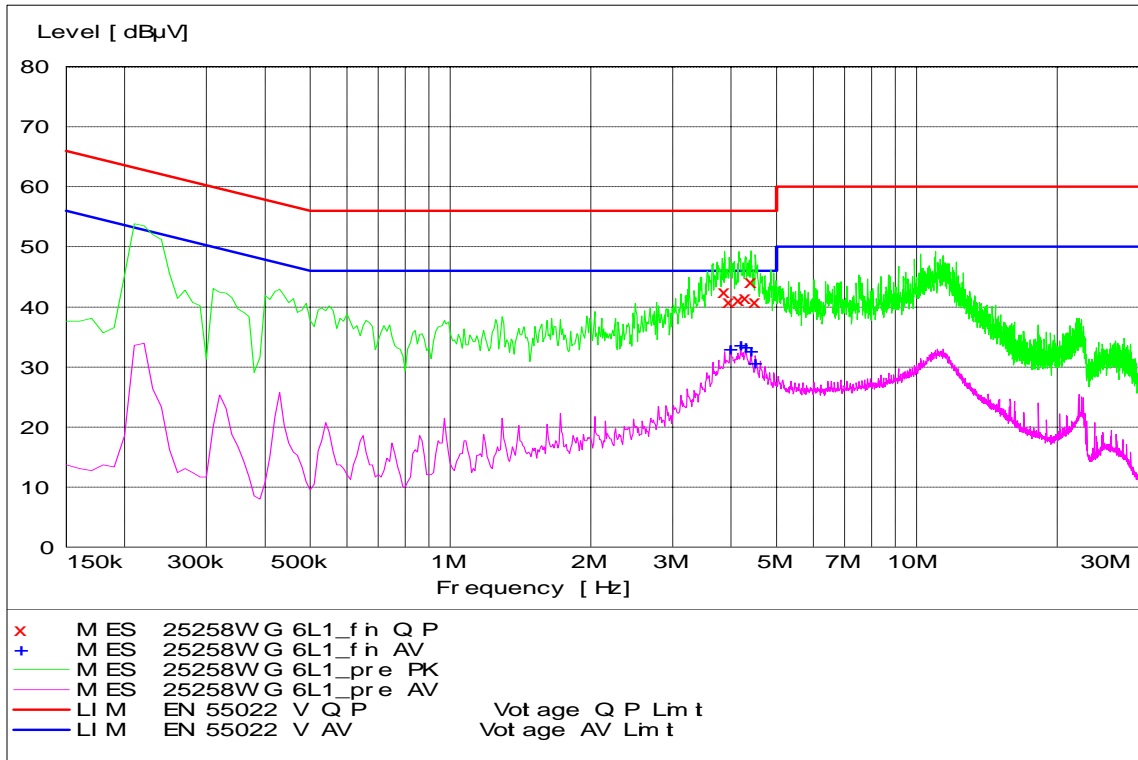


Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.68	38.5	10	56	17.5
4.00	39.7	10	56	16.3
4.13	41.3	10	56	14.7
4.22	41.0	10	56	15.0
4.31	41.1	10	56	14.9

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
3.95	29.7	10	46	16.3
4.13	30.9	10	46	15.1
4.31	30.0	10	46	16.0
4.40	29.6	10	46	16.4

**802.11g @ 6Mbps**

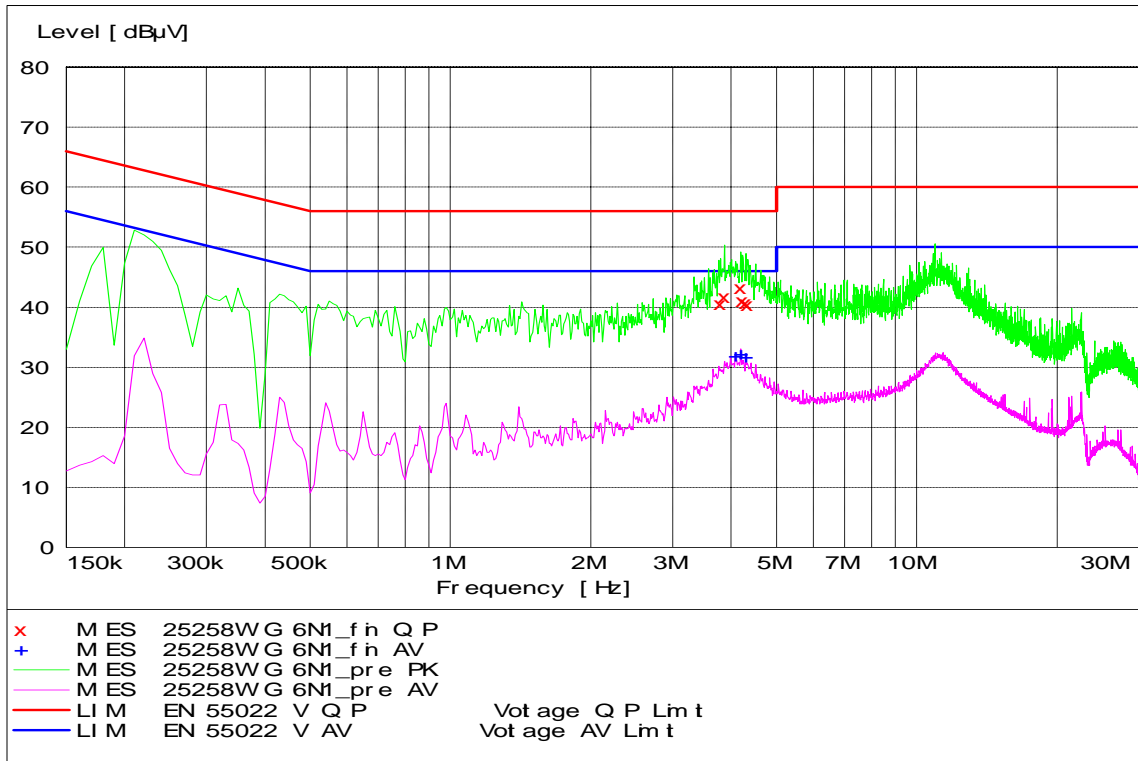
**WLAN Channel 1 - TX Mode – Line Coupling**



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.87	42.6	10	56	13.4
3.96	40.9	10	56	15.1
4.16	41.2	10	56	14.8
4.29	41.5	10	56	14.5
4.41	44.2	10	56	11.8

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
3.98	33.1	10	46	12.9
4.19	33.8	10	46	12.2
4.30	33.4	10	46	12.6
4.41	32.7	10	46	13.3
4.51	30.7	10	46	15.3

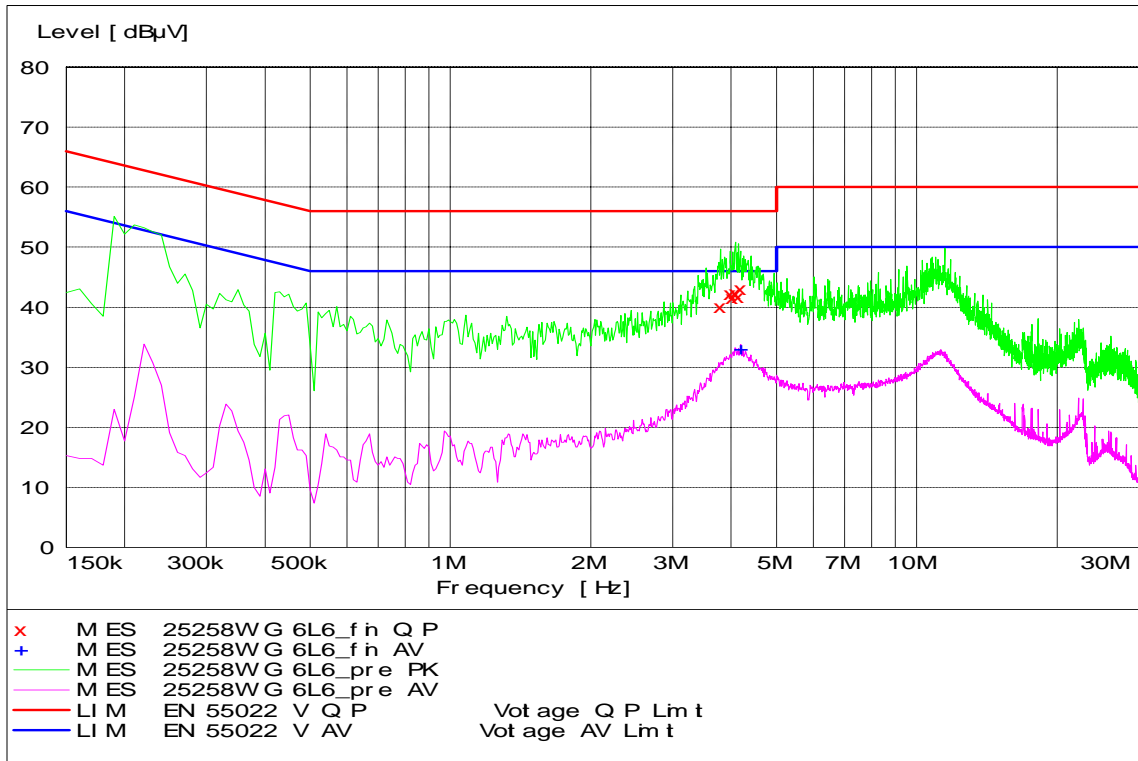
### WLAN Channel 1 - TX Mode – Neutral Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.80	40.6	10	56	15.4
3.87	41.8	10	56	14.2
4.19	43.3	10	56	12.7
4.23	41.2	10	56	14.8
4.31	40.8	10	56	15.2

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
4.09	32.0	10	46	14
4.19	32.3	10	46	13.7
4.30	31.7	10	46	14.3

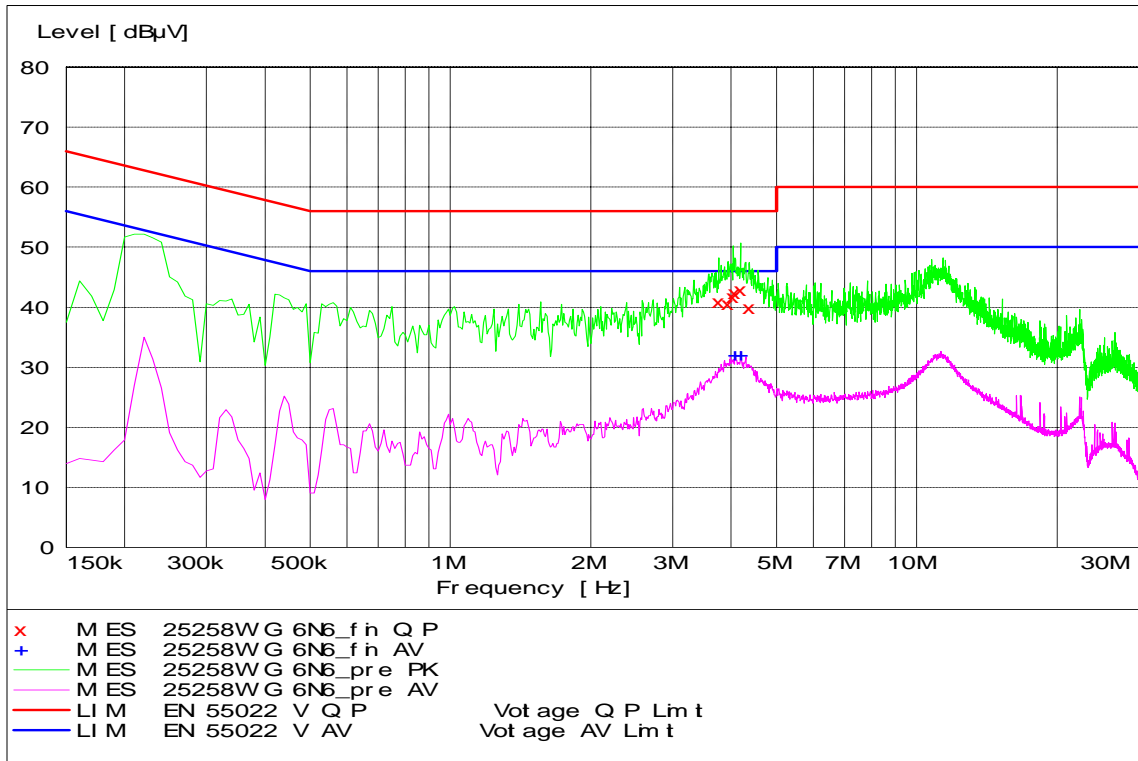
### WLAN Channel 6 - TX Mode - Line Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.80	40.1	10	56	15.9
3.98	42.3	10	56	13.7
4.03	41.6	10	56	14.4
4.09	42.5	10	56	13.5
4.15	41.7	10	56	14.3

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
4.19	33.2	10	46	12.8

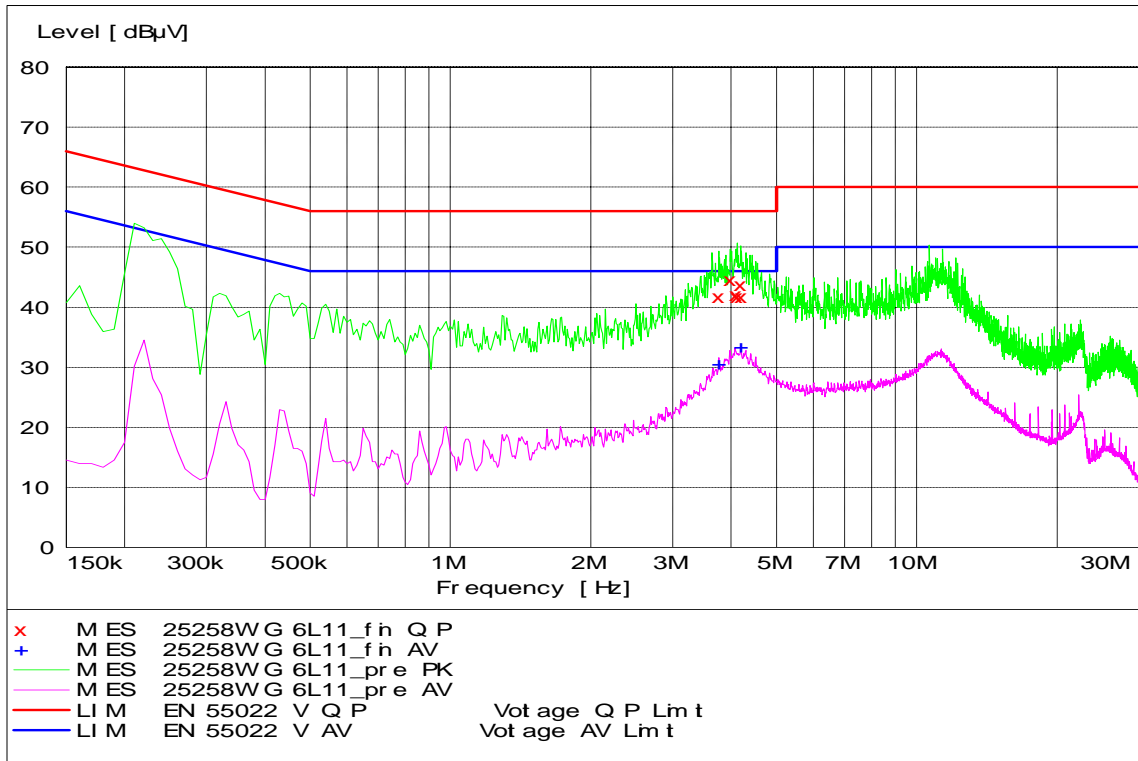
### WLAN Channel 6 - TX Mode - Neutral Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.76	41.0	10	56	15.0
3.94	40.6	10	56	15.4
4.04	41.8	10	56	14.2
4.08	42.5	10	56	13.5
4.19	42.9	10	56	13.1

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
4.08	32.1	10	46	13.9
4.19	32.1	10	46	13.9

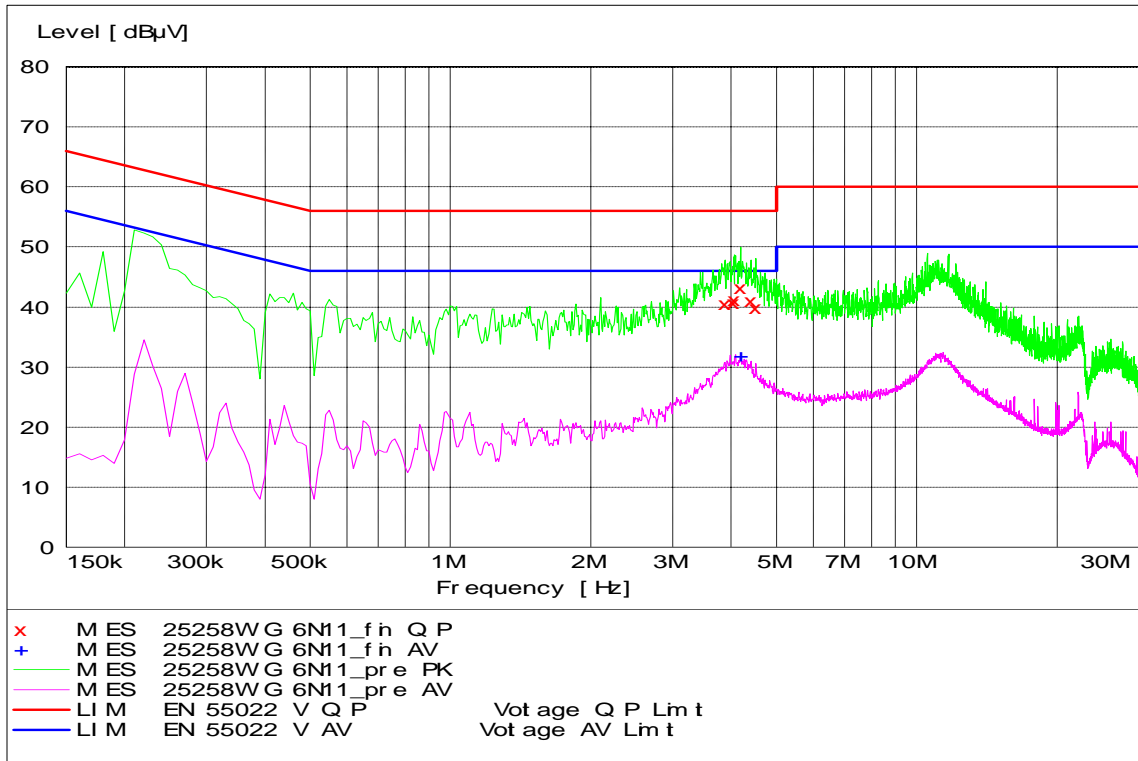
### WLAN Channel 11 - TX Mode - Line Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.76	41.8	10	56	14.2
3.98	44.6	10	56	11.4
4.10	42.1	10	56	13.9
4.12	41.8	10	56	14.2
4.19	43.7	10	56	12.3

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
3.76	30.6	10	46	15.4
4.19	33.5	10	46	12.5

### WLAN Channel 11 - TX Mode - Neutral Coupling



Frequency MHz	QuasiPeak dBuV	Correction dB	Limit dBuV	Margin dB
3.88	40.5	10	56	15.5
4.05	40.7	10	56	15.3
4.07	41.3	10	56	14.7
4.19	43.2	10	56	12.8
4.41	41.1	10	56	14.9

Frequency MHz	Average dBuV	Correction dB	Limit dBuV	Margin dB
4.2	31.9	10	46	14.1

**End of Test Report**