

TEST REPORT

Applicant: Queclink Wireless Solutions Co., Ltd.
Address: No.30, Lane 500, Xinlong Road, Minhang District, Shanghai, China
Equipment Type: INDUSTRIAL ROUTER
Model Name: WR201LG
Brand Name: QUECLINK
FCC ID: YQD-WR201LG
Test Standard: 47 CFR Part 15 Subpart C(refer section 3.1)
Sample Arrival Date: Sep. 15, 2023
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<u>Rev. 01</u>	<u>Dec. 12, 2023</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Kunshan Balun Communications Technology Co., Ltd.
Address	Room 101, Building 5, No. 1689, Zizhu Road, Yushan, Kunshan, Jiangsu, China

1.2 Test Location

Name	Kunshan Balun Communications Technology Co., Ltd.
Location	Room 101, Building 5, No. 1689, Zizhu Road, Yushan, Kunshan, Jiangsu, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1352.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Queclink Wireless Solutions Co., Ltd.
Address	No.30, Lane 500, Xinlong Road, Minhang District, Shanghai, China

2.2 Manufacturer Information

Manufacturer	Queclink Wireless Solutions Co., Ltd.
Address	No.30, Lane 500, Xinlong Road, Minhang District, Shanghai, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	INDUSTRIAL ROUTER
Model Name Under Test	WR201LG
Series Model Name	N/A
Description of Model name differentiation	N/A
Sample No.	SC-EC2381046-S07
Hardware Version	V1.02
Software Version	R00A03V04

	measurements	<p>4.89 dBi</p> <p>Formulas: Directional gain = GANT + Array Gain, <i>Array Gain = 10 log(NANT/NSS) dB</i>. NSS =1, GANT set equal to the gain of the antenna having the highest gain.</p> <p>Uncorrelated: 1.88 dBi</p> <p>Formulas: Directional gain = <i>10 log(NANT/NSS) dB</i>. NSS =1, GANT set equal to the gain of the antenna having the highest gain.</p>
	For Conducted Out-of-Band and Spurious Measurements	<p>Correlated: 4.89 dBi</p> <p>Formulas: Directional gain = GANT + Array Gain, <i>Array Gain = 10 log(NANT/NSS) dB</i>. NSS =1, GANT set equal to the gain of the antenna having the highest gain.</p> <p>Uncorrelated: 1.88 dBi</p> <p>Formulas: Directional gain = <i>10 log(NANT/NSS) dB</i>. NSS =1, GANT set equal to the gain of the antenna having the highest gain.</p>
About the Product		Only the WIFI 802.11b, 802.11g and 802.11n (HT20/40) was tested in this report.

Mode	Antenna		
	Main Antenna	Aux. Antenna	MIMO
802.11b	√	√	--
802.11g	√	√	--
802.11n20	√	√	√
802.11n40	√	√	√

Note: All the configurations were tested, but only the worst data was shown in this report.

Modulation technology	Modulation Type	Transfer Rate (Mbps)(Single RF path)
DSSS (802.11b)	DBPSK	1
	DQPSK	2
	CCK	5.5/11
OFDM (802.11g)	BPSK	6/9
	QPSK	12/18
	16QAM	24/36
	64QAM	48/54
OFDM (802.11n-20 MHz)	BPSK	6.5/7.2
	QPSK	13/19.5/14.4/21.7
	16QAM	26/39/28.9/43.3

	64QAM	52/58.5/65/57.8/65/72.2
OFDM (802.11n-40 MHz)	BPSK	13.5/15
	QPSK	27/40.5/30/45
	16QAM	54/81/60/90
	64QAM	108/121.5/135/120/150

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	
Output Power	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
6dB Bandwidth	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Conducted Spurious Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Conducted Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Radiated Spurious Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Band Edge	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Power spectral density (PSD)	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9

Note: The above EUT information in section 2.4 and 2.6 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart C	Intentional radiators of radio frequency equipment
2	KDB Publication 662911 D01v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)
3	ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
4	KDB Publication 558074 D01v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES

3.2 Test Verdict

No.	Description	FCC PART No.	Test Result	Verdict
1	Antenna Requirement	15.203	N/A	Pass ^{Note 1}
2	Output Power	15.247 (b)	ANNEX A.1	Pass
3	6dB Bandwidth	15.247 (a)	ANNEX A.2	Pass
4	Conducted Spurious Emission	15.247 (d)	ANNEX A.3	Pass
5	Band Edge(Authorized-band band-edge)	15.247 (d)	ANNEX A.4	Pass
6	Conducted Emission	15.207	ANNEX A.5	Pass
7	Radiated Spurious Emission	15.209; 15.247 (d)	ANNEX A.6	Pass
8	Band Edge(Restricted-band band-edge)	15.209; 15.247 (d)	ANNEX A.7	Pass
9	Power spectral density (PSD)	15.247 (e)	ANNEX A.8	Pass
10	Receiver Spurious Emissions	N/A	N/A	N/A

Note 1: Please refer to section 5.1.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	44% to 61%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+21.1°C to +25.5°C
Working Voltage of the EUT	NV (Normal Voltage)	AC 120V/60Hz

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Software /Firmware Version	Cal. Date	Cal. Due
Spectrum Analyzer	Agilent	E4440A	MY44303 400	A.11.21	2022.11.02	2023.11.01
EMI Receiver	KEYSIGHT	N9038A	MY55330 122	A.21.06	2022.11.19	2023.11.18
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBE CK	FMZB 1519	1519B- 177	N/A	2023.06.21	2026.06.20
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBE CK	VULB 9163	9163- 1203	N/A	2021.12.30	2024.12.29
Test Antenna-Horn(1-18 GHz)	SCHWARZBE CK	BBHA 9120D	9120D- 2134	N/A	2022.10.08	2025.10.07
Test Antenna-Horn (18-40 GHz)	A-INFO	LB- 180400- KF	J2110603 07	N/A	2022.02.28	2025.02.27
Anechoic Chamber	YiHeng	9m*6m*6 m	N/A	N/A	2022.07.22	2025.07.21

4.3 Test Software List

Description	Manufacturer	Software Version	Serial No.	Applicable Test Setup
BL410R	BALUN	V2.1.1.496	N/A	The section 4.5.1
BL410E	BALUN	V19.618	N/A	The section 4.5.2
BL410E	BALUN	V21.919	N/A	The section 4.5.3&4.5.4&4.5.5

4.4 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

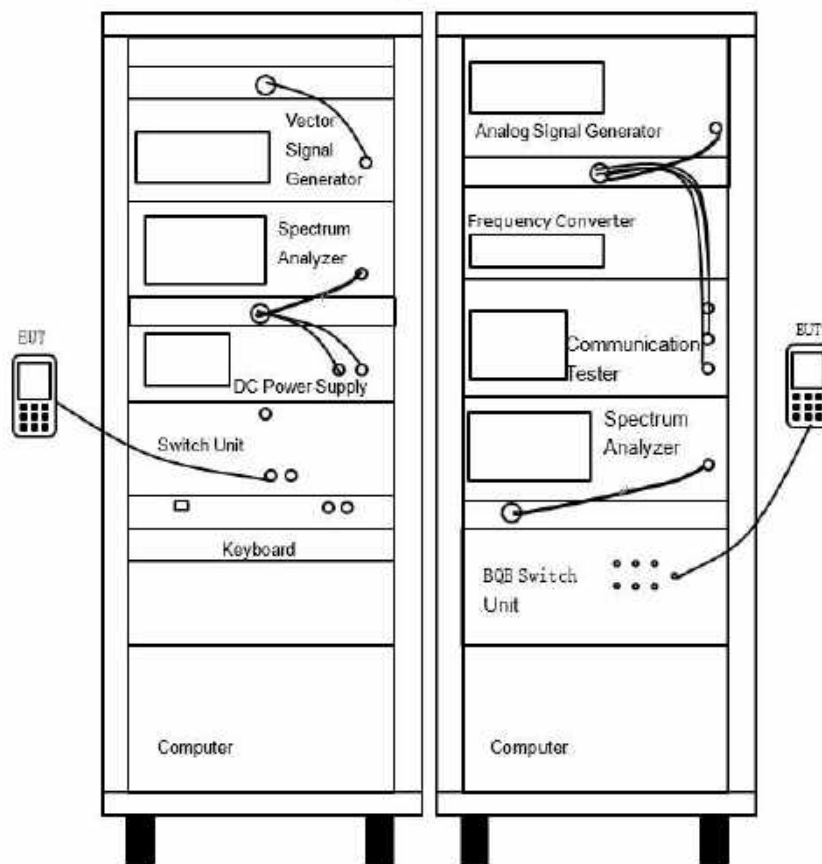
Parameters	Uncertainty
Occupied Channel Bandwidth	2.4 %
RF output power, conducted	0.408 dB
Power Spectral Density, conducted	1.739 dB
Unwanted Emissions, conducted	1.738 dB
All emissions, radiated	4.568 dB
Temperature	0.82 °C
Humidity	4.08 %

4.5 Description of Test Setup

4.5.1 For Antenna Port Test

Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:
 Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



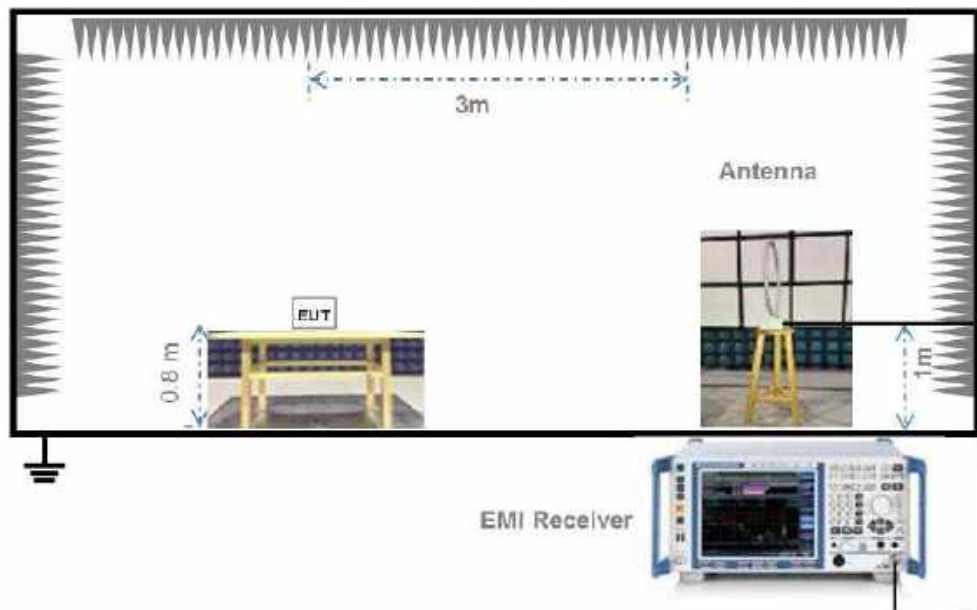
(Diagram 1)

4.5.2 For AC Power Supply Port Test



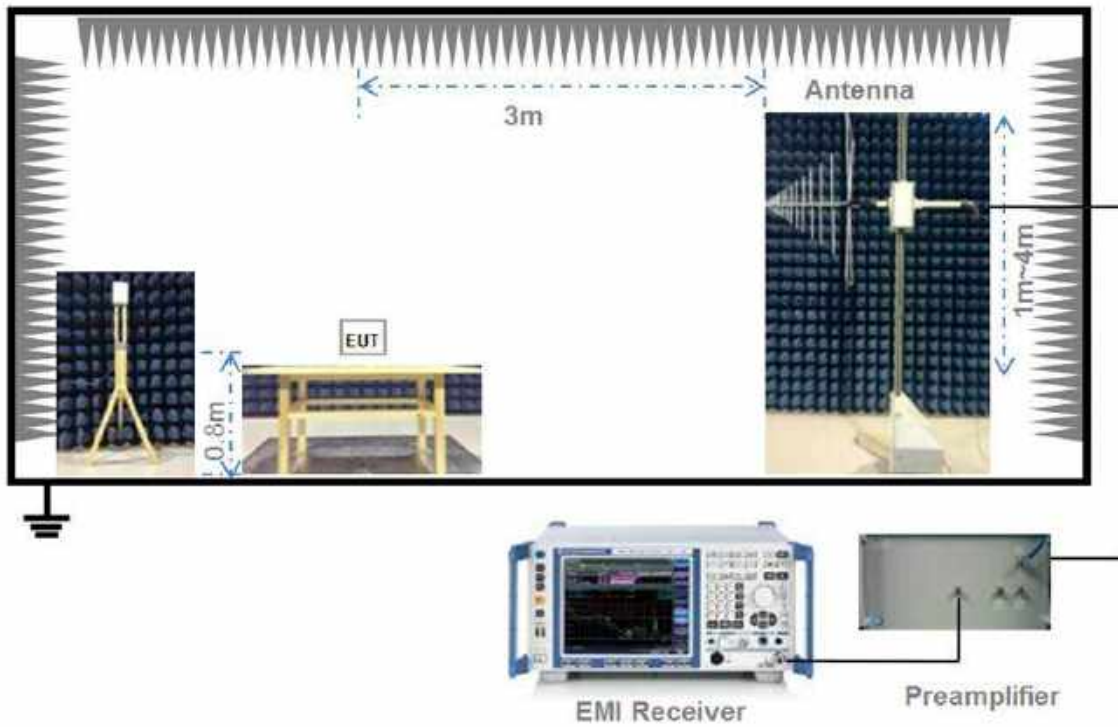
(Diagram 2)

4.5.3 For Radiated Test (Below 30 MHz)



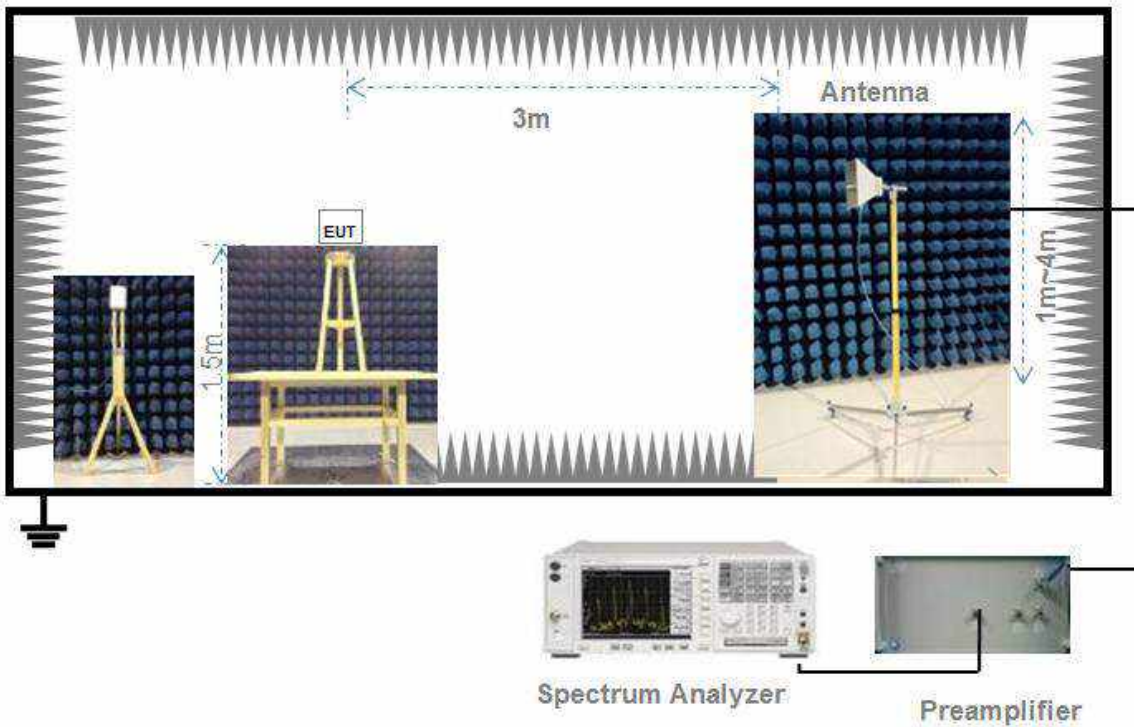
(Diagram 3)

4.5.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.5.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

4.6 Measurement Results Explanation Example

4.6.1 For conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

4.6.2 For radiated band edges and spurious emission test:

$$E = \text{EIRP} - 20 \log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

EIRP = Measure Conducted output power Value (dBm) + Maximum transmit antenna gain (dBi) + the appropriate maximum ground reflection factor (dB)

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
Compliance with 15.203, use of a standard antenna jack or electrical connector is prohibited.	The antenna is the unique connector with a wire antenna.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.1.3 Antenna Gain

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

5.2 Output Power

5.2.1 Test Limit

FCC § 15.247(b)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements.

5.2.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Maximum peak conducted output power

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

Maximum conducted (average) output power (Reporting Only)

a) As an alternative to spectrum analyzer or EMI receiver measurements, measurements may be performed

using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty factor.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.

b) If the transmitter does not transmit continuously, measure the duty cycle (x) of the transmitter output signal as

described in Section 6.0.

c) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.

d) Adjust the measurement in dBm by adding $10\log(1/x)$, where x is the duty cycle to the measurement result.

Measurements of duty cycle

The zero-span mode on a spectrum analyzer or EMI receiver is used if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission.

Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.

Set $VBW \geq RBW$. Set detector = peak or average.

The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 6dB Bandwidth

5.3.1 Limit

FCC §15.247(a)

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.

5.3.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Use the following spectrum analyzer settings:

Set RBW = 100 kHz.

Set the video bandwidth (VBW) \geq 3 RBW.

Detector = Peak.

Trace mode = max hold.

Sweep = auto couple.

Allow the trace to stabilize.

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Conducted Spurious Emission

5.4.1 Limit

FCC §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.4.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

- a) If the maximum peak conducted output power procedure was used to demonstrate compliance as described in 9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).
- b) If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).
- c) In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required.

The following procedures shall be used to demonstrate compliance to these limits. Note that these procedures can be used in either an antenna-port conducted or radiated test set-up. Radiated tests must conform to the test site requirements and utilize maximization procedures defined herein.

Reference level measurement

Establish a reference level by using the following procedure:

Set instrument center frequency to DTS channel center frequency.

Set the span to ≥ 1.5 times the DTS bandwidth.

Set the RBW = 100 kHz.

Set the VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum PSD level.

Emission level measurement

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

Set the RBW = 100 kHz.

Set the VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Band Edge (Authorized-band band-edge)

5.5.1 Limit

FCC §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.5.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The following procedures may be used to determine the peak or average field strength or power of an unwanted emission that is within 2 MHz of the authorized band edge. If a peak detector is utilized, use the procedure described in 13.2.1. Use the procedure described in 13.2.2 when using an average detector and the EUT can be configured to transmit continuously (i.e., duty cycle $\geq 98\%$). Use the procedure described in 13.2.3 when using an average detector and the EUT cannot be configured to transmit continuously but the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent). Use the procedure described in 13.2.4 when using an average detector for those cases where the EUT cannot be configured to transmit continuously and the duty cycle is not constant (duty cycle variations equal or exceed 2 percent).

When using a peak detector to measure unwanted emissions at or near the band edge (within 2 MHz of the authorized band), the following integration procedure can be used.

Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).

Set span to 2 MHz

RBW = 100 kHz.

VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweep to continue until the trace stabilizes (required measurement time may increase for low duty cycle applications)

Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency (femission) ± 0.5 MHz. If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by femission ± 0.5 MHz.

Standard method(The 99% OBW of the fundamental emission is without 2 MHz of the authorized band):

Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation.

Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

Attenuation: Auto (at least 10 dB preferred).

Sweep time: Coupled.

Resolution bandwidth: 100 kHz.

Video bandwidth: 300 kHz.

Detector: Peak.

Trace: Max hold.

5.5.4 Test Result

Please refer to ANNEX A.4.

5.6 Conducted Emission

5.6.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.6.2 Test Setup

See section 4.5.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.6.4 Test Result

Please refer to ANNEX A.5.

5.7 Radiated Spurious Emission

5.7.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note:

- For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
- For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.7.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
- d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20\log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

- f) Compare the resultant electric field strength level to the applicable limit.
- g) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 1.
- b) VBW $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be

longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle, x , of the transmitter output signal as described in section 6.0.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW $\geq 3 \times$ RBW.
- e) Detector = RMS, if $\text{span}/(\# \text{ of points in sweep}) \leq (\text{RBW}/2)$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., RMS).
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.
- h) Perform a trace average of at least 100 traces.
- i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.
 - 2) If linear voltage averaging mode was used in step f), then the applicable correction factor is $20 \log(1/x)$, where x is the duty cycle.
 - 3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.7.4 Test Result

Please refer to ANNEX A.6.

5.8 Band Edge (Restricted-band band-edge)

5.8.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.8.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.8.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

For transmitters operating above 1 GHz repeat the measurement with an average detector.

5.8.4 Test Result

Please refer to ANNEX A.7.

5.9 Power Spectral density (PSD)

5.9.1 Limit

FCC §15.247(e)

The same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used.

5.9.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.9.3 Test Procedure

Set analyzer center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.

Set the VBW $\geq 3 \text{ RBW}$.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.9.4 Test Result

Please refer to ANNEX A.8.

ANNEX A TEST RESULT

A.1 Output Power

Note: All the configurations were pre tested, only the worst configuration has been reported in this report.

Duty Cycle

Test Mode	On Time (ms)	On+Off time (ms)	Duty Cycle
802.11b	12.17	12.24	99.41%
802.11g	2.02	2.07	97.44%
802.11n-20 MHz	1.89	1.94	97.01%
802.11n-40 MHz	0.92	0.97	95.65%

Peak Power Test Data

Main Antenna

802.11b Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.75	74.99	30	1000	Pass
Middle	18.60	72.44			Pass
High	18.45	69.98			Pass

802.11g Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	21.30	134.90	30	1000	Pass
Middle	20.68	116.95			Pass
High	20.56	113.76			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.37	68.71	30	1000	Pass
Middle	18.36	68.55			Pass
High	18.25	66.83			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	19.10	81.28	30	1000	Pass
Middle	18.92	77.98			Pass
High	18.82	76.21			Pass

Aux. Antenna

802.11b Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	10.29	10.69	30	1000	Pass
Middle	10.64	11.59			Pass
High	10.23	10.54			Pass

802.11g Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.84	76.56	30	1000	Pass
Middle	18.73	74.64			Pass
High	19.48	88.72			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	17.58	57.28	30	1000	Pass
Middle	18.01	63.24			Pass
High	17.53	56.62			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	19.64	92.04	30	1000	Pass
Middle	19.29	84.92			Pass
High	19.49	88.92			Pass

MIMO

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.39	69.03	30	1000	Pass
Middle	18.36	68.51			Pass
High	18.34	68.17			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	19.77	94.74	30	1000	Pass
Middle	19.45	88.12			Pass
High	19.50	89.07			Pass

Average Power Test Data

Main Antenna

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.04	31.92	30	1000	Pass
Middle	14.90	30.90			Pass
High	14.72	29.65			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.29	33.81	30	1000	Pass
Middle	14.66	29.24			Pass
High	14.58	28.71			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	12.33	17.10	30	1000	Pass
Middle	12.31	17.02			Pass
High	12.22	16.67			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	12.23	16.71	30	1000	Pass
Middle	12.18	16.52			Pass
High	12.11	16.26			Pass

Aux. Antenna

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	6.56	4.53	30	1000	Pass
Middle	6.89	4.89			Pass
High	6.50	4.47			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	12.86	19.32	30	1000	Pass
Middle	12.73	18.75			Pass
High	13.51	22.44			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	11.52	14.19	30	1000	Pass
Middle	11.89	15.45			Pass
High	11.45	13.96			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	12.95	19.72	30	1000	Pass
Middle	12.57	18.07			Pass
High	12.76	18.88			Pass

MIMO

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	12.47	17.66	30	1000	Pass
Middle	12.22	16.67			Pass
High	12.24	16.75			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	12.91	19.54	30	1000	Pass
Middle	12.77	18.92			Pass
High	12.69	18.58			Pass

A.2 Bandwidth

Note 1: All antenna were tested, but only the worst case has been reported in this report.

Note 2: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data

802.11b Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	10.112549	13.382940	≥500
Middle	10.112549	13.368690	≥500
High	9.662109	13.367520	≥500

802.11g Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	15.118896	16.271240	≥500
Middle	15.168945	16.292590	≥500
High	15.168945	16.285630	≥500

802.11n-20MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	15.168945	17.322050	≥500
Middle	15.168945	17.289780	≥500
High	15.168945	17.323770	≥500

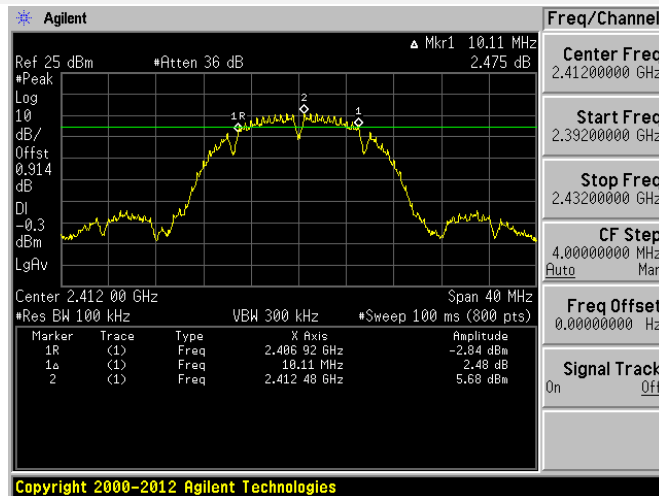
802.11n-40MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	33.871094	35.670940	≥500
Middle	33.871094	35.697060	≥500
High	32.670410	35.694800	≥500

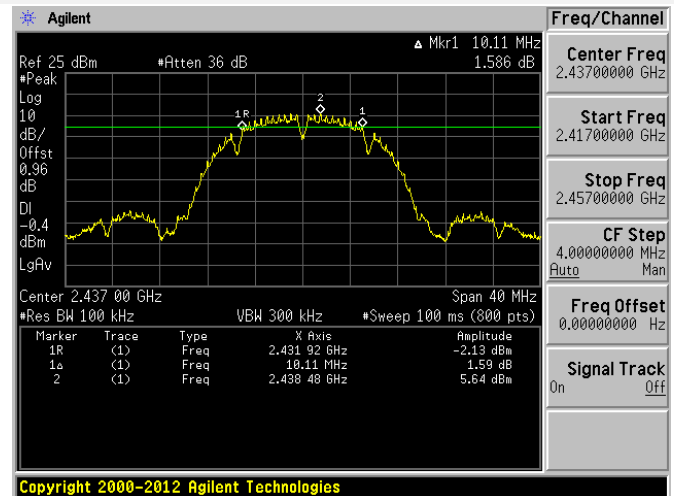
Test Plots

6 dB Bandwidth

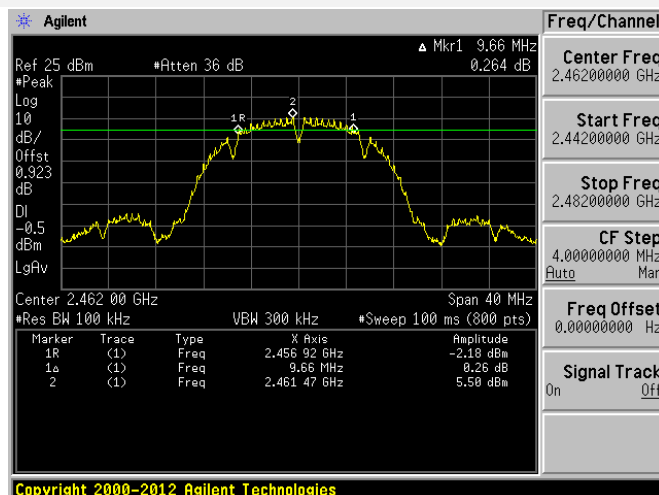
802.11b LOW CHANNEL



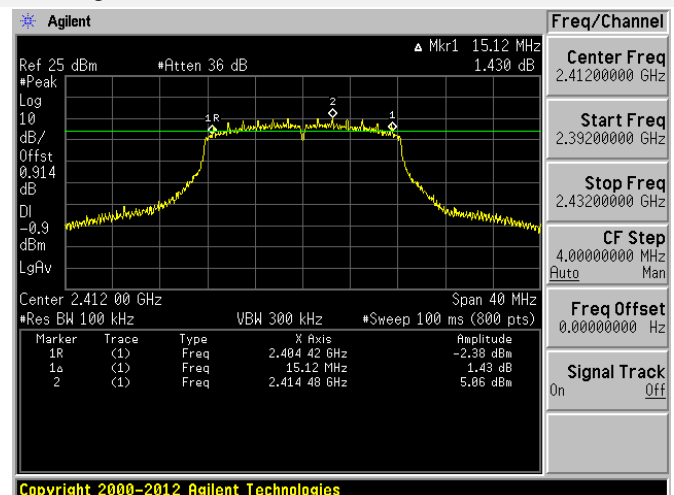
802.11b MIDDLE CHANNEL



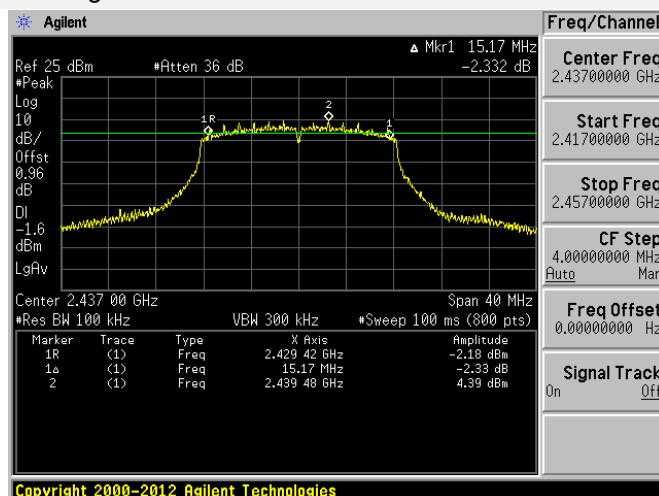
802.11b HIGH CHANNEL



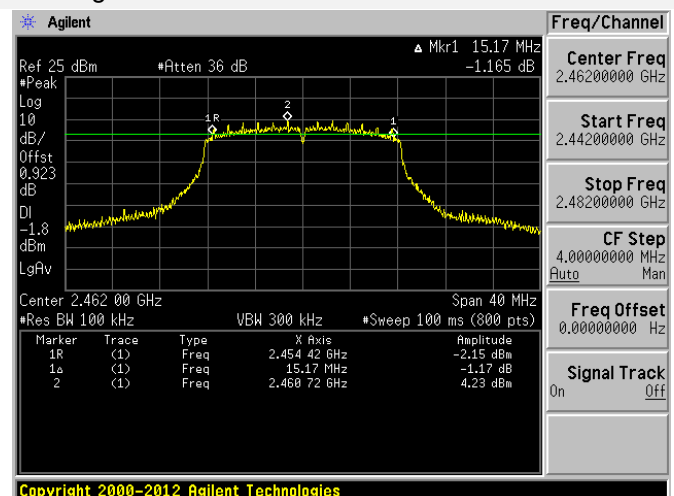
802.11g LOW CHANNEL



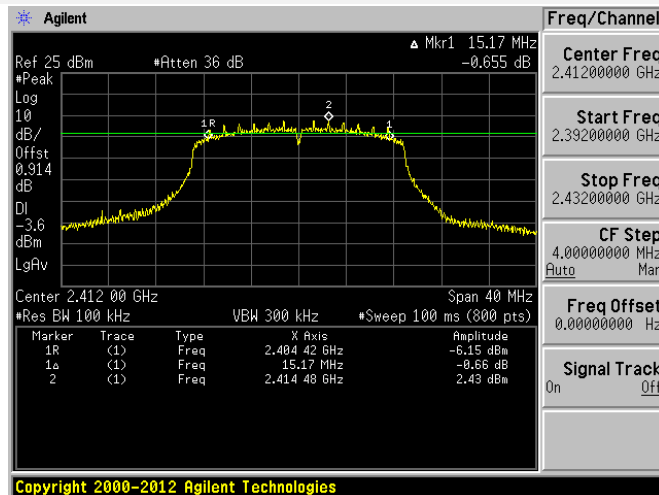
802.11g MIDDLE CHANNEL



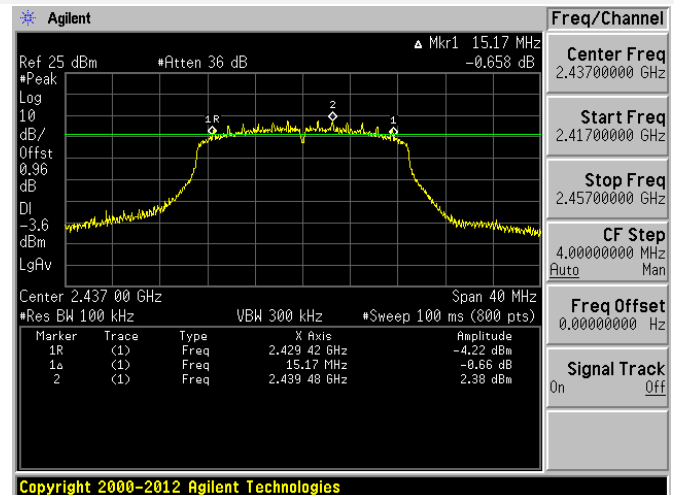
802.11g HIGH CHANNEL



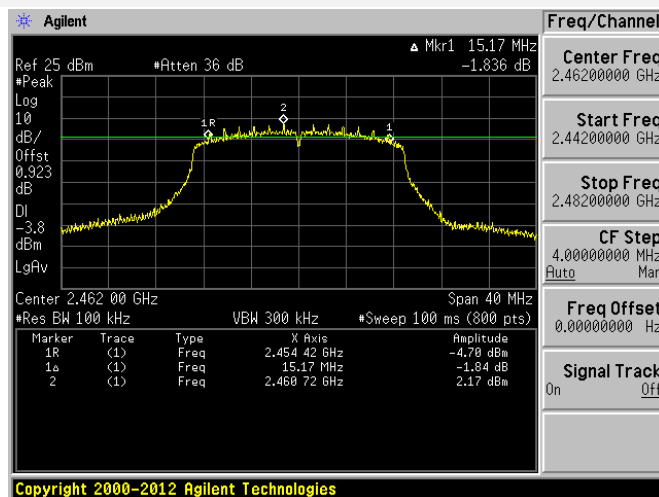
802.11n-20 MHz LOW CHANNEL



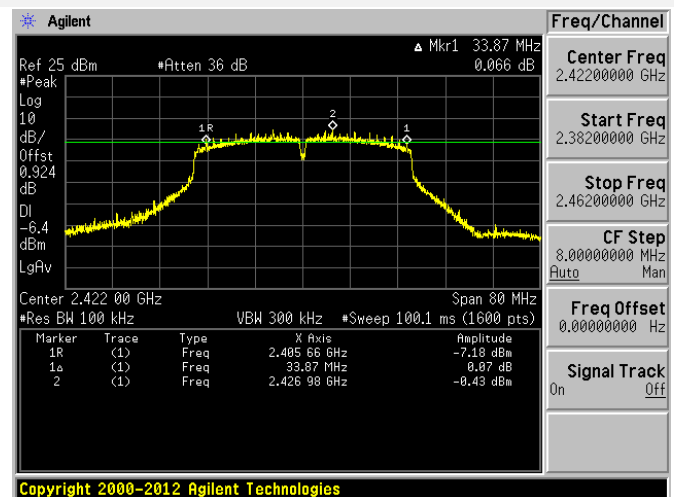
802.11n-20 MHz MIDDLE CHANNEL



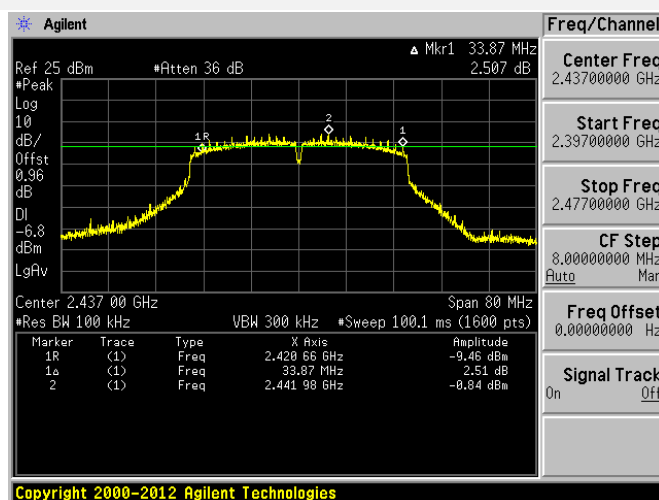
802.11n-20 MHz HIGH CHANNEL



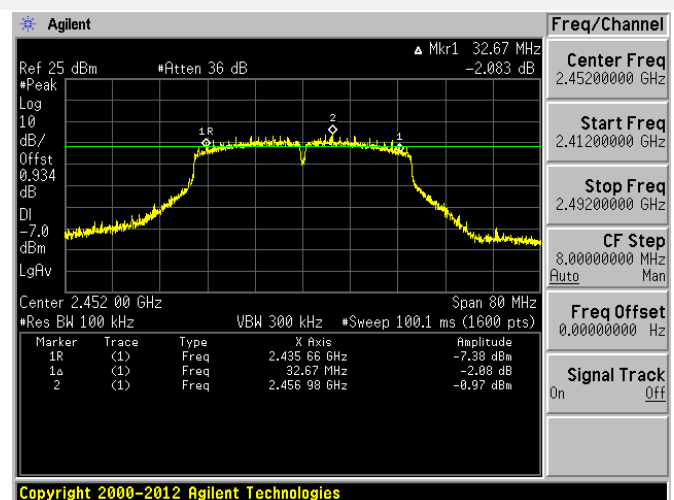
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL

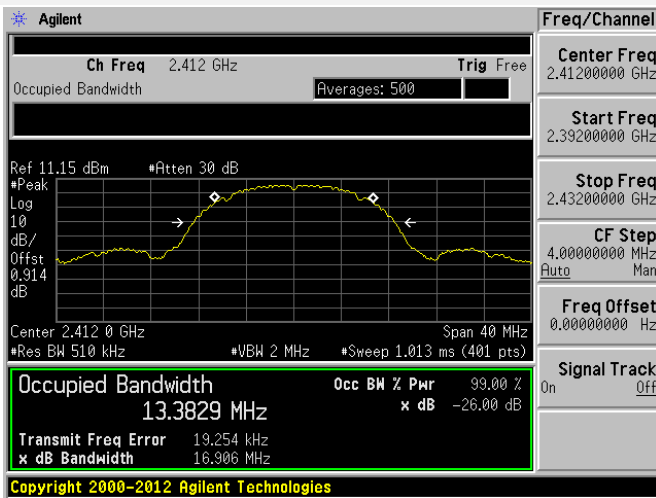


802.11n-40 MHz HIGH CHANNEL

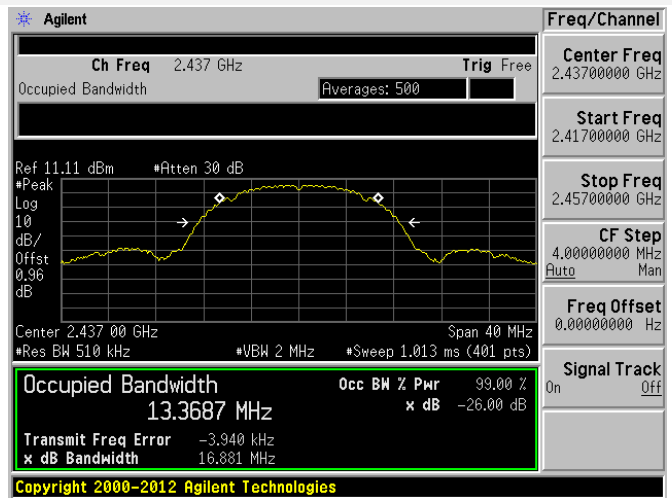


99% Bandwidth

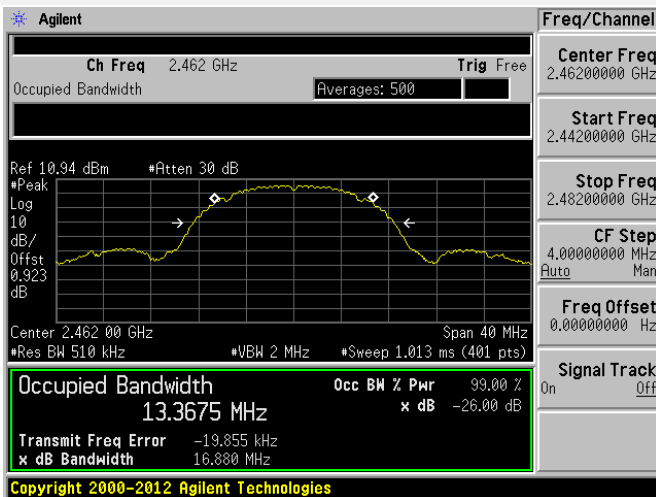
802.11b LOW CHANNEL



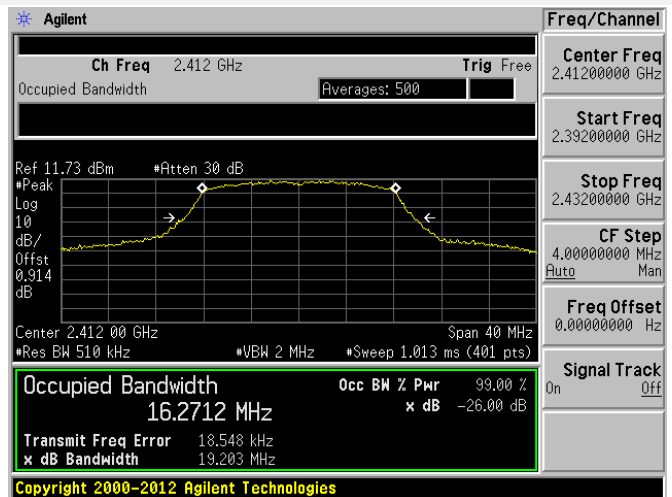
802.11b MIDDLE CHANNEL



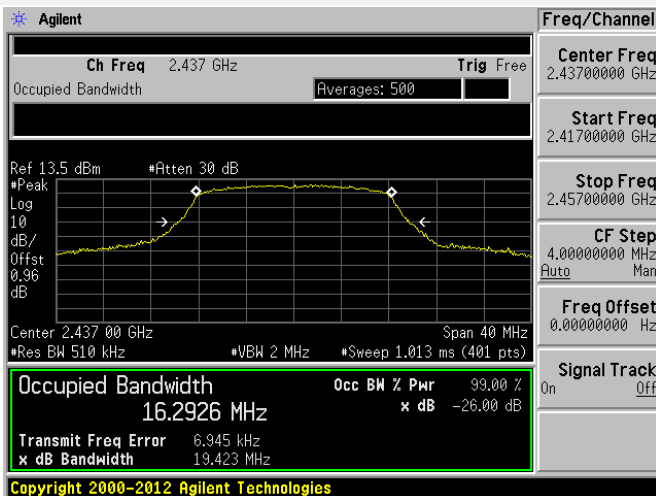
802.11b HIGH CHANNEL



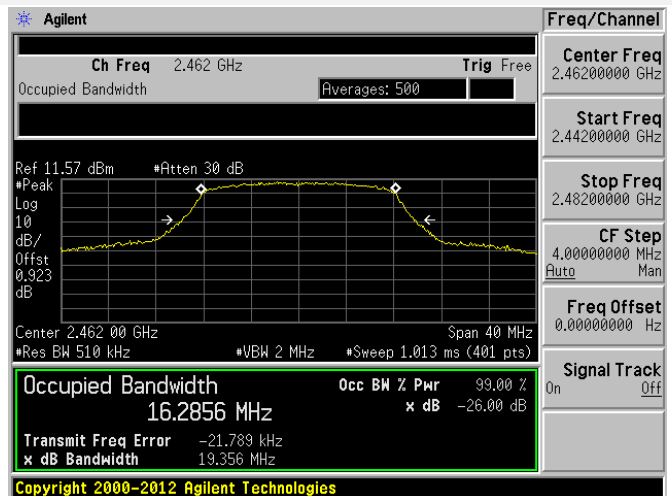
802.11g LOW CHANNEL



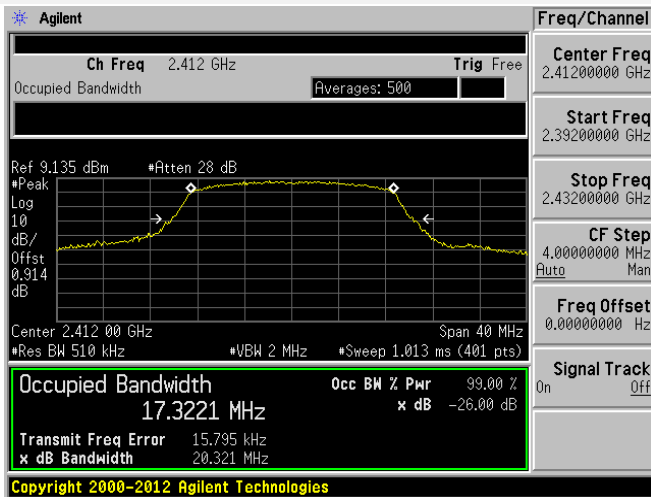
802.11g MIDDLE CHANNEL



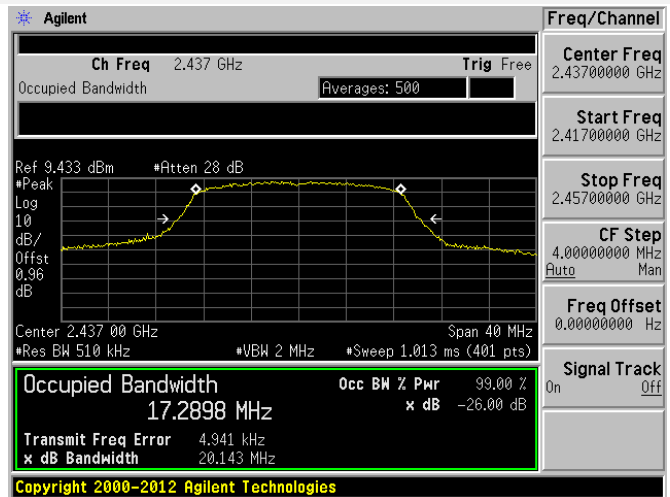
802.11g HIGH CHANNEL



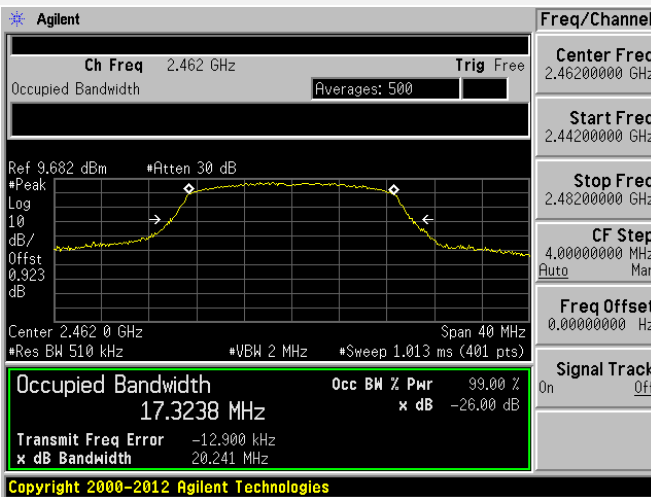
802.11n-20 MHz LOW CHANNEL



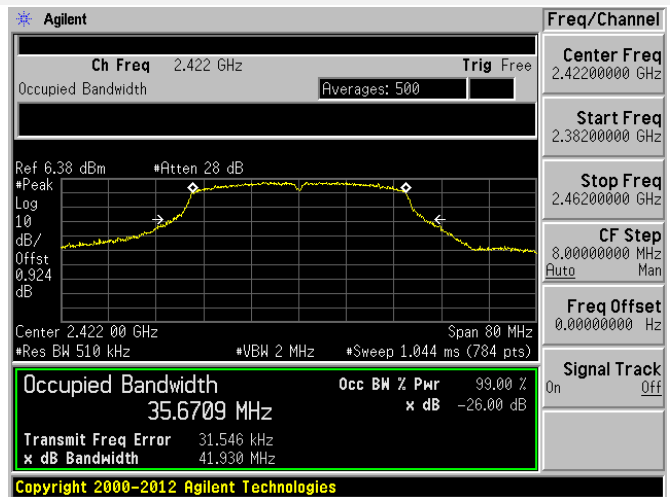
802.11n-20 MHz MIDDLE CHANNEL



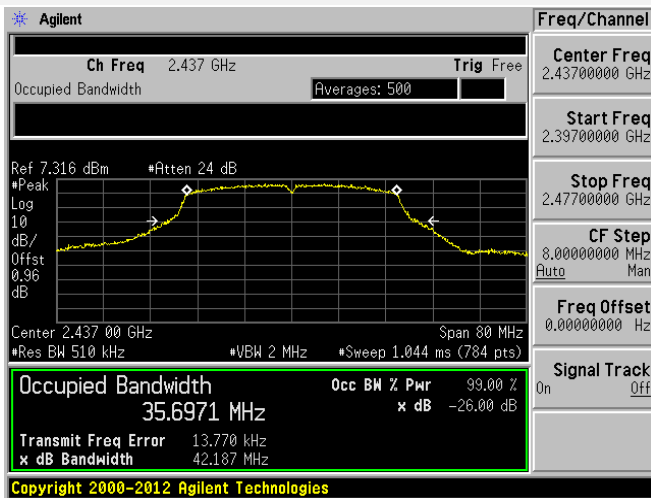
802.11n-20 MHz HIGH CHANNEL



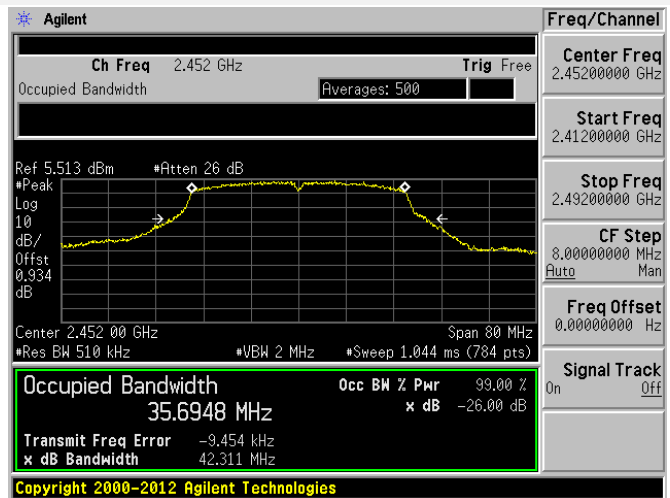
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



802.11n-40 MHz HIGH CHANNEL



A.3 Conducted Spurious Emissions

Note: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data

Main Antenna

802.11b Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-52.74	5.71	-14.29	Pass
Middle	-53.26	5.62	-14.38	Pass
High	-48.75	5.31	-14.69	Pass

802.11g Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-53.13	5.63	-14.37	Pass
Middle	-52.87	4.87	-15.13	Pass
High	-43.90	3.79	-16.21	Pass

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-53.73	2.52	-17.48	Pass
Middle	-52.83	2.18	-17.82	Pass
High	-49.03	2.76	-17.24	Pass

802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-54.53	-0.45	-20.45	Pass
Middle	-52.97	-0.75	-20.75	Pass
High	-53.18	-0.92	-20.92	Pass

Aux. Antenna

802.11b Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-49.04	-2.92	-22.92	Pass
Middle	-48.31	-2.62	-22.62	Pass
High	-49.22	-2.28	-22.28	Pass

802.11g Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-48.47	2.79	-17.21	Pass
Middle	-50.08	2.37	-17.63	Pass
High	-49.34	3.22	-16.78	Pass

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-48.43	1.98	-18.03	Pass
Middle	-48.15	2.69	-17.31	Pass
High	-49.13	1.38	-18.62	Pass

802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-50.63	0.06	-19.94	Pass
Middle	-51.35	-0.73	-20.73	Pass
High	-53.22	-0.10	-20.10	Pass

MIMO-Main Antenna

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-52.87	-0.01	-20.01	Pass
Middle	-51.82	0.25	-19.75	Pass
High	-53.47	-0.42	-20.42	Pass

802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-52.80	-3.11	-23.11	Pass
Middle	-52.48	-3.50	-23.50	Pass
High	-54.42	-3.47	-23.47	Pass

MIMO-Aux. Antenna

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-44.08	-0.31	-20.31	Pass
Middle	-46.62	-0.31	-20.31	Pass
High	-48.48	-0.19	-20.19	Pass

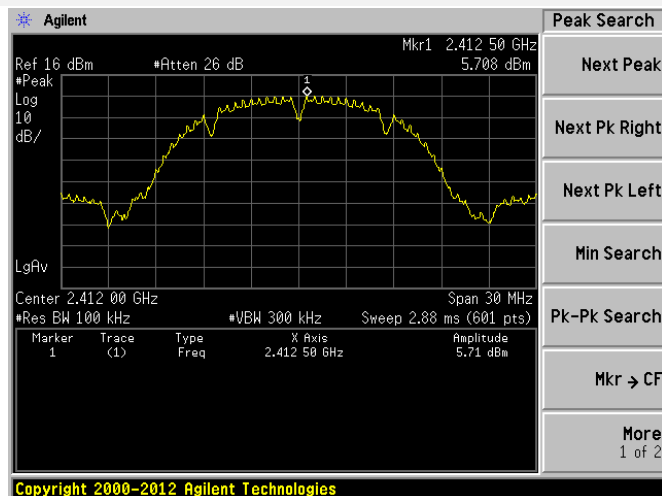
802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-44.93	-2.55	-22.55	Pass
Middle	-46.12	-3.10	-23.10	Pass
High	-47.82	-3.29	-23.29	Pass

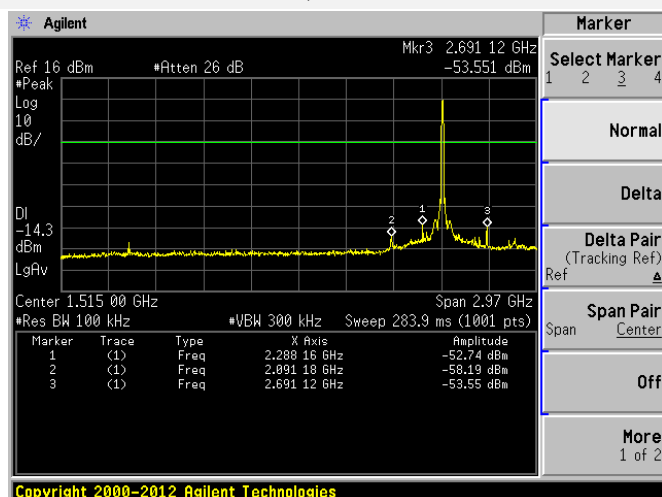
Test Plots

Main Antenna

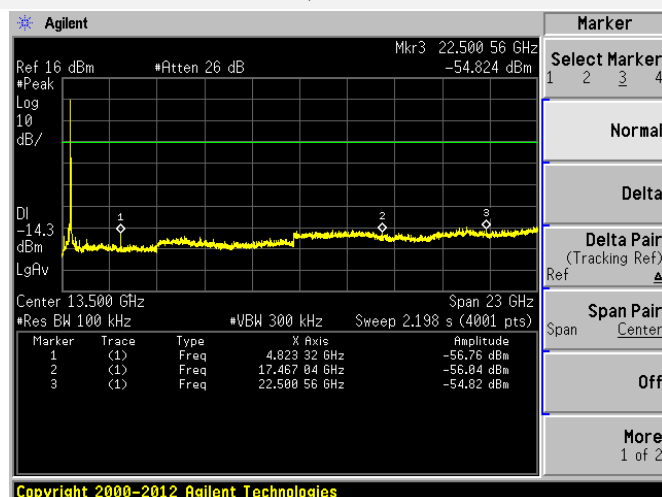
802.11b LOW CHANNEL CARRIER LEVEL



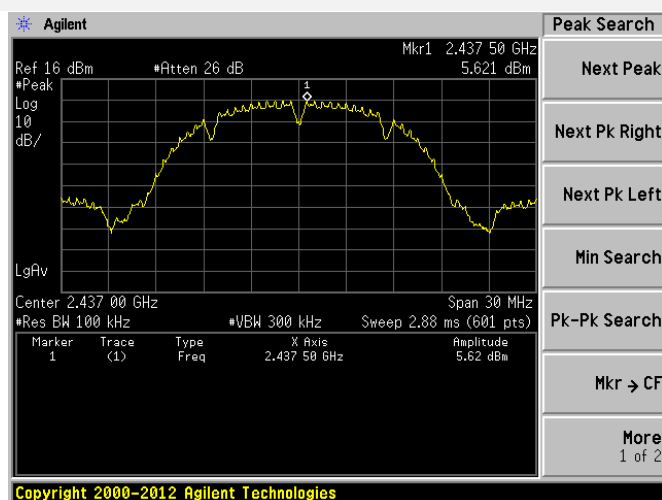
802.11b LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



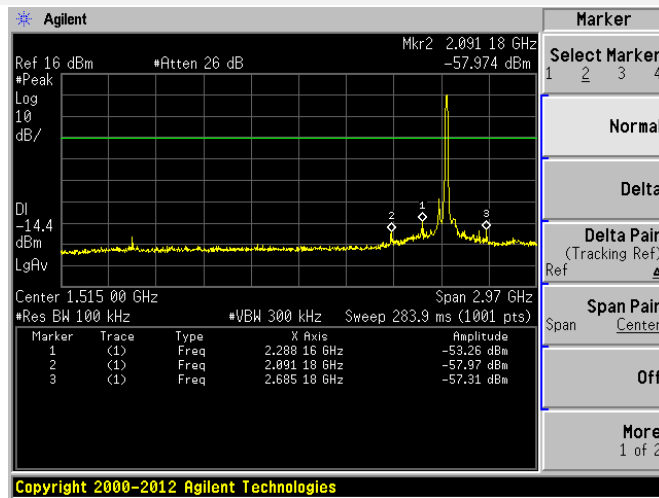
802.11b LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



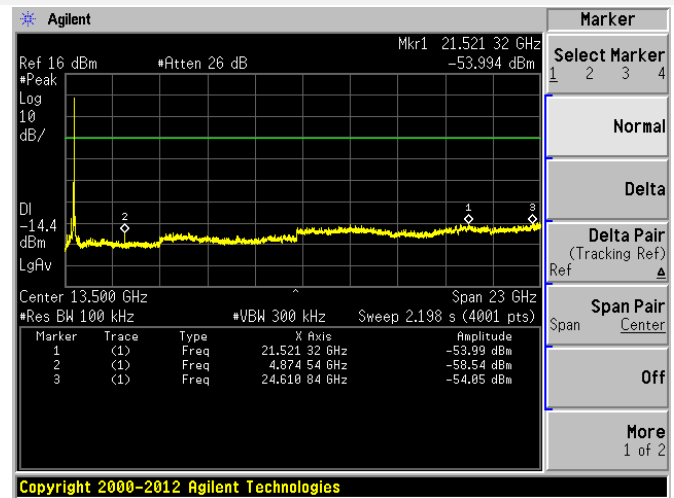
802.11b MIDDLE CHANNEL CARRIER LEVEL



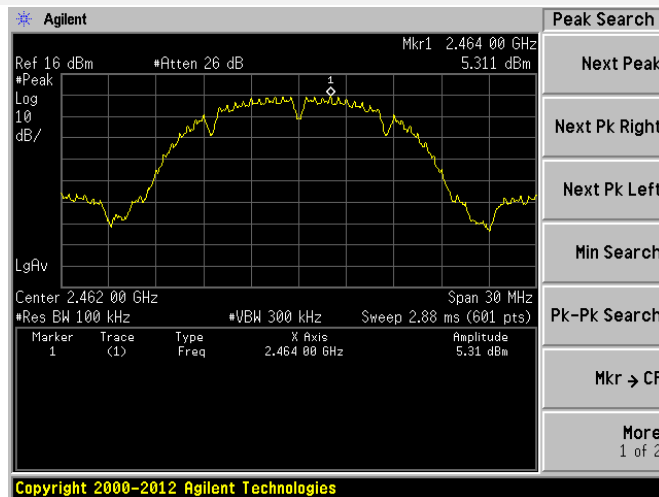
802.11b MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



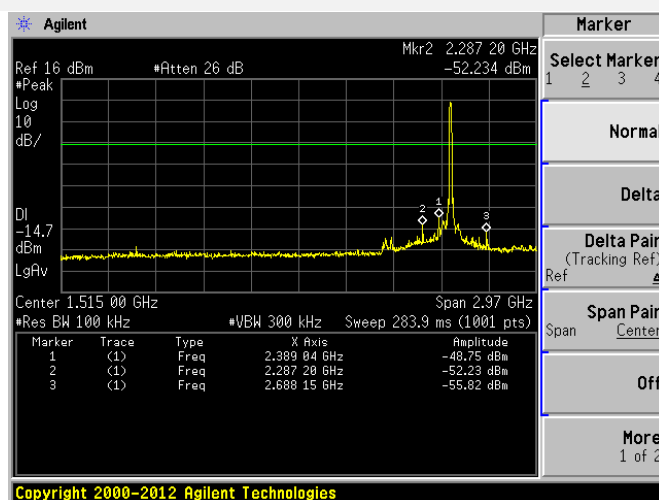
802.11b MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



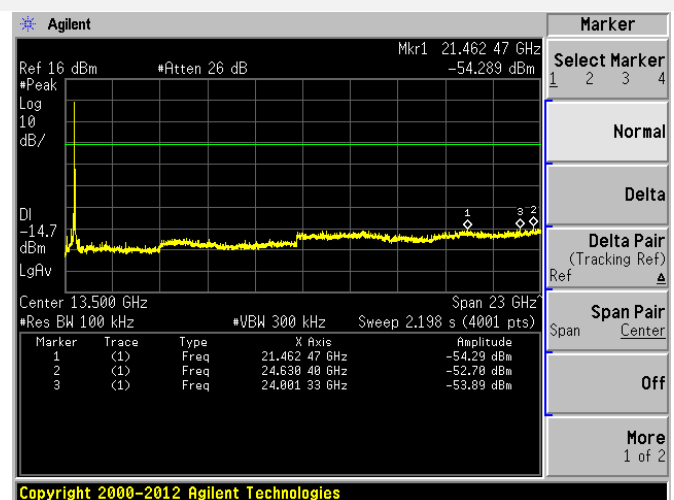
802.11b HIGH CHANNEL CARRIER LEVEL



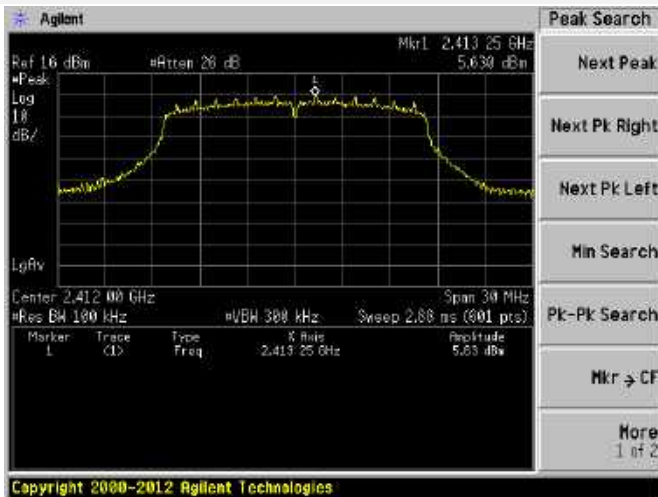
802.11b HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



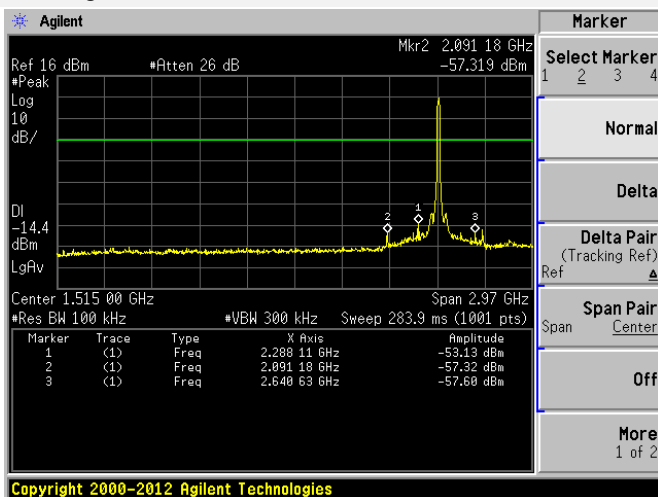
802.11b HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



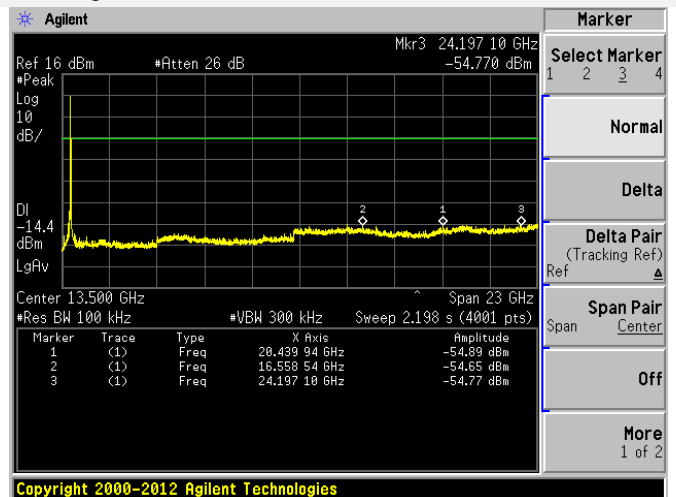
802.11g LOW CHANNEL CARRIER LEVEL



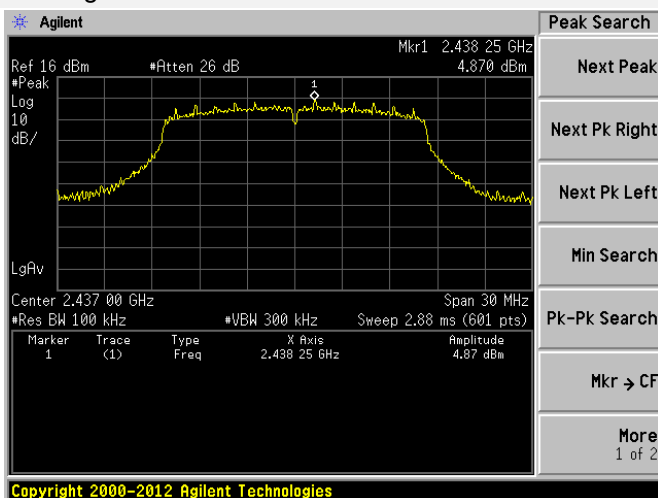
802.11g LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



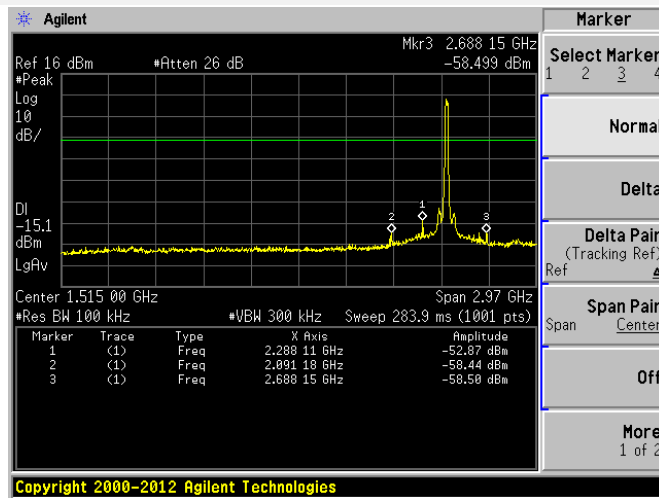
802.11g LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



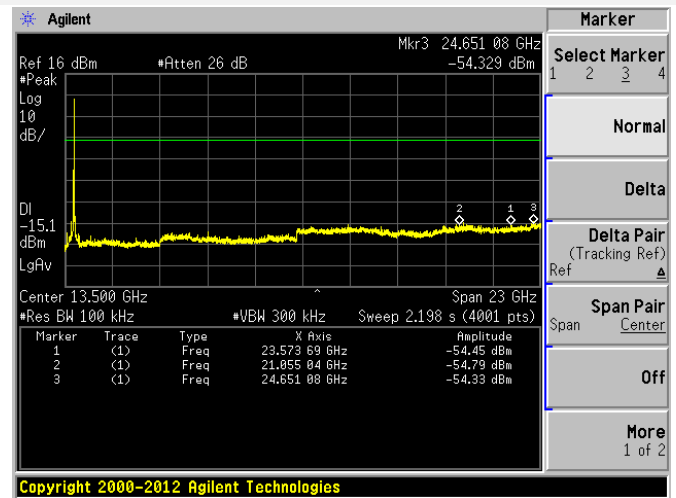
802.11g MIDDLE CHANNEL CARRIER LEVEL



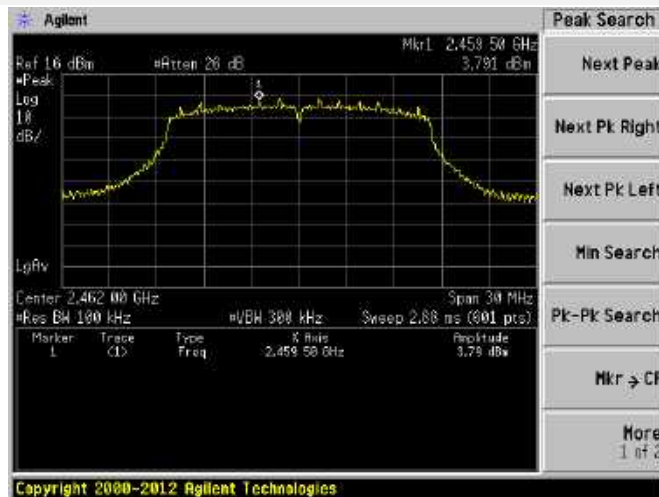
802.11g MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



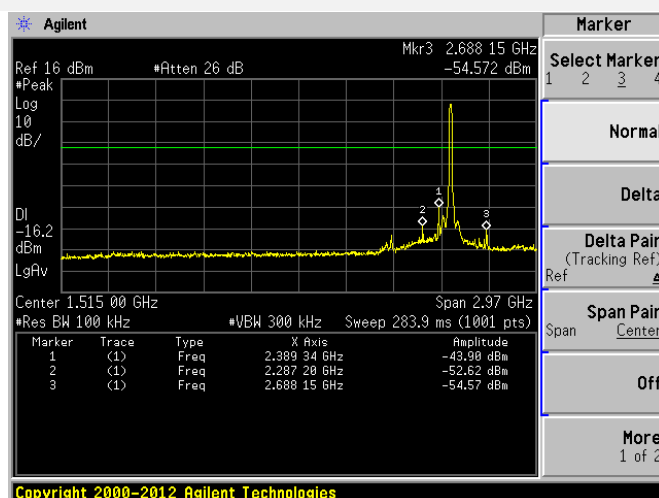
802.11g MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



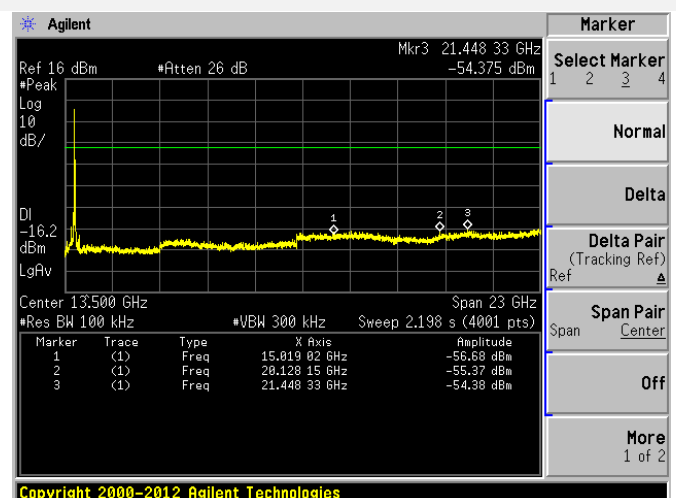
802.11g HIGH CHANNEL CARRIER LEVEL



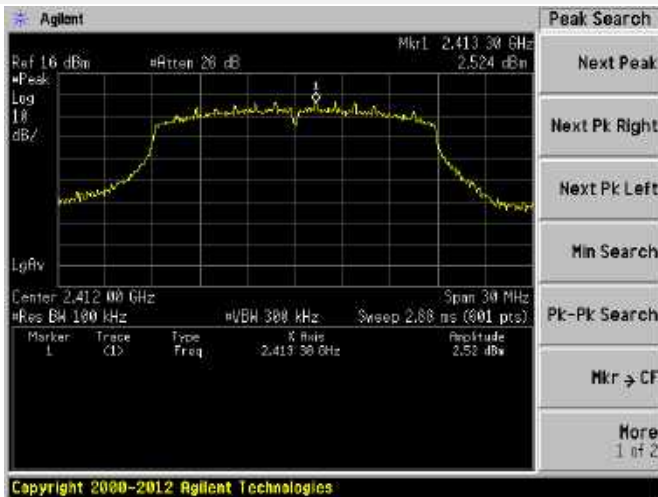
802.11g HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



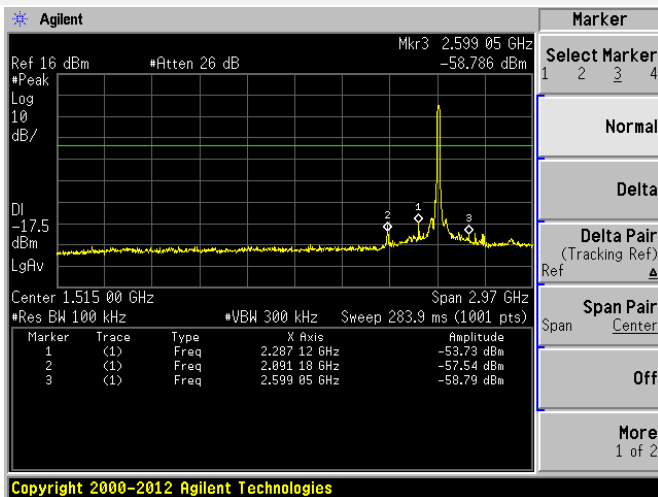
802.11g HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



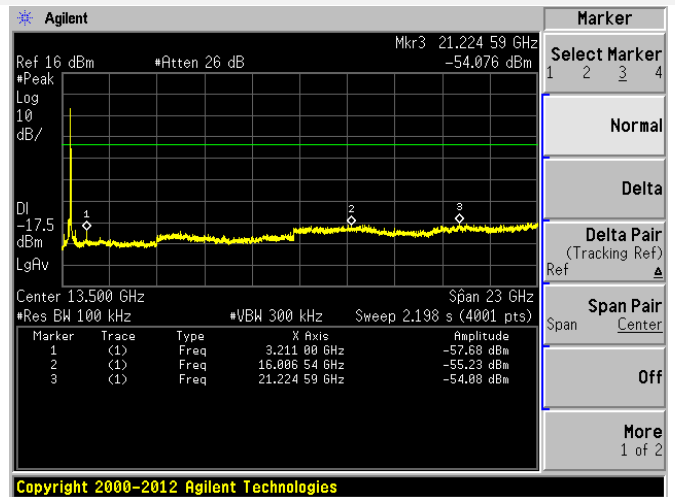
802.11n-20 MHz LOW CHANNEL CARRIER LEVEL



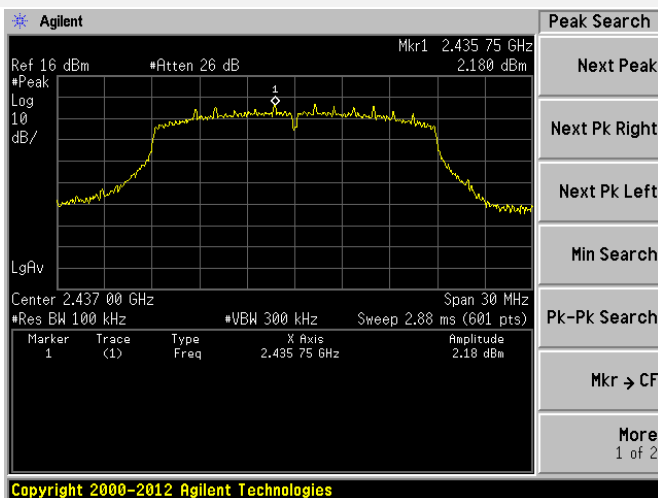
802.11n-20 MHz LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



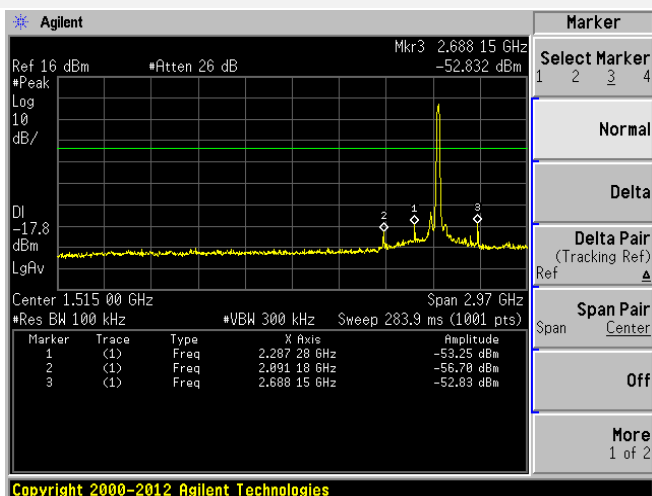
802.11n-20 MHz LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



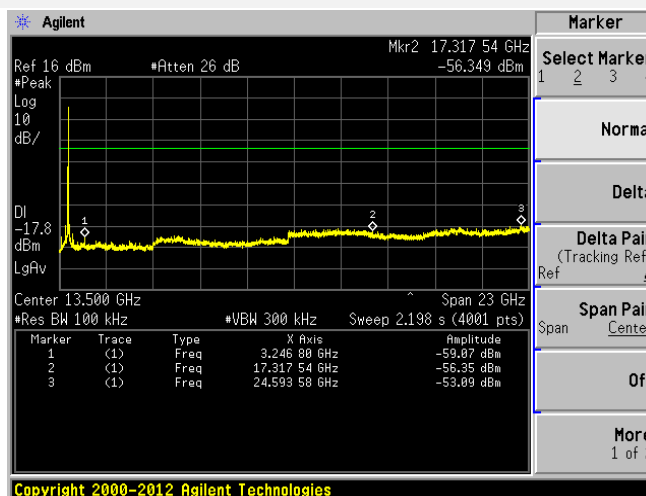
802.11n-20 MHz MIDDLE CHANNEL CARRIER LEVEL



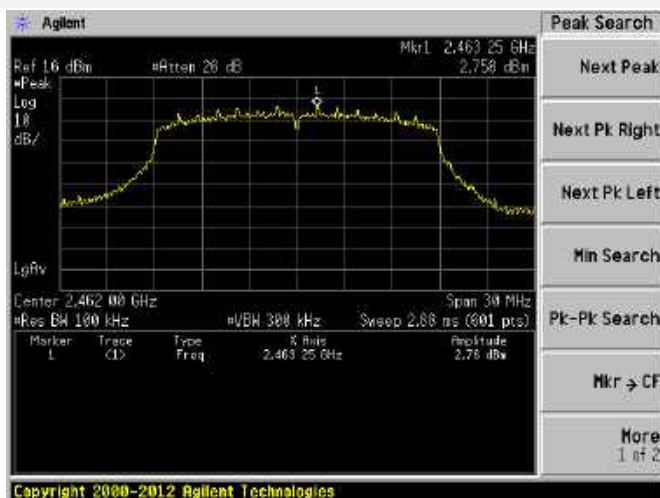
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



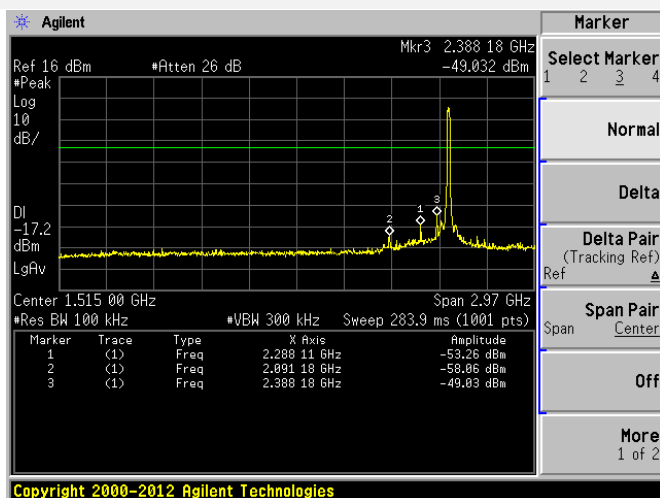
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



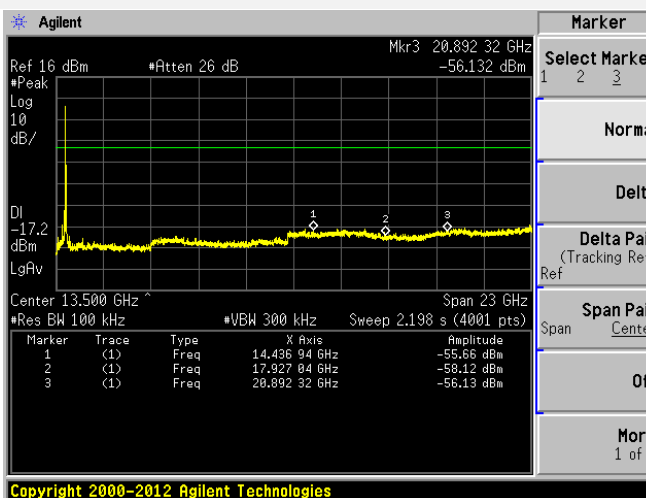
802.11n-20 MHz HIGH CHANNEL CARRIER LEVEL



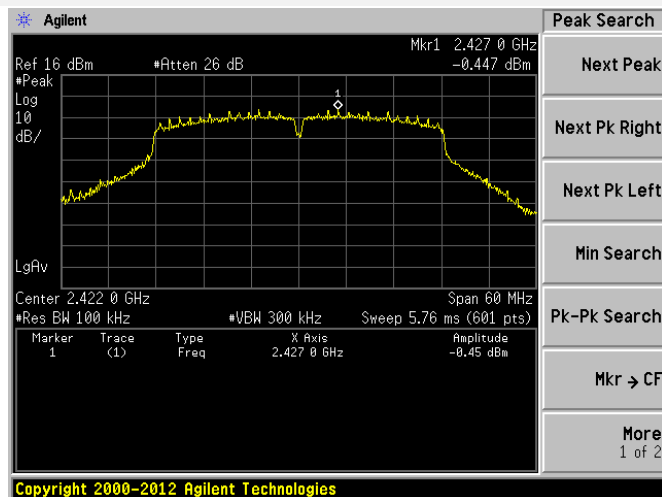
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



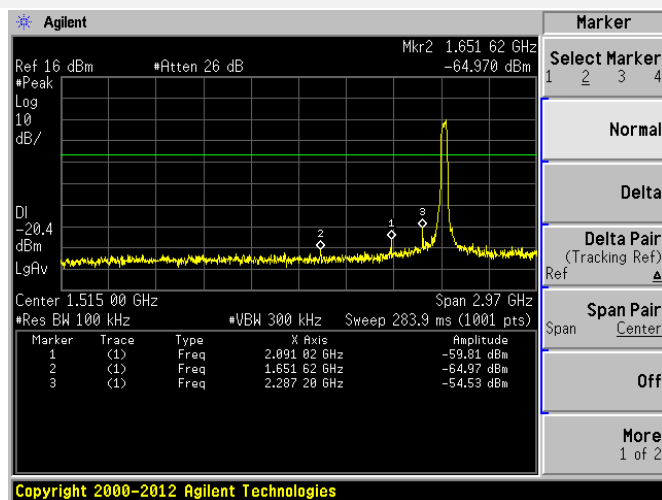
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



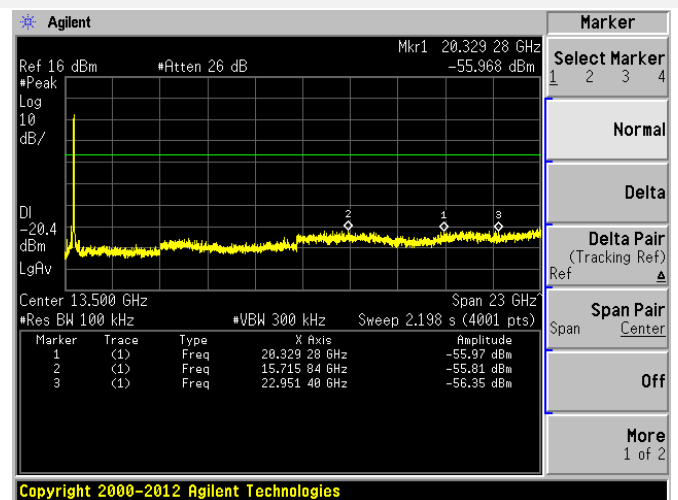
802.11n-40 MHz LOW CHANNEL CARRIER LEVEL



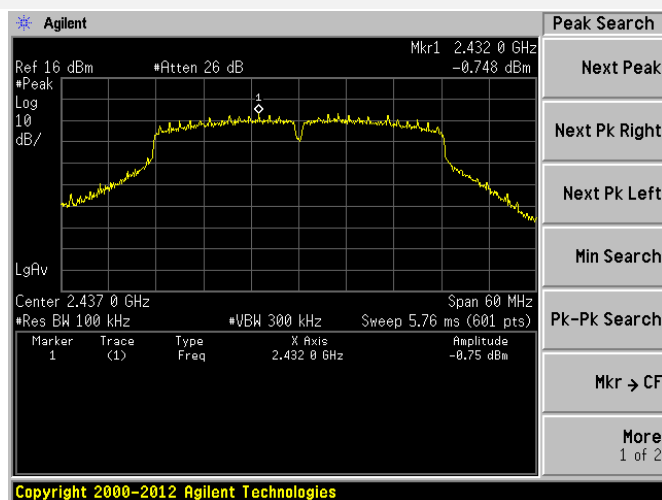
802.11n-40 MHz LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



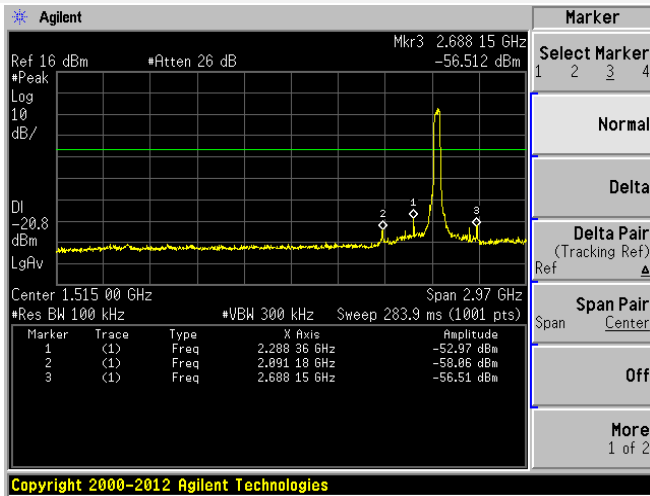
802.11n-40 MHz LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



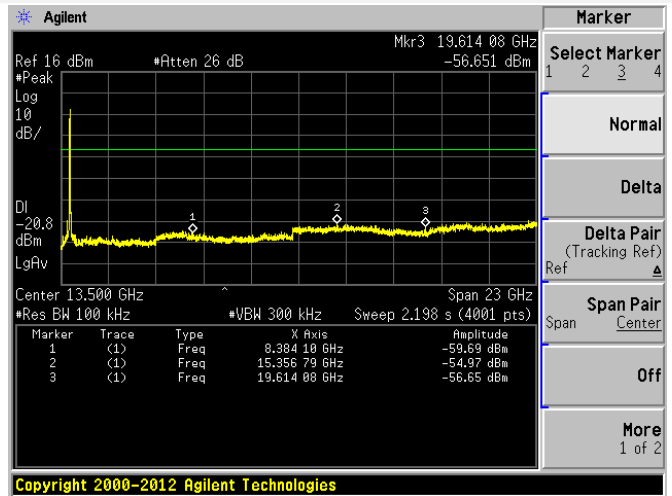
802.11n-40 MHz MIDDLE CHANNEL CARRIER LEVEL



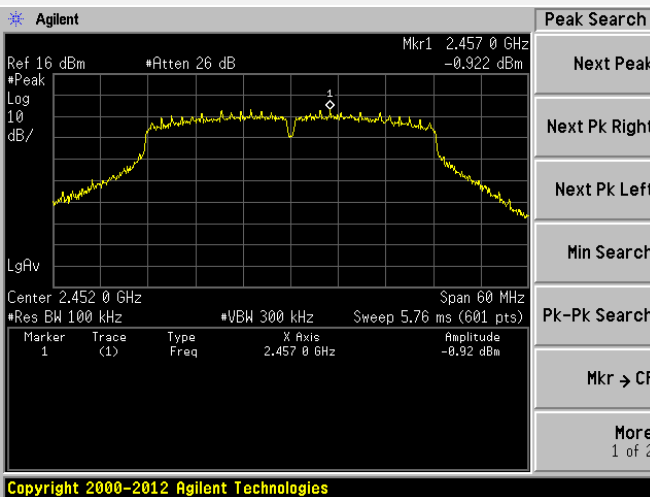
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



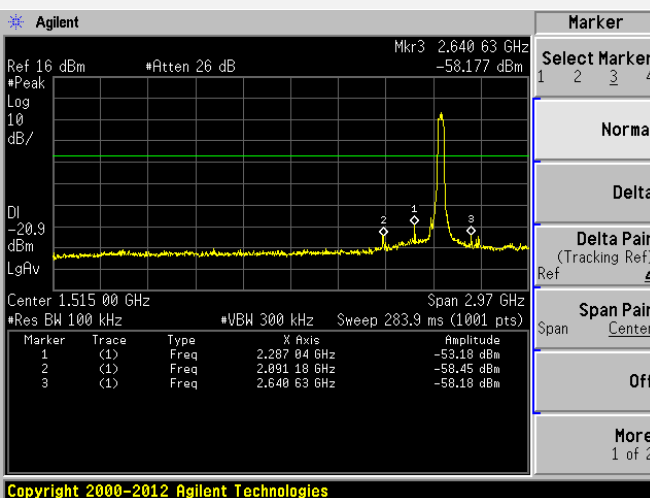
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



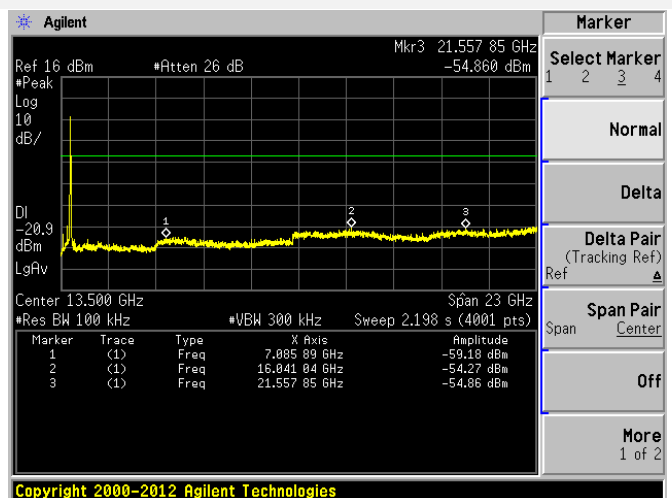
802.11n-40 MHz HIGH CHANNEL CARRIER LEVEL



802.11n-40 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz

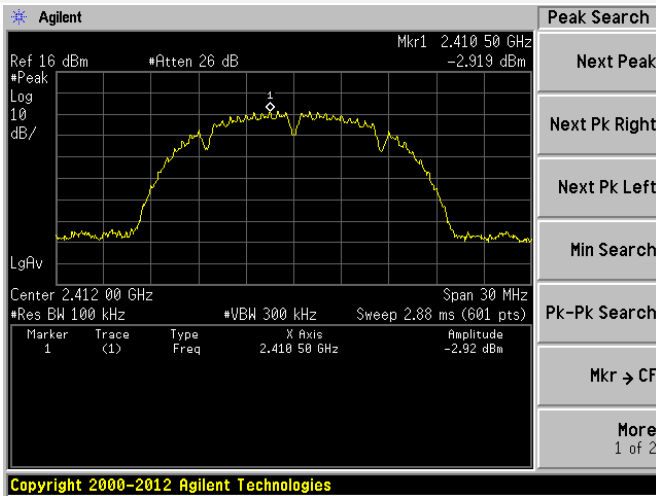


802.11n-40 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz

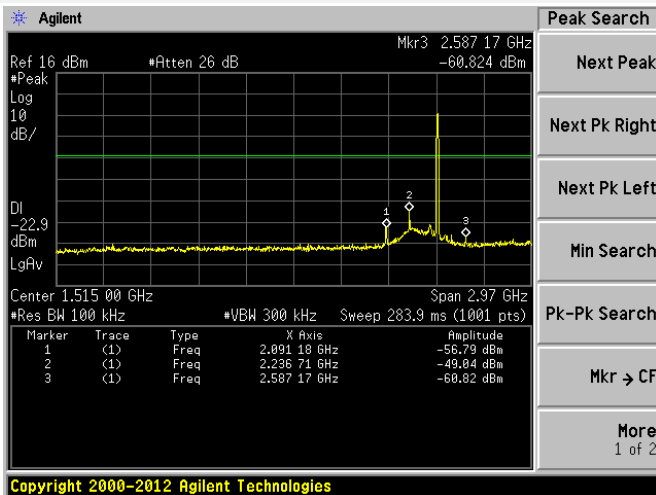


Aux. Antenna

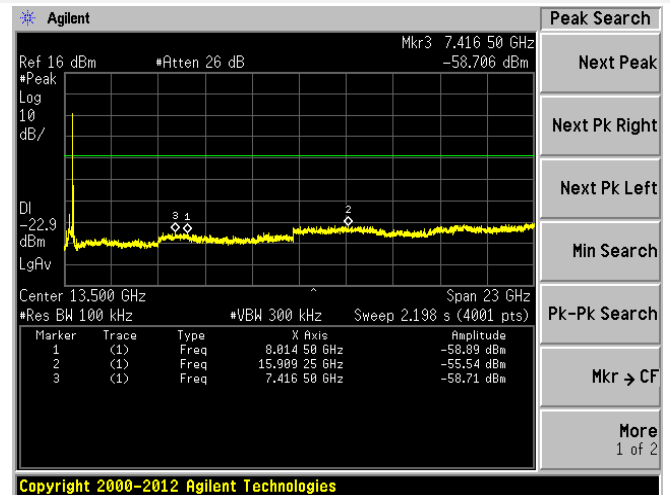
802.11b LOW CHANNEL CARRIER LEVEL



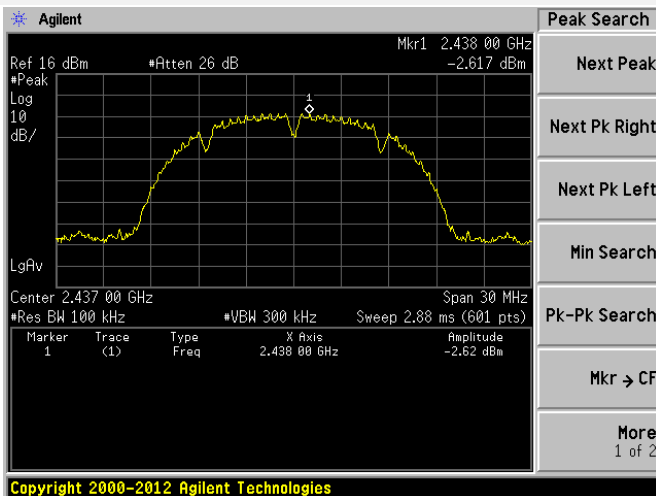
802.11b LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



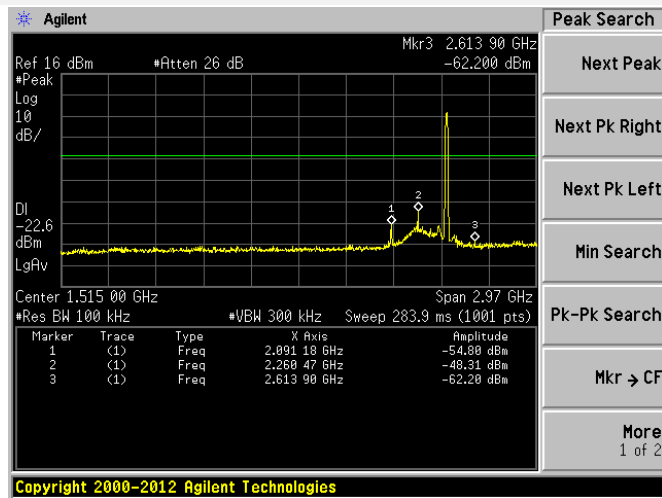
802.11b LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



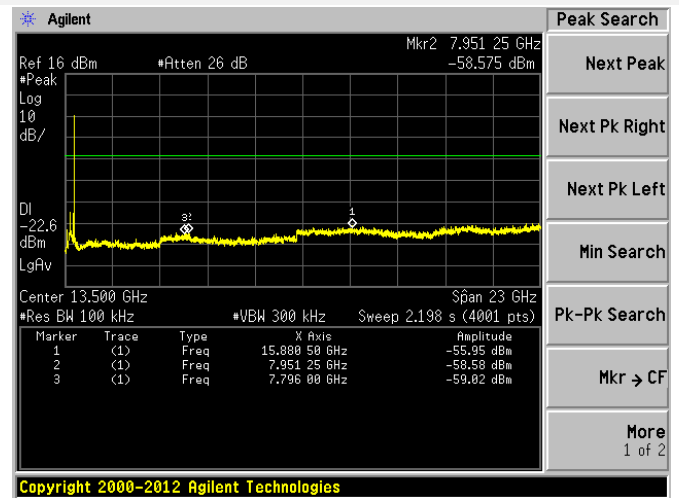
802.11b MIDDLE CHANNEL CARRIER LEVEL



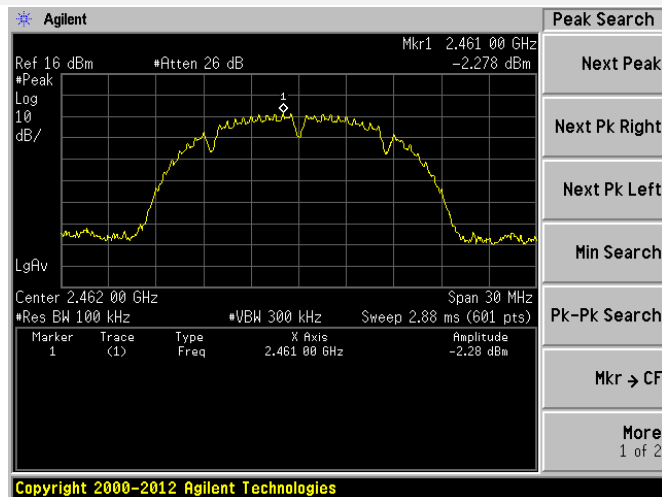
802.11b MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



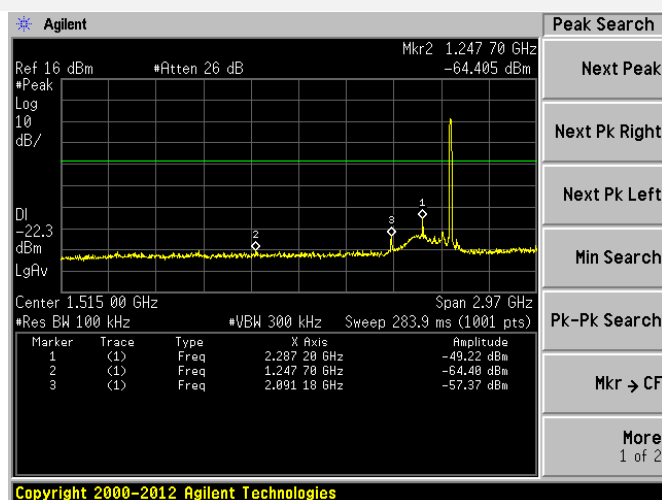
802.11b MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



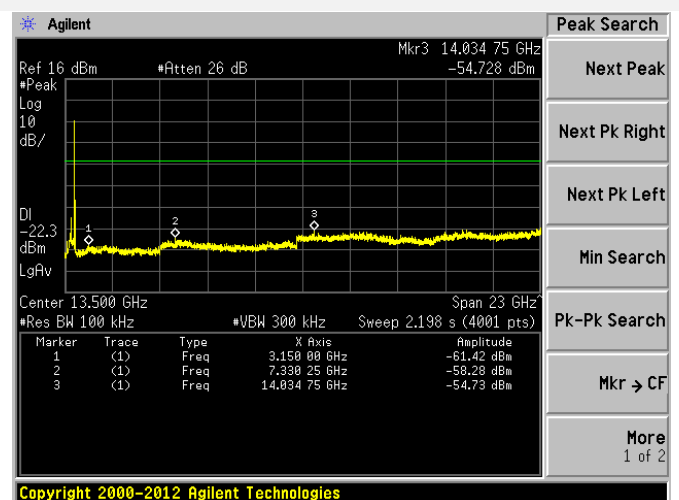
802.11b HIGH CHANNEL CARRIER LEVEL



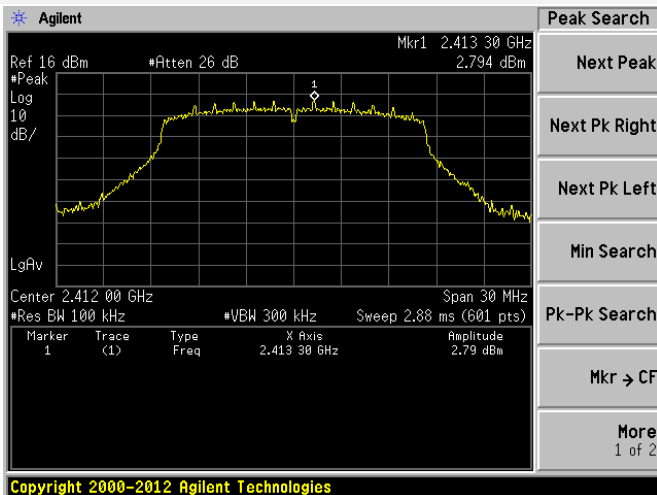
802.11b HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



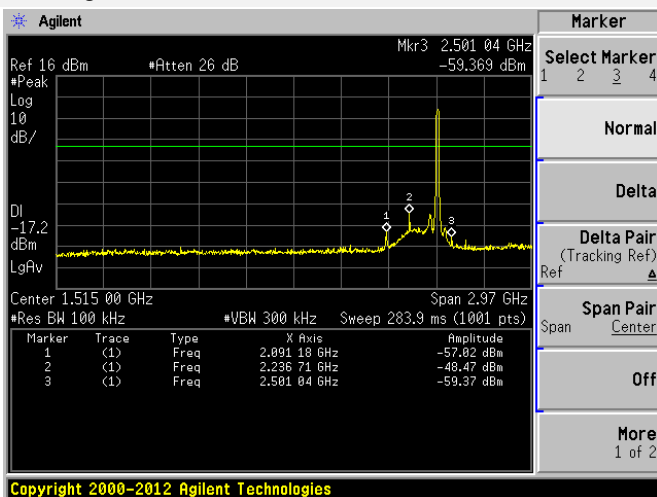
802.11b HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



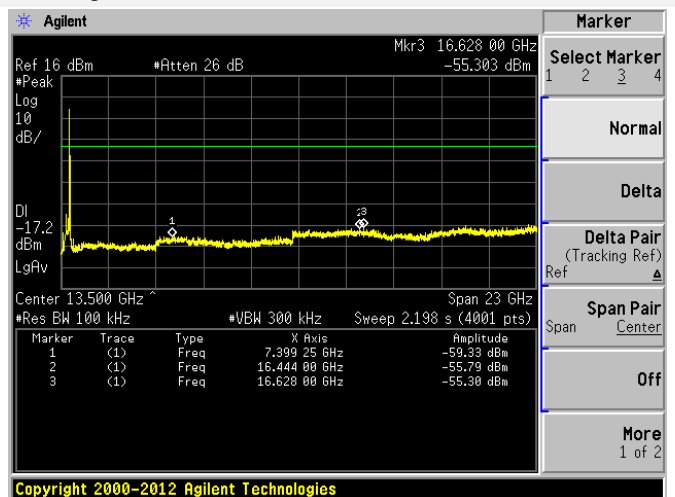
802.11g LOW CHANNEL CARRIER LEVEL



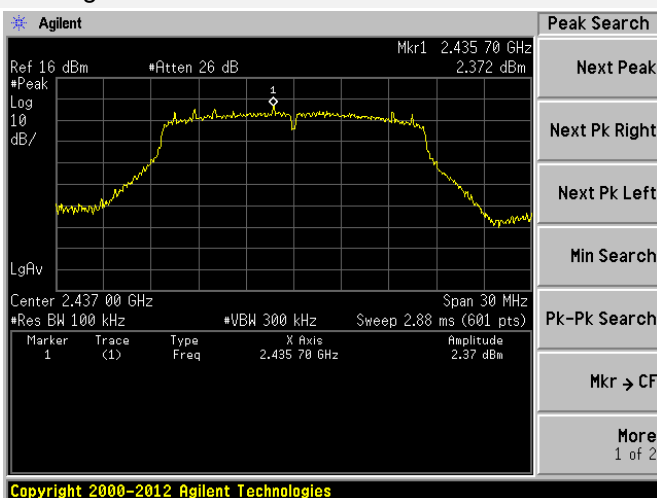
802.11g LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



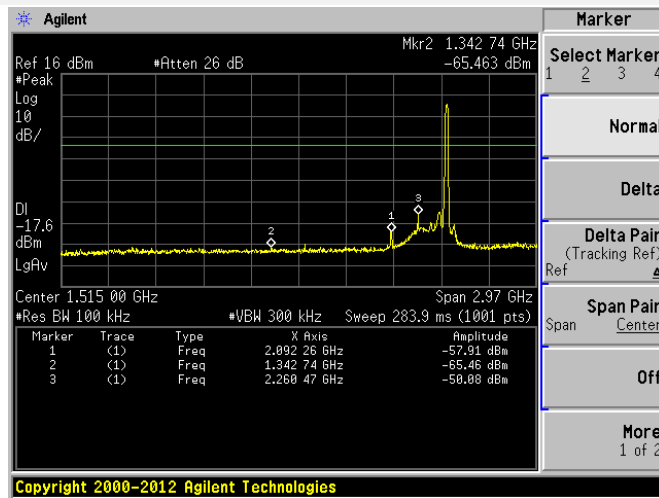
802.11g LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



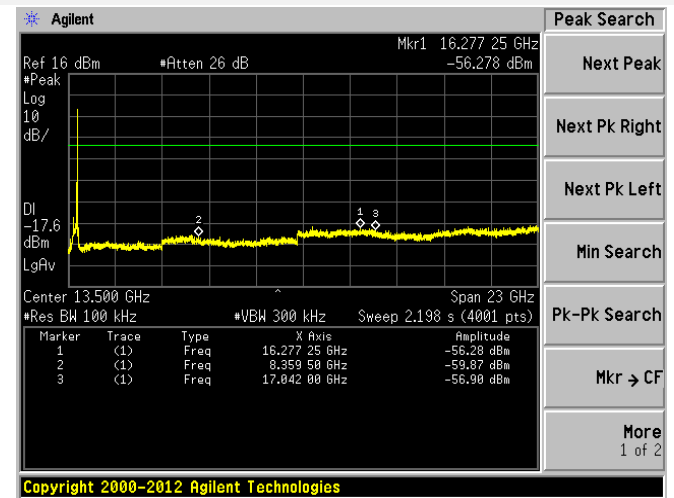
802.11g MIDDLE CHANNEL CARRIER LEVEL



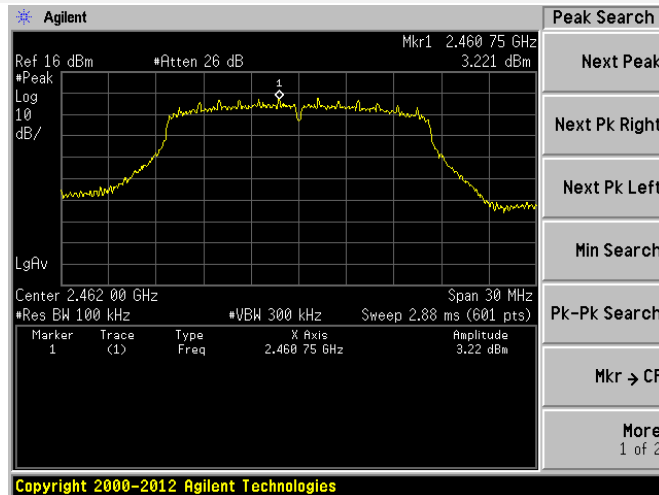
802.11g MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



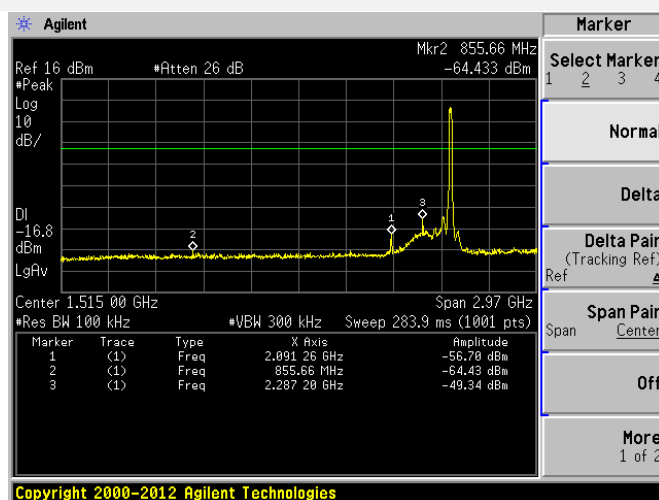
802.11g MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



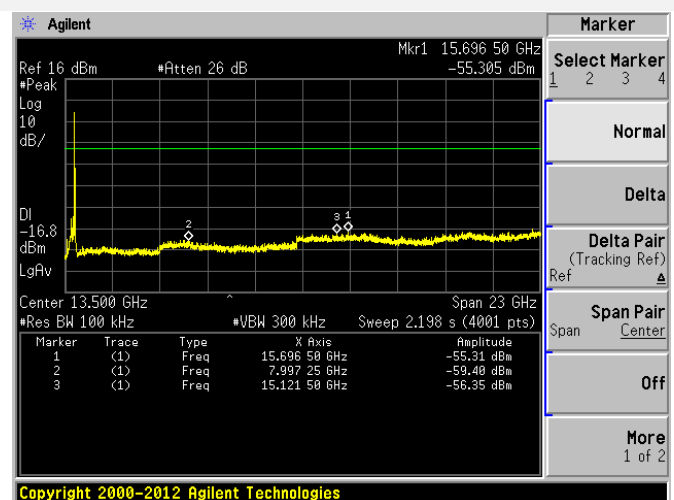
802.11g HIGH CHANNEL CARRIER LEVEL



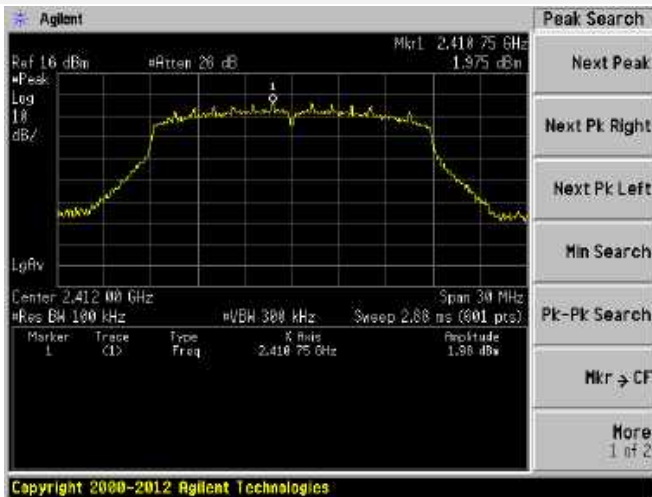
802.11g HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



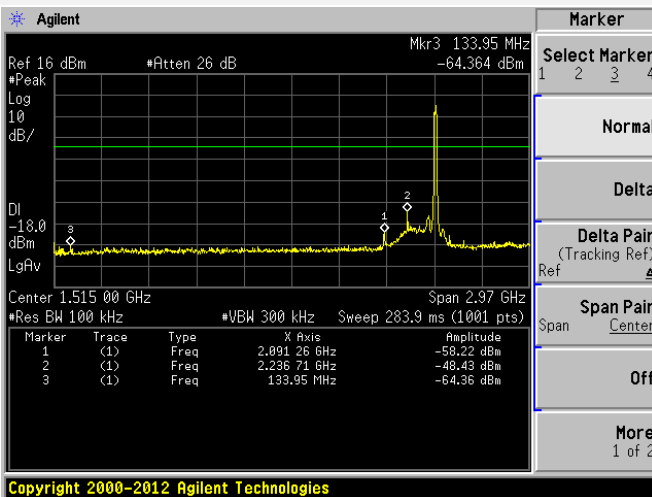
802.11g HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



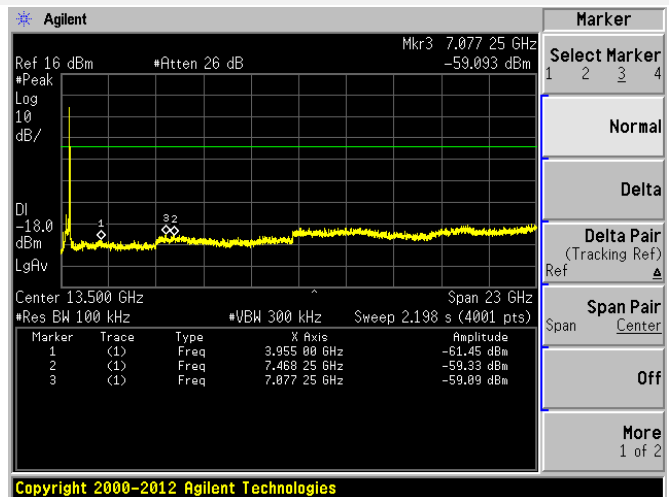
802.11n-20 MHz LOW CHANNEL CARRIER LEVEL



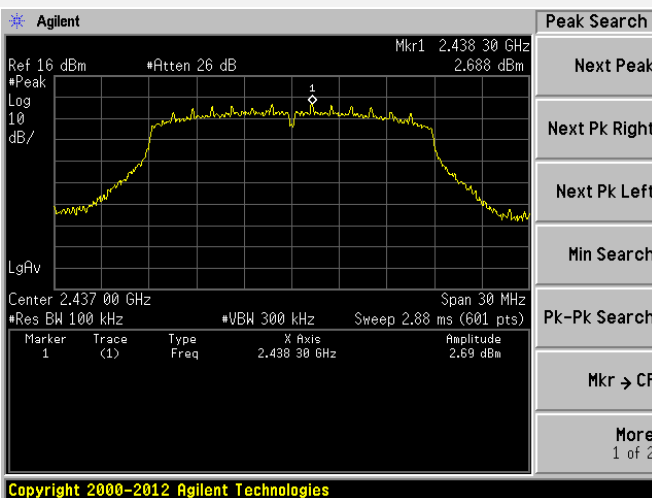
802.11n-20 MHz LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



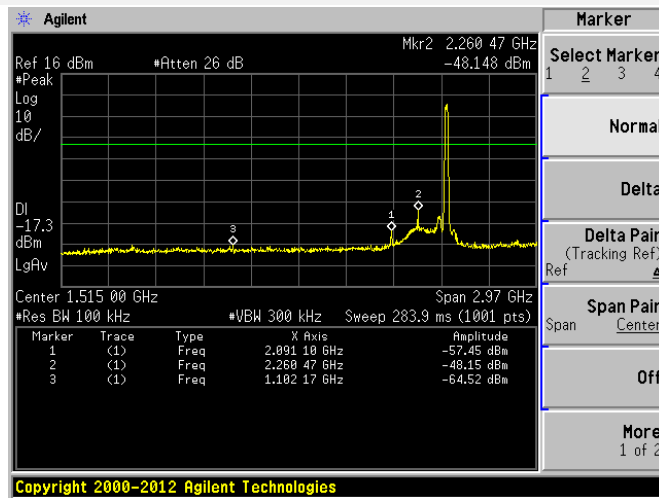
802.11n-20 MHz LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



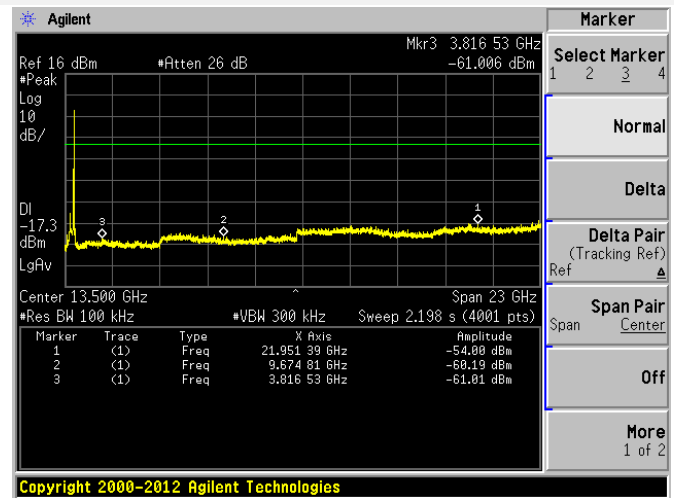
802.11n-20 MHz MIDDLE CHANNEL CARRIER LEVEL



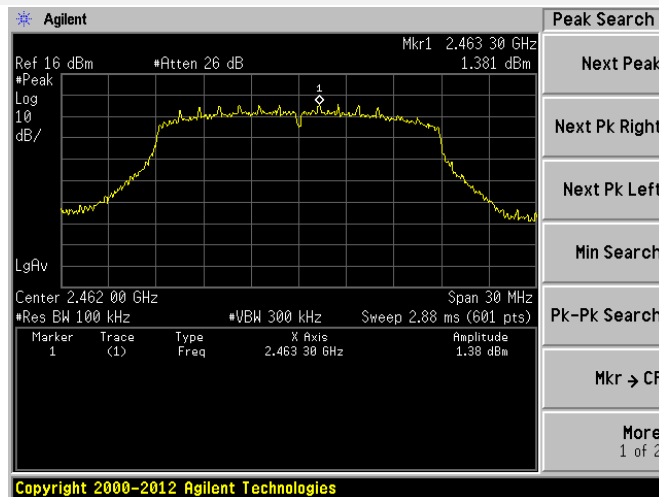
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



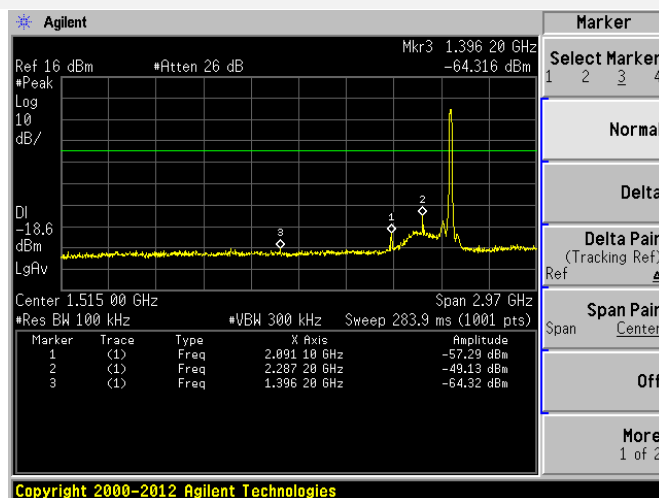
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



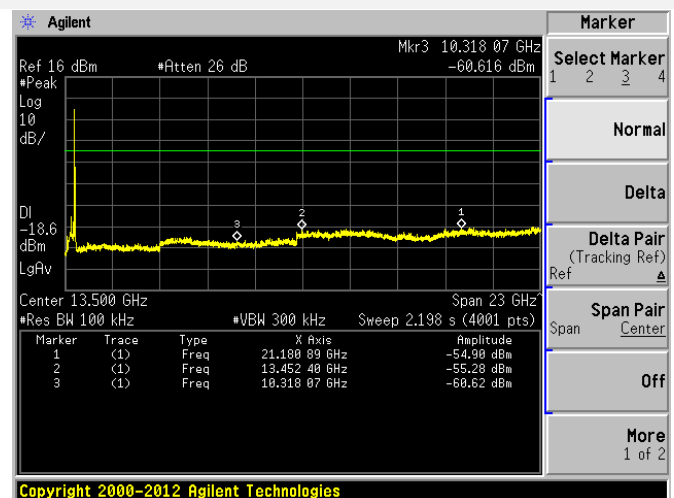
802.11n-20 MHz HIGH CHANNEL CARRIER LEVEL



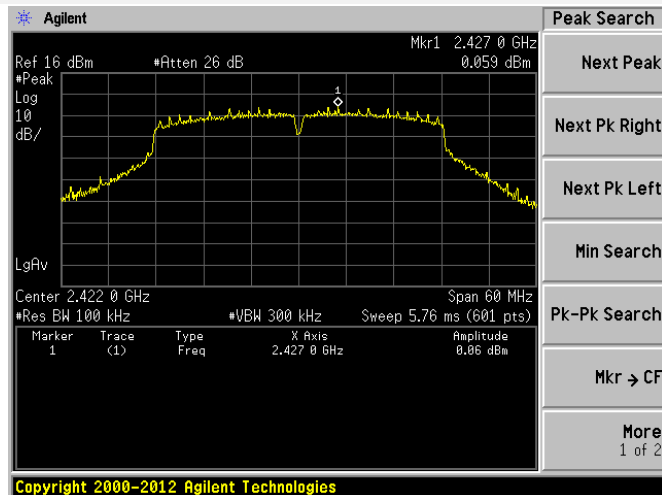
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



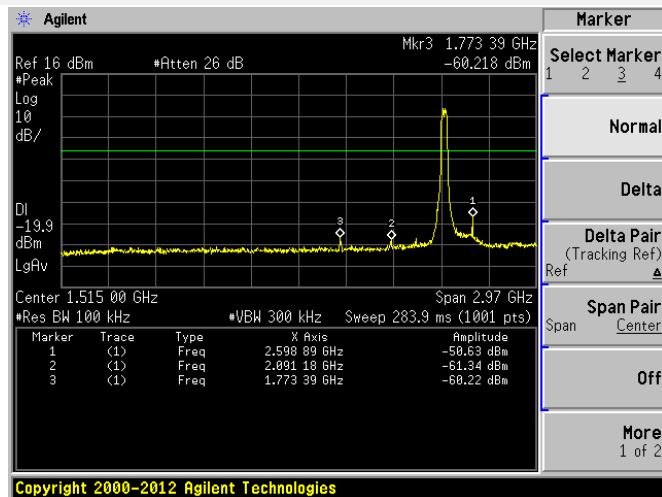
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



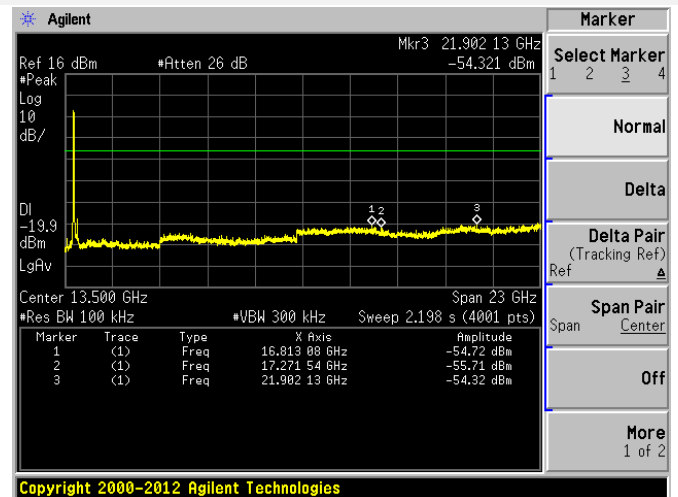
802.11n-40 MHz LOW CHANNEL CARRIER LEVEL



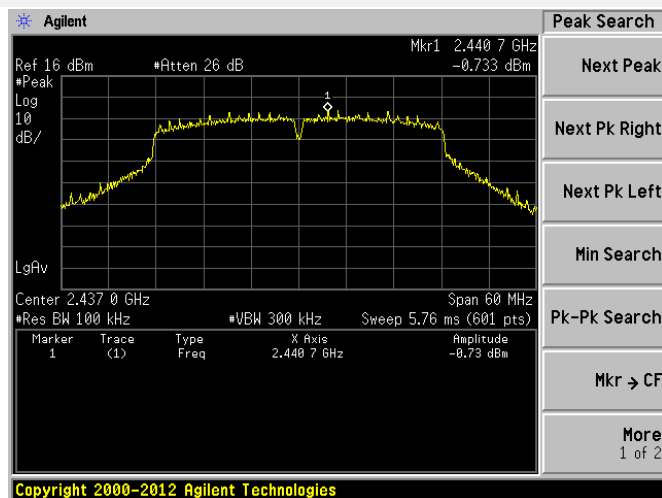
802.11n-40 MHz LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



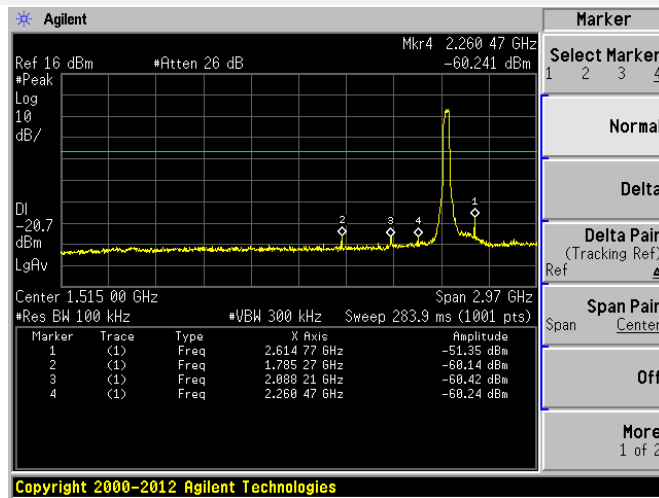
802.11n-40 MHz LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



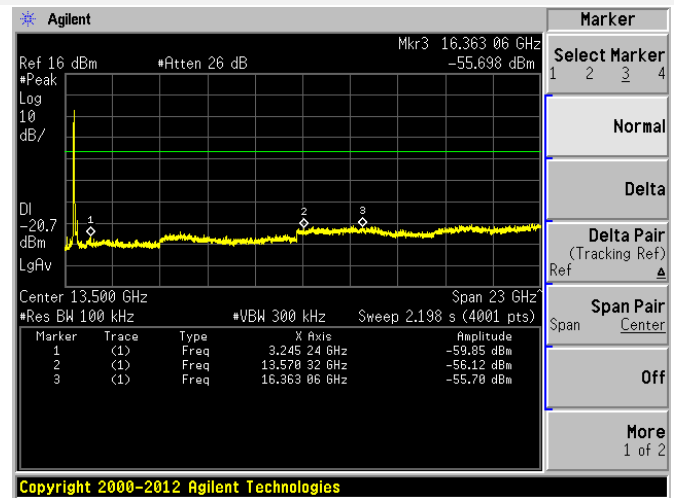
802.11n-40 MHz MIDDLE CHANNEL CARRIER LEVEL



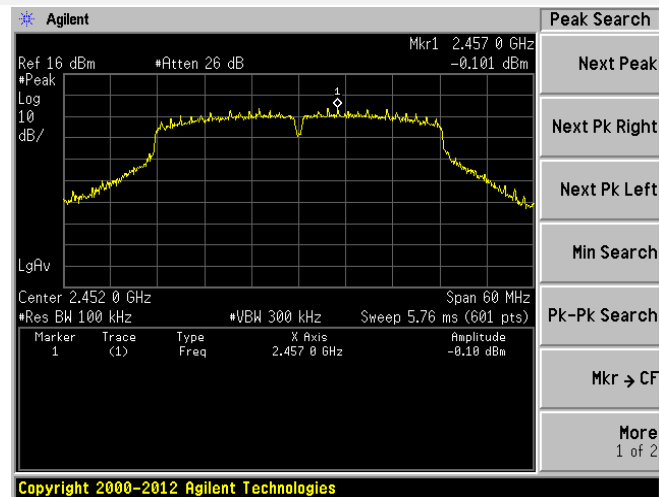
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



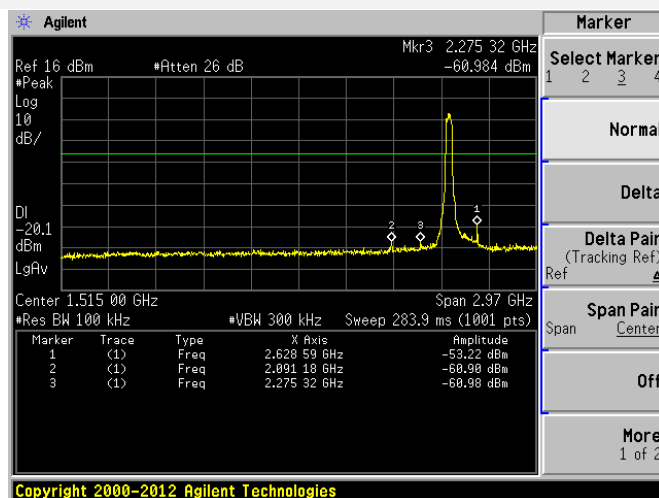
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



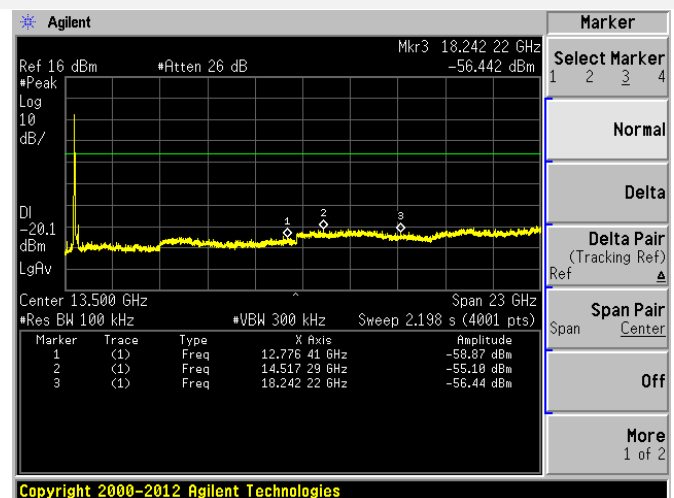
802.11n-40 MHz HIGH CHANNEL CARRIER LEVEL



802.11n-40 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz

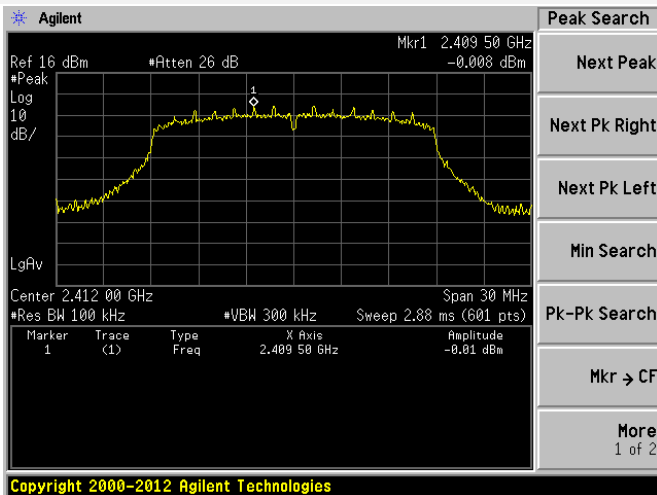


802.11n-40 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz

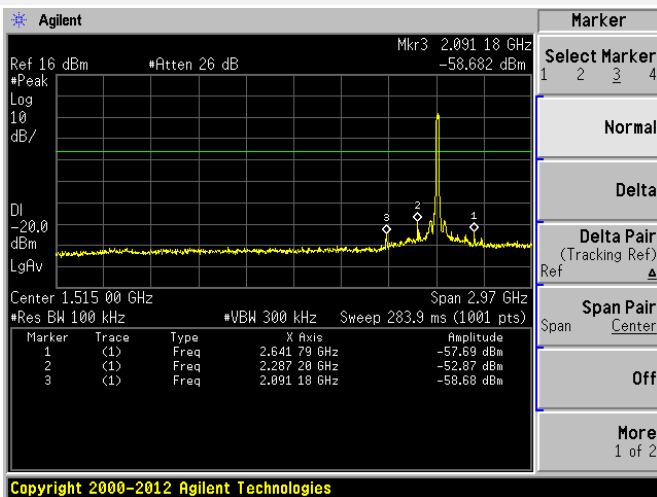


MIMO-Main Antenna

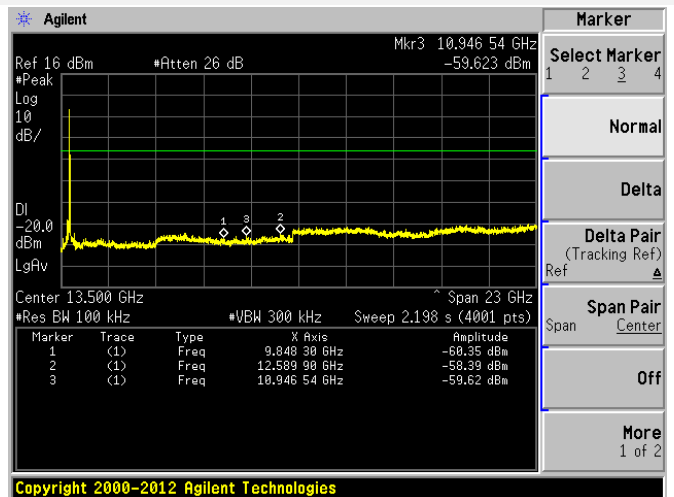
802.11n-20 MHz LOW CHANNEL CARRIER LEVEL



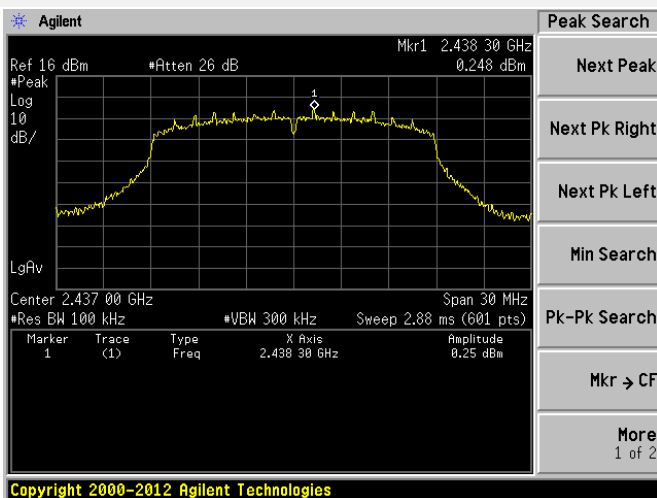
802.11n-20 MHz LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



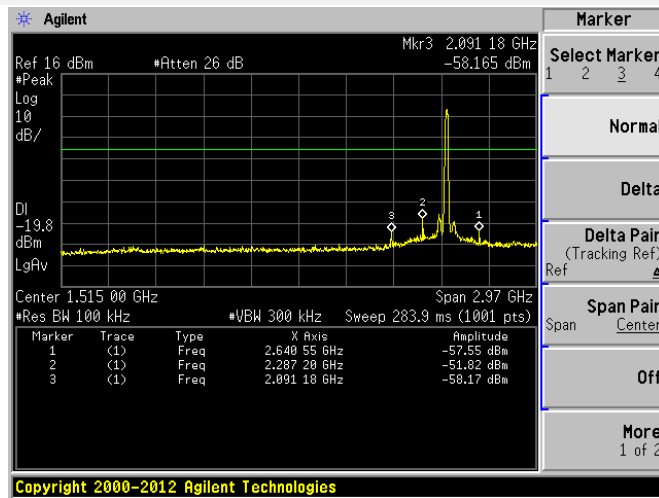
802.11n-20 MHz LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



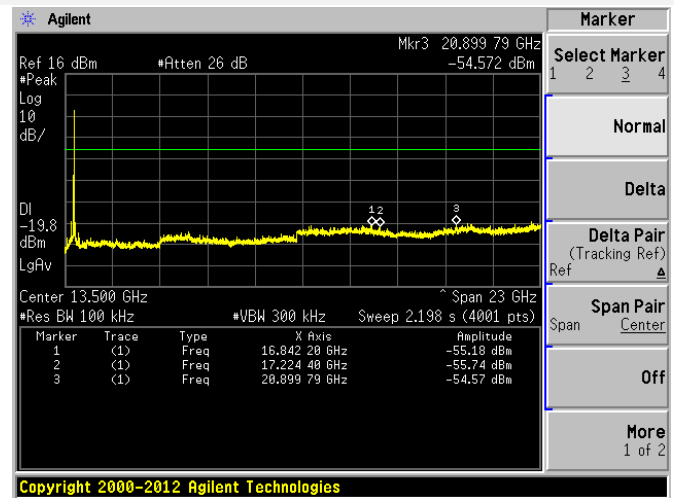
802.11n-20 MHz MIDDLE CHANNEL CARRIER LEVEL



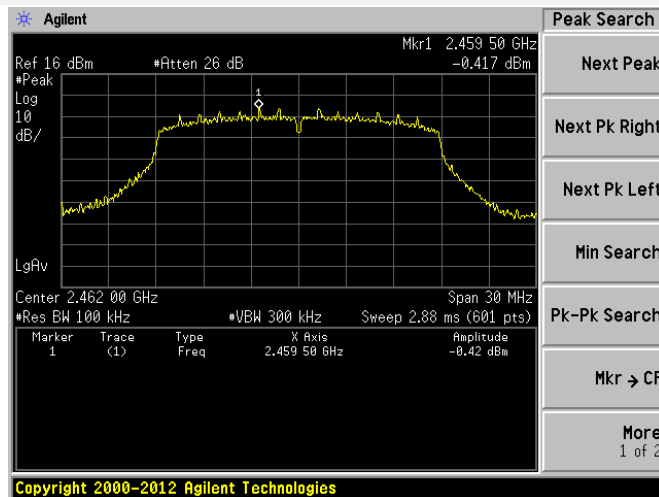
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



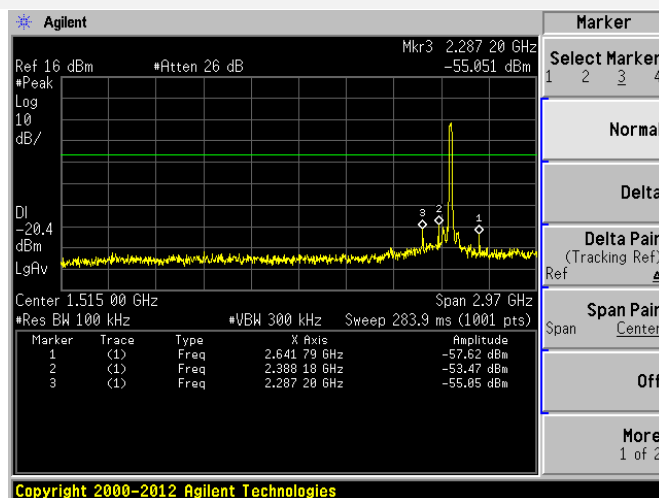
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



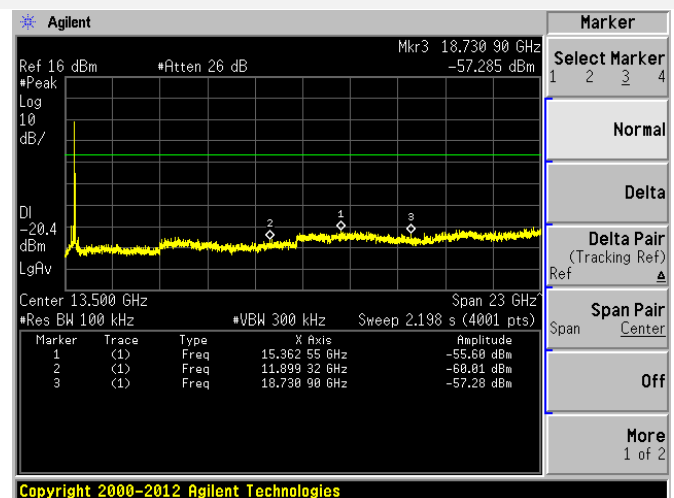
802.11n-20 MHz HIGH CHANNEL CARRIER LEVEL



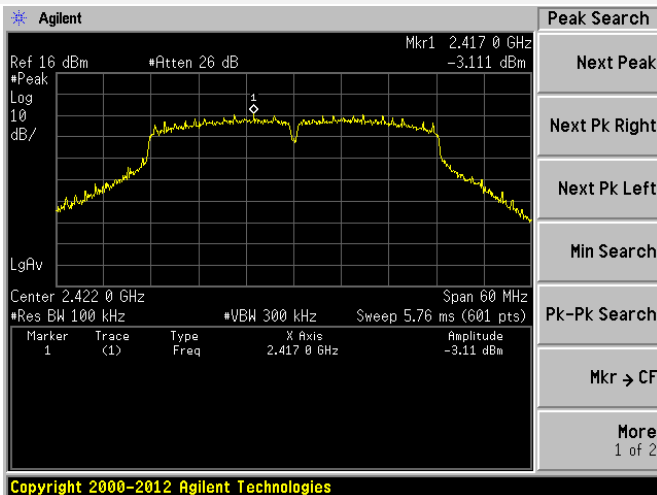
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



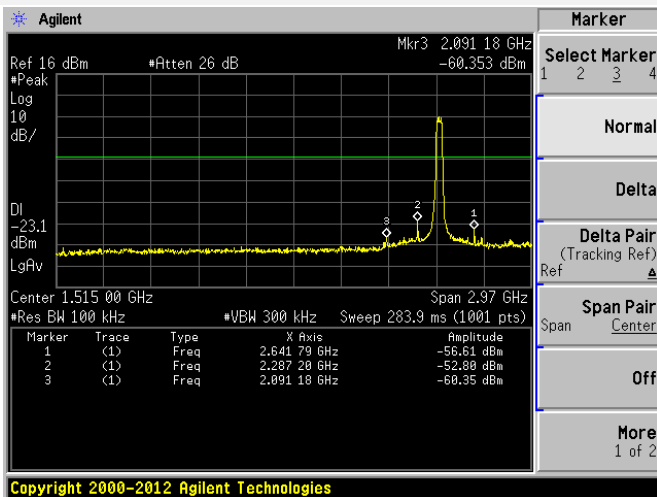
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



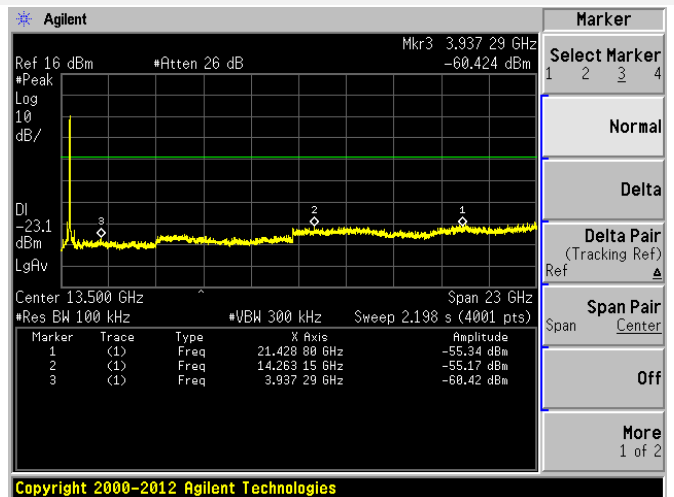
802.11n-40 MHz LOW CHANNEL CARRIER LEVEL



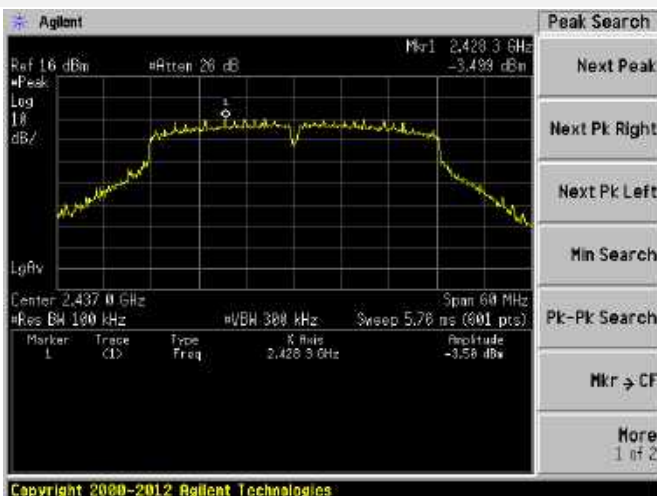
802.11n-40 MHz LOW CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



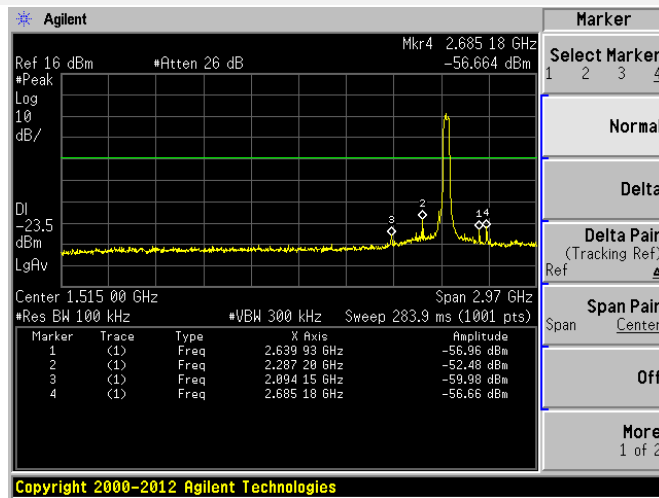
802.11n-40 MHz LOW CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



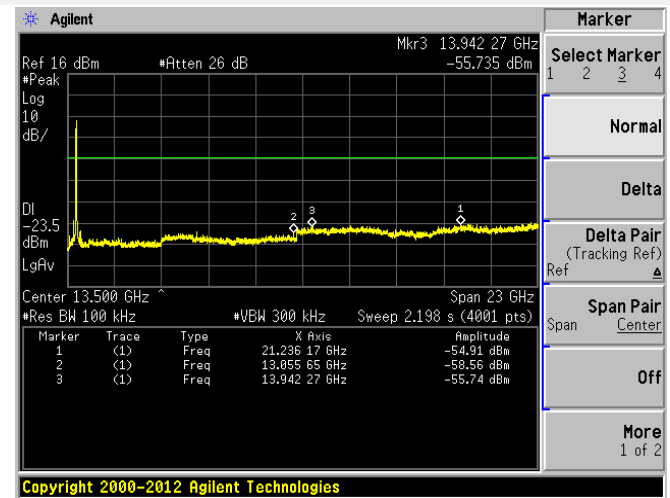
802.11n-40 MHz MIDDLE CHANNEL CARRIER LEVEL



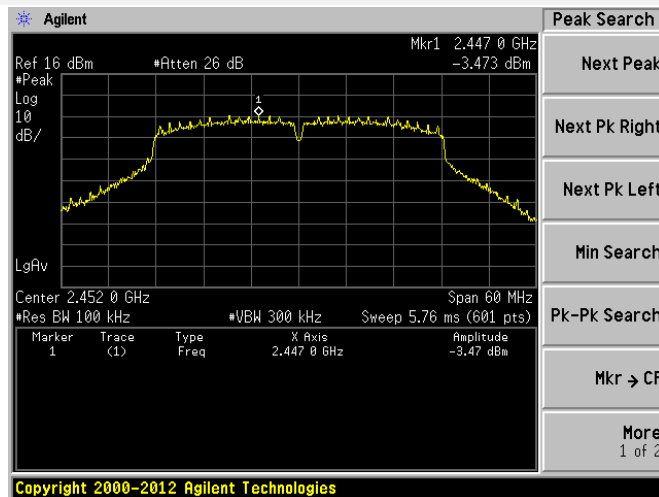
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



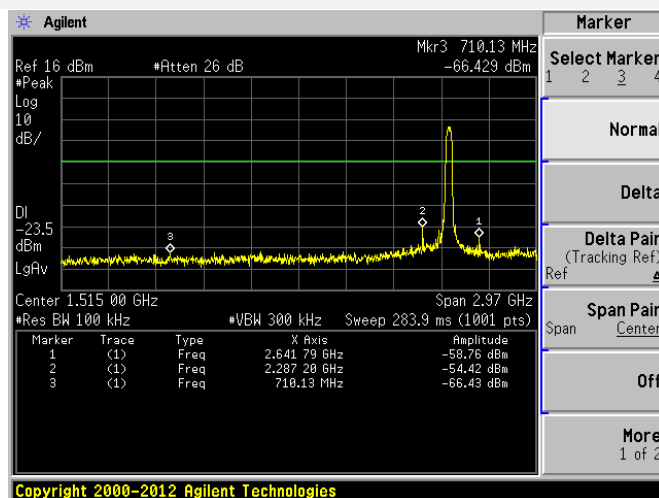
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



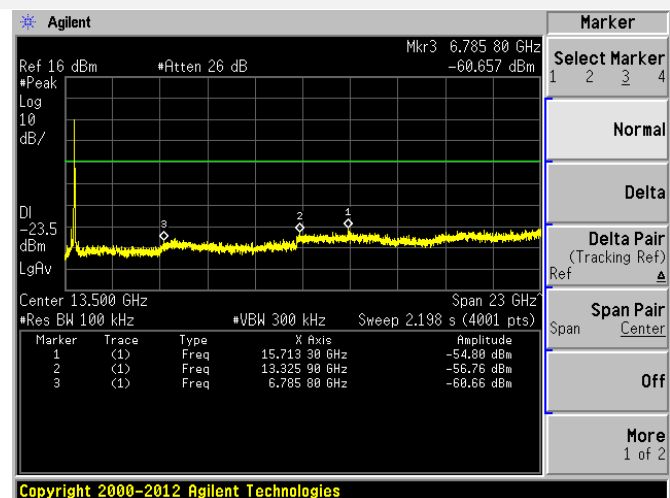
802.11n-40 MHz HIGH CHANNEL CARRIER LEVEL



802.11n-40 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz

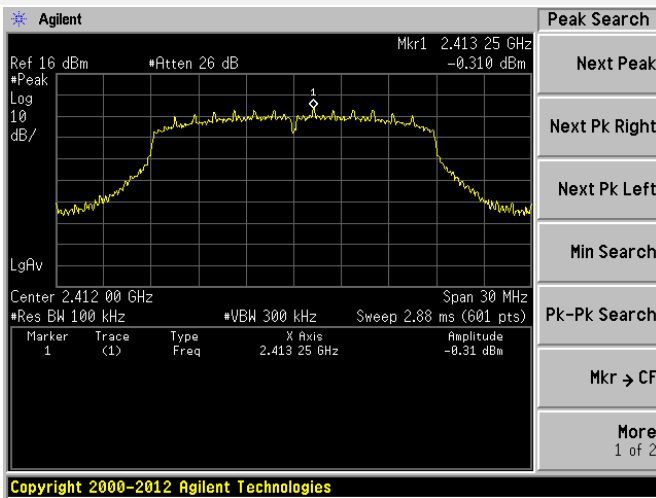


802.11n-40 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz

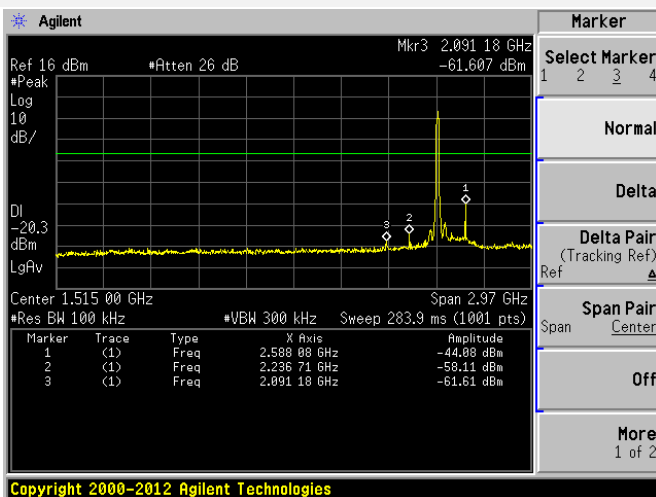


MIMO-Aux. Antenna

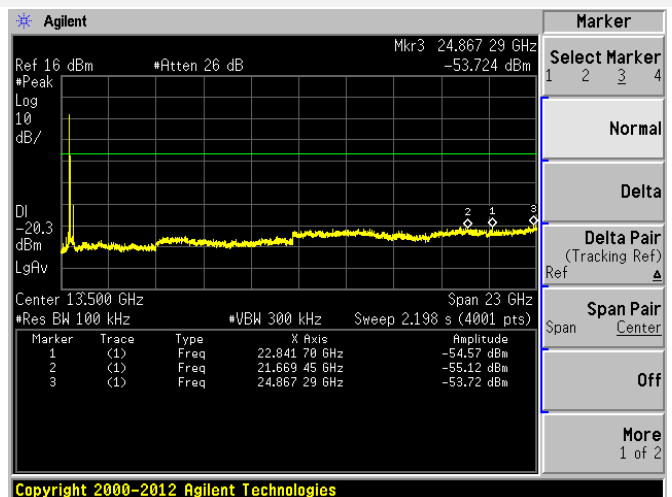
802.11n-20 MHz LOW CHANNEL CARRIER LEVEL



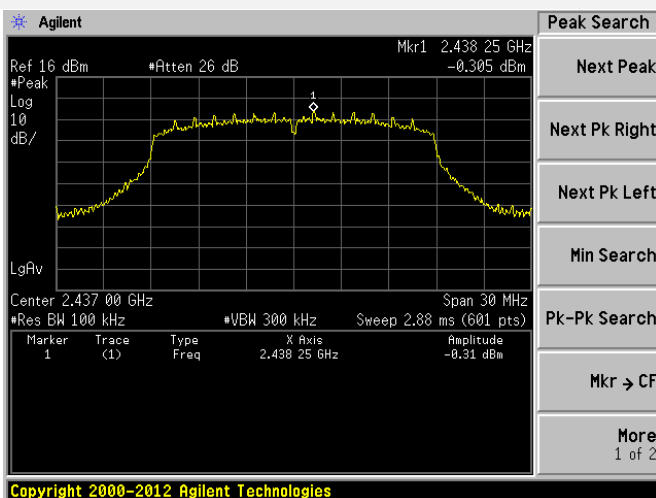
802.11n-20 MHz LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



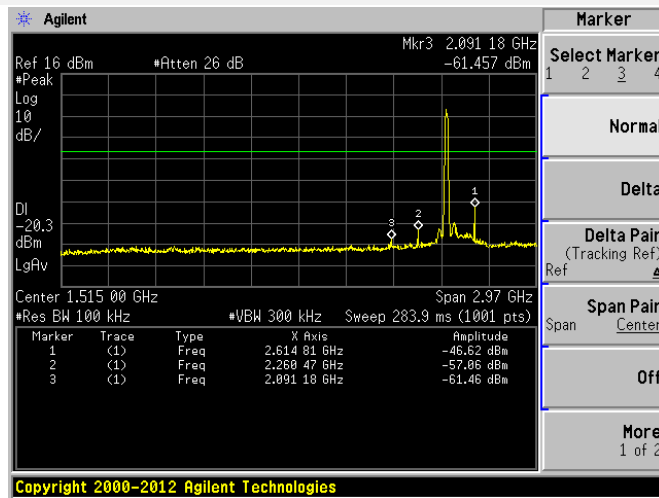
802.11n-20 MHz LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



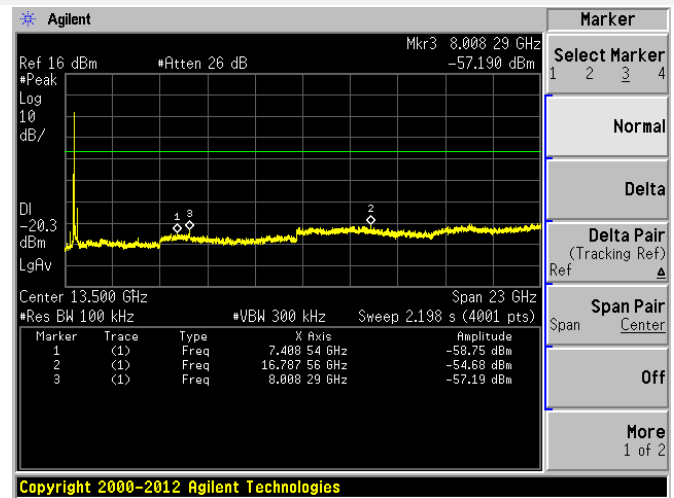
802.11n-20 MHz MIDDLE CHANNEL CARRIER LEVEL



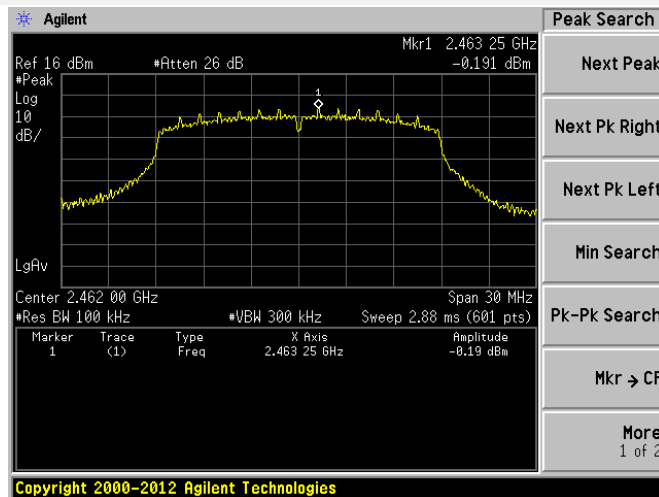
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



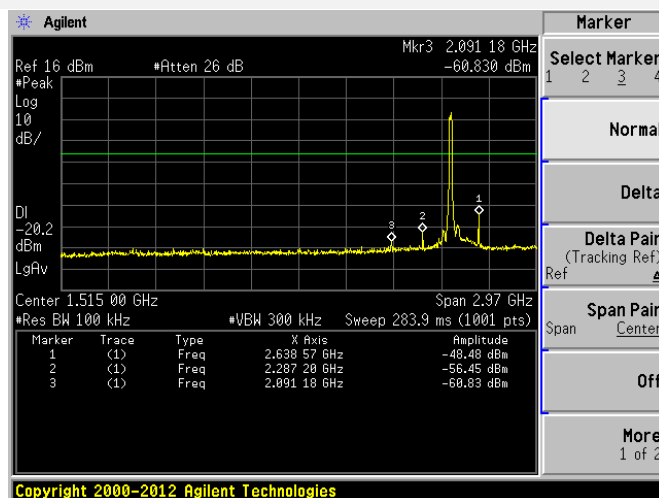
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



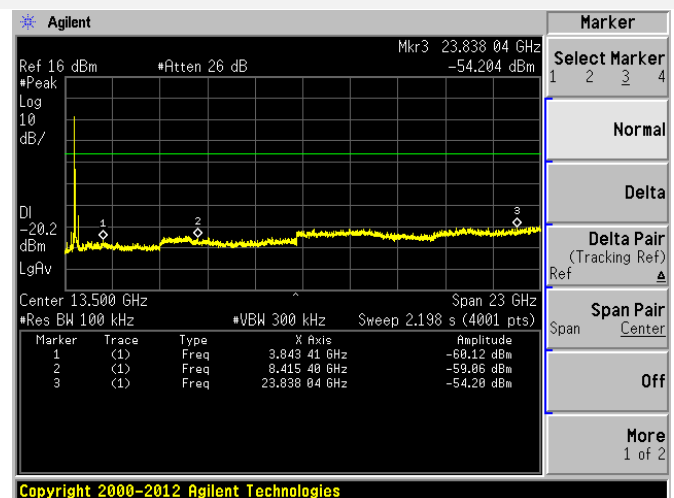
802.11n-20 MHz HIGH CHANNEL CARRIER LEVEL



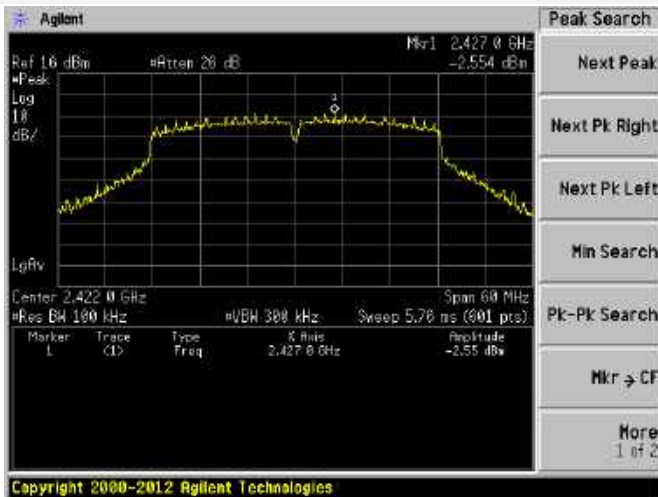
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



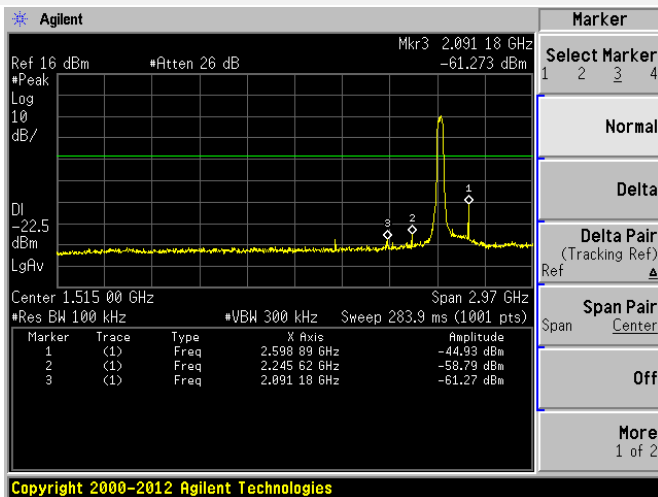
802.11n-20 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



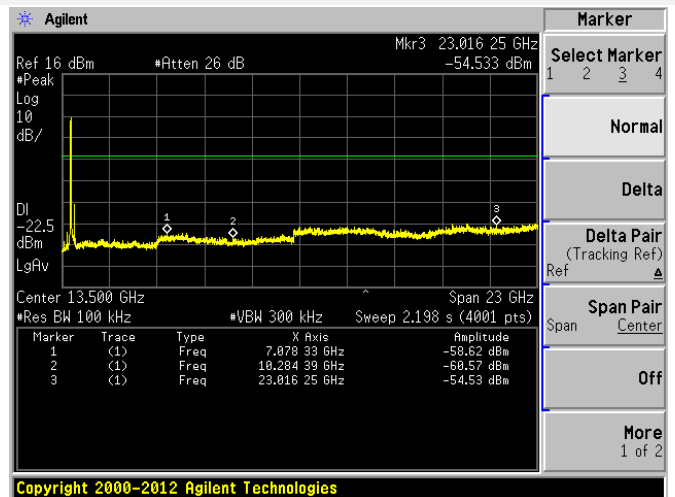
802.11n-40 MHz LOW CHANNEL CARRIER LEVEL



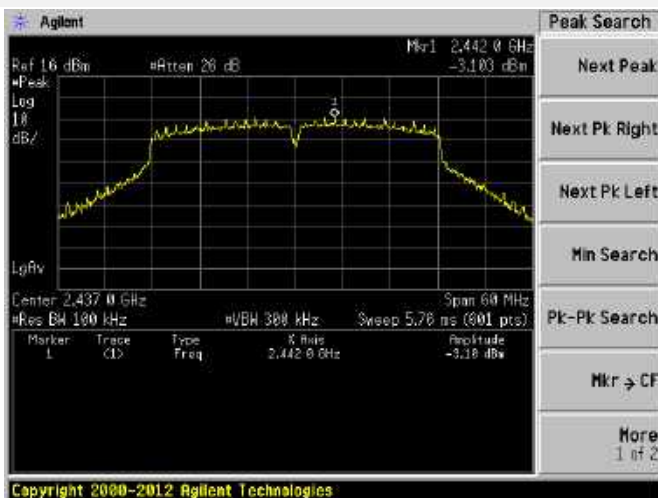
802.11n-40 MHz LOW CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



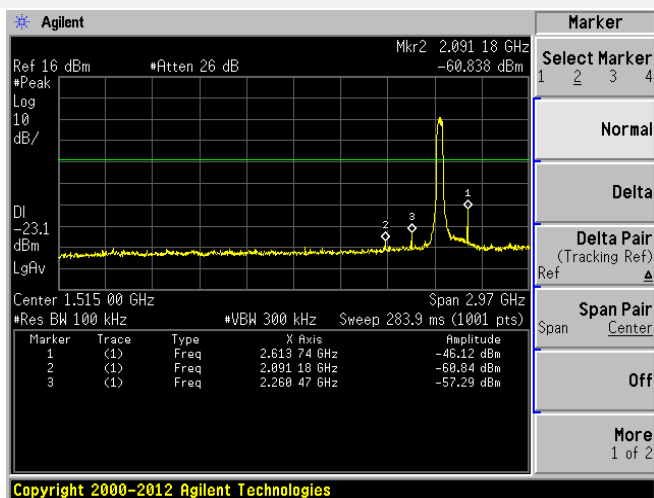
802.11n-40 MHz LOW CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



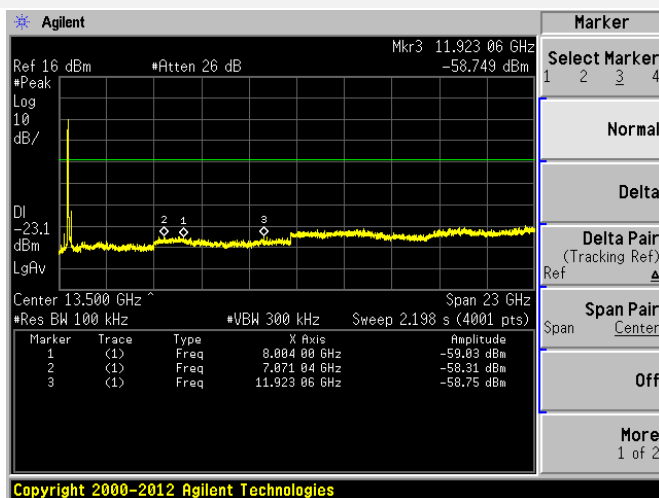
802.11n-40 MHz MIDDLE CHANNEL CARRIER LEVEL



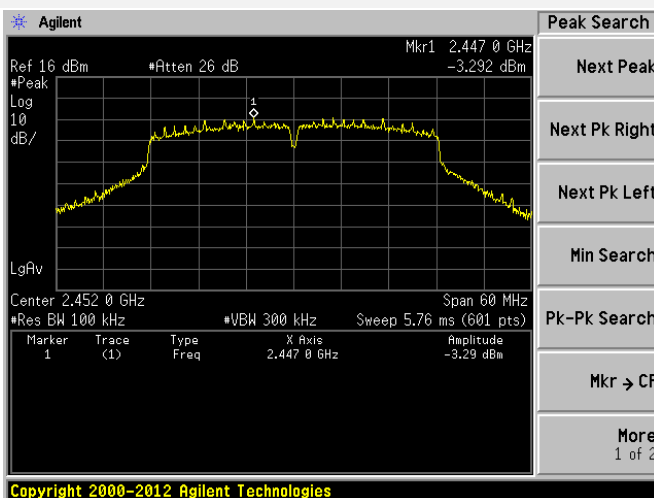
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



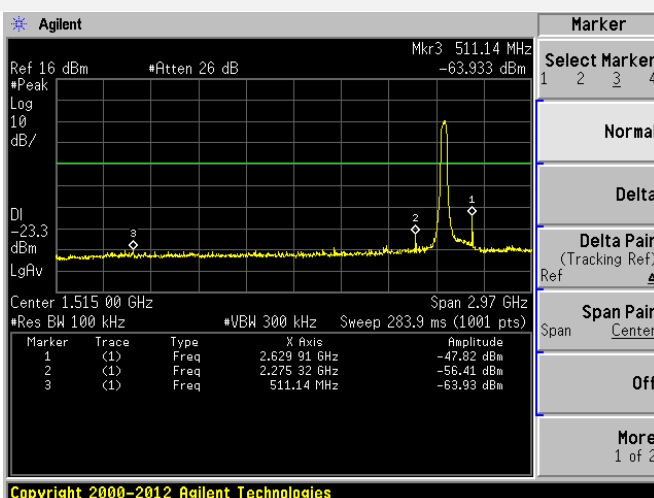
802.11n-40 MHz MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



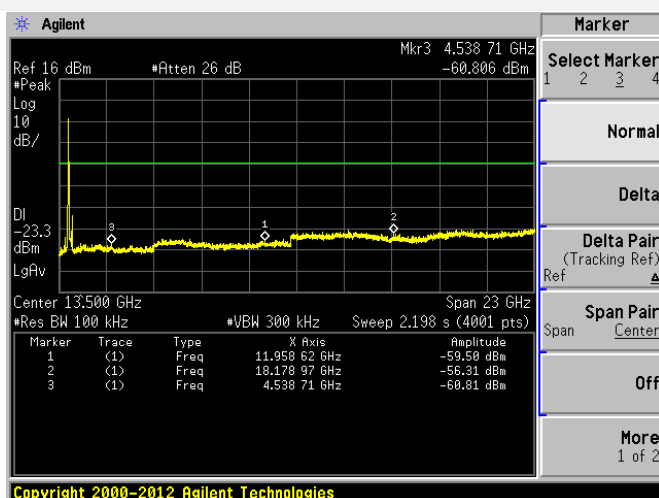
802.11n-40 MHz HIGH CHANNEL CARRIER LEVEL



802.11n-40 MHz HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz



802.11n-40 MHz HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz



A.4 Band Edge (Authorized-band band-edge)

Note 1: The 99% OBW of the fundamental emission is without 2 MHz of the authorized band.

Note 2: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data

Main Antenna

802.11b Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-43.29	5.71	-14.29	Pass
High Channel	-54.23	5.31	-14.69	Pass

802.11g Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-37.46	5.63	-14.37	Pass
High Channel	-51.77	3.79	-16.21	Pass

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-41.54	2.52	-17.48	Pass
High Channel	-51.25	2.76	-17.24	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-32.80	-0.45	-20.45	Pass
High Channel	-49.84	-0.92	-20.92	Pass

Aux. Antenna

802.11b Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-58.66	-2.92	-22.92	Pass
High Channel	-60.21	-2.28	-22.28	Pass

802.11g Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-44.20	2.79	-17.21	Pass
High Channel	-56.44	3.22	-16.78	Pass

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-45.46	1.98	-18.03	Pass
High Channel	-56.75	1.38	-18.62	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-32.51	0.06	-19.94	Pass
High Channel	-45.73	-0.10	-20.10	Pass

MIMO-Main Antenna

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-44.31	-0.01	-20.01	Pass
High Channel	-55.86	-0.42	-20.42	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-44.84	-3.11	-23.11	Pass
High Channel	-52.29	-3.47	-23.47	Pass

MIMO-Aux. Antenna

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-45.26	-0.31	-20.31	Pass
High Channel	-54.76	-0.19	-20.19	Pass

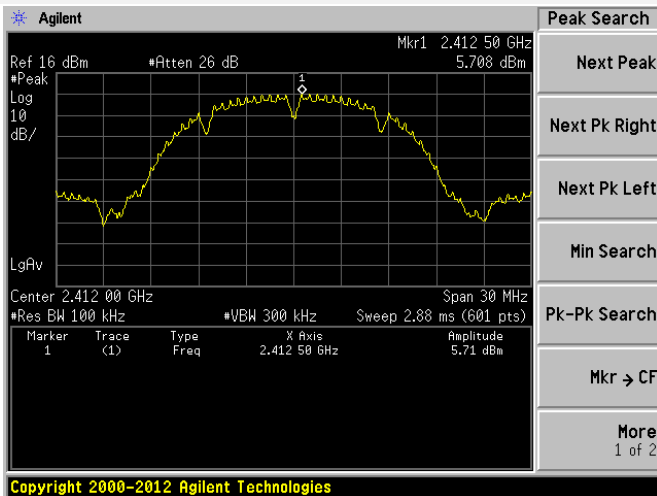
802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-51.69	-2.55	-22.55	Pass
High Channel	-49.72	-3.29	-23.29	Pass

Test Plots

Main Antenna

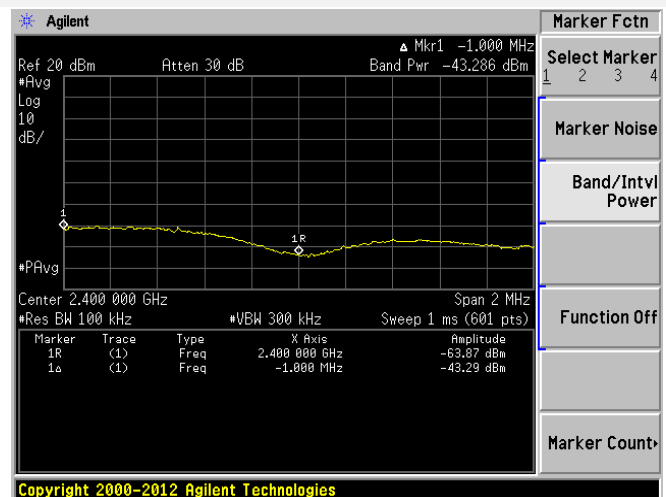
802.11b LOW CHANNEL, CARRIER LEVEL



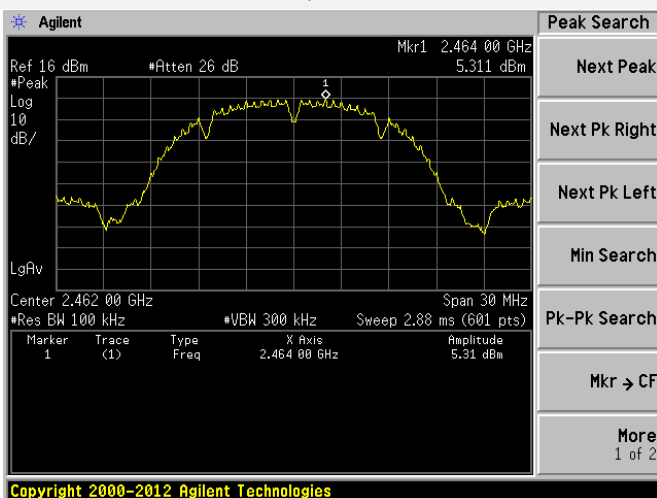
802.11b LOW CHANNEL, REFERENCE LEVEL



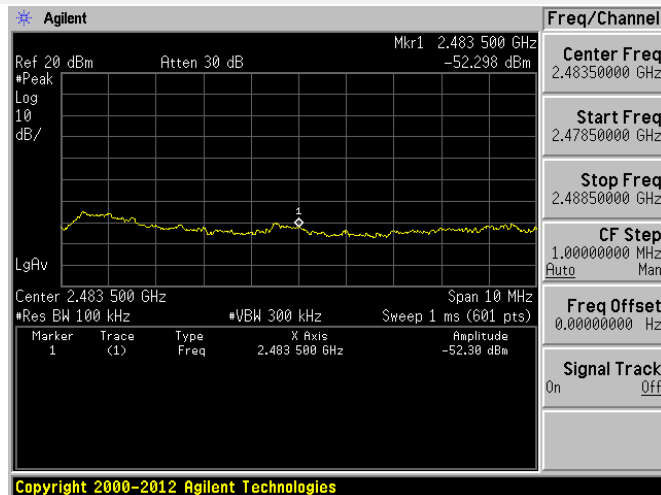
802.11b LOW CHANNEL, BAND EDGE



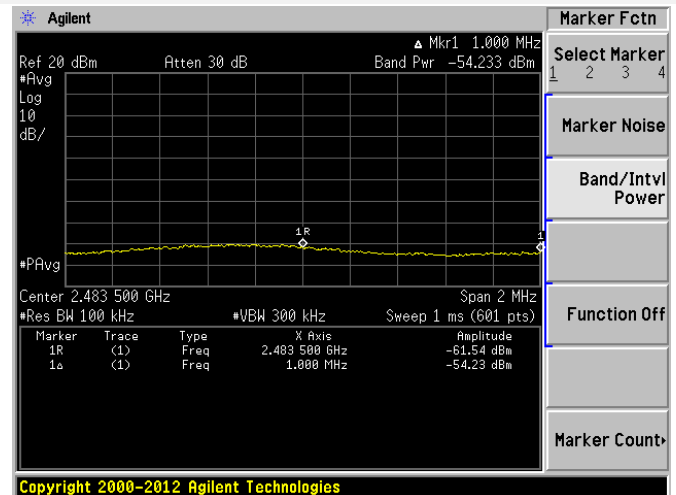
802.11b HIGH CHANNEL, CARRIER LEVEL



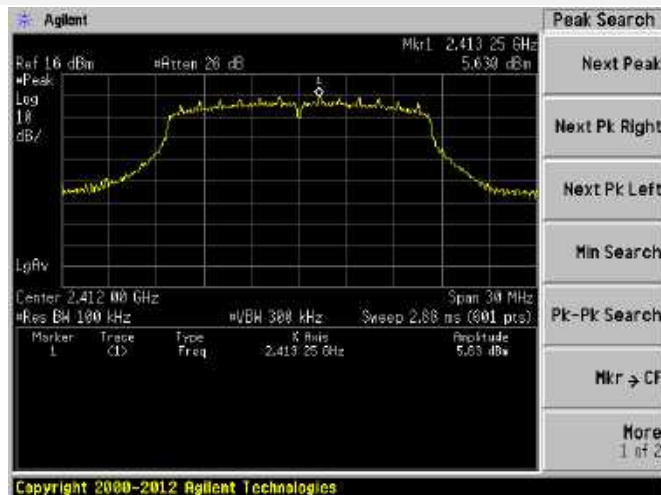
802.11b HIGH CHANNEL, REFERENCE LEVEL



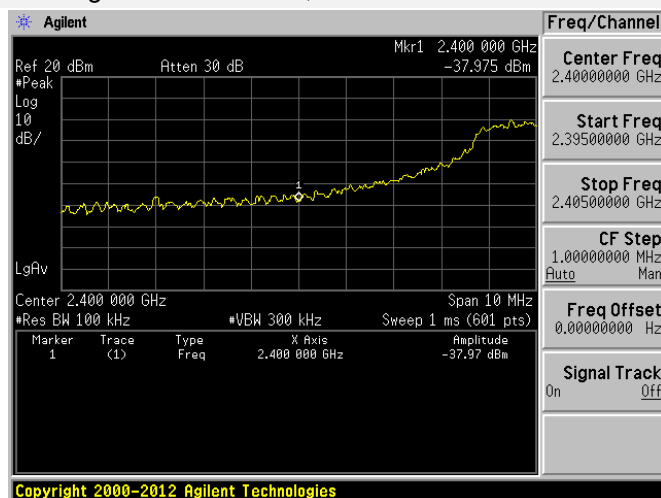
802.11b HIGH CHANNEL, BAND EDGE



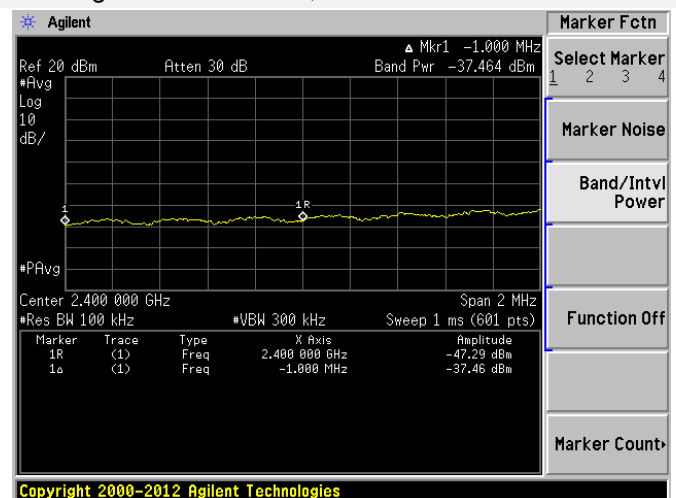
802.11g LOW CHANNEL, CARRIER LEVEL



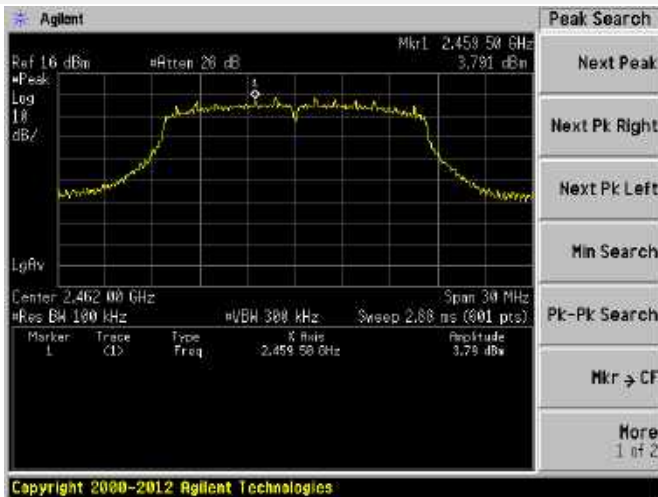
802.11g LOW CHANNEL, REFERENCE LEVEL



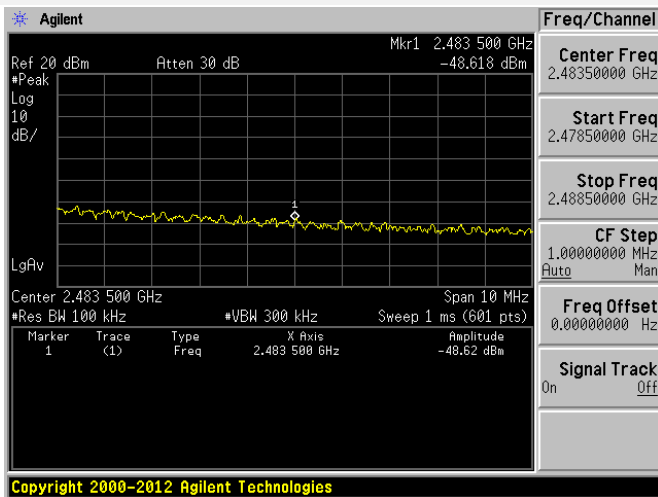
802.11g LOW CHANNEL, BAND EDGE



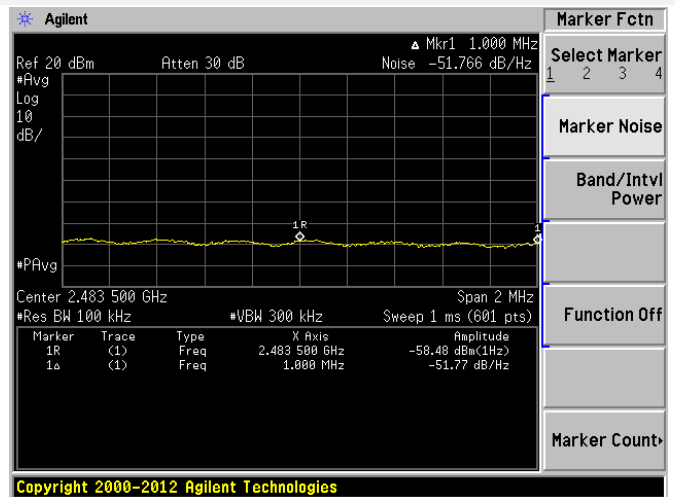
802.11g HIGH CHANNEL, CARRIER LEVEL



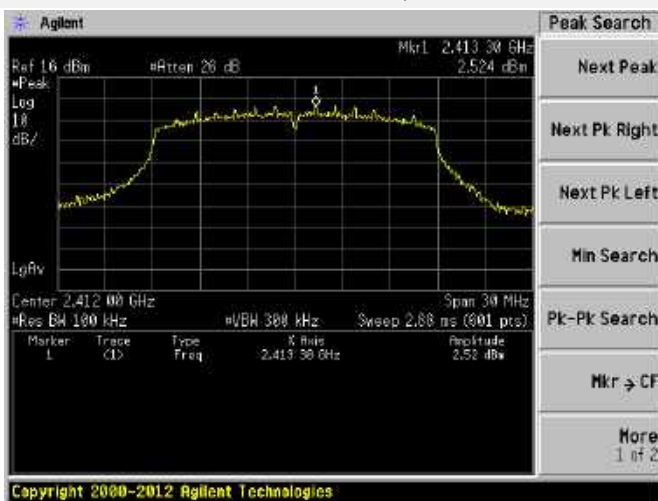
802.11g HIGH CHANNEL, REFERENCE LEVEL



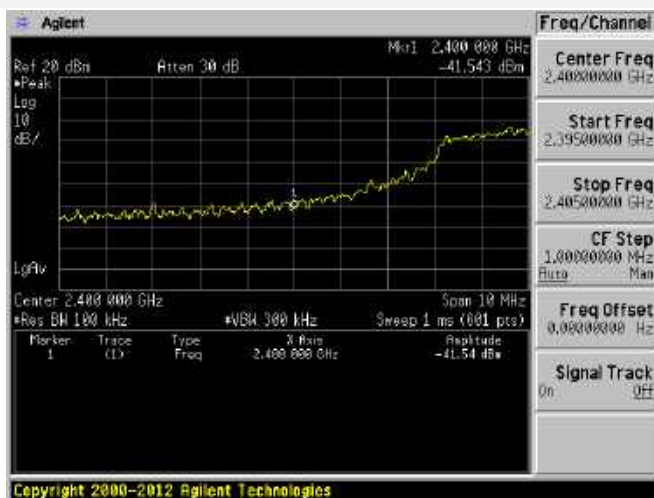
802.11g HIGH CHANNEL, BAND EDGE



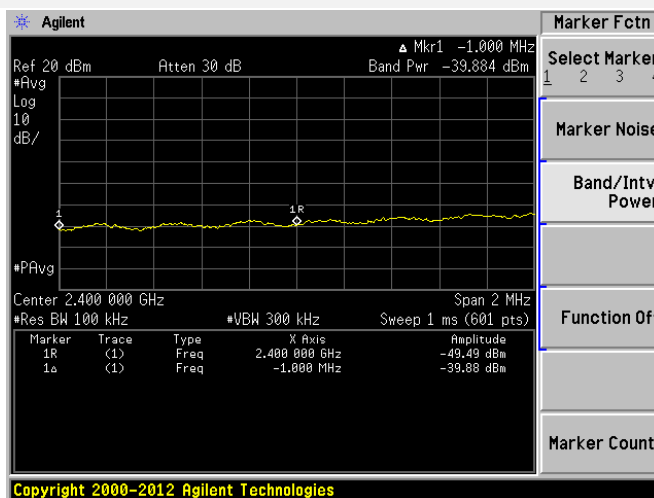
802.11n-20 MHz LOW CHANNEL, CARRIER LEVEL



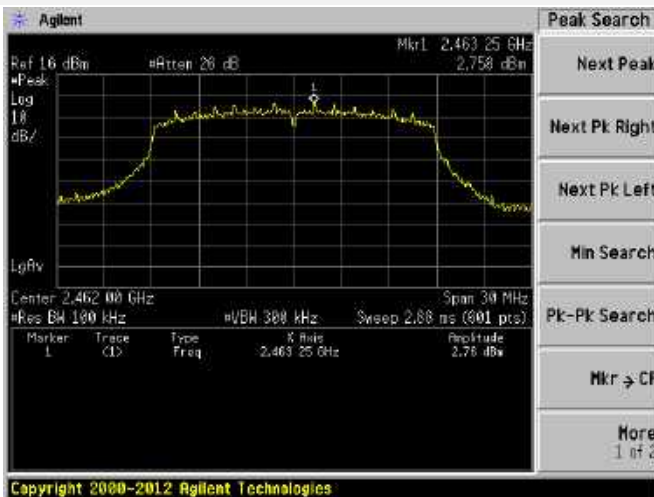
802.11n-20 MHz LOW CHANNEL, REFERENCE LEVEL



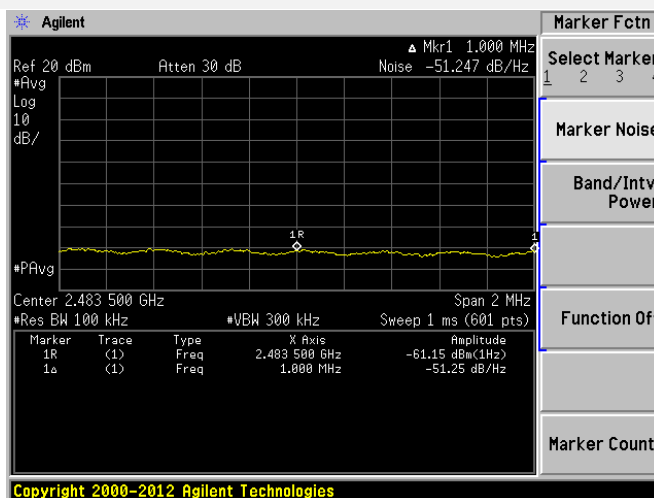
802.11n-20 MHz LOW CHANNEL, BAND EDGE



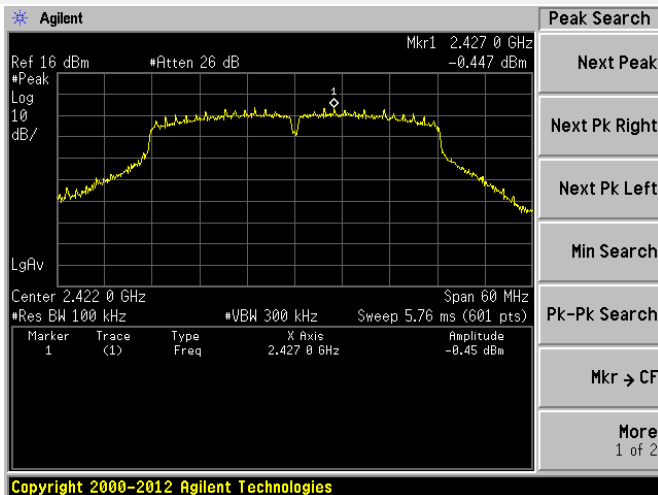
802.11n-20 MHz HIGH CHANNEL, CARRIER LEVEL



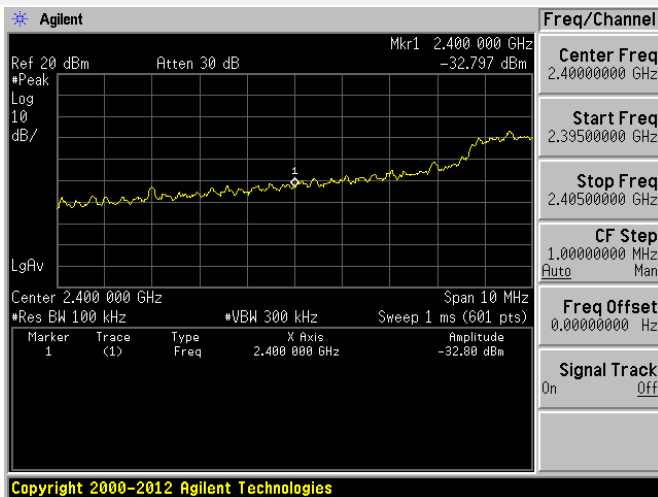
802.11n-20 MHz HIGH CHANNEL, BAND EDGE



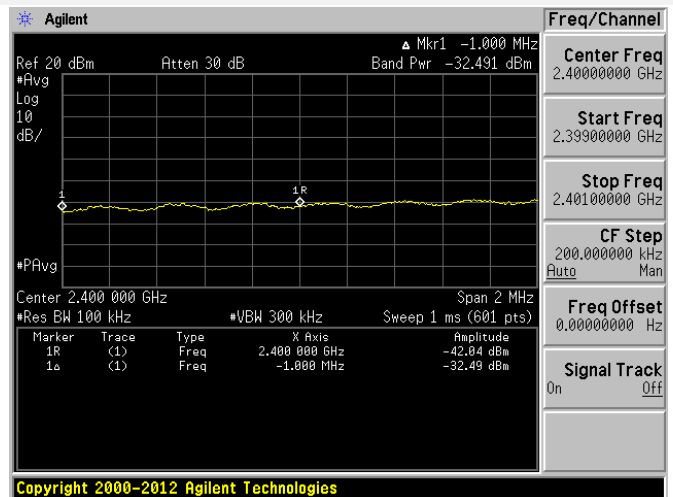
802.11n-40 MHz LOW CHANNEL, CARRIER LEVEL



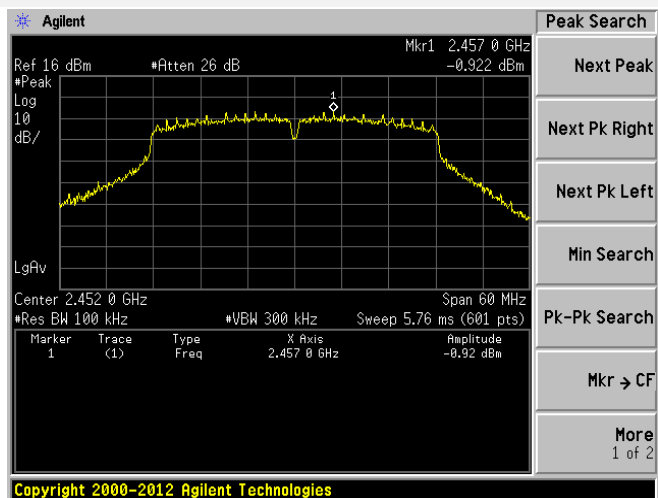
802.11n-40 MHz LOW CHANNEL, REFERENCE LEVEL



802.11n-40 MHz LOW CHANNEL, BAND EDGE

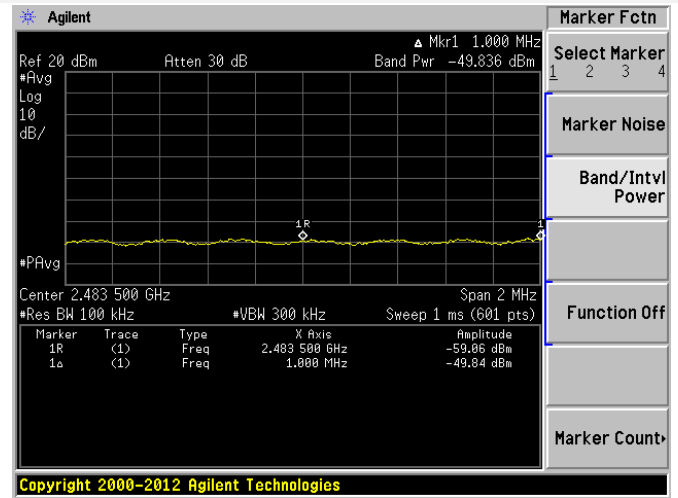
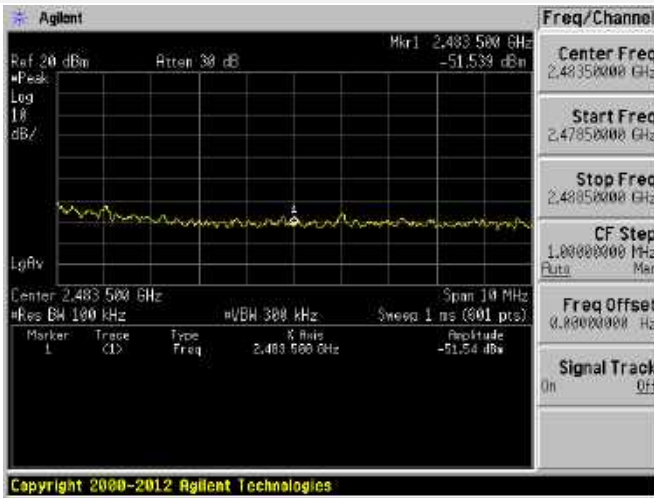


802.11n-40 MHz HIGH CHANNEL, CARRIER LEVEL



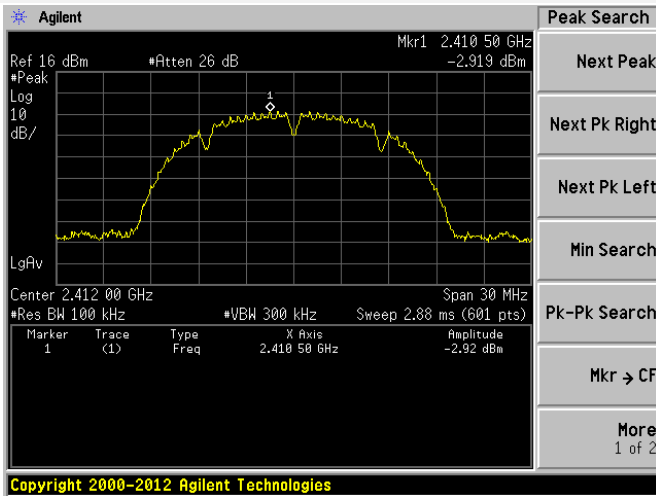
802.11n-40 MHz HIGH CHANNEL,
REFERENCE LEVEL

802.11n-40 MHz HIGH CHANNEL, BAND EDGE

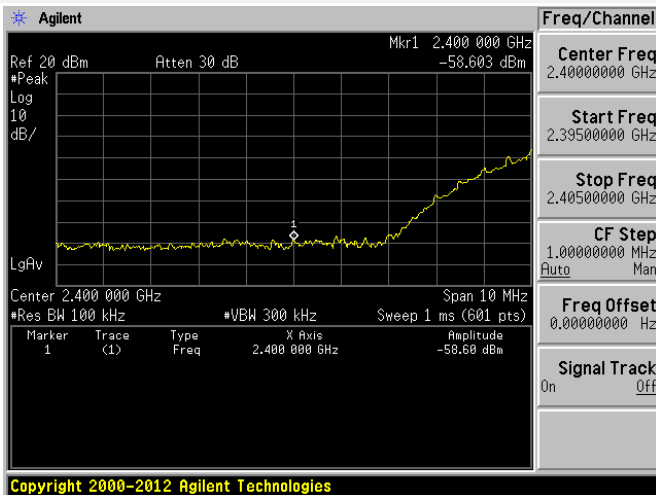


Aux. Antenna

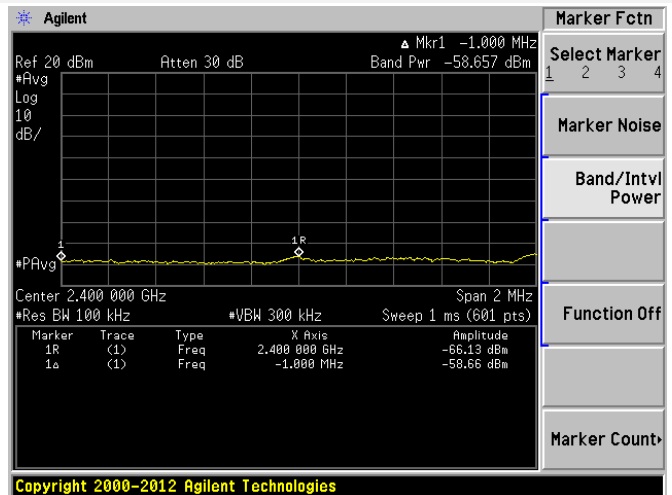
802.11b LOW CHANNEL, CARRIER LEVEL



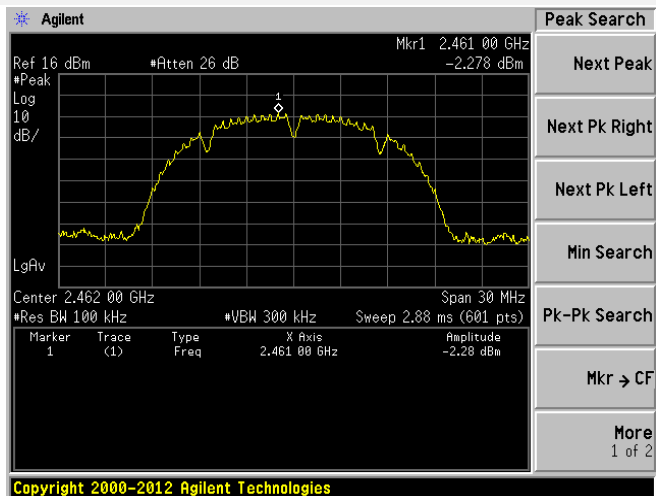
802.11b LOW CHANNEL, REFERENCE LEVEL



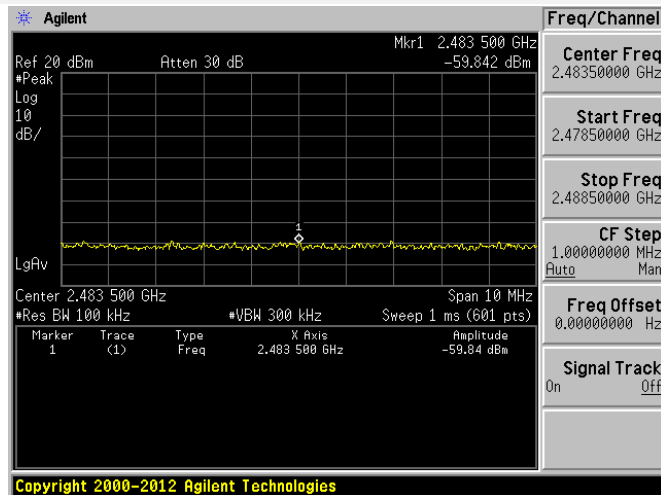
802.11b LOW CHANNEL, BAND EDGE



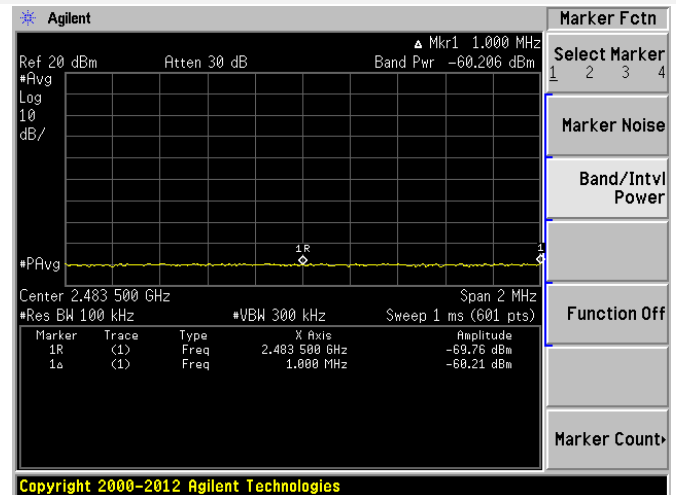
802.11b HIGH CHANNEL, CARRIER LEVEL



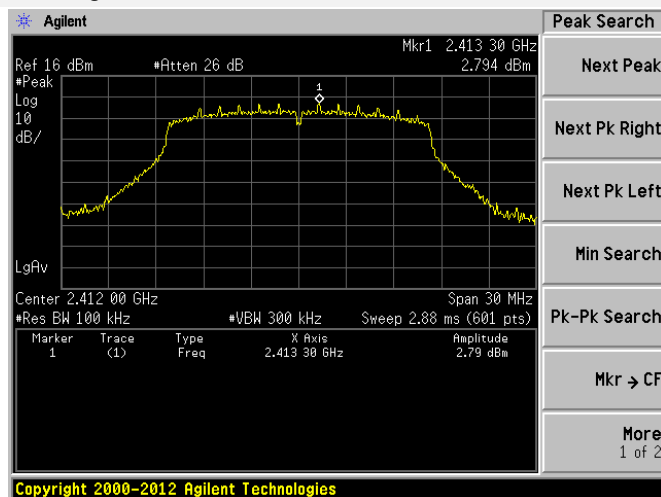
802.11b HIGH CHANNEL, REFERENCE LEVEL



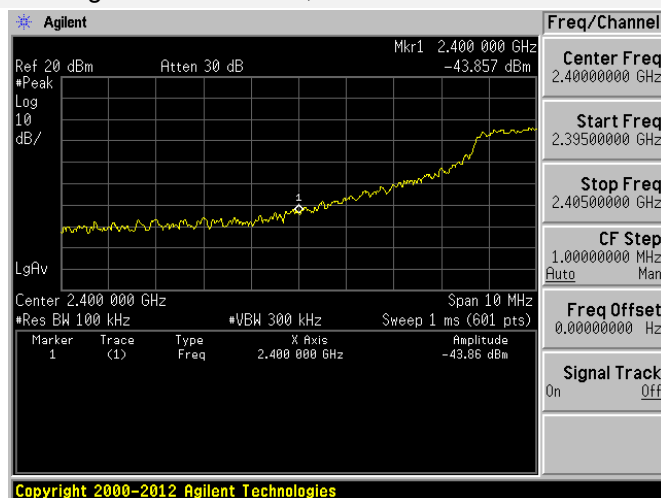
802.11b HIGH CHANNEL, BAND EDGE



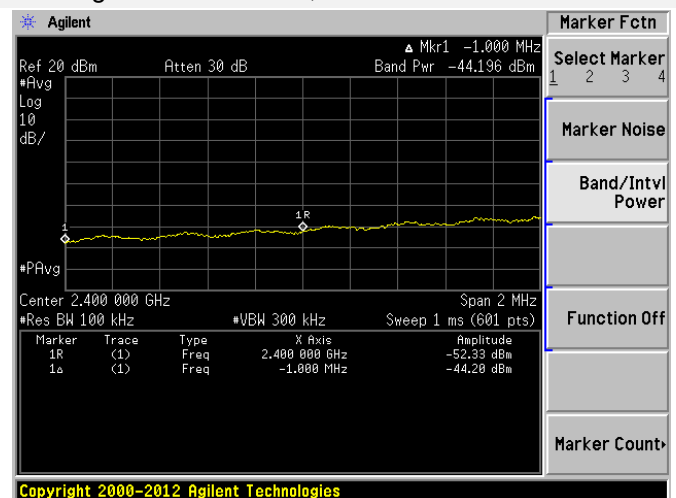
802.11g LOW CHANNEL, CARRIER LEVEL



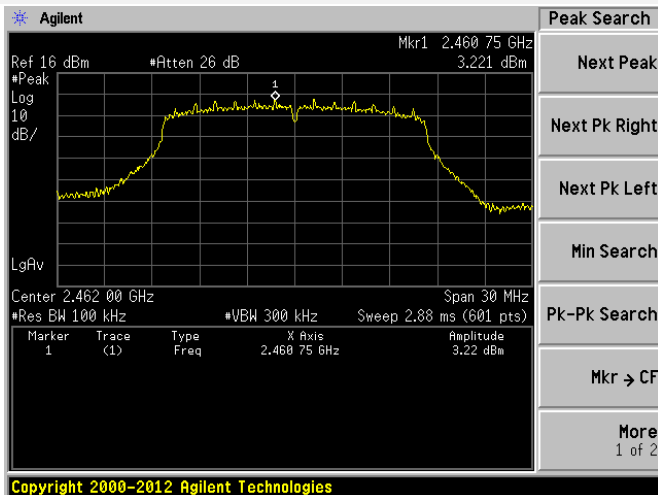
802.11g LOW CHANNEL, REFERENCE LEVEL



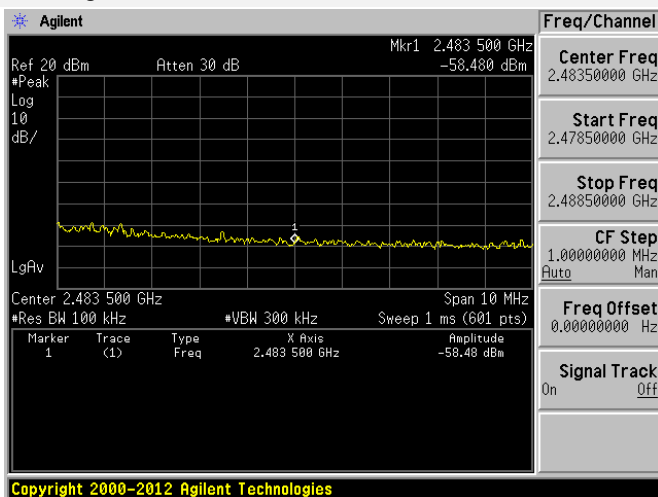
802.11g LOW CHANNEL, BAND EDGE



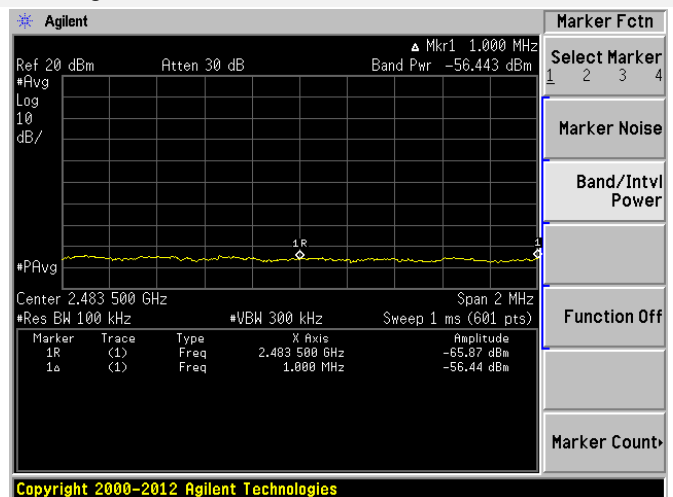
802.11g HIGH CHANNEL, CARRIER LEVEL



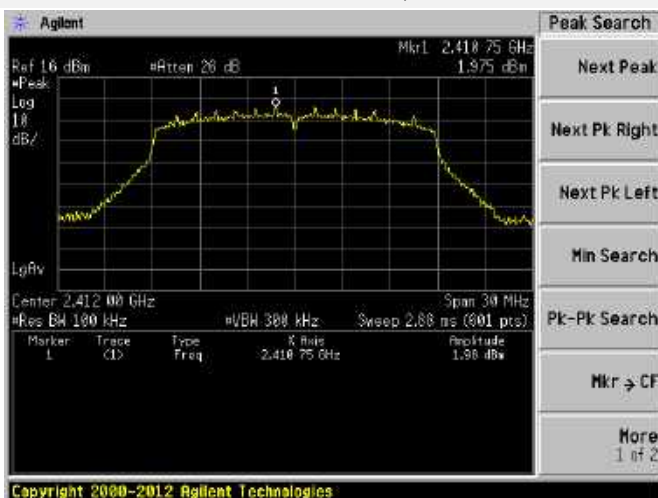
802.11g HIGH CHANNEL, REFERENCE LEVEL



802.11g HIGH CHANNEL, BAND EDGE



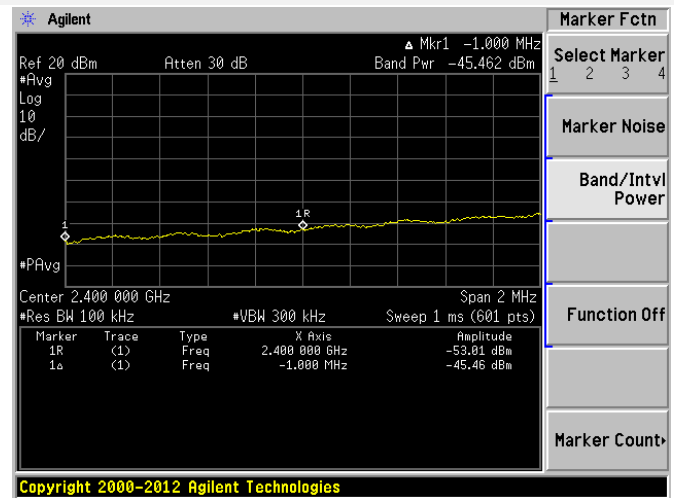
802.11n-20 MHz LOW CHANNEL, CARRIER LEVEL



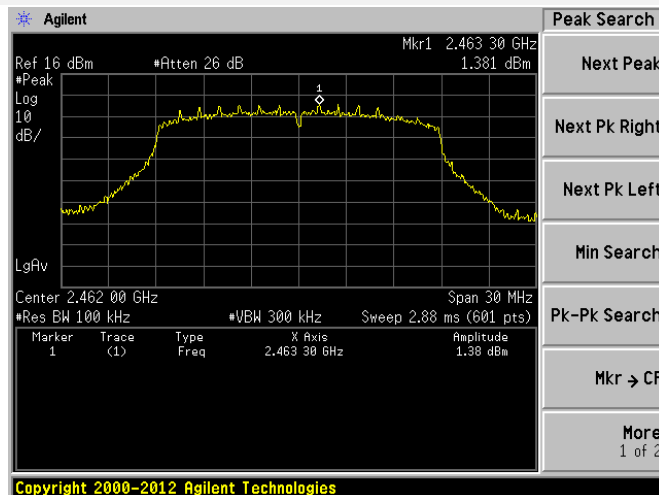
802.11n-20 MHz LOW CHANNEL, REFERENCE LEVEL



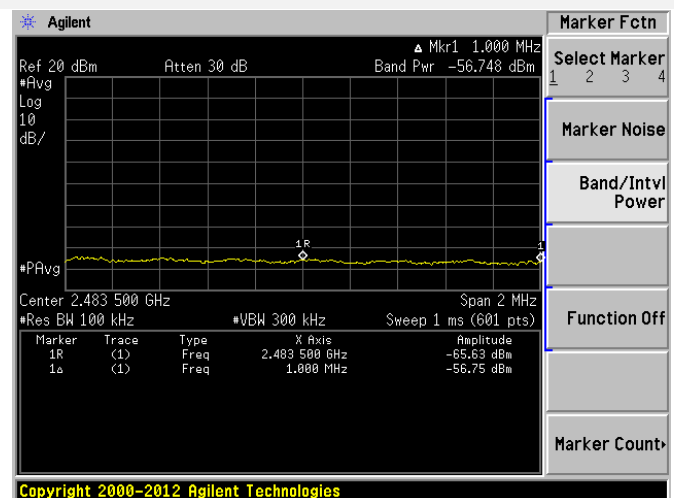
802.11n-20 MHz LOW CHANNEL, BAND EDGE



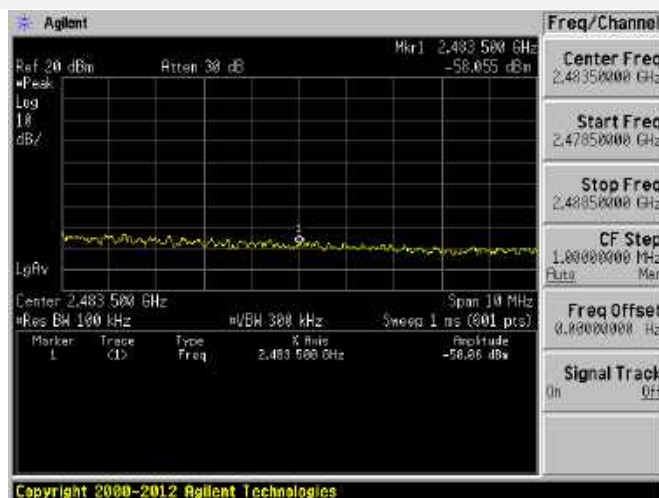
802.11n-20 MHz HIGH CHANNEL, CARRIER LEVEL



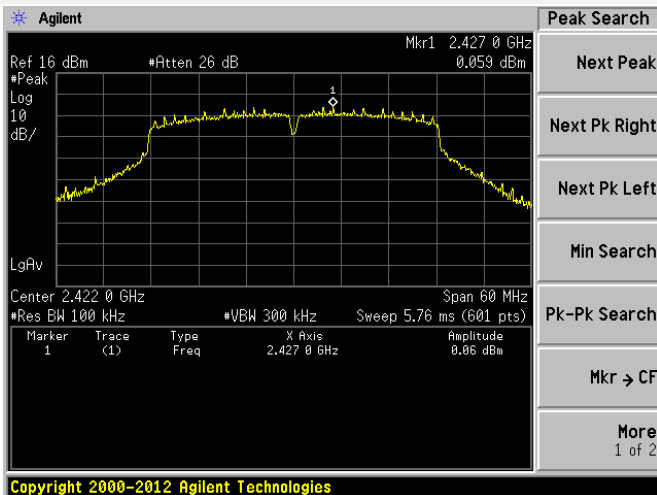
802.11n-20 MHz HIGH CHANNEL, BAND EDGE



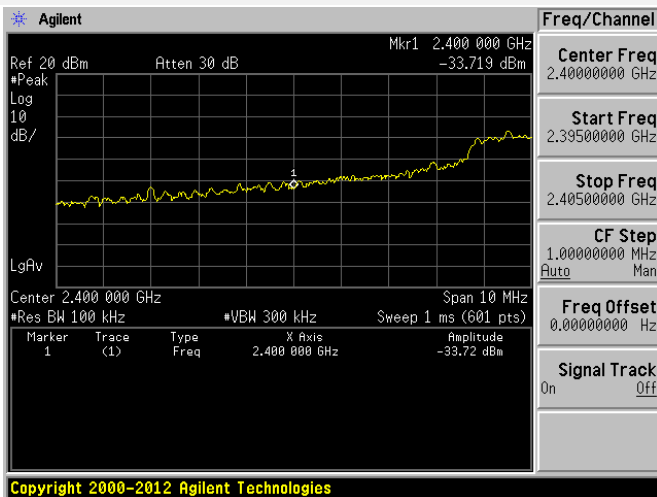
802.11n-20 MHz HIGH CHANNEL, REFERENCE LEVEL



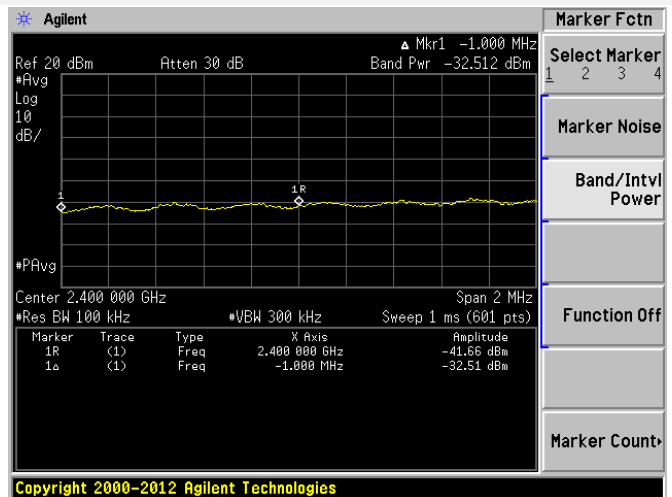
802.11n-40 MHz LOW CHANNEL, CARRIER LEVEL



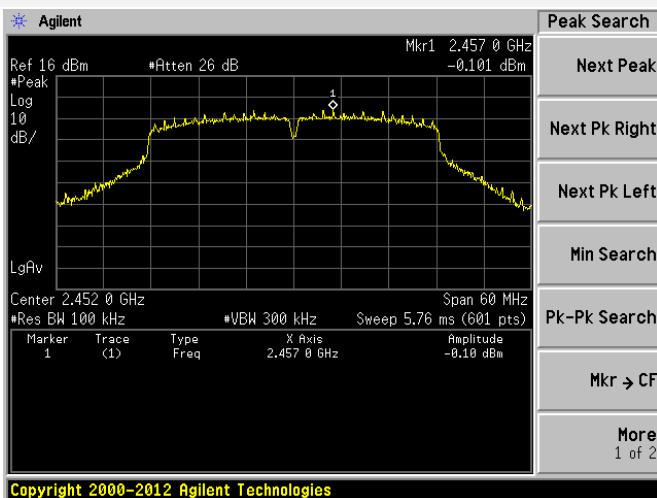
802.11n-40 MHz LOW CHANNEL, REFERENCE LEVEL



802.11n-40 MHz LOW CHANNEL, BAND EDGE

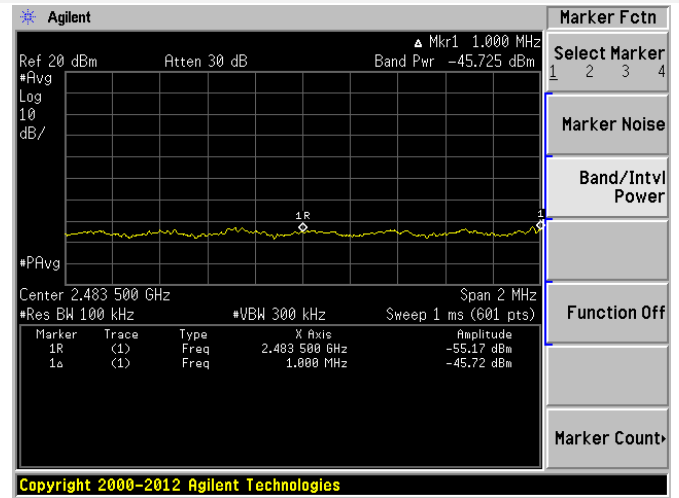
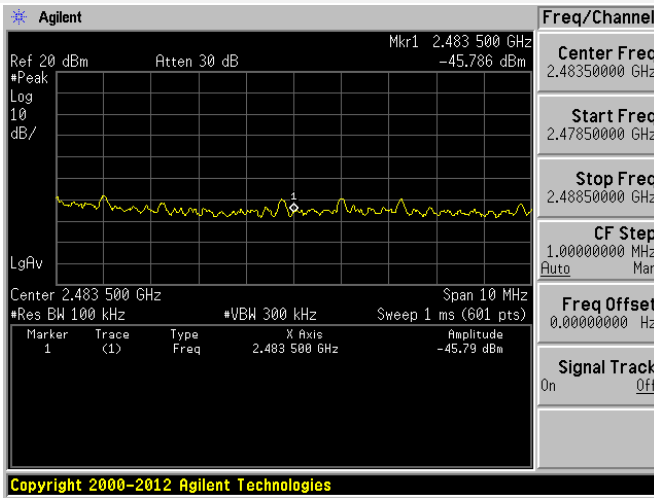


802.11n-40 MHz HIGH CHANNEL, CARRIER LEVEL



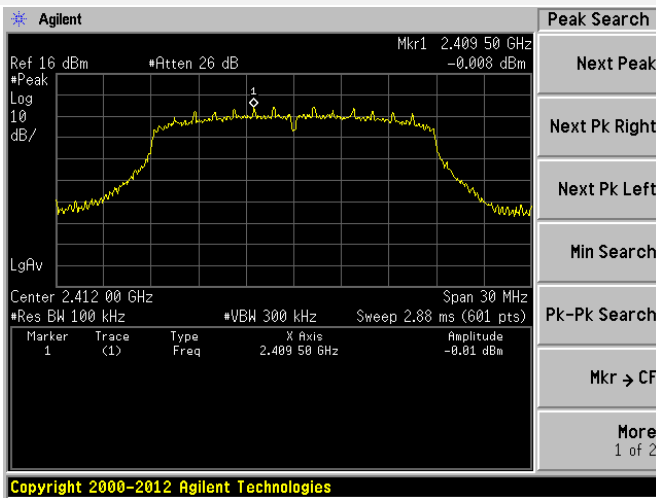
802.11n-40 MHz HIGH CHANNEL,
REFERENCE LEVEL

802.11n-40 MHz HIGH CHANNEL, BAND EDGE

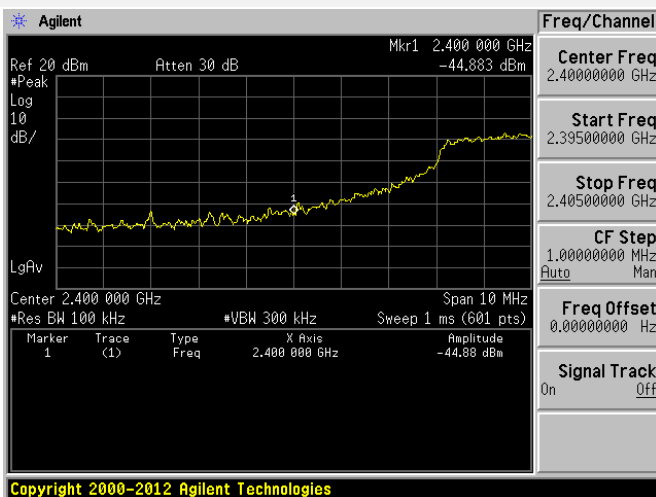


MIMO-Main Antenna

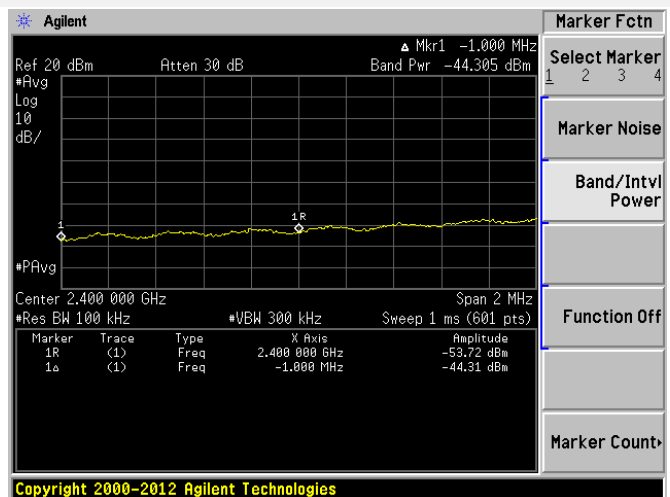
802.11n-20 MHz LOW CHANNEL, CARRIER LEVEL



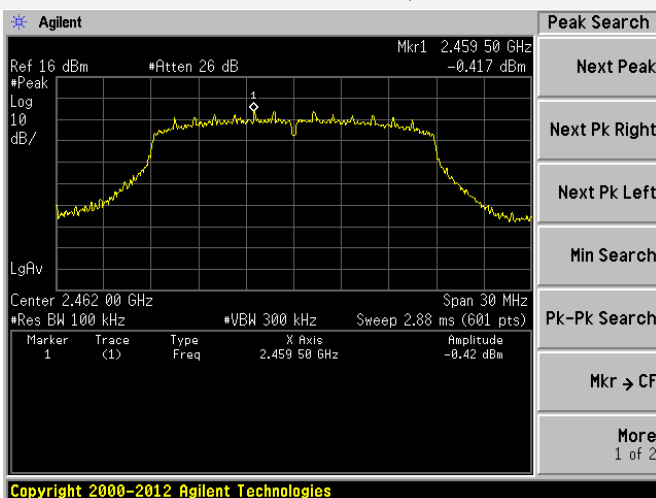
802.11n-20 MHz LOW CHANNEL, REFERENCE LEVEL



802.11n-20 MHz LOW CHANNEL, BAND EDGE

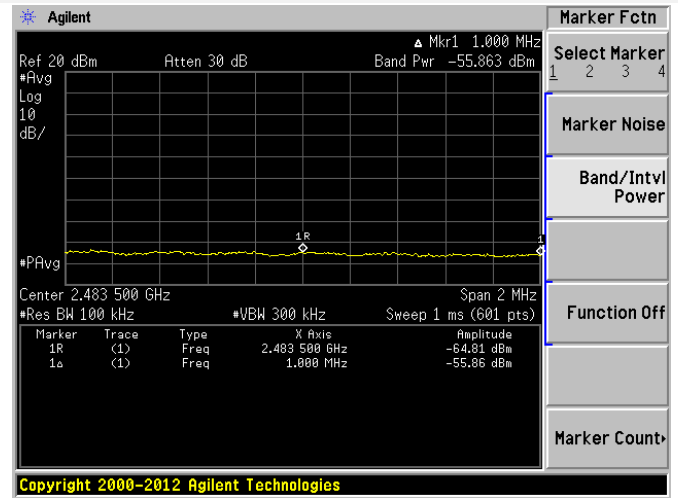
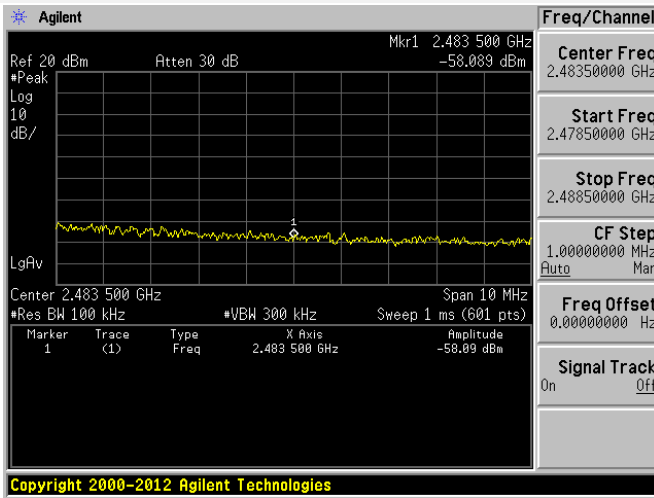


802.11n-20 MHz HIGH CHANNEL, CARRIER LEVEL

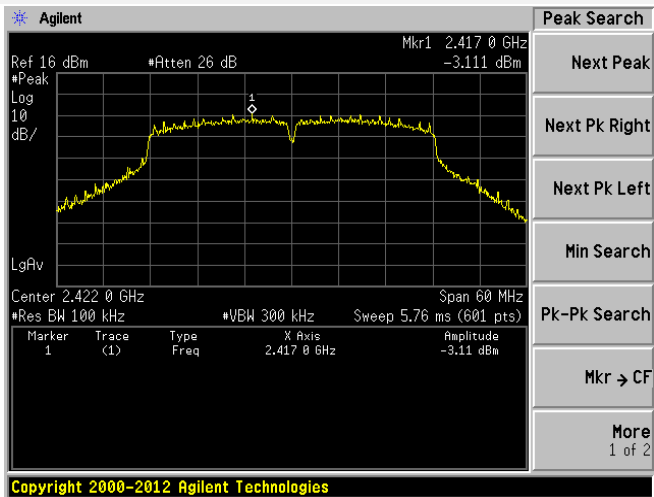


802.11n-20 MHz HIGH CHANNEL,
REFERENCE LEVEL

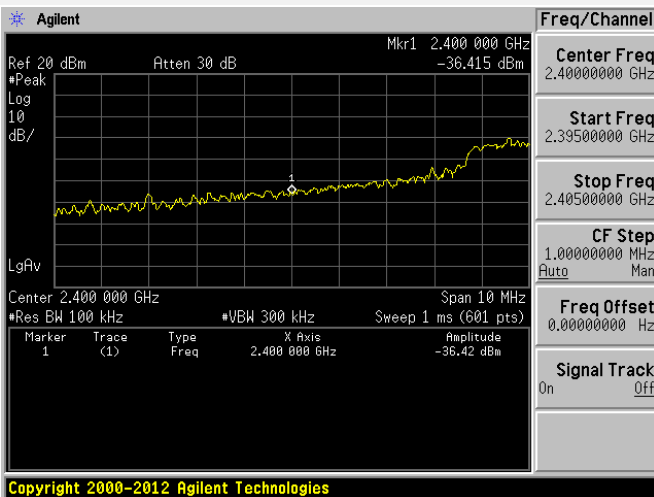
802.11n-20 MHz HIGH CHANNEL, BAND EDGE



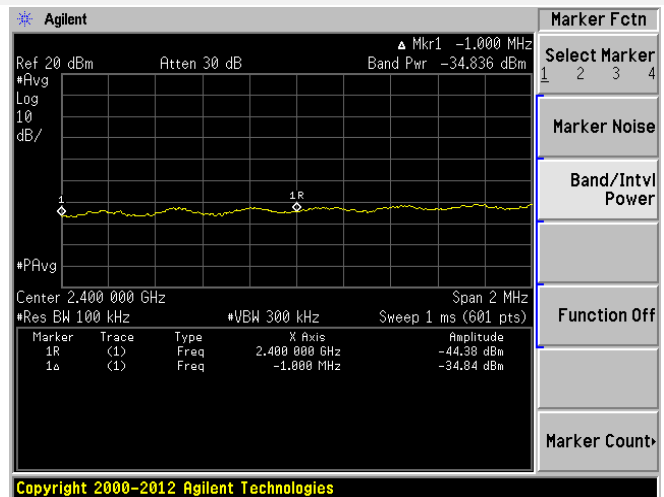
802.11n-40 MHz LOW CHANNEL, CARRIER LEVEL



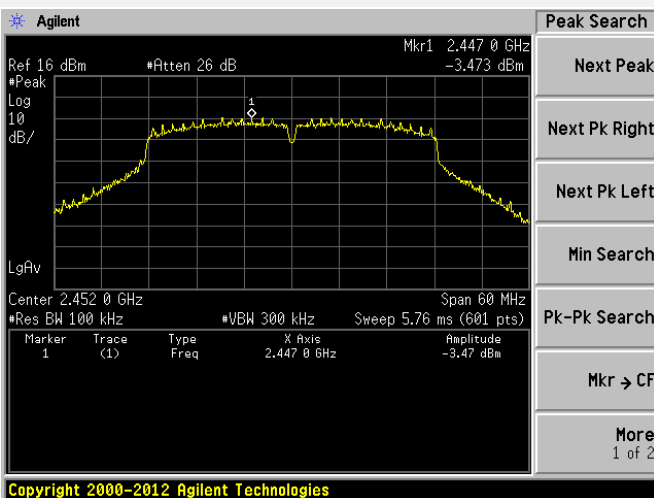
802.11n-40 MHz LOW CHANNEL, REFERENCE LEVEL



802.11n-40 MHz LOW CHANNEL, BAND EDGE

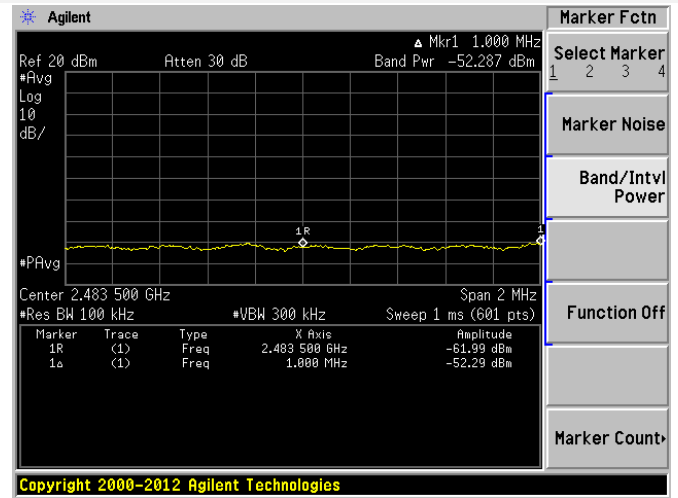
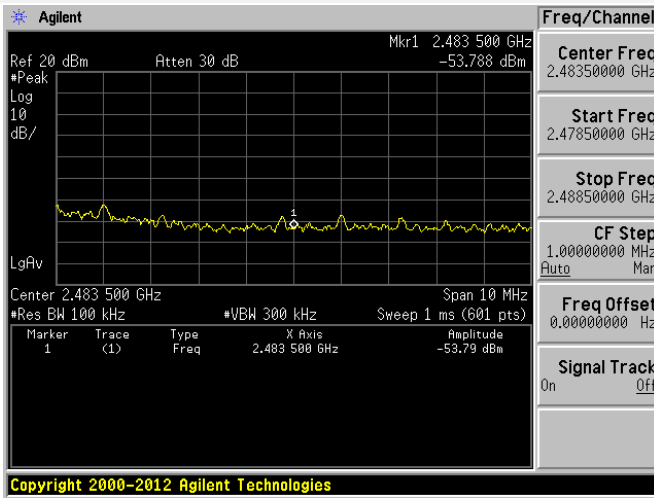


802.11n-40 MHz HIGH CHANNEL, CARRIER LEVEL



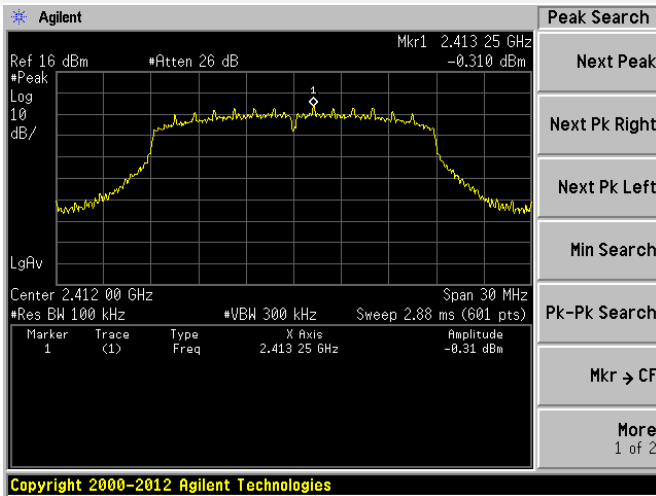
802.11n-40 MHz HIGH CHANNEL,
REFERENCE LEVEL

802.11n-40 MHz HIGH CHANNEL, BAND EDGE

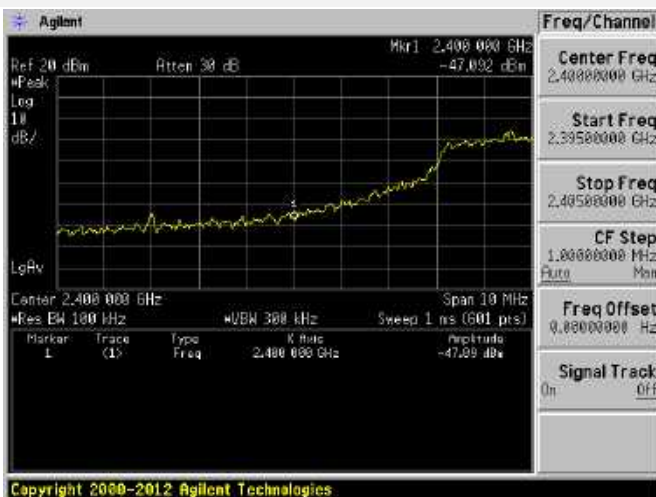


MIMO-Aux. Antenna

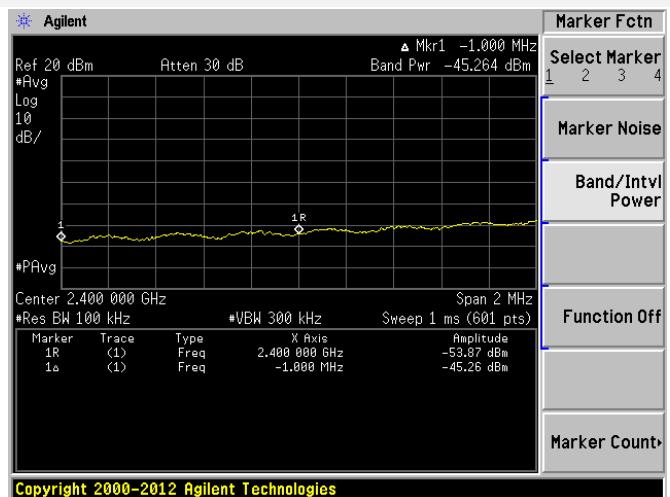
802.11n-20 MHz LOW CHANNEL, CARRIER LEVEL



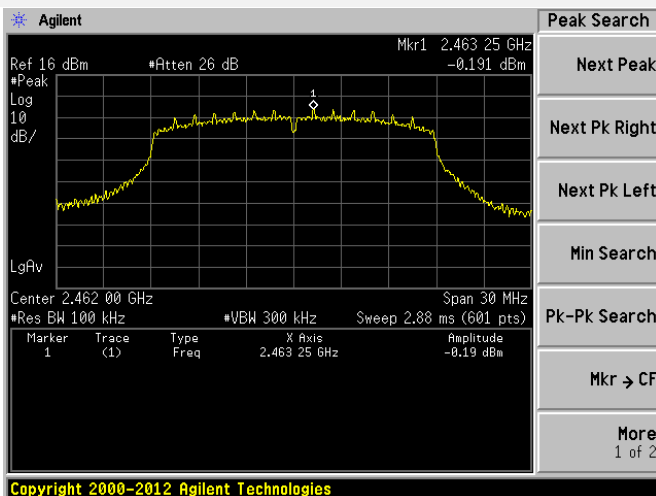
802.11n-20 MHz LOW CHANNEL, REFERENCE LEVEL



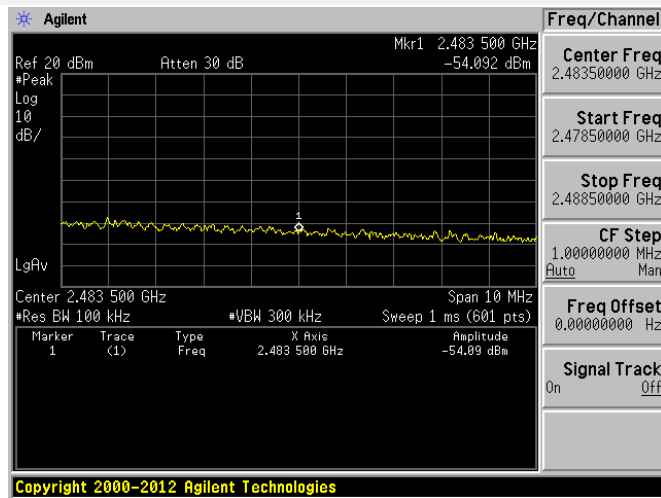
802.11n-20 MHz LOW CHANNEL, BAND EDGE



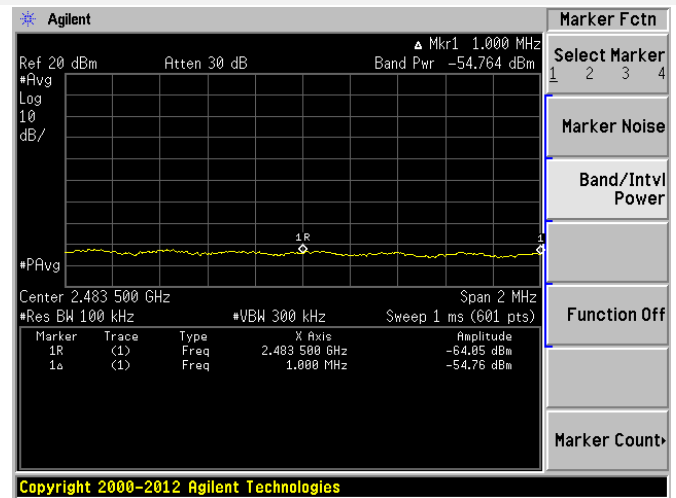
802.11n-20 MHz HIGH CHANNEL, CARRIER LEVEL



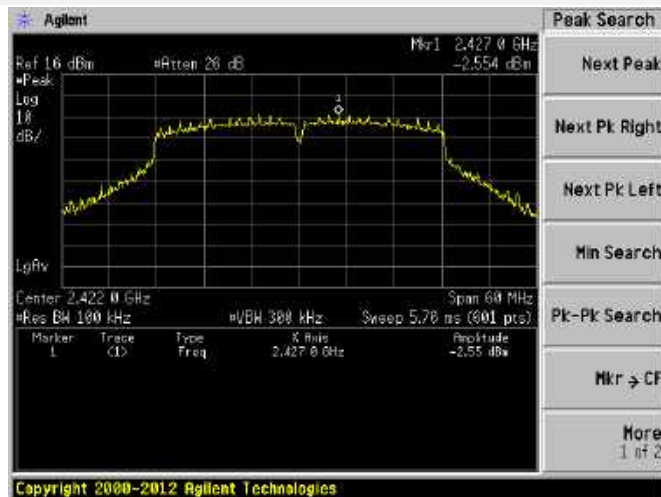
802.11n-20 MHz HIGH CHANNEL, REFERENCE LEVEL



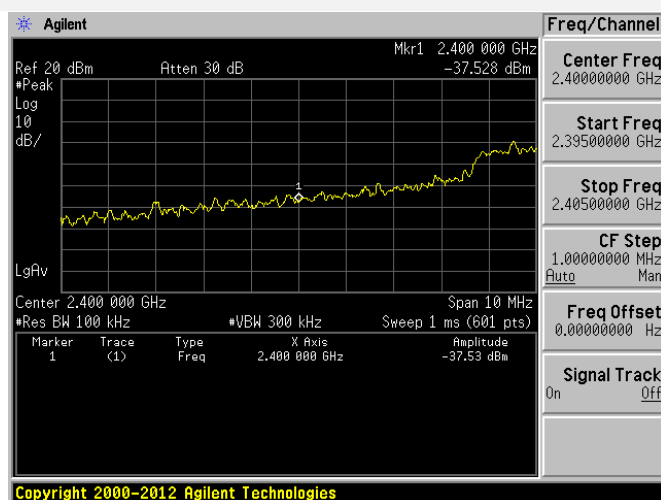
802.11n-20 MHz HIGH CHANNEL, BAND EDGE



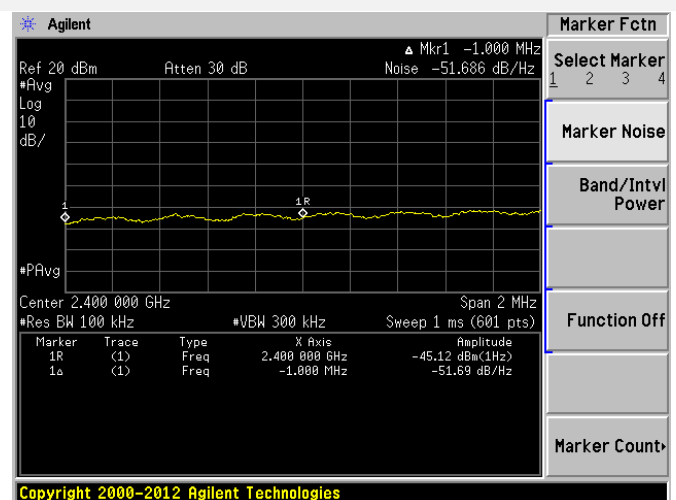
802.11n-40 MHz LOW CHANNEL, CARRIER LEVEL



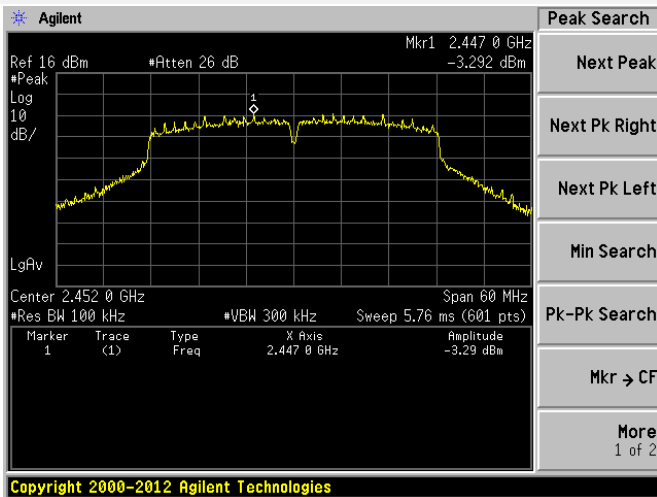
802.11n-40 MHz LOW CHANNEL, REFERENCE LEVEL



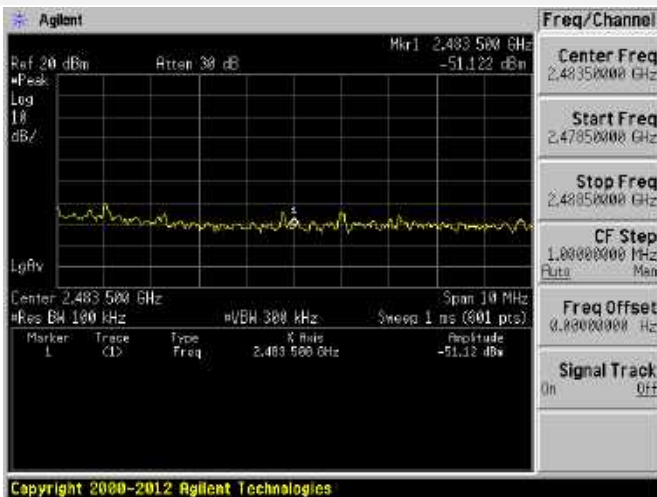
802.11n-40 MHz LOW CHANNEL, BAND EDGE



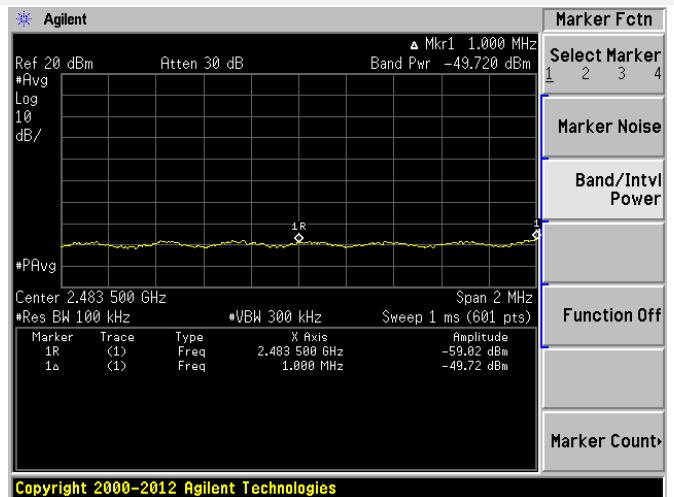
802.11n-40 MHz HIGH CHANNEL, CARRIER LEVEL



802.11n-40 MHz HIGH CHANNEL, REFERENCE LEVEL



802.11n-40 MHz HIGH CHANNEL, BAND EDGE



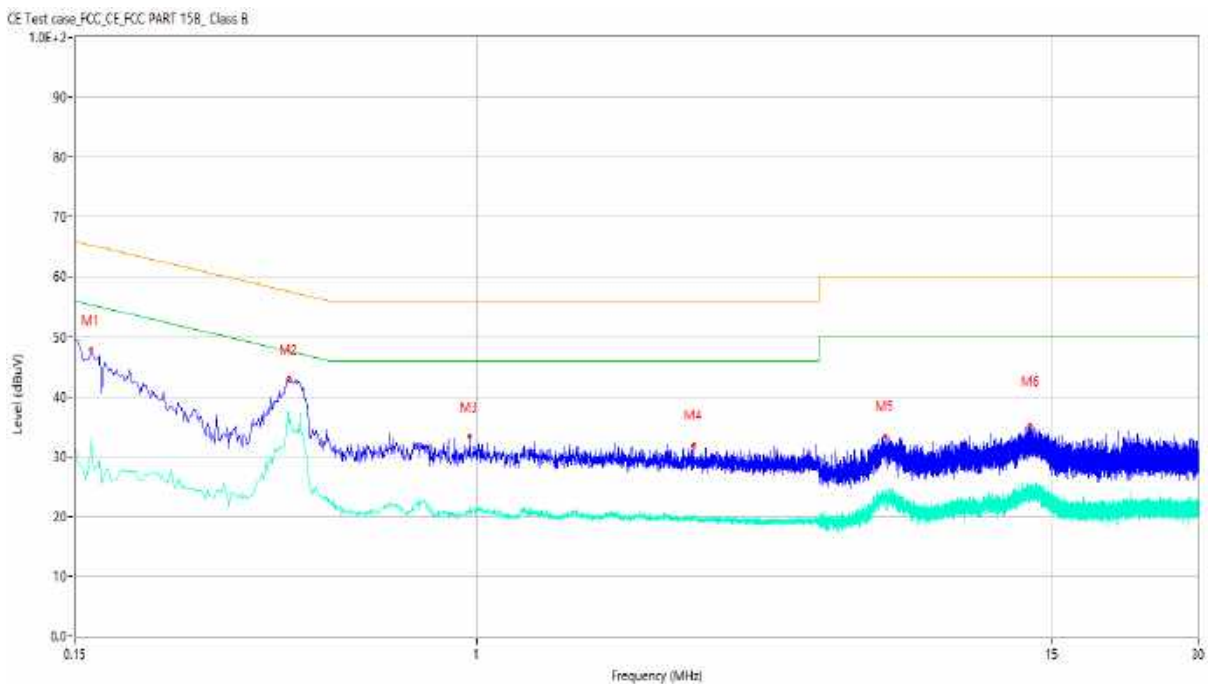
A.5 Conducted Emissions

Note ¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

Note ²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

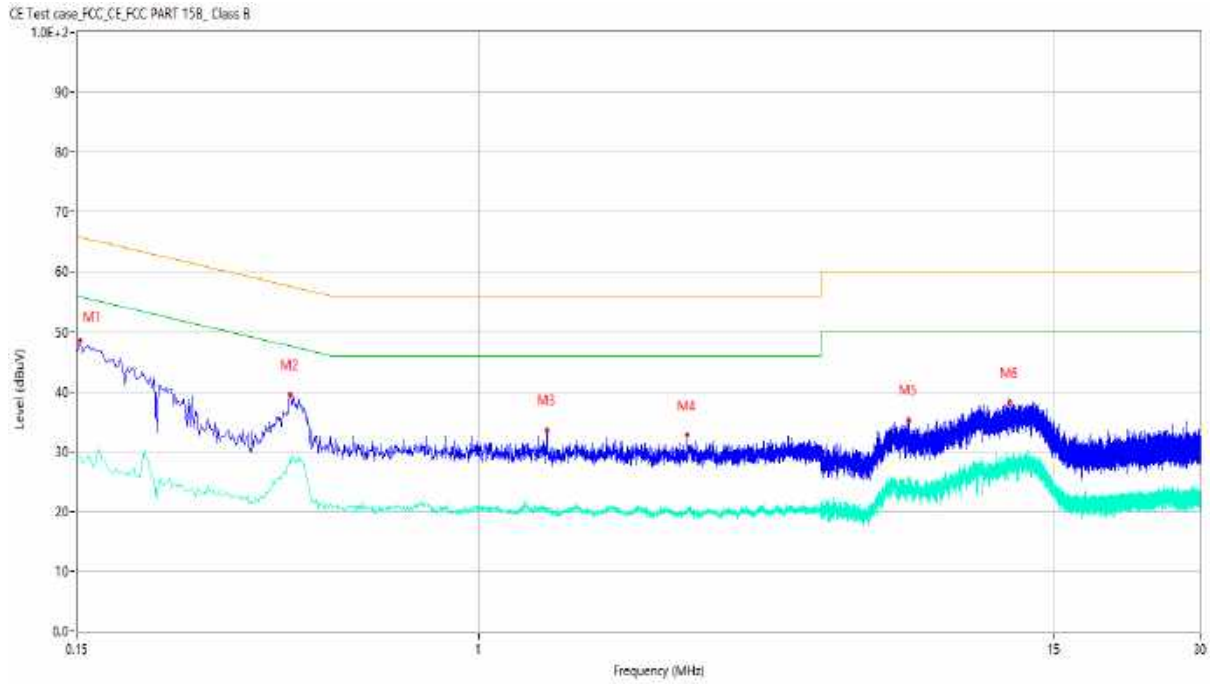
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.162	47.91	10.23	65.36	17.45	Peak	L	Pass
1**	0.162	32.81	10.23	55.36	22.55	AV	L	Pass
2	0.412	42.89	10.18	57.61	14.72	Peak	L	Pass
2**	0.412	35.62	10.18	47.61	11.99	AV	L	Pass
3	0.964	33.26	10.17	56.00	22.74	Peak	L	Pass
3**	0.964	21.14	10.17	46.00	24.86	AV	L	Pass
4	2.772	31.86	10.24	56.00	24.14	Peak	L	Pass
4**	2.772	19.37	10.24	46.00	26.63	AV	L	Pass
5	6.842	33.36	10.32	60.00	26.64	Peak	L	Pass
5**	6.842	23.93	10.32	50.00	26.07	AV	L	Pass
6	13.564	34.98	10.67	60.00	25.02	Peak	L	Pass
6**	13.564	24.72	10.67	50.00	25.28	AV	L	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.152	48.65	10.23	65.89	17.24	Peak	N	Pass
1**	0.152	29.07	10.23	55.89	26.82	AV	N	Pass
2	0.410	39.46	10.17	57.65	18.19	Peak	N	Pass
2**	0.410	27.99	10.17	47.65	19.66	AV	N	Pass
3	1.378	33.60	10.20	56.00	22.40	Peak	N	Pass
3**	1.378	19.95	10.20	46.00	26.05	AV	N	Pass
4	2.668	32.71	10.23	56.00	23.29	Peak	N	Pass
4**	2.668	20.52	10.23	46.00	25.48	AV	N	Pass
5	7.576	35.21	10.37	60.00	24.79	Peak	N	Pass
5**	7.576	24.65	10.37	50.00	25.35	AV	N	Pass
6	12.194	38.17	10.62	60.00	21.83	Peak	N	Pass
6**	12.194	27.96	10.62	50.00	22.04	AV	N	Pass

A.6 Radiated Emission

Note 1: The symbol of "--" in the table which means not application.

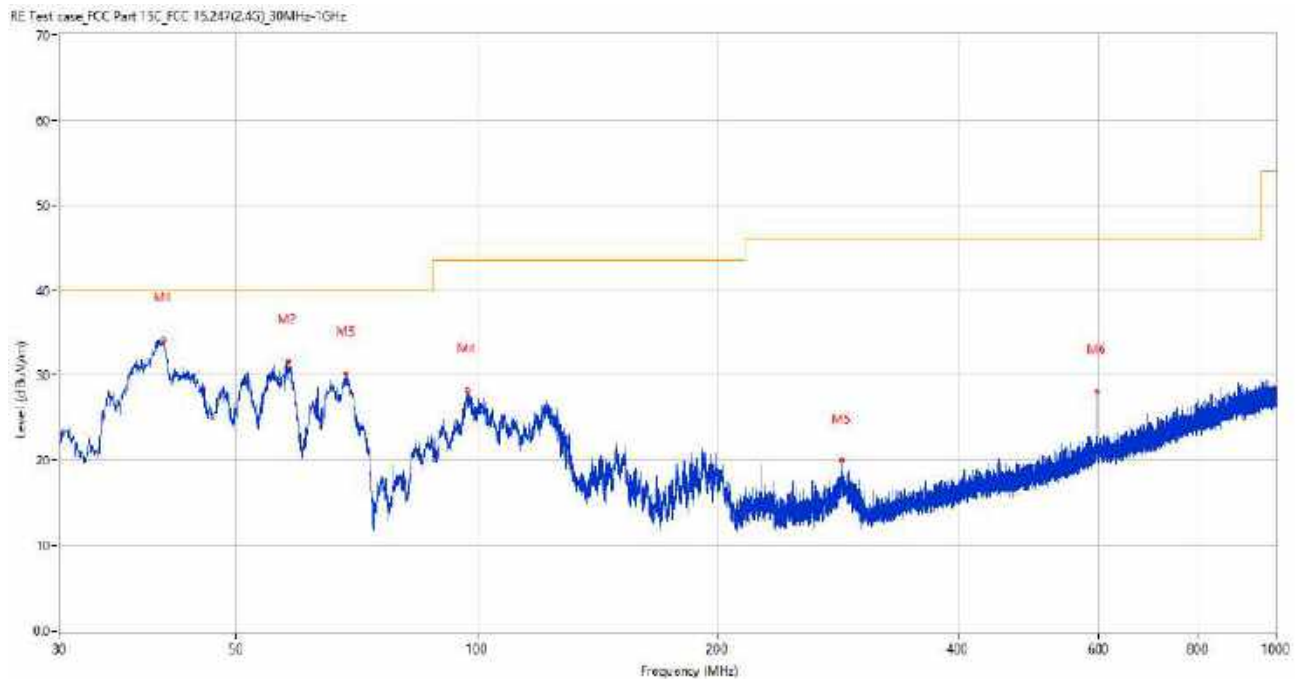
Note 2: For the test data above 1 GHz, According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note 4: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

Test Data and Plots

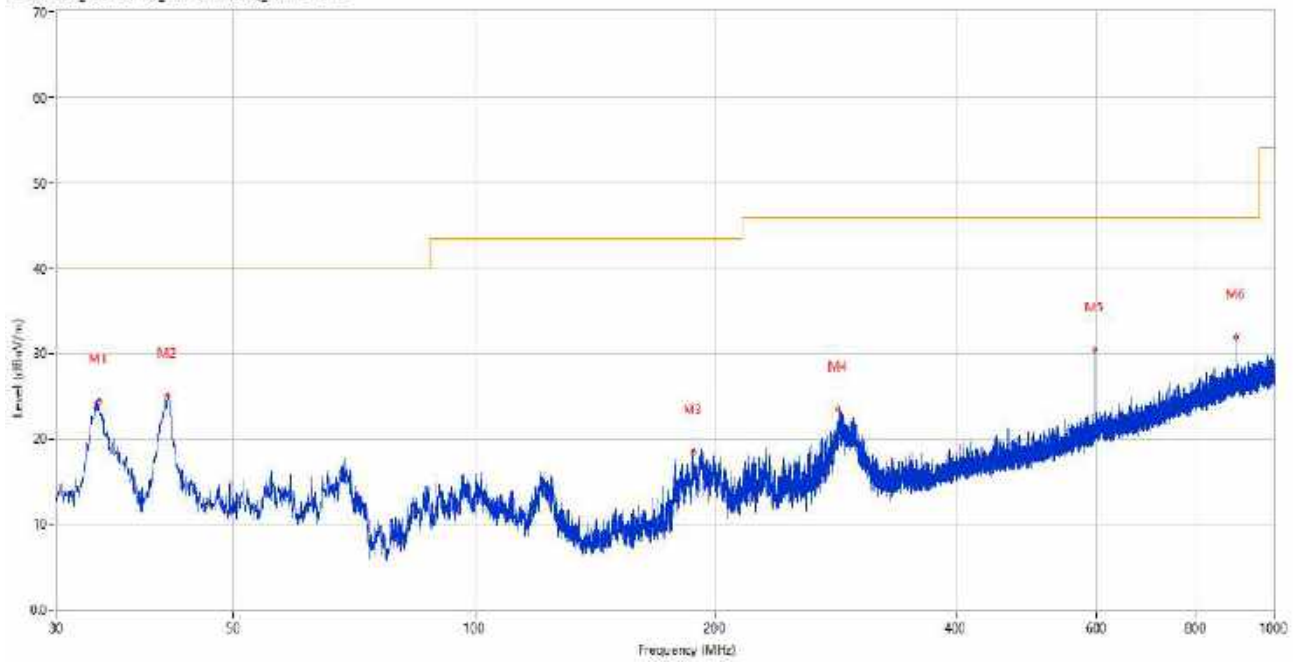
30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	40.525	34.17	-25.33	40.0	5.83	Peak	218.00	100	Vertical	Pass
2	57.888	31.62	-25.51	40.0	8.38	Peak	168.00	100	Vertical	Pass
3	68.703	30.18	-27.69	40.0	9.82	Peak	34.00	200	Vertical	Pass
4	97.367	28.18	-26.03	43.5	15.32	Peak	40.00	100	Vertical	Pass
5	286.274	19.98	-23.44	46.0	26.02	Peak	222.00	200	Vertical	Pass
6	597.498	28.03	-16.01	46.0	17.97	Peak	248.00	100	Vertical	Pass

30 MHz to 1 GHz, ANT H

RE Test case_FCC Part 15C_FCC 15.249(2.4G)_30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	33.928	24.40	-27.63	40.0	15.60	Peak	257.00	100	Horizontal	Pass
2	41.300	25.08	-25.01	40.0	14.92	Peak	273.00	100	Horizontal	Pass
3	188.110	18.46	-26.69	43.5	25.04	Peak	141.00	200	Horizontal	Pass
4	285.741	23.45	-23.46	46.0	22.55	Peak	280.00	100	Horizontal	Pass
5	597.159	30.42	-16.05	46.0	15.58	Peak	264.00	100	Horizontal	Pass
6	896.356	31.91	-10.46	46.0	14.09	Peak	246.00	100	Horizontal	Pass

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious above 18G is noise only, do not show on the report.

Main Antenna

1 GHz to 18 GHz, ANT V 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2092.750	58.68	-12.44	74.0	15.32	Peak	360.00	150	Vertical	Pass
1**	2092.750	45.14	-12.44	54.0	8.86	AV	360.00	150	Vertical	Pass
2	2410.500	105.04	-11.41	74.0	-31.04	Peak	84.00	150	Vertical	N/A
2**	2410.500	101.89	-11.41	54.0	-47.89	AV	84.00	150	Vertical	N/A
3	3480.500	44.62	-6.18	74.0	29.38	Peak	290.00	150	Vertical	Pass
3**	3480.500	37.69	-6.18	54.0	16.31	AV	290.00	150	Vertical	Pass
4	4824.500	53.81	-1.64	74.0	20.19	Peak	200.00	150	Vertical	Pass
4**	4824.500	52.03	-1.64	54.0	1.97	AV	200.00	150	Vertical	Pass
5	7342.500	54.93	3.18	74.0	19.07	Peak	271.00	150	Vertical	Pass
5**	7342.500	44.12	3.18	54.0	9.88	AV	271.00	150	Vertical	Pass
6	12710.500	52.38	3.10	74.0	21.62	Peak	141.00	150	Vertical	Pass
6**	12710.500	42.22	3.10	54.0	11.78	AV	141.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2242.750	58.15	-11.60	74.0	15.85	Peak	65.00	150	Horizontal	Pass
1**	2242.750	44.99	-11.60	54.0	9.01	AV	65.00	150	Horizontal	Pass
2	2410.500	105.00	-11.41	74.0	-31.00	Peak	80.00	150	Horizontal	N/A
2**	2410.500	101.81	-11.41	54.0	-47.81	AV	80.00	150	Horizontal	N/A
3	4824.500	53.39	-1.64	74.0	20.61	Peak	192.00	150	Horizontal	Pass
3**	4824.500	51.70	-1.64	54.0	2.30	AV	192.00	150	Horizontal	Pass
4	6896.000	54.53	2.40	74.0	19.47	Peak	242.00	150	Horizontal	Pass
4**	6896.000	44.06	2.40	54.0	9.94	AV	242.00	150	Horizontal	Pass
5	10408.500	51.50	1.85	74.0	22.50	Peak	359.00	150	Horizontal	Pass
5**	10408.500	40.92	1.85	54.0	13.08	AV	359.00	150	Horizontal	Pass
6	15092.500	53.34	4.28	74.0	20.66	Peak	68.00	150	Horizontal	Pass
6**	15092.500	42.97	4.28	54.0	11.03	AV	68.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2092.750	48.49	-12.44	74.0	25.51	Peak	297.00	150	Vertical	Pass
1**	2092.750	42.05	-12.44	54.0	11.95	AV	297.00	150	Vertical	Pass
2	2435.500	96.33	-11.26	74.0	-22.33	Peak	160.00	150	Vertical	N/A
2**	2435.500	93.41	-11.26	54.0	-39.41	AV	160.00	150	Vertical	N/A
3	4874.500	49.97	-1.32	74.0	24.03	Peak	121.00	150	Vertical	Pass
3**	4874.500	45.49	-1.32	54.0	8.51	AV	121.00	150	Vertical	Pass
4	6736.500	54.46	2.66	74.0	19.54	Peak	8.00	150	Vertical	Pass
4**	6736.500	44.24	2.66	54.0	9.76	AV	8.00	150	Vertical	Pass
5	11434.500	51.87	1.83	74.0	22.13	Peak	0.00	150	Vertical	Pass
5**	11434.500	41.32	1.83	54.0	12.68	AV	0.00	150	Vertical	Pass
6	15216.500	53.12	4.71	74.0	20.88	Peak	0.00	150	Vertical	Pass
6**	15216.500	43.06	4.71	54.0	10.94	AV	0.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2090.250	49.94	-12.46	74.0	24.06	Peak	272.00	150	Horizontal	Pass
1**	2090.250	40.04	-12.46	54.0	13.96	AV	272.00	150	Horizontal	Pass
2	2435.250	96.51	-11.25	74.0	-22.51	Peak	110.00	150	Horizontal	N/A
2**	2435.250	93.44	-11.25	54.0	-39.44	AV	110.00	150	Horizontal	N/A
3	4874.500	50.39	-1.32	74.0	23.61	Peak	80.00	150	Horizontal	Pass
3**	4874.500	43.95	-1.32	54.0	10.05	AV	80.00	150	Horizontal	Pass
4	7165.000	54.02	2.27	74.0	19.98	Peak	4.00	150	Horizontal	Pass
4**	7165.000	43.10	2.27	54.0	10.90	AV	4.00	150	Horizontal	Pass
5	10916.500	51.96	1.65	74.0	22.04	Peak	0.00	150	Horizontal	Pass
5**	10916.500	41.28	1.65	54.0	12.72	AV	0.00	150	Horizontal	Pass
6	15364.000	52.74	3.76	74.0	21.26	Peak	84.00	150	Horizontal	Pass
6**	15364.000	42.44	3.76	54.0	11.56	AV	84.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2091.750	47.74	-12.45	74.0	26.26	Peak	168.00	150	Vertical	Pass
1**	2091.750	41.30	-12.45	54.0	12.70	AV	168.00	150	Vertical	Pass
2	2460.750	94.72	-10.90	74.0	-20.72	Peak	266.00	150	Vertical	N/A
2**	2460.750	91.77	-10.90	54.0	-37.77	AV	266.00	150	Vertical	N/A
3	4924.500	49.89	-1.18	74.0	24.11	Peak	160.00	150	Vertical	Pass
3**	4924.500	44.19	-1.18	54.0	9.81	AV	160.00	150	Vertical	Pass
4	9173.000	50.66	0.64	74.0	23.34	Peak	7.00	150	Vertical	Pass
4**	9173.000	39.34	0.64	54.0	14.66	AV	7.00	150	Vertical	Pass
5	15762.000	53.69	4.06	74.0	20.31	Peak	26.00	150	Vertical	Pass
5**	15762.000	42.63	4.06	54.0	11.37	AV	26.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2208.500	49.25	-12.13	74.0	24.75	Peak	154.00	100	Vertical	Pass
1**	2208.500	42.52	-12.13	54.0	11.48	AV	154.00	100	Vertical	Pass
2	2460.750	94.89	-10.90	74.0	-20.89	Peak	262.00	100	Vertical	N/A
2**	2460.750	91.99	-10.90	54.0	-37.99	AV	262.00	100	Vertical	N/A
3	4924.500	49.41	-1.18	74.0	24.59	Peak	62.00	100	Vertical	Pass
3**	4924.500	43.14	-1.18	54.0	10.86	AV	62.00	100	Vertical	Pass
4	6651.000	54.47	2.03	74.0	19.53	Peak	230.00	100	Vertical	Pass
4**	6651.000	43.39	2.03	54.0	10.61	AV	230.00	100	Vertical	Pass
5	10209.000	50.91	2.06	74.0	23.09	Peak	0.00	100	Vertical	Pass
5**	10209.000	40.62	2.06	54.0	13.38	AV	0.00	100	Vertical	Pass
6	14145.500	53.83	3.86	74.0	20.17	Peak	264.00	100	Vertical	Pass
6**	14145.500	42.99	3.86	54.0	11.01	AV	264.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT V 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2176.000	52.80	-11.72	74.0	21.20	Peak	151.00	150	Vertical	Pass
1**	2176.000	39.52	-11.72	54.0	14.48	AV	151.00	150	Vertical	Pass
2	2410.500	100.93	-11.41	74.0	-26.93	Peak	182.00	150	Vertical	N/A
2**	2410.500	92.83	-11.41	54.0	-38.83	AV	182.00	150	Vertical	N/A
3	3926.000	47.23	-2.65	74.0	26.77	Peak	228.00	150	Vertical	Pass
3**	3926.000	37.12	-2.65	54.0	16.88	AV	228.00	150	Vertical	Pass
4	7789.000	54.94	3.73	74.0	19.06	Peak	0.00	150	Vertical	Pass
4**	7789.000	44.47	3.73	54.0	9.53	AV	0.00	150	Vertical	Pass
5	11301.500	51.19	1.56	74.0	22.81	Peak	0.00	150	Vertical	Pass
5**	11301.500	41.00	1.56	54.0	13.00	AV	0.00	150	Vertical	Pass
6	15220.500	53.89	4.81	74.0	20.11	Peak	7.00	150	Vertical	Pass
6**	15220.500	44.34	4.81	54.0	9.66	AV	7.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1195.000	40.81	-14.81	74.0	33.19	Peak	107.00	150	Horizontal	Pass
1**	1195.000	30.75	-14.81	54.0	23.25	AV	107.00	150	Horizontal	Pass
2	2204.500	54.61	-12.11	74.0	19.39	Peak	156.00	150	Horizontal	Pass
2**	2204.500	40.68	-12.11	54.0	13.32	AV	156.00	150	Horizontal	Pass
3	2414.750	100.45	-11.40	74.0	-26.45	Peak	115.00	150	Horizontal	N/A
3**	2414.750	92.13	-11.40	54.0	-38.13	AV	115.00	150	Horizontal	N/A
4	5288.000	51.45	-0.62	74.0	22.55	Peak	310.00	150	Horizontal	Pass
4**	5288.000	39.84	-0.62	54.0	14.16	AV	310.00	150	Horizontal	Pass
5	7925.000	55.08	3.75	74.0	18.92	Peak	191.00	150	Horizontal	Pass
5**	7925.000	44.25	3.75	54.0	9.75	AV	191.00	150	Horizontal	Pass
6	13692.000	52.78	2.69	74.0	21.22	Peak	0.00	150	Horizontal	Pass
6**	13692.000	42.15	2.69	54.0	11.85	AV	0.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1477.000	40.35	-15.29	74.0	33.65	Peak	129.00	150	Vertical	Pass
1**	1477.000	28.94	-15.29	54.0	25.06	AV	129.00	150	Vertical	Pass
2	2166.500	57.39	-12.02	74.0	16.61	Peak	106.00	150	Vertical	Pass
2**	2166.500	39.57	-12.02	54.0	14.43	AV	106.00	150	Vertical	Pass
3	2433.000	100.17	-11.21	74.0	-26.17	Peak	160.00	150	Vertical	N/A
3**	2433.000	91.43	-11.21	54.0	-37.43	AV	160.00	150	Vertical	N/A
4	4935.000	50.21	-0.75	74.0	23.79	Peak	194.00	150	Vertical	Pass
4**	4935.000	39.28	-0.75	54.0	14.72	AV	194.00	150	Vertical	Pass
5	6874.000	54.32	2.17	74.0	19.68	Peak	174.00	150	Vertical	Pass
5**	6874.000	43.47	2.17	54.0	10.53	AV	174.00	150	Vertical	Pass
6	14143.500	52.94	3.65	74.0	21.06	Peak	302.00	150	Vertical	Pass
6**	14143.500	41.91	3.65	54.0	12.09	AV	302.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1306.000	40.69	-14.67	74.0	33.31	Peak	69.00	150	Horizontal	Pass
1**	1306.000	29.26	-14.67	54.0	24.74	AV	69.00	150	Horizontal	Pass
2	2211.500	52.53	-12.10	74.0	21.47	Peak	219.00	150	Horizontal	Pass
2**	2211.500	36.95	-12.10	54.0	17.05	AV	219.00	150	Horizontal	Pass
3	2434.750	99.54	-11.24	74.0	-25.54	Peak	158.00	150	Horizontal	N/A
3**	2434.750	91.10	-11.24	54.0	-37.10	AV	158.00	150	Horizontal	N/A
4	7750.000	55.07	3.64	74.0	18.93	Peak	0.00	150	Horizontal	Pass
4**	7750.000	43.76	3.64	54.0	10.24	AV	0.00	150	Horizontal	Pass
5	10212.500	50.77	1.94	74.0	23.23	Peak	58.00	150	Horizontal	Pass
5**	10212.500	40.41	1.94	54.0	13.59	AV	58.00	150	Horizontal	Pass
6	13710.500	52.26	3.01	74.0	21.74	Peak	262.00	150	Horizontal	Pass
6**	13710.500	42.22	3.01	54.0	11.78	AV	262.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1212.500	39.73	-15.02	74.0	34.27	Peak	161.00	150	Vertical	Pass
1**	1212.500	29.19	-15.02	54.0	24.81	AV	161.00	150	Vertical	Pass
2	2210.000	54.28	-12.15	74.0	19.72	Peak	174.00	150	Vertical	Pass
2**	2210.000	40.61	-12.15	54.0	13.39	AV	174.00	150	Vertical	Pass
3	2460.000	98.66	-10.97	74.0	-24.66	Peak	260.00	150	Vertical	N/A
3**	2460.000	90.53	-10.97	54.0	-36.53	AV	260.00	150	Vertical	N/A
4	3348.000	46.31	-6.46	74.0	27.69	Peak	360.00	150	Vertical	Pass
4**	3348.000	34.89	-6.46	54.0	19.11	AV	360.00	150	Vertical	Pass
5	6138.500	53.95	1.15	74.0	20.05	Peak	349.00	150	Vertical	Pass
5**	6138.500	41.93	1.15	54.0	12.07	AV	349.00	150	Vertical	Pass
6	10841.000	51.79	1.65	74.0	22.21	Peak	0.00	150	Vertical	Pass
6**	10841.000	40.87	1.65	54.0	13.13	AV	0.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1490.500	41.76	-15.22	74.0	32.24	Peak	187.00	150	Horizontal	Pass
1**	1490.500	29.38	-15.22	54.0	24.62	AV	187.00	150	Horizontal	Pass
2	2167.000	52.11	-11.99	74.0	21.89	Peak	266.00	150	Horizontal	Pass
2**	2167.000	38.81	-11.99	54.0	15.19	AV	266.00	150	Horizontal	Pass
3	2461.250	99.00	-10.85	74.0	-25.00	Peak	261.00	150	Horizontal	N/A
3**	2461.250	91.06	-10.85	54.0	-37.06	AV	261.00	150	Horizontal	N/A
4	6280.500	54.48	1.28	74.0	19.52	Peak	141.00	150	Horizontal	Pass
4**	6280.500	42.67	1.28	54.0	11.33	AV	141.00	150	Horizontal	Pass
5	9968.000	50.92	2.41	74.0	23.08	Peak	350.00	150	Horizontal	Pass
5**	9968.000	39.74	2.41	54.0	14.26	AV	350.00	150	Horizontal	Pass
6	16554.000	54.22	5.22	74.0	19.78	Peak	263.00	150	Horizontal	Pass
6**	16554.000	42.94	5.22	54.0	11.06	AV	263.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1371.750	40.28	-15.08	74.0	33.72	Peak	3.00	150	Vertical	Pass
1**	1371.750	29.20	-15.08	54.0	24.80	AV	3.00	150	Vertical	Pass
2	2207.250	56.06	-12.14	74.0	17.94	Peak	9.00	150	Vertical	Pass
2**	2207.250	43.12	-12.14	54.0	10.88	AV	9.00	150	Vertical	Pass
3	2409.750	105.56	-11.43	74.0	-31.56	Peak	76.00	150	Vertical	N/A
3**	2409.750	97.55	-11.43	54.0	-43.55	AV	76.00	150	Vertical	N/A
4	6886.000	55.06	2.10	74.0	18.94	Peak	360.00	150	Vertical	Pass
4**	6886.000	43.74	2.10	54.0	10.26	AV	360.00	150	Vertical	Pass
5	7865.500	55.36	3.87	74.0	18.64	Peak	69.00	150	Vertical	Pass
5**	7865.500	44.66	3.87	54.0	9.34	AV	69.00	150	Vertical	Pass
6	12929.500	53.07	3.53	74.0	20.93	Peak	156.00	150	Vertical	Pass
6**	12929.500	42.67	3.53	54.0	11.33	AV	156.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1204.500	39.94	-14.83	74.0	34.06	Peak	297.00	150	Horizontal	Pass
1**	1204.500	28.85	-14.83	54.0	25.15	AV	297.00	150	Horizontal	Pass
2	2202.000	58.17	-12.12	74.0	15.83	Peak	119.00	150	Horizontal	Pass
2**	2202.000	44.27	-12.12	54.0	9.73	AV	119.00	150	Horizontal	Pass
3	2414.000	105.53	-11.44	74.0	-31.53	Peak	81.00	150	Horizontal	N/A
3**	2414.000	97.58	-11.44	54.0	-43.58	AV	81.00	150	Horizontal	N/A
4	6830.500	55.07	2.37	74.0	18.93	Peak	0.00	150	Horizontal	Pass
4**	6830.500	44.04	2.37	54.0	9.96	AV	0.00	150	Horizontal	Pass
5	7906.000	55.72	3.54	74.0	18.28	Peak	310.00	150	Horizontal	Pass
5**	7906.000	44.52	3.54	54.0	9.48	AV	310.00	150	Horizontal	Pass
6	14659.500	53.94	3.32	74.0	20.06	Peak	233.00	150	Horizontal	Pass
6**	14659.500	42.28	3.32	54.0	11.72	AV	233.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1374.250	40.45	-15.11	74.0	33.55	Peak	319.00	150	Vertical	Pass
1**	1374.250	29.53	-15.11	54.0	24.47	AV	319.00	150	Vertical	Pass
2	2241.500	55.88	-11.67	74.0	18.12	Peak	35.00	150	Vertical	Pass
2**	2241.500	40.62	-11.67	54.0	13.38	AV	35.00	150	Vertical	Pass
3	2434.000	106.63	-11.24	74.0	-32.63	Peak	59.00	150	Vertical	N/A
3**	2434.000	96.89	-11.24	54.0	-42.89	AV	59.00	150	Vertical	N/A
4	4842.000	54.11	-1.11	74.0	19.89	Peak	173.00	150	Vertical	Pass
4**	4842.000	38.56	-1.11	54.0	15.44	AV	173.00	150	Vertical	Pass
5	7865.000	55.75	3.89	74.0	18.25	Peak	192.00	150	Vertical	Pass
5**	7865.000	45.19	3.89	54.0	8.81	AV	192.00	150	Vertical	Pass
6	12836.500	52.38	2.51	74.0	21.62	Peak	277.00	150	Vertical	Pass
6**	12836.500	42.01	2.51	54.0	11.99	AV	277.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1567.000	40.84	-15.09	74.0	33.16	Peak	109.00	150	Horizontal	Pass
1**	1567.000	29.20	-15.09	54.0	24.80	AV	109.00	150	Horizontal	Pass
2	2091.750	53.41	-12.45	74.0	20.59	Peak	278.00	150	Horizontal	Pass
2**	2091.750	40.74	-12.45	54.0	13.26	AV	278.00	150	Horizontal	Pass
3	2434.500	96.24	-11.24	74.0	-22.24	Peak	157.00	150	Horizontal	N/A
3**	2434.500	87.55	-11.24	54.0	-33.55	AV	157.00	150	Horizontal	N/A
4	6190.000	53.83	1.14	74.0	20.17	Peak	356.00	150	Horizontal	Pass
4**	6190.000	42.50	1.14	54.0	11.50	AV	356.00	150	Horizontal	Pass
5	7885.000	55.54	3.33	74.0	18.46	Peak	4.00	150	Horizontal	Pass
5**	7885.000	44.38	3.33	54.0	9.62	AV	4.00	150	Horizontal	Pass
6	12922.500	53.45	3.46	74.0	20.55	Peak	360.00	150	Horizontal	Pass
6**	12922.500	43.02	3.46	54.0	10.98	AV	360.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1473.750	40.91	-15.26	74.0	33.09	Peak	236.00	150	Vertical	Pass
1**	1473.750	28.91	-15.26	54.0	25.09	AV	236.00	150	Vertical	Pass
2	2197.500	55.95	-12.00	74.0	18.05	Peak	33.00	150	Vertical	Pass
2**	2197.500	40.22	-12.00	54.0	13.78	AV	33.00	150	Vertical	Pass
3	2459.500	104.67	-11.01	74.0	-30.67	Peak	59.00	150	Vertical	N/A
3**	2459.500	96.14	-11.01	54.0	-42.14	AV	59.00	150	Vertical	N/A
4	4924.500	51.14	-1.18	74.0	22.86	Peak	360.00	150	Vertical	Pass
4**	4924.500	42.00	-1.18	54.0	12.00	AV	360.00	150	Vertical	Pass
5	7314.500	55.50	2.63	74.0	18.50	Peak	121.00	150	Vertical	Pass
5**	7314.500	43.83	2.63	54.0	10.17	AV	121.00	150	Vertical	Pass
6	14131.500	53.11	3.46	74.0	20.89	Peak	0.00	150	Vertical	Pass
6**	14131.500	42.76	3.46	54.0	11.24	AV	0.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1493.500	41.46	-15.18	74.0	32.54	Peak	112.00	150	Horizontal	Pass
1**	1493.500	32.25	-15.18	54.0	21.75	AV	112.00	150	Horizontal	Pass
2	2169.000	54.09	-11.89	74.0	19.91	Peak	107.00	150	Horizontal	Pass
2**	2169.000	40.13	-11.89	54.0	13.87	AV	107.00	150	Horizontal	Pass
3	2460.000	94.93	-10.97	74.0	-20.93	Peak	259.00	150	Horizontal	N/A
3**	2460.000	86.79	-10.97	54.0	-32.79	AV	259.00	150	Horizontal	N/A
4	6646.000	55.16	2.07	74.0	18.84	Peak	237.00	150	Horizontal	Pass
4**	6646.000	43.50	2.07	54.0	10.50	AV	237.00	150	Horizontal	Pass
5	7905.500	55.53	3.55	74.0	18.47	Peak	0.00	150	Horizontal	Pass
5**	7905.500	45.08	3.55	54.0	8.92	AV	0.00	150	Horizontal	Pass
6	13020.000	53.47	2.91	74.0	20.53	Peak	116.00	150	Horizontal	Pass
6**	13020.000	41.87	2.91	54.0	12.13	AV	116.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1493.250	40.45	-15.19	74.0	33.55	Peak	174.00	150	Vertical	Pass
1**	1493.250	30.42	-15.19	54.0	23.58	AV	174.00	150	Vertical	Pass
2	2197.000	55.58	-12.01	74.0	18.42	Peak	106.00	150	Vertical	Pass
2**	2197.000	44.57	-12.01	54.0	9.43	AV	106.00	150	Vertical	Pass
3	2427.250	102.49	-11.10	74.0	-28.49	Peak	54.00	150	Vertical	N/A
3**	2427.250	93.90	-11.10	54.0	-39.90	AV	54.00	150	Vertical	N/A
4	4844.000	51.73	-1.10	74.0	22.27	Peak	169.00	150	Vertical	Pass
4**	4844.000	38.86	-1.10	54.0	15.14	AV	169.00	150	Vertical	Pass
5	7729.500	55.25	3.09	74.0	18.75	Peak	290.00	150	Vertical	Pass
5**	7729.500	43.80	3.09	54.0	10.20	AV	290.00	150	Vertical	Pass
6	16455.999	54.63	4.66	74.0	19.37	Peak	272.00	150	Vertical	Pass
6**	16455.999	43.30	4.66	54.0	10.70	AV	272.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1493.500	40.98	-15.18	74.0	33.02	Peak	182.00	150	Horizontal	Pass
1**	1493.500	32.16	-15.18	54.0	21.84	AV	182.00	150	Horizontal	Pass
2	2167.750	51.97	-11.94	74.0	22.03	Peak	86.00	150	Horizontal	Pass
2**	2167.750	39.78	-11.94	54.0	14.22	AV	86.00	150	Horizontal	Pass
3	2414.250	93.61	-11.43	74.0	-19.61	Peak	57.00	150	Horizontal	N/A
3**	2414.250	84.66	-11.43	54.0	-30.66	AV	57.00	150	Horizontal	N/A
4	6652.500	54.90	2.01	74.0	19.10	Peak	4.00	150	Horizontal	Pass
4**	6652.500	43.48	2.01	54.0	10.52	AV	4.00	150	Horizontal	Pass
5	7775.500	55.77	3.26	74.0	18.23	Peak	359.00	150	Horizontal	Pass
5**	7775.500	43.81	3.26	54.0	10.19	AV	359.00	150	Horizontal	Pass
6	12811.000	52.65	2.95	74.0	21.35	Peak	1.00	150	Horizontal	Pass
6**	12811.000	42.05	2.95	54.0	11.95	AV	1.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1121.500	40.74	-14.83	74.0	33.26	Peak	314.00	150	Vertical	Pass
1**	1121.500	28.61	-14.83	54.0	25.39	AV	314.00	150	Vertical	Pass
2	2189.500	53.35	-12.07	74.0	20.65	Peak	77.00	150	Vertical	Pass
2**	2189.500	45.04	-12.07	54.0	8.96	AV	77.00	150	Vertical	Pass
3	2433.000	103.49	-11.21	74.0	-29.49	Peak	40.00	150	Vertical	N/A
3**	2433.000	94.05	-11.21	54.0	-40.05	AV	40.00	150	Vertical	N/A
4	6735.500	54.63	2.71	74.0	19.37	Peak	219.00	150	Vertical	Pass
4**	6735.500	44.07	2.71	54.0	9.93	AV	219.00	150	Vertical	Pass
5	7919.000	55.08	3.67	74.0	18.92	Peak	250.00	150	Vertical	Pass
5**	7919.000	44.83	3.67	54.0	9.17	AV	250.00	150	Vertical	Pass
6	12216.001	52.48	1.88	74.0	21.52	Peak	350.00	150	Vertical	Pass
6**	12216.001	41.66	1.88	54.0	12.34	AV	350.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1493.500	43.64	-15.18	74.0	30.36	Peak	260.00	150	Horizontal	Pass
1**	1493.500	33.03	-15.18	54.0	20.97	AV	260.00	150	Horizontal	Pass
2	2240.500	52.85	-11.72	74.0	21.15	Peak	279.00	150	Horizontal	Pass
2**	2240.500	37.21	-11.72	54.0	16.79	AV	279.00	150	Horizontal	Pass
3	2433.000	93.39	-11.21	74.0	-19.39	Peak	260.00	150	Horizontal	N/A
3**	2433.000	83.98	-11.21	54.0	-29.98	AV	260.00	150	Horizontal	N/A
4	6800.500	54.84	2.15	74.0	19.16	Peak	278.00	150	Horizontal	Pass
4**	6800.500	43.83	2.15	54.0	10.17	AV	278.00	150	Horizontal	Pass
5	7921.000	55.29	3.66	74.0	18.71	Peak	50.00	150	Horizontal	Pass
5**	7921.000	44.58	3.66	54.0	9.42	AV	50.00	150	Horizontal	Pass
6	15220.000	54.15	4.84	74.0	19.85	Peak	99.00	150	Horizontal	Pass
6**	15220.000	43.18	4.84	54.0	10.82	AV	99.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1492.250	42.58	-15.21	74.0	31.42	Peak	280.00	100	Vertical	Pass
1**	1492.250	28.88	-15.21	54.0	25.12	AV	280.00	100	Vertical	Pass
2	2242.250	58.30	-11.63	74.0	15.70	Peak	90.00	100	Vertical	Pass
2**	2242.250	41.22	-11.63	54.0	12.78	AV	90.00	100	Vertical	Pass
3	2448.250	102.38	-11.47	74.0	-28.38	Peak	58.00	100	Vertical	N/A
3**	2448.250	93.91	-11.47	54.0	-39.91	AV	58.00	100	Vertical	N/A
4	6718.500	54.79	2.30	74.0	19.21	Peak	131.00	100	Vertical	Pass
4**	6718.500	44.10	2.30	54.0	9.90	AV	131.00	100	Vertical	Pass
5	7894.000	55.48	3.44	74.0	18.52	Peak	141.00	100	Vertical	Pass
5**	7894.000	44.60	3.44	54.0	9.40	AV	141.00	100	Vertical	Pass
6	12929.000	53.96	3.50	74.0	20.04	Peak	292.00	100	Vertical	Pass
6**	12929.000	42.69	3.50	54.0	11.31	AV	292.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1397.500	40.00	-15.06	74.0	34.00	Peak	271.00	150	Horizontal	Pass
1**	1397.500	29.11	-15.06	54.0	24.89	AV	271.00	150	Horizontal	Pass
2	2166.750	53.34	-12.00	74.0	20.66	Peak	285.00	150	Horizontal	Pass
2**	2166.750	37.87	-12.00	54.0	16.13	AV	285.00	150	Horizontal	Pass
3	2446.750	92.72	-11.46	74.0	-18.72	Peak	262.00	150	Horizontal	N/A
3**	2446.750	84.00	-11.46	54.0	-30.00	AV	262.00	150	Horizontal	N/A
4	4343.500	48.94	-2.32	74.0	25.06	Peak	90.00	150	Horizontal	Pass
4**	4343.500	38.14	-2.32	54.0	15.86	AV	90.00	150	Horizontal	Pass
5	7873.000	55.55	3.70	74.0	18.45	Peak	1.00	150	Horizontal	Pass
5**	7873.000	44.68	3.70	54.0	9.32	AV	1.00	150	Horizontal	Pass
6	16859.000	54.65	5.17	74.0	19.35	Peak	334.00	150	Horizontal	Pass
6**	16859.000	43.90	5.17	54.0	10.10	AV	334.00	150	Horizontal	Pass

Aux. Antenna

1 GHz to 18 GHz, ANT V 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2236.250	46.89	-11.92	74.0	27.11	Peak	321.00	150	Vertical	Pass
1**	2236.250	42.34	-11.92	54.0	11.66	AV	321.00	150	Vertical	Pass
2	2410.500	93.99	-11.41	74.0	-19.99	Peak	112.00	150	Vertical	N/A
2**	2410.500	90.99	-11.41	54.0	-36.99	AV	112.00	150	Vertical	N/A
3	4824.500	52.46	-1.64	74.0	21.54	Peak	0.00	150	Vertical	Pass
3**	4824.500	50.04	-1.64	54.0	3.96	AV	0.00	150	Vertical	Pass
4	7780.500	55.59	3.39	74.0	18.41	Peak	219.00	150	Vertical	Pass
4**	7780.500	43.84	3.39	54.0	10.16	AV	219.00	150	Vertical	Pass
5	12032.500	52.69	1.94	74.0	21.31	Peak	111.00	150	Vertical	Pass
5**	12032.500	41.76	1.94	54.0	12.24	AV	111.00	150	Vertical	Pass
6	15258.000	54.31	5.17	74.0	19.69	Peak	111.00	150	Vertical	Pass
6**	15258.000	43.60	5.17	54.0	10.40	AV	111.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1493.000	41.15	-15.19	74.0	32.85	Peak	182.00	150	Horizontal	Pass
1**	1493.000	30.82	-15.19	54.0	23.18	AV	182.00	150	Horizontal	Pass
2	2411.000	93.13	-11.43	74.0	-19.13	Peak	144.00	150	Horizontal	N/A
2**	2411.000	90.30	-11.43	54.0	-36.30	AV	144.00	150	Horizontal	N/A
3	4824.500	48.11	-1.64	74.0	25.89	Peak	32.00	150	Horizontal	Pass
3**	4824.500	44.27	-1.64	54.0	9.73	AV	32.00	150	Horizontal	Pass
4	6895.500	55.00	2.39	74.0	19.00	Peak	339.00	150	Horizontal	Pass
4**	6895.500	43.82	2.39	54.0	10.18	AV	339.00	150	Horizontal	Pass
5	13093.000	53.20	3.32	74.0	20.80	Peak	156.00	150	Horizontal	Pass
5**	13093.000	42.18	3.32	54.0	11.82	AV	156.00	150	Horizontal	Pass
6	14638.500	53.69	3.96	74.0	20.31	Peak	156.00	150	Horizontal	Pass
6**	14638.500	43.25	3.96	54.0	10.75	AV	156.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2336.500	49.85	-10.67	74.0	24.15	Peak	267.00	150	Vertical	Pass
1**	2336.500	36.90	-10.67	54.0	17.10	AV	267.00	150	Vertical	Pass
2	2435.500	92.54	-11.26	74.0	-18.54	Peak	133.00	150	Vertical	N/A
2**	2435.500	89.91	-11.26	54.0	-35.91	AV	133.00	150	Vertical	N/A
3	4874.500	51.93	-1.32	74.0	22.07	Peak	352.00	150	Vertical	Pass
3**	4874.500	49.17	-1.32	54.0	4.83	AV	352.00	150	Vertical	Pass
4	6729.500	55.21	2.67	74.0	18.79	Peak	320.00	150	Vertical	Pass
4**	6729.500	43.95	2.67	54.0	10.05	AV	320.00	150	Vertical	Pass
5	7928.000	55.31	3.77	74.0	18.69	Peak	0.00	150	Vertical	Pass
5**	7928.000	44.84	3.77	54.0	9.16	AV	0.00	150	Vertical	Pass
6	12932.500	52.84	3.62	74.0	21.16	Peak	234.00	150	Vertical	Pass
6**	12932.500	43.13	3.62	54.0	10.87	AV	234.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1495.750	41.36	-15.18	74.0	32.64	Peak	181.00	150	Horizontal	Pass
1**	1495.750	31.10	-15.18	54.0	22.90	AV	181.00	150	Horizontal	Pass
2	2435.500	92.03	-11.26	74.0	-18.03	Peak	145.00	150	Horizontal	N/A
2**	2435.500	89.11	-11.26	54.0	-35.11	AV	145.00	150	Horizontal	N/A
3	5740.500	53.31	-0.17	74.0	20.69	Peak	360.00	150	Horizontal	Pass
3**	5740.500	41.37	-0.17	54.0	12.63	AV	360.00	150	Horizontal	Pass
4	7787.000	55.55	3.62	74.0	18.45	Peak	321.00	150	Horizontal	Pass
4**	7787.000	44.45	3.62	54.0	9.55	AV	321.00	150	Horizontal	Pass
5	12211.500	52.55	1.89	74.0	21.45	Peak	360.00	150	Horizontal	Pass
5**	12211.500	42.36	1.89	54.0	11.64	AV	360.00	150	Horizontal	Pass
6	16059.000	53.53	4.73	74.0	20.47	Peak	10.00	150	Horizontal	Pass
6**	16059.000	42.95	4.73	54.0	11.05	AV	10.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b High Channel

No.	Frequency (MHz)	Results (dBUV/m)	Factor (dB)	Limit (dBUV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2286.000	50.77	-11.71	74.0	23.23	Peak	282.00	150	Vertical	Pass
1**	2286.000	43.88	-11.71	54.0	10.12	AV	282.00	150	Vertical	Pass
2	2460.750	94.37	-10.90	74.0	-20.37	Peak	72.00	150	Vertical	N/A
2**	2460.750	91.41	-10.90	54.0	-37.41	AV	72.00	150	Vertical	N/A
3	4924.500	51.94	-1.18	74.0	22.06	Peak	349.00	150	Vertical	Pass
3**	4924.500	47.37	-1.18	54.0	6.63	AV	349.00	150	Vertical	Pass
4	6745.000	54.36	2.66	74.0	19.64	Peak	356.00	150	Vertical	Pass
4**	6745.000	44.00	2.66	54.0	10.00	AV	356.00	150	Vertical	Pass
5	7953.500	55.41	3.94	74.0	18.59	Peak	71.00	150	Vertical	Pass
5**	7953.500	44.42	3.94	54.0	9.58	AV	71.00	150	Vertical	Pass
6	16784.500	54.46	4.85	74.0	19.54	Peak	126.00	150	Vertical	Pass
6**	16784.500	42.96	4.85	54.0	11.04	AV	126.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b High Channel

No.	Frequency (MHz)	Results (dBUV/m)	Factor (dB)	Limit (dBUV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2362.250	48.52	-11.64	74.0	25.48	Peak	259.00	150	Horizontal	Pass
1**	2362.250	34.92	-11.64	54.0	19.08	AV	259.00	150	Horizontal	Pass
2	2460.750	90.90	-10.90	74.0	-16.90	Peak	150.00	150	Horizontal	N/A
2**	2460.750	87.93	-10.90	54.0	-33.93	AV	150.00	150	Horizontal	N/A
3	4617.000	50.55	-1.95	74.0	23.45	Peak	178.00	150	Horizontal	Pass
3**	4617.000	38.82	-1.95	54.0	15.18	AV	178.00	150	Horizontal	Pass
4	7372.500	55.03	2.59	74.0	18.97	Peak	89.00	150	Horizontal	Pass
4**	7372.500	43.72	2.59	54.0	10.28	AV	89.00	150	Horizontal	Pass
5	10887.000	52.12	1.56	74.0	21.88	Peak	360.00	150	Horizontal	Pass
5**	10887.000	41.10	1.56	54.0	12.90	AV	360.00	150	Horizontal	Pass
6	12935.000	53.29	3.52	74.0	20.71	Peak	148.00	150	Horizontal	Pass
6**	12935.000	42.96	3.52	54.0	11.04	AV	148.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2358.500	57.75	-11.59	74.0	16.25	Peak	291.00	150	Vertical	Pass
1**	2358.500	42.85	-11.59	54.0	11.15	AV	291.00	150	Vertical	Pass
2	2412.000	104.05	-11.44	74.0	-30.05	Peak	72.00	150	Vertical	N/A
2**	2412.000	94.83	-11.44	54.0	-40.83	AV	72.00	150	Vertical	N/A
3	4823.000	60.13	-1.63	74.0	13.87	Peak	221.00	150	Vertical	Pass
3**	4823.000	51.92	-1.63	54.0	2.08	AV	221.00	150	Vertical	Pass
4	6751.500	54.76	2.59	74.0	19.24	Peak	349.00	150	Vertical	Pass
4**	6751.500	43.75	2.59	54.0	10.25	AV	349.00	150	Vertical	Pass
5	7966.000	55.05	3.89	74.0	18.95	Peak	360.00	150	Vertical	Pass
5**	7966.000	44.06	3.89	54.0	9.94	AV	360.00	150	Vertical	Pass
6	14324.500	53.80	3.68	74.0	20.20	Peak	353.00	150	Vertical	Pass
6**	14324.500	43.02	3.68	54.0	10.98	AV	353.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2362.250	54.68	-11.64	74.0	19.32	Peak	261.00	150	Horizontal	Pass
1**	2362.250	43.06	-11.64	54.0	10.94	AV	261.00	150	Horizontal	Pass
2	2409.500	101.84	-11.44	74.0	-27.84	Peak	143.00	150	Horizontal	N/A
2**	2409.500	93.62	-11.44	54.0	-39.62	AV	143.00	150	Horizontal	N/A
3	4819.000	54.61	-1.47	74.0	19.39	Peak	59.00	150	Horizontal	Pass
3**	4819.000	46.79	-1.47	54.0	7.21	AV	59.00	150	Horizontal	Pass
4	6735.000	54.80	2.72	74.0	19.20	Peak	202.00	150	Horizontal	Pass
4**	6735.000	44.17	2.72	54.0	9.83	AV	202.00	150	Horizontal	Pass
5	7740.000	55.13	3.36	74.0	18.87	Peak	109.00	150	Horizontal	Pass
5**	7740.000	44.49	3.36	54.0	9.51	AV	109.00	150	Horizontal	Pass
6	15089.500	54.26	4.40	74.0	19.74	Peak	264.00	150	Horizontal	Pass
6**	15089.500	43.89	4.40	54.0	10.11	AV	264.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2336.250	55.96	-10.67	74.0	18.04	Peak	253.00	150	Vertical	Pass
1**	2336.250	37.12	-10.67	54.0	16.88	AV	253.00	150	Vertical	Pass
2	2435.250	103.34	-11.25	74.0	-29.34	Peak	69.00	150	Vertical	N/A
2**	2435.250	94.94	-11.25	54.0	-40.94	AV	69.00	150	Vertical	N/A
3	4875.500	57.81	-1.33	74.0	16.19	Peak	349.00	150	Vertical	Pass
3**	4875.500	51.38	-1.33	54.0	2.62	AV	349.00	150	Vertical	Pass
4	6837.500	54.80	2.38	74.0	19.20	Peak	193.00	150	Vertical	Pass
4**	6837.500	43.78	2.38	54.0	10.22	AV	193.00	150	Vertical	Pass
5	7888.000	55.22	3.36	74.0	18.78	Peak	1.00	150	Vertical	Pass
5**	7888.000	44.86	3.36	54.0	9.14	AV	1.00	150	Vertical	Pass
6	12140.000	52.53	1.70	74.0	21.47	Peak	157.00	150	Vertical	Pass
6**	12140.000	41.66	1.70	54.0	12.34	AV	157.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2393.750	52.23	-11.77	74.0	21.77	Peak	84.00	150	Horizontal	Pass
1**	2393.750	41.75	-11.77	54.0	12.25	AV	84.00	150	Horizontal	Pass
2	2434.750	100.47	-11.24	74.0	-26.47	Peak	144.00	150	Horizontal	N/A
2**	2434.750	91.95	-11.24	54.0	-37.95	AV	144.00	150	Horizontal	N/A
3	4871.500	50.48	-1.24	74.0	23.52	Peak	59.00	150	Horizontal	Pass
3**	4871.500	43.91	-1.24	54.0	10.09	AV	59.00	150	Horizontal	Pass
4	6226.000	53.59	0.93	74.0	20.41	Peak	359.00	150	Horizontal	Pass
4**	6226.000	42.35	0.93	54.0	11.65	AV	359.00	150	Horizontal	Pass
5	7794.500	56.03	3.90	74.0	17.97	Peak	81.00	150	Horizontal	Pass
5**	7794.500	44.60	3.90	54.0	9.40	AV	81.00	150	Horizontal	Pass
6	12984.001	52.80	2.76	74.0	21.20	Peak	27.00	150	Horizontal	Pass
6**	12984.001	42.30	2.76	54.0	11.70	AV	27.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2361.750	55.35	-11.62	74.0	18.65	Peak	272.00	150	Vertical	Pass
1**	2361.750	38.47	-11.62	54.0	15.53	AV	272.00	150	Vertical	Pass
2	2463.750	104.99	-10.59	74.0	-30.99	Peak	114.00	150	Vertical	N/A
2**	2463.750	95.88	-10.59	54.0	-41.88	AV	114.00	150	Vertical	N/A
3	4923.500	61.50	-1.19	74.0	12.50	Peak	336.00	150	Vertical	Pass
3**	4923.500	53.21	-1.19	54.0	0.79	AV	336.00	150	Vertical	Pass
4	7237.500	55.20	3.12	74.0	18.80	Peak	118.00	150	Vertical	Pass
4**	7237.500	43.85	3.12	54.0	10.15	AV	118.00	150	Vertical	Pass
5	7856.500	55.73	3.78	74.0	18.27	Peak	0.00	150	Vertical	Pass
5**	7856.500	45.00	3.78	54.0	9.00	AV	0.00	150	Vertical	Pass
6	13526.500	52.47	3.35	74.0	21.53	Peak	360.00	150	Vertical	Pass
6**	13526.500	42.56	3.35	54.0	11.44	AV	360.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2413.250	53.68	-11.47	74.0	20.32	Peak	144.00	150	Horizontal	Pass
1**	2413.250	42.21	-11.47	54.0	11.79	AV	144.00	150	Horizontal	Pass
2	2460.000	101.16	-10.97	74.0	-27.16	Peak	144.00	150	Horizontal	N/A
2**	2460.000	92.91	-10.97	54.0	-38.91	AV	144.00	150	Horizontal	N/A
3	4923.000	50.39	-1.20	74.0	23.61	Peak	151.00	150	Horizontal	Pass
3**	4923.000	44.13	-1.20	54.0	9.87	AV	151.00	150	Horizontal	Pass
4	6894.000	54.82	2.31	74.0	19.18	Peak	221.00	150	Horizontal	Pass
4**	6894.000	44.02	2.31	54.0	9.98	AV	221.00	150	Horizontal	Pass
5	7966.000	55.06	3.89	74.0	18.94	Peak	360.00	150	Horizontal	Pass
5**	7966.000	44.40	3.89	54.0	9.60	AV	360.00	150	Horizontal	Pass
6	15296.000	54.14	3.99	74.0	19.86	Peak	125.00	150	Horizontal	Pass
6**	15296.000	42.49	3.99	54.0	11.51	AV	125.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2314.000	54.90	-11.23	74.0	19.10	Peak	350.00	150	Vertical	Pass
1**	2314.000	39.04	-11.23	54.0	14.96	AV	350.00	150	Vertical	Pass
2	2410.250	102.16	-11.41	74.0	-28.16	Peak	111.00	150	Vertical	N/A
2**	2410.250	93.75	-11.41	54.0	-39.75	AV	111.00	150	Vertical	N/A
3	4824.000	57.33	-1.66	74.0	16.67	Peak	350.00	150	Vertical	Pass
3**	4824.000	50.31	-1.66	54.0	3.69	AV	350.00	150	Vertical	Pass
4	6814.500	55.39	1.98	74.0	18.61	Peak	321.00	150	Vertical	Pass
4**	6814.500	44.05	1.98	54.0	9.95	AV	321.00	150	Vertical	Pass
5	7858.500	55.34	3.84	74.0	18.66	Peak	300.00	150	Vertical	Pass
5**	7858.500	44.86	3.84	54.0	9.14	AV	300.00	150	Vertical	Pass
6	17472.500	55.98	6.32	74.0	18.02	Peak	96.00	150	Vertical	Pass
6**	17472.500	44.65	6.32	54.0	9.35	AV	96.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2360.000	52.85	-11.60	74.0	21.15	Peak	164.00	150	Horizontal	Pass
1**	2360.000	40.38	-11.60	54.0	13.62	AV	164.00	150	Horizontal	Pass
2	2413.250	100.15	-11.47	74.0	-26.15	Peak	145.00	150	Horizontal	N/A
2**	2413.250	91.60	-11.47	54.0	-37.60	AV	145.00	150	Horizontal	N/A
3	4823.000	53.03	-1.63	74.0	20.97	Peak	50.00	150	Horizontal	Pass
3**	4823.000	45.28	-1.63	54.0	8.72	AV	50.00	150	Horizontal	Pass
4	6882.500	55.18	2.12	74.0	18.82	Peak	50.00	150	Horizontal	Pass
4**	6882.500	43.73	2.12	54.0	10.27	AV	50.00	150	Horizontal	Pass
5	7867.500	55.67	3.84	74.0	18.33	Peak	346.00	150	Horizontal	Pass
5**	7867.500	44.65	3.84	54.0	9.35	AV	346.00	150	Horizontal	Pass
6	14415.000	53.19	3.44	74.0	20.81	Peak	360.00	150	Horizontal	Pass
6**	14415.000	43.43	3.44	54.0	10.57	AV	360.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2340.500	55.01	-10.72	74.0	18.99	Peak	267.00	150	Vertical	Pass
1**	2340.500	38.77	-10.72	54.0	15.23	AV	267.00	150	Vertical	Pass
2	2435.250	102.63	-11.25	74.0	-28.63	Peak	96.00	150	Vertical	N/A
2**	2435.250	94.36	-11.25	54.0	-40.36	AV	96.00	150	Vertical	N/A
3	4876.000	59.43	-1.32	74.0	14.57	Peak	355.00	150	Vertical	Pass
3**	4876.000	50.37	-1.32	54.0	3.63	AV	355.00	150	Vertical	Pass
4	6830.500	54.62	2.37	74.0	19.38	Peak	355.00	150	Vertical	Pass
4**	6830.500	43.79	2.37	54.0	10.21	AV	355.00	150	Vertical	Pass
5	11901.500	52.17	2.17	74.0	21.83	Peak	173.00	150	Vertical	Pass
5**	11901.500	41.98	2.17	54.0	12.02	AV	173.00	150	Vertical	Pass
6	15253.500	53.89	4.86	74.0	20.11	Peak	233.00	150	Vertical	Pass
6**	15253.500	43.45	4.86	54.0	10.55	AV	233.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1492.500	43.74	-15.21	74.0	30.26	Peak	302.00	150	Horizontal	Pass
1**	1492.500	30.36	-15.21	54.0	23.64	AV	302.00	150	Horizontal	Pass
2	2435.750	100.67	-11.28	74.0	-26.67	Peak	139.00	150	Horizontal	N/A
2**	2435.750	91.68	-11.28	54.0	-37.68	AV	139.00	150	Horizontal	N/A
3	4875.500	50.19	-1.33	74.0	23.81	Peak	268.00	150	Horizontal	Pass
3**	4875.500	43.24	-1.33	54.0	10.76	AV	268.00	150	Horizontal	Pass
4	6695.000	54.96	1.92	74.0	19.04	Peak	360.00	150	Horizontal	Pass
4**	6695.000	43.16	1.92	54.0	10.84	AV	360.00	150	Horizontal	Pass
5	7902.000	55.60	3.53	74.0	18.40	Peak	348.00	150	Horizontal	Pass
5**	7902.000	44.78	3.53	54.0	9.22	AV	348.00	150	Horizontal	Pass
6	13497.500	53.70	2.74	74.0	20.30	Peak	215.00	150	Horizontal	Pass
6**	13497.500	42.24	2.74	54.0	11.76	AV	215.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2364.250	53.80	-11.57	74.0	20.20	Peak	270.00	150	Vertical	Pass
1**	2364.250	37.56	-11.57	54.0	16.44	AV	270.00	150	Vertical	Pass
2	2460.750	102.66	-10.90	74.0	-28.66	Peak	75.00	150	Vertical	N/A
2**	2460.750	94.64	-10.90	54.0	-40.64	AV	75.00	150	Vertical	N/A
3	4923.500	59.54	-1.19	74.0	14.46	Peak	338.00	150	Vertical	Pass
3**	4923.500	48.80	-1.19	54.0	5.20	AV	338.00	150	Vertical	Pass
4	7170.000	54.67	2.30	74.0	19.33	Peak	320.00	150	Vertical	Pass
4**	7170.000	44.09	2.30	54.0	9.91	AV	320.00	150	Vertical	Pass
5	12274.000	52.32	1.91	74.0	21.68	Peak	147.00	150	Vertical	Pass
5**	12274.000	41.78	1.91	54.0	12.22	AV	147.00	150	Vertical	Pass
6	15210.500	53.70	4.10	74.0	20.30	Peak	350.00	150	Vertical	Pass
6**	15210.500	43.34	4.10	54.0	10.66	AV	350.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2362.750	50.30	-11.64	74.0	23.70	Peak	136.00	150	Horizontal	Pass
1**	2362.750	34.96	-11.64	54.0	19.04	AV	136.00	150	Horizontal	Pass
2	2463.000	98.52	-10.69	74.0	-24.52	Peak	144.00	150	Horizontal	N/A
2**	2463.000	90.42	-10.69	54.0	-36.42	AV	144.00	150	Horizontal	N/A
3	4917.000	48.07	-1.24	74.0	25.93	Peak	141.00	150	Horizontal	Pass
3**	4917.000	41.68	-1.24	54.0	12.32	AV	141.00	150	Horizontal	Pass
4	7319.000	55.10	2.65	74.0	18.90	Peak	2.00	150	Horizontal	Pass
4**	7319.000	44.02	2.65	54.0	9.98	AV	2.00	150	Horizontal	Pass
5	12810.500	53.20	2.90	74.0	20.80	Peak	276.00	150	Horizontal	Pass
5**	12810.500	42.46	2.90	54.0	11.54	AV	276.00	150	Horizontal	Pass
6	15219.500	53.62	4.85	74.0	20.38	Peak	100.00	150	Horizontal	Pass
6**	15219.500	43.75	4.85	54.0	10.25	AV	100.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2320.750	53.92	-11.24	74.0	20.08	Peak	270.00	150	Vertical	Pass
1**	2320.750	38.06	-11.24	54.0	15.94	AV	270.00	150	Vertical	Pass
2	2426.000	99.45	-11.08	74.0	-25.45	Peak	70.00	150	Vertical	N/A
2**	2426.000	90.14	-11.08	54.0	-36.14	AV	70.00	150	Vertical	N/A
3	4832.000	52.82	-1.52	74.0	21.18	Peak	356.00	150	Vertical	Pass
3**	4832.000	45.93	-1.52	54.0	8.07	AV	356.00	150	Vertical	Pass
4	6736.000	54.86	2.69	74.0	19.14	Peak	199.00	150	Vertical	Pass
4**	6736.000	44.39	2.69	54.0	9.61	AV	199.00	150	Vertical	Pass
5	11464.500	52.15	1.72	74.0	21.85	Peak	98.00	150	Vertical	Pass
5**	11464.500	41.39	1.72	54.0	12.61	AV	98.00	150	Vertical	Pass
6	16545.000	54.85	4.86	74.0	19.15	Peak	360.00	150	Vertical	Pass
6**	16545.000	43.82	4.86	54.0	10.18	AV	360.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2310.500	50.17	-11.19	74.0	23.83	Peak	263.00	150	Horizontal	Pass
1**	2310.500	36.67	-11.19	54.0	17.33	AV	263.00	150	Horizontal	Pass
2	2414.000	96.29	-11.44	74.0	-22.29	Peak	147.00	150	Horizontal	N/A
2**	2414.000	86.71	-11.44	54.0	-32.71	AV	147.00	150	Horizontal	N/A
3	4835.500	48.93	-1.39	74.0	25.07	Peak	359.00	150	Horizontal	Pass
3**	4835.500	41.92	-1.39	54.0	12.08	AV	359.00	150	Horizontal	Pass
4	7319.500	55.56	2.66	74.0	18.44	Peak	77.00	150	Horizontal	Pass
4**	7319.500	44.83	2.66	54.0	9.17	AV	77.00	150	Horizontal	Pass
5	10375.500	52.38	1.91	74.0	21.62	Peak	7.00	150	Horizontal	Pass
5**	10375.500	41.68	1.91	54.0	12.32	AV	7.00	150	Horizontal	Pass
6	14772.500	54.54	4.19	74.0	19.46	Peak	360.00	150	Horizontal	Pass
6**	14772.500	43.67	4.19	54.0	10.33	AV	360.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2328.500	52.19	-10.94	74.0	21.81	Peak	302.00	150	Vertical	Pass
1**	2328.500	38.63	-10.94	54.0	15.37	AV	302.00	150	Vertical	Pass
2	2430.750	100.50	-11.15	74.0	-26.50	Peak	69.00	150	Vertical	N/A
2**	2430.750	91.98	-11.15	54.0	-37.98	AV	69.00	150	Vertical	N/A
3	4869.500	53.15	-1.28	74.0	20.85	Peak	351.00	150	Vertical	Pass
3**	4869.500	46.70	-1.28	54.0	7.30	AV	351.00	150	Vertical	Pass
4	6894.500	55.12	2.33	74.0	18.88	Peak	0.00	150	Vertical	Pass
4**	6894.500	44.04	2.33	54.0	9.96	AV	0.00	150	Vertical	Pass
5	10371.000	52.17	2.13	74.0	21.83	Peak	350.00	150	Vertical	Pass
5**	10371.000	42.12	2.13	54.0	11.88	AV	350.00	150	Vertical	Pass
6	16295.999	54.39	5.33	74.0	19.61	Peak	0.00	150	Vertical	Pass
6**	16295.999	44.27	5.33	54.0	9.73	AV	0.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2347.000	50.82	-11.06	74.0	23.18	Peak	258.00	150	Horizontal	Pass
1**	2347.000	36.54	-11.06	54.0	17.46	AV	258.00	150	Horizontal	Pass
2	2432.250	96.94	-11.18	74.0	-22.94	Peak	142.00	150	Horizontal	N/A
2**	2432.250	88.95	-11.18	54.0	-34.95	AV	142.00	150	Horizontal	N/A
3	4866.000	48.86	-1.25	74.0	25.14	Peak	312.00	150	Horizontal	Pass
3**	4866.000	41.96	-1.25	54.0	12.04	AV	312.00	150	Horizontal	Pass
4	6858.500	55.38	2.53	74.0	18.62	Peak	350.00	150	Horizontal	Pass
4**	6858.500	44.27	2.53	54.0	9.73	AV	350.00	150	Horizontal	Pass
5	10298.500	52.16	1.96	74.0	21.84	Peak	39.00	150	Horizontal	Pass
5**	10298.500	41.05	1.96	54.0	12.95	AV	39.00	150	Horizontal	Pass
6	14837.500	54.80	4.73	74.0	19.20	Peak	305.00	150	Horizontal	Pass
6**	14837.500	43.31	4.73	54.0	10.69	AV	305.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2346.000	53.70	-11.00	74.0	20.30	Peak	105.00	150	Vertical	Pass
1**	2346.000	37.18	-11.00	54.0	16.82	AV	105.00	150	Vertical	Pass
2	2449.000	101.53	-11.45	74.0	-27.53	Peak	96.00	150	Vertical	N/A
2**	2449.000	92.61	-11.45	54.0	-38.61	AV	96.00	150	Vertical	N/A
3	4895.500	56.20	-1.20	74.0	17.80	Peak	0.00	150	Vertical	Pass
3**	4895.500	47.78	-1.20	54.0	6.22	AV	0.00	150	Vertical	Pass
4	6723.000	55.26	2.41	74.0	18.74	Peak	31.00	150	Vertical	Pass
4**	6723.000	44.07	2.41	54.0	9.93	AV	31.00	150	Vertical	Pass
5	12548.500	53.25	3.00	74.0	20.75	Peak	69.00	150	Vertical	Pass
5**	12548.500	42.69	3.00	54.0	11.31	AV	69.00	150	Vertical	Pass
6	17588.500	55.22	6.72	74.0	18.78	Peak	11.00	150	Vertical	Pass
6**	17588.500	45.92	6.72	54.0	8.08	AV	11.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2356.750	50.77	-11.55	74.0	23.23	Peak	210.00	150	Horizontal	Pass
1**	2356.750	36.44	-11.55	54.0	17.56	AV	210.00	150	Horizontal	Pass
2	2449.500	98.10	-11.45	74.0	-24.10	Peak	156.00	150	Horizontal	N/A
2**	2449.500	89.29	-11.45	54.0	-35.29	AV	156.00	150	Horizontal	N/A
3	6892.500	55.40	2.23	74.0	18.60	Peak	40.00	150	Horizontal	Pass
3**	6892.500	44.22	2.23	54.0	9.78	AV	40.00	150	Horizontal	Pass
4	7853.000	55.30	3.75	74.0	18.70	Peak	0.00	150	Horizontal	Pass
4**	7853.000	45.19	3.75	54.0	8.81	AV	0.00	150	Horizontal	Pass
5	10933.500	52.09	1.67	74.0	21.91	Peak	360.00	150	Horizontal	Pass
5**	10933.500	41.21	1.67	54.0	12.79	AV	360.00	150	Horizontal	Pass
6	17593.500	56.52	6.92	74.0	17.48	Peak	320.00	150	Horizontal	Pass
6**	17593.500	44.99	6.92	54.0	9.01	AV	320.00	150	Horizontal	Pass

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1 GHz to 18 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1711.700	44.77	-17.52	74.0	29.23	Peak	237.00	150	Vertical	Pass
1**	1711.700	38.93	-17.52	54.0	15.07	AV	237.00	150	Vertical	Pass
2	2408.300	105.80	-12.67	74.0	-31.80	Peak	41.00	150	Vertical	N/A
2**	2408.300	98.16	-12.67	54.0	-44.16	AV	41.00	150	Vertical	N/A
3	3882.750	47.18	-3.76	74.0	26.82	Peak	190.00	150	Vertical	Pass
3**	3882.750	35.55	-3.76	54.0	18.45	AV	190.00	150	Vertical	Pass
4	4822.750	52.13	-2.07	74.0	21.87	Peak	288.00	150	Vertical	Pass
4**	4822.750	48.10	-2.07	54.0	5.90	AV	288.00	150	Vertical	Pass
5	7342.250	53.27	1.07	74.0	20.73	Peak	209.00	150	Vertical	Pass
5**	7342.250	41.99	1.07	54.0	12.01	AV	209.00	150	Vertical	Pass
6	13452.500	49.94	0.46	74.0	24.06	Peak	85.00	150	Vertical	Pass
6**	13452.500	40.07	0.46	54.0	13.93	AV	85.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1728.800	41.57	-17.14	74.0	32.43	Peak	241.00	150	Horizontal	Pass
1**	1728.800	30.67	-17.14	54.0	23.33	AV	241.00	150	Horizontal	Pass
2	2408.200	99.93	-12.67	74.0	-25.93	Peak	35.00	150	Horizontal	N/A
2**	2408.200	91.59	-12.67	54.0	-37.59	AV	35.00	150	Horizontal	N/A
3	3761.250	47.13	-3.64	74.0	26.87	Peak	275.00	150	Horizontal	Pass
3**	3761.250	35.94	-3.64	54.0	18.06	AV	275.00	150	Horizontal	Pass
4	4818.000	52.26	-2.00	74.0	21.74	Peak	245.00	150	Horizontal	Pass
4**	4818.000	39.83	-2.00	54.0	14.17	AV	245.00	150	Horizontal	Pass
5	7413.000	53.34	2.14	74.0	20.66	Peak	193.00	150	Horizontal	Pass
5**	7413.000	42.56	2.14	54.0	11.44	AV	193.00	150	Horizontal	Pass
6	12518.000	49.67	-1.83	74.0	24.33	Peak	145.00	150	Horizontal	Pass
6**	12518.000	38.49	-1.83	54.0	15.51	AV	145.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2092.700	49.40	-14.83	74.0	24.60	Peak	203.00	150	Vertical	Pass
1**	2092.700	46.63	-14.83	54.0	7.37	AV	203.00	150	Vertical	Pass
2	2438.500	105.77	-12.81	74.0	-31.77	Peak	52.00	150	Vertical	N/A
2**	2438.500	98.45	-12.81	54.0	-44.45	AV	52.00	150	Vertical	N/A
3	3730.000	47.04	-3.92	74.0	26.96	Peak	25.00	150	Vertical	Pass
3**	3730.000	36.07	-3.92	54.0	17.93	AV	25.00	150	Vertical	Pass
4	4869.250	56.26	-2.34	74.0	17.74	Peak	229.00	150	Vertical	Pass
4**	4869.250	46.40	-2.34	54.0	7.60	AV	229.00	150	Vertical	Pass
5	7399.750	53.54	2.11	74.0	20.46	Peak	107.00	150	Vertical	Pass
5**	7399.750	42.44	2.11	54.0	11.56	AV	107.00	150	Vertical	Pass
6	13639.500	49.50	0.71	74.0	24.50	Peak	0.00	150	Vertical	Pass
6**	13639.500	38.58	0.71	54.0	15.42	AV	0.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2089.900	51.10	-14.86	74.0	22.90	Peak	277.00	150	Horizontal	Pass
1**	2089.900	39.28	-14.86	54.0	14.72	AV	277.00	150	Horizontal	Pass
2	2440.800	99.01	-12.84	74.0	-25.01	Peak	23.00	150	Horizontal	N/A
2**	2440.800	90.82	-12.84	54.0	-36.82	AV	23.00	150	Horizontal	N/A
3	3723.500	47.76	-3.85	74.0	26.24	Peak	179.00	150	Horizontal	Pass
3**	3723.500	36.21	-3.85	54.0	17.79	AV	179.00	150	Horizontal	Pass
4	4872.750	54.35	-2.37	74.0	19.65	Peak	272.00	150	Horizontal	Pass
4**	4872.750	44.72	-2.37	54.0	9.28	AV	272.00	150	Horizontal	Pass
5	7867.500	53.62	1.89	74.0	20.38	Peak	22.00	150	Horizontal	Pass
5**	7867.500	42.67	1.89	54.0	11.33	AV	22.00	150	Horizontal	Pass
6	13610.500	50.23	0.52	74.0	23.77	Peak	257.00	150	Horizontal	Pass
6**	13610.500	39.39	0.52	54.0	14.61	AV	257.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2020.600	50.32	-15.54	74.0	23.68	Peak	245.00	150	Vertical	Pass
1**	2020.600	44.17	-15.54	54.0	9.83	AV	245.00	150	Vertical	Pass
2	2459.400	105.22	-12.89	74.0	-31.22	Peak	32.00	150	Vertical	N/A
2**	2459.400	97.99	-12.89	54.0	-43.99	AV	32.00	150	Vertical	N/A
3	3187.250	51.31	-7.55	74.0	22.69	Peak	90.00	150	Vertical	Pass
3**	3187.250	39.58	-7.55	54.0	14.42	AV	90.00	150	Vertical	Pass
4	4932.750	54.05	-2.30	74.0	19.95	Peak	256.00	150	Vertical	Pass
4**	4932.750	43.23	-2.30	54.0	10.77	AV	256.00	150	Vertical	Pass
5	7914.500	54.21	2.12	74.0	19.79	Peak	163.00	150	Vertical	Pass
5**	7914.500	42.31	2.12	54.0	11.69	AV	163.00	150	Vertical	Pass
6	13474.000	49.58	0.42	74.0	24.42	Peak	186.00	150	Vertical	Pass
6**	13474.000	40.52	0.42	54.0	13.48	AV	186.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2092.300	47.84	-14.84	74.0	26.16	Peak	234.00	150	Horizontal	Pass
1**	2092.300	40.03	-14.84	54.0	13.97	AV	234.00	150	Horizontal	Pass
2	2459.500	98.54	-12.89	74.0	-24.54	Peak	12.00	150	Horizontal	N/A
2**	2459.500	90.98	-12.89	54.0	-36.98	AV	12.00	150	Horizontal	N/A
3	3598.500	45.84	-4.94	74.0	28.16	Peak	75.00	150	Horizontal	Pass
3**	3598.500	35.13	-4.94	54.0	18.87	AV	75.00	150	Horizontal	Pass
4	4934.500	49.84	-2.34	74.0	24.16	Peak	268.00	150	Horizontal	Pass
4**	4934.500	40.09	-2.34	54.0	13.91	AV	268.00	150	Horizontal	Pass
5	7270.500	52.53	0.85	74.0	21.47	Peak	171.00	150	Horizontal	Pass
5**	7270.500	41.94	0.85	54.0	12.06	AV	171.00	150	Horizontal	Pass
6	13435.500	49.63	0.53	74.0	24.37	Peak	195.00	150	Horizontal	Pass
6**	13435.500	39.57	0.53	54.0	14.43	AV	195.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1997.000	52.38	-15.88	74.0	21.62	Peak	124.00	150	Vertical	Pass
1**	1997.000	34.49	-15.88	54.0	19.51	AV	124.00	150	Vertical	Pass
2	2436.200	104.52	-12.82	74.0	-30.52	Peak	9.00	150	Vertical	N/A
2**	2436.200	96.40	-12.82	54.0	-42.40	AV	9.00	150	Vertical	N/A
3	3081.500	47.30	-7.55	74.0	26.70	Peak	81.00	150	Vertical	Pass
3**	3081.500	37.08	-7.55	54.0	16.92	AV	81.00	150	Vertical	Pass
4	4859.750	51.32	-2.20	74.0	22.68	Peak	195.00	150	Vertical	Pass
4**	4859.750	40.07	-2.20	54.0	13.93	AV	195.00	150	Vertical	Pass
5	7788.500	52.92	1.66	74.0	21.08	Peak	301.00	150	Vertical	Pass
5**	7788.500	41.47	1.66	54.0	12.53	AV	301.00	150	Vertical	Pass
6	13480.500	50.19	0.41	74.0	23.81	Peak	85.00	150	Vertical	Pass
6**	13480.500	39.82	0.41	54.0	14.18	AV	85.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1996.700	47.41	-15.88	74.0	26.59	Peak	164.00	150	Horizontal	Pass
1**	1996.700	27.86	-15.88	54.0	26.14	AV	164.00	150	Horizontal	Pass
2	2438.100	95.34	-12.81	74.0	-21.34	Peak	0.00	150	Horizontal	N/A
2**	2438.100	86.89	-12.81	54.0	-32.89	AV	0.00	150	Horizontal	N/A
3	2763.800	45.29	-11.23	74.0	28.71	Peak	3.00	150	Horizontal	Pass
3**	2763.800	29.52	-11.23	54.0	24.48	AV	3.00	150	Horizontal	Pass
4	4835.000	50.51	-2.28	74.0	23.49	Peak	100.00	150	Horizontal	Pass
4**	4835.000	37.27	-2.28	54.0	16.73	AV	100.00	150	Horizontal	Pass
5	6970.750	52.69	0.82	74.0	21.31	Peak	106.00	150	Horizontal	Pass
5**	6970.750	40.89	0.82	54.0	13.11	AV	106.00	150	Horizontal	Pass
6	13469.000	49.73	0.42	74.0	24.27	Peak	306.00	150	Horizontal	Pass
6**	13469.000	39.28	0.42	54.0	14.72	AV	306.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1991.300	49.99	-16.01	74.0	24.01	Peak	124.00	150	Vertical	Pass
1**	1991.300	29.27	-16.01	54.0	24.73	AV	124.00	150	Vertical	Pass
2	2441.600	104.78	-12.88	74.0	-30.78	Peak	46.00	150	Vertical	N/A
2**	2441.600	96.50	-12.88	54.0	-42.50	AV	46.00	150	Vertical	N/A
3	3080.000	48.32	-7.49	74.0	25.68	Peak	81.00	150	Vertical	Pass
3**	3080.000	34.26	-7.49	54.0	19.74	AV	81.00	150	Vertical	Pass
4	4891.500	52.89	-2.35	74.0	21.11	Peak	240.00	150	Vertical	Pass
4**	4891.500	41.98	-2.35	54.0	12.02	AV	240.00	150	Vertical	Pass
5	7426.000	53.08	1.48	74.0	20.92	Peak	347.00	150	Vertical	Pass
5**	7426.000	42.18	1.48	54.0	11.82	AV	347.00	150	Vertical	Pass
6	13330.500	50.07	0.61	74.0	23.93	Peak	9.00	150	Vertical	Pass
6**	13330.500	37.97	0.61	54.0	16.03	AV	9.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2091.000	50.56	-14.85	74.0	23.44	Peak	11.00	150	Horizontal	Pass
1**	2091.000	40.03	-14.85	54.0	13.97	AV	11.00	150	Horizontal	Pass
2	2441.900	96.61	-12.89	74.0	-22.61	Peak	11.00	150	Horizontal	N/A
2**	2441.900	88.32	-12.89	54.0	-34.32	AV	11.00	150	Horizontal	N/A
3	3711.500	46.91	-4.20	74.0	27.09	Peak	120.00	150	Horizontal	Pass
3**	3711.500	35.97	-4.20	54.0	18.03	AV	120.00	150	Horizontal	Pass
4	4841.750	49.96	-2.31	74.0	24.04	Peak	17.00	150	Horizontal	Pass
4**	4841.750	37.71	-2.31	54.0	16.29	AV	17.00	150	Horizontal	Pass
5	7413.000	53.39	2.14	74.0	20.61	Peak	313.00	150	Horizontal	Pass
5**	7413.000	42.20	2.14	54.0	11.80	AV	313.00	150	Horizontal	Pass
6	13501.500	48.64	0.40	74.0	25.36	Peak	360.00	150	Horizontal	Pass
6**	13501.500	39.48	0.40	54.0	14.52	AV	360.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2210.000	58.52	-12.94	74.0	15.48	Peak	49.00	150	Vertical	Pass
1**	2210.000	42.20	-12.94	54.0	11.80	AV	49.00	150	Vertical	Pass
2	2464.500	104.11	-12.89	74.0	-30.11	Peak	27.00	150	Vertical	N/A
2**	2464.500	96.50	-12.89	54.0	-42.50	AV	27.00	150	Vertical	N/A
3	3192.000	49.39	-7.55	74.0	24.61	Peak	359.00	150	Vertical	Pass
3**	3192.000	34.57	-7.55	54.0	19.43	AV	359.00	150	Vertical	Pass
4	4916.750	51.41	-2.19	74.0	22.59	Peak	271.00	150	Vertical	Pass
4**	4916.750	41.63	-2.19	54.0	12.37	AV	271.00	150	Vertical	Pass
5	7389.000	53.28	1.67	74.0	20.72	Peak	152.00	150	Vertical	Pass
5**	7389.000	42.12	1.67	54.0	11.88	AV	152.00	150	Vertical	Pass
6	13352.500	49.34	0.80	74.0	24.66	Peak	0.00	150	Vertical	Pass
6**	13352.500	38.49	0.80	54.0	15.51	AV	0.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2092.000	54.49	-14.84	74.0	19.51	Peak	33.00	150	Horizontal	Pass
1**	2092.000	38.39	-14.84	54.0	15.61	AV	33.00	150	Horizontal	Pass
2	2467.300	95.07	-12.91	74.0	-21.07	Peak	359.00	150	Horizontal	N/A
2**	2467.300	86.59	-12.91	54.0	-32.59	AV	359.00	150	Horizontal	N/A
3	3766.500	47.10	-3.90	74.0	26.90	Peak	0.00	150	Horizontal	Pass
3**	3766.500	35.82	-3.90	54.0	18.18	AV	0.00	150	Horizontal	Pass
4	4783.000	50.15	-1.91	74.0	23.85	Peak	75.00	150	Horizontal	Pass
4**	4783.000	38.71	-1.91	54.0	15.29	AV	75.00	150	Horizontal	Pass
5	7769.250	53.29	1.58	74.0	20.71	Peak	50.00	150	Horizontal	Pass
5**	7769.250	42.36	1.58	54.0	11.64	AV	50.00	150	Horizontal	Pass
6	13031.000	49.22	-0.44	74.0	24.78	Peak	304.00	150	Horizontal	Pass
6**	13031.000	39.26	-0.44	54.0	14.74	AV	304.00	150	Horizontal	Pass

A.7 Band Edge (Restricted-band band-edge)

Note ¹: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

Note ²: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

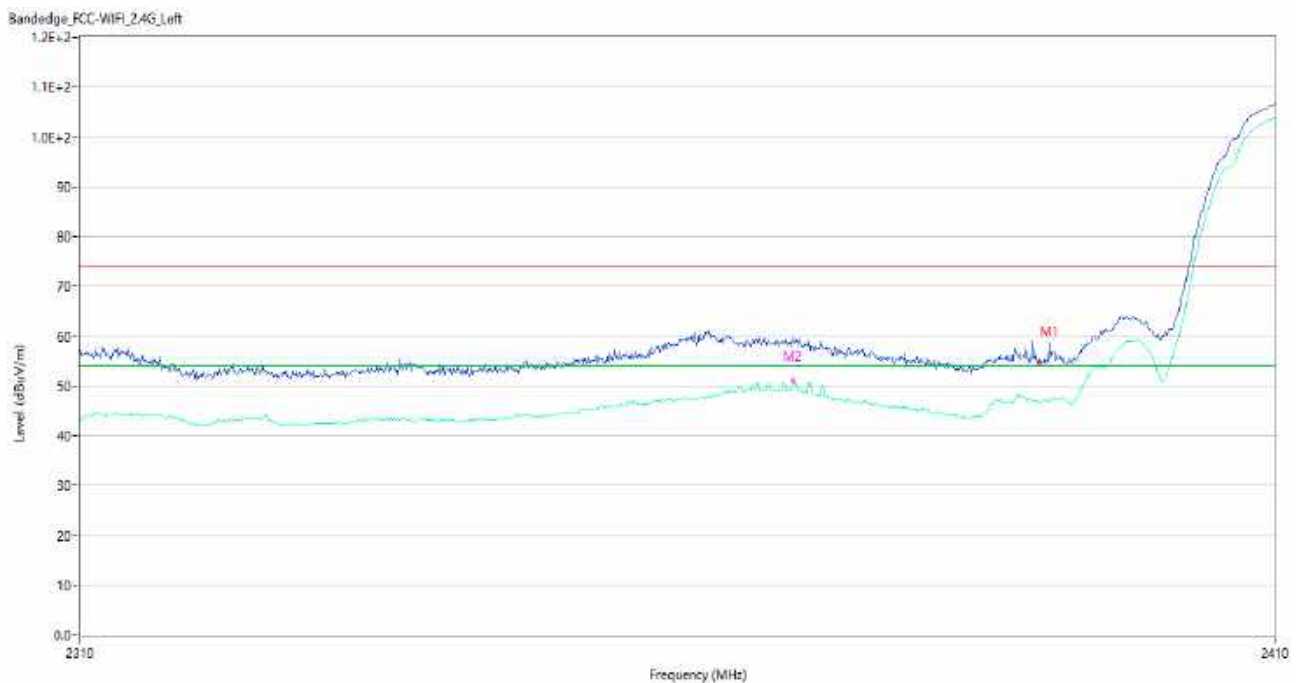
Note ³: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note ⁴: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data and Plots

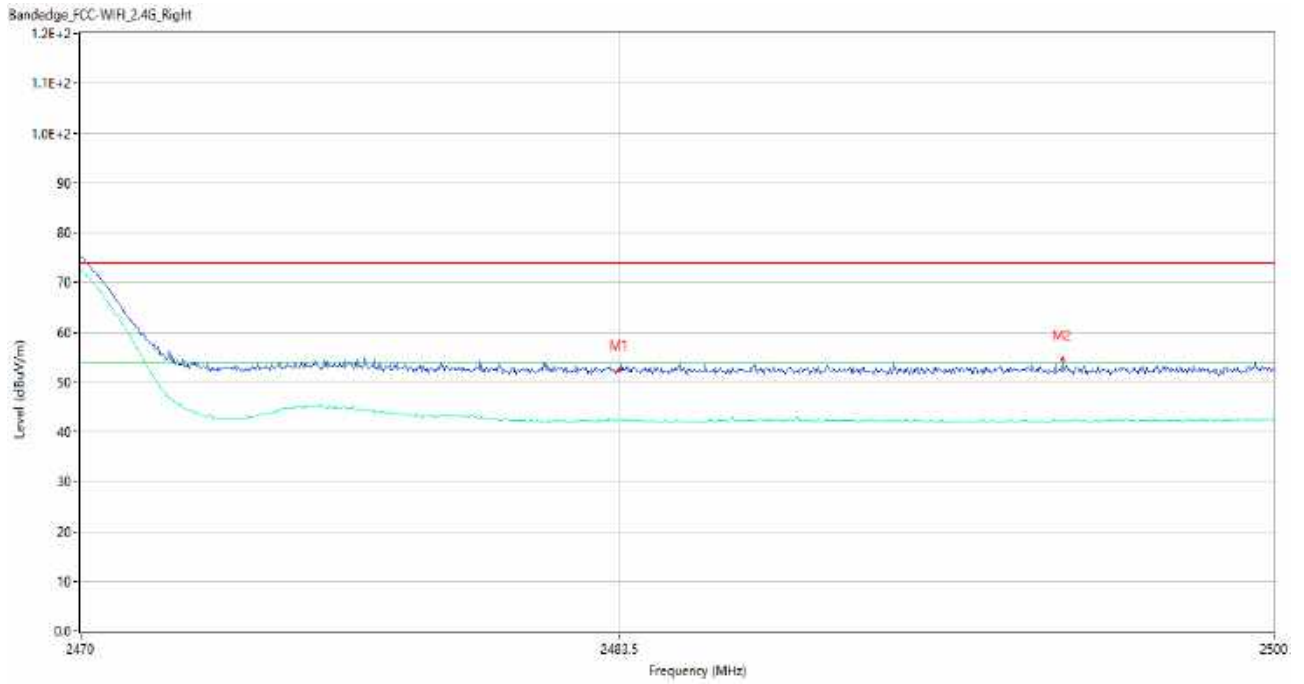
Main Antenna

802.11b LOW CHANNEL



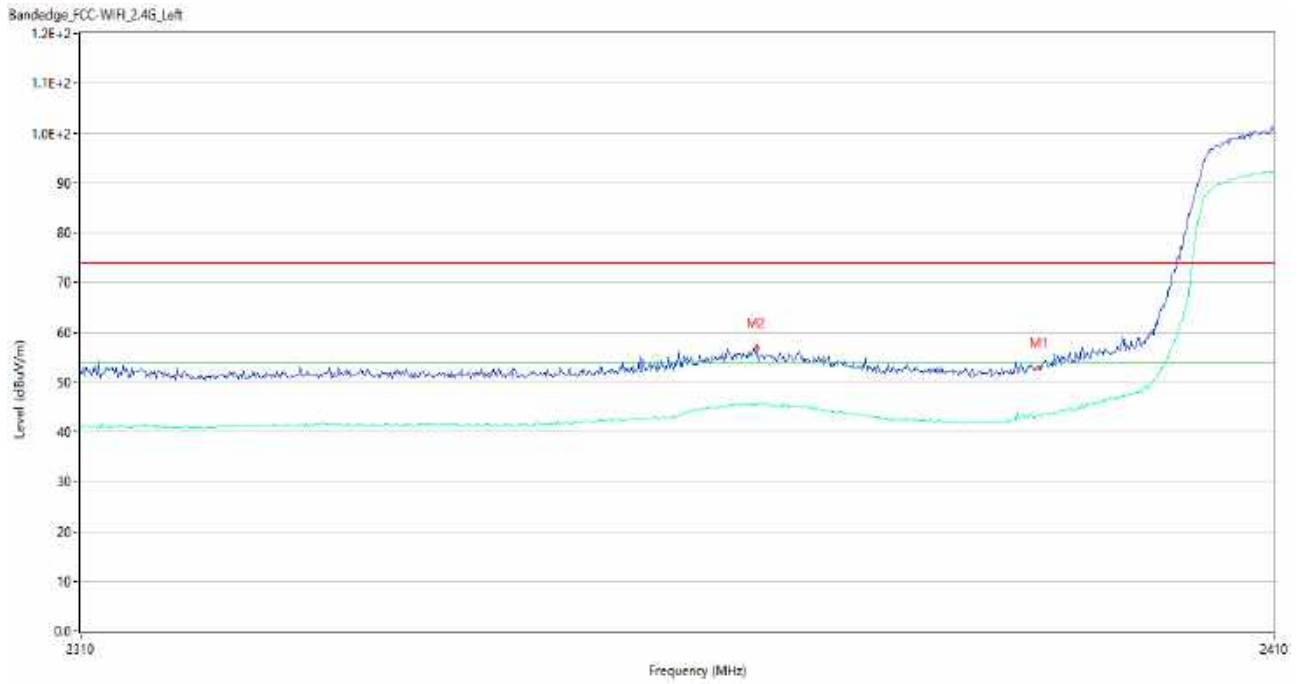
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	54.65	-3.73	74.0	19.35	Peak	151.00	150	Vertical	Pass
1**	2390.000	46.72	-3.73	54.0	7.28	AV	151.00	150	Vertical	Pass
2	2369.200	59.56	-2.91	74.0	14.44	Peak	117.00	150	Vertical	Pass
2**	2369.200	51.13	-2.91	54.0	2.87	AV	117.00	150	Vertical	Pass

802.11b HIGH CHANNEL



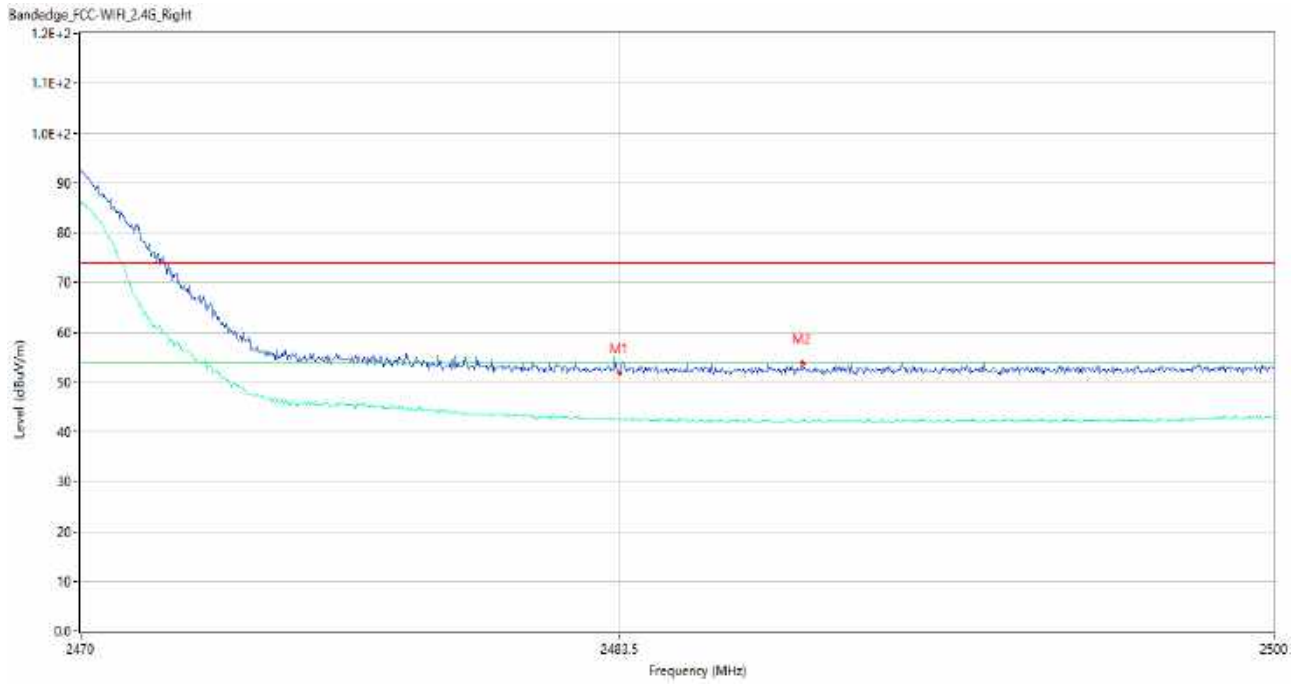
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	52.54	-2.60	74.0	21.46	Peak	0.00	150	Vertical	Pass
1**	2483.500	42.43	-2.60	54.0	11.57	AV	0.00	150	Vertical	Pass
2	2494.660	54.35	-2.80	74.0	19.65	Peak	266.00	150	Vertical	Pass
2**	2494.660	42.25	-2.80	54.0	11.75	AV	266.00	150	Vertical	Pass

802.11g LOW CHANNEL



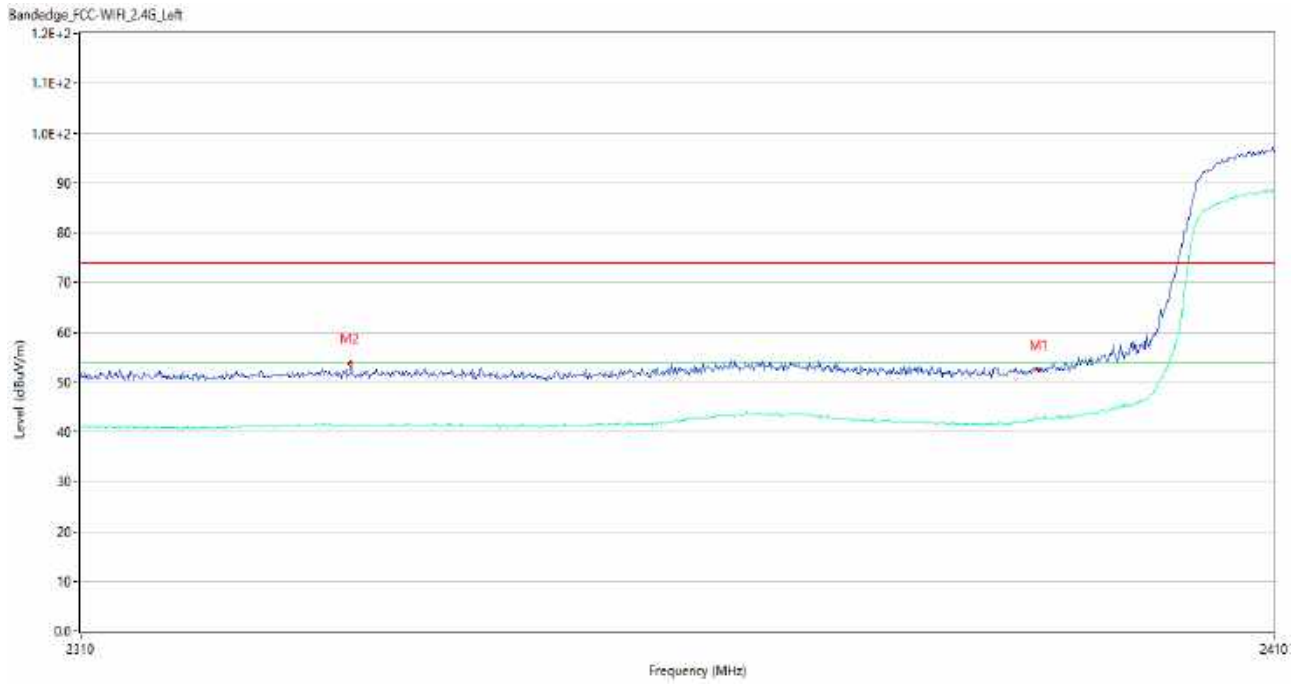
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	52.78	-3.73	74.0	21.22	Peak	266.93	150	Vertical	Pass
1**	2390.000	43.17	-3.73	54.0	10.83	AV	266.93	150	Vertical	Pass
2	2366.100	56.95	-3.25	74.0	17.05	Peak	119.00	150	Vertical	Pass
2**	2366.100	45.40	-3.25	54.0	8.60	AV	119.00	150	Vertical	Pass

802.11g HIGH CHANNEL



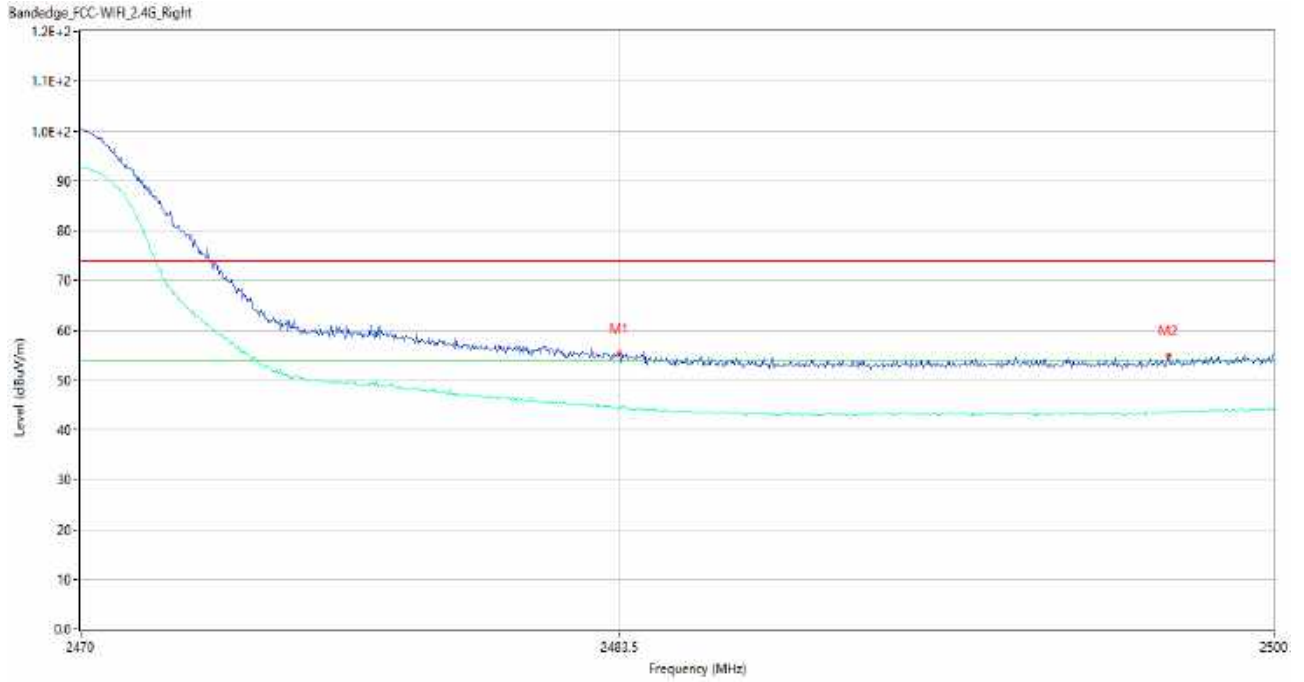
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	51.76	-2.60	74.0	22.24	Peak	19.00	150	Vertical	Pass
1**	2483.500	42.26	-2.60	54.0	11.74	AV	19.00	150	Vertical	Pass
2	2488.090	53.68	-2.66	74.0	20.32	Peak	7.00	150	Vertical	Pass
2**	2488.090	42.04	-2.66	54.0	11.96	AV	7.00	150	Vertical	Pass

802.11n20 LOW CHANNEL



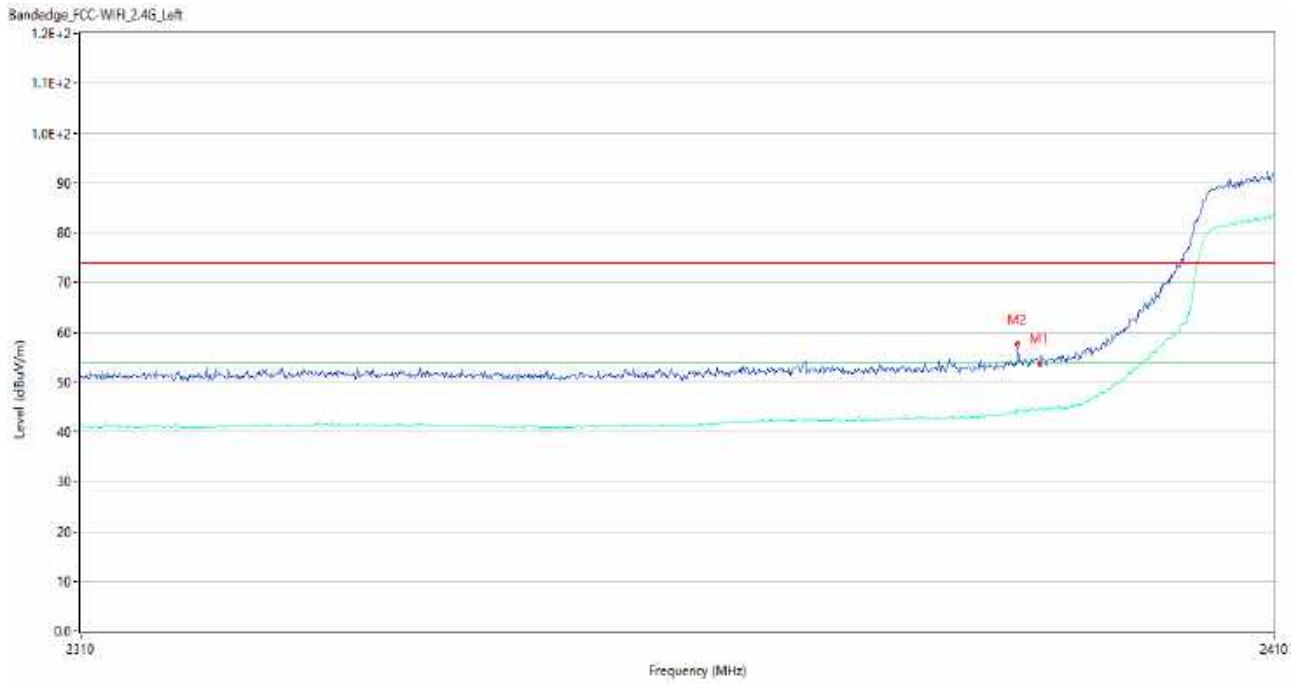
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	52.33	-3.73	74.0	21.67	Peak	343.69	150	Vertical	Pass
1**	2390.000	42.52	-3.73	54.0	11.48	AV	343.69	150	Vertical	Pass
2	2332.300	53.82	-3.01	74.0	20.18	Peak	208.00	150	Vertical	Pass
2**	2332.300	41.29	-3.01	54.0	12.71	AV	208.00	150	Vertical	Pass

802.11n20 HIGH CHANNEL



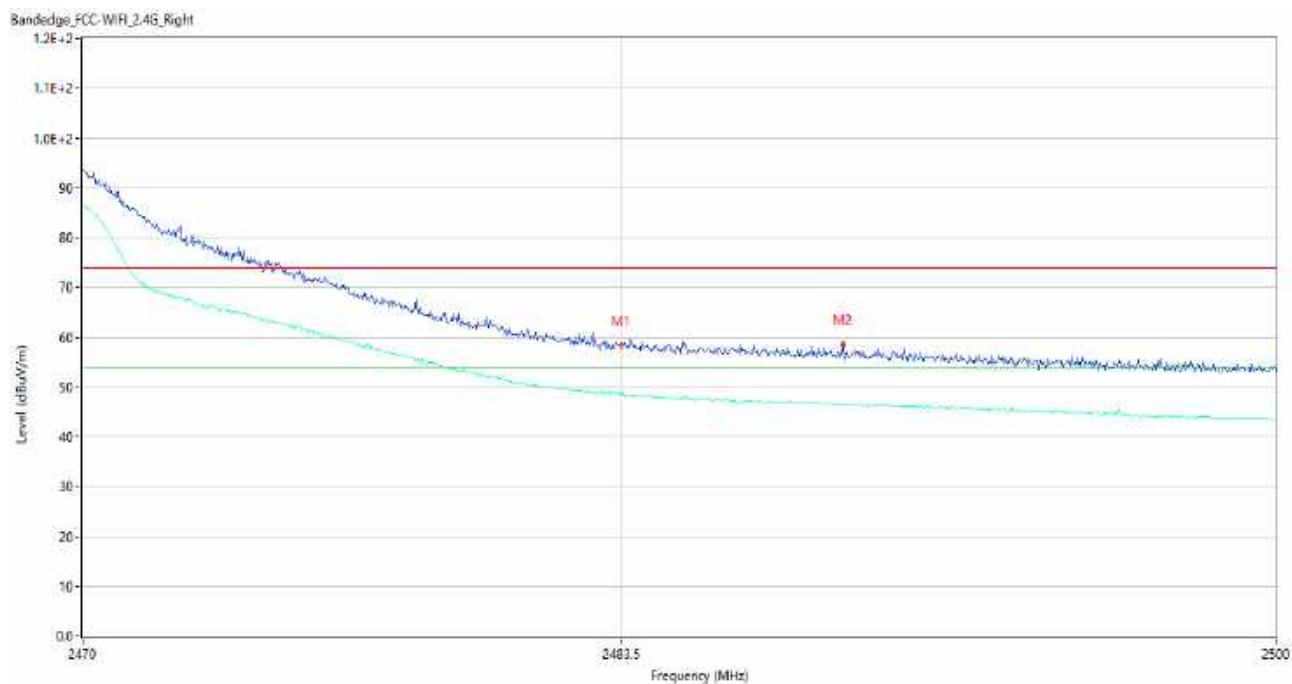
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	55.36	-2.60	74.0	18.64	Peak	27.00	150	Vertical	Pass
1**	2483.500	44.34	-2.60	54.0	9.66	AV	27.00	150	Vertical	Pass
2	2497.330	54.94	-2.86	74.0	19.06	Peak	37.00	150	Vertical	Pass
2**	2497.330	43.45	-2.86	54.0	10.55	AV	37.00	150	Vertical	Pass

802.11n40 LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	53.65	-3.73	74.0	20.35	Peak	232.84	150	Vertical	Pass
1**	2390.000	44.74	-3.73	54.0	9.26	AV	232.84	150	Vertical	Pass
2	2388.200	57.51	-3.63	74.0	16.49	Peak	199.00	150	Vertical	Pass
2**	2388.200	43.97	-3.63	54.0	10.03	AV	199.00	150	Vertical	Pass

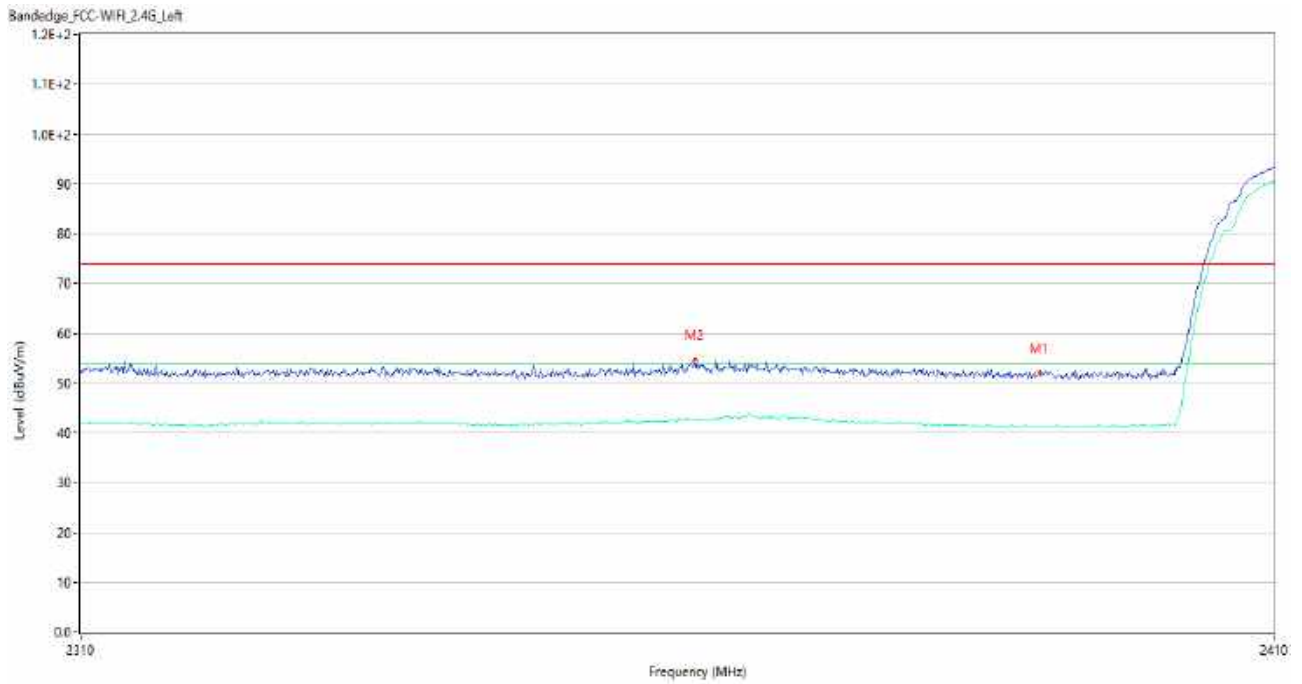
802.11n40 HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	58.27	-2.60	74.0	15.73	Peak	57.00	150	Vertical	Pass
1**	2483.500	48.24	-2.60	54.0	5.76	AV	57.00	150	Vertical	Pass
2	2489.080	58.53	-2.68	74.0	15.47	Peak	43.00	150	Vertical	Pass
2**	2489.080	46.33	-2.68	54.0	7.67	AV	43.00	150	Vertical	Pass

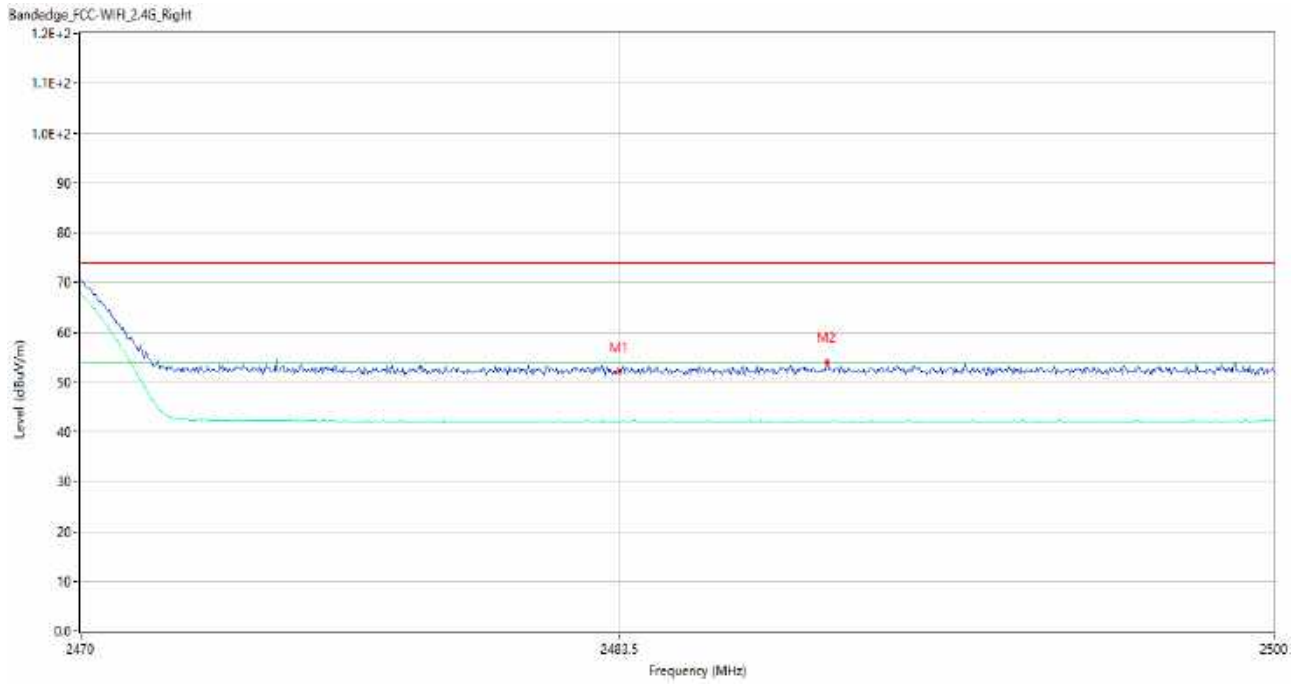
Aux. Antenna

802.11b LOW CHANNEL



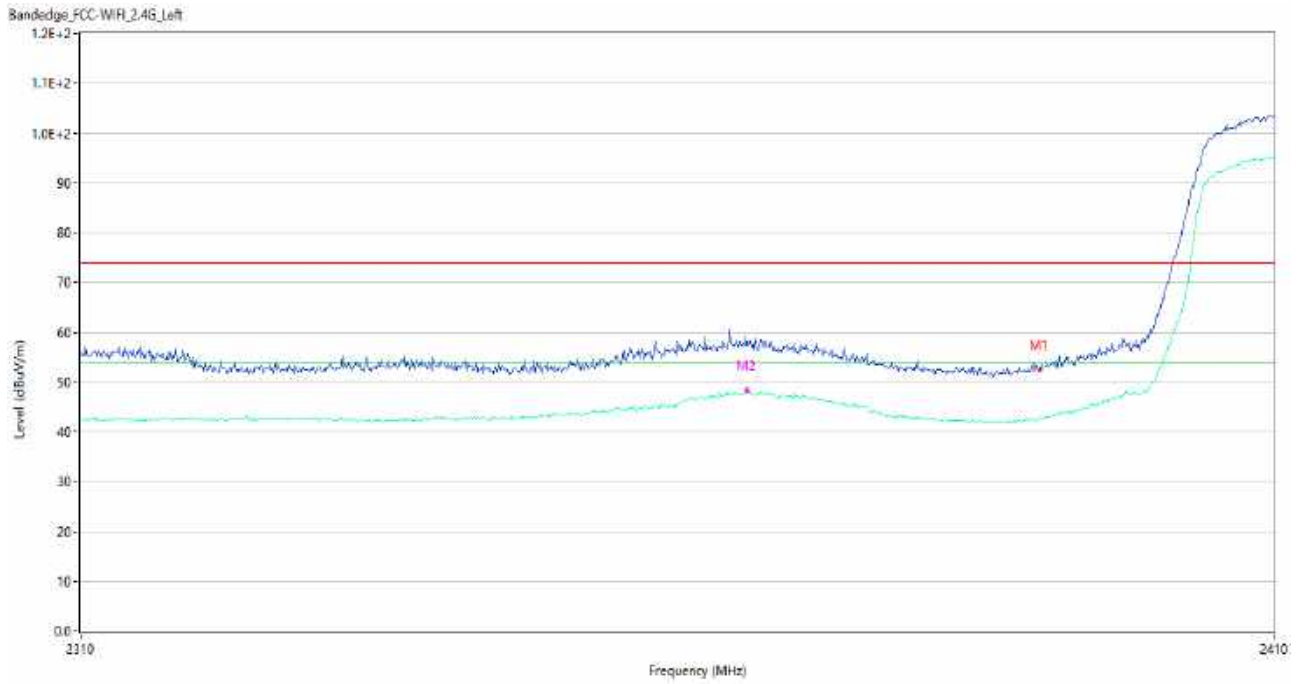
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	51.95	-3.73	74.0	22.05	Peak	141.89	100	Vertical	Pass
1**	2390.000	41.24	-3.73	54.0	12.76	AV	141.89	100	Vertical	Pass
2	2361.000	54.40	-3.72	74.0	19.60	Peak	111.00	100	Vertical	Pass
2**	2361.000	42.79	-3.72	54.0	11.21	AV	111.00	100	Vertical	Pass

802.11b HIGH CHANNEL



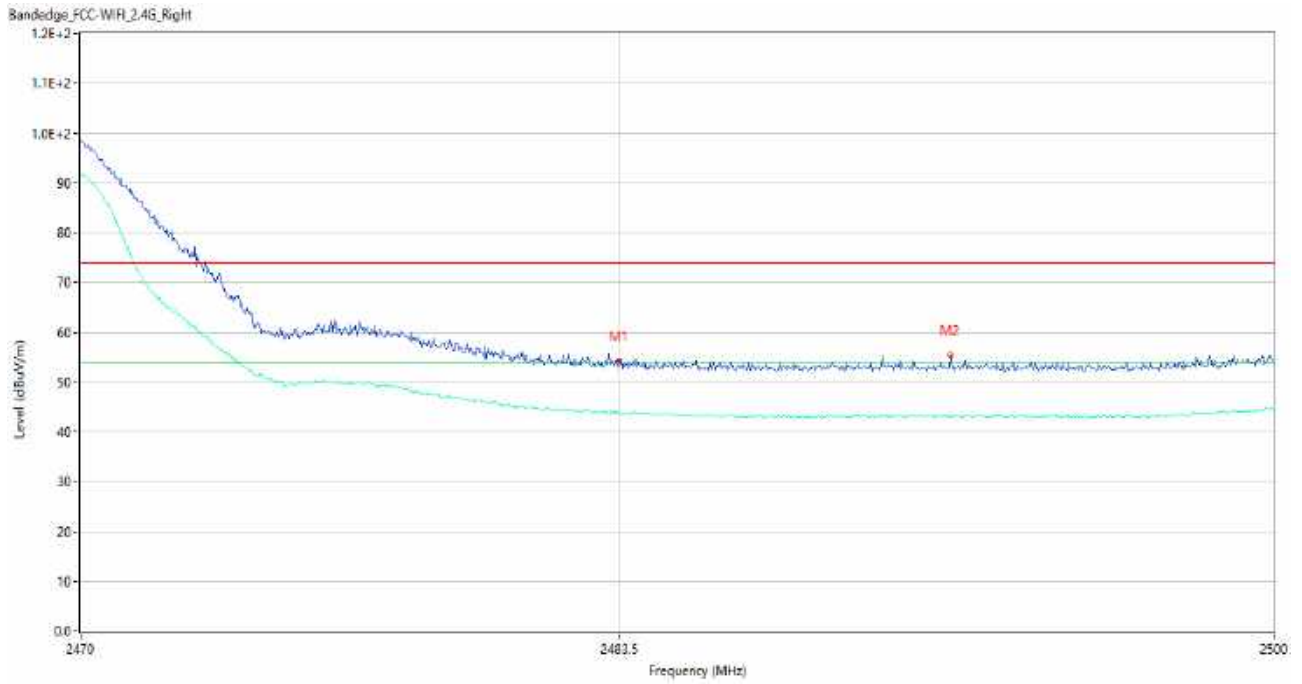
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	51.94	-2.60	74.0	22.06	Peak	19.00	150	Vertical	Pass
1**	2483.500	42.01	-2.60	54.0	11.99	AV	19.00	150	Vertical	Pass
2	2488.720	53.98	-2.67	74.0	20.02	Peak	130.00	150	Vertical	Pass
2**	2488.720	41.94	-2.67	54.0	12.06	AV	130.00	150	Vertical	Pass

802.11g LOW CHANNEL



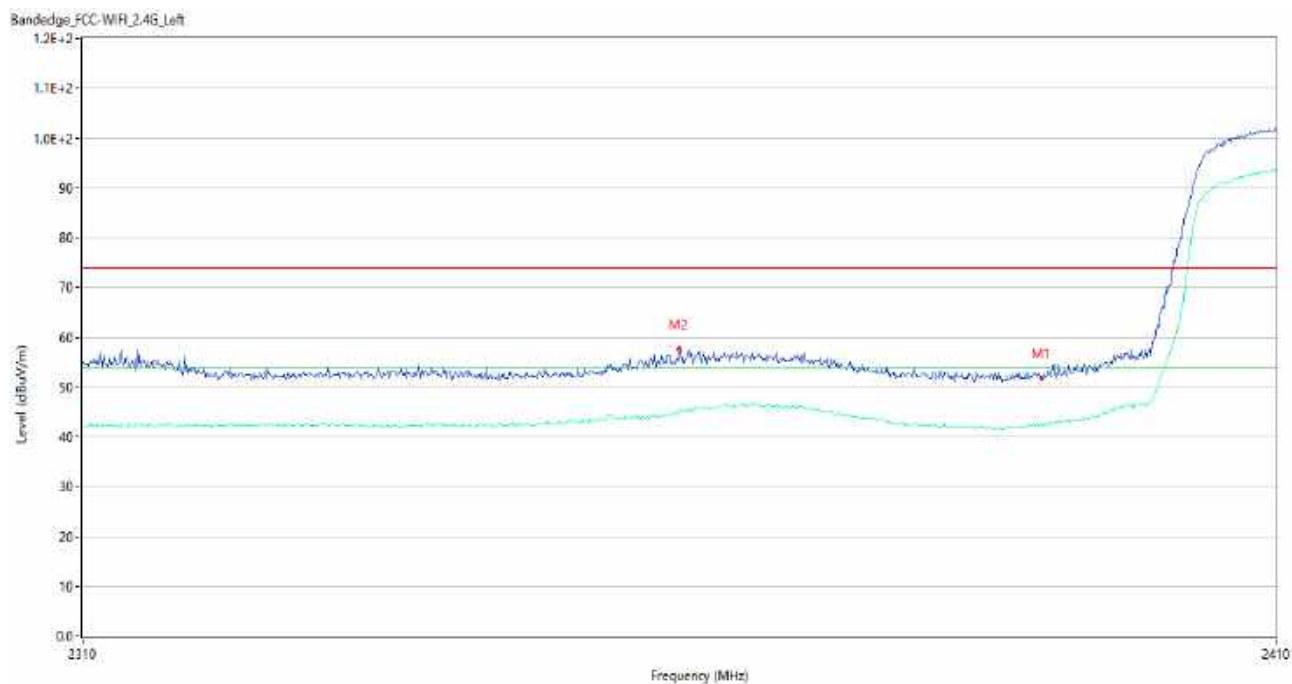
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	52.42	-3.73	74.0	21.58	Peak	265.71	150	Vertical	Pass
1**	2390.000	42.70	-3.73	54.0	11.30	AV	265.71	150	Vertical	Pass
2	2365.300	57.30	-3.32	74.0	16.70	Peak	288.00	150	Vertical	Pass
2**	2365.300	48.39	-3.32	54.0	5.61	AV	288.00	150	Vertical	Pass

802.11g HIGH CHANNEL



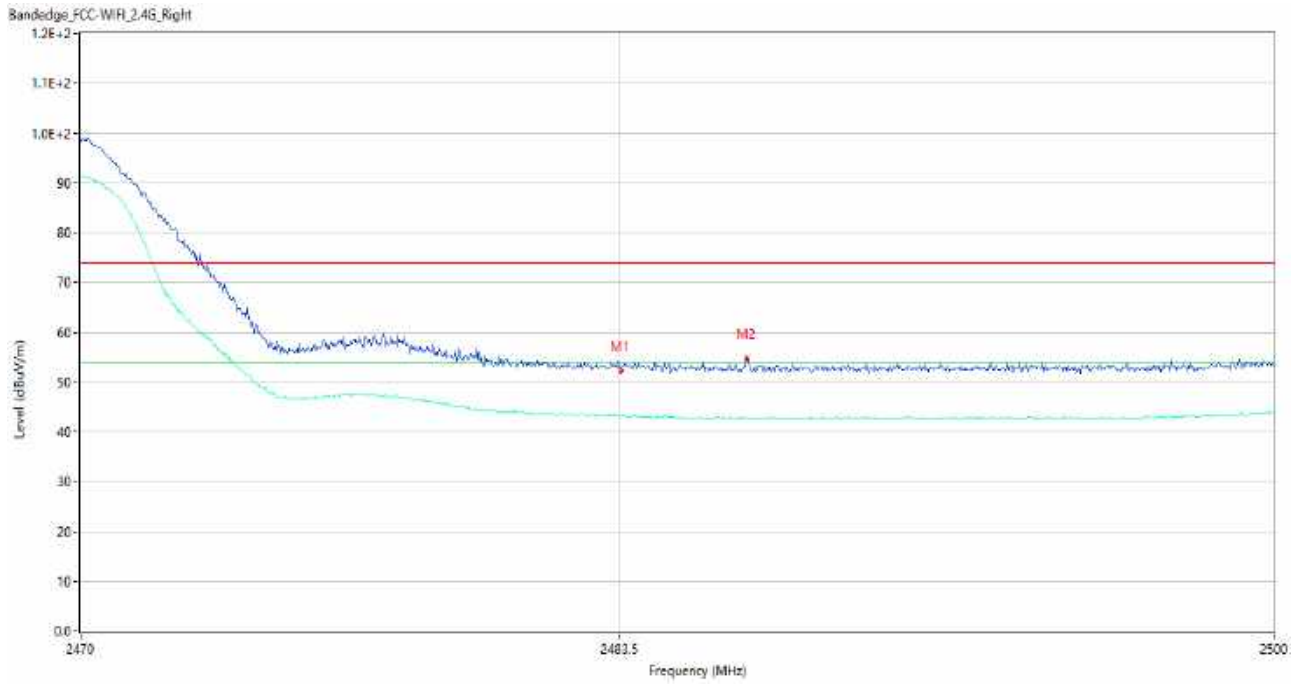
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	54.31	-2.60	74.0	19.69	Peak	70.00	150	Vertical	Pass
1**	2483.500	43.81	-2.60	54.0	10.19	AV	70.00	150	Vertical	Pass
2	2491.840	55.26	-2.74	74.0	18.74	Peak	53.00	150	Vertical	Pass
2**	2491.840	42.91	-2.74	54.0	11.09	AV	53.00	150	Vertical	Pass

802.11n20 LOW CHANNEL



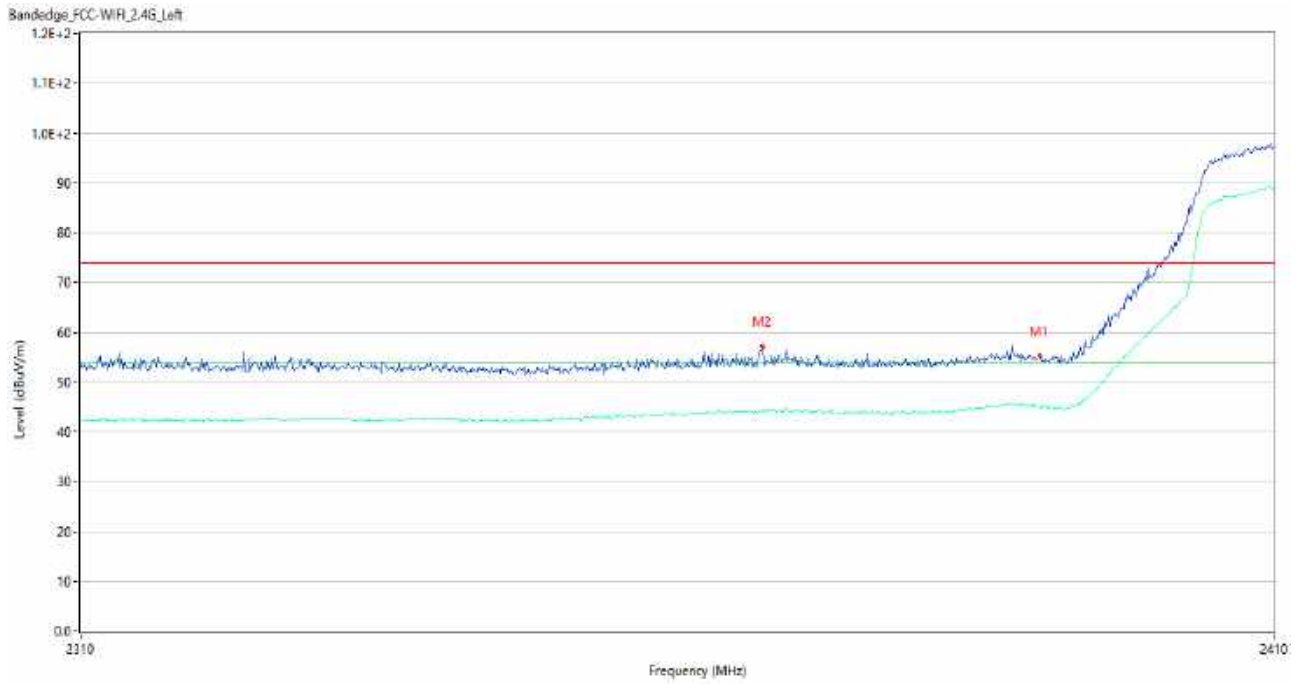
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	51.83	-3.73	74.0	22.17	Peak	302.00	150	Vertical	Pass
1**	2390.000	42.73	-3.73	54.0	11.27	AV	302.00	150	Vertical	Pass
2	2359.500	57.56	-3.83	74.0	16.44	Peak	265.00	150	Vertical	Pass
2**	2359.500	44.90	-3.83	54.0	9.10	AV	265.00	150	Vertical	Pass

802.11n20 HIGH CHANNEL



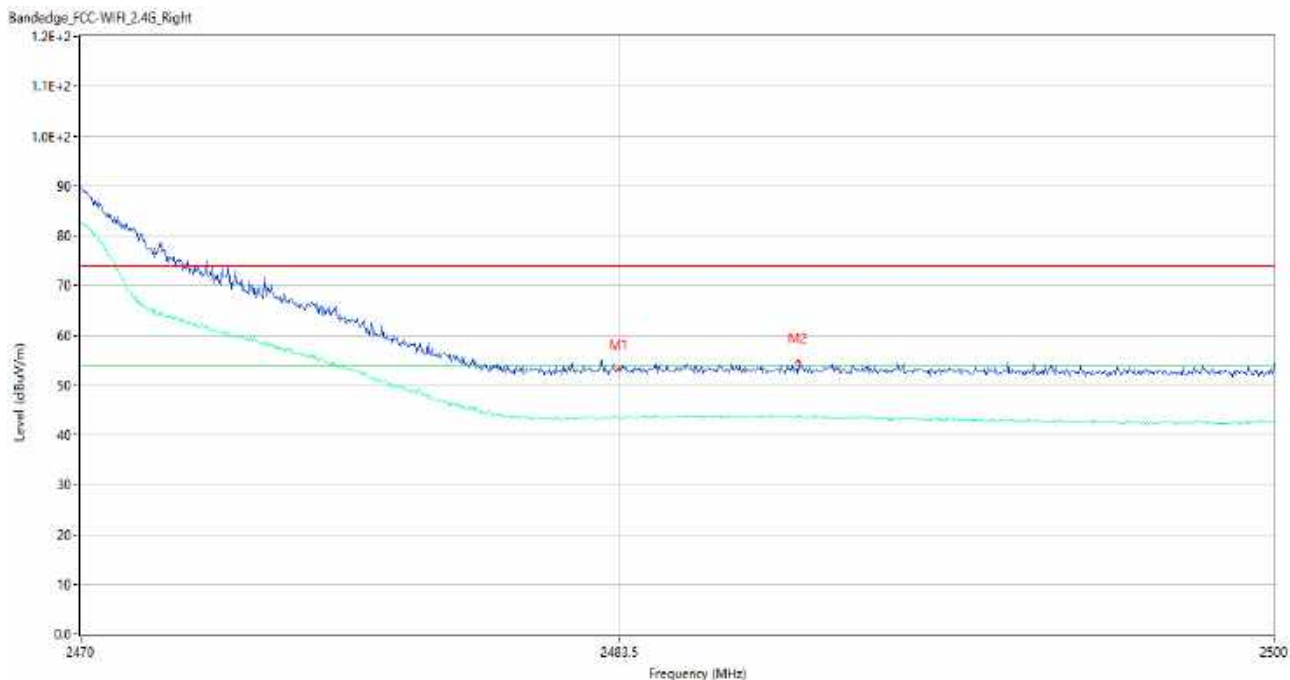
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	52.27	-2.60	74.0	21.73	Peak	71.00	150	Vertical	Pass
1**	2483.500	43.04	-2.60	54.0	10.96	AV	71.00	150	Vertical	Pass
2	2486.710	54.61	-2.64	74.0	19.39	Peak	69.00	150	Vertical	Pass
2**	2486.710	42.58	-2.64	54.0	11.42	AV	69.00	150	Vertical	Pass

802.11n40 LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	55.18	-3.73	74.0	18.82	Peak	263.75	150	Vertical	Pass
1**	2390.000	44.96	-3.73	54.0	9.04	AV	263.75	150	Vertical	Pass
2	2366.600	57.22	-3.20	74.0	16.78	Peak	291.00	150	Vertical	Pass
2**	2366.600	44.14	-3.20	54.0	9.86	AV	291.00	150	Vertical	Pass

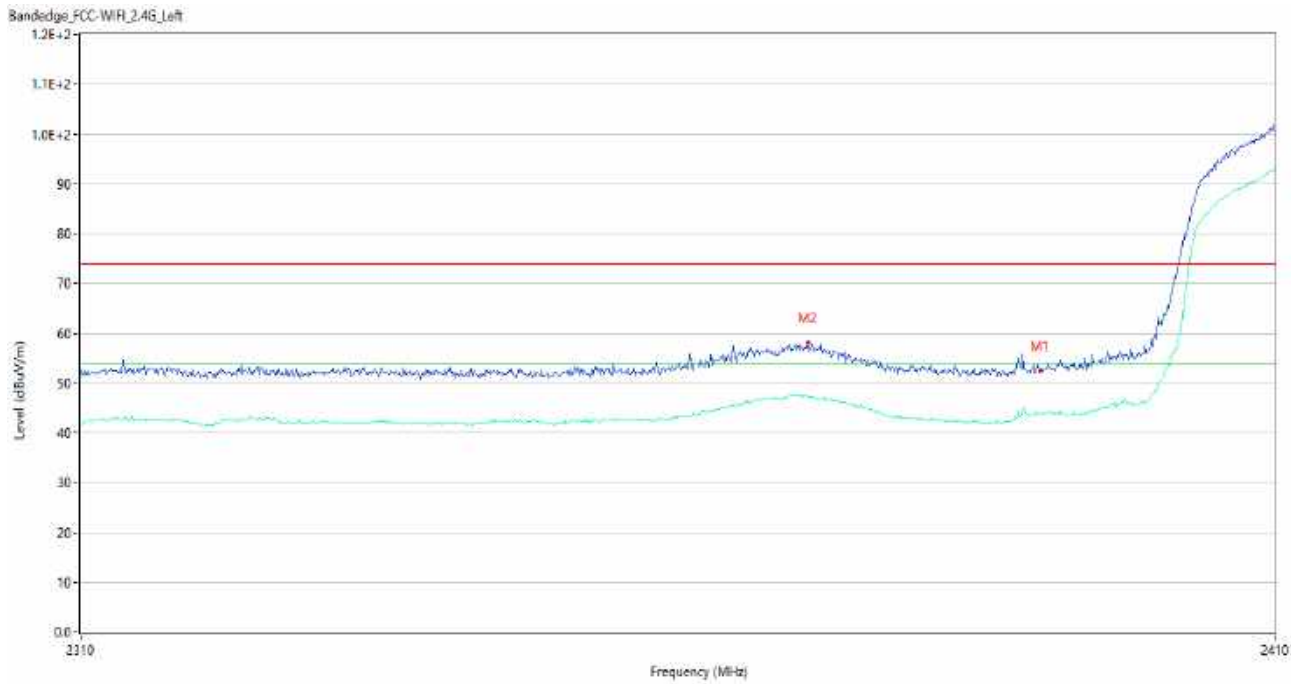
802.11n40 HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	53.03	-2.60	74.0	20.97	Peak	160.00	150	Vertical	Pass
1**	2483.500	43.13	-2.60	54.0	10.87	AV	160.00	150	Vertical	Pass
2	2488.000	54.50	-2.66	74.0	19.50	Peak	157.00	150	Vertical	Pass
2**	2488.000	43.39	-2.66	54.0	10.61	AV	157.00	150	Vertical	Pass

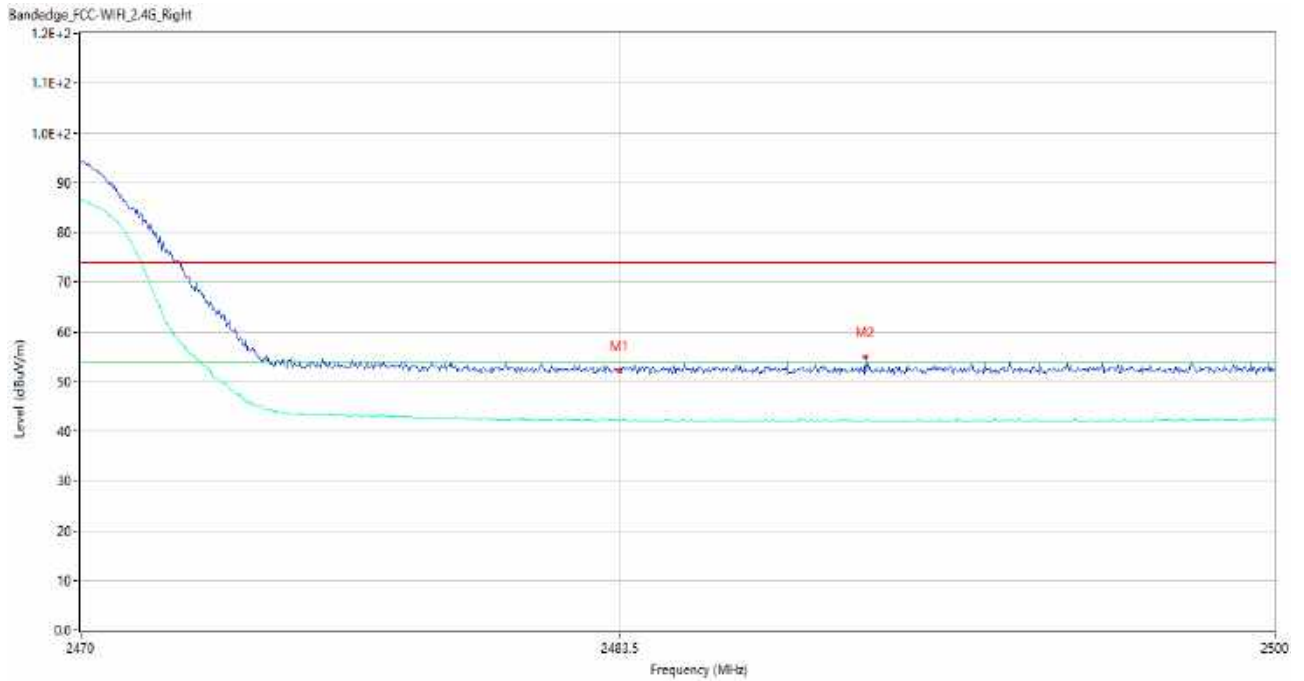
MIMO

802.11n20 LOW CHANNEL



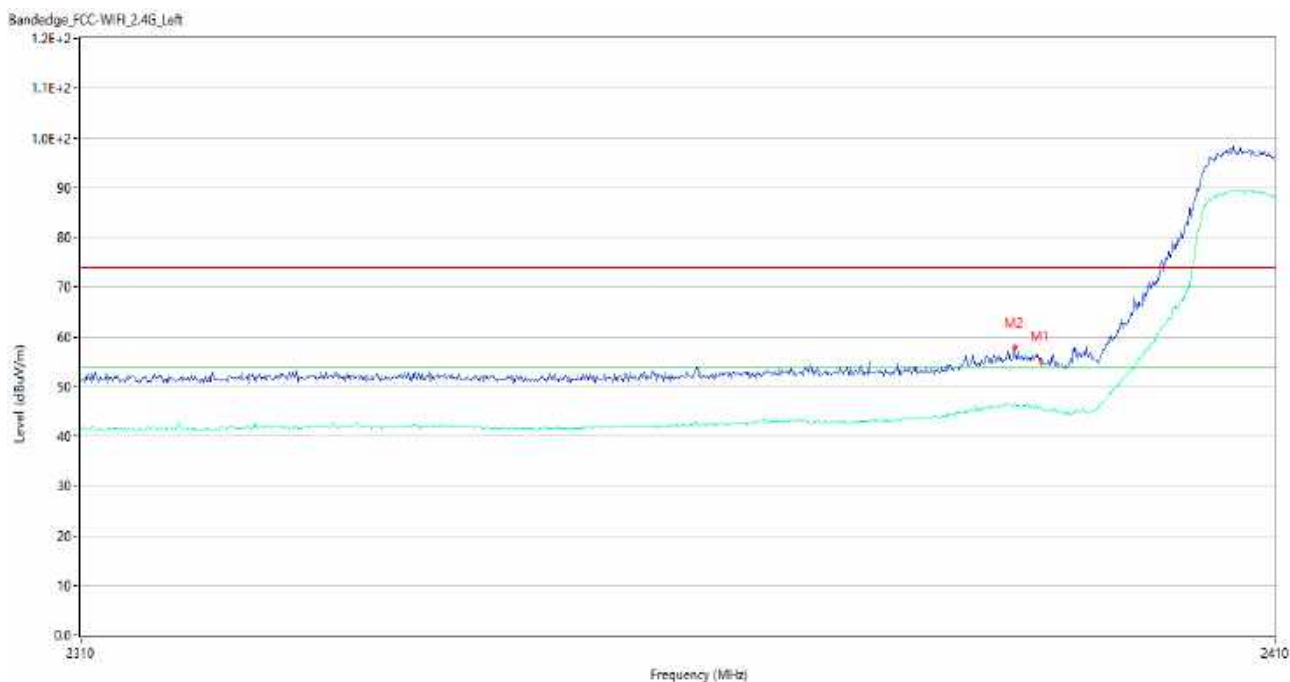
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	52.48	-3.73	74.0	21.52	Peak	164.94	150	Vertical	Pass
1**	2390.000	43.56	-3.73	54.0	10.44	AV	164.94	150	Vertical	Pass
2	2370.400	58.02	-2.82	74.0	15.98	Peak	159.00	150	Vertical	Pass
2**	2370.400	47.20	-2.82	54.0	6.80	AV	159.00	150	Vertical	Pass

802.11n20 HIGH CHANNEL



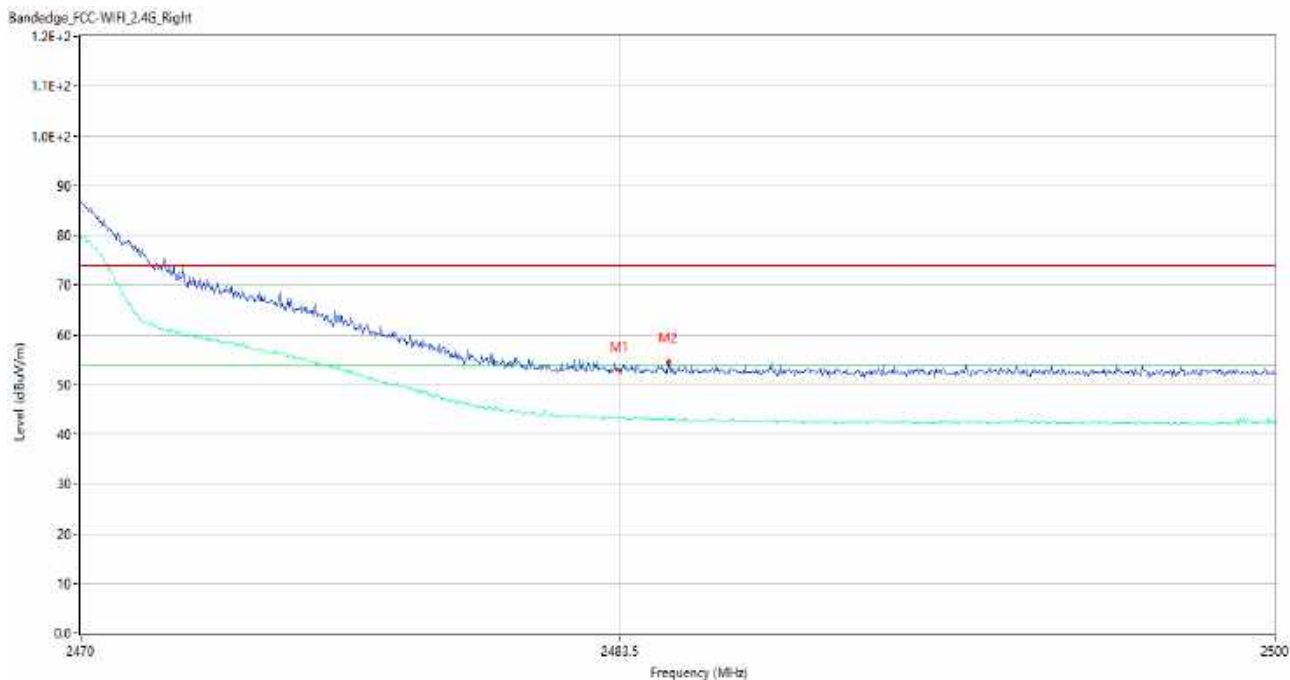
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	52.16	-2.60	74.0	21.84	Peak	360.00	150	Vertical	Pass
1**	2483.500	42.08	-2.60	54.0	11.92	AV	360.00	150	Vertical	Pass
2	2489.680	54.87	-2.69	74.0	19.13	Peak	230.00	150	Vertical	Pass
2**	2489.680	41.96	-2.69	54.0	12.04	AV	230.00	150	Vertical	Pass

802.11n40 LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2390.000	55.04	-3.73	74.0	18.96	Peak	160.94	150	Vertical	Pass
1**	2390.000	45.84	-3.73	54.0	8.16	AV	160.94	150	Vertical	Pass
2	2387.800	57.78	-3.61	74.0	16.22	Peak	112.00	150	Vertical	Pass
2**	2387.800	46.24	-3.61	54.0	7.76	AV	112.00	150	Vertical	Pass

802.11n40 HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	52.71	-2.60	74.0	21.29	Peak	172.00	150	Vertical	Pass
1**	2483.500	43.27	-2.60	54.0	10.73	AV	172.00	150	Vertical	Pass
2	2484.730	54.40	-2.62	74.0	19.60	Peak	107.00	150	Vertical	Pass
2**	2484.730	43.02	-2.62	54.0	10.98	AV	107.00	150	Vertical	Pass

A.8 Power Spectral Density (PSD)

Note: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data

Main Antenna

802.11b Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-7.99	8
Middle	-8.70	8
High	-8.17	8

802.11g Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-8.22	8
Middle	-8.87	8
High	-8.77	8

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-12.21	8
Middle	-12.13	8
High	-12.21	8

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-13.85	8
Middle	-14.03	8
High	-14.60	8

Aux. Antenna

802.11b Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-16.51	8
Middle	-16.28	8
High	-16.59	8

802.11g Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-10.68	8
Middle	-11.68	8
High	-10.19	8

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-12.76	8
Middle	-11.81	8
High	-12.56	8

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-12.95	8
Middle	-13.05	8
High	-14.45	8

MIMO

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-11.28	8
Middle	-11.57	8
High	-11.84	8

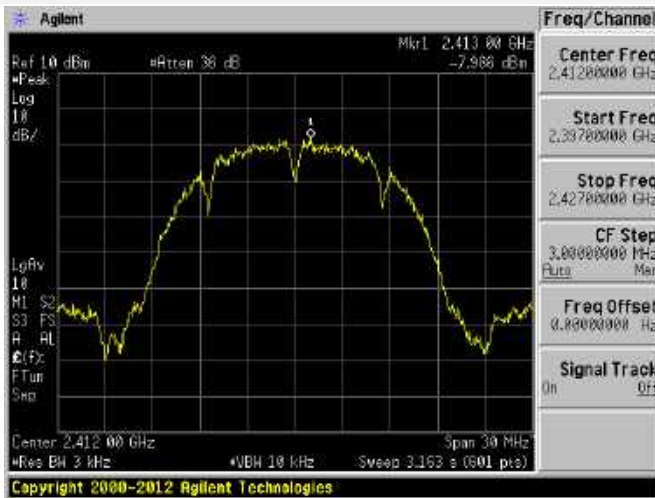
802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-13.53	8
Middle	-12.87	8
High	-13.62	8

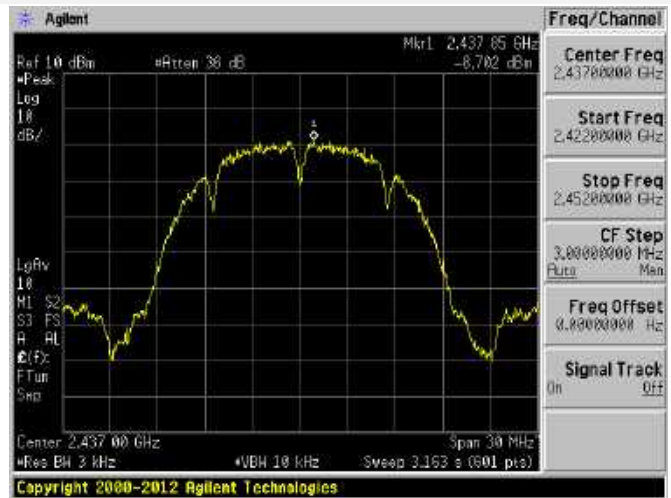
Test Plots

Main Antenna

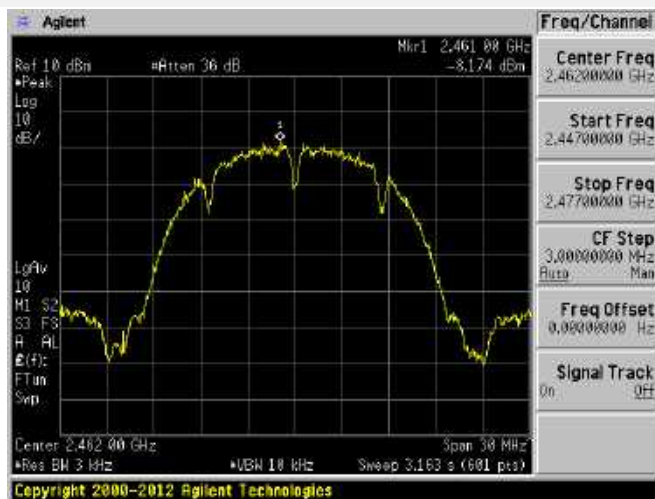
802.11b LOW CHANNEL



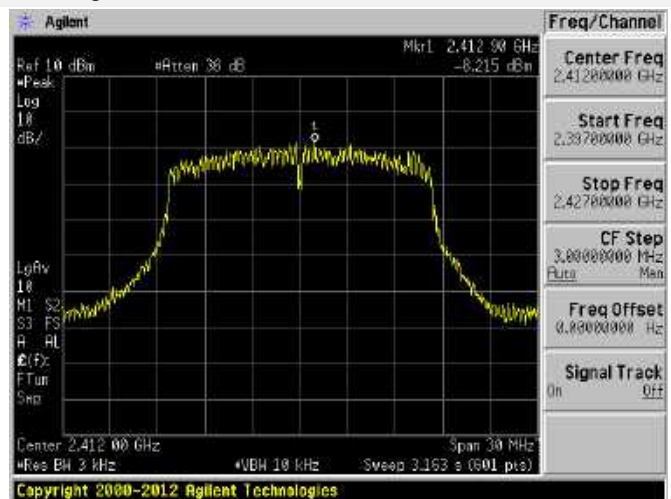
802.11b MIDDLE CHANNEL



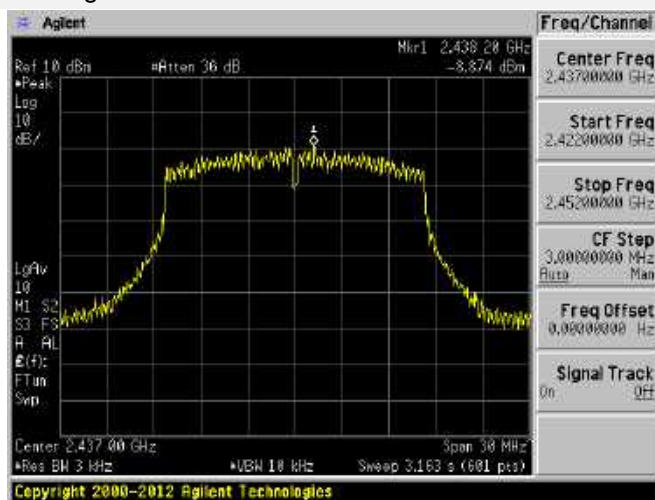
802.11b HIGH CHANNEL



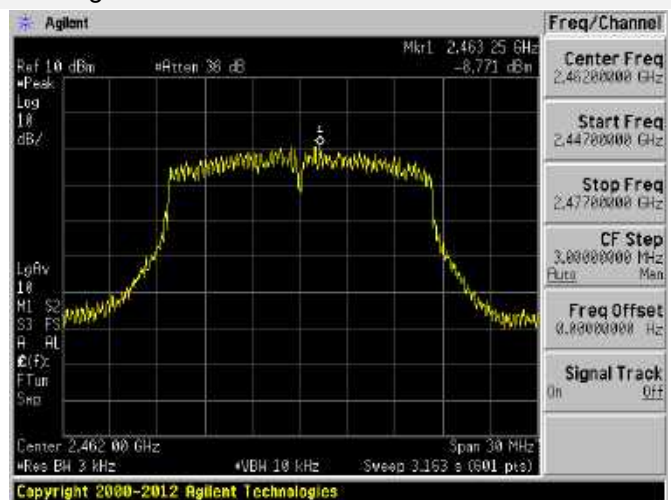
802.11g LOW CHANNEL



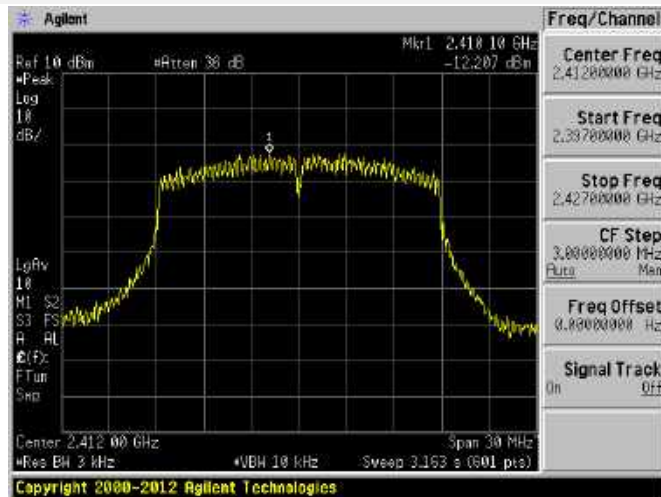
802.11g MIDDLE CHANNEL



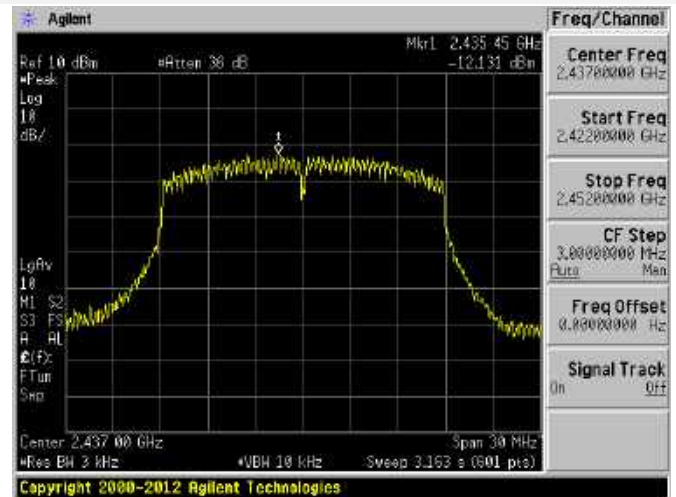
802.11g HIGH CHANNEL



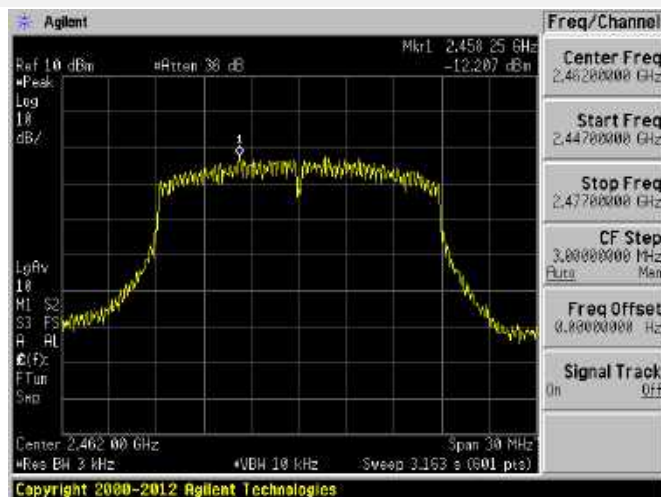
802.11n-20 MHz LOW CHANNEL



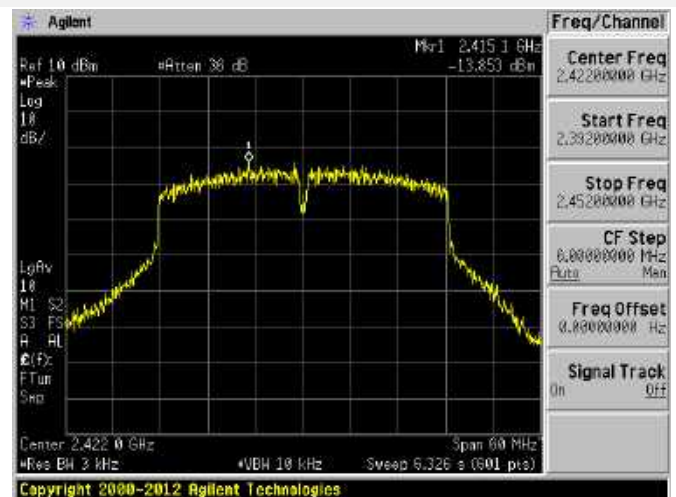
802.11 n-20 MHz MIDDLE CHANNEL



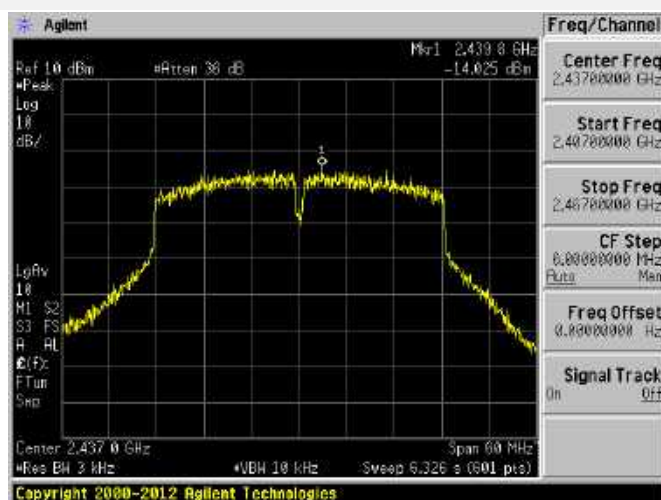
802.11n-20 MHz HIGH CHANNEL



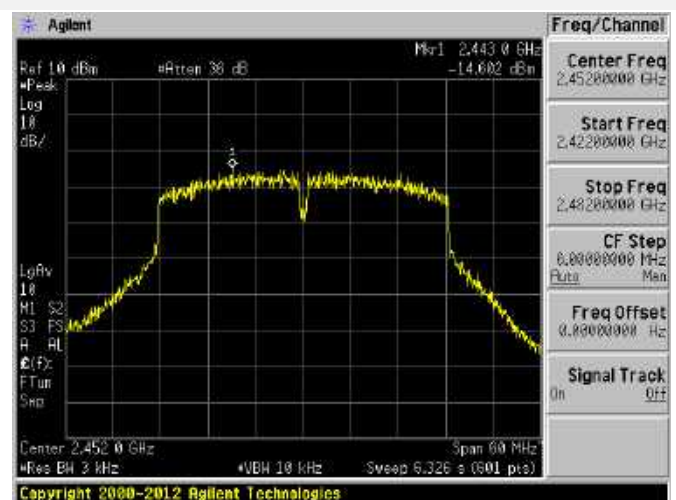
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL

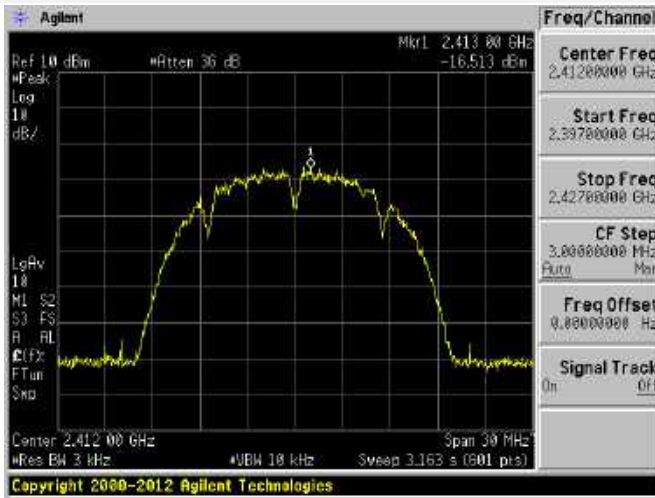


802.11n-40 MHz HIGH CHANNEL

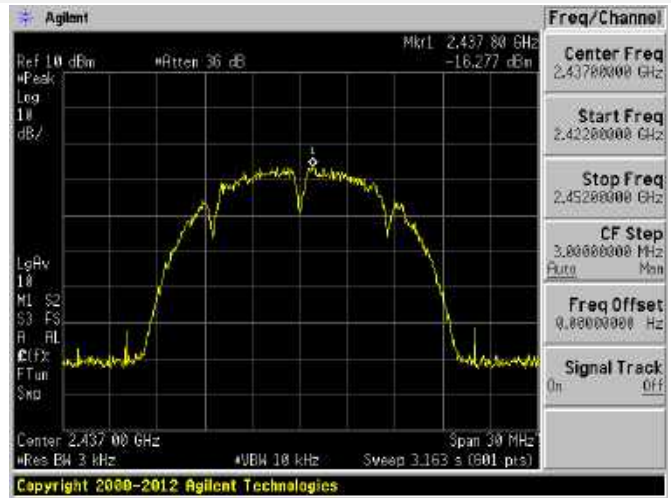


Aux. Antenna

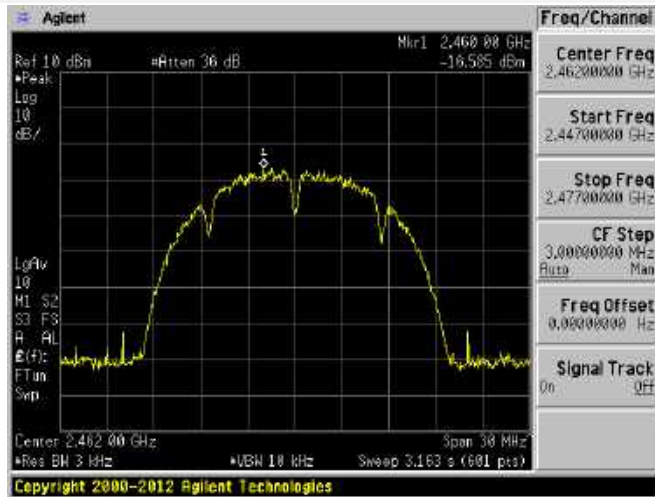
802.11b LOW CHANNEL



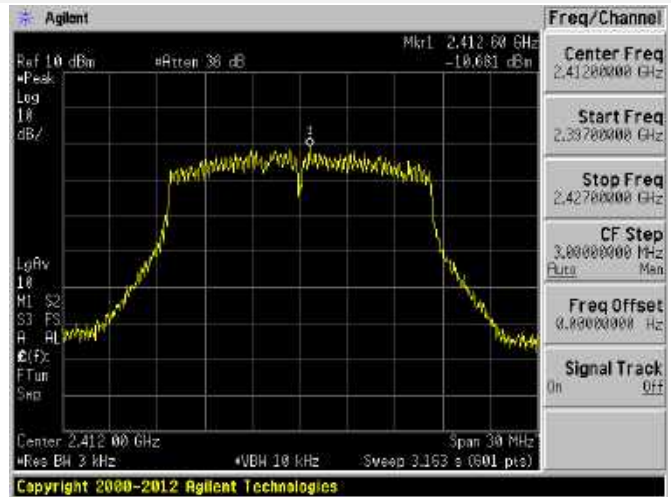
802.11b MIDDLE CHANNEL



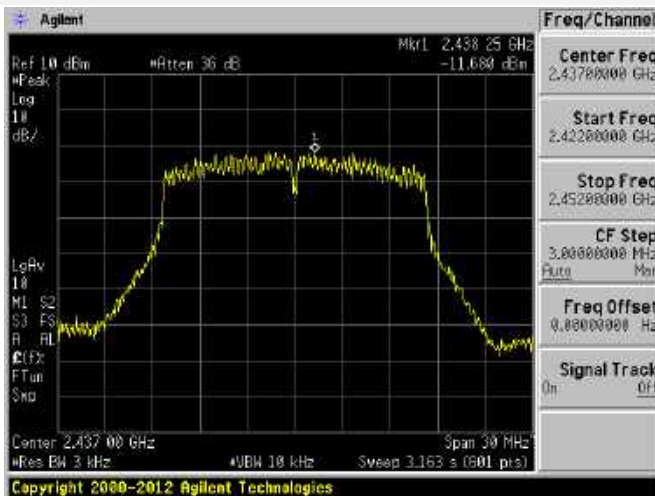
802.11b HIGH CHANNEL



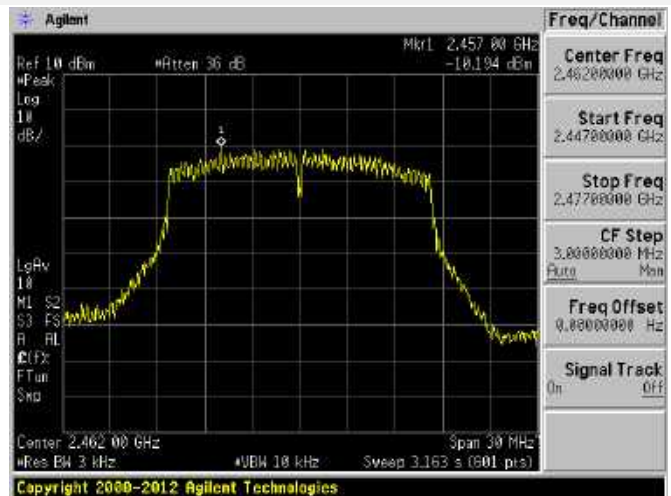
802.11g LOW CHANNEL



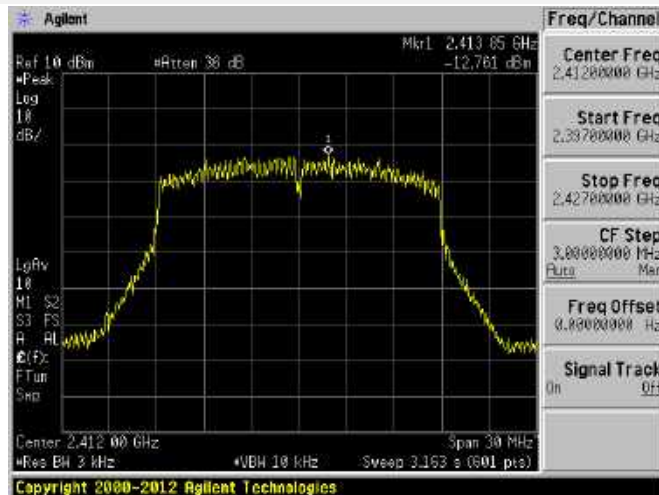
802.11g MIDDLE CHANNEL



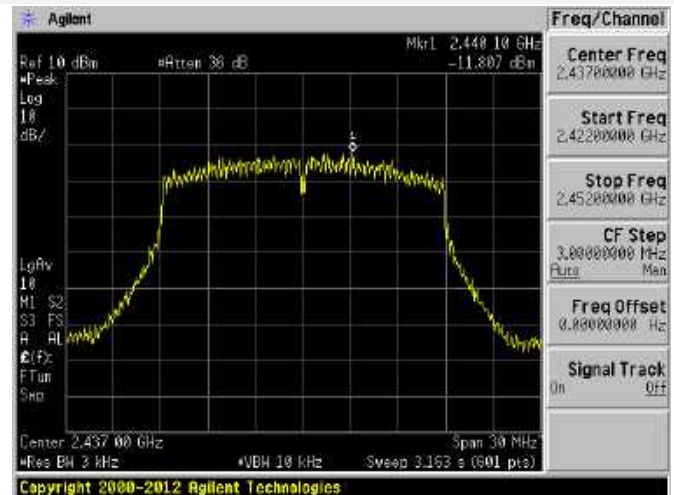
802.11g HIGH CHANNEL



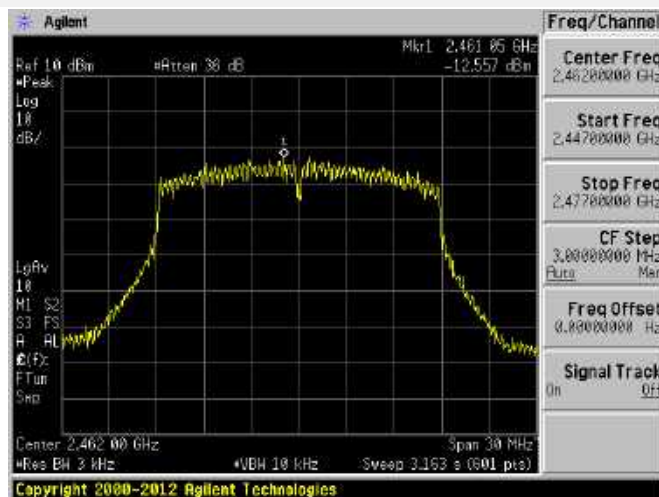
802.11n-20 MHz LOW CHANNEL



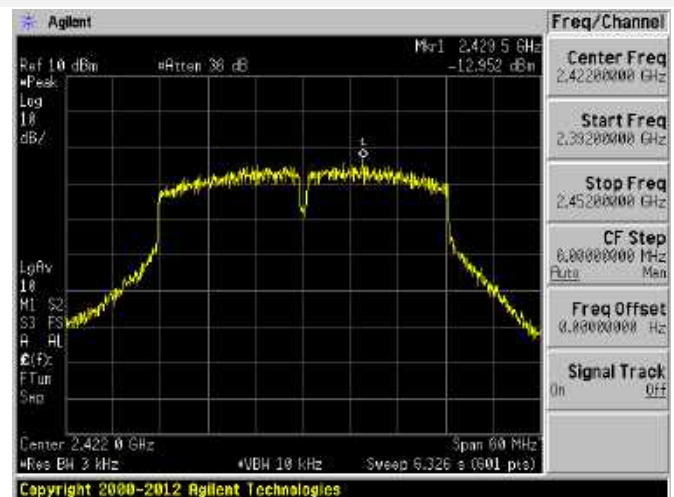
802.11 n-20 MHz MIDDLE CHANNEL



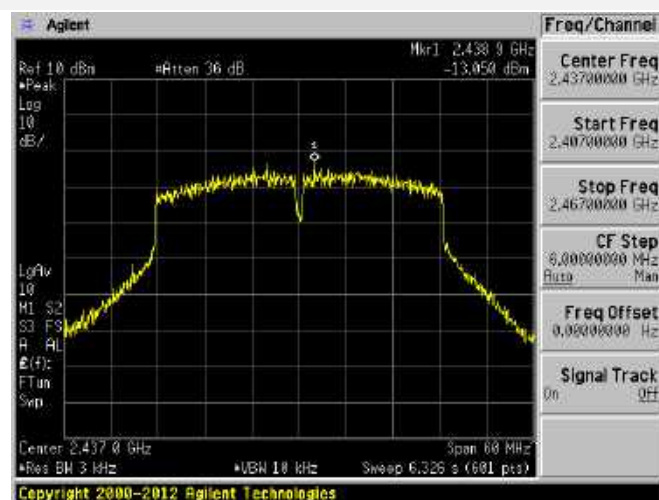
802.11n-20 MHz HIGH CHANNEL



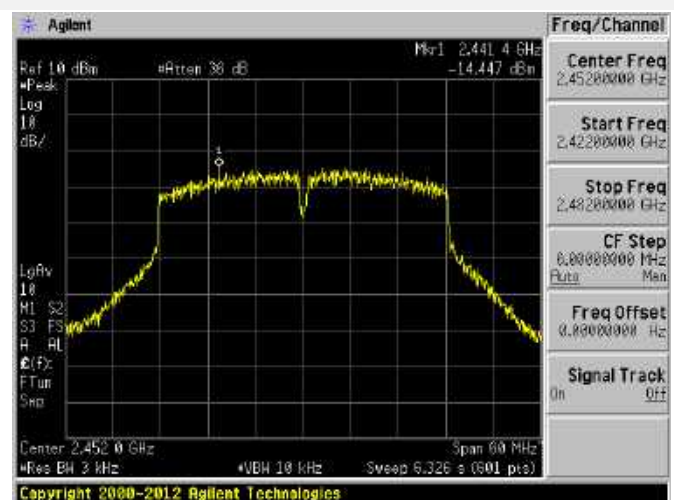
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL

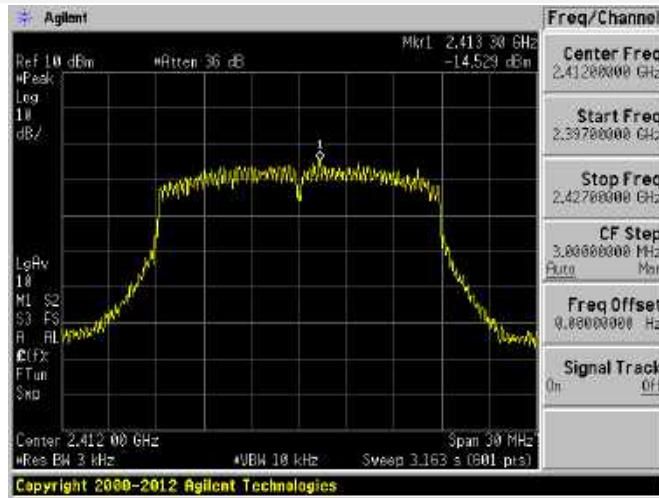


802.11n-40 MHz HIGH CHANNEL

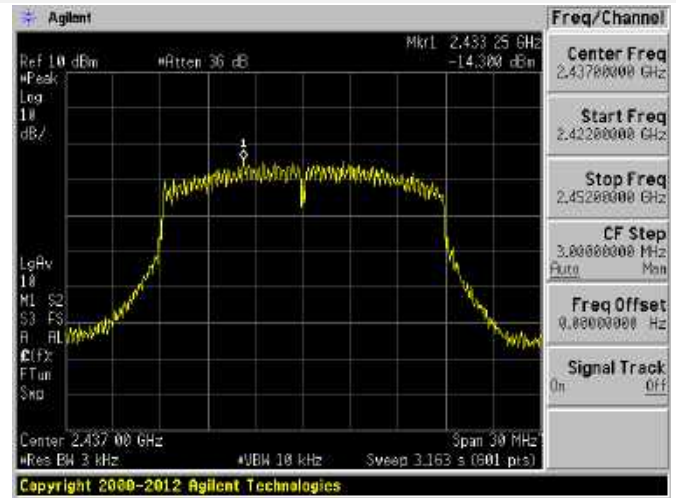


MIMO-Main Antenna

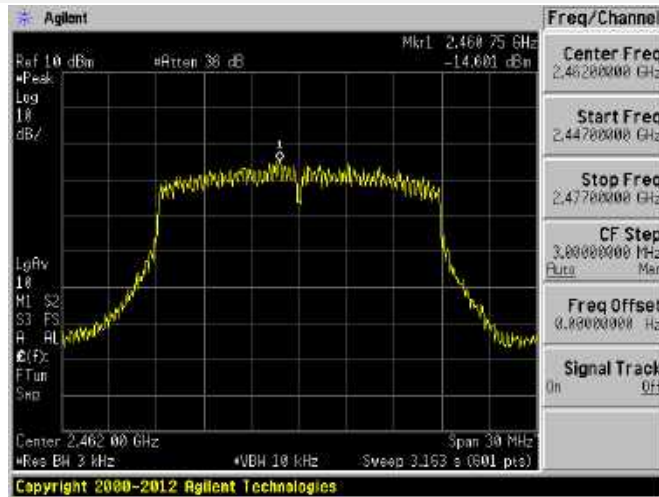
802.11n-20 MHz LOW CHANNEL



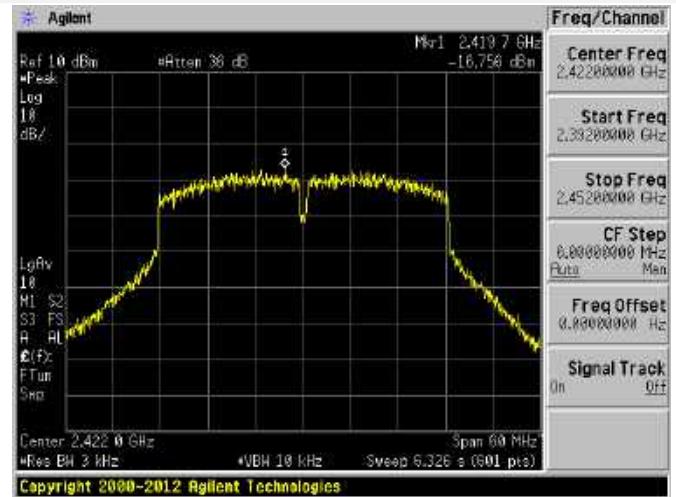
802.11 n-20 MHz MIDDLE CHANNEL



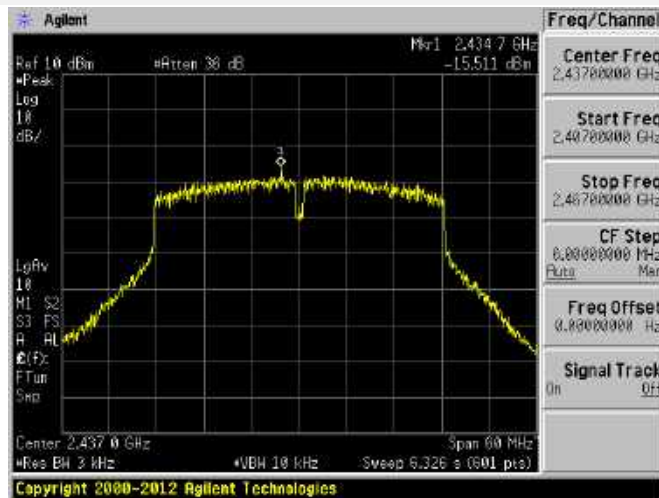
802.11n-20 MHz HIGH CHANNEL



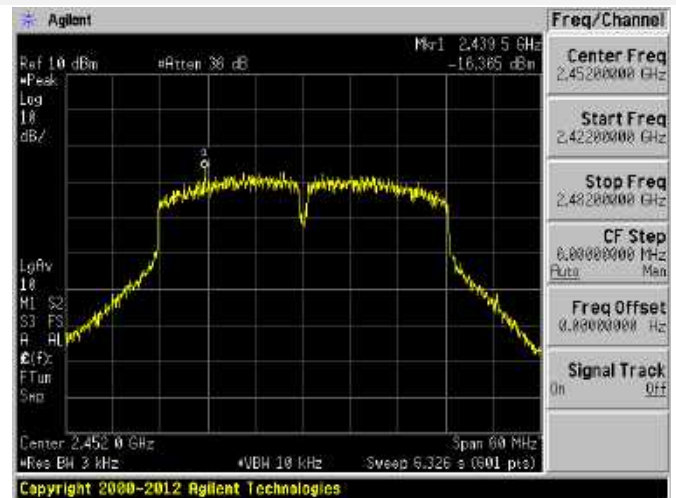
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL

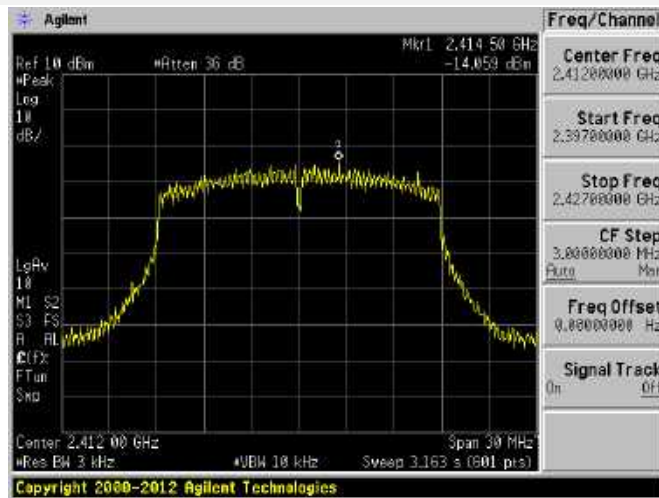


802.11n-40 MHz HIGH CHANNEL

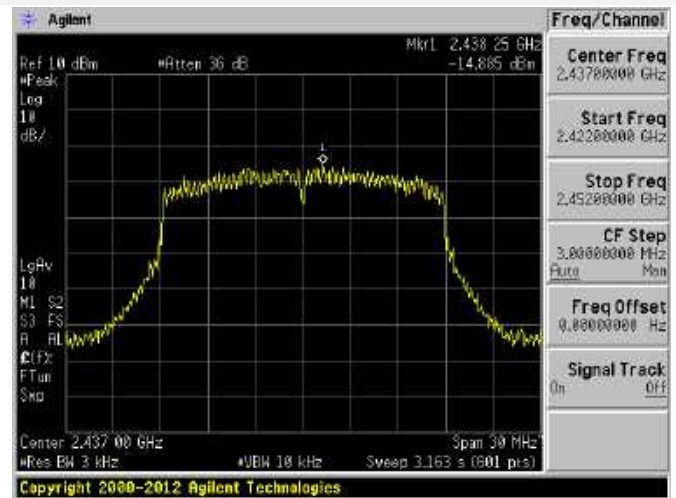


MIMO-Aux. Antenna

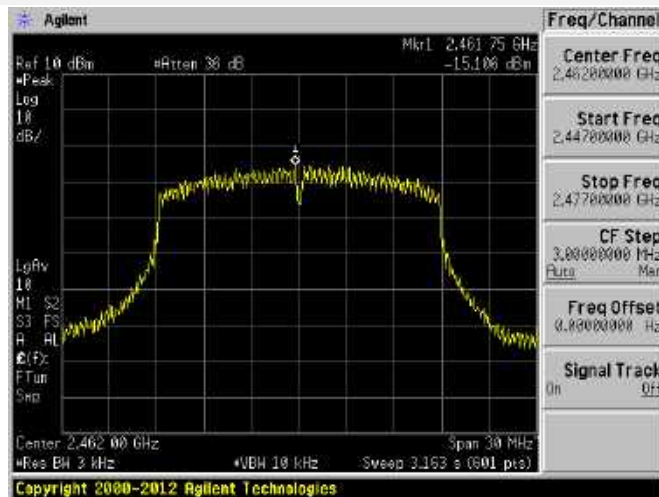
802.11n-20 MHz LOW CHANNEL



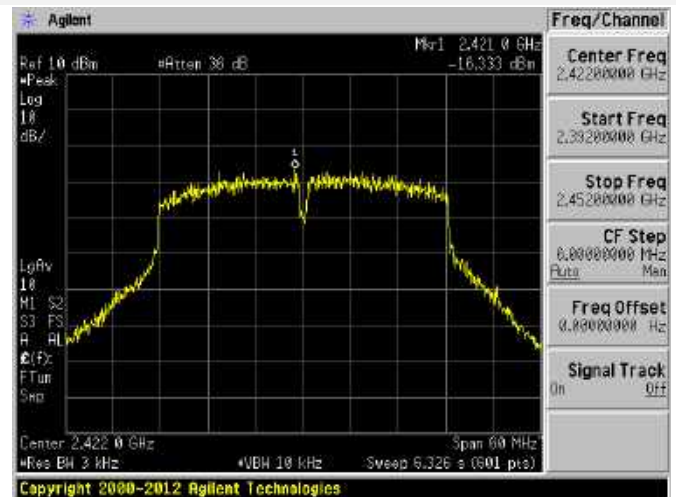
802.11 n-20 MHz MIDDLE CHANNEL



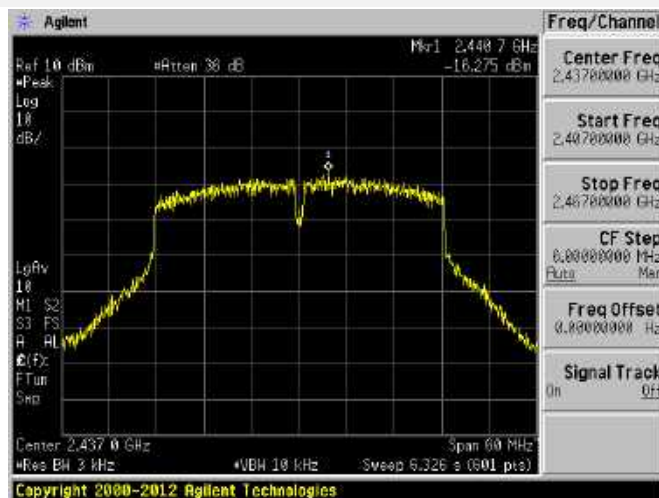
802.11n-20 MHz HIGH CHANNEL



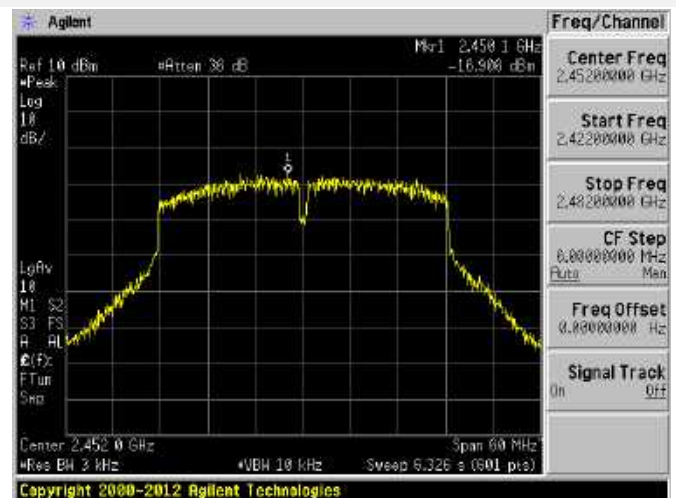
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



802.11n-40 MHz HIGH CHANNEL



ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-EC2390557-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-EC2390557-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-EC2390557-AI.PDF”.

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--END OF REPORT--