



Test Report
AIR-AP1572xxx-B-K9

(Where x = model options not effecting the radio module)

FCC ID: LDK102093P

2400-2483.5 MHz

Antenna Gain = 13dBi

Point to Point Cross Polarized Directional antenna

Against the following Specifications:

CFR47 Part 15.247

Cisco Systems
170 West Tasman Drive
San Jose, CA 95134

Test Engineer: 

Date: 6/11/2014



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Section 1: Overview

1.1 Test Summary

The samples were assessed against the tests detailed in section 3 under the requirements of the following specifications:

Emission	Immunity
CFR47 Part 15.247 RSS210 LP0002	N/A

The specifications listed above represent actual tests performed to demonstrate compliance against the specifications and basic standards listed on the front cover of this report. This list is not a one to one match to the front cover for one or more of the following reasons.

1. Basic standards call up many different test phenomena specifications such as the 61000-4-X series. The basic standards define which elements and levels shall be applied from these specifications and as such it is not appropriate to list the individual specifications on the front cover.
2. A Standard listed on the front cover may be required in a particular country but is not appropriate for the particular technologies included in the equipment under test. E.g. You cannot test a DC product to the mains Harmonics requirements in EN61000-3-2. See section 3.2.
3. Test results against a particular standard or specification may be included in a different test report. See section 3.2 for an EDCS reference of this data.
4. Where appropriate, Cisco may have substituted a later revision of a basic standard to those referenced in the specification on the front sheet of this test report. This decision was based upon improved test methodology and repeatability and/or where the newer revision represented a more stringent test.
5. Where relevant, testing has been carried out to the requirements of both EN and IEC Specifications. This was possible because of the similarities of the test methods involved and the Cisco EMC test procedures.
6. Testing may have been performed to an equivalent test that satisfies the requirements of the standards and specifications listed on the front cover of the report. See section 3.2.
7. Where radiated emissions testing has been performed to EN55022/CISPR22 the additional requirements of VCCI: V- 3/2006.04, EN55022: 1994 +A1/2 and CAN/CSA- CISPR 22-02 have also been evaluated unless otherwise stated.
8. Testing to the requirements of CFR47 Part 15 was performed against the CISPR22 limits. The results are therefore deemed satisfactory evidence of compliance with Industry Canada Interference Causing Equipment Standard ICES-003.
9. Where assessment has been performed to CISPR24, all the applicable test requirements may have not been covered. Refer to the results section for the tests performed.

Notes:

- 1) Where a specification listed on the front cover of this report has deviations from the basic standards listed above, the additional technical requirements of the specification were also assessed.
- 2) Where appropriate, Cisco may have substituted a later revision of a basic standard to those referenced in the specification on the front sheet of this test report. This decision was based upon improved test methodology and repeatability and/or where the newer revision represented a more stringent test.
- 3) Where relevant, testing has been carried out to the requirements of both EN and IEC Specifications. This was possible because of the similarities of the test methods involved and the Cisco EMC test procedures.



Section 2: Assessment Information

2.1 General

This report contains an assessment of an apparatus against Electromagnetic Compatibility Standards based upon tests carried out on the samples submitted. The testing was performed by and for the use of Cisco systems Inc:

With regard to this assessment, the following points should be noted:

- a) The results contained in this report relate only to the items tested and were obtained in the period between the date of the initial assessment and the date of issue of the report. Manufactured products will not necessarily give identical results due to production and measurement tolerances.
- b) The apparatus was set up and exercised using the configuration and modes of operation defined in this report only.
- c) Where relevant, the apparatus was only assessed using the susceptibility criteria defined in this report and the Test Assessment Plan (TAP).
- d) All testing was performed under the following environmental conditions:
 - Temperature 15°C to 35°C (54°F to 95°F)
 - Atmospheric Pressure 860mbar to 1060mbar (25.4" to 31.3")
 - Humidity 10% to 75*%

*[Where applicable] For ESD testing the humidity limits used were 30% to 60% and for EFT/B tests the humidity limits used were 25% to 75%.
- e) All AC testing was performed at one or more of the following supply voltages:
 - 110V 60 Hz (+/-20%)
 - 220V 50 Hz (+/-20%)

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2.2 Date of testing

11-April-2014

2.3 Report Issue Date

Cisco uses an electronic system to issue, store and control the revision of test reports. This system is called the Engineering Document Control System (EDCS). The actual report issue date is embedded into the original file on EDCS. Any copies of this report, either electronic or paper, that are not on EDCS must be considered uncontrolled

2.4 Testing facilities

This assessment was performed by:

Testing Laboratory

Cisco Systems, Inc.,
4125 Highlander Parkway
Richfield, OH 44286
USA

Test Engineers

Bud Chiller

2.5 Equipment Assessed (EUT)

AIR-AP1572EAC-A-K9



2.6 EUT Description

The 1572 Series Cisco Aironet 802.11n Dual Band Access Points support the following modes of operation. The modes are further defined in the Radio Theory of Operation. The modes included in this report represent the worst case data for all modes.

Legacy CCK, One Antenna, 1 to 11 Mbps
 Legacy CCK, Two Antennas, 1 to 11 Mbps
 Legacy CCK, Three Antennas, 1 to 11 Mbps
 Legacy CCK, Four Antennas, 1 to 11 Mbps

Non HT-20, One Antenna, 6 to 54 Mbps
 Non HT-20, Two Antennas, 6 to 54 Mbps
 Non HT-20, Three Antennas, 6 to 54 Mbps
 Non HT-20, Four Antennas, 6 to 54 Mbps

Non HT-20 Beam Forming, Two Antennas, 6 to 54 Mbps
 Non HT-20 Beam Forming, Three Antennas, 6 to 54 Mbps
 Non HT-20 Beam Forming, Four Antennas, 6 to 54 Mbps

HT-20, One Antenna, M0 to M7
 HT-20, Two Antennas, M0 to M15
 HT-20, Three Antennas, M0 to M23
 HT-20, Four Antennas, M0 to M23

HT-20 Beam Forming, Two Antennas, M0 to M15
 HT-20 Beam Forming, Three Antennas, M0 to M23
 HT-20 Beam Forming, Four Antennas, M0 to M23

HT-20 STBC, Two Antennas, M0 to M7
 HT-20 STBC, Three Antennas, M0 to M7
 HT-20 STBC, Four Antennas, M0 to M7

The following antennas are supported by this product series.
The data included in this report represent the worst case data for the antenna gain(s) specified on the cover page.

Frequency	Part Number	Antenna Type	Antenna Gain (dBi)
2.4 GHz	AIR-ANT2420V-N	2.4GHz Omni, 5"	2
	Internal	Omni	4
	AIR-ANT2450V-N	2.4GHz Omni,	5
	AIR-ANT2455V-N	2.4GHz Omni,	5.5
	AIR-ANT2480V-N	2.4GHz Omni,	8
	AIR-ANT2413P2M-N	2.5GHz 2x2 Patch array, dual polarized	13



Section 3: Sample Details

Note: Each sample was evaluated to ensure that its condition was suitable to be used as a test sample prior to the commencement of testing.

3.1 Sample Details

Sample No.	Equipment Details	Part Number	Manufacturer	Hardware Rev.	Firmware Rev.	Software Rev.	Serial Number
S01	AIR-AP1572EAC-A-K9		Cisco Systems	NA	NA	NA	

3.2 System Details

System #	Description	Samples
1	EUT	S01

3.3 Mode of Operation Details

Mode#	Description	Comments
1	Continuous Transmitting	Continuous Transmitting >= 98% duty cycle



Appendix A: Emission Test Results

Testing Laboratory: Cisco Systems, Inc., 4125 Highlander Parkway, Richfield, OH, USA

Supported Channels

Band	Freq (MHz)	Ch ID
2.4 ISM	2412	1
	2417	2
	2422	3
	2427	4
	2432	5
	2437	6
	2442	7
	2447	8
	2452	9
	2457	10
	2462	11

Target Maximum Channel Power

The following table details the maximum supported Total Channel Power for all operating modes.

Operating Mode	Maximum Channel Power (dBm)		
	Frequency (MHz)		
	2412	2437	2462
Legacy CCK, 1 to 11 Mbps	27	28	28
Non HT-20, 6 to 54 Mbps	21	28	21
Non HT-20 Beam Forming, 6 to 54 Mbps	20	26	20
HT-20, M0 to M23	20	28	21
HT-20 Beam Forming, M0 to M23	20	28	21
HT-20 STBC, M0 to M7	20	28	21



6dB Bandwidth

15.247: Systems using digital modulation techniques may operate in the 2400-2483.5MHz band. The minimum 6 dB bandwidth shall be at least 500 kHz.

Connect the antenna port(s) to the spectrum analyzer input. Using the spectrum analyzer Channel Bandwidth mode, configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).

Center Frequency:	Frequency from table below
Span:	2 x Nominal Bandwidth (e.g. 40MHz for a 20MHz channel)
Reference Level:	20 dBm
Attenuation:	10 dB
Sweep Time:	5 s
Resolution Bandwidth:	100 kHz
Video Bandwidth:	100 kHz
X dB Bandwidth:	6 dB
Detector:	Peak
Trace:	Single

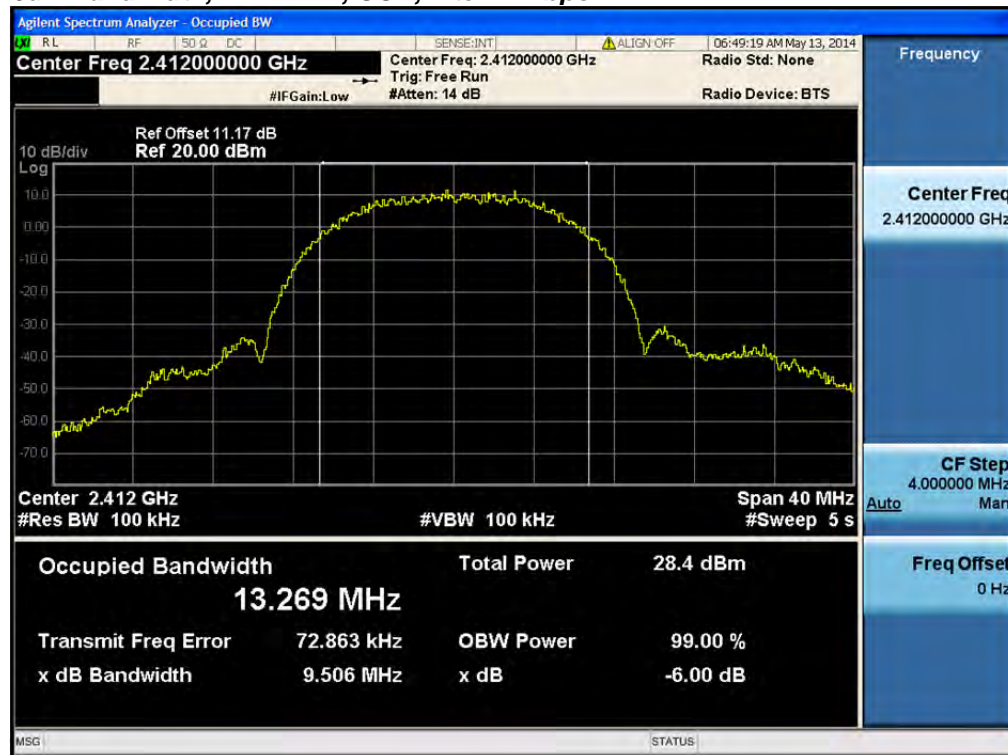
Place the radio in continuous transmit mode. View the transmitter waveform on the spectrum analyzer, and record the pertinent measurements:



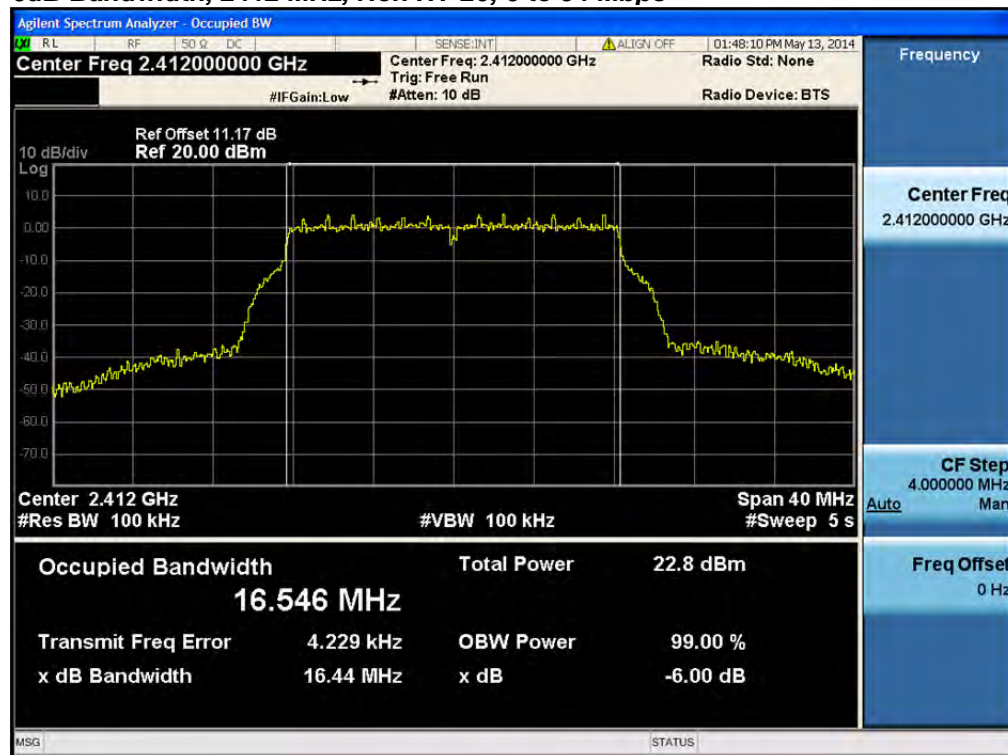
Frequency (MHz)	Mode	Data Rate (Mbps)	6dB BW (MHz)	Limit (kHz)	Margin (MHz)
2412	CCK, 1 to 11 Mbps	11	9.5	>500	9.0
	Non HT-20, 6 to 54 Mbps	6	16.4	>500	15.9
	HT-20, M0 to M23	m0	17.7	>500	17.2
2437	CCK, 1 to 11 Mbps	11	9.1	>500	8.6
	Non HT-20, 6 to 54 Mbps	6	16.4	>500	15.9
	HT-20, M0 to M23	m0	17.7	>500	17.2
2462	CCK, 1 to 11 Mbps	11	9.6	>500	9.1
	Non HT-20, 6 to 54 Mbps	6	16.4	>500	15.9
	HT-20, M0 to M23	m0	17.6	>500	17.1



6dB Bandwidth, 2412 MHz, CCK, 1 to 11 Mbps

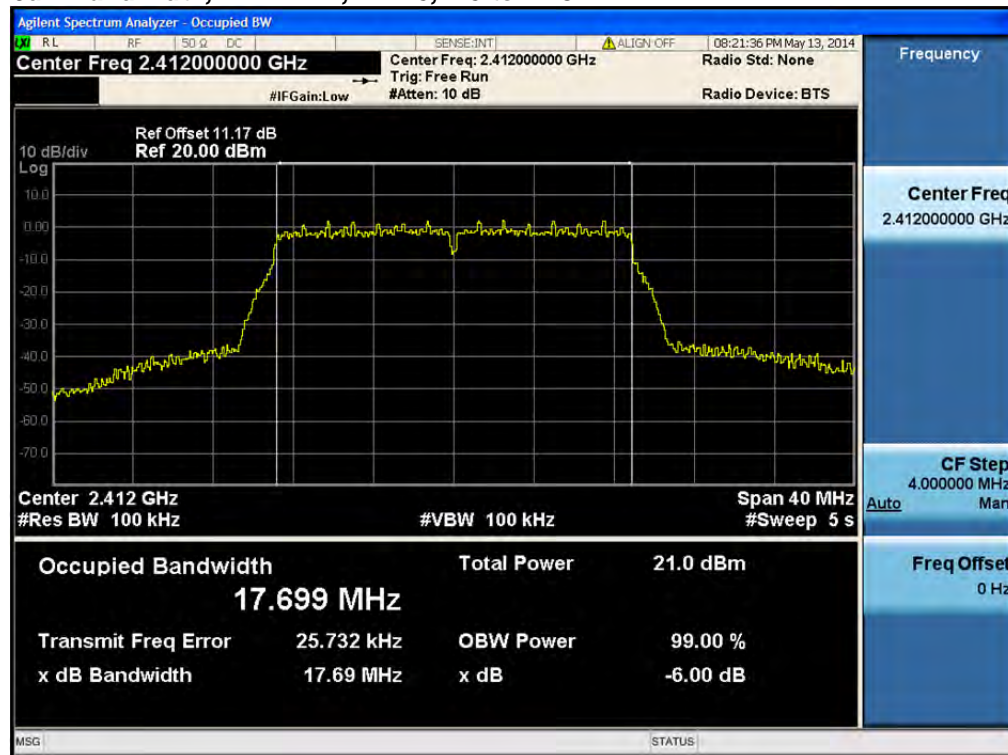


6dB Bandwidth, 2412 MHz, Non HT-20, 6 to 54 Mbps

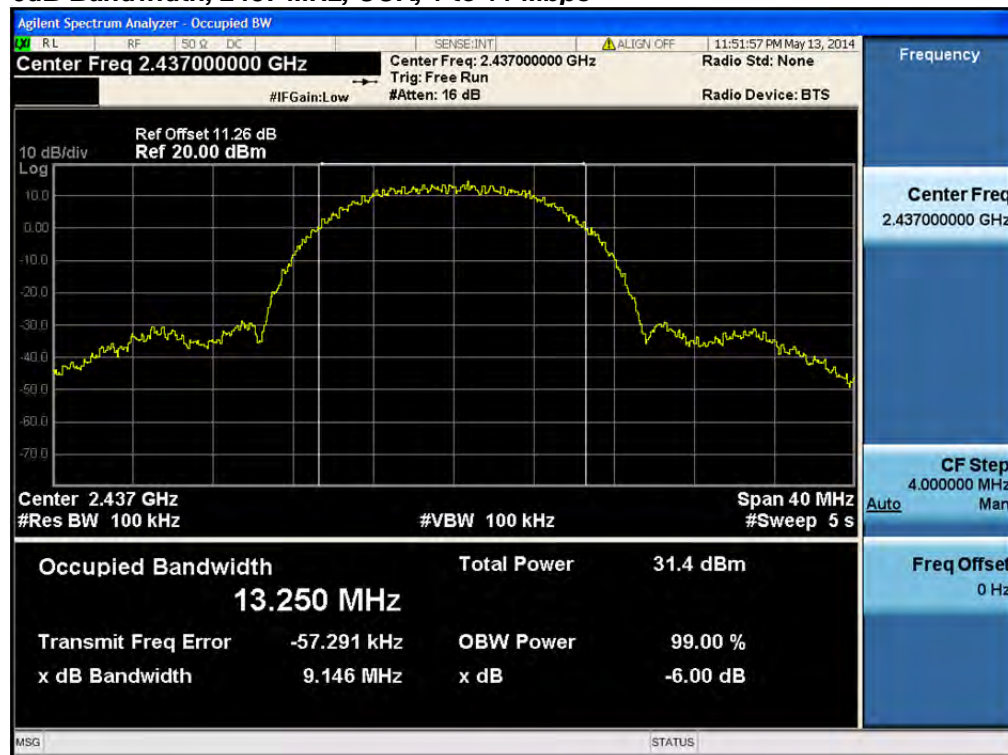




6dB Bandwidth, 2412 MHz, HT-20, M0 to M23

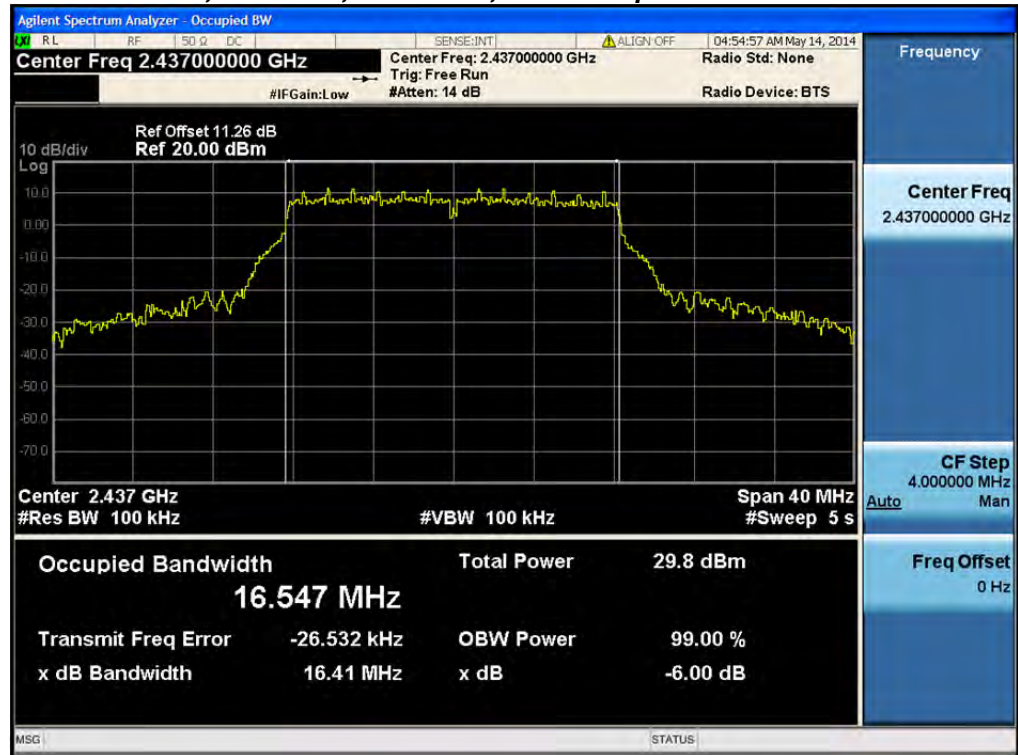


6dB Bandwidth, 2437 MHz, CCK, 1 to 11 Mbps

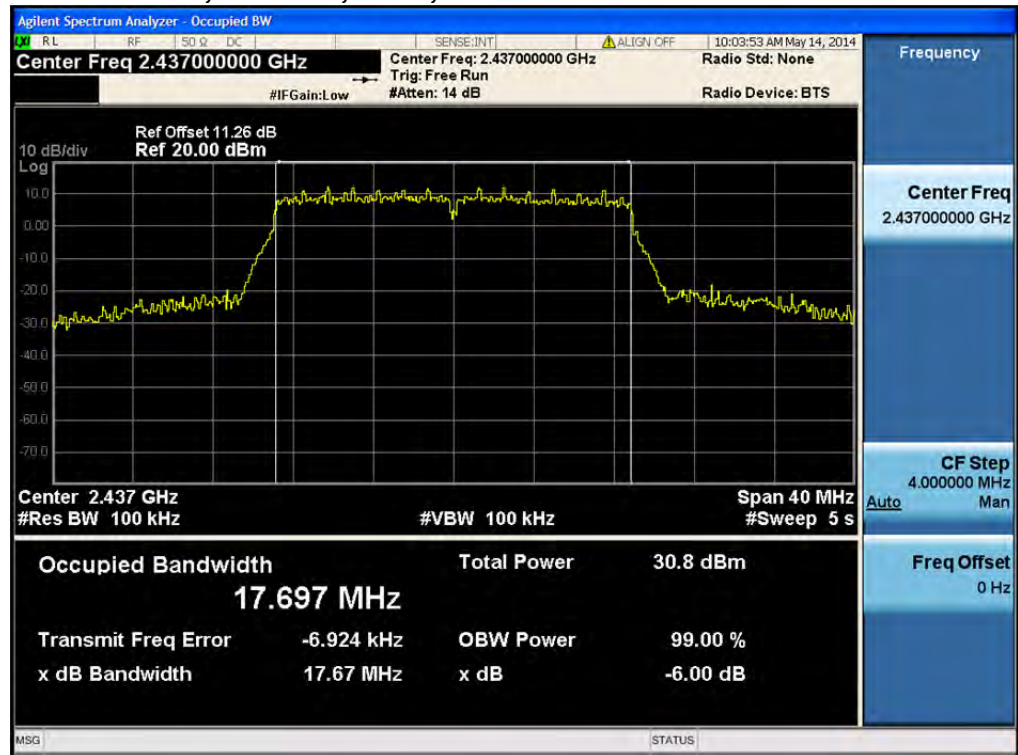




6dB Bandwidth, 2437 MHz, Non HT-20, 6 to 54 Mbps

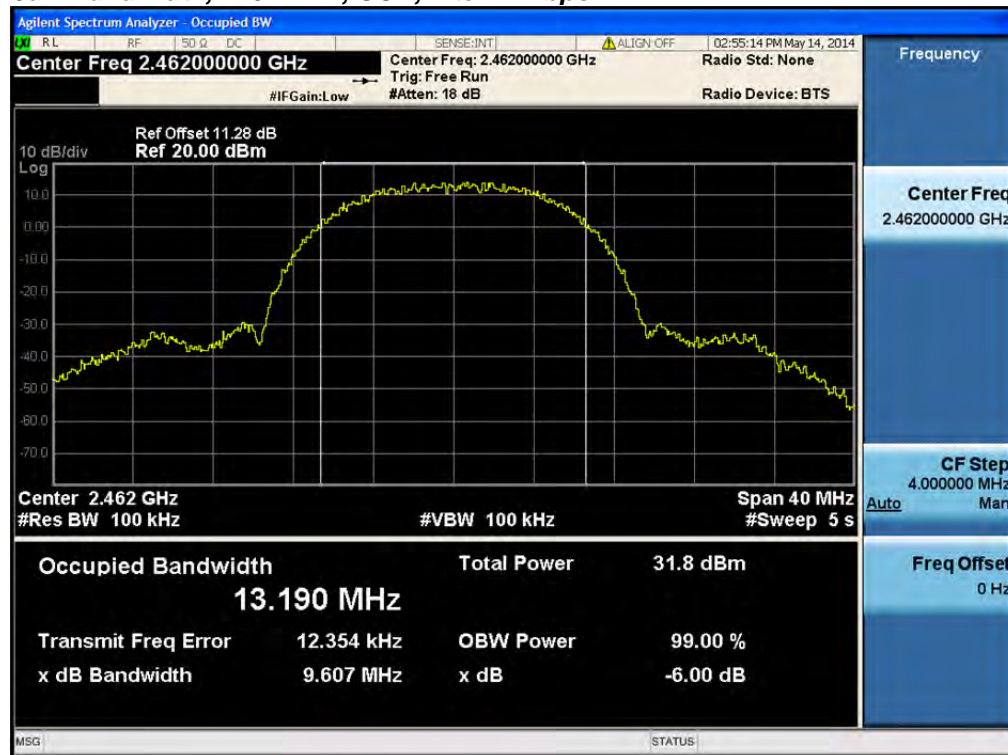


6dB Bandwidth, 2437 MHz, HT-20, M0 to M23

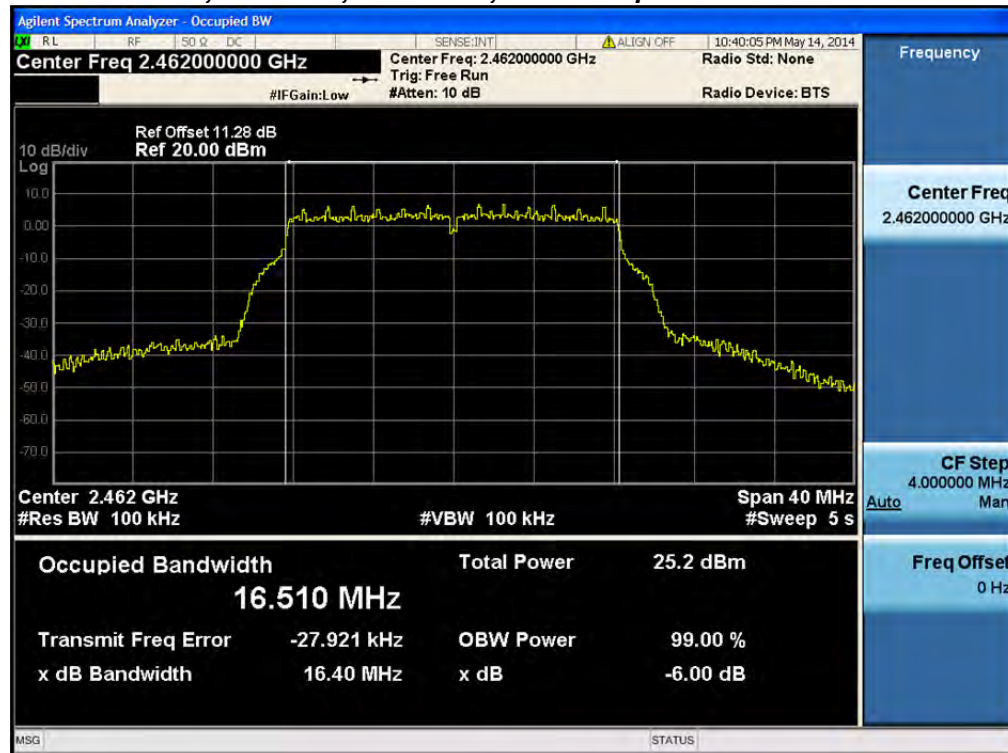




6dB Bandwidth, 2462 MHz, CCK, 1 to 11 Mbps

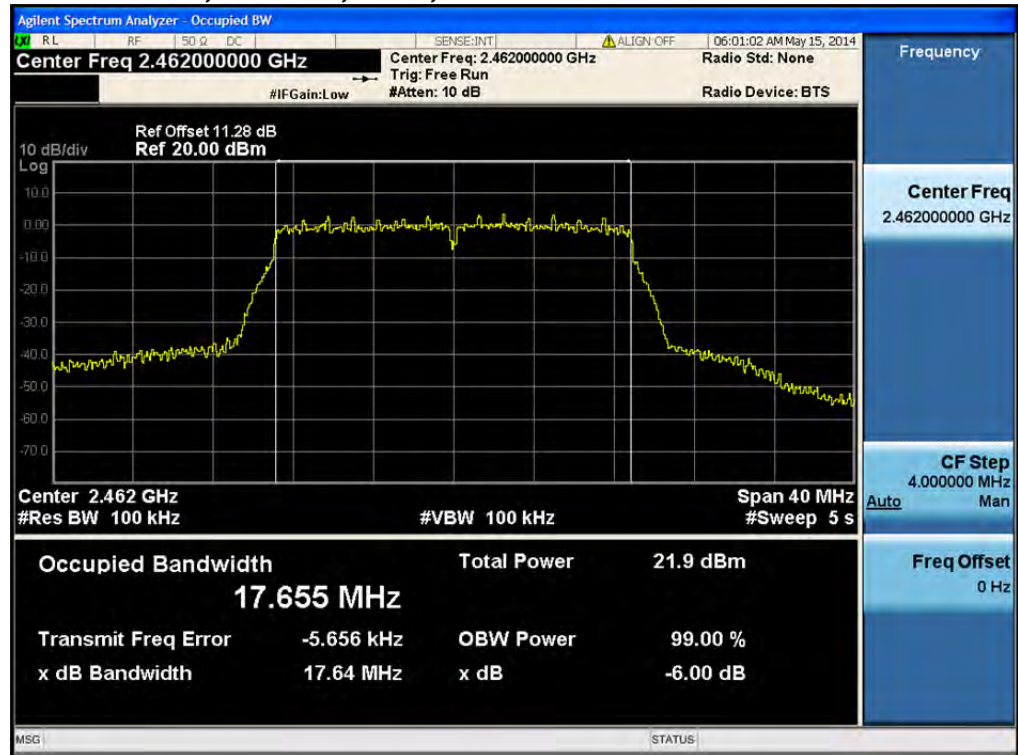


6dB Bandwidth, 2462 MHz, Non HT-20, 6 to 54 Mbps





6dB Bandwidth, 2462 MHz, HT-20, M0 to M23





99% and 26dB Bandwidth

Connect the antenna port(s) to the spectrum analyzer input. Using the spectrum analyzer Channel Bandwidth mode, configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).

Center Frequency:	Frequency from table below
Span:	2 x Nominal Bandwidth (e.g. 40MHz for a 20MHz channel)
Reference Level:	20 dBm
Attenuation:	10 dB
Sweep Time:	5 s
Resolution Bandwidth:	1%-3% of 26 dB Bandwidth
Video Bandwidth:	≥Resolution Bandwidth
X dB Bandwidth:	26 dB
Detector:	Peak
Trace:	Single

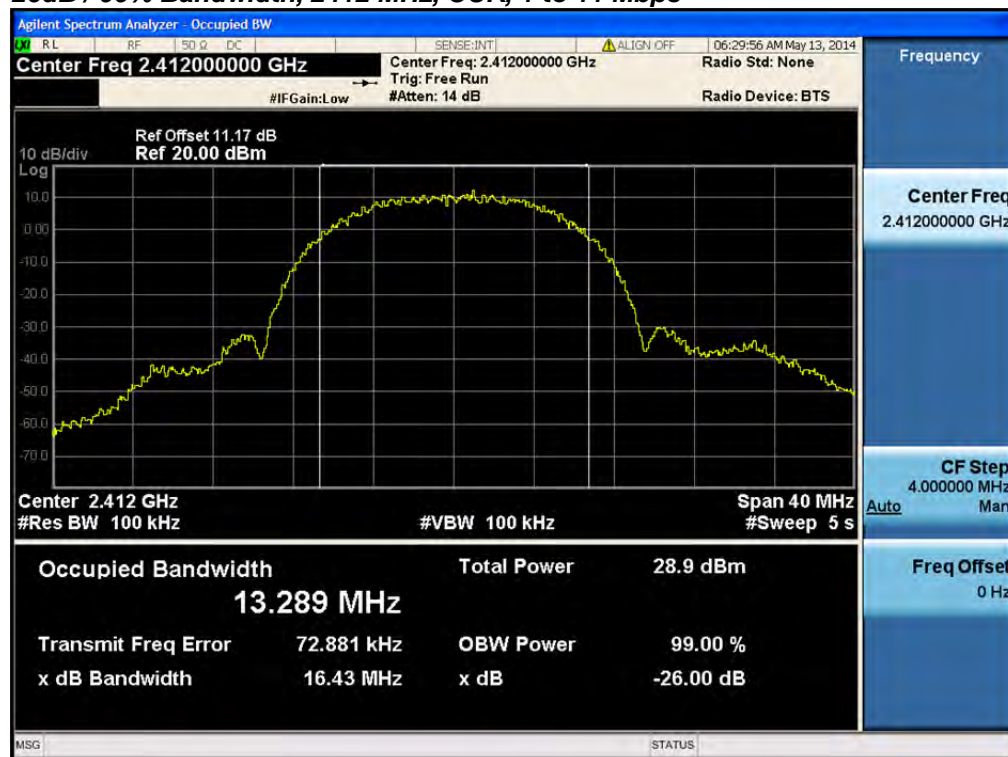
Place the radio in continuous transmit mode. View the transmitter waveform on the spectrum analyzer, and record the pertinent measurements:



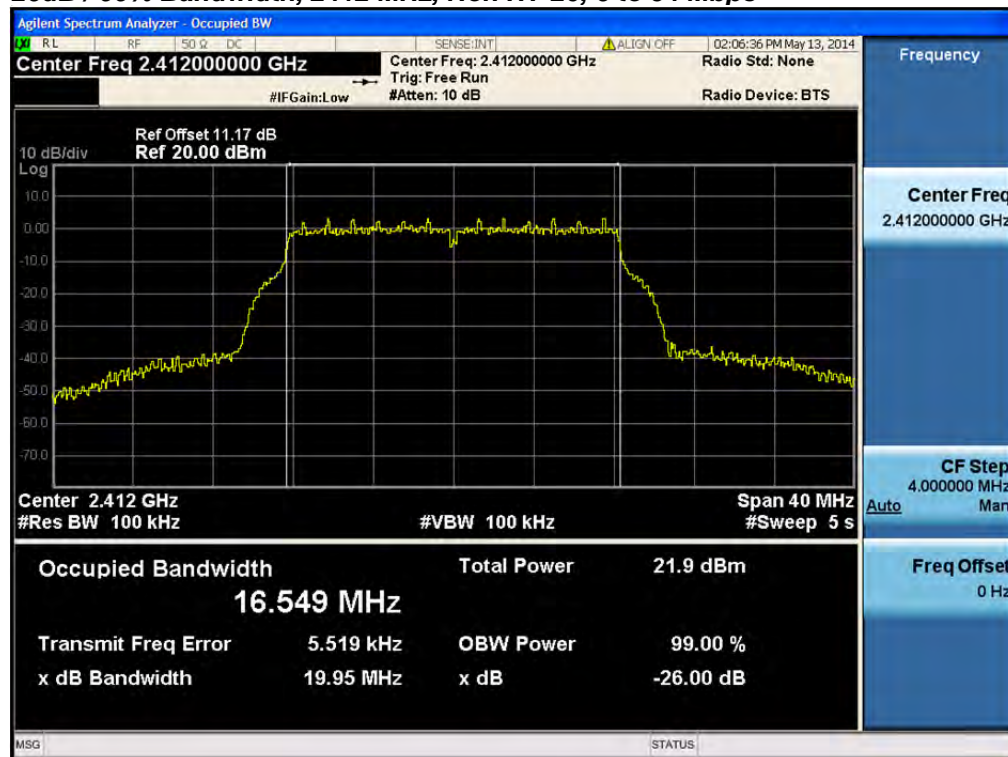
Frequency (MHz)	Mode	Data Rate (Mbps)	26dB BW (MHz)	99% BW (MHz)
2412	CCK, 1 to 11 Mbps	11	16.4	13.3
	Non HT-20, 6 to 54 Mbps	6	19.9	16.5
	HT-20, M0 to M23	m0	20.1	17.7
2437	CCK, 1 to 11 Mbps	11	16.1	13.2
	Non HT-20, 6 to 54 Mbps	6	19.9	16.5
	HT-20, M0 to M23	m0	20.1	17.7
2462	CCK, 1 to 11 Mbps	11	16.3	13.1
	Non HT-20, 6 to 54 Mbps	6	19.7	16.5
	HT-20, M0 to M23	m0	20	17.7



26dB / 99% Bandwidth, 2412 MHz, CCK, 1 to 11 Mbps

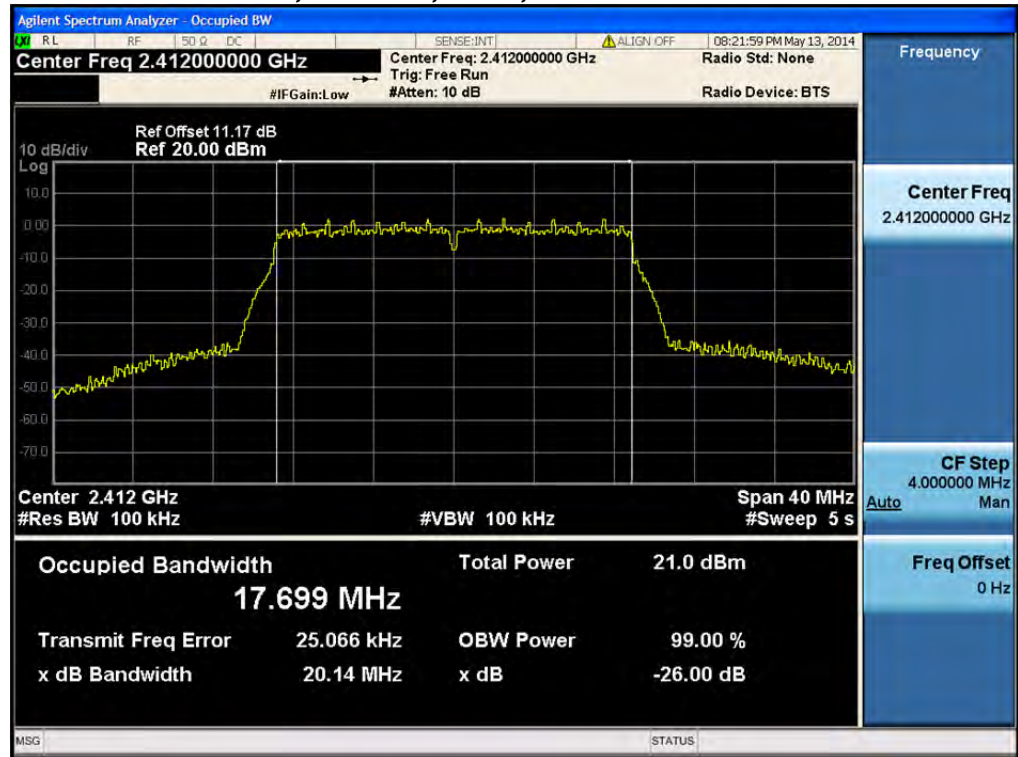


26dB / 99% Bandwidth, 2412 MHz, Non HT-20, 6 to 54 Mbps

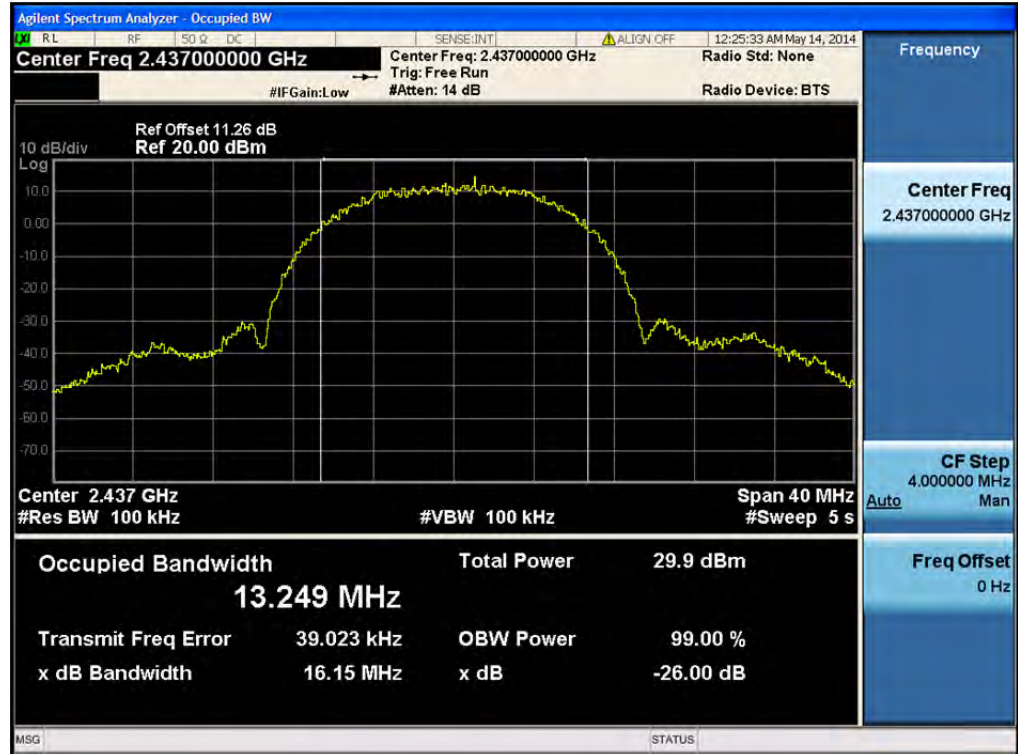




26dB / 99% Bandwidth, 2412 MHz, HT-20, M0 to M23

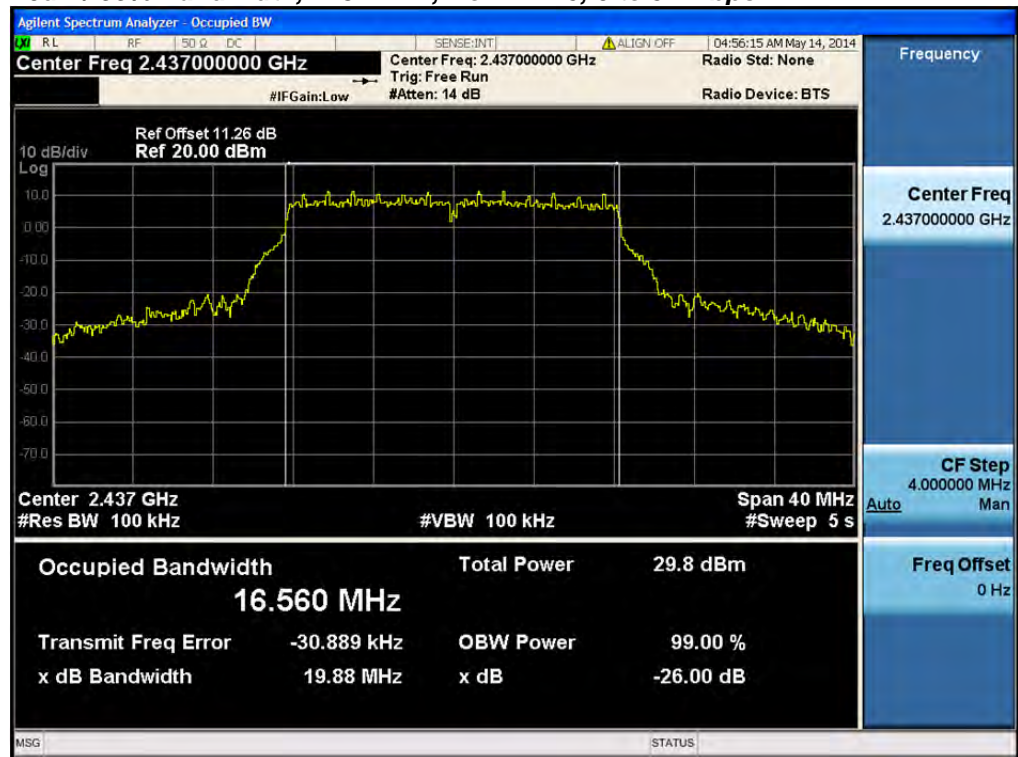


26dB / 99% Bandwidth, 2437 MHz, CCK, 1 to 11 Mbps

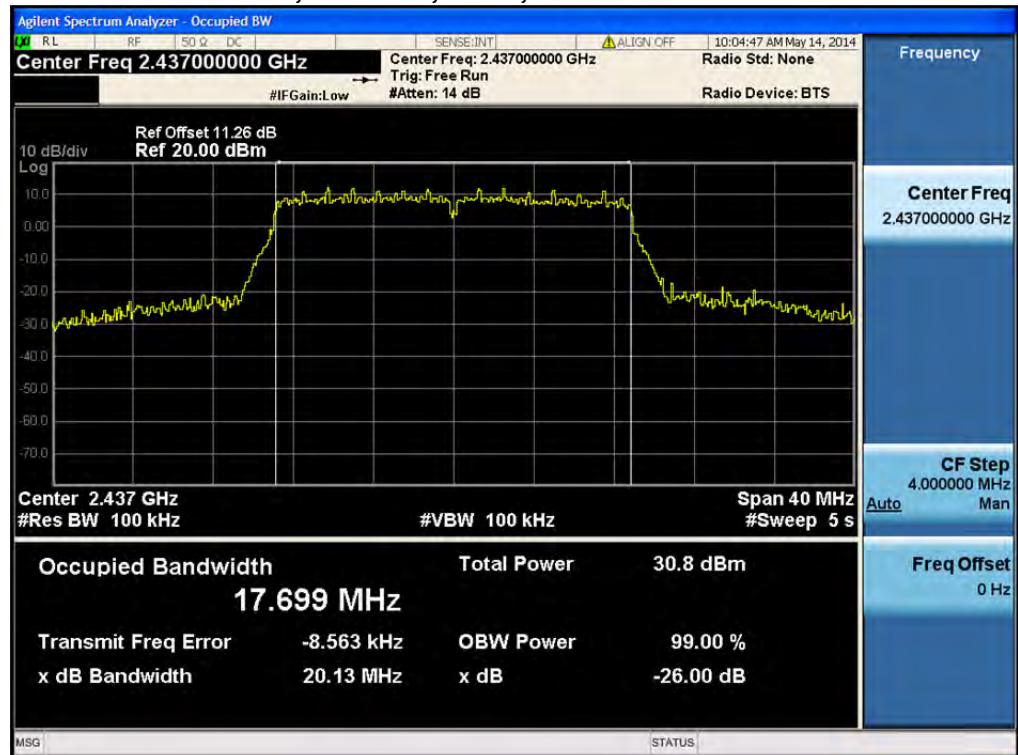




26dB / 99% Bandwidth, 2437 MHz, Non HT-20, 6 to 54 Mbps

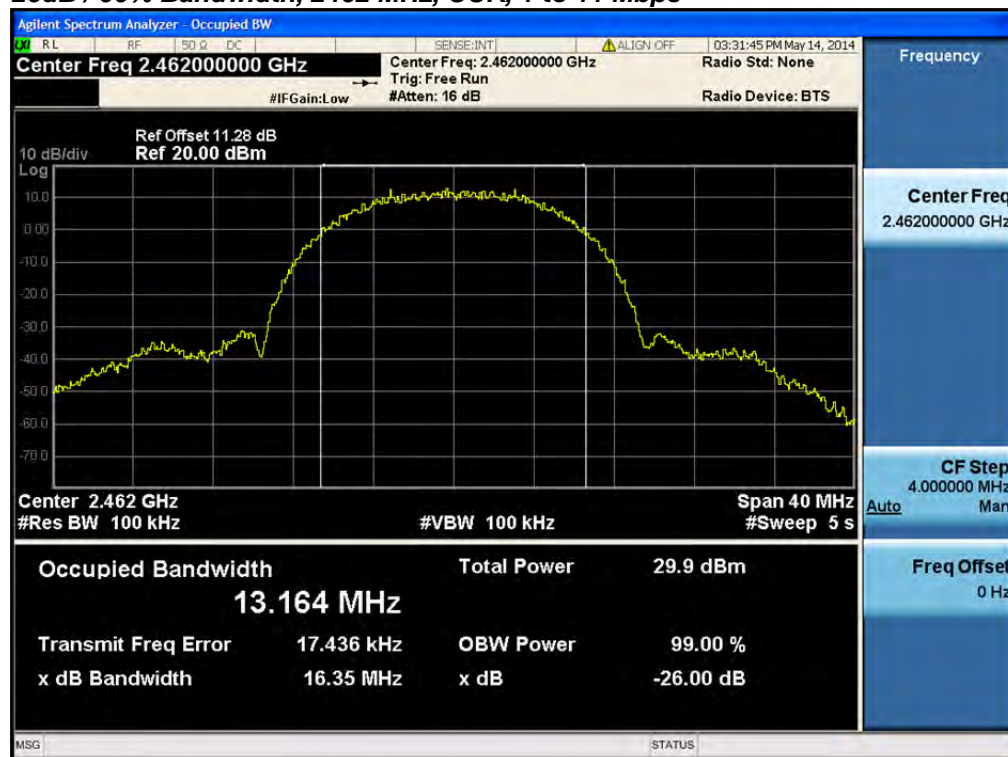


26dB / 99% Bandwidth, 2437 MHz, HT-20, M0 to M23

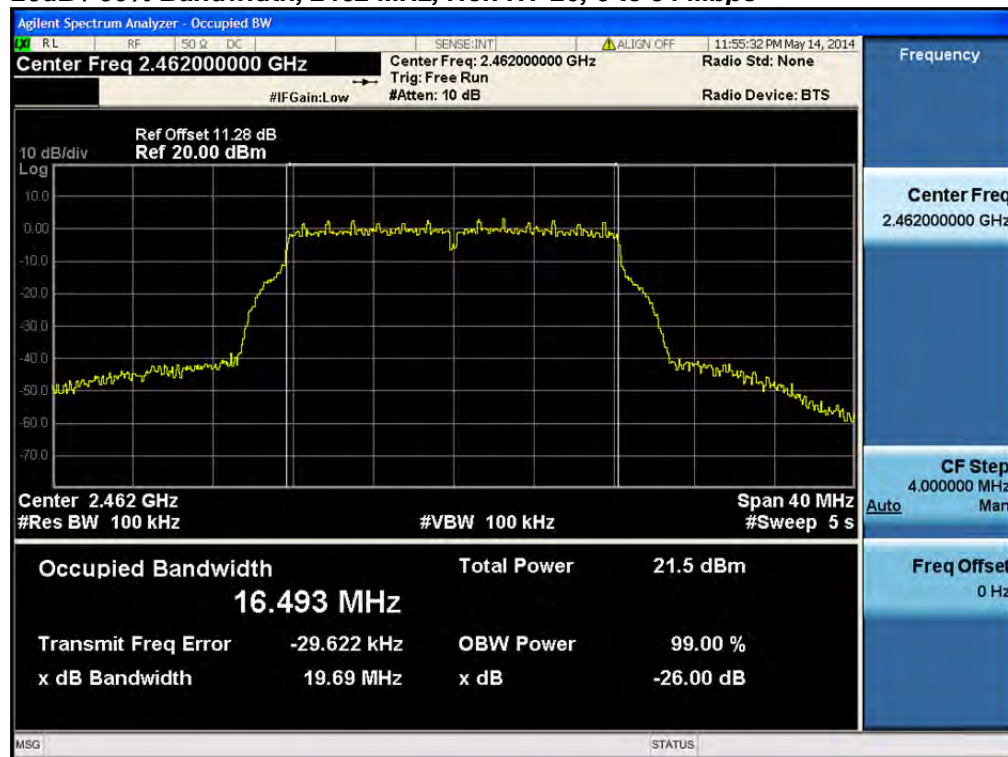




26dB / 99% Bandwidth, 2462 MHz, CCK, 1 to 11 Mbps

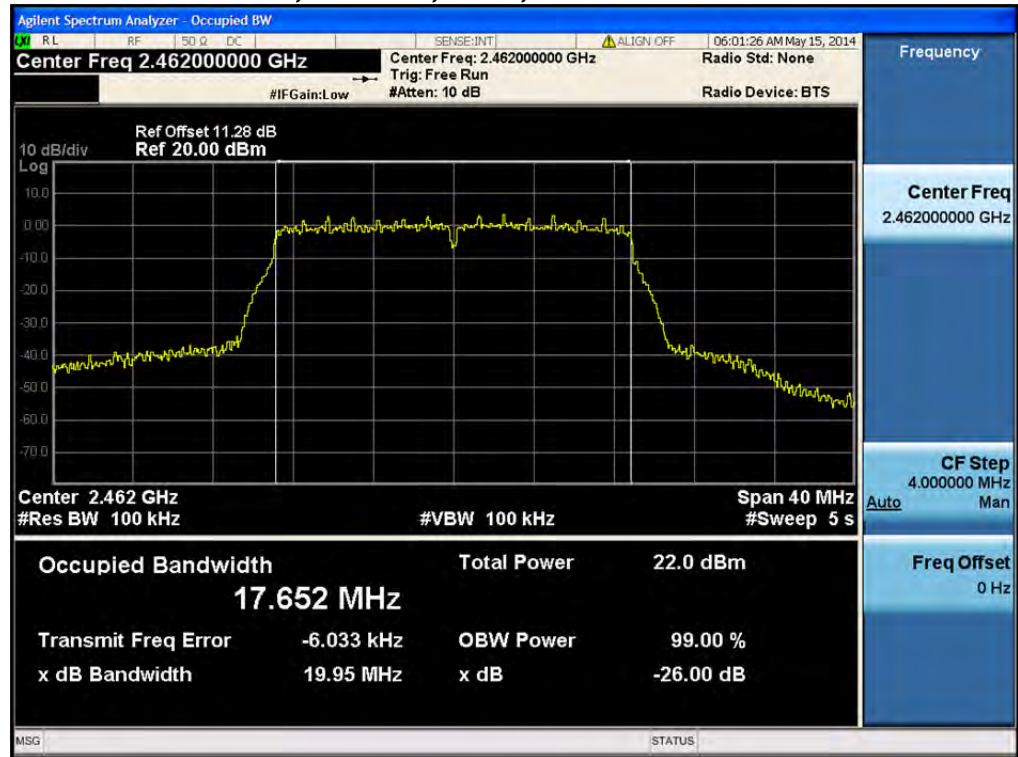


26dB / 99% Bandwidth, 2462 MHz, Non HT-20, 6 to 54 Mbps





26dB / 99% Bandwidth, 2462 MHz, HT-20, M0 to M23





Peak Output Power

15.247: The maximum conducted output power of the intentional radiator for systems using digital modulation in the 2400-2483.5 MHz band shall not exceed 1 Watt (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

- (i) **Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.**

The maximum supported antenna gain is 13dBi. Max conducted output power limit is calculated as:

$13\text{dBi} - 6\text{dBi}/3 = 2.3$ therefore power is reduced 2dB for limit = 28dBm

The peak correlated gain for each mode is listed in the table below.

Connect the antenna port(s) to the spectrum analyzer input. Place the radio in continuous transmit mode. Configure the spectrum analyzer as shown below.

Enable "Channel Power" function of analyzer	
Center Frequency:	Frequency from table below
Span:	20 MHz (must be greater than 26dB bandwidth, adjust as necessary)
Ref Level Offset:	Correct for attenuator and cable loss.
Reference Level:	20 dBm
Attenuation:	20 dB
Sweep Time:	100ms, Single sweep
Resolution Bandwidth:	1 MHz
Video Bandwidth:	3 MHz
Detector:	Sample
Trace:	Trace Average 100 traces in Power Averaging Mode
Integration BW:	=26 dB BW from 26 dB Bandwidth Data

After averaging 100 traces of the transmitter waveform on the spectrum analyzer, record the spectrum analyzer Channel Power.

The "measure-and-sum technique" is used for measuring in-band transmit power of a device. In the measure-and-sum approach, the conducted emission level is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in linear power units.



Frequency (MHz)	Mode	Tx Paths	Correlated Antenna Gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	Total Tx Channel Power (dBm)	Limit (dBm)	Margin (dB)
2412	CCK, 1 to 11 Mbps	1	13	21.1				21.1	28.0	6.9
	CCK, 1 to 11 Mbps	2	13	21.1	21.8			24.5	28.0	3.5
	CCK, 1 to 11 Mbps	3	13	21.1	21.8	21.5		26.2	28.0	1.8
	CCK, 1 to 11 Mbps	4	13	20.3	20.9	20.7	20.9	26.7	28.0	1.3
	Non HT-20, 6 to 54 Mbps	1	13	16.2				16.2	28.0	11.8
	Non HT-20, 6 to 54 Mbps	2	13	15.2	16.4			18.9	28.0	9.1
	Non HT-20, 6 to 54 Mbps	3	13	15.2	16.4	16.2		20.7	28.0	7.3
	Non HT-20, 6 to 54 Mbps	4	13	14.2	15.5	15.1	15.9	21.2	28.0	6.8
	Non HT-20 Beam Forming, 6 to 54 Mbps	2	13	15.2	16.4			18.9	28.0	9.1
	Non HT-20 Beam Forming, 6 to 54 Mbps	3	16	13.2	14.6	14.2		18.8	27.0	8.2
	Non HT-20 Beam Forming, 6 to 54 Mbps	4	16	13.2	14.6	14.2	14.6	20.2	27.0	6.8
	HT-20, M0 to M7	1	13	14.4				14.4	28.0	13.6
	HT-20, M0 to M7	2	13	14.4	15.3			17.9	28.0	10.1
	HT-20, M8 to M15	2	13	14.4	15.3			17.9	28.0	10.1
	HT-20, M0 to M7	3	13	13.4	14.3	14.3		18.8	28.0	9.2
	HT-20, M8 to M15	3	13	13.4	14.3	14.3		18.8	28.0	9.2
	HT-20, M16 to M23	3	13	13.4	14.3	14.3		18.8	28.0	9.2
	HT-20, M0 to M7	4	13	13.4	14.3	14.3	14.9	20.3	28.0	7.7
	HT-20, M8 to M15	4	13	13.4	14.3	14.3	14.9	20.3	28.0	7.7
	HT-20, M16 to M23	4	13	13.4	14.3	14.3	14.9	20.3	28.0	7.7
	HT-20 Beam Forming, M0 to M7	2	13	14.4	15.3			17.9	28.0	10.1
	HT-20 Beam Forming, M8 to M15	2	13	14.4	15.3			17.9	28.0	10.1
	HT-20 Beam Forming, M0 to M7	3	16	12.5	13.2	13.5		17.9	27.0	9.1
	HT-20 Beam Forming, M8 to M15	3	13	13.4	14.3	14.3		18.8	28.0	9.2
	HT-20 Beam Forming, M16 to M23	3	13	13.4	14.3	14.3		18.8	28.0	9.2
	HT-20 Beam Forming, M0 to M7	4	16	11.2	11.8	12.1	12.4	17.9	27.0	9.1
	HT-20 Beam Forming, M8 to M15	4	13	13.4	14.3	14.3	14.9	20.3	28.0	7.7
	HT-20 Beam Forming, M16 to M23	4	13	13.4	14.3	14.3	14.9	20.3	28.0	7.7
	HT-20 STBC, M0 to M7	2	13	14.4	15.3			17.9	28.0	10.1
	HT-20 STBC, M0 to M7	3	13	13.4	14.3	14.3		18.8	28.0	9.2
HT-20 STBC, M0 to M7	4	13	13.4	14.3	14.3	14.9	20.3	28.0	7.7	
4	3	CCK, 1 to 11 Mbps	1	13	24.0			24.0	28.0	4.0



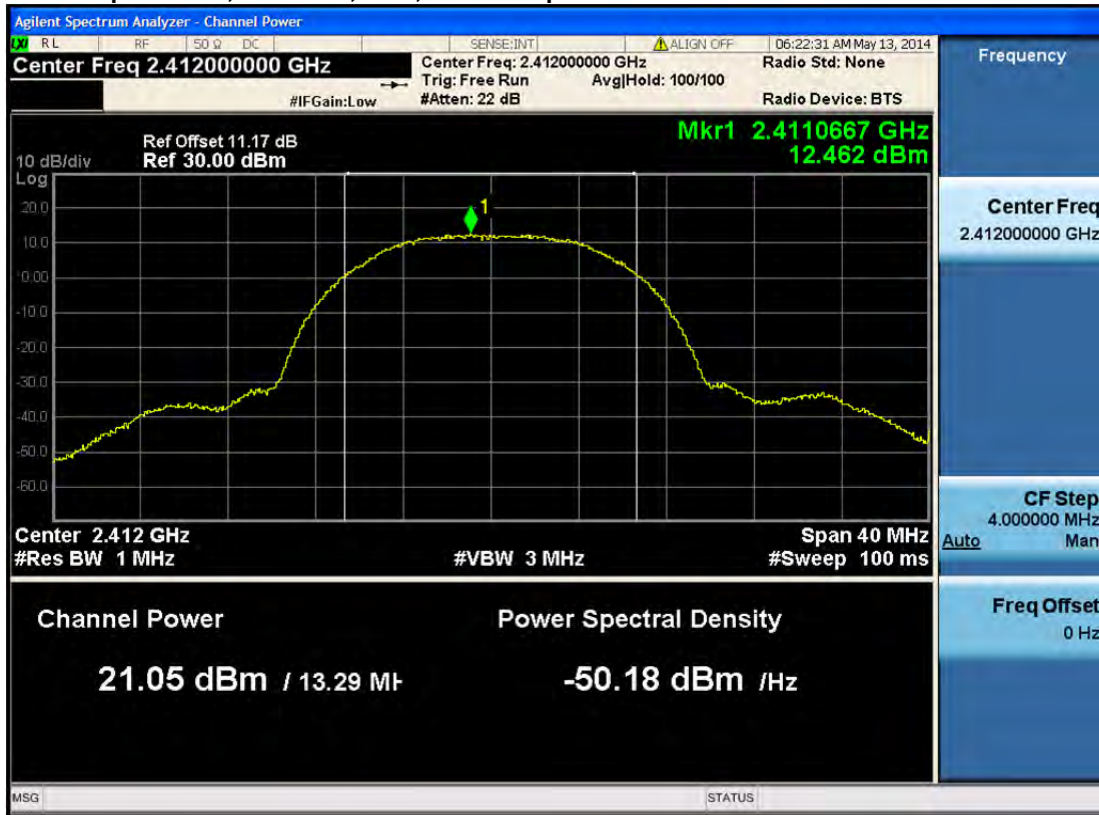
	CCK, 1 to 11 Mbps	2	13	24.0	24.4			27.2	28.0	0.8
	CCK, 1 to 11 Mbps	3	13	23.1	23.5	23.7		28.2	28.0	-0.2
	CCK, 1 to 11 Mbps	4	13	21.8	22.5	22.8	22.7	28.5	28.0	-0.5
	Non HT-20, 6 to 54 Mbps	1	13	23.2				23.2	28.0	4.8
	Non HT-20, 6 to 54 Mbps	2	13	23.2	23.7			26.5	28.0	1.5
	Non HT-20, 6 to 54 Mbps	3	13	22.3	22.8	23.0		27.5	28.0	0.5
	Non HT-20, 6 to 54 Mbps	4	13	21.5	21.8	22.2	22.1	27.9	28.0	0.1
	Non HT-20 Beam Forming, 6 to 54 Mbps	2	13	23.2	23.7			26.5	28.0	1.5
	Non HT-20 Beam Forming, 6 to 54 Mbps	3	16	20.6	20.9	21.2		25.7	27.0	1.3
	Non HT-20 Beam Forming, 6 to 54 Mbps	4	16	19.7	20.5	20.3	20.8	26.4	27.0	0.6
	HT-20, M0 to M7	1	13	24.1				24.1	28.0	3.9
	HT-20, M0 to M7	2	13	24.1	23.6			26.9	28.0	1.1
	HT-20, M8 to M15	2	13	24.1	23.6			26.9	28.0	1.1
	HT-20, M0 to M7	3	13	23.2	22.7	23.4		27.9	28.0	0.1
	HT-20, M8 to M15	3	13	23.2	22.7	23.4		27.9	28.0	0.1
	HT-20, M16 to M23	3	13	23.2	22.7	23.4		27.9	28.0	0.1
	HT-20, M0 to M7	4	13	22.3	21.8	22.6	22.6	28.4	28.0	-0.4
	HT-20, M8 to M15	4	13	22.3	21.8	22.6	22.6	28.4	28.0	-0.4
	HT-20, M16 to M23	4	13	22.3	21.8	22.6	22.6	28.4	28.0	-0.4
	HT-20 Beam Forming, M0 to M7	2	13	24.1	23.6			26.9	28.0	1.1
	HT-20 Beam Forming, M8 to M15	2	13	24.1	23.6			26.9	28.0	1.1
	HT-20 Beam Forming, M0 to M7	3	16	21.4	21.0	21.7		26.1	27.0	0.9
	HT-20 Beam Forming, M8 to M15	3	13	22.3	21.8	22.6		27.0	28.0	1.0
	HT-20 Beam Forming, M16 to M23	3	13	23.2	22.7	23.4		27.9	28.0	0.1
	HT-20 Beam Forming, M0 to M7	4	16	20.5	20.5	20.7	21.2	26.8	27.0	0.2
	HT-20 Beam Forming, M8 to M15	4	13	21.4	21.0	21.7	21.6	27.5	28.0	0.5
	HT-20 Beam Forming, M16 to M23	4	13	22.3	21.8	22.6	22.6	28.4	28.0	-0.4
	HT-20 STBC, M0 to M7	2	13	24.1	23.6			26.9	28.0	1.1
	HT-20 STBC, M0 to M7	3	13	23.2	22.7	23.4		27.9	28.0	0.1
	HT-20 STBC, M0 to M7	4	13	22.3	21.8	22.6	22.6	28.4	28.0	-0.4
2462	CCK, 1 to 11 Mbps	1	13	24.4				24.4	28.0	3.6
	CCK, 1 to 11 Mbps	2	13	24.4	23.8			27.1	28.0	0.9
	CCK, 1 to 11 Mbps	3	13	23.4	22.8	23.5		28.0	28.0	0.0
	CCK, 1 to 11 Mbps	4	13	22.5	21.9	22.7	22.5	28.4	28.0	-0.4
	Non HT-20, 6 to 54 Mbps	1	13	18.5				18.5	28.0	9.5
	Non HT-20, 6 to 54 Mbps	2	13	16.6	17.7			20.2	28.0	7.8
	Non HT-20, 6 to 54 Mbps	3	13	14.5	15.7	14.8		19.8	28.0	8.2
	Non HT-20, 6 to 54 Mbps	4	13	14.5	15.7	14.8	15.0	21.0	28.0	7.0
	Non HT-20 Beam Forming, 6 to 54 Mbps	2	13	16.6	17.7			20.2	28.0	7.8
	Non HT-20 Beam Forming, 6 to 54 Mbps	3	16	14.5	15.7	14.8		19.8	27.0	7.2



Non HT-20 Beam Forming, 6 to 54 Mbps	4	16	13.6	15.2	13.9	14.5	20.4	27.0	6.6
HT-20, M0 to M7	1	13	17.4				17.4	28.0	10.6
HT-20, M0 to M7	2	13	15.3	15.5			18.4	28.0	9.6
HT-20, M8 to M15	2	13	15.3	15.5			18.4	28.0	9.6
HT-20, M0 to M7	3	13	15.3	15.5	15.1		20.1	28.0	7.9
HT-20, M8 to M15	3	13	15.3	15.5	15.1		20.1	28.0	7.9
HT-20, M16 to M23	3	13	15.3	15.5	15.1		20.1	28.0	7.9
HT-20, M0 to M7	4	13	15.3	15.5	15.1	15.2	21.3	28.0	6.7
HT-20, M8 to M15	4	13	15.3	15.5	15.1	15.2	21.3	28.0	6.7
HT-20, M16 to M23	4	13	15.3	15.5	15.1	15.2	21.3	28.0	6.7
HT-20 Beam Forming, M0 to M7	2	13	15.3	15.5			18.4	28.0	9.6
HT-20 Beam Forming, M8 to M15	2	13	15.3	15.5			18.4	28.0	9.6
HT-20 Beam Forming, M0 to M7	3	16	14.4	14.8	14.1		19.2	27.0	7.8
HT-20 Beam Forming, M8 to M15	3	13	15.3	15.5	15.1		20.1	28.0	7.9
HT-20 Beam Forming, M16 to M23	3	13	15.3	15.5	15.1		20.1	28.0	7.9
HT-20 Beam Forming, M0 to M7	4	16	13.3	13.9	13.1	13.7	19.5	27.0	7.5
HT-20 Beam Forming, M8 to M15	4	13	15.3	15.5	15.1	15.2	21.3	28.0	6.7
HT-20 Beam Forming, M16 to M23	4	13	15.3	15.5	15.1	15.2	21.3	28.0	6.7
HT-20 STBC, M0 to M7	2	13	15.3	15.5			18.4	28.0	9.6
HT-20 STBC, M0 to M7	3	13	15.3	15.5	15.1		20.1	28.0	7.9
HT-20 STBC, M0 to M7	4	13	15.3	15.5	15.1	15.2	21.3	28.0	6.7



Peak Output Power, 2412 MHz, CCK, 1 to 11 Mbps



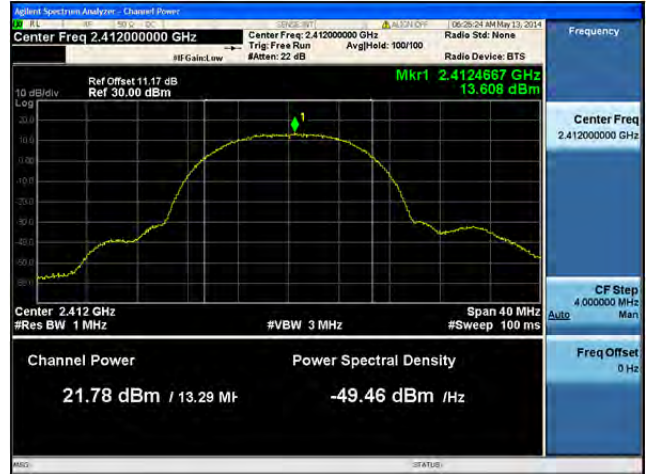
Antenna A



Peak Output Power, 2412 MHz, CCK, 1 to 11 Mbps



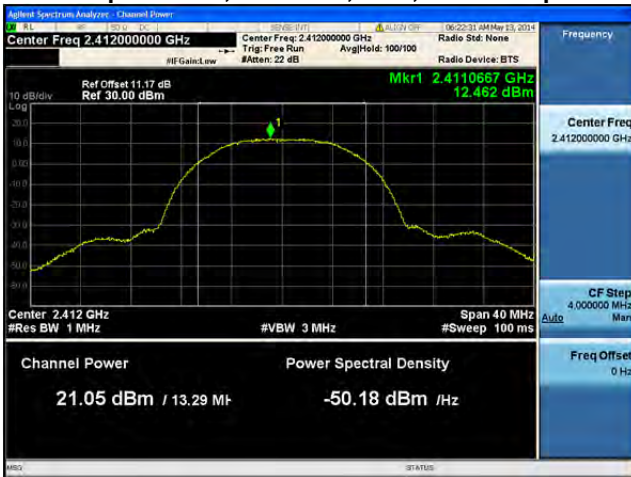
Antenna A



Antenna B



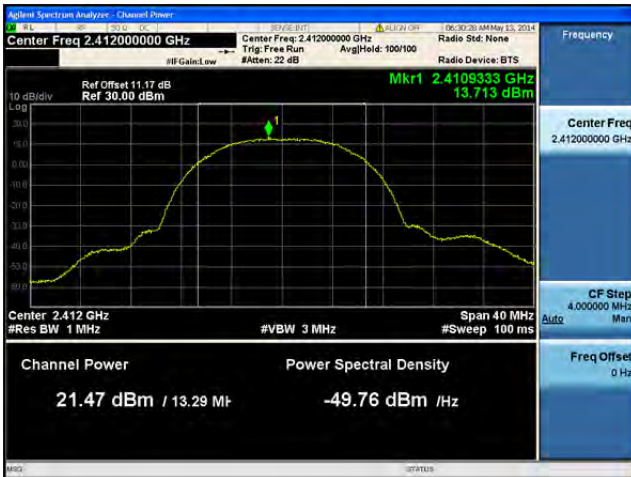
Peak Output Power, 2412 MHz, CCK, 1 to 11 Mbps



Antenna A



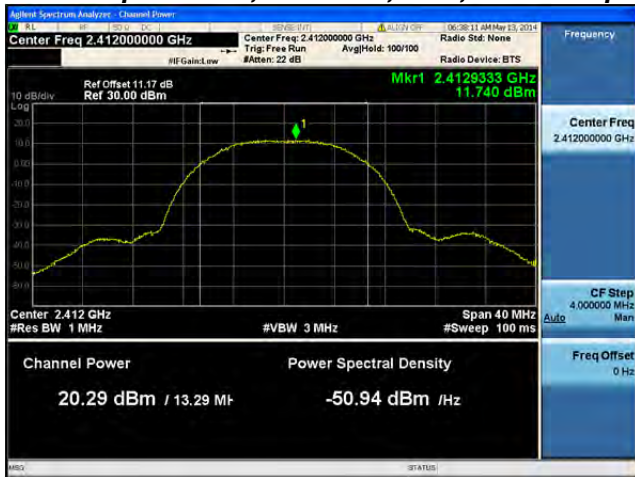
Antenna B



Antenna C



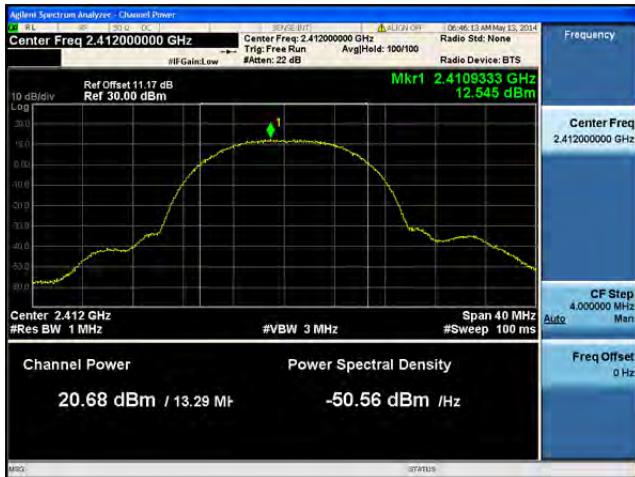
Peak Output Power, 2412 MHz, CCK, 1 to 11 Mbps



Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2412 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



Peak Output Power, 2412 MHz, Non HT-20, 6 to 54 Mbps



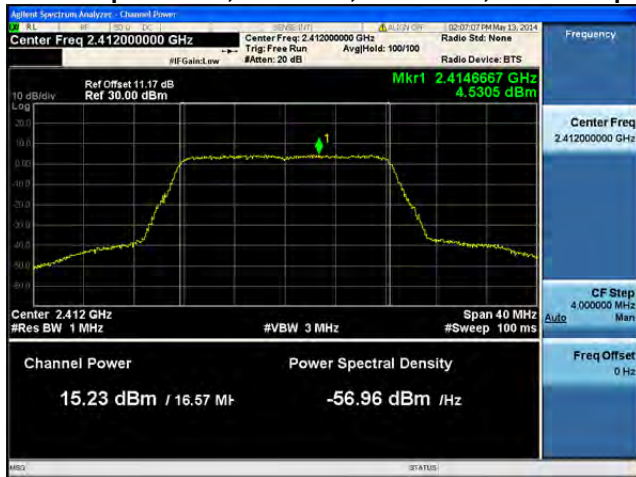
Antenna A



Antenna B



Peak Output Power, 2412 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



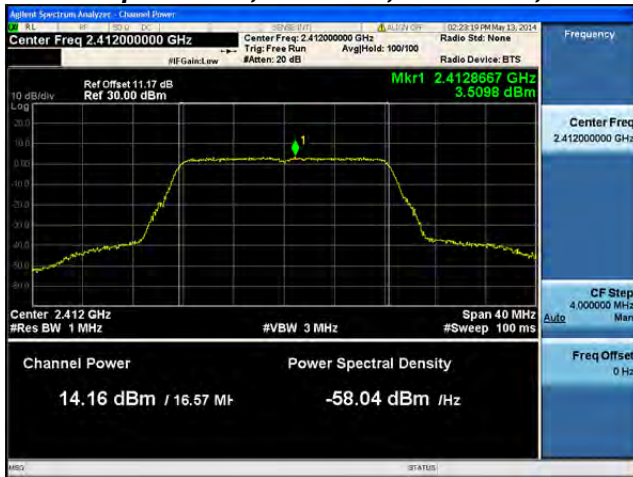
Antenna B



Antenna C



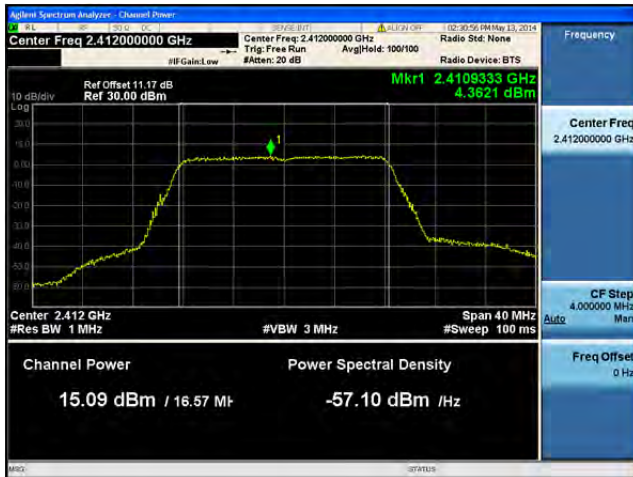
Peak Output Power, 2412 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



Antenna B



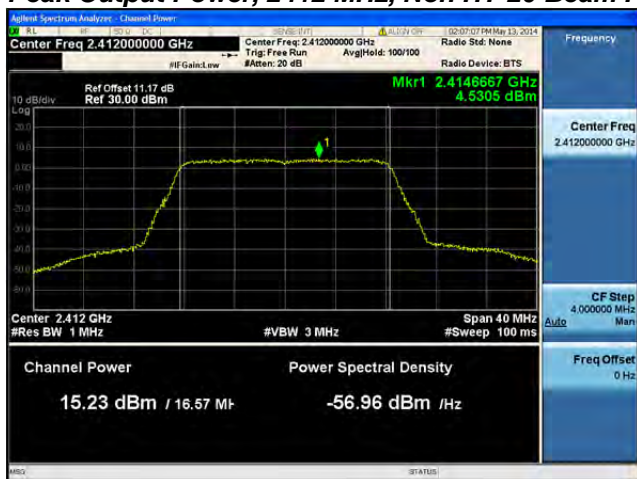
Antenna C



Antenna D



Peak Output Power, 2412 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



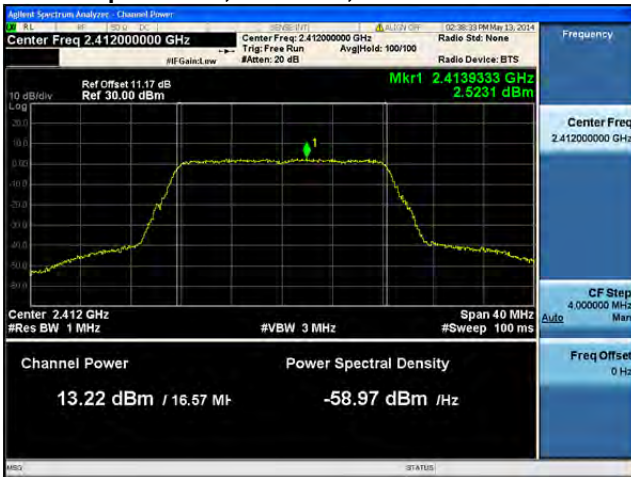
Antenna A



Antenna B



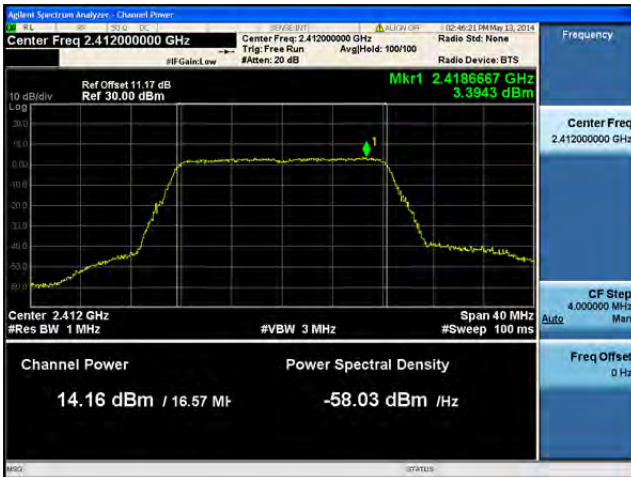
Peak Output Power, 2412 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



Antenna A



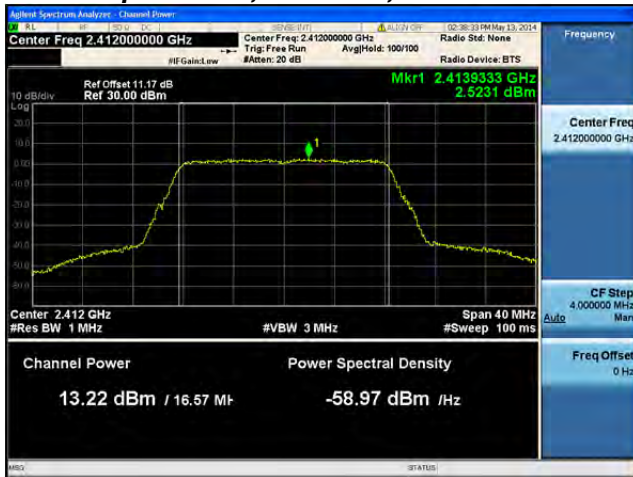
Antenna B



Antenna C



Peak Output Power, 2412 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



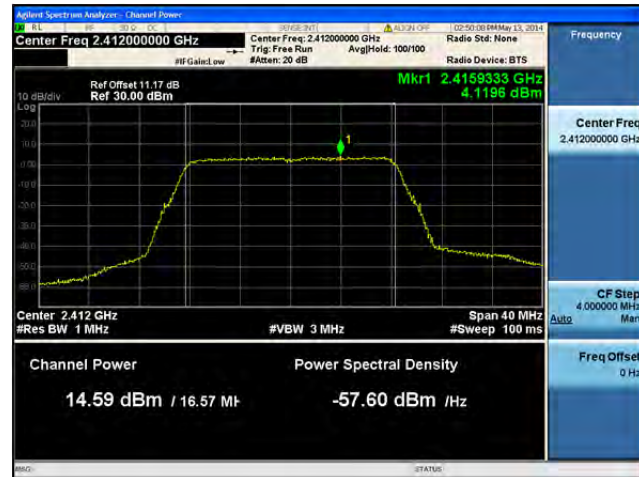
Antenna A



Antenna B



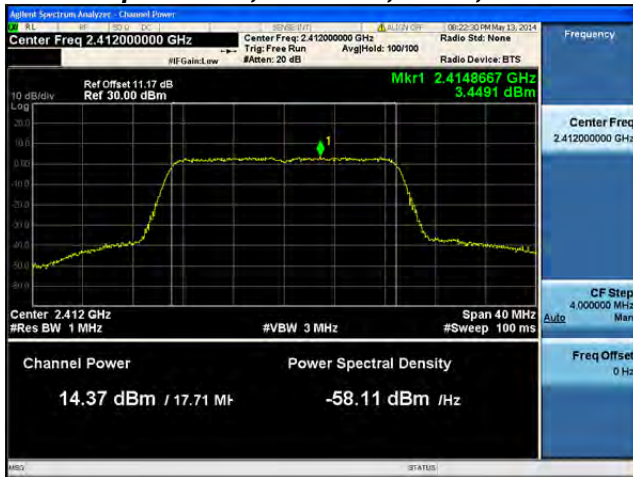
Antenna C



Antenna D



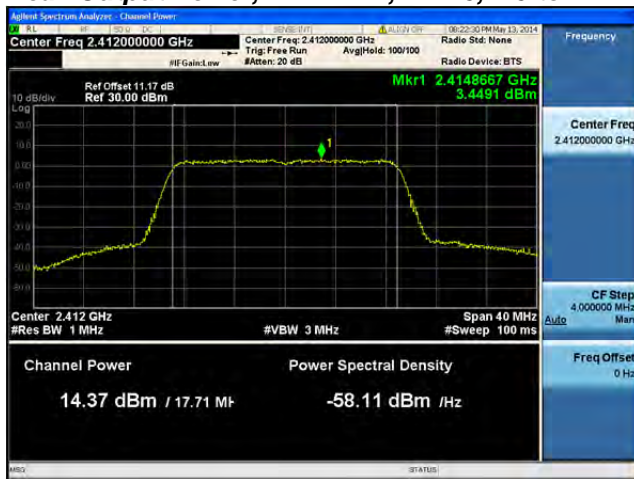
Peak Output Power, 2412 MHz, HT-20, M0 to M7



Antenna A



Peak Output Power, 2412 MHz, HT-20, M0 to M7



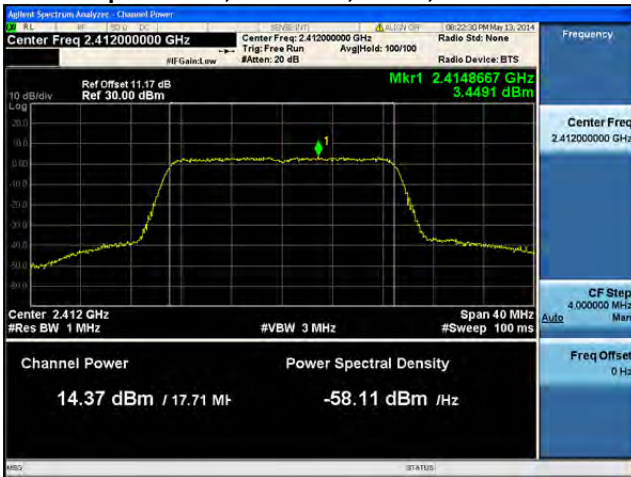
Antenna A



Antenna B



Peak Output Power, 2412 MHz, HT-20, M8 to M15



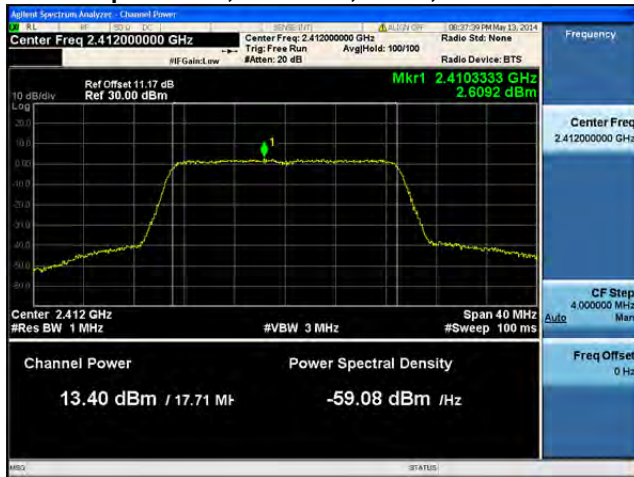
Antenna A



Antenna B



Peak Output Power, 2412 MHz, HT-20, M0 to M7



Antenna A



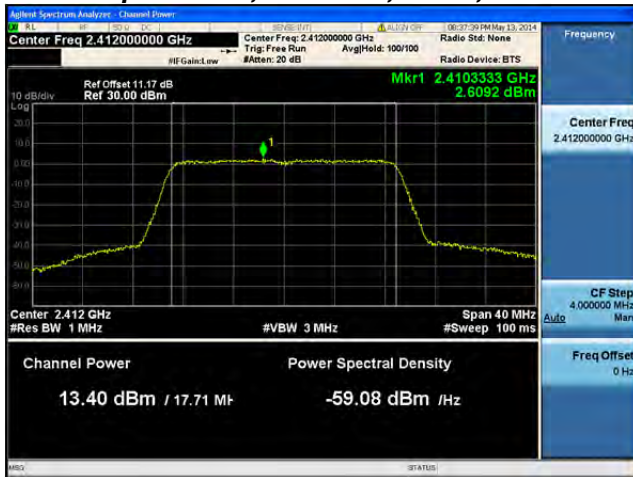
Antenna B



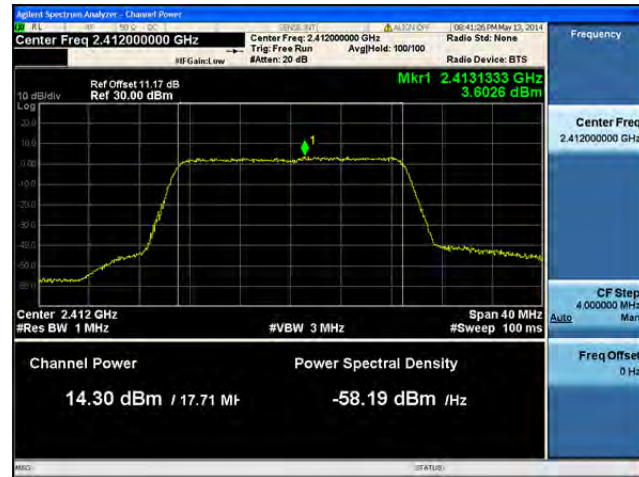
Antenna C



Peak Output Power, 2412 MHz, HT-20, M8 to M15



Antenna A



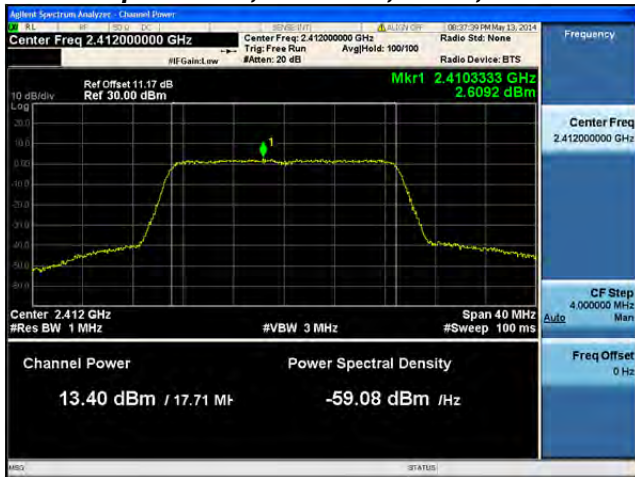
Antenna B



Antenna C



Peak Output Power, 2412 MHz, HT-20, M16 to M23



Antenna A



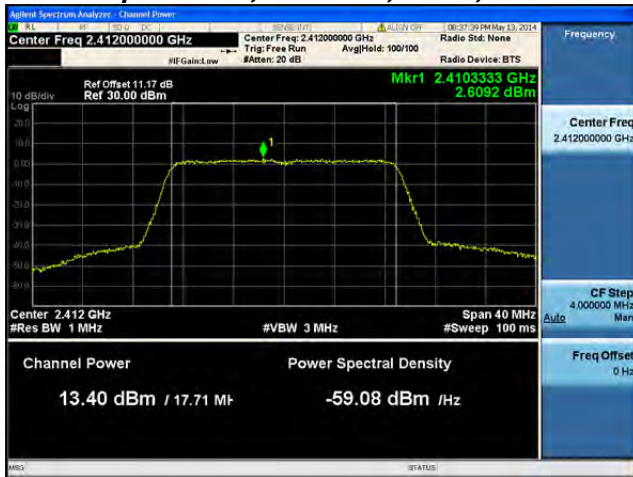
Antenna B



Antenna C



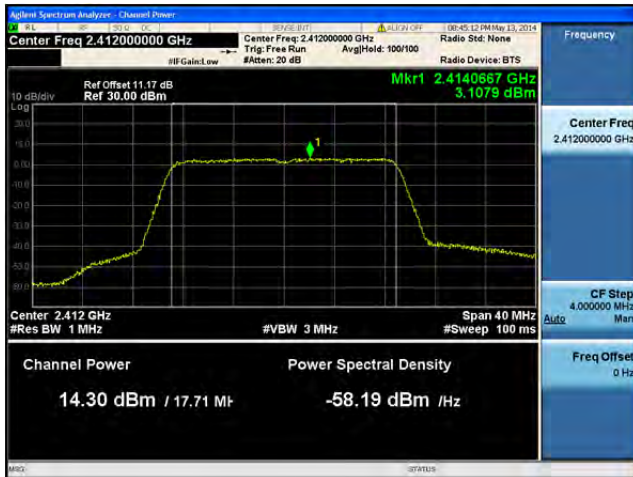
Peak Output Power, 2412 MHz, HT-20, M0 to M7



Antenna A



Antenna B



Antenna C



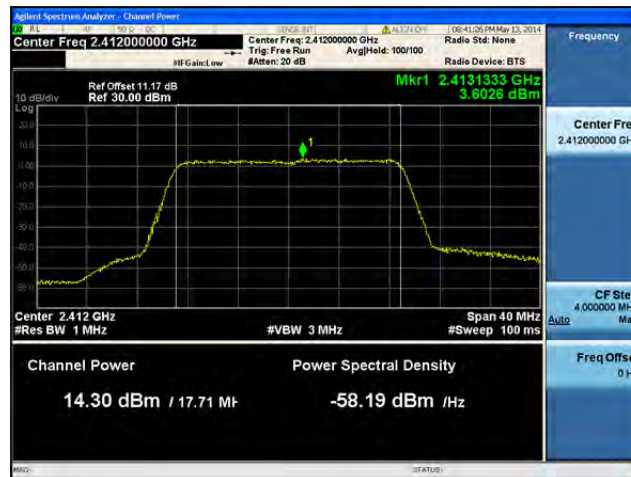
Antenna D



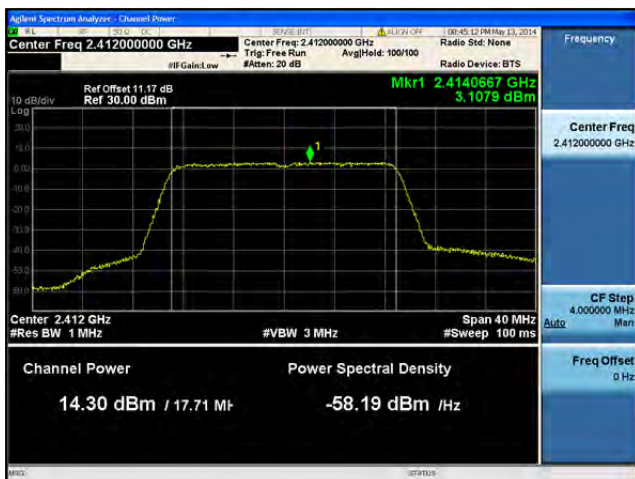
Peak Output Power, 2412 MHz, HT-20, M8 to M15



Antenna A



Antenna B



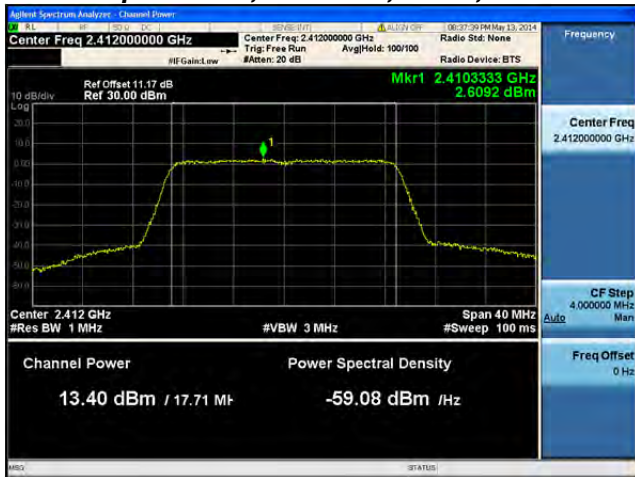
Antenna C



Antenna D



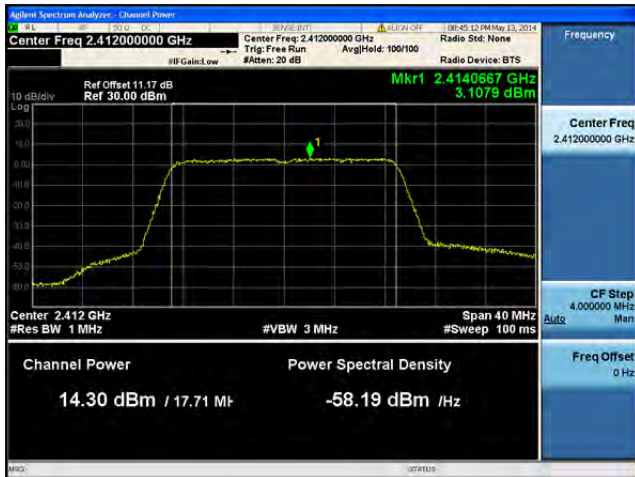
Peak Output Power, 2412 MHz, HT-20, M16 to M23



Antenna A



Antenna B



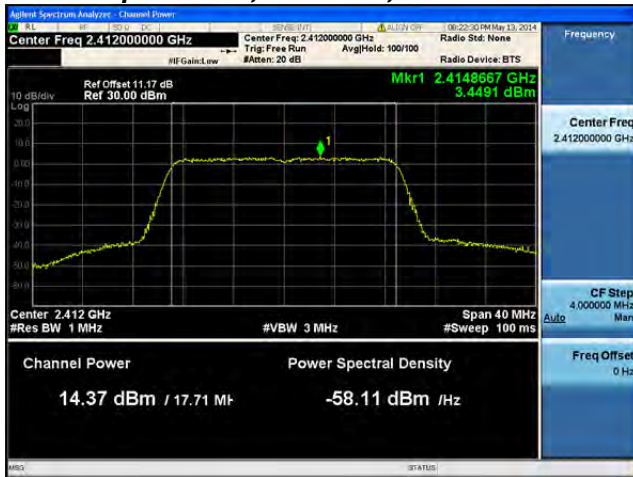
Antenna C



Antenna D



Peak Output Power, 2412 MHz, HT-20 Beam Forming, M0 to M7



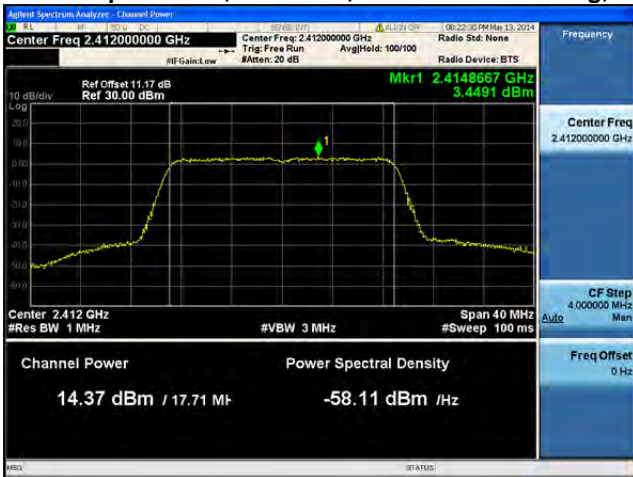
Antenna A



Antenna B



Peak Output Power, 2412 MHz, HT-20 Beam Forming, M8 to M15



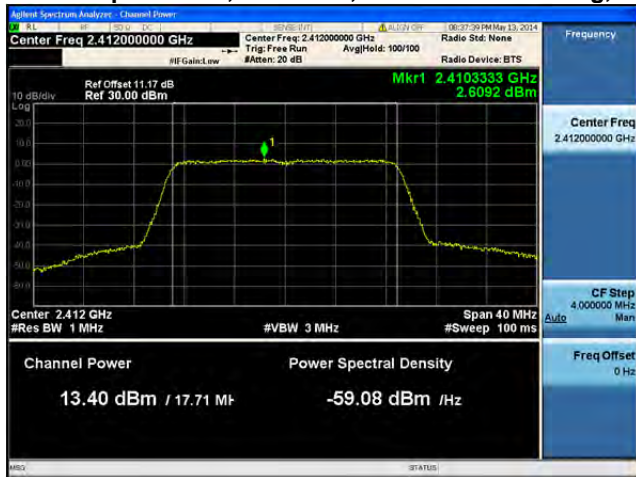
Antenna A



Antenna B



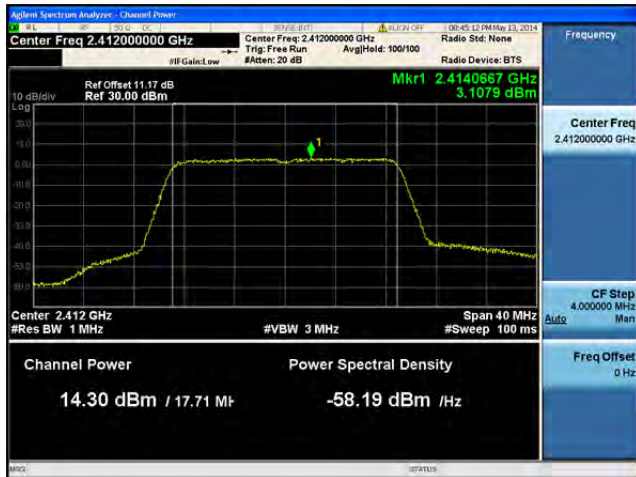
Peak Output Power, 2412 MHz, HT-20 Beam Forming, M0 to M7



Antenna A



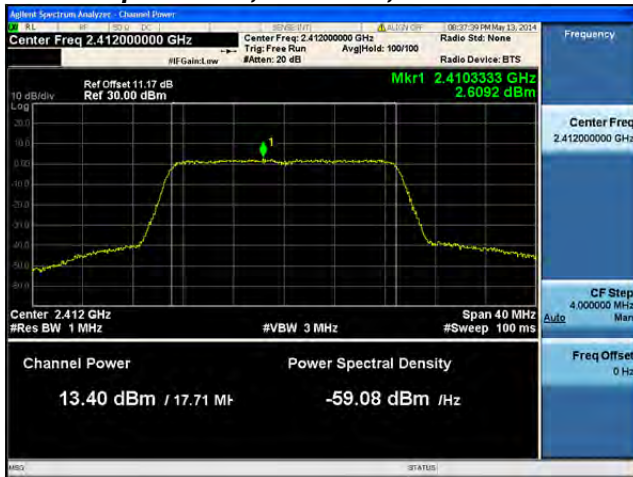
Antenna B



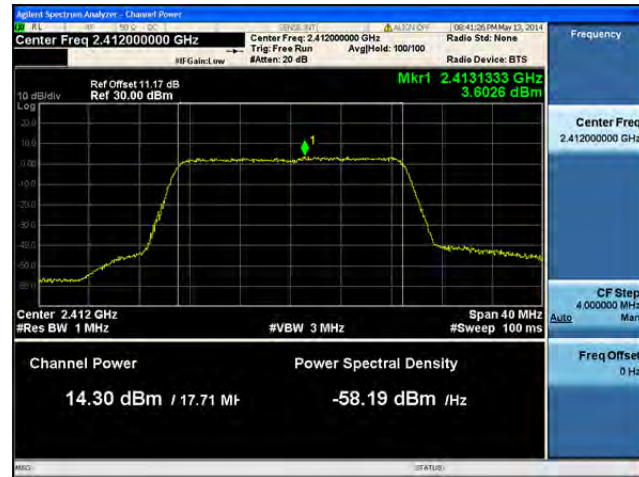
Antenna C



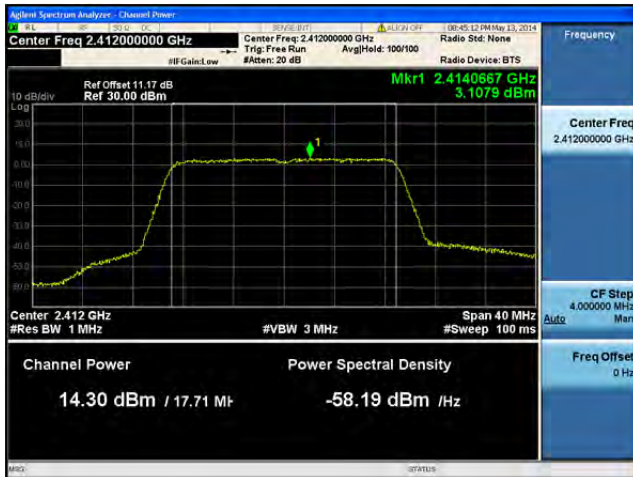
Peak Output Power, 2412 MHz, HT-20 Beam Forming, M8 to M15



Antenna A



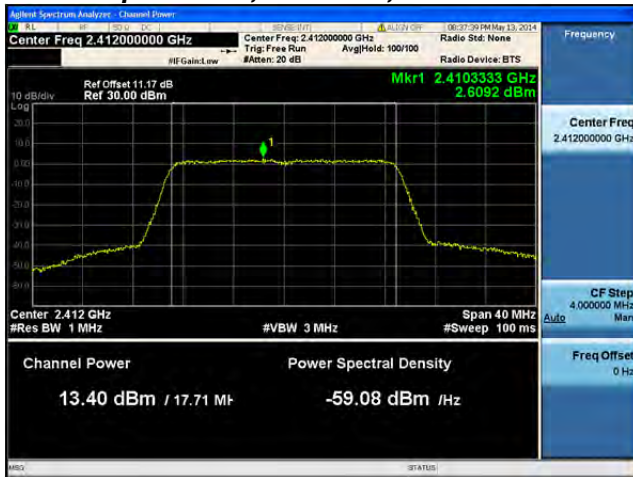
Antenna B



Antenna C



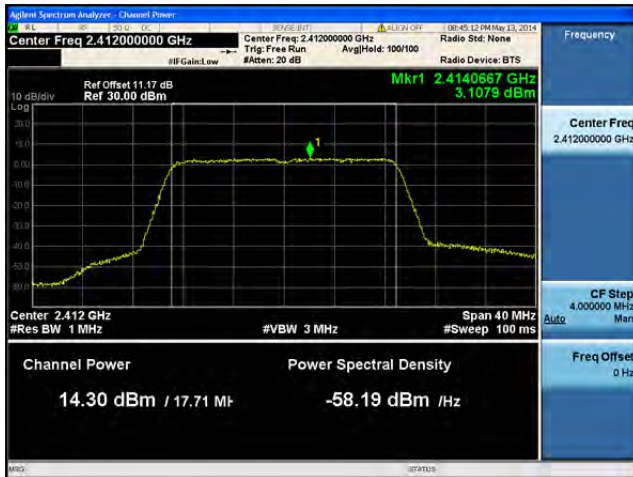
Peak Output Power, 2412 MHz, HT-20 Beam Forming, M16 to M23



Antenna A



Antenna B



Antenna C



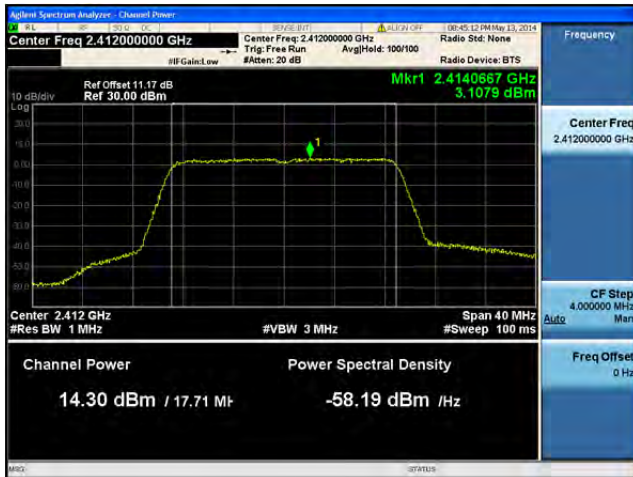
Peak Output Power, 2412 MHz, HT-20 Beam Forming, M0 to M7



Antenna A



Antenna B



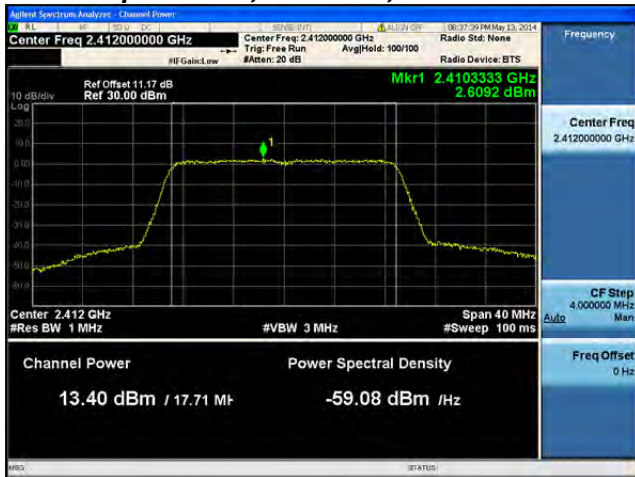
Antenna C



Antenna D



Peak Output Power, 2412 MHz, HT-20 Beam Forming, M8 to M15



Antenna A



Antenna B



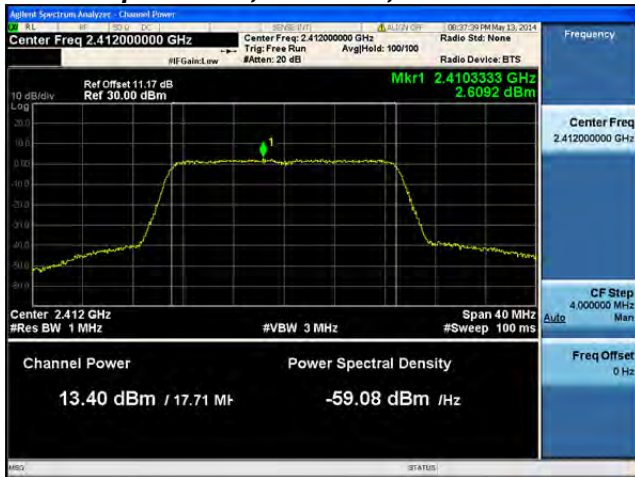
Antenna C



Antenna D



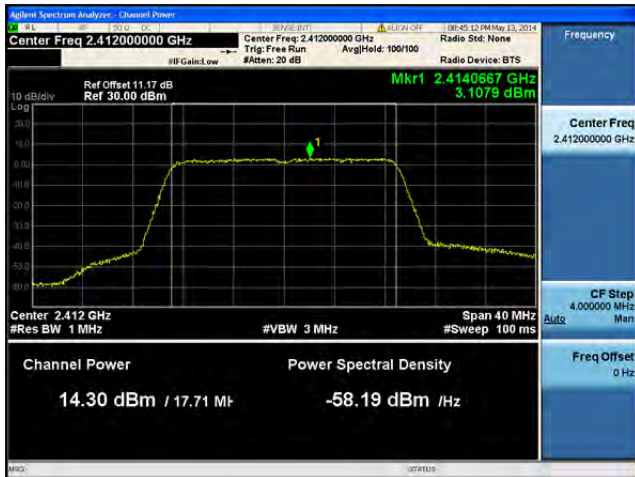
Peak Output Power, 2412 MHz, HT-20 Beam Forming, M16 to M23



Antenna A



Antenna B



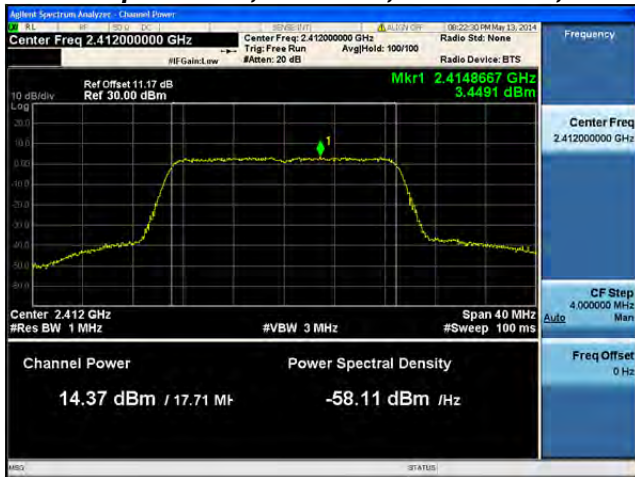
Antenna C



Antenna D



Peak Output Power, 2412 MHz, HT-20 STBC, M0 to M7



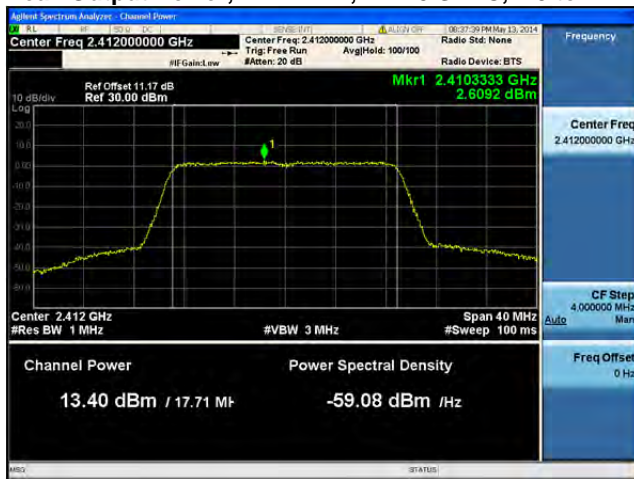
Antenna A



Antenna B



Peak Output Power, 2412 MHz, HT-20 STBC, M0 to M7



Antenna A



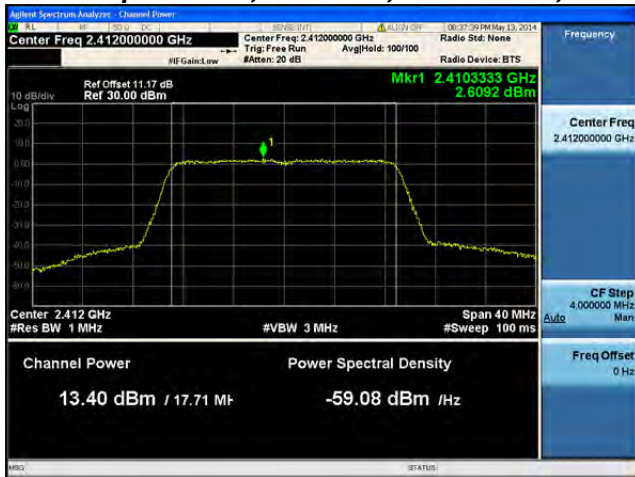
Antenna B



Antenna C



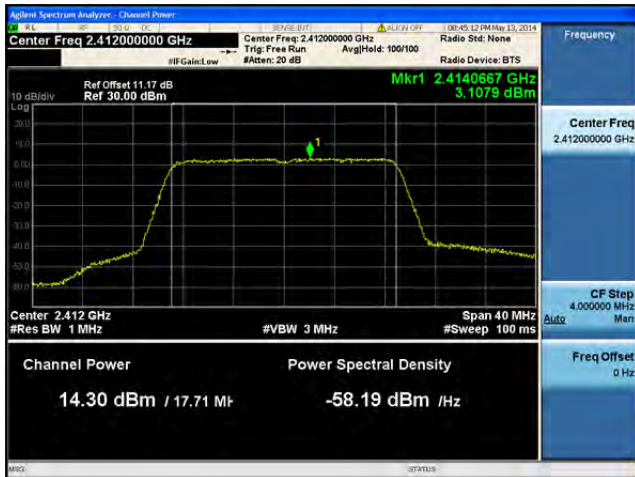
Peak Output Power, 2412 MHz, HT-20 STBC, M0 to M7



Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2437 MHz, CCK, 1 to 11 Mbps



Antenna A



Peak Output Power, 2437 MHz, CCK, 1 to 11 Mbps



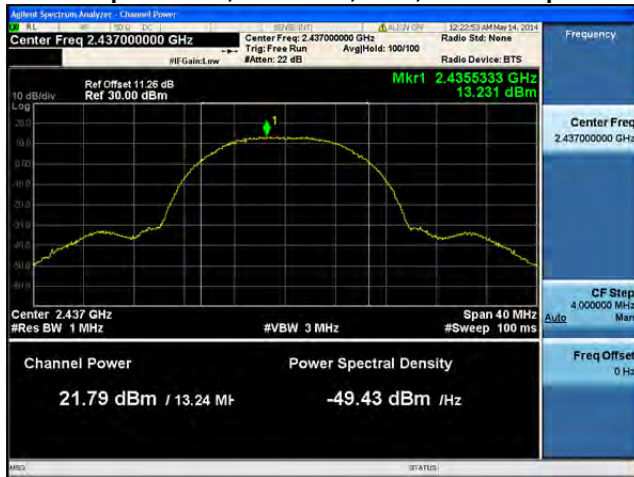
Antenna A



Antenna B



Peak Output Power, 2437 MHz, CCK, 1 to 11 Mbps



Antenna A



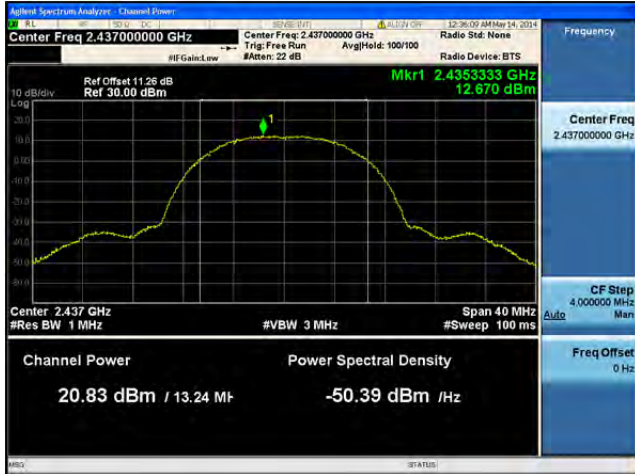
Antenna B



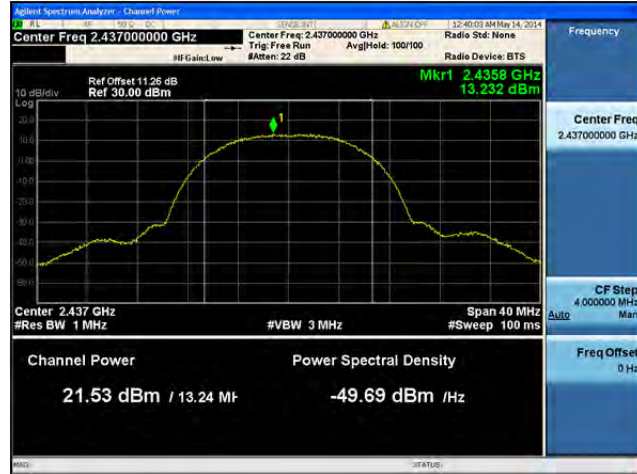
Antenna C



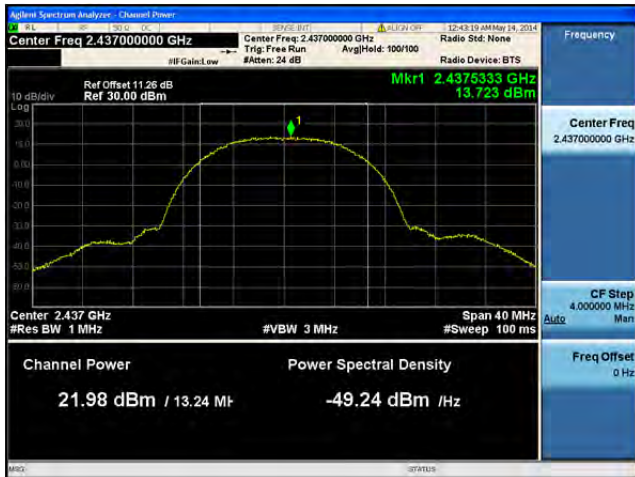
Peak Output Power, 2437 MHz, CCK, 1 to 11 Mbps



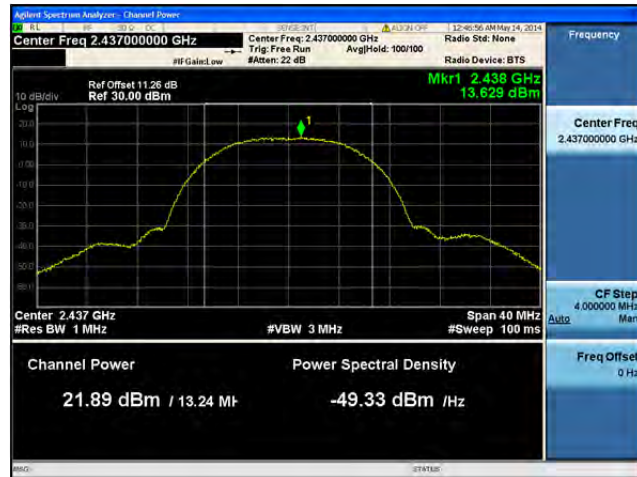
Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2437 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



Peak Output Power, 2437 MHz, Non HT-20, 6 to 54 Mbps



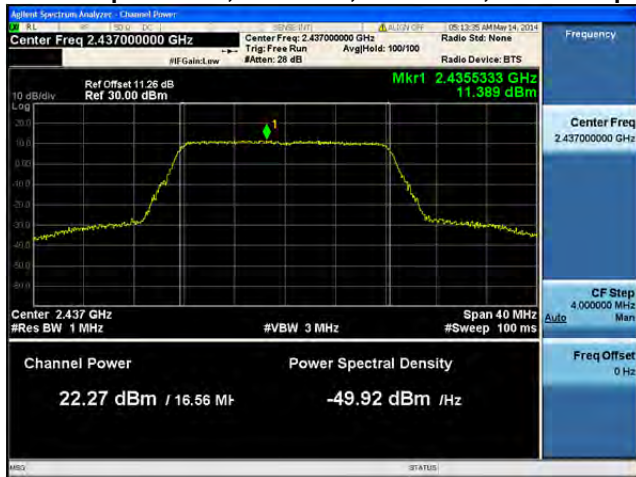
Antenna A



Antenna B



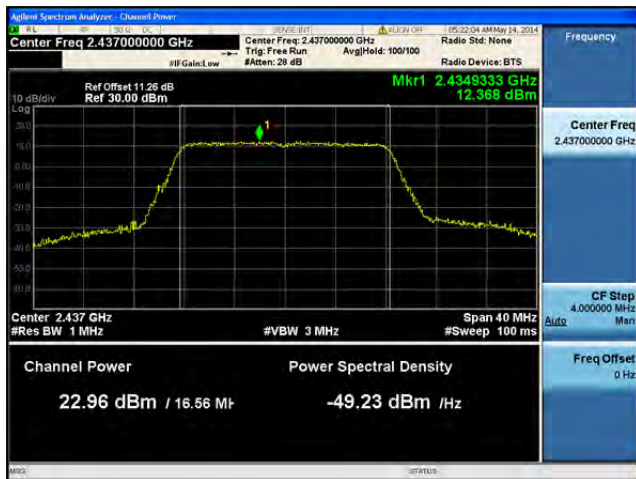
Peak Output Power, 2437 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



Antenna B



Antenna C



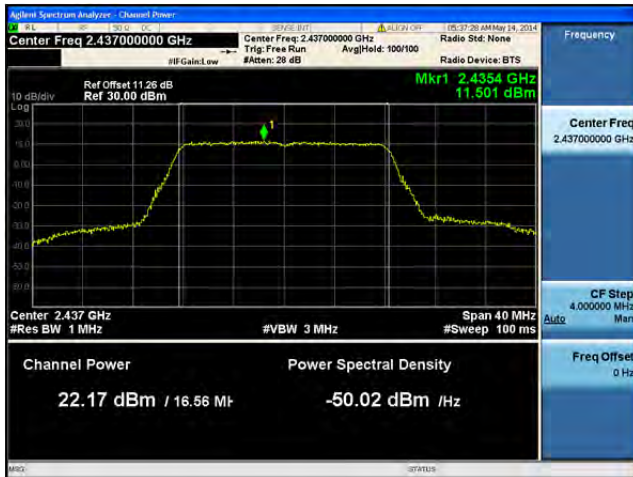
Peak Output Power, 2437 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2437 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



Antenna A



Antenna B



Peak Output Power, 2437 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



Antenna A



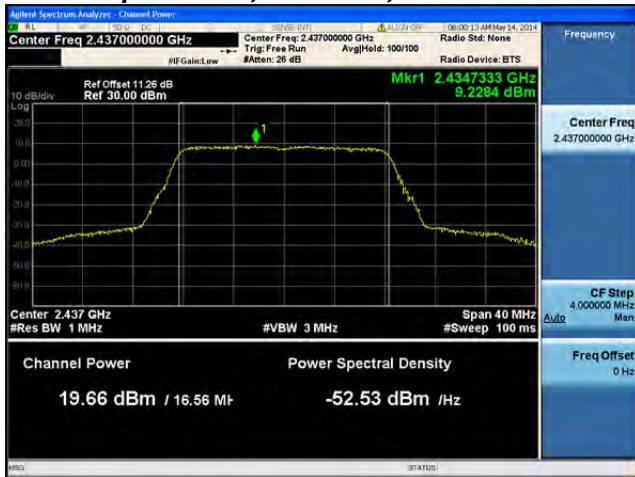
Antenna B



Antenna C



Peak Output Power, 2437 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



Antenna A



Antenna B



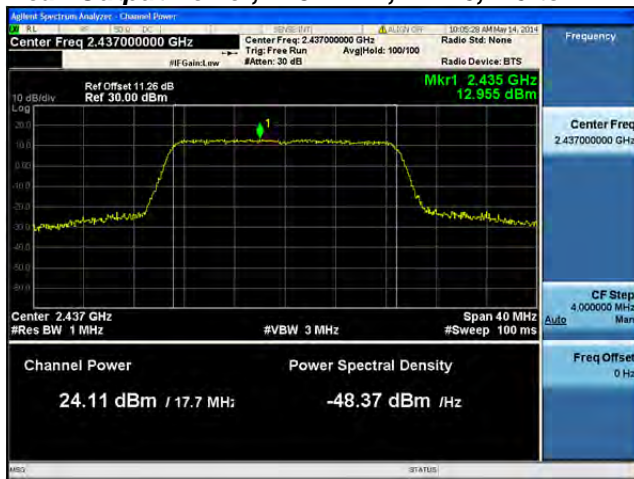
Antenna C



Antenna D



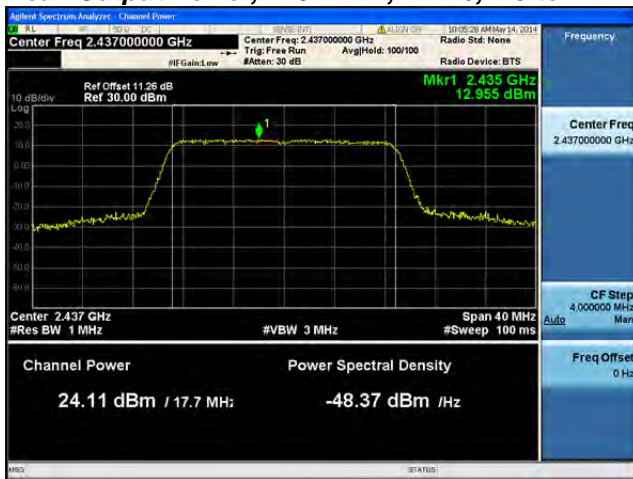
Peak Output Power, 2437 MHz, HT-20, M0 to M7



Antenna A



Peak Output Power, 2437 MHz, HT-20, M0 to M7



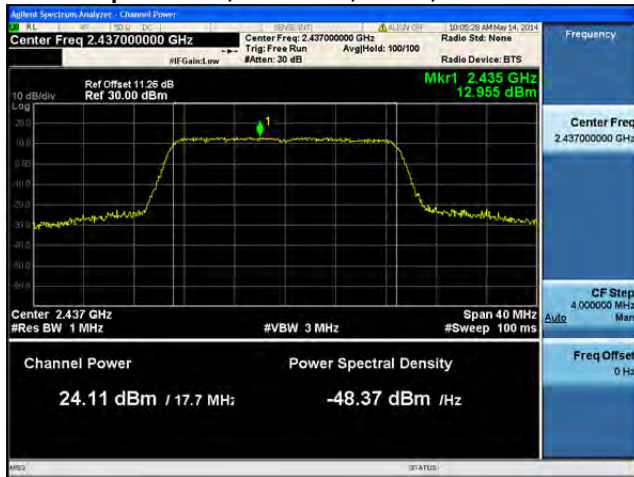
Antenna A



Antenna B



Peak Output Power, 2437 MHz, HT-20, M8 to M15



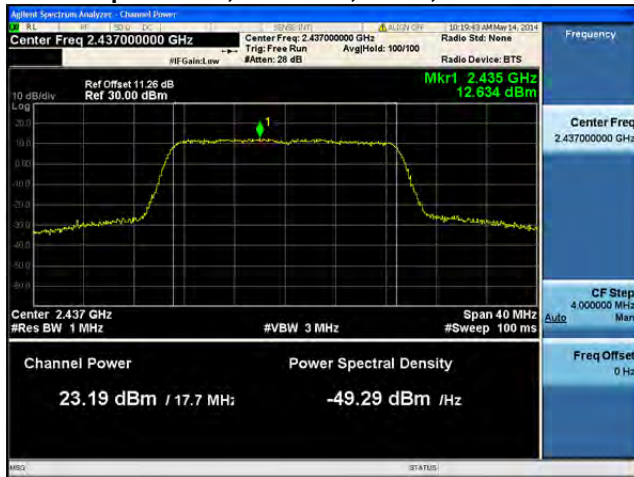
Antenna A



Antenna B



Peak Output Power, 2437 MHz, HT-20, M0 to M7



Antenna A



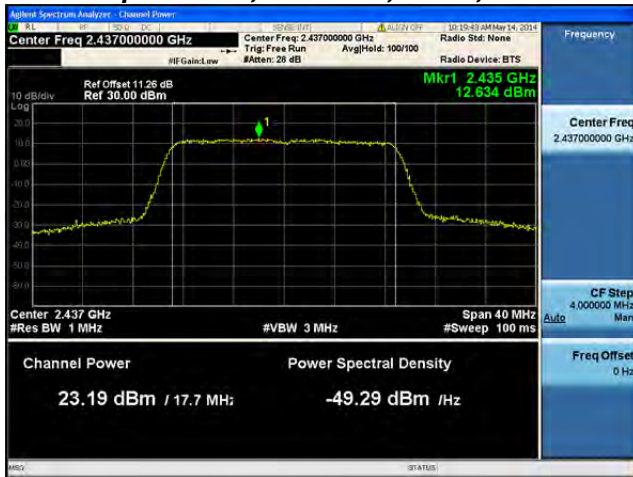
Antenna B



Antenna C



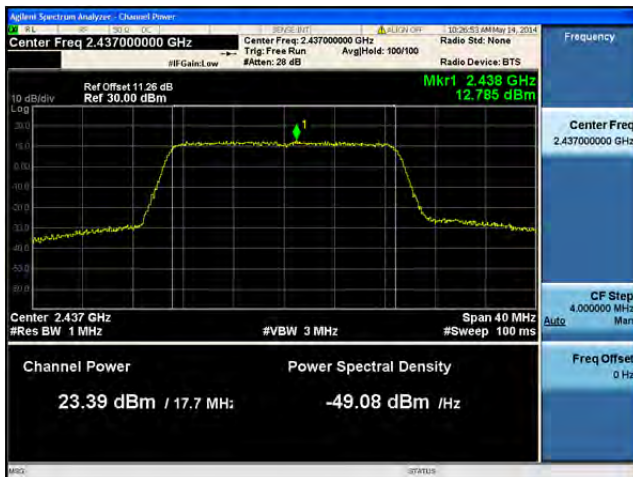
Peak Output Power, 2437 MHz, HT-20, M8 to M15



Antenna A



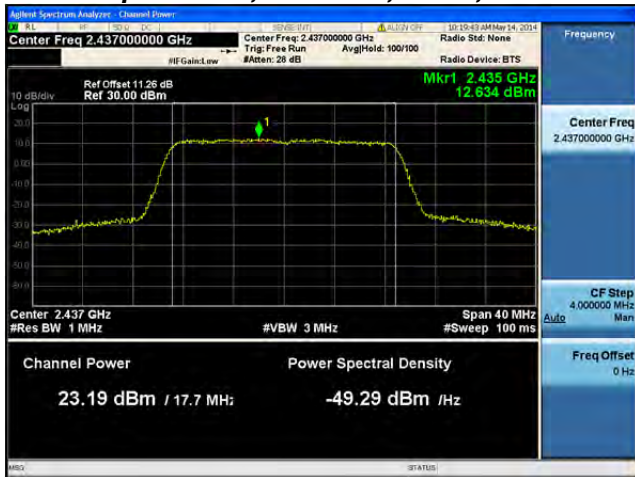
Antenna B



Antenna C



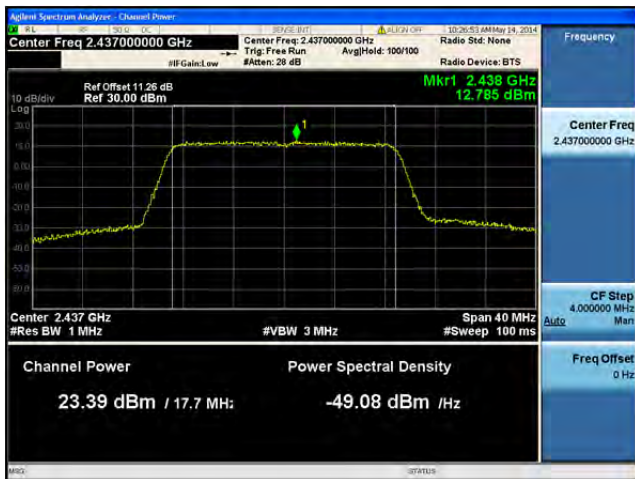
Peak Output Power, 2437 MHz, HT-20, M16 to M23



Antenna A



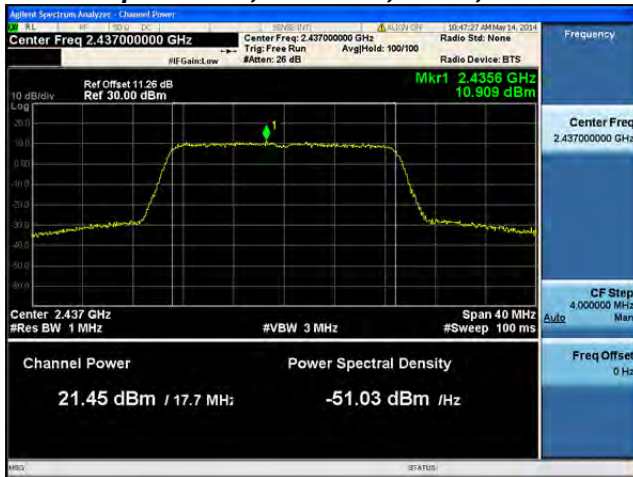
Antenna B



Antenna C



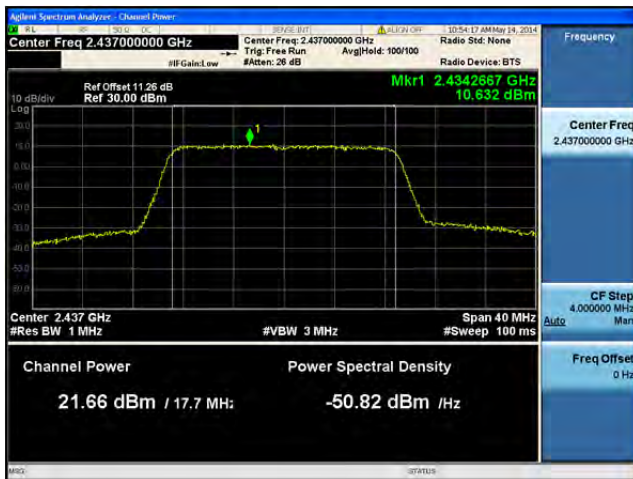
Peak Output Power, 2437 MHz, HT-20, M0 to M7



Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2437 MHz, HT-20, M8 to M15



Antenna A



Antenna B



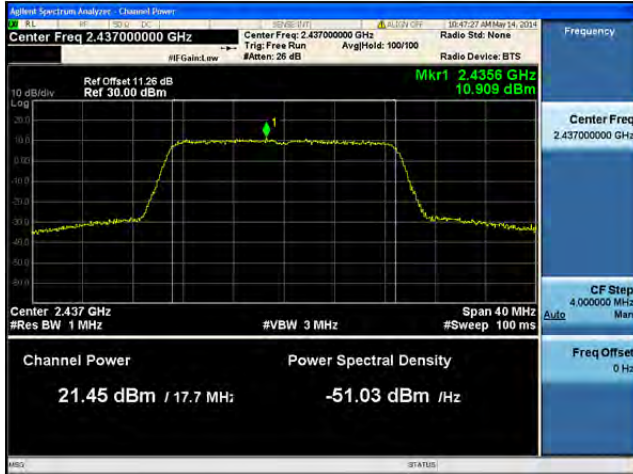
Antenna C



Antenna D



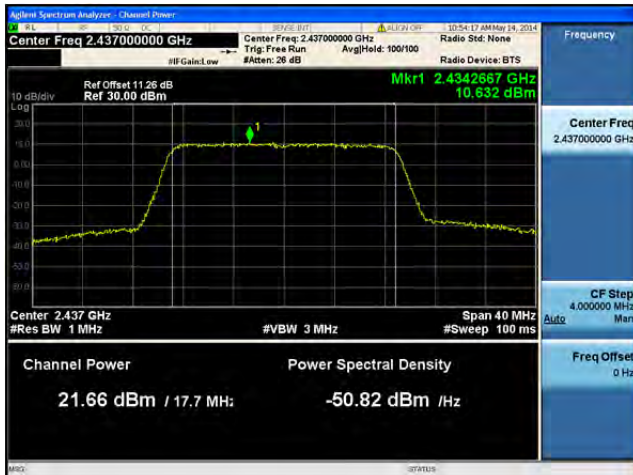
Peak Output Power, 2437 MHz, HT-20, M16 to M23



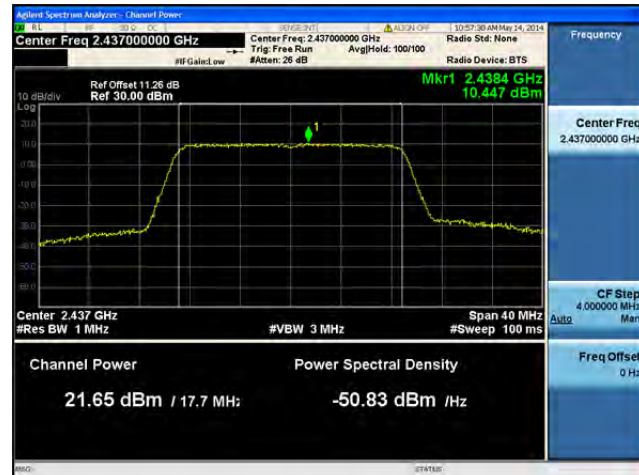
Antenna A



Antenna B



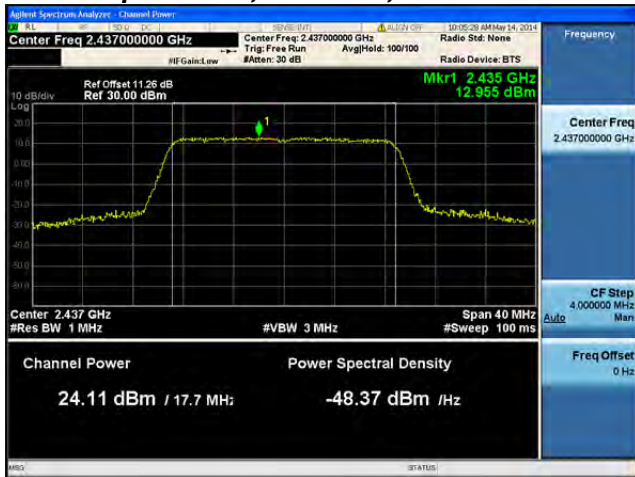
Antenna C



Antenna D



Peak Output Power, 2437 MHz, HT-20 Beam Forming, M0 to M7



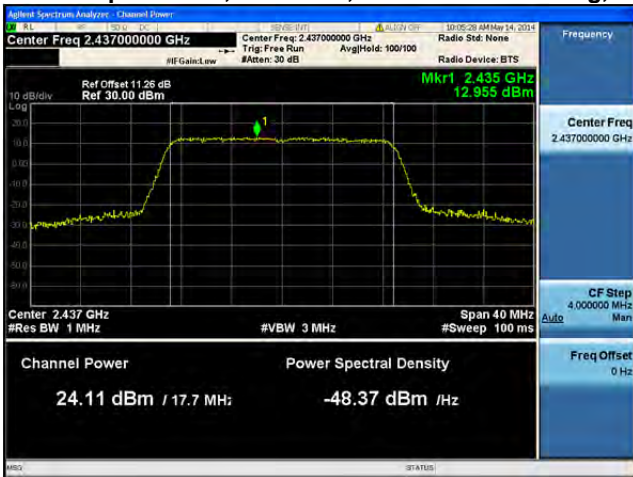
Antenna A



Antenna B



Peak Output Power, 2437 MHz, HT-20 Beam Forming, M8 to M15



Antenna A



Antenna B



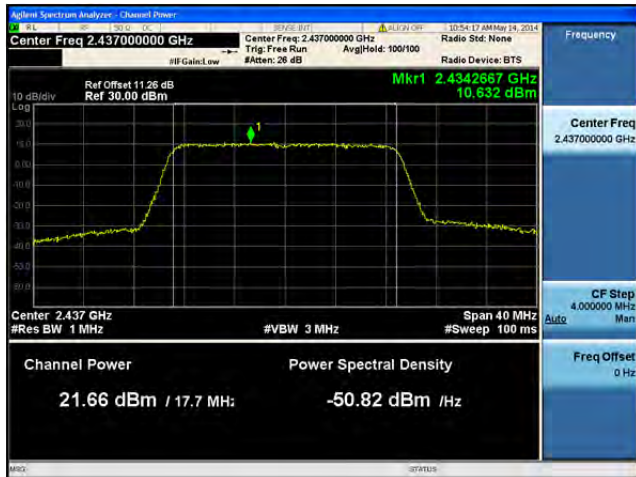
Peak Output Power, 2437 MHz, HT-20 Beam Forming, M0 to M7



Antenna A



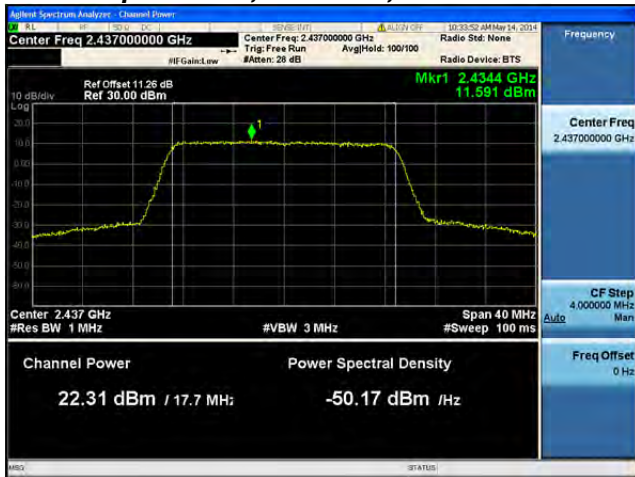
Antenna B



Antenna C



Peak Output Power, 2437 MHz, HT-20 Beam Forming, M8 to M15



Antenna A



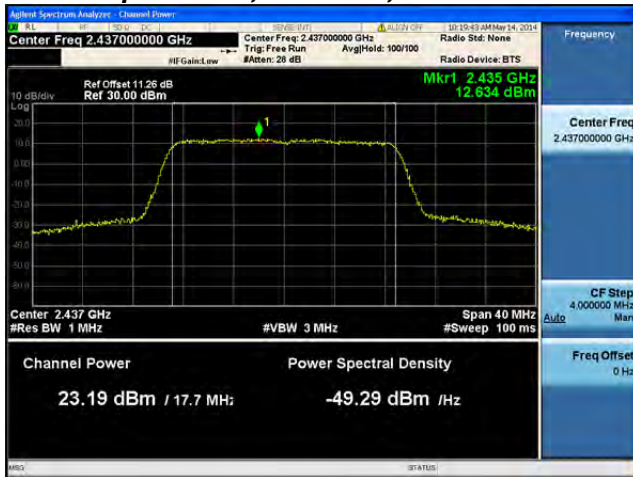
Antenna B



Antenna C



Peak Output Power, 2437 MHz, HT-20 Beam Forming, M16 to M23



Antenna A



Antenna B



Antenna C



Peak Output Power, 2437 MHz, HT-20 Beam Forming, M0 to M7



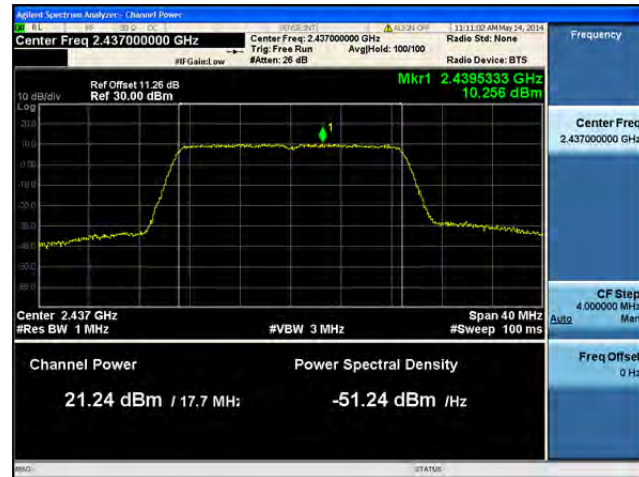
Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2437 MHz, HT-20 Beam Forming, M8 to M15



Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2437 MHz, HT-20 Beam Forming, M16 to M23



Antenna A



Antenna B



Antenna C



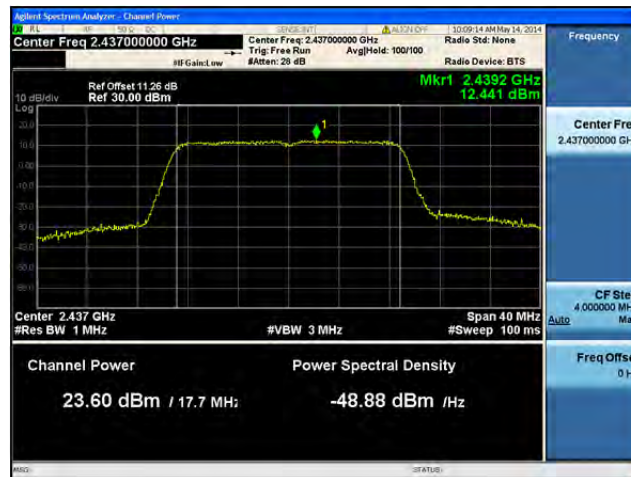
Antenna D



Peak Output Power, 2437 MHz, HT-20 STBC, M0 to M7



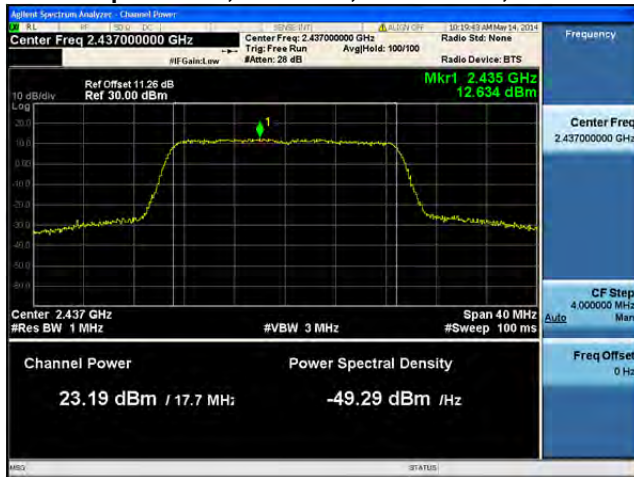
Antenna A



Antenna B



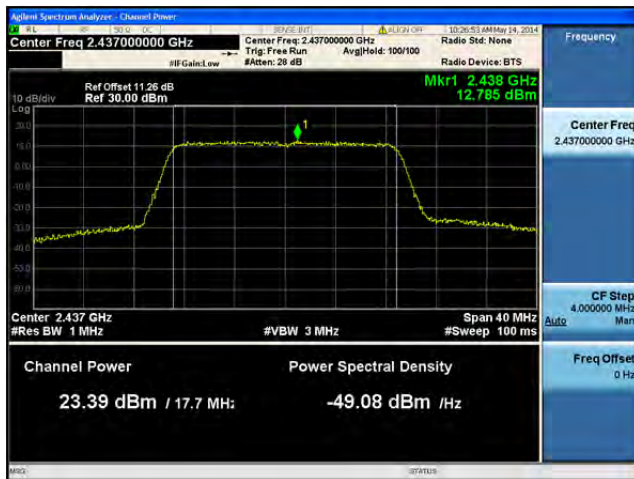
Peak Output Power, 2437 MHz, HT-20 STBC, M0 to M7



Antenna A



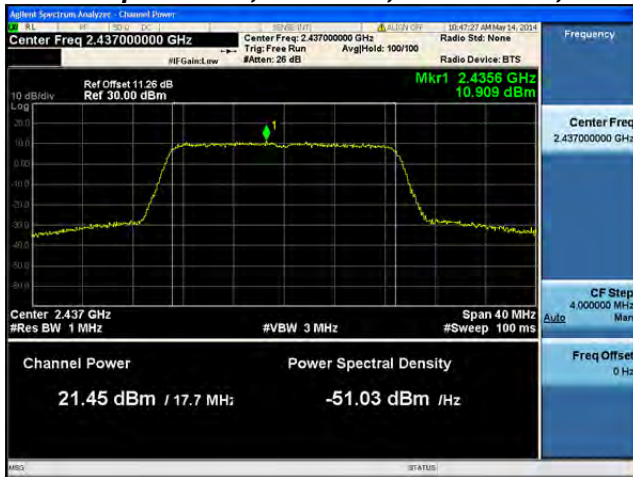
Antenna B



Antenna C



Peak Output Power, 2437 MHz, HT-20 STBC, M0 to M7



Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2462 MHz, CCK, 1 to 11 Mbps



Antenna A



Peak Output Power, 2462 MHz, CCK, 1 to 11 Mbps



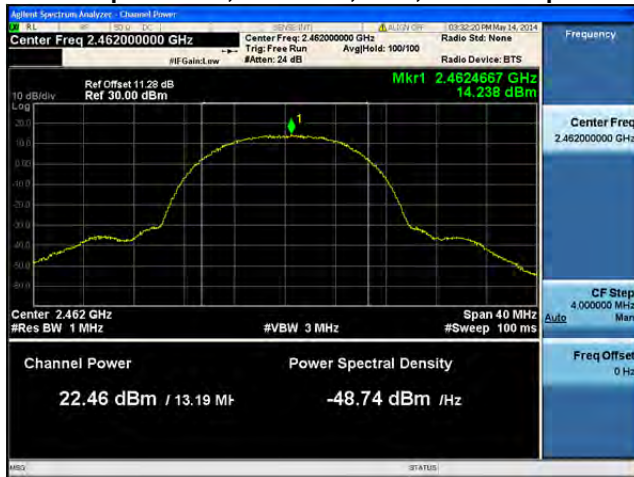
Antenna A



Antenna B



Peak Output Power, 2462 MHz, CCK, 1 to 11 Mbps



Antenna A



Antenna B



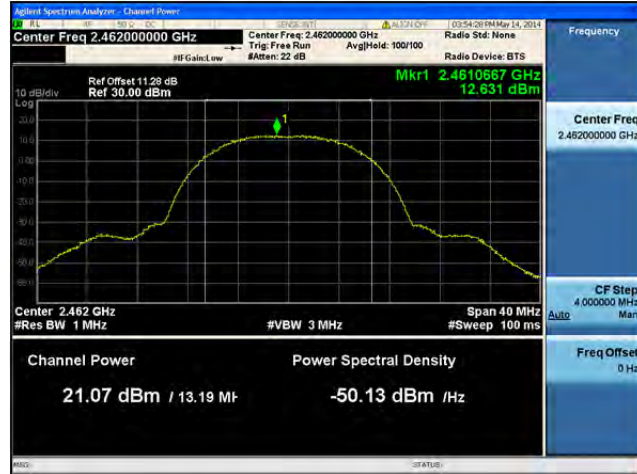
Antenna C



Peak Output Power, 2462 MHz, CCK, 1 to 11 Mbps



Antenna A



Antenna B



Antenna C



Antenna D



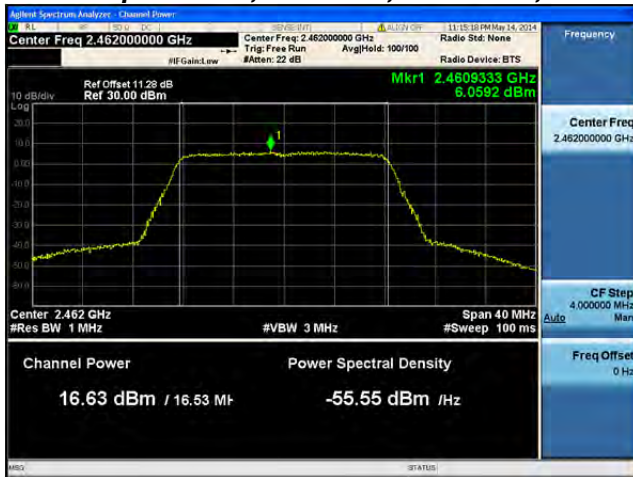
Peak Output Power, 2462 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



Peak Output Power, 2462 MHz, Non HT-20, 6 to 54 Mbps



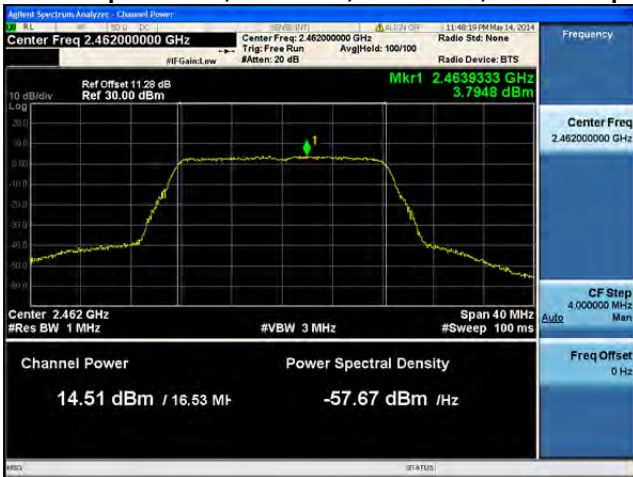
Antenna A



Antenna B



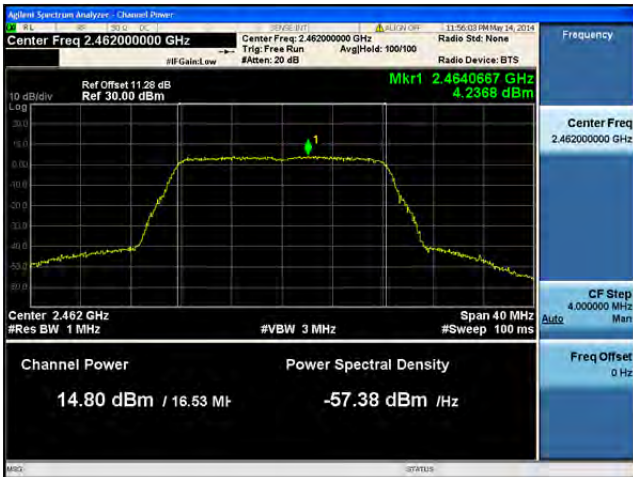
Peak Output Power, 2462 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



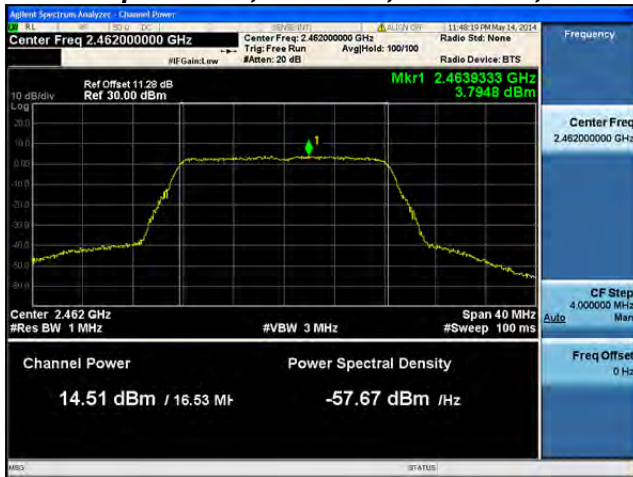
Antenna B



Antenna C



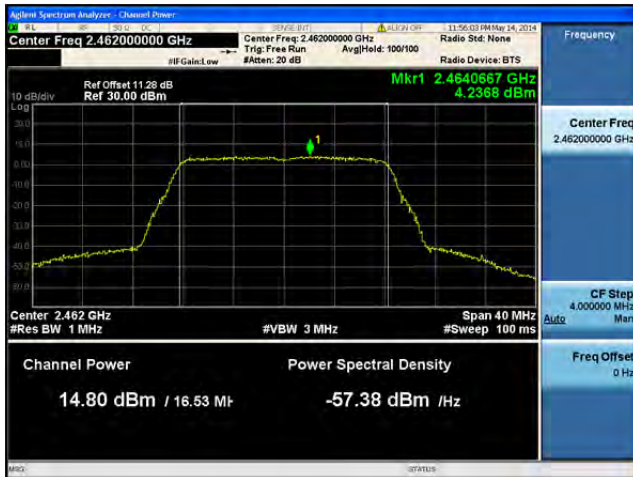
Peak Output Power, 2462 MHz, Non HT-20, 6 to 54 Mbps



Antenna A



Antenna B



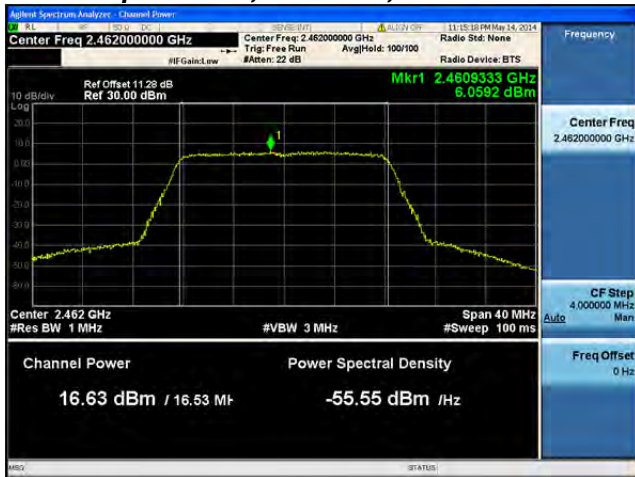
Antenna C



Antenna D



Peak Output Power, 2462 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



Antenna A



Antenna B



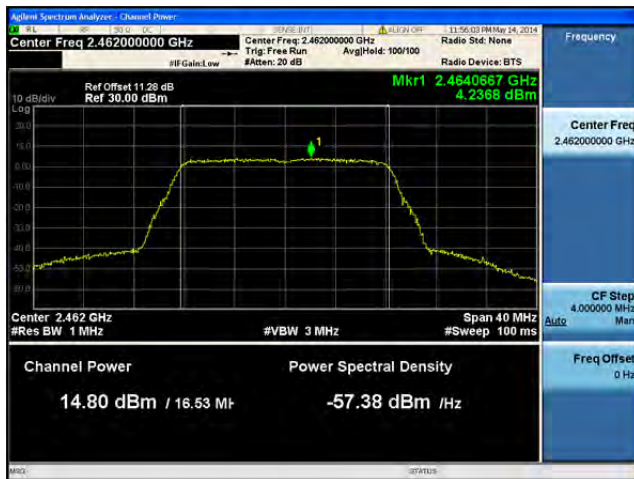
Peak Output Power, 2462 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



Antenna A



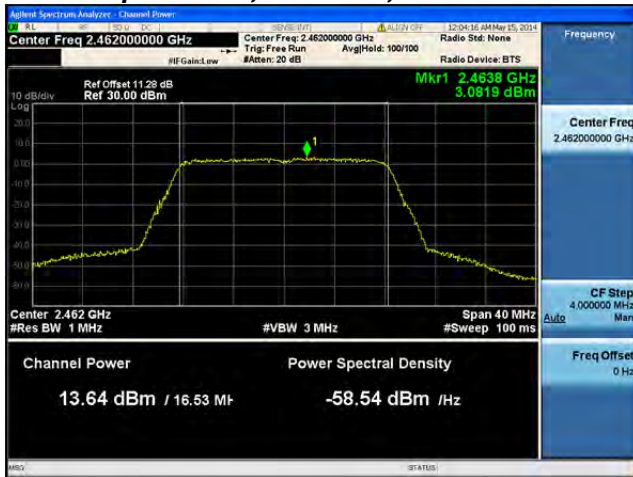
Antenna B



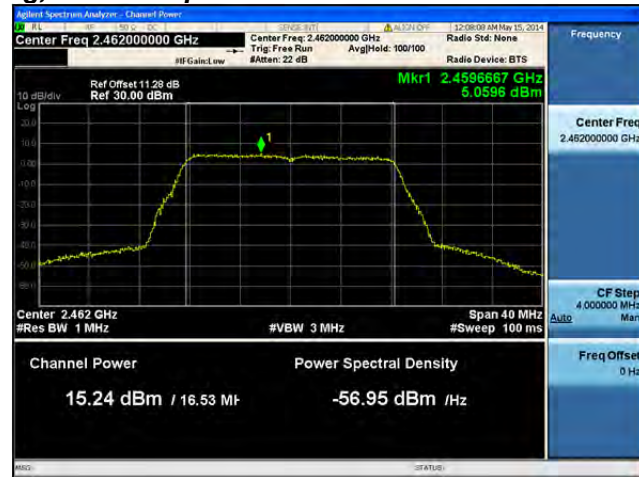
Antenna C



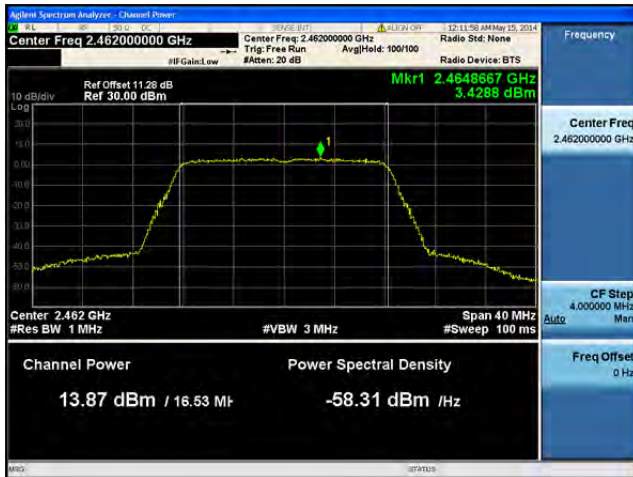
Peak Output Power, 2462 MHz, Non HT-20 Beam Forming, 6 to 54 Mbps



Antenna A



Antenna B



Antenna C



Antenna D



Peak Output Power, 2462 MHz, HT-20, M0 to M7



Antenna A