

Report on the FCC and ISED Testing of:
 Apple Inc. Model: A2159
 In accordance with FCC 47 CFR Part 15E and Industry
 Canada RSS-247 and Industry Canada RSS-GEN

Prepared for: Apple Inc.
 One Apple Park Way
 Cupertino, California 95014, USA

FCC ID: BCGA2159

ISED: 579C-A2159



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Document Number: 75945152-13 | Issue: 01

SIGNATURE

NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Matthew Russell	RF Team Leader	Authorised Signatory	14 May 2019

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD document control rules.

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15E and Industry Canada RSS-247 and Industry Canada RSS-GEN. The sample tested was found to comply with the requirements defined in the applied rules.

SIGNATURE

NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Philip Harrison	Senior Engineer	Testing	14 May 2019
Mehadi Choudhury	Engineer	Testing	14 May 2019
George Porter / Daniel Bishop	Assistant Engineer's	Testing	14 May 2019
Cristian Onaca / Malik Mohammed	Shift Technician's	Testing	14 May 2019
Jay Balendrarajah	Shift Technician	Testing	14 May 2019

FCC Accreditation

90987 Octagon House, Fareham Test Laboratory

Industry Canada Accreditation

IC2932B-1 Octagon House, Fareham Test Laboratory

EXECUTIVE SUMMARY

A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15E: 2017, Industry Canada RSS-247: Issue 2 (2017-02) and Industry Canada RSS-GEN: Issue 5 (2018-04).



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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	14 May 2019

Table 1

1.2 Introduction

Applicant	Apple Inc
Manufacturer	Apple Inc
Model Number(s)	A2159
Serial Number(s)	C02Y4006L59F, C02Y3009L5C1, C02XR00DL54Y
Hardware Version(s)	REV 1.0
Software Version(s)	18F65, 18F33
Number of Samples Tested	3
Test Specification/Issue/Date	FCC 47 CFR Part 15E: 2017 Industry Canada RSS-247: Issue 2 (2017-02) Industry Canada RSS-GEN: Issue 5 (2018-04)
Order Number	0540175066
Date	21-February-2019
Date of Receipt of EUT	06-February-2019
Start of Test	06-February-2019
Finish of Test	09-May-2019
Name of Engineer(s)	Philip Harrison, Malik Mohammed, George Porter, Cristian Onaca, Jay Balendrarajah, Daniel Bishop.
Related Document(s)	ANSI C63.10 (2013) KDB 662911 D01 v02r02 KDB 789033 D02 v02r01 KDB 905462 D02 v02 KDB 905462 D03 V01r02



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15E and Industry Canada RSS-247 and Industry Canada RSS-GEN is shown below.

Section	Specification Clause			Test Description	Result	Comments/Base Standard
	Part 15E	RSS-247	RSS-GEN			
Configuration and Mode: 802.11 a/n/ac						
2.1	15.407 (a)	6.2	6.12	Maximum Conducted Output Power	Pass	ANSI C63.10 (2013), KDB 662911 D01
2.2	15.407 (a)	6.2	-	Maximum Conducted Power Spectral Density	Pass	ANSI C63.10 (2013), KDB 662911 D01
2.3	15.407 (a)(e)	6.2	6.7	Emission Bandwidth	Pass	ANSI C63.10 (2013)
2.4	15.407 (b)	6.2	-	Authorised Band Edges	Pass	ANSI C63.10 (2013)
2.5	15.407 (b), 15.205	6.2	6.13	Spurious Radiated Emissions	Pass	ANSI C63.10 (2013)
2.6	15.205	-	8.10	Restricted Band Edges	Pass	ANSI C63.10 (2013)
2.7	15.407(h)(2)(iii) (iv)	6.3.2 (c)(d)(e)	-	Channel Move Time, Channel Closing Transmis- sion Time and Non-Occupancy Period	Pass	KDB 905462 D02

Table 2



1.4 Product Information

1.4.1 Technical Description

The Equipment Under Test (EUT) was a laptop computer with Bluetooth, Bluetooth Low Energy and 802.11 a/b/g/n/ac capabilities in the 2.4 GHz and 5.0 GHz bands.

US and CA country codes changed the power table for U-NII band 1. Therefore U-NII-1 was tested to both powers. The CA country code also disabled any channels in the 5600-5650 MHz band

1.4.2 Test Modes

The EUT's radio supports SISO modes only for 802.11a operation, and SISO / 2x2 MIMO in 802.11n and ac modes, with 20 MHz, 40 MHz, and 80 MHz channel bandwidths.

The EUT uses different output powers per chain dependent on how many chains are employed. The EUT also uses different power tables for Cyclic Delay Diversity (CDD), Space Division Multiplexing (SDM), and transmit beamforming (TxBF) modes. It uses the same conducted power per chain in any given mode, but due to the different antenna gains the radiated powers per chain differ.

After preliminary investigations were performed, the EUT was tested in the following worst-case modes:

- SISO Modes:
 - Main 802.11a (Core 0 for U-NII-1 / 2A / 2C / 3)
 - Main 802.11n HT20 (Core 0 for U-NII-1 / 2A / 2C / 3)
 - Main 802.11n HT40 (Core 0 for U-NII-1 / 2A / 2C / 3)
 - Main 802.11ac VHT80 (Core 0 for U-NII-1 / 2A / 2C / 3)
- 2x2 MIMO Modes:
 - Main 802.11n/ac (V)HT20* (Core 0+1 for U-NII-1 / 2A / 2C / 3)
 - Main 802.11n/ac (V)HT40* (Core 0+1 for U-NII-1 / 2A / 2C / 3)
 - Main 802.11ac VHT80 (Core 0+1 for U-NII-1 / 2A / 2C / 3)

* = 802.11n HT modes were used for CDD/SDM and 802.11ac VHT modes were used for TxBF modes.

1.4.3 Test Set-up

For conducted tests the EUT's antennas were disconnected and replaced with U.FL to SMA test cables to enable conducted testing on each chain. The loss of these test cables were known and compensated for in any conducted measurements.

For transmit beamforming (TxBF) modes the EUT was set up communicating with a support notebook computer provided by the applicant, configured with custom commands to act as an access point. The test laptop was also set to a low output power (approximately 5 dBm) so in conjunction with the rest of the set-up configuration, would give negligible power at the measuring equipment and would not affect the test result. The support laptop's test network set the channel and bandwidth to which the EUT could connect. The EUT then set up a communications link to the support laptop, operating in normal communications mode but with beamforming modes forced on, with auto rate and TPC disabled via terminal commands so the EUT could be limited to worst-case modes. The EUT transmit duty cycle was then maximized by using iPerf bandwidth testing software to keep the transmit output buffer full and generate more traffic from the EUT to the support laptop than the link could sustain. The EUT therefore could fully operate its beamforming mode but with strictly controlled test parameters.

For all other testing except DFS the EUT was put into a continuous transmit test mode with the chipset manufacturer's test commands via a script running in the EUT's terminal application. The EUT then transmitted the required type of packeted 802.11 data frames of fixed length, containing the standard headers and with pseudo-random data content, ensuring the measured signals were representative and contained all the symbols at the highest power control level.

For DFS testing the EUT was connected to a test access point as shown in section 2.7. The iPerf data throughput test application was set at the terminal to send UDP data packets from the EUT to the access point. The iPerf throughput rate was then adjusted to give >17 % duty cycle for each test mode.

1.4.4 Test Set-up Diagram(s)

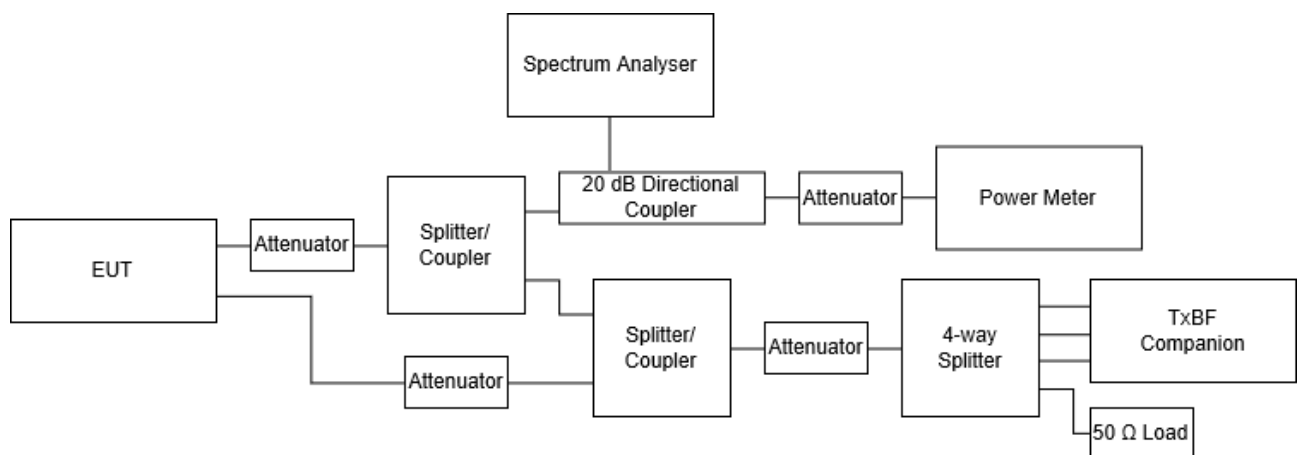


Figure 1 - Conducted Test Setup

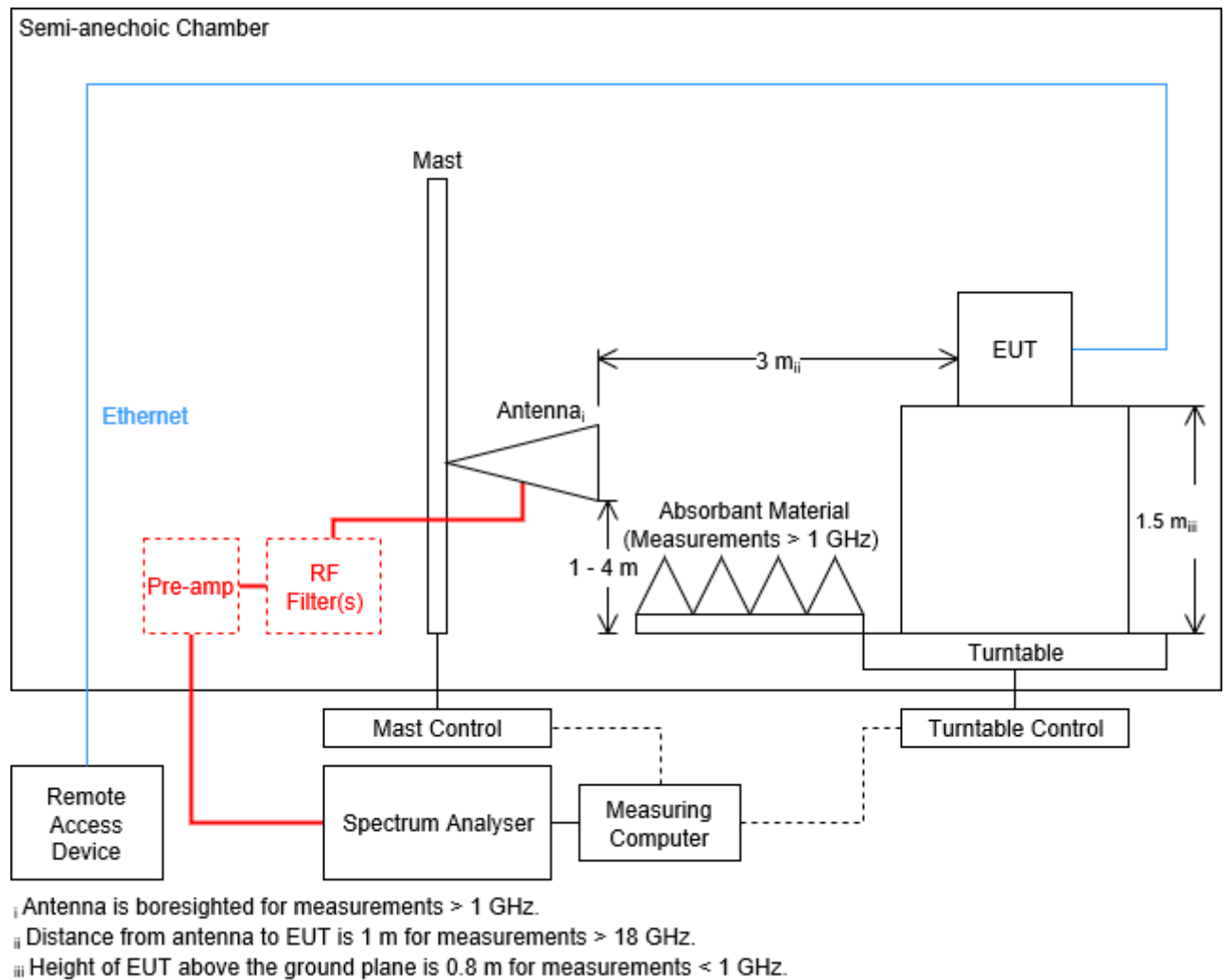


Figure 2 – Radiated Test Setup Diagram

1.4.5 EUT Configuration and Rationale for Radiated Spurious Emissions

The EUT was placed on the non-conducting platform in a manner typical of a normal installation. The lid was tilted to 90 degrees with reference to the ground plane.

Ports on the EUT were terminated with loads as described in ANSI C63.4 clause 6.2.4. Interconnecting cables were connected and pre-scans performed to determine whether the level of the emissions were increased by >2 dB and emission measurements performed in the worst-case configuration.



1.4.6 Antenna Gain Table

Core 0

Frequency (MHz)	Peak Gain (dBi)	Conducted Cable Loss (dB)
5150 – 5250	5.20	1.2
5250 – 5350	4.69	1.2
5470 – 5725	5.29	1.2
5725 – 5850	4.61	1.2

Table 3

Core 1

Frequency (MHz)	Peak Gain (dBi)	Conducted Cable Loss (dB)
5150 – 5250	4.82	1.2
5250 – 5350	4.22	1.2
5470 – 5725	4.74	1.2
5725 – 5850	3.27	1.2

Table 4

1.5 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.6 EUT Modification Record

The table below details modifications made to the EUT during the test programme.
The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Serial Number: C02Y4006L59F			
0	As supplied by the customer	Not Applicable	Not Applicable
Serial Number: C02Y3009L5C1			
0	As supplied by the customer	Not Applicable	Not Applicable
Serial Number: C02XR00DL54Y			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 5



1.7 Test Location

TÜV SÜD conducted the following tests at our Fareham Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 802.11 a/n/ac		
Maximum Conducted Output Power	Philip Harrison	UKAS
Maximum Conducted Power Spectral Density	Philip Harrison	UKAS
Emission Bandwidth	Philip Harrison	UKAS
Authorised Band Edges	Malik Mohammed, George Porter, Cristian Onaca, Jay Balendrarajah, Daniel Bishop.	UKAS
Spurious Radiated Emissions		UKAS
Restricted Band Edges		UKAS
Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period	Daniel Bishop	UKAS

Table 6

Office Address:

Octagon House
Concorde Way
Segensworth North
Fareham
Hampshire
PO15 5RL
United Kingdom



2 Test Details

2.1 Maximum Conducted Output Power

2.1.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (a)
Industry Canada RSS-247, Clause 6.2
Industry Canada RSS-GEN, Clause 6.12.

2.1.2 Equipment Under Test and Modification State

C02Y3009L5C1, S/N: TBC - Modification State 0

2.1.3 Date of Test

05-March-2019 to 09-May-2019

2.1.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 12.3.3.2 and KDB 789033 D02 using method PM-G.

Since the gated power meter was used for method PM-G the EUT was measured only while transmitting and hence no duty cycle correction was necessary.

The EUT has equal conducted powers on all ports for each mode of operation, but unequal antenna gains. Therefore for SISO and 2x2 MIMO modes the EUT was tested on the ports with the highest antenna gain combinations which would result in the highest EIRP output power.

MIMO output port summing was performed in accordance with KDB 662911 D01. For the CDD results the Directional Gain was calculated in accordance with clause F)2)f)(ii) using the calculations from F)2)f)(i) with worst-case individual gain and an array gain of zero. For SDM modes Directional Gain was calculated in accordance with clause F)2)d)(ii). For transmit beamforming (TxBF) mode it was calculated in accordance with clause F)2)d)(i).

The 'straddle' channels which operate across the U-NII band 2C and 3 boundaries are reported by comparing the total output power to the stricter U-NII-2A band limits.

2.1.5 Environmental Conditions

Ambient Temperature	21.2 - 24.3 °C
Relative Humidity	34.9 - 35.6 %



2.1.6 Test Results: U-NII-1

802.11a / 6 Mbps / SISO / Core 0 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Antenna Directional Gain (dBi)	5.20	5.20	5.20
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
Conducted Power (dBm)	12.46	12.52	12.67

Table 7

802.11a / 6 Mbps / SISO / Core 0 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power (dBm)	12.50	12.45	12.43
Antenna Directional Gain (dBi)	5.20	5.20	4.82
RSS-247 EIRP Power Limit (dBm)	22.20	22.19	22.20
Total EIRP (dBm)	17.70	17.65	17.25

Table 8

802.11n / HT20 MCS0 / SISO / Core 0 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Antenna Directional Gain (dBi)	5.20	5.20	5.20
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
Conducted Power (dBm)	12.67	12.43	12.65

Table 9

802.11n / HT20 MCS0 / SISO / Core 0 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power (dBm)	12.27	12.23	12.49
Antenna Directional Gain (dBi)	5.20	5.20	5.20
RSS-247 EIRP Power Limit (dBm)	22.50	22.49	22.49
Total EIRP (dBm)	17.47	17.43	17.69

Table 10

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power Core 0 (dBm)	12.50	12.70	12.59
Conducted Power Core 1 (dBm)	12.56	12.24	12.65
Antenna Directional Gain (dBi)	5.20	5.20	5.20
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
Total Conducted Power (dBm)	15.54	15.49	15.63

Table 11



802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power Core 0 (dBm)	6.82	6.96	7.00
Conducted Power Core 1 (dBm)	6.81	6.86	6.76
Total Conducted Power (dBm)	9.83	9.92	9.89
Antenna Directional Gain (dBi)	5.20	5.20	5.20
RSS-247 EIRP Power Limit (dBm)	22.50	22.50	22.49
Total EIRP (dBm)	15.03	15.12	15.09

Table 12

802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power Core 0 (dBm)	12.50	12.42	12.42
Conducted Power Core 1 (dBm)	12.60	12.56	12.54
Antenna Directional Gain (dBi)	5.01	5.01	5.01
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
Total Conducted Power (dBm)	15.56	15.50	15.50

Table 13

802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power Core 0 (dBm)	9.49	9.39	9.40
Conducted Power Core 1 (dBm)	9.48	9.50	9.25
Total Conducted Power (dBm)	12.50	12.46	12.34
Antenna Directional Gain (dBi)	5.01	5.01	4.82
RSS-247 EIRP Power Limit (dBm)	22.49	22.50	22.49
Total EIRP (dBm)	17.51	17.47	17.16

Table 14

802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power Core 0 (dBm)	11.76	12.45	12.72
Conducted Power Core 1 (dBm)	11.86	12.68	12.72
Antenna Directional Gain (dBi)	8.02	8.02	8.02
15.407 Conducted Power Limit (dBm)	21.98	21.98	21.98
Total Conducted Power (dBm)	14.82	15.58	15.73

Table 15



802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted Power Core 0 (dBm)	6.95	6.93	6.84
Conducted Power Core 1 (dBm)	6.95	6.88	6.82
Total Conducted Power (dBm)	9.96	9.91	9.84
Antenna Directional Gain (dBi)	8.02	8.02	8.02
RSS-247 EIRP Power Limit (dBm)	22.50	22.50	22.50
Total EIRP (dBm)	17.98	17.94	17.86

Table 16

802.11n / HT40 MCS0 / SISO / Core 0 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Antenna Directional Gain (dBi)	5.20	5.20
15.407 Conducted Power Limit (dBm)	24.00	24.00
Conducted Power (dBm)	12.73	12.42

Table 17

802.11n / HT40 MCS0 / SISO / Core 0 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted Power (dBm)	12.43	12.52
Antenna Directional Gain (dBi)	5.20	5.20
RSS-247 EIRP Power Limit (dBm)	23.00	23.00
Total EIRP (dBm)	17.63	17.72

Table 18

802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted Power Core 0 (dBm)	11.73	12.58
Conducted Power Core 1 (dBm)	11.77	12.64
Antenna Directional Gain (dBi)	5.20	5.20
15.407 Conducted Power Limit (dBm)	24.00	24.00
Total Conducted Power (dBm)	14.76	15.62

Table 19

802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted Power Core 0 (dBm)	9.38	9.46
Conducted Power Core 1 (dBm)	9.24	9.36
Total Conducted Power (dBm)	12.32	12.42
Antenna Directional Gain (dBi)	5.20	5.20
RSS-247 EIRP Power Limit (dBm)	23.00	23.00
Total EIRP (dBm)	17.52	17.62

Table 20



802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted Power Core 0 (dBm)	12.47	12.69
Conducted Power Core 1 (dBm)	12.60	12.66
Antenna Directional Gain (dBi)	5.01	5.01
15.407 Conducted Power Limit (dBm)	24.00	24.00
Total Conducted Power (dBm)	15.55	15.68

Table 21

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted Power Core 0 (dBm)	12.17	12.50
Conducted Power Core 1 (dBm)	12.36	12.31
Total Conducted Power (dBm)	15.28	15.41
Antenna Directional Gain (dBi)	5.01	5.01
RSS-247 EIRP Power Limit (dBm)	23.00	23.00
Total EIRP (dBm)	20.29	20.43

Table 22

802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted Power Core 0 (dBm)	11.20	12.44
Conducted Power Core 1 (dBm)	11.32	12.42
Antenna Directional Gain (dBi)	8.02	8.02
15.407 Conducted Power Limit (dBm)	21.98	21.98
Total Conducted Power (dBm)	14.27	15.44

Table 23

802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted Power Core 0 (dBm)	9.34	9.38
Conducted Power Core 1 (dBm)	9.38	9.31
Total Conducted Power (dBm)	12.37	12.35
Antenna Directional Gain (dBi)	8.02	8.02
RSS-247 EIRP Power Limit (dBm)	23.00	23.00
Total EIRP (dBm)	20.39	20.38

Table 24



802.11ac / VHT20 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom
Frequency (MHz)	5180
Conducted Power Core 0 (dBm)	11.84
Conducted Power Core 1 (dBm)	11.70
Antenna Directional Gain (dBi)	8.02
15.407 Conducted Power Limit (dBm)	21.98
Total Conducted Power (dBm)	14.78

Table 25

802.11ac / VHT80 MCS0x1 / SISO / Core 0 / Country Code US

Channel	Middle
Frequency (MHz)	5210
Antenna Directional Gain (dBi)	5.20
15.407 Conducted Power Limit (dBm)	24.00
Conducted Power (dBm)	12.67

Table 26

802.11ac / VHT80 MCS0x1 / SISO / Core 0 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Conducted Power (dBm)	12.61
Antenna Directional Gain (dBi)	5.20
RSS-247 EIRP Power Limit (dBm)	23.00
Total EIRP (dBm)	17.81

Table 27

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210
Conducted Power Core 0 (dBm)	10.90
Conducted Power Core 1 (dBm)	10.79
Antenna Directional Gain (dBi)	5.20
15.407 Conducted Power Limit (dBm)	24.00
Total Conducted Power (dBm)	13.86

Table 28

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Conducted Power Core 0 (dBm)	10.88
Conducted Power Core 1 (dBm)	10.97
Total Conducted Power (dBm)	13.94
Antenna Directional Gain (dBi)	5.20
RSS-247 EIRP Power Limit (dBm)	23.00
Total EIRP (dBm)	19.14

Table 29

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1 / Country Code US



Channel	Middle
Frequency (MHz)	5210
Conducted Power Core 0 (dBm)	12.42
Conducted Power Core 1 (dBm)	12.31
Antenna Directional Gain (dBi)	5.01
15.407 Conducted Power Limit (dBm)	24.00
Total Conducted Power (dBm)	15.38

Table 30

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Conducted Power Core 0 (dBm)	12.33
Conducted Power Core 1 (dBm)	12.28
Total Conducted Power (dBm)	15.32
Antenna Directional Gain (dBi)	5.01
RSS-247 EIRP Power Limit (dBm)	23.00
Total EIRP (dBm)	20.33

Table 31

802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210
Conducted Power Core 0 (dBm)	10.99
Conducted Power Core 1 (dBm)	10.98
Antenna Directional Gain (dBi)	8.02
15.407 Conducted Power Limit (dBm)	21.98
Total Conducted Power (dBm)	14.00

Table 32

802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Conducted Power Core 0 (dBm)	9.79
Conducted Power Core 1 (dBm)	9.71
Total Conducted Power (dBm)	12.76
Antenna Directional Gain (dBi)	8.02
RSS-247 EIRP Power Limit (dBm)	23.00
Total EIRP (dBm)	20.78

Table 33



2.1.7 Test Results: U-NII-2A

802.11a / 6 Mbps / SISO / Core 0

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Antenna Directional Gain (dBi)	4.69	4.69	4.69
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	23.20	23.20	23.20
Conducted Power (dBm)	13.53	13.53	13.46
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	29.20	29.20	29.20
EIRP Power (dBm)	18.22	18.22	18.15

Table 34

802.11n / HT20 MCS0 / SISO / Core 0

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Antenna Directional Gain (dBi)	4.69	4.69	4.69
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	23.49	23.50	23.50
Conducted Power (dBm)	13.75	13.62	13.74
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	29.49	29.50	29.50
EIRP Power (dBm)	18.44	18.31	18.43

Table 35

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Conducted Power Core 0 (dBm)	13.71	13.58	13.63
Conducted Power Core 1 (dBm)	13.70	13.69	13.64
Antenna Directional Gain (dBi)	4.69	4.69	4.69
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	23.51	23.49	23.48
Total Conducted Power (dBm)	16.72	16.64	16.64
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	29.51	29.49	29.48
EIRP Power (dBm)	21.41	21.33	21.33

Table 36



802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Conducted Power Core 0 (dBm)	13.70	13.74	13.63
Conducted Power Core 1 (dBm)	13.51	13.74	13.71
Antenna Directional Gain (dBi)	4.46	4.46	4.46
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	23.49	23.49	23.49
Total Conducted Power (dBm)	16.62	16.75	16.68
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	29.49	29.49	29.49
EIRP Power (dBm)	21.08	21.21	21.14

Table 37

802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Conducted Power Core 0 (dBm)	13.65	13.54	13.68
Conducted Power Core 1 (dBm)	13.65	13.51	13.62
Antenna Directional Gain (dBi)	7.47	7.47	7.47
15.407 Conducted Power Limit (dBm)	22.53	22.53	22.53
RSS-247 Conducted Power Limit (dBm)	23.50	23.50	23.49
Total Conducted Power (dBm)	16.66	16.54	16.66
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	29.50	29.50	29.49
EIRP Power (dBm)	24.13	24.01	24.13

Table 38

802.11n / HT40 MCS0 / SISO / Core 0

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Antenna Directional Gain (dBi)	4.69	4.69
15.407 Conducted Power Limit (dBm)	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00
Conducted Power (dBm)	13.47	13.53
15.407 TPC EIRP Limit (dBm)	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00
EIRP Power (dBm)	18.16	18.22

Table 39



802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Conducted Power Core 0 (dBm)	13.56	13.64
Conducted Power Core 1 (dBm)	13.52	13.55
Antenna Directional Gain (dBi)	4.69	4.69
15.407 Conducted Power Limit (dBm)	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00
Total Conducted Power (dBm)	16.55	16.60
15.407 TPC EIRP Limit (dBm)	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00
EIRP Power (dBm)	21.24	21.29

Table 40

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Conducted Power Core 0 (dBm)	13.99	13.64
Conducted Power Core 1 (dBm)	13.62	13.64
Antenna Directional Gain (dBi)	4.46	4.46
15.407 Conducted Power Limit (dBm)	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00
Total Conducted Power (dBm)	16.82	16.65
15.407 TPC EIRP Limit (dBm)	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00
EIRP Power (dBm)	21.28	21.11

Table 41

802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Conducted Power Core 0 (dBm)	13.50	13.37
Conducted Power Core 1 (dBm)	13.70	13.29
Antenna Directional Gain (dBi)	7.47	7.47
15.407 Conducted Power Limit (dBm)	22.53	22.53
RSS-247 Conducted Power Limit (dBm)	24.00	24.00
Total Conducted Power (dBm)	16.61	16.34
15.407 TPC EIRP Limit (dBm)	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00
EIRP Power (dBm)	24.08	23.81

Table 42



802.11ac / VHT80 MCS0x1 / SISO / Core 0

Channel	Middle
Frequency (MHz)	5290
Antenna Directional Gain (dBi)	4.69
15.407 Conducted Power Limit (dBm)	24.00
RSS-247 Conducted Power Limit (dBm)	24.00
Conducted Power (dBm)	13.59
15.407 TPC EIRP Limit (dBm)	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00
EIRP Power (dBm)	18.28

Table 43

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1

Channel	Middle
Frequency (MHz)	5290
Conducted Power Core 0 (dBm)	12.43
Conducted Power Core 1 (dBm)	12.23
Antenna Directional Gain (dBi)	4.22
15.407 Conducted Power Limit (dBm)	24.00
RSS-247 Conducted Power Limit (dBm)	24.00
Total Conducted Power (dBm)	15.34
15.407 TPC EIRP Limit (dBm)	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00
EIRP Power (dBm)	19.56

Table 44

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1

Channel	Middle
Frequency (MHz)	5290
Conducted Power Core 0 (dBm)	12.24
Conducted Power Core 1 (dBm)	12.44
Antenna Directional Gain (dBi)	4.46
15.407 Conducted Power Limit (dBm)	24.00
RSS-247 Conducted Power Limit (dBm)	24.00
Total Conducted Power (dBm)	15.35
15.407 TPC EIRP Limit (dBm)	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00
EIRP Power (dBm)	19.81

Table 45



802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1

Channel	Middle
Frequency (MHz)	5290
Conducted Power Core 0 (dBm)	11.78
Conducted Power Core 1 (dBm)	11.99
Antenna Directional Gain (dBi)	7.47
15.407 Conducted Power Limit (dBm)	22.53
RSS-247 Conducted Power Limit (dBm)	24.00
Total Conducted Power (dBm)	14.89
15.407 TPC EIRP Limit (dBm)	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00
EIRP Power (dBm)	22.36

Table 46



2.1.8 Test Results: U-NII-2C

802.11a / 6 Mbps / SISO / Core 0

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00	23.02
RSS-247 Conducted Power Limit (dBm)	23.19	23.19	23.19	23.19
Conducted Power (dBm)	12.68	12.73	12.71	12.70
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	29.02
RSS-247 TPC EIRP Limit (dBm)	29.19	29.19	29.19	29.19
EIRP Power (dBm)	17.97	18.02	18.00	17.99

Table 47

802.11n / HT20 MCS0 / SISO / Core 0

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00	23.04
RSS-247 Conducted Power Limit (dBm)	23.50	23.49	23.49	23.49
Conducted Power (dBm)	12.68	12.65	12.42	12.44
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	29.04
RSS-247 TPC EIRP Limit (dBm)	29.50	29.49	29.49	29.49
EIRP Power (dBm)	17.97	17.94	17.70	17.73

Table 48

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Conducted Power Core 0 (dBm)	12.54	12.49	12.61	12.57
Conducted Power Core 1 (dBm)	12.57	12.67	12.54	12.72
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00	23.05
RSS-247 Conducted Power Limit (dBm)	23.49	23.50	23.49	23.49
Total Conducted Power (dBm)	15.56	15.59	15.59	15.66
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	29.05
RSS-247 TPC EIRP Limit (dBm)	29.49	29.50	29.49	29.49
EIRP Power (dBm)	20.85	20.88	20.88	20.95

Table 49



802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Conducted Power Core 0 (dBm)	12.73	12.72	12.52	12.68
Conducted Power Core 1 (dBm)	12.41	12.67	12.51	12.43
Antenna Directional Gain (dBi)	5.02	5.02	5.02	5.02
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00	23.02
RSS-247 Conducted Power Limit (dBm)	23.49	23.48	23.49	23.49
Total Conducted Power (dBm)	15.58	15.70	15.52	15.57
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	29.02
RSS-247 TPC EIRP Limit (dBm)	29.49	29.48	29.49	29.49
EIRP Power (dBm)	20.61	20.73	20.55	20.59

Table 50

802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Conducted Power Core 0 (dBm)	12.57	12.66	12.65	12.43
Conducted Power Core 1 (dBm)	12.61	12.41	12.66	12.63
Antenna Directional Gain (dBi)	8.03	8.03	8.03	8.03
15.407 Conducted Power Limit (dBm)	21.97	21.97	21.97	20.99
RSS-247 Conducted Power Limit (dBm)	23.50	23.50	23.49	23.49
Total Conducted Power (dBm)	15.60	15.55	15.67	15.54
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	29.02
RSS-247 TPC EIRP Limit (dBm)	29.50	29.50	29.49	29.49
EIRP Power (dBm)	23.63	23.58	23.70	23.57

Table 51

802.11n / HT40 MCS0 / SISO / Core 0

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00	24.00	24.00
Conducted Power (dBm)	12.51	12.51	12.47	12.71
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
EIRP Power (dBm)	17.80	17.80	17.76	18.00

Table 52



802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Conducted Power Core 0 (dBm)	12.64	12.45	12.65	12.67
Conducted Power Core 1 (dBm)	12.88	12.64	12.55	12.72
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00	24.00	24.00
Total Conducted Power (dBm)	15.77	15.55	15.61	15.70
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
EIRP Power (dBm)	21.06	20.84	20.90	20.99

Table 53

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Conducted Power Core 0 (dBm)	12.44	12.41	12.61	12.57
Conducted Power Core 1 (dBm)	12.58	12.72	12.57	12.59
Antenna Directional Gain (dBi)	5.02	5.02	5.02	5.02
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00	24.00	24.00
Total Conducted Power (dBm)	15.52	15.58	15.60	15.59
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
EIRP Power (dBm)	20.55	20.61	20.62	20.61

Table 54

802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Conducted Power Core 0 (dBm)	12.74	12.66	12.64	12.68
Conducted Power Core 1 (dBm)	12.49	12.65	12.00	12.71
Antenna Directional Gain (dBi)	8.03	8.03	8.03	8.03
15.407 Conducted Power Limit (dBm)	21.97	21.97	21.97	21.97
RSS-247 Conducted Power Limit (dBm)	24.00	24.00	24.00	24.00
Total Conducted Power (dBm)	15.62	15.66	15.34	15.71
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00	30.00	30.00
EIRP Power (dBm)	23.65	23.69	23.37	23.73

Table 55



802.11ac / VHT80 MCS0x1 / SISO / Core 0

Channel	Bottom	Top	Straddle
Frequency (MHz)	5530	5610	5690
Antenna Directional Gain (dBi)	5.29	5.29	5.29
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00	24.00
Conducted Power (dBm)	12.47	12.71	12.49
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00	30.00
EIRP Power (dBm)	17.76	18.00	17.78

Table 56

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1

Channel	Bottom	Top	Straddle
Frequency (MHz)	5530	5610	5690
Conducted Power Core 0 (dBm)	12.64	12.75	12.57
Conducted Power Core 1 (dBm)	12.61	12.54	12.66
Antenna Directional Gain (dBi)	5.29	5.29	5.29
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00	24.00
Total Conducted Power (dBm)	15.64	15.66	15.63
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00	30.00
EIRP Power (dBm)	20.93	20.95	20.92

Table 57

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1

Channel	Bottom	Top	Straddle
Frequency (MHz)	5530	5610	5690
Conducted Power Core 0 (dBm)	12.67	12.67	12.58
Conducted Power Core 1 (dBm)	12.75	12.68	12.72
Antenna Directional Gain (dBi)	5.02	5.02	5.02
15.407 Conducted Power Limit (dBm)	24.00	24.00	24.00
RSS-247 Conducted Power Limit (dBm)	24.00	24.00	24.00
Total Conducted Power (dBm)	15.72	15.69	15.66
15.407 TPC EIRP Limit (dBm)	30.00	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00	30.00
EIRP Power (dBm)	20.74	20.71	20.68

Table 58



802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1

Channel	Top	Straddle
Frequency (MHz)	5610	5690
Conducted Power Core 0 (dBm)	12.74	12.63
Conducted Power Core 1 (dBm)	12.44	12.58
Antenna Directional Gain (dBi)	8.03	8.03
15.407 Conducted Power Limit (dBm)	21.97	21.97
RSS-247 Conducted Power Limit (dBm)	24.00	24.00
Total Conducted Power (dBm)	15.60	15.62
15.407 TPC EIRP Limit (dBm)	30.00	30.00
RSS-247 TPC EIRP Limit (dBm)	30.00	30.00
EIRP Power (dBm)	23.63	23.65

Table 59



2.1.9 Test Results: U-NII-3

802.11a / 6 Mbps / SISO / Core 0

Channel	Bottom	Middle	Top
Frequency (MHz)	5745	5785	5825
Antenna Directional Gain (dBi)	4.61	4.61	4.61
15.407 Conducted Power Limit (dBm)	30.00	30.00	30.00
RSS-247 Conducted Power Limit (dBm)	30.00	30.00	30.00
Conducted Power (dBm)	13.92	13.70	13.64
15.407 EIRP Limit (dBm)	36.00	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00	36.00
EIRP Power (dBm)	18.53	18.30	18.25

Table 60

802.11n / HT20 MCS0 / SISO / Core 0

Channel	Bottom	Middle	Top
Frequency (MHz)	5745	5785	5825
Antenna Directional Gain (dBi)	4.61	4.61	4.61
15.407 Conducted Power Limit (dBm)	30.00	30.00	30.00
RSS-247 Conducted Power Limit (dBm)	30.00	30.00	30.00
Conducted Power (dBm)	13.92	13.70	13.78
15.407 EIRP Limit (dBm)	36.00	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00	36.00
EIRP Power (dBm)	18.53	18.30	18.39

Table 61

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5745	5785	5825
Conducted Power Core 0 (dBm)	13.71	13.95	13.74
Conducted Power Core 1 (dBm)	13.70	13.91	13.87
Antenna Directional Gain (dBi)	4.61	4.61	4.61
15.407 Conducted Power Limit (dBm)	30.00	30.00	30.00
RSS-247 Conducted Power Limit (dBm)	30.00	30.00	30.00
Total Conducted Power (dBm)	16.71	16.94	16.82
15.407 EIRP Limit (dBm)	36.00	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00	36.00
EIRP Power (dBm)	21.32	21.55	21.43

Table 62



802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5745	5785	5825
Conducted Power Core 0 (dBm)	13.69	13.82	13.95
Conducted Power Core 1 (dBm)	13.85	13.83	13.92
Antenna Directional Gain (dBi)	3.99	3.99	3.99
15.407 Conducted Power Limit (dBm)	30.00	30.00	30.00
RSS-247 Conducted Power Limit (dBm)	30.00	30.00	30.00
Total Conducted Power (dBm)	16.78	16.84	16.94
15.407 EIRP Limit (dBm)	36.00	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00	36.00
EIRP Power (dBm)	20.78	20.83	20.94

Table 63

802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5745	5785	5825
Conducted Power Core 0 (dBm)	13.72	13.91	13.85
Conducted Power Core 1 (dBm)	13.67	13.86	13.98
Antenna Directional Gain (dBi)	6.98	6.98	6.98
15.407 Conducted Power Limit (dBm)	29.02	29.02	29.02
RSS-247 Conducted Power Limit (dBm)	29.02	29.02	29.02
Total Conducted Power (dBm)	16.70	16.90	16.93
15.407 EIRP Limit (dBm)	36.00	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00	36.00
EIRP Power (dBm)	23.68	23.87	23.90

Table 64

802.11n / HT40 MCS0 / SISO / Core 0

Channel	Bottom	Top
Frequency (MHz)	5755	5795
Antenna Directional Gain (dBi)	4.61	4.61
15.407 Conducted Power Limit (dBm)	30.00	30.00
RSS-247 Conducted Power Limit (dBm)	30.00	30.00
Conducted Power (dBm)	13.82	13.91
15.407 EIRP Limit (dBm)	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00
EIRP Power (dBm)	18.43	18.52

Table 65



802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5755	5795
Conducted Power Core 0 (dBm)	13.80	13.98
Conducted Power Core 1 (dBm)	13.94	13.77
Antenna Directional Gain (dBi)	4.61	4.61
15.407 Conducted Power Limit (dBm)	30.00	30.00
RSS-247 Conducted Power Limit (dBm)	30.00	30.00
Total Conducted Power (dBm)	16.88	16.89
15.407 EIRP Limit (dBm)	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00
EIRP Power (dBm)	21.49	21.50

Table 66

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5755	5795
Conducted Power Core 0 (dBm)	13.80	13.78
Conducted Power Core 1 (dBm)	13.82	13.96
Antenna Directional Gain (dBi)	3.27	3.99
15.407 Conducted Power Limit (dBm)	30.00	30.00
RSS-247 Conducted Power Limit (dBm)	30.00	30.00
Total Conducted Power (dBm)	16.82	16.88
15.407 EIRP Limit (dBm)	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00
EIRP Power (dBm)	20.09	20.87

Table 67

802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5755	5795
Conducted Power Core 0 (dBm)	13.87	13.67
Conducted Power Core 1 (dBm)	13.84	13.94
Antenna Directional Gain (dBi)	6.98	6.98
15.407 Conducted Power Limit (dBm)	29.02	29.02
RSS-247 Conducted Power Limit (dBm)	29.02	29.02
Total Conducted Power (dBm)	16.86	16.82
15.407 EIRP Limit (dBm)	36.00	36.00
RSS-247 EIRP Limit (dBm)	36.00	36.00
EIRP Power (dBm)	23.84	23.79

Table 68



802.11ac / VHT80 MCS0x1 / SISO / Core 0

Channel	Middle
Frequency (MHz)	5775
Antenna Directional Gain (dBi)	4.61
15.407 Conducted Power Limit (dBm)	30.00
RSS-247 Conducted Power Limit (dBm)	30.00
Conducted Power (dBm)	13.88
15.407 EIRP Limit (dBm)	36.00
RSS-247 EIRP Limit (dBm)	36.00
EIRP Power (dBm)	18.49

Table 69

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1

Channel	Middle
Frequency (MHz)	5775
Conducted Power Core 0 (dBm)	13.93
Conducted Power Core 1 (dBm)	13.82
Antenna Directional Gain (dBi)	4.61
15.407 Conducted Power Limit (dBm)	30.00
RSS-247 Conducted Power Limit (dBm)	30.00
Total Conducted Power (dBm)	16.89
15.407 EIRP Limit (dBm)	36.00
RSS-247 EIRP Limit (dBm)	36.00
EIRP Power (dBm)	21.50

Table 70

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1

Channel	Middle
Frequency (MHz)	5775
Conducted Power Core 0 (dBm)	13.92
Conducted Power Core 1 (dBm)	13.77
Antenna Directional Gain (dBi)	3.99
15.407 Conducted Power Limit (dBm)	30.00
RSS-247 Conducted Power Limit (dBm)	30.00
Total Conducted Power (dBm)	16.85
15.407 EIRP Limit (dBm)	36.00
RSS-247 EIRP Limit (dBm)	36.00
EIRP Power (dBm)	20.85

Table 71



802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1

Channel	Middle
Frequency (MHz)	5775
Conducted Power Core 0 (dBm)	13.78
Conducted Power Core 1 (dBm)	13.78
Antenna Directional Gain (dBi)	6.98
15.407 Conducted Power Limit (dBm)	29.02
RSS-247 Conducted Power Limit (dBm)	29.02
Total Conducted Power (dBm)	16.79
15.407 EIRP Limit (dBm)	36.00
RSS-247 EIRP Limit (dBm)	36.00
EIRP Power (dBm)	23.77

Table 72



2.1.10 Limits

FCC 47 CFR Part 15E, Limit Clause 15.407(a)

Condition of Operation	Frequency Range (MHz)			
	5150-5250	5250-5350	5470-5725	5725-5850
Max Conducted TX Power	30 dBm (1W) for master device 24 dBm (250 mW) for client device	24 dBm (250 mW) or 11 dBm + 10 Log B, whichever is lower (B = 26 dB emission BW)		30 dBm (1 W)
Max EIRP	4W (36 dBm) with 6 dBi antenna 200 W (53 dBm) for fixed P-t-P application with 23 dBi antenna Additional rule for outdoor operation: Max_EIRP < 125 mW (21 dBm) at any elevation angle > 30° from horizon.	1 W (30 dBm) with 6 dBi antenna		4 W (36 dBm) with 6 dBi antenna. No EIRP limit for fixed P-t-P application (i.e. no antenna gain limit)

Table 73

Industry Canada RSS-247, Limit Clause 6.2.1.1, 6.2.2.1, 6.2.3.1 and 6.2.4.1

Device	Frequency Range (MHz)			
	5150-5250	5250-5350	5470-5725	5725-5850
OEM installed in vehicles	30 mW or $1.76 + 10 \log_{10} B$, dBm (EIRP); whichever is less	30 mW or $1.76 + 10 \log_{10} B$, dBm (EIRP); whichever is less	-	-
Other	200 mW or $10 + 10 \log_{10} B$ dBm (EIRP); whichever is less	250 mW or $11 + 10 \log_{10} B$; whichever is less 1.0 W or $17 + 10 \log_{10} B$ dBm EIRP; whichever is less	250 mW or $11 + 10 \log_{10} B$; whichever is less 1.0 W or $17 + 10 \log_{10} B$ dBm EIRP; whichever is less	1W 4W EIRP

Table 74



2.1.11 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 3.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Attenuator 10dB 10W	Weinschel	47-10-34	398	12	18-Jul-2019
Multimeter	Iso-tech	IDM101	2424	12	12-Dec-2019
Hygrometer	Rotronic	I-1000	2891	12	18-Sep-/2019
ZVA40 Network Analyser	Rohde & Schwarz	100127	3548	12	17-Oct-2019
ZV-Z54 Calibration Unit	Rohde & Schwarz	1000001	4368	12	22-Oct-2019
PXA Signal Analyser	Keysight Technologies	N9030A	4653	12	06-Feb-2020
Power splitter - 2 port	Mini-Circuits	ZN2PD-63-S+	4742	12	19-Sep-2019
Power splitter - 2 port	Mini-Circuits	ZN2PD-63-S+	4743	12	19-Sep-2019
USB Power Sensor	Boonton	RTP5006	5187	12	12-Dec-2019
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
Power Splitter, 4 way	Mini-Circuits	ZN4PD1-63-S+	5235	-	O/P Mon
Attenuator 10dB 2W	Telegartner	J01156A0031	N/A	N/A	Not serialised.
Attenuator 10dB 2W	Telegartner	J01156A0031	N/A	N/A	Not serialised.
Attenuator 10dB 2W	Telegartner	J01156A0031	N/A	N/A	Not serialised.

Table 75

O/P Mon – Output Monitored using Calibrated Equipment.



2.2 Maximum Conducted Power Spectral Density

2.2.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (a)
Industry Canada RSS-247, Clause 6.2
Industry Canada RSS-GEN, Clause 6.12

2.2.2 Equipment Under Test and Modification State

C02Y3009L5C1, S/N: TBC - Modification State 0

2.2.3 Date of Test

05-March-2019 to 22-March-2019

2.2.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 12.5 and KDB 789033 D02.

Results shown in the table with a duty cycle correction factor were tested with the SA-2 method (duty cycle corrected). Other results showing duty cycle is not applicable state which method was used on a per measurement basis (SA-1 or SA-3).

Results for the U-NII-3 band were measured in a narrower bandwidth and integrated over 500 kHz using the spectrum analyzers channel power integration function.

MIMO output port summing was performed in accordance with KDB 662911 D01. MIMO output port summing was performed in accordance with KDB 662911 D01. For the CDD results the Directional Gain was calculated in accordance with clause F)2)f)(ii) using the calculations from F)2)f)(i) with worst-case individual gain and an array gain of $10 \log (2/1)$ dB. For SDM modes Directional Gain was calculated in accordance with clause F)2)d)(ii). For transmit beamforming (TxBF) mode it was calculated in accordance with clause F)2)d)(i).

2.2.5 Environmental Conditions

Ambient Temperature	21.2 - 24.3 °C
Relative Humidity	34.9 - 35.6 %



2.2.6 Test Results: U-NII-1

2.2.7 Test Results: U-NII-1

802.11a / 6 Mbps / SISO / Core 0 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Raw Conducted PSD (dBm/MHz)	1.56	1.71	1.76
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.20	5.20	5.20
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	1.56	1.71	1.76

Table 76

802.11a / 6 Mbps / SISO / Core 0 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Raw Conducted PSD (dBm/MHz)	1.58	1.65	2.68
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.20	5.20	4.82
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	6.78	6.85	7.50

Table 77

802.11n / HT20 MCS0 / SISO / Core 0 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Raw Conducted PSD (dBm/MHz)	2.10	1.26	1.46
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.20	5.20	5.20
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.10	1.26	1.46

Table 78

802.11n / HT20 MCS0 / SISO / Core 0 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Raw Conducted PSD (dBm/MHz)	1.03	1.83	1.46
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.20	5.20	5.20
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	6.23	7.03	6.66

Table 79



802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted PSD Core 0 (dBm/MHz)	1.51	1.54	1.40
Conducted PSD Core 1 (dBm/MHz)	1.64	0.75	1.57
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	8.02	8.02	8.02
15.407 Conducted PSD Limit (dBm/MHz)	8.98	8.98	8.98
Conducted PSD Result (dBm/MHz)	4.59	4.17	4.50

Table 80

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted PSD Core 0 (dBm/MHz)	-4.17	-4.07	-3.44
Conducted PSD Core 1 (dBm/MHz)	-4.31	-4.02	-2.76
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	8.02	8.02	8.02
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	6.79	6.99	7.95

Table 81

802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted PSD Core 0 (dBm/MHz)	1.34	1.14	1.43
Conducted PSD Core 1 (dBm/MHz)	1.22	1.76	1.45
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.01	5.01	5.01
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	4.29	4.47	4.45

Table 82

802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted PSD Core 0 (dBm/MHz)	-1.72	-1.82	-0.43
Conducted PSD Core 1 (dBm/MHz)	-1.60	-2.04	-0.64
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.01	5.01	4.82
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	6.36	6.10	7.30

Table 83



802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted PSD Core 0 (dBm/MHz)	1.00	1.19	2.06
Conducted PSD Core 1 (dBm/MHz)	1.20	2.07	1.87
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.02	8.02	8.02
15.407 Conducted PSD Limit (dBm/MHz)	8.98	8.98	8.98
Conducted PSD Result (dBm/MHz)	4.11	4.66	4.98

Table 84

802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
Conducted PSD Core 0 (dBm/MHz)	-3.94	-4.45	-3.72
Conducted PSD Core 1 (dBm/MHz)	-3.63	-3.96	-4.27
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.02	8.02	8.02
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	7.25	6.83	7.05

Table 85

802.11n / HT40 MCS0 / SISO / Core 0 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Raw Conducted PSD (dBm/MHz)	-1.29	-1.44
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.20	5.20
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00
Conducted PSD Result (dBm/MHz)	-1.29	-1.44

Table 86

802.11n / HT40 MCS0 / SISO / Core 0 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Raw Conducted PSD (dBm/MHz)	-1.63	-1.73
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.20	5.20
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	3.57	3.47

Table 87



802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted PSD Core 0 (dBm/MHz)	-2.53	-1.59
Conducted PSD Core 1 (dBm/MHz)	-2.61	-1.38
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	8.02	8.02
15.407 Conducted PSD Limit (dBm/MHz)	8.98	8.98
Conducted PSD Result (dBm/MHz)	0.44	1.53

Table 88

802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted PSD Core 0 (dBm/MHz)	-5.03	-5.13
Conducted PSD Core 1 (dBm/MHz)	-4.97	-4.80
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	8.02	8.02
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	6.03	6.07

Table 89

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted PSD Core 0 (dBm/MHz)	-1.85	-2.01
Conducted PSD Core 1 (dBm/MHz)	-1.95	-1.69
Duty Cycle Correction (dB)	0.12	0.13
Antenna Directional Gain (dBi)	5.01	5.01
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00
Conducted PSD Result (dBm/MHz)	1.23	1.29

Table 90

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted PSD Core 0 (dBm/MHz)	-1.79	-1.91
Conducted PSD Core 1 (dBm/MHz)	-2.30	-2.09
Duty Cycle Correction (dB)	0.13	0.12
Antenna Directional Gain (dBi)	5.01	5.01
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	6.11	6.15

Table 91



802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted PSD Core 0 (dBm/MHz)	-2.49	-1.14
Conducted PSD Core 1 (dBm/MHz)	-2.52	-1.74
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.02	8.02
15.407 Conducted PSD Limit (dBm/MHz)	8.98	8.98
Conducted PSD Result (dBm/MHz)	0.51	1.58

Table 92

802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
Conducted PSD Core 0 (dBm/MHz)	-4.69	-4.30
Conducted PSD Core 1 (dBm/MHz)	-4.32	-4.42
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.02	8.02
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00	10.00
EIRP Spectral Density Result (dBm/MHz)	6.53	6.67

Table 93

802.11ac / VHT20 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom
Frequency (MHz)	5180
Conducted PSD Core 0 (dBm/MHz)	0.69
Conducted PSD Core 1 (dBm/MHz)	0.37
Duty Cycle Correction (dB)	N/A SA-3
Antenna Directional Gain (dBi)	8.02
15.407 Conducted PSD Limit (dBm/MHz)	8.98
Conducted PSD Result (dBm/MHz)	3.54

Table 94

802.11ac / VHT80 MCS0x1 / SISO / Core 0 / Country Code US

Channel	Middle
Frequency (MHz)	5210
Raw Conducted PSD (dBm/MHz)	-4.76
Duty Cycle Correction (dB)	0.15
Antenna Directional Gain (dBi)	5.20
15.407 Conducted PSD Limit (dBm/MHz)	11.00
Conducted PSD Result (dBm/MHz)	-4.61

Table 95



802.11ac / VHT80 MCS0x1 / SISO / Core 0 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Raw Conducted PSD (dBm/MHz)	-4.67
Duty Cycle Correction (dB)	0.14
Antenna Directional Gain (dBi)	5.20
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00
EIRP Spectral Density Result (dBm/MHz)	0.67

Table 96

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210
Conducted PSD Core 0 (dBm/MHz)	-6.66
Conducted PSD Core 1 (dBm/MHz)	-5.90
Duty Cycle Correction (dB)	0.15
Antenna Directional Gain (dBi)	8.02
15.407 Conducted PSD Limit (dBm/MHz)	8.98
Conducted PSD Result (dBm/MHz)	-3.11

Table 97

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Conducted PSD Core 0 (dBm/MHz)	-6.26
Conducted PSD Core 1 (dBm/MHz)	-5.64
Duty Cycle Correction (dB)	0.13
Antenna Directional Gain (dBi)	8.02
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00
EIRP Spectral Density Result (dBm/MHz)	5.22

Table 98

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210
Conducted PSD Core 0 (dBm/MHz)	-4.88
Conducted PSD Core 1 (dBm/MHz)	-4.88
Duty Cycle Correction (dB)	0.24
Antenna Directional Gain (dBi)	5.01
15.407 Conducted PSD Limit (dBm/MHz)	11.00
Conducted PSD Result (dBm/MHz)	-1.63

Table 99



802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Conducted PSD Core 0 (dBm/MHz)	-2.97
Conducted PSD Core 1 (dBm/MHz)	-4.73
Duty Cycle Correction (dB)	N/A SA-1
Antenna Directional Gain (dBi)	5.01
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00
EIRP Spectral Density Result (dBm/MHz)	4.26

Table 100

802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210
Conducted PSD Core 0 (dBm/MHz)	-6.13
Conducted PSD Core 1 (dBm/MHz)	-5.94
Duty Cycle Correction (dB)	N/A SA-3
Antenna Directional Gain (dBi)	8.02
15.407 Conducted PSD Limit (dBm/MHz)	8.98
Conducted PSD Result (dBm/MHz)	-3.02

Table 101

802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
Conducted PSD Core 0 (dBm/MHz)	-6.99
Conducted PSD Core 1 (dBm/MHz)	-7.21
Duty Cycle Correction (dB)	N/A SA-3
Antenna Directional Gain (dBi)	8.02
RSS-247 EIRP Spectral Density Limit (dBm/MHz)	10.00
EIRP Spectral Density Result (dBm/MHz)	3.94

Table 102



2.2.8 Test Results: U-NII-2A

802.11a / 6 Mbps / SISO / Core 0

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Raw Conducted PSD (dBm/MHz)	2.79	3.20	3.10
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	4.69	4.69	4.69
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.79	3.20	3.10

Table 103

802.11n / HT20 MCS0 / SISO / Core 0

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Raw Conducted PSD (dBm/MHz)	2.82	2.62	2.71
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	4.69	4.69	4.69
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.82	2.62	2.71

Table 104

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Conducted PSD Core 0 (dBm/MHz)	2.43	2.81	2.56
Conducted PSD Core 1 (dBm/MHz)	2.84	2.51	3.04
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	7.47	7.47	7.47
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	5.65	5.67	5.82

Table 105

802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Conducted PSD Core 0 (dBm/MHz)	2.38	2.47	2.98
Conducted PSD Core 1 (dBm/MHz)	2.42	2.84	2.79
Duty Cycle Correction (dB)	N/A SA-1	0.17	N/A SA-1
Antenna Directional Gain (dBi)	4.46	4.46	4.46
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	5.41	5.84	5.89

Table 106



802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
Conducted PSD Core 0 (dBm/MHz)	2.95	2.98	3.09
Conducted PSD Core 1 (dBm/MHz)	2.72	2.79	2.65
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	7.47	7.47	7.47
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	5.85	5.90	5.89

Table 107

802.11n / HT40 MCS0 / SISO / Core 0

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Raw Conducted PSD (dBm/MHz)	-0.74	-0.67
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	4.69	4.69
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00
Conducted PSD Result (dBm/MHz)	-0.74	-0.67

Table 108

802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Conducted PSD Core 0 (dBm/MHz)	-0.95	-0.66
Conducted PSD Core 1 (dBm/MHz)	-0.72	-0.29
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	7.47	7.47
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.18	2.54

Table 109

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Conducted PSD Core 0 (dBm/MHz)	-0.82	-0.82
Conducted PSD Core 1 (dBm/MHz)	-0.81	-0.38
Duty Cycle Correction (dB)	0.12	0.14
Antenna Directional Gain (dBi)	4.46	4.46
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.32	2.55

Table 110



802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Top
Frequency (MHz)	5270	5310
Conducted PSD Core 0 (dBm/MHz)	-0.11	-0.58
Conducted PSD Core 1 (dBm/MHz)	0.07	-0.22
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	7.47	7.47
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.99	2.62

Table 111

802.11ac / VHT80 MCS0x1 / SISO / Core 0

Channel	Middle
Frequency (MHz)	5290
Raw Conducted PSD (dBm/MHz)	-3.23
Duty Cycle Correction (dB)	0.14
Antenna Directional Gain (dBi)	4.69
15.407 Conducted PSD Limit (dBm/MHz)	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00
Conducted PSD Result (dBm/MHz)	-3.09

Table 112

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1

Channel	Middle
Frequency (MHz)	5290
Conducted PSD Core 0 (dBm/MHz)	-3.30
Conducted PSD Core 1 (dBm/MHz)	-3.42
Duty Cycle Correction (dB)	0.13
Antenna Directional Gain (dBi)	7.23
15.407 Conducted PSD Limit (dBm/MHz)	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00
Conducted PSD Result (dBm/MHz)	-0.21

Table 113

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1

Channel	Middle
Frequency (MHz)	5290
Conducted PSD Core 0 (dBm/MHz)	-4.95
Conducted PSD Core 1 (dBm/MHz)	-3.52
Duty Cycle Correction (dB)	0.24
Antenna Directional Gain (dBi)	4.46
15.407 Conducted PSD Limit (dBm/MHz)	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00
Conducted PSD Result (dBm/MHz)	-0.92

Table 114



802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1

Channel	Middle
Frequency (MHz)	5290
Conducted PSD Core 0 (dBm/MHz)	-4.74
Conducted PSD Core 1 (dBm/MHz)	-5.16
Duty Cycle Correction (dB)	N/A SA-3
Antenna Directional Gain (dBi)	7.47
15.407 Conducted PSD Limit (dBm/MHz)	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00
Conducted PSD Result (dBm/MHz)	-1.93

Table 115



2.2.9 Test Results: U-NII-2C

802.11a / 6 Mbps / SISO / Core 0

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Raw Conducted PSD (dBm/MHz)	2.56	3.07	4.06	3.92
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.56	3.07	4.06	3.92

Table 116

802.11n / HT20 MCS0 / SISO / Core 0

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Raw Conducted PSD (dBm/MHz)	2.31	2.83	2.63	2.99
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.31	2.83	2.63	2.99

Table 117

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Conducted PSD Core 0 (dBm/MHz)	2.23	2.47	2.59	3.50
Conducted PSD Core 1 (dBm/MHz)	1.94	2.57	2.88	3.14
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	8.03	8.03	8.03	8.03
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	5.10	5.53	5.75	6.34

Table 118

802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Conducted PSD Core 0 (dBm/MHz)	2.75	2.80	3.07	3.56
Conducted PSD Core 1 (dBm/MHz)	2.42	2.58	2.71	3.16
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	0.09	N/A SA-1
Antenna Directional Gain (dBi)	5.02	5.02	5.02	5.02
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	5.60	5.70	5.99	6.37

Table 119



802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5500	5580	5700	5720
Conducted PSD Core 0 (dBm/MHz)	2.67	3.07	3.38	3.55
Conducted PSD Core 1 (dBm/MHz)	2.88	2.98	3.19	3.46
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.03	8.03	8.03	8.03
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	5.78	6.03	6.29	6.52

Table 120

802.11n / HT40 MCS0 / SISO / Core 0

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Raw Conducted PSD (dBm/MHz)	-1.17	-0.18	-0.02	0.36
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.29	5.29	5.29	5.29
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	-1.17	-0.18	-0.02	0.36

Table 121

802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Conducted PSD Core 0 (dBm/MHz)	-0.87	-0.34	-0.22	-0.40
Conducted PSD Core 1 (dBm/MHz)	-1.13	-0.38	-0.06	-0.14
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	0.10	N/A SA-1
Antenna Directional Gain (dBi)	8.03	8.03	8.03	8.03
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.01	2.65	2.97	2.75

Table 122

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Conducted PSD Core 0 (dBm/MHz)	-0.73	-0.90	-0.51	-0.53
Conducted PSD Core 1 (dBm/MHz)	-0.66	-0.91	-0.14	-0.08
Duty Cycle Correction (dB)	0.14	0.13	0.13	0.12
Antenna Directional Gain (dBi)	5.02	5.02	5.02	5.02
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.45	2.23	2.81	2.84

Table 123



802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1

Channel	Bottom	Middle	Top	Straddle
Frequency (MHz)	5510	5590	5670	5710
Conducted PSD Core 0 (dBm/MHz)	-0.35	-0.16	0.21	0.54
Conducted PSD Core 1 (dBm/MHz)	-0.83	0.00	-0.49	0.23
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.03	8.03	8.03	8.03
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	2.43	2.94	2.89	3.40

Table 124

802.11ac / VHT80 MCS0x1 / SISO / Core 0

Channel	Bottom	Top	Straddle
Frequency (MHz)	5530	5610	5690
Raw Conducted PSD (dBm/MHz)	-3.70	-1.01	-0.80
Duty Cycle Correction (dB)	0.15	0.13	0.13
Antenna Directional Gain (dBi)	5.29	5.29	5.29
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	-3.55	-0.88	-0.67

Table 125

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1

Channel	Bottom	Top	Straddle
Frequency (MHz)	5530	5610	5690
Conducted PSD Core 0 (dBm/MHz)	-3.90	-3.57	-3.32
Conducted PSD Core 1 (dBm/MHz)	-2.47	-2.35	-2.39
Duty Cycle Correction (dB)	0.13	0.13	0.13
Antenna Directional Gain (dBi)	8.03	8.03	8.03
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	0.02	0.23	0.31

Table 126

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1

Channel	Bottom	Top	Straddle
Frequency (MHz)	5530	5610	5690
Conducted PSD Core 0 (dBm/MHz)	-1.21	-4.07	-3.23
Conducted PSD Core 1 (dBm/MHz)	-2.44	-2.40	-2.73
Duty Cycle Correction (dB)	0.24	0.24	0.24
Antenna Directional Gain (dBi)	5.02	5.02	5.02
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00	11.00
Conducted PSD Result (dBm/MHz)	1.46	0.10	0.28

Table 127



802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1

Channel	Top	Straddle
Frequency (MHz)	5610	5690
Conducted PSD Core 0 (dBm/MHz)	-3.08	-2.96
Conducted PSD Core 1 (dBm/MHz)	-3.34	-3.20
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.03	8.03
15.407 Conducted PSD Limit (dBm/MHz)	11.00	11.00
RSS-247 Conducted PSD Limit (dBm/MHz)	11.00	11.00
Conducted PSD Result (dBm/MHz)	-0.20	-0.07

Table 128



2.2.10 Test Results: U-NII-3

802.11a / 6 Mbps / SISO / Core 0

Channel	Straddle	Bottom	Middle	Top
Frequency (MHz)	5720	5745	5785	5825
Raw Conducted PSD (dBm/500kHz)	-1.52	1.70	1.74	0.91
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.29	4.61	4.61	4.61
15.407 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00	30.00
RSS-247 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00	30.00
Conducted PSD Result (dBm/500kHz)	-1.52	1.70	1.74	0.91

Table 129

802.11n / HT20 MCS0 / SISO / Core 0

Channel	Straddle	Bottom	Middle	Top
Frequency (MHz)	5720	5745	5785	5825
Raw Conducted PSD (dBm/500kHz)	-1.77	0.79	1.72	0.78
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.29	4.61	4.61	4.61
15.407 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00	30.00
RSS-247 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00	30.00
Conducted PSD Result (dBm/500kHz)	-1.77	0.79	1.72	0.78

Table 130

802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1

Channel	Straddle	Bottom	Middle	Top
Frequency (MHz)	5720	5745	5785	5825
Conducted PSD Core 0 (dBm/500kHz)	-1.25	0.08	0.18	1.35
Conducted PSD Core 1 (dBm/500kHz)	-1.74	0.58	0.36	0.32
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	8.03	6.98	6.98	6.98
15.407 Conducted PSD Limit (dBm/500kHz)	27.97	29.02	29.02	29.02
RSS-247 Conducted PSD Limit (dBm/500kHz)	27.97	29.02	29.02	29.02
Conducted PSD Result (dBm/500kHz)	1.53	3.35	3.28	3.88

Table 131

802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1

Channel	Straddle	Bottom	Middle	Top
Frequency (MHz)	5720	5745	5785	5825
Conducted PSD Core 0 (dBm/500kHz)	-1.66	0.21	0.34	0.26
Conducted PSD Core 1 (dBm/500kHz)	-2.05	0.76	0.94	1.03
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.02	3.99	3.99	3.99
15.407 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00	30.00
RSS-247 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00	30.00
Conducted PSD Result (dBm/500kHz)	1.16	3.51	3.66	3.67

Table 132



802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1

Channel	Straddle	Bottom	Middle	Top
Frequency (MHz)	5720	5745	5785	5825
Conducted PSD Core 0 (dBm/500kHz)	-1.93	-0.17	-0.50	0.02
Conducted PSD Core 1 (dBm/500kHz)	-1.71	0.03	0.15	-0.59
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	7.75	6.98	6.98	6.98
15.407 Conducted PSD Limit (dBm/500kHz)	28.25	29.02	29.02	29.02
RSS-247 Conducted PSD Limit (dBm/500kHz)	28.25	29.02	29.02	29.02
Conducted PSD Result (dBm/500kHz)	1.19	2.94	2.85	2.73

Table 133

802.11n / HT40 MCS0 / SISO / Core 0

Channel	Straddle	Bottom	Top
Frequency (MHz)	5710	5755	5795
Raw Conducted PSD (dBm/500kHz)	-5.55	-1.80	-2.26
Duty Cycle Correction (dB)	N/A SA-1	N/A SA-1	N/A SA-1
Antenna Directional Gain (dBi)	5.29	4.61	4.61
15.407 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00
RSS-247 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00
Conducted PSD Result (dBm/500kHz)	-5.55	-1.80	-2.26

Table 134

802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1

Channel	Straddle	Bottom	Top
Frequency (MHz)	5710	5755	5795
Conducted PSD Core 0 (dBm/500kHz)	-6.03	-2.06	-2.86
Conducted PSD Core 1 (dBm/500kHz)	-6.44	-1.92	-1.97
Duty Cycle Correction (dB)	N/A SA-1	0.10	N/A SA-1
Antenna Directional Gain (dBi)	8.03	6.98	6.98
15.407 Conducted PSD Limit (dBm/500kHz)	27.97	29.02	29.02
RSS-247 Conducted PSD Limit (dBm/500kHz)	27.97	29.02	29.02
Conducted PSD Result (dBm/500kHz)	-3.22	1.12	0.62

Table 135

802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1

Channel	Straddle	Bottom	Top
Frequency (MHz)	5710	5755	5795
Conducted PSD Core 0 (dBm/500kHz)	-6.03	-2.35	-2.40
Conducted PSD Core 1 (dBm/500kHz)	-5.70	-2.49	-2.65
Duty Cycle Correction (dB)	0.12	0.13	0.12
Antenna Directional Gain (dBi)	5.02	3.27	3.99
15.407 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00
RSS-247 Conducted PSD Limit (dBm/500kHz)	30.00	30.00	30.00
Conducted PSD Result (dBm/500kHz)	-2.73	0.71	0.61

Table 136



802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1

Channel	Straddle	Bottom	Top
Frequency (MHz)	5710	5755	5795
Conducted PSD Core 0 (dBm/500kHz)	-6.10	-2.99	-3.44
Conducted PSD Core 1 (dBm/500kHz)	-6.10	-2.69	-2.64
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.03	6.98	6.98
15.407 Conducted PSD Limit (dBm/500kHz)	27.97	29.02	29.02
RSS-247 Conducted PSD Limit (dBm/500kHz)	27.97	29.02	29.02
Conducted PSD Result (dBm/500kHz)	-3.09	0.17	-0.01

Table 137

802.11ac / VHT80 MCS0x1 / SISO / Core 0

Channel	Straddle	Middle
Frequency (MHz)	5690	5775
Raw Conducted PSD (dBm/500kHz)	-9.91	-5.57
Duty Cycle Correction (dB)	0.13	0.14
Antenna Directional Gain (dBi)	5.29	4.61
15.407 Conducted PSD Limit (dBm/500kHz)	30.00	30.00
RSS-247 Conducted PSD Limit (dBm/500kHz)	30.00	30.00
Conducted PSD Result (dBm/500kHz)	-9.78	-5.43

Table 138

802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1

Channel	Straddle	Middle
Frequency (MHz)	5690	5775
Conducted PSD Core 0 (dBm/500kHz)	-9.78	-0.76
Conducted PSD Core 1 (dBm/500kHz)	-9.89	-1.82
Duty Cycle Correction (dB)	0.13	0.13
Antenna Directional Gain (dBi)	8.03	6.98
15.407 Conducted PSD Limit (dBm/500kHz)	27.97	29.02
RSS-247 Conducted PSD Limit (dBm/500kHz)	27.97	29.02
Conducted PSD Result (dBm/500kHz)	-6.69	1.88

Table 139

802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1

Channel	Straddle	Middle
Frequency (MHz)	5690	5775
Conducted PSD Core 0 (dBm/500kHz)	-10.06	-1.55
Conducted PSD Core 1 (dBm/500kHz)	-9.87	-2.08
Duty Cycle Correction (dB)	0.24	0.24
Antenna Directional Gain (dBi)	5.02	3.99
15.407 Conducted PSD Limit (dBm/500kHz)	30.00	30.00
RSS-247 Conducted PSD Limit (dBm/500kHz)	30.00	30.00
Conducted PSD Result (dBm/500kHz)	-6.72	1.45

Table 140



802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1

Channel	Straddle	Middle
Frequency (MHz)	5690	5775
Conducted PSD Core 0 (dBm/500kHz)	-10.50	-5.87
Conducted PSD Core 1 (dBm/500kHz)	-11.02	-6.16
Duty Cycle Correction (dB)	N/A SA-3	N/A SA-3
Antenna Directional Gain (dBi)	8.03	6.98
15.407 Conducted PSD Limit (dBm/500kHz)	27.97	29.02
RSS-247 Conducted PSD Limit (dBm/500kHz)	27.97	29.02
Conducted PSD Result (dBm/500kHz)	-7.74	-3.00

Table 141

2.2.11 Limits

FCC 47 CFR Part 15E, Limit Clause 15.407(a)

Condition of Operation	Frequency Range (MHz)			
	5150-5250	5250-5350	5470-5725	5725-5850
Max Conducted Power Spectral Density	17 dBm/MHz for master device 11 dBm/MHz for mobile/portable client device	11 dBm/MHz		30 dBm/500 kHz

Table 142

Industry Canada RSS-247, Limit Clause 6.2.1.1, 6.2.2.1, 6.2.3.1 and 6.2.4.1

Device	Frequency Range (MHz)			
	5150-5250	5250-5350	5470-5725	5725-5850
OEM installed in vehicles	-	-	-	-
Other	≤10 dBm/MHz EIRP	≤11 dBm/MHz	≤11 dBm/MHz	≤30 dBm/500kHz

Table 143



2.2.12 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 3.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Attenuator 10dB 10W	Weinschel	47-10-34	398	12	18-Jul-2019
Multimeter	Iso-tech	IDM101	2424	12	12-Dec-2019
Hygrometer	Rotronic	I-1000	2891	12	18-Sep-/2019
ZVA40 Network Analyser	Rohde & Schwarz	100127	3548	12	17-Oct-2019
ZV-Z54 Calibration Unit	Rohde & Schwarz	1000001	4368	12	22-Oct-2019
PXA Signal Analyser	Keysight Technologies	N9030A	4653	12	06-Feb-2020
Power splitter - 2 port	Mini-Circuits	ZN2PD-63-S+	4742	12	19-Sep-2019
Power splitter - 2 port	Mini-Circuits	ZN2PD-63-S+	4743	12	19-Sep-2019
USB Power Sensor	Boonton	RTP5006	5187	12	12-Dec-2019
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
Power Splitter, 4 way	Mini-Circuits	ZN4PD1-63-S+	5235	0	O/P Mon
Attenuator 10dB 2W	Telegartner	J01156A0031	N/A	N/A	Not serialised.
Attenuator 10dB 2W	Telegartner	J01156A0031	N/A	N/A	Not serialised.
Attenuator 10dB 2W	Telegartner	J01156A0031	N/A	N/A	Not serialised.

Table 144

O/P Mon – Output Monitored using Calibrated Equipment.



2.3 Emission Bandwidth

2.3.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (a),
Industry Canada RSS-247, Clause 6.2
Industry Canada RSS-GEN, Clause 6.7

2.3.2 Equipment Under Test and Modification State

C02Y3009L5C1, S/N: TBC - Modification State 0

2.3.3 Date of Test

05-March-2019 to 09-May-2019

2.3.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 12.4.1 & 6.9.3, KDB 789033 D02 section C, and RSS-GEN 4.6.1 and 4.6.2

For modes of operation using multiple chains, measurements were made on each chain but only the worst case results are reported. Worst case was considered as the narrowest results for 6 dB bandwidth and the widest result for 26 dB bandwidth and 99% occupied bandwidth.

2.3.5 Environmental Conditions

Ambient Temperature	21.2 - 24.3 °C
Relative Humidity	34.9 - 35.6 %



2.3.6 Test Results: U-NII-1

802.11a / 6 Mbps / SISO / Core 0 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.480	21.840	21.600
99% Bandwidth (MHz)	16.572	16.578	16.567

Table 145

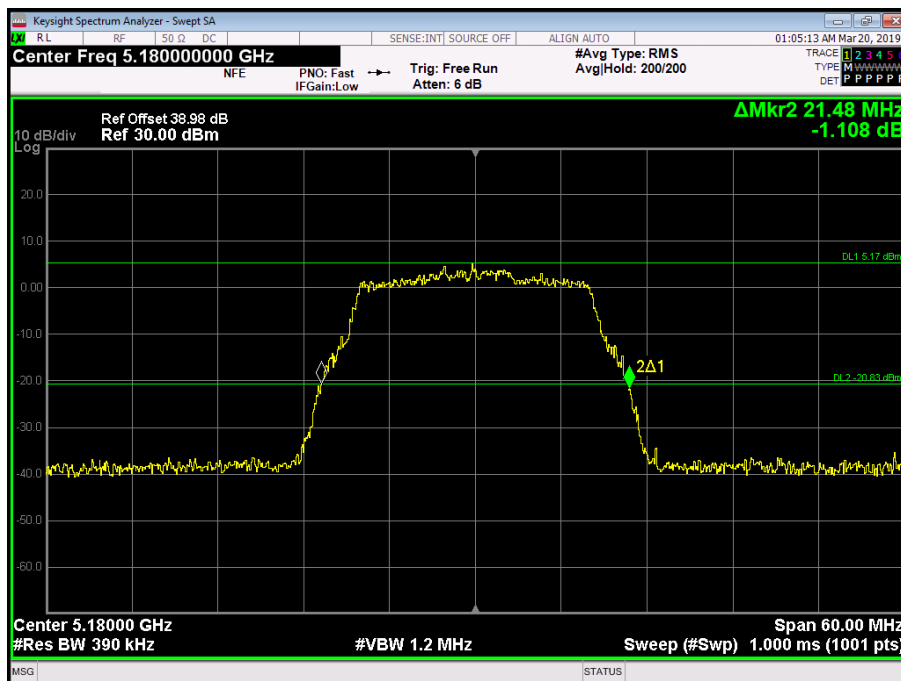


Figure 3 - 5180 MHz - 26 dB Emission Bandwidth

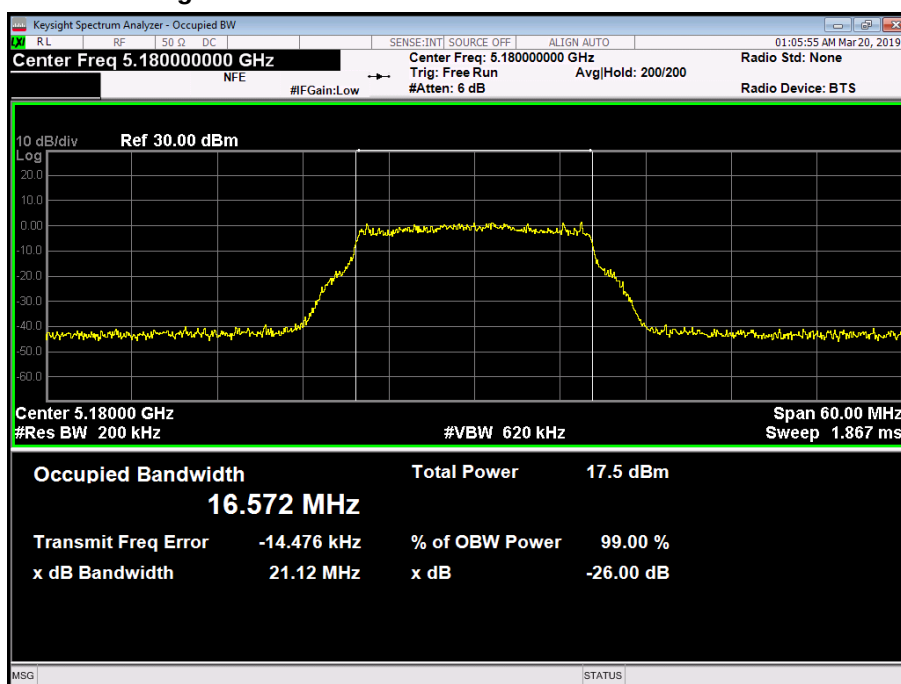


Figure 4 - 5180 MHz - 99% Occupied Bandwidth

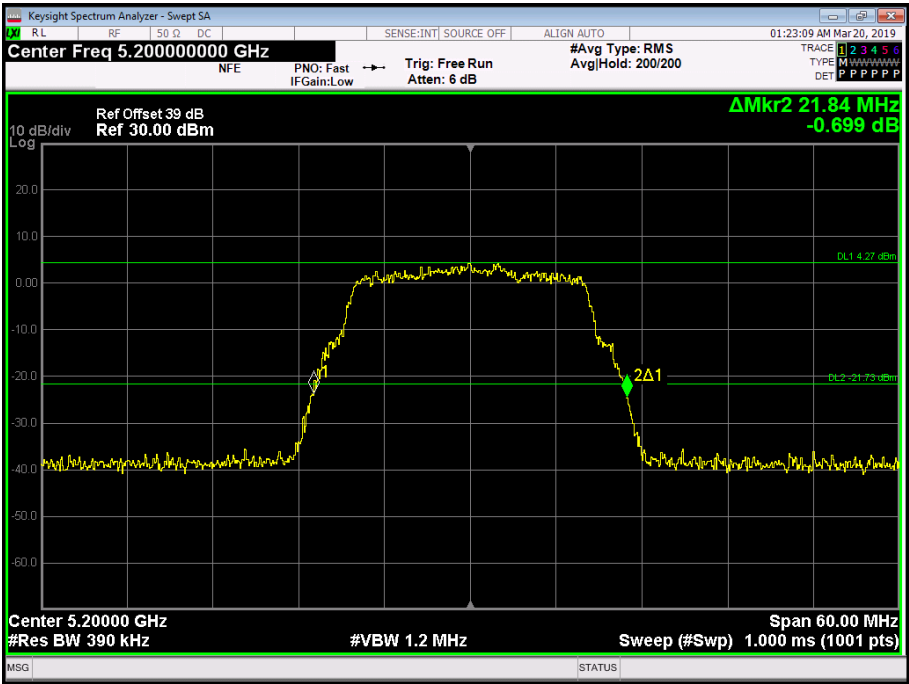


Figure 5 - 5200 MHz - 26 dB Emission Bandwidth

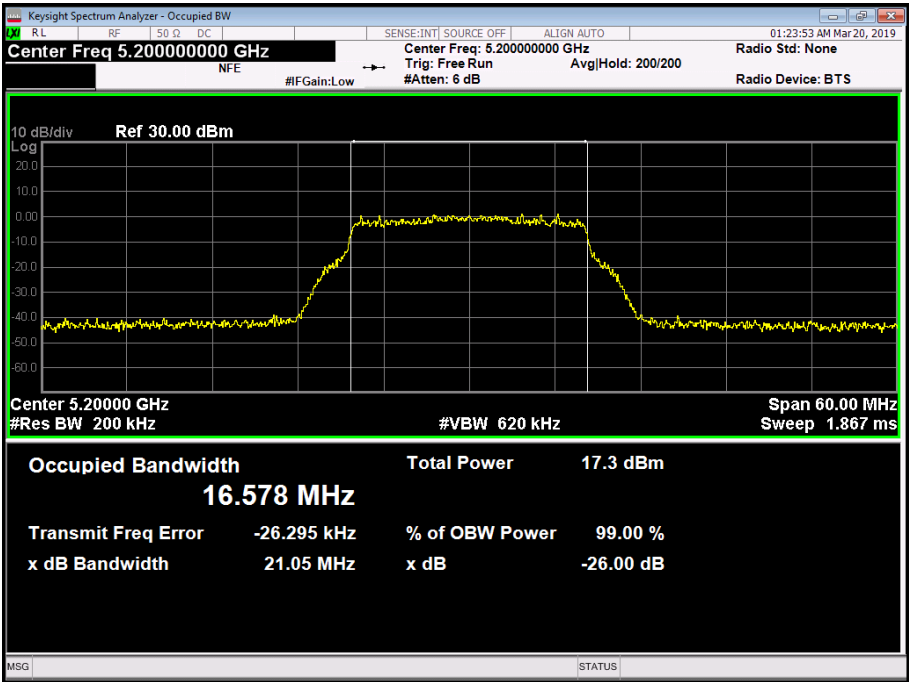


Figure 6 - 5200 MHz - 99% Occupied Bandwidth

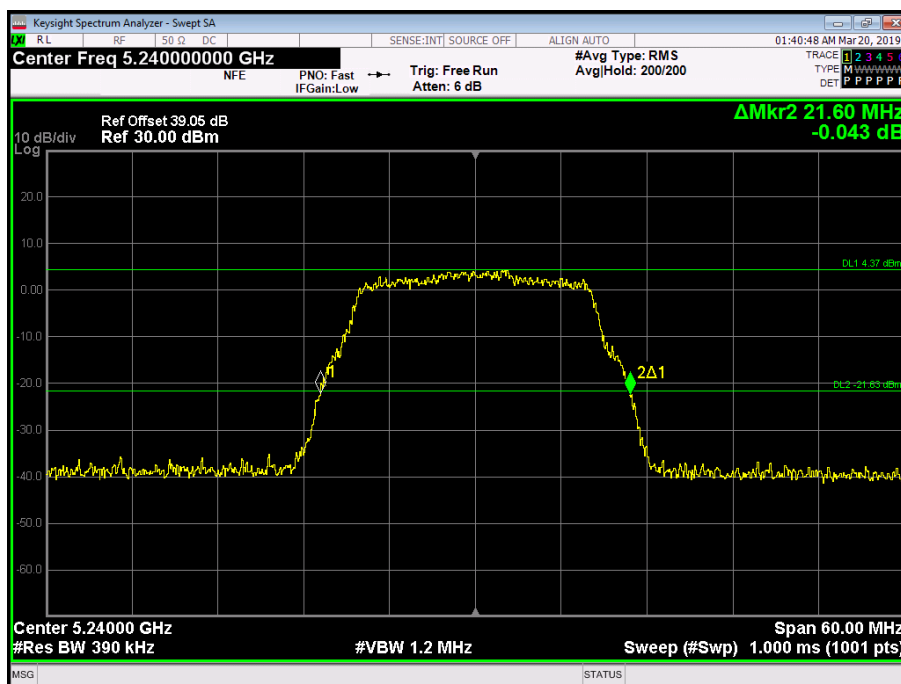


Figure 7 - 5240 MHz - 26 dB Emission Bandwidth

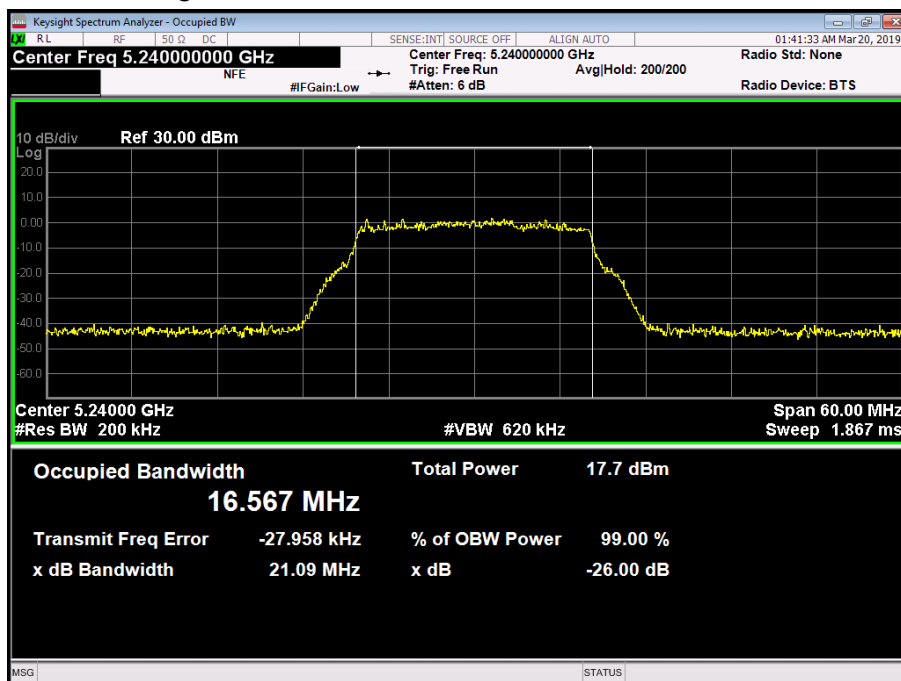


Figure 8 - 5240 MHz - 99% Occupied Bandwidth



802.11a / 6 Mbps / SISO / Core 0 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.600	21.540	21.660
99% Bandwidth (MHz)	16.580	16.562	16.587

Table 146

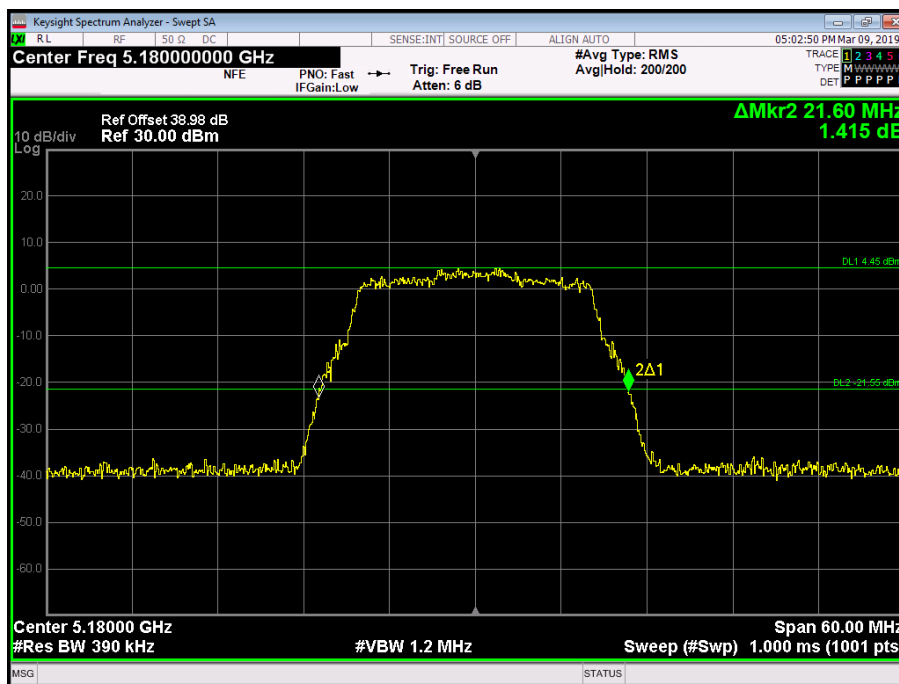


Figure 9 - 5180 MHz - 26 dB Emission Bandwidth

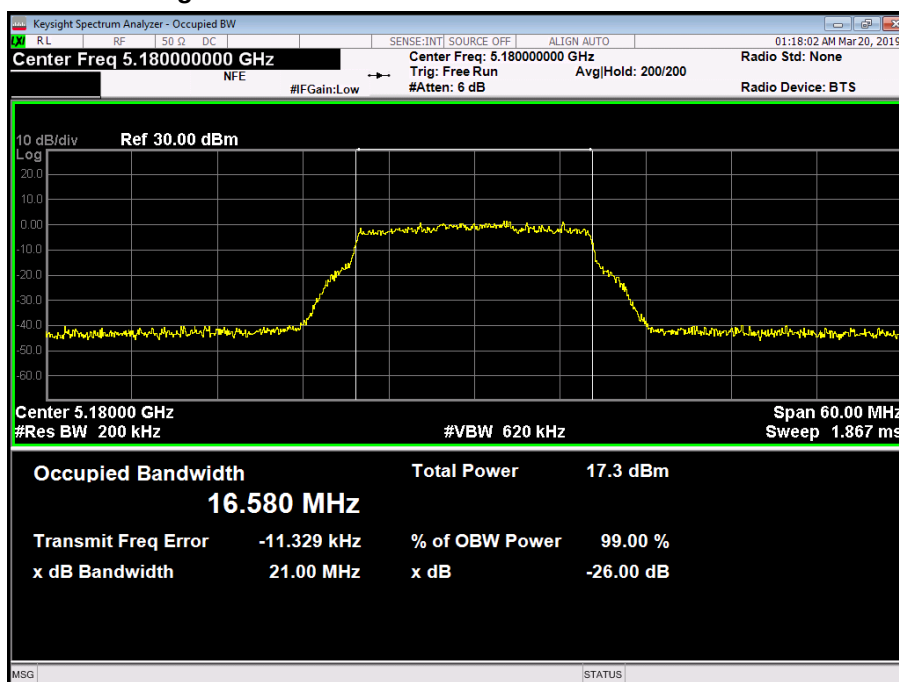


Figure 10 - 5180 MHz - 99% Occupied Bandwidth

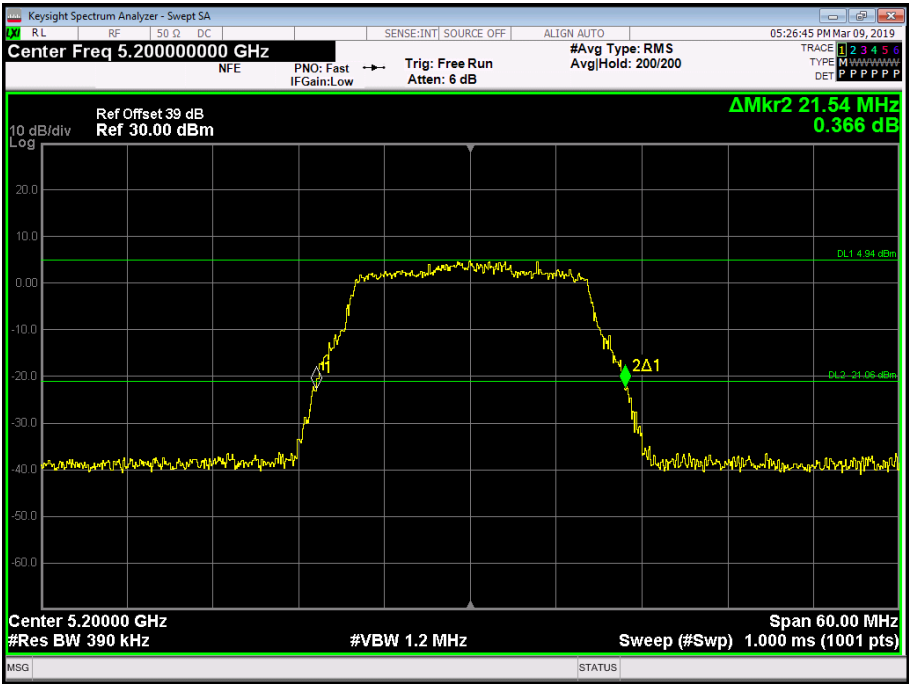


Figure 11 - 5200 MHz - 26 dB Emission Bandwidth

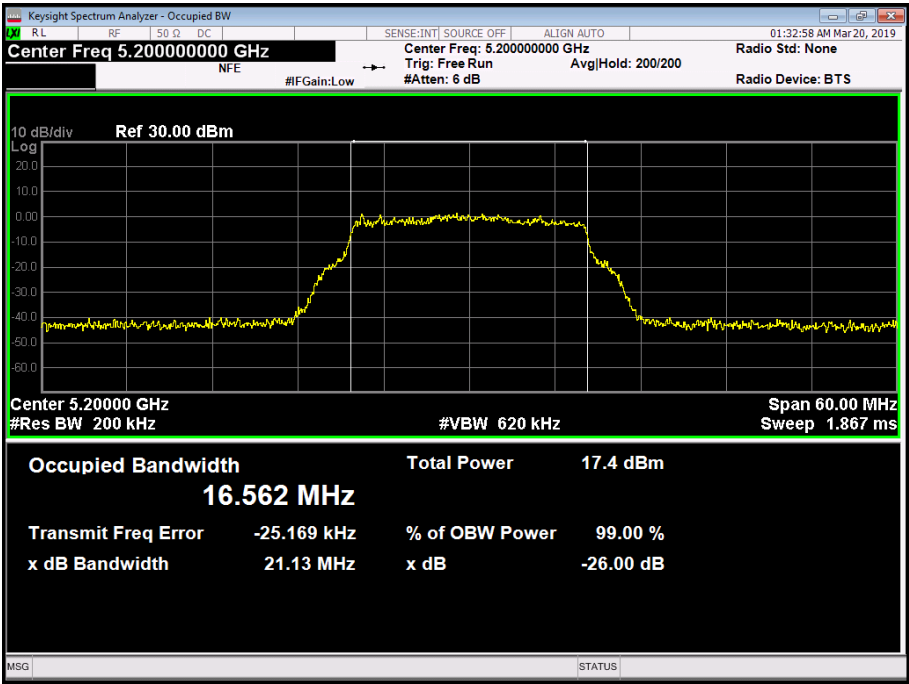


Figure 12 - 5200 MHz - 99% Occupied Bandwidth

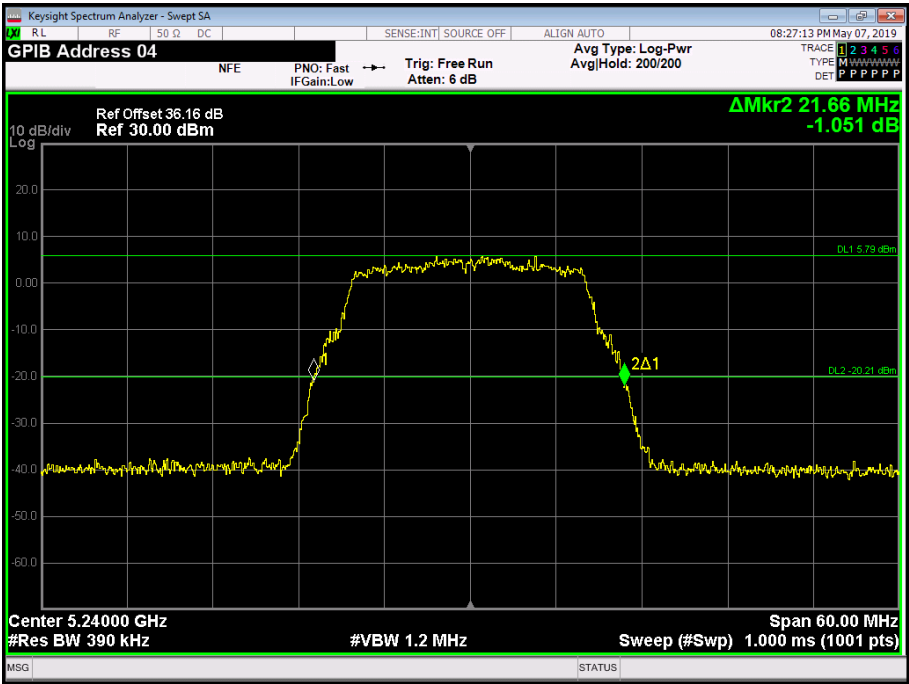


Figure 13 - 5240 MHz - 26 dB Emission Bandwidth

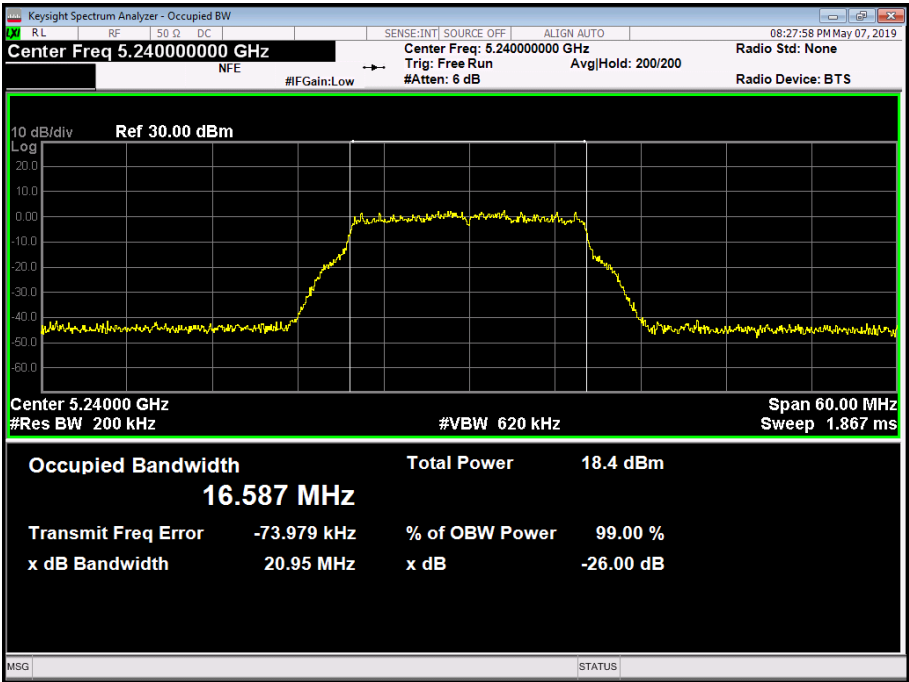


Figure 14 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT20 MCS0 / SISO / Core 0 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.600	21.780	21.660
99% Bandwidth (MHz)	17.745	17.747	17.750

Table 147

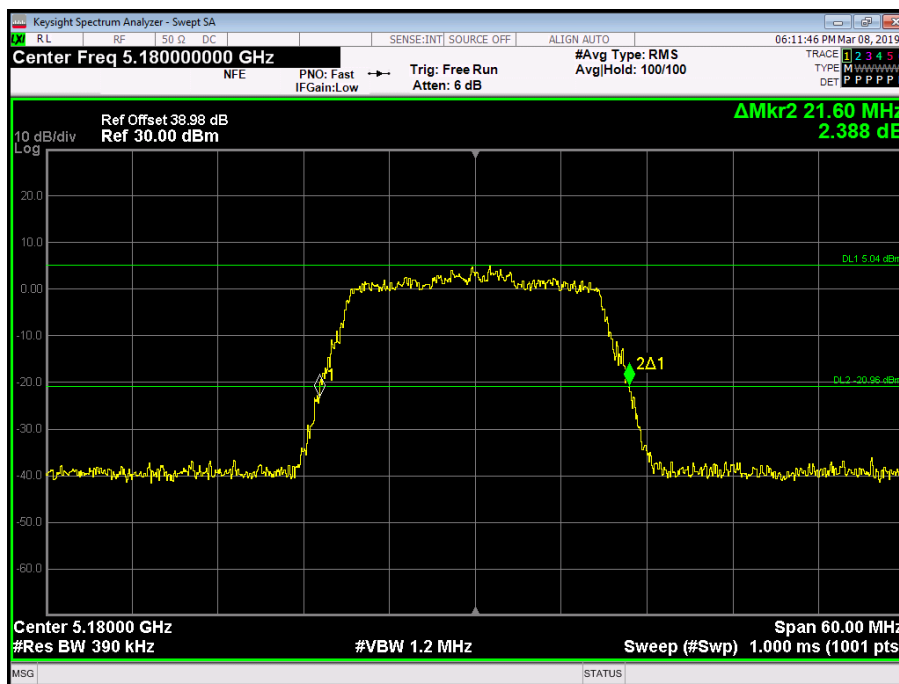


Figure 15 - 5180 MHz - 26 dB Emission Bandwidth

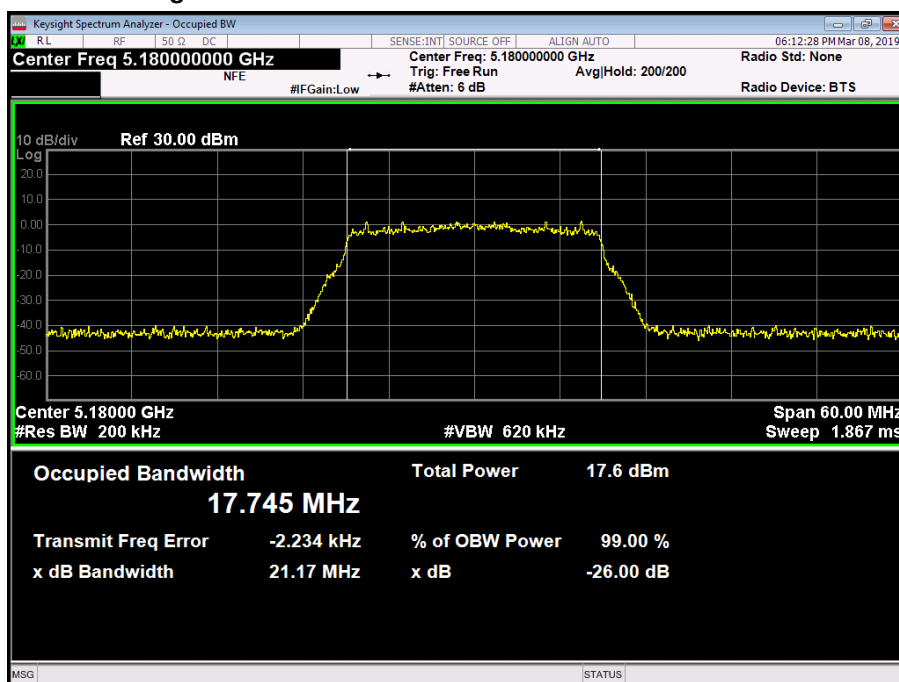


Figure 16 - 5180 MHz - 99% Occupied Bandwidth

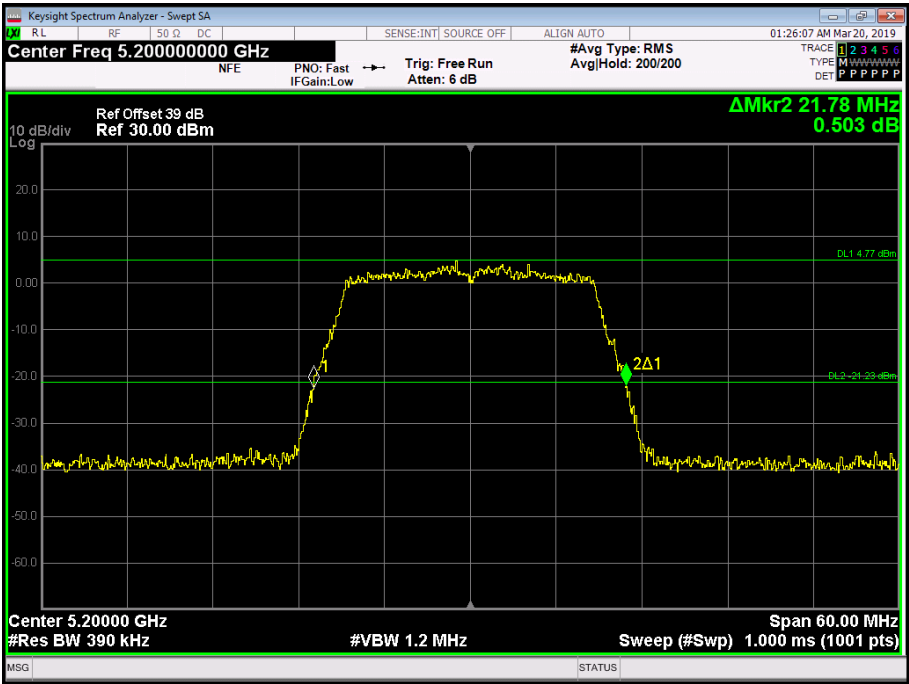


Figure 17 - 5200 MHz - 26 dB Emission Bandwidth

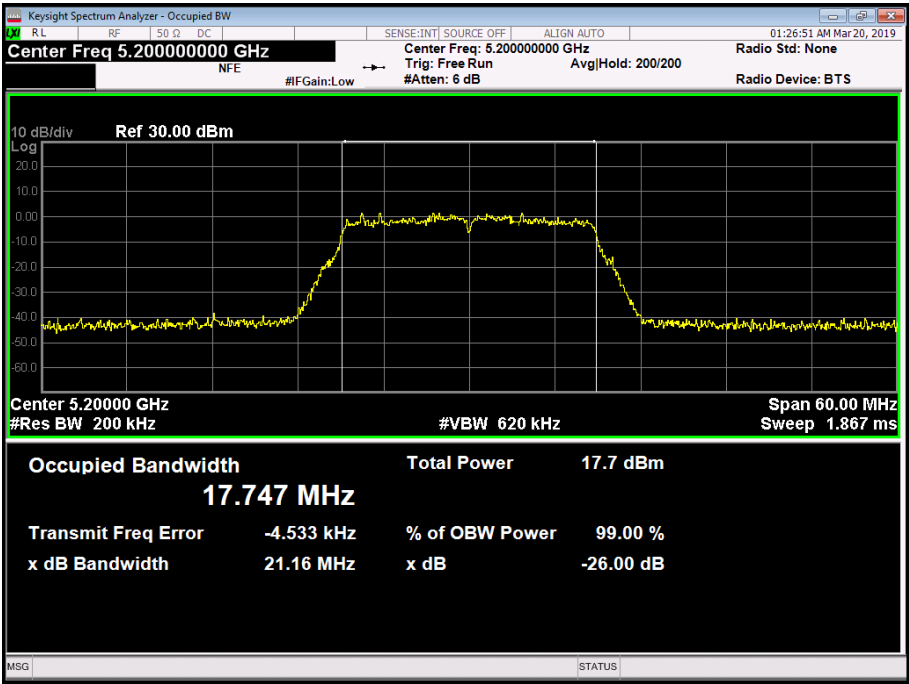


Figure 18 - 5200 MHz - 99% Occupied Bandwidth

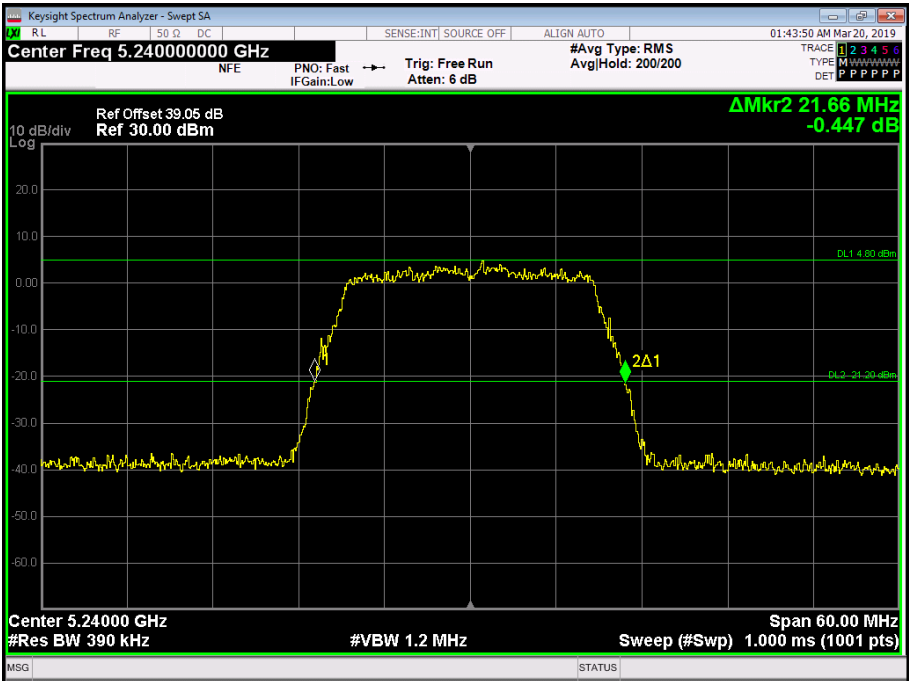


Figure 19 - 5240 MHz - 26 dB Emission Bandwidth

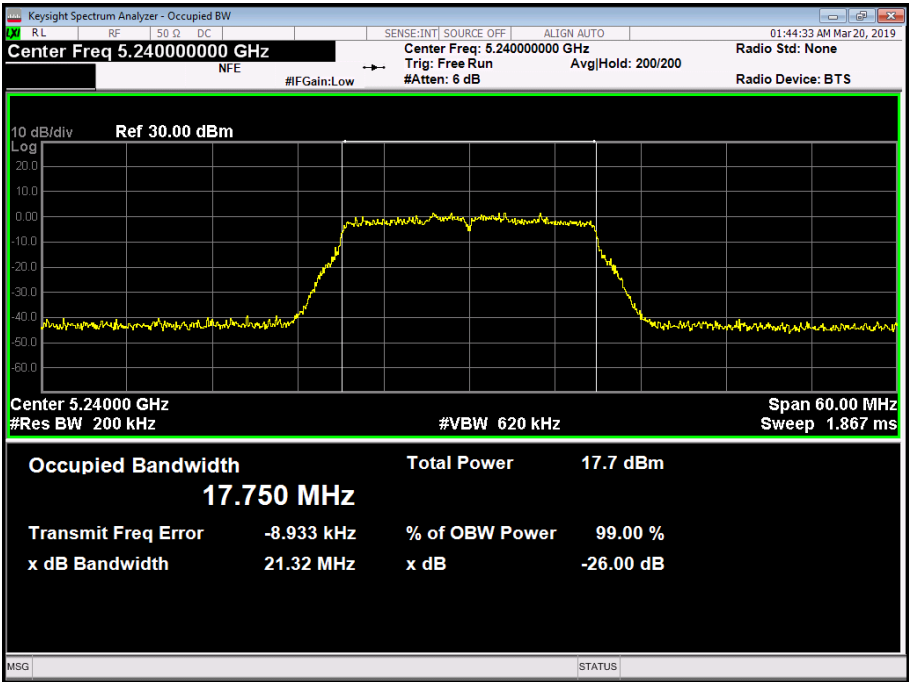


Figure 20 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT20 MCS0 / SISO / Core 0 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.960	21.840	21.720
99% Bandwidth (MHz)	17.763	17.760	17.752

Table 148

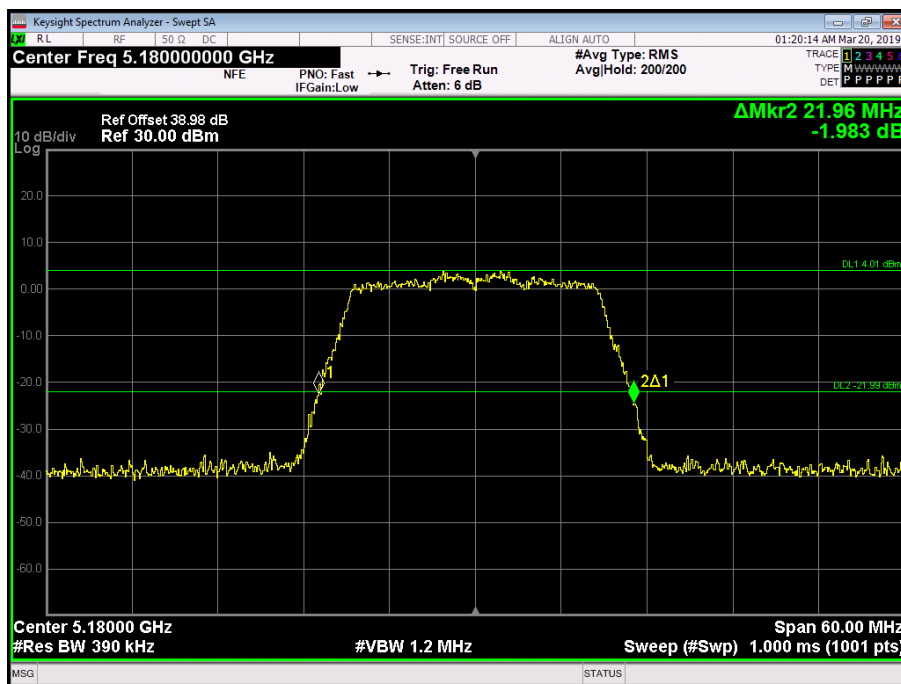


Figure 21 - 5180 MHz - 26 dB Emission Bandwidth

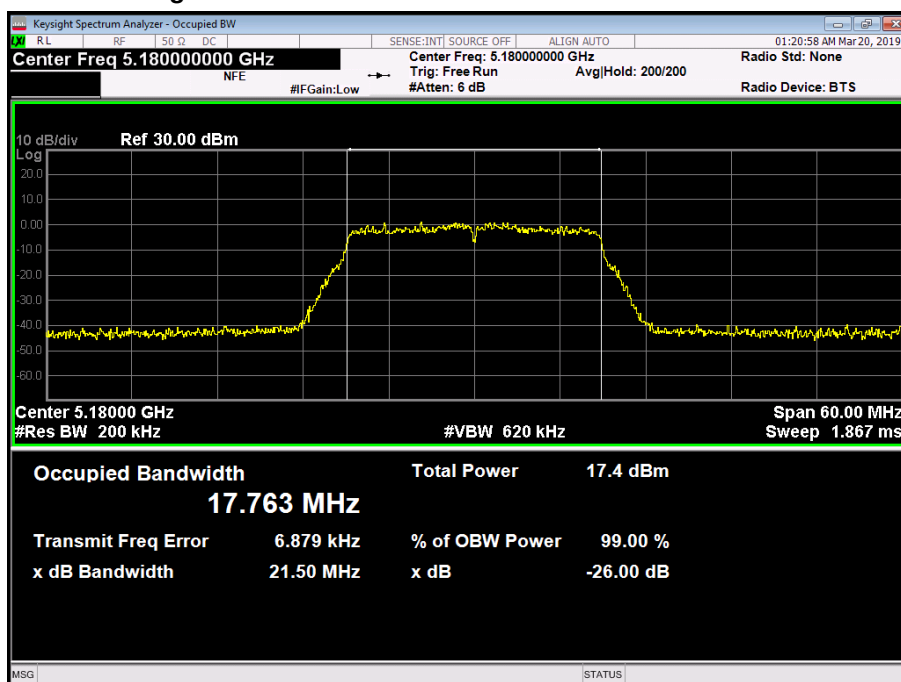


Figure 22 - 5180 MHz - 99% Occupied Bandwidth

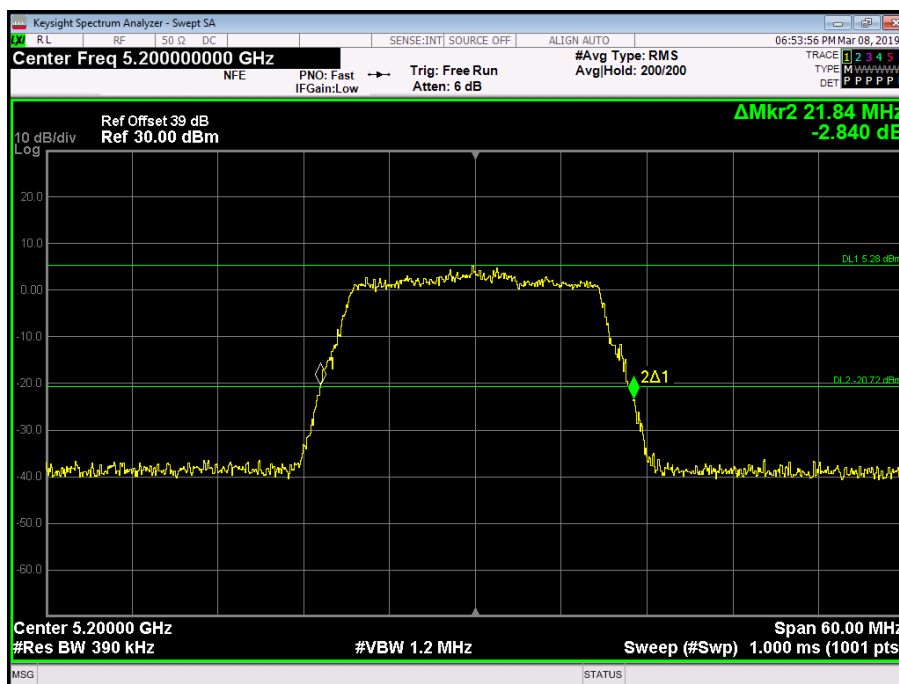


Figure 23 - 5200 MHz - 26 dB Emission Bandwidth

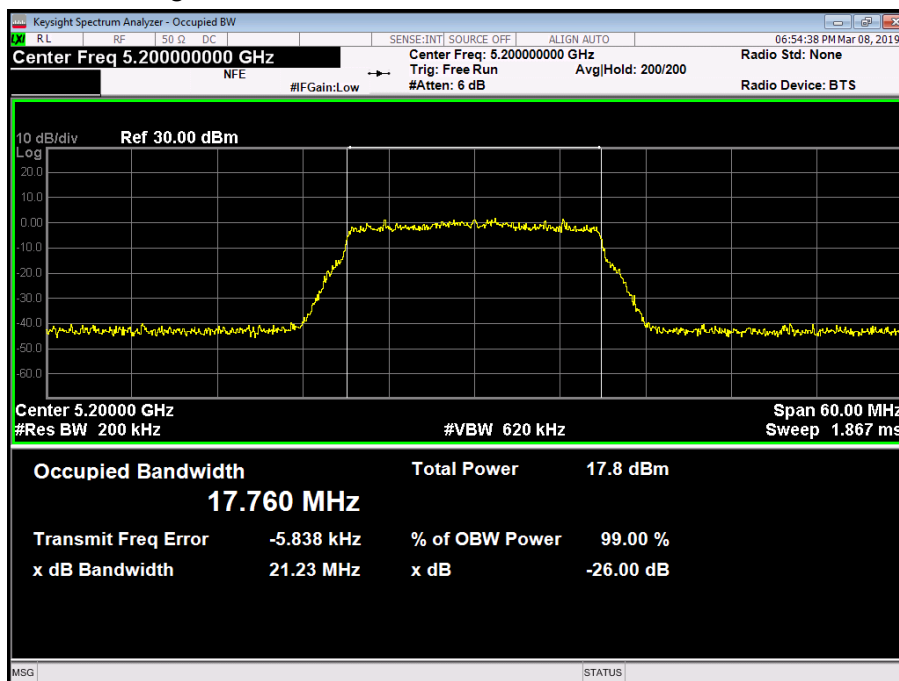


Figure 24 - 5200 MHz - 99% Occupied Bandwidth

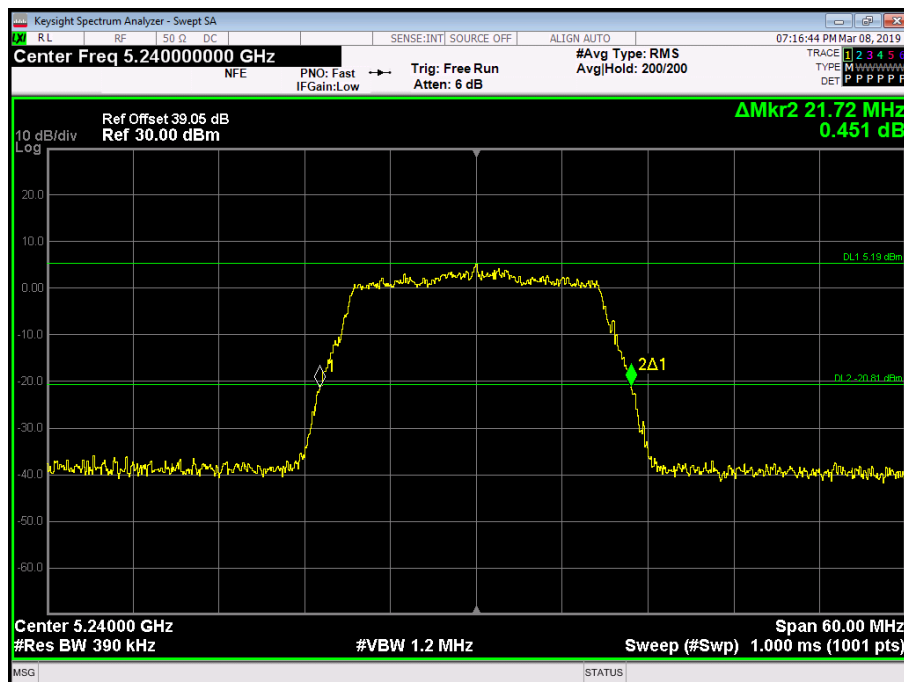


Figure 25 - 5240 MHz - 26 dB Emission Bandwidth

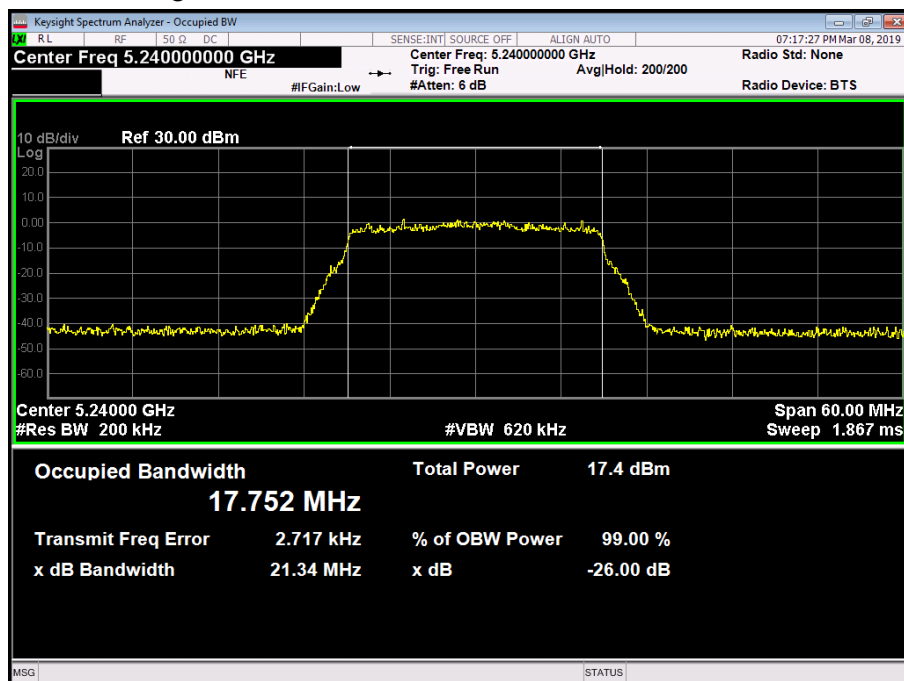


Figure 26 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	22.020	21.720	21.900
99% Bandwidth (MHz)	17.763	17.761	17.764

Table 149



Figure 27 - 5180 MHz - 26 dB Emission Bandwidth

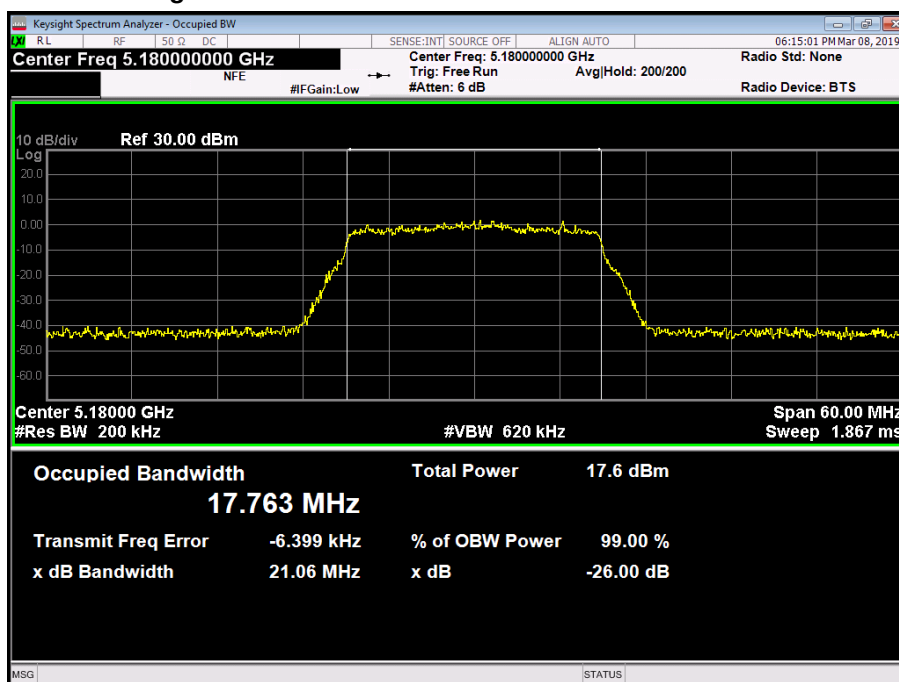


Figure 28 - 5180 MHz - 99% Occupied Bandwidth

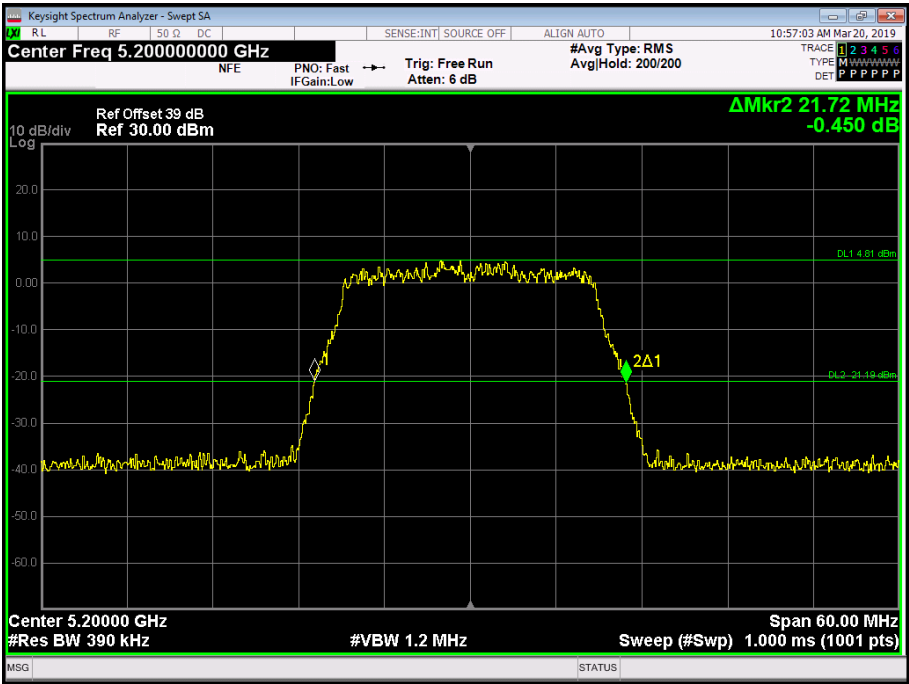


Figure 29 - 5200 MHz - 26 dB Emission Bandwidth

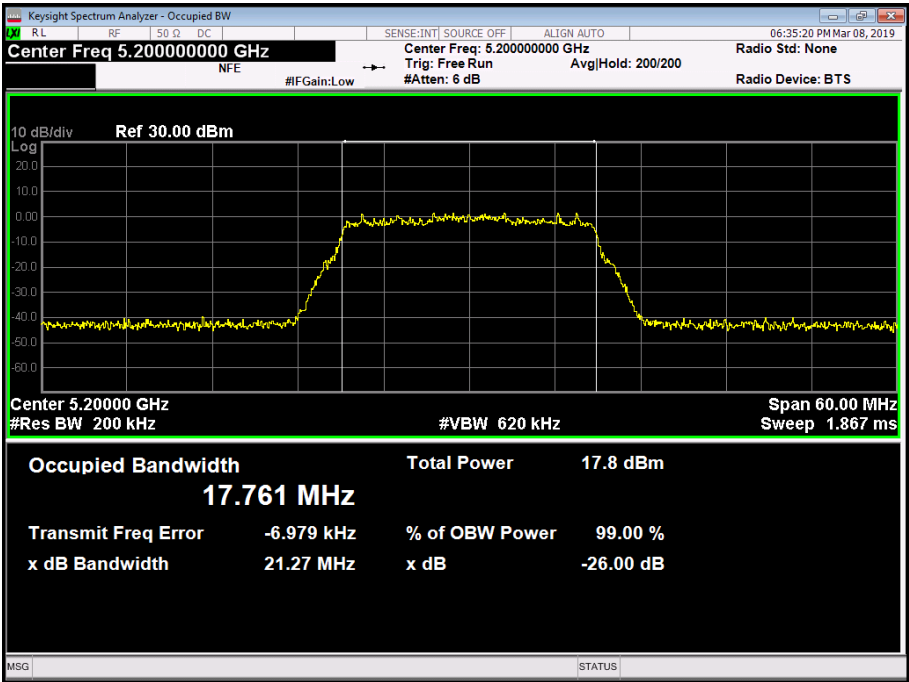


Figure 30 - 5200 MHz - 99% Occupied Bandwidth

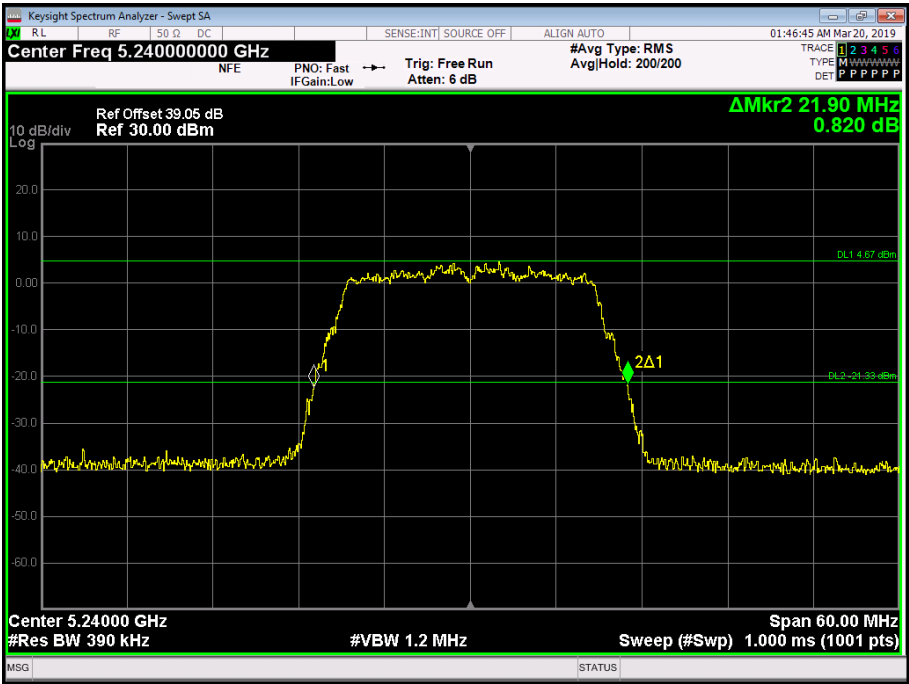


Figure 31 - 5240 MHz - 26 dB Emission Bandwidth

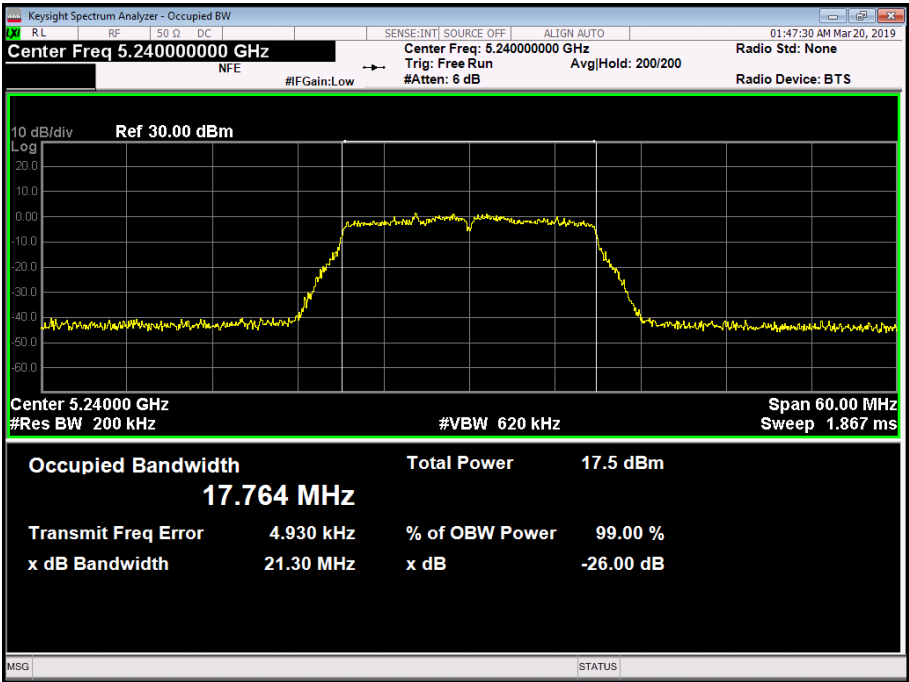


Figure 32 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT20 MCS0 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.780	22.020	21.840
99% Bandwidth (MHz)	17.788	17.774	17.745

Table 150

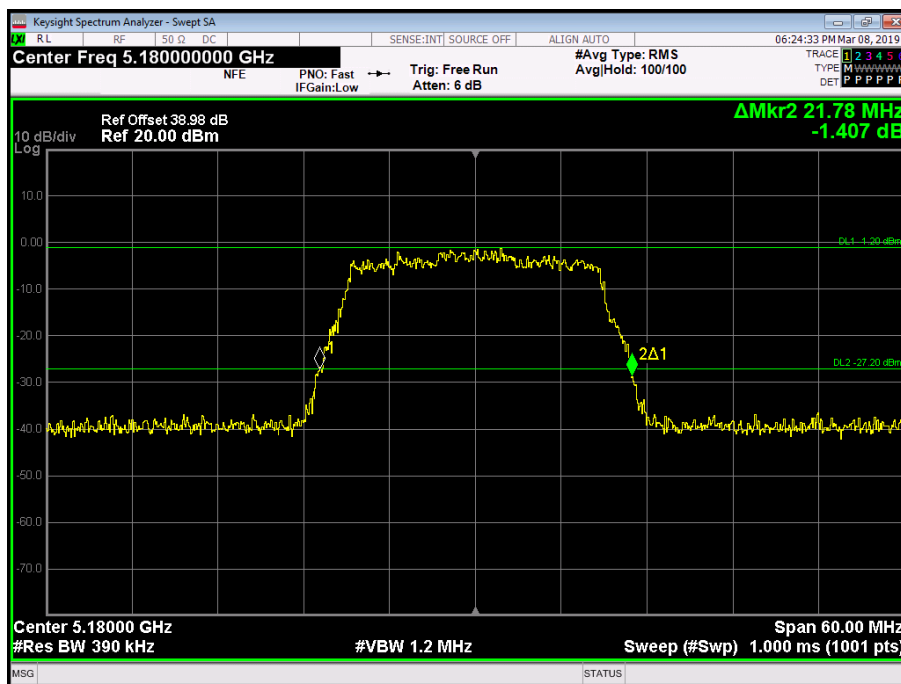


Figure 33 - 5180 MHz - 26 dB Emission Bandwidth

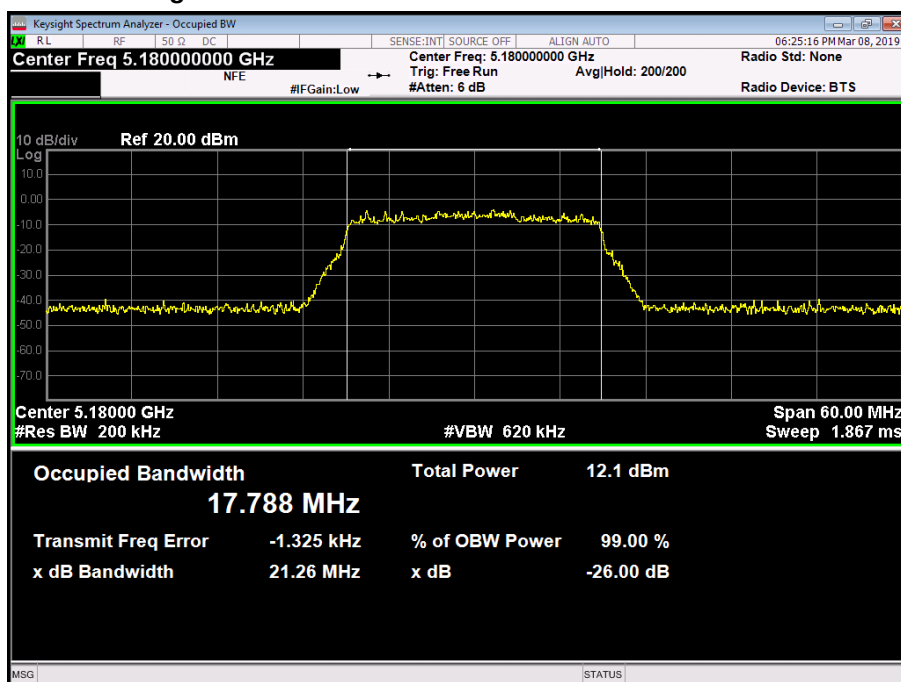


Figure 34 - 5180 MHz - 99% Occupied Bandwidth

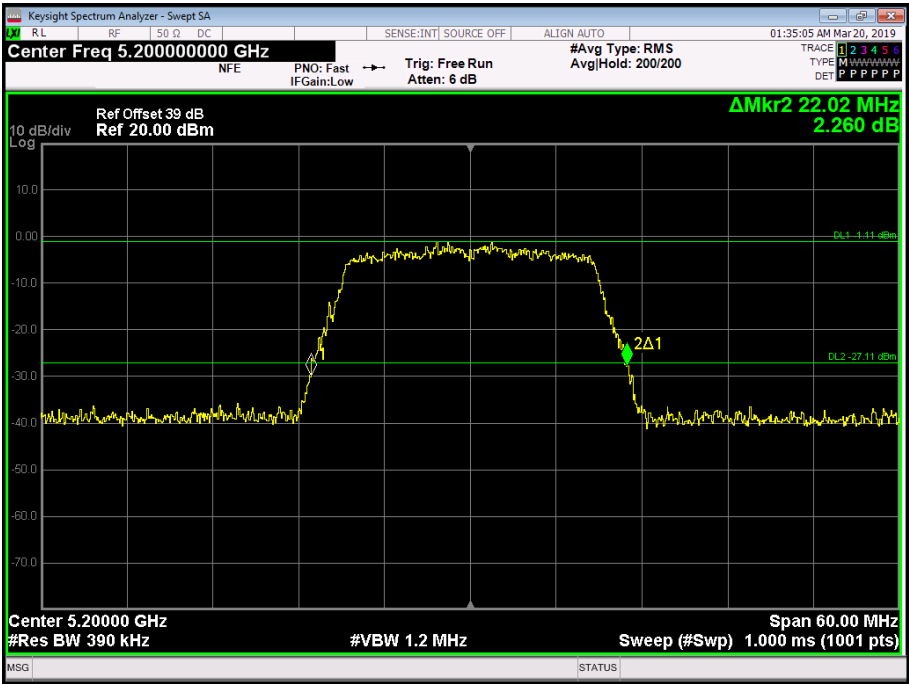


Figure 35 - 5200 MHz - 26 dB Emission Bandwidth

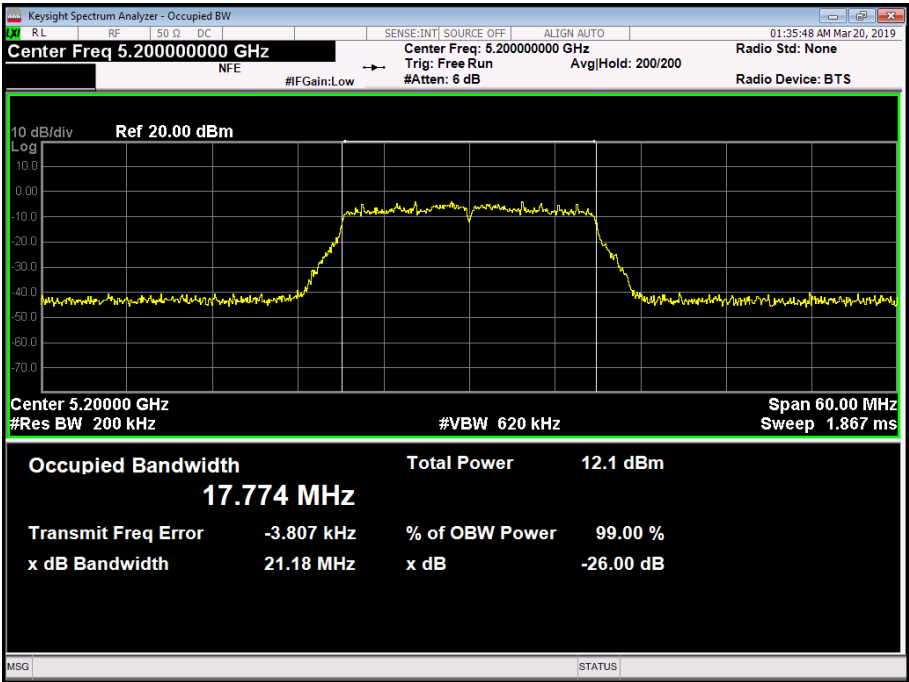


Figure 36 - 5200 MHz - 99% Occupied Bandwidth

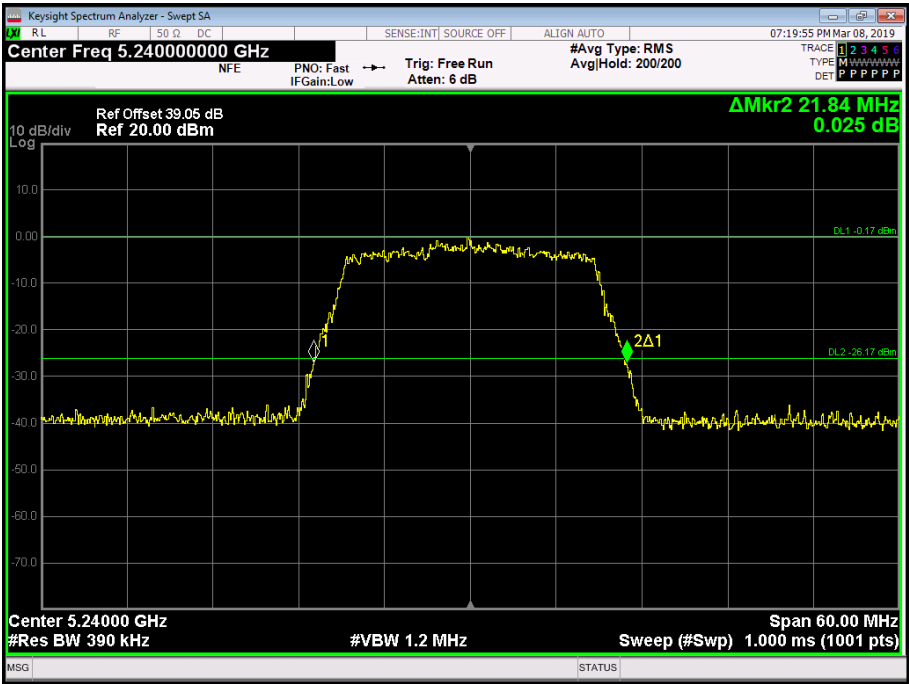


Figure 37 - 5240 MHz - 26 dB Emission Bandwidth

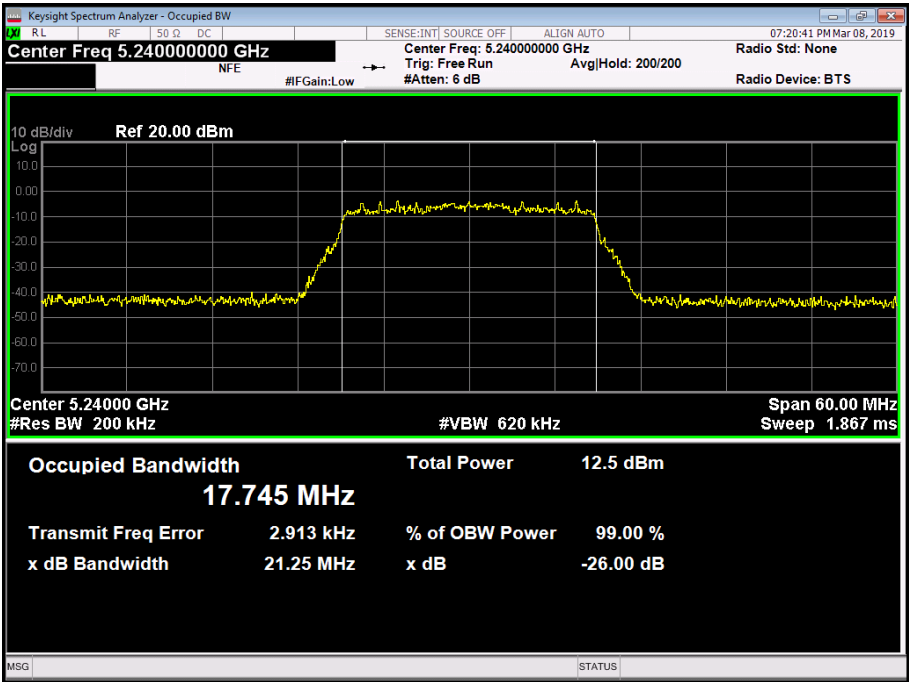


Figure 38 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.780	22.200	21.960
99% Bandwidth (MHz)	17.743	17.762	17.722

Table 151

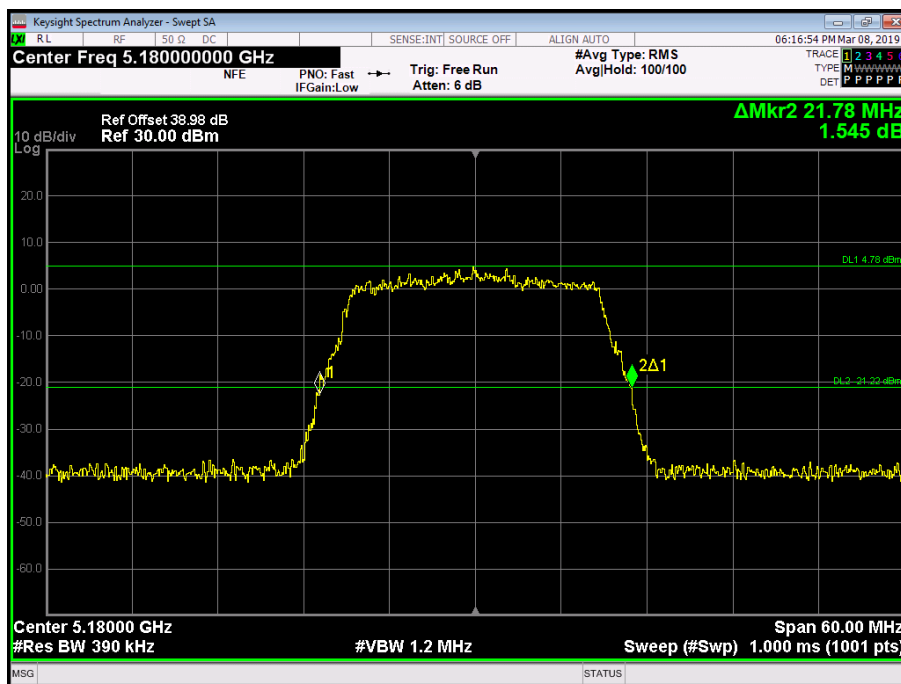


Figure 39 - 5180 MHz - 26 dB Emission Bandwidth

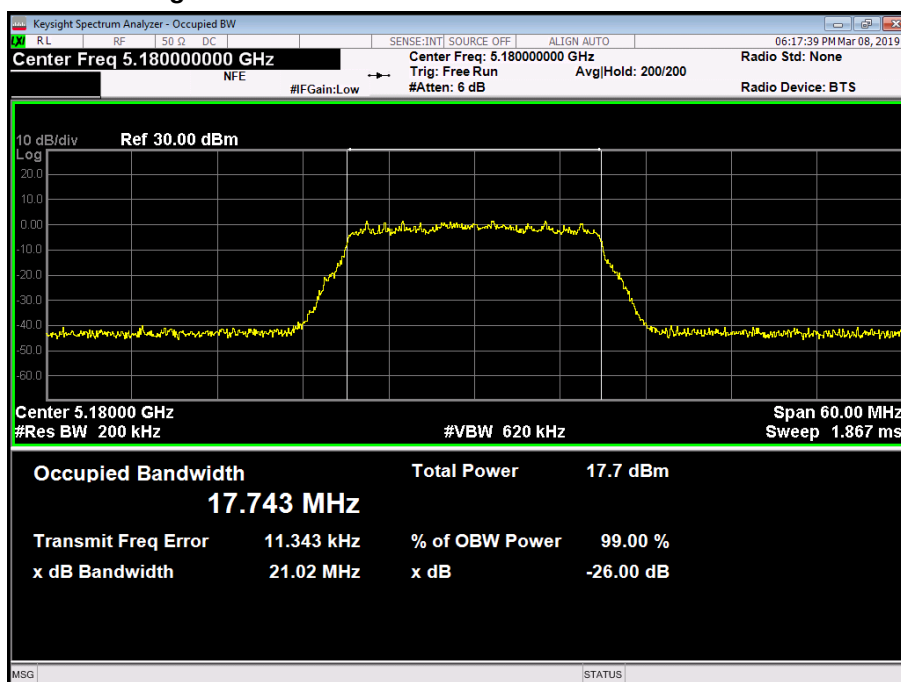


Figure 40 - 5180 MHz - 99% Occupied Bandwidth



Figure 41 - 5200 MHz - 26 dB Emission Bandwidth

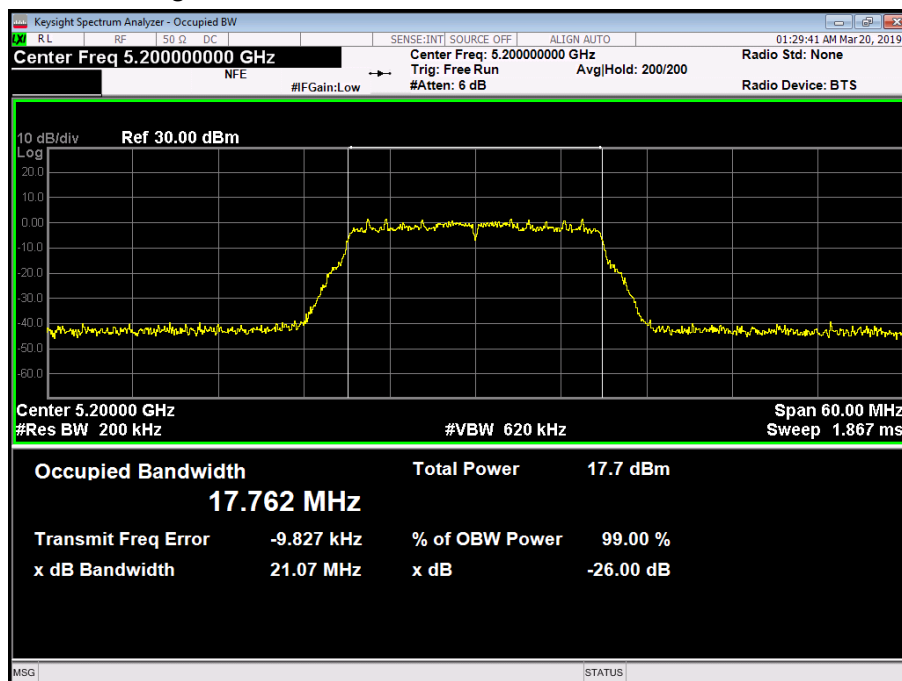


Figure 42 - 5200 MHz - 99% Occupied Bandwidth

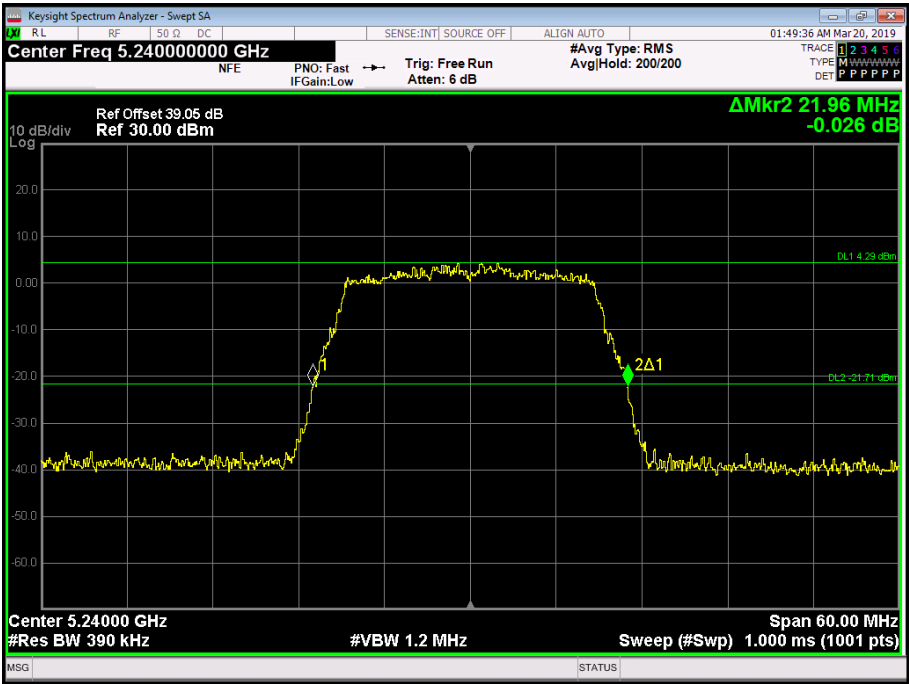


Figure 43 - 5240 MHz - 26 dB Emission Bandwidth

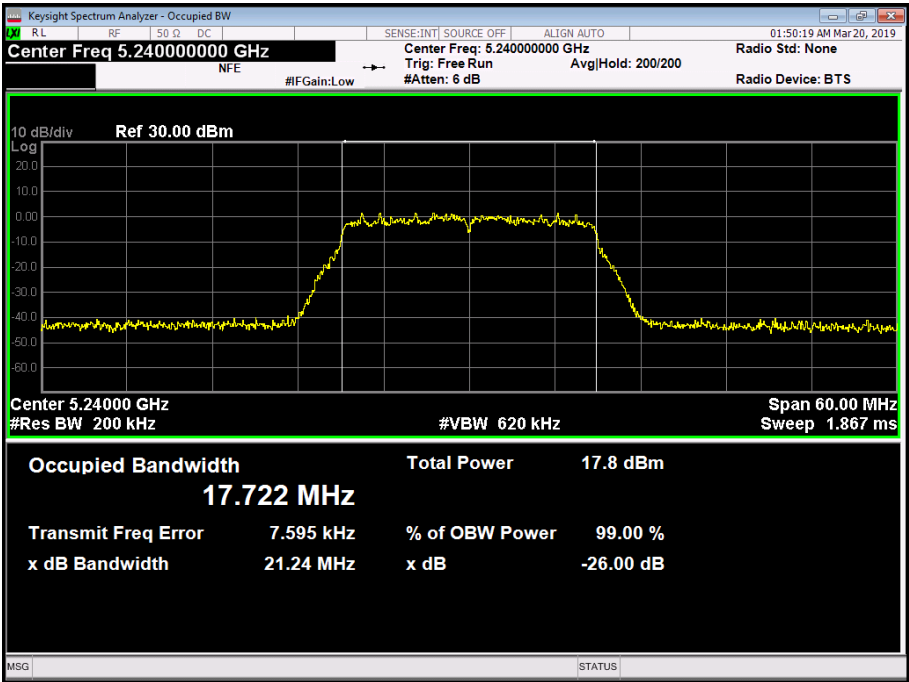


Figure 44 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT20 MCS8 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.960	22.080	21.840
99% Bandwidth (MHz)	17.724	17.774	17.742

Table 152

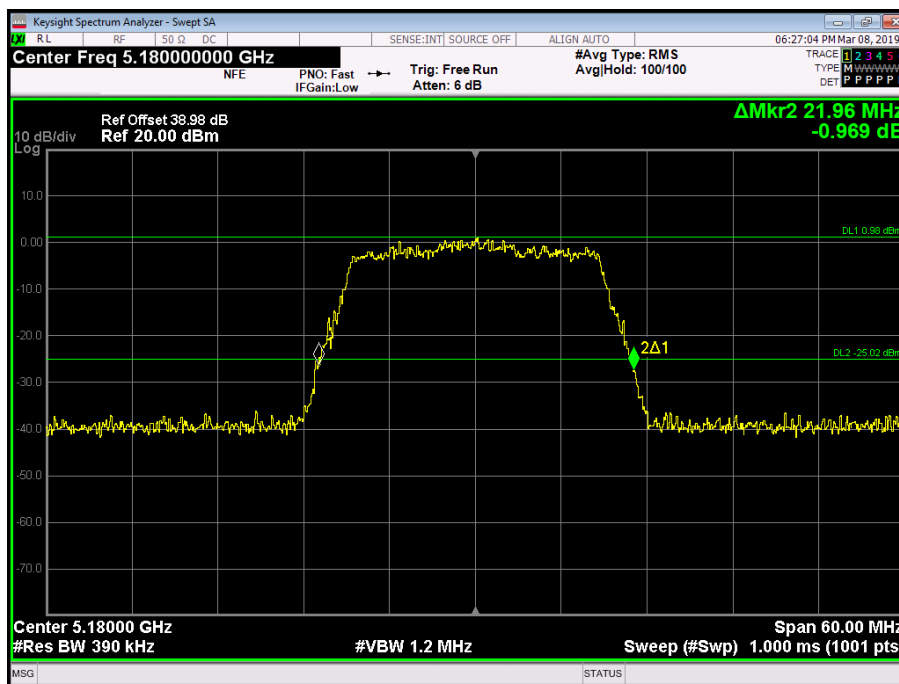


Figure 45 - 5180 MHz - 26 dB Emission Bandwidth

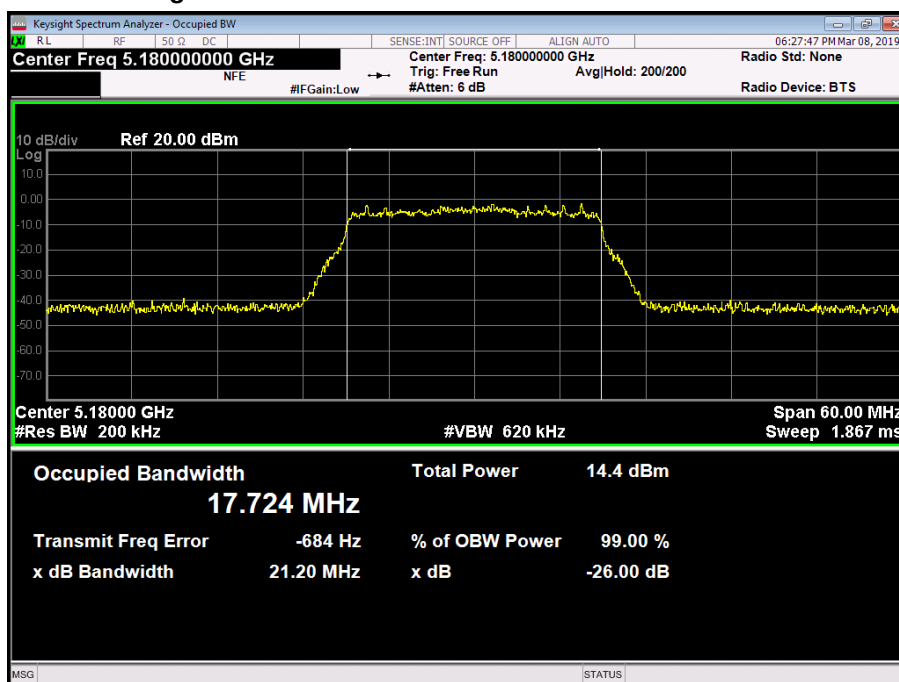


Figure 46 - 5180 MHz - 99% Occupied Bandwidth

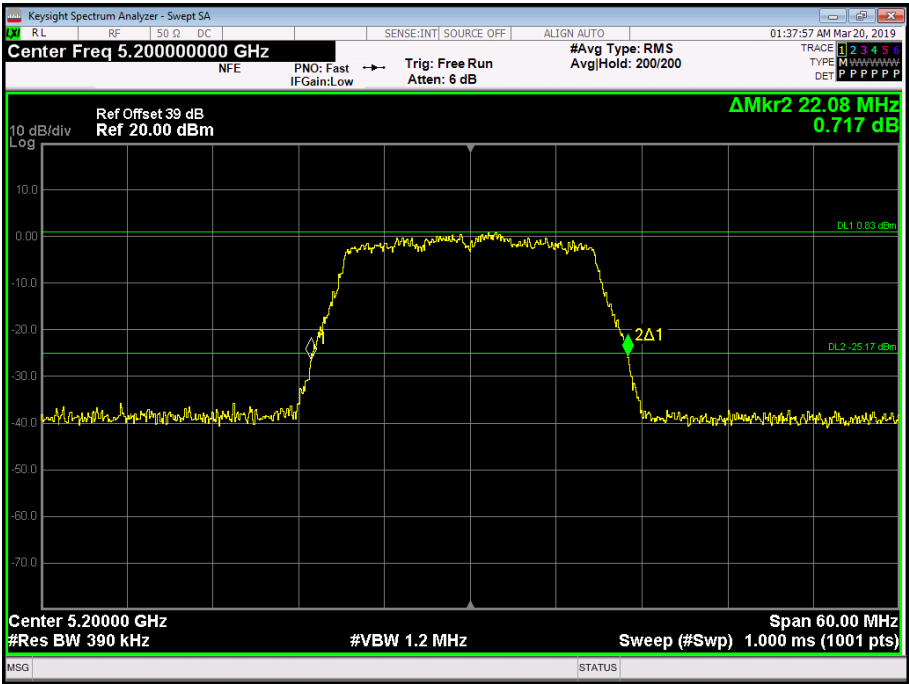


Figure 47 - 5200 MHz - 26 dB Emission Bandwidth

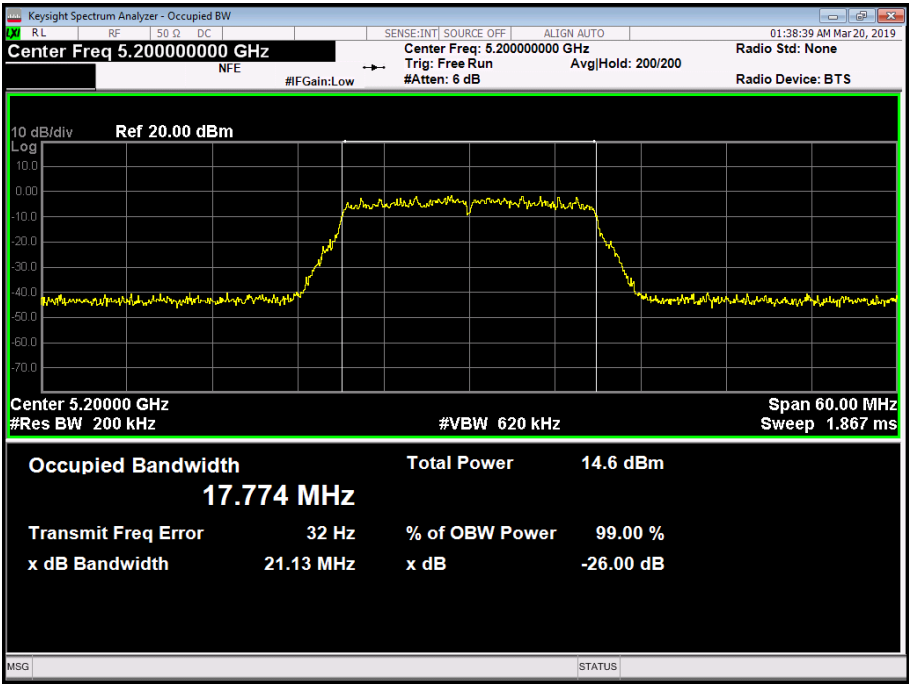


Figure 48 - 5200 MHz - 99% Occupied Bandwidth

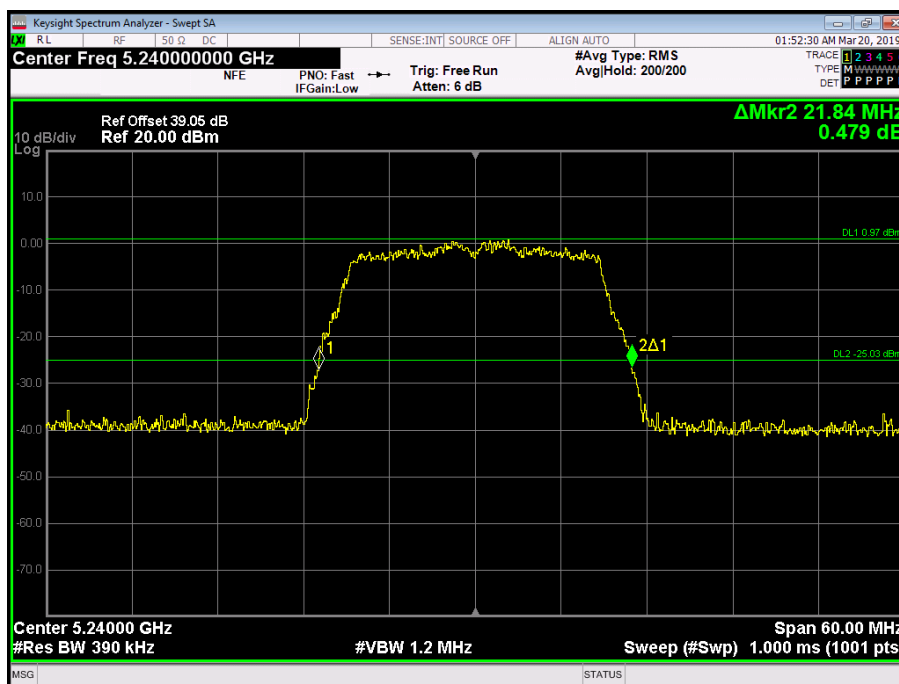


Figure 49 - 5240 MHz - 26 dB Emission Bandwidth

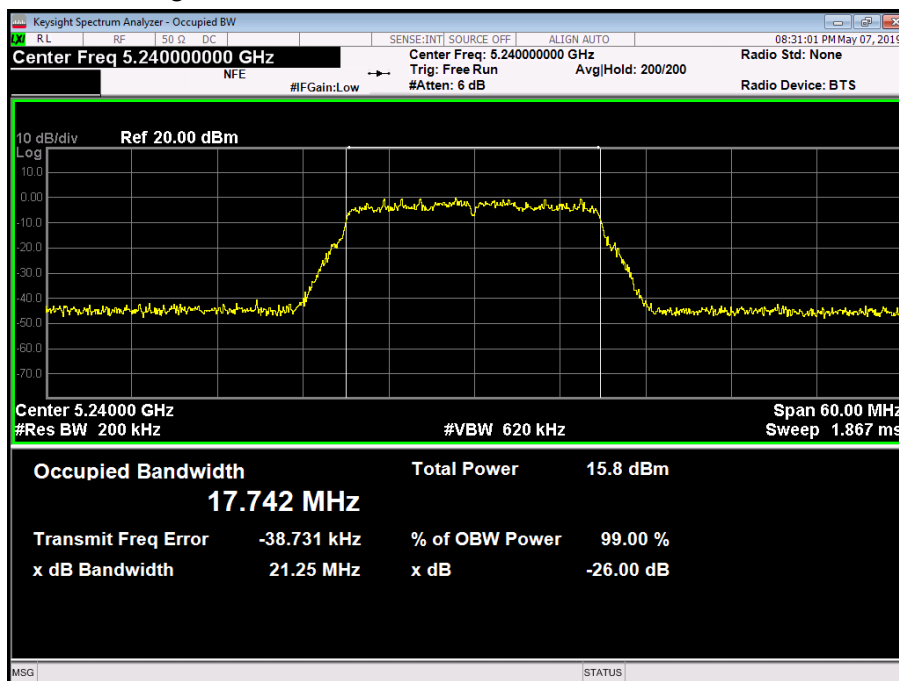


Figure 50 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT20 MCS0 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.840	21.720	21.960
99% Bandwidth (MHz)	17.766	17.768	17.762

Table 153

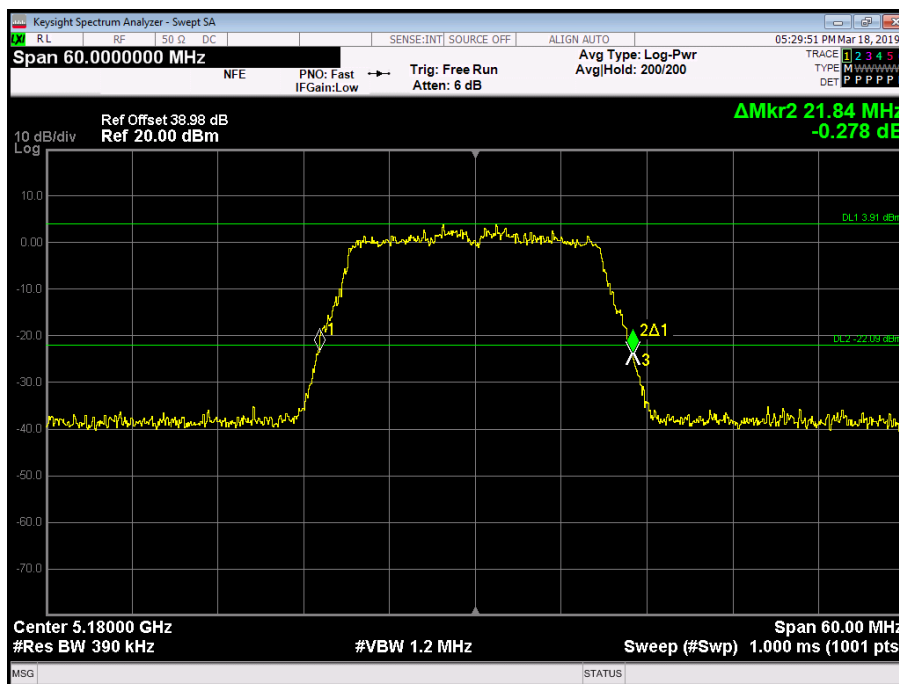


Figure 51 - 5180 MHz - 26 dB Emission Bandwidth

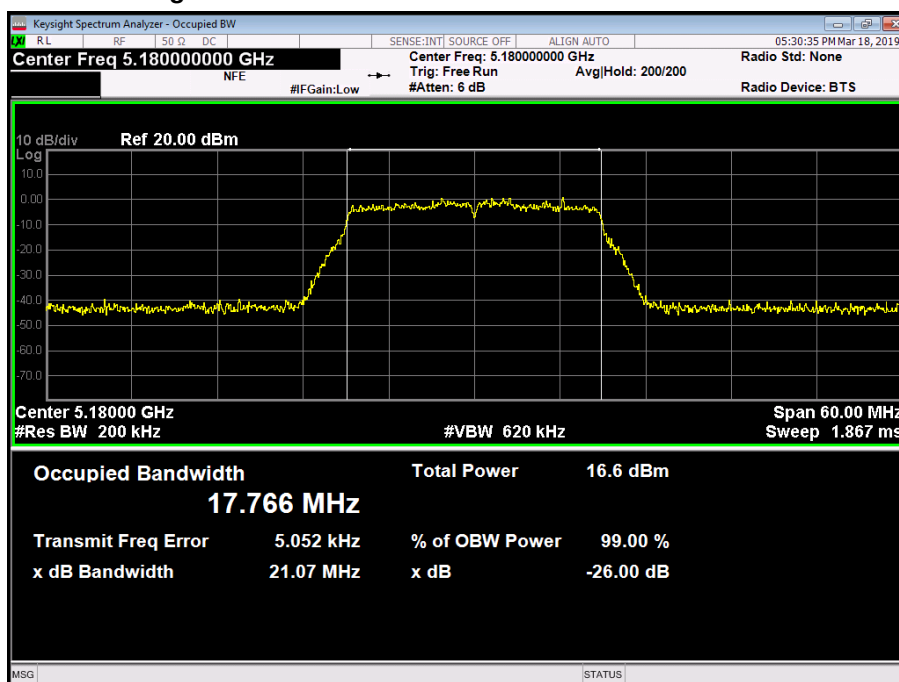


Figure 52 - 5180 MHz - 99% Occupied Bandwidth

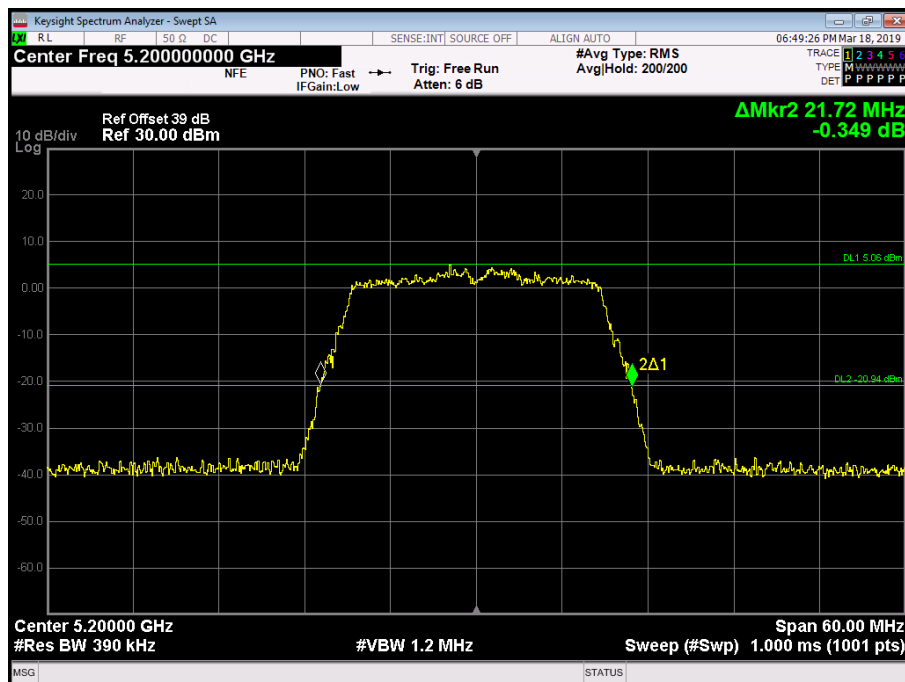


Figure 53 - 5200 MHz - 26 dB Emission Bandwidth

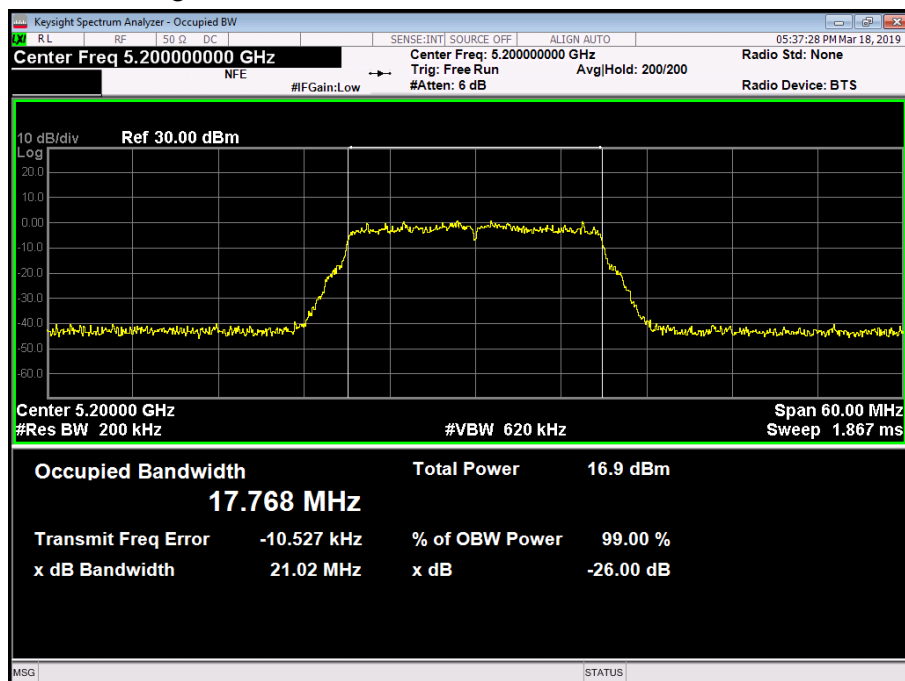


Figure 54 - 5200 MHz - 99% Occupied Bandwidth

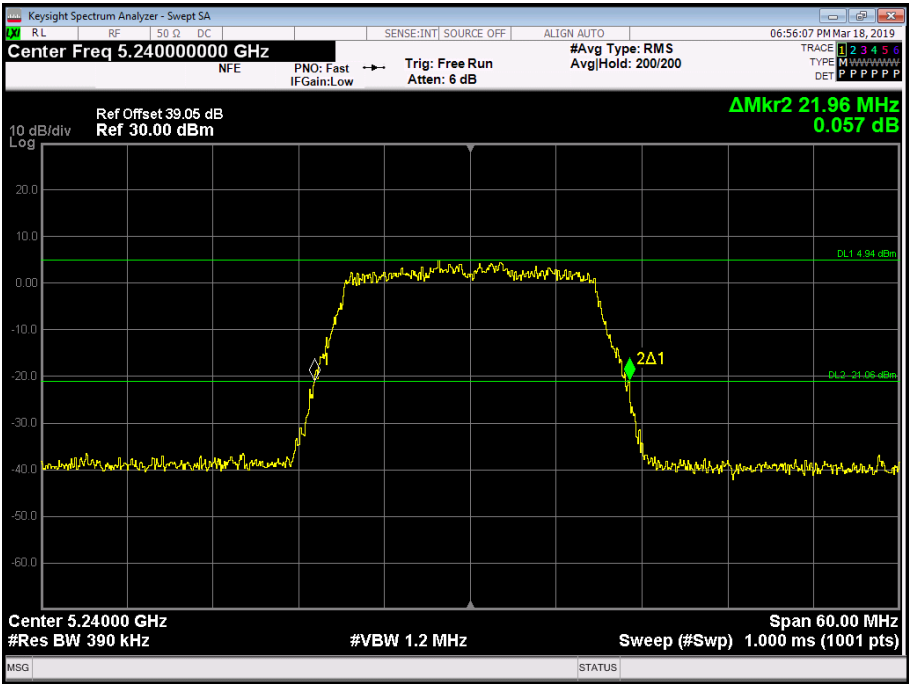


Figure 55 - 5240 MHz - 26 dB Emission Bandwidth

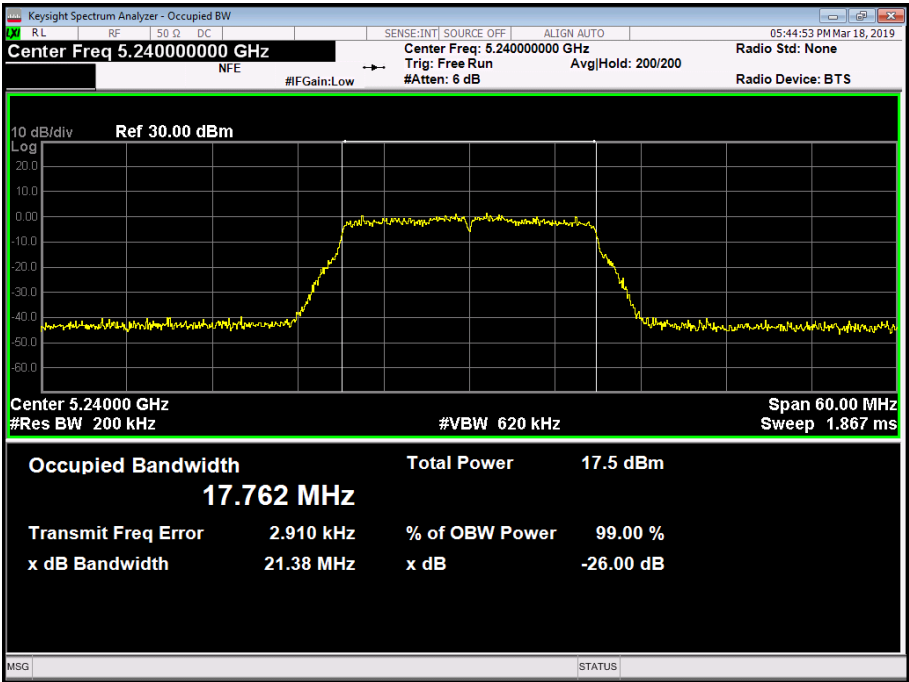


Figure 56 - 5240 MHz - 99% Occupied Bandwidth

Channel	Bottom	Middle	Top
Frequency (MHz)	5180	5200	5240
26 dB Bandwidth (MHz)	21.780	22.140	21.900
99% Bandwidth (MHz)	17.785	17.775	17.782

Keysight Spectrum Analyzer - Swept SA

RL 50 Ω DC

Center Freq 5.18000000 GHz

NFE PNO: Fast IFGain: Low Trig: Free Run Atten: 6 dB

#Avg Type: RMS AvgHold: 200/200

05:33:18 PM Mar 18, 2019

TRACE 1 2 3 4 5 TYPE MWWWWWW DET P P P P P

Ref Offset 38.98 dB Ref 20.00 dBm

Δ Mkr2 21.78 MHz -1.907 dB

10 dB/div Log

The spectrum analyzer displays a swept signal with a yellow trace. The vertical axis is labeled '10 dB/div Log' and ranges from -70.0 to 10.0 dBm. The horizontal axis represents frequency. A green horizontal line is at 0.00 dBm, and another is at -27.06 dBm. A yellow marker labeled '2Δ1' is positioned on the trace. The signal shows a flat noise floor at approximately -40 dBm, a rising edge, a flat top at approximately -10 dBm, and a falling edge. The text 'DL1 -1.06 dBm' and 'DL2 -27.06 dBm' are visible on the right side of the plot.

Center 5.18000 GHz #Res BW 390 kHz #VBW 1.2 MHz Span 60.00 MHz Sweep (#Swp) 1.001 pts (1001 pts)

MSG STATUS

Keysight Spectrum Analyzer - Occupied BW

RL RF 50 Ω DC

Center Freq 5.18000000 GHz

NFE

#IFGain: Low

SENSE:INT SOURCE:OFF ALIGN: AUTO

Center Freq: 5.18000000 GHz

Trig: Free Run

Avg/Hold: 200/200

Radio Std: None

Radio Device: BTS

10 dB/div Ref 20.00 dBm

Log

Center 5.18000 GHz

#Res BW 200 kHz

#VBW 620 kHz

Span 60.00 MHz

Sweep 1.867 ms

Occupied Bandwidth

17.785 MHz

Total Power

12.2 dBm

Transmit Freq Error

6.411 kHz

% of OBW Power

99.00 %

x dB Bandwidth

21.07 MHz

x dB

-26.00 dB

MSG STATUS

Detailed description: The image shows a Keysight Spectrum Analyzer interface. At the top, it displays 'Keysight Spectrum Analyzer - Occupied BW'. Below this are various control buttons and settings. The main display area shows a spectrum plot with a yellow trace. The plot has a grid and is labeled '10 dB/div' and 'Ref 20.00 dBm'. The trace shows a signal with a flat top at approximately -10 dBm and sloped sides that drop to about -50 dBm. Below the plot, there are several measurement results: 'Center 5.18000 GHz', '#Res BW 200 kHz', '#VBW 620 kHz', 'Span 60.00 MHz', and 'Sweep 1.867 ms'. At the bottom, there are four rows of data: 'Occupied Bandwidth' (17.785 MHz), 'Total Power' (12.2 dBm), 'Transmit Freq Error' (6.411 kHz), '% of OBW Power' (99.00 %), 'x dB Bandwidth' (21.07 MHz), and 'x dB' (-26.00 dB). The bottom of the screen has 'MSG' and 'STATUS' indicators.

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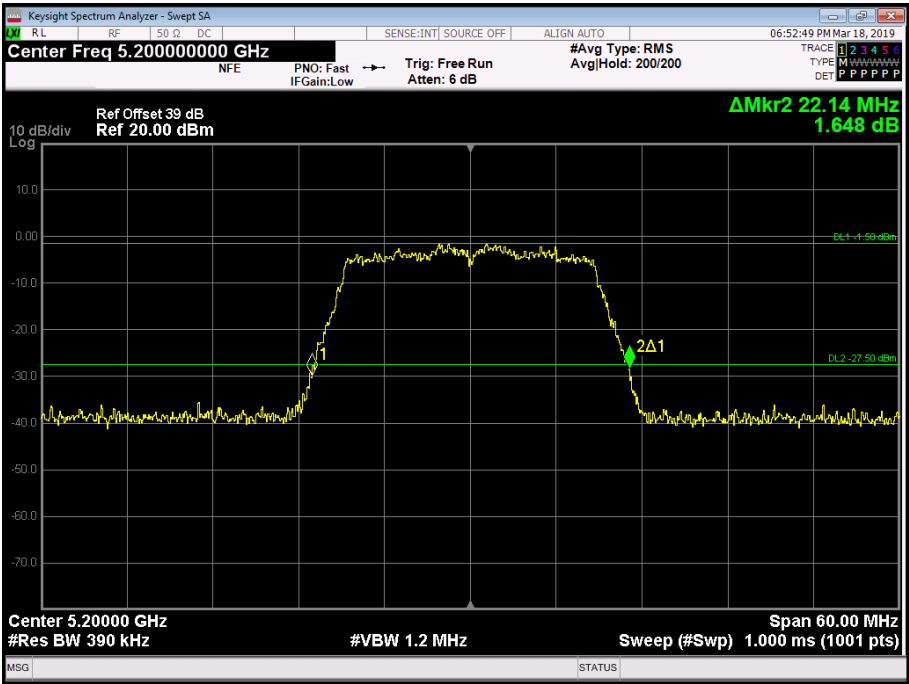


Figure 59 - 5200 MHz - 26 dB Emission Bandwidth

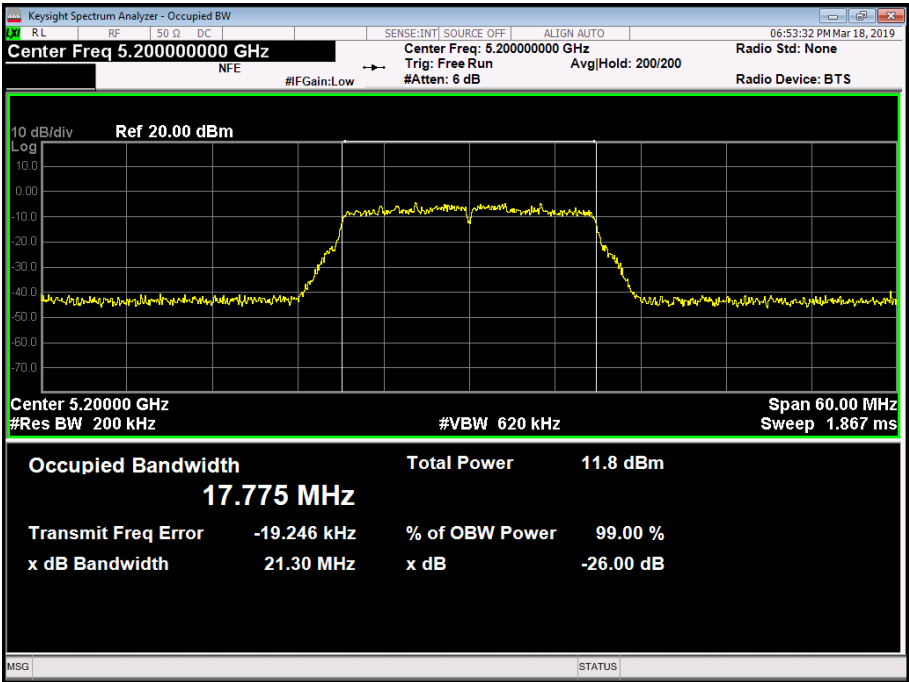


Figure 60 - 5200 MHz - 99% Occupied Bandwidth

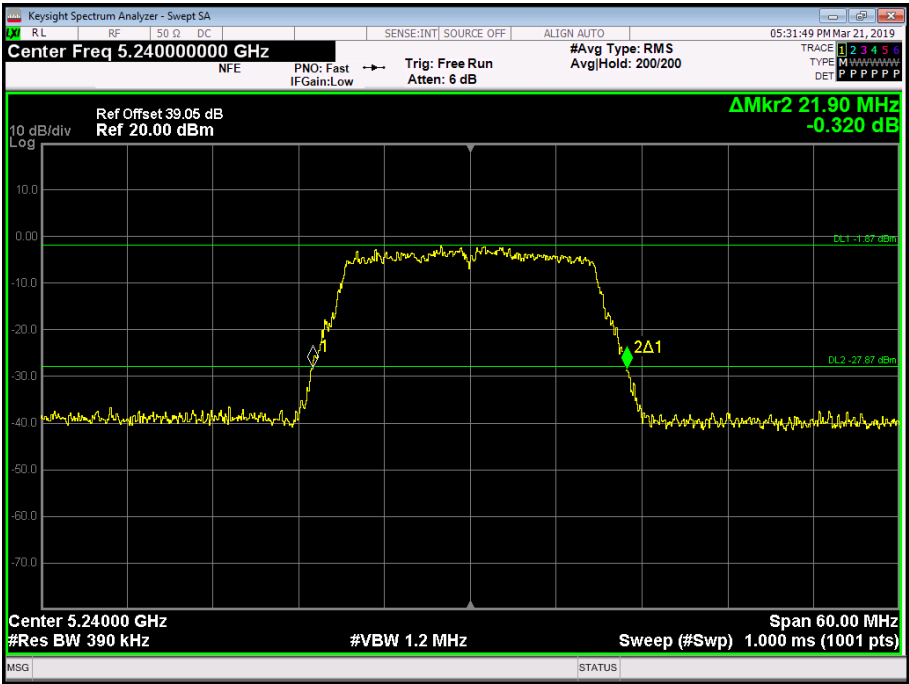


Figure 61 - 5240 MHz - 26 dB Emission Bandwidth

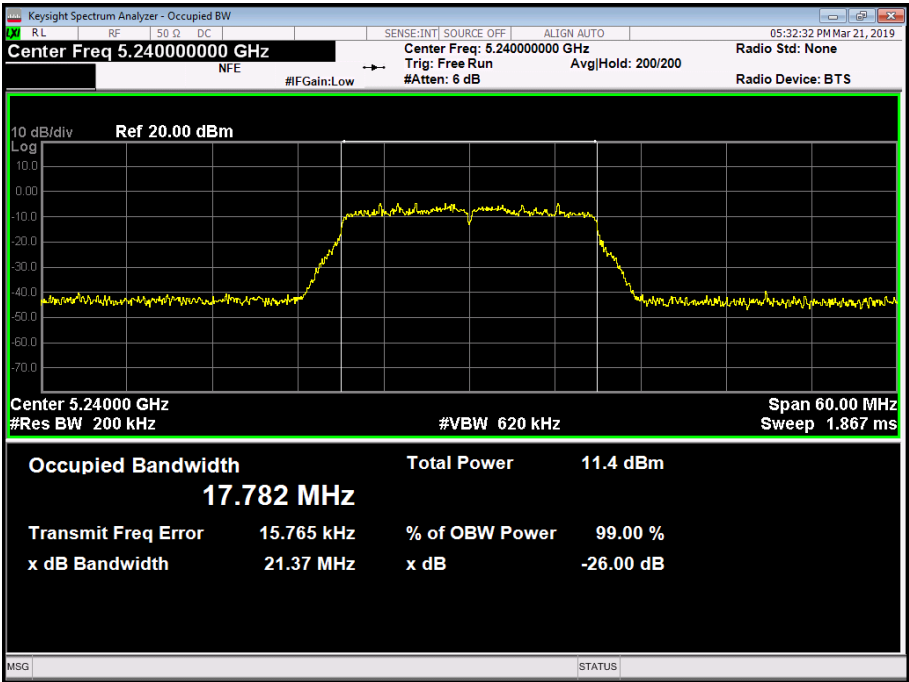


Figure 62 - 5240 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS0 / SISO / Core 0 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.440	40.440
99% Bandwidth (MHz)	36.117	36.104

Table 155

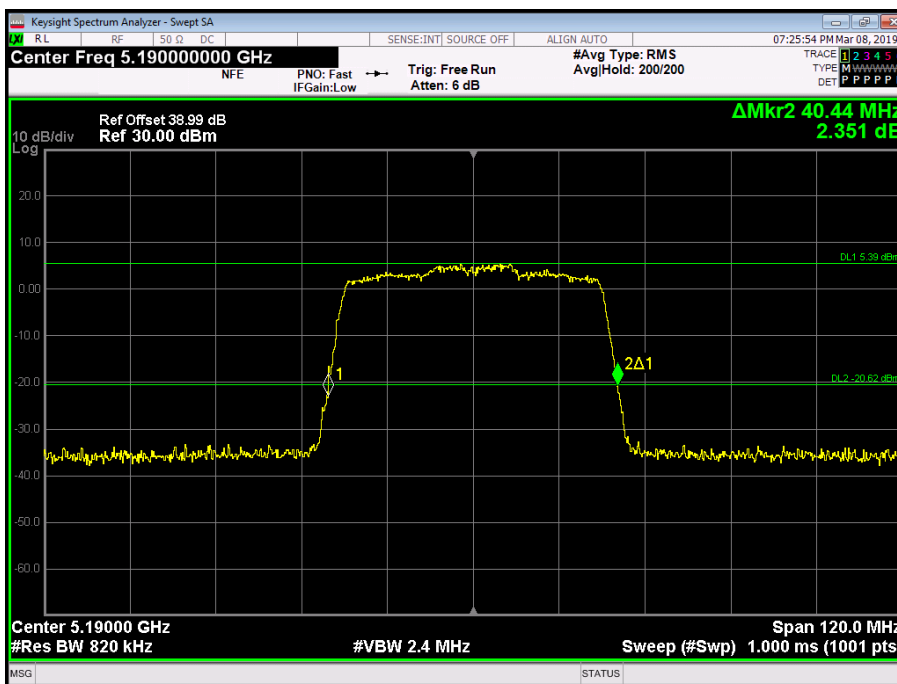


Figure 63 - 5190 MHz - 26 dB Emission Bandwidth

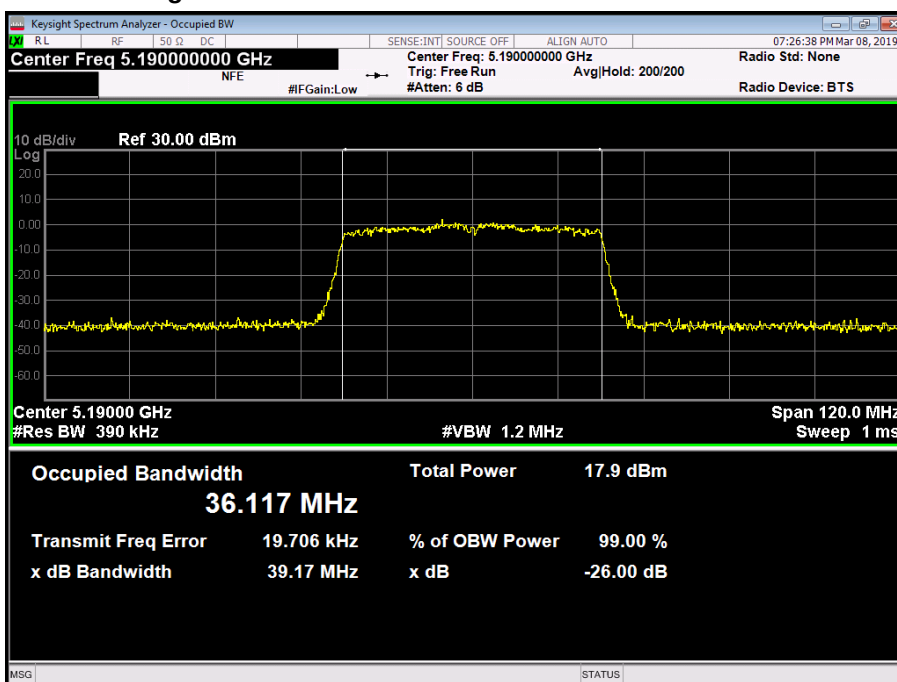


Figure 64 - 5190 MHz - 99% Occupied Bandwidth

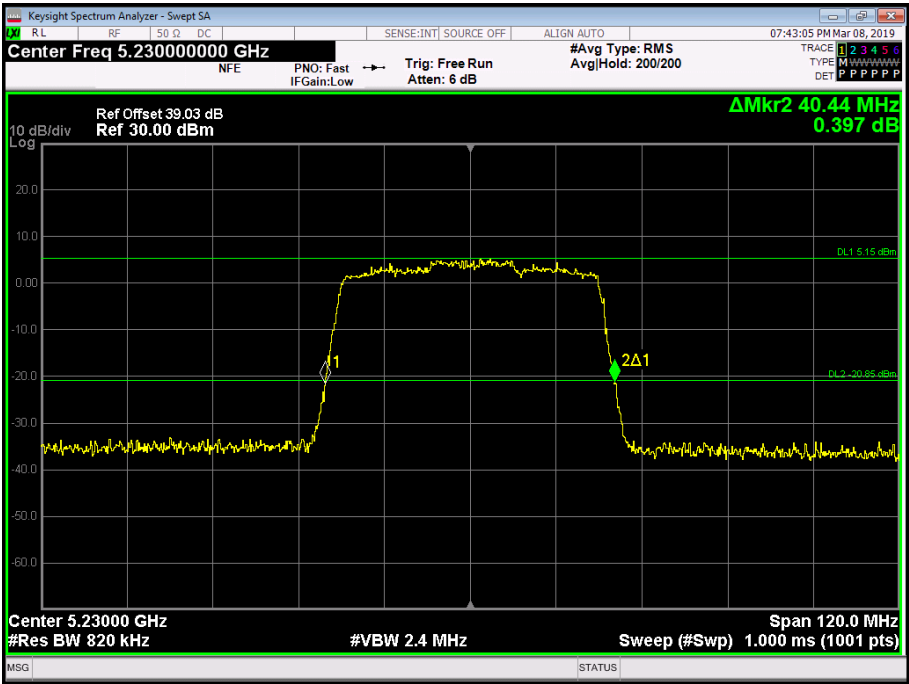


Figure 65 - 5230 MHz - 26 dB Emission Bandwidth

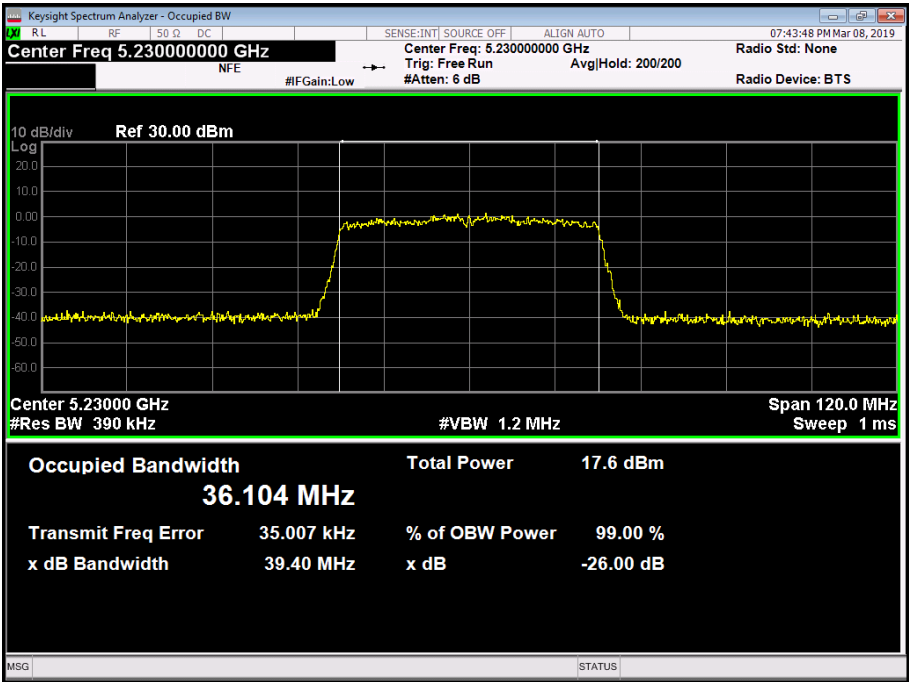


Figure 66 - 5230 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS0 / SISO / Core 0 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.320	40.560
99% Bandwidth (MHz)	36.111	36.114

Table 156



Figure 67 - 5190 MHz - 26 dB Emission Bandwidth

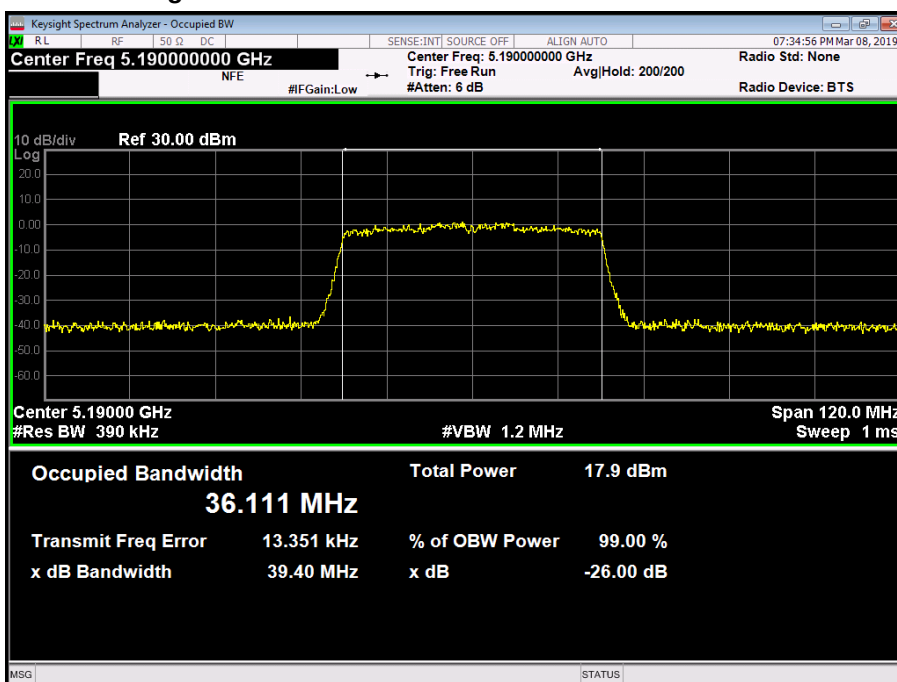


Figure 68 - 5190 MHz - 99% Occupied Bandwidth

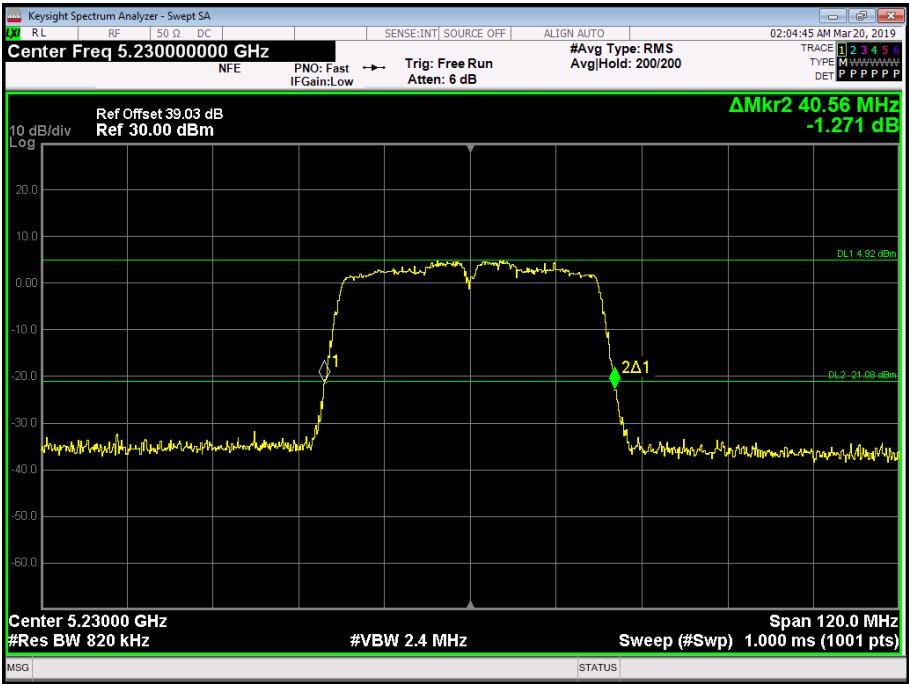


Figure 69 - 5230 MHz - 26 dB Emission Bandwidth

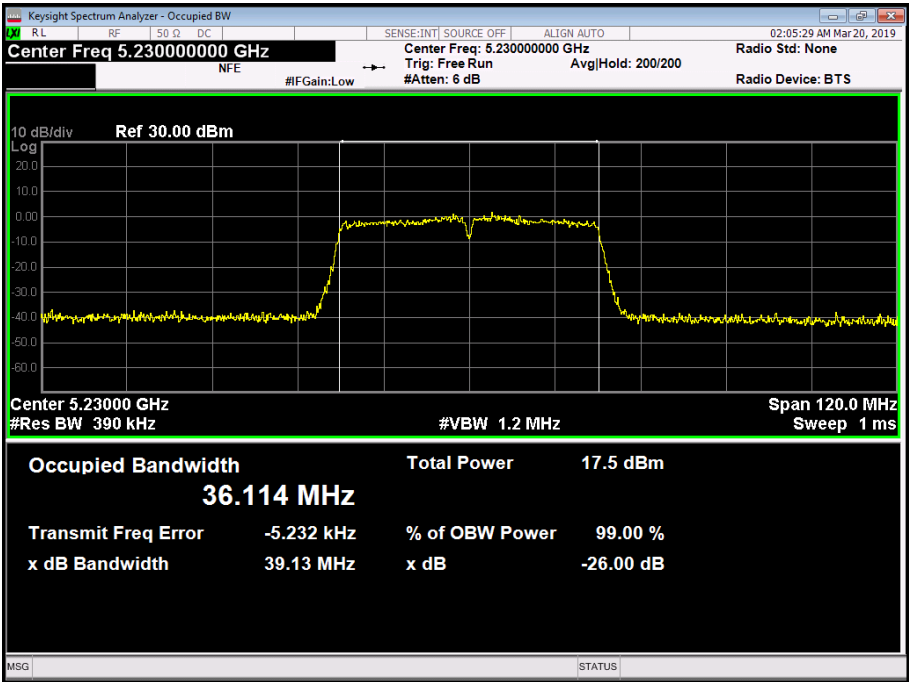


Figure 70 - 5230 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.680	40.320
99% Bandwidth (MHz)	36.120	36.204

Table 157

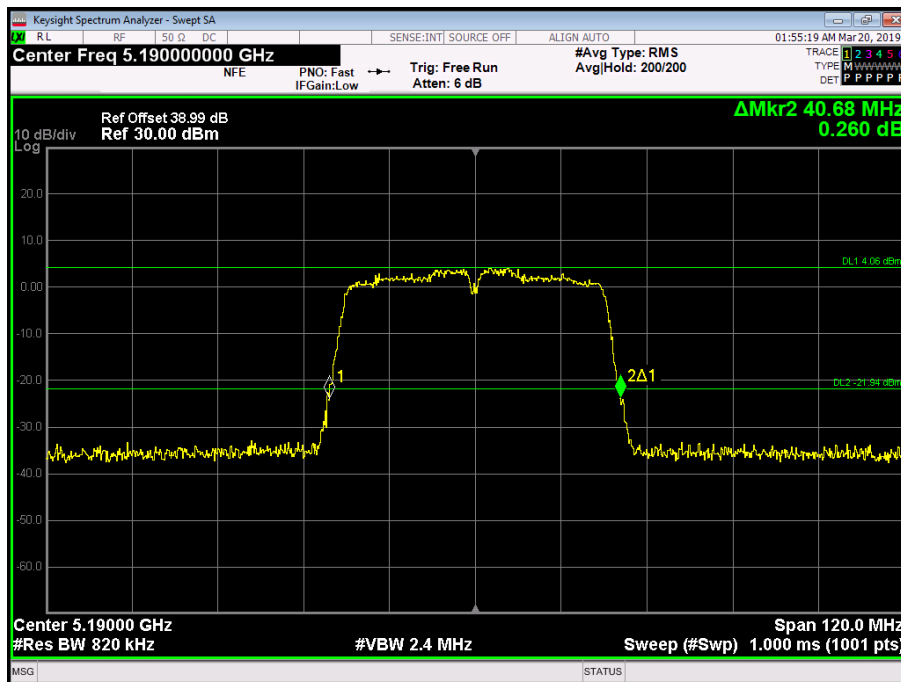


Figure 71 - 5190 MHz - 26 dB Emission Bandwidth

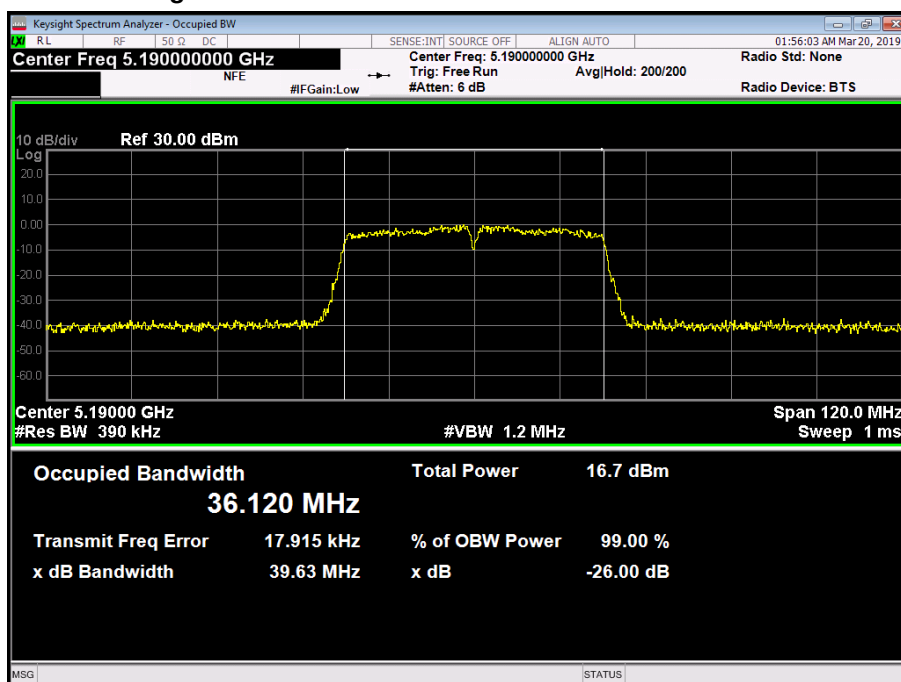


Figure 72 - 5190 MHz - 99% Occupied Bandwidth

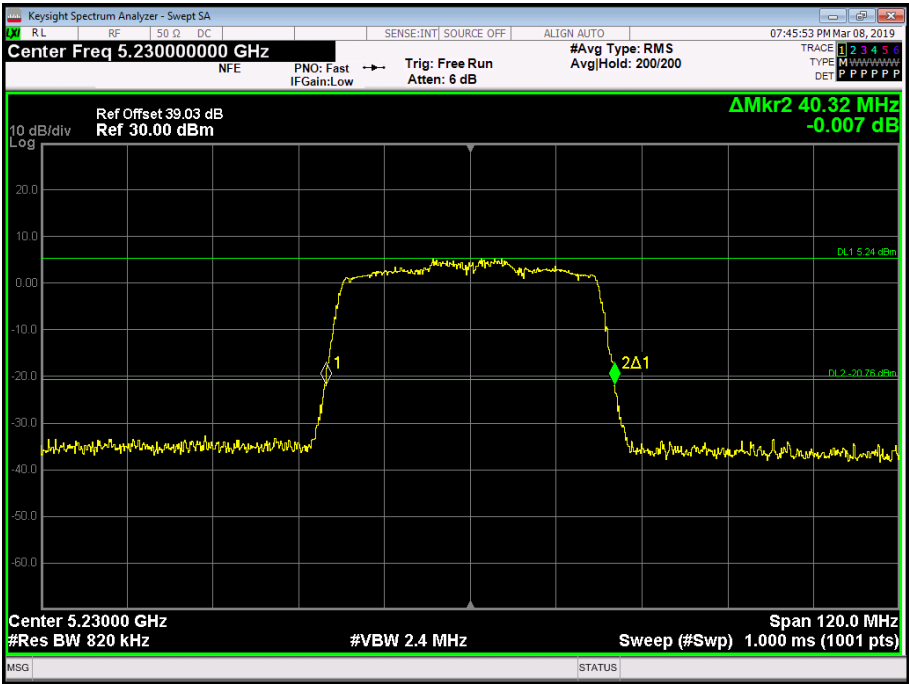


Figure 73 - 5230 MHz - 26 dB Emission Bandwidth

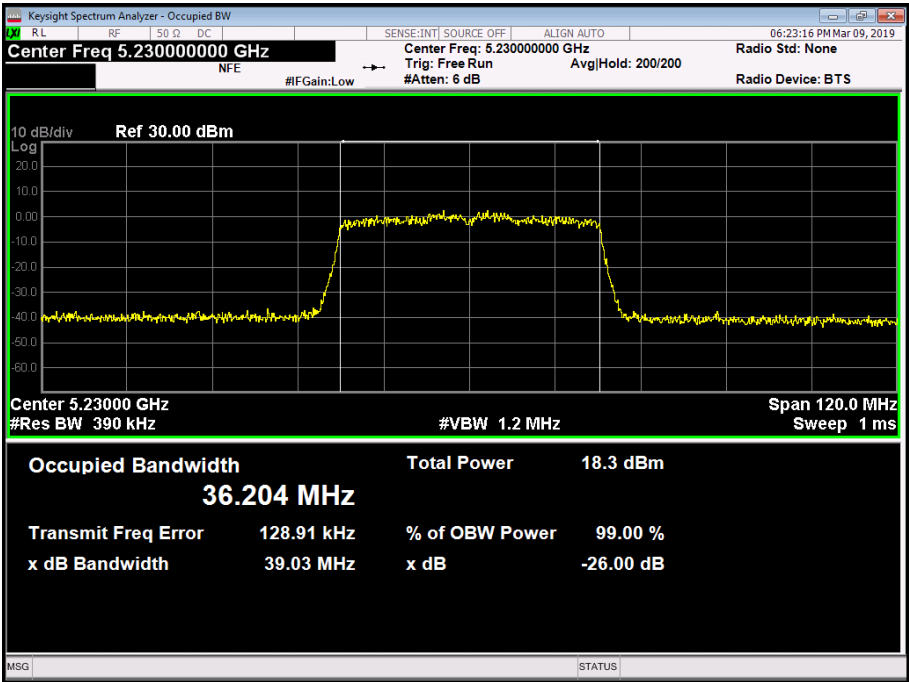


Figure 74 - 5230 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS0 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.680	40.200
99% Bandwidth (MHz)	36.178	36.165

Table 158

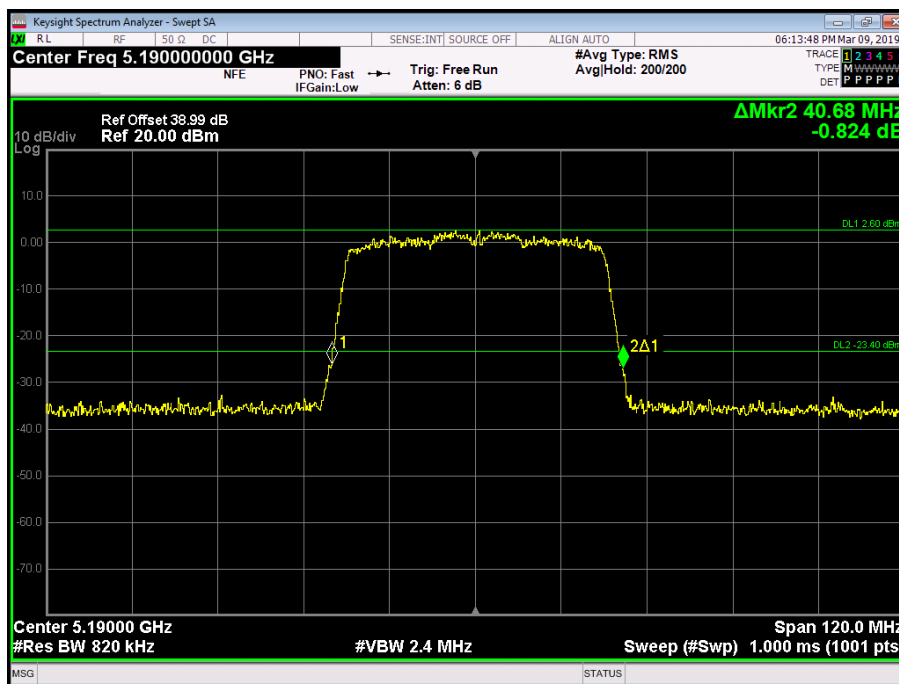


Figure 75 - 5190 MHz - 26 dB Emission Bandwidth

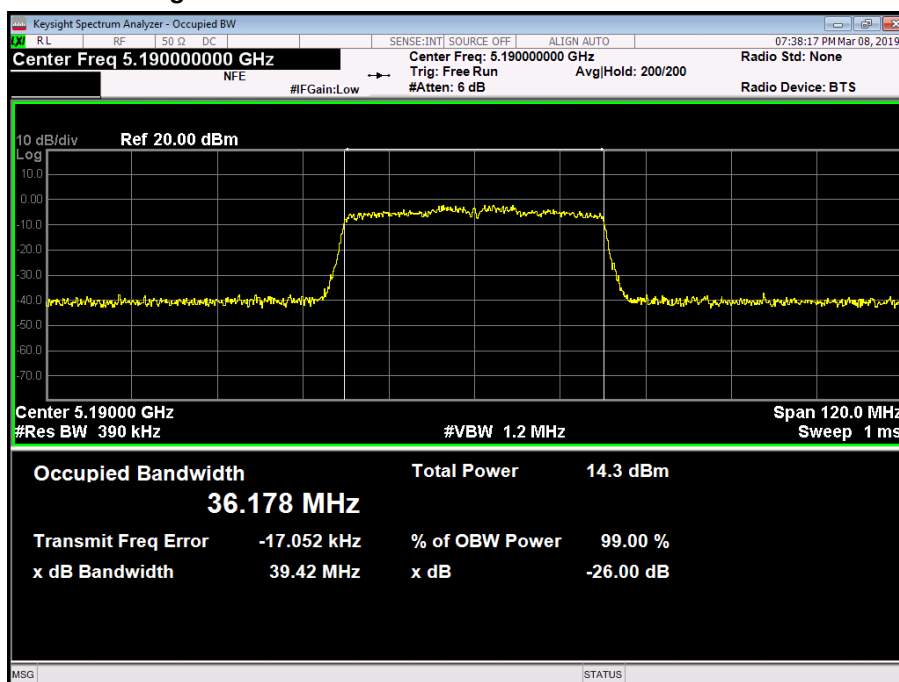


Figure 76 - 5190 MHz - 99% Occupied Bandwidth

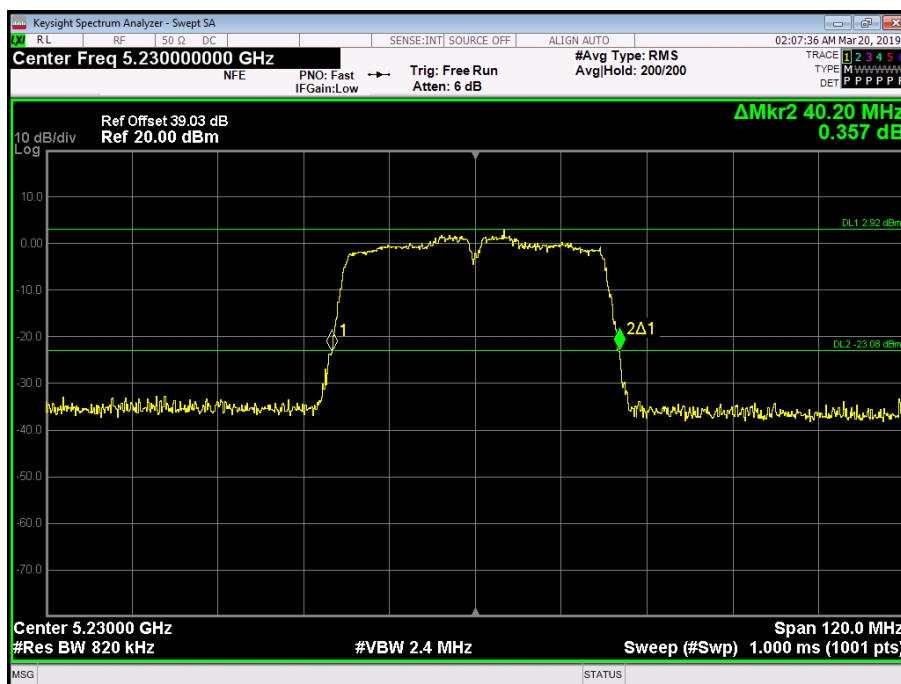


Figure 77 - 5230 MHz - 26 dB Emission Bandwidth

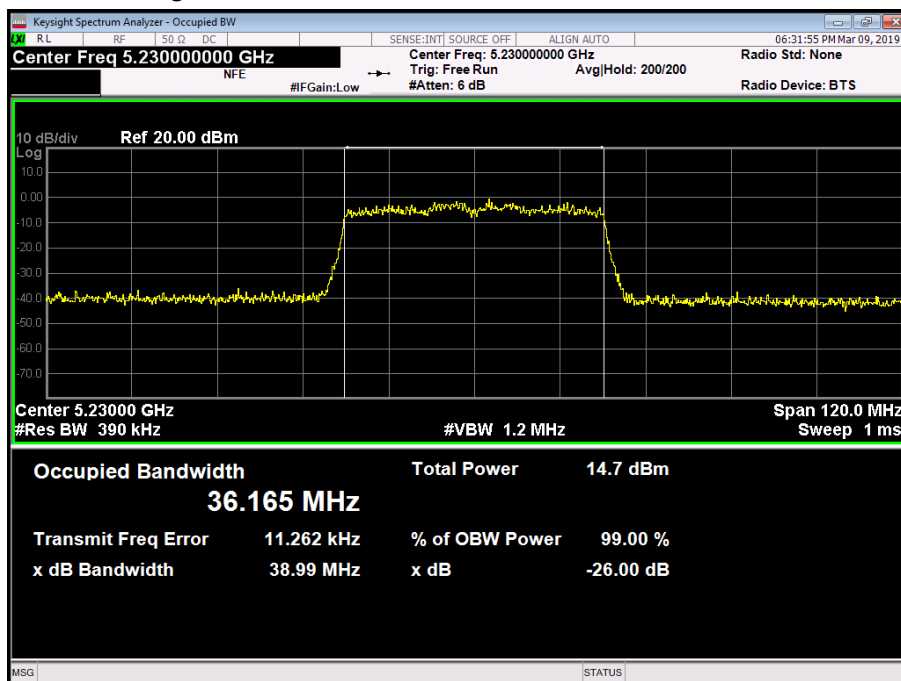


Figure 78 - 5230 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.680	40.680
99% Bandwidth (MHz)	36.149	36.223

Table 159



Figure 79 - 5190 MHz - 26 dB Emission Bandwidth

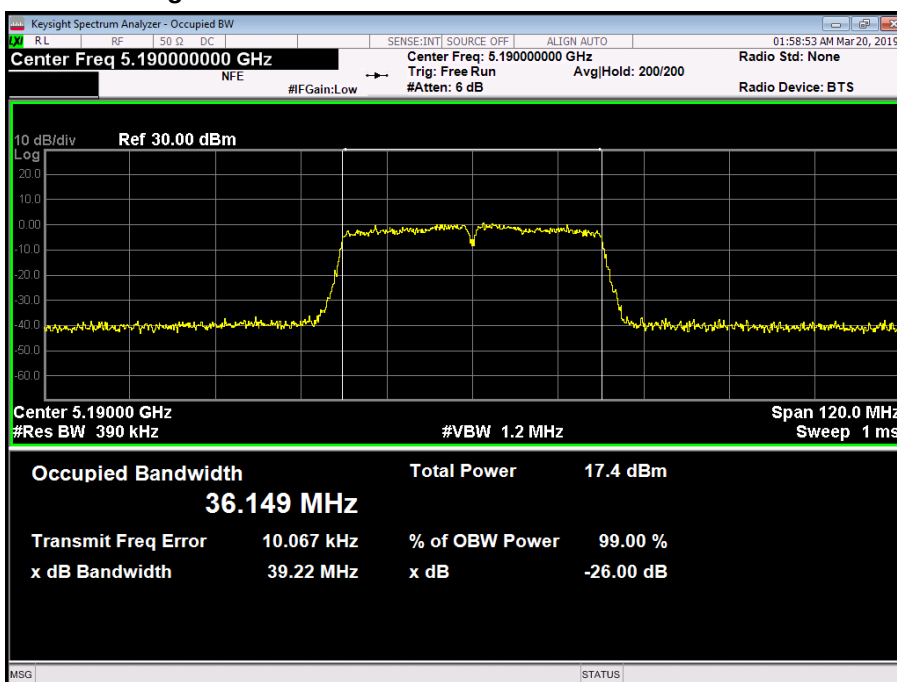


Figure 80 - 5190 MHz - 99% Occupied Bandwidth

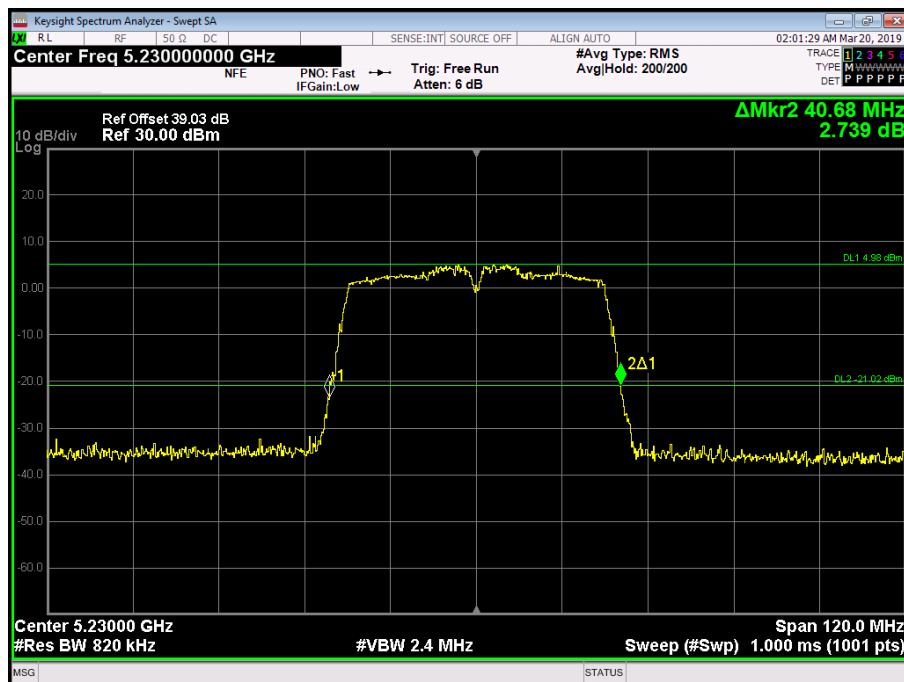


Figure 81 - 5230 MHz - 26 dB Emission Bandwidth

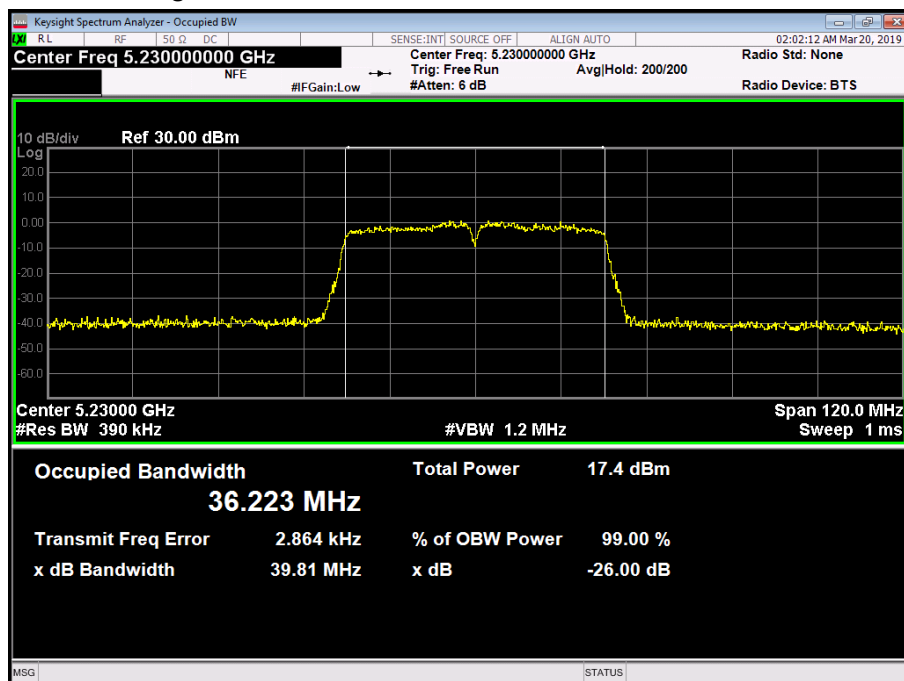


Figure 82 - 5230 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS8 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.800	40.440
99% Bandwidth (MHz)	36.163	36.194

Table 160

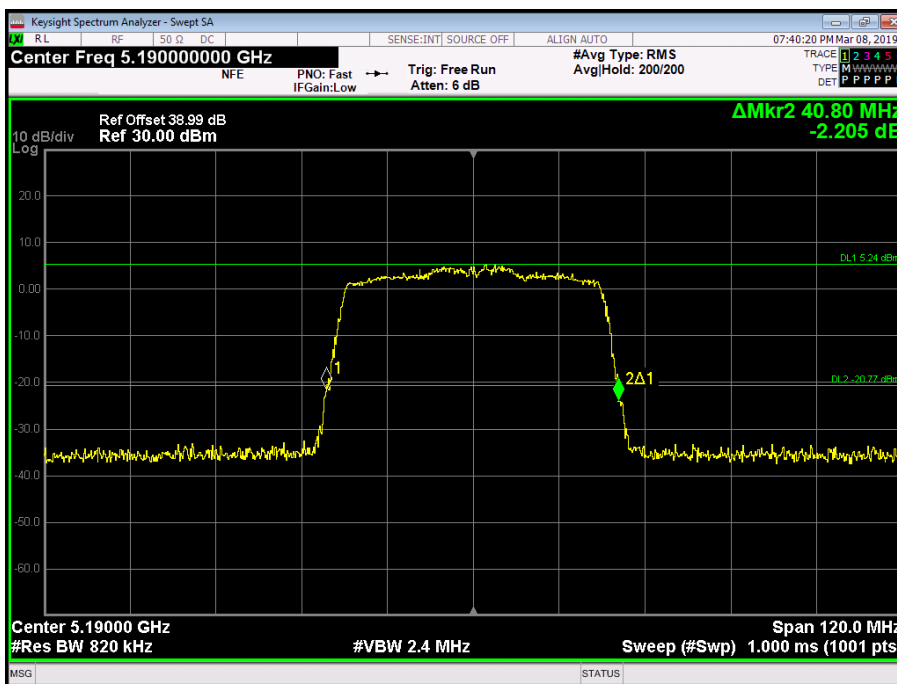


Figure 83 - 5190 MHz - 26 dB Emission Bandwidth

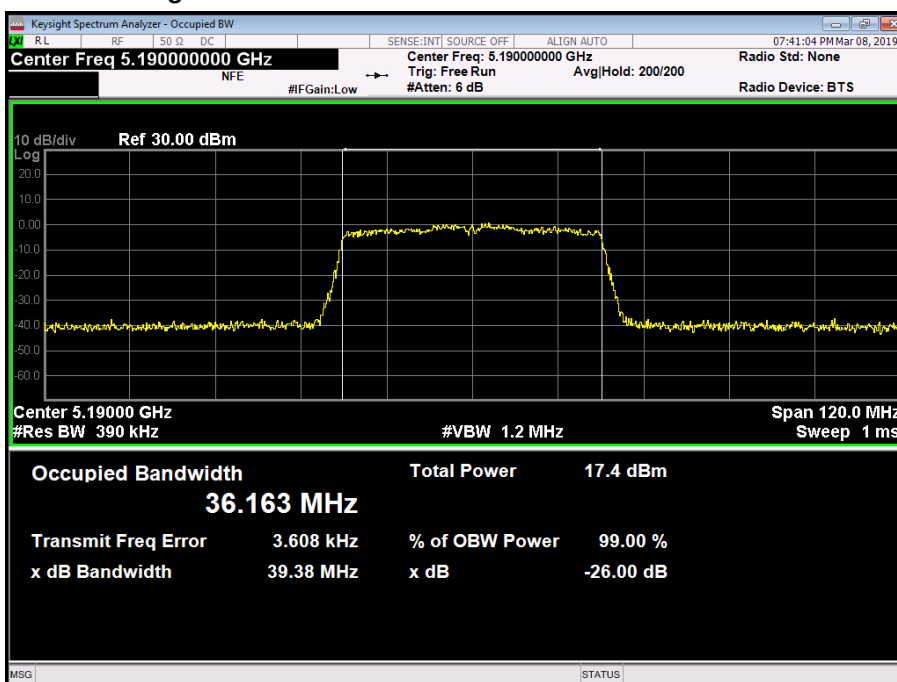


Figure 84 - 5190 MHz - 99% Occupied Bandwidth

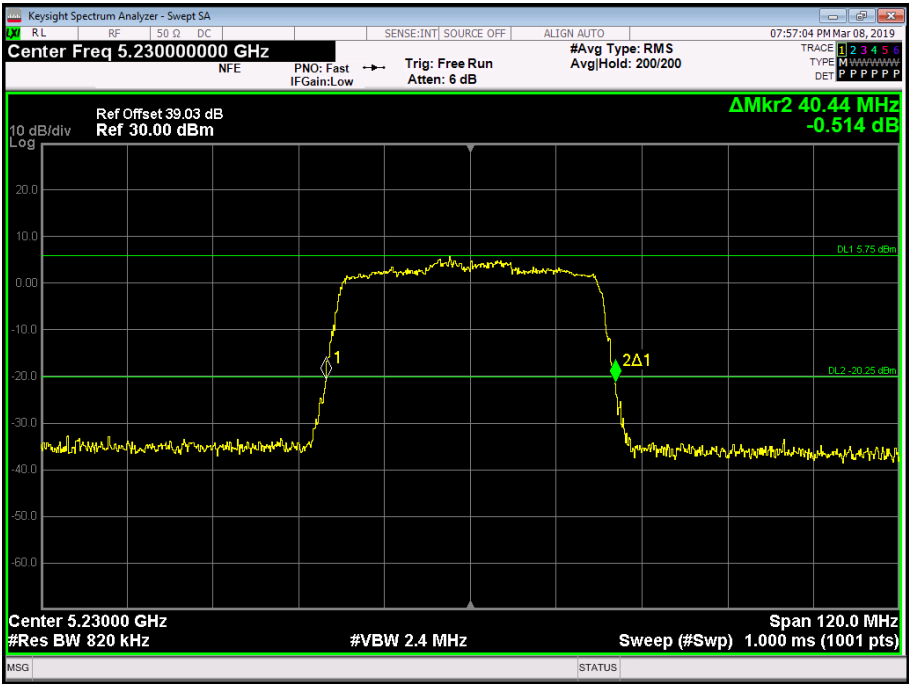


Figure 85 - 5230 MHz - 26 dB Emission Bandwidth

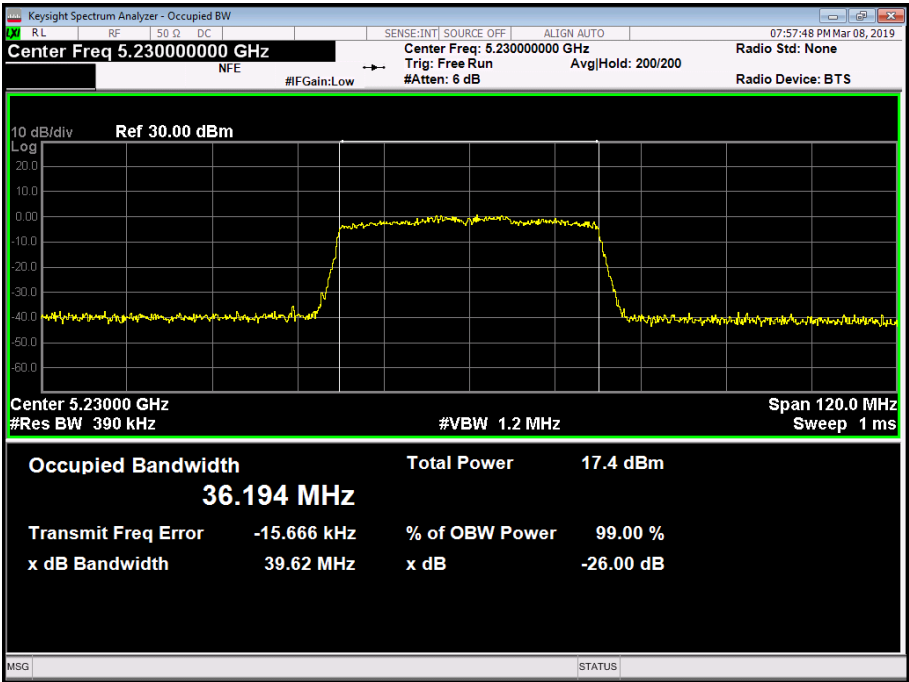


Figure 86 - 5230 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.680	40.320
99% Bandwidth (MHz)	36.134	36.165

Table 161



Figure 87 - 5190 MHz - 26 dB Emission Bandwidth

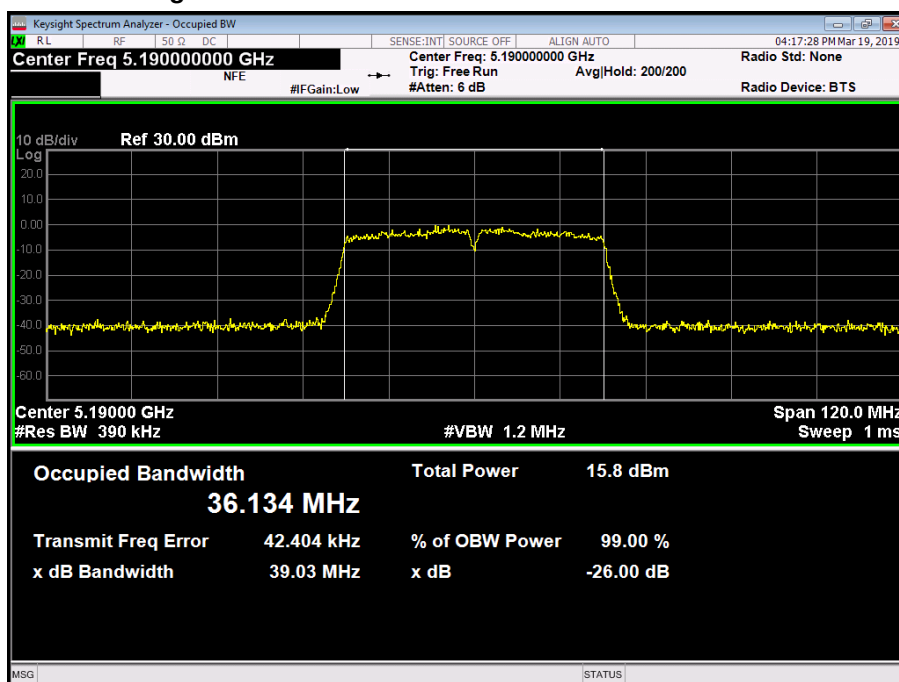


Figure 88 - 5190 MHz - 99% Occupied Bandwidth

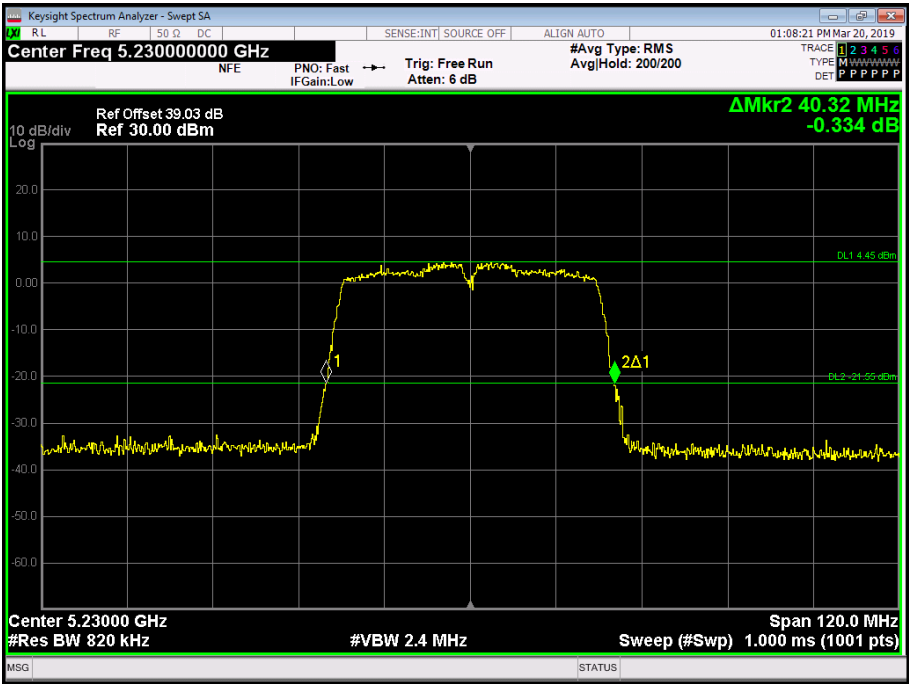


Figure 89 - 5230 MHz - 26 dB Emission Bandwidth

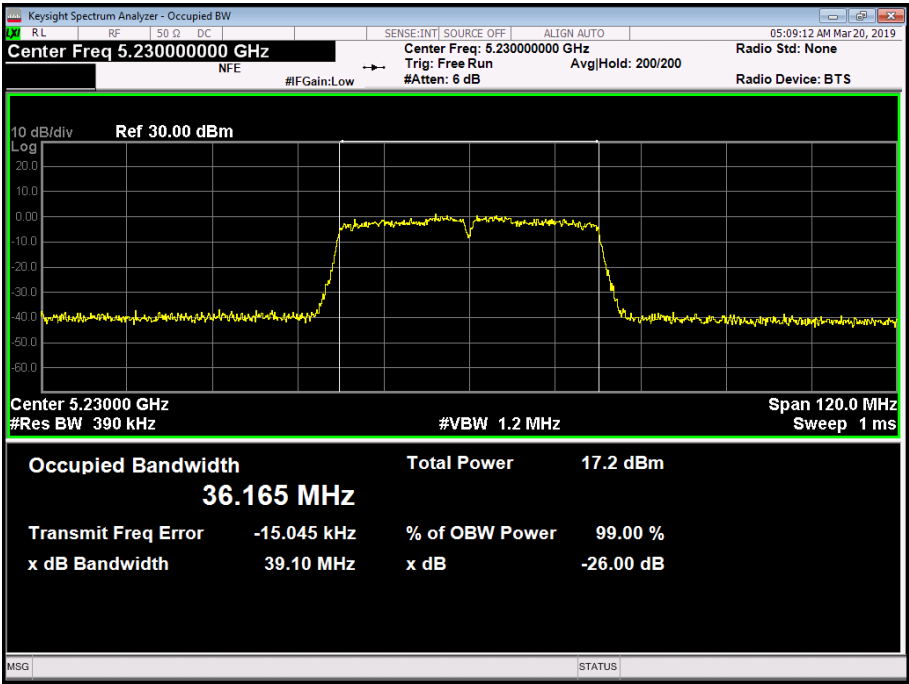


Figure 90 - 5230 MHz - 99% Occupied Bandwidth



802.11n / HT40 MCS0 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Bottom	Top
Frequency (MHz)	5190	5230
26 dB Bandwidth (MHz)	40.560	40.440
99% Bandwidth (MHz)	36.137	36.209

Table 162

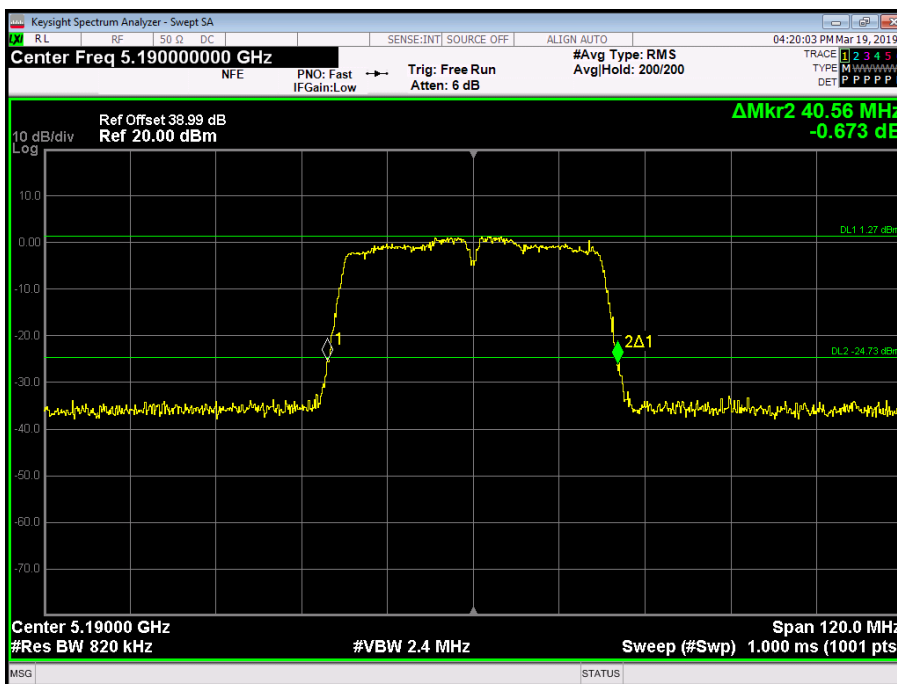


Figure 91 - 5190 MHz - 26 dB Emission Bandwidth

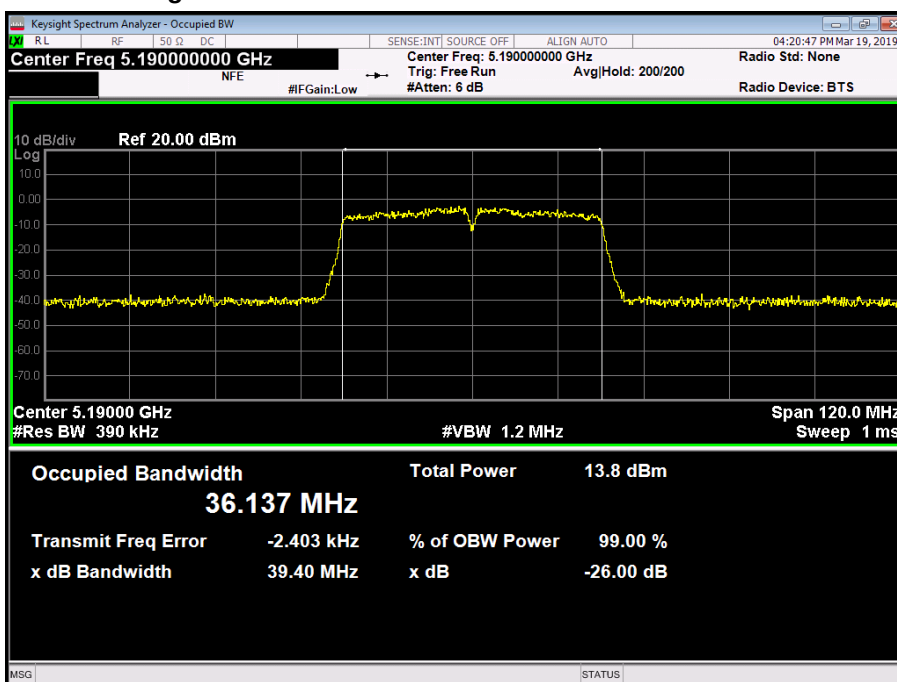


Figure 92 - 5190 MHz - 99% Occupied Bandwidth

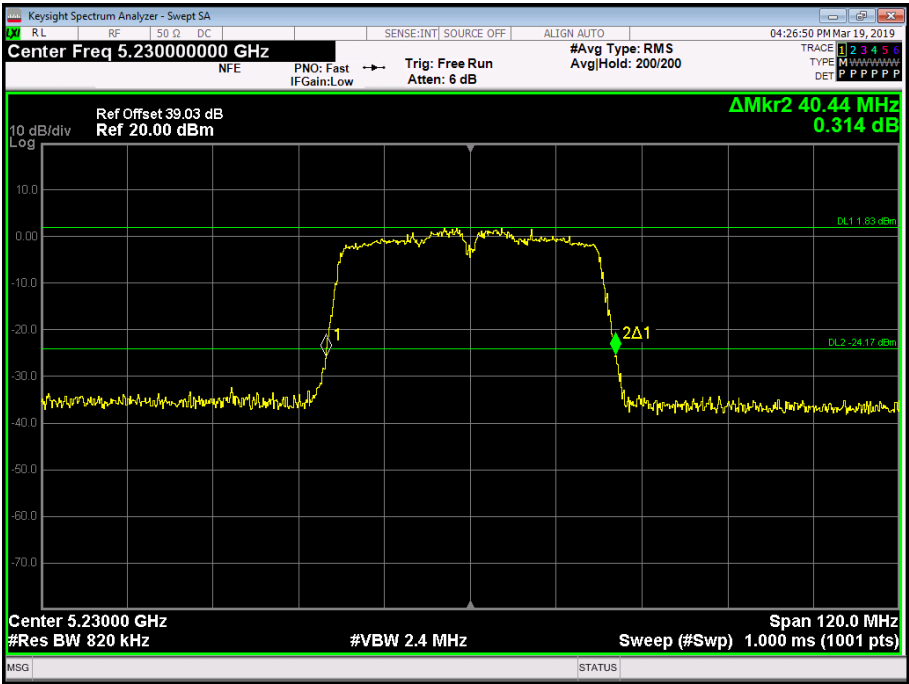


Figure 93 - 5230 MHz - 26 dB Emission Bandwidth

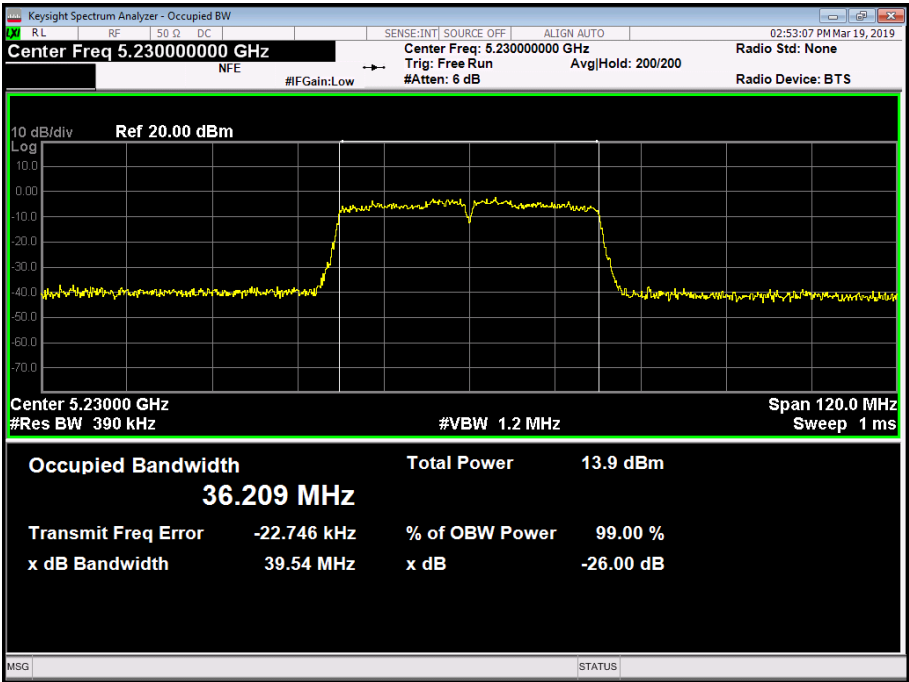


Figure 94 - 5230 MHz - 99% Occupied Bandwidth



802.11ac / VHT20 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Bottom
Frequency (MHz)	5180
26 dB Bandwidth (MHz)	21.840
99% Bandwidth (MHz)	17.775

Table 163



Figure 95 - 5180 MHz - 26 dB Emission Bandwidth

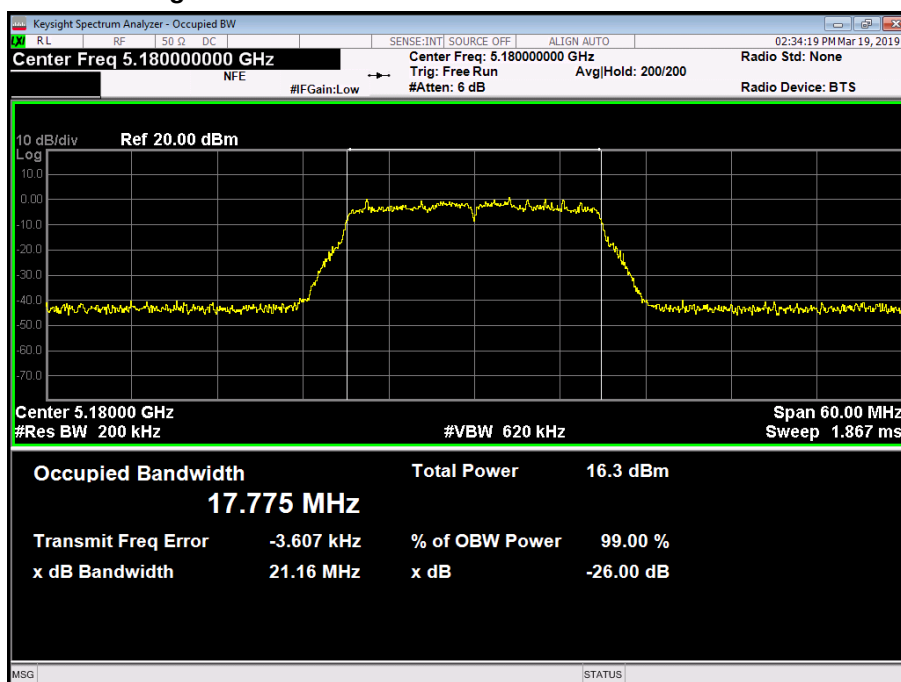


Figure 96 - 5180 MHz - 99% Occupied Bandwidth

802.11ac / VHT80 MCS0x1 / SISO / Core 0 / Country Code US



Channel	Middle
Frequency (MHz)	5210
26 dB Bandwidth (MHz)	81.600
99% Bandwidth (MHz)	75.524

Table 164

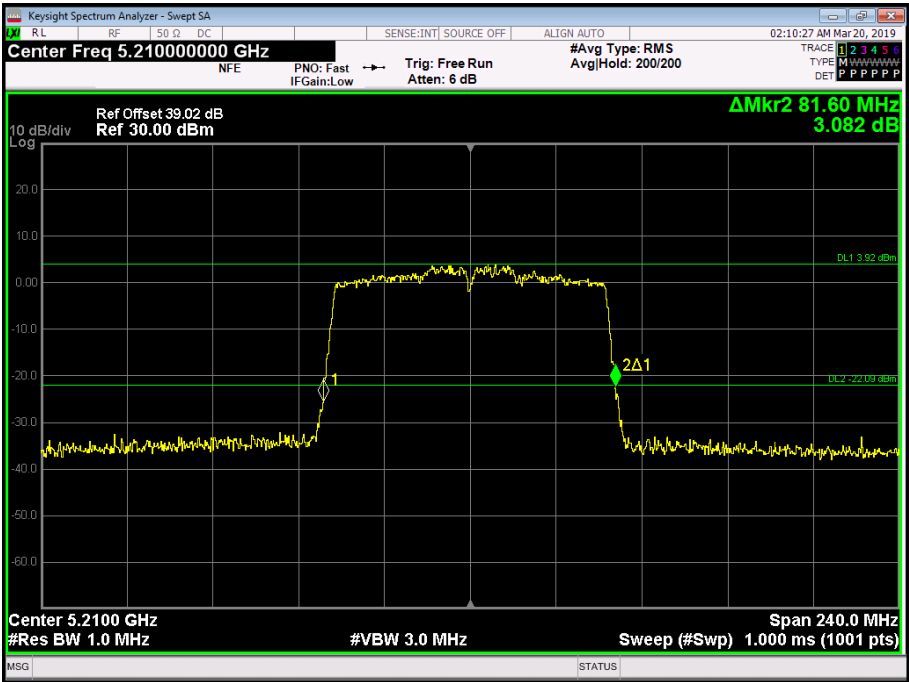


Figure 97 - 5210 MHz - 26 dB Emission Bandwidth

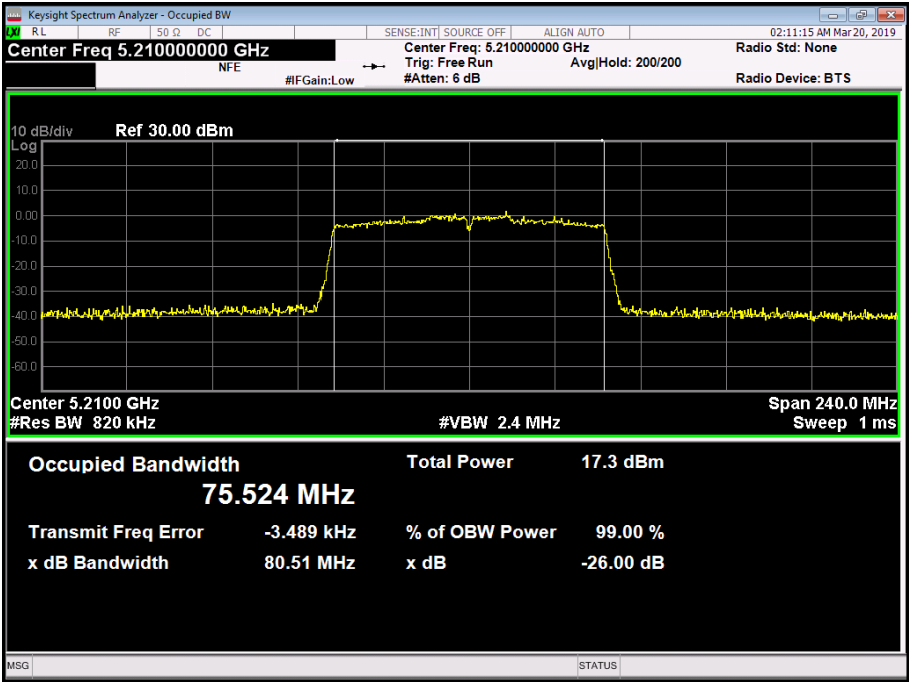


Figure 98 - 5210 MHz - 99% Occupied Bandwidth

802.11ac / VHT80 MCS0x1 / SISO / Core 0 / Country Code CA

Channel	Middle
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Frequency (MHz)	5210
26 dB Bandwidth (MHz)	81.600
99% Bandwidth (MHz)	75.540

Table 165

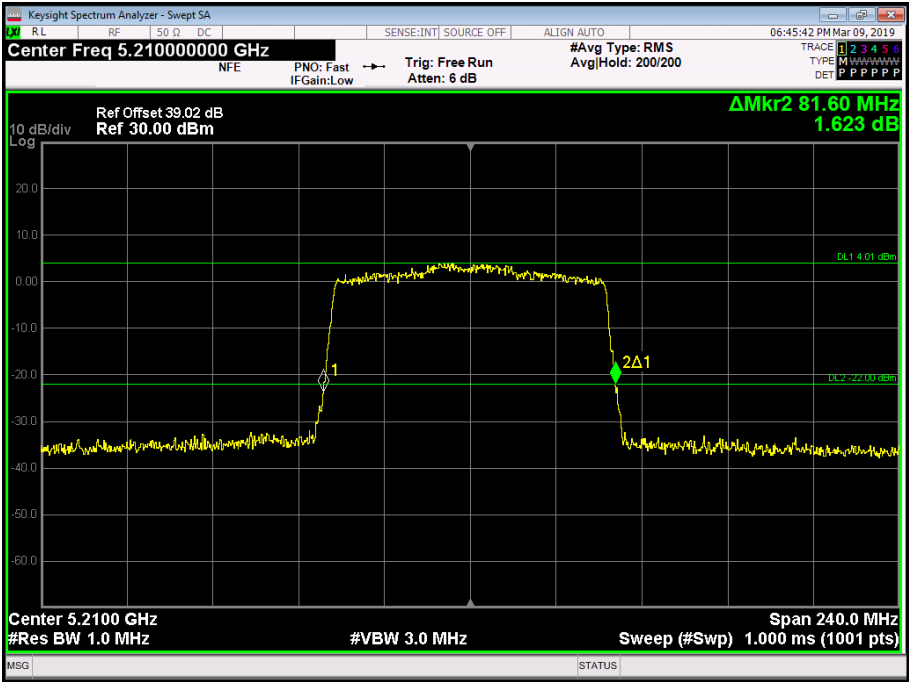


Figure 99 - 5210 MHz - 26 dB Emission Bandwidth

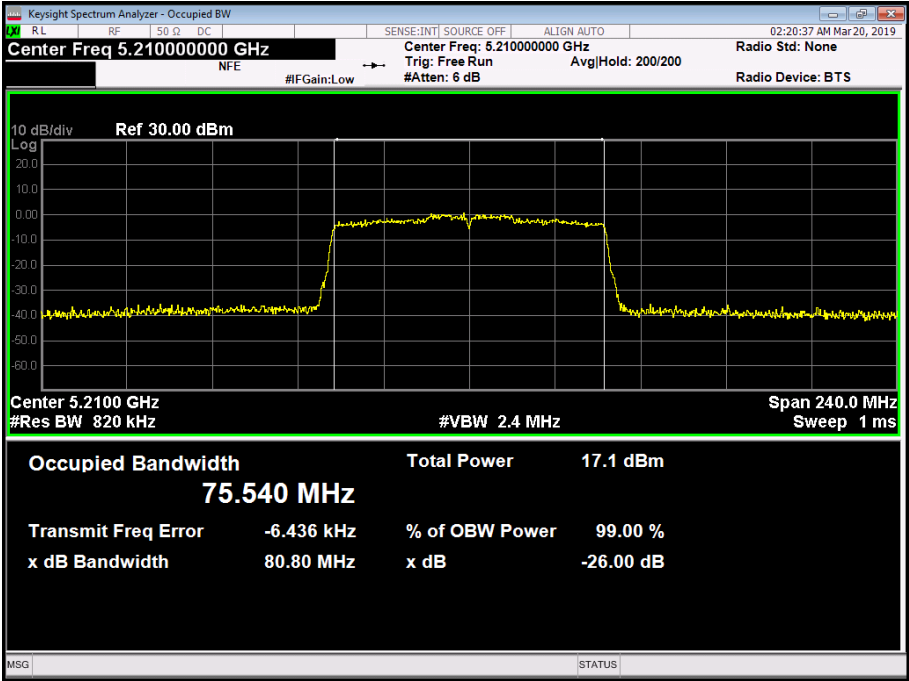


Figure 100 - 5210 MHz - 99% Occupied Bandwidth
802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210



26 dB Bandwidth (MHz)	82.080
99% Bandwidth (MHz)	75.531

Table 166

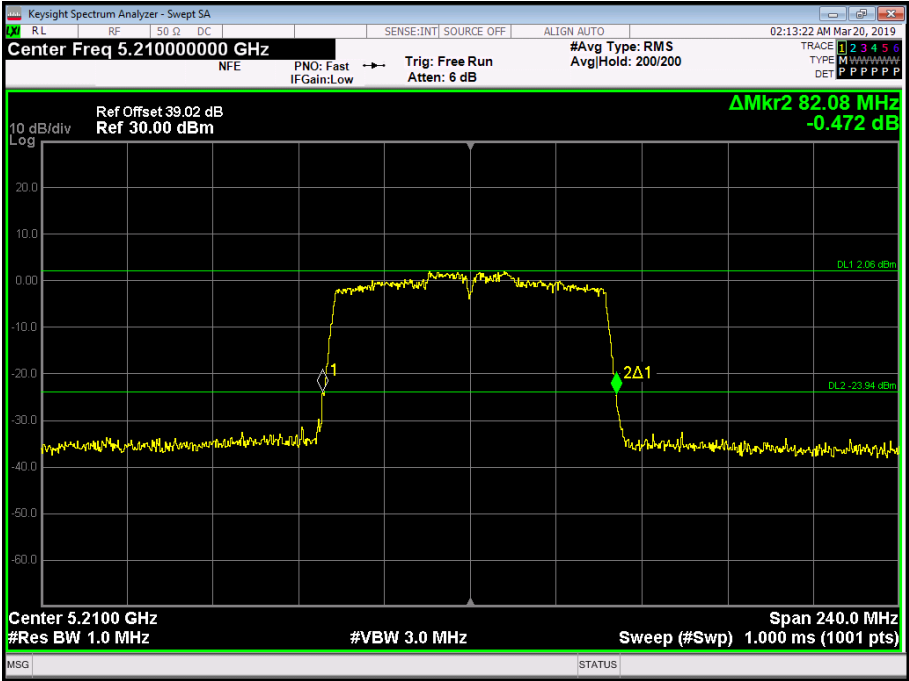


Figure 101 - 5210 MHz - 26 dB Emission Bandwidth

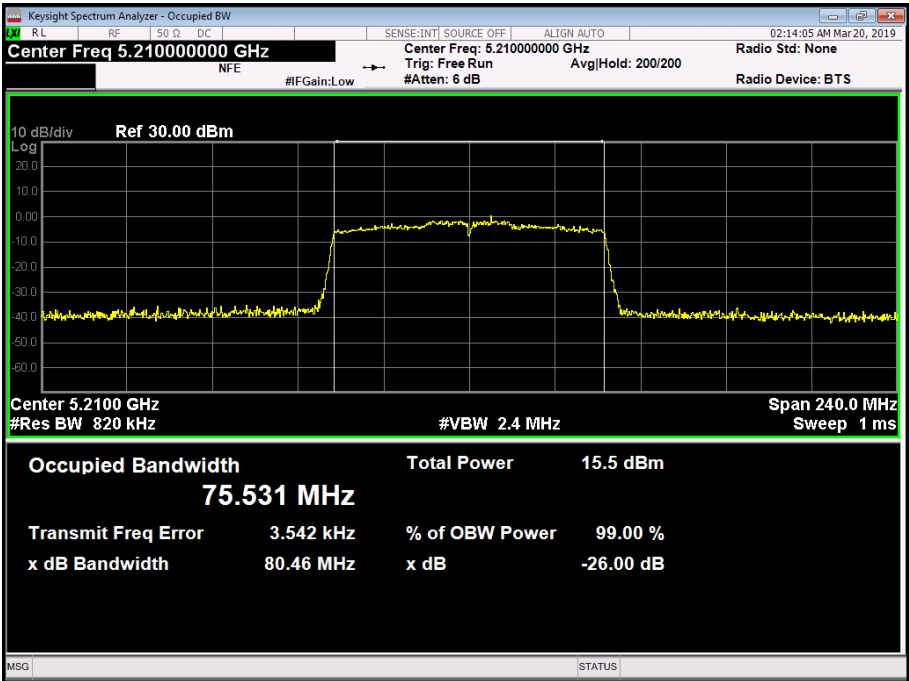


Figure 102 - 5210 MHz - 99% Occupied Bandwidth
802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
26 dB Bandwidth (MHz)	81.600



99% Bandwidth (MHz)	75.591
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Table 167

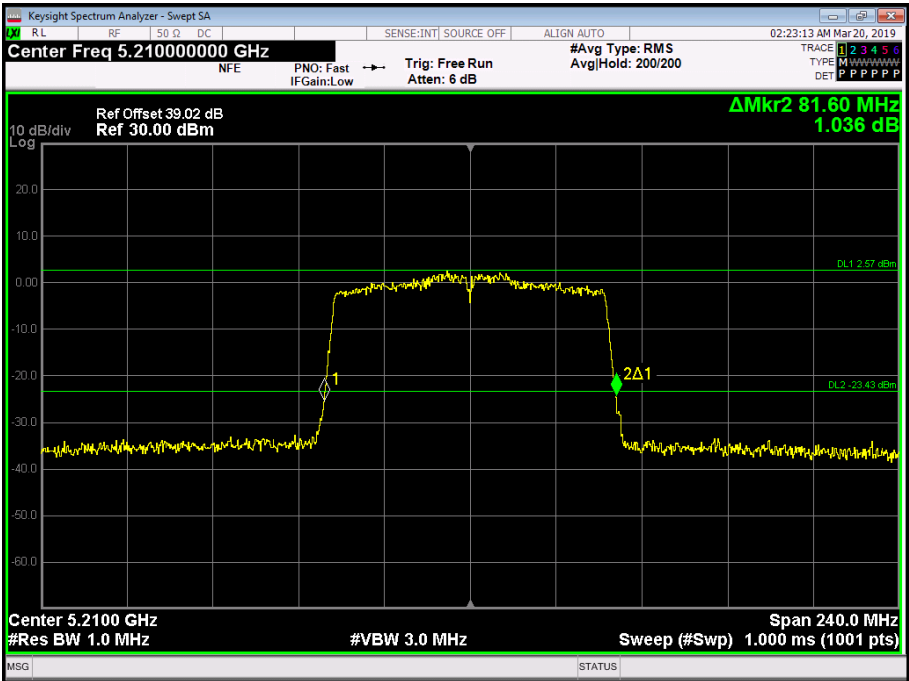


Figure 103 - 5210 MHz - 26 dB Emission Bandwidth

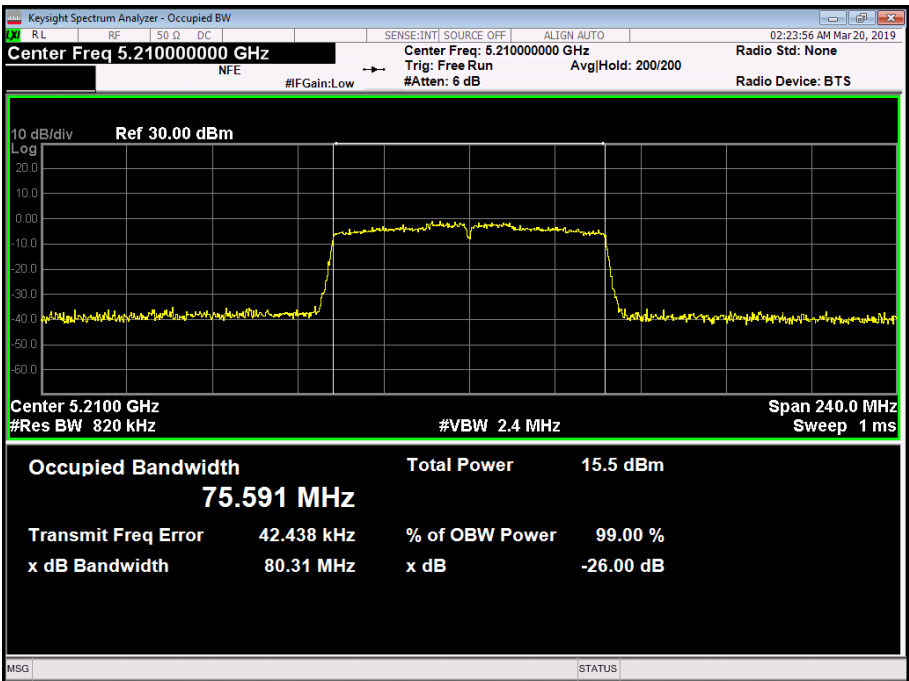


Figure 104 - 5210 MHz - 99% Occupied Bandwidth
802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210
26 dB Bandwidth (MHz)	81.600
99% Bandwidth (MHz)	75.538



Table 168

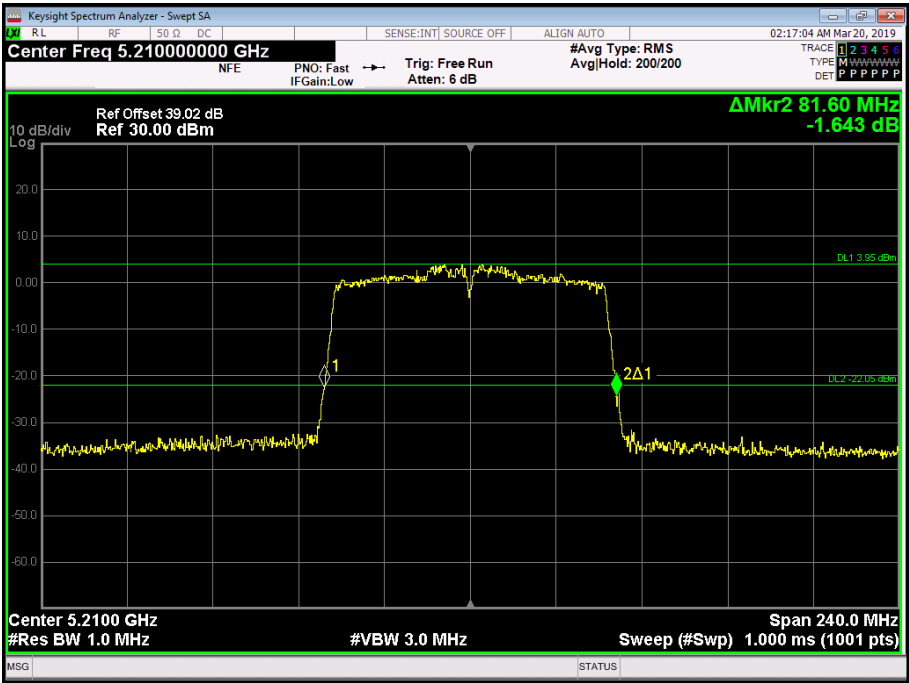


Figure 105 - 5210 MHz - 26 dB Emission Bandwidth

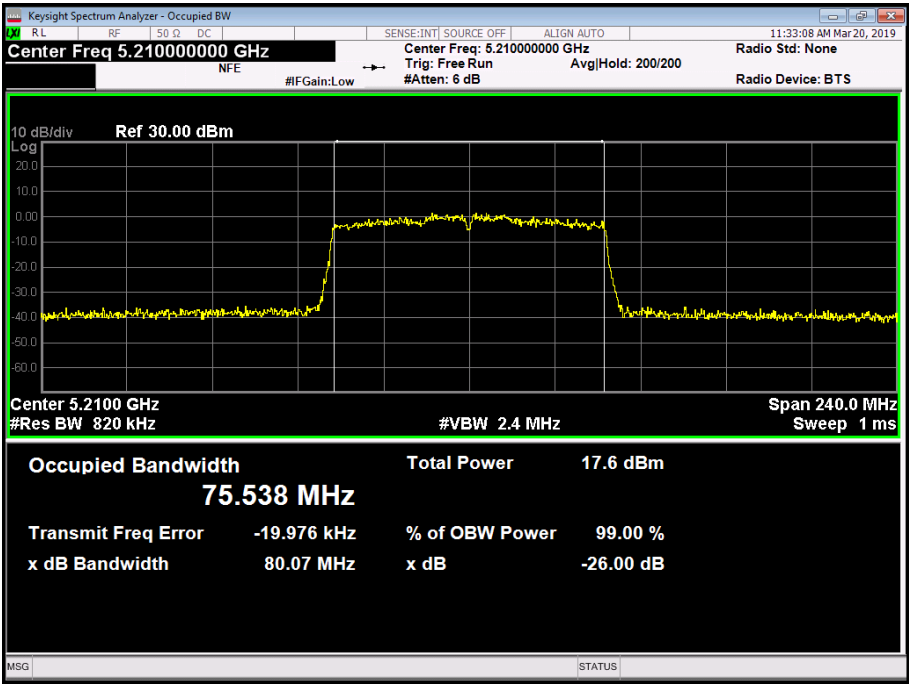


Figure 106 - 5210 MHz - 99% Occupied Bandwidth
802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
26 dB Bandwidth (MHz)	81.360
99% Bandwidth (MHz)	75.494

Table 169

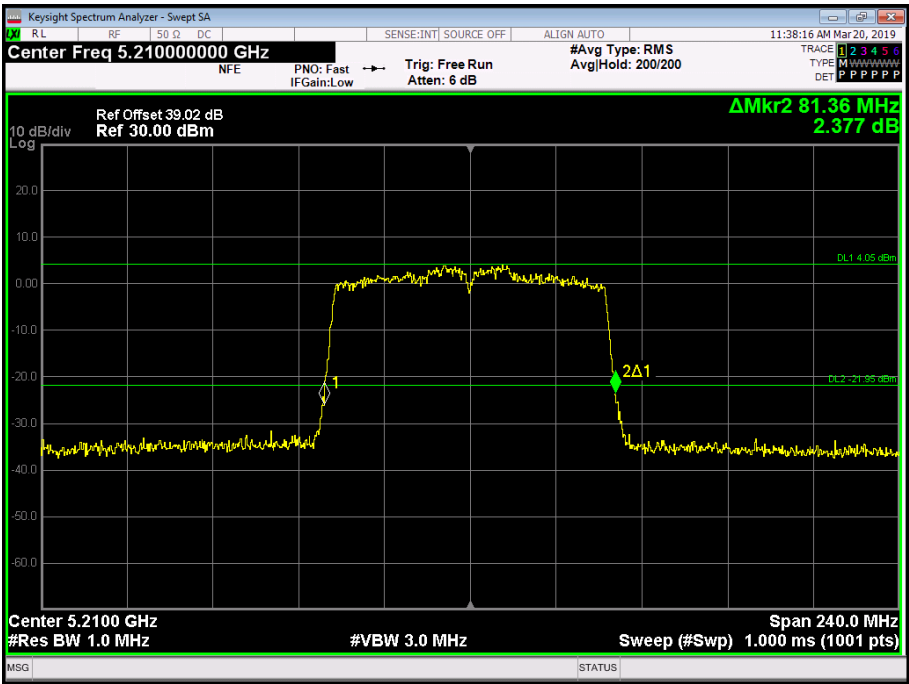


Figure 107 - 5210 MHz - 26 dB Emission Bandwidth

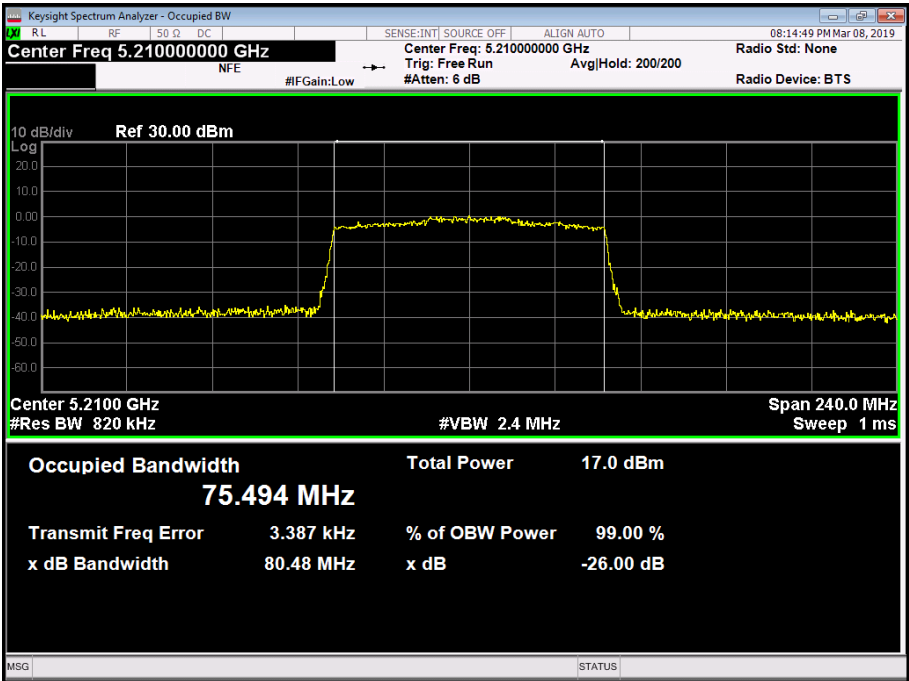


Figure 108 - 5210 MHz - 99% Occupied Bandwidth
802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code US

Channel	Middle
Frequency (MHz)	5210
26 dB Bandwidth (MHz)	82.080
99% Bandwidth (MHz)	75.606

Table 170

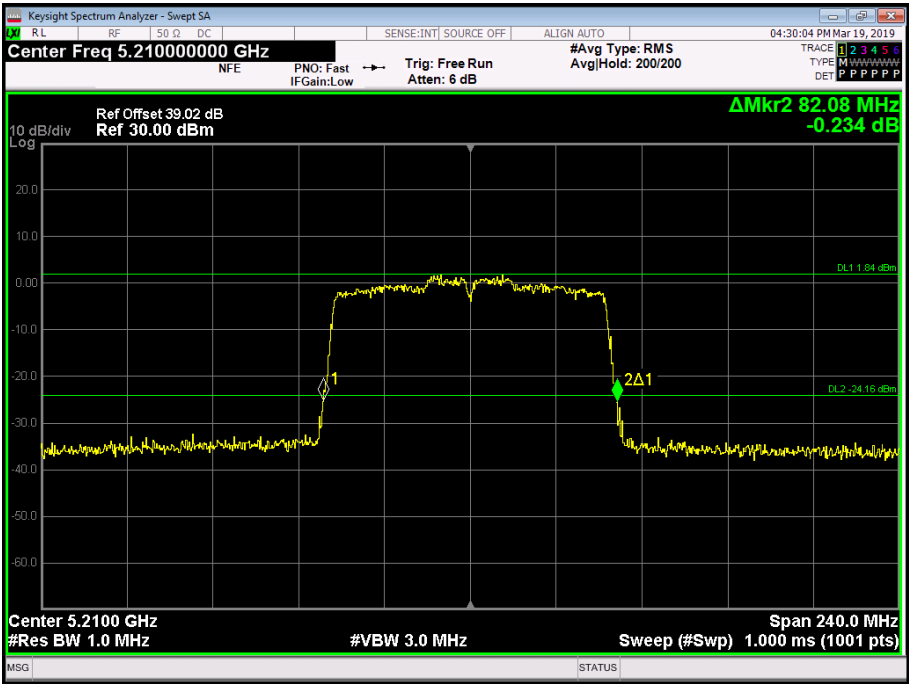


Figure 109 - 5210 MHz - 26 dB Emission Bandwidth

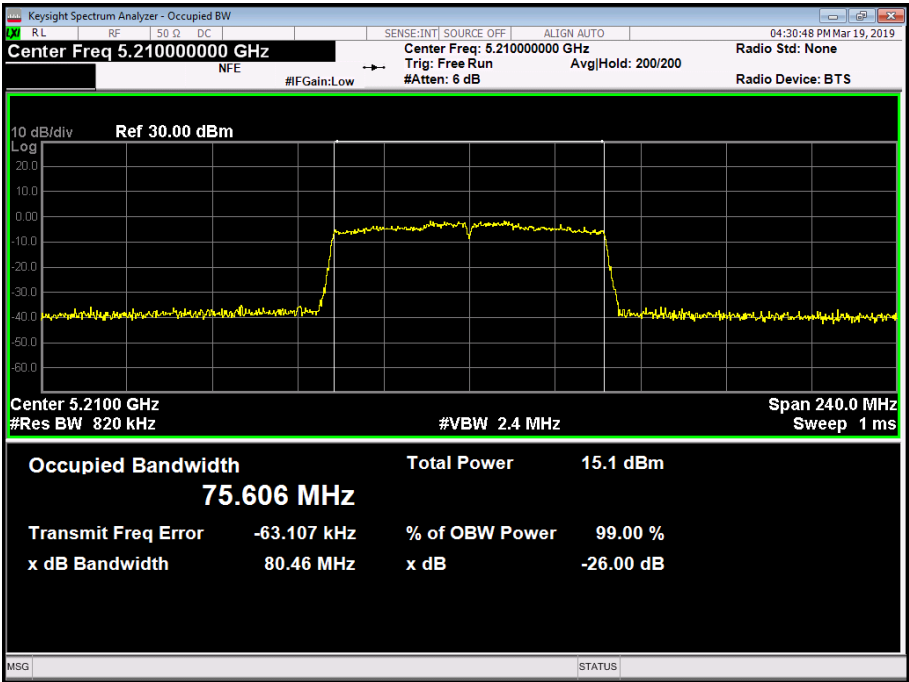


Figure 110 - 5210 MHz - 99% Occupied Bandwidth
802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1 / Country Code CA

Channel	Middle
Frequency (MHz)	5210
26 dB Bandwidth (MHz)	81.600
99% Bandwidth (MHz)	75.581

Table 171

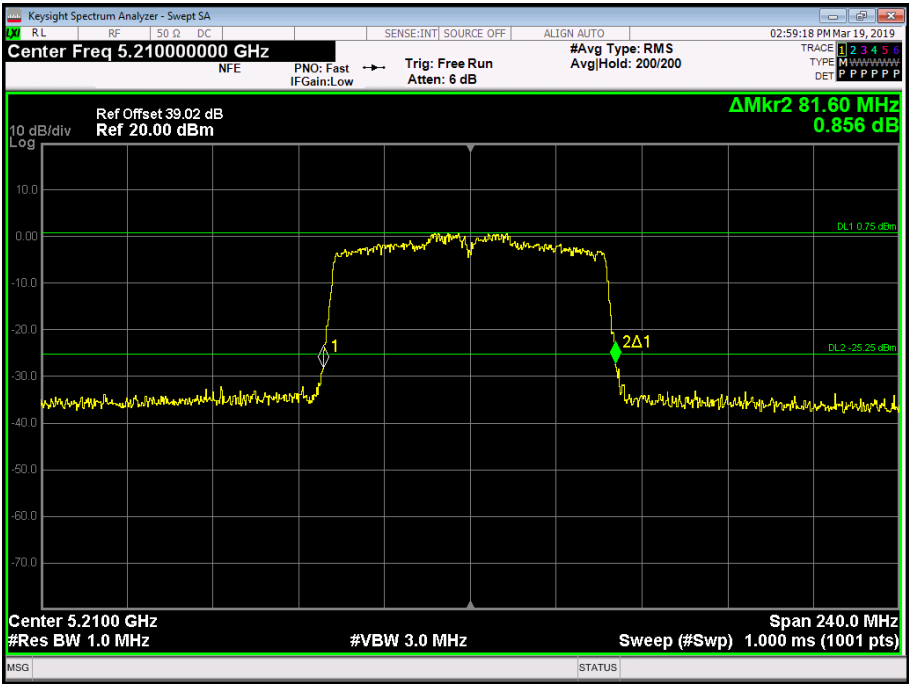


Figure 111 - 5210 MHz - 26 dB Emission Bandwidth

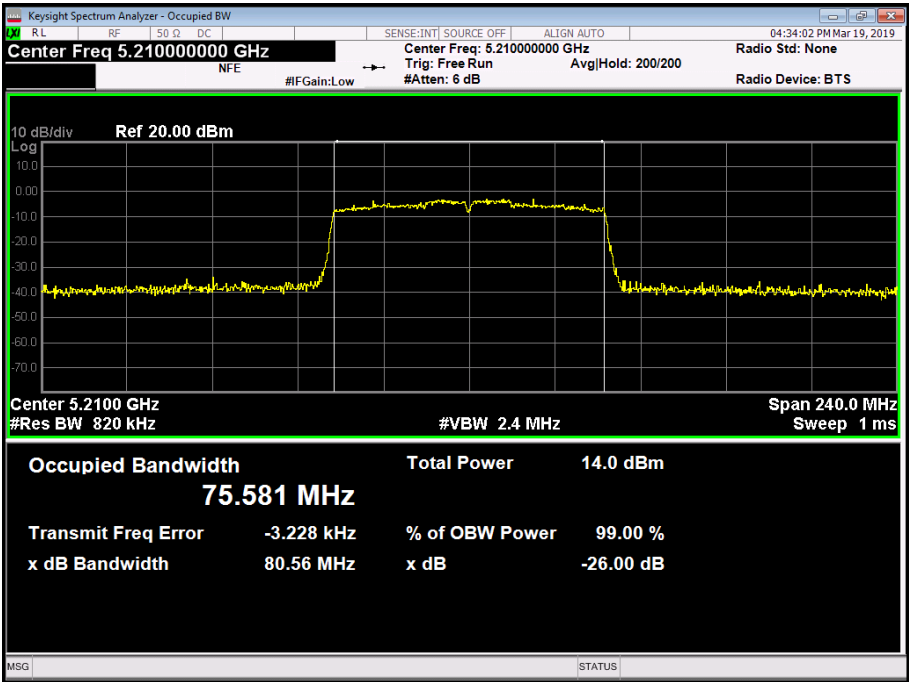


Figure 112 - 5210 MHz - 99% Occupied Bandwidth

2.3.7 Test Results: U-NII-2A

802.11a / 6 Mbps / SISO / Core 0

Channel	Bottom	Middle	Top
Frequency (MHz)	5260	5280	5320
26 dB Bandwidth (MHz)	21.720	21.420	21.480
99% Bandwidth (MHz)	16.579	16.589	16.578

Table 172