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CERTIFICATION TEST REPORT

Manufacturer:	**Woodstream Corporation** **69 North Locust Street** **Lititz, Pennsylvania 17543 USA**
Applicant:	**Same As Above**
Product Name:	**Victor WiFi Mouse Trap**
Product Description:	WiFi enabled electronic mouse trap which detects a rodent and then shocks it in order to kill it. The trap can then connect to WiFi in order to send notifications to the user's phone via an app. Runs on 4 AA batteries.
Operating Voltage/Frequency:	**Battery-Operated (4 AA Batteries)**
Model:	**M1**
FCC ID:	**SNA-M1**
Testing Commenced:	Oct. 29, 2019
Testing Ended:	Jan. 23, 2020
Summary of Test Results:	**In Compliance, with Modifications** The EUT complies with the EMC requirements when manufactured identically as the unit tested in this report, including any required modifications and/or manufacturer's statement. Any changes to the design or build of this unit subsequent to this testing may deem it non-compliant.

Standards:

- **FCC Part 15 Subpart C, Section 15.247**
- **FCC Part 15.31(e)**
- **ANSI C63.10:2013**

Evaluation Conducted by:

Julius Chiller, EMC/Wireless Engineer

Report Reviewed by:

Ken Littell, Director of EMC & Wireless Operations

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1 ADMINISTRATIVE INFORMATION

1.1 Measurement Location:

F2 Labs in Middlefield, Ohio. Site description and attenuation data are on file with the FCC's Sampling and Measurement Branch at the FCC Laboratory in Columbia, MD.

1.2 Measurement Procedure:

All measurements were performed according to the 2013 version of ANSI C63.10 and recommended FCC procedure of measurement of DTS operating under Section 15.247 and in KDB558074. A list of the measurement equipment can be found in Section 6.

1.3 Uncertainty Budget:

The uncertainty in EMC measurements arises from several factors which affect the results, some associated with environmental conditions in the measurement room, the test equipment being used and the measurement techniques adopted.

The measurement uncertainty budgets detailed below are calculated from the test and calibration data, and are expressed with a 95% confidence factor. Note: Only measurements listed below which relate to tests included in this Test Report are applicable to it.

Measurement Range	Expanded Uncertainty	Combined Uncertainly
Radiated Emissions <1 GHz @ 3m	±5.07dB	±2.54
Radiated Emissions <1 GHz @ 10m	±5.09dB	±2.55
Radiated Emissions 1 GHz to 2.7 GHz	±3.62dB	±1.81
Radiated Emissions 2.7 GHz to 18 GHz	±3.10dB	±1.55
AC Power Line Conducted Emissions, 150kHz to 30 MHz	±2.76dB	±1.38

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

1.4 Document History

Document Number	Description	Issue Date	Approved By
F2P22041A-01E	First Issue	Jan. 23, 2020	K. Littell

2 SUMMARY OF TEST RESULTS

Test Name	Standard(s)	Results
Occupied Bandwidth	CFR 47 Part 15.247(a)(2) / KDB558074	Complies
Conducted Output Power	CFR 47 Part 15.247(b)(3) / KDB558074	Complies
Voltage Variations	CFR 47 Part 15.31(e)	Complies*
Conducted Spurious Emissions	CFR 47 Part 15.247(d) / Part 15.207 / KDB558074	Complies
Radiated Spurious Emission with 1.443dBi Integral Antenna	CFR 47 Part 15.247(d) / Part 15.209 / KDB558074	Complies
Peak Power Spectral Density	CFR 47 Part 15.247(e) / KDB558074	Complies

**Requirements of 15.31 were met by using new batteries.*

Modifications Made to the Equipment
Power attenuation was adjusted to -6dB.

3 TABLE OF MEASURED RESULTS

Test		Low Channel 2.412 GHz	Mid Channel 2.437 GHz	High Channel 2.462 GHz
Conducted Output Power	11b CCK	15.26dBm	15.53dBm	15.24dBm
	11g 54 Mbps OFDM	16.18dBm	16.68dBm	16.22dBm
	11n MCS7	14.62dBm	14.84dBm	14.65dBm
Conducted Output Power Limit		1 Watt, 30dBm	1 Watt, 30dBm	1 Watt, 30dBm
Peak Power Spectral Density	11b CCK	-12.39dBm	-11.52dBm	-11.96dBm
	11g 54 Mbps OFDM	-16.48dBm	-15.70dBm	-16.44dBm
	11n MCS7	-12.48dBm	-12.01dBm	-12.61dBm
Peak Power Spectral Density Limit		8dBm	8dBm	8dBm
-6dB Occupied Bandwidth	11b CCK	8.079 MHz	8.066 MHz	8.066 MHz
	11g 54 Mbps OFDM	16.466 MHz	16.464 MHz	16.457 MHz
	11n MCS7	17.561 MHz	17.543 MHz	17.55 MHz
-6dB Occupied Bandwidth Limit		≥ 500KHz	≥ 500KHz	≥ 500KHz

4 ENGINEERING STATEMENT

This report has been prepared on behalf of Woodstream Corporation to provide documentation for the testing described herein. This equipment has been tested and found to comply with Part 15.247 of the FCC Rules using ANSI C63.10:2013 and KDB558074 standards. The test results found in this test report relate only to the items tested.

5 EUT INFORMATION AND DATA

5.1 Equipment Under Test:

Product: Victor WiFi Mouse Trap
Model: M1
Serial No.: None Specified
FCC ID: SNA-M1

5.2 Trade Name:

Woodstream Corporation

5.3 Power Supply:

Battery-Operated

5.4 Applicable Rules:

CFR 47, Part 15.247, subpart C

5.5 Equipment Category:

Radio Transmitter-DTS

5.6 Antenna:

Integral, 1.443dBi Gain

5.7 Accessories:

(4) Procell AA Batteries

5.8 Test Item Condition:

The equipment to be tested was received in good condition.

5.9 Testing Algorithm:

The EUT was configured to provide a continuous modulated signal on the low, mid and high channels of the 2.4 GHz WiFi band.

6 LIST OF MEASUREMENT INSTRUMENTATION

Equipment Type	Asset Number	Manufacturer	Model	Serial Number	Calibration Due Date
Shielded Chamber	CL166-E	Albatross Projects	B83117-DF435-T261	US140023	Mar. 30, 2020
Temp/Hum. Recorder	CL234	Extech	445814	03	Apr. 19, 2020
Receiver	CL204	Rohde & Schwarz	ESR7	101714	Oct. 16, 2020
Receiver	CL151	Rohde & Schwarz	ESU40	100319	Oct. 21, 2020
Antenna, JB3 Combination	CL211	Sunol Sciences, Inc.	JB1	A021017	Oct. 3, 2021
Horn Antenna	CL098	Emco	3115	9809-5580	Jan. 31, 2021
Antenna, Horn	CL114	AH Systems Inc.	SAS-572	237	Feb. 4, 2021
Pre-Amplifier	CL153	Keysight Tech.	83006A	MY39500791	Aug. 5, 2020
Active 18” Loop Antenna	CL163-Loop	A.H. Systems, Inc.	EHA-52B	100	July 24, 2020
Pre-amplifier	CL250	Com-Power	PAM-118A	18040011	Jan. 31, 2020
Software:	Tile Version 3.4.B.3		Software Verified: Oct. 30-Nov. 1, 2019; Jan. 17, 2020		
Software:	EMC 32, Version 8.53.0		Software Verified: Oct. 30-Nov. 1, 2019; Jan. 17, 2020		

7 FCC PART 15.247(a)(2) – OCCUPIED BANDWIDTH

7.1 Requirements:

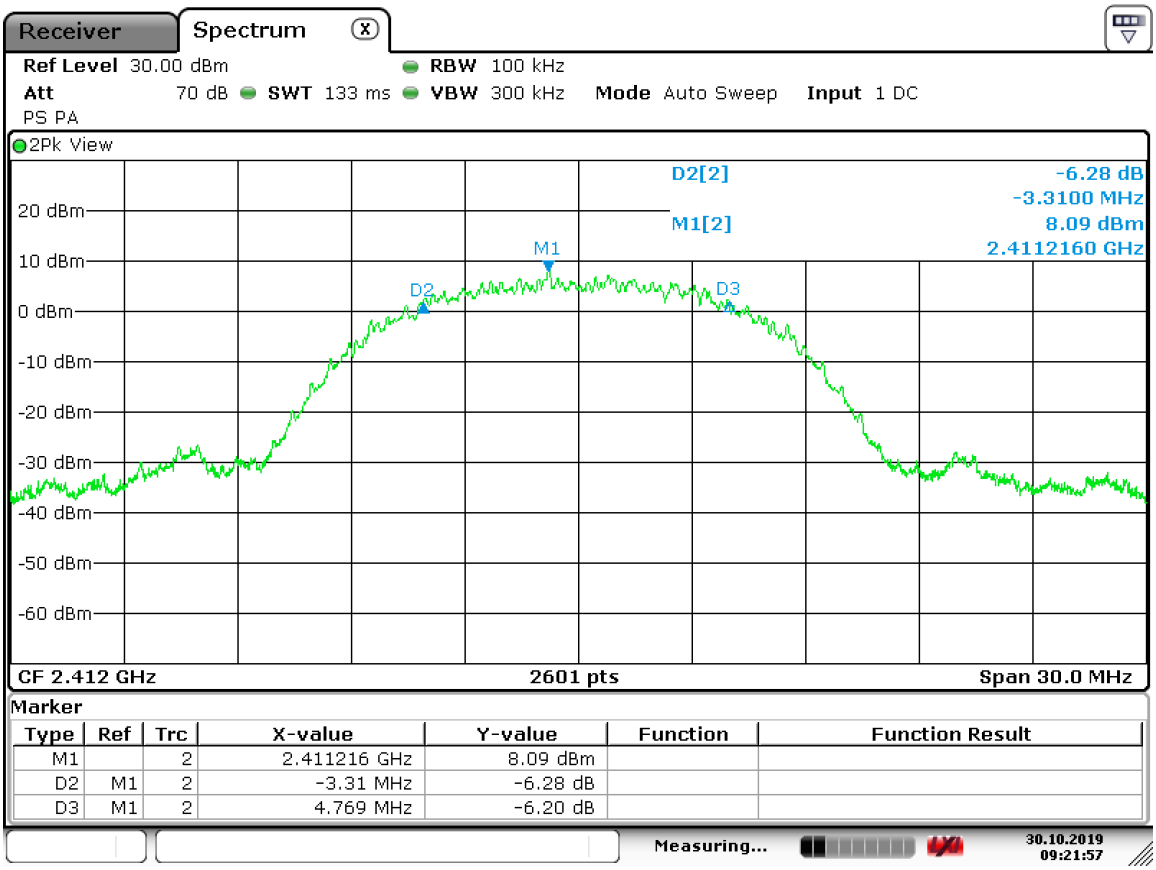
The 6dB bandwidth shall be greater than 500 kHz.

Bandwidth measurements were made at the low, mid and high frequencies with the resolution Bandwidth set at 100 kHz (video bandwidth set at 300 kHz) while the span was set at 20MHz to encompass the entire modulated waveform. The bandwidth was measured using the marker delta method.

7.2 Occupied Bandwidth Test Data

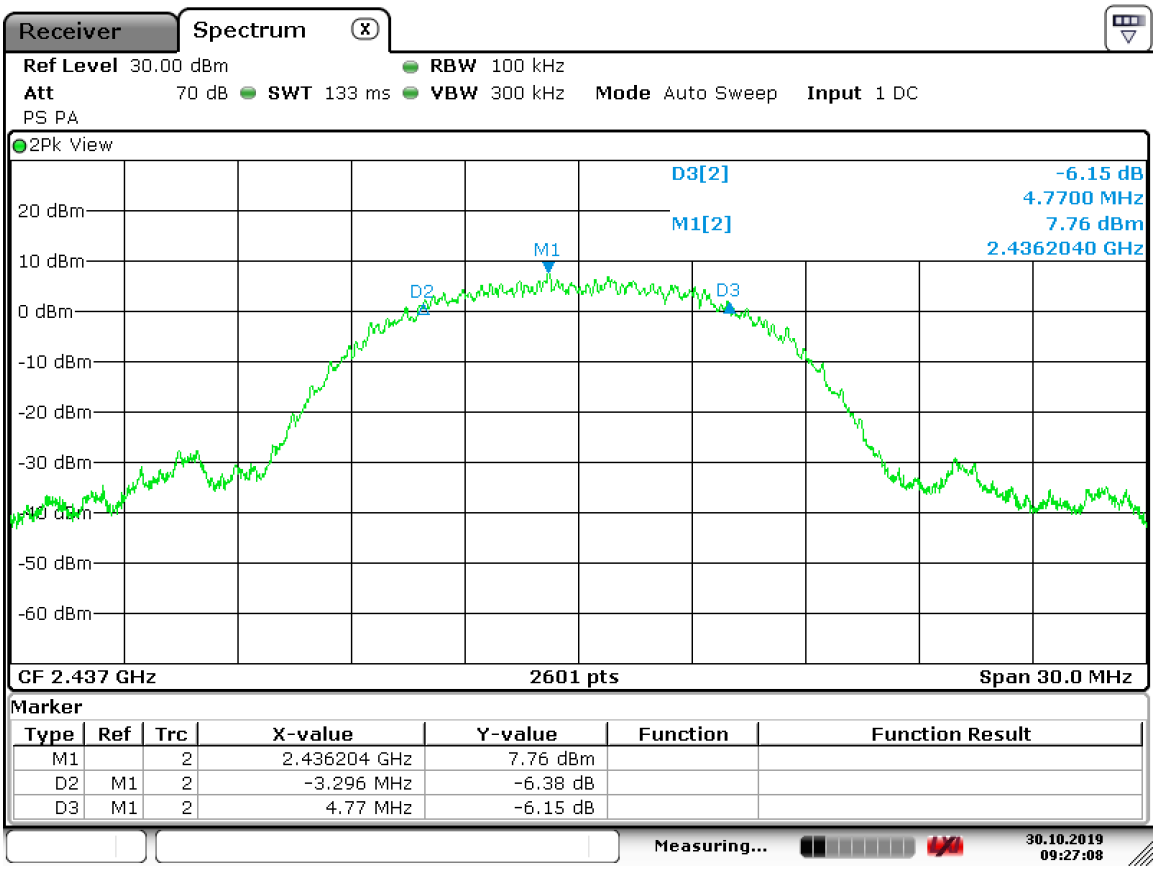
Test Date:	Oct. 30, 2019	Test Engineer:	J. Chiller
Standards:	CFR 47 Part 15.247(a)(2); KDB558074	Air Temperature:	21.3ºC
		Relative Humidity:	41%

-6dB OBW, 11b CCK: Low Channel



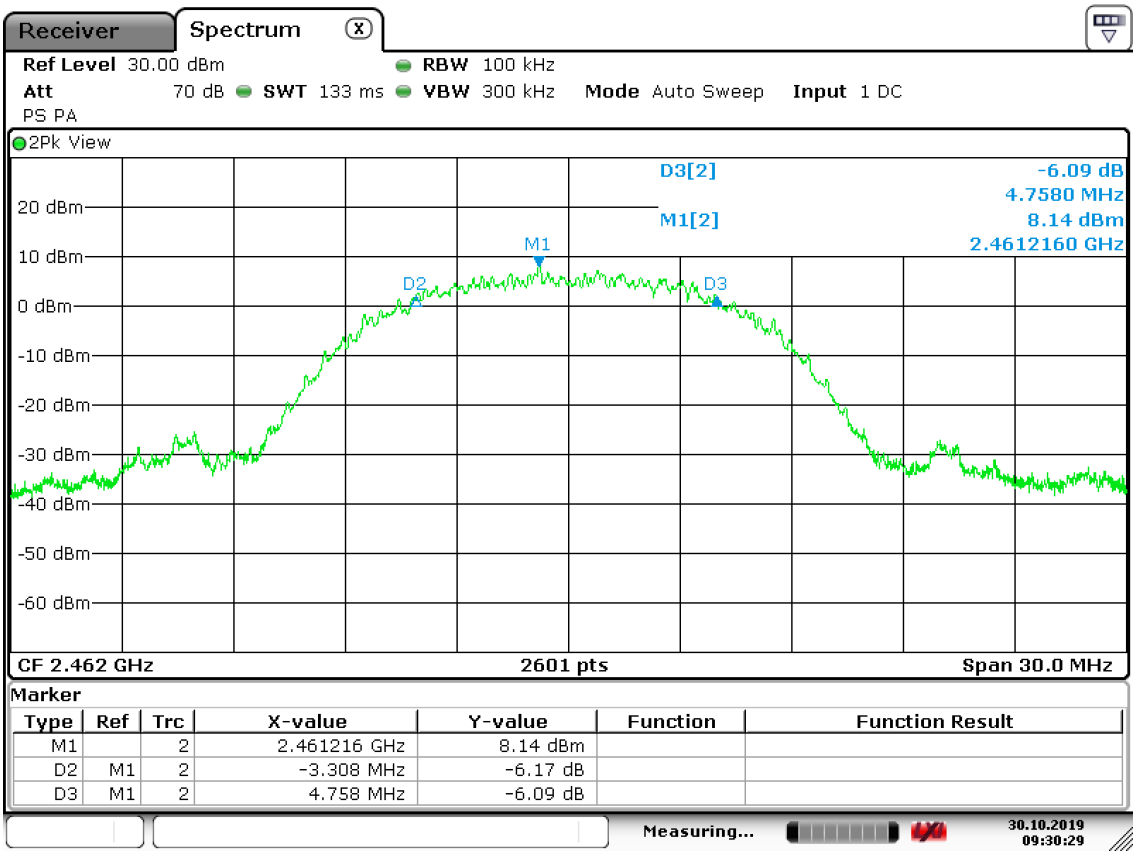
Date: 30.OCT.2019 09:21:57

-6dB OBW, 11b CCK: Mid Channel



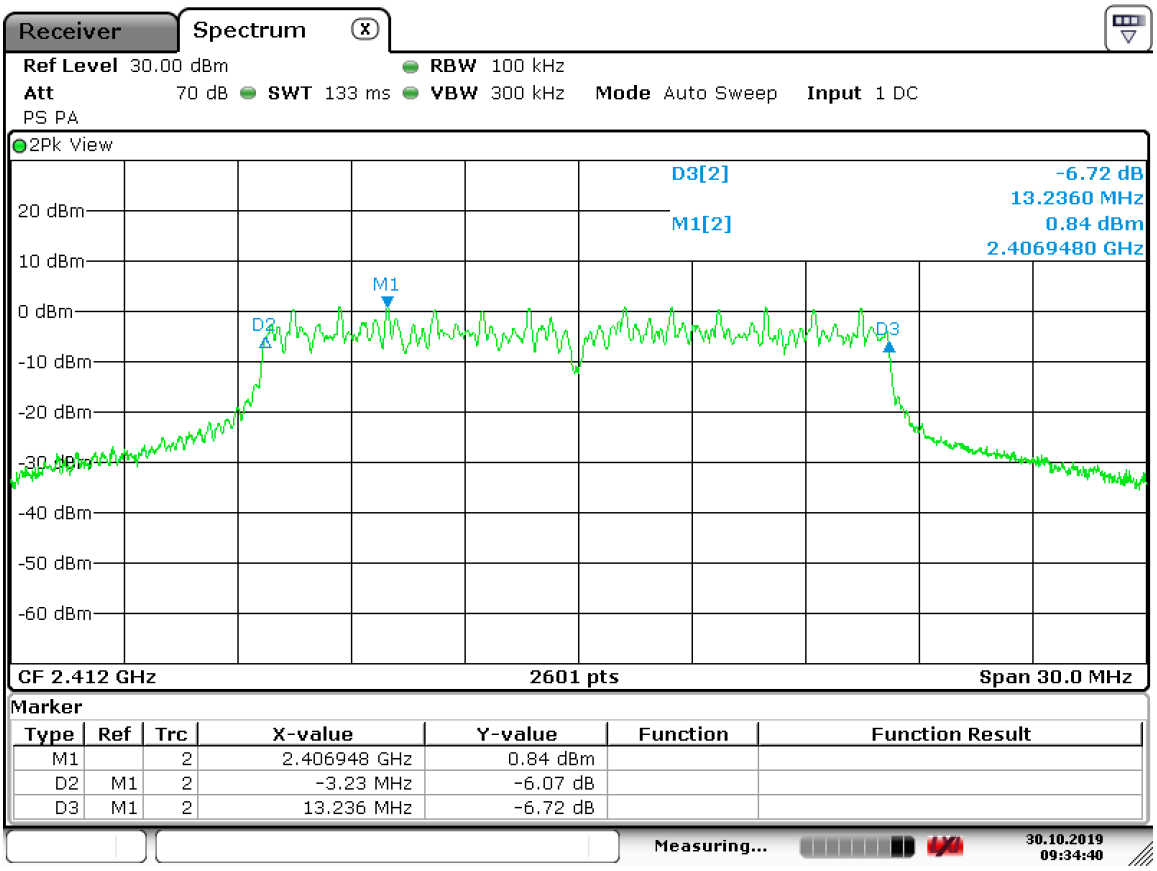
Date: 30.OCT.2019 09:27:09

-6dB OBW, 11b CCK: High Channel



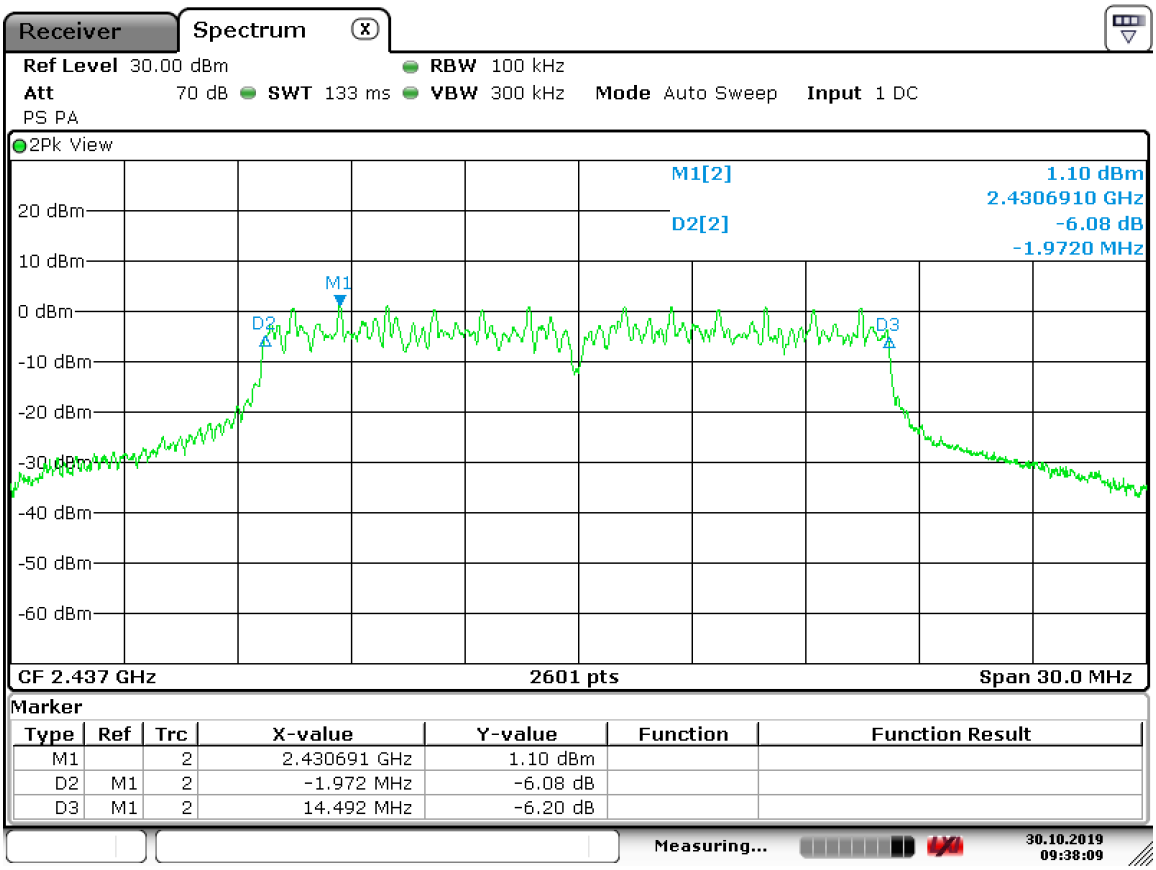
Date: 30.OCT.2019 09:30:29

-6dB OBW, 11g 54 Mbps OFDM: Low Channel



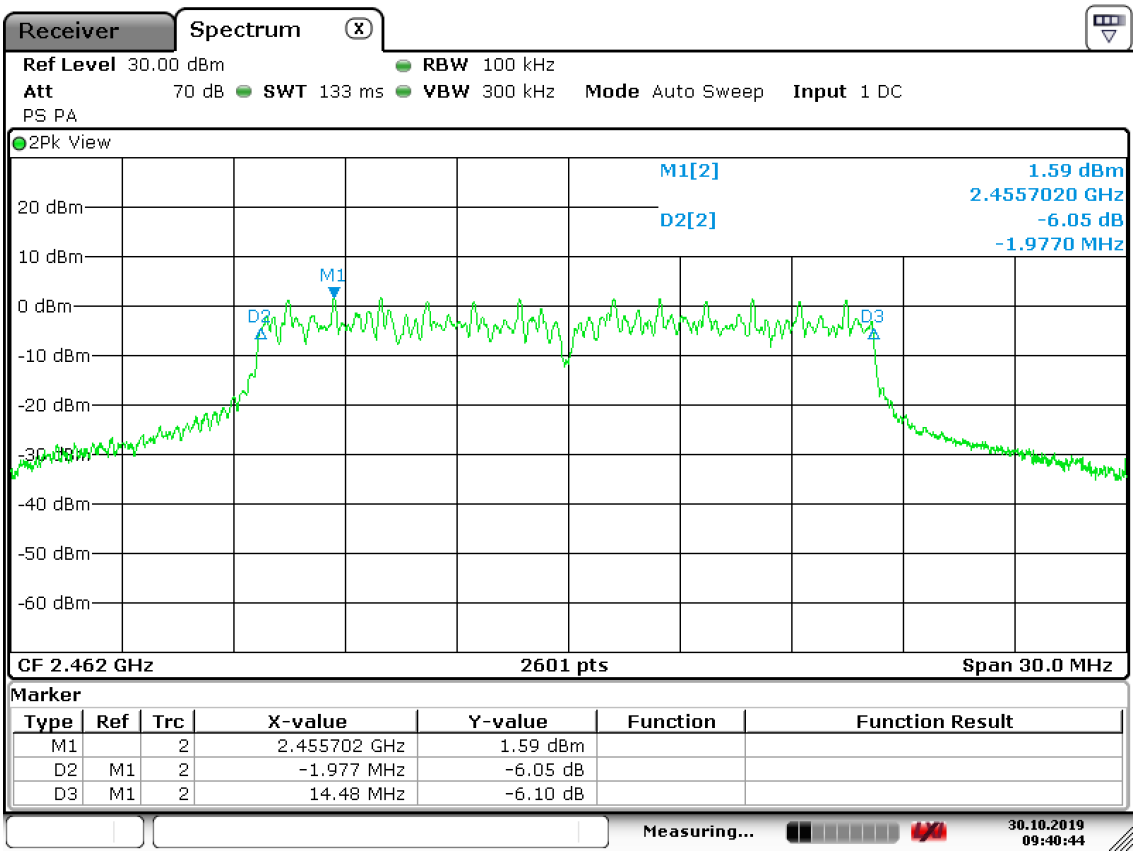
Date: 30.OCT.2019 09:34:40

-6dB OBW, 11g 54 Mbps OFDM: Mid Channel



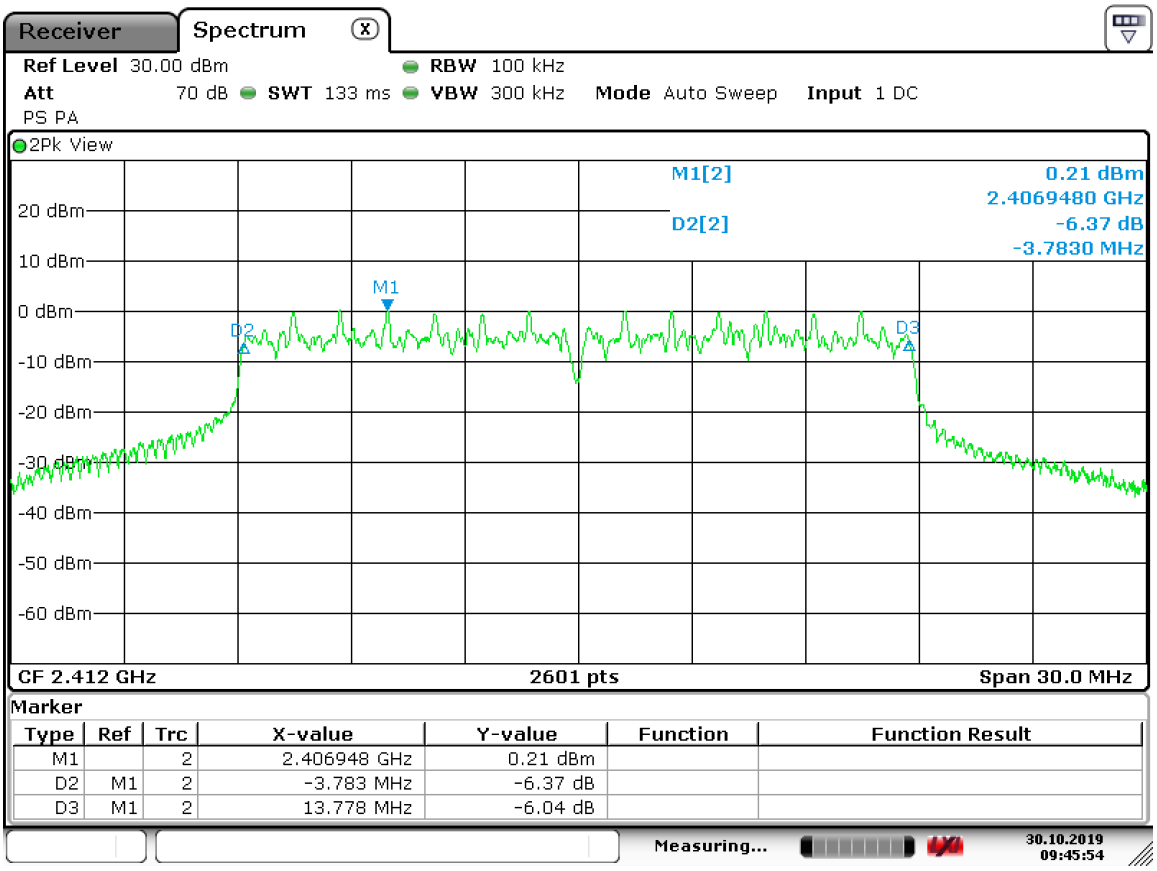
Date: 30.OCT.2019 09:38:08

-6dB OBW, 11g 54 Mbps OFDM: High Channel



Date: 30.OCT.2019 09:40:44

-6dB OBW, 11n MCS7: Low Channel



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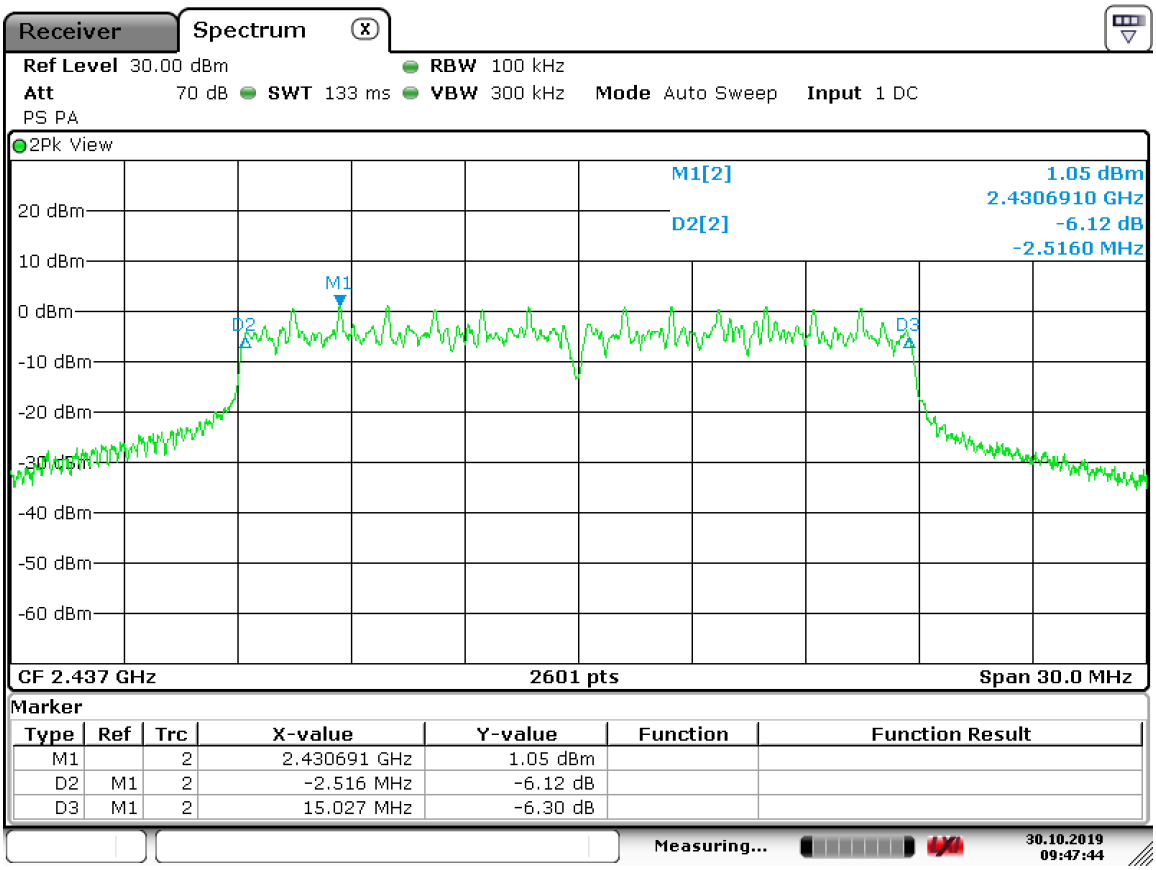
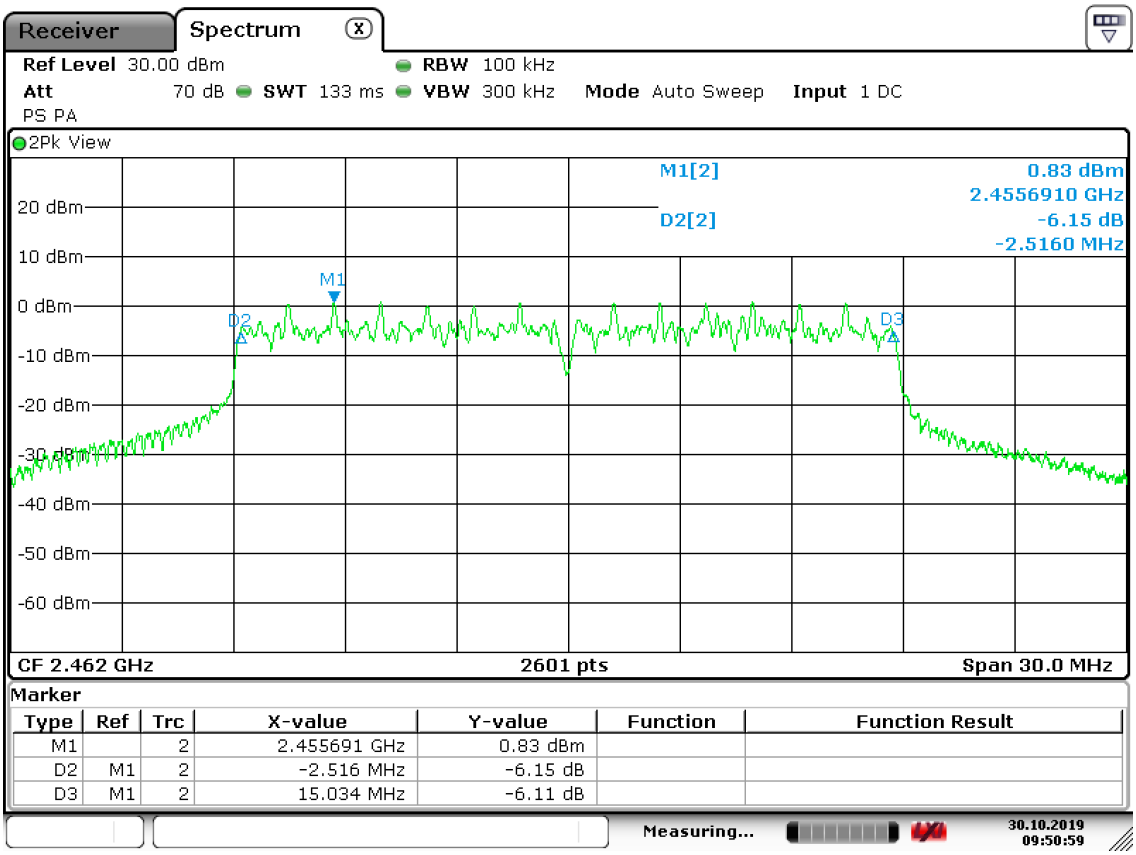
-6dB OBW, 11n MCS7: Mid Channel



Date: 30.OCT.2019 09:47:43

-6dB OBW, 11n MCS7: High Channel



Date: 30.OCT.2019 09:50:59

8 FCC PART 15.247(b)(3) – CONDUCTED OUTPUT POWER

The EUT antenna port was fitted with an SMA connector and directly connected to the input of the receiver. The peak power output was measured.

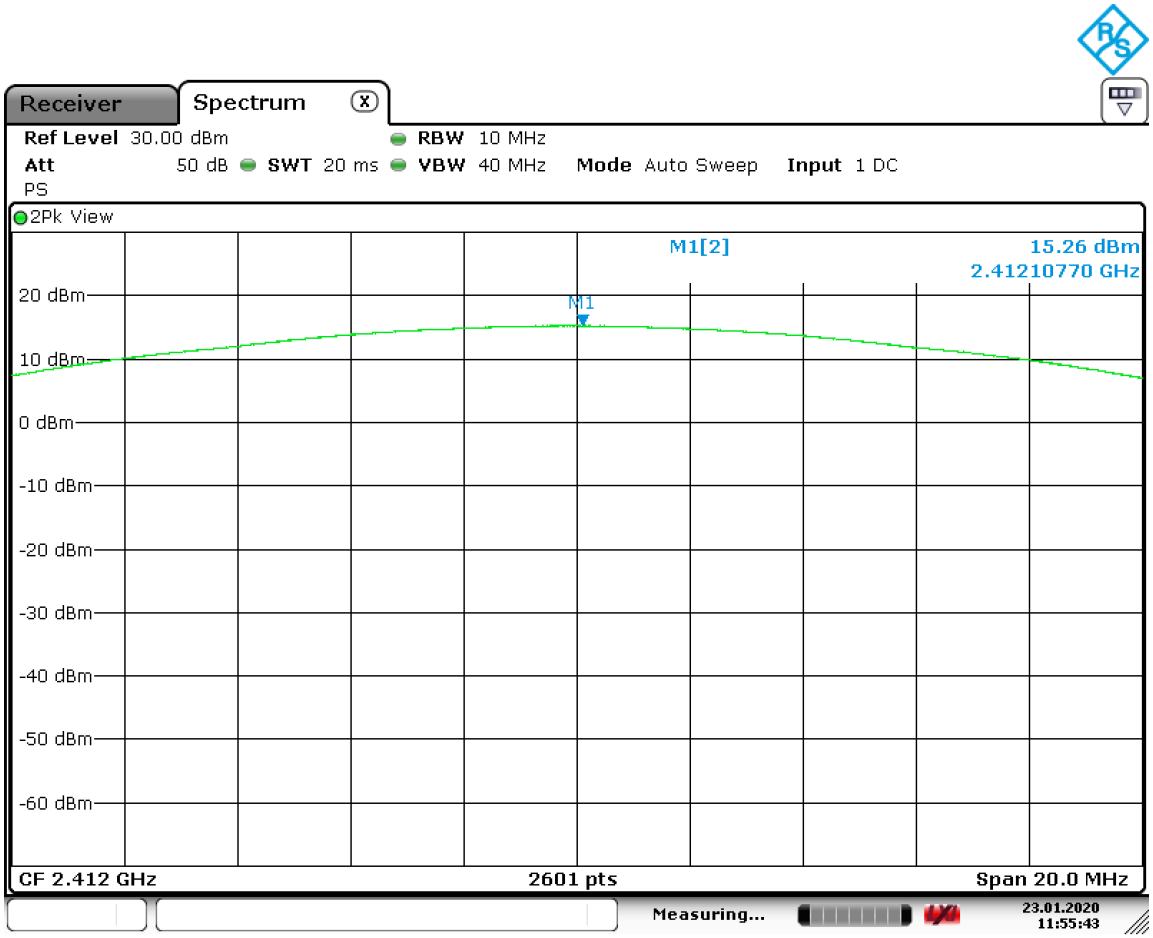
8.1 Requirements:

The power output shall be 1 watt (30 dBm) or less when using an antenna with a gain of less than 6dBi. For antennas having a gain of more than 6dBi, the limit is reduced by 1dB for every dB the antenna gain is over 6dBi.

8.2 Conducted Output Power Test Data

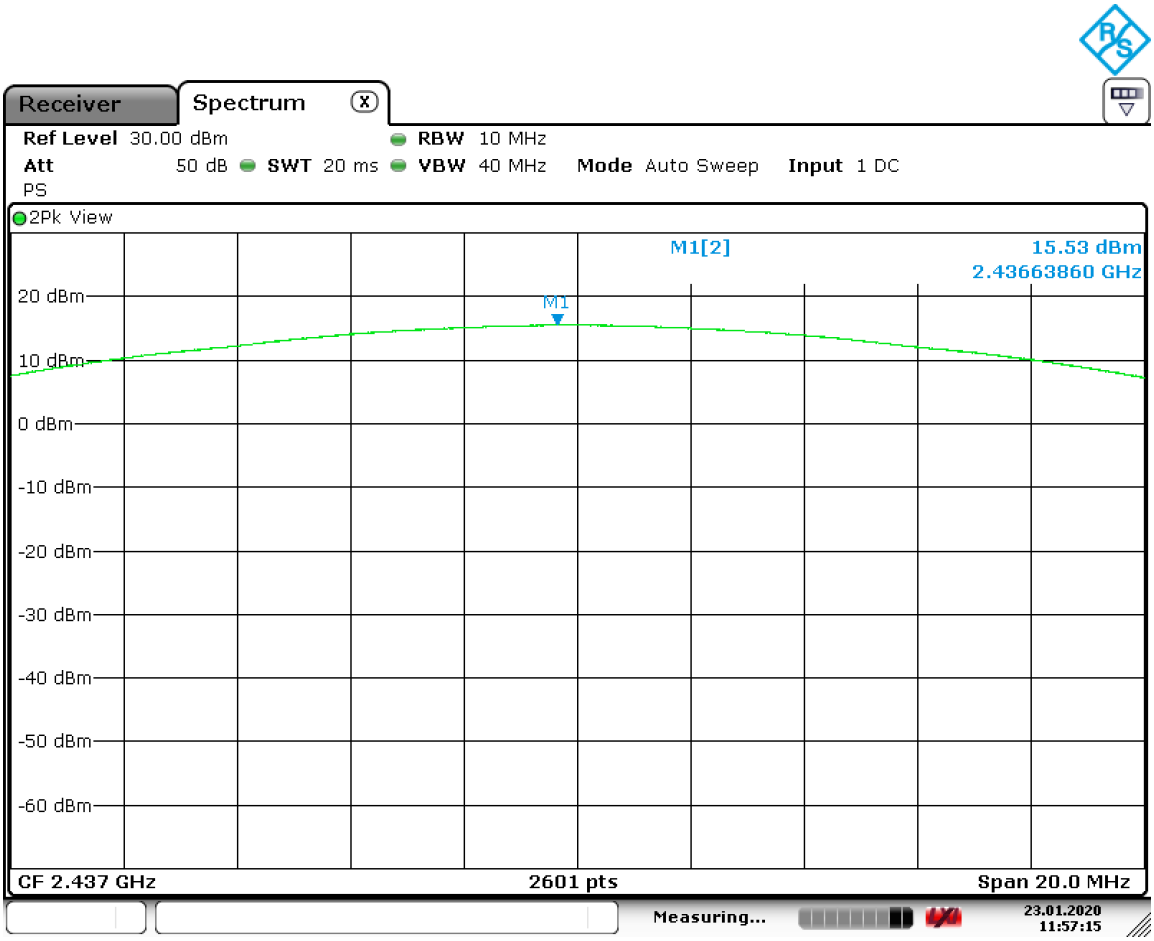
Test Date:	Jan. 23, 2020	**Test Engineer:**	J. Chiller
Standards:	CFR 47 Part 15.247(b)(3); KDB558074	**Air Temperature:**	22.3ºC
		Relative Humidity:	23%

11b CCK: Low Channel



Date: 23.JAN.2020 11:55:43

11b CCK: Mid Channel



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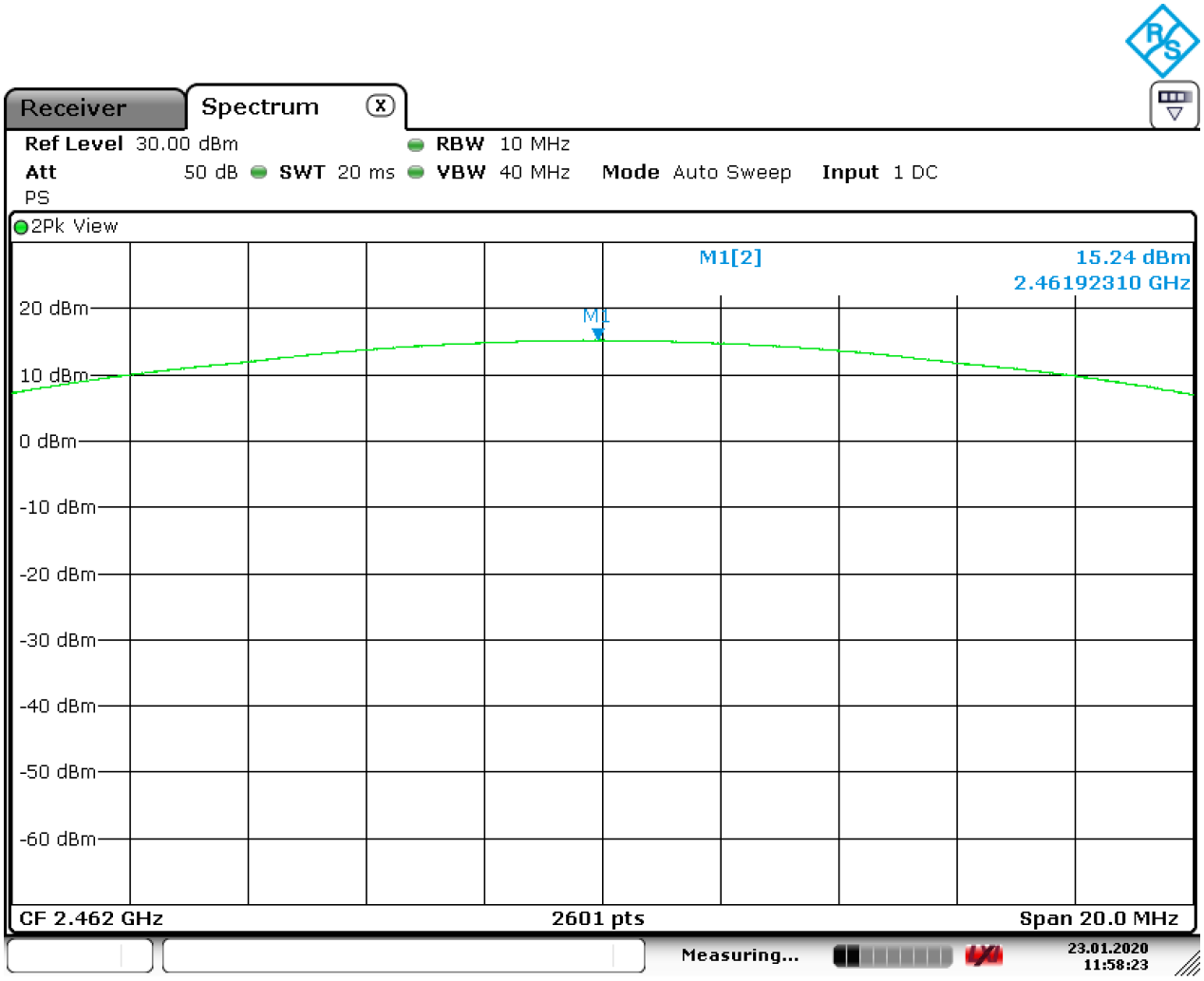
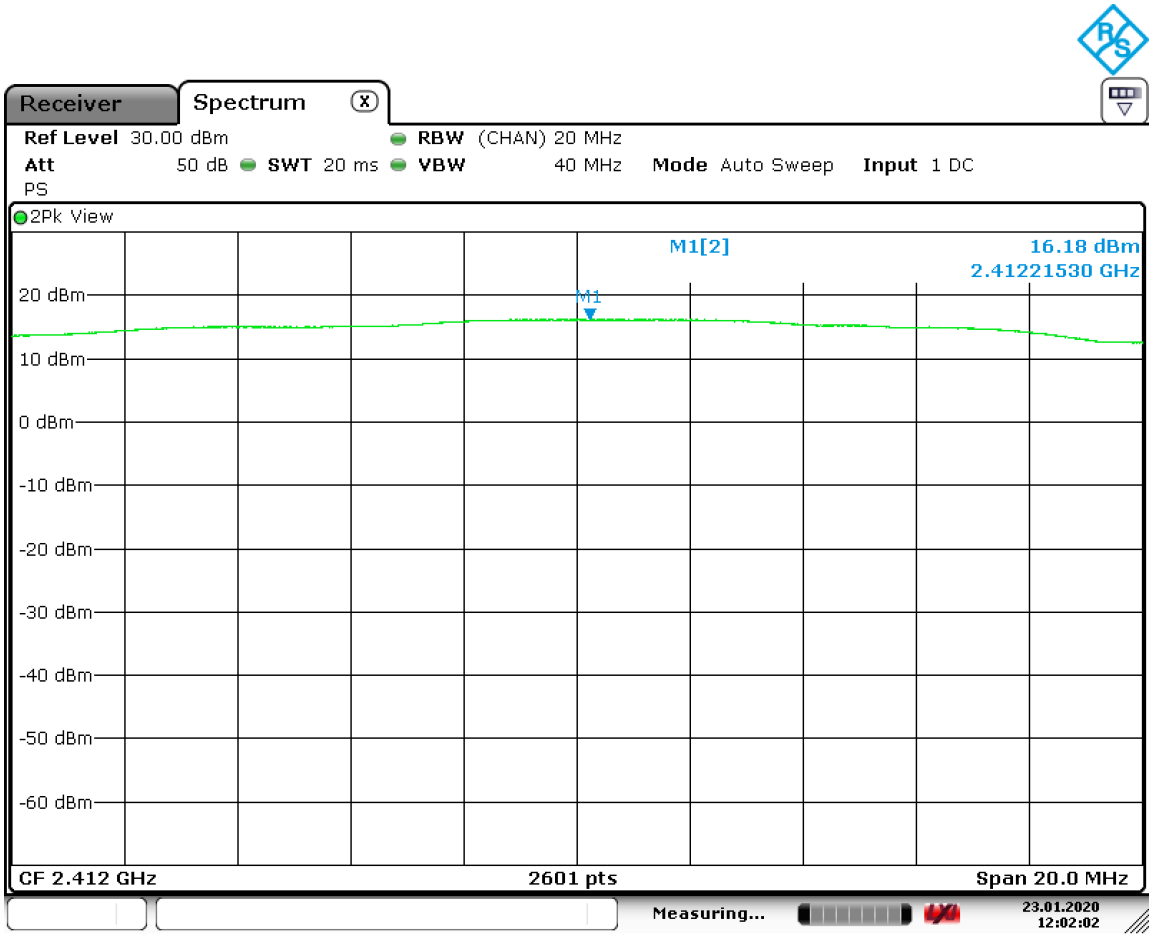
11b CCK: High Channel



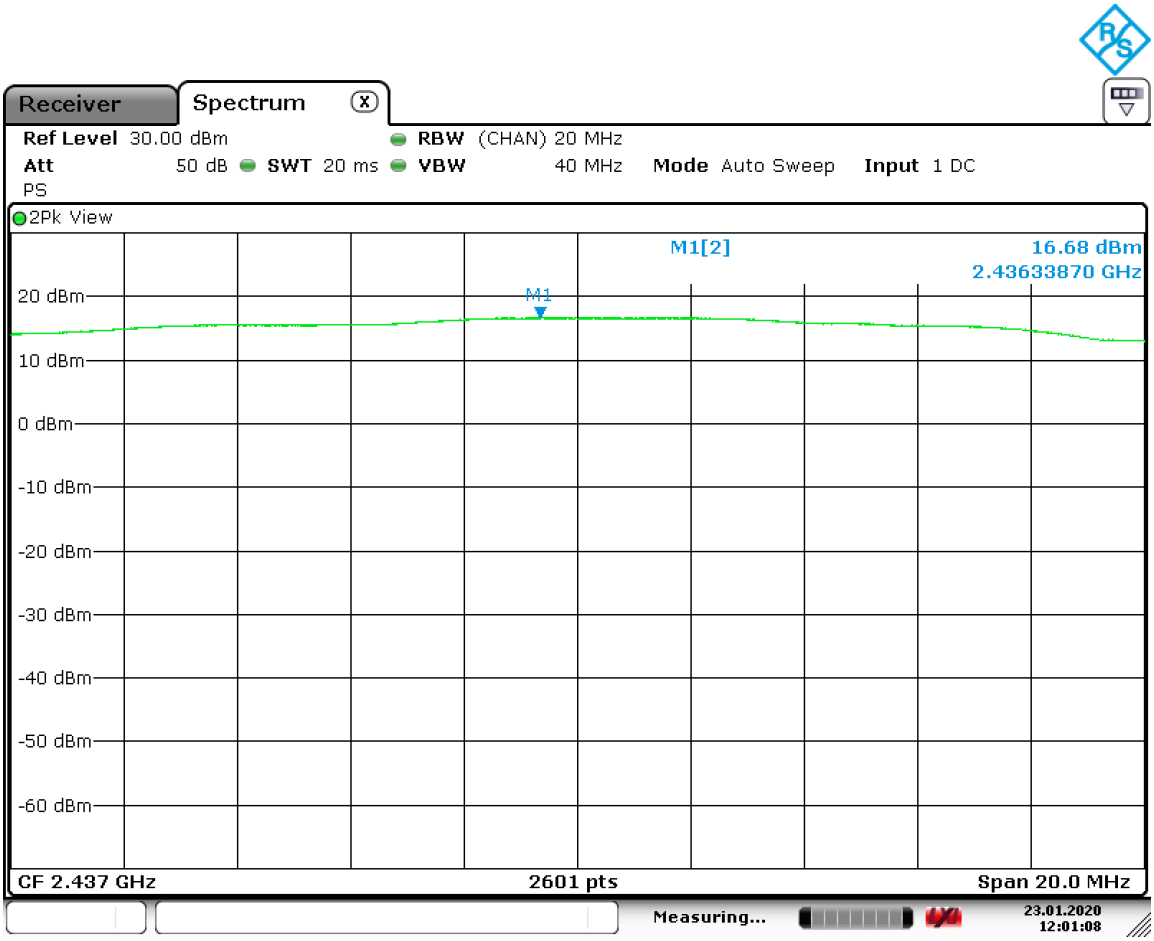
Date: 23.JAN.2020 11:58:23

11g 54 Mbps OFDM: Low Channel



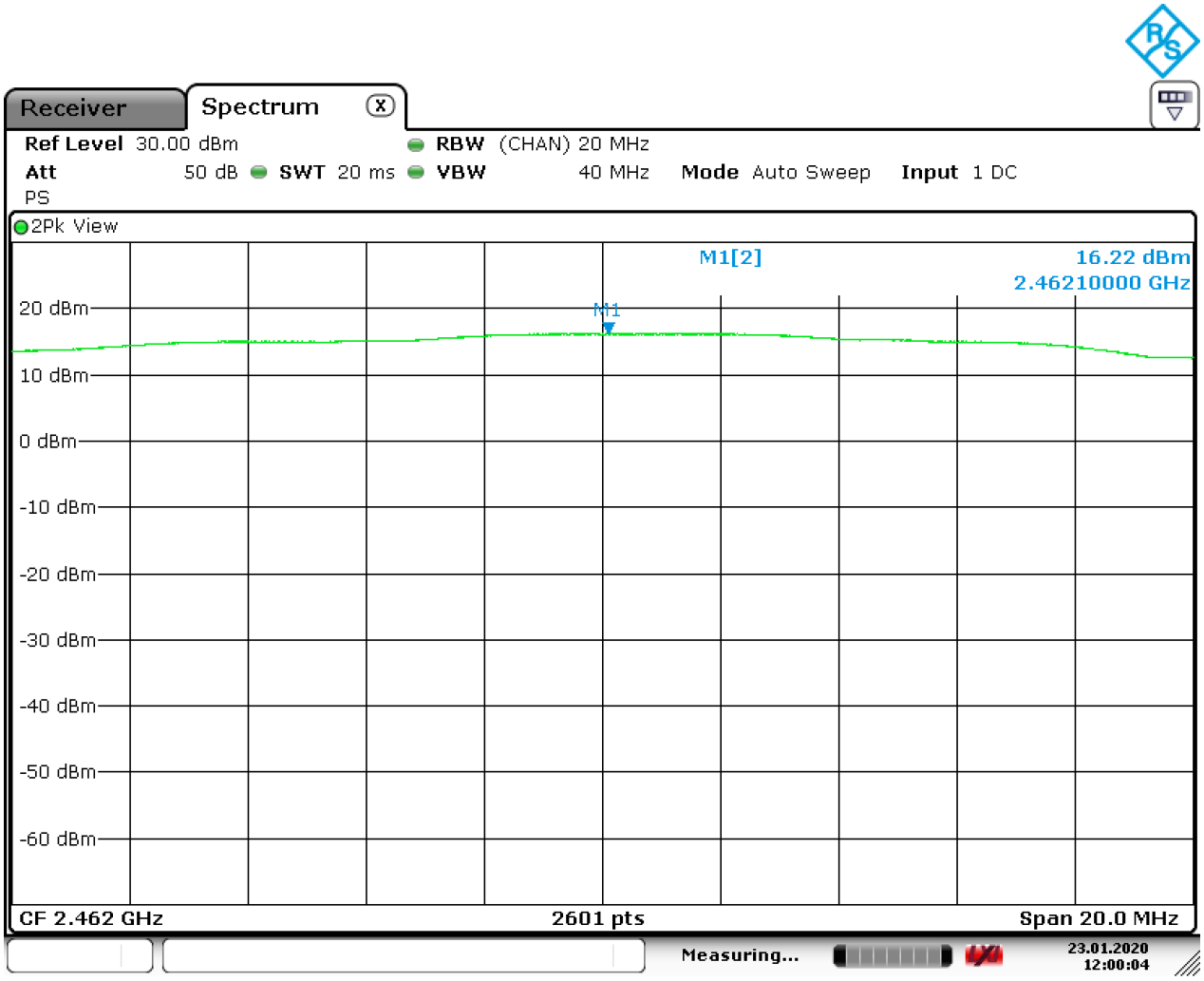
Date: 23.JAN.2020 12:02:03

11g 54 Mbps OFDM: Mid Channel



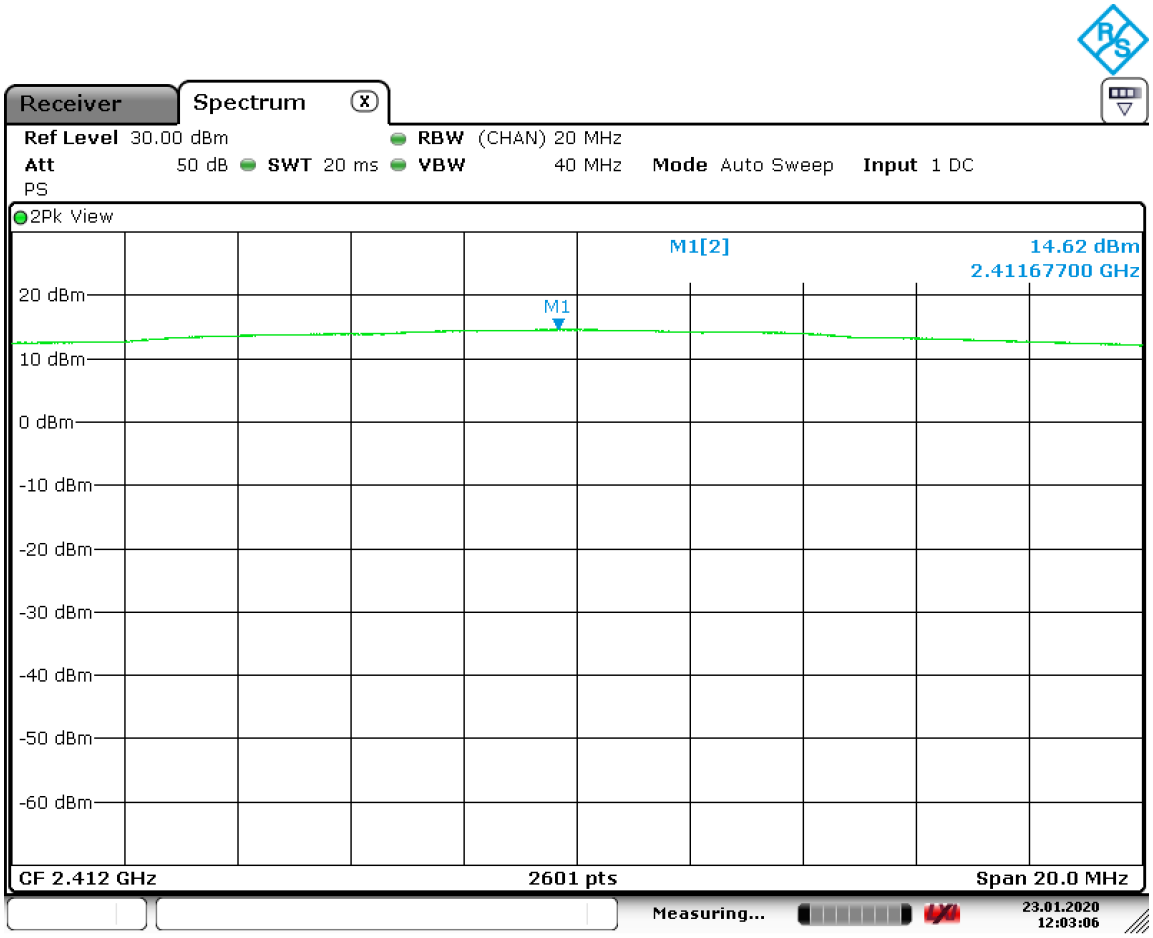
Date: 23.JAN.2020 12:01:08

11g 54 Mbps OFDM: High Channel



Date: 23.JAN.2020 12:00:04

11n MCS7: Low Channel



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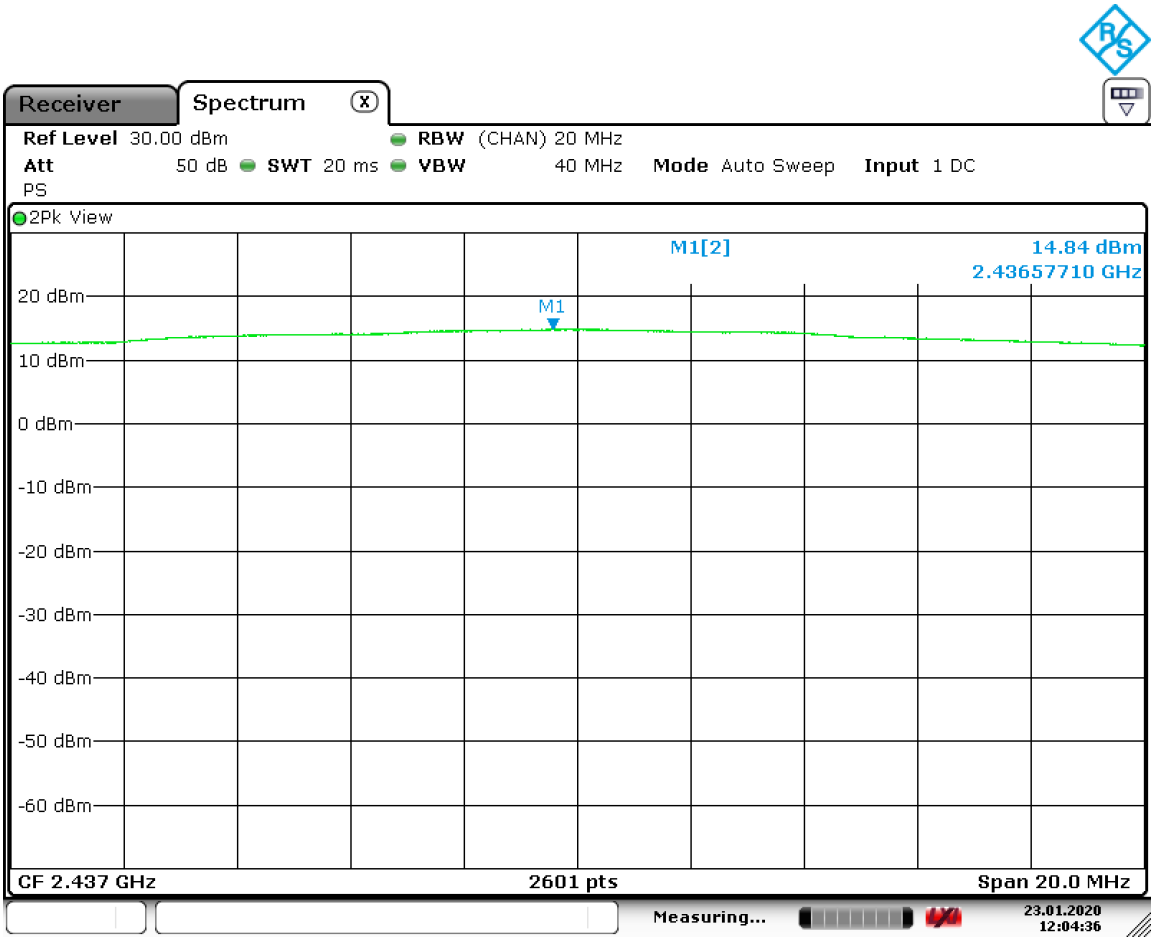
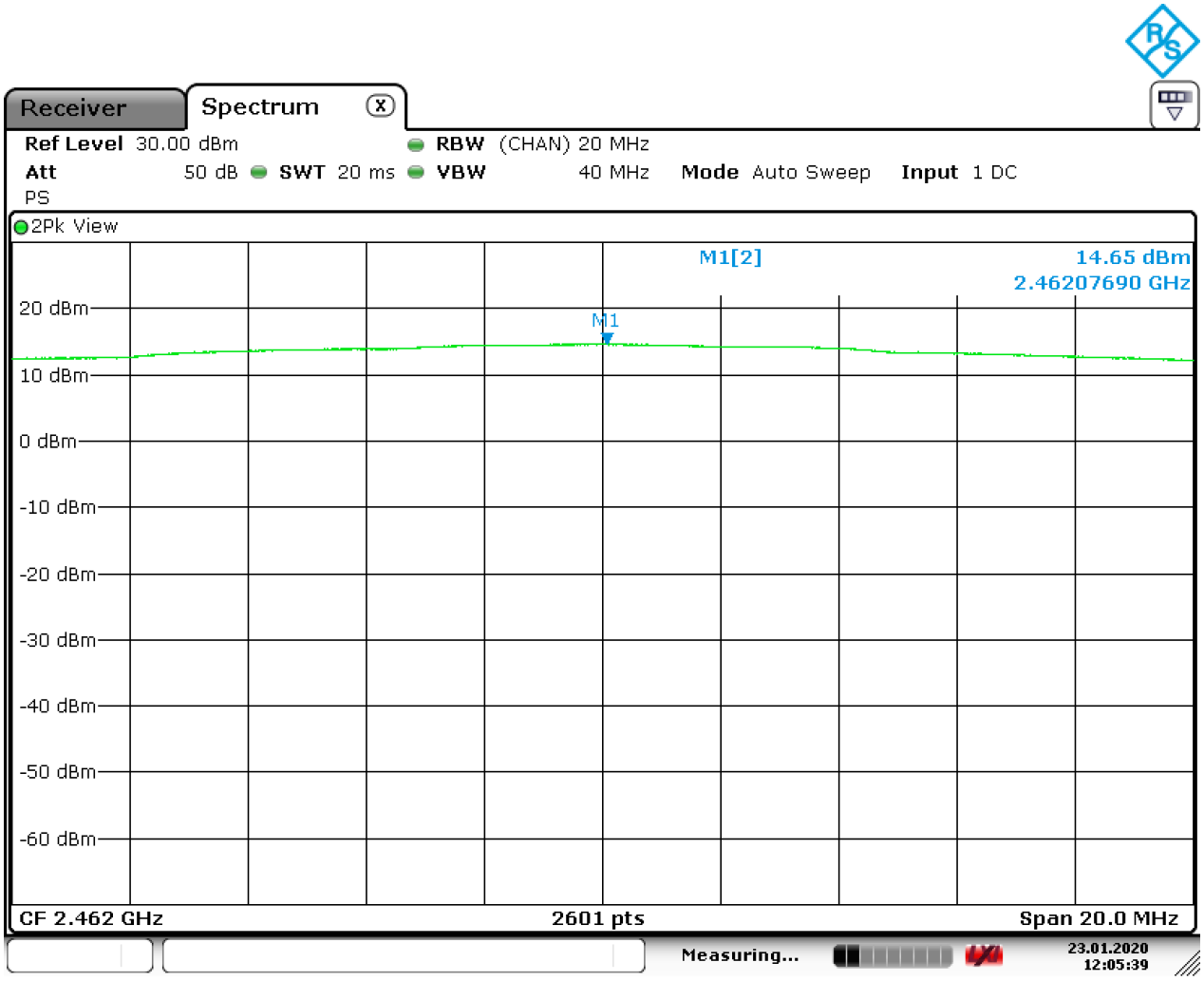
11n MCS7: Mid Channel



Date: 23.JAN.2020 12:04:37

11n MCS7: High Channel



Date: 23.JAN.2020 12:05:40

9 FCC Part 15.247(d) – CONDUCTED SPURIOUS EMISSIONS

The following tests were performed to demonstrate compliance.

RF Antenna Conducted Test

The EUT antenna port was fitted with an SMA connector and directly connected to the input of the spectrum analyzer.

9.1 Requirements:

All Spurious Emissions must be at least 20dB down from the highest emission level measured within the authorized band up through the tenth harmonic.

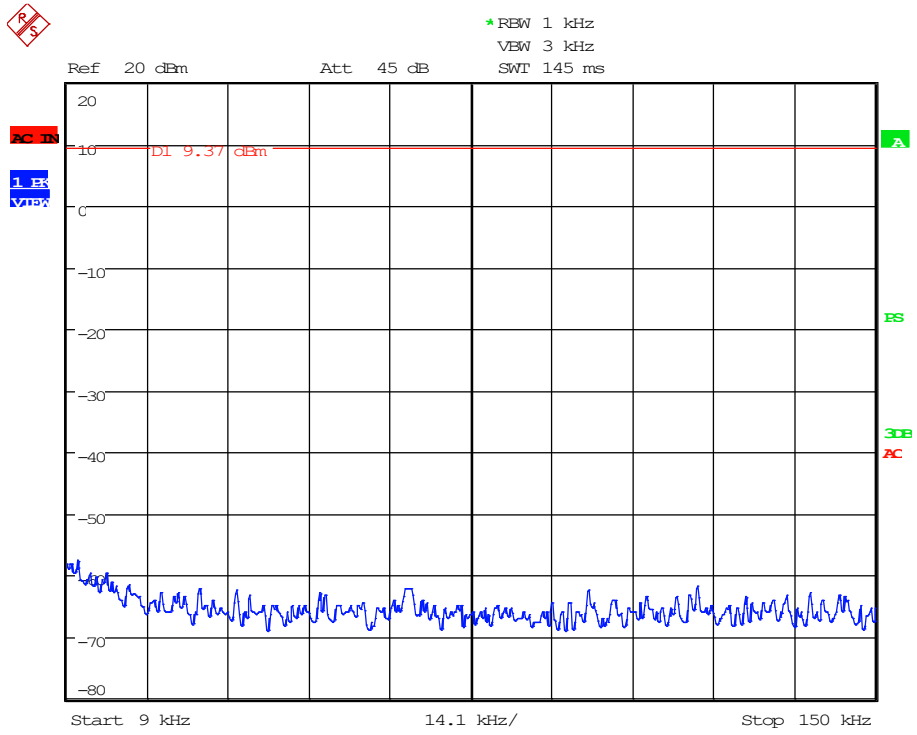
Spurious emissions measurements were made at the low, mid, and upper channels with the appropriate spectrum analyzer impulse bandwidth. Additionally, 20dB down points were measured for the low and high channels to verify band edge compliance.

9.2 Conducted Spurious Emissions Test Data

Test Date:	Oct. 31, 2019	**Test Engineer:**	J. Chiller
Standards:	CFR 47 Part 15.247(d) / Part 15.207 KDB558074	**Air Temperature:**	22.6ºC
		Relative Humidity:	47%

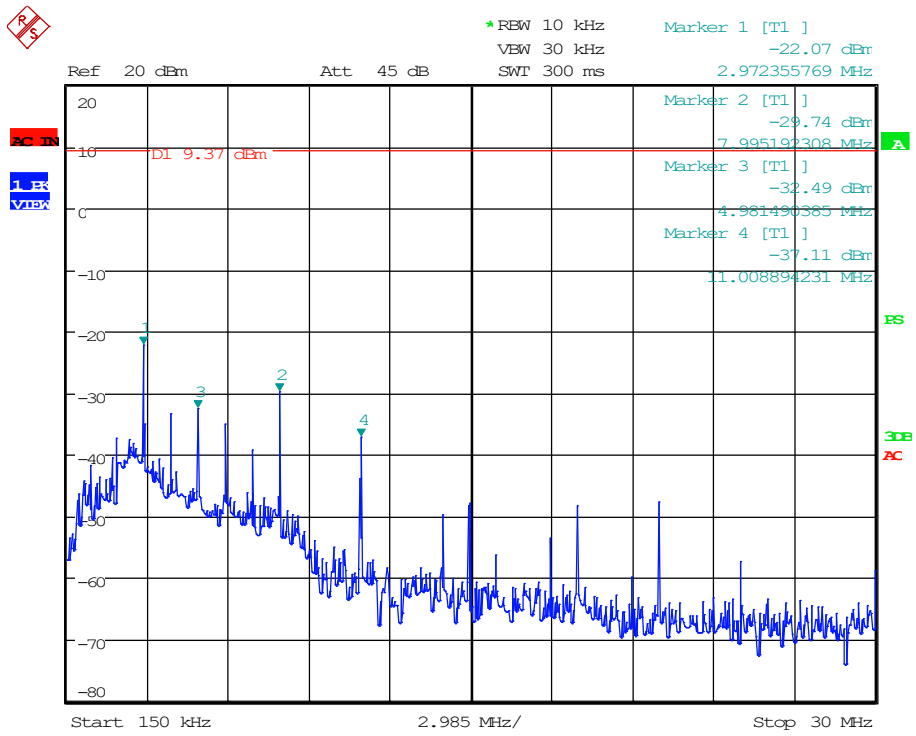
11b CCK: Low Channel, 0.009 MHz to 0.15 MHz

.



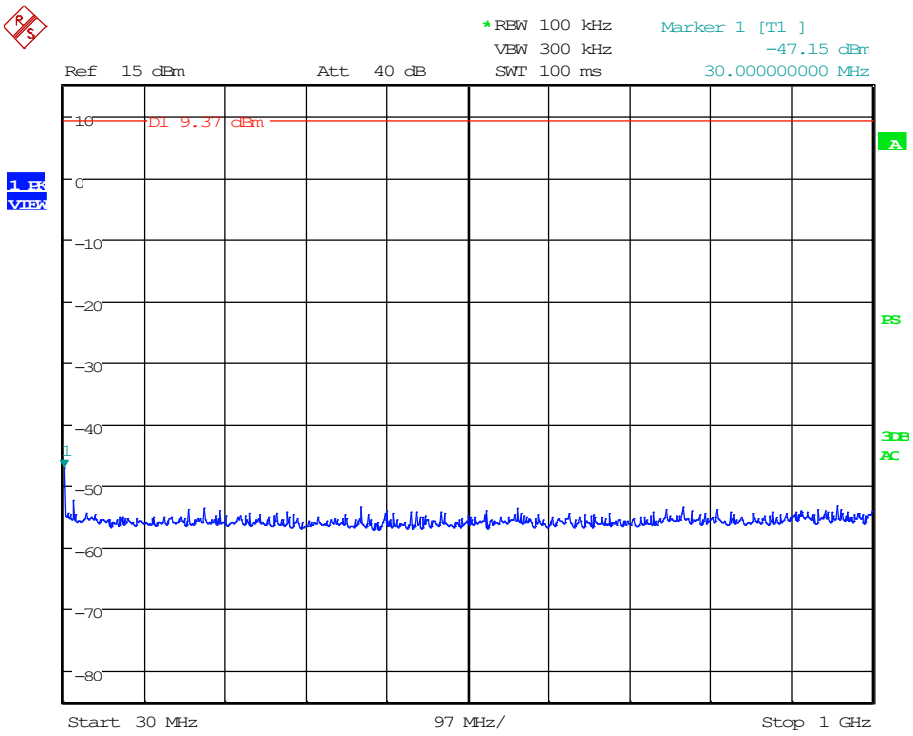
11b CCK: Low Channel, 0.15 MHz to 30 MHz

.



11b CCK: Low Channel, 30 MHz to 1000 MHz

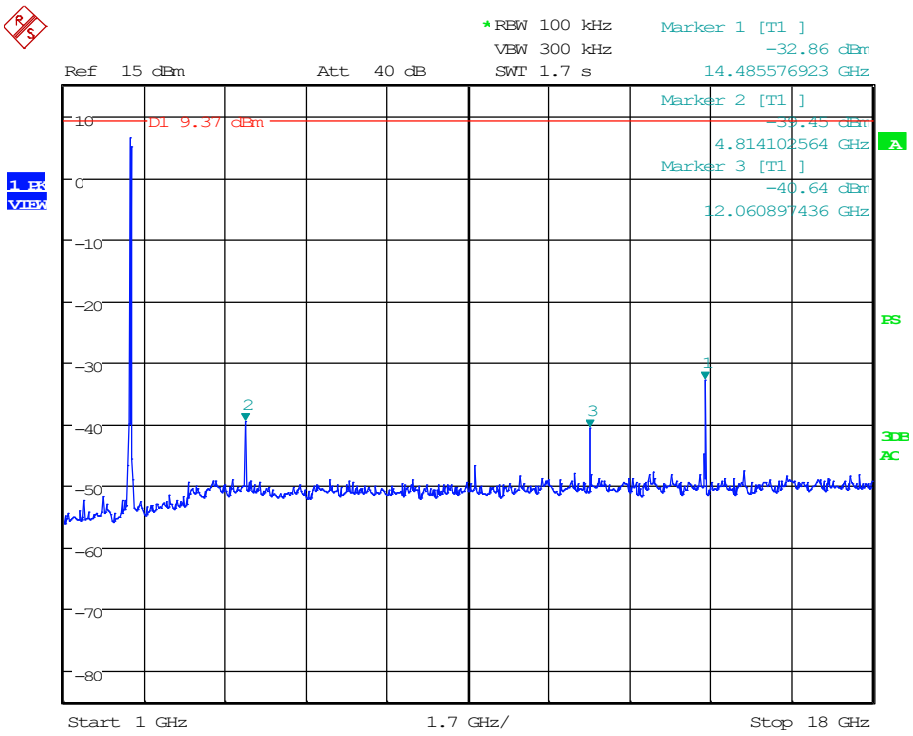
.



Date: 31.OCT.2019 12:21:07

11b CCK: Low Channel, 1 GHz to 18 GHz

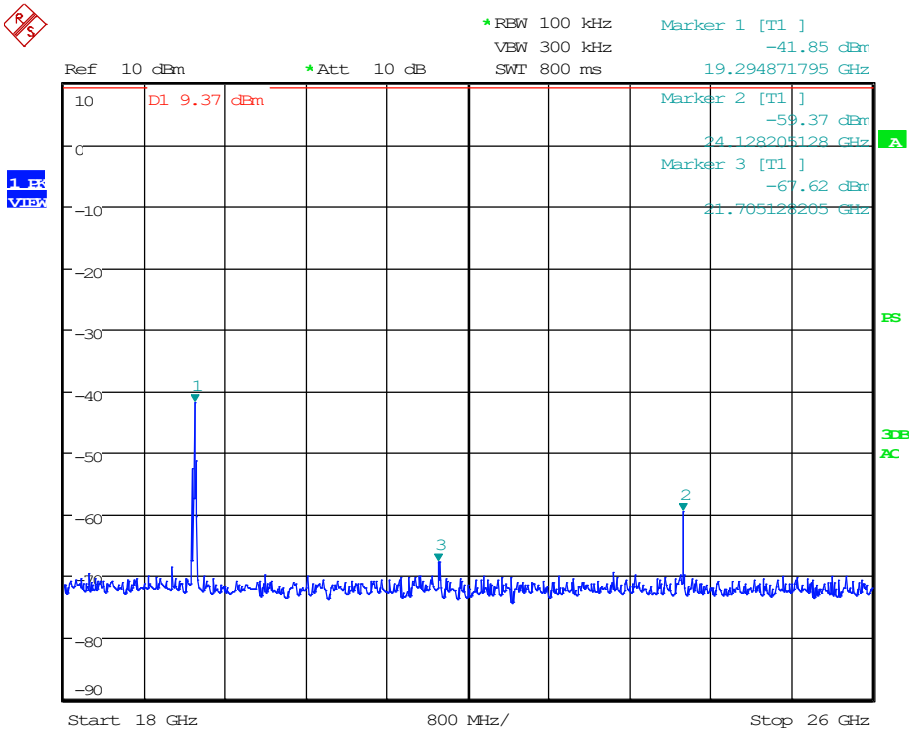
.



Date: 31.OCT.2019 12:16:40

11b CCK: Low Channel, 18 GHz to 26 GHz

.



Date: 31.OCT.2019 12:01:11

11b CCK: Mid Channel, 0.009 MHz to 0.15 MHz

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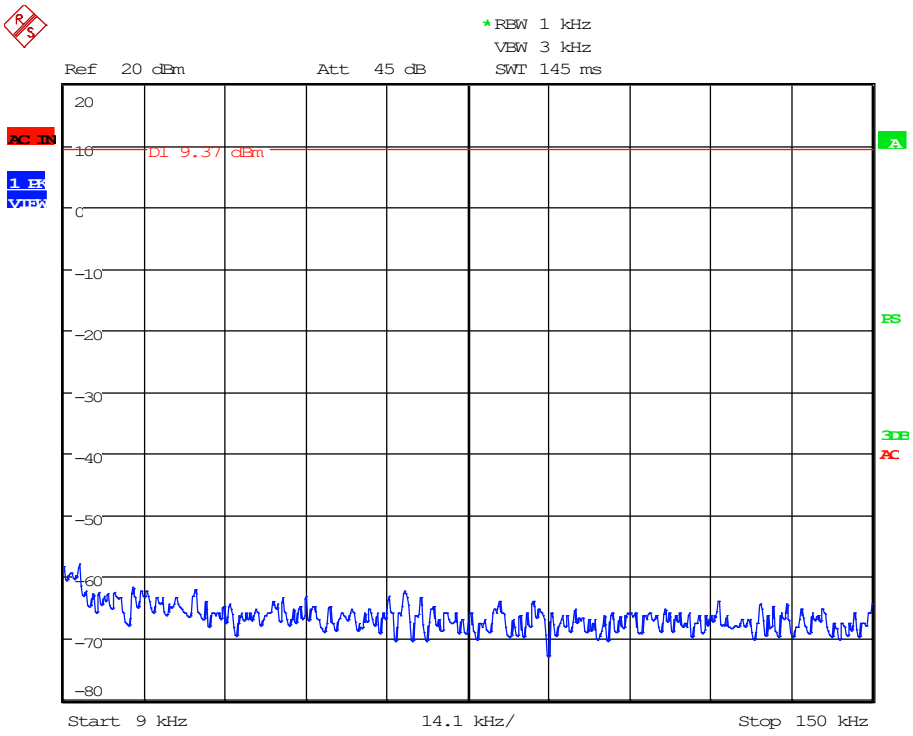

11b CCK: Mid Channel, 0.15 MHz to 30 MHz

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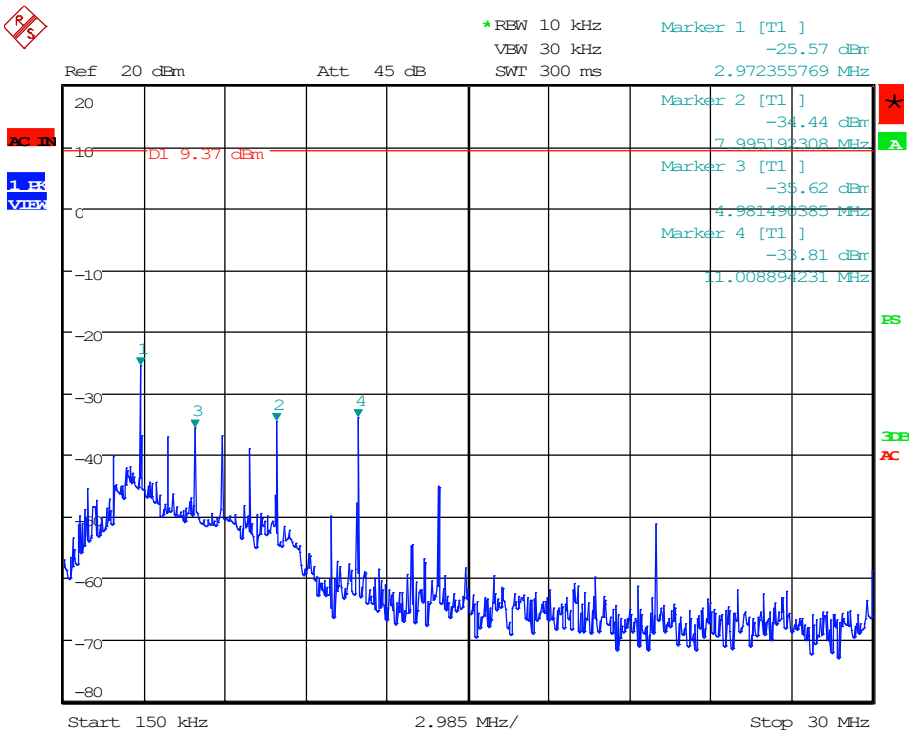

11b CCK: Mid Channel, 30 MHz to 1000 MHz

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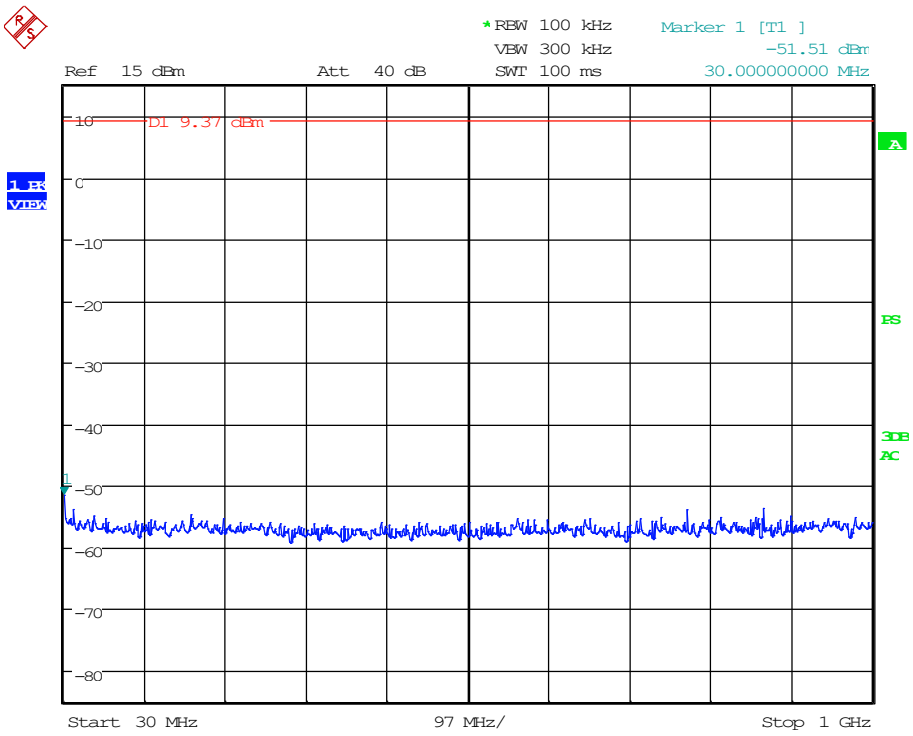

Date: 31.OCT.2019 12:21:44

11b CCK: Mid Channel, 1 GHz to 18 GHz

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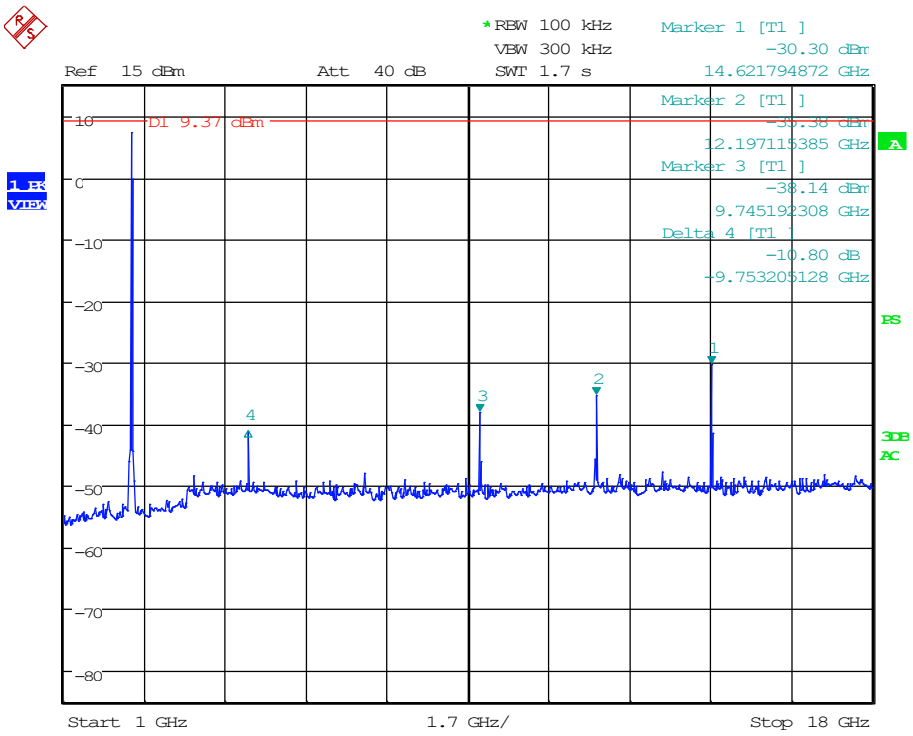

Date: 31.OCT.2019 12:18:08

11b CCK: Mid Channel, 18 GHz to 26 GHz

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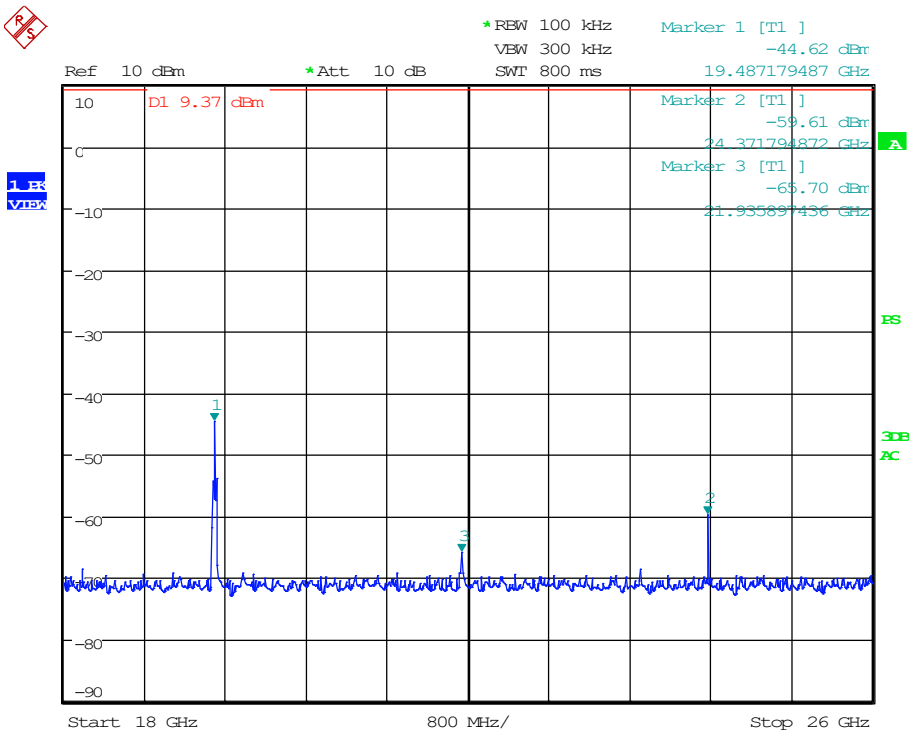

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11b CCK: High Channel, 0.009 MHz to 0.15 MHz

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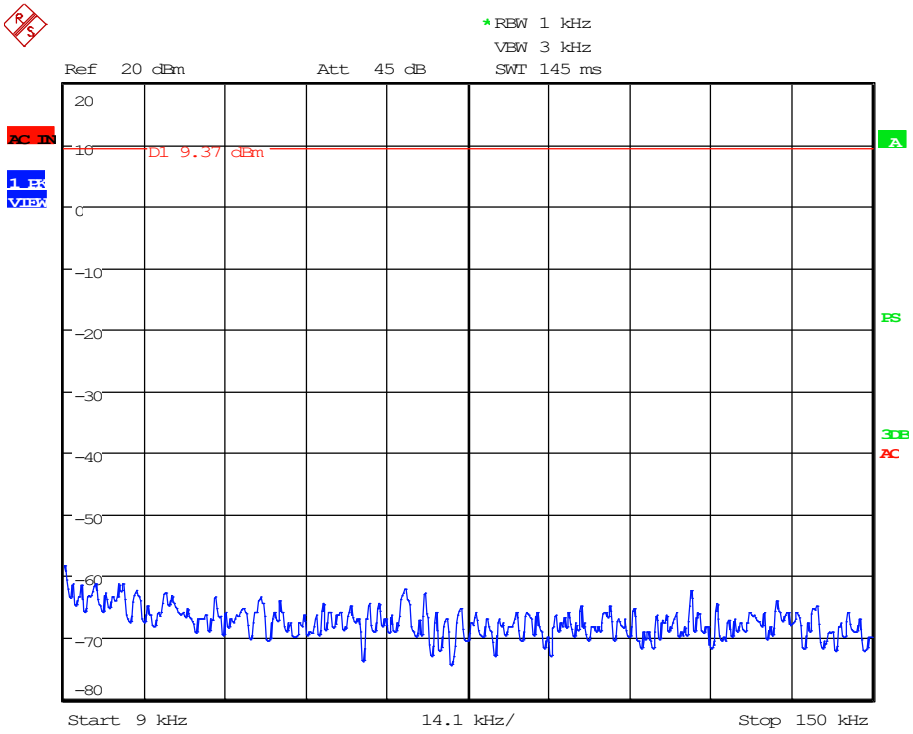

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11b CCK: High Channel, 0.15 MHz to 30 MHz

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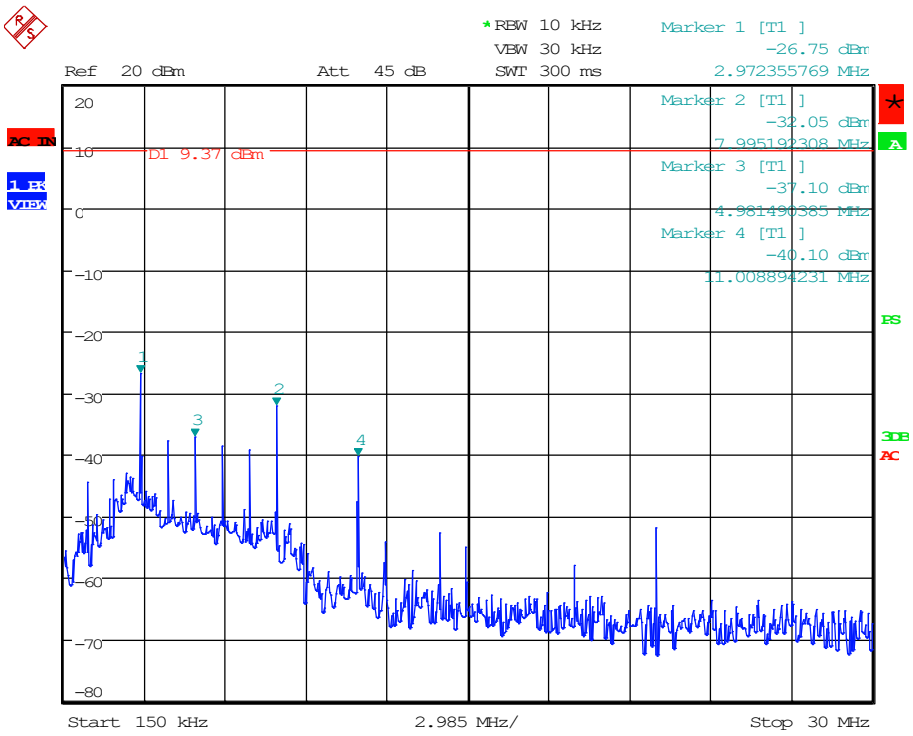
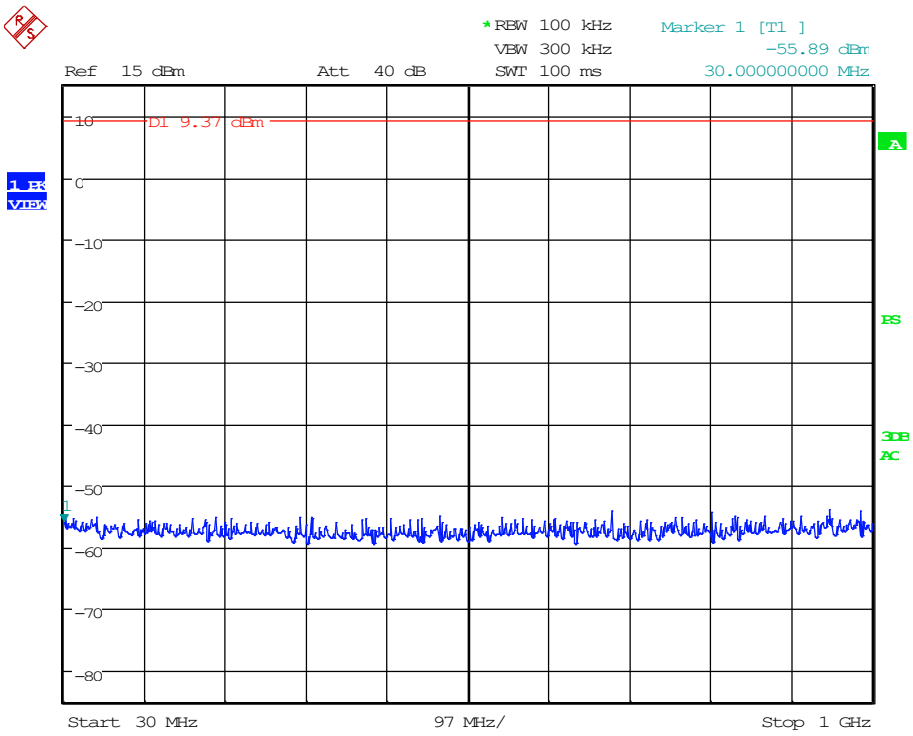


Date: 31.OCT.2019 12:29:29

11b CCK: High Channel, 30 MHz to 1000 MHz

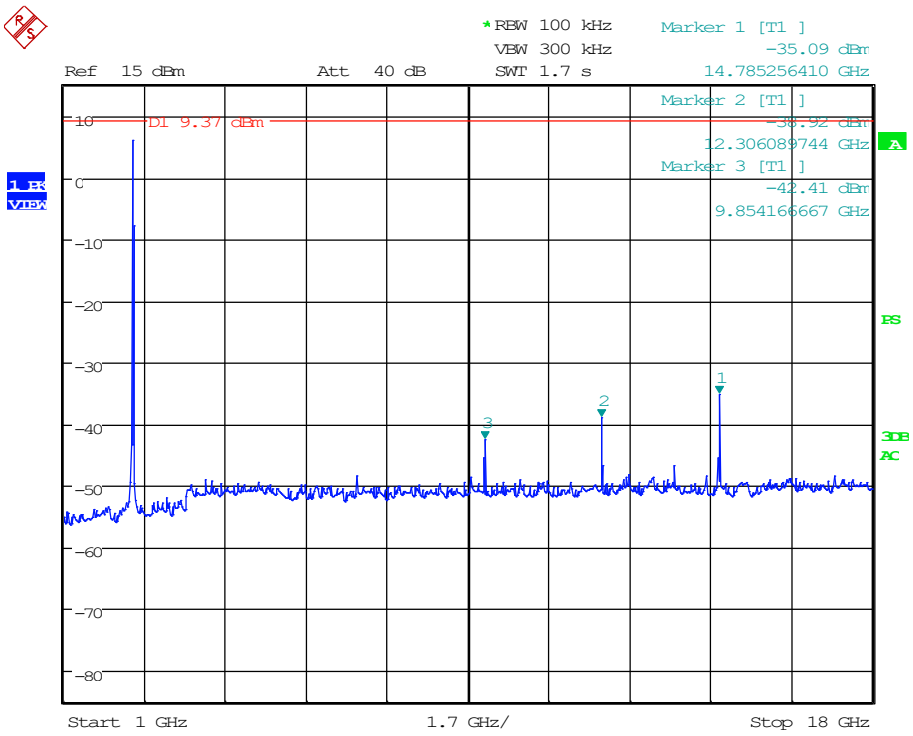
.



Date: 31.OCT.2019 12:22:26

11b CCK: High Channel, 1 GHz to 18 GHz

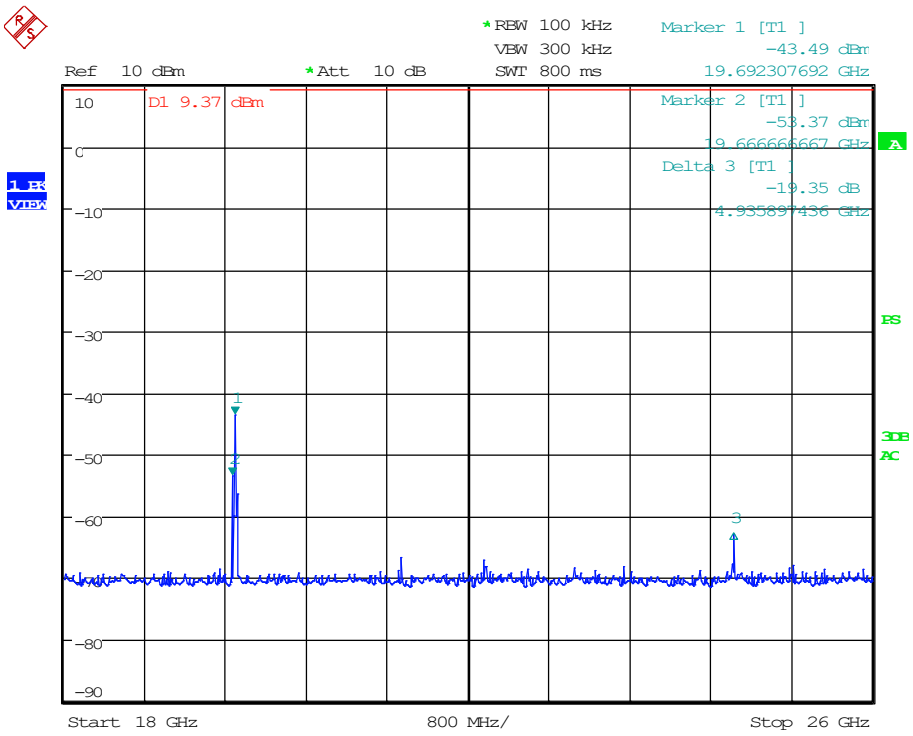
.



Date: 31.OCT.2019 12:19:43

11b CCK: High Channel, 18 GHz to 26 GHz

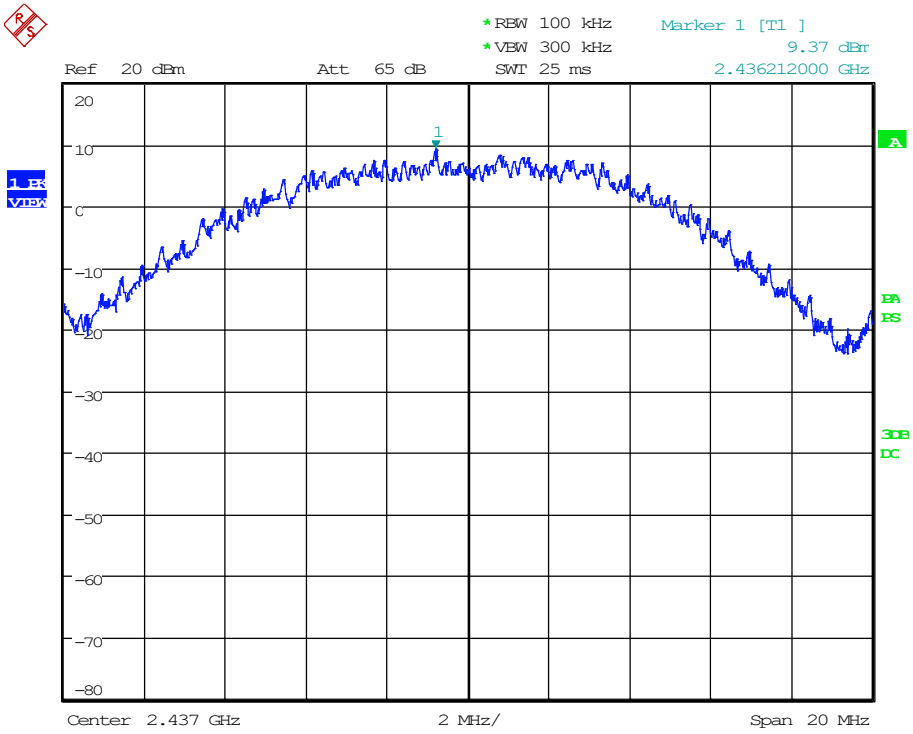
.



Date: 31.OCT.2019 12:04:21

11b CCK: Reference

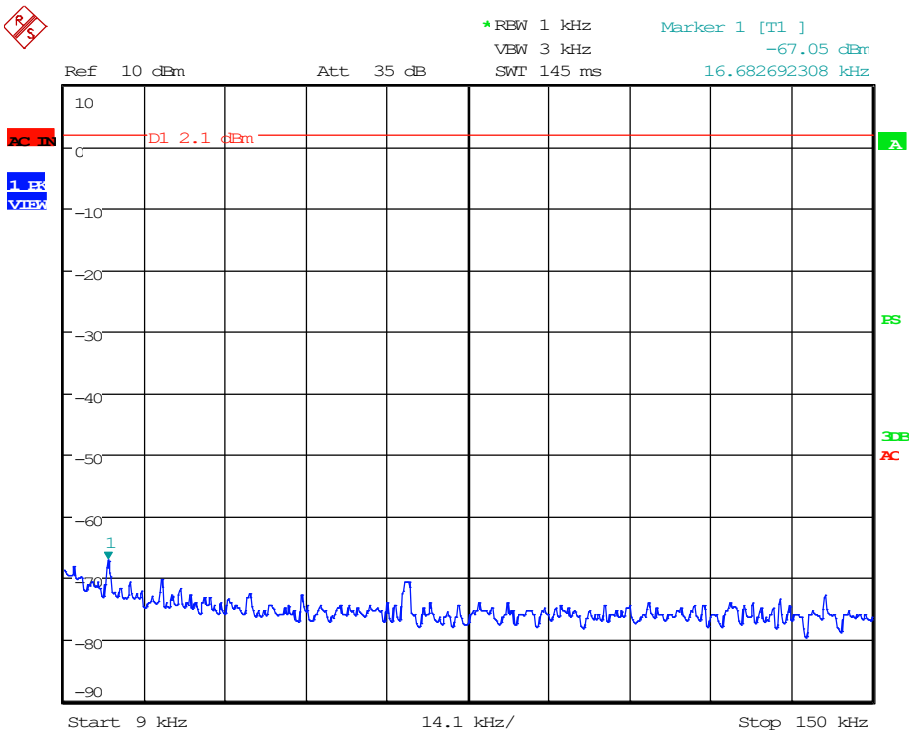
.



Date: 31.OCT.2019 11:55:37

11g 54 Mbps OFDM: Low Channel, 0.009 MHz to 0.15 MHz

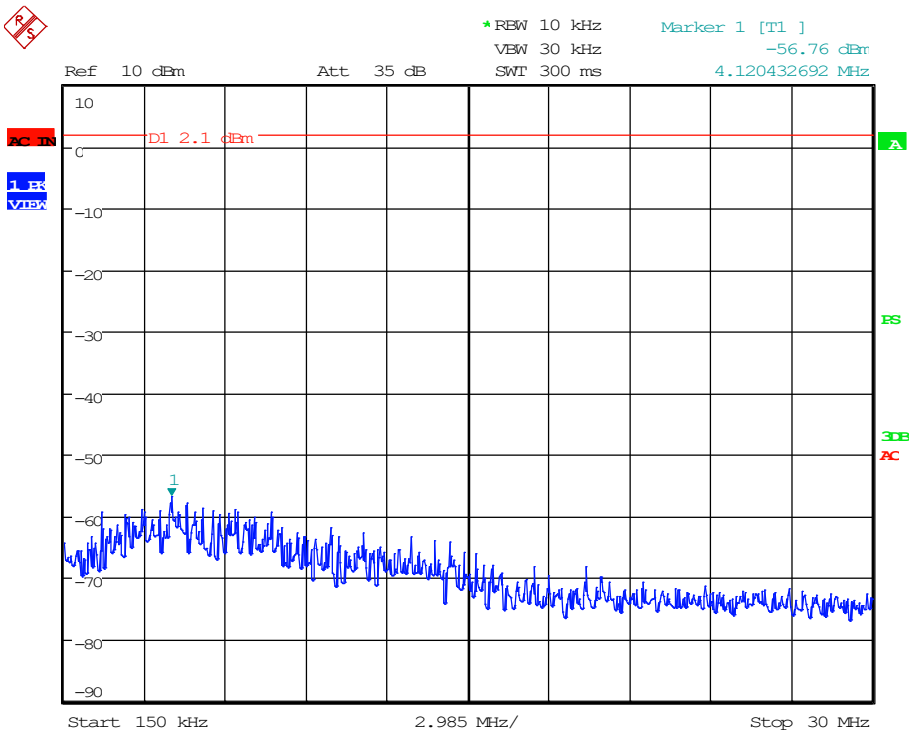
.



Date: 31.OCT.2019 13:10:52

11g 54 Mbps OFDM: Low Channel, 0.15 MHz to 30 MHz

.



Date: 31.OCT.2019 13:10:00

11g 54 Mbps OFDM: Low Channel, 30 MHz to 1000 MHz

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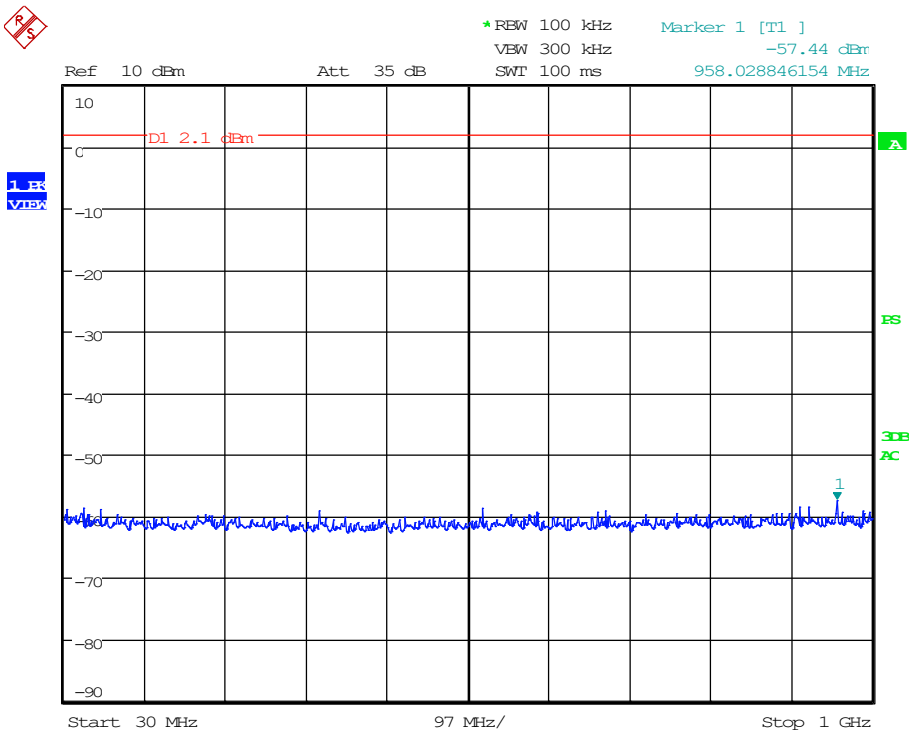

11g 54 Mbps OFDM: Low Channel, 1 GHz to 18 GHz

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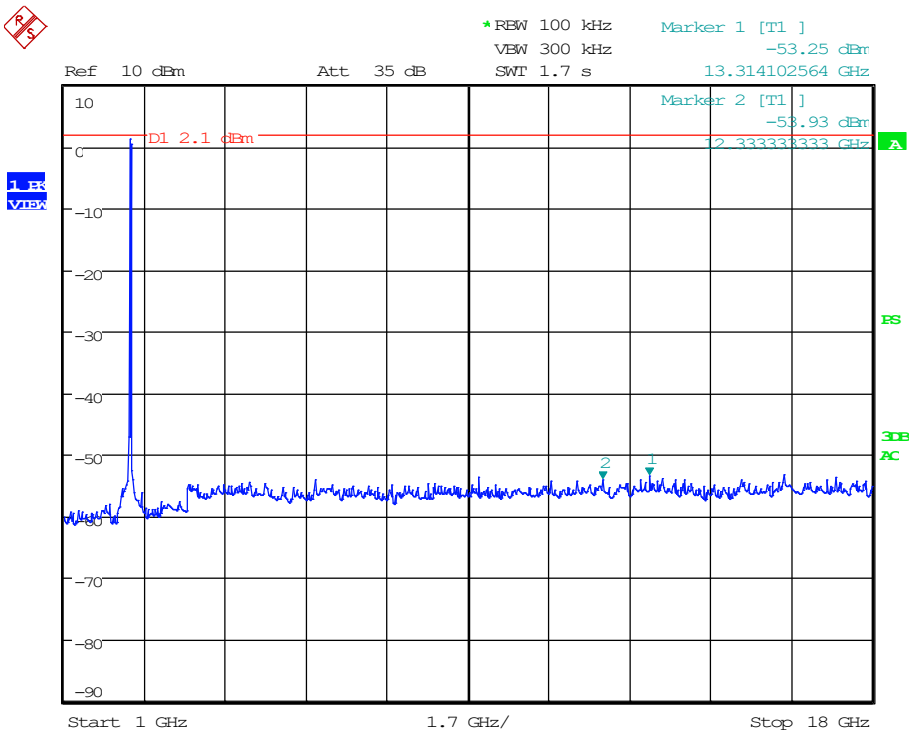

Date: 31.OCT.2019 13:04:27

11g 54 Mbps OFDM: Low Channel, 18 GHz to 26 GHz

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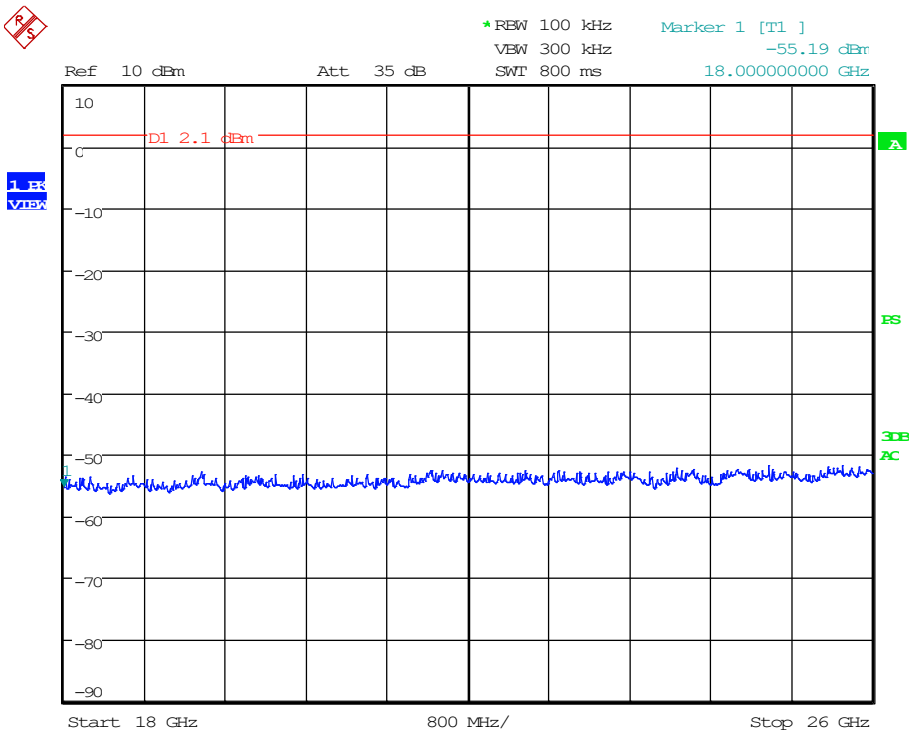
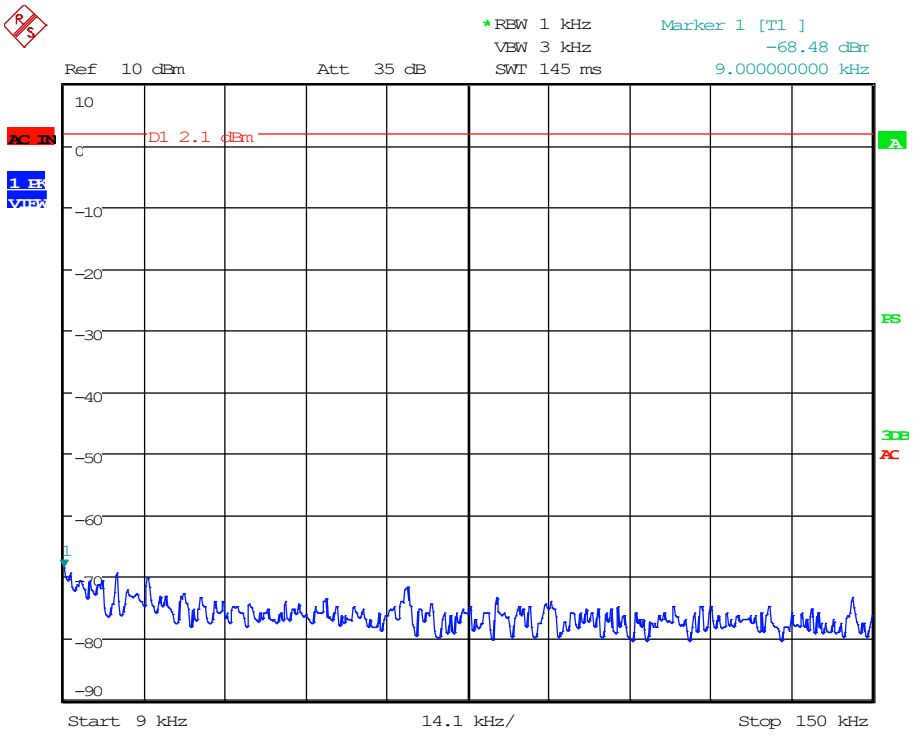


Date: 31.OCT.2019 12:53:29

11g 54 Mbps OFDM: Mid Channel, 0.009 MHz to 0.15 MHz

.



11g 54 Mbps OFDM: Mid Channel, 0.15 MHz to 30 MHz

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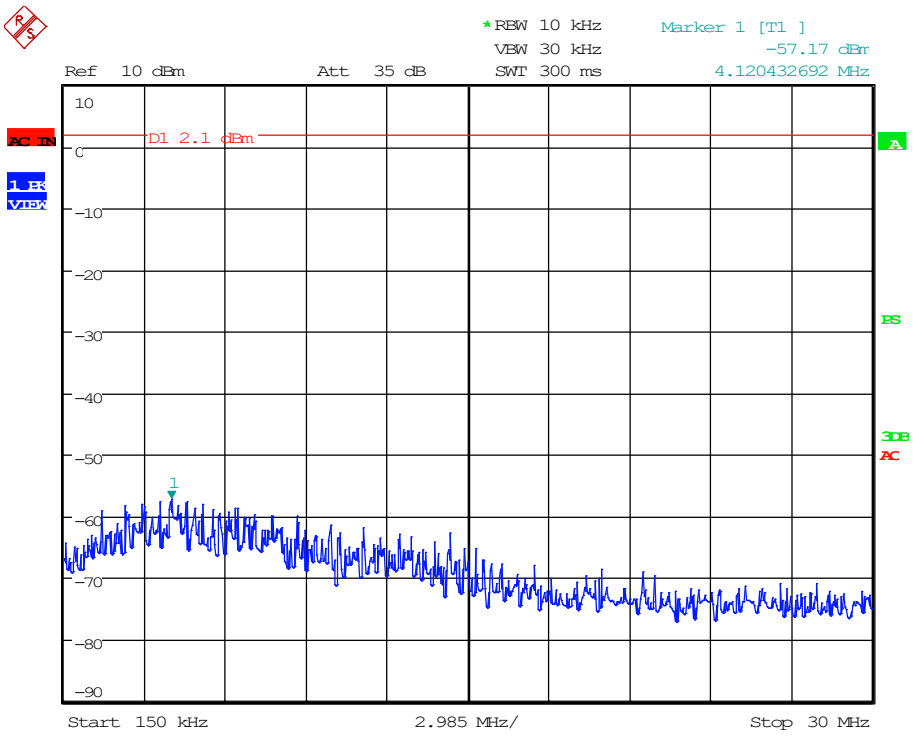

Date: 31.OCT.2019 13:09:19

11g 54 Mbps OFDM: Mid Channel, 30 MHz to 1000 MHz

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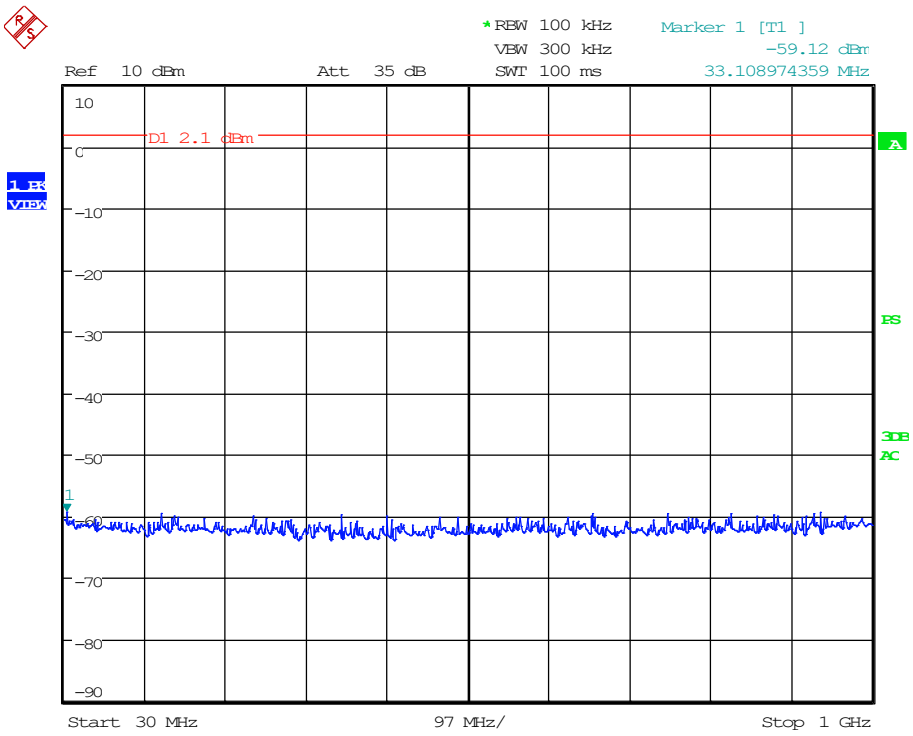
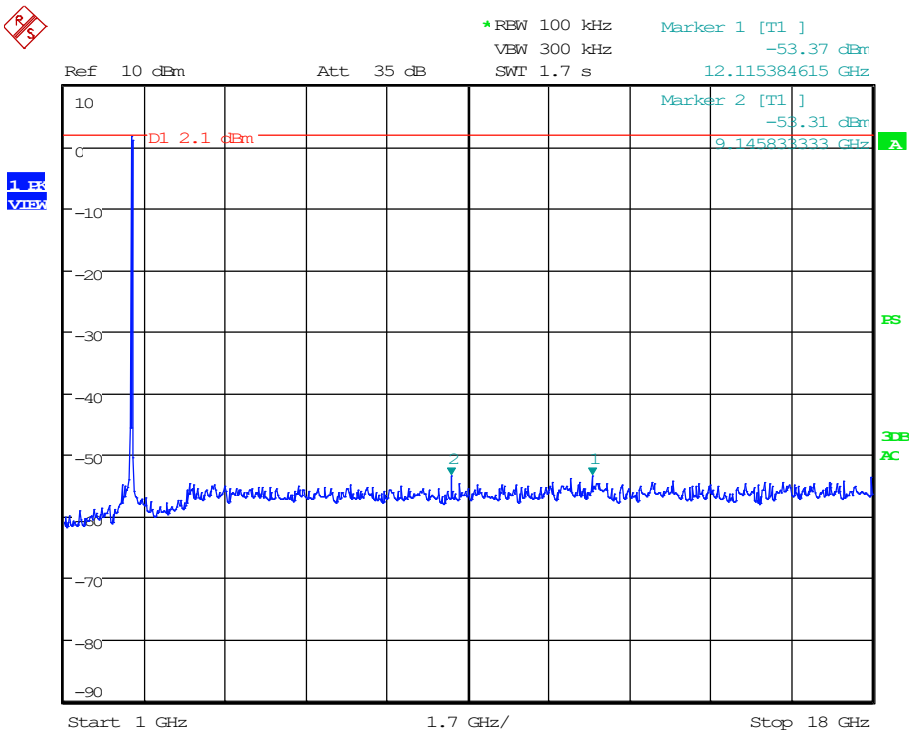


Date: 31.OCT.2019 13:06:34

11g 54 Mbps OFDM: Mid Channel, 1 GHz to 18 GHz

.



Date: 31.OCT.2019 13:02:19

11g 54 Mbps OFDM: Mid Channel, 18 GHz to 26 GHz

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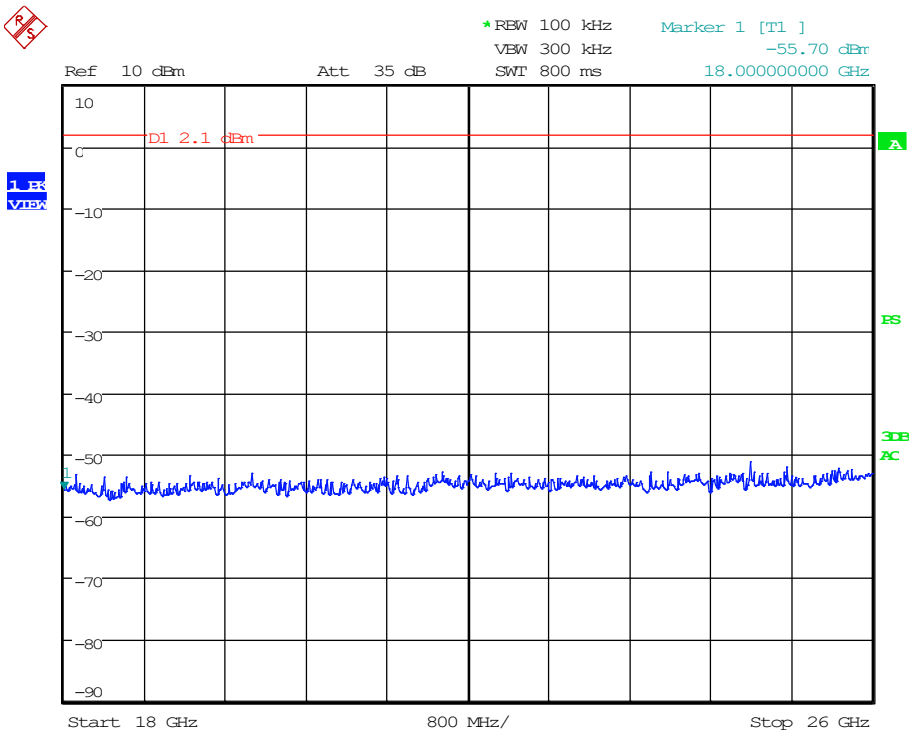
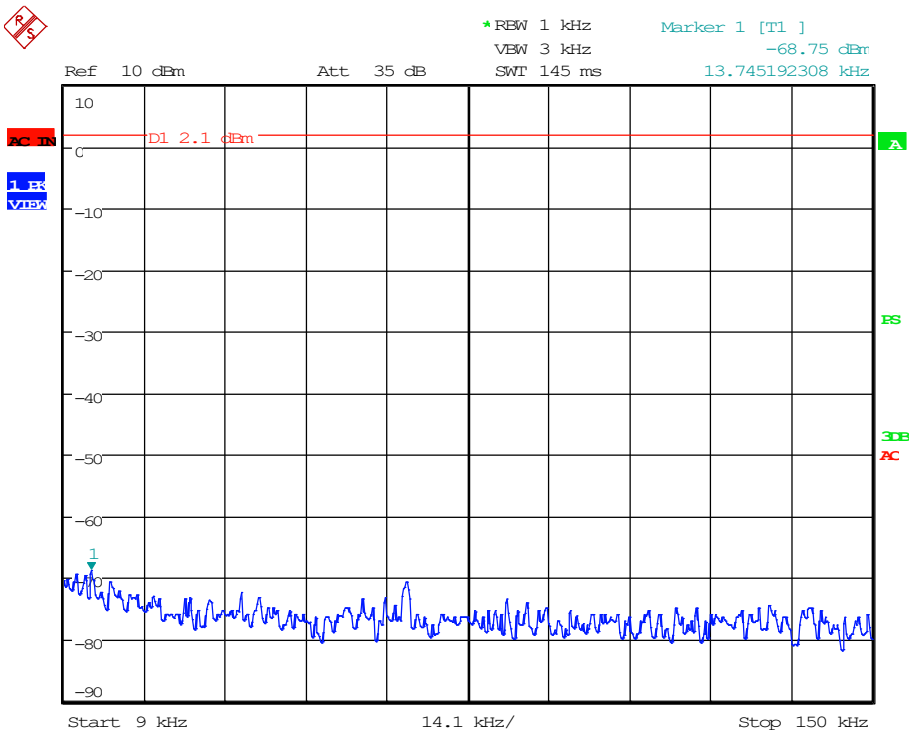


Date: 31.OCT.2019 12:58:35

11g 54 Mbps OFDM: High Channel, 0.009 MHz to 0.15 MHz

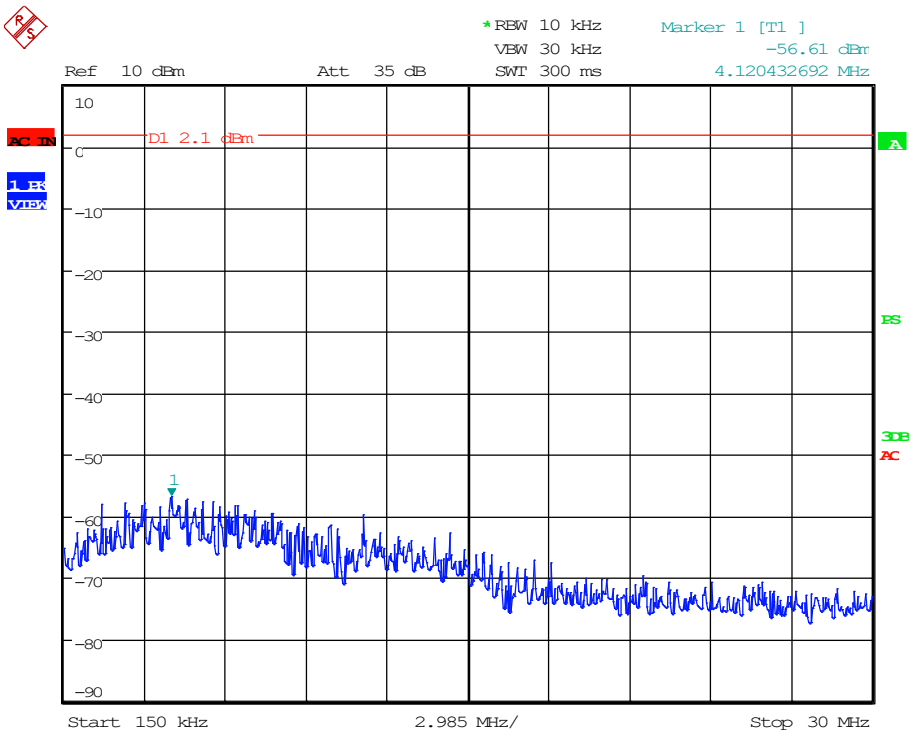
.



Date: 31.OCT.2019 13:11:53

11g 54 Mbps OFDM: High Channel, 0.15 MHz to 30 MHz

.



Date: 31.OCT.2019 13:08:35

11g 54 Mbps OFDM: High Channel, 30 MHz to 1000 MHz

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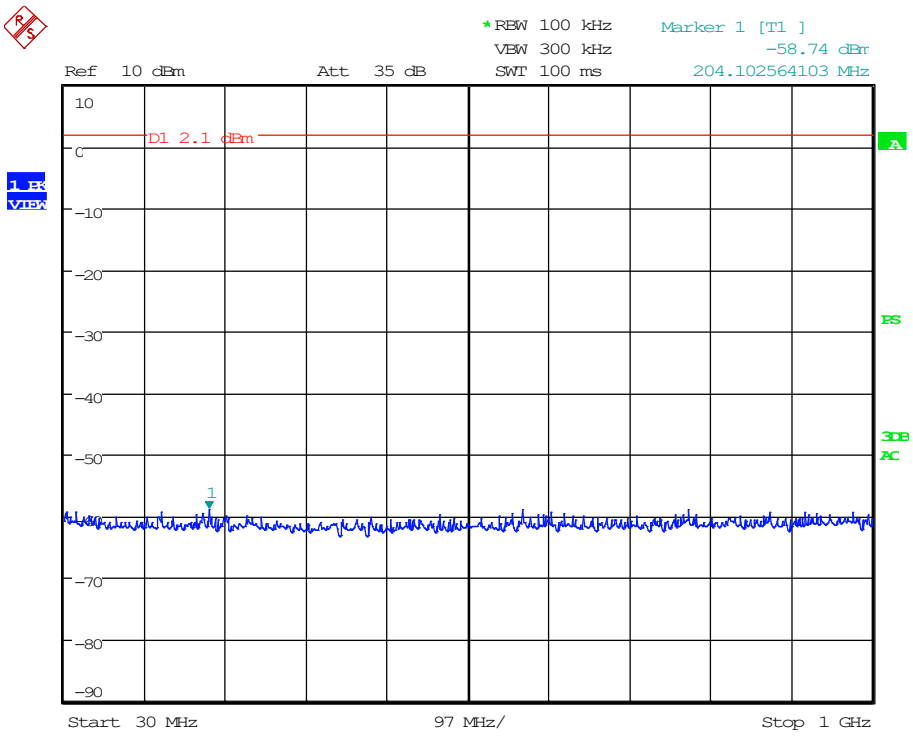

11g 54 Mbps OFDM: High Channel, 1 GHz to 18 GHz

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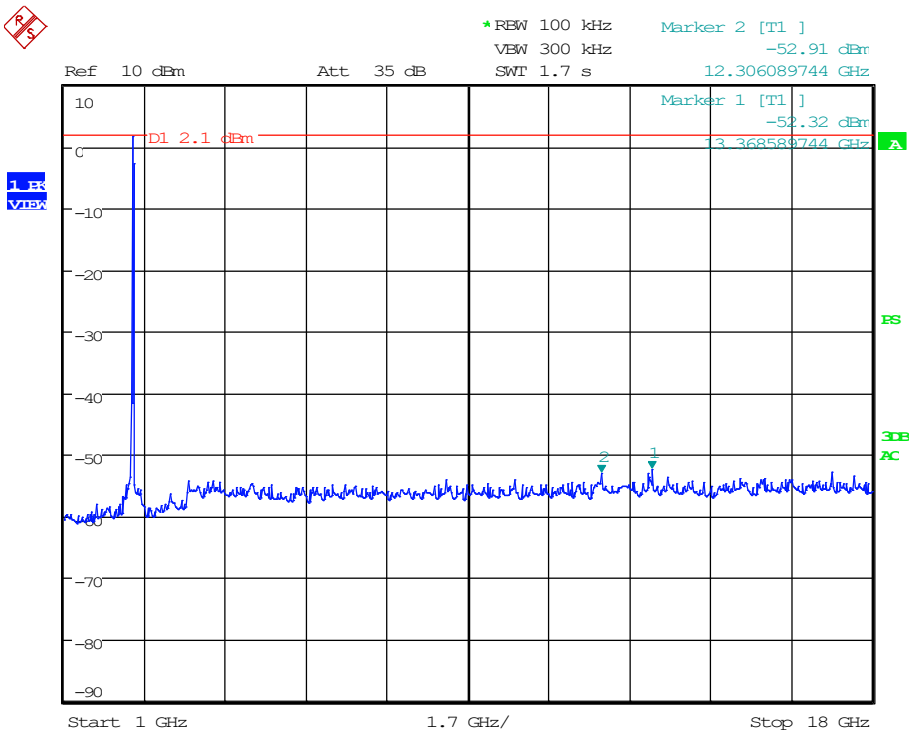
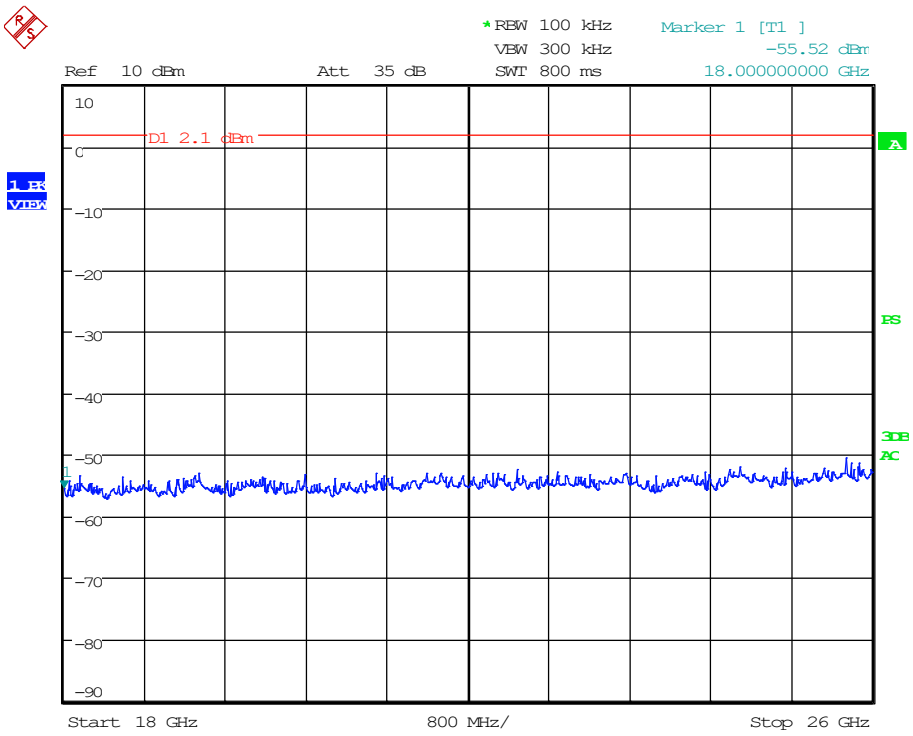


11g 54 Mbps OFDM: High Channel, 18 GHz to 26 GHz

.



Date: 31.OCT.2019 12:59:10

11n MCS7: Low Channel, 0.009 MHz to 0.15 MHz

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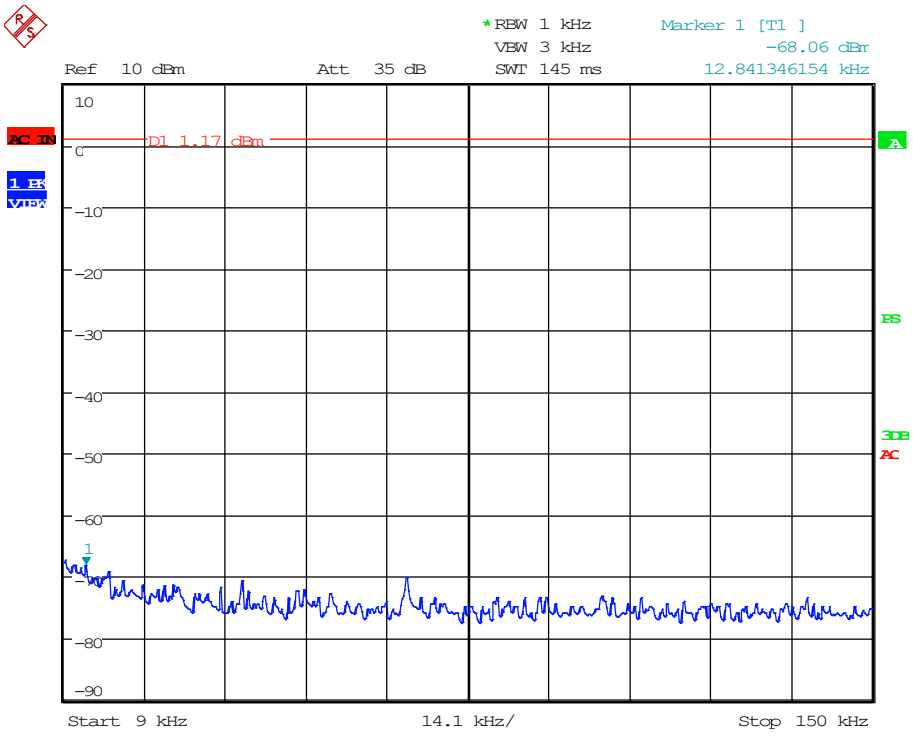

11n MCS7: Low Channel, 0.15 MHz to 30 MHz

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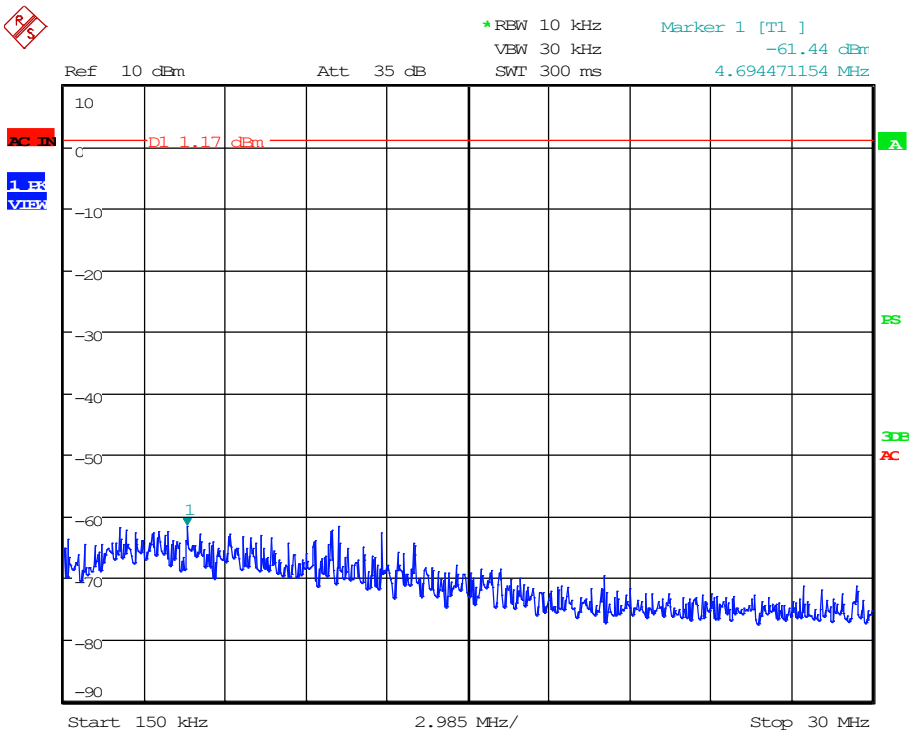

Date: 31.OCT.2019 13:32:37

11n MCS7: Low Channel, 30 MHz to 1000 MHz

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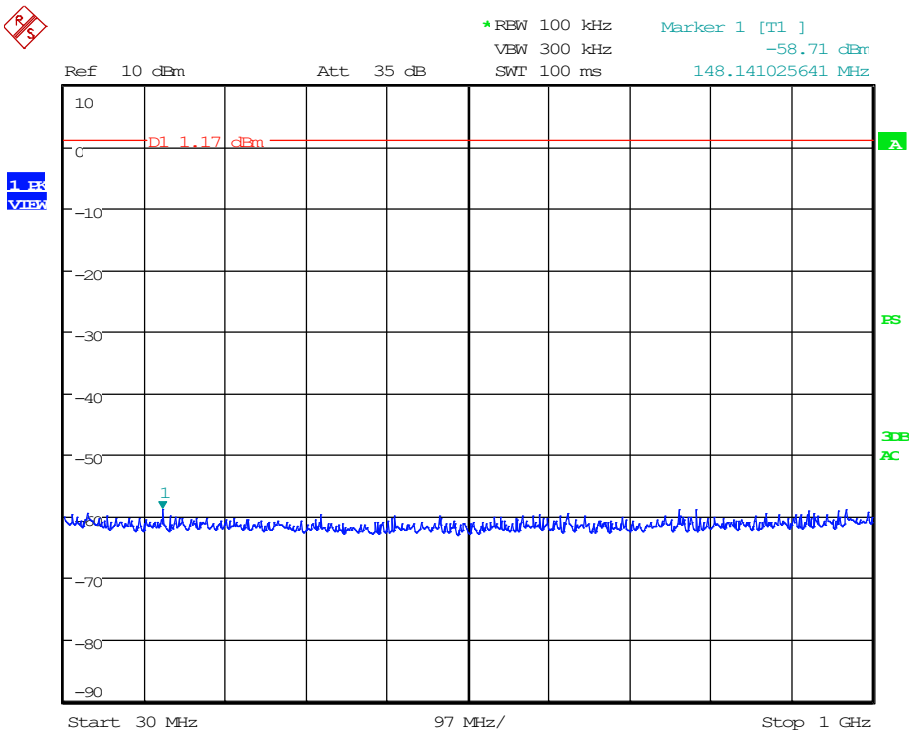
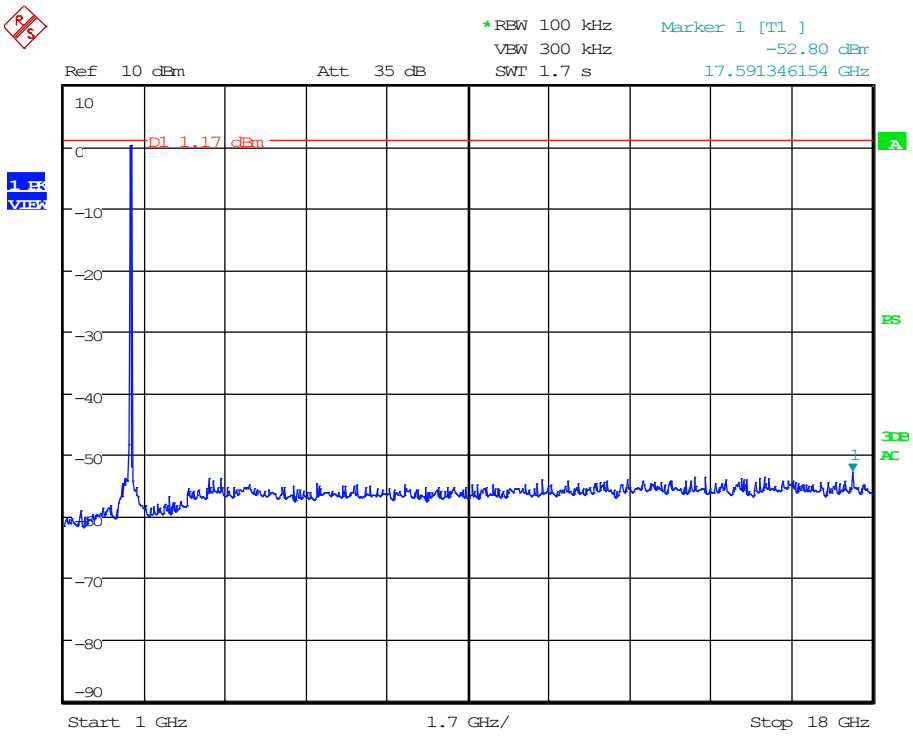


Date: 31.OCT.2019 13:24:19

11n MCS7: Low Channel, 1 GHz to 18 GHz

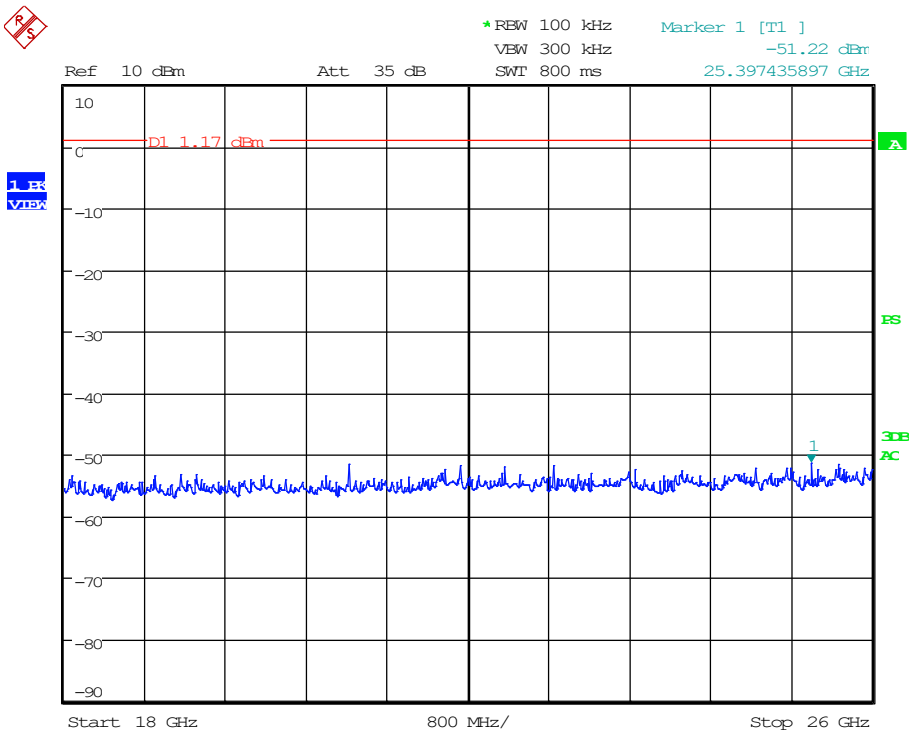
.



Date: 31.OCT.2019 13:23:29

11n MCS7: Low Channel, 18 GHz to 26 GHz

.



Date: 31.OCT.2019 13:18:39

11n MCS7: Mid Channel, 0.009 MHz to 0.15 MHz

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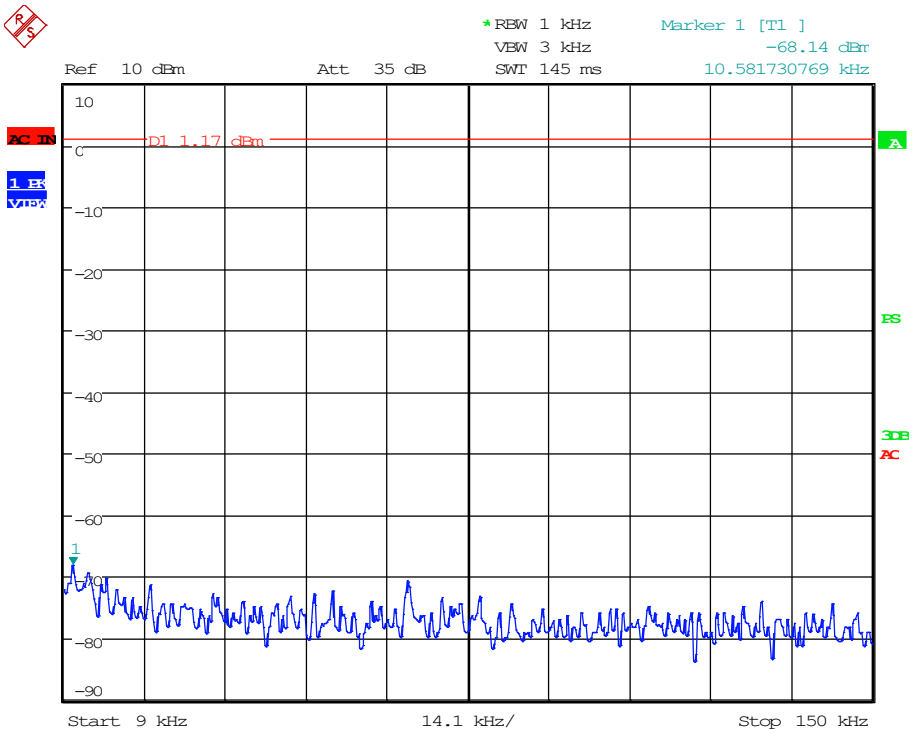
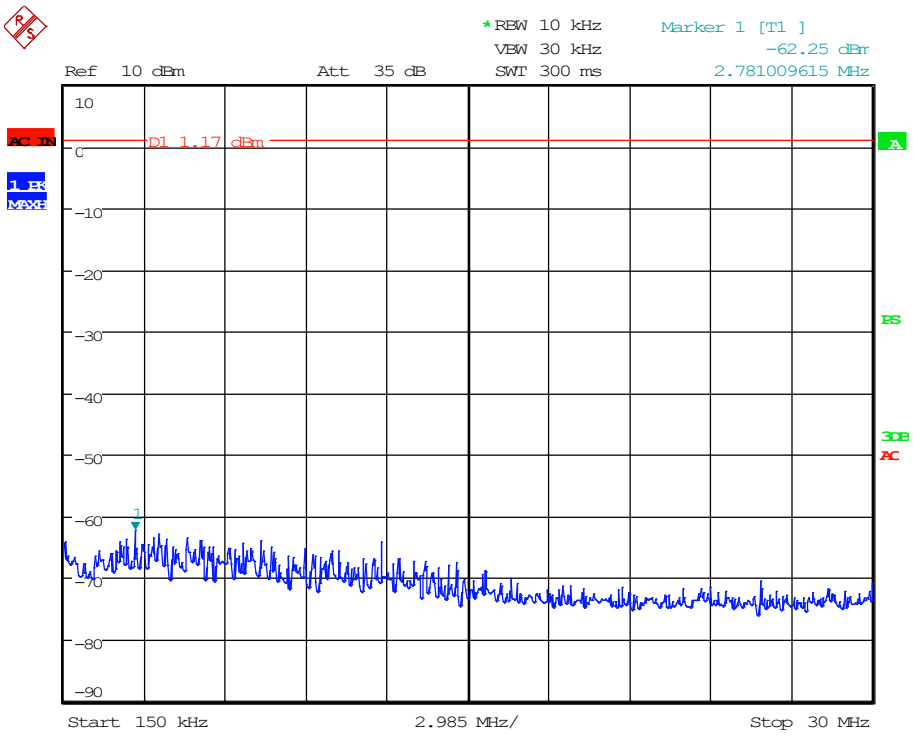


Date: 31.OCT.2019 13:34:25

11n MCS7: Mid Channel, 0.15 MHz to 30 MHz

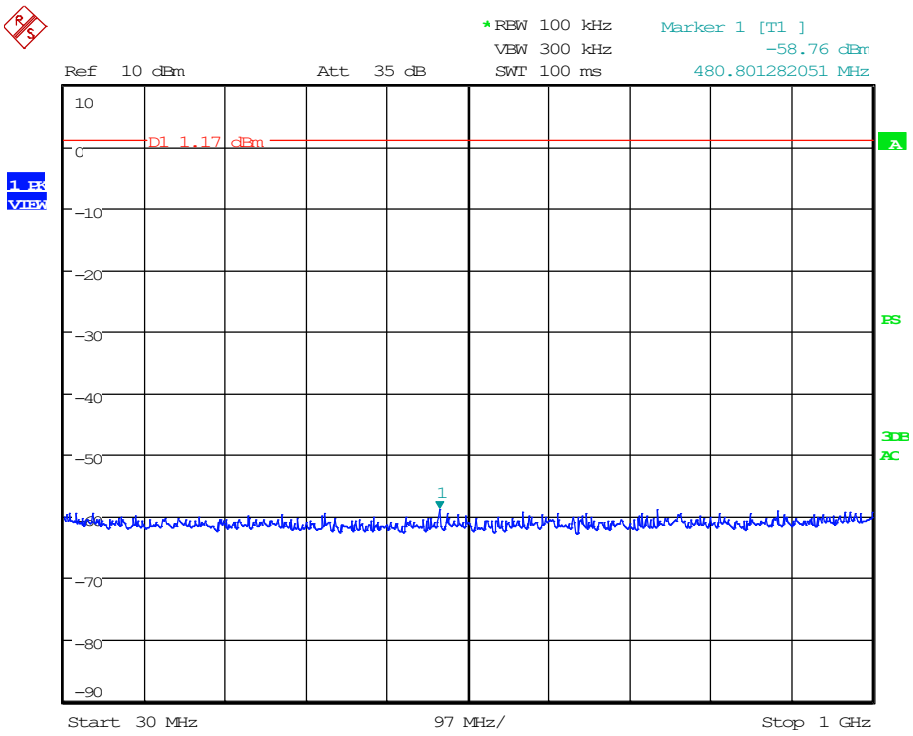
.



Date: 31.OCT.2019 13:27:43

11n MCS7: Mid Channel, 30 MHz to 1000 MHz

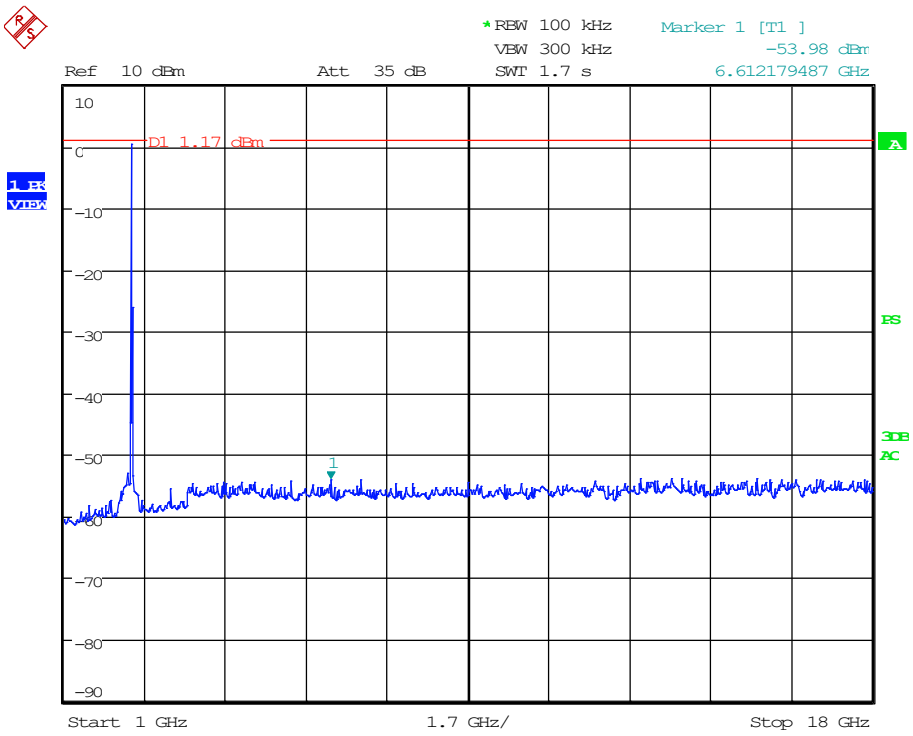
.



Date: 31.OCT.2019 13:24:55

11n MCS7: Mid Channel, 1 GHz to 18 GHz

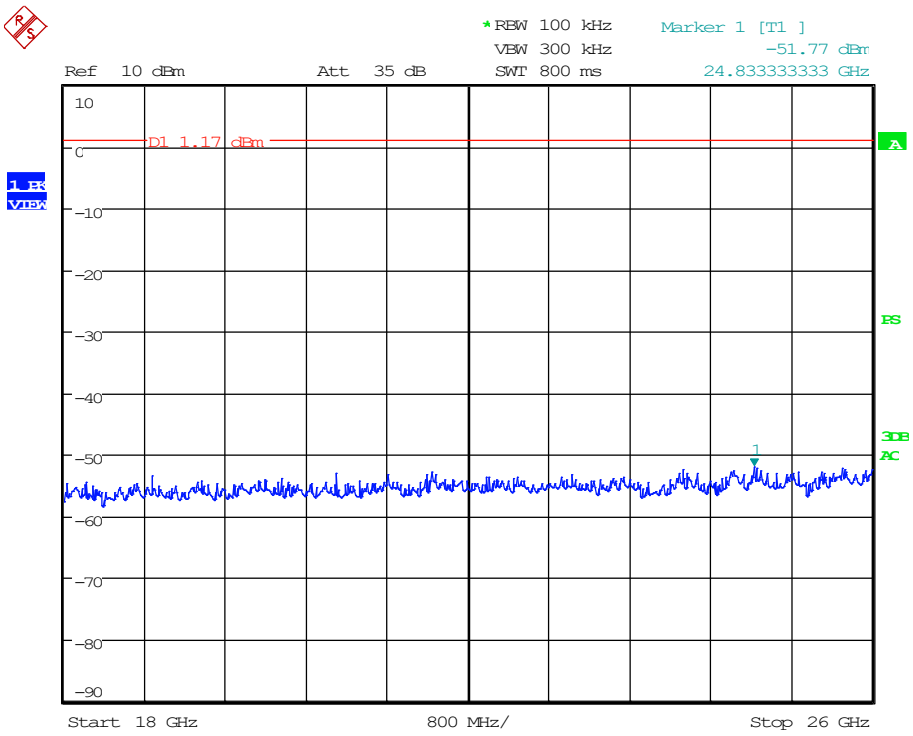
.



Date: 31.OCT.2019 13:22:24

11n MCS7: Mid Channel, 18 GHz to 26 GHz

.



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11n MCS7: High Channel, 0.009 MHz to 0.15 MHz

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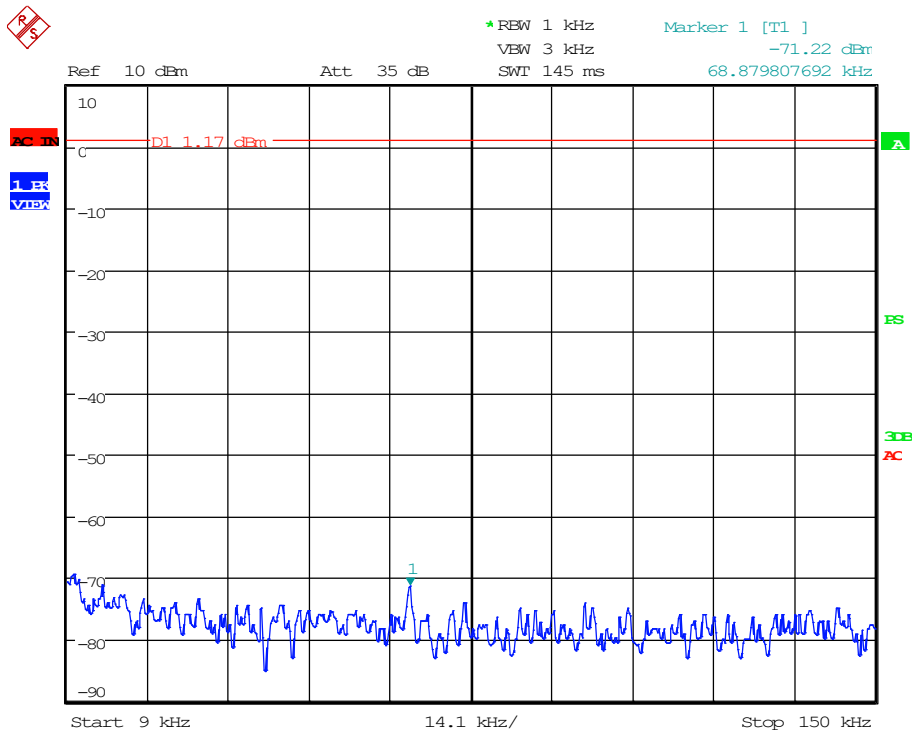

Date: 31.OCT.2019 13:34:57

11n MCS7: High Channel, 0.15 MHz to 30 MHz

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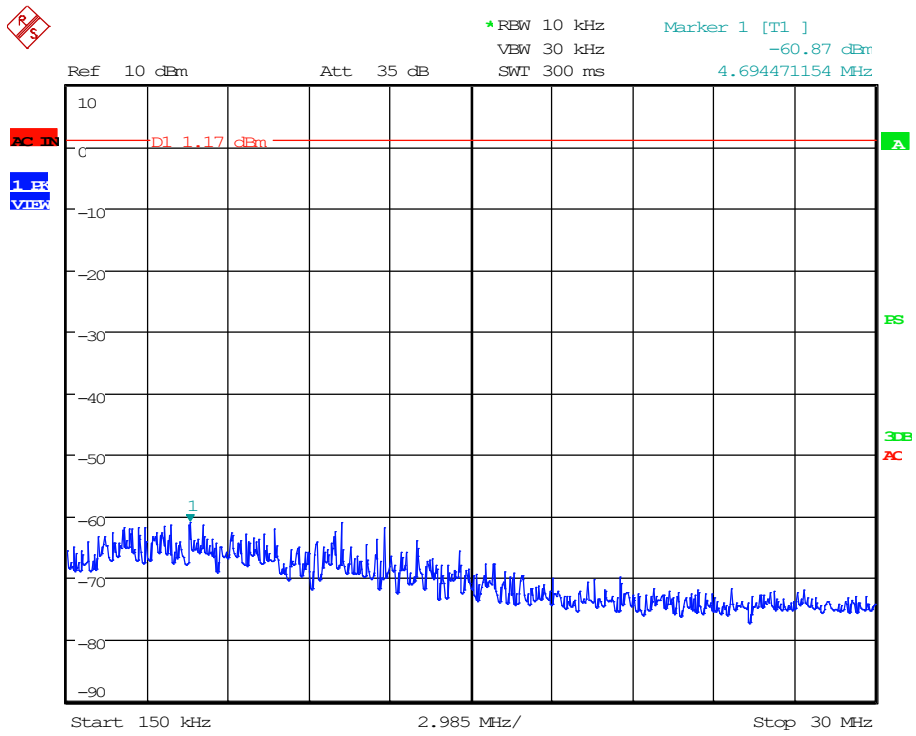

Date: 31.OCT.2019 13:26:46

11n MCS7: High Channel, 30 MHz to 1000 MHz

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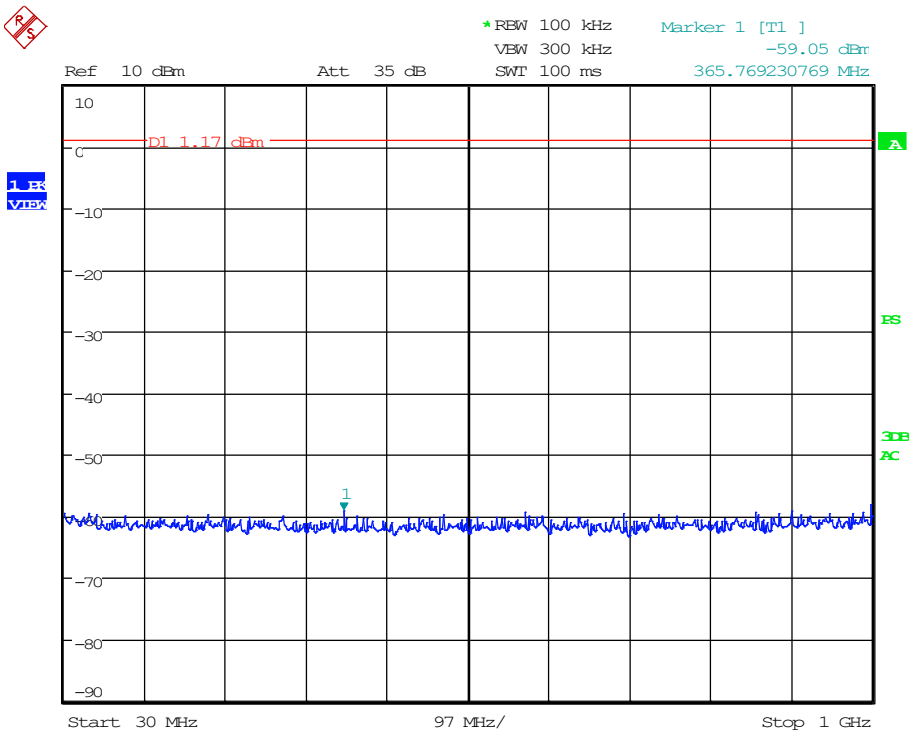

Date: 31.OCT.2019 13:25:51

11n MCS7: High Channel, 1 GHz to 18 GHz

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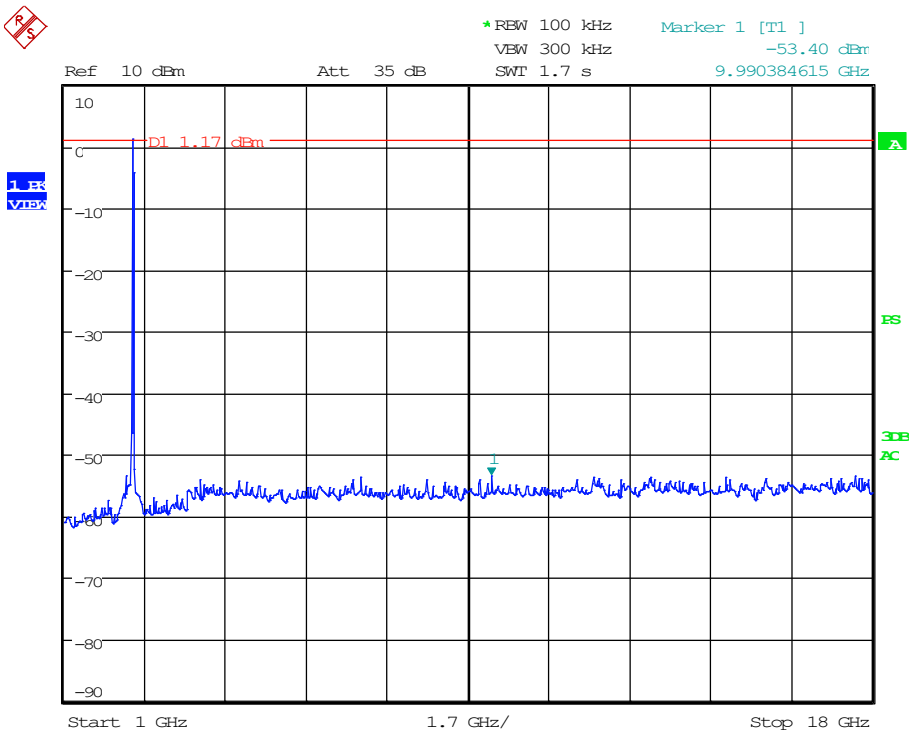
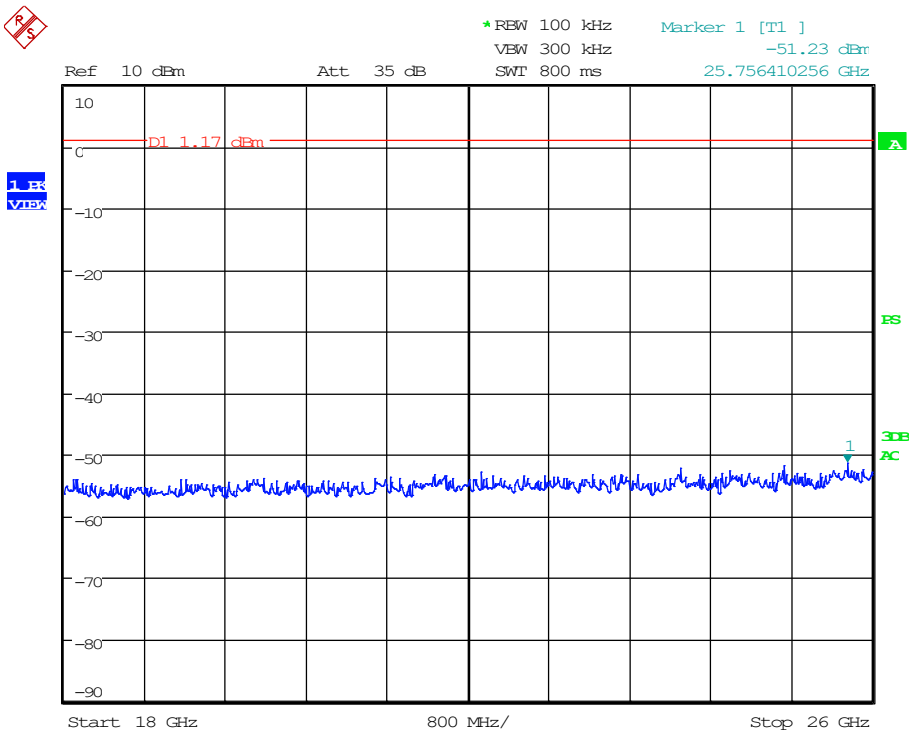


Date: 31.OCT.2019 13:21:10

11n MCS7: High Channel, 18 GHz to 26 GHz

.



Date: 31.OCT.2019 13:20:00

11n MCS7: Reference

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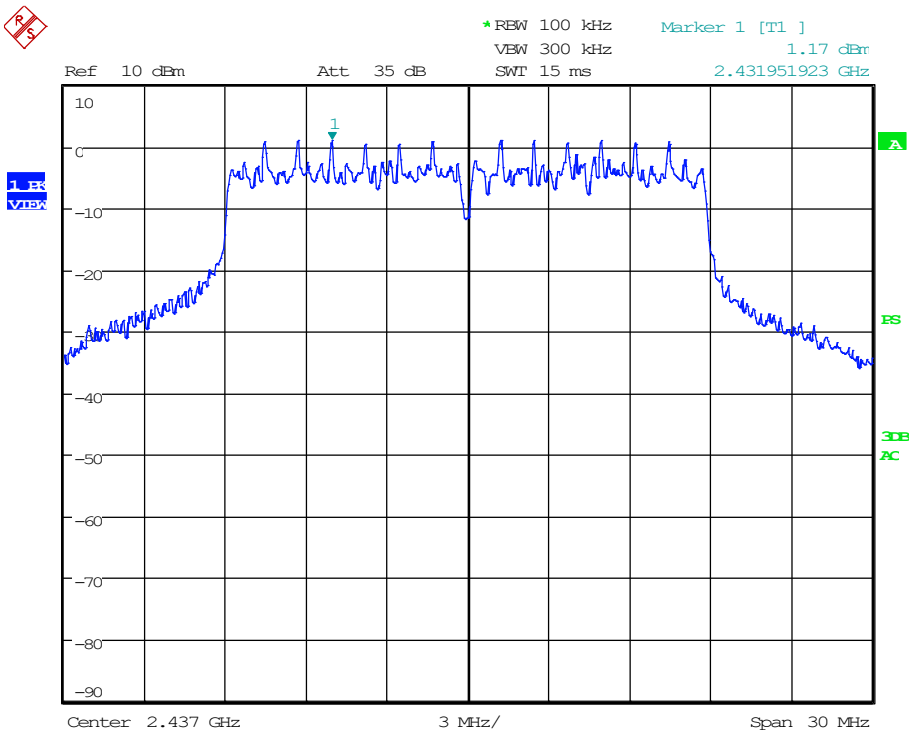


Date: 31.OCT.2019 13:17:01

10 RADIATED SPURIOUS EMISSION

The EUT antenna port was fitted with its integral/internal antenna. Radiated emissions were measured in a Semi-Anechoic Chamber. All emissions generated that fall in the restricted bands per FCC Part 15.205 were examined.

10.1 Requirements:

All emissions that fall in the restricted bands defined in FCC Part 15.205 shall not exceed the maximum field strength listed in FCC Part 15.209(a).

10.2 Radiated Spurious Emission Test Data

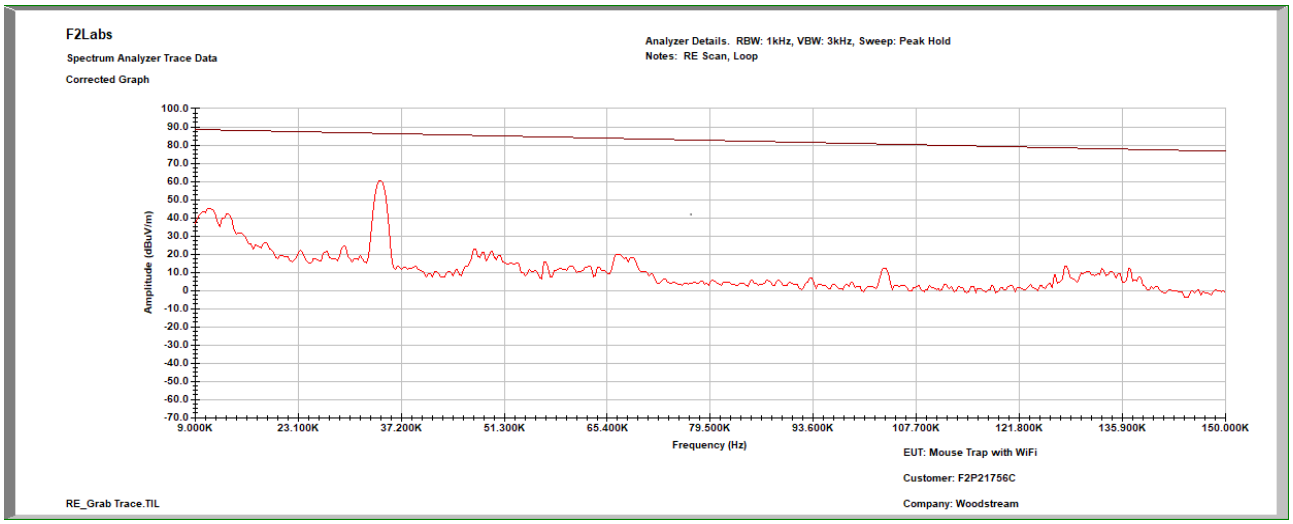
Test Date(s):	Oct. 29, 2019	**Test Engineer:**	J. Chiller
Standards:	CFR 47 Part 15.247(d); Part 15.209 / KDB558074	**Air Temperature:**	21.6ºC
		Relative Humidity:	40%

Notes: Plots are peak, max hold pre-scan data included only to determine what frequencies to investigate and measure. The EUT was initially placed in a semi-anechoic chamber, and rotated in all three orthogonal positions to maximize the emissions. Characterization measurements were then performed to determine at which frequencies significant emissions occurred. These graphs are shown below.

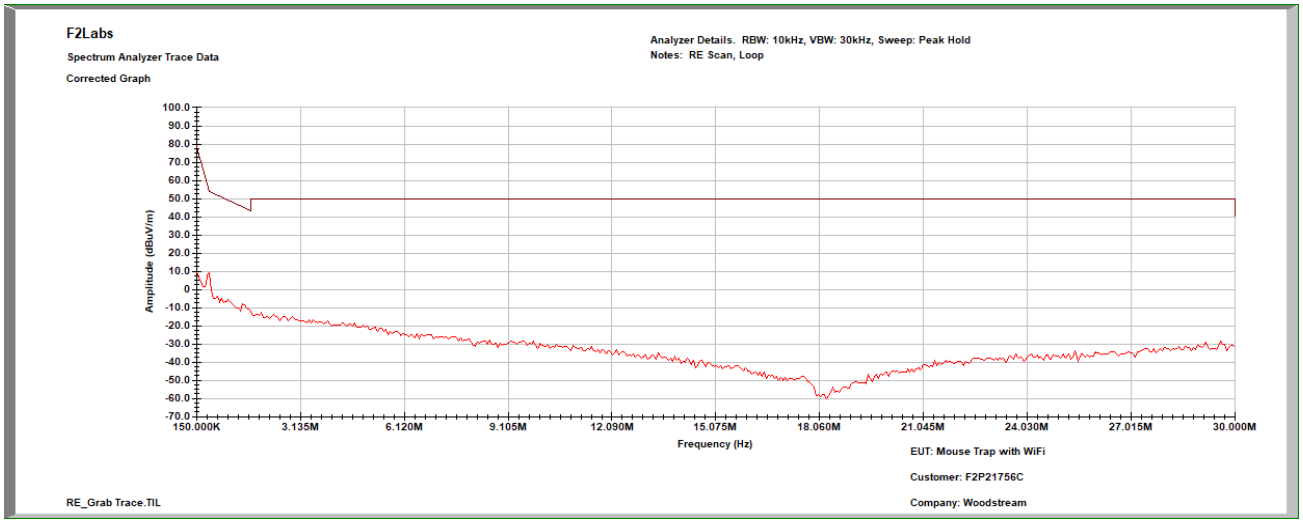
The equipment was fully exercised with all cabling attached to the EUT and was positioned on the table for maximum emissions. While the equipment was energized, the receiving antenna was scanned from 1.0 meter to 4.0 meters in both vertical and horizontal polarities while the turntable was adjusted 360 degrees to determine the maximum field strength. The tables of measured results can be found below.

In the following plots, the black line indicates the active scan and the green line indicates the MaxPk measurement with the EUT on. Emissions to be found by the EUT were measured and listed in tables. The plots are pre-scan plots of the worse-case channel and the data table reflects emissions from all channels. The 11b CCK was the worse-case modulation.

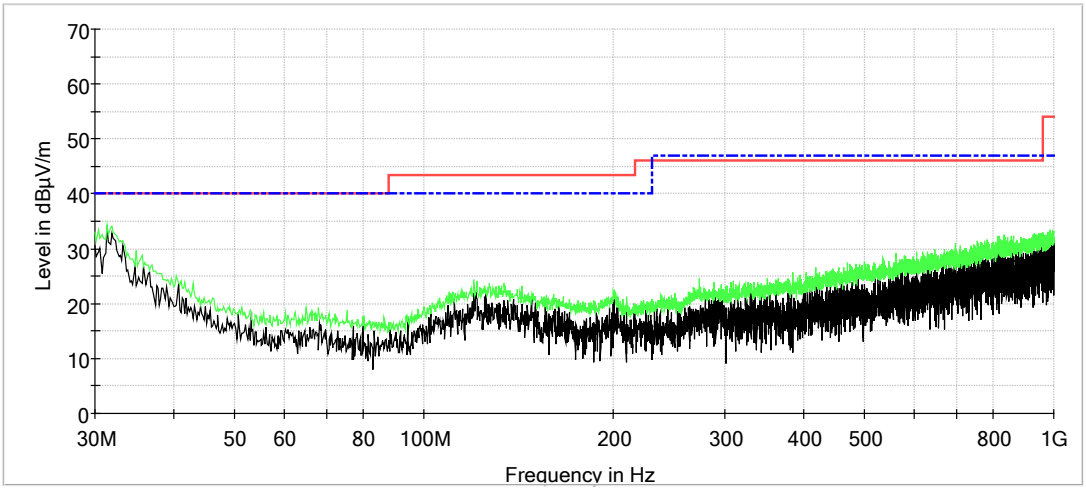
0.009 MHz to 0.15 MHz - Loop Antenna



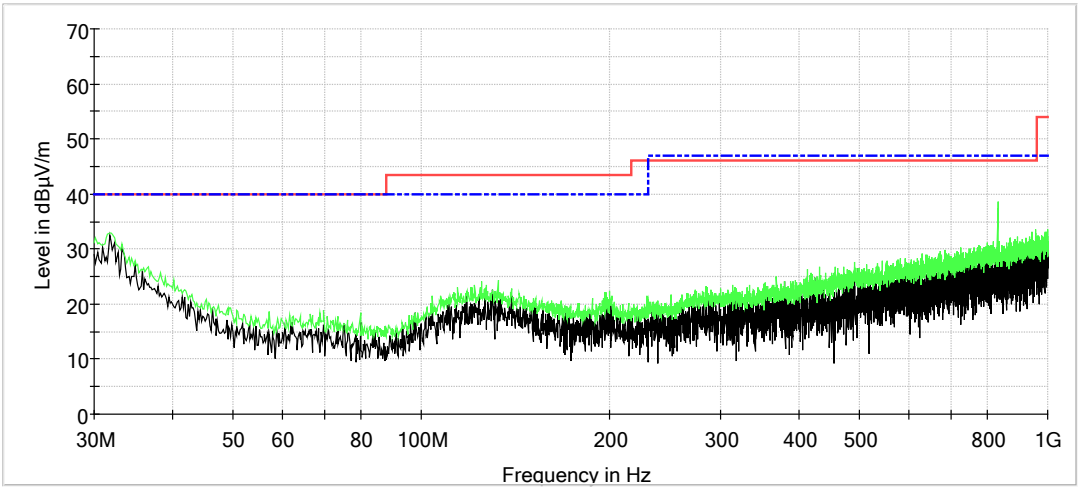
0.15 MHz to 30 MHz - Loop Antenna



30 MHz to 1000 MHz - Vertical

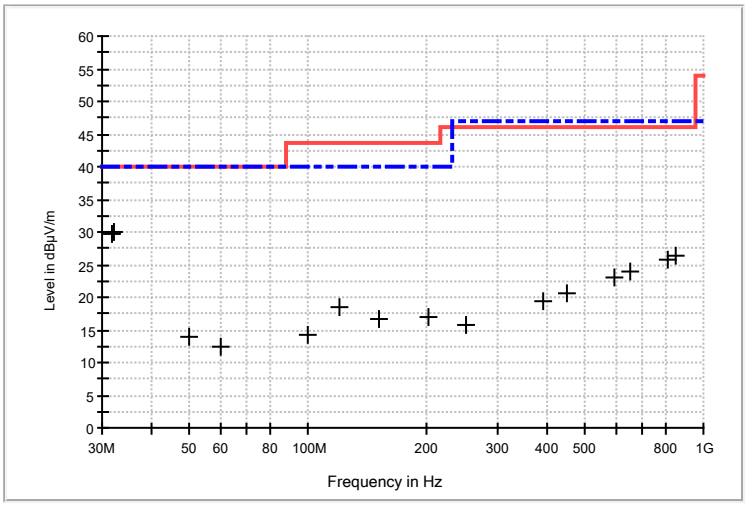


30 MHz to 1000 MHz - Horizontal

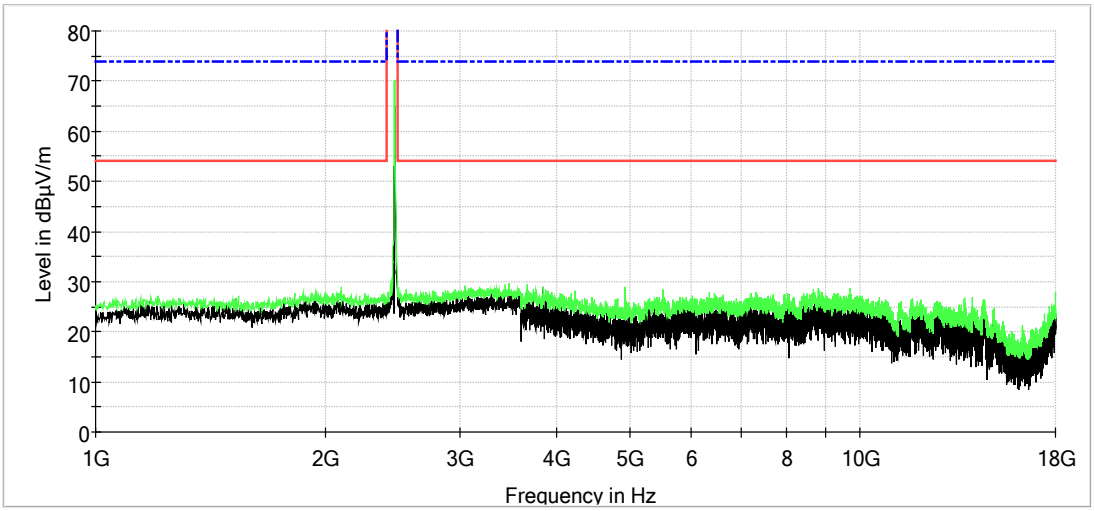


Measurements

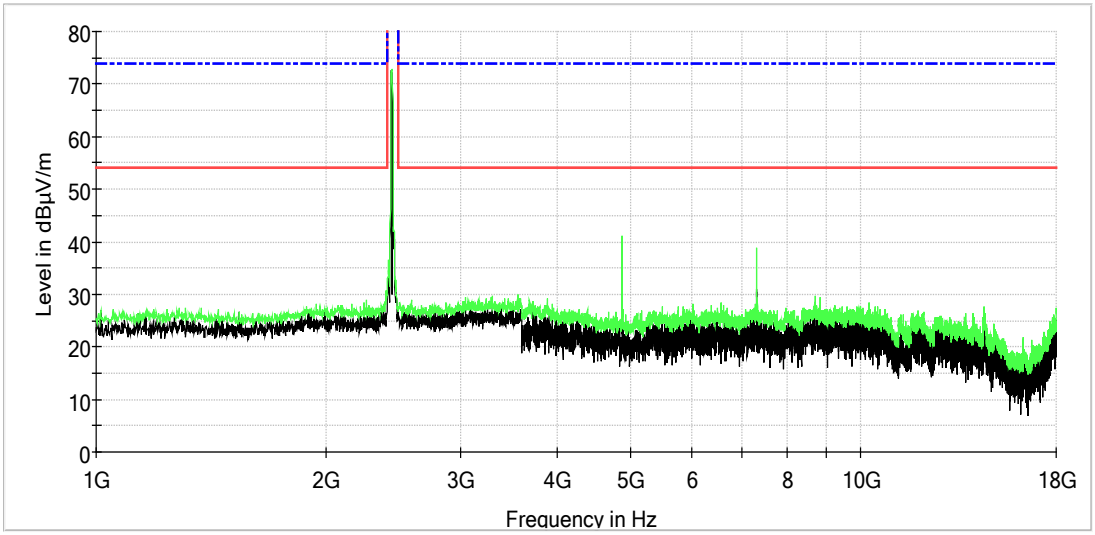
Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Azimuth (degrees)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
31.760000	V	100.00	0.00	24.3	5.3	29.60	40.0	-10.4
32.000000	H	100.00	0.00	24.9	5.1	30.00	40.0	-10.0
50.000000	H	100.00	0.00	20.4	-6.5	13.90	40.0	-26.1
60.280000	V	100.00	0.00	20.0	-7.5	12.50	40.0	-27.5
100.000000	H	100.00	0.00	19.6	-5.5	14.10	40.0	-25.9
120.000000	V	100.00	0.00	20.2	-1.8	18.40	40.0	-21.6
150.000000	H	100.00	0.00	19.5	-3.0	16.50	40.0	-23.5
201.120000	V	100.00	0.00	19.4	-2.4	17.00	40.0	-23.0
250.000000	H	100.00	0.00	19.4	-3.6	15.80	47.0	-31.2
391.600000	V	100.00	0.00	19.1	0.3	19.40	47.0	-27.6
450.000000	H	100.00	0.00	19.0	1.6	20.60	47.0	-26.4
596.480000	V	100.00	0.00	19.3	3.7	23.00	47.0	-24.0
650.000000	H	100.00	0.00	19.0	4.8	23.80	47.0	-23.2
813.560000	V	100.00	0.00	19.3	6.5	25.80	47.0	-21.2
850.000000	H	100.00	0.00	19.8	6.6	26.40	47.0	-20.6



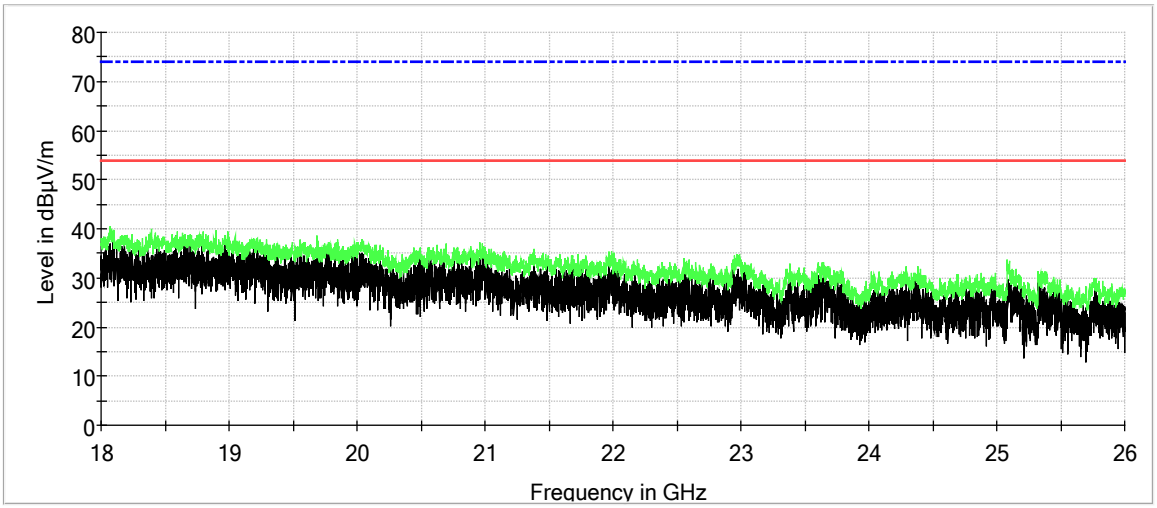
1 GHz to 18 GHz – Vertical



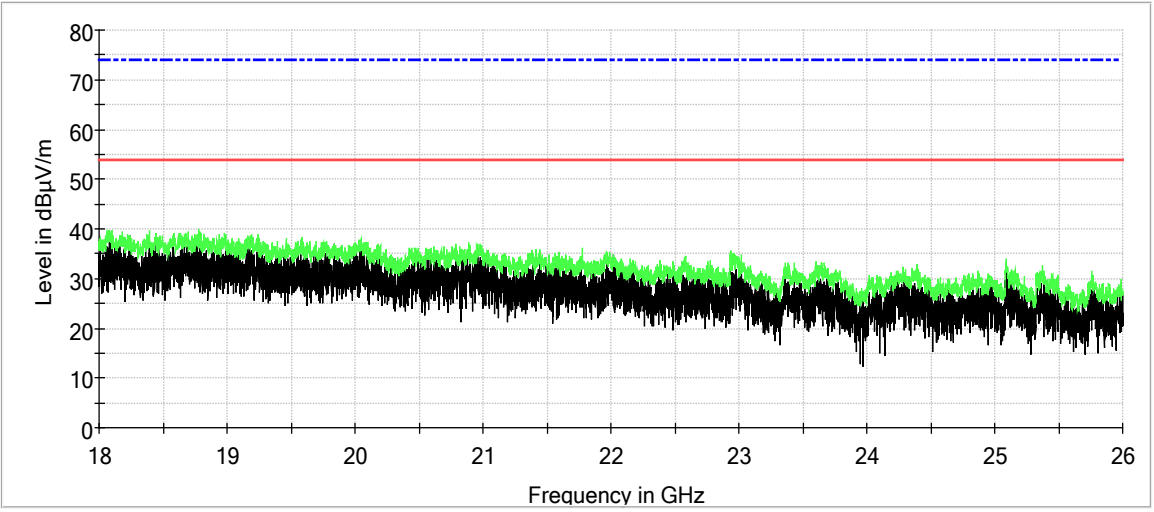
1 GHz to 18 GHz – Horizontal



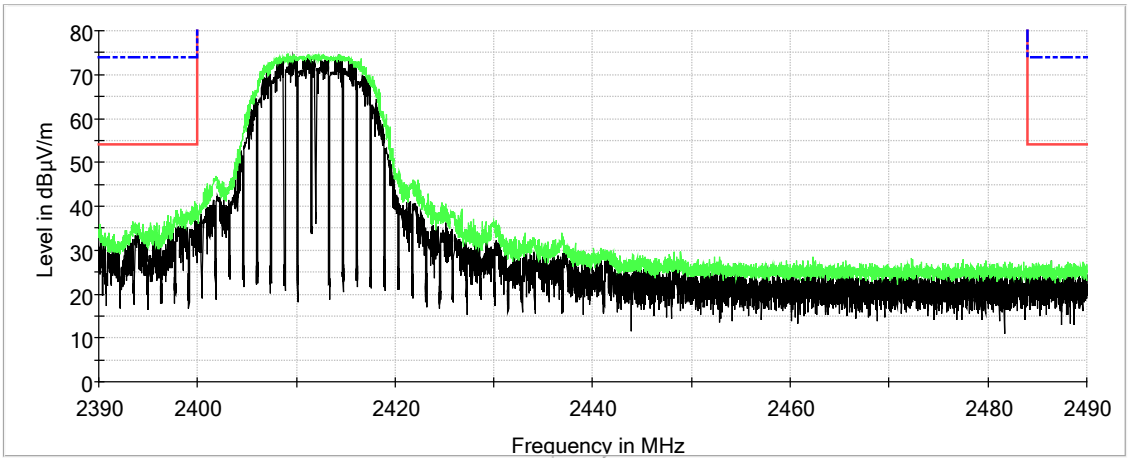
18 GHz to 26 GHz - Vertical



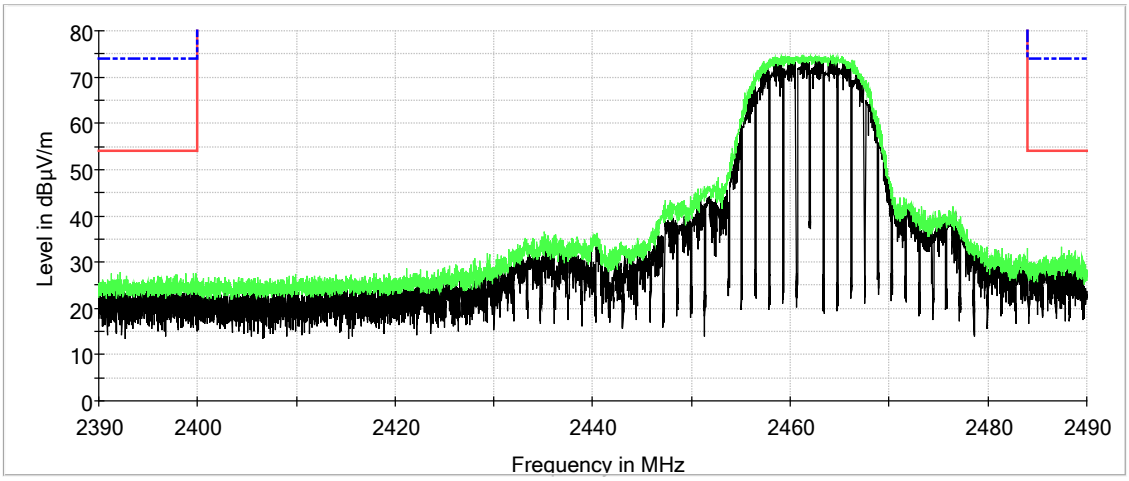
18 GHz to 26 GHz - Horizontal



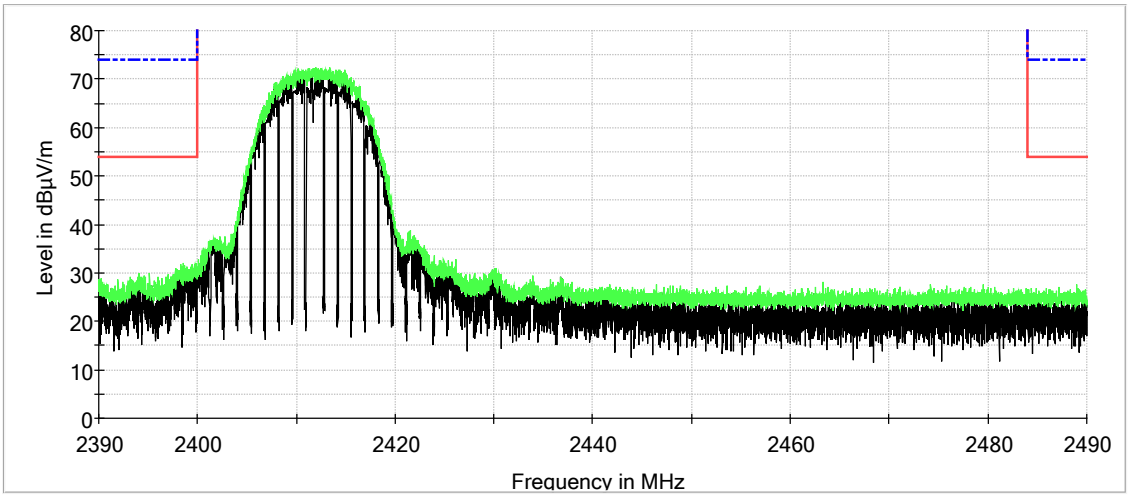
Lower Band Edge, 11b CCK: Horizontal



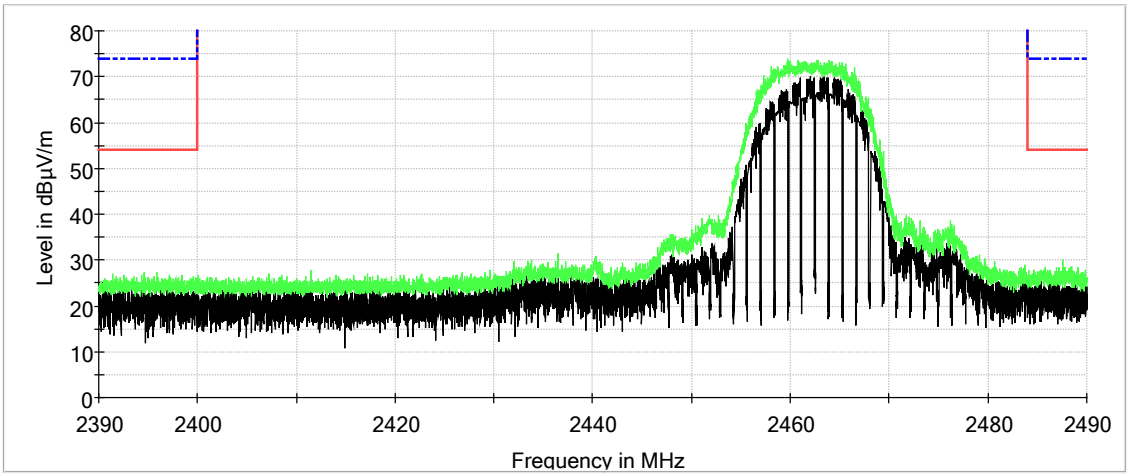
Upper Band Edge, 11b CCK: Horizontal



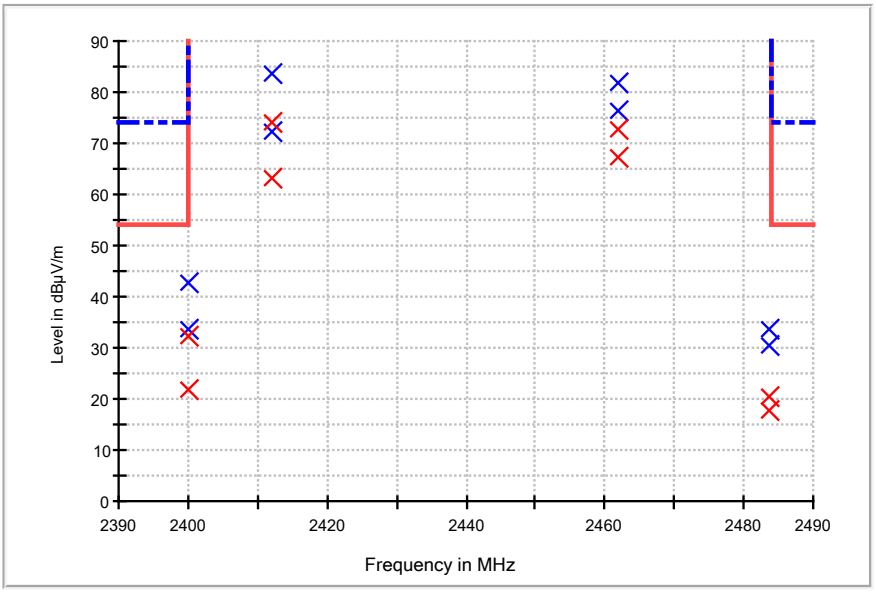
Lower Band Edge, 11b CCK: Vertical



Upper Band Edge, 11b CCK: Vertical



11b CCK: Band Edge



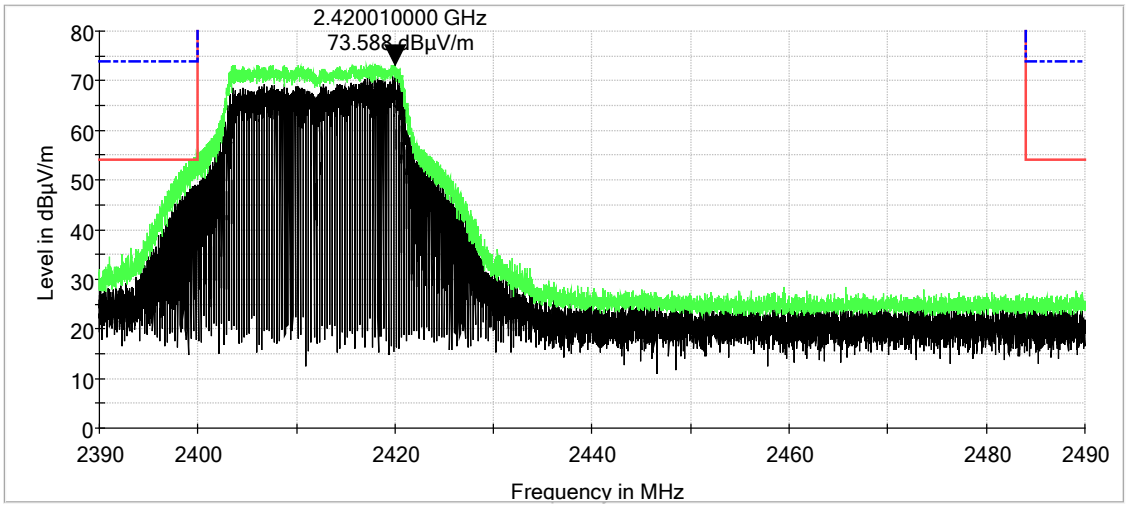
MaxPeak

Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2400.00	V	150.00	124.00	53.1	-19.4	33.70	74.0	-40.3
2400.00	H	150.00	151.00	62.2	-19.4	42.80	74.0	-31.2
2412.00	H	150.00	151.00	102.7	-19.3	83.40	114.0	-30.6
2412.00	V	150.00	124.00	91.7	-19.3	72.40	114.0	-41.6
2462.00	H	150.00	132.00	101.1	-19.2	81.90	114.0	-32.1
2462.00	V	150.00	164.00	95.7	-19.2	76.50	114.0	-37.5
2483.50	H	150.00	132.00	52.7	-19.0	33.70	74.0	-40.3
2483.50	V	150.00	162.00	49.4	-19.0	30.40	74.0	-43.6

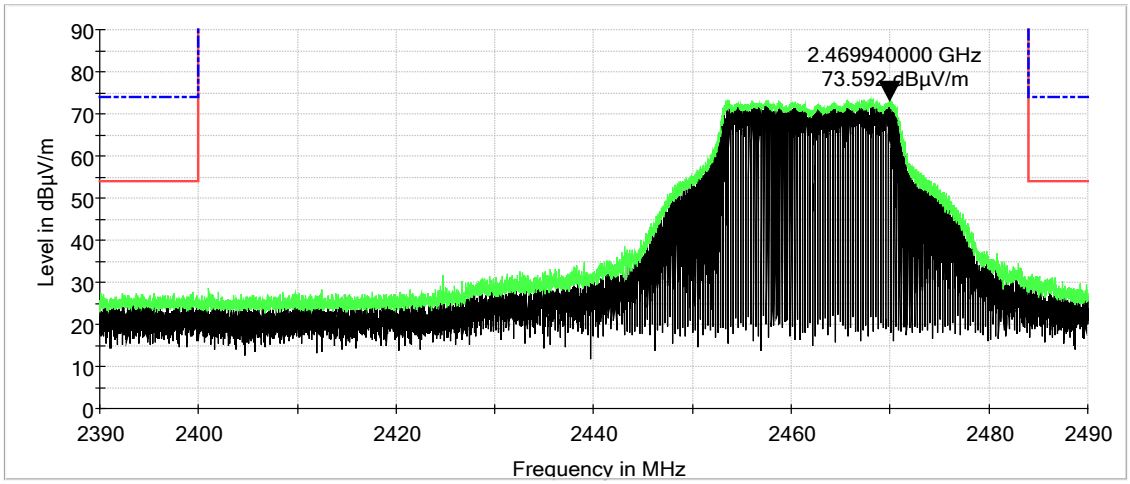
AVG

Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2400.00	V	150.00	124.00	41.2	-19.4	21.80	54.0	-32.2
2400.00	H	150.00	151.00	51.6	-19.4	32.20	54.0	-21.8
2412.00	H	150.00	151.00	93.5	-19.3	74.20	94.0	-19.8
2412.00	V	150.00	124.00	82.4	-19.3	63.10	94.0	-30.9
2462.00	H	150.00	132.00	91.9	-19.2	72.70	94.0	-21.3
2462.00	V	150.00	164.00	86.3	-19.2	67.10	94.0	-26.9
2483.50	H	150.00	132.00	39.4	-19.0	20.40	54.0	-33.6
2483.50	V	150.00	162.00	36.9	-19.0	17.90	54.0	-36.1

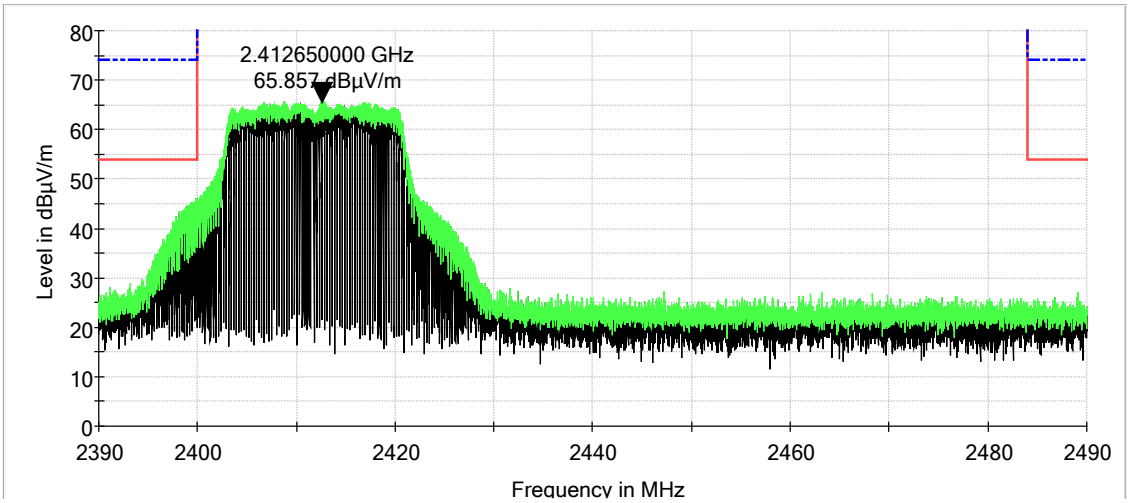
Lower Band Edge, 11n MCS7: Horizontal



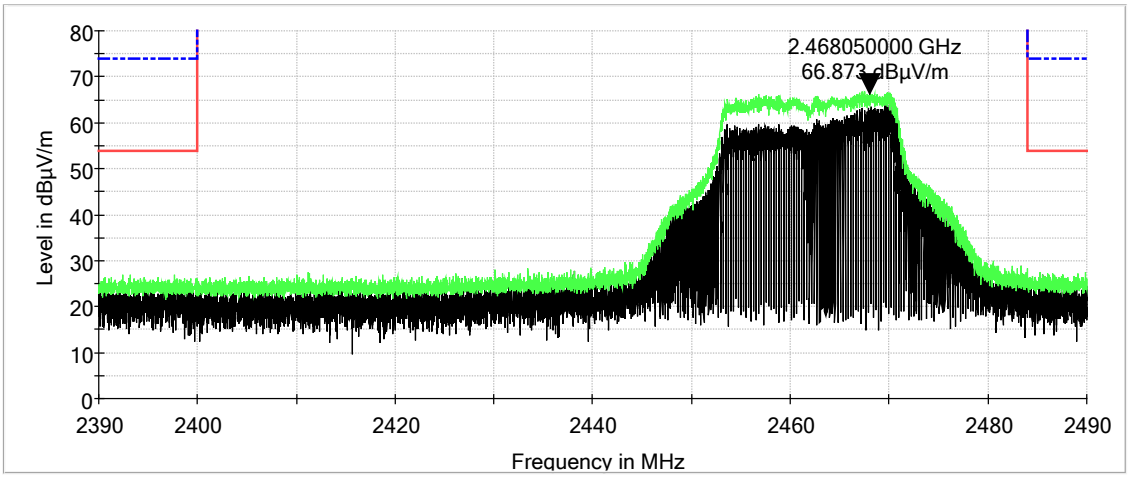
Upper Band Edge, 11n MCS7: Horizontal



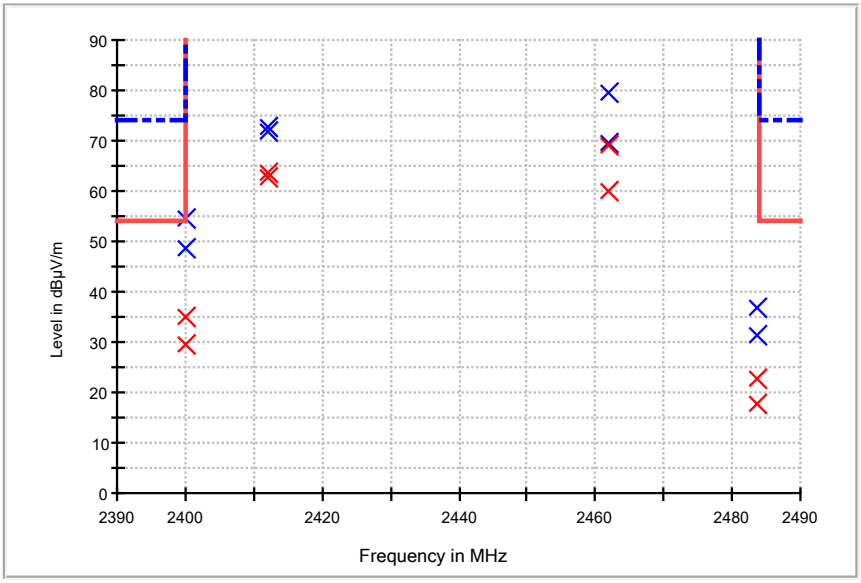
Lower Band Edge, 11n MCS7: Vertical



Upper Band Edge, 11n MCS7: Vertical



11n MCS7: Band Edge



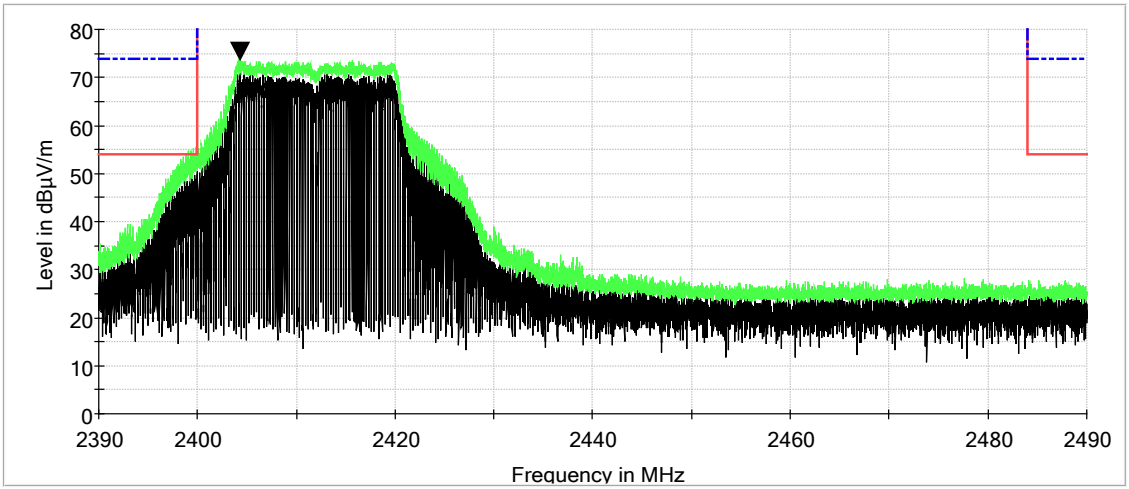
MaxPeak

Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2400.00	V	150.00	0.00	68.3	-19.4	48.90	74.0	-25.1
2400.00	H	150.00	339.00	74.0	-19.4	54.60	74.0	-19.4
2412.00	H	150.00	332.00	92.2	-19.3	72.90	114.0	-41.1
2412.00	V	150.00	339.00	91.2	-19.3	71.90	114.0	-42.1
2462.00	H	175.00	144.00	98.5	-19.1	79.40	114.0	-34.6
2462.00	V	150.00	181.00	88.9	-19.2	69.70	114.0	-44.3
2483.50	H	175.00	144.00	55.8	-19.0	36.80	74.0	-37.2
2483.50	V	150.00	181.00	50.3	-19.0	31.30	74.0	-42.7

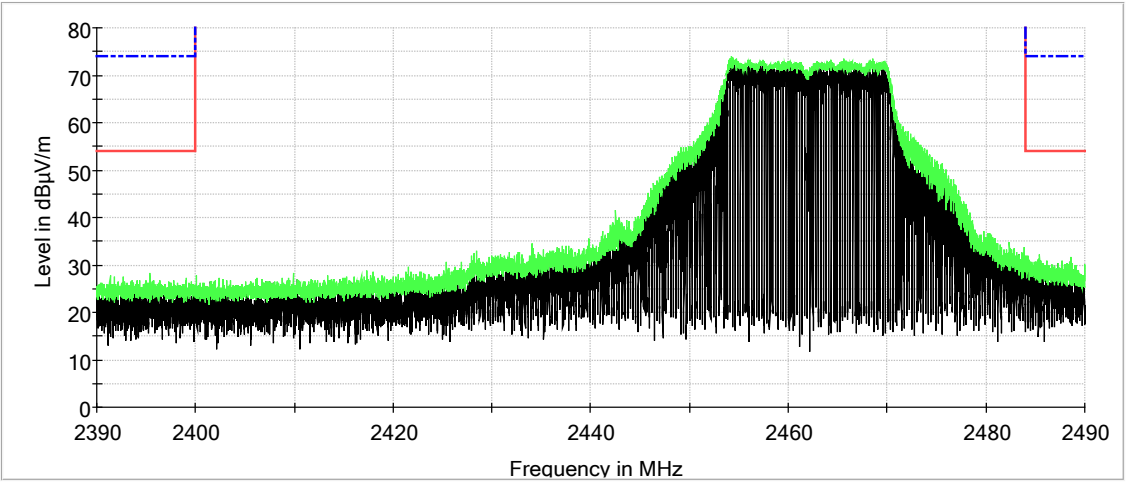
AVG

Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2400.00	V	150.00	0.00	48.9	-19.4	29.50	54.0	-24.5
2400.00	H	150.00	339.00	54.6	-19.4	35.20	54.0	-18.8
2412.00	H	150.00	332.00	82.7	-19.3	63.40	94.0	-30.6
2412.00	V	150.00	339.00	81.9	-19.3	62.60	94.0	-31.4
2462.00	H	175.00	144.00	88.0	-19.1	68.90	94.0	-25.1
2462.00	V	150.00	181.00	79.1	-19.2	59.90	94.0	-34.1
2483.50	H	175.00	144.00	41.8	-19.0	22.80	54.0	-31.2
2483.50	V	150.00	181.00	36.5	-19.0	17.50	54.0	-36.5

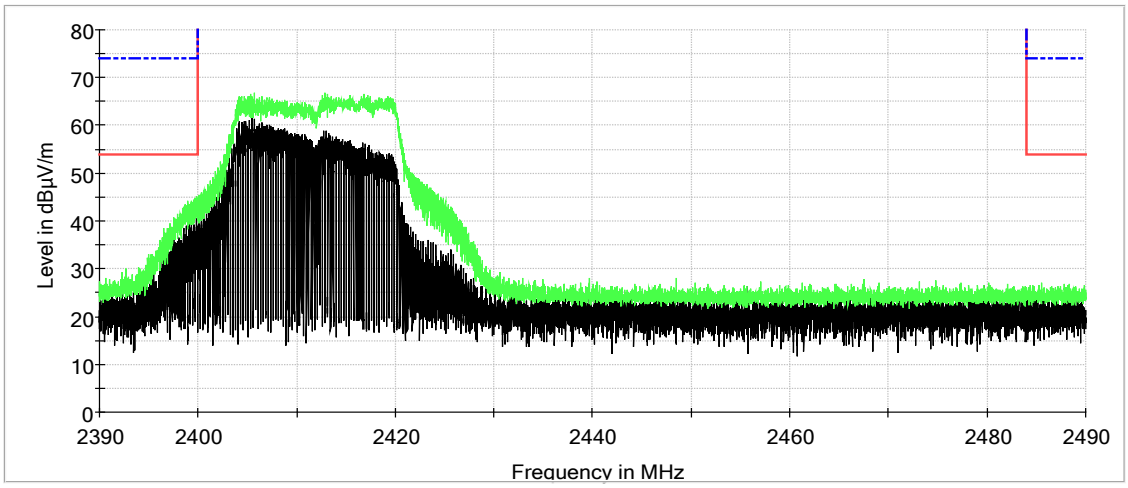
Lower Band Edge, 11g 54 Mbps OFDM: Horizontal



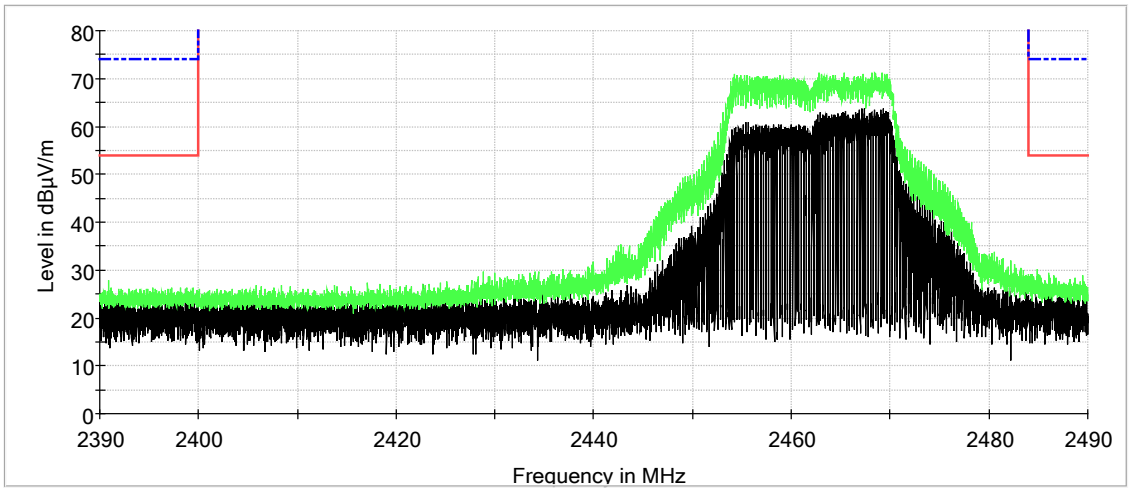
Upper Band Edge, 11g 54 Mbps OFDM: Horizontal



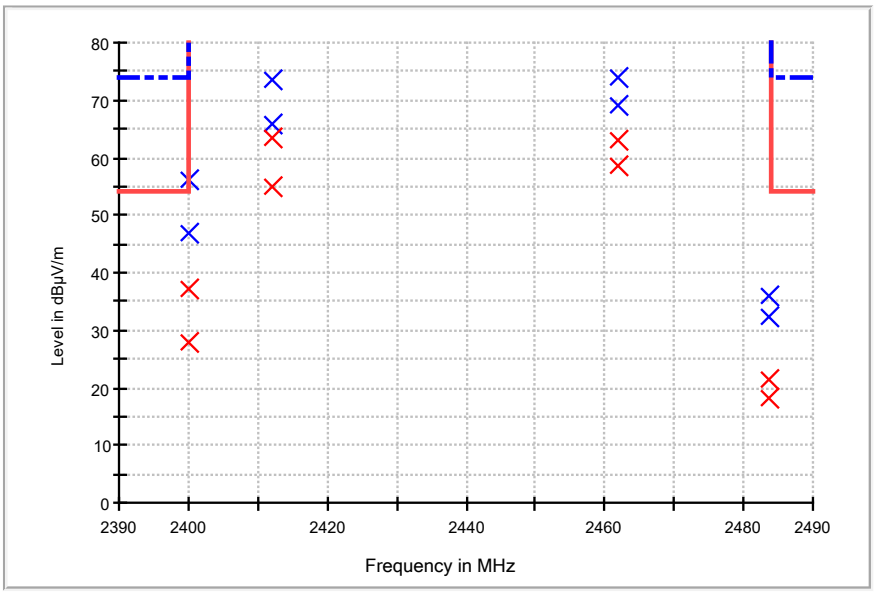
Lower Band Edge, 11g 54 Mbps OFDM: Vertical



Upper Band Edge, 11g 54 Mbps OFDM: Vertical



11g 54 Mbps OFDM: Band Edge



MaxPeak

Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2400.00	V	150.00	193.00	66.2	-19.4	46.80	74.0	-27.2
2400.00	H	150.00	148.00	75.6	-19.4	56.20	74.0	-17.8
2412.00	H	150.00	147.00	92.7	-19.3	73.40	114.0	-40.6
2412.00	V	150.00	193.00	85.1	-19.3	65.80	114.0	-48.2
2462.00	H	150.00	98.00	93.1	-19.2	73.90	114.0	-40.1
2462.00	V	150.00	172.00	88.1	-19.2	68.90	114.0	-45.1
2483.50	H	150.00	100.00	54.8	-19.0	35.80	74.0	-38.2
2483.50	V	150.00	172.00	51.2	-19.0	32.20	74.0	-41.8

AVG

Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2400.00	V	150.00	193.00	47.4	-19.4	28.00	54.0	-26.0
2400.00	H	150.00	148.00	56.8	-19.4	37.40	54.0	-16.6
2412.00	H	150.00	147.00	82.8	-19.3	63.50	94.0	-30.5
2412.00	V	150.00	193.00	74.1	-19.3	54.80	94.0	-39.2
2462.00	H	150.00	98.00	82.2	-19.2	63.00	94.0	-31.0
2462.00	V	150.00	172.00	77.7	-19.2	58.50	94.0	-35.5
2483.50	H	150.00	100.00	40.6	-19.0	21.60	54.0	-32.4
2483.50	V	150.00	172.00	37.2	-19.0	18.20	54.0	-35.8

11 FCC PART 15.247(e) – PEAK POWER SPECTRAL DENSITY (PSD)

Peak power spectral density measurements were performed.

11.1 Requirements:

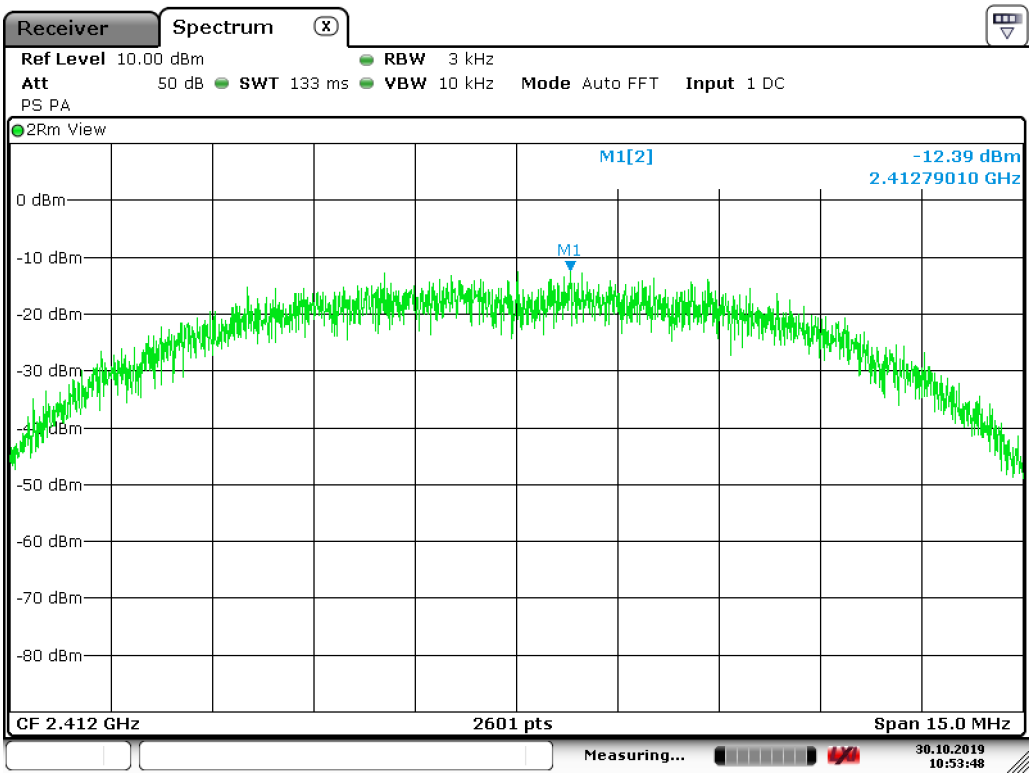
The peak power spectral density shall not exceed +8dBm in any 3 kHz band during any time interval of continuous transmission.

Power spectral density measurements were performed at a resolution bandwidth of 3 kHz (video bandwidth set at 10 KHz). The peak spectral densities were measured at the low, mid, and upper channels.

12.2 Peak Power Spectral Density Test Data

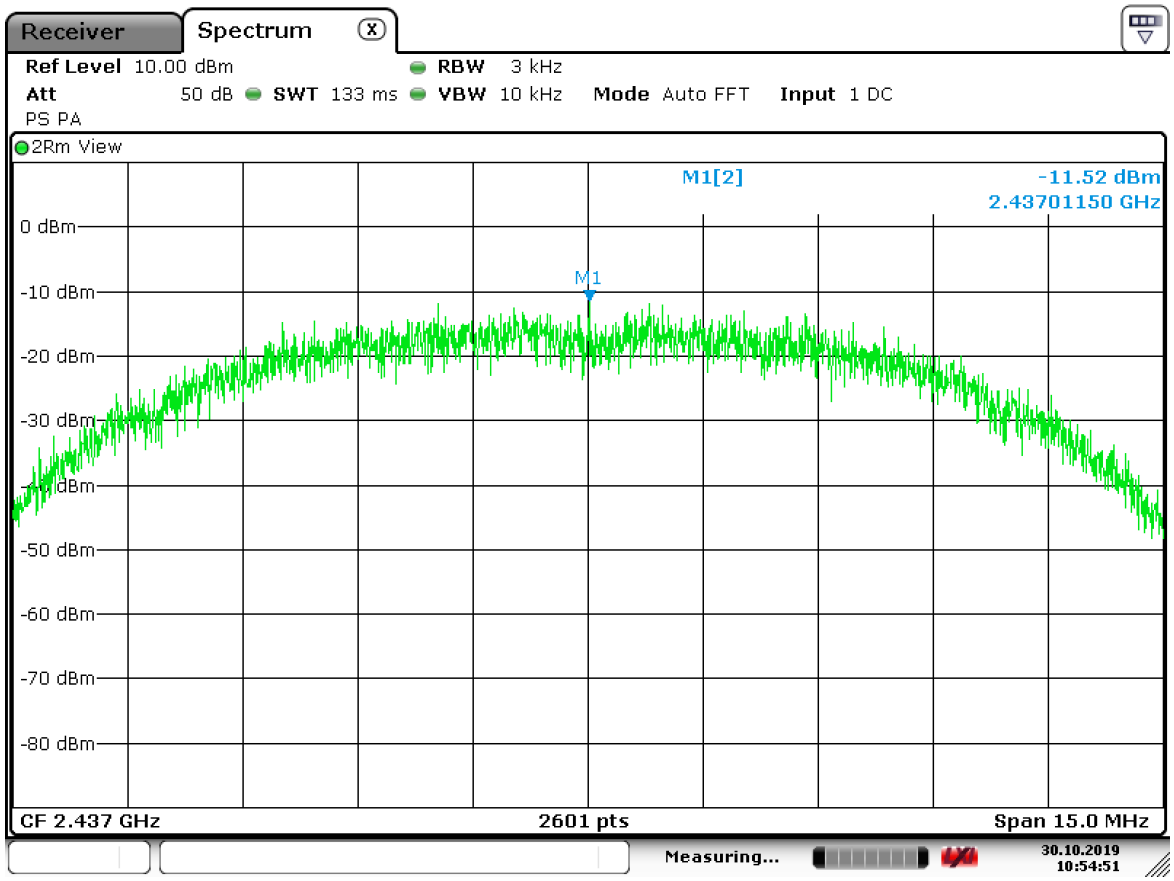
Test Date(s):	Oct. 30, 2019	Test Engineer:	J. Chiller
Standards:	CFR 47 Part 15.247(e); KDB558074	Air Temperature:	22.5ºC
		Relative Humidity:	40%

11b CCK: Low Channel



Date: 30.OCT.2019 10:53:49

11b CCK: Mid Channel



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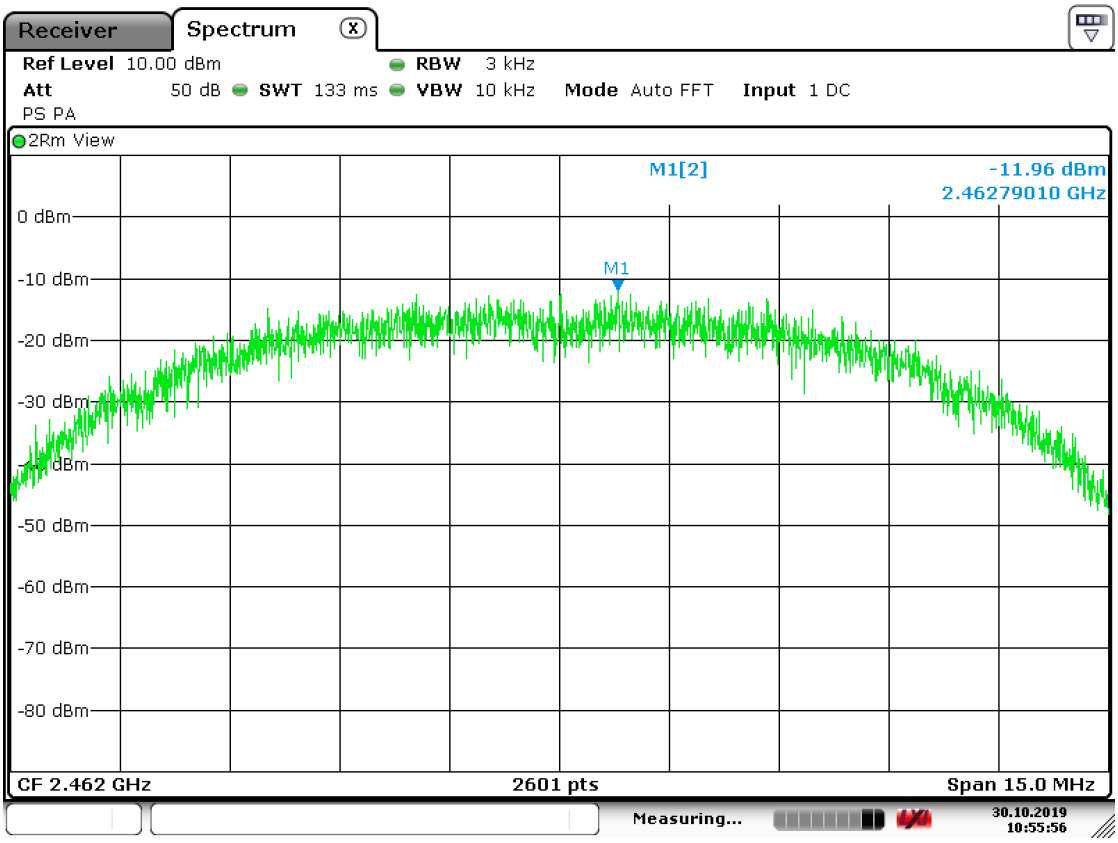
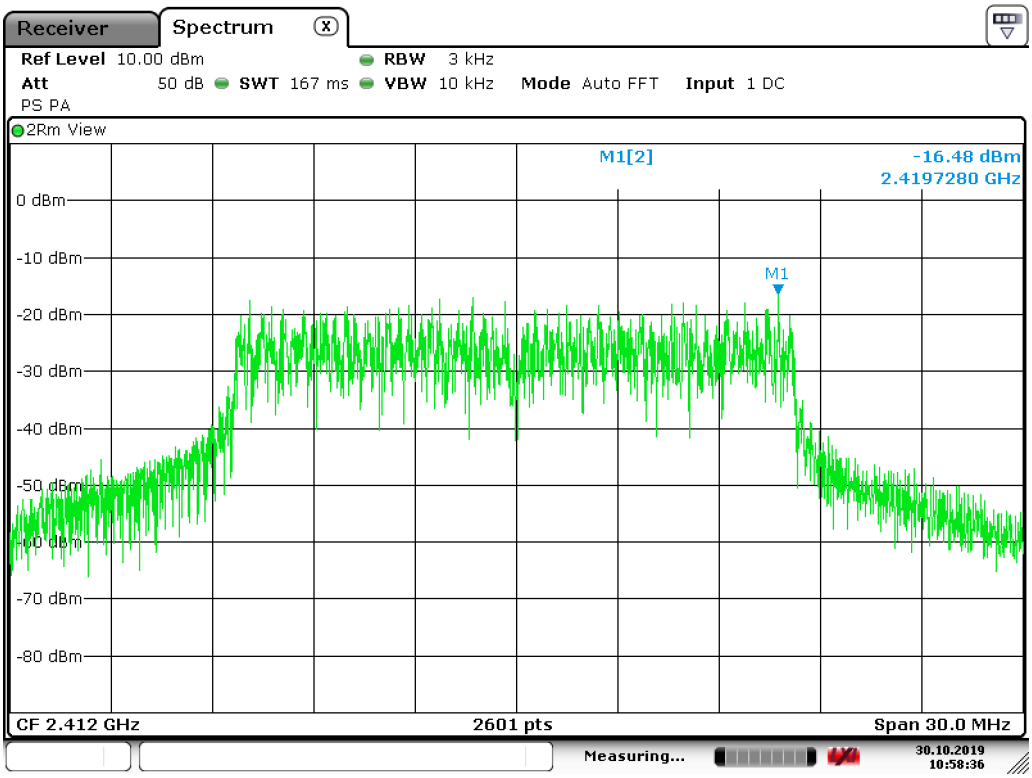
11b CCK: High Channel



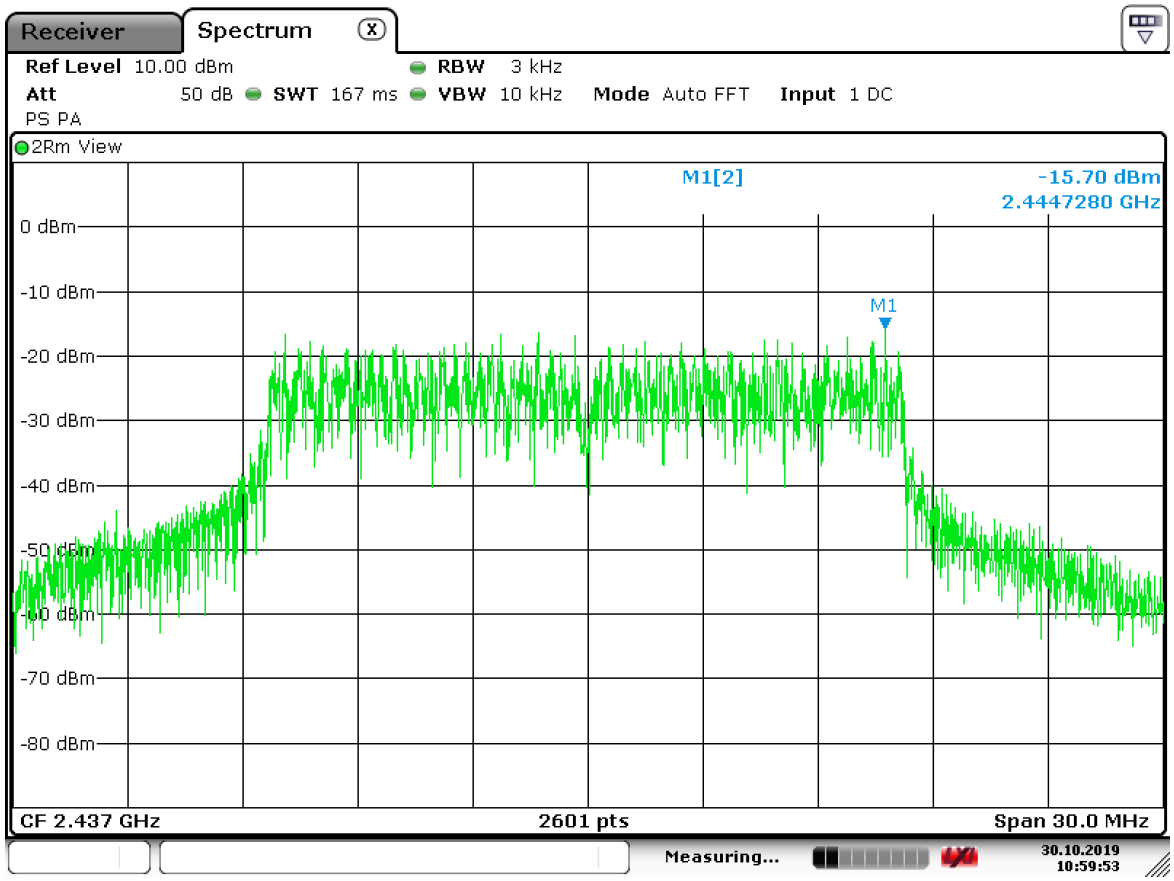
Date: 30.OCT.2019 10:55:56

11g 54 Mbps OFDM: Low Channel



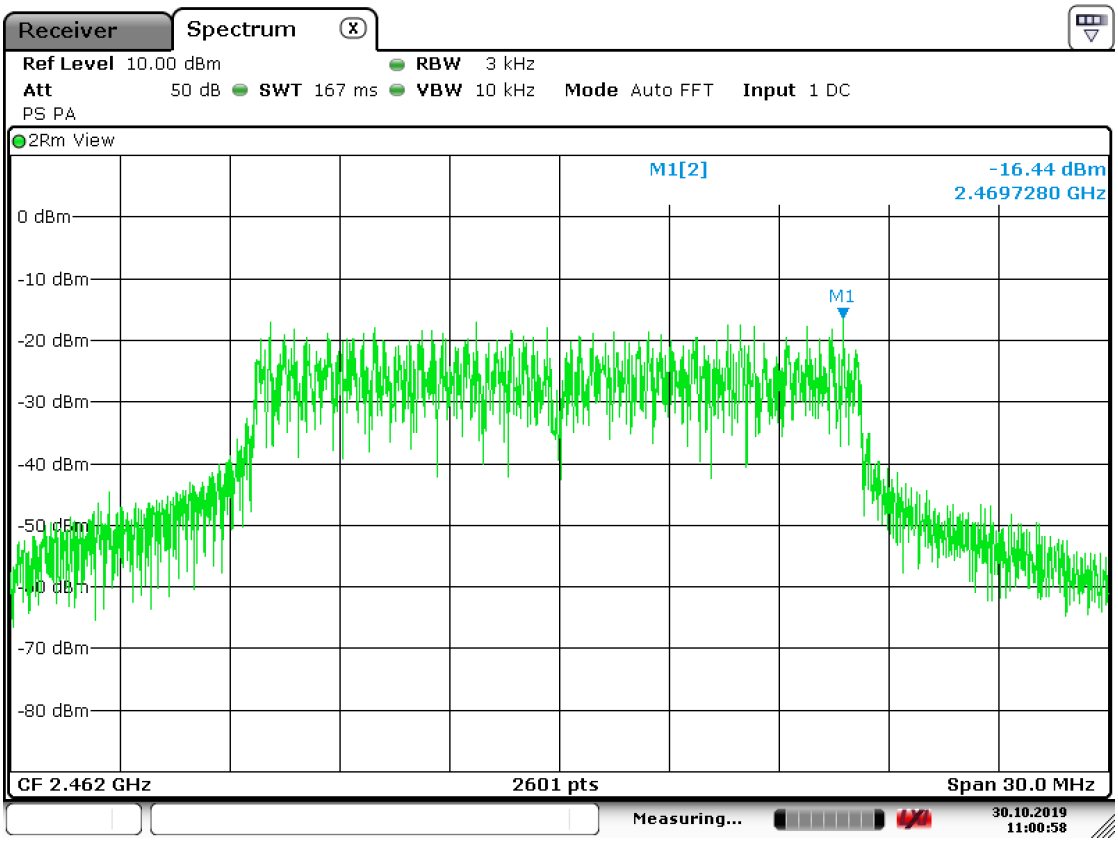
Date: 30.OCT.2019 10:58:37

11g 54 Mbps OFDM: Mid Channel



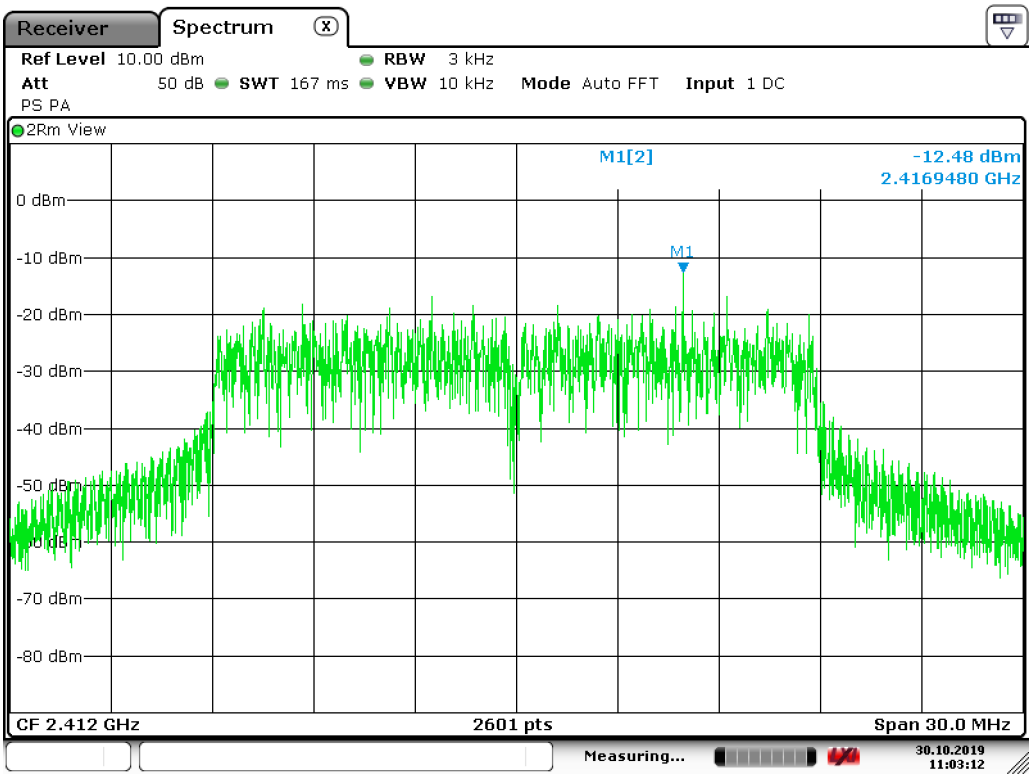
Date: 30.OCT.2019 10:59:53

11g 54 Mbps OFDM: High Channel



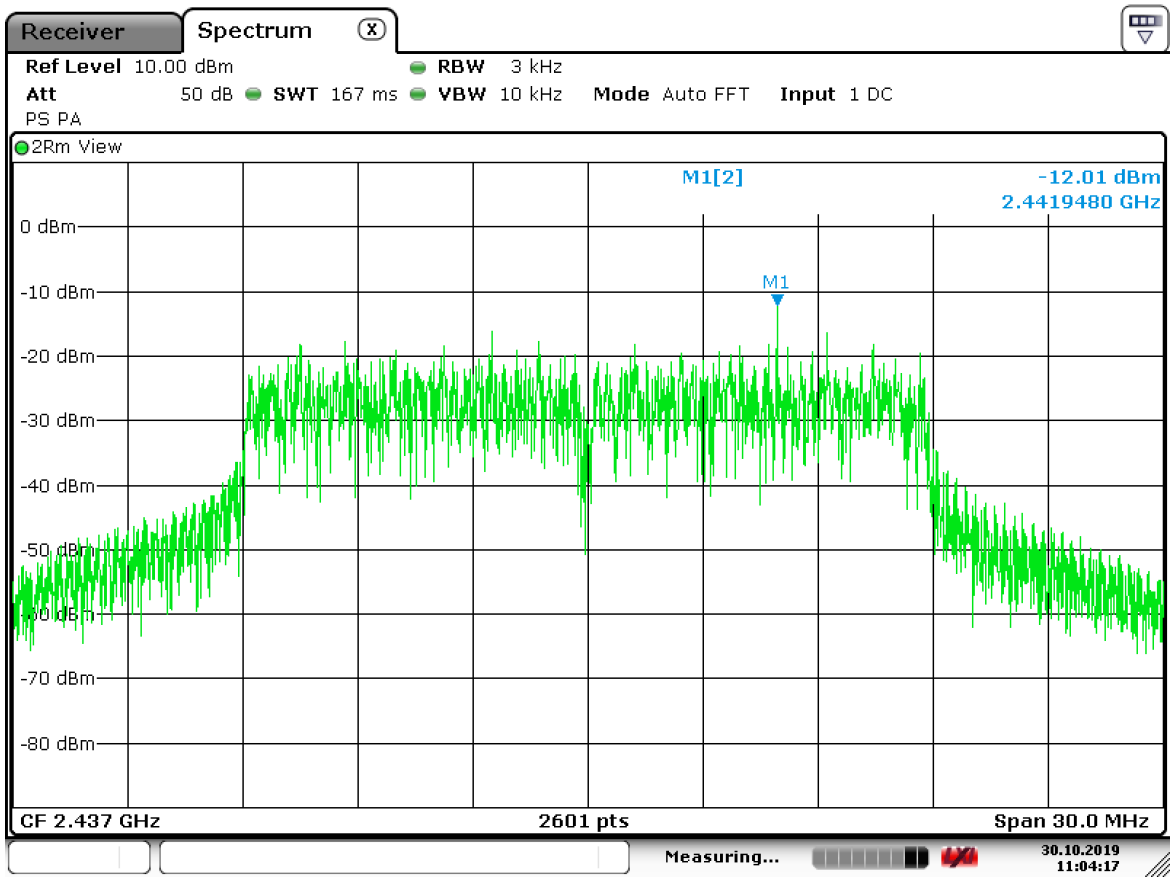
Date: 30.OCT.2019 11:00:58

11n MCS7: Low Channel



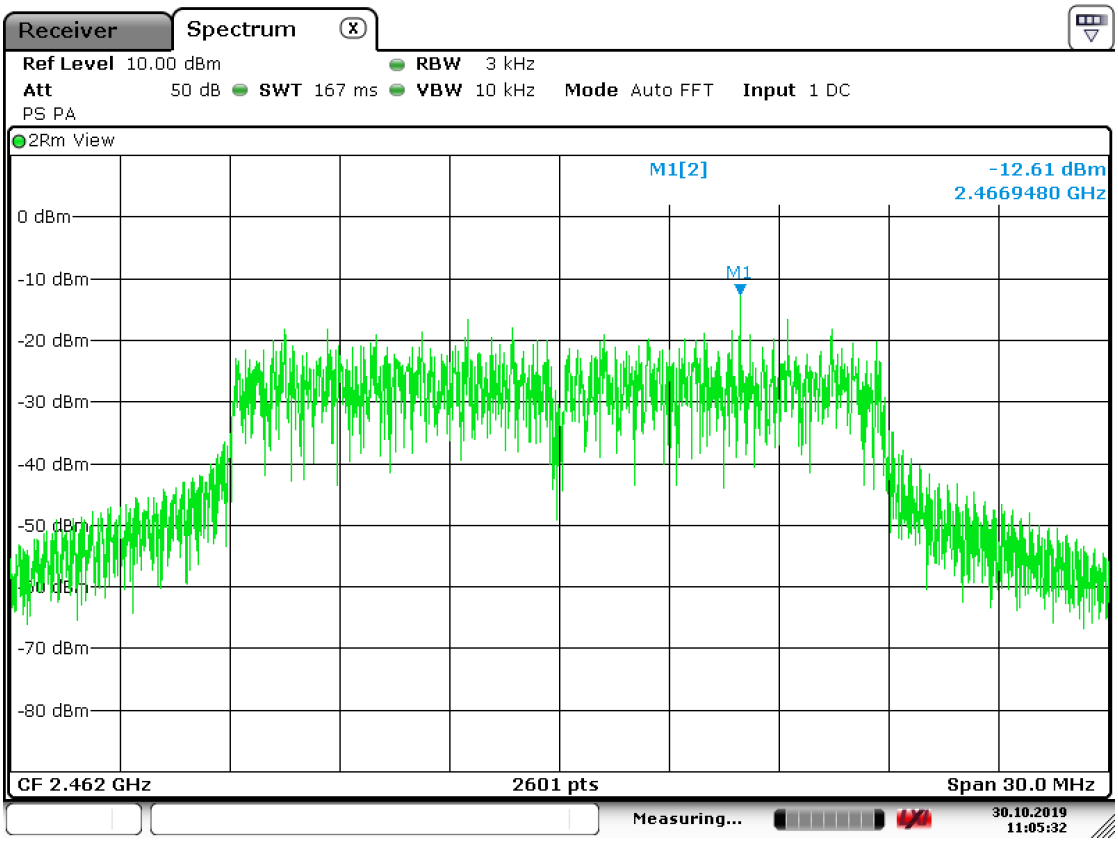
Date: 30.OCT.2019 11:03:12

11n MCS7: Mid Channel



Date: 30.OCT.2019 11:04:17

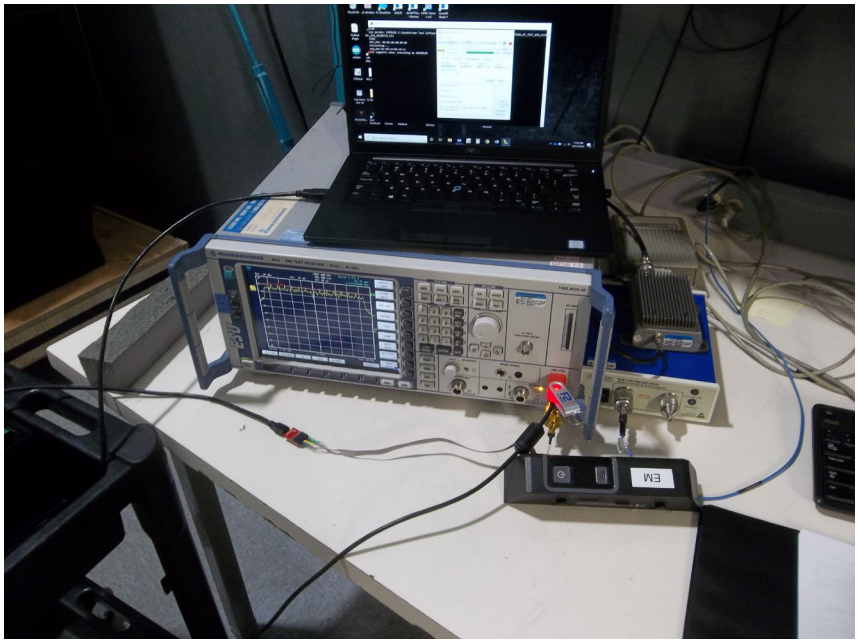
11n MCS7: High Channel



Date: 30.OCT.2019 11:05:32

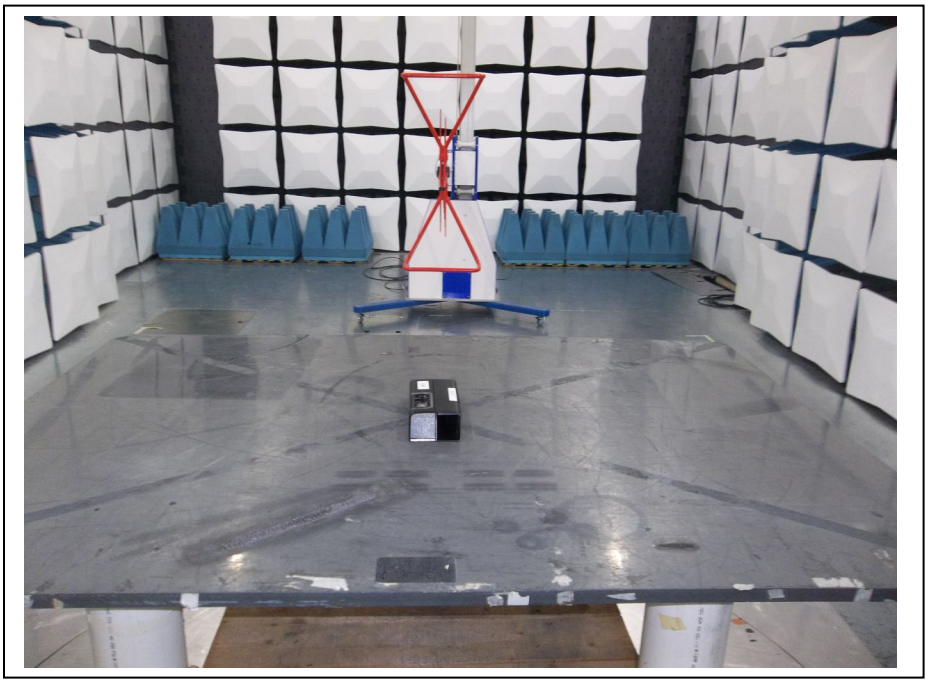
12 PHOTOGRAPHS

Conducted Output Power, Peak Power Spectral Density, Occupied Bandwidth, and Conducted Spurious Emissions

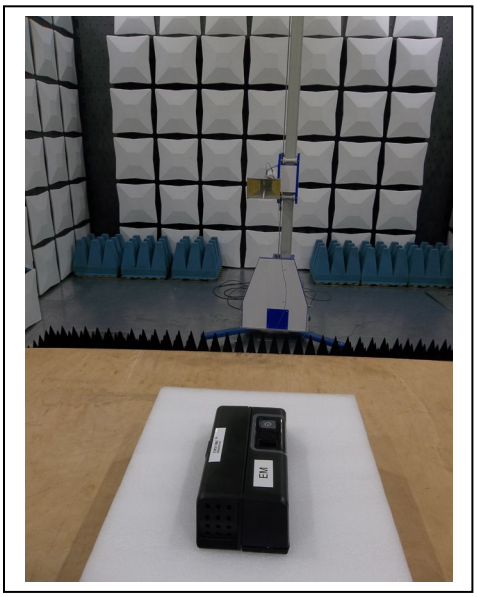
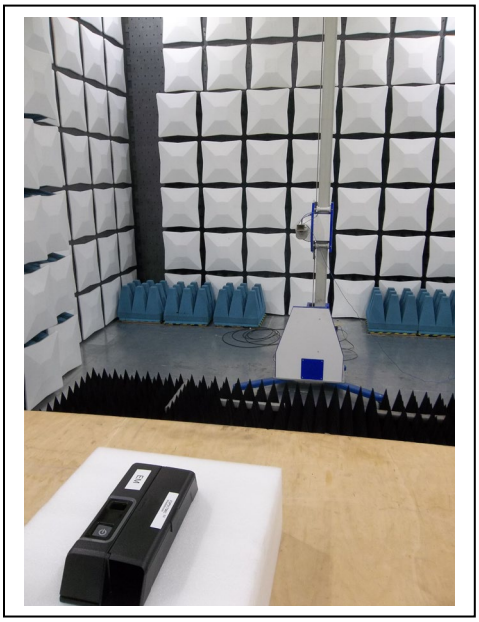


Radiated Spurious Emissions, Less than 30 MHz

Radiated Spurious Emissions, 30 MHz to 1000 MHz



Radiated Spurious Emissions 1 GHz to 18 GHz



Radiated Spurious Emissions 18 GHz to 26 GHz