



FCC TEST REPORT

Application No: ZR/2020/B0016
Applicant: SMT TELECOMM HK LIMITED
Address of Applicant: UNIT C 8/F CHARMHILL CTR 50 HILLWOOD RD TST KL
Manufacturer: SMT TELECOMM HK LIMITED
Address of Manufacturer: UNIT C 8/F CHARMHILL CTR 50 HILLWOOD RD TST KL
EUT Description: tablet
Model No.: Inspire 4.0
Trade Mark: GTL
FCC ID: 2AIMEI40
Standards: 47 CFR FCC Part 2, Subpart J
 47 CFR Part 15, Subpart C
Test Method: KDB558074 D01 15.247 Meas Guidance v05r02
 ANSI C63.10 (2013)
Date of Receipt: 2020/11/18
Date of Test: 2020/11/18 to 2020/12/7
Date of Issue: 2021/6/1

Test Result:	PASS *
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Derek Yang
Wireless Laboratory Manager



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1 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2021/3/8		Original
02		2021/6/1	Sherlock Fang	1.Modify data conversion error of antenna height 2.Update equipment list

*This report supersedes our previous report ZR/2020/B001604, issued on 2021-03-08, which is hereby deemed null and void.

Authorized for issue by:		
Prepared By		Sherlock Fang (Sherlock Fang) / Engineer
Checked By		David Chen (David Chen) /Reviewer





2 Test Summary

Test Item	Test Requirement	Test method	Test Result	Result	Test Lab*
AC Power Line Conducted Emission	15.207	ANSI C63.10 2013	Clause 4.2	PASS	B
Duty Cycle	--	--	Clause 4.3	PASS	A
Conducted Output Power	15.247 (b)(3)	ANSI C63.10 2013	Clause 4.4	PASS	A
DTS (6 dB) Bandwidth & 99% Occupied Bandwidth	15.247 (a)(2)	ANSI C63.10 2013	Clause 4.5	PASS	A
Power Spectral Density	15.247 (e)	ANSI C63.10 2013	Clause 4.6	PASS	A
Band-edge for RF Conducted Emissions	15.247(d)	ANSI C63.10 2013	Clause 4.7	PASS	A
RF Conducted Spurious Emissions	15.247(d)	ANSI C63.10 2013	Clause 4.8	PASS	A
Radiated Spurious Emissions	15.247(d);15.205/15.209	ANSI C63.10 2013	Clause 4.9	PASS	B
Restricted bands around fundamental frequency (Radiated Emission)	15.247(d);15.205/15.209	ANSI C63.10 2013	Clause 4.10	PASS	B





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3 General Information

3.1 Client Information

Applicant:	SMT TELECOMM HK LIMITED
Address of Applicant:	UNIT C 8/F CHARMHILL CTR 50 HILLWOOD RD TST KL
Manufacturer:	SMT TELECOMM HK LIMITED
Address of Manufacturer:	UNIT C 8/F CHARMHILL CTR 50 HILLWOOD RD TST KL

3.2 Test Location

Lab A:

Company:	SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
Address:	No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China
Post code:	518057

Lab B:

Company:	SGS-CSTC STANDARDS TECHNICAL SERVICES (XI 'AN) CO., LTD.
Address:	1/F, Unit D, Building 1, Kanghong Orange Technology Park, No.137, Keyuan 3rd Road, Fengdong New City, Xi'an, Shaanxi China
Post code:	710086



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3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

Lab A:

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

Lab B:

A2LA (Certificate No. 4854.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES (XI 'AN) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4854.01.

Designation Number: CN1271.



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3.4 General Description of EUT

EUT Description::	tablet
Model No.:	Inspire 4.0
Trade Mark:	GTL
Hardware Version:	P3
Software Version:	Inspire 4.0_09162020
IEEE 802.11 WLAN Mode Supported	☒ 802.11B (20 MHz channel bandwidth), ☒ 802.11G (20 MHz channel bandwidth) ☒ 802.11N (20 MHz channel bandwidth), ☐ 802.11N (40 MHz channel bandwidth)
Operation Frequency:	2400 MHz -2483.5MHz $f_c = 2407 \text{ MHz} + N * 5 \text{ MHz}$, where: - f_c = "Operating Frequency" in MHz, - N = "Channel Number" with the range from 1 to 11 for the 20 MHz channel bandwidth, or 3 to 9 for the 40 MHz channel bandwidth.
Type of Modulation:	IEEE for 802.11B: DSSS IEEE for 802.11G : OFDM IEEE for 802.11N(HT20) : OFDM
Sample Type:	☒ Portable Device, ☐ Module
Antenna Type:	☐ External, ☒ Integrated
Antenna Ports	☒ Ant 1, ☒ Ant 2, ☐ Ant 3
Smart System	☒ SISO (for 802.11B/G/N), ☒ MIMO (for 802.11N): 2 Tx & 2 Rx, ☐ Diversity (for 802.11B/G) : Tx & Rx
Antenna Gain:	3.0dBi(ANT1); 2.0dBi(ANT2);
Power Supply	☒ AC/DC Adapter; ☐ Battery ☐ PoE;; ☐ Other:

Operation Frequency of each channel (802.11B/G/N HT20)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		



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Remark:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency for 802.11B/G/N (HT20)
The Lowest channel	2412MHz
The Middle channel	2437MHz
The Highest channel	2462MHz

3.5 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	50 % RH
Atmospheric Pressure:	101.30 KPa
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

3.6 Description of Support Units

The EUT has been tested independent unit.



4 Test results and Measurement Data

4.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 3.0dBi.	



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4.2 AC Power Line Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10: 2013		
Test Frequency Range:	150kHz to 30MHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.		



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Test Setup:	
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates at lowest, middle and highest channel. Charge + Transmitting mode.
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate of 802.11B at lowest channel is the worst case. Charge + Transmitting mode. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass
Remark:	The Emission Test data were reused from the report no:XZR/2020/B001601



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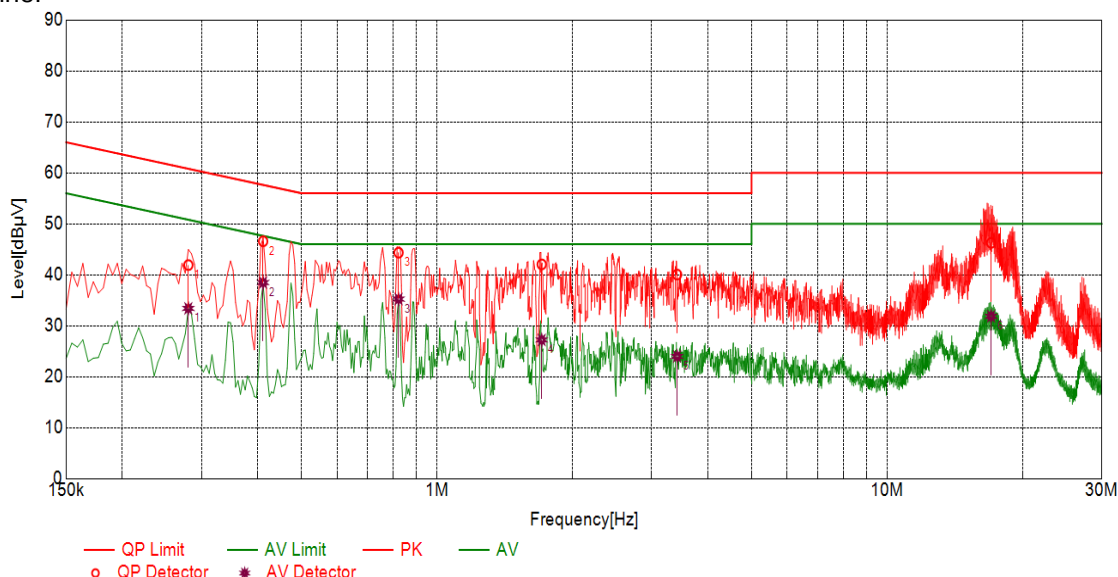
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Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live Line:

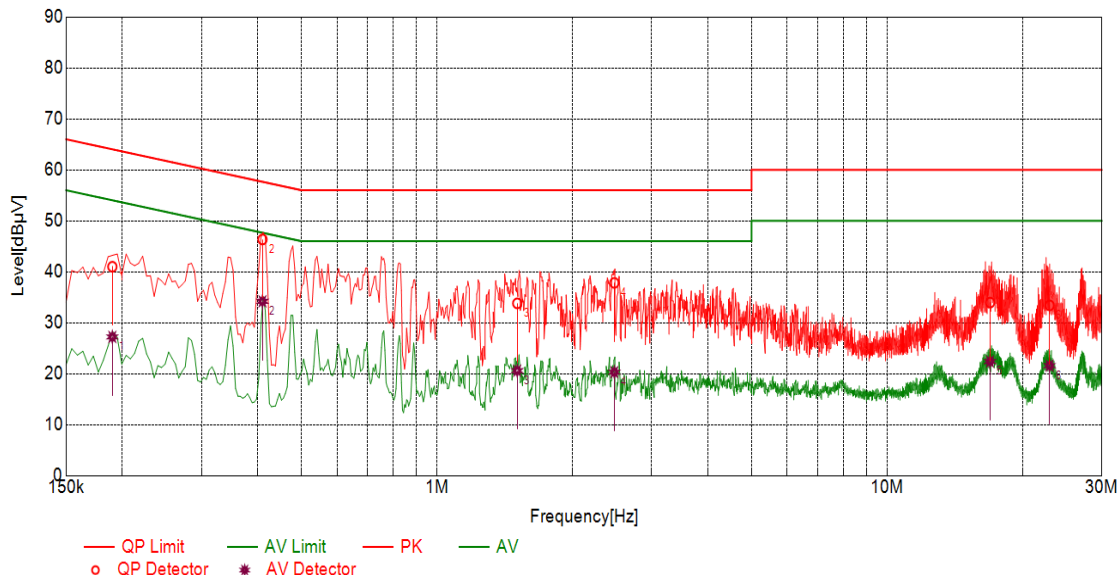


Test Graph

Final Data List									
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Type
1	0.2804	10.10	41.91	60.80	18.89	33.41	50.80	17.39	L
2	0.4110	10.10	46.57	57.63	11.06	38.47	47.63	9.16	L
3	0.8218	10.10	44.34	56.00	11.66	35.23	46.00	10.77	L
4	1.7091	10.10	42.04	56.00	13.96	27.21	46.00	18.79	L
5	3.4159	10.10	40.05	56.00	15.95	23.98	46.00	22.02	L
6	17.0238	10.11	46.26	60.00	13.74	31.85	50.00	18.15	L



Neutral Line:



Test Graph

Final Data List									
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Type
1	0.1901	10.10	41.00	64.03	23.03	27.21	54.03	26.82	N
2	0.4097	10.10	46.35	57.65	11.30	34.20	47.65	13.45	N
3	1.5080	10.10	33.81	56.00	22.19	20.59	46.00	25.41	N
4	2.4776	10.10	37.82	56.00	18.18	20.30	46.00	25.70	N
5	16.9305	10.11	33.96	60.00	26.04	22.39	50.00	27.61	N
6	22.9583	10.11	33.41	60.00	26.59	21.58	50.00	28.42	N

Remarks:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.





4.3 Duty Cycle

The detailed test data see: **Appendix**



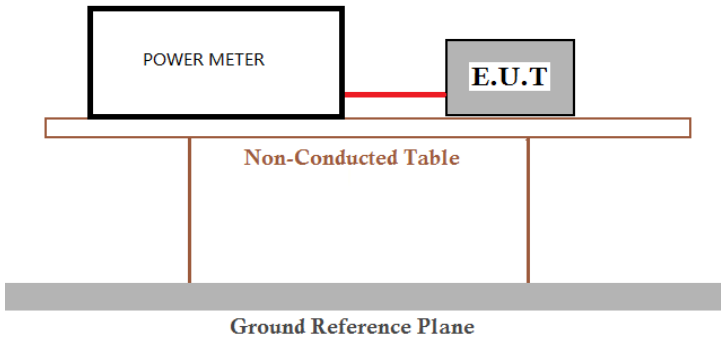
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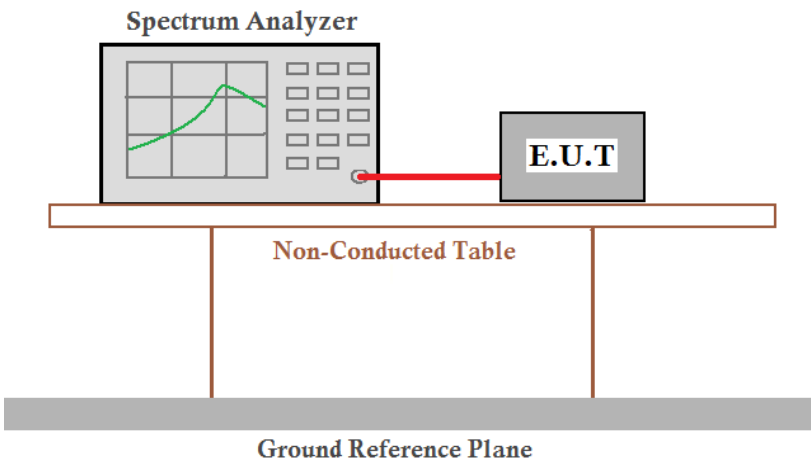
4.4 Conducted Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	ANSI C63.10 :2013 Section 11.9.1.3
Test Setup:	
Test Instruments:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11B; 6Mbps of rate is the worst case of 802.11G ; 6.5Mbps of rate is the worst case of 802.11N(HT20);
Limit:	30dBm
Test Results:	Pass

The detailed test data see: **Appendix**



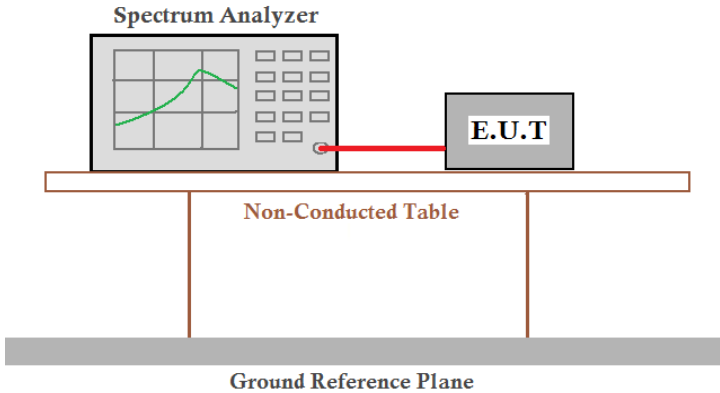
4.5 DTS (6 dB) Bandwidth & 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10: 2013 Section 11.8.1 Option 1
Test Setup:	
Instruments Used:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11B; 6Mbps of rate is the worst case of 802.11G; 6.5Mbps of rate is the worst case of 802.11N(HT20);
Limit:	≥ 500 kHz
Test Results:	Pass

The detailed test data see: **Appendix**



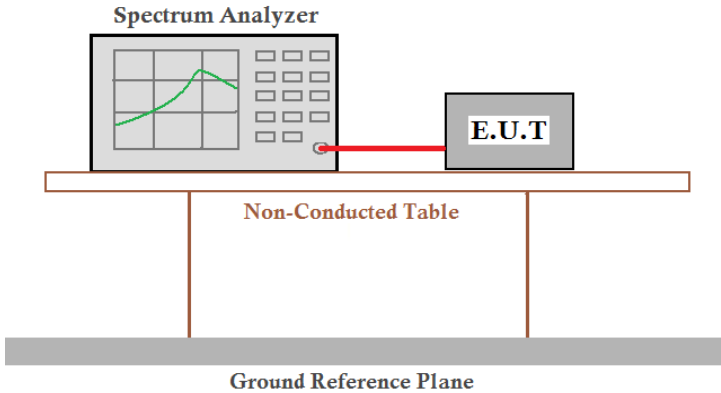
4.6 Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10 :2013 Section 11.10.2
Test Setup:	
Test Instruments:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11B; 6Mbps of rate is the worst case of 802.11G ; 6.5Mbps of rate is the worst case of 802.11N(HT20);
Limit:	$\leq 8.00\text{dBm}/3\text{kHz}$
Test Results:	Pass

The detailed test data see: **Appendix**



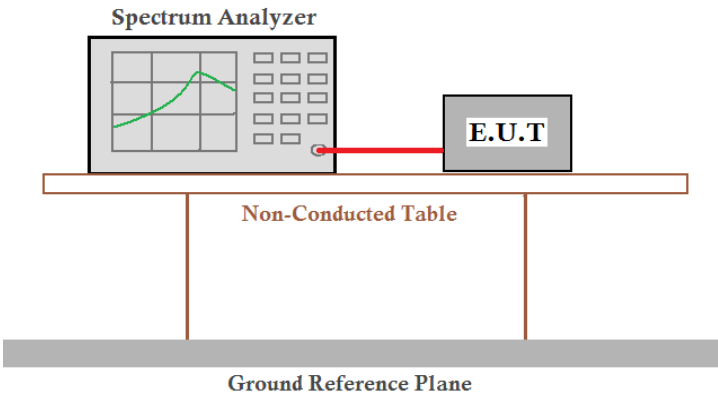
4.7 Band-edge for RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10: 2013 Section 11.13
Test Setup:	
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11B; 6Mbps of rate is the worst case of 802.11G ; 6.5Mbps of rate is the worst case of 802.11N(HT20) ;
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass

The detailed test data see: **Appendix**



4.8 RF Conducted Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10: 2013 Section 11.11
Test Setup:	
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11B; 6Mbps of rate is the worst case of 802.11G; 6.5Mbps of rate is the worst case of 802.11N(HT20);
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass

Remark:

Scan from 9kHz to 25GHz, the disturbance between 9KHz to 30MHz was very low, and the above harmonics were the highest point could be found when testing, The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

The detailed test data see: **Appendix**



4.9 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205				
Test Method:	ANSI C63.10 :2013 Section 11.12				
Test Site:	Measurement Distance: 3m or 10m (Semi-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Remark: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				

Test Setup:	
-------------	--



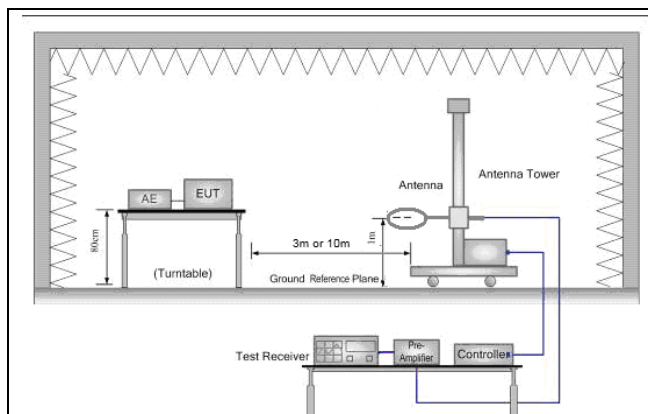


Figure 1. Below 30MHz

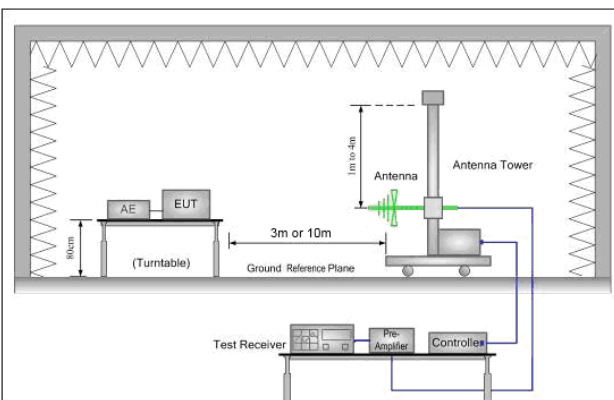


Figure 2. 30MHz to 1GHz

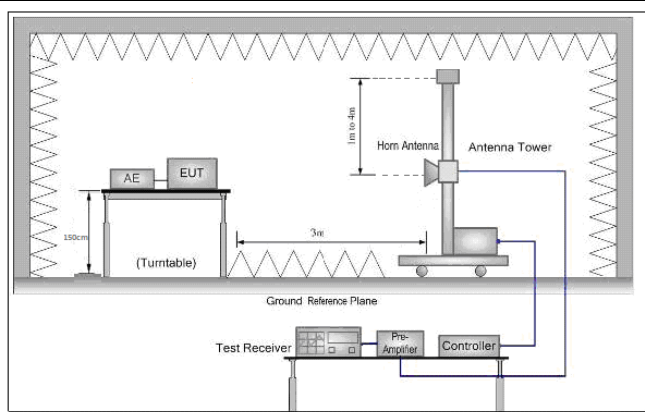


Figure 3. Above 1 GHz

Test Procedure:

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Use the following spectrum analyzer settings:
 - Span shall wide enough to fully capture the emission being measured;
 - Set RBW=100 kHz for $f < 1 \text{ GHz}$, RBW=1MHz for $f > 1\text{GHz}$; VBW $\geq$ RBW; Sweep = auto;
Detector function = peak; Trace = max hold for peak
 - For average measurement: use duty cycle correction factor method per 15.35(c).

Duty cycle = On time/100 milliseconds



	On time = $N_1 * L_1 + N_2 * L_2 + \dots + N_{n-1} * L_{n-1} + N_n * L_n$ Where N_1 is number of type 1 pulses, L_1 is length of type 1 pulses, etc. Average Emission Level = Peak Emission Level + $20 \cdot \log(\text{Duty cycl}$ f. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. g. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. h. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. i. Test the EUT in the lowest channel, the middle channel, the Highest channel j. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case. k. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Charge + Transmitting mode.
Final Test Mode:	Pretest the EUT at Charge + Transmitting mode. Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11B; 6Mbps of rate is the worst case of 802.11G; 6.5Mbps of rate is the worst case of 802.11N(HT20); For below 1GHz, through Pre-scan, find the 1Mbps of rate of 802.11B at lowest channel is the worst case. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass
Remark:	The Emission Test data were reused from the report no:XZR/2020/B001601



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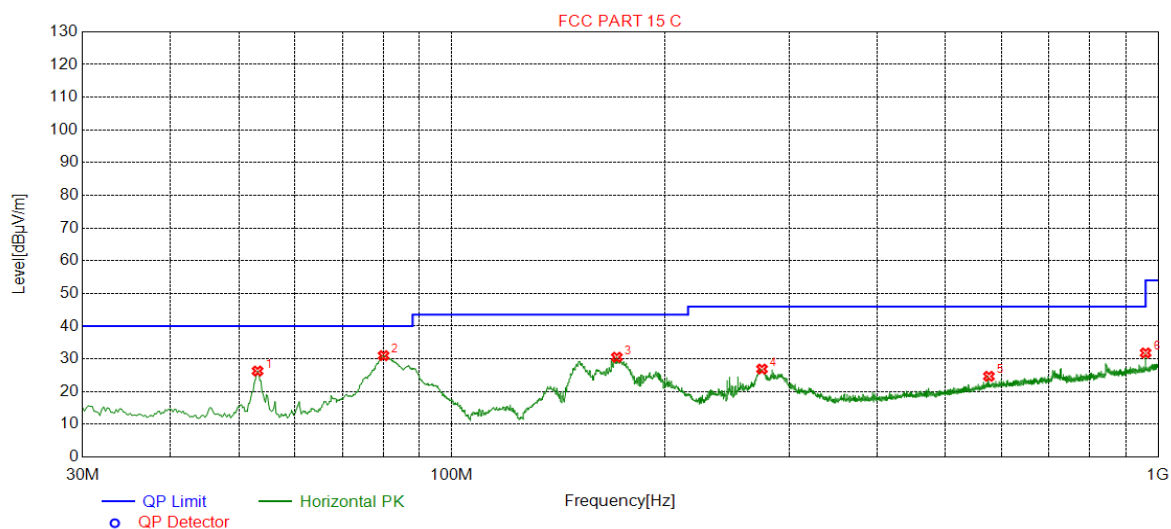
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4.9.1 Radiated emission below 1GHz

4.9.1.1 Charge + Transmitting

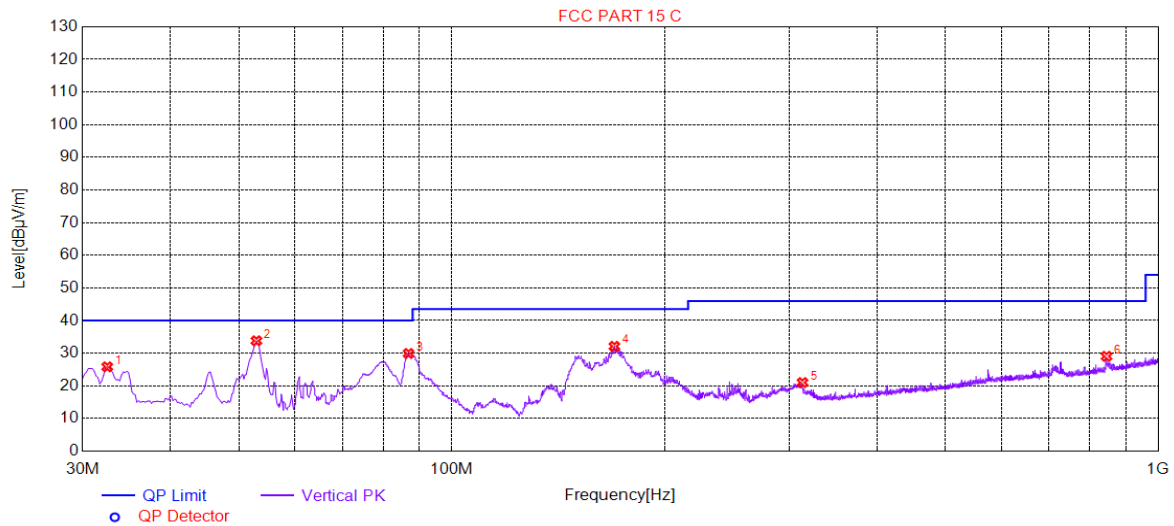


Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	53.0906	26.30	40.00	13.70	233	49	Horizontal
2	80.0620	31.00	40.00	9.00	152	247	Horizontal
3	171.2603	30.52	43.50	12.98	184	236	Horizontal
4	274.8770	26.90	46.00	19.10	157	110	Horizontal
5	576.0252	24.68	46.00	21.32	199	236	Horizontal
6	960.0280	31.83	54.00	22.17	228	174	Horizontal

Final Data List





Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	32.5225	25.84	40.00	14.16	212	191	Vertical
2	52.8966	33.82	40.00	6.18	281	241	Vertical
3	86.8534	29.93	40.00	10.07	151	250	Vertical
4	169.9020	32.12	43.50	11.38	208	356	Vertical
5	313.6847	21.03	46.00	24.97	210	189	Vertical
6	845.1570	29.07	46.00	16.93	232	273	Vertical

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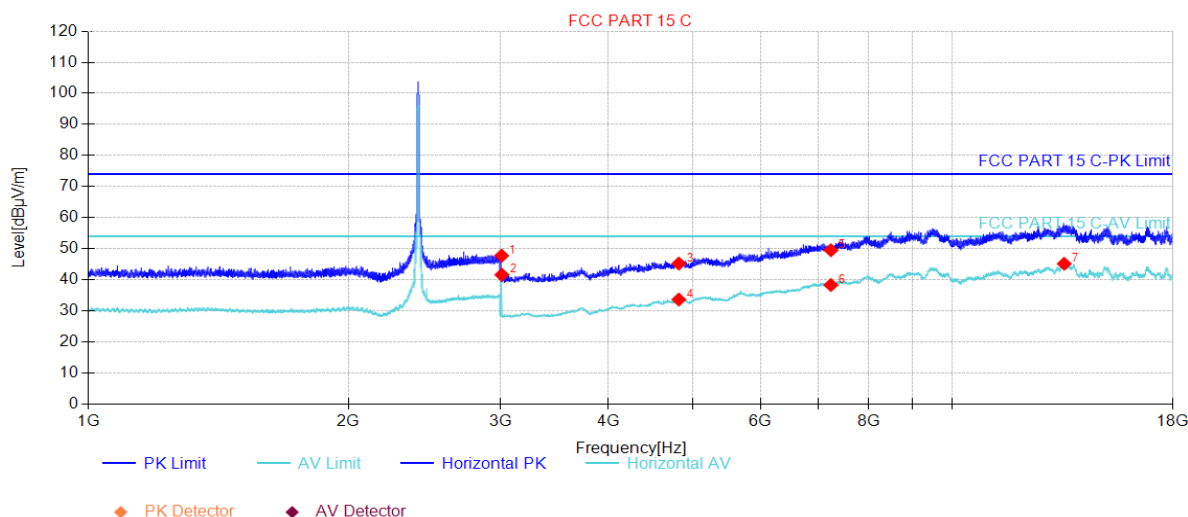
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4.9.2 Transmitter emission above 1GHz

4.9.2.1 802.11B_Channel 1 ANT 1



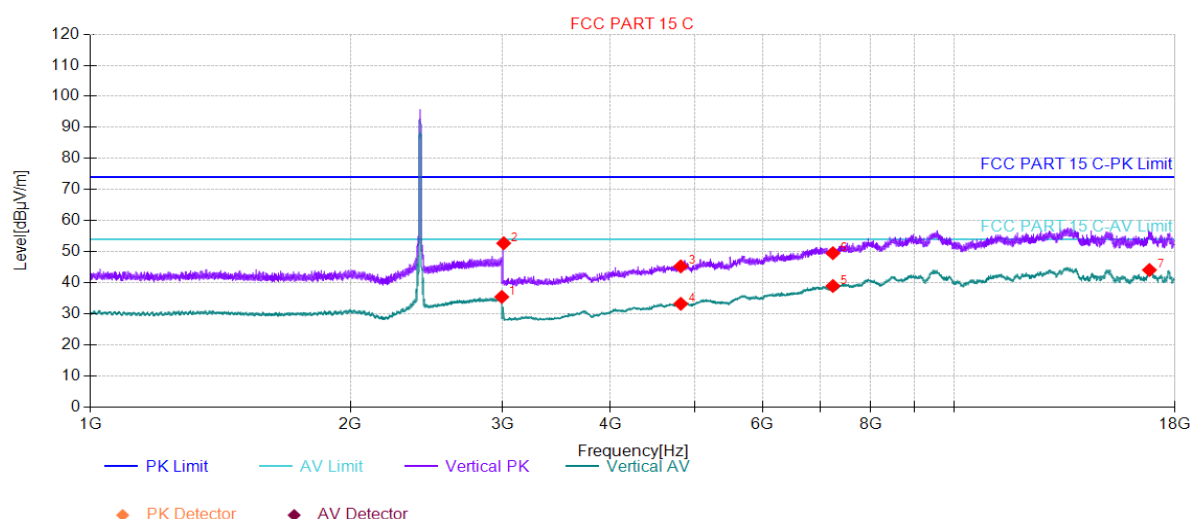
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	3009.000	47.75	-15.86	74.00	26.25	130	Horizontal
2	3010.501	41.57	-15.87	54.00	12.43	167	Horizontal
3	4824.000	45.19	-10.56	74.00	28.81	134	Horizontal
4	4824.000	33.60	-10.56	54.00	20.40	164	Horizontal
5	7236.000	49.48	-2.59	74.00	24.52	173	Horizontal
6	7236.000	38.28	-2.59	54.00	15.72	157	Horizontal
7	13474.04	45.12	3.68	54.00	8.88	150	Horizontal

Final Data List



4.9.2.2 802.11B_Channel 1 ANT 1



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2993.399	35.42	7.38	54.00	18.58	259	Vertical
2	3009.000	52.69	-15.86	74.00	21.31	242	Vertical
3	4824.000	45.25	-10.56	74.00	28.75	241	Vertical
4	4824.000	33.19	-10.56	54.00	20.81	246	Vertical
5	7236.000	38.93	-2.59	54.00	15.07	225	Vertical
6	7236.000	49.50	-2.59	74.00	24.50	245	Vertical
7	16819.38	44.08	4.41	54.00	9.92	150	Vertical

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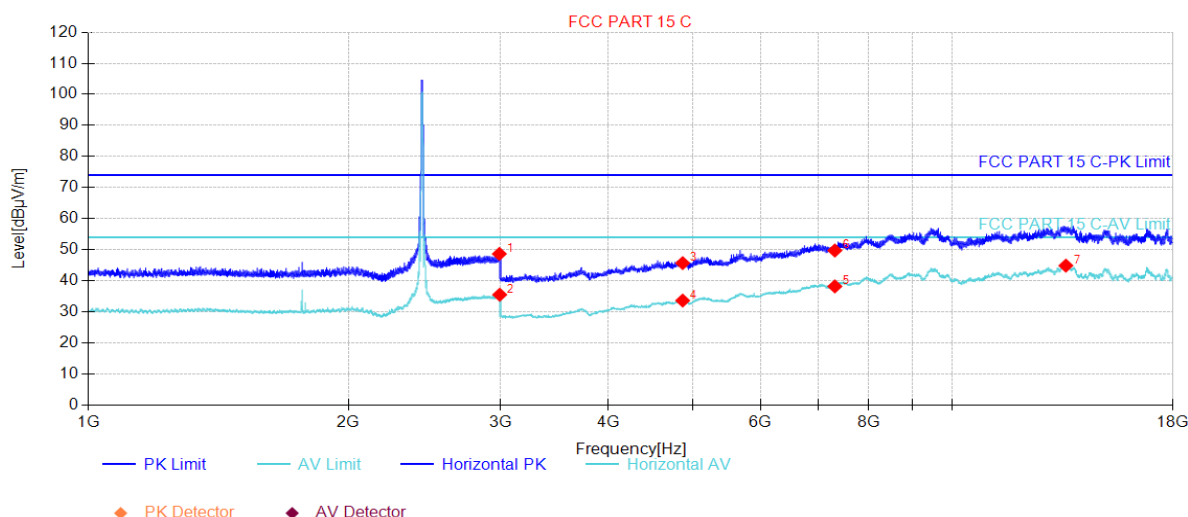
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4.9.2.3

802.11B_Channel 6 ANT 1



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2990.399	48.63	7.37	74.00	25.37	163	Horizontal
2	2992.999	35.48	7.38	54.00	18.52	138	Horizontal
3	4874.000	45.66	-10.40	74.00	28.34	139	Horizontal
4	4874.000	33.59	-10.40	54.00	20.41	154	Horizontal
5	7311.000	38.16	-2.57	54.00	15.84	160	Horizontal
6	7311.000	49.72	-2.57	74.00	24.28	142	Horizontal
7	13534.05	44.85	3.97	54.00	9.15	200	Horizontal

Final Data List



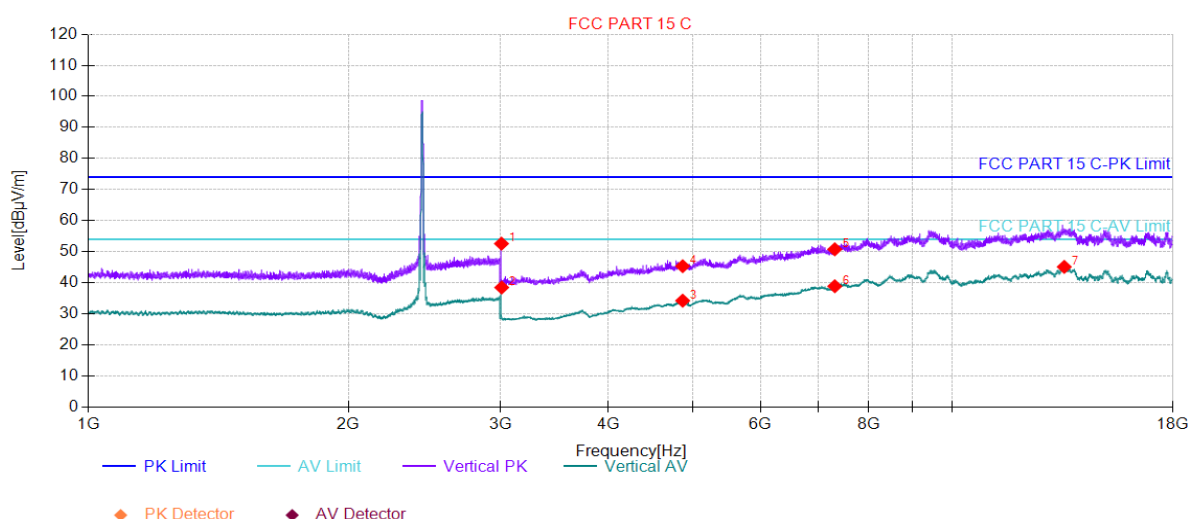
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4.9.2.4 802.11B_Channel 6 ANT 1



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	3007.500	52.57	-15.86	74.00	21.43	234	Vertical
2	3009.000	38.44	-15.86	54.00	15.56	245	Vertical
3	4874.000	34.21	-10.40	54.00	19.79	225	Vertical
4	4874.000	45.30	-10.40	74.00	28.70	246	Vertical
5	7311.000	50.75	-2.57	74.00	23.25	284	Vertical
6	7311.000	38.85	-2.57	54.00	15.15	224	Vertical
7	13474.04	45.09	3.68	54.00	8.91	300	Vertical

Final Data List



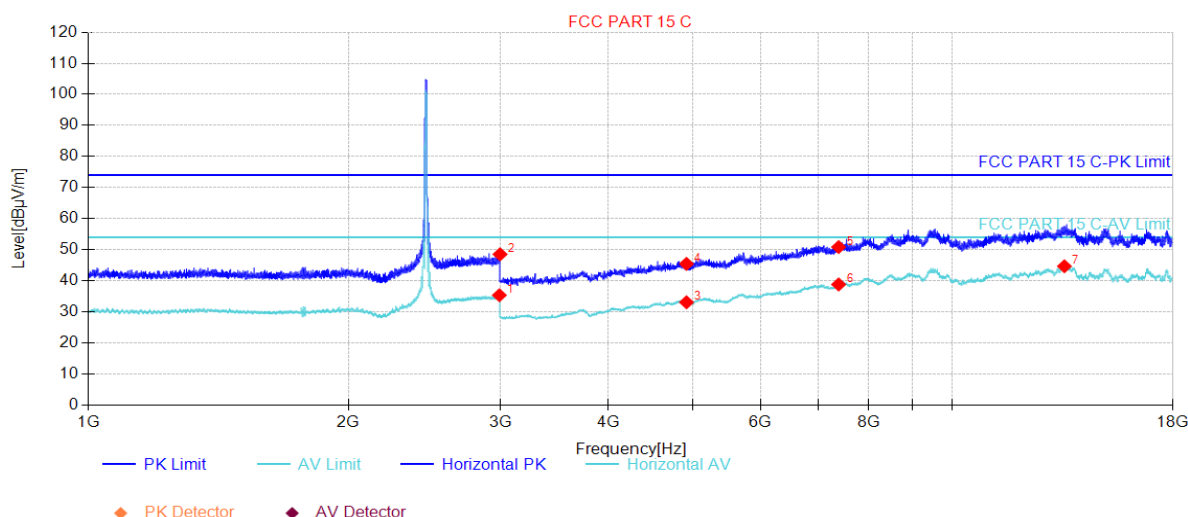
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4.9.2.5 802.11B_Channel 11 ANT 1



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2990.599	35.33	7.37	54.00	18.67	173	Horizontal
2	2995.399	48.50	7.39	74.00	25.50	154	Horizontal
3	4924.000	33.04	-10.22	54.00	20.96	171	Horizontal
4	4924.000	45.41	-10.22	74.00	28.59	159	Horizontal
5	7386.000	50.83	-2.06	74.00	23.17	138	Horizontal
6	7386.000	38.78	-2.06	54.00	15.22	160	Horizontal
7	13480.04	44.64	3.73	54.00	9.36	150	Horizontal

Final Data List



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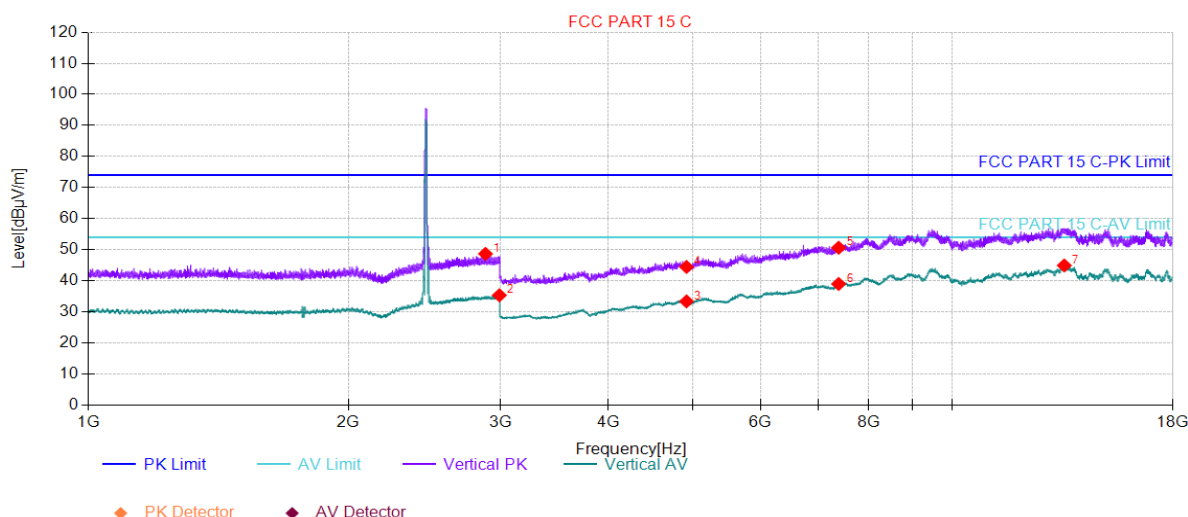
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4.9.2.6

802.11B_Channel 11 ANT 1



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2881.788	48.64	6.91	74.00	25.36	272	Vertical
2	2990.599	35.30	7.37	54.00	18.70	248	Vertical
3	4924.000	33.34	-10.22	54.00	20.66	247	Vertical
4	4924.000	44.43	-10.22	74.00	29.57	246	Vertical
5	7386.000	50.61	-2.06	74.00	23.39	234	Vertical
6	7386.000	38.95	-2.06	54.00	15.05	286	Vertical
7	13475.54	44.90	3.69	54.00	9.10	150	Vertical

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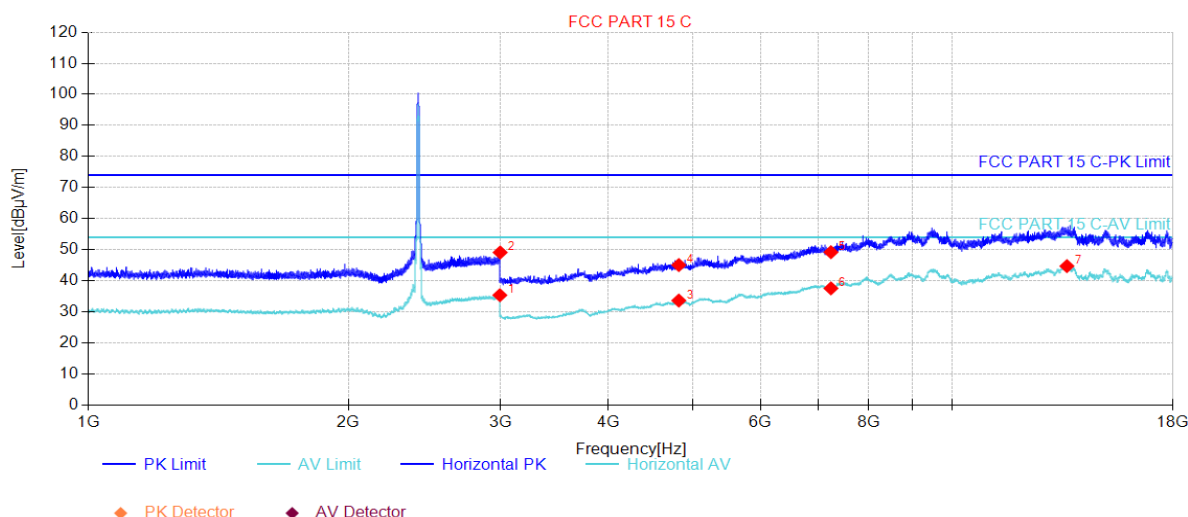
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4.9.2.7

802.11B_Channel 1 ANT 2



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2994.599	35.33	7.39	54.00	18.67	134	Horizontal
2	2996.799	49.09	7.40	74.00	24.91	131	Horizontal
3	4824.000	33.60	-10.56	54.00	20.40	168	Horizontal
4	4824.000	45.04	-10.56	74.00	28.96	160	Horizontal
5	7236.000	49.18	-2.59	74.00	24.82	174	Horizontal
6	7236.000	37.53	-2.59	54.00	16.47	150	Horizontal
7	13571.55	44.69	4.04	54.00	9.31	150	Horizontal

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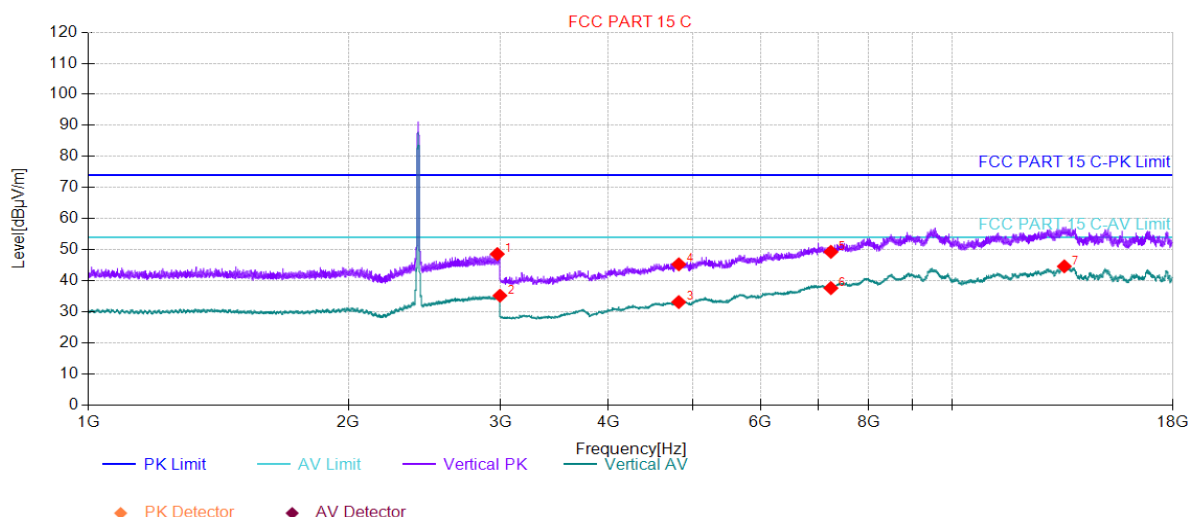
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4.9.2.8

802.11B_Channel 1 ANT 2



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2973.997	48.57	7.29	74.00	25.43	262	Vertical
2	2995.199	35.19	7.39	54.00	18.81	272	Vertical
3	4824.000	33.11	-10.56	54.00	20.89	254	Vertical
4	4824.000	45.26	-10.56	74.00	28.74	277	Vertical
5	7236.000	49.28	-2.59	74.00	24.72	266	Vertical
6	7236.000	37.61	-2.59	54.00	16.39	278	Vertical
7	13477.04	44.61	3.71	54.00	9.39	150	Vertical

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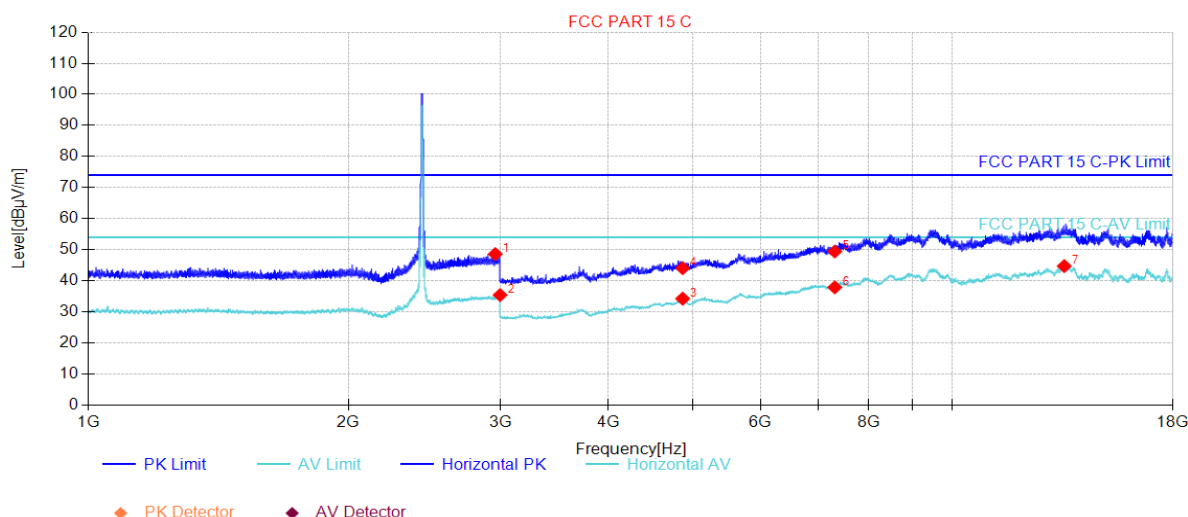
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4.9.2.9

802.11B_Channel 6 ANT 2



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2957.995	48.57	7.22	74.00	25.43	157	Horizontal
2	2996.399	35.38	7.39	54.00	18.62	162	Horizontal
3	4874.000	34.21	-10.40	54.00	19.79	150	Horizontal
4	4874.000	44.04	-10.40	74.00	29.96	168	Horizontal
5	7311.000	49.41	-2.57	74.00	24.59	150	Horizontal
6	7311.000	37.86	-2.57	54.00	16.14	160	Horizontal
7	13475.54	44.70	3.69	54.00	9.30	150	Horizontal

Final Data List



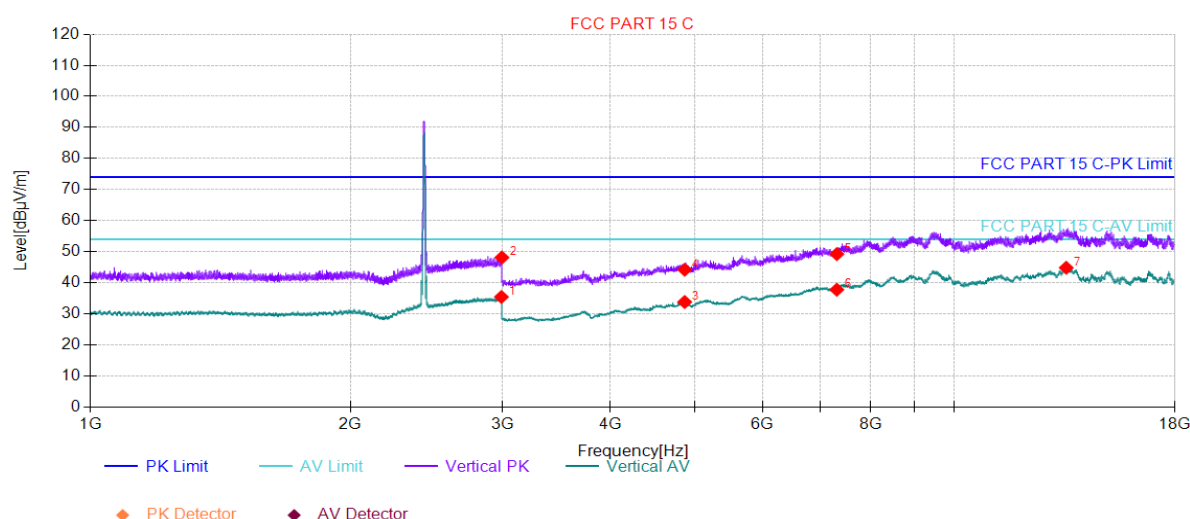
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4.9.2.10 802.11B_Channel 6 ANT 2



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2990.799	35.41	7.37	54.00	18.59	277	Vertical
2	2994.999	48.11	7.39	74.00	25.89	266	Vertical
3	4874.000	33.77	-10.40	54.00	20.23	234	Vertical
4	4874.000	44.18	-10.40	74.00	29.82	282	Vertical
5	7311.000	49.21	-2.57	74.00	24.79	256	Vertical
6	7311.000	37.74	-2.57	54.00	16.26	245	Vertical
7	13474.04	44.81	3.68	54.00	9.19	150	Vertical

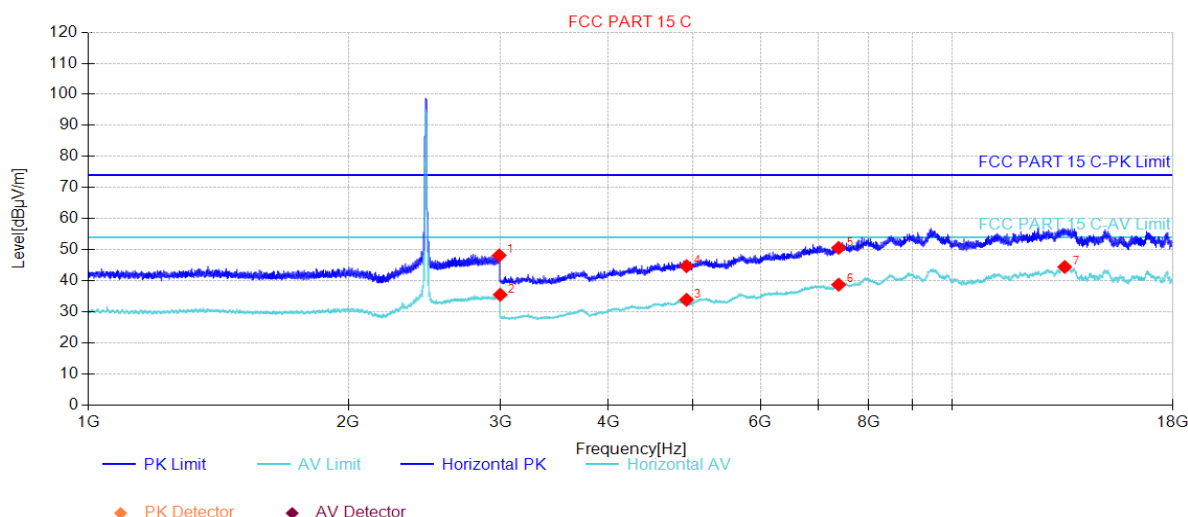
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4.9.2.11 802.11B_Channel 11 ANT 2



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2988.798	48.14	7.36	74.00	25.86	179	Horizontal
2	2997.199	35.48	7.40	54.00	18.52	135	Horizontal
3	4924.000	33.85	-10.22	54.00	20.15	163	Horizontal
4	4924.000	44.68	-10.22	74.00	29.32	131	Horizontal
5	7386.000	50.56	-2.06	74.00	23.44	177	Horizontal
6	7386.000	38.71	-2.06	54.00	15.29	160	Horizontal
7	13492.04	44.42	3.84	54.00	9.58	150	Horizontal

Final Data List



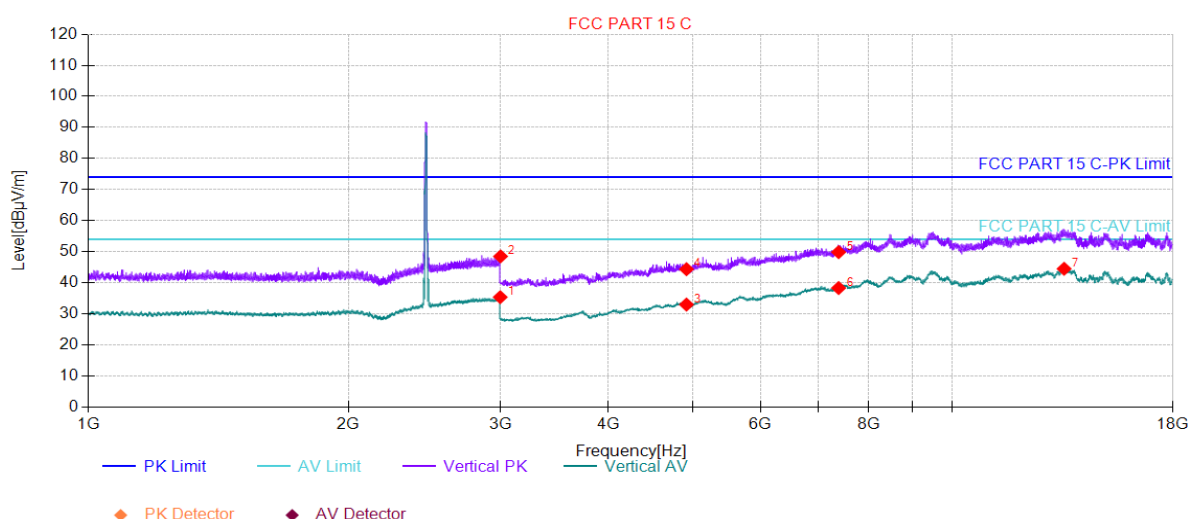
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4.9.2.12 802.11B_Channel 11 ANT 2



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2997.399	35.35	7.40	54.00	18.65	237	Vertical
2	2999.600	48.47	7.41	74.00	25.53	222	Vertical
3	4924.000	32.95	-10.22	54.00	21.05	248	Vertical
4	4924.000	44.34	-10.22	74.00	29.66	293	Vertical
5	7386.000	49.83	-2.06	74.00	24.17	261	Vertical
6	7386.000	38.28	-2.06	54.00	15.72	266	Vertical
7	13469.54	44.48	3.64	54.00	9.52	150	Vertical

Final Data List



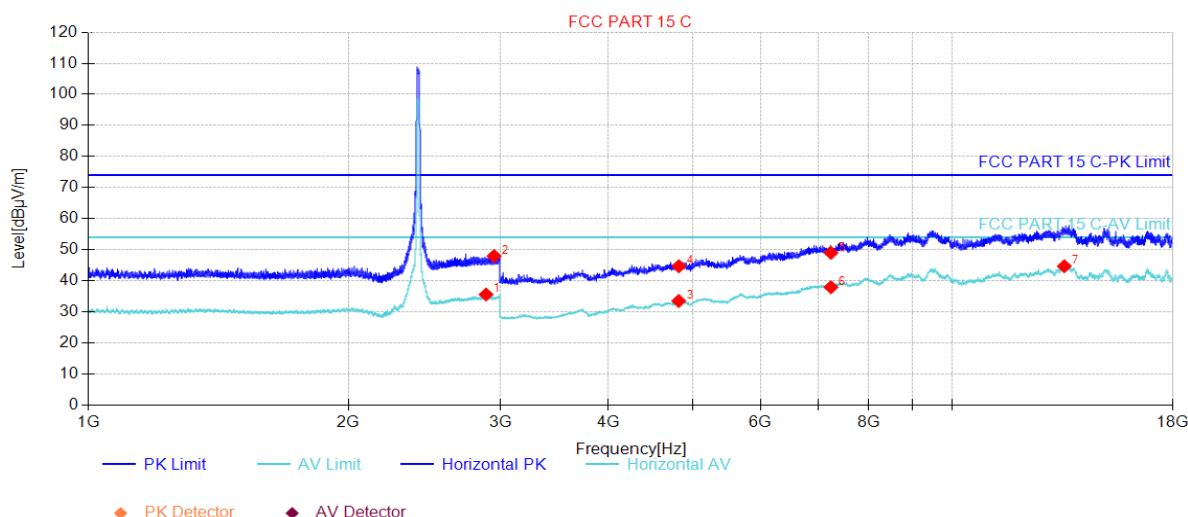
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4.9.2.13 802.11G_Channel 1 MIMO



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2886.188	35.55	6.92	54.00	18.45	155	Horizontal
2	2948.394	47.93	7.17	74.00	26.07	143	Horizontal
3	4824.000	33.46	-10.56	54.00	20.54	136	Horizontal
4	4824.000	44.65	-10.56	74.00	29.35	164	Horizontal
5	7236.000	48.97	-2.59	74.00	25.03	147	Horizontal
6	7236.000	37.90	-2.59	54.00	16.10	171	Horizontal
7	13477.04	44.65	3.71	54.00	9.35	150	Horizontal

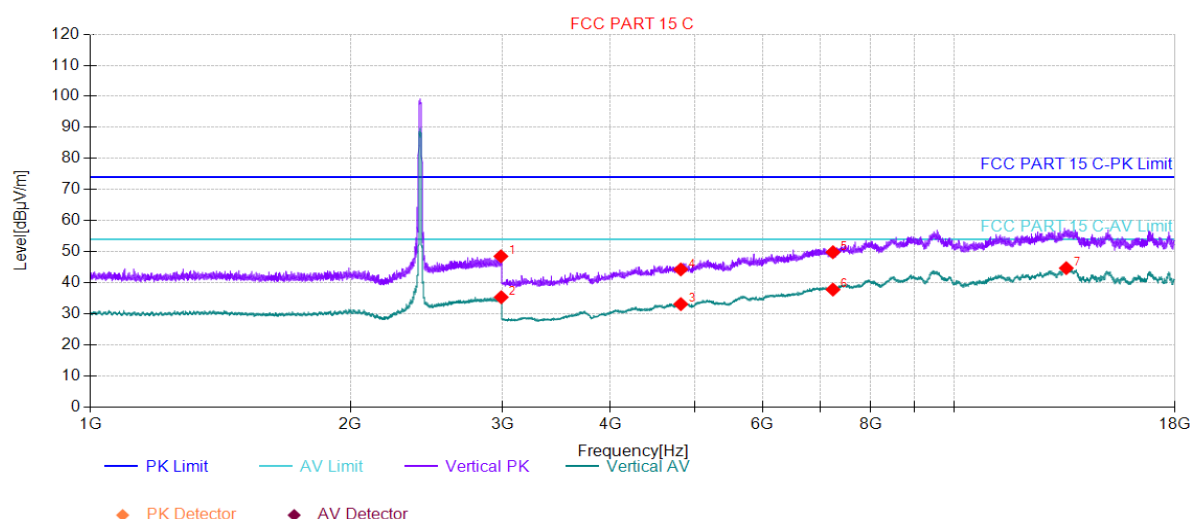
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4.9.2.14 802.11G_Channel 1 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2986.998	48.50	7.35	74.00	25.50	287	Vertical
2	2989.198	35.31	7.36	54.00	18.69	260	Vertical
3	4824.000	33.08	-10.56	54.00	20.92	248	Vertical
4	4824.000	44.26	-10.56	74.00	29.74	300	Vertical
5	7236.000	49.82	-2.59	74.00	24.18	259	Vertical
6	7236.000	37.78	-2.59	54.00	16.22	286	Vertical
7	13475.54	44.68	3.69	54.00	9.32	150	Vertical

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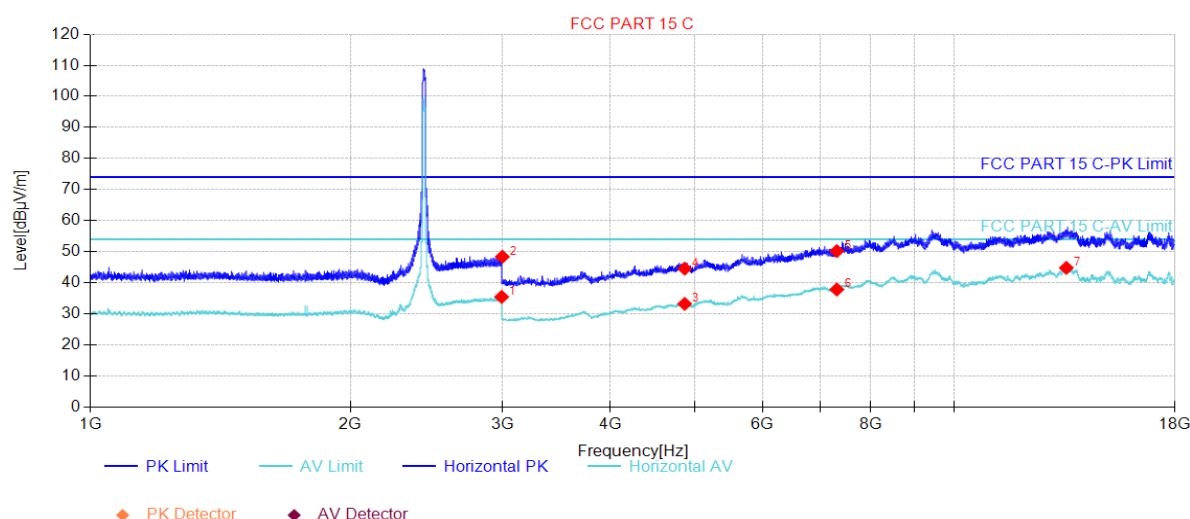
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4.9.2.15 802.11G_Channel 6 MIMO



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2992.999	35.42	7.38	54.00	18.58	151	Horizontal
2	2998.199	48.35	7.40	74.00	25.65	150	Horizontal
3	4874.000	33.17	-10.40	54.00	20.83	136	Horizontal
4	4874.000	44.52	-10.40	74.00	29.48	177	Horizontal
5	7311.000	50.17	-2.57	74.00	23.83	158	Horizontal
6	7311.000	37.81	-2.57	54.00	16.19	156	Horizontal
7	13477.04	44.77	3.71	54.00	9.23	150	Horizontal

Final Data List



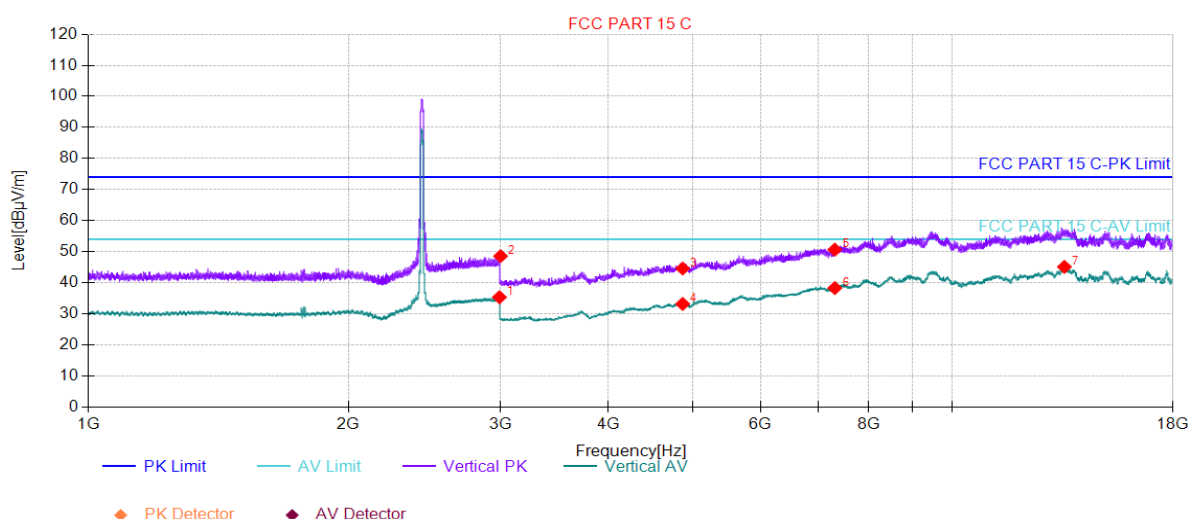
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4.9.2.16 802.11G_Channel 6 MIMO



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2990.999	35.33	7.37	54.00	18.67	229	Vertical
2	3000.000	48.56	7.41	74.00	25.44	298	Vertical
3	4874.000	44.57	-10.40	74.00	29.43	248	Vertical
4	4874.000	33.15	-10.40	54.00	20.85	249	Vertical
5	7311.000	50.64	-2.57	74.00	23.36	273	Vertical
6	7311.000	38.27	-2.57	54.00	15.73	243	Vertical
7	13480.04	45.09	3.73	54.00	8.91	150	Vertical

Final Data List



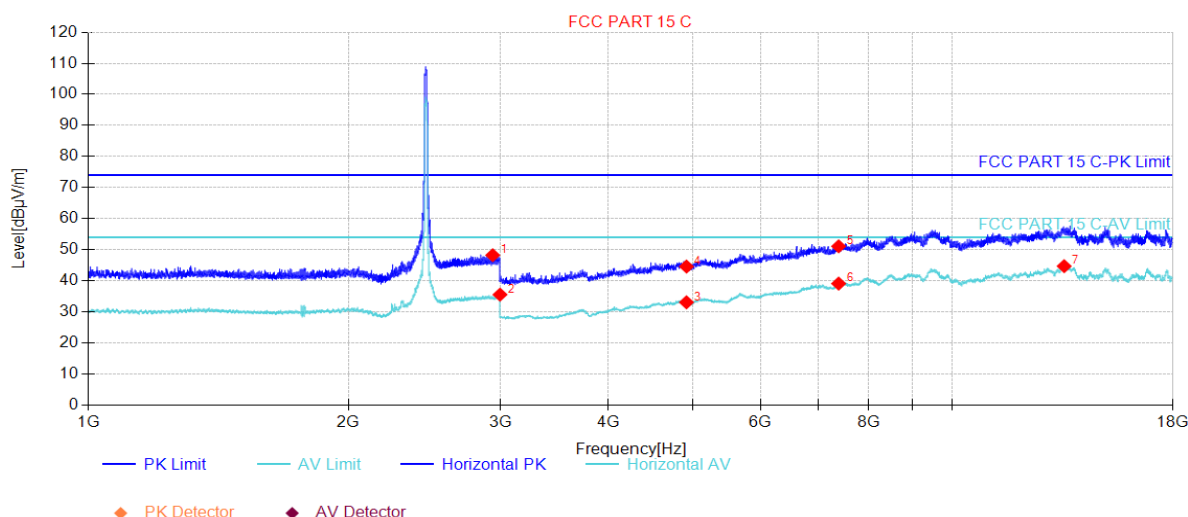
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4.9.2.17 802.11G_Channel 11 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2937.993	48.21	7.12	74.00	25.79	176	Horizontal
2	2995.399	35.51	7.39	54.00	18.49	144	Horizontal
3	4924.000	33.03	-10.22	54.00	20.97	158	Horizontal
4	4924.000	44.55	-10.22	74.00	29.45	131	Horizontal
5	7386.000	51.07	-2.06	74.00	22.93	136	Horizontal
6	7386.000	39.06	-2.06	54.00	14.94	147	Horizontal
7	13472.54	44.67	3.67	54.00	9.33	150	Horizontal

Final Data List



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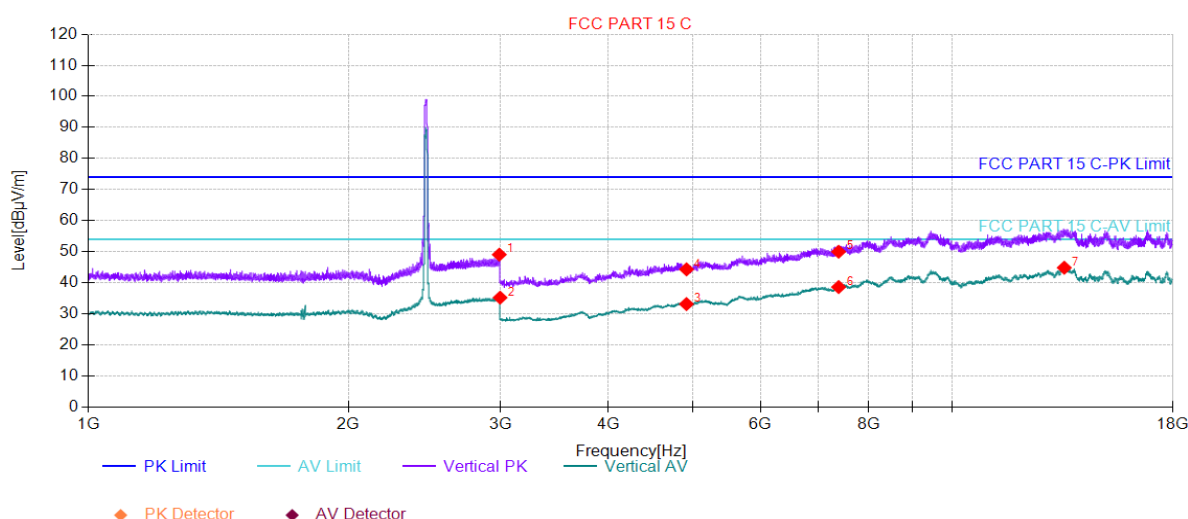
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4.9.2.18 802.11G_Channel 11 MIMO



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2989.799	49.04	7.36	74.00	24.96	287	Vertical
2	2996.399	35.19	7.39	54.00	18.81	228	Vertical
3	4924.000	33.11	-10.22	54.00	20.89	243	Vertical
4	4924.000	44.28	-10.22	74.00	29.72	267	Vertical
5	7386.000	49.96	-2.06	74.00	24.04	223	Vertical
6	7386.000	38.59	-2.06	54.00	15.41	255	Vertical
7	13475.54	44.81	3.69	54.00	9.19	150	Vertical

Final Data List



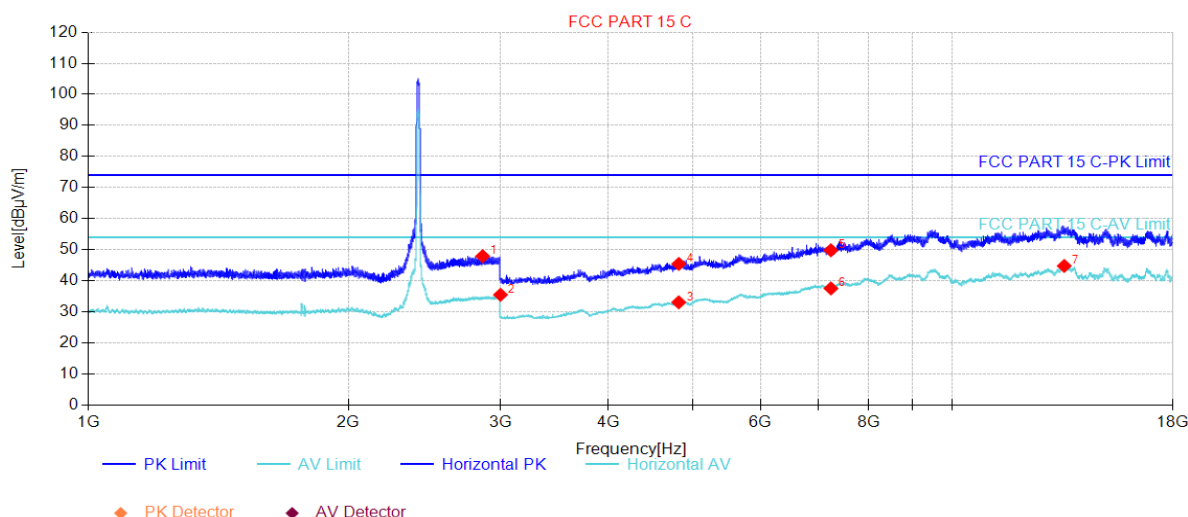
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4.9.2.19 802.11N20_Channel 1 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2860.386	47.88	6.86	74.00	26.12	171	Horizontal
2	2999.399	35.46	7.41	54.00	18.54	150	Horizontal
3	4824.000	33.03	-10.56	54.00	20.97	135	Horizontal
4	4824.000	45.40	-10.56	74.00	28.60	155	Horizontal
5	7236.000	49.79	-2.59	74.00	24.21	174	Horizontal
6	7236.000	37.50	-2.59	54.00	16.50	138	Horizontal
7	13474.04	44.75	3.68	54.00	9.25	150	Horizontal

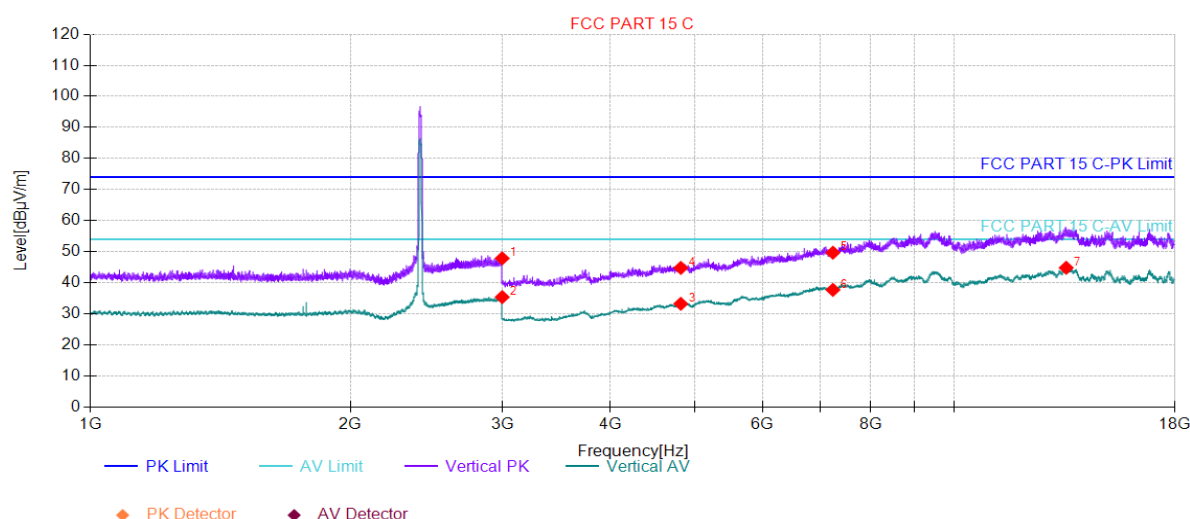
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4.9.2.20 802.11N20_Channel 1 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2996.999	47.84	7.40	74.00	26.16	224	Vertical
2	2996.999	35.36	7.40	54.00	18.64	287	Vertical
3	4824.000	33.19	-10.56	54.00	20.81	223	Vertical
4	4824.000	44.75	-10.56	74.00	29.25	294	Vertical
5	7236.000	49.66	-2.59	74.00	24.34	267	Vertical
6	7236.000	37.68	-2.59	54.00	16.32	282	Vertical
7	13472.54	44.79	3.67	54.00	9.21	150	Vertical

Final Data List



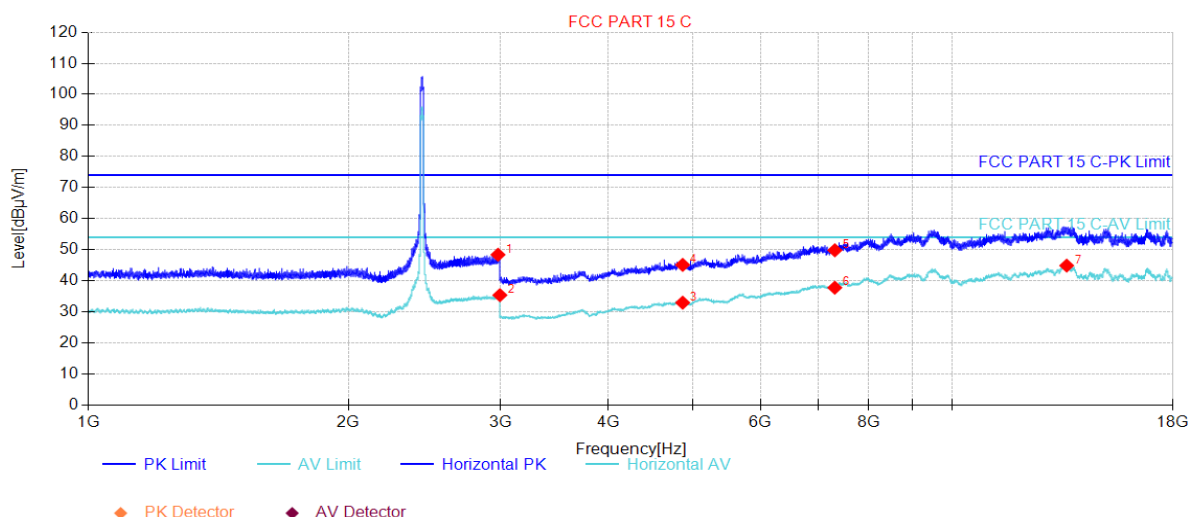
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4.9.2.21 802.11N20_Channel 6 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2979.798	48.36	7.32	74.00	25.64	136	Horizontal
2	2994.799	35.34	7.39	54.00	18.66	133	Horizontal
3	4874.000	32.92	-10.40	54.00	21.08	162	Horizontal
4	4874.000	45.09	-10.40	74.00	28.91	170	Horizontal
5	7311.000	49.79	-2.57	74.00	24.21	139	Horizontal
6	7311.000	37.74	-2.57	54.00	16.26	164	Horizontal
7	13562.55	44.86	4.02	54.00	9.14	150	Horizontal

Final Data List



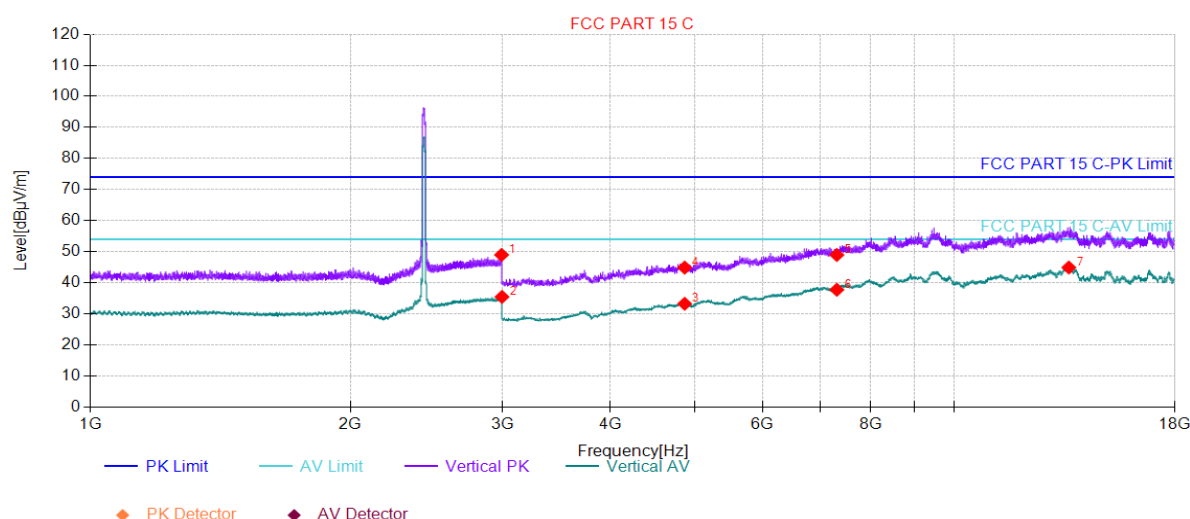
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4.9.2.22 802.11N20_Channel 6 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2991.999	48.95	7.37	74.00	25.05	254	Vertical
2	2995.599	35.43	7.39	54.00	18.57	239	Vertical
3	4874.000	33.21	-10.40	54.00	20.79	245	Vertical
4	4874.000	44.86	-10.40	74.00	29.14	254	Vertical
5	7311.000	48.93	-2.57	74.00	25.07	277	Vertical
6	7311.000	37.72	-2.57	54.00	16.28	264	Vertical
7	13568.55	44.89	4.03	54.00	9.11	150	Vertical

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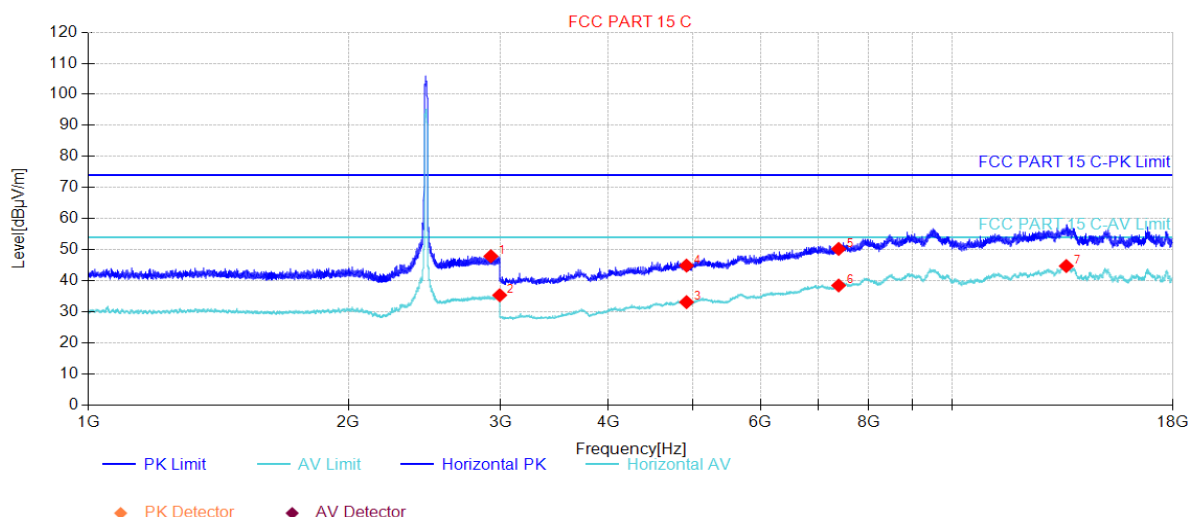
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4.9.2.23 802.11N20_Channel 11 MIMO



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2923.992	47.87	7.06	74.00	26.13	144	Horizontal
2	2992.999	35.33	7.38	54.00	18.67	138	Horizontal
3	4924.000	33.08	-10.22	54.00	20.92	147	Horizontal
4	4924.000	44.86	-10.22	74.00	29.14	159	Horizontal
5	7386.000	50.23	-2.06	74.00	23.77	150	Horizontal
6	7386.000	38.46	-2.06	54.00	15.54	144	Horizontal
7	13547.55	44.72	3.99	54.00	9.28	150	Horizontal

Final Data List

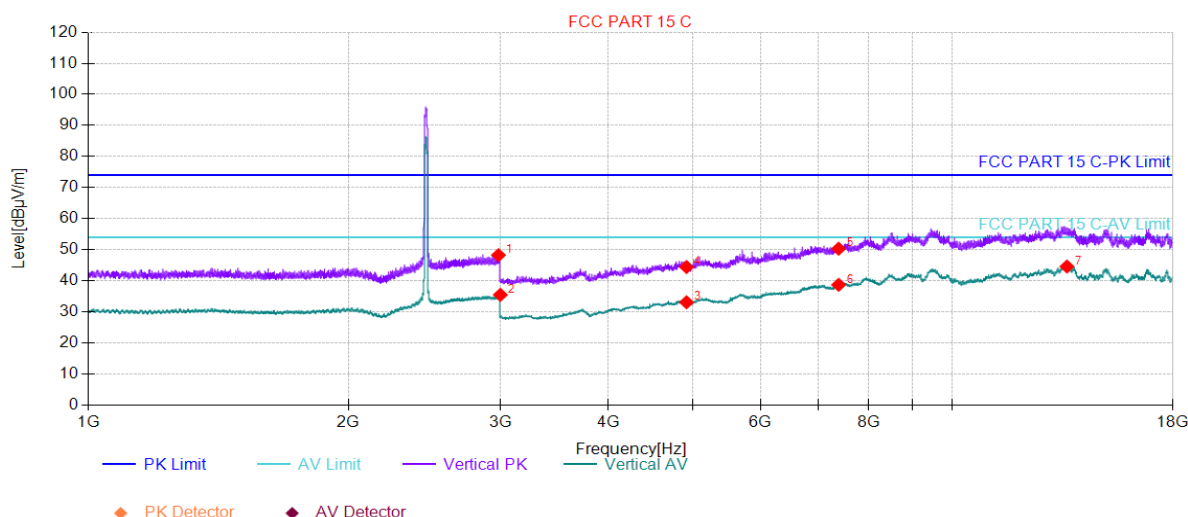


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4.9.2.24 802.11N20_Channel 11 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
1	2983.398	48.23	7.33	74.00	25.77	264	Vertical
2	2998.599	35.44	7.40	54.00	18.56	259	Vertical
3	4924.000	33.06	-10.22	54.00	20.94	263	Vertical
4	4924.000	44.41	-10.22	74.00	29.59	291	Vertical
5	7386.000	50.30	-2.06	74.00	23.70	264	Vertical
6	7386.000	38.66	-2.06	54.00	15.34	238	Vertical
7	13571.55	44.56	4.04	54.00	9.44	150	Vertical

Final Data List

Remark:

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

$$\text{Final Test Level} = \text{Receiver Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Preamplifier Factor}$$

- 2) Scan from 9kHz to 25GHz, the disturbance between 9KHz to 30MHz and 18GHz to 25GHz was very low, and the above harmonics were the highest point could be found when testing, The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
- 3) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.
- 4) All Modes have been tested, but only the worst case data displayed in this report.



4.10 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10: 2013 Section 11.12		
Test Site:	Measurement Distance: 3m or 10m (Semi-Anechoic Chamber)		
Limit:	Frequency	Limit (dBuV/m @3m)	Remark
	30MHz-88MHz	40.0	Quasi-peak Value
	88MHz-216MHz	43.5	Quasi-peak Value
	216MHz-960MHz	46.0	Quasi-peak Value
	960MHz-1GHz	54.0	Quasi-peak Value
	Above 1GHz	54.0	Average Value
		74.0	Peak Value
Test Setup:			

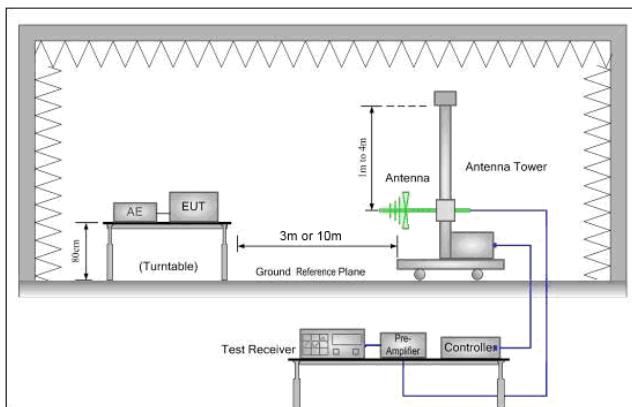


Figure 1. 30MHz to 1GHz

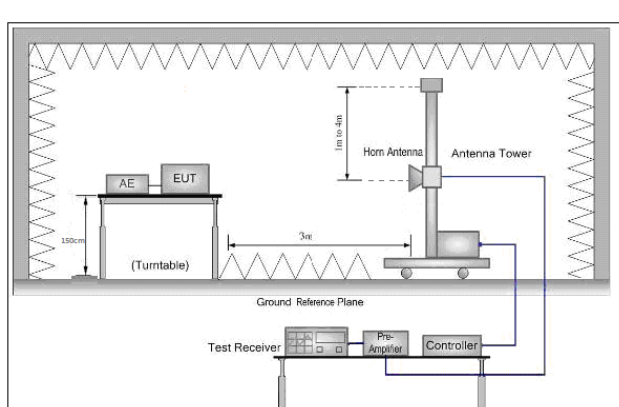


Figure 2. Above 1 GHz



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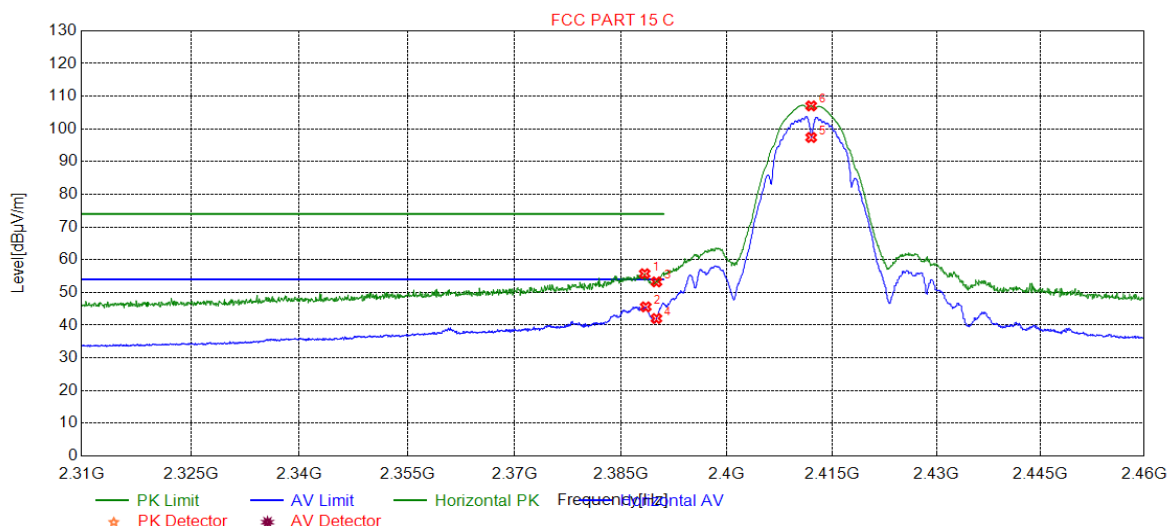
Test Procedure:	a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. g. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel h. Test the EUT in the lowest channel , the Highest channel i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case. j. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Charge + Transmitting mode.
Final Test Mode:	Pretest the EUT at Charge +Transmitting mode. Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11B; 6Mbps of rate is the worst case of 802.11G ; 6.5Mbps of rate is the worst case of 802.11N(HT20); Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass
Remark:	The Emission Test data were reused from the report no:XZR/2020/B001601



Test plot as follows:

4.10.1 Test plots

4.10.1.1 802.11B_Channel 1 ANT 1



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2388.339	55.75	74.00	18.25	238	272	Horizontal
2	2388.489	45.61	54.00	8.39	140	272	Horizontal
3	2390.000	53.24	74.00	20.76	125	110	Horizontal
4	2390.000	42.06	54.00	11.94	121	272	Horizontal
5	2412.000	97.39	0.00	-97.39	132	276	Horizontal
6	2412.000	107.04	0.00	-107.04	152	272	Horizontal

Final Data List



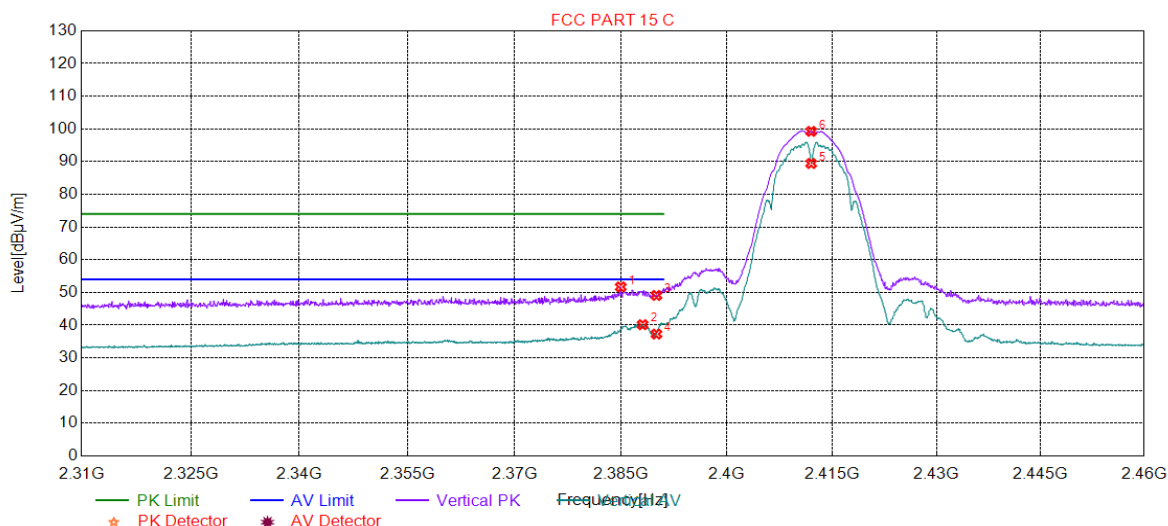
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4.10.1.2 802.11B_Channel 1 ANT 1



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2384.962	51.71	74.00	22.29	165	159	Vertical
2	2388.039	40.16	54.00	13.84	295	159	Vertical
3	2390.000	49.11	74.00	24.89	194	163	Vertical
4	2390.000	37.28	54.00	16.72	208	159	Vertical
5	2412.000	89.44	0.00	-89.44	150	159	Vertical
6	2412.000	99.26	0.00	-99.26	277	163	Vertical

Final Data List



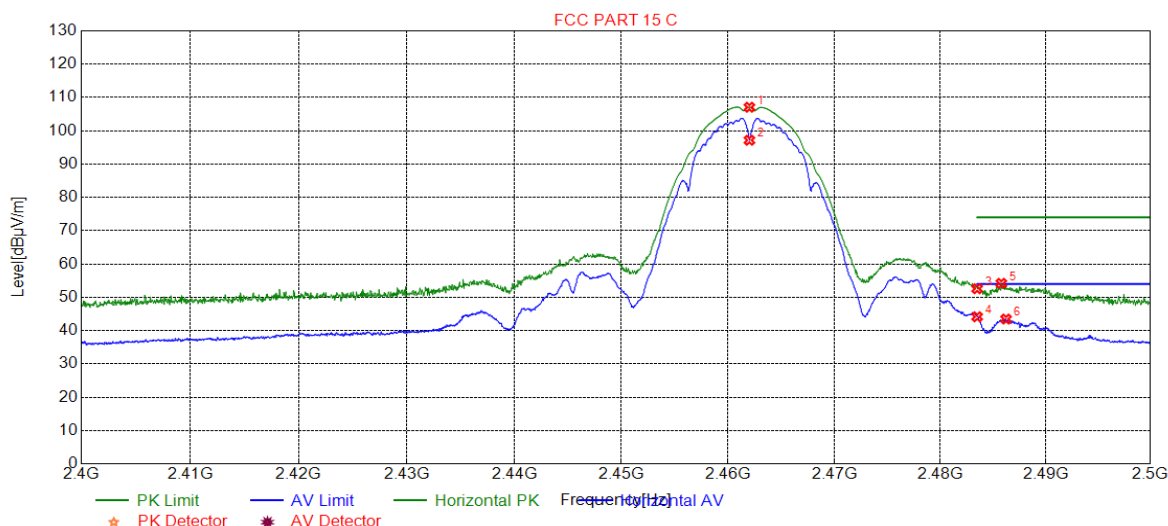
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4.10.1.3 802.11B_Channel 11 ANT 1

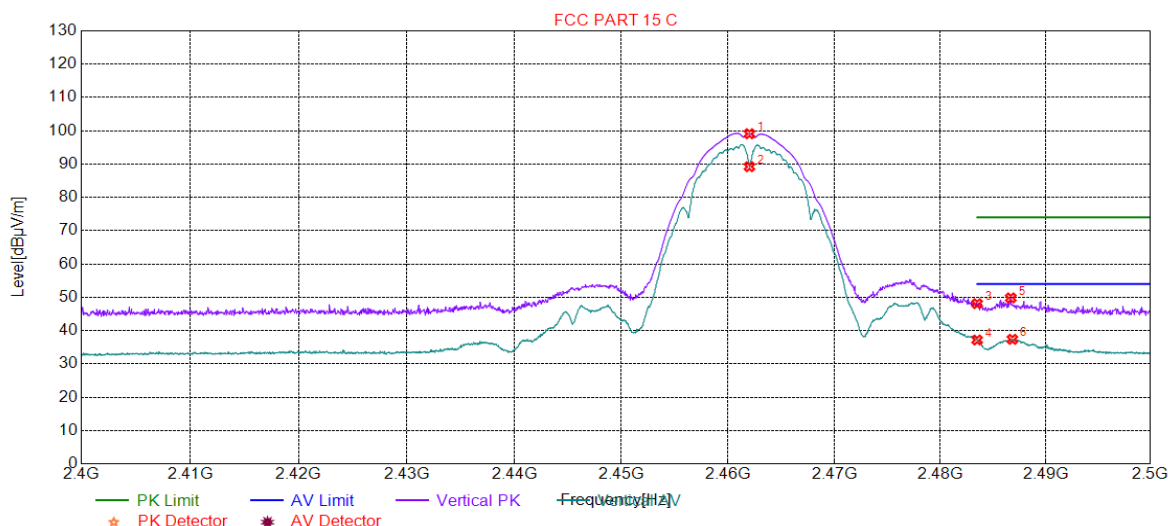


Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	107.07	0.00	-107.07	128	270	Horizontal
2	2462.000	97.16	0.00	-97.16	201	274	Horizontal
3	2483.500	52.59	74.00	21.41	206	270	Horizontal
4	2483.500	44.18	54.00	9.82	168	270	Horizontal
5	2485.792	54.22	74.00	19.78	213	270	Horizontal
6	2486.243	43.49	54.00	10.51	166	270	Horizontal

Final Data List



4.10.1.4 802.11B_Channel 11 ANT 1

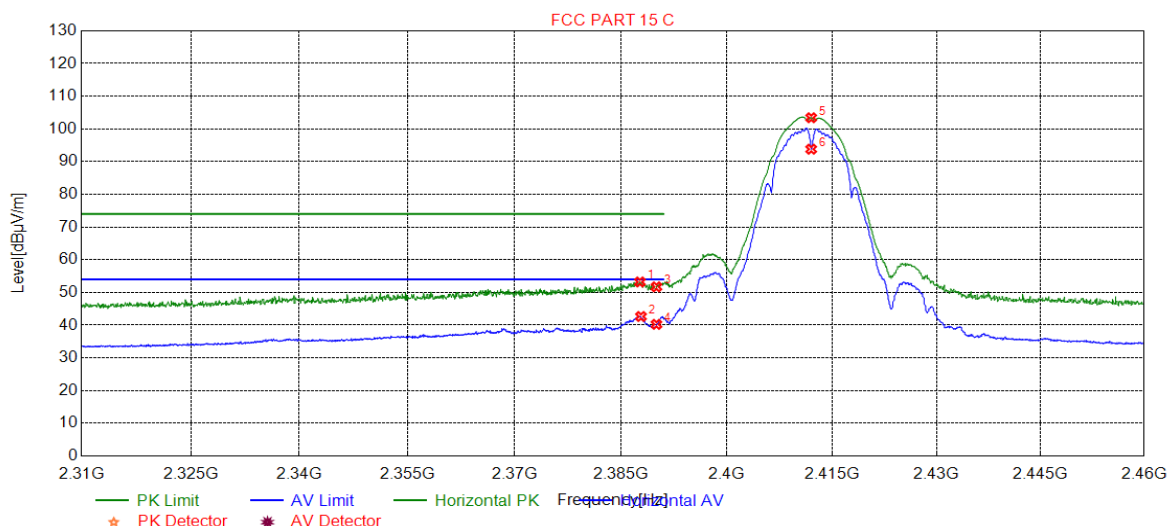


Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	99.12	0.00	-99.12	232	360	Vertical
2	2462.000	89.23	0.00	-89.23	229	359	Vertical
3	2483.500	48.11	74.00	25.89	218	359	Vertical
4	2483.500	37.21	54.00	16.79	265	359	Vertical
5	2486.693	49.84	74.00	24.16	241	354	Vertical
6	2486.843	37.41	54.00	16.59	172	359	Vertical

Final Data List



4.10.1.5 802.11B_Channel 1 ANT 2



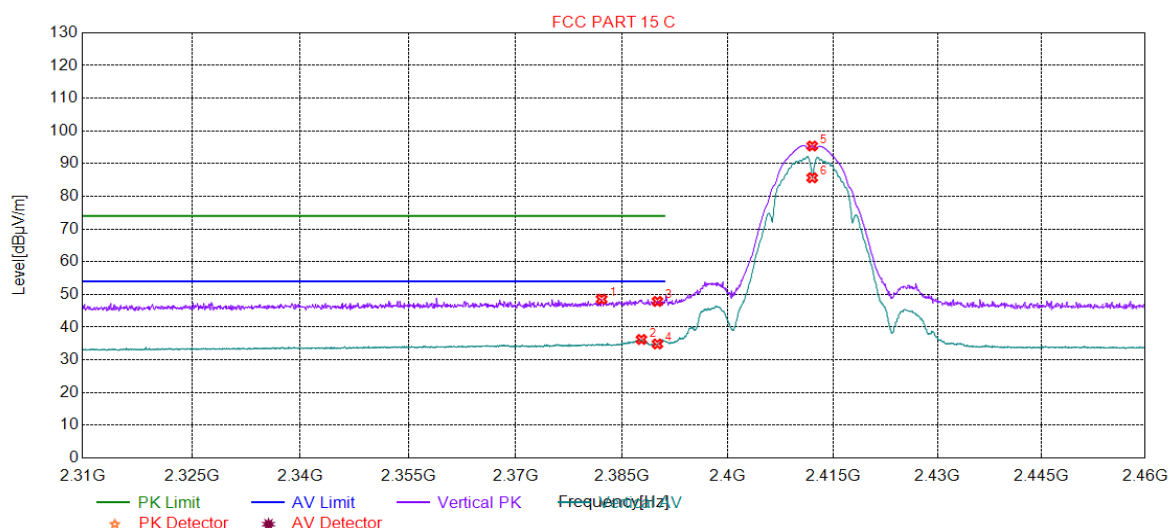
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2387.663	53.22	74.00	20.78	216	138	Horizontal
2	2387.813	42.66	54.00	11.34	230	54	Horizontal
3	2390.000	51.73	74.00	22.27	187	58	Horizontal
4	2390.000	40.26	54.00	13.74	103	123	Horizontal
5	2412.000	103.42	0.00	-103.42	128	123	Horizontal
6	2412.000	93.81	0.00	-93.81	222	111	Horizontal

Final Data List



4.10.1.6 802.11B_Channel 1 ANT 2

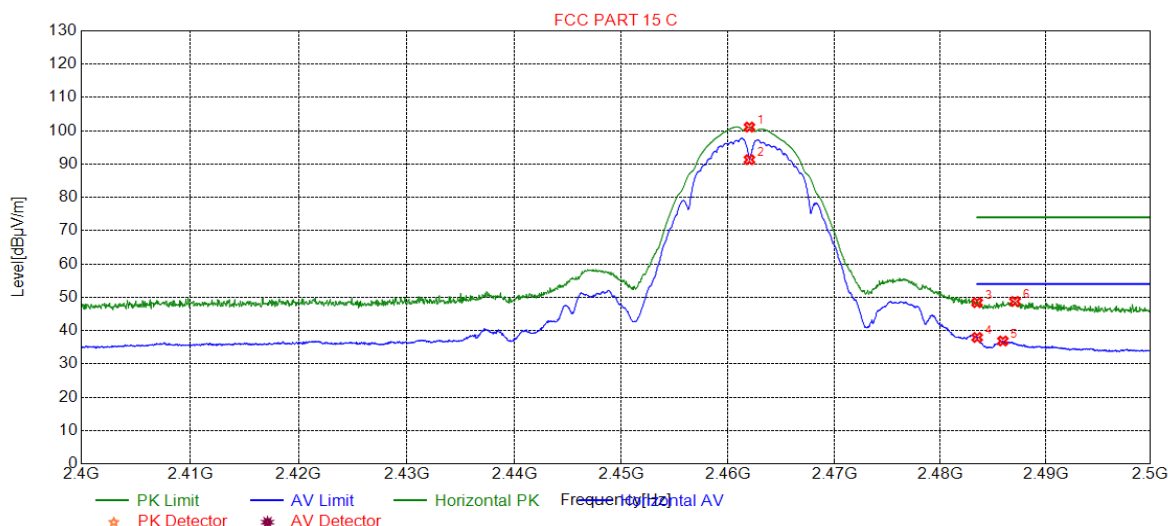


Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2382.111	48.57	74.00	25.43	188	320	Vertical
2	2387.738	36.25	54.00	17.75	174	14	Vertical
3	2390.000	47.89	74.00	26.11	257	243	Vertical
4	2390.000	34.88	54.00	19.12	235	354	Vertical
5	2412.000	95.39	0.00	-95.39	299	75	Vertical
6	2412.000	85.68	0.00	-85.68	279	75	Vertical

Final Data List



4.10.1.7 802.11B_Channel 11 ANT 2



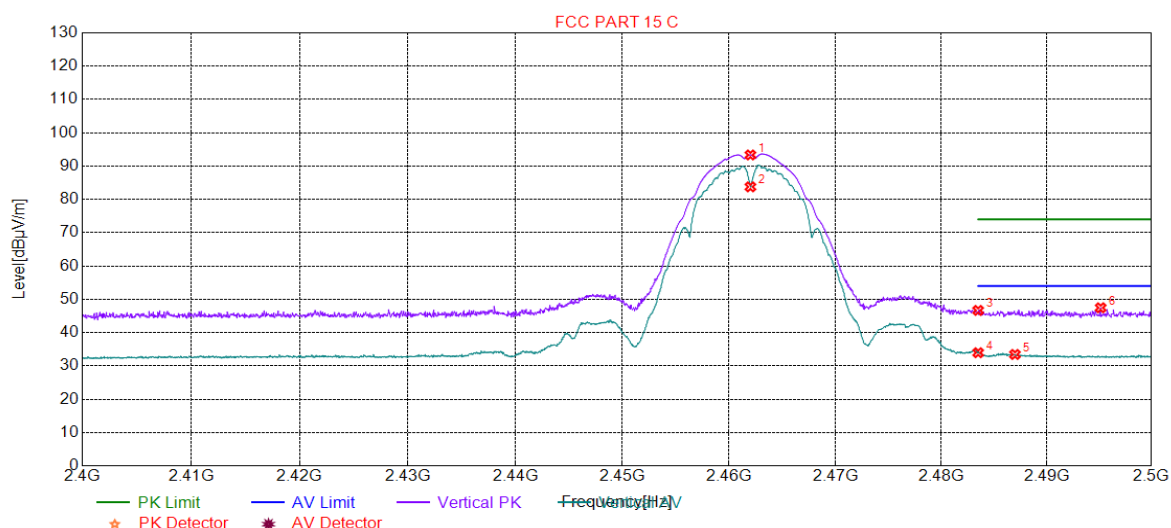
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	101.12	0.00	-101.12	205	113	Horizontal
2	2462.000	91.32	0.00	-91.32	119	117	Horizontal
3	2483.500	48.42	74.00	25.58	151	143	Horizontal
4	2483.500	37.97	54.00	16.03	223	113	Horizontal
5	2485.943	36.91	54.00	17.09	161	113	Horizontal
6	2487.093	48.77	74.00	25.23	106	140	Horizontal

Final Data List



4.10.1.8 802.11B_Channel 11 ANT 2



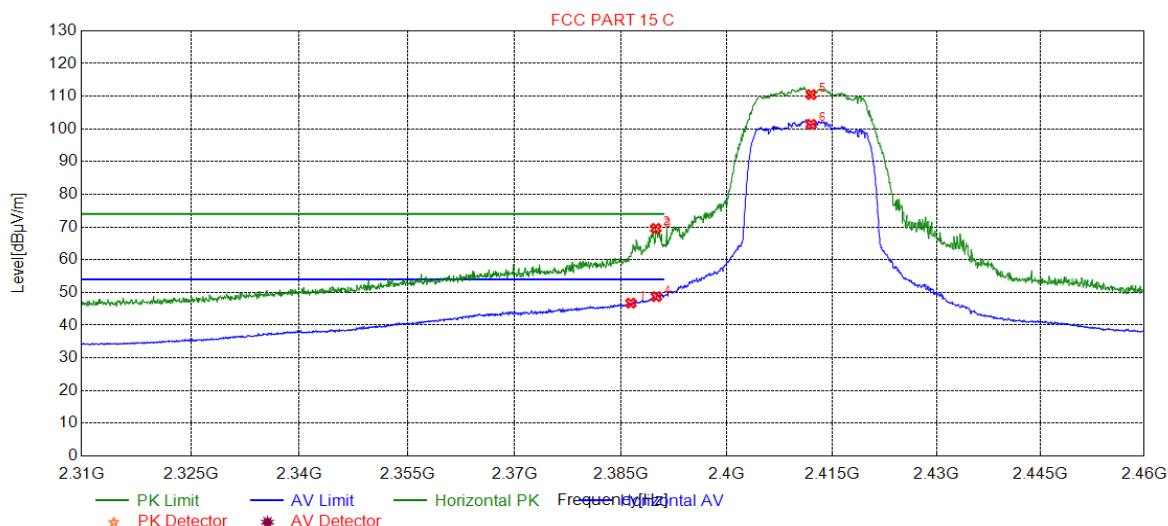
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	93.35	0.00	-93.35	200	75	Vertical
2	2462.000	83.77	0.00	-83.77	233	75	Vertical
3	2483.500	46.68	74.00	27.32	282	286	Vertical
4	2483.500	33.99	54.00	20.01	220	79	Vertical
5	2486.993	33.47	54.00	20.53	286	71	Vertical
6	2495.147	47.48	74.00	26.52	286	301	Vertical

Final Data List



4.10.1.9 802.11G_Channel 1 MIMO

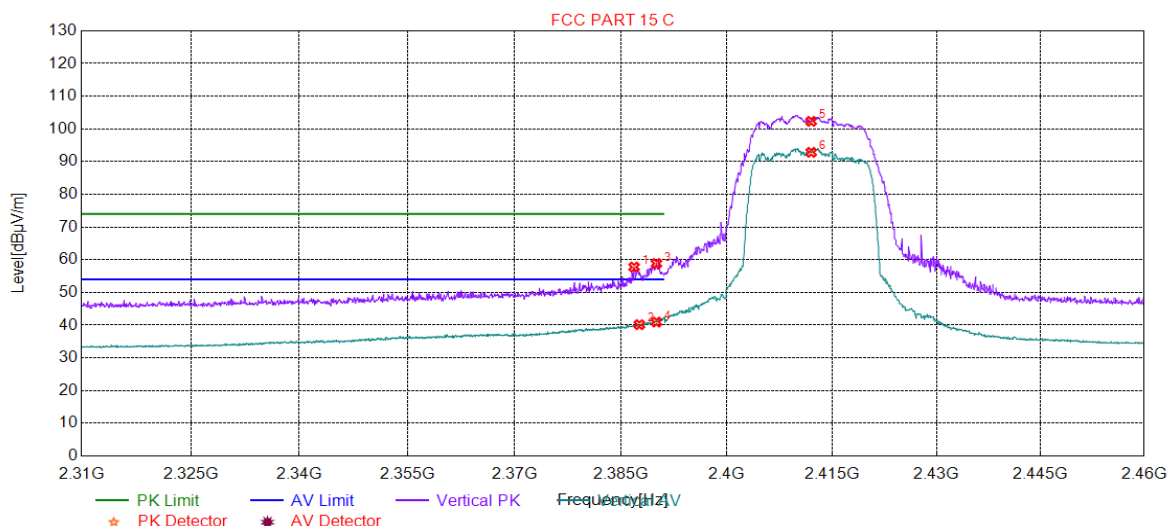


Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2386.388	46.75	54.00	7.25	137	50	Horizontal
2	2389.915	69.60	74.00	4.40	157	50	Horizontal
3	2390.000	69.08	74.00	4.92	177	111	Horizontal
4	2390.000	48.72	54.00	5.28	177	111	Horizontal
5	2412.000	110.51	0.00	-110.51	233	45	Horizontal
6	2412.000	101.39	0.00	-101.39	105	54	Horizontal

Final Data List



4.10.1.10 802.11G_Channel 1 MIMO



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2386.838	57.78	74.00	16.22	232	165	Vertical
2	2387.588	40.16	54.00	13.84	199	158	Vertical
3	2390.000	58.85	74.00	15.15	267	14	Vertical
4	2390.000	40.97	54.00	13.03	236	158	Vertical
5	2412.000	102.33	0.00	-102.33	271	161	Vertical
6	2412.000	92.85	0.00	-92.85	203	161	Vertical

Final Data List

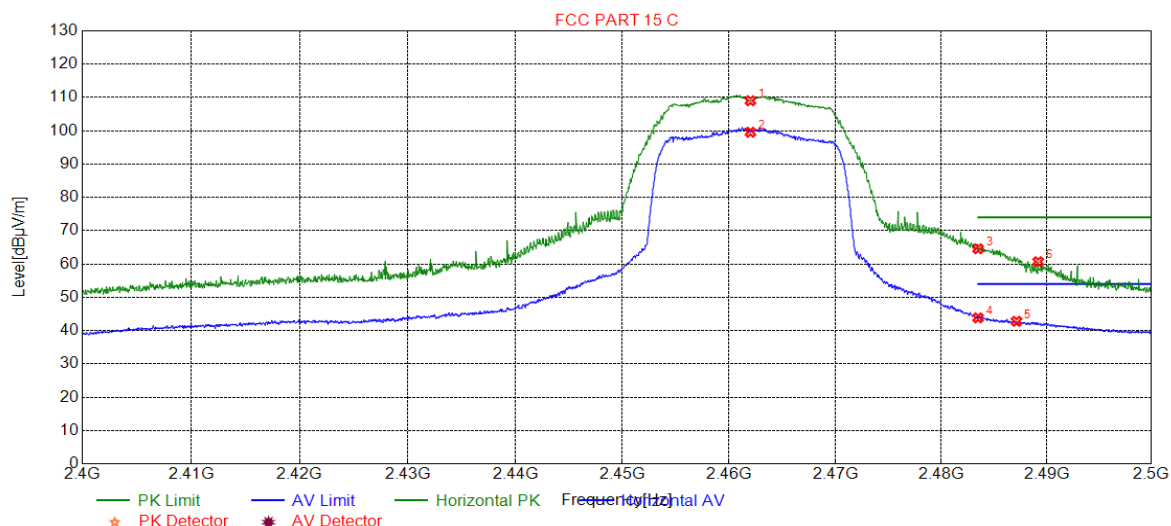


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4.10.1.11 802.11G_Channel 11 MIMO



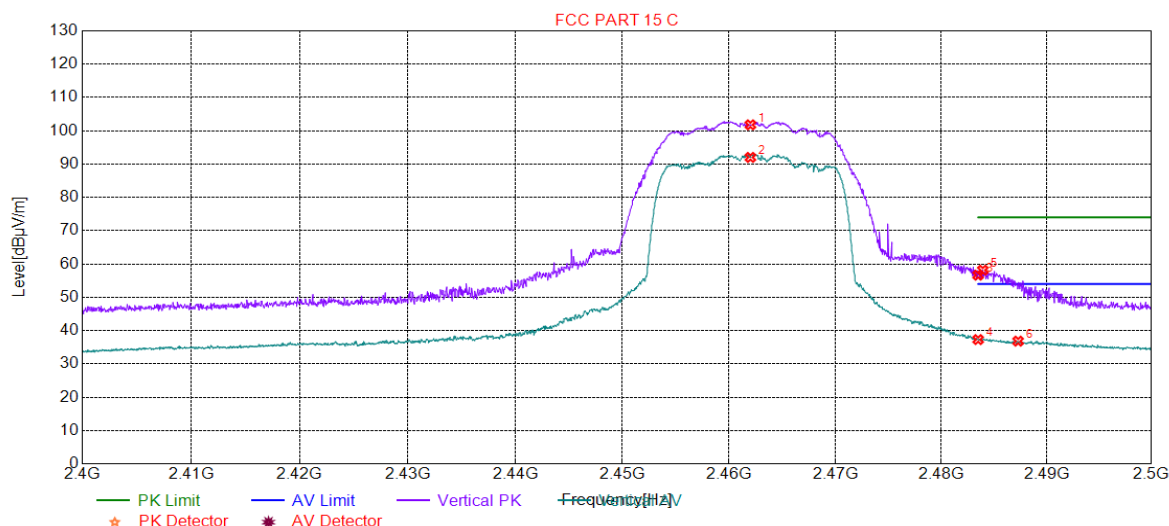
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	109.01	0.00	-109.01	135	114	Horizontal
2	2462.000	99.56	0.00	-99.56	103	53	Horizontal
3	2483.500	64.59	74.00	9.41	189	87	Horizontal
4	2483.500	43.86	54.00	10.14	220	60	Horizontal
5	2487.143	42.82	54.00	11.18	192	56	Horizontal
6	2489.194	60.71	74.00	13.29	121	56	Horizontal

Final Data List



4.10.1.12 802.11G_Channel 11 MIMO



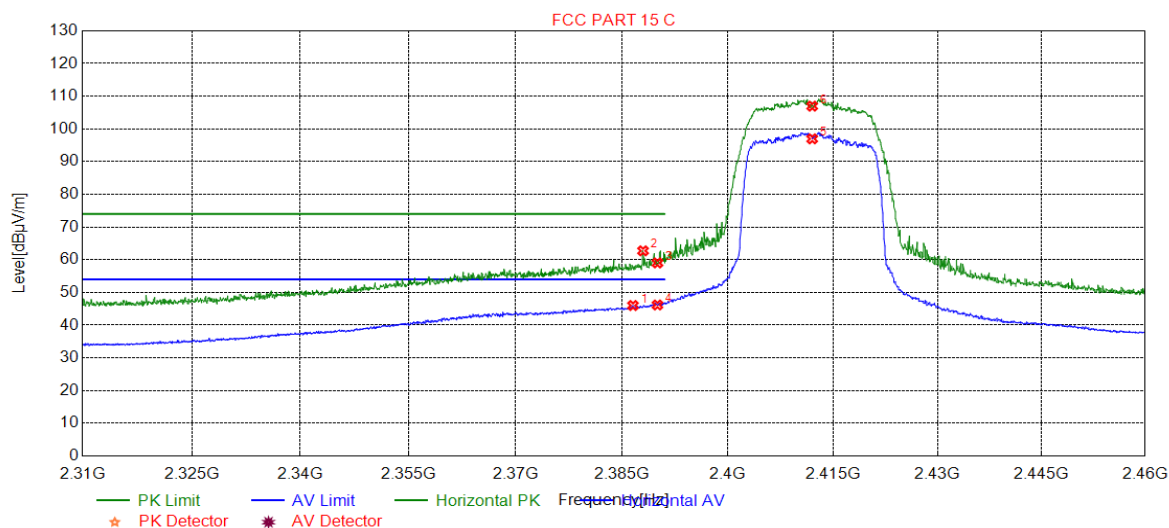
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	101.79	0.00	-101.79	188	360	Vertical
2	2462.000	92.01	0.00	-92.01	279	14	Vertical
3	2483.500	56.67	74.00	17.33	152	14	Vertical
4	2483.500	37.33	54.00	16.67	274	14	Vertical
5	2483.942	58.17	74.00	15.83	189	14	Vertical
6	2487.293	36.86	54.00	17.14	289	352	Vertical

Final Data List



4.10.1.13 802.11N20_Channel 1 MIMO



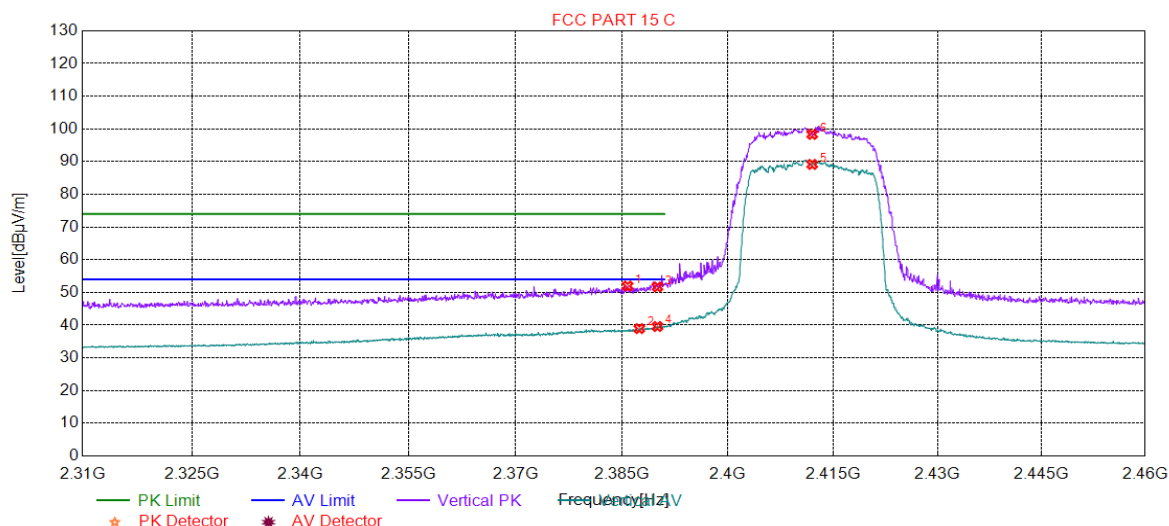
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2386.538	46.02	54.00	7.98	187	53	Horizontal
2	2387.964	62.74	74.00	11.26	240	72	Horizontal
3	2390.000	59.04	74.00	14.96	150	114	Horizontal
4	2390.000	46.19	54.00	7.81	214	110	Horizontal
5	2412.000	96.97	0.00	-96.97	229	46	Horizontal
6	2412.000	106.97	0.00	-106.97	237	114	Horizontal

Final Data List



4.10.1.14 802.11N20_Channel 1 MIMO

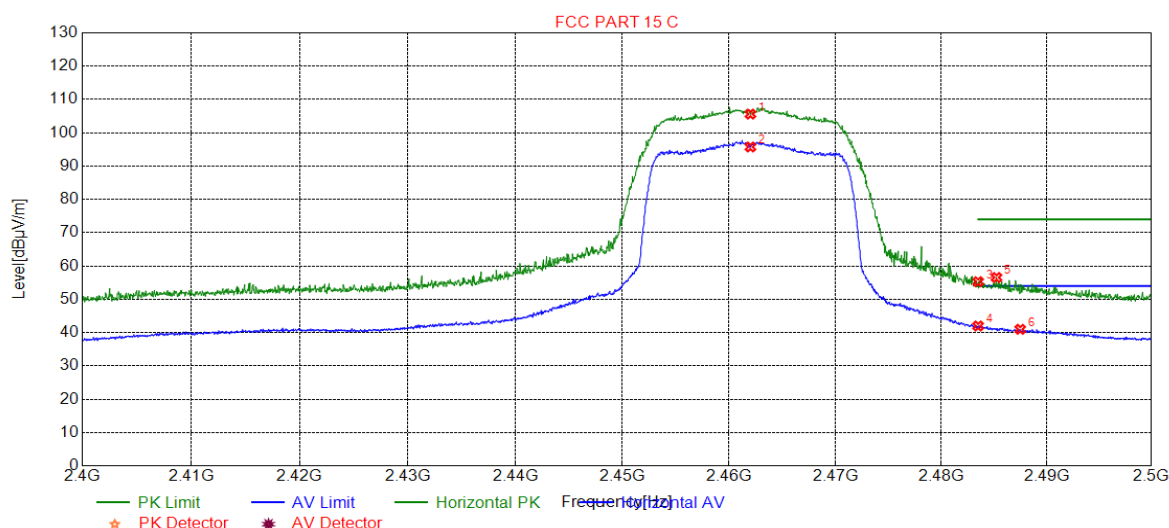


Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2385.787	51.98	74.00	22.02	278	171	Vertical
2	2387.438	38.96	54.00	15.04	187	175	Vertical
3	2390.000	51.70	74.00	22.30	225	167	Vertical
4	2390.000	39.61	54.00	14.39	281	175	Vertical
5	2412.000	89.16	0.00	-89.16	215	159	Vertical
6	2412.000	98.34	0.00	-98.34	294	156	Vertical

Final Data List



4.10.1.15 802.11N20_Channel 11 MIMO



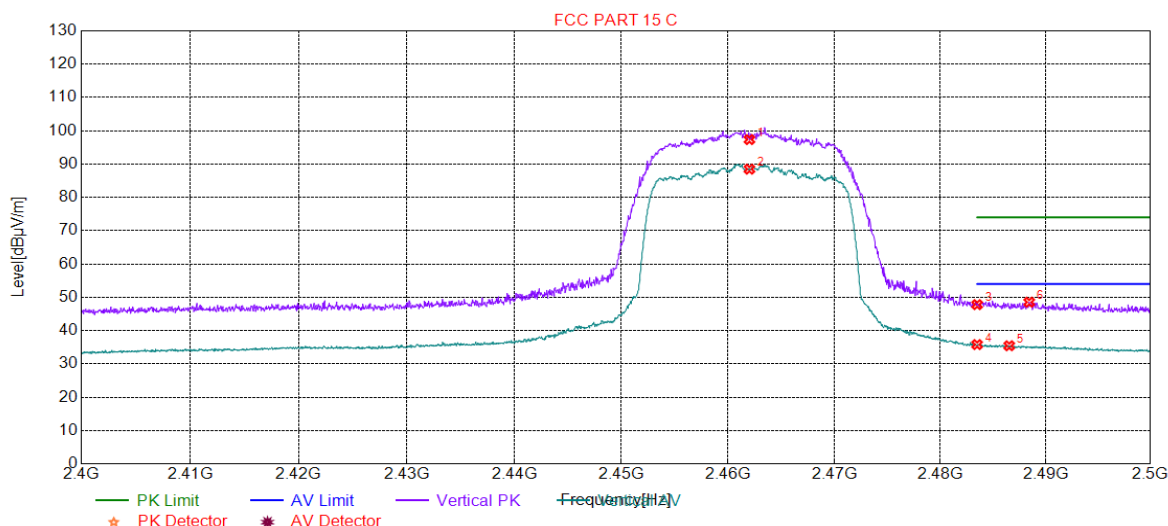
Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	105.61	0.00	-105.61	137	270	Horizontal
2	2462.000	95.74	0.00	-95.74	240	82	Horizontal
3	2483.500	55.31	74.00	18.69	108	289	Horizontal
4	2483.500	42.01	54.00	11.99	190	270	Horizontal
5	2485.242	56.57	74.00	17.43	100	266	Horizontal
6	2487.493	41.02	54.00	12.98	237	270	Horizontal

Final Data List



4.10.1.16 802.11N20_Channel 11 MIMO



Suspected List							
NO.	Freq. [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2462.000	97.36	0.00	-97.36	271	360	Vertical
2	2462.000	88.48	0.00	-88.48	199	14	Vertical
3	2483.500	47.82	74.00	26.18	158	113	Vertical
4	2483.500	35.83	54.00	18.17	289	360	Vertical
5	2486.543	35.48	54.00	18.52	264	360	Vertical
6	2488.444	48.56	74.00	25.44	169	14	Vertical

Final Data List

Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

All Modes have been tested, but only the worst case data displayed in this report.



5 Measurement Uncertainty (95% confidence levels, k=2)

Lab A:

No.	Item	Measurement Uncertainty
1	Total RF power, conducted	$\pm 0.41\text{dB}$
2	RF power density, conducted	$\pm 1.96\text{dB}$
3	Spurious emissions, conducted	$\pm 0.41\text{dB}$
4	Radio Frequency	$\pm 7.10 \times 10^{-8}$
5	Duty Cycle	$\pm 0.49\%$
6	Occupied Bandwidth	$\pm 0.2\%$

Lab B:

No.	Item	Measurement Uncertainty
1	Conduction Emission	$\pm 3.0\text{dB}$ (150kHz to 30MHz)
2	Radiated Emission	$\pm 4.8\text{dB}$ (Below 1GHz)
		$\pm 4.8\text{dB}$ (1GHz to 6GHz)
		$\pm 4.5\text{dB}$ (6GHz to 18GHz)
		$\pm 5.02\text{dB}$ (Above 18GHz)



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6 Equipment List

RF conducted test					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal. Due date
				(yyyy-mm-dd)	(yyyy-mm-dd)
DC Power Supply	Agilent Technologie Inc	66311B	W009-09	2020/7/15	2021/7/15
Signal Analyzer	Rohde & Schwarz	FSV	W025-05	2021/1/3	2022/1/2
				2020/1/4	2021/1/3
Coaxial Cable	SGS	N/A	SEM031-01	2020/6/12	2021/6/11
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020/7/14	2021/7/14
Temperature Chamber	GIANT FORCE	ICT-150-40-CP AR	W027-03	2020/10/27	2021/10/27
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2020/7/14	2021/7/14

CE Test System					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Shielding Room	Brilliant-emc	N/A	XAW03-35-01	2019-09-11	2022-09-10
Test receiver	ROHDE&SCHWARZ	ESR	XAW01-08-01	2020-09-11	2021-09-10
Artificial network	ROHDE&SCHWARZ	ENV216	XAW01-04-01	2020-08-04	2021-08-03
Temperature and humidity meter	MingGao	TH101B	XAW01-01-01	2020-11-06	2021-11-05
Measurement Software	Tonscend	TS+ CE V2.5	XAW02-05-02	NCR	NCR





RSE Test System					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Semi-Anechoic Chamber	Brilliant-emc	N/A	XAW03-35-01	2019-09-11	2022-09-10
MXA signal analyzer	Keysight	N9020A	XAW01-06-01	2020-04-02	2021-04-01
Test receiver	ROHDE&SCHWARZ	ESR	XAW01-08-01	2020-09-11	2021-09-10
Receiving antenna (30MHz-3GHz)	Schwarzbeck	VULB 9163	XAW01-09-01	2019-10-13	2021-10-12
Receiving antenna (1GHz~18GHz)	Schwarzbeck	BBHA 9120D	XAW01-09-02	2019-10-13	2021-10-12
Receiving antenna (15GHz~40GHz)	Schwarzbeck	BBHA 9170	XAW01-09-03	2019-10-13	2021-10-12
Directional antenna rack controller	Max-Full	MF-7802BS	XAW03-03-01	NCR	NCR
High-speed antenna rack controller	Max-Full	MF-7802	XAW03-04-01	NCR	NCR
Filter bank	Tonscend	JS0806-F	XAW03-05-01	NCR	NCR
Filter bank	Tonscend	JS0806s	XAW03-05-02	NCR	NCR
Amplifier	Tonscend	TAP00903040	XAW01-41-01	2020-10-26	2021-10-25
Amplifier	Tonscend	TAP01018048	XAW01-41-02	2020-10-26	2021-10-25
Amplifier	Tonscend	TAP18040048	XAW01-41-03	2020-10-27	2021-10-26
Amplifier	Shanghai Steed	YX28980930	XAW01-41-06	2020-10-26	2021-10-25
Temperature and humidity meter	MingGao	TH101B	XAW01-01-01	2020-11-06	2021-11-05
Measurement Software	Tonscend	TS+ RSE V3.0.0.2	XAW02-05-01	NCR	NCR

7 Photographs - EUT Constructional Details

Refer to Appendix A - Photographs of Set-Up for ZR/2020/B0016.



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Appendix





DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.110	2408.460	2415.570	0.5	PASS
	Ant2	2412	7.110	2408.460	2415.570	0.5	PASS
	Ant1	2437	7.110	2433.460	2440.570	0.5	PASS
	Ant2	2437	7.590	2432.980	2440.570	0.5	PASS
	Ant1	2462	7.080	2458.460	2465.540	0.5	PASS
	Ant2	2462	7.140	2458.430	2465.570	0.5	PASS
11G	Ant1	2412	16.380	2403.810	2420.190	0.5	PASS
	Ant2	2412	16.380	2403.810	2420.190	0.5	PASS
	Ant1	2437	16.380	2428.810	2445.190	0.5	PASS
	Ant2	2437	16.380	2428.810	2445.190	0.5	PASS
	Ant1	2462	16.380	2453.810	2470.190	0.5	PASS
	Ant2	2462	16.380	2453.810	2470.190	0.5	PASS
11N20SISO	Ant1	2412	17.640	2403.180	2420.820	0.5	PASS
	Ant2	2412	17.640	2403.180	2420.820	0.5	PASS
	Ant1	2437	17.400	2428.180	2445.580	0.5	PASS
	Ant2	2437	17.370	2428.210	2445.580	0.5	PASS
	Ant1	2462	17.370	2453.180	2470.550	0.5	PASS
	Ant2	2462	17.370	2453.180	2470.550	0.5	PASS
11G-CDD	Ant1	2412	16.380	2403.810	2420.190	0.5	PASS
	Ant2	2412	16.380	2403.810	2420.190	0.5	PASS
	Ant1	2437	16.380	2428.810	2445.190	0.5	PASS
	Ant2	2437	16.410	2428.810	2445.220	0.5	PASS
	Ant1	2462	16.380	2453.810	2470.190	0.5	PASS
	Ant2	2462	16.410	2453.810	2470.220	0.5	PASS
11N20MIM O	Ant1	2412	17.370	2403.210	2420.580	0.5	PASS
	Ant2	2412	17.640	2403.180	2420.820	0.5	PASS
	Ant1	2437	17.610	2428.180	2445.790	0.5	PASS
	Ant2	2437	17.640	2428.180	2445.820	0.5	PASS



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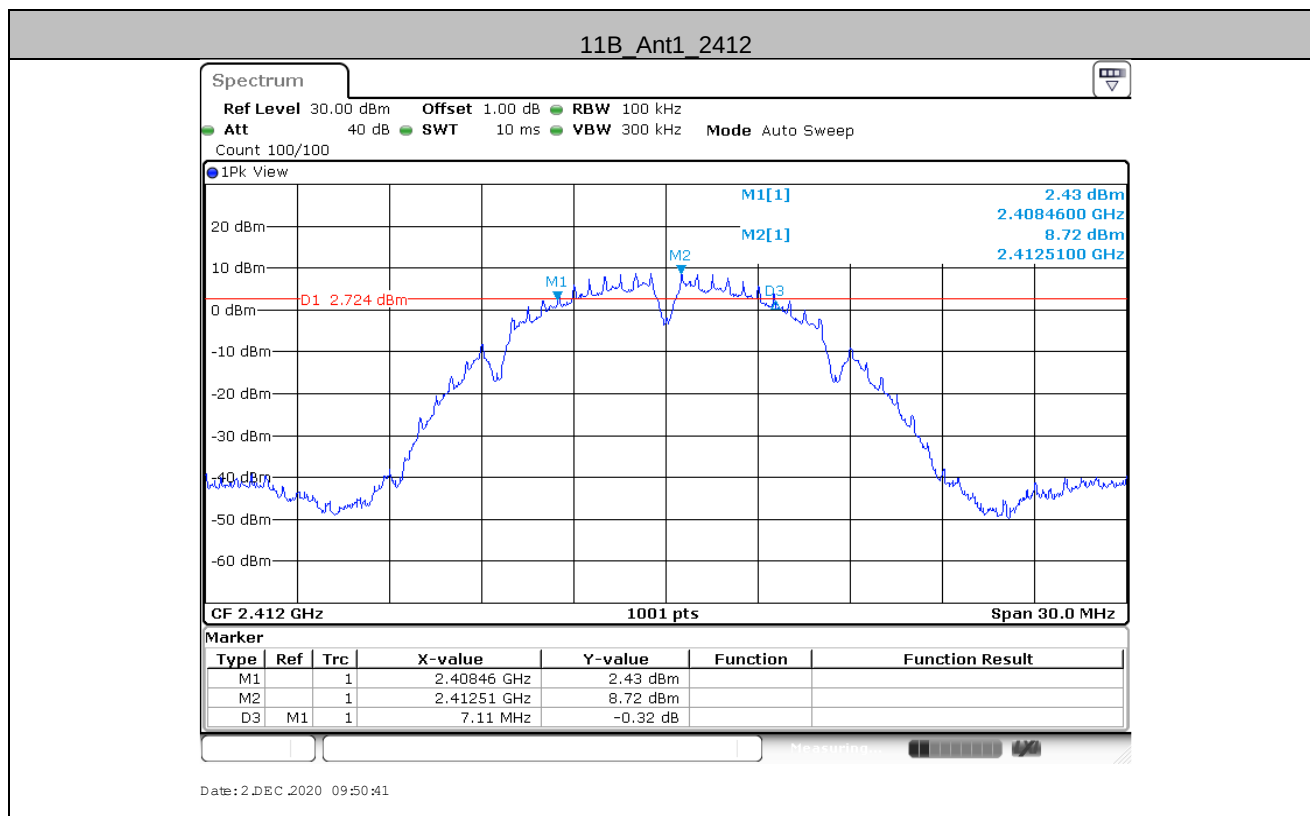
	Ant1	2462	17.340	2453.210	2470.550	0.5	PASS
	Ant2	2462	17.640	2453.180	2470.820	0.5	PASS



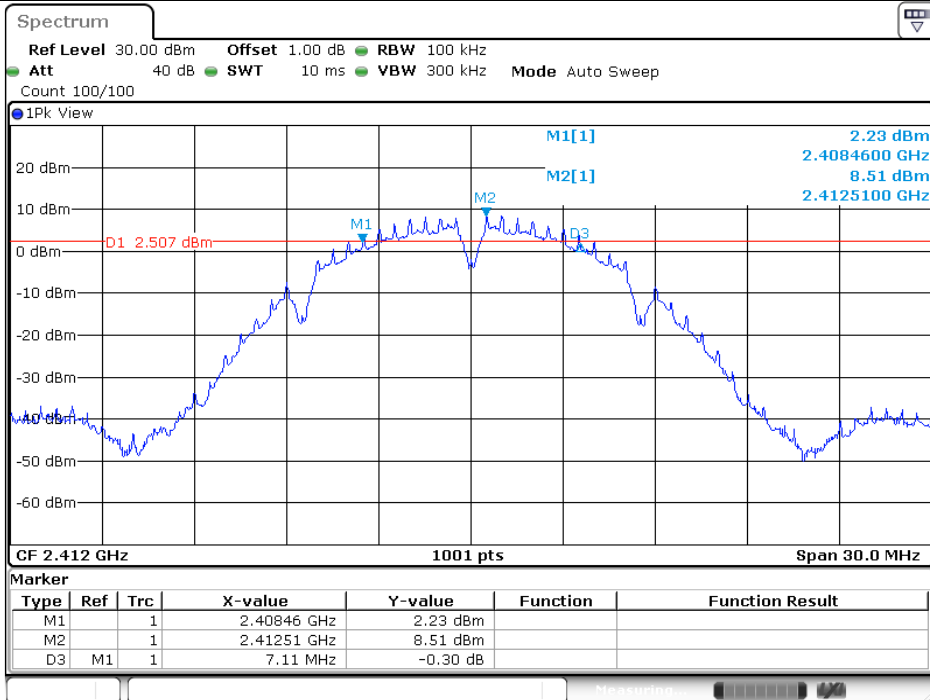
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Test Graphs

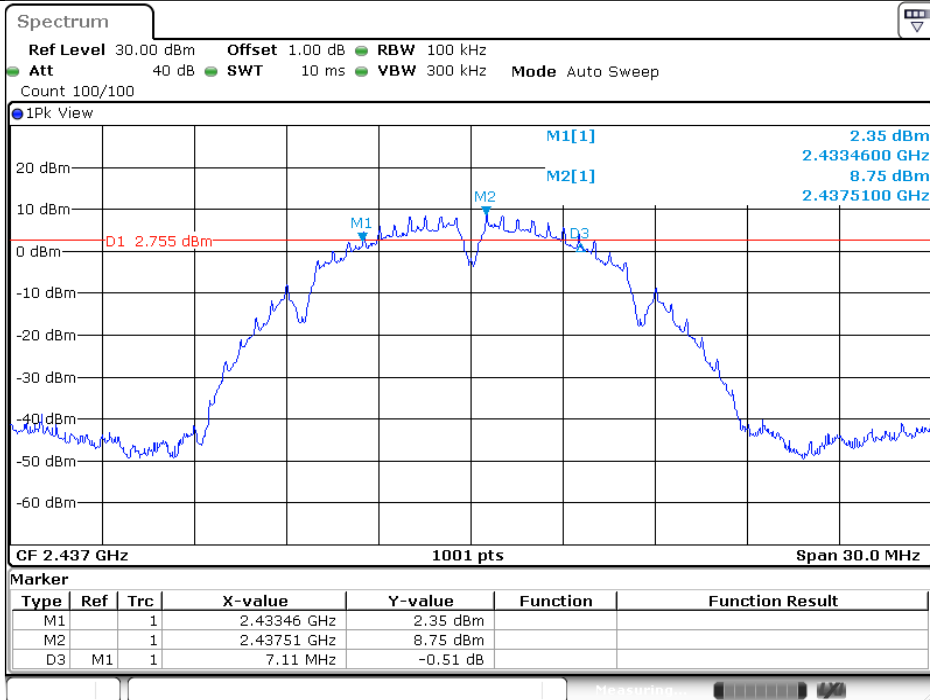


11B Ant2 2412



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11B Ant1 2437



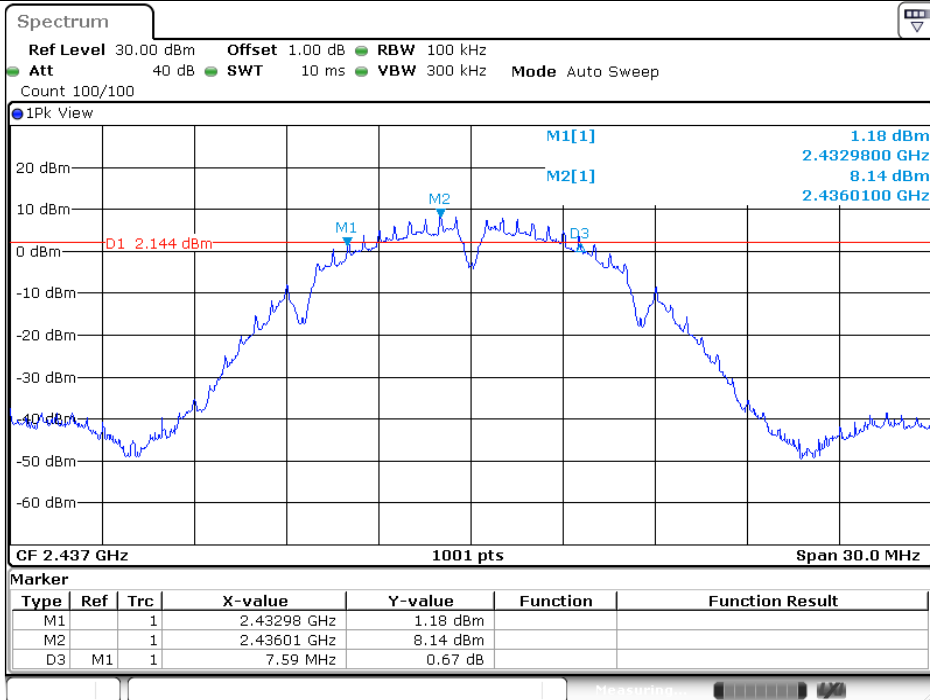
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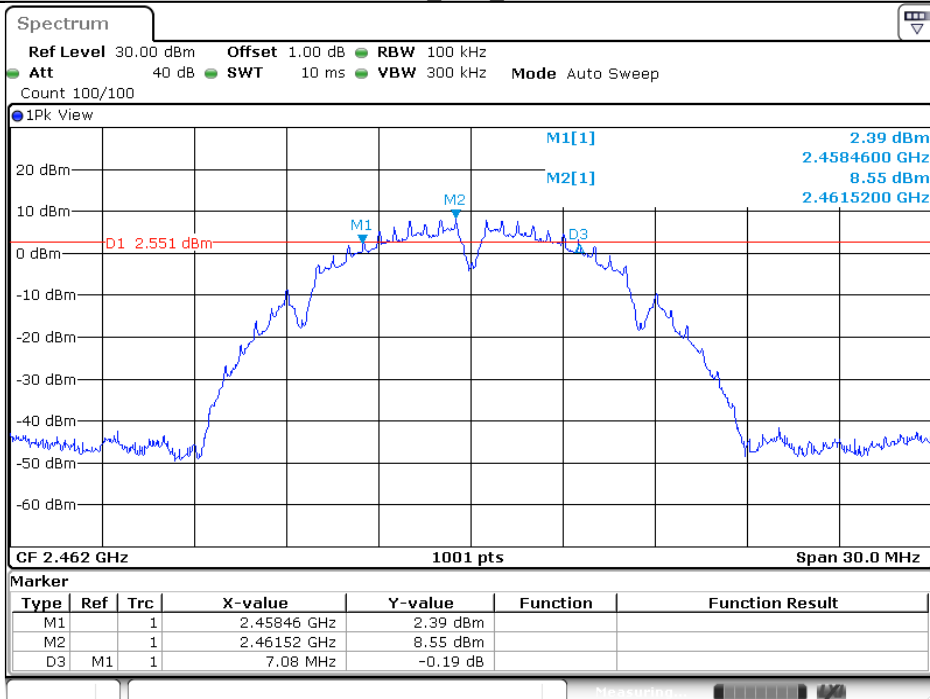
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11B Ant2 2437



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11B Ant1 2462



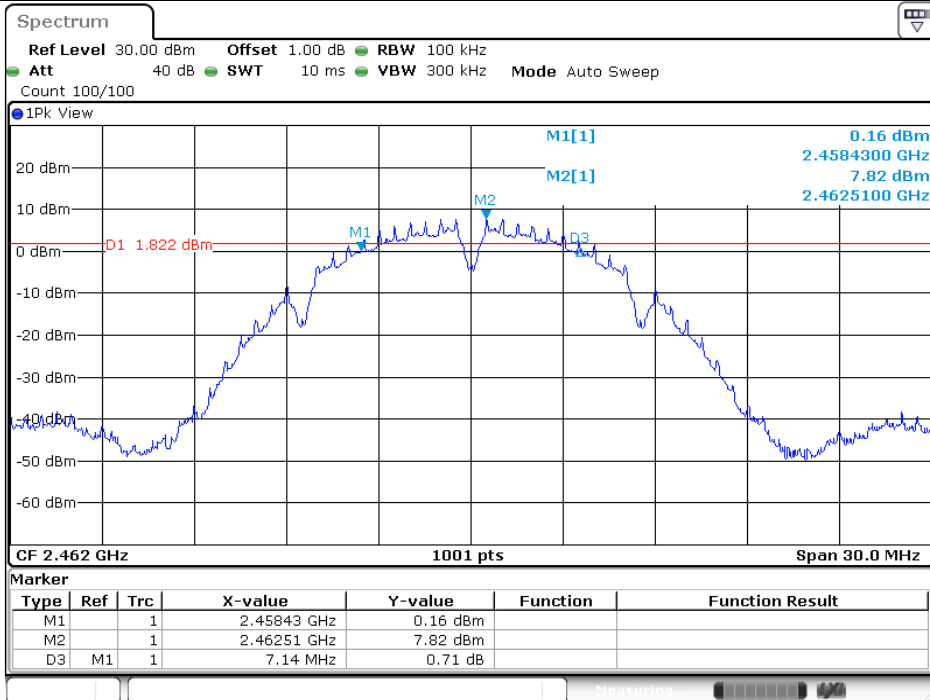
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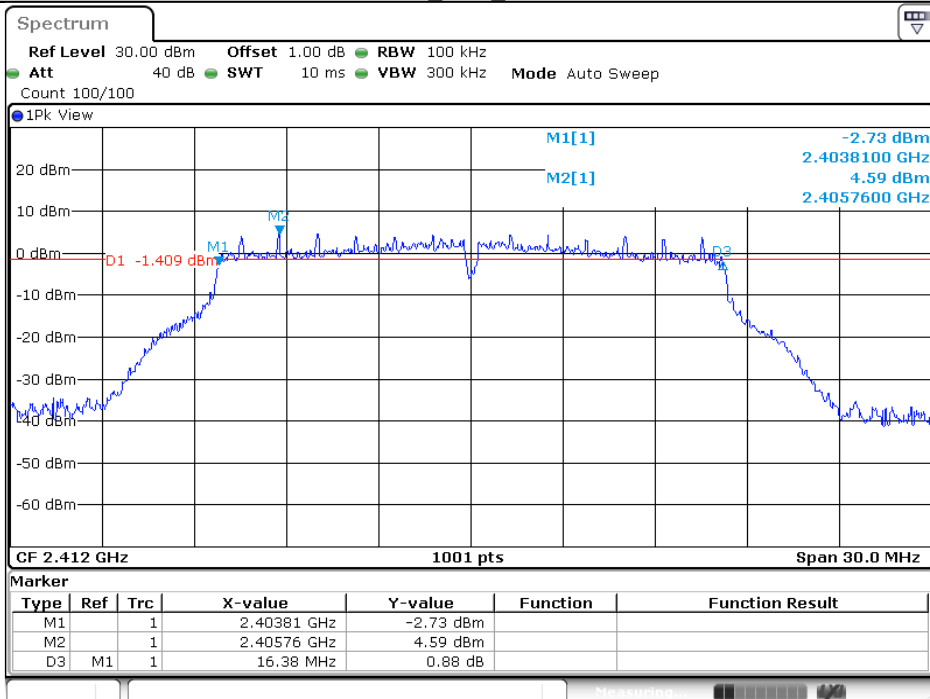
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11B Ant2 2462



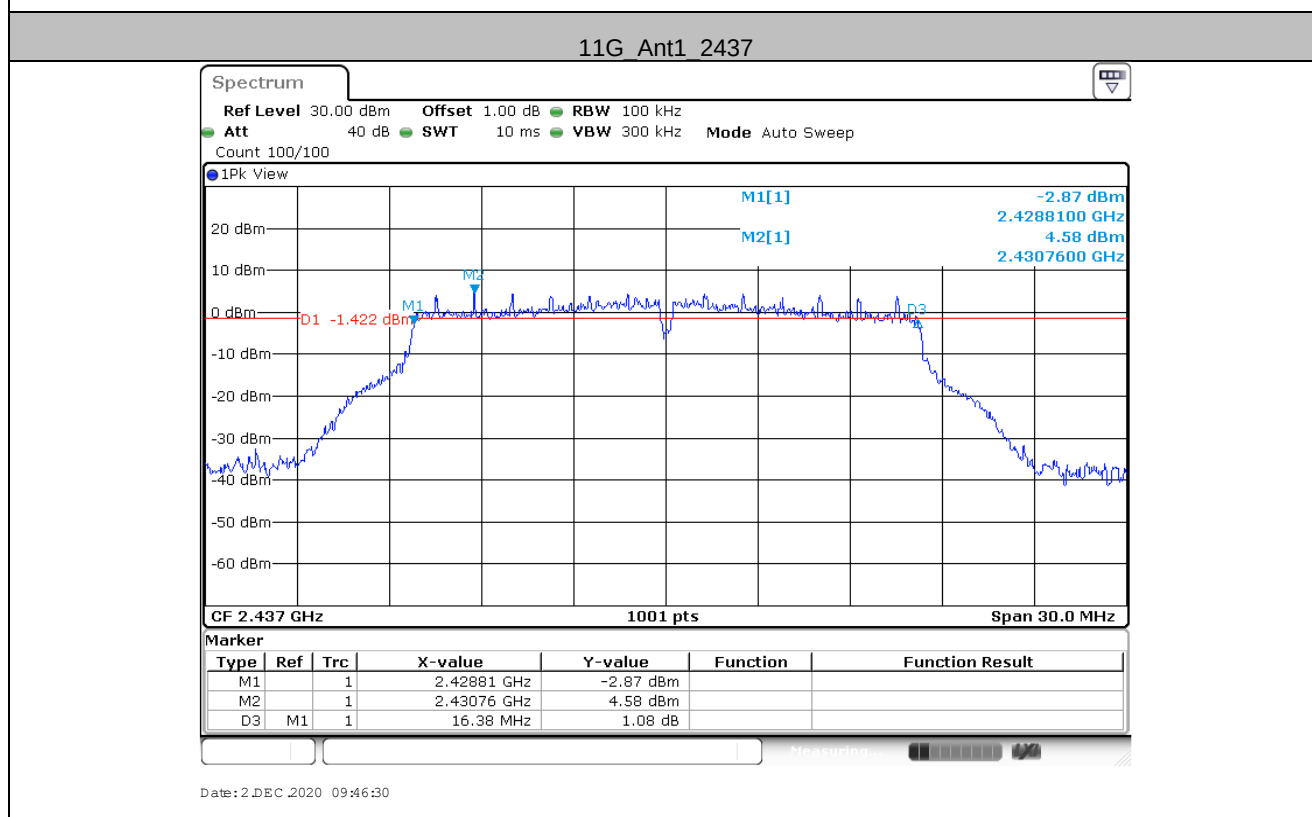
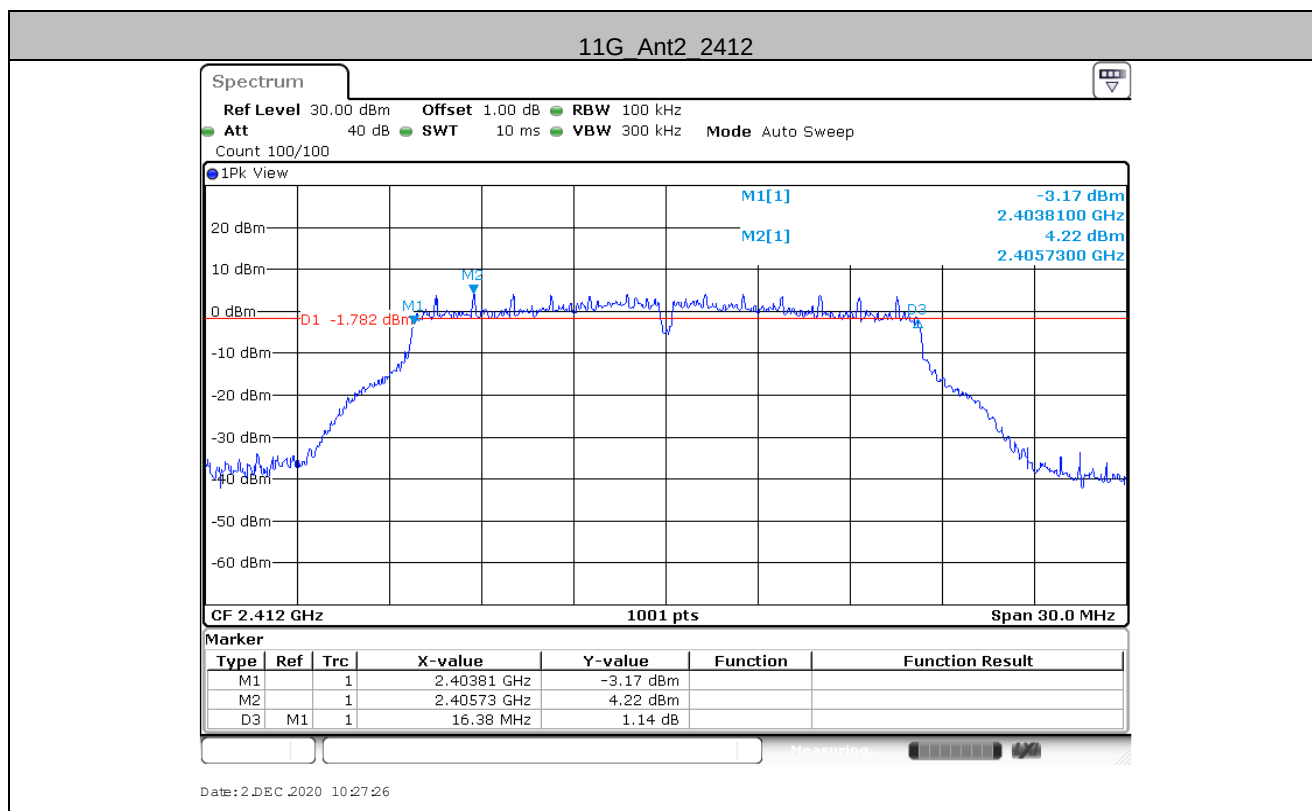
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11G Ant1 2412



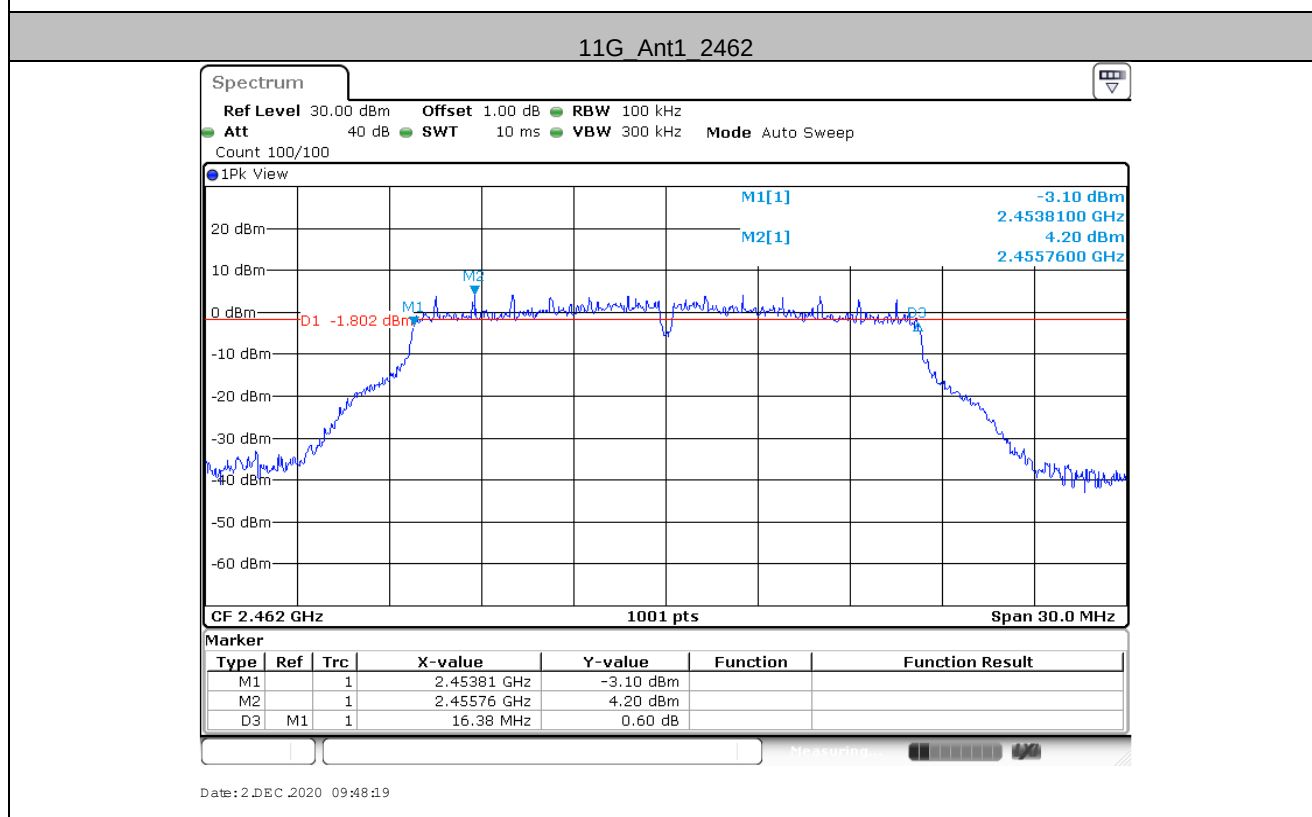
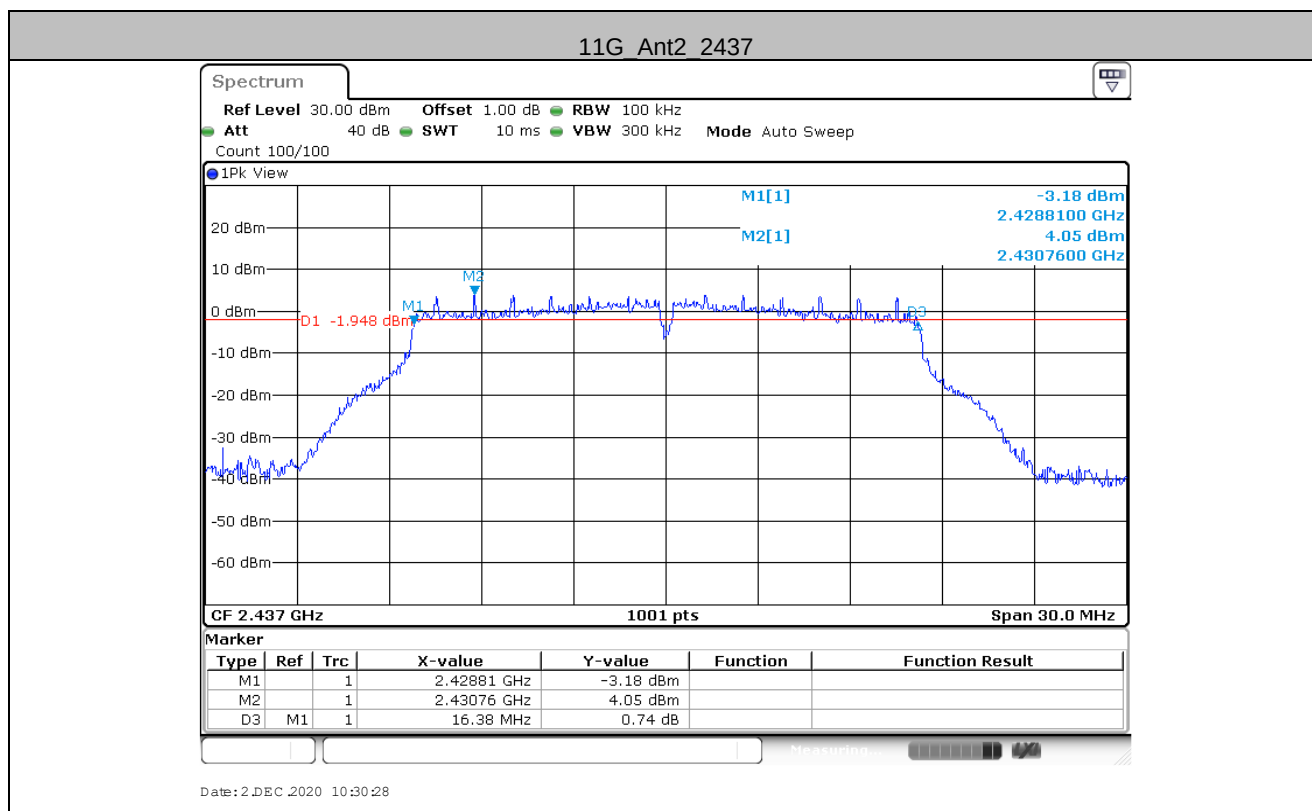
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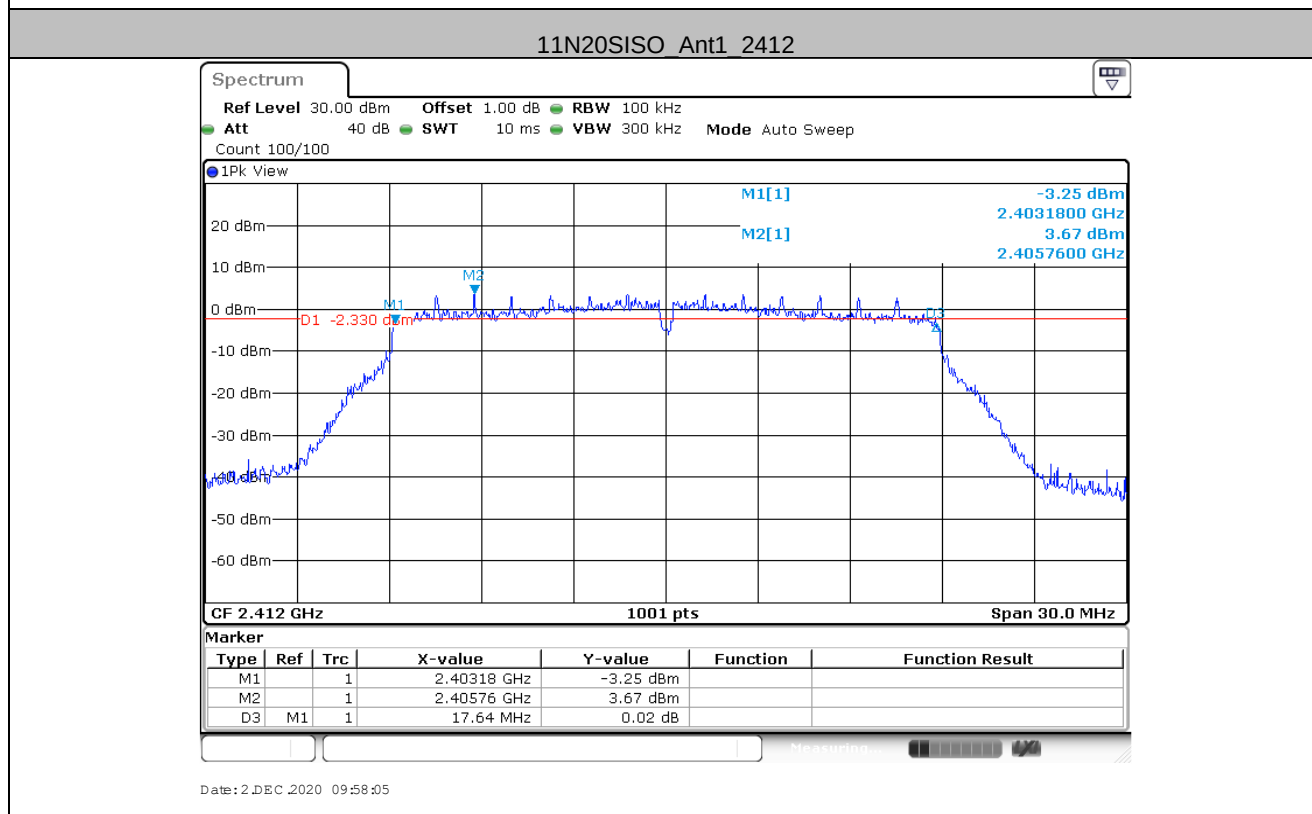
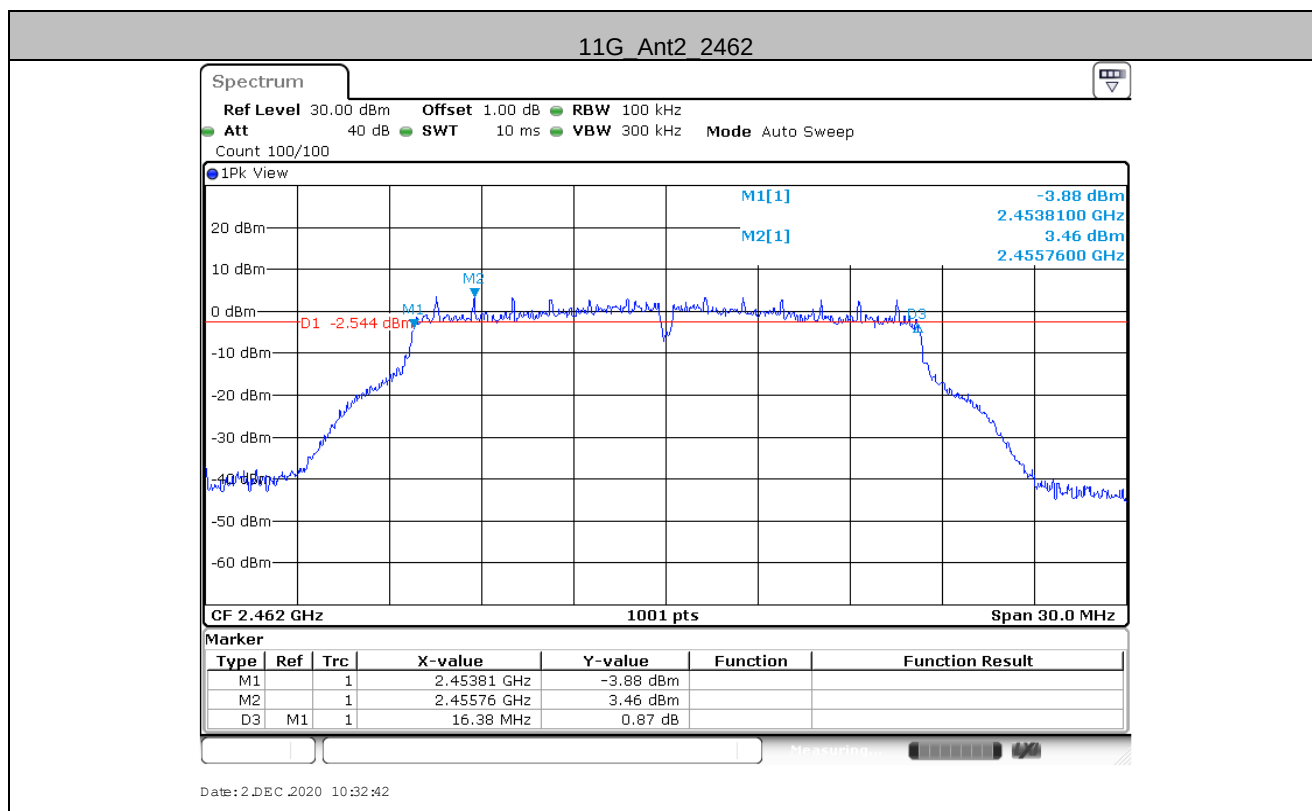
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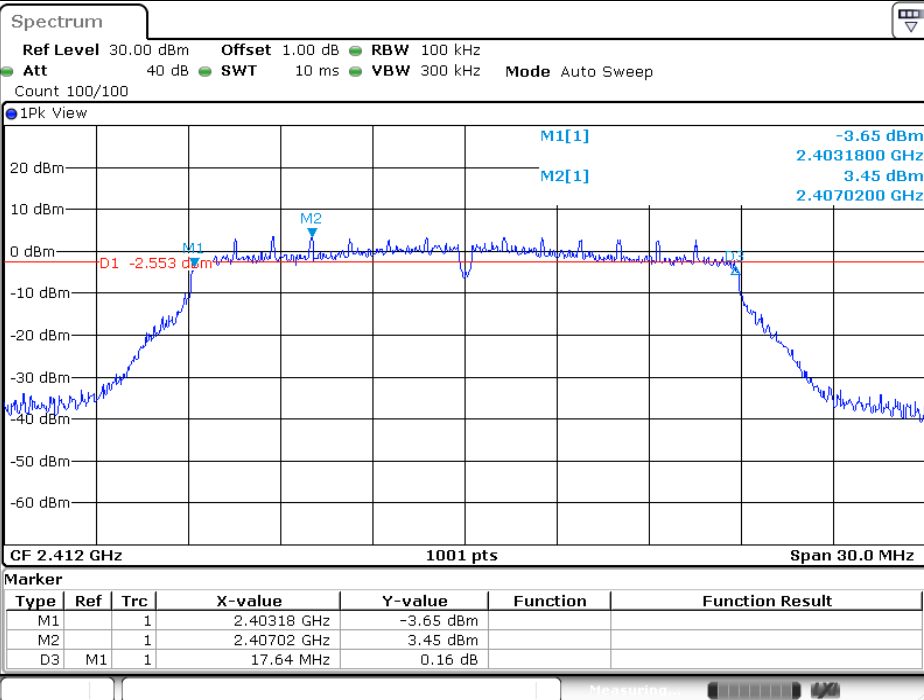
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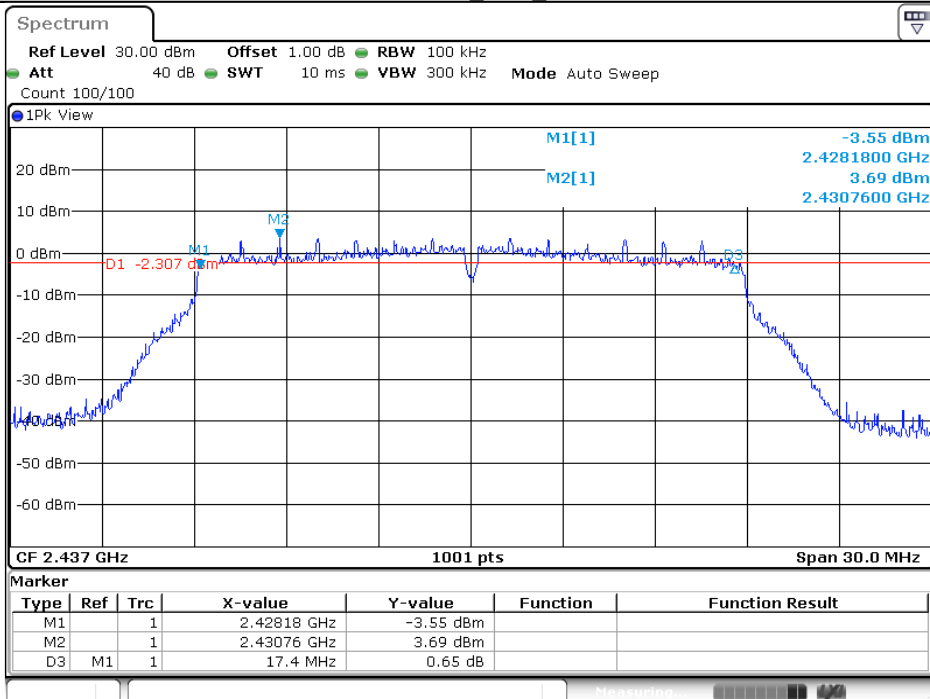
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11N20SISO Ant2 2412



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11N20SISO Ant1 2437



Date: 2.DEC.2020 10:00:49



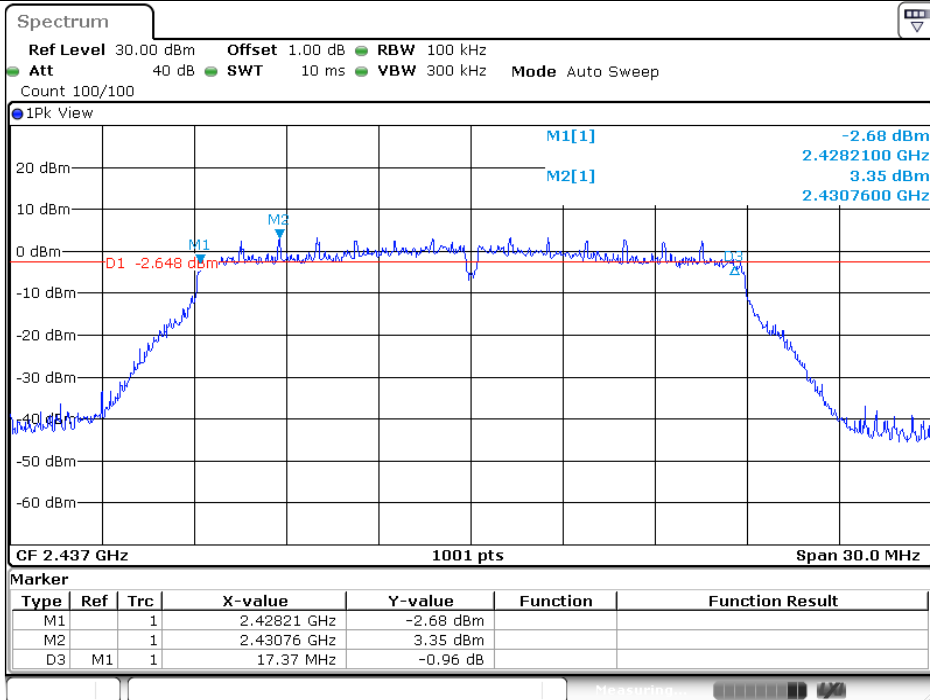
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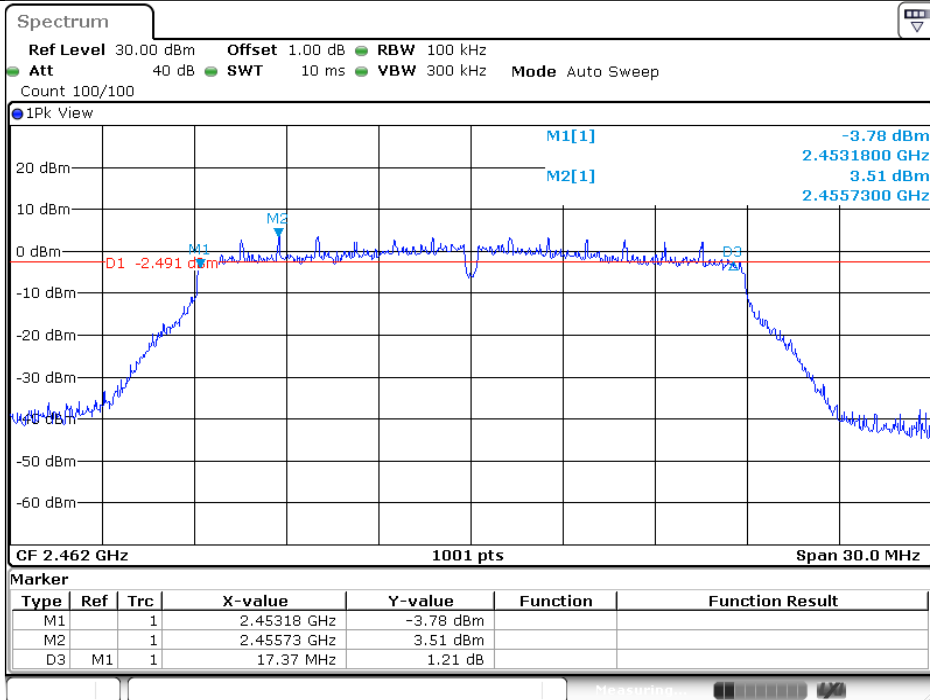
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11N20SISO Ant2 2437



Date: 2 DEC. 2020 10:09:55

11N20SISO Ant1 2462



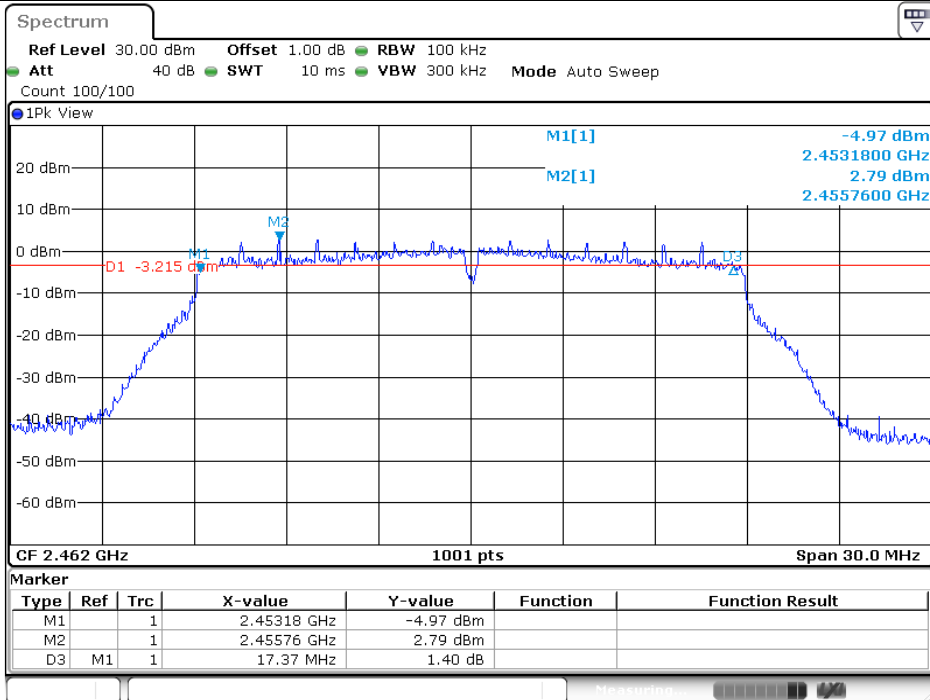
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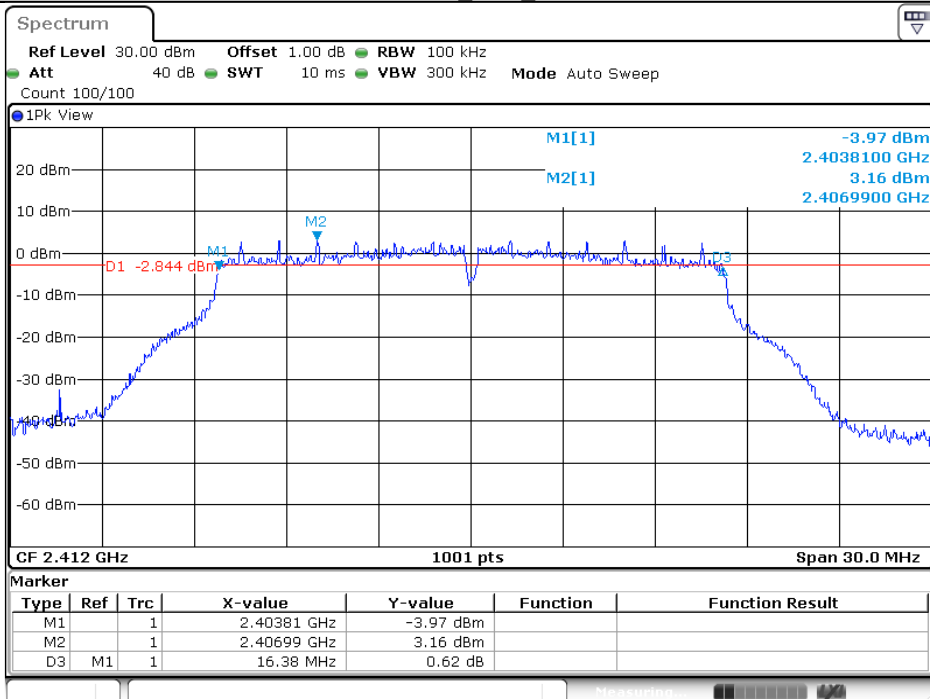
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11N20SISO Ant2 2462



Date: 2.DEC.2020 10:12:01

11G-CDD Ant1 2412



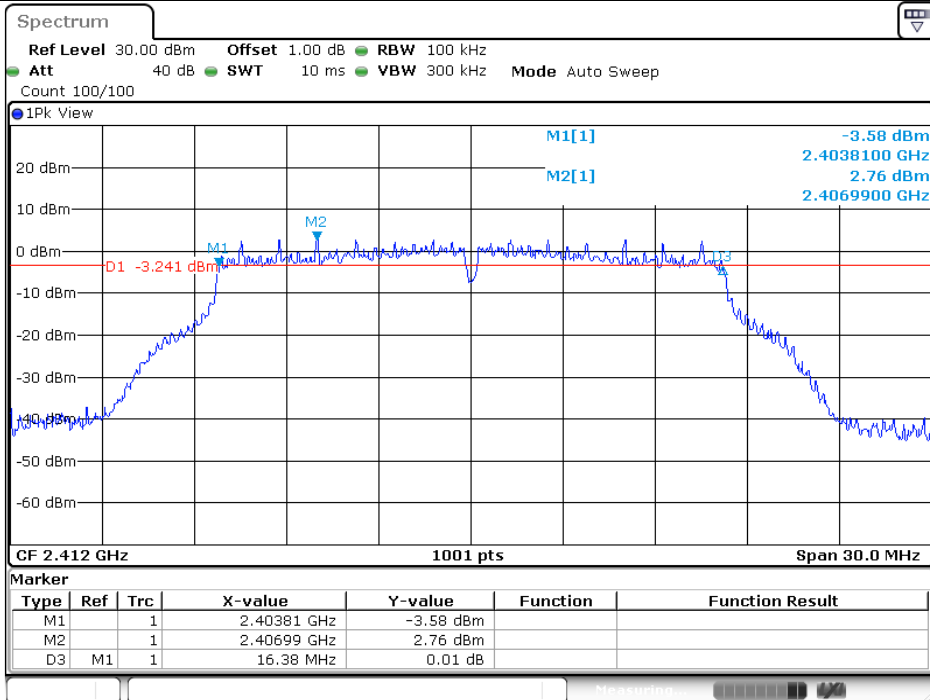
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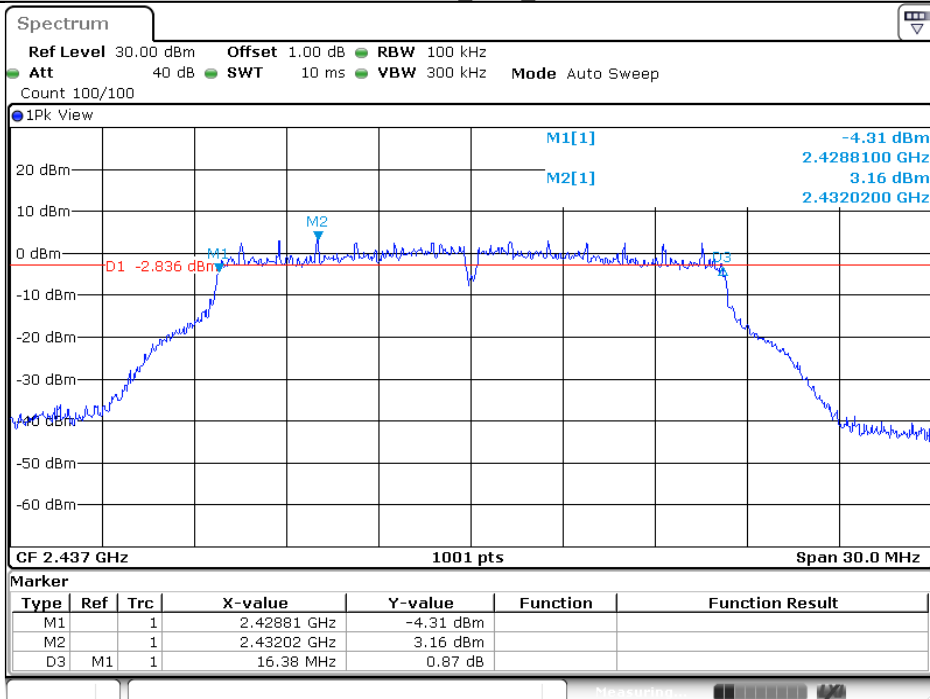
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11G-CDD Ant2 2412



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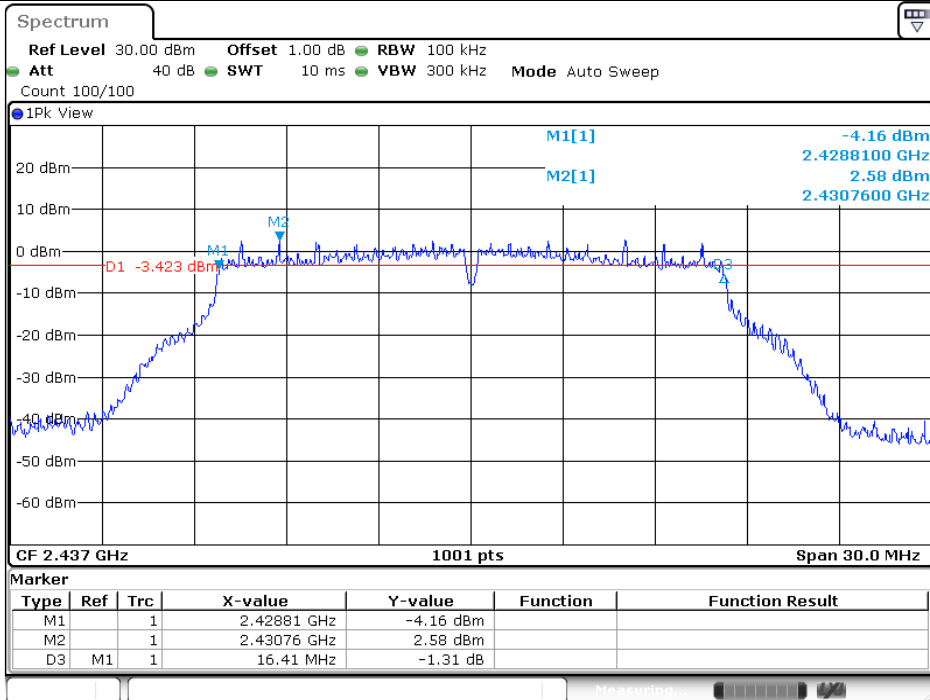
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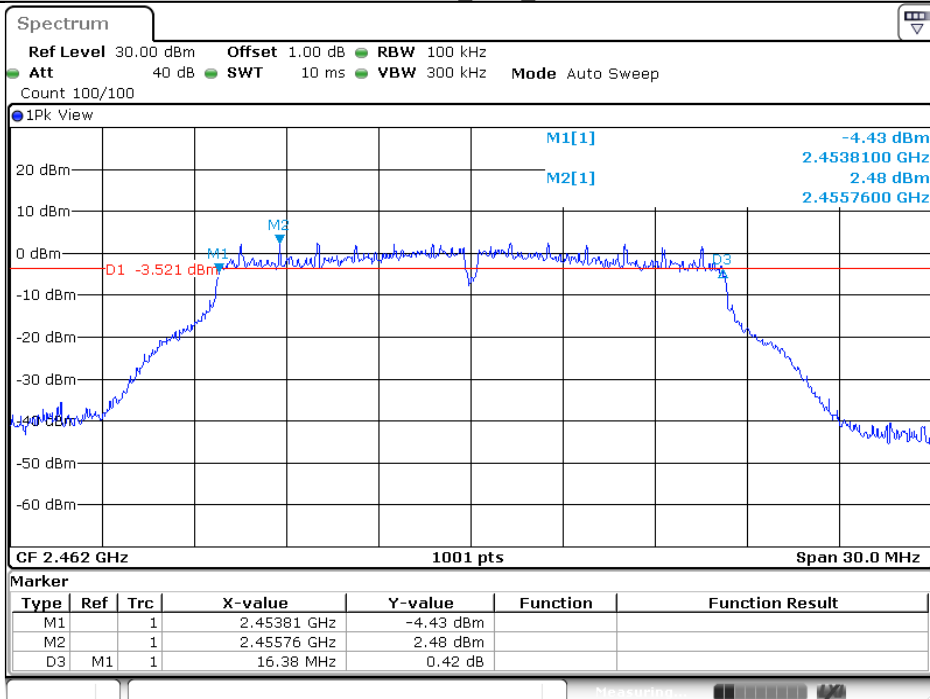


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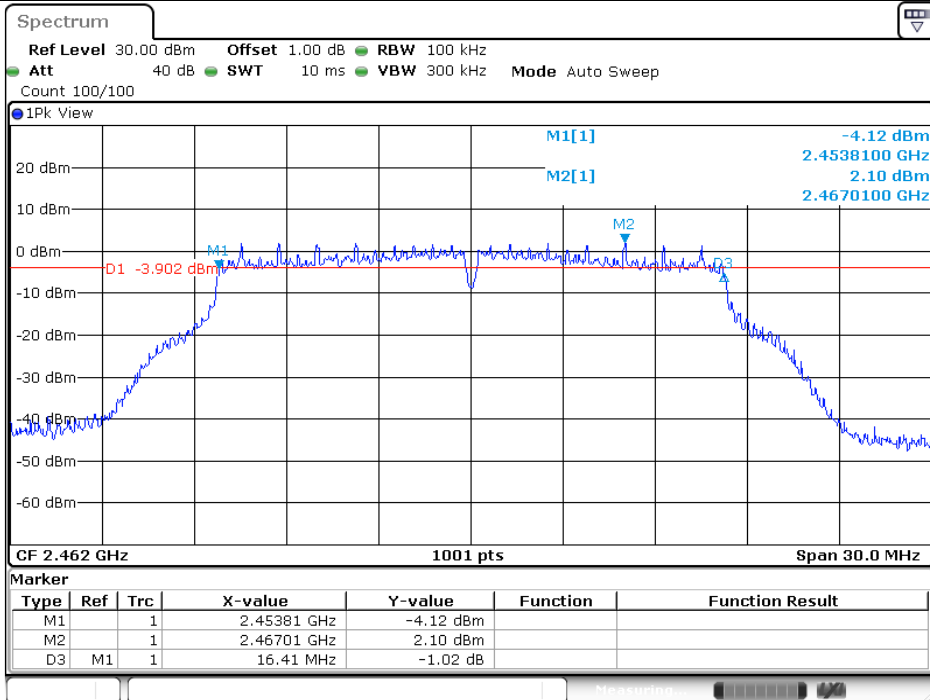
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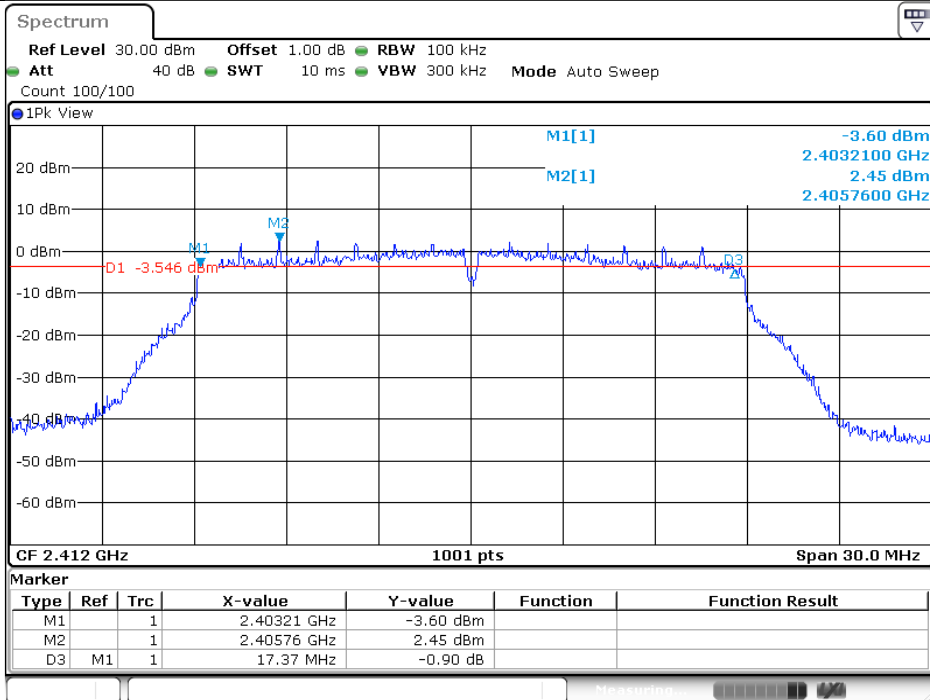
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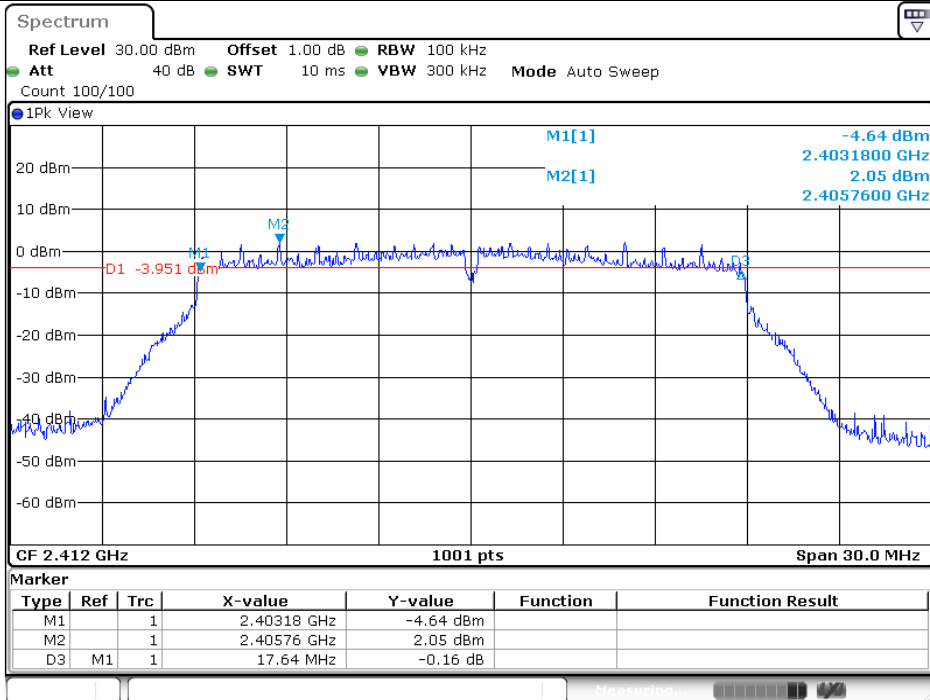
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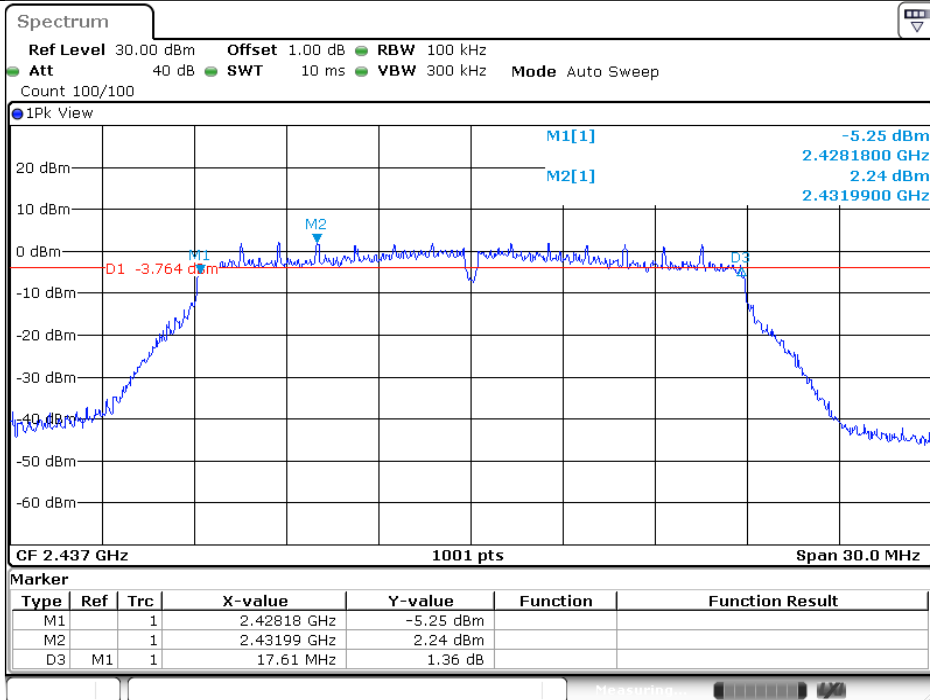
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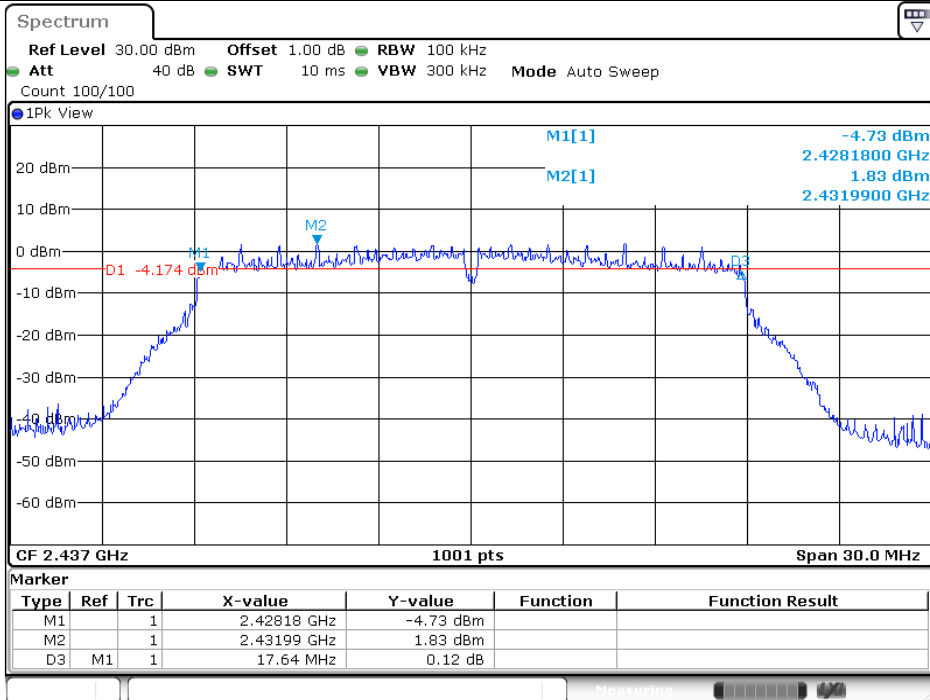
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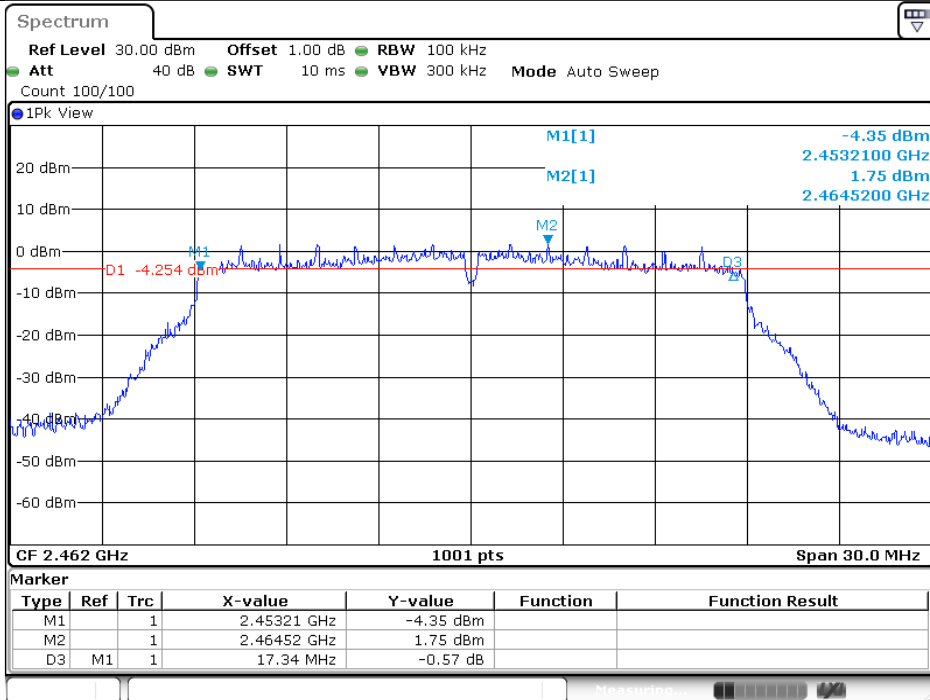
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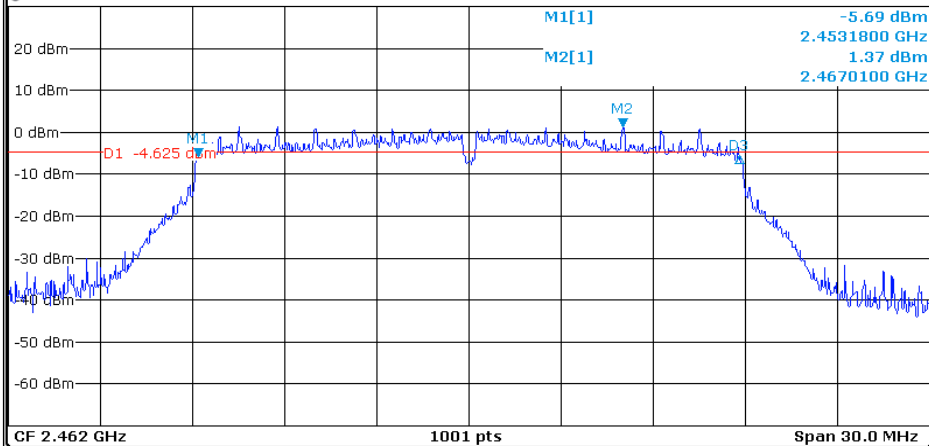
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11N20MIMO Ant2 2462

Spectrum

Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz
Att 40 dB SWT 10 ms VBW 300 kHz Mode Auto Sweep
Count 100/100

1Pk View



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.45318 GHz	-5.69 dBm		
M2		1	2.46701 GHz	1.37 dBm		
D3	M1	1	17.64 MHz	0.24 dB		

Date: 2 DEC 2020 11:12:14





Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.28	2406.845	2417.125	---	PASS
	Ant2	2412	10.43	2406.785	2417.215	---	PASS
	Ant1	2437	10.25	2431.875	2442.125	---	PASS
	Ant2	2437	10.37	2431.815	2442.185	---	PASS
	Ant1	2462	10.22	2456.875	2467.095	---	PASS
	Ant2	2462	10.37	2456.785	2467.155	---	PASS
11G	Ant1	2412	16.993	2403.429	2420.422	---	PASS
	Ant2	2412	16.963	2403.459	2420.422	---	PASS
	Ant1	2437	16.963	2428.459	2445.422	---	PASS
	Ant2	2437	16.963	2428.459	2445.422	---	PASS
	Ant1	2462	16.963	2453.459	2470.422	---	PASS
	Ant2	2462	16.963	2453.459	2470.422	---	PASS
11N20SISO	Ant1	2412	18.072	2402.919	2420.991	---	PASS
	Ant2	2412	18.102	2402.919	2421.021	---	PASS
	Ant1	2437	18.102	2427.919	2446.021	---	PASS
	Ant2	2437	18.102	2427.919	2446.021	---	PASS
	Ant1	2462	18.072	2452.919	2470.991	---	PASS
	Ant2	2462	18.072	2452.919	2470.991	---	PASS
11G-CDD	Ant1	2412	16.963	2403.459	2420.422	---	PASS
	Ant2	2412	16.873	2403.668	2420.541	---	PASS
	Ant1	2437	16.963	2428.459	2445.422	---	PASS
	Ant2	2437	16.873	2428.668	2445.541	---	PASS
	Ant1	2462	16.933	2453.459	2470.392	---	PASS
	Ant2	2462	16.873	2453.668	2470.541	---	PASS
11N20MIM O	Ant1	2412	18.072	2402.919	2420.991	---	PASS
	Ant2	2412	17.802	2403.099	2420.901	---	PASS
	Ant1	2437	18.132	2427.889	2446.021	---	PASS
	Ant2	2437	17.802	2428.069	2445.871	---	PASS



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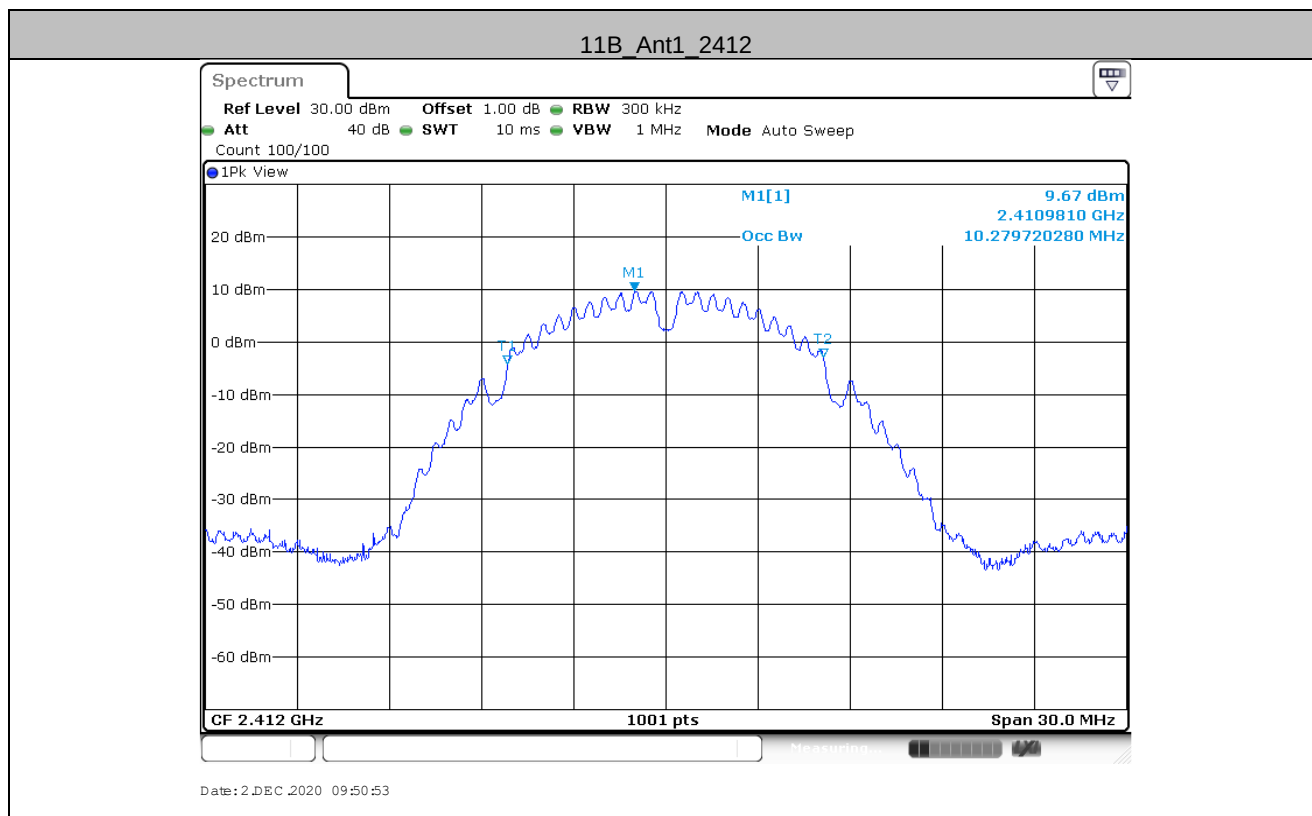
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	Ant2	2462	17.802	2453.069	2470.871	---	PASS

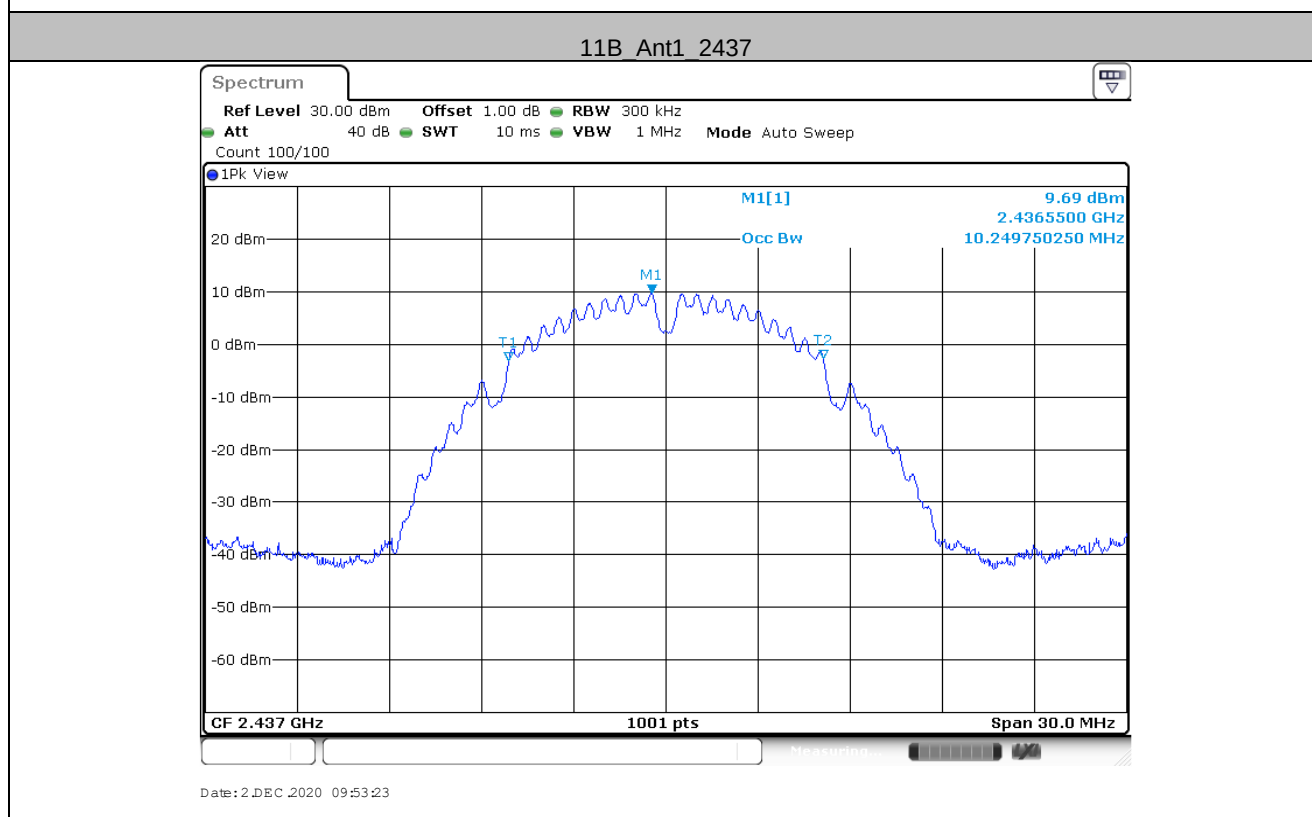
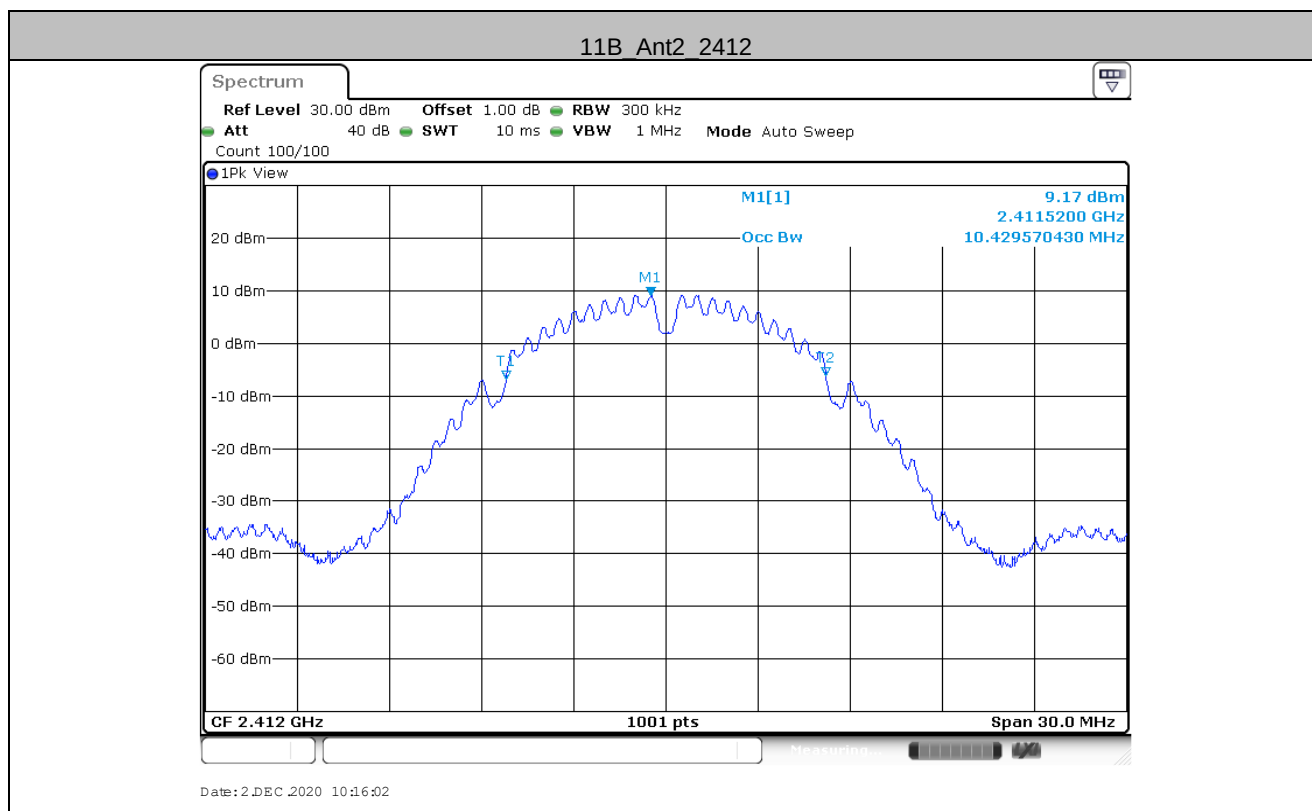


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Test Graphs





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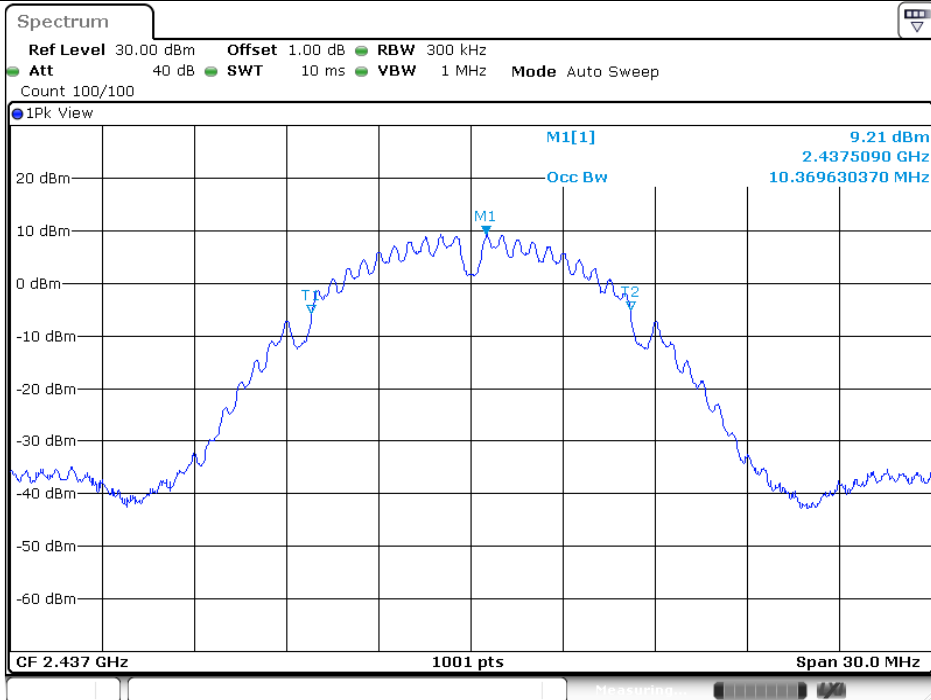
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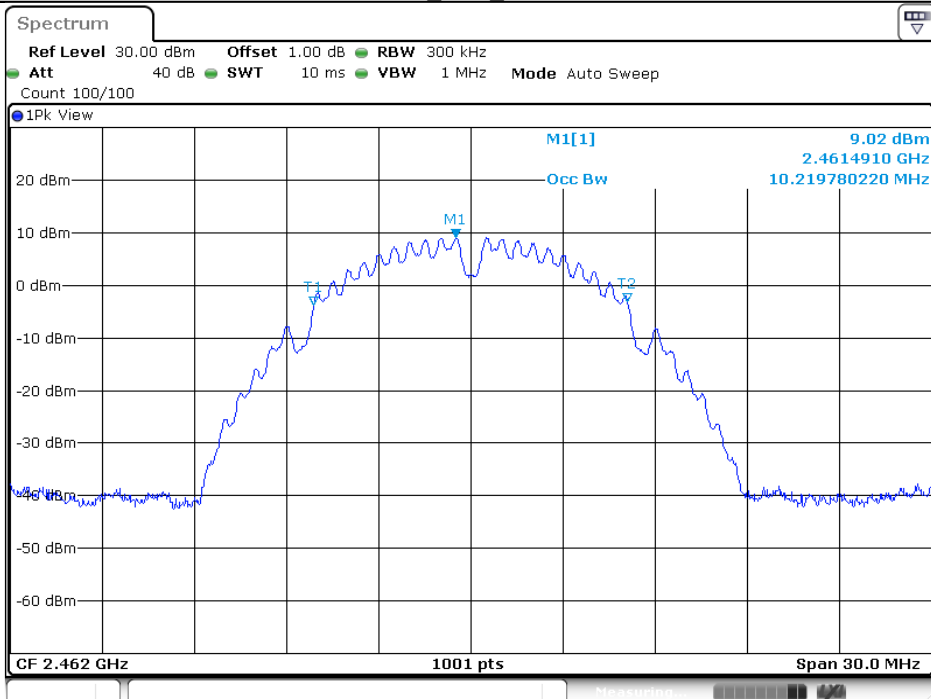
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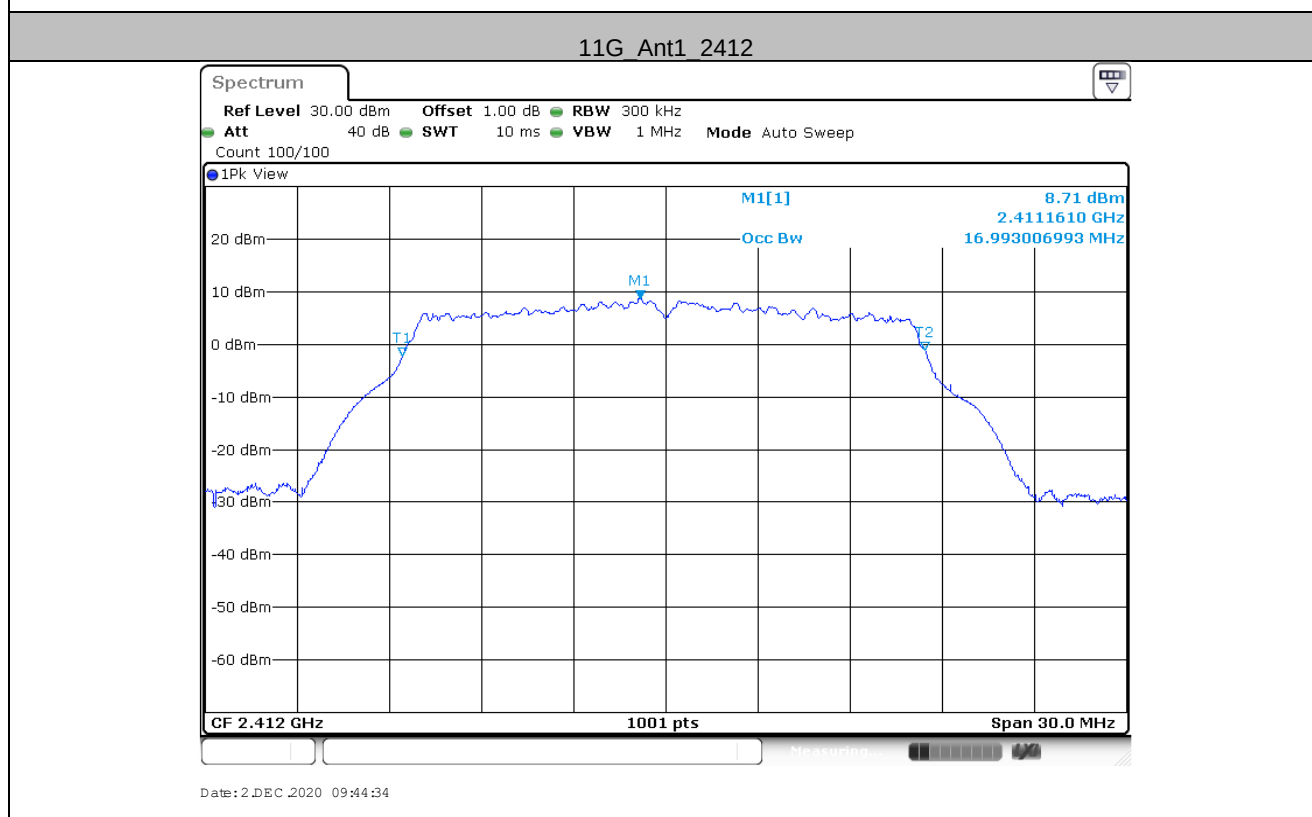
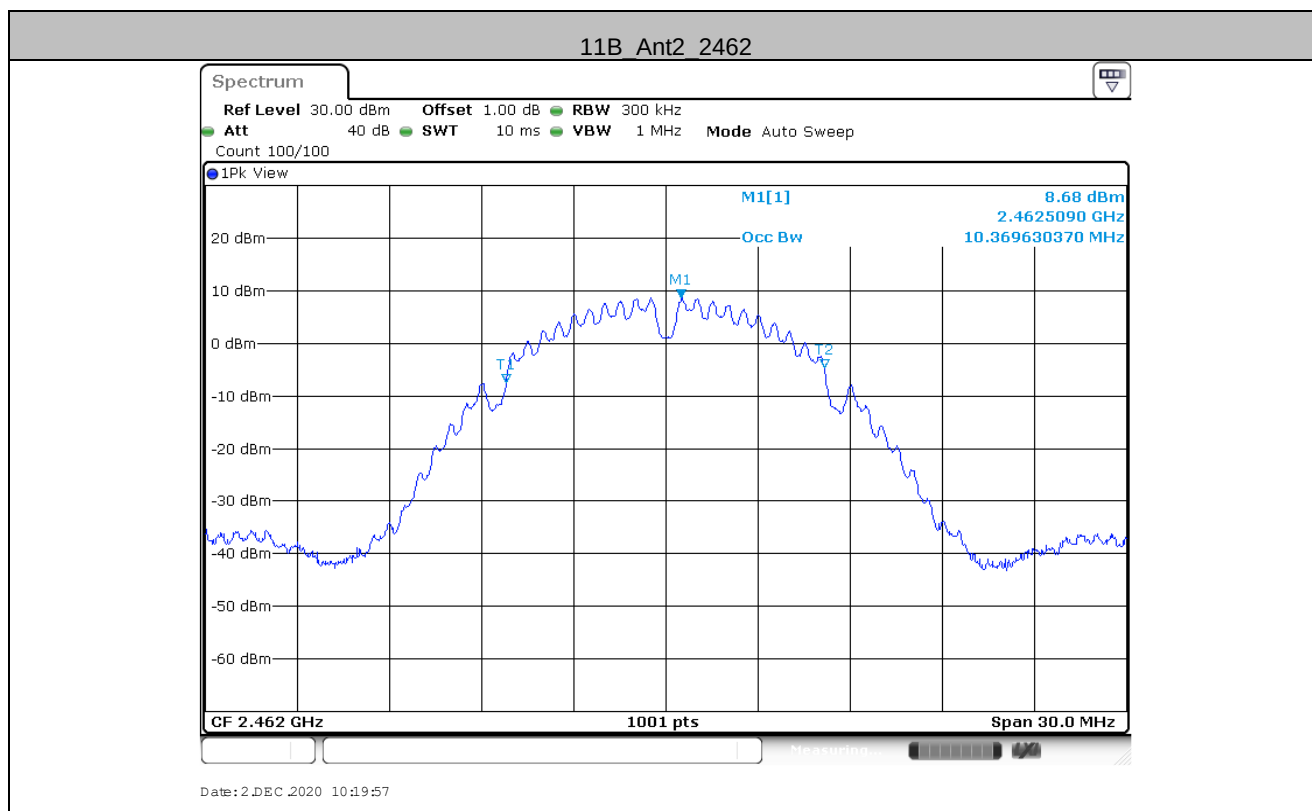


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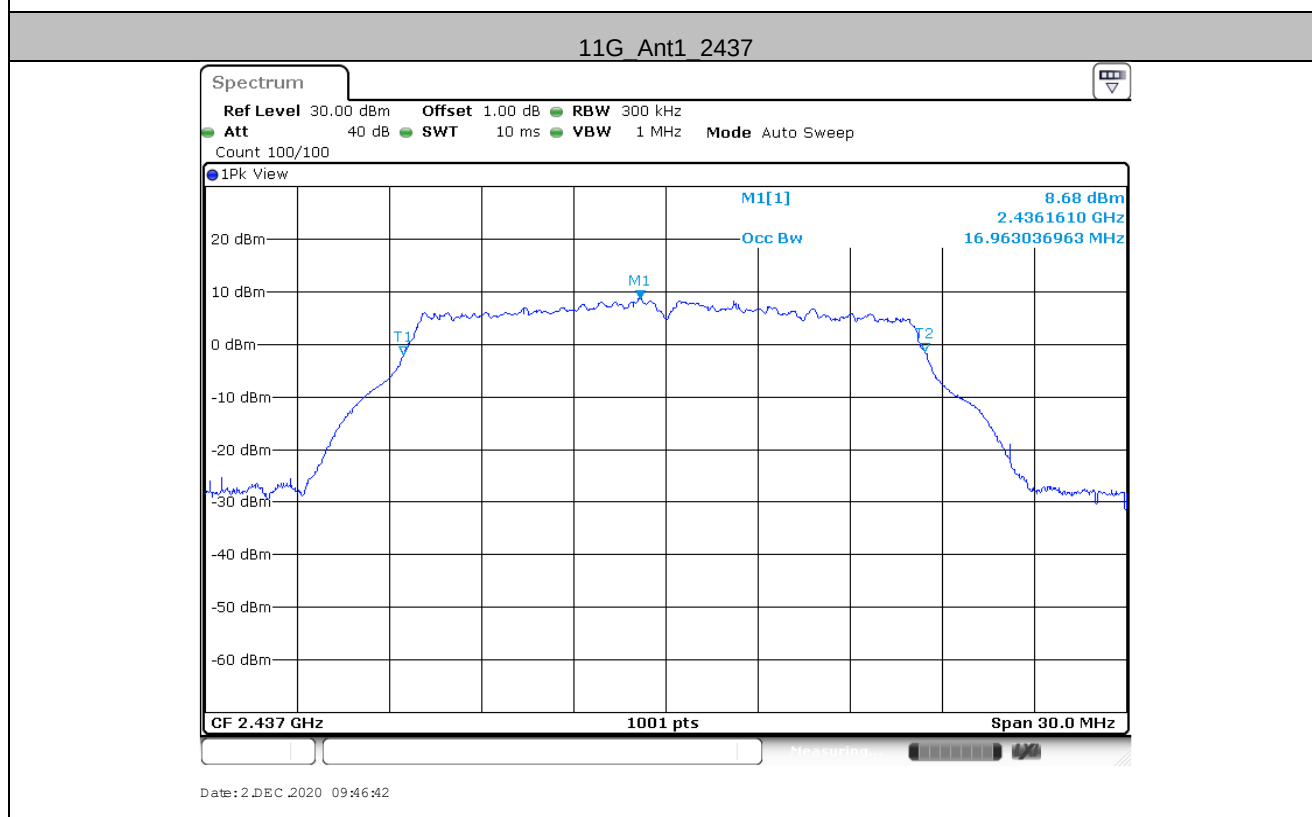
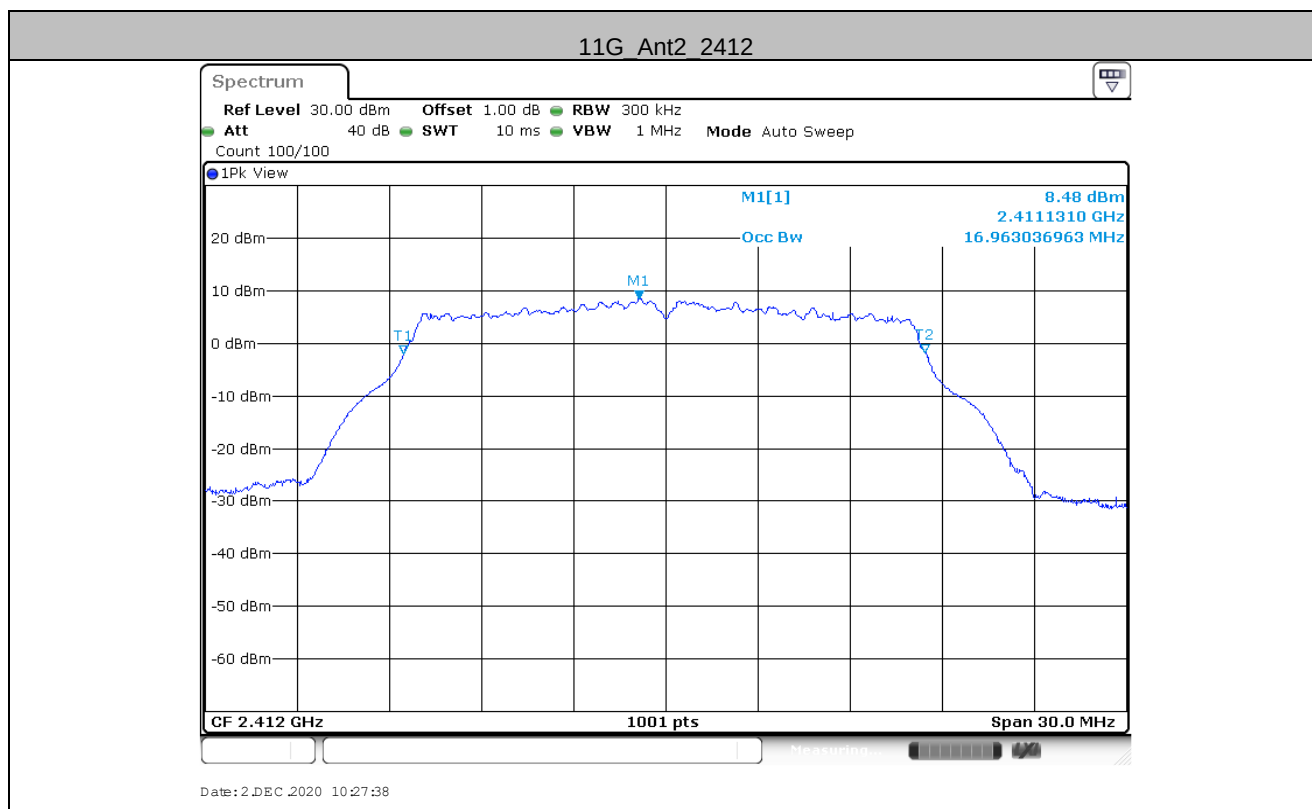


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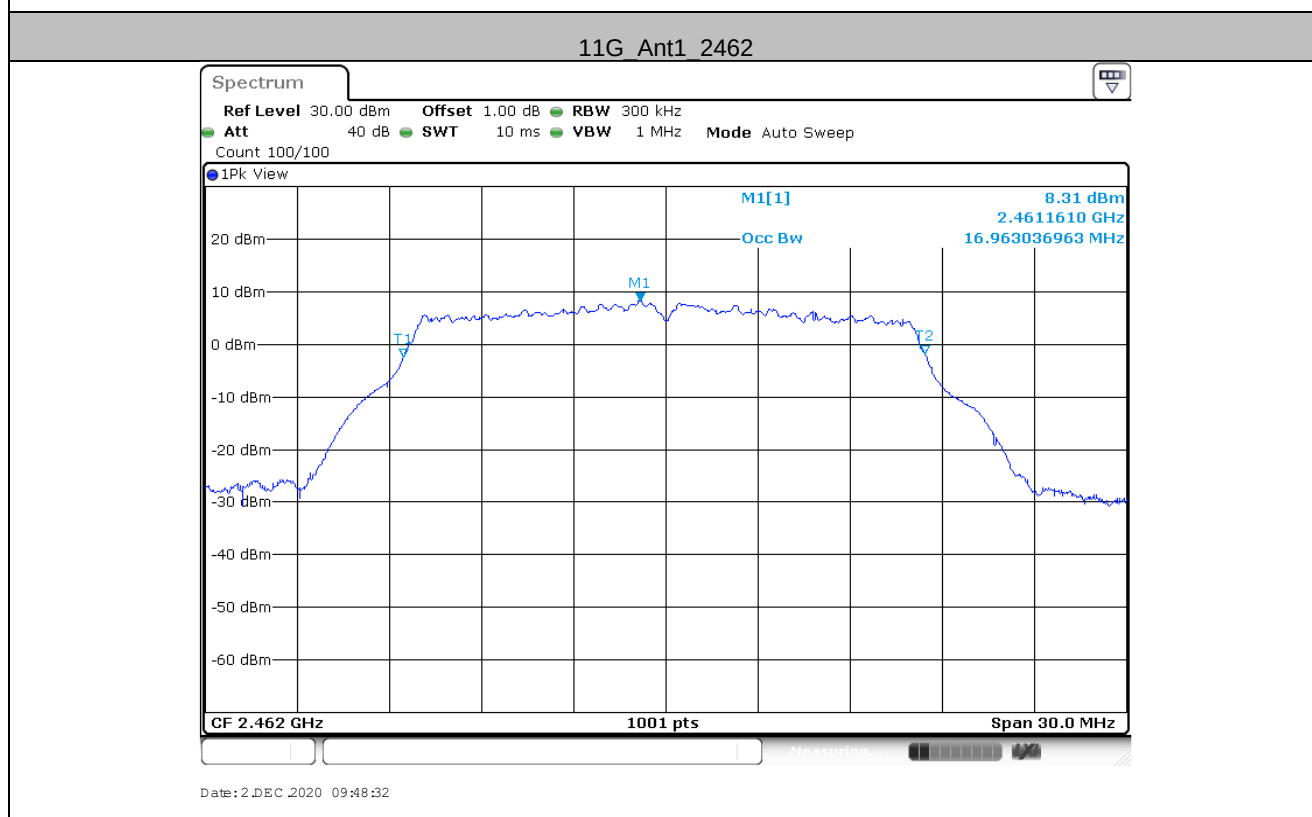
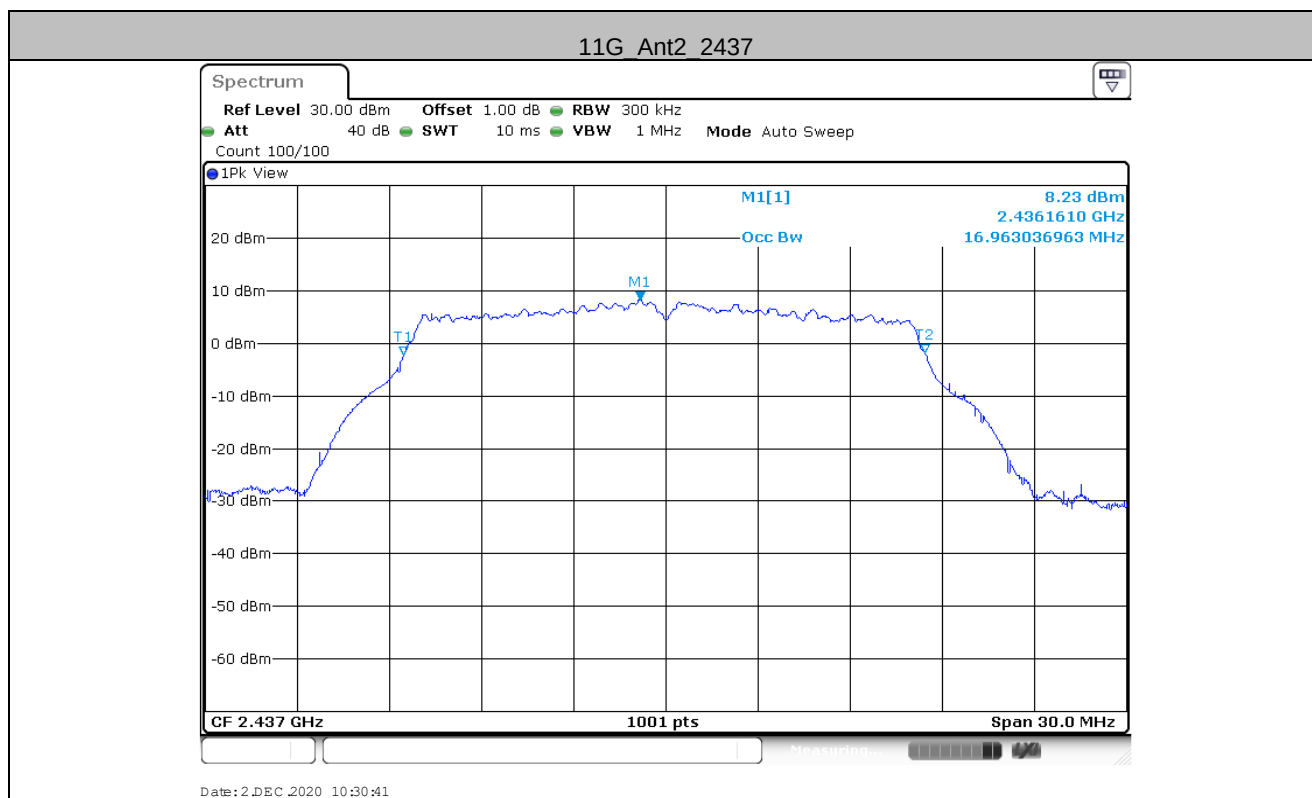
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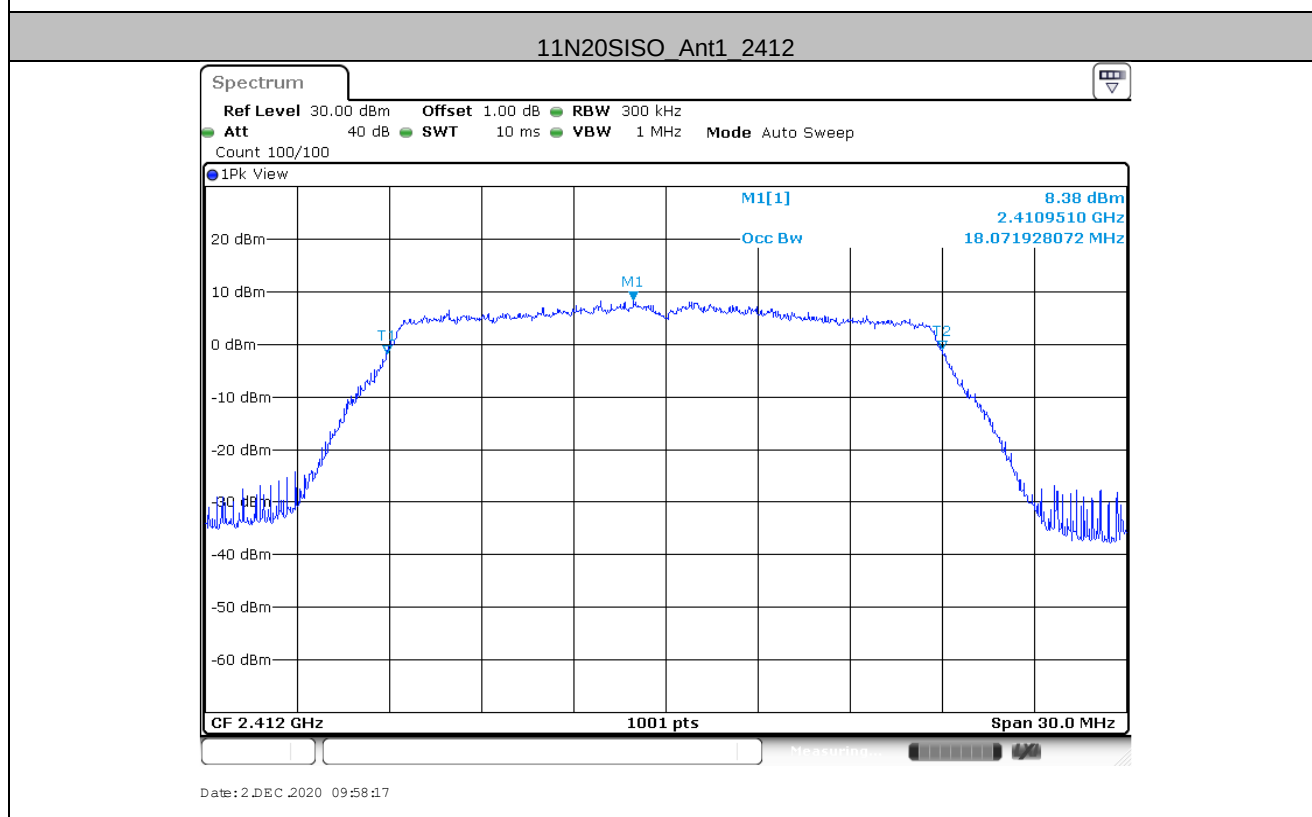
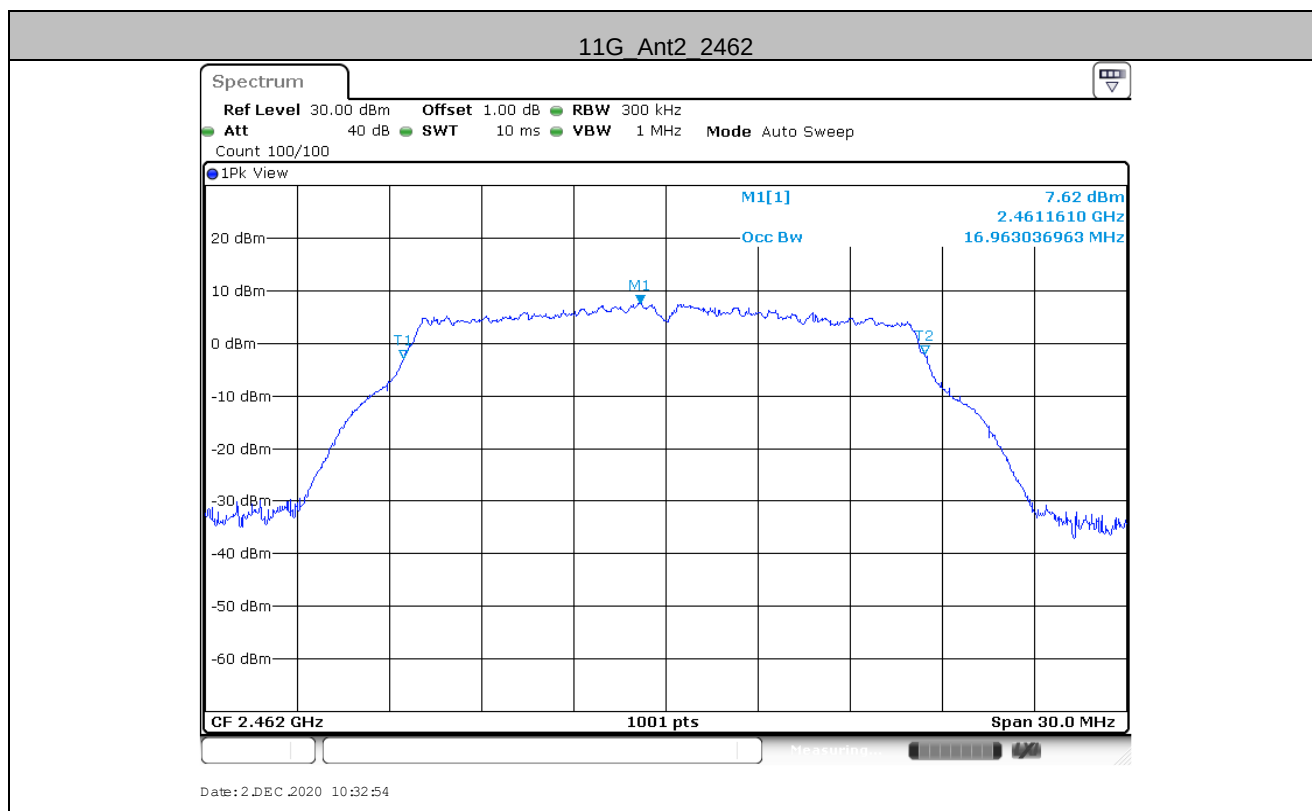
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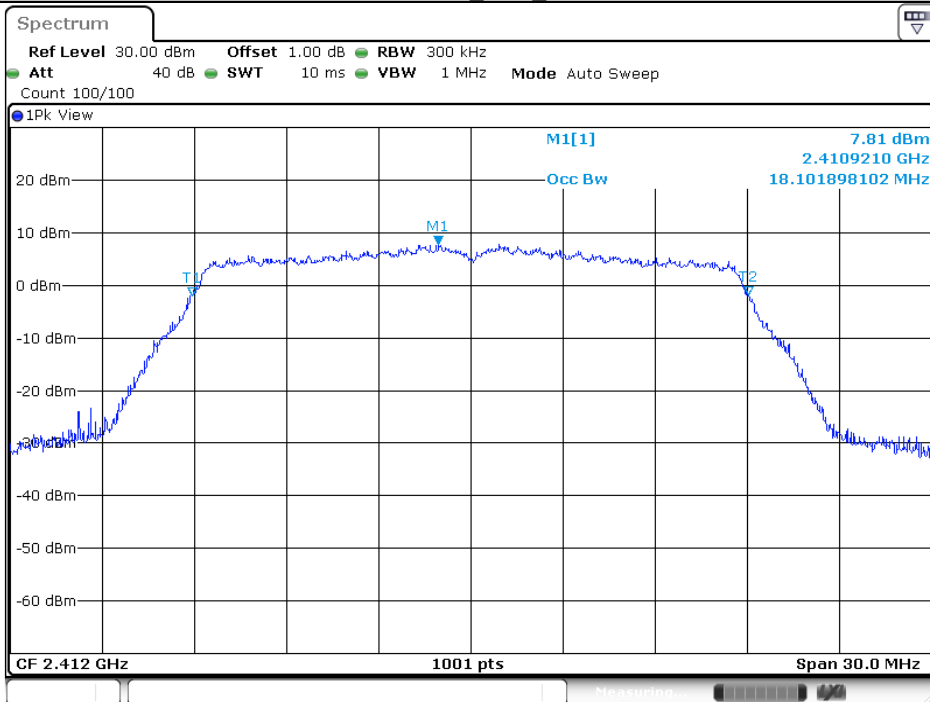
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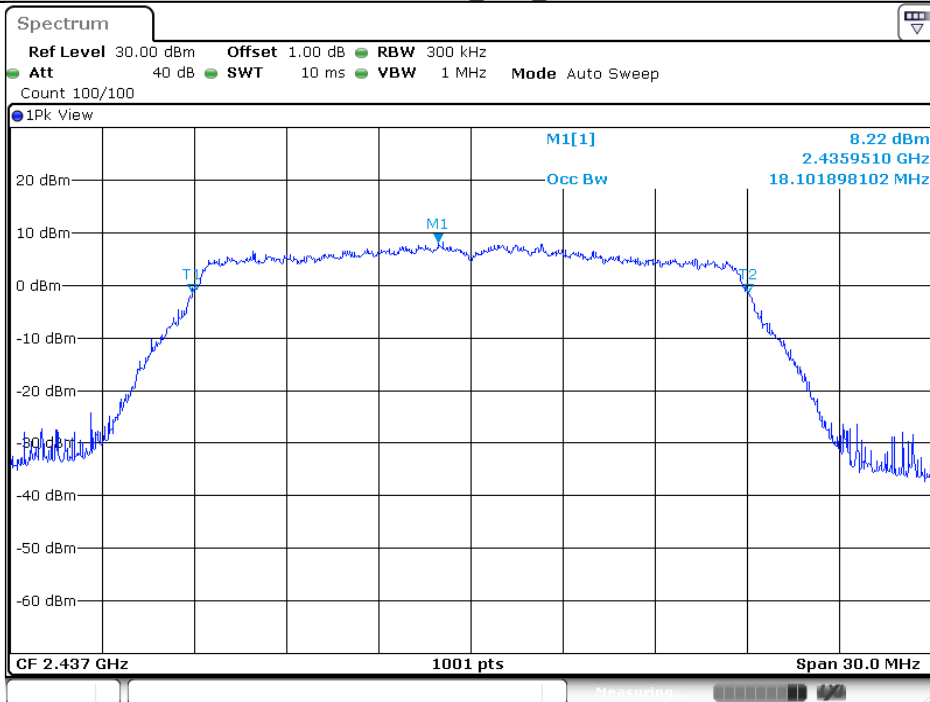
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11N20SISO Ant2 2412



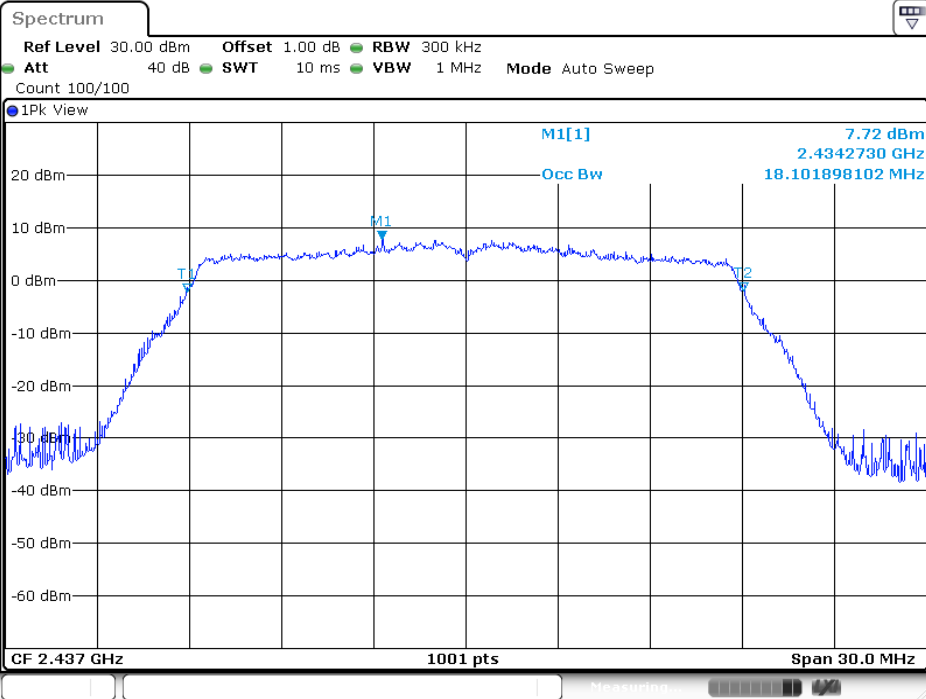
11N20SISO Ant1 2437



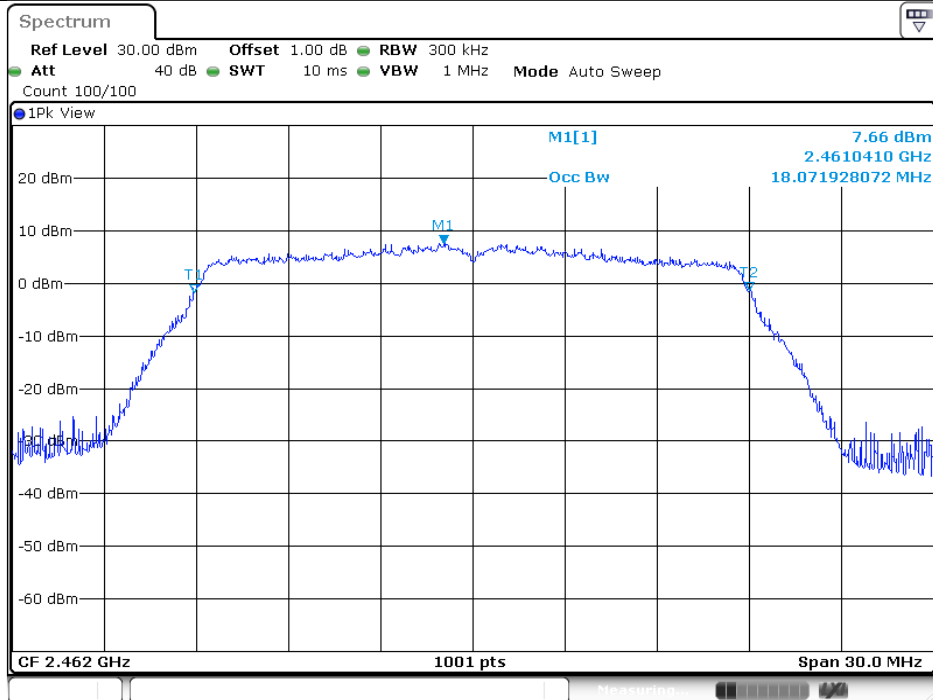
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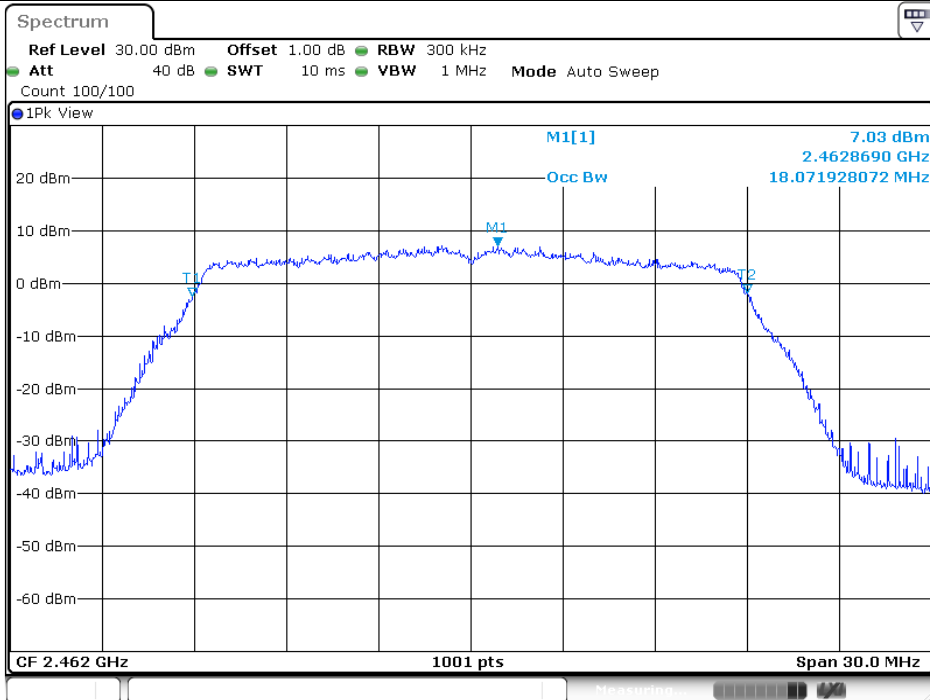
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11N20SISO Ant1 2462

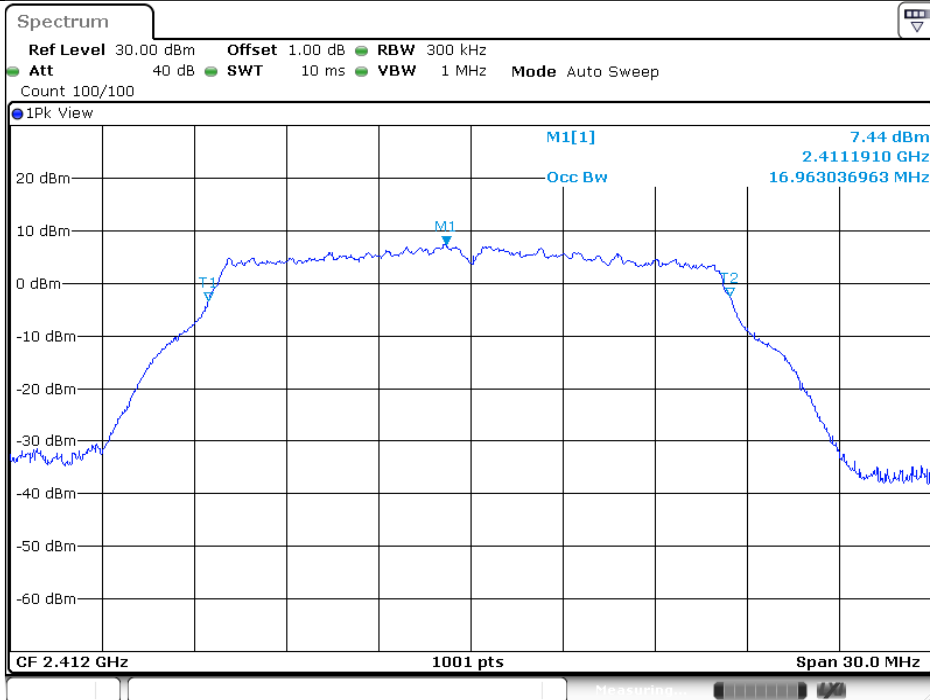


11N20SISO Ant2 2462



Date: 2 DEC. 2020 10:12:13

11G-CDD Ant1 2412



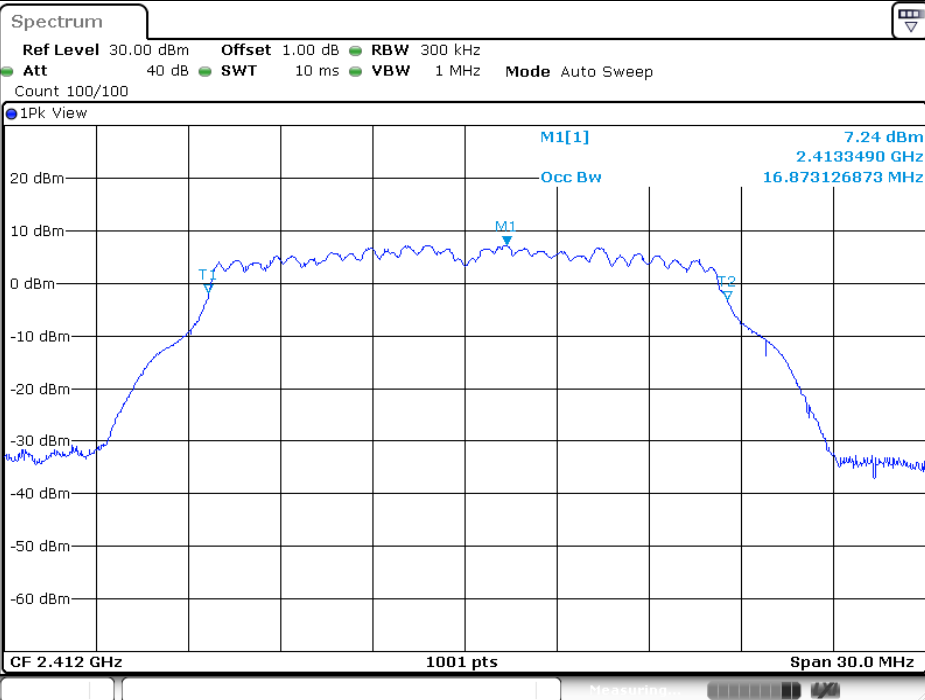
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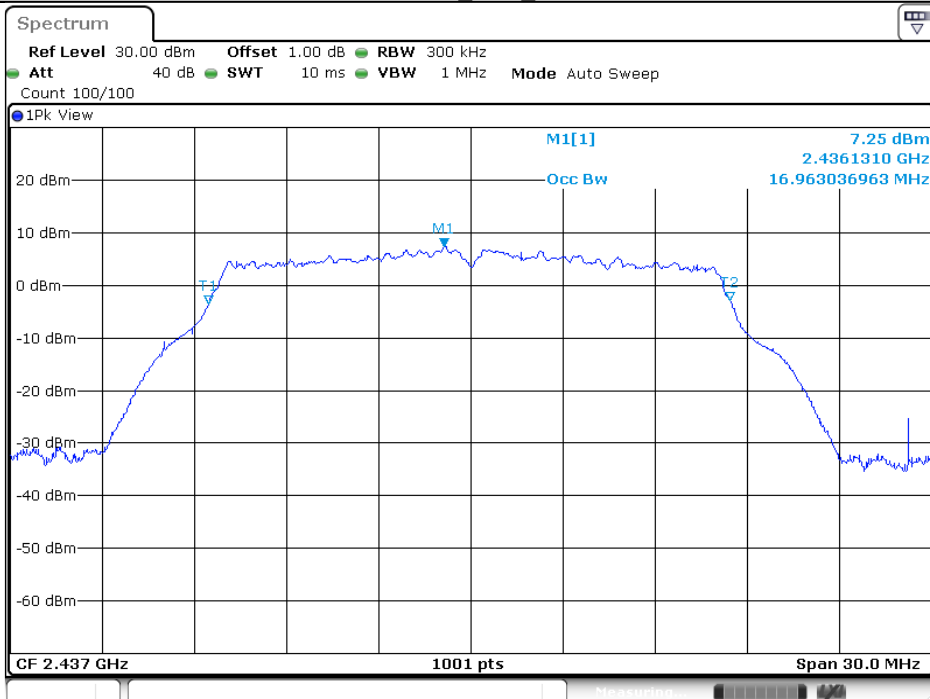
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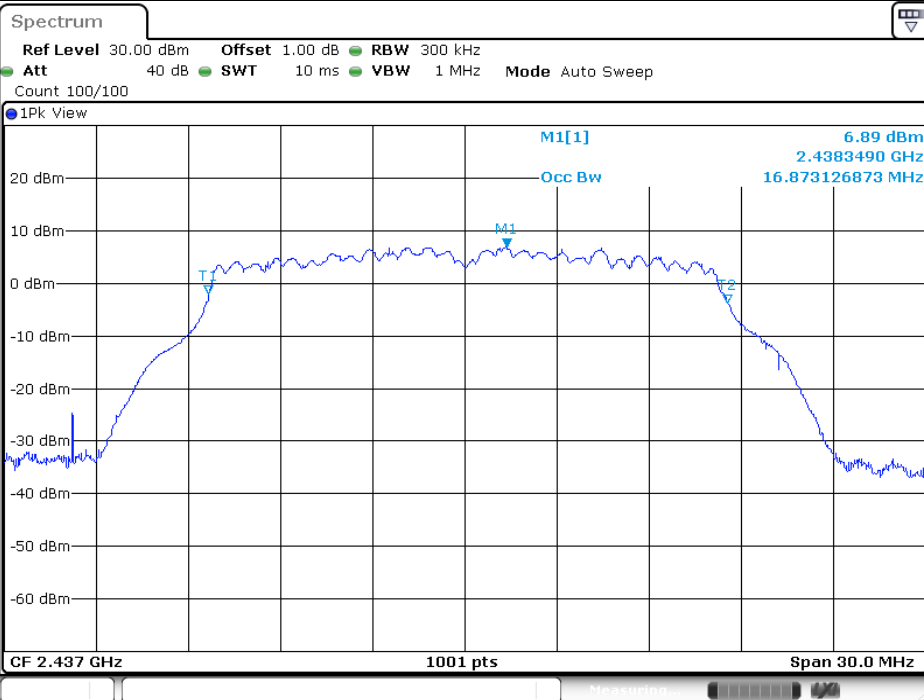
11G-CDD Ant2 2412



11G-CDD Ant1 2437

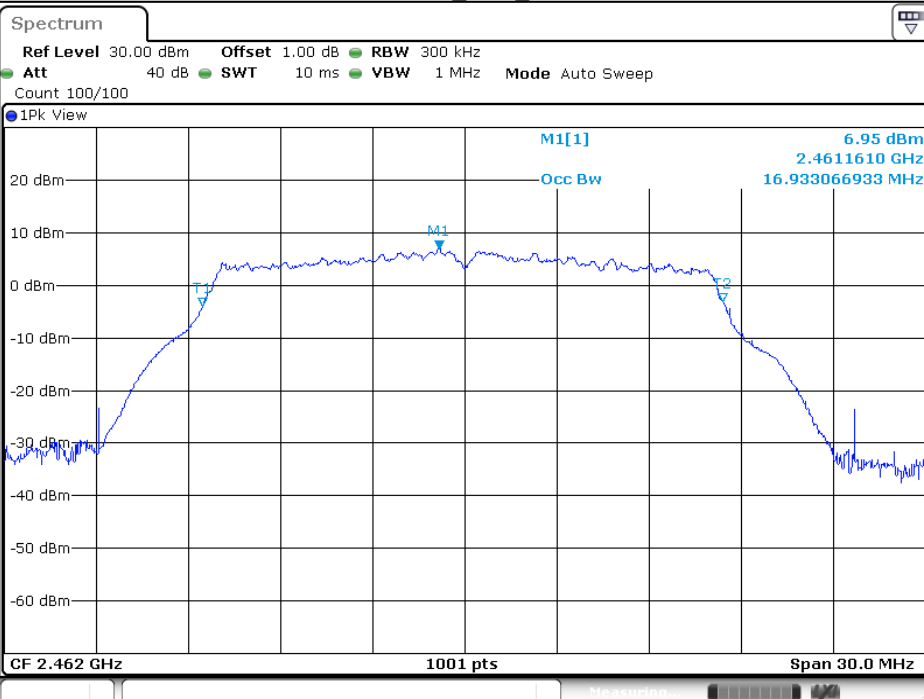


11G-CDD Ant2 2437



Date: 2 DEC. 2020 11:36:30

11G-CDD Ant1 2462



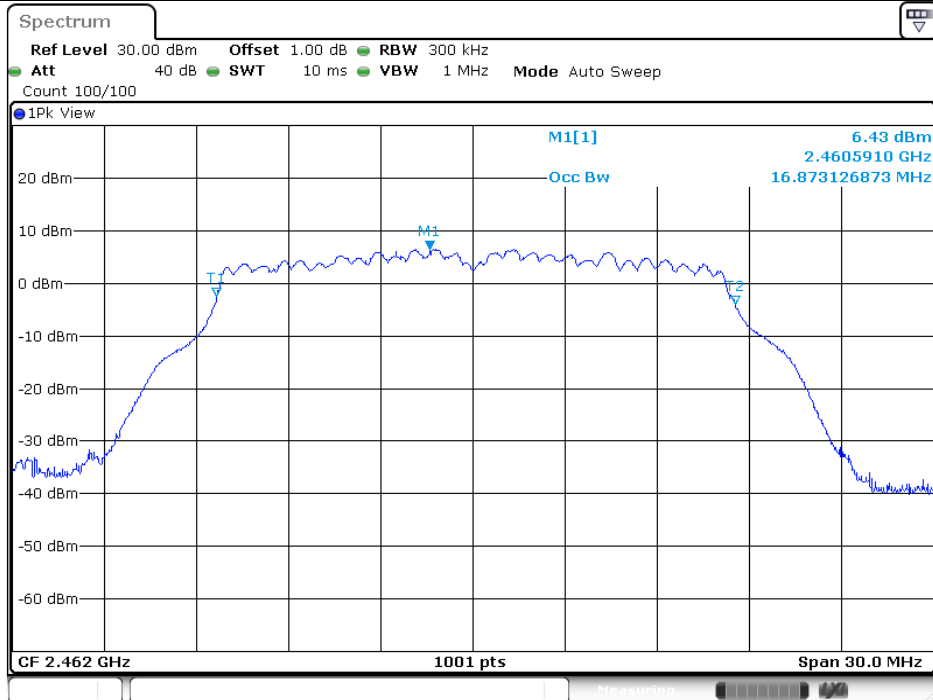
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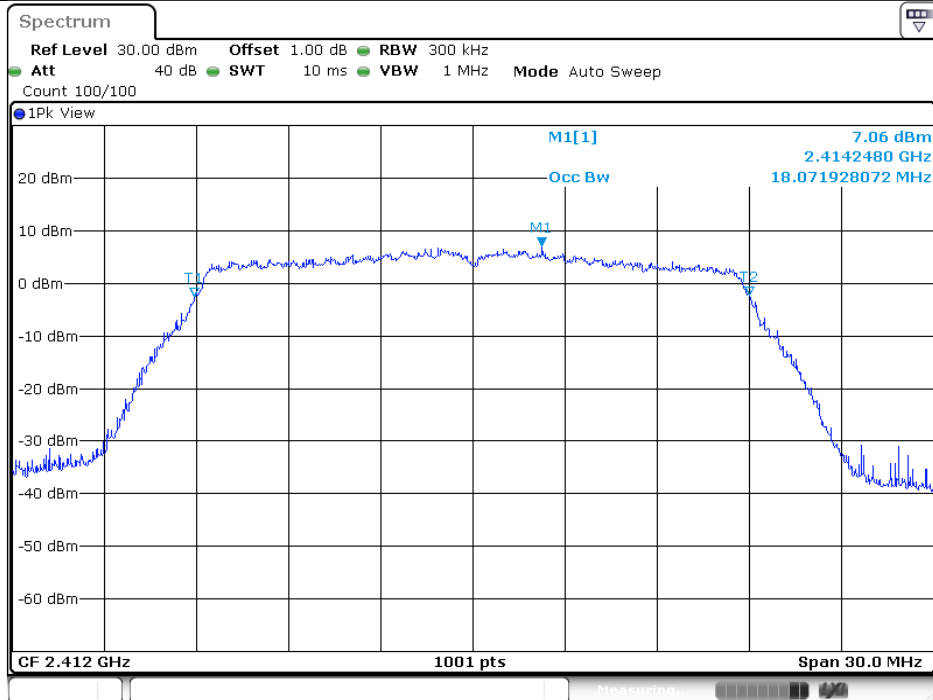
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11G-CDD Ant2 2462



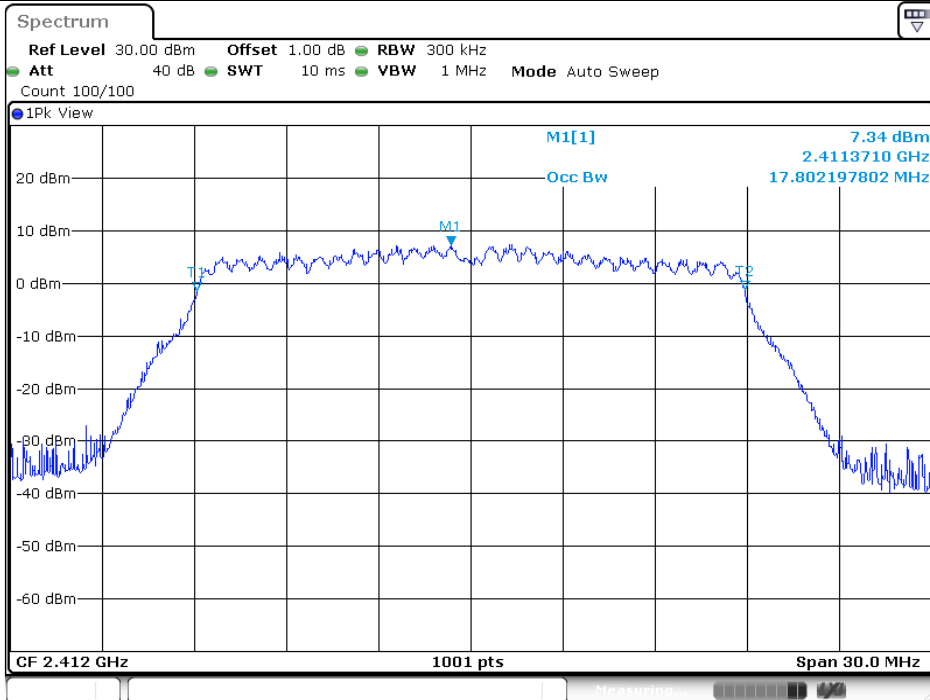
11N20MIMO Ant1 2412



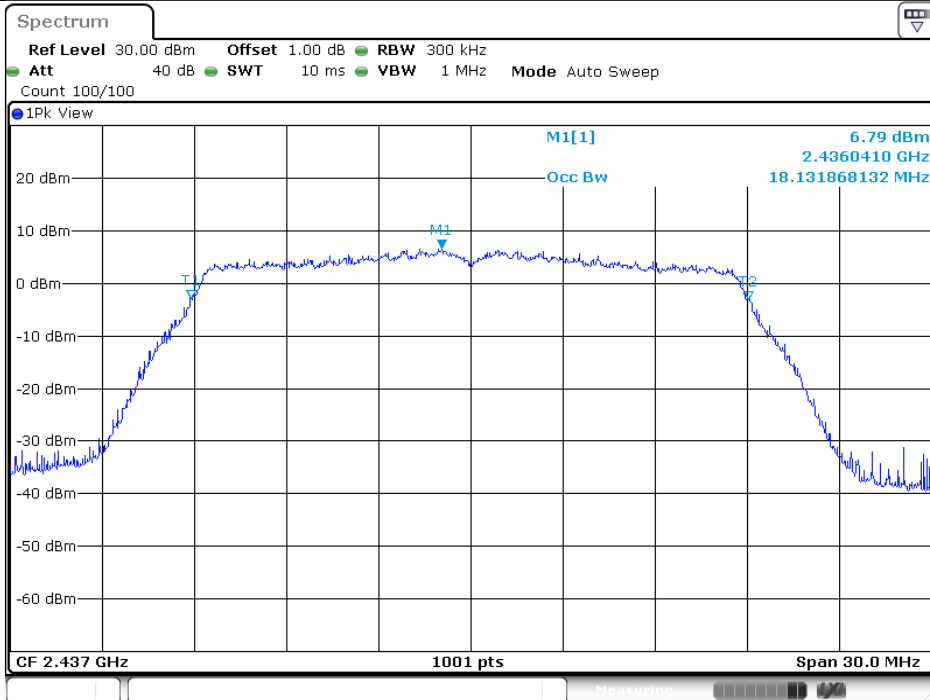
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11N20MIMO Ant2 2412



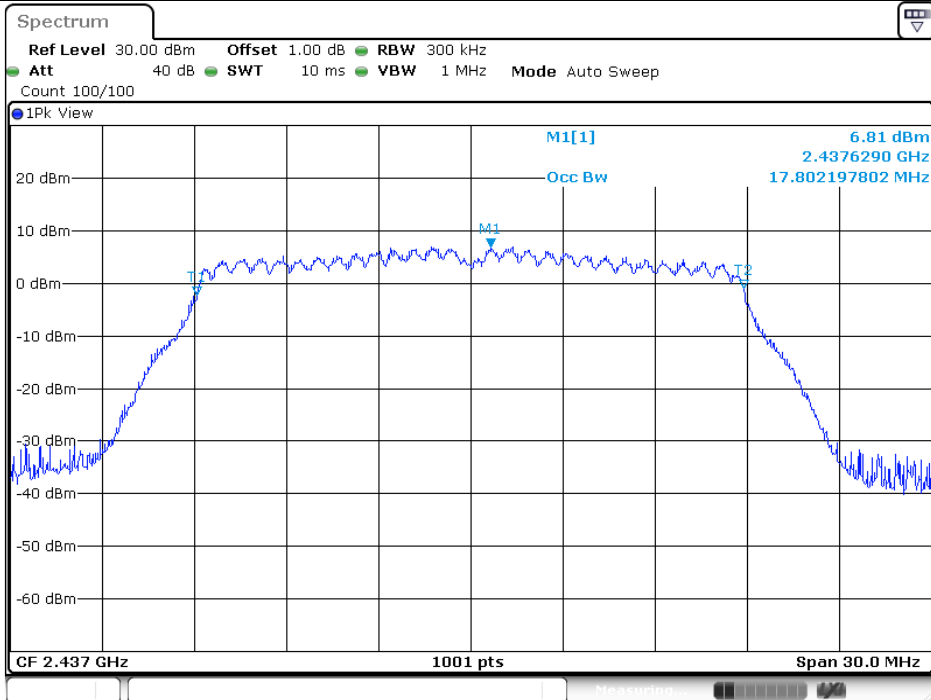
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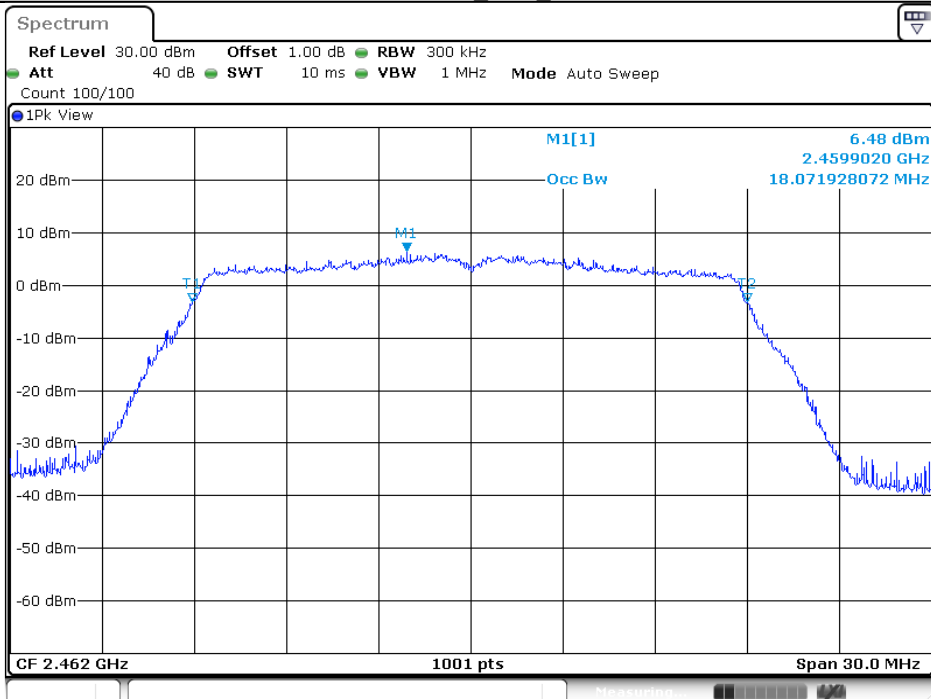
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11N20MIMO Ant2 2437



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11N20MIMO Ant1 2462



Date: 2 DEC. 2020 11:09:34



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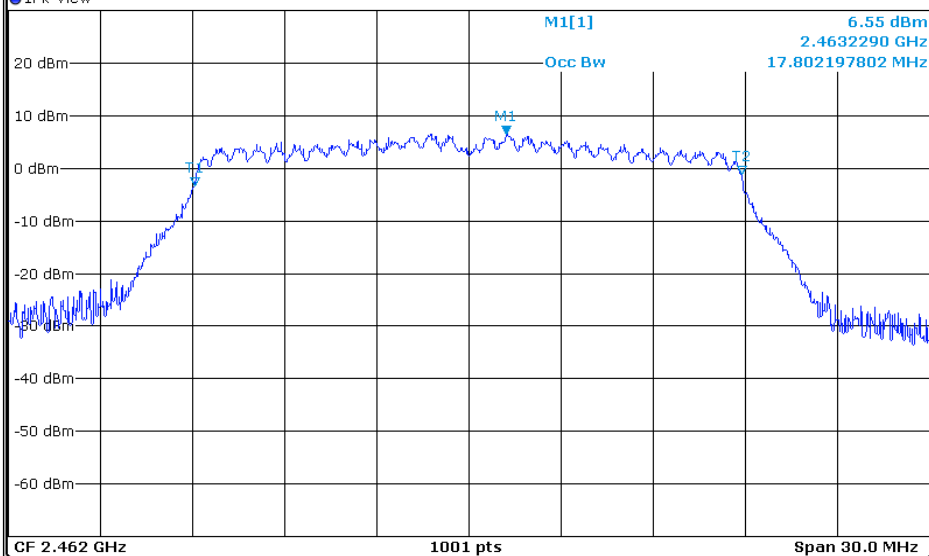
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11N20MIMO Ant2 2462

Spectrum

Ref Level 30.00 dBm Offset 1.00 dB RBW 300 kHz
Att 40 dB SWT 10 ms VBW 1 MHz Mode Auto Sweep
Count 100/100

1Pk View



Date: 2 DEC 2020 11:12:27



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Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Power [dBm]	Verdict
11B	Ant1	2412	16.15	PASS
	Ant2	2412	15.75	PASS
	Ant1	2437	16.17	PASS
	Ant2	2437	15.66	PASS
	Ant1	2462	15.68	PASS
	Ant2	2462	15.07	PASS
11G	Ant1	2412	15.84	PASS
	Ant2	2412	15.65	PASS
	Ant1	2437	15.82	PASS
	Ant2	2437	15.52	PASS
	Ant1	2462	15.36	PASS
	Ant2	2462	14.65	PASS
11N20SISO	Ant1	2412	14.98	PASS
	Ant2	2412	14.67	PASS
	Ant1	2437	14.97	PASS
	Ant2	2437	14.45	PASS
	Ant1	2462	14.51	PASS
	Ant2	2462	14.07	PASS
11G-CDD	Ant1	2412	14.24	PASS
	Ant2	2412	14.34	PASS
	total	2412	17.3	PASS
	Ant1	2437	14.10	PASS
	Ant2	2437	13.87	PASS
	total	2437	17.0	PASS
	Ant1	2462	13.62	PASS
	Ant2	2462	13.55	PASS
	total	2462	16.6	PASS
	Ant1	2412	13.58	PASS
11N20MIMO	Ant1	2412	13.58	PASS



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	Ant2	2412	13.29	PASS
	total	2412	16.4	PASS
	Ant1	2437	13.45	PASS
	Ant2	2437	13.05	PASS
	total	2437	16.3	PASS
	Ant1	2462	13.01	PASS
	Ant2	2462	12.58	PASS
	total	2462	15.8	PASS



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Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-3.18	<=8	PASS
	Ant2	2412	-3.68	<=8	PASS
	Ant1	2437	-4.51	<=8	PASS
	Ant2	2437	-3.57	<=8	PASS
	Ant1	2462	-4.17	<=8	PASS
	Ant2	2462	-4.39	<=8	PASS
11G	Ant1	2412	-7.69	<=8	PASS
	Ant2	2412	-7.81	<=8	PASS
	Ant1	2437	-7.76	<=8	PASS
	Ant2	2437	-8.12	<=8	PASS
	Ant1	2462	-8.18	<=8	PASS
	Ant2	2462	-8.81	<=8	PASS
11N20SISO	Ant1	2412	-8.57	<=8	PASS
	Ant2	2412	-8.86	<=8	PASS
	Ant1	2437	-8.18	<=8	PASS
	Ant2	2437	-9.15	<=8	PASS
	Ant1	2462	-8.58	<=8	PASS
	Ant2	2462	-9.54	<=8	PASS
11G-CDD	Ant1	2412	-8.9	<=8	PASS
	Ant2	2412	-8.82	<=8	PASS
	total	2412	-5.85	<=8	PASS
	Ant1	2437	-9.12	<=8	PASS
	Ant2	2437	-9.14	<=8	PASS
	total	2437	-6.12	<=8	PASS
	Ant1	2462	-9.43	<=8	PASS
	Ant2	2462	-9.58	<=8	PASS
	total	2462	-6.49	<=8	PASS
11N20MIMO	Ant1	2412	-9.53	<=8	PASS



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	Ant2	2412	-9.15	<=8	PASS
	total	2412	-6.33	<=8	PASS
	Ant1	2437	-9.49	<=8	PASS
	Ant2	2437	-9.89	<=8	PASS
	total	2437	-6.68	<=8	PASS
	Ant1	2462	-10.35	<=8	PASS
	Ant2	2462	-10.84	<=8	PASS
	total	2462	-7.58	<=8	PASS



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