

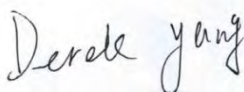
FCC TEST REPORT

Application No.: ZR/2021/30022
Applicant: HMD Global Oy
Address of Applicant: Bertel Jungin aukio 9, 02600 Espoo, Finland
Manufacturer: HMD Global Oy
Address of Manufacturer: Bertel Jungin aukio 9, 02600 Espoo, Finland
EUT Description: Smart Phone
Model No.: TA-1371
Trade Mark: NOKIA
FCC ID: 2AJOTTA-1371
Standards: 47 CFR FCC Part 2, Subpart J
47 CFR Part 15, Subpart C
Date of Receipt: 2021/4/2
Date of Test: 2021/4/2 to 2021/5/14
Date of Issue: 2021/5/14

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

Authorized Signature:



Derek Yang
Wireless Laboratory Manager

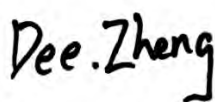



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Report No.: ZR/2021/3002204
Page: 2 of 278

1 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2021-05-14		Original

Authorized for issue by:		
Prepared By		 (Dee Zheng) / Engineer
Checked By		 (Jim Huang) / Reviewer



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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

Remark : All test were performed by Lab A and B.

Lab A SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Lab B SGS-CSTC STANDARDS TECHNICAL SERVICES (XI 'AN) CO., LTD.



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SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Inspection & Testing Services Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

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3 General Information

3.1 Details of Client

Applicant:	HMD Global Oy
Address of Applicant	Bertel Jungin aukio 9, 02600 Espoo, Finland
Manufacturer:	HMD Global Oy
Address of Manufacturer	Bertel Jungin aukio 9, 02600 Espoo, Finland

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
Test engineer:	Dee Zheng, Swing Hu, Habit Zeng

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
Test engineer:	Leah Chen, Ken Liu, Andy Yao



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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.

FCC-Designation Number: CN1271.



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3.4 General Description of EUT

EUT Description:	Smart Phone
Model No.:	TA-1371
Trade Mark:	NOKIA
Hardware Version:	V1.00
Software Version:	00WW_1_01A
IEEE 802.11 WLAN Mode Supported	<input checked="" type="checkbox"/> 802.11B (20 MHz channel bandwidth), <input checked="" type="checkbox"/> 802.11G (20 MHz channel bandwidth) <input checked="" type="checkbox"/> 802.11N (20 MHz channel bandwidth), <input checked="" type="checkbox"/> 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 IEEE for 802.11N(HT40) : OFDM
Sample Type:	<input checked="" type="checkbox"/> Portable Device, <input type="checkbox"/> Module
Antenna Type:	<input type="checkbox"/> External, <input checked="" type="checkbox"/> Integrated
Antenna Ports	<input checked="" type="checkbox"/> Ant 1, <input checked="" type="checkbox"/> Ant 2, <input type="checkbox"/> Ant 3
Smart System	<input checked="" type="checkbox"/> SISO (for 802.11B/G/N), <input checked="" type="checkbox"/> MIMO (for 802.11B/G/N): 2 Tx & 2 Rx, <input type="checkbox"/> Diversity (for 802.11B/G) : Tx & Rx
Antenna Gain:	-0.5dBi(ANT4); -0.5dBi(ANT7);

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		

Operation Frequency of each channel (802.11N HT40)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
3	2422MHz	6	2437MHz	9	2452MHz		
4	2427MHz	7	2442MHz				
5	2432MHz	8	2447MHz				



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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)	Frequency for 802.11N (HT40)
The Lowest channel	2412MHz	2422MHz
The Middle channel	2437MHz	2437MHz
The Highest channel	2462MHz	2452MHz

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.



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4 Test results and Measurement Data

4.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
<p>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.</p> <p>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.</p>	
<p>The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is -0.5dBi.</p>	



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:	<p>1) The mains terminal disturbance voltage test was conducted in a shielded room.</p> <p>2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω 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.</p> <p>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,</p> <p>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. 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.</p>		



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No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
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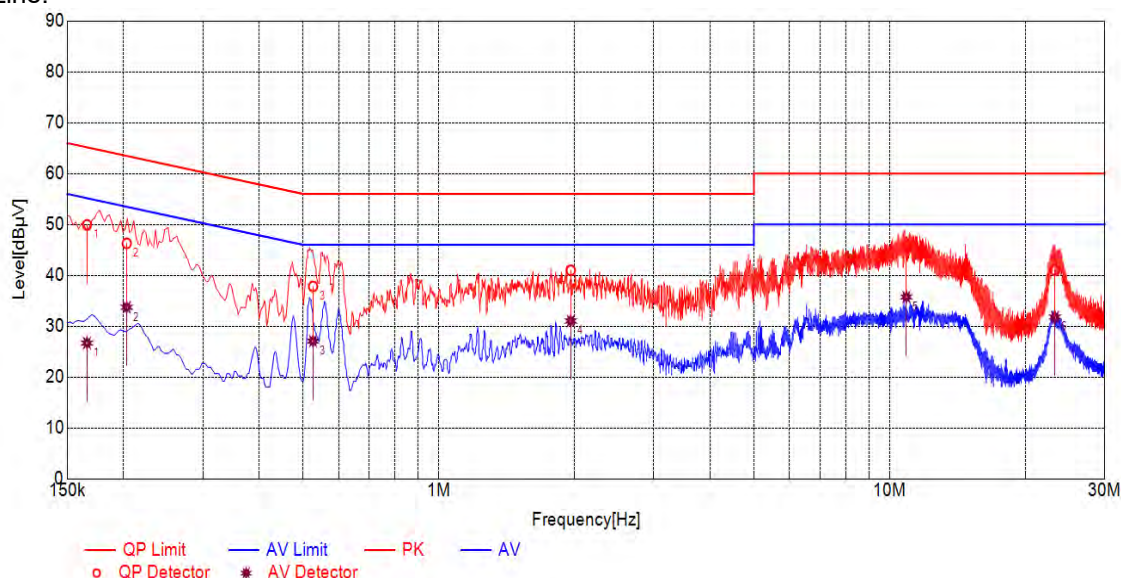
Test Setup:	
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates at lowest, middle and highest channel. Charge + Transmitting mode.
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate of 802.11B at lowest channel is the worst case. Charge + Transmitting mode. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 6 for details
Test Results:	Pass



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]
1	0.1660	10.10	49.91	65.16	15.25	26.69	55.16	28.47
2	0.2033	10.10	46.29	63.47	17.18	33.71	53.47	19.76
3	0.5264	10.10	37.82	56.00	18.18	27.06	46.00	18.94
4	1.9633	10.10	40.98	56.00	15.02	31.04	46.00	14.96
5	10.8925	10.10	45.66	60.00	14.34	35.75	50.00	14.25
6	23.2654	10.11	41.01	60.00	18.99	31.81	50.00	18.19



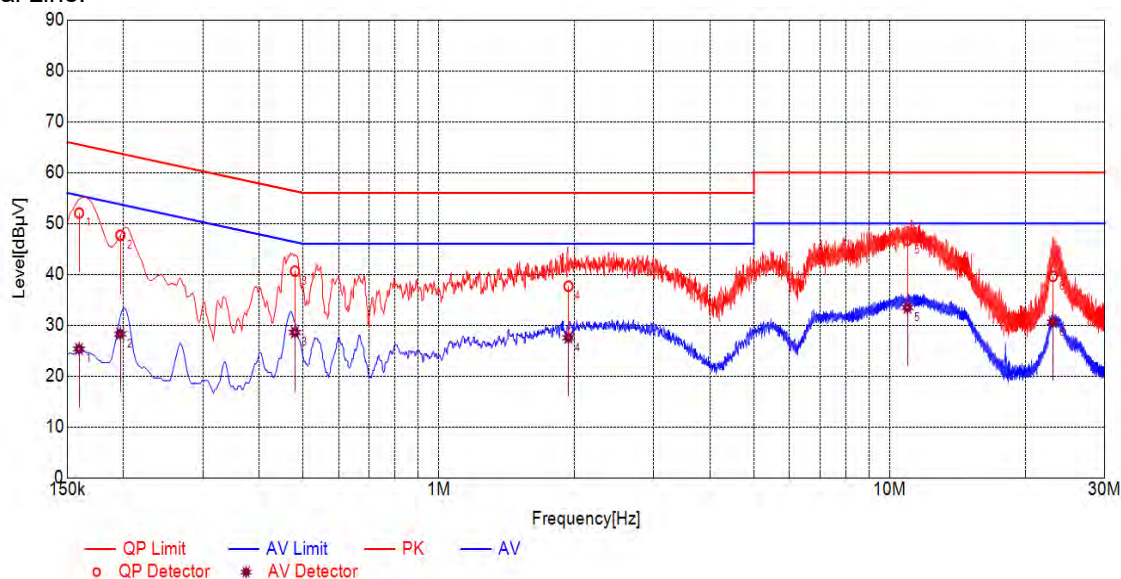
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Neutral Line:



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]
1	0.1594	10.10	52.04	65.49	13.45	25.33	55.49	30.16
2	0.1968	10.10	47.69	63.75	16.06	28.29	53.75	25.46
3	0.4799	10.10	40.61	56.34	15.73	28.59	46.34	17.75
4	1.9399	10.10	37.67	56.00	18.33	27.54	46.00	18.46
5	10.9533	10.10	46.67	60.00	13.33	33.47	50.00	16.53
6	23.0091	10.11	39.63	60.00	20.37	30.60	50.00	19.40

Remark1:

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



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4.3 Duty Cycle

The detailed test data see: **Appendix**

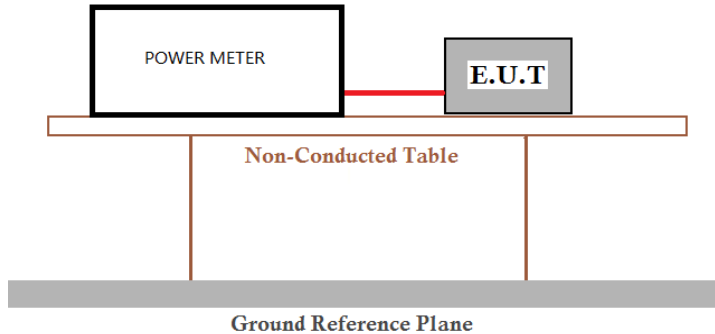


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4.4 Conducted Output Power

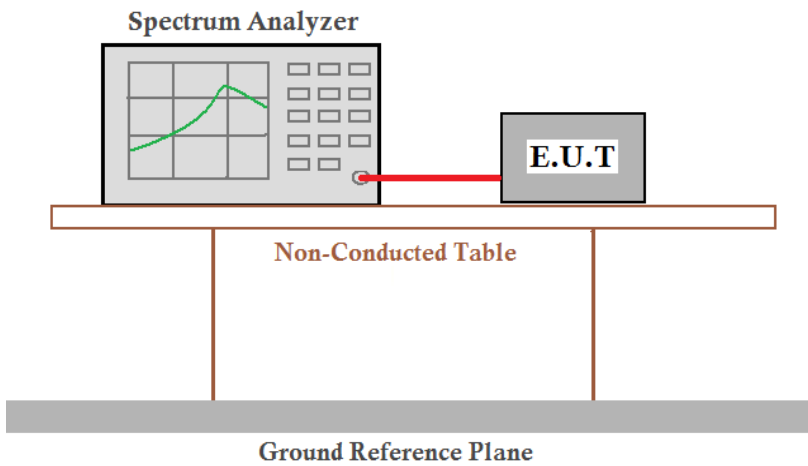
Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	ANSI C63.10 :2013 Section 11.9.1.3
Test Setup:	
Test Instruments:	Refer to section 6 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate 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); 13.5Mbps of rate is the worst case of 802.11N(HT40).
Limit:	30dBm
Test Results:	Pass

The detailed test data see: **Appendix**



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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 6 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); 13.5Mbps of rate is the worst case of 802.11N(HT40).
Limit:	≥ 500 kHz
Test Results:	Pass

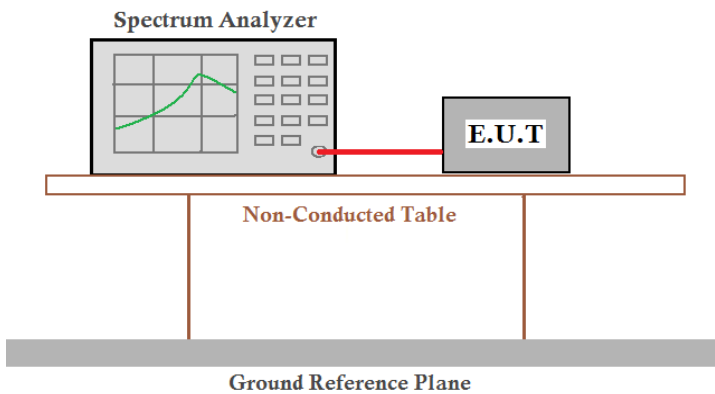
The detailed test data see: **Appendix**



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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 6 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); 13.5Mbps of rate is the worst case of 802.11N(HT40).
Limit:	≤8.00dBm/3kHz
Test Results:	Pass

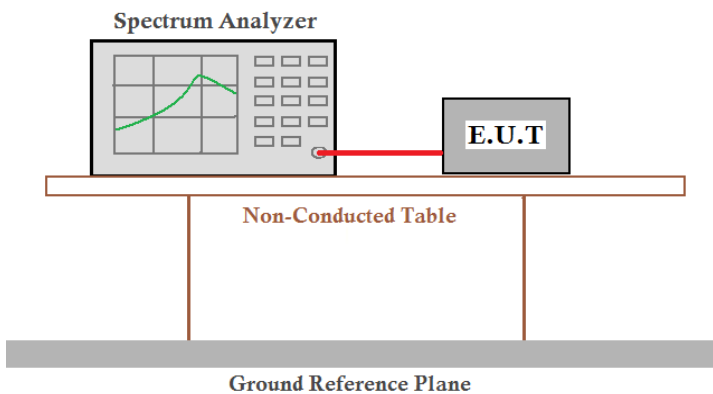
The detailed test data see: **Appendix**



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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:	
Instruments Used:	Refer to section 6 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); 13.5Mbps of rate is the worst case of 802.11N(HT40).
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.
Test Results:	Pass

The detailed test data see: **Appendix**

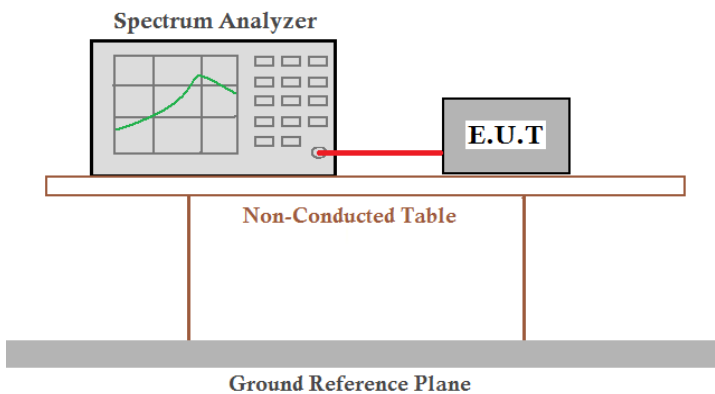


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4.8 RF Conducted Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10: 2013 Section 11.11
Test Setup:	
Instruments Used:	Refer to section 6 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); 13.5Mbps of rate is the worst case of 802.11N(HT40).
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.
Test Results:	Pass

The detailed test data see: **Appendix**



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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	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz (DC \geq 0.98) \geq 1/T (DC<0.98)	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:

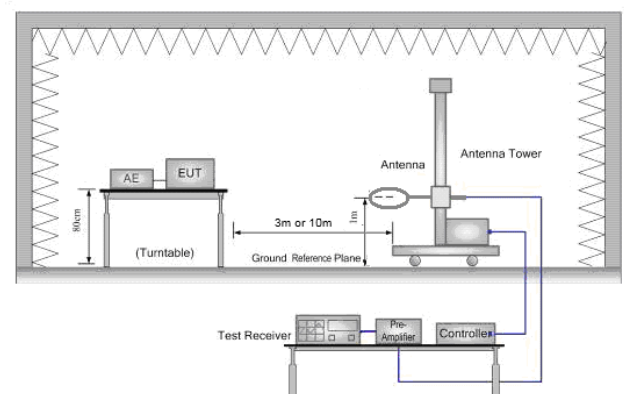


Figure 1. Below 30MHz

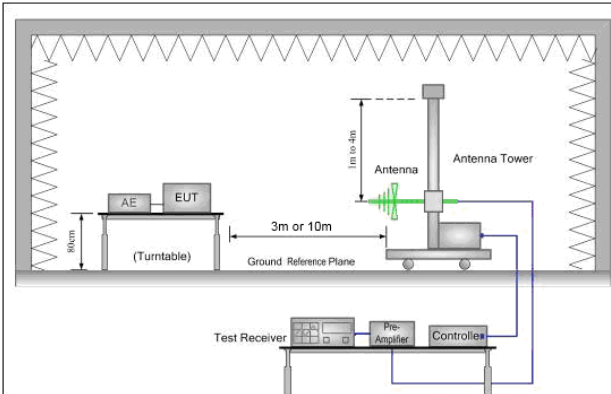


Figure 2. 30MHz to 1GHz

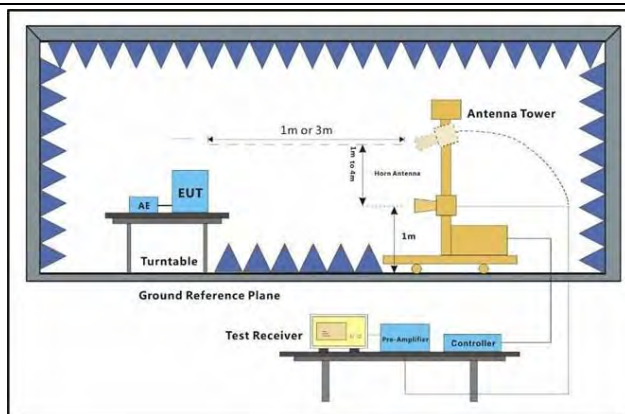


Figure 3. Above 1 GHz

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 $f < 1$ GHz, RBW=1MHz for $f > 1$ 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



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t (86-755) 26012053 f (86-755) 26710594

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	<p>On time = $N_1 * L_1 + N_2 * L_2 + \dots + N_{n-1} * L_{n-1} + N_n * L_n$</p> <p>Where N_1 is number of type 1 pulses, L_1 is length of type 1 pulses, etc.</p> <p>Average Emission Level = Peak Emission Level + $20 * \log(\text{Duty cycle})$</p> <p>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.</p> <p>g. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>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.</p> <p>i. Test the EUT in the lowest channel, the middle channel, the Highest channel.</p> <p>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.</p> <p>k. Repeat above procedures until all frequencies measured was complete.</p>
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Charge + Transmitting mode.
Final Test Mode:	<p>Pretest the EUT at Charge + Transmitting mode.</p> <p>Through Pre-scan, find the</p> <p>1Mbps of rate is the worst case of 802.11B;</p> <p>6Mbps of rate is the worst case of 802.11G;</p> <p>6.5Mbps of rate is the worst case of 802.11N(HT20);</p> <p>13.5Mbps of rate is the worst case of 802.11N(HT40);</p> <p>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.</p>
Instruments Used:	Refer to section 6 for details
Test Results:	Pass

The detailed test data see: **Appendix**



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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)	Remark
	30MHz-88MHz	40.0	Quasi-peak
	88MHz-216MHz	43.5	Quasi-peak
	216MHz-960MHz	46.0	Quasi-peak
	960MHz-1GHz	54.0	Quasi-peak
	Above 1GHz	54.0	Average Value
		74.0	Peak Value
Test Setup:			

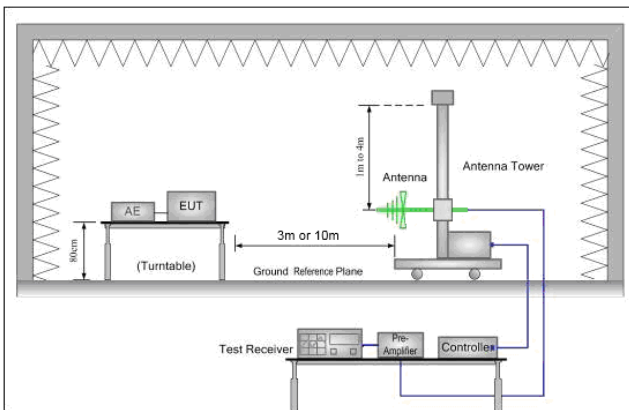


Figure 1. 30MHz to 1GHz

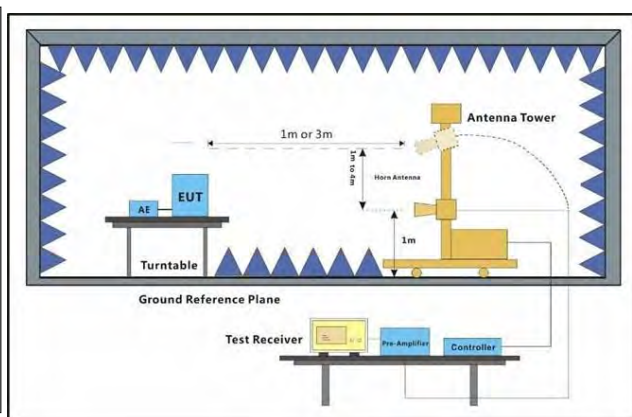


Figure 2. Above 1 GHz



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Test Procedure:	<ul style="list-style-type: none"> 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); 13.5Mbps of rate is the worst case of 802.11N(HT40); Only the worst case is recorded in the report.
Instruments Used:	Refer to section 6 for details
Test Results:	Pass

The detailed test data see: **Appendix**



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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 Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
Signal Analyzer	Rohde & Schwarz	FSV	W025-05	2020/4/16	2021/4/15
				2021/4/14	2022/4/13
DC Power Supply	Rohde & Schwarz	HMP2020	W009-08	2020/7/15	2021/7/15
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2020/7/14	2021/7/13
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	HTC-1	W006-17	2020/4/21	2021/4/20
				2021/4/14	2022/4/13

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



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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	2021-04-01	2022-03-31
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



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7 Photographs - EUT Constructional Details

Refer to Appendix A Setup Photos.



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Appendix



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DTS Bandwidth Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant4	2412	7.650	2407.920	2415.570	0.5	PASS
	Ant7	2412	8.130	2407.920	2416.050	0.5	PASS
	Ant4	2437	8.130	2432.920	2441.050	0.5	PASS
	Ant7	2437	8.130	2432.920	2441.050	0.5	PASS
	Ant4	2462	8.130	2457.920	2466.050	0.5	PASS
	Ant7	2462	8.130	2457.920	2466.050	0.5	PASS
11G	Ant4	2412	15.150	2404.410	2419.560	0.5	PASS
	Ant7	2412	15.750	2403.840	2419.590	0.5	PASS
	Ant4	2437	15.510	2429.080	2444.590	0.5	PASS
	Ant7	2437	15.510	2429.380	2444.890	0.5	PASS
	Ant4	2462	15.150	2454.440	2469.590	0.5	PASS
	Ant7	2462	15.750	2453.810	2469.560	0.5	PASS
11N20SISO	Ant4	2412	15.180	2404.410	2419.590	0.5	PASS
	Ant7	2412	16.020	2403.540	2419.560	0.5	PASS
	Ant4	2437	16.860	2428.540	2445.400	0.5	PASS
	Ant7	2437	15.510	2429.080	2444.590	0.5	PASS
	Ant4	2462	15.180	2454.410	2469.590	0.5	PASS
	Ant7	2462	16.410	2453.180	2469.590	0.5	PASS
11N40SISO	Ant4	2422	35.220	2404.360	2439.580	0.5	PASS
	Ant7	2422	35.880	2403.760	2439.640	0.5	PASS
	Ant4	2437	36.480	2418.760	2455.240	0.5	PASS
	Ant7	2437	36.420	2418.760	2455.180	0.5	PASS
	Ant4	2452	35.280	2434.360	2469.640	0.5	PASS
	Ant7	2452	35.280	2434.360	2469.640	0.5	PASS
11B-CDD	Ant4	2412	8.130	2407.920	2416.050	0.5	PASS
	Ant7	2412	8.130	2407.920	2416.050	0.5	PASS
	Ant4	2437	8.130	2432.920	2441.050	0.5	PASS
	Ant7	2437	8.130	2432.920	2441.050	0.5	PASS
	Ant4	2462	8.130	2457.920	2466.050	0.5	PASS



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	Ant7	2462	8.130	2457.920	2466.050	0.5	PASS
11G-CDD	Ant4	2412	15.120	2404.410	2419.530	0.5	PASS
	Ant7	2412	15.390	2404.170	2419.560	0.5	PASS
	Ant4	2437	16.110	2428.810	2444.920	0.5	PASS
	Ant7	2437	15.420	2429.470	2444.890	0.5	PASS
	Ant4	2462	15.150	2454.410	2469.560	0.5	PASS
	Ant7	2462	15.390	2454.200	2469.590	0.5	PASS
	Ant4	2412	15.150	2404.410	2419.560	0.5	PASS
11N20MIMO	Ant7	2412	16.050	2403.540	2419.590	0.5	PASS
	Ant4	2437	16.860	2428.540	2445.400	0.5	PASS
	Ant7	2437	16.830	2428.570	2445.400	0.5	PASS
	Ant4	2462	15.150	2454.410	2469.560	0.5	PASS
	Ant7	2462	15.990	2453.600	2469.590	0.5	PASS
	Ant4	2422	32.700	2404.360	2437.060	0.5	PASS
	Ant7	2422	35.880	2403.760	2439.640	0.5	PASS
11N40MIMO	Ant4	2437	36.480	2418.760	2455.240	0.5	PASS
	Ant7	2437	36.480	2418.760	2455.240	0.5	PASS
	Ant4	2452	35.220	2434.420	2469.640	0.5	PASS
	Ant7	2452	35.280	2434.360	2469.640	0.5	PASS
	Ant4	2437	36.480	2418.760	2455.240	0.5	PASS
	Ant7	2437	36.480	2418.760	2455.240	0.5	PASS



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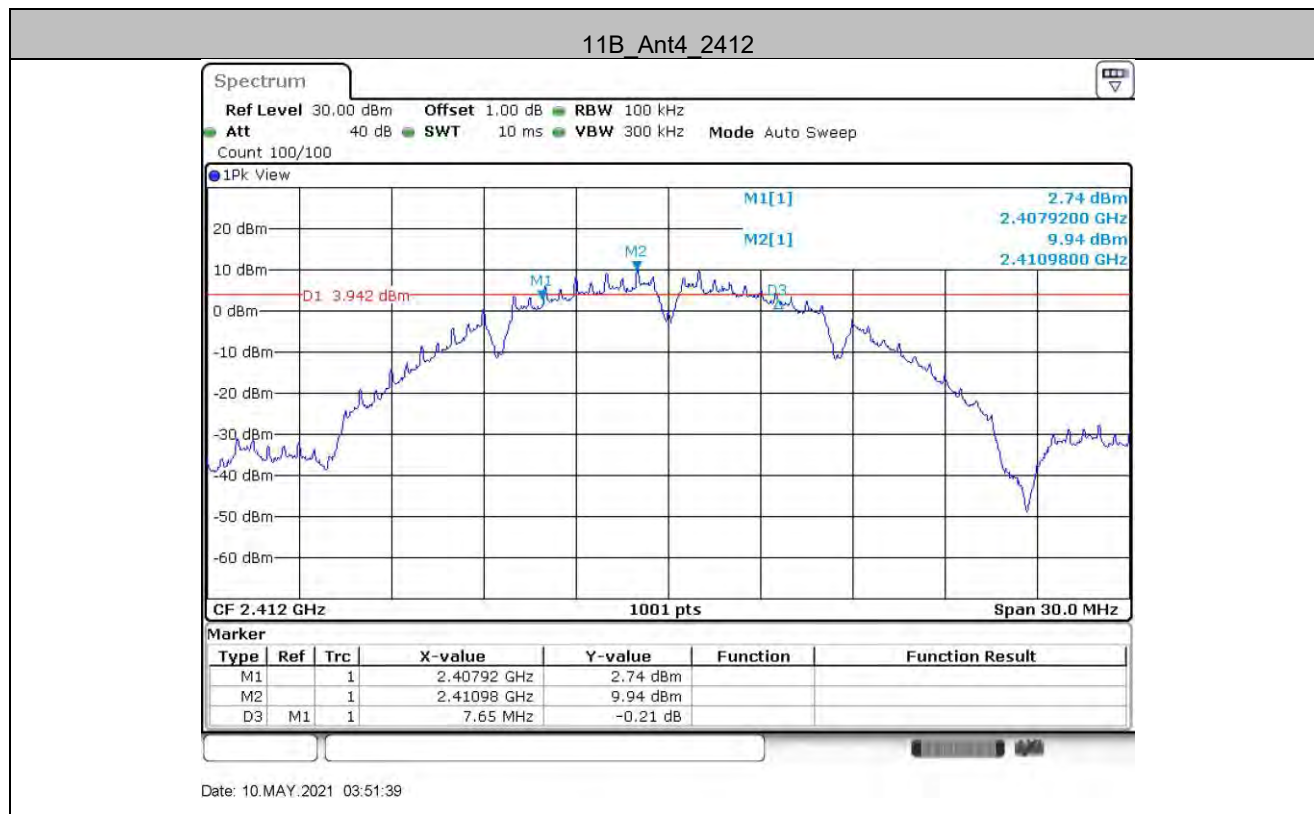
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Test Graphs



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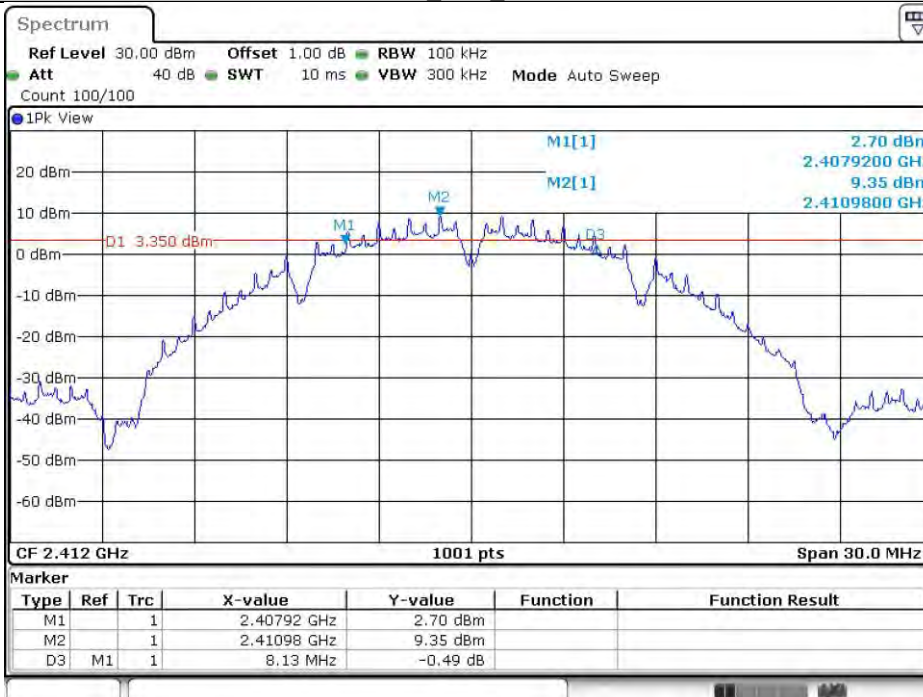
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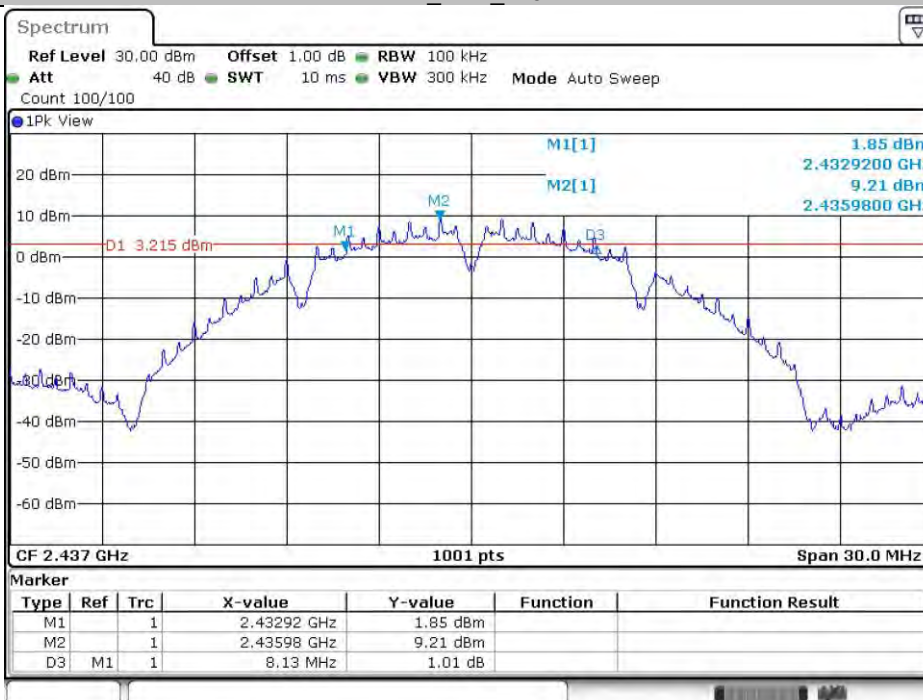
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11B Ant7 2412



Date: 10.MAY.2021 04:52:57

11B Ant4 2437



Date: 10.MAY.2021 03:55:08



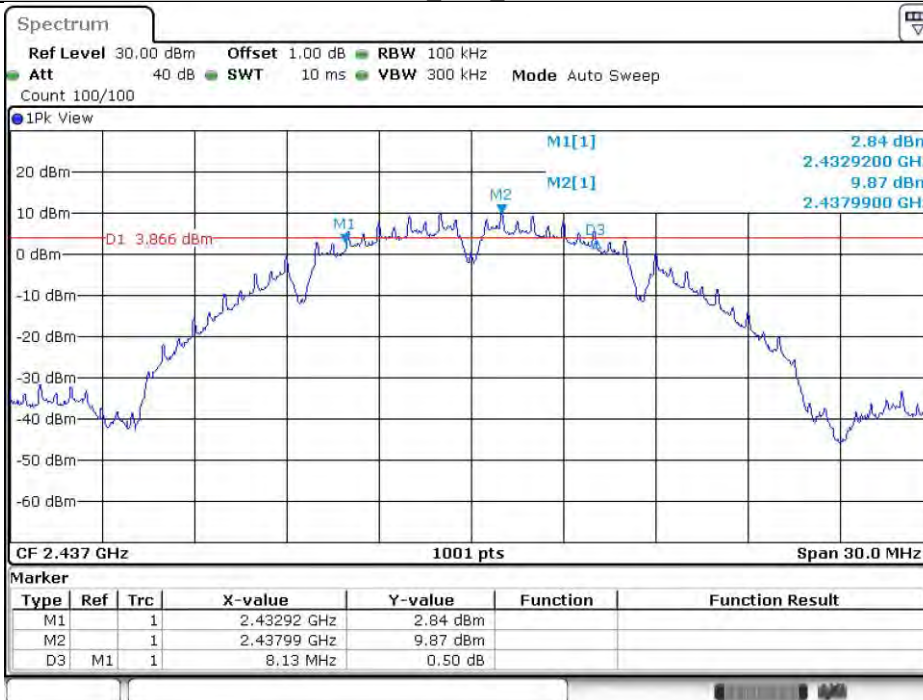
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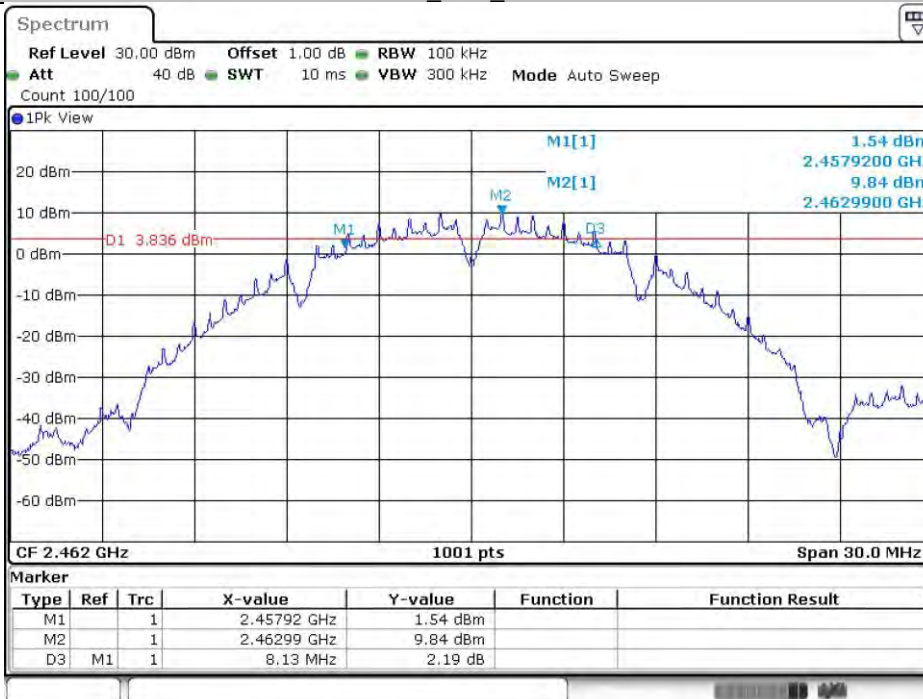
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11B Ant4 2462



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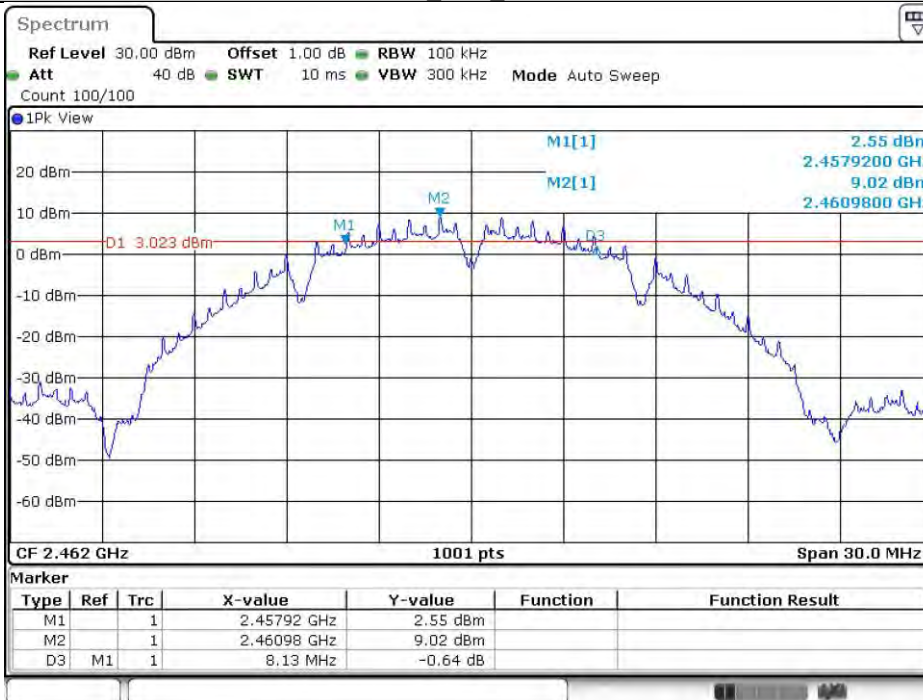
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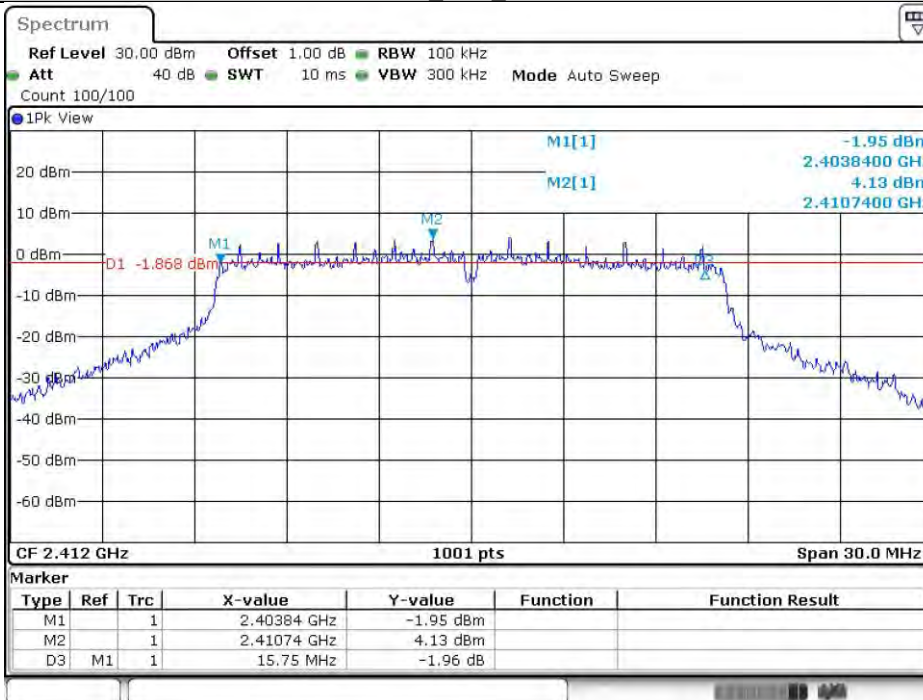
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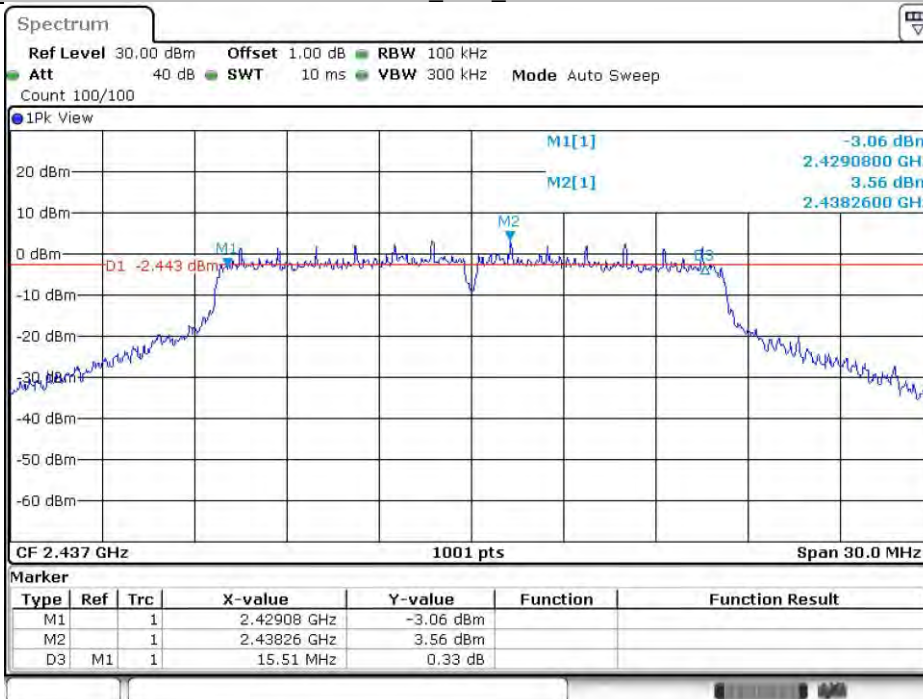
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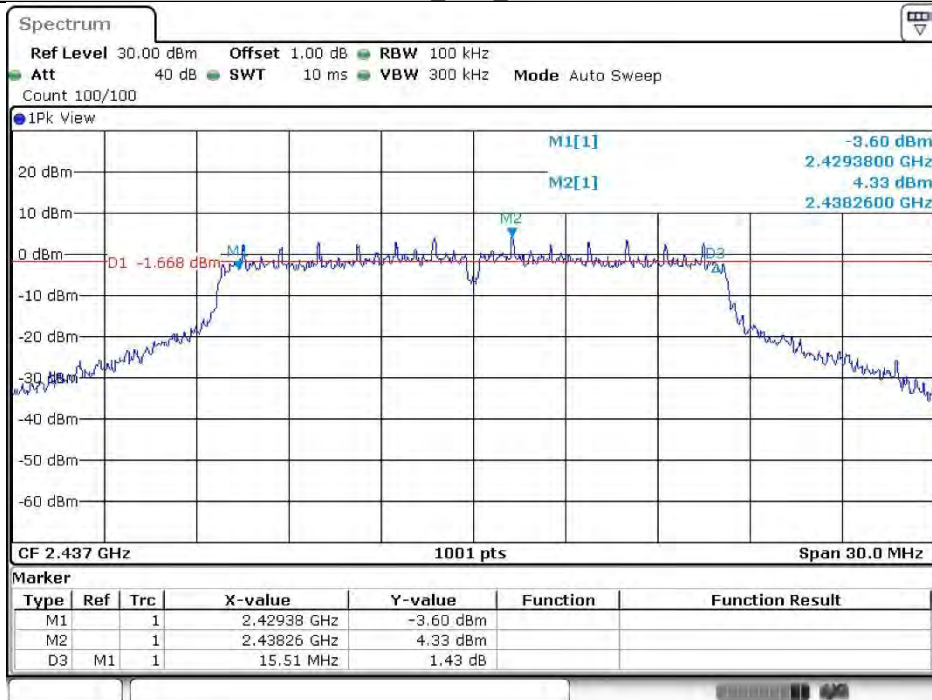
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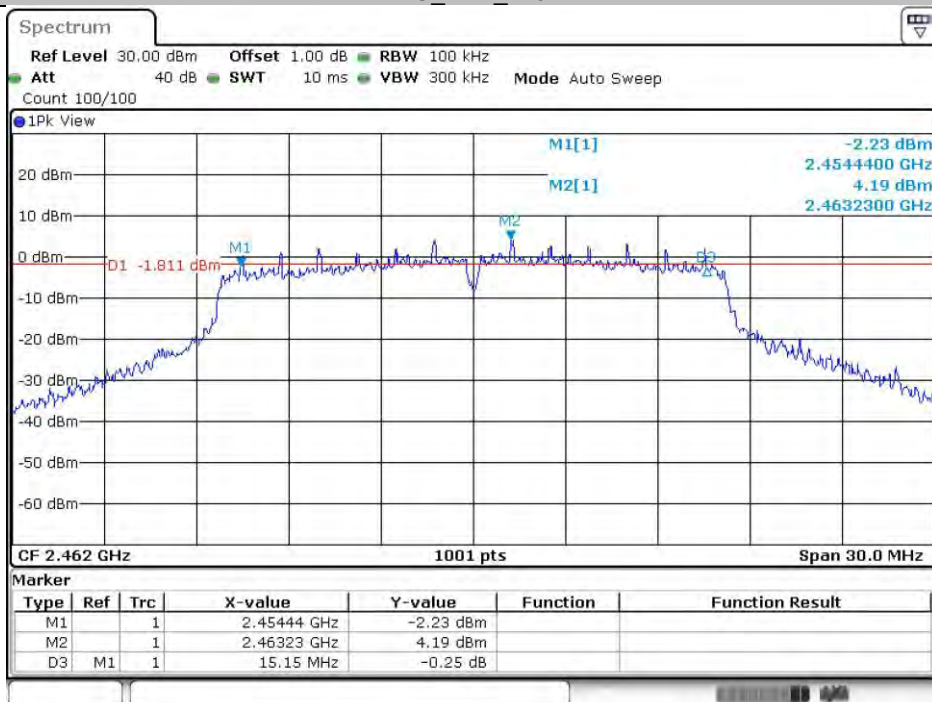
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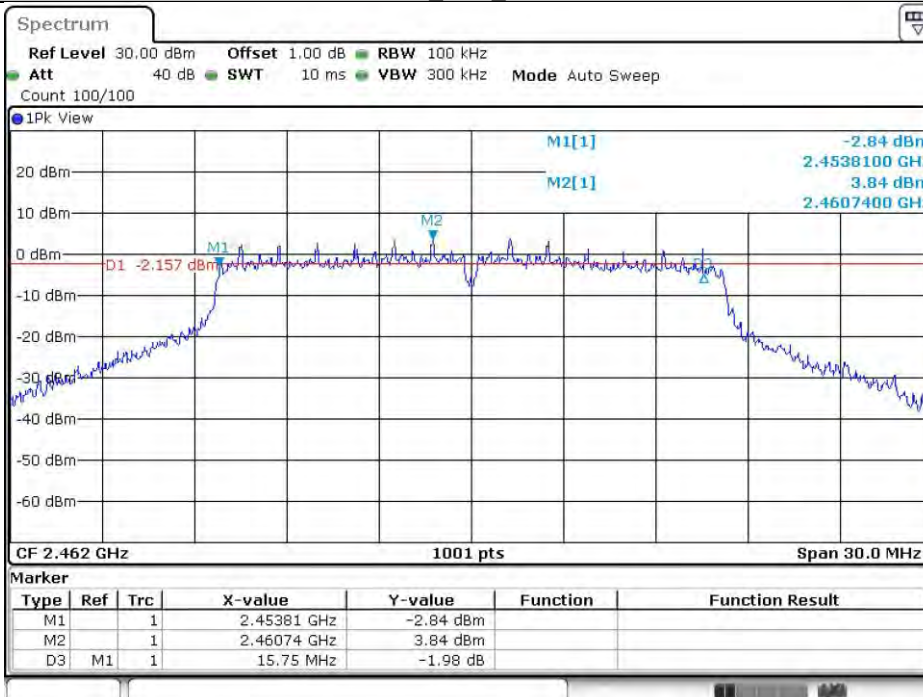
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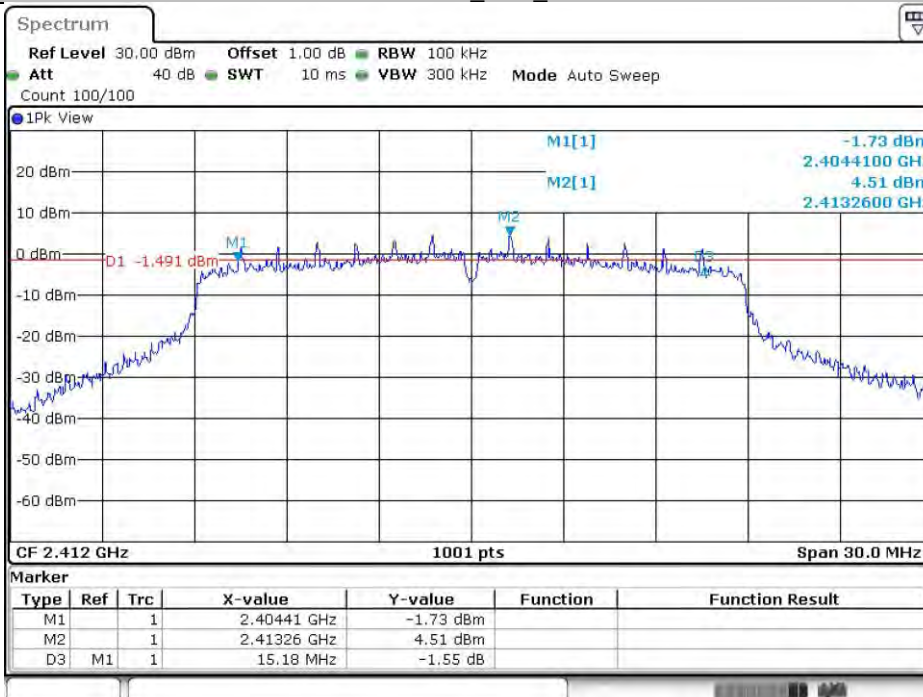
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Date: 10.MAY.2021 05:14:32

11N20SISO_Ant4_2412



Date: 10.MAY.2021 04:06:04



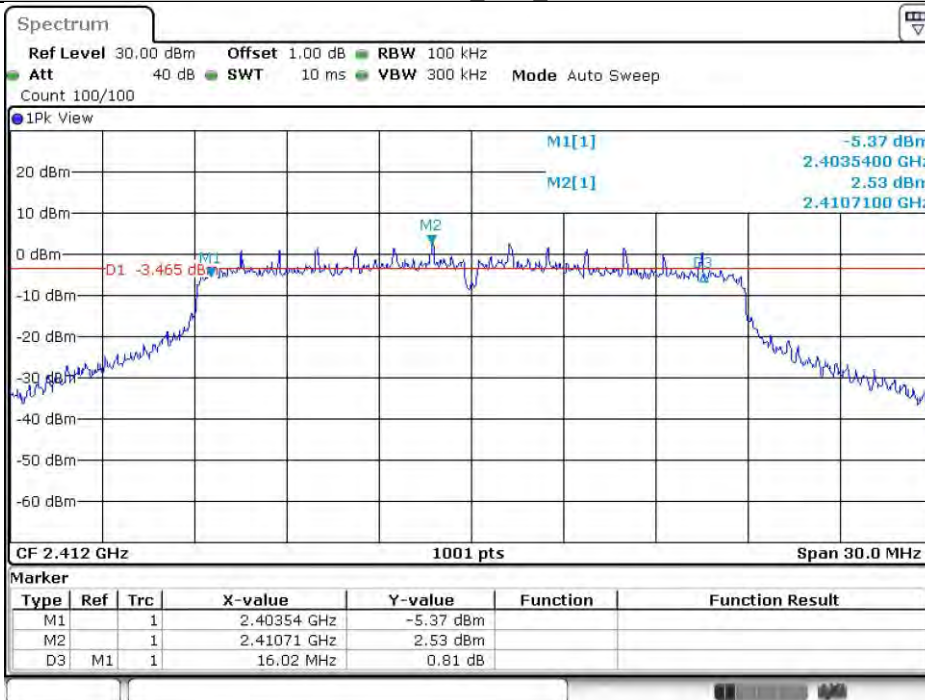
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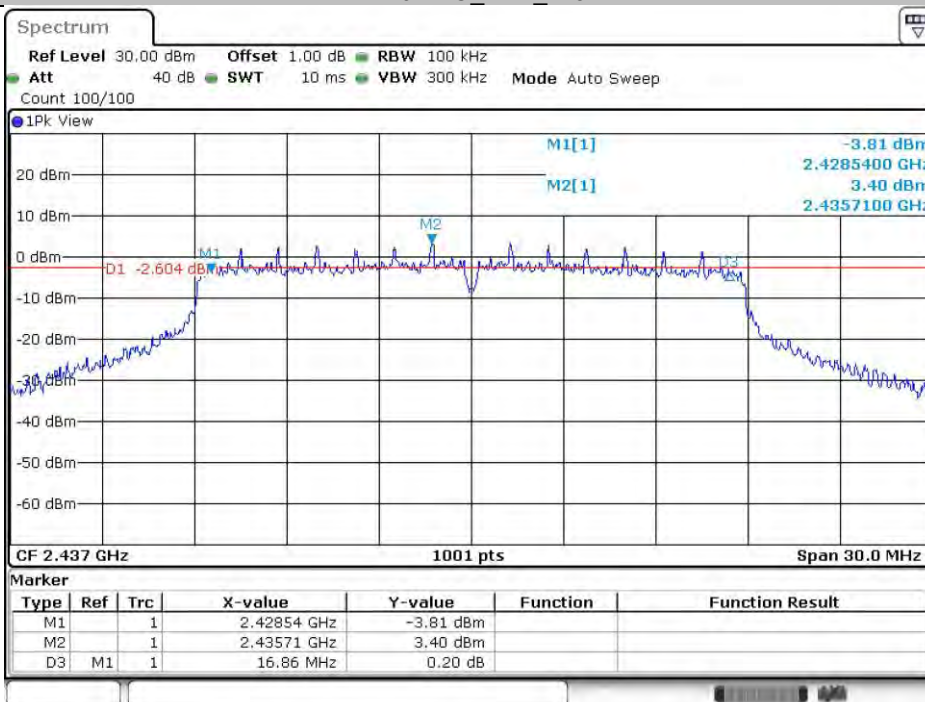
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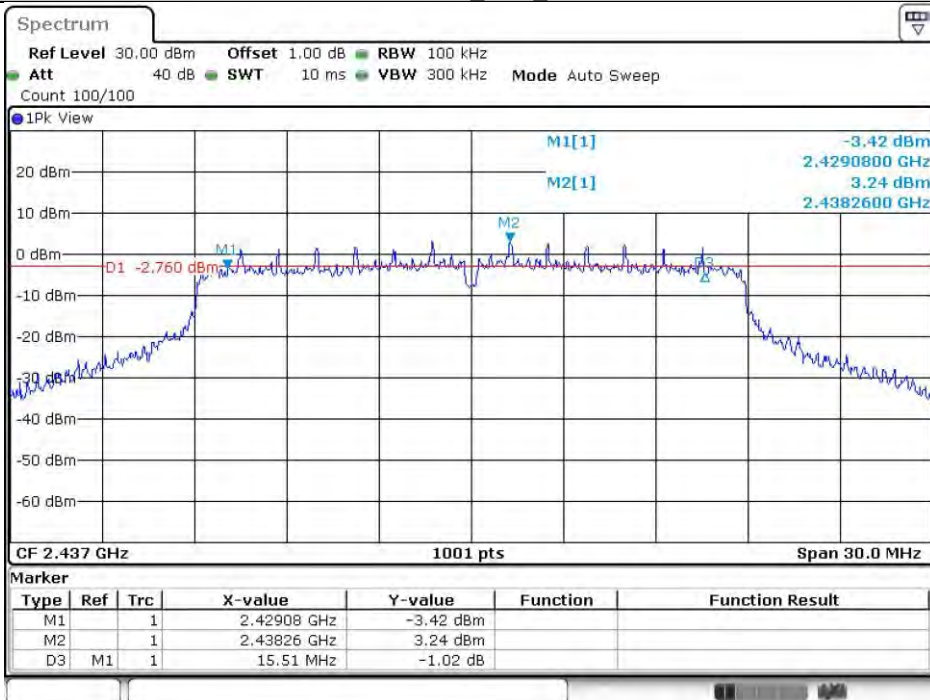
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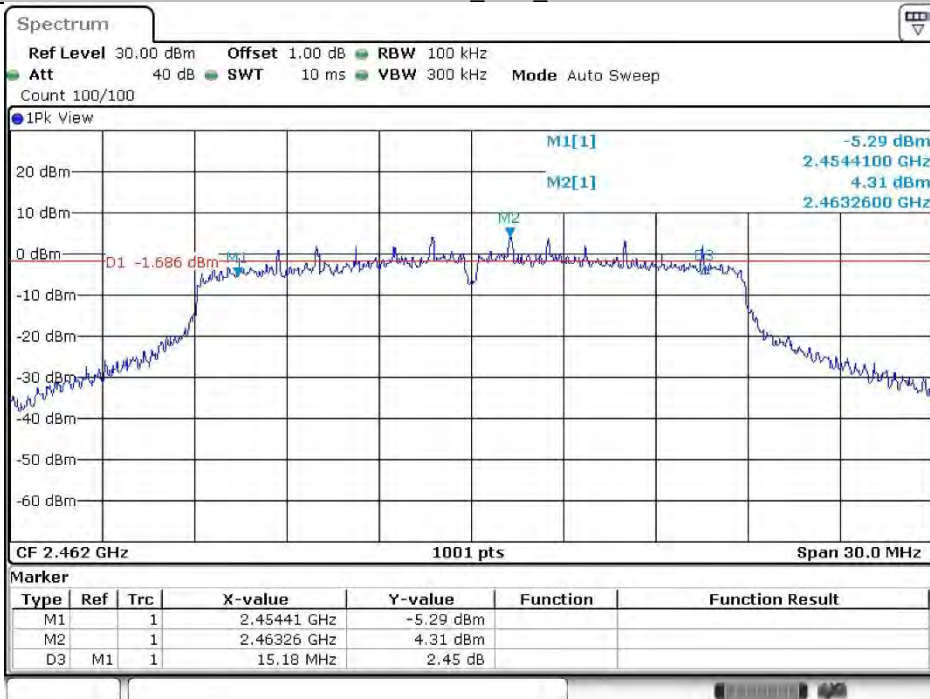
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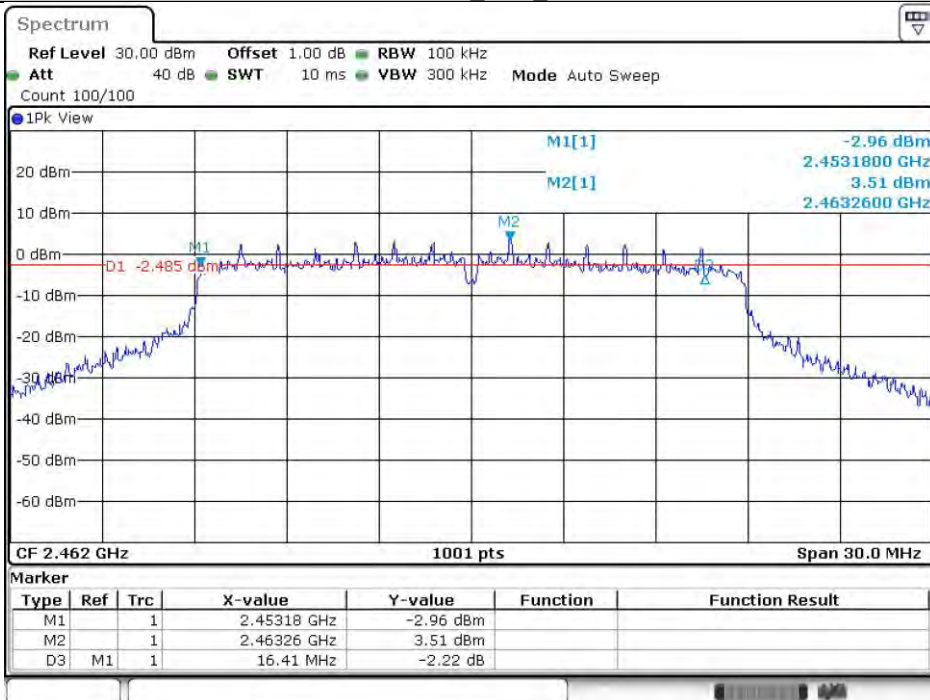
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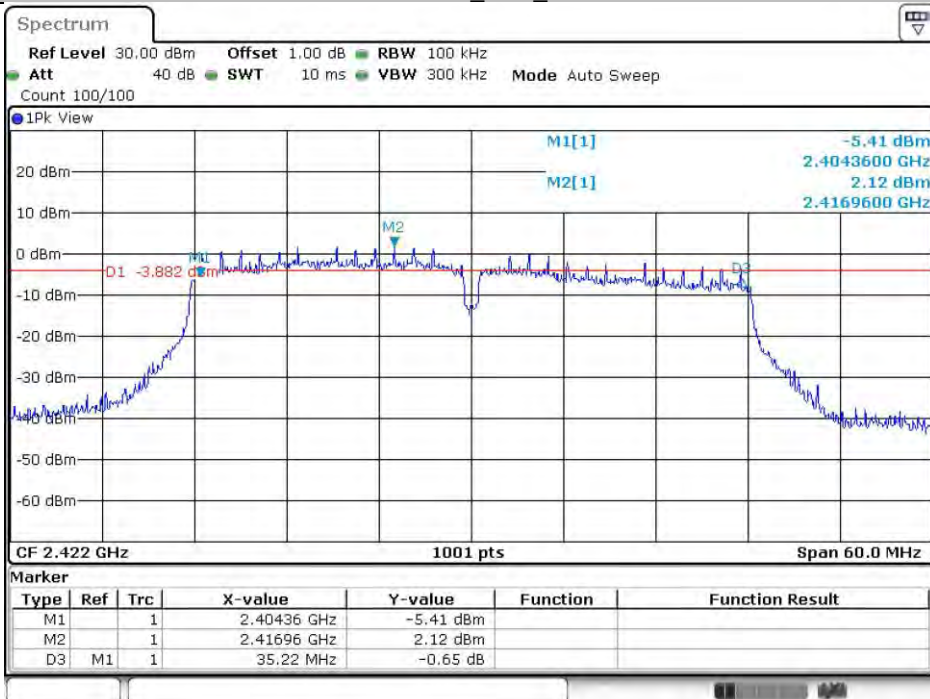
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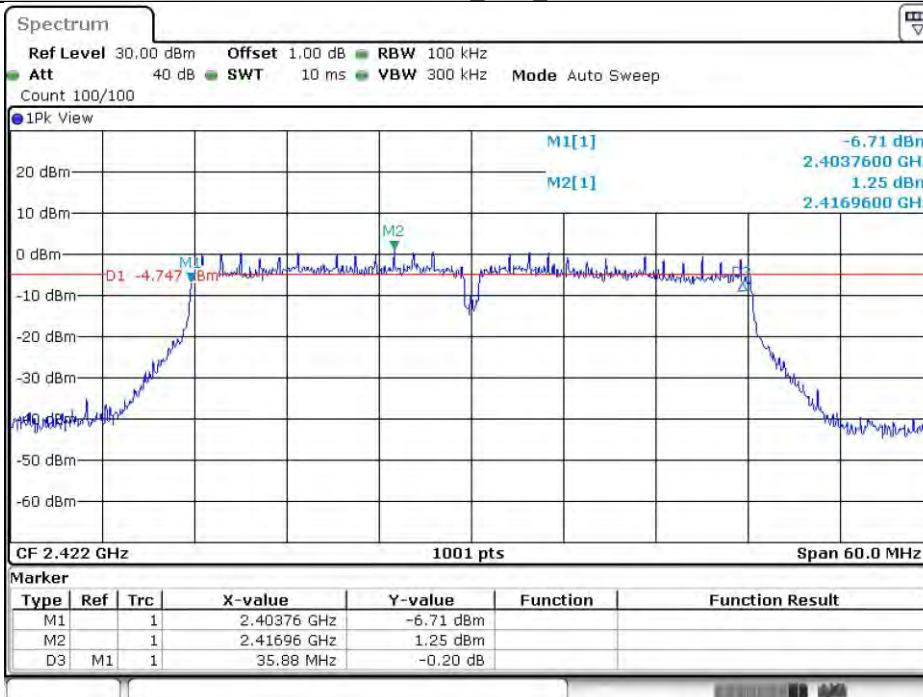
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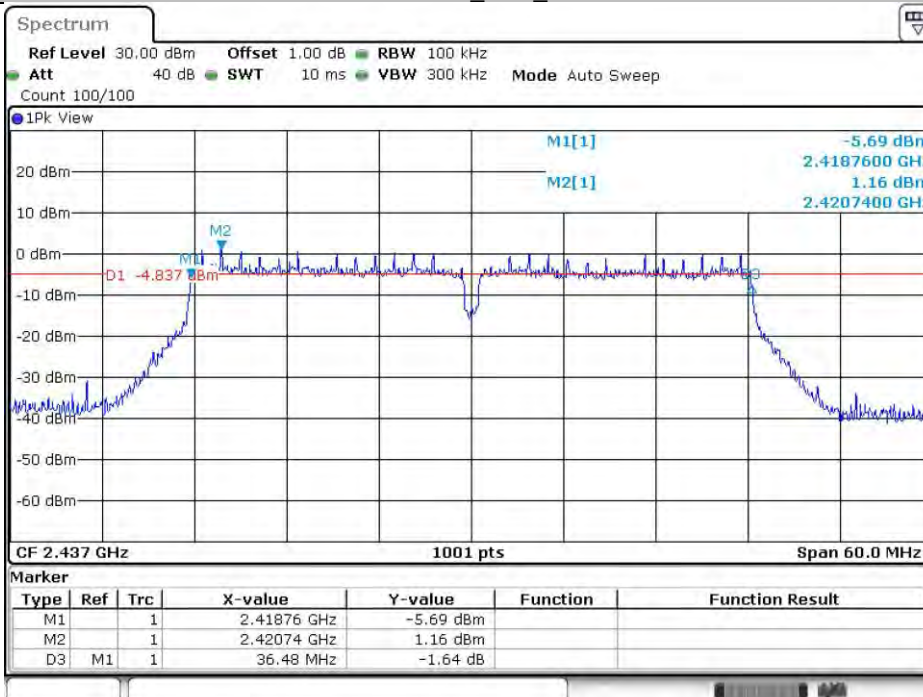
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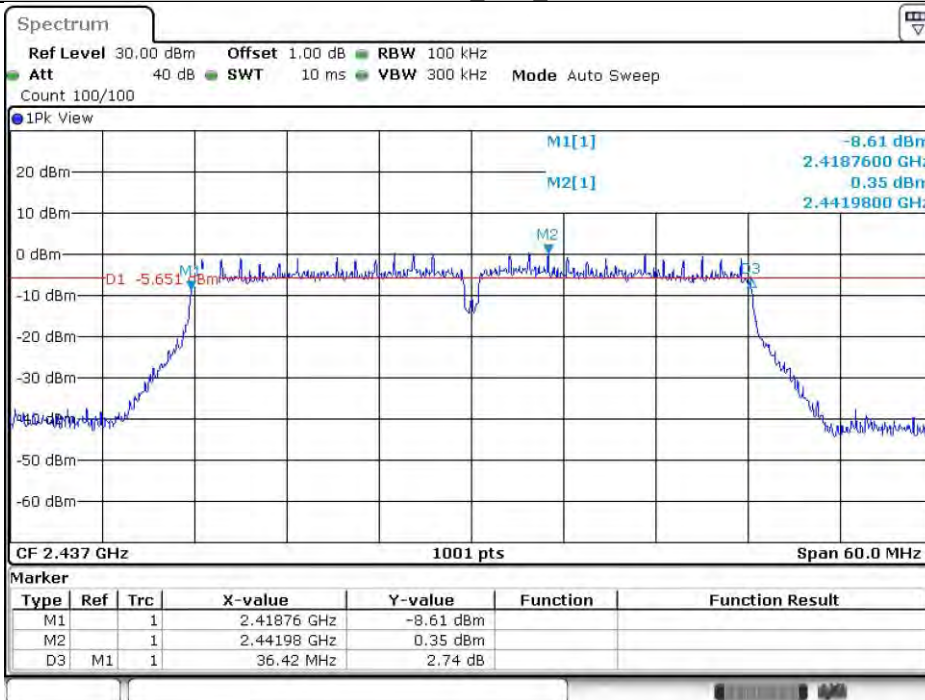
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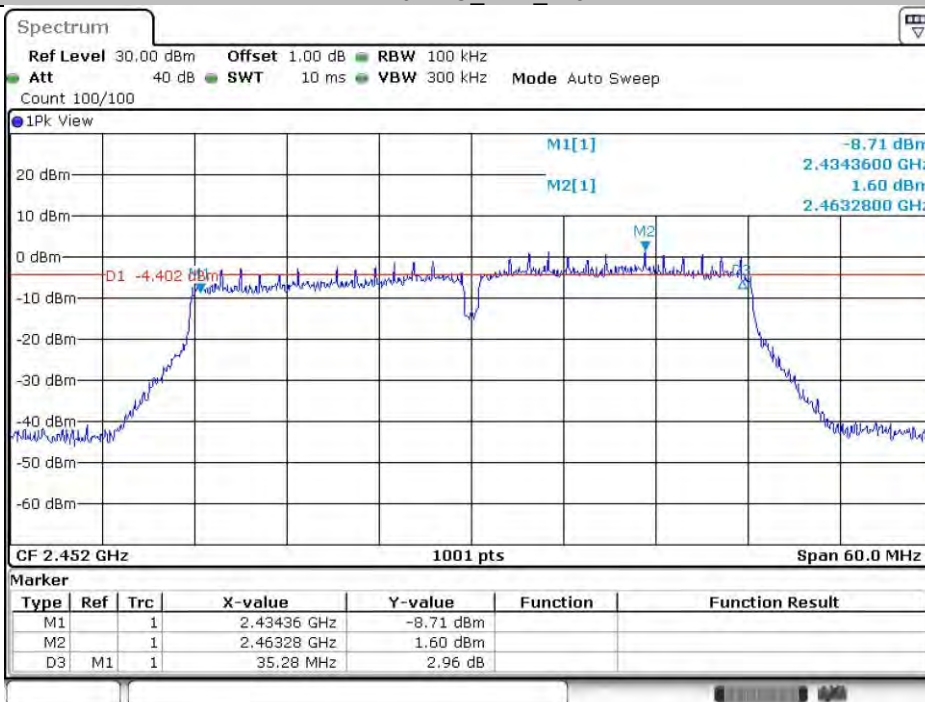
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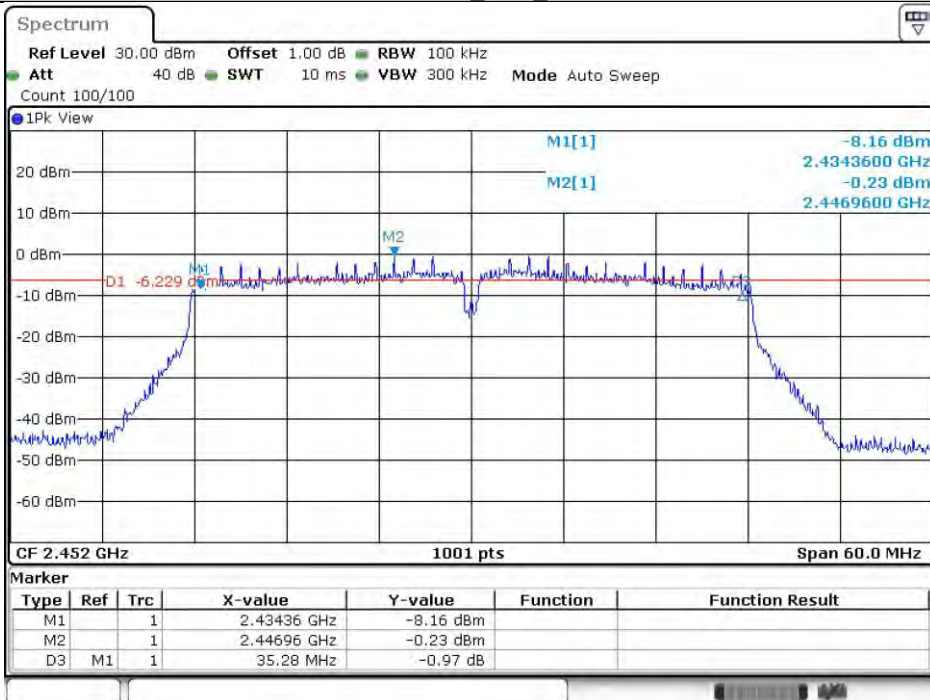
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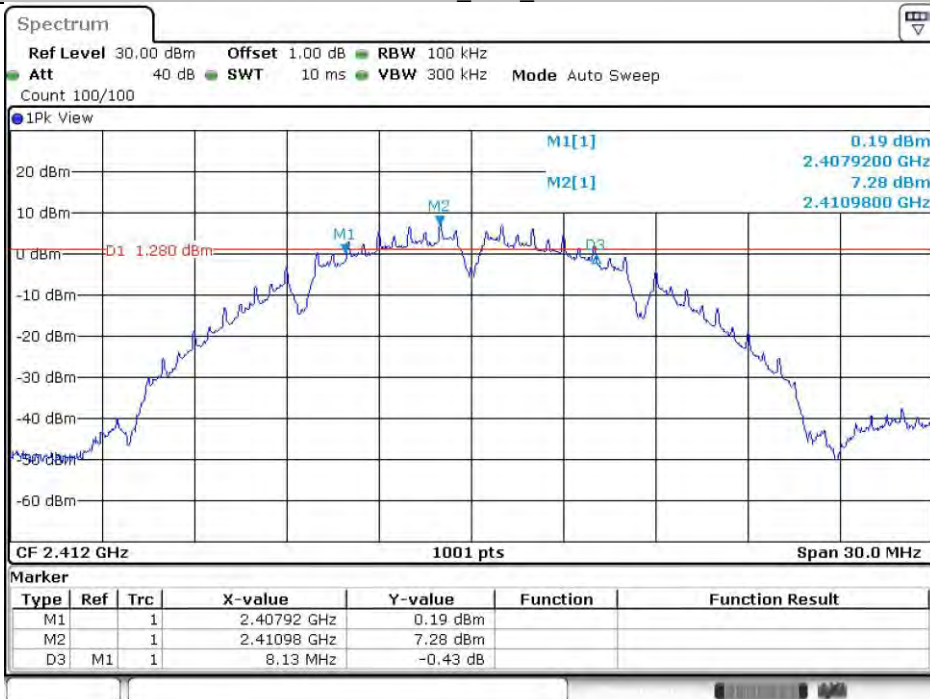
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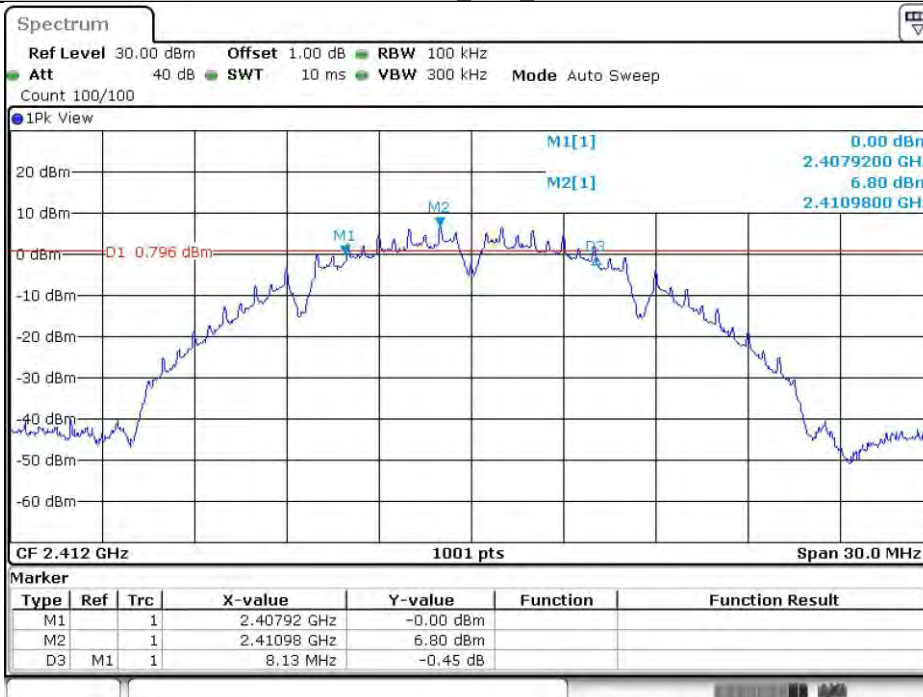
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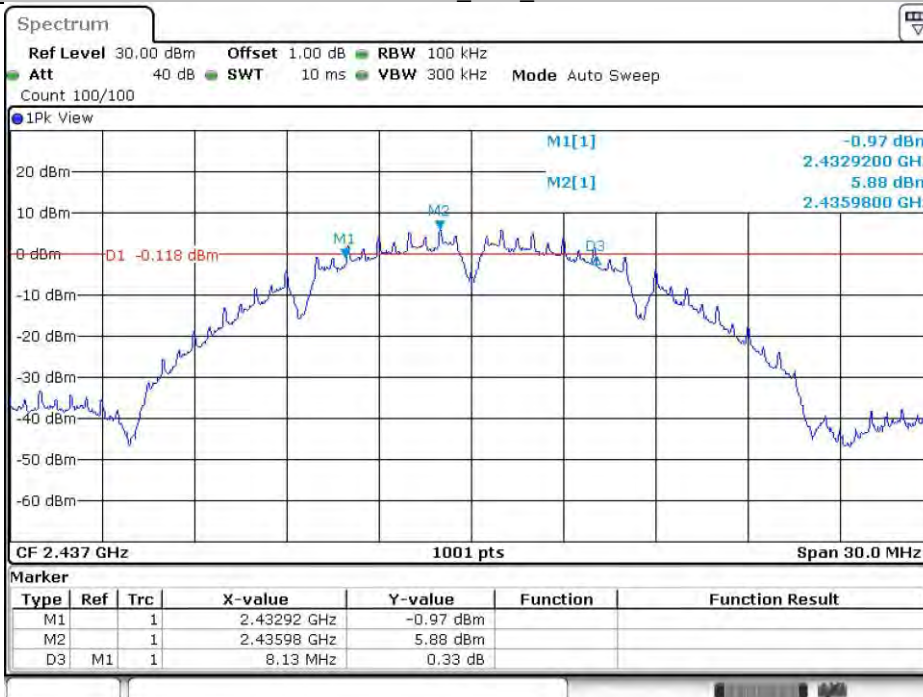
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11B-CDD Ant4 2437



Date: 10.MAY.2021 04:27:14



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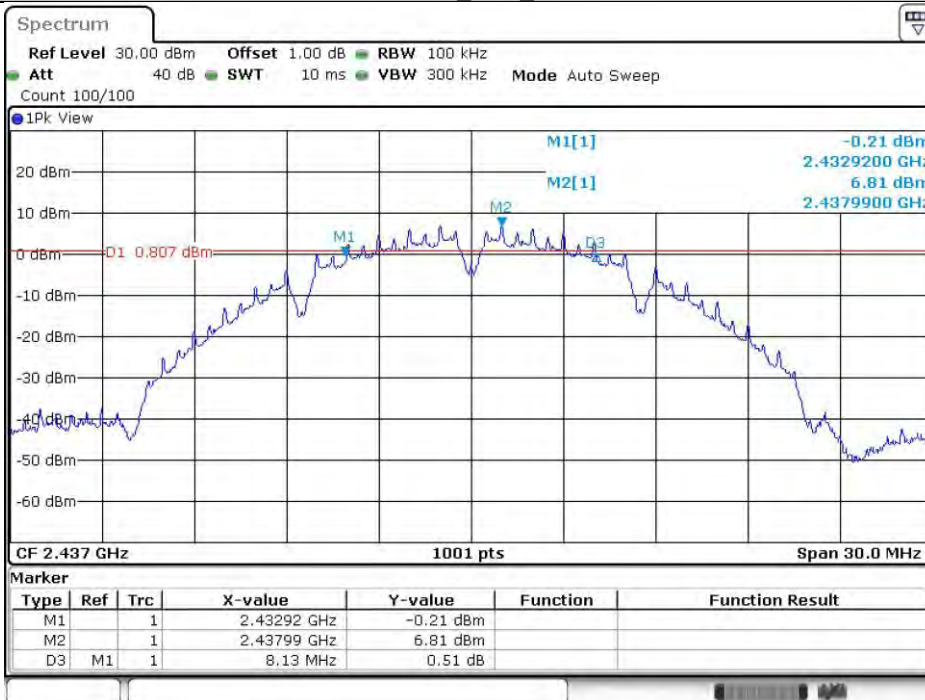
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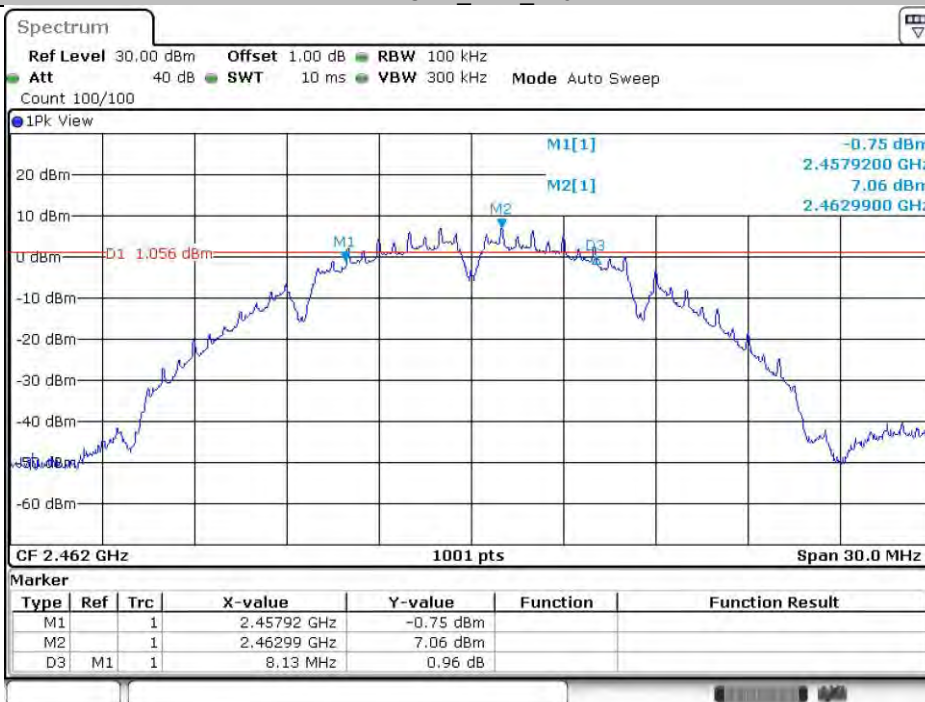
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Date: 10.MAY.2021 05:34:52

11B-CDD Ant4 2462



Date: 10.MAY.2021 04:30:25



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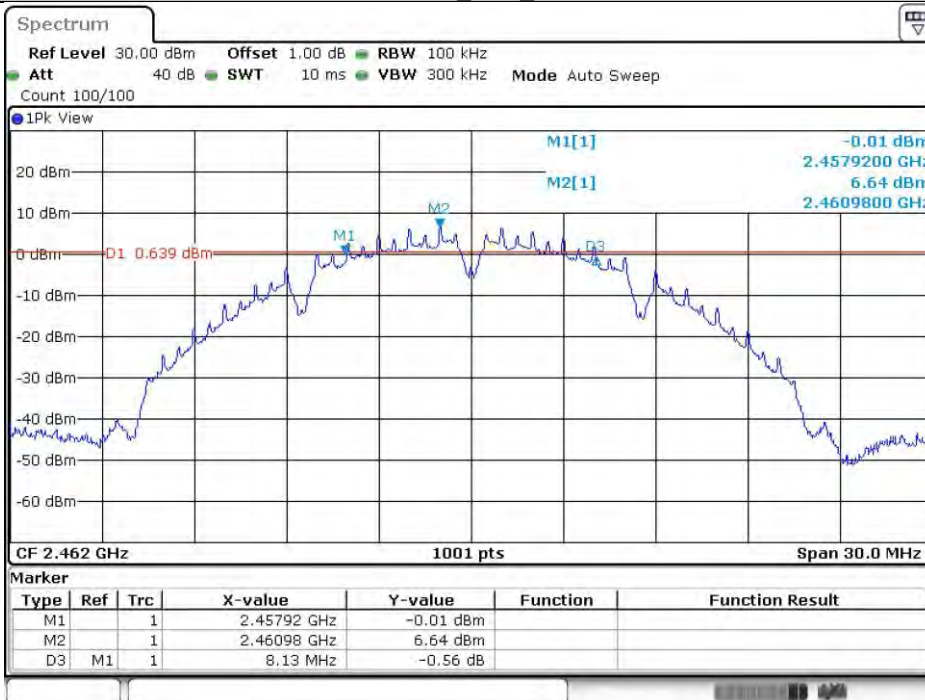
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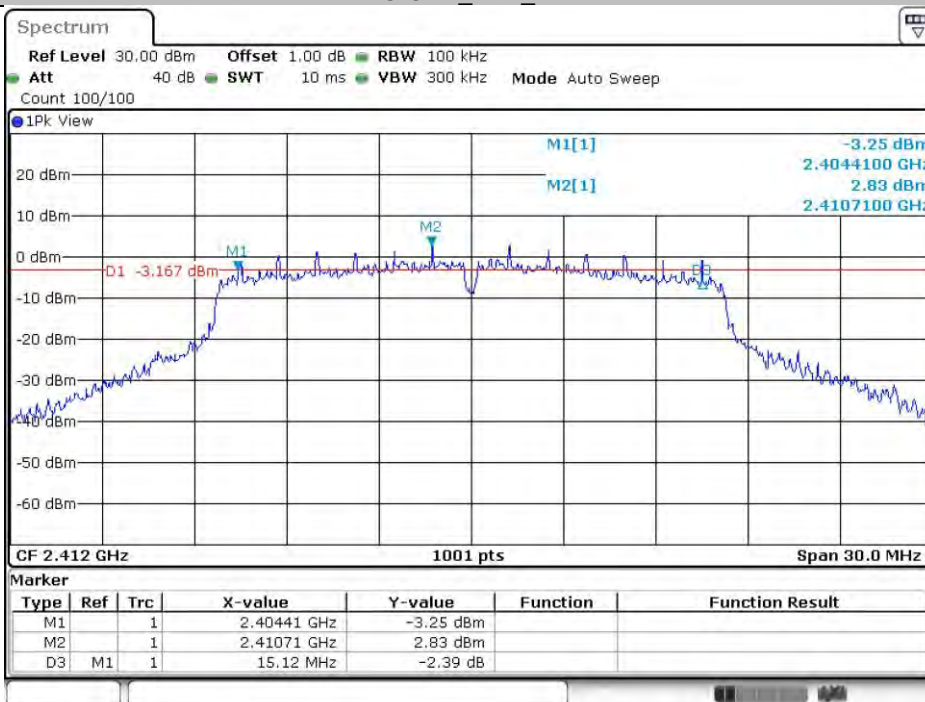
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Date: 10.MAY.2021 05:36:54

11G-CDD Ant4 2412



Date: 10.MAY.2021 04:32:33



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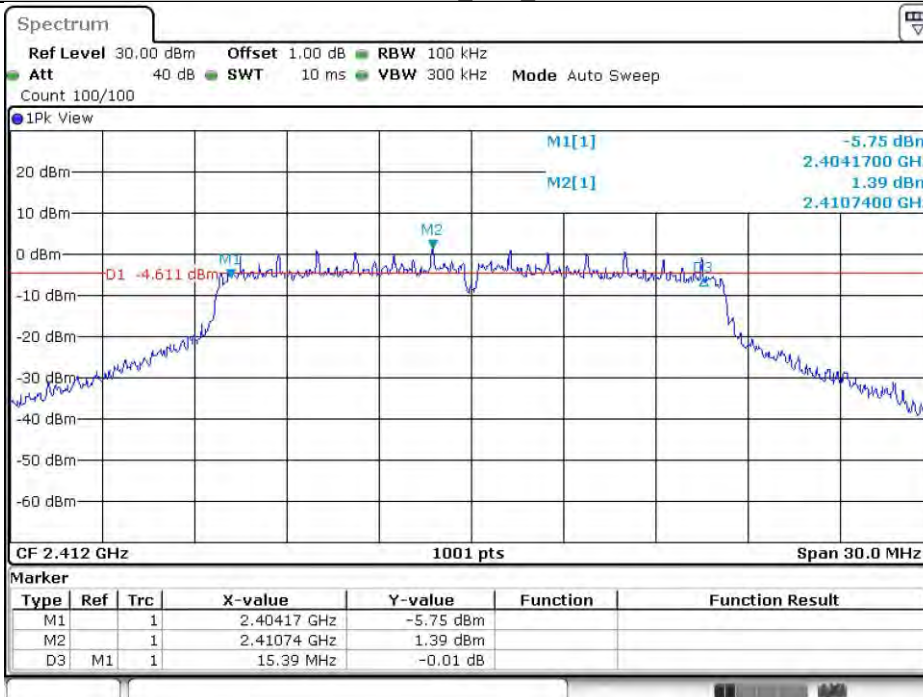
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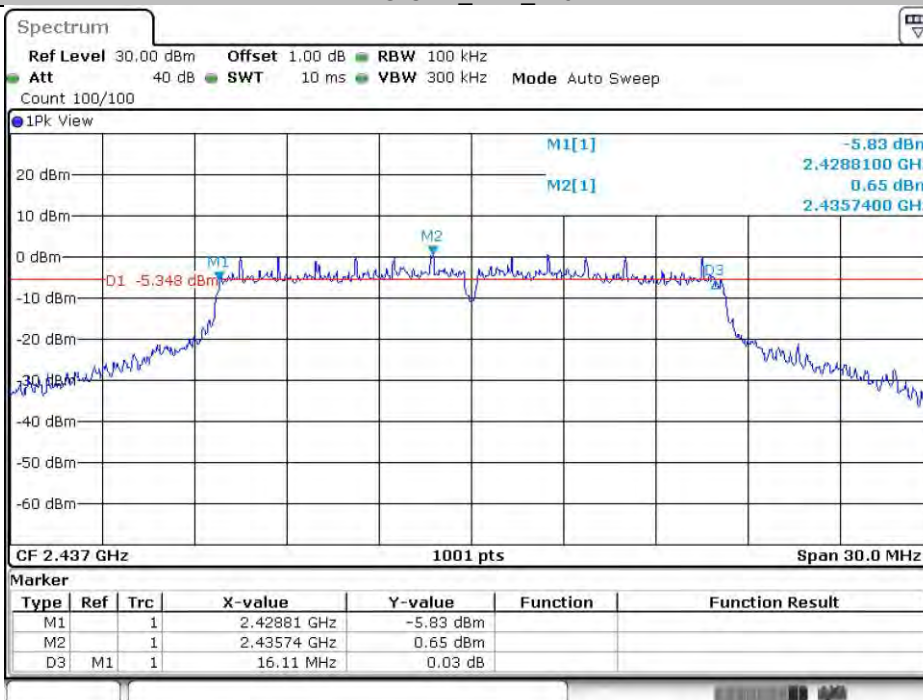
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Date: 10.MAY.2021 05:42:49

11G-CDD Ant4 2437



Date: 10.MAY.2021 04:34:37



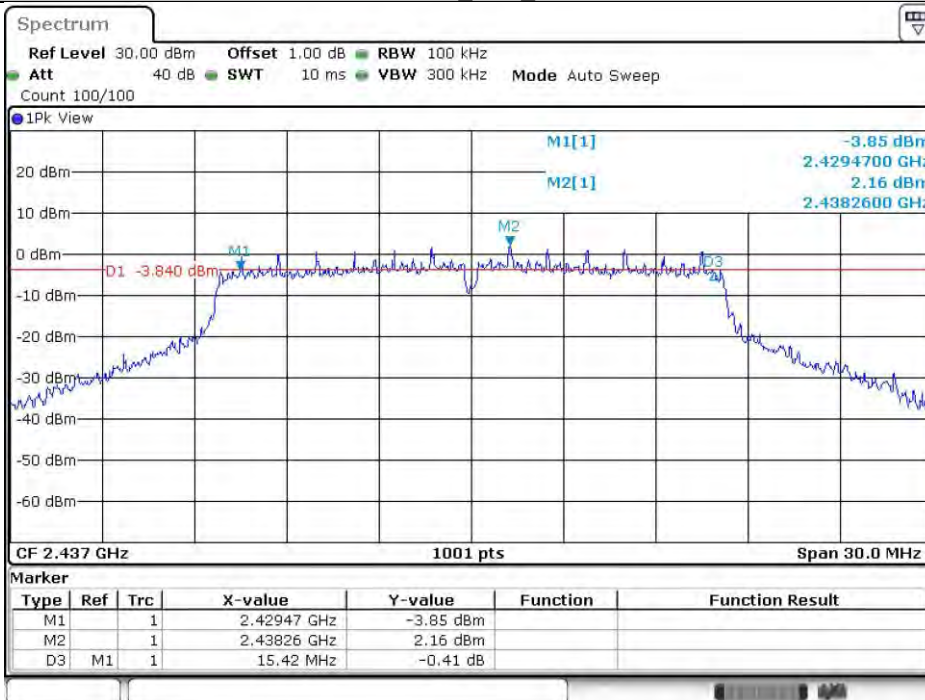
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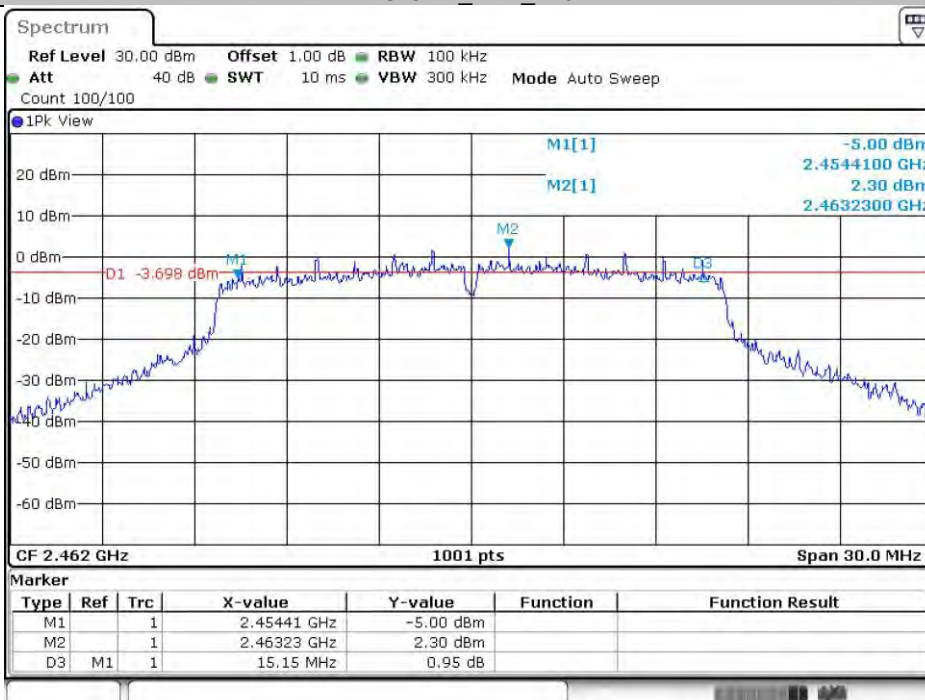
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Date: 10.MAY.2021 05:44:48

11G-CDD Ant4 2462



Date: 10.MAY.2021 04:36:28



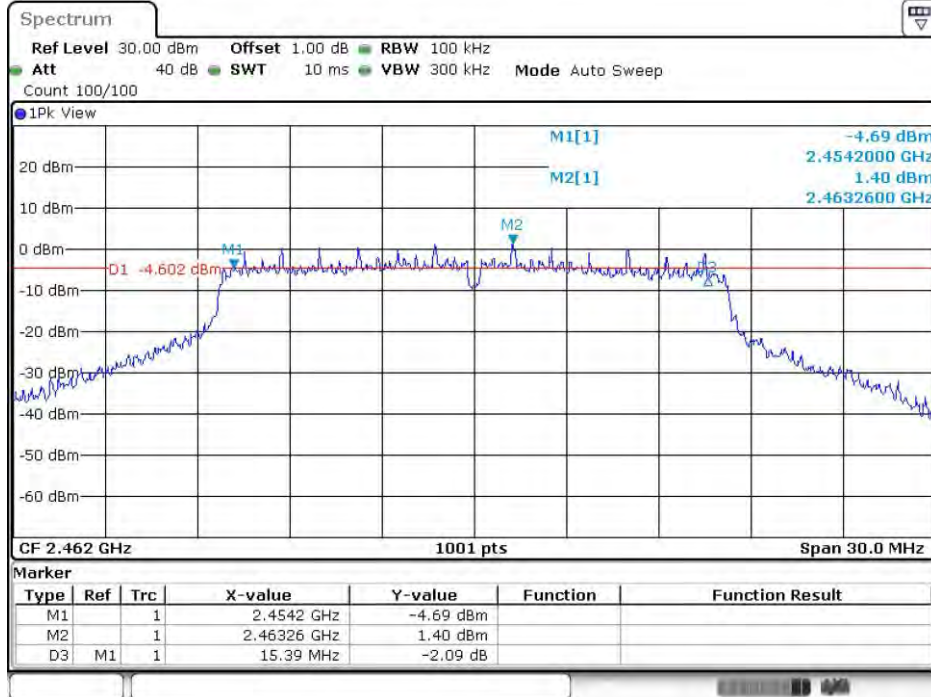
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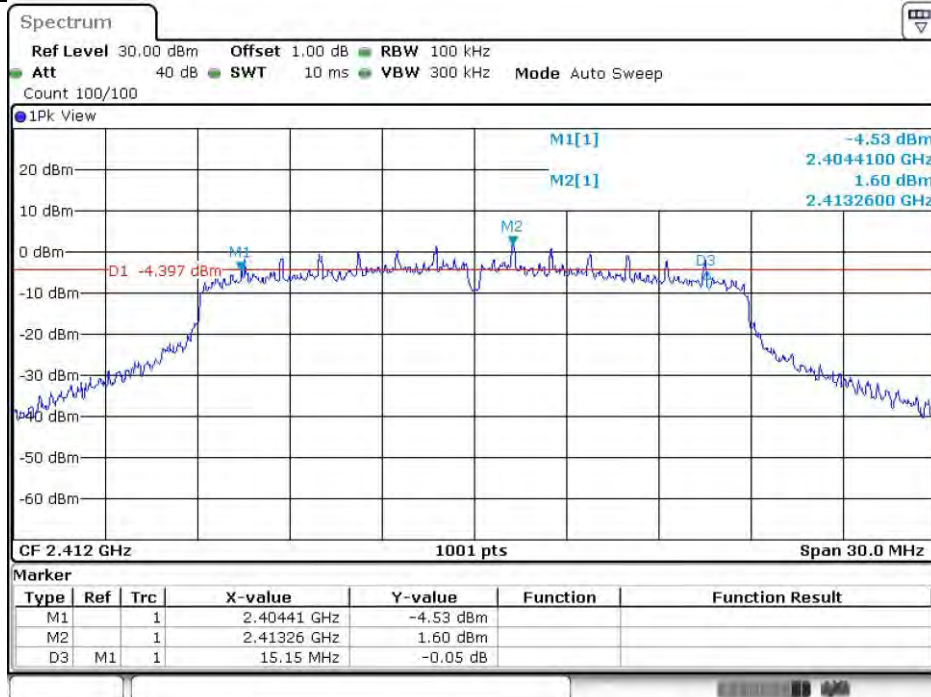
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Date: 10.MAY.2021 06:05:04

11N20MIMO Ant4 2412



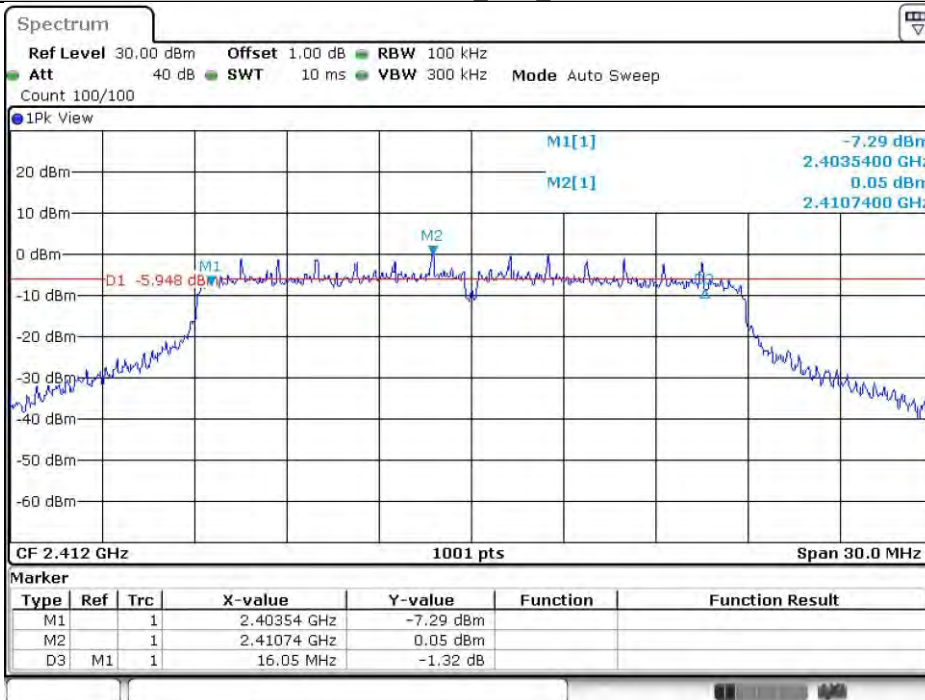
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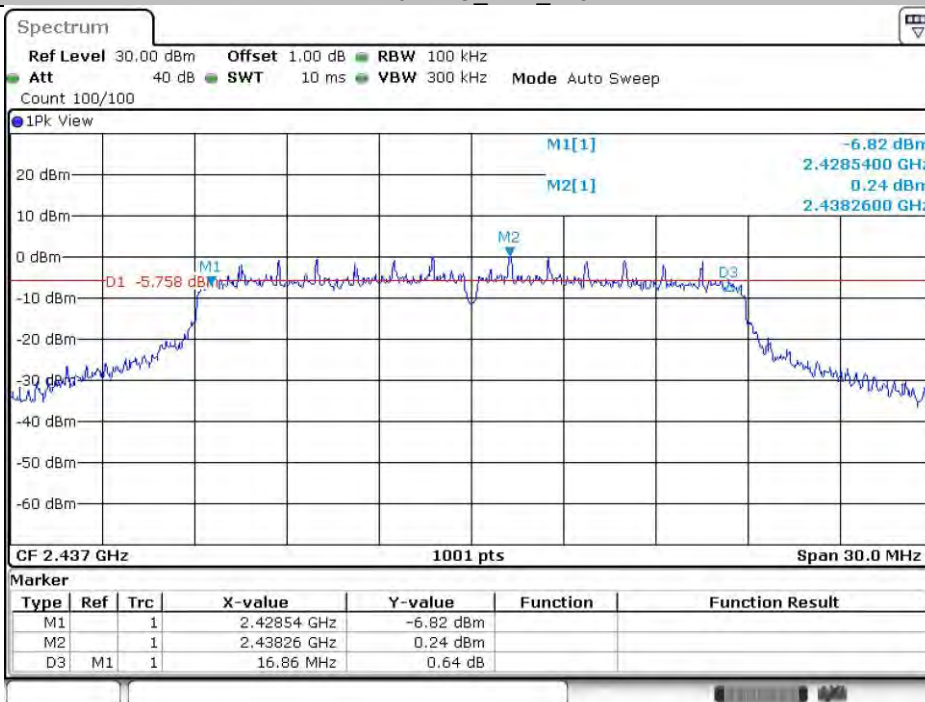
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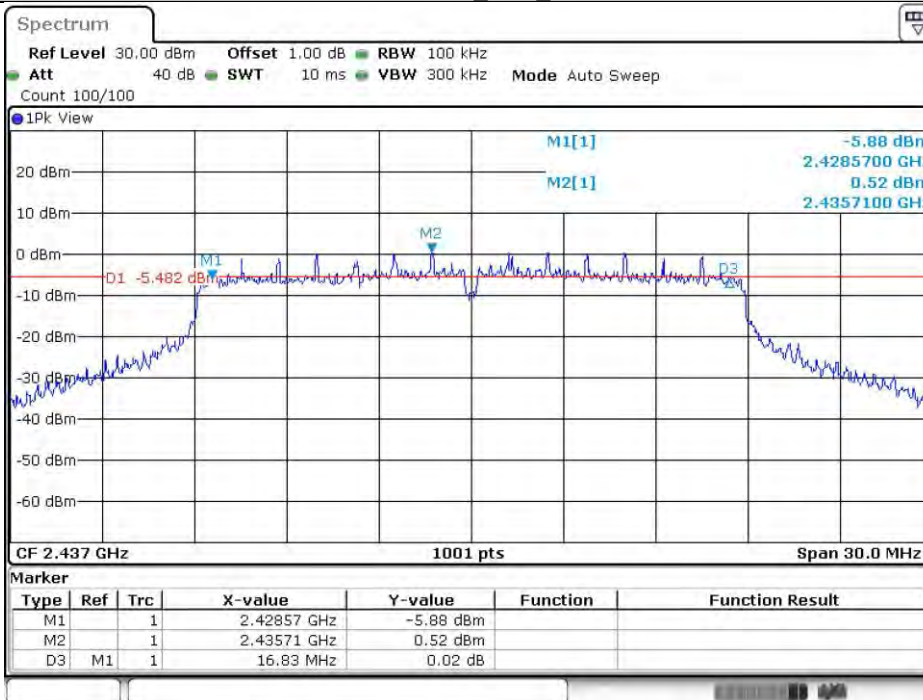
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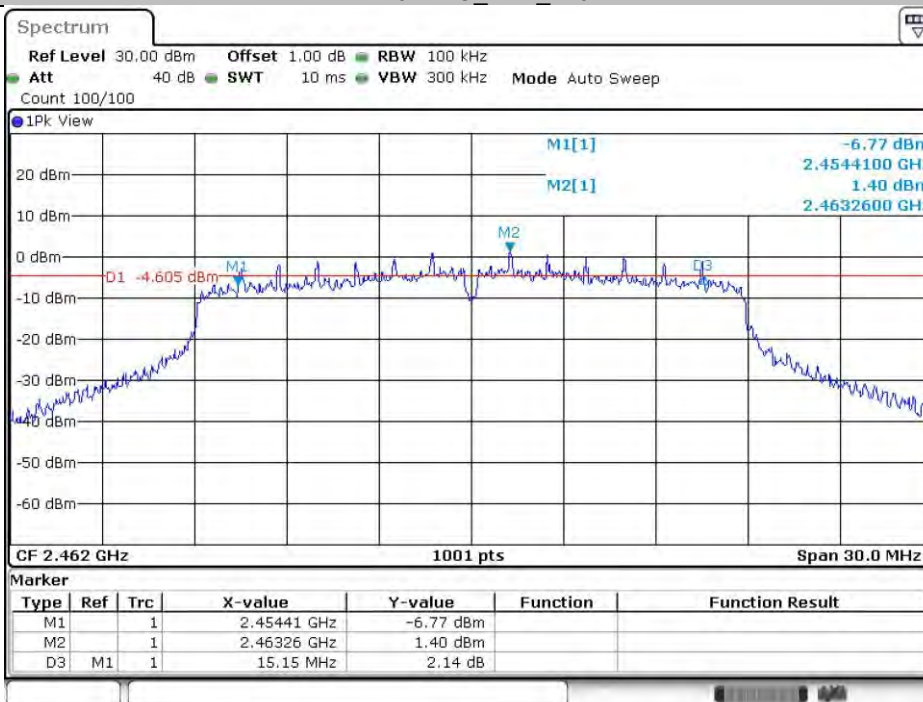
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Date: 10.MAY.2021 06:51:30

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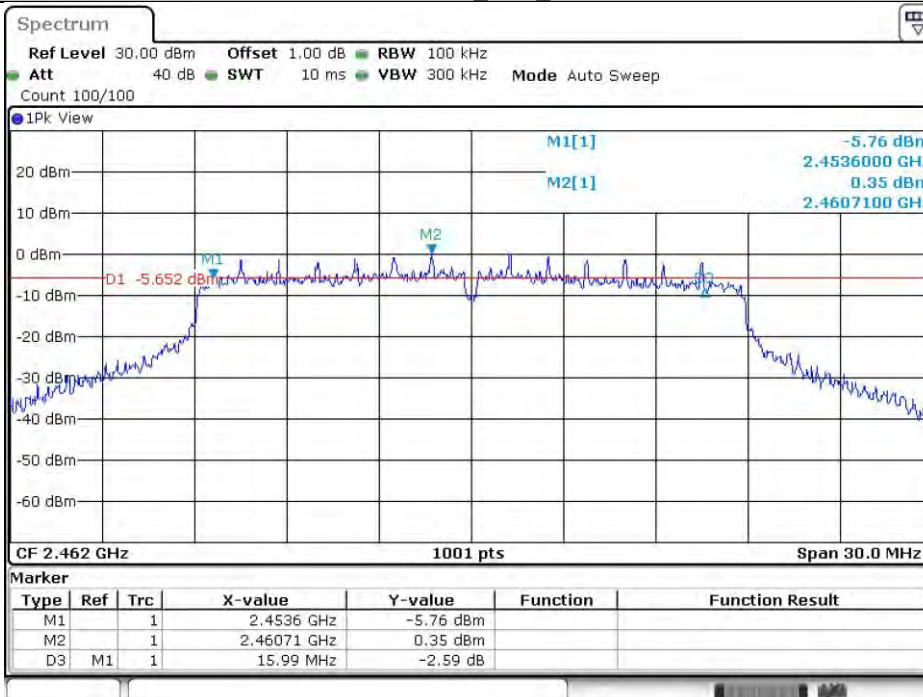
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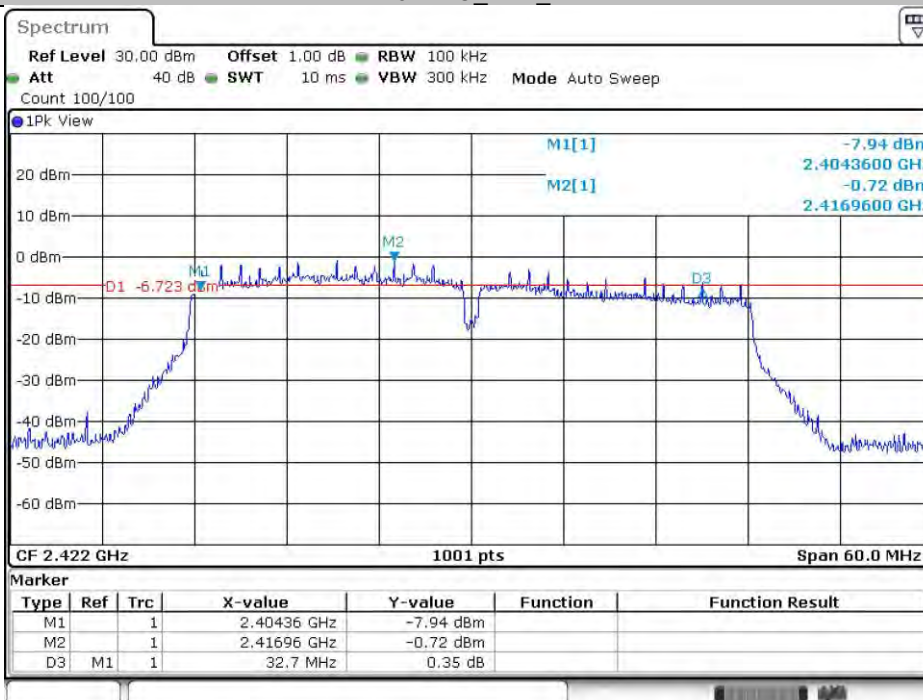
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11N40MIMO Ant4 2422



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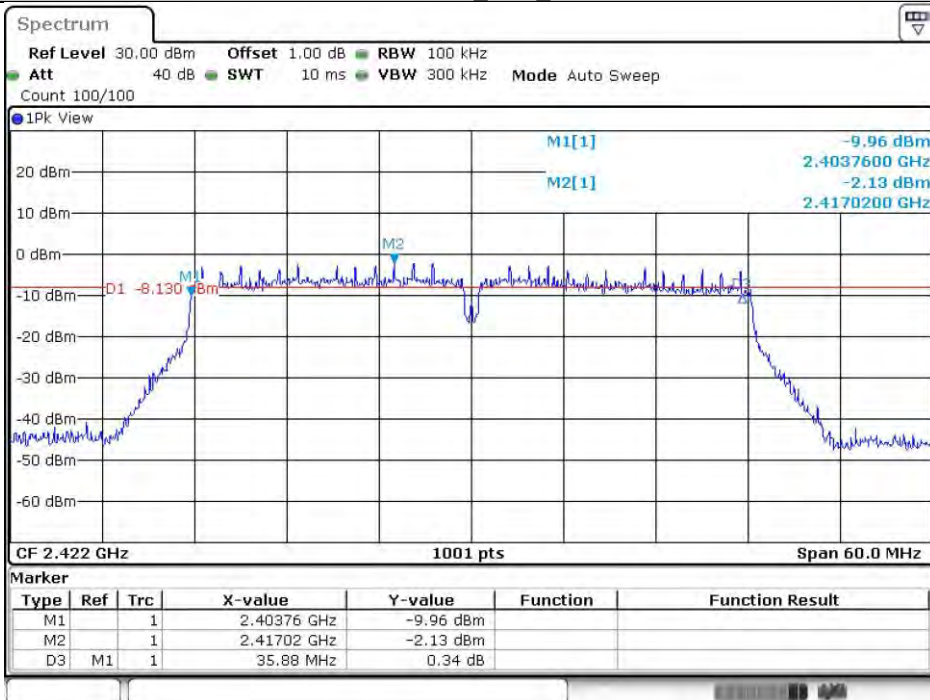
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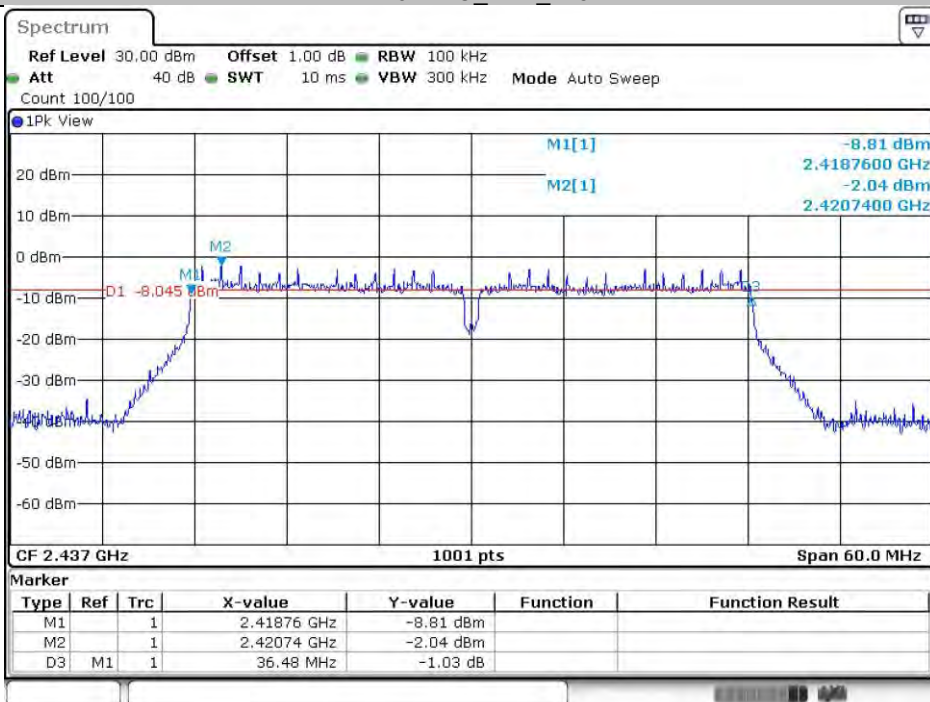
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11N40MIMO Ant7 2422



Date: 10.MAY.2021 06:55:16

11N40MIMO Ant4 2437



Date: 10.MAY.2021 04:45:01

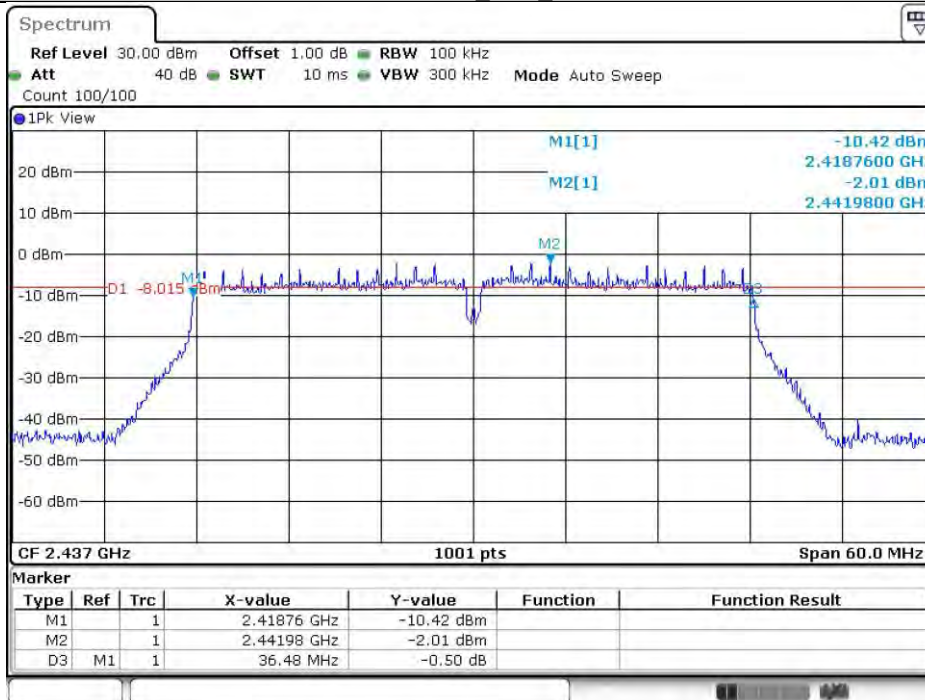


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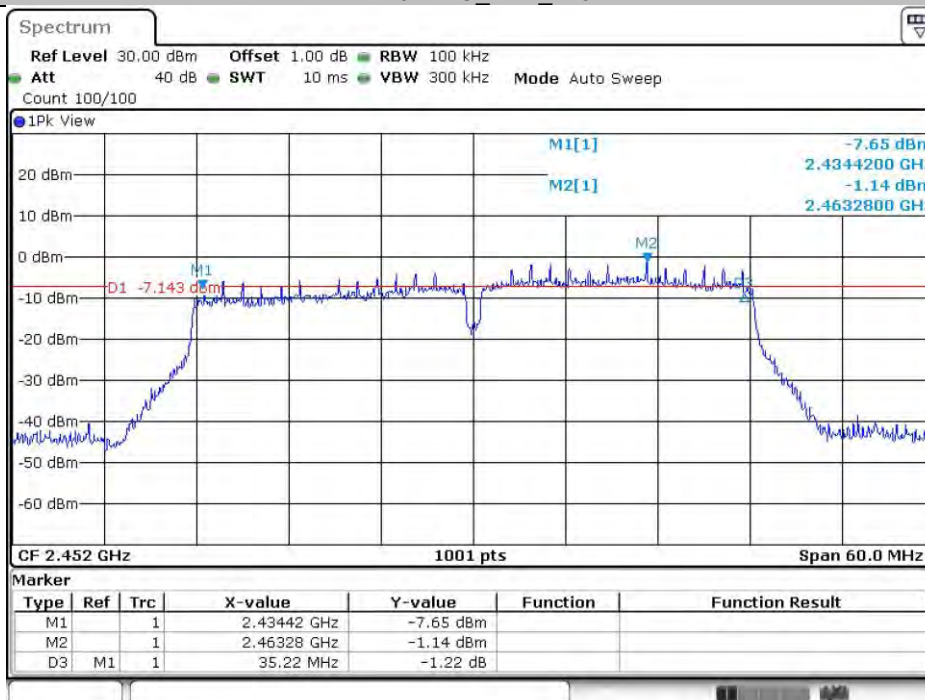
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Date: 10.MAY.2021 07:05:42

11N40MIMO Ant4 2452



Date: 10.MAY.2021 04:46:44

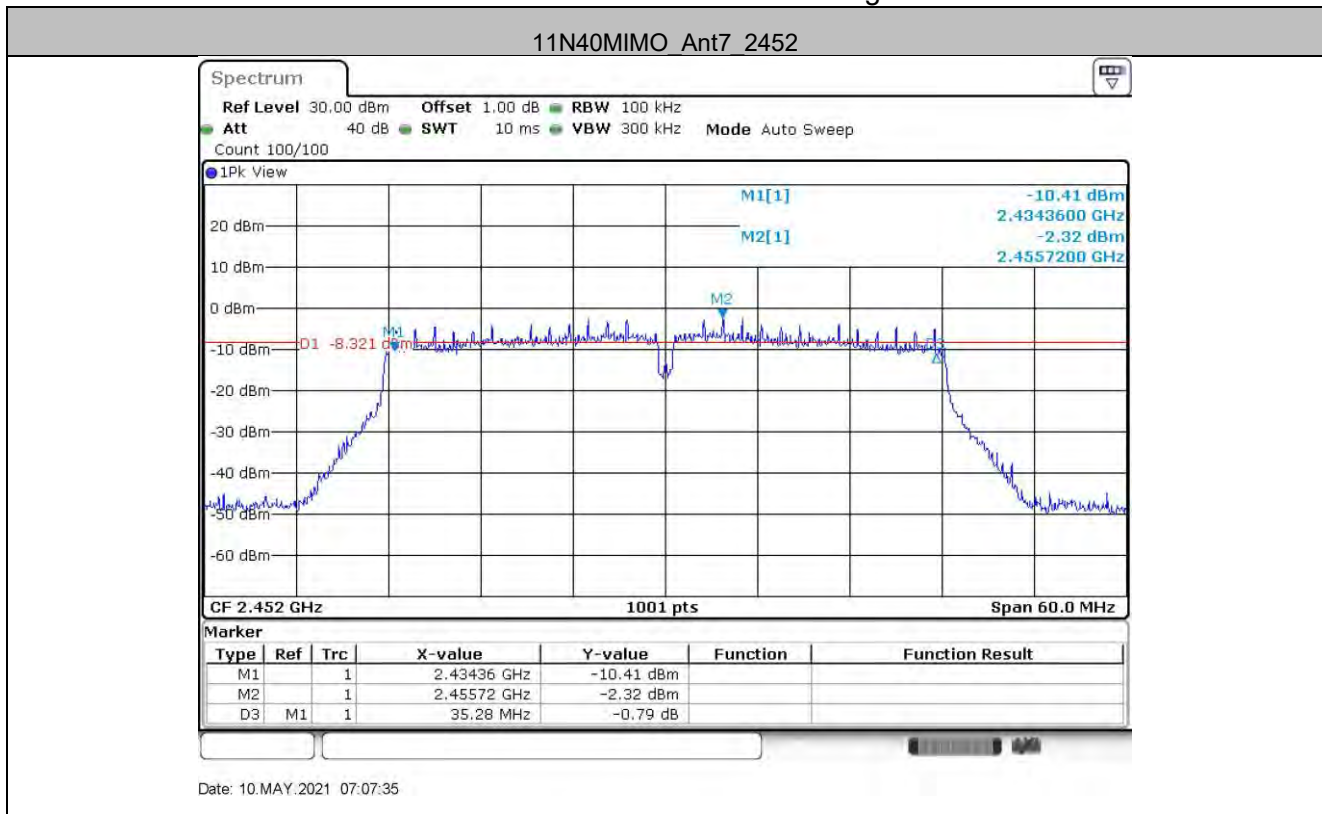


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Occupied Channel Bandwidth Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant4	2412	14.146	2404.927	2419.073	---	PASS
	Ant7	2412	14.056	2404.927	2418.983	---	PASS
	Ant4	2437	13.936	2430.047	2443.983	---	PASS
	Ant7	2437	13.966	2430.077	2444.043	---	PASS
	Ant4	2462	13.636	2455.377	2469.013	---	PASS
	Ant7	2462	14.206	2454.807	2469.013	---	PASS
11G	Ant4	2412	16.484	2403.758	2420.242	---	PASS
	Ant7	2412	16.603	2403.638	2420.242	---	PASS
	Ant4	2437	16.903	2428.489	2445.392	---	PASS
	Ant7	2437	16.693	2428.668	2445.362	---	PASS
	Ant4	2462	16.573	2453.788	2470.362	---	PASS
	Ant7	2462	16.603	2453.638	2470.242	---	PASS
11N20SISO	Ant4	2412	17.682	2403.159	2420.841	---	PASS
	Ant7	2412	17.802	2403.069	2420.871	---	PASS
	Ant4	2437	18.042	2427.949	2445.991	---	PASS
	Ant7	2437	17.922	2428.069	2445.991	---	PASS
	Ant4	2462	17.742	2453.189	2470.931	---	PASS
	Ant7	2462	17.802	2453.039	2470.841	---	PASS
11N40SISO	Ant4	2422	36.144	2403.778	2439.922	---	PASS
	Ant7	2422	36.264	2403.838	2440.102	---	PASS
	Ant4	2437	36.743	2418.598	2455.342	---	PASS
	Ant7	2437	36.324	2418.838	2455.162	---	PASS
	Ant4	2452	36.264	2434.018	2470.282	---	PASS
	Ant7	2452	36.144	2433.898	2470.042	---	PASS
11B-CDD	Ant4	2412	13.457	2405.197	2418.653	---	PASS
	Ant7	2412	13.726	2405.047	2418.773	---	PASS
	Ant4	2437	13.996	2430.017	2444.013	---	PASS
	Ant7	2437	13.846	2430.137	2443.983	---	PASS



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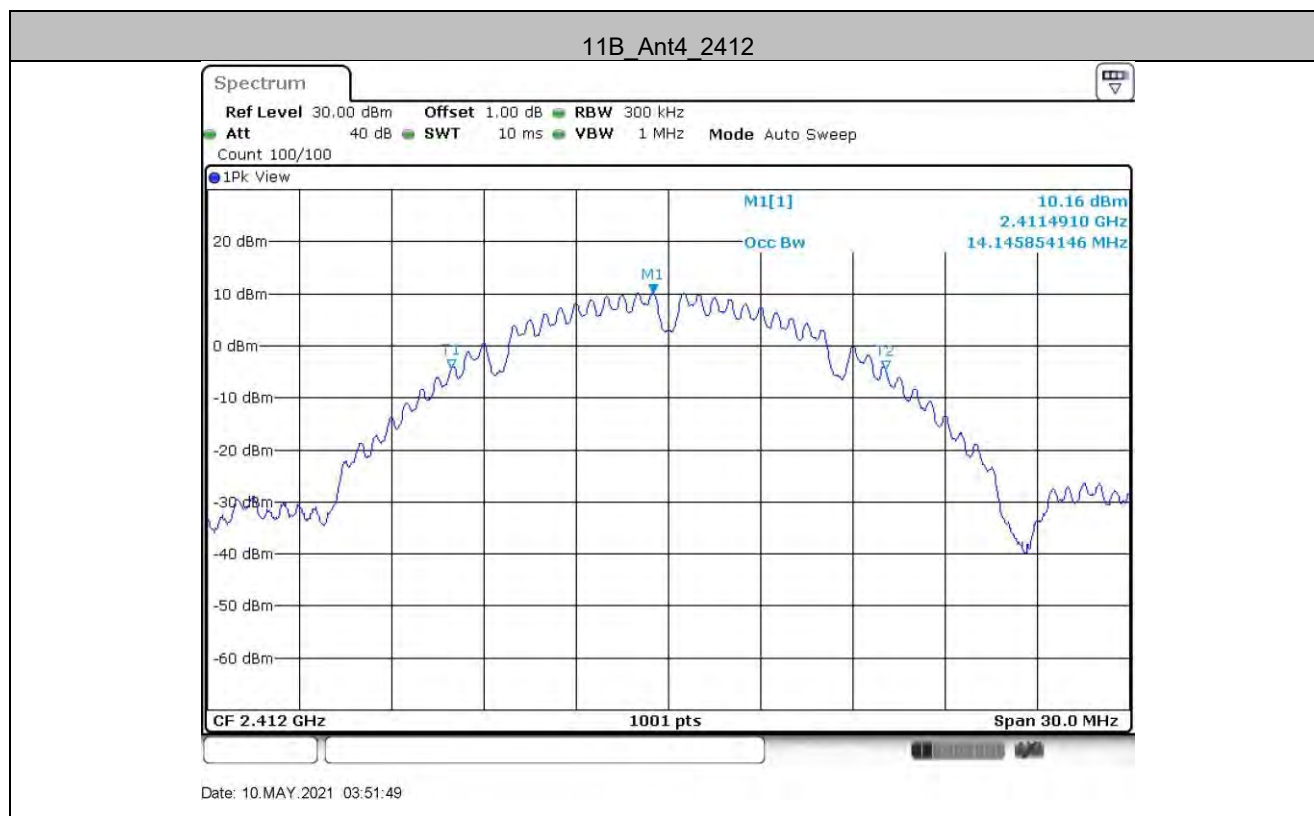
	Ant4	2462	13.427	2455.407	2468.833	---	PASS
	Ant7	2462	13.906	2454.957	2468.863	---	PASS
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	Ant7	2412	16.603	2403.668	2420.272	---	PASS
	Ant4	2437	16.993	2428.459	2445.452	---	PASS
	Ant7	2437	16.663	2428.698	2445.362	---	PASS
	Ant4	2462	16.543	2453.788	2470.332	---	PASS
	Ant7	2462	16.603	2453.638	2470.242	---	PASS
11N20MIMO	Ant4	2412	17.622	2403.159	2420.781	---	PASS
	Ant7	2412	17.862	2403.039	2420.901	---	PASS
	Ant4	2437	18.102	2427.919	2446.021	---	PASS
	Ant7	2437	17.922	2428.069	2445.991	---	PASS
	Ant4	2462	17.682	2453.189	2470.871	---	PASS
	Ant7	2462	17.832	2453.039	2470.871	---	PASS
11N40MIMO	Ant4	2422	36.084	2403.778	2439.862	---	PASS
	Ant7	2422	36.264	2403.838	2440.102	---	PASS
	Ant4	2437	36.803	2418.538	2455.342	---	PASS
	Ant7	2437	36.264	2418.898	2455.162	---	PASS
	Ant4	2452	36.204	2434.078	2470.282	---	PASS
	Ant7	2452	36.084	2433.958	2470.042	---	PASS



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Test Graphs



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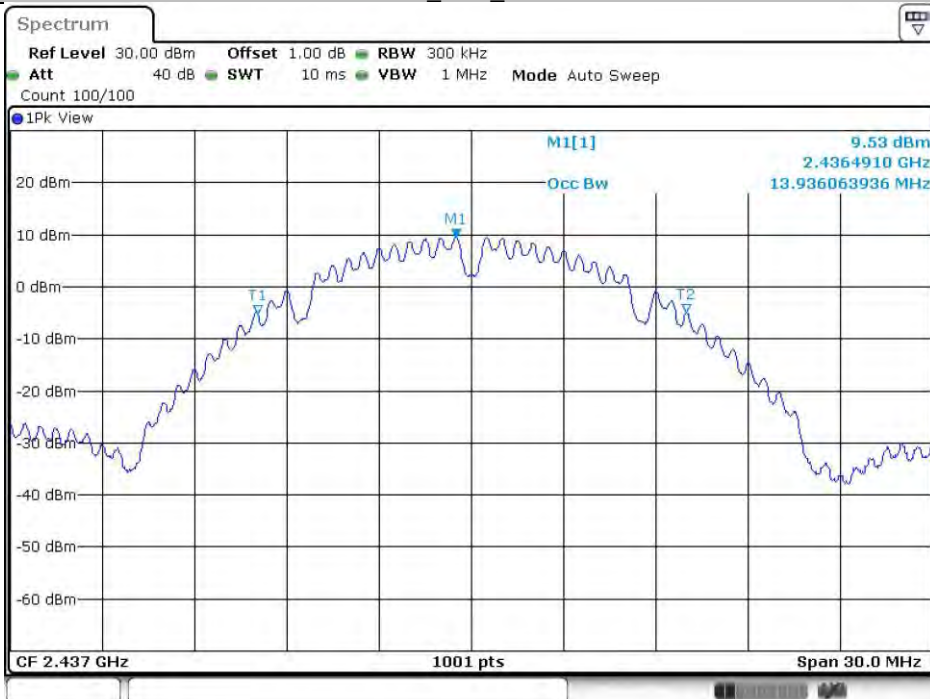
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11B Ant7 2412



Date: 10.MAY.2021 04:53:06

11B Ant4 2437



Date: 10.MAY.2021 03:55:18



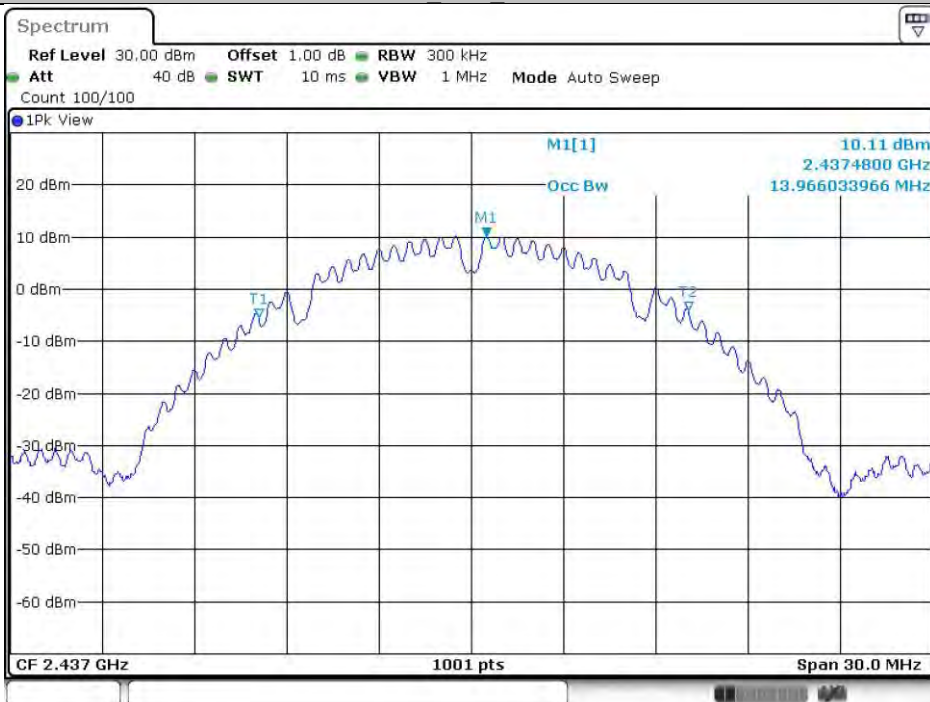
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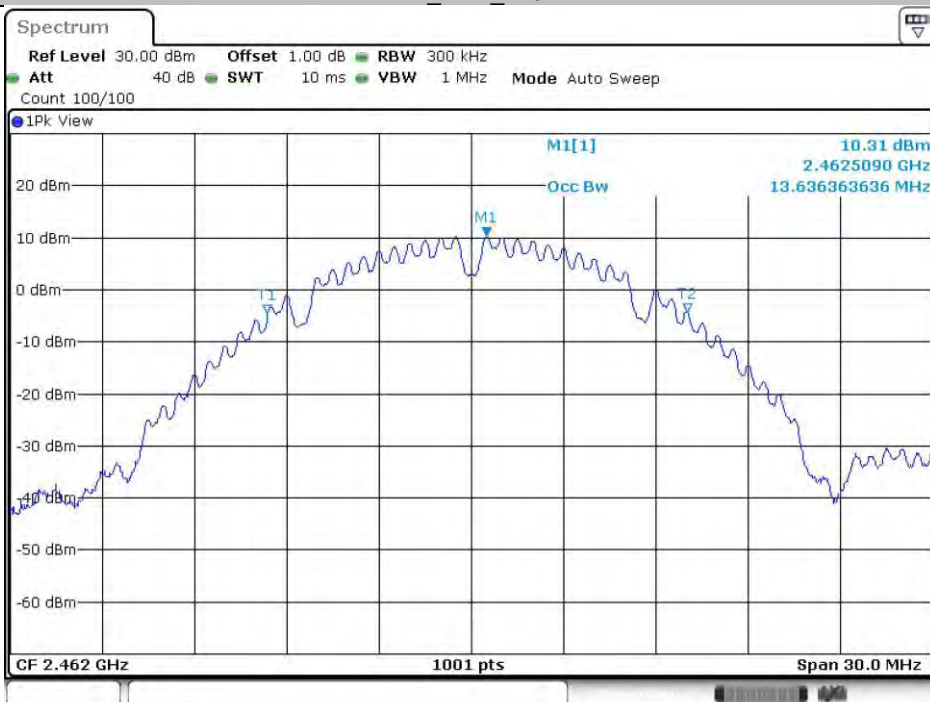
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11B Ant7 2437



Date: 10.MAY.2021 04:58:08

11B Ant4 2462



Date: 10.MAY.2021 03:57:19



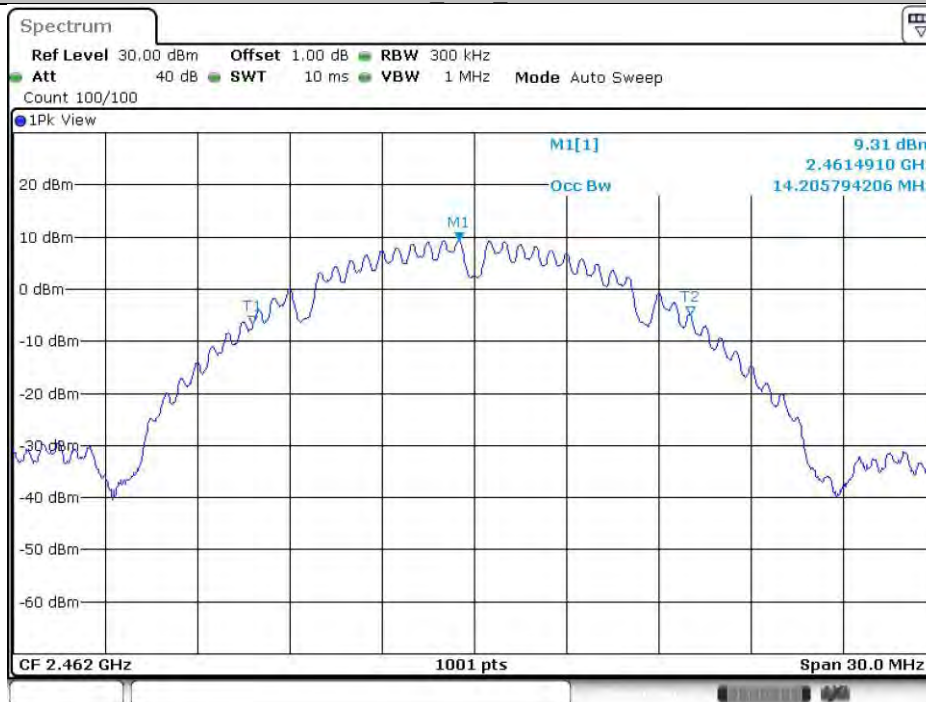
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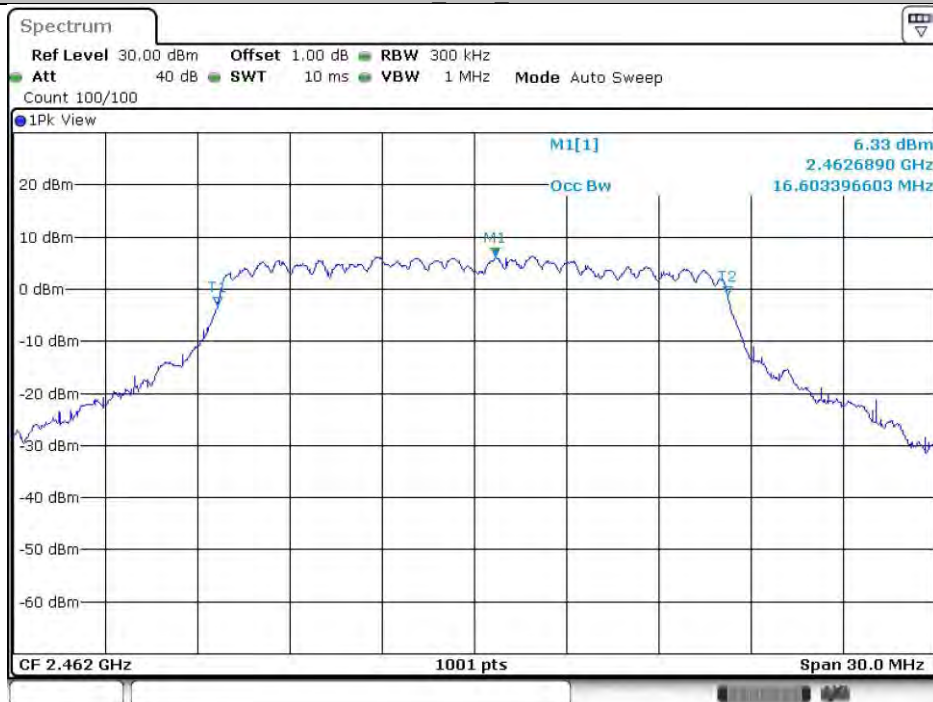
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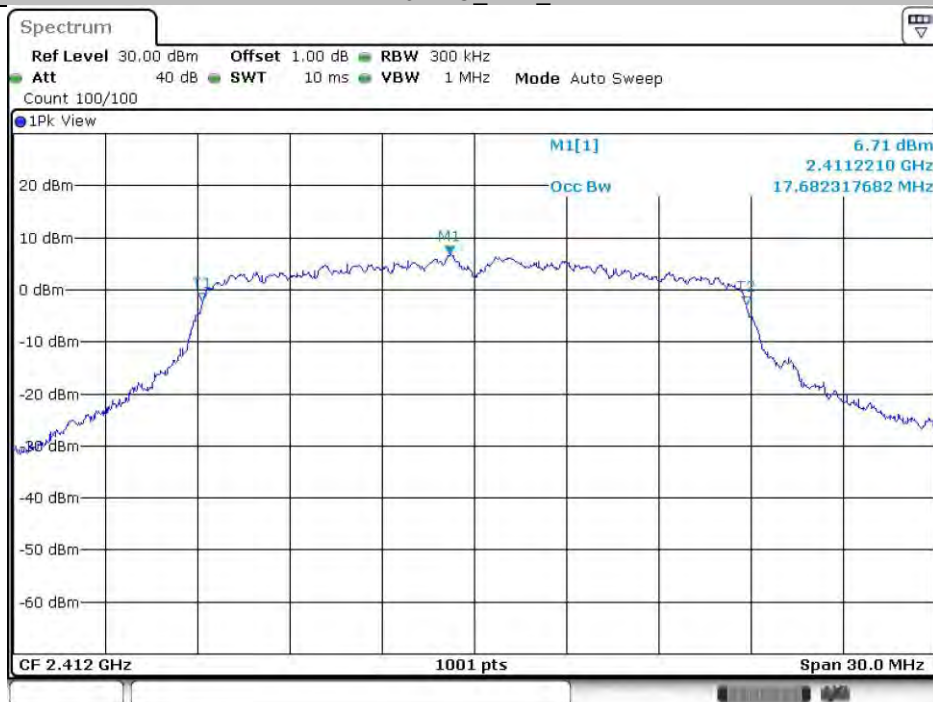
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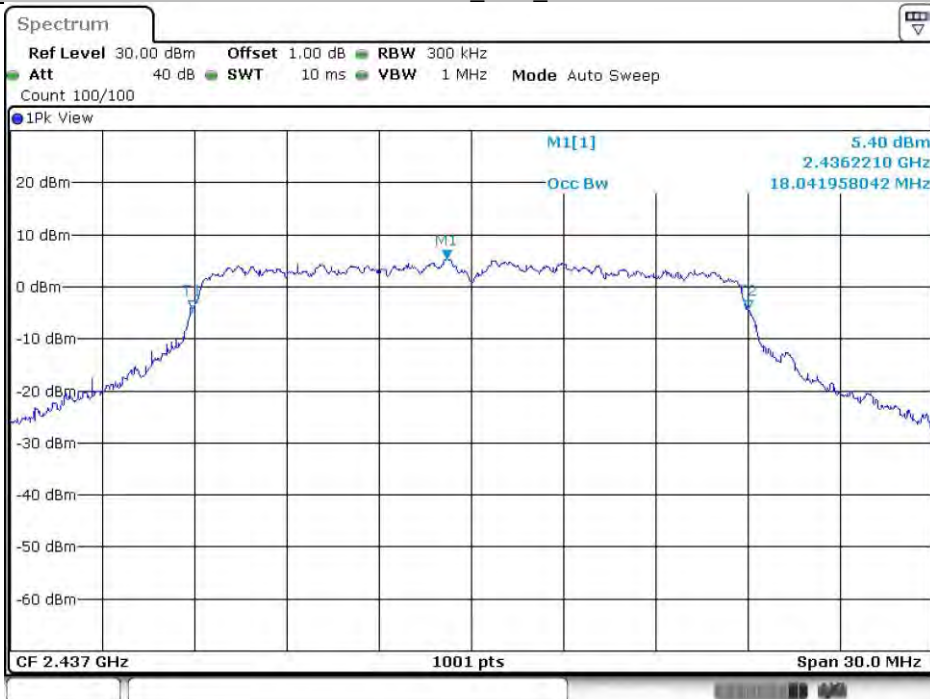
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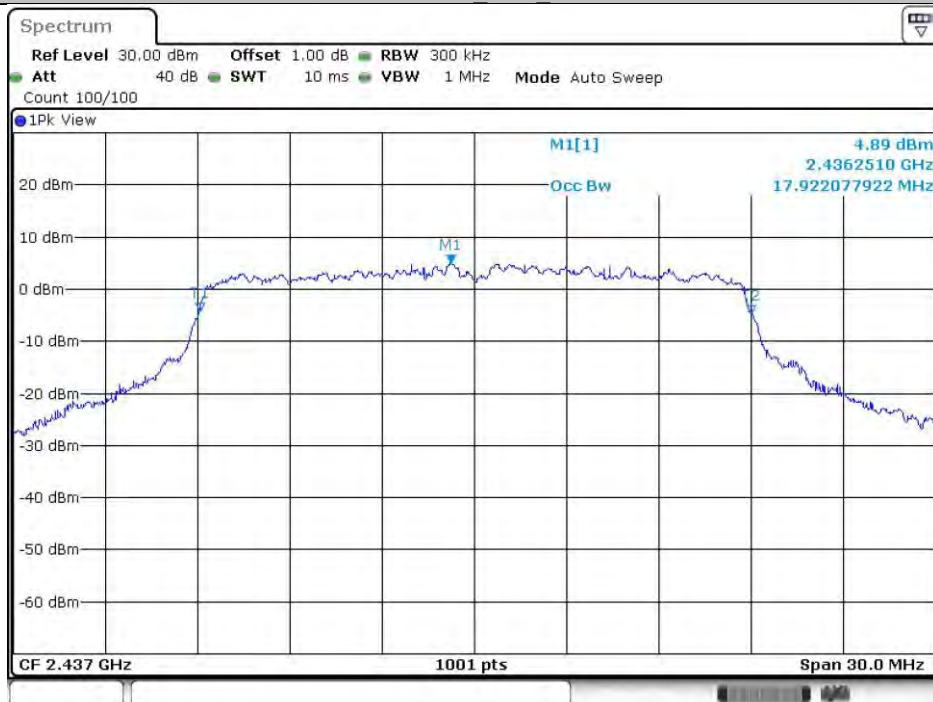
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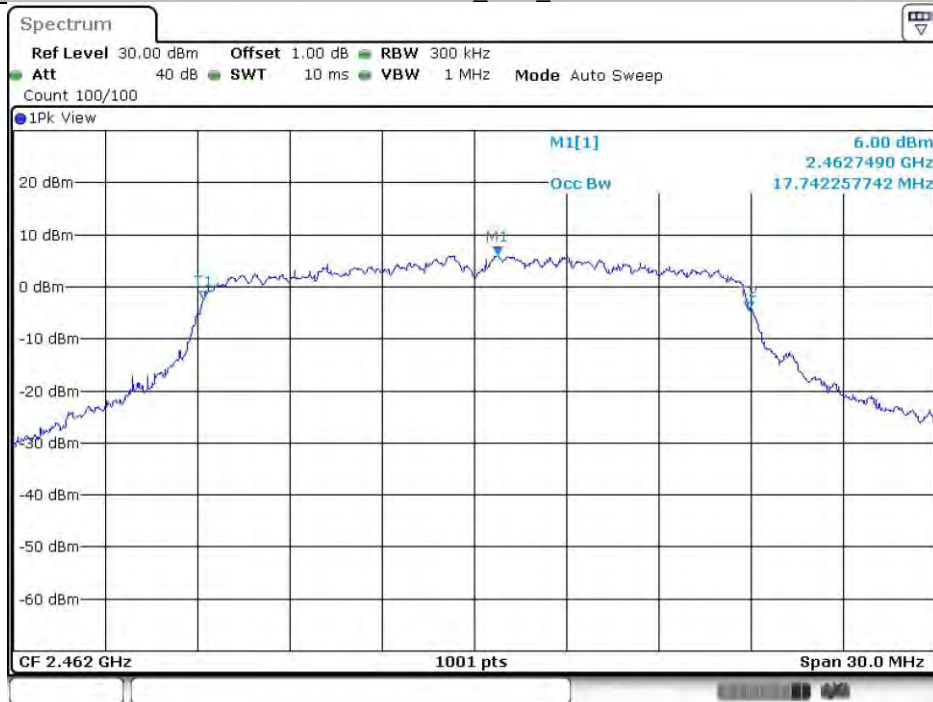
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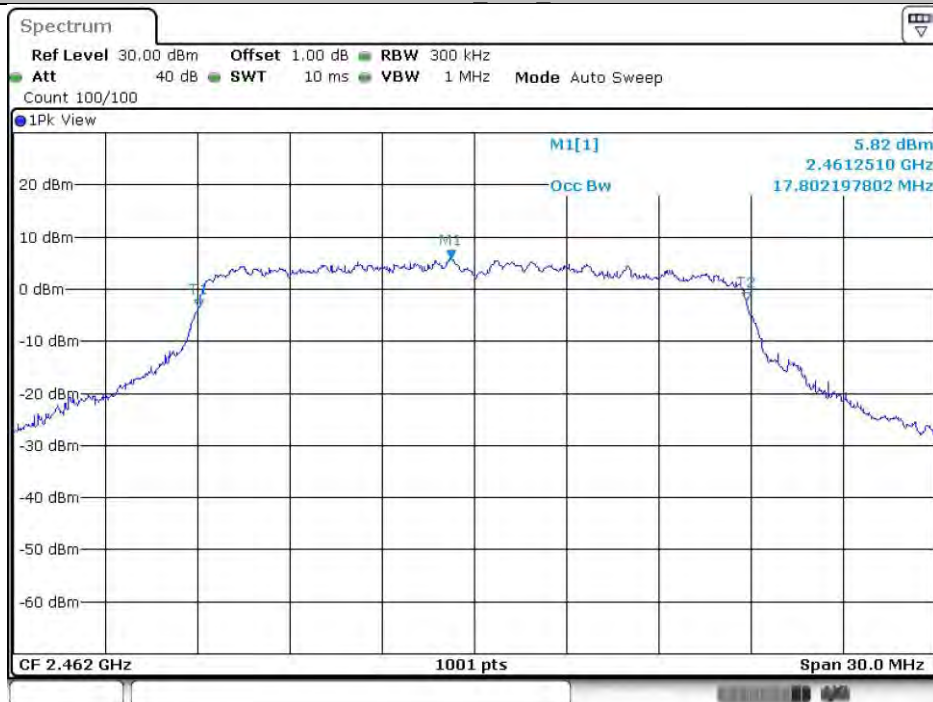
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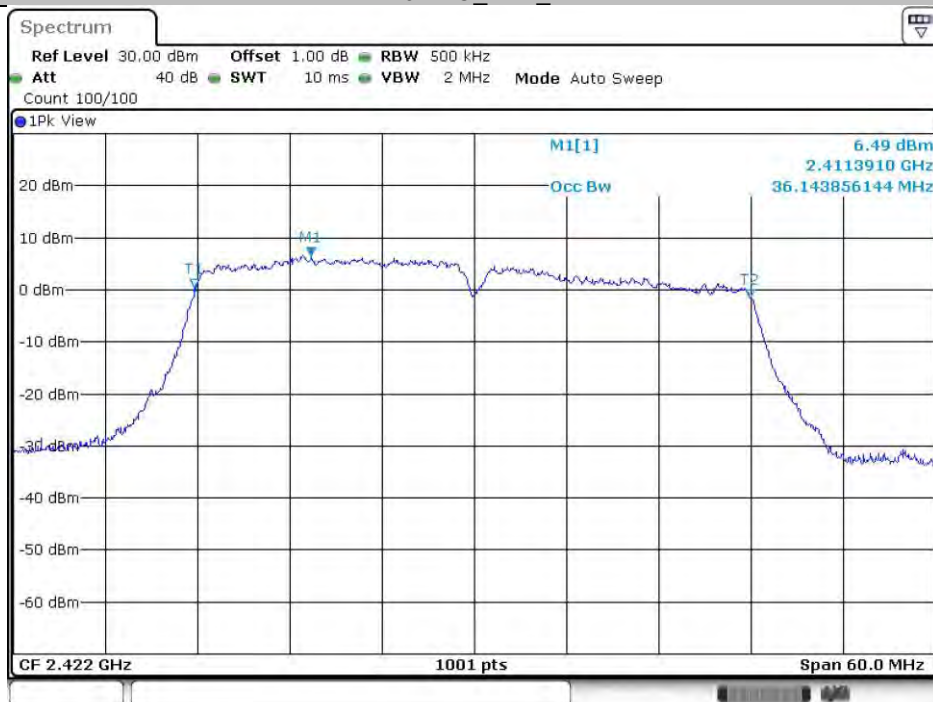
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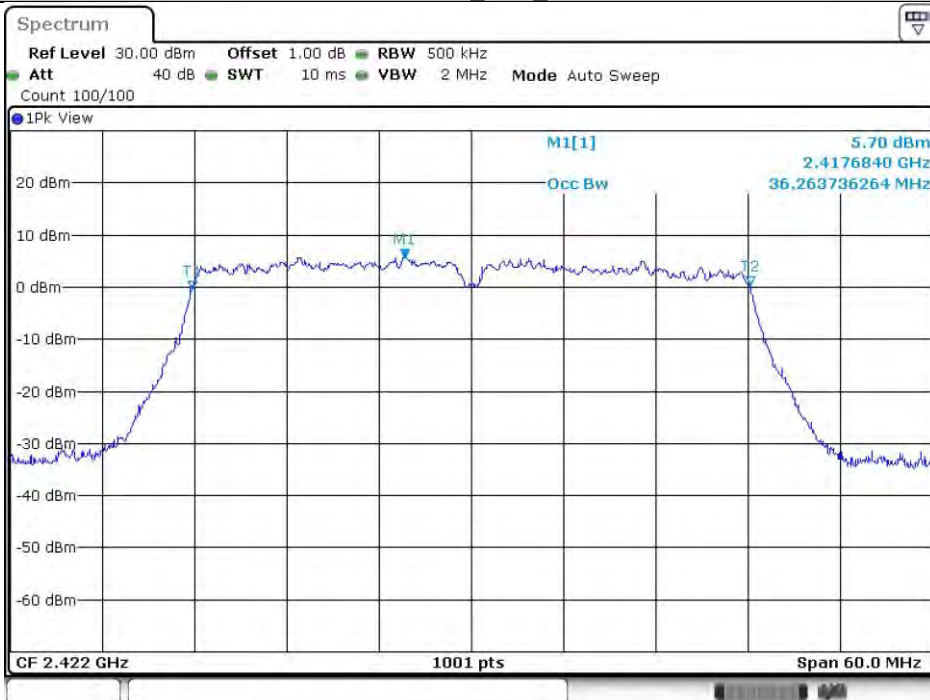
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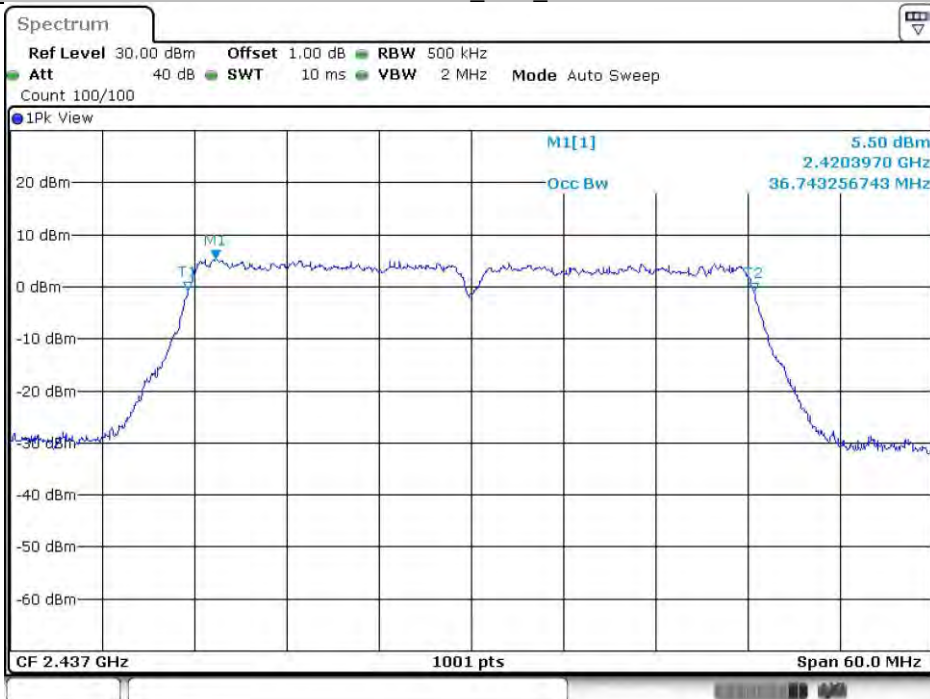
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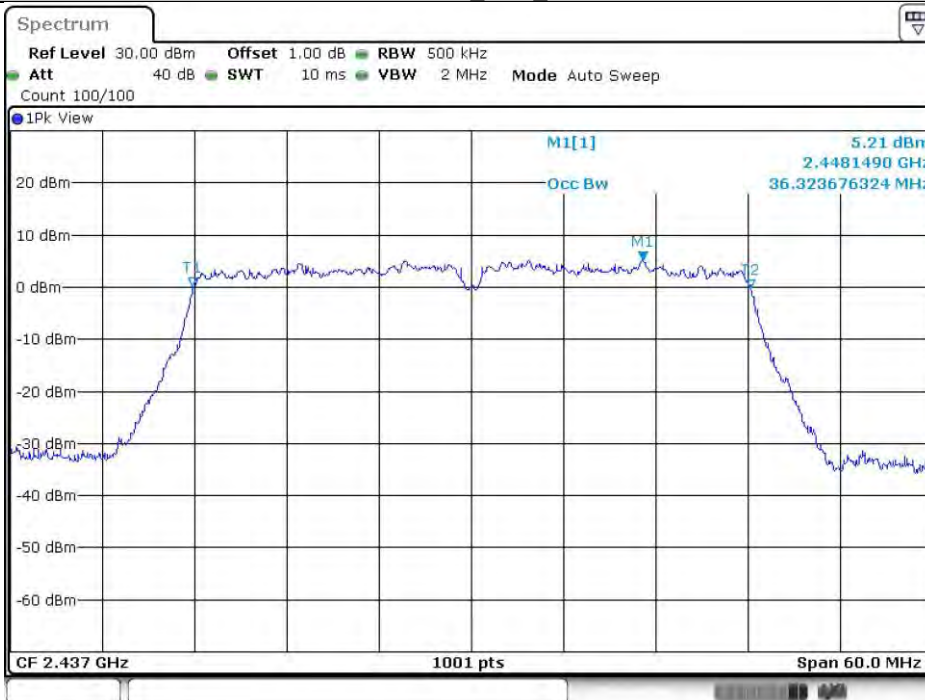
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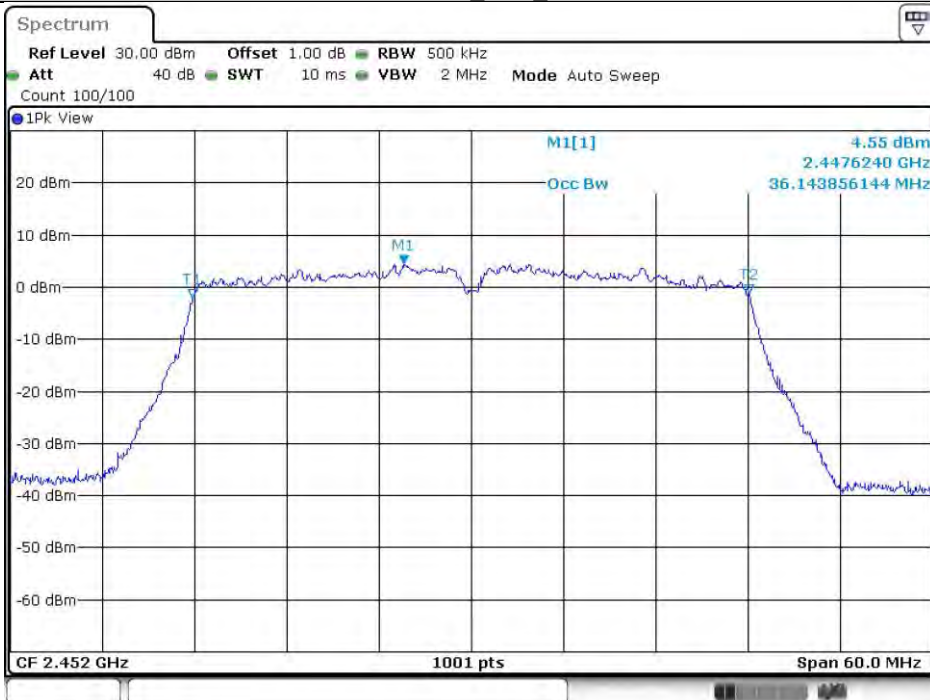
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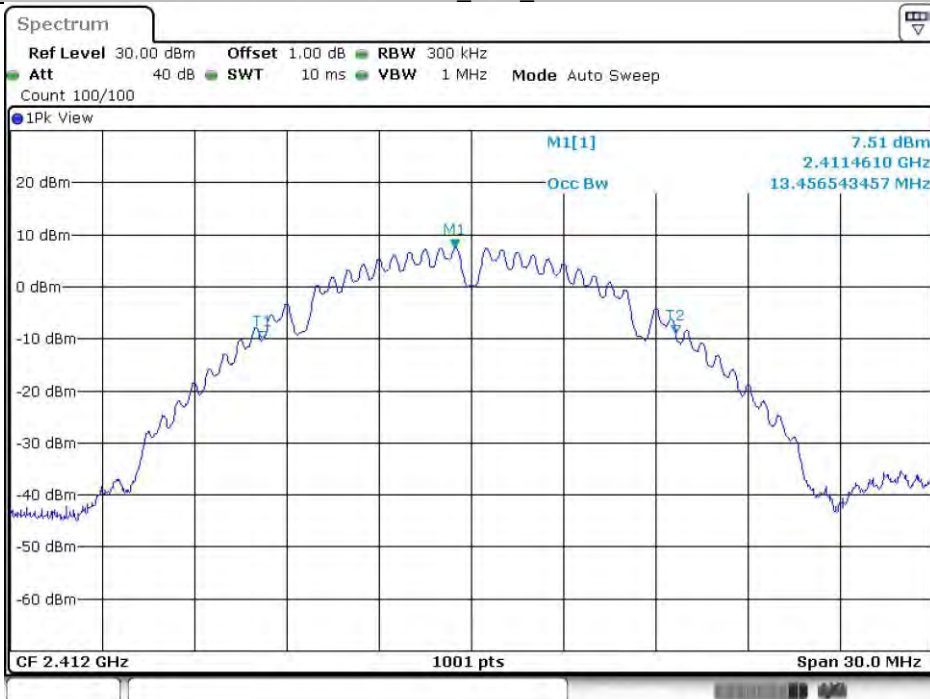
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Date: 10.MAY.2021 05:29:47

11B-CDD Ant4 2412



Date: 10.MAY.2021 04:25:19



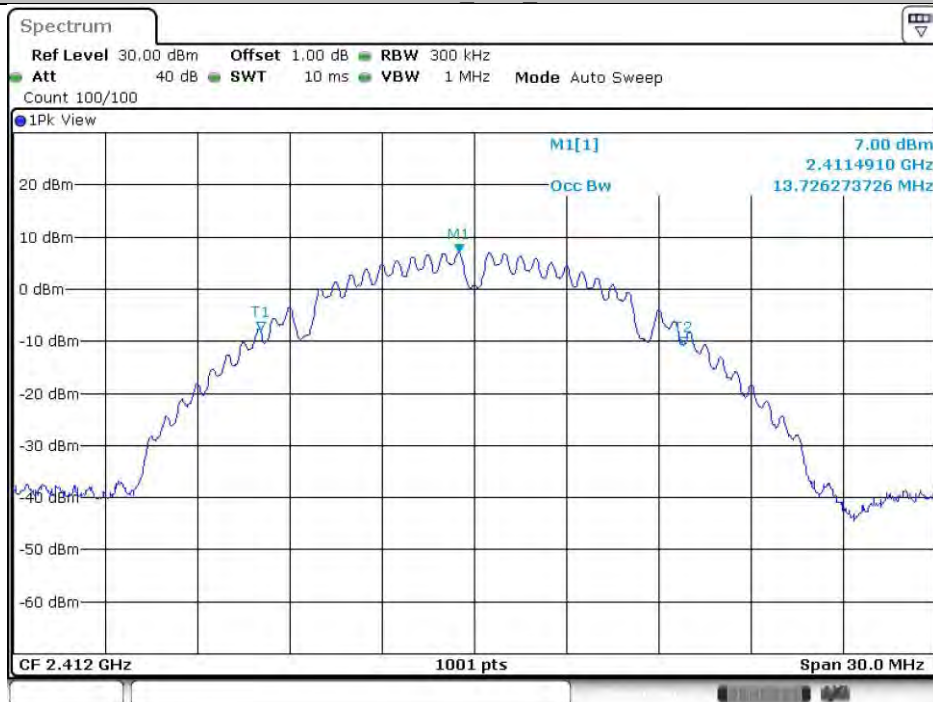
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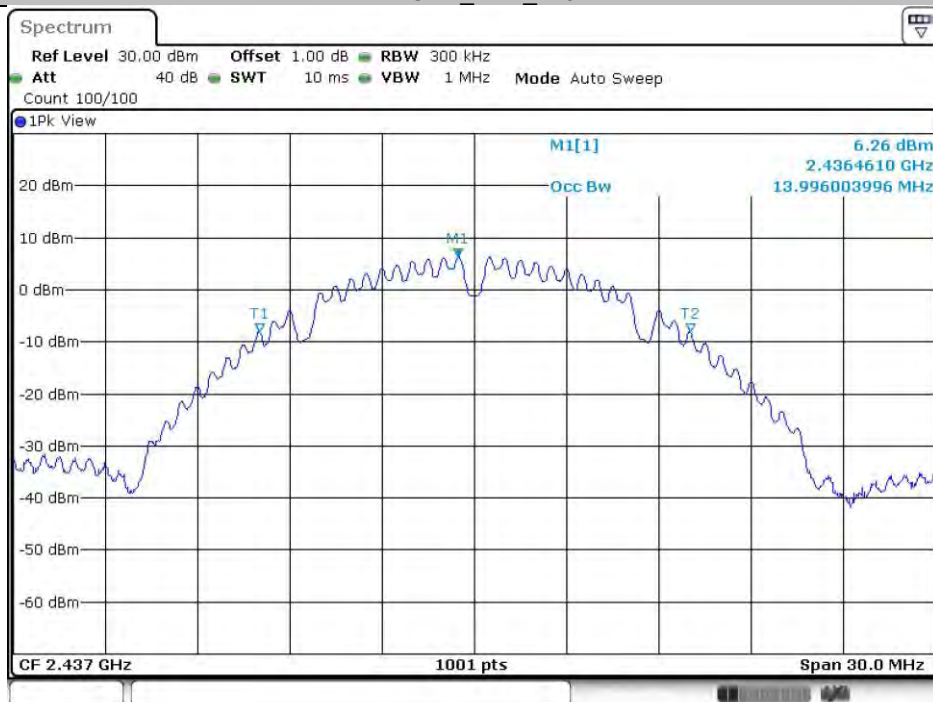
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Date: 10.MAY.2021 05:32:31

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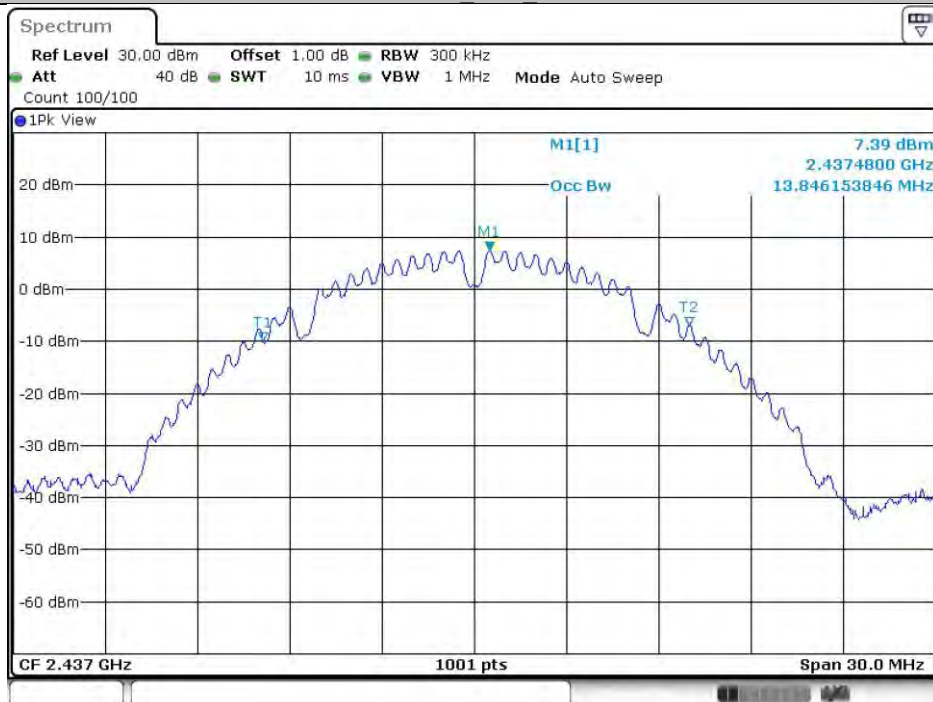
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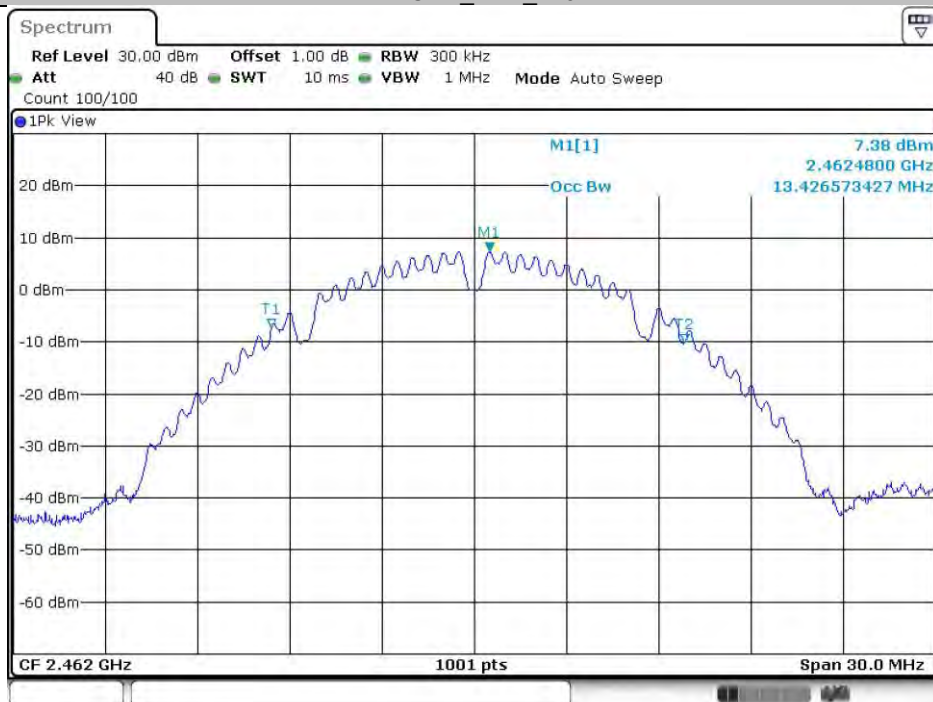
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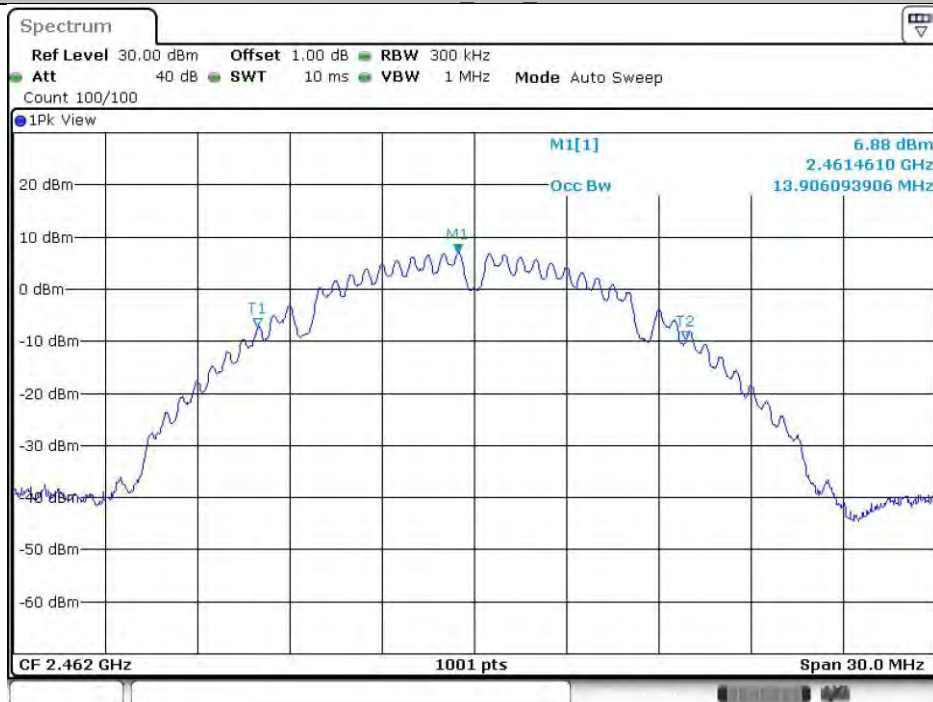
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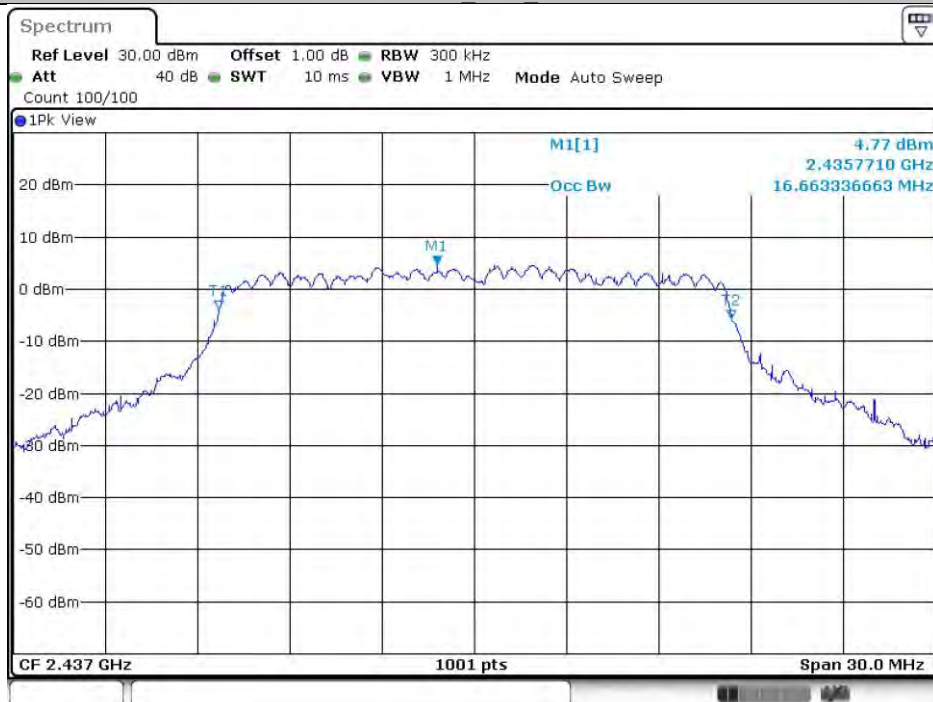
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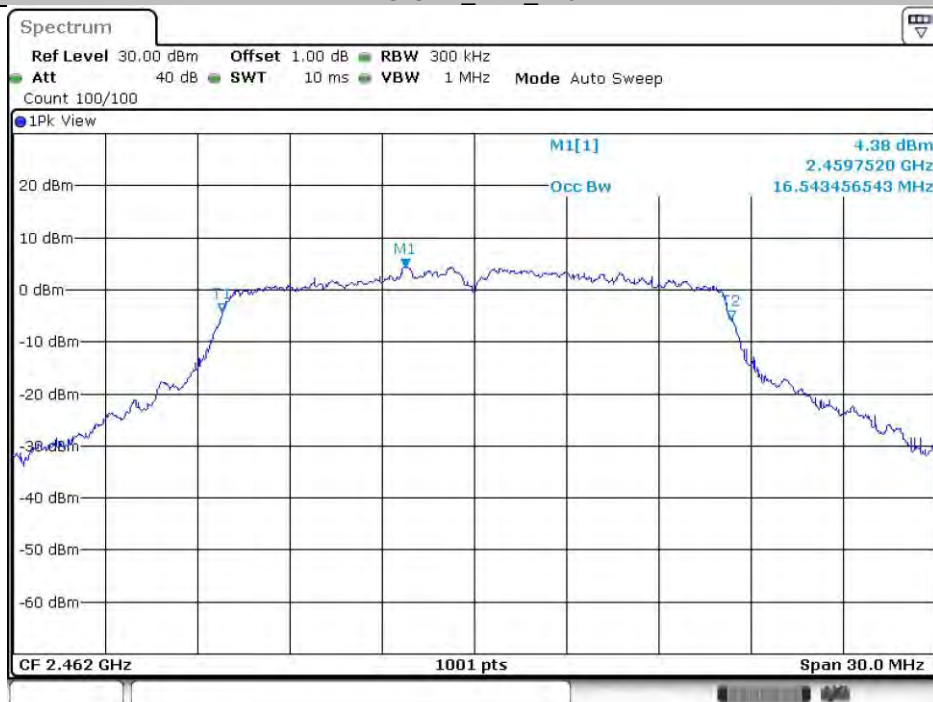
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Date: 10.MAY.2021 05:44:58

11G-CDD Ant4 2462



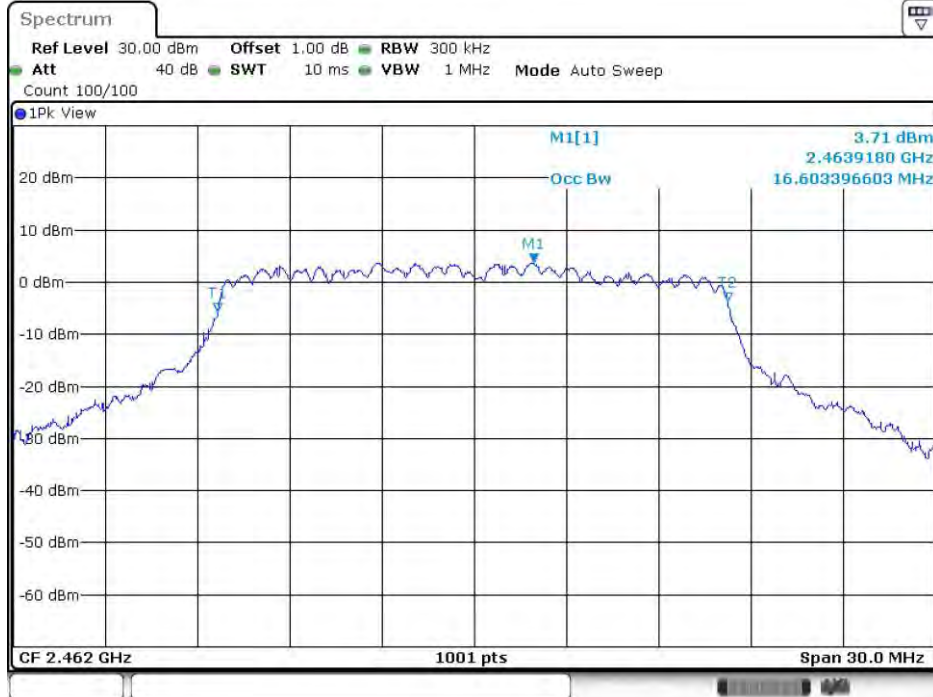
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11N20MIMO Ant4 2412



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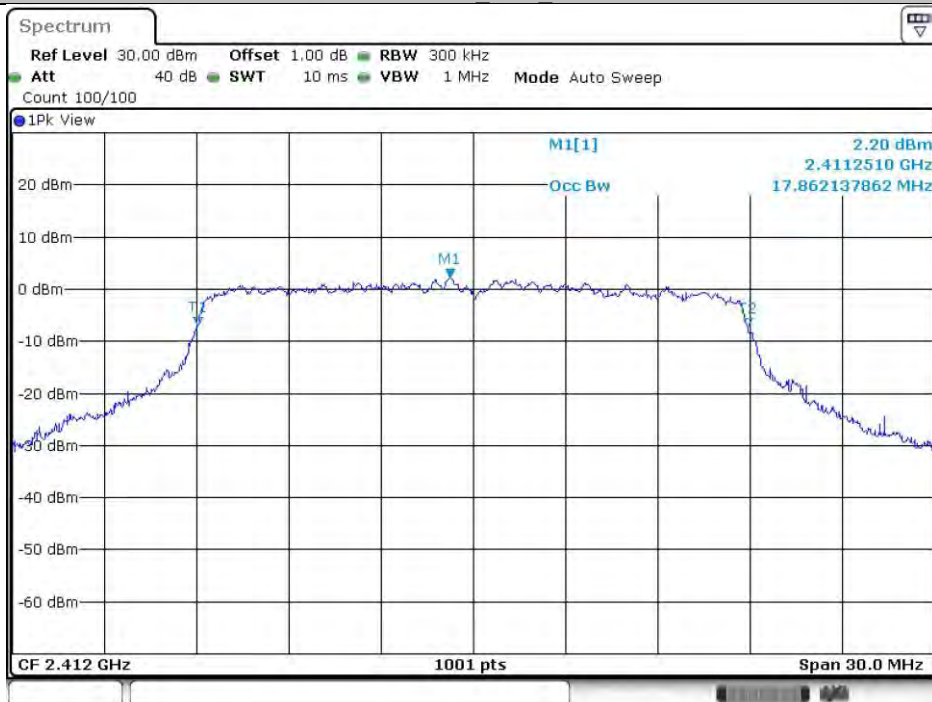
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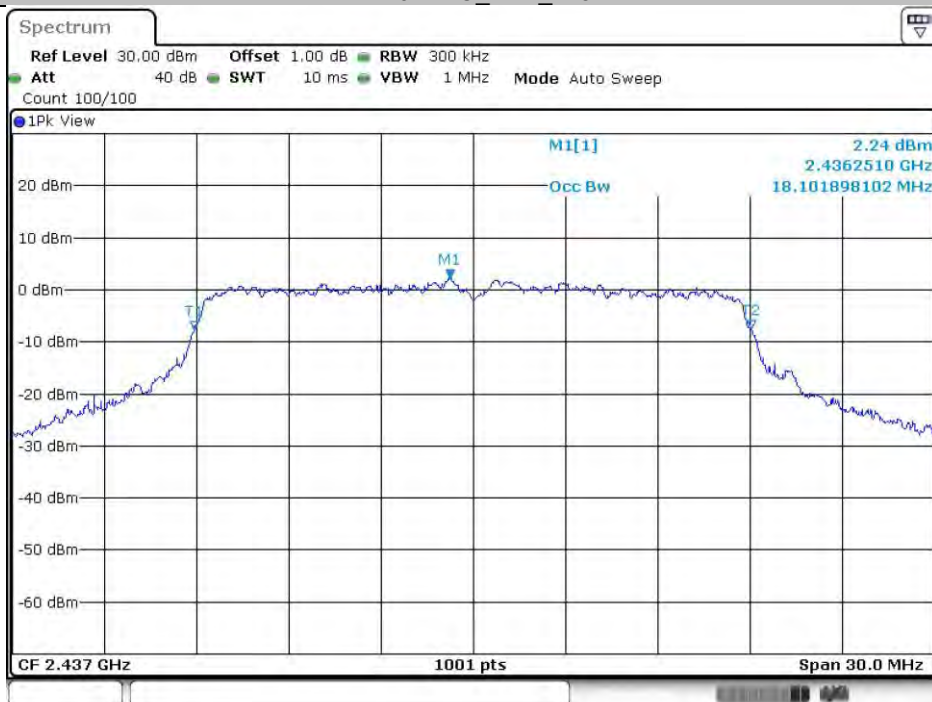
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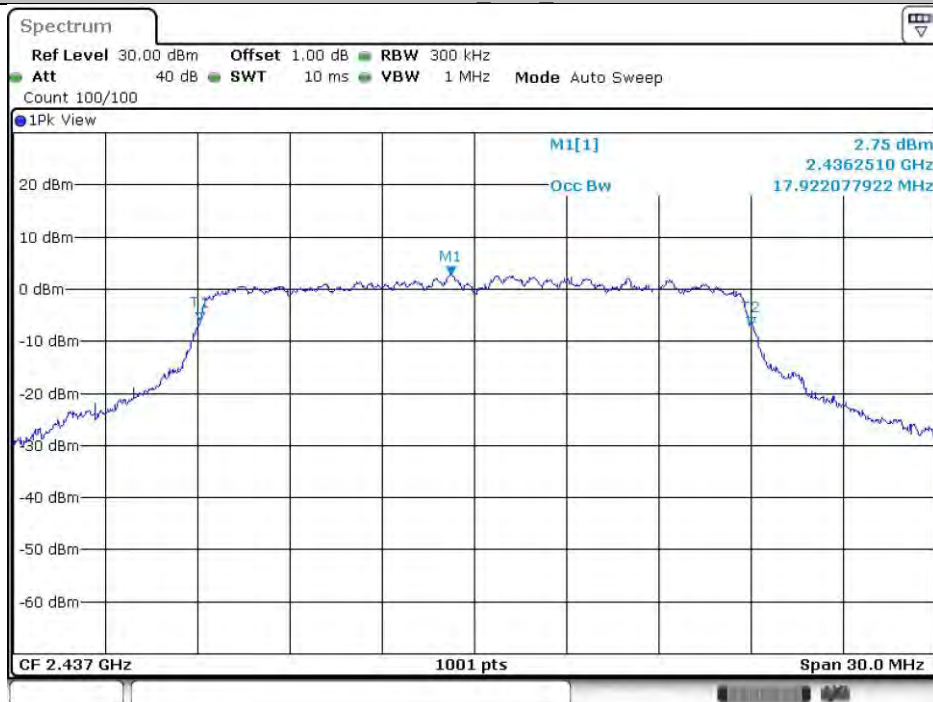
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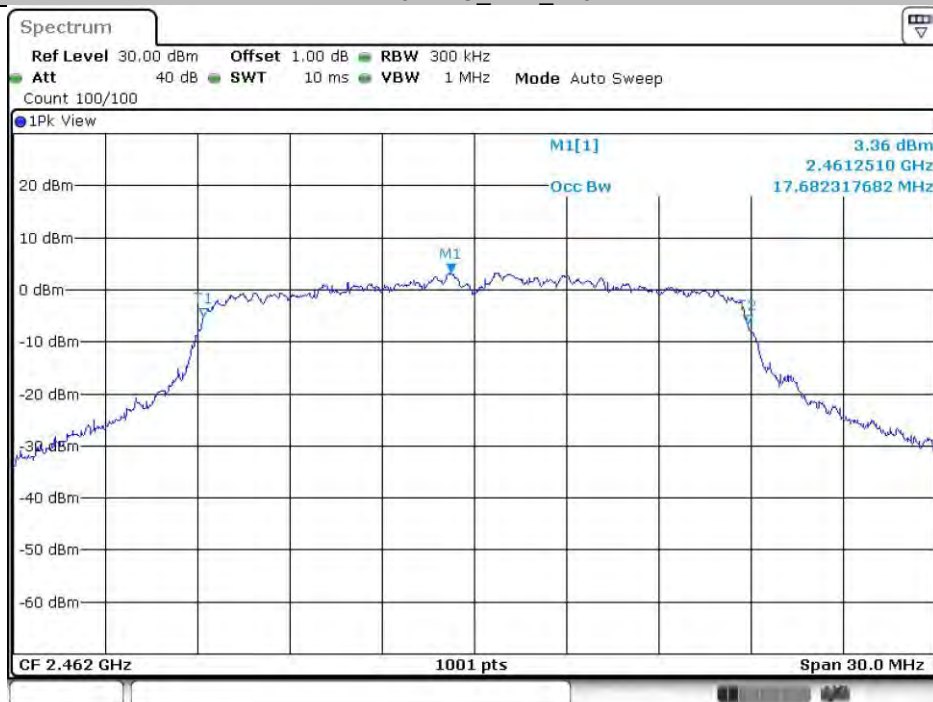
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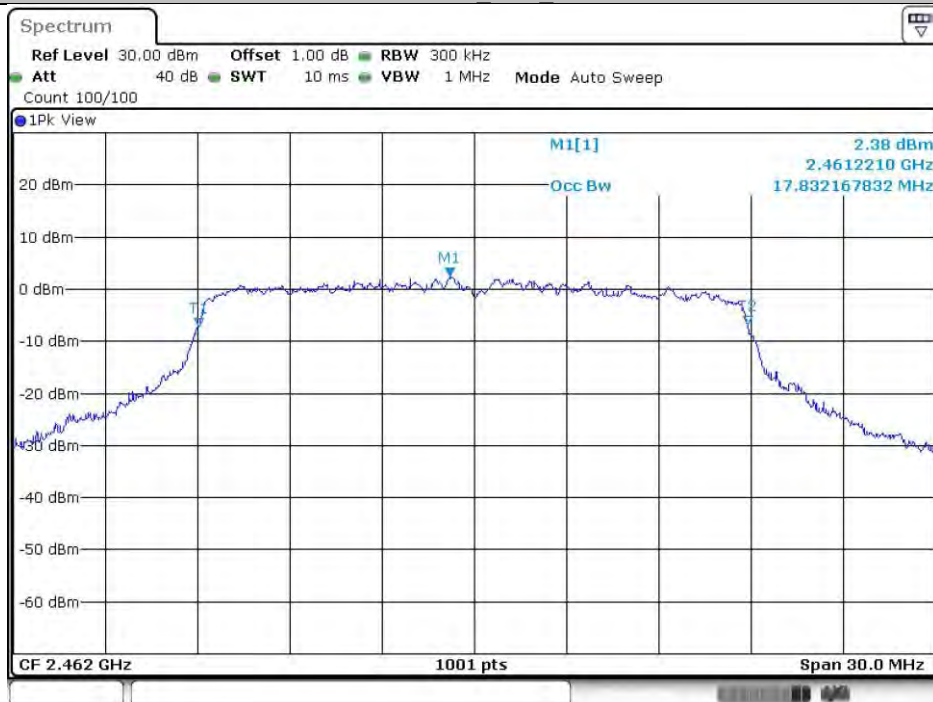
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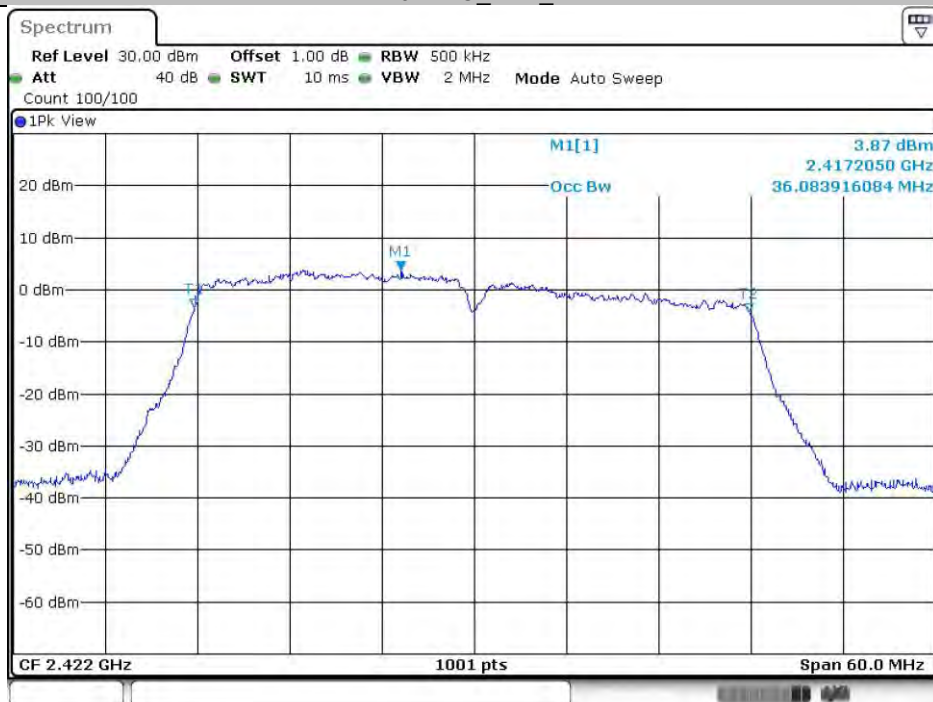
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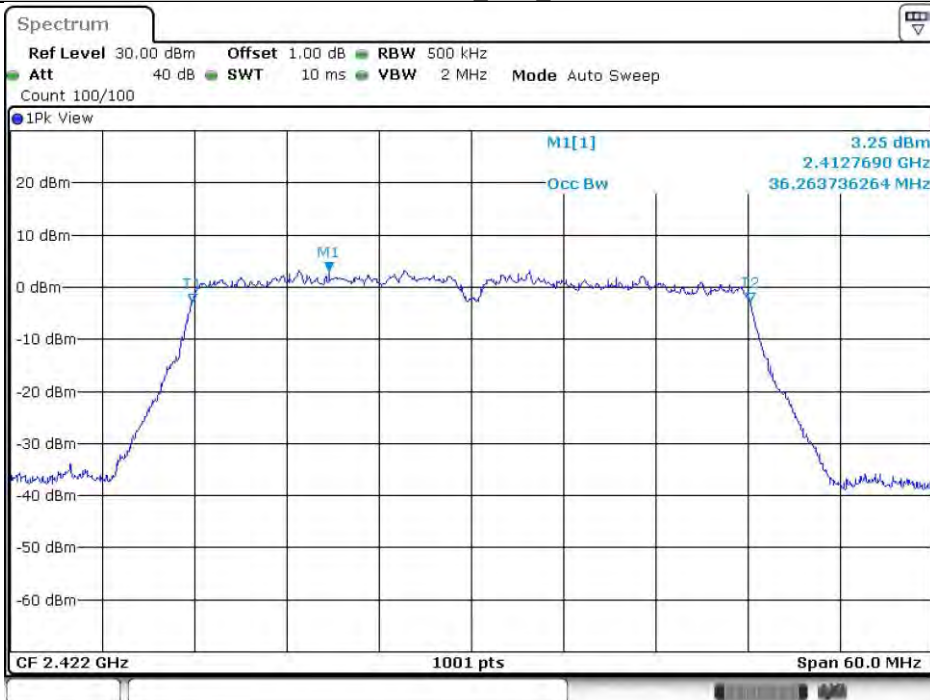
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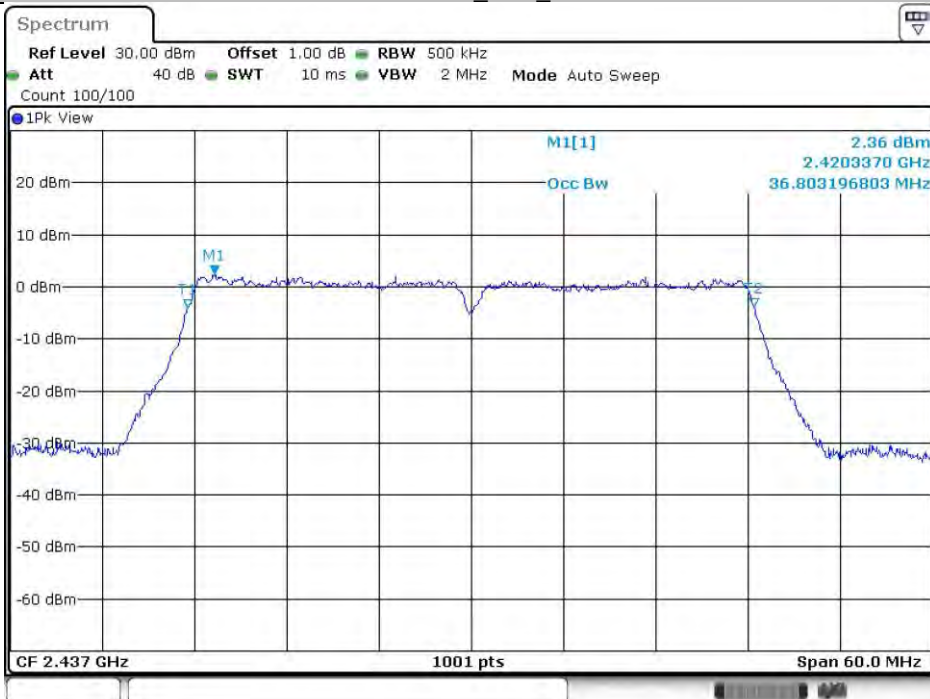
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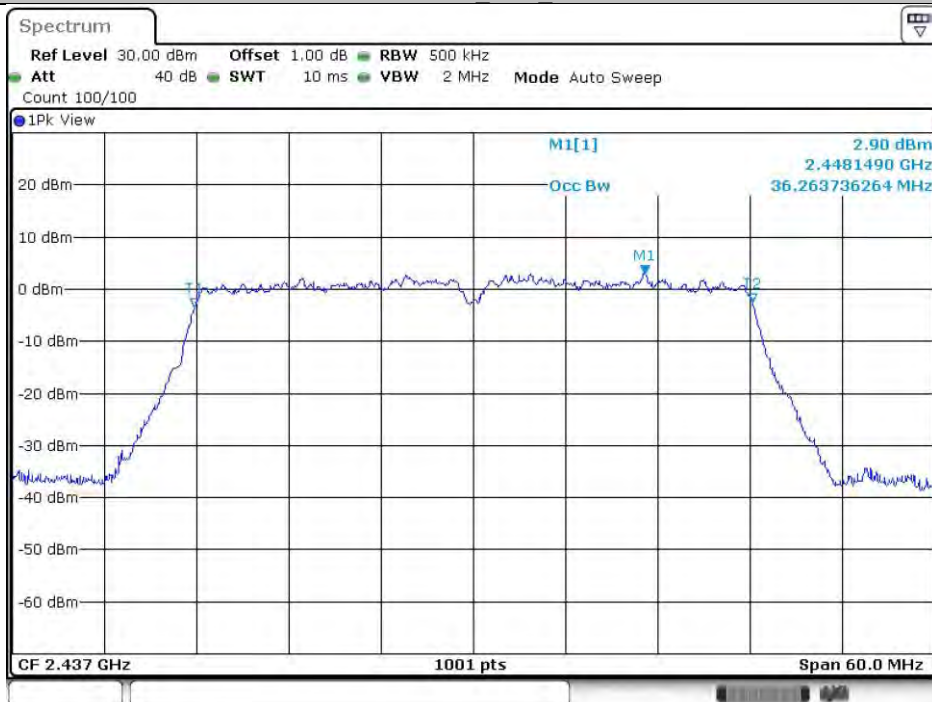
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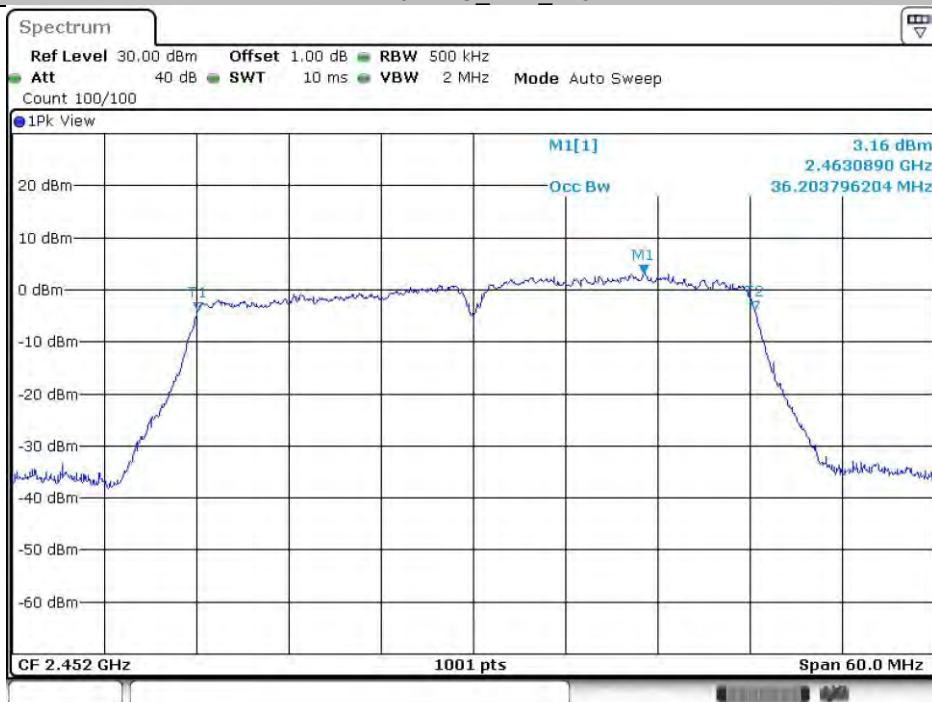
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Date: 10.MAY.2021 07:05:52

11N40MIMO Ant4 2452



Date: 10.MAY.2021 04:46:54



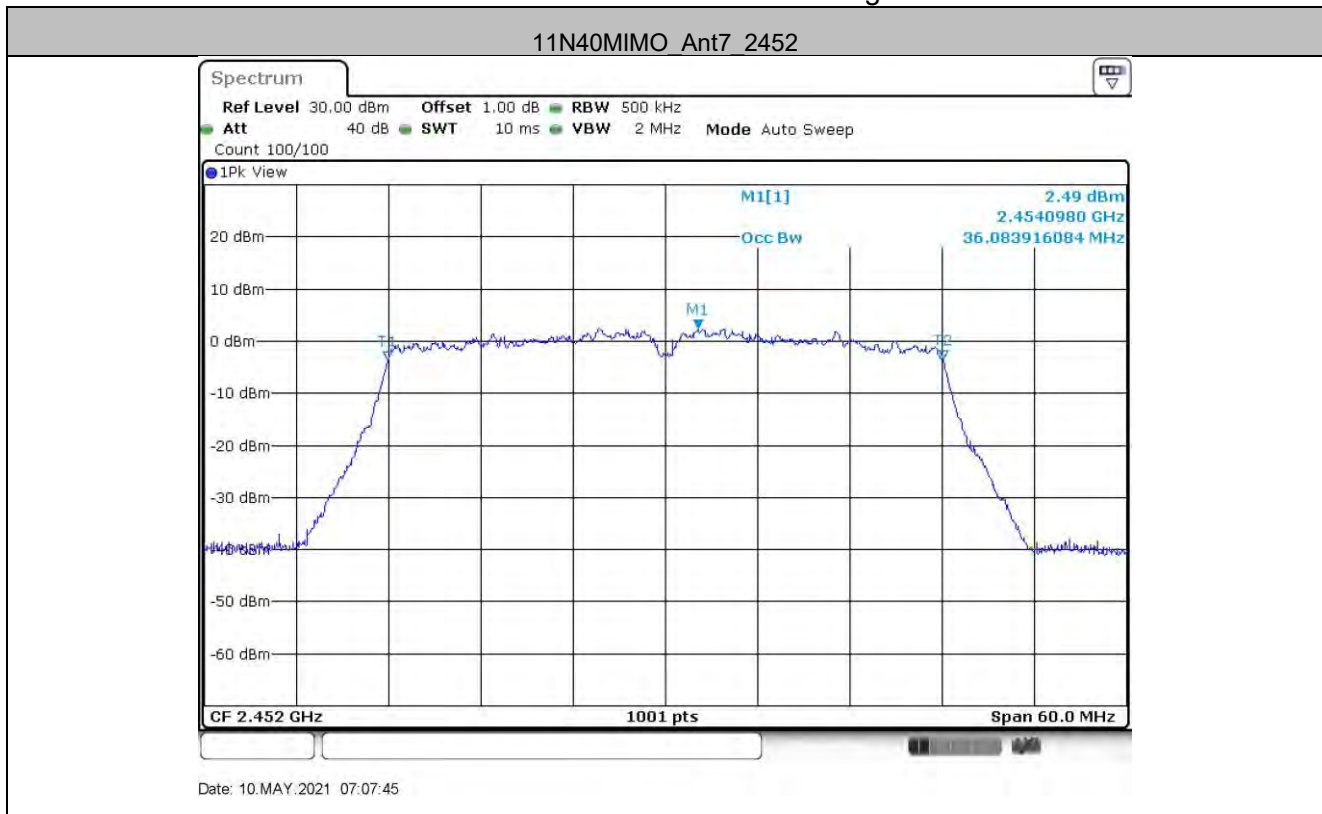
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Maximum conducted output power Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant4	2412	20.39	<=30	PASS
	Ant7	2412	19.92	<=30	PASS
	Ant4	2437	19.98	<=30	PASS
	Ant7	2437	20.60	<=30	PASS
	Ant4	2462	20.55	<=30	PASS
	Ant7	2462	19.80	<=30	PASS
11G	Ant4	2412	22.00	<=30	PASS
	Ant7	2412	22.41	<=30	PASS
	Ant4	2437	21.39	<=30	PASS
	Ant7	2437	22.32	<=30	PASS
	Ant4	2462	21.70	<=30	PASS
	Ant7	2462	22.08	<=30	PASS
11N20SISO	Ant4	2412	21.74	<=30	PASS
	Ant7	2412	20.55	<=30	PASS
	Ant4	2437	21.41	<=30	PASS
	Ant7	2437	20.82	<=30	PASS
	Ant4	2462	21.44	<=30	PASS
	Ant7	2462	20.54	<=30	PASS
11N40SISO	Ant4	2422	23.02	<=30	PASS
	Ant7	2422	22.52	<=30	PASS
	Ant4	2437	23.04	<=30	PASS
	Ant7	2437	22.54	<=30	PASS
	Ant4	2452	22.44	<=30	PASS
	Ant7	2452	21.37	<=30	PASS
11B-CDD	Ant4	2412	17.84	<=30	PASS
	Ant7	2412	17.56	<=30	PASS
	total	2412	20.7	<=30	PASS
	Ant4	2437	16.73	<=30	PASS



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	Ant7	2437	17.85	<=30	PASS
	total	2437	20.3	<=30	PASS
	Ant4	2462	17.64	<=30	PASS
	Ant7	2462	17.31	<=30	PASS
	total	2462	20.5	<=30	PASS
11G-CDD	Ant4	2412	19.87	<=30	PASS
	Ant7	2412	19.65	<=30	PASS
	total	2412	22.8	<=30	PASS
	Ant4	2437	19.25	<=30	PASS
	Ant7	2437	20.23	<=30	PASS
	total	2437	22.8	<=30	PASS
	Ant4	2462	19.71	<=30	PASS
	Ant7	2462	19.44	<=30	PASS
	total	2462	22.6	<=30	PASS
11N20MIMO	Ant4	2412	18.59	<=30	PASS
	Ant7	2412	18.08	<=30	PASS
	total	2412	21.4	<=30	PASS
	Ant4	2437	18.21	<=30	PASS
	Ant7	2437	18.93	<=30	PASS
	total	2437	21.6	<=30	PASS
	Ant4	2462	18.48	<=30	PASS
	Ant7	2462	18.15	<=30	PASS
	total	2462	21.3	<=30	PASS
11N40MIMO	Ant4	2422	19.98	<=30	PASS
	Ant7	2422	20.19	<=30	PASS
	total	2422	23.1	<=30	PASS
	Ant4	2437	19.95	<=30	PASS
	Ant7	2437	20.16	<=30	PASS
	total	2437	23.1	<=30	PASS
	Ant4	2452	19.66	<=30	PASS
	Ant7	2452	19.34	<=30	PASS
	total	2452	22.5	<=30	PASS



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Maximum power spectral density Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant4	2412	-6.83	<=8	PASS
	Ant7	2412	-6.83	<=8	PASS
	Ant4	2437	-7.18	<=8	PASS
	Ant7	2437	-6.86	<=8	PASS
	Ant4	2462	-6.97	<=8	PASS
	Ant7	2462	-7.46	<=8	PASS
11G	Ant4	2412	-9.58	<=8	PASS
	Ant7	2412	-10.34	<=8	PASS
	Ant4	2437	-12.09	<=8	PASS
	Ant7	2437	-10.37	<=8	PASS
	Ant4	2462	-11.08	<=8	PASS
	Ant7	2462	-11.82	<=8	PASS
11N20SISO	Ant4	2412	-11.1	<=8	PASS
	Ant7	2412	-12.56	<=8	PASS
	Ant4	2437	-12.02	<=8	PASS
	Ant7	2437	-11.9	<=8	PASS
	Ant4	2462	-10.92	<=8	PASS
	Ant7	2462	-12.87	<=8	PASS
11N40SISO	Ant4	2422	-12.49	<=8	PASS
	Ant7	2422	-14.05	<=8	PASS
	Ant4	2437	-13.63	<=8	PASS
	Ant7	2437	-14.4	<=8	PASS
	Ant4	2452	-13.9	<=8	PASS
	Ant7	2452	-15.47	<=8	PASS
11B-CDD	Ant4	2412	7.35	<=8	PASS
	Ant7	2412	-9.28	<=8	PASS
	total	2412	7.44	<=8	PASS
	Ant4	2437	-10.48	<=8	PASS



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	Ant7	2437	-9.16	<=8	PASS
	total	2437	-6.76	<=8	PASS
	Ant4	2462	-9.63	<=8	PASS
	Ant7	2462	-10.14	<=8	PASS
	total	2462	-6.87	<=8	PASS
11G-CDD	Ant4	2412	-11.35	<=8	PASS
	Ant7	2412	-13.74	<=8	PASS
	total	2412	-9.37	<=8	PASS
	Ant4	2437	-13.94	<=8	PASS
	Ant7	2437	-13.05	<=8	PASS
	total	2437	-10.46	<=8	PASS
	Ant4	2462	-13.32	<=8	PASS
	Ant7	2462	-13.23	<=8	PASS
	total	2462	-10.26	<=8	PASS
11N20MIMO	Ant4	2412	-13.56	<=8	PASS
	Ant7	2412	-15.22	<=8	PASS
	total	2412	-11.30	<=8	PASS
	Ant4	2437	-15.19	<=8	PASS
	Ant7	2437	-14.73	<=8	PASS
	total	2437	-11.94	<=8	PASS
	Ant4	2462	-14.35	<=8	PASS
	Ant7	2462	-14.75	<=8	PASS
	total	2462	-11.54	<=8	PASS
11N40MIMO	Ant4	2422	-16.03	<=8	PASS
	Ant7	2422	-17.01	<=8	PASS
	total	2422	-13.48	<=8	PASS
	Ant4	2437	-16.76	<=8	PASS
	Ant7	2437	-17.4	<=8	PASS
	total	2437	-14.06	<=8	PASS
	Ant4	2452	-16.38	<=8	PASS
	Ant7	2452	-17.06	<=8	PASS
	total	2452	-13.70	<=8	PASS



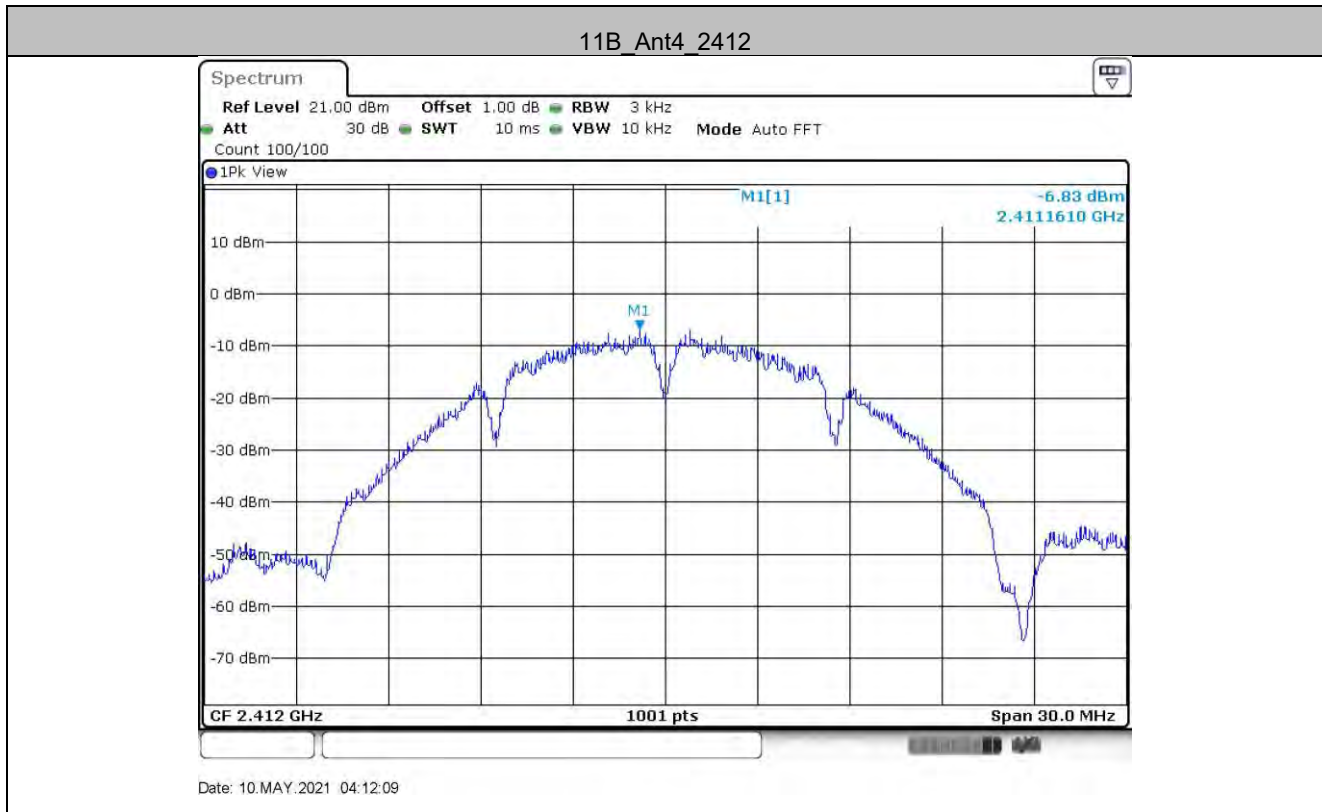
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Test Graphs

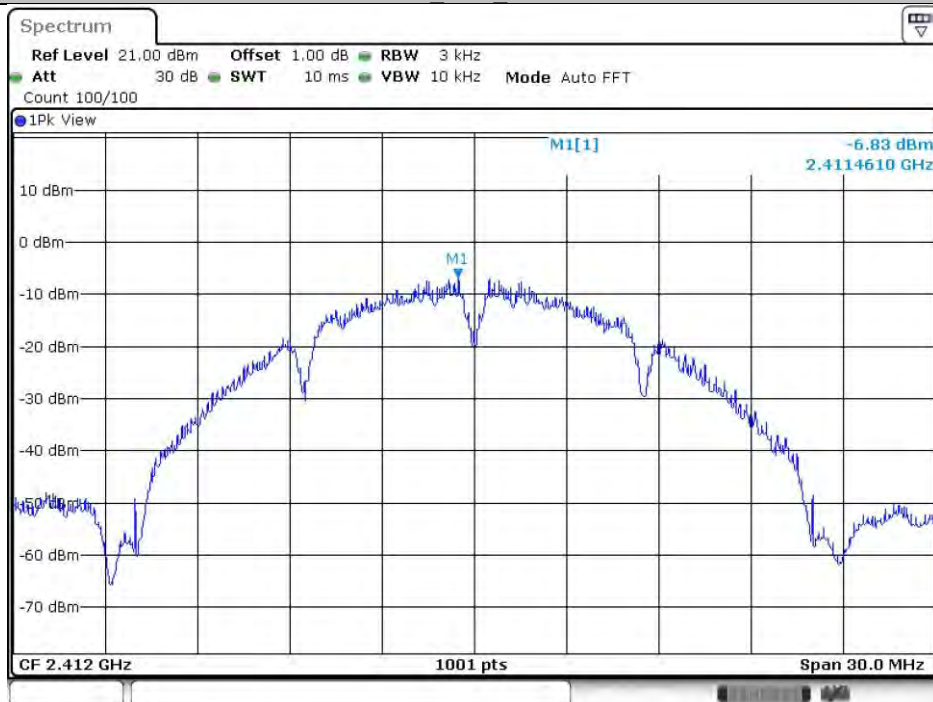


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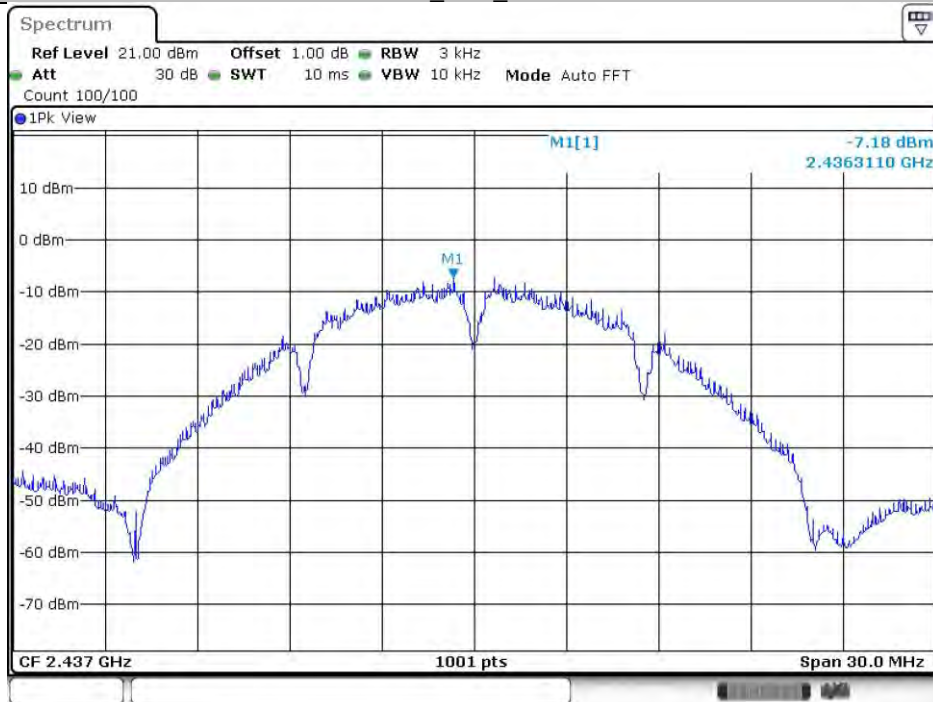
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11B Ant7 2412



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11B Ant4 2437



Date: 10.MAY.2021 04:12:30



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11B Ant7 2437



Date: 10.MAY.2021 04:58:57

11B Ant4 2462



Date: 10.MAY.2021 04:12:56



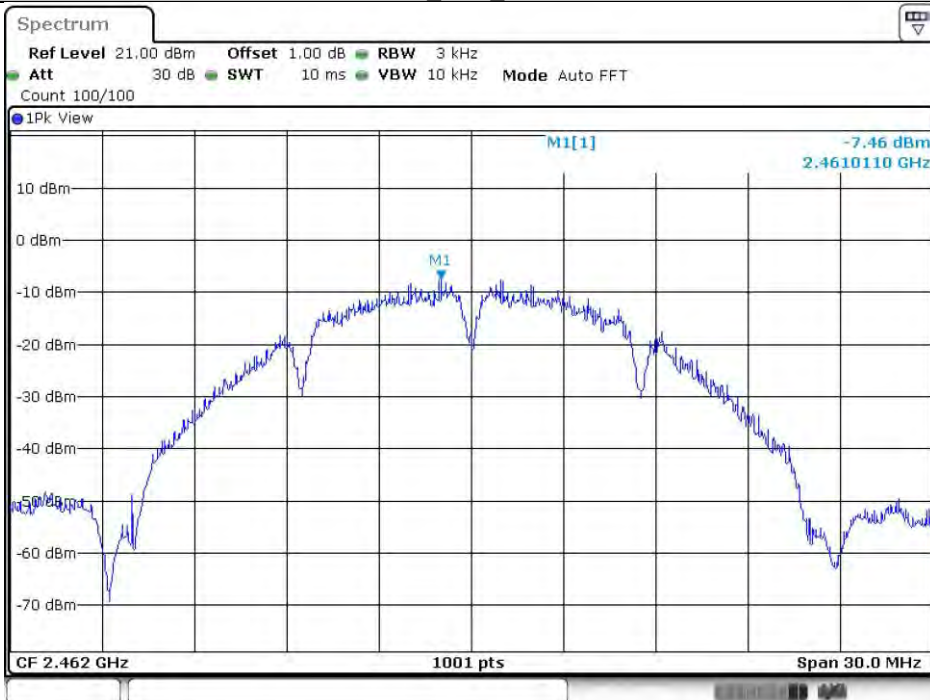
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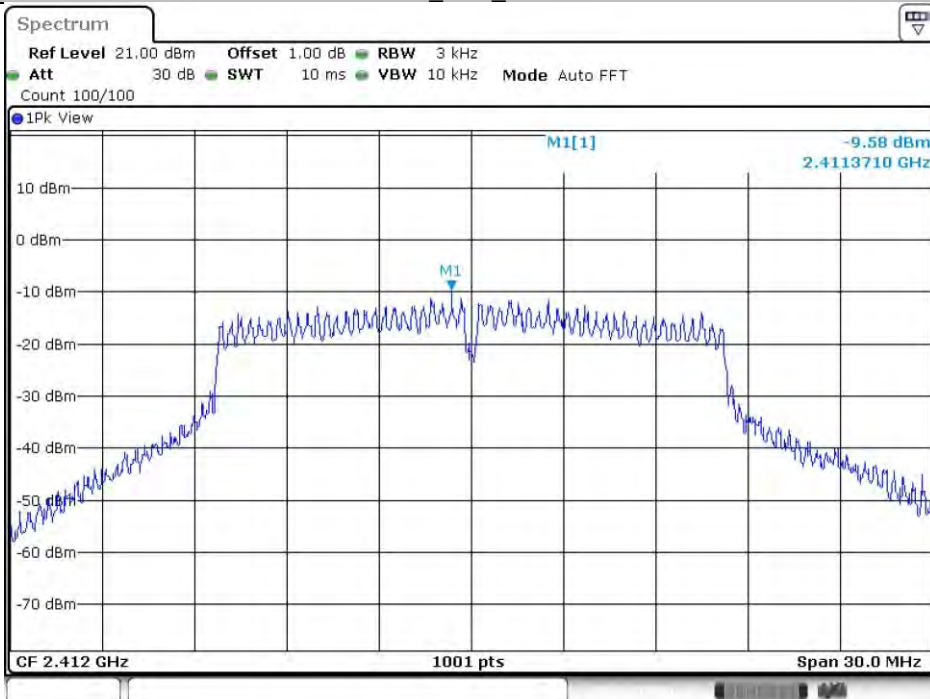
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11B Ant7 2462



Date: 10.MAY.2021 05:00:58

11G Ant4 2412



Date: 10.MAY.2021 04:13:16



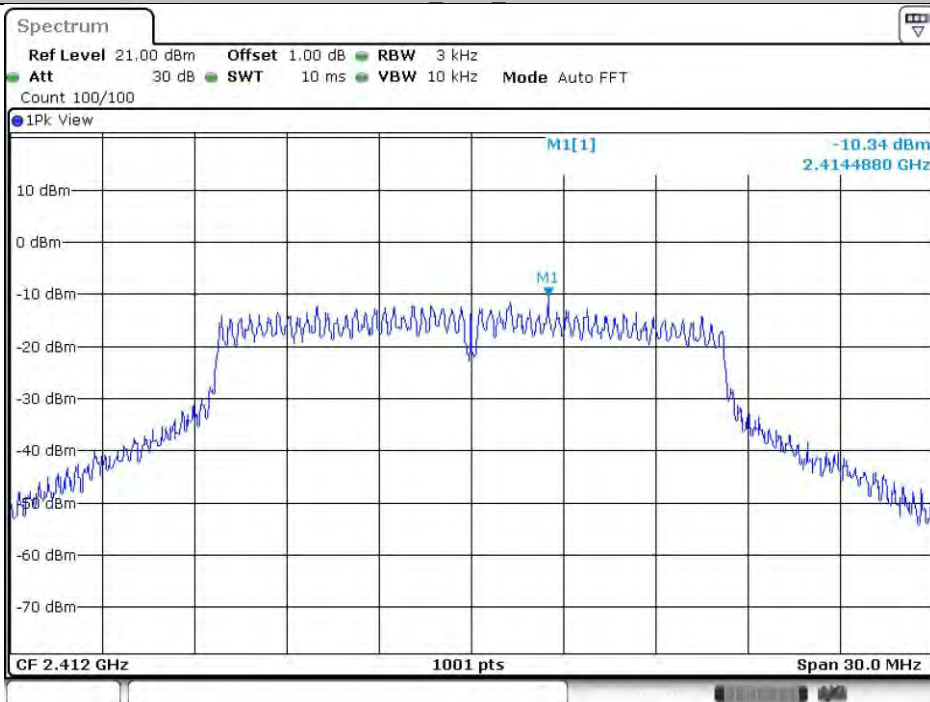
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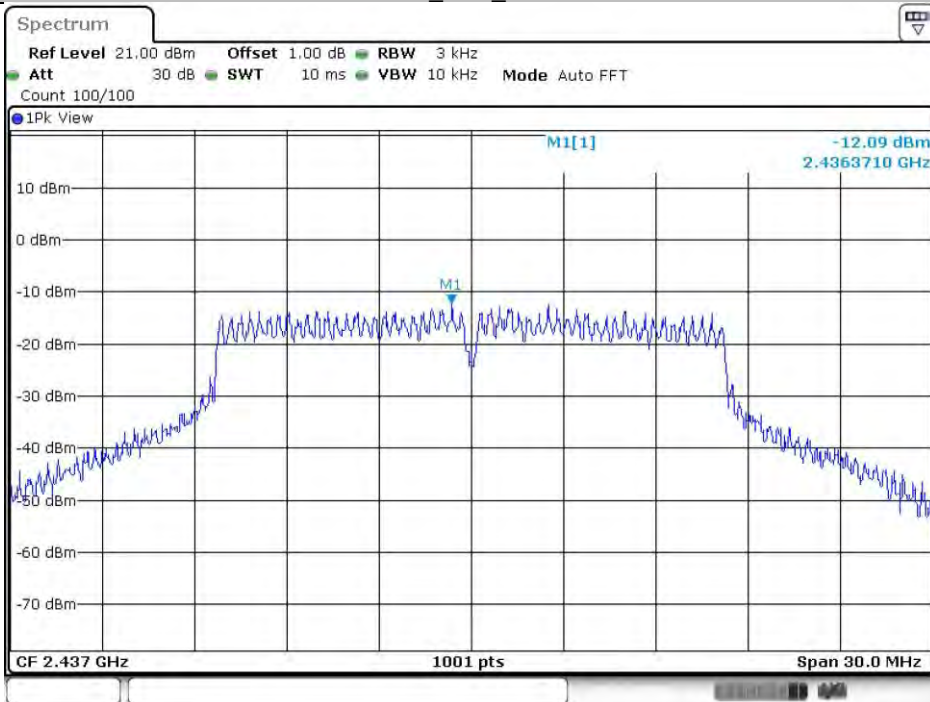
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11G_Ant7_2412



Date: 10.MAY.2021 05:12:00

11G_Ant4_2437



Date: 10.MAY.2021 04:13:38



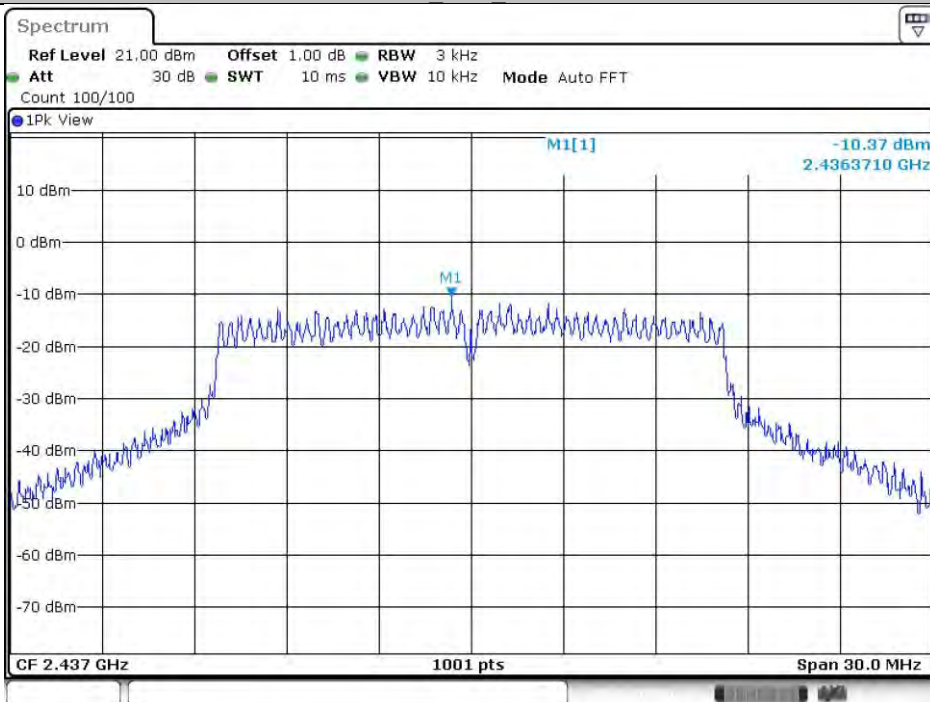
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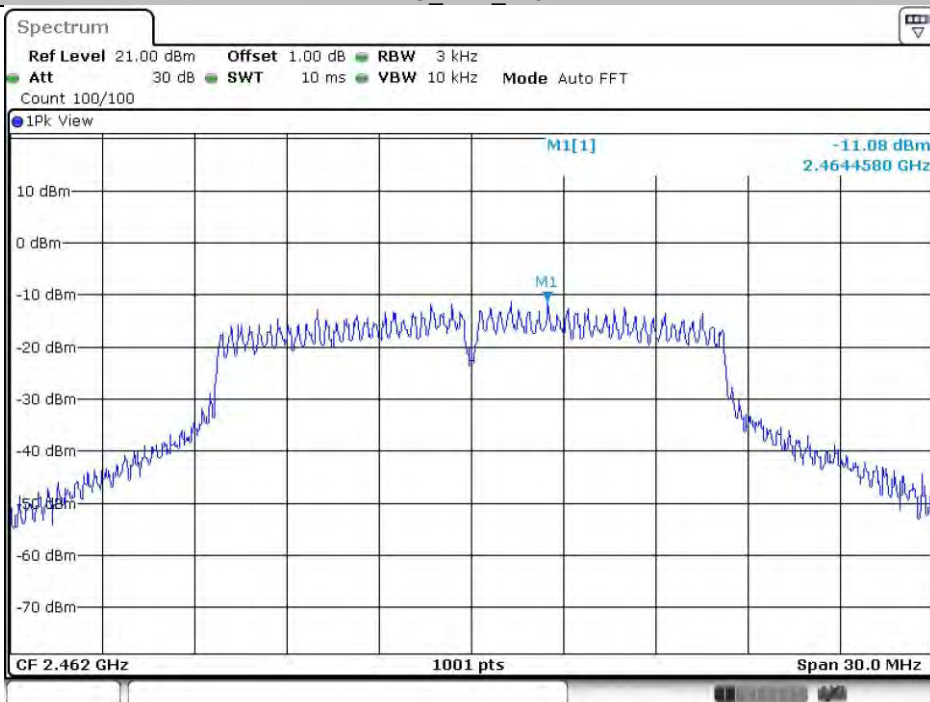
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11G Ant7 2437



Date: 10.MAY.2021 05:13:35

11G Ant4 2462



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SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com