FCC - TEST REPORT

Report Number	:	**68.950.23.0881.01**	Date of Issue:	**2023-11-06**
Model	:	**NPG-001, HP52A, HP52AX, NPG01ASTB**		
Product	:	Playground		
Applicant	:	Shenzhen Skyworth Digital Technology Co., LTD.		
Address	:	14/F, Unit A, Skyworth Building, Gaoxin Ave.1.S., Nanshan District, 518063 Shenzhen, PEOPLE'S REPUBLIC OF CHINA		
Manufacturer	:	Shenzhen Skyworth Digital Technology Co., LTD.		
Address	:	14/F, Unit A, Skyworth Building, Gaoxin Ave.1.S., Nanshan District, 518063 Shenzhen, PEOPLE'S REPUBLIC OF CHINA		
Test Result	:	■ **Positive** ☐ **Negative**		
Total pages including Appendices	:	**97**		

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1 Table of Contents

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2 Details about the Test Laboratory

Details about the Test Laboratory
Test Site 1

Company name:	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong, China
Telephone:	86 755 8828 6998
Fax:	86 755 8828 5299
FCC Registration No.:	514049
FCC Designation Number:	CN5009
IC Registration No.:	10320A

3 Description of the Equipment Under Test

Product:	Playground
Model no.:	NPG-001, HP52A, HP52AX, NPG01ASTB
Model difference:	All models have the same technical construction including circuit diagram, PCB layout, components and component layout. Only the outlook/color are different. So the main test model is NPG-001.
FCC ID:	WNA-NPG-001
Options and accessories:	Adapter, HDMI Cable, Remote
Rating:	5VDC, 3A supplied by external adapter
Adapter information:	Adapter Model: AD-0150500300US-1 Input: 100-240VAC 50/60Hz, 0.5A, Output: 5VDC, 3.0A 15.0W
Remote information:	Type name: Bluetooth voice remote control Model: NPG-RCU-001 FCC ID: 2A7GQ-NPG-RCU-001
RF Transmission Frequency:	2412MHz-2462MHz for 802.11b/g/n20 (Wi-Fi) 2422MHz-2452MHz for 802.11n40 (Wi-Fi)
No. of Operated Channel:	11 for 802.11b/g/n20/n40 (Wi-Fi) 7 for 802.11n40 (Wi-Fi)
Modulation:	DSSS, OFDM
Antenna Type:	PCBA antenna
Antenna 0	2.3dBi
Antenna 1	2.3dBi
Description of the EUT:	The EUT is a playground with Bluetooth Low Energy/Bluetooth BDR+EDR, 2.4G Wi-Fi & 5G Wi-Fi functions. Only 2.4G Wi-Fi included in this report.

NOTE 1: The above EUT's information is declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2021 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10 (2020).

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5 Summary of Test Results

Technical Requirements						
FCC Part 15 Subpart C						
Test Condition		Test Site	Test Result			Test Environment
			Pass	Fail	N/A	
§15.207	Conducted emission AC power port	Site 1	☒	☐	☐	--
§15.247 (b) (1)	Conducted peak output power	Site 1	☒	☐	☐	T: 23.7℃ H: 50.3%
§15.247(a)(1)	20dB bandwidth	---	☐	☐	☒	--
§15.247(a)(1)	Carrier frequency separation	---	☐	☐	☒	--
§15.247(a)(1)(iii)	Number of hopping frequencies	---	☐	☐	☒	--
§15.247(a)(1)(iii)	Dwell Time	---	☐	☐	☒	--
§15.247(a)(2)	6dB bandwidth	Site 1	☒	☐	☐	T: 23.7℃ H: 50.3%
§15.247(e)	Power spectral density	Site 1	☒	☐	☐	T: 23.7℃ H: 50.3%
§15.247(d)	Spurious RF conducted emissions	Site 1	☒	☐	☐	T: 23.7℃ H: 50.3%
§15.247(d)	Band edge	Site 1	☒	☐	☐	T: 23.7℃ H: 50.3%
§15.247(d) & §15.205 & §15.209	Spurious radiated emissions for transmitter	Site 1	☒	☐	☐	T: 24.5℃ H: 53.2%
§15.203	Antenna requirement	See note 2	☒	☐	☐	--

Note 1: N/A=Not Applicable.
Note 2: The EUT uses a PCBA antenna, which gain Ant1: 2.3dBi and Ant2: 2.3dBi. In accordance to §15.203, it is considered sufficiently to comply with the provisions of this section.
Note 3: T: Temperature, H: Humidity

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6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: WNA-NPG-001 complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C rules.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

☐ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

☐ - **Does not** fulfill the general approval requirements.

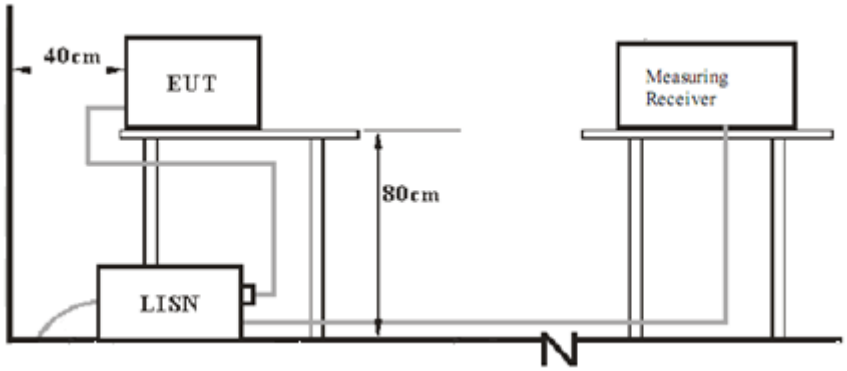
Sample Received Date:	2023-10-23
Testing Start Date:	2023-10-23
Testing End Date:	2023-11-04

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

Reviewed by:	Prepared by:	Tested by:
John Zhi	Sanvin Zheng	Carry Cai
Project Manager	Project Engineer	Test Engineer

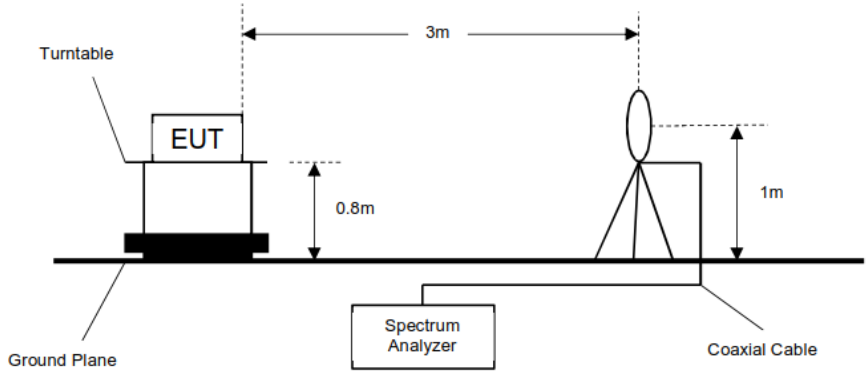
7 Test Setups

7.1 AC Power Line Conducted Emission test setups

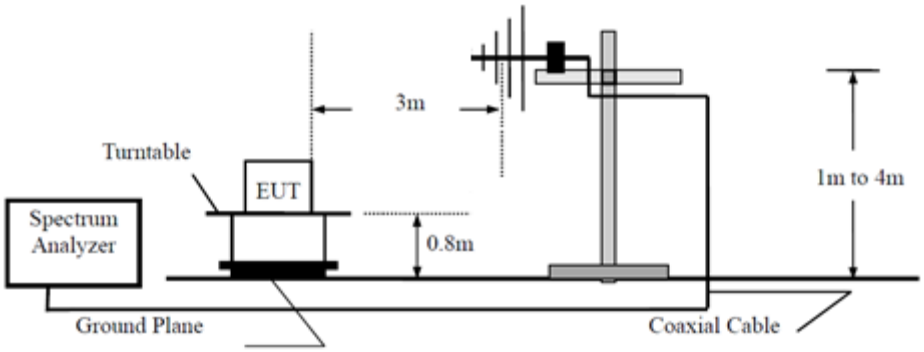


7.2 Radiated test setups

9kHz - 30MHz



30MHz - 1GHz



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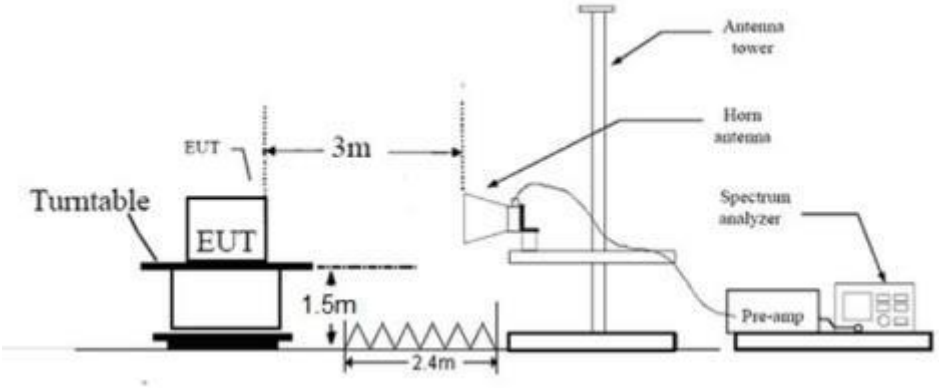
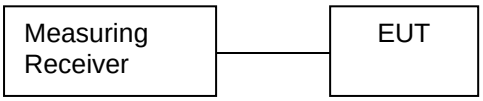
Above 1GHz



7.3 Conducted RF test setups



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8 Systems Test Configuration

Auxiliary Equipment Used during Test:

Description	Manufacturer	Model No.	Remark
Notebook	Lenovo	X220	---
Remote	Wuxi Weida Intelligent Electronics	NPG-RCU-001	Type name: Bluetooth voice remote control FCC ID: 2A7GQ-NPG-RCU-001

Cables Used During Test:

Cable	Length	Shielded/unshielded	With / without ferrite
HDMI Cable	150cm	Shielded	Without ferrite
Type-C Cable	100cm	Unshielded	Without ferrite

Test software information:

Test Software	adb.exe	
Mode	Setting TX Power	Packet Type
802.11b	Default	DSSS
802.11g	Default	OFDM
802.11n20	Default	OFDM
802.11n40	Default	OFDM

The system was configured to non-hopping mode.

Non-hopping mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power.

Through pre-scan all kind of modulation and all kind of rates, find the 1Mbps of rate is the worst case of 802.11b; the 6Mbps of rate is the worst case of 802.11g; the 13Mbps of rate is the worst case of 802.11n20 and 802.11n40, only the worst case transmitter rate data mode in recorded in the report.

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9 Technical Requirement

9.1 Conducted Emission

Test Method

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. Both sides of AC line were checked for maximum conducted interference.
6. The frequency range from 150 kHz to 30 MHz was searched.
7. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

Limit

According to §15.207, Conducted emissions limit as below:

Frequency MHz	QP Limit dBµV	AV Limit dBµV
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linearly with logarithm of the frequency

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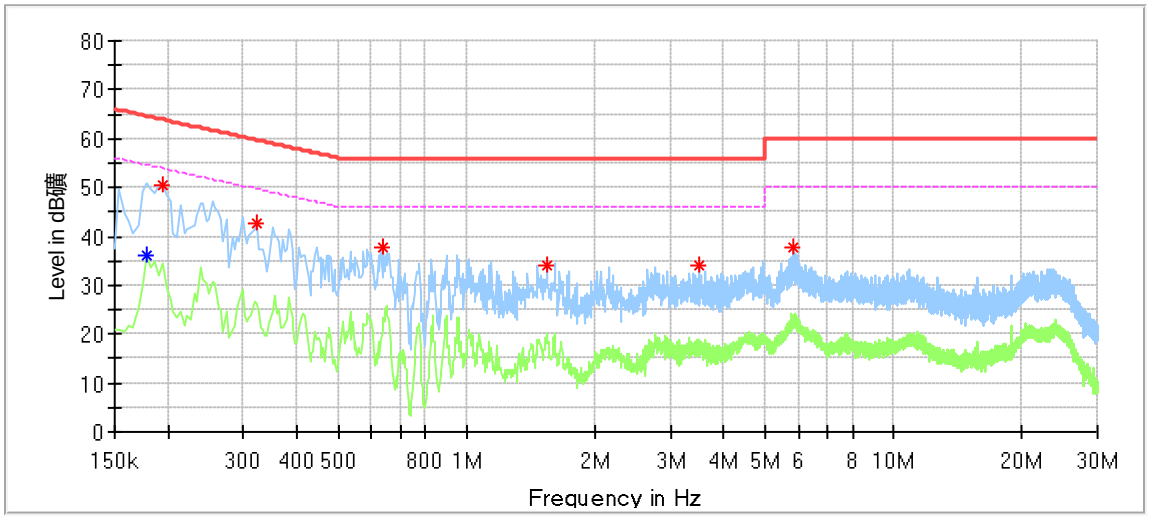
Conducted Emission

Product Type	:	Playground
M/N	:	NPG-001
Operating Condition	:	Transmitting mode
Test Specification	:	Line
Comment	:	AC 120V/60Hz



Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.178000	---	36.20	54.58	18.37	L1	9.54
0.194000	50.44	---	63.86	13.42	L1	9.54
0.322000	42.60	---	59.66	17.06	L1	9.57
0.638000	37.93	---	56.00	18.07	L1	9.60
1.546000	33.92	---	56.00	22.08	L1	9.61
3.494000	33.94	---	56.00	22.06	L1	9.68
5.802000	37.71	---	60.00	22.29	L1	9.78

Remark:
Max Peak/ Average=Reading Level + Correction Factor
Correction Factor=Cable Loss + LISN Factor
(The Reading Level is recorded by software which is not shown in the sheet)

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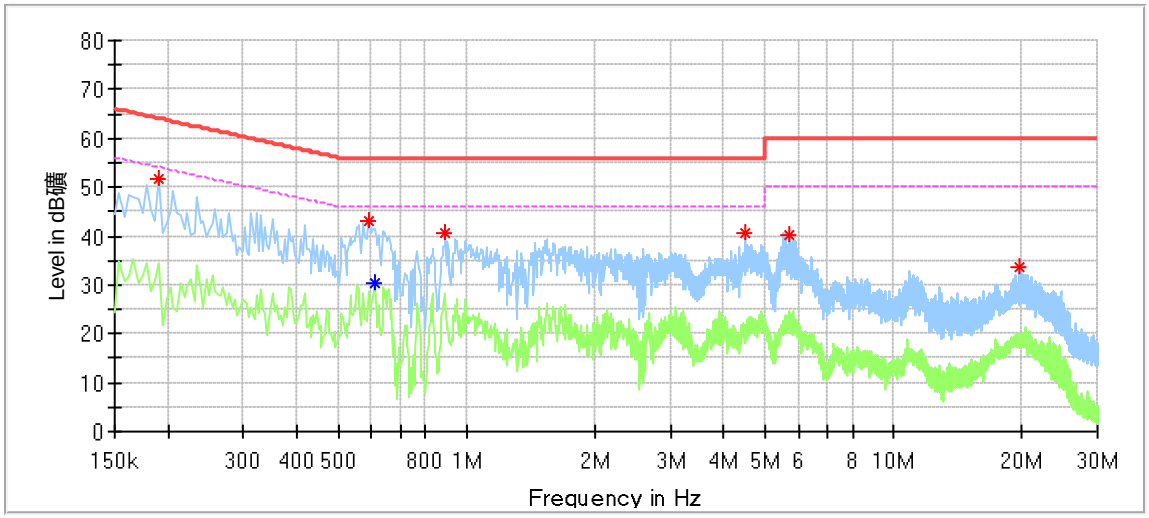
Conducted Emission

Product Type	:	Playground
M/N	:	NPG-001
Operating Condition	:	Transmitting mode
Test Specification	:	Neutral
Comment	:	AC 120V/60Hz



Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.190000	51.53	---	64.04	12.50	N	9.57
0.590000	42.90	---	56.00	13.10	N	9.63
0.610000	---	30.53	46.00	15.47	N	9.63
0.890000	40.59	---	56.00	15.41	N	9.63
4.482000	40.68	---	56.00	15.32	N	9.75
5.714000	40.15	---	60.00	19.85	N	9.81
19.694000	33.74	---	60.00	26.26	N	9.95

Remark:
Max Peak/ Average=Reading Level + Correction Factor
Correction Factor=Cable Loss + LISN Factor
(The Reading Level is recorded by software which is not shown in the sheet)

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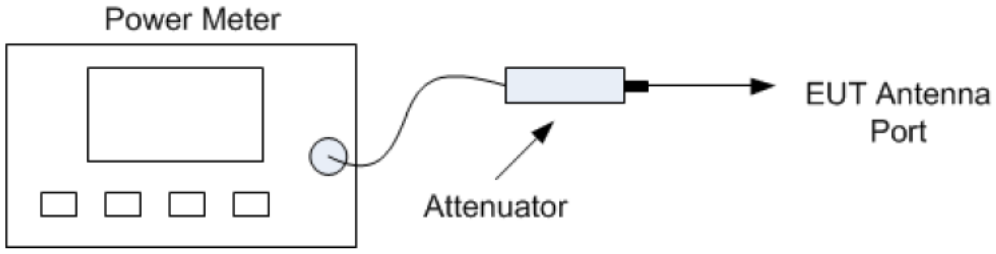
9.2 Conducted Peak Output Power

Test Method

1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
4) Measure the peak power of the transmitter. This measurement is a peak over both the ON and OFF periods of the transmitter.



Power meter conducted test setup

Limits

According to §15.247 (b) (3), conducted peak output power limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

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Test result as below table

802.11b_SISO modulation Test Result

Frequency (MHz)	Conducted Peak Output Power (dBm)		Result
	Ant 0	Ant 1	
Low channel 2412MHz	16.9	15.4	Pass
Middle channel 2437MHz	18.9	16.9	Pass
High channel 2462MHz	18.0	15.5	Pass

802.11g_ SISO modulation Test Result

Frequency (MHz)	Conducted Peak Output Power (dBm)		Result
	Ant 0	Ant 1	
Low channel 2412MHz	11.0	10.7	Pass
Middle channel 2437MHz	18.9	17.1	Pass
High channel 2462MHz	11.9	11.0	Pass

802.11n20_MIMO modulation Test Result

Frequency (MHz)	Conducted Peak Output Power (dBm)			Result
	Ant 0	Ant 1	SUM	
Low channel 2412MHz	9.4	11.2	13.4	Pass
Middle channel 2437MHz	17.1	17.7	20.4	Pass
High channel 2462MHz	9.8	11.0	13.5	Pass

802.11n40_MIMO modulation Test Result

Frequency (MHz)	Conducted Peak Output Power (dBm)			Result
	Ant 0	Ant 1	SUM	
Low channel 2422MHz	8.4	13.1	14.4	Pass
Middle channel 2437MHz	14.0	15.0	17.5	Pass
High channel 2452MHz	8.3	13.0	14.3	Pass

$Power^{SUM} = 10*Log(10^{\wedge(PowerAnt0/10)} + 10^{\wedge(PowerAnt1/10)})$

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9.3 6dB Bandwidth

Test Method for 6 dB Bandwidth

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
   RBW=100KHz, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
5. Allow the trace to stabilize, record the 6 dB Bandwidth value.

Limit

According to §15.247(a)(2), 6dB Bandwidth limit as below:

Limit [kHz]
≥500

802.11b modulation Test Result

Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant0	10.160	0.5	Pass
Middle channel 2437MHz	Ant0	10.160	0.5	Pass
High channel 2462MHz	Ant0	10.160	0.5	Pass

Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant1	10.160	0.5	Pass
Middle channel 2437MHz	Ant1	10.160	0.5	Pass
High channel 2462MHz	Ant1	10.160	0.5	Pass

802.11g modulation Test Result

Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant0	15.800	0.5	Pass
Middle channel 2437MHz	Ant0	16.120	0.5	Pass
High channel 2462MHz	Ant0	15.920	0.5	Pass

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Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant1	16.120	0.5	Pass
Middle channel 2437MHz	Ant1	15.600	0.5	Pass
High channel 2462MHz	Ant1	15.920	0.5	Pass

802.11n-HT20 modulation Test Result

Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant0	16.640	0.5	Pass
Middle channel 2437MHz	Ant0	16.640	0.5	Pass
High channel 2462MHz	Ant0	17.000	0.5	Pass

Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant1	16.400	0.5	Pass
Middle channel 2437MHz	Ant1	16.640	0.5	Pass
High channel 2462MHz	Ant1	16.640	0.5	Pass

802.11n-HT40 modulation Test Result

Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant0	35.280	0.5	Pass
Middle channel 2437MHz	Ant0	35.280	0.5	Pass
High channel 2462MHz	Ant0	35.600	0.5	Pass

Frequency (MHz)	Antenna	6dB bandwidth (MHz)	Limit (MHz)	Result
Low channel 2412MHz	Ant1	35.280	0.5	Pass
Middle channel 2437MHz	Ant1	35.280	0.5	Pass
High channel 2462MHz	Ant1	35.280	0.5	Pass

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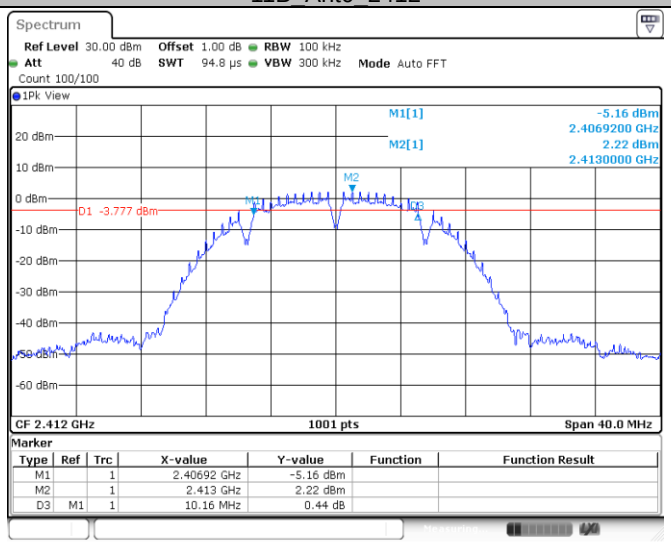
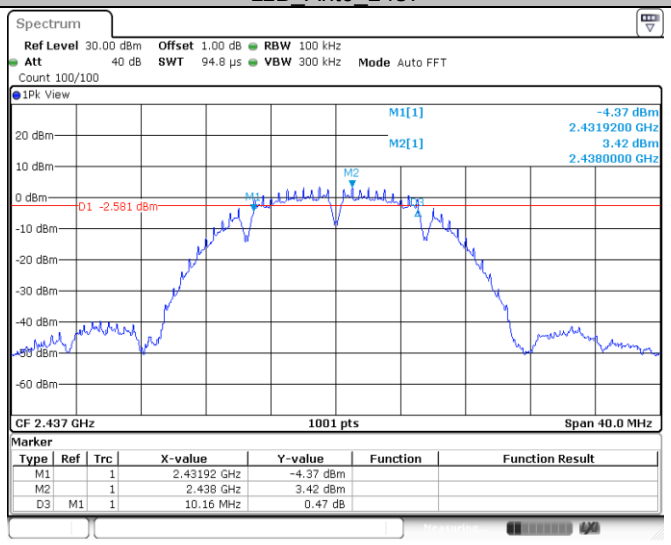
6 dB Bandwidth

11B_Ant0_2412



Date: 29.OCT.2023 16:11:00

11B_Ant0_2437



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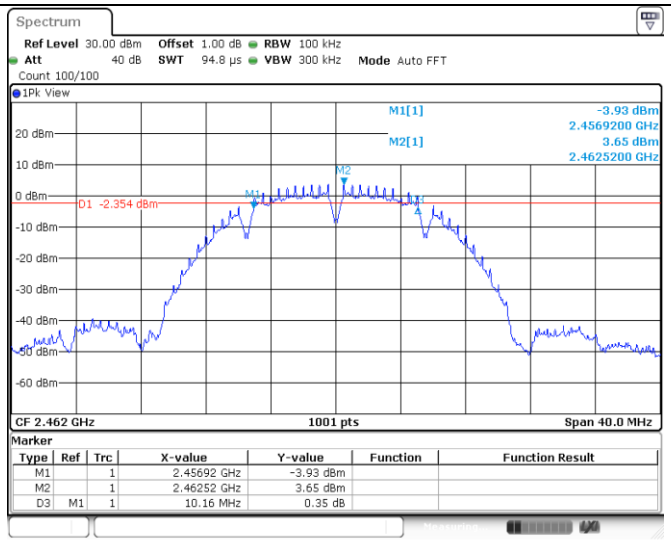

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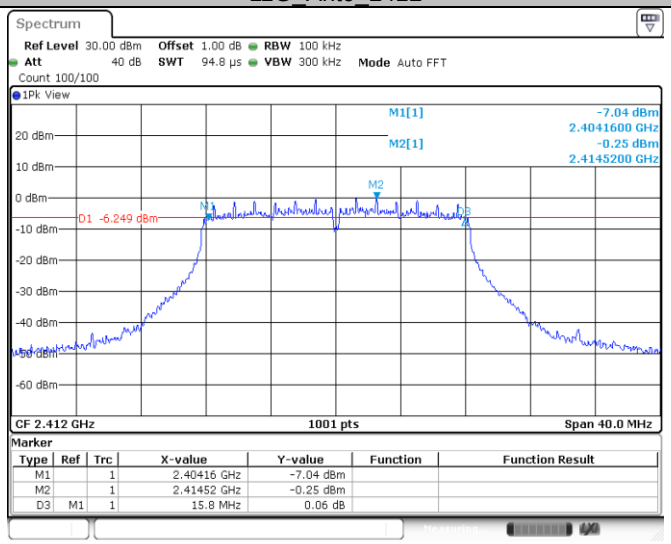

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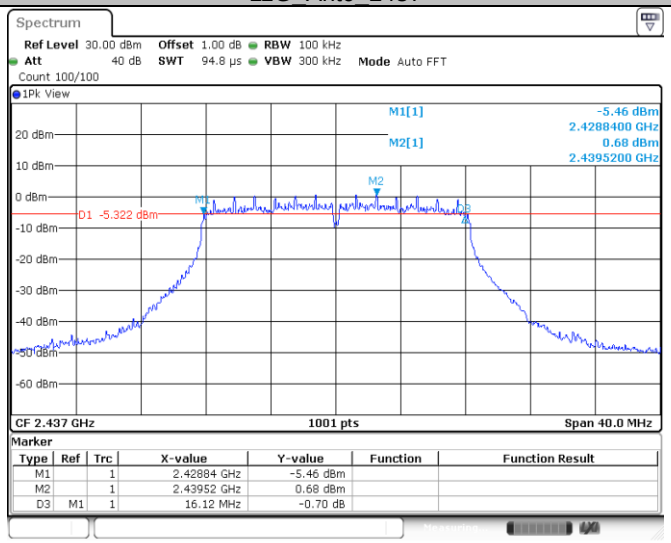

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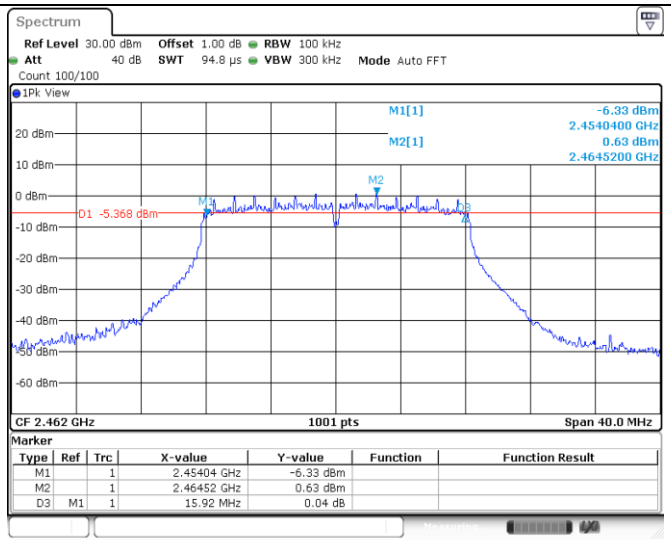

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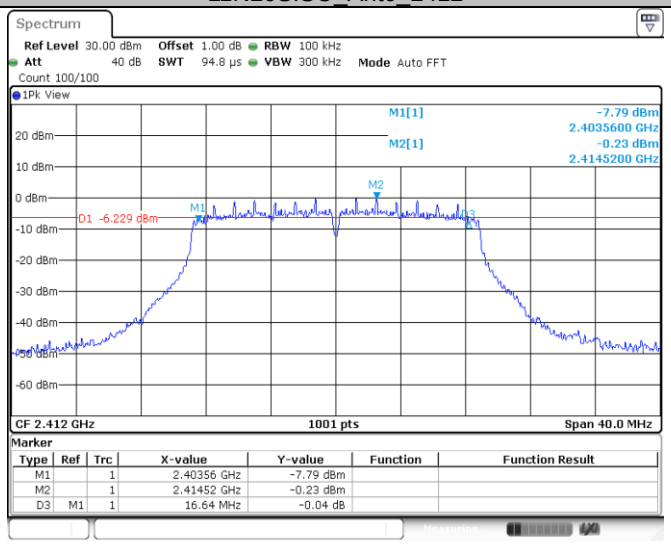
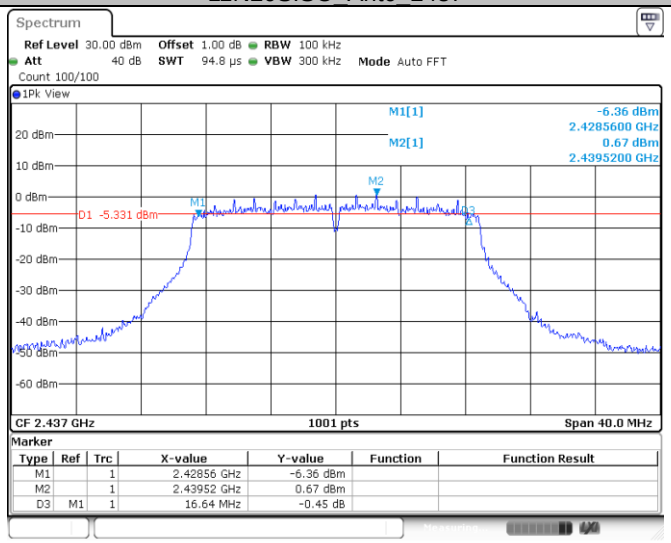
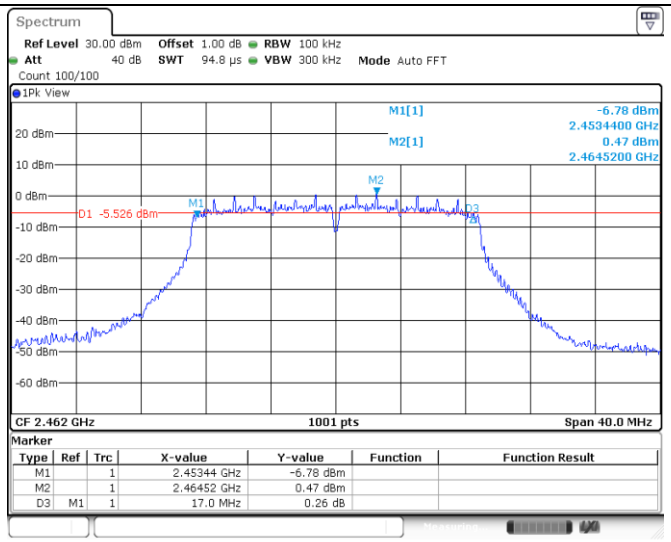


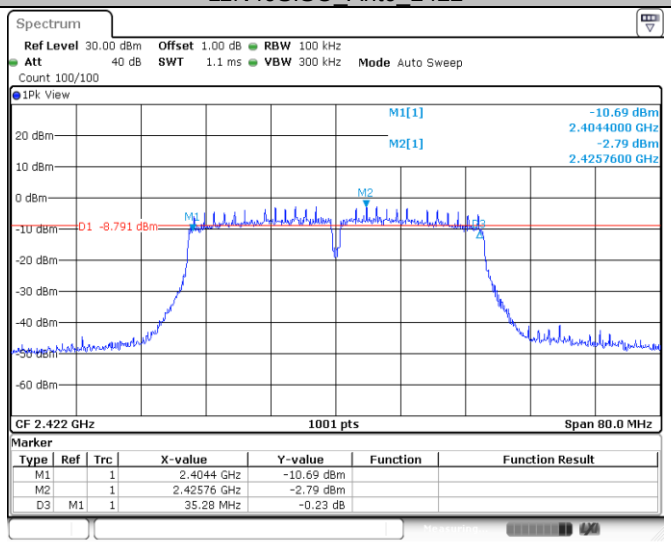
11N20SISO_Ant0_2437



11N20SISO_Ant0_2462



11N40SISO_Ant0_2422



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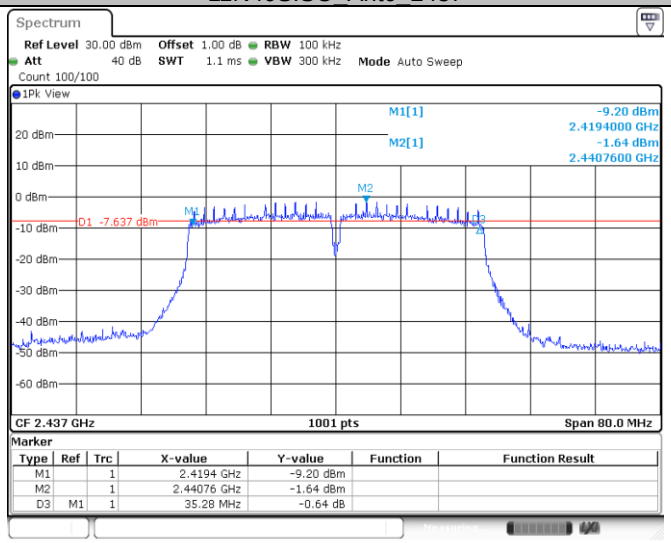
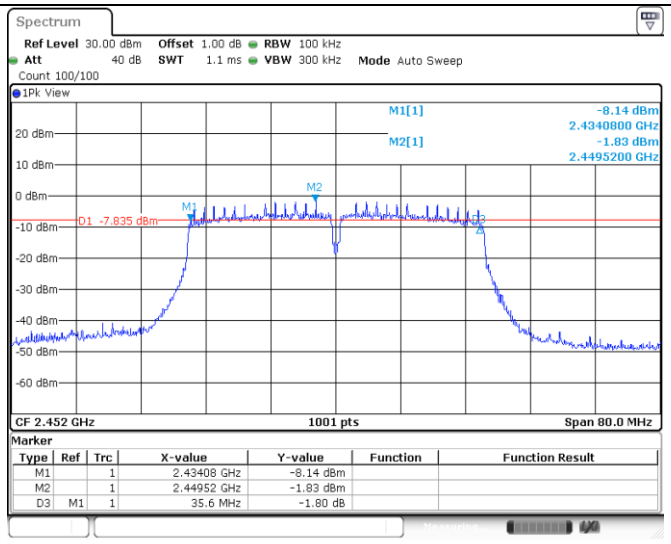
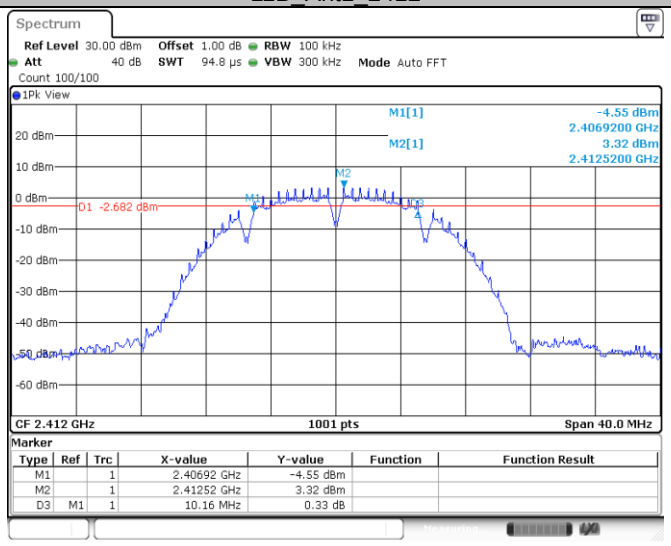


11N40SISO_Ant0_2452



Date: 29.OCT.2023 16:42:09

11B_Ant1_2412



Date: 29.OCT.2023 16:48:28

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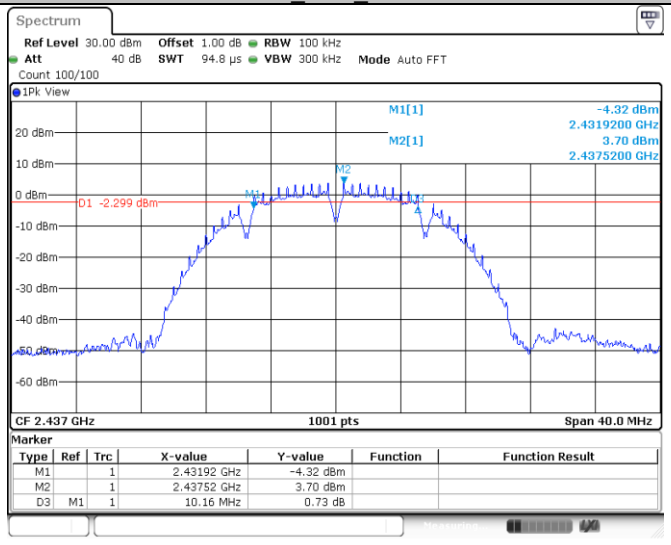

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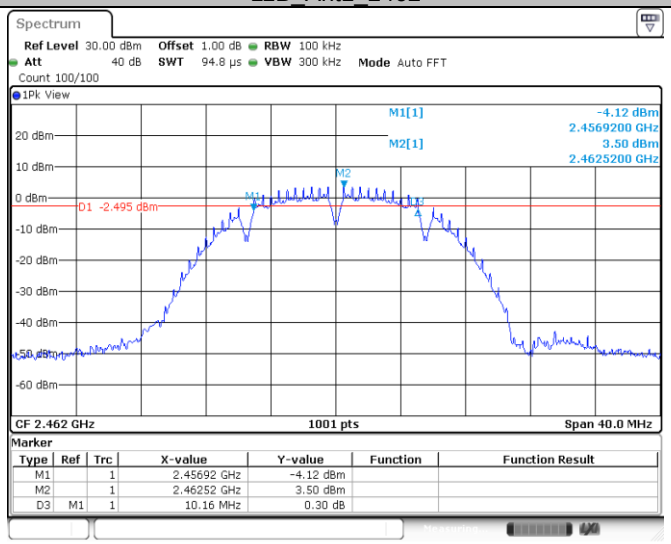
11B_Ant1_2462



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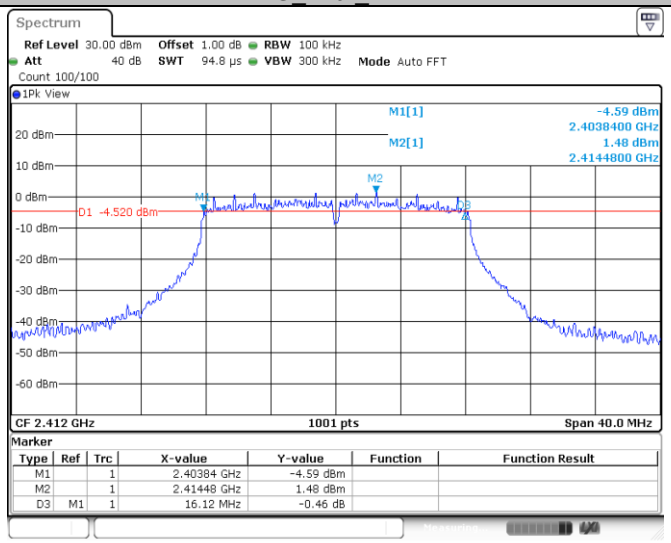
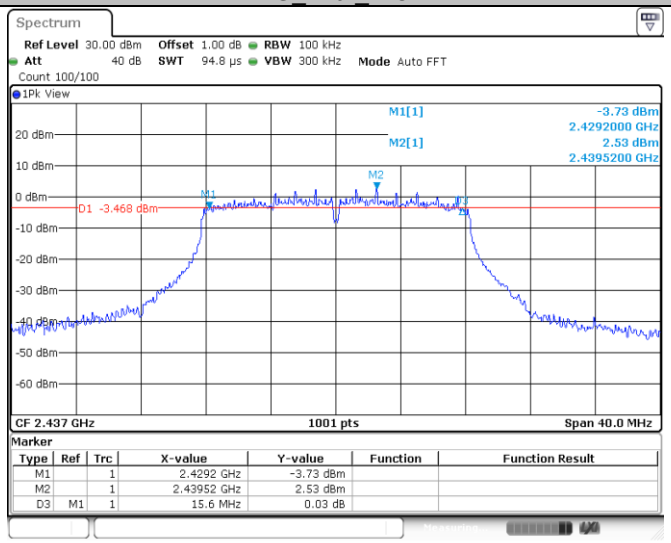
11G_Ant1_2412



Date: 29.OCT.2023 16:56:42

11G_Ant1_2437



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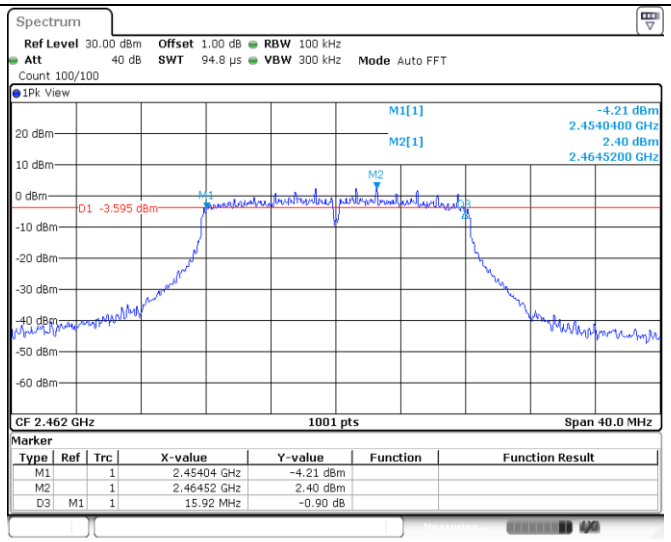
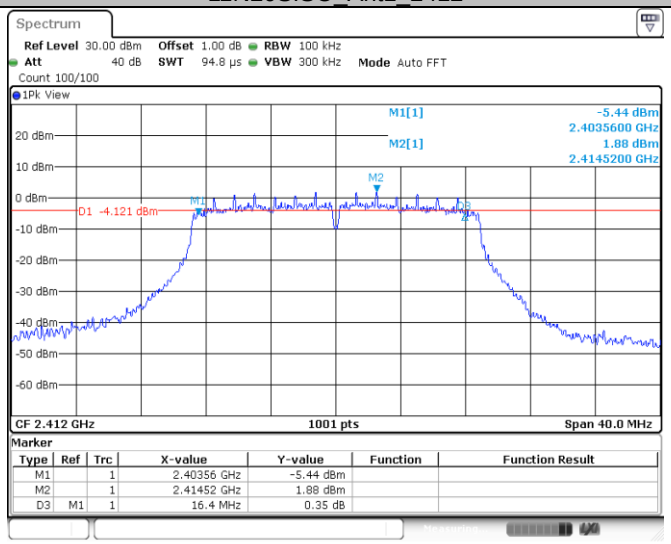


11N20SISO_Ant1_2412



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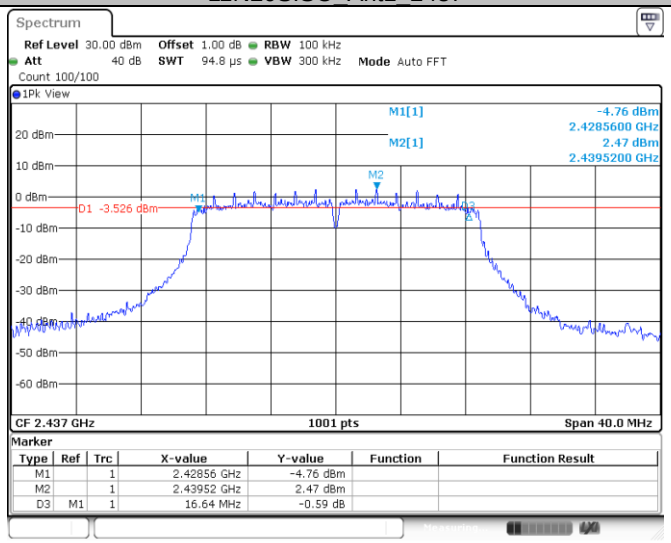

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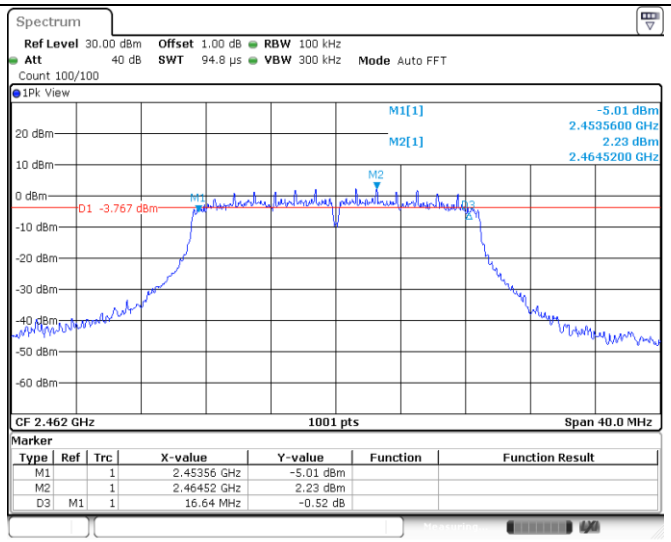
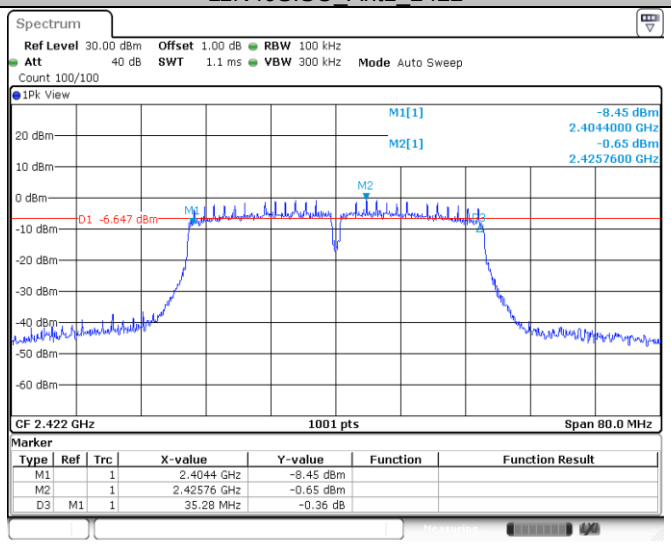


11N40SISO_Ant1_2422



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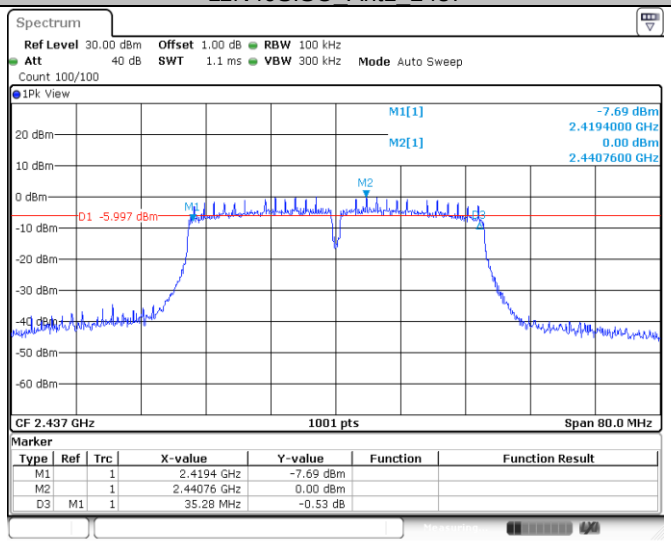

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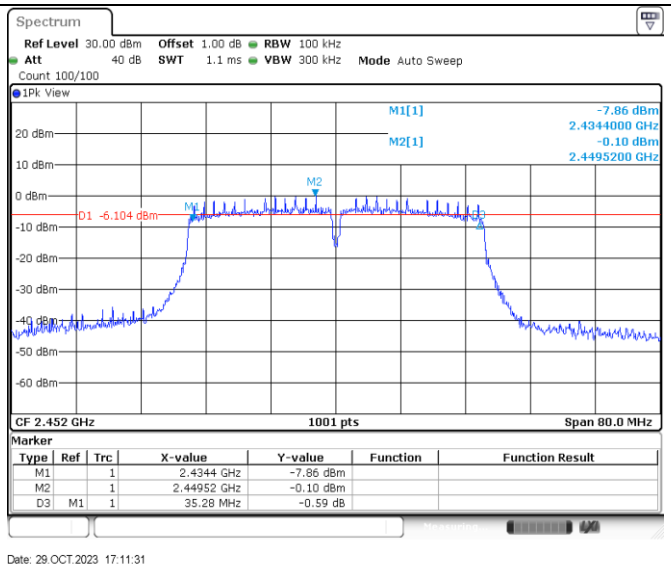
Spectrum
Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz
Att 40 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep
Count 100/100
1Pk View
M1[1] -7.86 dBm
2.4344000 GHz
M2[1] -0.10 dBm
2.4495200 GHz
D1 -6.104 dBm
CF 2.452 GHz
1001 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.4344 GHz -7.86 dBm
M2 1 2.44952 GHz -0.10 dBm
D3 M1 1 35.28 MHz -0.59 dB
Date: 29.OCT.2023 17:11:31

9.4 Power Spectral Density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW≥3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

Limit

According to §15.247(e), power spectral density limit as below:

Limit [dBm/3KHz]
≤8

802.11b modulation Test Result

Frequency (MHz)	Power spectral density (dBm/3KHz)		Limit (dBm)	Result
	Ant0	Ant1		
Low channel 2412MHz	-7.70	-7.79	8	Pass
Middle channel 2437MHz	-6.63	-7.37	8	Pass
High channel 2462MHz	-7.07	-7.83	8	Pass

802.11g modulation Test Result

Frequency (MHz)	Power spectral density (dBm/3KHz)		Limit (dBm)	Result
	Ant0	Ant1		
Low channel 2412MHz	-16.52	-15.00	8	Pass
Middle channel 2437MHz	-8.85	-8.46	8	Pass
High channel 2462MHz	-16.00	-14.89	8	Pass

802.11n-HT20 modulation Test Result

Frequency (MHz)	Power spectral density (dBm/3KHz)			Limit (dBm)	Result
	Ant0	Ant1	SUM		
Low channel 2412MHz	-15.88	-14.43	-12.08	8	Pass
Middle channel 2437MHz	-8.34	-7.96	-5.14	8	Pass
High channel 2462MHz	-15.49	-14.38	-11.89	8	Pass

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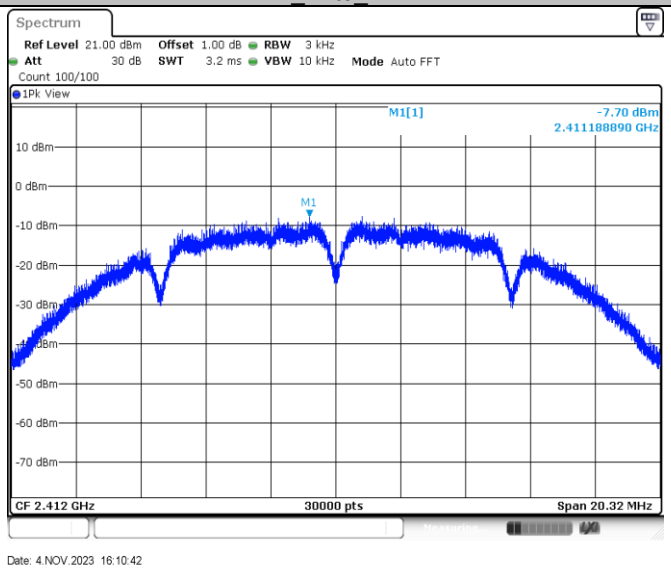
802.11n-HT40 modulation Test Result

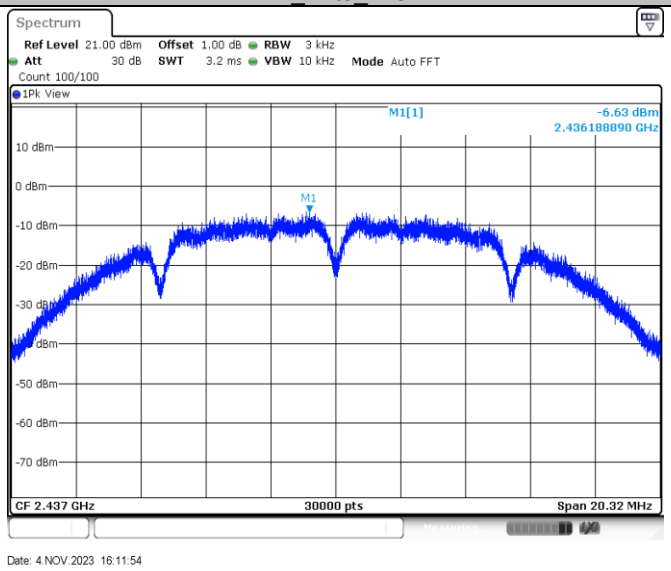
Frequency (MHz)	Power spectral density (dBm/3KHz)			Limit (dBm)	Result
	Ant0	Ant1	SUM		
Low channel 2422MHz	-18.14	-16.67	-14.33	8	Pass
Middle channel 2437MHz	-13.78	-12.95	-10.33	8	Pass
High channel 2452MHz	-17.19	-16.44	-13.79	8	Pass

PSD^{SUM} = 10*Log(10^(PSDAnt0/10) + 10^(PSDAnt1/10))

11B_Ant0_2412



11B_Ant0_2437



11B_Ant0_2462

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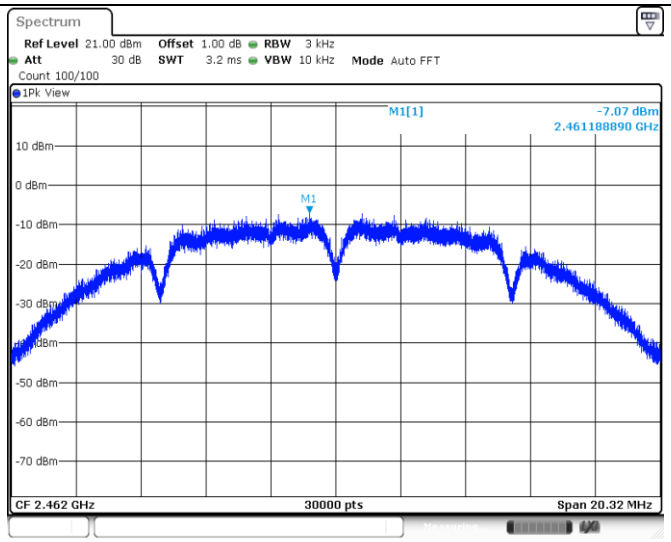
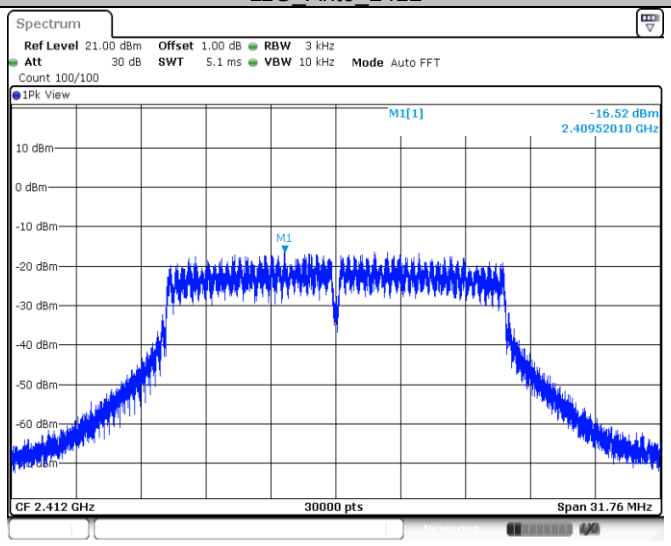
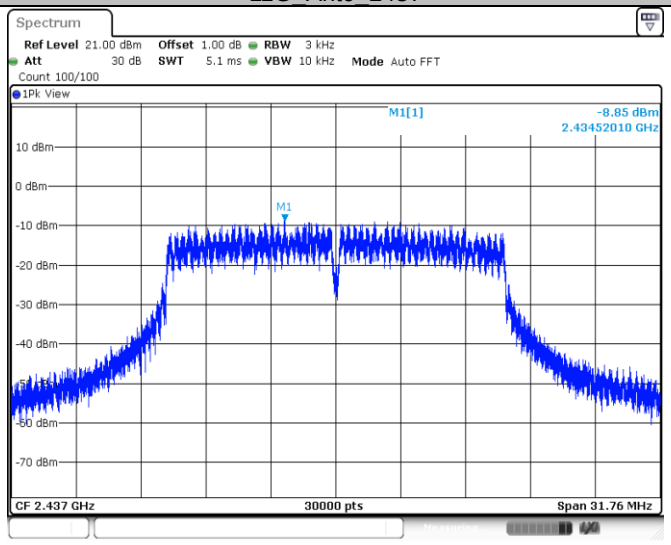


11G_Ant0_2412



11G_Ant0_2437



11G_Ant0_2462

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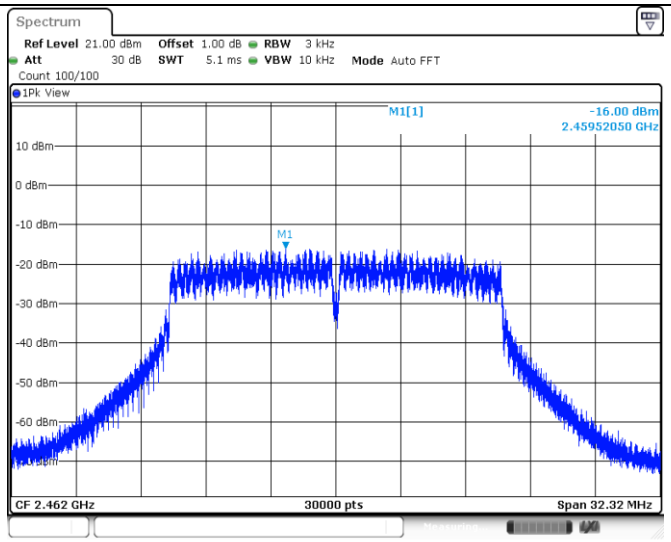
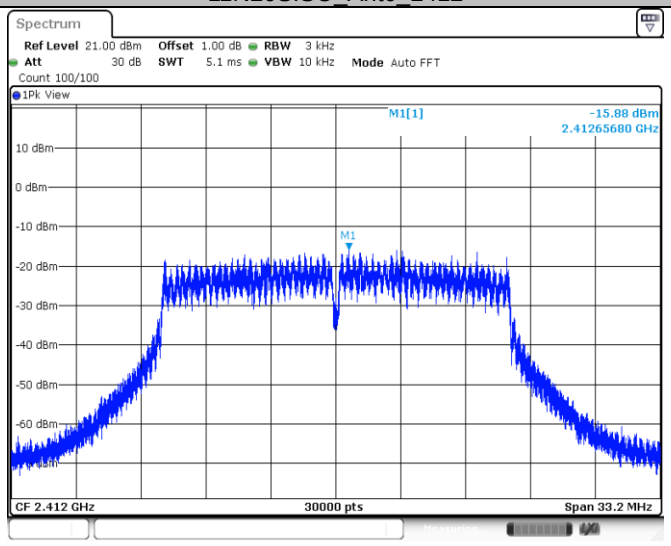


11N20SISO_Ant0_2412



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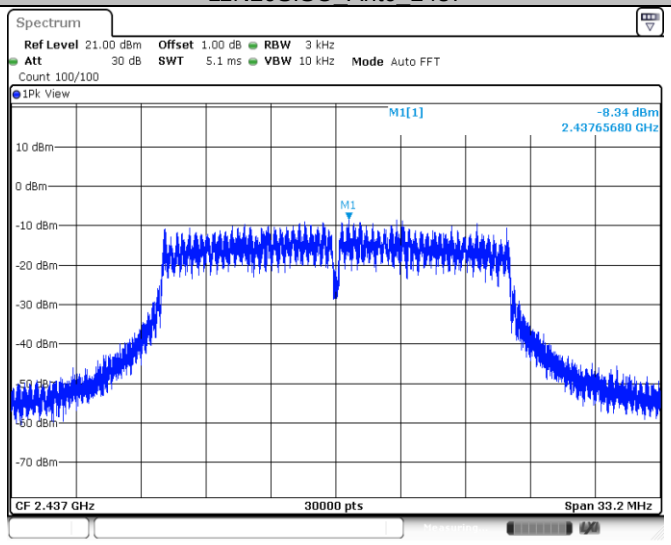

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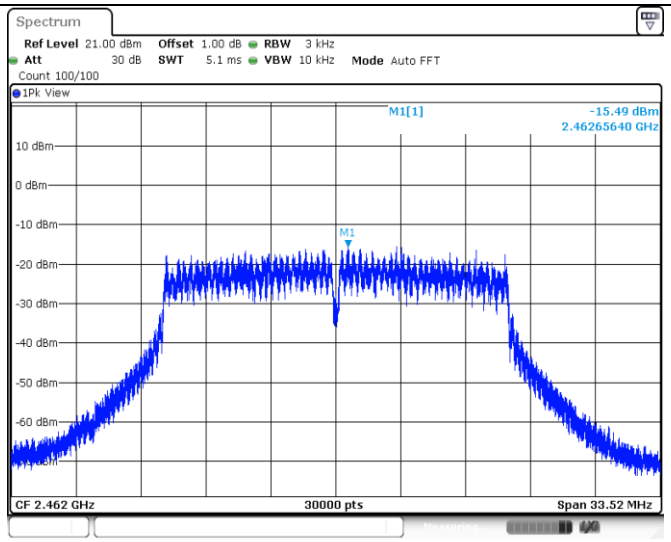

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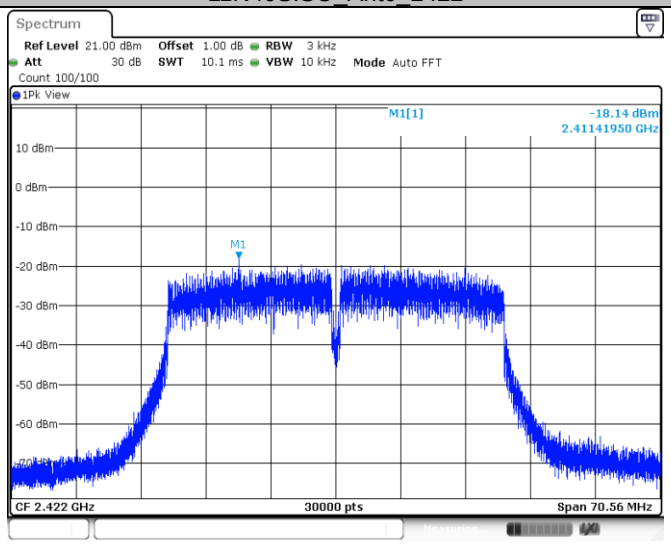

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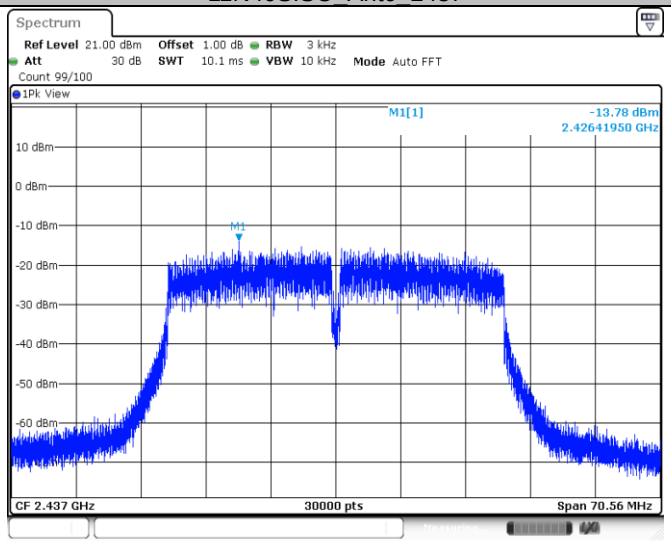

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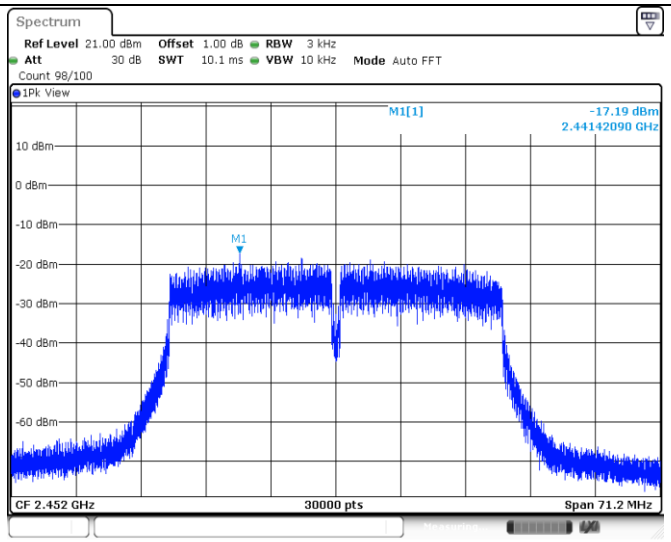
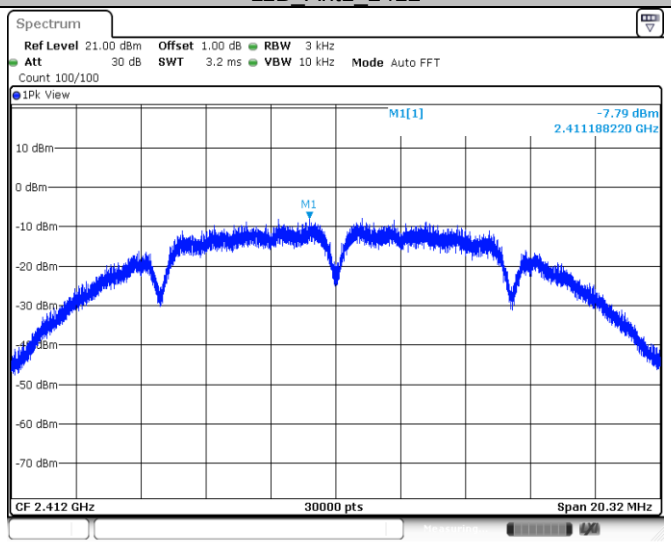
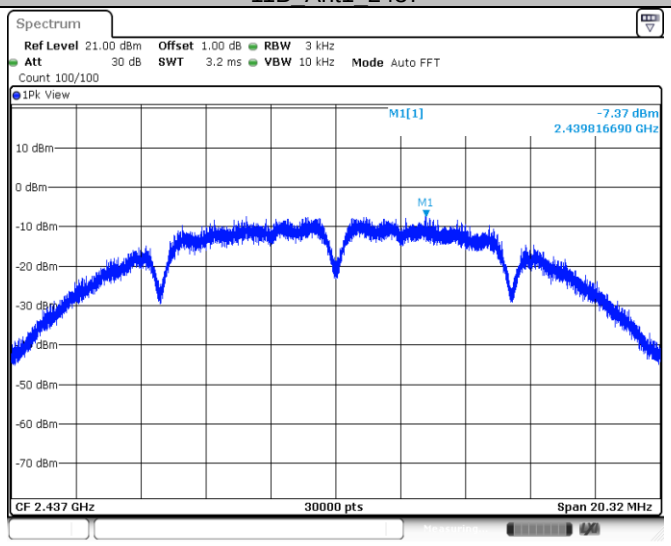


11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462

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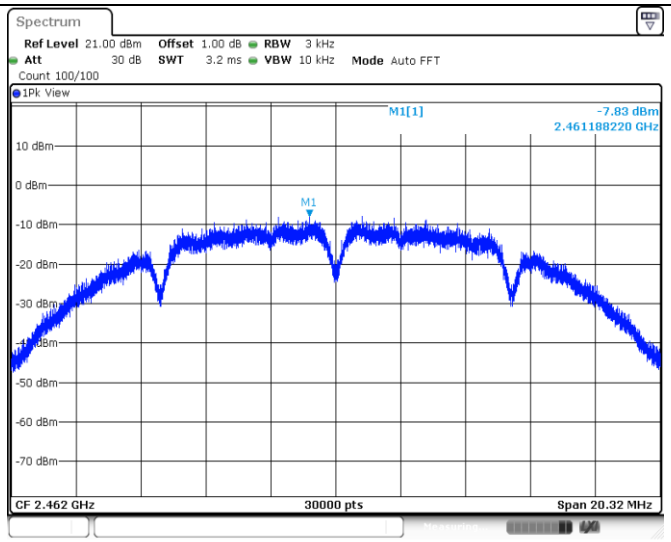
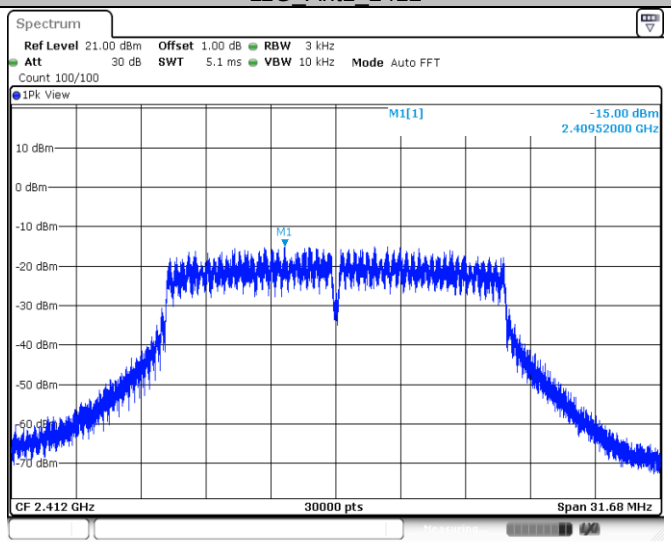


11G_Ant1_2412



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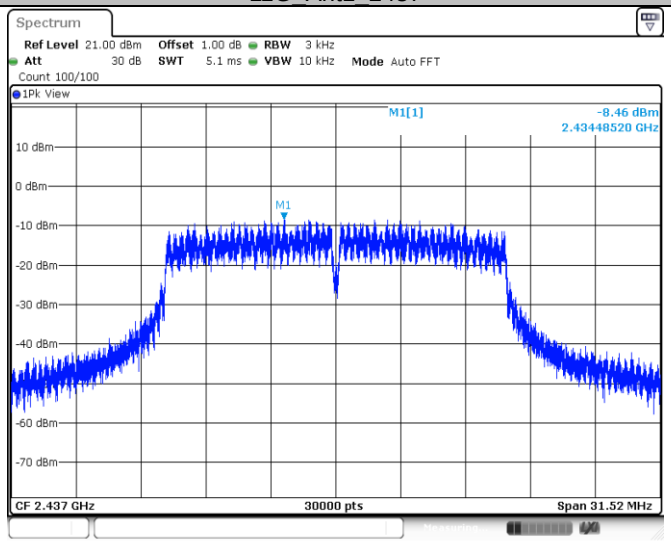

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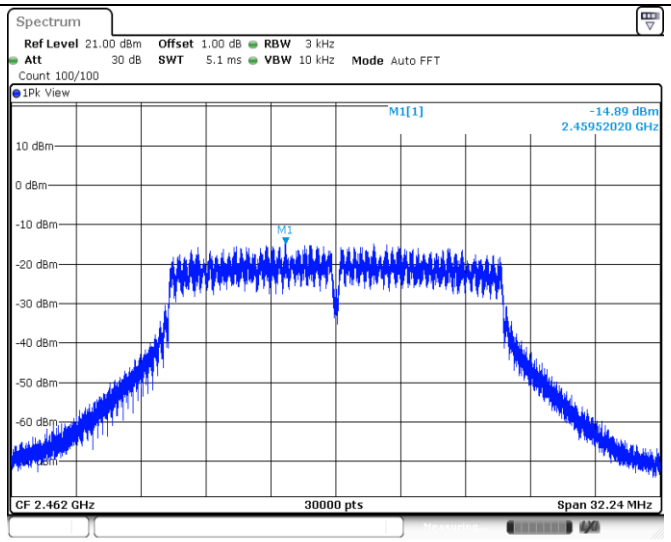

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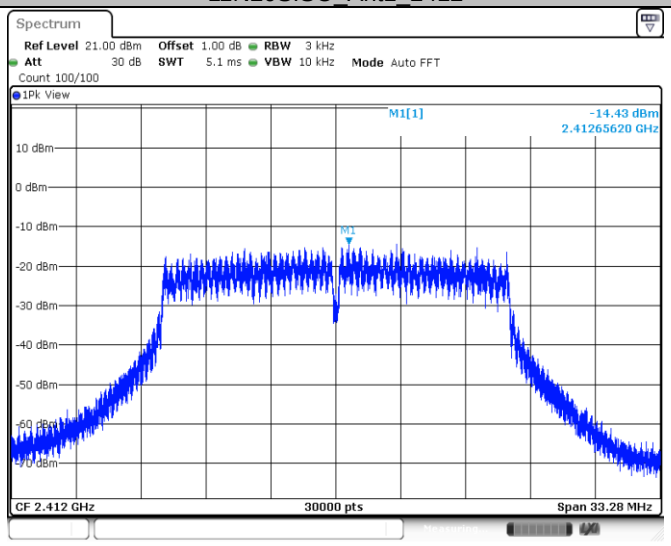

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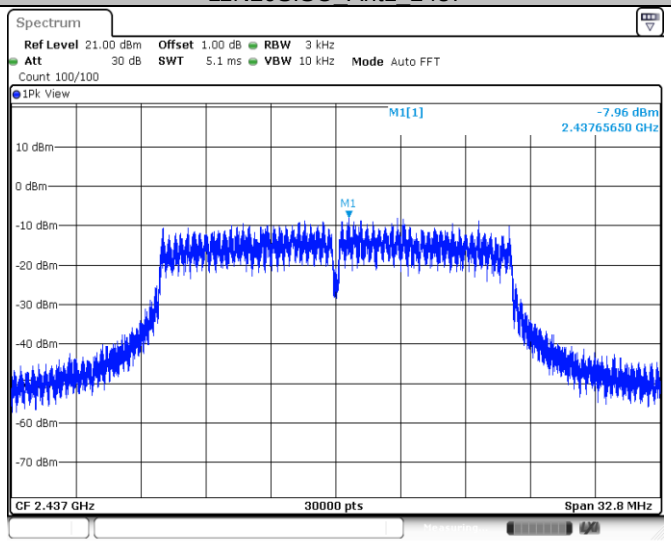
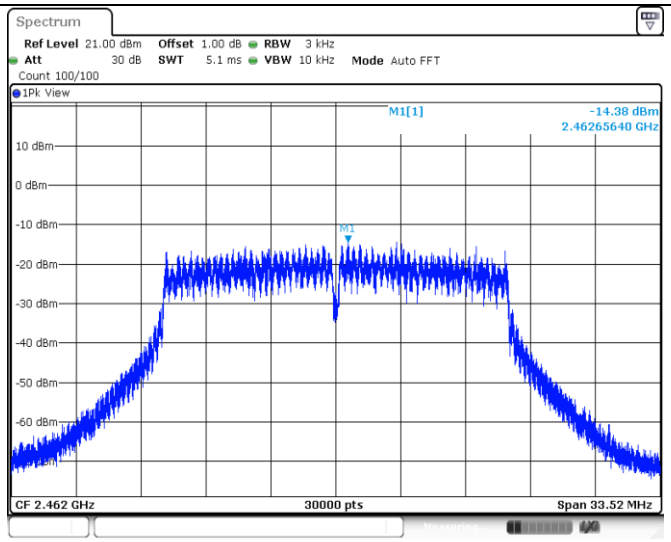
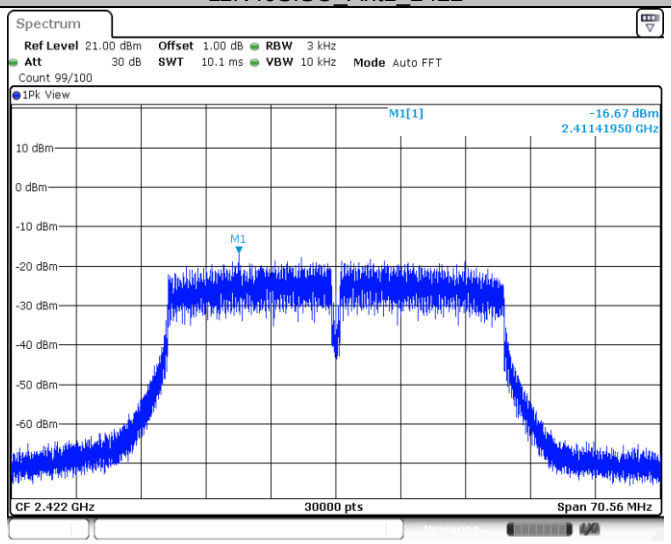


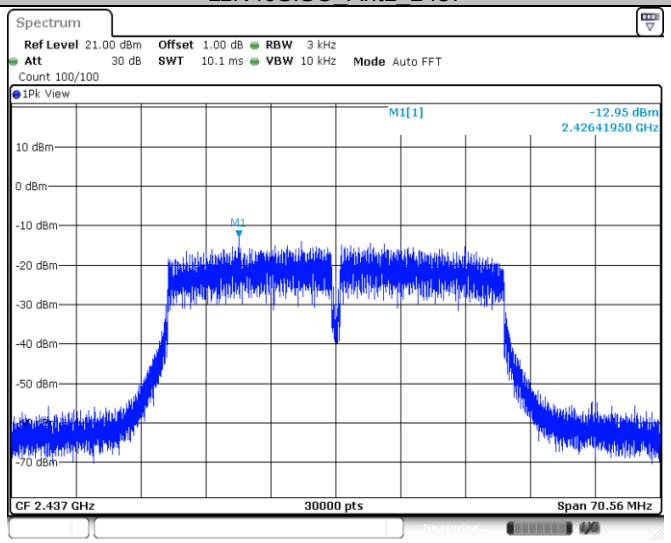
11N20SISO_Ant1_2462



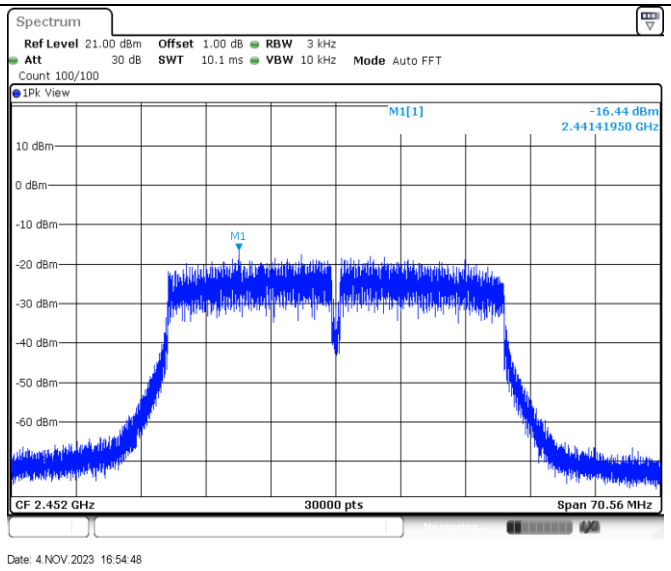
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452


Spectrum
Ref Level 21.00 dBm Offset 1.00 dB RBW 3 kHz
Att 30 dB SWT 10.1 ms VBW 10 kHz Mode Auto FFT
Count 100/100
1Pk View
M1[1] -16.44 dBm
2.44141950 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
M1
CF 2.452 GHz
30000 pts
Span 70.56 MHz
Date: 4.NOV.2023 16:54:48

9.5 Spurious RF Conducted Emissions

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
   Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10^{th} harmonic. Typically, several plots are required to cover this entire span.
   RBW = 100 kHz, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
5. The level displayed must comply with the limit specified in this Section. Submit these plots.
6. Repeat above procedures until all frequencies measured were complete.

Limit

According to §15.247(d), spurious RF conducted emissions limit as below:

Frequency Range MHz	Limit (dBc)
30-25000	-20

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Spurious RF conducted emissions

Test Mode	Antenna	Channel (MHz)	Frequency Range (MHz)	Reference Level	Result (dBm)	Limit (dBm)	Verdict
11B	Ant0	2412	Reference	2.72	2.72	---	PASS
			30~1000	30~1000	-67.84	<=-17.28	PASS
			1000~26500	1000~26500	-47.98	<=-17.28	PASS
		2437	Reference	3.39	3.39	---	PASS
			30~1000	30~1000	-68.31	<=-16.61	PASS
			1000~26500	1000~26500	-51.82	<=-16.61	PASS
		2462	Reference	3.53	3.53	---	PASS
			30~1000	30~1000	-68.44	<=-16.47	PASS
			1000~26500	1000~26500	-50.34	<=-16.47	PASS
11G	Ant0	2412	Reference	-1.71	-1.71	---	PASS
			30~1000	30~1000	-67.81	<=-21.71	PASS
			1000~26500	1000~26500	-52.27	<=-21.71	PASS
		2437	Reference	0.85	0.85	---	PASS
			30~1000	30~1000	-67.89	<=-19.15	PASS
			1000~26500	1000~26500	-51.96	<=-19.15	PASS
		2462	Reference	-1.21	-1.21	---	PASS
			30~1000	30~1000	-67.89	<=-21.21	PASS
			1000~26500	1000~26500	-51.45	<=-21.21	PASS
11N20	Ant0	2412	Reference	-0.26	-0.26	---	PASS
			30~1000	30~1000	-68.65	<=-20.26	PASS
			1000~26500	1000~26500	-40.36	<=-20.26	PASS
		2437	Reference	0.81	0.81	---	PASS
			30~1000	30~1000	-67.71	<=-19.19	PASS
			1000~26500	1000~26500	-52.91	<=-19.19	PASS
		2462	Reference	0.74	0.74	---	PASS
			30~1000	30~1000	-68.3	<=-19.26	PASS
			1000~26500	1000~26500	-52.03	<=-19.26	PASS
11N40	Ant0	2422	Reference	-3.34	-3.34	---	PASS
			30~1000	30~1000	-68.47	<=-23.34	PASS
			1000~26500	1000~26500	-43.63	<=-23.34	PASS
		2437	Reference	-2.04	-2.04	---	PASS
			30~1000	30~1000	-68.43	<=-22.04	PASS
			1000~26500	1000~26500	-50.36	<=-22.04	PASS
		2452	Reference	-2.09	-2.09	---	PASS
			30~1000	30~1000	-68.46	<=-22.09	PASS
			1000~26500	1000~26500	-50.87	<=-22.09	PASS
11B	Ant1	2412	Reference	3.04	3.04	---	PASS
			30~1000	30~1000	-68.39	<=-16.96	PASS
			1000~26500	1000~26500	-51.96	<=-16.96	PASS
		2437	Reference	3.73	3.73	---	PASS
			30~1000	30~1000	-68.15	<=-16.27	PASS
			1000~26500	1000~26500	-52.31	<=-16.27	PASS
		2462	Reference	3.67	3.67	---	PASS
			30~1000	30~1000	-67.97	<=-16.33	PASS
			1000~26500	1000~26500	-52.3	<=-16.33	PASS
11G	Ant1	2412	Reference	1.76	1.76	---	PASS
			30~1000	30~1000	-67.54	<=-18.24	PASS
			1000~26500	1000~26500	-34.94	<=-18.24	PASS
		2437	Reference	2.19	2.19	---	PASS
			30~1000	30~1000	-68.57	<=-17.81	PASS
			1000~26500	1000~26500	-52.19	<=-17.81	PASS
		2462	Reference	2.17	2.17	---	PASS
			30~1000	30~1000	-68.36	<=-17.83	PASS
			1000~26500	1000~26500	-52.24	<=-17.83	PASS
11N20	Ant1	2412	Reference	1.28	1.28	---	PASS
			30~1000	30~1000	-67.8	<=-18.72	PASS
			1000~26500	1000~26500	-36.09	<=-18.72	PASS
		2437	Reference	2.34	2.34	---	PASS
			30~1000	30~1000	-68.22	<=-17.66	PASS

			1000~26500	1000~26500	-52.36	<=-17.66	PASS
		2462	Reference	1.95	1.95	---	PASS
			30~1000	30~1000	-67.79	<=-18.05	PASS
			1000~26500	1000~26500	-52.19	<=-18.05	PASS
11N40	Ant1	2422	Reference	-1.09	-1.09	---	PASS
			30~1000	30~1000	-68.39	<=-21.09	PASS
			1000~26500	1000~26500	-38.19	<=-21.09	PASS
		2437	Reference	-0.59	-0.59	---	PASS
			30~1000	30~1000	-68.19	<=-20.59	PASS
			1000~26500	1000~26500	-46.3	<=-20.59	PASS
		2452	Reference	-1.58	-1.58	---	PASS
			30~1000	30~1000	-68.23	<=-21.58	PASS
			1000~26500	1000~26500	-46.91	<=-21.58	PASS

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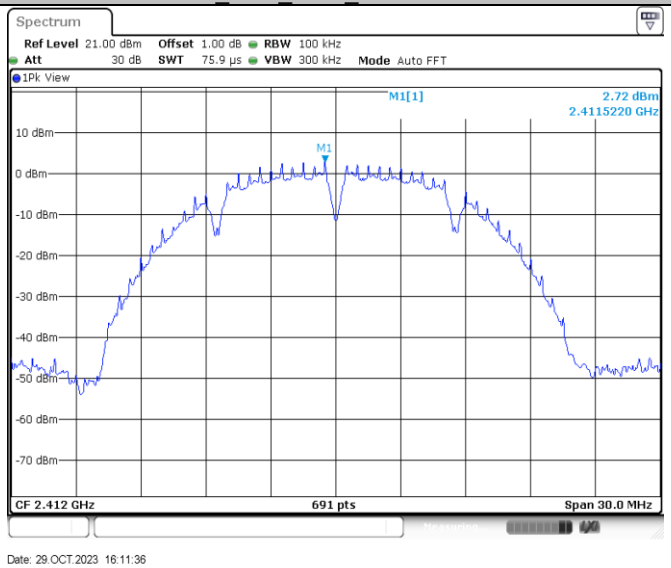
11B_Ant0_2412_0~Reference



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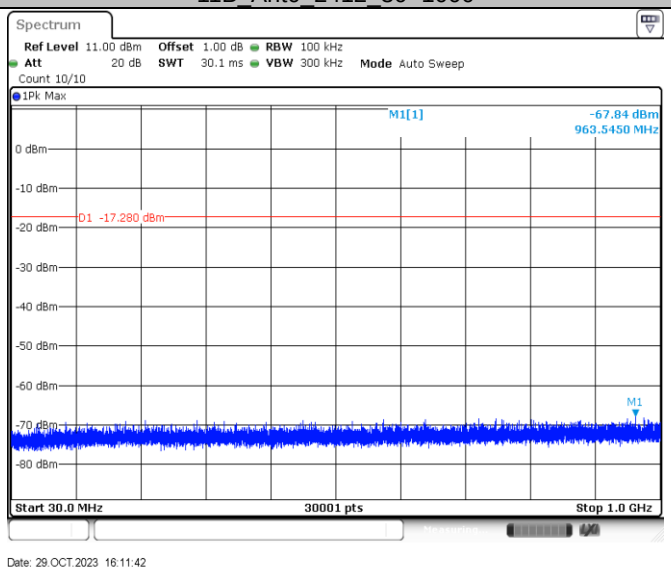

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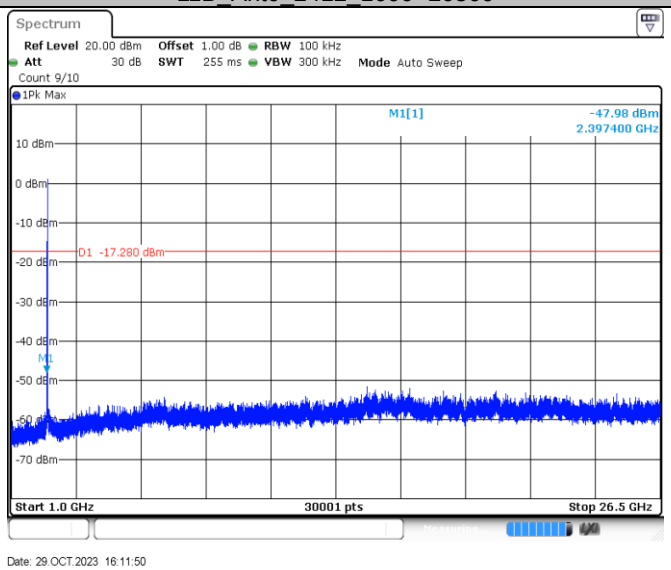

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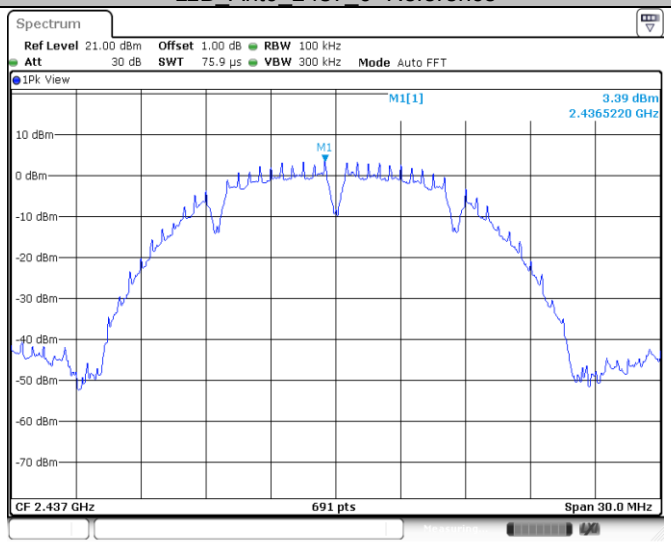 Date: 29.OCT.2023 16:13:16
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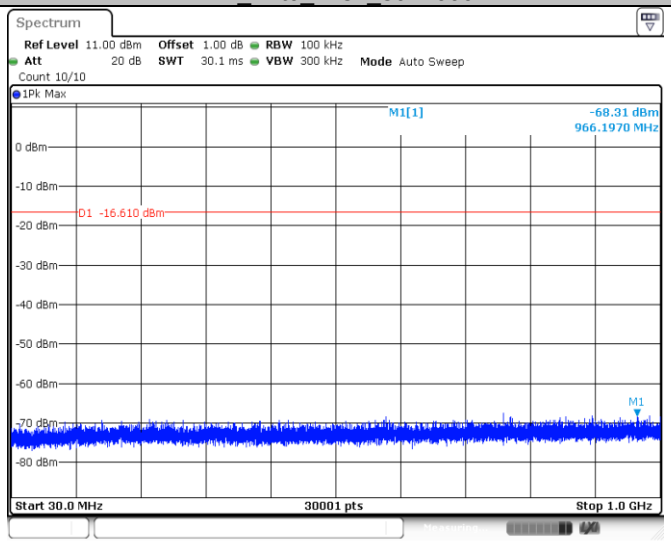 Date: 29.OCT.2023 16:13:22
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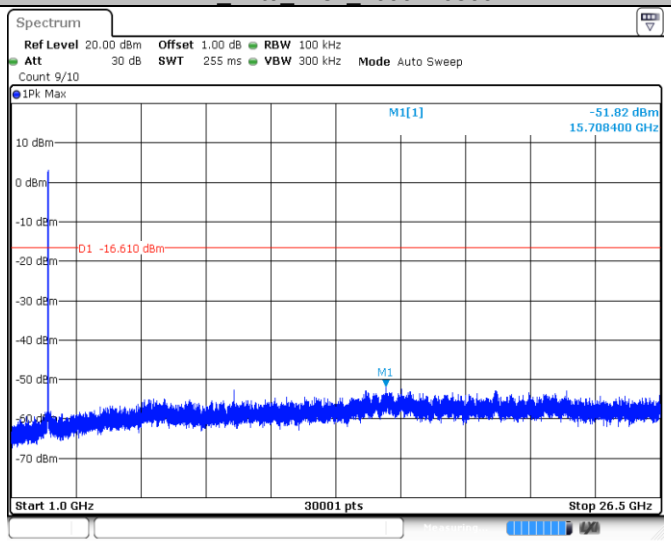 Date: 29.OCT.2023 16:13:30
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TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
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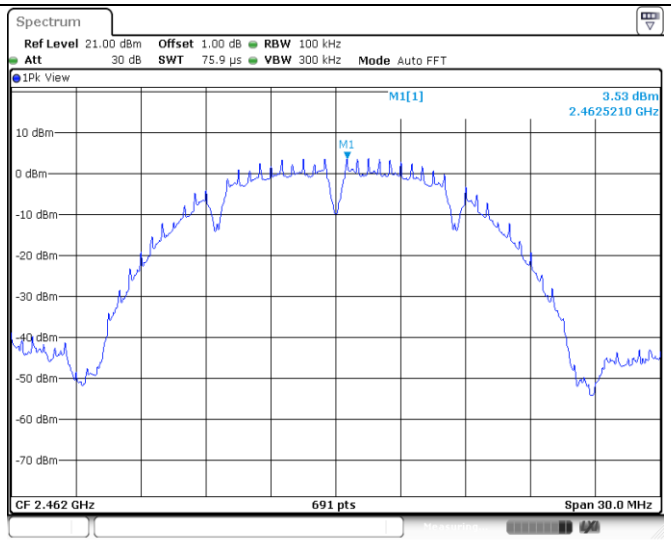
Shenzhen, Guangdong, China Tel. +86 755 8828 6998, Fax: +86 755 8828 5299



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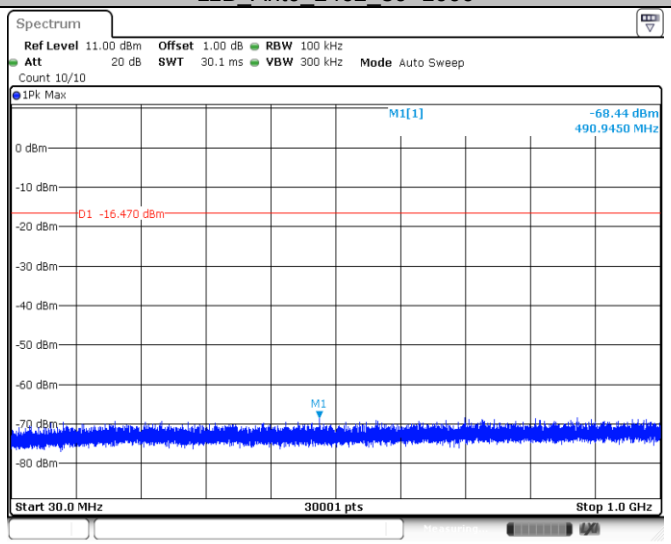

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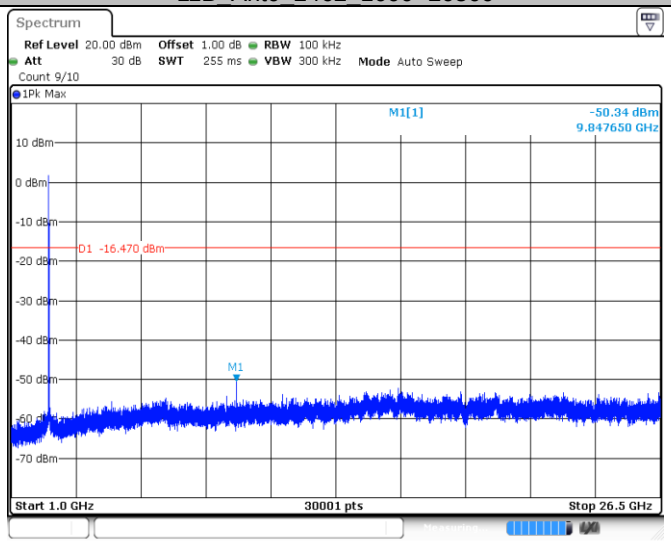

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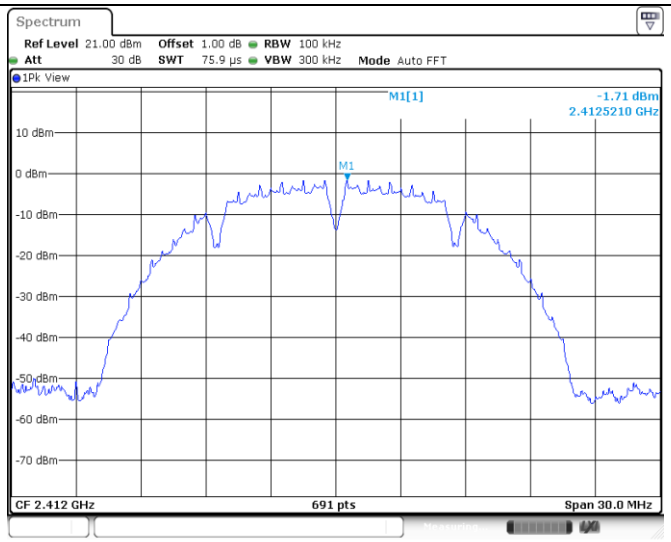

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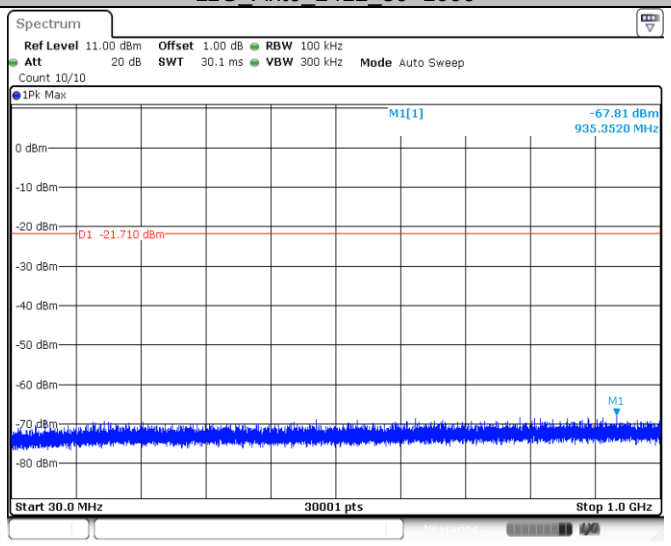

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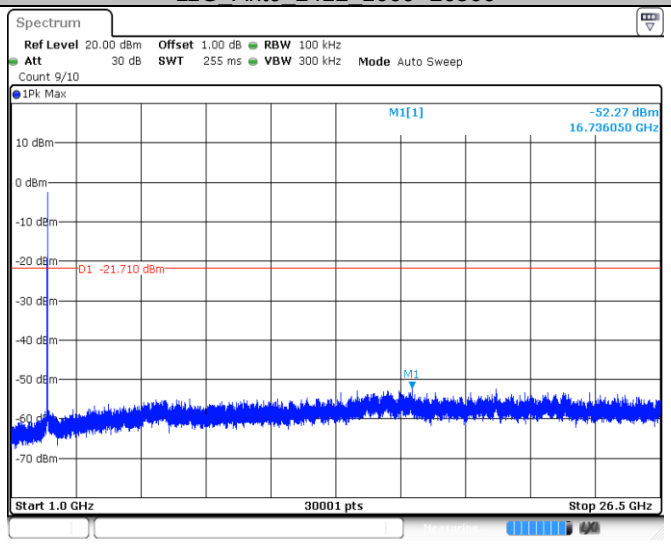

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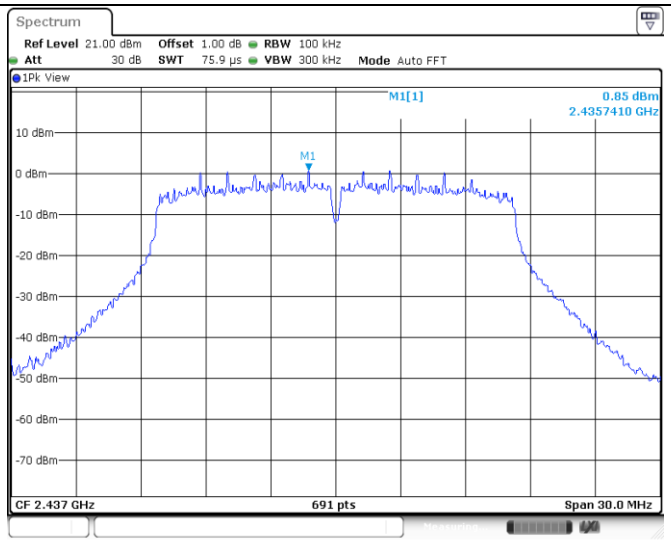

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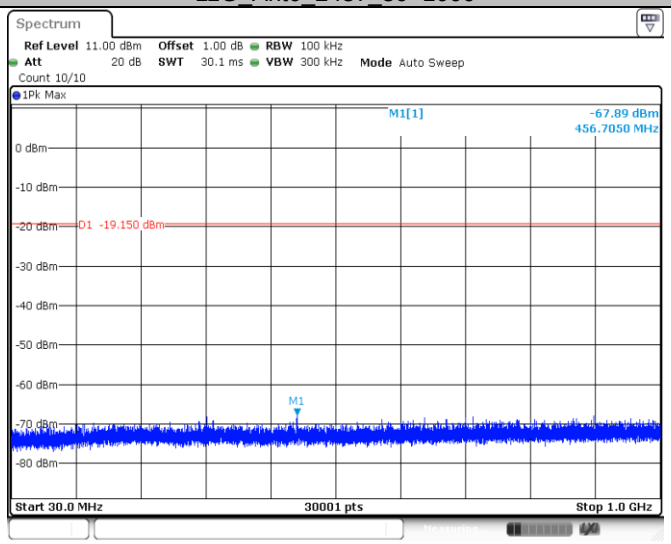

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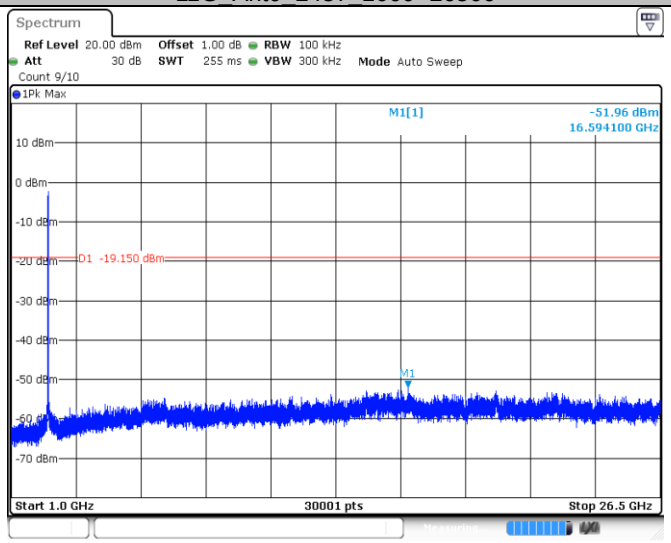

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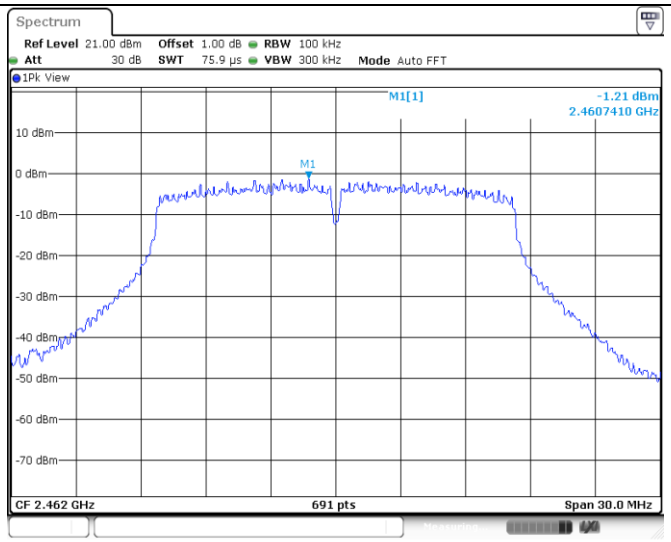

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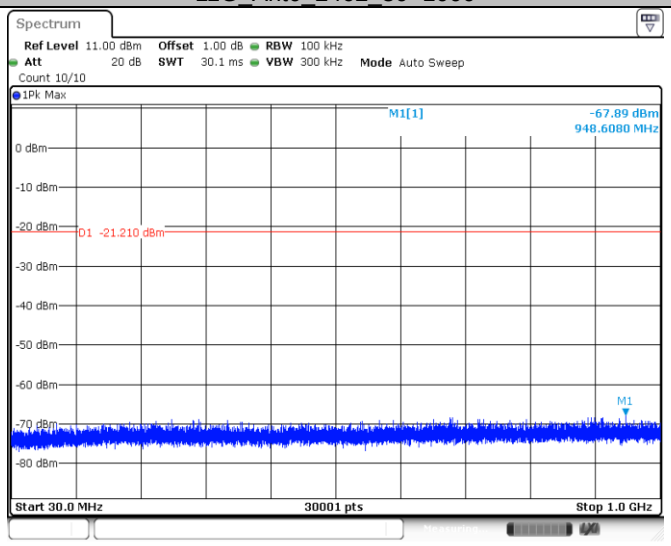

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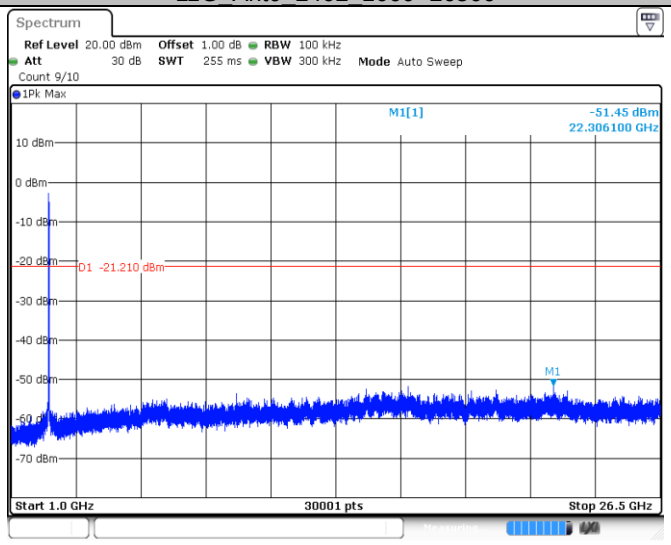

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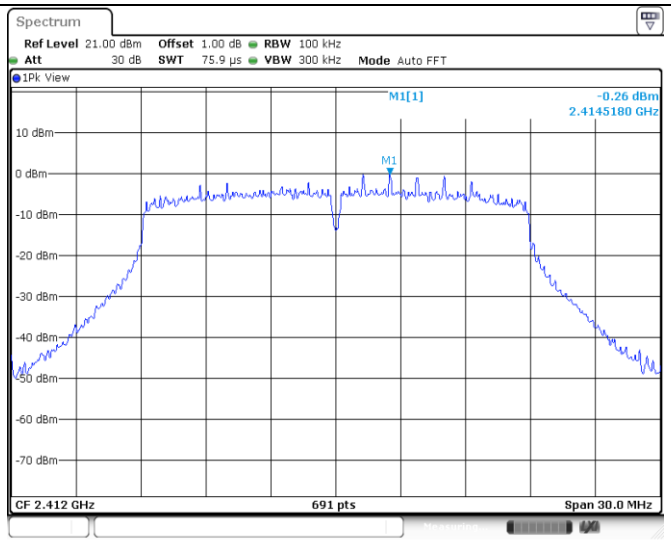

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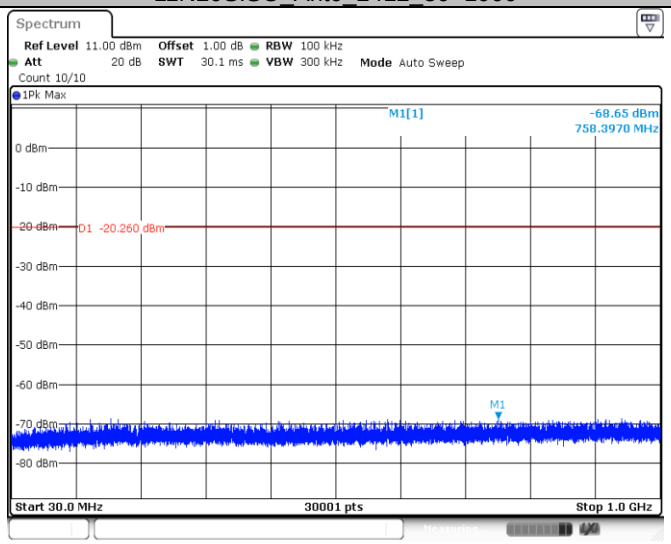

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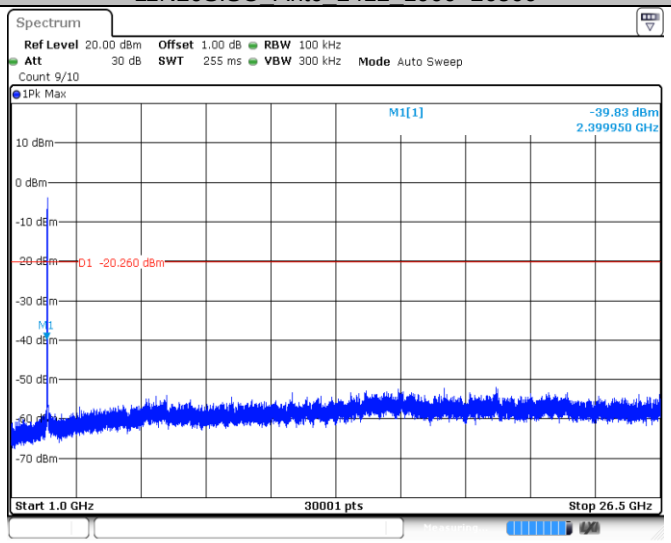

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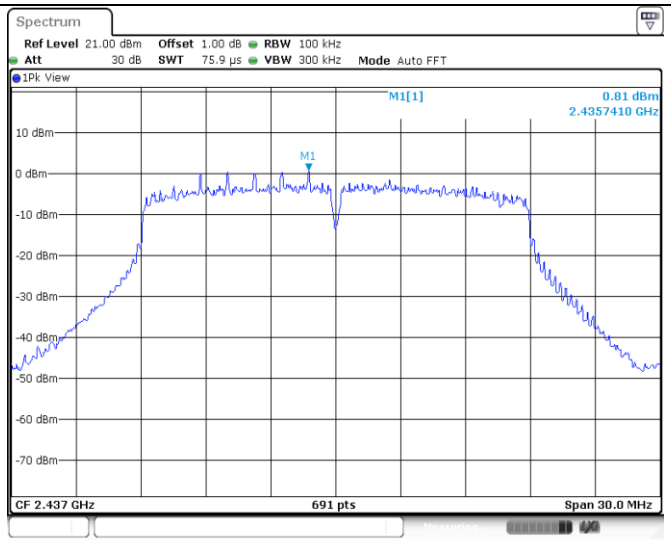

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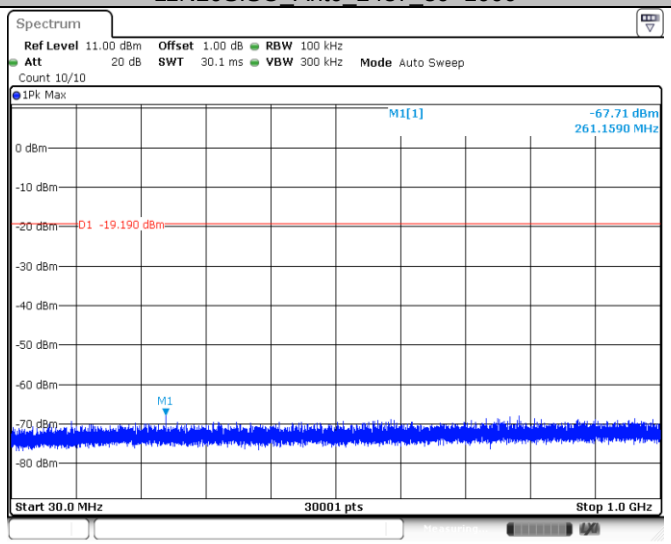

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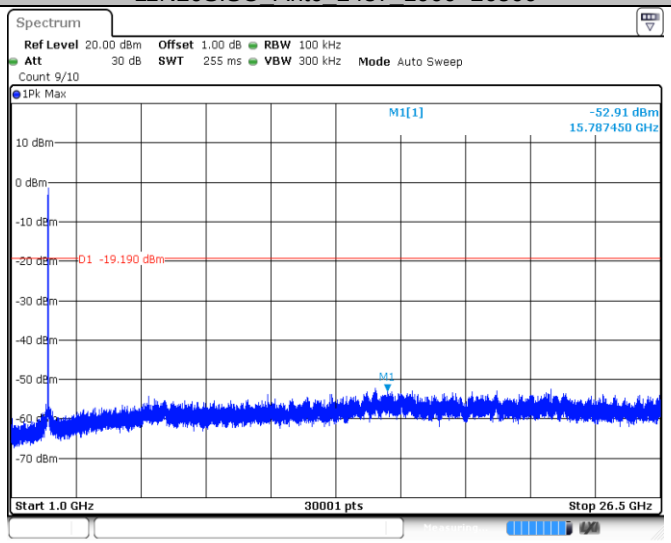

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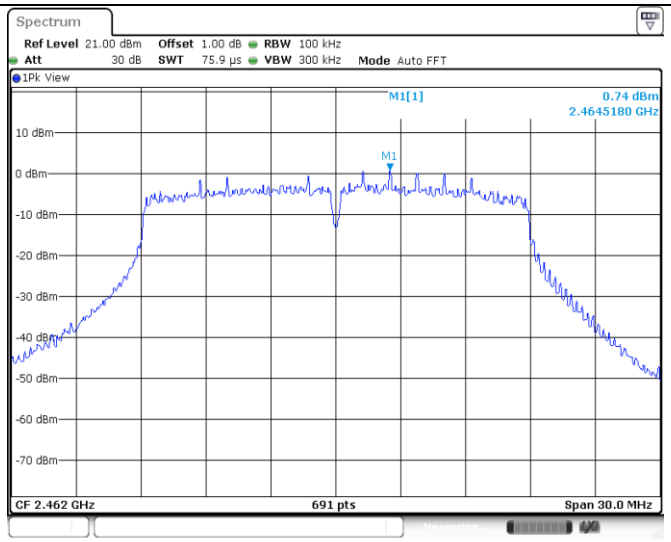

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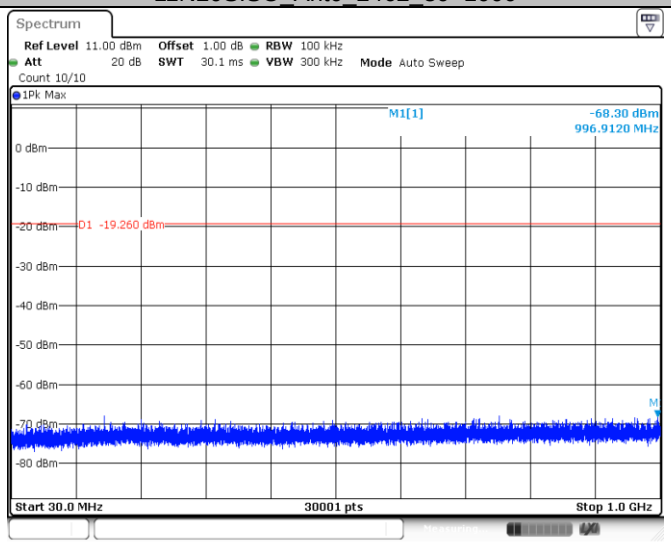

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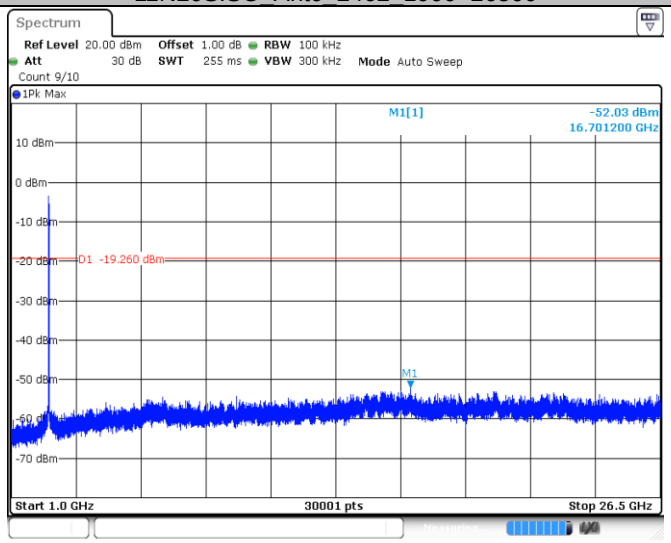

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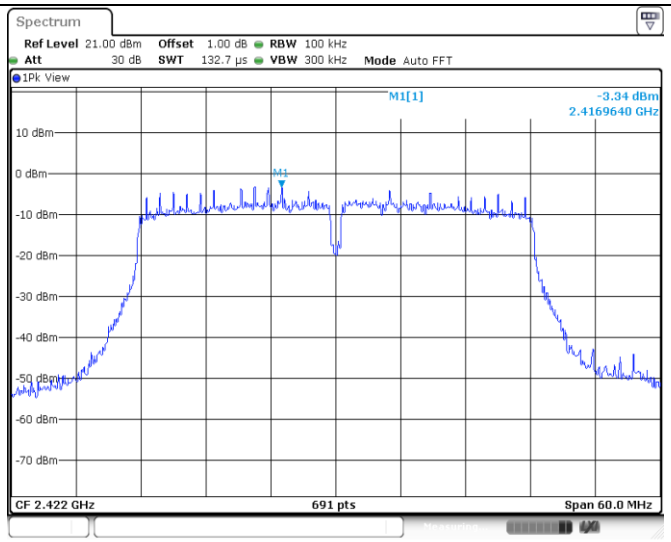

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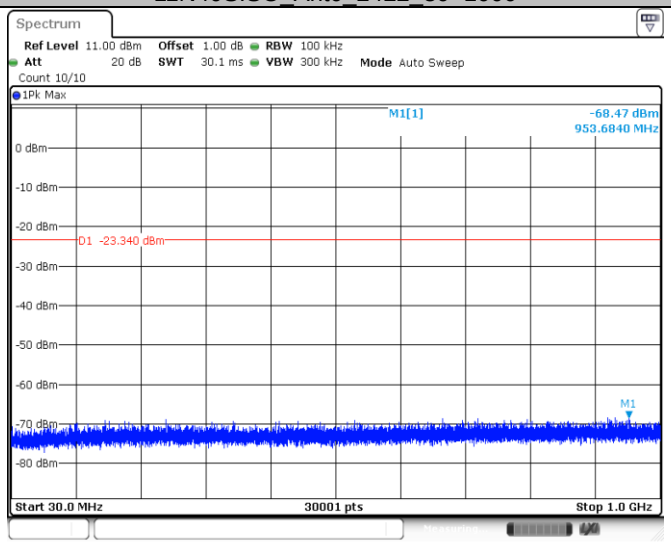

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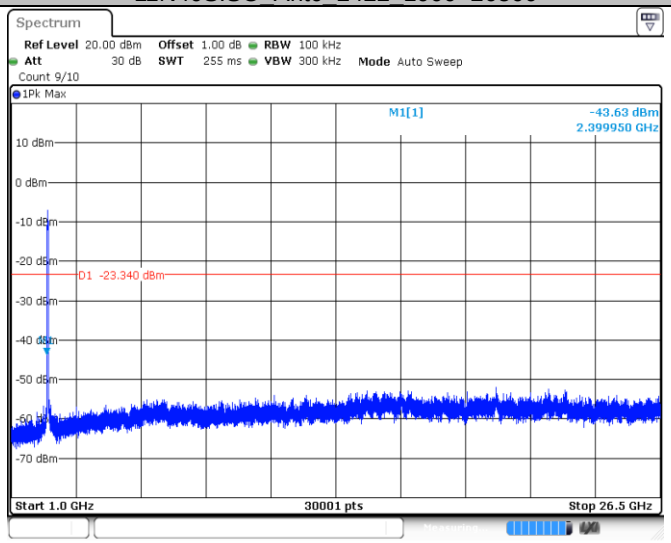

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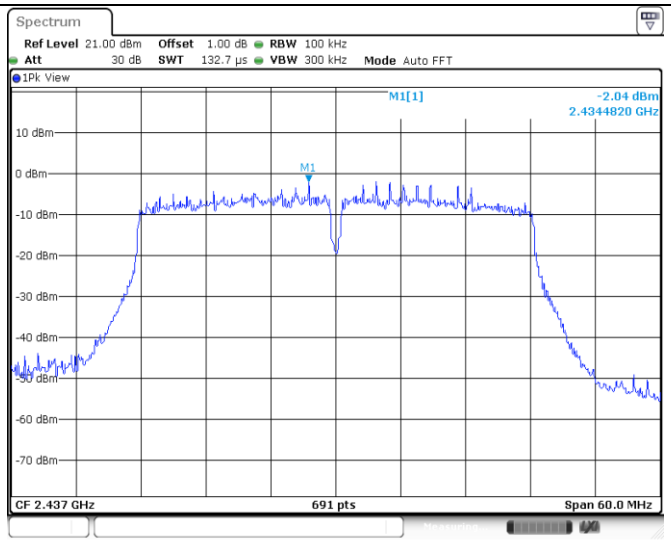

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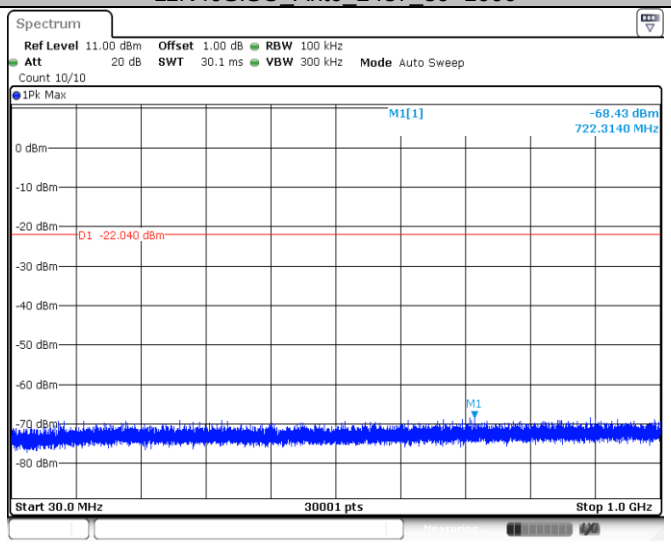

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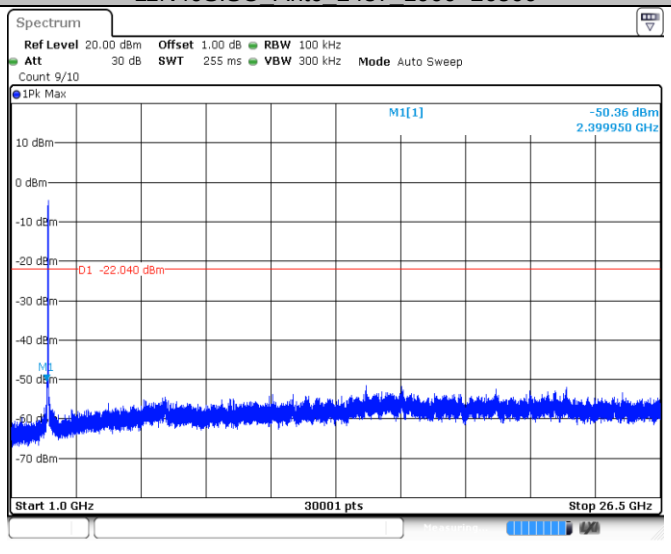

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