

FCC/ISED - TEST REPORT

Report Number : **68.950.24.0229.01** Date of Issue: **2024-04-18**

Model/HVIN : **CPPB1**

Product Type : Camera

Applicant : GoPro, Inc.

Address : 3025 Clearview Way, San Mateo, CA 94402, USA

Manufacturer : GoPro, Inc.

Address : 3025 Clearview Way, San Mateo, CA 94402, USA

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including Appendices : **223**

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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 City, 518052, P. R. China

Telephone: 86 755 8828 6998

Fax: 86 755 828 5299

FCC Registration No.: 514049

FCC Designation No.: CN5009

IC Registration No.: 10320A

ISED CAB identifier: CN0077

3 Description of the Equipment Under Test

Product:	Camera
Model no.:	CPPB1
FCC ID:	CNFCPPB1
IC:	10193A-CPPB1
PMN:	CPPB1
HVIN:	CPPB1
Rating:	3.89VDC
RF Transmission Frequency:	2412MHz-2462MHz for 802.11b/g/n20/n40/ax20/ax40
No. of Operated Channel:	11
Modulation:	802.11b: BPSK, QPSK, CCK, 802.11g/802.11n20/802.11n40: BPSK, QPSK, 16-QAM, 64-QAM 802.11ax20/802.11ax40: BPSK, QPSK, 16-QAM, 64-QAM/256-QAM/1024-QAM
Antenna Type:	Internal Integrated Metal Antenna
Antenna Gain:	ANT1:1.5dBi max for 2.4G ANT2: -0.25dBi max for 2.4G Note: Antenna 1 and Antenna 2 support MIMO mode, so directional gain value as below: $\text{Directional Gain} = 10 * \log[(10^{1.5/20} + 10^{-0.25/20})^2 / 2] = 3.68\text{dBi}$
Description of the EUT:	The Equipment Under Test (EUT) is a Camera supports Bluetooth Low Energy / Bluetooth BR+EDR/ Wi-Fi functions

4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2023 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-Gen Issue 5 April 2018 Amendment 1 March 2019 + Amendment 2 February 2021	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 3 August 2023	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSS) and License-Exempt Local Area Network (LE- LAN) Devices

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10-2013.

5 Summary of Test Results

Technical Requirements			
FCC Part 15 Subpart C/ RSS-247 Issue 3/RSS-Gen Issue 5			
Test Condition		Test Site	Test Result
§15.207 & RSS-GEN 8.8	Conducted emission AC power port	Site 1	Pass
§15.247 (b) (3) & RSS-247 5.4(d)	Conducted peak output power	Site 1	Pass
RSS-247 5.4(d)	Equivalent Isotropic Radiated Power	Site 1	Pass
§15.247(a)(2) & RSS-247 5.2(a) & RSS-GEN 6.7	6dB bandwidth and 99% Occupied Bandwidth	Site 1	Pass
§15.247(e) & RSS-247 5.2(b)	Power spectral density	Site 1	Pass
§15.247(d) & RSS-247 5.5	Spurious RF conducted emissions	Site 1	Pass
§15.247(d) & RSS-247 5.5	Band edge	Site 1	Pass
§15.247(d) & §15.209 & §15.205 & RSS-247 5.5 & RSS-Gen 6.13	Spurious radiated emissions for transmitter	Site 1	Pass
§15.203 & RSS-Gen 6.8	Antenna requirement	See note 2	Pass

Note 1: N/A=Not Applicable.

Note 2: The EUT uses an Internal Integrated Metal Antenna, which gain is ANT1:1.5dBi max for 2.4GHz, ANT2: -0.25dBi max for 2.4GHz. In accordance to §15.203 & RSS-Gen 6.8, it is considered sufficiently to comply with the provisions of this section.

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: CNFCPPB1, complies with Section 15.207, 15.209, 15.205, 15.247 of the FCC Part 15, Subpart C.

This submittal(s) (test report) is intended for IC: 10193A-CPPB1, complies with RSS-247, RSS-GEN.

The Model: CPPB1 supports Bluetooth Low Energy/Bluetooth BR+EDR/Wi-Fi functions, power by 3.89VDC, 1960mAh supplied by a rechargeable Lithium Ion Battery or 5VDC supplied by USB type C port.

The TX and RX range is 2402MHz-2480MHz for Bluetooth, 2412MHz – 2462MHz for 2.4GHz Wi-Fi, 5180MHz – 5320MHz, 5500MHz – 5700MHz, 5745MHz – 5825MHz for 5GHz Wi-Fi.

(This device shall not be capable of transmitting in the band 5600-5650MHz for Canada. This restriction is for the protection of Terminal Doppler Weather Radar (TDWR) operating in this band.)

This report is for the 2.4GHz Wi-Fi part.

SUMMARY:

All tests according to the regulations cited on page 6 were

■ - Performed

□ - Not Performed

The Equipment Under Test

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

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

Sample Received Date: 2024-02-26

Testing Start Date: 2024-02-26

Testing End Date: 2024-03-18

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

Reviewed by:

Prepared by:

Tested by:



John Zhi
Project Manager



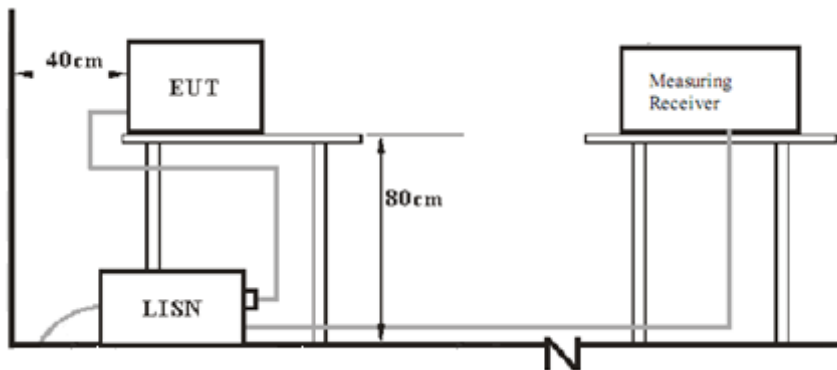
Joe Gu
Project Engineer



Carry Cai
Test Engineer

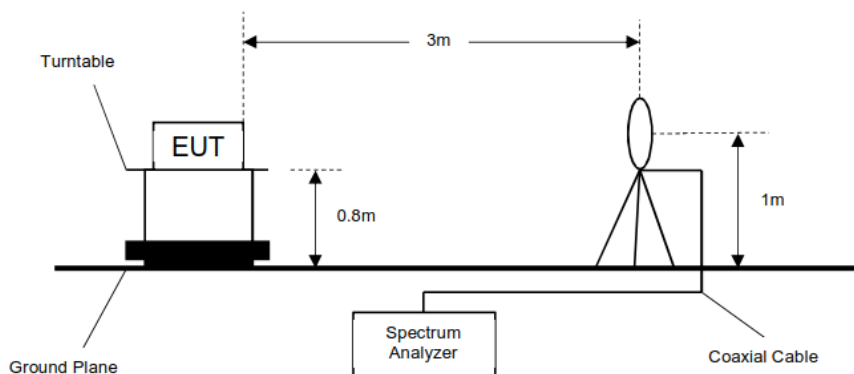
7 Test Setups

7.1 AC Power Line Conducted Emission test setups

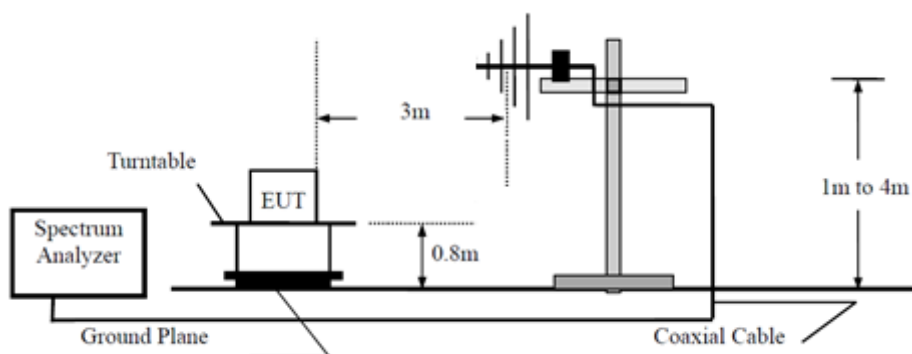


7.2 Radiated test setups

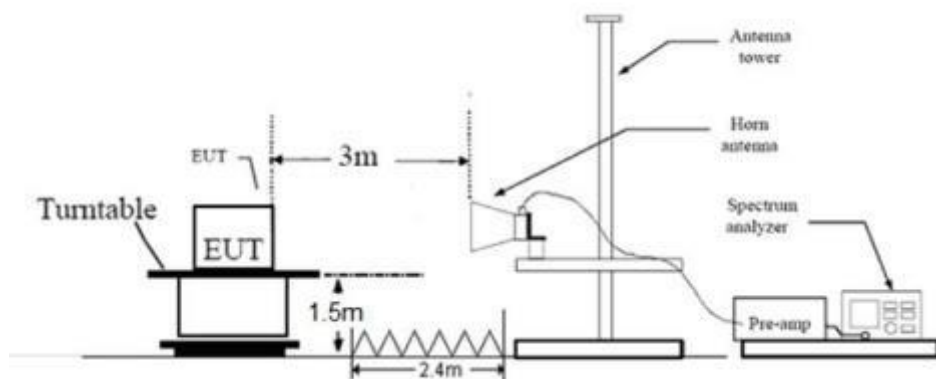
9kHz - 30MHz



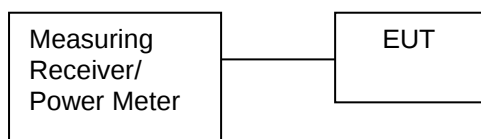
30MHz - 1GHz



Above 1GHz



7.3 Conducted RF test setups



8 Systems Test Configuration

Auxiliary Equipment Used during Test:

Description	Manufacturer	Model NO.	S/N
LAPTOP	LENOVO	T460S	---
USB TYPE C CABLE	GOPRO	0.46M (LENGTH)	---
AC ADAPTER	APPLE	A1401	

Test Channel information:

Test Mode	Channel (MHz)		
802.11b	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11g	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11n20	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11n40	CH 3: 2422MHz	CH 6: 2437MHz	CH 9: 2452MHz
802.11ax20	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11ax40	CH 3: 2422MHz	CH 6: 2437MHz	CH 9: 2452MHz

Test software information:

Test Software Version	RF TOOL(Ver:0.2.1)		
Mode	RU Tone	Packet Type	Data Rate
11b	/	15	11b LONG 1 Mbps
11g	/	16	11g 6 Mbps
11n HT20	/	14	MCS8
11n HT40	/	13	MCS8
11ax HE20	26 Tone	7	MCS0
	52 Tone	10	
	106 Tone	13	
	242 Tone	14	
11ax HE40	26 Tone	6	MCS0
	52 Tone	9	
	106 Tone	11	
	242 Tone	15	
	484 Tone	13	

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.

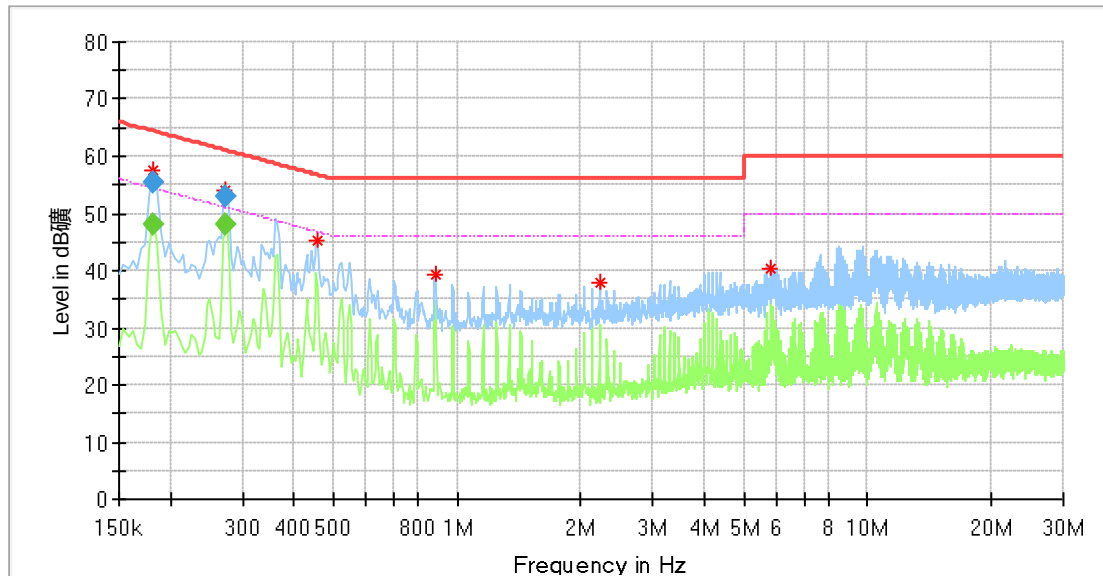
Limit

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

*Decreases with the logarithm of the frequency.

Conducted Emission

Product Type : Camera
 M/N : CPPB1
 Operating Condition : Transmitting
 Test Specification : Line
 Comment : AC 120V/60Hz(External adapter)



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.181500	57.56	---	64.39	6.83	L1	10.27
0.273500	54.05	---	61.00	6.95	L1	10.28
0.458000	45.18	---	56.73	11.55	L1	10.29
0.886000	39.29	---	56.00	16.71	L1	10.32
2.226000	38.02	---	56.00	17.98	L1	10.38
5.786000	40.44	---	60.00	19.56	L1	10.64

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.181500	---	48.24	54.42	6.18	L1	10.27
0.181500	55.43	---	64.42	8.99	L1	10.27
0.273500	---	47.46	51.01	3.55	L1	10.28
0.273500	53.14	---	61.01	7.87	L1	10.28

Remark:

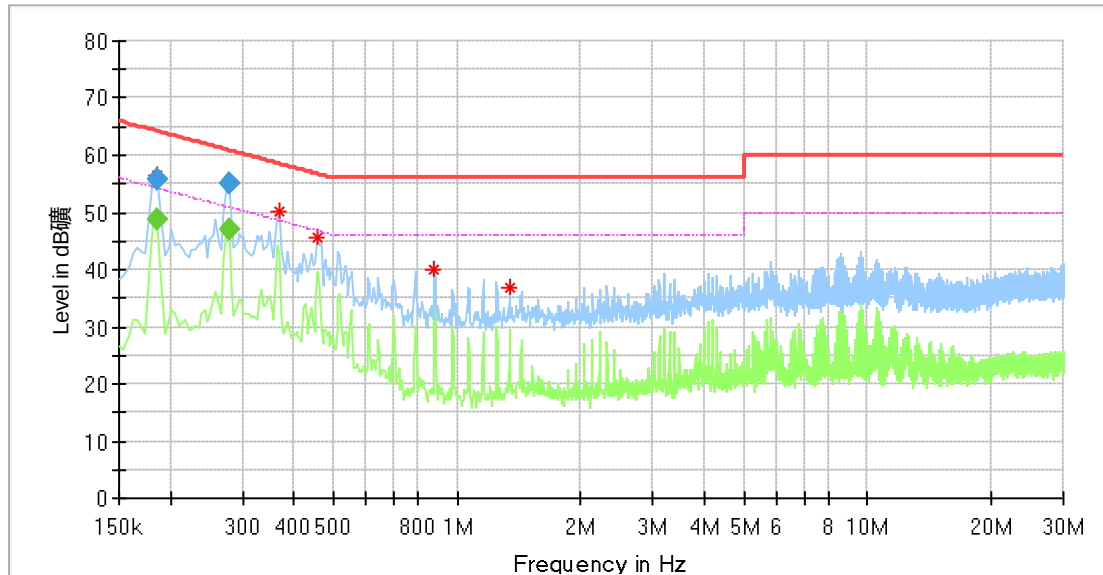
Level=Reading Level + Correction Factor

Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)

Conducted Emission

Product Type : Camera
 M/N : CPPB1
 Operating Condition : Transmitting
 Test Specification : Neutral
 Comment : AC 120V/60Hz(External adapter)



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.185500	56.38	---	64.39	8.01	N	10.22
0.277500	55.07	---	61.00	5.93	N	10.23
0.370000	50.12	---	58.50	8.38	N	10.16
0.458000	45.70	---	56.73	11.03	N	10.21
0.882000	40.04	---	56.00	15.96	N	10.19
1.342000	36.92	---	56.00	19.08	N	10.23

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.185500	---	48.73	54.24	5.51	N	10.22
0.185500	55.68	---	64.24	8.56	N	10.22
0.277500	---	47.08	50.89	3.81	N	10.23
0.277500	54.99	---	60.89	5.90	N	10.23

Remark:

Level=Reading Level + Correction Factor

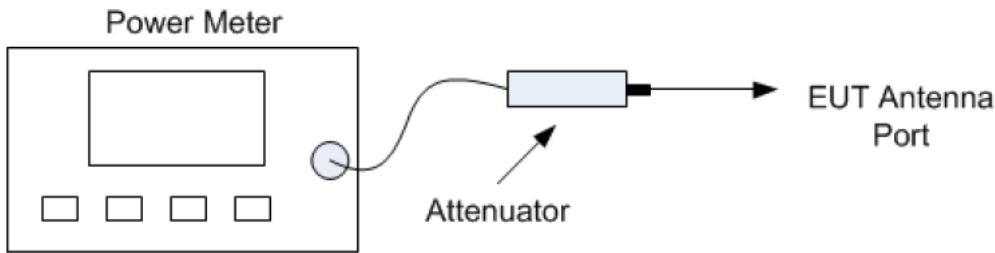
Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)

9.2 Conducted 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) & RSS-247 5.4(d), conducted output power limit as below:

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

According to & RSS-247 5.4(d), EIRP limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤4	≤36

Test result as below table

802.11b_SISO modulation Test Result

Frequency (MHz)	Ant 1		Ant 2		Result
	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	
Low channel 2412MHz	15.19	16.69	16.00	15.75	Pass
Middle channel 2437MHz	14.91	16.41	15.57	15.32	Pass
High channel 2462MHz	14.61	16.11	15.38	15.13	Pass

802.11g_SISO modulation Test Result

Frequency (MHz)	Ant 1		Ant 2		Result
	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	
Low channel 2412MHz	16.99	18.49	16.98	16.73	Pass
Middle channel 2437MHz	16.70	18.20	16.41	16.16	Pass
High channel 2462MHz	16.56	18.06	16.50	16.25	Pass

802.11n20_MIMO modulation Test Result

Frequency (MHz)	Ant 1		Ant 2		Ant 1+ Ant 2		Result
	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	
Low channel 2412MHz	15.44	16.94	15.53	15.28	18.50	19.20	Pass
Middle channel 2437MHz	15.11	16.61	15.14	14.89	18.14	18.84	Pass
High channel 2462MHz	14.86	16.36	15.16	14.91	18.02	18.71	Pass

802.11n40_MIMO modulation Test Result

Frequency (MHz)	Ant 1		Ant 2		Ant 1+ Ant 2		Result
	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	
Low channel 2422MHz	14.36	15.86	14.03	13.78	17.21	17.95	Pass
Middle channel 2437MHz	14.21	15.71	14.25	14.00	17.24	17.95	Pass
High channel 2452MHz	14.48	15.98	14.03	13.78	17.27	18.03	Pass

802.11ax20_MIMO modulation Test Result

Frequency (MHz)	Ru Size	Ru Index	Ant 1		Ant 2		Ant 1+ Ant 2		Result
			Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	
Low channel 2412MHz	26Tone	RU0	8.17	9.67	8.15	7.90	11.17	11.88	Pass
Low channel 2412MHz	52Tone	RU37	11.85	13.35	12.10	11.85	14.99	15.67	Pass
Low channel 2412MHz	106Tone	RU53	14.46	15.96	14.80	14.55	17.64	18.32	Pass
Low channel 2412MHz	242Tone	RU61	15.58	17.08	15.75	15.50	18.68	19.37	Pass
Middle channel 2437MHz	26Tone	RU4	8.50	10.00	7.53	7.28	11.05	11.86	Pass
Middle channel 2437MHz	52Tone	RU38	11.98	13.48	11.67	11.42	14.84	15.58	Pass
Middle channel 2437MHz	106Tone	RU53	14.24	15.74	14.19	13.94	17.23	17.94	Pass
Middle channel 2437MHz	242Tone	RU61	15.20	16.70	15.43	15.18	18.33	19.02	Pass
High channel 2462MHz	26Tone	RU8	7.98	9.48	8.10	7.85	11.05	11.75	Pass
High channel 2462MHz	52Tone	RU40	11.83	13.33	11.97	11.72	14.91	15.61	Pass
High channel 2462MHz	106Tone	RU54	14.55	16.05	14.77	14.52	17.67	18.36	Pass
High channel 2462MHz	242Tone	RU61	15.06	16.56	15.47	15.22	18.28	18.95	Pass

802.11ax40_MIMO modulation Test Result

Frequency (MHz)	Ru Size	Ru Index	Ant 1		Ant 2		Ant 1+ Ant 2		Result
			Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	Conducted Power (dBm)	EIRP (dBm)	
Low channel 2422MHz	26Tone	RU0	6.43	7.93	5.80	5.55	9.14	9.91	Pass
Low channel 2422MHz	52Tone	RU37	10.57	12.07	9.73	9.48	13.18	13.98	Pass
Low channel 2422MHz	106Tone	RU53	12.94	14.44	12.19	11.94	15.59	16.38	Pass
Low channel 2422MHz	242Tone	RU61	15.87	17.37	15.88	15.63	18.89	19.60	Pass
Low channel 2422MHz	484Tone	RU65	14.28	15.78	13.99	13.74	17.15	17.89	Pass
Middle channel 2437MHz	26Tone	RU8	7.74	9.24	6.99	6.74	10.39	11.18	Pass
Middle channel 2437MHz	52Tone	RU40	10.99	12.49	10.80	10.55	13.91	14.64	Pass
Middle channel 2437MHz	106Tone	RU54	13.45	14.95	12.99	12.74	16.24	16.99	Pass
Middle channel 2437MHz	242Tone	RU61	15.68	17.18	15.93	15.68	18.82	19.50	Pass
Middle channel 2437MHz	484Tone	RU65	14.47	15.97	14.25	14.00	17.37	18.11	Pass
High channel 2452MHz	26Tone	RU17	6.45	7.95	5.95	5.70	9.22	9.98	Pass
High channel 2452MHz	52Tone	RU44	10.57	12.07	9.67	9.42	13.15	13.95	Pass
High channel 2452MHz	106Tone	RU56	12.68	14.18	12.22	11.97	15.47	16.22	Pass
High channel 2452MHz	242Tone	RU62	15.13	16.63	15.75	15.50	18.46	19.11	Pass
High channel 2452MHz	484Tone	RU65	14.39	15.89	13.98	13.73	17.20	17.95	Pass

$$\text{Power}_{\text{SUM}} = 10 * \log(10^{(\text{PowerAnt1}/10)} + 10^{(\text{PowerAnt2}/10)})$$

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 $\geq$ 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

Limit [kHz]

≥ 500

Test Method for 99 % Bandwidth

1. Set center frequency to the nominal EUT channel center frequency
2. Set span = 1.5 times to 5.0 times the OBW. Set RBW = 1 % to 5 % of the OBW
Set VBW $\geq$ 3 RBW Trace mode = max hold. Sweep = auto couple.
Allow the trace to stabilize.
3. Use the 99 % power bandwidth function of the instrument.
4. Record the results in the test report.

Limit

Limit [kHz]

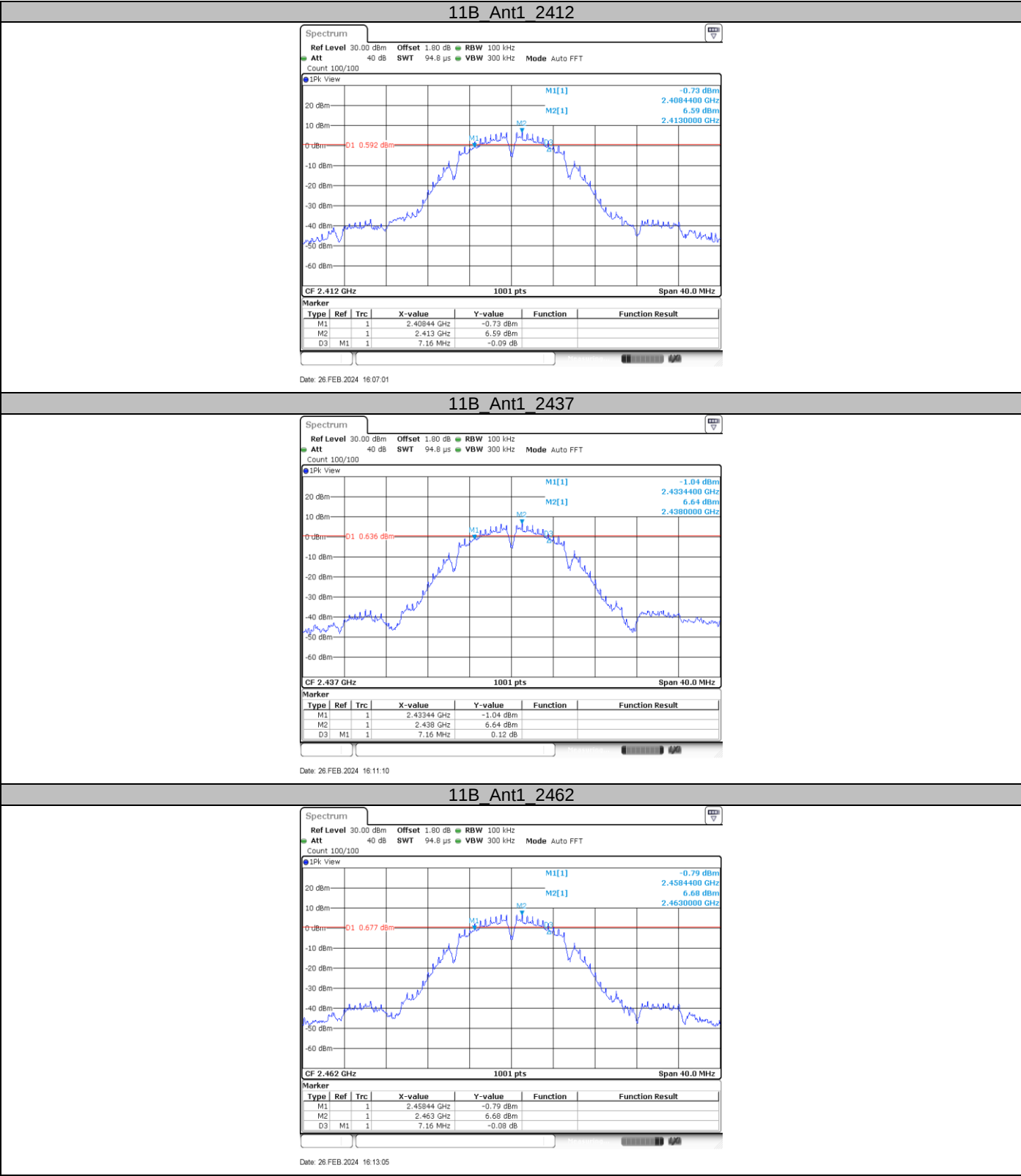
6 dB Bandwidth

TestMode	Antenna	Channel[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.160	2408.440	2415.600	0.5	PASS
		2437	7.160	2433.440	2440.600	0.5	PASS
		2462	7.160	2458.440	2465.600	0.5	PASS
11G	Ant1	2412	16.440	2403.800	2420.240	0.5	PASS
		2437	16.400	2428.840	2445.240	0.5	PASS
		2462	16.440	2453.800	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.640	2403.200	2420.840	0.5	PASS
		2437	17.680	2428.200	2445.880	0.5	PASS
		2462	17.640	2453.200	2470.840	0.5	PASS
11N40SISO	Ant1	2422	36.480	2403.840	2440.320	0.5	PASS
		2437	36.480	2418.840	2455.320	0.5	PASS
		2452	36.480	2433.840	2470.320	0.5	PASS
11AX20SISO	Ant1	2412 242Tone RU61	19.120	2402.480	2421.600	0.5	PASS
		2437 242Tone RU61	19.120	2427.520	2446.640	0.5	PASS
		2462 242Tone RU61	19.160	2452.440	2471.600	0.5	PASS
11AX40SISO	Ant1	2422 484Tone RU65	37.920	2403.200	2441.120	0.5	PASS
		2437 484Tone RU65	38.000	2418.200	2456.200	0.5	PASS
		2452 484Tone RU65	37.920	2433.200	2471.120	0.5	PASS
11AX20SISO	Ant1	2412 26Tone RU0	2.160	2402.440	2404.600	0.5	PASS
		2437 26Tone RU4	2.760	2435.640	2438.400	0.5	PASS
		2462 26Tone RU8	2.120	2469.440	2471.560	0.5	PASS
11AX40SISO	Ant1	2422 26Tone RU0	2.160	2402.960	2405.120	0.5	PASS
		2437 26Tone RU8	2.160	2434.680	2436.840	0.5	PASS
		2452 26Tone RU17	2.160	2468.960	2471.120	0.5	PASS
11AX20SISO	Ant1	2412 52Tone RU37	17.160	2402.440	2419.600	0.5	PASS
		2437 52Tone RU38	13.880	2430.720	2444.600	0.5	PASS
		2462 52Tone RU40	7.040	2464.480	2471.520	0.5	PASS
11AX40SISO	Ant1	2422 52Tone RU37	16.720	2402.960	2419.680	0.5	PASS
		2437 52Tone RU40	4.240	2432.600	2436.840	0.5	PASS
		2452 52Tone RU44	15.440	2455.680	2471.120	0.5	PASS
11AX20SISO	Ant1	2412 106Tone RU53	17.240	2402.400	2419.640	0.5	PASS
		2437 106Tone RU53	17.240	2427.400	2444.640	0.5	PASS
		2462 106Tone RU54	17.240	2444.400	2461.640	0.5	PASS
11AX40SISO	Ant1	2422 106Tone RU53	16.640	2403.040	2419.680	0.5	PASS
		2437 106Tone RU54	17.440	2419.400	2436.840	0.5	PASS
		2452 106Tone RU56	16.720	2454.400	2471.120	0.5	PASS
11AX40SISO	Ant1	2422 242Tone RU61	18.800	2403.040	2421.840	0.5	PASS
		2437 242Tone RU61	18.800	2418.120	2436.920	0.5	PASS
		2452 242Tone RU62	18.960	2452.160	2471.120	0.5	PASS

TestMode	Antenna	Channel[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant2	2412	7.160	2408.440	2415.600	0.5	PASS
		2437	7.160	2433.440	2440.600	0.5	PASS
		2462	7.160	2458.440	2465.600	0.5	PASS
11G	Ant2	2412	16.440	2403.800	2420.240	0.5	PASS
		2437	16.400	2428.840	2445.240	0.5	PASS
		2462	16.440	2453.800	2470.240	0.5	PASS
11N20SISO	Ant2	2412	17.680	2403.200	2420.880	0.5	PASS
		2437	17.640	2428.200	2445.840	0.5	PASS
		2462	17.640	2453.200	2470.840	0.5	PASS
11N40SISO	Ant2	2422	36.480	2403.840	2440.320	0.5	PASS
		2437	36.480	2418.840	2455.320	0.5	PASS
		2452	36.560	2433.760	2470.320	0.5	PASS
11AX20SISO	Ant2	2412_242Tone_RU61	19.120	2402.480	2421.600	0.5	PASS
		2437_242Tone_RU61	19.200	2427.440	2446.640	0.5	PASS
		2462_242Tone_RU61	19.200	2452.400	2471.600	0.5	PASS
11AX40SISO	Ant2	2422_484Tone_RU65	38.080	2403.120	2441.200	0.5	PASS
		2437_484Tone_RU65	38.000	2418.200	2456.200	0.5	PASS
		2452_484Tone_RU65	38.080	2433.040	2471.120	0.5	PASS
11AX20SISO	Ant2	2412_26Tone_RU0	2.120	2402.480	2404.600	0.5	PASS
		2437_26Tone_RU4	2.720	2435.640	2438.360	0.5	PASS
		2462_26Tone_RU8	2.120	2469.440	2471.560	0.5	PASS
11AX40SISO	Ant2	2422_26Tone_RU0	2.160	2402.960	2405.120	0.5	PASS
		2437_26Tone_RU8	2.240	2434.600	2436.840	0.5	PASS
		2452_26Tone_RU17	2.160	2468.960	2471.120	0.5	PASS
11AX20SISO	Ant1	2412_52Tone_RU37	17.120	2402.480	2419.600	0.5	PASS
		2437_52Tone_RU38	13.880	2430.720	2444.600	0.5	PASS
		2462_52Tone_RU40	15.880	2455.680	2471.560	0.5	PASS
11AX40SISO	Ant1	2422_52Tone_RU37	16.640	2402.960	2419.600	0.5	PASS
		2437_52Tone_RU40	4.880	2431.960	2436.840	0.5	PASS
		2452_52Tone_RU44	15.440	2455.680	2471.120	0.5	PASS
11AX20SISO	Ant2	2412_106Tone_RU53	17.240	2402.400	2419.640	0.5	PASS
		2437_106Tone_RU53	17.240	2427.400	2444.640	0.5	PASS
		2462_106Tone_RU54	17.160	2454.440	2471.600	0.5	PASS
11AX40SISO	Ant2	2422_106Tone_RU53	16.640	2403.040	2419.680	0.5	PASS
		2437_106Tone_RU54	17.440	2419.400	2436.840	0.5	PASS
		2452_106Tone_RU56	16.720	2454.400	2471.120	0.5	PASS
11AX40SISO	Ant2	2422_242Tone_RU61	18.960	2402.960	2421.920	0.5	PASS
		2437_242Tone_RU61	18.960	2417.960	2436.920	0.5	PASS
		2452_242Tone_RU62	18.880	2452.240	2471.120	0.5	PASS

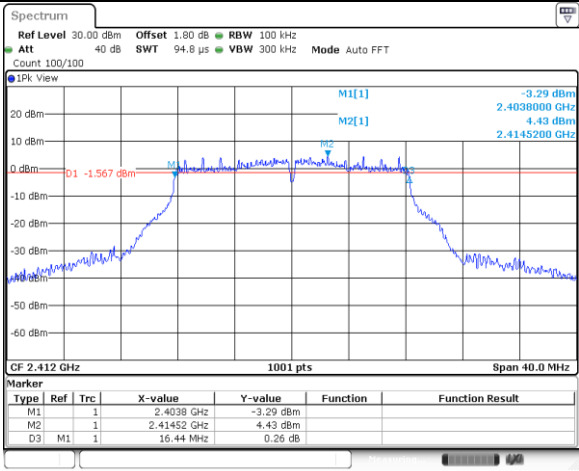


6 dB Bandwidth



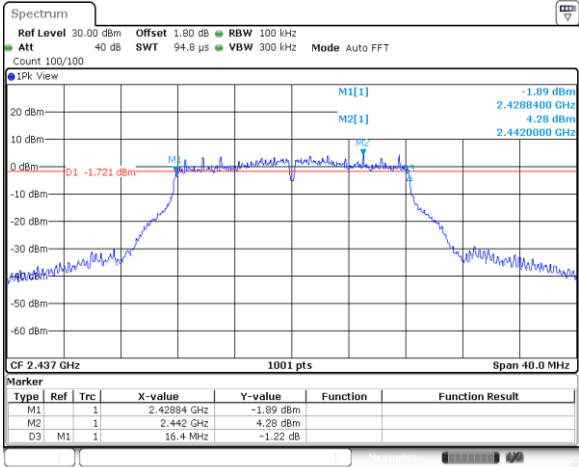


11G_Ant1_2412



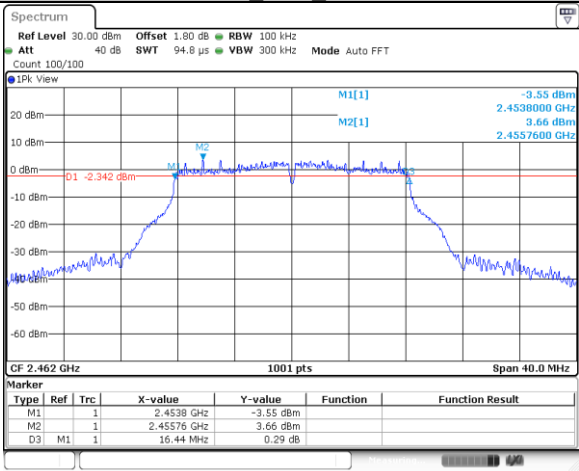
Date: 26 FEB 2024 16:29:59

11G_Ant1_2437



Date: 26 FEB 2024 16:32:19

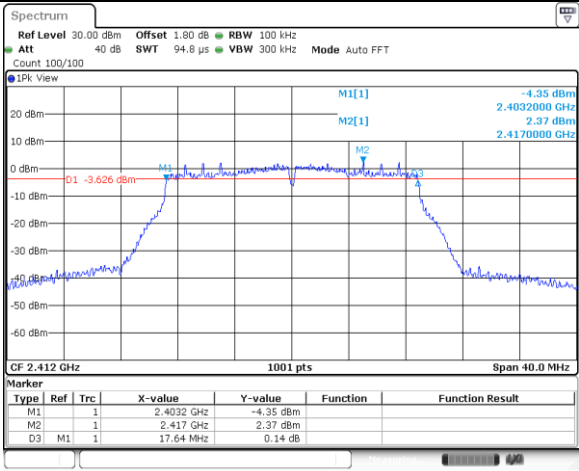
11G_Ant1_2462



Date: 26 FEB 2024 16:34:59

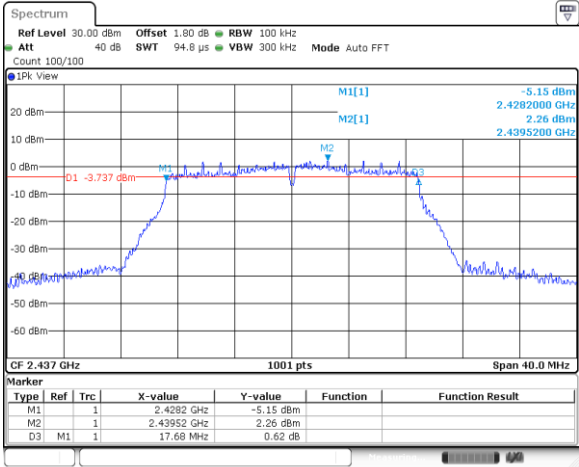


11N20SISO_Ant1_2412



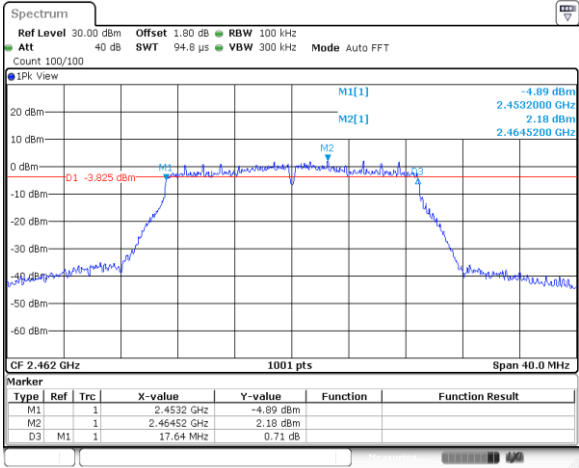
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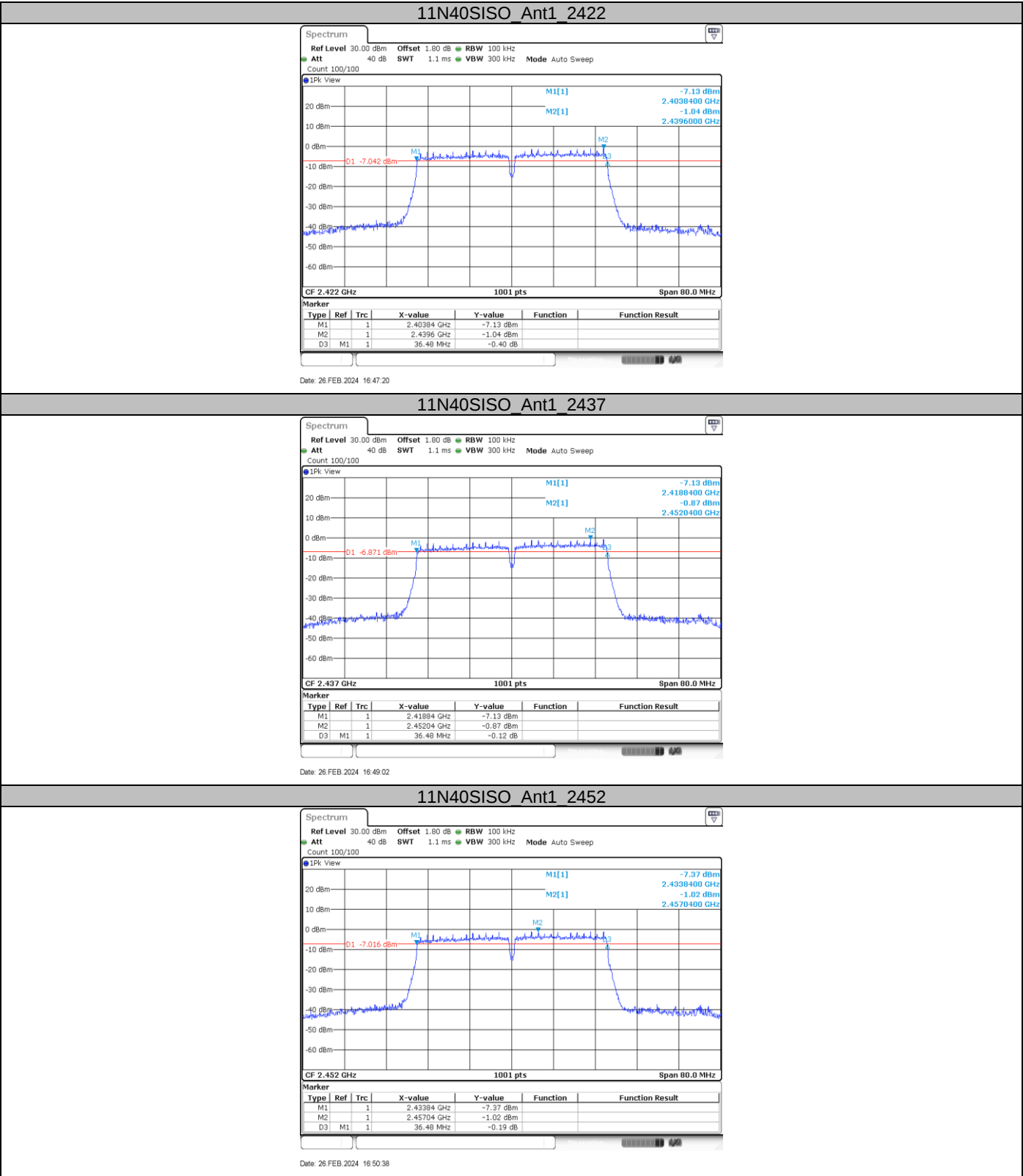


Date: 26 FEB 2024 16:42:49

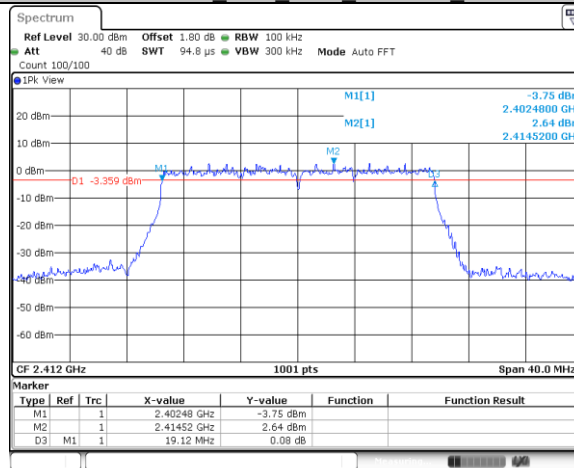
11N20SISO_Ant1_2462



Date: 26 FEB 2024 16:44:23

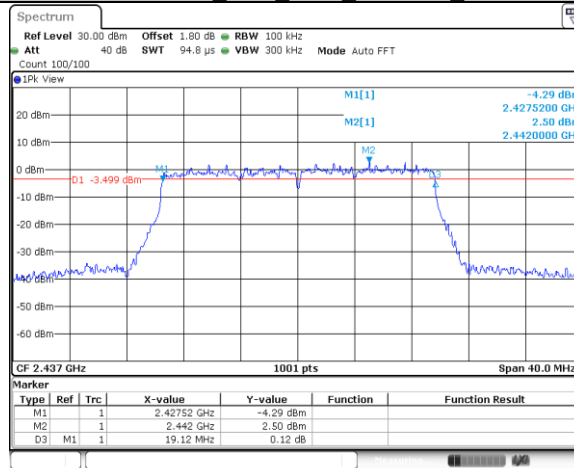


11AX20SISO_Ant1_2412_242Tone_RU61



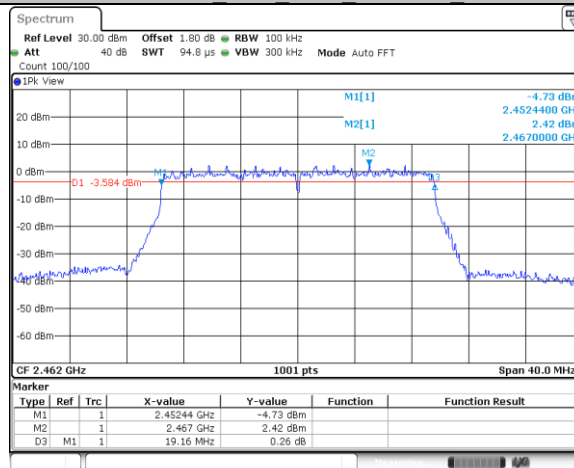
Date: 26 FEB 2024 16:53:20

11AX20SISO_Ant1_2437_242Tone_RU61



Date: 26 FEB 2024 16:55:29

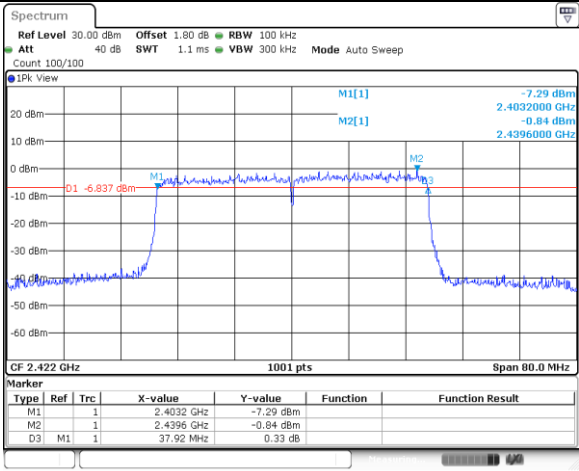
11AX20SISO_Ant1_2462_242Tone_RU61



Date: 26 FEB 2024 16:57:43

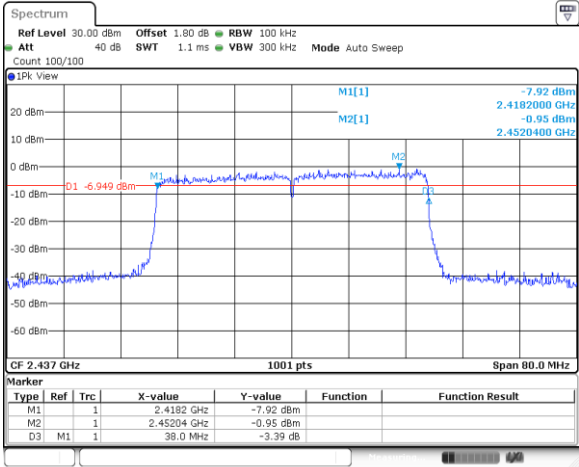


11AX40SISO_Ant1_2422_484Tone_RU65



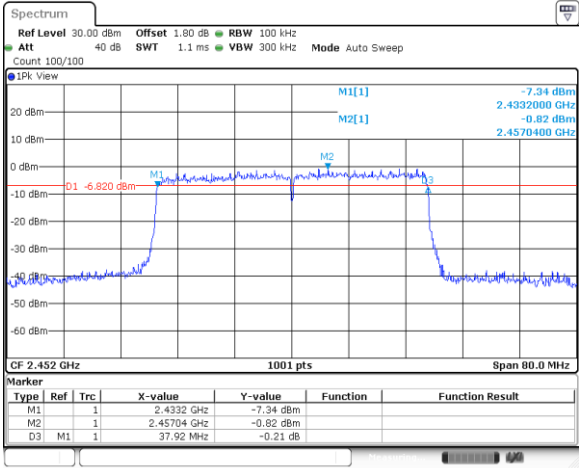
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Date: 26 FEB 2024 17:01:35

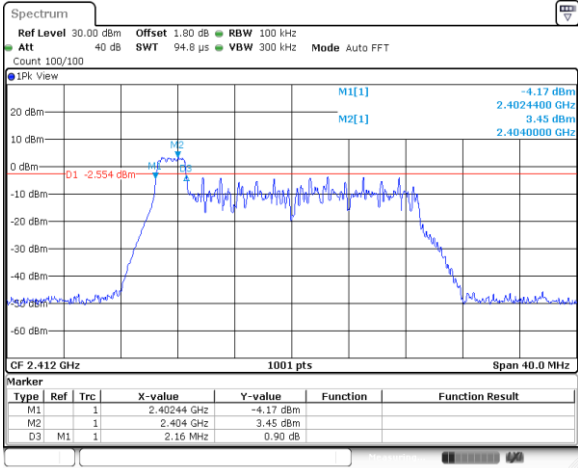
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Date: 26 FEB 2024 17:03:05

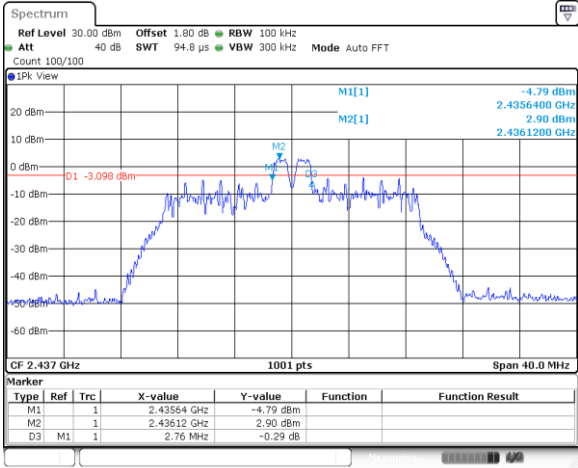


11AX20SISO Ant1 2412 26Tone RU0



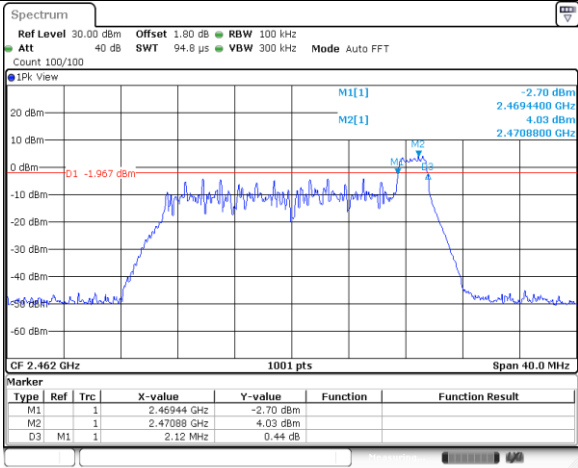
Date: 28 FEB 2024 12:13:13

11AX20SISO Ant1 2437 26Tone RU4



Date: 28 FEB 2024 12:15:27

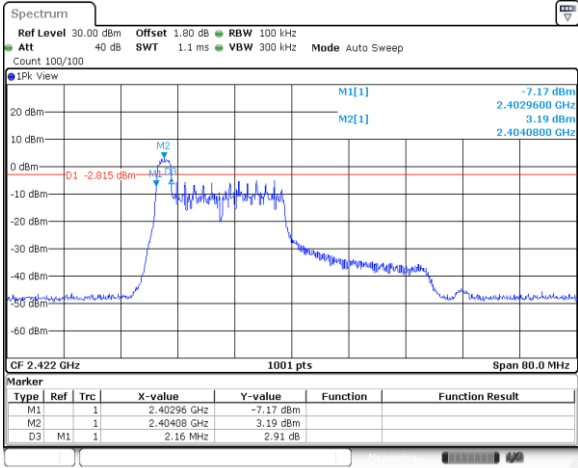
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Date: 28 FEB 2024 12:17:11

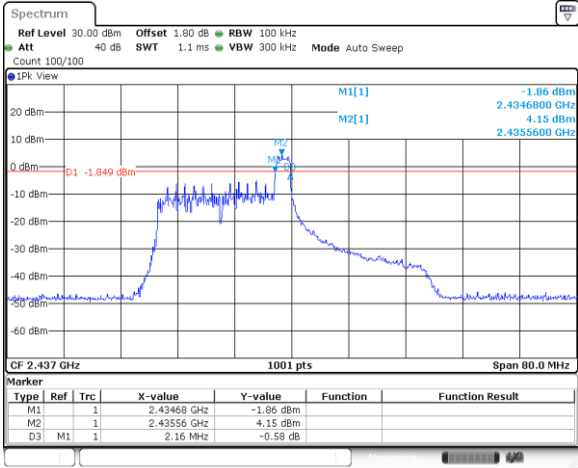


11AX40SISO Ant1 2422 26Tone RU0



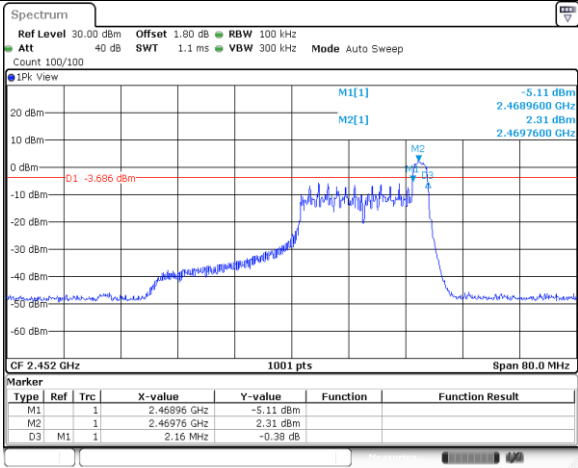
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11AX40SISO Ant1 2437 26Tone RU8



Date: 28 FEB 2024 13:42:55

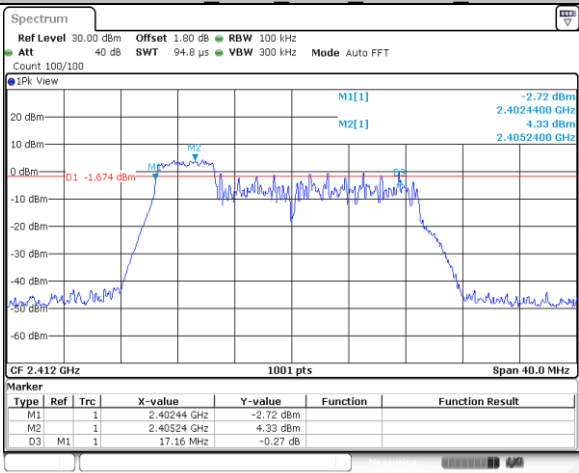
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Date: 28 FEB 2024 13:44:37

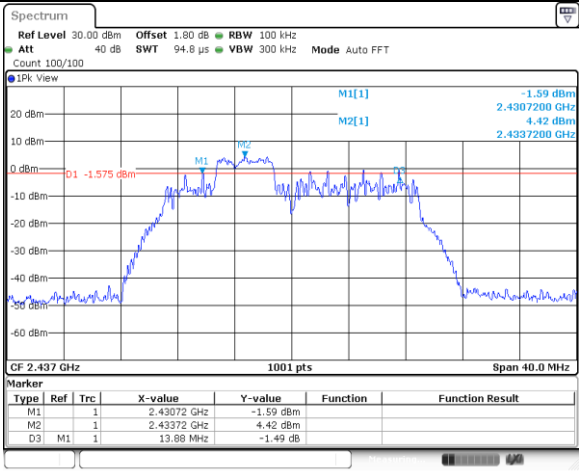


11AX20SISO Ant1 2412 52Tone RU37



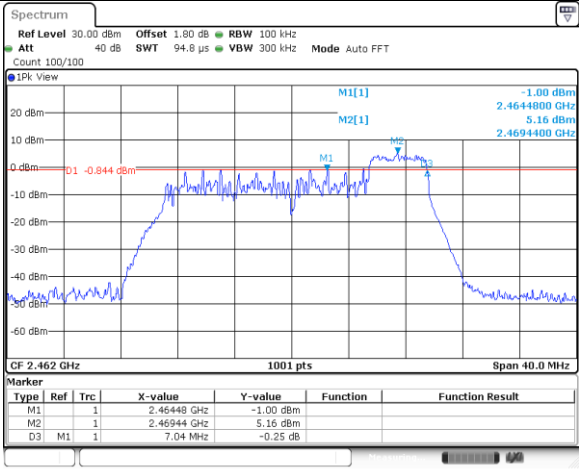
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11AX20SISO Ant1 2437 52Tone RU38



Date: 28 FEB 2024 13:50:17

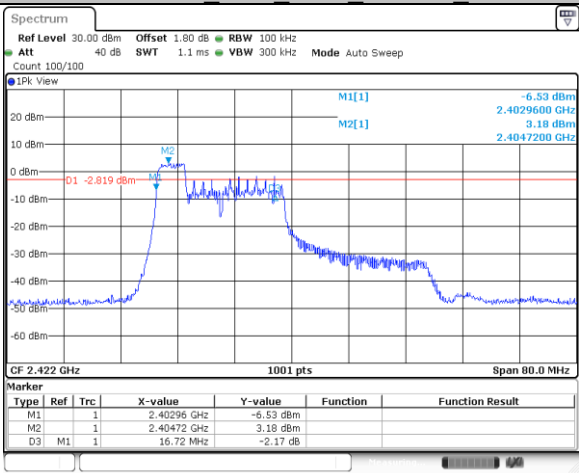
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Date: 28 FEB 2024 13:51:55

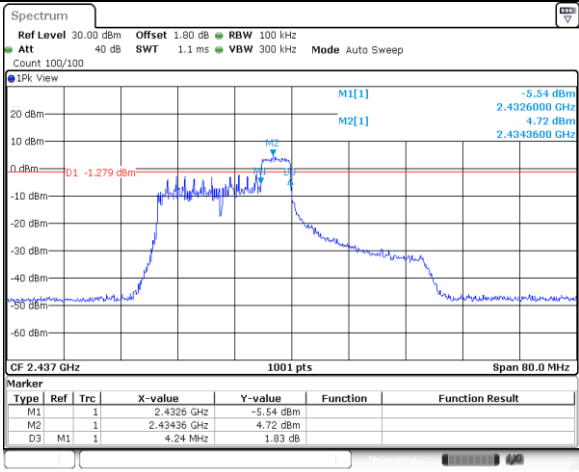


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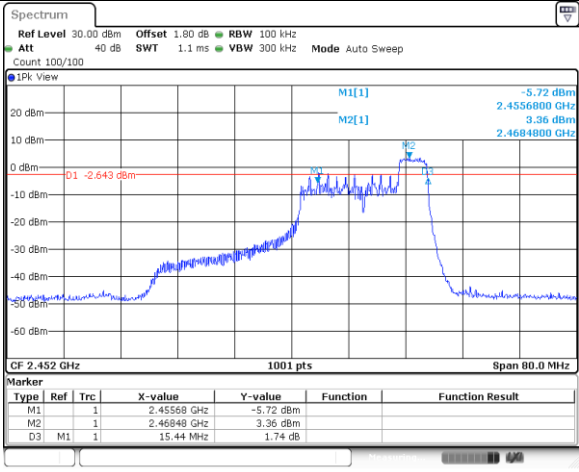
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11AX40SISO Ant1 2437 52Tone RU40



Date: 28 FEB 2024 13:55:24

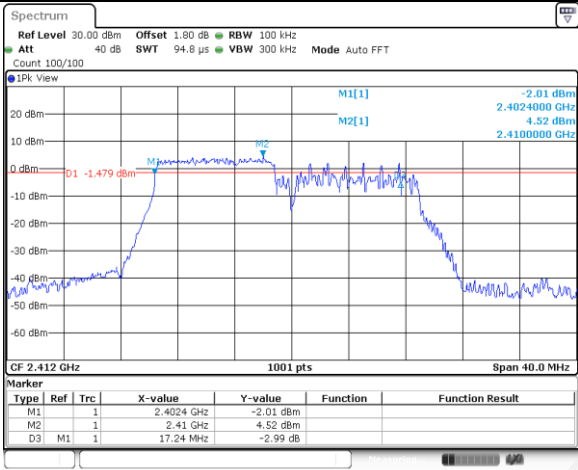
11AX40SISO Ant1 2452 52Tone RU44



Date: 28 FEB 2024 13:57:03

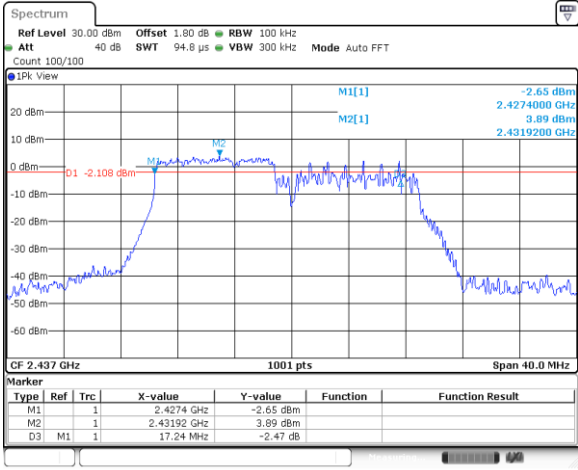


11AX20SISO Ant1 2412 106Tone RU53



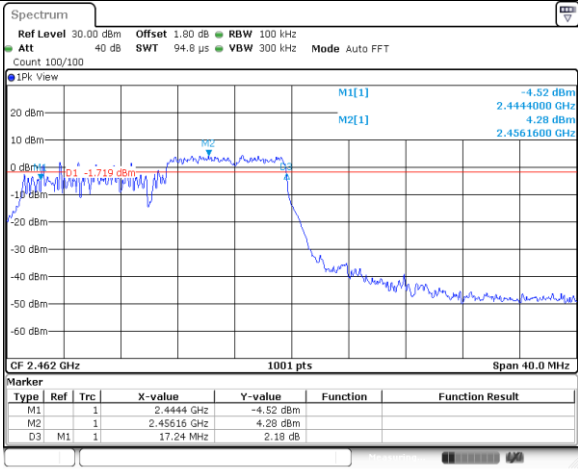
Date: 28 FEB 2024 13:59:37

11AX20SISO Ant1 2437 106Tone RU53



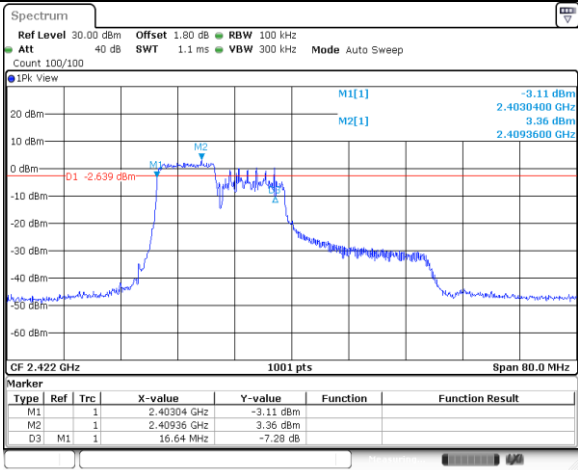
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11AX20SISO Ant1 2462 106Tone RU54

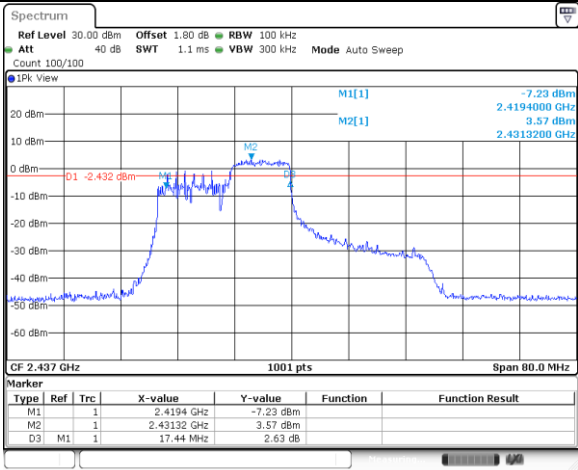


Date: 28 FEB 2024 14:03:22

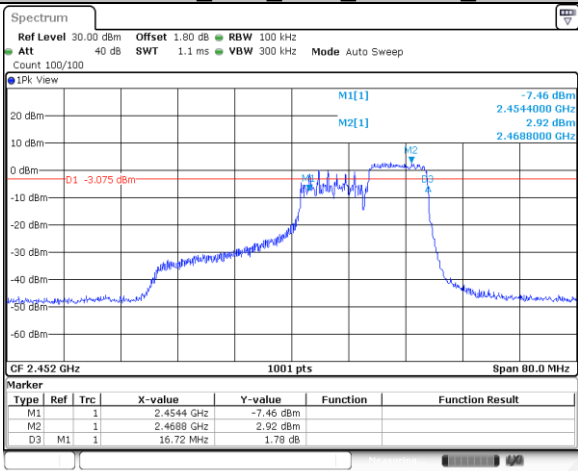
11AX40SISO Ant1 2422 106Tone RU53



11AX40SISO Ant1 2437 106Tone RU54

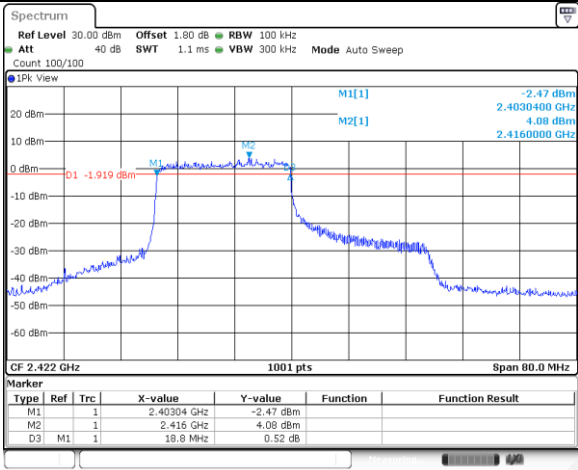


11AX40SISO Ant1 2452 106Tone RU56



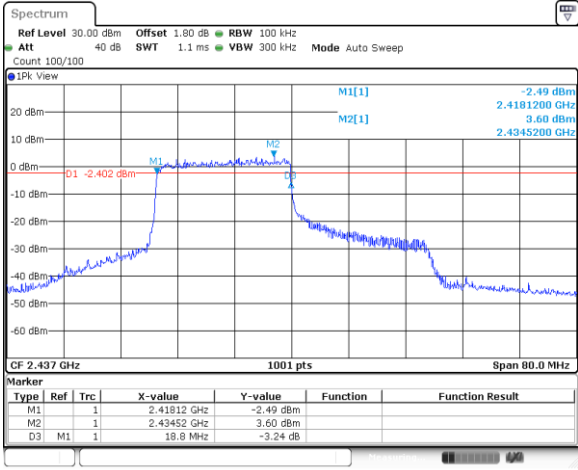


11AX40SISO Ant1 2422 242Tone RU61



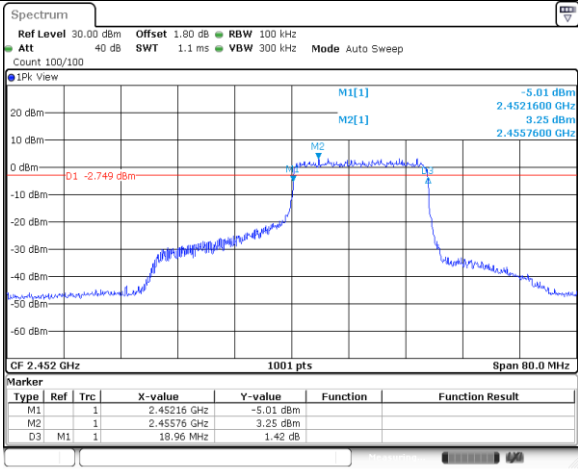
Date: 28 FEB 2024 12:03:54

11AX40SISO Ant1 2437 242Tone RU61



Date: 28 FEB 2024 12:05:27

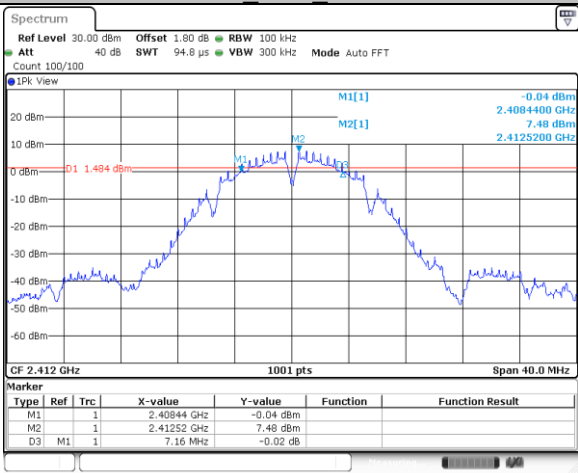
11AX40SISO Ant1 2452 242Tone RU62



Date: 28 FEB 2024 12:06:55

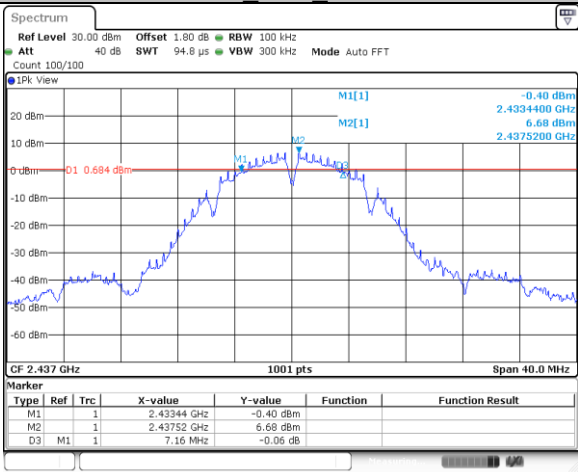


11B Ant2 2412



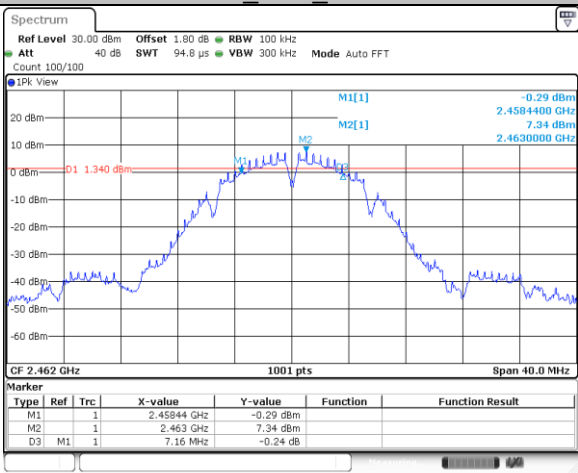
Date: 28 FEB 2024 14:16:56

11B Ant2 2437



Date: 28 FEB 2024 14:18:43

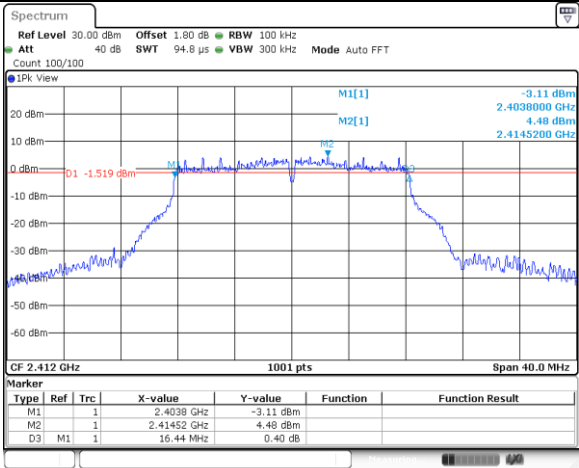
11B Ant2 2462



Date: 28 FEB 2024 14:20:16

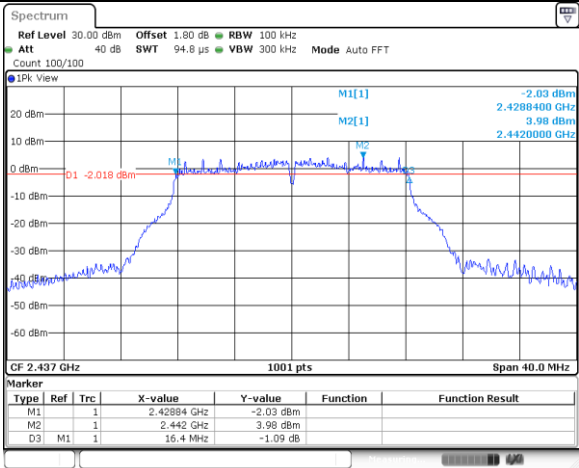


11G_Ant2_2412



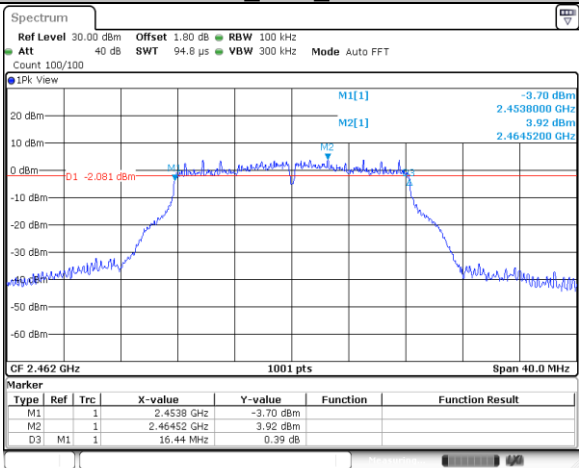
Date: 28 FEB 2024 14:22:04

11G_Ant2_2437



Date: 28 FEB 2024 14:23:38

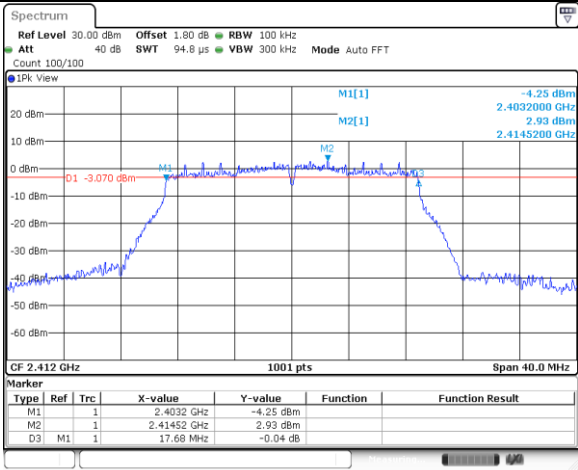
11G_Ant2_2462



Date: 28 FEB 2024 14:25:04

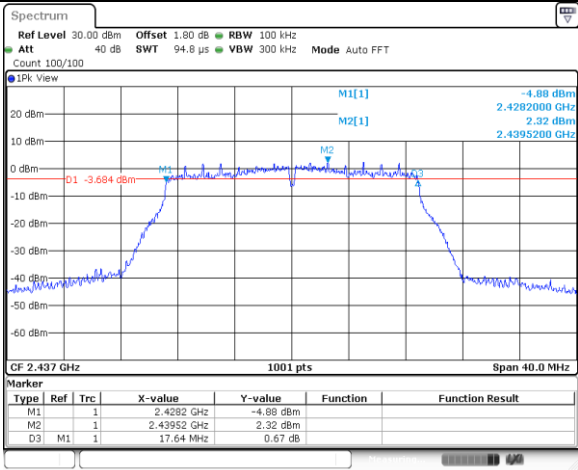


11N20SISO Ant2 2412



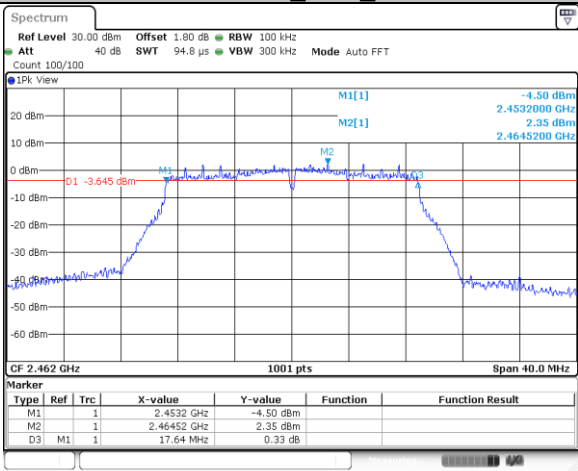
Date: 28 FEB 2024 14:26:51

11N20SISO Ant2 2437



Date: 28 FEB 2024 14:28:28

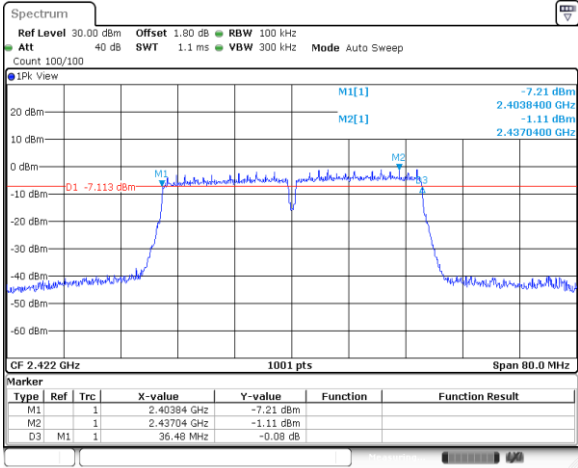
11N20SISO Ant2 2462



Date: 28 FEB 2024 14:29:57

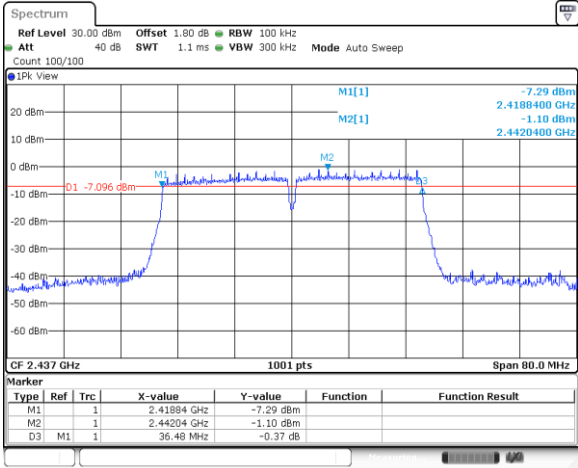


11N40SISO Ant2 2422



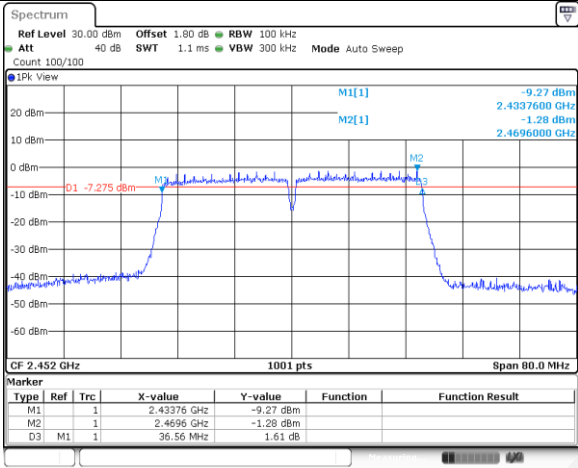
Date: 28 FEB 2024 14:31:48

11N40SISO Ant2 2437



Date: 28 FEB 2024 14:35:13

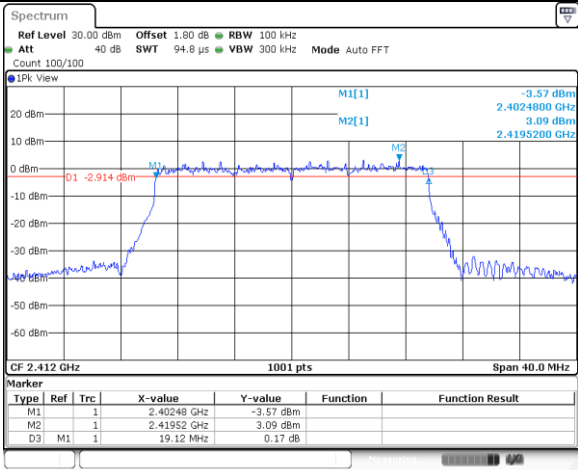
11N40SISO Ant2 2452



Date: 28 FEB 2024 14:36:46

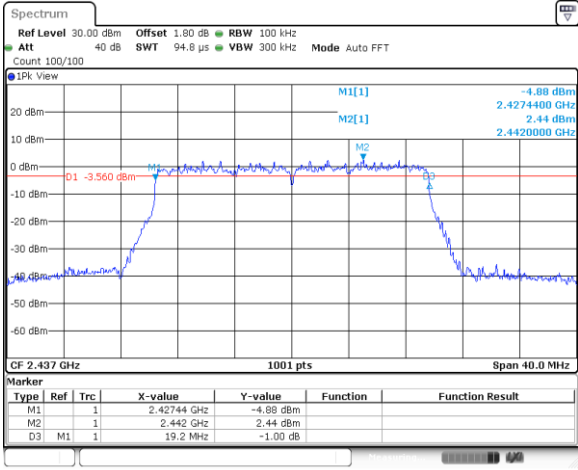


11AX20SISO Ant2 2412 242Tone RU61



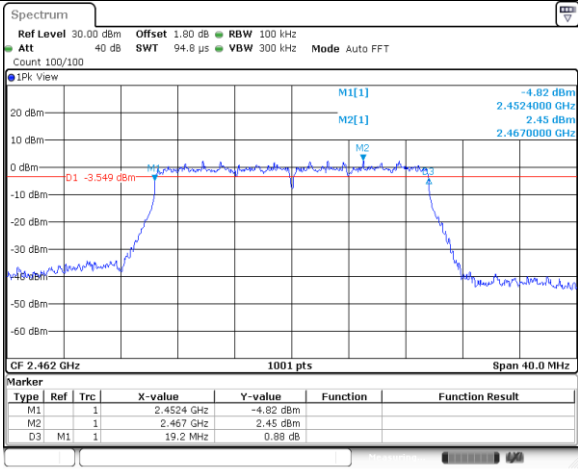
Date: 28 FEB 2024 14:39:23

11AX20SISO Ant2 2437 242Tone RU61



Date: 28 FEB 2024 14:41:50

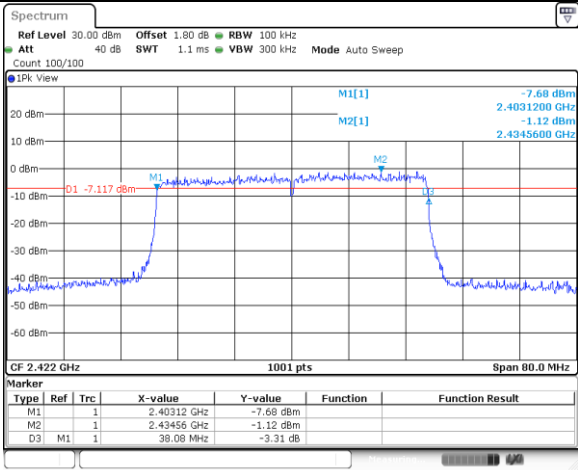
11AX20SISO Ant2 2462 242Tone RU61



Date: 28 FEB 2024 14:43:42

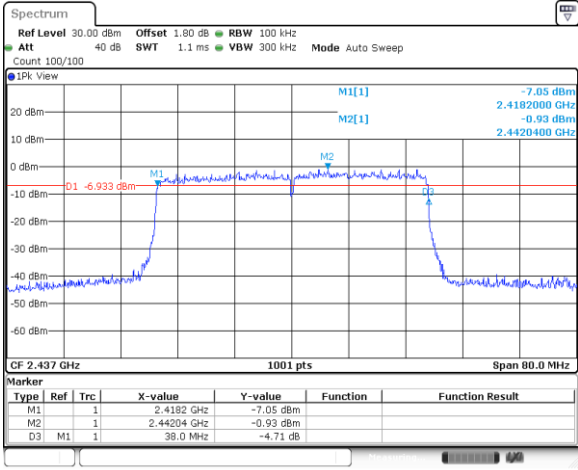


11AX40SISO Ant2 2422 484Tone RU65



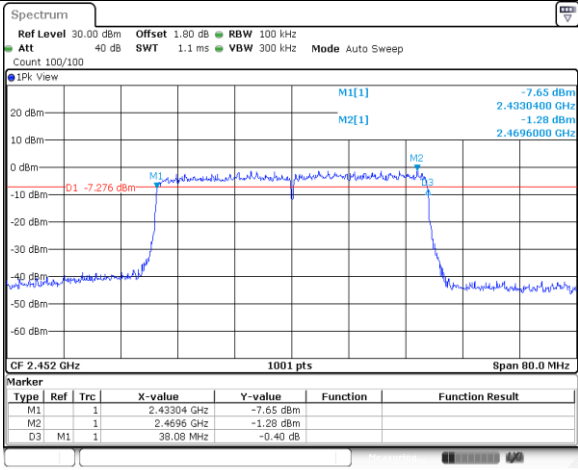
Date: 28 FEB 2024 14:47:41

11AX40SISO Ant2 2437 484Tone RU65



Date: 28 FEB 2024 14:50:29

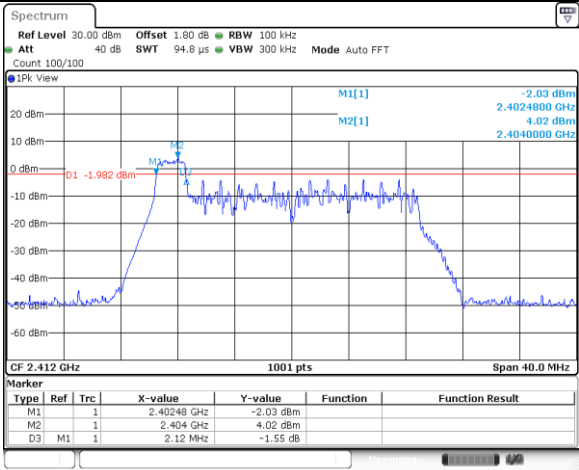
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Date: 28 FEB 2024 14:52:15

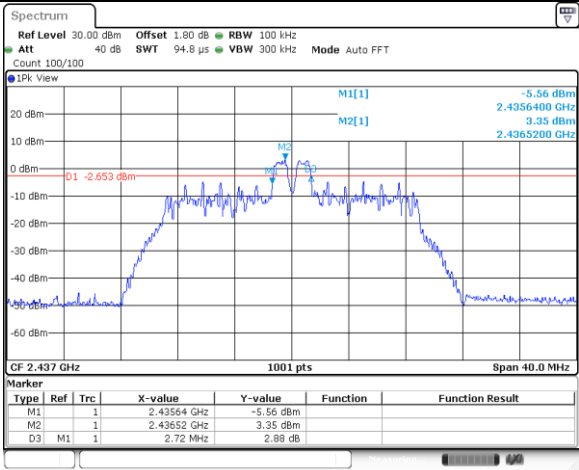


11AX20SISO Ant2 2412 26Tone RU0



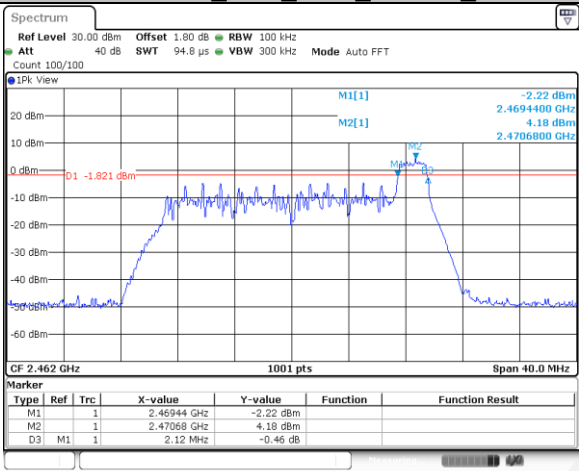
Date: 28 FEB 2024 14:57:24

11AX20SISO Ant2 2437 26Tone RU4



Date: 28 FEB 2024 15:00:52

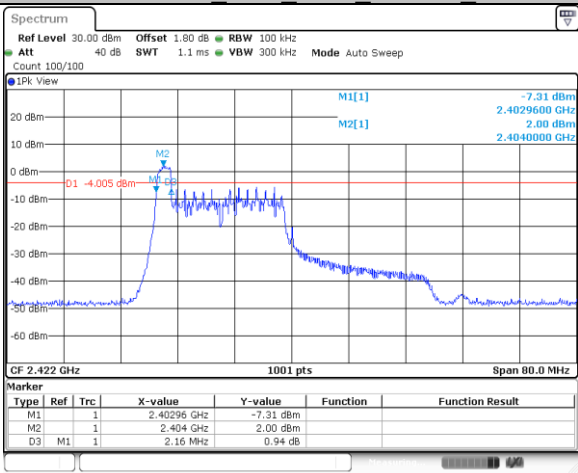
11AX20SISO Ant2 2462 26Tone RU8



Date: 28 FEB 2024 15:03:17

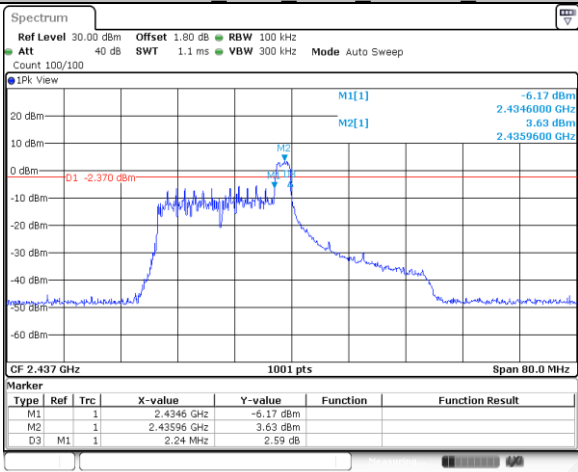


11AX40SISO Ant2 2422 26Tone RU0



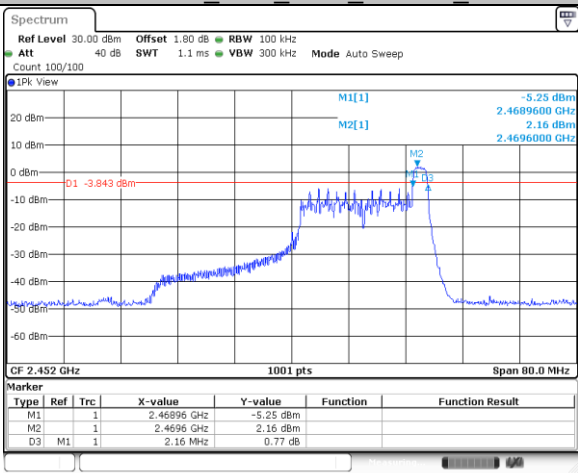
Date: 28 FEB 2024 15:08:46

11AX40SISO Ant2 2437 26Tone RU8



Date: 28 FEB 2024 15:10:32

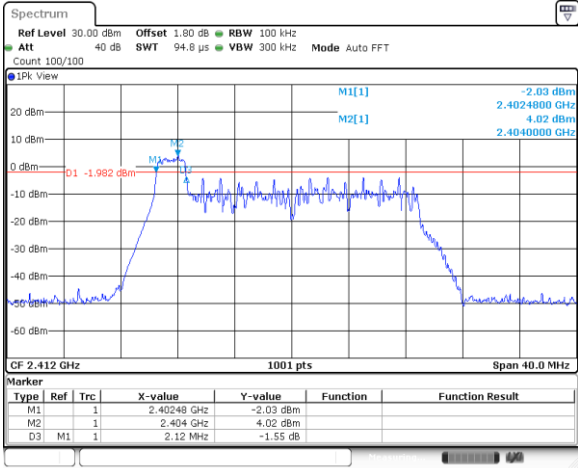
11AX40SISO Ant2 2452 26Tone RU17



Date: 28 FEB 2024 15:13:32

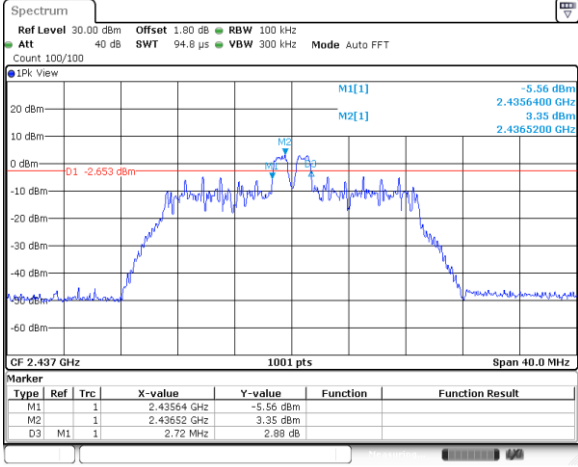


11AX20SISO Ant2 2412 26Tone RU0



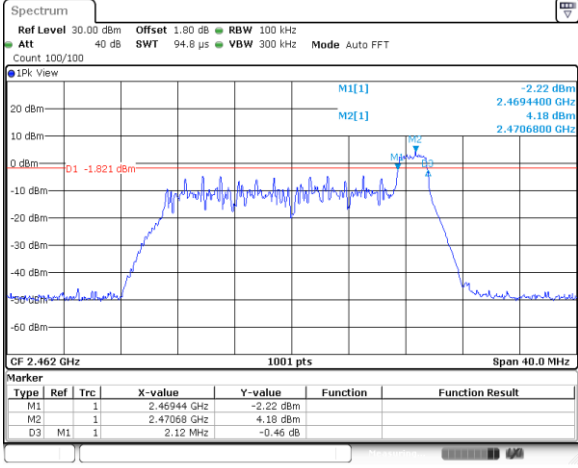
Date: 28 FEB 2024 14:57:24

11AX20SISO Ant2 2437 26Tone RU4



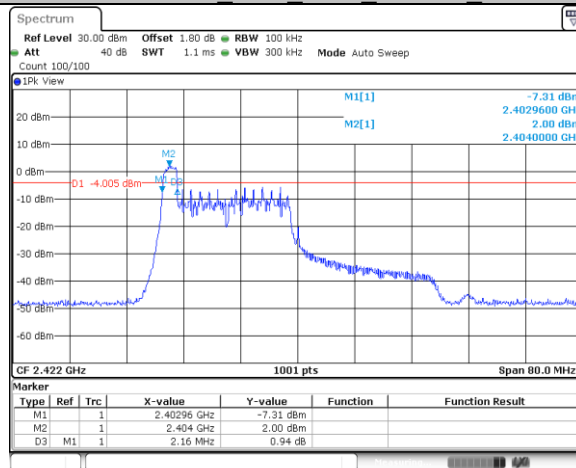
Date: 28 FEB 2024 15:00:52

11AX20SISO Ant2 2462 26Tone RU8



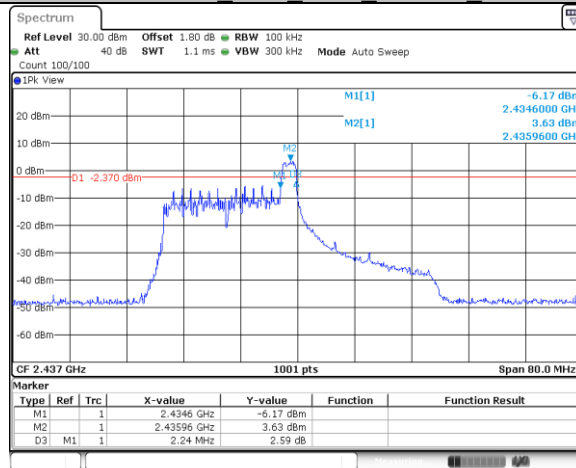
Date: 28 FEB 2024 15:03:17

11AX40SISO Ant2 2422 26Tone RU0



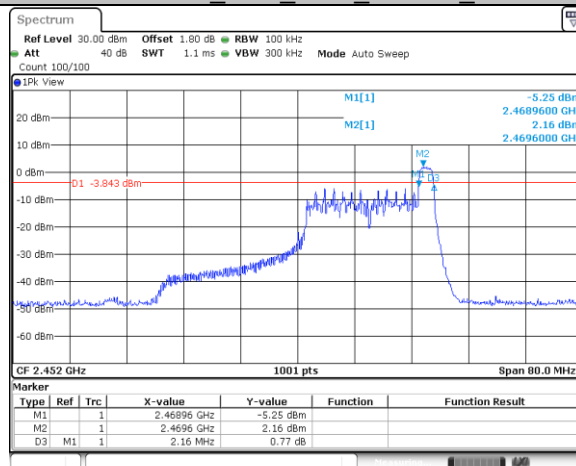
Date: 28 FEB 2024 15:08:46

11AX40SISO Ant2 2437 26Tone RU8



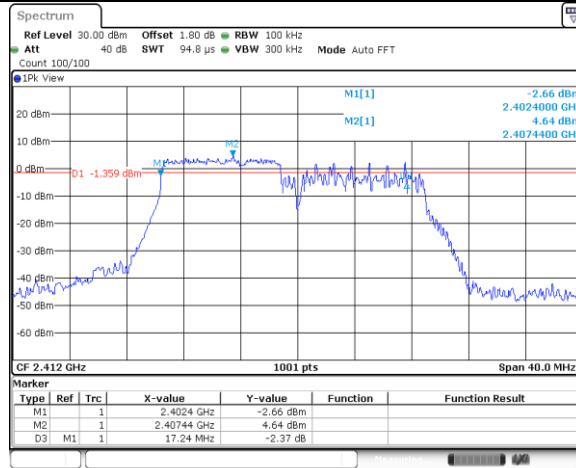
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11AX40SISO Ant2 2452 26Tone RU17



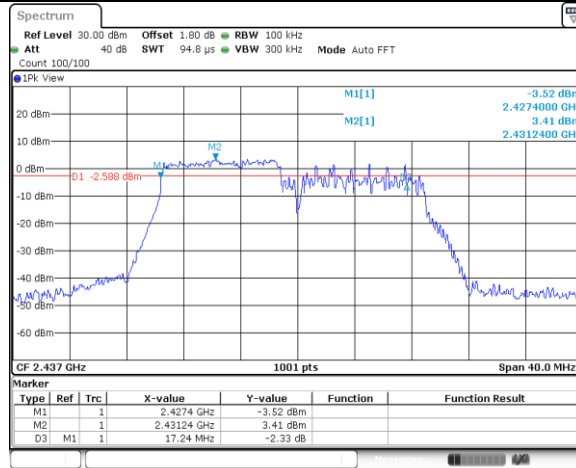
Date: 28 FEB 2024 15:13:32

11AX20SISO Ant2 2412 106Tone RU53



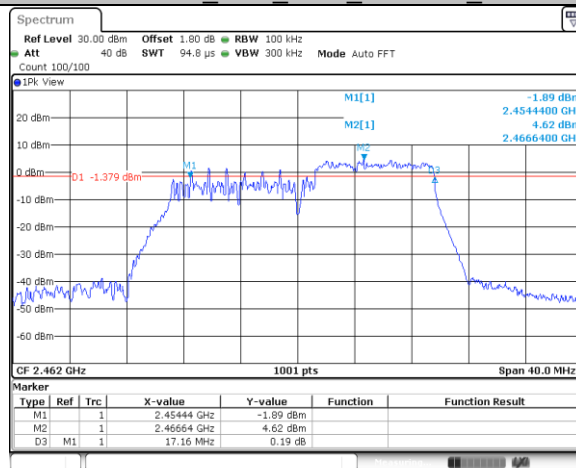
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11AX20SISO Ant2 2437 106Tone RU53



Date: 28 FEB 2024 15:39:29

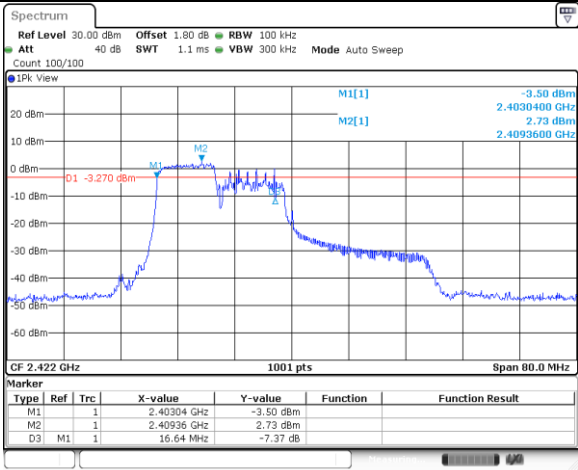
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Date: 28 FEB 2024 15:41:05

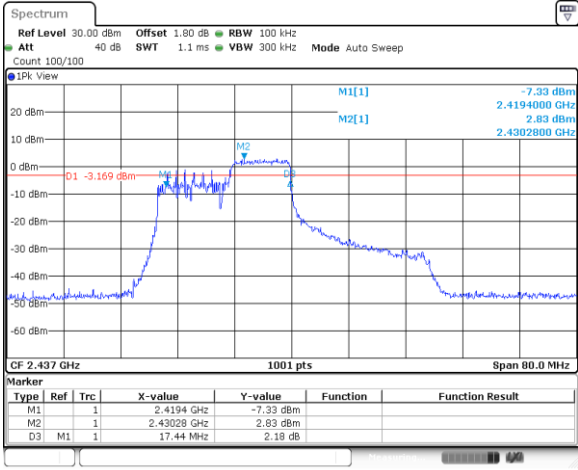


11AX40SISO Ant2 2422 106Tone RU53



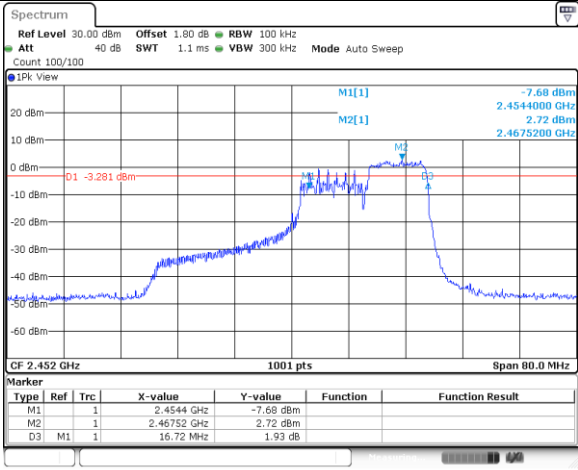
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11AX40SISO Ant2 2437 106Tone RU54



Date: 28 FEB 2024 15:45:48

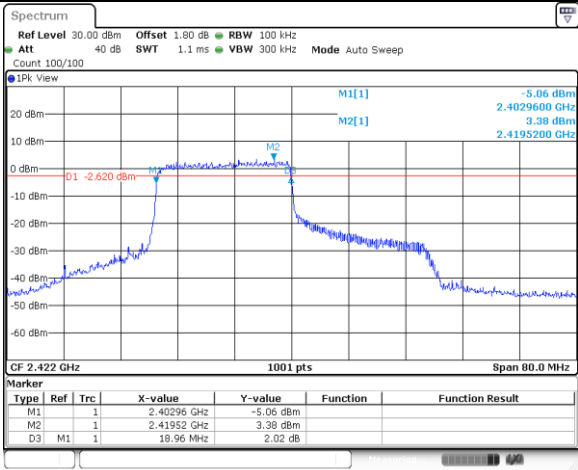
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Date: 28 FEB 2024 15:48:16

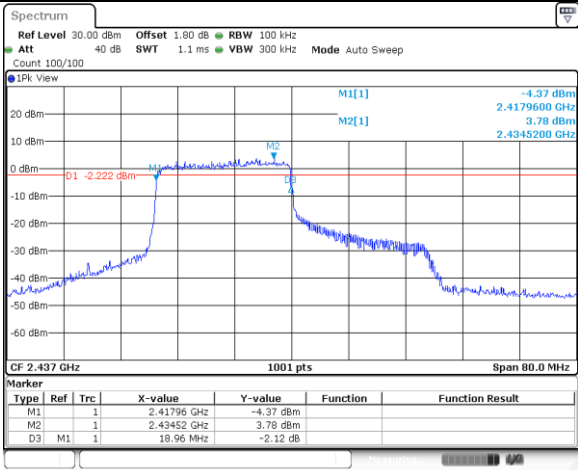


11AX40SISO Ant2 2422 242Tone RU61



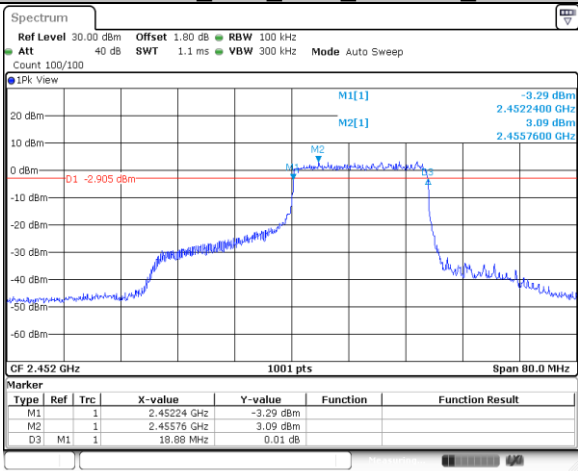
Date: 28 FEB 2024 15:52:48

11AX40SISO Ant2 2437 242Tone RU61



Date: 28 FEB 2024 15:54:46

11AX40SISO Ant2 2452 242Tone RU62

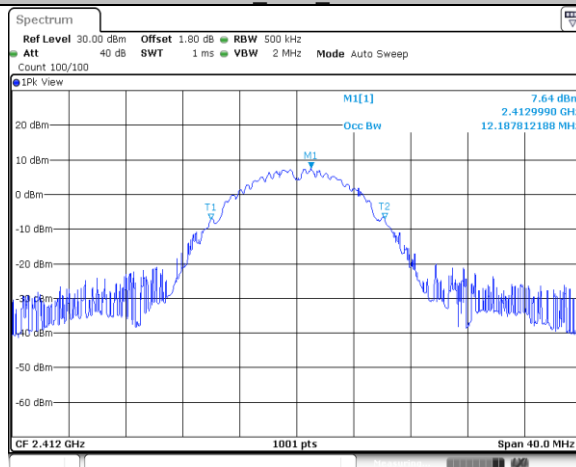


Date: 28 FEB 2024 15:57:15

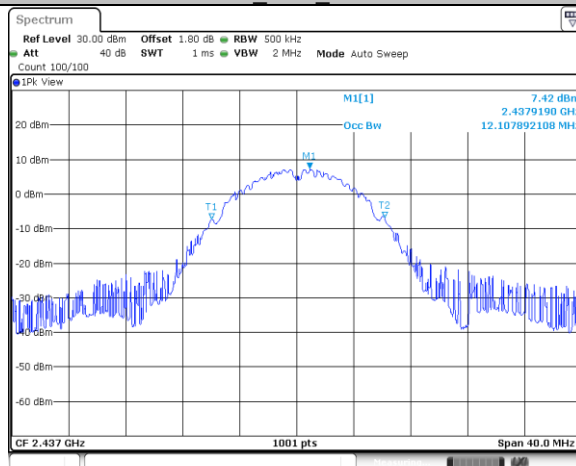
99% Bandwidth

TestMode	Antenna	Channel [MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.188	2405.966	2418.154	---	PASS
		2437	12.108	2431.046	2443.154	---	PASS
		2462	12.148	2456.046	2468.194	---	PASS
11G	Ant1	2412	17.822	2403.209	2421.031	---	PASS
		2437	17.822	2428.249	2446.071	---	PASS
		2462	17.822	2453.209	2471.031	---	PASS
11N20SISO	Ant1	2412	18.741	2402.689	2421.431	---	PASS
		2437	18.661	2427.769	2446.431	---	PASS
		2462	18.701	2452.769	2471.471	---	PASS
11N40SISO	Ant1	2422	37.003	2403.698	2440.701	---	PASS
		2437	36.923	2418.778	2455.701	---	PASS
		2452	36.843	2433.778	2470.621	---	PASS
11AX20SISO	Ant1	2412 242Tone RU61	19.341	2402.410	2421.750	---	PASS
		2437 242Tone RU61	19.301	2427.450	2446.750	---	PASS
		2462 242Tone RU61	19.341	2452.410	2471.750	---	PASS
11AX40SISO	Ant1	2422 484Tone RU65	37.962	2403.139	2441.101	---	PASS
		2437 484Tone RU65	37.802	2418.219	2456.021	---	PASS
		2452 484Tone RU65	37.802	2433.219	2471.021	---	PASS
11AX20SISO	Ant1	2412 26Tone RU0	18.821	2401.890	2420.711	---	PASS
		2437 26Tone RU4	17.742	2427.969	2445.711	---	PASS
		2462 26Tone RU8	19.301	2452.929	2472.230	---	PASS
11AX40SISO	Ant1	2422 26Tone RU0	22.937	2402.340	2425.277	---	PASS
		2437 26Tone RU8	25.415	2418.459	2443.873	---	PASS
		2452 26Tone RU17	22.138	2449.682	2471.820	---	PASS
11AX20SISO	Ant1	2412 52Tone RU37	18.701	2402.010	2420.711	---	PASS
		2437 52Tone RU38	17.822	2427.929	2445.751	---	PASS
		2462 52Tone RU40	19.101	2452.929	2472.030	---	PASS
11AX40SISO	Ant1	2422 52Tone RU37	22.697	2402.500	2425.197	---	PASS
		2437 52Tone RU40	25.015	2418.459	2443.474	---	PASS
		2452 52Tone RU44	21.658	2449.922	2471.580	---	PASS
11AX20SISO	Ant1	2412 106Tone RU53	18.541	2402.210	2420.751	---	PASS
		2437 106Tone RU53	18.621	2427.210	2445.831	---	PASS
		2462 106Tone RU54	18.981	2442.979	2461.960	---	PASS
11AX40SISO	Ant1	2422 106Tone RU53	22.777	2402.739	2425.516	---	PASS
		2437 106Tone RU54	24.136	2418.379	2442.514	---	PASS
		2452 106Tone RU56	21.658	2449.762	2471.421	---	PASS
11AX40SISO	Ant1	2422 242Tone RU61	24.535	2402.979	2427.514	---	PASS
		2437 242Tone RU61	25.415	2417.899	2443.314	---	PASS
		2452 242Tone RU62	23.017	2448.244	2471.261	---	PASS

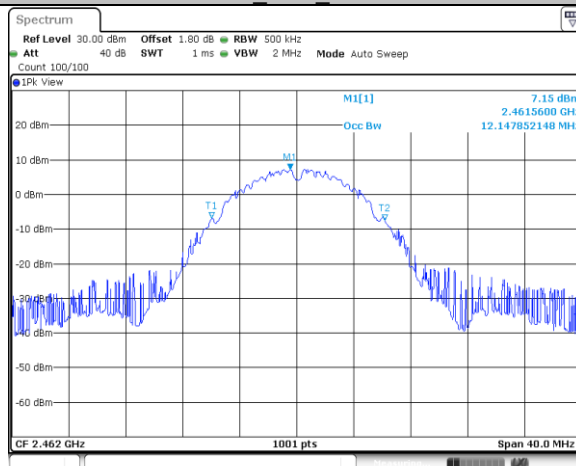
TestMode	Antenna	Channel [MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
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		2437	11.988	2431.086	2443.074	---	PASS
		2462	11.988	2456.086	2468.074	---	PASS
11G	Ant2	2412	17.862	2403.209	2421.071	---	PASS
		2437	17.742	2428.289	2446.031	---	PASS
		2462	17.822	2453.209	2471.031	---	PASS
11N20SISO	Ant2	2412	18.701	2402.729	2421.431	---	PASS
		2437	18.621	2427.769	2446.391	---	PASS
		2462	18.701	2452.689	2471.391	---	PASS
11N40SISO	Ant2	2422	37.003	2403.698	2440.701	---	PASS
		2437	36.843	2418.778	2455.621	---	PASS
		2452	36.923	2433.698	2470.621	---	PASS
11AX20SISO	Ant2	2412 242Tone RU61	19.301	2402.450	2421.750	---	PASS
		2437 242Tone RU61	19.381	2427.410	2446.790	---	PASS
		2462 242Tone RU61	19.381	2452.370	2471.750	---	PASS
11AX40SISO	Ant2	2422 484Tone RU65	37.802	2403.299	2441.101	---	PASS
		2437 484Tone RU65	37.802	2418.219	2456.021	---	PASS
		2452 484Tone RU65	37.722	2433.219	2470.941	---	PASS
11AX20SISO	Ant2	2412 26Tone RU0	18.781	2401.930	2420.711	---	PASS
		2437 26Tone RU4	17.742	2427.929	2445.671	---	PASS
		2462 26Tone RU8	19.261	2452.929	2472.190	---	PASS
11AX40SISO	Ant2	2422 26Tone RU0	22.937	2402.340	2425.277	---	PASS
		2437 26Tone RU8	25.175	2418.459	2443.633	---	PASS
		2452 26Tone RU17	22.458	2449.283	2471.740	---	PASS
11AX20SISO	Ant1	2412 52Tone RU37	18.741	2402.010	2420.751	---	PASS
		2437 52Tone RU38	17.782	2427.929	2445.711	---	PASS
		2462 52Tone RU40	19.141	2452.929	2472.070	---	PASS
11AX40SISO	Ant1	2422 52Tone RU37	23.097	2402.500	2425.596	---	PASS
		2437 52Tone RU40	24.456	2418.459	2442.914	---	PASS
		2452 52Tone RU44	21.898	2449.682	2471.580	---	PASS
11AX20SISO	Ant2	2412 106Tone RU53	18.621	2402.170	2420.791	---	PASS
		2437 106Tone RU53	18.541	2427.210	2445.751	---	PASS
		2462 106Tone RU54	19.021	2452.889	2471.910	---	PASS
11AX40SISO	Ant2	2422 106Tone RU53	23.337	2402.739	2426.076	---	PASS
		2437 106Tone RU54	24.136	2418.379	2442.514	---	PASS
		2452 106Tone RU56	22.058	2449.283	2471.341	---	PASS
11AX40SISO	Ant2	2422 242Tone RU61	25.255	2402.979	2428.234	---	PASS
		2437 242Tone RU61	24.775	2417.899	2442.674	---	PASS
		2452 242Tone RU62	23.337	2447.924	2471.261	---	PASS

99% Bandwidth**11B_Ant1_2412**

Date: 26 FEB 2024 16:07:12

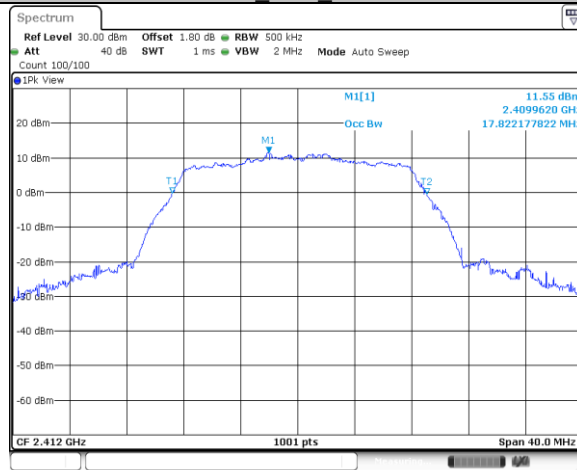
11B_Ant1_2437

Date: 26 FEB 2024 16:11:21

11B_Ant1_2462

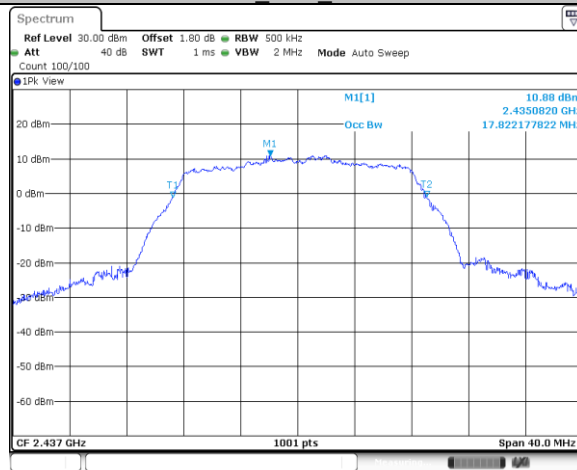
Date: 26 FEB 2024 16:13:16

11G_Ant1_2412



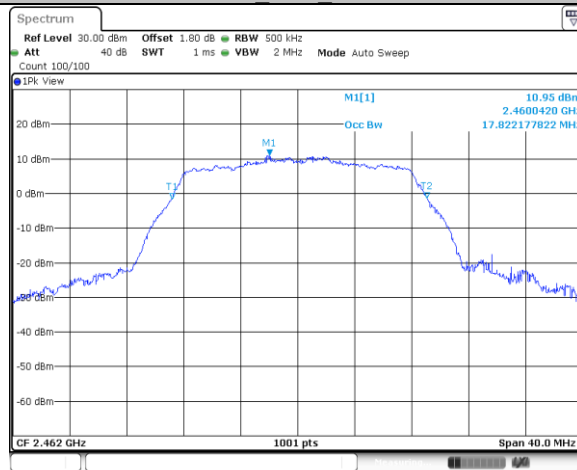
Date: 26 FEB 2024 16:30:10

11G_Ant1_2437



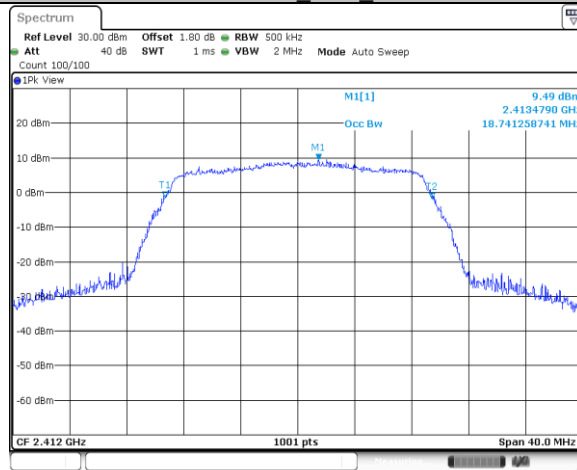
Date: 26 FEB 2024 16:32:30

11G_Ant1_2462



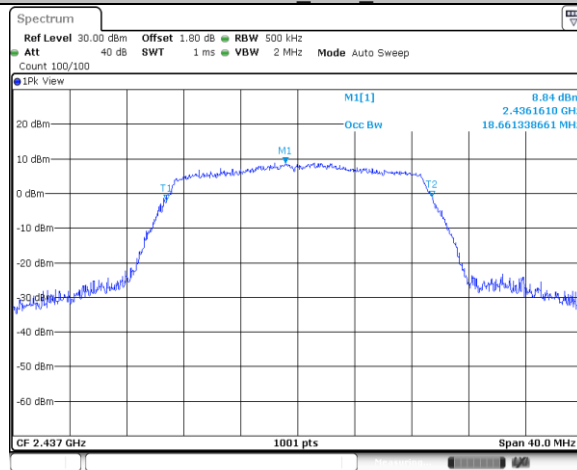
Date: 26 FEB 2024 16:35:10

11N20SISO_Ant1_2412



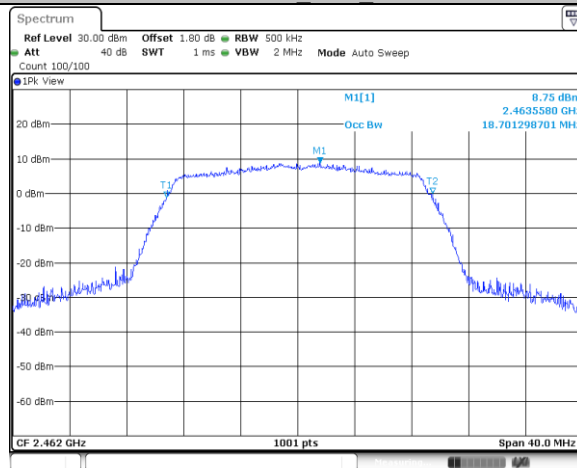
Date: 26 FEB 2024 16:40:13

11N20SISO_Ant1_2437



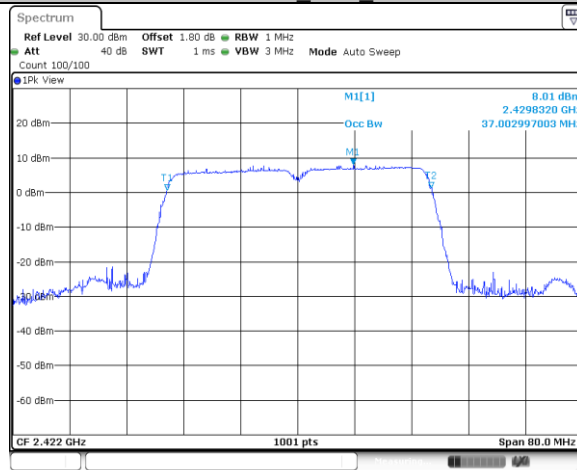
Date: 26 FEB 2024 16:43:00

11N20SISO_Ant1_2462



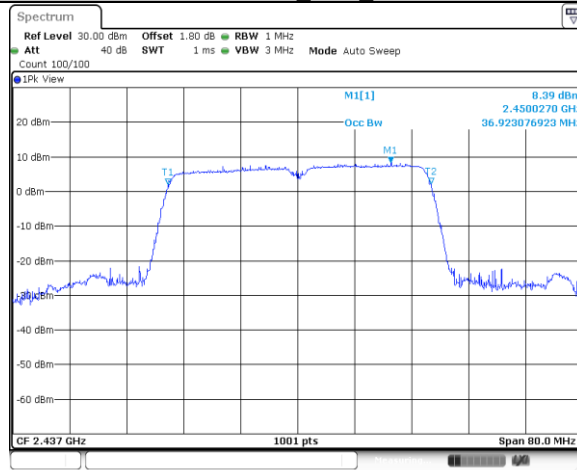
Date: 26 FEB 2024 16:44:34

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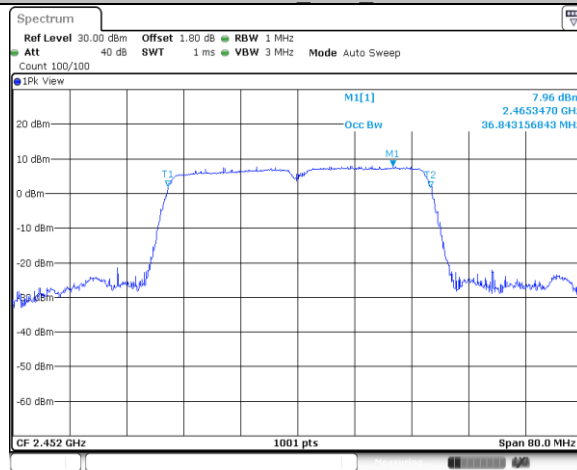
Date: 26 FEB 2024 16:47:31

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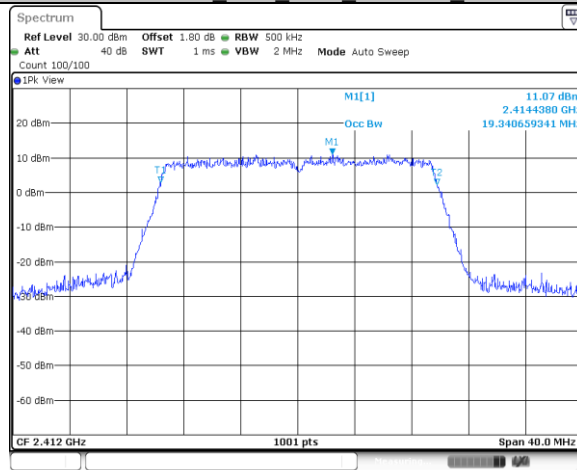
Date: 26 FEB 2024 16:49:13

11N40SISO_Ant1_2452



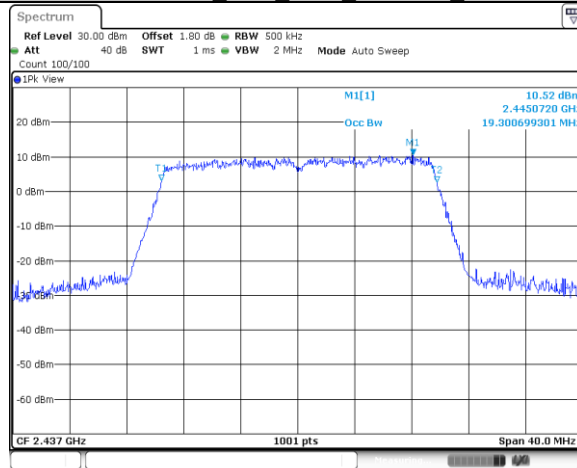
Date: 26 FEB 2024 16:50:49

11AX20SISO_Ant1_2412_242Tone_RU61



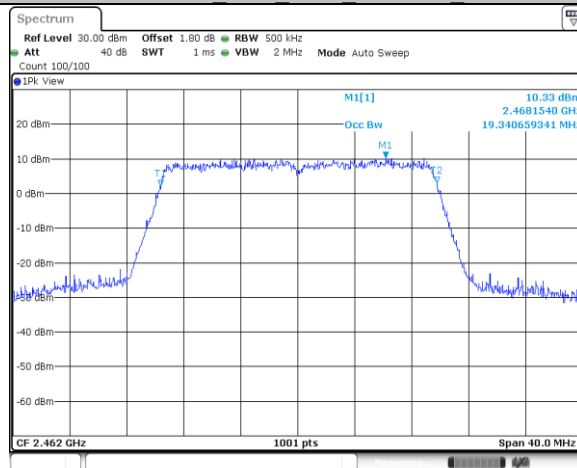
Date: 26 FEB 2024 16:53:31

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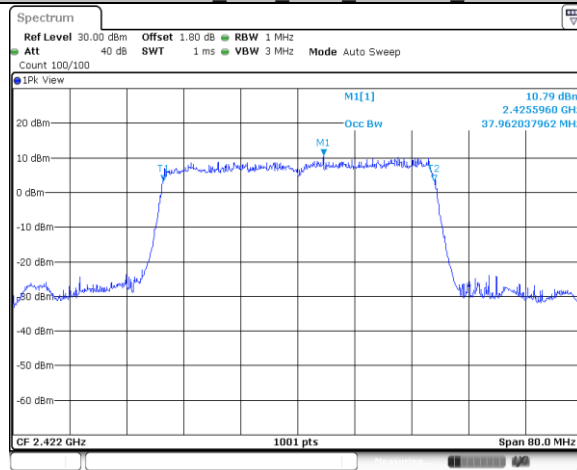
Date: 26 FEB 2024 16:55:40

11AX20SISO_Ant1_2462_242Tone_RU61



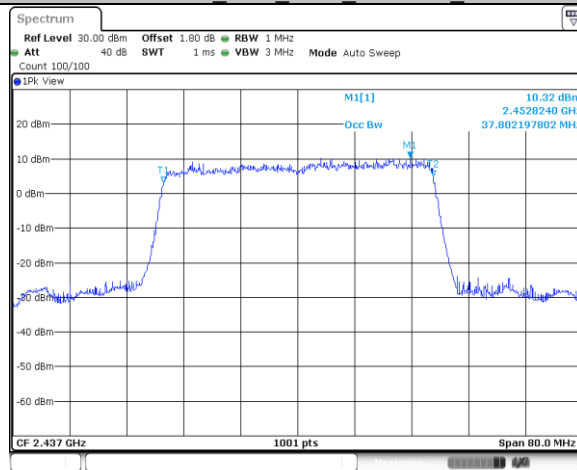
Date: 26 FEB 2024 16:57:54

11AX40SISO_Ant1_2422_484Tone_RU65



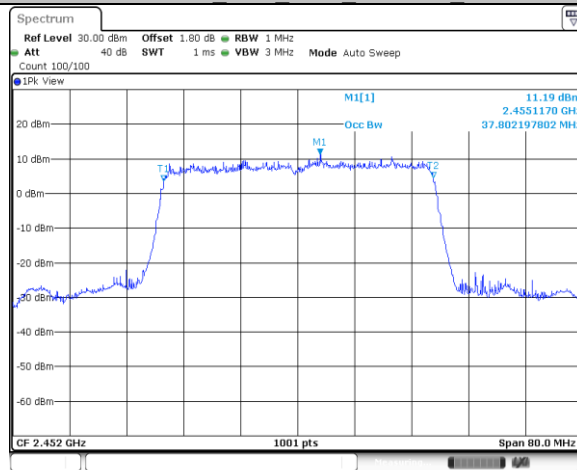
Date: 26 FEB 2024 17:00:09

11AX40SISO_Ant1_2437_484Tone_RU65



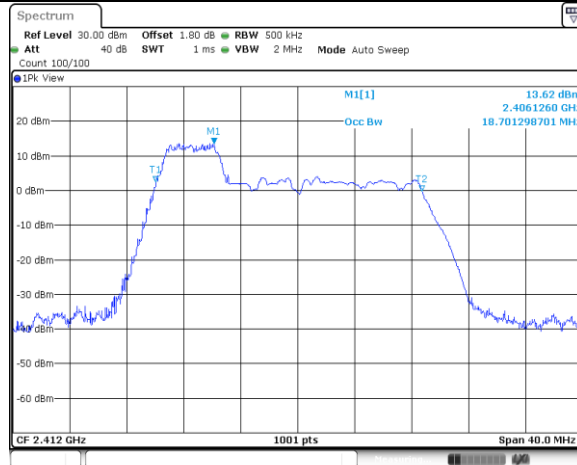
Date: 26 FEB 2024 17:01:45

11AX40SISO_Ant1_2452_484Tone_RU65



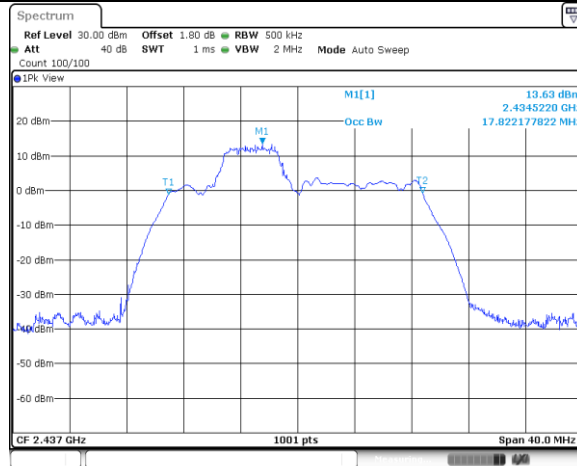
Date: 26 FEB 2024 17:03:16

11AX20SISO Ant1 2412 52Tone RU37



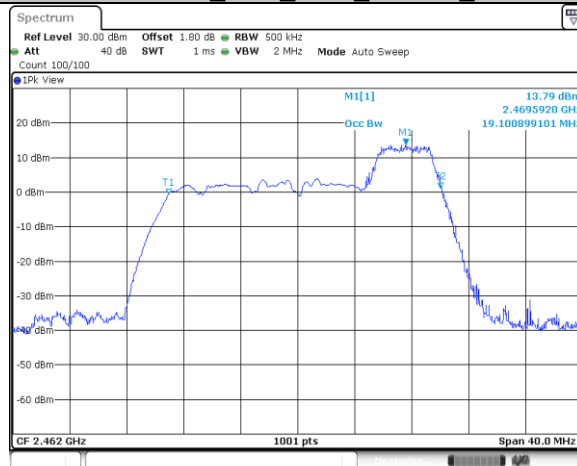
Date: 28 FEB 2024 13:48:54

11AX20SISO Ant1 2437 52Tone RU38



Date: 28 FEB 2024 13:50:28

11AX20SISO Ant1 2462 52Tone RU40



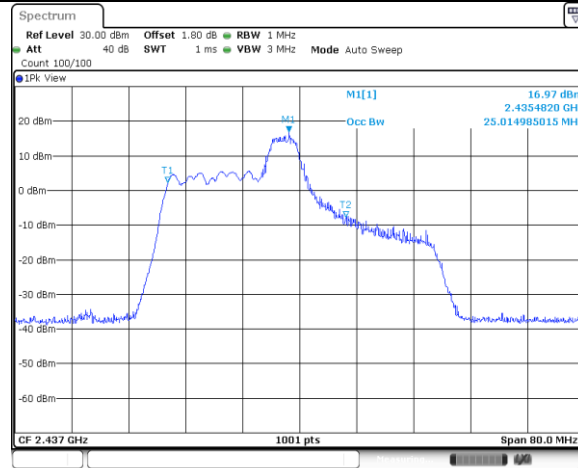
Date: 28 FEB 2024 13:52:06

11AX40SISO Ant1 2422 52Tone RU37



Date: 28 FEB 2024 13:53:59

11AX40SISO Ant1 2437 52Tone RU40



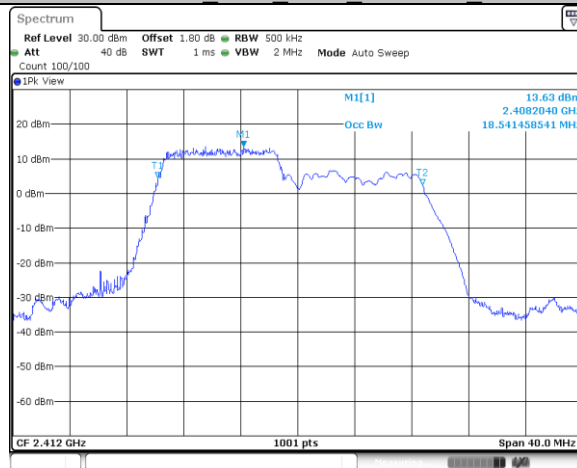
Date: 28 FEB 2024 13:55:34

11AX40SISO Ant1 2452 52Tone RU44



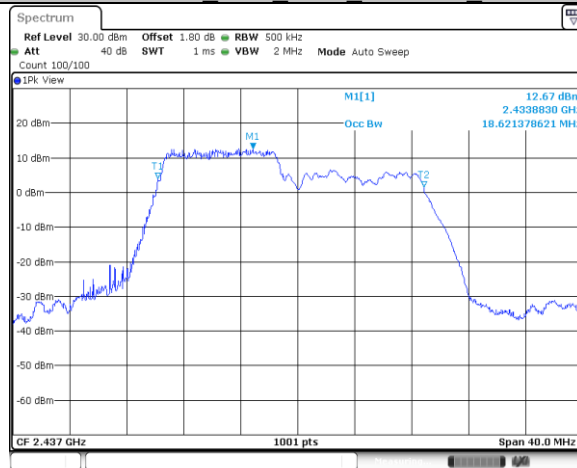
Date: 28 FEB 2024 13:57:14

11AX20SISO Ant1 2412 106Tone RU53



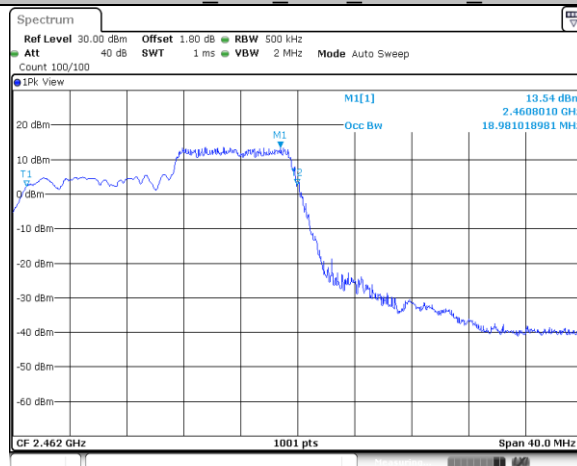
Date: 28 FEB 2024 13:59:48

11AX20SISO Ant1 2437 106Tone RU53



Date: 28 FEB 2024 14:01:31

11AX20SISO Ant1 2462 106Tone RU54



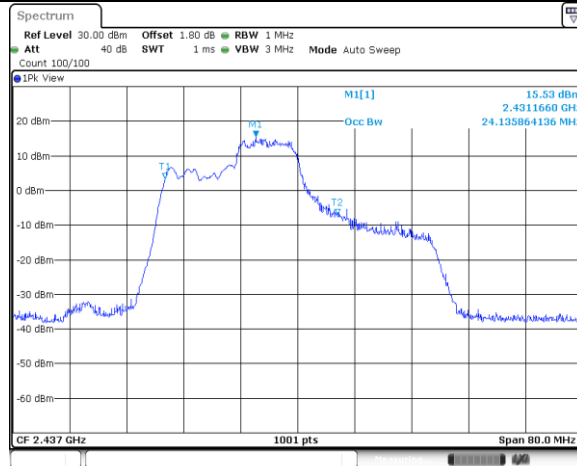
Date: 28 FEB 2024 14:03:33

11AX40SISO Ant1 2422 106Tone RU53



Date: 28 FEB 2024 14:05:22

11AX40SISO Ant1 2437 106Tone RU54



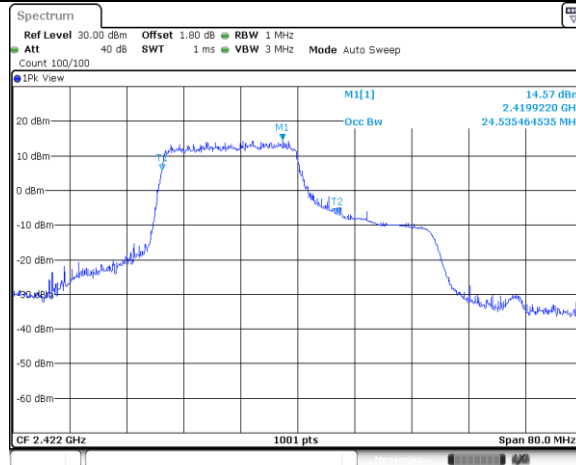
Date: 28 FEB 2024 14:07:11

11AX40SISO Ant1 2452 106Tone RU56



Date: 28 FEB 2024 14:08:45

11AX40SISO Ant1 2422 242Tone RU61



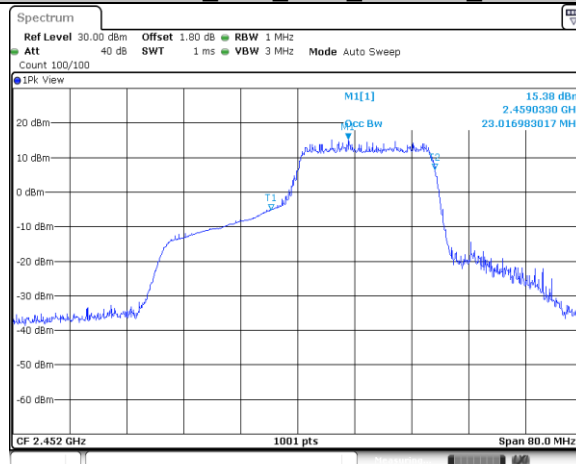
Date: 28 FEB 2024 12:04:05

11AX40SISO Ant1 2437 242Tone RU61



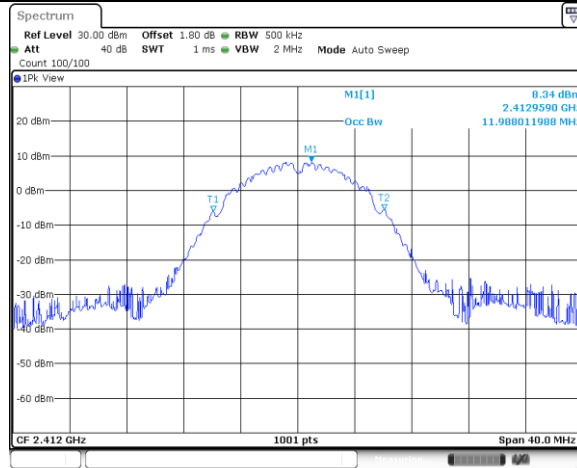
Date: 28 FEB 2024 12:05:37

11AX40SISO Ant1 2452 242Tone RU62



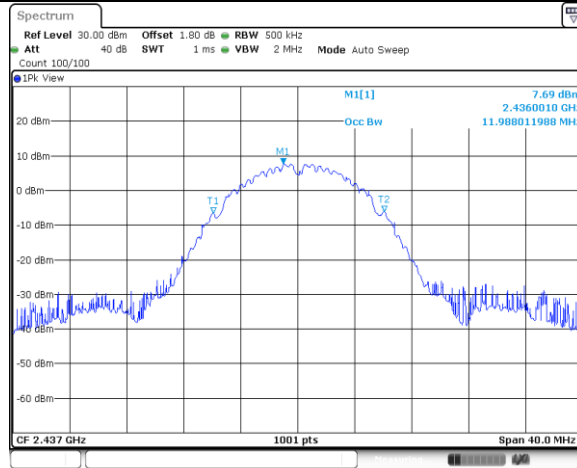
Date: 28 FEB 2024 12:07:05

11B Ant2 2412



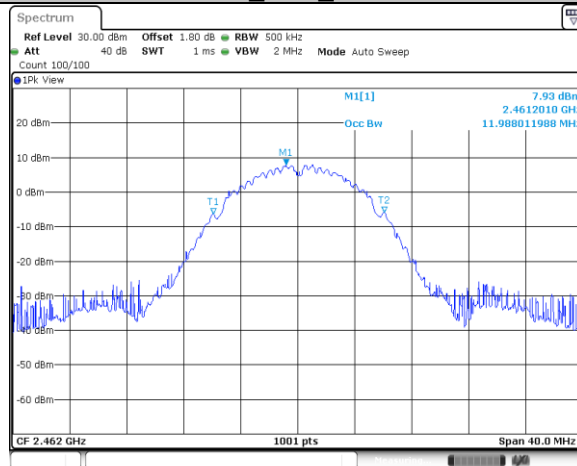
Date: 28 FEB 2024 14:17:07

11B Ant2 2437



Date: 28 FEB 2024 14:18:54

11B Ant2 2462



Date: 28 FEB 2024 14:20:27