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Report Template Version: V05
Report Template Revision Date: 2018-07-06

Test Report

Report No.:	CQASZ20250300547E-01
Applicant:	Winstars Technology Limited
Address of Applicant:	1-5F, NO.5, Taisong Industrial Zone, Dalang Community, Dalang Street, Longhua District, Shenzhen, China
Equipment Under Test (EUT):	
Product:	Wireless AP/Repeater
Model No.:	WS-WN573HX3, WL-WN573HX3, WS-WN573HX1, WL-WN573HX1, AERIAL HD6, AERIAL HD9
Teat Model No.:	WS-WN573HX3
Brand Name:	N/A
FCC ID:	NZ3-WN0007
Standards:	47 CFR Part 15, Subpart E KDB 789033 D02 General UNII Test Procedures New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01
Date of Receipt:	2025-03-17
Date of Test:	2025-03-17 to 2025-05-26
Date of Issue:	2025-05-30
Test Result:	**PASS***

*In the configuration tested, the EUT complied with the standards specified above.

Tested By: lewis zhou

(Lewis Zhou)

Reviewed By: Timo Lei

(Timo Lei)

Approved By:

(Jack Ai)

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20250300547E-01	Rev.01	Initial report	2025-05-30

2 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203	ANSI C63.10-2013; KDB789033	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart E Section 15.207	ANSI C63.10-2013; KDB789033	PASS
Maximum Conducted Output Power	47 CFR Part 15 Subpart C Section 15.407 (a)	ANSI C63.10-2013; KDB789033	PASS
Emission Bandwidth	47 CFR Part 15 Subpart C Section 15.407 (a)(e)	ANSI C63.10-2013; KDB789033	PASS
Maximum Power Spectral Density	47 CFR Part 15 Subpart E Section 15.407 (a)	ANSI C63.10-2013; KDB789033	PASS
Band Edge Measurements	47 CFR Part 15 Subpart C Section 15.209 &15.407(b)	ANSI C63.10-2013; KDB789033	PASS
Frequency stability	47 CFR Part 15 Subpart E Section 15.407 (g)	ANSI C63.10-2013; KDB789033	PASS
Operation in the absence of information to the transmit	47 CFR Part 15 Subpart E Section 15.407 (c)	47 CFR Part 15 Subpart E	PASS
Radiated Spurious Emissions	47 CFR Part 15 Subpart E Section 15.407 (b)	ANSI C63.10-2013; KDB789033	PASS

Remark:
The tested sample(s) and the sample information are provided by the client.
Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
RF: In this whole report RF means Radiated Frequency.
CH: In this whole report CH means channel.
Volt: In this whole report Volt means Voltage.
Temp: In this whole report Temp means Temperature.
Humid: In this whole report Humid means humidity.
Press: In this whole report Press means Pressure.
N/A: In this whole report not application

3 Content

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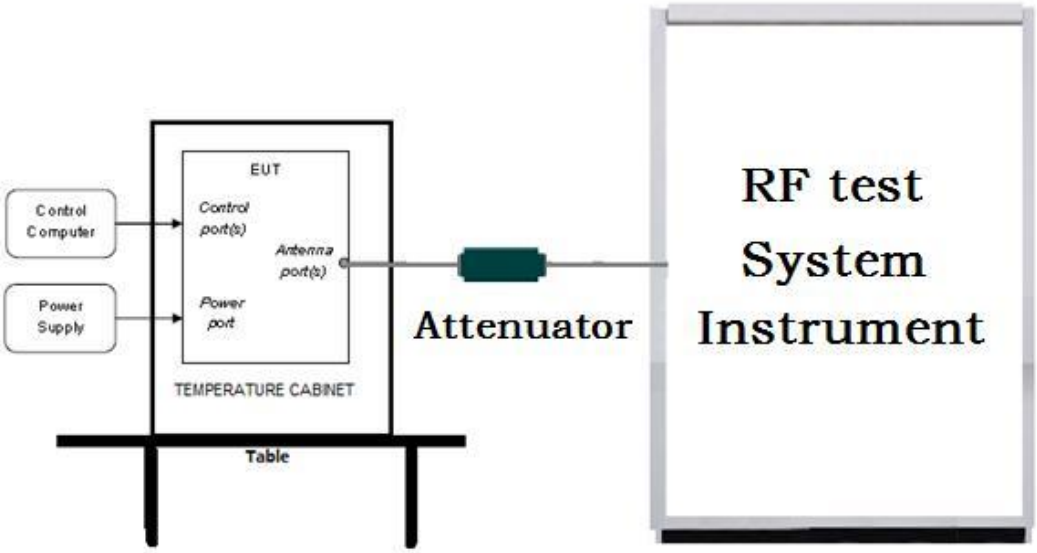
4 Test Requirement

4.1 Test setup

4.1.1 For Conducted test setup



4.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

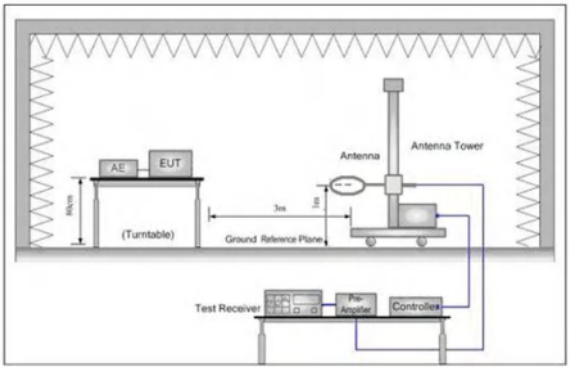


Figure 1. Below 30MHz

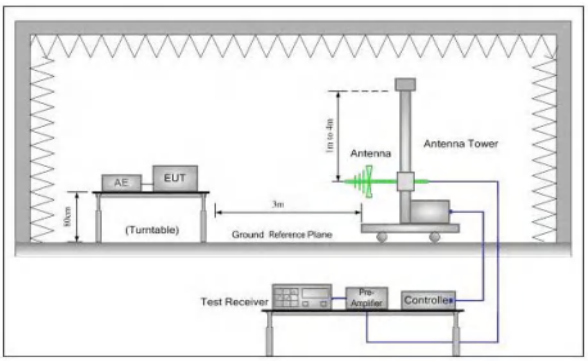


Figure 2. 30MHz to 1GHz

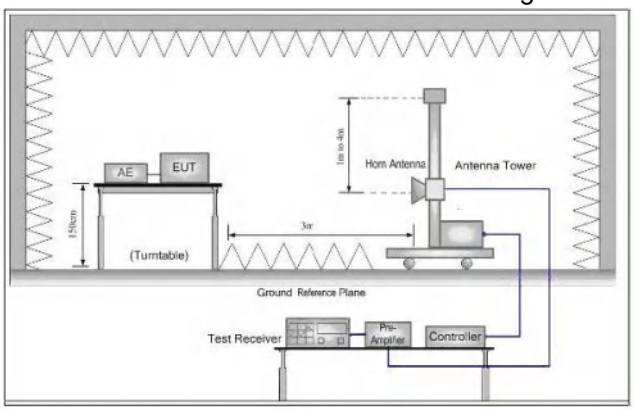
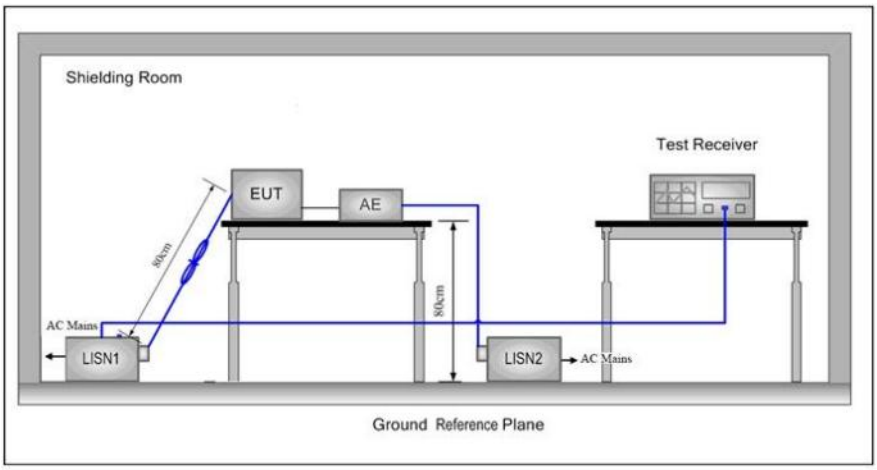


Figure 3. Above 1GHz

4.1.3 For Conducted Emissions test setup

Conducted Emissions setup



4.2 Test Environment

Operating Environment:		
Conducted Emissions:		
Temperature:	25.6 °C	
Humidity:	60 % RH	
Atmospheric Pressure:	1009 mbar	
Radiated Emissions:		
Temperature:	25.5 °C	
Humidity:	54 % RH	
Atmospheric Pressure:	1009mbar	
Radio conducted item test (RF Conducted test room):		
Temperature:	25.3 °C	
Humidity:	50 % RH	
Atmospheric Pressure:	1009 mbar	
Test Condition	Temperature (°C)	Voltage (V)
TN/VN	+15 to +35	24
TL/VL	0	21.6
TH/VL	50	21.6
TL/VH	0	26.4
TH/VH	50	26.4

Remark:

1)The EUT just work in such extreme temperature of 0 °C to 50 °C and the extreme voltage of 6.84V to 8.36V, so here the EUT is tested in the temperature of 0 °C to 50 °C and the voltage of 6.84V to 8.36V.

2)VN: Normal Voltage; TN: Normal Temperature;

TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature;

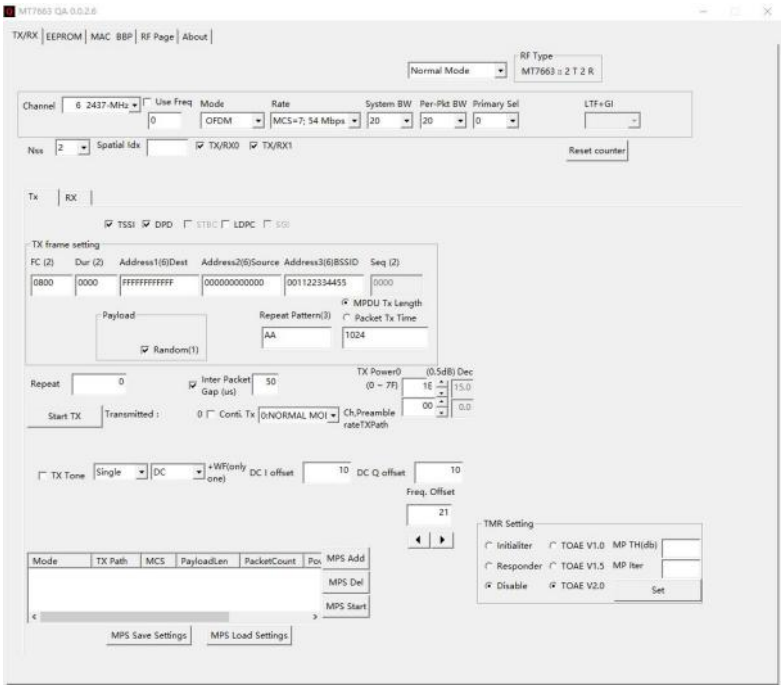
VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage.

4.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11a/n/ac/ax(20M)	5250MHz ~5350 MHz	Channel 52	Channel 56	Channel 64
		5260MHz	5280MHz	5320MHz
802.11n/ac/ax(40M)	5250MHz ~5350 MHz	Channel 54	N/A	Channel 62
		5270MHz	N/A	5310MHz
802.11n/ac/ax(80M)	5250MHz ~5350 MHz	N/A	Channel 58	N/A
		N/A	5290MHz	N/A
802.11a/n/ac/ax(20M)	5470MHz ~5725 MHz	Channel 100	Channel 116	Channel 144
		5500MHz	5580MHz	5720MHz
802.11n/ac/ax(40M)	5470MHz ~5725 MHz	Channel 102	Channel 110	Channel 142
		5510MHz	5550MHz	5710MHz
802.11n/ac/ax(80M)	5470MHz ~5725 MHz	Channel 106	N/A	Channel 138
		5530MHz	N/A	5690MHz

Run Software:



Test mode:

Pre-scan under all rate at lowest channel for Ant1

Through Pre-scan, 6Mbps is the worst case of 802.11a (20M); MCS0 is the worst case of 802.11n (20M); MCS0 is the worst case of 802.11ac (20M); MCS0 is the worst case of 802.11n(40M); MCS0 is the worst case of 802.11ac (40M); MCS0 is the worst case of 802.11ac(80M).

5 General Information

5.1 Client Information

Applicant:	Winstars Technology Limited
Address of Applicant:	1-5F, NO.5, Taisong Industrial Zone, Dalang Community, Dalang Street, Longhua District, Shenzhen, China
Manufacturer:	Winstars Technology Limited
Address of Manufacturer:	1-5F, NO.5, Taisong Industrial Zone, Dalang Community, Dalang Street, Longhua District, Shenzhen, China
Factory:	Winstars Technology Limited
Address of Factory:	1-5F, NO.5, Taisong Industrial Zone, Dalang Community, Dalang Street, Longhua District, Shenzhen, China

5.2 General Description of EUT

Product Name:	Wireless AP/Repeater
Model No.:	WS-WN573HX3, WL-WN573HX3, WS-WN573HX1, WL-WN573HX1, AERIAL HD6, AERIAL HD9
Test Model No.:	WS-WN573HX3
Trade Mark:	N/A
Hardware Version:	M73HX3_V240229
Software Version:	WS-WN573HX3-A
EUT Power Supply:	Power supply POE
EUT Supports Radios application:	U-NII-1: 5.15-5.25GHz; U-NII-2a: 5.25-5.35GHz U-NII-2c: 5.47-5.725GHz; U-NII-3: 5.725-5.850GHz
EUT Type:	Indoor devices

5.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11a/n/ac/ax(20M): 5150MHz ~5250 MHz IEEE802.11n/ac/ax(40M): 5150MHz ~5250 MHz IEEE802.11ac/ax(80M): 5150MHz ~5250 MHz IEEE 802.11a/n/ac/ax(20M): 5250MHz ~5350 MHz IEEE802.11n/ac/ax(40M): 5250MHz ~5350 MHz IEEE802.11ac/ax(80M): 5250MHz ~5350 MHz IEEE 802.11a/n/ac/ax(20M): 5470MHz ~5725 MHz IEEE802.11n/ac/ax(40M): 5470MHz ~5725 MHz IEEE802.11ac/ax(80M): 5470MHz ~5725 MHz IEEE 802.11a/n/ac/ax(20M): 5725MHz ~5850 MHz IEEE802.11n/ac/ax(40M): 5725MHz ~5850 MHz IEEE802.11ac/ax(80M): 5725MHz ~5850 MHz
Channel Numbers:	IEEE 802.11a/n/ac/ax(20M): 5150MHz ~5250MHz/ 4 channel IEEE 802.11n/ac/ax(40M): 5150MHz ~5250MHz/ 2 channel IEEE 802.11ac/ax(80M): 5150MHz ~5250MHz/ 1 channel IEEE 802.11a/n/ac/ax(20M): 5250MHz ~5350MHz/ 4 channel IEEE 802.11n/ac/ax(40M): 5250MHz ~5350MHzHz/ 2 channel IEEE 802.11ac/ax(80M): 5250MHz ~5350MHzHz/ 1 channel IEEE 802.11a/n/ac/ax(20M): 5470MHz ~5725MHz/ 8 channel IEEE 802.11n/ac/ax(40M): 5470MHz ~5725MHz/ 3 channel IEEE 802.11ac/ax(80M): 5470MHz ~5725MHz/ 1 channel IEEE 802.11a/n/ac/ax(20M): 5725MHz ~5850MHz/ 5 channel IEEE 802.11n/ac/ax(40M): 5725MHz ~5850MHz/ 2 channel IEEE 802.11ac/ax(80M): 5725MHz ~5850MHz/ 1 channel
Type of Modulation:	IEEE for 802.11ax: OFDMA(1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11a/n/ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)
Sample Type:	☒ Mobile ☐ Portable
Test Software of EUT:	qatool_dbg
Antenna Type:	External antenna
Antenna gain:	Ant1: 6.7dBi@5GHz: Wi-Fi: U-NII-1 6.83dBi@5GHz: Wi-Fi: U-NII-2A 7.61dBi@5GHz: Wi-Fi: U-NII-2C 6.71dBi@5GHz: Wi-Fi: U-NII-3 Ant2: 6.7dBi@5GHz: Wi-Fi: U-NII-1 6.83dBi@5GHz: Wi-Fi: U-NII-2A 7.61dBi@5GHz: Wi-Fi: U-NII-2C 6.71dBi@5GHz: Wi-Fi: U-NII-3 Ant1+Ant2: 9.71dBi@5GHz: Wi-Fi: U-NII-1 9.84dBi@5GHz: Wi-Fi: U-NII-2A 10.62dBi@5GHz: Wi-Fi: U-NII-2C 9.72dBi@5GHz: Wi-Fi: U-NII-3
Cable loss:	1.0 dB

Operation Frequency each of channel

(U-NII-1) 5180MHz-5240MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
20MHz	**36**	**5180**	**40**	**5200**
	44	**5220**	**48**	**5240**
40MHz	**38**	**5190**	**46**	**5230**
80MHz	**42**	**5210**	**/**	**/**
(U-NII-2A) 5260MHz-5320MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
20MHz	**52**	**5260**	**56**	**5280**
	60	**5300**	**64**	**5320**
40MHz	**54**	**5270**	**62**	**5310**
80MHz	**58**	**5290**	**/**	**/**
(U-NII-2C) 5500MHz-5700MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
20MHz	**100**	**5500**	**104**	**5520**
	108	**5540**	**112**	**5560**
	116	**5580**	**132**	**5660**
	136	**5680**	**140**	**5700**
40MHz	**102**	**5510**	**110**	**5550**
	134	**5670**	**/**	**/**
80MHz	**106**	**5530**	**/**	**/**
(U-NII-3) 5745MHz-5825MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
20MHz	**149**	**5745**	**153**	**5765**
	157	**5785**	**161**	**5805**
	165	**5825**	**/**	**/**
40MHz	**151**	**5755**	**159**	**5795**
80MHz	**165**	**5775**	**/**	**/**

5.4 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Certification	Supplied by
/	/	/	/	/

5.5 Test Location

All tests were performed at:

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua New District, Shenzhen, Guangdong, China

5.6 Test Facility

- **A2LA (Certificate No. 4742.01)**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

- **FCC Registration No.: 522263**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.:522263

5.7 Deviation from Standards

None.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.

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

No.	Item	Measurement Uncertainty
1	Radio Frequency	3×10^{-8}
2	RF power, conducted	0.86dB
3	Radiated Spurious emission test	5.12dB (Below 1GHz)
		4.6dB (Above 1GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.8°C
6	Humidity test	2.0%
7	DC power voltages	0.5%

6 Equipment List

Test Equipment	Manufacturer	Model No.	Instrument No.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR7	CQA-005	2024/9/2	2025/9/1
Spectrum analyzer	R&S	FSU26	CQA-038	2024/9/2	2025/9/1
Spectrum analyzer	R&S	FSU40	CQA-075	2024/9/2	2025/9/1
Preamplifier	MITEQ	AFS4-00010300-18-10P-4	CQA-035	2024/9/2	2025/9/1
Preamplifier	MITEQ	AMF-6D-02001800-29-20P	CQA-036	2024/9/2	2025/9/1
Preamplifier	EMCI	EMC184055SE	CQA-089	2024/9/2	2025/9/1
Loop antenna	Schwarzbeck	FMZB1516	CQA-060	2023/9/8	2026/9/7
Bilog Antenna	R&S	HL562	CQA-011	2023/11/01	2026/10/31
Horn Antenna	R&S	HF906	CQA-012	2023/11/01	2026/10/31
Horn Antenna	Schwarzbeck	BBHA 9170	CQA-088	2023/9/7	2026/9/6
Coaxial Cable (Above 1GHz)	CQA	N/A	C007	2024/9/2	2025/9/1
Coaxial Cable (Below 1GHz)	CQA	N/A	C013	2024/9/2	2025/9/1
RF cable(9KHz~40GHz)	CQA	RF-01	CQA-079	2024/9/2	2025/9/1
Antenna Connector	CQA	RFC-01	CQA-080	2024/9/2	2025/9/1
Power Sensor	KEYSIGHT	U2021XA	CQA-30	2024/9/2	2025/9/1
N1918A Power Analysis Manager Power Panel	Agilent	N1918A	CQA-074	2024/9/2	2025/9/1
Power meter	R&S	NRVD	CQA-029	2024/9/2	2025/9/1
Power divider	MIDWEST	PWD-2533-02-SMA-79	CQA-067	2024/9/2	2025/9/1
EMI Test Receiver	R&S	ESR7	CQA-005	2024/9/2	2025/9/1
LISN	R&S	ENV216	CQA-003	2024/9/2	2025/9/1
Coaxial cable	CQA	N/A	CQA-C009	2024/9/2	2025/9/1
DC power	KEYSIGHT	E3631A	CQA-028	2024/9/2	2025/9/1

Test software:

	Manufacturer	Software brand	Software version
Radiated Emissions test software	Tonscend	JS1120-3	Version:8
Conducted Emissions test software	Audix	e3	Version:9
RF Conducted test software	Audix	e3	V3.5.39

7 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15E	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicesed Wireless Devices
3	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01	Guidelines for compliance testing of unlicensed national information infrastructure (U-NII) device part 15, subpart E
4	KDB 662911 D01 Multiple Transmitter Output v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band

Appendix A): Emission Bandwidth

26dB Emission bandwidth

Test Requirement: 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II C 1

6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart C 15.407 (e)

Test Method: KDB 789033 D02 II C 2

Limit: ≥500 kHz

Test Procedure:

a) Set RBW = approximately 1% of the emission bandwidth.

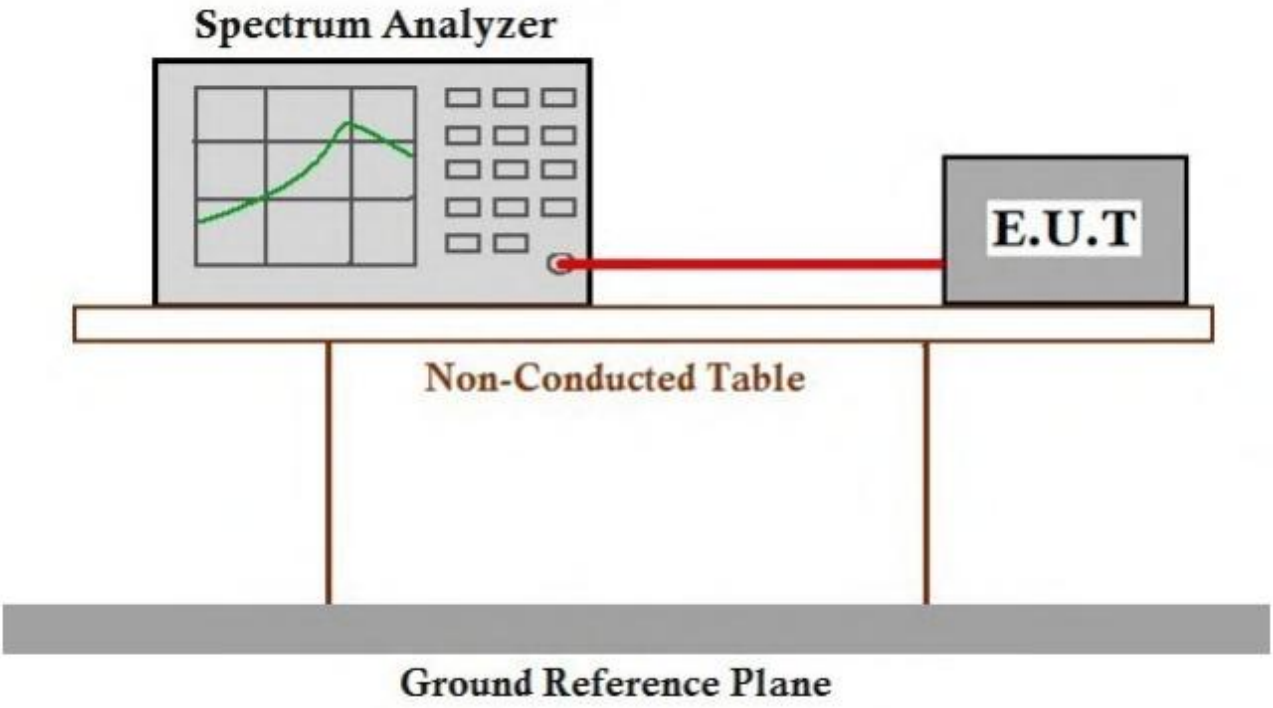
b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Test Setup Diagram



Result Table

Ant1:

TestMode	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]
11A	5260	20.04	5249.68	5269.72
	5280	20.32	5269.64	5289.96
	5320	20.76	5309.52	5330.28
	5500	20.44	5489.92	5510.36
	5580	19.80	5570.04	5589.84
	5700	21.52	5688.28	5709.80
11N20SISO	5260	20.32	5249.64	5269.96
	5280	20.24	5269.76	5290.00
	5320	21.12	5308.88	5330.00
	5500	20.28	5489.96	5510.24
	5580	20.04	5569.96	5590.00
	5700	21.40	5688.40	5709.80
11N40SISO	5270	39.92	5249.84	5289.76
	5310	38.96	5290.88	5329.84
	5510	40.56	5489.52	5530.08
	5550	39.60	5530.16	5569.76
	5670	40.32	5649.12	5689.44
11AC20SISO	5260	20.32	5249.48	5269.80
	5280	20.64	5269.36	5290.00
	5320	20.84	5309.40	5330.24
	5500	20.04	5490.08	5510.12
	5580	21.00	5569.84	5590.84
	5700	22.52	5688.00	5710.52
11AC40SISO	5270	39.76	5250.00	5289.76
	5310	39.36	5290.48	5329.84
	5510	41.52	5488.88	5530.40
	5550	39.36	5530.08	5569.44
	5670	39.36	5650.00	5689.36
11AC80SISO	5290	82.24	5247.92	5330.16
	5530	80.00	5490.00	5570.00
11AX20SISO	5260	20.24	5249.80	5270.04
	5280	20.52	5269.88	5290.40
	5320	22.00	5308.16	5330.16
	5500	22.48	5488.96	5511.44

	5580	20.68	5569.64	5590.32
	5700	21.36	5689.48	5710.84
11AX40SISO	5270	39.52	5250.08	5289.60
	5310	39.28	5290.40	5329.68
	5510	39.52	5490.24	5529.76
	5550	39.44	5530.32	5569.76
	5670	39.68	5650.00	5689.68
11AX80SISO	5290	83.84	5246.32	5330.16
	5530	80.00	5490.00	5570.00

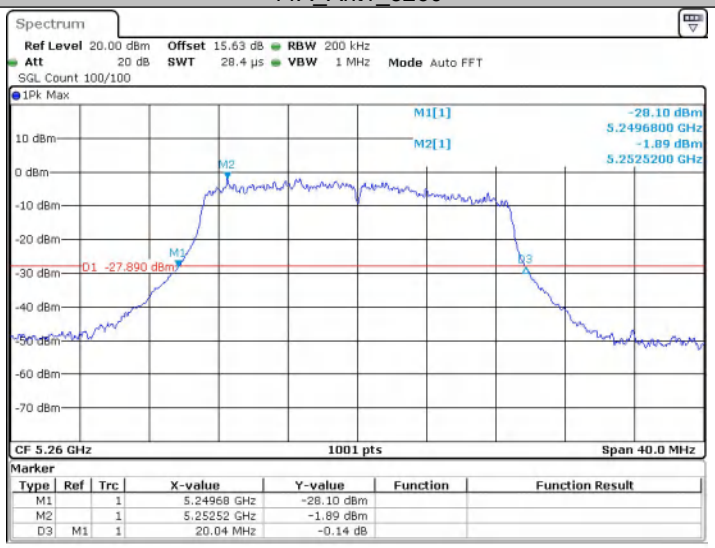
Ant2:

TestMode	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]
11A	5260	18.92	5250.28	5269.20
	5280	19.96	5269.68	5289.64
	5320	19.28	5310.20	5329.48
	5500	21.16	5489.92	5511.08
	5580	19.76	5570.36	5590.12
	5700	20.44	5689.88	5710.32
11N20SISO	5260	19.84	5249.80	5269.64
	5280	20.60	5269.68	5290.28
	5320	21.40	5308.84	5330.24
	5500	21.84	5489.84	5511.68
	5580	20.84	5569.68	5590.52
	5700	21.88	5687.96	5709.84
11N40SISO	5270	40.24	5249.60	5289.84
	5310	40.08	5290.40	5330.48
	5510	39.92	5490.16	5530.08
	5550	39.92	5530.40	5570.32
	5670	41.28	5648.64	5689.92
11AC20SISO	5260	20.92	5249.04	5269.96
	5280	20.72	5269.80	5290.52
	5320	22.84	5308.88	5331.72
	5500	22.76	5488.56	5511.32
	5580	20.68	5569.44	5590.12
	5700	23.44	5687.12	5710.56
11AC40SISO	5270	39.60	5249.68	5289.28
	5310	39.60	5290.16	5329.76
	5510	42.08	5489.44	5531.52
	5550	39.28	5530.40	5569.68
	5670	40.72	5649.04	5689.76
11AC80SISO	5290	88.32	5241.84	5330.16
	5530	80.00	5490.00	5570.00
11AX20SISO	5260	20.40	5249.64	5270.04
	5280	20.64	5269.52	5290.16
	5320	20.04	5310.00	5330.04
	5500	20.20	5489.96	5510.16
	5580	20.40	5570.00	5590.40

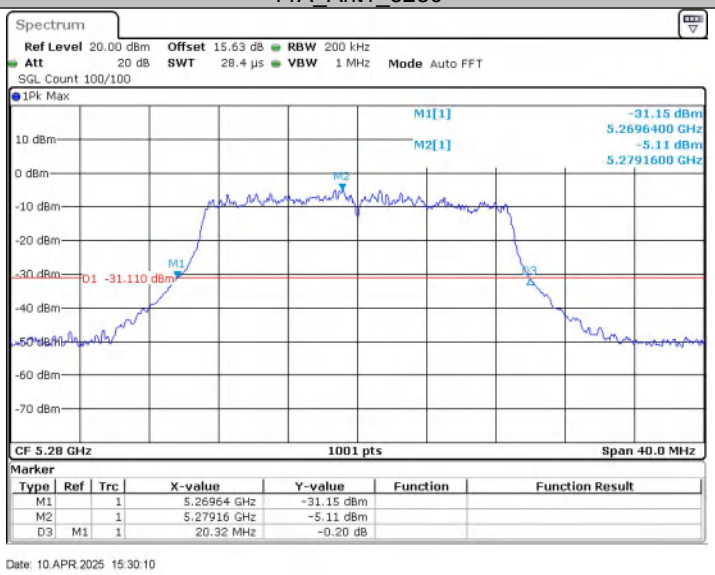
	5700	21.60	5688.76	5710.36
11AX40SISO	5270	39.28	5250.32	5289.60
	5310	39.44	5290.40	5329.84
	5510	39.60	5490.24	5529.84
	5550	39.36	5530.32	5569.68
	5670	42.08	5647.76	5729.68
11AX80SISO	5290	83.04	5247.12	5330.16
	5530	80.16	5489.84	5570.00

Test Graph

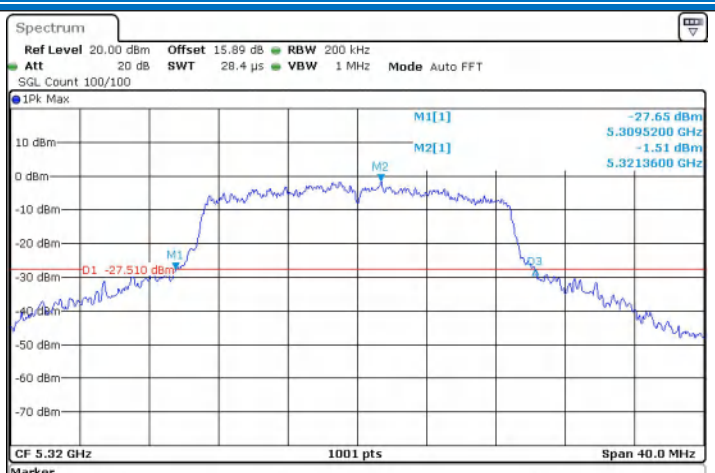
11A_Ant1_5260



11A_Ant1_5280



11A_Ant1_5320

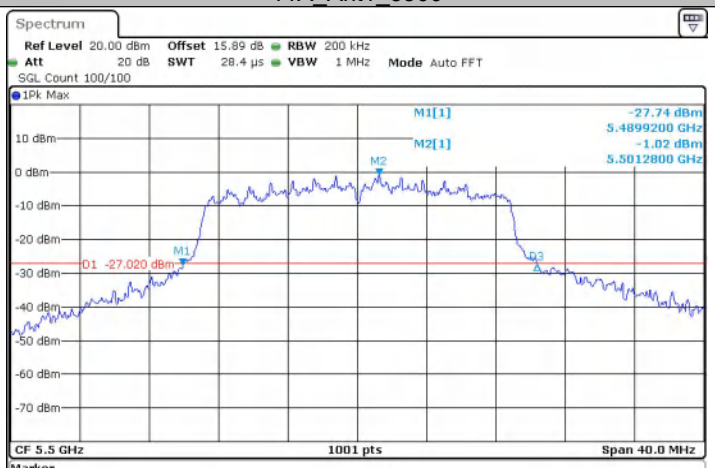


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.30952 GHz	-27.65 dBm		
M2		1	5.32136 GHz	-1.51 dBm		
D3	M1	1	20.76 MHz	0.01 dB		

Date: 10.APR.2025 15:32:41

11A_Ant1_5500

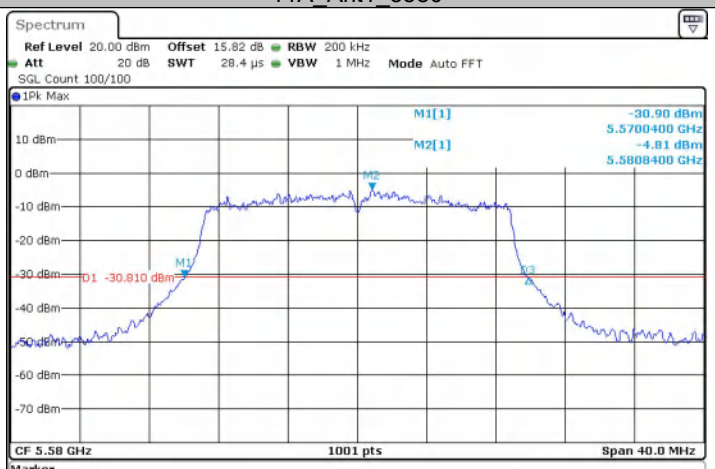


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.48992 GHz	-27.74 dBm		
M2		1	5.50128 GHz	-1.02 dBm		
D3	M1	1	20.44 MHz	0.42 dB		

Date: 10.APR.2025 15:34:23

11A_Ant1_5580

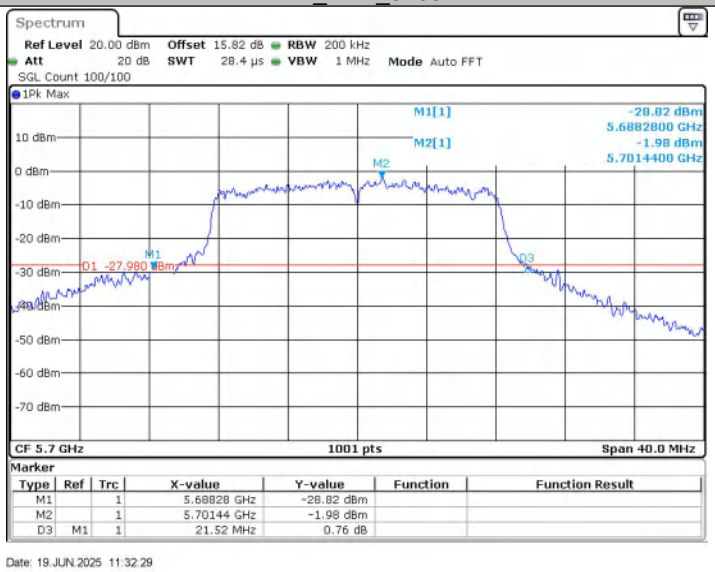


Marker

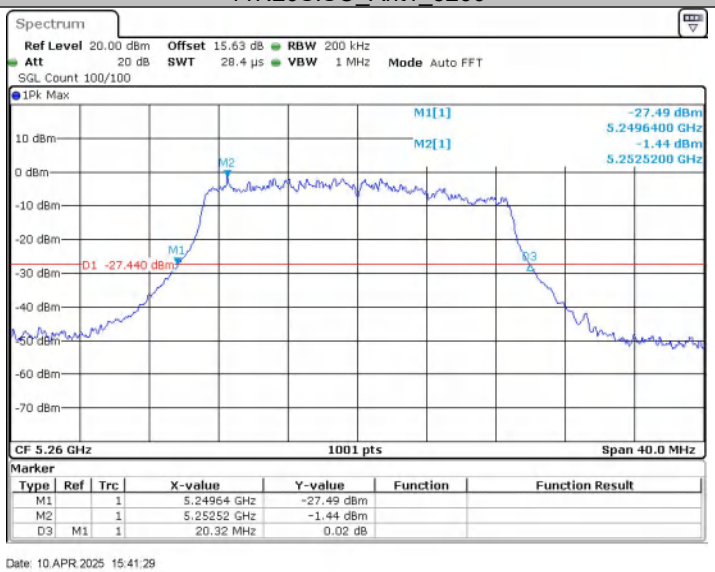
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.57004 GHz	-30.90 dBm		
M2		1	5.58084 GHz	-4.81 dBm		
D3	M1	1	19.8 MHz	-0.22 dB		

Date: 10.APR.2025 15:36:24

11A_Ant1_5700



11N20SISO_Ant1_5260



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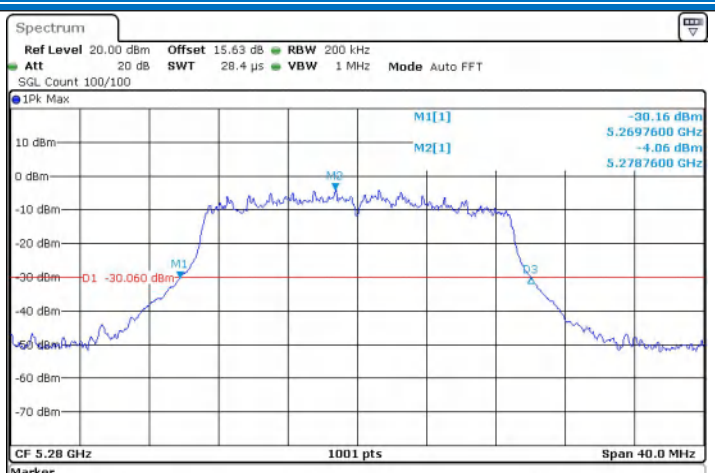
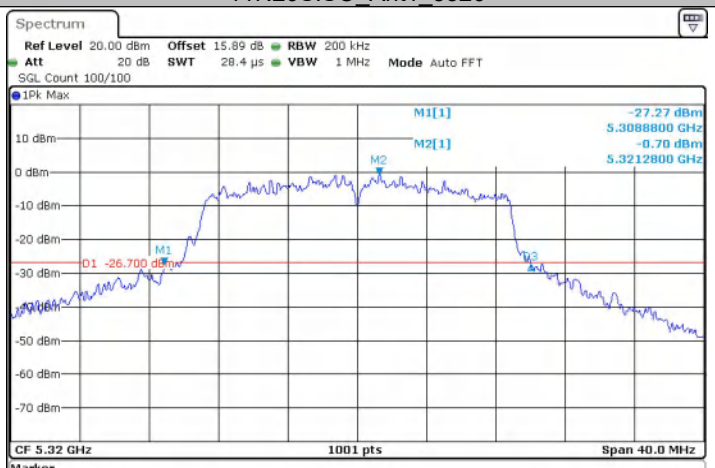


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.26976 GHz	-30.16 dBm		
M2		1	5.27876 GHz	-4.06 dBm		
D3	M1	1	20.24 MHz	0.08 dB		

Date: 10.APR.2025 15:43:45

11N20SISO_Ant1_5320

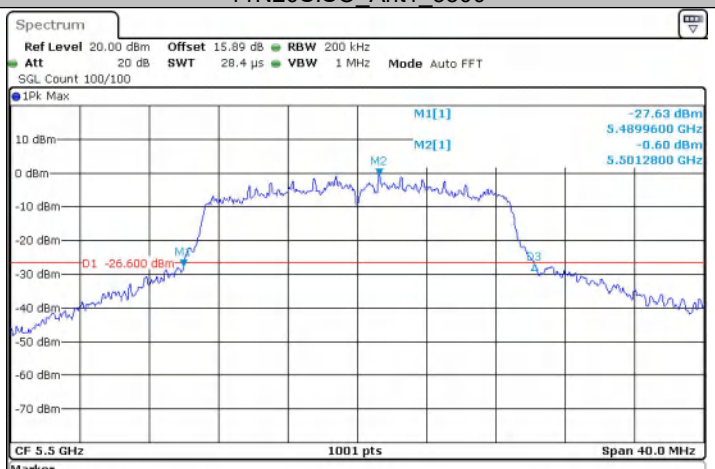


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.30888 GHz	-27.27 dBm		
M2		1	5.32128 GHz	-0.70 dBm		
D3	M1	1	21.12 MHz	-0.17 dB		

Date: 10.APR.2025 15:45:58

11N20SISO_Ant1_5500

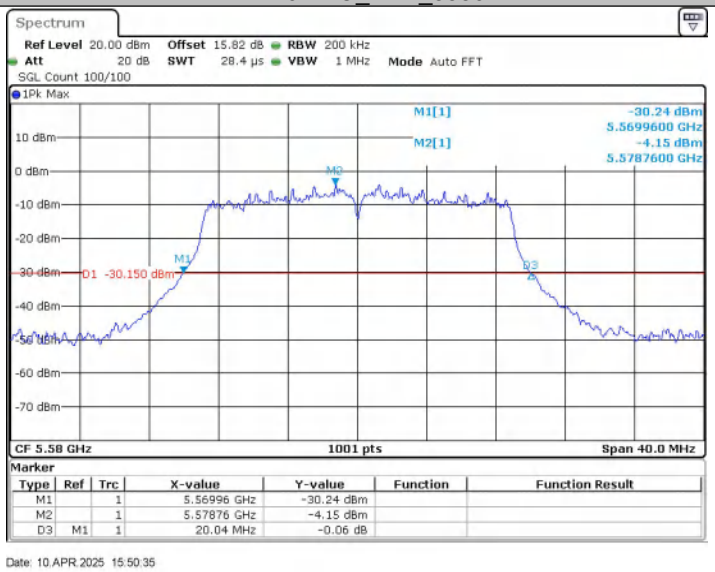


Marker

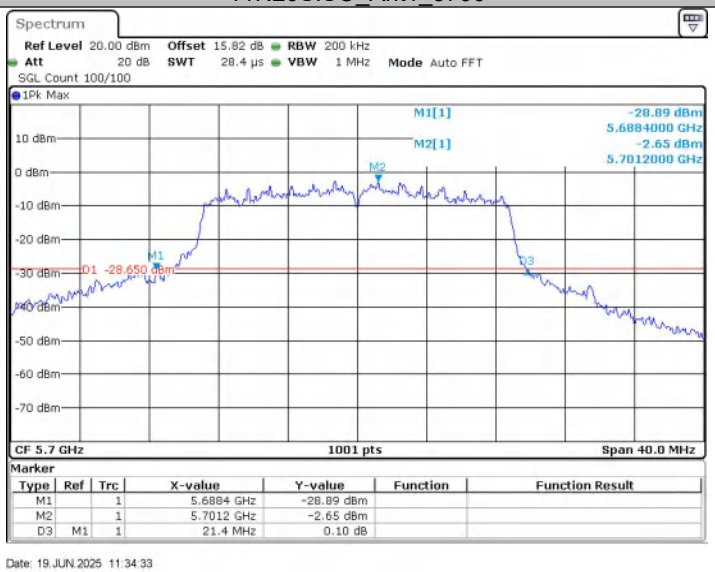
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.48996 GHz	-27.63 dBm		
M2		1	5.50128 GHz	-0.60 dBm		
D3	M1	1	20.28 MHz	0.53 dB		

Date: 10.APR.2025 15:47:47

11N20SISO_Ant1_5580



11N20SISO_Ant1_5700



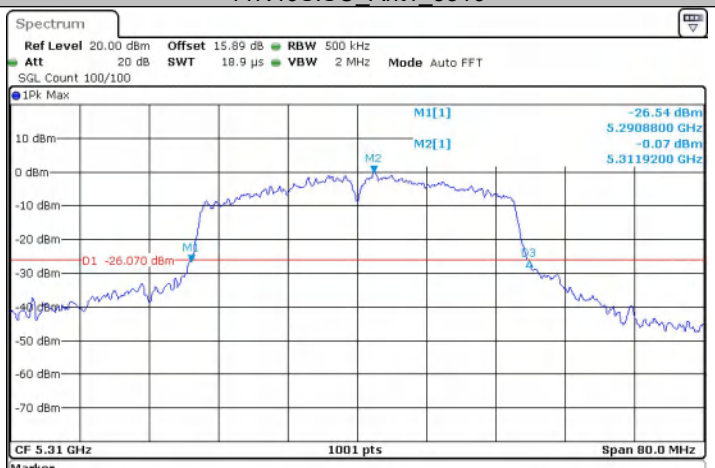
11N40SISO_Ant1_5270

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.24984 GHz	-28.92 dBm		
M2		1	5.26856 GHz	-2.42 dBm		
D3	M1	1	39.92 MHz	0.17 dB		

Date: 10.APR.2025 15:58:01

11N40SISO_Ant1_5310

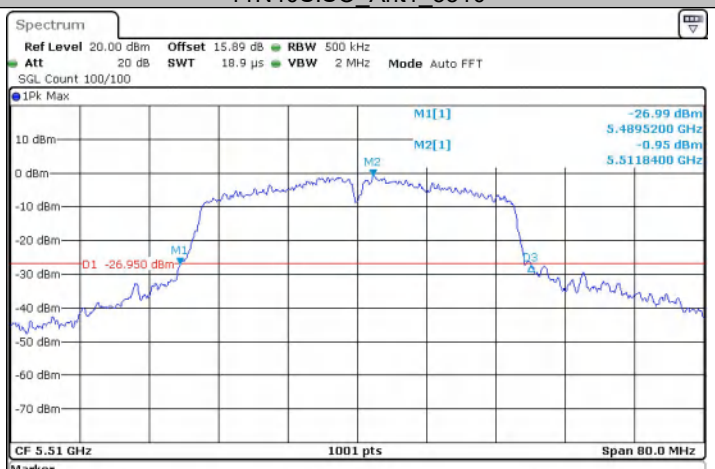


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.29088 GHz	-26.54 dBm		
M2		1	5.31192 GHz	-0.07 dBm		
D3	M1	1	38.96 MHz	0.37 dB		

Date: 10.APR.2025 16:03:37

11N40SISO_Ant1_5510

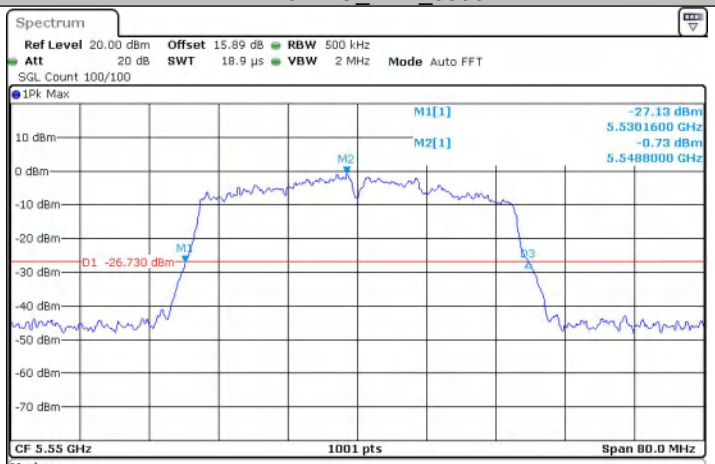


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.48952 GHz	-26.99 dBm		
M2		1	5.51184 GHz	-0.95 dBm		
D3	M1	1	40.56 MHz	-0.31 dB		

Date: 10.APR.2025 16:05:21

11N40SISO_Ant1_5550

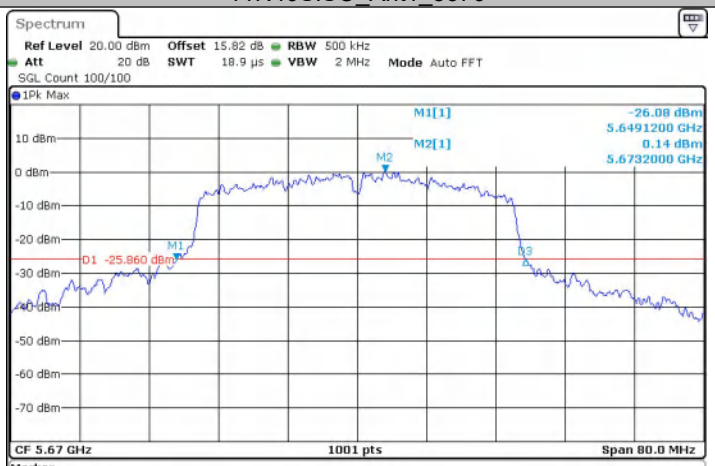


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.53016 GHz	-27.13 dBm		
M2		1	5.5488 GHz	-0.73 dBm		
D3	M1	1	39.6 MHz	0.34 dB		

Date: 10.APR.2025 16:12:52

11N40SISO_Ant1_5670

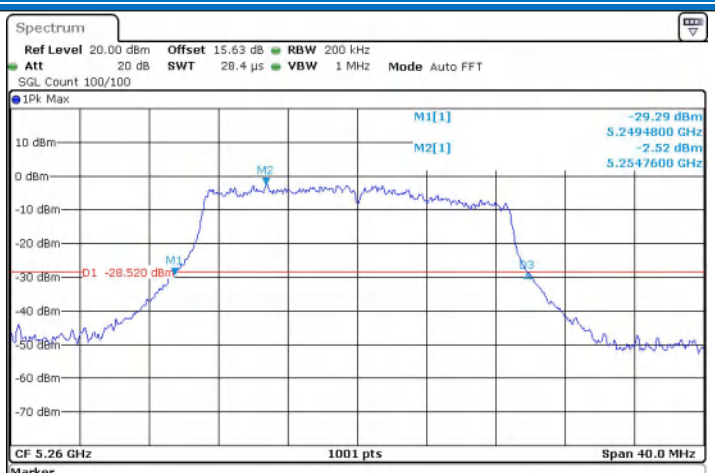


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.64912 GHz	-26.08 dBm		
M2		1	5.6732 GHz	0.14 dBm		
D3	M1	1	40.32 MHz	0.19 dB		

Date: 19.JUN.2025 11:59:24

11AC20SISO_Ant1_5260

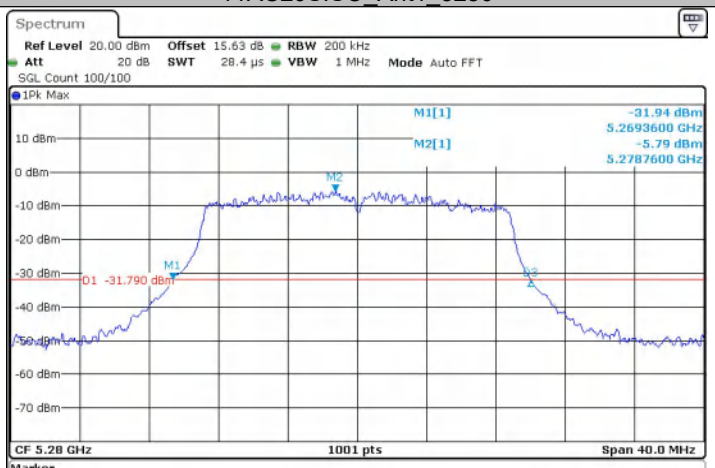


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.24948 GHz	-29.29 dBm		
M2		1	5.25476 GHz	-2.52 dBm		
D3	M1	1	20.32 MHz	0.74 dB		

Date: 10.APR.2025 16:17:17

11AC20SISO_Ant1_5280

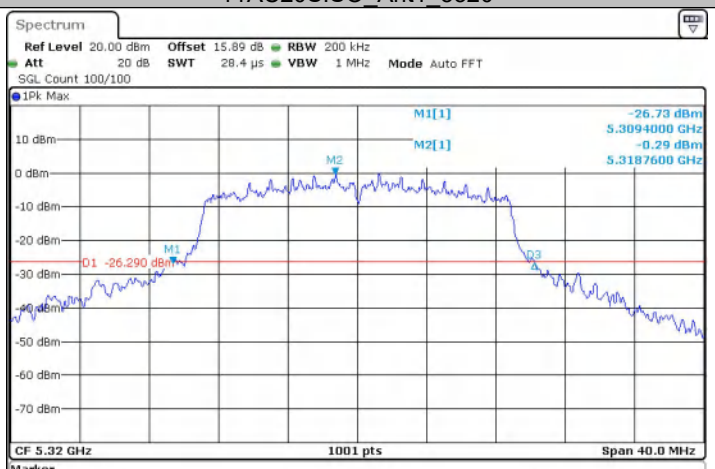


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.26936 GHz	-31.94 dBm		
M2		1	5.27876 GHz	-5.79 dBm		
D3	M1	1	20.64 MHz	-0.09 dB		

Date: 10.APR.2025 16:19:32

11AC20SISO_Ant1_5320

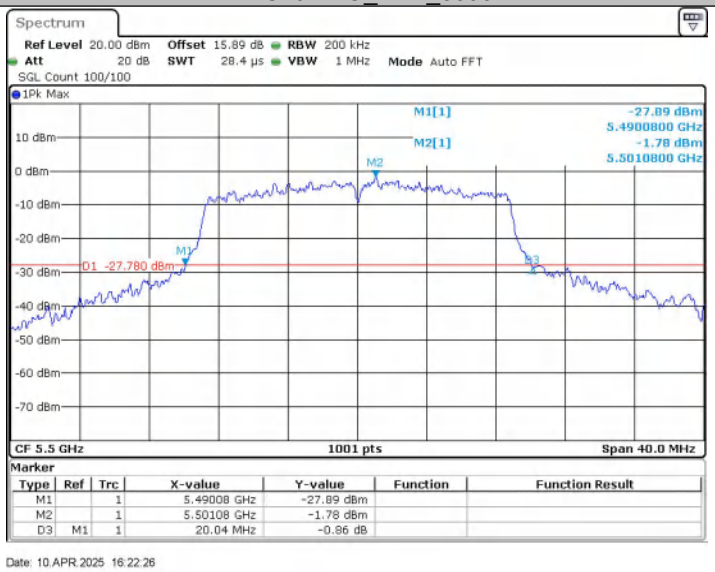


Marker

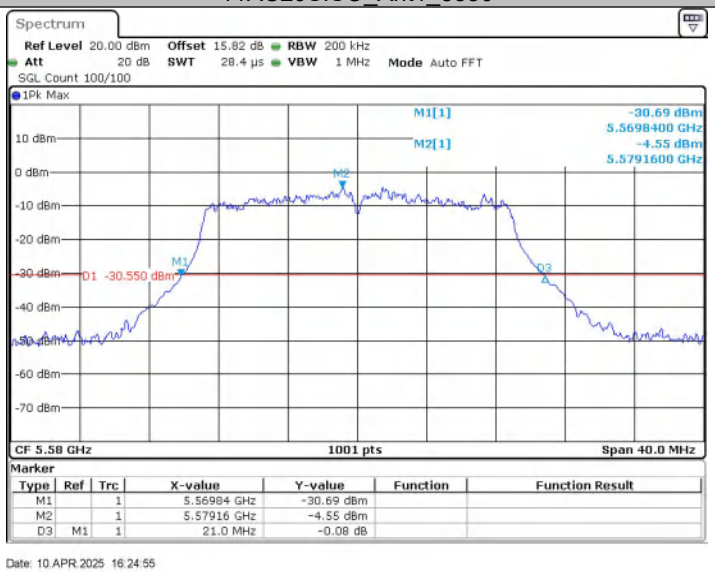
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.3094 GHz	-26.73 dBm		
M2		1	5.31876 GHz	-0.29 dBm		
D3	M1	1	20.84 MHz	0.13 dB		

Date: 10.APR.2025 16:20:37

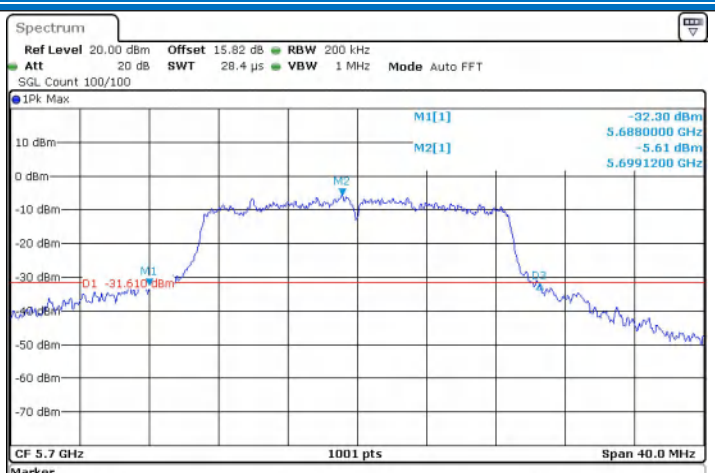
11AC20SISO_Ant1_5500



11AC20SISO_Ant1_5580



11AC20SISO_Ant1_5700

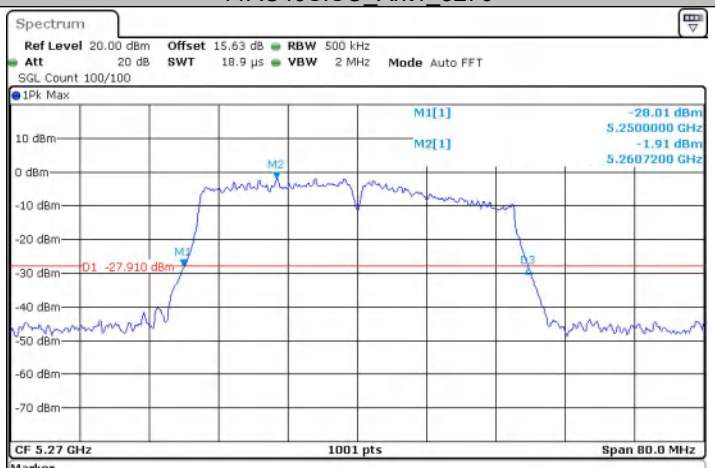


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.688 GHz	-32.30 dBm		
M2		1	5.69912 GHz	-5.61 dBm		
D3	M1	1	22.52 MHz	0.32 dB		

Date: 19.JUN.2025 15:59:38

11AC40SISO_Ant1_5270

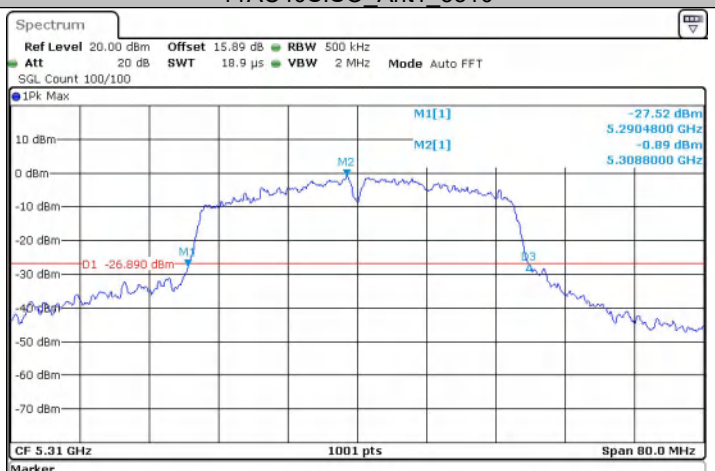


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.25 GHz	-28.01 dBm		
M2		1	5.26072 GHz	-1.91 dBm		
D3	M1	1	39.76 MHz	-0.33 dB		

Date: 10.APR.2025 16:28:29

11AC40SISO_Ant1_5310

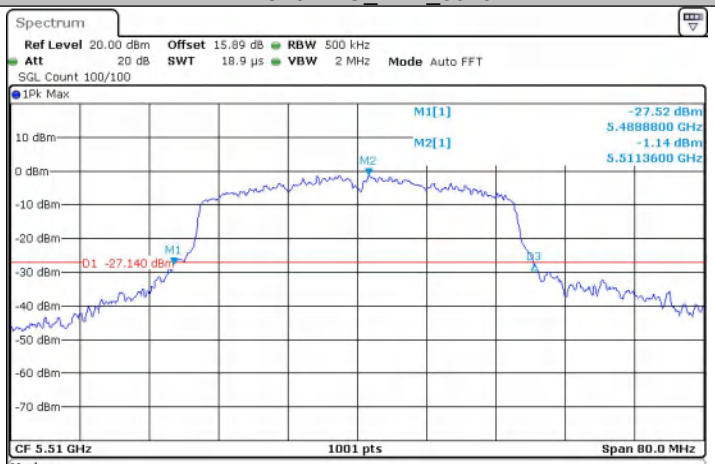


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.29048 GHz	-27.52 dBm		
M2		1	5.3088 GHz	-0.89 dBm		
D3	M1	1	39.36 MHz	0.42 dB		

Date: 10.APR.2025 16:32:14

11AC40SISO_Ant1_5510

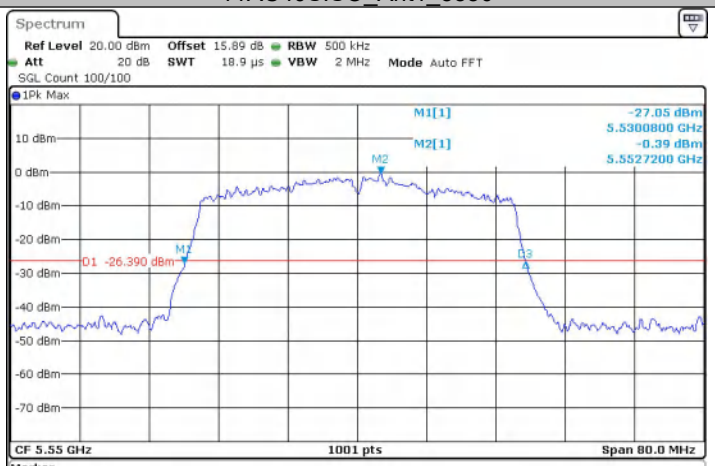


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.48888 GHz	-27.52 dBm		
M2		1	5.51136 GHz	-1.14 dBm		
D3	M1	1	41.52 MHz	-0.02 dB		

Date: 10.APR.2025 16:33:53

11AC40SISO_Ant1_5550

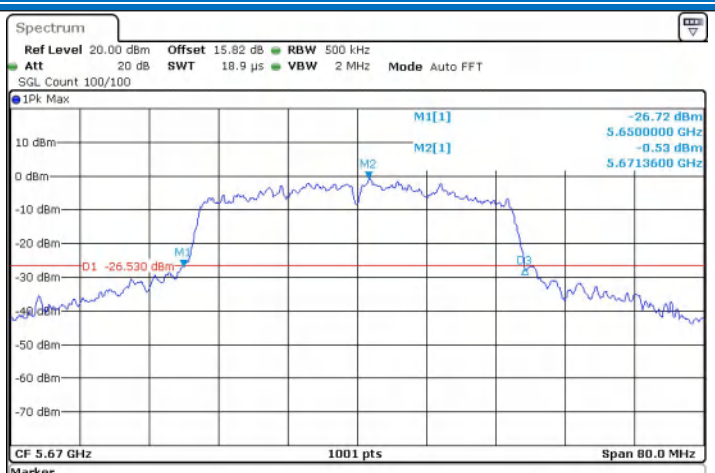


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.53008 GHz	-27.05 dBm		
M2		1	5.55272 GHz	-0.39 dBm		
D3	M1	1	39.36 MHz	0.39 dB		

Date: 10.APR.2025 16:45:34

11AC40SISO_Ant1_5670

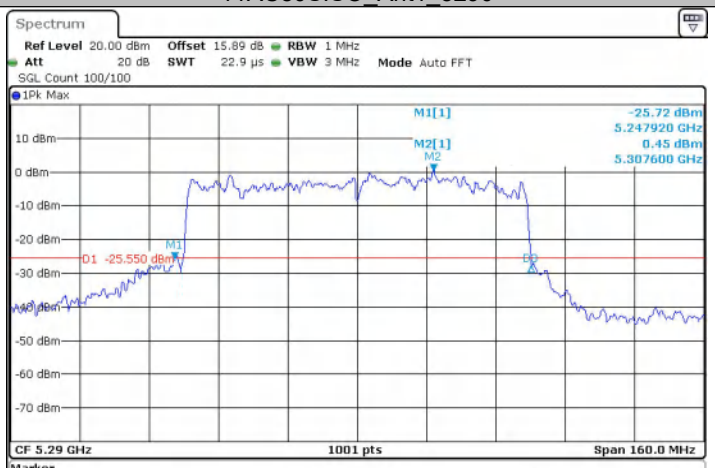


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.65 GHz	-26.72 dBm		
M2		1	5.67136 GHz	-0.53 dBm		
D3	M1	1	39.36 MHz	-0.68 dB		

Date: 19.JUN.2025 16:01:43

11AC80SISO_Ant1_5290

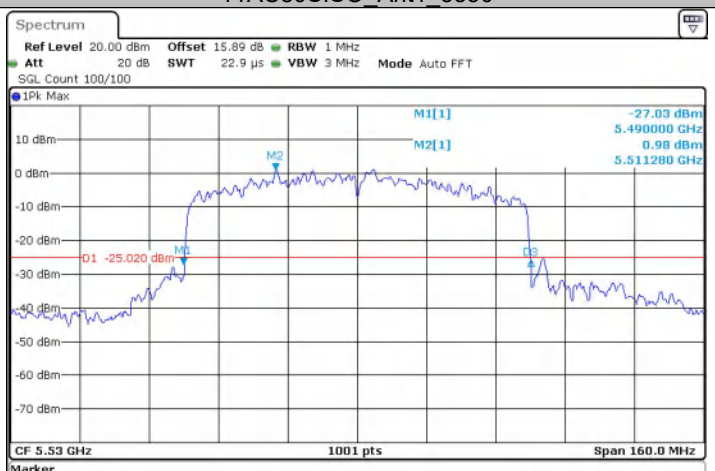


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.24792 GHz	-25.72 dBm		
M2		1	5.3076 GHz	0.45 dBm		
D3	M1	1	82.24 MHz	-2.04 dB		

Date: 10.APR.2025 17:22:35

11AC80SISO_Ant1_5530

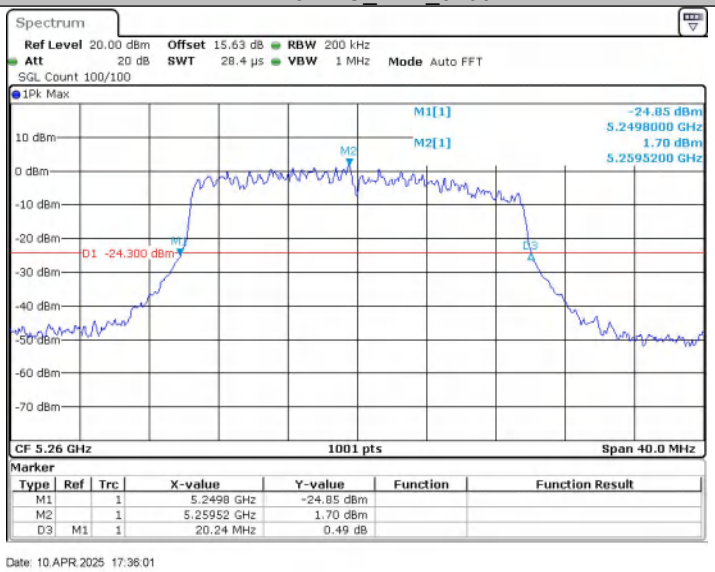


Marker

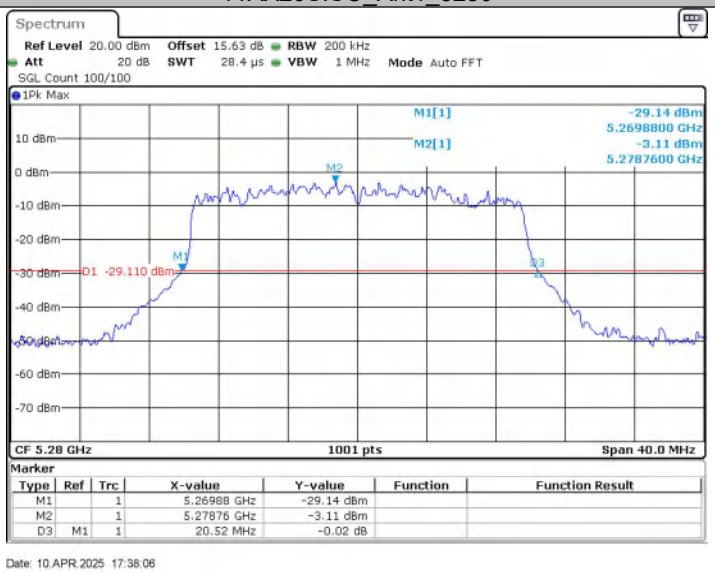
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.49 GHz	-27.03 dBm		
M2		1	5.51128 GHz	0.98 dBm		
D3	M1	1	80.0 MHz	1.22 dB		

Date: 10.APR.2025 17:26:09

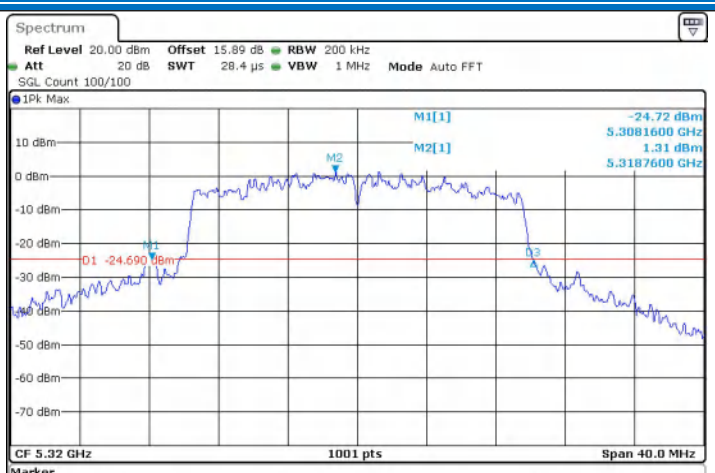
11AX20SISO_Ant1_5260



11AX20SISO_Ant1_5280



11AX20SISO_Ant1_5320

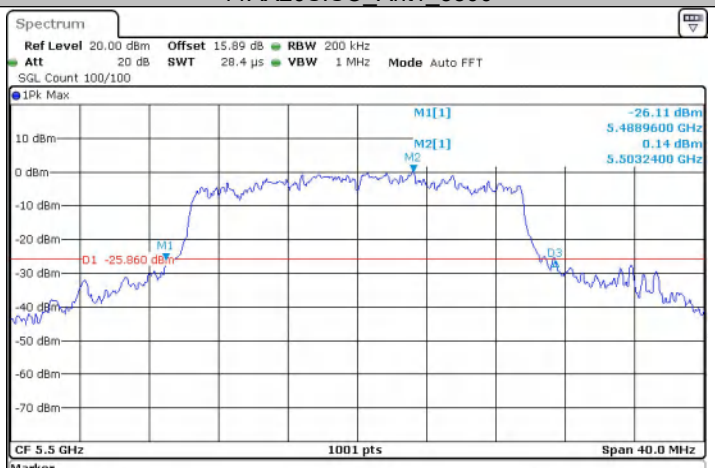


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.30816 GHz	-24.72 dBm		
M2		1	5.31876 GHz	1.31 dBm		
D3	M1	1	22.0 MHz	-0.36 dB		

Date: 10.APR.2025 17:41:31

11AX20SISO_Ant1_5500

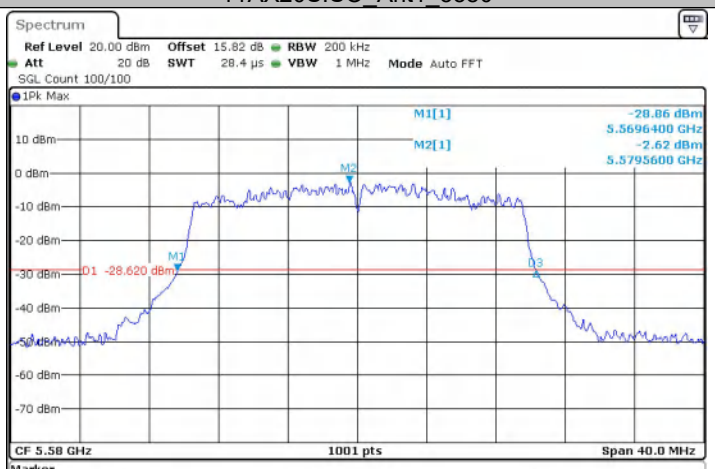


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.48896 GHz	-26.11 dBm		
M2		1	5.50324 GHz	0.14 dBm		
D3	M1	1	22.48 MHz	-0.31 dB		

Date: 10.APR.2025 17:44:24

11AX20SISO_Ant1_5580

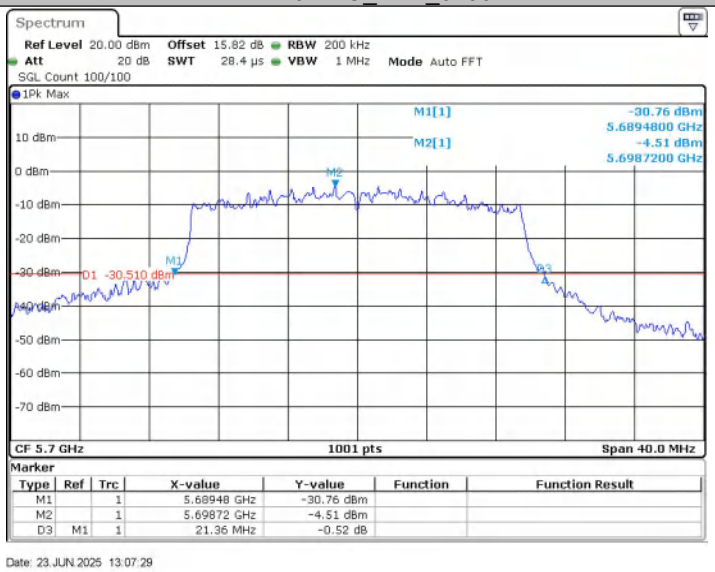


Marker

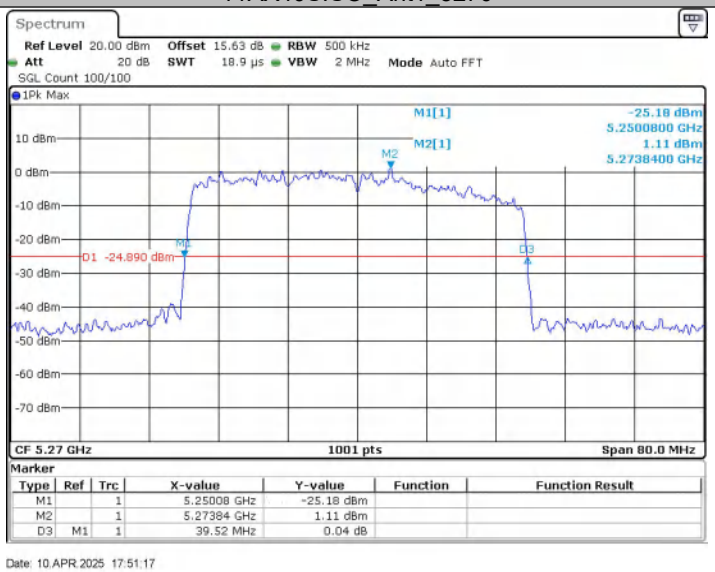
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.56964 GHz	-28.86 dBm		
M2		1	5.57956 GHz	-2.62 dBm		
D3	M1	1	20.68 MHz	-0.11 dB		

Date: 10.APR.2025 17:47:25

11AX20SISO_Ant1_5700



11AX40SISO_Ant1_5270



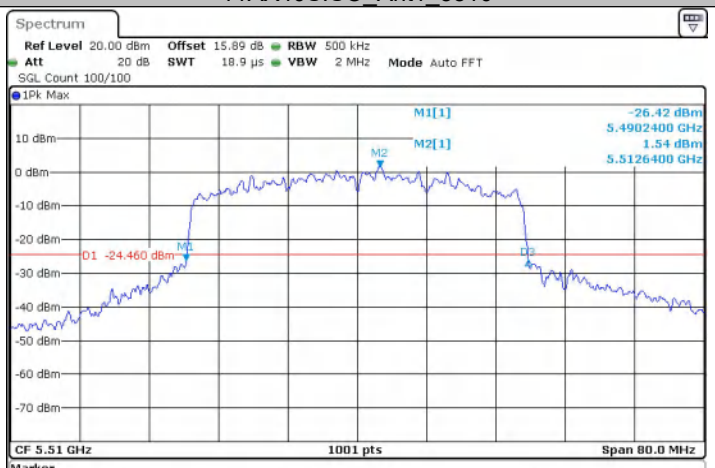
11AX40SISO_Ant1_5310

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.2904 GHz	-24.85 dBm		
M2		1	5.31344 GHz	3.07 dBm		
D3	M1	1	39.28 MHz	0.74 dB		

Date: 10.APR.2025 17:53:20

11AX40SISO_Ant1_5510

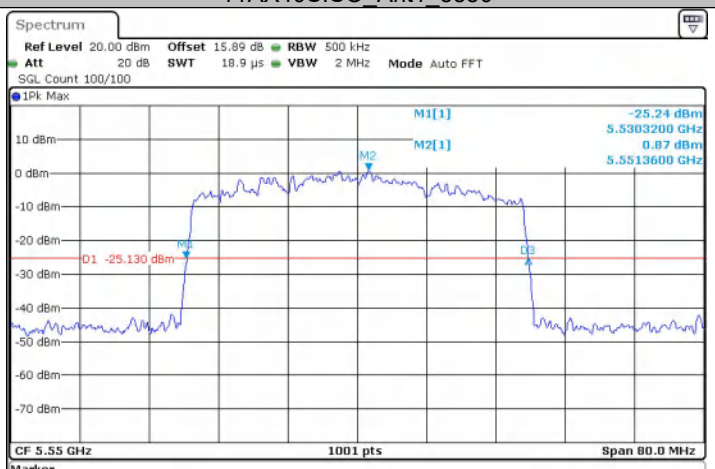


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.49024 GHz	-26.42 dBm		
M2		1	5.51264 GHz	1.54 dBm		
D3	M1	1	39.52 MHz	0.48 dB		

Date: 10.APR.2025 17:55:01

11AX40SISO_Ant1_5550

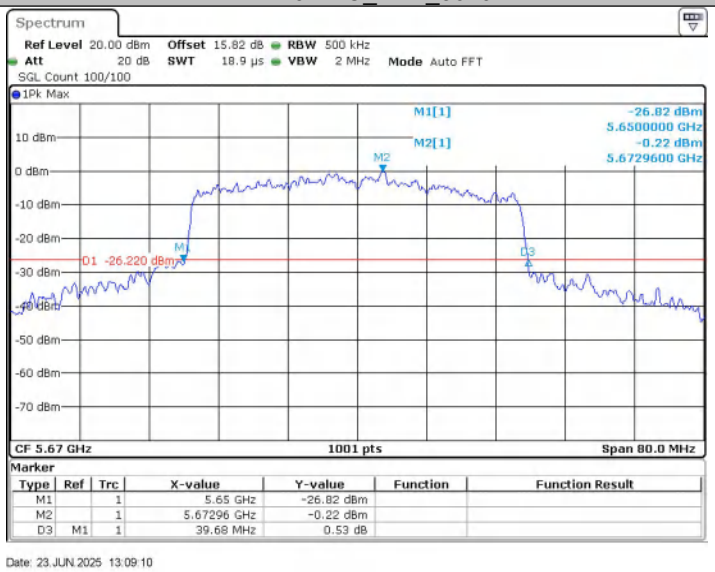


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.53032 GHz	-25.24 dBm		
M2		1	5.55136 GHz	0.87 dBm		
D3	M1	1	39.44 MHz	-0.08 dB		

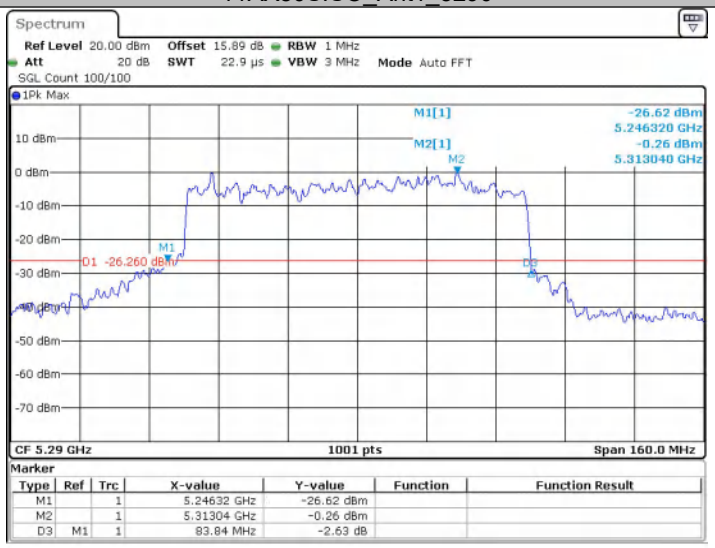
Date: 10.APR.2025 17:56:47

11AX40SISO_Ant1_5670



Date: 23.JUN.2025 13:09:10

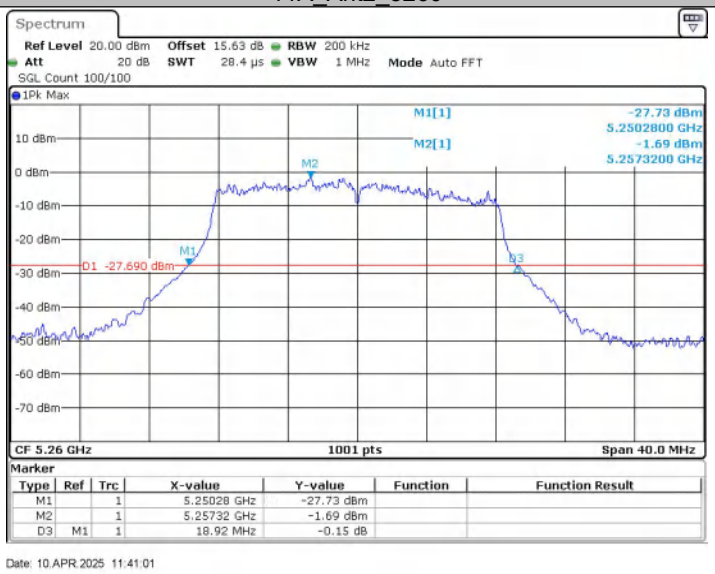
11AX80SISO_Ant1_5290



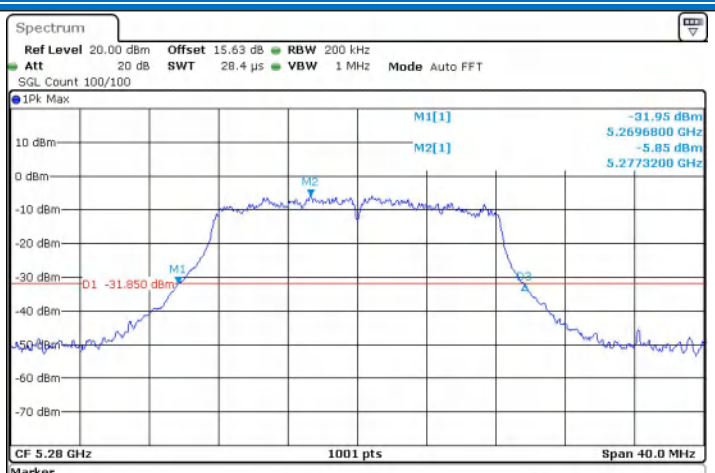
Date: 10.APR.2025 18:00:28

11AX80SISO_Ant1_5530

11A_Ant2_5260



11A_Ant2_5280



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.26968 GHz	-31.95 dBm		
M2		1	5.27732 GHz	-5.85 dBm		
D3	M1	1	19.96 MHz	-0.13 dB		

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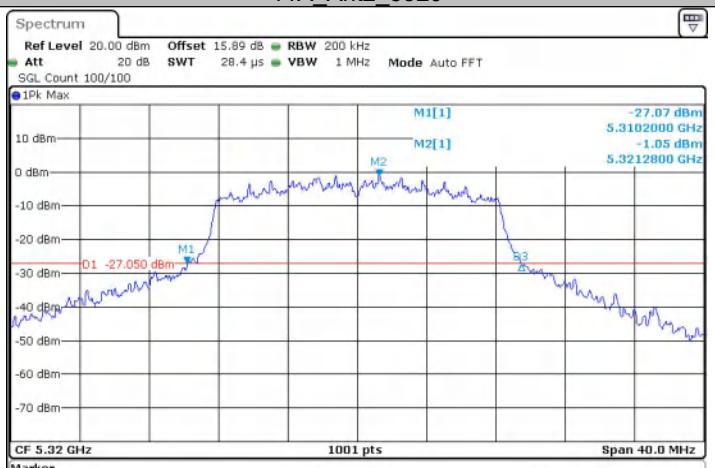
11A_Ant2_5320

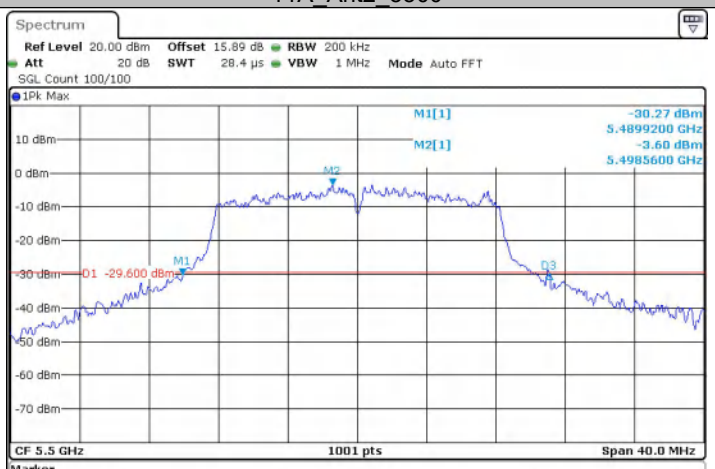


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.3102 GHz	-27.07 dBm		
M2		1	5.32128 GHz	-1.05 dBm		
D3	M1	1	19.28 MHz	-0.36 dB		

Date: 10.APR.2025 11:46:43

11A_Ant2_5500

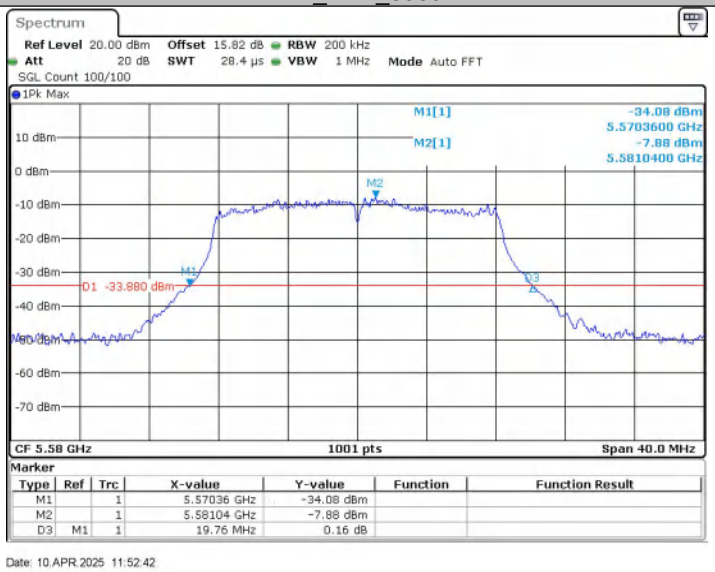


Marker

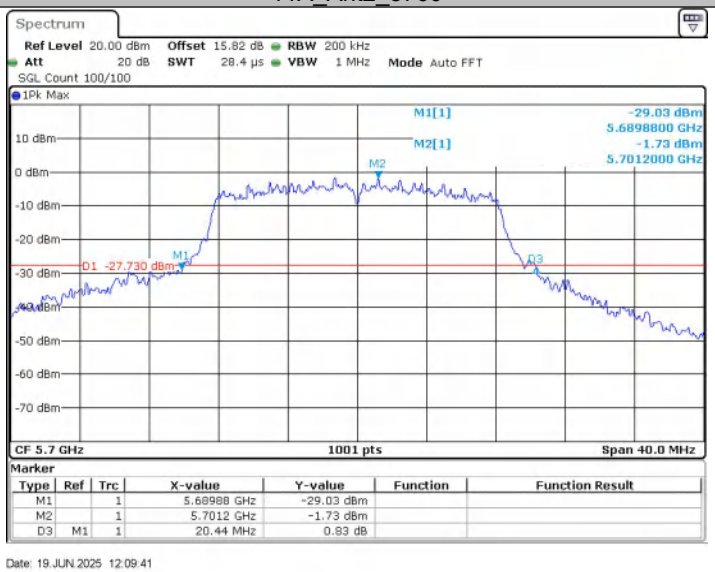
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.48992 GHz	-30.27 dBm		
M2		1	5.49856 GHz	-3.60 dBm		
D3	M1	1	21.16 MHz	0.59 dB		

Date: 10.APR.2025 11:49:15

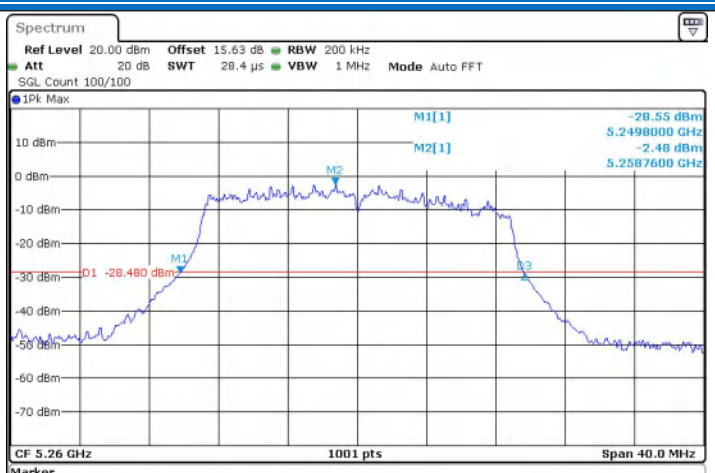
11A_Ant2_5580



11A_Ant2_5700



11N20SISO_Ant2_5260



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.2498 GHz	-28.55 dBm		
M2		1	5.25876 GHz	-2.48 dBm		
D3	M1	1	19.84 MHz	-0.33 dB		

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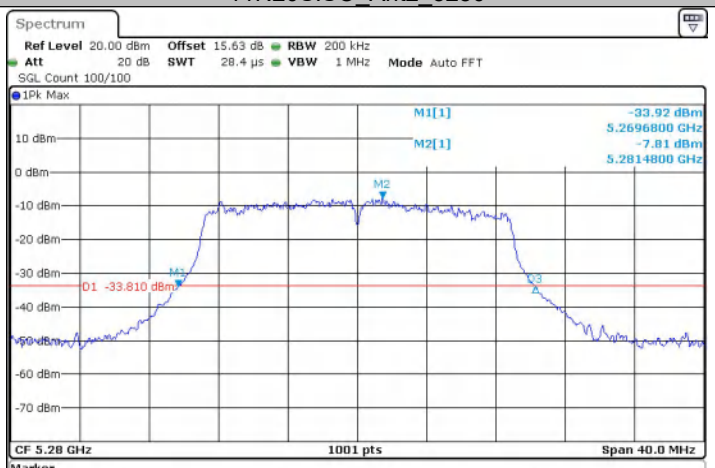
11N20SISO_Ant2_5280

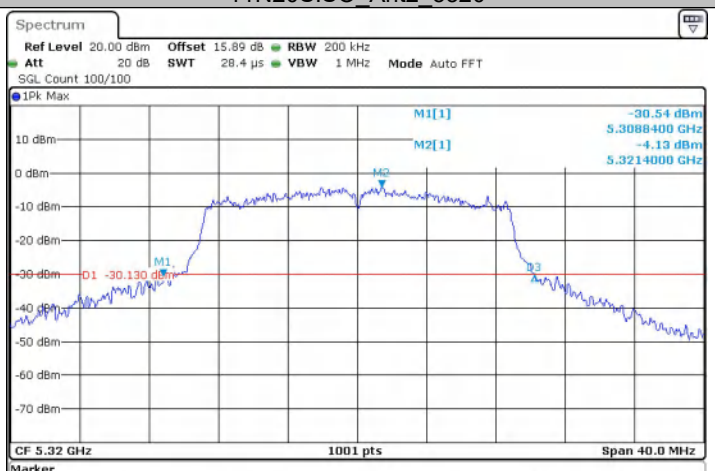


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.26968 GHz	-33.92 dBm		
M2		1	5.28148 GHz	-7.81 dBm		
D3	M1	1	20.6 MHz	-0.01 dB		

Date: 10.APR.2025 12:00:11

11N20SISO_Ant2_5320

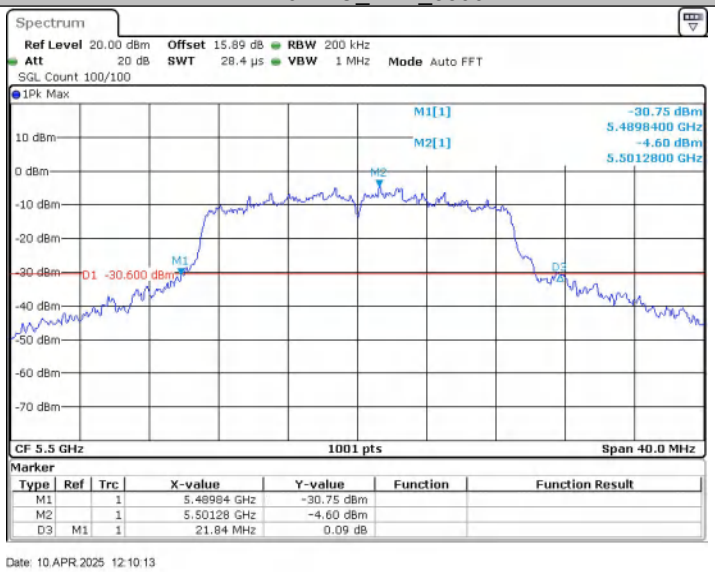


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.30884 GHz	-30.54 dBm		
M2		1	5.3214 GHz	-4.13 dBm		
D3	M1	1	21.4 MHz	0.20 dB		

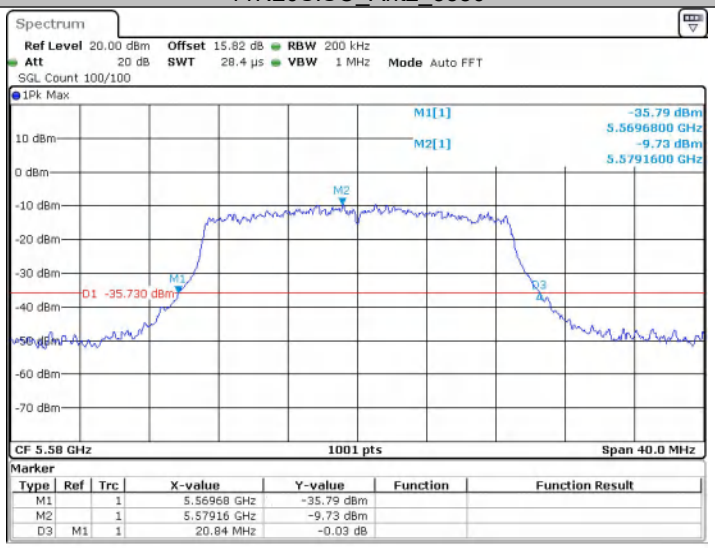
Date: 10.APR.2025 12:08:01

11N20SISO_Ant2_5500



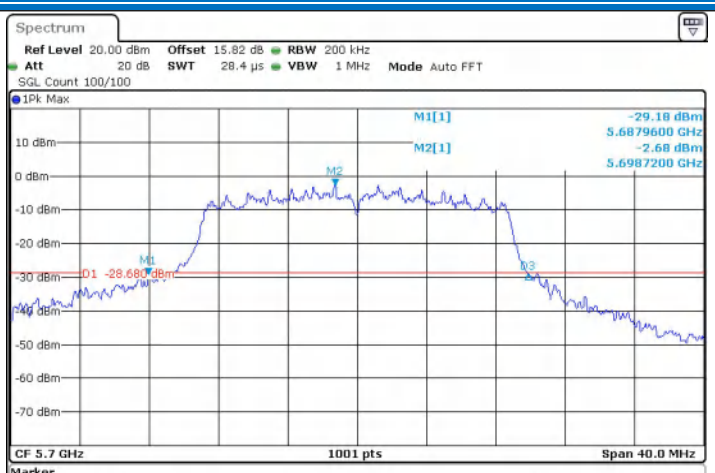
Date: 10.APR.2025 12:10:13

11N20SISO_Ant2_5580



Date: 10.APR.2025 12:12:59

11N20SISO_Ant2_5700

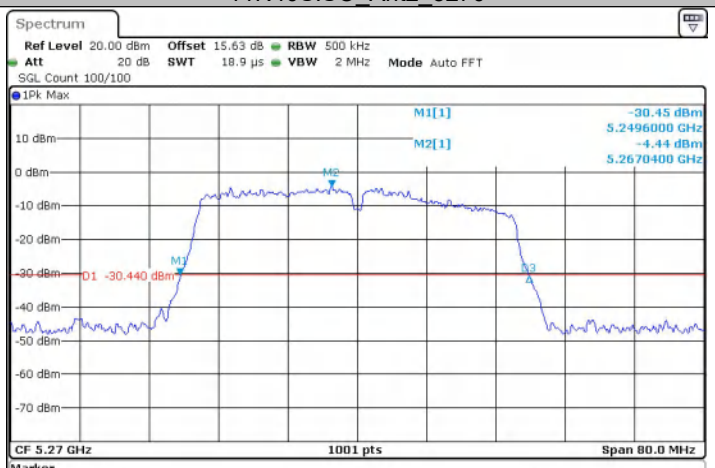


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.68796 GHz	-29.18 dBm		
M2		1	5.69872 GHz	-2.68 dBm		
D3	M1	1	21.88 MHz	0.26 dB		

Date: 19.JUN.2025 12:12:05

11N40SISO_Ant2_5270

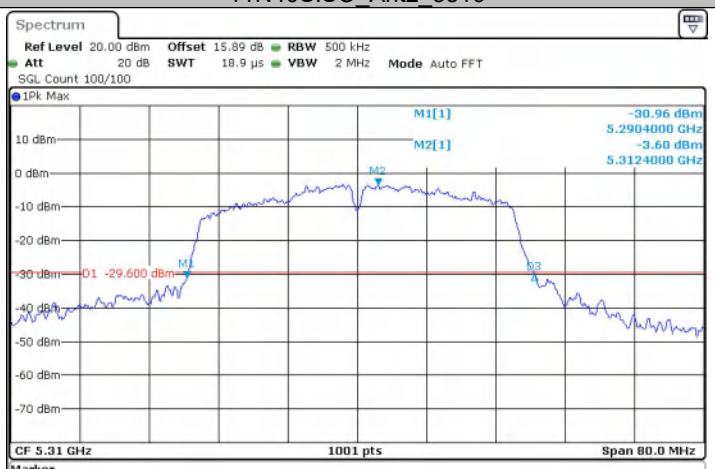


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.2496 GHz	-30.45 dBm		
M2		1	5.26704 GHz	-4.44 dBm		
D3	M1	1	40.24 MHz	-0.43 dB		

Date: 10.APR.2025 12:18:41

11N40SISO_Ant2_5310

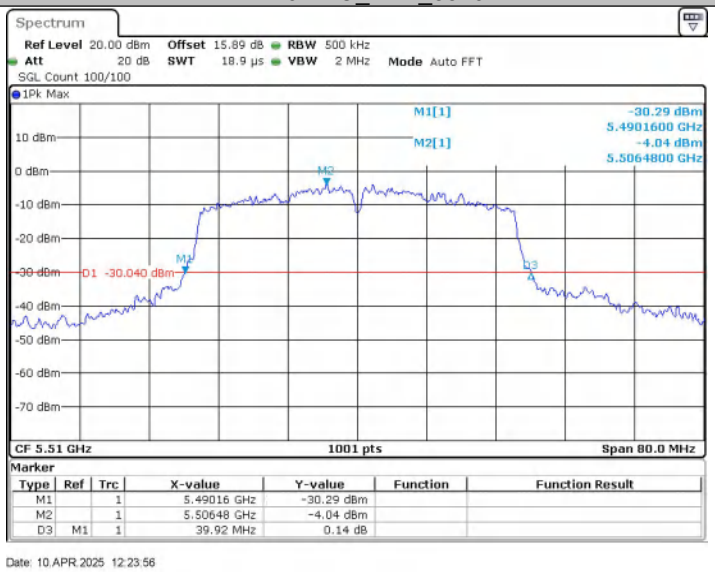


Marker

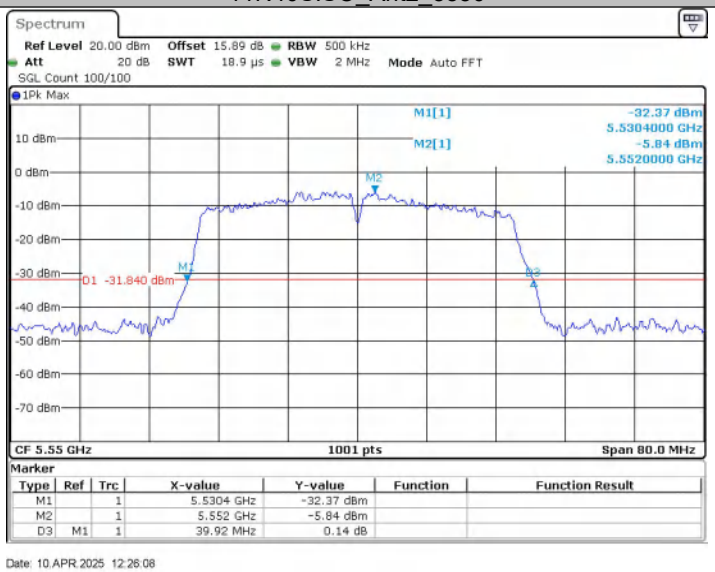
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.2904 GHz	-30.96 dBm		
M2		1	5.3124 GHz	-3.60 dBm		
D3	M1	1	40.08 MHz	1.08 dB		

Date: 10.APR.2025 12:21:41

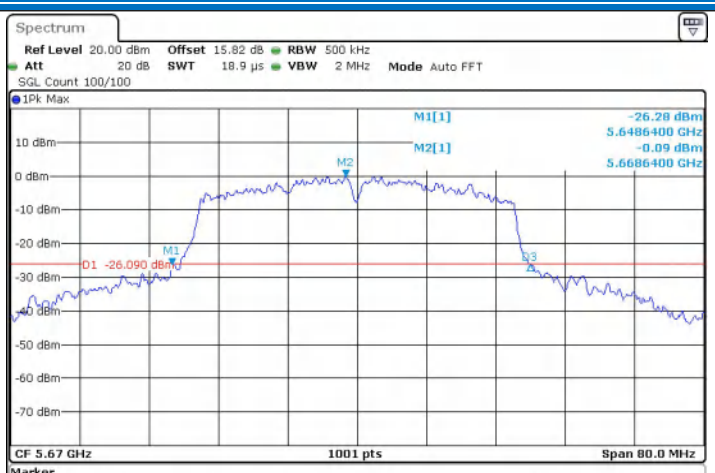
11N40SISO_Ant2_5510



11N40SISO_Ant2_5550



11N40SISO_Ant2_5670

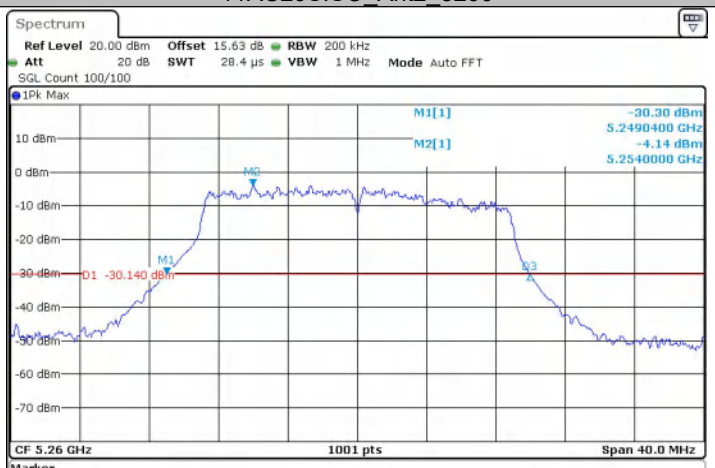


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.64864 GHz	-26.28 dBm		
M2		1	5.66864 GHz	-0.09 dBm		
D3	M1	1	41.28 MHz	0.08 dB		

Date: 19.JUN.2025 12:14:32

11AC20SISO_Ant2_5260

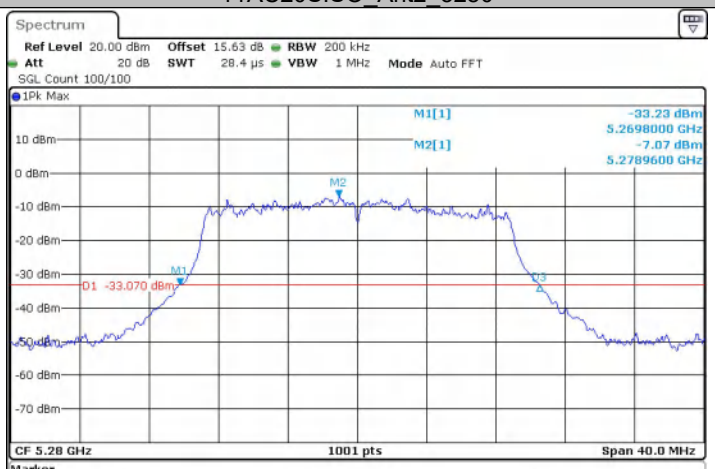


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.24904 GHz	-30.30 dBm		
M2		1	5.254 GHz	-4.14 dBm		
D3	M1	1	20.92 MHz	-0.03 dB		

Date: 10.APR.2025 12:31:42

11AC20SISO_Ant2_5280

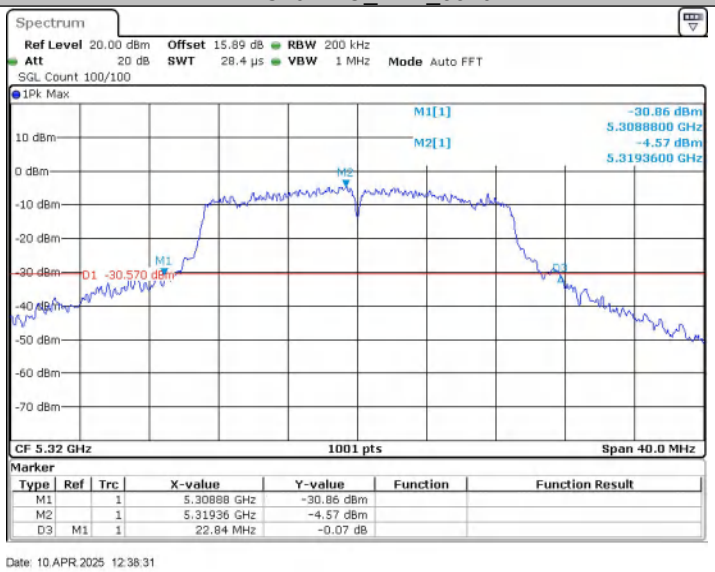


Marker

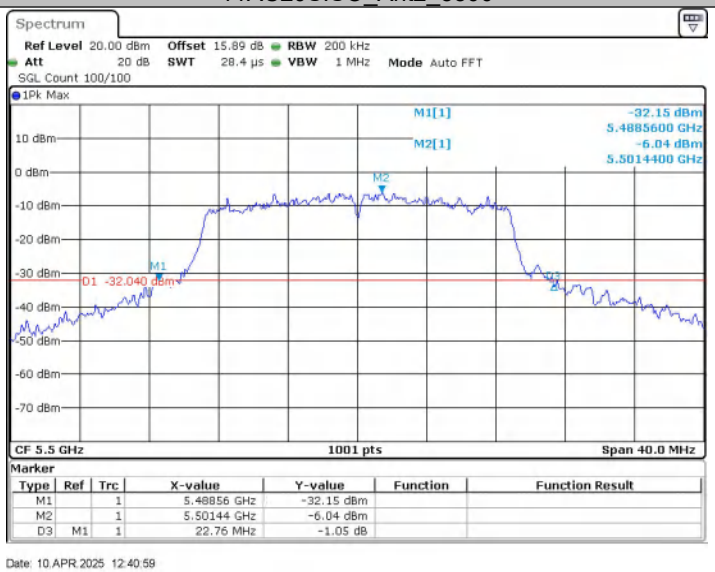
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.2698 GHz	-33.23 dBm		
M2		1	5.27896 GHz	-7.07 dBm		
D3	M1	1	20.72 MHz	0.02 dB		

Date: 10.APR.2025 12:36:27

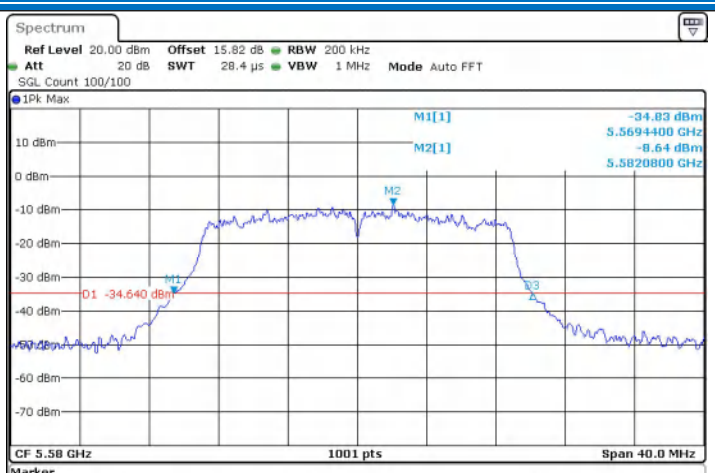
11AC20SISO_Ant2_5320



11AC20SISO_Ant2_5500



11AC20SISO_Ant2_5580



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.56944 GHz	-34.83 dBm		
M2		1	5.58208 GHz	-8.64 dBm		
D3	M1	1	20.68 MHz	0.02 dB		

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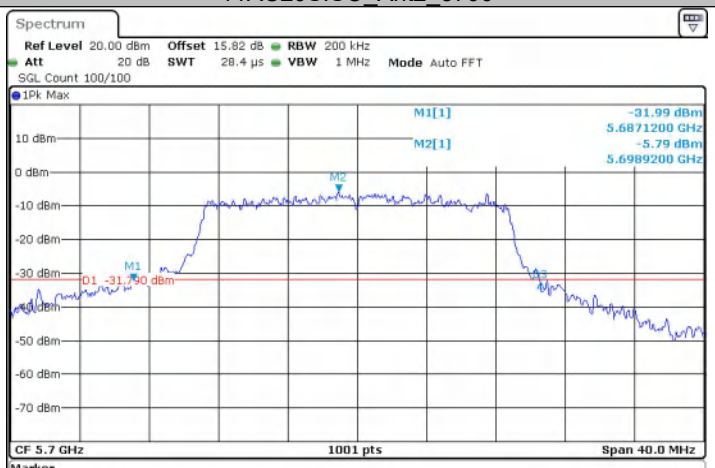
11AC20SISO_Ant2_5700

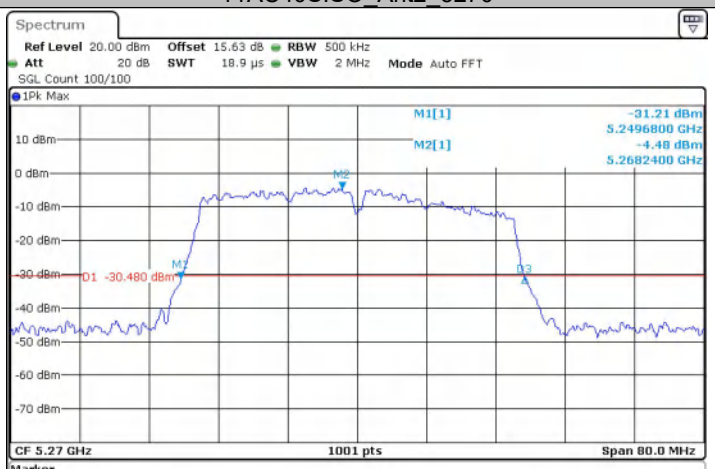


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.68712 GHz	-31.99 dBm		
M2		1	5.69892 GHz	-5.79 dBm		
D3	M1	1	23.44 MHz	-0.79 dB		

Date: 19.JUN.2025 16:04:00

11AC40SISO_Ant2_5270



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.24968 GHz	-31.21 dBm		
M2		1	5.26824 GHz	-4.48 dBm		
D3	M1	1	39.6 MHz	0.50 dB		

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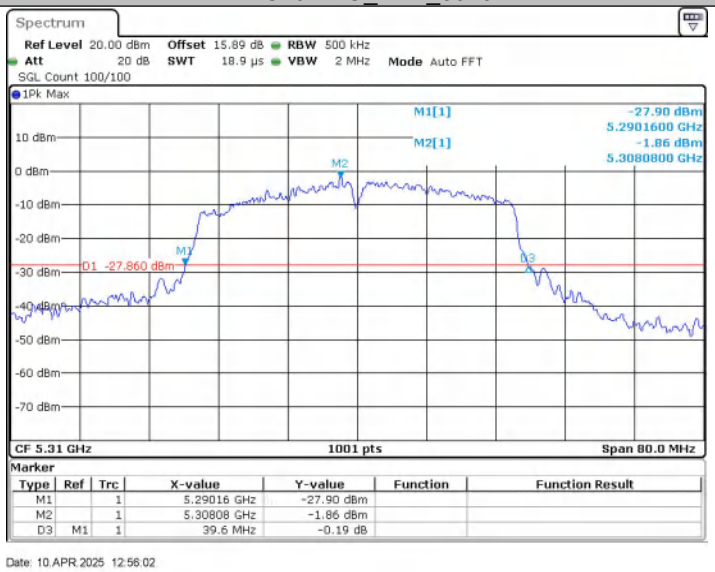
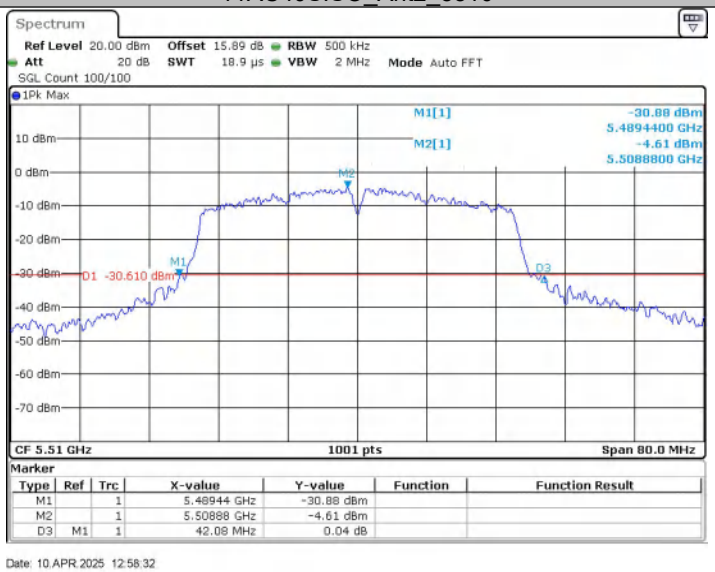
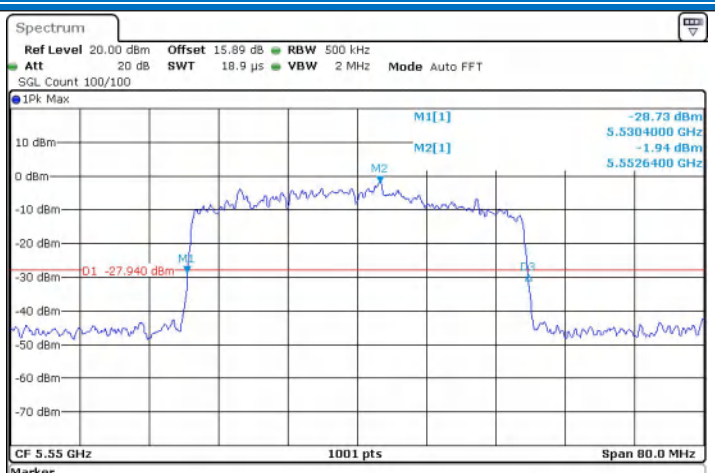
11AC40SISO_Ant2_5310



11AC40SISO_Ant2_5510



11AC40SISO_Ant2_5550

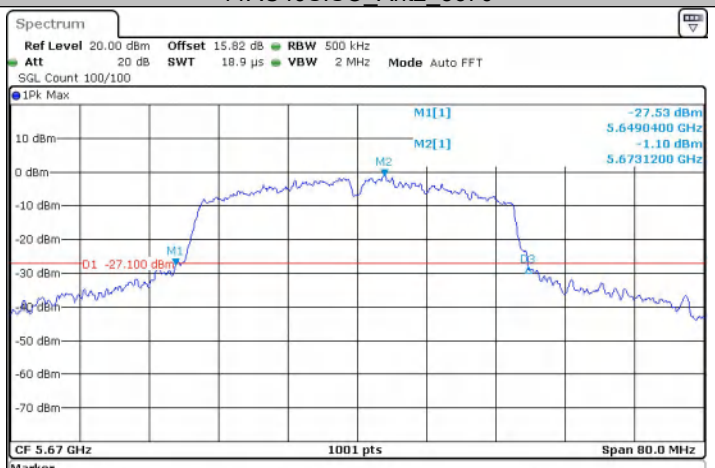


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.5304 GHz	-28.73 dBm		
M2		1	5.55264 GHz	-1.94 dBm		
D3	M1	1	39.28 MHz	-0.37 dB		

Date: 10.APR.2025 10:21:34

11AC40SISO_Ant2_5670

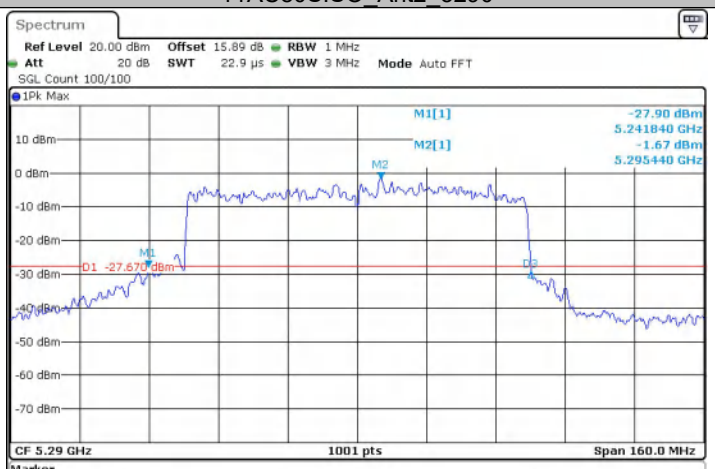


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.64904 GHz	-27.53 dBm		
M2		1	5.67312 GHz	-1.10 dBm		
D3	M1	1	40.72 MHz	-0.73 dB		

Date: 19.JUN.2025 16:05:52

11AC80SISO_Ant2_5290

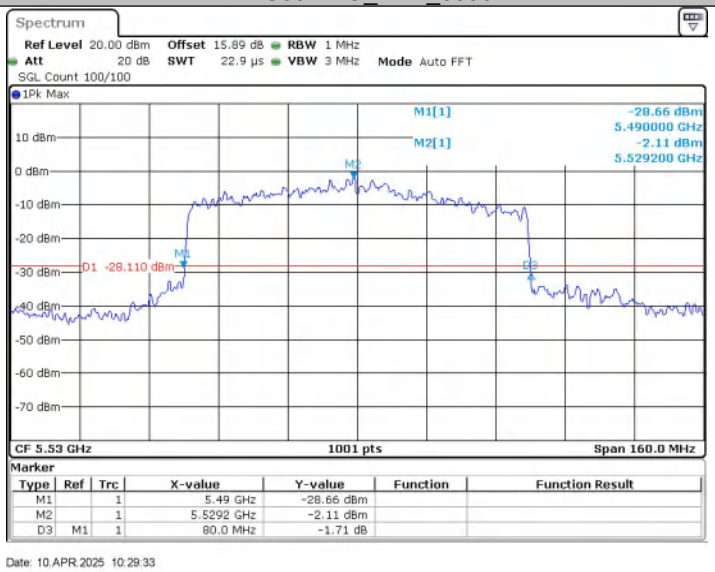


Marker

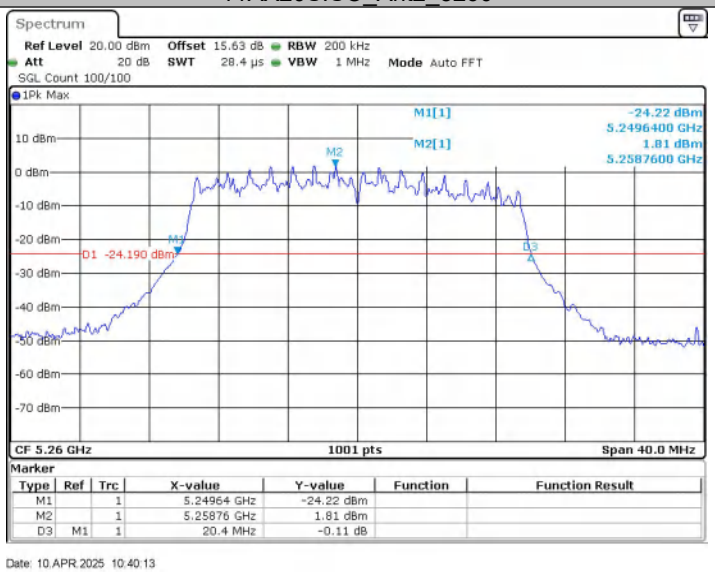
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.24184 GHz	-27.90 dBm		
M2		1	5.29544 GHz	-1.67 dBm		
D3	M1	1	88.32 MHz	-1.35 dB		

Date: 10.APR.2025 10:26:09

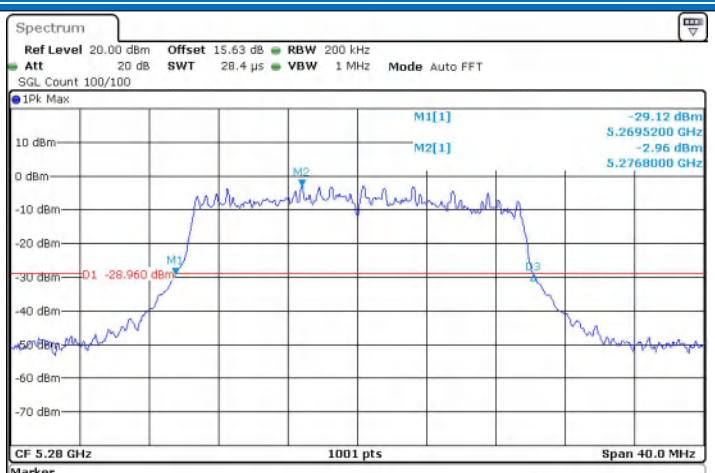
11AC80SISO_Ant2_5530



11AX20SISO_Ant2_5260



11AX20SISO_Ant2_5280

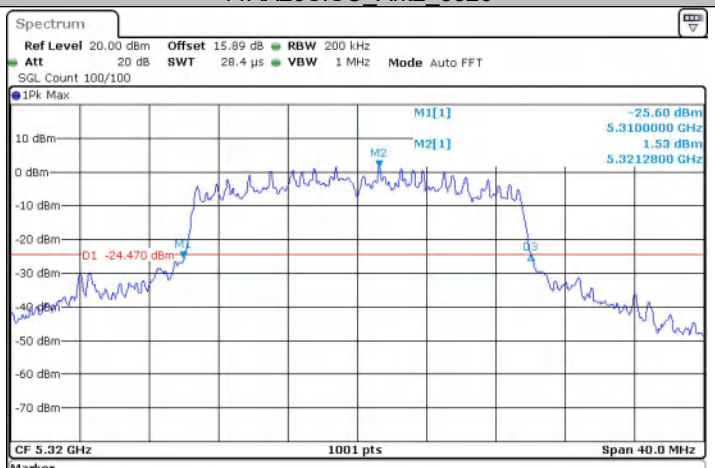


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.26952 GHz	-29.12 dBm		
M2		1	5.2768 GHz	-2.96 dBm		
D3	M1	1	20.64 MHz	-0.05 dB		

Date: 10.APR.2025 10:42:38

11AX20SISO_Ant2_5320

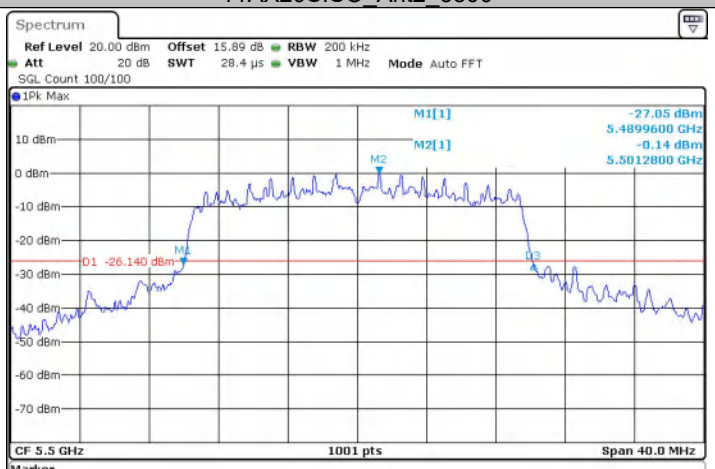


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.31 GHz	-25.60 dBm		
M2		1	5.32128 GHz	1.53 dBm		
D3	M1	1	20.04 MHz	1.03 dB		

Date: 10.APR.2025 10:44:28

11AX20SISO_Ant2_5500

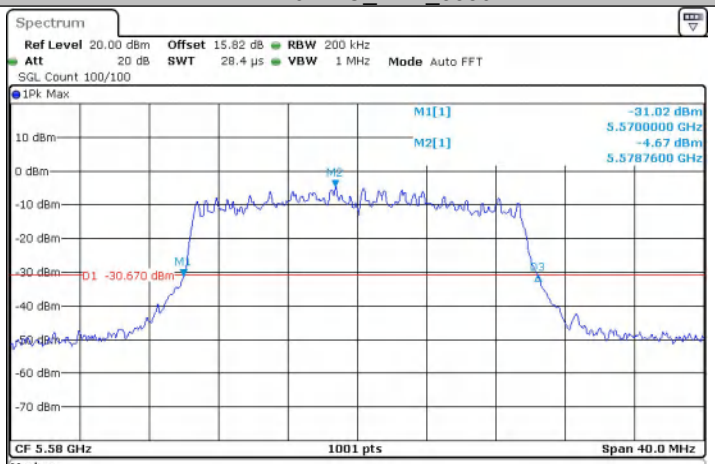


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.48996 GHz	-27.05 dBm		
M2		1	5.50128 GHz	-0.14 dBm		
D3	M1	1	20.2 MHz	0.32 dB		

Date: 10.APR.2025 10:47:50

11AX20SISO_Ant2_5580

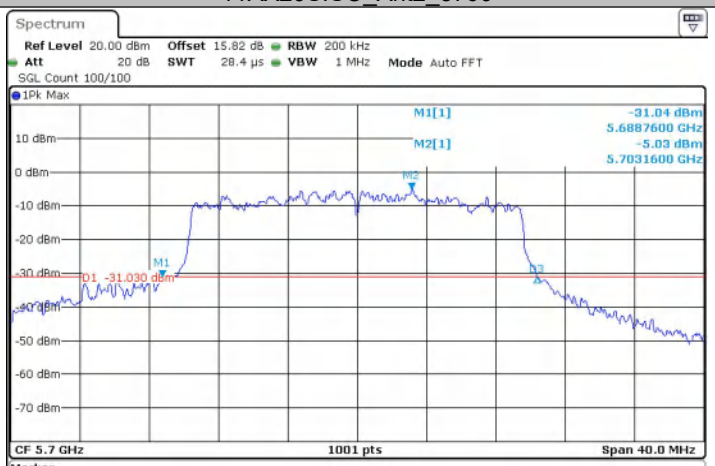


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.57 GHz	-31.02 dBm		
M2		1	5.57876 GHz	-4.67 dBm		
D3	M1	1	20.4 MHz	0.20 dB		

Date: 10.APR.2025 10:51:44

11AX20SISO_Ant2_5700

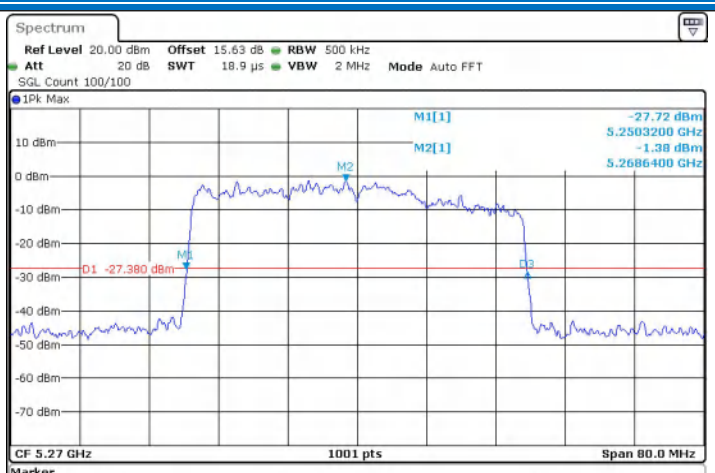


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.68876 GHz	-31.04 dBm		
M2		1	5.70316 GHz	-5.03 dBm		
D3	M1	1	21.6 MHz	-0.05 dB		

Date: 23.JUN.2025 13:12:22

11AX40SISO_Ant2_5270

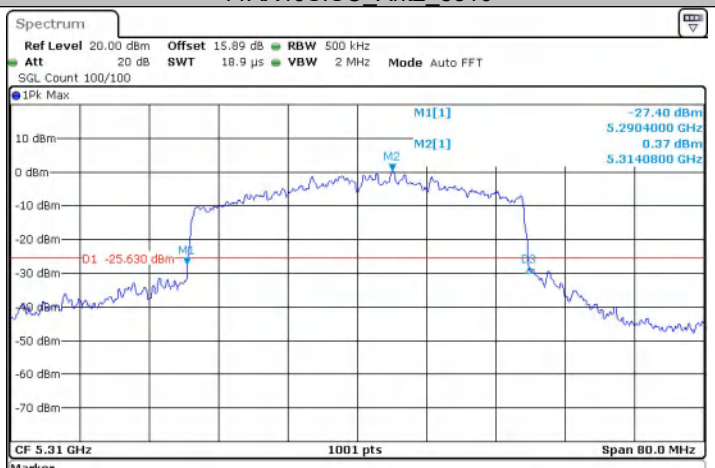


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.25032 GHz	-27.72 dBm		
M2		1	5.26864 GHz	-1.38 dBm		
D3	M1	1	39.28 MHz	-0.74 dB		

Date: 10.APR.2025 10:57:30

11AX40SISO_Ant2_5310

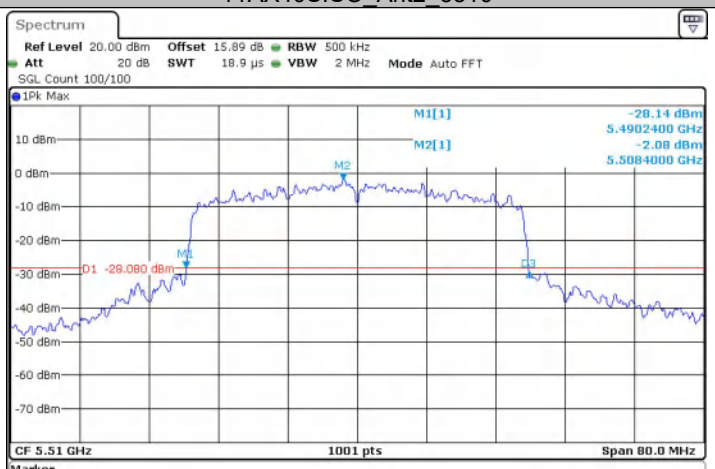


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.2904 GHz	-27.40 dBm		
M2		1	5.31408 GHz	0.37 dBm		
D3	M1	1	39.44 MHz	-0.69 dB		

Date: 10.APR.2025 11:00:59

11AX40SISO_Ant2_5510

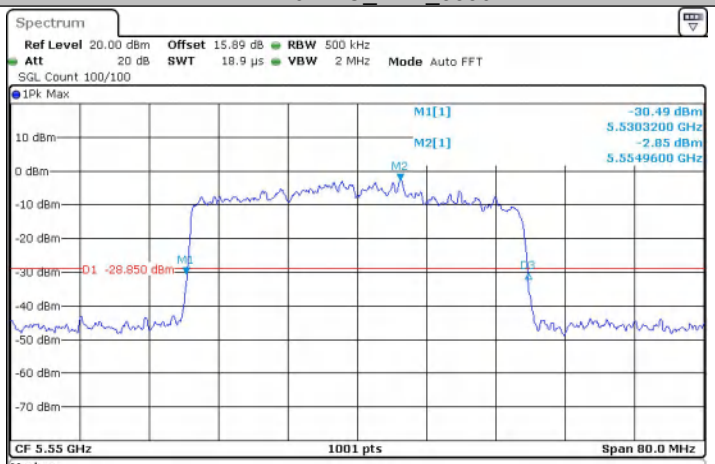


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.49024 GHz	-28.14 dBm		
M2		1	5.5084 GHz	-2.08 dBm		
D3	M1	1	39.6 MHz	-1.15 dB		

Date: 10.APR.2025 11:03:06

11AX40SISO_Ant2_5550

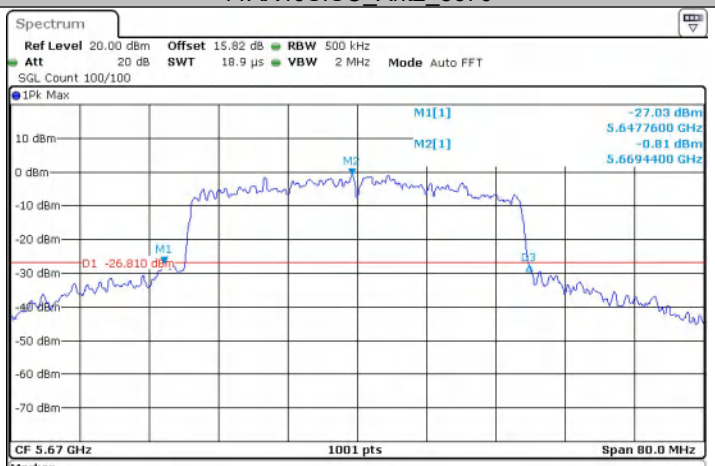


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.53032 GHz	-30.49 dBm		
M2		1	5.55496 GHz	-2.85 dBm		
D3	M1	1	39.36 MHz	0.22 dB		

Date: 10.APR.2025 11:06:49

11AX40SISO_Ant2_5670

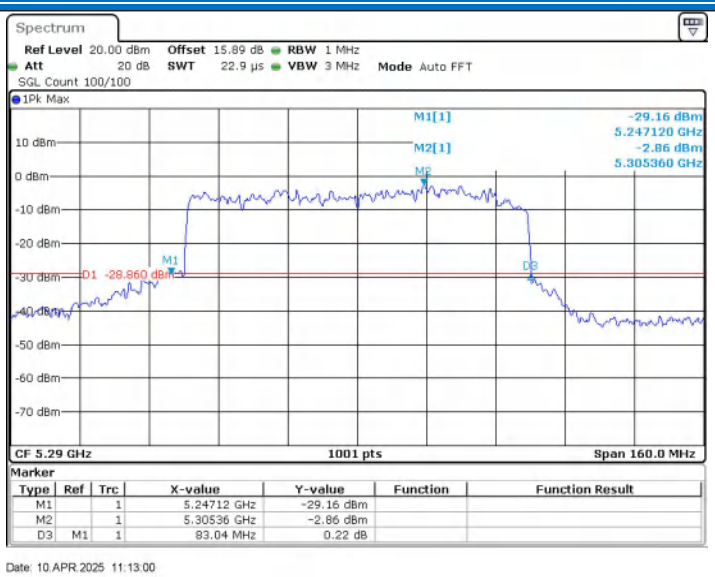


Marker

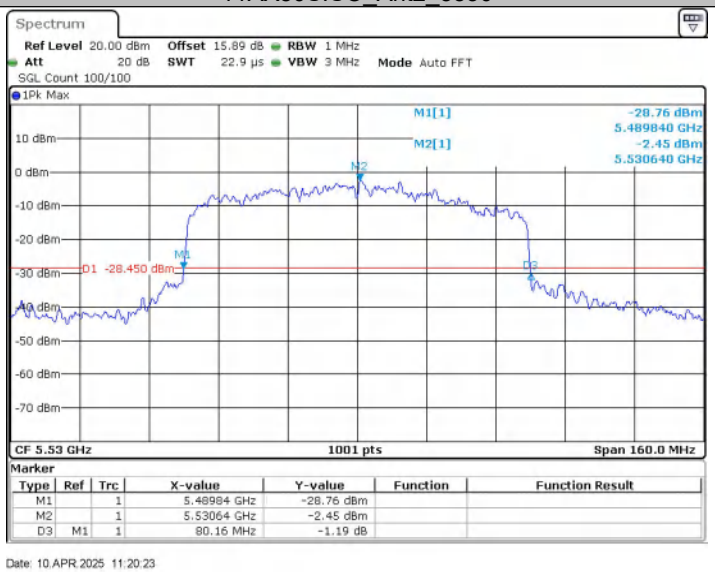
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.64776 GHz	-27.03 dBm		
M2		1	5.66944 GHz	-0.81 dBm		
D3	M1	1	42.08 MHz	-0.49 dB		

Date: 23.JUN.2025 13:13:46

11AX80SISO_Ant2_5290



11AX80SISO_Ant2_5530



Appendix B): Maximum Conduct Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II E

Limit:

Frequency band(MHz)	Limit
5150-5250	≤1W(30dBm) for Indoor device
	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) for client device or 11dBm+10logB*
5470-5725	≤250mW(24dBm) for client device or 11dBm+10logB*
5725-5850	≤1W(30dBm)
Remark:	* Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

Test Procedure:

Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

(1) Set RBW = 1 MHz.

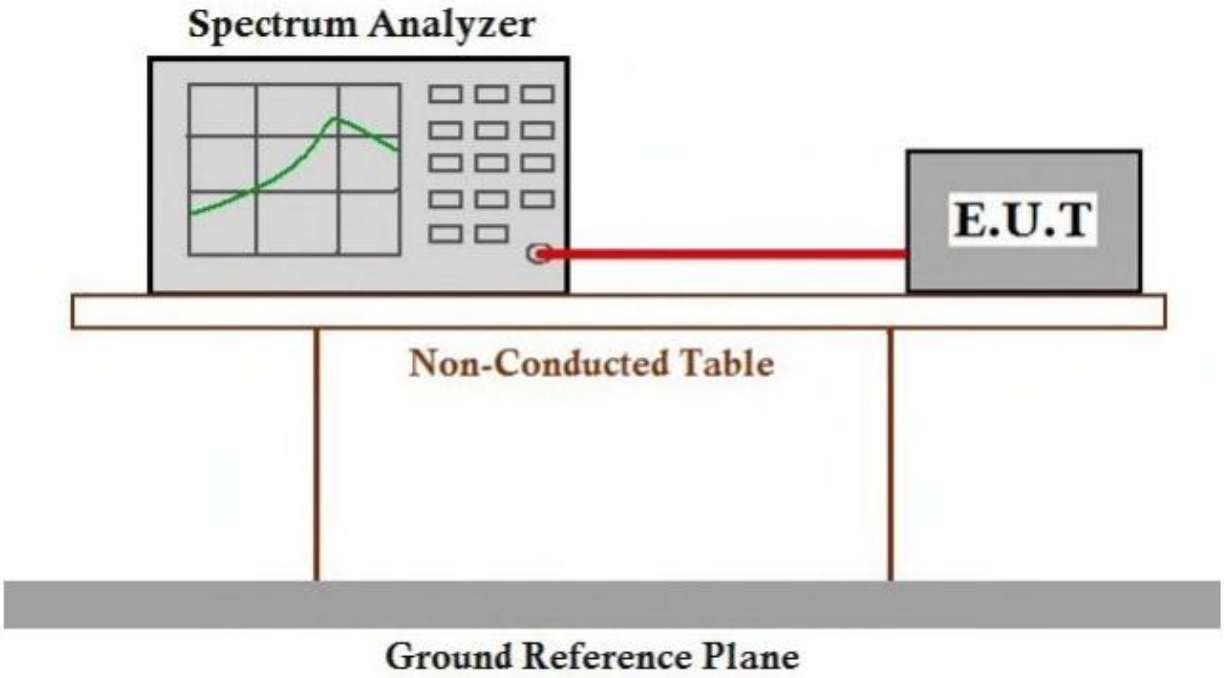
(2) Set VBW ≥ 3 MHz.

(3) Detector = power average

(4) Sweep time = auto.

(5) Add duty cycle to the measured average power.

Test Setup Diagram



Measurement Data

Ant1:

Test Mode	Antenna	Freq(MHz)	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5260	8.75	≤23.17	PASS
		5280	5.50	≤23.17	PASS
		5320	8.76	≤23.17	PASS
		5500	8.01	≤22.39	PASS
		5580	5.52	≤22.39	PASS
		5700	8.54	≤22.39	PASS
11N20SISO	Ant1	5260	8.97	≤23.17	PASS
		5280	5.45	≤23.17	PASS
		5320	8.79	≤23.17	PASS
		5500	8.29	≤22.39	PASS
		5580	5.48	≤22.39	PASS
		5700	6.90	≤22.39	PASS
11N40SISO	Ant1	5270	7.45	≤23.17	PASS
		5310	8.42	≤23.17	PASS
		5510	8.21	≤22.39	PASS
		5550	7.72	≤22.39	PASS
		5670	9.26	≤22.39	PASS
11AC20SISO	Ant1	5260	8.83	≤23.17	PASS
		5280	5.35	≤23.17	PASS
		5320	8.66	≤23.17	PASS
		5500	8.11	≤22.39	PASS
		5580	5.43	≤22.39	PASS
		5700	5.28	≤22.39	PASS
11AC40SISO	Ant1	5270	7.39	≤23.17	PASS
		5310	8.37	≤23.17	PASS
		5510	8.31	≤22.39	PASS
		5550	8.10	≤22.39	PASS
		5670	7.96	≤22.39	PASS
11AC80SISO	Ant1	5290	8.55	≤23.17	PASS
		5530	9.03	≤22.39	PASS
11AX20SISO	Ant1	5260	10.75	≤23.17	PASS
		5280	7.32	≤23.17	PASS
		5320	10.56	≤23.17	PASS

		5500	10.11	≤22.39	PASS
		5580	7.30	≤22.39	PASS
		5700	5.18	≤22.39	PASS
11AX40SISO	Ant1	5270	9.17	≤23.17	PASS
		5310	10.14	≤23.17	PASS
		5510	9.38	≤22.39	PASS
		5550	8.55	≤22.39	PASS
		5670	7.55	≤22.39	PASS
11AX80SISO	Ant1	5290	7.85	≤23.17	PASS
		5530	8.30	≤22.39	PASS

Limit=Conducted output power Limit-(gains-6dBi)

gain:

6.7dBi@5GHz: Wi-Fi: U-NII-1

6.83dBi@5GHz: Wi-Fi: U-NII-2A

7.61dBi@5GHz: Wi-Fi: U-NII-2C

6.71dBi@5GHz: Wi-Fi: U-NII-3

Ant2:

Test Mode	Antenna	Freq(MHz)	Result [dBm]	Limit [dBm]	Verdict
11A	Ant2	5260	8.45	≤23.17	PASS
		5280	5.16	≤23.17	PASS
		5320	8.17	≤23.17	PASS
		5500	6.58	≤22.39	PASS
		5580	2.92	≤22.39	PASS
		5700	8.12	≤22.39	PASS
11N20SISO	Ant2	5260	6.84	≤23.17	PASS
		5280	3.66	≤23.17	PASS
		5320	6.60	≤23.17	PASS
		5500	4.78	≤22.39	PASS
		5580	1.50	≤22.39	PASS
		5700	6.72	≤22.39	PASS
11N40SISO	Ant2	5270	5.54	≤23.17	PASS
		5310	6.11	≤23.17	PASS
		5510	4.89	≤22.39	PASS
		5550	3.61	≤22.39	PASS
		5670	9.16	≤22.39	PASS
11AC20SISO	Ant2	5260	6.87	≤23.17	PASS
		5280	3.58	≤23.17	PASS
		5320	6.57	≤23.17	PASS
		5500	4.77	≤22.39	PASS
		5580	1.43	≤22.39	PASS
		5700	5.45	≤22.39	PASS
11AC40SISO	Ant2	5270	5.43	≤23.17	PASS
		5310	6.15	≤23.17	PASS
		5510	4.85	≤22.39	PASS
		5550	5.08	≤22.39	PASS
		5670	8.01	≤22.39	PASS
11AC80SISO	Ant2	5290	6.19	≤23.17	PASS
		5530	5.18	≤22.39	PASS
11AX20SISO	Ant2	5260	9.15	≤23.17	PASS
		5280	5.87	≤23.17	PASS
		5320	8.76	≤23.17	PASS
		5500	7.04	≤22.39	PASS

		5580	3.54	≤22.39	PASS
		5700	5.13	≤22.39	PASS
11AX40SISO	Ant2	5270	6.91	≤23.17	PASS
		5310	7.61	≤23.17	PASS
		5510	6.25	≤22.39	PASS
		5550	5.09	≤22.39	PASS
		5670	7.56	≤22.39	PASS
11AX80SISO	Ant2	5290	6.13	≤23.17	PASS
		5530	5.30	≤22.39	PASS

Limit=Conducted output power Limit-(gains-6dBi)

gain:

6.7dBi@5GHz: Wi-Fi: U-NII-1

6.83dBi@5GHz: Wi-Fi: U-NII-2A

7.61dBi@5GHz: Wi-Fi: U-NII-2C

6.71dBi@5GHz: Wi-Fi: U-NII-3

Ant1+Ant2:

Test Mode	Antenna	Freq(MHz)	Result [dBm]	Limit [dBm]	Verdict
11N20MIMO	Ant1+Ant2	5260	11.04	≤20.16	PASS
		5280	7.66	≤20.16	PASS
		5320	10.84	≤20.16	PASS
		5500	9.89	≤19.38	PASS
		5580	6.94	≤19.38	PASS
		5700	9.82	≤19.38	PASS
11N40MIMO	Ant1+Ant2	5270	9.61	≤20.16	PASS
		5310	10.43	≤20.16	PASS
		5510	9.87	≤19.38	PASS
		5550	9.14	≤19.38	PASS
		5670	12.22	≤19.38	PASS
11AC20MIMO	Ant1+Ant2	5260	10.97	≤20.16	PASS
		5280	7.56	≤20.16	PASS
		5320	10.75	≤20.16	PASS
		5500	9.76	≤19.38	PASS
		5580	6.89	≤19.38	PASS
		5700	8.38	≤19.38	PASS
11AC40MIMO	Ant1+Ant2	5270	9.53	≤20.16	PASS
		5310	10.41	≤20.16	PASS
		5510	9.93	≤19.38	PASS
		5550	9.86	≤19.38	PASS
		5670	11.00	≤19.38	PASS
11AC80MIMO	Ant1+Ant2	5290	10.54	≤20.16	PASS
		5530	10.53	≤19.38	PASS
11AX20MIMO	Ant1+Ant2	5260	13.03	≤20.16	PASS
		5280	9.67	≤20.16	PASS
		5320	12.76	≤20.16	PASS
		5500	11.85	≤19.38	PASS
		5580	8.83	≤19.38	PASS
		5700	8.17	≤19.38	PASS
11AX40MIMO	Ant1+Ant2	5270	11.20	≤20.16	PASS
		5310	12.07	≤20.16	PASS
		5510	11.10	≤19.38	PASS
		5550	10.17	≤19.38	PASS

		5670	10.57	≤19.38	PASS
11AX80MIMO	Ant1+Ant2	5290	10.08	≤20.16	PASS
		5530	10.06	≤19.38	PASS

MIMO limit=Conducted output power Limit-(directional gains-6dBi)

Directional gain:

9.71dBi@5GHz: Wi-Fi: U-NII-1

9.84dBi@5GHz: Wi-Fi: U-NII-2A

10.62dBi@5GHz: Wi-Fi: U-NII-2C

9.72dBi@5GHz: Wi-Fi: U-NII-3

Remark:
Av.Power=Meas.Level+10 log (1/duty cycle)
E.i.r.p=Av.Power+G,
G = antenna gain in dBi.

Appendix C): Maximum Power Spectral Density

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II F

Test Procedure:

For 5150-5725MHz:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 1MHz.
4. Set the VBW ≥3*RBW. Detector = Peak. Trace mode = max hold.

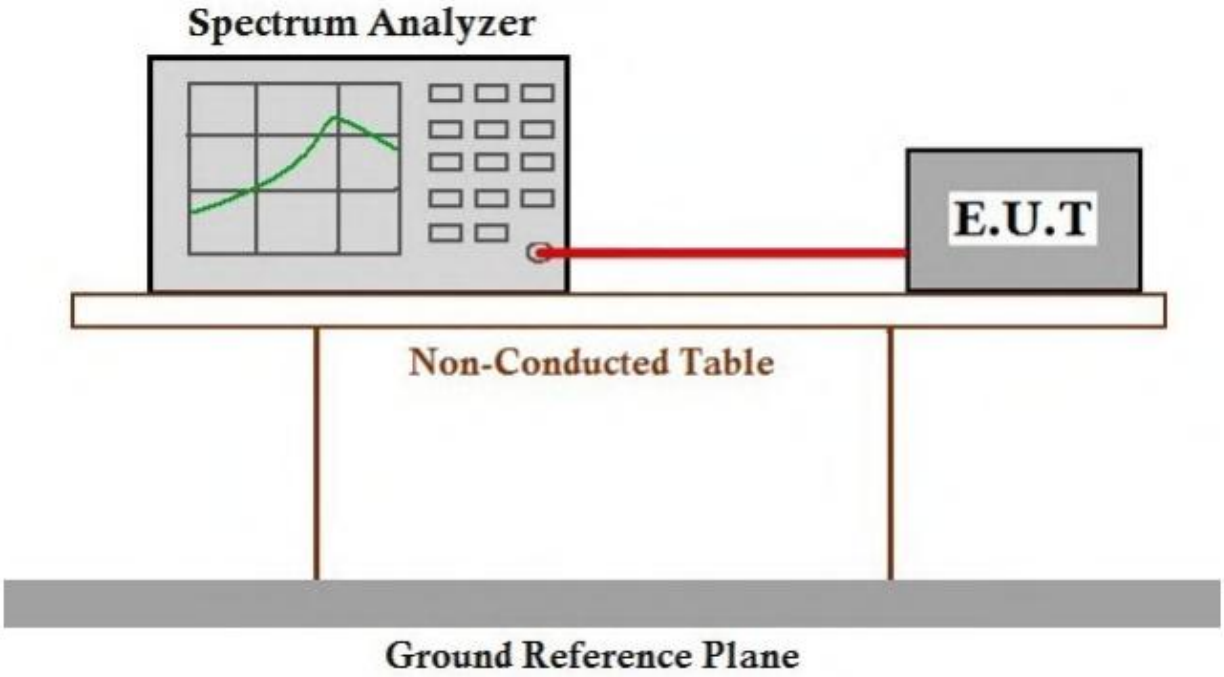
For 5725-5850MHz:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 500KHz.
4. Set the VBW ≥3*RBW. Detector = Peak. Trace mode = max hold.

Limit:

Frequency band(MHz)	Limit
5150-5250	≤17dBm in 1MHz for Indoor device
	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

Test Setup Diagram


Spectrum Analyzer
E.U.T
Non-Conducted Table
Ground Reference Plane

Result Table

Ant1:

TestMode	Freq(MHz)	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	5260	-1.01	≤10.17	PASS
	5280	-5.59	≤10.17	PASS
	5320	-1.82	≤10.17	PASS
	5500	-2.56	≤9.39	PASS
	5580	-4.69	≤9.39	PASS
	5700	-1.94	≤9.39	PASS
11N20SISO	5260	-0.93	≤10.17	PASS
	5280	-4.99	≤10.17	PASS
	5320	-1.22	≤10.17	PASS
	5500	-1.77	≤9.39	PASS
	5580	-4.88	≤9.39	PASS
	5700	-3.46	≤9.39	PASS
11N40SISO	5270	-5.39	≤10.17	PASS
	5310	-3.95	≤10.17	PASS
	5510	-4.93	≤9.39	PASS
	5550	-4.96	≤9.39	PASS
	5670	-3.84	≤9.39	PASS
11AC20SISO	5260	-1.72	≤10.17	PASS
	5280	-5.38	≤10.17	PASS
	5320	-1.50	≤10.17	PASS
	5500	-2.75	≤9.39	PASS
	5580	-5.60	≤9.39	PASS
	5700	-5.10	≤9.39	PASS
11AC40SISO	5270	-5.41	≤10.17	PASS
	5310	-3.58	≤10.17	PASS
	5510	-3.74	≤9.39	PASS
	5550	-4.33	≤9.39	PASS
	5670	-4.67	≤9.39	PASS
11AC80SISO	5290	-8.35	≤10.17	PASS
	5530	-6.87	≤9.39	PASS
11AX20SISO	5260	0.11	≤10.17	PASS
	5280	-3.56	≤10.17	PASS
	5320	-0.15	≤10.17	PASS
	5500	-0.63	≤9.39	PASS

	5580	-3.94	≤9.39	PASS
	5700	-5.46	≤9.39	PASS
11AX40SISO	5270	-4.22	≤10.17	PASS
	5310	-2.55	≤10.17	PASS
	5510	-2.94	≤9.39	PASS
	5550	-4.03	≤9.39	PASS
	5670	-5.64	≤9.39	PASS
11AX80SISO	5290	-8.57	≤10.17	PASS
	5530	-7.07	≤9.39	PASS

PSD Limit=Conducted output power Limit-(gains-6dBi)

gain:

6.7dBi@5GHz: Wi-Fi: U-NII-1

6.83dBi@5GHz: Wi-Fi: U-NII-2A

7.61dBi@5GHz: Wi-Fi: U-NII-2C

6.71dBi@5GHz: Wi-Fi: U-NII-3

Ant2:

TestMode	Freq(MHz)	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	5260	-2.10	≤10.17	PASS
	5280	-5.10	≤10.17	PASS
	5320	-1.52	≤10.17	PASS
	5500	-3.57	≤9.39	PASS
	5580	-8.00	≤9.39	PASS
	5700	-2.03	≤9.39	PASS
11N20SISO	5260	-3.52	≤10.17	PASS
	5280	-6.84	≤10.17	PASS
	5320	-3.95	≤10.17	PASS
	5500	-5.65	≤9.39	PASS
	5580	-9.17	≤9.39	PASS
	5700	-3.96	≤9.39	PASS
11N40SISO	5270	-7.49	≤10.17	PASS
	5310	-5.61	≤10.17	PASS
	5510	-8.21	≤9.39	PASS
	5550	-8.63	≤9.39	PASS
	5670	-3.65	≤9.39	PASS
11AC20SISO	5260	-3.53	≤10.17	PASS
	5280	-6.91	≤10.17	PASS
	5320	-3.45	≤10.17	PASS
	5500	-5.71	≤9.39	PASS
	5580	-8.62	≤9.39	PASS
	5700	-5.18	≤9.39	PASS
11AC40SISO	5270	-7.61	≤10.17	PASS
	5310	-6.18	≤10.17	PASS
	5510	-7.15	≤9.39	PASS
	5550	-7.89	≤9.39	PASS
	5670	-4.87	≤9.39	PASS
11AC80SISO	5290	-10.68	≤10.17	PASS
	5530	-10.17	≤9.39	PASS
11AX20SISO	5260	-0.67	≤10.17	PASS
	5280	-5.05	≤10.17	PASS
	5320	-1.71	≤10.17	PASS
	5500	-4.07	≤9.39	PASS
	5580	-7.30	≤9.39	PASS

	5700	-5.95	≤9.39	PASS
11AX40SISO	5270	-6.44	≤10.17	PASS
	5310	-5.18	≤10.17	PASS
	5510	-6.50	≤9.39	PASS
	5550	-7.14	≤9.39	PASS
	5670	-5.70	≤9.39	PASS
11AX80SISO	5290	-10.76	≤10.17	PASS
	5530	-10.21	≤9.39	PASS

PSD Limit=Conducted output power Limit-(gains-6dBi)

gain:

6.7dBi@5GHz: Wi-Fi: U-NII-1

6.83dBi@5GHz: Wi-Fi: U-NII-2A

7.61dBi@5GHz: Wi-Fi: U-NII-2C

6.71dBi@5GHz: Wi-Fi: U-NII-3

Ant1+Ant2:

TestMode	Freq(MHz)	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11N20MIMO	5260	0.98	≤7.16	PASS
	5280	-2.81	≤7.16	PASS
	5320	0.64	≤7.16	PASS
	5500	-0.28	≤6.38	PASS
	5580	-3.51	≤6.38	PASS
	5700	-0.69	≤6.38	PASS
11N40MIMO	5270	-3.30	≤7.16	PASS
	5310	-1.69	≤7.16	PASS
	5510	-3.26	≤6.38	PASS
	5550	-3.41	≤6.38	PASS
	5670	-0.73	≤6.38	PASS
11AC20MIMO	5260	0.48	≤7.16	PASS
	5280	-3.07	≤7.16	PASS
	5320	0.64	≤7.16	PASS
	5500	-0.97	≤6.38	PASS
	5580	-3.84	≤6.38	PASS
	5700	-2.13	≤6.38	PASS
11AC40MIMO	5270	-3.36	≤7.16	PASS
	5310	-1.68	≤7.16	PASS
	5510	-2.11	≤6.38	PASS
	5550	-2.74	≤6.38	PASS
	5670	-1.76	≤6.38	PASS
11AC80MIMO	5290	-6.35	≤7.16	PASS
	5530	-5.20	≤6.38	PASS
11AX20MIMO	5260	2.75	≤7.16	PASS
	5280	-1.23	≤7.16	PASS
	5320	2.15	≤7.16	PASS
	5500	0.99	≤6.38	PASS
	5580	-2.29	≤6.38	PASS
	5700	-2.69	≤6.38	PASS
11AX40MIMO	5270	-2.18	≤7.16	PASS
	5310	-0.66	≤7.16	PASS
	5510	-1.35	≤6.38	PASS
	5550	-2.30	≤6.38	PASS
	5670	-2.66	≤6.38	PASS

11AX80MIMO	5290	-6.52	≤7.16	PASS
	5530	-5.35	≤6.38	PASS

MIMO PSD limit=Conducted output power Limit-(directional gains-6dBi)

Directional gain:

9.71dBi@5GHz: Wi-Fi: U-NII-1

9.84dBi@5GHz: Wi-Fi: U-NII-2A

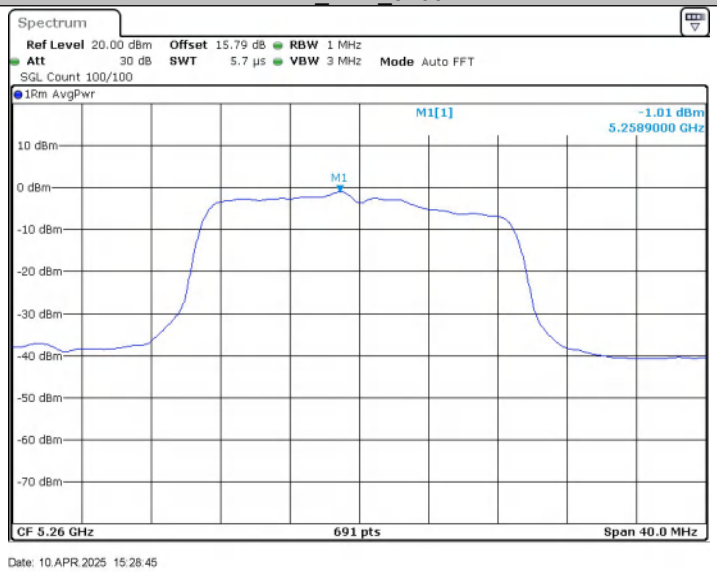
10.62dBi@5GHz: Wi-Fi: U-NII-2C

9.72dBi@5GHz: Wi-Fi: U-NII-3

Remark:

PSD = Meas PSD + Duty Cycle Factor

11A_Ant1_5260



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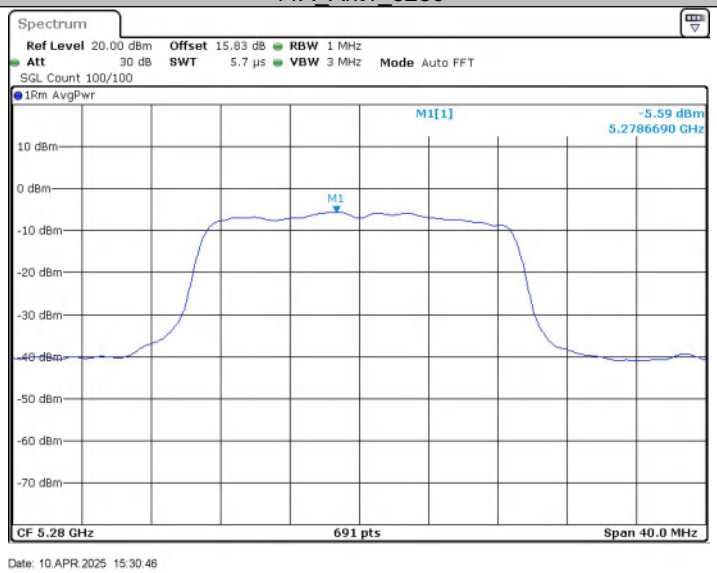

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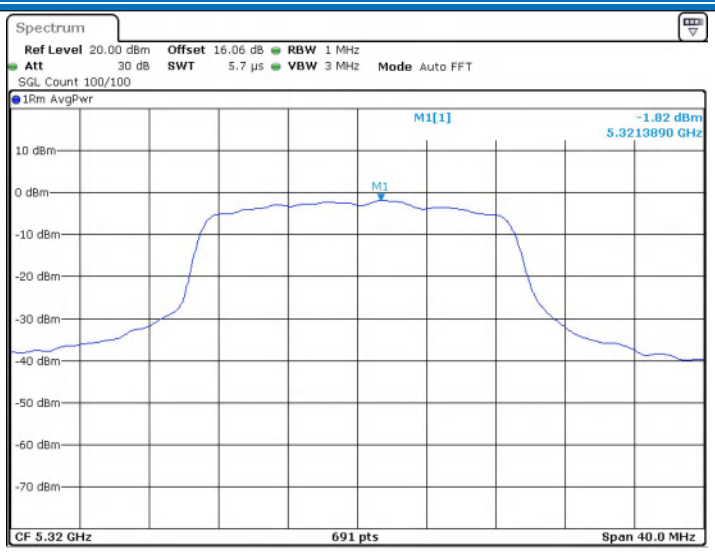

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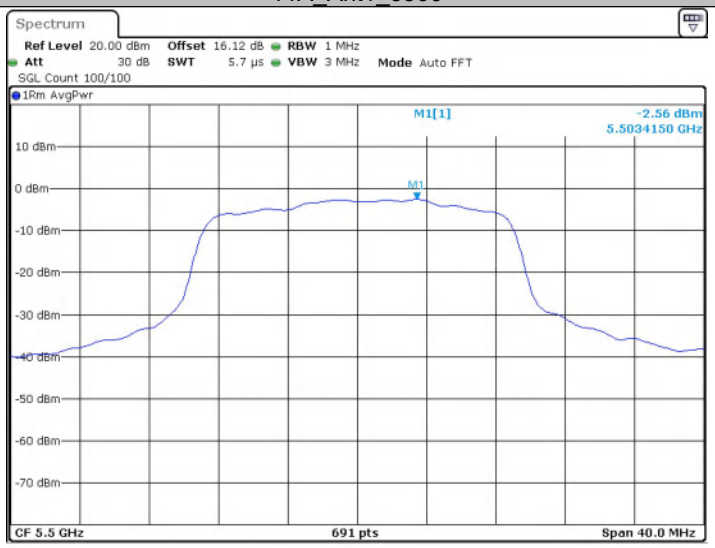

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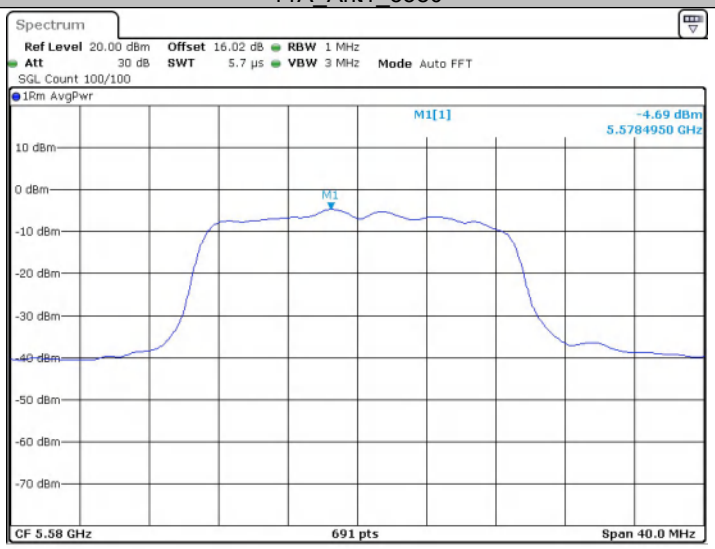

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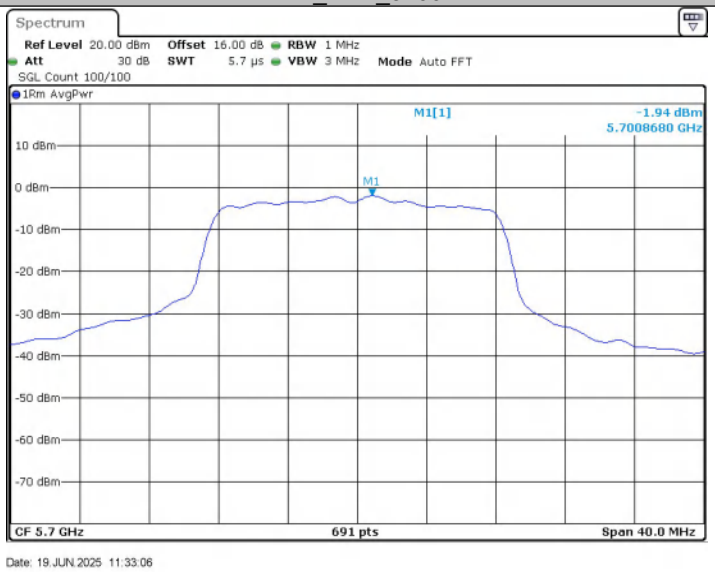

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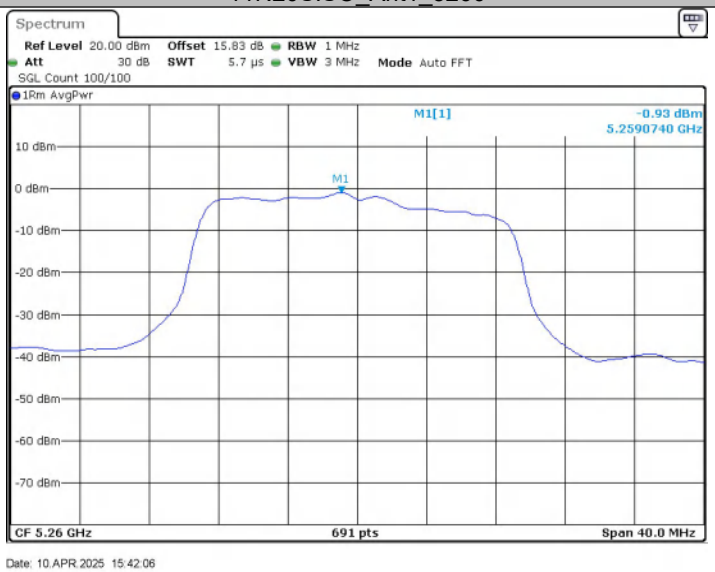

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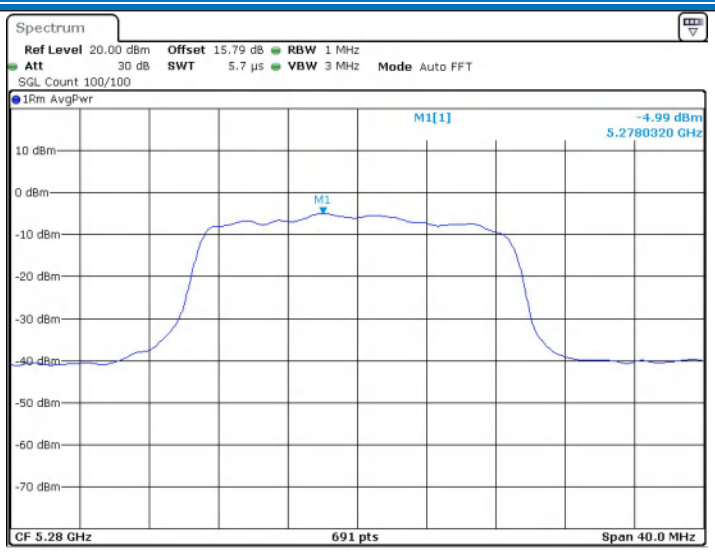

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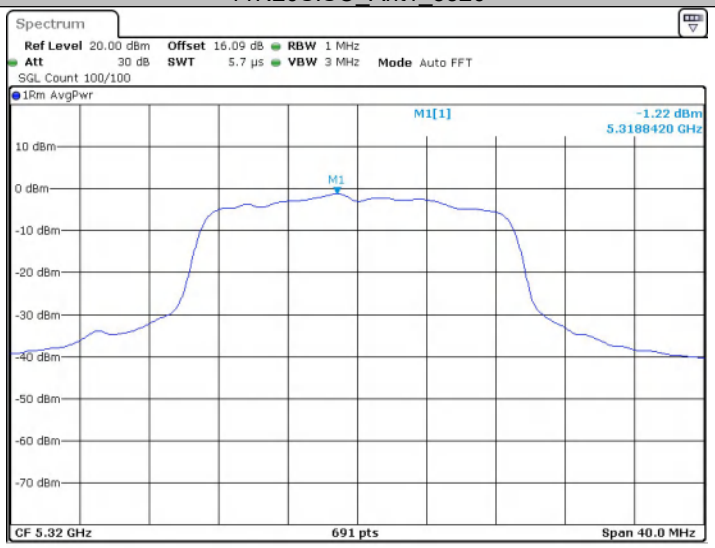

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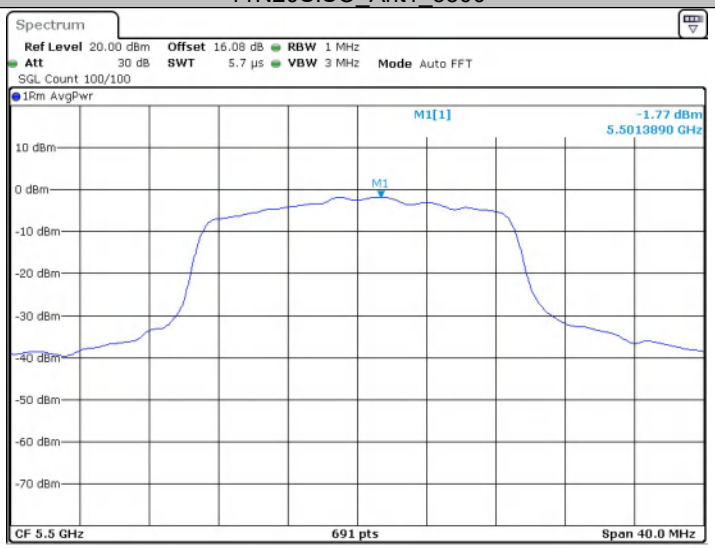

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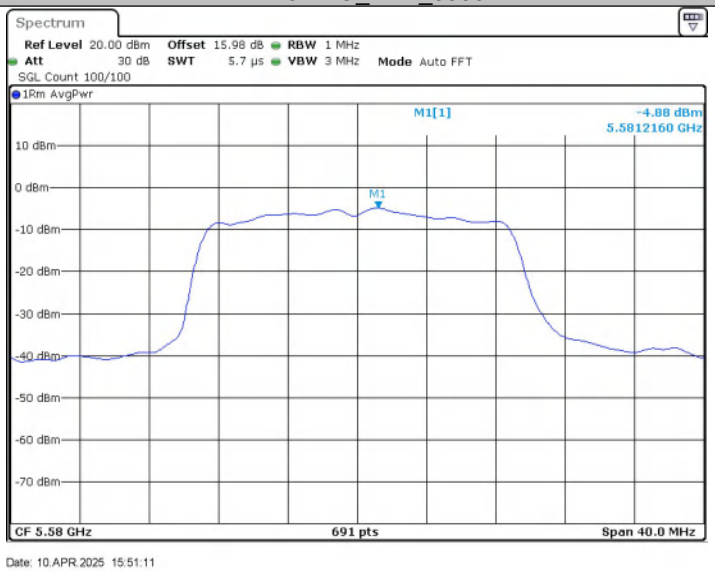

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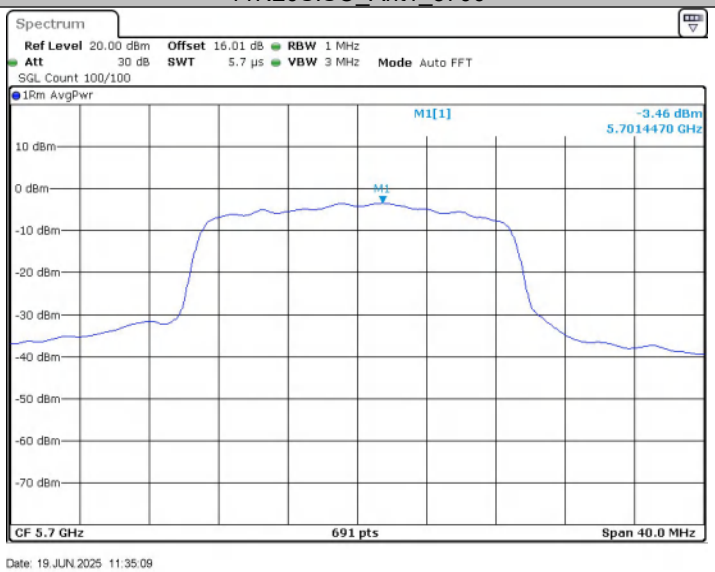

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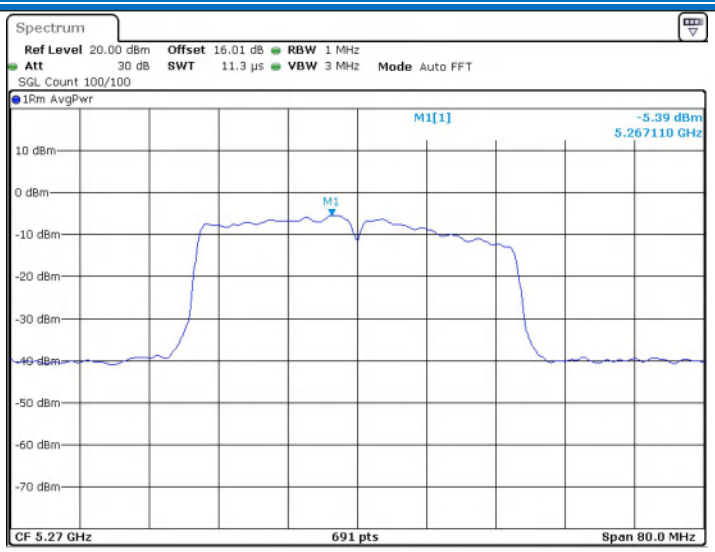

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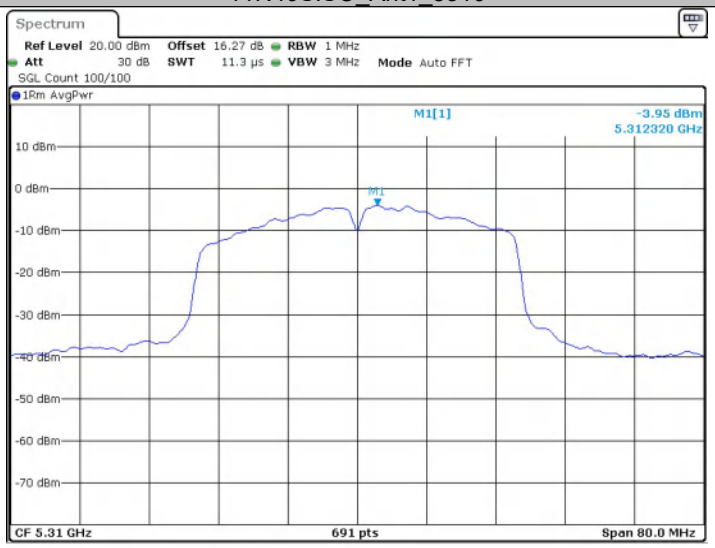

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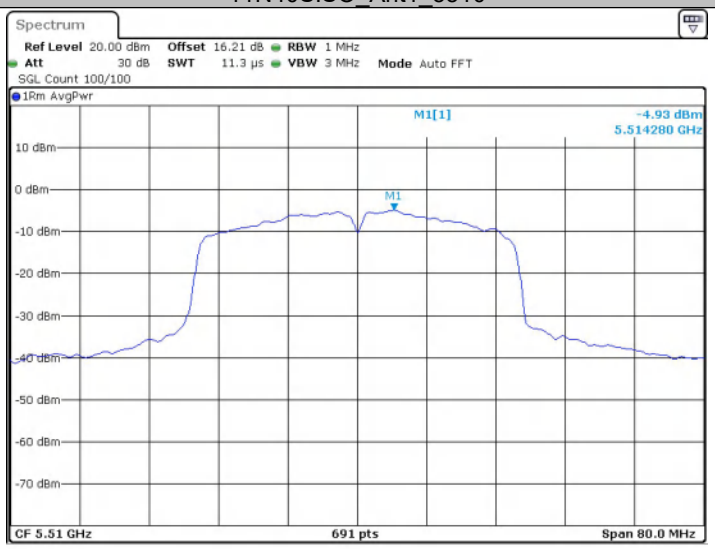

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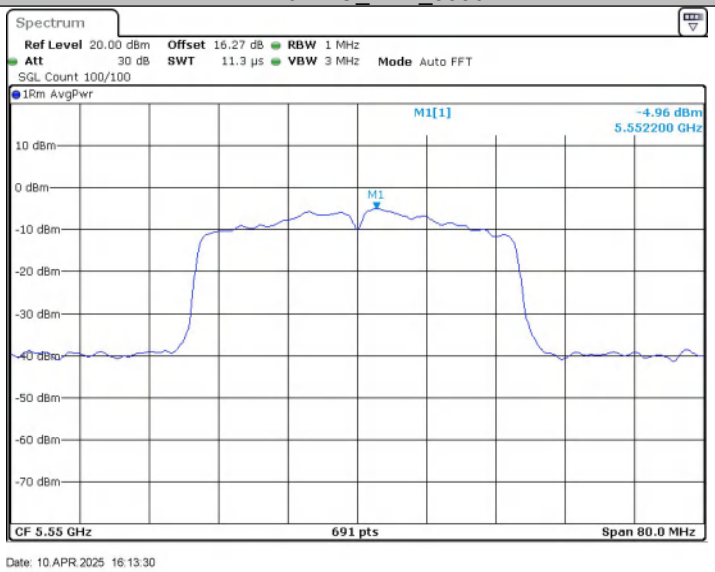

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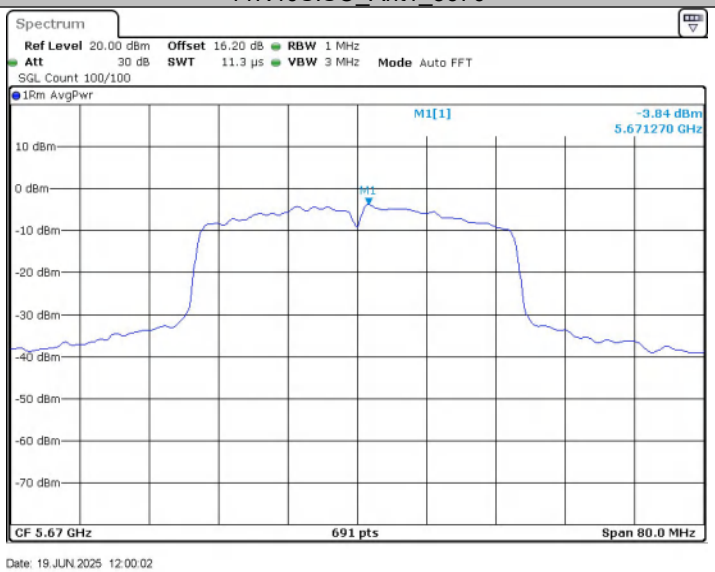

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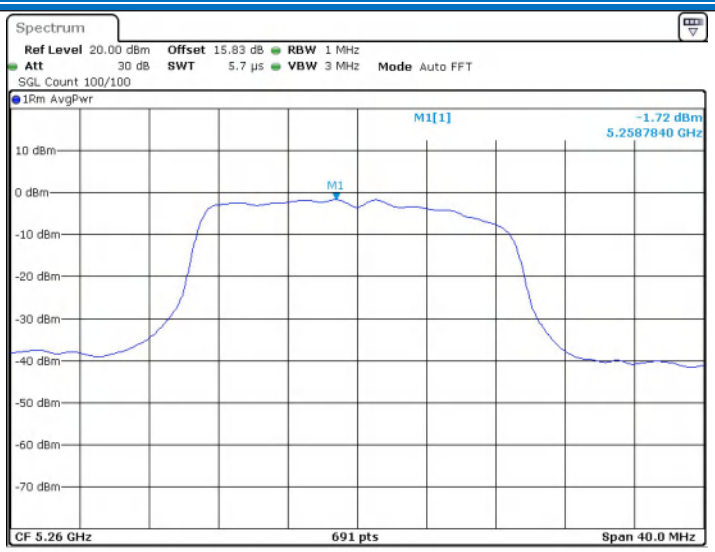

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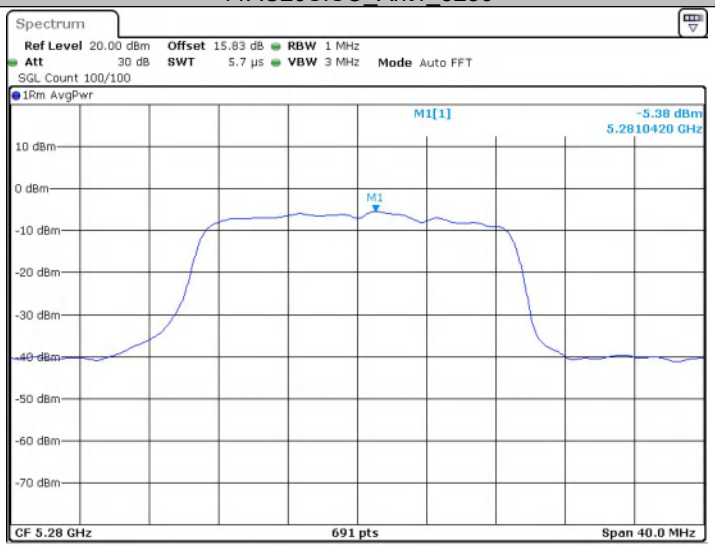

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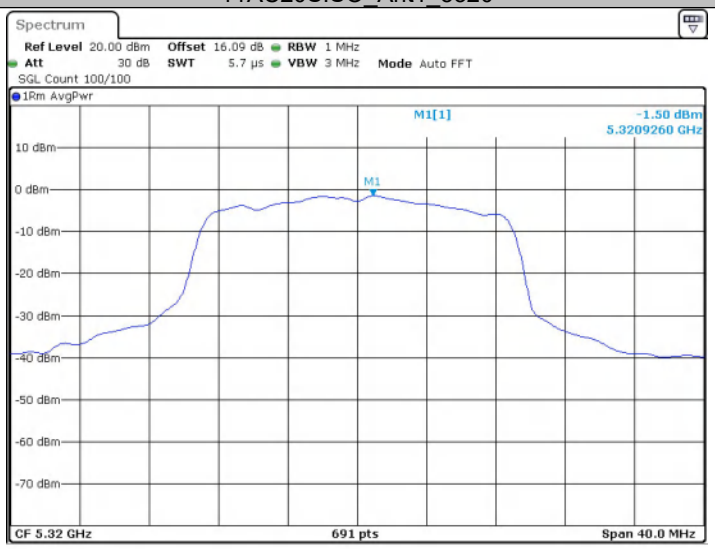

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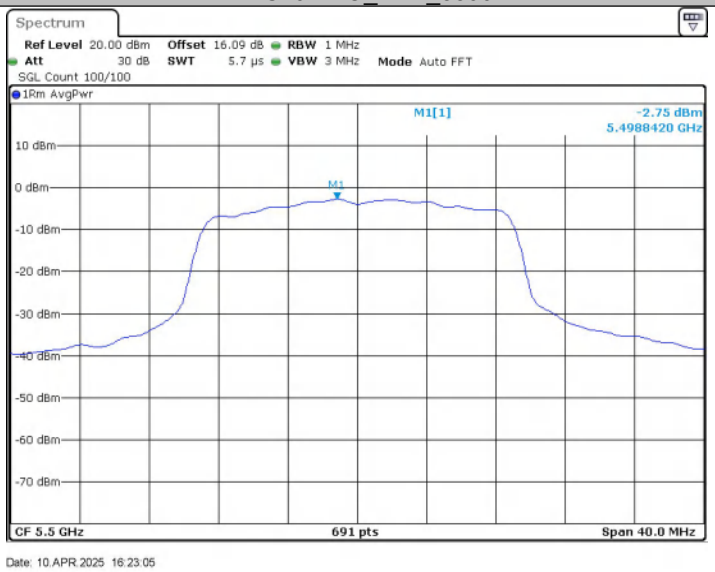

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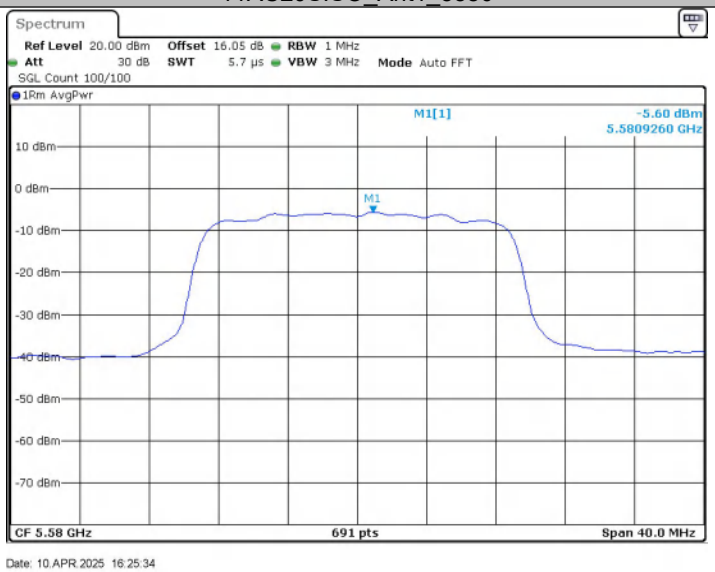

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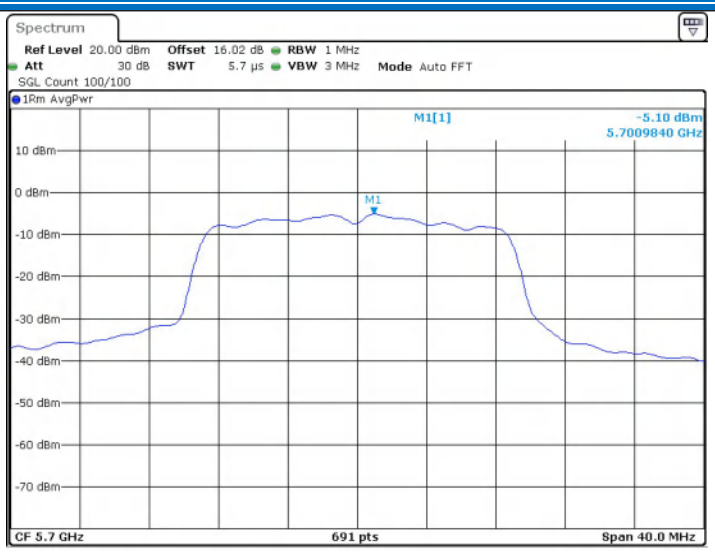

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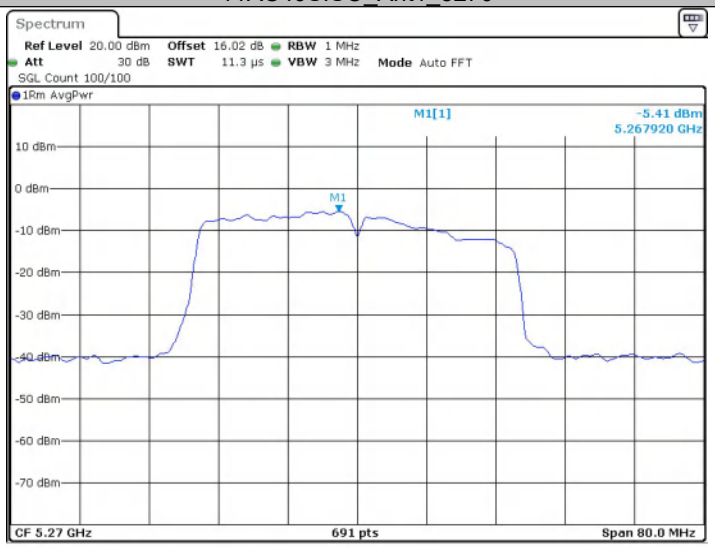

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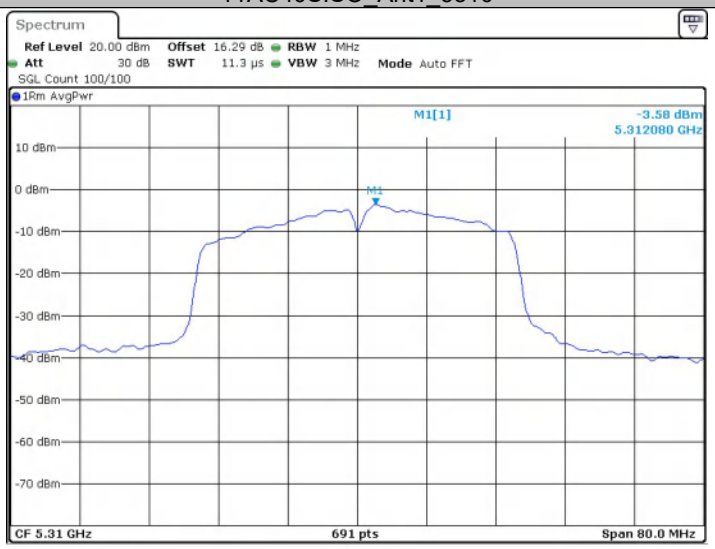

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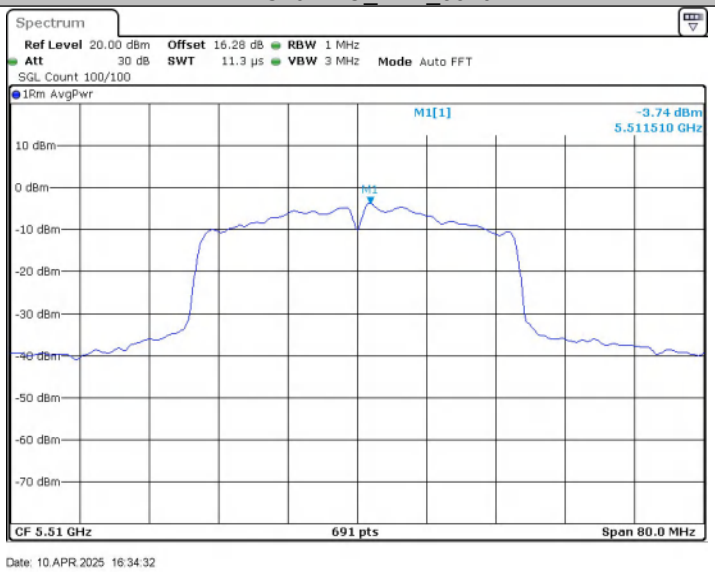

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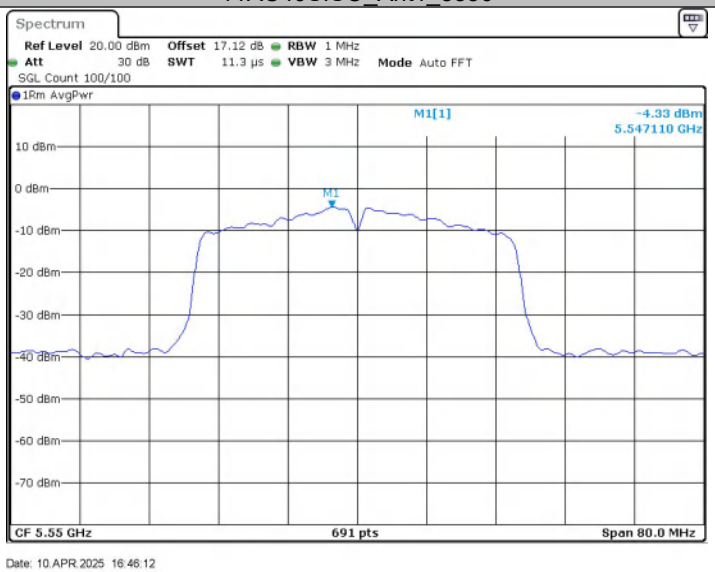

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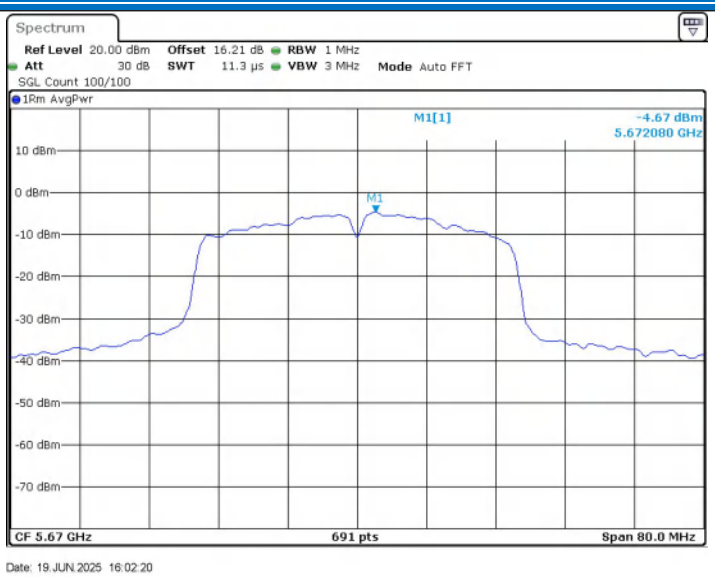

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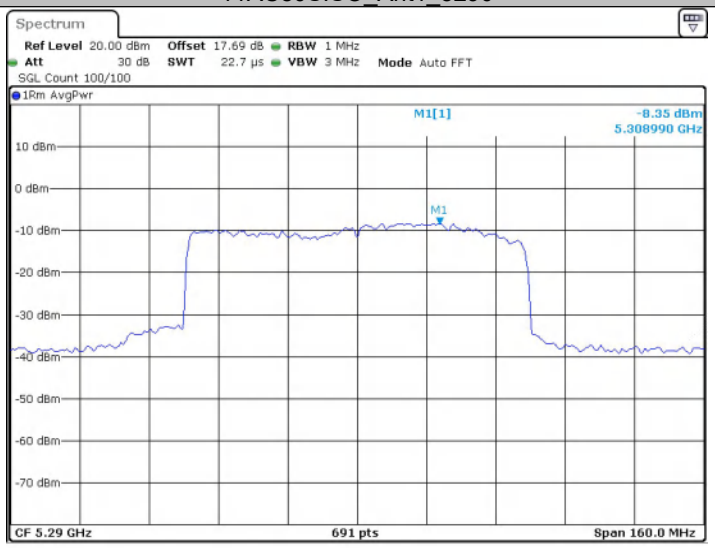

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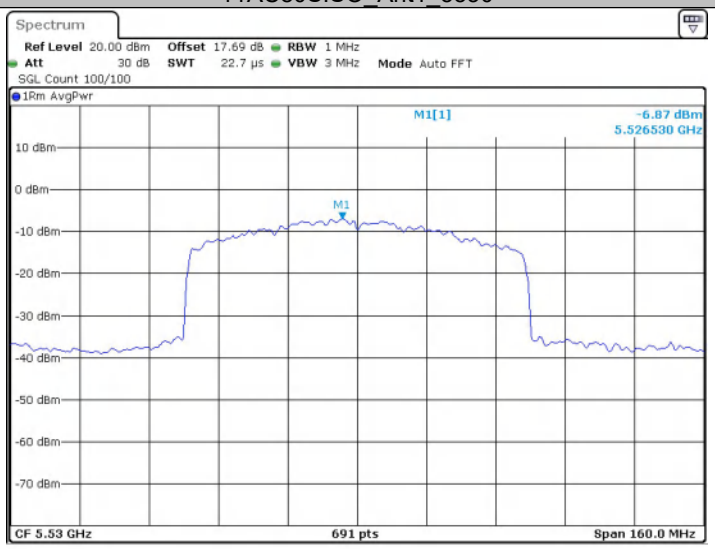

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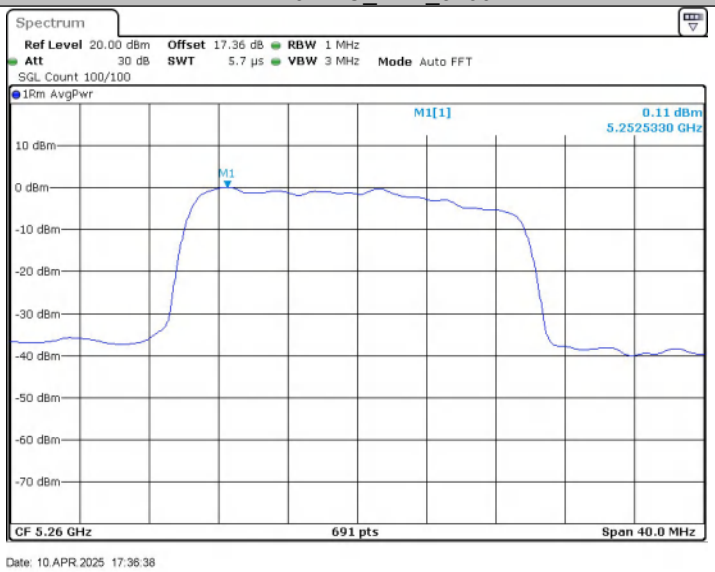

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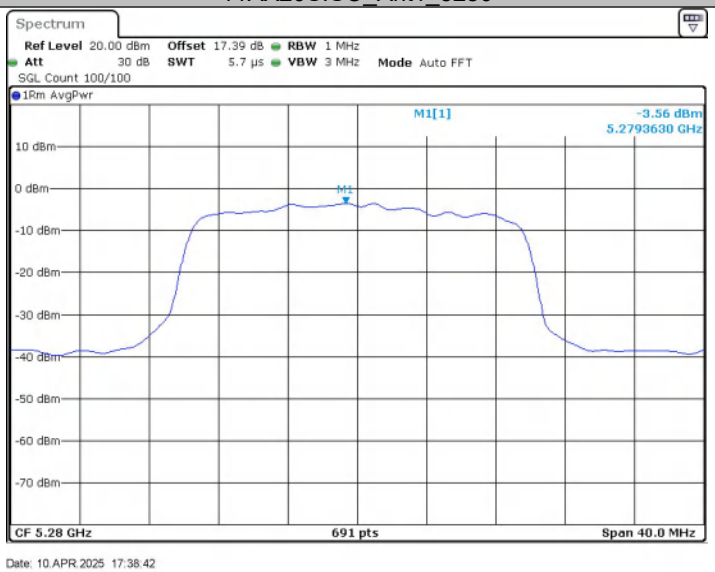

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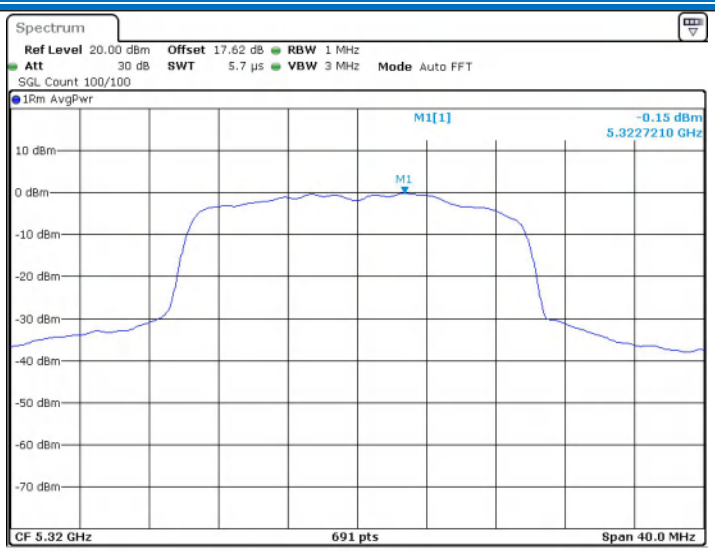

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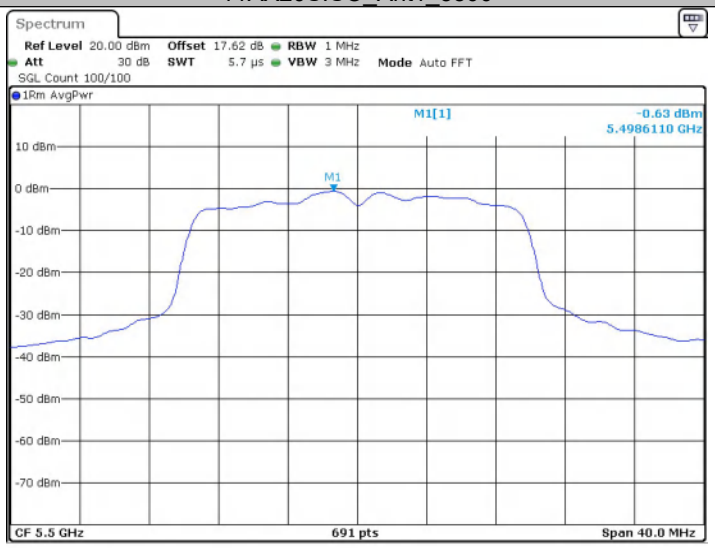

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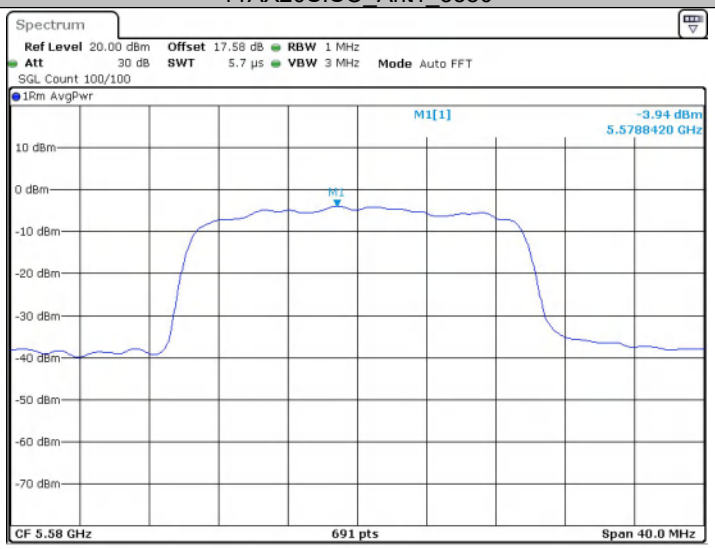

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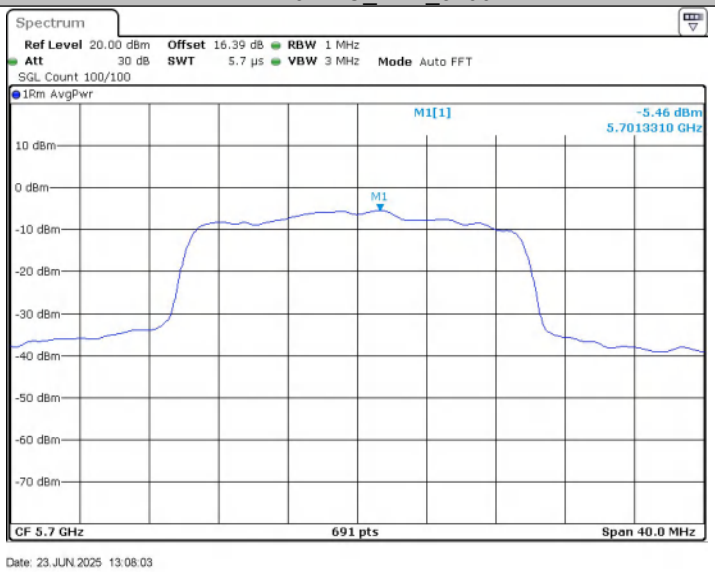

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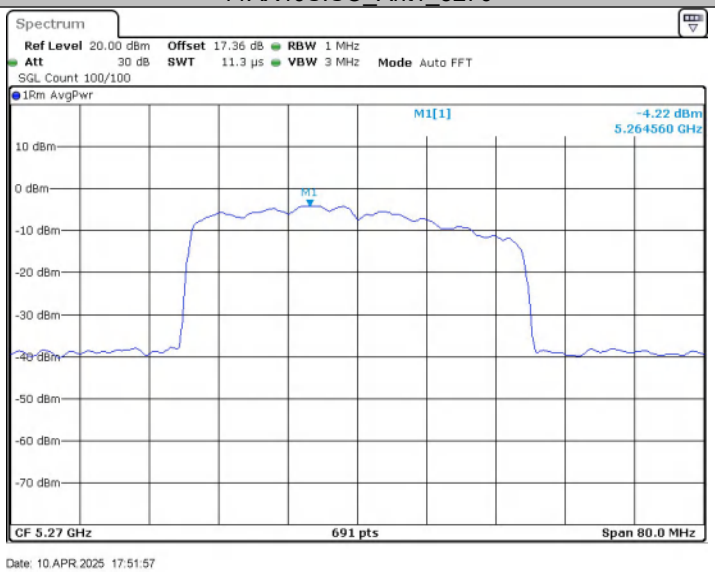

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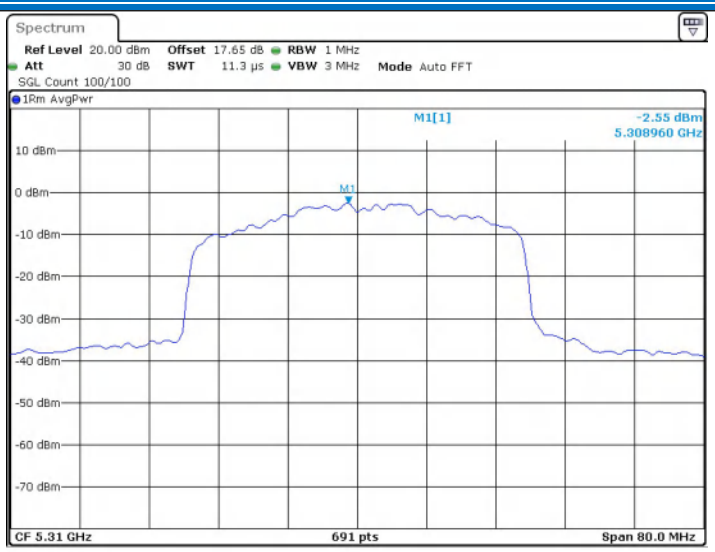

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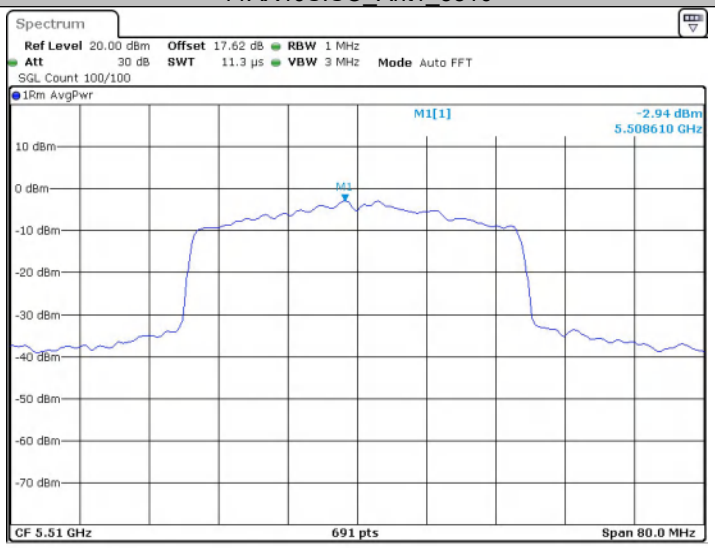

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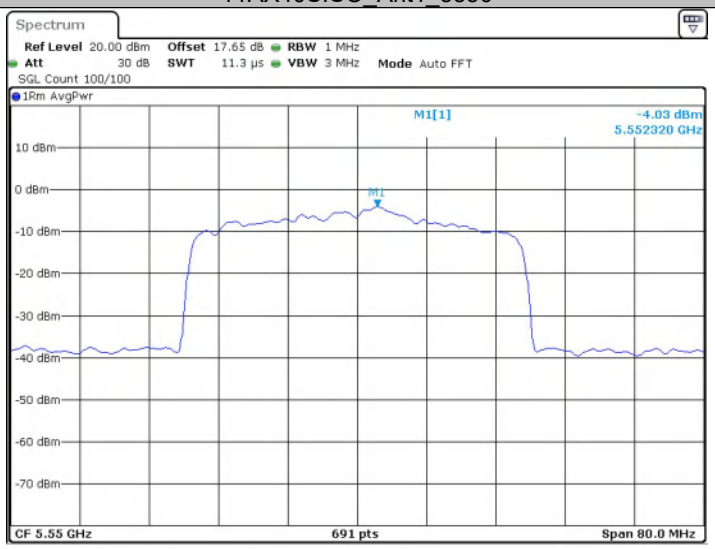

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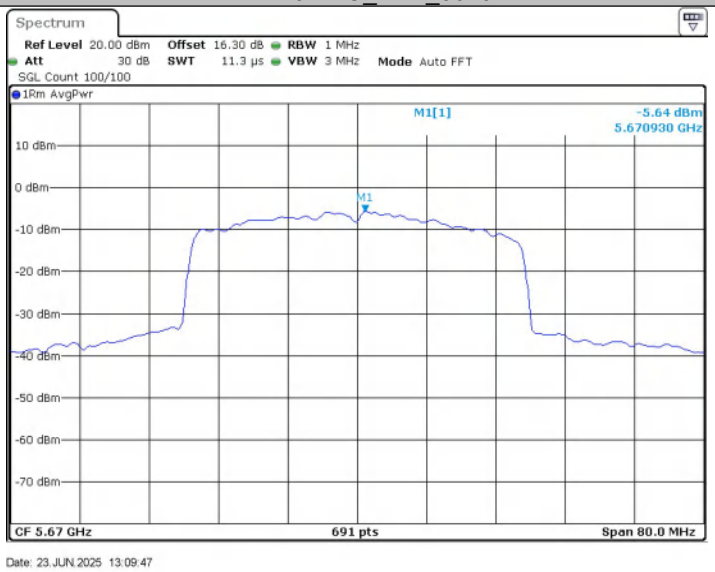
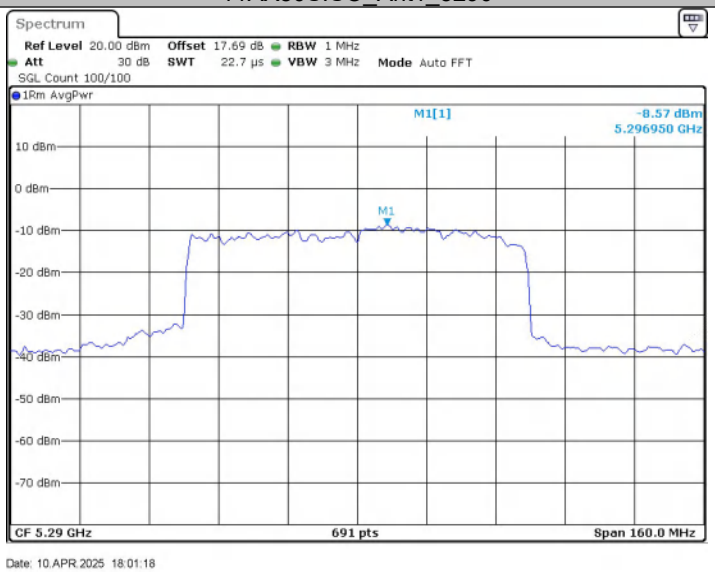
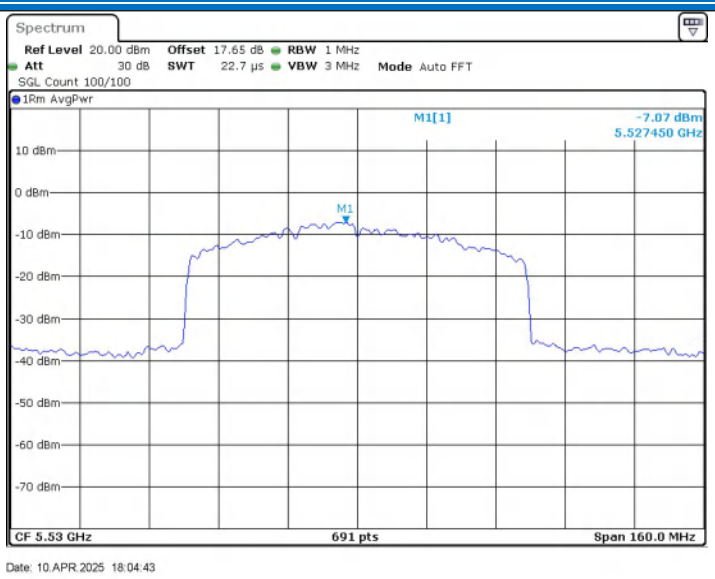


11AX80SISO_Ant1_5290



11AX80SISO_Ant1_5530


Spectrum
Ref Level 20.00 dBm Offset 17.65 dB RBW 1 MHz
Att 30 dB SWT 22.7 µs VBW 3 MHz Mode Auto FFT
SGL Count 100/100
1Rm AvgPwr
M1[1] -7.07 dBm
5.527450 GHz
M1
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.53 GHz
691 pts
Span 160.0 MHz
Date: 10.APR.2025 18:04:43

Appendix D): Band Edge Measurements

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)
Test Method: KDB 789033 D02 II G

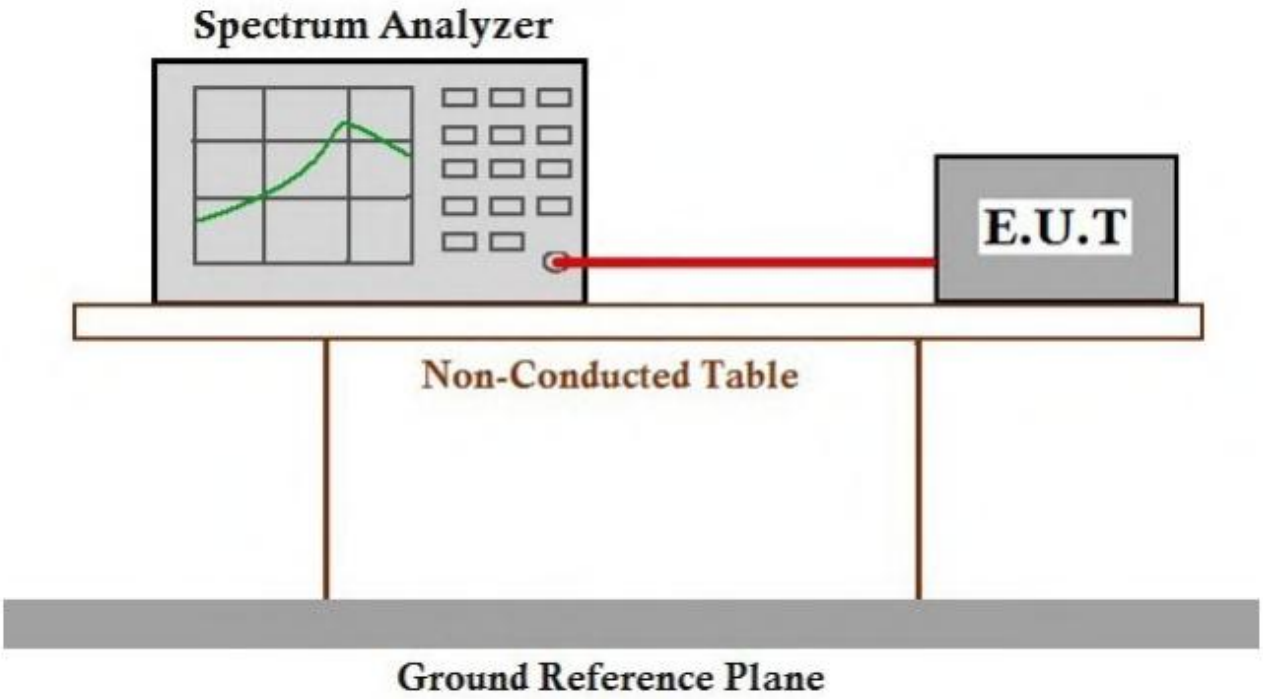
Test Procedure:

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
(b) AVERAGE: RBW=1MHz ; VBW=1/on time(1KHz) / Sweep=AUTO

Limit:

For transmitters operating in the 5.15-5.25 GHz band:	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.25-5.35 GHz band:	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.47-5.725 GHz band:	All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.725-5.85 GHz band:	(i) All emissions shall be limited to a level of −27 dBm/MHz (68.2dBuV/m) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz (105.2dBuV/m) at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz (110.8dBuV/m) at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz (122.2dBuV/m) at the band edge.

Test Setup Diagram



Test Result:

Ant1:

7.1.1 Test Result B2/3

TestMode	ChName	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
11A	High	5320	-39.7	≤-27	PASS
	Low	5500	-40.17	≤-27	PASS
11N20SISO	High	5320	-39.51	≤-27	PASS
	Low	5500	-39.23	≤-27	PASS
11N40SISO	High	5310	-38.79	≤-27	PASS
	Low	5510	-38.83	≤-27	PASS
11AC20SISO	High	5320	-39.13	≤-27	PASS
	Low	5500	-39.23	≤-27	PASS
11AC40SISO	High	5310	-39.45	≤-27	PASS
	Low	5510	-39.92	≤-27	PASS
11AC80SISO	High	5290	-39.64	≤-27	PASS
	Low	5530	-39.88	≤-27	PASS
11AX20SISO	High	5320	-39.26	≤-27	PASS
	Low	5500	-39.78	≤-27	PASS
11AX40SISO	High	5310	-40.05	≤-27	PASS
	Low	5510	-39.26	≤-27	PASS
11AX80SISO	High	5290	-39.77	≤-27	PASS
	Low	5530	-39.39	≤-27	PASS

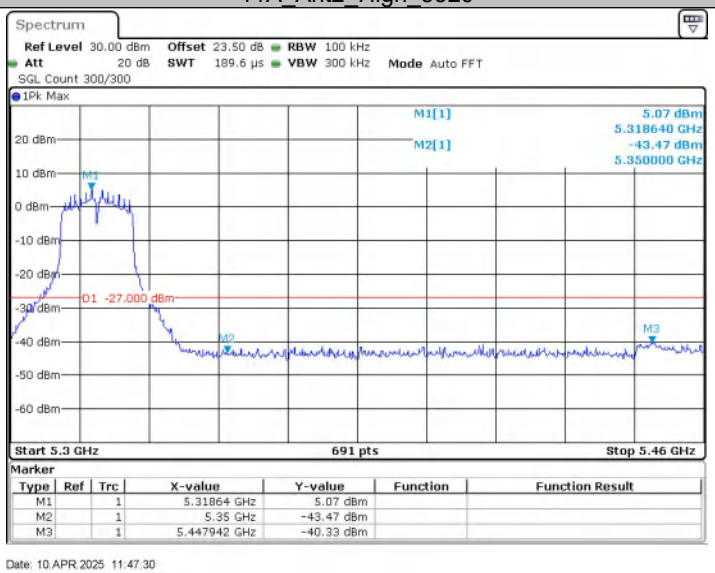
Ant2:

7.1.2 Test Result B2/3

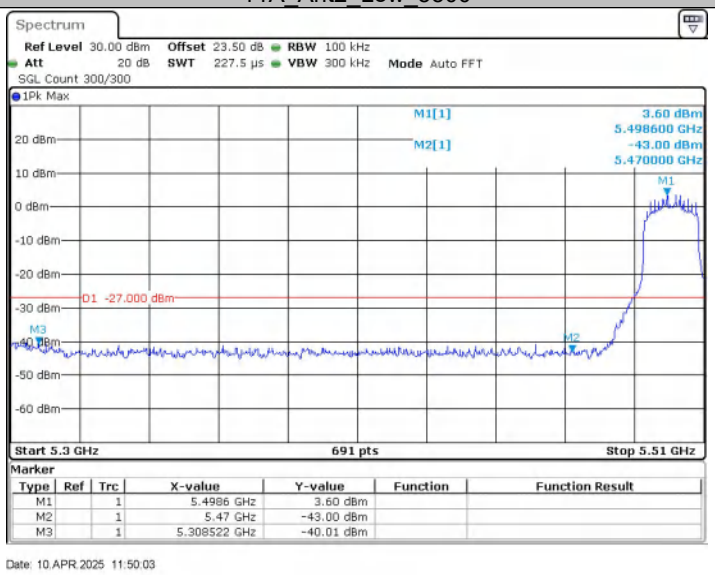
TestMode	ChName	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
11A	High	5320	-40.33	≤-27	PASS
	Low	5500	-40.01	≤-27	PASS
11N20SISO	High	5320	-40.11	≤-27	PASS
	Low	5500	-40.02	≤-27	PASS
11N40SISO	High	5310	-39.42	≤-27	PASS
	Low	5510	-38.93	≤-27	PASS
11AC20SISO	High	5320	-39.99	≤-27	PASS
	Low	5500	-39.39	≤-27	PASS
11AC40SISO	High	5310	-39.66	≤-27	PASS
	Low	5510	-40.03	≤-27	PASS
11AC80SISO	High	5290	-39.57	≤-27	PASS
	Low	5530	-39.16	≤-27	PASS
11AX20SISO	High	5320	-38.74	≤-27	PASS
	Low	5500	-39.29	≤-27	PASS
11AX40SISO	High	5310	-39.47	≤-27	PASS
	Low	5510	-39.69	≤-27	PASS
11AX80SISO	High	5290	-38.85	≤-27	PASS
	Low	5530	-39.86	≤-27	PASS

7.1.3 Test Graphs B2/3

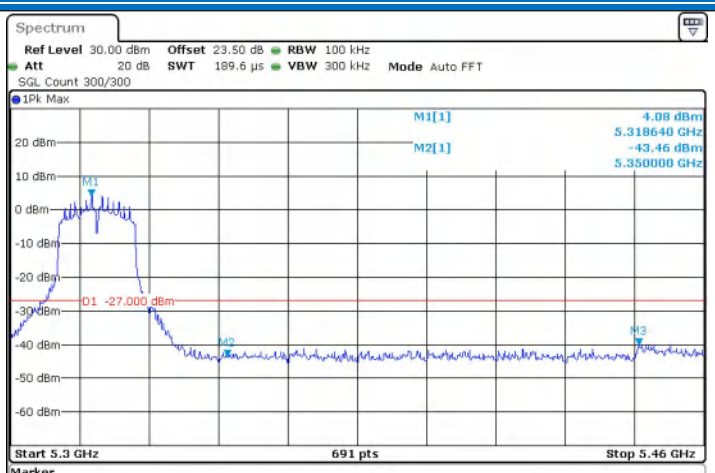
11A_Ant2_High_5320



11A_Ant2_Low_5500



11N20SISO_Ant2_High_5320

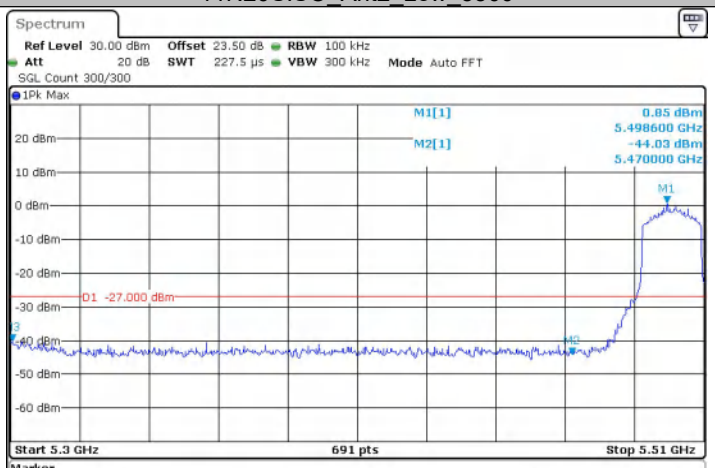


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.31864 GHz	4.08 dBm		
M2		1	5.35 GHz	-43.46 dBm		
M3		1	5.444928 GHz	-40.11 dBm		

Date: 10.APR.2025 12:08:46

11N20SISO_Ant2_Low_5500

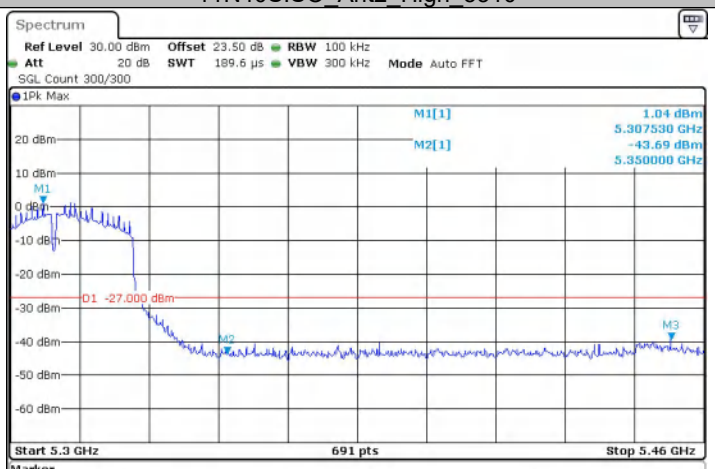


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.4986 GHz	0.85 dBm		
M2		1	5.47 GHz	-44.03 dBm		
M3		1	5.300609 GHz	-40.02 dBm		

Date: 10.APR.2025 12:11:02

11N40SISO_Ant2_High_5310

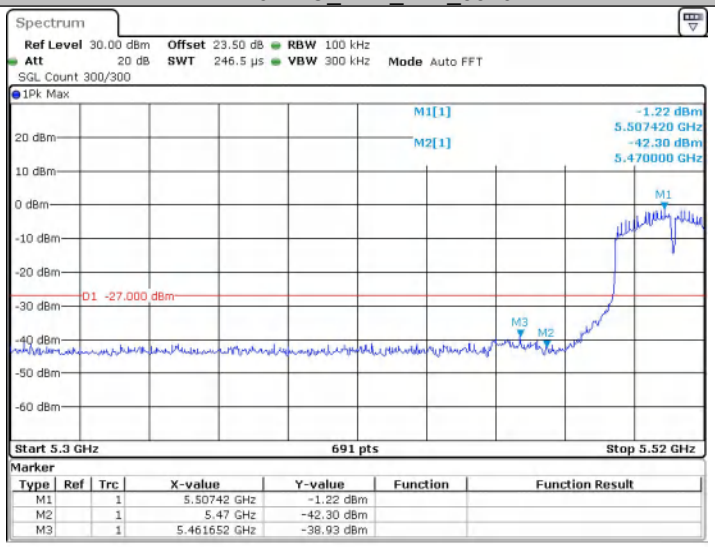


Marker

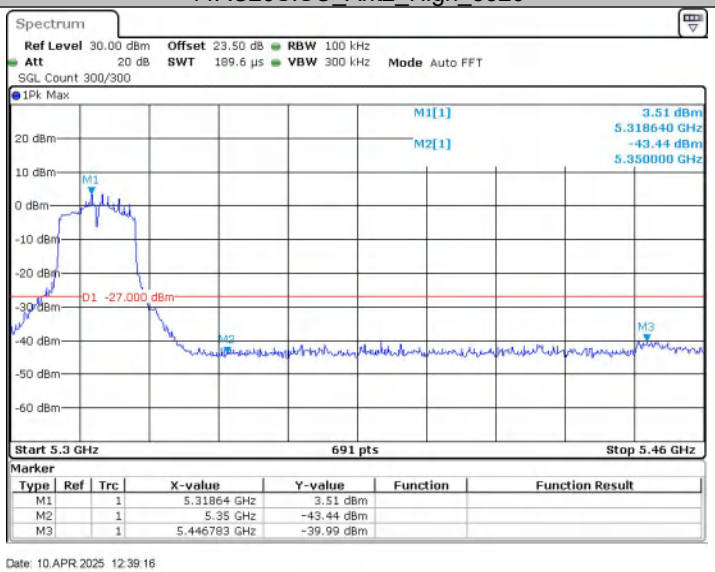
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.30753 GHz	1.04 dBm		
M2		1	5.35 GHz	-43.69 dBm		
M3		1	5.452348 GHz	-39.42 dBm		

Date: 10.APR.2025 12:22:29

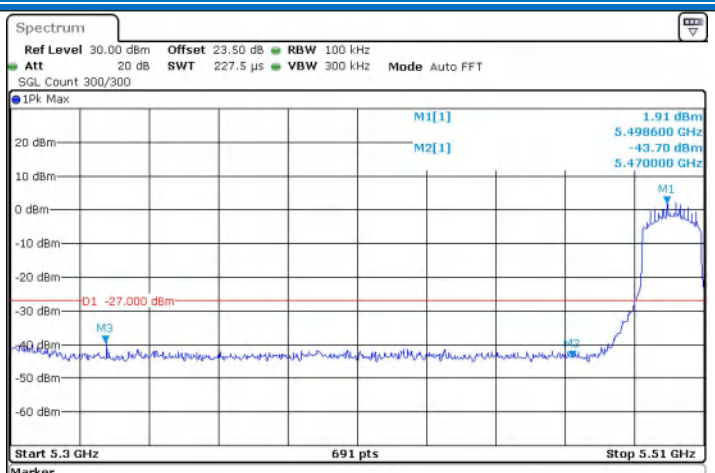
11N40SISO_Ant2_Low_5510



11AC20SISO_Ant2_High_5320



11AC20SISO_Ant2_Low_5500

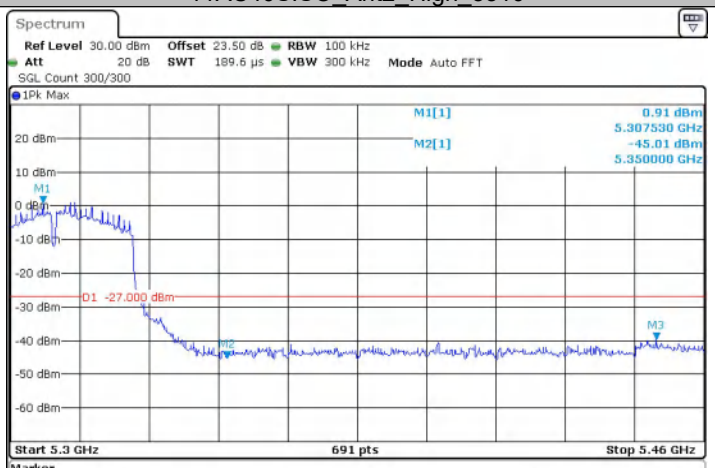


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.4986 GHz	1.91 dBm		
M2		1	5.47 GHz	-43.70 dBm		
M3		1	5.328913 GHz	-39.39 dBm		

Date: 10.APR.2025 12:41:47

11AC40SISO_Ant2_High_5310

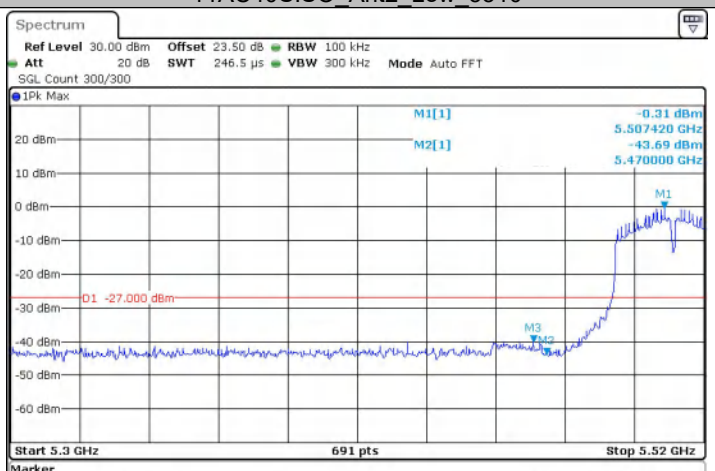


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.30753 GHz	0.91 dBm		
M2		1	5.35 GHz	-45.01 dBm		
M3		1	5.44887 GHz	-39.66 dBm		

Date: 10.APR.2025 12:56:50

11AC40SISO_Ant2_Low_5510

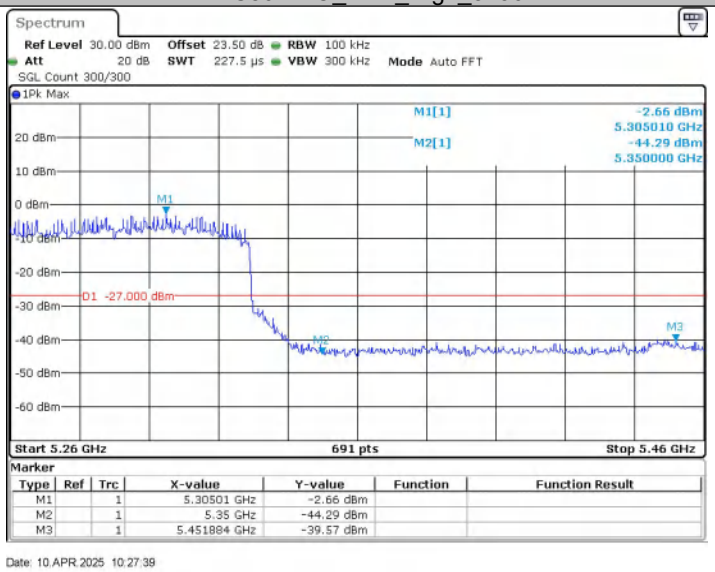


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.50742 GHz	-0.31 dBm		
M2		1	5.47 GHz	-43.69 dBm		
M3		1	5.465797 GHz	-40.03 dBm		

Date: 10.APR.2025 12:59:21

11AC80SISO_Ant2_High_5290

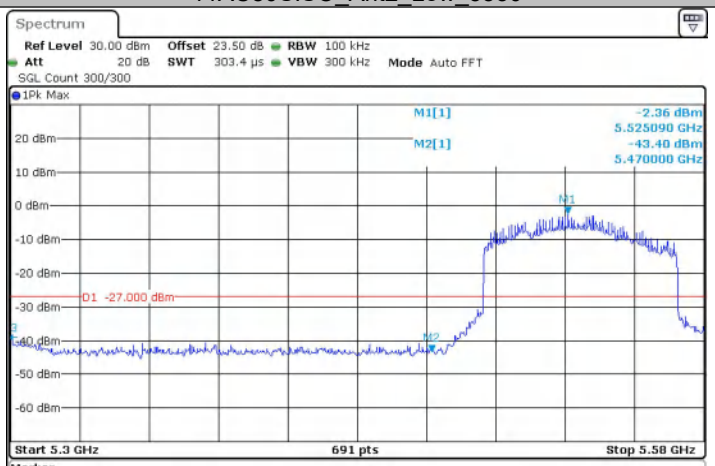


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.30501 GHz	-2.66 dBm		
M2		1	5.35 GHz	-44.29 dBm		
M3		1	5.451884 GHz	-39.57 dBm		

Date: 10.APR.2025 10:27:39

11AC80SISO_Ant2_Low_5530



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.52509 GHz	-2.36 dBm		
M2		1	5.47 GHz	-43.40 dBm		
M3		1	5.3 GHz	-39.16 dBm		

Date: 10.APR.2025 10:30:36

11AX20SISO_Ant2_High_5320