FCC RF Test Report

FCC ID	:	UZ7WS3012
EQUIPMENT	:	Wearable Computer
BRAND NAME	:	Zebra
MODEL NAME	:	WS3012
APPLICANT	:	Zebra Technologies Corporation 3 Overlook Point, Lincolnshire, IL 60069
MANUFACTURER	:	Zebra Technologies Corporation 3 Overlook Point, Lincolnshire, IL 60069
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure
TEST DATE(S)	:	Jun. 20, 2025 ~ Aug. 22, 2025

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Sporton International Inc. (Shenzhen)

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR540105E	Rev. 01	Initial issue of report	Aug. 28, 2025

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit for U-NII-1/2A/2C	Limit for U-NII-3	Result	Remark
3.1	2.1049 & 15.403(i)	26dB & 99% Bandwidth	-	6dB Bandwidth > 500kHz	Report only	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	≤ 30 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm/MHz	≤ 30 dBm/500kHz	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	15.407(b)(4)(i) &15.209(a)	Pass	Under limit 1.20 dB at 5351.32 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	15.207(a)	Pass	Under limit 15.26 dB at 0.330 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	15.203 & 15.407(a)	15.203 & 15.407(a)	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Wearable Computer
Brand Name	Zebra
Model Name	WS3012
FCC ID	UZ7WS3012
SN Code	Conducted: 251445247E0039 Conduction: 251435247E0054 Radiation: 251435247E0060
HW Version	EV2
SW Version	14-05-29.00-UN-U00-PRD-APL-04
MFD	202505
EUT Stage	Identical Prototype

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

Supported Unit used in test configuration and system				
AC Adapter 1 (USB A) USB Wall Charger	**Brand Name**	Zebra	**Part Number**	PWR-WUA5V12W0US
AC Adapter 2 (USB C) USB Wall Charger	**Brand Name**	Zebra	**Part Number**	PWR-WUA5V45W1US
USB Cable 1 (Type A to Type C)	**Brand Name**	Zebra	**Part Number**	CBL-WS5X-USBA-01
USB Cable 2 (Type C to Type C)	**Brand Name**	Zebra	**Part Number**	CBL-EC5X-USBC3A-01
Clip mount	**Brand Name**	Zebra	**Part Number**	SG-WS3X-CLPJK-01
Earphone 1 (Wire headset USB-C)	**Brand Name**	Zebra	**Part Number**	HDST-USBC-PTT1-01
Earphone 2 (Rugged Bluetooth Headset)	**Brand Name**	Zebra	**Part Number**	HS3100-OTH
Earphone 3 (3.5mm PTT Headset)	**Brand Name**	Zebra	**Part Number**	HDST-35MM-PTT1-02

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5720 MHz 5745 MHz ~ 5825 MHz
Maximum Output Power to Antenna	**MIMO <Ant. 0 + 1>** **<5180 MHz ~ 5240 MHz>** 802.11a : 22.78 dBm / 0.1897 W 802.11n HT20 : 22.67 dBm / 0.1849 W 802.11n HT40 : 22.27 dBm / 0.1687 W 802.11ac VHT20 : 22.62 dBm / 0.1828 W 802.11ac VHT40 : 22.25 dBm / 0.1679 W 802.11ac VHT80 : 17.81 dBm / 0.0604 W 802.11ax HE 20 : 22.81 dBm / 0.1910 W 802.11ax HE 40 : 22.32 dBm / 0.1706 W 802.11ax HE80 : 18.17 dBm / 0.0656 W **<5260 MHz ~ 5320 MHz>** 802.11a : 22.78 dBm / 0.1897 W 802.11n HT20 : 22.58 dBm / 0.1811 W 802.11n HT40 : 22.95 dBm / 0.1972 W 802.11ac VHT20 : 22.55 dBm / 0.1799 W 802.11ac VHT40 : 22.92 dBm / 0.1959 W 802.11ac VHT80 : 17.75 dBm / 0.0596 W 802.11ax HE 20 : 22.81 dBm / 0.1910 W 802.11ax HE 40 : 22.97 dBm / 0.1982 W 802.11ax HE80 : 18.05 dBm / 0.0638 W **<5500 MHz ~ 5720 MHz >** 802.11a : 22.69 dBm / 0.1858 W 802.11n HT20 : 22.04 dBm / 0.1600 W 802.11n HT40 : 21.83 dBm / 0.1524 W 802.11ac VHT20 : 21.98 dBm / 0.1578 W 802.11ac VHT40 : 21.76 dBm / 0.1500 W 802.11ac VHT80 : 21.53 dBm / 0.1422 W 802.11ax HE 20 : 22.22 dBm / 0.1667 W 802.11ax HE 40 : 22.23 dBm / 0.1671 W 802.11ax HE80 : 21.82 dBm / 0.1521 W **<5745 MHz ~ 5825 MHz>** 802.11a : 23.00 dBm / 0.1995 W 802.11n HT20 : 22.97 dBm / 0.1982 W 802.11n HT40 : 23.00 dBm / 0.1995 W 802.11ac VHT20 : 22.92 dBm / 0.1959 W 802.11ac VHT40 : 22.98 dBm / 0.1986 W 802.11ac VHT80 : 22.43 dBm / 0.1750 W 802.11ax HE 20 : 23.10 dBm / 0.2042 W 802.11ax HE 40 : 23.35 dBm / 0.2163 W 802.11ax HE80 : 22.63 dBm / 0.1832 W
99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 19.006 MHz 802.11n HT20 : 19.182 MHz 802.11n HT40 : 37.532 MHz 802.11ac VHT80 : 76.456 MHz 802.11ax HE 20 : 19.506 MHz

	802.11ax HE 40 : 39.012 MHz 802.11ax HE80 : 78.728 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 19.006 MHz 802.11n HT20 : 18.862 MHz 802.11n HT40 : 37.428 MHz 802.11ac VHT80 : 76.584 MHz 802.11ax HE 20 : 19.486 MHz 802.11ax HE 40 : 38.828 MHz 802.11ax HE80 : 78.264 MHz **<5500 MHz ~ 5720 MHz >** 802.11a : 19.022 MHz 802.11n HT20 : 19.490 MHz 802.11n HT40 : 37.844 MHz 802.11ac VHT80 : 76.872 MHz 802.11ax HE 20 : 19.642 MHz 802.11ax HE 40 : 39.044 MHz 802.11ax HE80 : 78.600 MHz **<5745 MHz ~ 5825 MHz>** 802.11a : 19.886 MHz 802.11n HT20 : 19.726 MHz 802.11n HT40 : 37.620 MHz 802.11ac VHT80 : 76.728 MHz 802.11ax HE 20 : 19.906 MHz 802.11ax HE 40 : 39.740 MHz 802.11ax HE80 : 78.424 MHz
Antenna Type / Gain	**<5180 MHz ~ 5240 MHz>** <Ant. 0> : IFA Antenna with gain -0.51 dBi <Ant. 1> : IFA Antenna with gain -0.26 dBi **<5260 MHz ~ 5320 MHz>** <Ant. 0> : IFA Antenna with gain -0.36 dBi <Ant. 1> : IFA Antenna with gain -1.51 dBi **<5500 MHz ~ 5720 MHz>** <Ant. 0> : IFA Antenna with gain -0.48 dBi <Ant. 1> : IFA Antenna with gain 0.40 dBi **<5745 MHz ~ 5825 MHz>** <Ant. 0> : IFA Antenna with gain -0.14 dBi <Ant. 1> : IFA Antenna with gain 0.08 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)

Note:

1. For WLAN SISO/MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power.
2. For 802.11n/11ac mode, the whole testing has assessed only 802.11n HT20/HT40 by referring to the higher output power for conducted test items.
3. For 802.11n/11ac/11ax mode, the whole testing has assessed only 802.11ax HE20/HE40/HE80 by referring to the higher output power for RSE testing.

4. 802.11ax support OFDMA full RU tone and partial RU tone, both full RU and partial RU-left (for low CH) and partial RU-right (for high CH) test output power, the full RU power/PSD > partial RU, therefore the full RU perform full test, and partial RU verify bandedge/spurious.

1.3 Modification of EUT

No modifications are made to the EUT during all test items.

1.4 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-KS 03CH05-KS	CN1257	314309

Sporton International Inc. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ	CN1256	421272

Test data subcontracted: Conducted test case in section 3.1~3.3&3.6 of this report.

1.5 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH05-KS	AUDIX	E3	210616
2.	CO01-KS	AUDIX	E3	6.2009-8-24

1.6 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2020

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5180-5240 MHz U-NII-1	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210	50##	5250

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5260-5320 MHz U-NII-2A	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290	-	-

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5500- 5720 MHz U-NII-2C	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5745-5825 MHz U-NII-3	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640
	-	-	114##	5570

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710	-	-

Note:

1. The above Frequency and Channel in "*" are 40MHz bandwidth.
2. The above Frequency and Channel in "#" are 80MHz bandwidth.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

MIMO Mode

Modulation	Data Rate
802.11a	**6 Mbps**
802.11n HT20	**MCS0**
802.11n HT40	**MCS0**
802.11ac VHT20 (Covered by HT20)	**MCS0**
802.11ac VHT40 (Covered by HT40)	**MCS0**
802.11ac VHT80	**MCS0**
802.11ax HE20	**MCS0**
802.11ax HE40	**MCS0**
802.11ax HE80	**MCS0**

Test Cases	
AC Conducted Emission	Mode 1 : WLAN 5G Link + BT Link + USB TYPE-A to TYPE-C cable + AC Adapter 1 + USB Cable 1
Remark: For Radiated Test Cases, the tests were performance with Adapter 1 and USB Cable 1.	

Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		20M BW	20M BW	20M BW	20M BW
L	Low	36	52	149	
M	Middle	44	60	157	
H	High	48	64	165	
Straddle		-	-	144	-

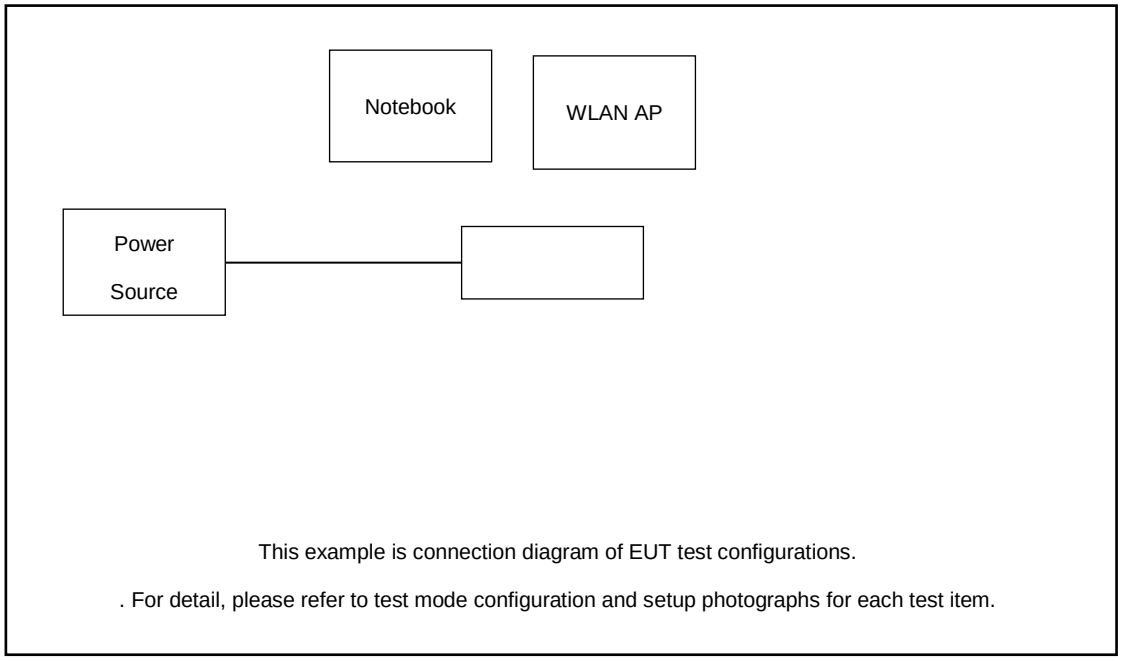
Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		40M BW	40M BW	40M BW	40M BW
L	Low	38	54	151	
M	Middle	-	-	-	
H	High	46	62	159	
Straddle		-	-	142	-

Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		80M BW	80M BW	80M BW	80M BW
L	Low	-	-	-	
M	Middle	42	58	155	
H	High	-	-	-	
Straddle		-	-	138	-

Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		160M BW		160M BW	
M	Middle	50		114	-

2.3 Connection Diagram of Test System

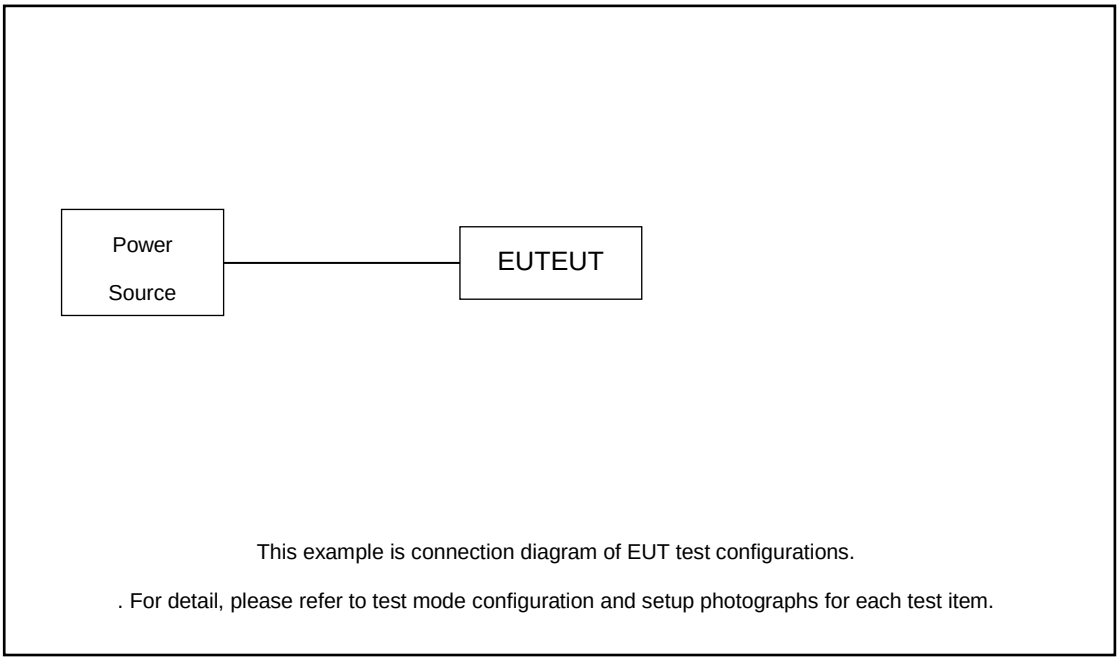
AC Conducted Emission:



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

Radiated Emission:



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Latiude 3400	N/A	N/A	Unshielded,1.8m
2.	WLAN AP	Dlink	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.88 dB and 20dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.88 + 20 = 24.88 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.1.2 Measuring Instruments

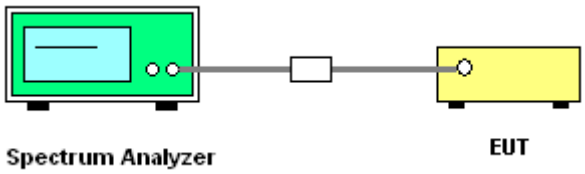
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 & ANSI C63.10-2020 clause 12.5.1 for 6dB BW and 12.5.2 for 26dB BW and 6.9.3 for 99% occupied bandwidth measurements.

☒	Section C) Bandwidth Measurement 1. Emission Bandwidth (EBW) and 99% OBW
	1. Set RBW = shall be in the range of 1% to 5% of the emission bandwidth. **2.** Set the VBW > RBW. **3.** Detector = Peak. **4.** Trace mode = max hold **5.** Measure the maximum width of the emission that is 26 dB down from the peak 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 in the range of 1% to 5%. **6.** For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set to 1%~5% of the OBW and set the Video bandwidth (VBW) ≥ 3 * RBW. **7.** Measure and record the results in the test report.
☒	Section C) Bandwidth Measurement 2. Minimum Emission Bandwidth for the band 5.725 - 5.85 GHz
	1. Set RBW = 100 kHz. **2.** Set the VBW ≥ 3 x RBW. **3.** Detector = Peak. **4.** Trace mode = max hold **5.** Measure the maximum width of the emission that is 6 dB down from the peak of the emission. **6.** Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm +10 $\log_{10}$ B, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

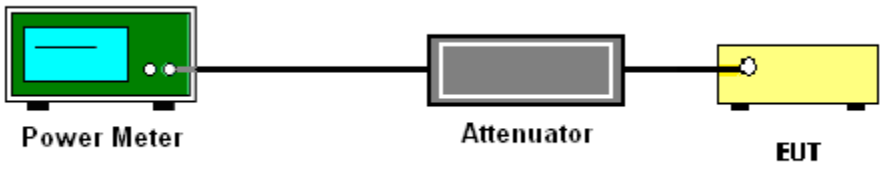
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.
4. For MIMO mode, the measure-and-sum technique should be used for measuring the in-band transmit power of a device.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

U-NII-1																
Mod.	Data Rate	NTX	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail	Power Setting
						Ant 0	Ant 1	Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1		
11a	6Mbps	2	36	Full	5180	0.30	0.30	18.23	18.11	21.18	24.00		-0.26		Pass	18
11a	6Mbps	2	44	Full	5220	0.30	0.30	19.77	19.63	22.71	24.00		-0.26		Pass	19.5
11a	6Mbps	2	48	Full	5240	0.30	0.30	19.85	19.69	22.78	24.00		-0.26		Pass	19.5
HT20	MCS0	2	36	Full	5180	0.32	0.32	18.22	18.08	21.16	24.00		-0.26		Pass	18
HT20	MCS0	2	44	Full	5220	0.32	0.32	19.53	19.50	22.53	24.00		-0.26		Pass	19.5
HT20	MCS0	2	48	Full	5240	0.32	0.32	19.75	19.57	22.67	24.00		-0.26		Pass	19.5
HT40	MCS0	2	38	Full	5190	0.62	0.62	16.01	16.18	19.11	24.00		-0.26		Pass	15
HT40	MCS0	2	46	Full	5230	0.62	0.62	19.03	19.48	22.27	24.00		-0.26		Pass	18.5
VHT20	MCS0	2	36	Full	5180	0.29	0.29	18.16	18.06	21.12	24.00		-0.26		Pass	18
VHT20	MCS0	2	44	Full	5220	0.29	0.29	19.46	19.48	22.48	24.00		-0.26		Pass	19.5
VHT20	MCS0	2	48	Full	5240	0.29	0.29	19.70	19.52	22.62	24.00		-0.26		Pass	19.5
VHT40	MCS0	2	38	Full	5190	0.57	0.57	15.96	16.11	19.05	24.00		-0.26		Pass	15
VHT40	MCS0	2	46	Full	5230	0.57	0.57	19.00	19.46	22.25	24.00		-0.26		Pass	18.5
VHT80	MCS0	2	42	Full	5210	0.34	0.34	14.71	14.88	17.81	24.00		-0.26		Pass	14.75
HE20	MCS0	2	36	Full	5180	0.10	0.10	18.36	18.22	21.30	24.00		-0.26		Pass	18
				26/0		0.10	0.10	9.36	8.81	12.10	24.00		-0.26		Pass	8.5
				52/37		0.10	0.10	12.25	11.72	15.00	24.00		-0.26		Pass	11.5
				106/53		0.10	0.10	15.18	15.00	18.10	24.00		-0.26		Pass	14.5
			44	Full	5220	0.10	0.10	19.82	19.73	22.79	24.00		-0.26		Pass	19.5
				26/0		0.10	0.10	10.95	10.36	13.68	24.00		-0.26		Pass	10
				52/37		0.10	0.10	13.33	12.81	16.09	24.00		-0.26		Pass	12.5
				106/53		0.10	0.10	16.26	16.08	19.18	24.00		-0.26		Pass	15.5
			48	Full	5240	0.10	0.10	19.88	19.71	22.81	24.00		-0.26		Pass	19.5
				26/8		0.10	0.10	10.94	10.39	13.68	24.00		-0.26		Pass	10
				52/40		0.10	0.10	13.83	13.30	16.58	24.00		-0.26		Pass	13
				106/54		0.10	0.10	16.76	16.58	19.68	24.00		-0.26		Pass	16
HE40	MCS0	2	38	Full	5190	0.22	0.22	16.11	16.26	19.20	24.00		-0.26		Pass	15
				242/61		0.22	0.22	11.76	11.90	14.84	24.00		-0.26		Pass	10.5
			46	Full	5230	0.22	0.22	19.09	19.52	22.32	24.00		-0.26		Pass	18.5
				242/62		0.22	0.22	15.25	15.42	18.35	24.00		-0.26		Pass	14
HE80	MCS0	2	42	Full	5210	0.43	0.43	15.00	15.32	18.17	24.00		-0.26		Pass	14.75
				484/65		0.43	0.43	11.82	12.26	15.06	24.00		-0.26		Pass	10.5

U-NII-2A																	
Mod.	Data Rate	NTX	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail	Power Setting
						Ant 0	Ant 1	Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1			
11a	6Mbps	2	52	Full	5260	0.30	0.30	19.72	19.83	22.78	23.98		-0.36		30	Pass	19.5
11a	6Mbps	2	60	Full	5300	0.30	0.30	19.79	19.74	22.77	23.98		-0.36		30	Pass	19.5
11a	6Mbps	2	64	Full	5320	0.30	0.30	18.22	18.19	21.22	23.98		-0.36		30	Pass	18
HT20	MCS0	2	52	Full	5260	0.32	0.32	19.62	19.52	22.58	23.98		-0.36		30	Pass	19.5
HT20	MCS0	2	60	Full	5300	0.32	0.32	19.64	19.48	22.57	23.98		-0.36		30	Pass	19.5
HT20	MCS0	2	64	Full	5320	0.32	0.32	17.80	17.45	20.64	23.98		-0.36		30	Pass	17.5
HT40	MCS0	2	54	Full	5270	0.62	0.62	19.88	19.99	22.95	23.98		-0.36		30	Pass	19.5
HT40	MCS0	2	62	Full	5310	0.62	0.62	16.00	16.53	19.28	23.98		-0.36		30	Pass	15.5
VHT20	MCS0	2	52	Full	5260	0.29	0.29	19.57	19.51	22.55	23.98		-0.36		30	Pass	19.5
VHT20	MCS0	2	60	Full	5300	0.29	0.29	19.63	19.43	22.54	23.98		-0.36		30	Pass	19.5
VHT20	MCS0	2	64	Full	5320	0.29	0.29	17.75	17.39	20.58	23.98		-0.36		30	Pass	17.5
VHT40	MCS0	2	54	Full	5270	0.57	0.57	19.85	19.96	22.92	23.98		-0.36		30	Pass	19.5
VHT40	MCS0	2	62	Full	5310	0.57	0.57	15.96	16.48	19.24	23.98		-0.36		30	Pass	15.5
VHT80	MCS0	2	58	Full	5290	0.34	0.34	14.63	14.84	17.75	23.98		-0.36		30	Pass	15
HE20	MCS0	2	52	Full	5260	0.10	0.10	19.80	19.79	22.81	23.98		-0.36		30	Pass	19.5
				26/0		0.10	0.10	9.90	10.27	13.10	23.98		-0.36		30	Pass	10
				52/37		0.10	0.10	13.01	13.37	16.20	23.98		-0.36		30	Pass	13
				106/53		0.10	0.10	16.04	16.68	19.38	23.98		-0.36		30	Pass	16
			60	Full	5300	0.10	0.10	19.90	19.61	22.77	23.98		-0.36		30	Pass	19.5
				26/0		0.10	0.10	9.39	9.75	12.58	23.98		-0.36		30	Pass	9.5
				52/37		0.10	0.10	12.48	12.84	15.67	23.98		-0.36		30	Pass	12.5
				106/53		0.10	0.10	15.56	16.17	18.89	23.98		-0.36		30	Pass	15.5
			64	Full	5320	0.10	0.10	17.88	17.53	20.72	23.98		-0.36		30	Pass	17.5
				26/8		0.10	0.10	7.81	8.18	11.01	23.98		-0.36		30	Pass	8
				52/40		0.10	0.10	10.92	11.27	14.11	23.98		-0.36		30	Pass	11
				106/54		0.10	0.10	13.99	14.59	17.31	23.98		-0.36		30	Pass	14
HE40	MCS0	2	54	Full	5270	0.22	0.22	19.90	20.02	22.97	23.98		-0.36		30	Pass	19.5
				242/61		0.22	0.22	15.82	16.53	19.20	23.98		-0.36		30	Pass	15
			62	Full	5310	0.22	0.22	16.05	16.64	19.37	23.98		-0.36		30	Pass	15.5
				242/62		0.22	0.22	11.71	12.44	15.10	23.98		-0.36		30	Pass	11
HE80	MCS0	2	58	Full	5290	0.43	0.43	14.92	15.15	18.05	23.98		-0.36		30	Pass	15
				484/66		0.43	0.43	11.22	12.02	14.65	23.98		-0.36		30	Pass	10.5

U-NII-2C																
Mod.	Data Rate	NTX	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail	Power Setting
						Ant 0	Ant 1	Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1			
11a	6Mbps	2	100	Full	5500	0.30	0.30	19.60	19.76	22.69	23.98		0.40		30	Pass	19
11a	6Mbps	2	116	Full	5580	0.30	0.30	19.11	19.05	22.09	23.98		0.40		30	Pass	19
11a	6Mbps	2	140	Full	5700	0.30	0.30	15.08	15.61	18.36	23.98		0.40		30	Pass	15.5
11a	6Mbps	2	144	Full	5720	0.30	0.30	19.25	19.20	22.24	23.98		0.40		30	Pass	19
HT20	MCS0	2	100	Full	5500	0.32	0.32	19.10	18.92	22.02	23.98		0.40		30	Pass	18.5
HT20	MCS0	2	116	Full	5580	0.32	0.32	19.02	19.03	22.04	23.98		0.40		30	Pass	19
HT20	MCS0	2	140	Full	5700	0.32	0.32	14.76	14.97	17.88	23.98		0.40		30	Pass	15
HT20	MCS0	2	144	Full	5720	0.32	0.32	19.00	18.71	21.87	23.98		0.40		30	Pass	19
HT40	MCS0	2	102	Full	5510	0.62	0.62	15.83	15.41	18.64	23.98		0.40		30	Pass	15.5
HT40	MCS0	2	110	Full	5550	0.62	0.62	19.26	18.33	21.83	23.98		0.40		30	Pass	19
HT40	MCS0	2	134	Full	5670	0.62	0.62	15.91	14.64	18.33	23.98		0.40		30	Pass	16
HT40	MCS0	2	142	Full	5710	0.62	0.62	18.90	17.56	21.29	23.98		0.40		30	Pass	19
VHT20	MCS0	2	100	Full	5500	0.29	0.29	19.06	18.88	21.98	23.98		0.40		30	Pass	18.5
VHT20	MCS0	2	116	Full	5580	0.29	0.29	18.96	18.98	21.98	23.98		0.40		30	Pass	19
VHT20	MCS0	2	140	Full	5700	0.29	0.29	14.69	14.92	17.82	23.98		0.40		30	Pass	15
VHT20	MCS0	2	144	Full	5720	0.29	0.29	18.87	18.66	21.78	23.98		0.40		30	Pass	19
VHT40	MCS0	2	102	Full	5510	0.57	0.57	15.77	15.24	18.52	23.98		0.40		30	Pass	15.5
VHT40	MCS0	2	110	Full	5550	0.57	0.57	19.16	18.30	21.76	23.98		0.40		30	Pass	19
VHT40	MCS0	2	134	Full	5670	0.57	0.57	15.80	14.56	18.23	23.98		0.40		30	Pass	16
VHT40	MCS0	2	142	Full	5710	0.57	0.57	18.85	17.51	21.24	23.98		0.40		30	Pass	19
VHT80	MCS0	2	106	Full	5530	0.34	0.34	16.56	16.24	19.41	23.98		0.40		30	Pass	16.5
VHT80	MCS0	2	122	Full	5610	0.34	0.34	18.87	18.13	21.53	23.98		0.40		30	Pass	19
VHT80	MCS0	2	138	Full	5690	0.34	0.34	18.82	18.13	21.50	23.98		0.40		30	Pass	19
HE20	MCS0	2	100	Full	5500	0.10	0.10	19.16	19.11	22.15	23.98		0.40		30	Pass	18.5
				26/0		0.10	0.10	8.80	9.25	12.04	23.98		0.40		30	Pass	8.5
				52/37		0.10	0.10	11.72	12.37	15.07	23.98		0.40		30	Pass	11.5
				106/53		0.10	0.10	15.57	16.06	18.83	23.98		0.40		30	Pass	15
			116	Full	5580	0.10	0.10	19.15	19.27	22.22	23.98		0.40		30	Pass	19
				26/0		0.10	0.10	9.35	9.78	12.58	23.98		0.40		30	Pass	9
				52/37		0.10	0.10	12.24	12.90	15.59	23.98		0.40		30	Pass	12
				106/53		0.10	0.10	15.64	16.47	19.09	23.98		0.40		30	Pass	15
			140	Full	5700	0.10	0.10	14.86	15.16	18.02	23.98		0.40		30	Pass	15
				26/8		0.10	0.10	5.92	5.47	8.71	23.98		0.40		30	Pass	5.5
				52/40		0.10	0.10	8.99	8.73	11.87	23.98		0.40		30	Pass	8.5
				106/54		0.10	0.10	12.03	12.09	15.07	23.98		0.40		30	Pass	11.5
			144	Full	5720	0.10	0.10	19.05	19.00	22.04	23.98		0.40		30	Pass	19
				26/8		0.10	0.10	9.82	9.34	12.60	23.98		0.40		30	Pass	9.5
				52/40		0.10	0.10	12.84	12.61	15.74	23.98		0.40		30	Pass	12.5
				106/54		0.10	0.10	15.95	15.97	18.97	23.98		0.40		30	Pass	15.5

HE40	MCS0	2	102	Full	5510	0.22	0.22	16.10	15.52	18.83	23.98	0.40	30	Pass	15.5
				242/61		0.22	0.22	11.44	12.27	14.89	23.98	0.40	30	Pass	10.5
			110	Full	5550	0.22	0.22	19.56	18.84	22.23	23.98	0.40	30	Pass	19
				242/61		0.22	0.22	15.53	16.33	18.96	23.98	0.40	30	Pass	14.5
			134	Full	5670	0.22	0.22	16.11	14.99	18.60	23.98	0.40	30	Pass	16
				242/62		0.22	0.22	12.26	12.30	15.29	23.98	0.40	30	Pass	11.5
			142	Full	5710	0.22	0.22	19.15	18.00	21.62	23.98	0.40	30	Pass	19
				242/62		0.22	0.22	15.85	15.84	18.86	23.98	0.40	30	Pass	15
HE80	MCS0	2	106	Full	5530	0.43	0.43	16.90	16.55	19.74	23.98	0.40	30	Pass	16.5
				484/65		0.43	0.43	13.72	14.59	17.19	23.98	0.40	30	Pass	12.5
			122	Full	5610	0.43	0.43	19.16	18.42	21.82	23.98	0.40	30	Pass	19
				484/66		0.43	0.43	15.83	16.34	19.10	23.98	0.40	30	Pass	14.5
			138	Full	5690	0.43	0.43	19.16	18.43	21.82	23.98	0.40	30	Pass	19
				484/66		0.43	0.43	15.82	16.41	19.14	23.98	0.40	30	Pass	14.5

U-NII-3																
Mod.	Data Rate	NTX	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass /Fail	Power Setting
						Ant 0	Ant 1	Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1		
11a	6Mbps	2	149	Full	5745	0.30	0.30	19.60	20.05	22.84	30.00		0.08		Pass	20
11a	6Mbps	2	157	Full	5785	0.30	0.30	19.91	19.94	22.94	30.00		0.08		Pass	20
11a	6Mbps	2	165	Full	5825	0.30	0.30	19.94	20.03	23.00	30.00		0.08		Pass	20
HT20	MCS0	2	149	Full	5745	0.32	0.32	19.94	19.94	22.95	30.00		0.08		Pass	20
HT20	MCS0	2	157	Full	5785	0.32	0.32	20.01	19.88	22.96	30.00		0.08		Pass	20
HT20	MCS0	2	165	Full	5825	0.32	0.32	20.00	19.91	22.97	30.00		0.08		Pass	20
HT40	MCS0	2	151	Full	5755	0.62	0.62	19.95	19.99	22.98	30.00		0.08		Pass	20
HT40	MCS0	2	159	Full	5795	0.62	0.62	20.07	19.92	23.00	30.00		0.08		Pass	20
VHT20	MCS0	2	149	Full	5745	0.29	0.29	19.70	19.91	22.82	30.00		0.08		Pass	20
VHT20	MCS0	2	157	Full	5785	0.29	0.29	19.95	19.83	22.90	30.00		0.08		Pass	20
VHT20	MCS0	2	165	Full	5825	0.29	0.29	19.97	19.85	22.92	30.00		0.08		Pass	20
VHT40	MCS0	2	151	Full	5755	0.57	0.57	19.91	19.94	22.93	30.00		0.08		Pass	20
VHT40	MCS0	2	159	Full	5795	0.57	0.57	20.04	19.90	22.98	30.00		0.08		Pass	20
VHT80	MCS0	2	155	Full	5775	0.34	0.34	19.44	19.40	22.43	30.00		0.08		Pass	19.5
HE20	MCS0	2	149	Full	5745	0.10	0.10	19.85	19.95	22.91	30.00		0.08		Pass	20
HE20	MCS0	2	149	26/0	5745	0.10	0.10	10.33	9.94	13.15	30.00		0.08		Pass	11.5
HE20	MCS0	2	149	52/37	5745	0.10	0.10	12.28	13.14	15.74	30.00		0.08		Pass	14.5
HE20	MCS0	2	149	106/53	5745	0.10	0.10	16.72	16.85	19.80	30.00		0.08		Pass	18
HE20	MCS0	2	157	Full	5785	0.10	0.10	20.10	19.93	23.03	30.00		0.08		Pass	20
HE20	MCS0	2	157	26/0	5745	0.10	0.10	9.85	9.46	12.67	30.00		0.08		Pass	11
HE20	MCS0	2	157	52/37	5745	0.10	0.10	12.71	12.67	15.70	30.00		0.08		Pass	14
HE20	MCS0	2	157	106/53	5745	0.10	0.10	16.25	13.36	18.05	30.00		0.08		Pass	17.5
HE20	MCS0	2	165	Full	5825	0.10	0.10	20.07	20.11	23.10	30.00		0.08		Pass	20
HE20	MCS0	2	165	26/8	5825	0.10	0.10	10.08	9.33	12.73	30.00		0.08		Pass	11.5
HE20	MCS0	2	165	52/40	5825	0.10	0.10	13.14	12.31	15.76	30.00		0.08		Pass	14.5
HE20	MCS0	2	165	106/54	5825	0.10	0.10	16.25	15.70	18.99	30.00		0.08		Pass	17.5
HE40	MCS0	2	151	Full	5755	0.22	0.22	20.35	20.33	23.35	30.00		0.08		Pass	20
HE40	MCS0	2	151	242/61	5755	0.22	0.22	16.58	16.38	19.49	30.00		0.08		Pass	15.5
HE40	MCS0	2	159	Full	5795	0.22	0.22	20.38	20.26	23.33	30.00		0.08		Pass	20
HE40	MCS0	2	159	242/62	5795	0.22	0.22	16.60	16.30	19.46	30.00		0.08		Pass	15.5
HE80	MCS0	2	155	Full	5775	0.43	0.43	19.74	19.50	22.63	30.00		0.08		Pass	19.5
HE80	MCS0	2	155	484/65	5775	0.43	0.43	16.30	16.26	19.29	30.00		0.08		Pass	15
HE80	MCS0	2	155	484/66	5775	0.43	0.43	15.96	15.66	18.82	30.00		0.08		Pass	14.5

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

 # Method SA-2 #

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

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

For devices operating in the band UNII-3

 # Method SA-2 #

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

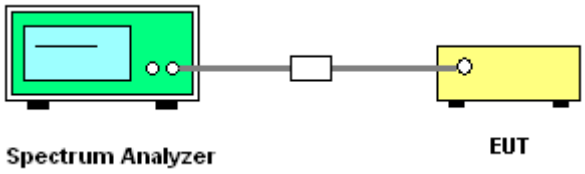
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 500KHz (or 300 kHz if the SA can't set RBW=500KHz).
- Set VBW ≥ 1 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- If the SA can't set RBW=500KHz, then add 10 log(500kHz/RBW) to the test result.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

   Method (a): Measure and sum the spectra across the outputs.

   The total final Power Spectral Density is the bin-by-bin summation to obtain the combined spectrum. For the device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 0 is summed with that in the first spectral bin of output 1 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5725 MHz band: all emissions outside of the 5470-5725 MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.2

Note: The following formula is used to convert the EIRP to field strength.

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

(3) ANSI C63.10-2013 clause 12.7.3 note 97

As specified by regulatory requirements, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit. However, an out-of-band emission that complies with both the average and peak general regulatory limits is not required to satisfy the peak emission limit.

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

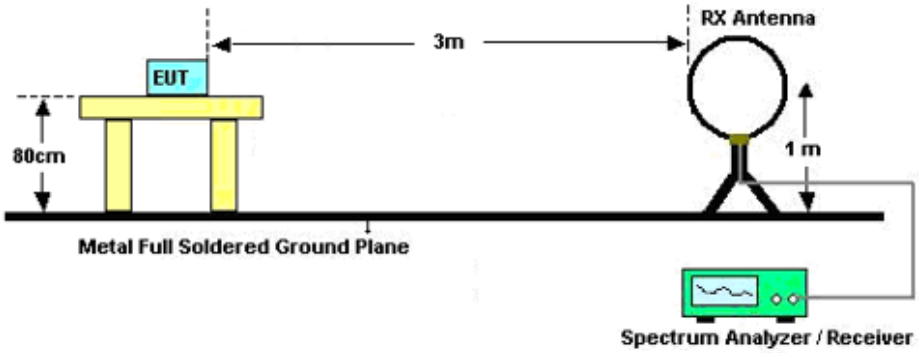
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on.

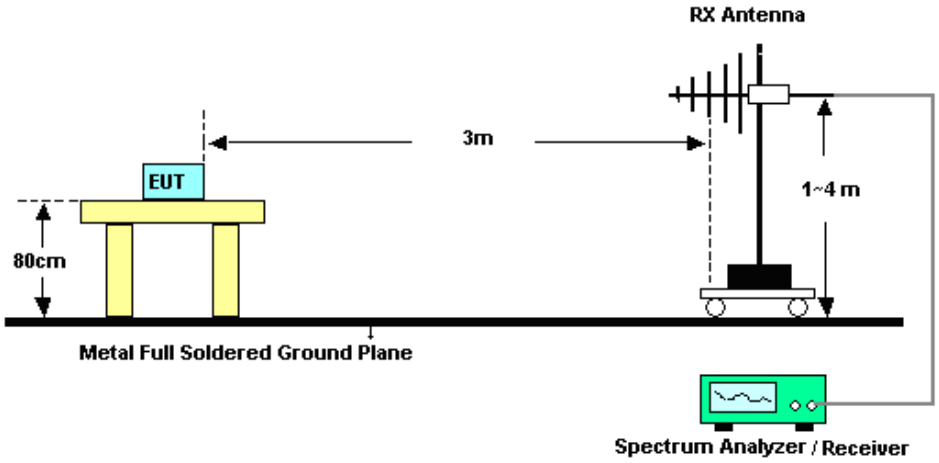
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

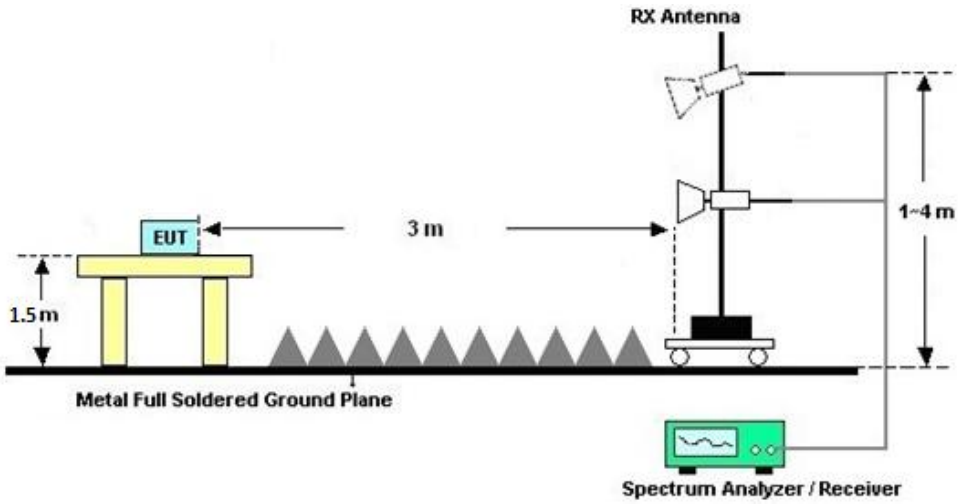
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

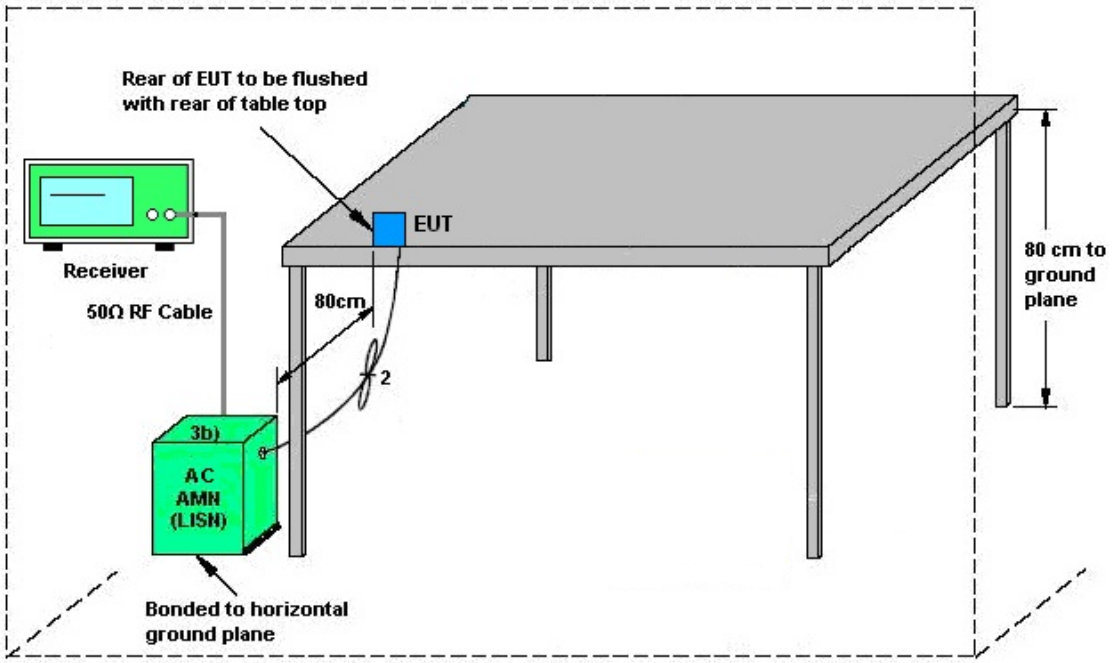
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

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. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = GANT + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log(NANT/NSS=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain GANT is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

	Ant. 0 (dBi)	Ant. 1 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
UNII-1	-0.51	-0.26	-0.26	2.63	0.00	0.00
UNII-2A	-0.36	-1.51	-0.36	2.09	0.00	0.00
UNII-2C	-0.48	0.40	0.40	2.98	0.00	0.00
UNII-3	-0.14	0.08	0.08	2.98	0.00	0.00

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A	MY57290151	3Hz~8.5GHz;Max 30dBm	Jul. 04, 2024	Jun. 23, 2025	Jul. 03, 2025	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY60242126	10Hz-44G,MAX 30dB	Oct. 10, 2024	Jun. 23, 2025	Oct. 09, 2025	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Jun. 23, 2025	Sep. 07, 2025	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49921	30MHz-1GHz	Apr. 18, 2025	Jun. 23, 2025	Apr. 17, 2026	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218642	1GHz~18GHz	Apr. 11, 2025	Jun. 23, 2025	Apr. 10, 2026	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101116	18GHz~40GHz	Oct. 22, 2024	Jun. 23, 2025	Oct. 21, 2025	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	380826	9KHz-1GHz	Jul. 03, 2024	Jun. 23, 2025	Jul. 02, 2025	Radiation (03CH05-KS)
Amplifier	EM	EM18G40GA	060851	18~40GHz	Jan. 02, 2025	Jun. 23, 2025	Jan. 01, 2026	Radiation (03CH05-KS)
high gain Amplifier	EM	EM01G18GA	060843	1Ghz-18Ghz	Jan. 02, 2025	Jun. 23, 2025	Jan. 01, 2026	Radiation (03CH05-KS)
Amplifier	EM	EM01G18GA	060833	1Ghz-18Ghz	Jan. 02, 2025	Jun. 23, 2025	Jan. 01, 2026	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jun. 23, 2025	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jun. 23, 2025	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jun. 23, 2025	NCR	Radiation (03CH05-KS)
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 02, 2025	Jun. 20, 2025~ Aug. 22, 2025	Apr. 01, 2026	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 25, 2024	Jun. 20, 2025~ Aug. 22, 2025	Dec. 24, 2025	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Oct. 14, 2024	Jun. 20, 2025~ Aug. 22, 2025	Oct. 13, 2025	Conducted (TH01-SZ)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 16, 2025	Jun. 23, 2025	Apr. 15, 2026	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Aug. 20, 2024	Jun. 23, 2025	Aug. 19, 2025	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Dec. 24, 2024	Jun. 23, 2025	Dec. 23, 2025	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 09, 2024	Jun. 23, 2025	Oct. 08, 2025	Conduction (CO01-KS)

NCR: No Calibration Required

5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Conducted Power Spectral Density	±1.32 dB
Frequency	±1.3 Hz

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.84 dB

Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.30 dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.18 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.88 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.36 dB

---------- THE END ----------

Appendix A. Conducted Test Results

Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26dB EBW [MHz]	FL[MHz]	FH[MHz]
11A-CDD	Ant0	5180	23.10	5168.70	5191.80
	Ant1	5180	22.00	5168.90	5190.90
	Ant0	5220	31.70	5204.20	5235.90
	Ant1	5220	28.80	5205.40	5234.20
	Ant0	5240	27.30	5226.20	5253.50
	Ant1	5240	25.20	5226.90	5252.10
	Ant0	5260	26.90	5246.20	5273.10
	Ant1	5260	27.30	5246.30	5273.60
	Ant0	5300	28.80	5285.10	5313.90
	Ant1	5300	26.70	5287.20	5313.90
	Ant0	5320	22.20	5308.80	5331.00
	Ant1	5320	21.90	5309.00	5330.90
	Ant0	5500	24.50	5487.20	5511.70
	Ant1	5500	23.30	5488.70	5512.00
	Ant0	5580	27.70	5567.90	5595.60
	Ant1	5580	22.70	5569.10	5591.80
	Ant0	5700	21.90	5689.00	5710.90
	Ant1	5700	21.60	5689.10	5710.70
	Ant0	5720	31.60	5703.90	5735.50
	Ant1	5720	22.40	5709.10	5731.50
	Ant0	5745	31.60	5729.30	5760.90
	Ant1	5745	23.90	5733.00	5756.90
	Ant0	5785	34.60	5767.70	5802.30
	Ant1	5785	28.30	5771.40	5799.70
	Ant0	5825	30.00	5810.00	5840.00
	Ant1	5825	28.30	5810.50	5838.80
11N20MIMO	Ant0	5180	28.10	5167.50	5195.60
	Ant1	5180	21.80	5169.20	5191.00
	Ant0	5220	29.60	5205.50	5235.10
	Ant1	5220	25.80	5207.00	5232.80
	Ant0	5240	33.60	5222.80	5256.40
	Ant1	5240	29.50	5226.40	5255.90
	Ant0	5260	28.20	5245.70	5273.90
	Ant1	5260	26.40	5247.20	5273.60

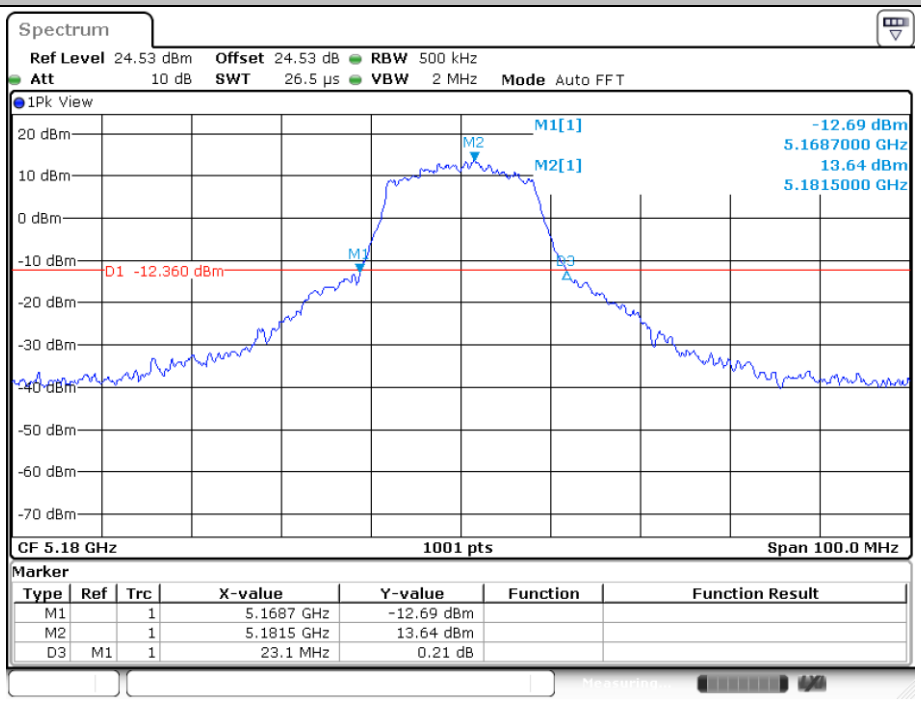
	Ant0	5300	27.90	5285.30	5313.20
	Ant1	5300	25.50	5286.30	5311.80
	Ant0	5320	22.10	5308.90	5331.00
	Ant1	5320	21.70	5309.10	5330.80
	Ant0	5500	23.00	5488.90	5511.90
	Ant1	5500	21.70	5489.10	5510.80
	Ant0	5580	25.60	5568.90	5594.50
	Ant1	5580	23.00	5568.50	5591.50
	Ant0	5700	22.20	5688.80	5711.00
	Ant1	5700	21.90	5689.00	5710.90
	Ant0	5720	29.20	5705.40	5734.60
	Ant1	5720	24.80	5706.60	5731.40
	Ant0	5745	33.30	5729.70	5763.00
	Ant1	5745	28.10	5732.10	5760.20
	Ant0	5785	36.50	5767.20	5803.70
	Ant1	5785	29.70	5770.60	5800.30
	Ant0	5825	34.80	5808.60	5843.40
	Ant1	5825	31.20	5809.80	5841.00
11N40MIMO	Ant0	5190	41.00	5169.80	5210.80
	Ant1	5190	40.00	5170.00	5210.00
	Ant0	5230	73.20	5194.80	5268.00
	Ant1	5230	67.40	5200.20	5267.60
	Ant0	5270	67.00	5234.60	5301.60
	Ant1	5270	73.60	5234.40	5308.00
	Ant0	5310	40.40	5289.80	5330.20
	Ant1	5310	40.00	5290.00	5330.00
	Ant0	5510	40.00	5490.00	5530.00
	Ant1	5510	40.00	5490.00	5530.00
	Ant0	5550	71.40	5517.00	5588.40
	Ant1	5550	57.80	5530.00	5587.80
	Ant0	5670	40.00	5650.00	5690.00
	Ant1	5670	40.20	5650.00	5690.20
	Ant0	5710	69.40	5673.00	5742.40
	Ant1	5710	48.60	5685.00	5733.60
	Ant0	5755	71.60	5721.80	5793.40
	Ant1	5755	52.40	5729.80	5782.20
	Ant0	5795	75.00	5758.60	5833.60
	Ant1	5795	73.20	5759.80	5833.00
11AC80MIMO	Ant0	5210	82.80	5168.00	5250.80

	Ant1	5210	82.40	5168.80	5251.20
	Ant0	5290	82.40	5248.40	5330.80
	Ant1	5290	83.20	5248.40	5331.60
	Ant0	5530	82.40	5488.80	5571.20
	Ant1	5530	82.40	5488.80	5571.20
	Ant0	5610	82.40	5568.80	5651.20
	Ant1	5610	98.00	5559.60	5657.60
	Ant0	5690	96.80	5642.40	5739.20
	Ant1	5690	83.20	5647.60	5730.80
	Ant0	5775	113.60	5718.20	5831.80
	Ant1	5775	96.00	5720.60	5816.60
11AX20MIMO	Ant0	5180	22.80	5168.90	5191.70
	Ant1	5180	22.10	5168.80	5190.90
	Ant0	5220	28.60	5207.80	5236.40
	Ant1	5220	27.50	5206.60	5234.10
	Ant0	5240	26.00	5227.20	5253.20
	Ant1	5240	25.50	5226.40	5251.90
	Ant0	5260	24.30	5247.90	5272.20
	Ant1	5260	25.50	5247.60	5273.10
	Ant0	5300	26.30	5286.80	5313.10
	Ant1	5300	24.70	5288.40	5313.10
	Ant0	5320	21.70	5309.00	5330.70
	Ant1	5320	21.70	5309.20	5330.90
	Ant0	5500	22.20	5489.00	5511.20
	Ant1	5500	21.50	5489.20	5510.70
	Ant0	5580	24.40	5568.00	5592.40
	Ant1	5580	22.70	5569.00	5591.70
	Ant0	5700	21.90	5689.00	5710.90
	Ant1	5700	21.80	5689.10	5710.90
	Ant0	5720	29.40	5705.70	5735.10
	Ant1	5720	24.70	5707.30	5732.00
	Ant0	5745	29.40	5730.40	5759.80
	Ant1	5745	28.90	5731.50	5760.40
	Ant0	5785	35.10	5766.60	5801.70
	Ant1	5785	28.70	5769.70	5798.40
	Ant0	5825	24.50	5813.00	5837.50
	Ant1	5825	29.20	5811.10	5840.30
11AX40MIMO	Ant0	5190	40.80	5169.40	5210.20
	Ant1	5190	41.20	5169.40	5210.60

	Ant0	5230	61.60	5198.40	5260.00
	Ant1	5230	57.60	5204.00	5261.60
	Ant0	5270	67.20	5235.20	5302.40
	Ant1	5270	60.80	5238.00	5298.80
	Ant0	5310	41.20	5289.40	5330.60
	Ant1	5310	41.40	5289.20	5330.60
	Ant0	5510	41.20	5489.40	5530.60
	Ant1	5510	41.40	5489.20	5530.60
	Ant0	5550	62.20	5517.60	5579.80
	Ant1	5550	46.20	5524.60	5570.80
	Ant0	5670	41.00	5649.40	5690.40
	Ant1	5670	41.00	5649.60	5690.60
	Ant0	5710	65.40	5680.00	5745.40
	Ant1	5710	44.40	5689.80	5734.20
	Ant0	5755	70.20	5722.00	5792.20
	Ant1	5755	64.60	5721.80	5786.40
	Ant0	5795	71.80	5764.20	5836.00
	Ant1	5795	64.20	5762.80	5827.00
11AX80MIMO	Ant0	5210	84.00	5168.00	5252.00
	Ant1	5210	82.80	5168.40	5251.20
	Ant0	5290	83.20	5248.40	5331.60
	Ant1	5290	83.20	5248.40	5331.60
	Ant0	5530	84.40	5487.60	5572.00
	Ant1	5530	83.20	5488.00	5571.20
	Ant0	5610	86.40	5568.40	5654.80
	Ant1	5610	83.60	5568.00	5651.60
	Ant0	5690	112.40	5636.40	5748.80
	Ant1	5690	83.20	5648.40	5731.60
	Ant0	5775	138.00	5709.40	5847.40
	Ant1	5775	89.60	5732.60	5822.20

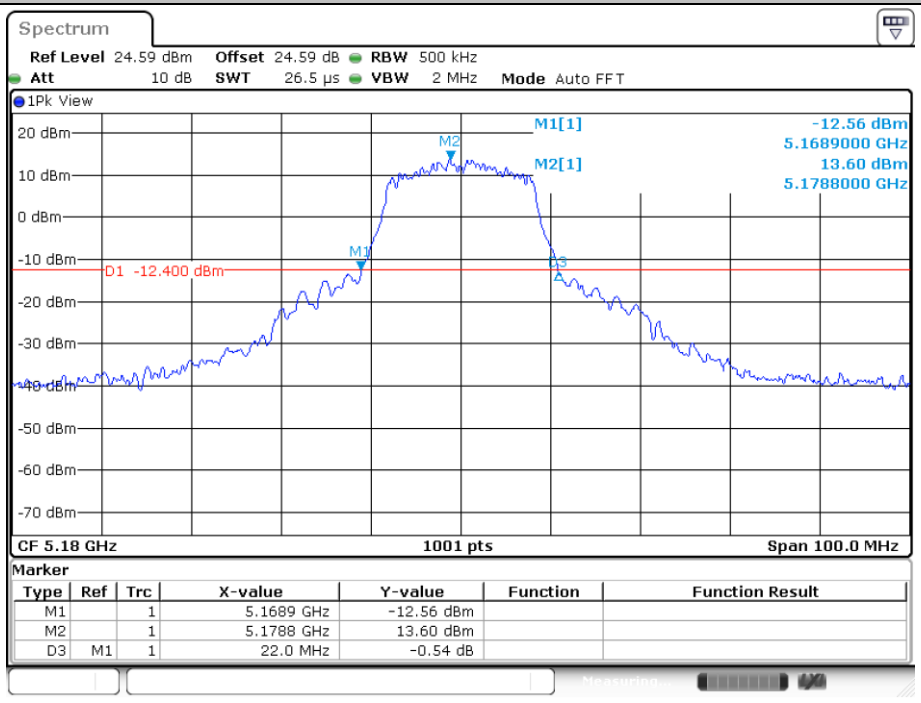
Test Graphs

11A-CDD_Ant0_5180



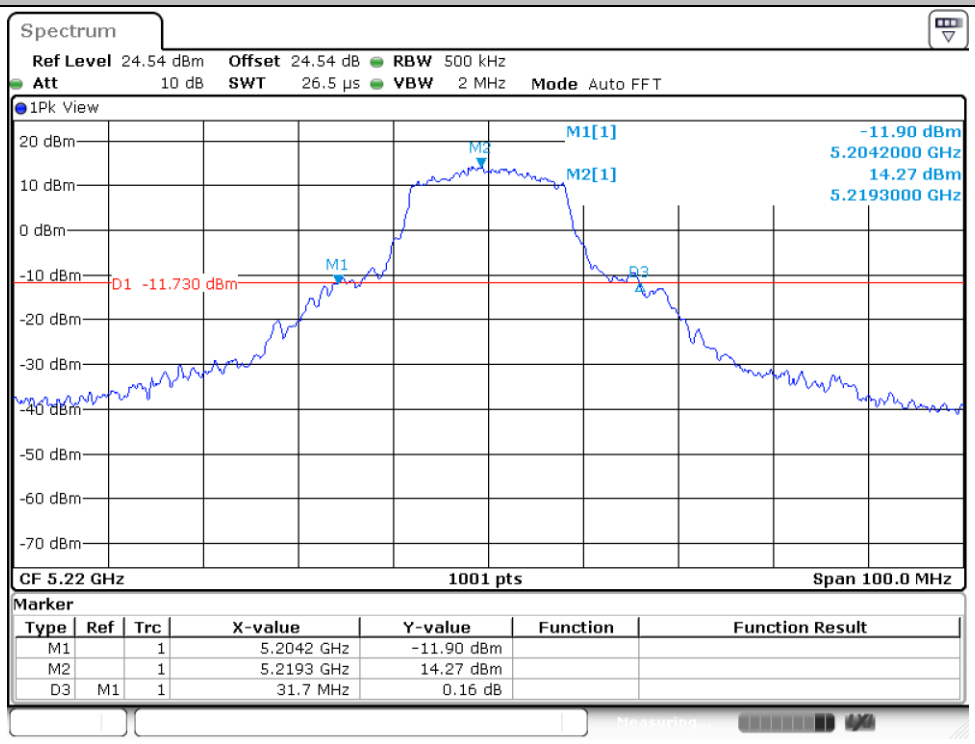
Date: 22.AUG.2025 00:48:18

11A-CDD_Ant1_5180



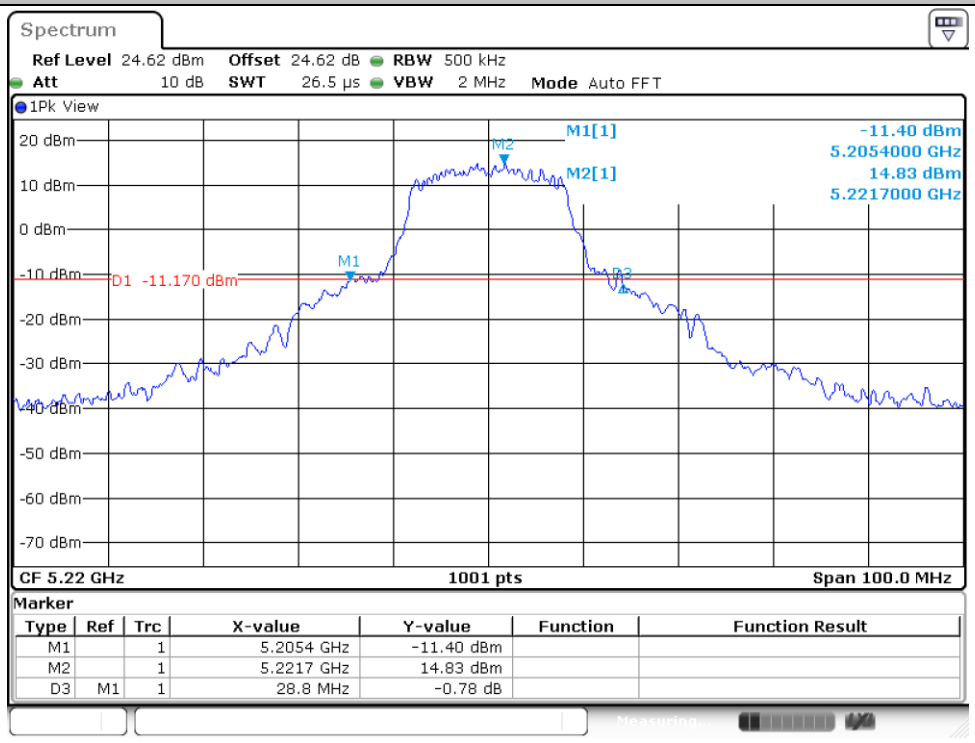
Date: 22.AUG.2025 00:48:34

11A-CDD_Ant0_5220



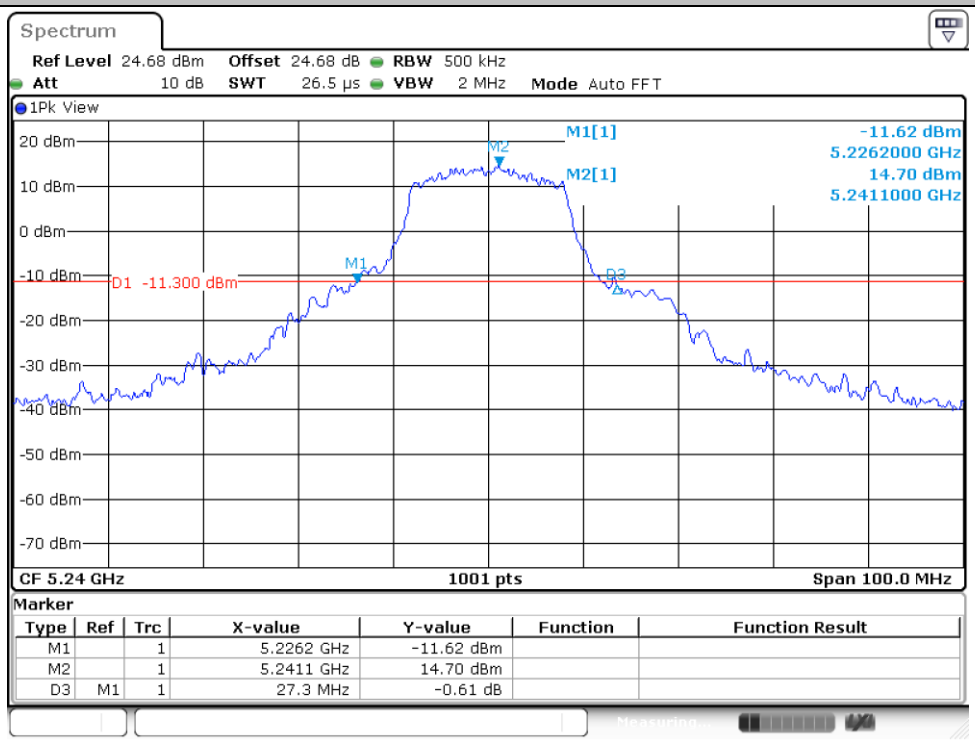
Date: 22.AUG.2025 00:49:08

11A-CDD_Ant1_5220



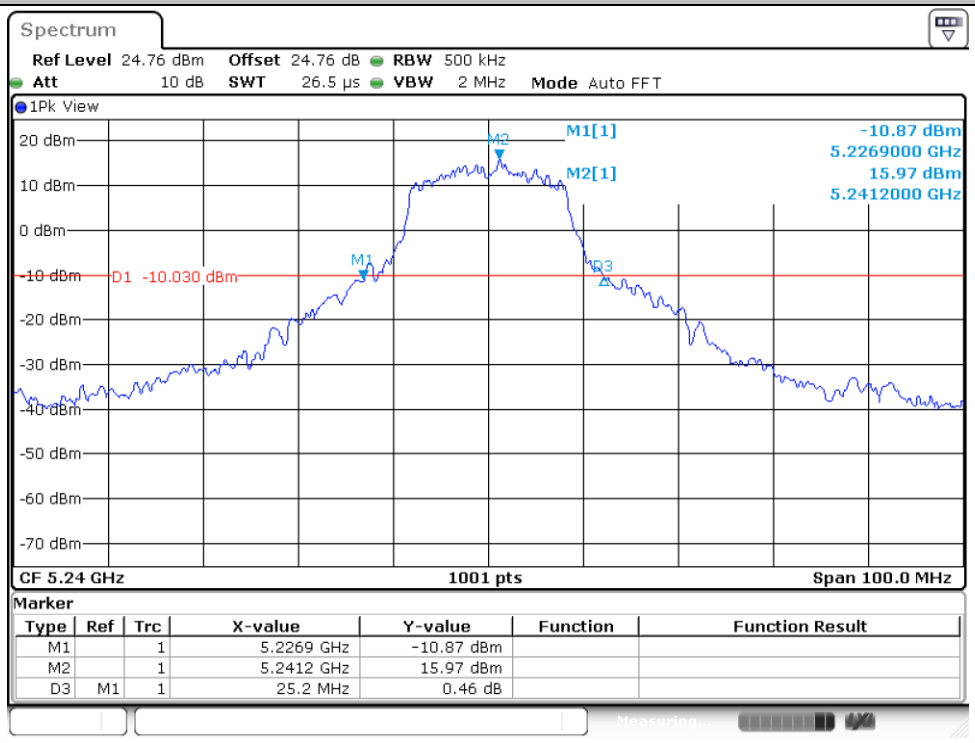
Date: 22.AUG.2025 00:49:23

11A-CDD_Ant0_5240



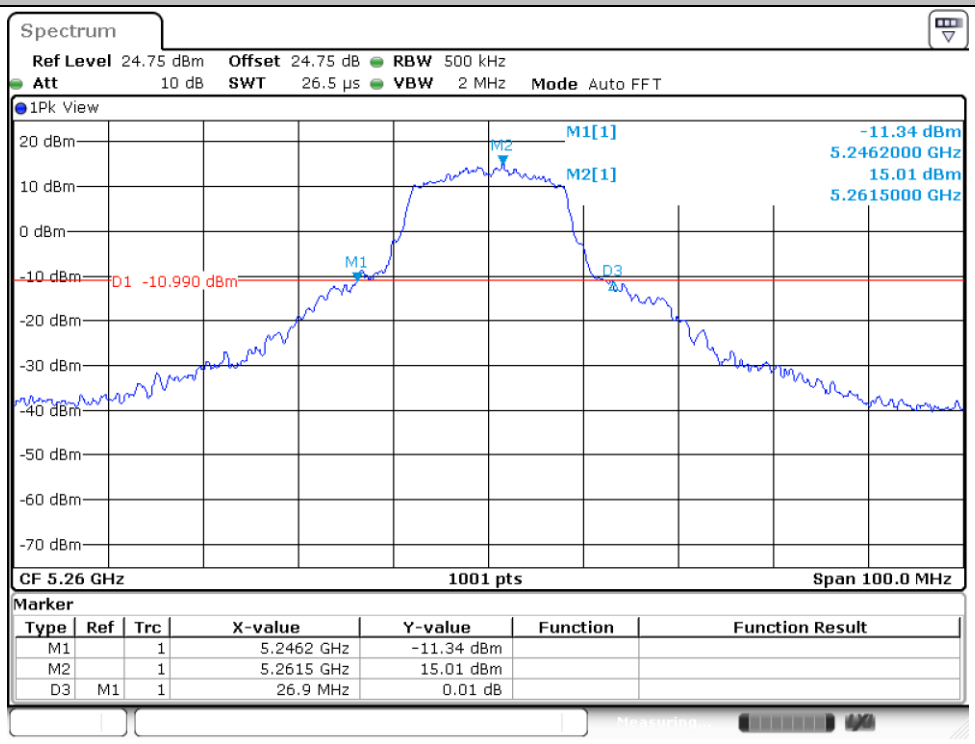
Date: 22.AUG.2025 00:50:17

11A-CDD_Ant1_5240



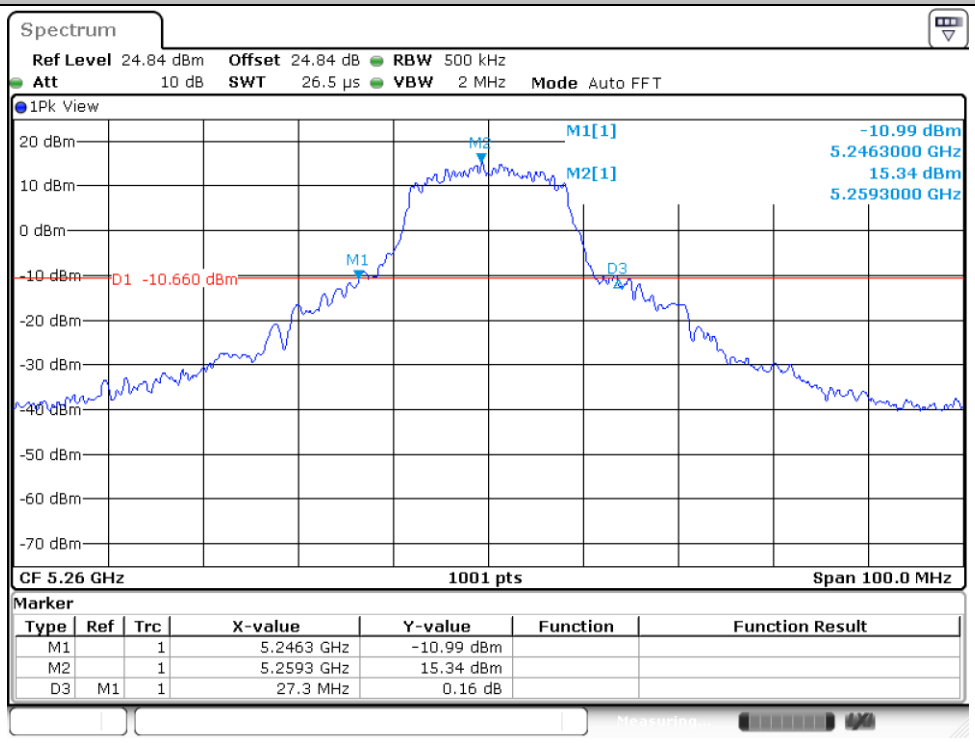
Date: 22.AUG.2025 00:50:32

11A-CDD_Ant0_5260



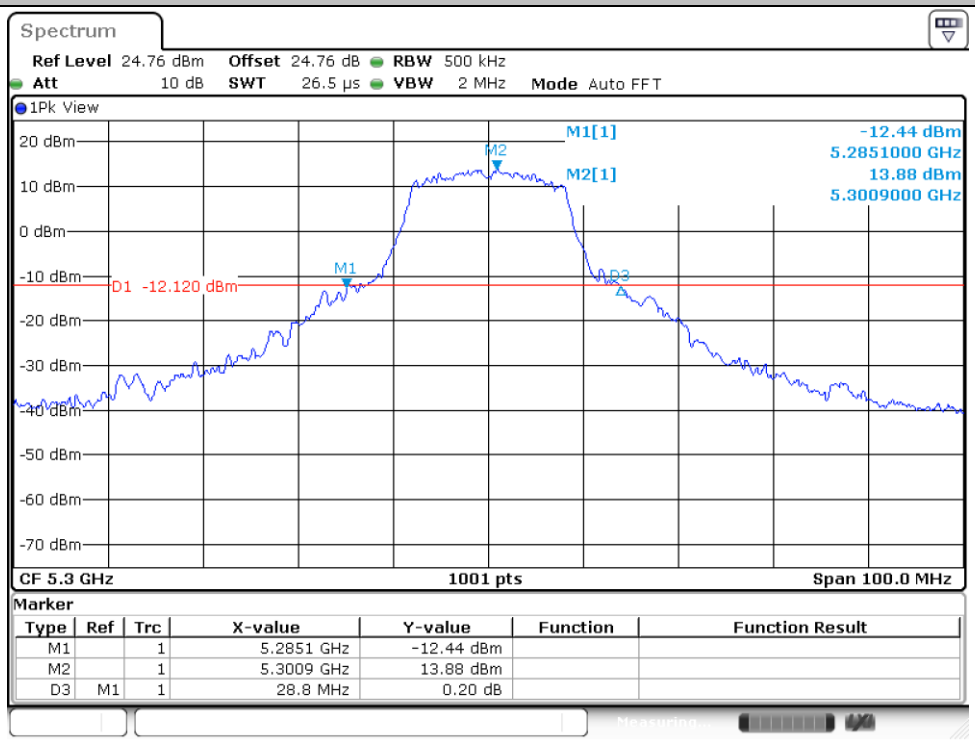
Date: 22.AUG.2025 00:51:00

11A-CDD_Ant1_5260



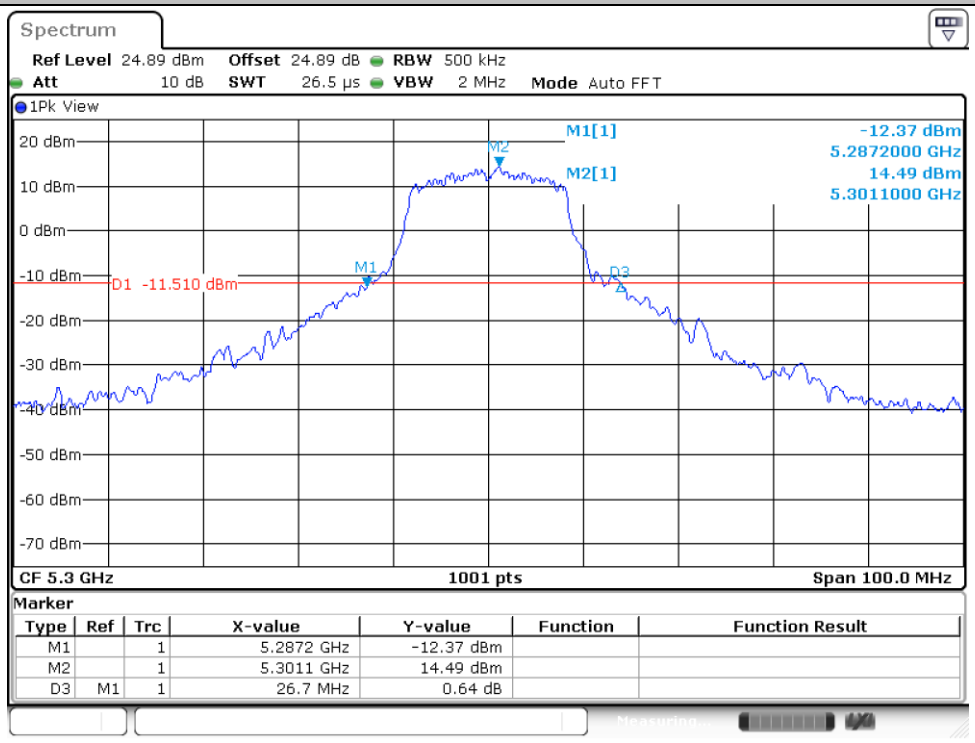
Date: 22.AUG.2025 00:51:16

11A-CDD_Ant0_5300



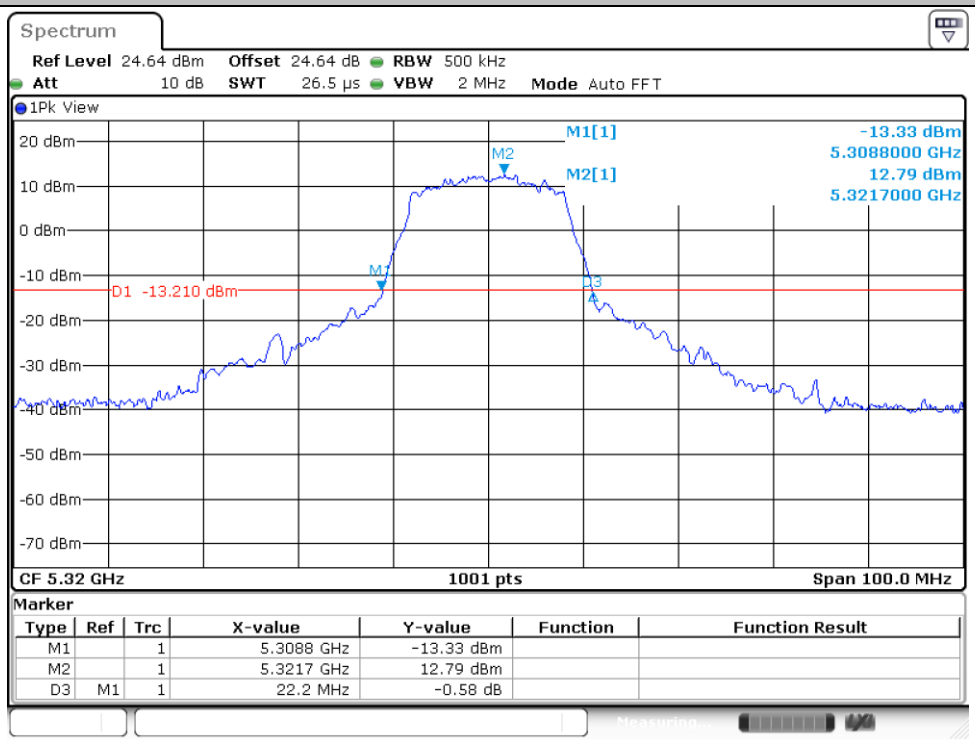
Date: 22.AUG.2025 00:51:40

11A-CDD_Ant1_5300



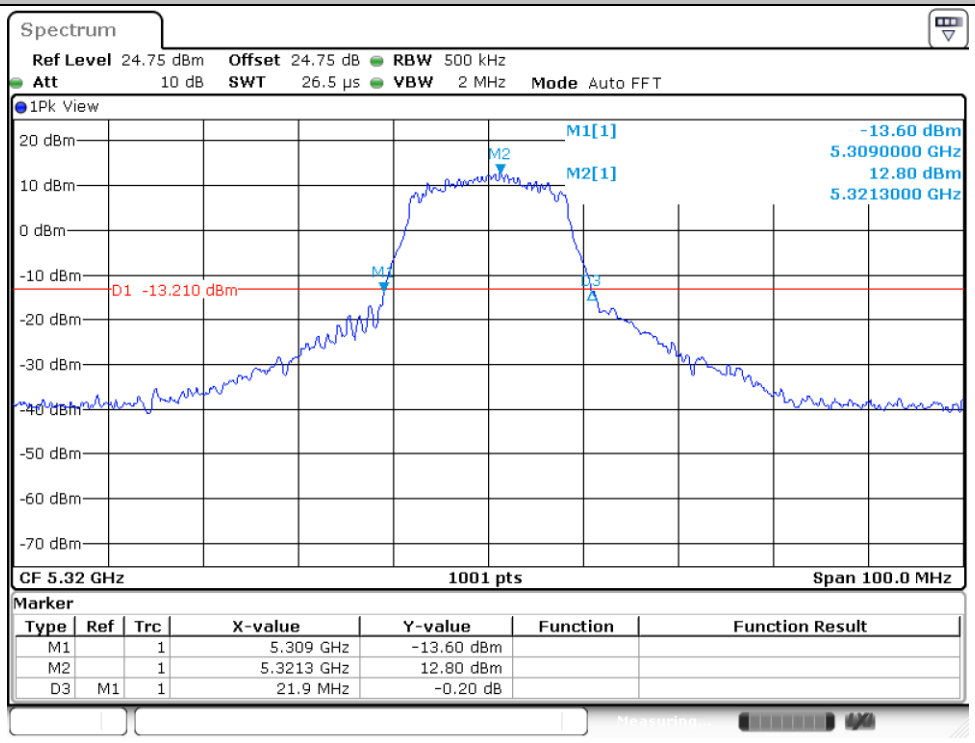
Date: 22.AUG.2025 00:51:55

11A-CDD_Ant0_5320



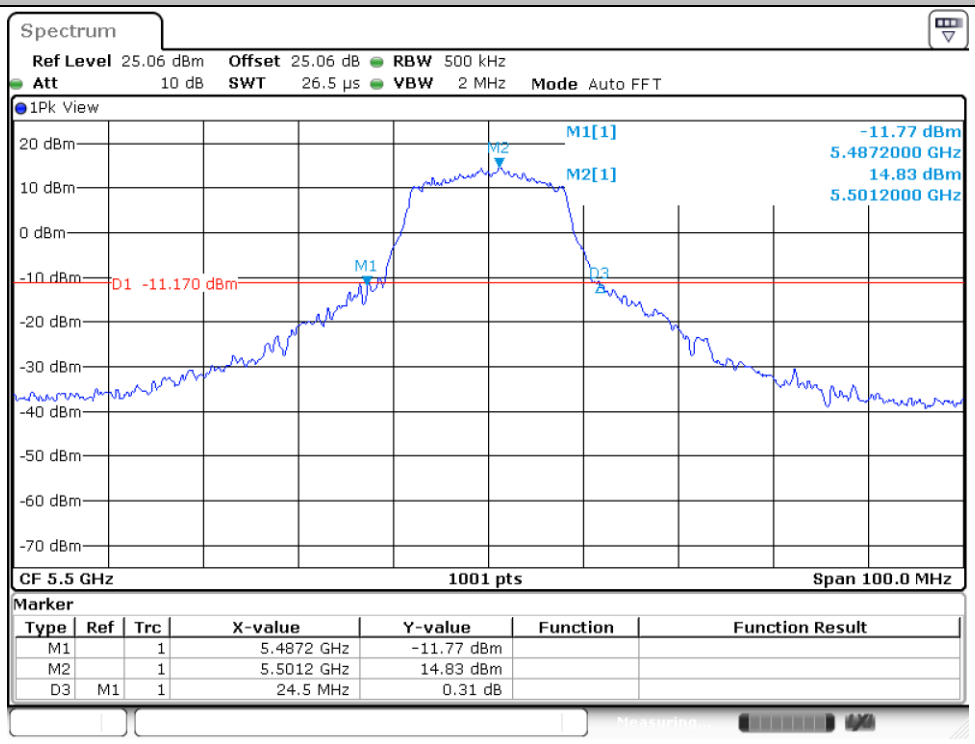
Date: 22.AUG.2025 00:52:25

11A-CDD_Ant1_5320



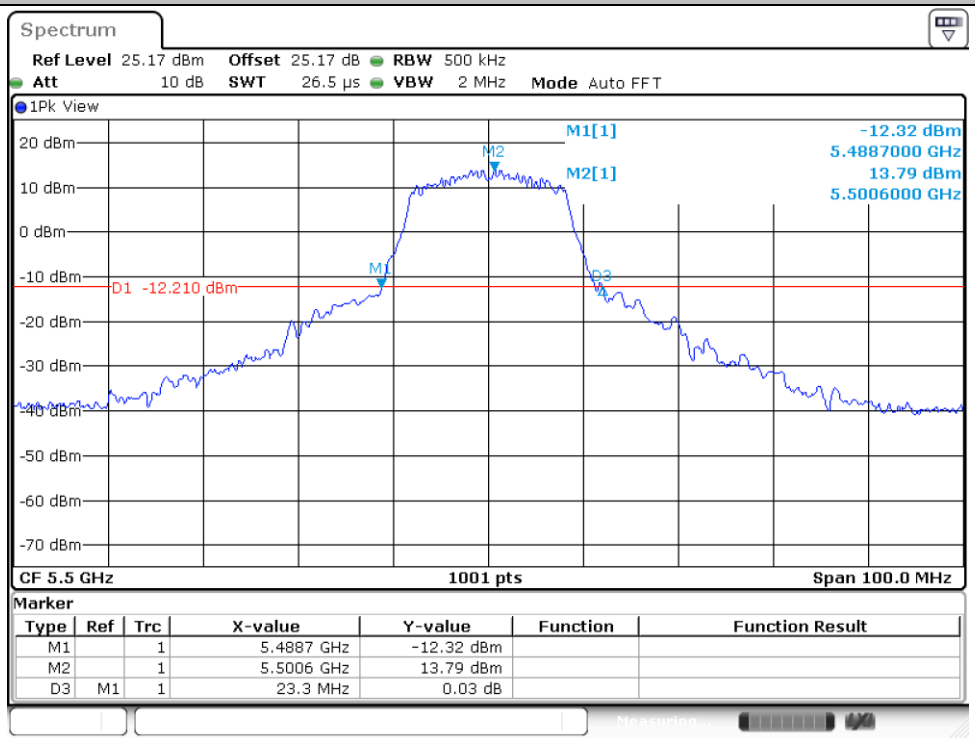
Date: 22.AUG.2025 00:52:41

11A-CDD_Ant0_5500



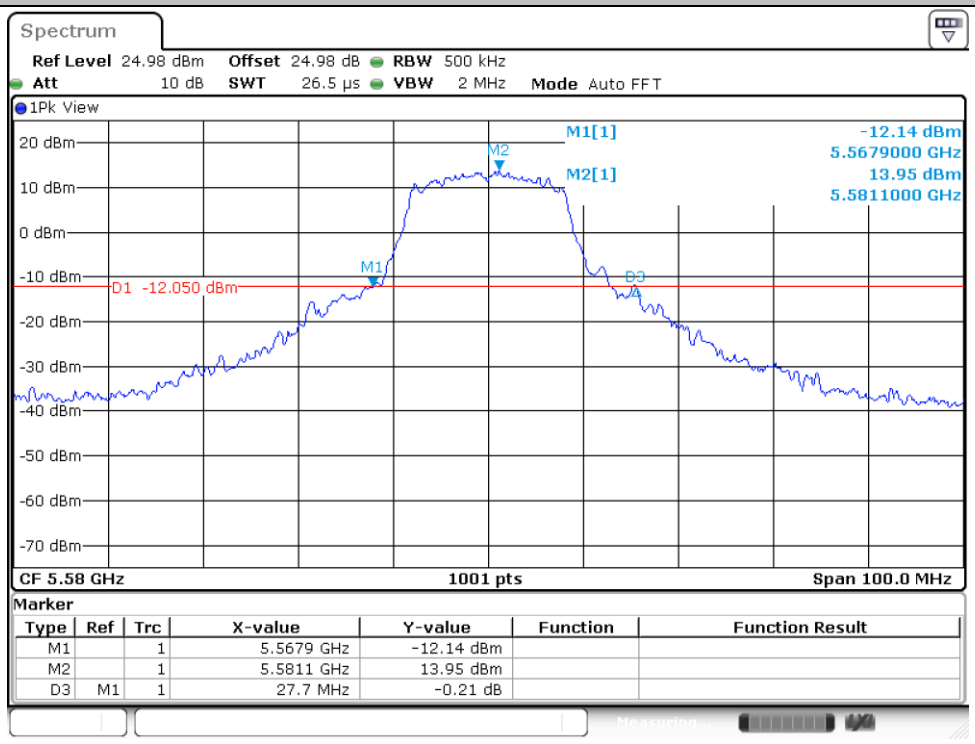
Date: 22.AUG.2025 00:53:07

11A-CDD_Ant1_5500



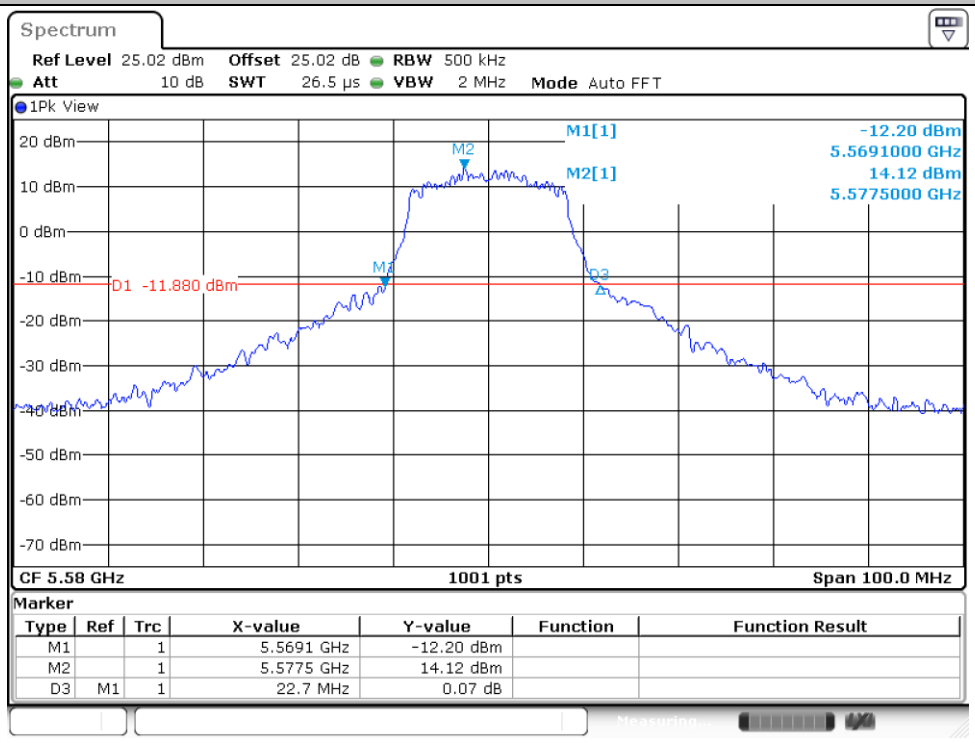
Date: 22.AUG.2025 00:53:22

11A-CDD_Ant0_5580



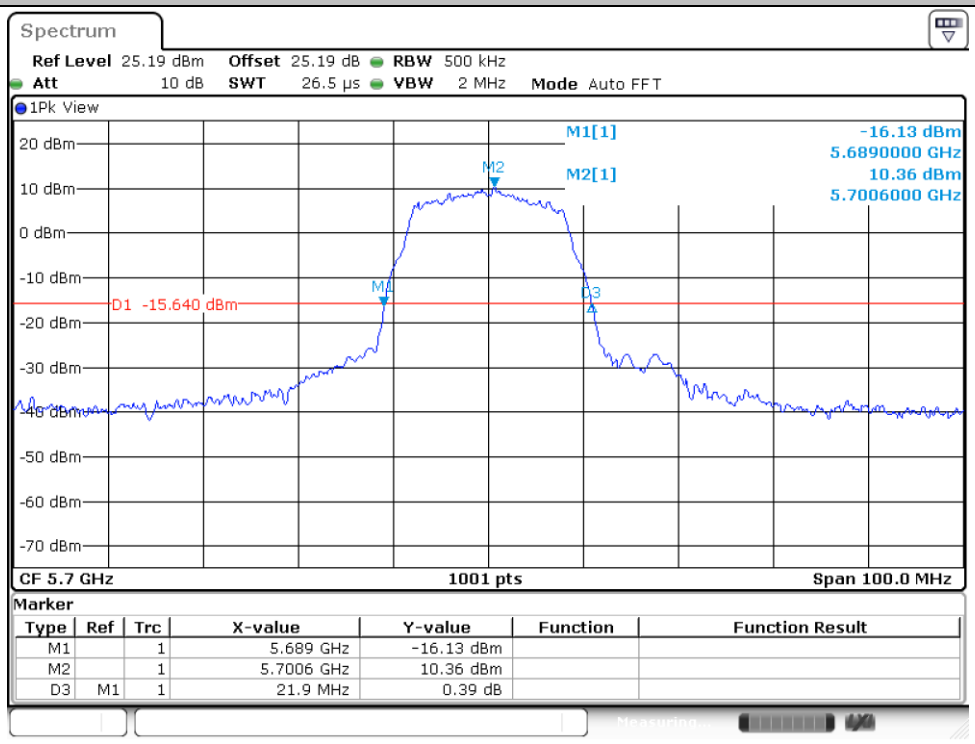
Date: 22.AUG.2025 00:53:46

11A-CDD_Ant1_5580



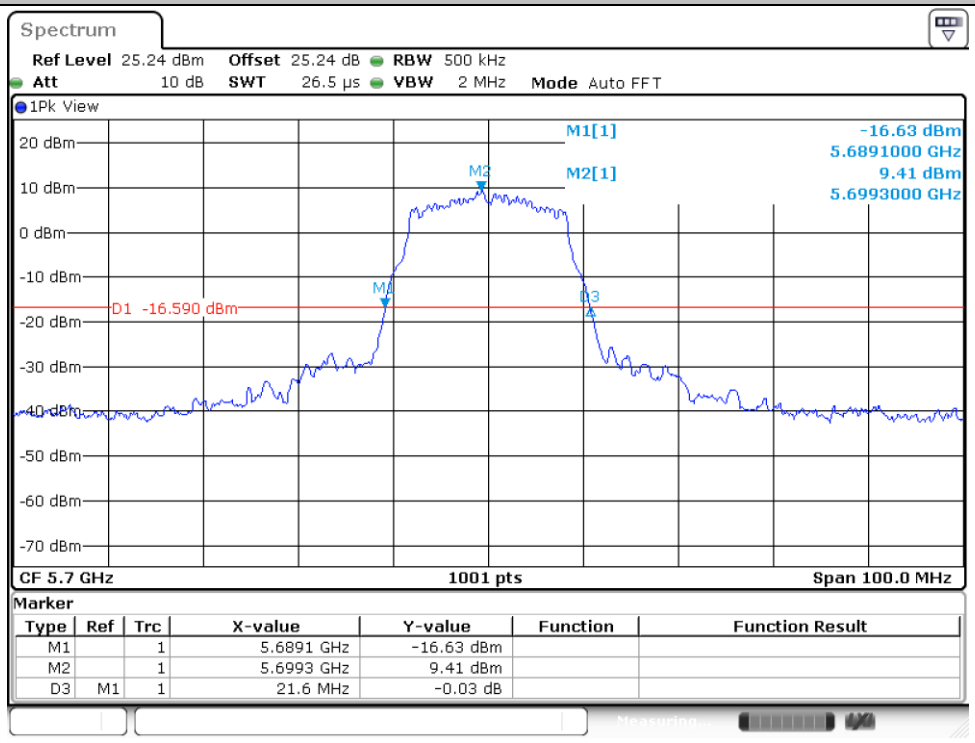
Date: 22.AUG.2025 00:54:02

11A-CDD_Ant0_5700



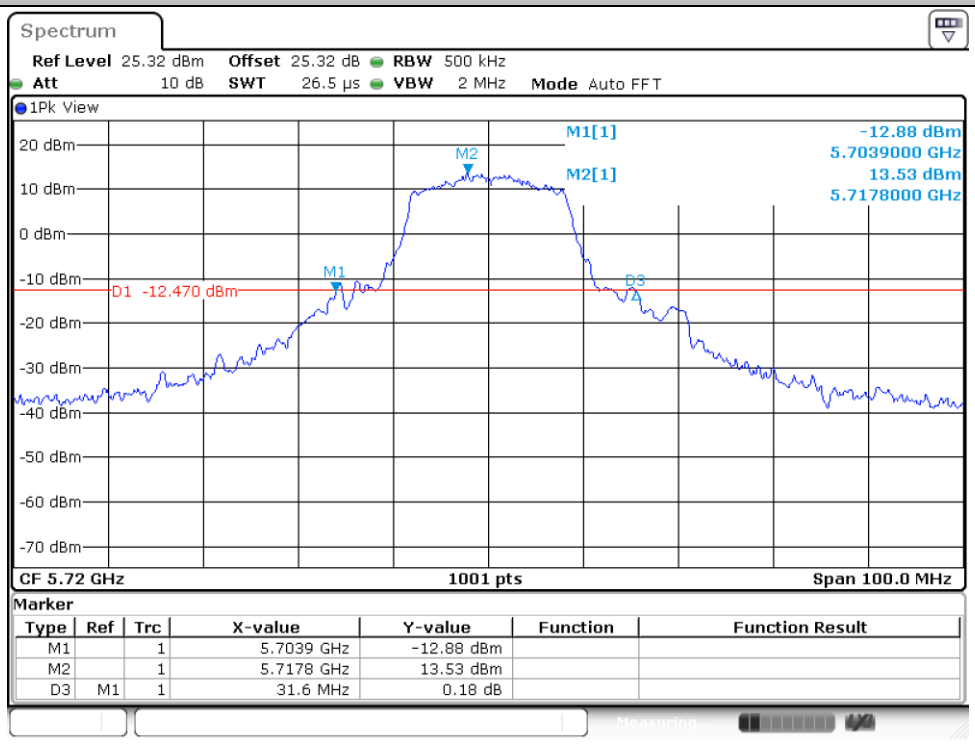
Date: 22.AUG.2025 00:54:26

11A-CDD_Ant1_5700



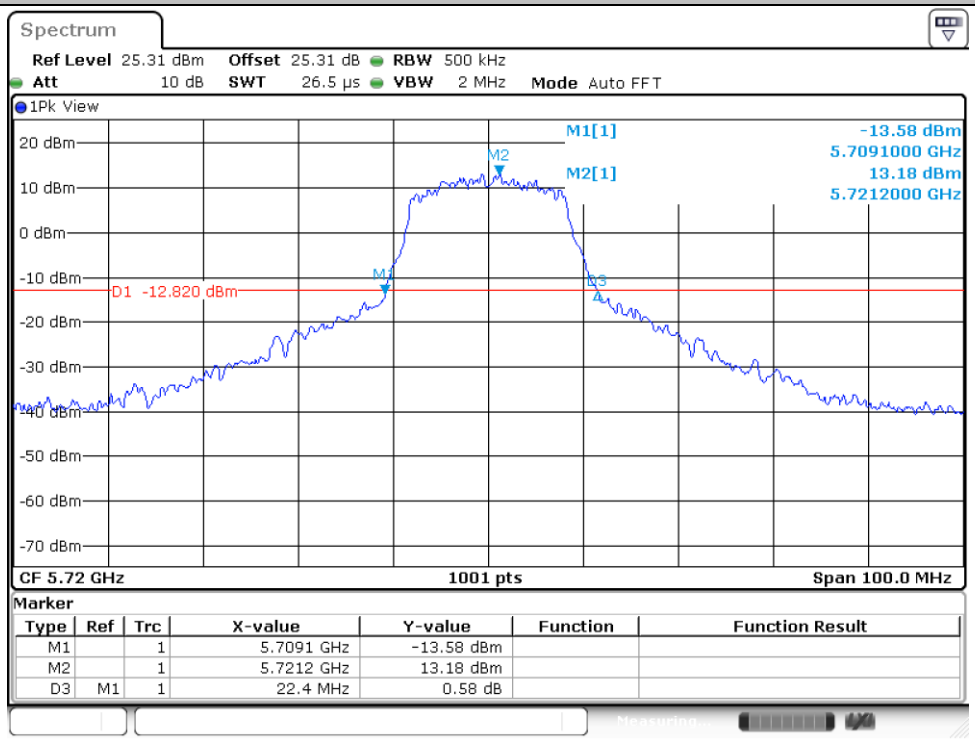
Date: 22.AUG.2025 00:54:41

11A-CDD_Ant0_5720



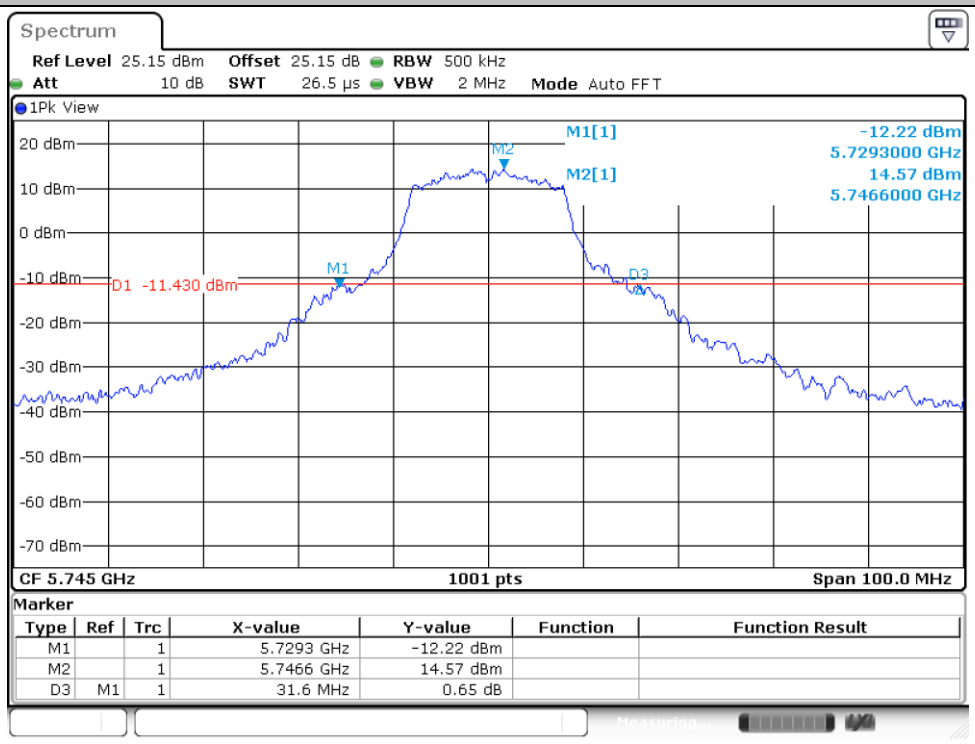
Date: 22.AUG.2025 00:55:04

11A-CDD_Ant1_5720



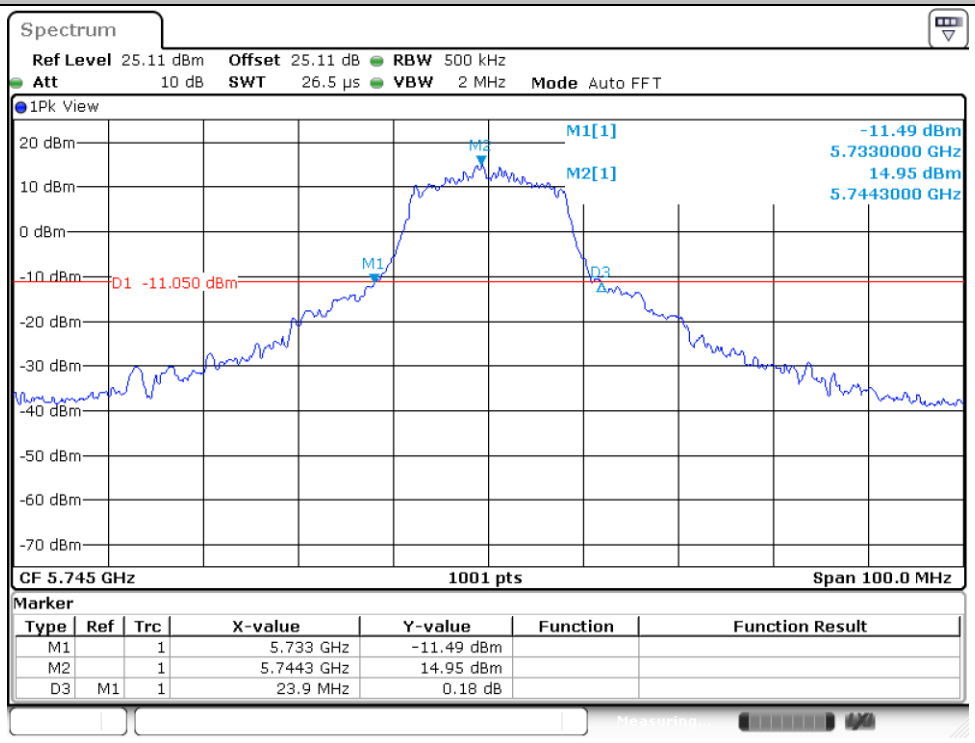
Date: 22.AUG.2025 00:55:20

11A-CDD_Ant0_5745



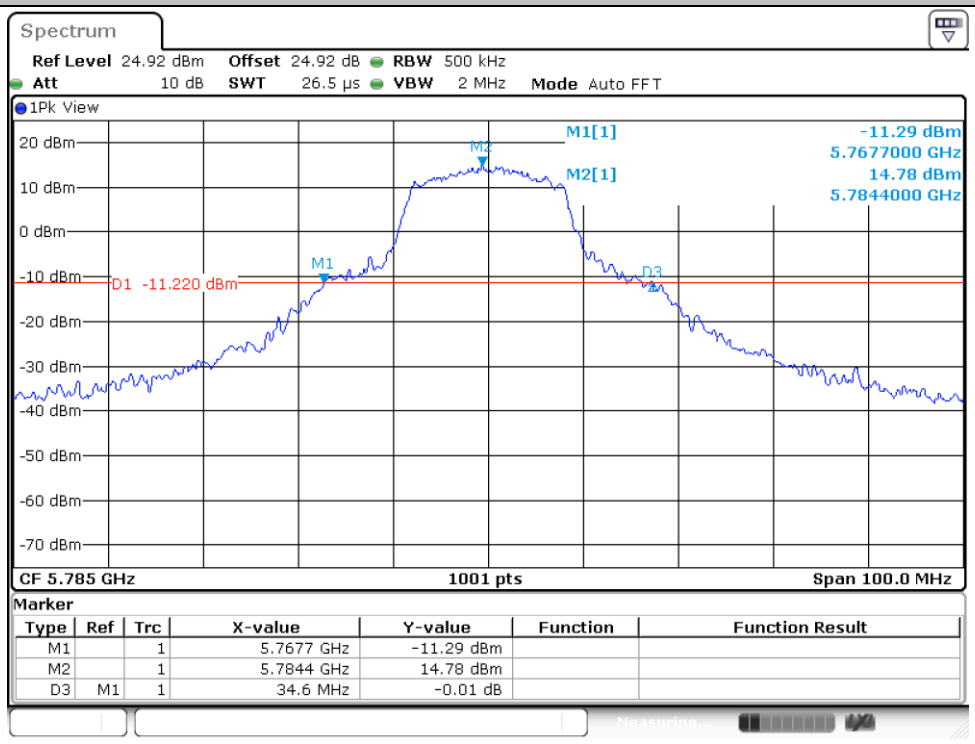
Date: 22.AUG.2025 00:55:45

11A-CDD_Ant1_5745



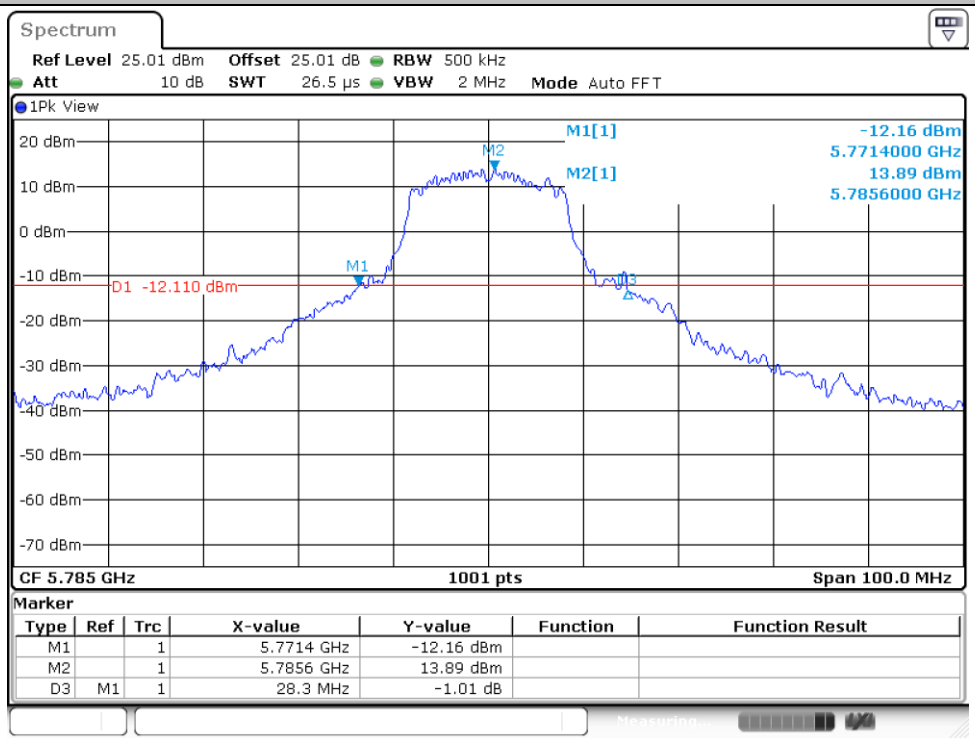
Date: 22.AUG.2025 00:56:01

11A-CDD_Ant0_5785



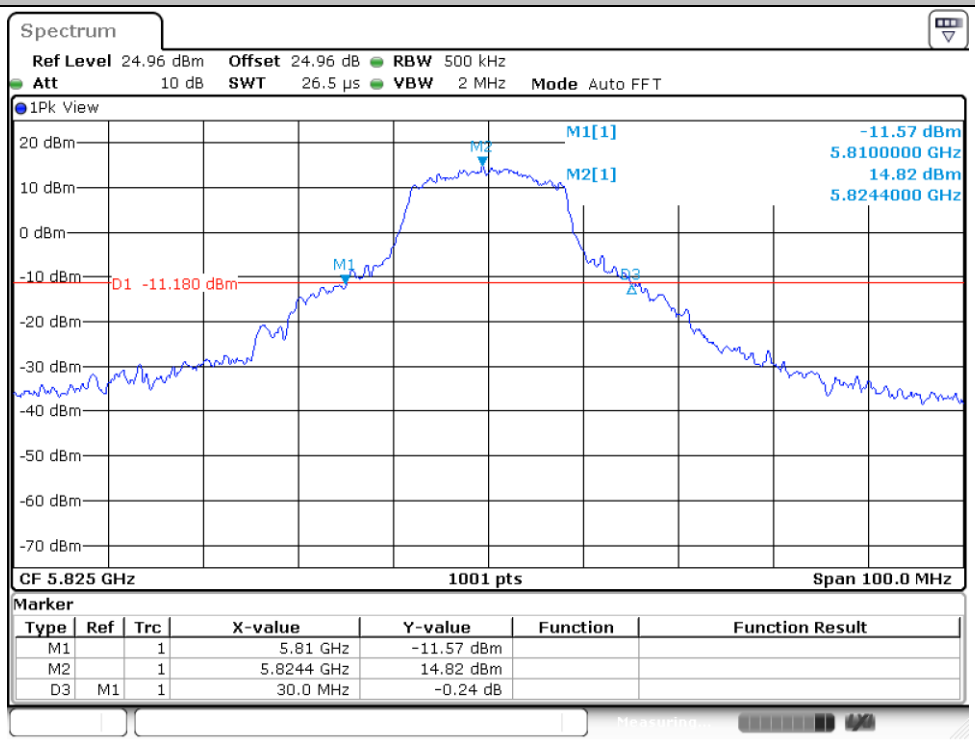
Date: 22.AUG.2025 00:56:38

11A-CDD_Ant1_5785



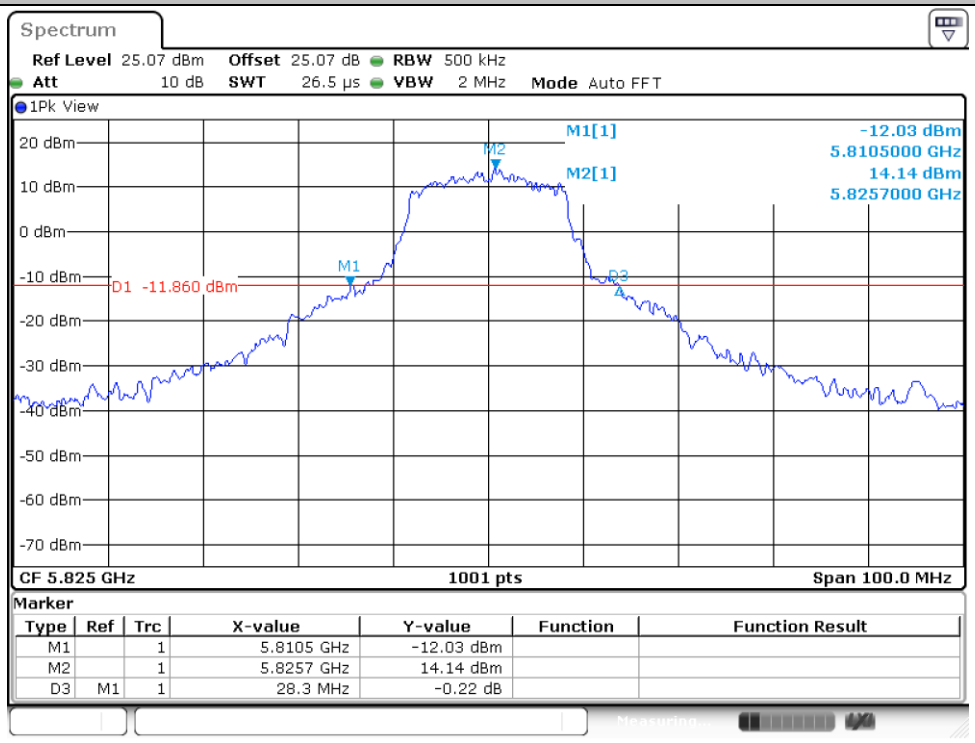
Date: 22.AUG.2025 00:56:54

11A-CDD_Ant0_5825



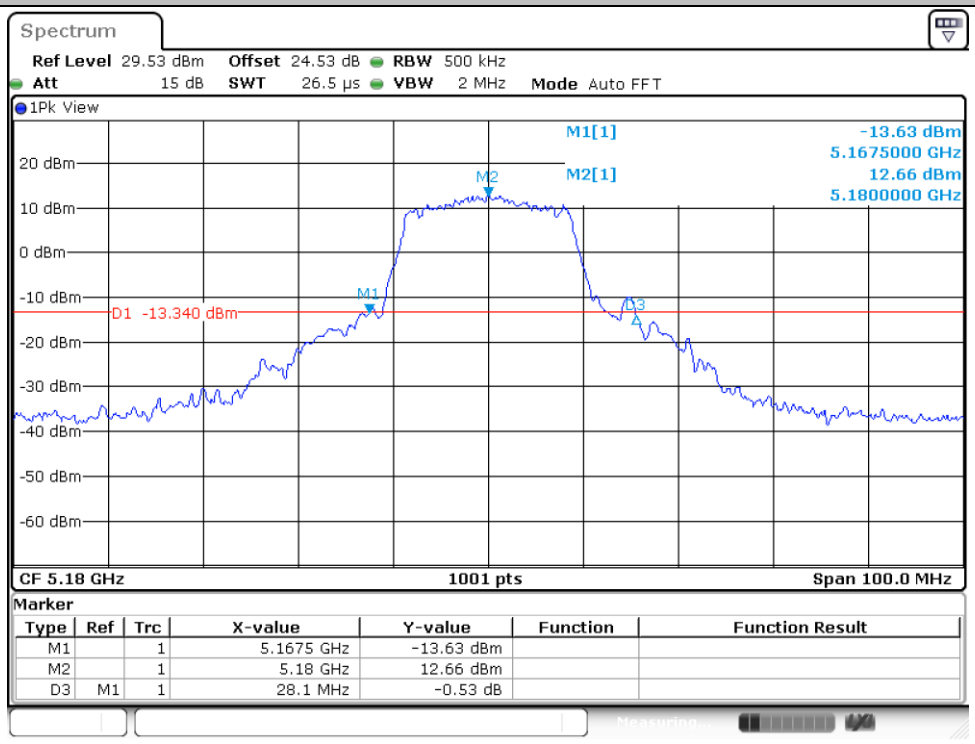
Date: 22.AUG.2025 00:57:17

11A-CDD_Ant1_5825



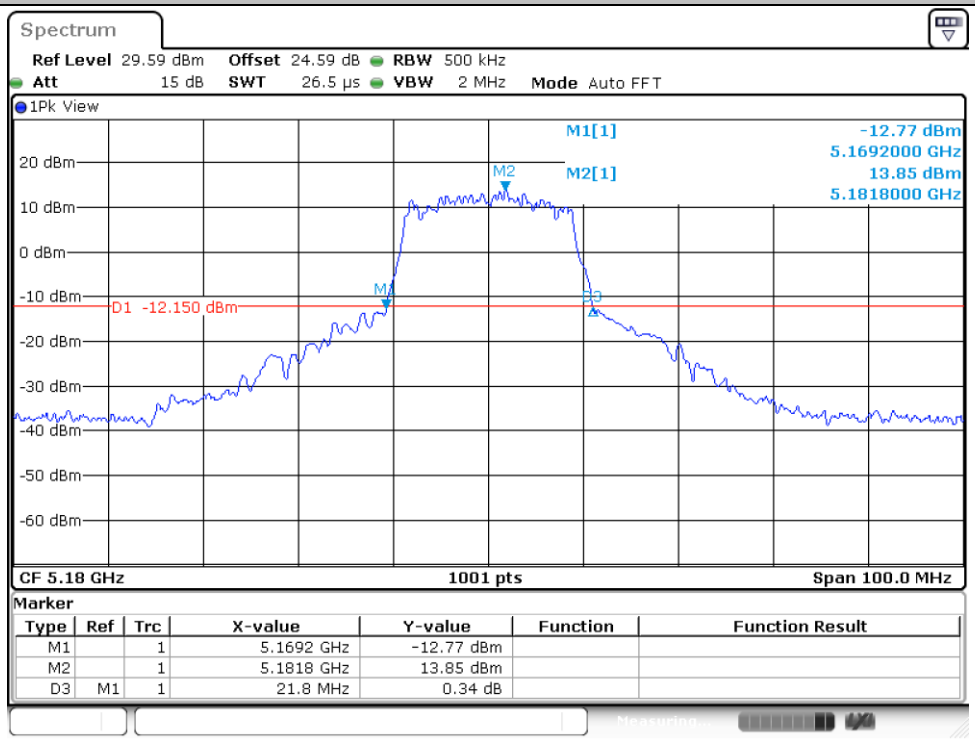
Date: 22.AUG.2025 00:57:33

11N20MIMO_Ant0_5180



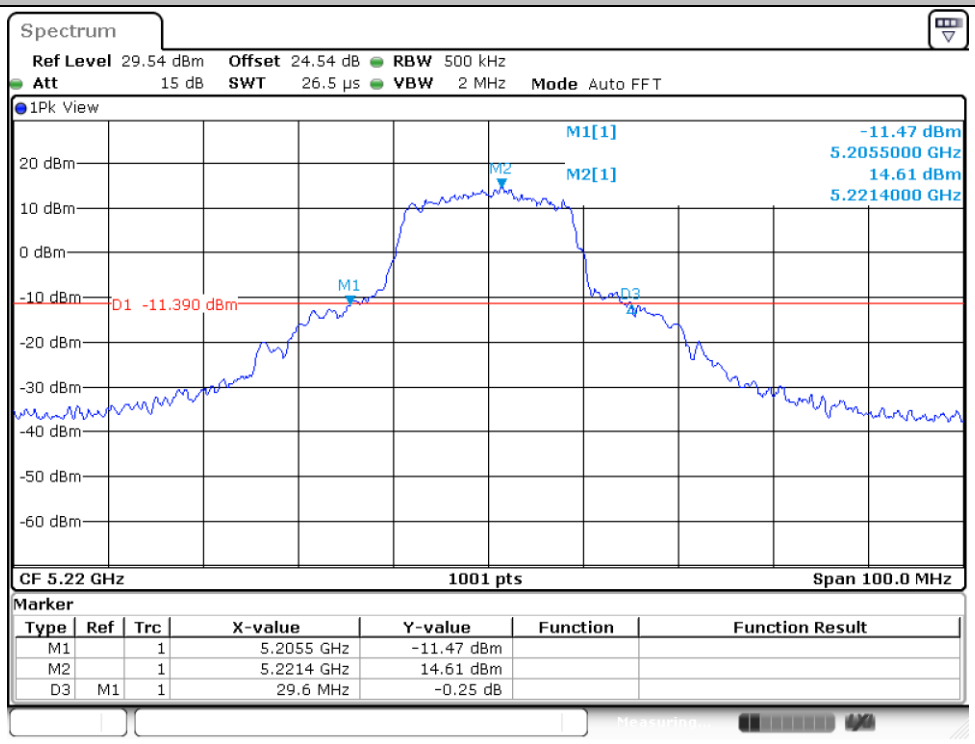
Date: 22.AUG.2025 01:35:50

11N20MIMO_Ant1_5180



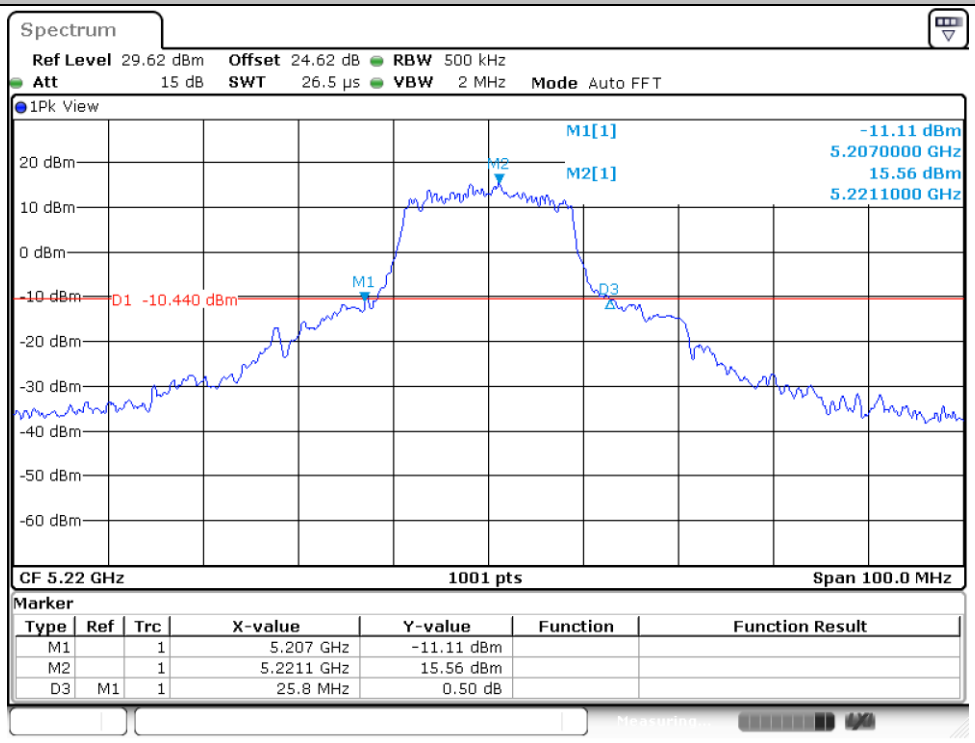
Date: 22.AUG.2025 01:36:06

11N20MIMO_Ant0_5220



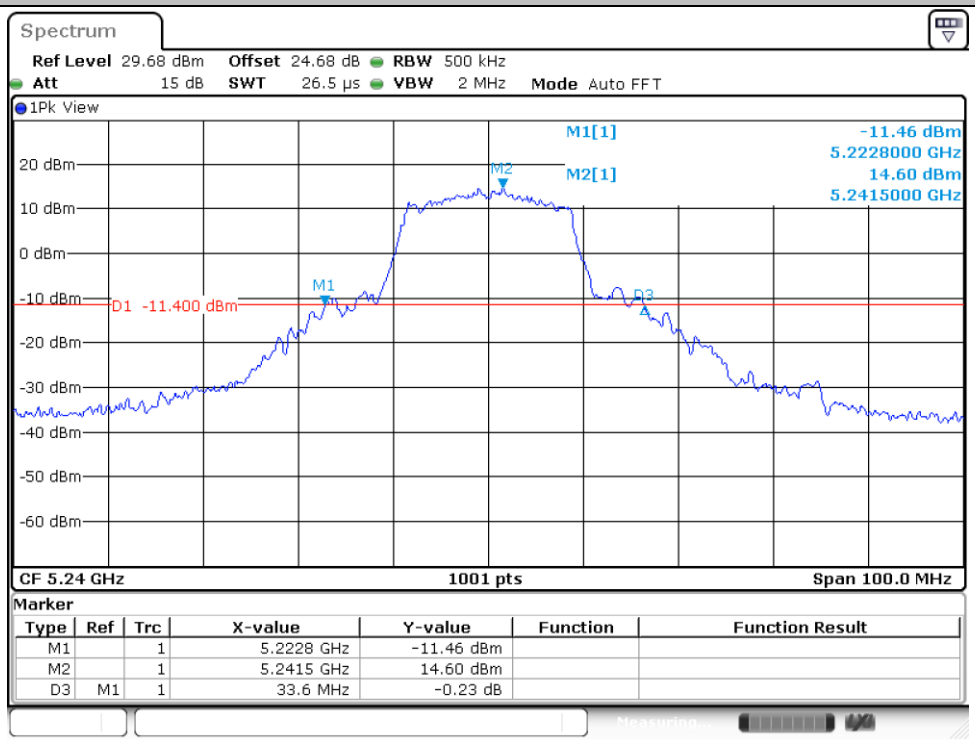
Date: 22.AUG.2025 01:36:31

11N20MIMO_Ant1_5220



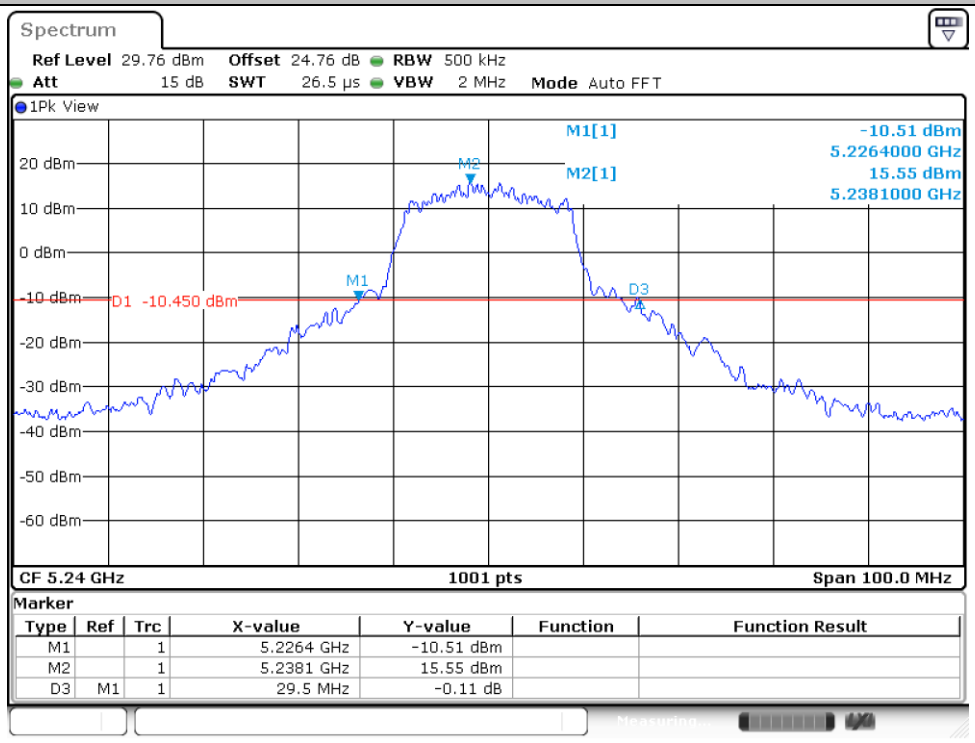
Date: 22.AUG.2025 01:36:47

11N20MIMO_Ant0_5240



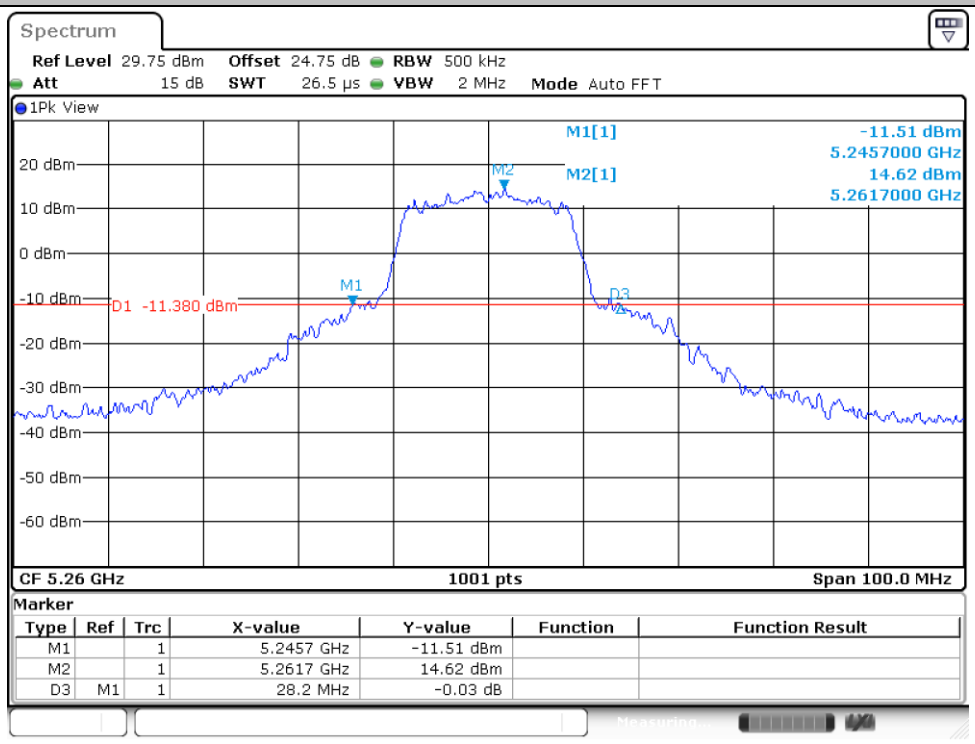
Date: 22.AUG.2025 01:37:13

11N20MIMO_Ant1_5240



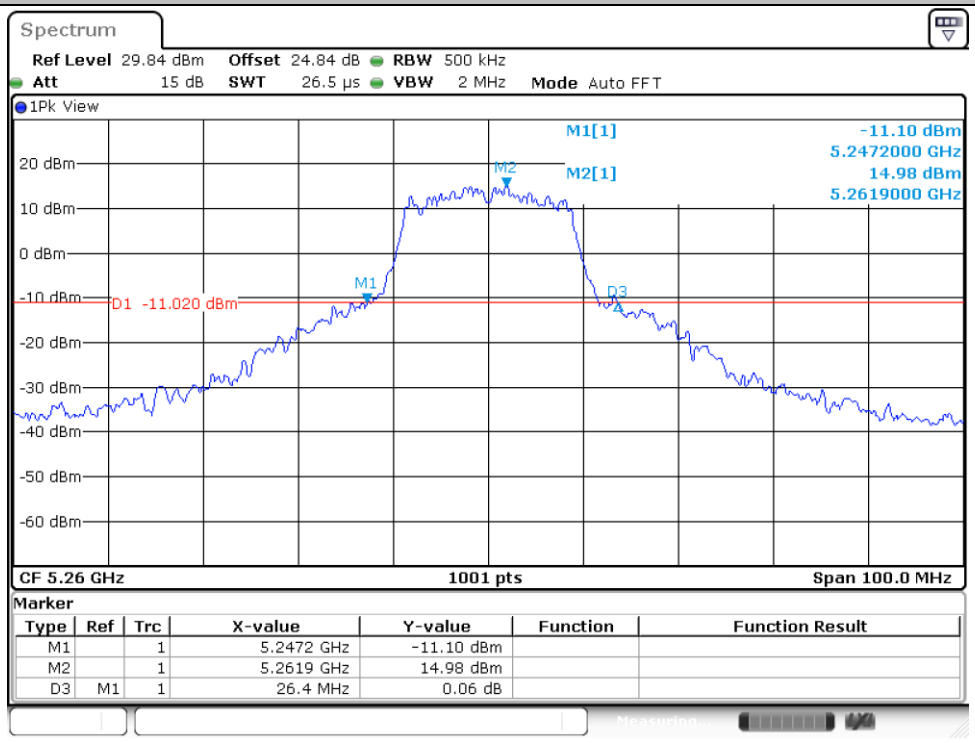
Date: 22.AUG.2025 01:37:28

11N20MIMO_Ant0_5260



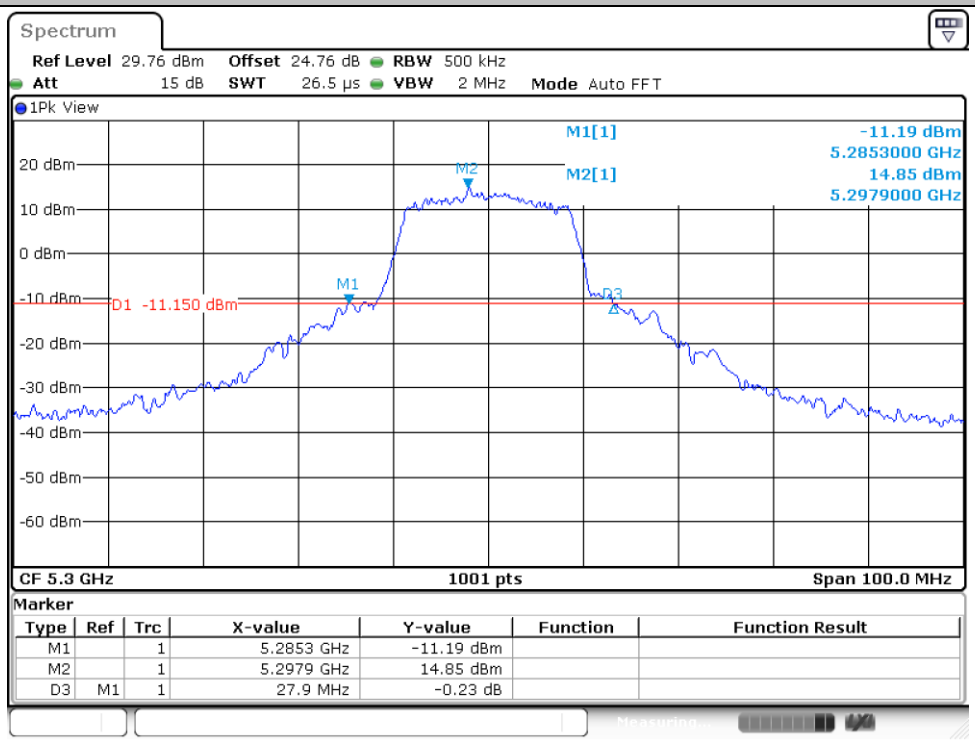
Date: 22.AUG.2025 01:38:07

11N20MIMO_Ant1_5260



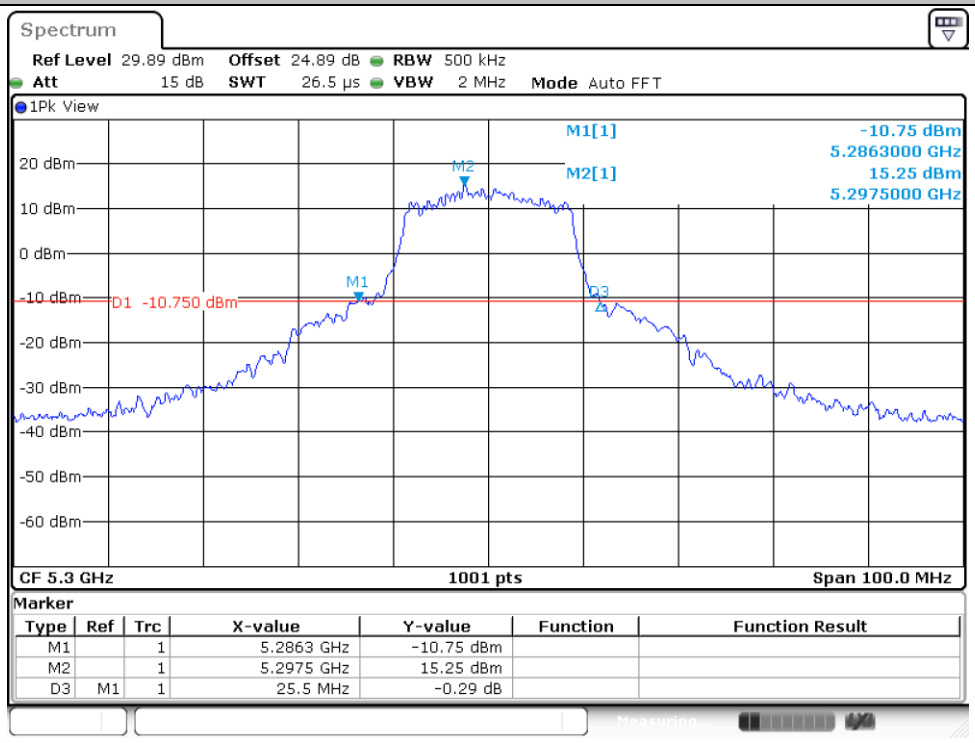
Date: 22.AUG.2025 01:38:22

11N20MIMO_Ant0_5300



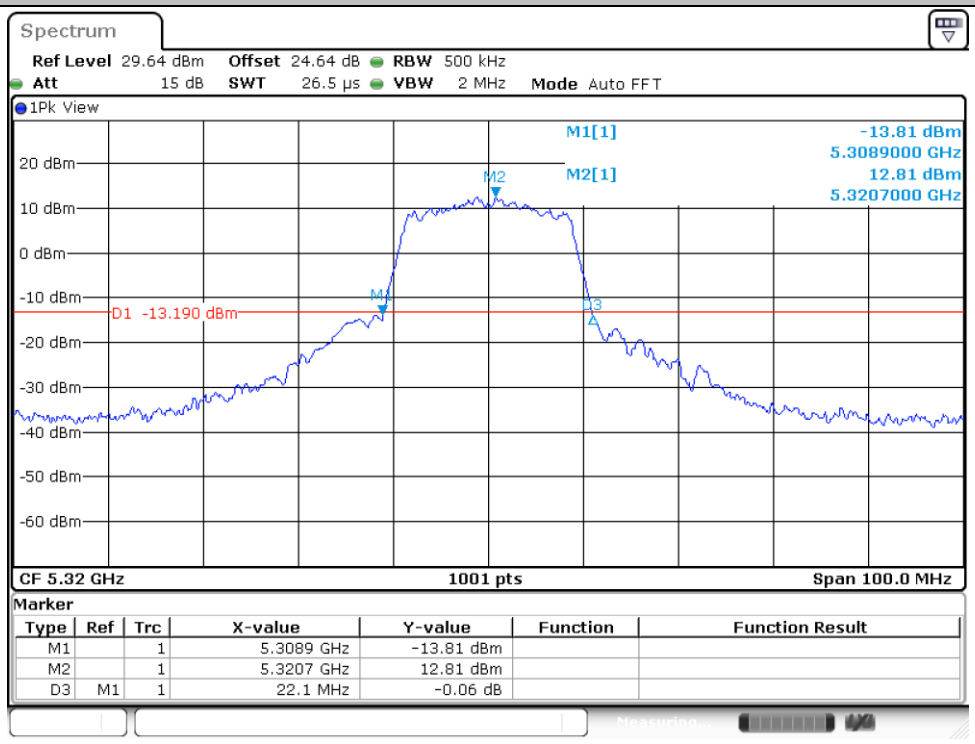
Date: 22.AUG.2025 01:38:45

11N20MIMO_Ant1_5300



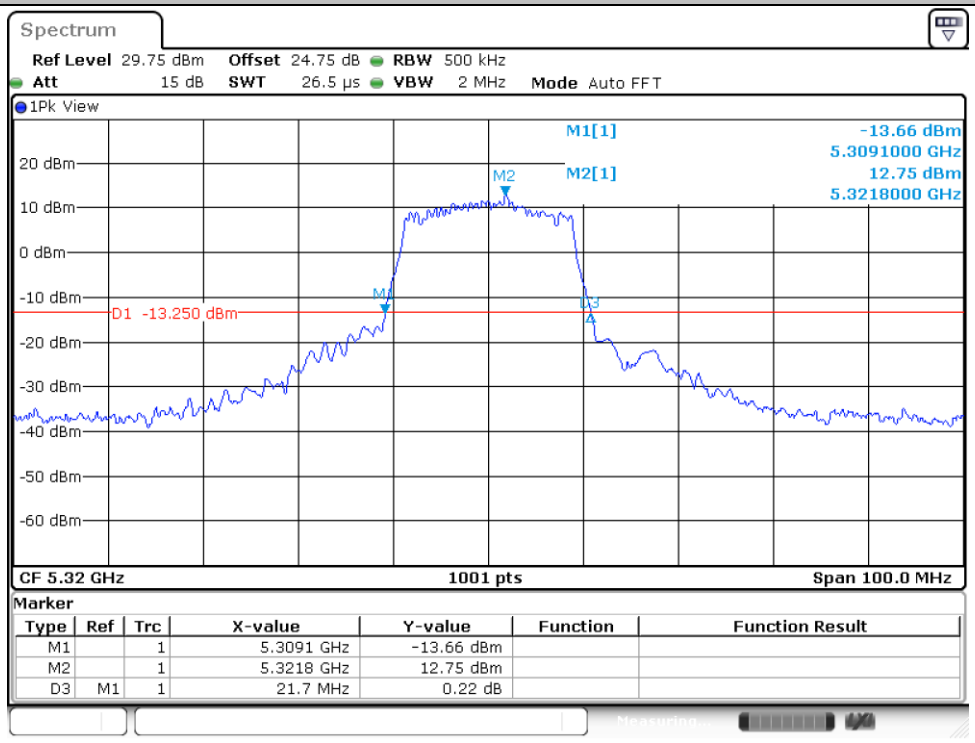
Date: 22.AUG.2025 01:39:01

11N20MIMO_Ant0_5320



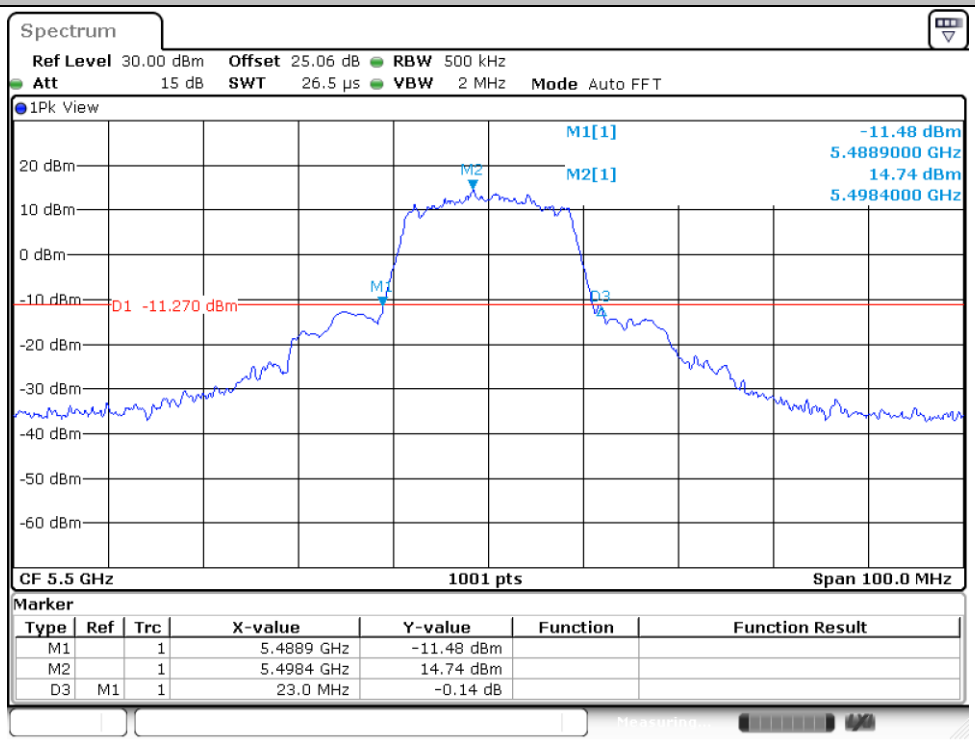
Date: 22.AUG.2025 01:39:25

11N20MIMO_Ant1_5320



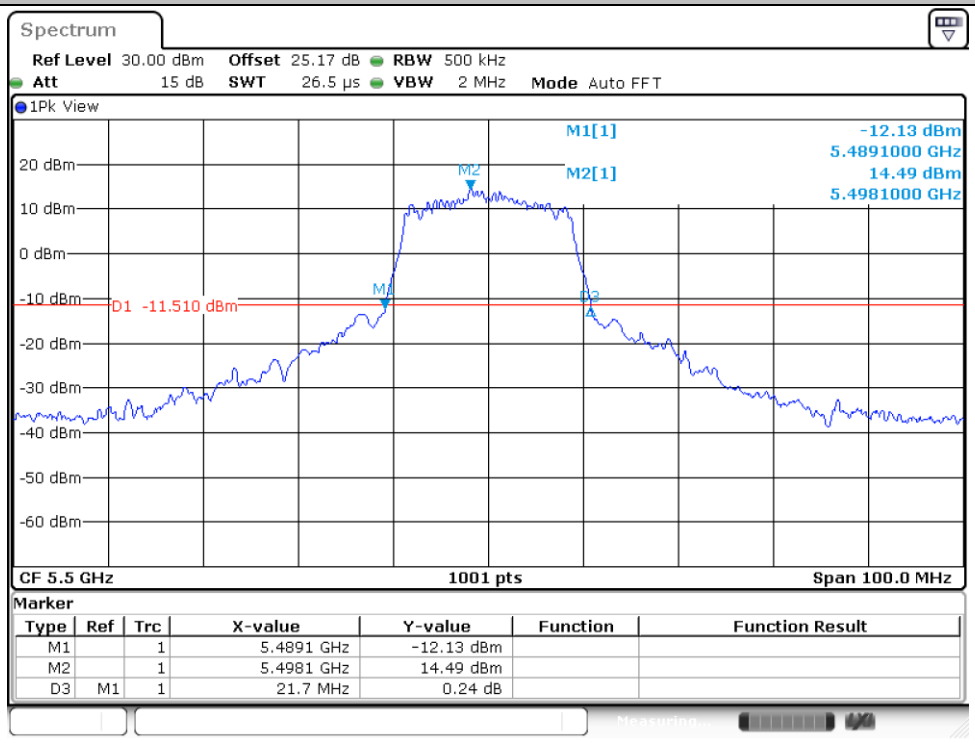
Date: 22.AUG.2025 01:39:40

11N20MIMO_Ant0_5500



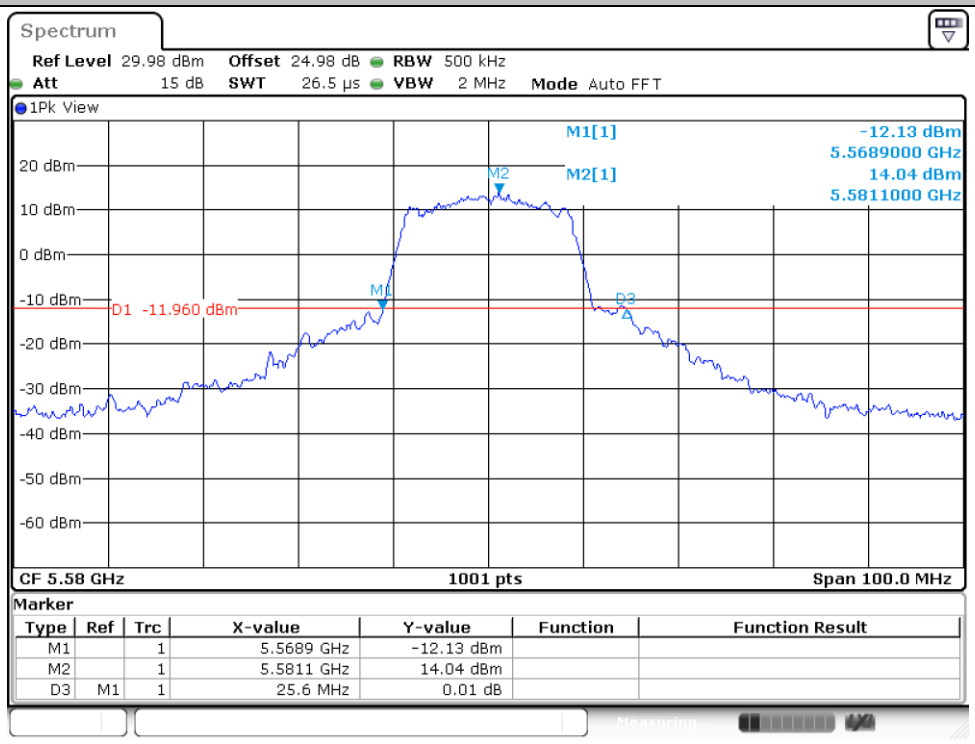
Date: 22.AUG.2025 01:40:03

11N20MIMO_Ant1_5500



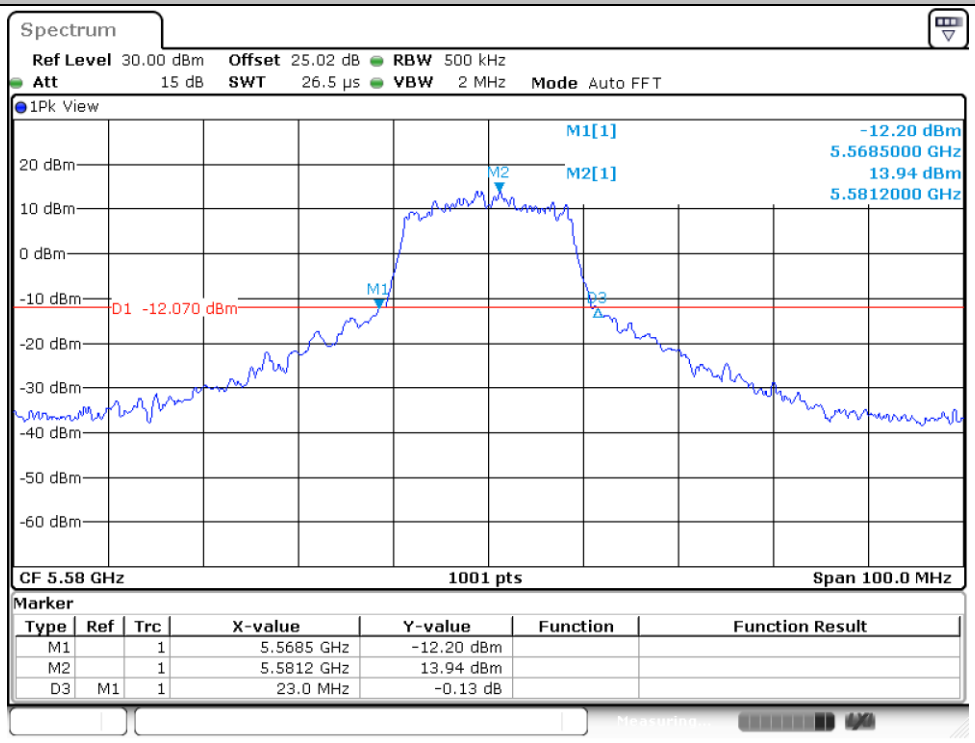
Date: 22.AUG.2025 01:40:18

11N20MIMO_Ant0_5580



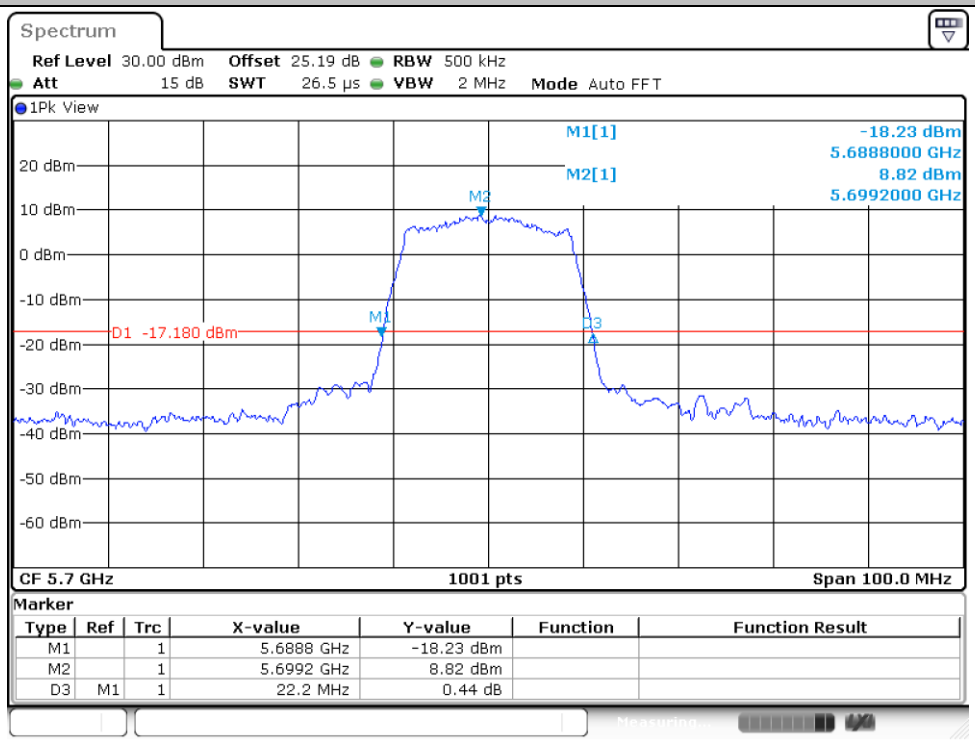
Date: 22.AUG.2025 01:40:46

11N20MIMO_Ant1_5580



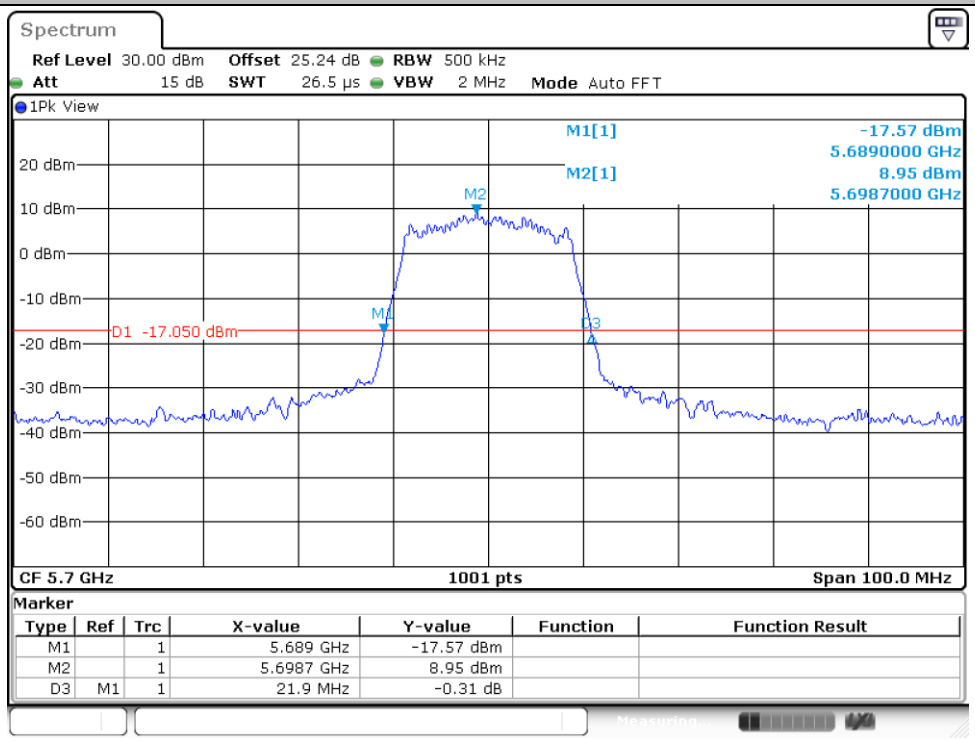
Date: 22.AUG.2025 01:41:01

11N20MIMO_Ant0_5700



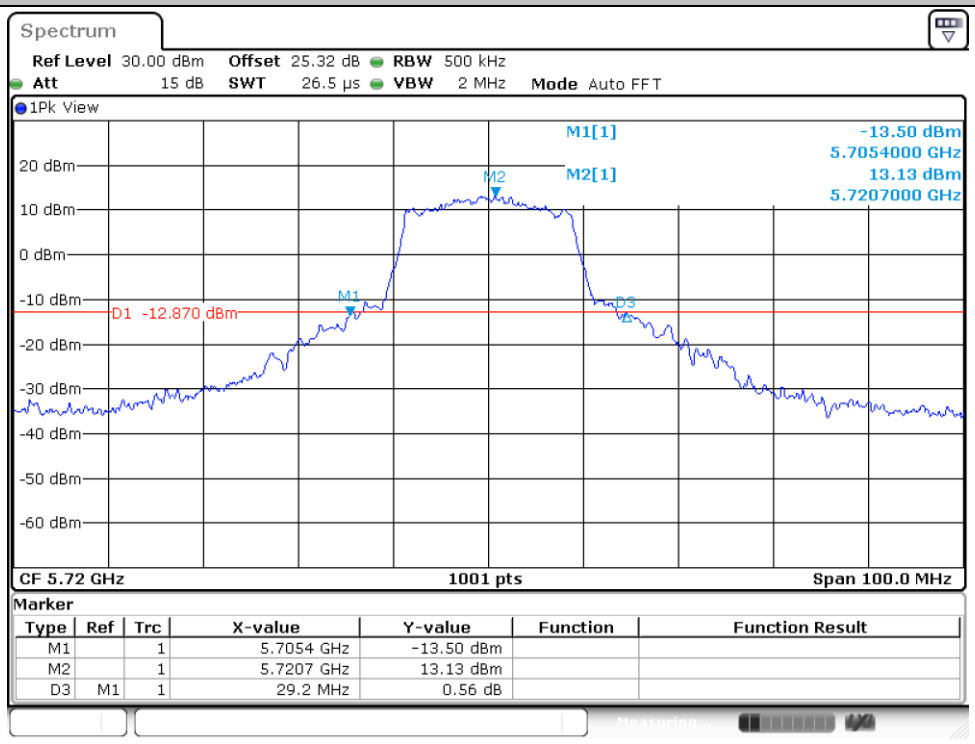
Date: 22.AUG.2025 01:41:25

11N20MIMO_Ant1_5700



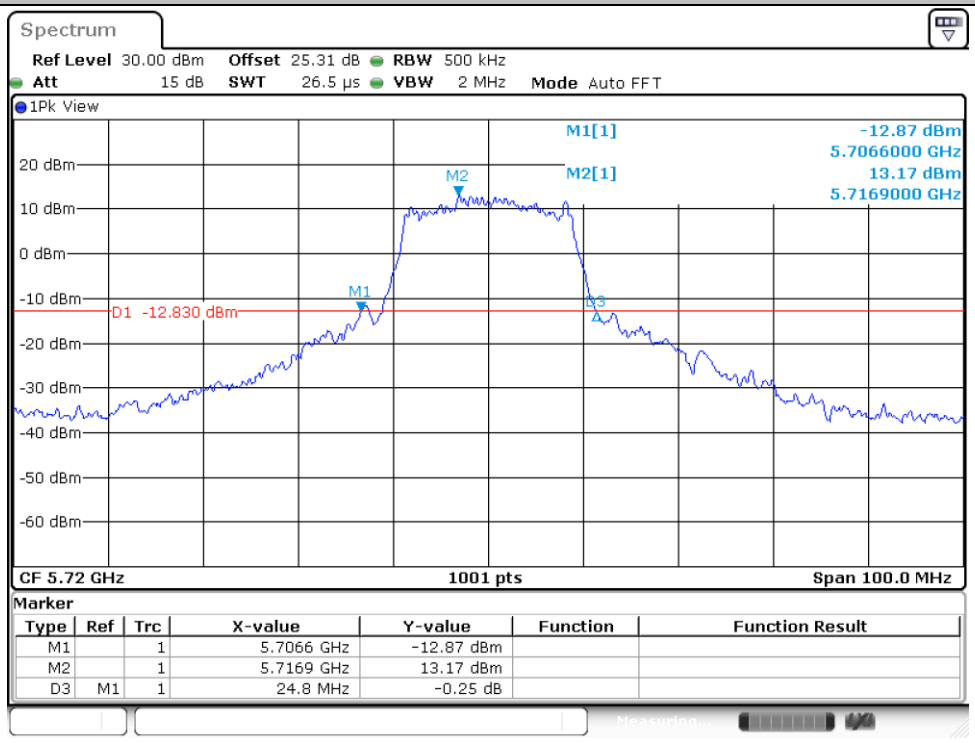
Date: 22.AUG.2025 01:41:41

11N20MIMO_Ant0_5720



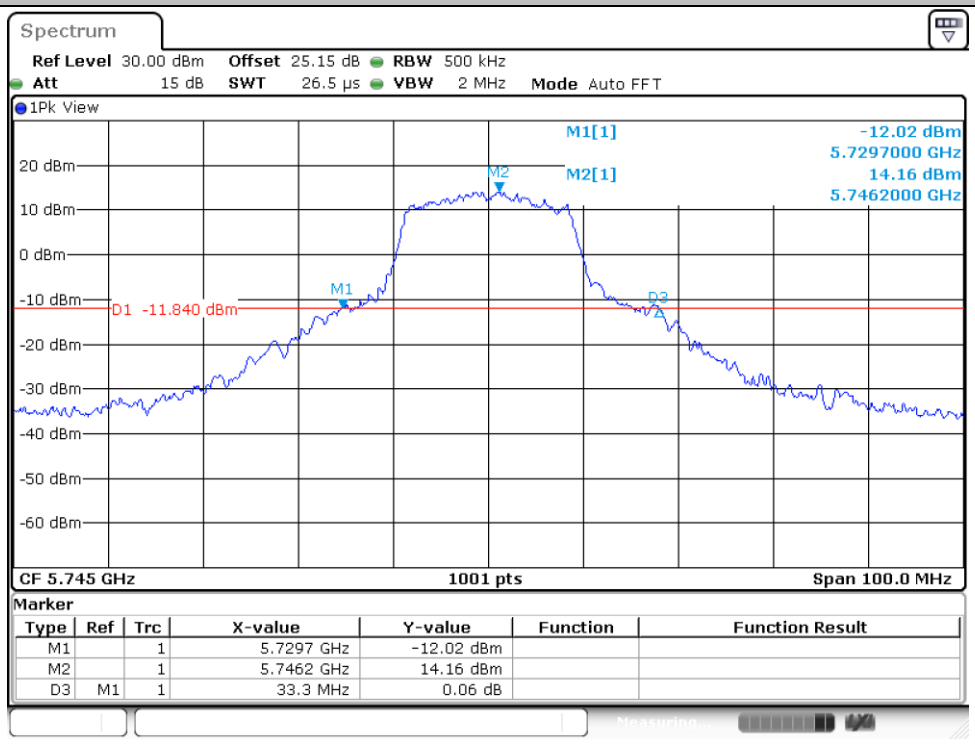
Date: 22.AUG.2025 01:42:04

11N20MIMO_Ant1_5720



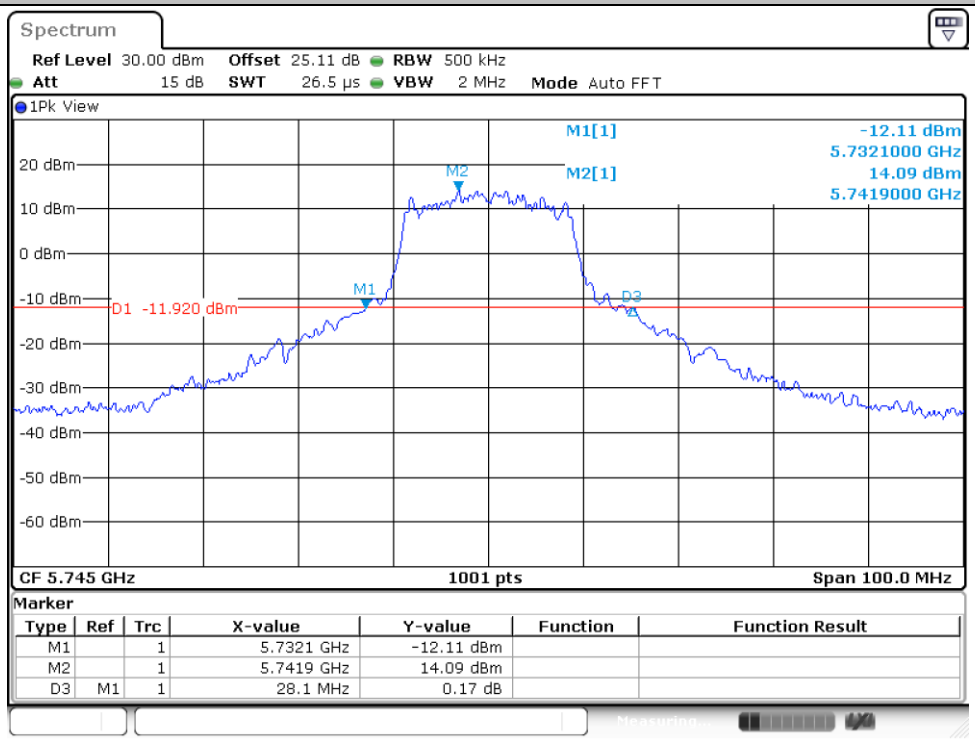
Date: 22.AUG.2025 01:42:20

11N20MIMO_Ant0_5745



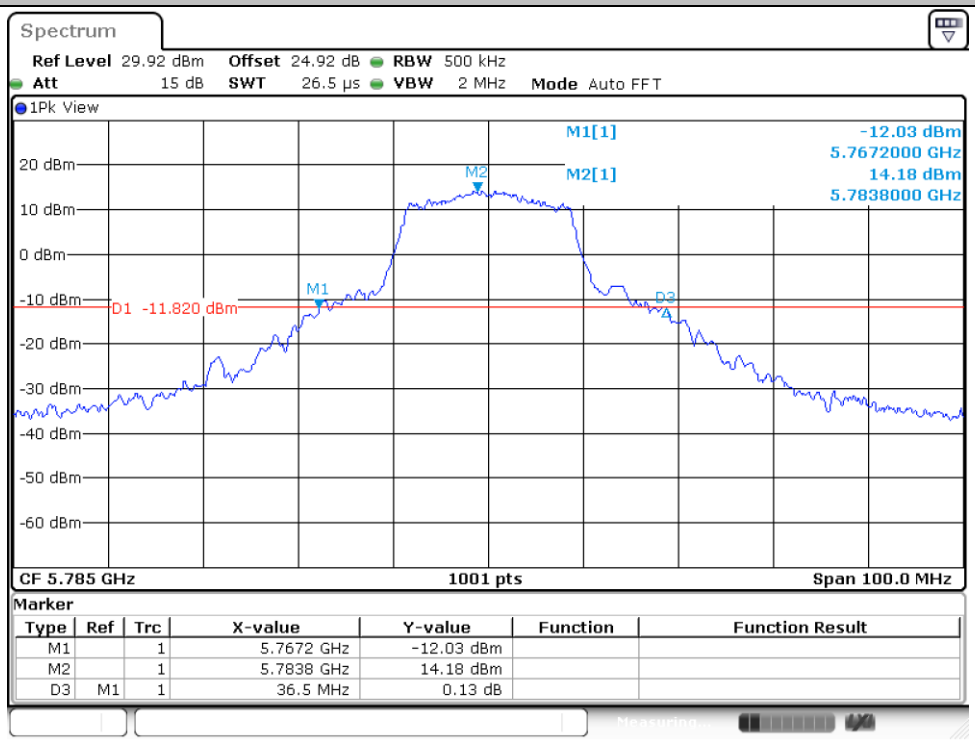
Date: 22.AUG.2025 01:42:47

11N20MIMO_Ant1_5745



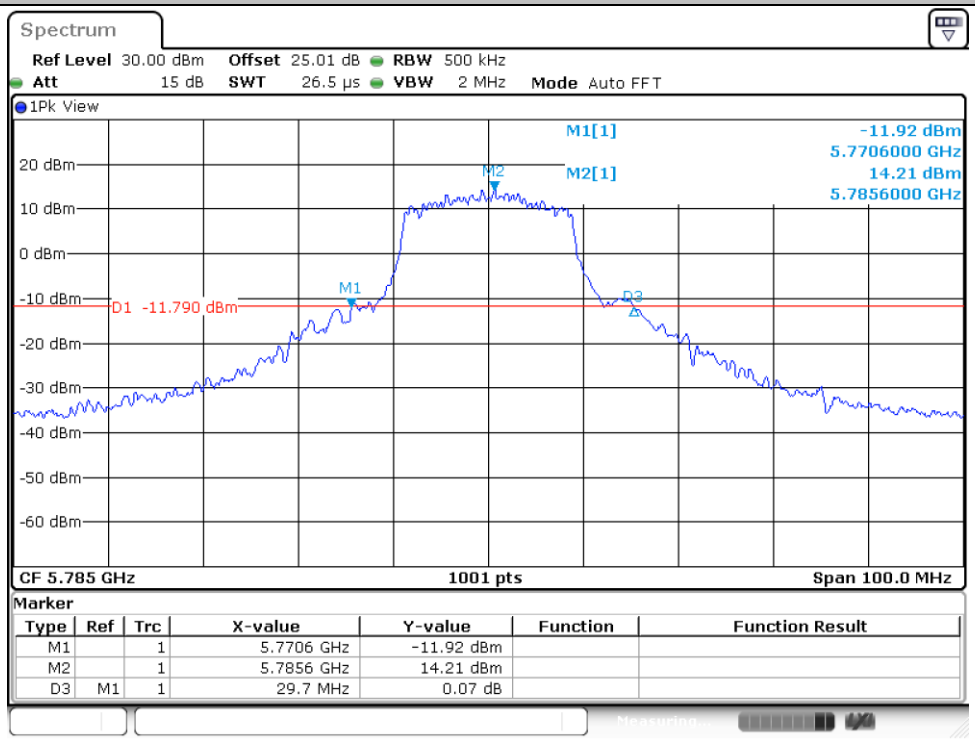
Date: 22.AUG.2025 01:43:03

11N20MIMO_Ant0_5785



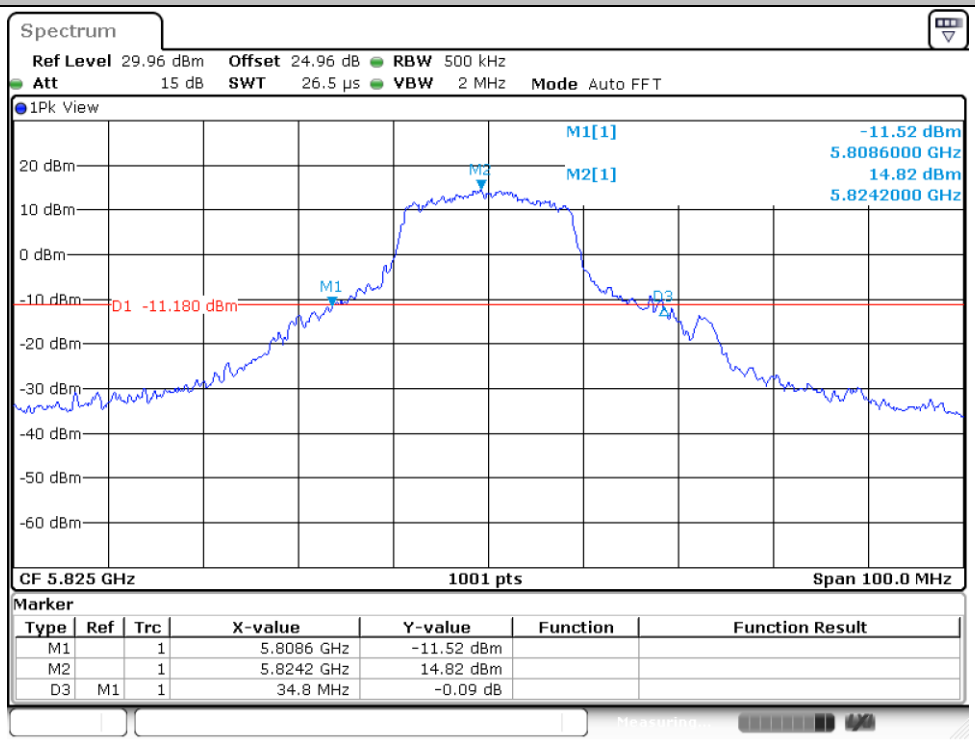
Date: 22.AUG.2025 01:43:29

11N20MIMO_Ant1_5785



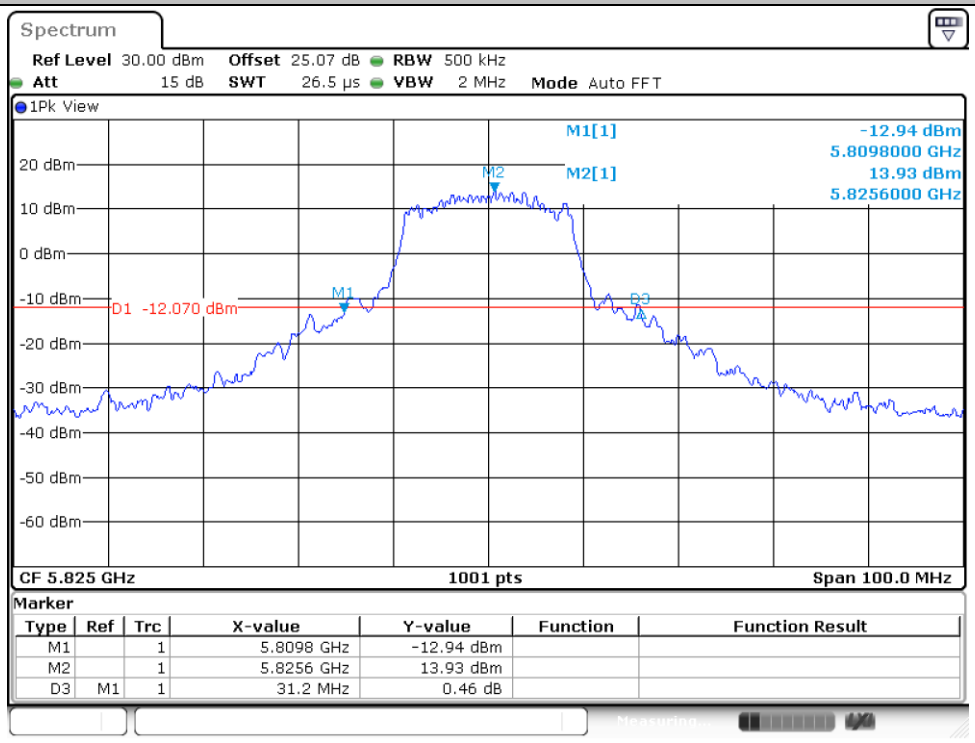
Date: 22.AUG.2025 01:43:45

11N20MIMO_Ant0_5825



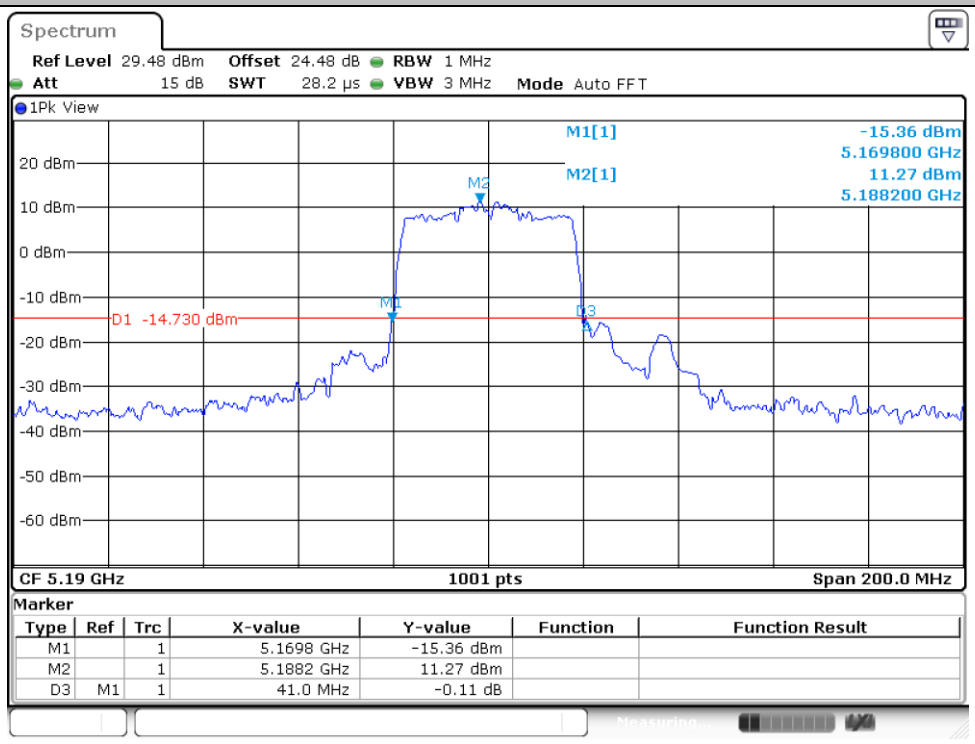
Date: 22.AUG.2025 01:44:08

11N20MIMO_Ant1_5825



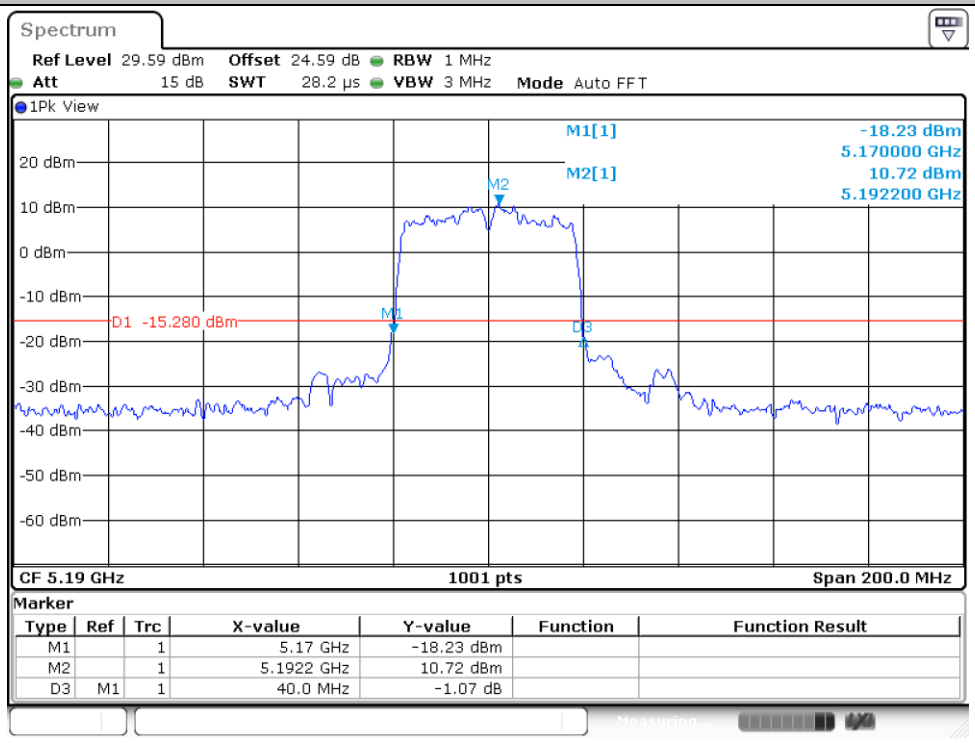
Date: 22.AUG.2025 01:44:24

11N40MIMO_Ant0_5190



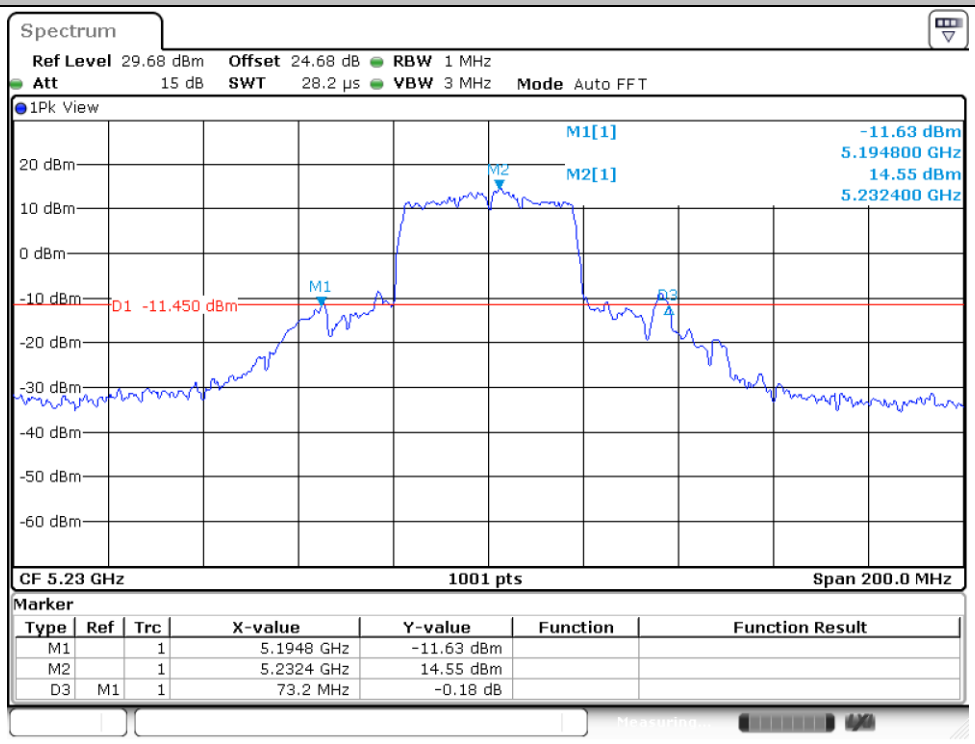
Date: 22.AUG.2025 01:45:52

11N40MIMO_Ant1_5190



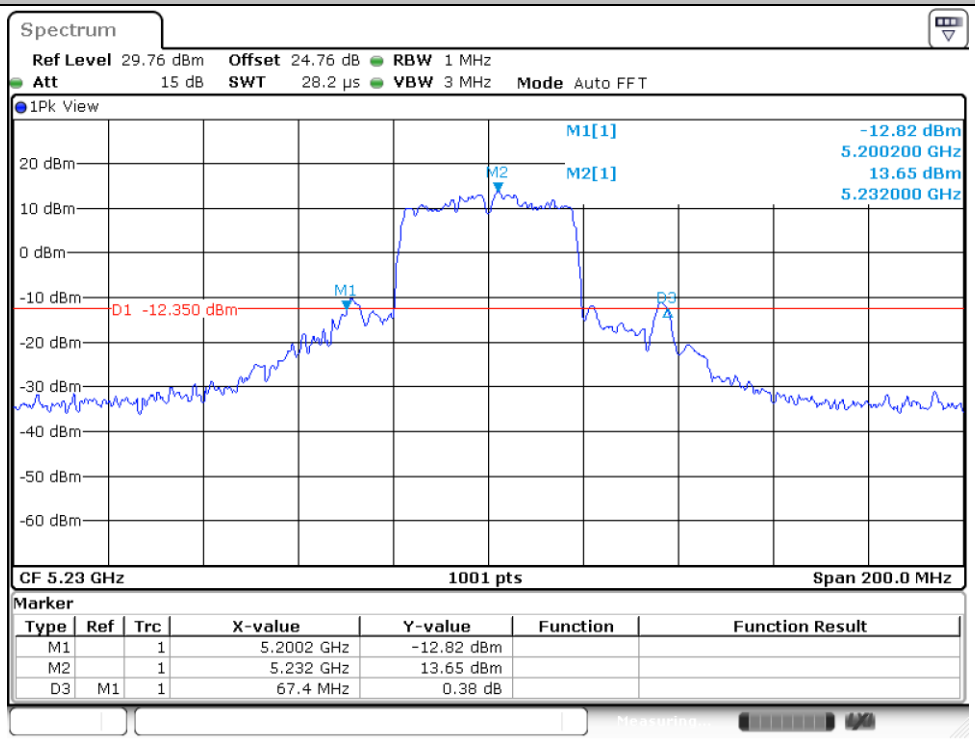
Date: 22.AUG.2025 01:46:08

11N40MIMO_Ant0_5230



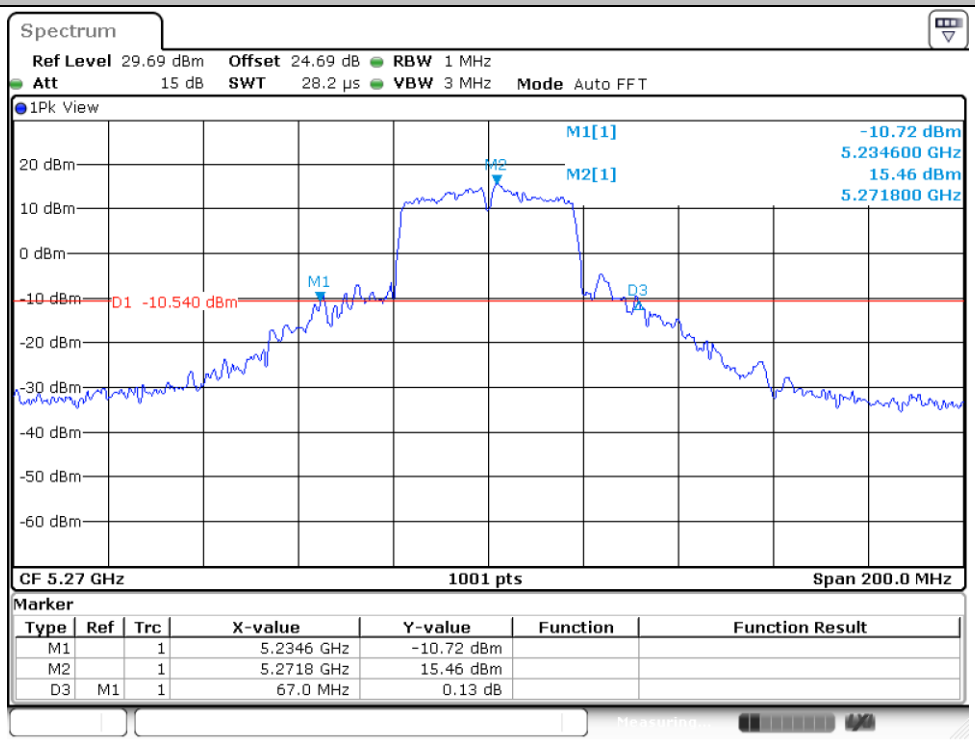
Date: 22.AUG.2025 01:47:03

11N40MIMO_Ant1_5230



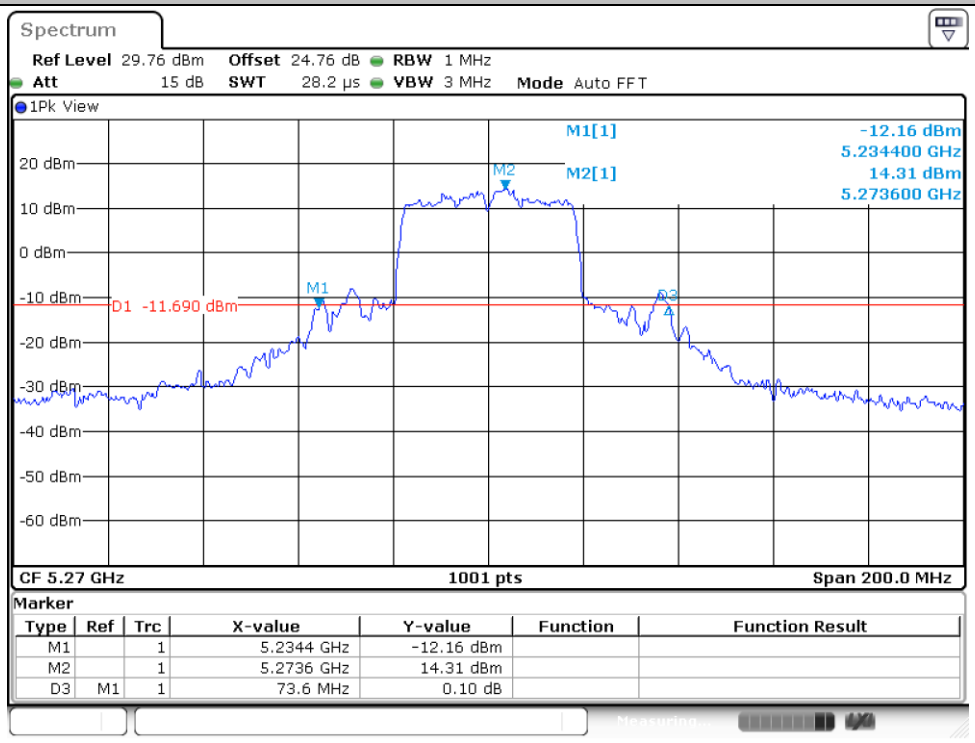
Date: 22.AUG.2025 01:47:18

11N40MIMO_Ant0_5270



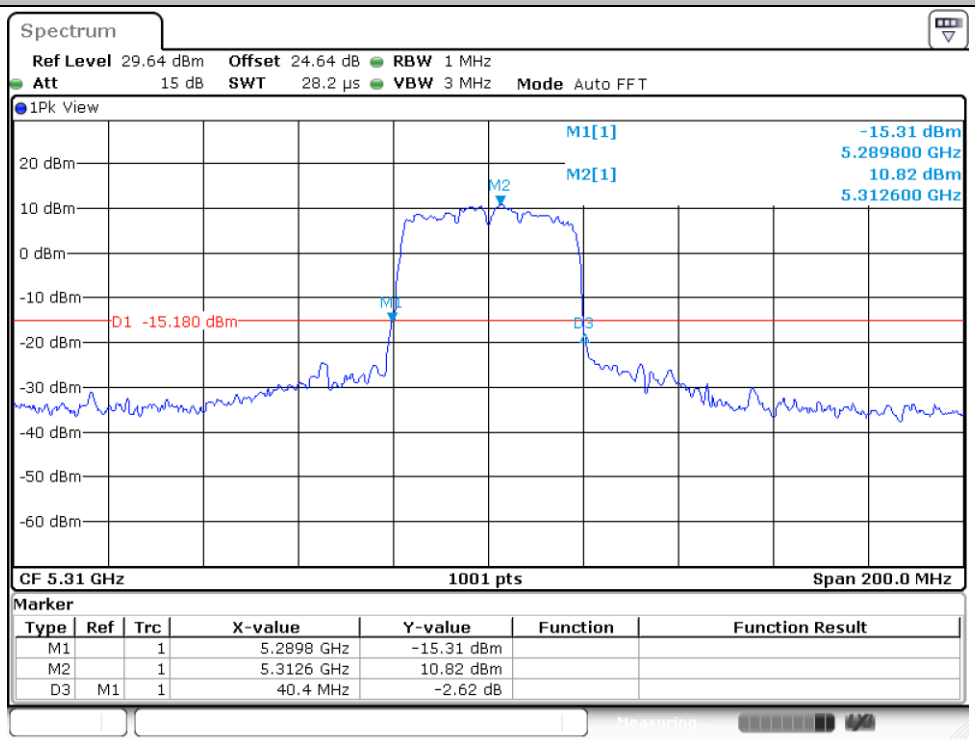
Date: 22.AUG.2025 01:47:59

11N40MIMO_Ant1_5270



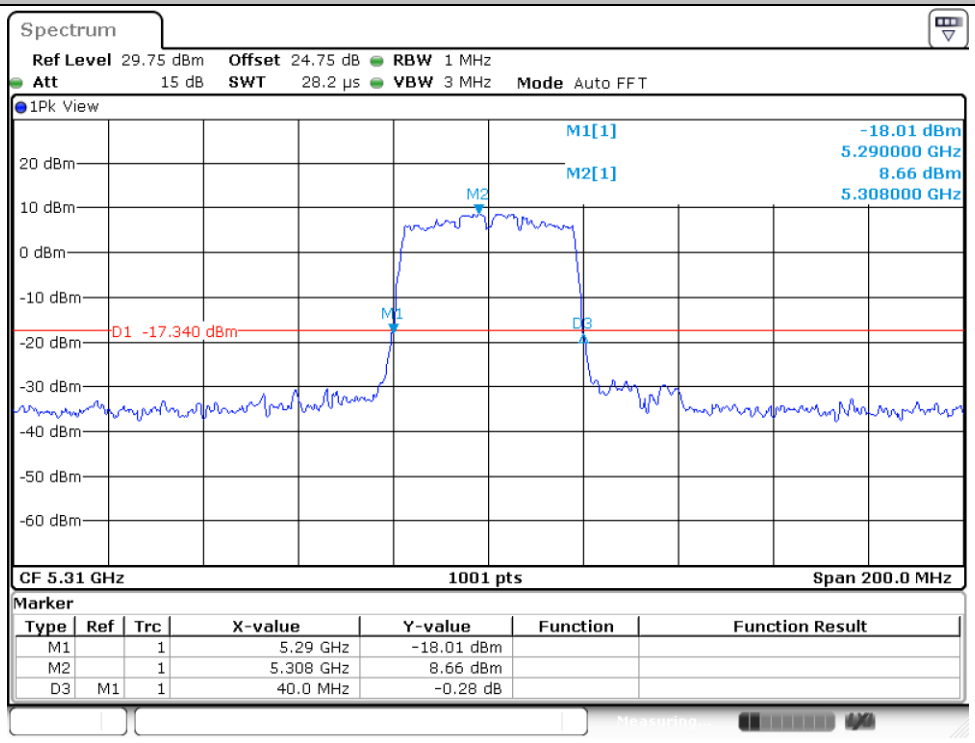
Date: 22.AUG.2025 01:48:15

11N40MIMO_Ant0_5310



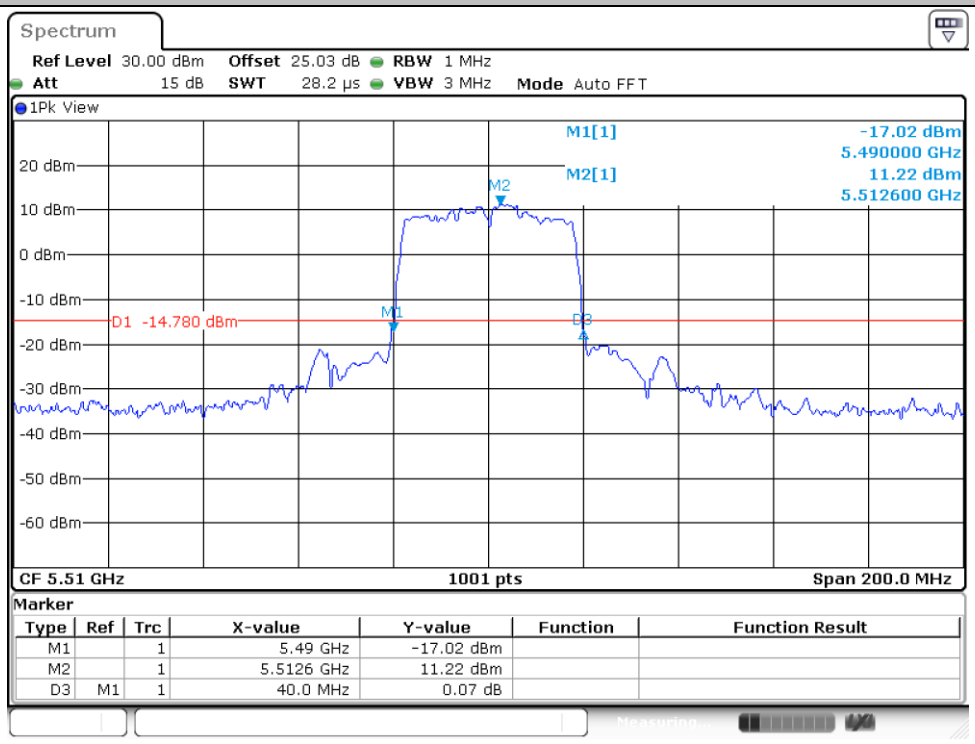
Date: 22.AUG.2025 01:48:39

11N40MIMO_Ant1_5310



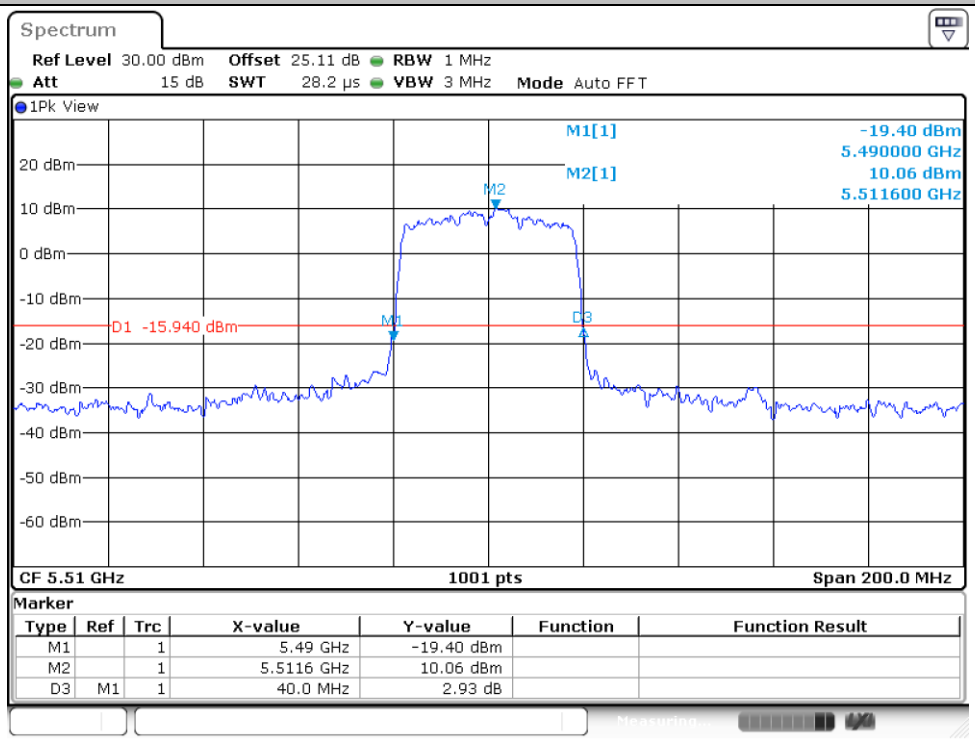
Date: 22.AUG.2025 01:48:54

11N40MIMO_Ant0_5510



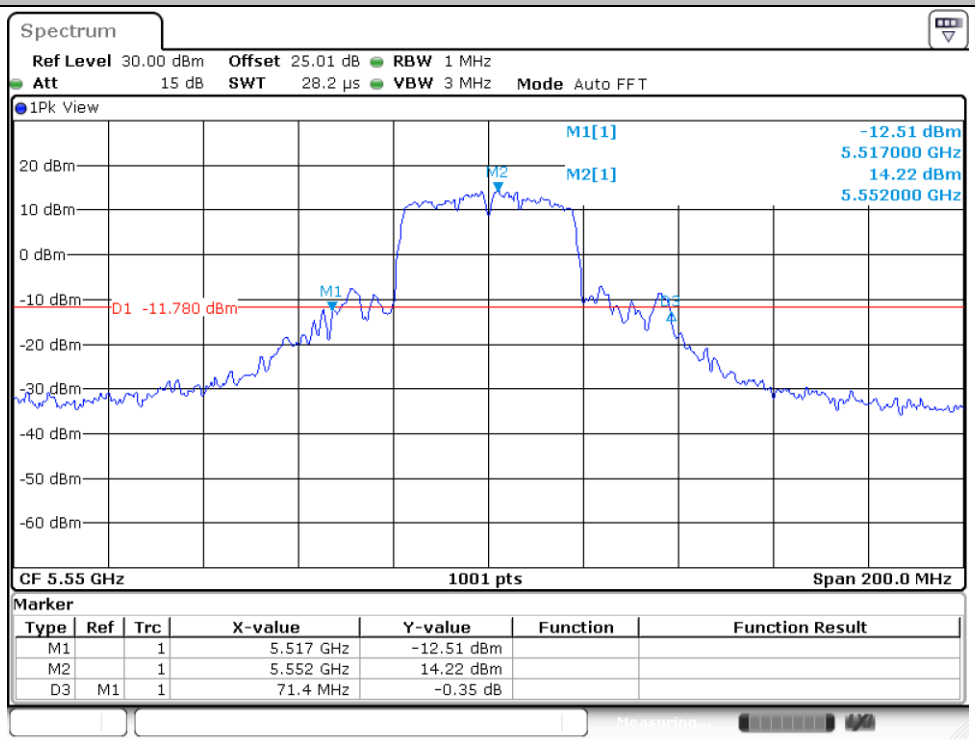
Date: 22.AUG.2025 01:49:18

11N40MIMO_Ant1_5510



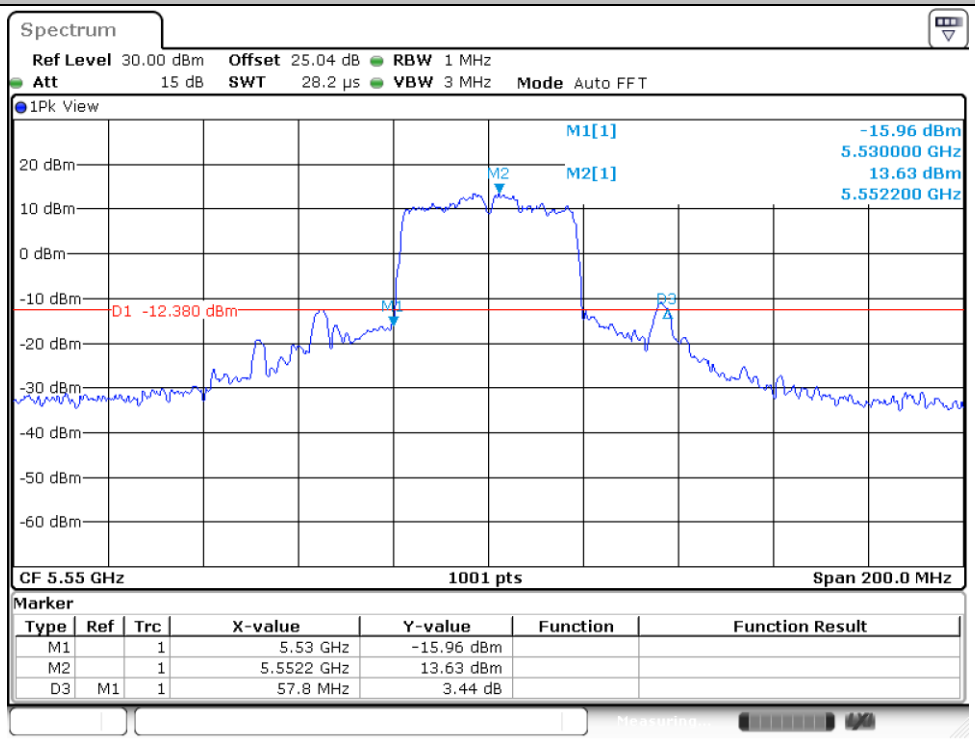
Date: 22.AUG.2025 01:49:34

11N40MIMO_Ant0_5550



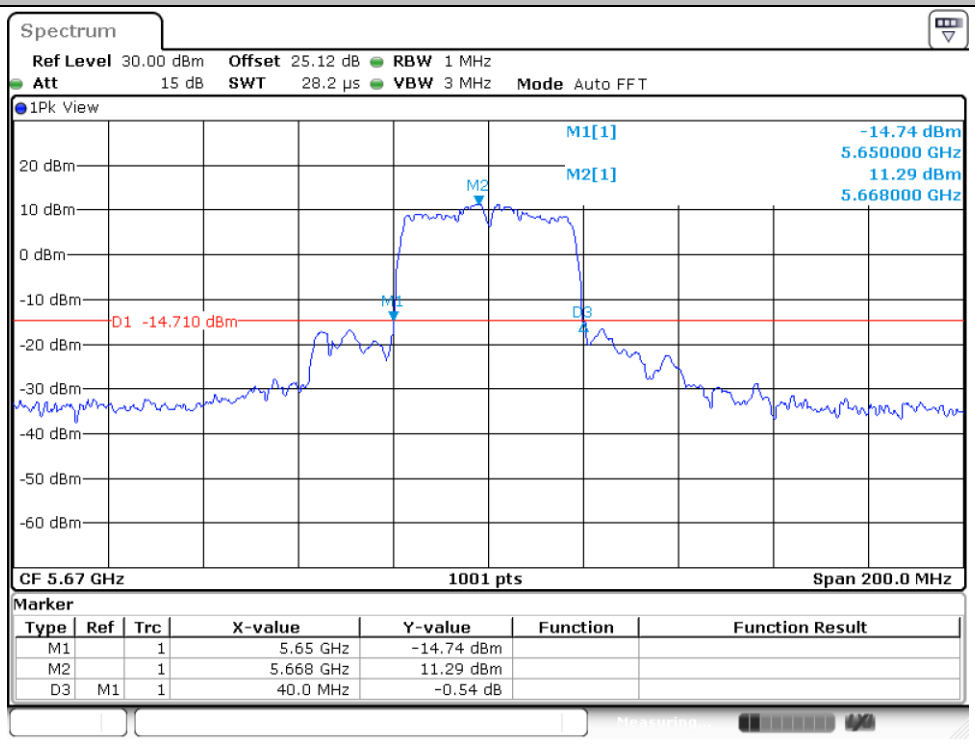
Date: 22.AUG.2025 01:49:56

11N40MIMO_Ant1_5550



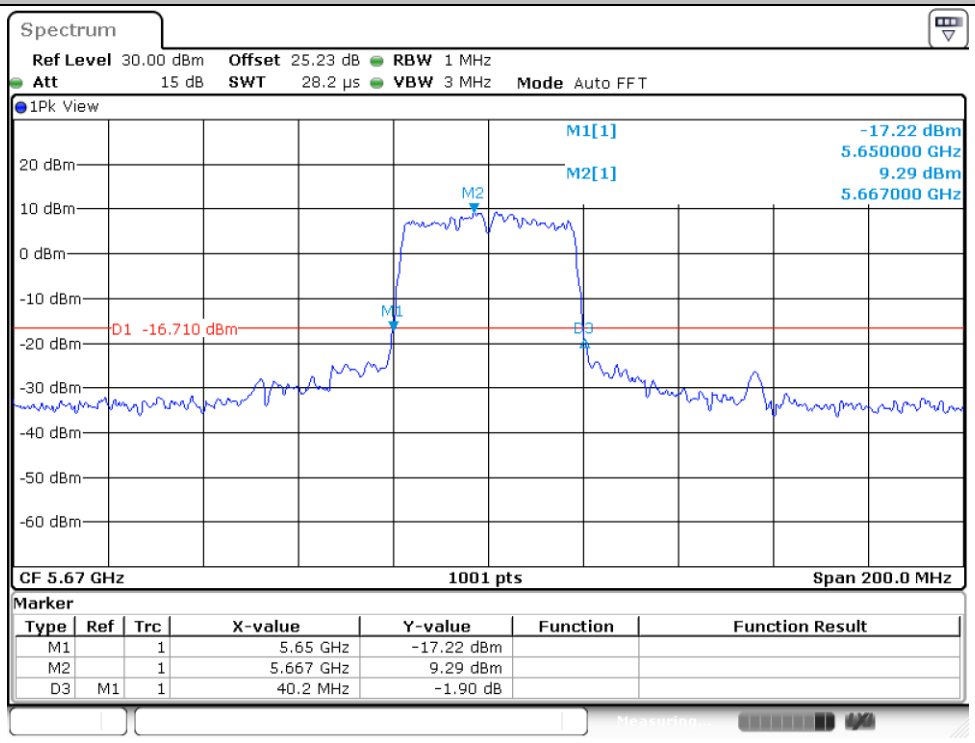
Date: 22.AUG.2025 01:50:12

11N40MIMO_Ant0_5670



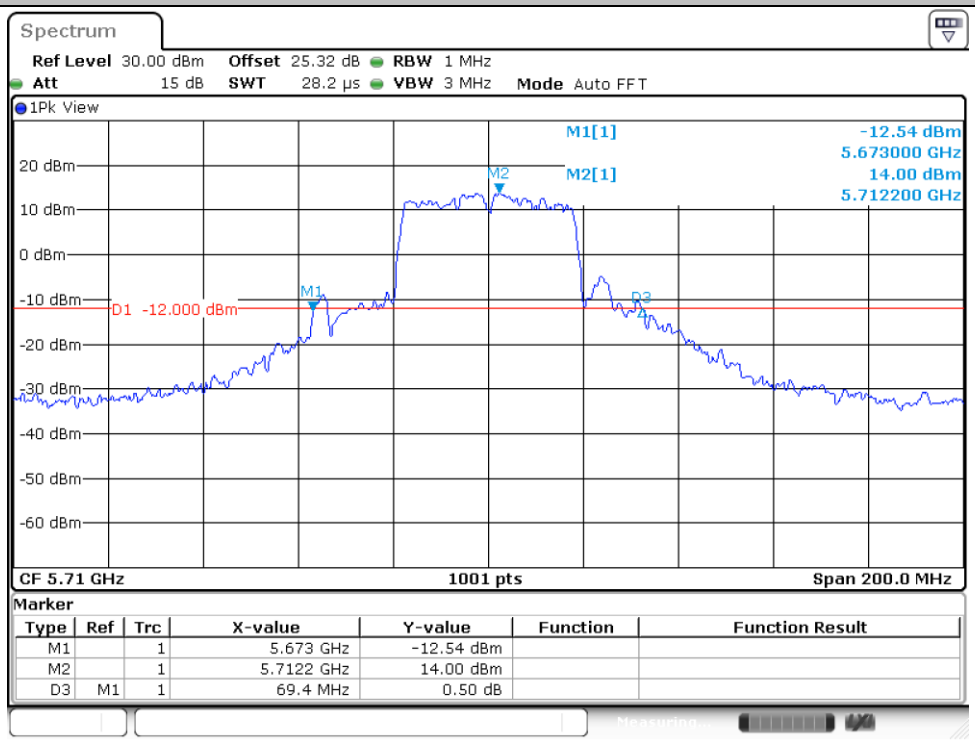
Date: 22.AUG.2025 01:50:33

11N40MIMO_Ant1_5670



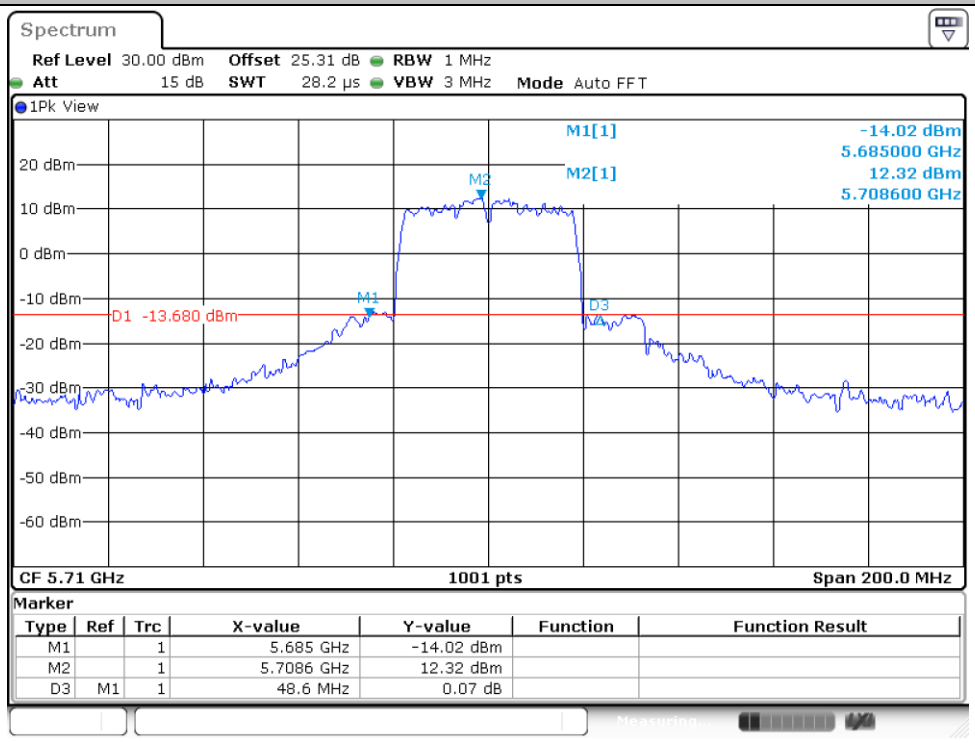
Date: 22.AUG.2025 01:50:49

11N40MIMO_Ant0_5710



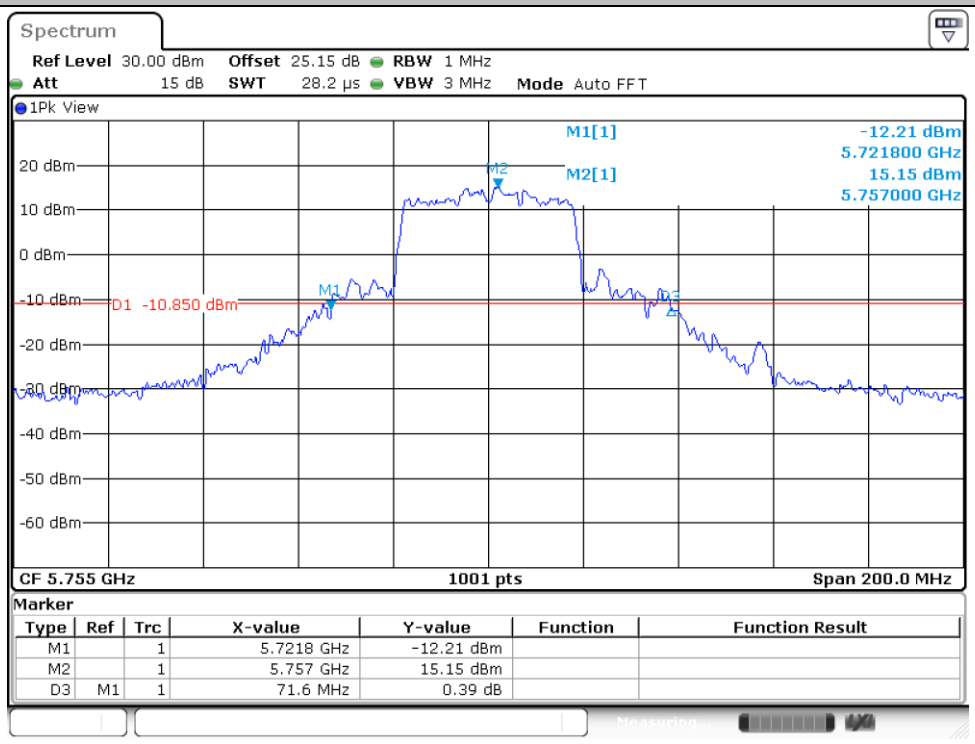
Date: 22.AUG.2025 01:51:12

11N40MIMO_Ant1_5710



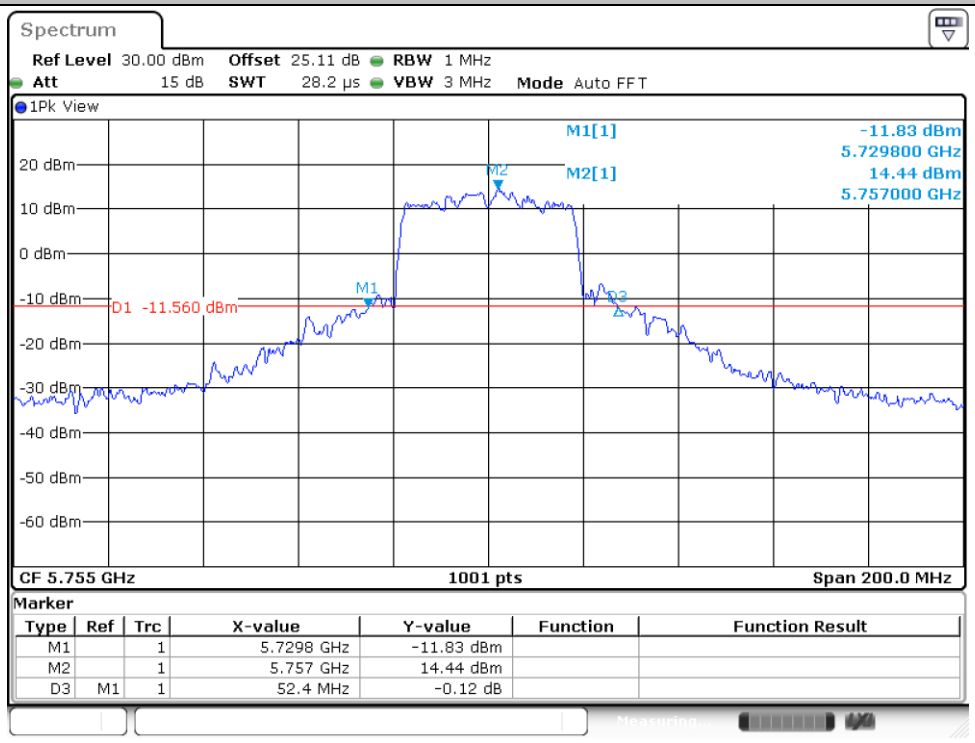
Date: 22.AUG.2025 01:51:28

11N40MIMO_Ant0_5755



Date: 22.AUG.2025 01:51:53

11N40MIMO_Ant1_5755



Date: 22.AUG.2025 01:52:08