FCC RF Test Report

APPLICANT	:	OnePlus Technology (Shenzhen) Co., Ltd.
EQUIPMENT	:	Mobile Phone
BRAND NAME	:	ONEPLUS,
MODEL NAME	:	CPH2655
FCC ID	:	2ABZ2-OP23895
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure
TEST DATE(S)	:	Aug. 08, 2024 ~ Sep. 06, 2024

We, Sporton International Inc. (ShenZhen), 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.

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR461101F	Rev. 01	Initial issue of report	Sep. 27, 2024

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)	6dB, 26dB & 99% Bandwidth	-	6dB Bandwidth > 500kHz	Pass	-
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 5.06 dB at 5725.030 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	15.207(a)	Pass	Under limit 15.97 dB at 0.17 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 Applicant

OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04, and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen, Guangdong, P.R. China.

1.2 Manufacturer

OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04, and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen, Guangdong, P.R. China.

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	ONEPLUS,
Model Name	CPH2655
FCC ID	2ABZ2-OP23895
IMEI Code	Conducted: 866493070031950/866493070031943 Conduction: 866493070032859/866493070032842 Radiation: 866493070032891/866493070032883
HW Version	11
SW Version	OxygenOS V15.0
EUT Stage	Production Unit

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5250 MHz 5250 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz 5745 MHz ~ 5825 MHz
Maximum Output Power to Antenna	**MIMO <Ant. 14 + 15>** **<5180 MHz ~ 5250 MHz>** 802.11a : 19.97 dBm / 0.0993 W 802.11n HT20 : 20.09 dBm / 0.1021 W 802.11n HT40 : 20.05 dBm / 0.1012 W 802.11ac VHT80: 20.13 dBm / 0.1030 W 802.11ac VHT160: 19.72 dBm / 0.0938 W 802.11ax HE20: 20.08 dBm / 0.1019 W 802.11ax HE40: 20.07 dBm / 0.1016 W 802.11ax HE80: 20.18 dBm / 0.1042 W 802.11ax HE160: 19.80 dBm / 0.0955 W 802.11be EHT20: 20.17 dBm / 0.1040 W 802.11be EHT40: 20.15 dBm / 0.1035 W 802.11be EHT80: 20.25 dBm / 0.1059 W 802.11be EHT160: 20.13 dBm / 0.1030 W **<5250 MHz ~ 5320 MHz>** 802.11a : 20.35 dBm / 0.1084 W 802.11n HT20 : 20.36 dBm / 0.1086 W 802.11n HT40 : 20.03 dBm / 0.1007 W 802.11ac VHT80: 20.12 dBm / 0.1028 W 802.11ax HE20: 20.33 dBm / 0.1079 W 802.11ax HE40: 20.12 dBm / 0.1028 W 802.11ax HE80: 20.16 dBm / 0.1038 W 802.11be EHT20: 20.40 dBm / 0.1096 W 802.11be EHT40: 20.21 dBm / 0.1050 W 802.11be EHT80: 20.24 dBm / 0.1057 W **<5500 MHz ~ 5700 MHz >** 802.11a : 20.07 dBm / 0.1016 W 802.11n HT20 : 20.10 dBm / 0.1023 W 802.11n HT40 : 20.22 dBm / 0.1052 W 802.11ac VHT80: 20.09 dBm / 0.1021 W 802.11ac VHT160: 19.89 dBm / 0.0975 W 802.11ax HE20: 20.24 dBm / 0.1057 W 802.11ax HE40: 20.24 dBm / 0.1057 W 802.11ax HE80: 20.00 dBm / 0.1000 W 802.11ax HE160: 19.83 dBm / 0.0962 W 802.11be EHT20: 20.38 dBm / 0.1091 W 802.11be EHT40: 20.31 dBm / 0.1074 W 802.11be EHT80: 20.09 dBm / 0.1021 W 802.11be EHT160: 20.15 dBm / 0.1035 W **<5745 MHz ~ 5825 MHz>** 802.11a : 21.53 dBm / 0.1422 W 802.11n HT20 : 21.54 dBm / 0.1426 W 802.11n HT40 : 21.59 dBm / 0.1442 W 802.11ac VHT80: 21.58 dBm / 0.1439 W 802.11ax HE20: 20.94 dBm / 0.1242 W 802.11ax HE40: 21.02 dBm / 0.1265 W

	802.11ax HE80: 21.05 dBm / 0.1274 W 802.11be EHT20: 20.79 dBm / 0.1199 W 802.11be EHT40: 20.79 dBm / 0.1199 W 802.11be EHT80: 21.14 dBm / 0.1300 W
99% Occupied Bandwidth	**<5180 MHz ~ 5250 MHz>** 802.11a : 17.566 MHz 802.11n HT20 : 18.61 MHz 802.11n HT40 : 37.308 MHz 802.11ac VHT80 : 77.624 MHz 802.11ac VHT160 : 159.312 MHz 802.11ax HE20: 19.358 MHz 802.11ax HE40: 38.388 MHz 802.11ax HE80: 78.104 MHz 802.11ax HE160: 159.824 MHz 802.11be EHT20: 19.506 MHz 802.11be EHT40: 38.492 MHz 802.11be EHT80: 78.2 MHz 802.11be EHT160: 159.952 MHz **<5250 MHz ~ 5320 MHz>** 802.11a : 17.638 MHz 802.11n HT20 : 18.626 MHz 802.11n HT40 : 37.3 MHz 802.11ac VHT80 : 77.256 MHz 802.11ax HE20: 19.462 MHz 802.11ax HE40: 38.996 MHz 802.11ax HE80: 78.392 MHz 802.11be EHT20: 19.534 MHz 802.11be EHT40: 38.348 MHz 802.11be EHT80: 77.944 MHz **<5500 MHz ~ 5700 MHz>** 802.11a : 17.422 MHz 802.11n HT20 : 18.55 MHz 802.11n HT40 : 37.484 MHz 802.11ac VHT80 : 77.448 MHz 802.11ac VHT160 : 159.536 MHz 802.11ax HE20: 19.542 MHz 802.11ax HE40: 38.468 MHz 802.11ax HE80: 78.632 MHz 802.11ax HE160: 160.048 MHz 802.11be EHT20: 19.47 MHz 802.11be EHT40: 38.5 MHz 802.11be EHT80: 78.328 MHz 802.11be EHT160: 160.176 MHz **<5745 MHz ~ 5825 MHz>** 802.11a : 17.434 MHz 802.11n HT20 : 18.55 MHz 802.11n HT40 : 37.228 MHz 802.11ac VHT80 : 77.304 MHz 802.11ax HE20: 19.514 MHz 802.11ax HE40: 38.428 MHz 802.11ax HE80: 78.68 MHz 802.11be EHT20: 19.454 MHz 802.11be EHT40: 38.532 MHz 802.11be EHT80: 78.168 MHz

<table>
<tr><td>Antenna Type / Gain</td><td><5180 MHz ~ 5240 MHz>
<Ant. 14>: IFA Antenna with gain -2.5 dBi
<Ant. 15>: IFA Antenna with gain -2.0 dBi
<5260 MHz ~ 5320 MHz>
<Ant. 14>: IFA Antenna with gain -2.0 dBi
<Ant. 15>: IFA Antenna with gain -0.7 dBi
<5500 MHz ~ 5700 MHz>
<Ant. 14>: IFA Antenna with gain 1.5 dBi
<Ant. 15>: IFA Antenna with gain 1.0 dBi
<5745 MHz ~ 5825 MHz>
<Ant. 14>: IFA Antenna with gain 1.0 dBi
<Ant. 15>: IFA Antenna with gain 1.0 dBi</td></tr>
<tr><td>Type of Modulation</td><td>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)
802.11be : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM / 4096QAM)</td></tr>
<tr><td>Antenna Function Description</td><td><table><tr><td></td><td>Ant. 14</td><td>Ant. 15</td></tr><tr><td>802.11 a/n/ac/ax/be</td><td>V</td><td>V</td></tr><tr><td>802.11 a/n/ac/ax/be MIMO</td><td>V</td><td>V</td></tr></table></td></tr>
</table>

Note:

1. WLAN MIMO support CDD mode.
2. The device support WLAN SISO & MIMO mode. For 802.11ac VHT160/ax HE160/be EHT160 mode, the whole testing has assessed only MIMO mode by referring to the higher normal output power.
3. For 802.11ac mode, the 11ac VHT20/ VHT40 power is set less than 11ax HE20/HE40 power, thus the whole testing have assessed only 802.11ax HE20/HE40 by referring to the higher output power.
4. For 6dB, 26dB & 99% Bandwidth test items, the whole testing has assessed ant 14 only by referring to the higher output power.
5. 802.11ax/be support OFDMA full RU tone and partial RU tone.
6. 802.11be support small size RU, Large size RU and Puncturing modes as below, and these partial RU Power/PSD less than full RU, therefore these partial RU only assess Power Density/RSE

<Small size RU 52+26 Tone>:

Bandwidth	Tones		Index		For test modes configure
20MHz	26	52	1	38	1
20MHz	52	26	38	4	2
20MHz	52	26	39	7	3

<Small size RU 106+26 Tone>:

Bandwidth	Tones		Index		For test modes configure
20MHz	106	26	53	4	1
20MHz	26	106	4	54	2

<Large size RU 484+242 tone> & <80M BW Puncturing 20MHz>:

Bandwidth	Tones		Index		For test modes configure
80MHz	242	484	62	66	1
80MHz	242	484	61	66	2
80MHz	484	242	65	64	3
80MHz	484	242	65	63	4

<Large size RU 996+484 tone> & <160M BW Puncturing 40MHz>:

Bandwidth	Tones		Index		For test modes configure
160MHz	484-Left	996-Right	66-Left	67-Right	1
160MHz	484-Left	996-Right	65-Left	67-Right	2
160MHz	996-Left	484-Right	67-Left	66-Right	3
160MHz	996-Left	484-Right	67-Left	65-Right	4

<Large size RU 996+484+242 tone> & <160M BW Puncturing 20MHz>:

Bandwidth	Tones			Index			For test modes configure
160MHz	242-Left	484-Left	996-Right	62-Left	66-Left	67-Right	1
160MHz	242-Left	484-Left	996-Right	61-Left	66-Left	67-Right	2
160MHz	484-Left	242-Left	996-Right	65-Left	64-Left	67-Right	3
160MHz	484-Left	242-Left	996-Right	65-Left	63-Left	67-Right	4
160MHz	996-Left	242-Right	484-Right	67-Left	62-Right	66-Right	5
160MHz	996-Left	242-Right	484-Right	67-Left	61-Right	66-Right	6
160MHz	996-Left	484-Right	242-Right	67-Left	65-Right	64-Right	7
160MHz	996-Left	484-Right	242-Right	67-Left	65-Right	63-Right	8

Only the worse cases are shown in this report.

7. The worse cases of RSE for partial RU, Large size RU and small size RU are shown in this report.

1.5 Modification of EUT

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

1.6 Testing Location

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	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-SZ TH01-SZ	CN1256	421272

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.**
	03CH04-SZ	CN1256	421272

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-SZ	AUDIX	E3	6.2009-8-24
2.	CO01-SZ	AUDIX	E3	6.120613b

1.8 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 C63.10-2013

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/Z 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)
5180-5250 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)
5250-5320 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)
5500-5700MHz 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

Note:

1. The above Frequency and Channel in "*" are 40MHz bandwidth.
2. The above Frequency and Channel in "#" are 80MHz bandwidth.
3. The above Frequency and Channel in "##" are 160MHz bandwidth.

2.2 Test Mode

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

MIMO and SISO Mode

Modulation	Data Rate
802.11a	**6 Mbps**
802.11n HT20	**MCS0**
802.11n HT40	**MCS0**
802.11ac VHT20 Covered by HE20	**MCS0**
802.11ac VHT40 Covered by HE40	**MCS0**
802.11ac VHT80	**MCS0**
802.11ac VHT160	**MCS0**
802.11ax HE20	**MCS0**
802.11ax HE40	**MCS0**
802.11ax HE80	**MCS0**
802.11ax HE160	**MCS0**
802.11be EHT20	**MCS0**
802.11be EHT40	**MCS0**
802.11be EHT80	**MCS0**
802.11be EHT160	**MCS0**

AC Conducted Emission	Mode 1 : GSM850 Idle + BT Link + WLAN Link(5G) + USB Cable 1(Charging from adapter 1) + Battery 1
Remark: For Radiated Test Cases, The tests were performance with Adapter 1, Battery 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	100	149
M	Middle	44	60	116	157
H	High	48	64	140	165

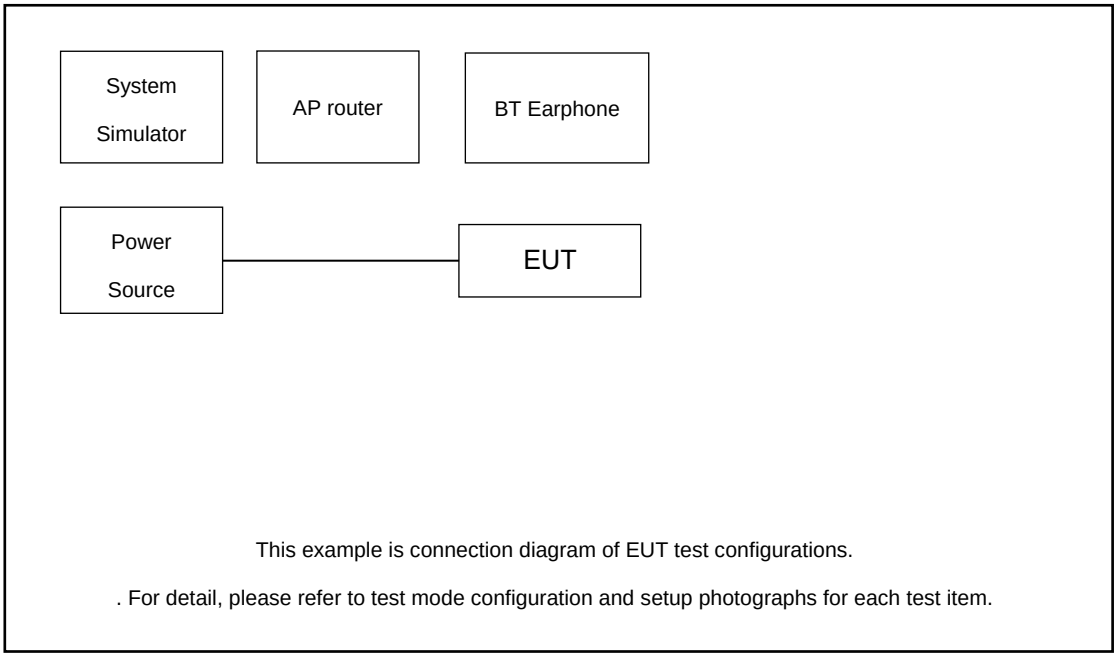
Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		40M BW	40M BW	40M BW	40M BW
L	Low	38	54	102	151
M	Middle	-	-	110	-
H	High	46	62	134	159

Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		80M BW	80M BW	80M BW	80M BW
L	Low	-	-	106	-
M	Middle	42	58	-	155
H	High	-	-	-	-

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

2.3 Connection Diagram of Test System

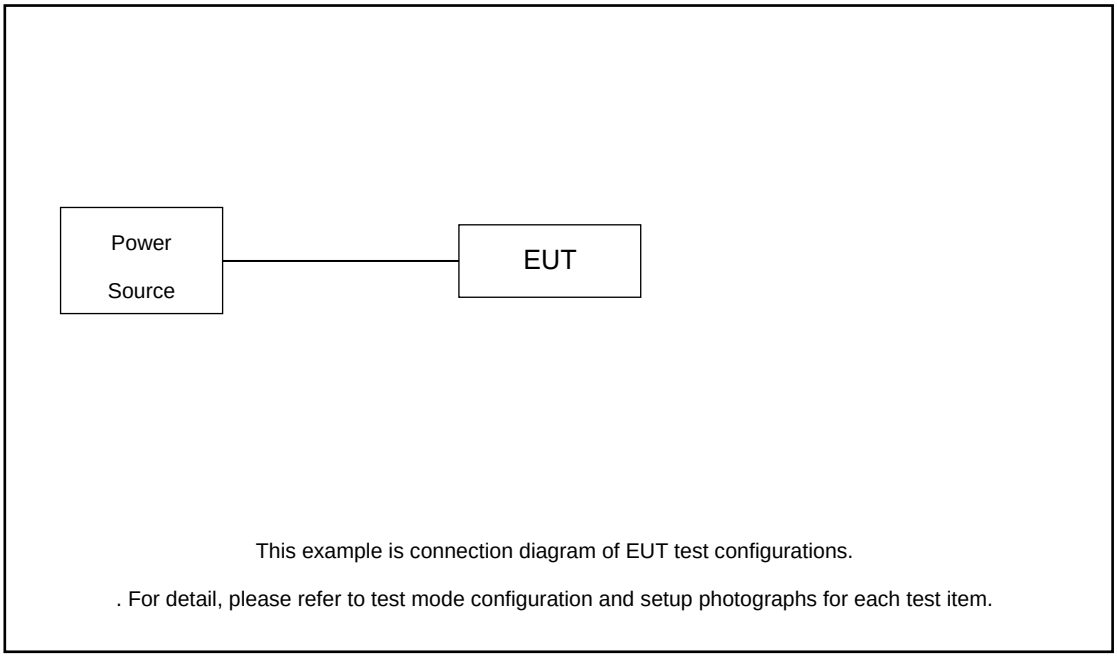
For AC Conducted Emission:



This example is connection diagram of EUT test configurations.

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

For 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.	Base Station(LTE)	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
3.	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 continuously 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 2.8 dB and 10dB attenuator.

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

= 2.8 + 10 = 12.8 (dB)

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

3.1.2 Measuring Instruments

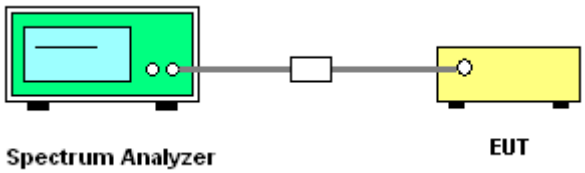
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

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

☒	Section C) Bandwidth Measurement 1. Emission Bandwidth (EBW) and 99% OBW
	1. Set RBW = approximately 1% 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 approximately 1%. **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 = 100kHz. **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 6dB and 26dB and 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.

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.

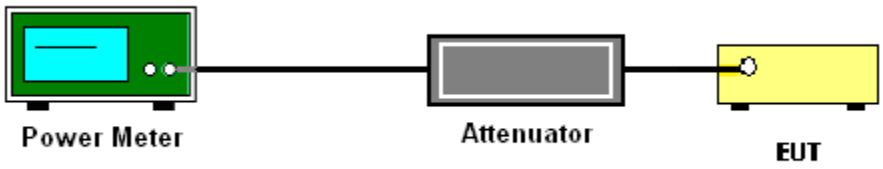
3.2.3 Test Procedures

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.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

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.

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 v01r04. Section F) Maximum power spectral density.

For devices operating in the bands UNII-1/2A/2C

 # 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.

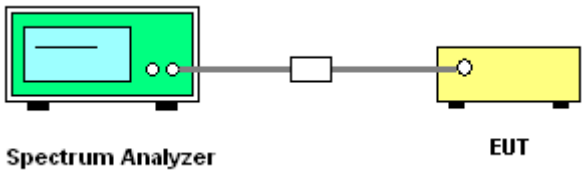
   UNII-1/2A/2C for Method (a): Measure and sum the spectra across the outputs.

   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 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

   UNII-3 for Method (b): Measure and sum spectral maxima across the outputs.

   The measurement on each individual output were performed with the same span and number on each individual output. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs.

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 as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

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 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) For transmitters operating in the 5.725-5.85 GHz band:
15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz 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 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 at the band edge.

(3) 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

(4) EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

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

3.4.2 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 v01r04. 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

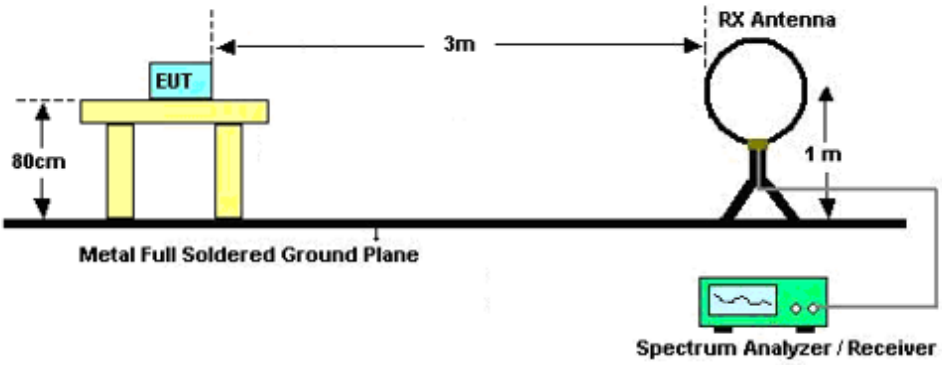
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - 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.

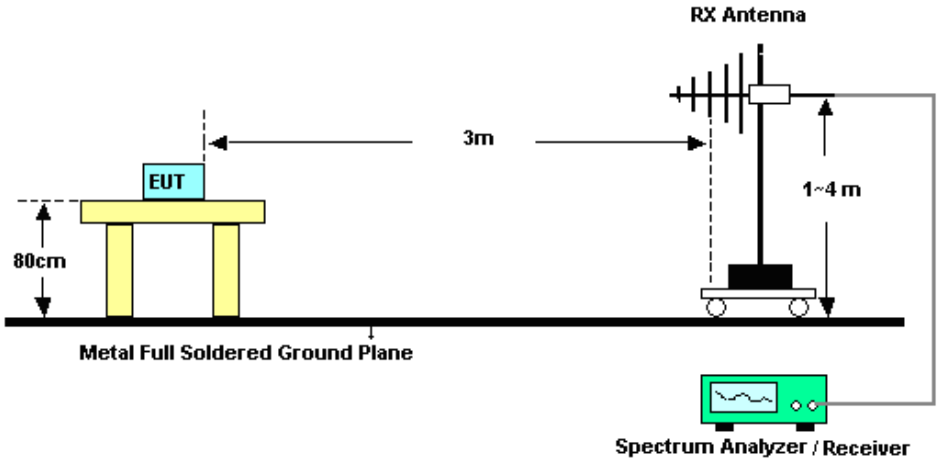
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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 average 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

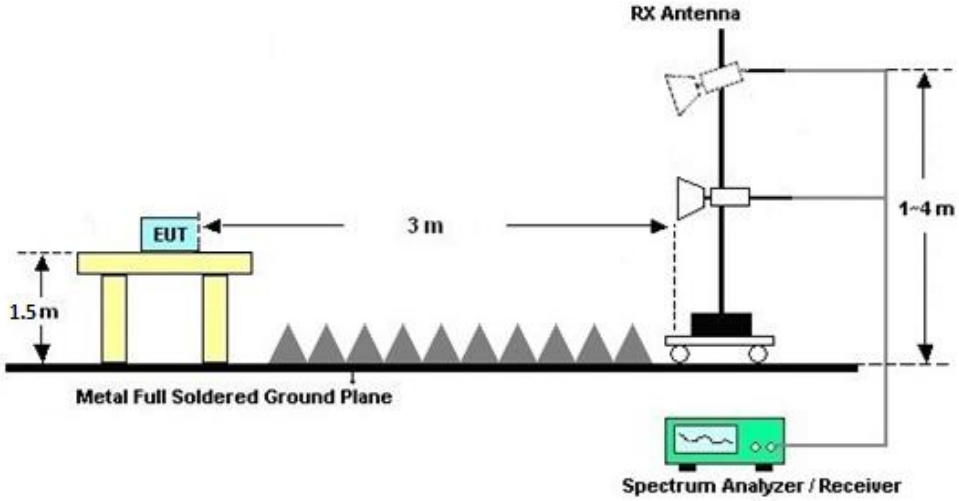
For radiated emissions below 30MHz



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)

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.

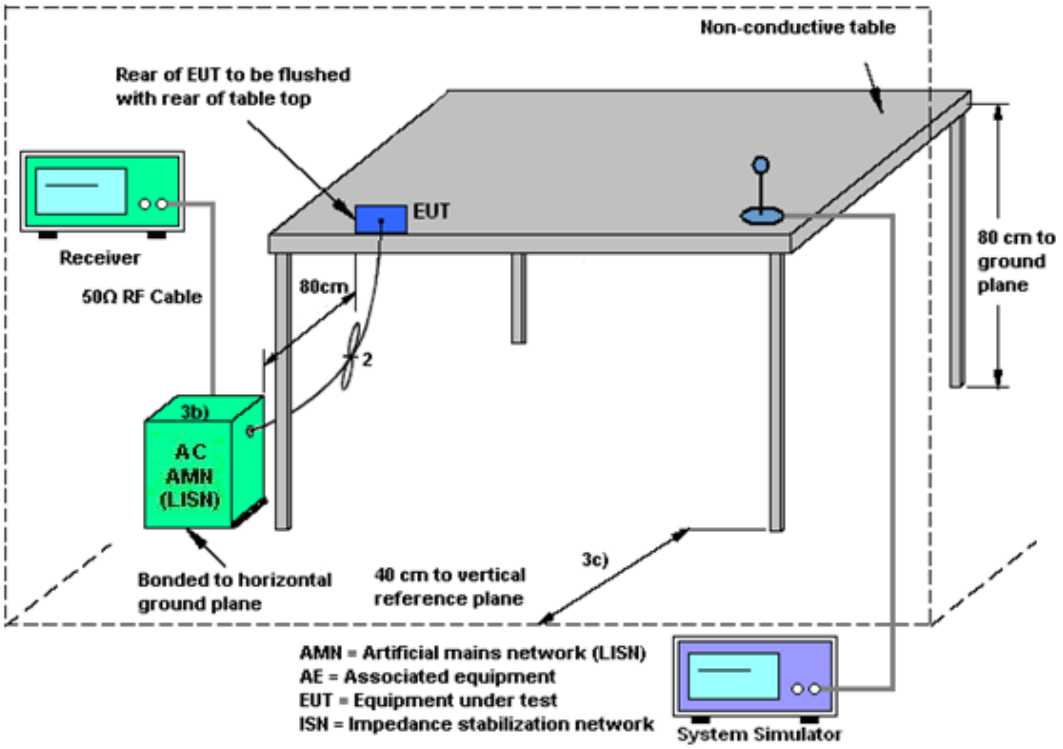
3.5.2 Measuring Instruments

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



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,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.

<CDD Modes>

	Ant. 14 (dBi)	Ant. 15 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
UNII-1	-2.50	-2.00	-2.00	0.76	0.00	0.00
UNII-2A	-2.00	-0.70	-0.70	1.68	0.00	0.00
UNII-2C	1.50	1.00	1.50	4.26	0.00	0.00
UNII-3	1.00	1.00	1.00	4.01	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
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Aug. 08, 2024~ Aug. 30, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 29, 2023	Aug. 08, 2024~ Aug. 30, 2024	Dec. 28, 2024	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Aug. 21, 2023	Aug. 08, 2024~ Aug. 30, 2024	Aug. 20, 2024	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Aug. 20, 2024		Aug. 19, 2025	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 18, 2023	Sep. 06, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	Sep. 06, 2024	Jul. 02, 2025	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 29, 2023	Sep. 06, 2024	Dec. 28, 2024	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	May 09, 2024	Sep. 06, 2024	May 08, 2025	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Jul. 06, 2024	Sep. 06, 2024	Jul. 05, 2025	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 04, 2024	Sep. 06, 2024	Jul. 03, 2025	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2023	Sep. 06, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00101 800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2023	Sep. 06, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Sep. 06, 2024	Jul. 02, 2025	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY57280136	500MHz~26.5GHz	Jul. 03, 2024	Sep. 06, 2024	Jul. 02, 2025	Radiation (03CH04-SZ)
AC Power Source	APC	AFV-S-600B	F119050019	N/A	Oct. 18, 2023	Sep. 06, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Sep. 06, 2024	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Sep. 06, 2024	NCR	Radiation (03CH04-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Jul. 04, 2024	Aug. 13, 2024	Jul. 03, 2025	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Jul. 04, 2024	Aug. 13, 2024	Jul. 03, 2025	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 16, 2023	Aug. 13, 2024	Oct. 15, 2024	Conduction (CO01-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Dec.25, 2022	Aug. 13, 2024	Dec. 24, 2024	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. 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))	2.5 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.8 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1 dB

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

Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Wen Shiwei	Temperature:	21~25	°C
Test Date:	2024/8/8-2024/8/30	Relative Humidity:	51~54	%

Report Number : FR461101F

TEST RESULTS DATA
Average Power Table

FCC Band I																	
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15				
11a	6Mbps	1	36	Full	5180	0.06	0.06	18.16	19.58		24.00	24.00	-2.50	-2.00		Pass	18.5	19
11a	6Mbps	1	44	Full	5220	0.06	0.06	19.76	19.60		24.00	24.00	-2.50	-2.00		Pass	20	20
11a	6Mbps	1	48	Full	5240	0.06	0.06	19.68	19.74		24.00	24.00	-2.50	-2.00		Pass	20	20
HT20	MCS0	1	36	Full	5180	0.00	0.00	17.66	19.61		24.00	24.00	-2.50	-2.00		Pass	18	19
HT20	MCS0	1	44	Full	5220	0.00	0.00	19.78	19.65		24.00	24.00	-2.50	-2.00		Pass	20	20
HT20	MCS0	1	48	Full	5240	0.00	0.00	19.69	19.76		24.00	24.00	-2.50	-2.00		Pass	20	20
HT40	MCS0	1	38	Full	5190	0.00	0.00	17.03	19.59		24.00	24.00	-2.50	-2.00		Pass	17.5	19
HT40	MCS0	1	46	Full	5230	0.00	0.00	19.11	19.77		24.00	24.00	-2.50	-2.00		Pass	19.5	20
VHT80	MCS0	1	42	Full	5210	0.00	0.00	16.73	18.30		24.00	24.00	-2.50	-2.00		Pass	17.5	18
HE20	MCS0	1	36	Full	5180	0.00	0.00	18.10	19.58		24.00	24.00	-2.50	-2.00		Pass	18.5	19
HE20	MCS0	1	44	Full	5220	0.00	0.00	19.82	19.63		24.00	24.00	-2.50	-2.00		Pass	20	20
HE20	MCS0	1	48	Full	5240	0.00	0.00	19.69	19.73		24.00	24.00	-2.50	-2.00		Pass	20	20
HE40	MCS0	1	38	Full	5190	0.00	0.00	16.00	19.61		24.00	24.00	-2.50	-2.00		Pass	16.5	19
HE40	MCS0	1	46	Full	5230	0.00	0.00	19.58	19.73		24.00	24.00	-2.50	-2.00		Pass	20	20
HE80	MCS0	1	42	Full	5210	0.00	0.00	16.60	17.96		24.00	24.00	-2.50	-2.00		Pass	17.5	18
11a	6Mbps	2	36	Full	5180	0.06	0.06	16.59	17.30	19.97	24.00		-2.00			Pass	17	
11a	6Mbps	2	44	Full	5220	0.06	0.06	16.76	16.51	19.65	24.00		-2.00			Pass	17	
11a	6Mbps	2	48	Full	5240	0.06	0.06	16.73	16.65	19.70	24.00		-2.00			Pass	17	
HT20	MCS0	2	36	Full	5180	0.00	0.00	16.57	17.53	20.09	24.00		-2.00			Pass	17	
HT20	MCS0	2	44	Full	5220	0.00	0.00	16.76	16.55	19.67	24.00		-2.00			Pass	17	
HT20	MCS0	2	48	Full	5240	0.00	0.00	16.70	16.73	19.73	24.00		-2.00			Pass	17	
HT40	MCS0	2	38	Full	5190	0.00	0.00	16.63	17.42	20.05	24.00		-2.00			Pass	17	
HT40	MCS0	2	46	Full	5230	0.00	0.00	16.82	16.52	19.68	24.00		-2.00			Pass	17	
VHT80	MCS0	2	42	Full	5210	0.00	0.00	16.51	17.66	20.13	24.00		-2.00			Pass	17	
VHT160	MCS0	2	50	Full	5250	0.00	0.00	16.67	16.74	19.72	24.00		-2.00			Pass	17	
HE20	MCS0	2	36	Full	5180	0.00	0.00	16.71	17.40	20.08	24.00		-2.00			Pass	17	
			44	Full	5220	0.00	0.00	16.82	16.51	19.68	24.00		-2.00			Pass	17	
			48	Full	5240	0.00	0.00	16.85	16.63	19.75	24.00		-2.00			Pass	17	
HE40	MCS0	2	38	Full	5190	0.00	0.00	16.65	17.44	20.07	24.00		-2.00			Pass	17	
			46	Full	5230	0.00	0.00	16.88	16.58	19.74	24.00		-2.00			Pass	17	
HE80	MCS0	2	42	Full	5210	0.00	0.00	16.53	17.72	20.18	24.00		-2.00			Pass	17	
HE160	MCS0	2	50	Full	5250	0.00	0.00	16.74	16.83	19.80	24.00		-2.00			Pass	17.5	

TEST RESULTS DATA
Average Power Table

FCC Band II																		
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15				
11a	6Mbps	1	52	Full	5260	0.06	0.06	19.73	19.82		23.98	23.98	-2.00	-0.70	26.99	Pass	20	20
11a	6Mbps	1	60	Full	5300	0.06	0.06	19.61	19.59		23.98	23.98	-2.00	-0.70	26.99	Pass	19.5	20.5
11a	6Mbps	1	64	Full	5320	0.06	0.06	19.21	19.64		23.98	23.98	-2.00	-0.70	26.99	Pass	19	20.5
HT20	MCS0	1	52	Full	5260	0.00	0.00	19.75	19.84		23.98	23.98	-2.00	-0.70	26.99	Pass	20	20
HT20	MCS0	1	60	Full	5300	0.00	0.00	19.65	19.61		23.98	23.98	-2.00	-0.70	26.99	Pass	19.5	20.5
HT20	MCS0	1	64	Full	5320	0.00	0.00	19.24	19.67		23.98	23.98	-2.00	-0.70	26.99	Pass	19	20.5
HT40	MCS0	1	54	Full	5270	0.00	0.00	19.26	19.81		23.98	23.98	-2.00	-0.70	26.99	Pass	19.5	20
HT40	MCS0	1	62	Full	5310	0.00	0.00	17.12	19.76		23.98	23.98	-2.00	-0.70	26.99	Pass	17	20.5
VHT80	MCS0	1	58	Full	5290	0.00	0.00	17.01	16.94		23.98	23.98	-2.00	-0.70	26.99	Pass	17	18
HE20	MCS0	1	52	Full	5260	0.00	0.00	19.72	19.81		23.98	23.98	-2.00	-0.70	26.99	Pass	20	20
HE20	MCS0	1	60	Full	5300	0.00	0.00	19.63	19.66		23.98	23.98	-2.00	-0.70	26.99	Pass	19.5	20.5
HE20	MCS0	1	64	Full	5320	0.00	0.00	19.12	19.65		23.98	23.98	-2.00	-0.70	26.99	Pass	19	20.5
HE40	MCS0	1	54	Full	5270	0.00	0.00	19.69	19.78		23.98	23.98	-2.00	-0.70	26.99	Pass	20	20
HE40	MCS0	1	62	Full	5310	0.00	0.00	16.57	18.70		23.98	23.98	-2.00	-0.70	26.99	Pass	16.5	19.5
HE80	MCS0	1	58	Full	5290	0.00	0.00	17.50	18.75		23.98	23.98	-2.00	-0.70	26.99	Pass	17.5	19.5
11a	6Mbps	2	52	Full	5260	0.06	0.06	16.70	16.78	19.75	23.98		-0.70		26.99	Pass	17	
11a	6Mbps	2	60	Full	5300	0.06	0.06	17.75	16.70	20.27	23.98		-0.70		26.99	Pass	17.5	
11a	6Mbps	2	64	Full	5320	0.06	0.06	17.90	16.69	20.35	23.98		-0.70		26.99	Pass	17.5	
HT20	MCS0	2	52	Full	5260	0.00	0.00	16.68	16.82	19.76	23.98		-0.70		26.99	Pass	17	
HT20	MCS0	2	60	Full	5300	0.00	0.00	17.85	16.72	20.33	23.98		-0.70		26.99	Pass	17.5	
HT20	MCS0	2	64	Full	5320	0.00	0.00	17.87	16.75	20.36	23.98		-0.70		26.99	Pass	17.5	
HT40	MCS0	2	54	Full	5270	0.00	0.00	16.81	16.84	19.84	23.98		-0.70		26.99	Pass	17	
HT40	MCS0	2	62	Full	5310	0.00	0.00	17.47	16.51	20.03	23.98		-0.70		26.99	Pass	17	
VHT80	MCS0	2	58	Full	5290	0.00	0.00	17.55	16.63	20.12	23.98		-0.70		26.99	Pass	17.5	
HE20	MCS0	2	52	Full	5260	0.00	0.00	16.84	16.81	19.84	23.98		-0.70		26.99	Pass	17	
			60	Full	5300	0.00	0.00	17.83	16.55	20.25	23.98		-0.70		26.99	Pass	17.5	
			64	Full	5320	0.00	0.00	17.92	16.63	20.33	23.98		-0.70		26.99	Pass	17.5	
HE40	MCS0	2	54	Full	5270	0.00	0.00	16.85	16.88	19.88	23.98		-0.70		26.99	Pass	17	
			62	Full	5310	0.00	0.00	17.56	16.60	20.12	23.98		-0.70		26.99	Pass	17	
HE80	MCS0	2	58	Full	5290	0.00	0.00	17.59	16.67	20.16	23.98		-0.70		26.99	Pass	17.5	

TEST RESULTS DATA
Average Power Table

FCC Band III																		
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15				
11a	6Mbps	1	100	Full	5500	0.06	0.06	19.73	19.56		23.98	23.98	1.50	1.00	26.99	Pass	20	20
11a	6Mbps	1	116	Full	5580	0.06	0.06	18.37	18.16		23.98	23.98	1.50	1.00	26.99	Pass	18.5	19
11a	6Mbps	1	140	Full	5700	0.06	0.06	18.43	17.48		23.98	23.98	1.50	1.00	26.99	Pass	18.5	18.5
HT20	MCS0	1	100	Full	5500	0.00	0.00	19.24	19.59		23.98	23.98	1.50	1.00	26.99	Pass	19.5	20
HT20	MCS0	1	116	Full	5580	0.00	0.00	19.52	19.76		23.98	23.98	1.50	1.00	26.99	Pass	19.5	20.5
HT20	MCS0	1	140	Full	5700	0.00	0.00	19.06	17.02		23.98	23.98	1.50	1.00	26.99	Pass	19	18
HT40	MCS0	1	102	Full	5510	0.00	0.00	17.66	19.02		23.98	23.98	1.50	1.00	26.99	Pass	18	19.5
HT40	MCS0	1	110	Full	5550	0.00	0.00	19.67	19.65		23.98	23.98	1.50	1.00	26.99	Pass	19.5	20.5
HT40	MCS0	1	134	Full	5670	0.00	0.00	19.05	17.03		23.98	23.98	1.50	1.00	26.99	Pass	19	18
VHT80	MCS0	1	106	Full	5530	0.00	0.00	16.70	17.50		23.98	23.98	1.50	1.00	26.99	Pass	17	18
VHT80	MCS0	1	122	Full	5610	0.00	0.00	18.44	18.18		23.98	23.98	1.50	1.00	26.99	Pass	18.5	19
HE20	MCS0	1	100	Full	5500	0.00	0.00	17.79	19.62		23.98	23.98	1.50	1.00	26.99	Pass	18	20
HE20	MCS0	1	116	Full	5580	0.00	0.00	19.61	19.78		23.98	23.98	1.50	1.00	26.99	Pass	19.5	20.5
HE20	MCS0	1	140	Full	5700	0.00	0.00	19.11	16.64		23.98	23.98	1.50	1.00	26.99	Pass	19	17.5
HE40	MCS0	1	102	Full	5510	0.00	0.00	16.59	18.52		23.98	23.98	1.50	1.00	26.99	Pass	17	19
HE40	MCS0	1	110	Full	5550	0.00	0.00	19.67	19.65		23.98	23.98	1.50	1.00	26.99	Pass	19.5	20.5
HE40	MCS0	1	134	Full	5670	0.00	0.00	18.75	17.15		23.98	23.98	1.50	1.00	26.99	Pass	18.5	18
HE80	MCS0	1	106	Full	5530	0.00	0.00	17.15	16.56		23.98	23.98	1.50	1.00	26.99	Pass	17.5	17
HE80	MCS0	1	122	Full	5610	0.00	0.00	19.33	18.61		23.98	23.98	1.50	1.00	26.99	Pass	19.5	19.5
11a	6Mbps	2	100	Full	5500	0.06	0.06	16.67	16.56	19.63	23.98		1.50		26.99	Pass	17	
11a	6Mbps	2	116	Full	5580	0.06	0.06	17.38	16.71	20.07	23.98		1.50		26.99	Pass	17.5	
11a	6Mbps	2	140	Full	5700	0.06	0.06	17.53	16.51	20.06	23.98		1.50		26.99	Pass	17.5	
HT20	MCS0	2	100	Full	5500	0.00	0.00	16.75	16.61	19.69	23.98		1.50		26.99	Pass	17	
HT20	MCS0	2	116	Full	5580	0.00	0.00	17.45	16.69	20.10	23.98		1.50		26.99	Pass	17.5	
HT20	MCS0	2	140	Full	5700	0.00	0.00	17.50	16.64	20.10	23.98		1.50		26.99	Pass	17.5	
HT40	MCS0	2	102	Full	5510	0.00	0.00	16.75	16.57	19.67	23.98		1.50		26.99	Pass	17	
HT40	MCS0	2	110	Full	5550	0.00	0.00	17.66	16.71	20.22	23.98		1.50		26.99	Pass	17.5	
HT40	MCS0	2	134	Full	5670	0.00	0.00	17.40	16.57	20.02	23.98		1.50		26.99	Pass	17.5	
VHT80	MCS0	2	106	Full	5530	0.00	0.00	16.79	16.64	19.73	23.98		1.50		26.99	Pass	17	
VHT80	MCS0	2	122	Full	5610	0.00	0.00	17.41	16.72	20.09	23.98		1.50		26.99	Pass	17.5	
VHT160	MCS0	2	114	Full	5570	0.00	0.00	17.18	16.56	19.89	23.98		1.50		26.99	Pass	17.5	
HE20	MCS0	2	100	Full	5500	0.00	0.00	16.77	16.65	19.72	23.98		1.50		26.99	Pass	17	
			116	Full	5580	0.00	0.00	17.57	16.85	20.24	23.98		1.50		26.99	Pass	17.5	
			140	Full	5700	0.00	0.00	17.62	16.58	20.14	23.98		1.50		26.99	Pass	17.5	
HE40	MCS0	2	102	Full	5510	0.00	0.00	16.66	16.52	19.60	23.98		1.50		26.99	Pass	17	
			110	Full	5550	0.00	0.00	17.68	16.73	20.24	23.98		1.50		26.99	Pass	17.5	
			134	Full	5670	0.00	0.00	17.57	16.57	20.11	23.98		1.50		26.99	Pass	17.5	
HE80	MCS0	2	106	Full	5530	0.00	0.00	16.88	16.73	19.82	23.98		1.50		26.99	Pass	17	
			122	Full	5610	0.00	0.00	17.32	16.63	20.00	23.98		1.50		26.99	Pass	17.5	
HE160	MCS0	2	114	Full	5570	0.00	0.00	17.06	16.57	19.83	23.98		1.50		26.99	Pass	18	

TEST RESULTS DATA
Average Power Table

Band IV																	
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15			
11a	6Mbps	2	149	Full	5745	0.06	0.06	18.75	18.27	21.53	30.00		1.00			Pass	19
11a	6Mbps	2	157	Full	5785	0.06	0.06	18.48	18.11	21.31	30.00		1.00			Pass	19
11a	6Mbps	2	165	Full	5825	0.06	0.06	18.52	18.09	21.32	30.00		1.00			Pass	19
HT20	MCS0	2	149	Full	5745	0.00	0.00	18.78	18.26	21.54	30.00		1.00			Pass	19
HT20	MCS0	2	157	Full	5785	0.00	0.00	18.50	18.15	21.34	30.00		1.00			Pass	19
HT20	MCS0	2	165	Full	5825	0.00	0.00	18.55	18.11	21.35	30.00		1.00			Pass	19
HT40	MCS0	2	151	Full	5755	0.00	0.00	18.84	18.31	21.59	30.00		1.00			Pass	19
HT40	MCS0	2	159	Full	5795	0.00	0.00	18.29	18.12	21.22	30.00		1.00			Pass	19
VHT80	MCS0	2	155	Full	5775	0.00	0.00	18.89	18.22	21.58	30.00		1.00			Pass	19
HE20	MCS0	2	149	Full	5745	0.00	0.00	18.13	17.72	20.94	30.00		1.00			Pass	18.5
HE20	MCS0	2	157	Full	5785	0.00	0.00	17.78	17.52	20.66	30.00		1.00			Pass	18.5
HE20	MCS0	2	165	Full	5825	0.00	0.00	17.86	17.53	20.71	30.00		1.00			Pass	18.5
HE40	MCS0	2	151	Full	5755	0.00	0.00	18.32	17.67	21.02	30.00		1.00			Pass	18.5
HE40	MCS0	2	159	Full	5795	0.00	0.00	17.74	17.53	20.65	30.00		1.00			Pass	18.5
HE80	MCS0	2	155	Full	5775	0.00	0.00	18.38	17.68	21.05	30.00		1.00			Pass	18.5

Report Number : FR461101F

TEST RESULTS DATA
Average Power Table

FCC Band I																	
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15			
EHT20	MCS0	2	36	Full	5180	0.00	0.00	16.82	17.48	20.17	24.00		-2.00			Pass	17
			44	Full	5220	0.00	0.00	16.94	16.57	19.77	24.00		-2.00			Pass	17
			48	Full	5240	0.00	0.00	16.98	16.67	19.84	24.00		-2.00			Pass	17
EHT40	MCS0	2	38	Full	5190	0.00	0.00	16.72	17.52	20.15	24.00		-2.00			Pass	17
			46	Full	5230	0.00	0.00	16.96	16.64	19.81	24.00		-2.00			Pass	17
EHT80	MCS0	2	42	Full	5210	0.00	0.00	16.60	17.80	20.25	24.00		-2.00			Pass	17
EHT160	MCS0	2	50	Full	5250	0.00	0.00	16.58	17.60	20.13	24.00		-2.00			Pass	17.5

TEST RESULTS DATA
Average Power Table

FCC Band II																
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15			
EHT20	MCS0	2	52	Full	5260	0.00	0.00	16.99	16.90	19.96	23.98		-0.70		26.99	Pass	17
			60	Full	5300	0.00	0.00	17.97	16.65	20.37	23.98		-0.70		26.99	Pass	17.5
			64	Full	5320	0.00	0.00	18.00	16.69	20.40	23.98		-0.70		26.99	Pass	17.5
EHT40	MCS0	2	54	Full	5270	0.00	0.00	16.96	16.92	19.95	23.98		-0.70		26.99	Pass	17
			62	Full	5310	0.00	0.00	17.66	16.69	20.21	23.98		-0.70		26.99	Pass	17
EHT80	MCS0	2	58	Full	5290	0.00	0.00	17.67	16.73	20.24	23.98		-0.70		26.99	Pass	17.5

TEST RESULTS DATA
Average Power Table

FCC Band III																	
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15			
EHT20	MCS0	2	100	Full	5500	0.00	0.00	16.91	16.80	19.87	23.98		1.50		26.99	Pass	17
			116	Full	5580	0.00	0.00	17.69	17.02	20.38	23.98		1.50		26.99	Pass	17.5
			140	Full	5700	0.00	0.00	17.77	16.71	20.28	23.98		1.50		26.99	Pass	17.5
EHT40	MCS0	2	102	Full	5510	0.00	0.00	16.72	16.62	19.68	23.98		1.50		26.99	Pass	17
			110	Full	5550	0.00	0.00	17.76	16.79	20.31	23.98		1.50		26.99	Pass	17.5
			134	Full	5670	0.00	0.00	17.66	16.61	20.18	23.98		1.50		26.99	Pass	17.5
EHT80	MCS0	2	106	Full	5530	0.00	0.00	16.99	16.77	19.89	23.98		1.50		26.99	Pass	17
			122	Full	5610	0.00	0.00	17.42	16.72	20.09	23.98		1.50		26.99	Pass	17.5
EHT160	MCS0	2	114	Full	5570	0.00	0.00	16.73	17.52	20.15	23.98		1.50		26.99	Pass	17.5

Report Number : FR461101F

TEST RESULTS DATA
Average Power Table

Band IV																	
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 14	Ant 15	Ant 14	Ant 15	SUM	Ant 14	Ant 15	Ant 14	Ant 15			
EHT20	MCS0	2	149	Full	5745	0.00	0.00	17.90	17.66	20.79	30.00		1.00			Pass	18
EHT20	MCS0	2	157	Full	5785	0.00	0.00	17.86	17.58	20.73	30.00		1.00			Pass	18.5
EHT20	MCS0	2	165	Full	5825	0.00	0.00	17.97	17.57	20.78	30.00		1.00			Pass	18.5
EHT40	MCS0	2	151	Full	5755	0.00	0.00	17.92	17.63	20.79	30.00		1.00			Pass	18
EHT40	MCS0	2	159	Full	5795	0.00	0.00	17.82	17.59	20.72	30.00		1.00			Pass	18.5
EHT80	MCS0	2	155	Full	5775	0.00	0.00	18.42	17.81	21.14	30.00		1.00			Pass	18.5

MIMO Mode

Emission Bandwidth

Test Result

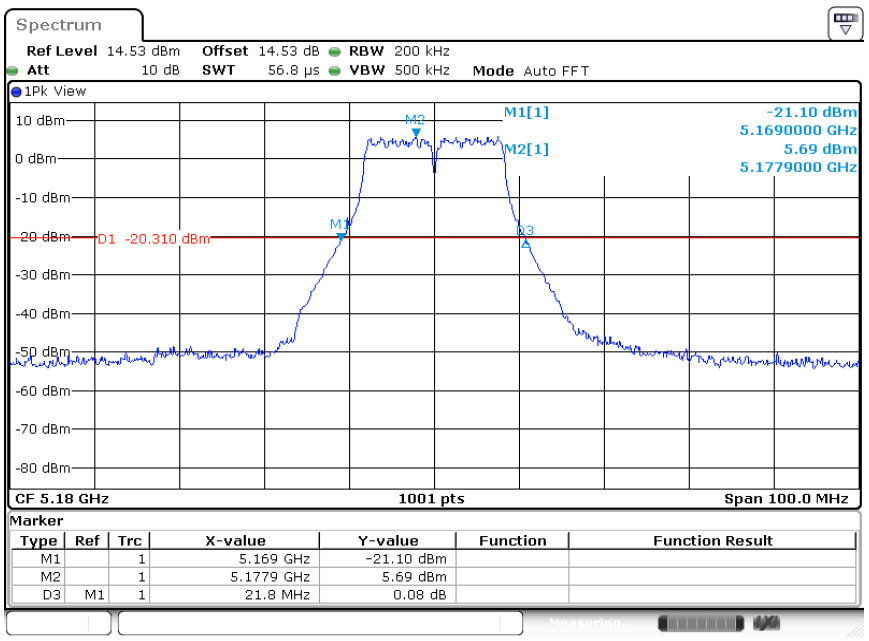
TestMode	Antenna	Freq(MHz)	26dB EBW [MHz]	FL[MHz]	FH[MHz]
11A-CDD	Ant14	5180	21.80	5169.00	5190.80
		5220	21.70	5209.00	5230.70
		5240	21.60	5229.00	5250.60
		5260	21.70	5249.00	5270.70
		5300	21.60	5289.00	5310.60
		5320	21.50	5309.10	5330.60
		5500	21.60	5489.00	5510.60
		5580	21.70	5569.00	5590.70
		5700	21.70	5689.00	5710.70
		5745	21.60	5734.00	5755.60
		5785	21.80	5774.00	5795.80
		5825	21.40	5814.30	5835.70
11N20MIMO	Ant14	5180	22.40	5169.00	5191.40
		5220	22.30	5208.80	5231.10
		5240	22.40	5228.80	5251.20
		5260	22.60	5248.70	5271.30
		5300	22.10	5288.90	5311.00
		5320	22.20	5308.90	5331.10
		5500	22.20	5488.80	5511.00
		5580	22.30	5568.70	5591.00
		5700	22.50	5688.50	5711.00
		5745	22.50	5733.50	5756.00
		5785	22.30	5773.80	5796.10
		5825	22.30	5813.70	5836.00
11N40MIMO	Ant14	5190	44.00	5168.20	5212.20
		5230	43.60	5208.20	5251.80
		5270	43.60	5248.60	5292.20
		5310	44.20	5287.60	5331.80
		5510	44.60	5487.80	5532.40
		5550	43.20	5528.40	5571.60
		5670	44.40	5647.80	5692.20
		5755	44.80	5732.60	5777.40

		5795	44.20	5773.20	5817.40
11AC80MIMO	Ant14	5210	88.80	5166.40	5255.20
		5290	88.00	5246.40	5334.40
		5530	89.60	5485.20	5574.80
		5610	89.20	5564.80	5654.00
		5775	94.00	5727.40	5821.40
11AC160MIMO	Ant14	5250	180.00	5160.40	5340.40
		5250_UNII-1	89.6	5160.40	5250
		5250_UNII-2A	90.4	5250	5340.40
		5570	180.00	5481.20	5661.20
11AX20MIMO	Ant14	5180	22.40	5169.00	5191.40
		5220	22.50	5208.70	5231.20
		5240	22.80	5228.70	5251.50
		5260	22.40	5248.90	5271.30
		5300	22.30	5288.90	5311.20
		5320	22.90	5308.60	5331.50
		5500	22.80	5488.60	5511.40
		5580	22.50	5568.70	5591.20
		5700	22.70	5688.70	5711.40
		5745	22.00	5734.00	5756.00
		5785	22.20	5774.00	5796.20
		5825	22.40	5813.80	5836.20
11AX40MIMO	Ant14	5190	43.60	5168.20	5211.80
		5230	42.80	5208.40	5251.20
		5270	43.00	5248.80	5291.80
		5310	44.20	5287.80	5332.00
		5510	42.80	5488.60	5531.40
		5550	42.80	5528.60	5571.40
		5670	43.60	5648.00	5691.60
		5755	42.60	5733.80	5776.40
		5795	43.40	5773.60	5817.00
11AX80MIMO	Ant14	5210	85.20	5167.20	5252.40
		5290	86.80	5247.60	5334.40
		5530	87.60	5486.00	5573.60
		5610	85.20	5567.20	5652.40
		5775	85.20	5733.40	5818.60
11AX160MIMO	Ant14	5250	178.40	5161.20	5339.60
		5250_UNII-1	88.8	5161.20	5250
		5250_UNII-2A	89.6	5250	5339.60

		5570	178.40	5481.20	5659.60
11BE20MIMO	Ant14	5180	22.40	5168.84	5191.24
		5220	22.70	5208.50	5231.20
		5240	22.30	5228.70	5251.00
		5260	22.40	5248.80	5271.20
		5300	22.10	5288.90	5311.00
		5320	22.50	5308.70	5331.20
		5500	22.70	5488.50	5511.20
		5580	22.40	5568.80	5591.20
		5700	22.60	5688.80	5711.40
		5745	22.50	5733.70	5756.20
		5785	21.90	5774.10	5796.00
		5825	22.20	5814.00	5836.20
11BE40MIMO	Ant14	5190	43.00	5168.60	5211.60
		5230	43.20	5208.20	5251.40
		5270	43.20	5248.20	5291.40
		5310	43.00	5288.40	5331.40
		5510	42.40	5488.80	5531.20
		5550	43.60	5528.20	5571.80
		5670	43.40	5648.00	5691.40
		5755	43.60	5733.00	5776.60
		5795	42.80	5773.20	5816.00
11BE80MIMO	Ant14	5210	86.80	5166.80	5253.60
		5290	86.00	5246.40	5332.40
		5530	86.00	5486.40	5572.40
		5610	85.20	5567.20	5652.40
		5775	86.80	5731.40	5818.20
11BE160MIMO	Ant14	5250	177.60	5161.20	5338.80
		5250_UNII-1	88.8	5161.20	5250
		5250_UNII-2A	88.8	5250	5338.80
		5570	178.40	5482.80	5661.20

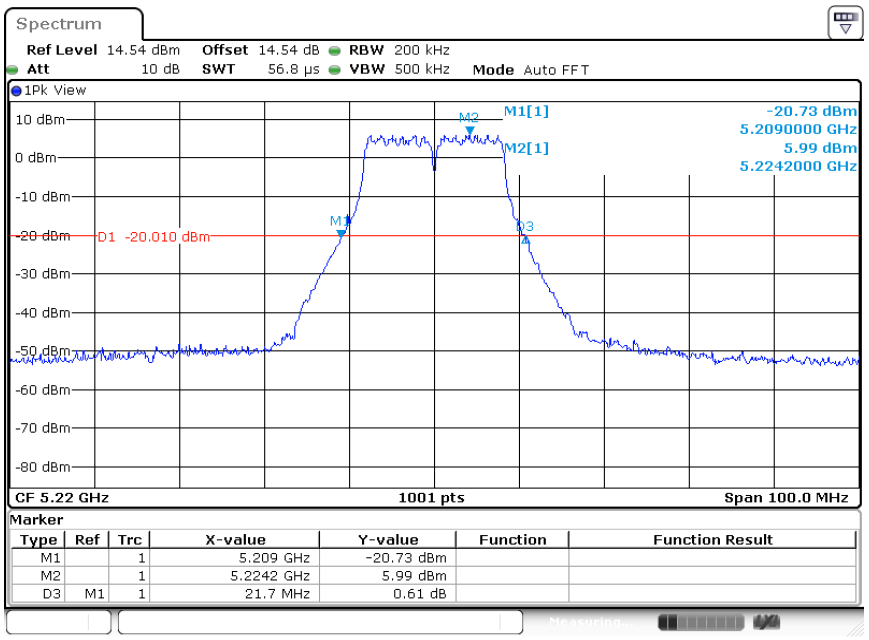
Test Graphs

11A-CDD_Ant14_5180



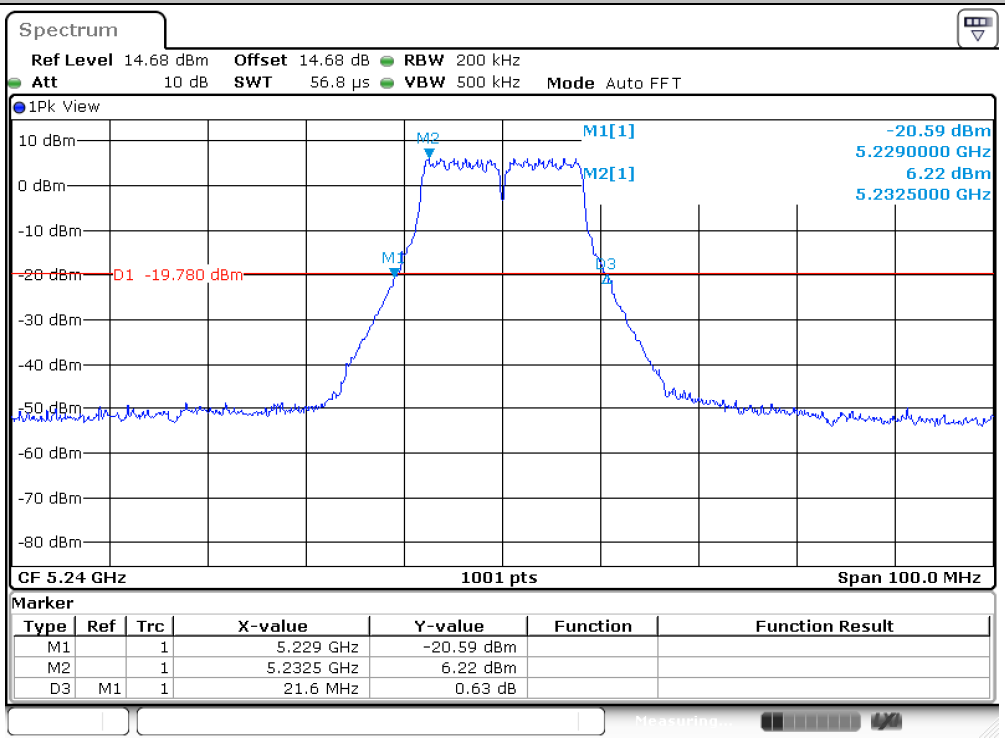
Date: 8.AUG.2024 09:23:34

11A-CDD_Ant14_5220



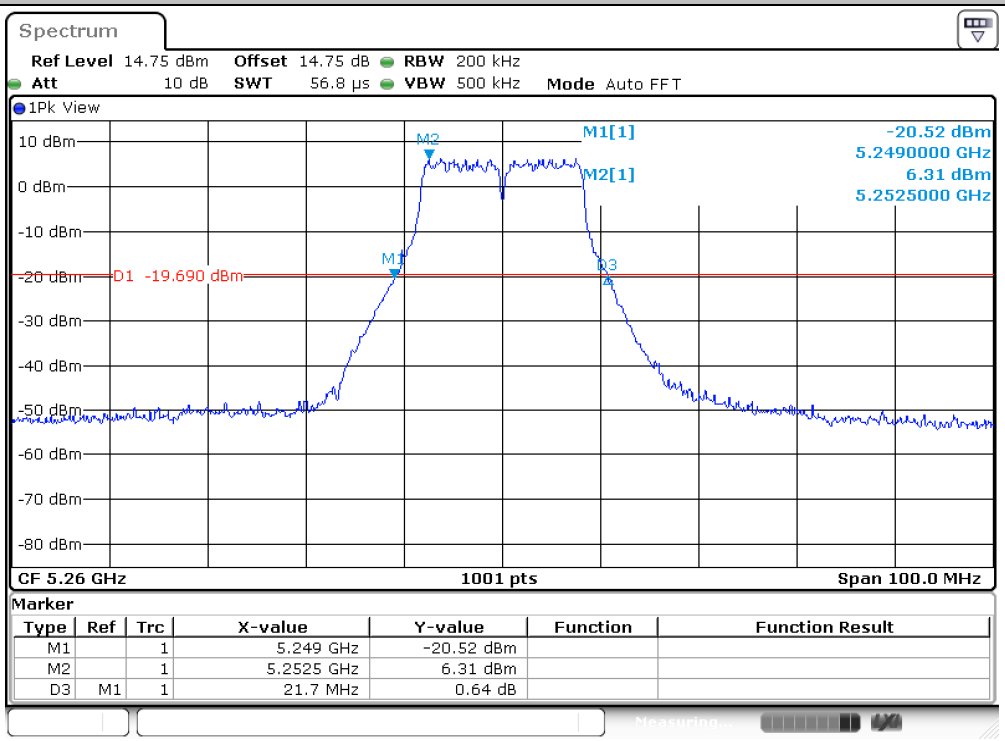
Date: 8.AUG.2024 09:24:29

11A-CDD_Ant14_5240



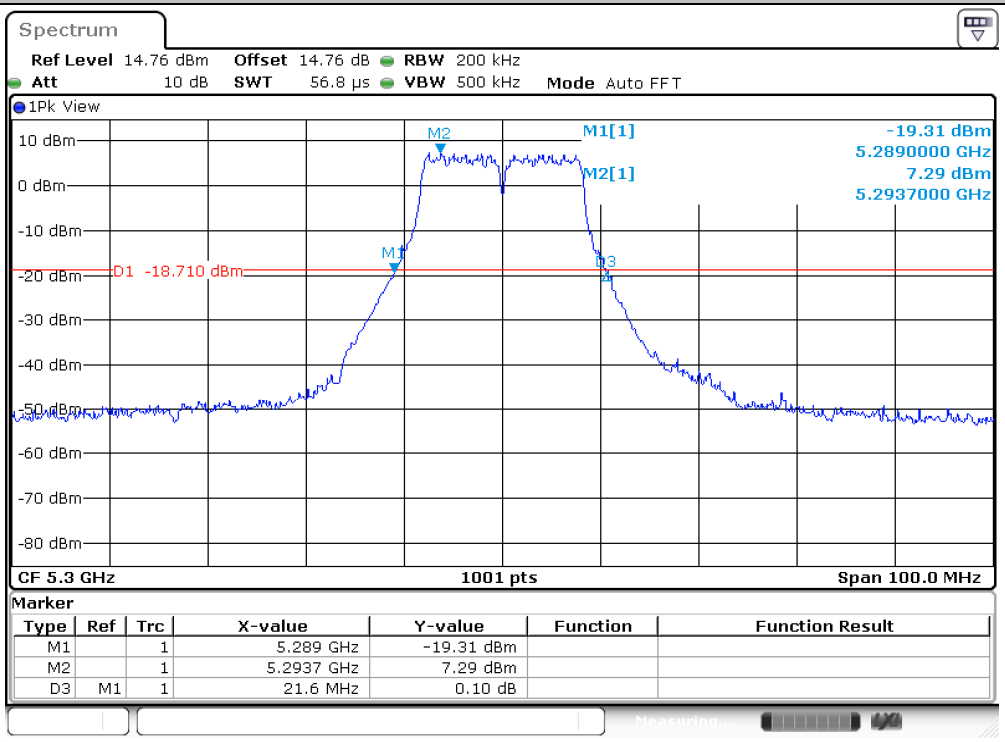
Date: 8.AUG.2024 09:25:52

11A-CDD_Ant14_5260



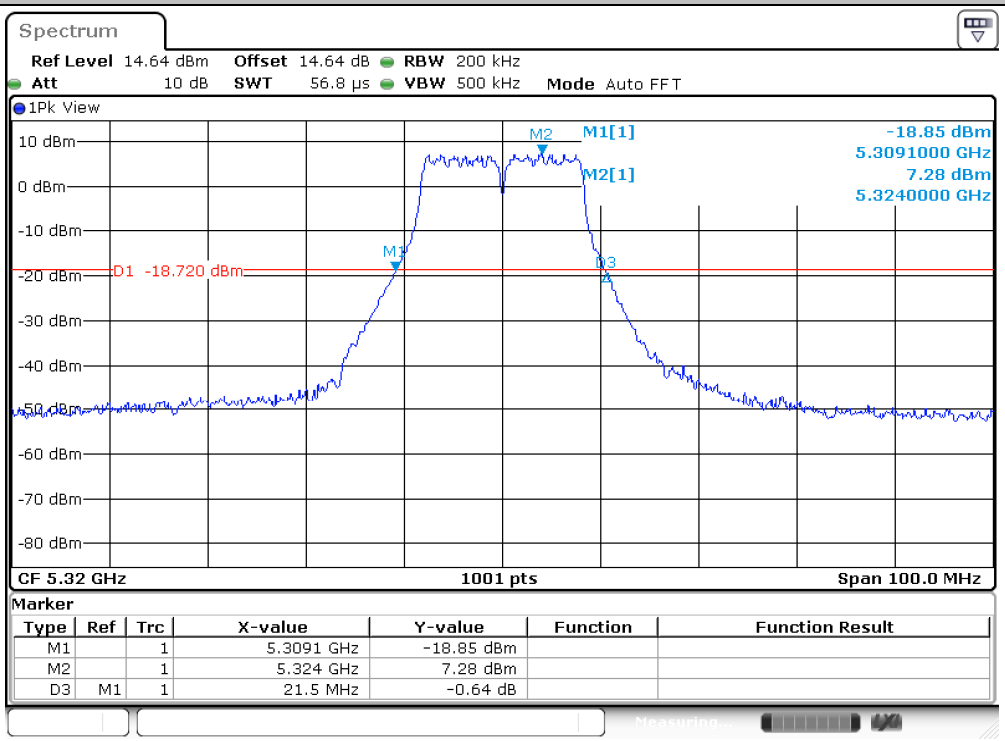
Date: 8.AUG.2024 09:26:59

11A-CDD_Ant14_5300



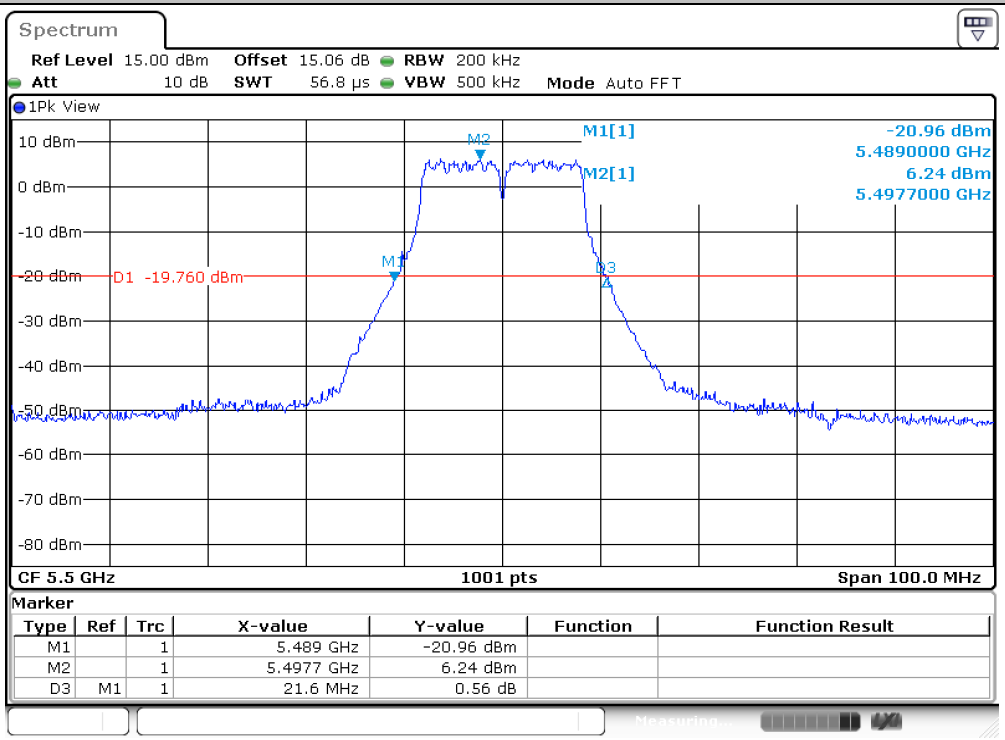
Date: 8.AUG.2024 09:28:02

11A-CDD_Ant14_5320



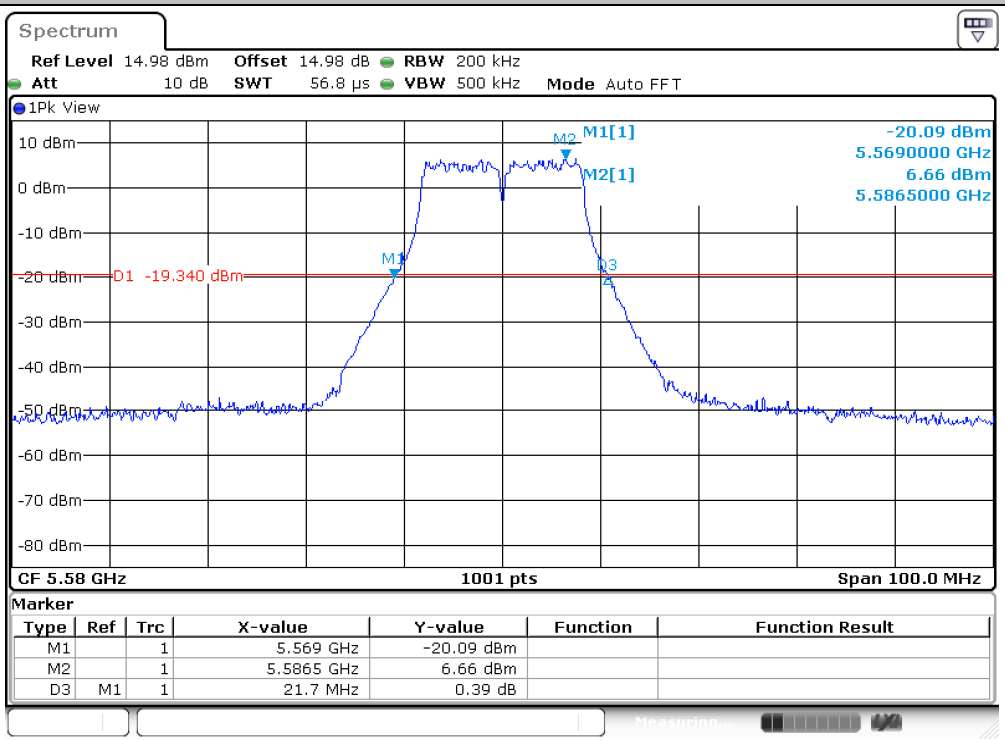
Date: 8.AUG.2024 09:31:34

11A-CDD_Ant14_5500



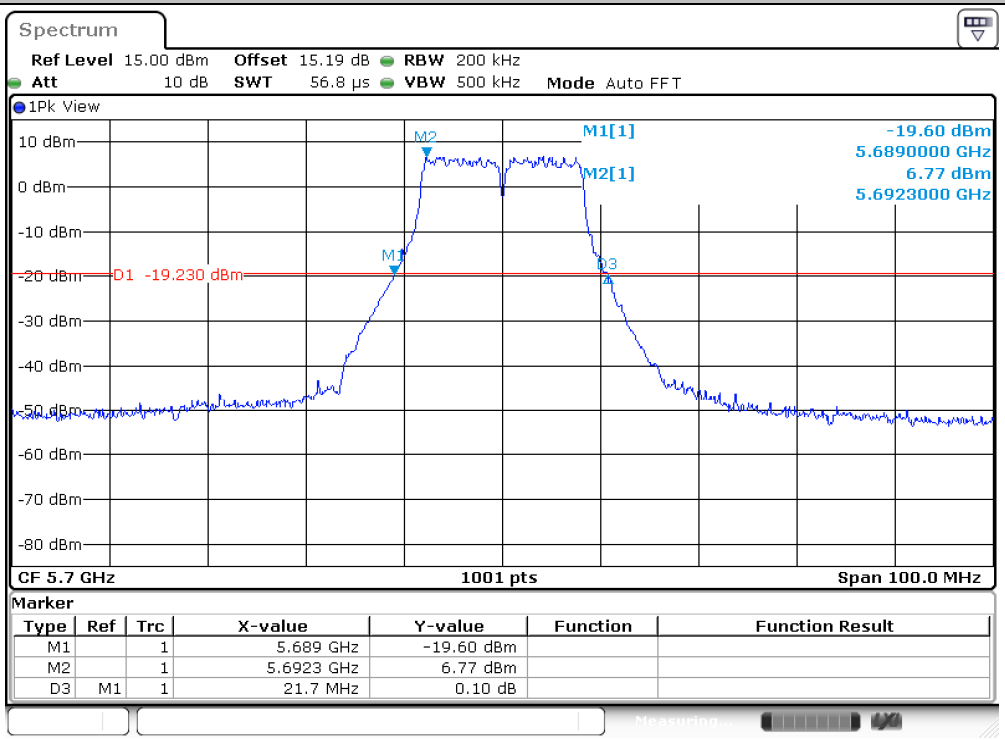
Date: 8.AUG.2024 09:32:23

11A-CDD_Ant14_5580



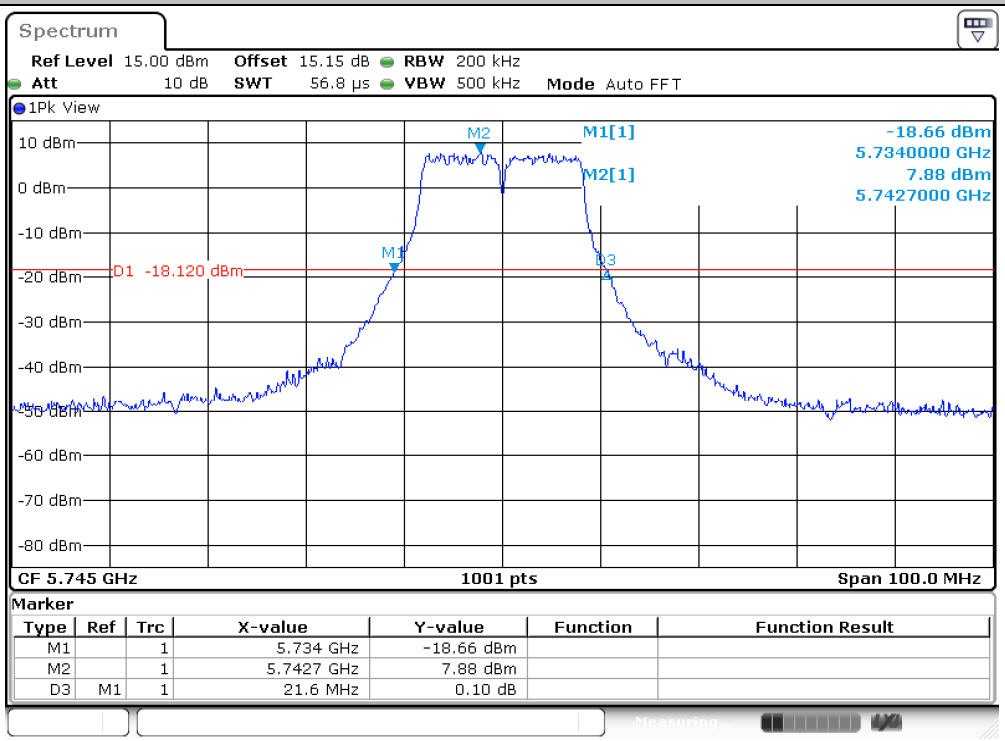
Date: 8.AUG.2024 09:48:37

11A-CDD_Ant14_5700



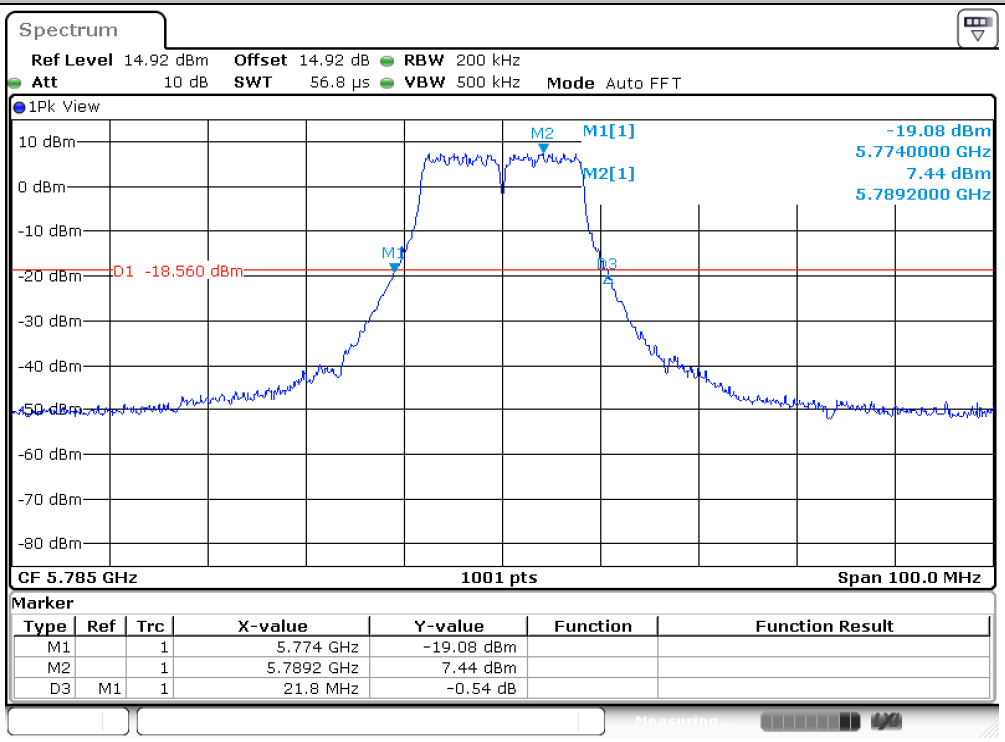
Date: 8.AUG.2024 09:49:15

11A-CDD_Ant14_5745



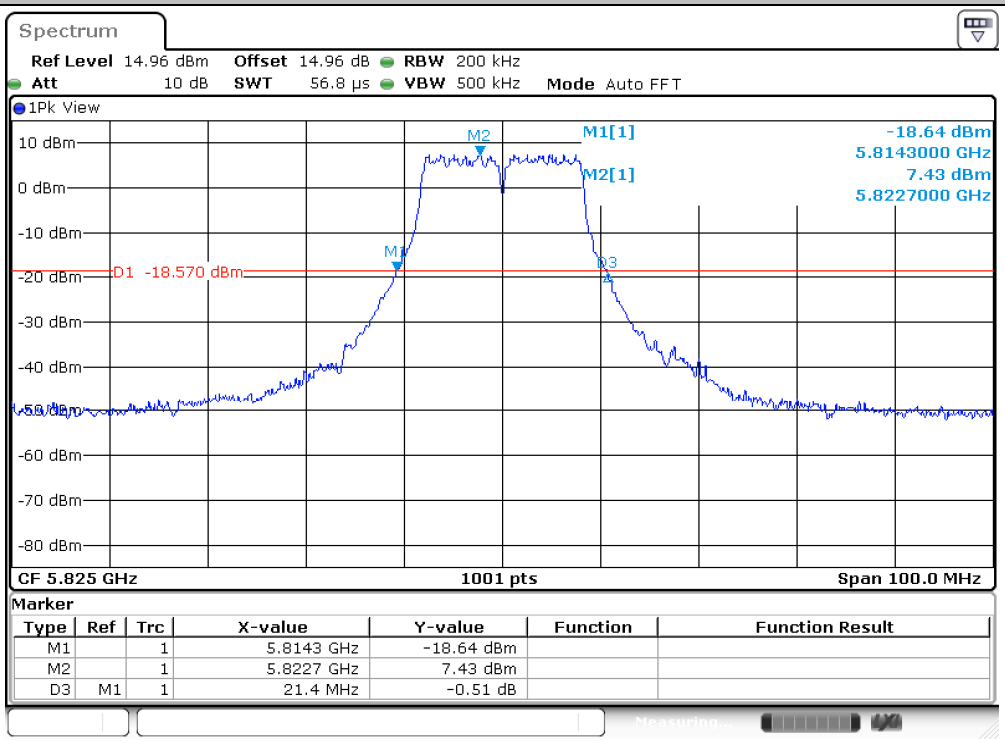
Date: 8.AUG.2024 09:50:39

11A-CDD_Ant14_5785



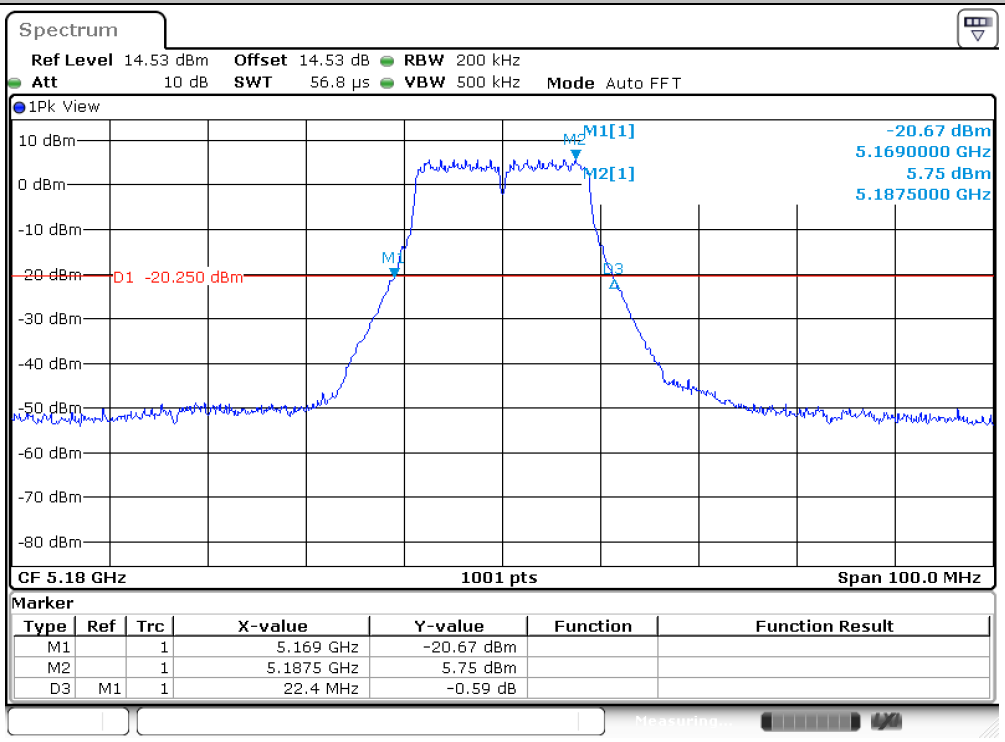
Date: 8.AUG.2024 09:51:40

11A-CDD_Ant14_5825



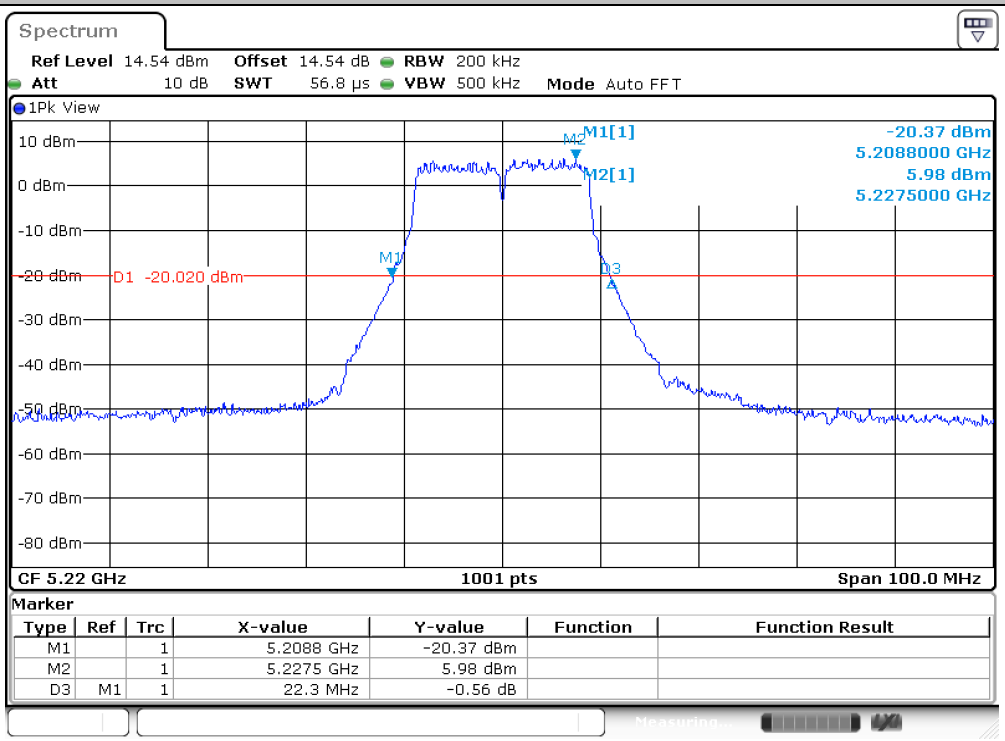
Date: 8.AUG.2024 09:52:16

11N20MIMO_Ant14_5180



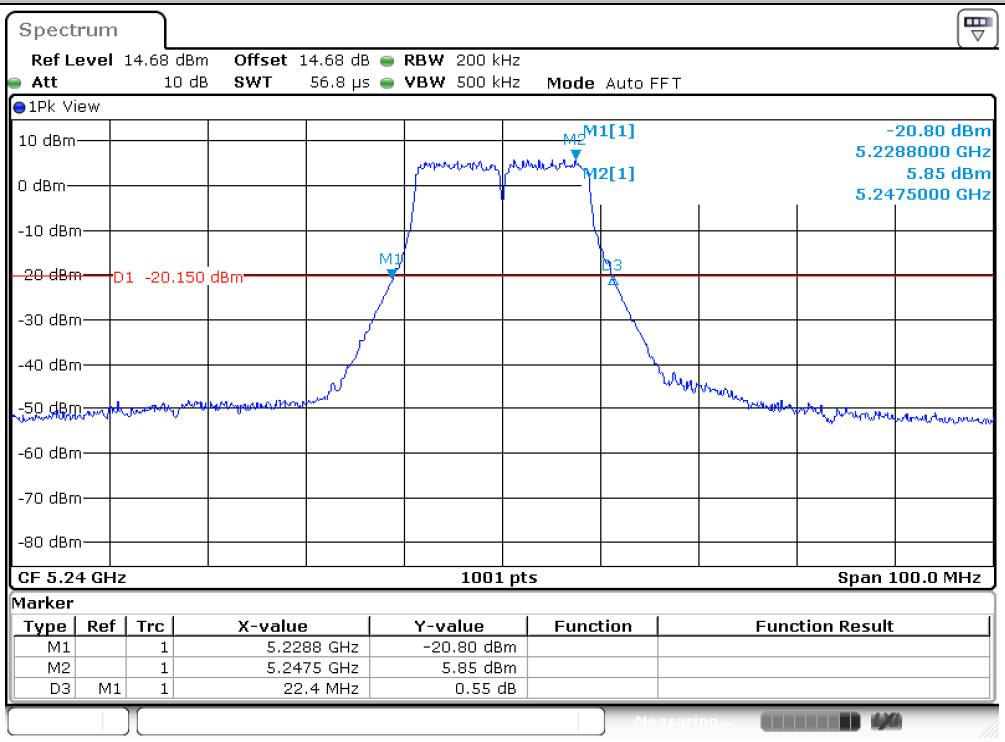
Date: 8.AUG.2024 09:53:45

11N20MIMO_Ant14_5220



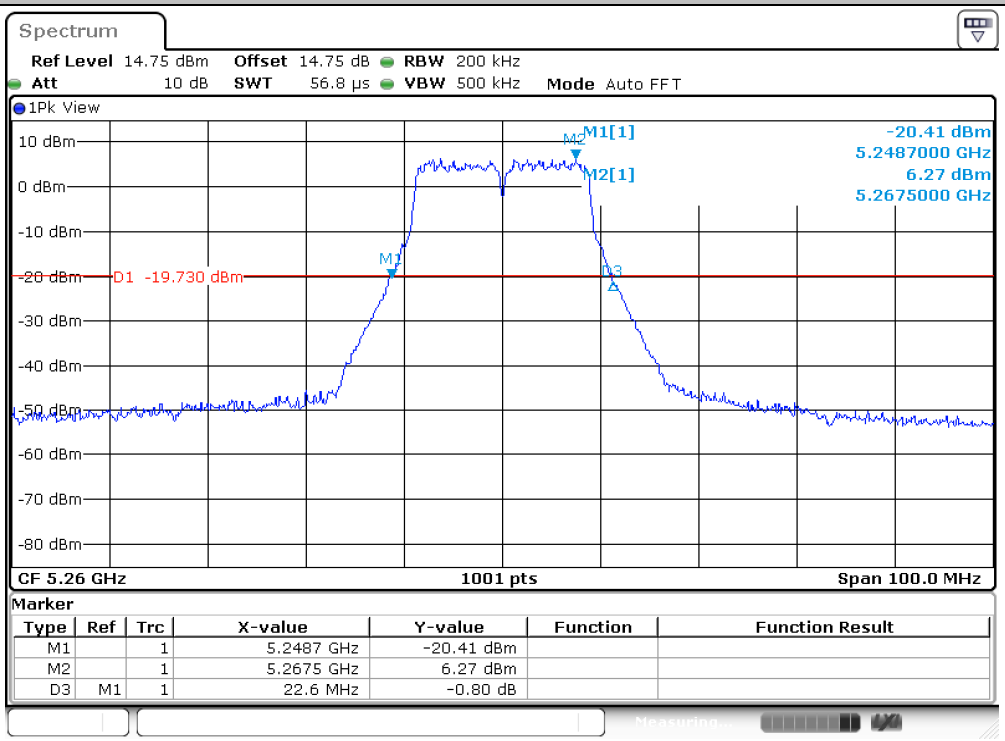
Date: 8.AUG.2024 09:54:41

11N20MIMO_Ant14_5240



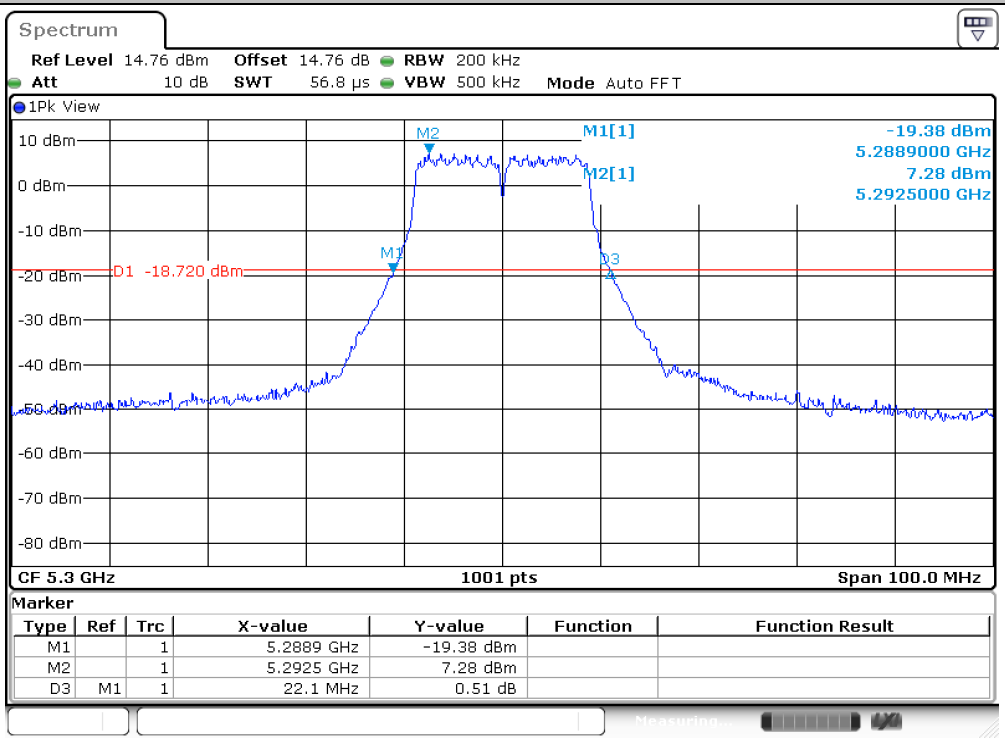
Date: 8.AUG.2024 09:55:12

11N20MIMO_Ant14_5260



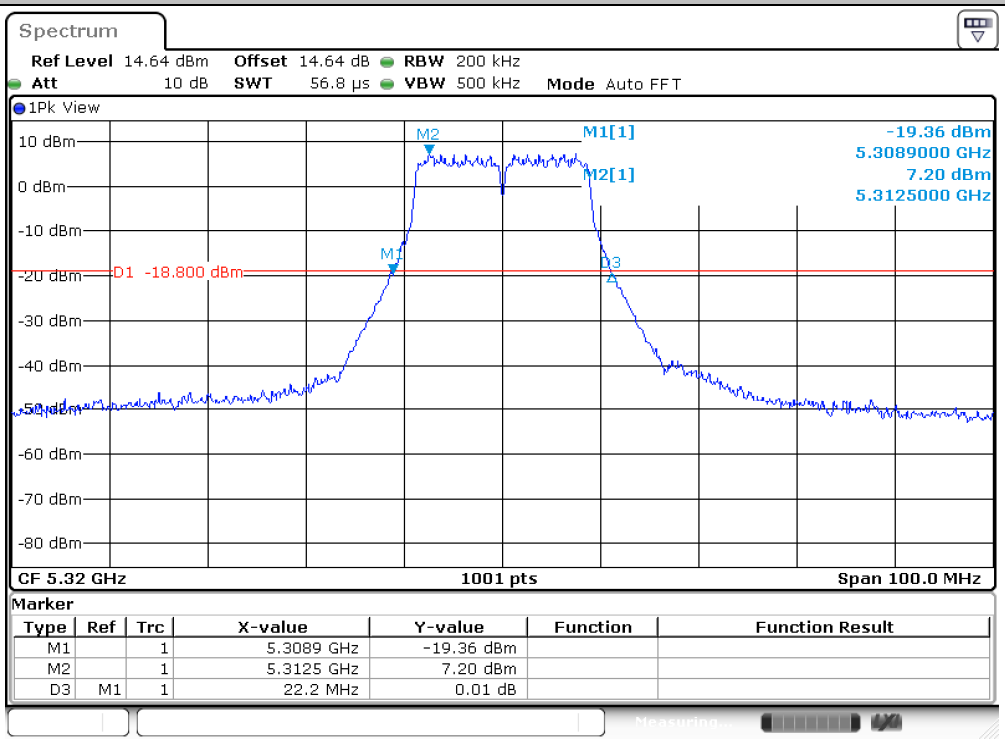
Date: 8.AUG.2024 09:56:18

11N20MIMO_Ant14_5300



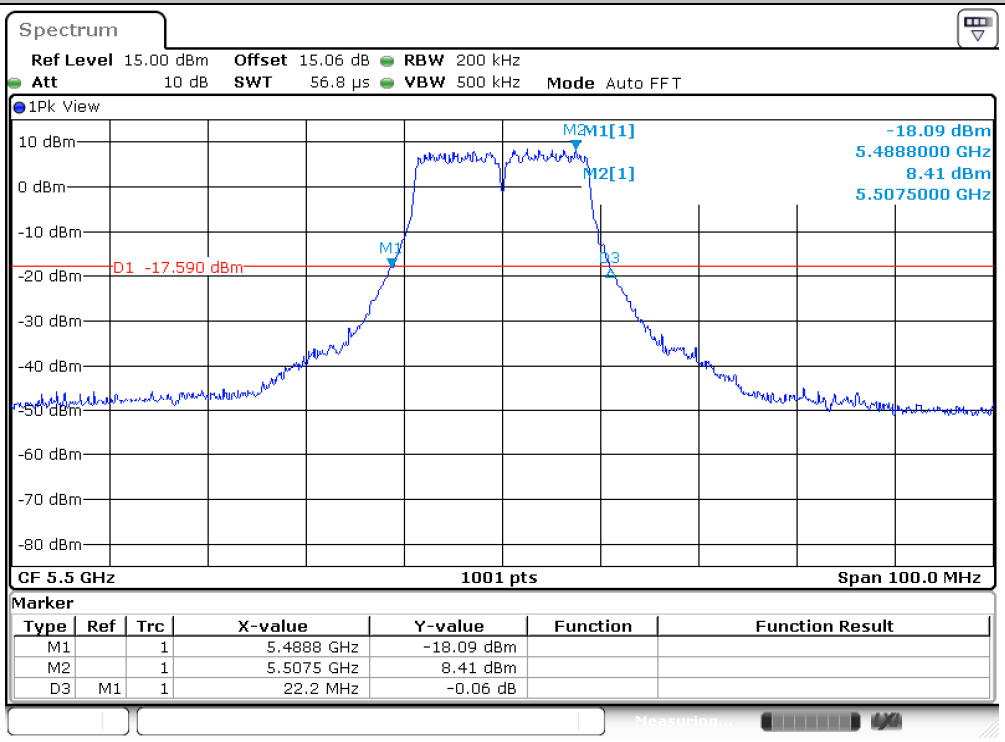
Date: 8.AUG.2024 09:56:55

11N20MIMO_Ant14_5320



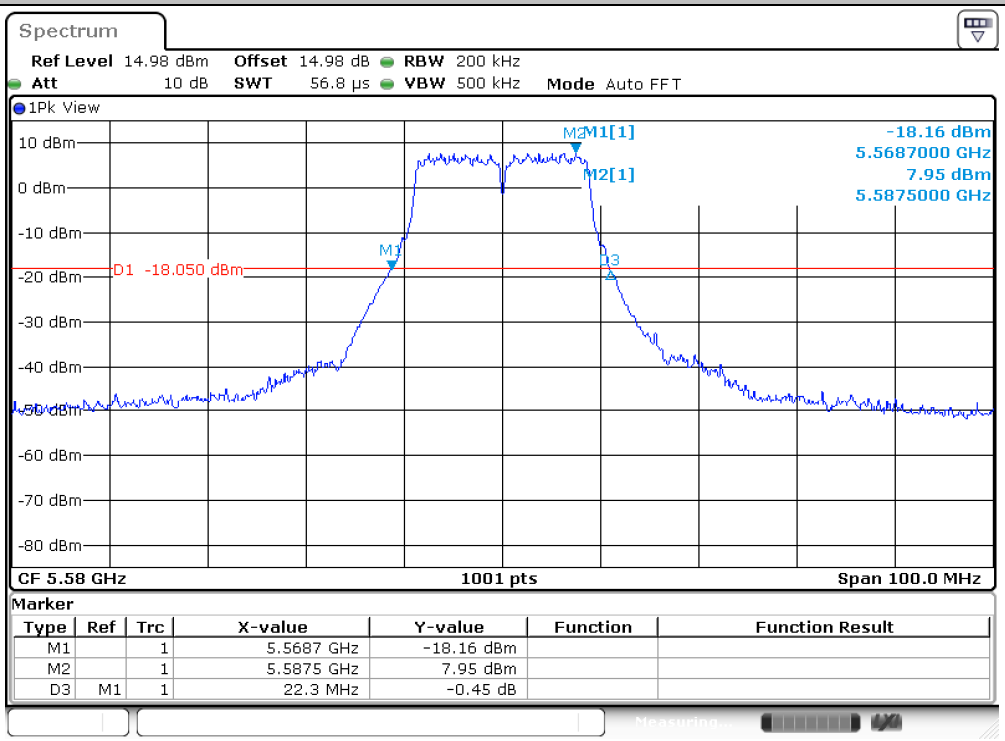
Date: 8.AUG.2024 09:57:27

11N20MIMO_Ant14_5500



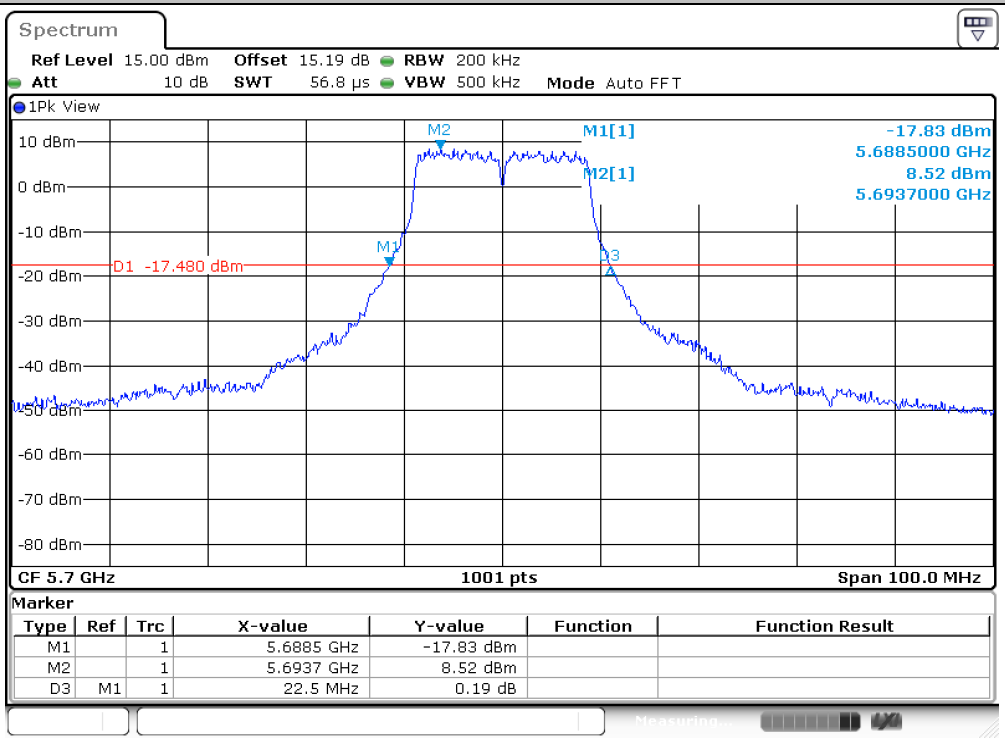
Date: 8.AUG.2024 09:59:11

11N20MIMO_Ant14_5580



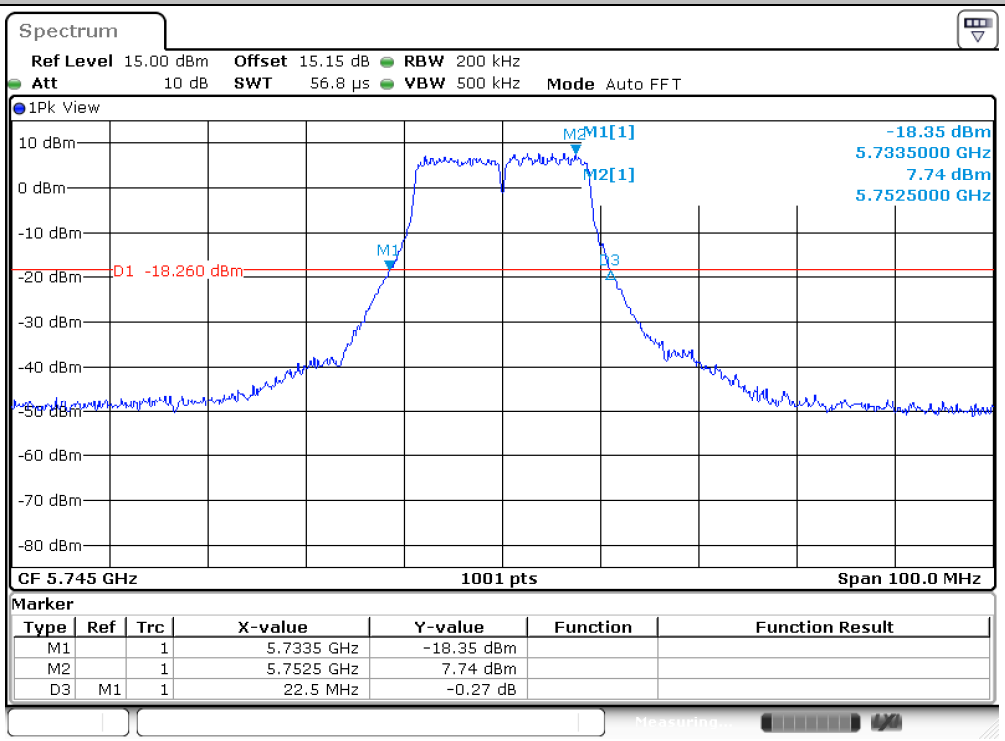
Date: 8.AUG.2024 09:59:44

11N20MIMO_Ant14_5700



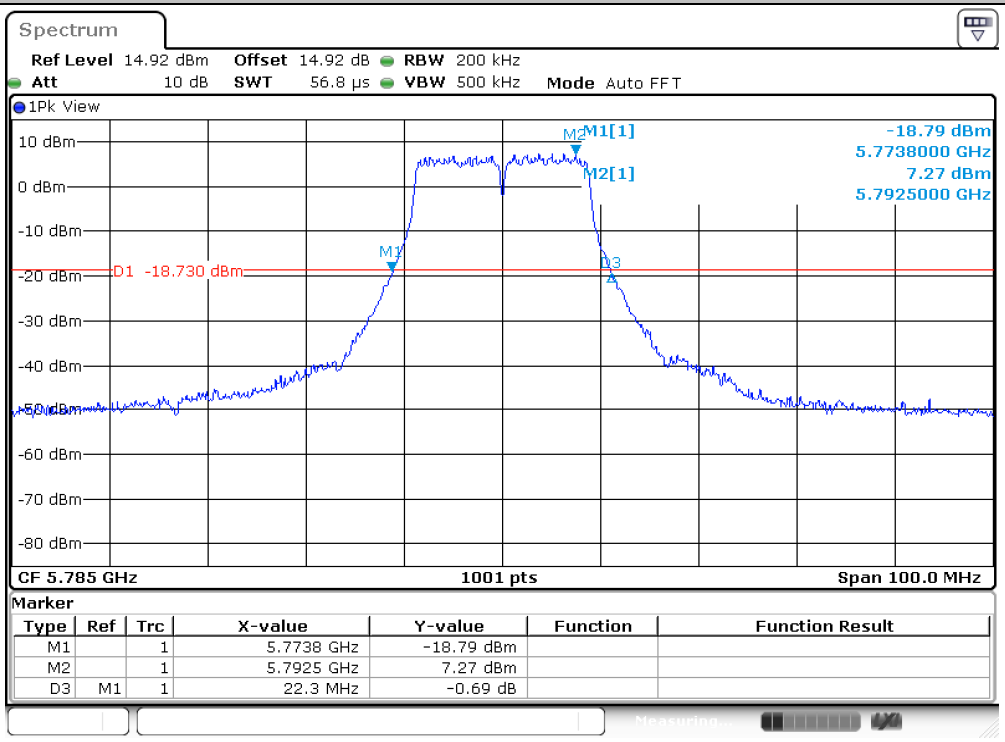
Date: 8.AUG.2024 10:03:28

11N20MIMO_Ant14_5745



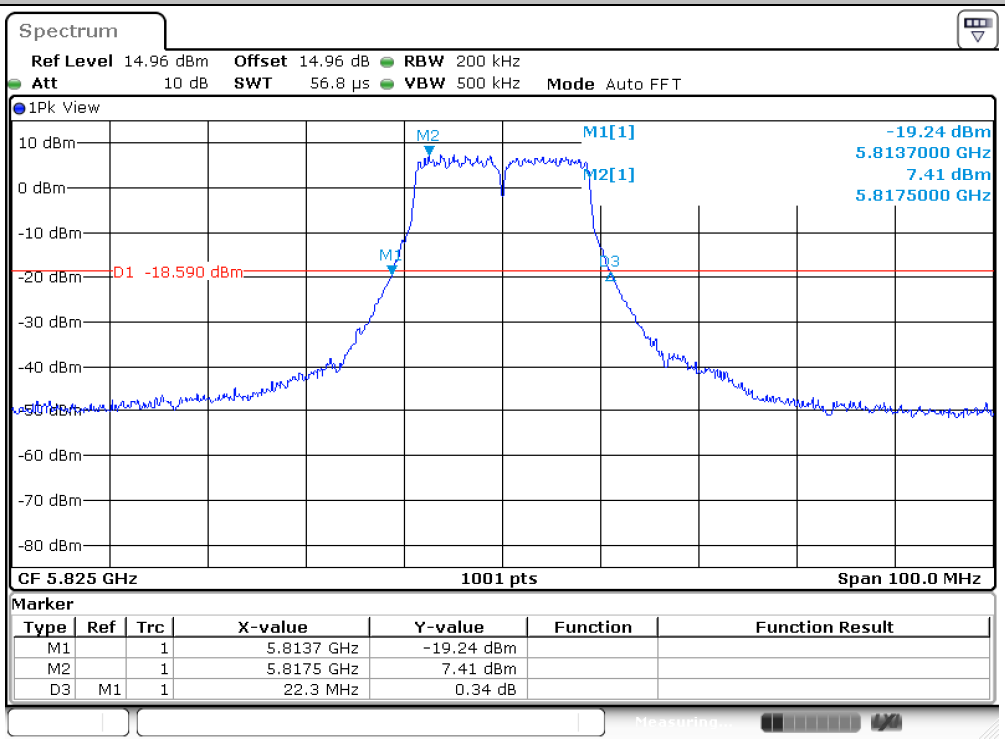
Date: 8.AUG.2024 10:04:49

11N20MIMO_Ant14_5785



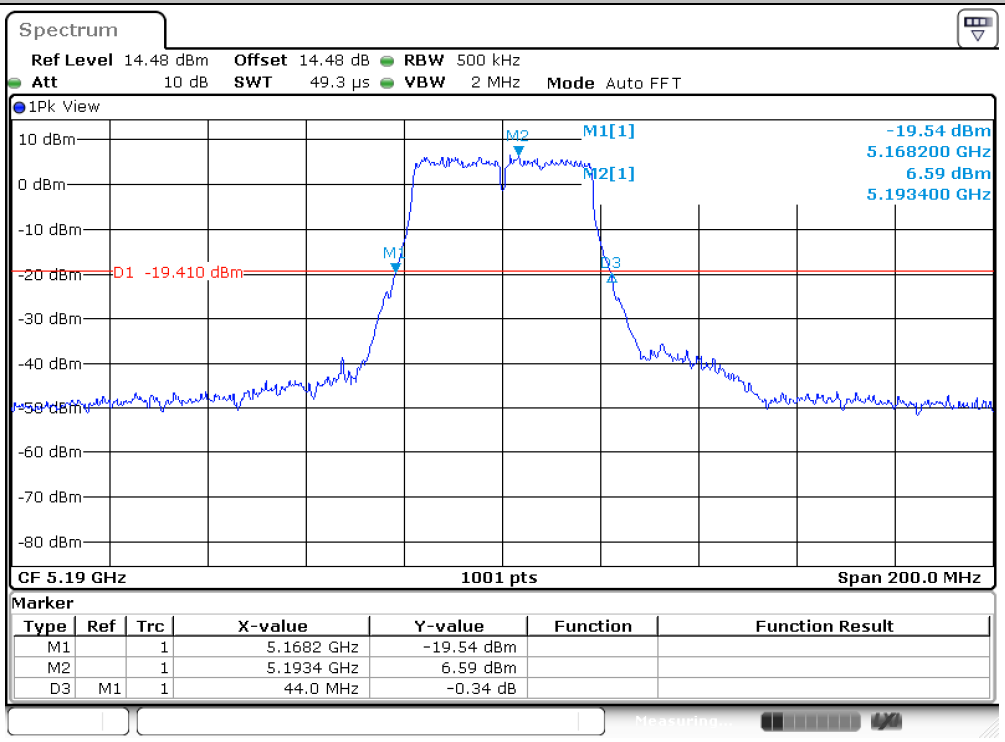
Date: 8.AUG.2024 10:05:28

11N20MIMO_Ant14_5825



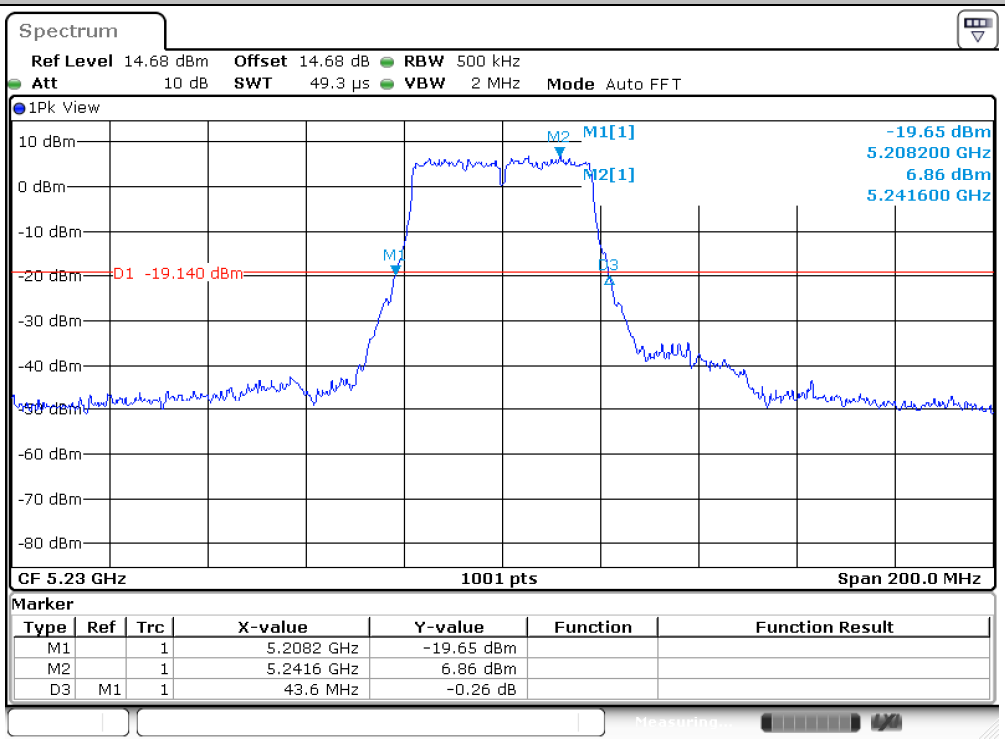
Date: 8.AUG.2024 10:06:37

11N40MIMO_Ant14_5190



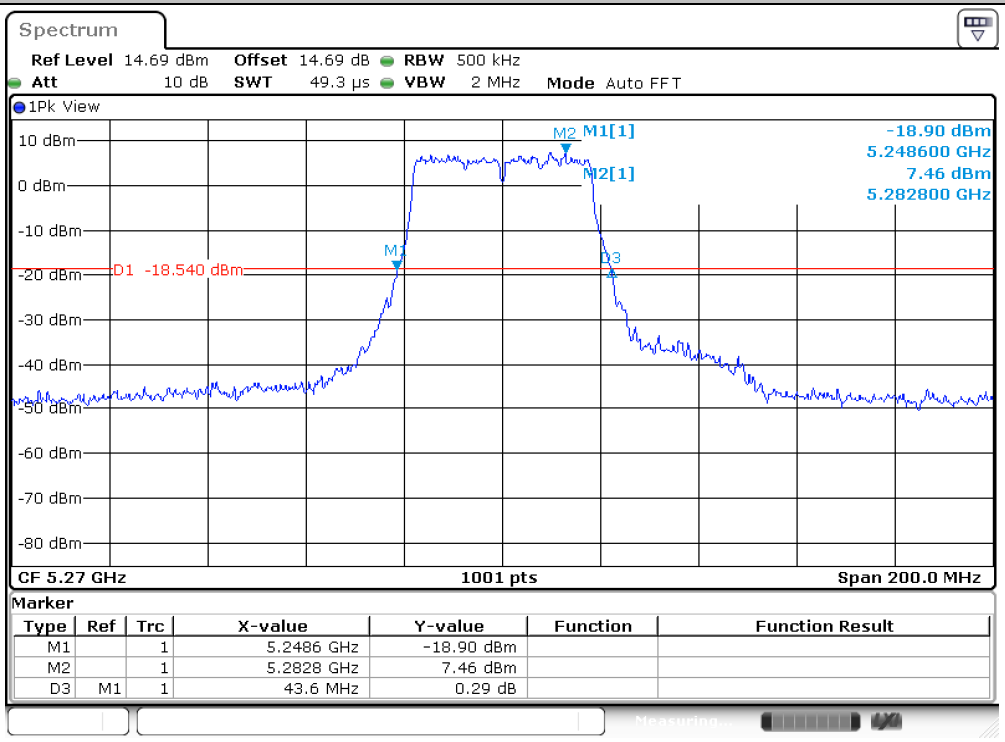
Date: 8.AUG.2024 10:07:43

11N40MIMO_Ant14_5230



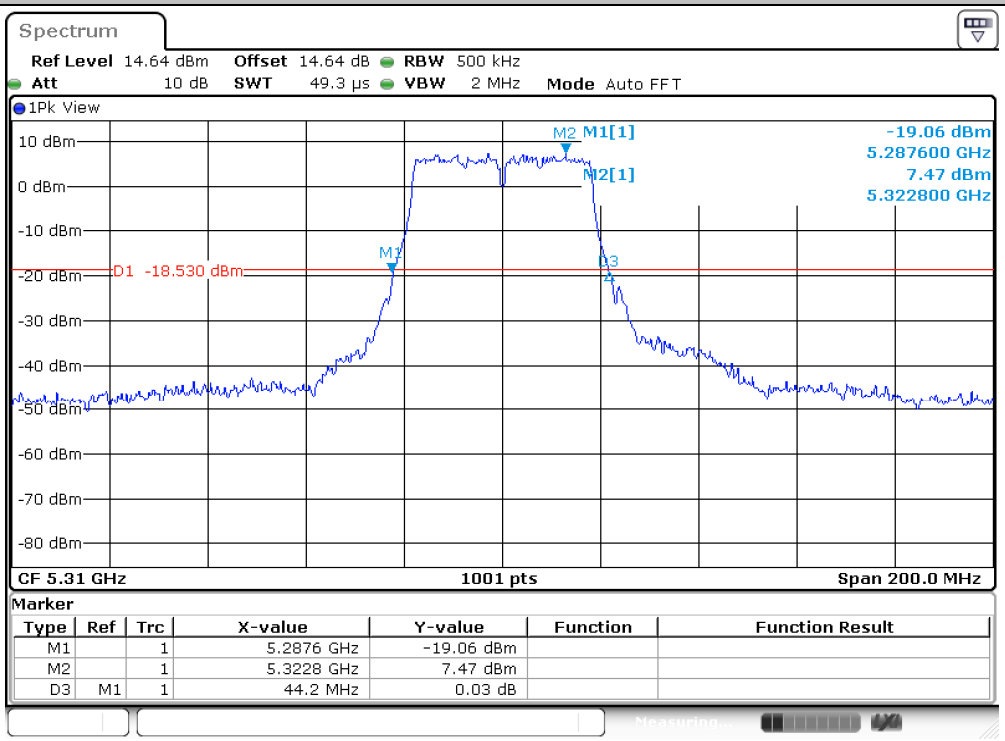
Date: 8.AUG.2024 10:08:34

11N40MIMO_Ant14_5270



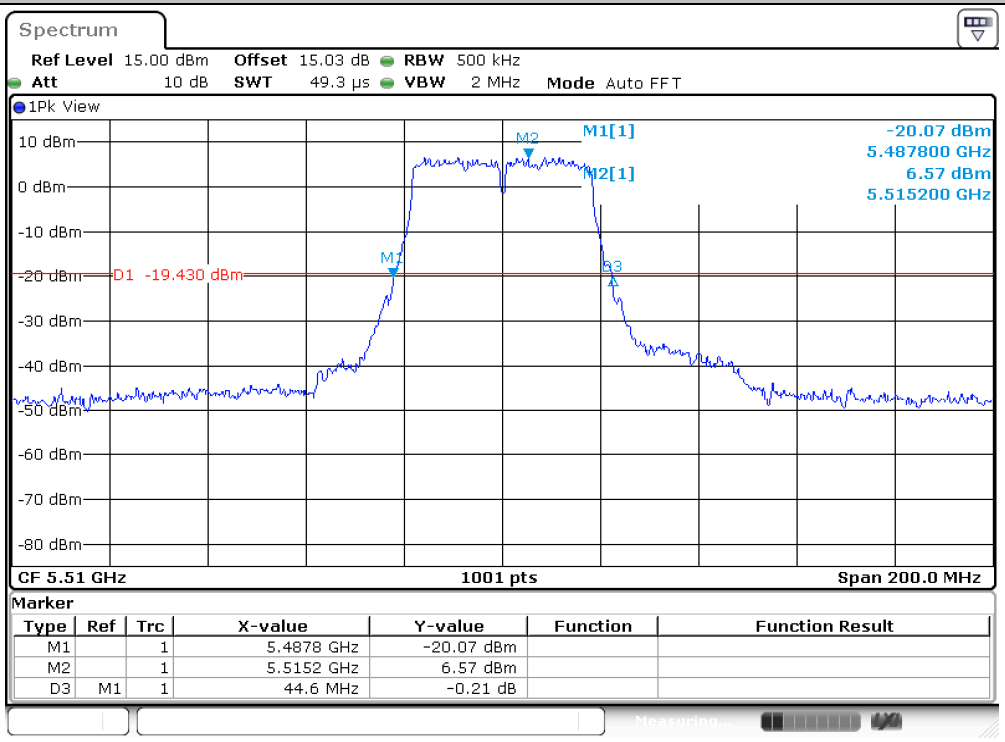
Date: 8.AUG.2024 10:09:22

11N40MIMO_Ant14_5310



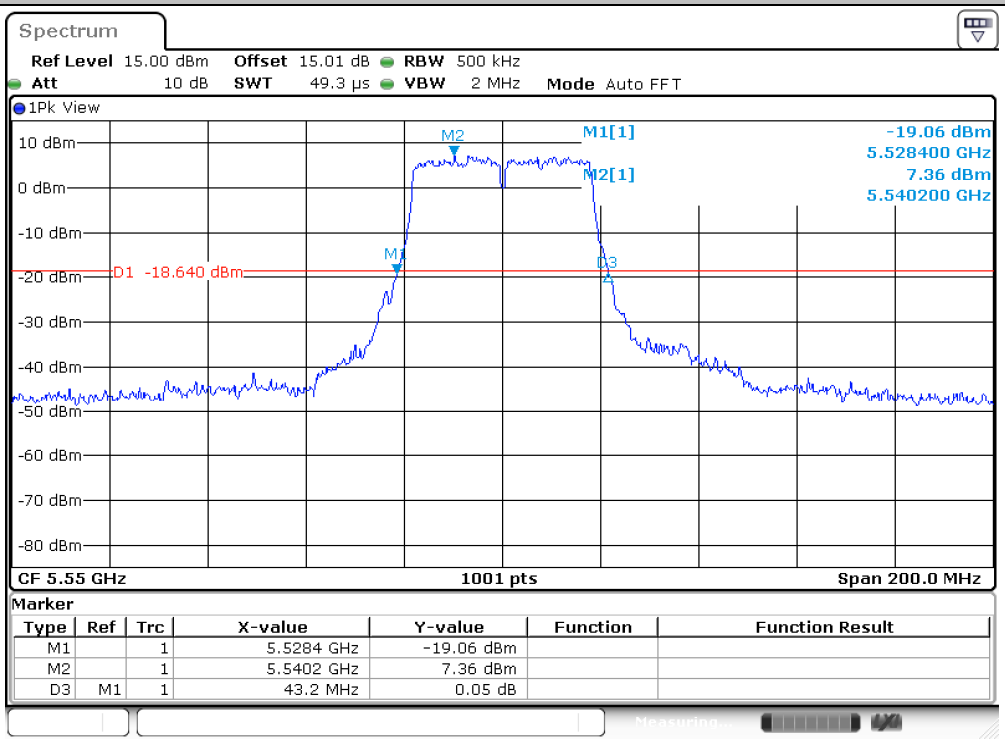
Date: 8.AUG.2024 10:10:29

11N40MIMO_Ant14_5510



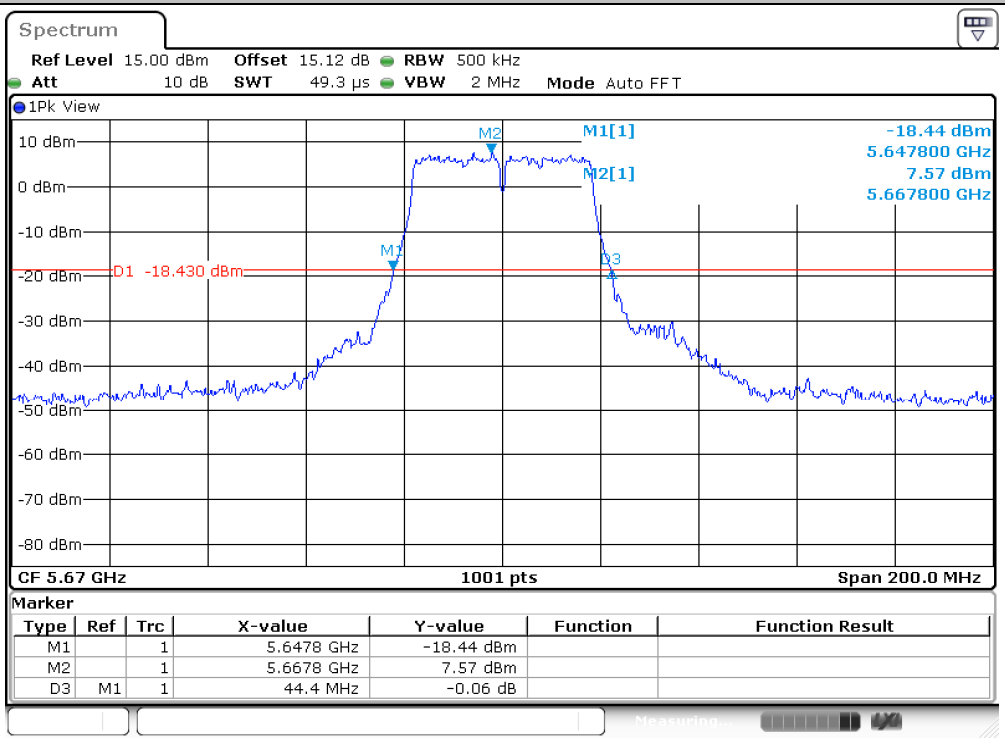
Date: 8.AUG.2024 10:12:47

11N40MIMO_Ant14_5550



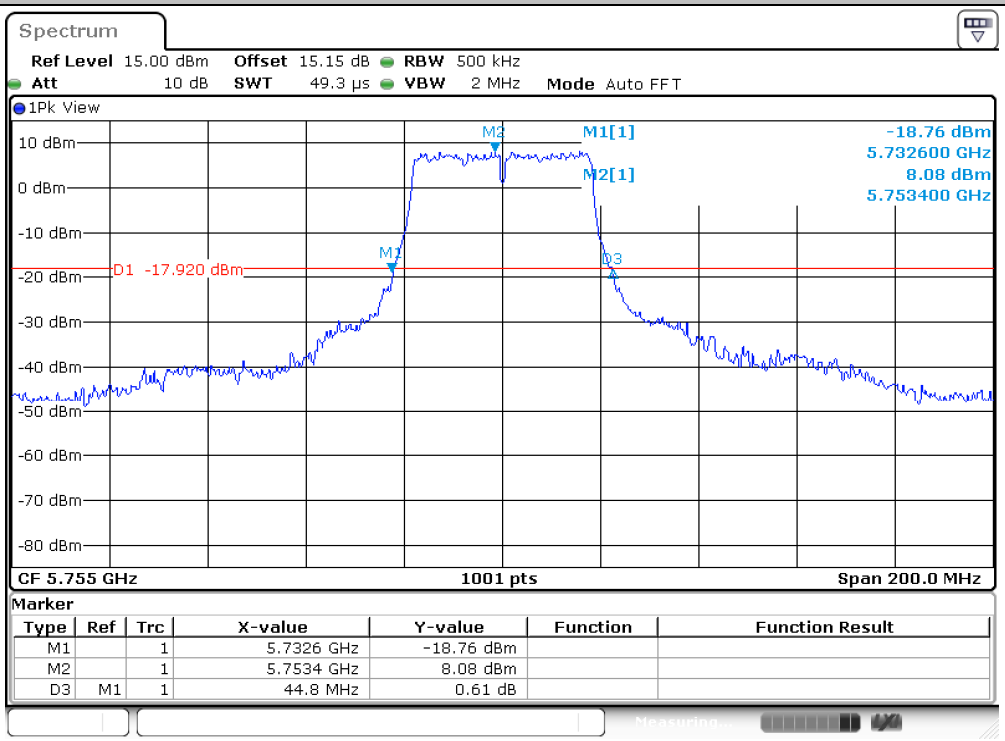
Date: 8.AUG.2024 10:13:33

11N40MIMO_Ant14_5670



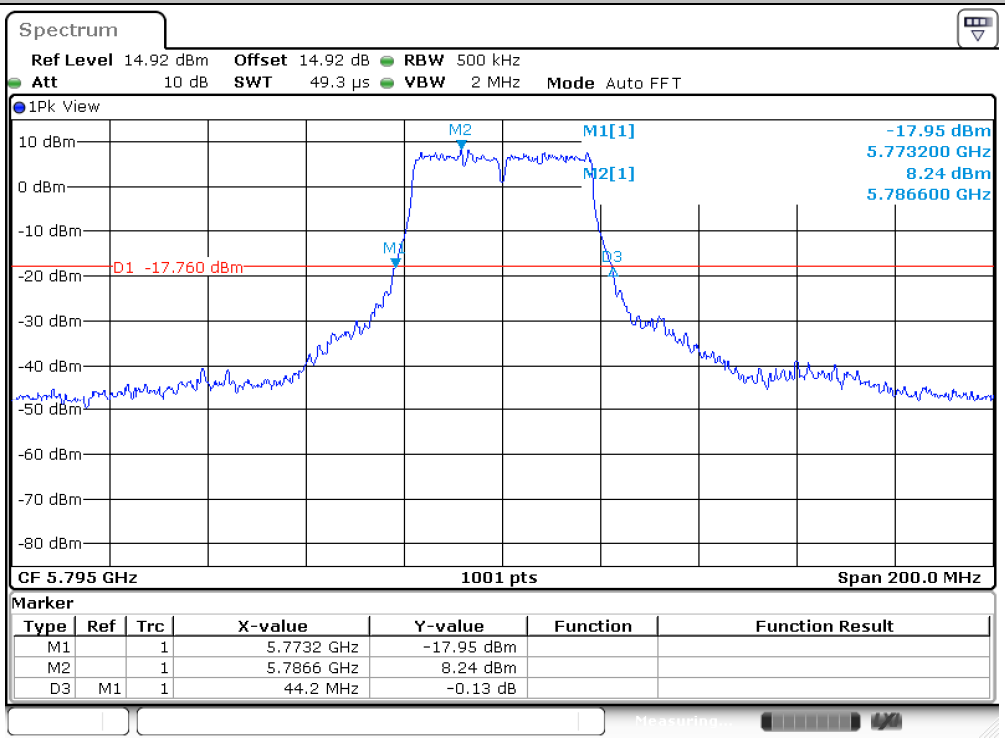
Date: 8.AUG.2024 10:14:44

11N40MIMO_Ant14_5755



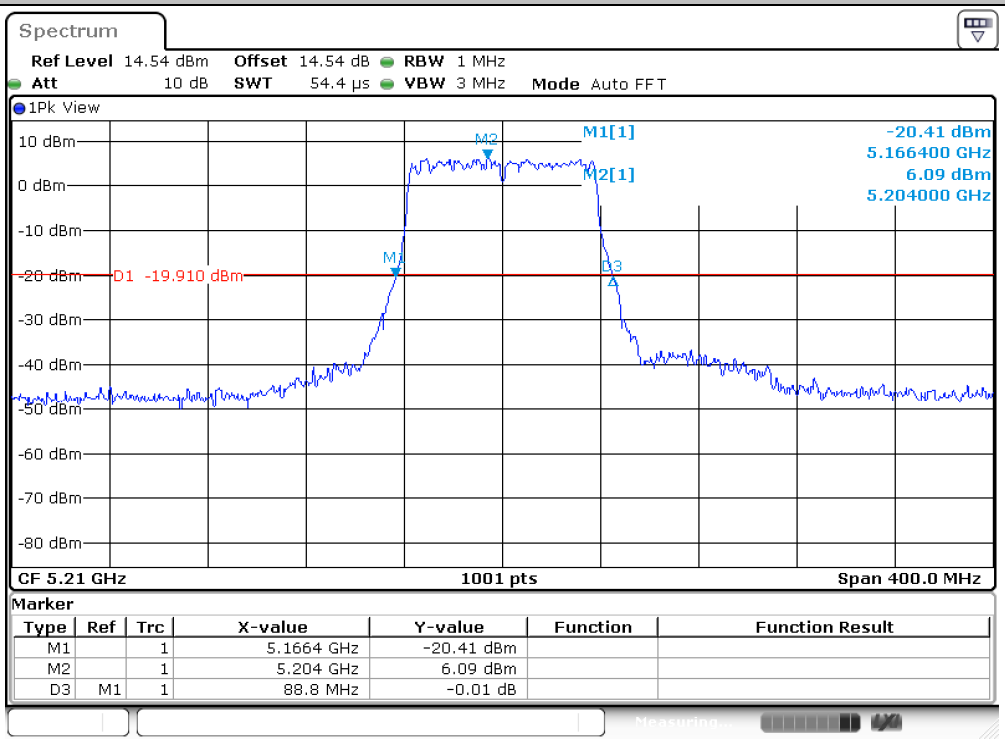
Date: 8.AUG.2024 10:15:27

11N40MIMO_Ant14_5795



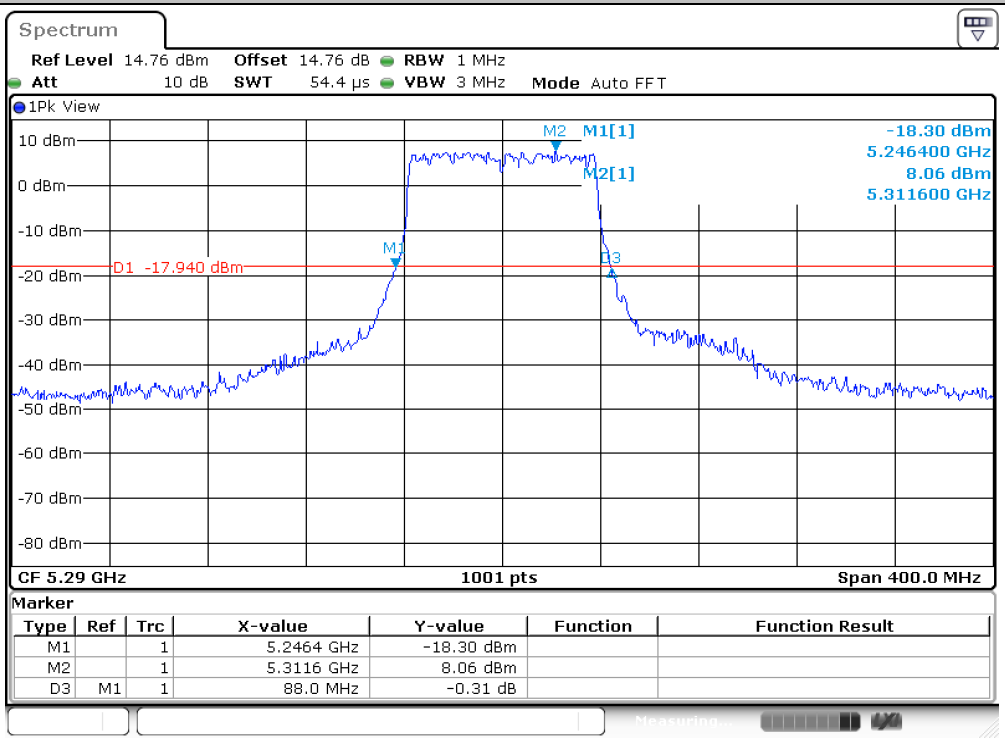
Date: 8.AUG.2024 10:16:09

11AC80MIMO_Ant14_5210



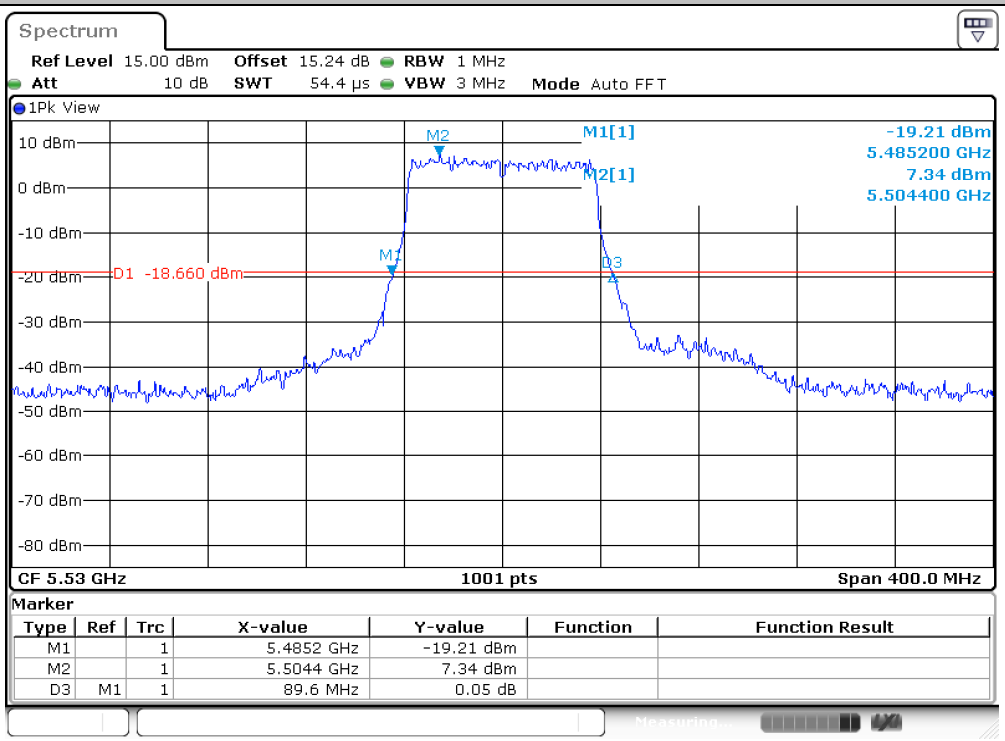
Date: 8.AUG.2024 10:18:21

11AC80MIMO_Ant14_5290



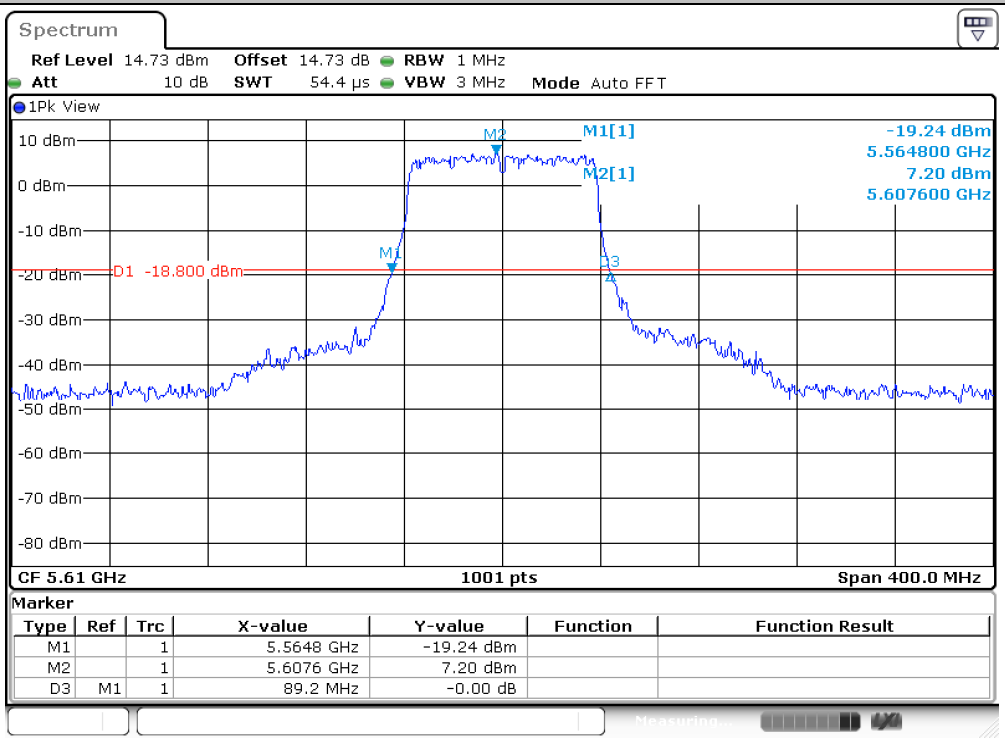
Date: 8.AUG.2024 10:19:01

11AC80MIMO_Ant14_5530



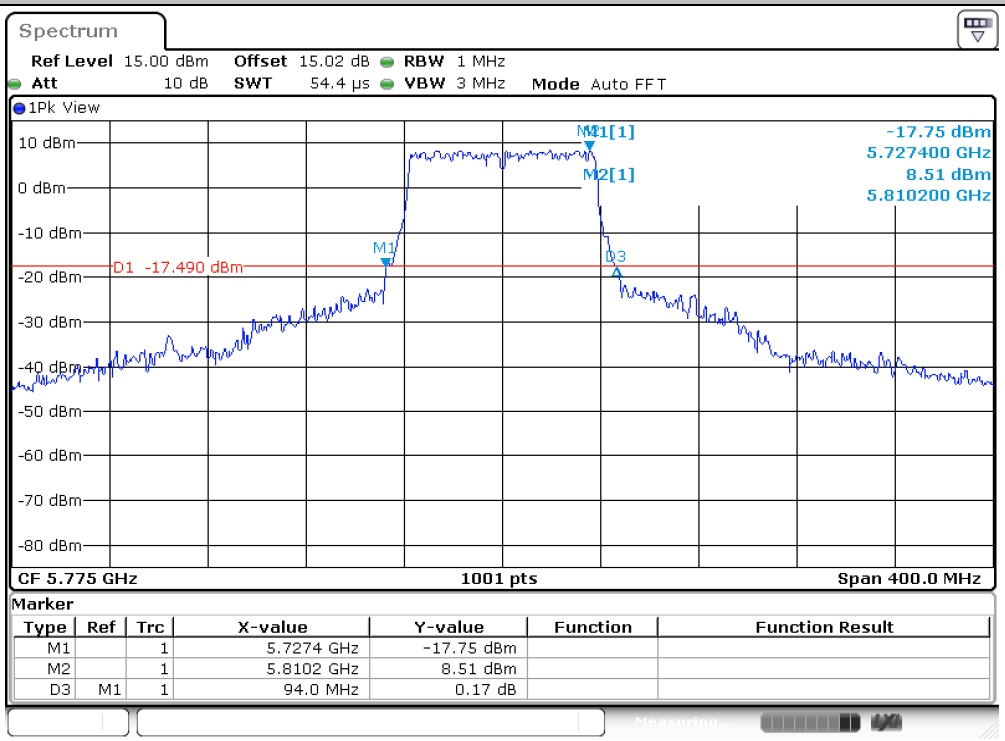
Date: 8.AUG.2024 10:20:07

11AC80MIMO_Ant14_5610



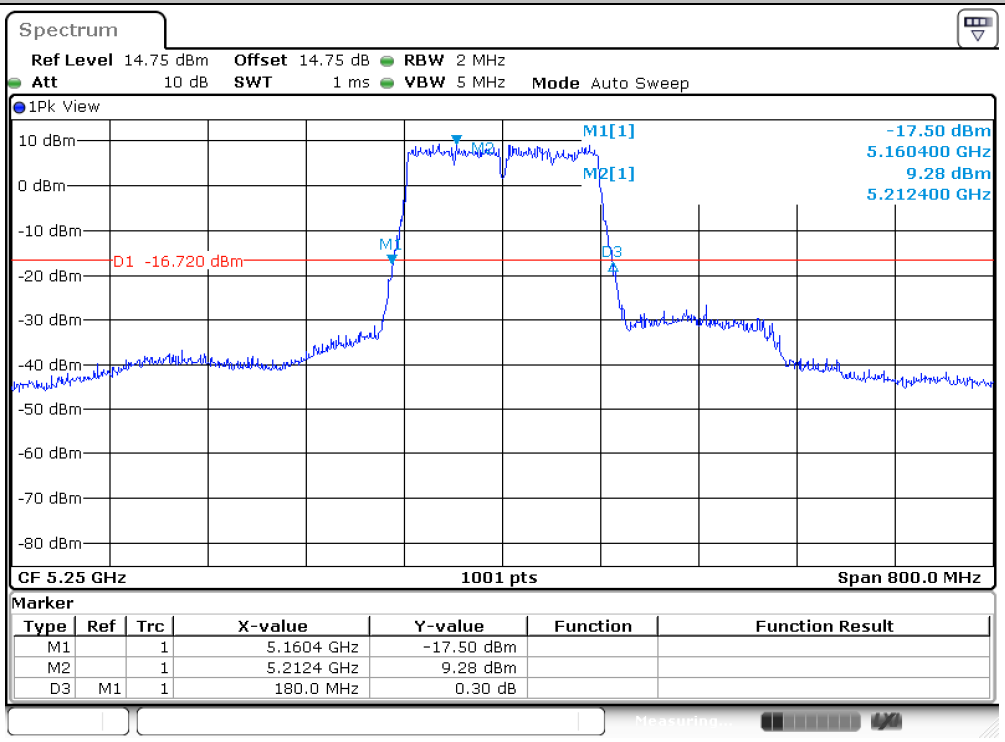
Date: 8.AUG.2024 10:20:54

11AC80MIMO_Ant14_5775



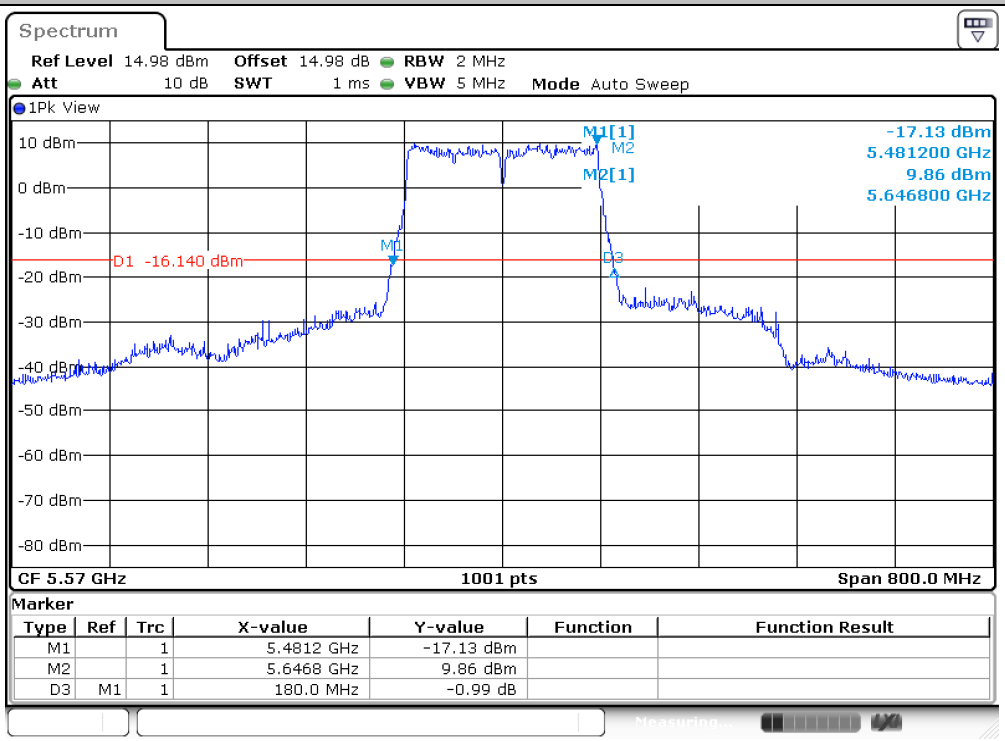
Date: 8.AUG.2024 10:21:46

11AC160MIMO_Ant14_5250



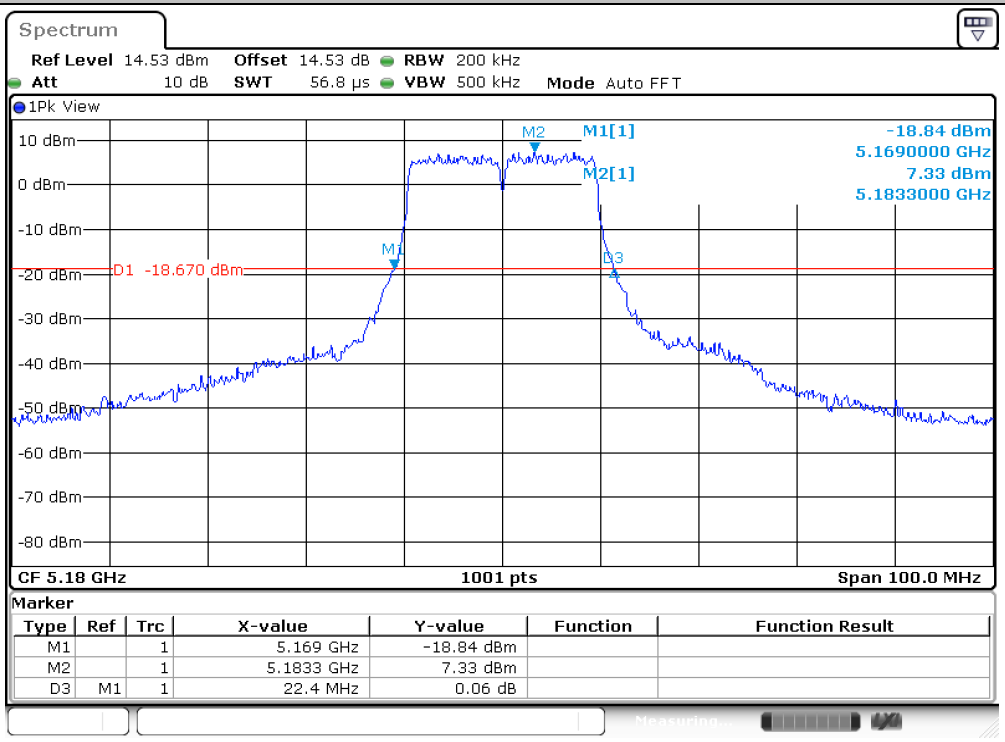
Date: 8.AUG.2024 10:23:10

11AC160MIMO_Ant14_5570



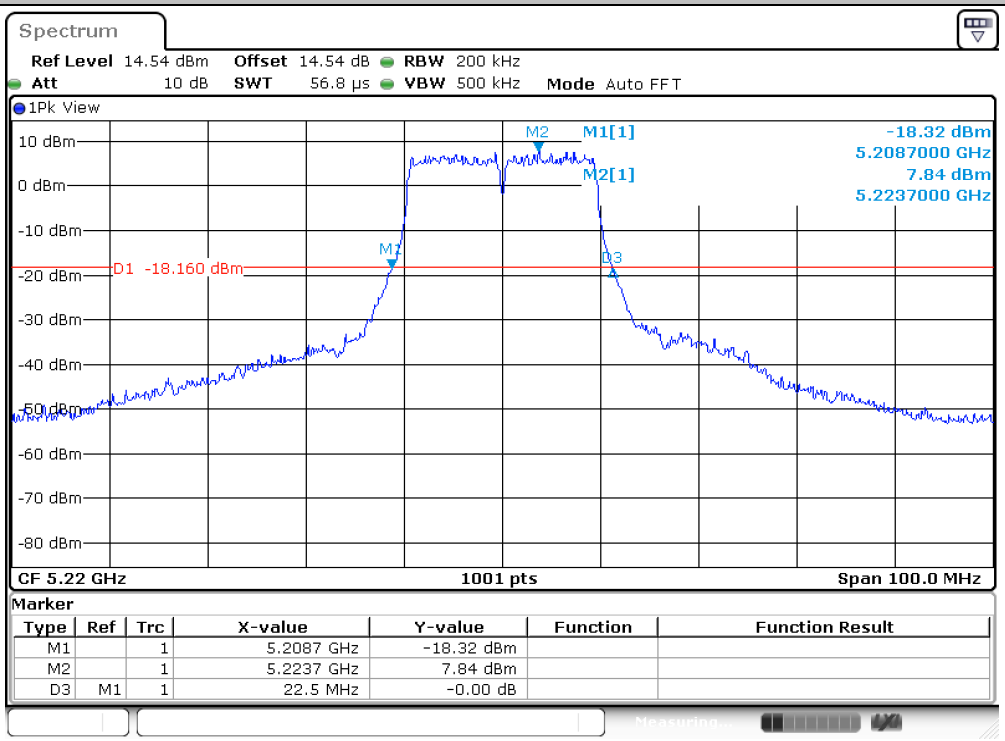
Date: 8.AUG.2024 10:24:00

11AX20MIMO_Ant14_5180



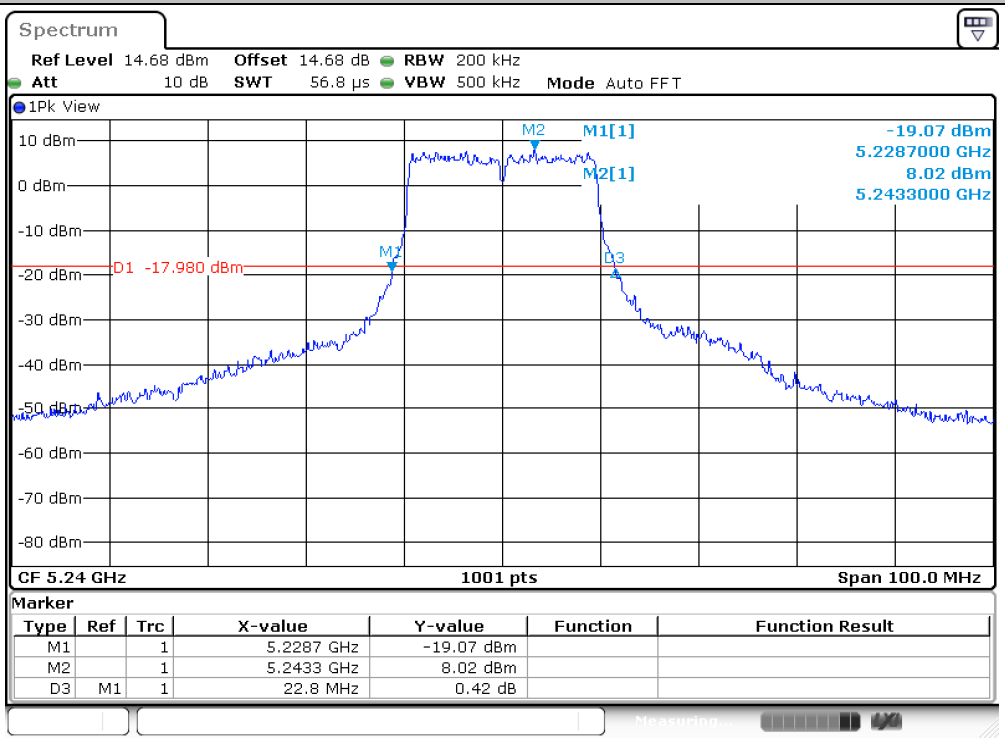
Date: 10.AUG.2024 00:46:36

11AX20MIMO_Ant14_5220



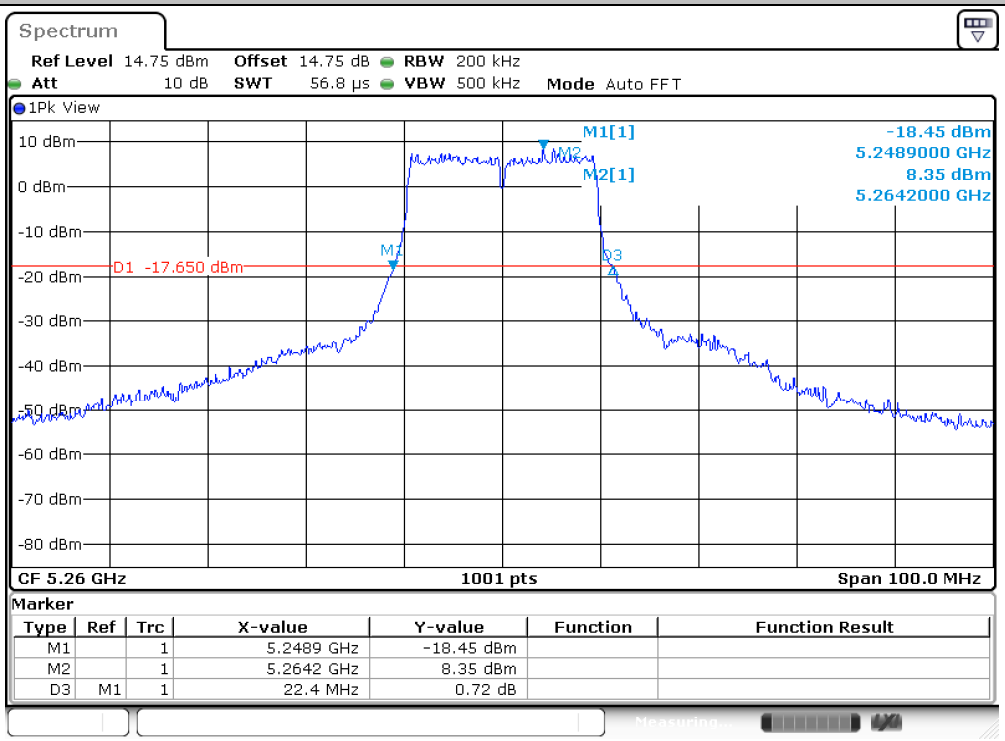
Date: 10.AUG.2024 00:48:07

11AX20MIMO_Ant14_5240



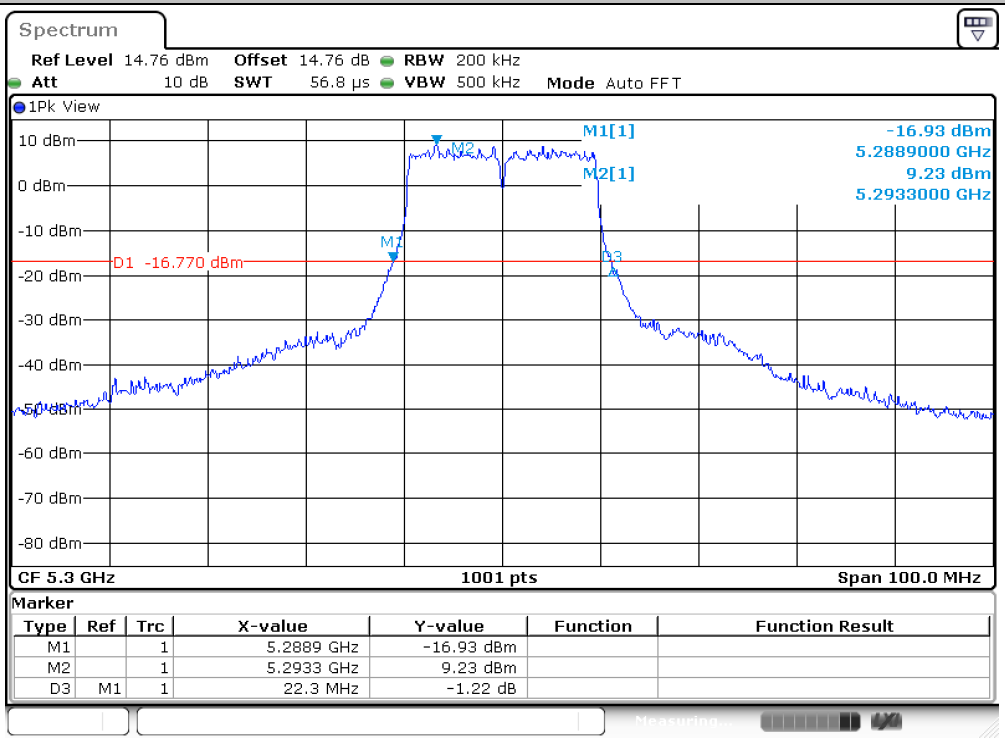
Date: 10.AUG.2024 00:49:04

11AX20MIMO_Ant14_5260



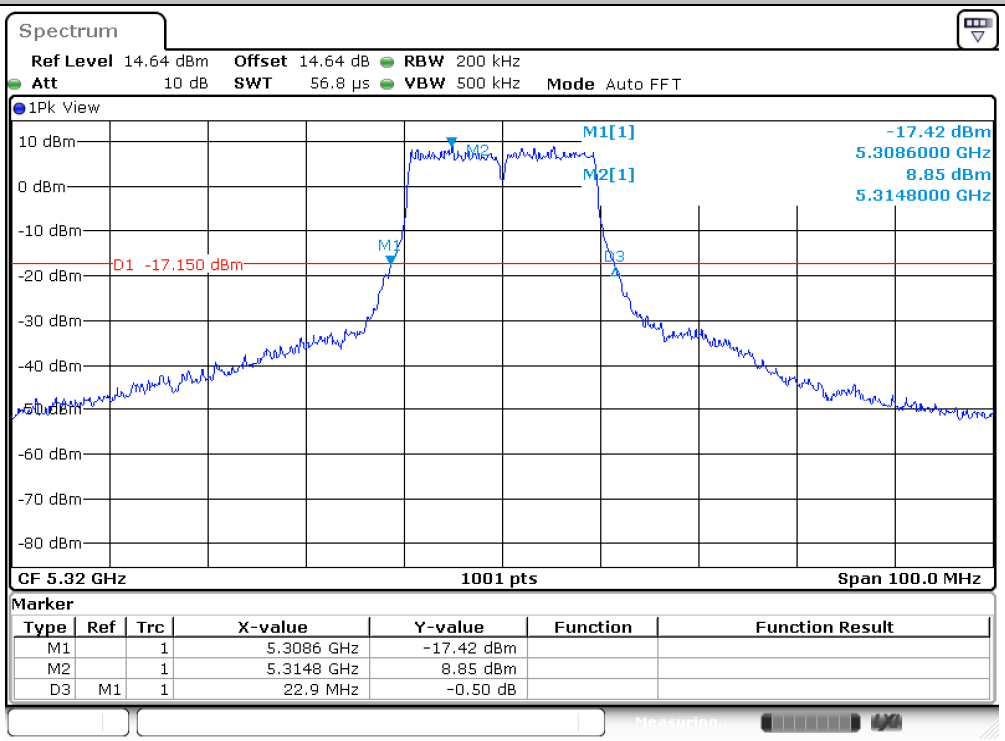
Date: 10.AUG.2024 00:50:06

11AX20MIMO_Ant14_5300



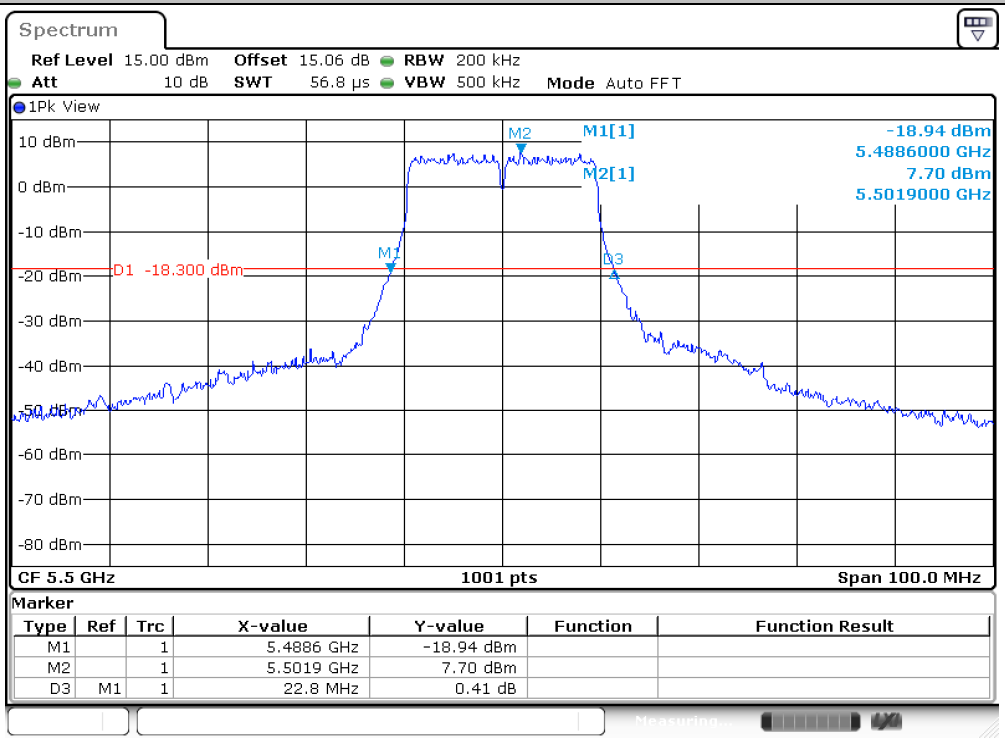
Date: 10.AUG.2024 00:51:05

11AX20MIMO_Ant14_5320



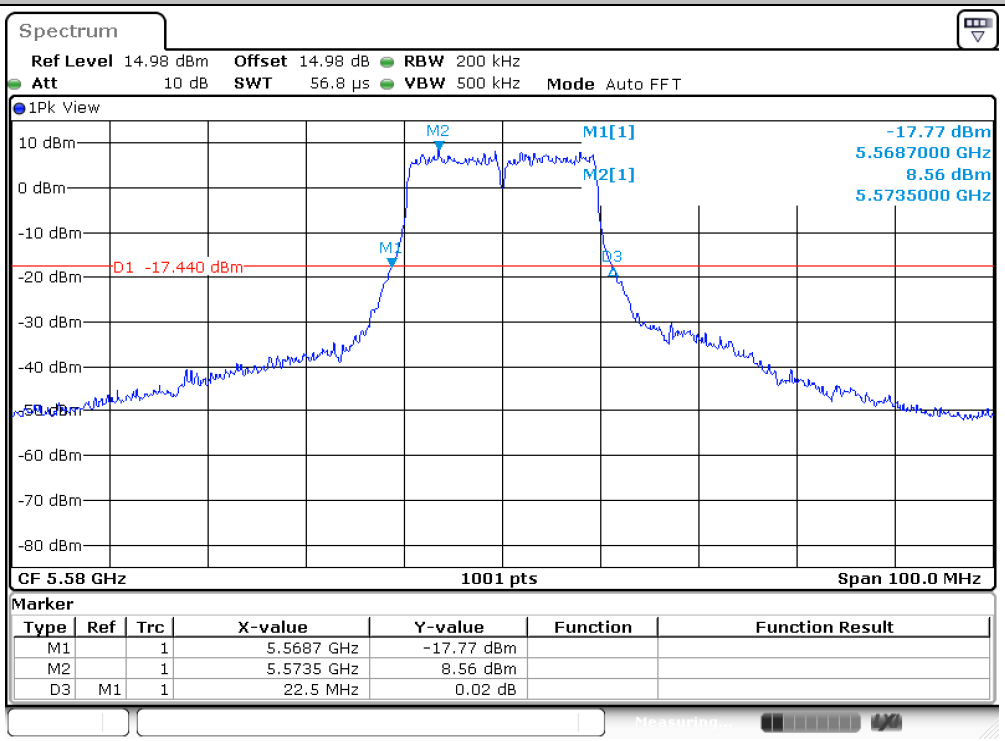
Date: 10.AUG.2024 00:52:08

11AX20MIMO_Ant14_5500



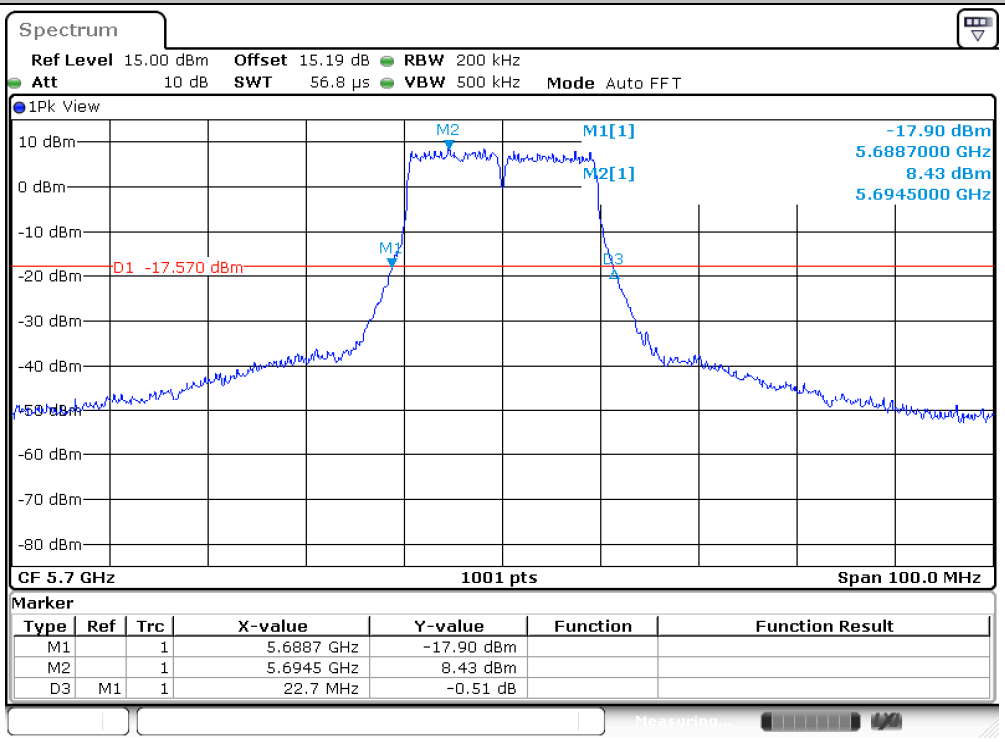
Date: 10.AUG.2024 00:53:07

11AX20MIMO_Ant14_5580



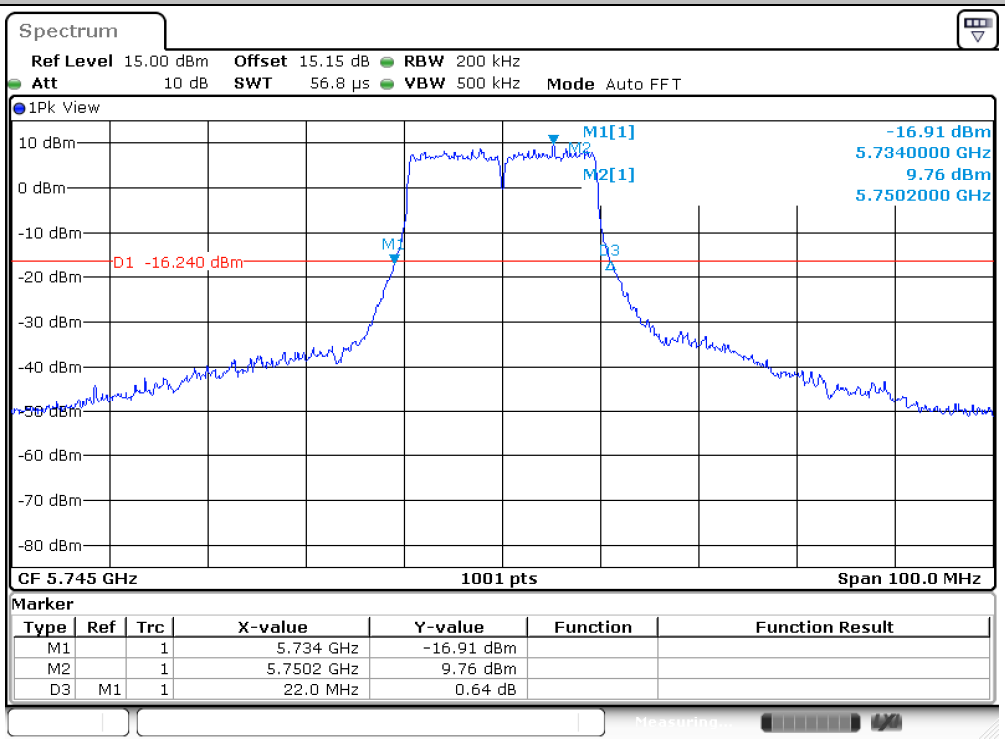
Date: 10.AUG.2024 00:54:07

11AX20MIMO_Ant14_5700



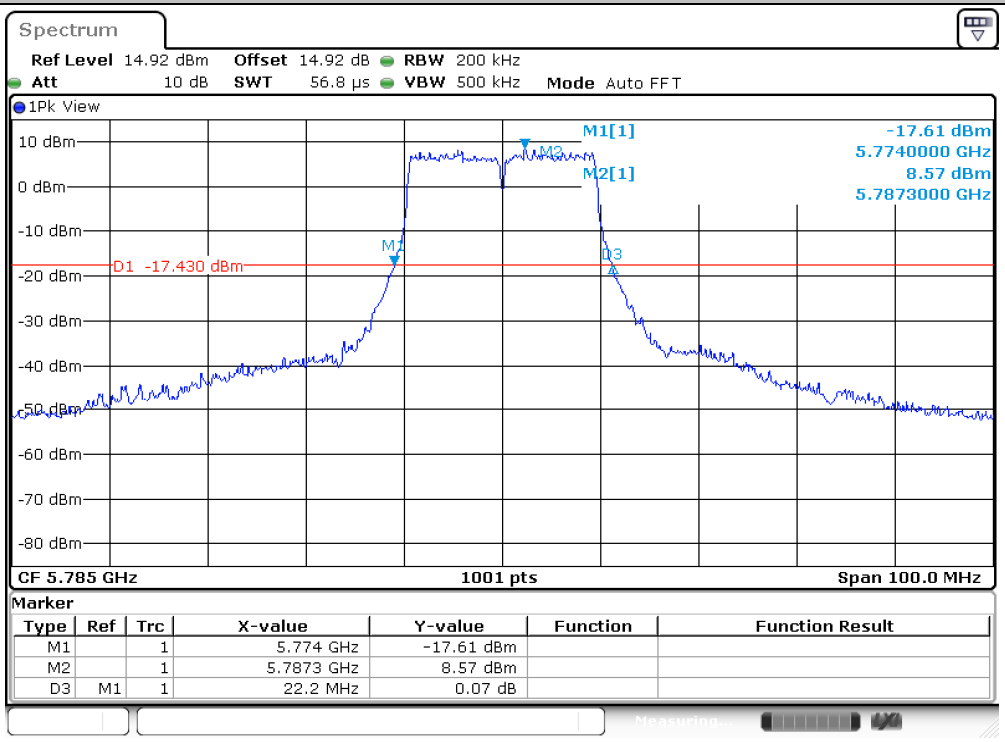
Date: 10.AUG.2024 00:55:05

11AX20MIMO_Ant14_5745



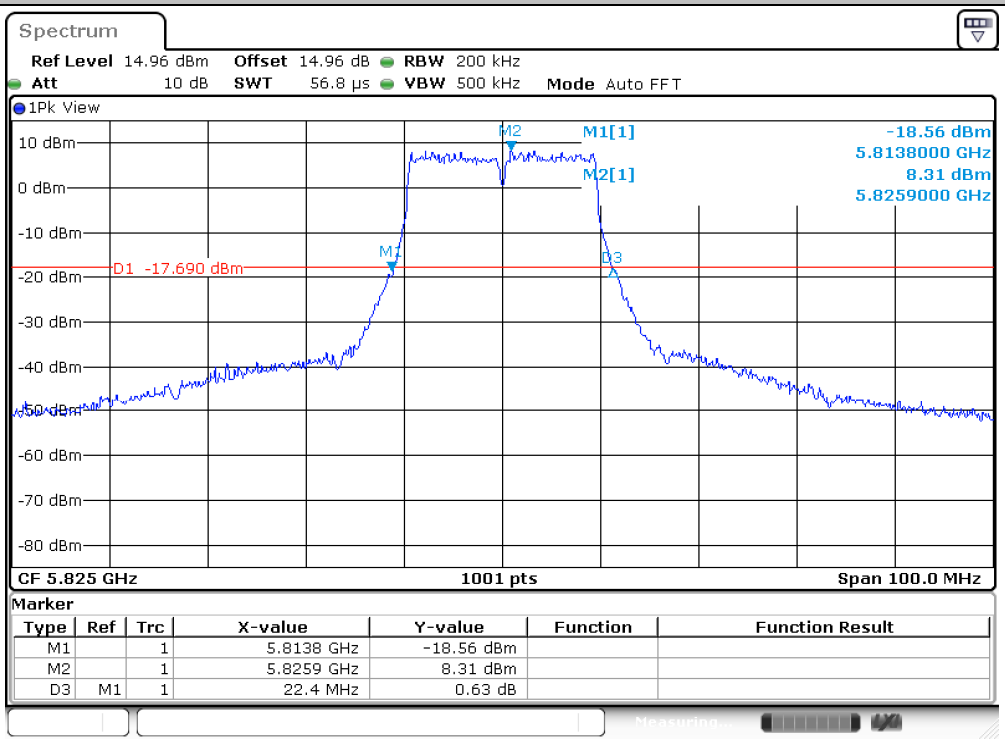
Date: 10.AUG.2024 00:56:01

11AX20MIMO_Ant14_5785



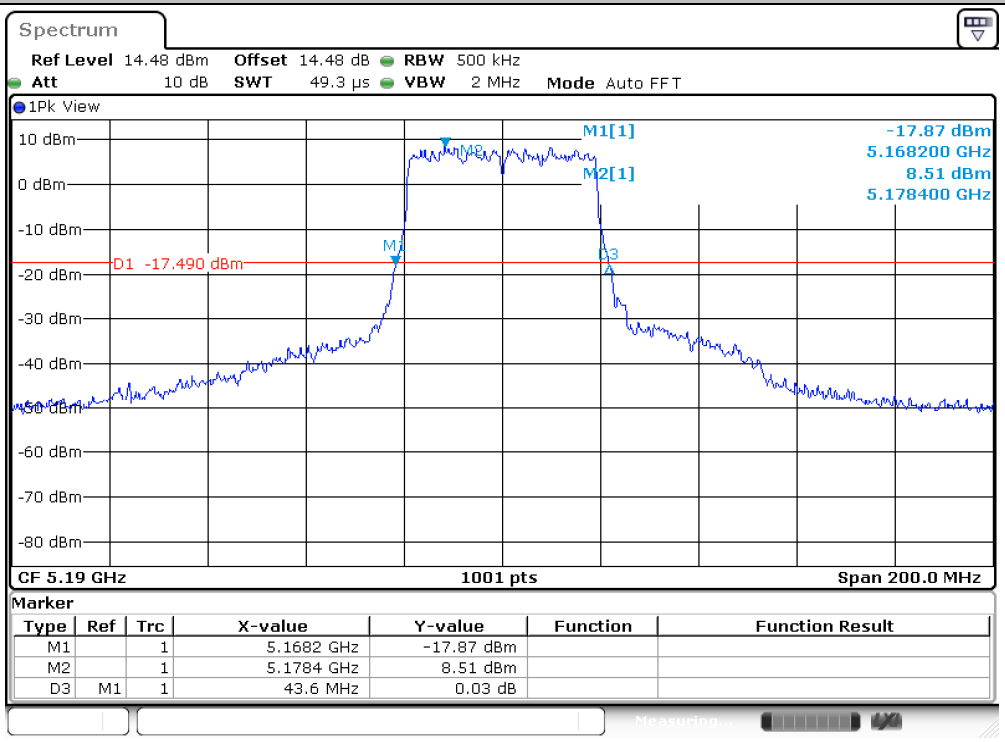
Date: 10.AUG.2024 00:57:07

11AX20MIMO_Ant14_5825



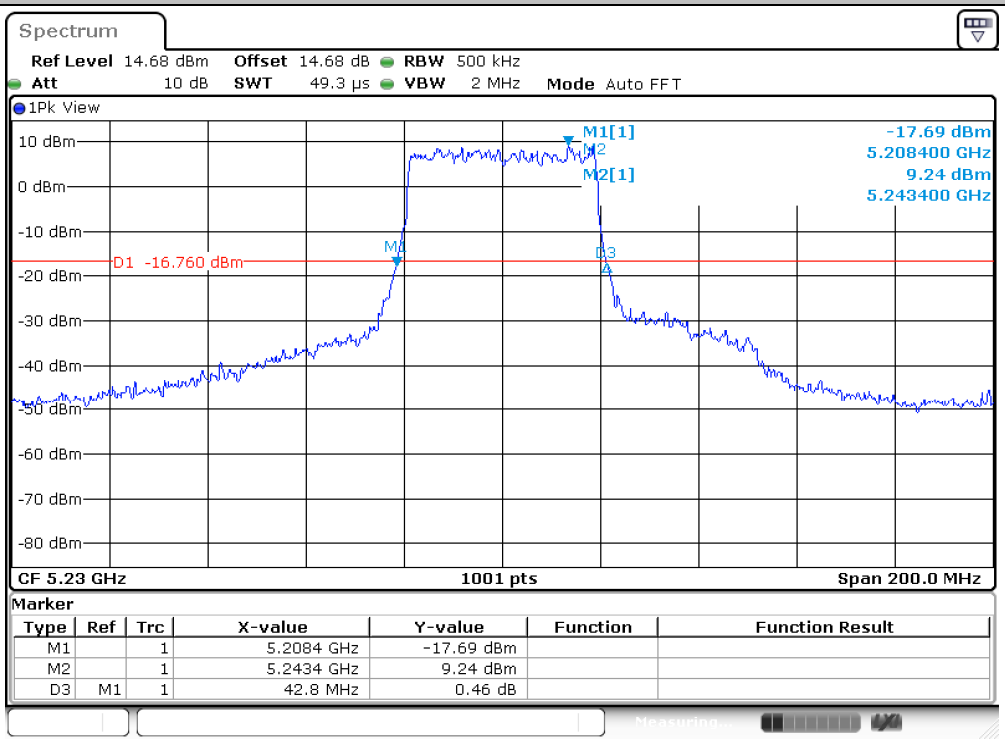
Date: 10.AUG.2024 00:58:14

11AX40MIMO_Ant14_5190



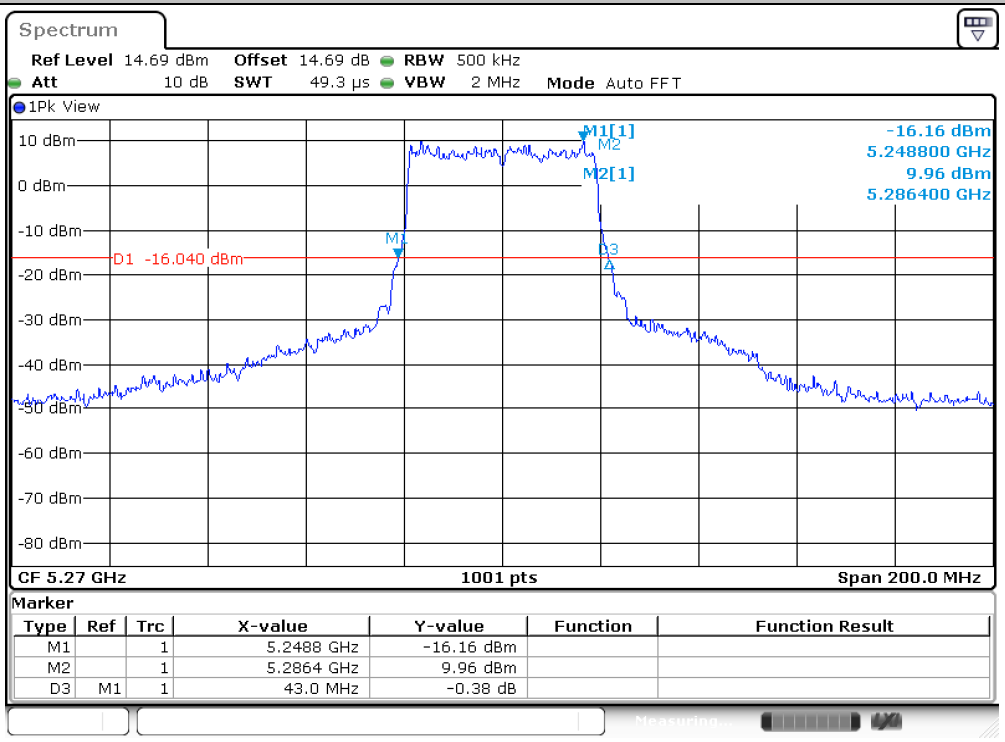
Date: 10.AUG.2024 00:59:36

11AX40MIMO_Ant14_5230



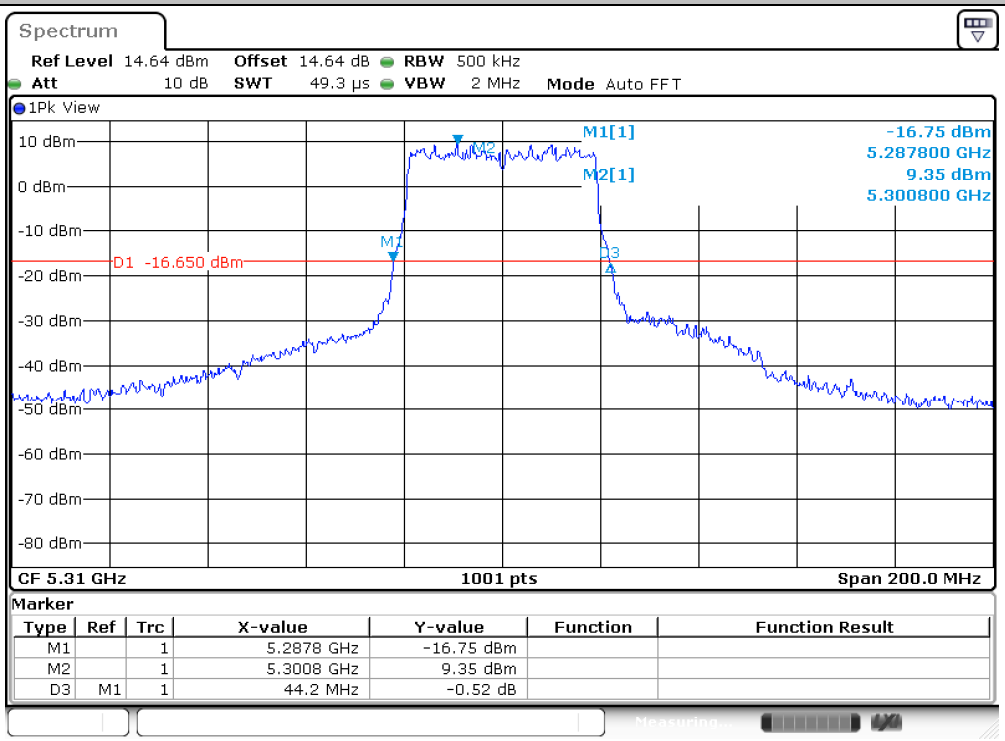
Date: 10.AUG.2024 01:02:17

11AX40MIMO_Ant14_5270



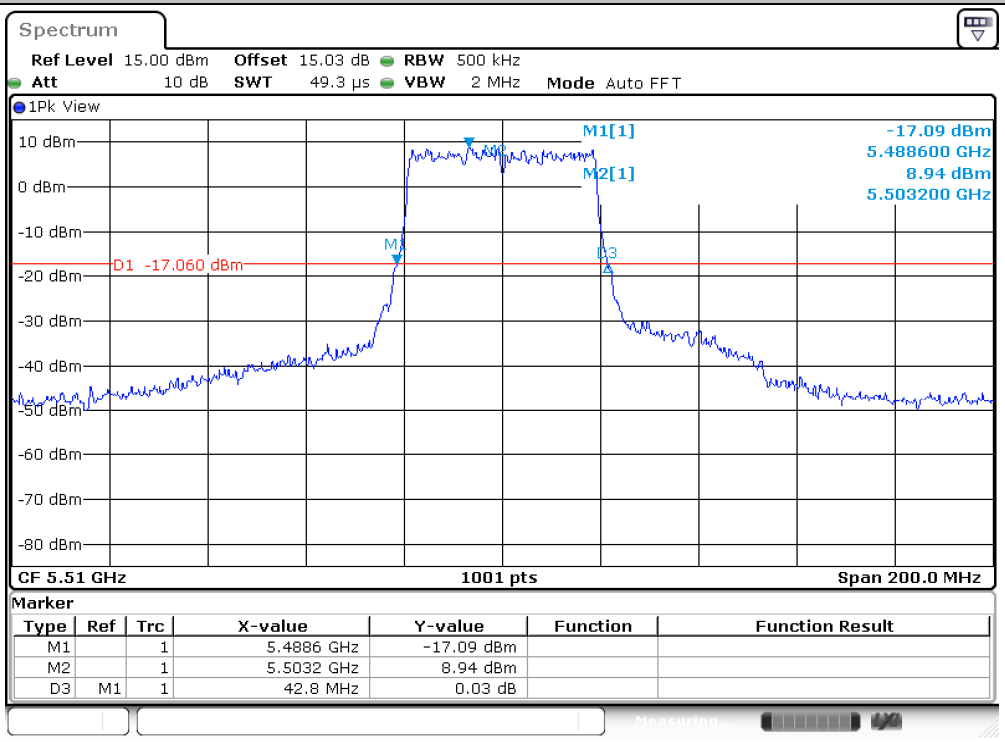
Date: 10.AUG.2024 01:03:32

11AX40MIMO_Ant14_5310



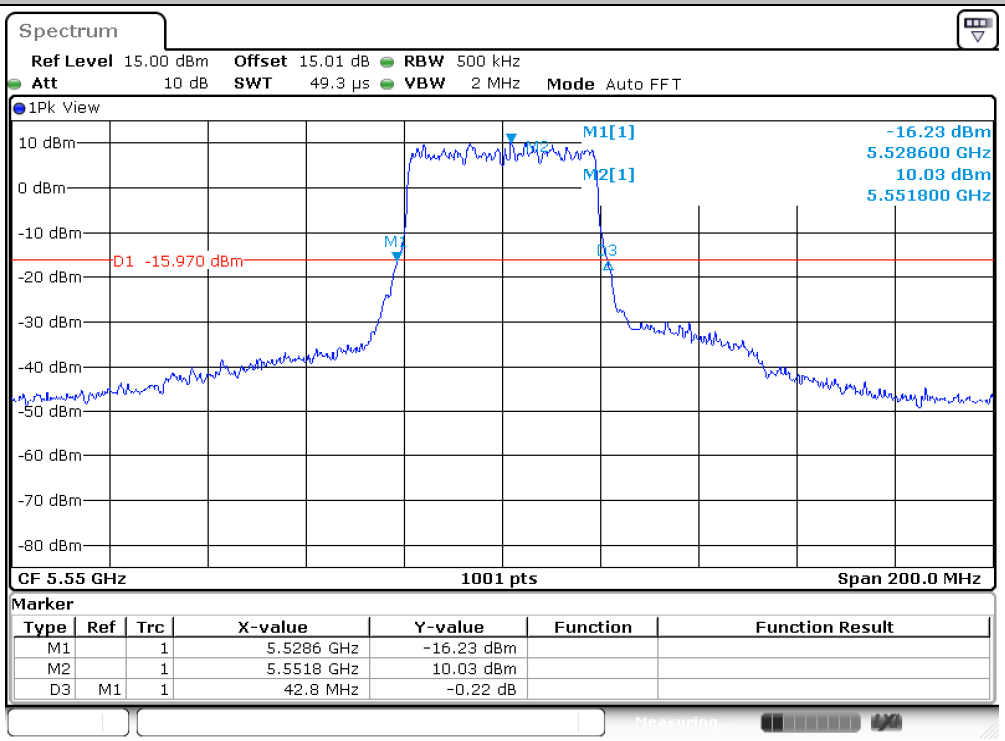
Date: 10.AUG.2024 01:07:07

11AX40MIMO_Ant14_5510



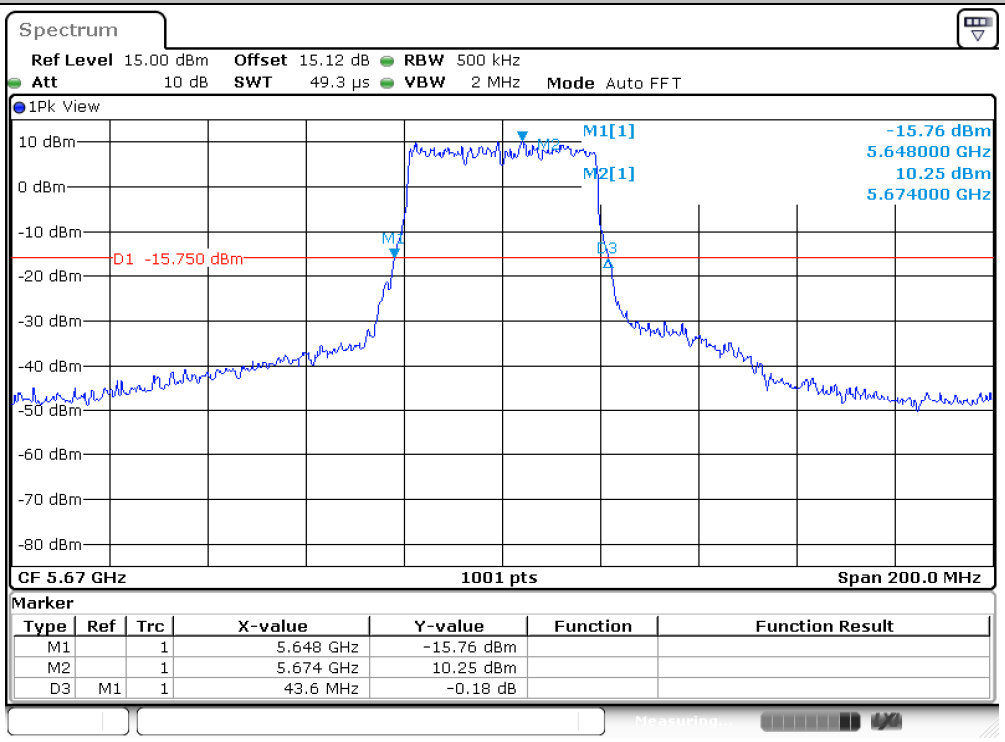
Date: 10.AUG.2024 01:08:30

11AX40MIMO_Ant14_5550



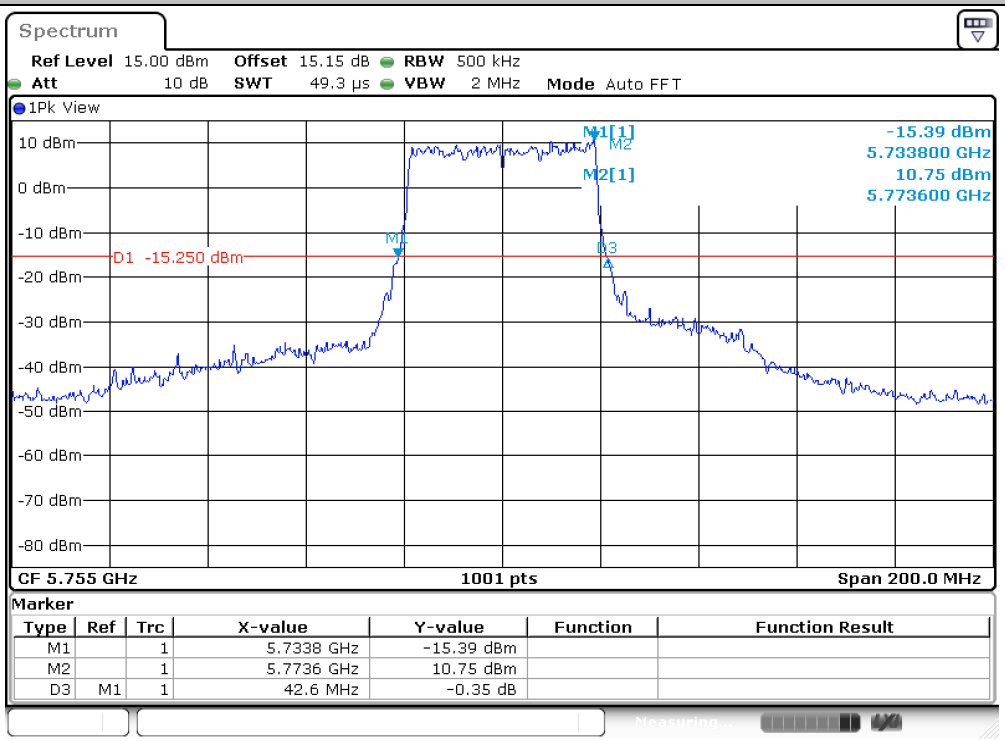
Date: 10.AUG.2024 01:09:49

11AX40MIMO_Ant14_5670



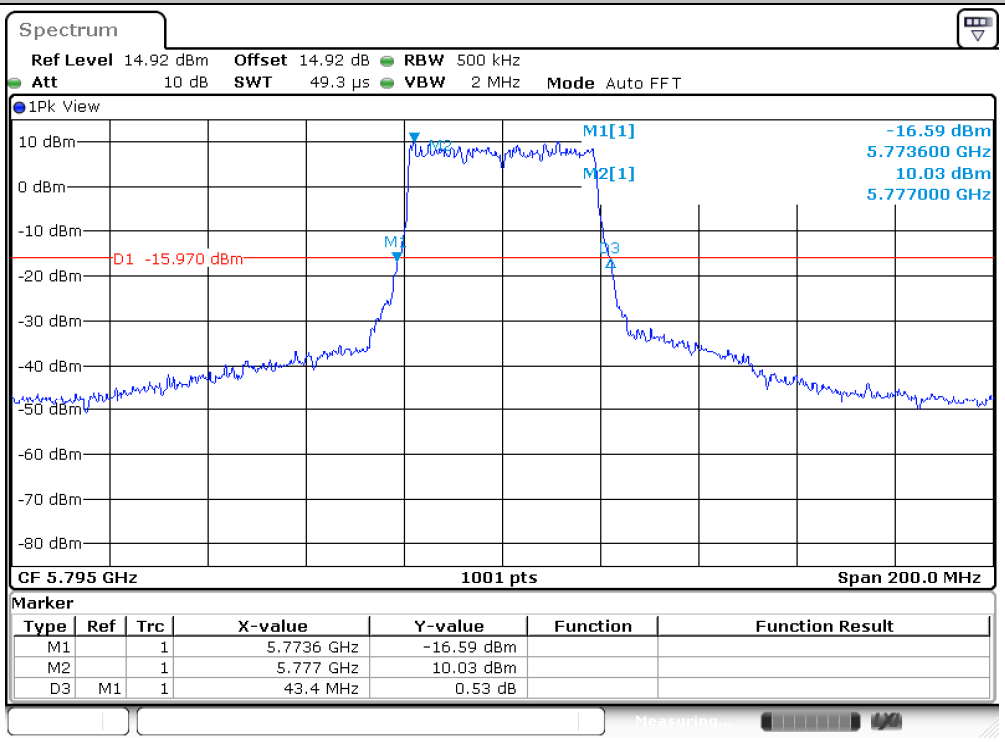
Date: 10.AUG.2024 01:11:28

11AX40MIMO_Ant14_5755



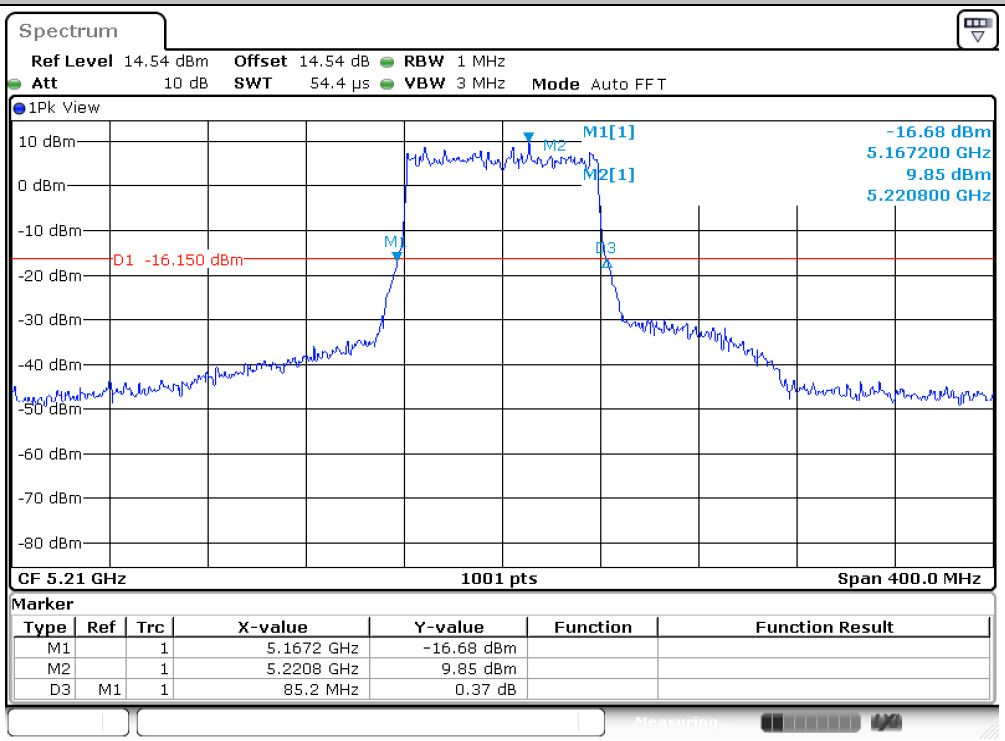
Date: 10.AUG.2024 01:12:36

11AX40MIMO_Ant14_5795



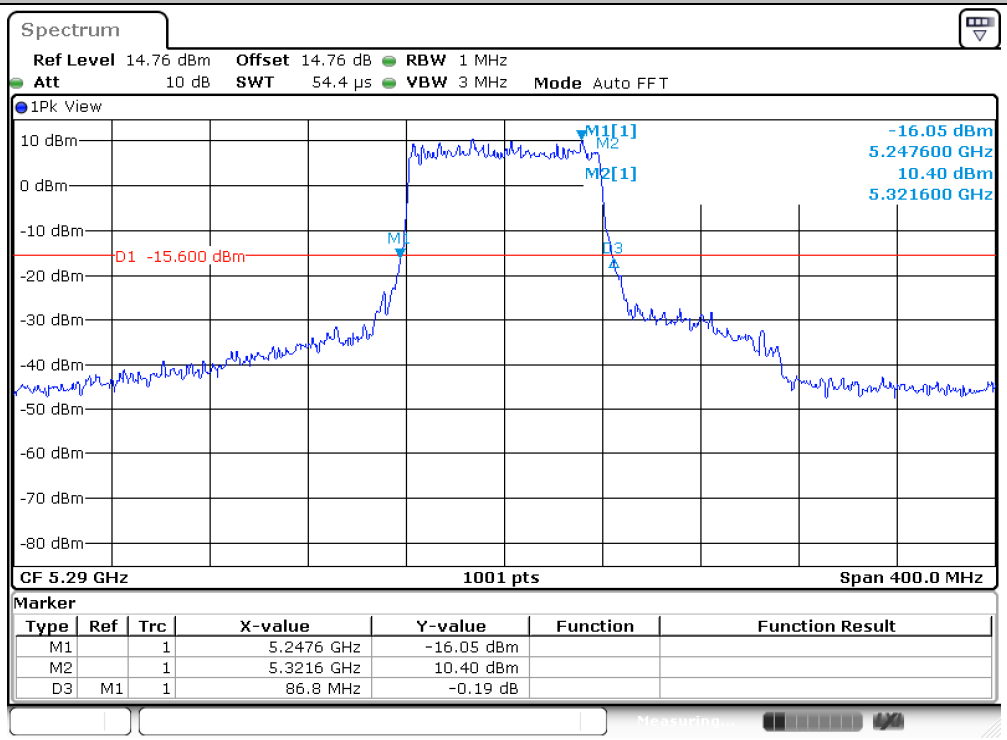
Date: 10.AUG.2024 01:13:41

11AX80MIMO_Ant14_5210

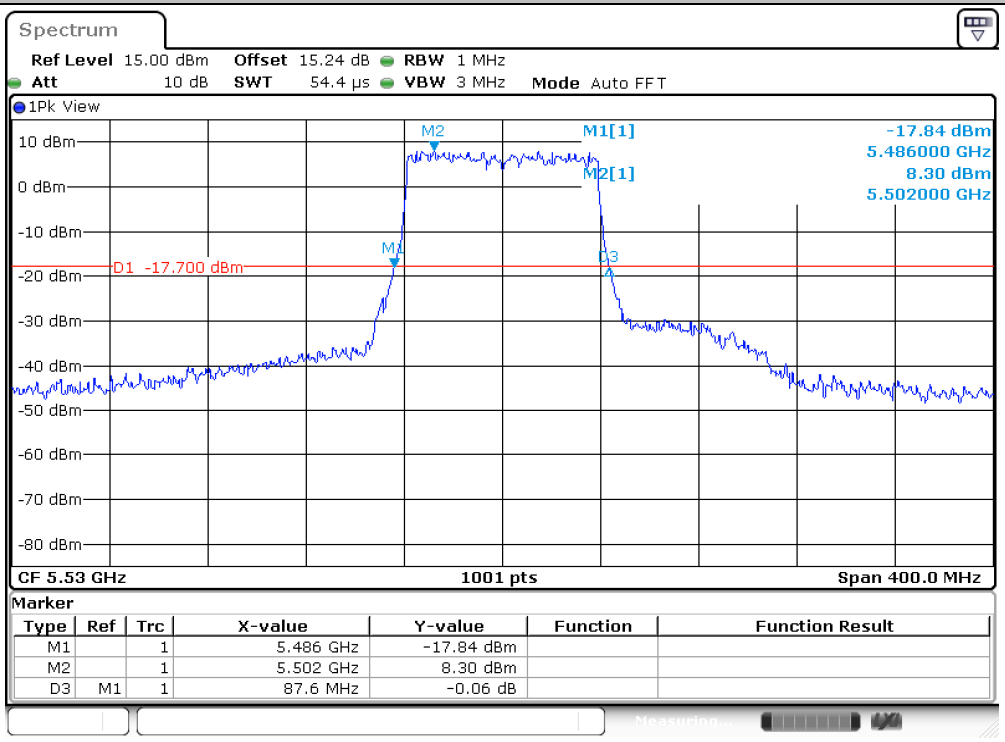


Date: 10.AUG.2024 01:14:54

11AX80MIMO_Ant14_5290

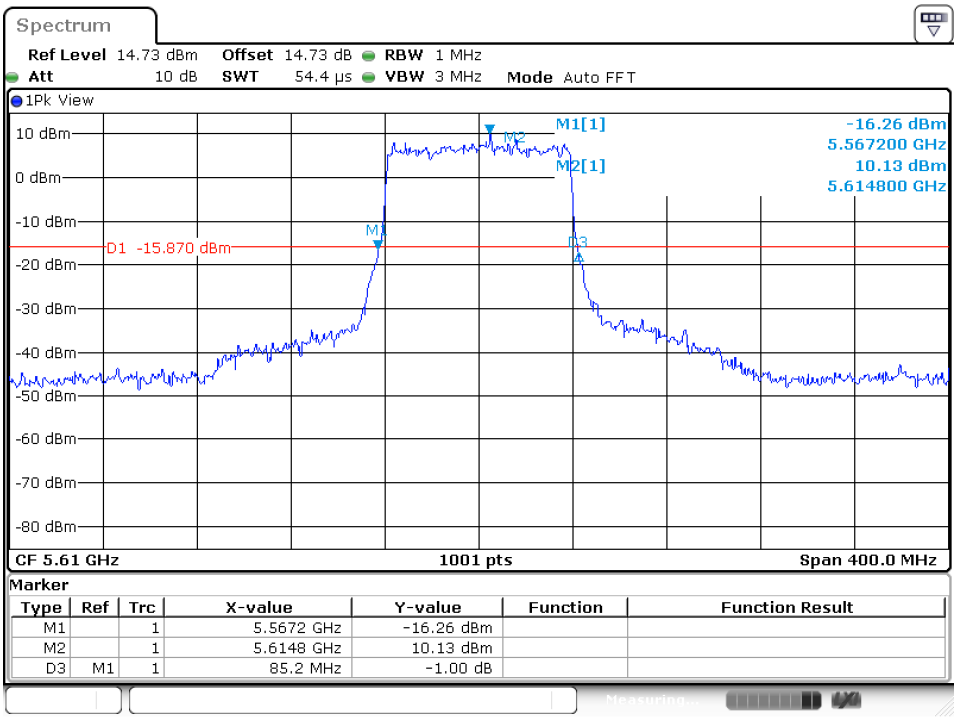


11AX80MIMO_Ant14_5530



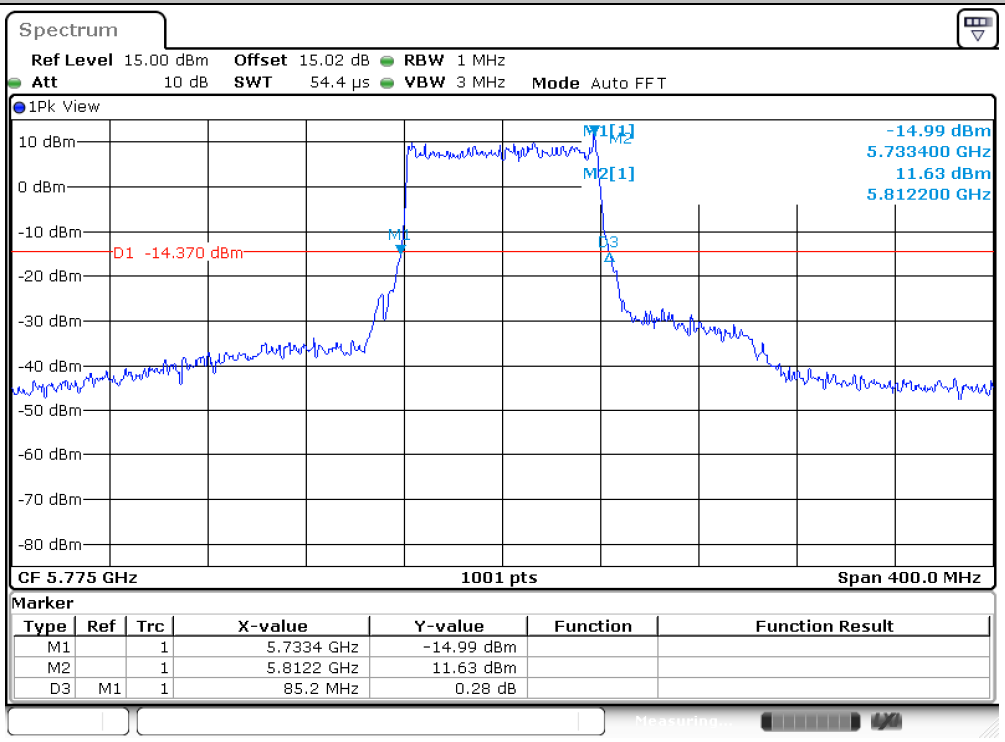
Date: 10.AUG.2024 01:17:36

11AX80MIMO_Ant14_5610



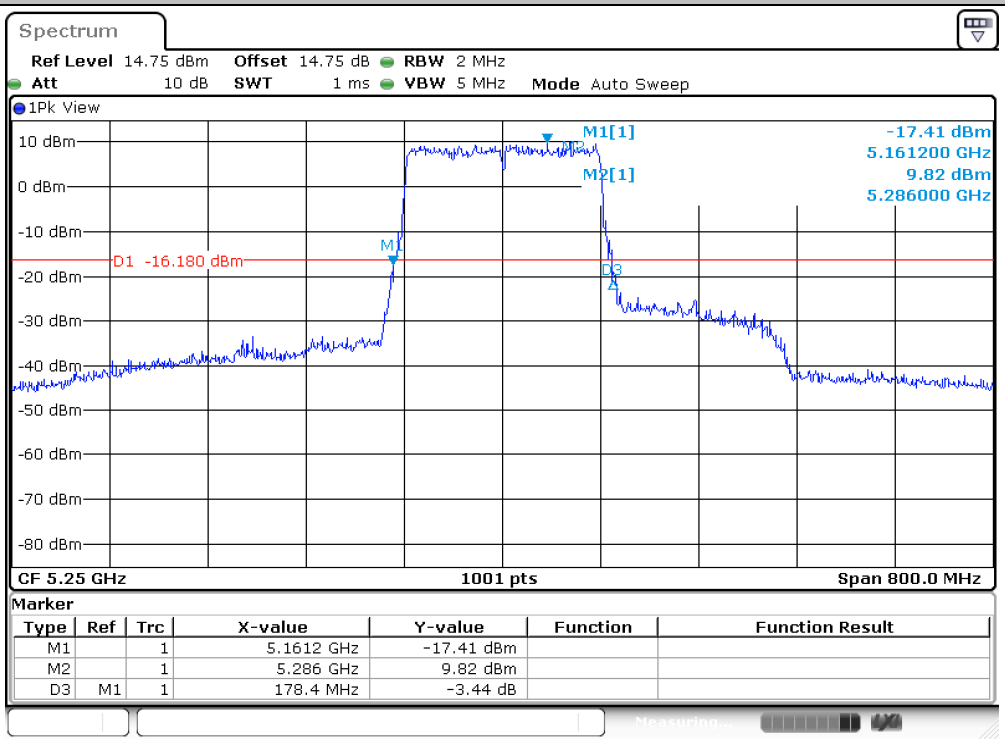
Date: 8.AUG.2024 11:41:39

11AX80MIMO_Ant14_5775



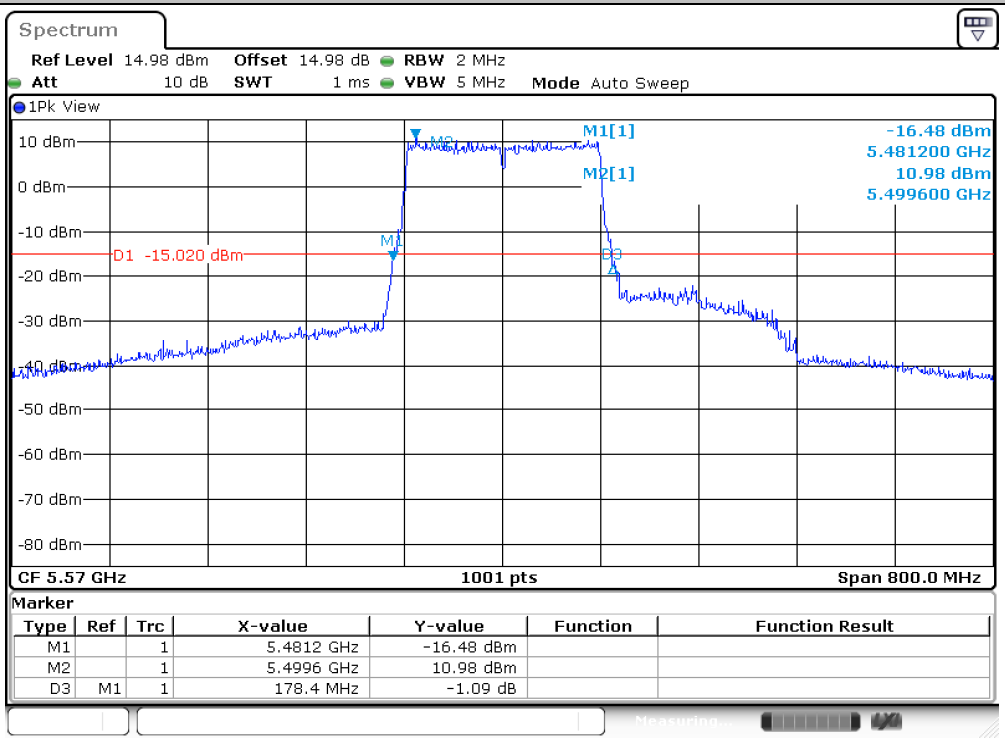
Date: 10.AUG.2024 01:19:36

11AX160MIMO_Ant14_5250



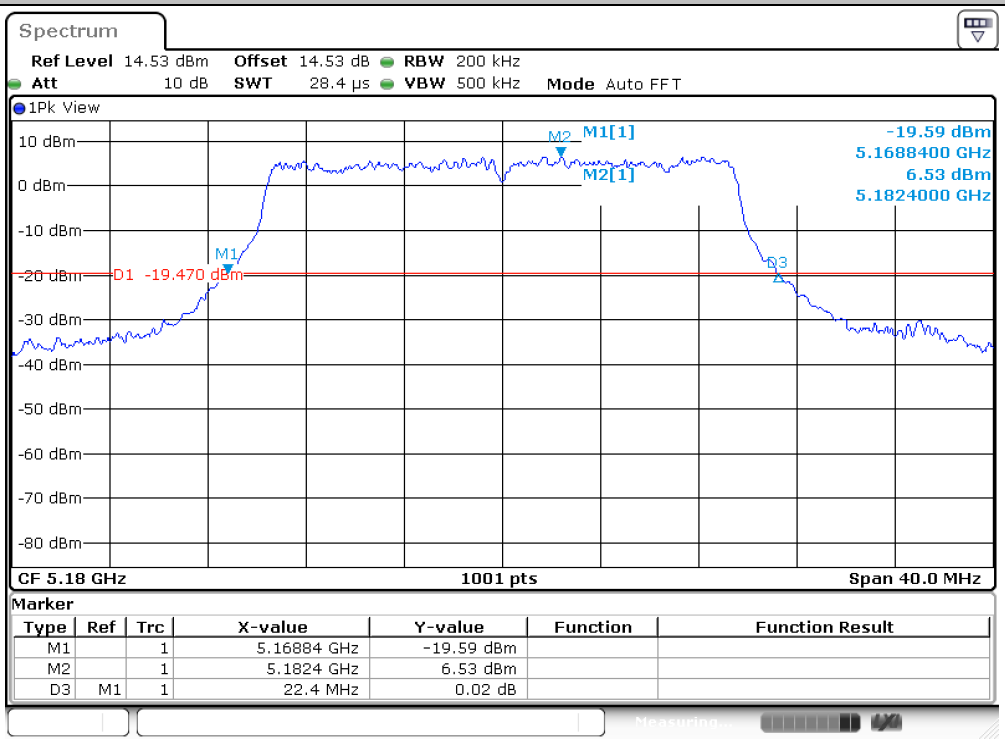
Date: 10.AUG.2024 01:20:54

11AX160MIMO_Ant14_5570



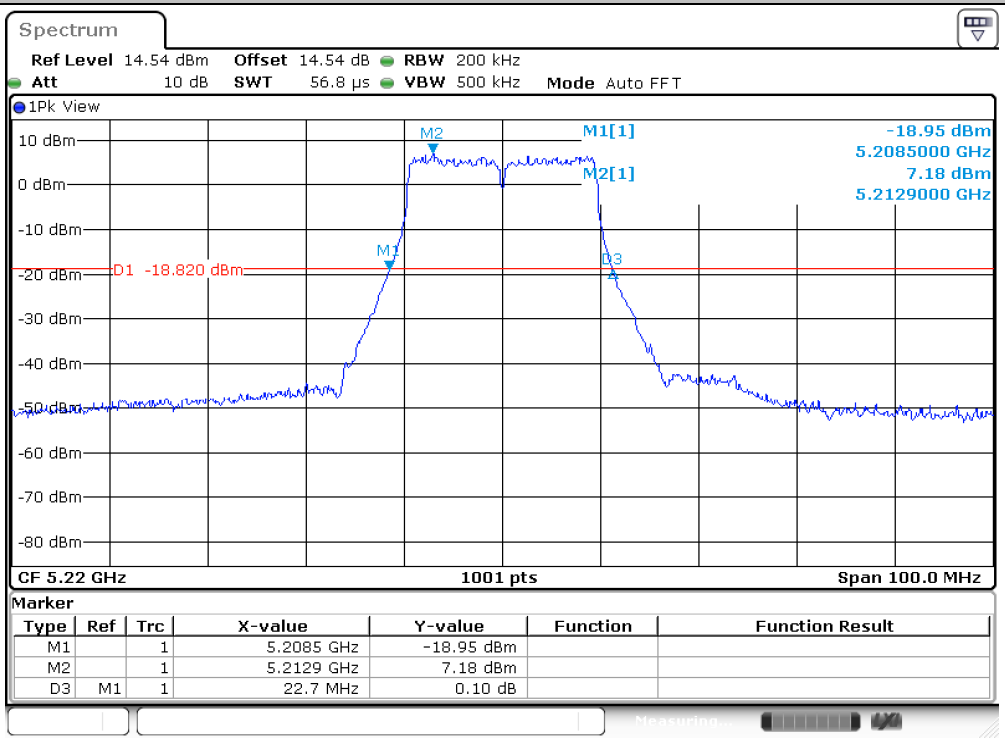
Date: 10.AUG.2024 01:22:36

11BE20MIMO_Ant14_5180



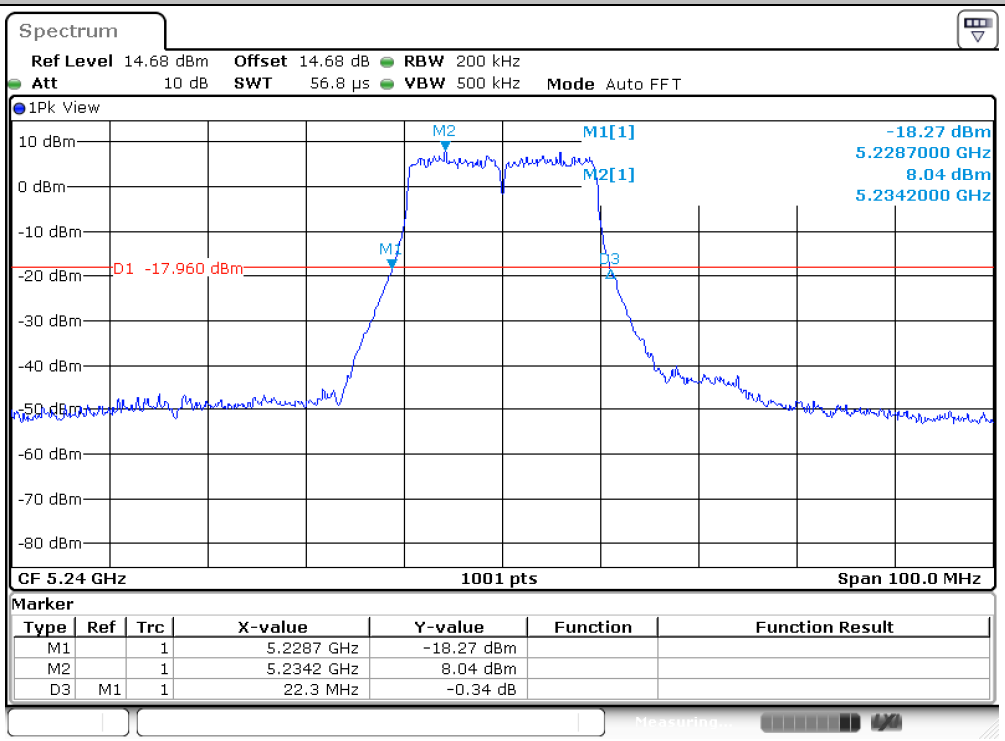
Date: 8.AUG.2024 08:31:32

11BE20MIMO_Ant14_5220



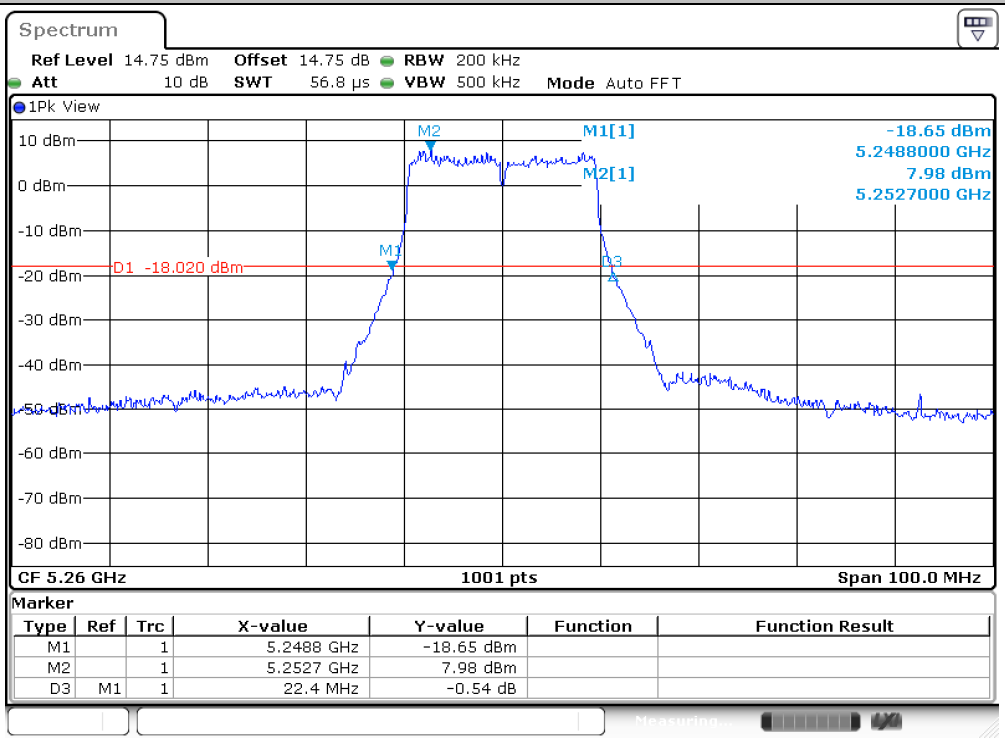
Date: 8.AUG.2024 10:58:05

11BE20MIMO_Ant14_5240



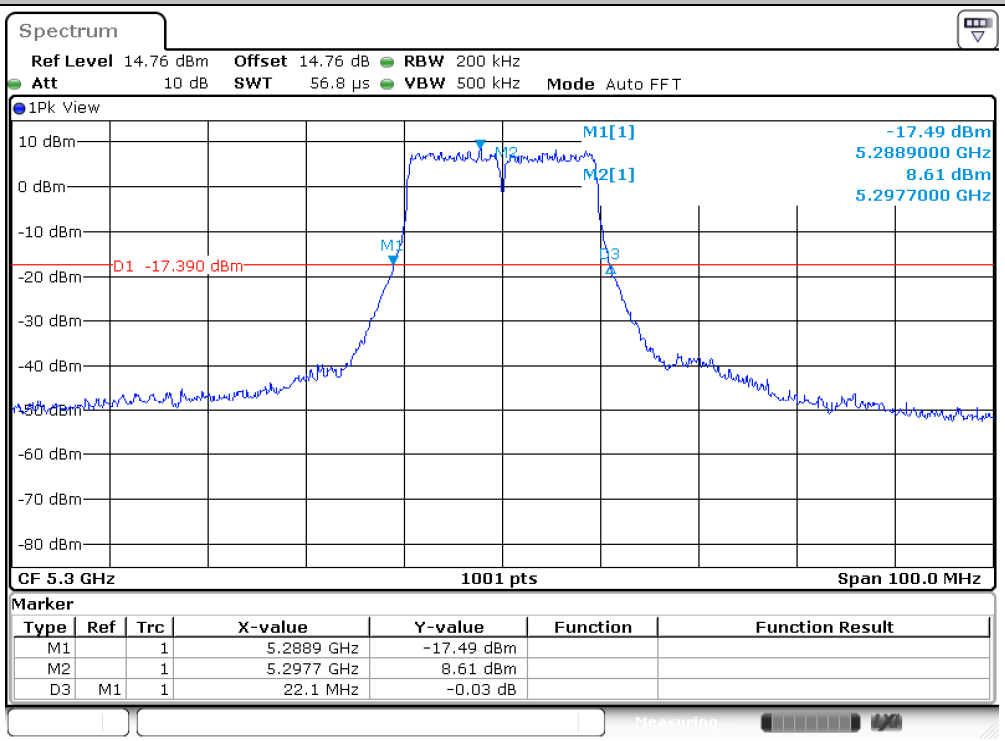
Date: 8.AUG.2024 10:59:34

11BE20MIMO_Ant14_5260



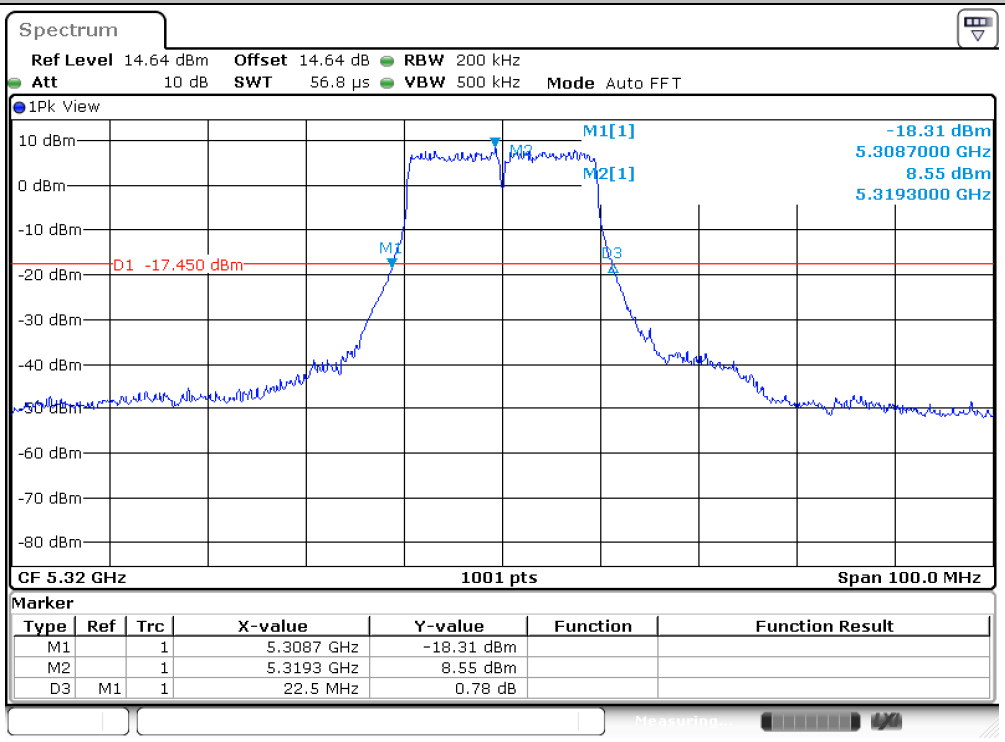
Date: 8.AUG.2024 11:01:02

11BE20MIMO_Ant14_5300



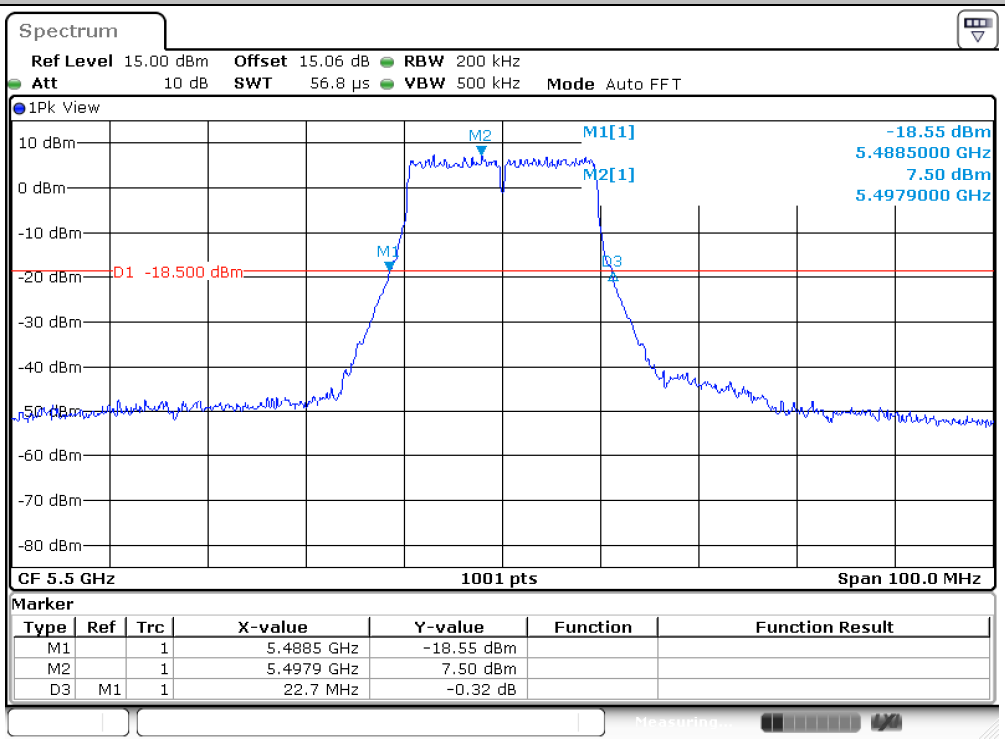
Date: 8.AUG.2024 11:02:27

11BE20MIMO_Ant14_5320



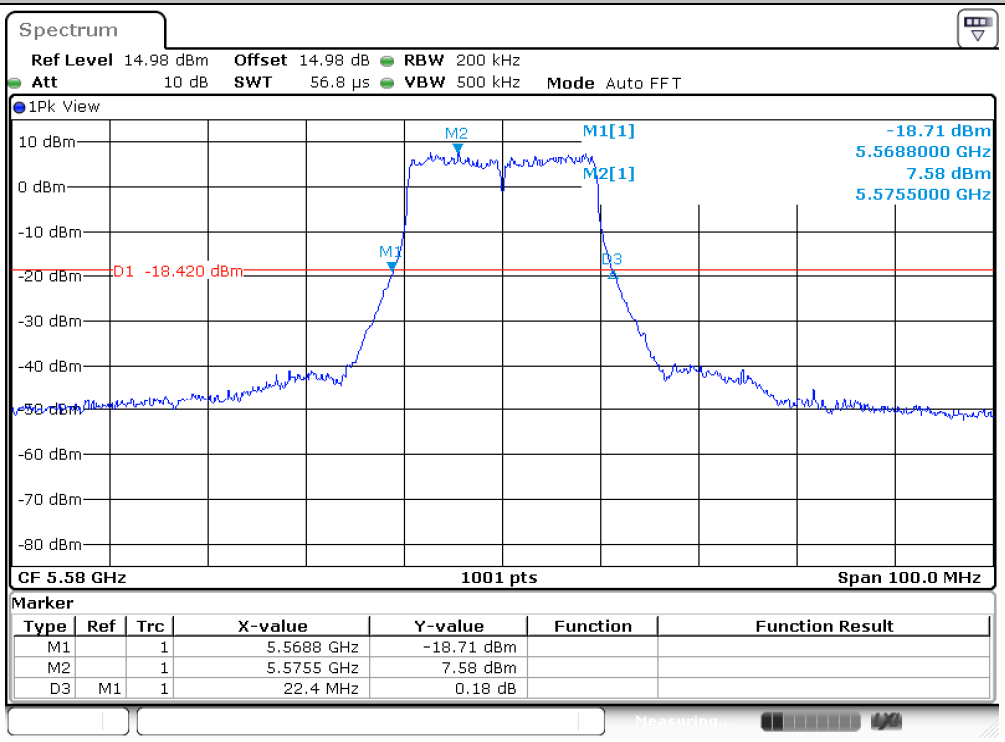
Date: 8.AUG.2024 11:03:54

11BE20MIMO_Ant14_5500



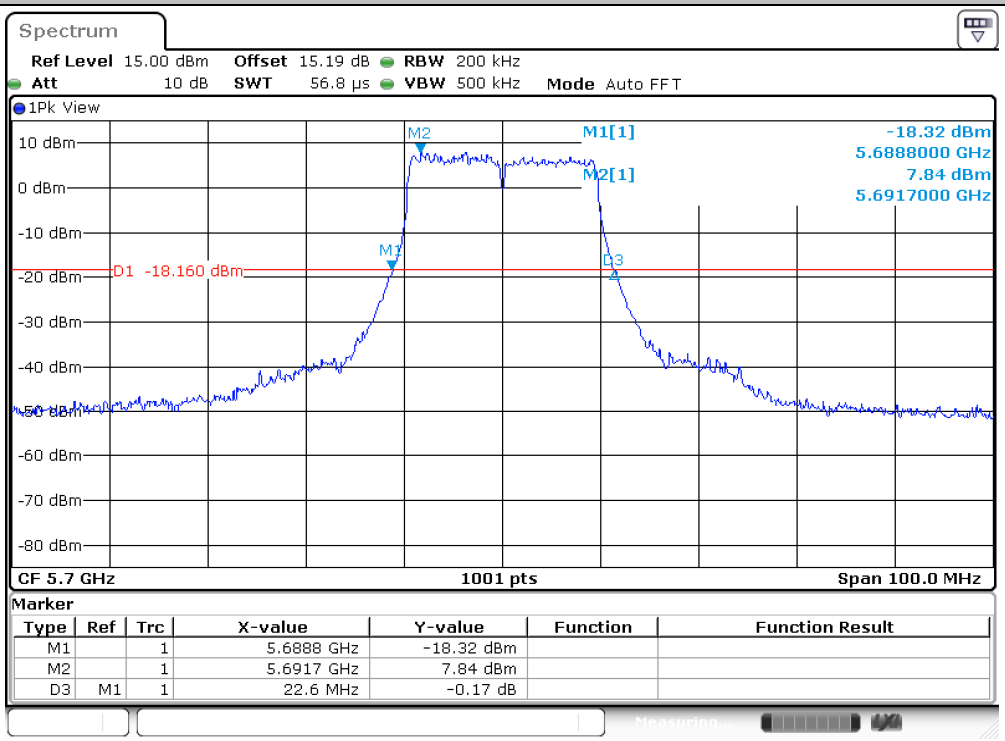
Date: 8.AUG.2024 11:05:29

11BE20MIMO_Ant14_5580



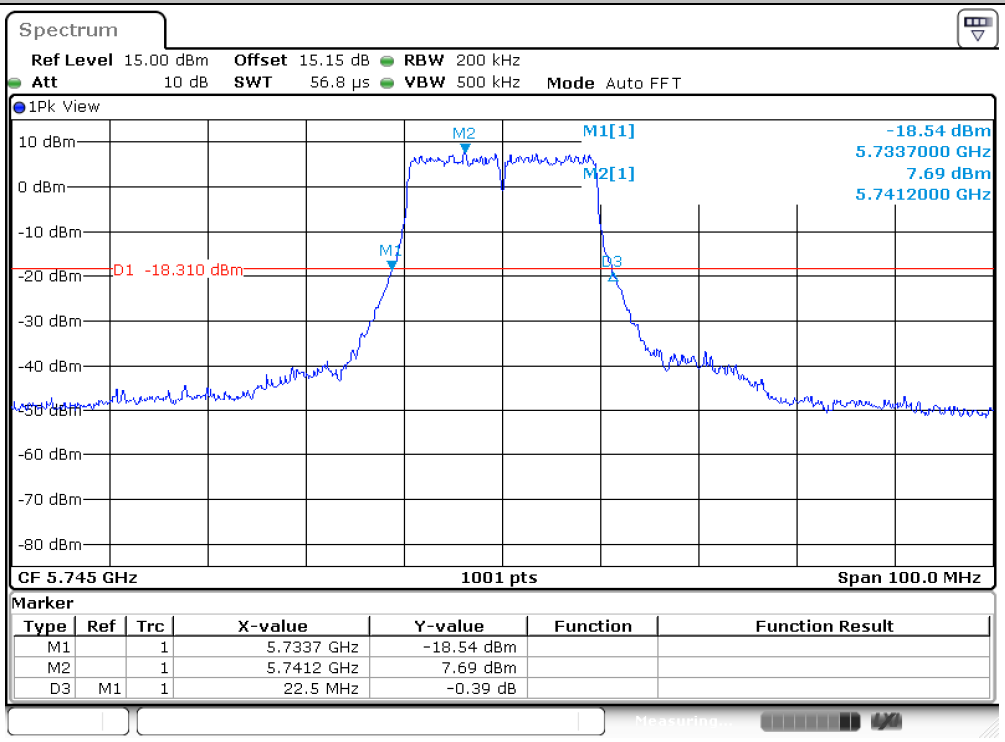
Date: 8.AUG.2024 11:07:02

11BE20MIMO_Ant14_5700



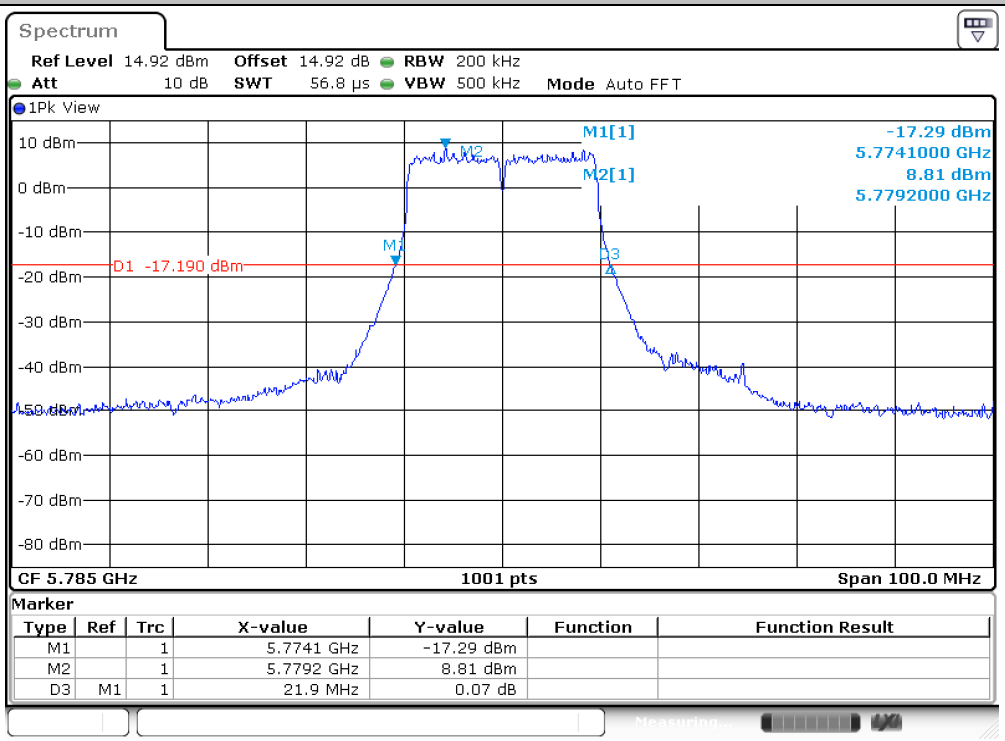
Date: 8.AUG.2024 11:08:58

11BE20MIMO_Ant14_5745



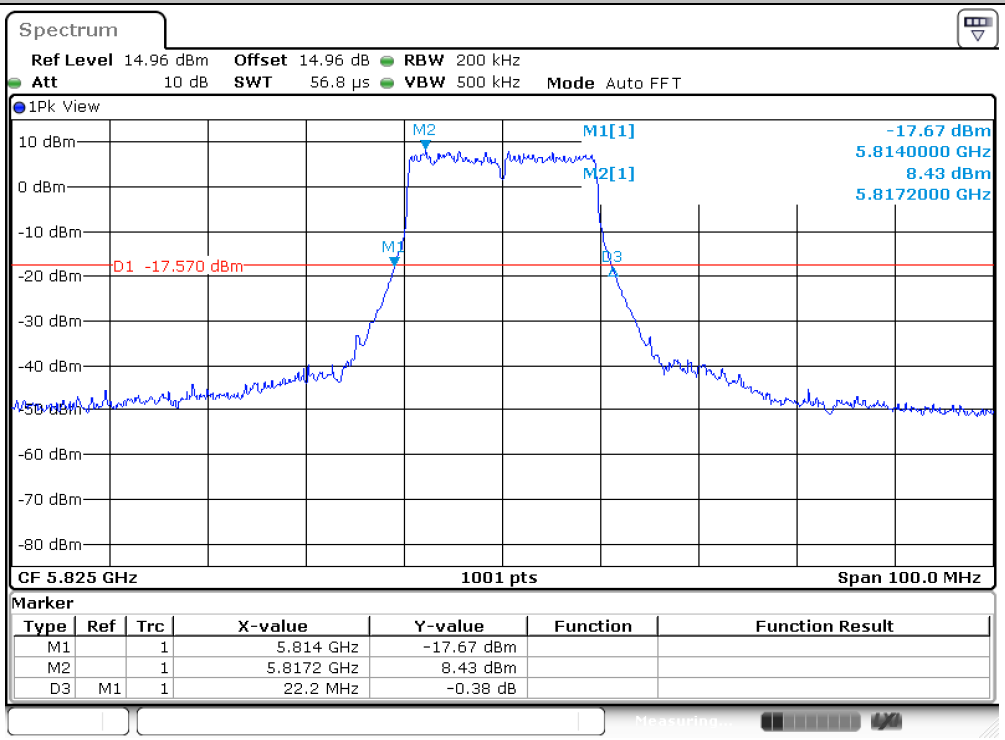
Date: 8.AUG.2024 11:11:40

11BE20MIMO_Ant14_5785



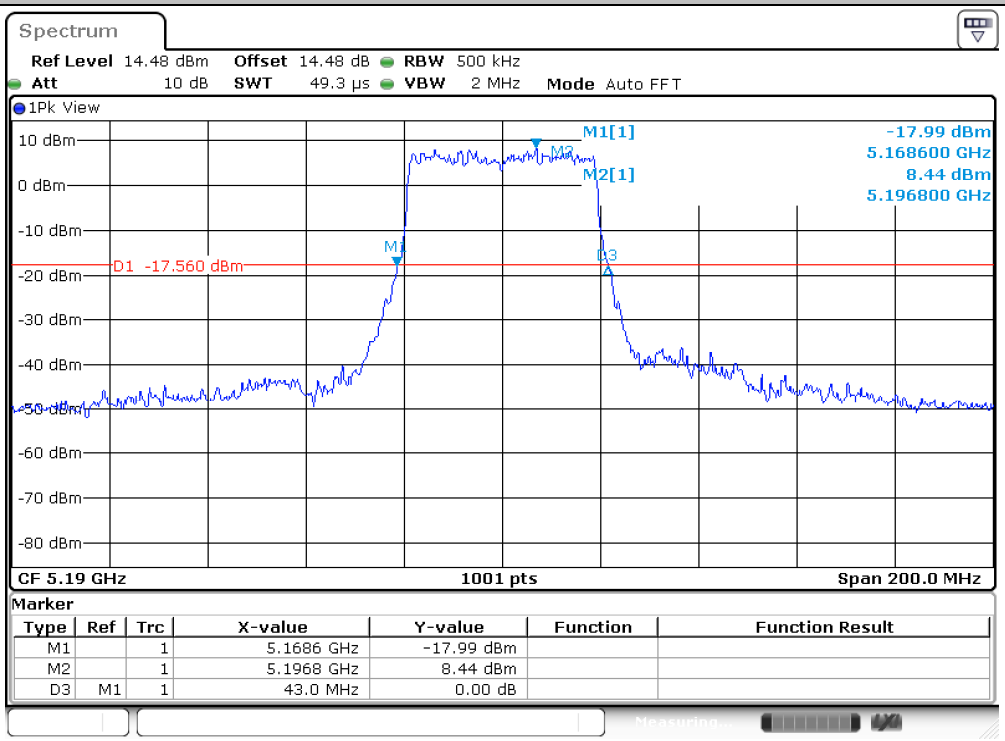
Date: 8.AUG.2024 11:13:18

11BE20MIMO_Ant14_5825



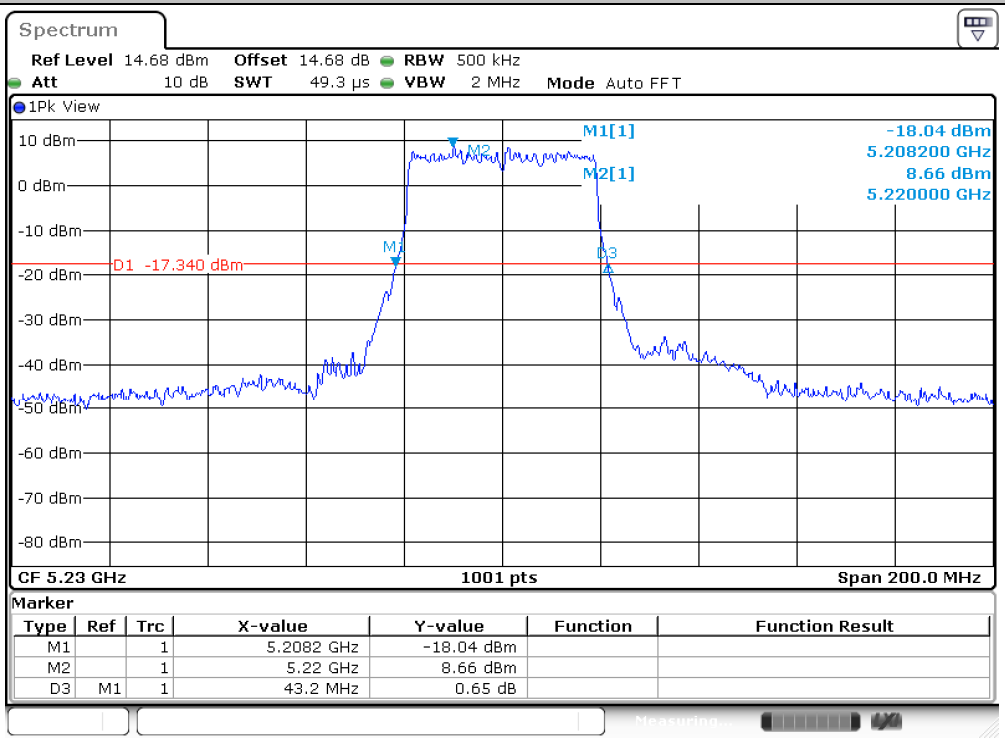
Date: 8.AUG.2024 11:14:47

11BE40MIMO_Ant14_5190



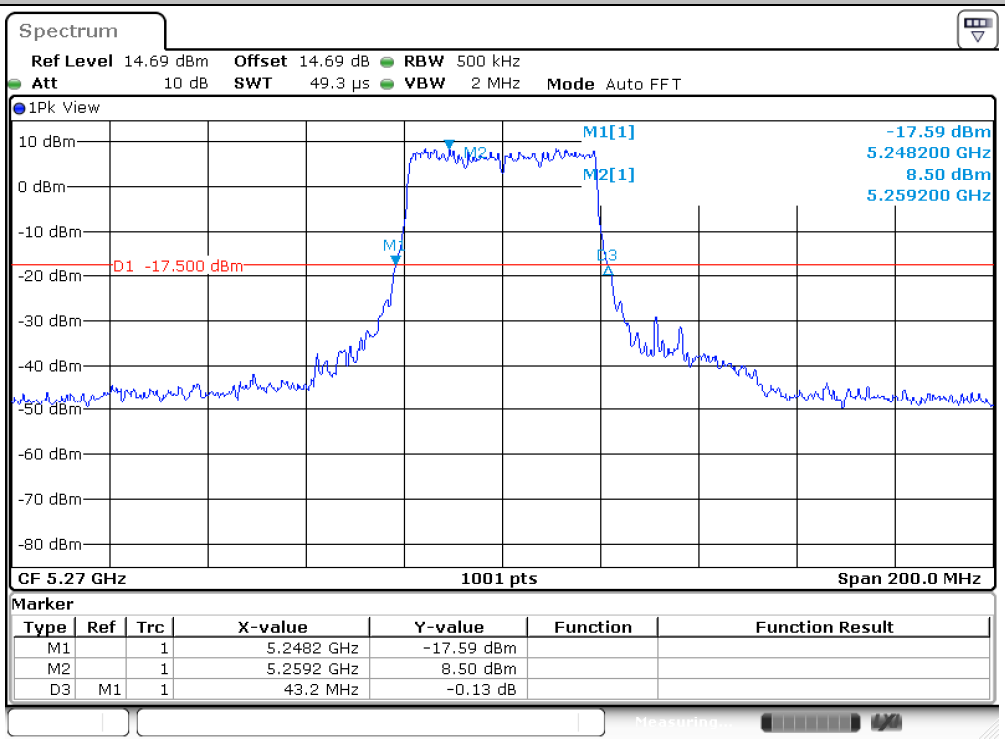
Date: 8.AUG.2024 11:17:10

11BE40MIMO_Ant14_5230



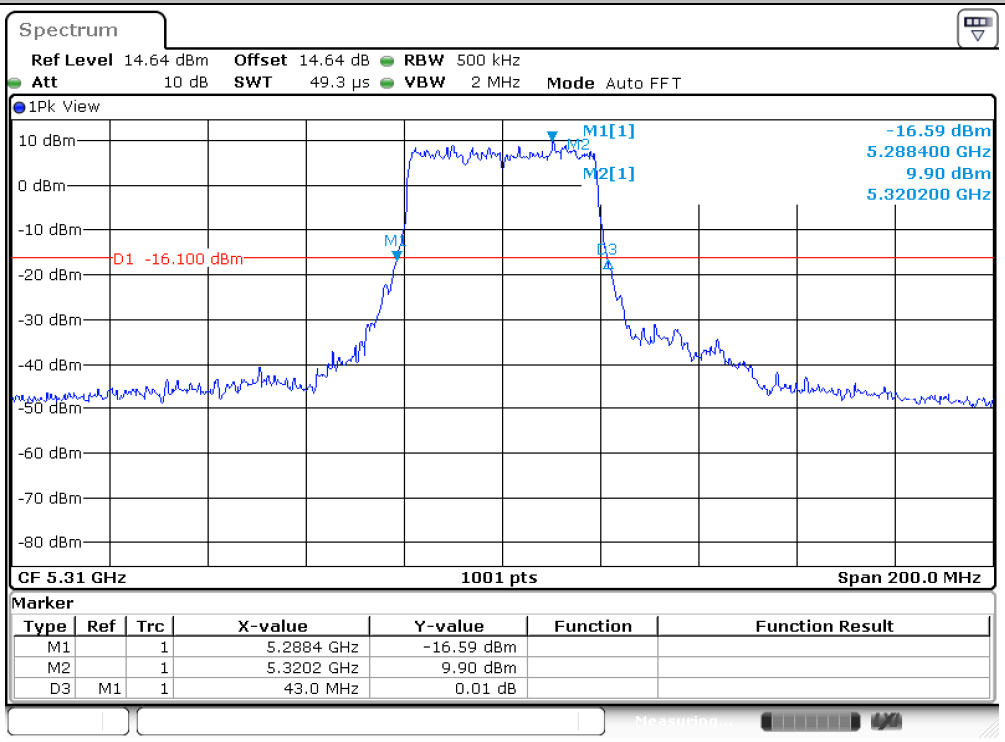
Date: 8.AUG.2024 11:21:08

11BE40MIMO_Ant14_5270



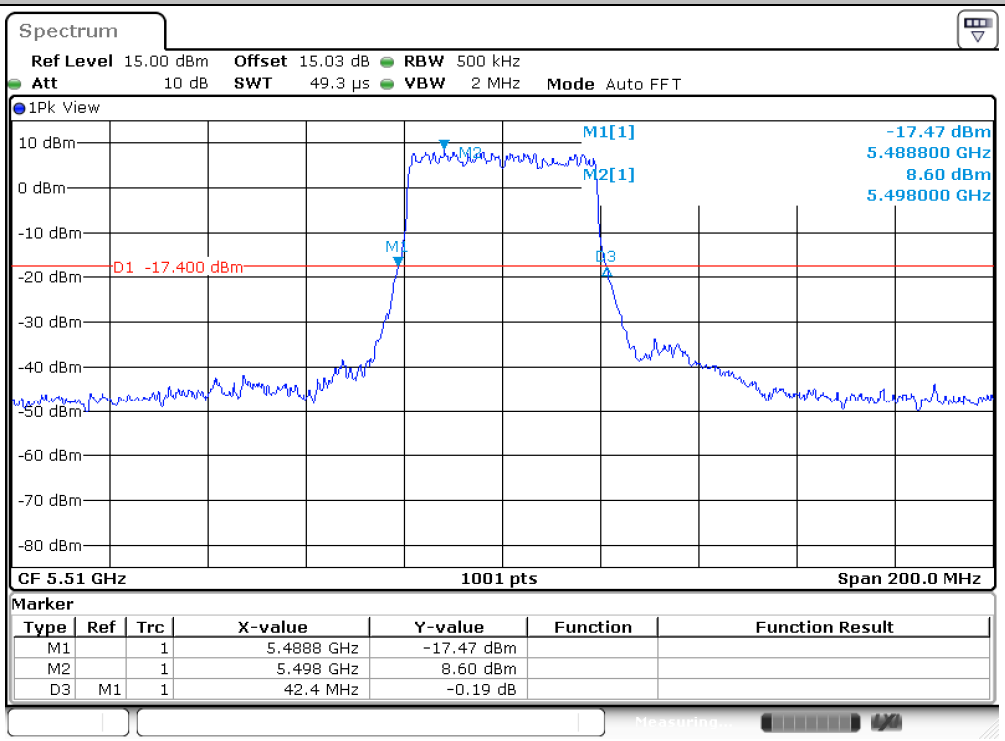
Date: 8.AUG.2024 11:23:39

11BE40MIMO_Ant14_5310



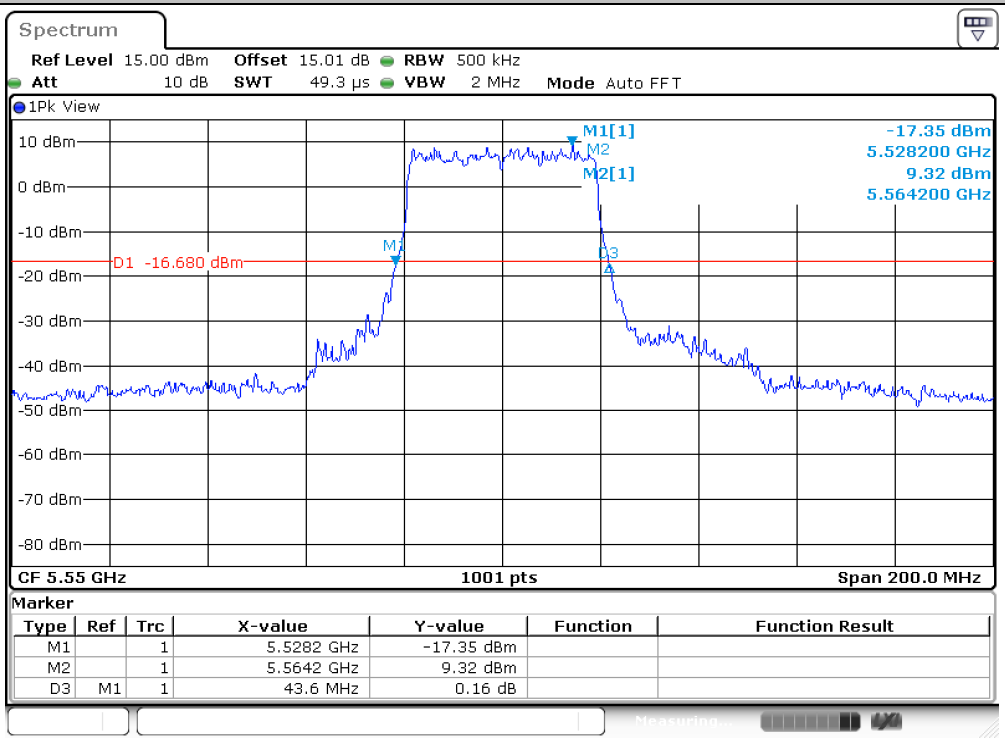
Date: 8.AUG.2024 11:25:14

11BE40MIMO_Ant14_5510



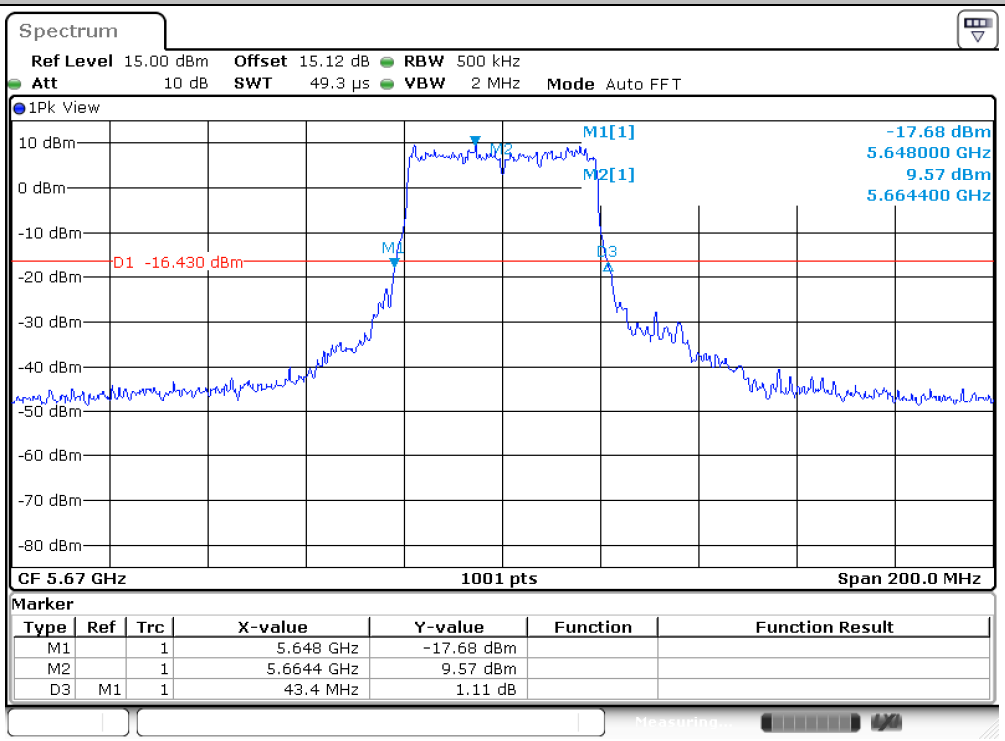
Date: 8.AUG.2024 11:26:40

11BE40MIMO_Ant14_5550



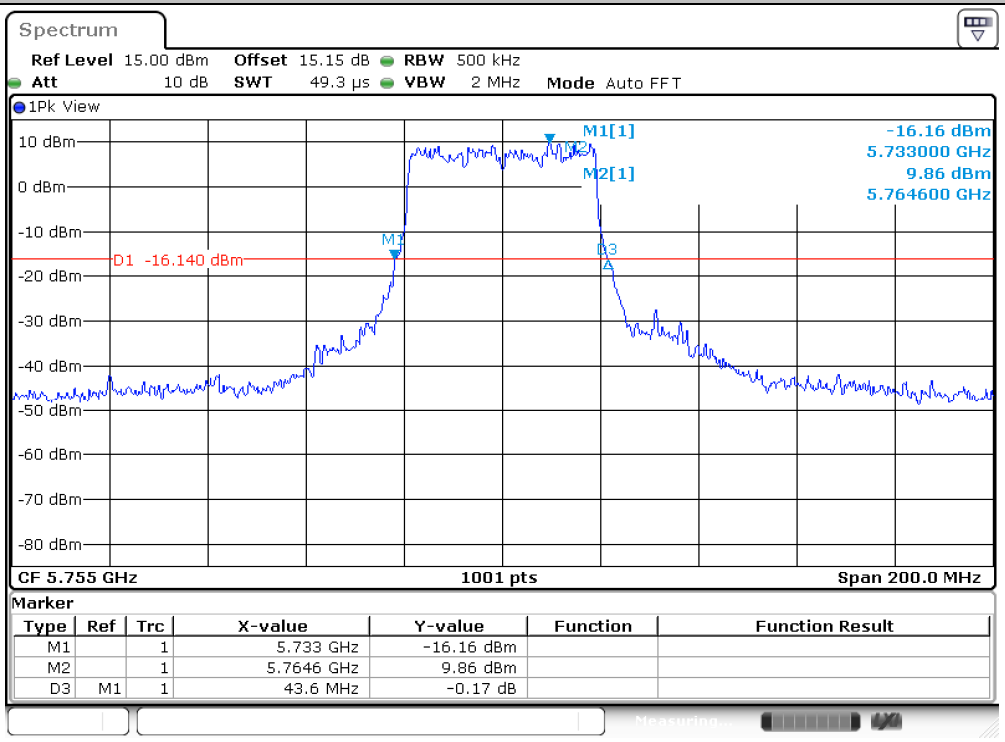
Date: 8.AUG.2024 11:28:21

11BE40MIMO_Ant14_5670



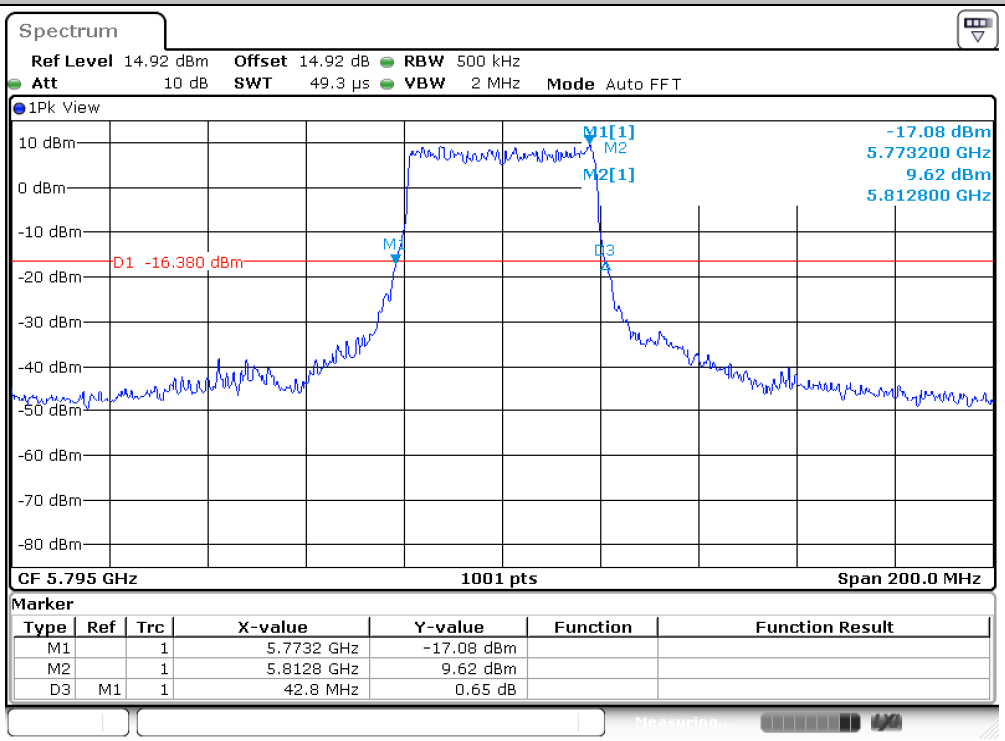
Date: 8.AUG.2024 11:29:50

11BE40MIMO_Ant14_5755



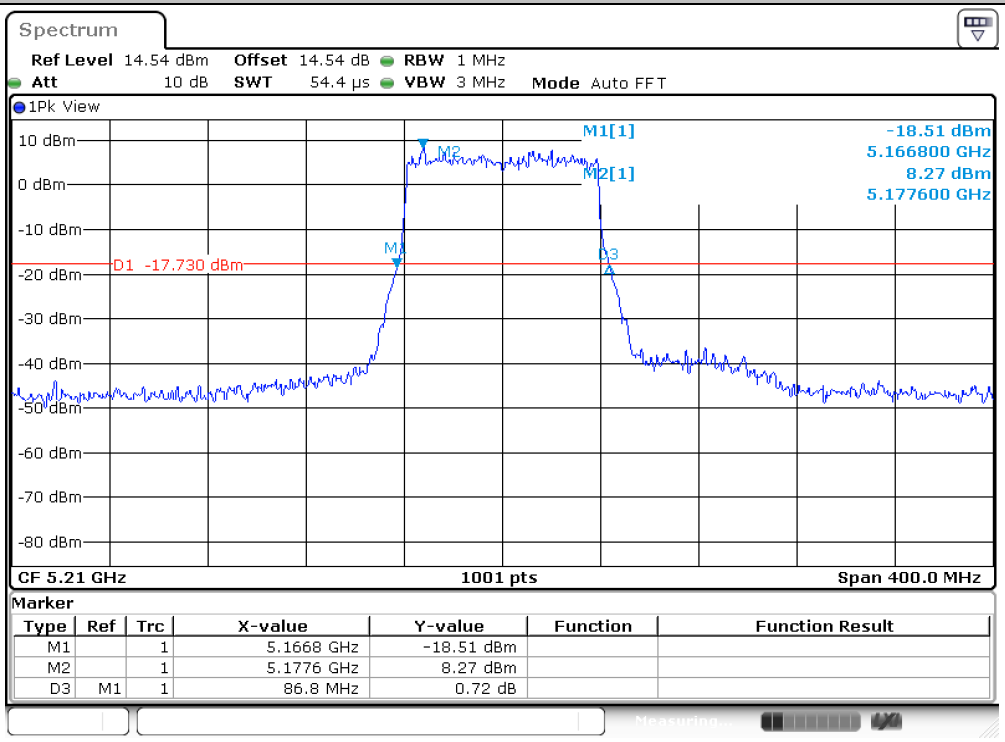
Date: 8.AUG.2024 11:32:01

11BE40MIMO_Ant14_5795



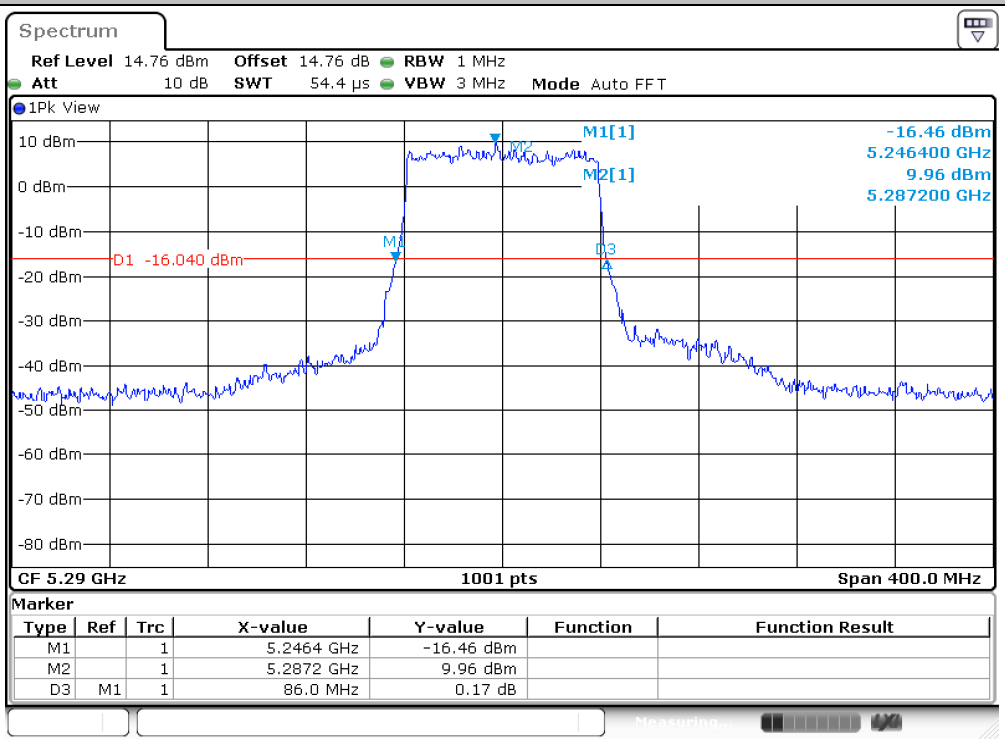
Date: 8.AUG.2024 11:33:34

11BE80MIMO_Ant14_5210



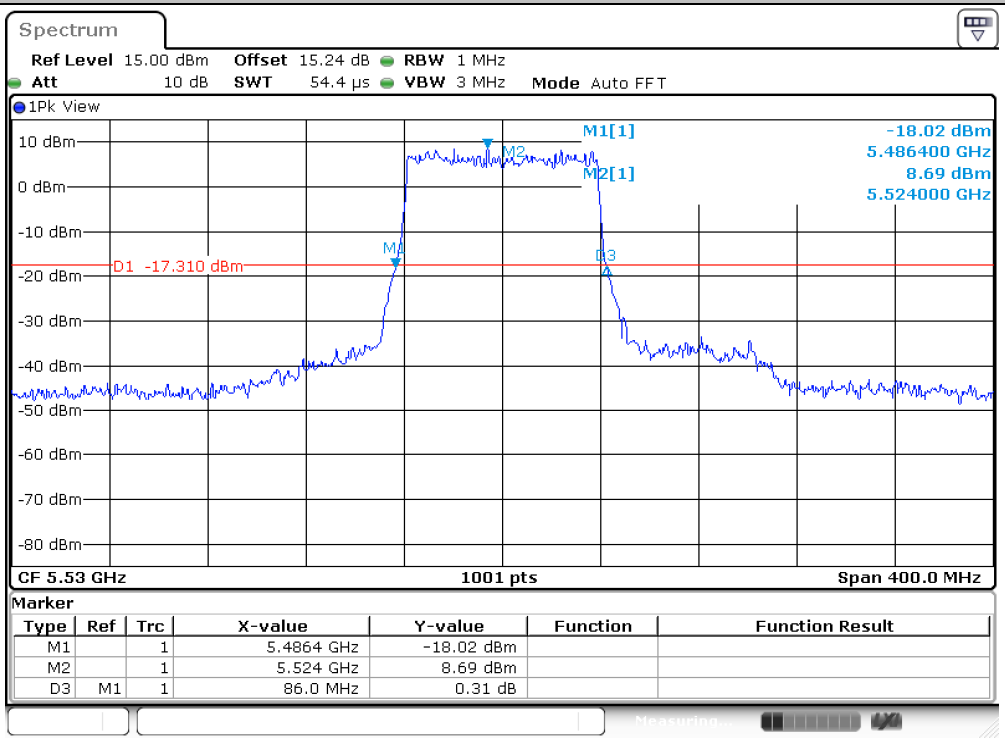
Date: 8.AUG.2024 11:36:25

11BE80MIMO_Ant14_5290



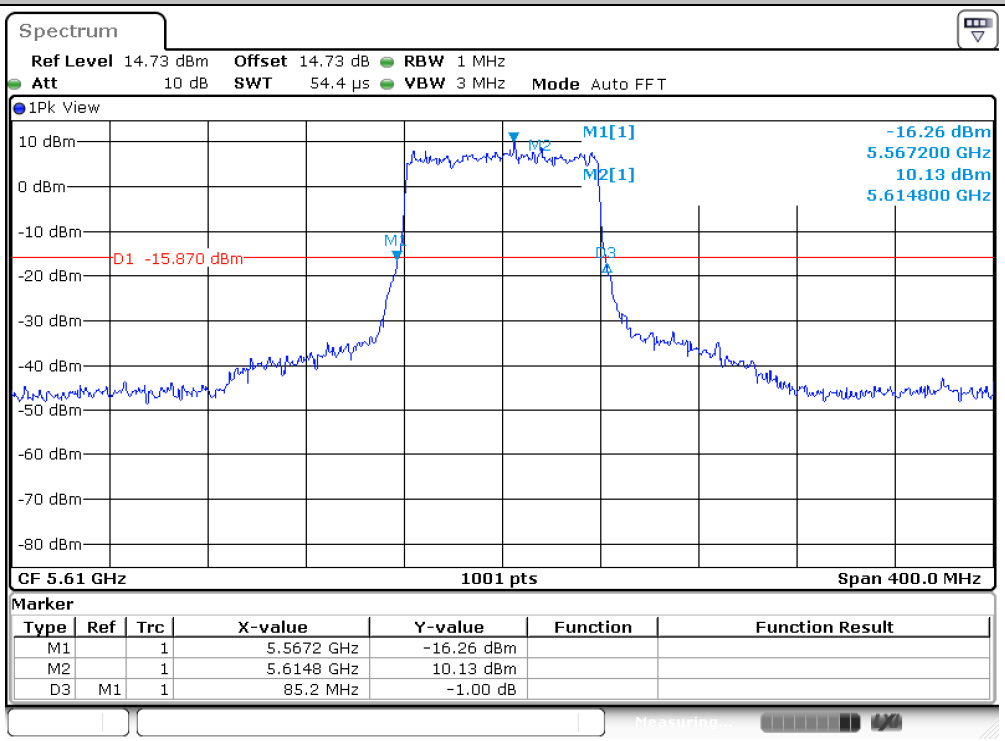
Date: 8.AUG.2024 11:38:36

11BE80MIMO_Ant14_5530



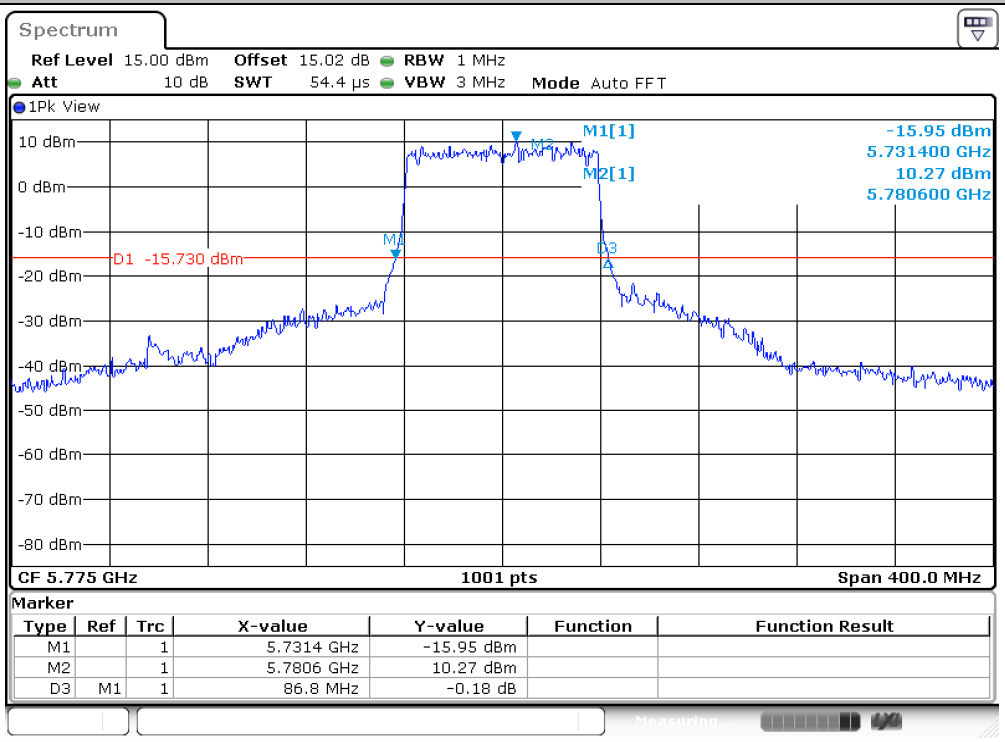
Date: 8.AUG.2024 11:40:11

11BE80MIMO_Ant14_5610



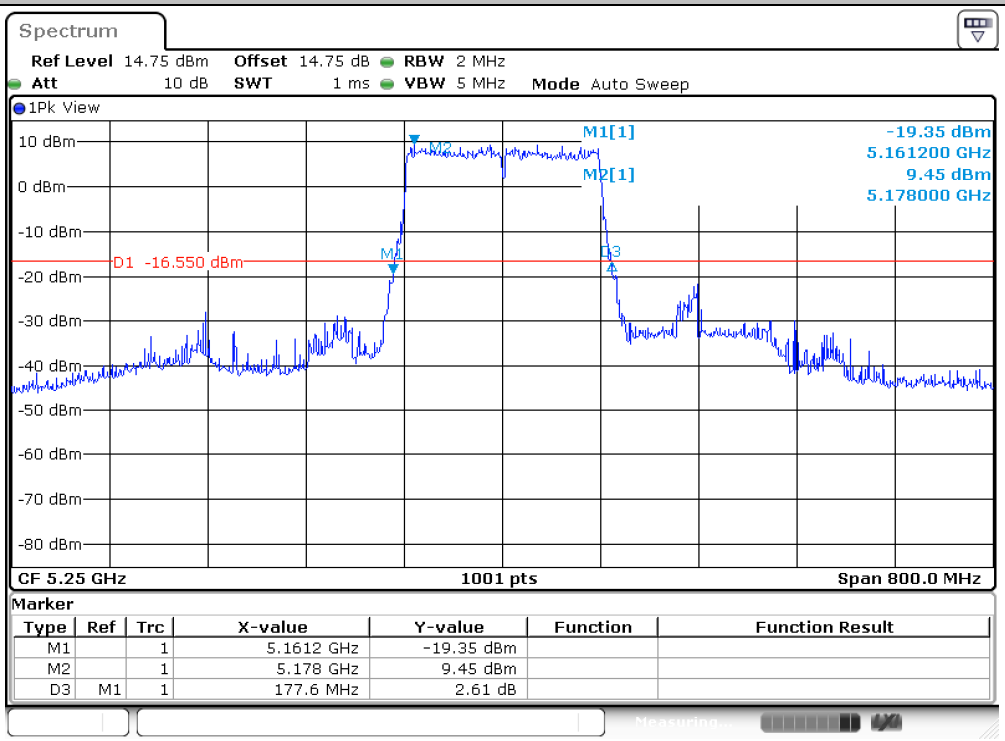
Date: 8.AUG.2024 11:41:39

11BE80MIMO_Ant14_5775



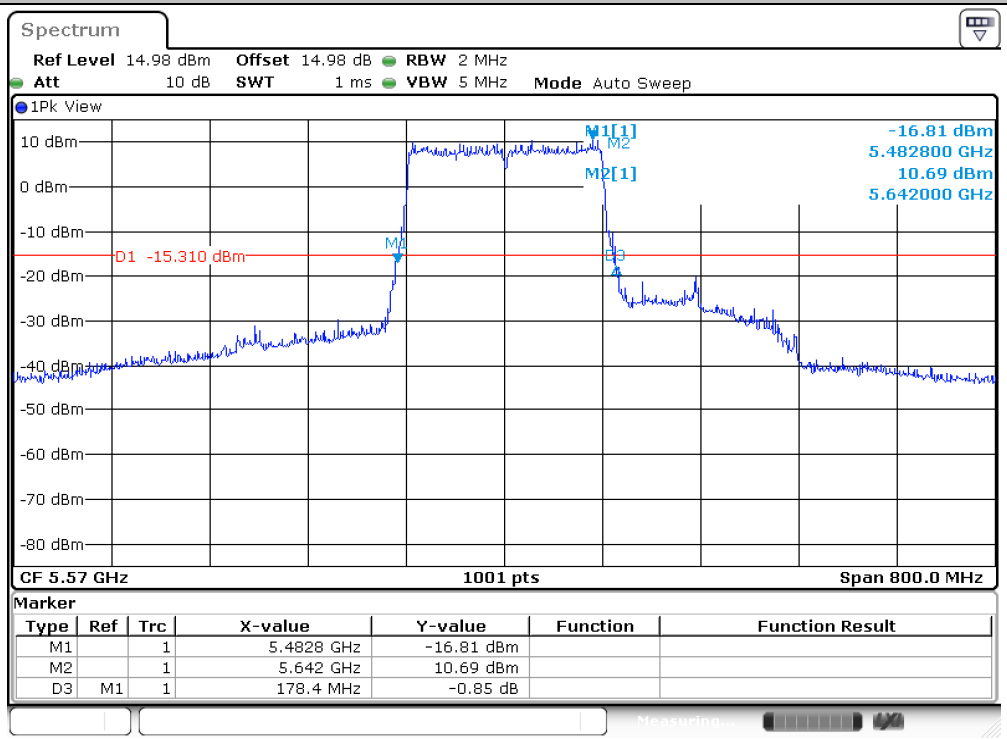
Date: 8.AUG.2024 11:53:22

11BE160MIMO_Ant14_5250



Date: 8.AUG.2024 11:55:41

11BE160MIMO_Ant14_5570



Occupied channel bandwidth

Test Result

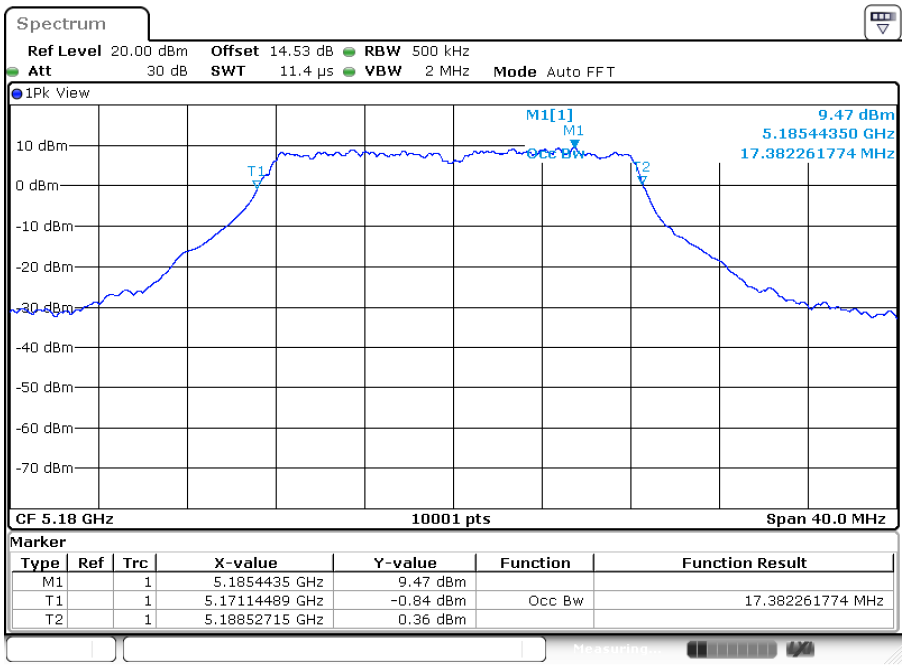
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]
11A-CDD	Ant14	5180	17.382	5171.1449	5188.5271
		5220	17.394	5211.1569	5228.5511
		5240	17.366	5231.2009	5248.5671
		5260	17.334	5251.1929	5268.5271
		5300	17.378	5291.1929	5308.5711
		5320	17.378	5311.1529	5328.5311
		5500	17.374	5491.1529	5508.5271
		5580	17.386	5571.1889	5588.5751
		5700	17.422	5691.1129	5708.5351
		5745	17.33	5736.2209	5753.5511
		5785	17.334	5776.1969	5793.5311
		5825	17.23	5816.2529	5833.4832
11N20MIMO	Ant14	5180	18.554	5170.6809	5189.2351
		5220	18.538	5210.6769	5229.2151
		5240	18.55	5230.6609	5249.2111
		5260	18.57	5250.6609	5269.2311
		5300	18.506	5290.7169	5309.2231
		5320	18.454	5310.7569	5329.2111
		5500	18.43	5490.6809	5509.1111
		5580	18.518	5570.7929	5589.3111
		5700	18.406	5690.7809	5709.1871
		5745	18.534	5735.6969	5754.2311
		5785	18.45	5775.7409	5794.1911
		5825	18.418	5815.7649	5834.1831
11N40MIMO	Ant14	5190	36.972	5171.4899	5208.4622
		5230	37.212	5211.2659	5248.4782
		5270	37.18	5251.4339	5288.6141
		5310	37.164	5291.4259	5328.5901
		5510	36.916	5491.4019	5528.3182
		5550	36.82	5531.5778	5568.3982
		5670	37.028	5651.3939	5688.4222
		5755	36.852	5736.6498	5773.5021
		5795	37.076	5776.4019	5813.4782
11AC80MIMO	Ant14	5210	76.792	5171.5238	5248.3162
		5290	77.208	5251.3319	5328.5401

		5530	77.096	5491.6998	5568.7961
		5610	76.472	5571.9238	5648.3962
		5775	76.6	5736.7158	5813.3162
11AC160MIMO	Ant14	5250	159.312	5170.4560	5329.7680
		5250_UNII-1	79.544	5170.4560	5250
		5250_UNII-2A	79.768	5250	5329.7680
		5570	159.536	5490.4560	5649.9920
11AX20MIMO	Ant14	5180	19.362	5170.3650	5189.7270
		5220	19.266	5210.3370	5229.6030
		5240	19.362	5230.3570	5249.7190
		5260	19.306	5250.2890	5269.5950
		5300	19.438	5290.2690	5309.7070
		5320	19.346	5310.2450	5329.5910
		5500	19.354	5490.2850	5509.6390
		5580	19.274	5570.3130	5589.5870
		5700	19.374	5690.2210	5709.5950
		5745	19.41	5735.3610	5754.7710
		5785	19.31	5775.3450	5794.6550
		5825	19.242	5815.3650	5834.6070
11AX40MIMO	Ant14	5190	38.38	5170.7299	5209.1101
		5230	38.3	5210.8499	5249.1501
		5270	38.996	5250.5539	5289.5500
		5310	38.404	5290.8419	5329.2461
		5510	38.412	5490.9139	5529.3261
		5550	38.468	5530.8739	5569.3421
		5670	38.42	5650.8259	5689.2461
		5755	38.428	5735.6979	5774.1261
		5795	38.428	5775.7859	5814.2141
11AX80MIMO	Ant14	5210	78.104	5170.9799	5249.0841
		5290	77.848	5251.0119	5328.8601
		5530	78.2	5490.9319	5569.1321
		5610	78.504	5570.9319	5649.4361
		5775	78.248	5735.8839	5814.1321
11AX160MIMO	Ant14	5250	159.824	5170.1360	5329.9600
		5250_UNII-1	79.864	5170.1360	5250
		5250_UNII-2A	79.96	5250	5329.9600
		5570	160.048	5490.1680	5650.2160
11BE20MIMO	Ant14	5180	19.398	5170.2650	5189.6630
		5220	19.506	5210.2450	5229.7510

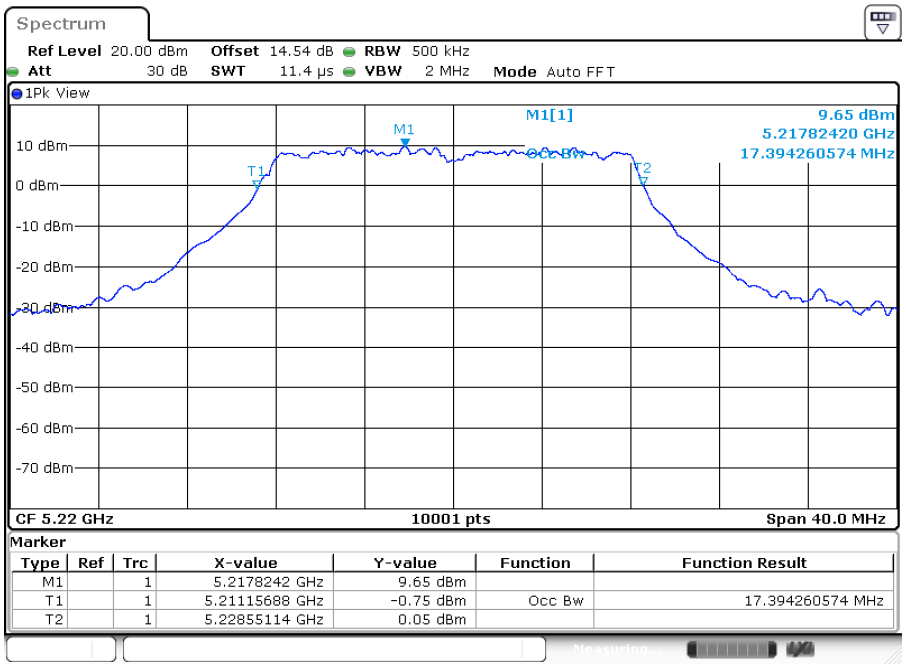
		5240	19.482	5230.1970	5249.6790
		5260	19.49	5250.2730	5269.7630
		5300	19.298	5290.3610	5309.6590
		5320	19.534	5310.2530	5329.7870
		5500	19.266	5490.3370	5509.6030
		5580	19.47	5570.2690	5589.7390
		5700	19.17	5690.3570	5709.5270
		5745	19.362	5735.3490	5754.7110
		5785	19.33	5775.3530	5794.6830
		5825	19.454	5815.2530	5834.7070
11BE40MIMO	Ant14	5190	38.492	5170.8739	5209.3661
		5230	38.396	5210.7699	5249.1661
		5270	38.348	5250.7779	5289.1261
		5310	38.26	5290.8579	5329.1181
		5510	38.292	5490.8099	5529.1021
		5550	38.5	5530.7299	5569.2301
		5670	38.5	5650.7059	5689.2061
		5755	38.292	5735.8659	5774.1581
		5795	38.532	5775.7219	5814.2541
11BE80MIMO	Ant14	5210	78.2	5170.9479	5249.1481
		5290	77.944	5251.0439	5328.9881
		5530	78.28	5490.9319	5569.2121
		5610	78.328	5570.7239	5649.0521
		5775	78.168	5736.0119	5814.1801
11BE160MIMO	Ant14	5250	159.952	5170.2000	5330.1520
		5250_UNII-1	79.8	5170.2000	5250
		5250_UNII-2A	80.152	5250	5330.1520
		5570	160.176	5490.1680	5650.3440

Test Graphs

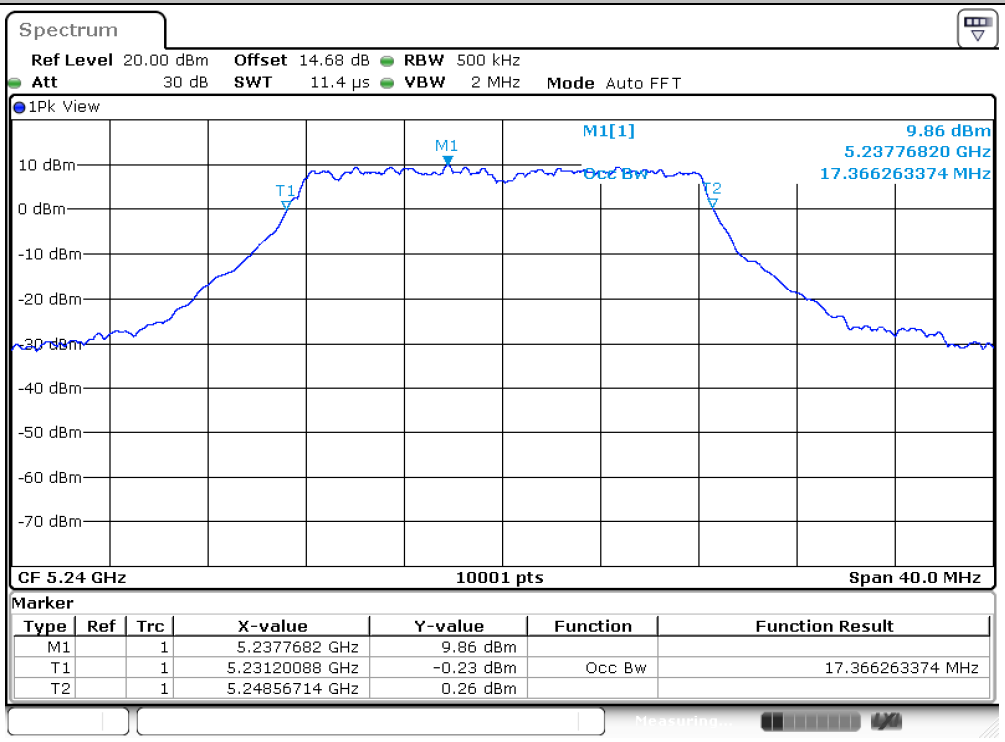
11A-CDD_Ant14_5180



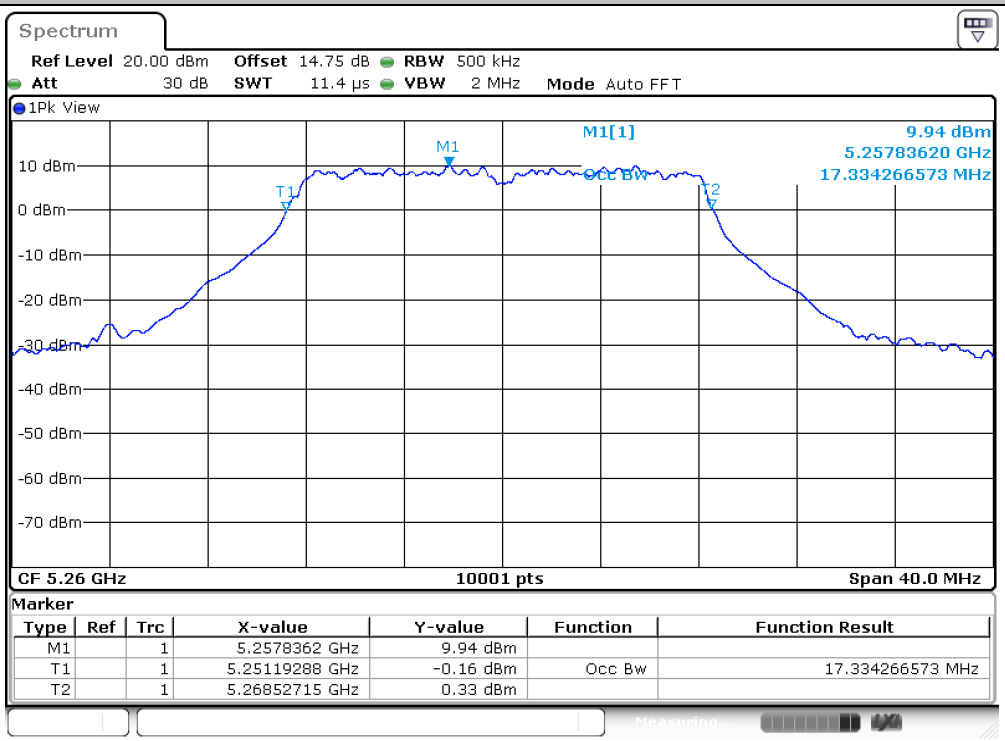
11A-CDD_Ant14_5220



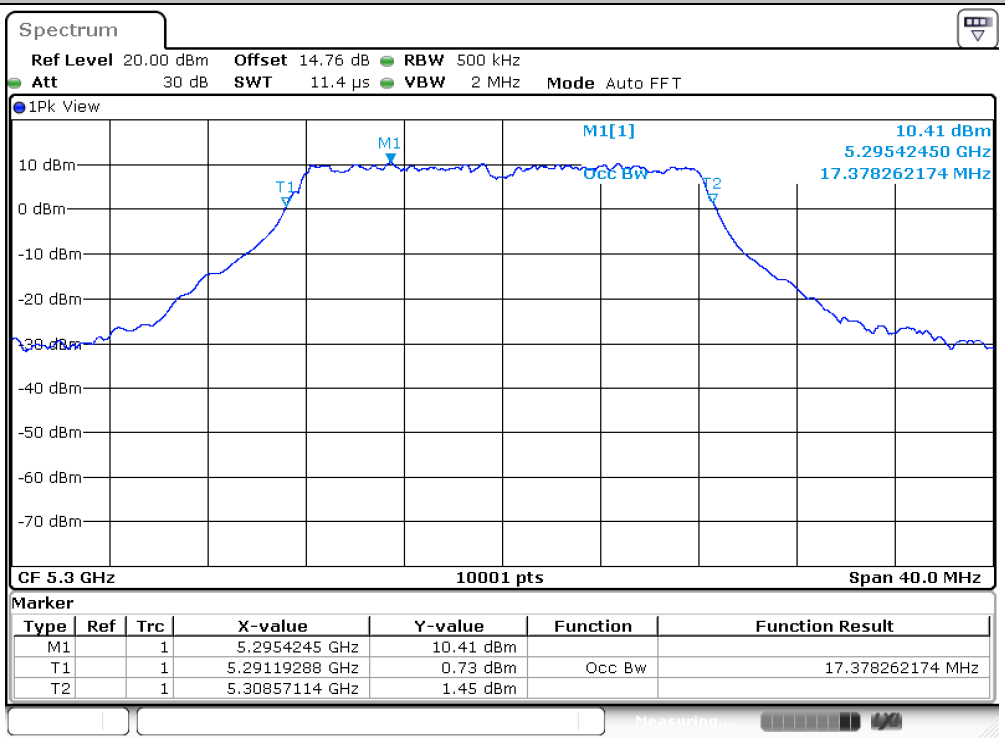
11A-CDD_Ant14_5240



11A-CDD_Ant14_5260

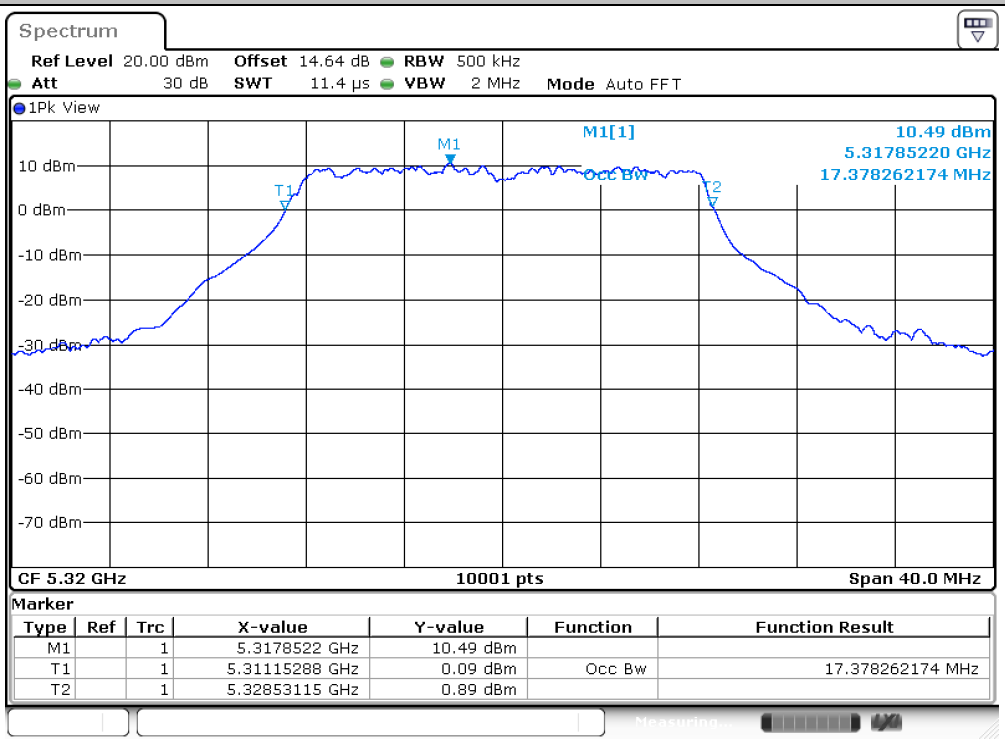


11A-CDD_Ant14_5300



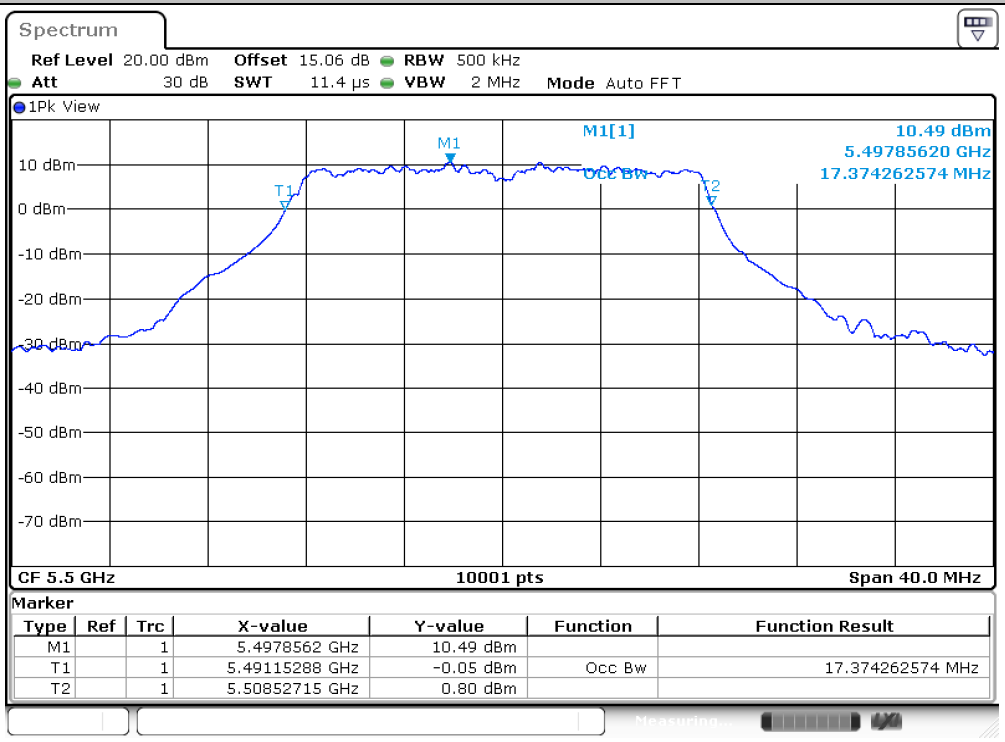
Date: 30.AUG.2024 02:37:54

11A-CDD_Ant14_5320



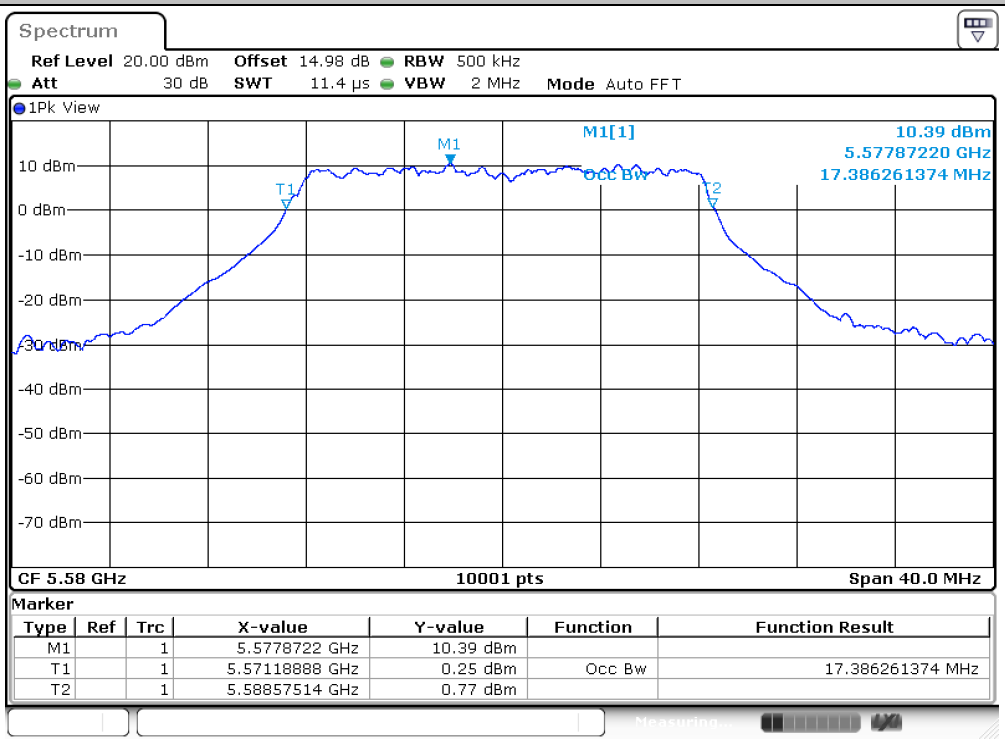
Date: 30.AUG.2024 02:38:21

11A-CDD_Ant14_5500



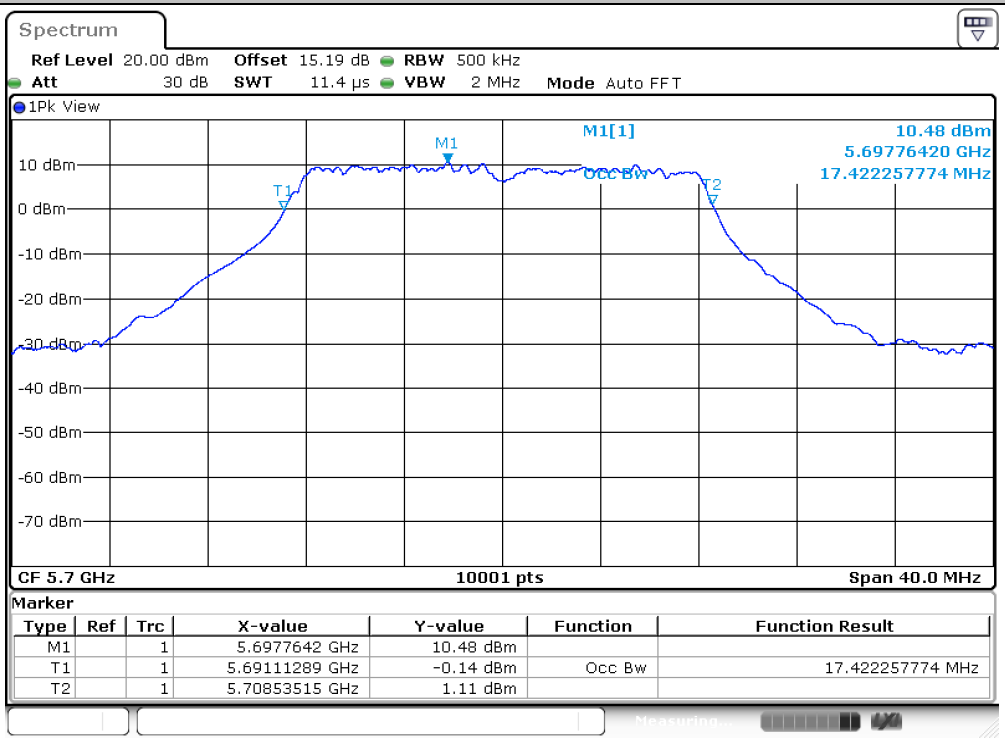
Date: 30.AUG.2024 02:38:48

11A-CDD_Ant14_5580



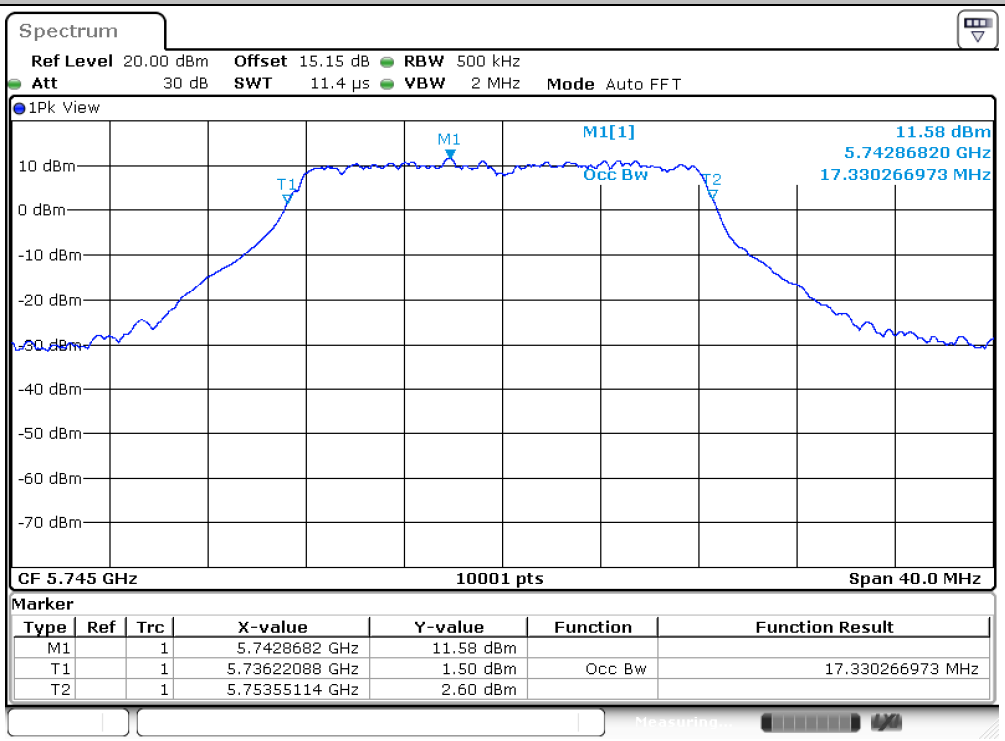
Date: 30.AUG.2024 02:39:13

11A-CDD_Ant14_5700



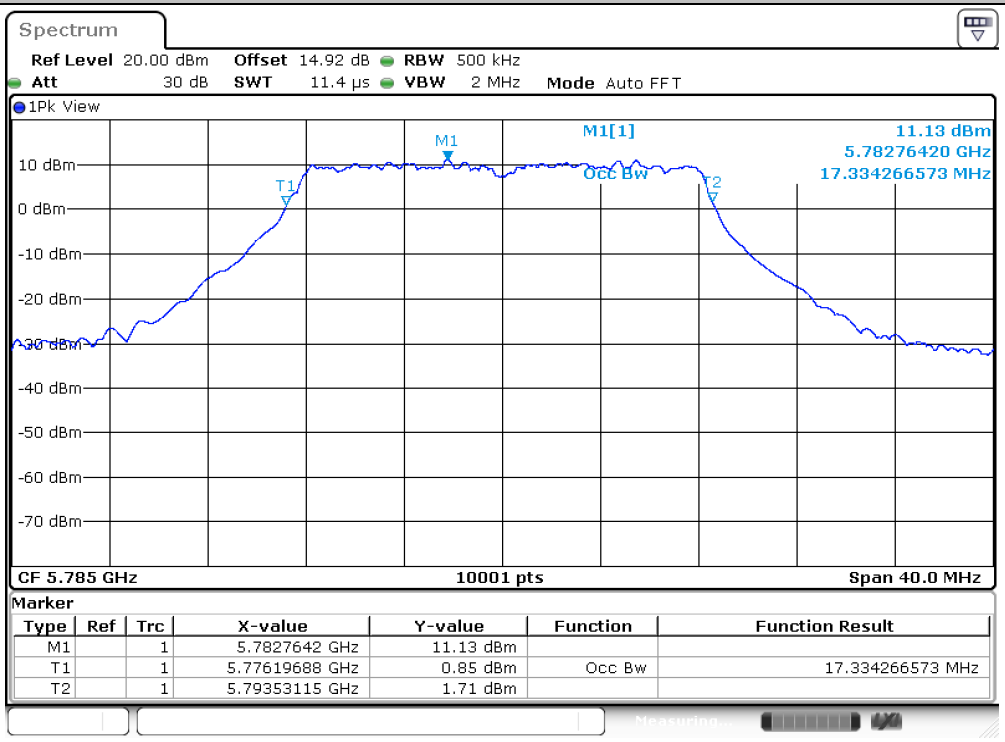
Date: 30.AUG.2024 02:41:33

11A-CDD_Ant14_5745



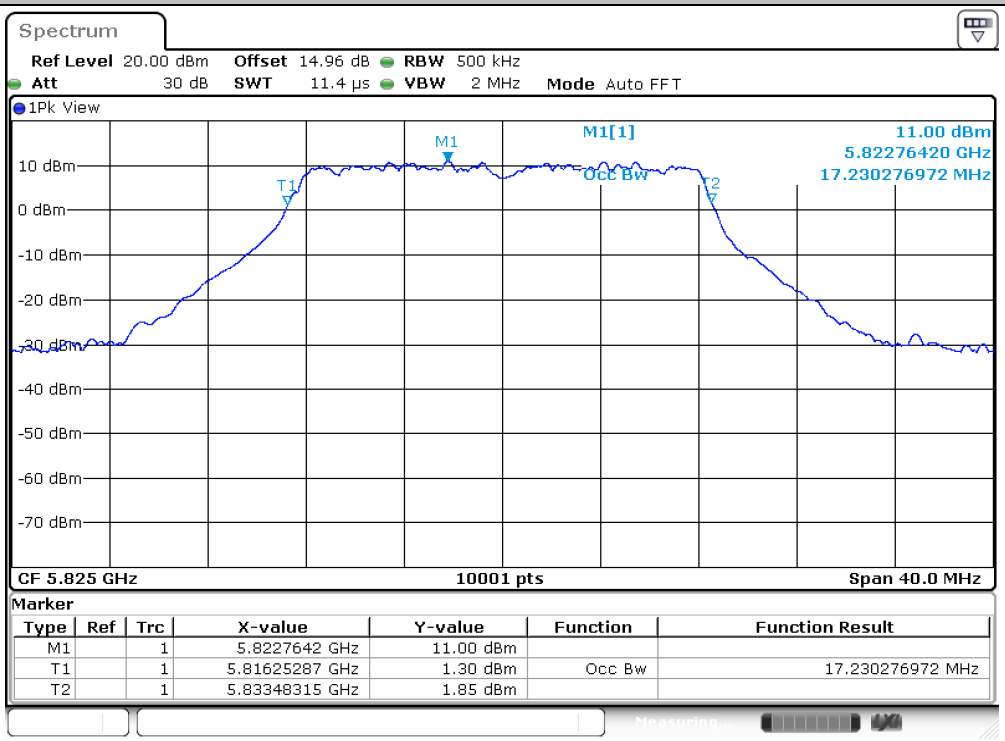
Date: 30.AUG.2024 02:42:56

11A-CDD_Ant14_5785



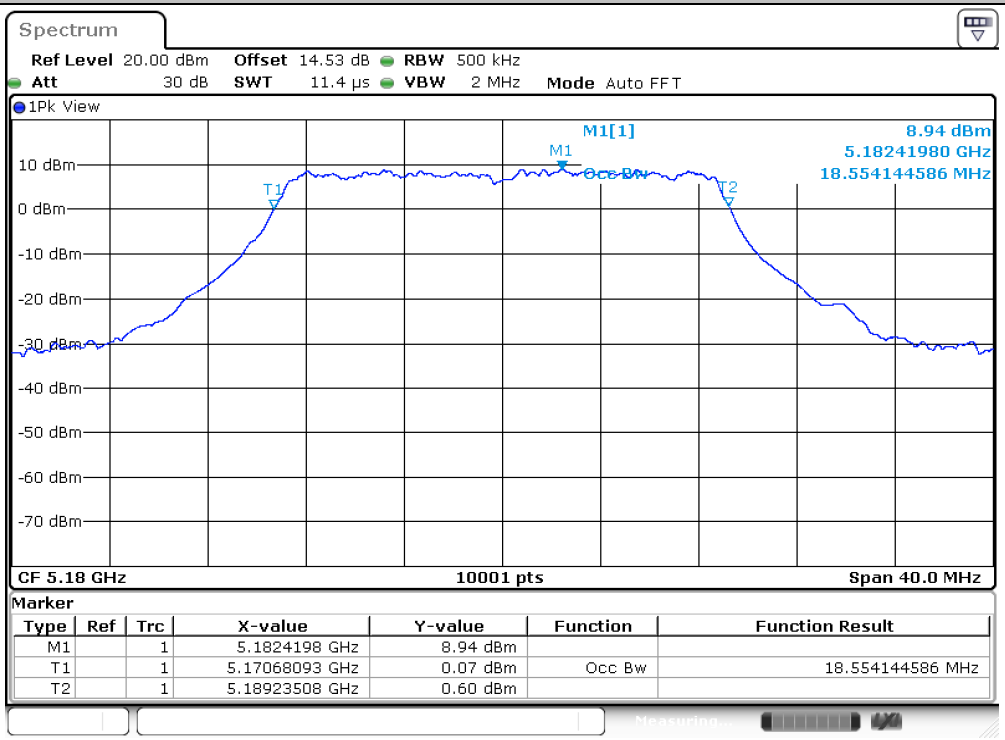
Date: 30.AUG.2024 02:43:23

11A-CDD_Ant14_5825



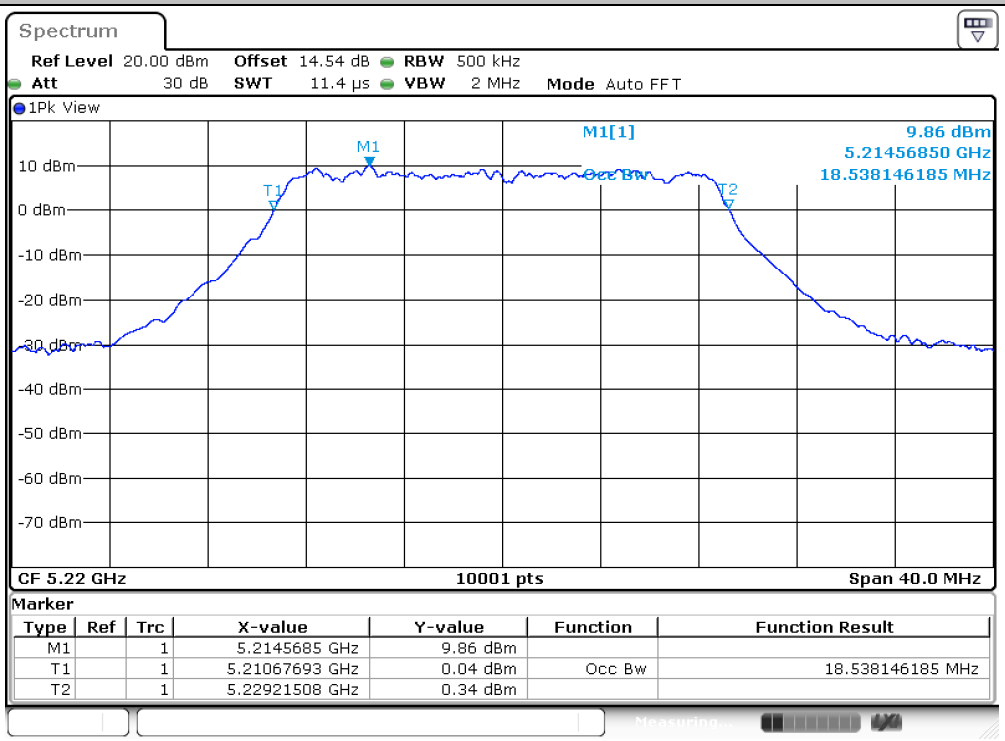
Date: 30.AUG.2024 02:44:26

11N20MIMO_Ant14_5180



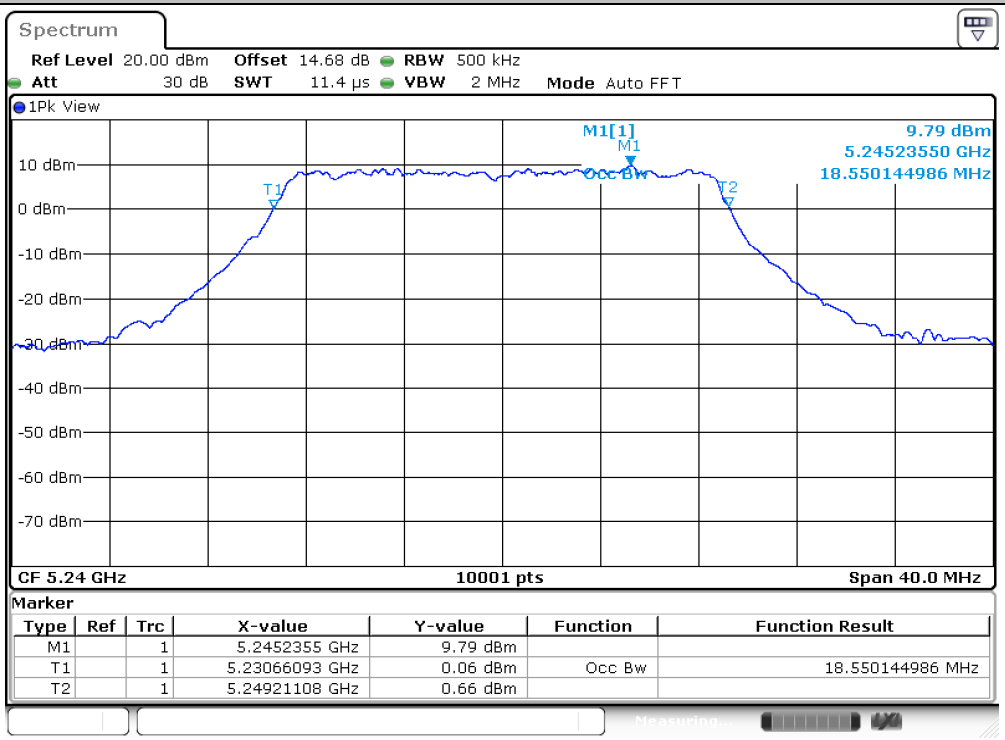
Date: 30.AUG.2024 02:56:16

11N20MIMO_Ant14_5220



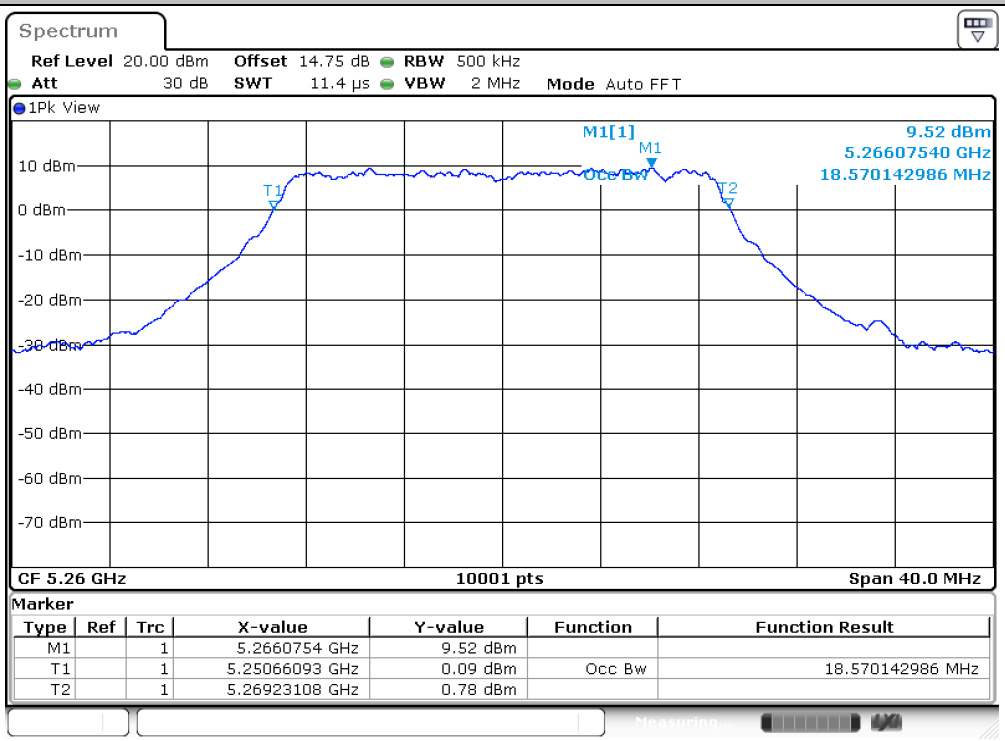
Date: 30.AUG.2024 02:56:50

11N20MIMO_Ant14_5240



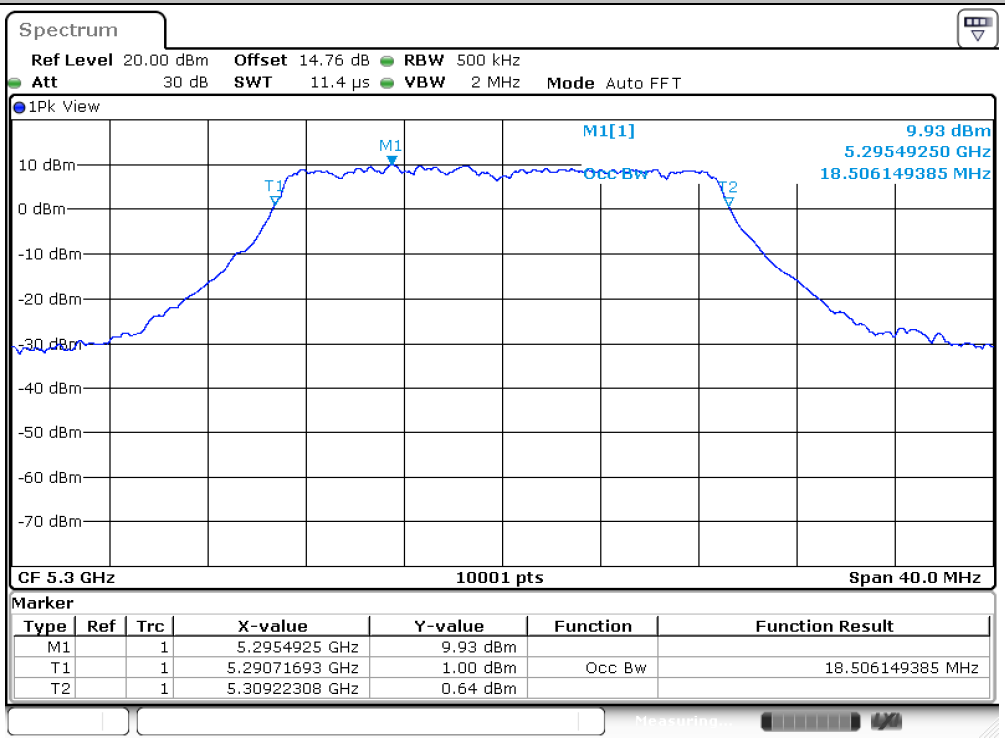
Date: 30.AUG.2024 02:57:30

11N20MIMO_Ant14_5260



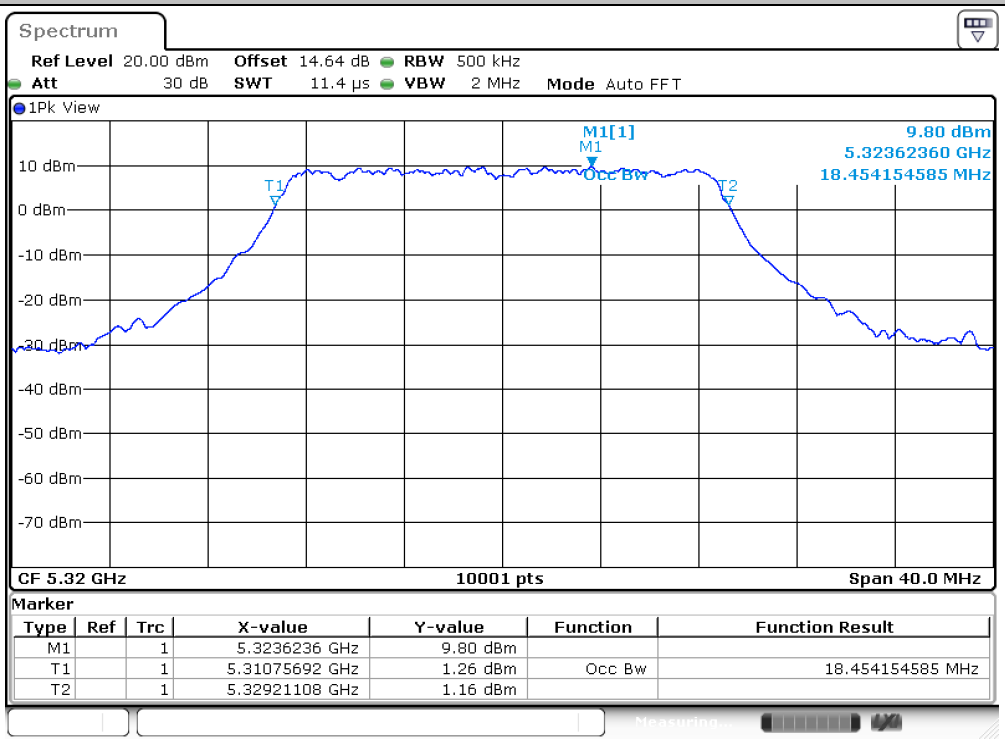
Date: 30.AUG.2024 02:57:54

11N20MIMO_Ant14_5300



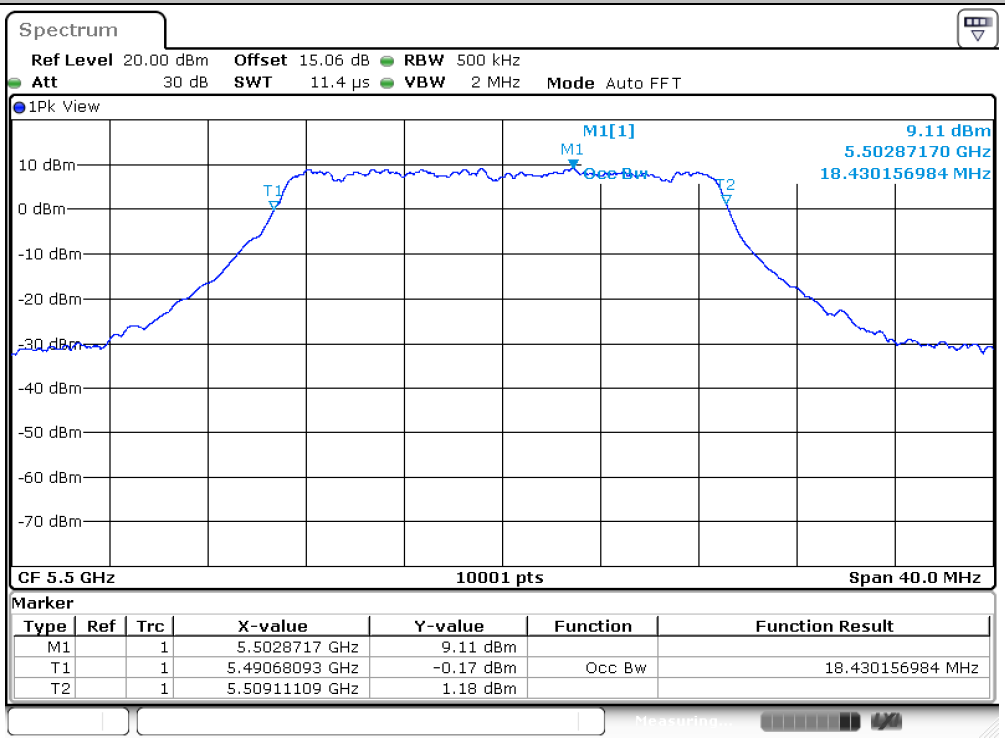
Date: 30.AUG.2024 02:58:20

11N20MIMO_Ant14_5320



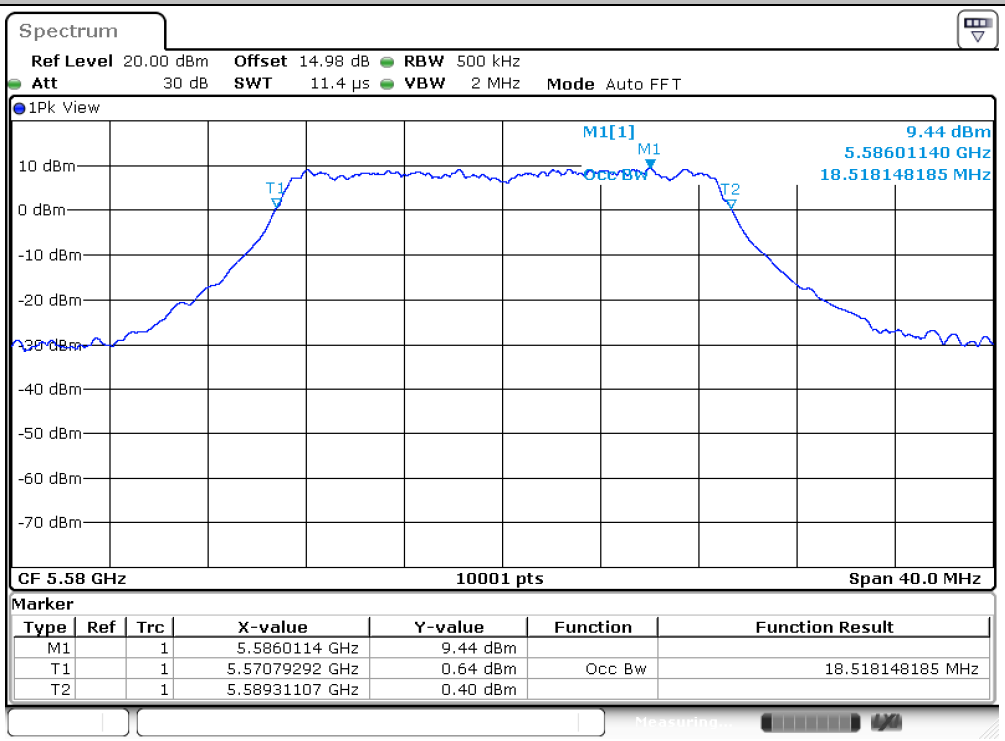
Date: 30.AUG.2024 02:58:49

11N20MIMO_Ant14_5500



Date: 30.AUG.2024 02:59:16

11N20MIMO_Ant14_5580



Date: 30.AUG.2024 02:59:42