



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2619-1, XT2619-2, XT2619-3, XT2619V
FCC ID : IHDT56AT8
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : 15E 6 GHz Low Power Indoor Client (6XD)
TEST DATE(S) : Oct. 21, 2025 ~ Oct. 29, 2025

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

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

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

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People's Republic of China**



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History of this test report

Report No.	Version	Description	Issued Date
FR591602F	01	Initial issue of report	Nov. 14, 2025



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.407(a)(11)	26dB Emission Bandwidth	Pass	-
3.2	15.407(b)(7)	In-Band Emissions (Channel Mask)	Pass	-
3.5	15.407(d)(6)	Contention Based Protocol	Pass	
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 10.52 dB at 4789.00 MHz
3.5	15.203 15.407(a)	Antenna Requirement	Pass	-

Note : This is a variant report, the change note could be referred to the XT2619-1, XT2619-2, XT2619-3, XT2619V_Operational Description of Product Equality Declaration which is exhibit separately. According to the differences, only the worse cases were verified from original test report (Sporton Report Number FR4O3003F).

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

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2619-1, XT2619-2, XT2619-3, XT2619V
FCC ID	IHDT56AT8
IMEI Code	Conducted: 350200180016273 Radiation: 350200180017271 CBP:350200180016034
HW Version	DVT2
SW Version	W2WD36.30
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The four models name XT2619-1, XT2619-2, XT2619-3, XT2619V are the same product except model name different for market segment.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	U-NII-5: 5925 MHz ~ 6425 MHz U-NII-6: 6425 MHz ~ 6525 MHz U-NII-7: 6525 MHz ~ 6875 MHz U-NII-8: 6875 MHz ~ 7125 MHz
Antenna Type / Gain	<5925 MHz ~ 6425 MHz > <Ant. 8> : PIFA Antenna with gain -6 dBi <Ant. 5> : Monopole Antenna with gain -7 dBi <6425 MHz ~ 6525 MHz > <Ant. 8> : PIFA Antenna with gain -8 dBi <Ant. 5> : Monopole Antenna with gain -6 dBi <6525 MHz ~ 6875 MHz > <Ant. 8> : PIFA Antenna with gain -9 dBi <Ant. 5> : Monopole Antenna with gain -7.5 dBi <6875 MHz ~ 7125 MHz > <Ant. 8> : PIFA Antenna with gain -9 dBi <Ant. 5> : Monopole Antenna with gain -7.5 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)

Remark:

1. WIFI MIMO support CDD.
2. 802.11ax support full RU tone and partial RU tone
3. The device does not support CH2 & CH233.
4. CBP test with antenna path of minimum gain (Minimum gain= -9 dBi).

1.5 Modification of EUT

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



1.6 Testing Location

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

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH03-KS TH01-KS DFS01-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24al

1.8 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v03
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2020

Remark:

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



1.9 Specification of Accessory

Accessories Information				
AC Adapter 1	Brand Name	Motorola(AOHAI)	Model Name	MC-201L
AC Adapter 2	Brand Name	Motorola(Chenyang)	Model Name	MC-201L
AC Adapter 3	Brand Name	Motorola(XIHI)	Model Name	MC-201L
Battery 1	Brand Name	Motorola(SUNWODA)	Model Name	SD52
Battery 2	Brand Name	Motorola(COSMX)	Model Name	SD52
USB Cable 1	Brand Name	LUXSHARE	Model Name	SC18E08103
USB Cable 2	Brand Name	Saibao	Model Name	SC18D86731
USB Cable 3	Brand Name	Saibao	Model Name	SC18D94161
Stylus 1	Brand Name	Maxeye	Model Name	SO28E92733 (Black) SO28E94204 (Pink)
Stylus 2	Brand Name	Sunwoda	Model Name	SO28E92734



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: 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 (Z plane) were recorded in this report.

2.1 Carrier Frequency and Channel

<U-NII-5, 6, 7, 8>

BW 20M	Channel	-	1	5	9	13	17	21	25	29
	Freq. (MHz)	-	5955	5975	5995	6015	6035	6055	6075	6095
BW 40M	Channel	3			11		19		27	
	Freq. (MHz)	5965			6005		6045		6085	
BW 80M	Channel	7					23			
	Freq. (MHz)	5985					6065			
BW 160M	Channel	15								
	Freq. (MHz)	6025								

BW 20M	Channel	33	37	41	45	49	53	57	61
	Freq. (MHz)	6115	6135	6155	6175	6195	6215	6235	6255
BW 40M	Channel	35		43		51		59	
	Freq. (MHz)	6125		6165		6205		6245	
BW 80M	Channel	39				55			
	Freq. (MHz)	6145				6225			
BW 160M	Channel	47							
	Freq. (MHz)	6185							

BW 20M	Channel	65	69	73	77	81	85	89	93
	Freq. (MHz)	6275	6295	6315	6335	6355	6375	6395	6415
BW 40M	Channel	67		75		83		91	
	Freq. (MHz)	6285		6325		6365		6405	
BW 80M	Channel	71				87			
	Freq. (MHz)	6305				6385			
BW 160M	Channel	79							
	Freq. (MHz)	6345							



BW 20M	Channel	97	101	105	109	113	117	121	125
	Freq. (MHz)	6435	6455	6475	6495	6515	6535	6555	6575
BW 40M	Channel	99		107		115		123	
	Freq. (MHz)	6445		6485		6525		6565	
BW 80M	Channel	103				119			
	Freq. (MHz)	6465				6545			
BW 160M	Channel	111							
	Freq. (MHz)	6505							

BW 20M	Channel	129	133	137	141	145	149	153	157
	Freq. (MHz)	6595	6615	6635	6655	6675	6695	6715	6735
BW 40M	Channel	131		139		147		155	
	Freq. (MHz)	6605		6645		6685		6725	
BW 80M	Channel	135				151			
	Freq. (MHz)	6625				6705			
BW 160M	Channel	143							
	Freq. (MHz)	6665							

BW 20M	Channel	161	165	169	173	177	181	185	189
	Freq. (MHz)	6755	6775	6795	6815	6835	6855	6875	6895
BW 40M	Channel	163		171		179		187	
	Freq. (MHz)	6765		6805		6845		6885	
BW 80M	Channel	167				183			
	Freq. (MHz)	6785				6865			
BW 160M	Channel	175							
	Freq. (MHz)	6825							

BW 20M	Channel	193	197	201	205	209	213	217	221
	Freq. (MHz)	6915	6935	6955	6975	6995	7015	7035	7055
BW 40M	Channel	195		203		211		219	
	Freq. (MHz)	6925		6965		7005		7045	
BW 80M	Channel	199				215			
	Freq. (MHz)	6945				7025			
BW 160M	Channel	207							
	Freq. (MHz)	6985							

BW 20M	Channel	225	229	-
	Freq. (MHz)	7075	7095	-
BW 40M	Channel	227		
	Freq. (MHz)	7085		

2.2 Test Mode

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

Modulation	Data Rate
802.11a	6 Mbps
802.11ax HE20	MCS0
802.11ax HE80	MCS0

Test Cases
Remark: For Radiated Test Cases, the tests were performed with Adapter 1, Earphone and USB Cable 1.

Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11ax HE20	802.11ax HE20	802.11ax HE20	802.11ax HE20
L	Low	001	097	117	189
M	Middle	045	105	149	209
H	High	093	113	181	229
Straddle		-	-	-	185

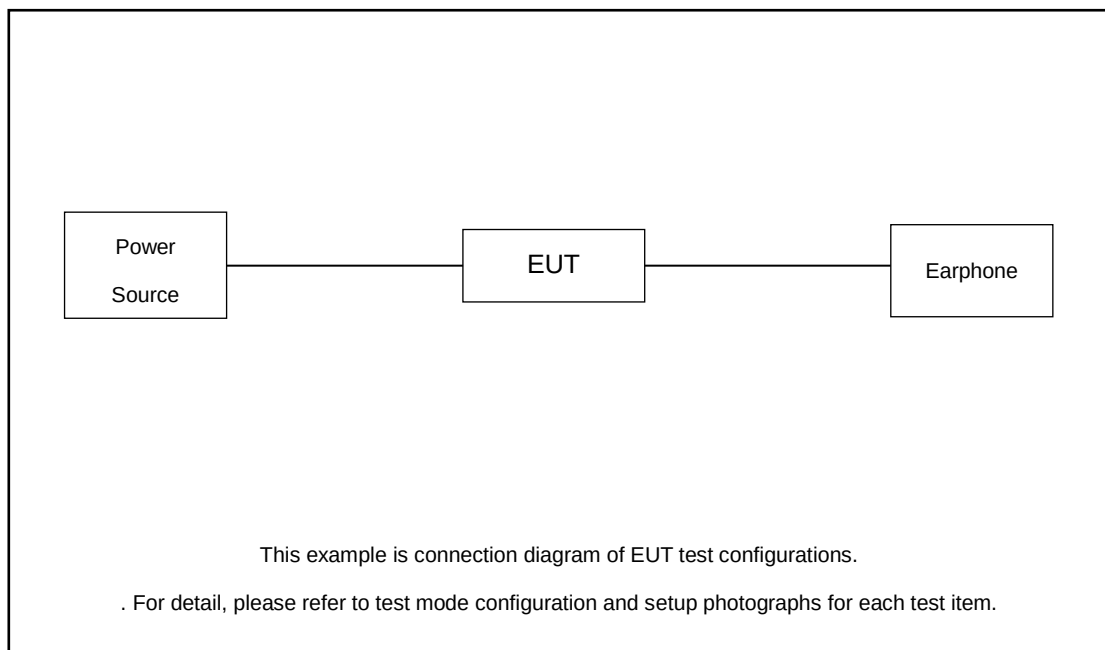
Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11ax HE40	802.11ax HE40	802.11ax HE40	802.11ax HE40
L	Low	003	099	123	195
M	Middle	043	-	147	203
H	High	091	107	179	227
Straddle		-	115	-	187

Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11ax HE80	802.11ax HE80	802.11ax HE80	802.11ax HE80
L	Low	007	103	135	199
M	Middle	039		151	-
H	High	087		167	215
Straddle		-	119	183	-

Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11ax HE160	802.11ax HE160	802.11ax HE160	802.11ax HE160
L	Low	015	-	143	207
M	Middle	047			
H	High	079			
Straddle		-	111	175	-

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Earphone	N/A	N/A	N/A	N/A	N/A

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program (QRCT TX Tool) was provided and enabled to make EUT continuously transmit.



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 5.32 dB and 20dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5.32 + 20 = 25.32 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 CFR 15.407 (a)(11)

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

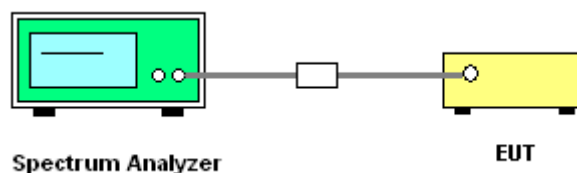
3.1.2 Measuring Instruments

See list of measuring equipment 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) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. 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%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

Only the maximum 26dB & 99% OB plots of each bandwidth shown in the report.

3.2 In-Band Emissions (Channel Mask)

3.2.1 Limit of Unwanted Emissions

<FCC 14-30 CFR 15.407>

(b)(7) For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

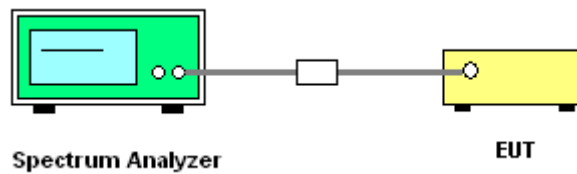
The testing follows FCC KDB 987594 D02 U-NII 6GHz EMC Measurement.

Section J) In-Band Emissions.

1. Take nominal bandwidth as reference channel bandwidth provided that 26 dB emission bandwidth is always larger than nominal bandwidth
2. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
 - a) Set the span to encompass the entire 26 dB EBW of the signal.
 - b) Set RBW = same RBW used for 26 dB EBW measurement.
 - c) Set VBW $\geq 3 \times$ RBW
 - d) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
 - e) Sweep time = auto.
 - f) Detector = RMS (i.e., power averaging)
 - g) Trace average at least 100 traces in power averaging (rms) mode.
 - h) Use the peak search function on the instrument to find the peak of the spectrum.
3. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
 - a. Suppressed by 20 dB at 1 MHz outside of the channel edge.

- b. Suppressed by 28 dB at one channel bandwidth from the channel center.
- c. Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
- 4. Adjust the span to encompass the entire mask as necessary.
- 5. Clear trace.
- 6. Trace average at least 100 traces in power averaging (rms) mode.
- 7. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

3.2.4 Test Setup



3.2.5 Test Result

Please refer to Appendix A.

3.3 Contention Based Protocol

3.3.1 Limit of Contention Based Protocol

<FCC 14-30 CFR 15.407>

(d)(6) All U-NII transmitters, except for standard power access points and fixed client devices, operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel and stay off the channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain. To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

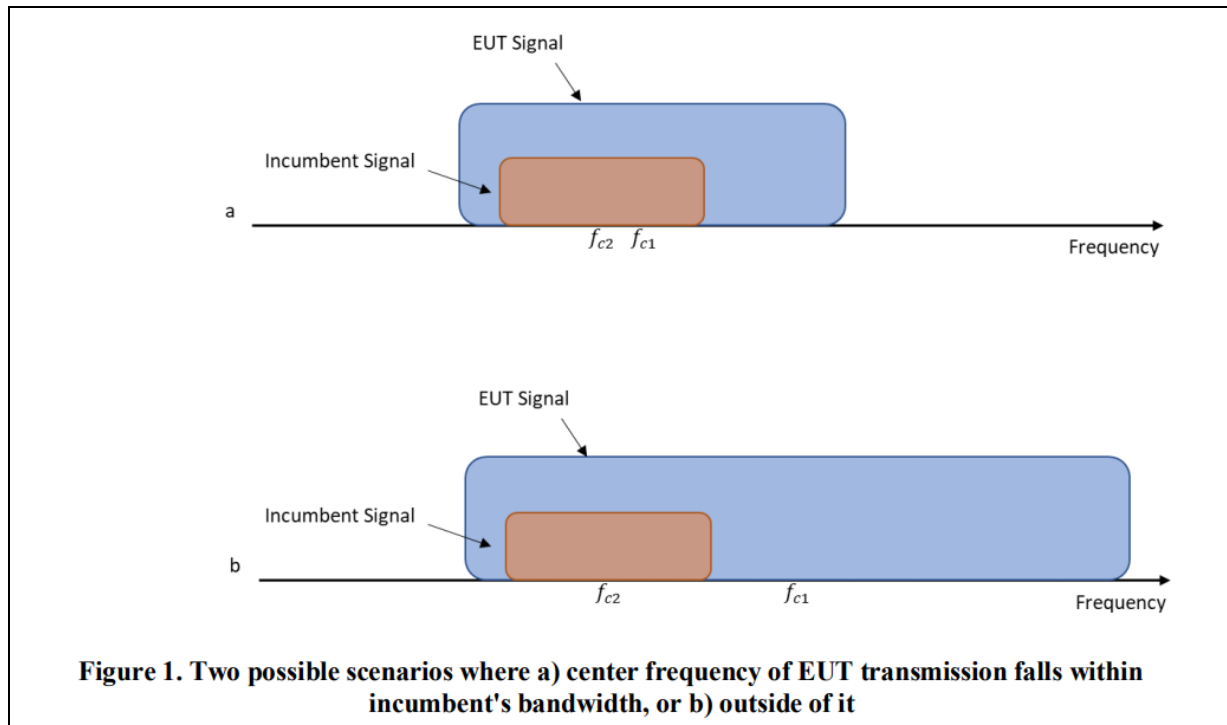
where:

BW_{EUT} : Transmission bandwidth of EUT signal

BW_{Inc} : Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)

f_{c1} : Center frequency of EUT transmission

f_{c2} : Center frequency of simulated incumbent signal



3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

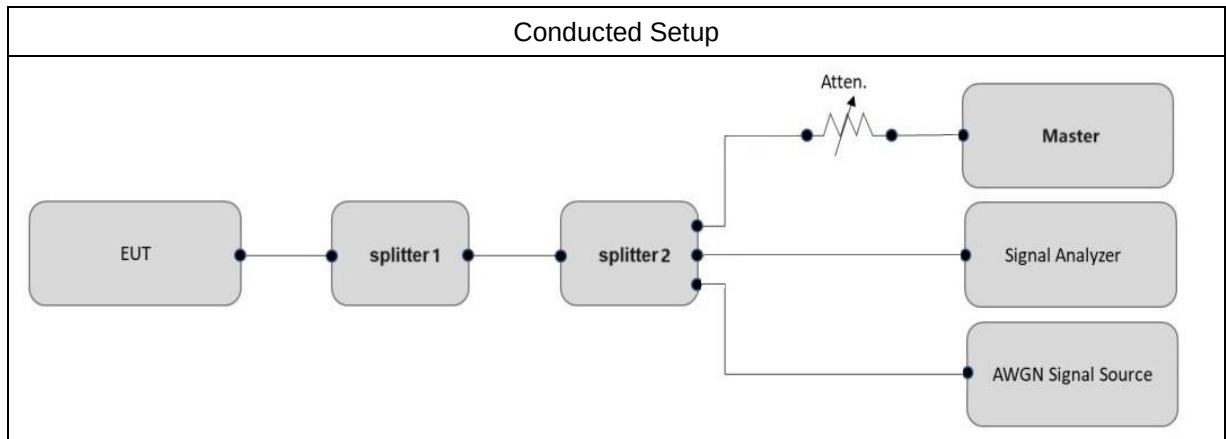
3.3.3 Test Procedures

1. To ensure EUT reliably detects an incumbent signal in both scenarios shown in Figure 1, the detection threshold test may be repeated more than once with the incumbent signal (having center frequency f_{c2}) tuned to different center frequencies within the UT transmission bandwidth. The criteria specified in Table 1 determines how many times the detection threshold test must be performed
2. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
3. Monitor the signal analyzer to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
4. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
5. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 2, choose a different center

frequency for the AWGN signal and repeat the process.

6. EUT was driven in MIMO mode, the interferer signal was injected to both chains to monitor the performance, while the interferer level is determined according to the lowest antenna gain among both antennas.

3.3.4 Test Setup



3.3.5 Support Unit used in test configuration and system

Instrument	Brand Name	Model No.	Characteristics
Signal Generator	Keysight	5182B/5182BX07	9KHz~7.2GHz
Spectrum Analyzer	R&S	FSV40	10kHz~40GHz
Terminal (NB Server)	DELL	P78G	LAN
Combiner (splitter1)	Tojoin	N/A	2G~8GHz
Combiner (splitter2)	MTJ Cooperation	MTJ7144-M	0.5GHz~18GHz
Attenuator	Keysight	8494B	0-110dBm
WLAN AP	ASUS	GT-AXE11000	Dual Band AP



3.3.6 Test Summary of Contention Based Protocol Test

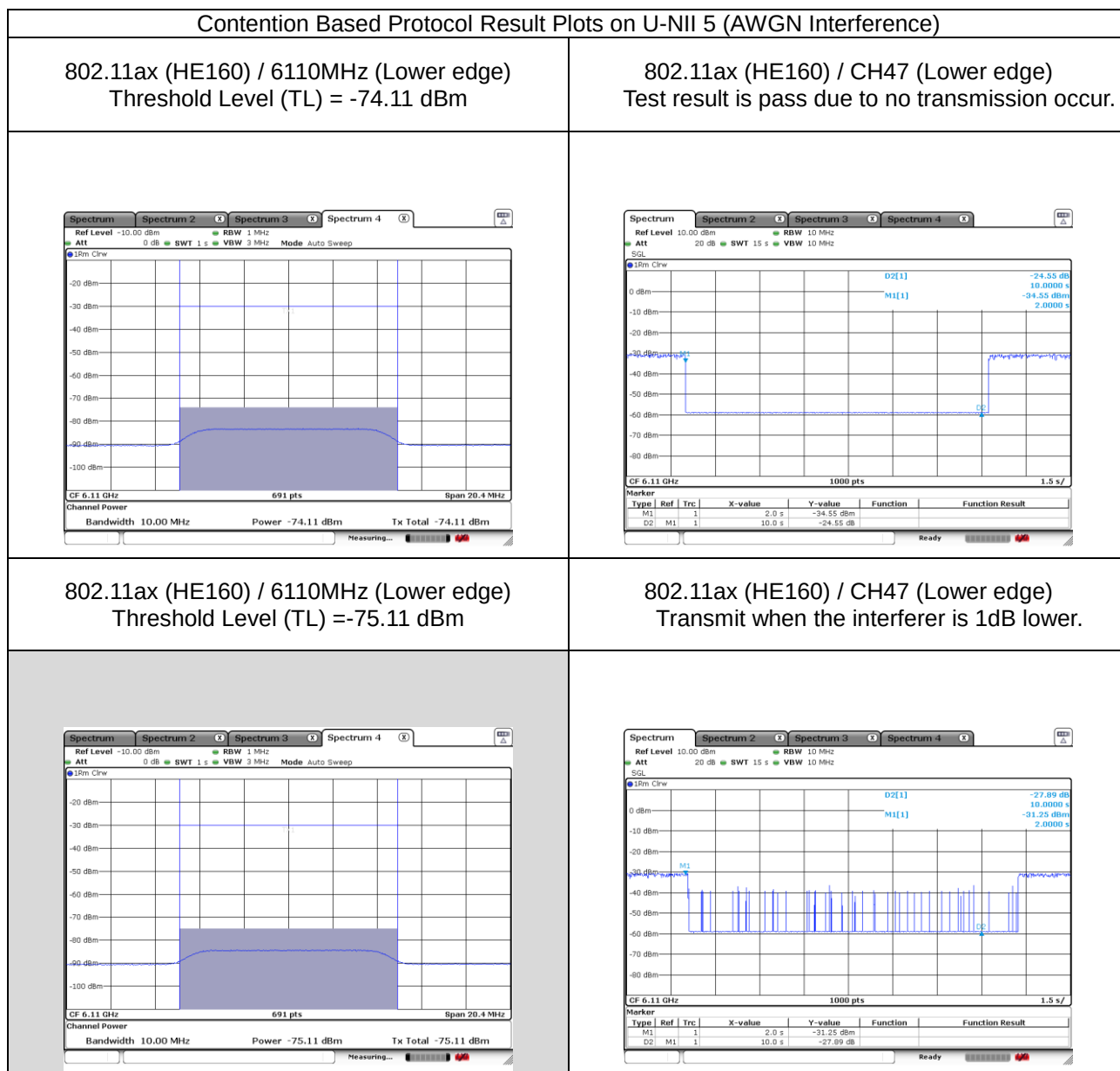
Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 5	6135	20	6135	-74.23	100	-62	-65.23	3.23
					Result: Stop Transmission			
				-75.23	< 90	-62	-66.23	4.23
					Result: Minimal Operation			
				-75.72	0	-62	-66.72	4.72
					Result: Normal Operation			
	6185	160	6110	-74.11	100	-62	-65.11	3.11
					Result: Stop Transmission			
				-75.11	< 90	-62	-66.11	4.11
					Result: Minimal Operation			
				-75.71	0	-62	-66.71	4.71
					Result: Normal Operation			
			6185	-74.52	100	-62	-65.52	3.52
					Result: Stop Transmission			
				-75.52	< 90	-62	-66.52	4.52
					Result: Minimal Operation			
				-76.04	0	-62	-67.04	5.04
					Result: Normal Operation			
			6260	-77.84	100	-62	-68.84	6.84
					Result: Stop Transmission			
				-78.84	< 90	-62	-69.84	7.84
					Result: Minimal Operation			
				-79.05	0	-62	-70.05	8.05
					Result: Normal Operation			

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (Antenna 8, gain = -9dBi)

Note 2: Path Loss between antenna and RF connector is negligible. (0 dB)

Note 3: Margin = Regulated Threshold level - Adjusted Power

3.3.7 Worst Case Plots of Contention Based Protocol



Remark: M1: Injection of AWGN signal, D1: Removal of AWGN signal

3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27 (RMS)	68.2
- 7 (Peak)	88.2

Unwanted emissions outside of restricted bands are measured with a RMS detector.

In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

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

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

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

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

3.4.2 Measuring Instruments

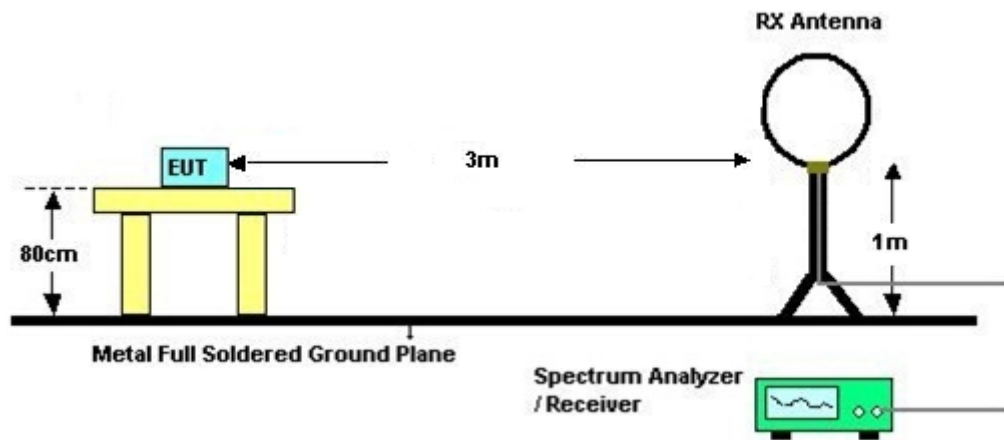
See list of measuring equipment of this test report.

3.4.3 Test Procedures

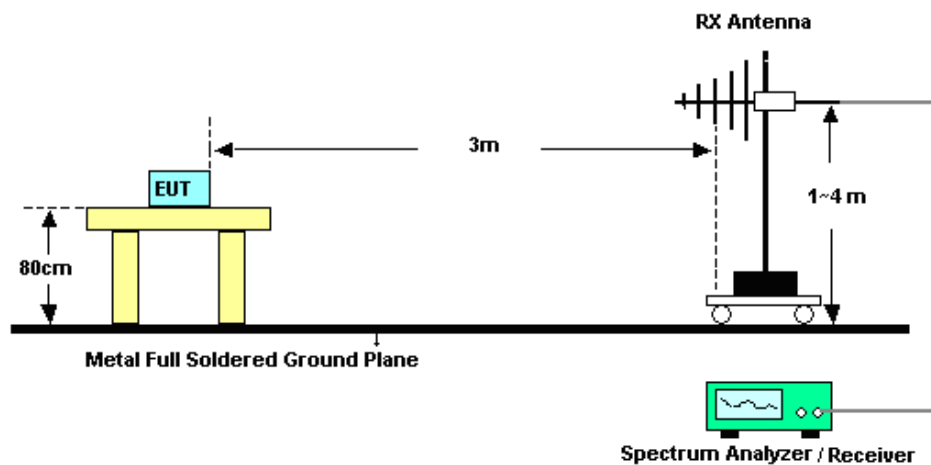
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 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 $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
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

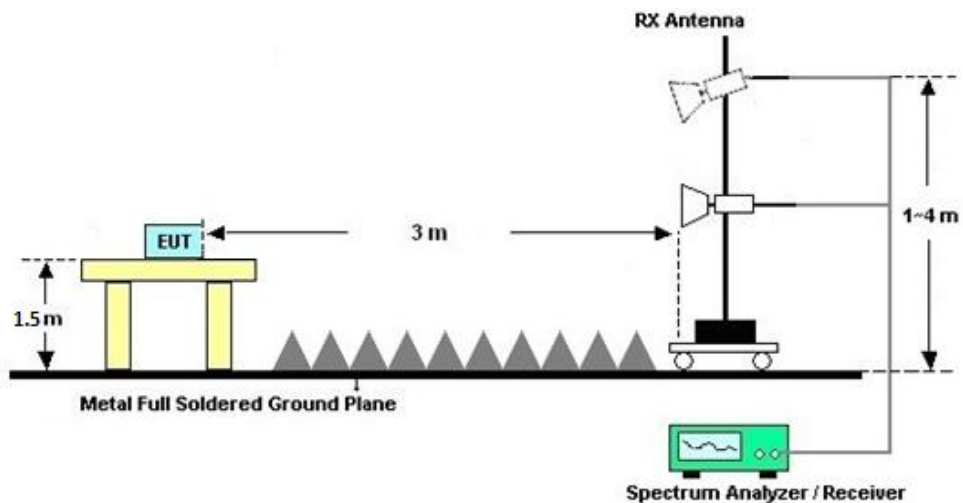
For radiated emissions below 30MHz



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 adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B

3.4.7 Duty Cycle

Please refer to Appendix C.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix B.

The emission level above 18GHz is checked that the emission level is noise floor only, so it is not reflected in the report.

3.5 Antenna Requirements

3.5.1 Standard Applicable

§15.203: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.5.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used. The EUT complies with the requirement of 15.203.

3.5.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e.,

Directional gain = $G_{ANT\ MAX}(Ant.1\ Gain, Ant.2\ Gain, \dots) + \text{Array Gain}$, as following table for Power, where Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

For PSD, the directional gain calculation is following,

Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + \dots + 10^{G_n/10})^2 / N_{ANT}]$ dBi, as following table for PSD.

N_{ANT} = number of transmit antennas

N_{SS} = number of spatial streams. (The worst case directional gain will occur when $N_{SS} = 1$)

<CDD Modes>				
			DG for Power (dBi)	DG for PSD (dBi)
	Ant. 8 (dBi)	Ant. 5 (dBi)		
U-NII-5	-6.00	-7.00	-6.00	-3.48
U-NII-6	-8.00	-6.00	-6.00	-3.93
U-NII-7	-9.00	-7.50	-7.50	-5.21
U-NII-8	-9.00	-7.50	-7.50	-5.21



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 10, 2025	Oct. 21, 2025	Oct. 09, 2026	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44GHz	Apr. 18, 2025	Oct. 21, 2025	Apr. 17, 2026	Radiation (03CH03-KS)
Active loop antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Aug. 10, 2025	Oct. 21, 2025	Aug. 09, 2026	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Nov. 23, 2024	Oct. 21, 2025	Nov. 22, 2025	Radiation (03CH03-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00251982	1GHz~18GHz	Aug. 22, 2025	Oct. 21, 2025	Aug. 21, 2026	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101116	18GHz~40GHz	Oct. 18, 2025	Oct. 21, 2025	Oct. 17, 2026	Radiation (03CH03-KS)
Amplifier	SONOMA	310N	380826	9KHz~1GHz	Jul. 02, 2025	Oct. 21, 2025	Jul. 01, 2026	Radiation (03CH03-KS)
Amplifier	EM	EM18G40GA	060851	18~40GHz	Jan. 02, 2025	Oct. 21, 2025	Jan. 01, 2026	Radiation (03CH03-KS)
high gain Amplifier	EM	EM01G18GA	060834	1Ghz~18Ghz	Dec. 02, 2024	Oct. 21, 2025	Dec. 01, 2025	Radiation (03CH03-KS)
Amplifier	EM	EM01G18GA	060833	1Ghz~18Ghz	Jan. 02, 2025	Oct. 21, 2025	Jan. 01, 2026	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Oct. 21, 2025	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Oct. 21, 2025	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Oct. 21, 2025	NCR	Radiation (03CH03-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Jul. 07, 2025	Oct. 27, 2025~ Oct. 29, 2025	Jul. 06, 2026	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2025	Oct. 27, 2025~ Oct. 29, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2025	Oct. 27, 2025~ Oct. 29, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Signal Analyzer	R&S	FSV7	101472	10Hz~7GHz	Jan. 02, 2025	Oct. 29, 2025	Jan. 01, 2026	CBP (DFS01-KS)
MXG-B RF Vector Signal Generator	Keysight	5182B /5182BX07	MY56200417 /MY59360210	9kHz~7.2GHz	Apr. 16, 2025	Oct. 29, 2025	Apr. 15, 2026	CBP (DFS01-KS)
Combiner	MTJ Cooperation	MTJ7112	N/A	0.4-6GHz	NCR	Oct. 29, 2025	NCR	CBP (DFS01-KS)

NCR: No Calibration Required



5 Measurement Uncertainty

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.20 dB
--	---------

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.32 dB
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----- THE END -----



Appendix A. Conducted Test Results



Emission Bandwidth

Test Result

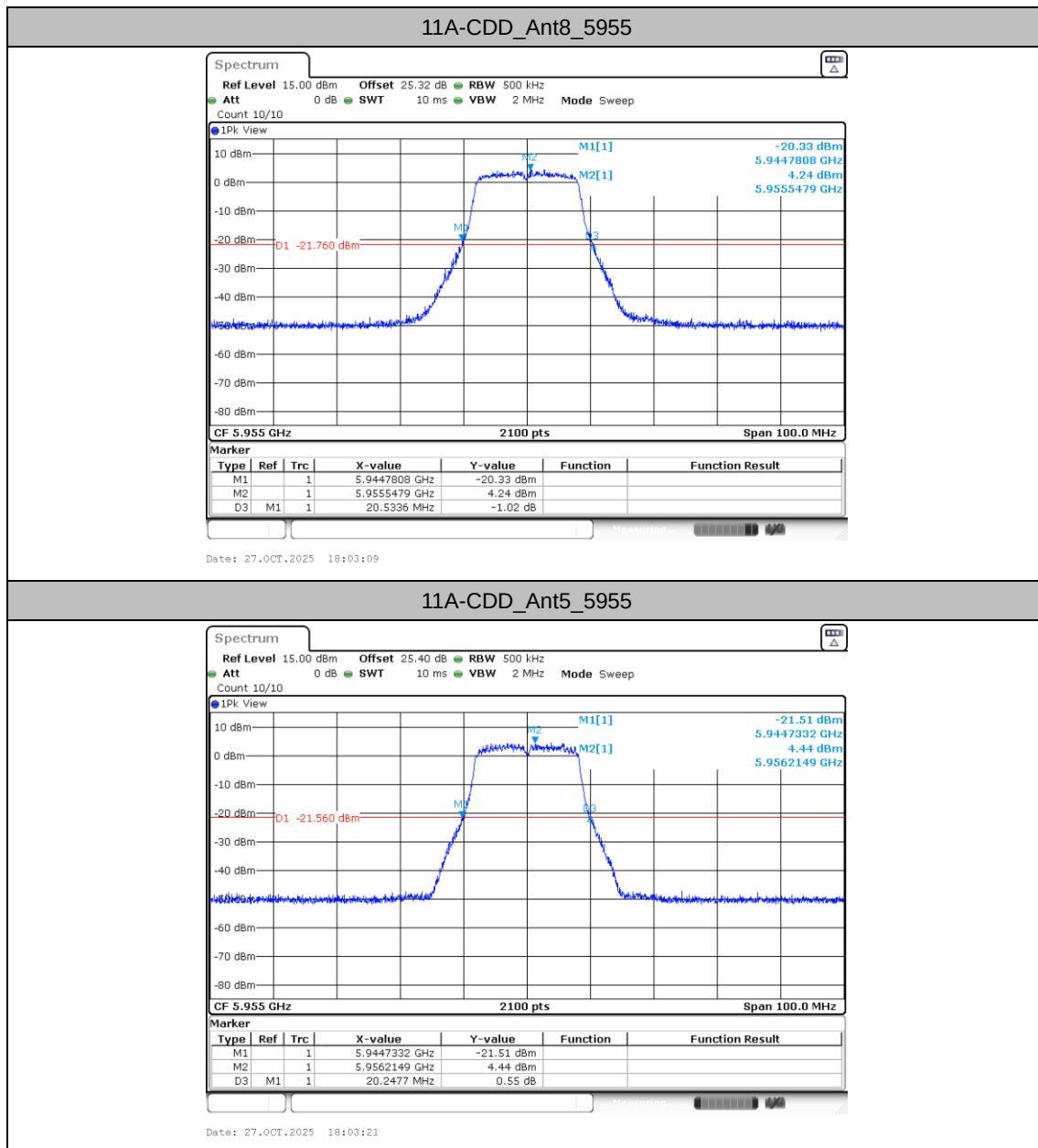
TestMode	Antenna	Freq(MHz)	26dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-CDD	Ant8	5955	20.53	5944.78	5965.31	---	---
	Ant5	5955	20.25	5944.73	5964.98	---	---
	Ant8	6175	20.44	6164.69	6185.12	---	---
	Ant5	6175	19.87	6164.92	6184.79	---	---
	Ant8	6415	20.63	6404.64	6425.27	---	---
	Ant5	6415	19.87	6405.02	6424.89	---	---
	Ant8	6435	20.34	6424.73	6445.08	---	---
	Ant5	6435	20.11	6424.64	6444.74	---	---
	Ant8	6475	20.15	6464.92	6485.08	---	---
	Ant5	6475	20.39	6464.73	6485.12	---	---
	Ant8	6515	20.34	6504.78	6525.12	---	---
	Ant5	6515	20.20	6504.83	6525.03	---	---
	Ant8	6535	20.53	6524.69	6545.22	---	---
	Ant5	6535	20.11	6524.78	6544.89	---	---
	Ant8	6695	20.11	6684.88	6704.98	---	---
	Ant5	6695	19.87	6684.92	6704.79	---	---
	Ant8	6855	20.49	6844.78	6865.27	---	---
	Ant5	6855	20.15	6844.83	6864.98	---	---
	Ant8	6875	20.49	6864.69	6885.17	---	---
	Ant5	6875	20.30	6864.50	6884.79	---	---
	Ant8	6895	20.30	6884.78	6905.08	---	---
	Ant5	6895	20.11	6884.78	6904.89	---	---
	Ant8	6995	20.44	6984.88	7005.31	---	---
	Ant5	6995	19.91	6985.11	7005.03	---	---
	Ant8	7095	20.82	7084.59	7105.41	---	---
	Ant5	7095	19.96	7084.88	7104.84	---	---
11AX20MIMO	Ant8	5955	21.44	5944.26	5965.70	---	---
	Ant5	5955	21.63	5944.11	5965.74	---	---
	Ant8	6175	21.77	6164.11	6185.89	---	---
	Ant5	6175	21.58	6164.16	6185.74	---	---
	Ant8	6415	21.87	6404.11	6425.98	---	---
	Ant5	6415	21.68	6404.16	6425.84	---	---
	Ant8	6435	21.34	6424.30	6445.65	---	---



	Ant5	6435	21.82	6424.21	6446.03	---	---
	Ant8	6475	21.53	6464.26	6485.79	---	---
	Ant5	6475	21.58	6464.11	6485.70	---	---
	Ant8	6515	21.77	6504.11	6525.89	---	---
	Ant5	6515	21.77	6504.16	6525.93	---	---
	Ant8	6535	21.39	6524.21	6545.60	---	---
	Ant5	6535	21.49	6524.21	6545.70	---	---
	Ant8	6695	21.49	6684.26	6705.74	---	---
	Ant5	6695	21.53	6684.26	6705.79	---	---
	Ant8	6855	21.63	6844.26	6865.89	---	---
	Ant5	6855	21.68	6844.07	6865.74	---	---
	Ant8	6875	21.58	6864.21	6885.79	---	---
	Ant5	6875	21.58	6864.21	6885.79	---	---
	Ant8	6895	21.63	6884.26	6905.89	---	---
	Ant5	6895	21.63	6884.21	6905.84	---	---
	Ant8	6995	21.25	6984.45	7005.70	---	---
	Ant5	6995	21.44	6984.30	7005.74	---	---
	Ant8	7095	21.44	7084.30	7105.74	---	---
	Ant5	7095	21.68	7084.21	7105.89	---	---

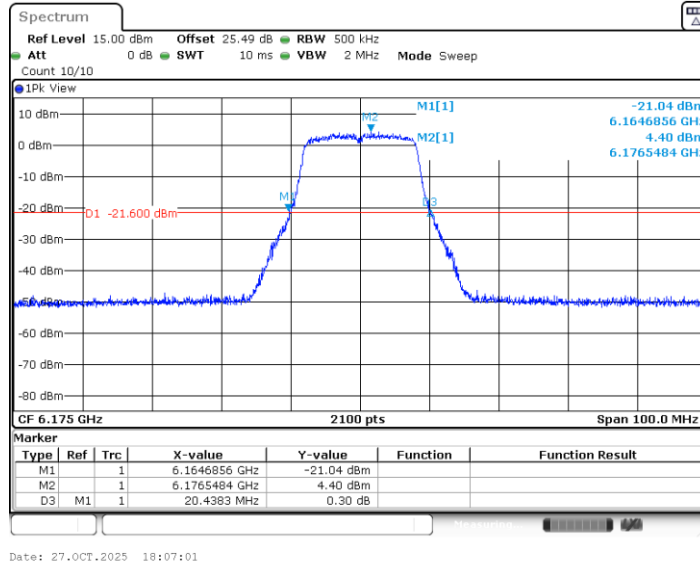


Test Graphs

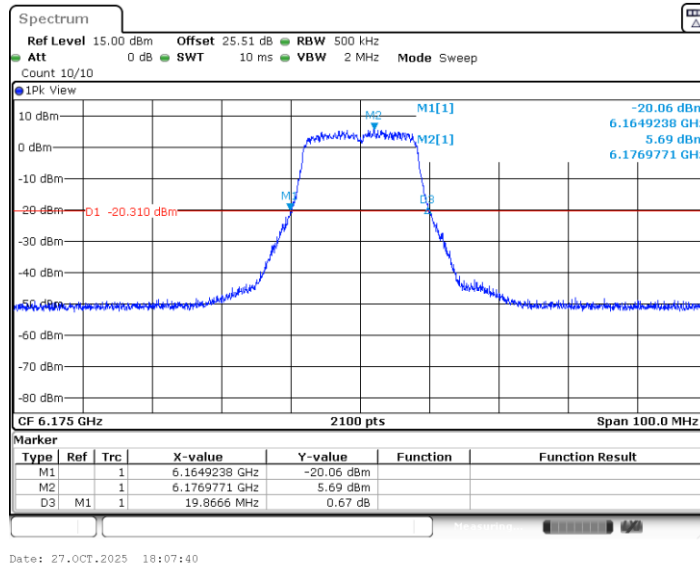




11A-CDD_Ant8_6175

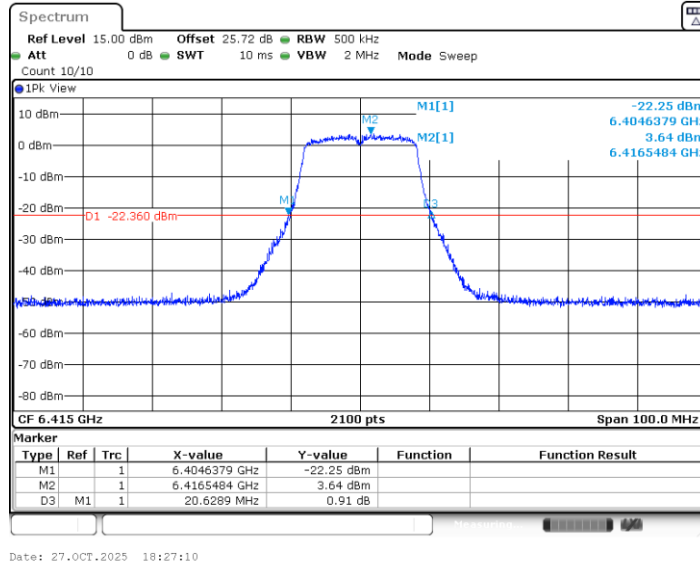


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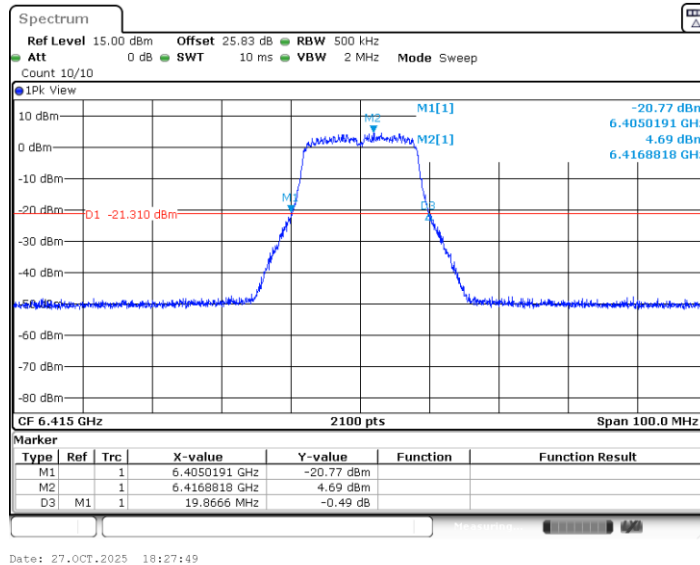




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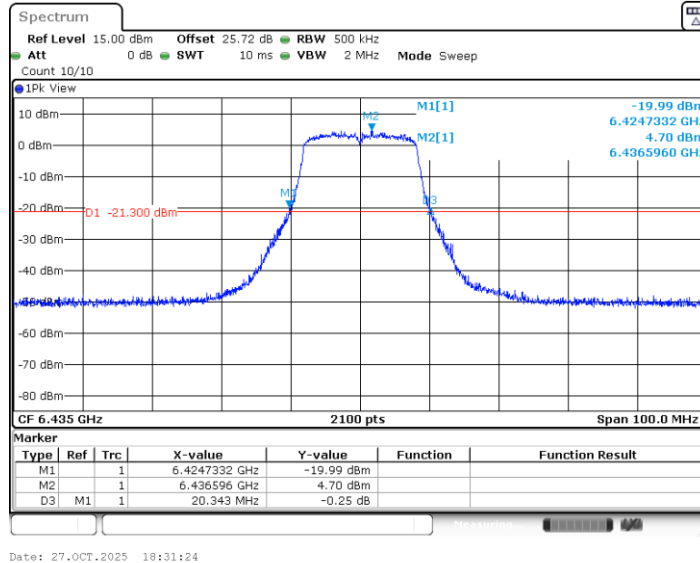


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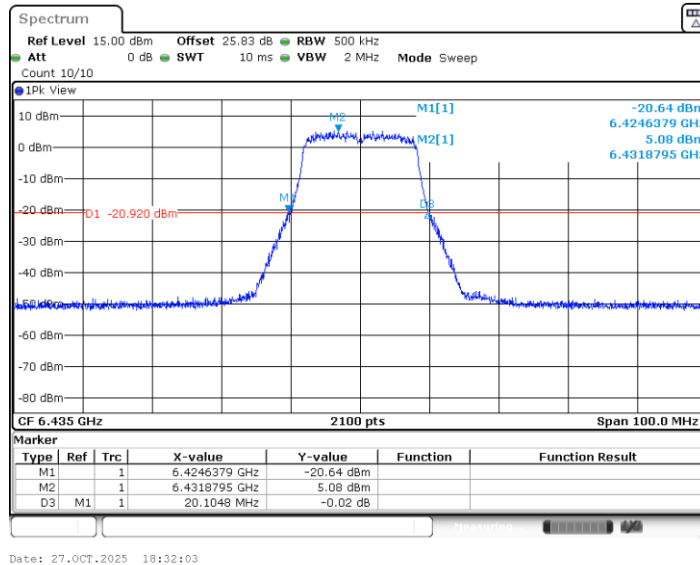




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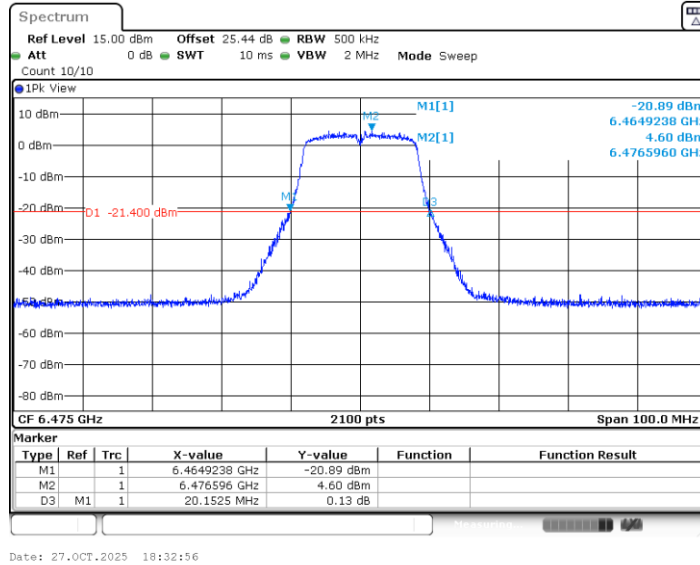


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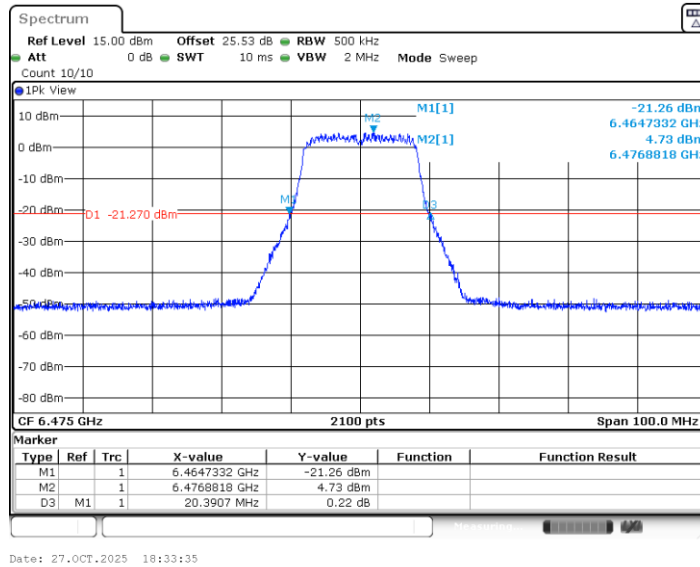




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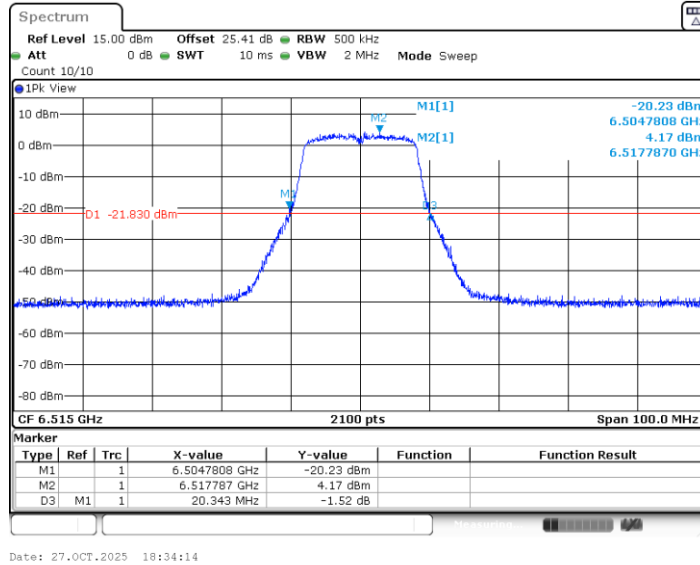


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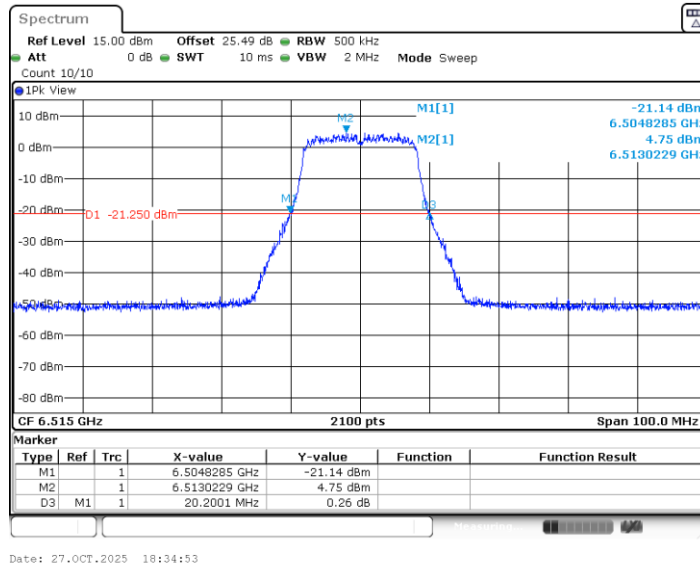


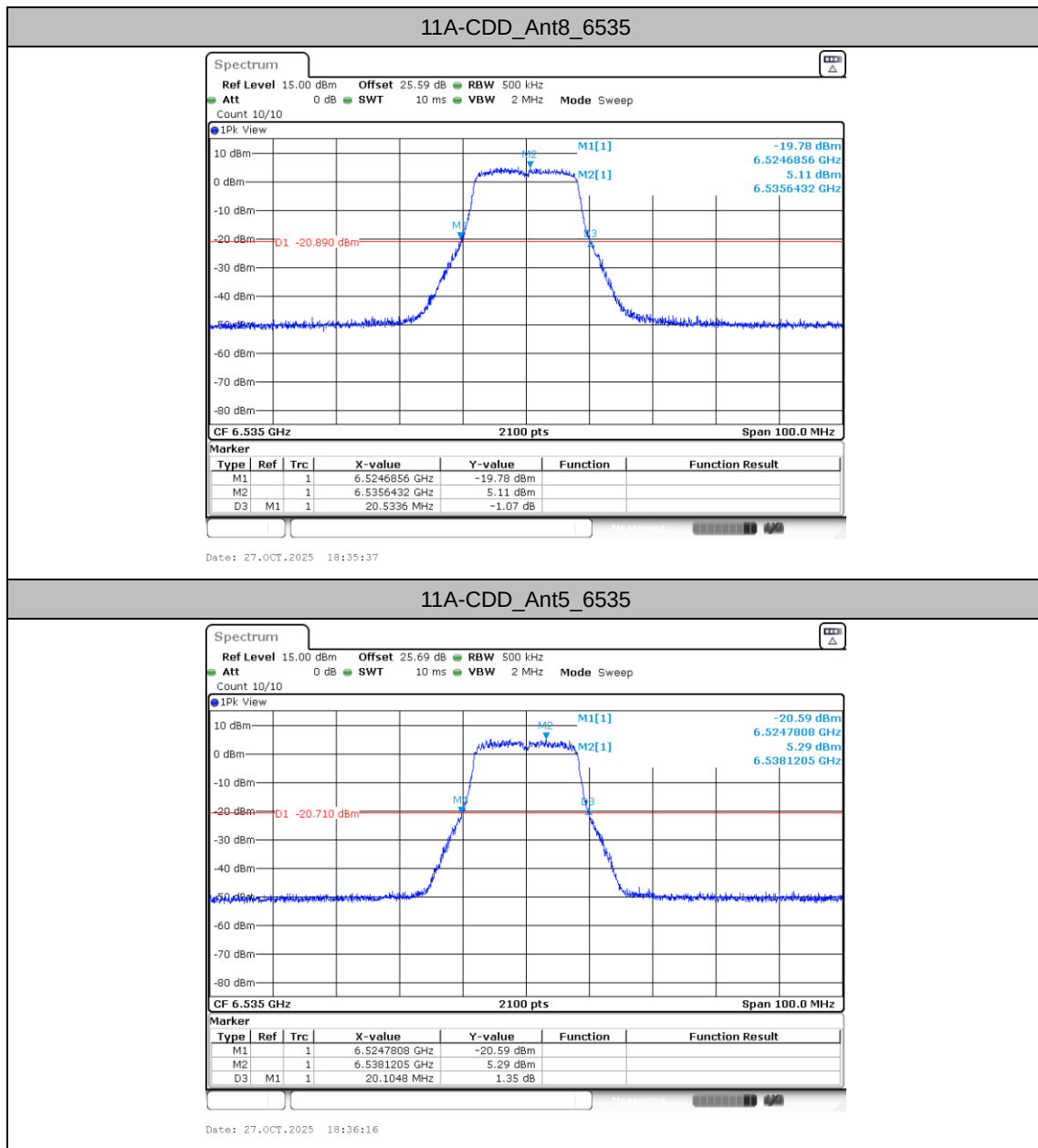


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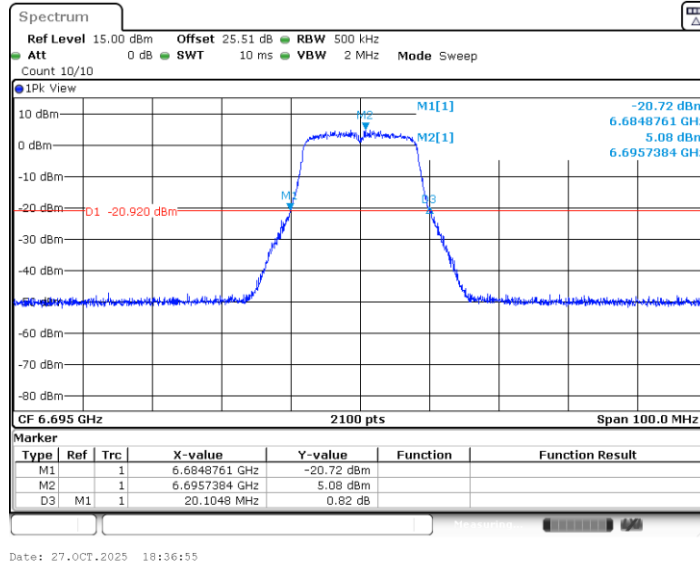
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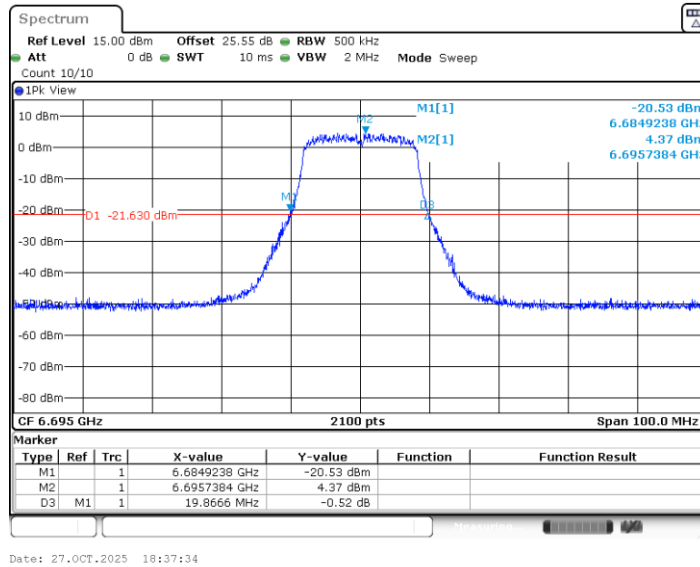


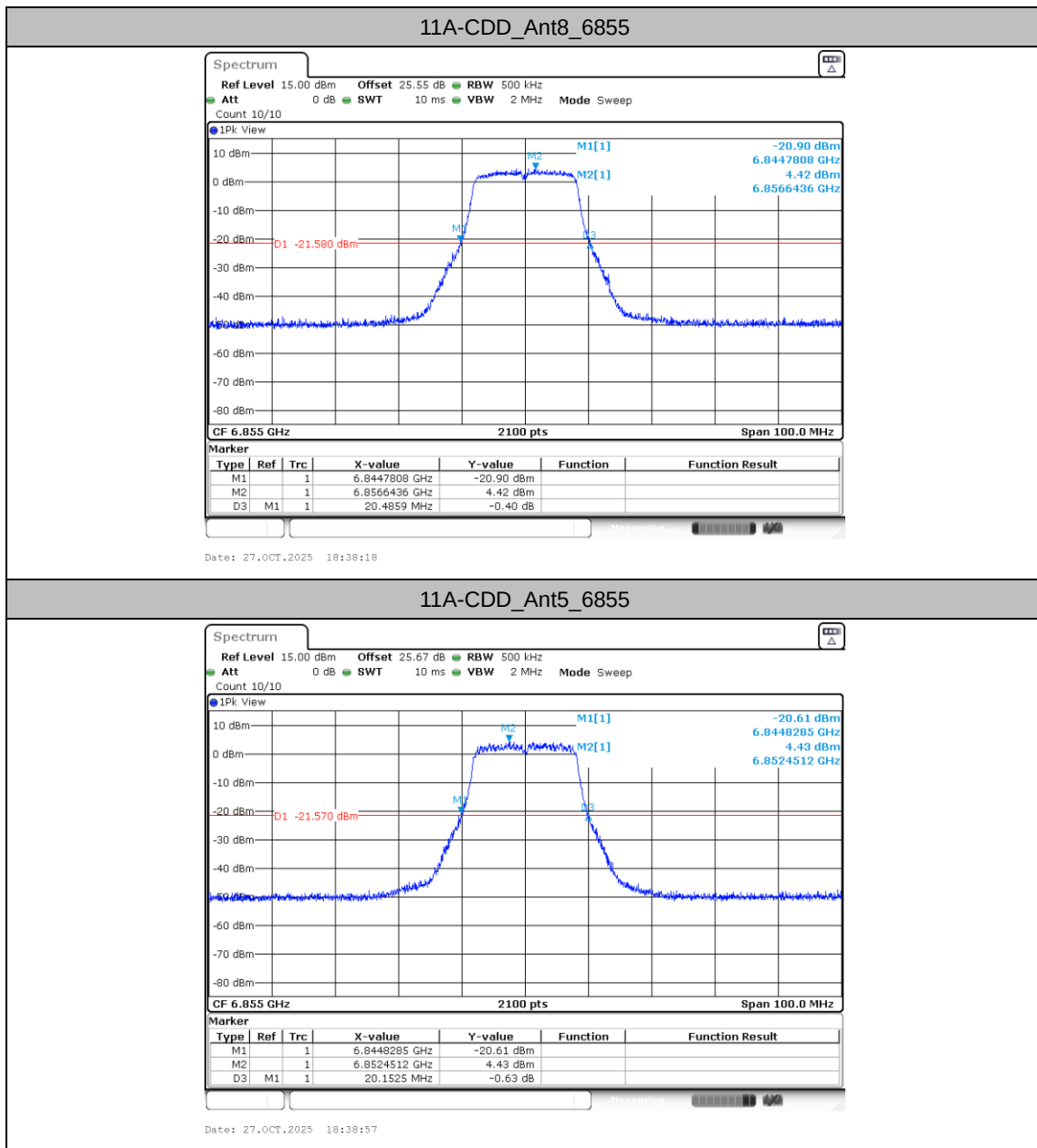


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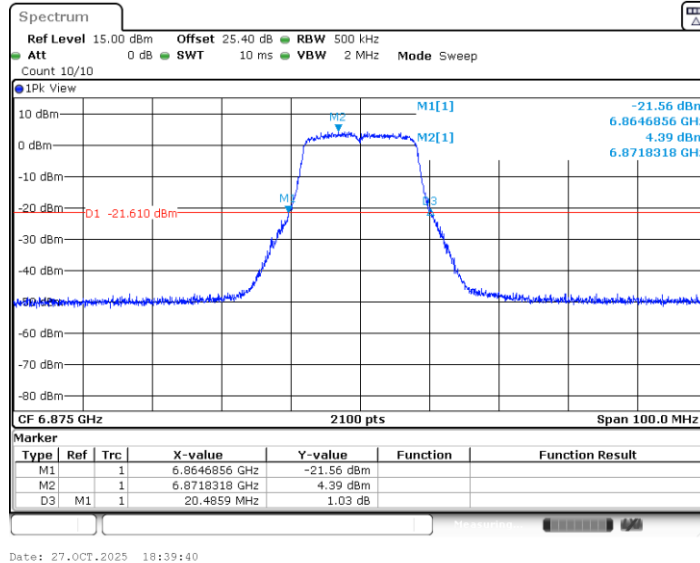
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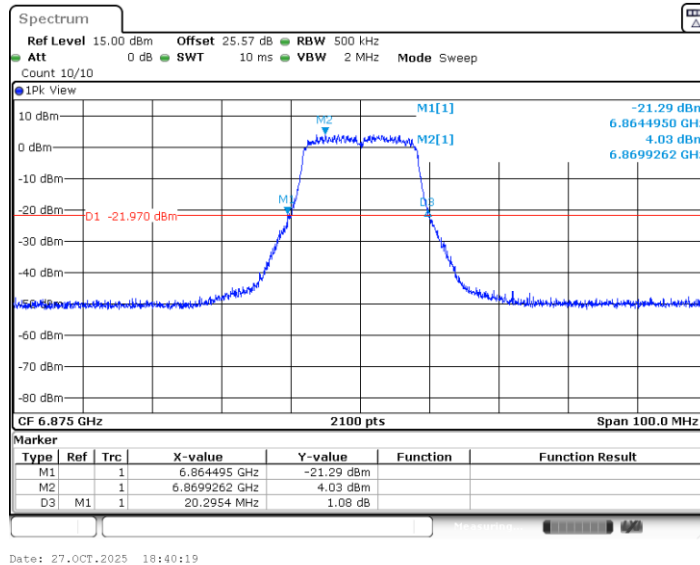




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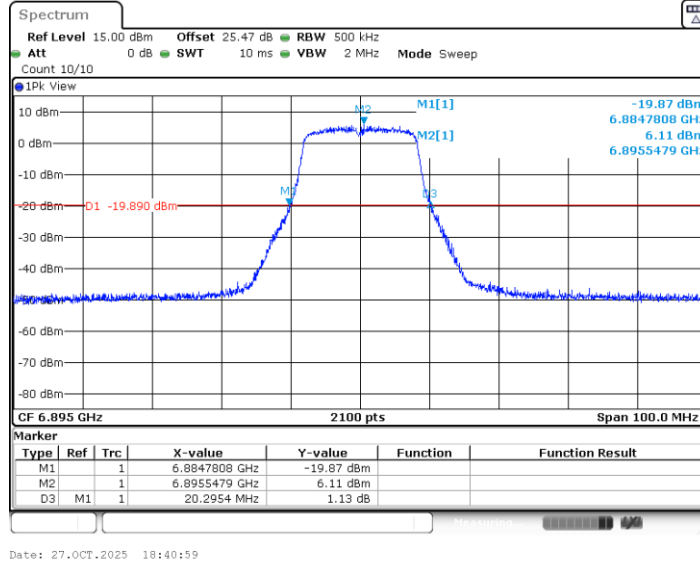


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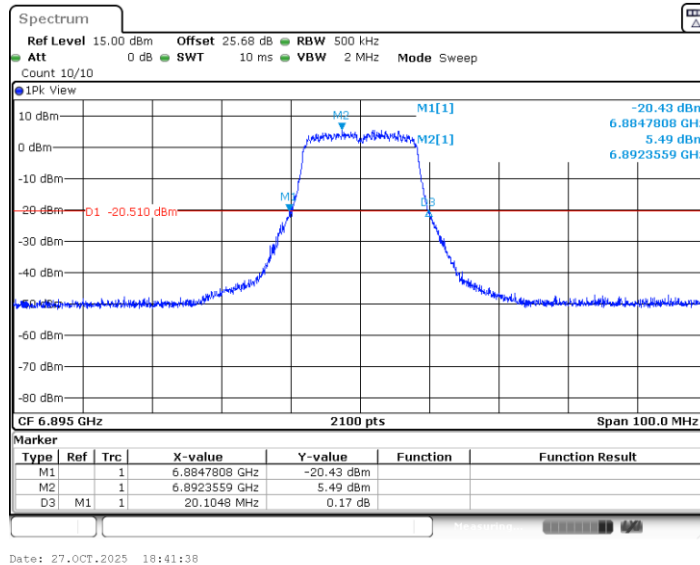




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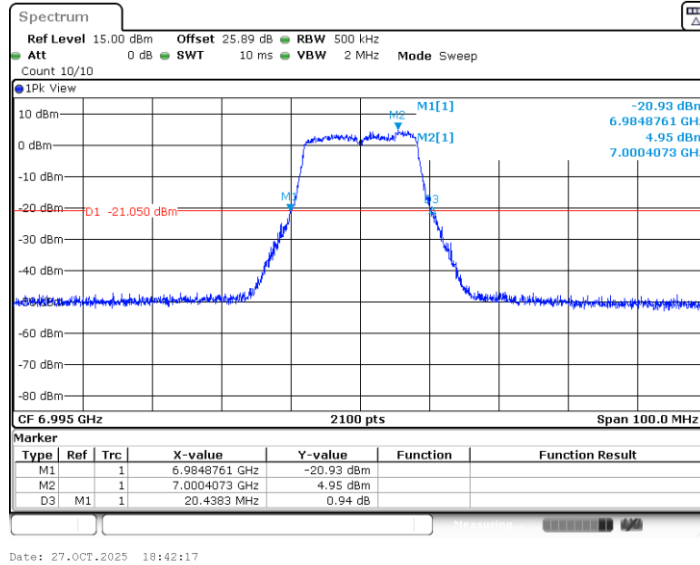


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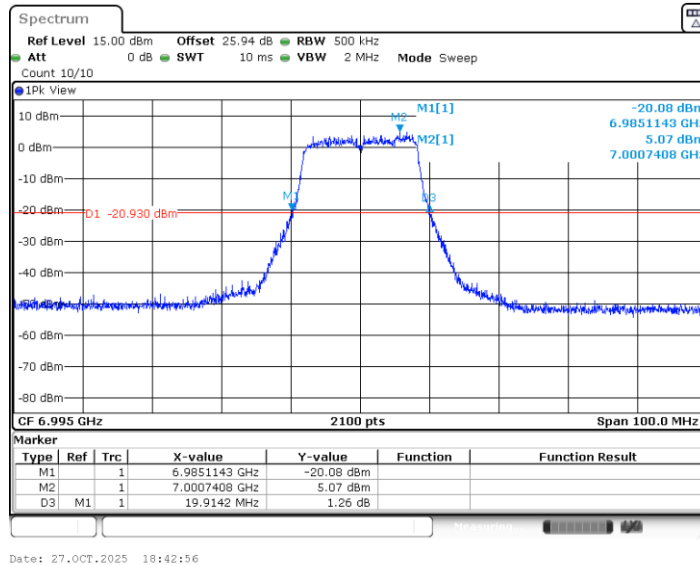




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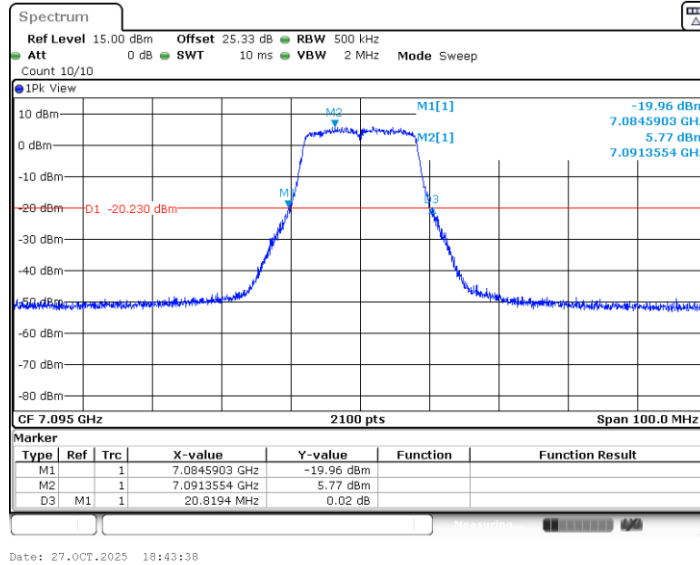


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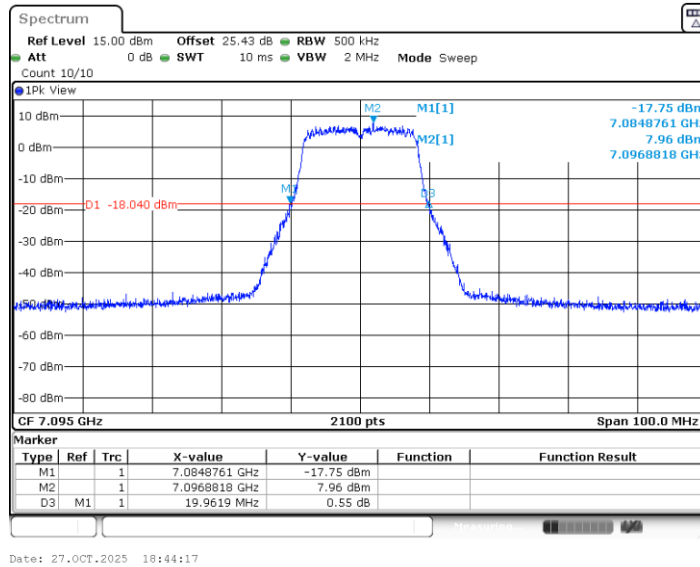


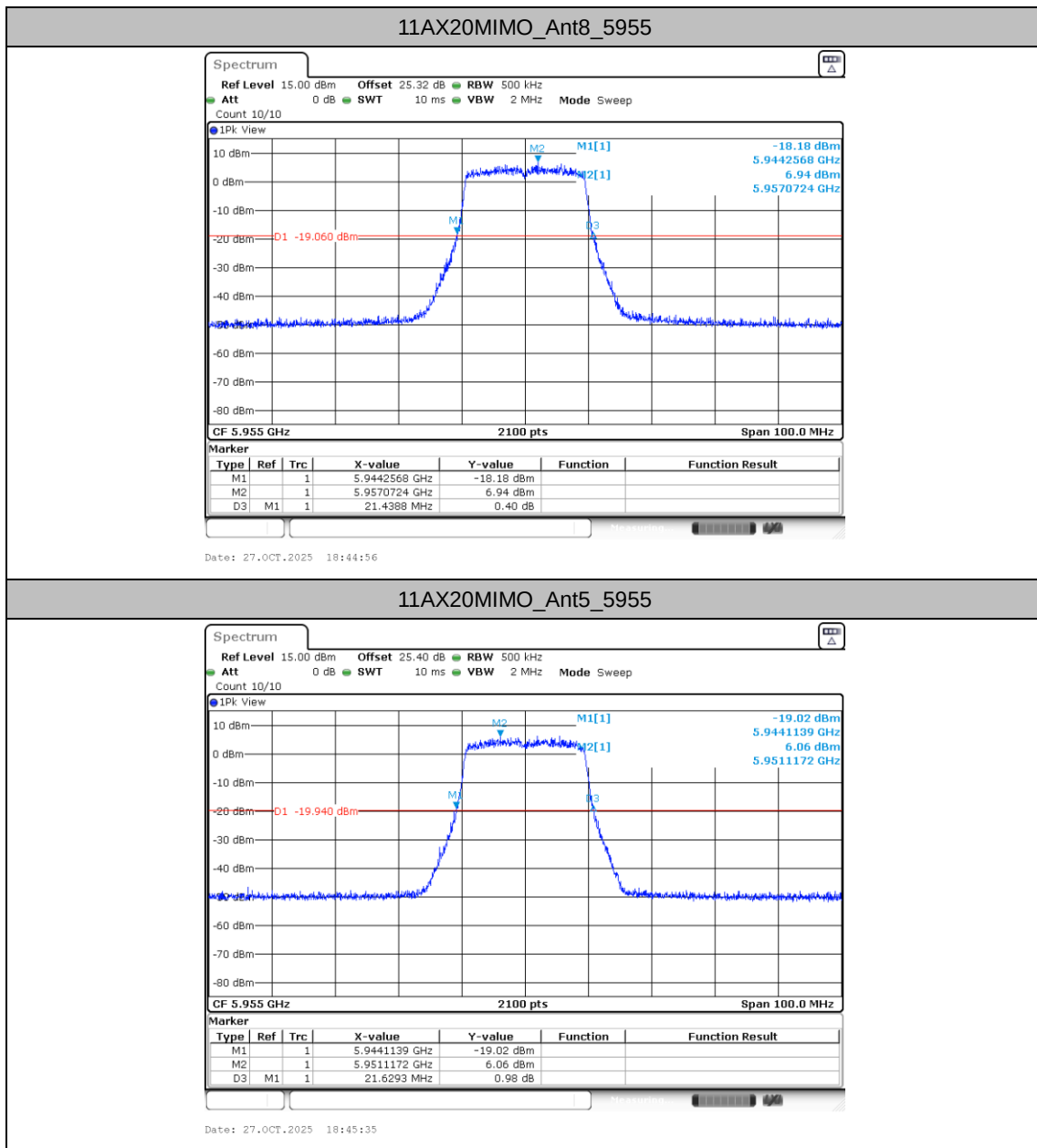


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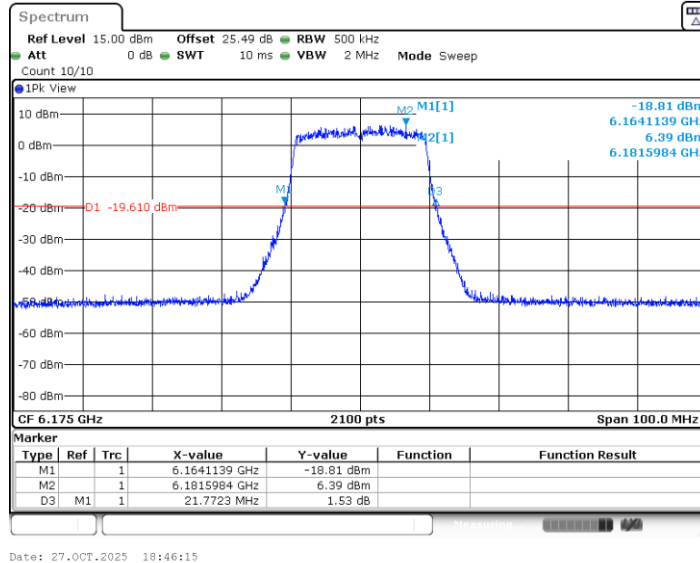
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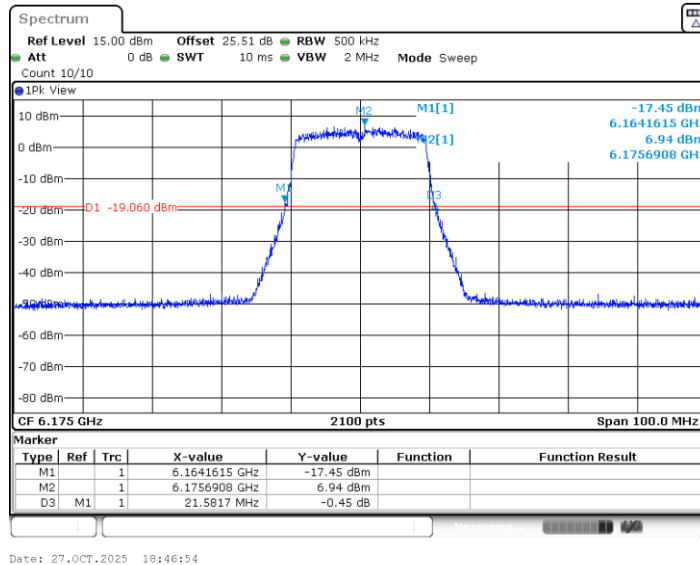




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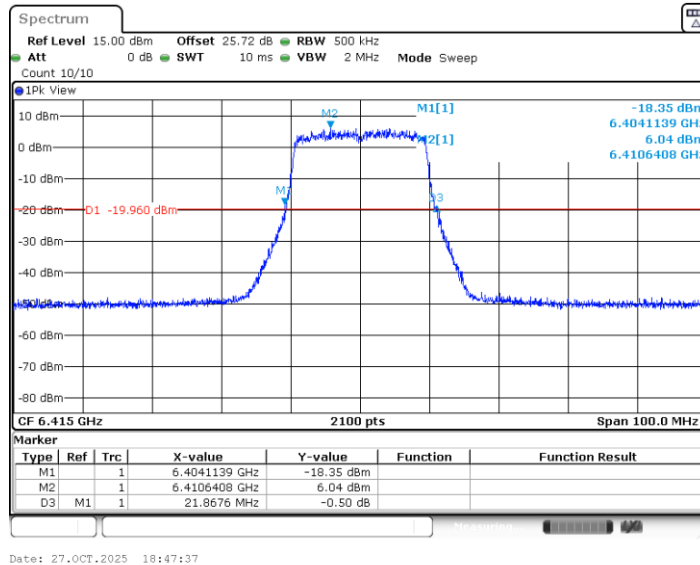


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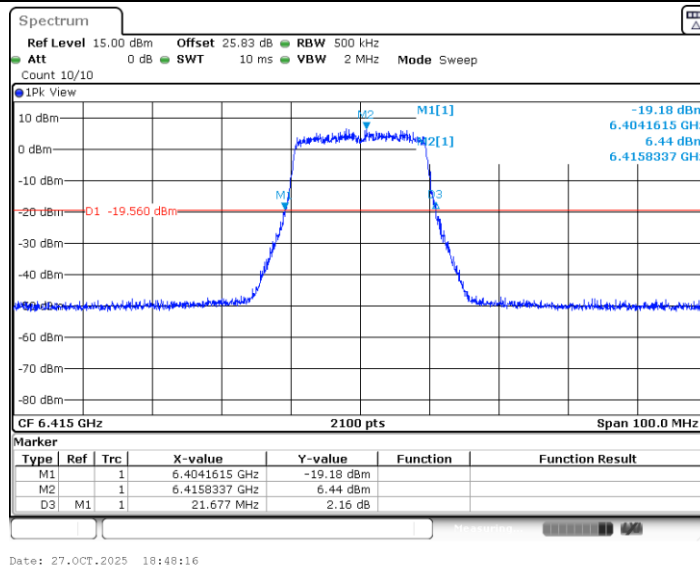




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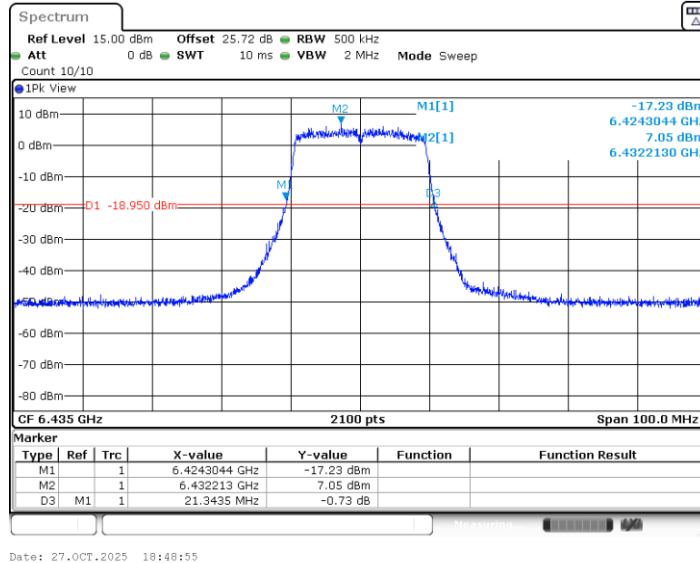


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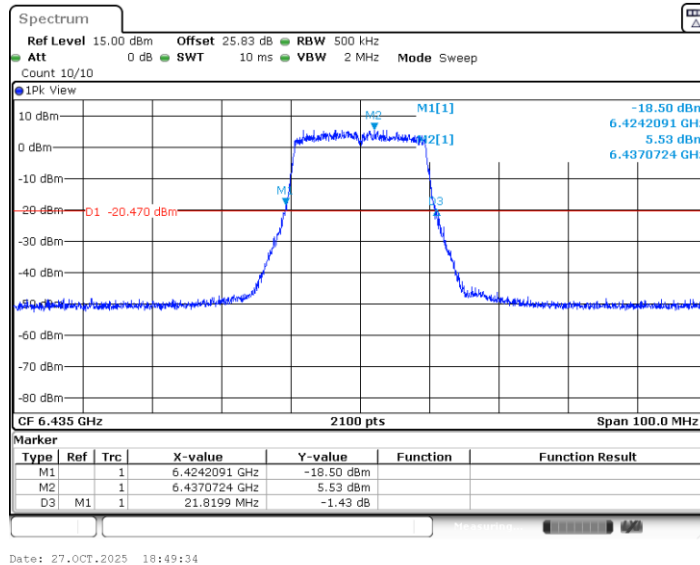




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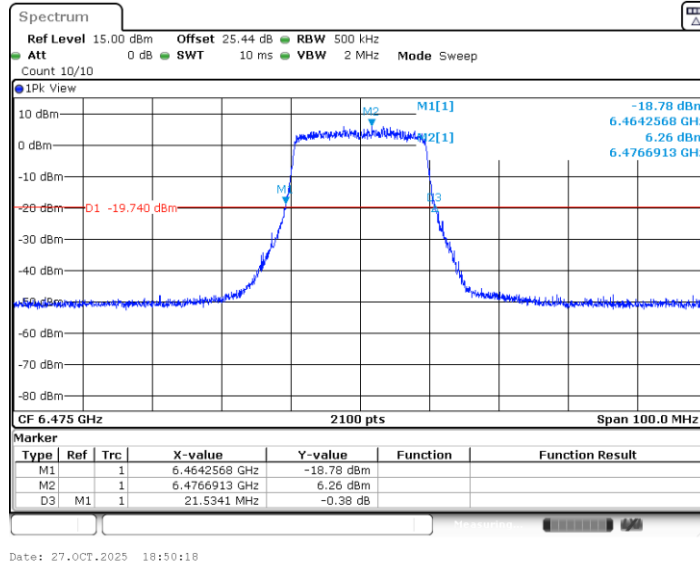


11AX20MIMO_Ant5_6435

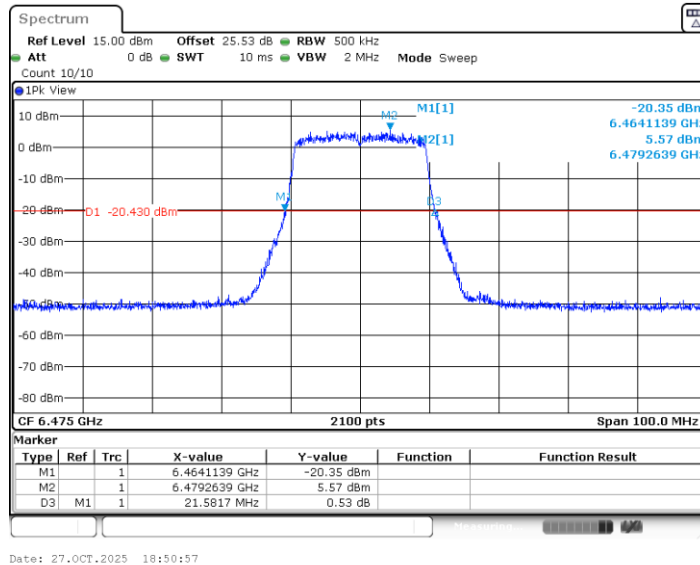




11AX20MIMO_Ant8_6475

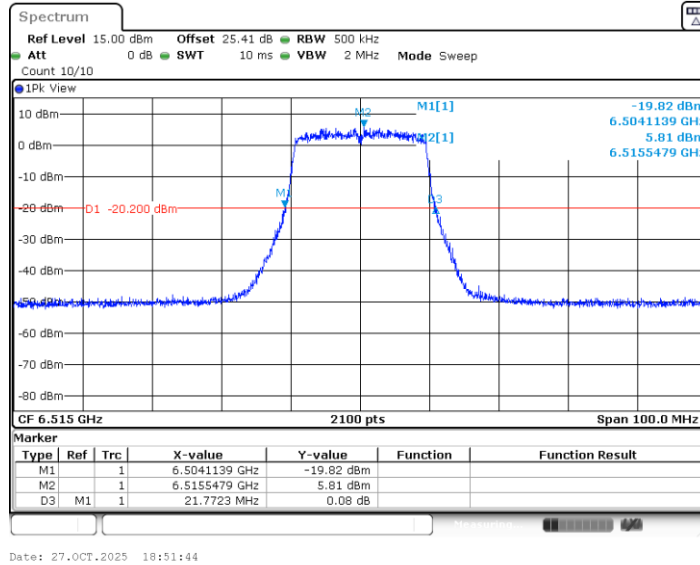


11AX20MIMO_Ant5_6475

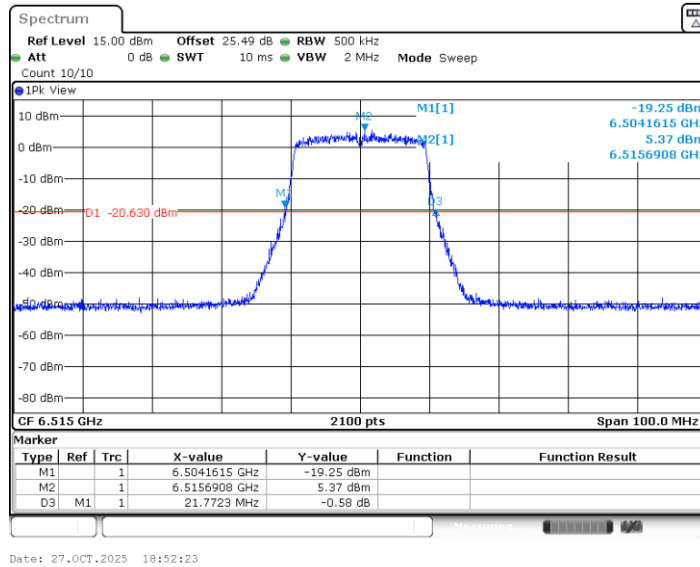




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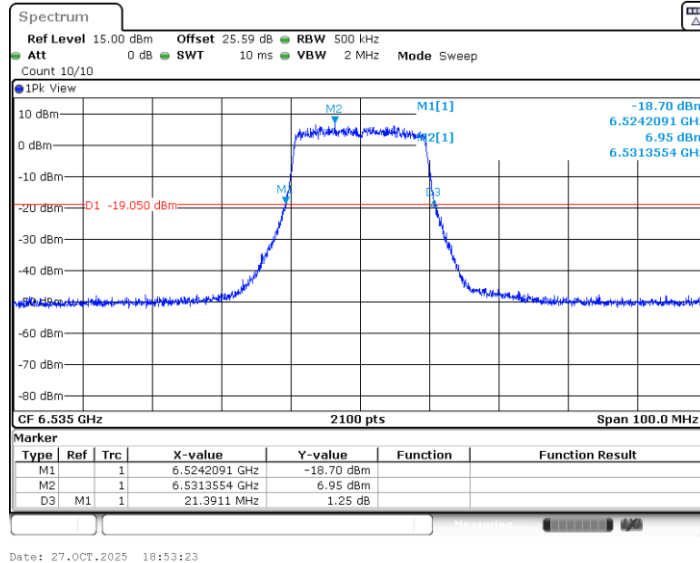


11AX20MIMO_Ant5_6515

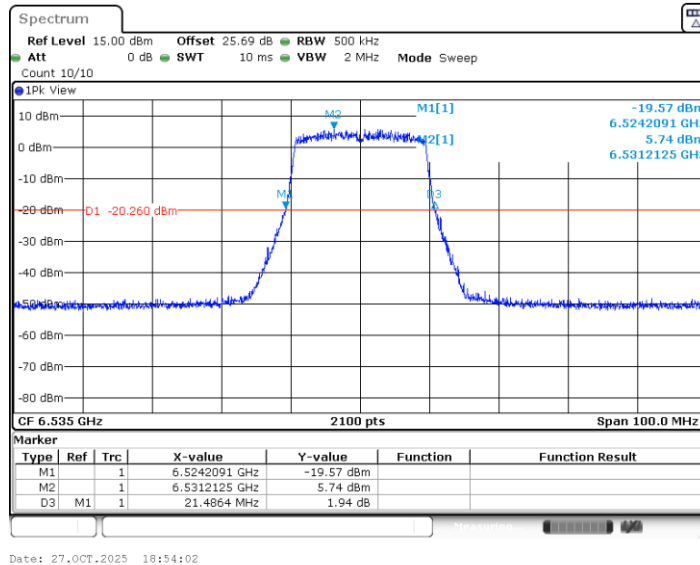


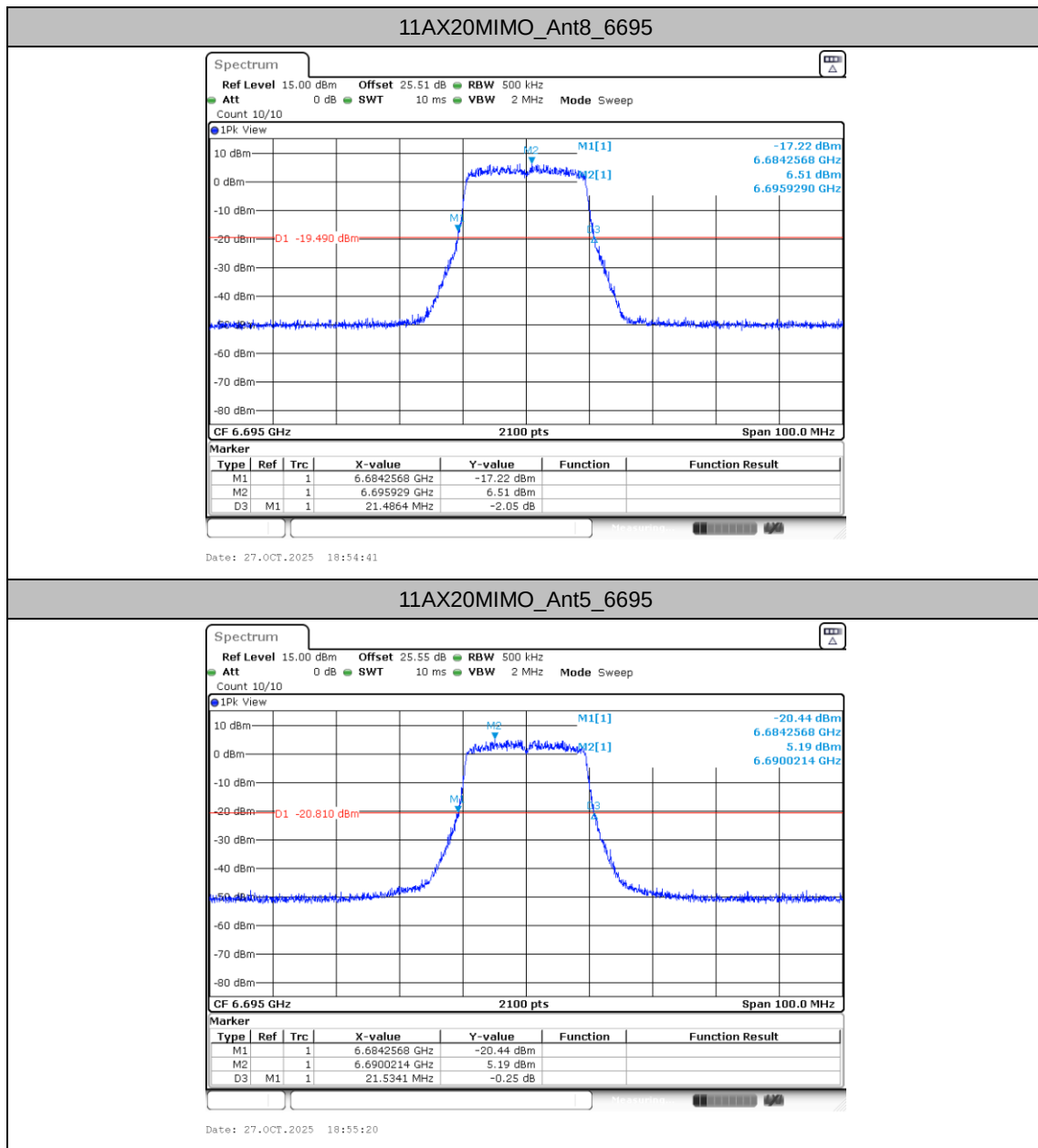


11AX20MIMO_Ant8_6535



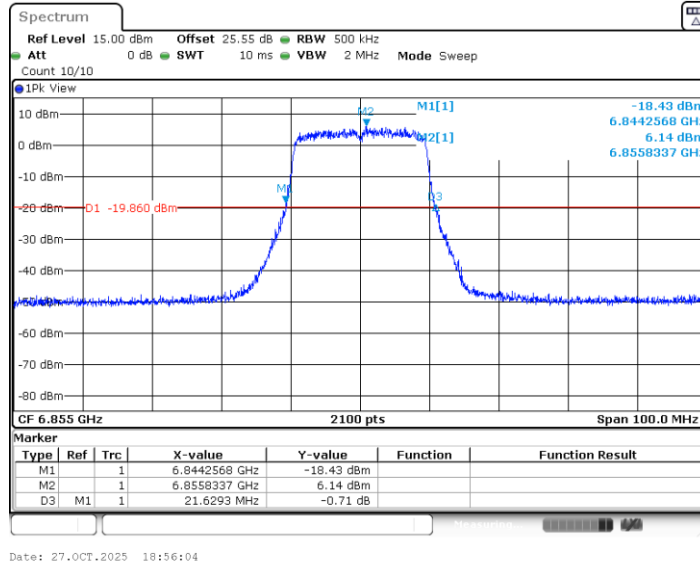
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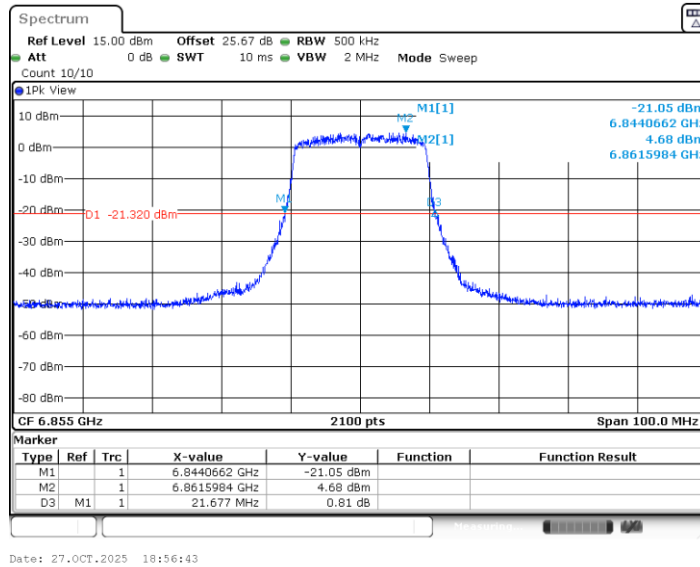




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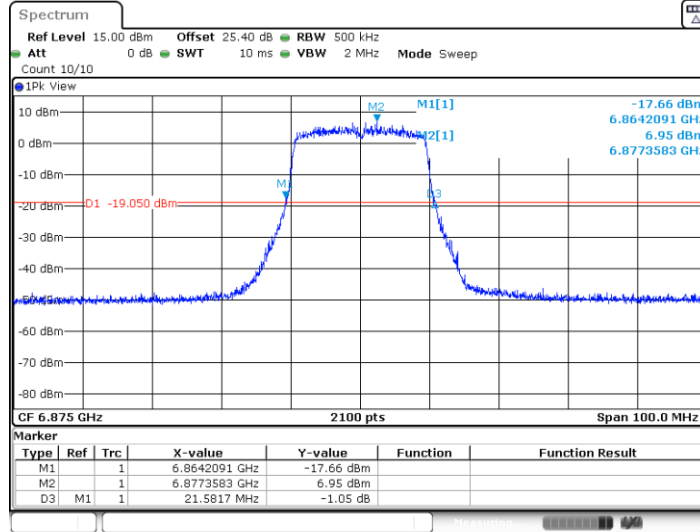


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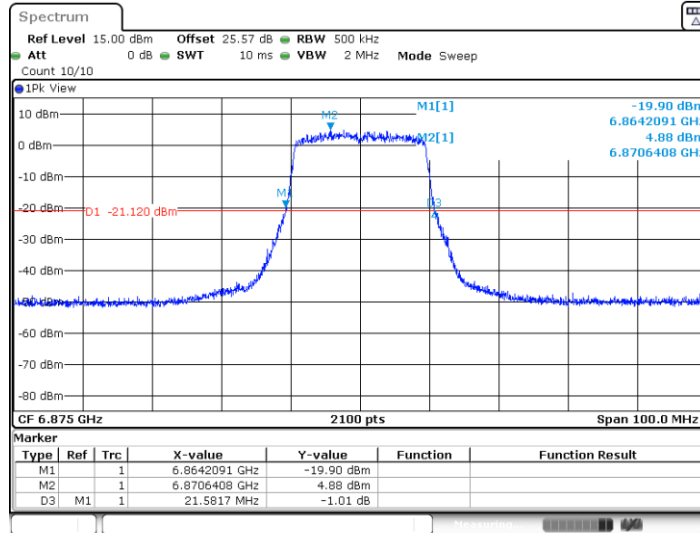




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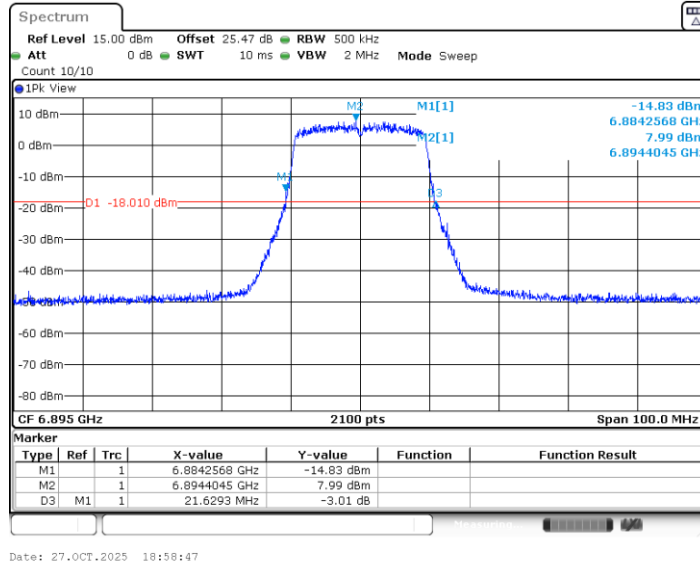


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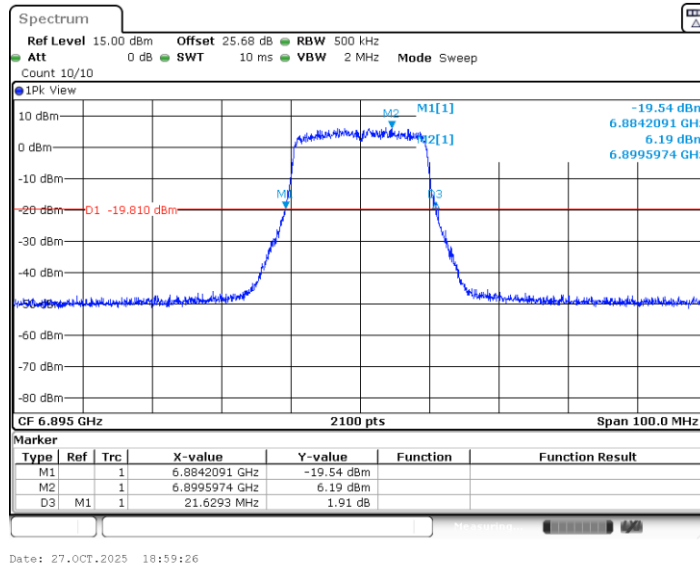




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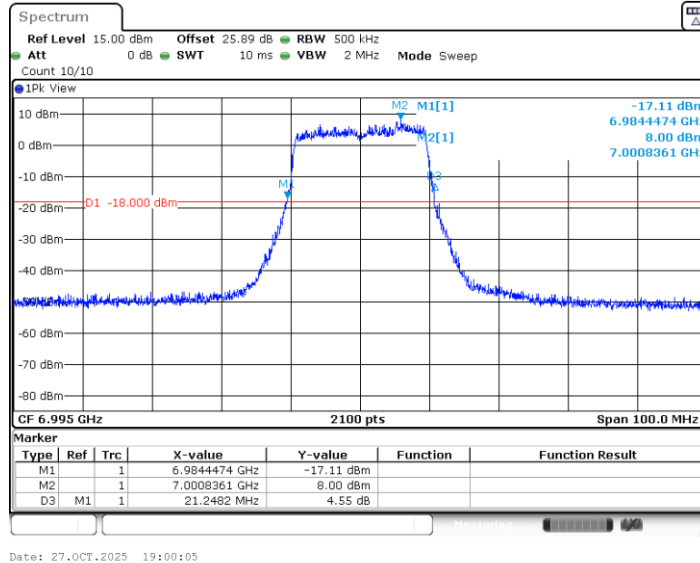


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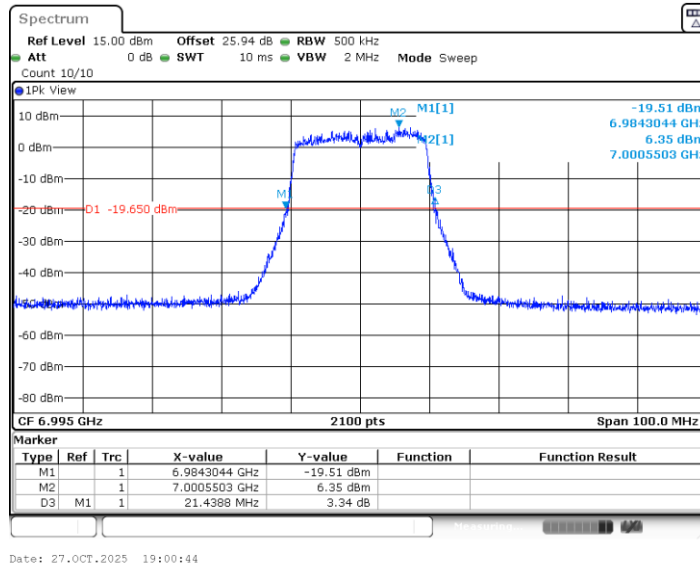




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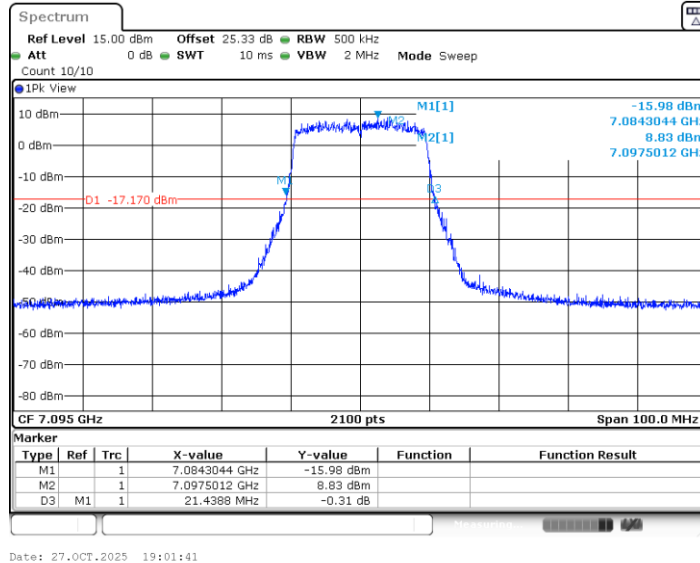


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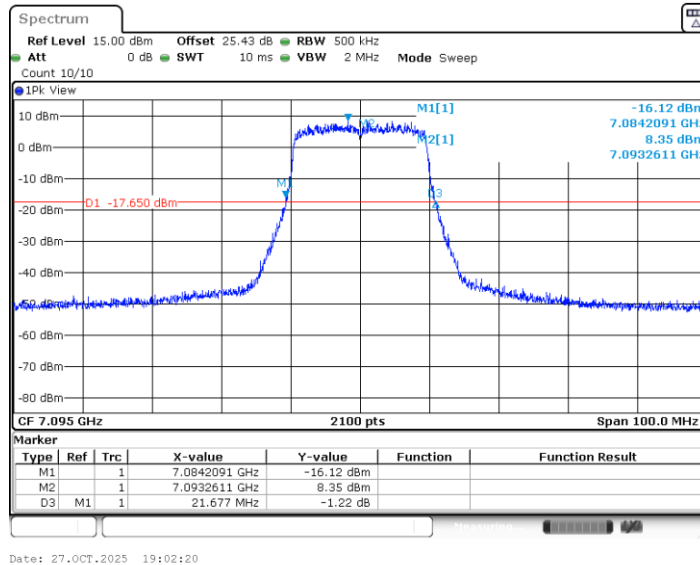




11AX20MIMO_Ant8_7095



11AX20MIMO_Ant5_7095





In-Band Emissions

Test Result

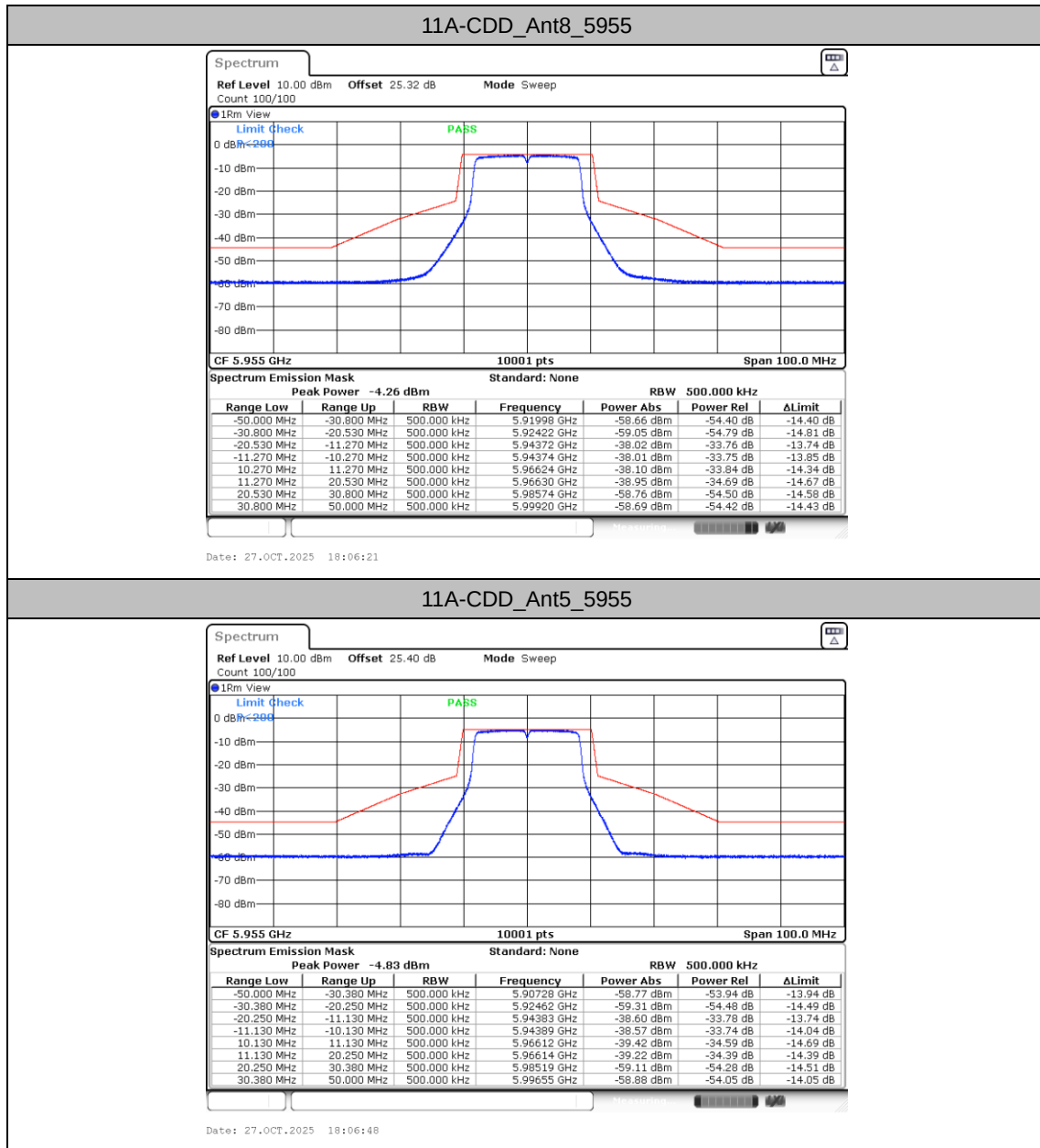
TestMode	Antenna	Freq(MHz)	Result	Limit	Verdict
11A-CDD	Ant8	5955	See test graph	See test graph	PASS
	Ant5	5955	See test graph	See test graph	PASS
	Ant8	6175	See test graph	See test graph	PASS
	Ant5	6175	See test graph	See test graph	PASS
	Ant8	6415	See test graph	See test graph	PASS
	Ant5	6415	See test graph	See test graph	PASS
	Ant8	6435	See test graph	See test graph	PASS
	Ant5	6435	See test graph	See test graph	PASS
	Ant8	6475	See test graph	See test graph	PASS
	Ant5	6475	See test graph	See test graph	PASS
	Ant8	6515	See test graph	See test graph	PASS
	Ant5	6515	See test graph	See test graph	PASS
	Ant8	6535	See test graph	See test graph	PASS
	Ant5	6535	See test graph	See test graph	PASS
	Ant8	6695	See test graph	See test graph	PASS
	Ant5	6695	See test graph	See test graph	PASS
	Ant8	6855	See test graph	See test graph	PASS
	Ant5	6855	See test graph	See test graph	PASS
	Ant8	6875	See test graph	See test graph	PASS
	Ant5	6875	See test graph	See test graph	PASS
	Ant8	6895	See test graph	See test graph	PASS
	Ant5	6895	See test graph	See test graph	PASS
	Ant8	6995	See test graph	See test graph	PASS
	Ant5	6995	See test graph	See test graph	PASS
	Ant8	7095	See test graph	See test graph	PASS
	Ant5	7095	See test graph	See test graph	PASS
11AX20MIMO	Ant8	5955	See test graph	See test graph	PASS
	Ant5	5955	See test graph	See test graph	PASS
	Ant8	6175	See test graph	See test graph	PASS
	Ant5	6175	See test graph	See test graph	PASS
	Ant8	6415	See test graph	See test graph	PASS
	Ant5	6415	See test graph	See test graph	PASS
	Ant8	6435	See test graph	See test graph	PASS
	Ant5	6435	See test graph	See test graph	PASS



	Ant8	6475	See test graph	See test graph	PASS
	Ant5	6475	See test graph	See test graph	PASS
	Ant8	6515	See test graph	See test graph	PASS
	Ant5	6515	See test graph	See test graph	PASS
	Ant8	6535	See test graph	See test graph	PASS
	Ant5	6535	See test graph	See test graph	PASS
	Ant8	6695	See test graph	See test graph	PASS
	Ant5	6695	See test graph	See test graph	PASS
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	Ant5	6895	See test graph	See test graph	PASS
	Ant8	6995	See test graph	See test graph	PASS
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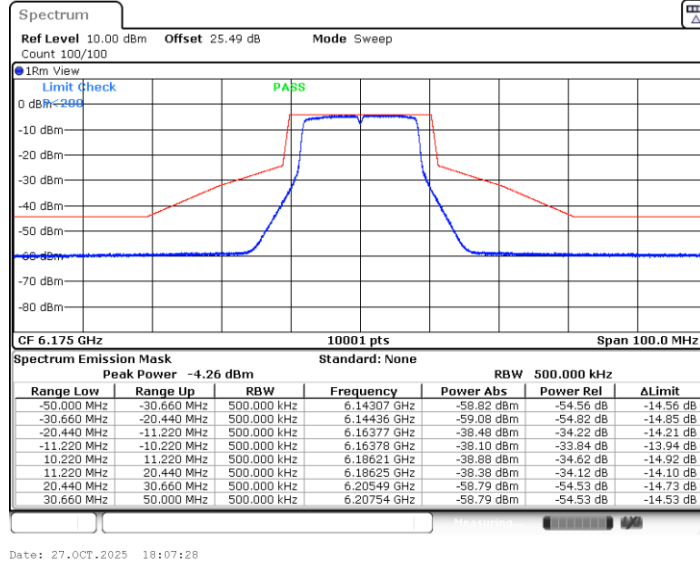


Test Graphs

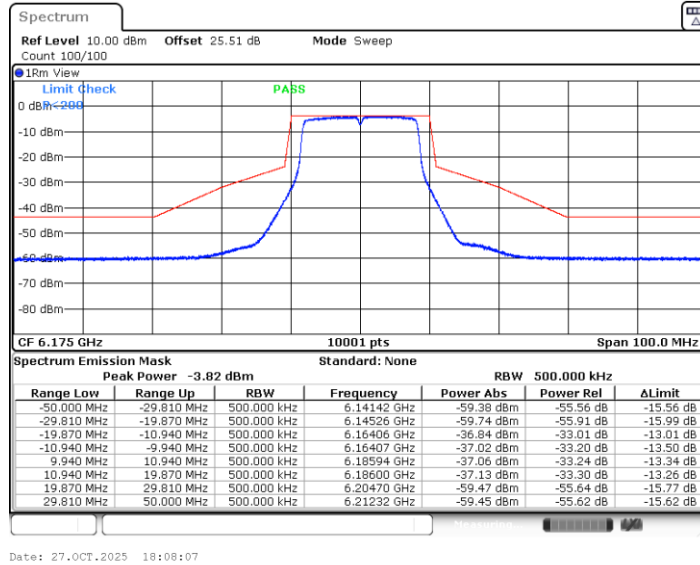




11A-CDD_Ant8_6175

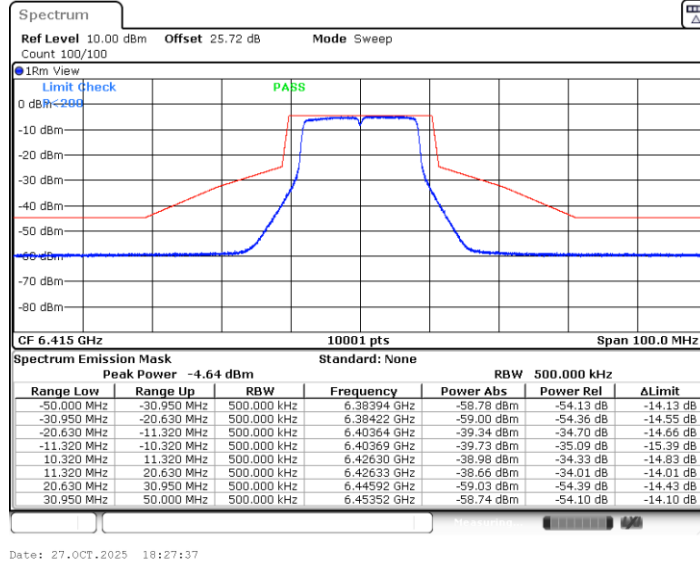


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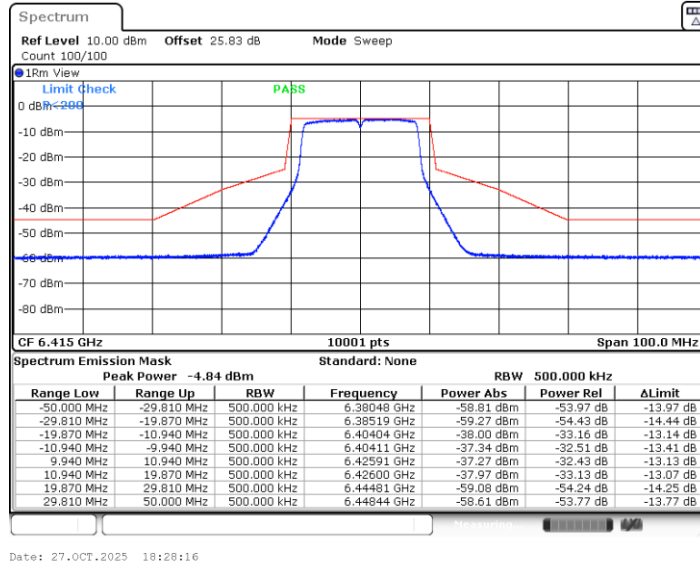




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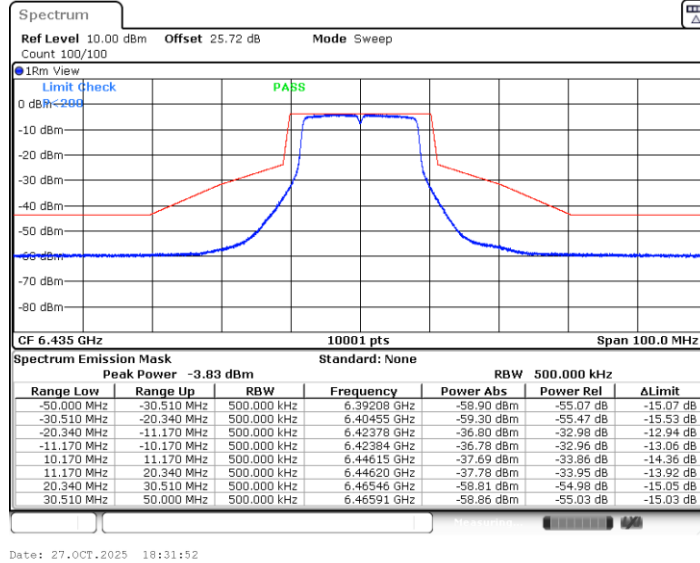


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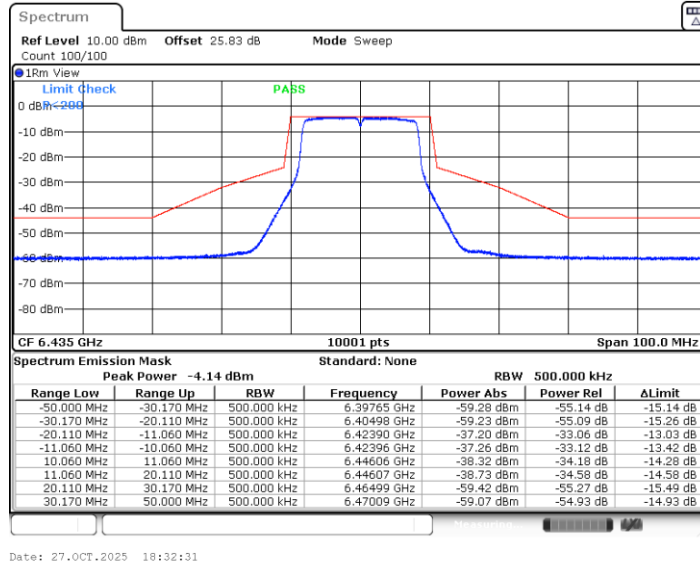




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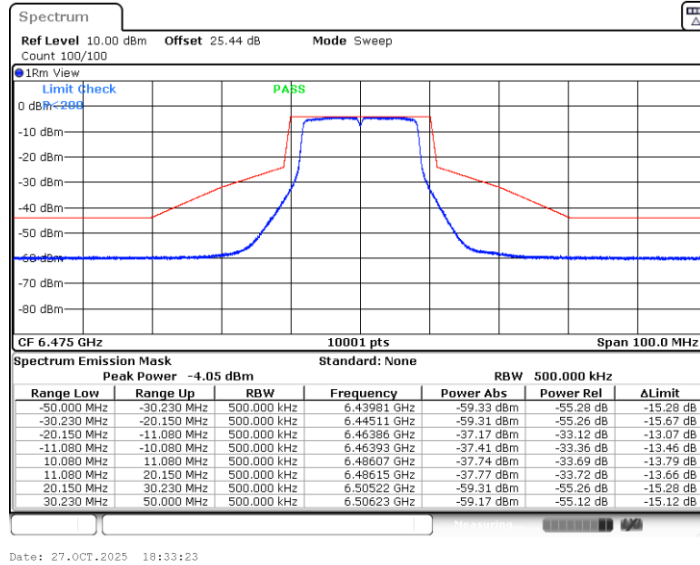


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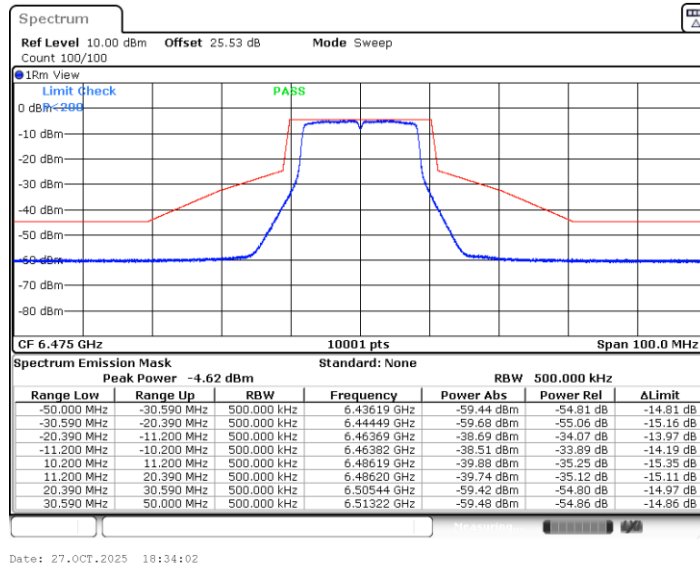




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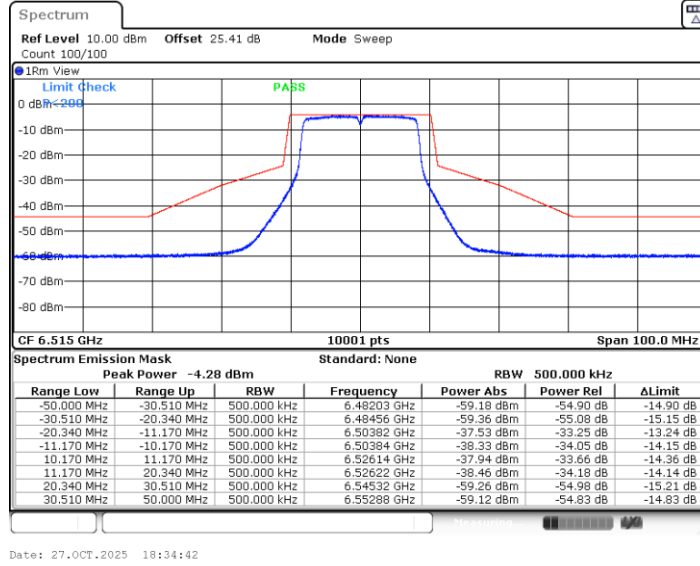


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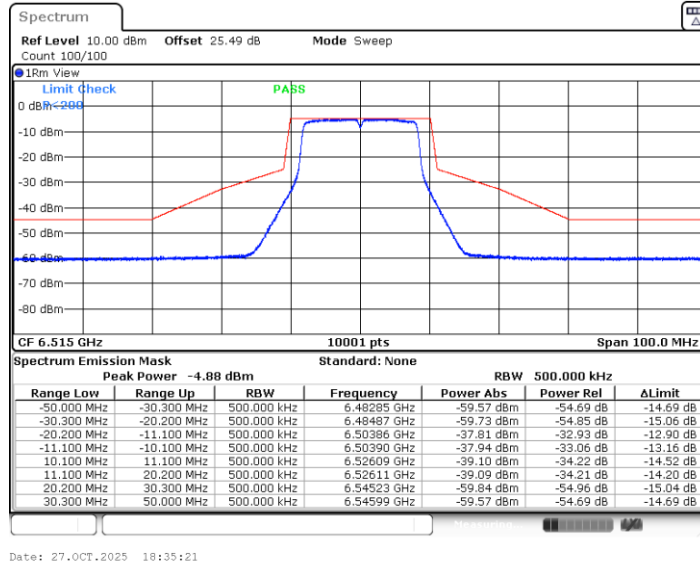




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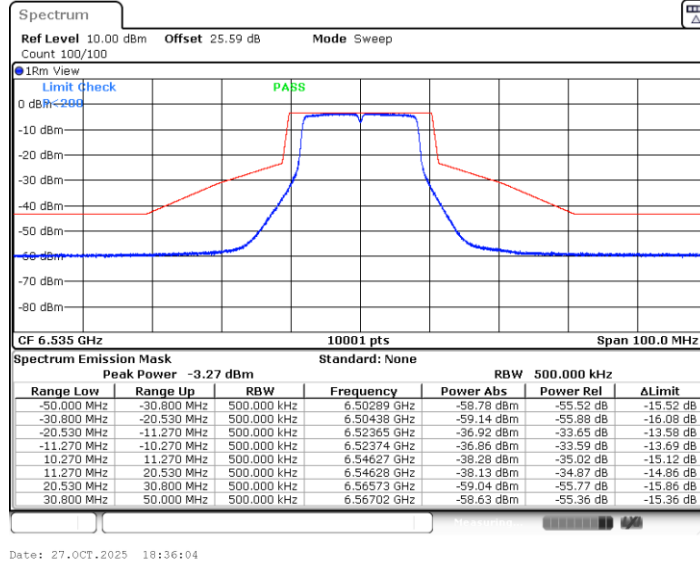


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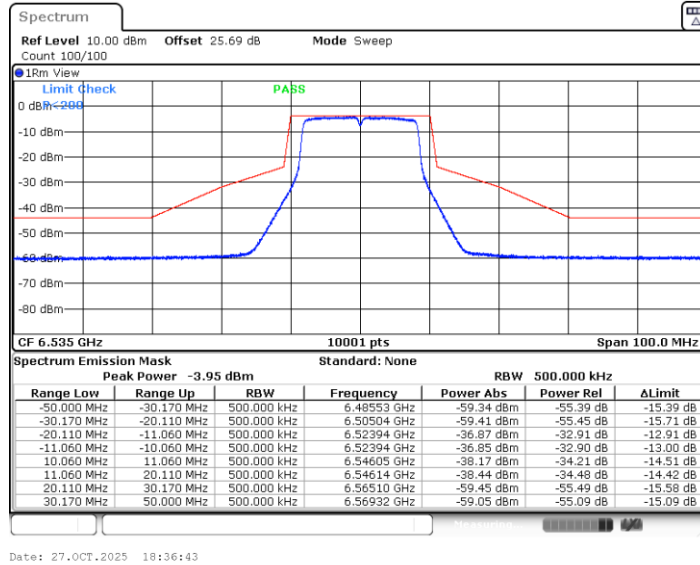




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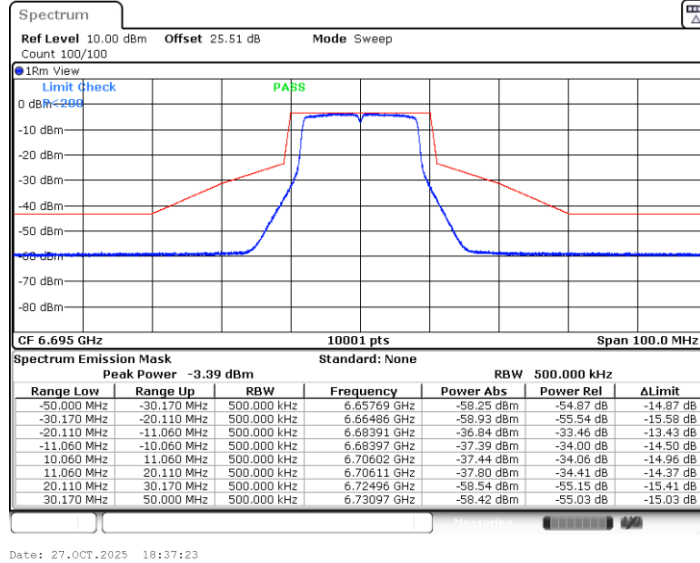


11A-CDD_Ant5_6535





11A-CDD_Ant8_6695



11A-CDD_Ant5_6695

