TEST REPORT

Product Name : Wireless Access Point
Model Number : RG-RAP72Pro-OD
FCC ID : 2AX5J-RAP72PROOD

Prepared for	:	Ruijie Networks Co., Ltd.
Address	:	Building 19,Juyuanzhou Industrial Park, No.618 Jinshan Road, CangshanDistrict,Fuzhou,Fujian, China
Prepared by	:	EMTEK (SHENZHEN) CO., LTD.
Address	:	Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China Tel: (0755) 26954280 Fax: (0755) 26954282
Report Number	:	ENS2407220409W00102R
Date(s) of Tests	:	August 6, 2024 to September 25, 2024
Date of Issue	:	September 30, 2024

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Modified Information

Version	Report No.	Revision Date	Summary
Ver.1.0	ENS2407220409W00102R	/	Original Report

1 TEST RESULT CERTIFICATION

Applicant	:	Ruijie Networks Co., Ltd.
Address :		Building 19,Juyuanzhou Industrial Park, No.618 Jinshan Road, CangshanDistrict,Fuzhou,Fujian, China
Manufacturer	:	Ruijie Networks Co., Ltd.
Address :		Building 19,Juyuanzhou Industrial Park, No.618 Jinshan Road, CangshanDistrict,Fuzhou,Fujian, China
EUT	:	Wireless Access Point
Model Name	:	RG-RAP72Pro-OD
Trademark	:	Ruijie, Ruijie | Reyee, Reyee, Reyee

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC 47 CFR Part 2, Subpart J FCC 47 CFR Part 15, Subpart E	**PASS**

The above equipment was tested by EMTEK (SHENZHEN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the above table standards requirement.
The test results of this report relate only to the tested sample identified in this report.

Date of Test	:	August 6, 2024 to September 25, 2024
Prepared by	:	Una Yu/Editor
Reviewer	:	Joe Xia/Supervisor
Approved & Authorized Signer :		Lisa Wang/Manager

EMTEK (SHENZHEN) CO., LTD. TESTING

2 EUT TECHNICAL DESCRIPTION

Product Name:	Wireless Access Point
Model Number:	RG-RAP72Pro-OD
WIFI Type:	UNII-1: 5150MHz-5250MHz Band UNII-2A: 5250MHz-5350MHz Band UNII-2C: 5470MHz-5725MHz Band UNII-3: 5725MHz-5850MHz Band
WLAN Supported:	IEEE 802.11a IEEE 802.11n(20MHz channel bandwidth) IEEE 802.11n(40MHz channel bandwidth) IEEE 802.11ac(20MHz channel bandwidth) IEEE 802.11ac(40MHz channel bandwidth) IEEE 802.11ac(80MHz channel bandwidth) IEEE 802.11ac(160MHz channel bandwidth) IEEE 802.11ax(20MHz channel bandwidth) IEEE 802.11ax(40MHz channel bandwidth) IEEE 802.11ax(80MHz channel bandwidth) IEEE 802.11ax(160MHz channel bandwidth) IEEE 802.11be(20MHz channel bandwidth) IEEE 802.11be(40MHz channel bandwidth) IEEE 802.11be(80MHz channel bandwidth) IEEE 802.11be(160MHz channel bandwidth)
Frequency Range:	5150MHz-5250MHz Band: 5180-5240MHz for 802.11a 5180-5240MHz for 802.11n(20) 5190-5230MHz for 802.11n(40) 5180-5240MHz for 802.11ac(20) 5190-5230MHz for 802.11ac(40) 5210MHz for 802.11ac(80) 5180-5240MHz for 802.11ax(20) 5190-5230MHz for 802.11ax(40) 5210MHz for 802.11ax(80) 5180-5240MHz for 802.11be(20) 5190-5230MHz for 802.11be(40) 5210MHz for 802.11be(80)
	5250MHz-5350MHz Band: 5260-5320MHz for 802.11a 5260-5320MHz for 802.11n(20) 5270-5310MHz for 802.11n(40) 5260-5320MHz for 802.11ac(20) 5270-5310MHz for 802.11ac(40) 5290MHz for 802.11ac(80) 5250MHz for 802.11ac(160) 5260-5320MHz for 802.11ax(20) 5270-5310MHz for 802.11ax(40) 5290MHz for 802.11ax(80) 5250MHz for 802.11ax(160) 5260-5320MHz for 802.11be(20)

	5270-5310MHz for 802.11be(40) 5290MHz for 802.11be(80) 5250MHz for 802.11be(160)
	5470MHz-5725MHz Band: 5500-5700MHz for 802.11a 5500-5700MHz for 802.11n(20) 5510-5670MHz for 802.11n(40) 5500-5700MHz for 802.11ac(20) 5510-5670MHz for 802.11ac(40) 5530-5610MHz for 802.11ac(80) 5570MHz for 802.11ac(160) 5500-5700MHz for 802.11ax(20) 5510-5670MHz for 802.11ax(40) 5530-5610MHz for 802.11ax(80) 5570MHz for 802.11ax(160) 5500-5700MHz for 802.11be(20) 5510-5670MHz for 802.11be(40) 5530-5610MHz for 802.11be(80) 5570MHz for 802.11be(160)
	5725MHz-5850MHz Band: 5745-5825MHz for 802.11a 5745-5825MHz for 802.11n(20) 5755-5795MHz for 802.11n(40) 5745-5825MHz for 802.11ac(20) 5755-5795MHz for 802.11ac(40) 5775MHz for 802.11ac(80) 5745-5825MHz for 802.11ax(20) 5755-5795MHz for 802.11ax(40) 5775MHz for 802.11ax(80) 5745-5825MHz for 802.11be(20) 5755-5795MHz for 802.11be(40) 5775MHz for 802.11be(80)
Modulation:	OFDM/OFDMA
Channel Puncturing:	80 MHz punctured by 20 MHz 160 MHz punctured by 20 MHz 160 MHz punctured by 40 MHz
TPC Function:	Support
Beamforming:	Not Support
DFS Function:	Master
Antenna Type:	Integrated Antenna
Antenna Gain:	Ant1: 5.30dBi, Ant2: 6.28dBi, Ant3: 2.57dBi (Note: The antenna information is provided by the customers, which will have a certain impact on the test results.)
Smart System:	MIMO

Power Supply:	802.3 at PoE (Note: PoE DC 50V and DC 57V are tested, and find the PoE DC 50V is the worst, so only the worst data of PoE DC 50V is shown in the report.)
Temperature Range:	-30℃~65℃

Note: for more details, please refer to the user's manual of the EUT.

3 SUMMARY OF TEST RESULT

FCC Part Clause	Test Parameter	Verdict	Remark
15.407 (a) 15.407 (e)	99% , 6dB and 26dB Bandwidth	PASS	
15.407 (a)	Maximum Conducted Output Power	PASS	
15.407 (a)	Peak Power Spectral Density	PASS	
15.407 (b)	Radiated Spurious Emission	PASS	
15.407 (b)(6) 15.207	Power Line Conducted Emission	PASS	
15.407(a) 15.203	Antenna Application	PASS	
NOTE1: The results of this report do not take into account the uncertainty. NOTE2: According to FCC OET KDB 789033 D2 General UNII Test Procedures New Rules v02r01, In addition, the radiated test is also performed to ensure the emissions emanating from the device cabinet also comply with the applicable limits.			

RELATED SUBMITTAL(S) / GRANT(S):

This submittal(s) (test report) is filing to comply with the above table standards requirement.

4 TEST METHODOLOGY

4.1 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to its specifications, the EUT must comply with the requirements of the following standards:
FCC 47 CFR Part 2, Subpart J
FCC 47 CFR Part 15, Subpart E
FCC KDB 789033 D2 General UNII Test Procedures New Rules v02r01

4.2 MEASUREMENT EQUIPMENT USED

For Conducted Emission Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
EMI Test Receiver	Rohde & Schwarz	ESCI	101384	2024/5/11	1Year
AMN	Rohde & Schwarz	ENV216	101161	2024/5/10	1Year

For Spurious Emissions Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Pre-Amplifier	Bonn	BLMA 011001N	2213967A	2023/10/23	1Year
EMI Test Receiver	Rohde & Schwarz	ESR7	102551	2023/10/23	1Year
Bilog Antenna	Schwarzbeck	VULB9163	9163142	2024/7/8	2Year
Horn antenna	Schwarzbeck	BBHA9120D	9120D-1198	2023/6/2	2Year
Pre-Amplifier	Bonn	BLMA 0118-5G	2213967B-01	2023/10/23	1Year
Spectrum Analyzer	Rohde & Schwarz	FSV3044	101290	2023/10/23	1Year
Horn antenna	Schwarzbeck	BBHA9170	9170-399	2023/5/12	2Year
Pre-Amplifier	Lunar EM	LNA18G26-40	J1012131010001	2024/5/11	1Year
Pre-Amplifier	Lunar EM	LNA26G40-40	J1013131028001	2024/5/11	1Year
Loop Antenna	Schwarzbeck	FMZB1519	1519-012	2023/5/12	2Year
Wideband Radio Communication Tester	R&S	CMW500	171168	2023/9/14	1Year

For Other Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Wideband Radio Communication Tester	R&S	CMW500	171168	2023/9/14 2024/9/13	1Year
Frequency Extender	R&S	CMW-Z800A	100430	2023/9/14 2024/9/13	1Year
Spectrum Analyzer	R&S	FSV3044	101289	2023/9/14 2024/9/13	1Year
Analog Signal Generator	R&S	SMB100A	183237	2023/9/16 2024/9/15	1Year
Vector Signal Generator	R&S	SMM100A	101808	2023/9/16 2024/9/15	1Year
RF Control Unit(Power Meter)	Tonscend	JS0806-2	22C8060567	2023/9/14 2024/9/13	1Year
Temperature&Humidity Chamber	ESPEC	EL-02KA	12107166	2024/5/10	1 Year
Temperature&Humidity Chamber	ESPEC	EL-02KA	12107166	2024/5/10	1 Year

4.3 DESCRIPTION OF TEST MODES

The EUT has been tested under its typical operating condition.
The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.
Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.
Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Wifi 5G with 5150-5250MHz

Frequency and Channels list for 802.11a/n(20)/ac(20)/ax(20)/be(20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	-	-
40	5200	48	5240	-	-

Frequency and Channels list for 802.11n (40)/ac(40)/ax(40)/be(40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	-	-	-	-
46	5230	-	-	-	-

Frequency and Channel list for 802.11ac(80)/ax(80)/be(80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	-	-	-	-

Test Frequency and Channels for 802.11a/n(20)/ac(20)/ax(20)/be(20):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	40	5200	48	5240

Test Frequency and channels for 802.11n (40)/ac(40)/ax(40)/be(40):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	-	-	46	5230

Test Frequency and channels for 802.11ac(80)/ax(80)/be(80):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	-	-	-	-

WIFI 5G with 5250-5350MHz

Frequency and Channels list for 802.11a/n(20)/ac(20)/ax(20)/be(20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300	-	-
56	5280	64	5320	-	-

Frequency and Channels list for 802.11n (40)/ac(40)/ax(40)/be(40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	-	-	-	-
62	5310	-	-	-	-

Frequency and Channels list for 802.11ac(80)/ax(80)/be(80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
58	5290	-	-	-	-

Frequency and Channels list for 802.11ax(160)/be(160):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
50	5250	-	-	-	-

Test Frequency and Channels for 802.11a/n(20)/ac(20)/ax(20)/be(20):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	56	5280	64	5320

Test Frequency and channels for 802.11n (40)/ac(40)/ax(40)/be(40):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	-	-	62	5310

Test Frequency and channels for 802.11ac(80)/ax(80)/be(80):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
58	5290	-	-	-	-

Test Frequency and channels for 802.11ac(160)/ax(160)/be(160):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
50	5250	-	-	-	-

WIFI 5G with 5470-5725MHz

Frequency and Channels list for 802.11a/n(20)/ac(20)/ax(20)/be(20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	116	5580	132	5660
104	5520	120	5600	136	5680
108	5540	124	5620	140	5700
112	5560	128	5640	-	-

Frequency and Channels list for 802.11n(40)/ac(40)/ax(40)/be(40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
102	5510	118	5590	134	5670
110	5550	126	5630	-	-

Frequency and Channels list for 802.11ac(80)/ax(80)/be(80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	122	5610	-	-

Frequency and channels for 802.11ac(160)/ax(160)/be(160):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
114	5570	-	-	-	-

Test Frequency and Channels for 802.11a/n(20)/ac(20)/ax(20)/be(20):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	116	5580	140	5700

Test Frequency and channels for 802.11n (40)/ac(40)/ax(40)/be(40):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
102	5510	-	-	134	5670

Test Frequency and channels for 802.11ac(80)/ax(80)/be(80):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	122	5610	-	-

Test Frequency and channels for 802.11ac(160)/ax(160)/be(160):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
114	5570	-	-	-	-

Wifi 5G with 5725MHz-5850MHz

Frequency and Channels list for 802.11a/n(20)/802.11ac(20)/ax(20)/be(20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785	165	5825
153	5765	161	5805	-	-

Frequency and Channels list for 802.11n(40)/ac(40)/ax(40)/be(40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	-	-	-	-
159	5795	-	-	-	-

Frequency and Channels list for 802.11ac(80)/ax(80)/be(80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775	-	-	-	-

Test Frequency and Channels for 802.11a/n(20)/ac(20)/ax(20)/be(20):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785	165	5825

Test Frequency and channels for 802.11n(40)/ac(40)/ax(40)/be(40):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	-	-	159	5795

Test Frequency and channels for 802.11ac(80)/ax(80)/be(80):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775	-	-	-	-

Multi-antenna correlation:

☑	Transmit Signals are Correlated
	Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}$] dBi
☐	All Transmit Signals are Completely Uncorrelated
	Directional gain = 10 log[$(10^{G1/10} + 10^{G2/10} + \ldots + 10^{GN/10})$)/NANT] dBi

Ant1: 5.30dBi, Ant2: 6.28dBi, Ant3: 2.57dBi

Directional gain = 9.62dBi

5 FACILITIES AND ACCREDITATIONS

5.1 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged wave guide, horn. Spectrum analyzers with preselectors and quasi-peak detectors are used to perform radiated measurements.
Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.
Calibrated wide band preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.
All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods”.

5.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description
Name of Firm : EMTEK (SHENZHEN) CO., LTD.
Site Location : Building 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China

6 TEST SYSTEM UNCERTAINTY

The following measurement uncertainty levels have been estimated for tests performed on the apparatus:

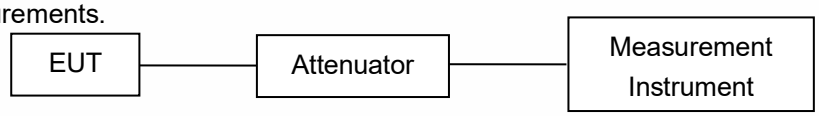
Parameter	Uncertainty
Radio Frequency	±1x10^-5
Maximum Peak Output Power Test	±1.0dB
Conducted Emissions Test	±2.0dB
Radiated Emission Test	±2.0dB
Power Density	±2.0dB
Occupied Bandwidth Test	±1.0dB
Band Edge Test	±3dB
All emission, radiated	±3dB
Antenna Port Emission	±3dB
Temperature	±0.5℃
Humidity	±3%

Measurement Uncertainty for a level of Confidence of 95%.

7 SETUP OF EQUIPMENT UNDER TEST

7.1 RADIO FREQUENCY TEST SETUP

The WLAN component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



7.2 RADIO FREQUENCY TEST SETUP

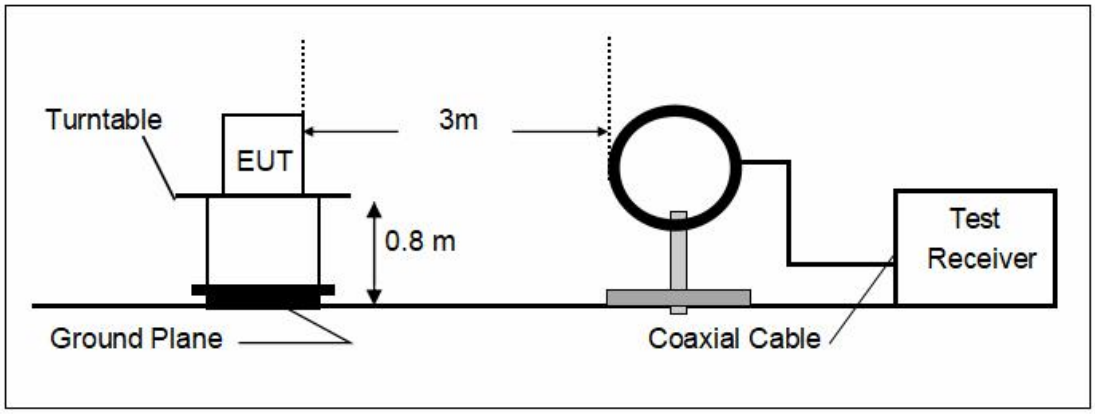
The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

Below 30MHz：
The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The Antenna should be positioned with its plane vertical at the specified distance from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. The center of the loop shall be 1 m above the ground. For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT.

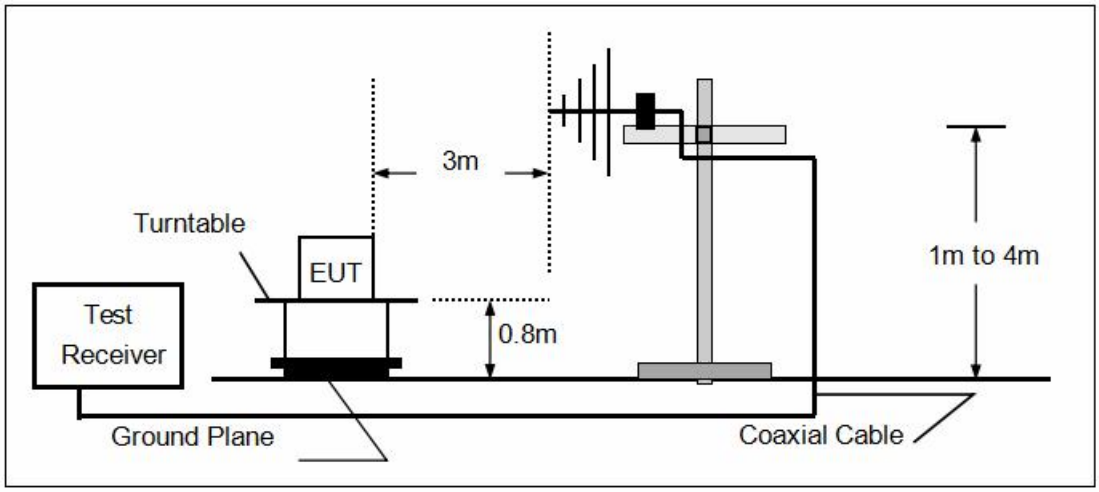
Above 30MHz：
The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

Above 1GHz：
(Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.)
The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

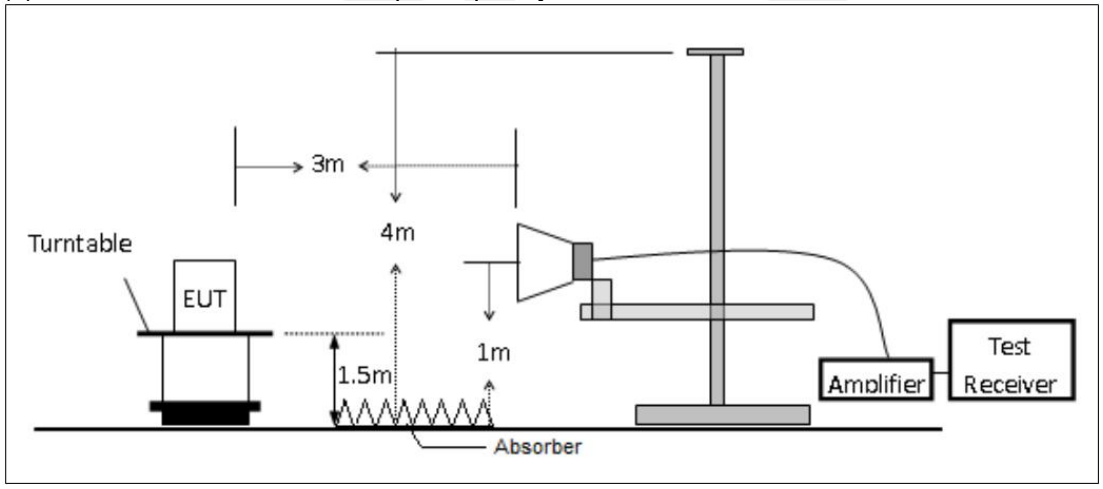
(a) Radiated Emission Test Set-Up, Frequency Below 30MHz



(b) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(c) Radiated Emission Test Set-Up, Frequency above 1000MHz

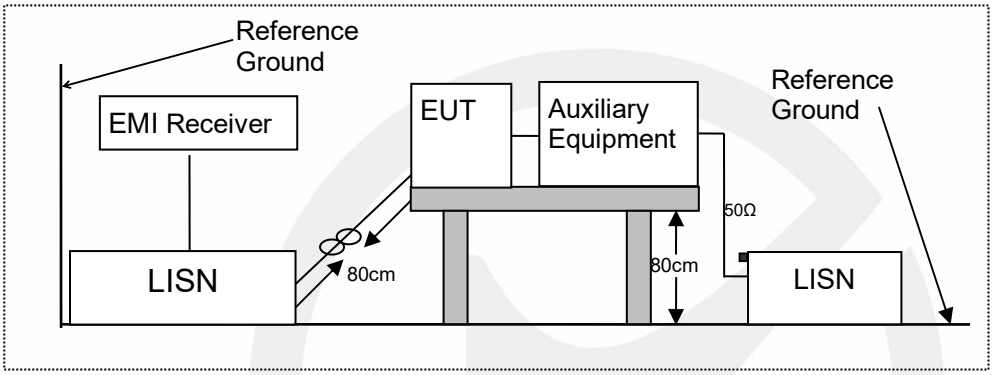


7.3 CONDUCTED EMISSION TEST SETUP

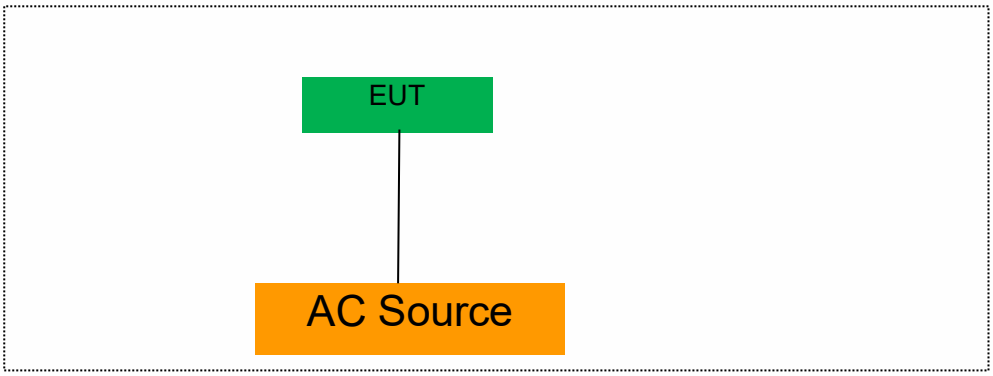
The mains cable of the EUT (maybe per AC/DC Adapter) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.1 m.

According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.



7.4 BLOCK DIAGRAM CONFIGURATION OF TEST SYSTEM



7.5 SUPPORT EQUIPMENT

POE : Model: EWPAM1NPOE
Input: 100-240V~50/60Hz
Output:44V~57V, 0.74A
CE, FCC

Notes:

1.All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2.Grounding was established in accordance with the manufacturer’s requirements and conditions for the intended use.

8 TEST REQUIREMENTS

8.1 BANDWIDTH MEASUREMENT

8.1.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNII Band I
According to FCC Part 15.407(a)(2) for UNII Band II-A and UNII Band II-C
According to FCC Part 15.407(a)(3) for UNII Band III
According to FCC Part 15.407(e) for UNII Band III
According to 789033 D02 Section II(C)
According to 789033 D02 Section II(D)

8.1.2 Conformance Limit

(1) For the band 5.15-5.25 GHz.
(iv) 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 provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 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 B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, 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, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(e) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

8.1.3 Test Configuration

Test according to clause 6.1 radio frequency test setup.

8.1.4 Test Procedure

According to 789033 D02 v02r01 section C&D, the following is the measurement procedure.

1. Emission Bandwidth (EBW)
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.

Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. Minimum Emission Bandwidth for the band 5.725-5.85 GHz
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

D. 99 Percent Occupied Bandwidth
The 99-percent occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section II.G.3.d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the EBW to 789033 D02 v01r02 General UNII Test Procedures New Rules v01 define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section II.E. However, the EBW must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW.
4. Set VBW ≥ 3 × RBW.
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

8.1.5 Test Results

Temperature :	25℃	ATM Pressure::	1011 mbar
Humidity :	45 %	Test Engineer:	GJ

Occupied channel bandwidth (99%)

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.576	5171.7237	5188.2996	---	---
	Ant2	5180	16.574	5171.7238	5188.2977	---	---
	Ant3	5180	16.578	5171.7202	5188.2979	---	---
	Ant1	5200	16.56	5191.7355	5208.2957	---	---
	Ant2	5200	16.579	5191.7001	5208.2791	---	---
	Ant3	5200	16.573	5191.7248	5208.2977	---	---
	Ant1	5240	16.483	5231.7501	5248.2329	---	---
	Ant2	5240	16.472	5231.7684	5248.2400	---	---
	Ant3	5240	16.474	5231.7688	5248.2428	---	---
	Ant1	5260	16.506	5251.7356	5268.2420	---	---
	Ant2	5260	16.484	5251.7312	5268.2151	---	---
	Ant3	5260	16.49	5251.7490	5268.2395	---	---
	Ant1	5280	16.493	5271.7452	5288.2384	---	---
	Ant2	5280	16.502	5271.7464	5288.2484	---	---
	Ant3	5280	16.509	5271.7397	5288.2484	---	---
	Ant1	5320	16.601	5311.6932	5328.2942	---	---
	Ant2	5320	16.561	5311.7185	5328.2794	---	---
	Ant3	5320	16.578	5311.7010	5328.2786	---	---
	Ant1	5500	16.583	5491.6840	5508.2671	---	---
	Ant2	5500	16.6	5491.6721	5508.2718	---	---
	Ant3	5500	16.57	5491.6893	5508.2594	---	---
	Ant1	5580	16.495	5571.7499	5588.2445	---	---
	Ant2	5580	16.485	5571.7505	5588.2356	---	---
	Ant3	5580	16.502	5571.7484	5588.2508	---	---
	Ant1	5700	16.567	5691.7058	5708.2724	---	---
	Ant2	5700	16.597	5691.6961	5708.2929	---	---
	Ant3	5700	16.578	5691.6989	5708.2768	---	---
	Ant1	5745	16.541	5736.7257	5753.2665	---	---
	Ant2	5745	16.547	5736.7390	5753.2863	---	---
	Ant3	5745	16.531	5736.7245	5753.2555	---	---
	Ant1	5785	16.565	5776.6999	5793.2646	---	---
	Ant2	5785	16.586	5776.6911	5793.2768	---	---
	Ant3	5785	16.562	5776.6909	5793.2526	---	---
	Ant1	5825	16.576	5816.7090	5833.2845	---	---
	Ant2	5825	16.595	5816.6729	5833.2677	---	---
	Ant3	5825	16.571	5816.7021	5833.2732	---	---
11N20MIMO	Ant1	5180	17.558	5171.2184	5188.7765	---	---
	Ant2	5180	17.51	5171.2644	5188.7747	---	---
	Ant3	5180	17.53	5171.2386	5188.7684	---	---
	Ant1	5200	17.568	5191.2168	5208.7850	---	---
	Ant2	5200	17.492	5191.2581	5208.7498	---	---
	Ant3	5200	17.529	5191.2196	5208.7481	---	---
	Ant1	5240	17.47	5231.2589	5248.7290	---	---
	Ant2	5240	17.42	5231.2754	5248.6950	---	---
	Ant3	5240	17.437	5231.2658	5248.7026	---	---
	Ant1	5260	17.464	5251.2443	5268.7080	---	---
	Ant2	5260	17.425	5251.2623	5268.6875	---	---
	Ant3	5260	17.419	5251.2557	5268.6748	---	---
	Ant1	5280	17.488	5271.2354	5288.7229	---	---
	Ant2	5280	17.402	5271.2868	5288.6888	---	---
	Ant3	5280	17.416	5271.2728	5288.6889	---	---
	Ant1	5320	17.575	5311.1960	5328.7711	---	---
	Ant2	5320	17.523	5311.2261	5328.7494	---	---
	Ant3	5320	17.528	5311.2144	5328.7424	---	---
	Ant1	5500	17.569	5491.2090	5508.7778	---	---
	Ant2	5500	17.513	5491.2213	5508.7342	---	---

	Ant3	5500	17.513	5491.2224	5508.7354	---	---
	Ant1	5580	17.467	5571.2494	5588.7160	---	---
	Ant2	5580	17.409	5571.2856	5588.6948	---	---
	Ant3	5580	17.419	5571.2797	5588.6985	---	---
	Ant1	5700	17.56	5691.2233	5708.7837	---	---
	Ant2	5700	17.473	5691.2746	5708.7476	---	---
	Ant3	5700	17.513	5691.2564	5708.7691	---	---
	Ant1	5745	17.57	5736.2390	5753.8086	---	---
	Ant2	5745	17.469	5736.2794	5753.7480	---	---
	Ant3	5745	17.489	5736.2516	5753.7402	---	---
	Ant1	5785	17.606	5776.1878	5793.7938	---	---
	Ant2	5785	17.505	5776.2230	5793.7276	---	---
	Ant3	5785	17.513	5776.2188	5793.7318	---	---
	Ant1	5825	17.574	5816.1949	5833.7691	---	---
	Ant2	5825	17.492	5816.2135	5833.7060	---	---
	Ant3	5825	17.509	5816.2261	5833.7354	---	---
11N40MIMO	Ant1	5190	35.703	5172.1597	5207.8625	---	---
	Ant2	5190	35.582	5172.2100	5207.7918	---	---
	Ant3	5190	35.571	5172.2142	5207.7848	---	---
	Ant1	5230	35.575	5212.1978	5247.7724	---	---
	Ant2	5230	35.475	5212.2408	5247.7158	---	---
	Ant3	5230	35.465	5212.2739	5247.7391	---	---
	Ant1	5270	35.588	5252.1708	5287.7590	---	---
	Ant2	5270	35.529	5252.2361	5287.7652	---	---
	Ant3	5270	35.453	5252.2519	5287.7045	---	---
	Ant1	5310	35.717	5292.1244	5327.8412	---	---
	Ant2	5310	35.605	5292.2223	5327.8274	---	---
	Ant3	5310	35.587	5292.1711	5327.7584	---	---
	Ant1	5510	35.669	5492.1542	5527.8227	---	---
	Ant2	5510	35.679	5492.1329	5527.8123	---	---
	Ant3	5510	35.633	5492.1928	5527.8255	---	---
	Ant1	5550	35.533	5532.2352	5567.7683	---	---
	Ant2	5550	35.474	5532.2693	5567.7432	---	---
	Ant3	5550	35.469	5532.3045	5567.7735	---	---
	Ant1	5670	35.679	5652.1400	5687.8193	---	---
	Ant2	5670	35.572	5652.2081	5687.7798	---	---
	Ant3	5670	35.584	5652.2043	5687.7880	---	---
	Ant1	5755	35.642	5737.1665	5772.8089	---	---
	Ant2	5755	35.538	5737.2434	5772.7813	---	---
	Ant3	5755	35.482	5737.2375	5772.7195	---	---
	Ant1	5795	35.741	5777.0954	5812.8360	---	---
	Ant2	5795	35.585	5777.1676	5812.7528	---	---
	Ant3	5795	35.591	5777.1726	5812.7631	---	---
11AC20MIMO	Ant1	5180	17.591	5171.1872	5188.7783	---	---
	Ant2	5180	17.51	5171.2246	5188.7347	---	---
	Ant3	5180	17.545	5171.1953	5188.7405	---	---
	Ant1	5200	17.575	5191.1909	5208.7662	---	---
	Ant2	5200	17.528	5191.2080	5208.7359	---	---
	Ant3	5200	17.572	5191.1830	5208.7547	---	---
	Ant1	5240	17.481	5231.2359	5248.7170	---	---
	Ant2	5240	17.425	5231.2631	5248.6881	---	---
	Ant3	5240	17.424	5231.2609	5248.6854	---	---
	Ant1	5260	17.506	5251.2054	5268.7116	---	---
	Ant2	5260	17.41	5251.2495	5268.6592	---	---
	Ant3	5260	17.439	5251.2372	5268.6765	---	---
	Ant1	5280	17.479	5271.2455	5288.7245	---	---
	Ant2	5280	17.412	5271.2690	5288.6811	---	---
	Ant3	5280	17.449	5271.2473	5288.6959	---	---
	Ant1	5320	17.603	5311.1760	5328.7786	---	---
	Ant2	5320	17.516	5311.2226	5328.7390	---	---
	Ant3	5320	17.554	5311.1939	5328.7479	---	---
	Ant1	5500	17.573	5491.1718	5508.7448	---	---
	Ant2	5500	17.517	5491.1970	5508.7144	---	---
	Ant3	5500	17.534	5491.1875	5508.7211	---	---
	Ant1	5580	17.492	5571.2170	5588.7090	---	---
	Ant2	5580	17.423	5571.2571	5588.6801	---	---
	Ant3	5580	17.454	5571.2535	5588.7078	---	---
	Ant1	5700	17.571	5691.2206	5708.7912	---	---

	Ant2	5700	17.507	5691.2554	5708.7620	---	---
	Ant3	5700	17.552	5691.2298	5708.7818	---	---
	Ant1	5745	17.547	5736.2432	5753.7898	---	---
	Ant2	5745	17.487	5736.2636	5753.7502	---	---
	Ant3	5745	17.525	5736.2346	5753.7595	---	---
	Ant1	5785	17.579	5776.1975	5793.7761	---	---
	Ant2	5785	17.555	5776.1988	5793.7534	---	---
	Ant3	5785	17.55	5776.1965	5793.7462	---	---
	Ant1	5825	17.575	5816.1971	5833.7719	---	---
	Ant2	5825	17.518	5816.2106	5833.7282	---	---
	Ant3	5825	17.53	5816.2095	5833.7392	---	---
11AC40MIMO	Ant1	5190	35.668	5172.1708	5207.8384	---	---
	Ant2	5190	35.645	5172.1874	5207.8323	---	---
	Ant3	5190	35.612	5172.1812	5207.7934	---	---
	Ant1	5230	35.553	5212.1995	5247.7528	---	---
	Ant2	5230	35.526	5212.2193	5247.7451	---	---
	Ant3	5230	35.483	5212.2412	5247.7238	---	---
	Ant1	5270	35.589	5252.1612	5287.7504	---	---
	Ant2	5270	35.555	5252.2021	5287.7570	---	---
	Ant3	5270	35.495	5252.2053	5287.7005	---	---
	Ant1	5310	35.722	5292.1165	5327.8388	---	---
	Ant2	5310	35.628	5292.2044	5327.8326	---	---
	Ant3	5310	35.652	5292.1490	5327.8012	---	---
	Ant1	5510	35.705	5492.1363	5527.8412	---	---
	Ant2	5510	35.663	5492.1382	5527.8016	---	---
	Ant3	5510	35.686	5492.1509	5527.8368	---	---
	Ant1	5550	35.53	5532.2309	5567.7611	---	---
	Ant2	5550	35.496	5532.2631	5567.7593	---	---
	Ant3	5550	35.434	5532.3051	5567.7390	---	---
	Ant1	5670	35.694	5652.1359	5687.8304	---	---
	Ant2	5670	35.621	5652.1932	5687.8143	---	---
	Ant3	5670	35.636	5652.1740	5687.8102	---	---
	Ant1	5755	35.608	5737.1912	5772.7988	---	---
	Ant2	5755	35.581	5737.2334	5772.8143	---	---
	Ant3	5755	35.578	5737.1811	5772.7589	---	---
	Ant1	5795	35.702	5777.1302	5812.8318	---	---
	Ant2	5795	35.647	5777.1523	5812.7991	---	---
	Ant3	5795	35.644	5777.1472	5812.7907	---	---
11AC80MIMO	Ant1	5210	74.96	5172.5918	5247.5521	---	---
	Ant2	5210	74.869	5172.5832	5247.4522	---	---
	Ant3	5210	74.972	5172.5584	5247.5300	---	---
	Ant1	5290	74.989	5252.4016	5327.3909	---	---
	Ant2	5290	74.95	5252.5444	5327.4942	---	---
	Ant3	5290	75.004	5252.4497	5327.4533	---	---
	Ant1	5530	75.018	5492.5506	5567.5683	---	---
	Ant2	5530	75.097	5492.4947	5567.5916	---	---
	Ant3	5530	75.017	5492.5976	5567.6149	---	---
	Ant1	5610	74.623	5572.6335	5647.2568	---	---
	Ant2	5610	74.608	5572.7181	5647.3258	---	---
	Ant3	5610	74.498	5572.6809	5647.1788	---	---
	Ant1	5775	75.082	5737.4628	5812.5446	---	---
	Ant2	5775	74.822	5737.5671	5812.3888	---	---
	Ant3	5775	74.928	5737.4803	5812.4086	---	---
11AC160MIMO	Ant1	5250	154.783	5172.6191	5327.4025	---	---
	Ant2	5250	154.522	5172.7885	5327.3104	---	---
	Ant3	5250	154.347	5172.8784	5327.2257	---	---
	Ant1	5250_UNII-1	77.381	5172.6191	5250	---	---
	Ant2	5250_UNII-1	77.212	5172.7885	5250	---	---
	Ant3	5250_UNII-1	77.122	5172.8784	5250	---	---
	Ant1	5250_UNII-2A	77.403	5250	5327.4025	---	---
	Ant2	5250_UNII-2A	77.31	5250	5327.3104	---	---
	Ant3	5250_UNII-2A	77.226	5250	5327.2257	---	---
	Ant1	5570	154.851	5492.4487	5647.2993	---	---
	Ant2	5570	154.79	5492.6236	5647.4139	---	---
	Ant3	5570	154.736	5492.8317	5647.5674	---	---
11AX20MIMO	Ant1	5180	18.841	5170.5609	5189.4023	---	---
	Ant2	5180	18.823	5170.5807	5189.4040	---	---
	Ant3	5180	18.823	5170.5596	5189.3829	---	---

	Ant1	5200	18.828	5190.6102	5209.4386	---	---
	Ant2	5200	18.825	5190.6066	5209.4314	---	---
	Ant3	5200	18.828	5190.5869	5209.4146	---	---
	Ant1	5240	18.796	5230.6016	5249.3979	---	---
	Ant2	5240	18.776	5230.6211	5249.3968	---	---
	Ant3	5240	18.779	5230.6072	5249.3861	---	---
	Ant1	5260	18.777	5250.5870	5269.3638	---	---
	Ant2	5260	18.751	5250.6108	5269.3618	---	---
	Ant3	5260	18.768	5250.5913	5269.3594	---	---
	Ant1	5280	18.776	5270.5956	5289.3719	---	---
	Ant2	5280	18.769	5270.5982	5289.3670	---	---
	Ant3	5280	18.783	5270.5903	5289.3729	---	---
	Ant1	5320	18.861	5310.5535	5329.4147	---	---
	Ant2	5320	18.84	5310.5712	5329.4112	---	---
	Ant3	5320	18.843	5310.5663	5329.4091	---	---
	Ant1	5500	18.836	5490.5571	5509.3926	---	---
	Ant2	5500	18.795	5490.5809	5509.3763	---	---
	Ant3	5500	18.81	5490.5511	5509.3607	---	---
	Ant1	5580	18.774	5570.6062	5589.3802	---	---
	Ant2	5580	18.773	5570.5906	5589.3635	---	---
	Ant3	5580	18.791	5570.5670	5589.3581	---	---
	Ant1	5700	18.836	5690.5631	5709.3995	---	---
	Ant2	5700	18.837	5690.5504	5709.3877	---	---
	Ant3	5700	18.821	5690.5701	5709.3909	---	---
	Ant1	5745	18.827	5735.5621	5754.3886	---	---
	Ant2	5745	18.822	5735.5706	5754.3921	---	---
	Ant3	5745	18.794	5735.5717	5754.3657	---	---
	Ant1	5785	18.845	5775.5644	5794.4095	---	---
	Ant2	5785	18.851	5775.5562	5794.4075	---	---
	Ant3	5785	18.843	5775.5377	5794.3811	---	---
	Ant1	5825	18.836	5815.5599	5834.3954	---	---
	Ant2	5825	18.804	5815.5660	5834.3696	---	---
	Ant3	5825	18.835	5815.5519	5834.3873	---	---
11AX40MIMO	Ant1	5190	37.442	5171.2574	5208.6997	---	---
	Ant2	5190	37.361	5171.3054	5208.6665	---	---
	Ant3	5190	37.396	5171.2964	5208.6923	---	---
	Ant1	5230	37.35	5211.3211	5248.6711	---	---
	Ant2	5230	37.289	5211.3229	5248.6116	---	---
	Ant3	5230	37.288	5211.3239	5248.6123	---	---
	Ant1	5270	37.318	5251.2902	5288.6087	---	---
	Ant2	5270	37.374	5251.2940	5288.6680	---	---
	Ant3	5270	37.225	5251.3401	5288.5651	---	---
	Ant1	5310	37.442	5291.2080	5328.6498	---	---
	Ant2	5310	37.416	5291.2781	5328.6937	---	---
	Ant3	5310	37.384	5291.2440	5328.6277	---	---
	Ant1	5510	37.45	5491.2623	5528.7124	---	---
	Ant2	5510	37.543	5491.1945	5528.7371	---	---
	Ant3	5510	37.425	5491.2887	5528.7138	---	---
	Ant1	5550	37.306	5531.3871	5568.6933	---	---
	Ant2	5550	37.248	5531.3860	5568.6338	---	---
	Ant3	5550	37.223	5531.4093	5568.6327	---	---
	Ant1	5670	37.371	5651.2942	5688.6655	---	---
	Ant2	5670	37.404	5651.3009	5688.7052	---	---
	Ant3	5670	37.382	5651.3014	5688.6830	---	---
	Ant1	5755	37.405	5736.2957	5773.7009	---	---
	Ant2	5755	37.355	5736.3442	5773.6996	---	---
	Ant3	5755	37.31	5736.3315	5773.6419	---	---
	Ant1	5795	37.41	5776.3078	5813.7173	---	---
	Ant2	5795	37.411	5776.2145	5813.6252	---	---
	Ant3	5795	37.428	5776.2740	5813.7017	---	---
11AX80MIMO	Ant1	5210	76.832	5171.6485	5248.4803	---	---
	Ant2	5210	76.592	5171.7384	5248.3302	---	---
	Ant3	5210	76.575	5171.7076	5248.2823	---	---
	Ant1	5290	76.68	5251.6261	5328.3065	---	---
	Ant2	5290	76.824	5251.6185	5328.4423	---	---
	Ant3	5290	76.84	5251.6048	5328.4452	---	---
	Ant1	5530	76.83	5491.5540	5568.3837	---	---
	Ant2	5530	76.646	5491.6942	5568.3404	---	---

	Ant3	5530	76.679	5491.8032	5568.4823	---	---
	Ant1	5610	76.507	5571.7001	5648.2076	---	---
	Ant2	5610	76.248	5571.9102	5648.1579	---	---
	Ant3	5610	76.533	5571.7251	5648.2581	---	---
	Ant1	5775	76.727	5736.5879	5813.3150	---	---
	Ant2	5775	76.433	5736.7390	5813.1722	---	---
	Ant3	5775	76.545	5736.6456	5813.1911	---	---
11AX160MIMO	Ant1	5250	155.98	5172.0425	5328.0225	---	---
	Ant2	5250	156.424	5171.9123	5328.3363	---	---
	Ant3	5250	156.675	5171.5570	5328.2321	---	---
	Ant1	5250_UNII-1	77.958	5172.0425	5250	---	---
	Ant2	5250_UNII-1	78.088	5171.9123	5250	---	---
	Ant3	5250_UNII-1	78.443	5171.5570	5250	---	---
	Ant1	5250_UNII-2A	78.023	5250	5328.0225	---	---
	Ant2	5250_UNII-2A	78.336	5250	5328.3363	---	---
	Ant3	5250_UNII-2A	78.232	5250	5328.2321	---	---
	Ant1	5570	156.031	5491.9637	5647.9951	---	---
	Ant2	5570	156.346	5491.9033	5648.2496	---	---
	Ant3	5570	156.497	5491.8114	5648.3085	---	---
11BE20MIMO	Ant1	5180	18.793	5170.6152	5189.4084	---	---
	Ant2	5180	18.817	5170.5867	5189.4040	---	---
	Ant3	5180	18.836	5170.6026	5189.4390	---	---
	Ant1	5200	18.845	5190.5735	5209.4188	---	---
	Ant2	5200	18.834	5190.5691	5209.4034	---	---
	Ant3	5200	18.831	5190.5761	5209.4074	---	---
	Ant1	5240	18.808	5230.5928	5249.4004	---	---
	Ant2	5240	18.788	5230.5888	5249.3772	---	---
	Ant3	5240	18.787	5230.5833	5249.3701	---	---
	Ant1	5260	18.79	5250.5835	5269.3739	---	---
	Ant2	5260	18.756	5250.5862	5269.3426	---	---
	Ant3	5260	18.785	5250.5750	5269.3604	---	---
	Ant1	5280	18.767	5270.6094	5289.3763	---	---
	Ant2	5280	18.805	5270.5908	5289.3962	---	---
	Ant3	5280	18.8	5270.5816	5289.3813	---	---
	Ant1	5320	18.847	5310.5518	5329.3990	---	---
	Ant2	5320	18.807	5310.5813	5329.3882	---	---
	Ant3	5320	18.835	5310.5496	5329.3843	---	---
	Ant1	5500	18.857	5490.5442	5509.4012	---	---
	Ant2	5500	18.824	5490.5444	5509.3687	---	---
	Ant3	5500	18.841	5490.5435	5509.3841	---	---
	Ant1	5580	18.786	5570.5888	5589.3748	---	---
	Ant2	5580	18.796	5570.5746	5589.3708	---	---
	Ant3	5580	18.81	5570.5825	5589.3927	---	---
	Ant1	5700	18.84	5690.5701	5709.4101	---	---
	Ant2	5700	18.815	5690.5865	5709.4019	---	---
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	Ant2	5785	18.826	5775.5842	5794.4105	---	---
	Ant3	5785	18.812	5775.5582	5794.3697	---	---
	Ant1	5825	18.819	5815.5637	5834.3822	---	---
	Ant2	5825	18.829	5815.5663	5834.3956	---	---
	Ant3	5825	18.846	5815.5406	5834.3862	---	---
11BE40MIMO	Ant1	5190	37.366	5171.2997	5208.6652	---	---
	Ant2	5190	37.35	5171.2932	5208.6432	---	---
	Ant3	5190	37.394	5171.2724	5208.6660	---	---
	Ant1	5230	37.375	5211.3125	5248.6875	---	---
	Ant2	5230	37.215	5211.3539	5248.5690	---	---
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	Ant1	5270	37.431	5251.2179	5288.6486	---	---
	Ant2	5270	37.351	5251.2771	5288.6280	---	---
	Ant3	5270	37.298	5251.3169	5288.6151	---	---
	Ant1	5310	37.397	5291.3169	5328.7142	---	---
	Ant2	5310	37.371	5291.3298	5328.7007	---	---
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	Ant1	5510	37.462	5491.2903	5528.7526	---	---

	Ant2	5510	37.373	5491.2928	5528.6662	---	---
	Ant3	5510	37.338	5491.3399	5528.6780	---	---
	Ant1	5550	37.278	5531.4372	5568.7148	---	---
	Ant2	5550	37.348	5531.3238	5568.6719	---	---
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	Ant1	5670	37.43	5651.3064	5688.7369	---	---
	Ant2	5670	37.461	5651.2801	5688.7413	---	---
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	Ant1	5755	37.422	5736.2819	5773.7043	---	---
	Ant2	5755	37.334	5736.3164	5773.6500	---	---
	Ant3	5755	37.368	5736.2846	5773.6528	---	---
	Ant1	5795	37.426	5776.3421	5813.7677	---	---
	Ant2	5795	37.318	5776.3009	5813.6193	---	---
	Ant3	5795	37.433	5776.2585	5813.6918	---	---
11BE80MIMO	Ant1	5210	76.694	5171.7413	5248.4350	---	---
	Ant2	5210	76.543	5171.7575	5248.3010	---	---
	Ant3	5210	76.621	5171.7436	5248.3642	---	---
	Ant1	5290	76.79	5251.5215	5328.3116	---	---
	Ant2	5290	76.734	5251.6364	5328.3702	---	---
	Ant3	5290	76.66	5251.5466	5328.2065	---	---
	Ant1	5530	76.604	5491.6960	5568.3003	---	---
	Ant2	5530	76.927	5491.5689	5568.4962	---	---
	Ant3	5530	76.705	5491.7660	5568.4714	---	---
	Ant1	5610	76.402	5571.7562	5648.1578	---	---
	Ant2	5610	76.471	5571.7871	5648.2582	---	---
	Ant3	5610	76.407	5571.7531	5648.1602	---	---
	Ant1	5775	76.695	5736.6026	5813.2976	---	---
	Ant2	5775	76.655	5736.6933	5813.3487	---	---
	Ant3	5775	76.853	5736.4156	5813.2686	---	---
11BE160MIMO	Ant1	5250	156.254	5172.0668	5328.3209	---	---
	Ant2	5250	157.154	5171.7473	5328.9010	---	---
	Ant3	5250	156.716	5171.7571	5328.4728	---	---
	Ant1	5250_UNII-1	77.933	5172.0668	5250	---	---
	Ant2	5250_UNII-1	78.253	5171.7473	5250	---	---
	Ant3	5250_UNII-1	78.243	5171.7571	5250	---	---
	Ant1	5250_UNII-2A	78.321	5250	5328.3209	---	---
	Ant2	5250_UNII-2A	78.901	5250	5328.9010	---	---
	Ant3	5250_UNII-2A	78.473	5250	5328.4728	---	---
	Ant1	5570	156.466	5491.8587	5648.3247	---	---
	Ant2	5570	156.518	5491.8704	5648.3880	---	---
	Ant3	5570	155.924	5492.0916	5648.0158	---	---

Occupied channel bandwidth (99%) Test Graphs

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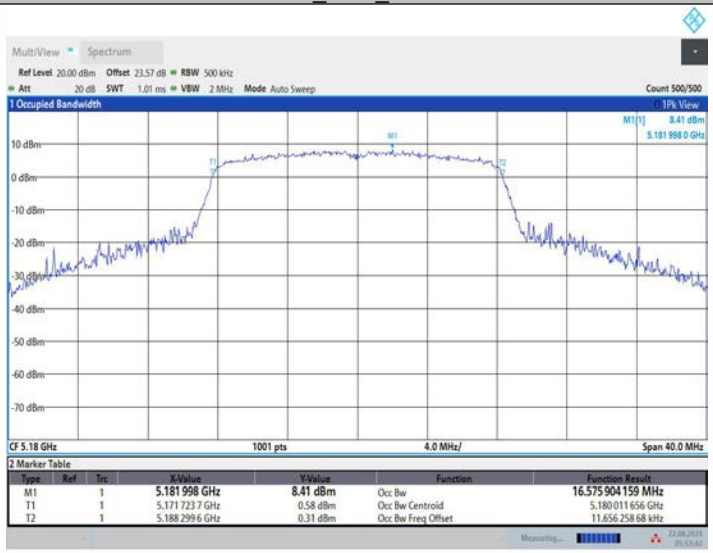
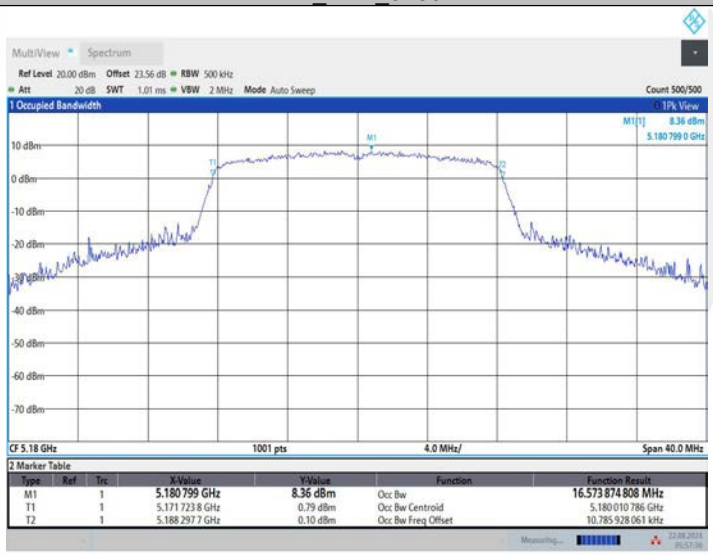

11A_Ant2_5180

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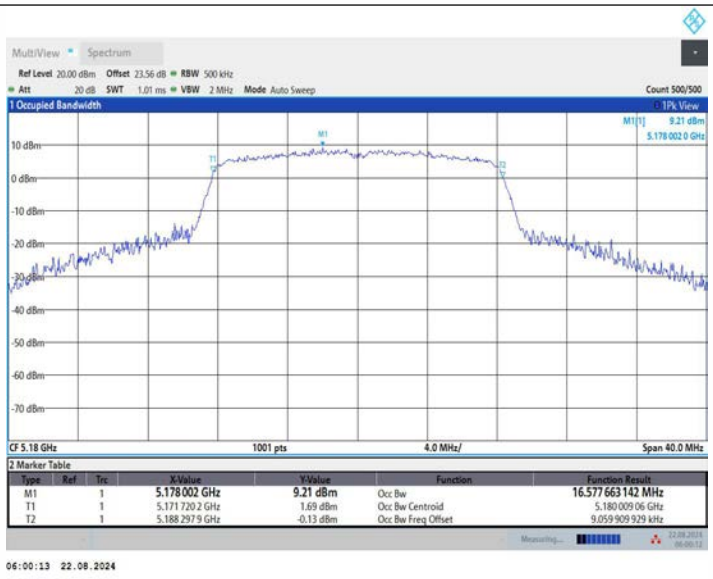

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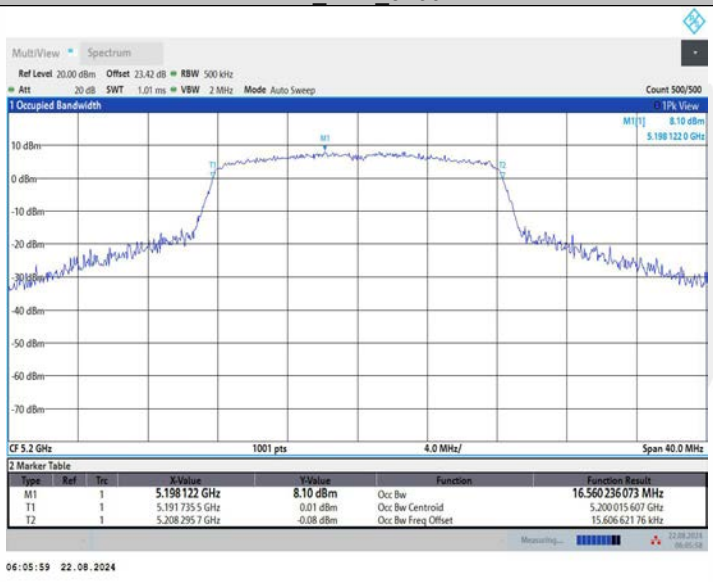

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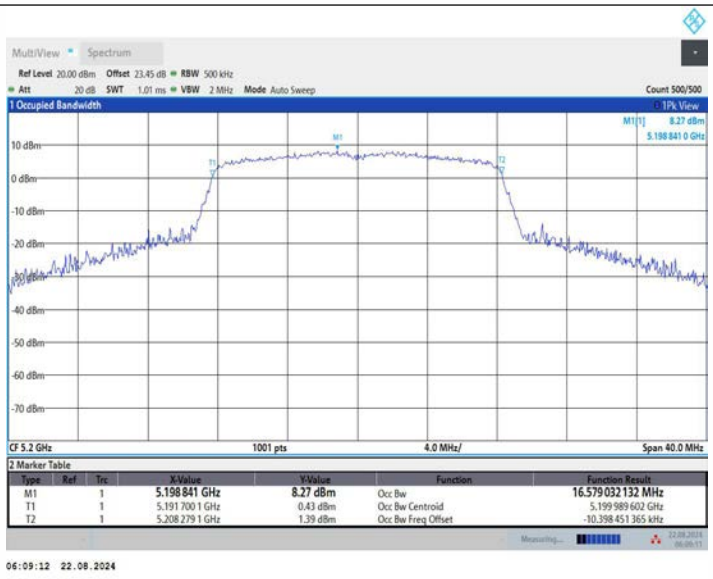

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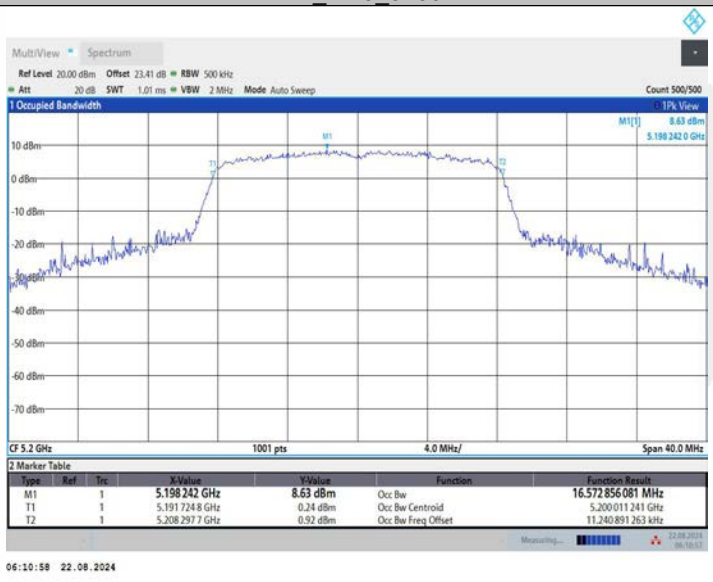

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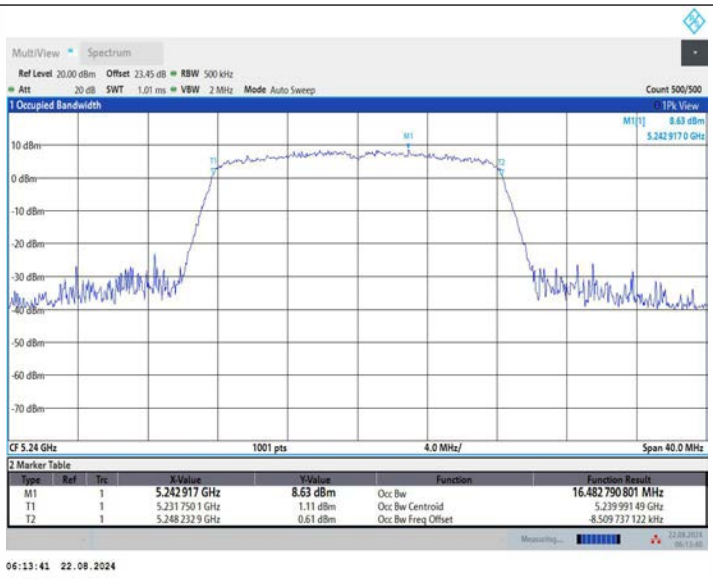

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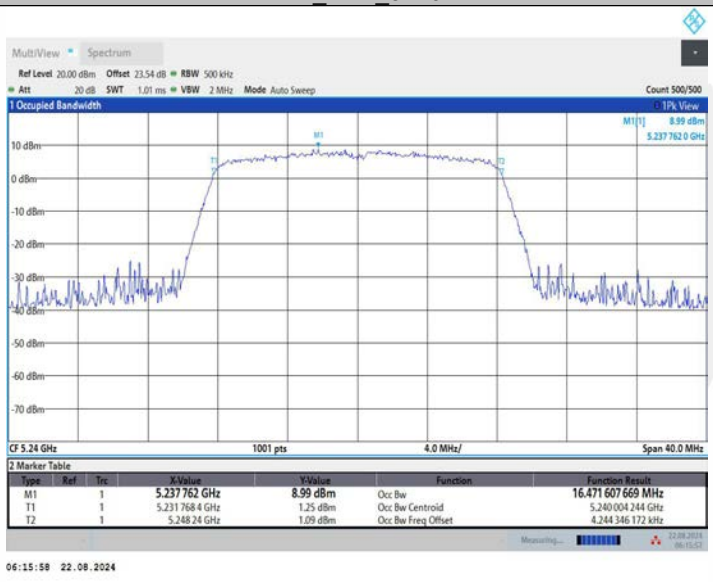

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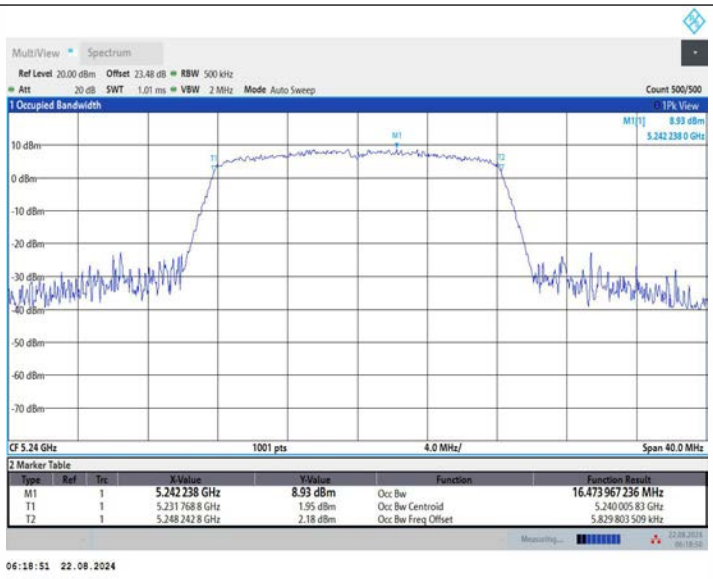

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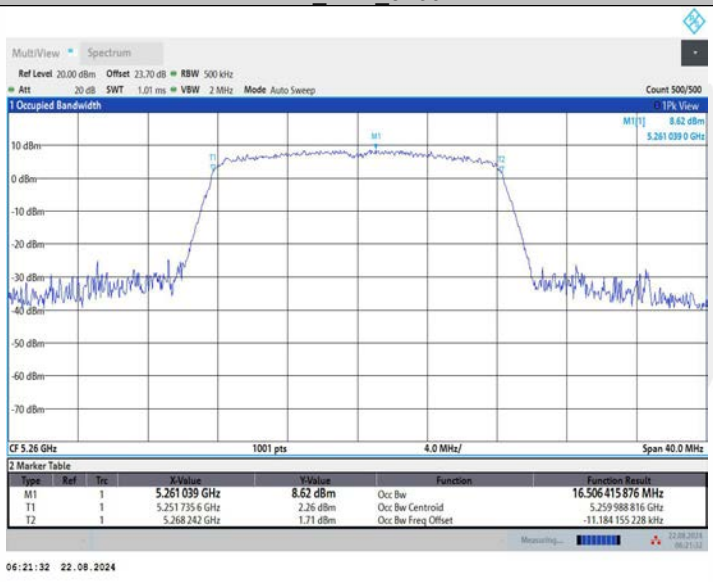

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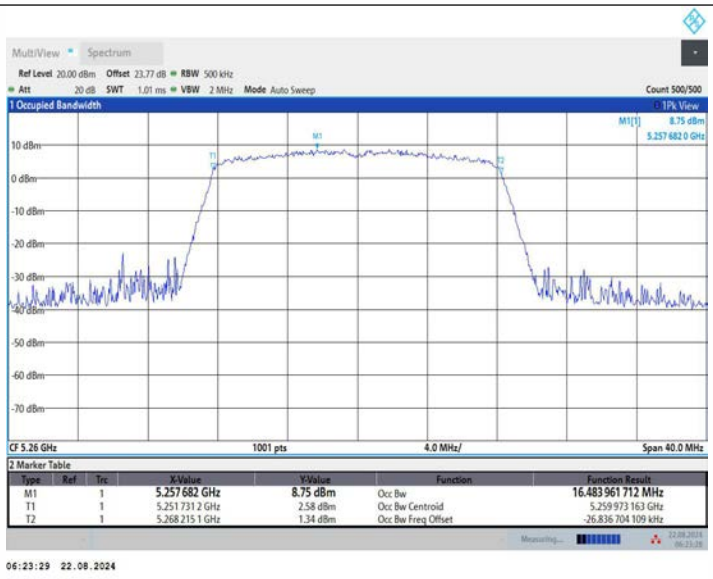

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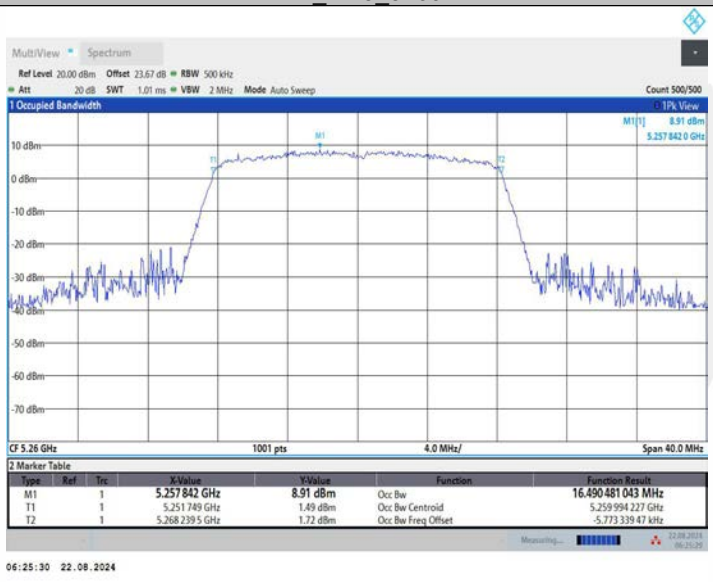

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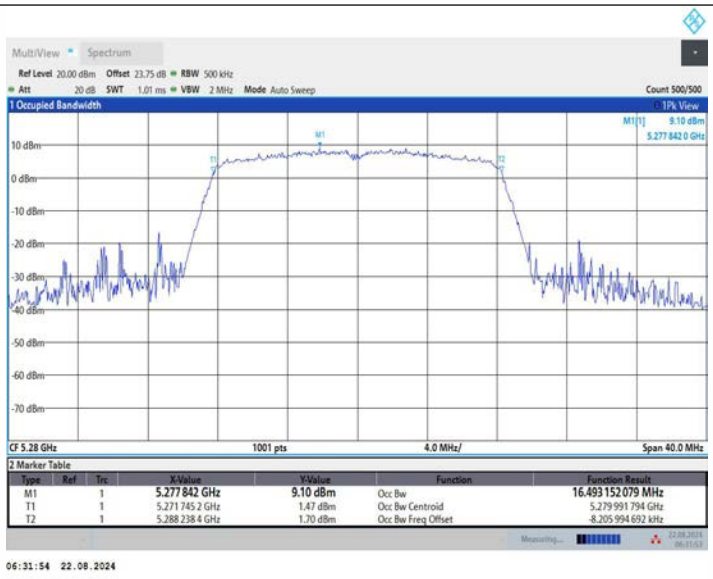

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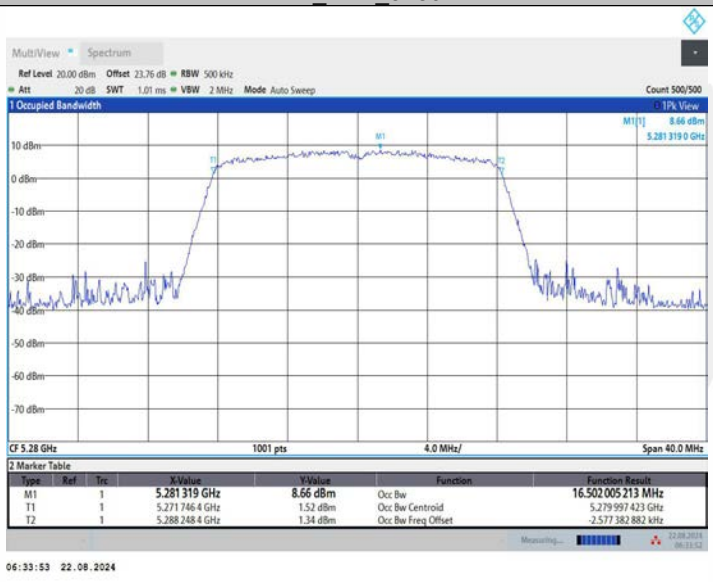

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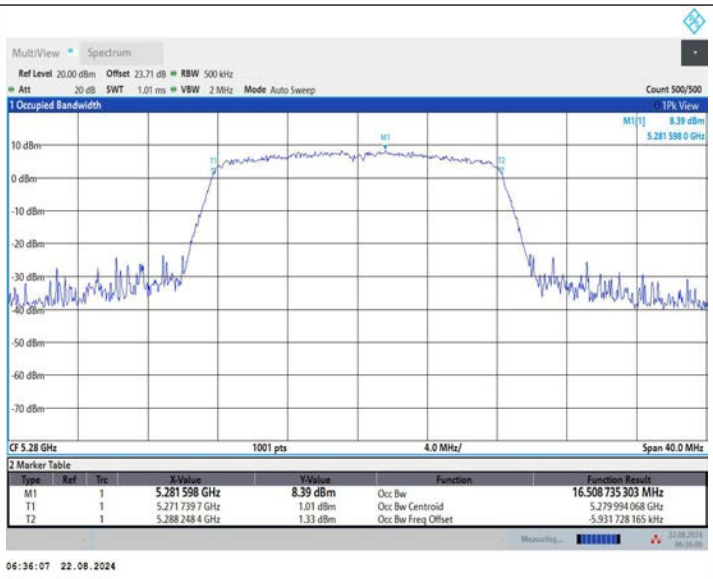

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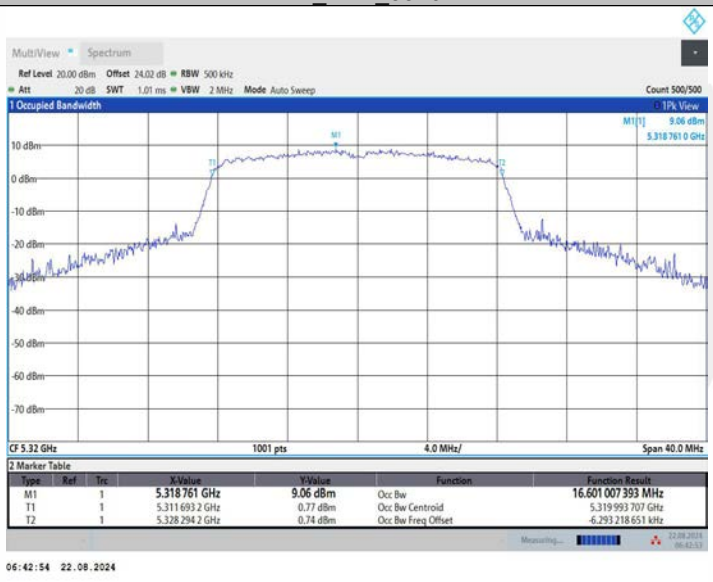

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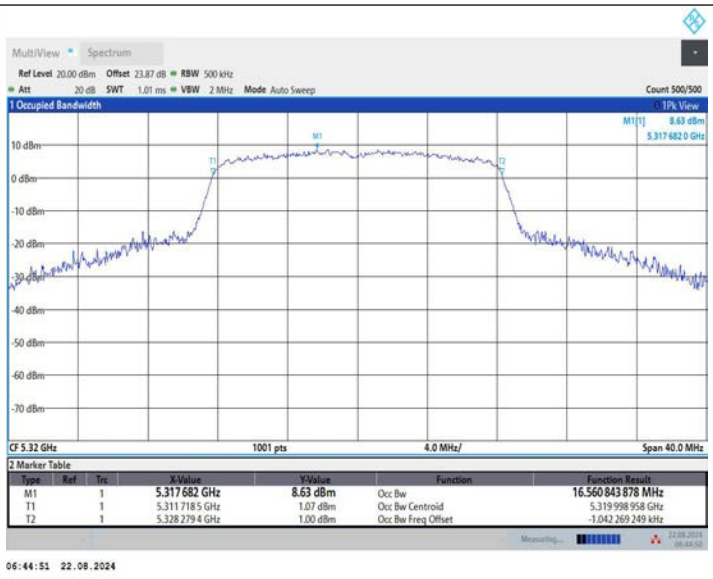

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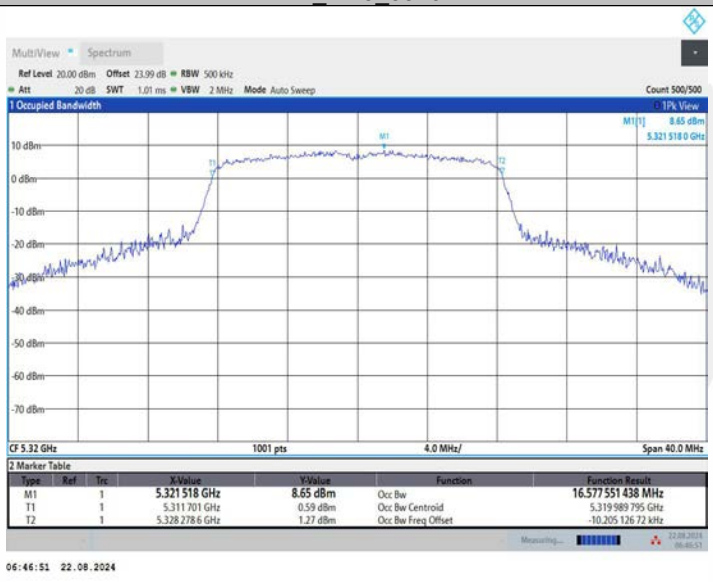

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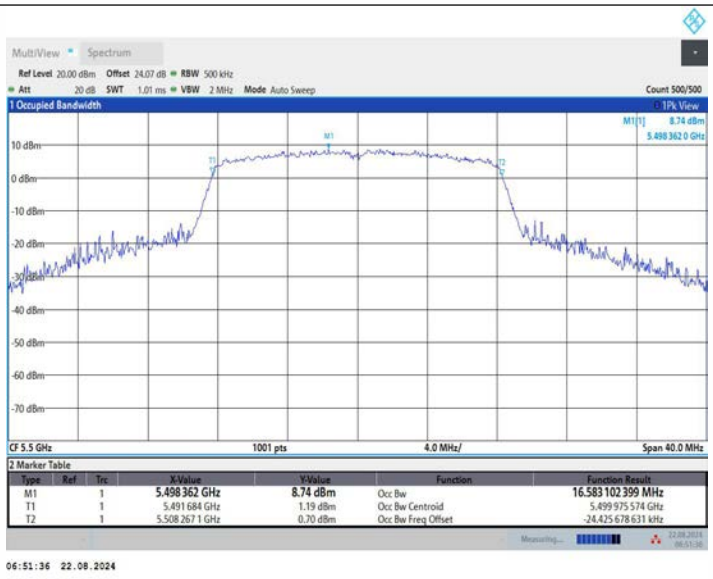

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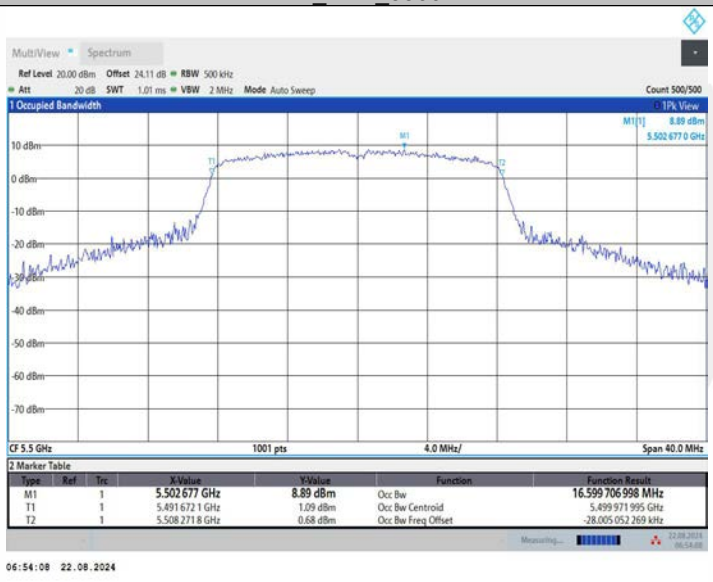

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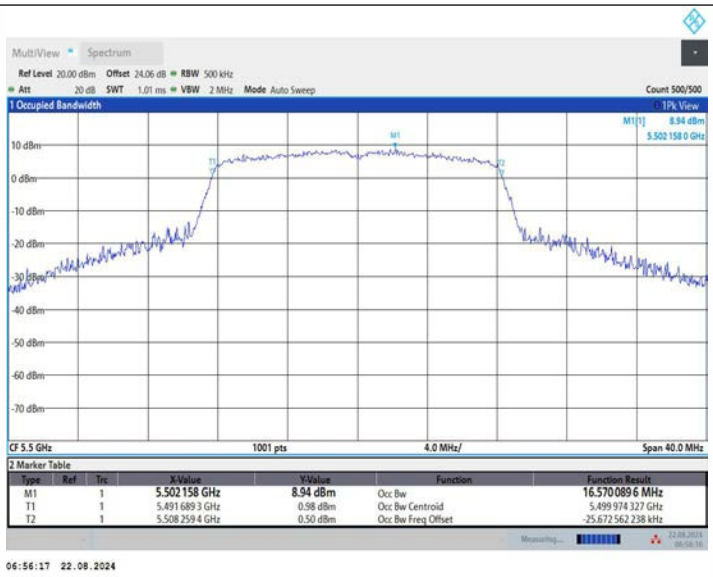

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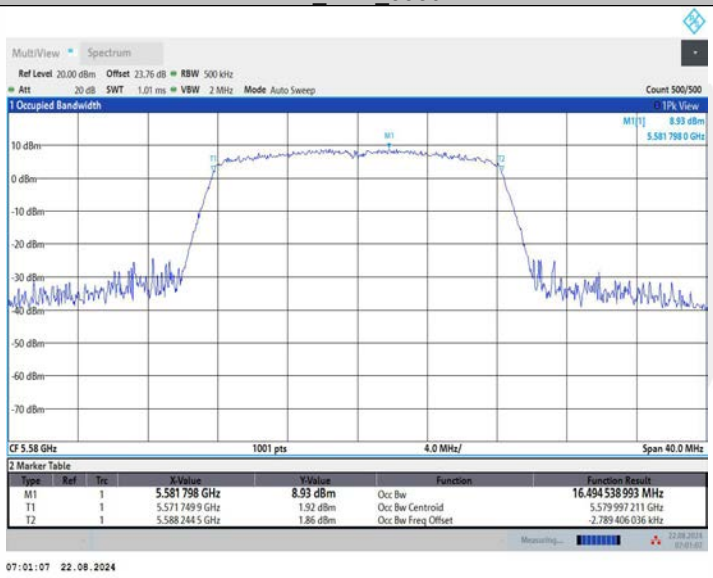

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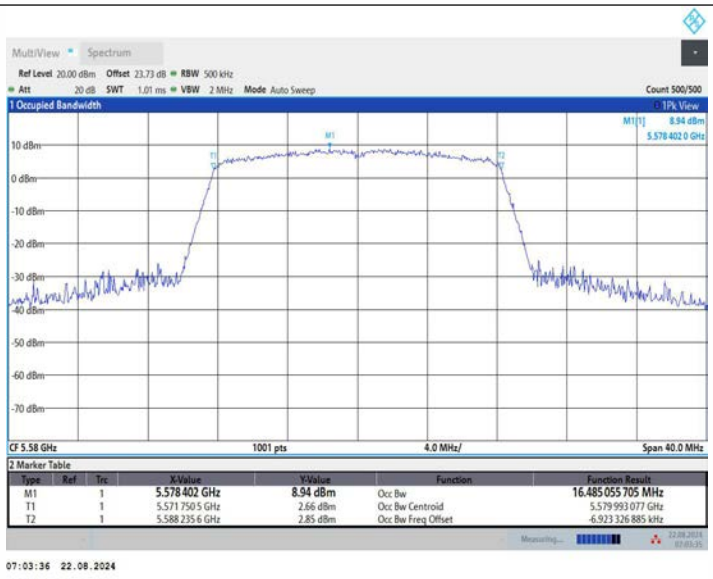

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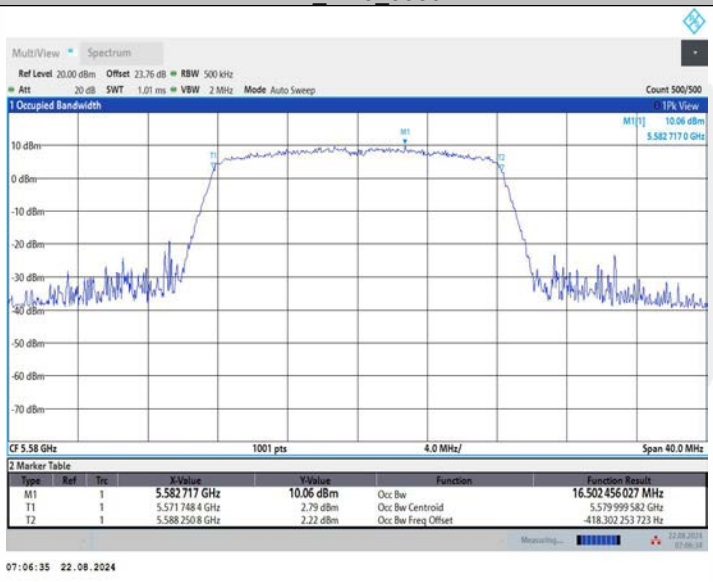

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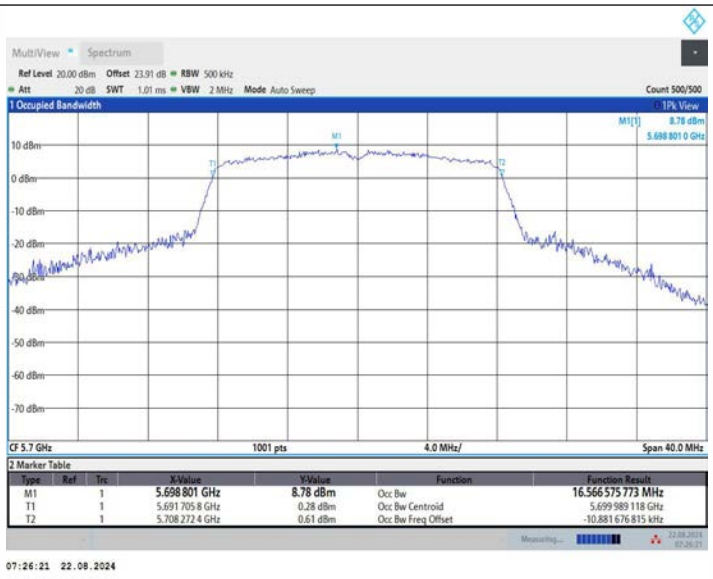

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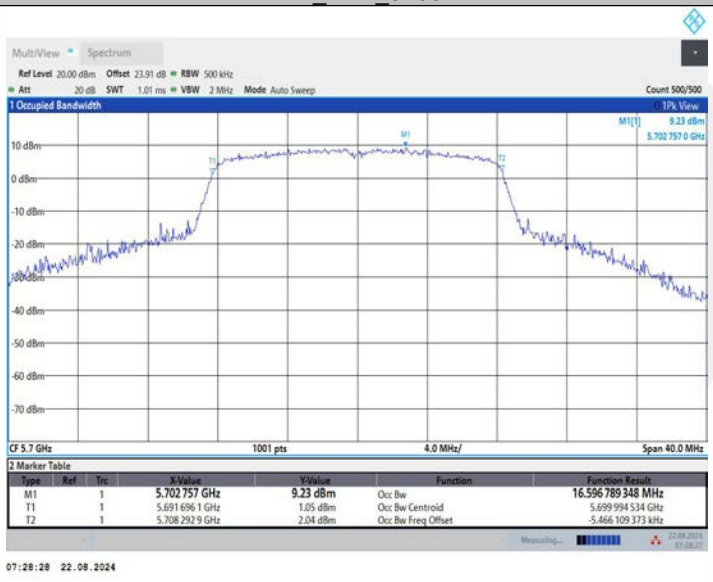

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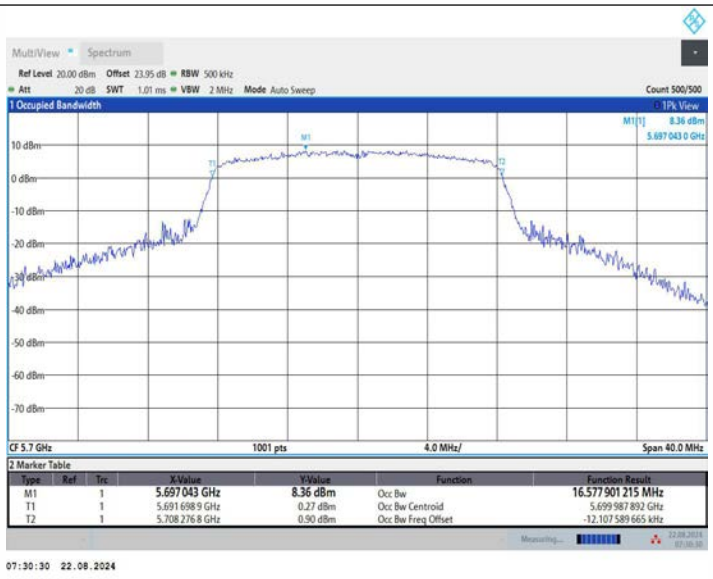

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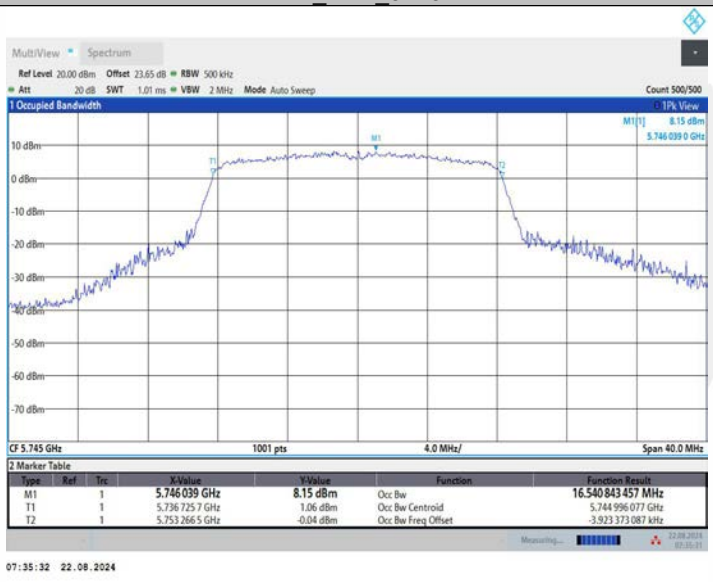

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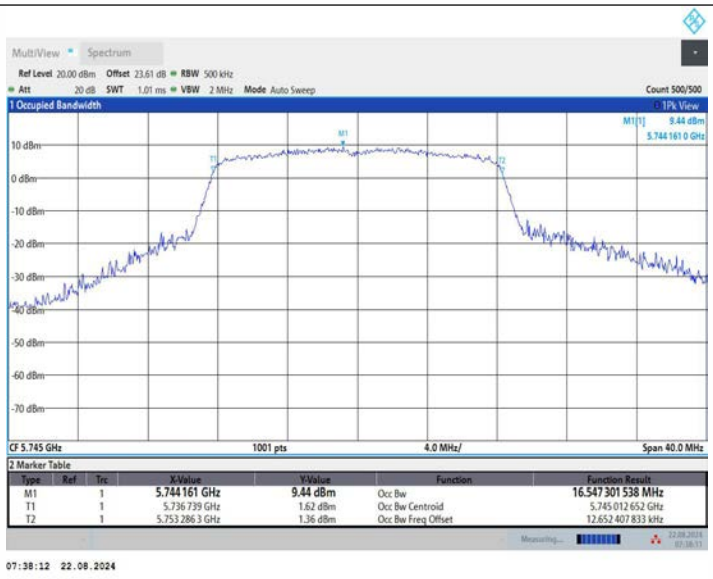

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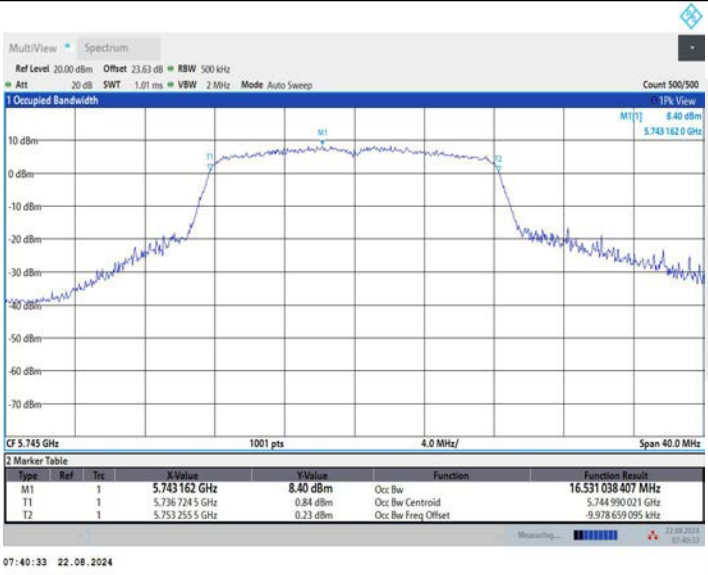
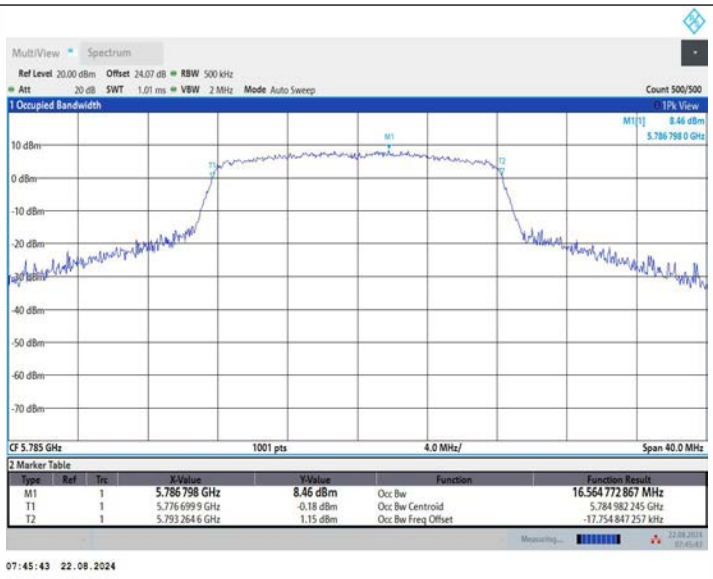
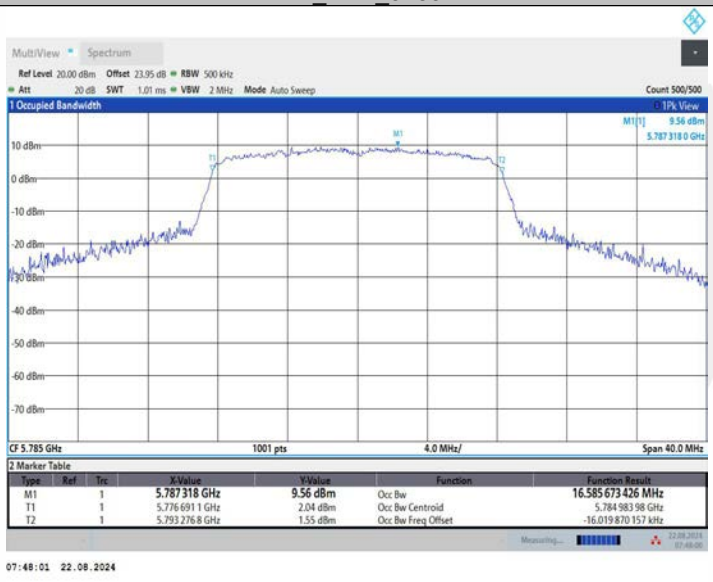


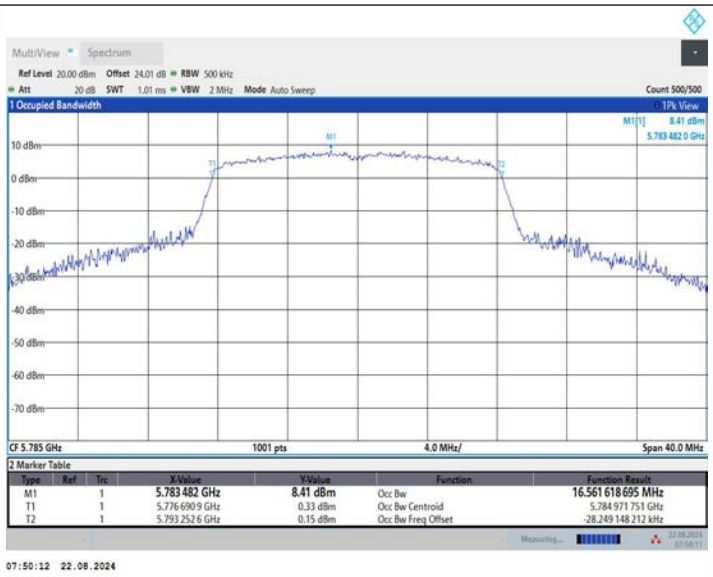
11A_Ant1_5785



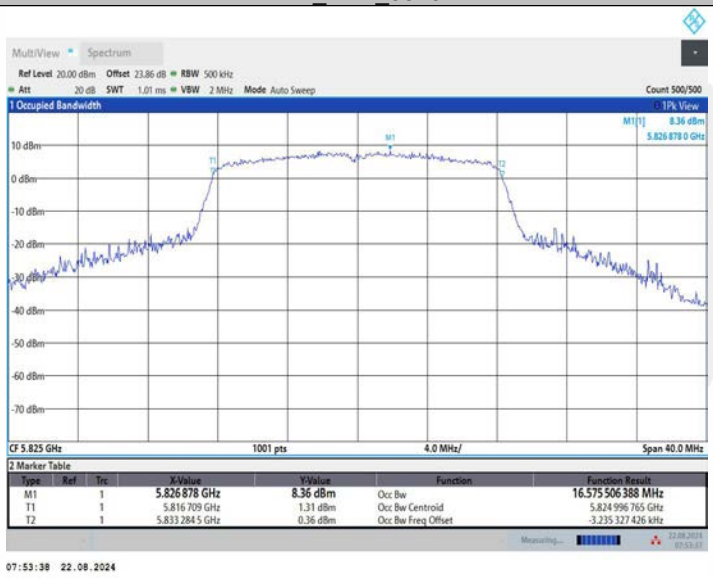
11A_Ant2_5785



11A_Ant3_5785



11A_Ant1_5825



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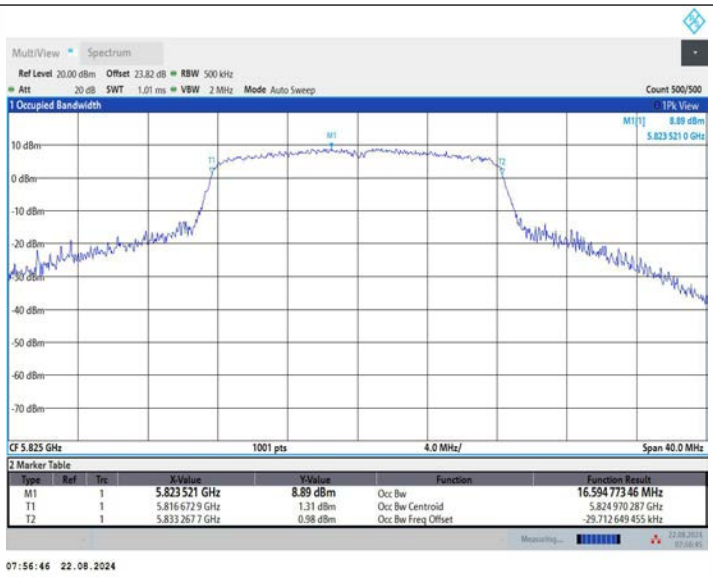

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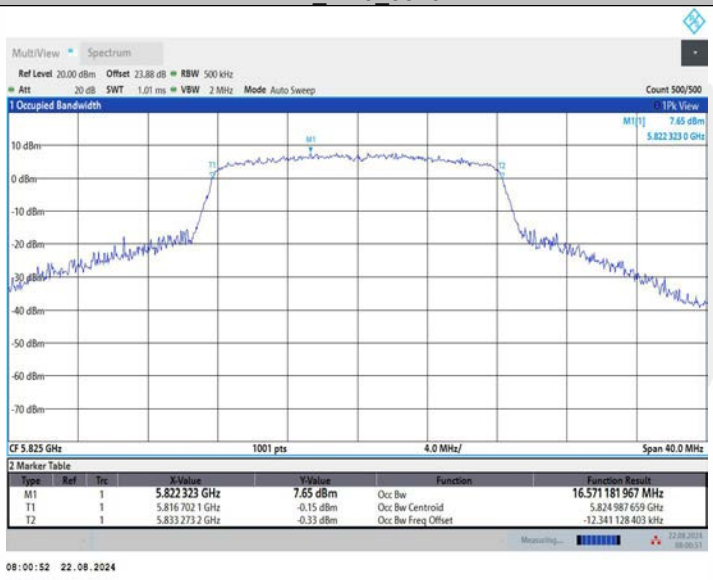

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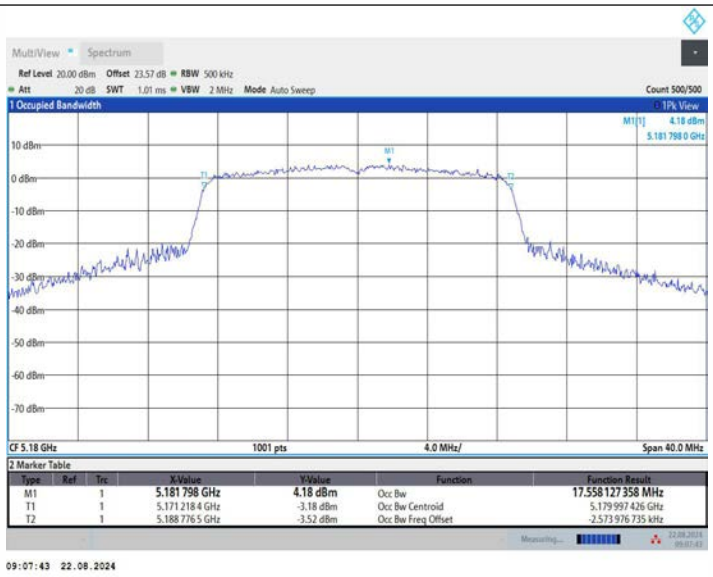

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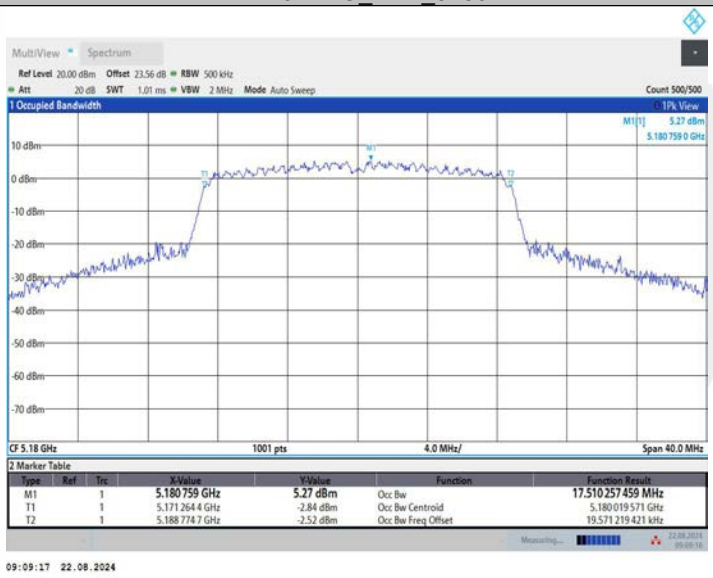

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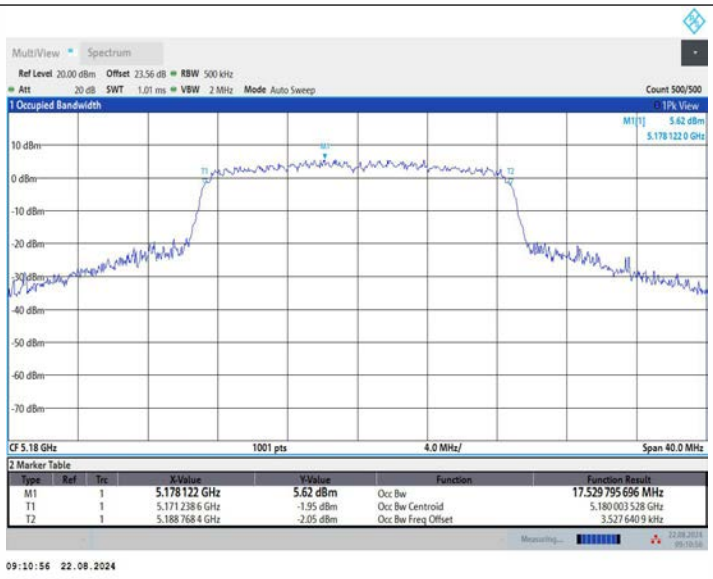

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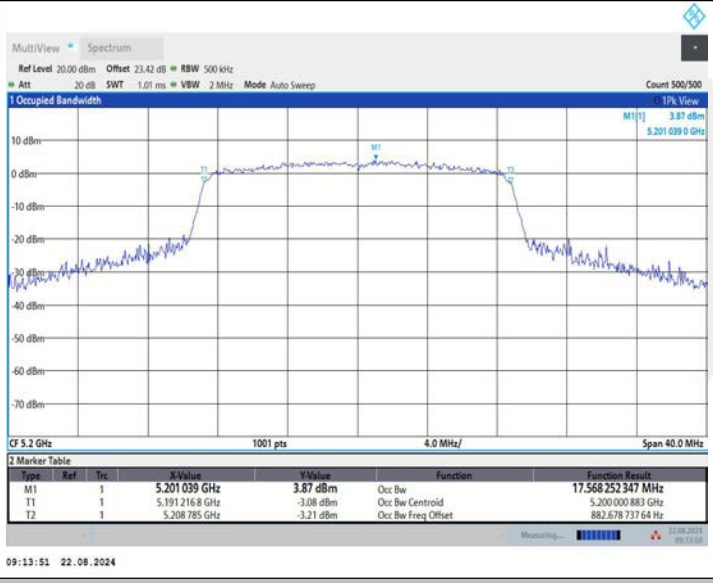

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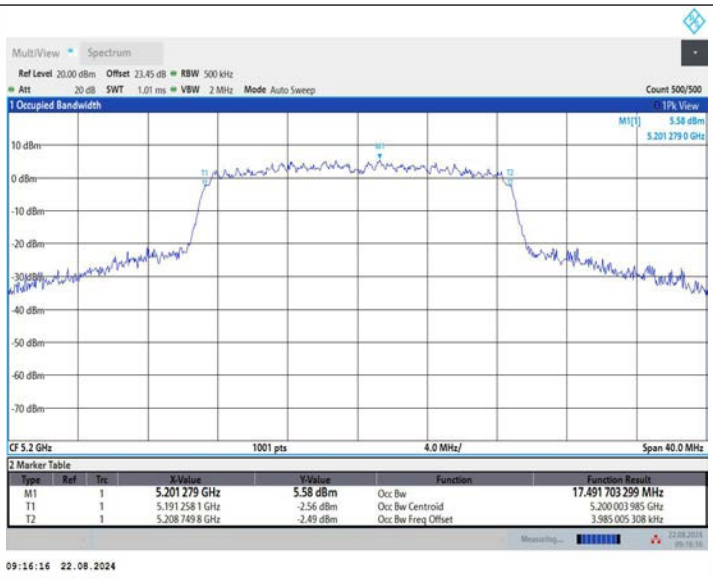

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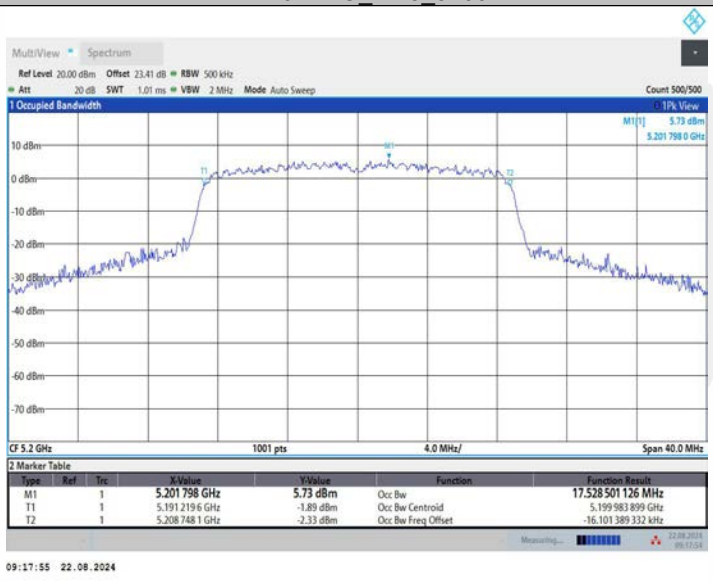
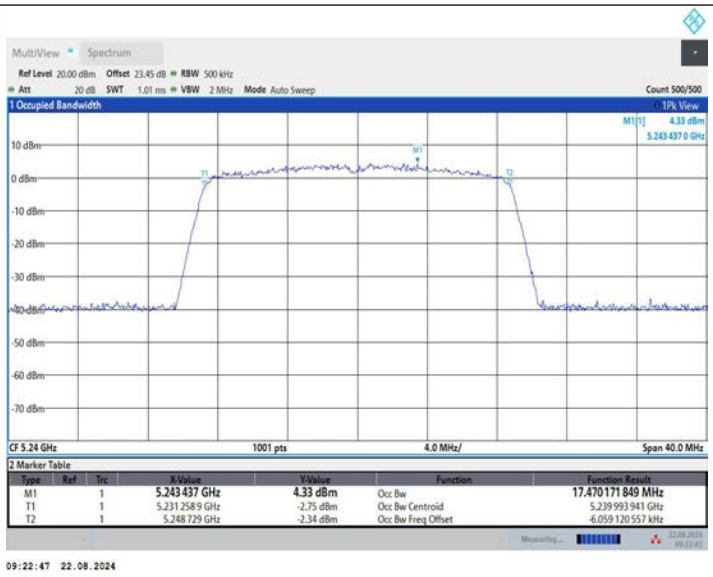


11N20MIMO_Ant1_5240



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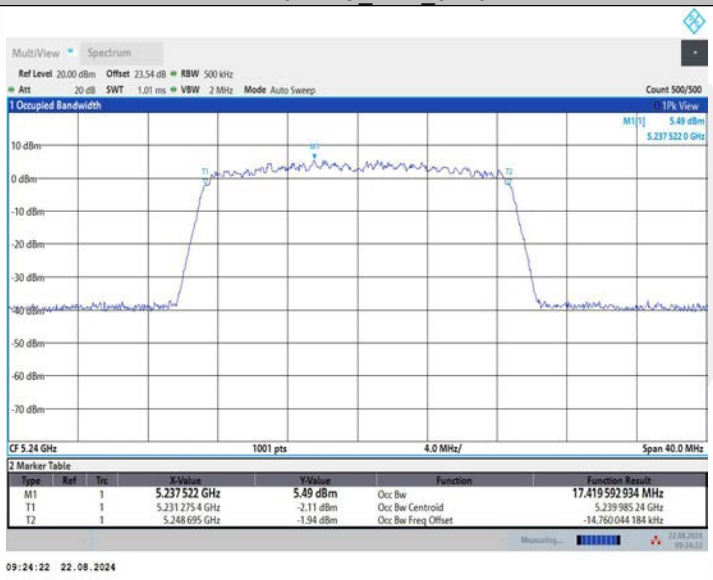

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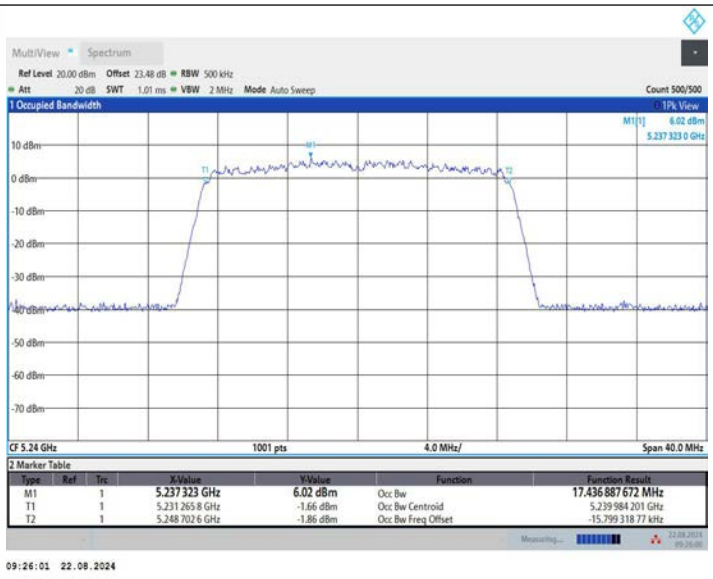

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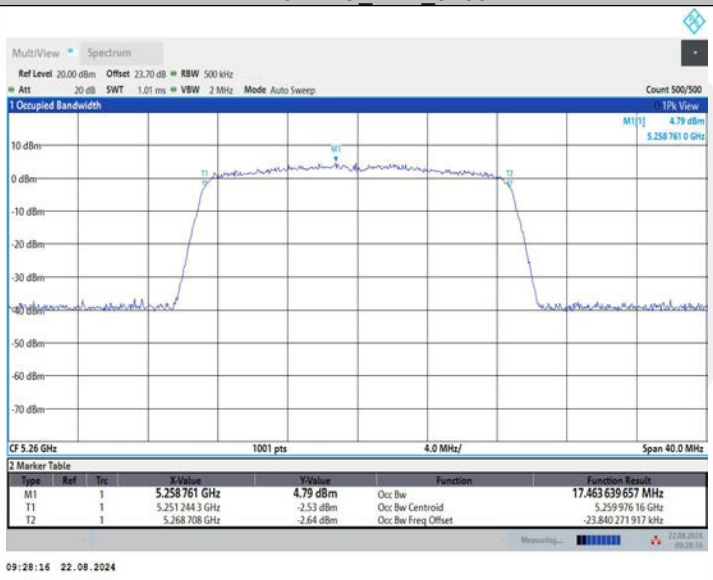

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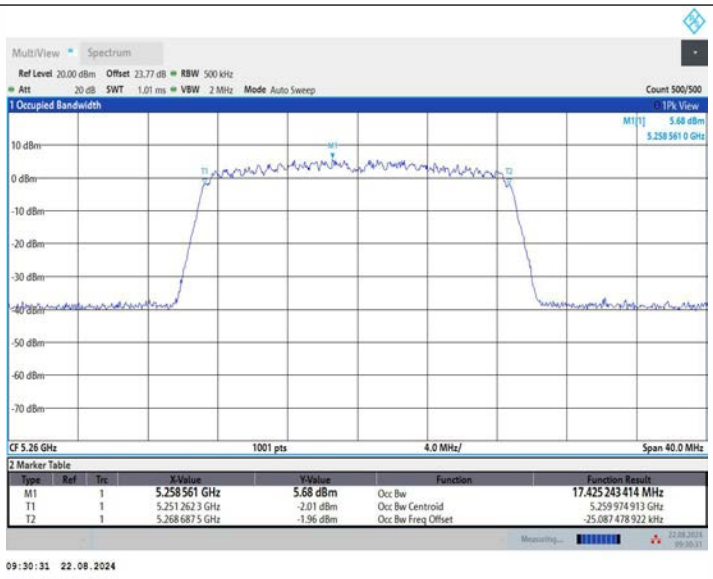

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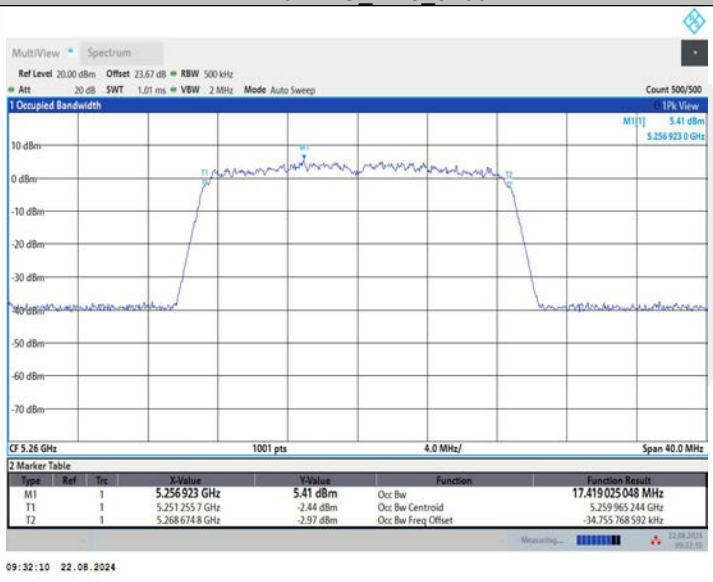

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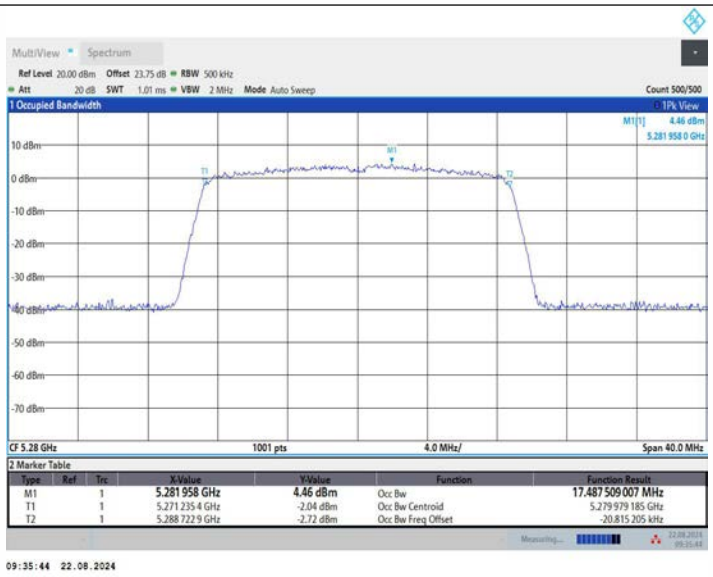

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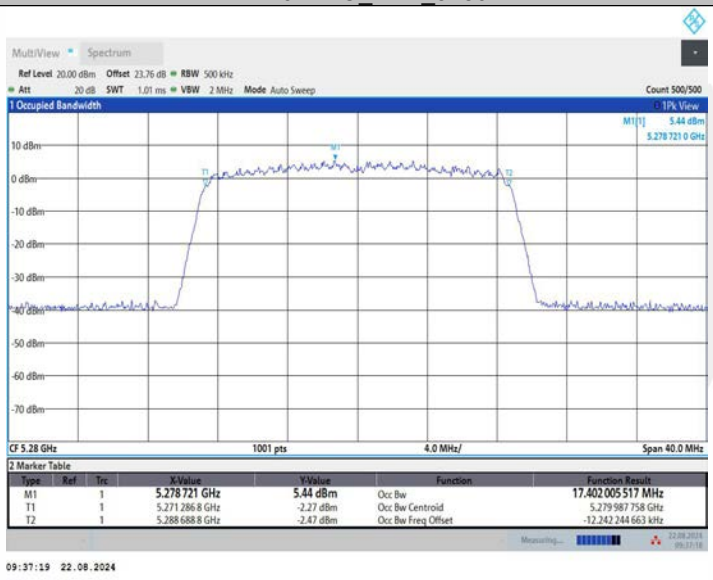

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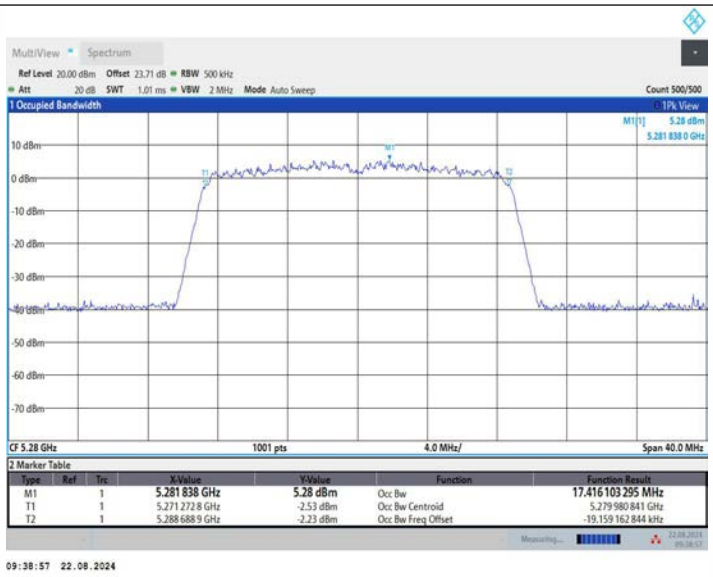

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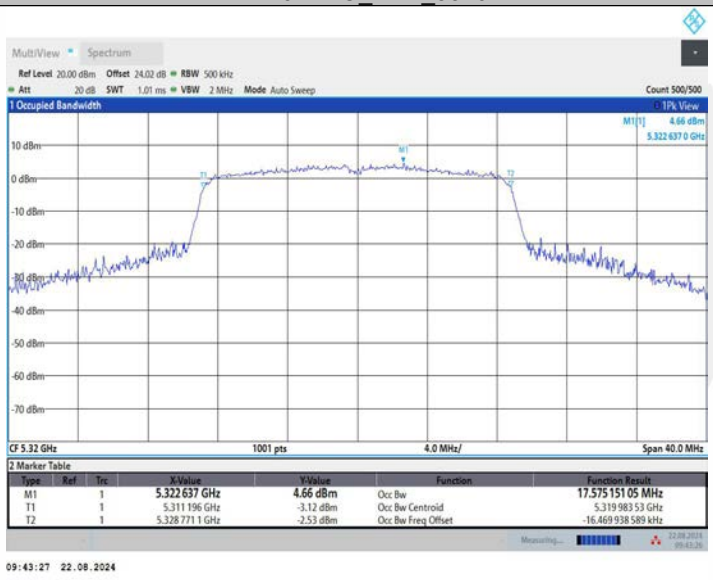

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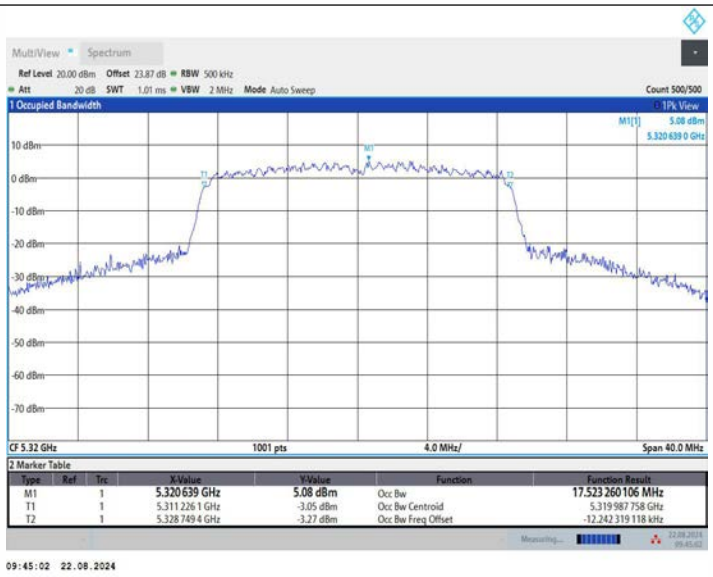

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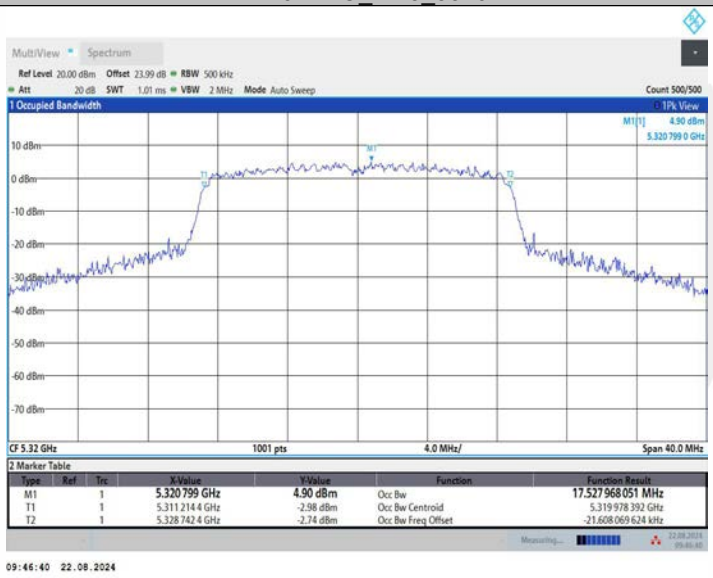
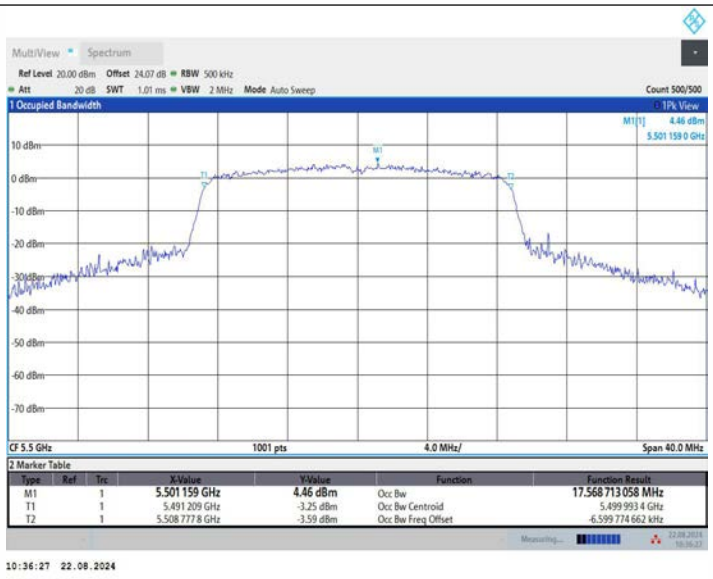


11N20MIMO_Ant1_5500



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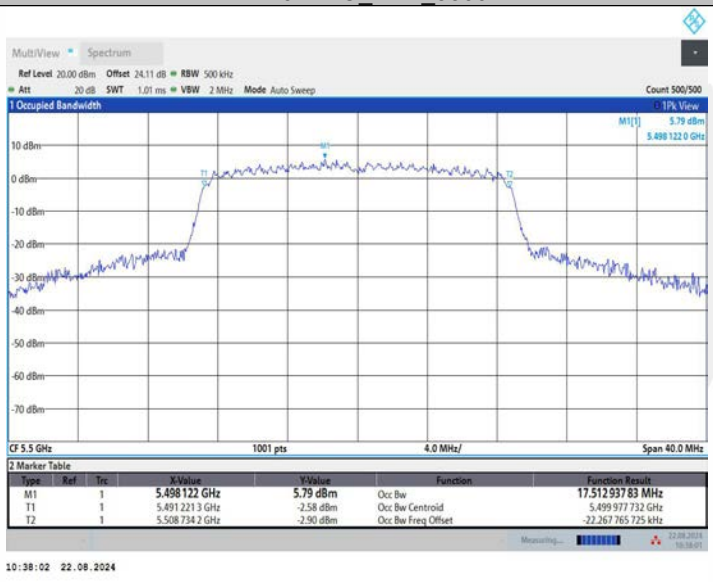

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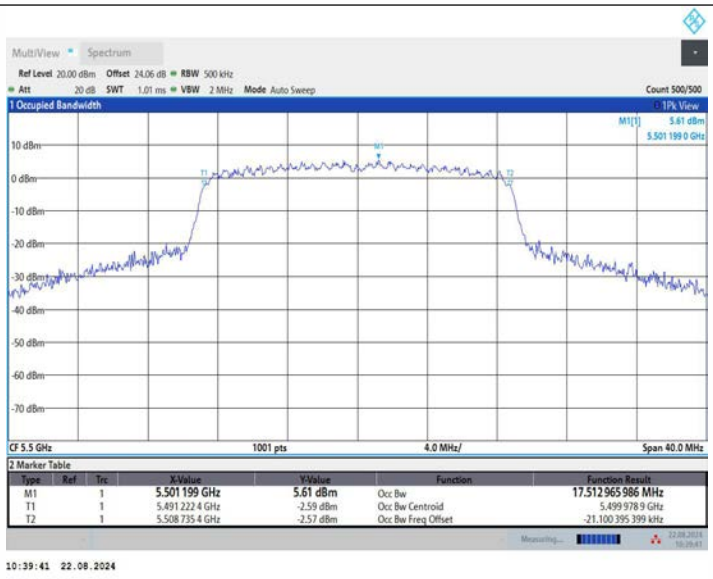

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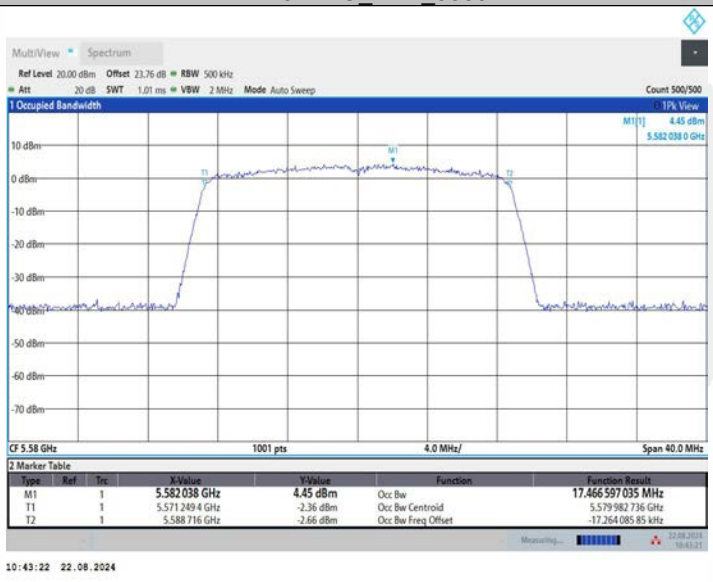

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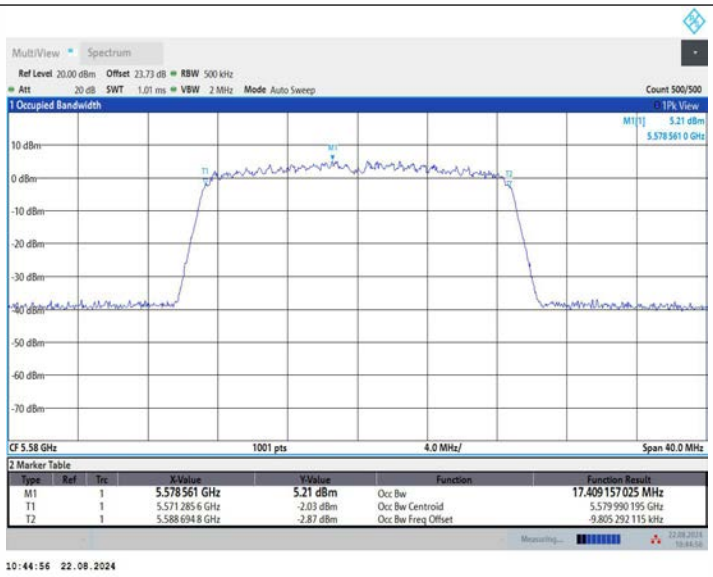

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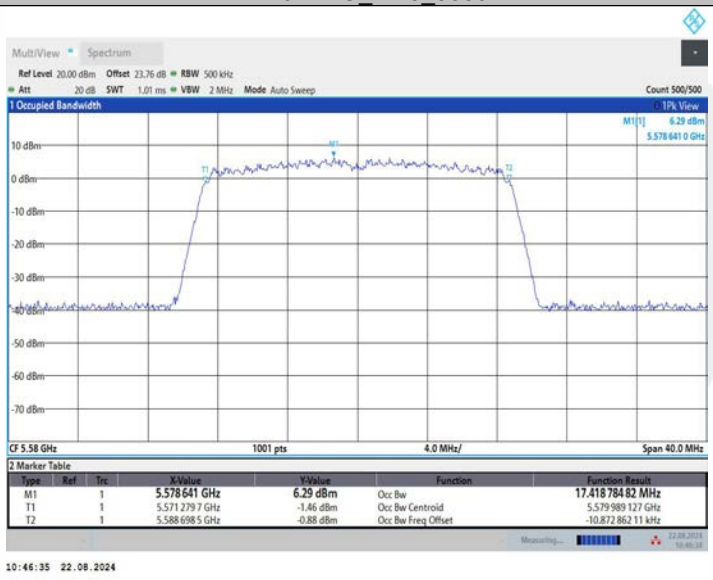

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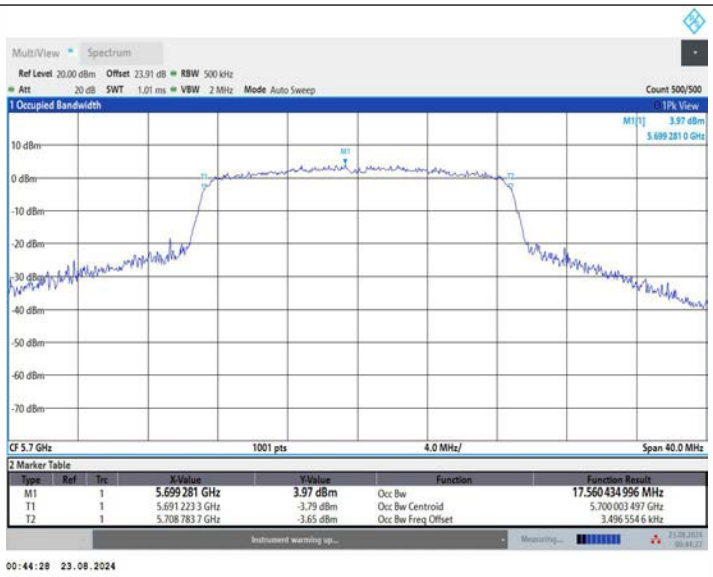

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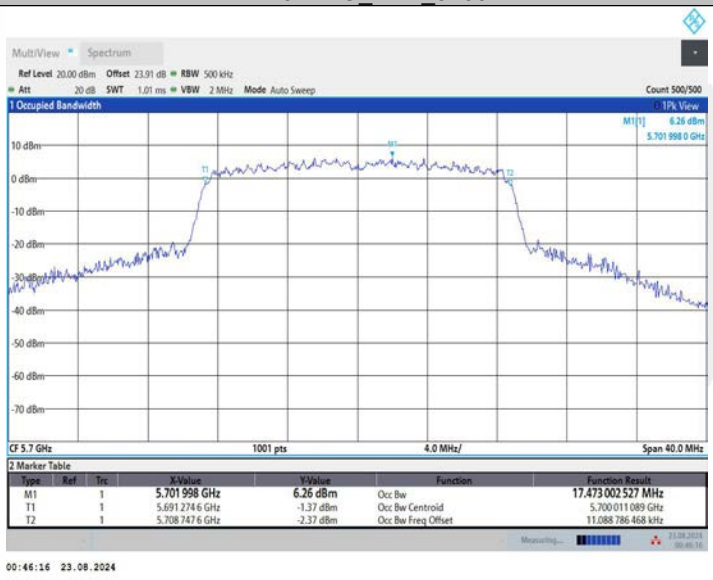

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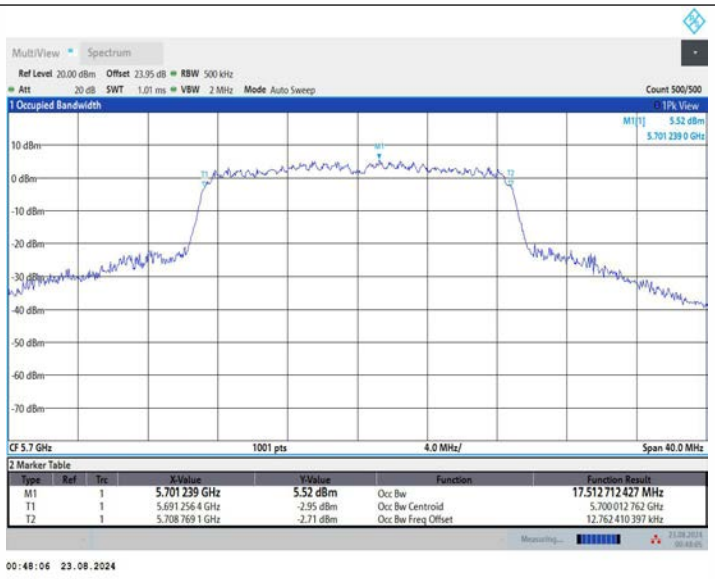

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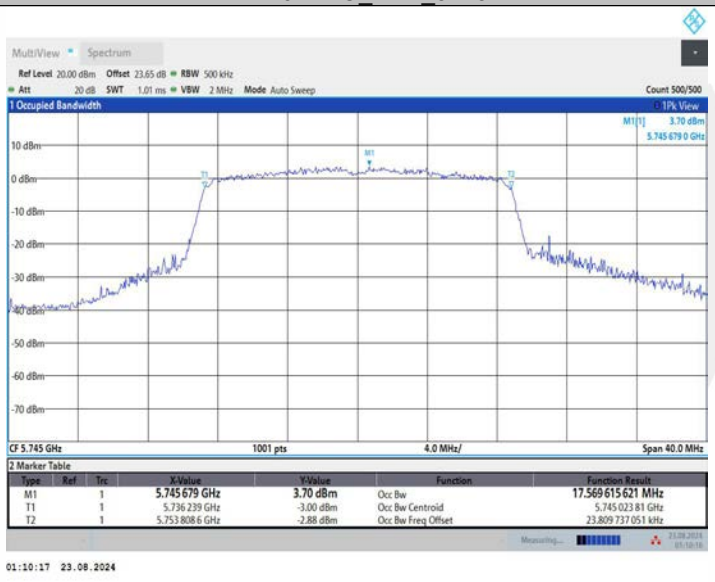

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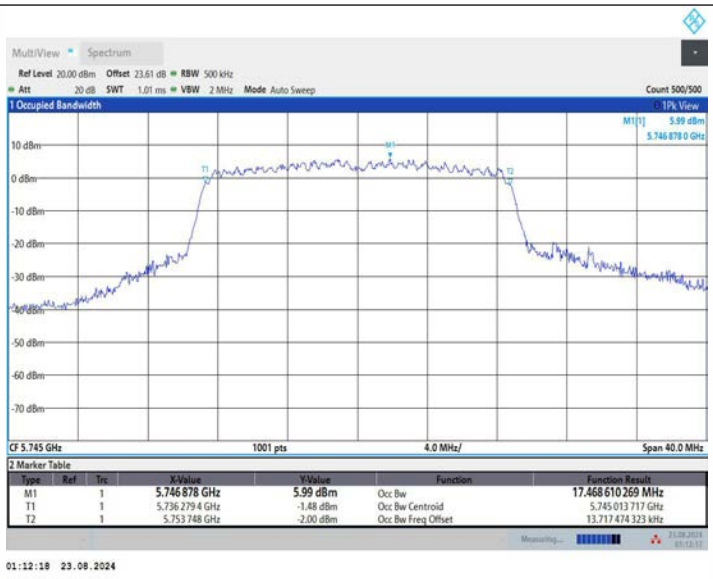

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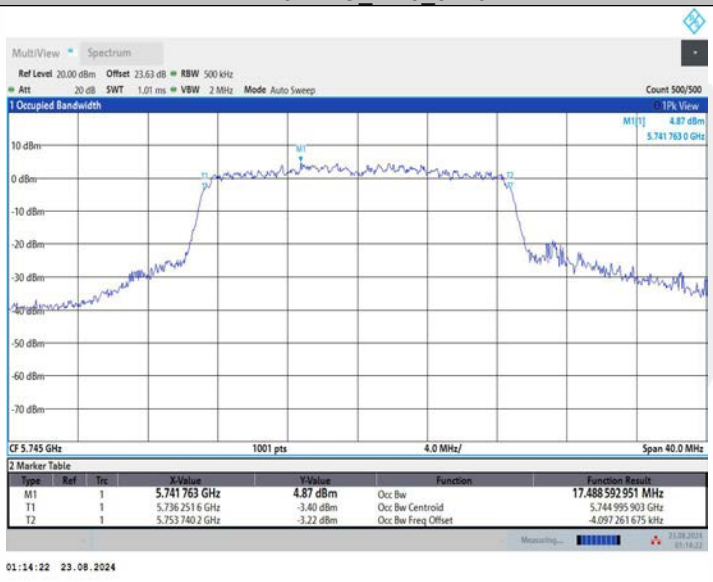

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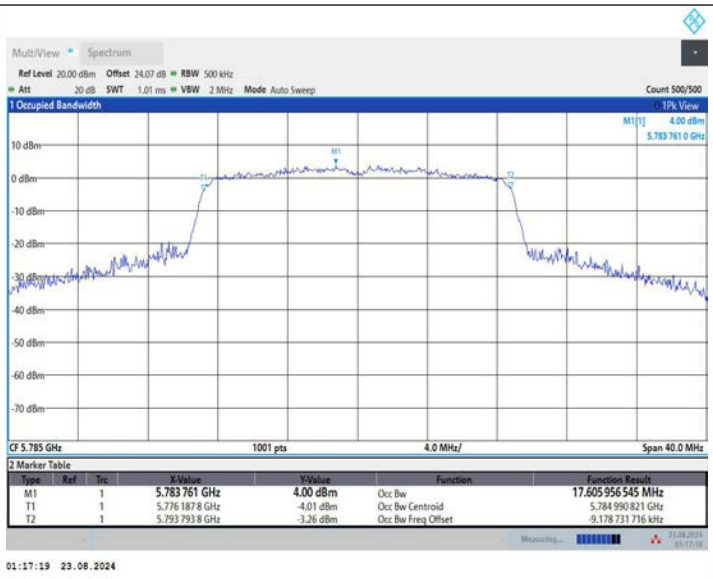

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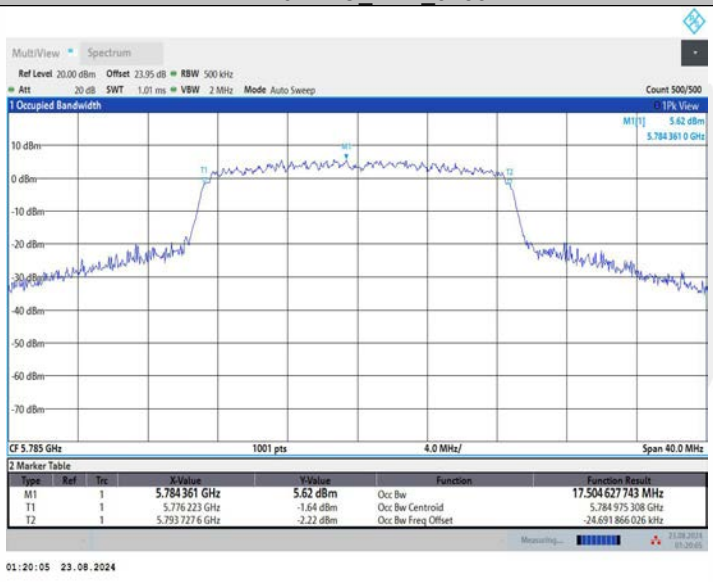

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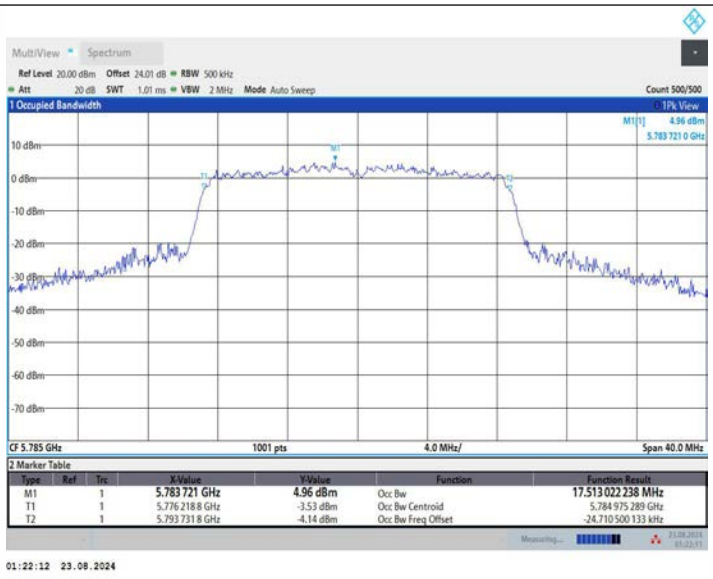
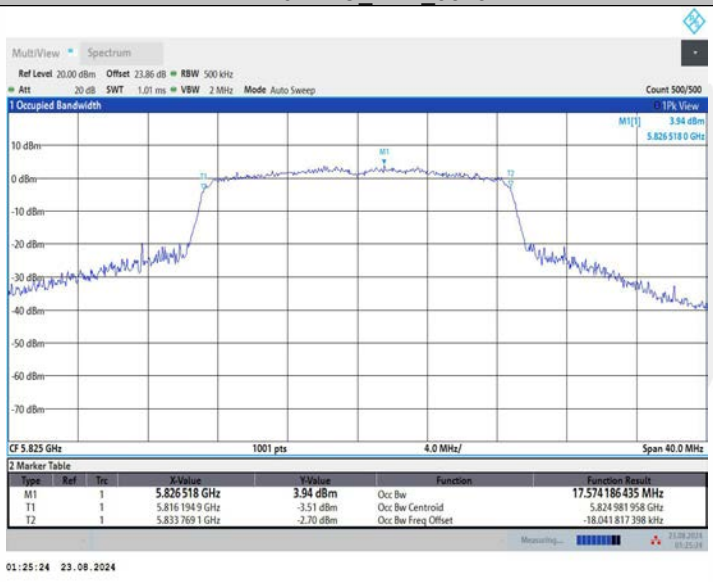


11N20MIMO_Ant1_5825



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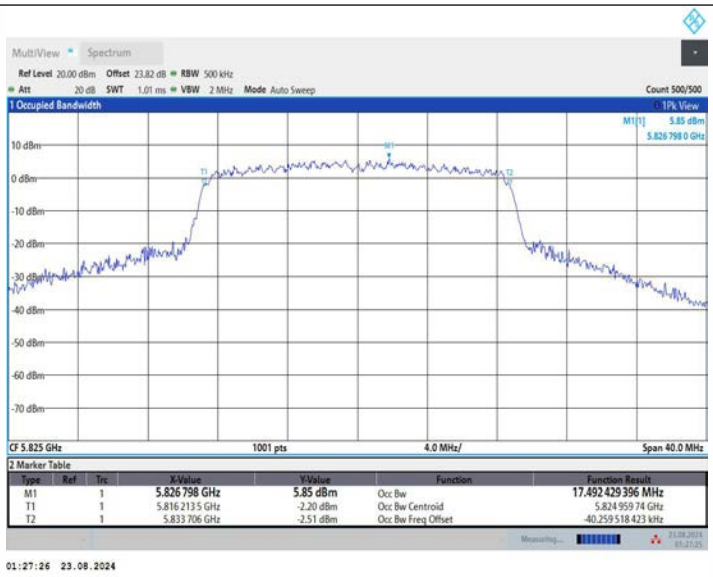

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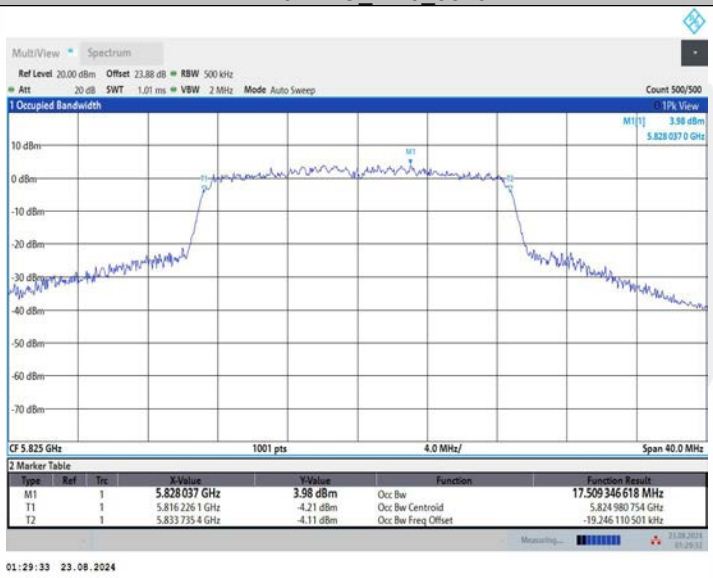

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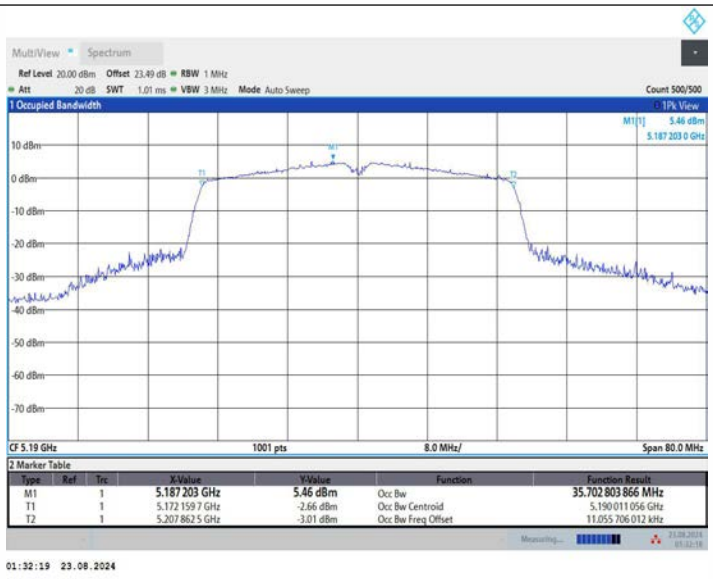

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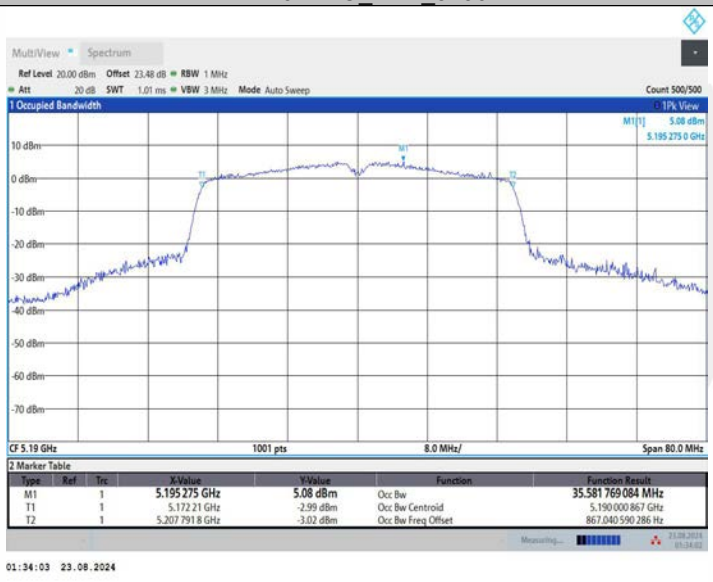

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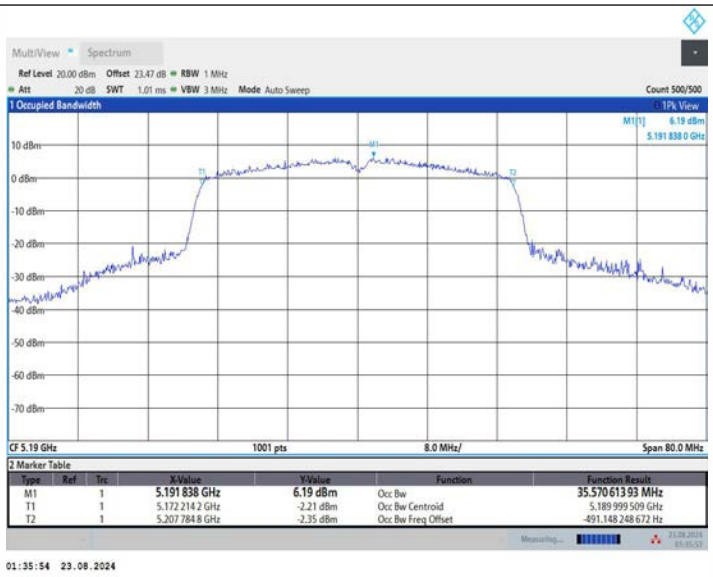

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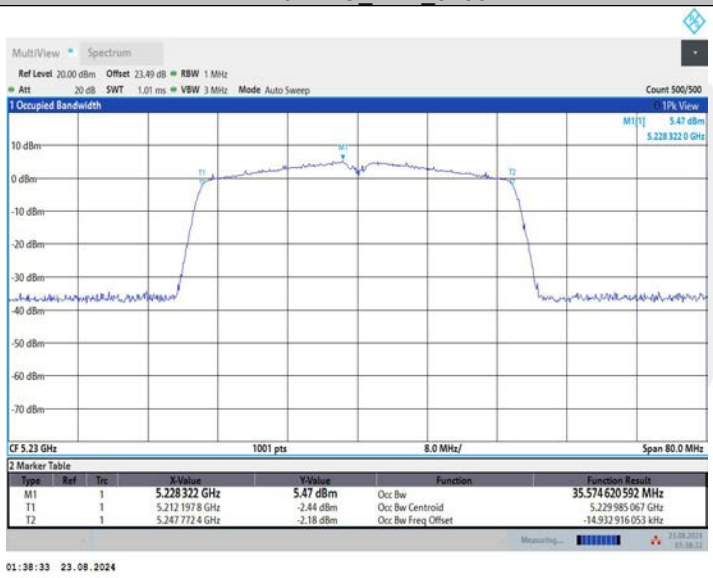

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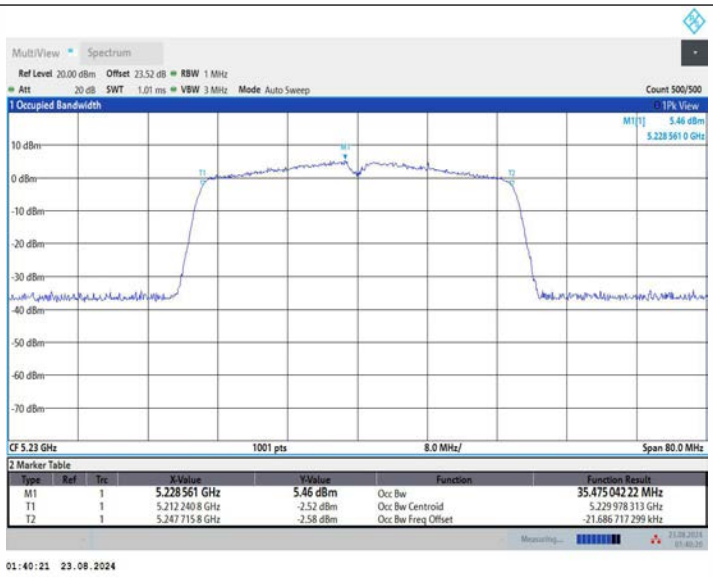

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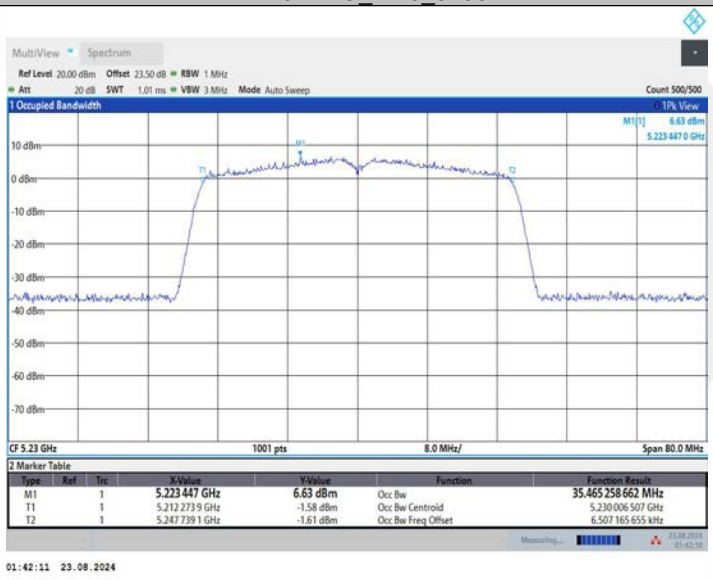

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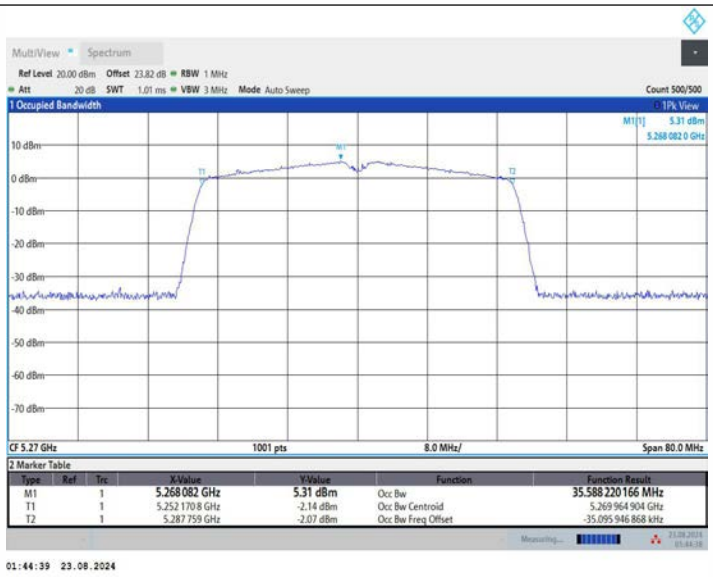

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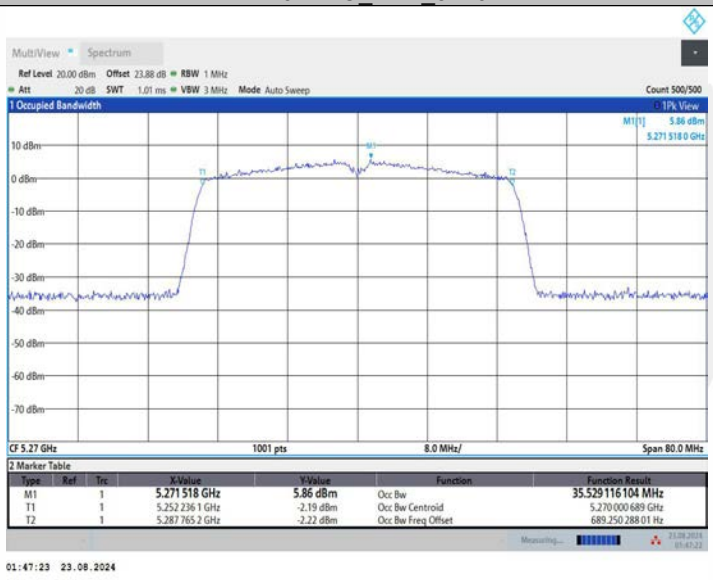

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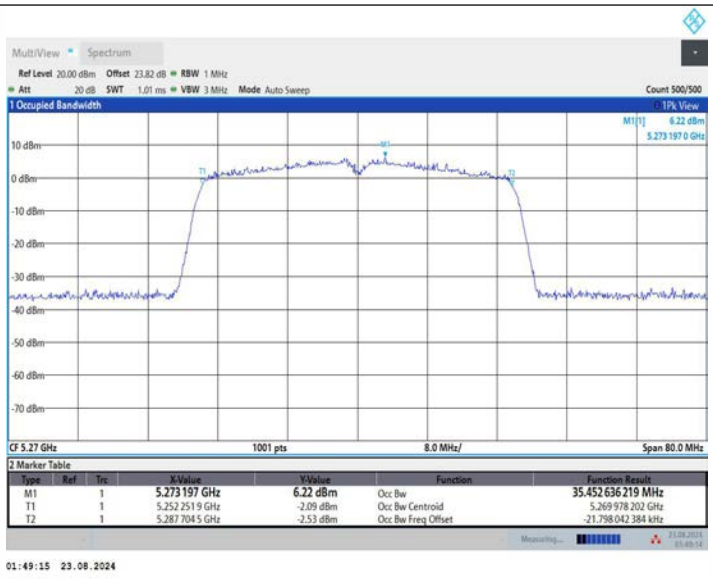

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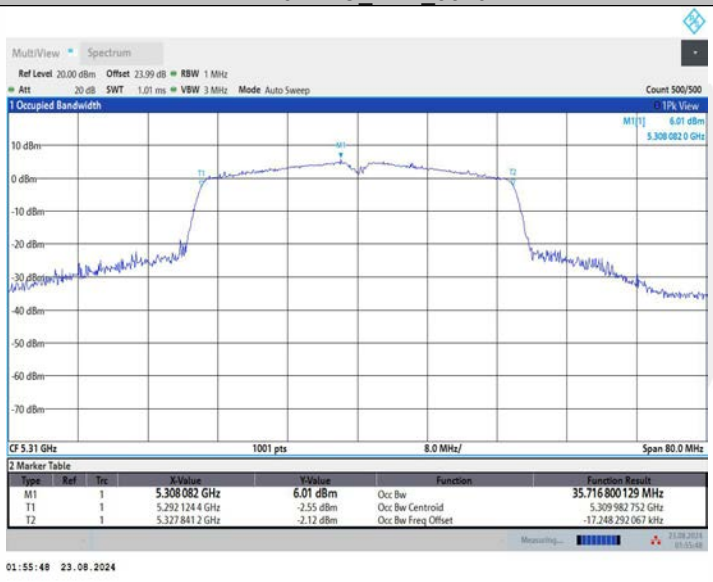

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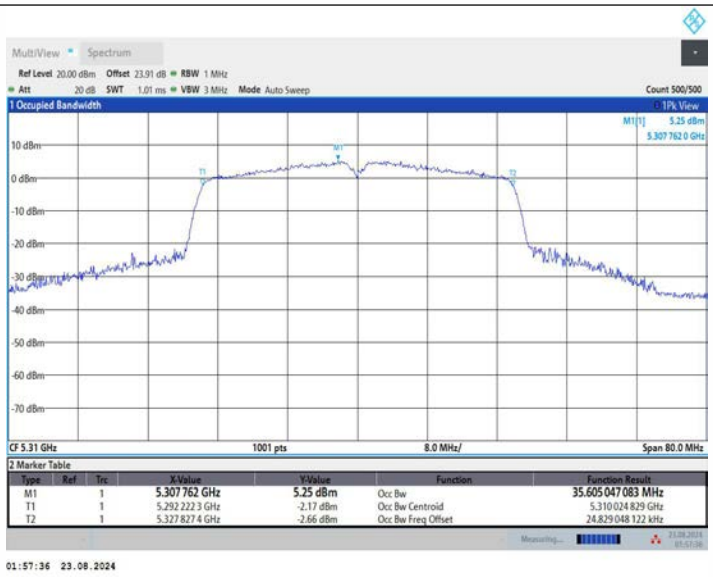

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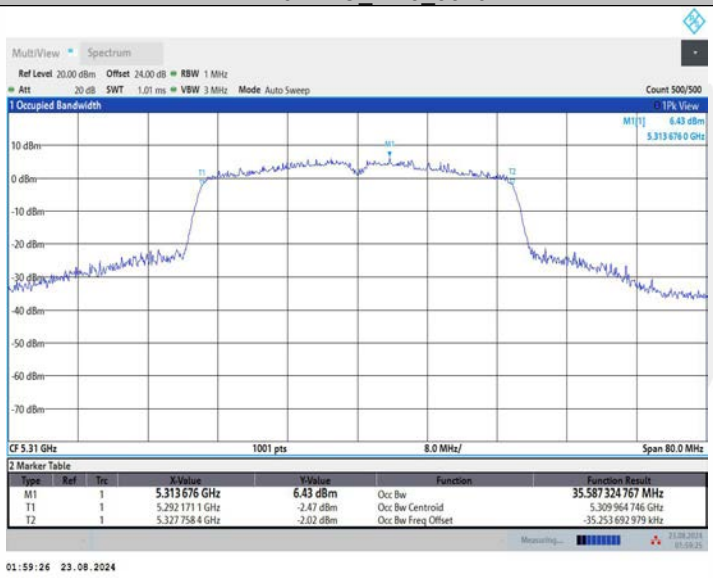

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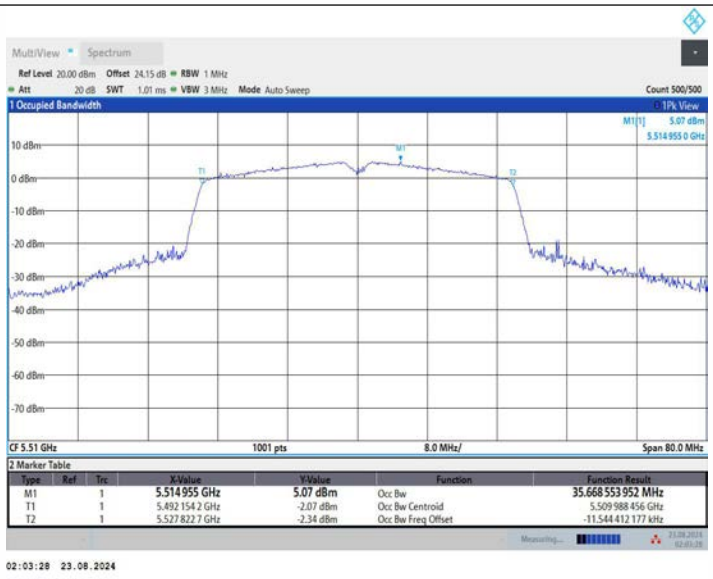
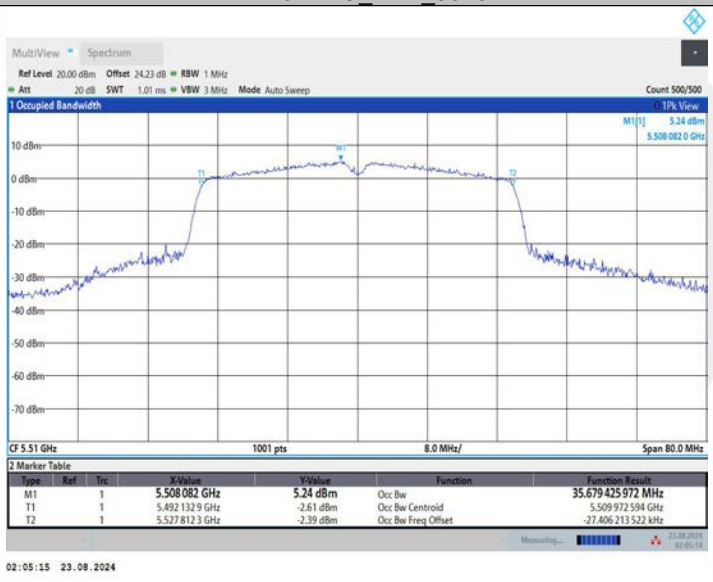


11N40MIMO_Ant2_5510



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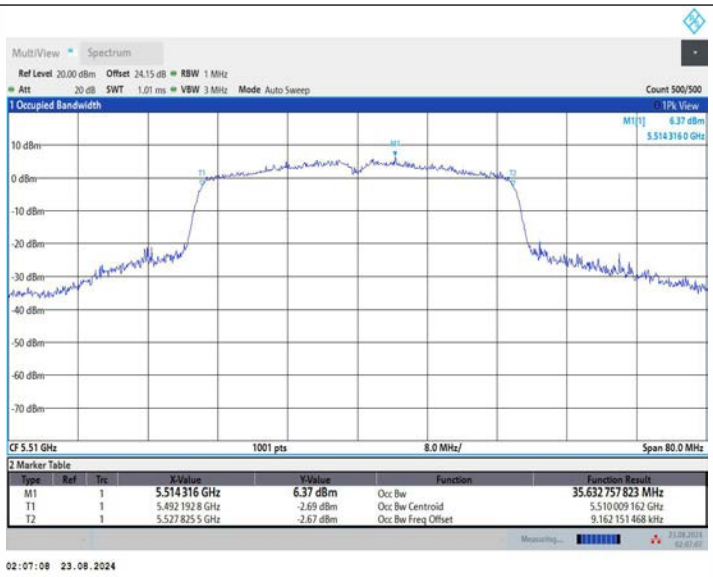

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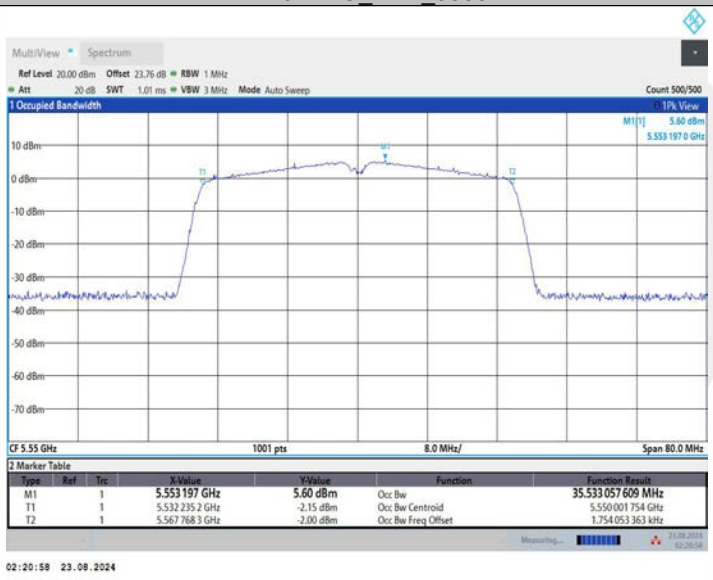

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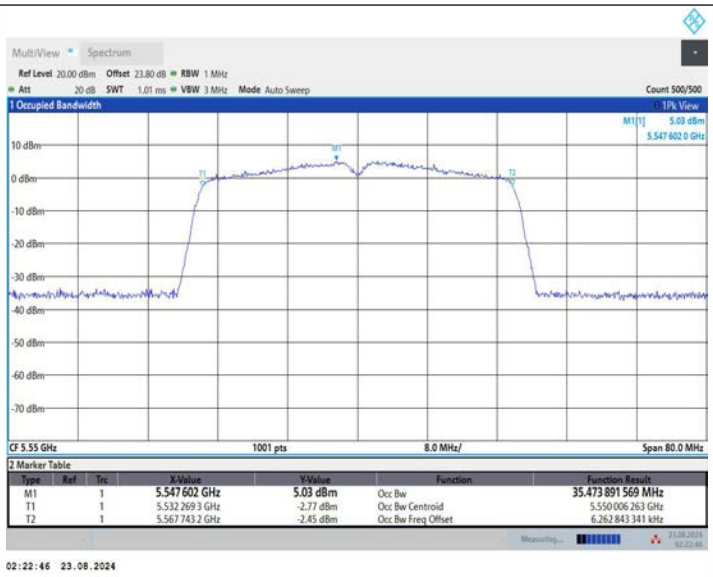

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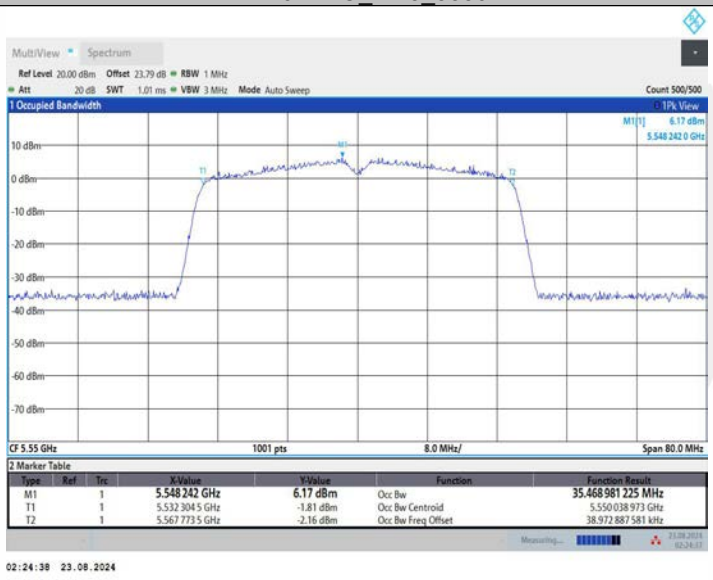

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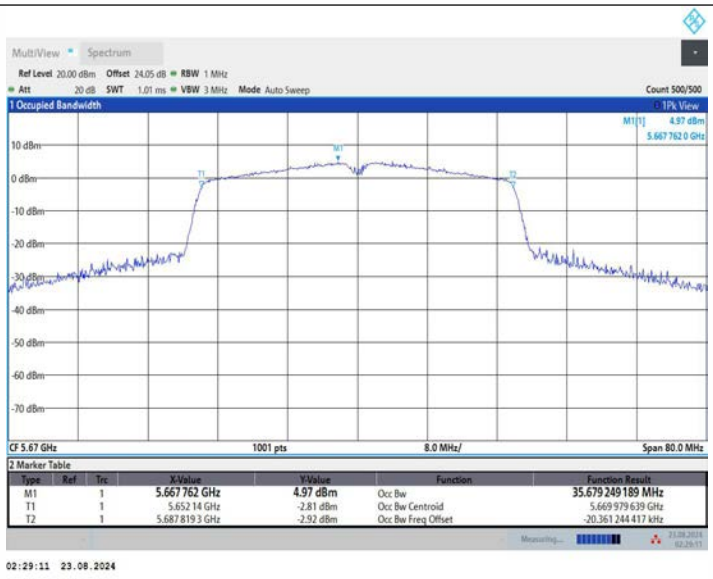

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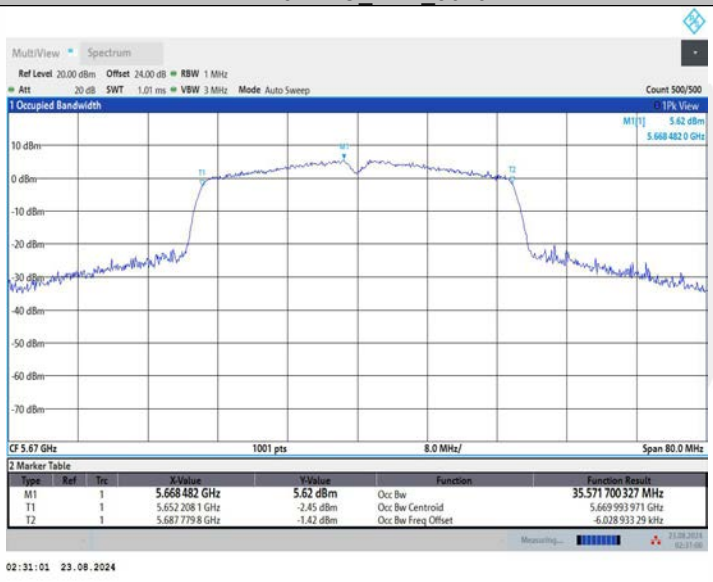

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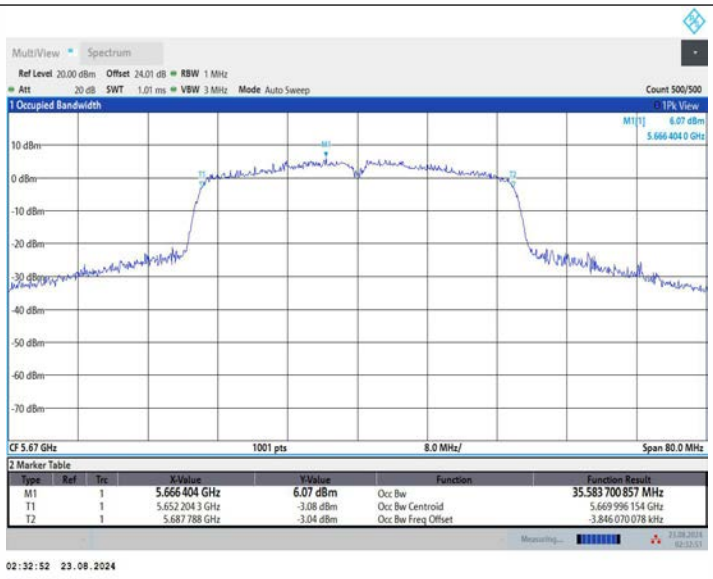

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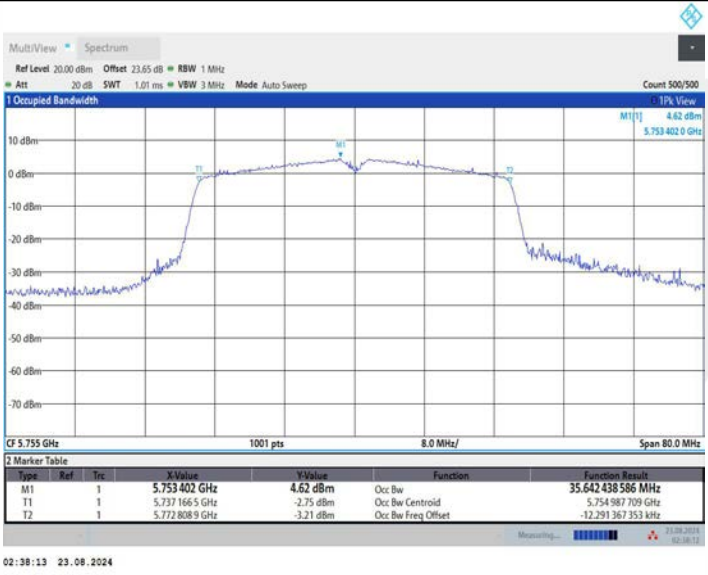

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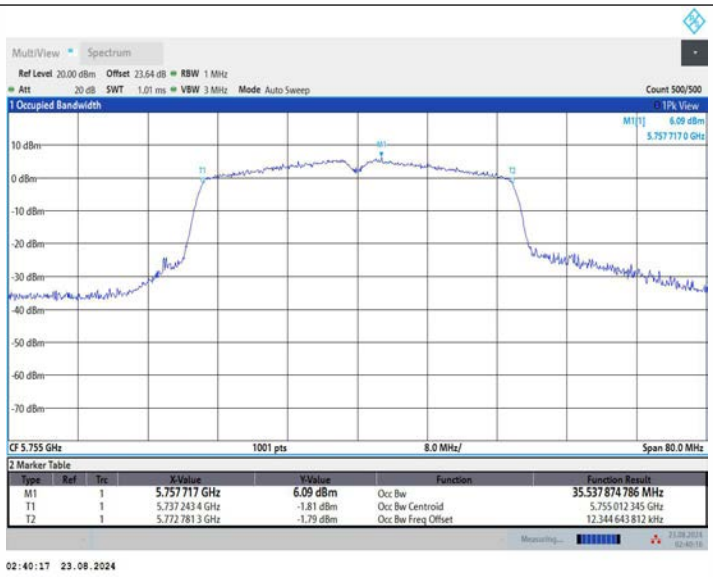

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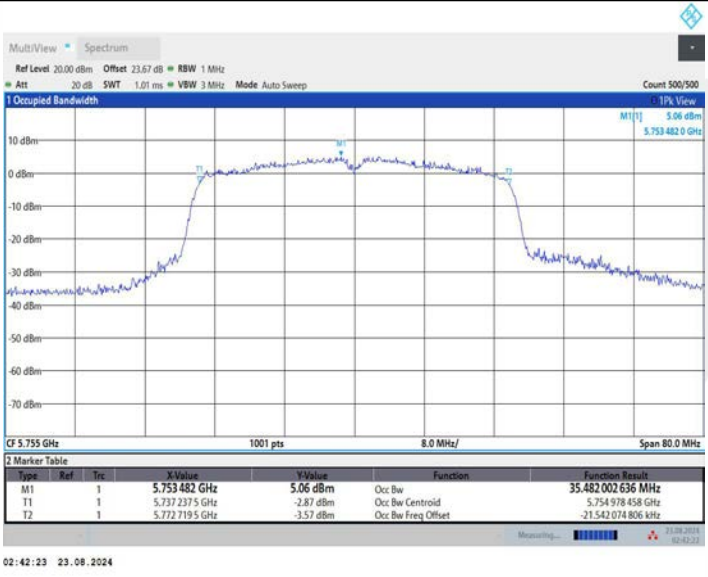

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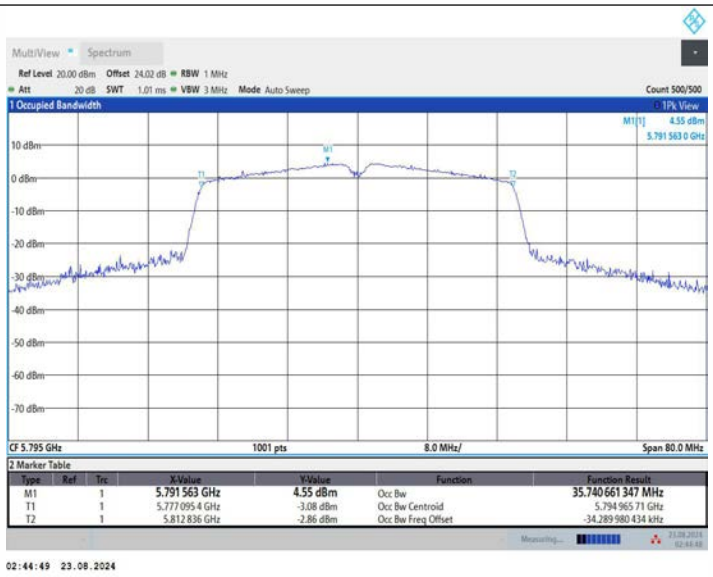

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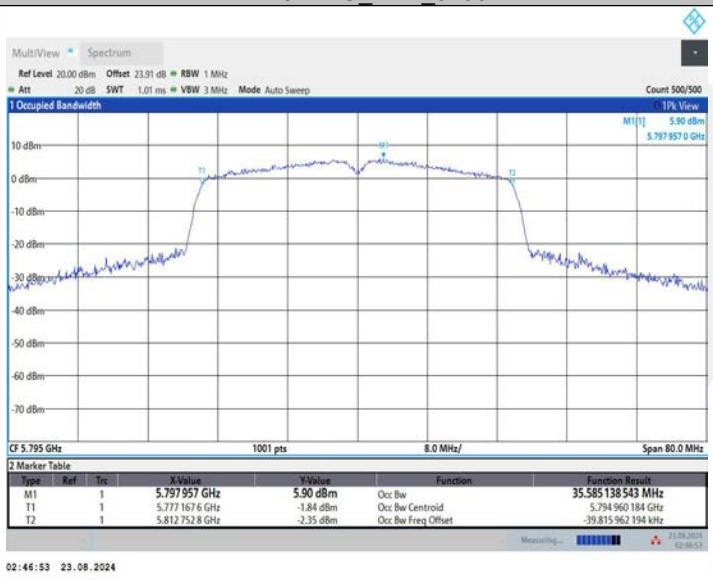

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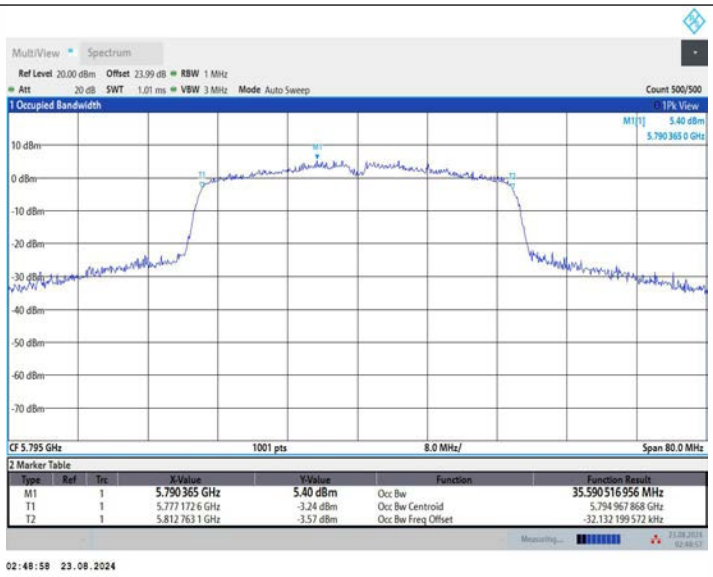

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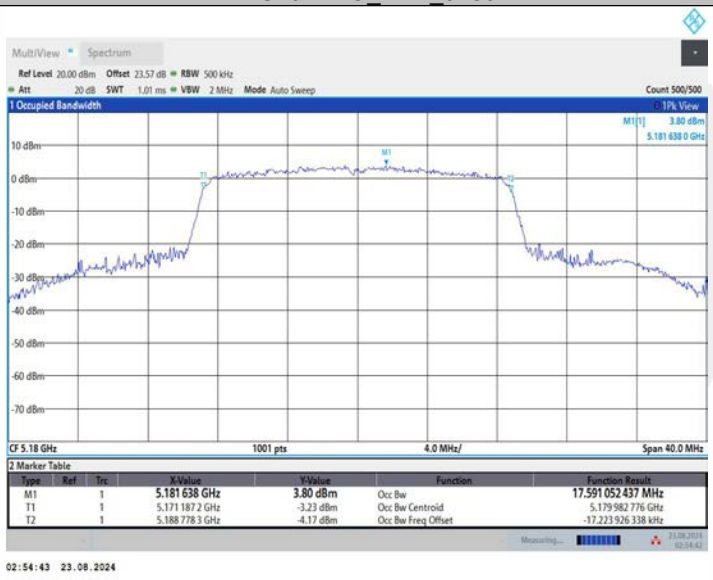

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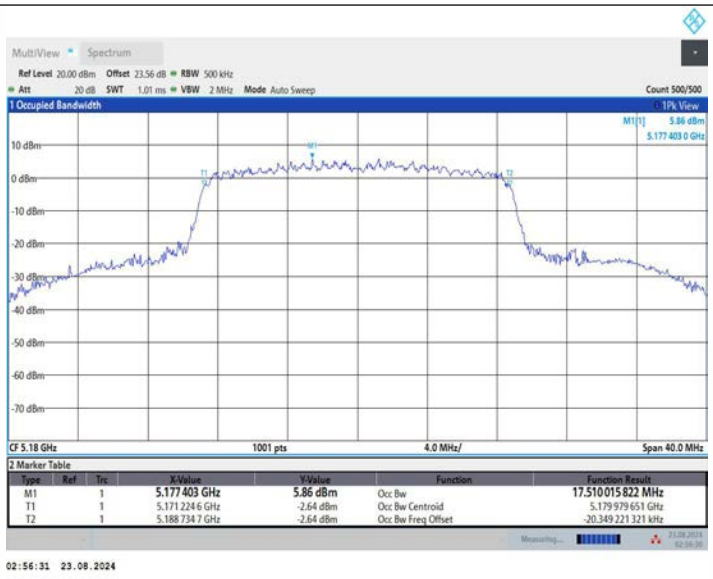

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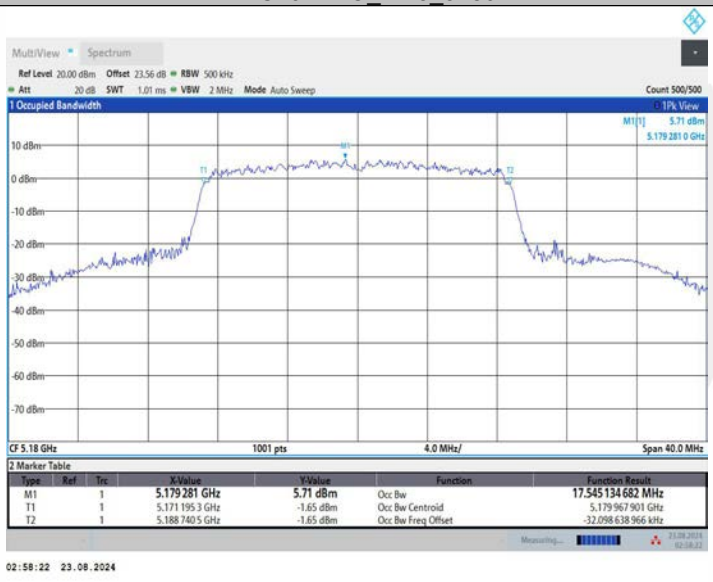

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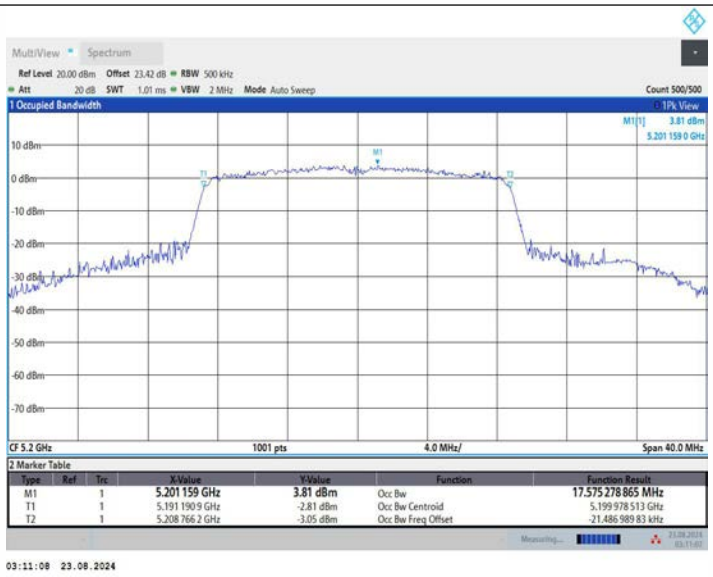

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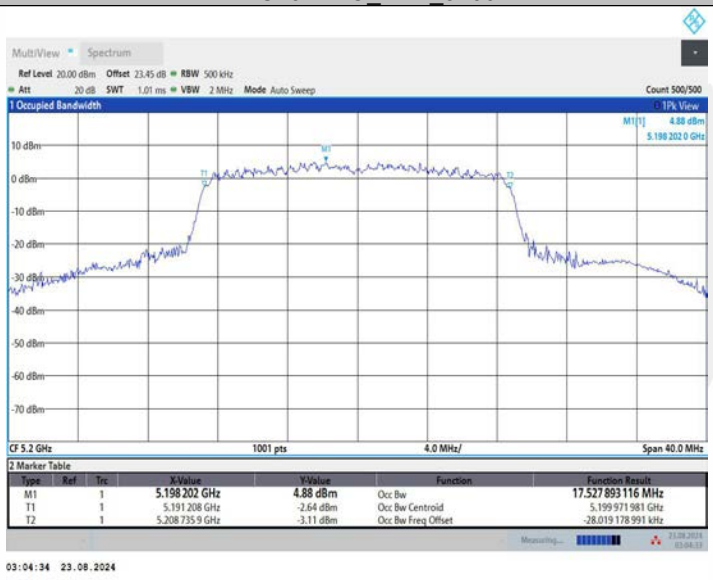

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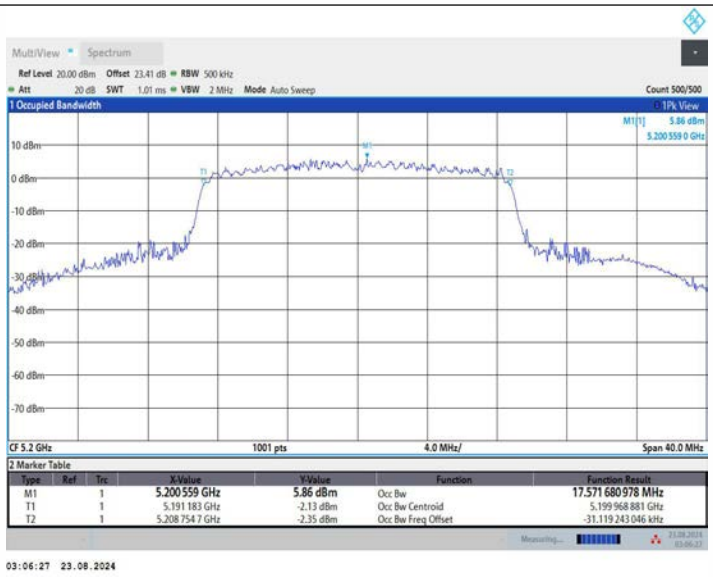

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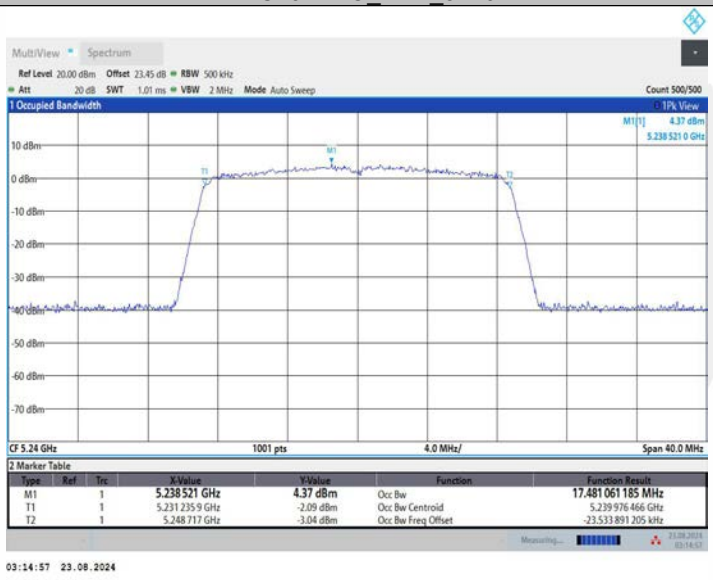

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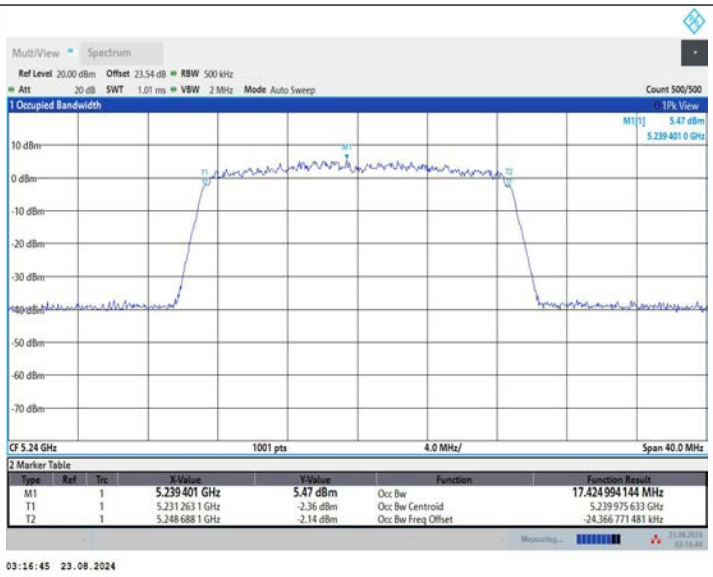

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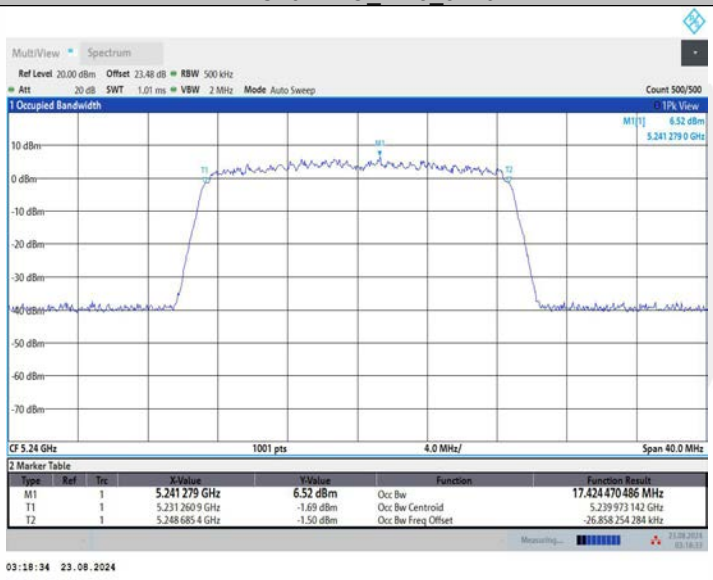

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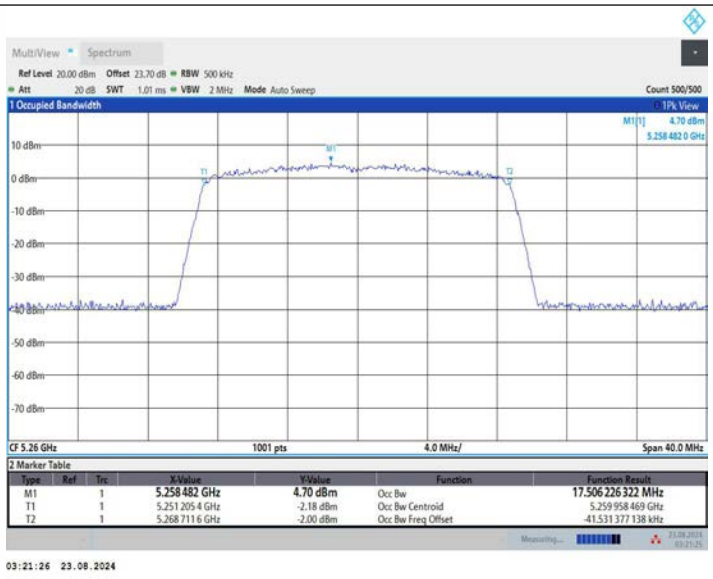

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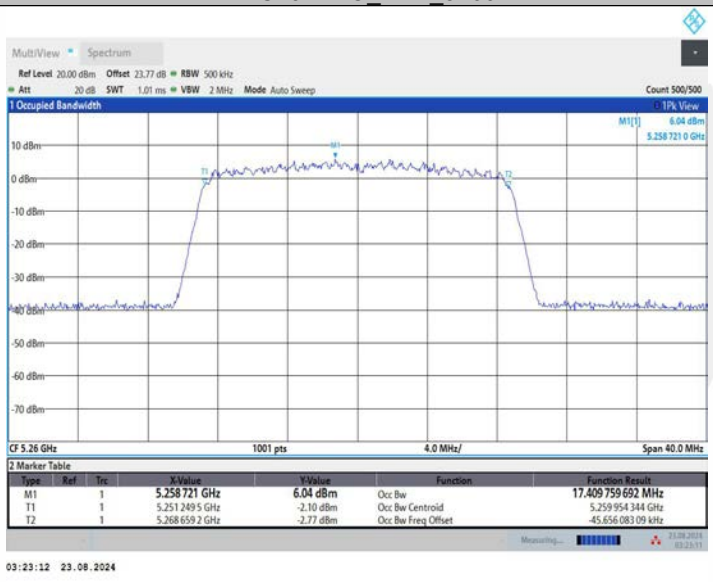

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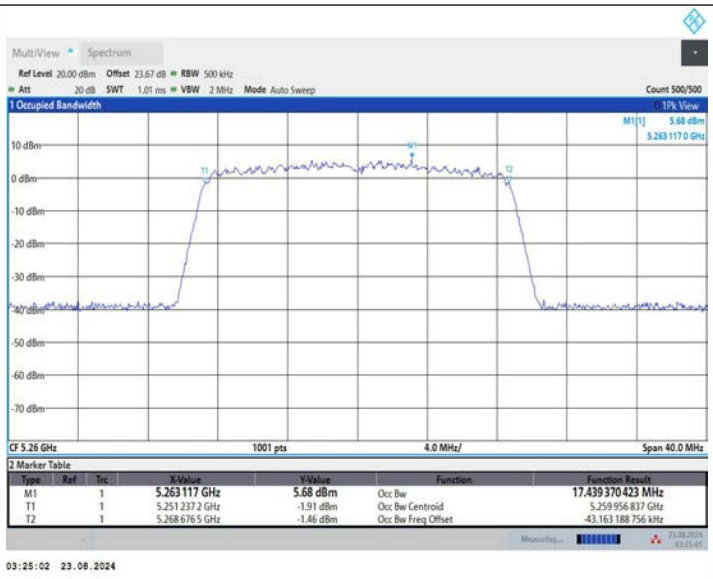

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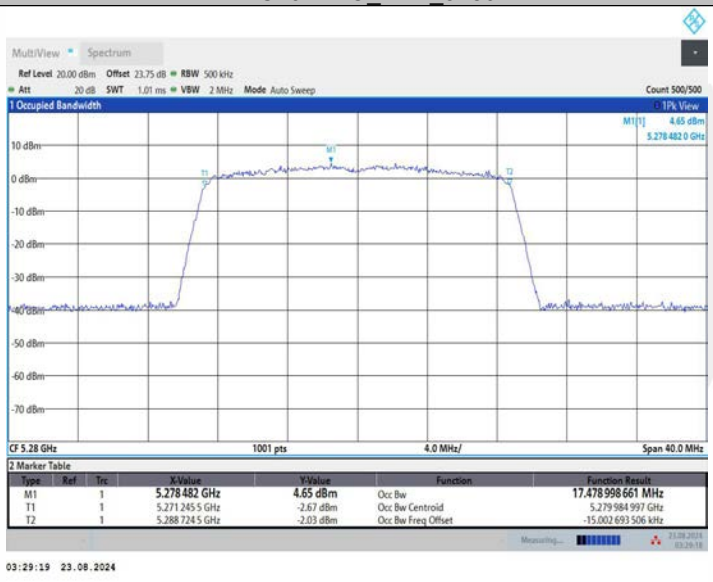

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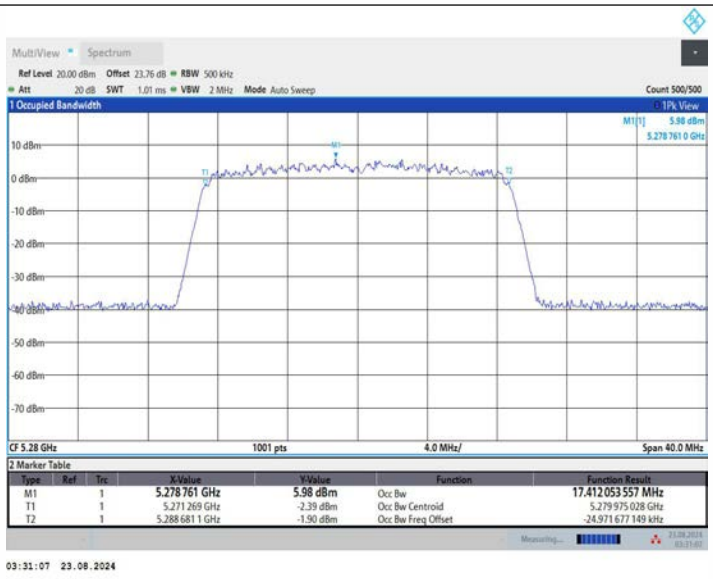

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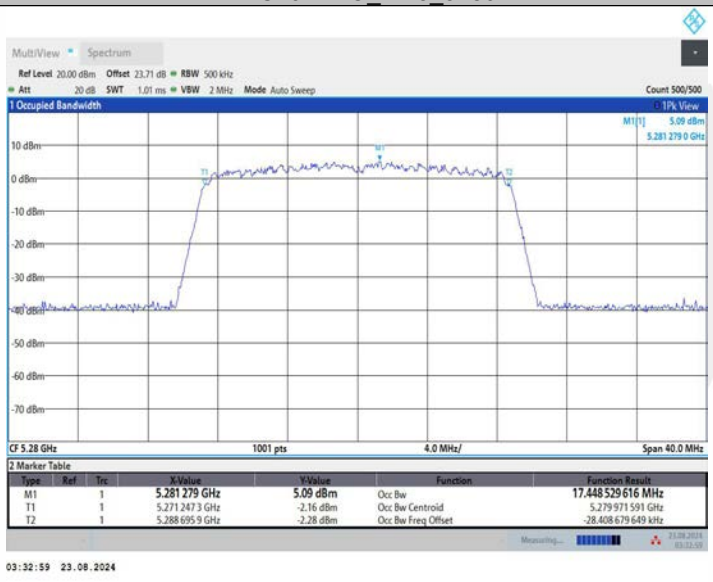

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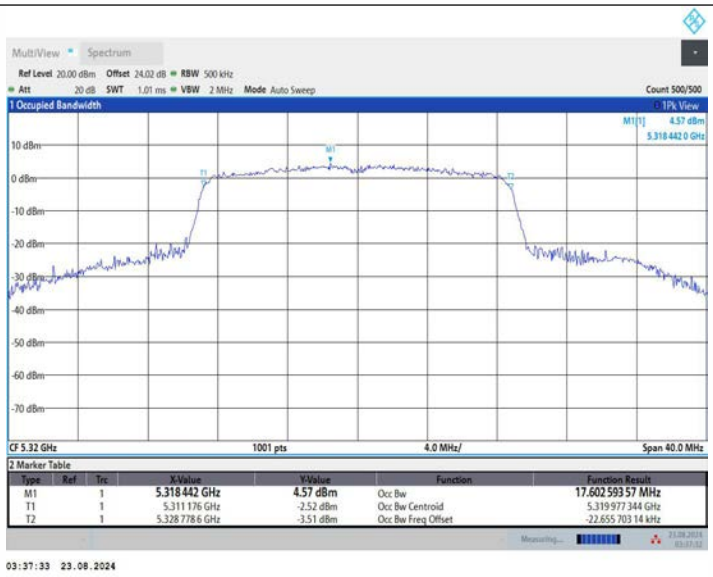

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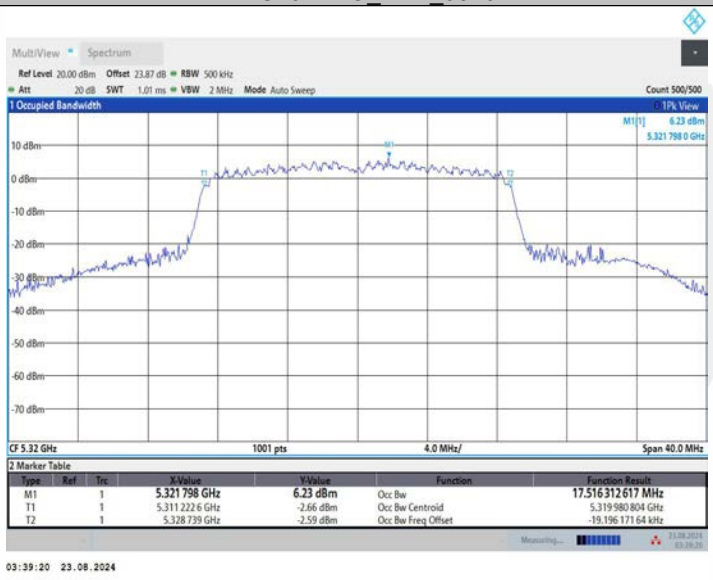

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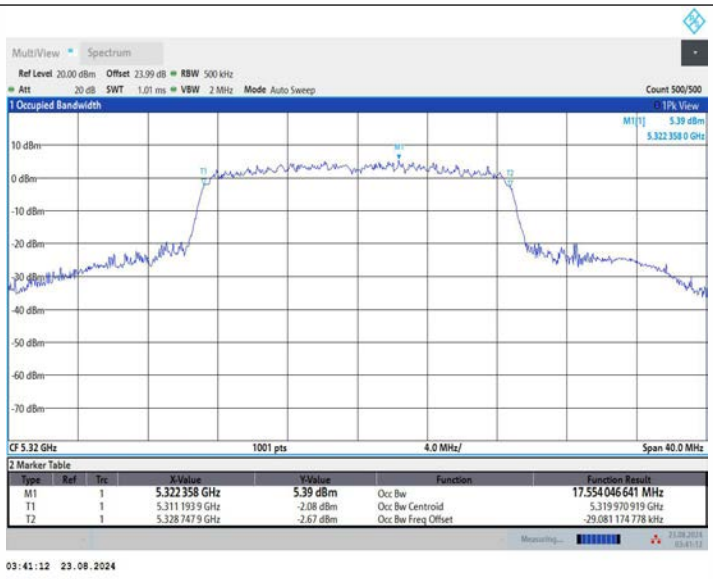

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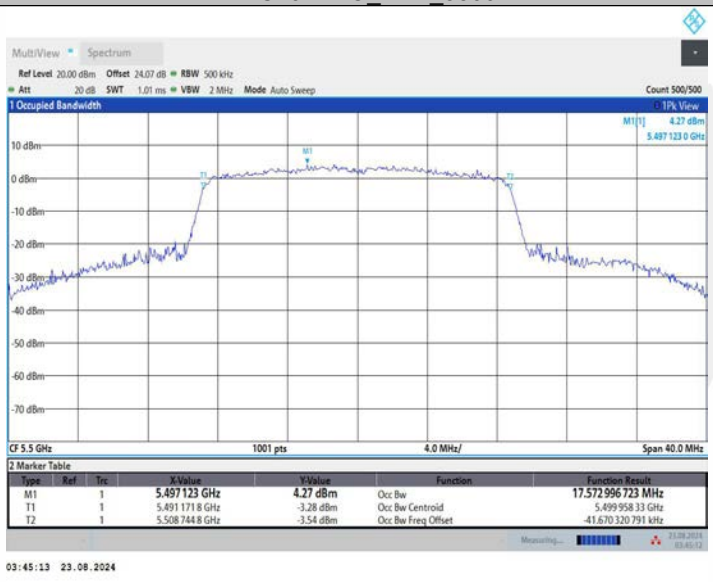

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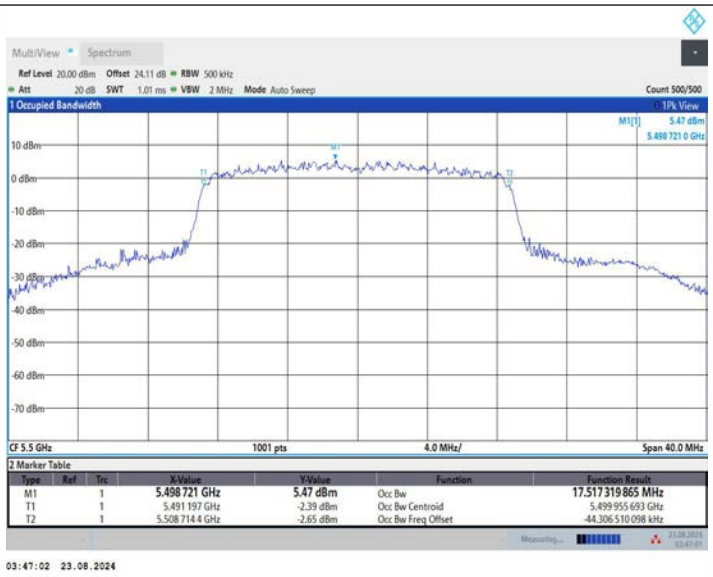

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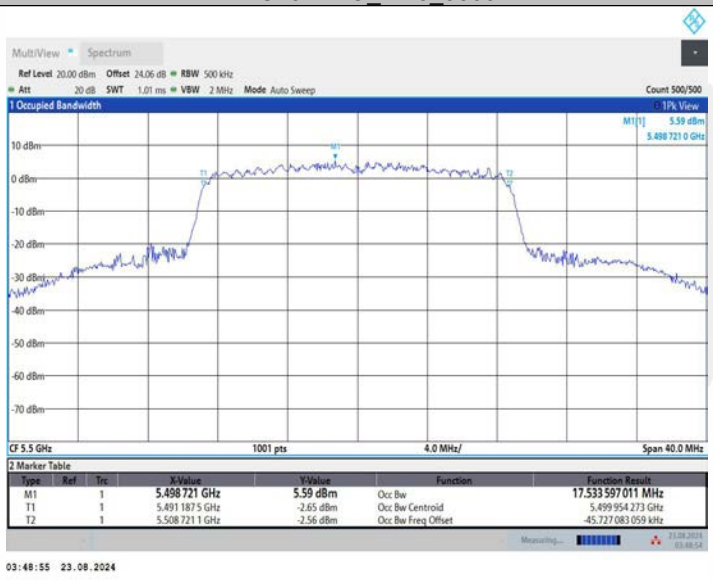

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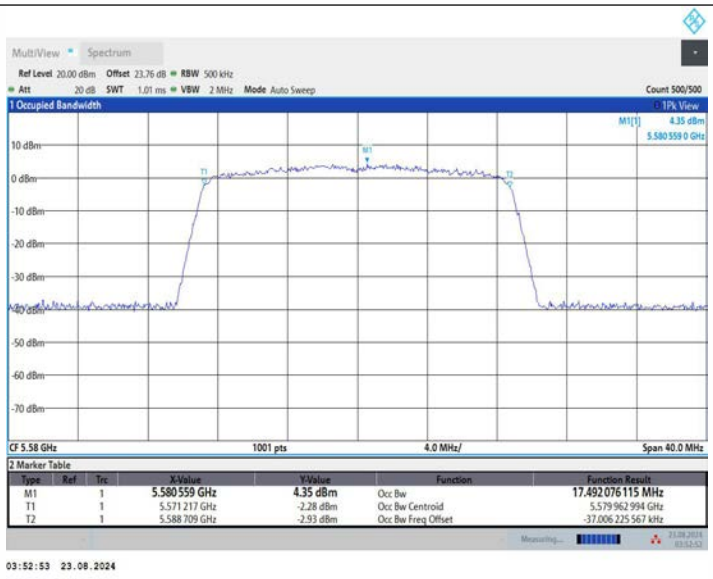

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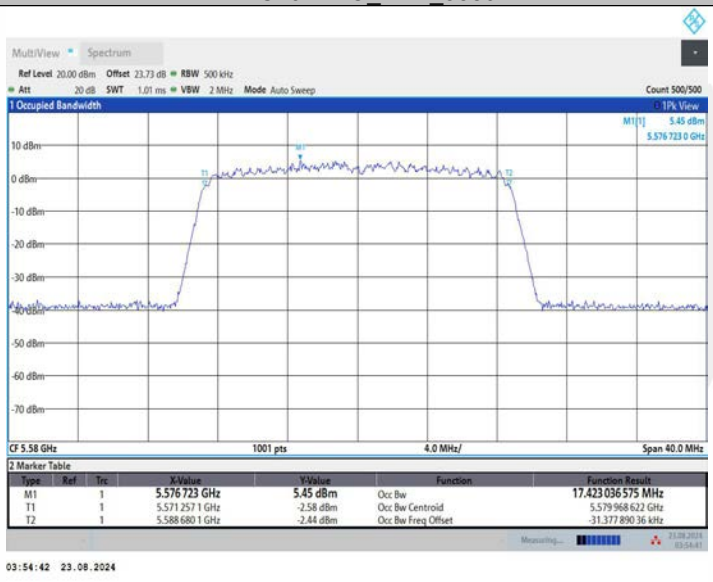

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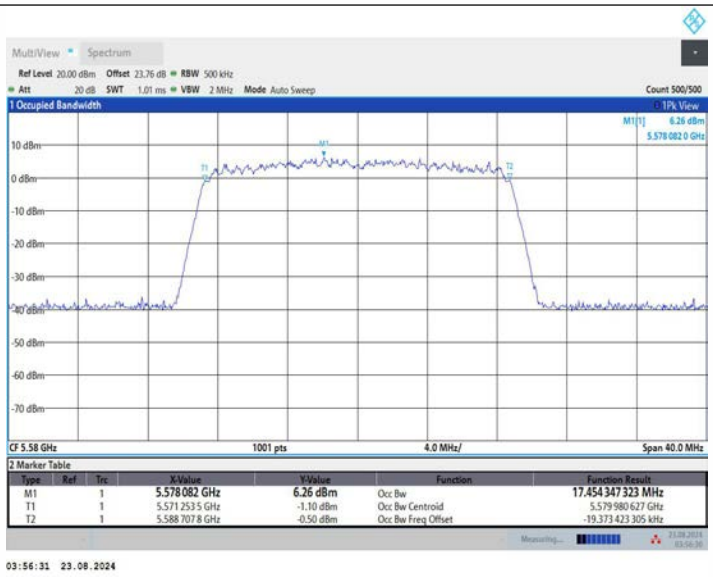

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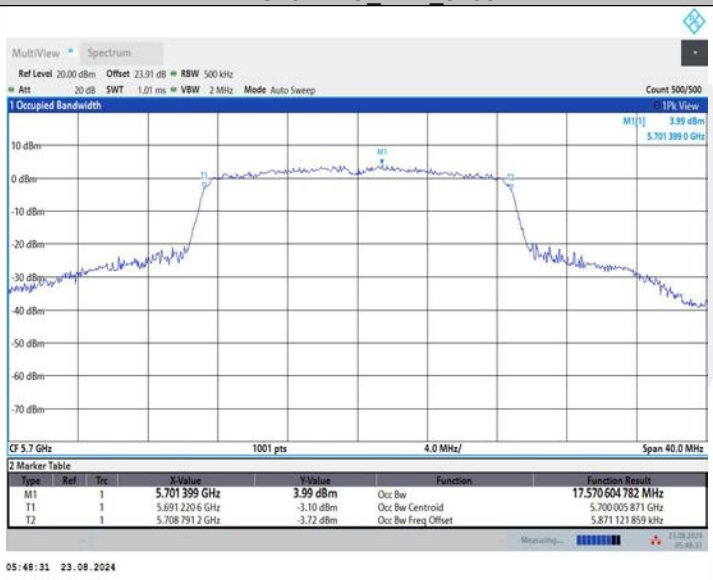

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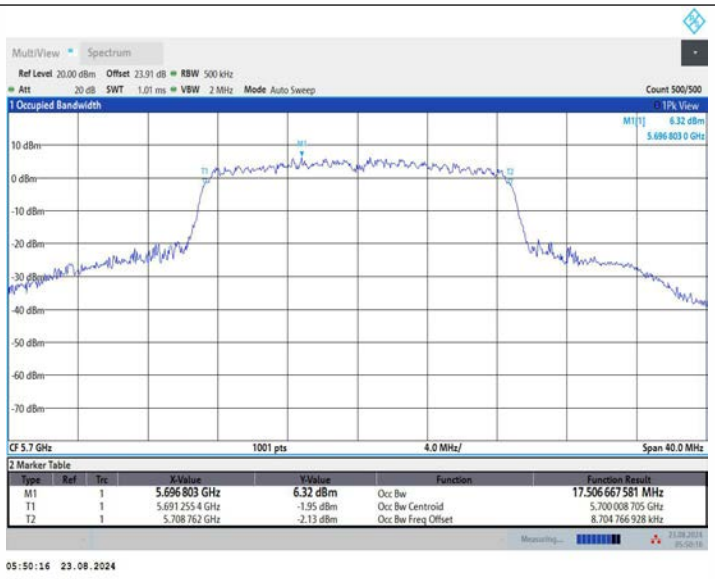

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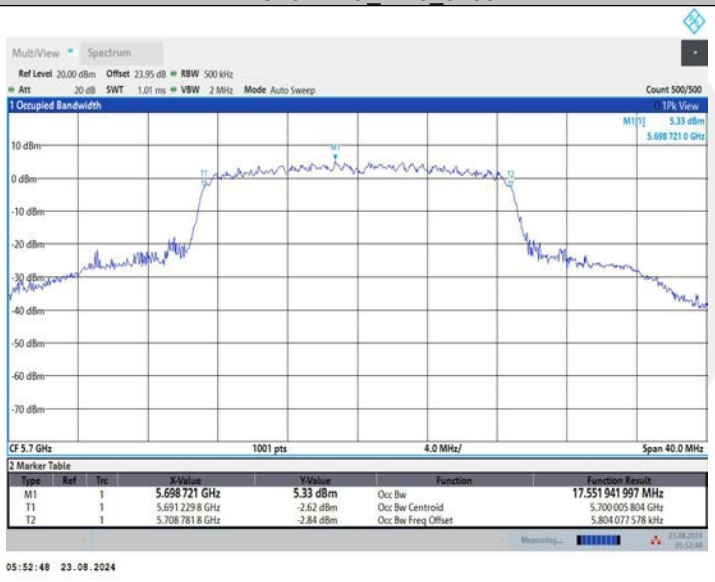

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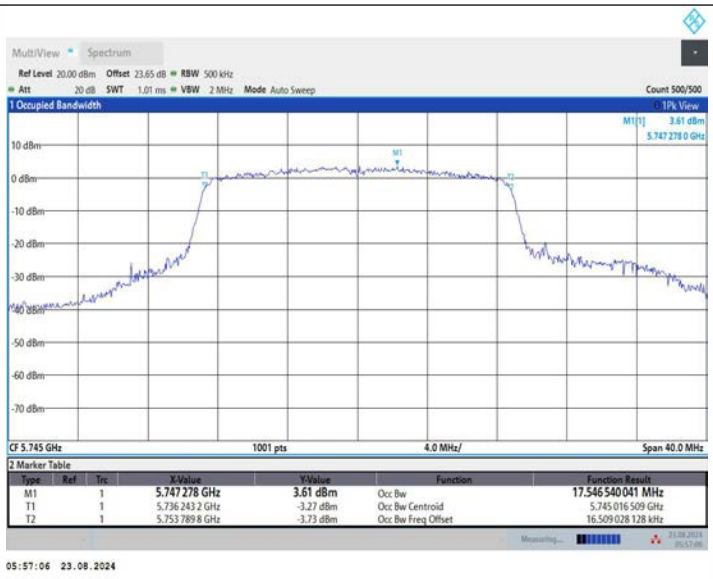

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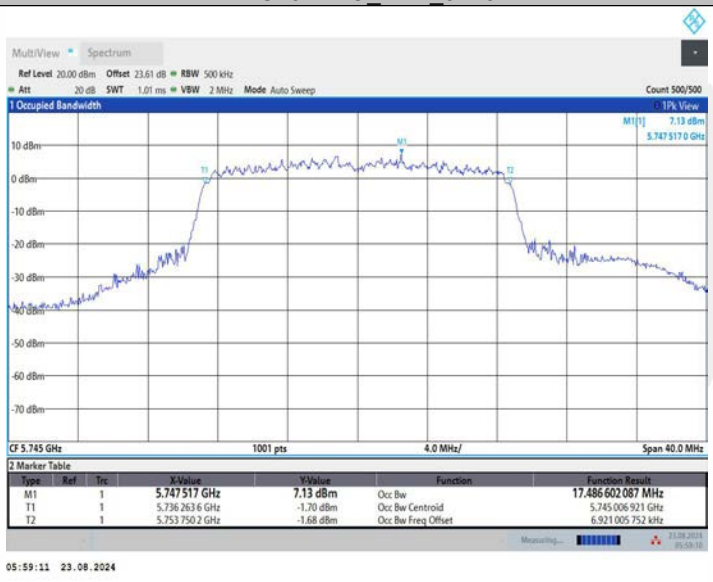

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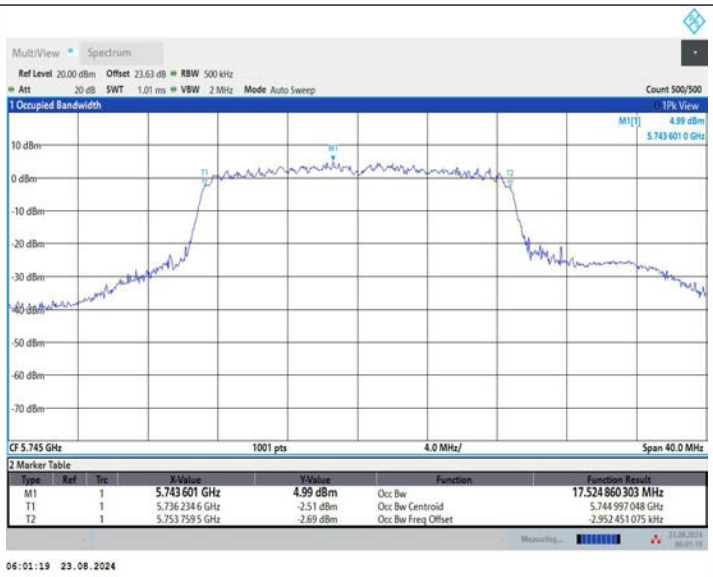

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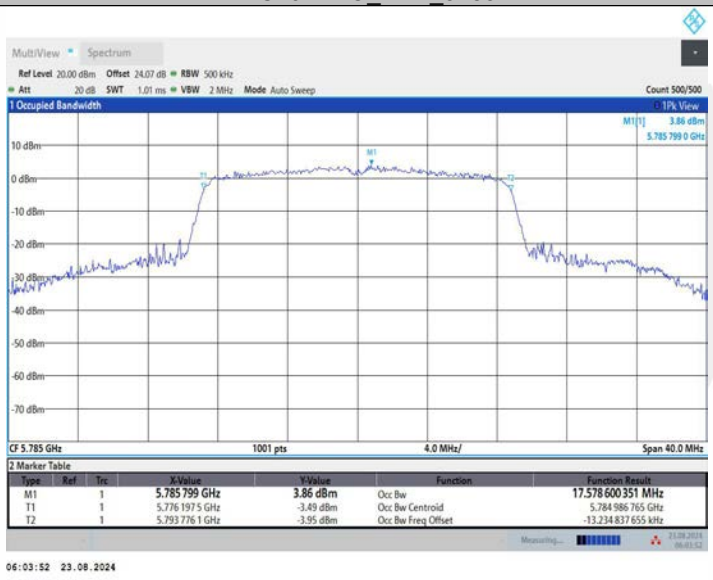

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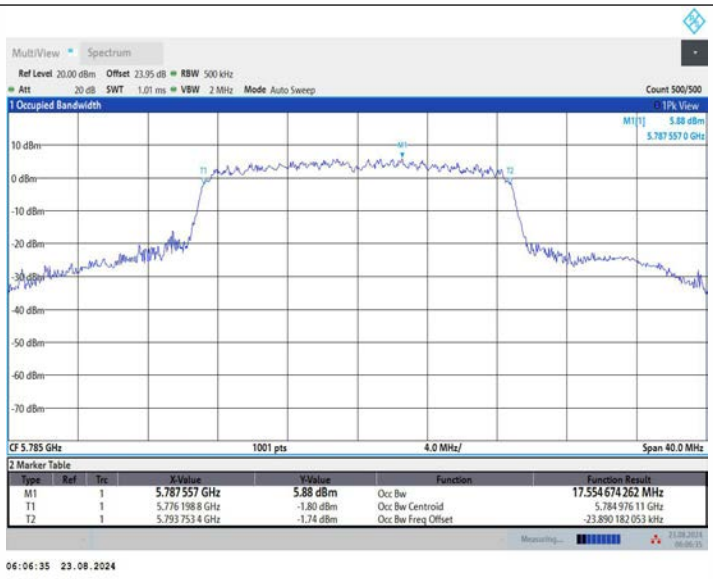

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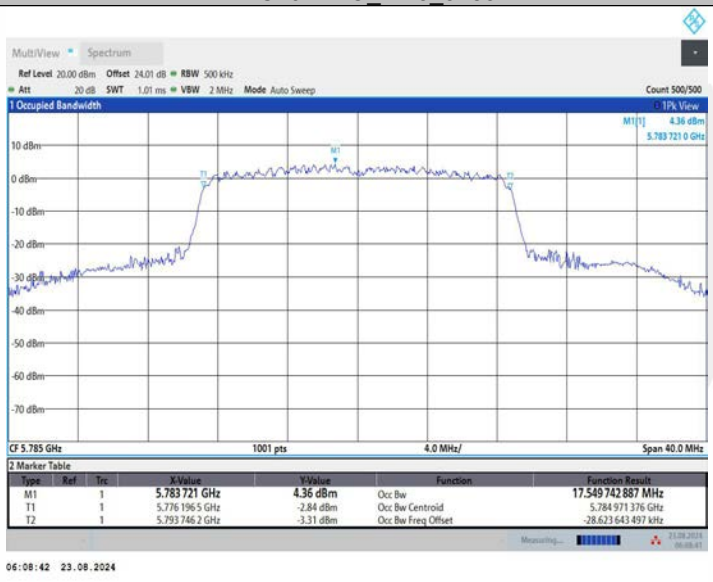

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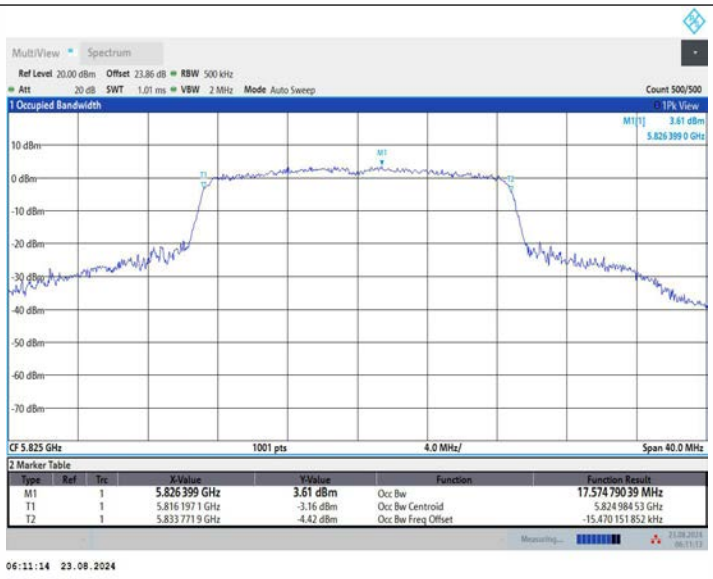

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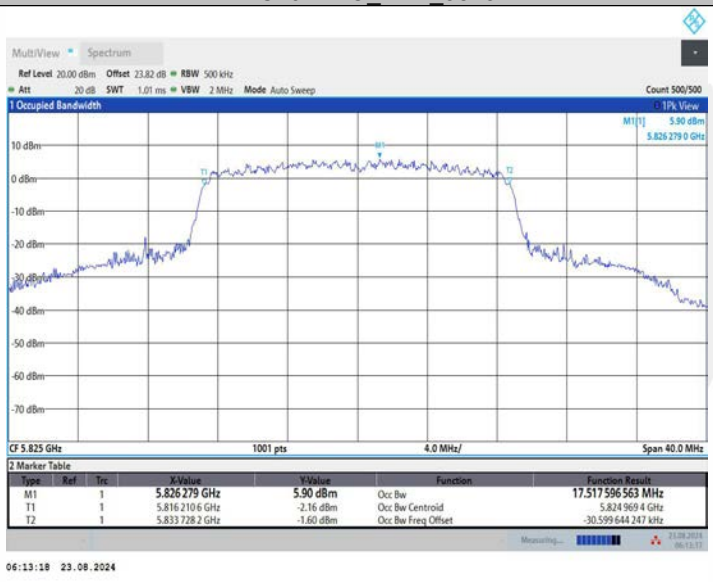

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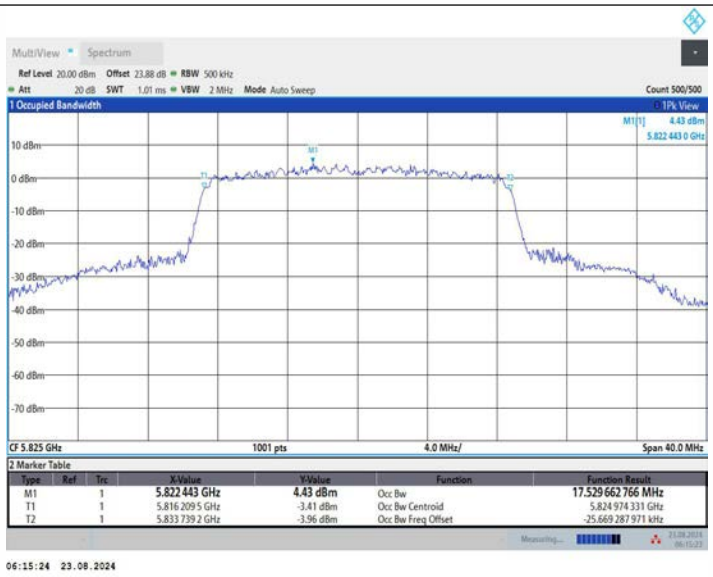

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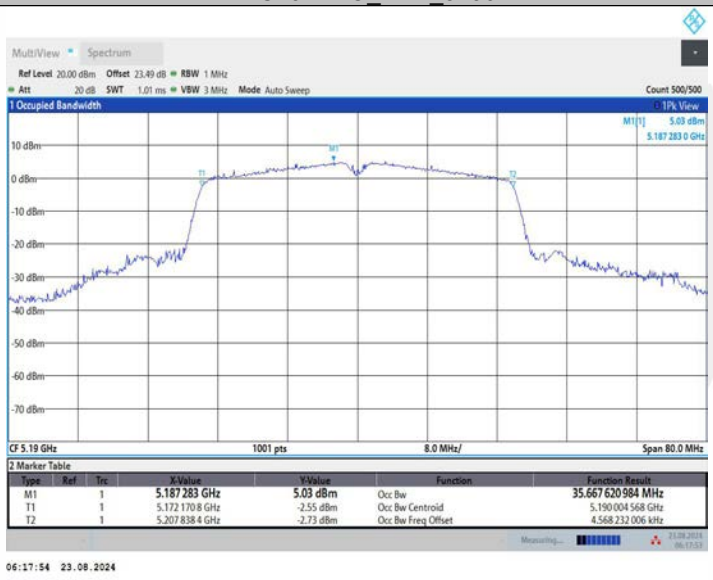

11AC40MIMO_Ant2_5190