



# FCC PART 15 TEST REPORT No.I23Z60761-IOT01

for

**Spectralink Corporation**

**Product name: Wifi/BT Phone**

**Model name: Versity 9753**

With

**FCC ID: IYG97XX**

**Hardware Version: DVT**

**Software Version: vSL25**

**Issued Date: 2023-09-22**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I23Z60761-IOT01	Rev.0	1st edition	2023-07-06
I23Z60761-IOT01	Rev.1	Adjust the CBP result table.	2023-08-07
I23Z60761-IOT01	Rev.2	Add the description for the CBP test	2023-08-25
I23Z60761-IOT01	Rev.3	Update the limit declaration for 26dB bandwidth and 99% OBW on page 33/94. Add the antenna gain on power result table. Update the declaration of CBP about bandwidth reduction.	2023-09-22

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## 1. TEST LABORATORY

### 1.1. Introduction & Accreditation

**Telecommunication Technology Labs, CAICT** is an ISO/IEC 17025:2017 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

### 1.2. Testing Location

Conducted testing Location: CTTL(Huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191

### 1.3. Testing Environment

Normal Temperature: 15-35°C

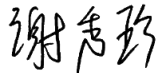
Relative Humidity: 20-75%

### 1.4. Project date

Testing Start Date: 2023-04-21

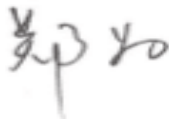
Testing End Date: 2023-07-06

### 1.5. Signature



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Xie Xiuzhen  
(Prepared this test report)



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Zheng Wei  
(Reviewed this test report)



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Pang Shuai  
(Approved this test report)



## **2. CLIENT INFORMATION**

### **2.1 Applicant Information**

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### **2.2 Manufacturer Information**

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Email: andrew.jackson@spectralink.com  
Telephone: +1 (303) 441-7618  
Fax: /

### **3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)**

#### **3.1. About EUT**

Description	Wifi/BT Phone
Model name	Versity 9753
FCC ID	IYG97XX
WLAN Frequency Band	ISM Bands: -5925MHz~6425MHz -6425MHz~6525MHz -6525MHz~6875MHz -6875MHz~7125MHz
Type of modulation	OFDM/OFDMA
Antenna	Integral Antenna
Voltage	3.85V
Equipment class	Indoor client

#### **3.2. Internal Identification of EUT used during the test**

<b>EUT ID*</b>	<b>SN or IMEI</b>	<b>HW Version</b>	<b>SW Version</b>
EUT1	mhne03bqkkg0011	DVT	vSL25

\*EUT ID: is used to identify the test sample in the lab internally.

EUT1 is used for Conduction test.

#### **3.3. General Description**

The Equipment under Test (EUT) is a model of Wifi/BT Phone with Integral antenna and inbuilt battery. It consists of normal options: travel charger, USB cable.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

#### **3.4. Interpretation of the Test Environment**

For the test methods, the test environment uncertainty figures correspond to an expansion factor  $k=2$ .

Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C
humidity	2 %
DC voltages	0.003V

### **4. REFERENCE DOCUMENTS**

#### **4.1. Documents supplied by applicant**

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

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## 4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

FCC Part15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	2021
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12
KDB 987594 D02	GUIDELINES FOR COMPLIANCE TESTING OF UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE 6 GHz (U-NII) DEVICES PART 15, SUBPART E	2021-02
KDB 662911 D01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band(e.g., MIMO, Smart Antenna, etc)	2013-10

## 5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

## 6. SUMMARY OF TEST RESULTS

### 6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Sub-clause of IC	Verdict
Maximum Output Power	15.407	/	<b>P</b>
Peak Power Spectral Density	15.407	/	<b>P</b>
Emission Bandwidth	15.403	/	<b>P</b>
99% Occupied bandwidth	/	/	<b>P</b>
Contention Based Protocol	15.407	/	<b>P</b>
In-Band Emissions	15.407	/	<b>P</b>

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard



## 6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacture as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.2.

This report only deals with the WLAN function among the features described in section 3. KDB 987594 is not accredited by the NVLAP.

## 6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	26°C
Voltage	3.85V
Humidity	44%

## 7. TEST EQUIPMENTS UTILIZED

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2024-06-15
2	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2024-03-06
3	Vector Signal Generator	SMW200A	103421	Rohde & Schwarz	1 year	2024-06-15
4	Attenuator	10dB/2W	/	Rosenberger	/	/
5	Shielding Room	S81	/	ETS-Lindgren	/	/

Instrument	Brand Name	Model
WLAN AP	ASUS	GT-AXE11000

## 8. Measurement Uncertainty

### 8.1 Transmitter Output Power

Measurement Uncertainty: 0.387dB, k=1.96

### 8.2 Peak Power Spectral Density

Measurement Uncertainty: 0.705dB, k=1.96

### 8.3 99% Occupied bandwidth

Measurement Uncertainty: 60.80Hz, k=1.96

### 8.4 Occupied Channel Bandwidth

Measurement Uncertainty: 60.80Hz, k=1.96

### 8.5 Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

### 8.6 Spurious Emissions

#### Conducted (k=1.96)

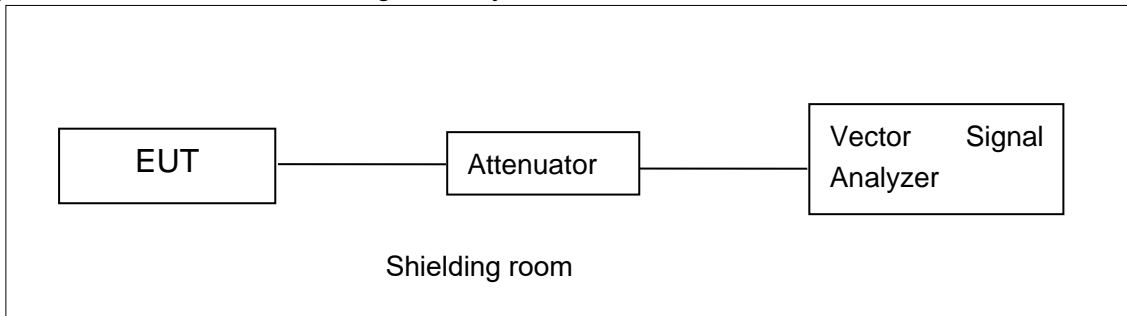
Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

## ANNEX A: MEASUREMENT RESULTS

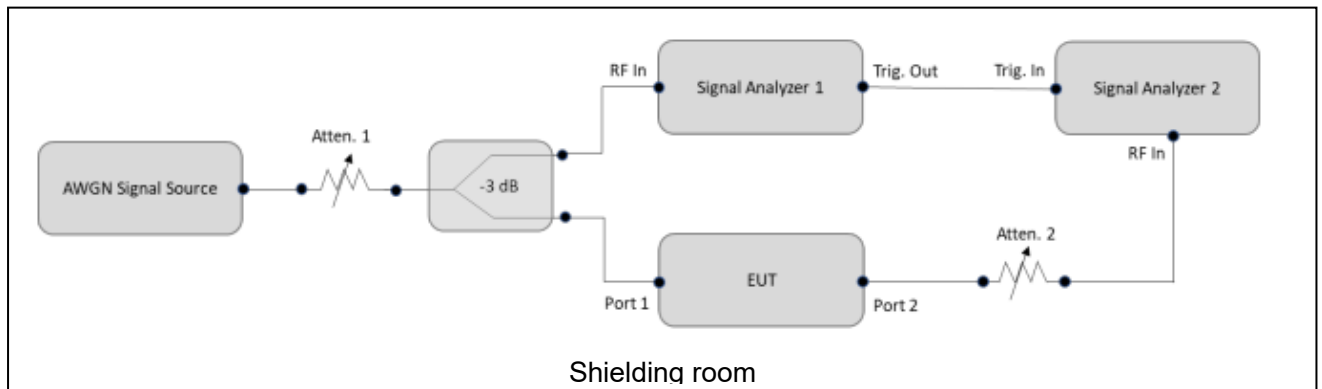
### A.1. Measurement Method

#### A.1.1. Conducted Measurements

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode.
- 3). Set the EUT to the required channel.
- 4). Set the spectrum analyzer to start measurement.
- 5). Record the values. Vector Signal Analyzer



Test Setup for Maximum Output Power, Peak Power Spectral Density, Occupied 26dB Bandwidth, 99% Occupied bandwidth, In-Band Emissions



Test Setup for Contention Based Protocol

## A.2. Maximum output Power

### Measurement Limit and Method:

Standard	Frequency (MHz)	e.i.r.p Limit (dBm)
FCC CRF Part 15.407(a)	5925MHz~6425MHz	24dBm
	6425MHz~6525MHz	24dBm
	6525MHz~6875MHz	24dBm
	6875MHz~7125MHz	24dBm

The measurement method SA-2 is made according to KDB 987594 and KDB 789033.

### Antenna Gain

Mode	Ant2(dBi)	Ant3(dBi)	Power(dBi)	PSD(dBi)
CDD	1.35	1.2	1.35	4.29
BF	1.35	1.2	4.29	4.29

For BF transmissions, power and PSD directional gain is calculated as:

Directional gain =  $10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{Gn/20})^2 / N_{ANT}]$  dBi, as following table for PSD.  $N_{ANT}$  = number of transmit antennas NSS = number of spatial streams. (The worst case directional gain will occur when NSS = 1)

For CDD transmissions, directional gain is calculated as:

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

Directional gain = GANT MAX (Ant.1 Gain, Ant.2 Gain, ...) + Array Gain, where Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;

b) For PSD, the directional gain calculation is following:

Directional gain =  $10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{Gn/20})^2 / N_{ANT}]$  dBi.  $N_{ANT}$  = number of transmit antennas NSS = number of spatial streams. (The worst case directional gain will occur when NSS = 1)

802.11a support CDD mode. 802.11ax support CDD and BF mode, as both of the CDD and BF use the same power setting, so report the BF mode result.

### Measurement Results:

#### SISO

#### 802.11a mode

Frequency	Test Result (dBm)					
	Data Rate					
	802.11a 6Mbps					
	Ant2 Conducted	Antenna Gain	Ant2 e.i.r.p	Ant3 Conducted	Antenna Gain	Ant3 e.i.r.p

5955MHz (Ch1)	7.41	1.35	8.76	7.72	1.2	8.92
6175MHz (Ch45)	7.17	1.35	8.52	6.95	1.2	8.15
6415MHz (Ch93)	6.10	1.35	7.45	6.70	1.2	7.90
6435MHz (Ch97)	6.19	1.35	7.54	6.84	1.2	8.04
6475MHz (Ch105)	6.32	1.35	7.67	6.60	1.2	7.80
6515MHz (Ch113)	6.33	1.35	7.68	6.96	1.2	8.16
6535MHz (Ch117)	6.11	1.35	7.46	6.86	1.2	8.06
6695MHz (Ch149)	5.95	1.35	7.30	6.81	1.2	8.01
6855MHz (Ch181)	6.79	1.35	8.14	6.98	1.2	8.18
6875MHz (Ch185)	6.85	1.35	8.20	6.74	1.2	7.94
6895MHz (ch189)	6.55	1.35	7.90	6.67	1.2	7.87
6995MHz (Ch209)	7.39	1.35	8.74	7.49	1.2	8.69
7115MHz (Ch233)	7.21	1.35	8.56	6.69	1.2	7.89

The data rate 6 Mbps is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ax HE20(full RU) mode

Frequency	Test Result (dBm)					
	Data Rate					
	802.11ax HE20 MCS0					
	Ant2 Conducted	Antenna Gain	Ant2 e.i.r.p	Ant3 Conducted	Antenna Gain	Ant3 e.i.r.p
5955MHz (Ch1)	7.71	1.35	9.06	7.63	1.2	8.83
6175MHz (Ch45)	6.50	1.35	7.85	6.37	1.2	7.57
6415MHz (Ch93)	6.02	1.35	7.37	6.47	1.2	7.67

6435MHz (Ch97)	6.08	1.35	7.43	6.50	1.2	7.70
6475MHz (Ch105)	6.21	1.35	7.56	6.41	1.2	7.61
6515MHz (Ch113)	6.27	1.35	7.62	6.87	1.2	8.07
6535MHz (Ch117)	6.05	1.35	7.40	6.71	1.2	7.91
6695MHz (Ch149)	5.88	1.35	7.23	6.76	1.2	7.96
6855MHz (Ch181)	6.77	1.35	8.12	6.83	1.2	8.03
6875MHz (Ch185)	6.78	1.35	8.13	6.58	1.2	7.78
6895MHz (ch189)	6.55	1.35	7.90	6.51	1.2	7.71
6995MHz (Ch209)	7.35	1.35	8.70	7.36	1.2	8.56
7115MHz (Ch233)	-2.18	1.35	-0.83	-3.12	1.2	-1.92

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ax-HE40(full RU) mode

Frequency	Test Result (dBm)					
	Data Rate					
	802.11ax HE40 MCS0					
	Ant2 Conducted	Antenna Gain	Ant2 e.i.r.p	Ant3 Conducted	Antenna Gain	Ant3 e.i.r.p
5965MHz (Ch3)	11.54	1.35	12.89	11.39	1.2	12.59
6165MHz (Ch43)	10.35	1.35	11.70	10.26	1.2	11.46
6405MHz (Ch91)	9.06	1.35	10.41	10.54	1.2	11.74
6445MHz (Ch99)	9.08	1.35	10.43	10.52	1.2	11.72
6485MHz (Ch107)	9.10	1.35	10.45	11.08	1.2	12.28
6525MHz (Ch115)	8.97	1.35	10.32	10.75	1.2	11.95

6565MHz (Ch123)	9.52	1.35	10.87	11.01	1.2	12.21
6685MHz (Ch147)	8.58	1.35	9.93	10.79	1.2	11.99
6845MHz (Ch179)	9.80	1.35	11.15	11.00	1.2	12.20
6885MHz (Ch187)	9.71	1.35	11.06	10.67	1.2	11.87
6925MHz (ch195)	9.47	1.35	10.82	10.84	1.2	12.04
6965MHz (Ch203)	9.70	1.35	11.05	11.18	1.2	12.38
7085MHz (Ch227)	9.67	1.35	11.02	10.27	1.2	11.47

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ax-HE80(full RU) mode

Frequency	Test Result (dBm)					
	Data Rate					
	802.11ax HE80 MCS0					
	Ant2 Conducted	Antenna Gain	Ant2 e.i.r.p	Ant3 Conducted	Antenna Gain	Ant3 e.i.r.p
5985MHz (Ch7)	13.73	1.35	15.08	13.56	1.2	14.76
6145MHz (Ch39)	13.51	1.35	14.86	12.25	1.2	13.45
6385MHz (Ch87)	11.33	1.35	12.68	12.77	1.2	13.97
6465MHz (Ch103)	11.35	1.35	12.70	12.74	1.2	13.94
6545MHz (Ch119)	11.87	1.35	13.22	13.17	1.2	14.37
6625MHz (Ch135)	11.03	1.35	12.38	13.02	1.2	14.22
6705MHz (Ch151)	11.34	1.35	12.69	12.97	1.2	14.17
6785MHz (Ch167)	11.77	1.35	13.12	12.87	1.2	14.07
6865MHz (Ch183)	11.72	1.35	13.07	12.90	1.2	14.10

6945MHz (Ch199)	11.70	1.35	13.05	13.14	1.2	14.34
7025MHz (Ch215)	12.06	1.35	13.41	13.18	1.2	14.38

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ax-HE160(full RU) mode

Frequency	Test Result (dBm)					
	Data Rate					
	802.11ax HE160 MCS0					
	Ant2 Conducted	Antenna Gain	Ant2 e.i.r.p	Ant3 Conducted	Antenna Gain	Ant3 e.i.r.p
6025MHz(Ch15)	15.82	1.35	17.17	16.81	1.2	18.01
6185MHz(Ch47)	16.20	1.35	17.55	16.26	1.2	17.46
6345MHz(Ch79)	14.90	1.35	16.25	16.02	1.2	17.22
6505MHz(Ch111)	13.31	1.35	14.66	16.11	1.2	17.31
6665MHz(Ch143)	14.19	1.35	15.54	16.00	1.2	17.20
6825MHz(Ch175)	14.88	1.35	16.23	15.76	1.2	16.96
6985MHz(Ch207)	15.40	1.35	16.75	16.48	1.2	17.68

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

#### SISO RU mode

##### 802.11ax HE20 RU mode

Mode	Frequency	Test Result (dBm)					
		Ant2 Conducted		Ant2 e.i.r.p	Ant3 Conducted		Ant3 e.i.r.p
		MCS0	Antenna Gain	MCS0	MCS0	Antenna Gain	MCS0
RU26-I	5955MHz (Ch1)	-1.16	1.35	0.19	-1.34	1.2	-0.14
	6175MHz (Ch45)	-1.88	1.35	-0.53	-2.08	1.2	-0.88
	6415MHz (Ch93)	-5.17	1.35	-3.82	-3.83	1.2	-2.63



	6435MHz (Ch97)	-4.26	1.35	-2.91	-1.45	1.2	-0.25
	6475MHz (Ch105)	-3.19	1.35	-1.84	-1.52	1.2	-0.32
	6515MHz (Ch113)	-3.62	1.35	-2.27	-1.38	1.2	-0.18
RU26-R	6535MHz (Ch117)	-2.91	1.35	-1.56	-1.21	1.2	-0.01
	6695MHz (Ch149)	-3.50	1.35	-2.15	-1.92	1.2	-0.72
	6855MHz (Ch181)	-3.58	1.35	-2.23	-2.08	1.2	-0.88
	6875MHz (Ch185)	-3.93	1.35	-2.58	-2.17	1.2	-0.97
	6895MHz (ch189)	-3.95	1.35	-2.60	-2.03	1.2	-0.83
	6995MHz (Ch209)	-4.11	1.35	-2.76	-2.26	1.2	-1.06
	7115MHz (Ch233)	-3.67	1.35	-2.32	-3.40	1.2	-2.20
<b>Mode</b>	<b>Frequency</b>	<b>Test Result (dBm)</b>					
		<b>Ant2 Conducted</b>		<b>Ant2 e.i.r.p</b>	<b>Ant3 Conducted</b>		<b>Ant3 e.i.r.p</b>
		<b>MCS0</b>	<b>Antenna Gain</b>	<b>MCS0</b>	<b>MCS0</b>	<b>Antenna Gain</b>	<b>MCS0</b>
RU52-I	5955MHz (Ch1)	1.67	1.35	3.02	0.83	1.2	2.03
	6175MHz (Ch45)	1.87	1.35	3.22	0.47	1.2	1.67
	6415MHz (Ch93)	-2.15	1.35	-0.80	-0.77	1.2	0.43
	6435MHz (Ch97)	-1.37	1.35	-0.02	1.58	1.2	2.78
	6475MHz (Ch105)	0.24	1.35	1.59	1.54	1.2	2.74
	6515MHz (Ch113)	-0.23	1.35	1.12	1.64	1.2	2.84
RU52-R	6535MHz (Ch117)	-0.25	1.35	1.10	1.68	1.2	2.88
	6695MHz (Ch149)	-0.02	1.35	1.33	1.58	1.2	2.78

	6855MHz (Ch181)	-0.74	1.35	0.61	0.37	1.2	1.57
	6875MHz (Ch185)	-0.83	1.35	0.52	0.28	1.2	1.48
	6895MHz (ch189)	-0.50	1.35	0.85	0.59	1.2	1.79
	6995MHz (Ch209)	-0.61	1.35	0.74	0.27	1.2	1.47
	7115MHz (Ch233)	-3.13	1.35	-1.78	-3.20	1.2	-2.00
<b>Mode</b>	<b>Frequency</b>	<b>Test Result (dBm)</b>					
		<b>Ant2 Conducted</b>		<b>Ant2 e.i.r.p</b>	<b>Ant3 Conducted</b>		<b>Ant3 e.i.r.p</b>
		<b>MCS0</b>	<b>Antenna Gain</b>	<b>MCS0</b>	<b>MCS0</b>	<b>Antenna Gain</b>	<b>MCS0</b>
RU106-I	5955MHz (Ch1)	4.22	1.35	5.57	4.78	1.2	5.98
	6175MHz (Ch45)	4.83	1.35	6.18	4.85	1.2	6.05
	6415MHz (Ch93)	-0.23	1.35	1.12	1.99	1.2	3.19
	6435MHz (Ch97)	1.36	1.35	2.71	3.65	1.2	4.85
	6475MHz (Ch105)	1.76	1.35	3.11	3.96	1.2	5.16
	6515MHz (Ch113)	1.80	1.35	3.15	3.76	1.2	4.96
RU106-R	6535MHz (Ch117)	1.42	1.35	2.77	3.95	1.2	5.15
	6695MHz (Ch149)	1.88	1.35	3.23	3.66	1.2	4.86
	6855MHz (Ch181)	3.97	1.35	5.32	3.29	1.2	4.49
	6875MHz (Ch185)	4.04	1.35	5.39	3.10	1.2	4.30
	6895MHz (ch189)	3.79	1.35	5.14	3.15	1.2	4.35
	6995MHz (Ch209)	4.23	1.35	5.58	3.59	1.2	4.79
	7115MHz (Ch233)	-3.16	1.35	-1.81	-3.21	1.2	-2.01

**MIMO**
**802.11a mode**

Frequency	Test Result (dBm)				
	Data Rate				
	802.11a 6 Mbps				
	Ant2	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p
5955MHz (Ch1)	0.86	-0.38	3.29	1.35	4.64
6175MHz (Ch45)	-0.18	-0.14	2.85	1.35	4.20
6415MHz (Ch93)	-3.76	-2.02	0.21	1.35	1.56
6435MHz (Ch97)	-2.76	0.21	1.98	1.35	3.33
6475MHz (Ch105)	-1.31	0.38	2.63	1.35	3.98
6515MHz (Ch113)	-1.63	0.18	2.38	1.35	3.73
6535MHz (Ch117)	-1.31	0.34	2.60	1.35	3.95
6695MHz (Ch149)	-1.53	-0.47	2.04	1.35	3.39
6855MHz (Ch181)	-1.76	-0.43	1.97	1.35	3.32
6875MHz (Ch185)	-1.79	-0.55	1.88	1.35	3.23
6895MHz (ch189)	-1.93	-0.54	1.83	1.35	3.18
6995MHz (Ch209)	-2.29	-0.57	1.66	1.35	3.01
7115MHz (Ch233)	-1.93	-1.83	1.13	1.35	2.48

The data rate 6 Mbps is selected as worst condition, and the following cases are performed with this condition.

**802.11ax HE20(full RU) mode**

Frequency	Test Result (dBm)				
	Data Rate				
	802.11ax HE20 MCS0				
	Ant2	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p
5955MHz (Ch1)	1.32	1.02	4.18	4.29	8.47

6175MHz (Ch45)	0.52	0.51	3.53	4.29	7.82
6415MHz (Ch93)	-2.51	-1.39	1.10	4.29	5.39
6435MHz (Ch97)	-1.46	0.83	2.84	4.29	7.13
6475MHz (Ch105)	-1.10	0.95	3.06	4.29	7.35
6515MHz (Ch113)	-1.45	0.73	2.79	4.29	7.08
6535MHz (Ch117)	-0.32	0.82	3.30	4.29	7.59
6695MHz (Ch149)	-1.12	0.27	2.64	4.29	6.93
6855MHz (Ch181)	-1.26	0.36	2.64	4.29	6.93
6875MHz (Ch185)	-1.32	0.22	2.53	4.29	6.82
6895MHz (ch189)	-1.40	0.23	2.50	4.29	6.79
6995MHz (Ch209)	-1.70	0.08	2.29	4.29	6.58
7115MHz (Ch233)	-7.93	-8.08	-4.99	4.29	-0.70

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ax-HE40 mode

Frequency	Test Result (dBm)				
	Data Rate				
	802.11ax HE40 MCS0				
	Ant2	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p
5965MHz (Ch3)	4.38	3.71	7.07	4.29	11.36
6165MHz (Ch43)	4.43	3.22	6.88	4.29	11.17
6405MHz (Ch91)	2.32	3.36	5.88	4.29	10.17
6445MHz (Ch99)	1.92	3.92	6.04	4.29	10.33
6485MHz (Ch107)	1.99	3.88	6.05	4.29	10.34
6525MHz (Ch115)	1.79	4.06	6.08	4.29	10.37
6565MHz (Ch123)	1.74	4.14	6.11	4.29	10.40
6685MHz (Ch147)	0.96	3.83	5.64	4.29	9.93
6845MHz (Ch179)	3.69	2.98	6.36	4.29	10.65

6885MHz (Ch187)	3.56	2.79	6.20	4.29	10.49
6925MHz (ch195)	3.50	2.87	6.21	4.29	10.50
6965MHz (Ch203)	3.57	3.05	6.33	4.29	10.62
7085MHz (Ch227)	3.51	2.26	5.94	4.29	10.23

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ax-HE80 mode

Frequency	Test Result (dBm)				
	Data Rate				
	802.11ax HE80 MCS0				
	Ant2	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p
5985MHz (Ch7)	7.46	6.71	10.11	4.29	14.40
6145MHz (Ch39)	7.23	5.59	9.50	4.29	13.79
6385MHz (Ch87)	4.95	6.09	8.57	4.29	12.86
6465MHz (Ch103)	5.45	4.90	8.19	4.29	12.48
6545MHz (Ch119)	6.03	5.27	8.68	4.29	12.97
6625MHz (Ch135)	5.14	5.16	8.16	4.29	12.45
6705MHz (Ch151)	5.36	5.08	8.23	4.29	12.52
6785MHz (Ch167)	5.76	4.81	8.32	4.29	12.61
6865MHz (Ch183)	5.78	4.71	8.29	4.29	12.58
6945MHz (Ch199)	5.60	5.02	8.33	4.29	12.62
7025MHz (Ch215)	5.94	4.98	8.50	4.29	12.79

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ax-HE160 mode

Frequency	Test Result (dBm)				
	Data Rate				
	802.11ax HE160 MCS0				
	Ant2	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p

6025MHz (Ch15)	10.83	8.66	12.89	4.29	17.18
6185MHz (Ch47)	10.11	8.32	12.32	4.29	16.61
6345MHz (Ch79)	8.87	8.07	11.50	4.29	15.79
6505MHz (Ch111)	8.46	8.39	11.44	4.29	15.73
6665MHz (Ch143)	8.18	8.12	11.16	4.29	15.45
6825MHz (Ch175)	8.67	7.69	11.22	4.29	15.51
6985MHz (Ch207)	9.10	8.40	11.77	4.29	16.06

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

### MIMO RU Mode

Mode	Frequency	Test Result (dBm)				
		Ant2	Ant3	Sum Conducted		Sum e.i.r.p
		MCS0	MCS0	MCS0	Antenna Gain	MCS0
RU26-I	5955MHz (Ch1)	-6.83	-7.33	-4.06	4.29	0.23
	6175MHz (Ch45)	-7.72	-7.79	-4.74	4.29	-0.45
	6415MHz (Ch93)	-10.92	-9.16	-6.94	4.29	-2.65
	6435MHz (Ch97)	-9.98	-6.89	-5.16	4.29	-0.87
	6475MHz (Ch105)	-9.26	-6.97	-4.96	4.29	-0.67
	6515MHz (Ch113)	-9.69	-6.81	-5.01	4.29	-0.72
RU26-R	6535MHz (Ch117)	-8.88	-6.57	-4.56	4.29	-0.27
	6695MHz (Ch149)	-9.38	-8.16	-5.72	4.29	-1.43
	6855MHz (Ch181)	-9.26	-8.13	-5.65	4.29	-1.36
	6875MHz (Ch185)	-9.39	-8.28	-5.79	4.29	-1.50
	6895MHz (ch189)	-9.73	-8.01	-5.78	4.29	-1.49
	6995MHz (Ch209)	-9.95	-8.30	-6.04	4.29	-1.75
	7115MHz (Ch233)	-10.09	-9.51	-6.78	4.29	-2.49
Mode	Frequency	Test Result (dBm)				
		Ant2	Ant3	Sum Conducted		Sum e.i.r.p
		MCS0	MCS0	MCS0	Antenna Gain	MCS0
RU52-I	5955MHz (Ch1)	-4.17	-5.13	-1.61	4.29	2.68
	6175MHz (Ch45)	-5.02	-5.16	-2.08	4.29	2.21

	6415MHz (Ch93)	-8.19	-6.76	-4.41	4.29	-0.12
	6435MHz (Ch97)	-7.34	-4.46	-2.66	4.29	1.63
	6475MHz (Ch105)	-5.75	-4.43	-2.03	4.29	2.26
	6515MHz (Ch113)	-6.15	-4.36	-2.15	4.29	2.14
RU52-R	6535MHz (Ch117)	-6.24	-4.23	-2.11	4.29	2.18
	6695MHz (Ch149)	-5.82	-4.36	-2.02	4.29	2.27
	6855MHz (Ch181)	-6.67	-4.89	-2.68	4.29	1.61
	6875MHz (Ch185)	-6.75	-4.94	-2.74	4.29	1.55
	6895MHz (ch189)	-7.14	-4.76	-2.78	4.29	1.51
	6995MHz (Ch209)	-6.47	-4.89	-2.60	4.29	1.69
	7115MHz (Ch233)	-8.08	-8.02	-5.04	4.29	-0.75
Mode	Frequency	Test Result (dBm)				
		Ant2	Ant3	Sum Conducted		Sum e.i.r.p
		MCS0	MCS0	MCS0	Antenna Gain	MCS0
RU106-I	5955MHz (Ch1)	-1.11	-2.03	1.46	4.29	5.75
	6175MHz (Ch45)	-1.99	-2.18	0.93	4.29	5.22
	6415MHz (Ch93)	-5.19	-3.73	-1.39	4.29	2.90
	6435MHz (Ch97)	-4.41	-1.42	0.35	4.29	4.64
	6475MHz (Ch105)	-2.81	-1.41	0.96	4.29	5.25
	6515MHz (Ch113)	-3.19	-1.44	0.78	4.29	5.07
RU106-R	6535MHz (Ch117)	-3.11	-1.27	0.92	4.29	5.21
	6695MHz (Ch149)	-2.67	-1.60	0.91	4.29	5.20
	6855MHz (Ch181)	-3.76	-1.85	0.31	4.29	4.60
	6875MHz (Ch185)	-3.68	-1.98	0.26	4.29	4.55
	6895MHz (ch189)	-4.17	-1.78	0.20	4.29	4.49
	6995MHz (Ch209)	-3.46	-1.94	0.38	4.29	4.67
	7115MHz (Ch233)	-5.98	-6.14	-3.05	4.29	1.24

## Duty Cycle

Mode	11a	11ax20	11ax40	11ax80	11ax160
Duty Cycle	99%	99%	99%	99%	99%



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Note: The following cases are performed with this condition:

- a) Ant3 is selected as the worst condition (SISO full RU mode)
  - Ant3 is selected as the worst condition (SISO RU mode);
- b) 802.11ax support full RU tone and partial RU tone(single RU), after assessment, 802.11ax-20M RU26/52/106 are selected as worse case to 11ax single RU, so 802.11ax-20M RU26/52/106 are tested for conducted power/PSD/Channel Mask.

**Conclusion: PASS**

### A.3. Peak Power Spectral Density (conducted)

Measurement Limit and Method:

Standard	Frequency (MHz)	e.i.r.p Limit (dBm/MHz)
FCC CRF Part 15.407(a)	5925MHz~6425MHz	-1
	6425MHz~6525MHz	-1
	6525MHz~6875MHz	-1
	6875MHz~7125MHz	-1

The output power measurement method Section F is made according to KDB 987594 and KDB 789033.

**Measurement Results:**



**SISO**
**Ant3**

Mode	Frequency	Power Spectral Density (dBm/MHz)			
		Conducted	Antenna Gain	e.i.r.p	Conclusion
802.11a	5955MHz (Ch1)	-3.58	1.2	-2.38	P
	6175MHz (Ch45)	-4.68	1.2	-3.48	P
	6415MHz (Ch93)	-4.32	1.2	-3.12	P
	6435MHz (Ch97)	-4.20	1.2	-3.00	P
	6475MHz (Ch105)	-4.29	1.2	-3.09	P
	6515MHz (Ch113)	-3.97	1.2	-2.77	P
	6535MHz (Ch117)	-4.12	1.2	-2.92	P
	6695MHz (Ch149)	-4.49	1.2	-3.29	P
	6855MHz (Ch181)	-4.45	1.2	-3.25	P
	6875MHz (Ch185)	-4.65	1.2	-3.45	P
	6895MHz (ch189)	-4.60	1.2	-3.40	P
	6995MHz (Ch209)	-4.21	1.2	-3.01	P
7115MHz (Ch233)	-4.82	1.2	-3.62	P	
Mode	Frequency	Power Spectral Density (dBm/MHz)			
		Conducted	Antenna Gain	e.i.r.p	Conclusion
802.11ax HE20 (full RU)	5955MHz (Ch1)	-4.04	1.2	-2.84	P
	6175MHz (Ch45)	-5.08	1.2	-3.88	P
	6415MHz (Ch93)	-4.84	1.2	-3.64	P
	6435MHz (Ch97)	-4.71	1.2	-3.51	P
	6475MHz (Ch105)	-4.73	1.2	-3.53	P
	6515MHz (Ch113)	-4.48	1.2	-3.28	P
	6535MHz (Ch117)	-4.62	1.2	-3.42	P
	6695MHz (Ch149)	-4.89	1.2	-3.69	P
	6855MHz (Ch181)	-4.94	1.2	-3.74	P
	6875MHz (Ch185)	-5.12	1.2	-3.92	P
	6895MHz (ch189)	-5.04	1.2	-3.84	P
	6995MHz (Ch209)	-4.75	1.2	-3.55	P
7115MHz (Ch233)	-5.32	1.2	-4.12	P	
802.11ax HE40 (full RU)	5965MHz (Ch3)	-3.50	1.2	-2.30	P
	6165MHz (Ch43)	-4.37	1.2	-3.17	P
	6405MHz (Ch91)	-4.06	1.2	-2.86	P
	6445MHz (Ch99)	-3.91	1.2	-2.71	P

	6485MHz (Ch107)	-3.42	1.2	-2.22	P
	6525MHz (Ch115)	-3.77	1.2	-2.57	P
	6565MHz (Ch123)	-3.64	1.2	-2.44	P
	6685MHz (Ch147)	-3.94	1.2	-2.74	P
	6845MHz (Ch179)	-3.75	1.2	-2.55	P
	6885MHz (Ch187)	-4.07	1.2	-2.87	P
	6925MHz (ch195)	-4.02	1.2	-2.82	P
	6965MHz (Ch203)	-3.72	1.2	-2.52	P
	7085MHz (Ch227)	-4.53	1.2	-3.33	P
802.11ax HE80 (full RU)	5985MHz (Ch7)	-4.06	1.2	-2.86	P
	6145MHz(Ch39)	-5.30	1.2	-4.10	P
	6385MHz (Ch87)	-4.70	1.2	-3.50	P
	6465MHz (Ch103)	-4.68	1.2	-3.48	P
	6545MHz (Ch119)	-4.38	1.2	-3.18	P
	6625MHz (Ch135)	-4.59	1.2	-3.39	P
	6705MHz (Ch151)	-4.70	1.2	-3.50	P
	6785MHz (Ch167)	-4.83	1.2	-3.63	P
	6865MHz (Ch183)	-4.88	1.2	-3.68	P
	6945MHz (Ch199)	-4.87	1.2	-3.67	P
	7025MHz (Ch215)	-4.76	1.2	-3.56	P
802.11ax HE160 (full RU)	6025MHz (Ch15)	-3.48	1.2	-2.28	P
	6185MHz (Ch47)	-4.14	1.2	-2.94	P
	6345MHz (Ch79)	-4.30	1.2	-3.10	P
	6505MHz (Ch111)	-4.13	1.2	-2.93	P
	6665MHz (Ch143)	-4.55	1.2	-3.35	P
	6825MHz (Ch175)	-4.97	1.2	-3.77	P
	6985MHz (Ch207)	-4.20	1.2	-3.00	P

## SISO RU Mode

### ANT3 802.11ax-HE20

Mode	Frequency	Power Spectral Density (dBm/MHz)			
		Conducted	Antenna Gain	e.i.r.p	Conclusion
RU26-I	5955MHz (Ch1)	-3.67	1.2	-2.32	P
	6175MHz (Ch45)	-4.50	1.2	-3.15	P
	6415MHz (Ch93)	-7.18	1.2	-5.83	P
	6435MHz (Ch97)	-6.36	1.2	-5.01	P
	6475MHz (Ch105)	-5.80	1.2	-4.45	P
	6515MHz (Ch113)	-6.26	1.2	-4.91	P

RU26-R	6535MHz (Ch117)	-5.55	1.2	-4.20	P
	6695MHz (Ch149)	-6.03	1.2	-4.68	P
	6855MHz (Ch181)	-6.26	1.2	-4.91	P
	6875MHz (Ch185)	-6.37	1.2	-5.02	P
	6895MHz (ch189)	-6.60	1.2	-5.25	P
	6995MHz (Ch209)	-6.88	1.2	-5.53	P
	7115MHz (Ch233)	-6.36	1.2	-5.01	P
<b>Mode</b>	<b>Frequency</b>	<b>Power Spectral Density (dBm/MHz)</b>			
		<b>Conducted</b>	<b>Antenna Gain</b>	<b>e.i.r.p</b>	<b>Conclusion</b>
RU52-I	5955MHz (Ch1)	-3.74	1.2	-2.39	P
	6175MHz (Ch45)	-3.54	1.2	-2.19	P
	6415MHz (Ch93)	-7.54	1.2	-6.19	P
	6435MHz (Ch97)	-6.82	1.2	-5.47	P
	6475MHz (Ch105)	-5.23	1.2	-3.88	P
	6515MHz (Ch113)	-5.75	1.2	-4.40	P
RU52-R	6535MHz (Ch117)	-5.77	1.2	-4.42	P
	6695MHz (Ch149)	-5.46	1.2	-4.11	P
	6855MHz (Ch181)	-6.05	1.2	-4.70	P
	6875MHz (Ch185)	-6.20	1.2	-4.85	P
	6895MHz (ch189)	-5.72	1.2	-4.37	P
	6995MHz (Ch209)	-6.11	1.2	-4.76	P
	7115MHz (Ch233)	-8.98	1.2	-7.63	P
<b>Mode</b>	<b>Frequency</b>	<b>Power Spectral Density (dBm/MHz)</b>			
		<b>Conducted</b>	<b>Antenna Gain</b>	<b>e.i.r.p</b>	<b>Conclusion</b>
RU106-I	5955MHz (Ch1)	-4.38	1.2	-3.03	P
	6175MHz (Ch45)	-3.71	1.2	-2.36	P
	6415MHz (Ch93)	-8.67	1.2	-7.32	P
	6435MHz (Ch97)	-7.03	1.2	-5.68	P
	6475MHz (Ch105)	-6.65	1.2	-5.30	P
	6515MHz (Ch113)	-6.61	1.2	-5.26	P
RU106-R	6535MHz (Ch117)	-6.90	1.2	-5.55	P
	6695MHz (Ch149)	-6.54	1.2	-5.19	P
	6855MHz (Ch181)	-4.34	1.2	-2.99	P
	6875MHz (Ch185)	-4.44	1.2	-3.09	P
	6895MHz (ch189)	-4.64	1.2	-3.29	P

	6995MHz (Ch209)	-4.19	1.2	-2.84	P
	7115MHz (Ch233)	-10.93	1.2	-9.58	P

**MIMO**

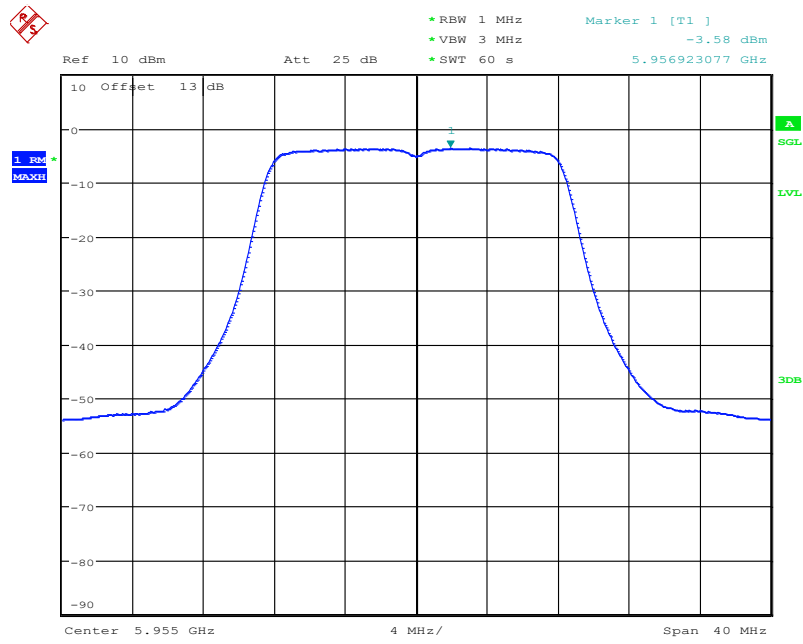
Mode	Frequency	Power Spectral Density (dBm/MHz)					Conclusion
		Ant3	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p	
802.11a	5955MHz (Ch1)	-10.23	-10.67	-7.43	4.29	-3.14	P
	6175MHz (Ch45)	-11.33	-11.24	-8.27	4.29	-3.98	P
	6415MHz (Ch93)	-14.85	-12.87	-10.74	4.29	-6.45	P
	6435MHz (Ch97)	-13.84	-10.72	-9.00	4.29	-4.71	P
	6475MHz (Ch105)	-12.78	-10.49	-8.48	4.29	-4.19	P
	6515MHz (Ch113)	-13.23	-10.81	-8.84	4.29	-4.55	P
	6535MHz (Ch117)	-12.35	-10.66	-8.41	4.29	-4.12	P
	6695MHz (Ch149)	-12.74	-11.48	-9.05	4.29	-4.76	P
	6855MHz (Ch181)	-12.78	-11.41	-9.03	4.29	-4.74	P
	6875MHz (Ch185)	-12.71	-11.61	-9.11	4.29	-4.82	P
	6895MHz (ch189)	-12.83	-11.49	-9.10	4.29	-4.81	P
	6995MHz (Ch209)	-13.39	-11.68	-9.44	4.29	-5.15	P
7115MHz (Ch233)	-12.91	-12.67	-9.78	4.29	-5.49	P	
Mode	Frequency	Power Spectral Density (dBm/MHz)					Conclusion
		Ant3	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p	
802.11ax HE20 (full RU)	5955MHz (Ch1)	-10.49	-10.73	-7.60	4.29	-3.31	P
	6175MHz (Ch45)	-11.55	-11.55	-8.54	4.29	-4.25	P
	6415MHz (Ch93)	-15.03	-13.16	-10.98	4.29	-6.69	P
	6435MHz (Ch97)	-14.16	-10.97	-9.27	4.29	-4.98	P
	6475MHz (Ch105)	-13.07	-10.64	-8.68	4.29	-4.39	P
	6515MHz (Ch113)	-13.36	-10.91	-8.95	4.29	-4.66	P
	6535MHz (Ch117)	-12.35	-10.90	-8.55	4.29	-4.26	P
	6695MHz (Ch149)	-12.80	-11.36	-9.01	4.29	-4.72	P
	6855MHz (Ch181)	-13.09	-11.33	-9.11	4.29	-4.82	P
	6875MHz (Ch185)	-13.11	-11.49	-9.21	4.29	-4.92	P
	6895MHz (ch189)	-13.22	-11.46	-9.24	4.29	-4.95	P
	6995MHz (Ch209)	-13.57	-11.74	-9.55	4.29	-5.26	P
7115MHz (Ch233)	-13.13	-12.90	-10.00	4.29	-5.71	P	
802.11ax HE40 (full RU)	5965MHz (Ch3)	-9.23	-10.87	-6.96	4.29	-2.67	P
	6165MHz (Ch43)	-9.85	-11.60	-7.63	4.29	-3.34	P
	6405MHz (Ch91)	-11.95	-11.35	-8.63	4.29	-4.34	P
	6445MHz (Ch99)	-12.42	-10.66	-8.44	4.29	-4.15	P

	6485MHz (Ch107)	-12.37	-10.63	-8.40	4.29	-4.11	P
	6525MHz (Ch115)	-12.51	-10.48	-8.37	4.29	-4.08	P
	6565MHz (Ch123)	-12.84	-10.37	-8.42	4.29	-4.13	P
	6685MHz (Ch147)	-13.39	-10.69	-8.82	4.29	-4.53	P
	6845MHz (Ch179)	-10.67	-11.25	-7.94	4.29	-3.65	P
	6885MHz (Ch187)	-10.70	-11.49	-8.07	4.29	-3.78	P
	6925MHz (ch195)	-10.96	-11.50	-8.21	4.29	-3.92	P
	6965MHz (Ch203)	-10.93	-11.32	-8.11	4.29	-3.82	P
	7085MHz (Ch227)	-11.09	-12.14	-8.57	4.29	-4.28	P
802.11ax HE80 (full RU)	5985MHz (Ch7)	-10.07	-10.97	-7.49	4.29	-3.20	P
	6145MHz(Ch39)	-10.26	-11.40	-7.78	4.29	-3.49	P
	6385MHz (Ch87)	-12.28	-11.27	-8.74	4.29	-4.45	P
	6465MHz (Ch103)	-11.76	-12.42	-9.07	4.29	-4.78	P
	6545MHz (Ch119)	-11.44	-11.96	-8.68	4.29	-4.39	P
	6625MHz (Ch135)	-12.18	-12.22	-9.19	4.29	-4.90	P
	6705MHz (Ch151)	-11.98	-12.34	-9.15	4.29	-4.86	P
	6785MHz (Ch167)	-11.65	-12.53	-9.06	4.29	-4.77	P
	6865MHz (Ch183)	-11.40	-12.53	-8.92	4.29	-4.63	P
	6945MHz (Ch199)	-11.82	-12.39	-9.09	4.29	-4.80	P
7025MHz (Ch215)	-11.65	-12.41	-9.00	4.29	-4.71	P	
802.11ax HE160 (full RU)	6025MHz (Ch15)	-9.65	-11.52	-7.47	4.29	-3.18	P
	6185MHz (Ch47)	-10.33	-12.13	-8.13	4.29	-3.84	P
	6345MHz (Ch79)	-11.40	-12.25	-8.79	4.29	-4.50	P
	6505MHz (Ch111)	-11.71	-11.91	-8.80	4.29	-4.51	P
	6665MHz (Ch143)	-11.83	-12.25	-9.02	4.29	-4.73	P
	6825MHz (Ch175)	-11.52	-12.62	-9.02	4.29	-4.73	P
6985MHz (Ch207)	-11.29	-11.79	-8.52	4.29	-4.23	P	

**MIMO RU Mode(802.11ax-HE20)**

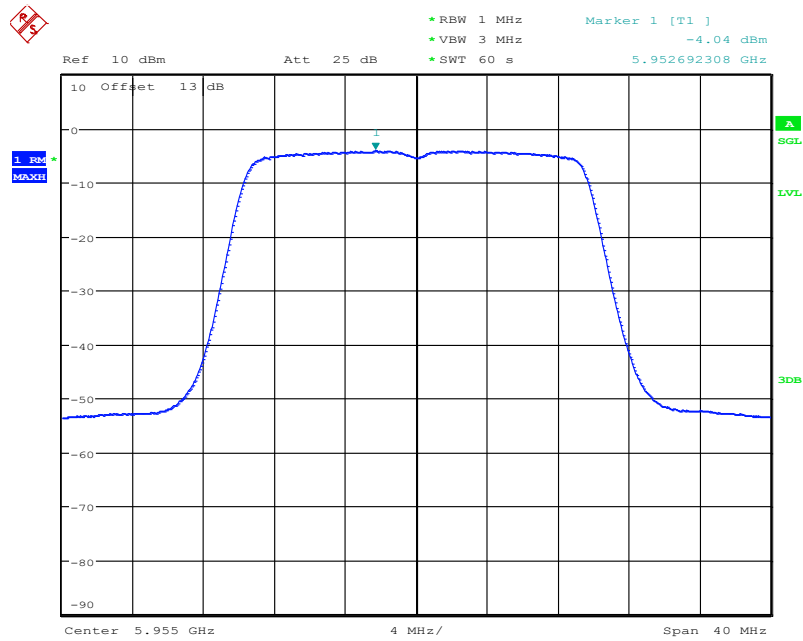
Mode	Frequency	Power Spectral Density (dBm/MHz)					
		Ant3	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p	Conclusi on
RU26-I	5955MHz (Ch1)	-9.60	-10.01	-6.79	4.29	-2.50	P
	6175MHz (Ch45)	-10.44	-10.45	-7.43	4.29	-3.14	P
	6415MHz (Ch93)	-13.50	-11.79	-9.55	4.29	-5.26	P
	6435MHz (Ch97)	-12.82	-9.69	-7.97	4.29	-3.68	P
	6475MHz (Ch105)	-12.13	-9.68	-7.72	4.29	-3.43	P
	6515MHz (Ch113)	-12.40	-9.50	-7.70	4.29	-3.41	P
RU26-R	6535MHz (Ch117)	-11.62	-9.31	-7.30	4.29	-3.01	P
	6695MHz (Ch149)	-12.13	-10.52	-8.24	4.29	-3.95	P
	6855MHz (Ch181)	-11.92	-10.80	-8.31	4.29	-4.02	P

	6875MHz (Ch185)	-12.13	-10.95	-8.49	4.29	-4.20	P
	6895MHz (ch189)	-12.47	-10.68	-8.47	4.29	-4.18	P
	6995MHz (Ch209)	-12.67	-11.14	-8.83	4.29	-4.54	P
	7115MHz (Ch233)	-12.82	-12.29	-9.54	4.29	-5.25	P
Mode	Frequency	Power Spectral Density (dBm/MHz)					
		Ant3	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p	Conclusi on
RU52-I	5955MHz (Ch1)	-9.50	-10.51	-6.97	4.29	-2.68	P
	6175MHz (Ch45)	-10.41	-10.71	-7.55	4.29	-3.26	P
	6415MHz (Ch93)	-13.57	-12.08	-9.75	4.29	-5.46	P
	6435MHz (Ch97)	-12.73	-9.80	-8.01	4.29	-3.72	P
	6475MHz (Ch105)	-11.05	-9.77	-7.35	4.29	-3.06	P
	6515MHz (Ch113)	-11.55	-9.83	-7.60	4.29	-3.31	P
RU52-R	6535MHz (Ch117)	-11.63	-9.64	-7.51	4.29	-3.22	P
	6695MHz (Ch149)	-11.06	-9.82	-7.39	4.29	-3.10	P
	6855MHz (Ch181)	-12.01	-10.01	-7.89	4.29	-3.60	P
	6875MHz (Ch185)	-12.06	-10.04	-7.92	4.29	-3.63	P
	6895MHz (ch189)	-12.45	-9.86	-7.95	4.29	-3.66	P
	6995MHz (Ch209)	-11.94	-10.19	-7.97	4.29	-3.68	P
	7115MHz (Ch233)	-12.84	-13.14	-9.98	4.29	-5.69	P
Mode	Frequency	Power Spectral Density (dBm/MHz)					
		Ant3	Ant3	Sum Conducted	Antenna Gain	Sum e.i.r.p	Conclusi on
RU106-I	5955MHz (Ch1)	-9.50	-10.46	-6.94	4.29	-2.65	P
	6175MHz (Ch45)	-10.39	-10.58	-7.47	4.29	-3.18	P
	6415MHz (Ch93)	-13.51	-12.05	-9.71	4.29	-5.42	P
	6435MHz (Ch97)	-12.63	-9.76	-7.95	4.29	-3.66	P
	6475MHz (Ch105)	-10.96	-9.75	-7.30	4.29	-3.01	P
	6515MHz (Ch113)	-11.46	-9.78	-7.53	4.29	-3.24	P
RU106-R	6535MHz (Ch117)	-11.59	-9.57	-7.45	4.29	-3.16	P
	6695MHz (Ch149)	-11.02	-9.81	-7.36	4.29	-3.07	P
	6855MHz (Ch181)	-11.99	-10.01	-7.88	4.29	-3.59	P
	6875MHz (Ch185)	-12.00	-10.00	-7.88	4.29	-3.59	P
	6895MHz (ch189)	-12.39	-9.78	-7.88	4.29	-3.59	P
	6995MHz (Ch209)	-11.83	-10.11	-7.88	4.29	-3.59	P
	7115MHz (Ch233)	-13.84	-14.23	-11.02	4.29	-6.73	P



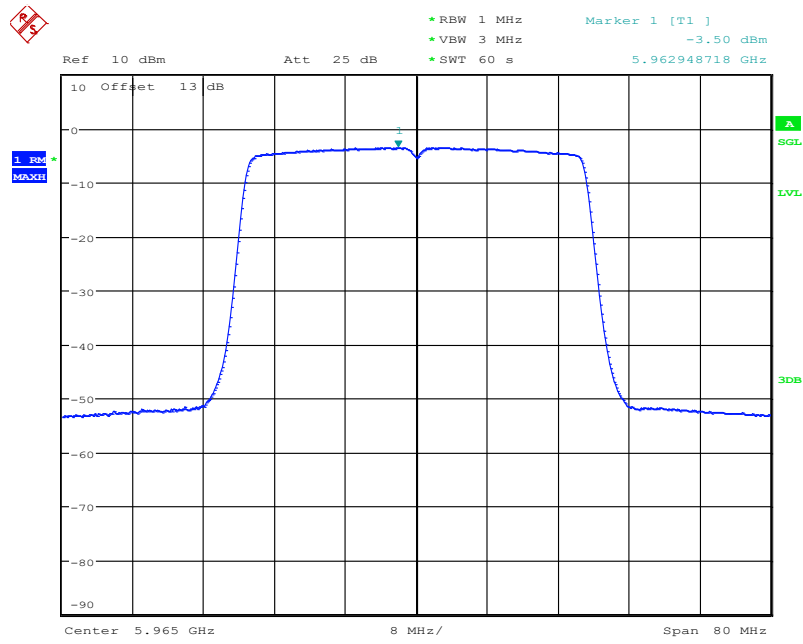
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**PSD: 11a-5955MHz(sono-ant3)**



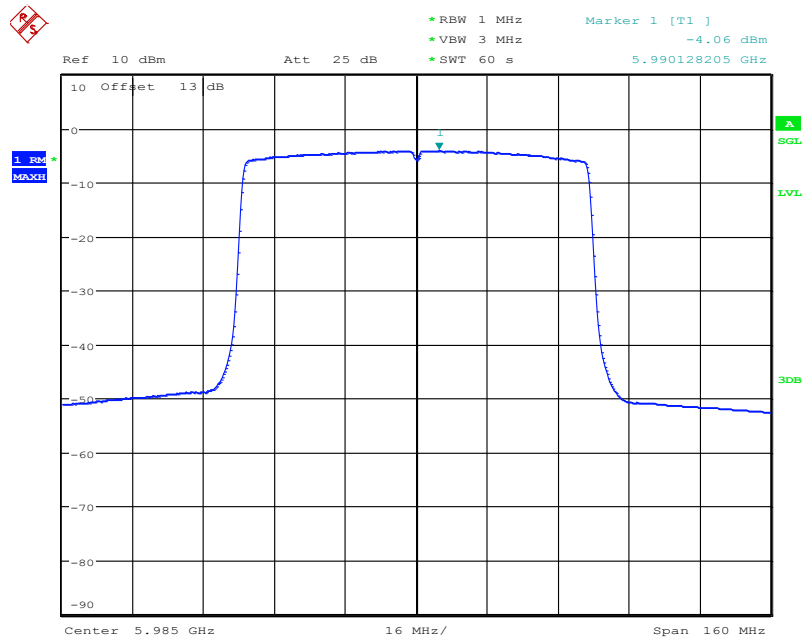
Date: 15.MAY.2023 18:02:59

**PSD: 11ax-HE20-5955MHz(sono-ant3)**



Date: 15.MAY.2023 19:55:58

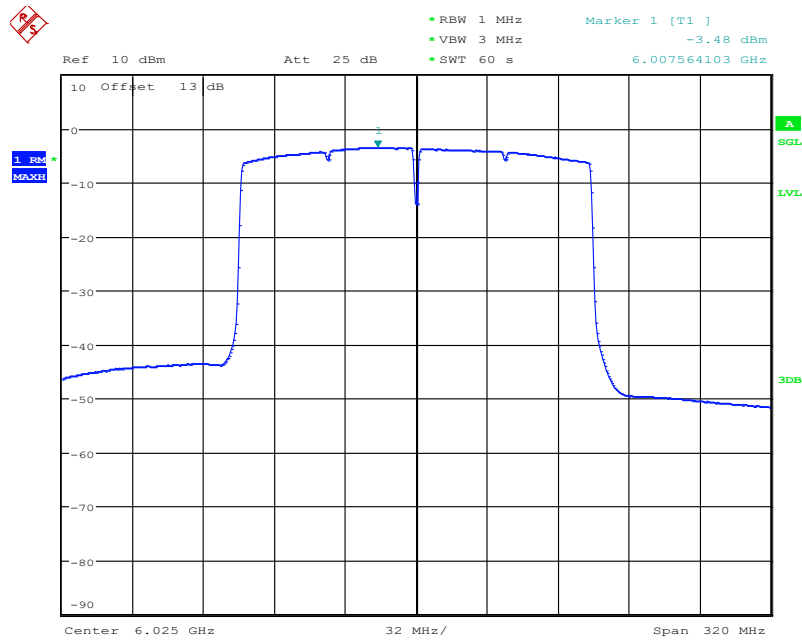
**PSD: 11ax-HE40-5965MHz(mimo-ant3)**



Date: 16.MAY.2023 10:30:33

**PSD: 11ax-HE80-5985MHz(siso-ant3)**





Date: 16.MAY.2023 13:25:40

**PSD: 11ax-HE160-6025MHz(ISO-ant3)**

**Conclusion: PASS**

**A.4. Emission Bandwidth(conducted)**

**Measurement Limit and Method:**

According to FCC 15.407(a)(10), The maximum transmitter channel bandwidth for U - NII devices in the 5.925 - 7.125 GHz band is 320 megahertz.

The measurement is made according to KDB 987594 and KDB 789033

**Measurement Result:**

**MIMO**

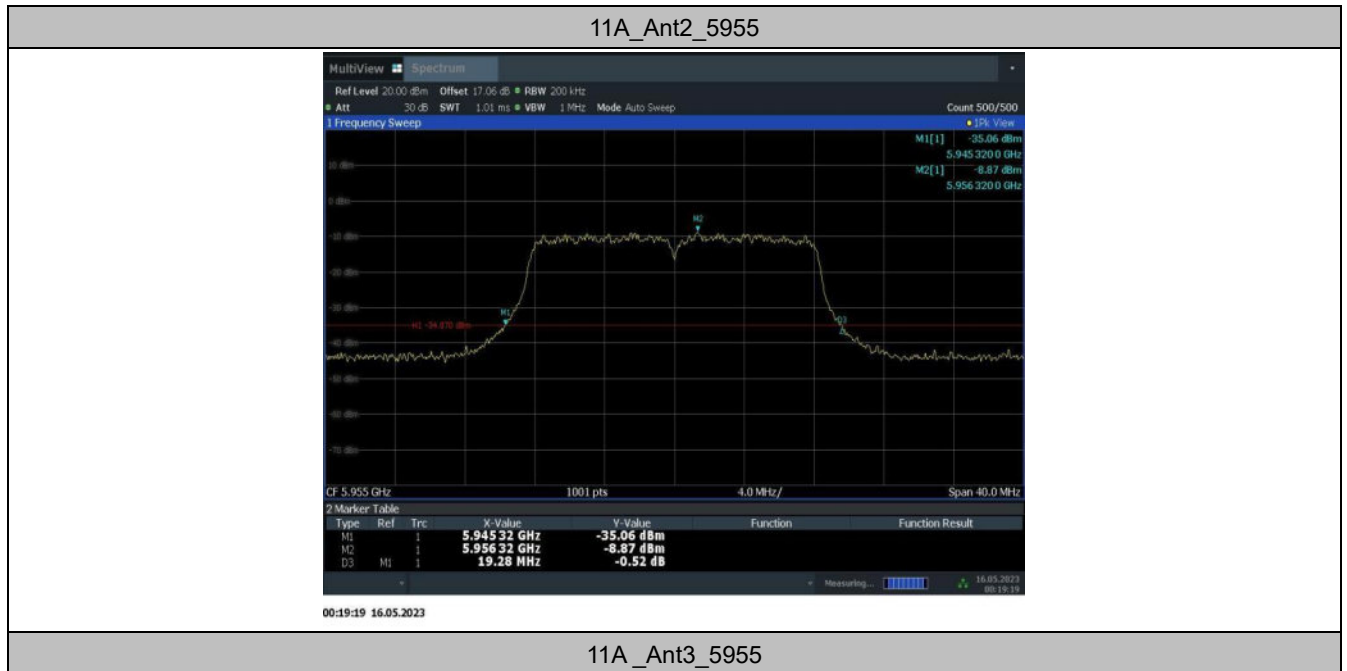
Test Mode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Conclusion
11A CDD	Ant2	5955	19.28	5945.32	5964.60	P
	Ant3	5955	19.36	5945.28	5964.64	P
	Ant2	6175	19.64	6164.96	6184.60	P
	Ant3	6175	19.52	6165.24	6184.76	P
	Ant2	6415	20.60	6404.68	6425.28	P
	Ant3	6415	19.96	6404.72	6424.68	P
	Ant2	6435	19.80	6425.08	6444.88	P
	Ant3	6435	19.44	6425.32	6444.76	P
	Ant2	6475	19.32	6465.24	6484.56	P

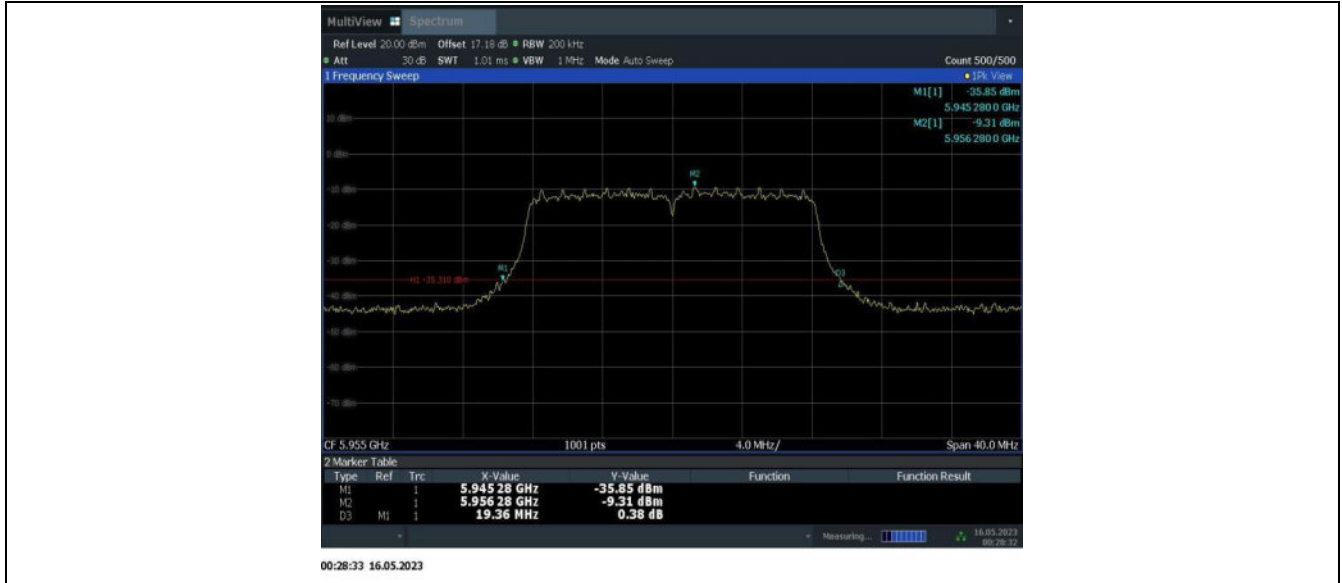
	Ant3	6475	19.80	6465.28	6485.08	P
	Ant2	6515	19.92	6504.76	6524.68	P
	Ant3	6515	19.40	6505.24	6524.64	P
	Ant2	6535	19.56	6524.96	6544.52	P
	Ant3	6535	19.52	6525.16	6544.68	P
	Ant2	6695	19.44	6685.16	6704.60	P
	Ant3	6695	19.36	6685.24	6704.60	P
	Ant2	6855	20.68	6844.96	6865.64	P
	Ant3	6855	19.76	6845.08	6864.84	P
	Ant2	6875	21.48	6865.08	6886.56	P
	Ant3	6875	19.80	6865.04	6884.84	P
	Ant2	6895	20.56	6884.92	6905.48	P
	Ant3	6895	19.92	6885.12	6905.04	P
	Ant2	6995	20.40	6984.84	7005.24	P
	Ant3	6995	20.08	6984.76	7004.84	P
	Ant2	7115	20.64	7104.92	7125.56	P
	Ant3	7115	20.32	7104.60	7124.92	P
11AX20 MIMO	Ant2	5955	21.08	5944.36	5965.44	P
	Ant3	5955	21.20	5944.48	5965.68	P
	Ant2	6175	20.92	6164.44	6185.36	P
	Ant3	6175	20.96	6164.48	6185.44	P
	Ant2	6415	21.44	6404.20	6425.64	P
	Ant3	6415	21.64	6404.24	6425.88	P
	Ant2	6435	21.32	6424.24	6445.56	P
	Ant3	6435	21.20	6424.36	6445.56	P
	Ant2	6475	21.20	6464.32	6485.52	P
	Ant3	6475	20.92	6464.56	6485.48	P
	Ant2	6515	21.12	6504.40	6525.52	P
	Ant3	6515	20.80	6504.60	6525.40	P
	Ant2	6535	21.12	6524.44	6545.56	P
	Ant3	6535	21.04	6524.44	6545.48	P
	Ant2	6695	21.48	6684.24	6705.72	P
	Ant3	6695	21.12	6684.40	6705.52	P
	Ant2	6855	21.44	6844.36	6865.80	P
	Ant3	6855	21.44	6844.28	6865.72	P
	Ant2	6875	21.48	6864.20	6885.68	P
	Ant3	6875	21.44	6864.28	6885.72	P
	Ant2	6895	21.12	6884.24	6905.36	P
	Ant3	6895	21.56	6884.24	6905.80	P
	Ant2	6995	21.48	6984.20	7005.68	P
	Ant3	6995	21.44	6984.28	7005.72	P
	Ant2	7115	21.40	7104.32	7125.72	P

	Ant3	7115	21.32	7104.40	7125.72	P
11AX40 MIMO	Ant2	5965	40.88	5944.60	5985.48	P
	Ant3	5965	40.64	5944.60	5985.24	P
	Ant2	6165	40.88	6144.44	6185.32	P
	Ant3	6165	40.88	6144.44	6185.32	P
	Ant2	6405	41.04	6384.44	6425.48	P
	Ant3	6405	40.88	6384.36	6425.24	P
	Ant2	6445	40.96	6424.36	6465.32	P
	Ant3	6445	40.72	6424.60	6465.32	P
	Ant2	6485	40.96	6464.52	6505.48	P
	Ant3	6485	40.64	6464.60	6505.24	P
	Ant2	6525	41.12	6504.44	6545.56	P
	Ant3	6525	40.80	6504.52	6545.32	P
	Ant2	6565	41.36	6544.04	6585.40	P
	Ant3	6565	41.04	6544.52	6585.56	P
	Ant2	6685	41.28	6664.28	6705.56	P
	Ant3	6685	40.72	6664.68	6705.40	P
	Ant2	6845	40.88	6824.60	6865.48	P
	Ant3	6845	40.80	6824.52	6865.32	P
	Ant2	6885	40.88	6864.44	6905.32	P
	Ant3	6885	40.88	6864.60	6905.48	P
	Ant2	6925	40.88	6904.36	6945.24	P
	Ant3	6925	40.96	6904.52	6945.48	P
	Ant2	6965	40.80	6944.52	6985.32	P
	Ant3	6965	40.80	6944.52	6985.32	P
Ant2	7085	40.80	7064.60	7105.40	P	
Ant3	7085	40.88	7064.44	7105.32	P	
11AX80 MIMO	Ant2	5985	83.04	5943.40	6026.44	P
	Ant3	5985	83.20	5943.56	6026.76	P
	Ant2	6145	83.52	6103.08	6186.60	P
	Ant3	6145	82.56	6103.56	6186.12	P
	Ant2	6385	82.40	6343.56	6425.96	P
	Ant3	6385	83.20	6343.24	6426.44	P
	Ant2	6465	83.84	6423.08	6506.92	P
	Ant3	6465	83.04	6423.08	6506.12	P
	Ant2	6545	83.20	6503.24	6586.44	P
	Ant3	6545	83.20	6503.24	6586.44	P
	Ant2	6625	82.88	6583.56	6666.44	P
	Ant3	6625	82.72	6583.72	6666.44	P
	Ant2	6705	82.88	6663.40	6746.28	P
	Ant3	6705	82.88	6663.40	6746.28	P
Ant2	6785	83.52	6742.92	6826.44	P	

	Ant3	6785	83.36	6743.24	6826.60	P
	Ant2	6865	82.88	6823.56	6906.44	P
	Ant3	6865	82.72	6823.56	6906.28	P
	Ant2	6945	83.20	6903.40	6986.60	P
	Ant3	6945	83.04	6903.40	6986.44	P
	Ant2	7025	83.68	6983.24	7066.92	P
	Ant3	7025	83.20	6983.56	7066.76	P
11AX160 MIMO	Ant2	6025	166.72	5941.48	6108.20	P
	Ant3	6025	166.40	5942.12	6108.52	P
	Ant2	6185	166.72	6101.16	6267.88	P
	Ant3	6185	165.76	6101.80	6267.56	P
	Ant2	6345	166.72	6261.48	6428.20	P
	Ant3	6345	166.72	6261.48	6428.20	P
	Ant2	6505	166.08	6421.80	6587.88	P
	Ant3	6505	166.72	6421.80	6588.52	P
	Ant2	6665	167.04	6580.84	6747.88	P
	Ant3	6665	166.08	6581.80	6747.88	P
	Ant2	6825	166.08	6741.48	6907.56	P
	Ant3	6825	167.36	6741.16	6908.52	P
	Ant2	6985	167.36	6901.16	7068.52	P
	Ant3	6985	166.72	6901.80	7068.52	P

## Test Graphs





11A\_Ant2\_6175



11A\_Ant3\_6175



00:40:18 16.05.2023

11A\_Ant2\_6415



00:44:36 16.05.2023

11A\_Ant3\_6415



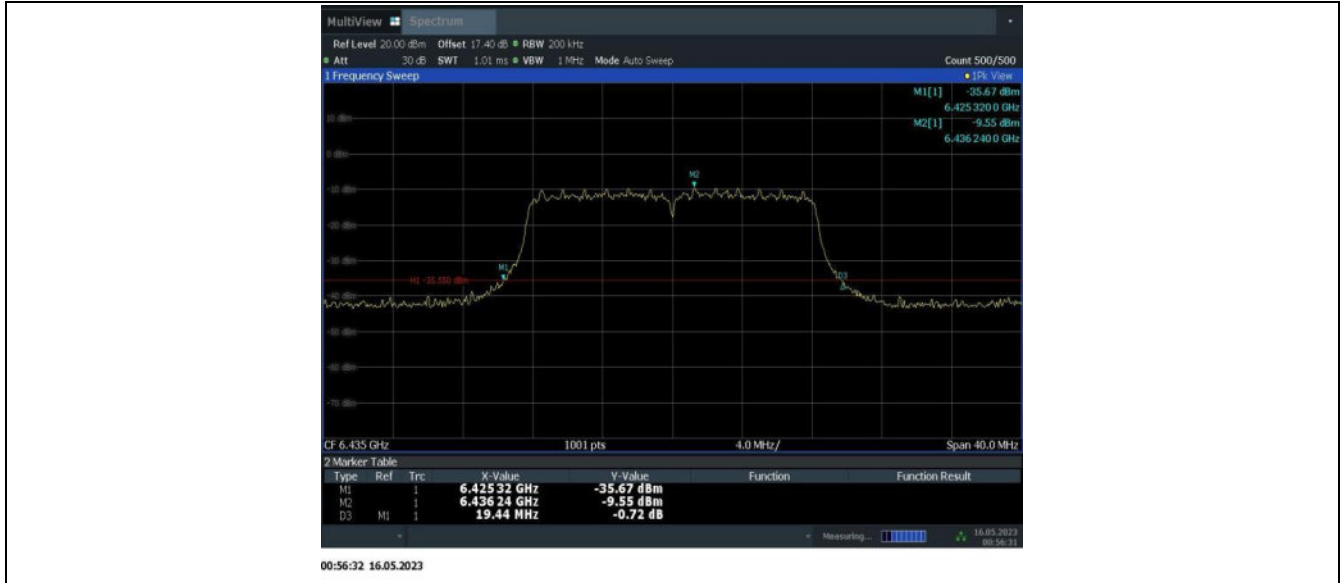
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11A\_Ant2\_6435



00:52:53 16.05.2023

11A\_Ant3\_6435

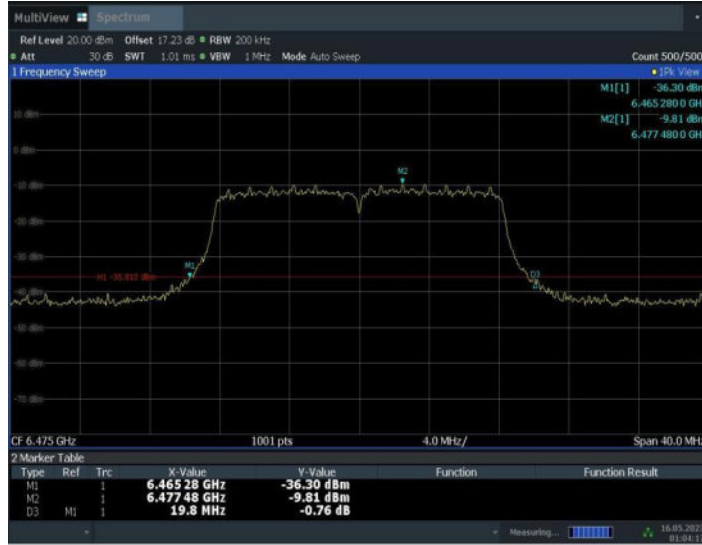


11A\_Ant2\_6475



11A\_Ant3\_6475





01:04:18 16.05.2023

11A\_Ant2\_6515

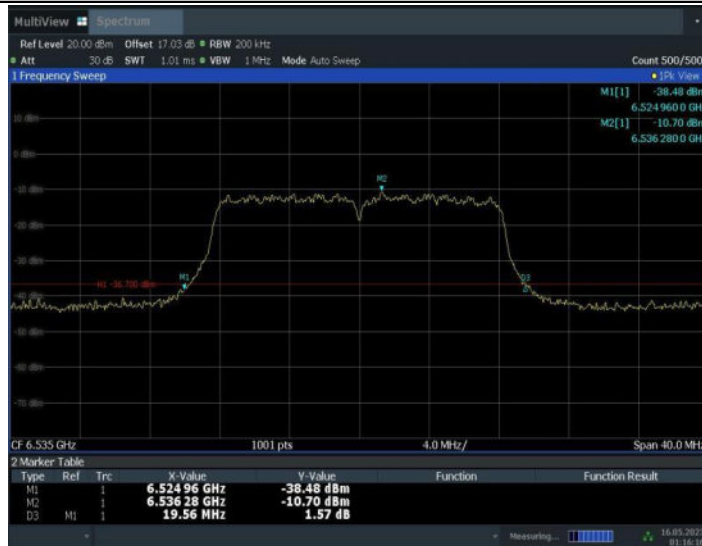


01:08:45 16.05.2023

11A\_Ant3\_6515



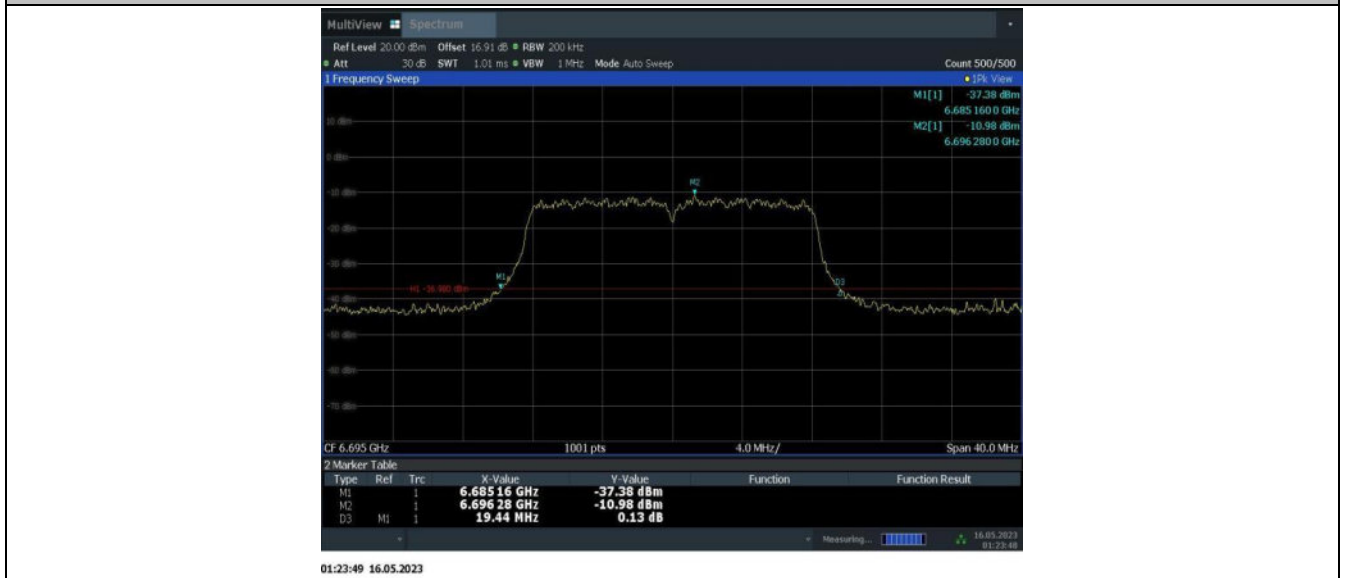
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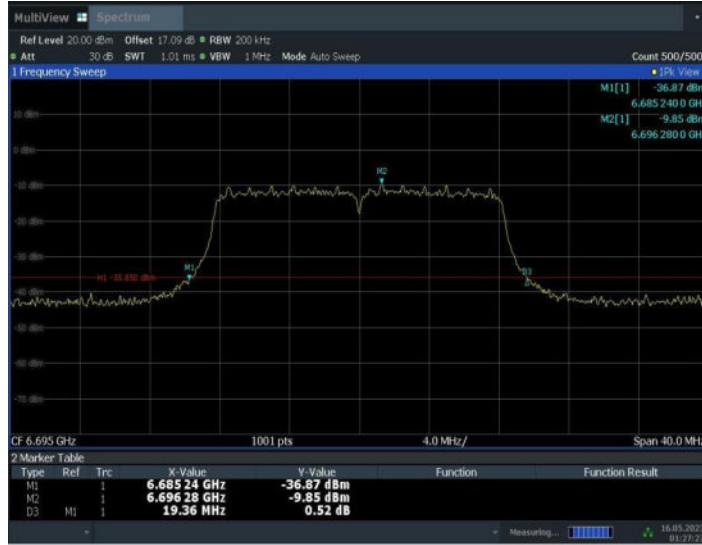
11A\_Ant3\_6535



11A\_Ant2\_6695



11A\_Ant3\_6695



01:27:27 16.05.2023

11A\_Ant2\_6855



01:31:29 16.05.2023

11A\_Ant3\_6855



01:35:08 16.05.2023

11A\_Ant2\_6875



01:39:11 16.05.2023

11A\_Ant3\_6875



11A\_Ant2\_6895



11A\_Ant3\_6895



11A\_Ant2\_6995



11A\_Ant3\_6995



02:15:11 16.05.2023

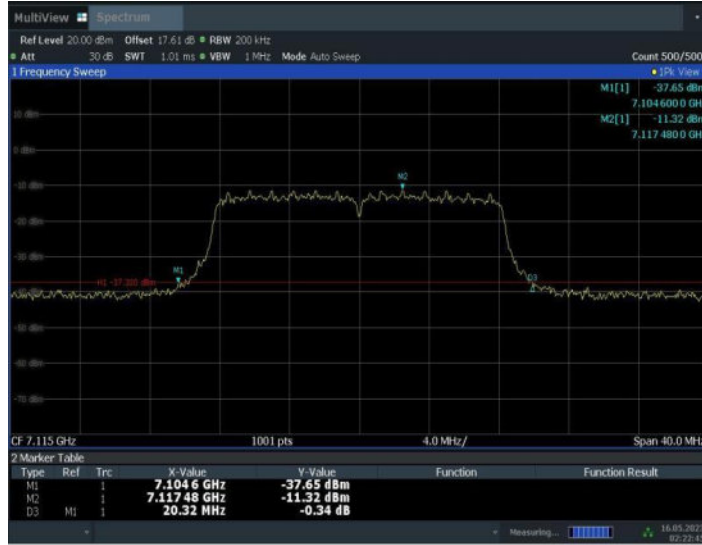
11A\_Ant2\_7115



02:19:06 16.05.2023

11A\_Ant3\_7115





02:22:45 16.05.2023

11AX20MIMO\_Ant2\_5955



02:33:27 16.05.2023

11AX20MIMO\_Ant3\_5955



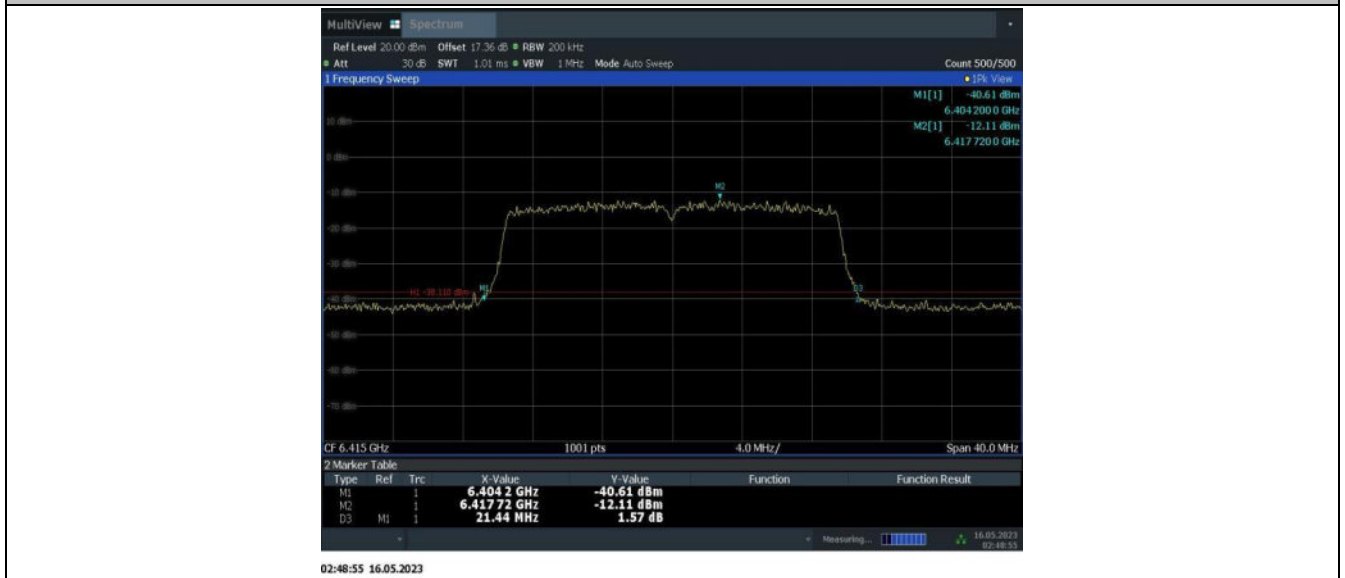
11AX20MIMO\_Ant2\_6175



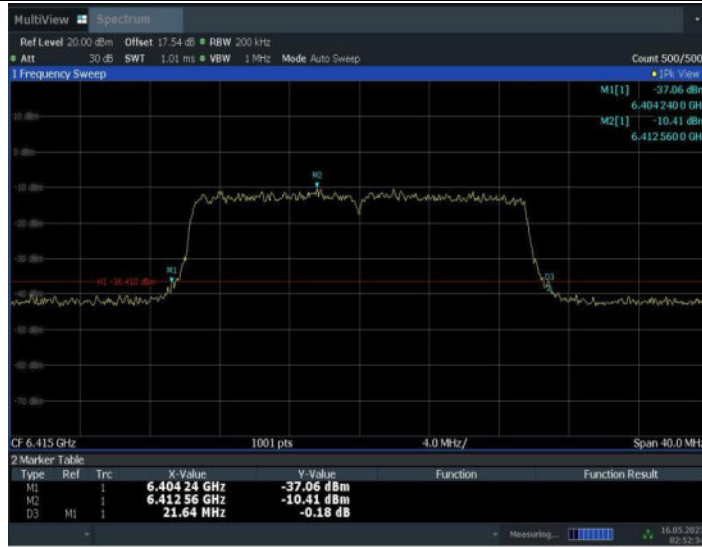
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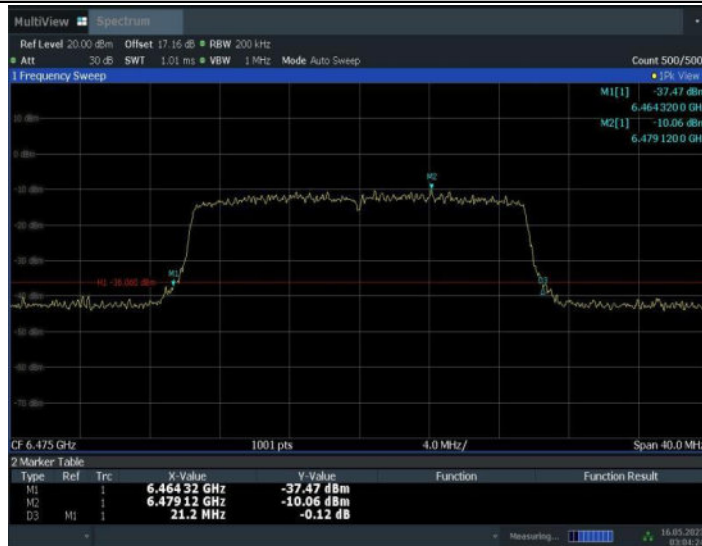
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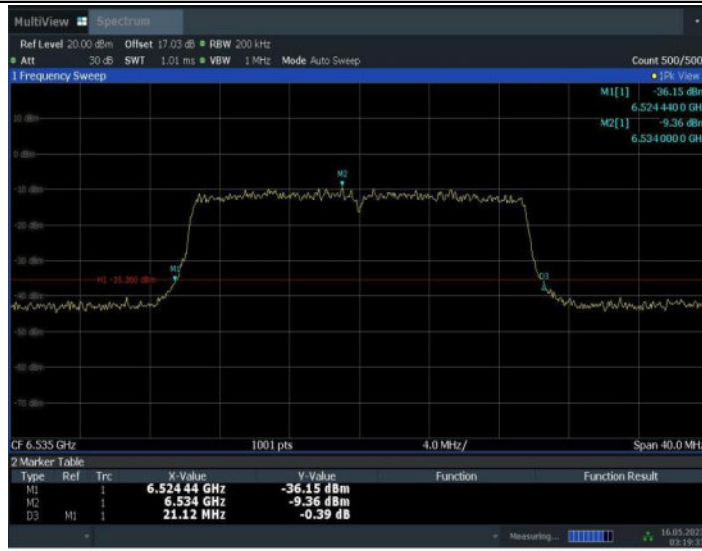


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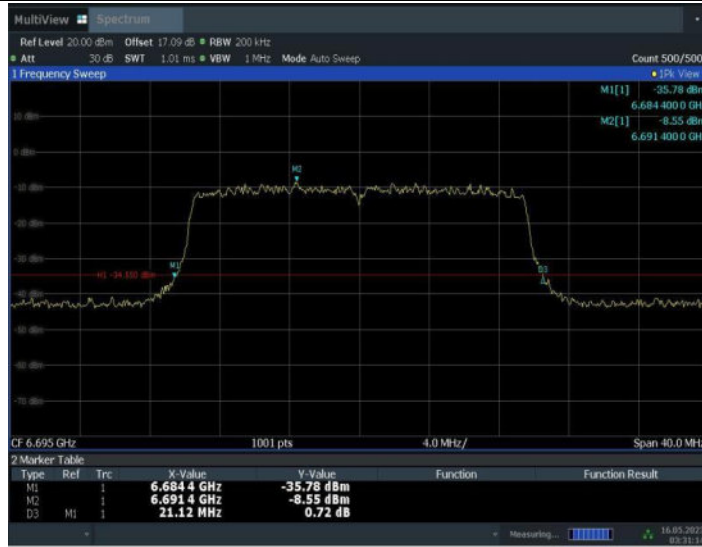
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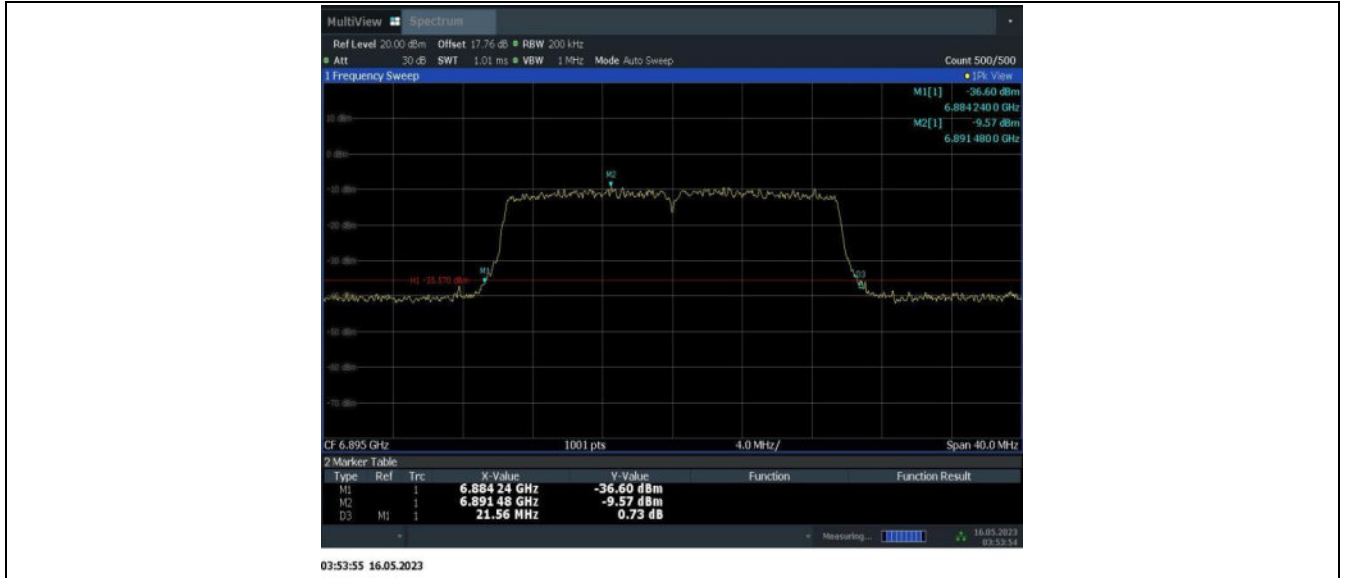
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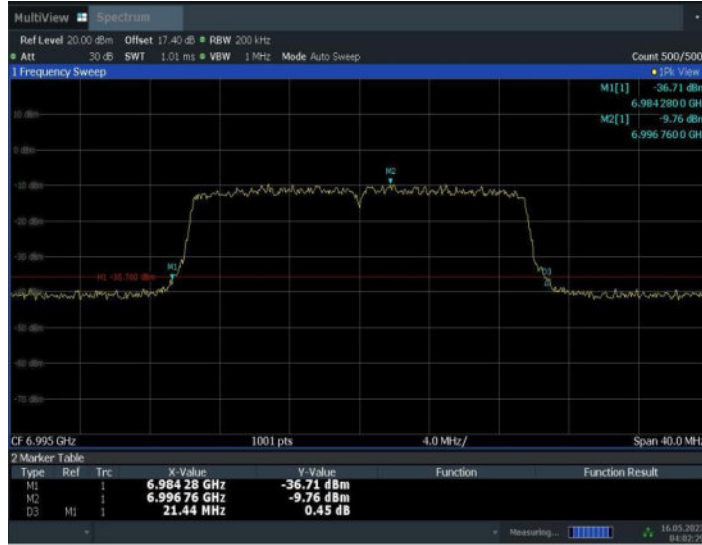
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04:06:27 16.05.2023

11AX20MIMO\_Ant3\_7115



11AX40MIMO\_Ant2\_5965



11AX40MIMO\_Ant3\_5965



04:19:08 16.05.2023

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00:05:20 17.05.2023

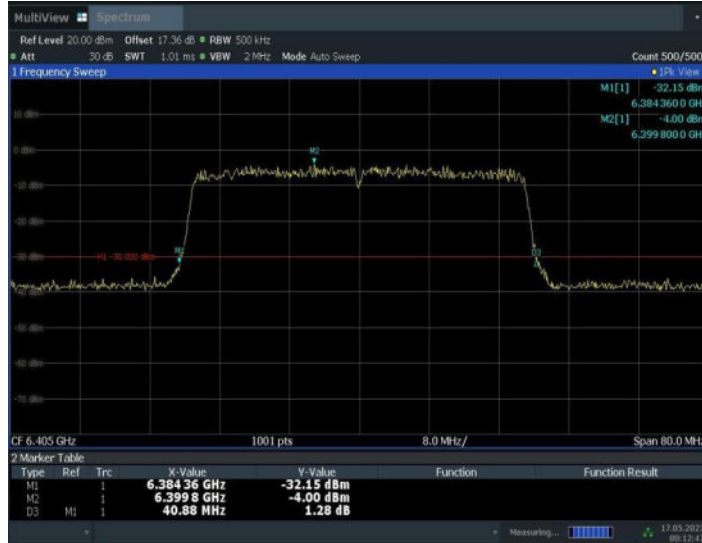
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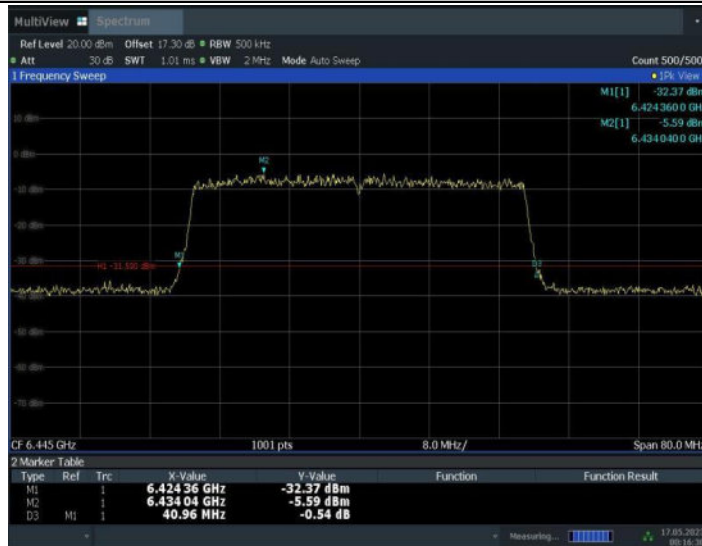
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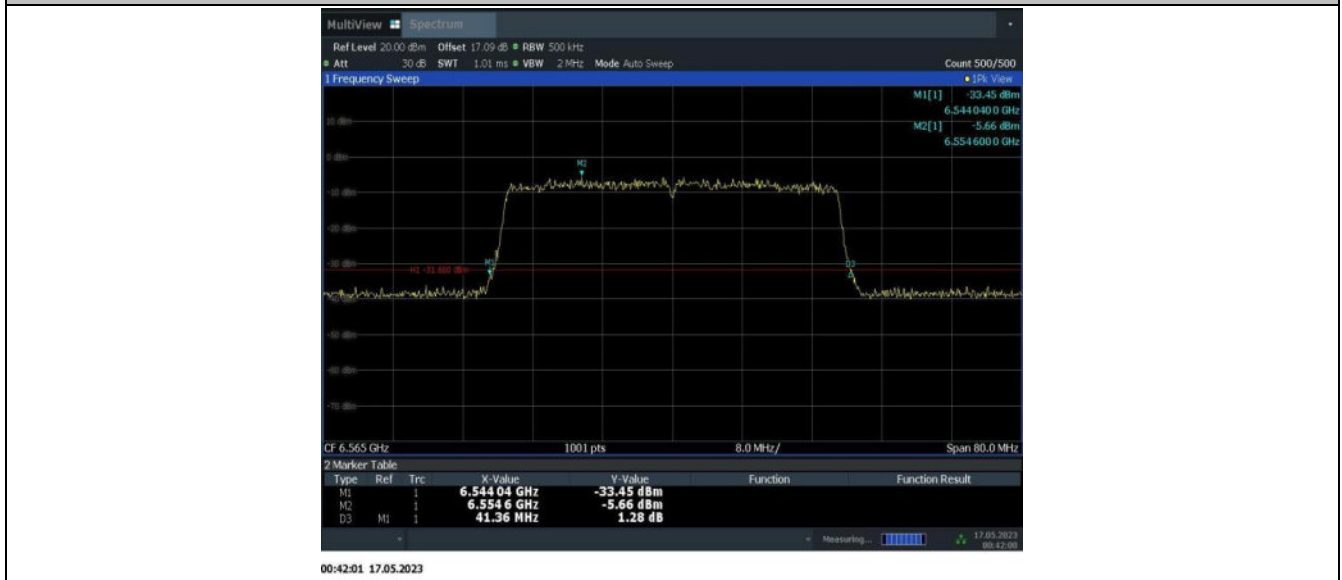
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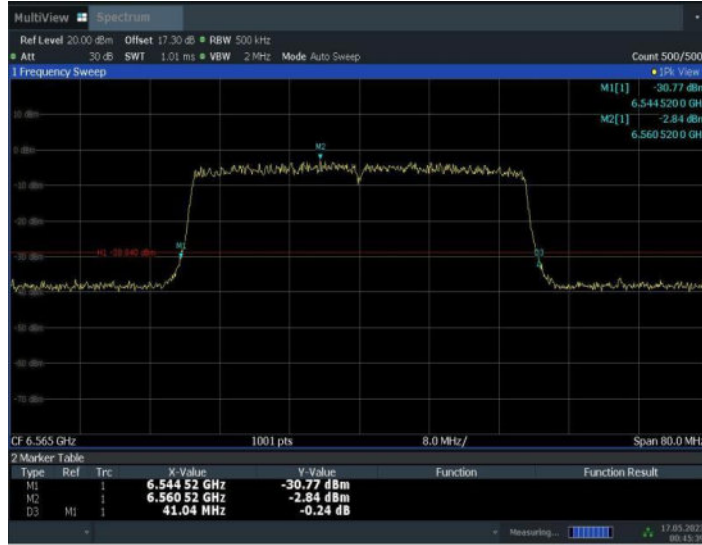
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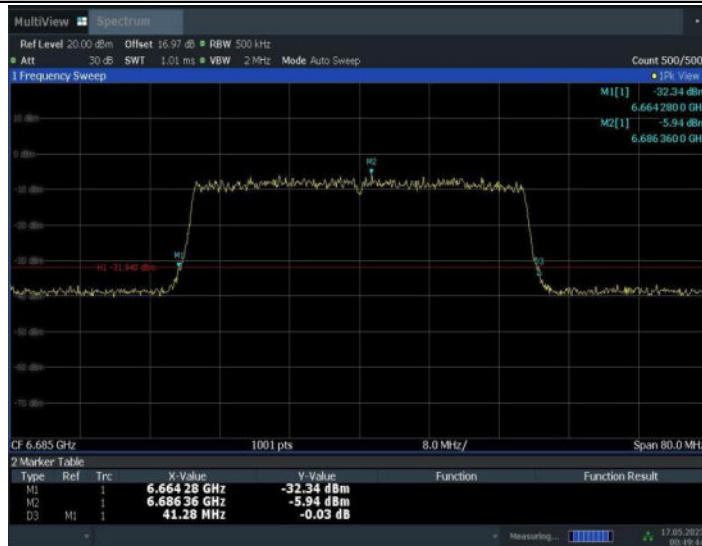


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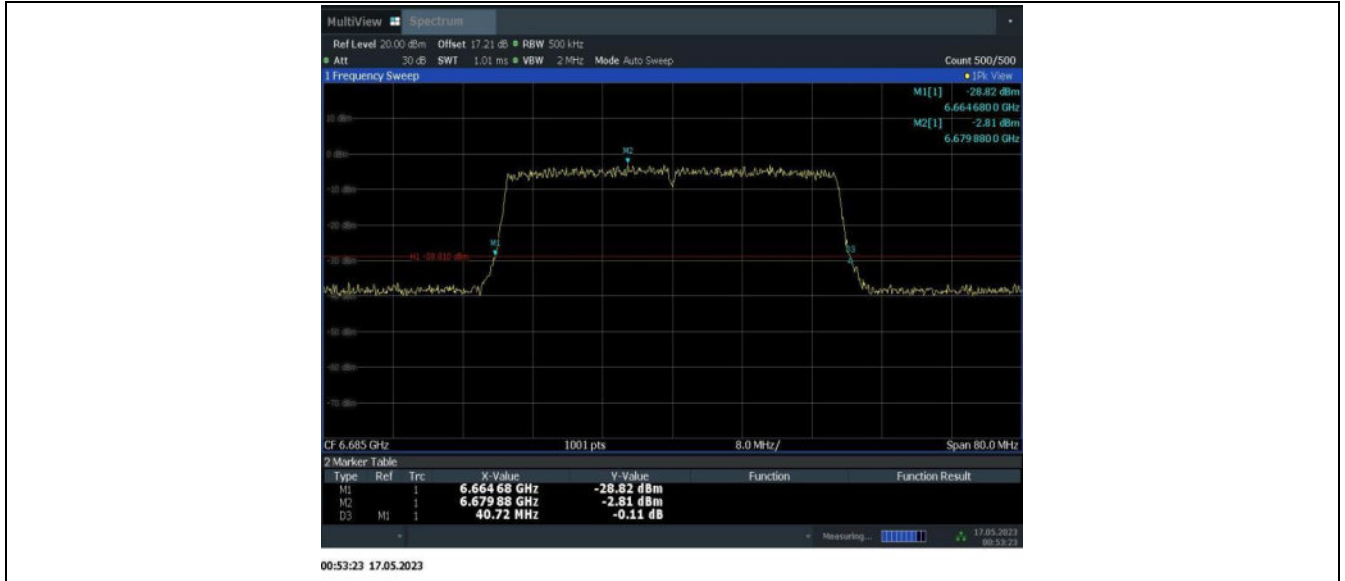
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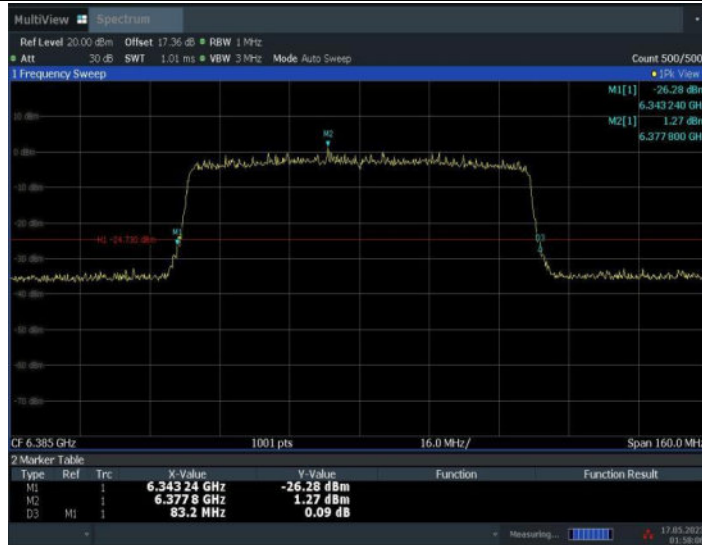
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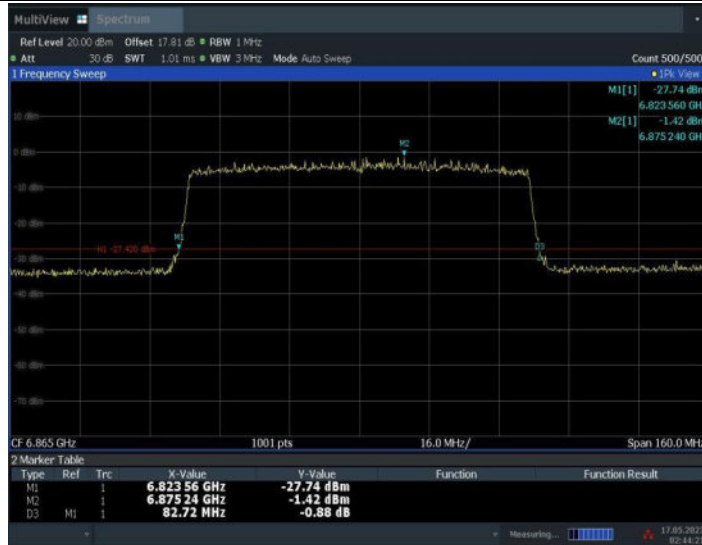
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