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## ETSI EN 301 893 V2.1.1 (2017-05)

### TEST REPORT

For

**SHENZHEN TENDA TECHNOLOGY CO.,LTD.**

6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

**Tested Model: RX12 Pro**  
**Multiple Model: TX12 Pro**

<b>Report Type:</b> Original Report	<b>Product Type:</b> AX3000 Dual Band Gigabit WiFi 6 Router
<b>Report Number:</b>	DG2220812-36651E-22C
<b>Report Date:</b>	2022-11-03
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## **TABLE OF CONTENTS**

<b>General Information</b>	<b>4</b>
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
TECHNICAL SPECIFICATION	4
OBJECTIVE	4
TEST METHODOLOGY	5
MEASUREMENT UNCERTAINTY	5
DECLARATIONS	5
<b>System Test Configuration</b>	<b>6</b>
DESCRIPTION OF TEST CONFIGURATION	6
EUT EXERCISE SOFTWARE	6
SUPPORT EQUIPMENT LIST AND DETAILS	9
BLOCK DIAGRAM OF TEST SETUP	9
TEST EQUIPMENT LIST	10
ENVIRONMENTAL CONDITIONS	11
<b>Summary of Test Results</b>	<b>12</b>
<b>1 – Carrier frequencies</b>	<b>13</b>
DEFINITION	13
LIMIT	13
TEST PROCEDURE	13
TEST DATA	13
<b>2 – Nominal channel bandwidth and occupied channel bandwidth</b>	<b>15</b>
DEFINITION	15
LIMIT	15
TEST PROCEDURE	15
TEST DATA	16
<b>3 – RF output power, TRANSMIT power control (TPC), POWER density</b>	<b>20</b>
DEFINITION	20
LIMIT	20
TEST PROCEDURE	21
TEST DATA	21
<b>4 – Transmitter unwanted emissions outside the 5 GHz RLAN bands</b>	<b>56</b>
DEFINITION	56
LIMIT	56
TEST PROCEDURE	56
TEST DATA	57
<b>5 – Transmitter unwanted emissions within the 5 GHz RLAN bands</b>	<b>67</b>
DEFINITION	67
LIMIT	67
TEST PROCEDURE	67
TEST DATA	67
<b>6 – Receiver spurious emissions</b>	<b>92</b>
DEFINITION	92
LIMIT	92
TEST PROCEDURE	92
TEST DATA	93

<b>8 – Adaptivity .....</b>	<b>103</b>
APPLICABLE STANDARD.....	103
LIMIT.....	103
TEST PROCEDURE.....	103
BLOCK DIAGRAM OF TEST SETUP .....	103
TEST DATA.....	104
<b>9 – Receiver blocking.....</b>	<b>111</b>
APPLICABLE STANDARD.....	111
LIMIT.....	111
TEST PROCEDURE.....	111
BLOCK DIAGRAM OF TEST SETUP .....	111
TEST DATA.....	112
<b>Exhibit A – Eut Photographs .....</b>	<b>113</b>
<b>Exhibit B – Test Set up Photographs .....</b>	<b>114</b>
<b>DECLARATION OF SIMILARITY LETTER .....</b>	<b>115</b>

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

<b>Product Name:</b>		AX3000 Dual Band Gigabit WiFi 6 Router
<b>Tested Model:</b>		RX12 Pro
<b>Multiple Model:</b>		TX12 Pro
<b>Model difference:</b>		Refer to the DOS
<b>Rated Input Voltage:</b>		12Vdc from adapter
<b>EU Adapter Information</b>	<b>Model:</b>	BN074-A18012E
	<b>Input:</b>	100-240Vac 50/60Hz 0.6A
	<b>Output:</b>	12Vdc 1.5A
<b>UK Adapter Information</b>	<b>Model:</b>	BN074-A18012B
	<b>Input:</b>	100-240Vac 50/60Hz 0.6A
	<b>Output:</b>	12Vdc 1.5A
<b>Serial Number:</b>		DG2220812-36651E-RF-S1
<b>EUT Received Date:</b>		2022.8.15
<b>EUT Received Status:</b>		Good

### Technical Specification

<b>Operation Frequency Range (MHz):</b>		802.11 a/n20/ax20: 5180-5240, 5260-5320 802.11 n40/ax40: 5190-5230, 5270-5310 802.11 ac80/ax80: 5210, 5290 802.11 ac160/ax160:5250
<b>RF Output Power (EIRP) (dBm):</b>		5.2G: 22.37 5.3G: 19.97  Beamforming: 5.2G: 21.47 5.3G: 19.65
<b>Number of Chains</b>	<b>Transmit:</b>	2
	<b>Receive:</b>	2
<b>Antenna Gain (dBi)_5.2G^_Chain 0:</b>		6
<b>Antenna Gain (dBi)_5.3G^_Chain 0:</b>		6
<b>Antenna Gain (dBi)_5.2G^_Chain 1:</b>		6
<b>Antenna Gain (dBi)_5.3G^_Chain 1:</b>		6
<b>Beamforming Gain(dB)^:</b>		3
<b>Modulation Type:</b>		OFDM, OFDMA

### Objective

This report is prepared on behalf of **SHENZHEN TENDA TECHNOLOGY CO.,LTD.** in accordance with ETSI EN 301 893 V2.1.1 (2017-05) 5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU.

The objective is to determine the compliance of EUT with: ETSI EN 301 893 V2.1.1 (2017-05).



## Test Methodology

All measurements contained in this report were conducted with ETSI EN 301 893 V2.1.1 (2017-05) 5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU.

## Measurement Uncertainty

Parameter	F <sub>lab</sub>	Maximum allow uncertainty
RF Frequency	$\pm 1 \times 10^{-6}$	$\pm 1 \times 10^{-5}$
RF power conducted	$\pm 0.61\text{dB}$	$\pm 1,5\text{dB}$
RF power radiated	$\pm 3.62\text{dB}$	$\pm 6\text{dB}$
Spurious emissions, conducted	$\pm 2.47\text{dB}$	$\pm 3\text{dB}$
Spurious emissions, radiated	$\pm 3.62\text{dB}$	$\pm 6\text{dB}$
Temperature	$\pm 1^\circ\text{C}$	$\pm 2^\circ\text{C}$
Humidity	$\pm 5\%$	$\pm 5\%$
Time	1%	$\pm 10\%$

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

## Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in engineering mode, which was provided by manufacture. The system support 802.11a/n ht20/n ht40/ac vht20/ac vht40/ac vht80/ax20/ax40/ax80, the vht20/vht40 were reduced since the identical parameters with 802.11n ht20 and ht40.

For 5150~5250 MHz band(W52), 8 channels were provided. 802.11a /n ht20/ax20 mode was tested with 5180MHz; 802.11n ht40/ax40 mode was tested with 5190MHz; 802.11ac vht80/ax80 mode was tested with 5210 MHz: The Channel 5250MHz was cross bands 5150~5250MHz and 5250~5350 MHz.

Frequency (MHz)	Frequency (MHz)
5180	5220
5190	5230
5200	5240
5210	5250

For 5250~5350 MHz band(W53), 7 channels are provided, 802.11a /n ht20/ax20 mode was tested with 5320MHz; 802.11n ht40/ax80 mode was tested with 5310MHz; 802.11ac vht80/ax80 mode was tested with 5290 MHz:

Frequency (MHz)	Frequency (MHz)
5260	5300
5270	5310
5280	5320
5290	/

Test condition as below:

NT: Normal Temperature 25°C, LT: Low Temperature 0°C, HT: High Temperature +40°C

*Note: For 802.11 ax20, 802.11 ax40 and 802.11 ax80(include ax160) modes, the Signal waveform level are the same in each RU Index, that is , the PSD of each type of RU configuration are the same. The full RU configuration was the worst, which was selected for fully test.*

### EUT Exercise Software

Software “accessMtool<sup>▲</sup>” was used and the power level was configured as below. The worst-case data rates are determined to be as follows for each mode based upon investigation by measuring the average power and PSD across all data rates, bandwidths, and modulations<sup>▲</sup>.

Mode	Frequency (MHz)	Data rate (Mbps)	Power level	
			Ant 0(Chain 0)	Ant 1(Chain 1)
802.11 a	5180	6	81	65
	5240	6	80	65
	5260	6	54	56
	5320	6	54	55
802.11 n20	5180	MCS8	68	50
	5240	MCS8	67	50
	5260	MCS8	50	43
	5320	MCS8	50	42
802.11 n40	5190	MCS8	70	51
	5230	MCS8	70	51
	5270	MCS8	51	41
	5310	MCS8	51	41
802.11 ac20	5180	MCS0NSS2	66	49
	5240	MCS0NSS2	65	49
	5260	MCS0NSS2	45	33
	5320	MCS0NSS2	43	32
802.11 ac40	5190	MCS0NSS2	70	51
	5230	MCS0NSS2	70	51
	5270	MCS0NSS2	51	47
	5310	MCS0NSS2	51	47
802.11 ac80	5210	MCS0NSS2	60	50
	5290	MCS0NSS2	52	41
802.11 ac160	5250	MCS0NSS2	60	52

Test Mode	Frequency (MHz)	Data rate (Mbps)	Power level	
			Ant 0 (Chain 0)	Ant 1 (Chain 1)
802.11 ax20	5180	HE0NSS2	53	41
	5240	HE0NSS2	53	41
	5260	HE0NSS2	38	34
	5320	HE0NSS2	38	34
802.11 ax40	5190	HE0NSS2	57	50
	5230	HE0NSS2	57	50
	5270	HE0NSS2	44	33
	5310	HE0NSS2	44	33
802.11 ax80	5210	HE0NSS2	55	46
	5290	HE0NSS2	46	37
802.11 ax160	5250	HE0NSS2	50	44

## Beamforming

Mode	Frequency (MHz)	Data rate (Mbps)	Power level	
			Ant 0(Chain 0)	Ant 1(Chain 1)
802.11 n20	5180	MCS8	55	39
	5240	MCS8	54	39
	5260	MCS8	39	20
	5320	MCS8	38	20
802.11 n40	5190	MCS8	58	36
	5230	MCS8	57	35
	5270	MCS8	38	24
	5310	MCS8	38	24
802.11 ac20	5180	MCS0NSS2	52	34
	5240	MCS0NSS2	53	30
	5260	MCS0NSS2	30	20
	5320	MCS0NSS2	30	18
802.11 ac40	5190	MCS0NSS2	57	36
	5230	MCS0NSS2	57	36
	5270	MCS0NSS2	38	30
	5310	MCS0NSS2	38	31
802.11 ac80	5210	MCS0NSS2	46	36
	5290	MCS0NSS2	38	26
802.11 ac160	5250	MCS0NSS2	47	37

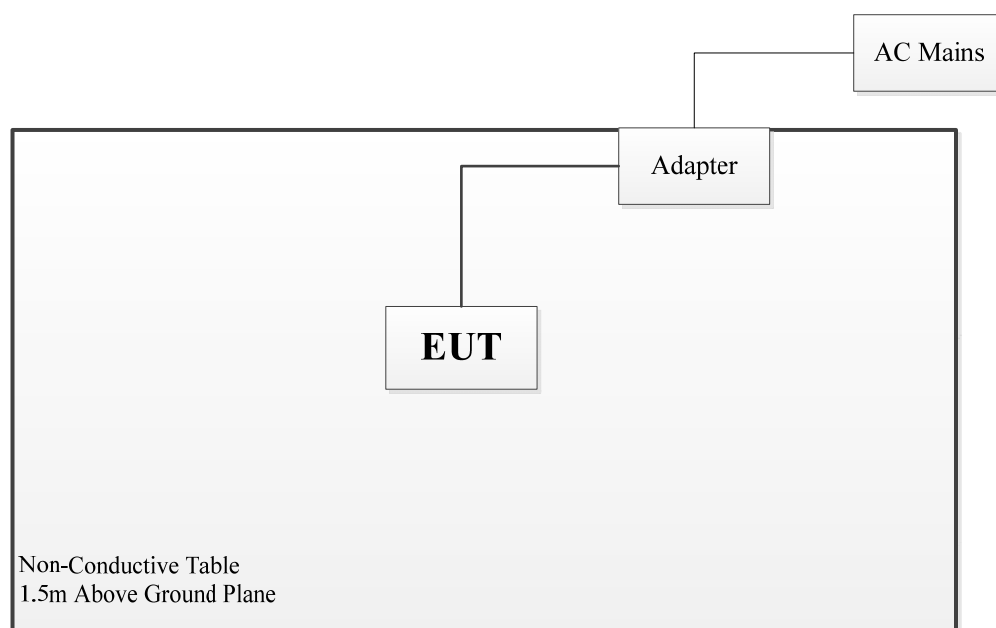
Test Mode	Frequency (MHz)	Data rate (Mbps)	Power level	
			Ant 0 (Chain 0)	Ant 1 (Chain 1)
802.11 ax20	5180	HE0NSS2	25	30
	5240	HE0NSS2	25	30
	5260	HE0NSS2	28	24
	5320	HE0NSS2	28	24
802.11 ax40	5190	HE0NSS2	40	34
	5230	HE0NSS2	40	34
	5270	HE0NSS2	37	22
	5310	HE0NSS2	37	22
802.11 ax80	5210	HE0NSS2	38	23
	5290	HE0NSS2	34	23
802.11 ax160	5250	HE0NSS2	32	35

**Support Equipment List and Details**

Manufacturer	Description	Model	Serial Number
/	/	/	/

**Support Cable List and Details**

Cable Description	Shielding Cable	Ferrite Core	Length (m)	From Port	To
DC Cable	No	No	1.5	Adapter	EUT

**Block Diagram of Test Setup**

**Test Equipment List**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated emissions below 1GHz					
Sunol Sciences	Antenna	JB3	A060611-1	2020-11-10	2023-11-10
R&S	EMI Test Receiver	ESR3	102453	2021-10-26	2022-10-25
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2022-07-19	2023-07-18
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2022-07-19	2023-07-18
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2022-07-19	2023-07-18
Sonoma	Amplifier	310N	372193	2022-07-18	2023-07-17
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2021-09-04	2022-09-03
Agilent	Signal Generator	E8247C	MY43321350	2022-04-01	2023-03-31
Radiated emissions above 1GHz					
ETS-Lindgren	Horn Antenna	3115	000 527 35	2021-10-12	2024-10-11
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-01 1304	2020-12-05	2023-12-04
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-01 1302	2020-12-05	2023-12-04
Agilent	Spectrum Analyzer	E4440A	SG43360054	2022-07-15	2023-07-14
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2021-09-04	2022-09-03
Unknown	Coaxial Cable	C-2.4J2.4J-50	C-0700-02	2022-06-27	2023-06-26
AH	Preamplifier	PAM-0118	469	2021-10-13	2022-10-12
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2022-06-27	2023-06-26
AH	Double Ridge Guide Horn Antenna	SAS-571	1394	2022-05-18	2025-05-17
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2020-12-05	2023-12-04
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-02 1302	2020-12-05	2023-12-04
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2021-09-04	2022-09-03
Agilent	Signal Generator	E8247C	MY43321350	2022-04-01	2023-03-31
Sinoscite	Bandstop Filters	BSF5150-5850MN-0899-003	0899003	2022-05-06	2023-05-05
RF conducted					
R&S	Spectrum Analyzer	FSV40	101589	2022-07-15	2023-07-14
Unknown	Coaxial Cable	C-SJ00-0010	C0010/02	Each time	N/A
E-Microwave	Blocking Control	EMDCB-00036	OE01201047	2022-05-06	2023-05-05
E-Microwave	Coaxial Attenuators	EMCA10-5RN-6	OE01203239	2022-09-04	2023-09-03
Agilent	USB Wideband Power Sensor	U2022XA	MY54170006	2022-04-01	2023-03-31
R&S	Wideband Radio Communication Tester	CMW500	149216	2022-04-01	2023-03-31
BACL	TEMP&HUMI Test Chamber	BTH-150	30022	2022-02-24	2023-02-23
Keysight	MXA Signal Analyzer	N9020	MY48490137	2021-10-26	2022-10-25
Agilent	MXG Analog Signal Generator	N5181A	MY48180151	2021-10-26	2022-10-25
Agilent	MXG Vector Signal Generator	N5182A	MY49060274	2021-10-26	2022-10-25

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Tonscend	RF Control Unit	JS0806-2	19G8060171	2021-10-26	2022-10-25

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Environmental Conditions

Test Item:	Radiated emissions (below 1GHz)	Radiated emissions (above 1GHz)	RF conducted
Temperature:	26.3 °C	26.8 °C	22.7~25.8°C
Relative Humidity:	46.0 %	45.0 %	44~69%
ATM Pressure:	100.0 kPa	99.8 kPa	100.1~100.5kPa
Tester:	Colin Yang	Lucky Lu	FanFan
Test Date:	2022.08.18	2022.08.20	2022.08.25~2022.09.24

## SUMMARY OF TEST RESULTS

SN	Rule and Clause	Description of Test	Test Result
1	EN 301 893 Clause 4.2.1	Carrier frequencies	Compliant
2	EN 301 893 Clause 4.2.2	Nominal channel bandwidth and occupied channel bandwidth	Compliant
3	EN 301 893 Clause 4.2.3	RF output power	Compliant
		Transmit power control (TPC)	Not applicable*
		Power Density	Compliant
4	EN 301 893 Clause 4.2.4.1	Transmitter unwanted emissions outside the 5 GHz RLAN bands	Compliant
5	EN 301 893 Clause 4.2.4.2	Transmitter unwanted emissions within the 5 GHz RLAN bands	Compliant
6	EN 301 893 Clause 4.2.5	Receiver spurious emissions	Compliant
7	EN 301 893 Clause 4.2.6	Dynamic frequency selection (DFS)	Compliant**
8	EN 301 893 Clause 4.2.7	Adaptivity	Compliant
9	EN 301 893 Clause 4.2.8	Receiver blocking	Compliant
10	EN 301 893 Clause 4.2.9	User access restrictions	Compliant*
11	EN 301 893 Clause 4.2.10	Geo-location capability	Not applicable*

Note:

**Not applicable\*:** The device without this function.

**Compliant\*:** Please refer to the product information declared by the manufacturer.

**Compliant\*\*:** Please refer to DFS report.



## 1 – CARRIER FREQUENCIES

### Definition

The Nominal Centre Frequency is the centre of the Operating Channel.

### Limit

The actual centre frequency for any given channel declared by the manufacturer shall be maintained within the range  $f_c \pm 20$  ppm.

### Test Procedure

According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.2

### Test Data

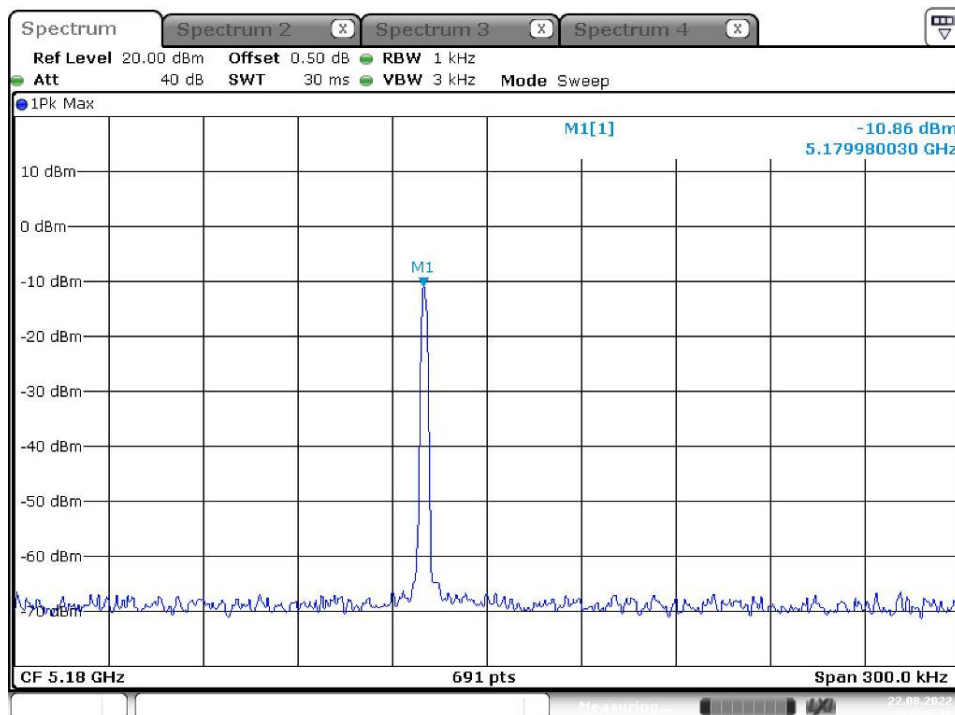
**Test Result:** Compliant. Please refer to following table(s) and Plot(s).

Band (MHz)	F <sub>c</sub> (MHz)	Test Condition	F (MHz)	Result (ppm)	Limit (ppm)
5150-5350	5180	NT	5179.98	-3.86	± 20
		LT	5180.02	3.86	
		HT	5179.96	-7.72	
	5260	NT	5259.98	-3.8	± 20
		LT	5260.02	3.8	
		HT	5259.96	-7.6	

Note: Result =  $(F - F_c) / F_c \times 10^6$

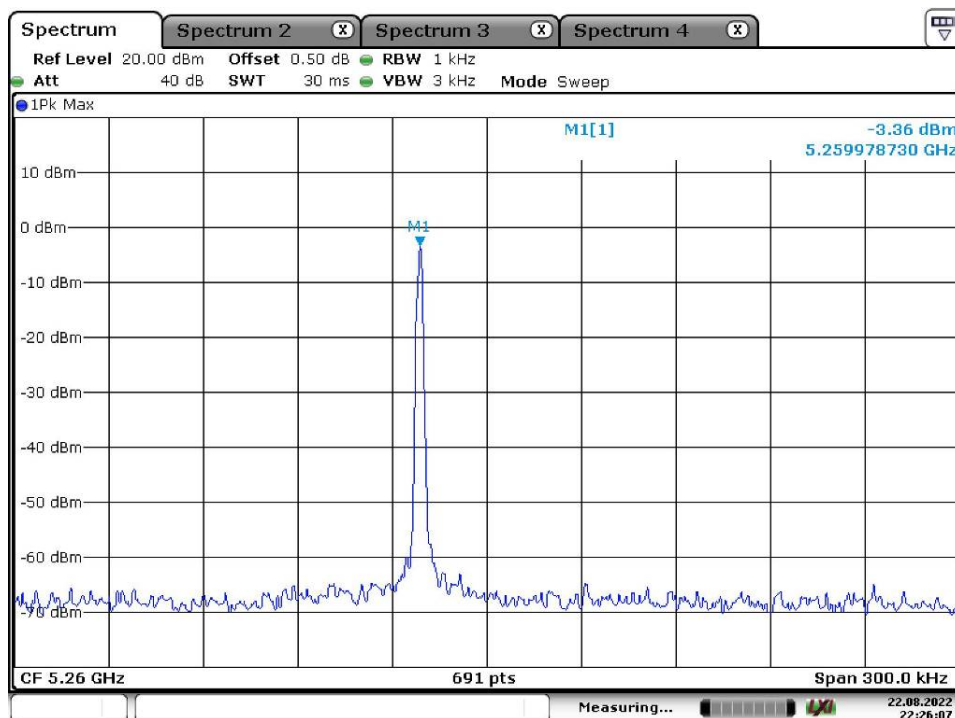
The Normal condition test plots, please refer to following Plots:

5180 MHz



Date: 22.AUG.2022 22:25:29

5260 MHz



Date: 22.AUG.2022 22:26:07

## **2 – NOMINAL CHANNEL BANDWIDTH AND OCCUPIED CHANNEL BANDWIDTH**

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### **Definition**

The Nominal Channel Bandwidth is the widest band of frequencies, inclusive of guard bands, assigned to a single channel.

The Occupied Channel Bandwidth is the bandwidth containing 99 % of the power of the signal.

When equipment has simultaneous transmissions in adjacent channels, these transmissions may be considered as one signal with an actual Nominal Channel Bandwidth of 'n' times the individual Nominal Channel Bandwidth where 'n' is the number of adjacent channels. When equipment has simultaneous transmissions in non-adjacent channels, each power envelope shall be considered separately.

### **Limit**

The Nominal Channel Bandwidth for a single Operating Channel shall be 20 MHz.

Alternatively, equipment may implement a lower Nominal Channel Bandwidth with a minimum of 5 MHz, providing they still comply with the Nominal Centre Frequencies defined in clause 4.2.1 (20 MHz raster).

The Occupied Channel Bandwidth shall be between 80 % and 100 % of the Nominal Channel Bandwidth. In case of smart antenna systems (devices with multiple transmit chains) each of the transmit chains shall meet this requirement.

The Occupied Channel Bandwidth might change with time/payload.

During a Channel Occupancy Time (COT), equipment may operate temporarily with an Occupied Channel Bandwidth of less than 80 % of its Nominal Channel Bandwidth with a minimum of 2 MHz.

### **Test Procedure**

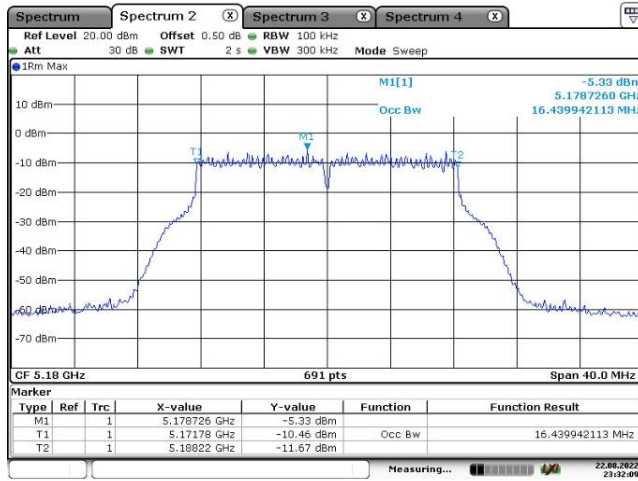
According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.3

**Test Data**

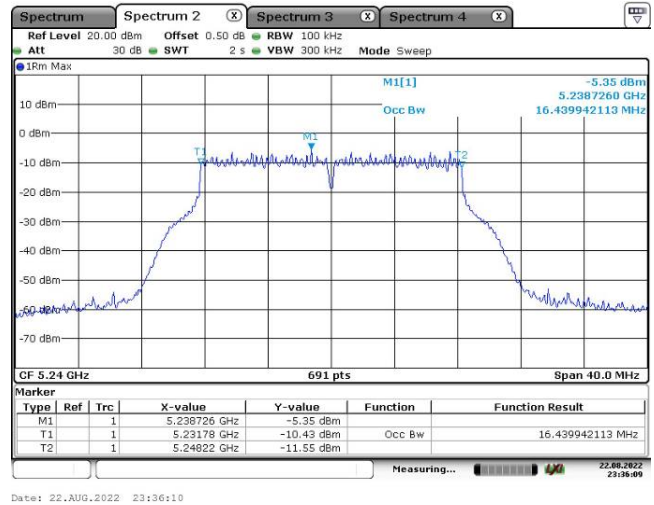
**Test Result:** Compliant. Please refer to following table(s) and Plot(s).

Band (MHz)	Mode	Fc (MHz)	Nominal Channel Bandwidth (MHz)	Result (MHz)	Limit (MHz)
5150-5350	802.11 a	5180	20	16.44	16~20
		5240	20	16.44	16~20
	802.11 n20	5180	20	17.60	16~20
		5240	20	17.60	16~20
	802.11 n40	5190	40	36.12	32~40
		5230	40	36.12	32~40
	802.11 ac20	5180	20	17.66	16~20
		5240	20	17.66	16~20
	802.11 ac40	5190	40	36.24	32~40
		5230	40	36.24	32~40
	802.11 ac80	5210	80	75.48	64~80
	802.11 ac160	5250	160	154.67	128~160
	802.11 ax20	5180	20	18.93	16~20
		5240	20	18.93	16~20
	802.11 ax40	5190	40	37.51	32~40
		5230	40	37.51	32~40
	802.11 ax80	5210	80	76.87	64~80
	802.11 ax160	5250	160	155.14	128~160

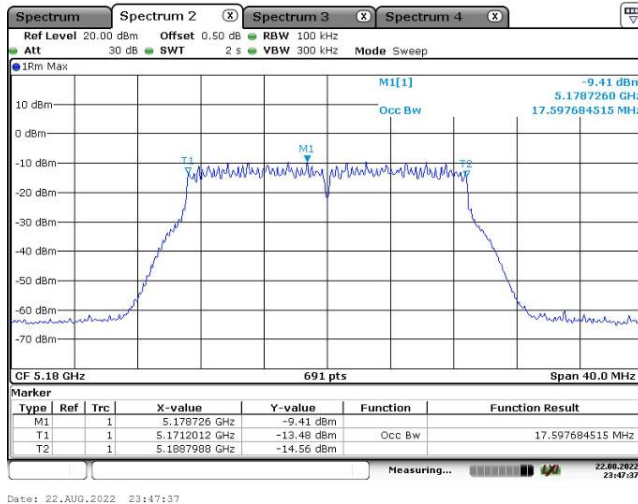
### 802.11 a-5180 MHz



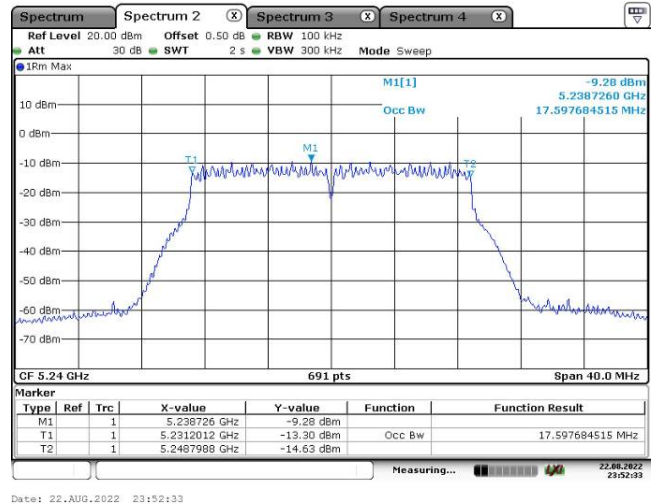
### 802.11 a-5240 MHz



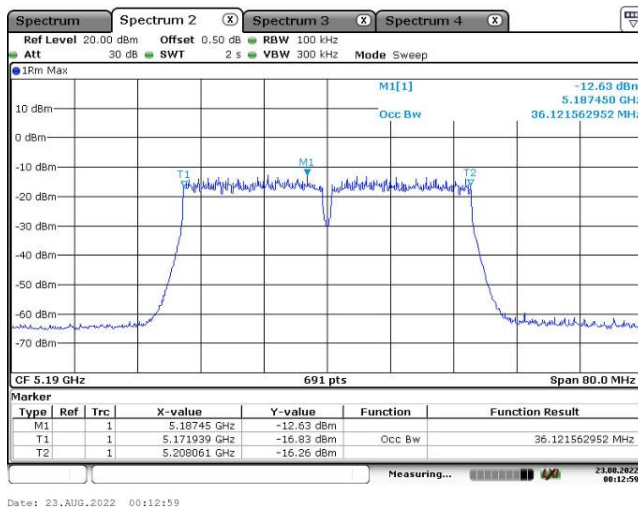
### 802.11 n20-5180 MHz



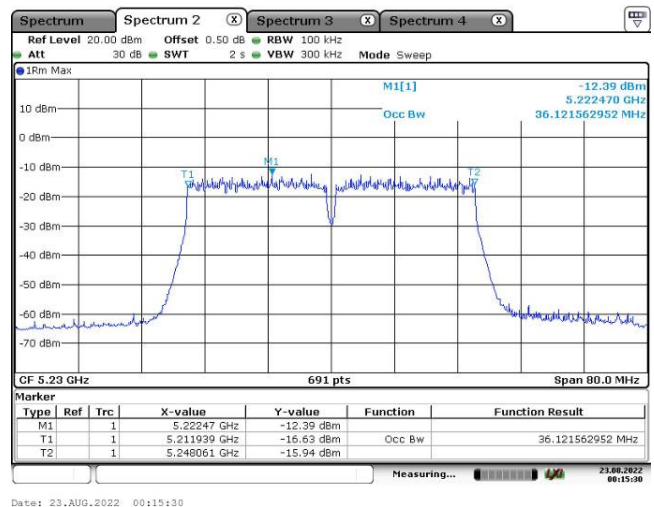
### 802.11 n20-5240 MHz



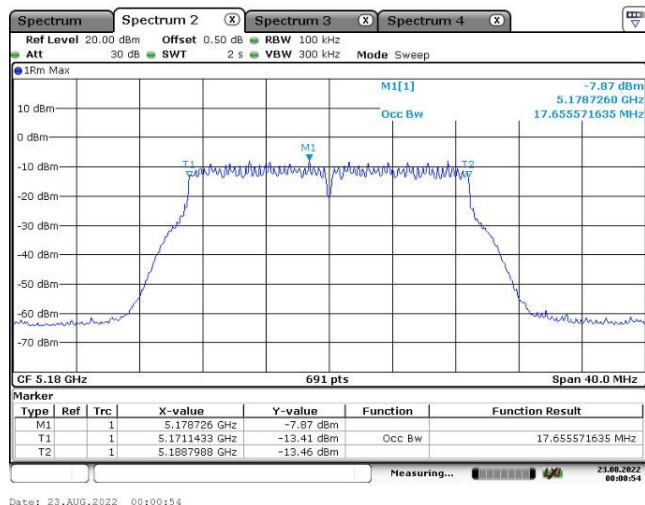
### 802.11 n40-5190 MHz



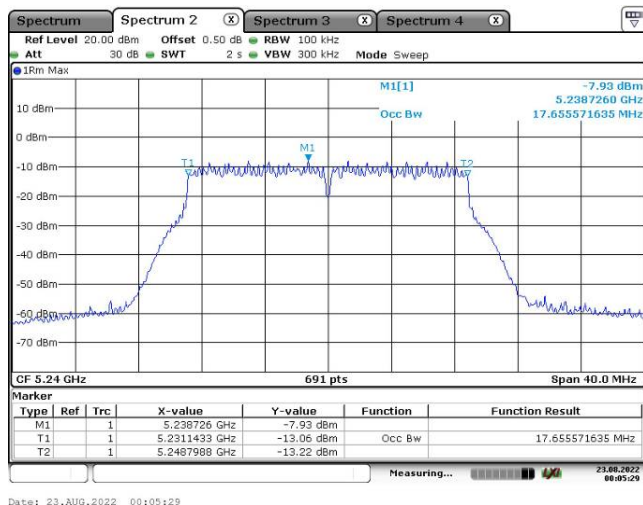
### 802.11 n40-5230 MHz



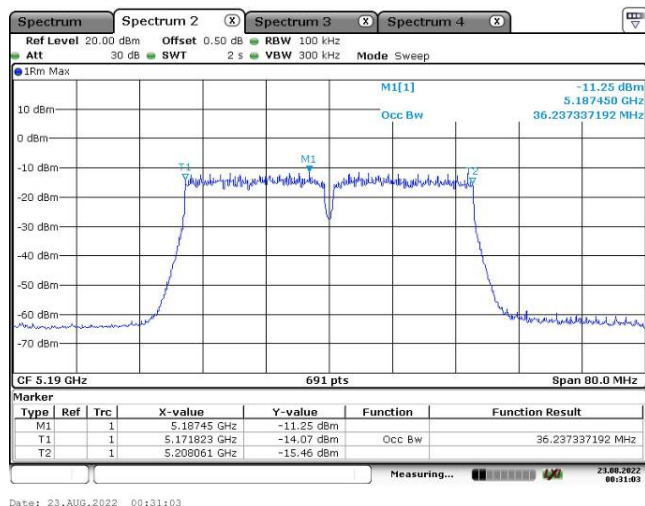
## 802.11 ac20-5180 MHz



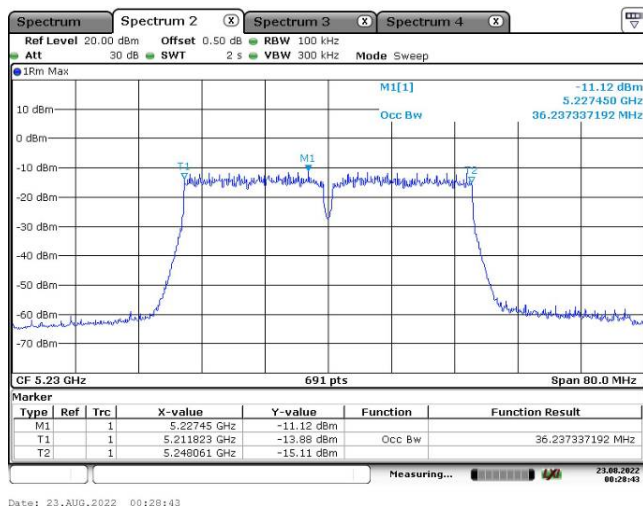
## 802.11 ac20-5240 MHz



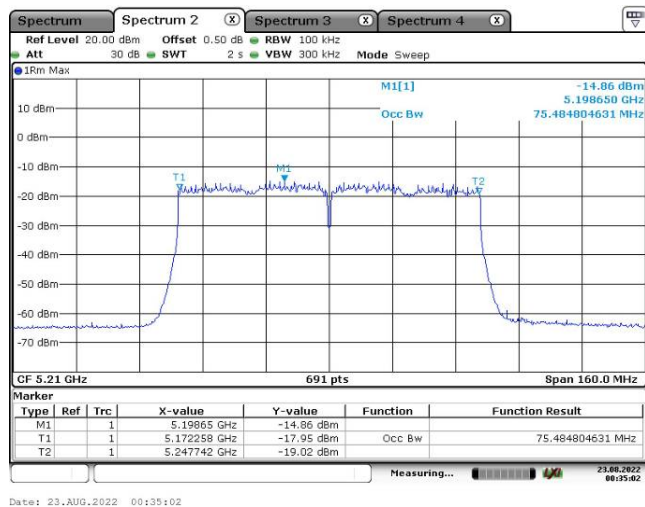
## 802.11 ac40-5190 MHz



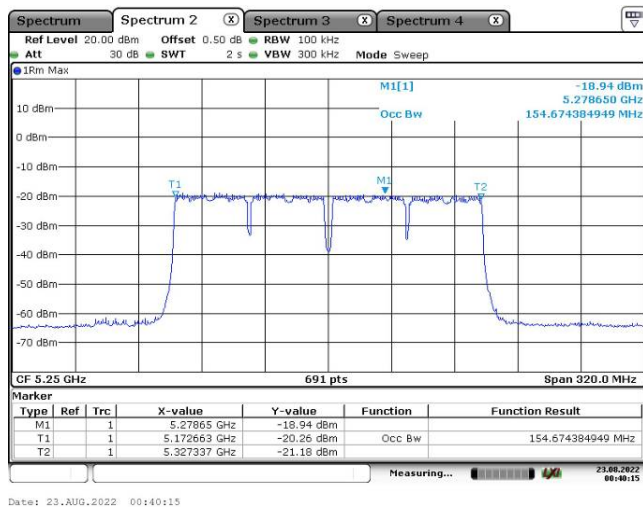
## 802.11 ac40-5230 MHz



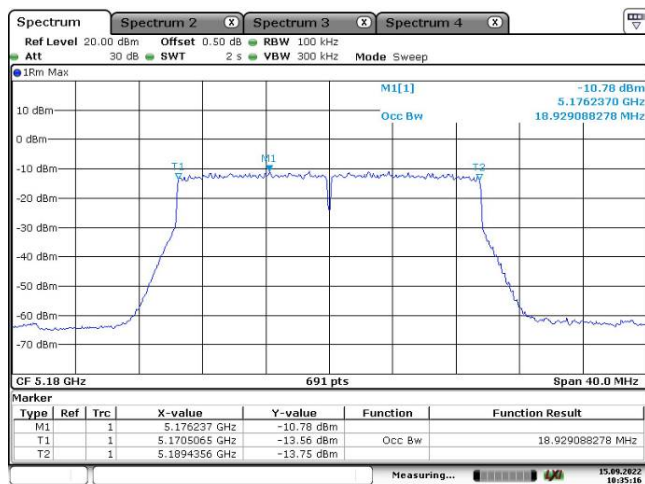
## 802.11 ac80-5210 MHz



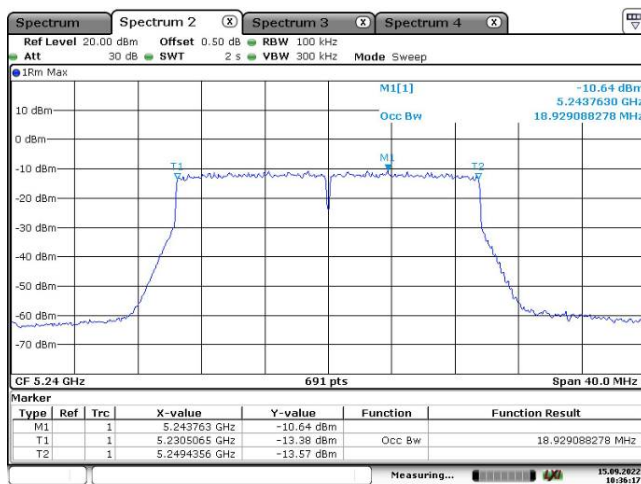
## 802.11 ac160-5250 MHz



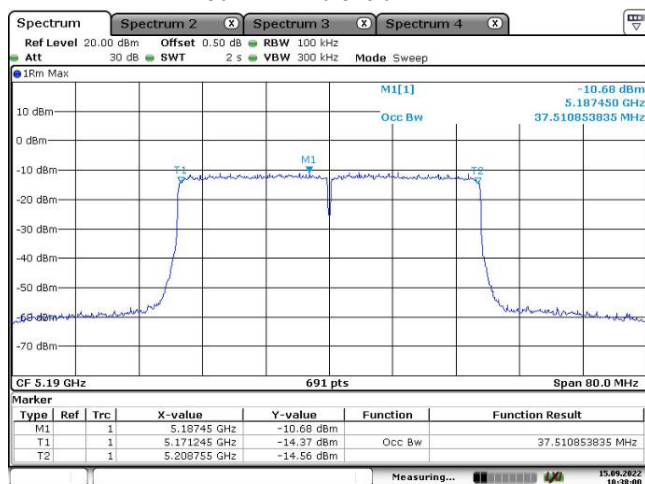
### 802.11 ax20-5180 MHz



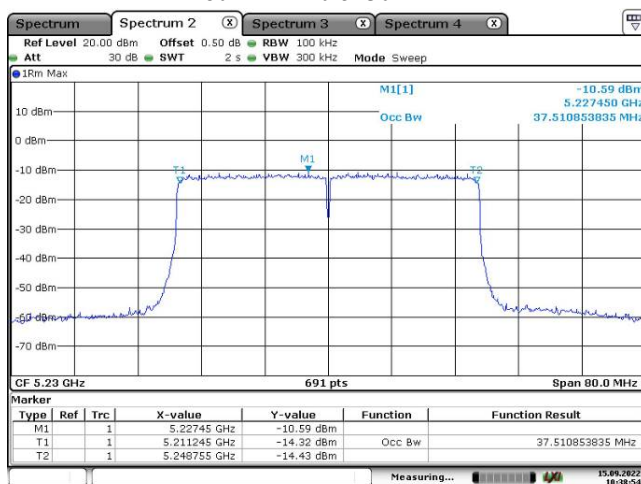
### 802.11 ax20-5240 MHz



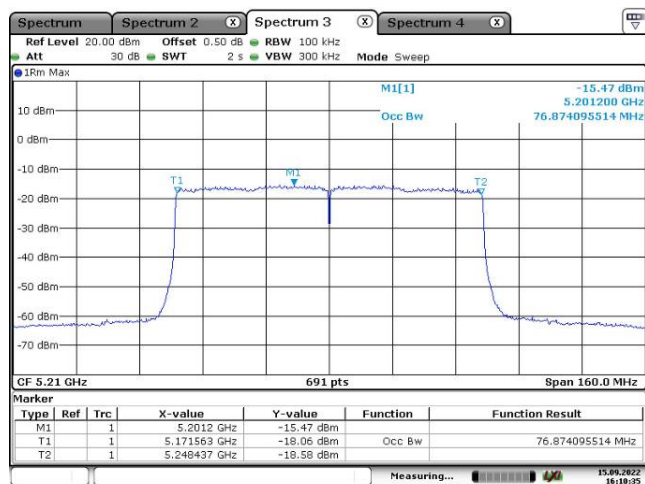
### 802.11 ax40-5190 MHz



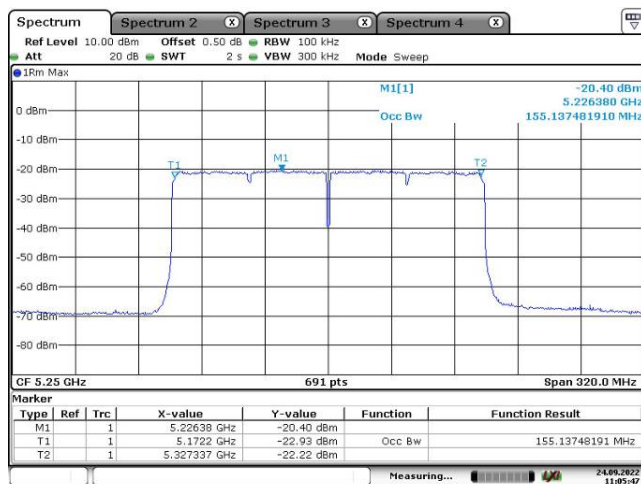
### 802.11 ax40-5230 MHz



### 802.11 ax80-5210 MHz



### 802.11 ax160-5250 MHz



### 3 – RF OUTPUT POWER, TRANSMIT POWER CONTROL (TPC), POWER DENSITY

#### Definition

##### RF Output Power:

The RF Output Power is the mean equivalent isotropically radiated power (e.i.r.p.) during a transmission burst.

##### Transmit Power Control (TPC):

Transmit Power Control (TPC) is a mechanism to be used by the RLAN device to ensure a mitigation factor of at least 3 dB on the aggregate power from a large number of devices. This requires the RLAN device to have a TPC range from which the lowest value is at least 6 dB below the values for mean e.i.r.p. given in table 2 for devices with TPC.

##### Power Density:

The Power Density is the mean Equivalent Isotropically Radiated Power (e.i.r.p.) density during a transmission burst.

#### Limit

TPC is not required for channels whose nominal bandwidth falls completely within the band 5150 MHz to 5250 MHz.

For devices with TPC, the RF output power and the power density when configured to operate at the highest stated power level of the TPC range shall not exceed the levels given in table 2.

Devices are allowed to operate without TPC. See table 2 for the applicable limits in this case.

**Table 2: Mean e.i.r.p. limits for RF output power and Power Density at the highest power level ( $P_H$ )**

Frequency range (MHz)	Mean e.i.r.p. limit for $P_H$ (dBm)		Mean e.i.r.p. density limit (dBm/MHz)	
	with TPC	without TPC	with TPC	without TPC
5 150 to 5 350	23	20/23 (see note 1)	10	7/10 (see note 2)
5 470 to 5 725	30 (see note 3)	27 (see note 3)	17 (see note 3)	14 (see note 3)
NOTE 1: The applicable limit is 20 dBm, except for transmissions whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz, in which case the applicable limit is 23 dBm.				
NOTE 2: The applicable limit is 7 dBm/MHz, except for transmissions whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz, in which case the applicable limit is 10 dBm/MHz.				
NOTE 3: Slave devices without a <i>Radar Interference Detection</i> function shall comply with the limits for the frequency range 5 250 MHz to 5 350 MHz.				



**Table 3: Mean e.i.r.p. limits for RF Output Power  
at the lowest power level of the TPC range**

Frequency range	Mean e.i.r.p. (dBm) limit for $P_L$
5 250 MHz to 5 350 MHz	17
5 470 MHz to 5 725 MHz	24 (see note)
NOTE: Slave devices without a <i>Radar Interference Detection</i> function shall comply with the limits for the band 5 250 MHz to 5 350 MHz.	

### Test Procedure

According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.4

### Test Data

**Test Result:** Compliant. Please refer to following table(s).

Test Mode	Test Condition	Fc (MHz)	Conducted output power (dBm)		Result_EIRP (dBm)		Limit (dBm)
			Chain 0	Chain 1	Chain 0	Chain 1	
802.11 a	NT	5180	14.88	14.78	20.88	20.78	≤ 23
		5240	14.90	14.84	20.90	20.84	≤ 23
		5260	12.80	12.86	18.80	18.86	≤ 20
		5320	13.01	12.82	19.01	18.82	≤ 20
	LT	5180	14.90	14.81	20.90	20.81	≤ 23
		5240	14.92	14.86	20.92	20.86	≤ 23
		5260	12.82	12.88	18.82	18.88	≤ 20
		5320	13.03	12.84	19.03	18.84	≤ 20
	HT	5180	14.86	14.76	20.86	20.76	≤ 23
		5240	14.88	14.82	20.88	20.82	≤ 23
		5260	12.78	12.84	18.78	18.84	≤ 20
		5320	12.98	12.80	18.98	18.80	≤ 20

Test Mode	Test Condition	Fc (MHz)	Conducted output power (dBm)		Result_EIRP (dBm)	Limit (dBm)
			Chain 0	Chain 1	Total	
802.11 n20	NT	5180	11.92	11.98	20.96	≤ 23
		5240	11.98	12.00	21.00	≤ 23
		5260	9.54	9.14	18.35	≤ 20
		5320	9.79	9.30	18.56	≤ 20
	LT	5180	11.94	12.01	20.99	≤ 23
		5240	12.01	12.02	21.03	≤ 23
		5260	9.56	9.16	18.37	≤ 20
		5320	9.81	9.33	18.59	≤ 20
	HT	5180	11.90	11.96	20.94	≤ 23
		5240	11.96	11.98	20.98	≤ 23
		5260	9.52	9.12	18.33	≤ 20
		5320	9.76	9.28	18.54	≤ 20
802.11 n40	NT	5190	11.87	12.03	20.96	≤ 23
		5230	12.02	11.95	21.00	≤ 23
		5270	9.92	10.04	18.99	≤ 20
		5310	10.05	10.01	19.04	≤ 20
	LT	5190	11.89	12.05	20.98	≤ 23
		5230	12.04	11.97	21.02	≤ 23
		5270	9.94	10.06	19.01	≤ 20
		5310	10.07	10.03	19.06	≤ 20
	HT	5190	11.85	12.01	20.94	≤ 23
		5230	12.00	11.93	20.98	≤ 23
		5270	9.90	10.01	18.97	≤ 20
		5310	10.03	10.00	19.03	≤ 20
802.11 ac20	NT	5180	11.93	11.99	20.97	≤ 23
		5240	12.14	11.95	21.06	≤ 23
		5260	9.54	9.52	18.54	≤ 20
		5320	9.57	9.61	18.60	≤ 20
	LT	5180	11.95	12.02	21.00	≤ 23
		5240	12.16	11.97	21.08	≤ 23
		5260	9.56	9.54	18.56	≤ 20
		5320	9.59	9.63	18.62	≤ 20
	HT	5180	11.91	11.97	20.95	≤ 23
		5240	12.11	11.93	21.03	≤ 23
		5260	9.52	9.50	18.52	≤ 20
		5320	9.55	9.60	18.59	≤ 20
802.11 ac40	NT	5190	11.95	12.01	20.99	≤ 23
		5230	12.25	12.10	21.19	≤ 23
		5270	10.01	9.83	18.93	≤ 20
		5310	10.09	9.90	19.01	≤ 20
	LT	5190	11.97	12.03	21.01	≤ 23
		5230	12.27	12.12	21.21	≤ 23
		5270	10.03	9.85	18.95	≤ 20

	HT	5310	10.11	9.92	19.03	≤ 20
		5190	11.93	12.00	20.98	≤ 23
		5230	12.23	12.07	21.16	≤ 23
		5270	10.00	9.81	18.92	≤ 20
		5310	10.07	9.88	18.99	≤ 20
<b>802.11 ac80</b>	NT	5210	11.94	11.90	20.93	≤ 23
		5290	9.99	9.95	18.98	≤ 20
	LT	5210	11.97	11.92	20.96	≤ 23
		5290	10.01	9.97	19.00	≤ 20
	HT	5210	11.92	11.88	20.91	≤ 23
		5290	9.97	9.93	18.96	≤ 20
<b>802.11 ac160</b>	NT	5250	9.69	11.57	19.74	≤ 20
	LT	5250	10.03	11.68	19.94	≤ 20
	HT	5250	9.32	11.42	19.51	≤ 20

Test Mode	Test Condition	Fc (MHz)	Conducted output power (dBm)		Result_EIRP (dBm)	Limit (dBm)
			Chain 0	Chain 1	Total	
<b>802.11 ax20</b>	NT	5180	12.34	11.26	20.84	≤ 23
		5240	12.63	11.12	20.95	≤ 23
		5260	9.32	10.89	19.19	≤ 20
		5320	9.27	10.78	19.10	≤ 20
	LT	5180	13.44	12.56	22.03	≤ 23
		5240	14.13	12.42	22.37	≤ 23
		5260	10.52	11.12	19.84	≤ 20
		5320	10.37	11.2	19.83	≤ 20
	HT	5180	11.34	10.26	19.84	≤ 23
		5240	11.63	10.12	19.95	≤ 23
		5260	8.32	9.89	18.19	≤ 20
		5320	8.27	9.78	18.10	≤ 20
<b>802.11 ax40</b>	NT	5190	13.24	12.16	21.74	≤ 23
		5230	13.18	12.09	21.68	≤ 23
		5270	10.86	9.37	19.19	≤ 20
		5310	10.73	9.29	19.08	≤ 20
	LT	5190	13.24	12.75	22.01	≤ 23
		5230	11.38	10.27	19.87	≤ 23
		5270	11.14	9.37	19.35	≤ 20
		5310	11.51	10.34	19.97	≤ 20
	HT	5190	11.94	10.86	20.44	≤ 23
		5230	11.78	10.89	20.37	≤ 23
		5270	9.46	8.17	17.87	≤ 20
		5310	9.23	8.09	17.71	≤ 20

Test Mode	Test Condition	Fc (MHz)	Conducted output power (dBm)		Result_EIRP (dBm)	Limit (dBm)
			Chain 0	Chain 1	Total	
802.11 ax80	NT	5210	12.91	11.59	21.31	≤ 23
		5290	10.59	9.97	19.30	≤ 20
	LT	5210	13.91	12.59	22.31	≤ 23
		5290	10.98	10.27	19.65	≤ 20
	HT	5210	11.91	10.59	20.31	≤ 23
		5290	9.59	8.97	18.30	≤ 20
802.11 ax160	NT	5250	11.07	10.13	19.64	≤ 20
	LT	5250	11.27	10.61	19.96	≤ 20
	HT	5250	11.00	10.00	19.54	≤ 20

## Beamforming-Power:

Test Mode	Test Condition	Fc (MHz)	Conducted output power (dBm)		Result_EIRP (dBm)	Limit (dBm)
			Chain 0	Chain 1	Total	
802.11 n20	NT	5180	8.85	9.04	20.96	≤ 23
		5240	9.08	8.88	20.99	≤ 23
		5260	6.59	6.73	18.67	≤ 20
		5320	6.65	6.85	18.76	≤ 20
	LT	5180	8.88	9.06	20.98	≤ 23
		5240	9.10	8.91	21.02	≤ 23
		5260	6.61	6.75	18.69	≤ 20
		5320	6.67	6.87	18.78	≤ 20
	HT	5180	8.83	9.02	20.94	≤ 23
		5240	9.06	8.71	20.90	≤ 23
		5260	6.53	6.71	18.63	≤ 20
		5320	6.62	6.83	18.74	≤ 20
802.11 n40	NT	5190	9.29	8.96	21.14	≤ 23
		5230	9.23	8.87	21.06	≤ 23
		5270	7.05	6.87	18.97	≤ 20
		5310	7.02	6.71	18.88	≤ 20
	LT	5190	9.31	8.98	21.16	≤ 23
		5230	9.25	8.88	21.08	≤ 23
		5270	7.07	6.89	18.99	≤ 20
		5310	7.04	6.73	18.90	≤ 20
	HT	5190	9.27	8.94	21.12	≤ 23
		5230	9.21	8.85	21.04	≤ 23
		5270	7.03	6.84	18.95	≤ 20
		5310	7.00	6.70	18.86	≤ 20
802.11 ac20	NT	5180	9.07	8.97	21.03	≤ 23
		5240	8.90	8.99	20.96	≤ 23
		5260	6.88	6.97	18.94	≤ 20
		5320	7.10	6.91	19.02	≤ 20
	LT	5180	9.09	8.99	21.05	≤ 23
		5240	8.92	9.02	20.98	≤ 23
		5260	6.91	6.99	18.96	≤ 20
		5320	7.12	6.93	19.04	≤ 20
	HT	5180	9.05	8.95	21.01	≤ 23
		5240	8.87	8.97	20.93	≤ 23
		5260	6.86	6.95	18.92	≤ 20
		5320	7.08	6.89	19.00	≤ 20
802.11 ac40	NT	5190	9.07	9.09	21.09	≤ 23
		5230	9.24	9.17	21.22	≤ 23
		5270	7.01	7.03	19.03	≤ 20
		5310	7.22	6.91	19.08	≤ 20
	LT	5190	9.09	9.11	21.11	≤ 23
		5230	9.26	9.19	21.24	≤ 23
		5270	7.03	7.05	19.05	≤ 20

	HT	5310	7.24	6.93	19.10	≤ 20
		5190	9.05	9.07	21.07	≤ 23
		5230	9.22	9.15	21.20	≤ 23
		5270	7.00	7.01	19.02	≤ 20
		5310	7.20	6.90	19.06	≤ 20
<b>802.11 ac80</b>	NT	5210	8.87	9.04	20.97	≤ 23
		5290	6.96	7.11	19.05	≤ 20
	LT	5210	8.89	9.06	20.99	≤ 23
		5290	6.98	7.14	19.07	≤ 20
	HT	5210	8.85	9.02	20.95	≤ 23
		5290	6.93	7.10	19.03	≤ 20
<b>802.11 ac160</b>	NT	5250	7.09	6.80	18.96	≤ 20
	LT	5250	7.12	6.83	18.99	≤ 20
	HT	5250	7.06	6.78	18.93	≤ 20

Test Mode	Test Condition	Fc (MHz)	Conducted output power (dBm)		Result_EIRP (dBm)	Limit (dBm)
			Chain 0	Chain 1	Total	
<b>802.11 ax20</b>	NT	5180	7.60	8.86	20.29	≤ 23
		5240	7.67	8.73	20.24	≤ 23
		5260	7.42	7.33	19.39	≤ 20
		5320	7.56	7.41	19.50	≤ 20
	LT	5180	7.75	8.93	20.39	≤ 23
		5240	7.78	8.87	20.37	≤ 23
		5260	7.57	7.47	19.53	≤ 20
		5320	7.68	7.60	19.65	≤ 20
	HT	5180	7.49	8.69	20.14	≤ 23
		5240	7.54	8.60	20.11	≤ 23
		5260	7.30	7.19	19.26	≤ 20
		5320	7.45	7.27	19.37	≤ 20
<b>802.11 ax40</b>	NT	5190	9.20	9.42	21.32	≤ 23
		5230	9.29	9.37	21.34	≤ 23
		5270	7.63	7.04	19.36	≤ 20
		5310	7.58	7.22	19.41	≤ 20
	LT	5190	9.35	9.57	21.47	≤ 23
		5230	9.40	9.46	21.44	≤ 23
		5270	7.76	7.19	19.49	≤ 20
		5310	7.70	7.37	19.55	≤ 20
	HT	5190	9.03	9.27	21.16	≤ 23
		5230	9.10	9.24	21.18	≤ 23
		5270	7.51	6.86	19.21	≤ 20
		5310	7.40	7.07	19.25	≤ 20

Test Mode	Test Condition	Fc (MHz)	Conducted output power (dBm)		Result_EIRP (dBm)	Limit (dBm)
			Chain 0	Chain 1	Total	
802.11 ax80	NT	5210	9.34	8.70	21.04	≤ 23
		5290	7.73	6.72	19.26	≤ 20
	LT	5210	9.48	8.83	21.18	≤ 23
		5290	7.89	6.85	19.41	≤ 20
	HT	5210	9.27	8.64	20.98	≤ 23
		5290	7.68	6.63	19.20	≤ 20
802.11 ax160	NT	5250	6.34	7.59	19.02	≤ 20
	LT	5250	6.42	7.63	19.08	≤ 20
	HT	5250	6.24	7.87	19.14	≤ 20

Note: The antenna Gain was added into the result.

**Power Density**

Mode	Fc (MHz)	Conducted power density (dBm/MHz)		Result (dBm/MHz)		Limit (dBm/MHz)
		Chain 0	Chain 1	Chain 0	Chain 1	
802.11 a	5180	0.97	-0.13	9.45	8.35	≤ 10
	5240	0.94	0.01	9.42	8.49	≤ 10
	5260	-2.06	-2.16	6.42	6.32	≤ 7
	5320	-1.66	-2.08	6.82	6.40	≤ 7
802.11 n20	5180	-2.44	-3.17	8.70		≤ 10
	5240	-2.26	-3.29	8.75		≤ 10
	5260	-5.02	-4.67	6.65		≤ 7
	5320	-4.65	-4.54	6.90		≤ 7
802.11 n40	5190	-5.79	-6.29	5.26		≤ 10
	5230	-5.58	-6.23	5.40		≤ 10
	5270	-7.87	-8.08	3.32		≤ 7
	5310	-7.66	-7.69	3.62		≤ 7
802.11 ac20	5180	-1.76	-1.65	8.15		≤ 10
	5240	-1.44	-1.57	8.35		≤ 10
	5260	-4.52	-4.54	5.32		≤ 7
	5320	-4.52	-4.50	5.34		≤ 7
802.11 ac40	5190	-3.96	-4.48	5.42		≤ 10
	5230	-3.80	-4.52	5.49		≤ 10
	5270	-6.03	-5.18	4.05		≤ 7
	5310	-5.93	-4.93	4.23		≤ 7
802.11 ac80	5210	-6.65	-8.00	2.36		≤ 10
	5290	-9.35	-9.24	0.34		≤ 7
802.11 ac160	5250	-10.57	-10.48	-0.84		≤ 7
802.11 ax20	5180	242/61	-2.32	-2.45	7.71	≤ 10
	5240	242/61	-2.03	-2.46	7.85	≤ 10
	5260	242/61	-5.38	-4.11	5.39	≤ 7
	5320	242/61	-5.36	-4.20	5.35	≤ 7
802.11 ax40	5190	484/65	-2.66	-3.71	6.94	≤ 10
	5230	484/65	-2.65	-3.58	7.00	≤ 10
	5270	484/65	-5.56	-7.02	3.86	≤ 7
	5310	484/65	-5.48	-6.80	4.00	≤ 7
802.11 ax80	5210	996/67	-5.91	-7.30	3.67	≤ 10
	5290	996/67	-8.42	-9.26	1.40	≤ 7
802.11 ax160	5250	2*996/67	-11.24	-9.59	-1.06	≤ 7

**Note:**

- 1, The antenna gain and duty cycle factor were added into the result.
- 2, Duty cycle factor =  $10 \cdot \log(1/\text{duty cycle})$

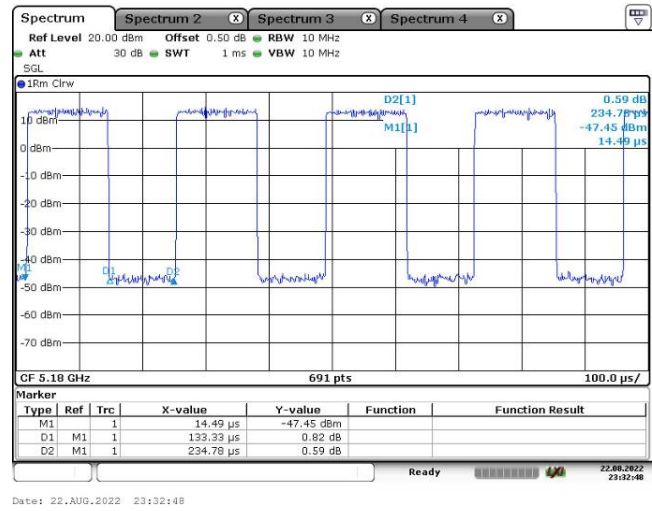


**Duty Cycle:**

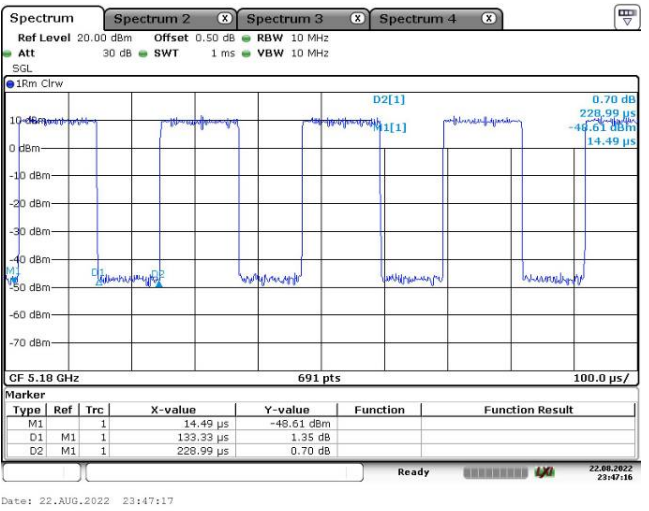
Mode	Ton (ms)	Ton+Toff (ms)	Duty cycle (%)	Duty cycle Factor (dB)
802.11 a	0.13	0.23	56.52	2.48
802.11 n20	0.13	0.23	56.52	2.48
802.11 n40	0.13	0.22	59.09	2.28
802.11 ac20	0.14	0.17	82.35	0.84
802.11 ac40	0.13	0.15	86.67	0.62
802.11 ac80	0.13	0.15	86.67	0.62
802.11 ac160	0.12	0.14	85.71	0.67
802.11 ax20	0.32	0.41	78.05	1.08
802.11 ax40	0.32	0.41	78.05	1.08
802.11 ax80	0.31	0.41	75.61	1.21
802.11 ax160	0.31	0.33	93.94	0.27

Duty Cycle:

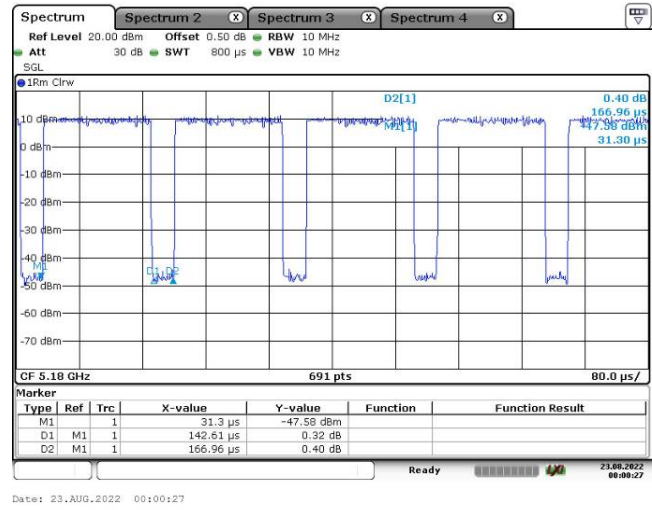
802.11 a



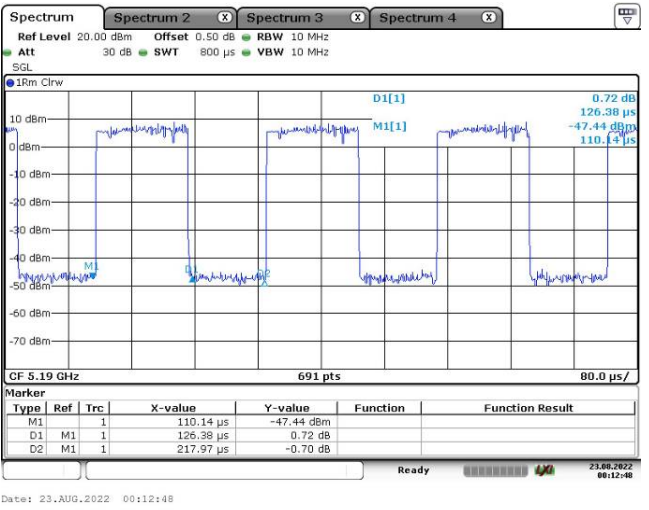
802.11 n20



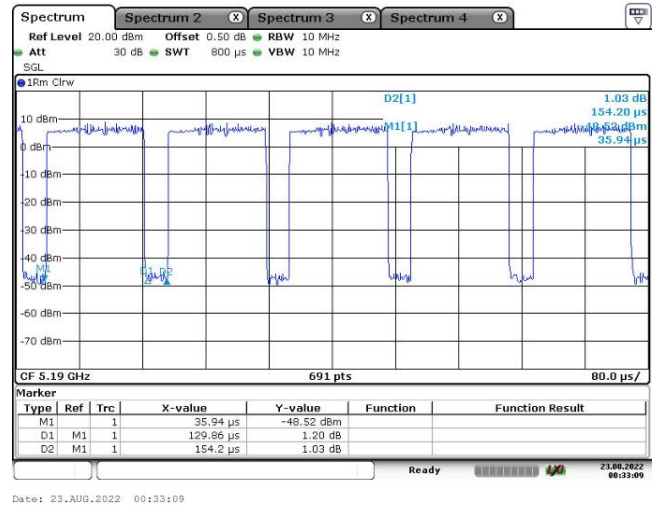
802.11 ac20



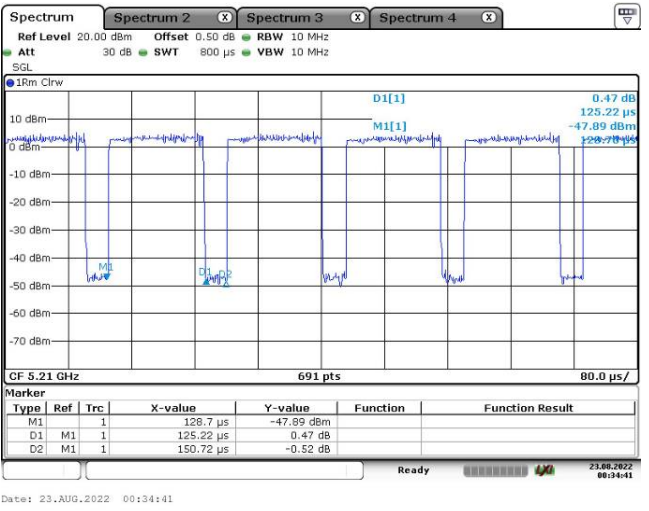
802.11 n40



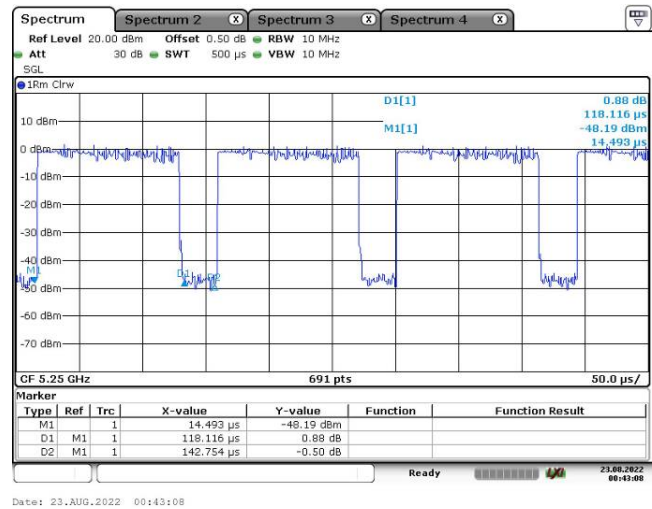
802.11 ac40



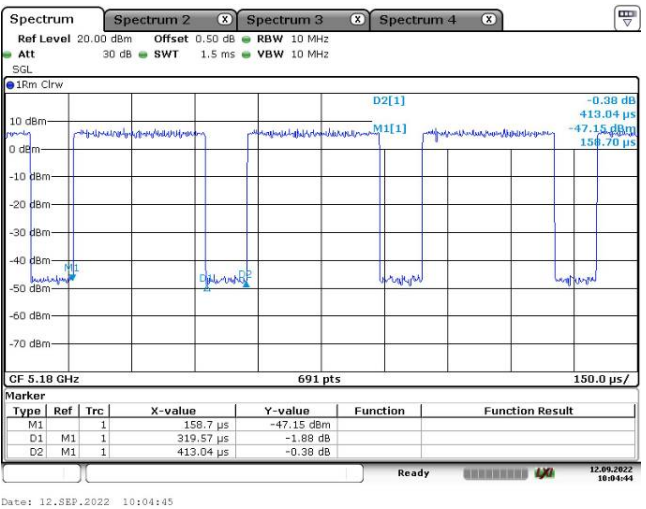
802.11 ac80



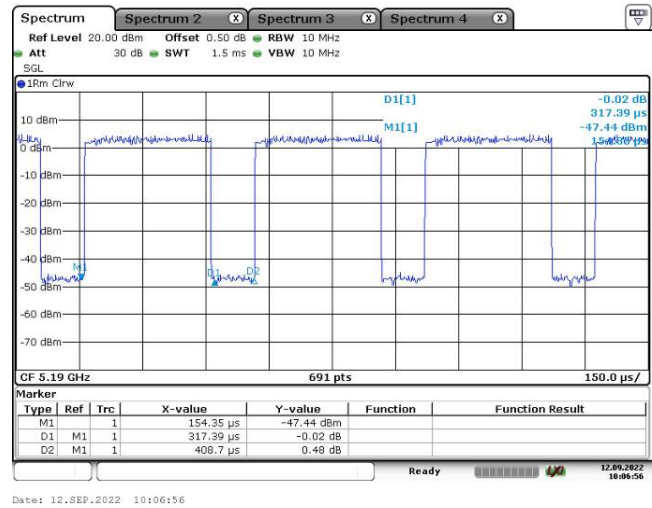
802.11 ac160



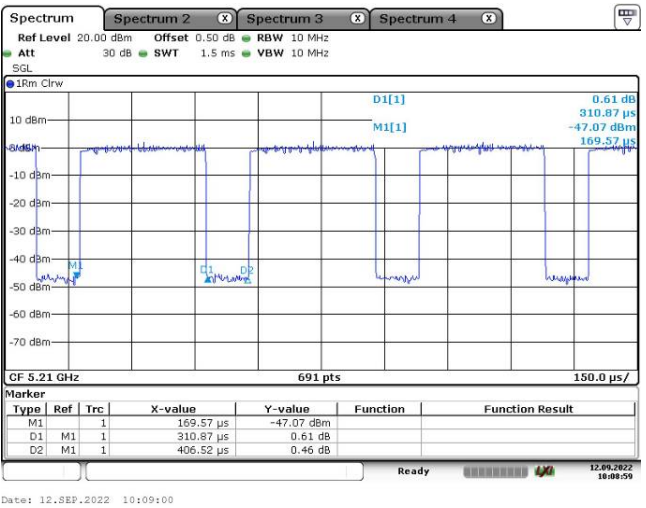
802.11 ax20



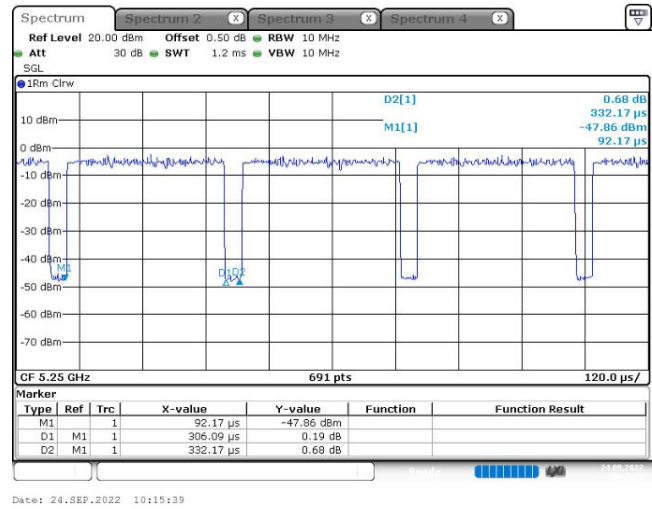
802.11 ax40



802.11 ax80

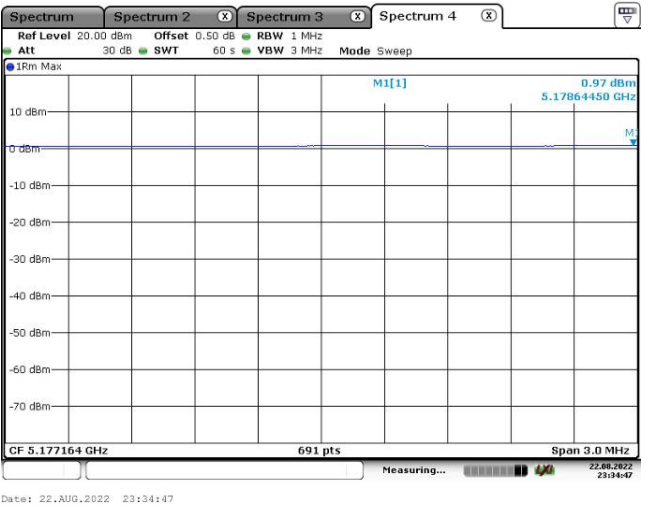
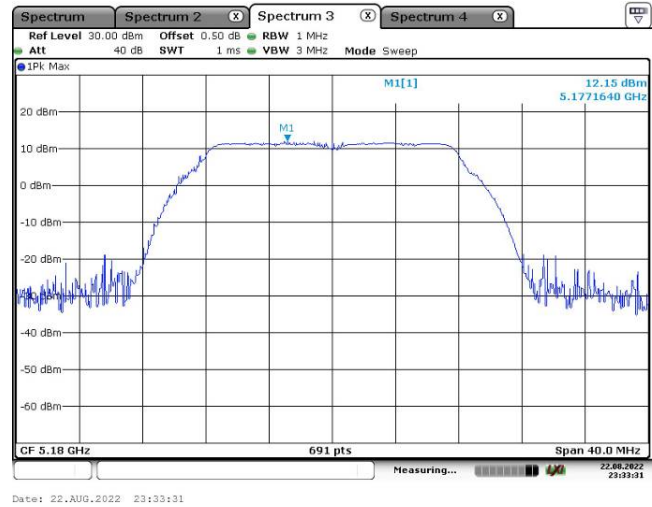


802.11 ax160

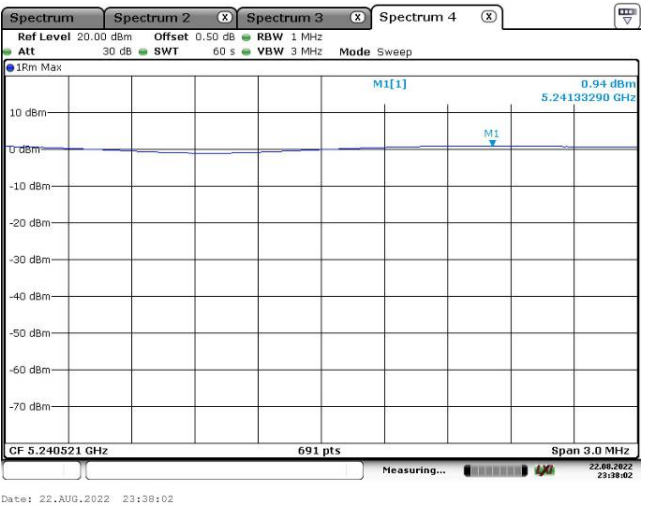
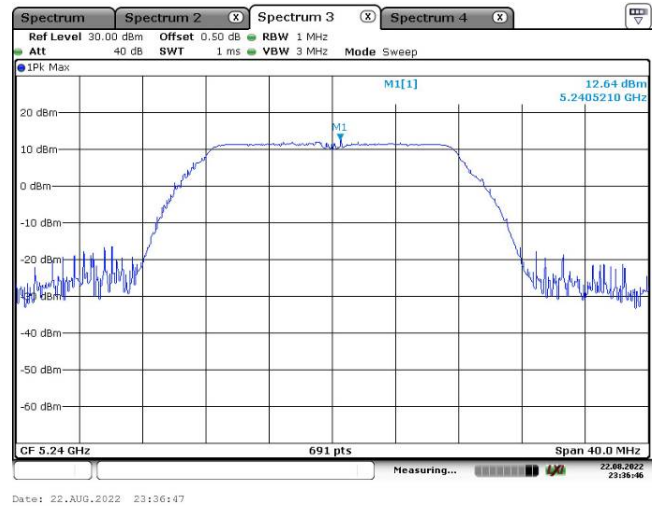


PSD:  
Chain0-5.2G

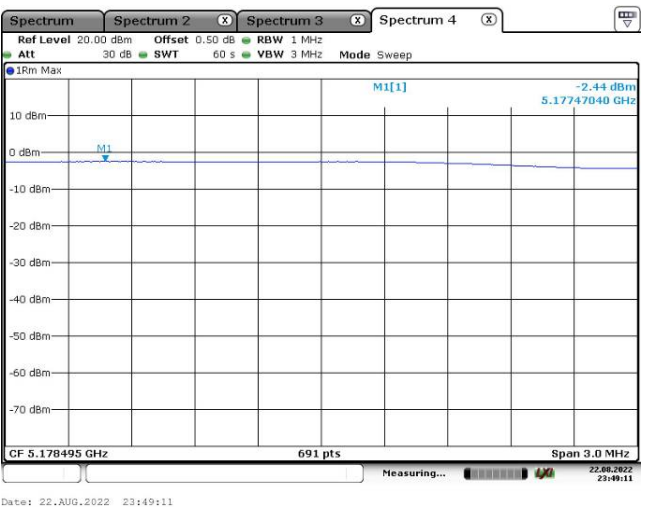
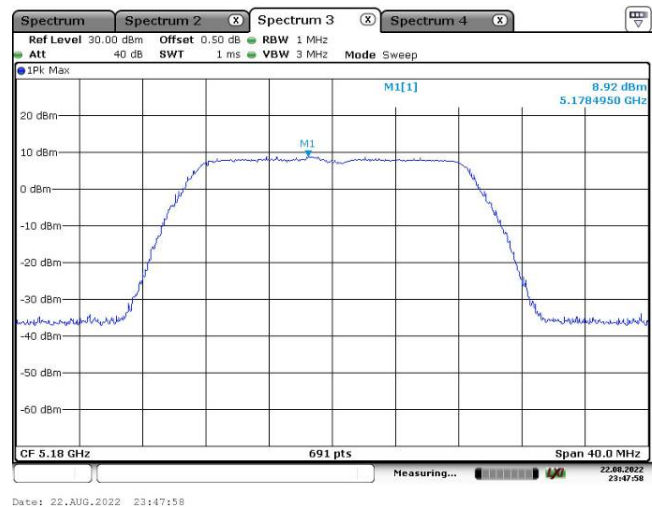
802.11 a-5180 MHz



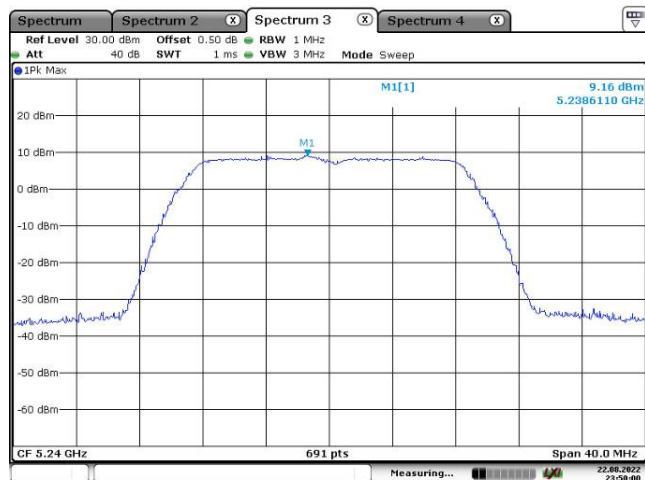
802.11 a-5320 MHz



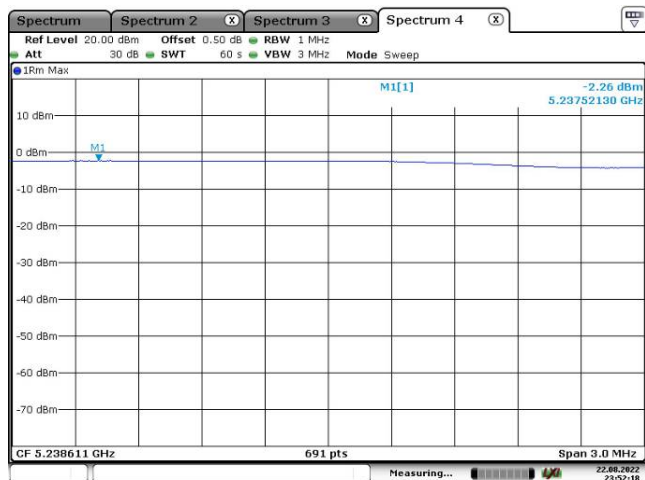
802.11 n20-5180 MHz



802.11 n20-5320 MHz

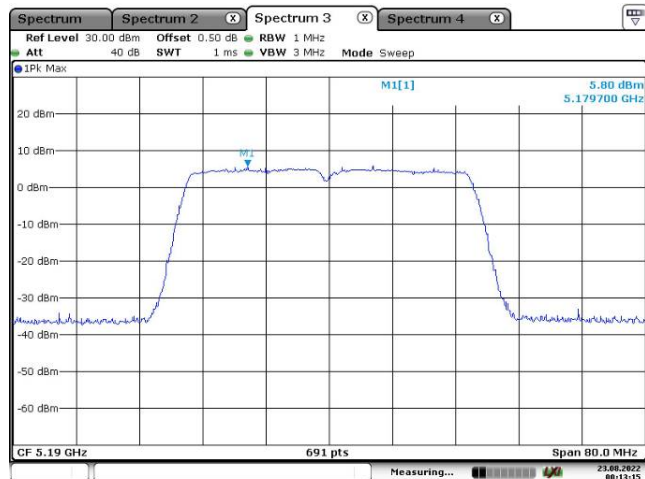


Date: 22.AUG.2022 23:50:01

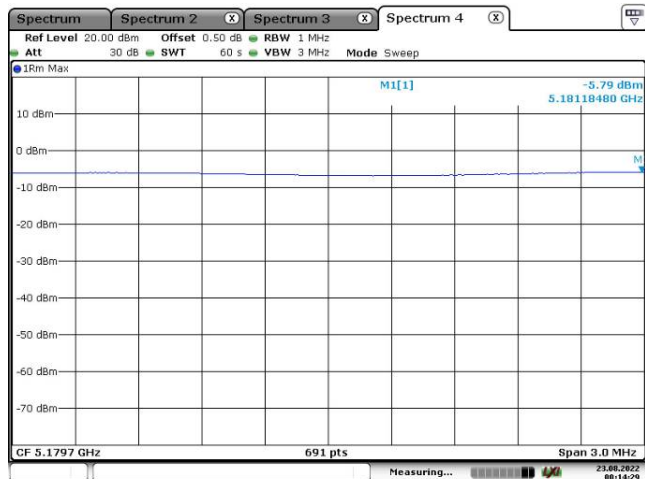


Date: 22.AUG.2022 23:52:18

802.11 n40-5190 MHz

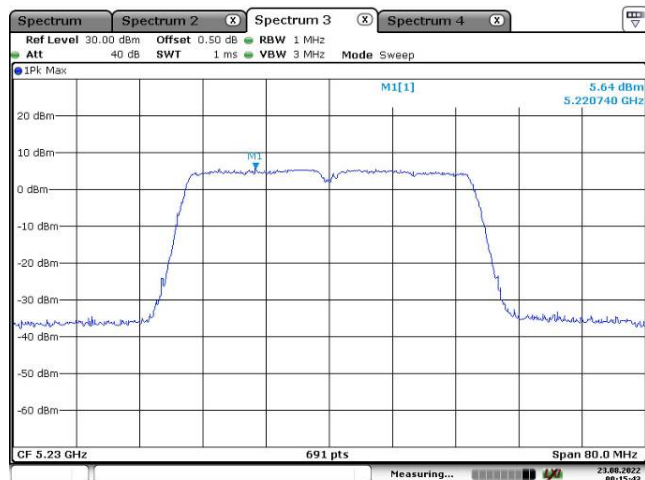


Date: 23.AUG.2022 00:13:15

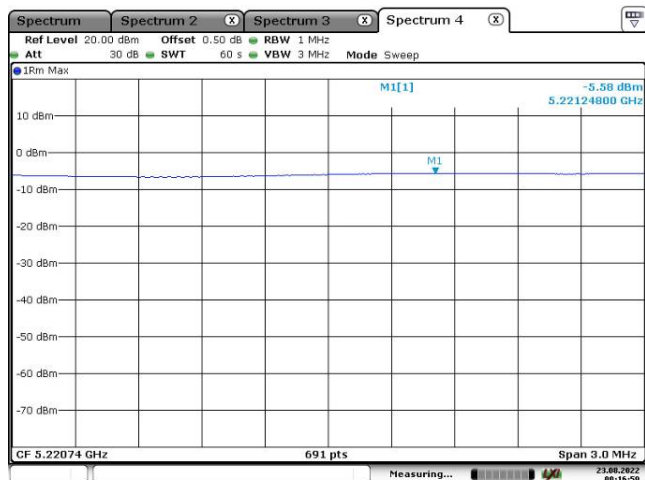


Date: 23.AUG.2022 00:14:29

802.11 n40-5310 MHz

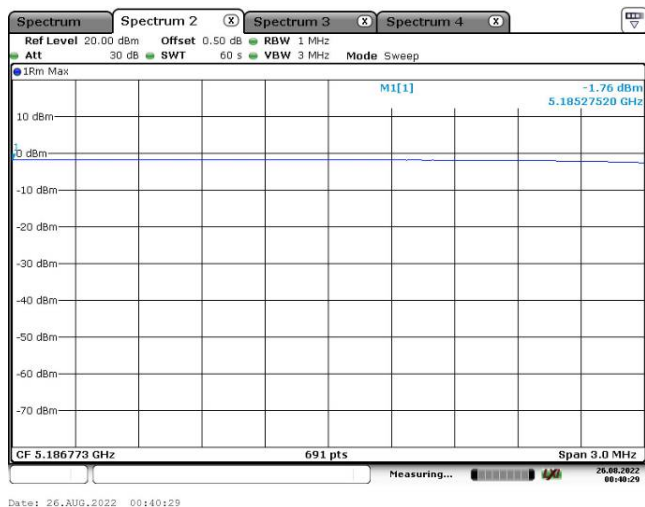
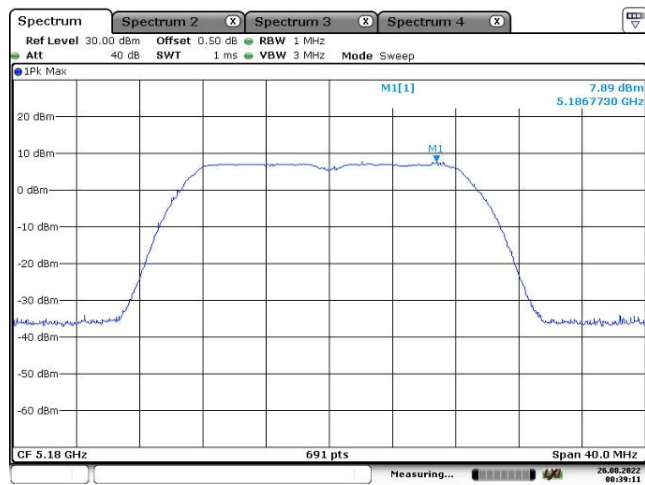


Date: 23.AUG.2022 00:15:43

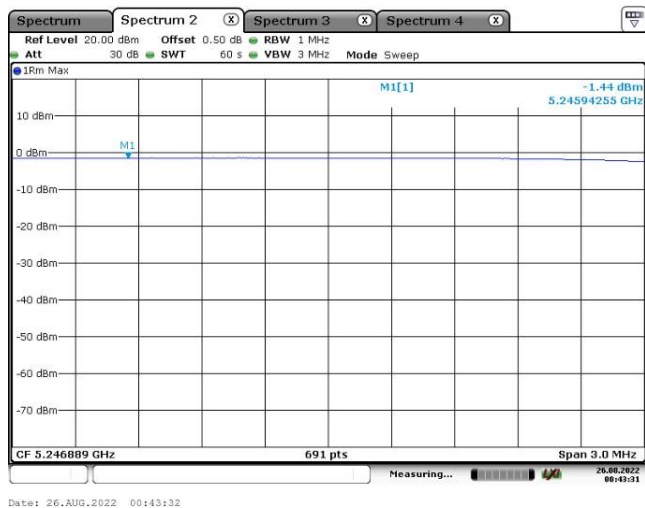
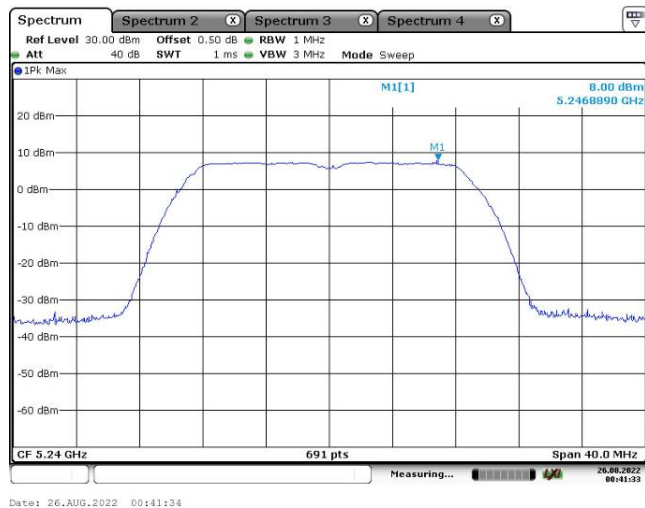


Date: 23.AUG.2022 00:16:59

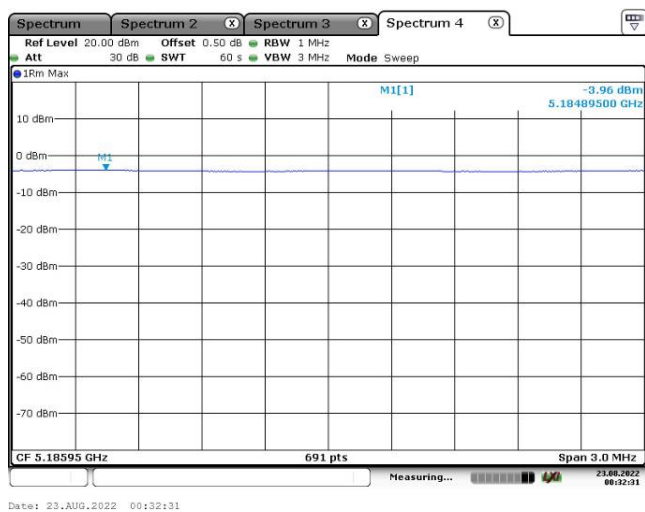
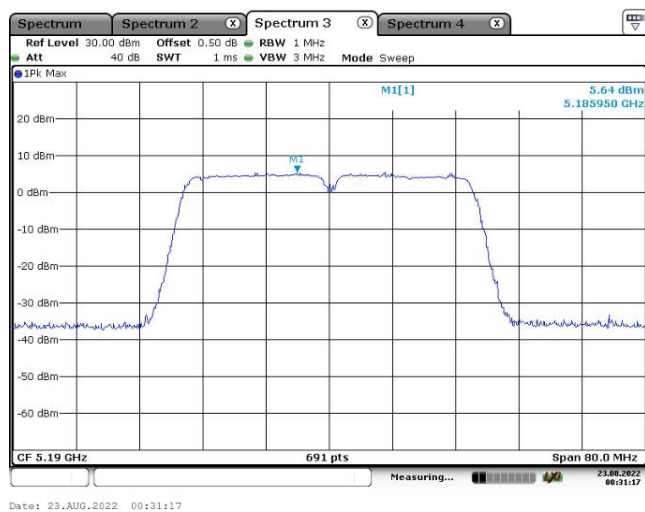
### 802.11 ac20-5180 MHz



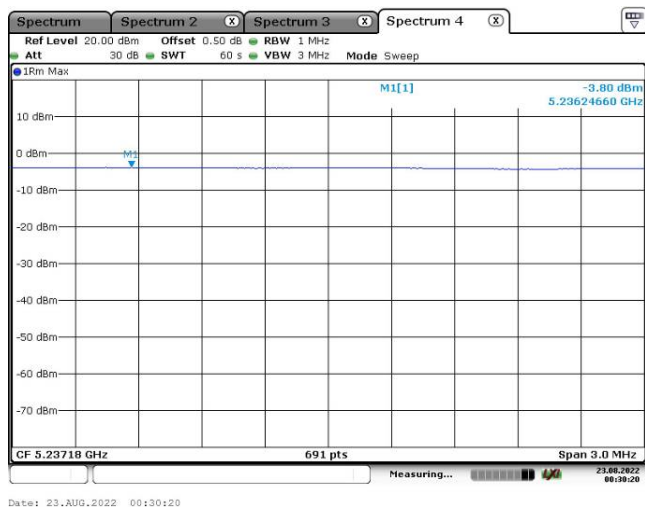
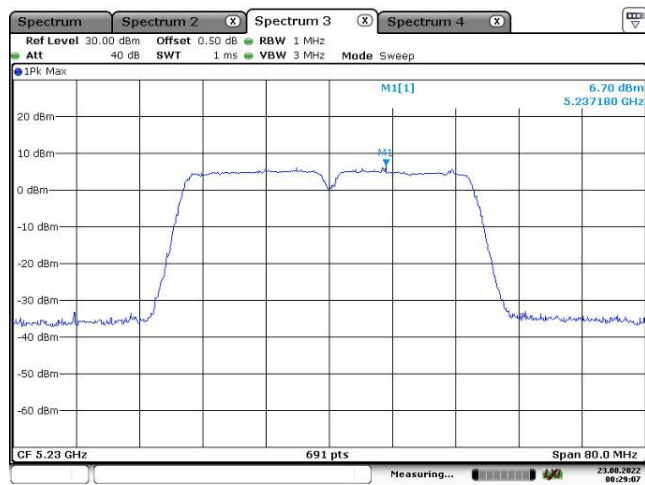
### 802.11 ac20-5240 MHz



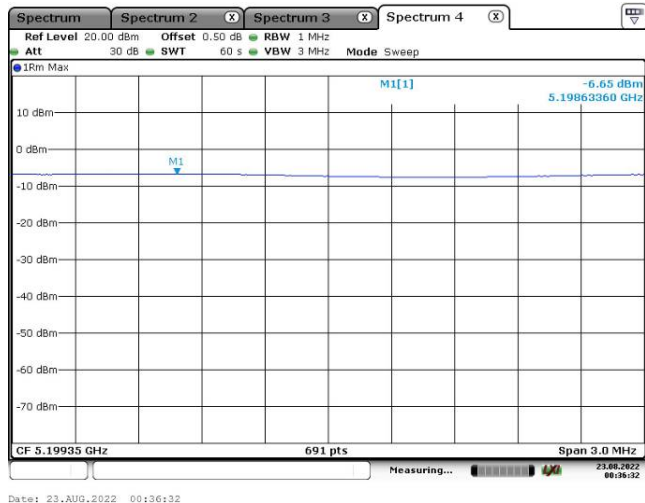
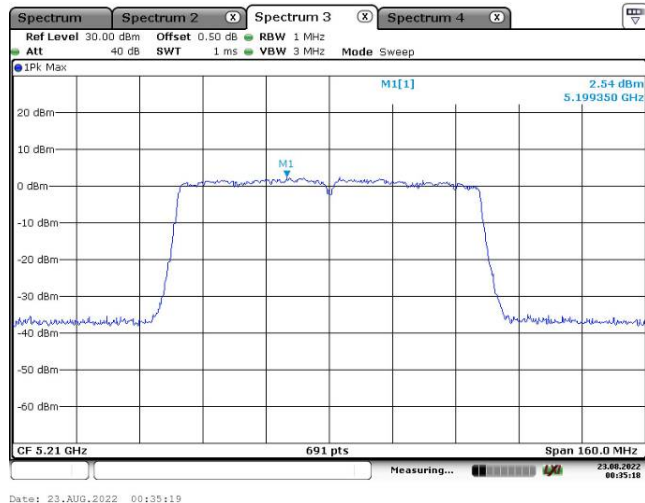
### 802.11 ac40-5190 MHz



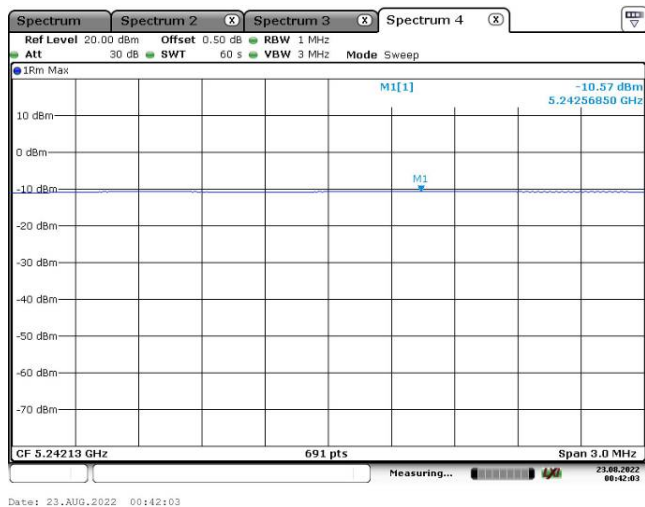
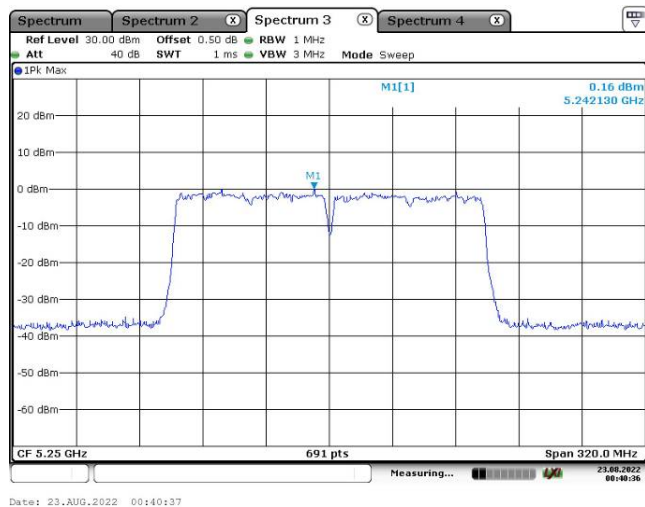
802.11 ac40-5230 MHz



802.11 ac80-5210 MHz

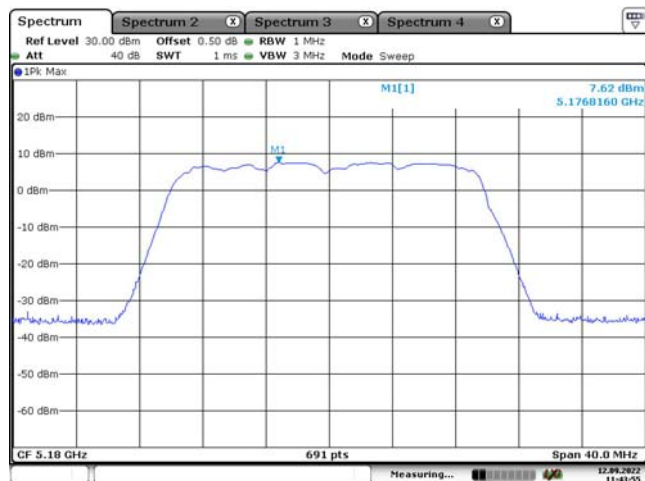


802.11 ac160-5250 MHz

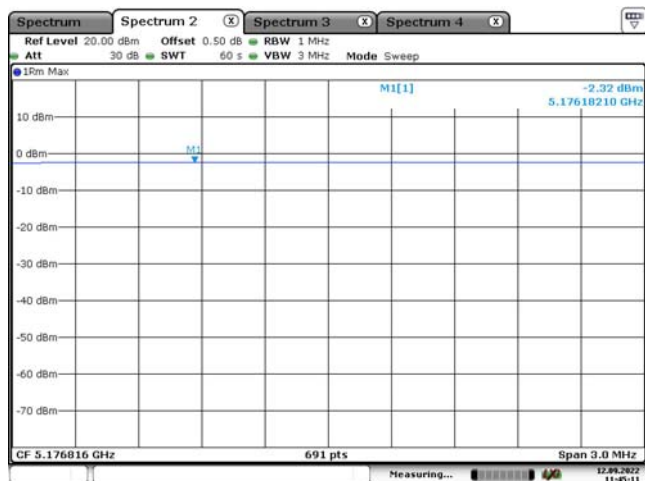




802.11 ax20-5180 MHz

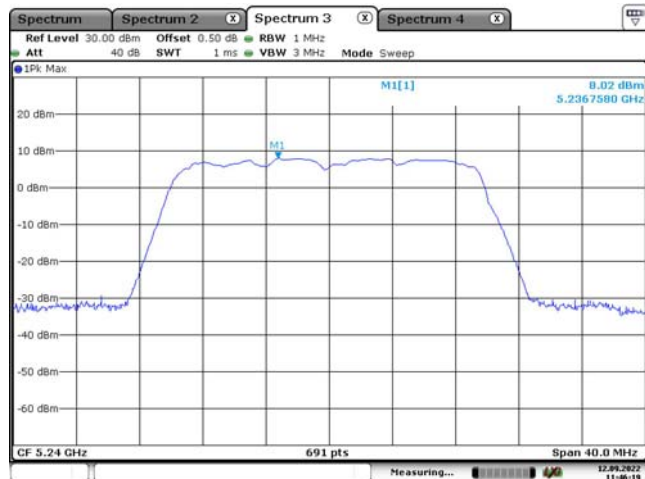


Date: 12,SEP,2022 11:43:55

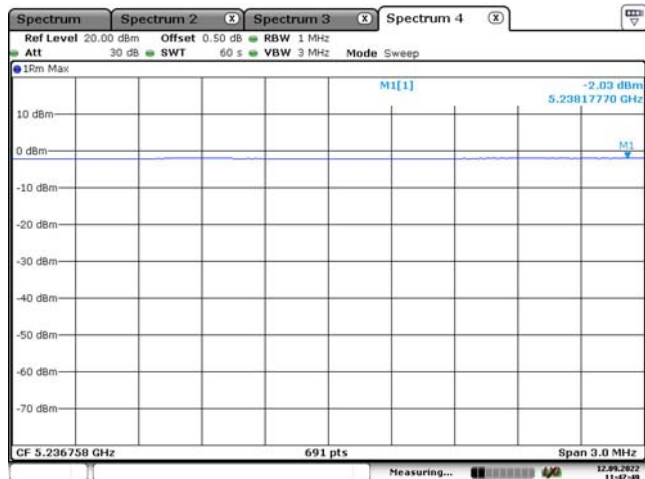


Date: 12,SEP,2022 11:45:12

802.11 ax20-5240 MHz

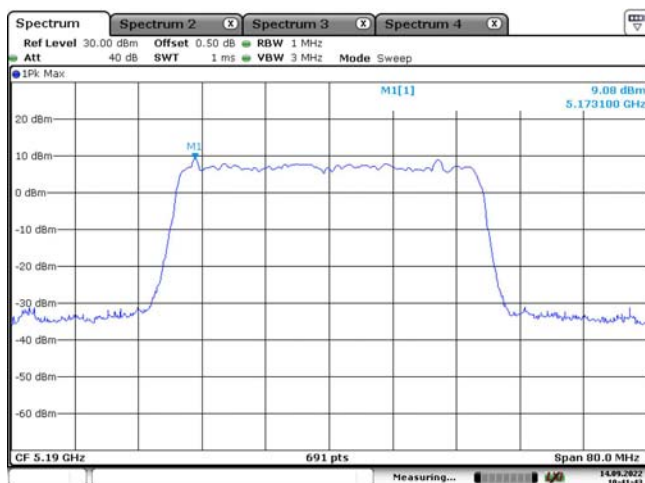


Date: 12,SEP,2022 11:46:19

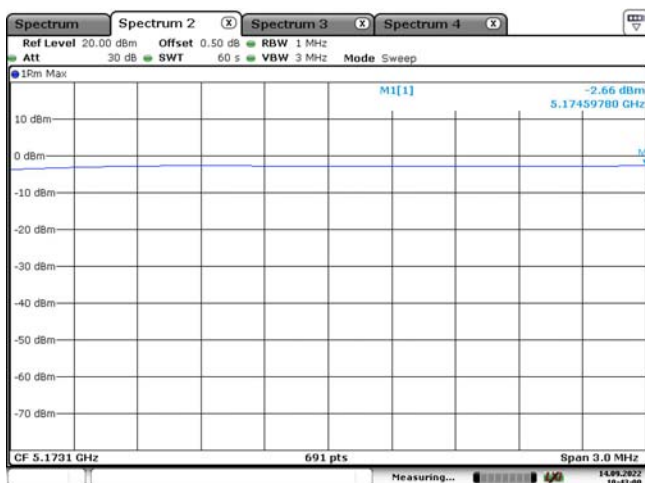


Date: 12,SEP,2022 11:47:49

802.11 ax40-5190 MHz



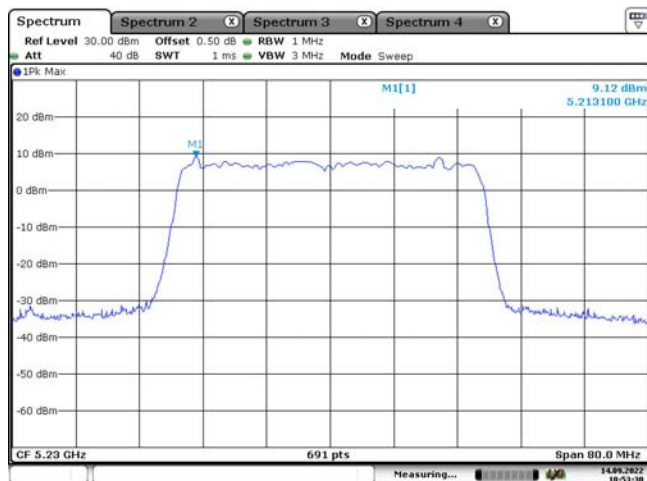
Date: 14,SEP,2022 10:41:43



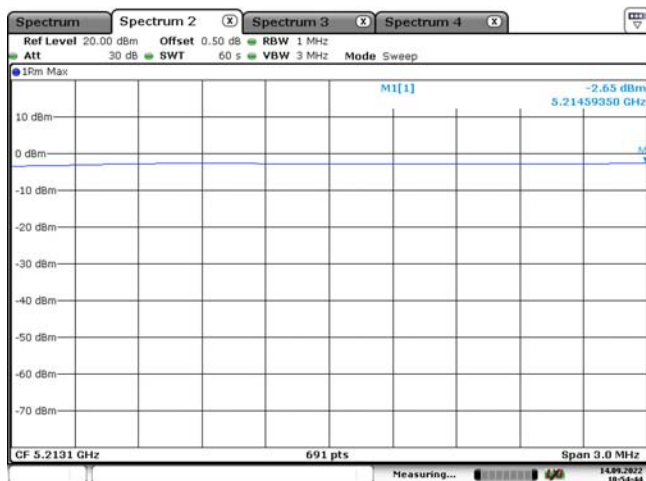
Date: 14,SEP,2022 10:43:00



802.11 ax40-5230 MHz

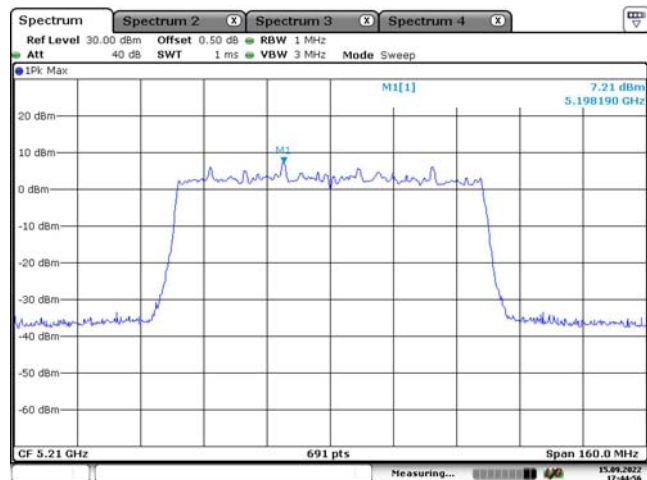


Date: 14.SEP.2022 10:53:31

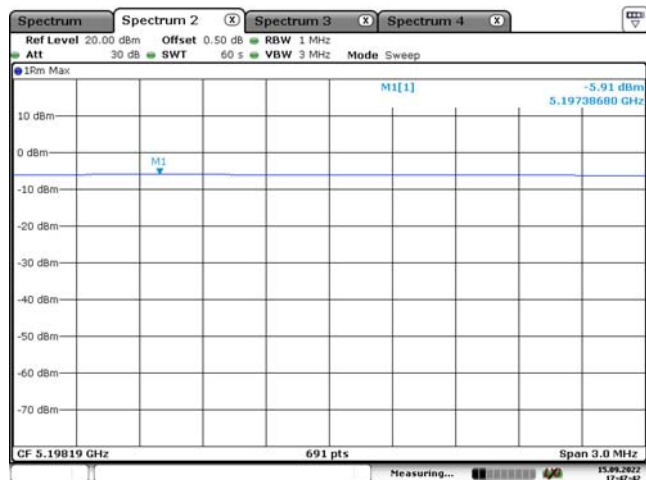


Date: 14.SEP.2022 10:54:45

802.11 ax80-5210 MHz

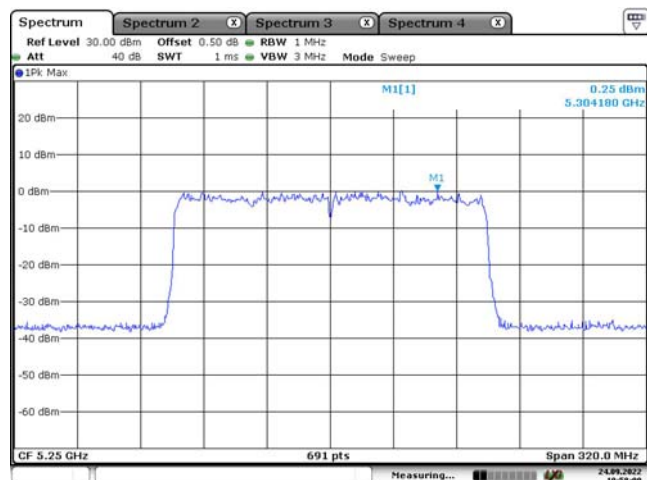


Date: 15.SEP.2022 17:44:57

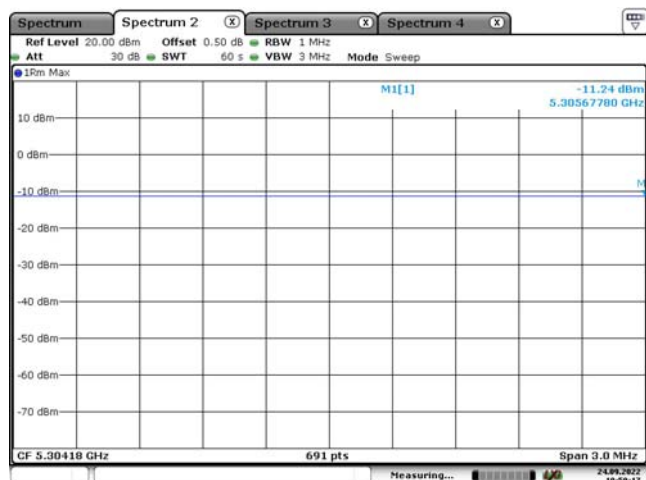


Date: 15.SEP.2022 17:47:43

802.11 ax160-5250 MHz



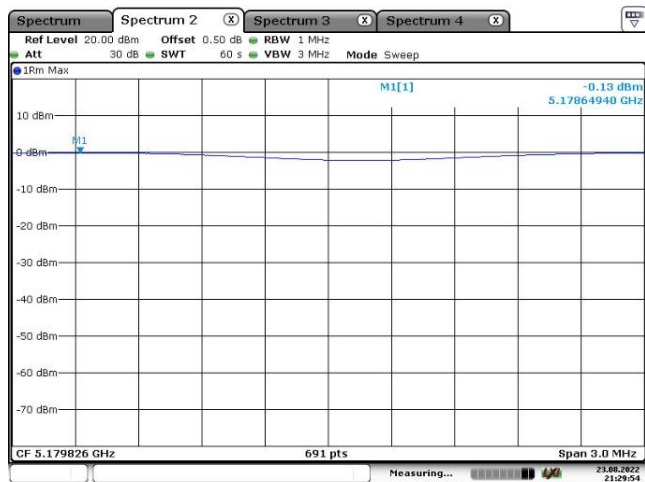
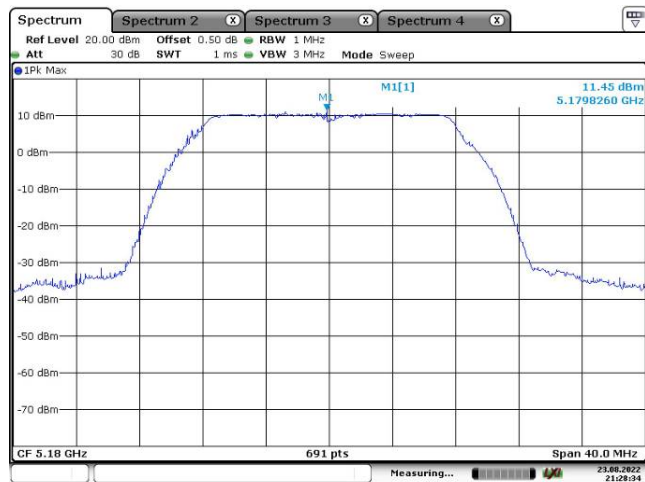
Date: 24.SEP.2022 10:58:00



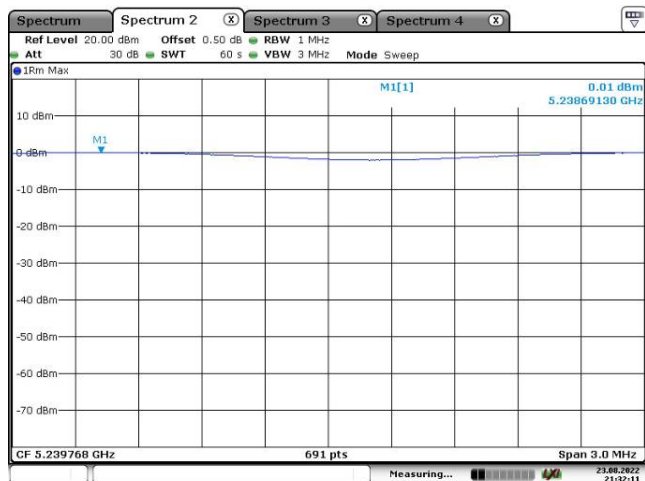
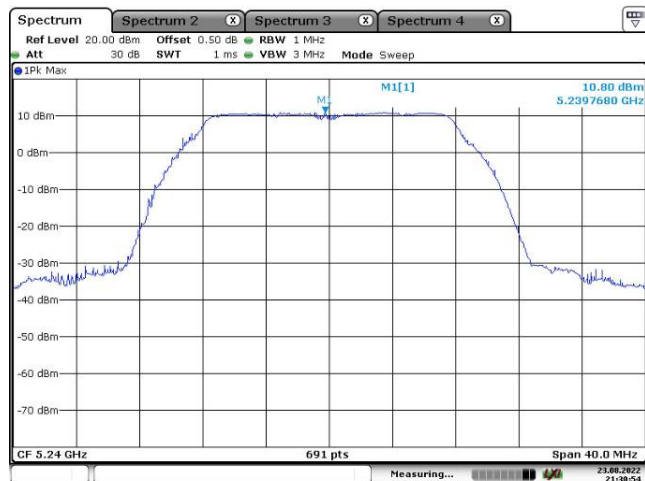
Date: 24.SEP.2022 10:59:17

Chain1-5.2G

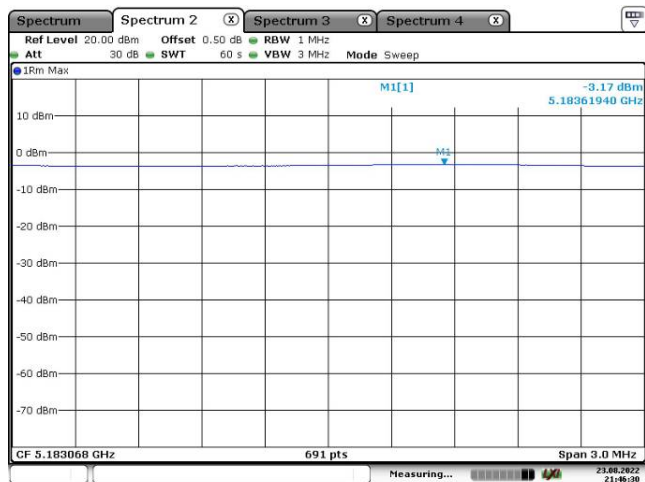
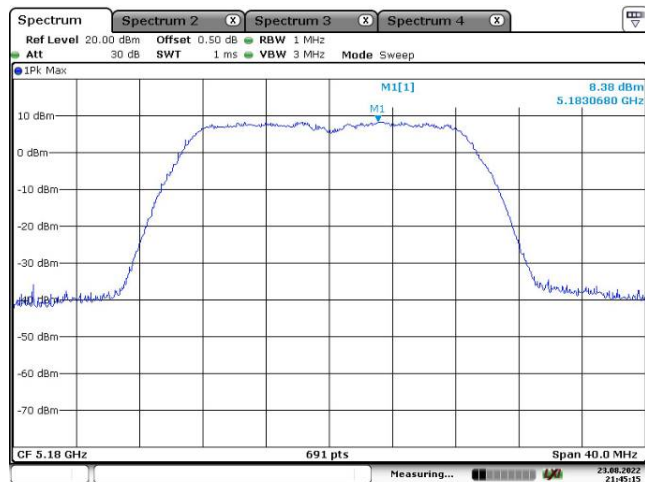
802.11 a-5180 MHz



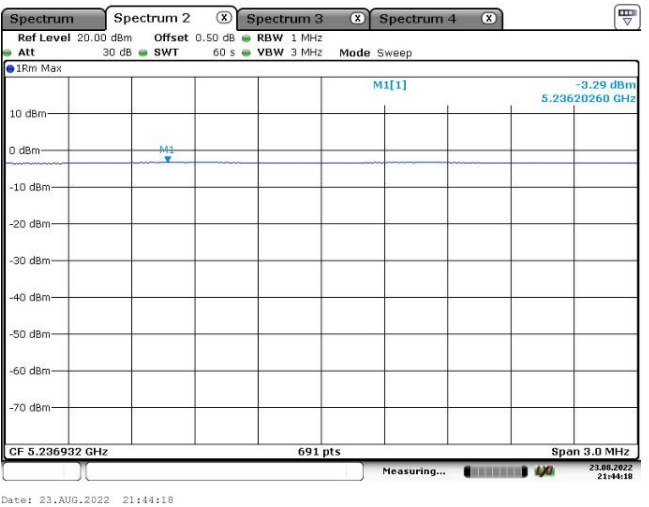
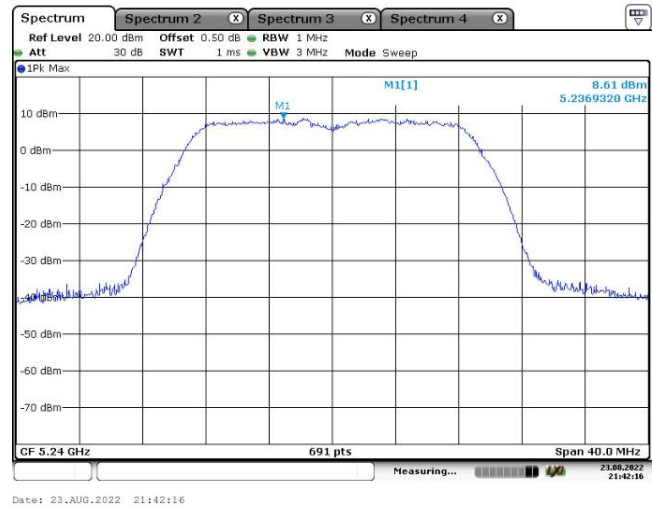
802.11 a-5240 MHz



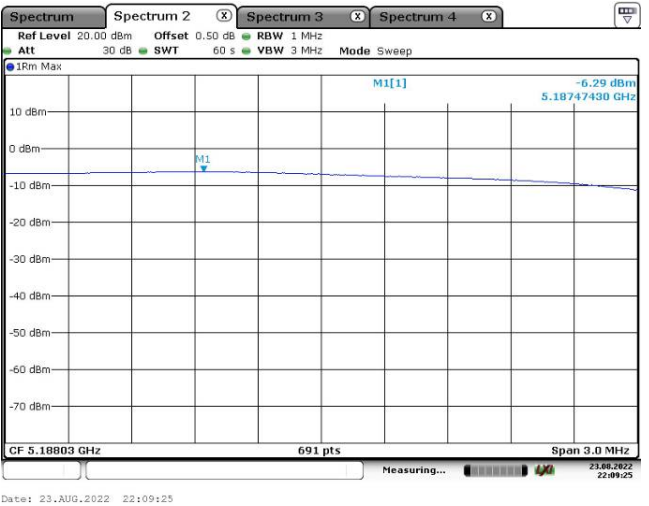
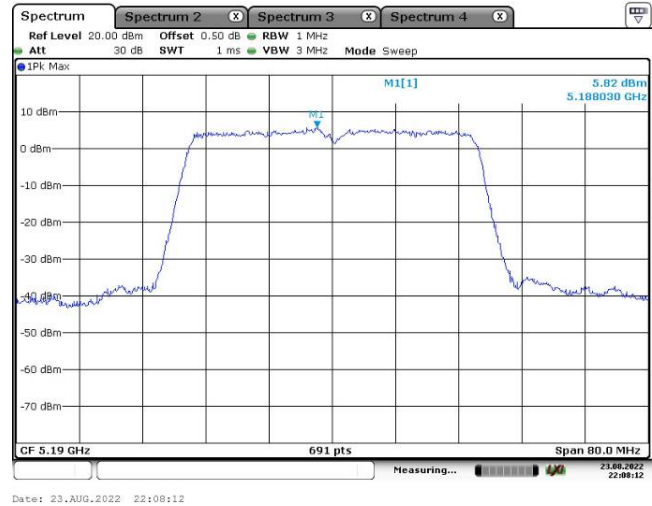
802.11 n20-5180 MHz



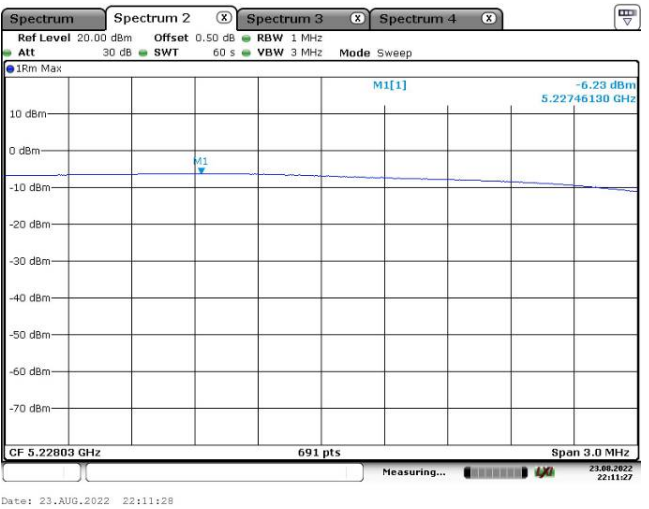
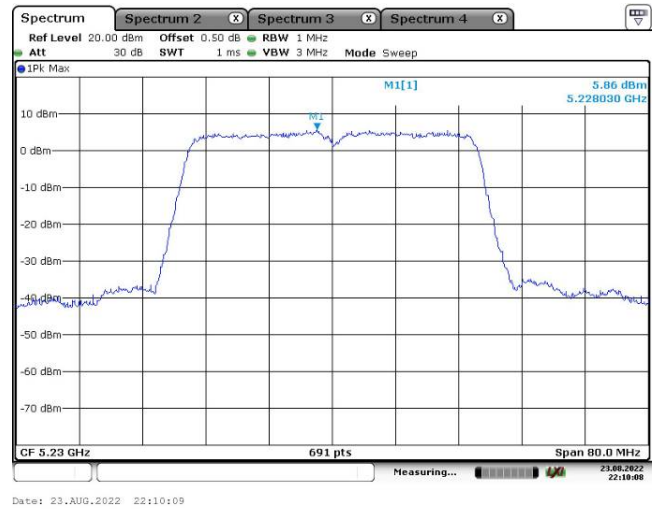
802.11 n20-5240 MHz



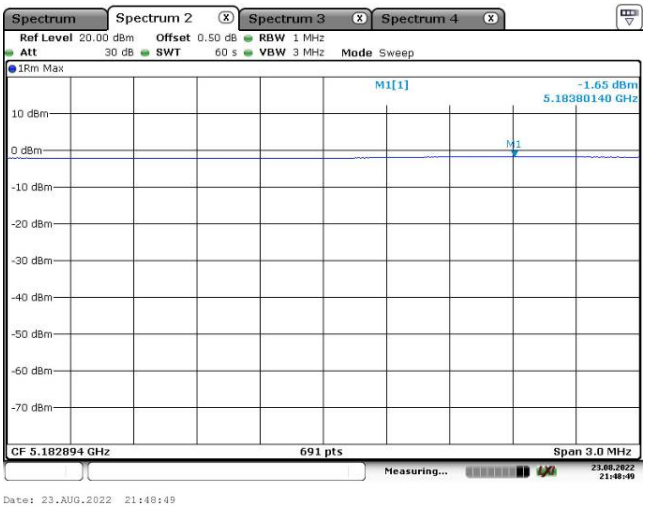
802.11 n40-5190 MHz



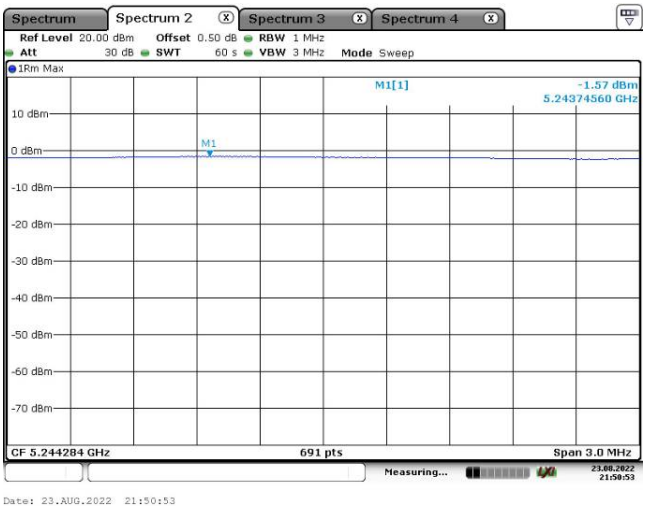
802.11 n40-5230 MHz



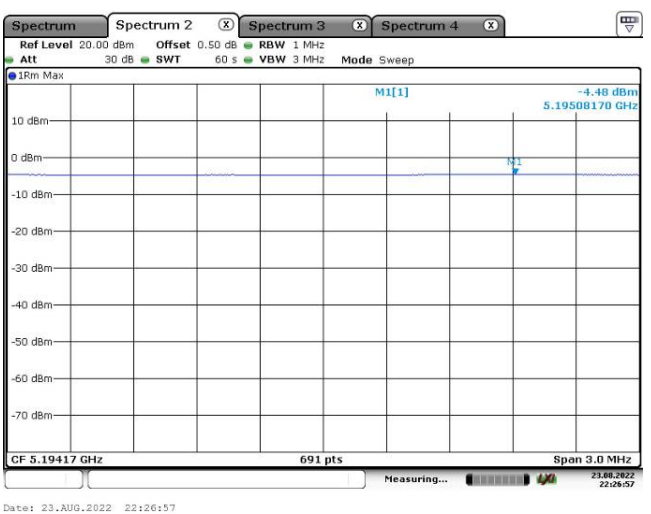
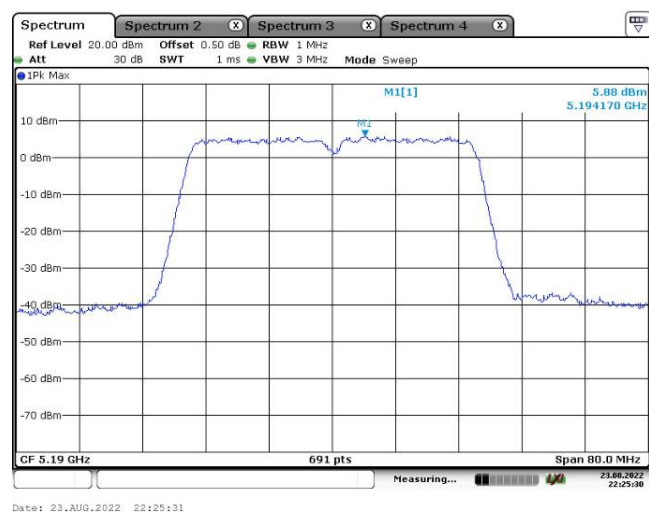
802.11 ac20-5180 MHz



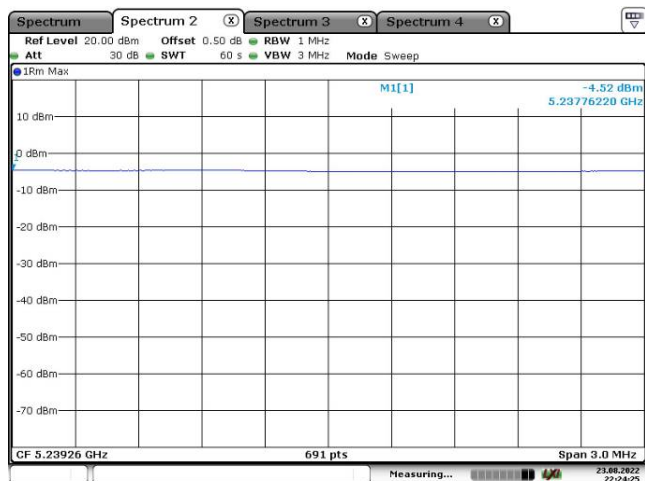
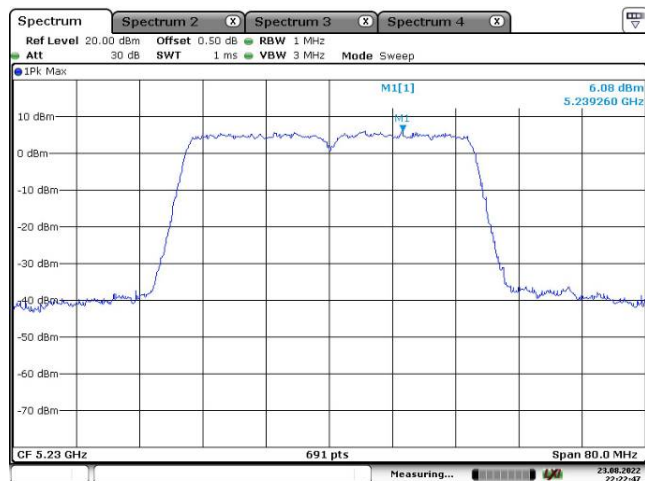
802.11 ac20-5240 MHz



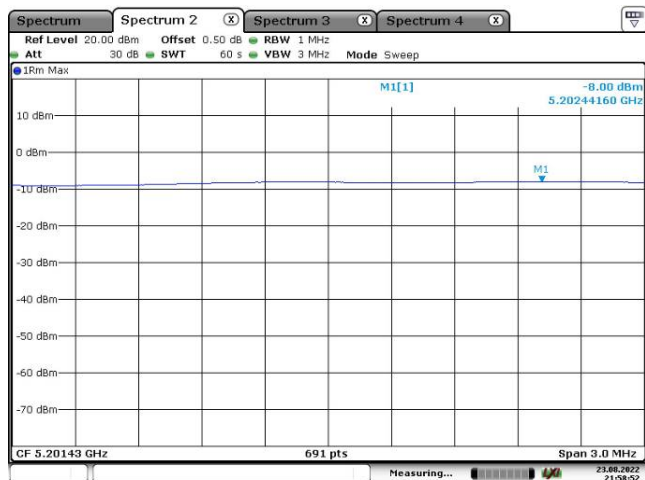
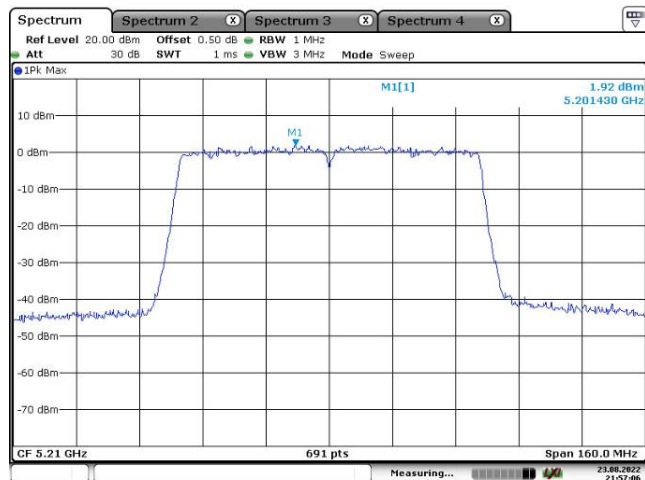
802.11 ac40-5190 MHz



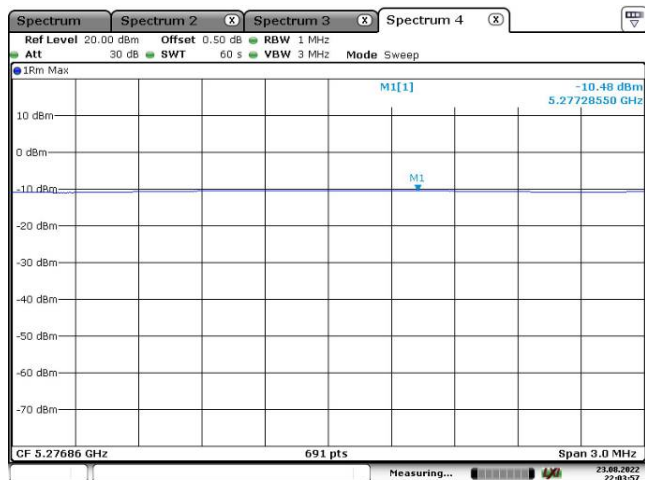
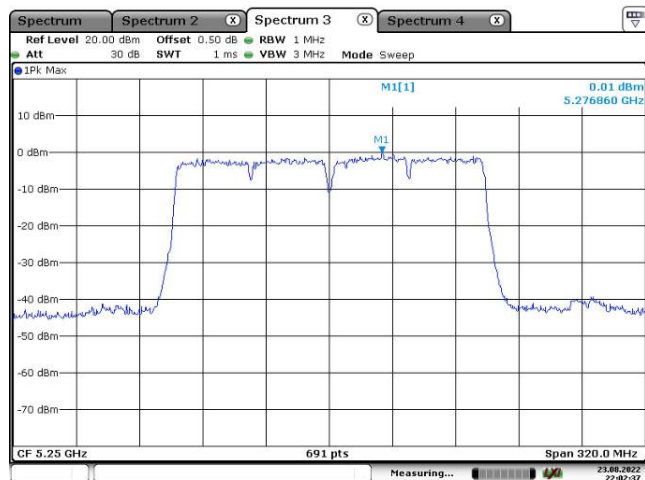
802.11 ac40-5230 MHz



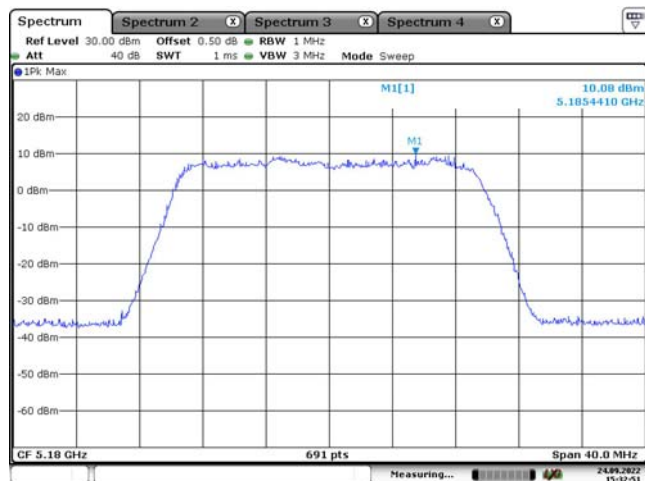
802.11 ac80-5210 MHz



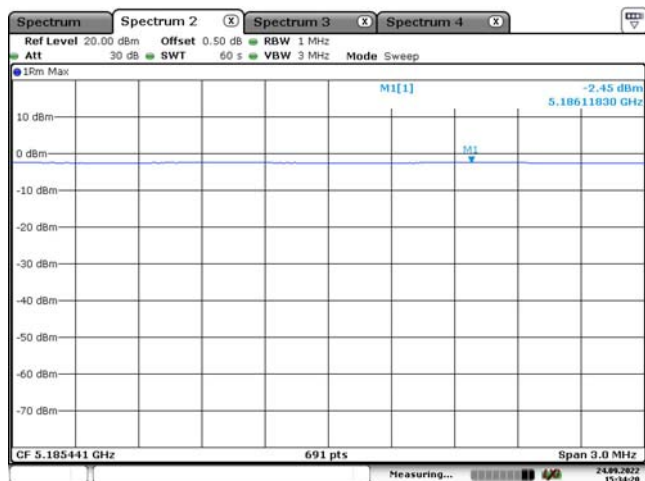
802.11 ac160-5250 MHz



### 802.11 ax20-5180 MHz

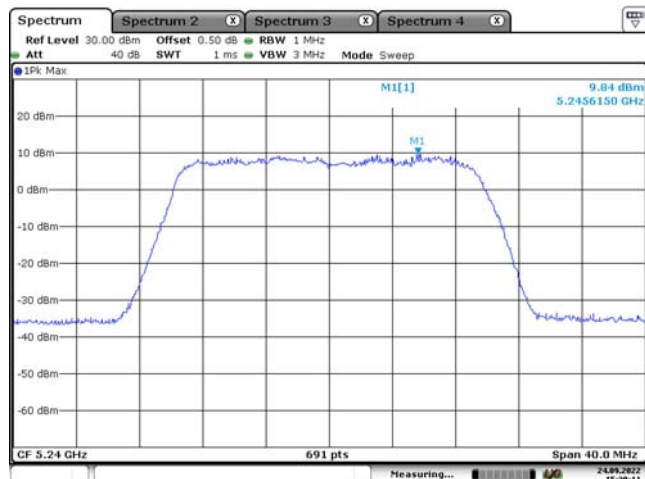


Date: 24,SEP,2022 15:32:51

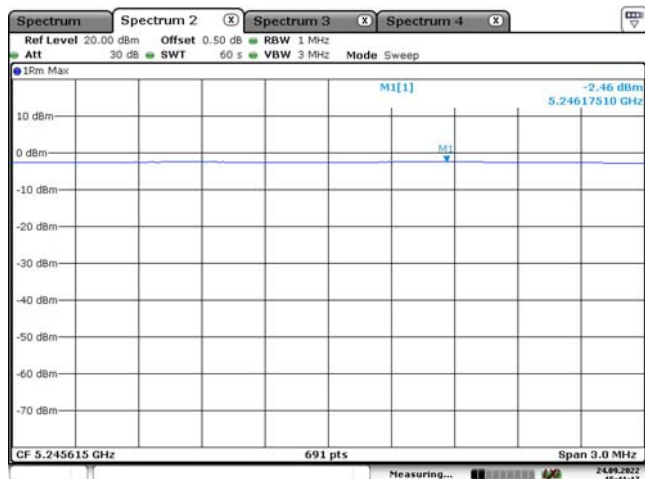


Date: 24,SEP,2022 15:34:21

### 802.11 ax20-5240 MHz

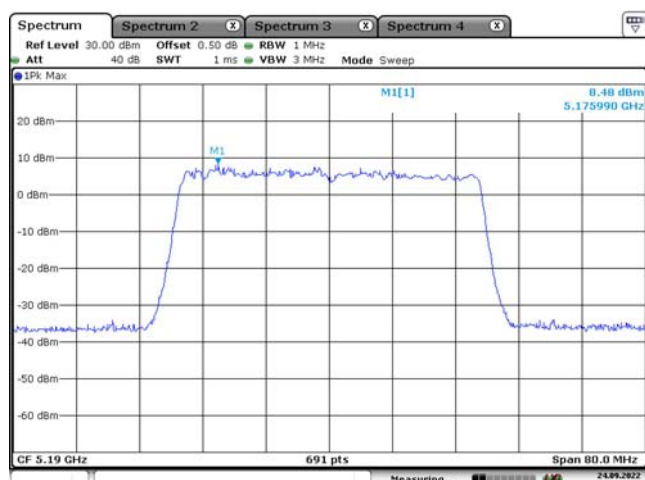


Date: 24,SEP,2022 15:39:11

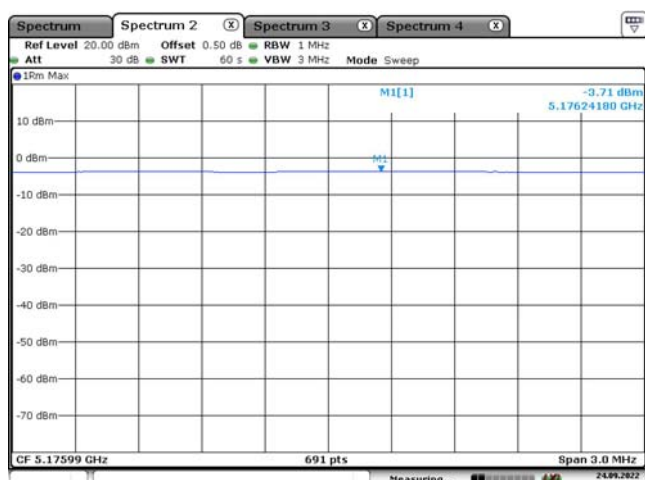


Date: 24,SEP,2022 15:41:17

### 802.11 ax40-5190 MHz



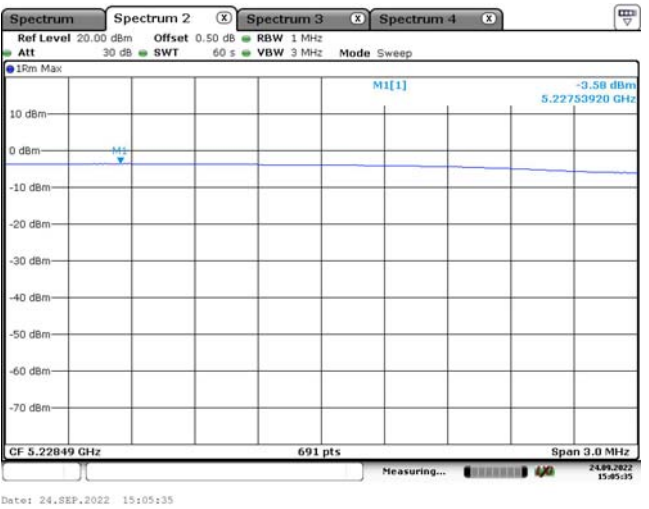
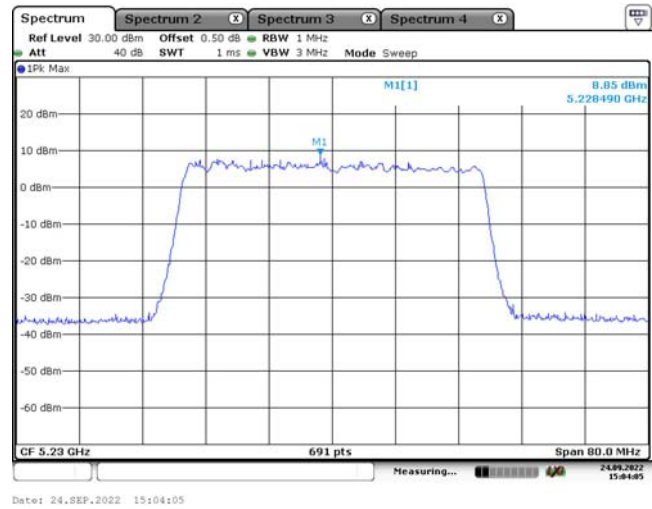
Date: 24,SEP,2022 14:57:57



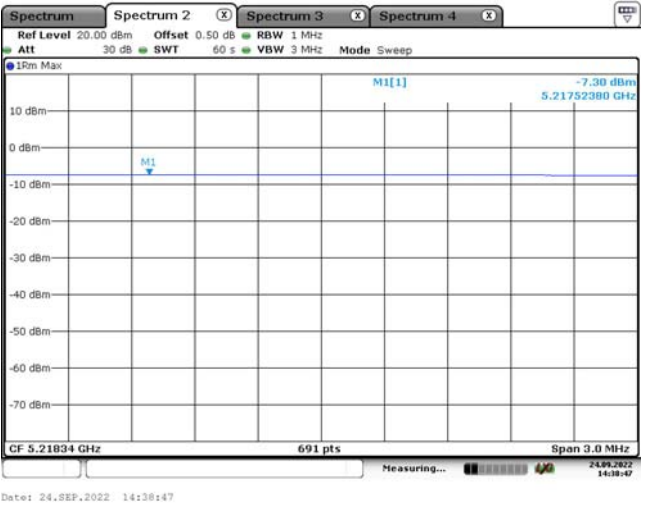
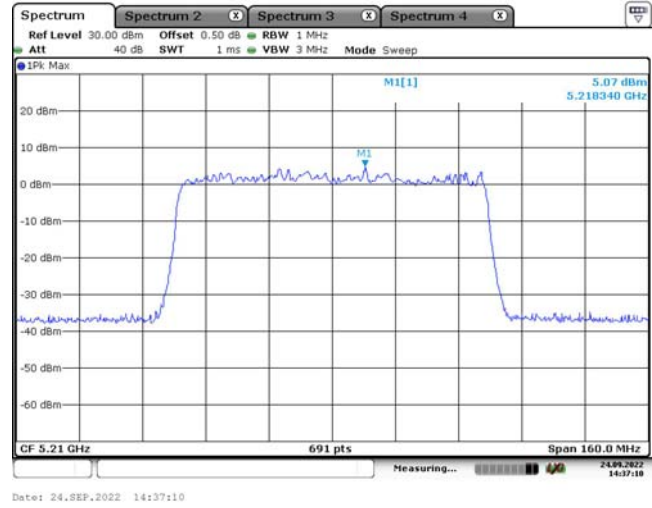
Date: 24,SEP,2022 14:59:36



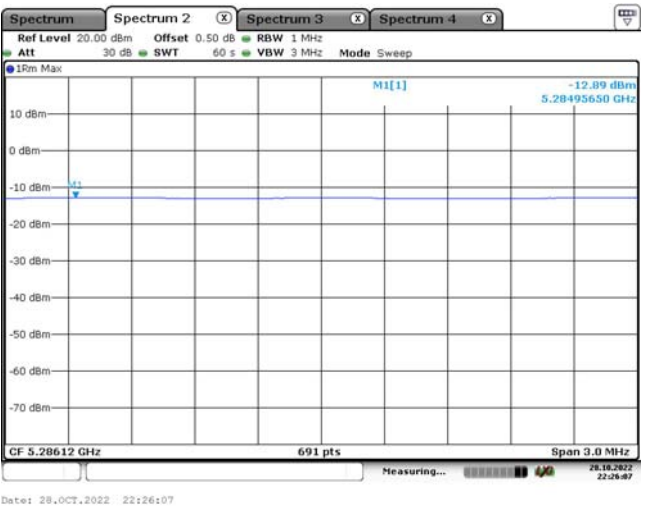
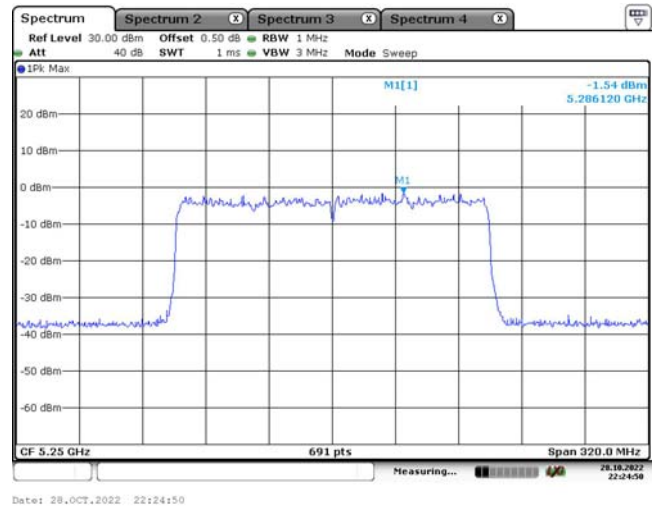
802.11 ax40-5230 MHz



802.11 ax80-5210 MHz

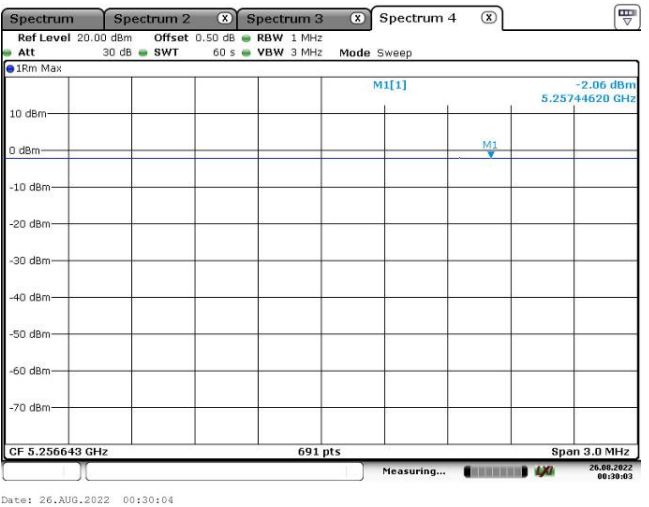
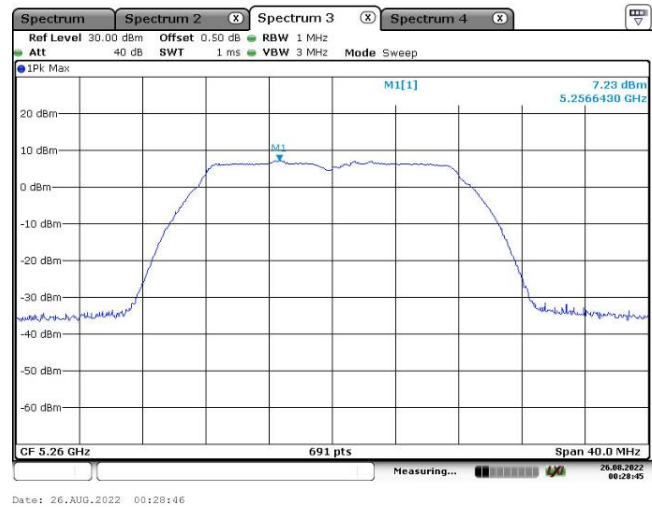


802.11 ax160-5250 MHz

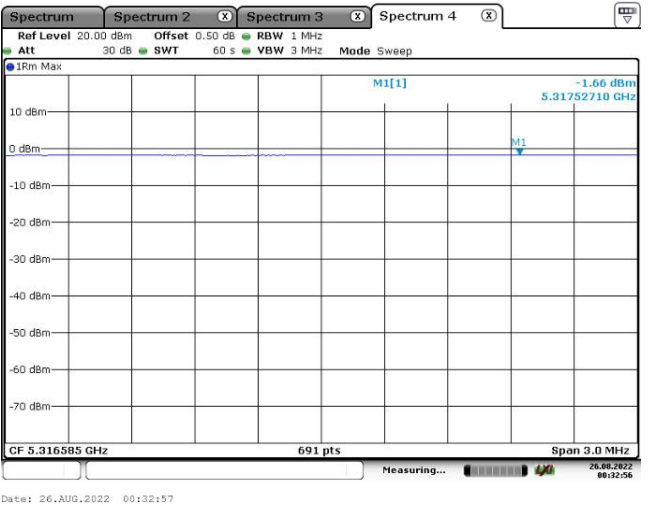


Chain0-5.3G

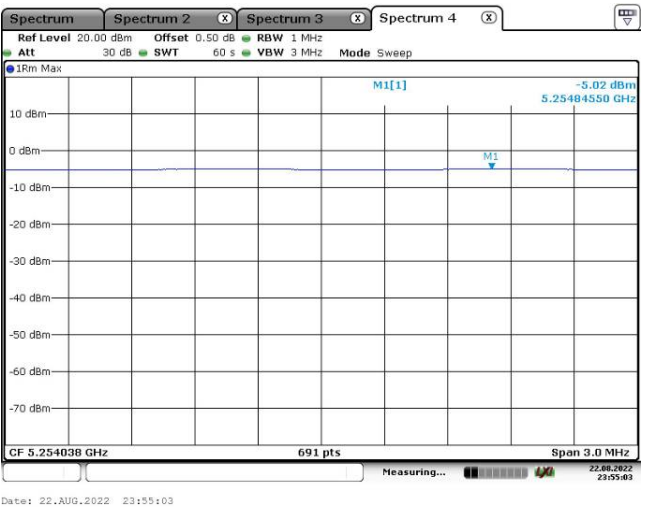
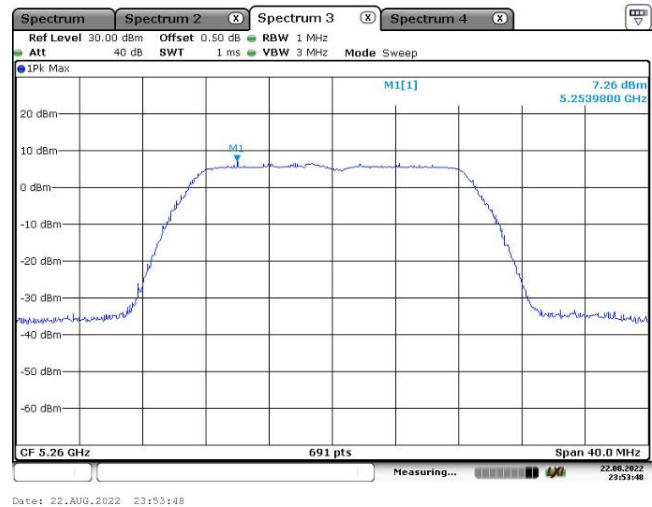
802.11 a-5260 MHz



802.11 a-5320 MHz

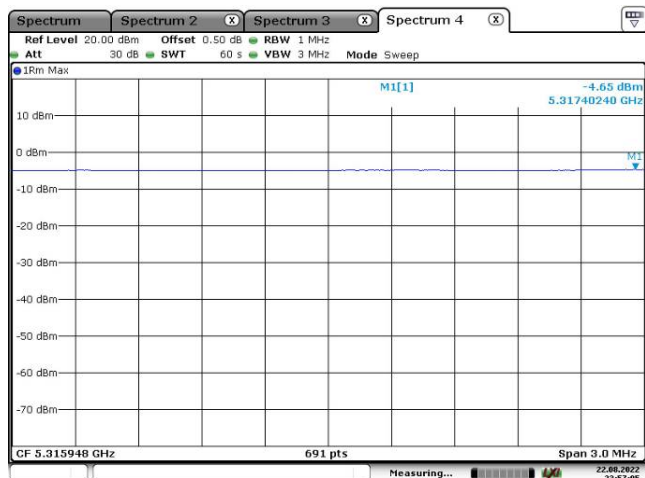
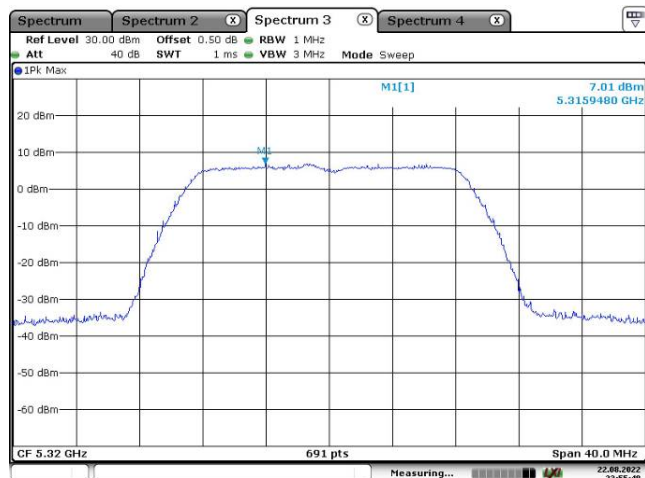


802.11 n20-5260 MHz

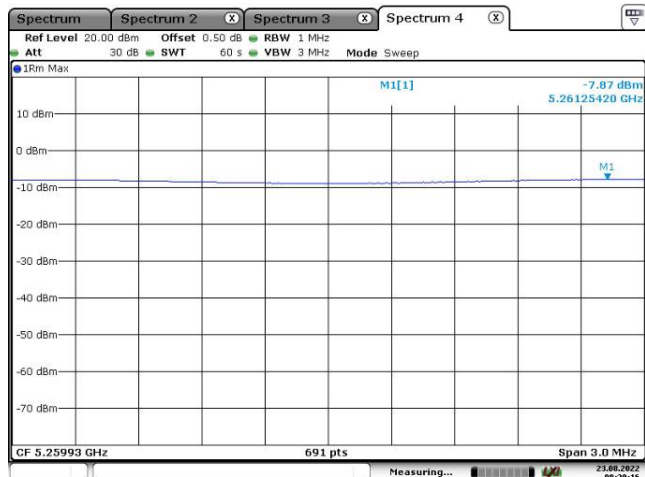
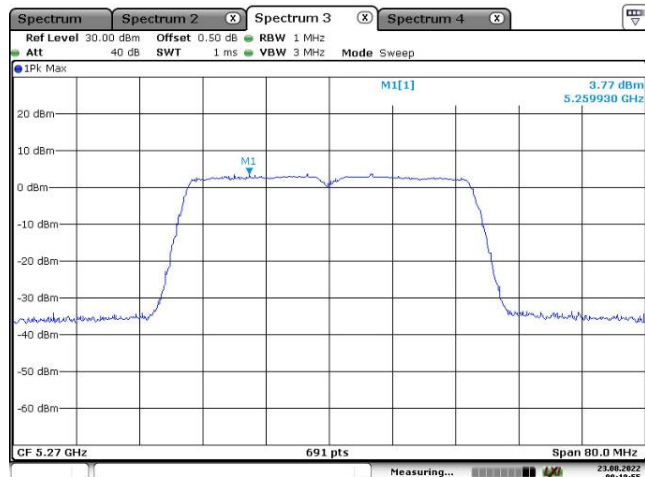




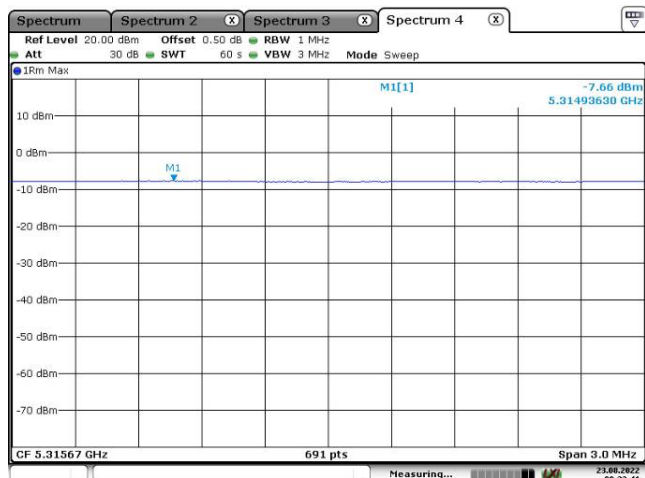
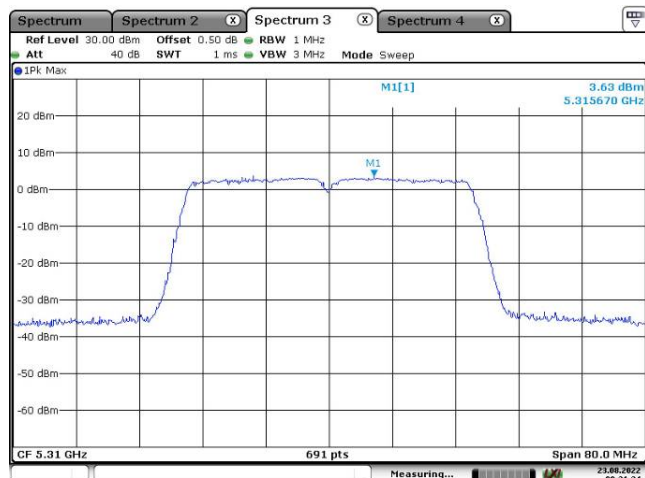
802.11 n20-5320 MHz



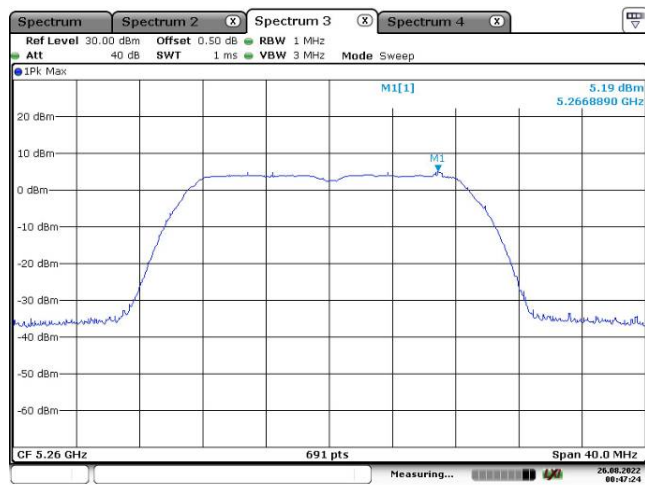
802.11 n40-5270 MHz



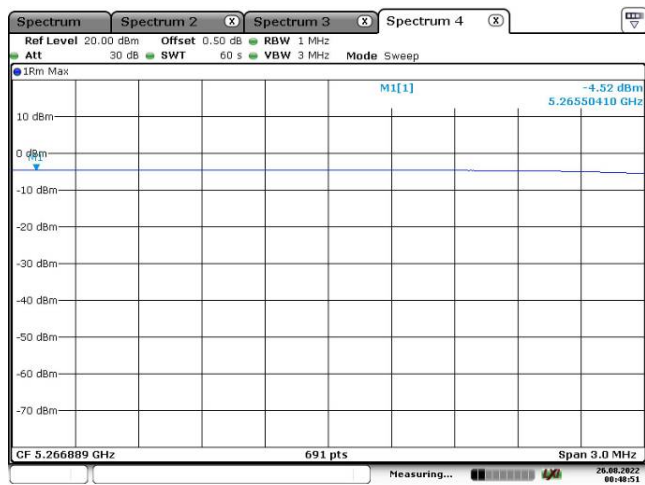
802.11 n40-5310 MHz



## 802.11 ac20-5260 MHz

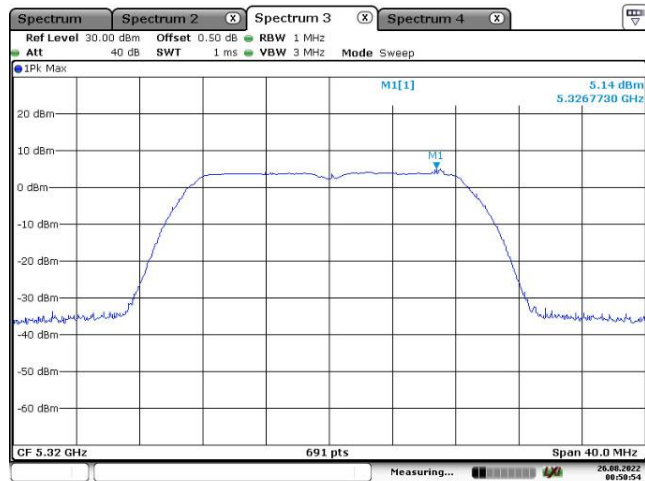


Date: 26.AUG.2022 00:47:24

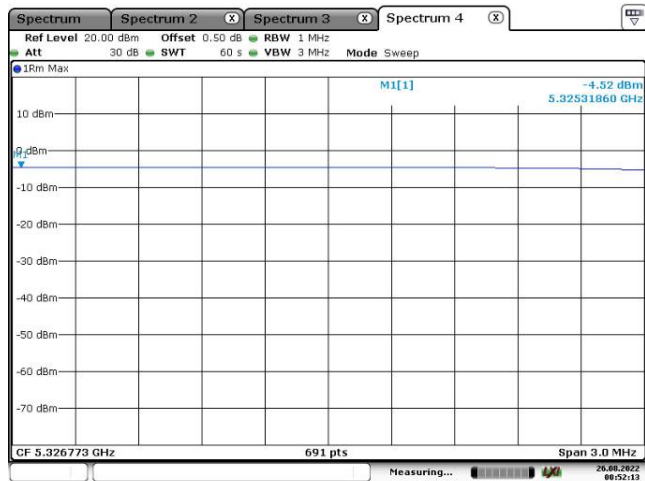


Date: 26.AUG.2022 00:48:51

## 802.11 ac20-5320 MHz

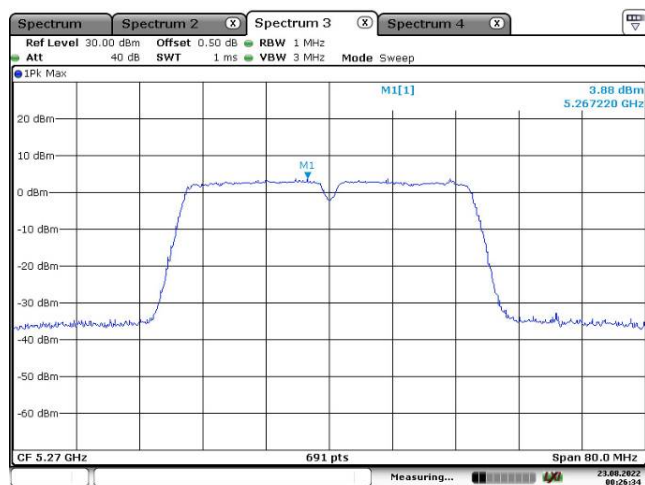


Date: 26.AUG.2022 00:50:55

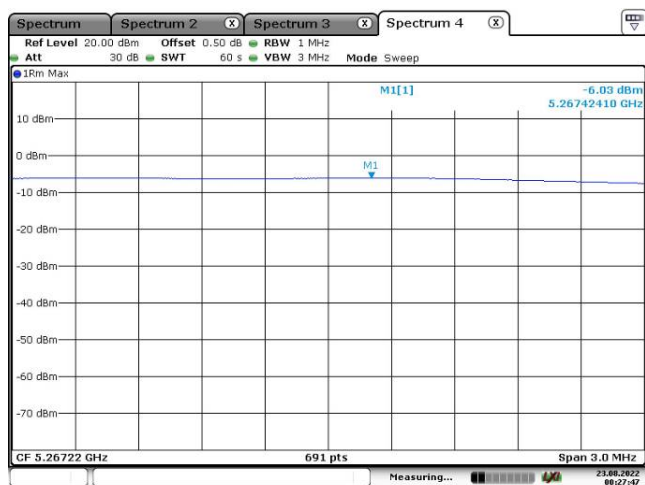


Date: 26.AUG.2022 00:52:13

## 802.11 ac40-5270 MHz

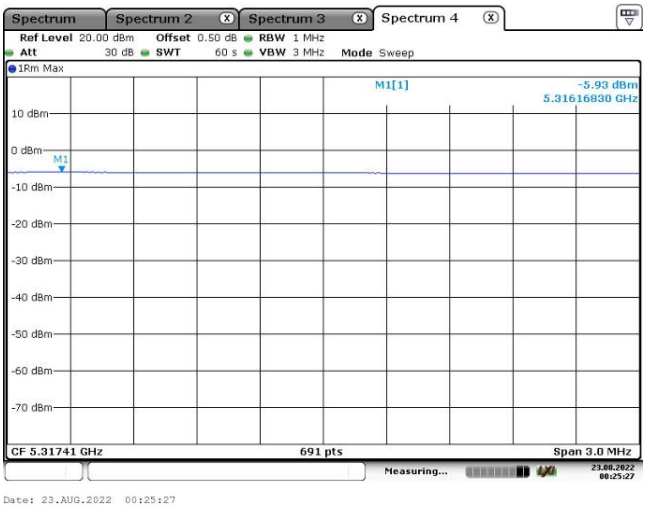
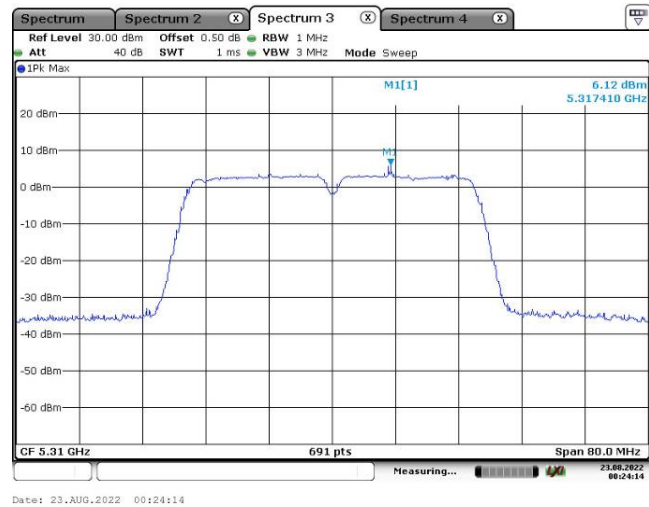


Date: 23.AUG.2022 00:26:34

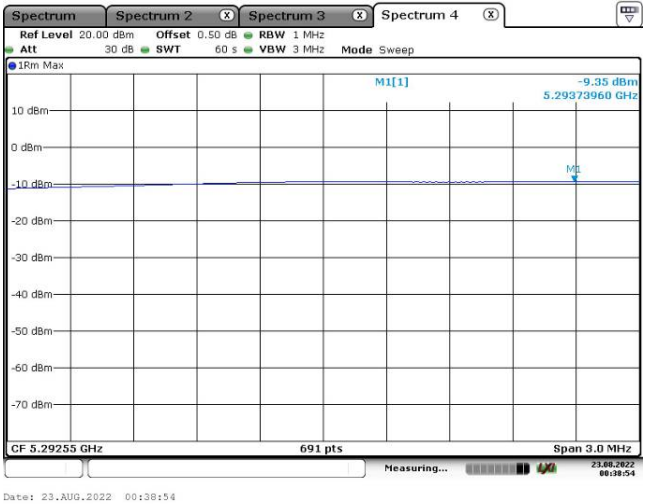
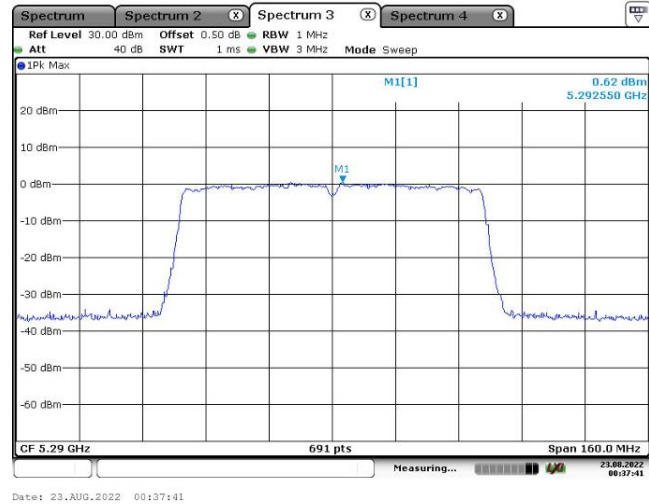


Date: 23.AUG.2022 00:27:47

802.11 ac40-5310 MHz



802.11 ac80-5290 MHz



Spectrum 1   Spectrum 2   Spectrum 3   Spectrum 4

Ref Level 30.00 dBm   Offset 0.50 dB   RBW 1 MHz  
 Att 40 dB   SWT 1 ms   VBW 3 MHz   Mode Sweep

1PK Max

M1

M1[1] 4.71 dBm  
 5.2567580 GHz

CF 5.26 GHz   691 pts   Span 40.0 MHz

Measuring... 12.99.2022 11:38:37

The screenshot shows a Spectrum Analyzer window with the following settings and data:

- Top Panel:**
  - Buttons: Spectrum, Spectrum 2, Spectrum 3, Spectrum 4.
  - Ref Level: 20.00 dBm
  - Offset: 0.50 dB
  - RBW: 1 MHz
  - Att: 30 dB
  - SWT: 60 s
  - VBW: 3 MHz
  - Mode: Sweep
- Plot Area:**
  - Trace: 1Rm Max
  - Frequency: 5.256758 GHz
  - Power: -5.38 dBm
  - Marker: M1[1]
  - Span: 3.0 MHz
  - Resolution: 691 pts
- Bottom Panel:**
  - CF: 5.256758 GHz
  - Measuring... (Progress bar)
  - Date/Time: 12/29/2021 11:37:51

The screenshot shows a spectrum analyzer interface with four tabs: Spectrum, Spectrum 2, Spectrum 3, and Spectrum 4. The 'Spectrum' tab is active. The top panel displays settings: Ref Level 30.00 dBm, Att 40 dB, Offset 0.50 dB, RBW 1 MHz, SWT 1 ms, VBW 3 MHz, and Mode Sweep. The main plot area shows a signal with a peak labeled 'M1' at 5.3167580 GHz with a power of 4.57 dBm. The y-axis ranges from -60 dBm to 20 dBm, and the x-axis ranges from CF 5.32 GHz to Span 40.0 MHz. The bottom panel shows '691 pts' and a date/time stamp '12/09/2022 11:08:03'.

The screenshot shows a spectrum analyzer interface with the following settings and data:

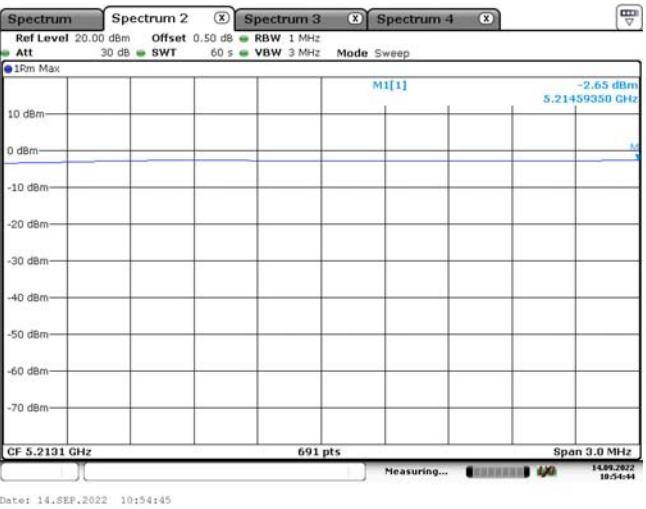
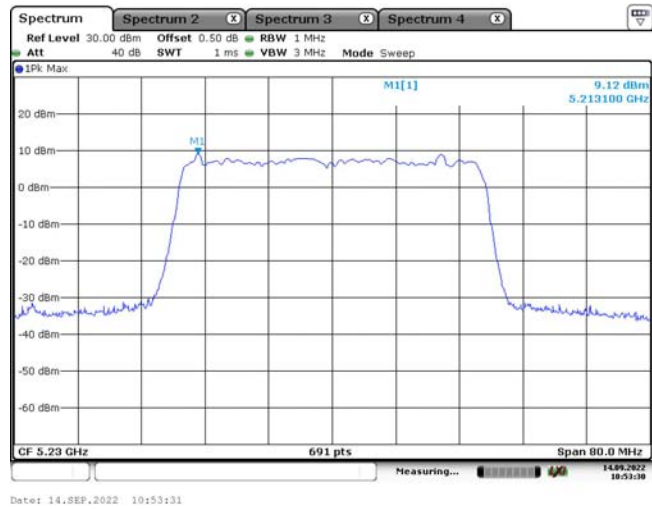
- Frequency:** 5.316320 GHz
- Span:** 3.0 MHz
- Resolution Bandwidth (RBW):** 1 MHz
- Video Bandwidth (VBW):** 3 MHz
- Reference Level:** 20.00 dBm
- Offset:** 0.50 dB
- Attenuation:** 30 dB
- SWT:** 60 s
- Mode:** Sweep
- Trace:** 1Fm Max
- Marker:** M1[1] at -5.36 dBm
- Grid:** 691 pts
- Measuring...:** Indicated by a bar graph and a small icon.
- Timestamp:** 12/29/2023 11:40:17

The screenshot shows a spectrum analyzer interface with three tabs: "Spectrum 2", "Spectrum 3", and "Spectrum 4". The "Spectrum 2" tab is active. The top panel displays the following settings: Ref Level 30.00 dBm, Offset 0.50 dB, RBW 1 MHz, Att 40 dB, SWT 1 ms, VBW 3 MHz, and Mode Sweep. The main display area shows a spectrum plot with a blue trace. A peak is labeled "M1" at 5.173100 GHz with a power level of 9.08 dBm. The plot has a vertical axis from -60 dBm to 20 dBm and a horizontal axis from CF 5.19 GHz to Span 80.0 MHz. The bottom status bar shows "CF 5.19 GHz", "691 pts", and "Span 80.0 MHz".

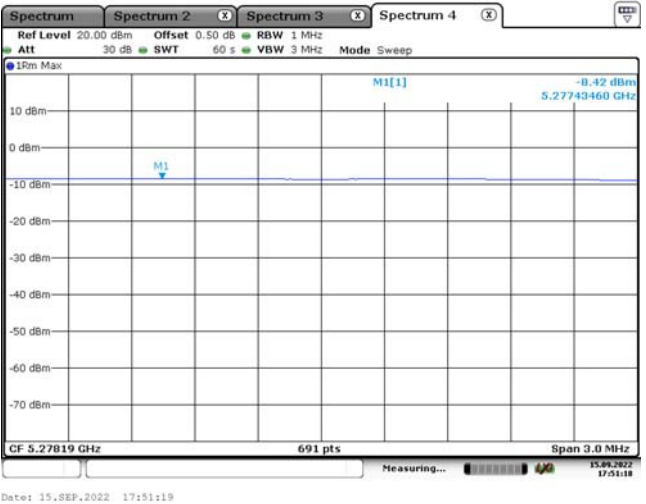
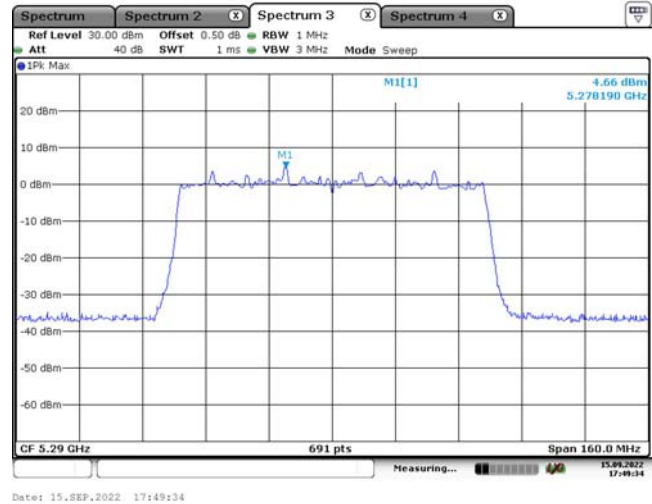
The screenshot displays the Spectrum Analyzer interface. At the top, there are three tabs: 'Spectrum 2', 'Spectrum 3', and 'Spectrum 4'. Below the tabs, the 'Ref Level' section shows various parameters: 20.00 dBm, 30 dB, 0.50 dB, 1 MHz, 3 MHz, and Mode Sweep. The main display area shows a grid with a blue line representing the signal. The signal is flat and labeled 'M1[1]' with a value of -2.66 dBm. The frequency is 5.17459780 GHz. The bottom status bar indicates 'CF 5.1731 GHz', '691 pts', and 'Span 3.0 MHz'.

Date: 14.SEP.2022 10:43:00

802.11 ax40-5310 MHz

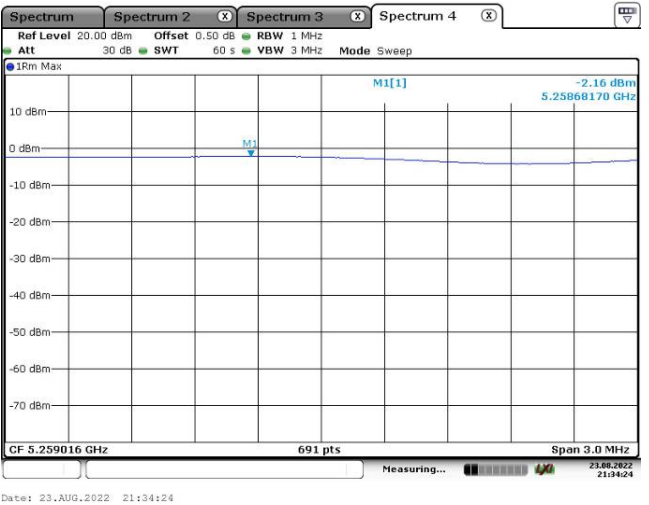
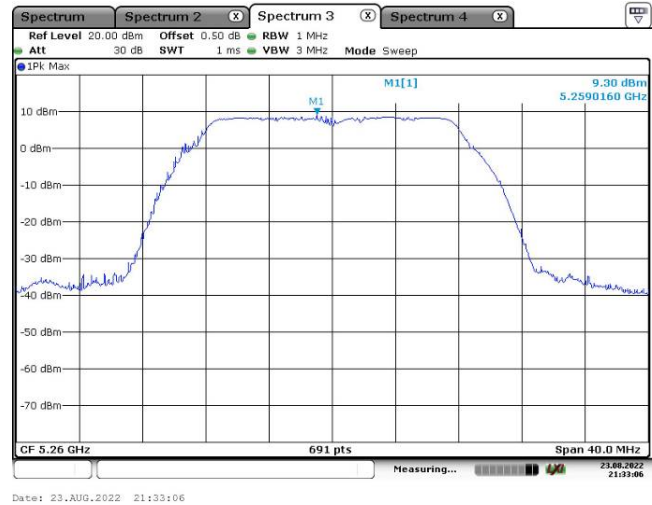


802.11 ax80-5290 MHz

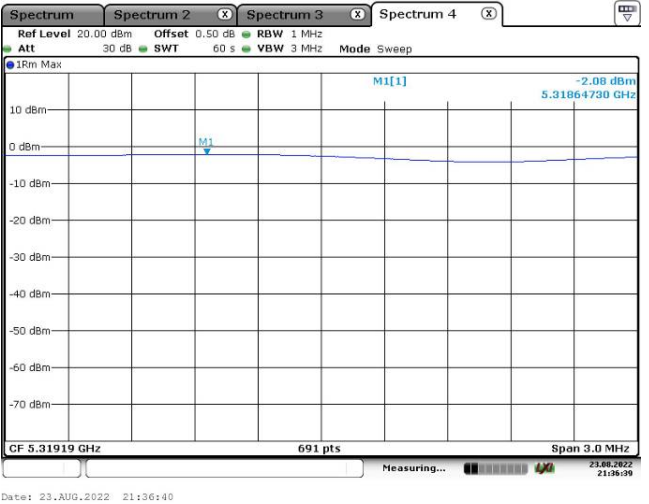
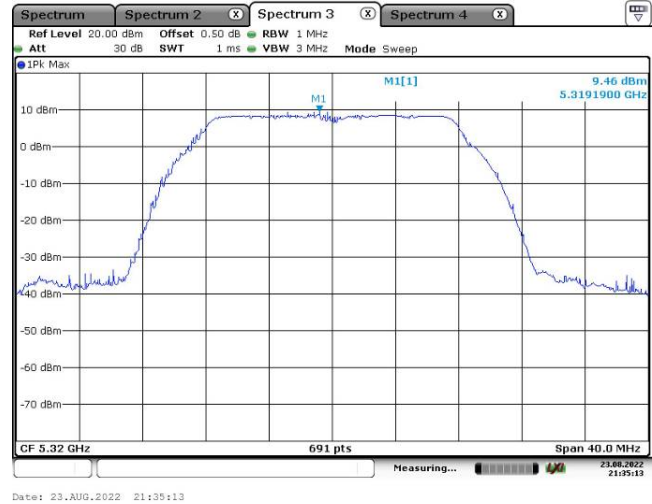


Chain1-5.3G

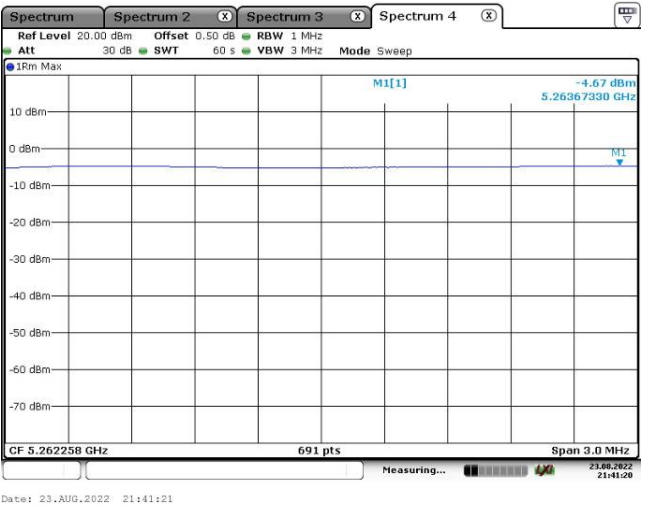
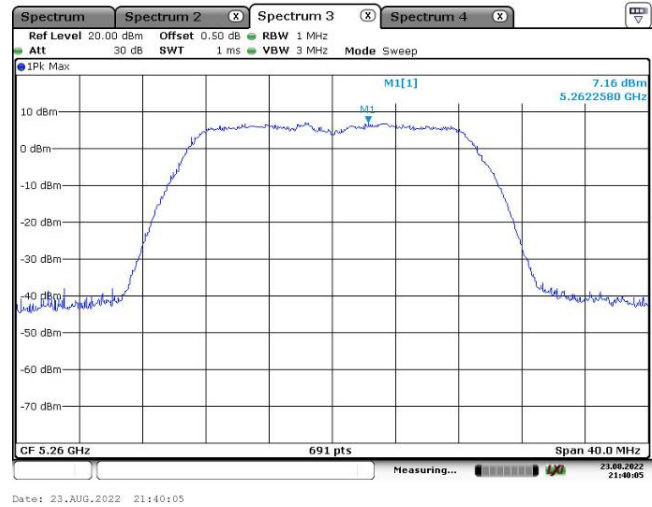
802.11 a-5260 MHz



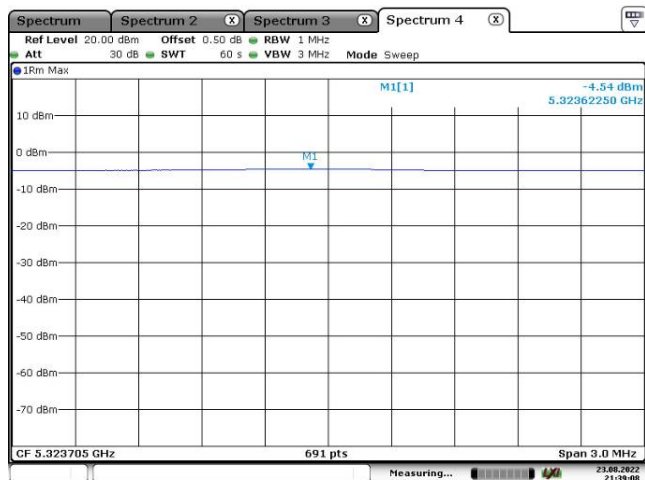
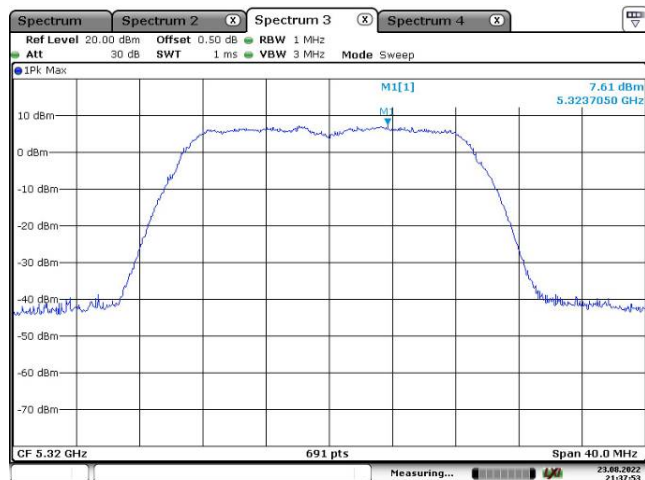
802.11 a-5320 MHz



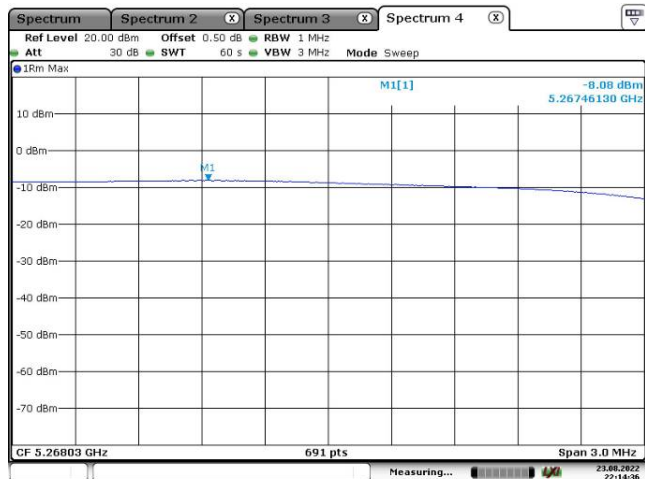
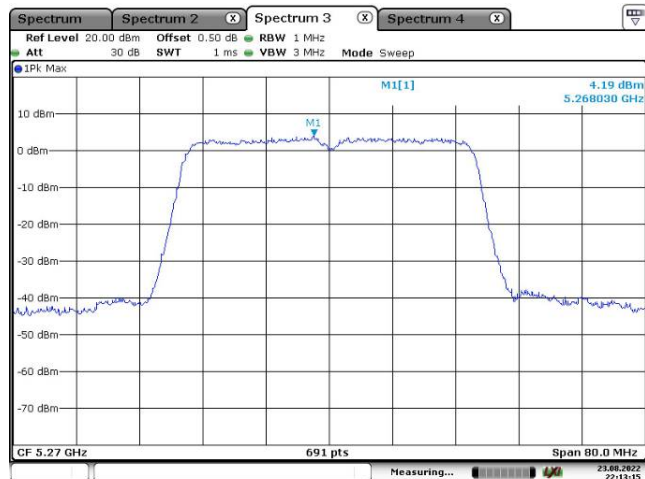
802.11 n20-5260 MHz



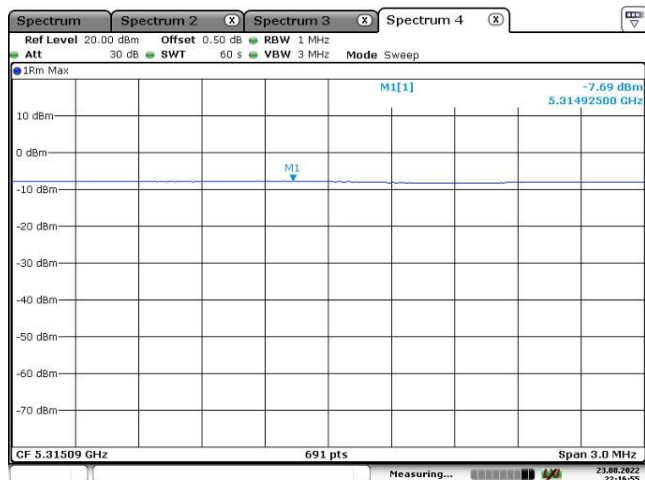
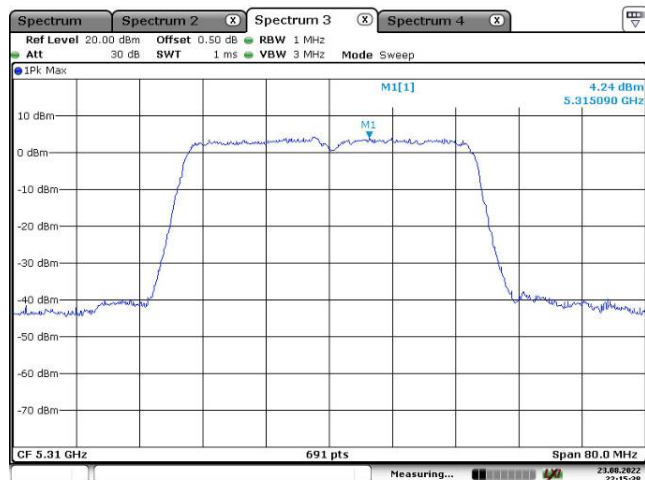
802.11 n20-5320 MHz



802.11 n40-5270 MHz

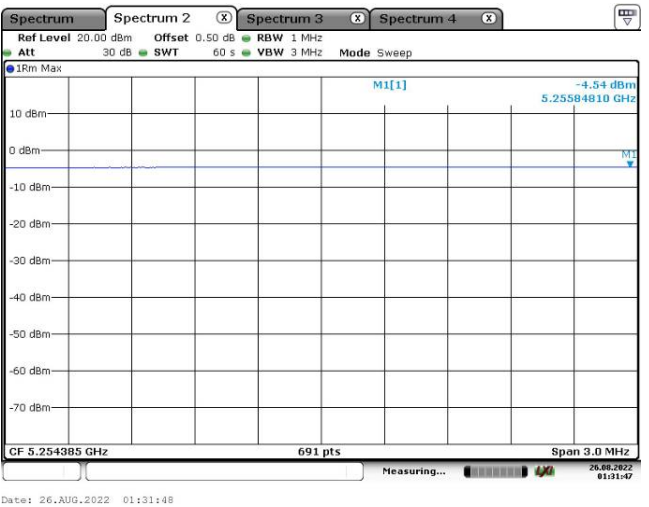
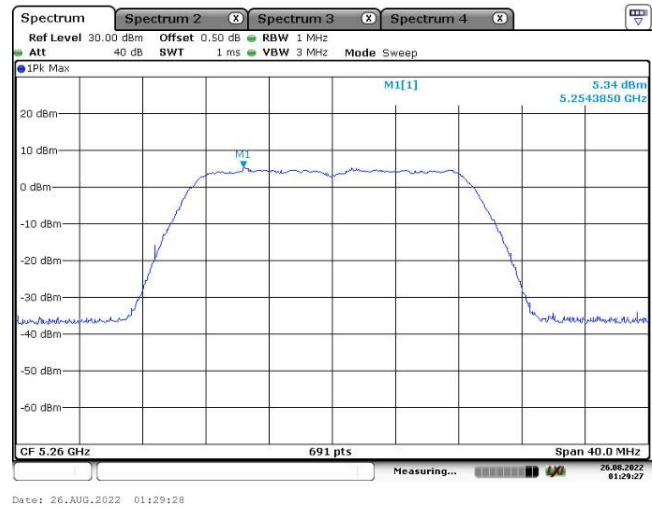


802.11 n40-5310 MHz

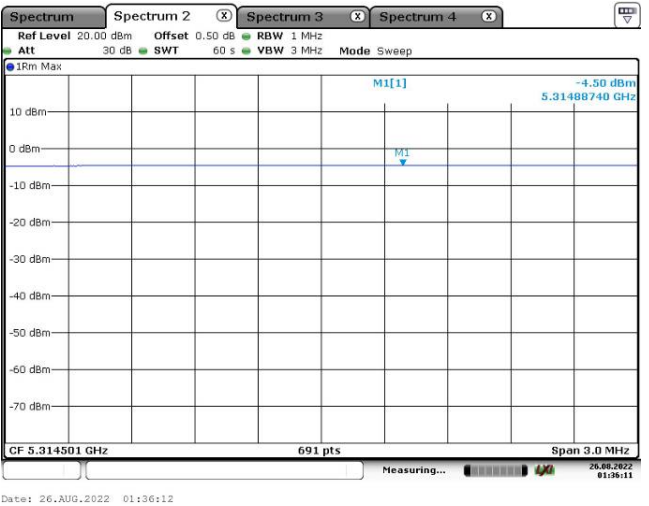
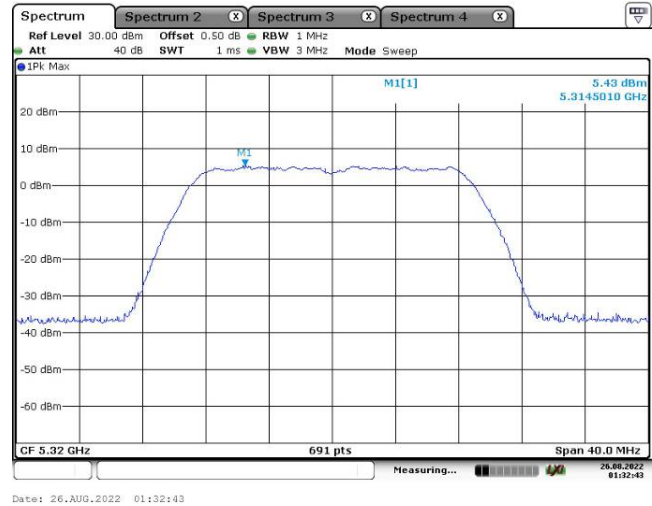




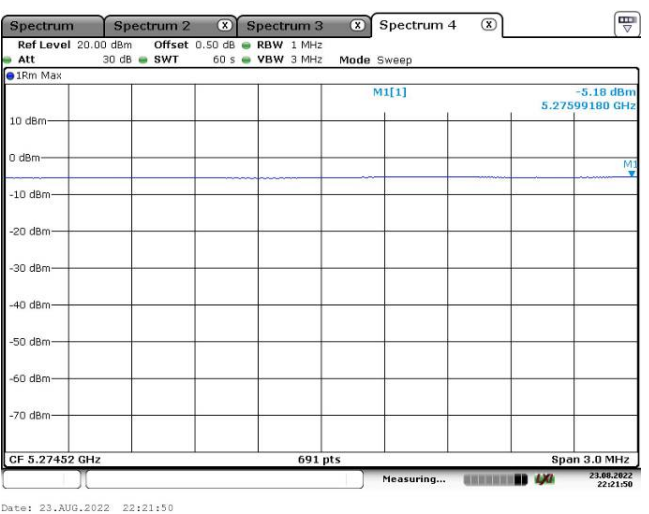
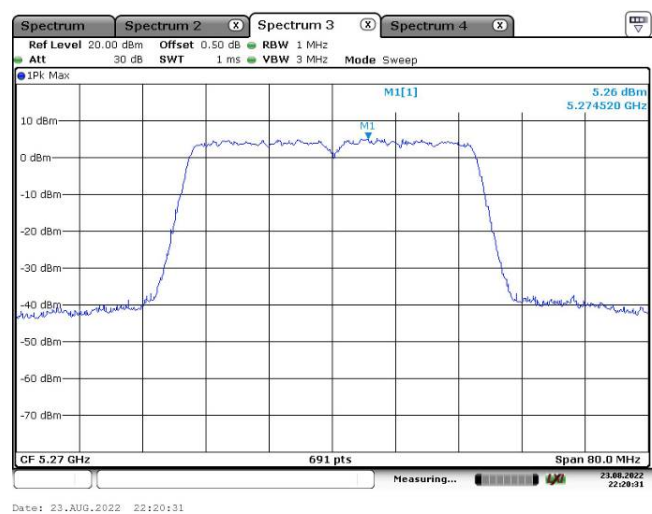
802.11 ac20-5260 MHz



802.11 ac20-5320 MHz

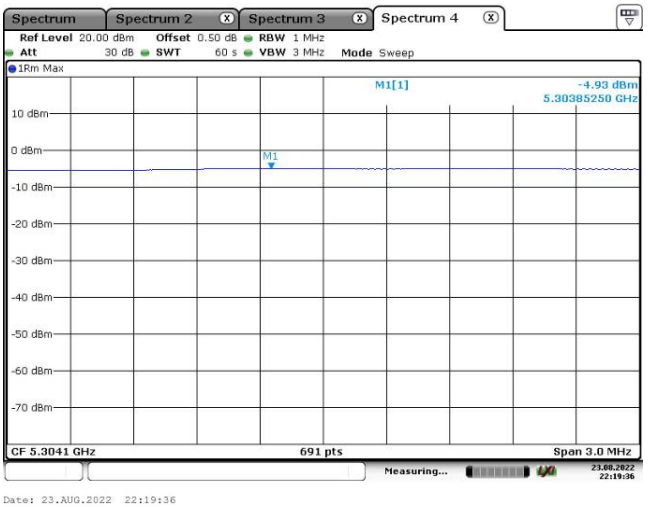
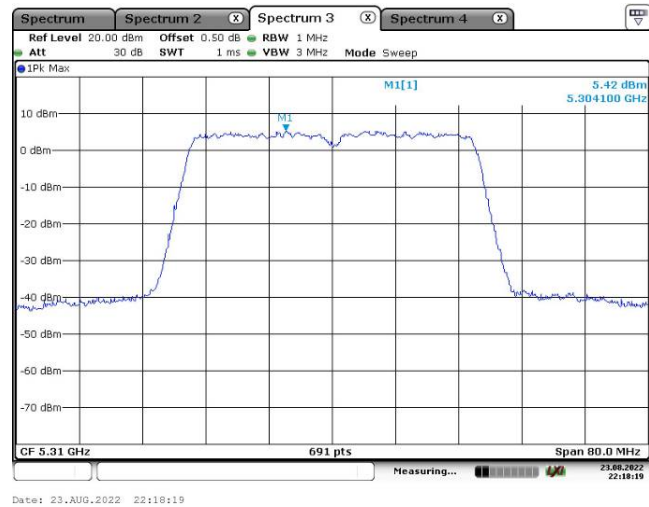


802.11 ac40-5270 MHz

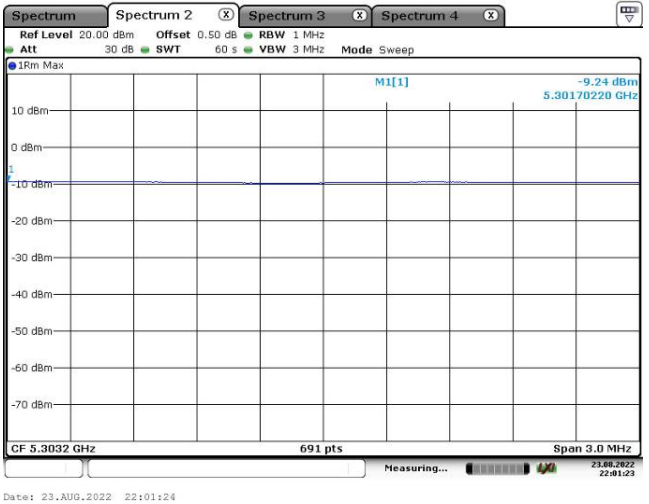
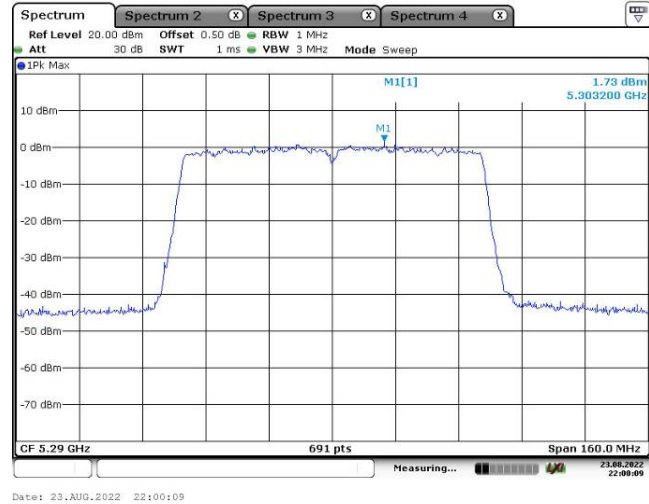




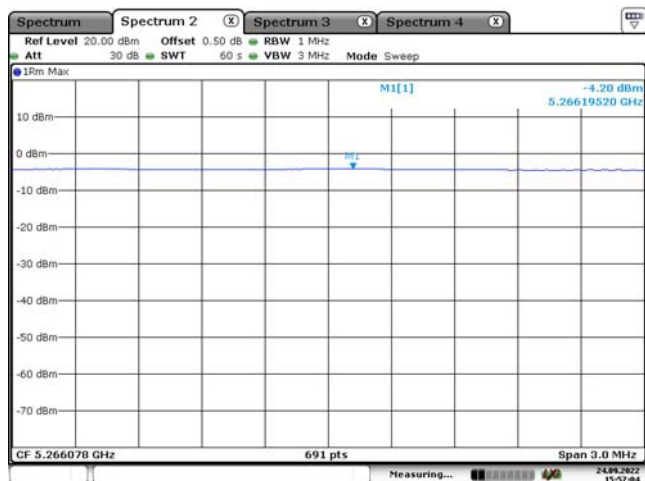
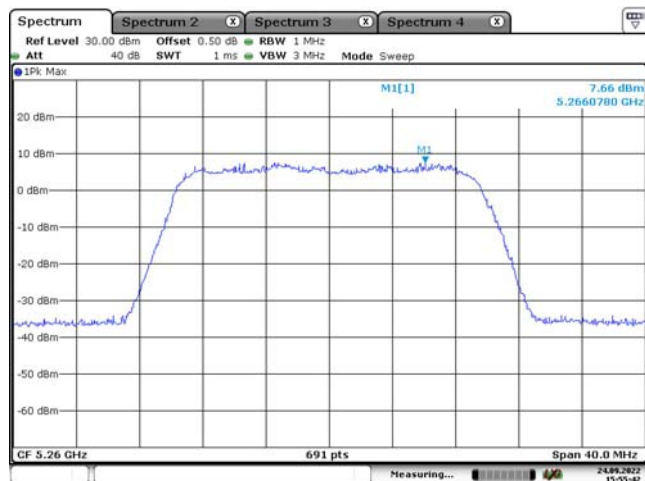
802.11 ac40-5310 MHz



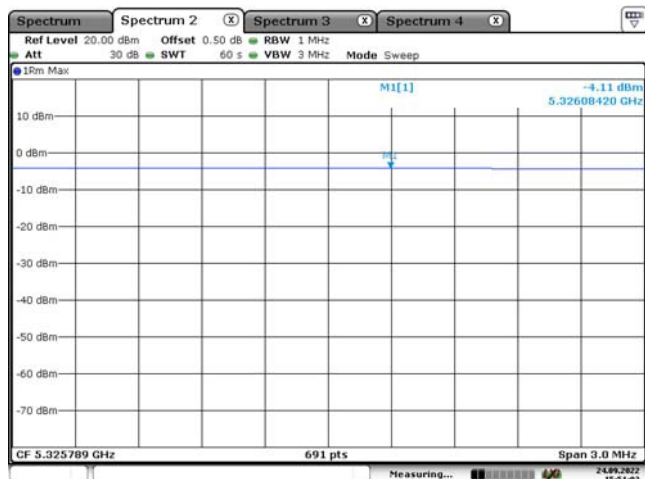
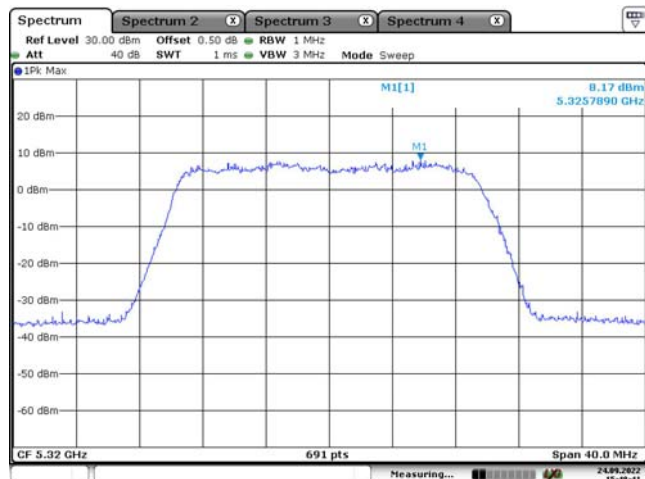
802.11 ac80-5290 MHz



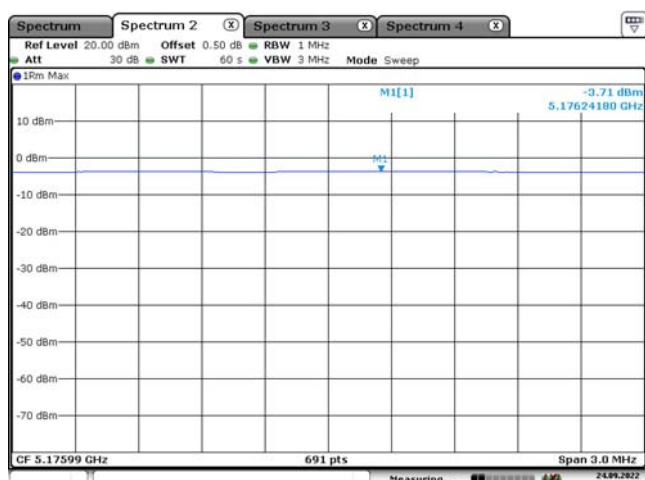
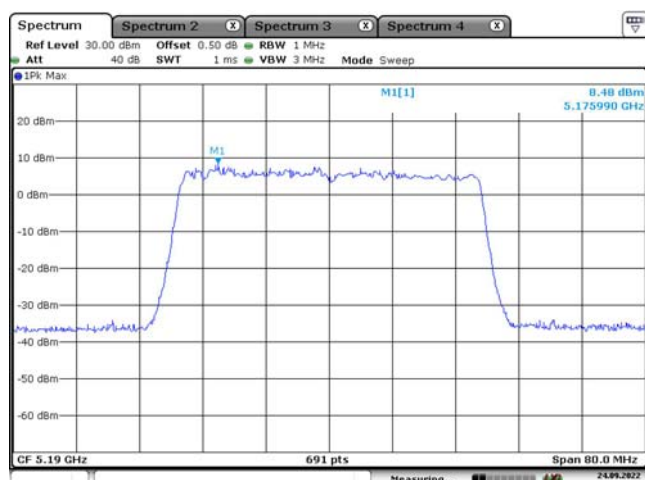
### 802.11 ax20-5260 MHz



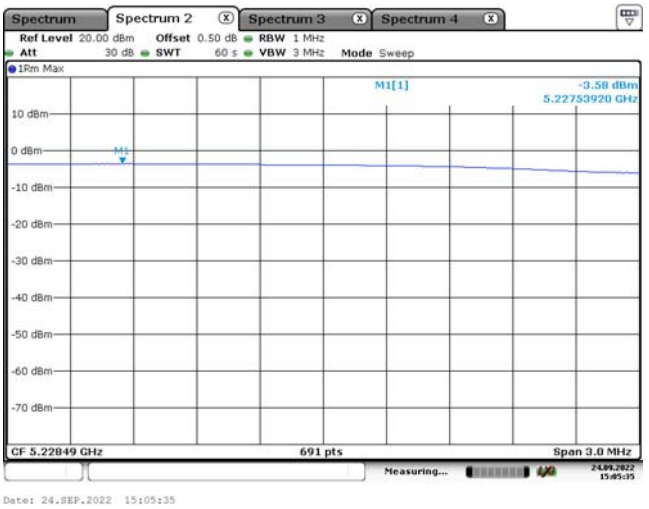
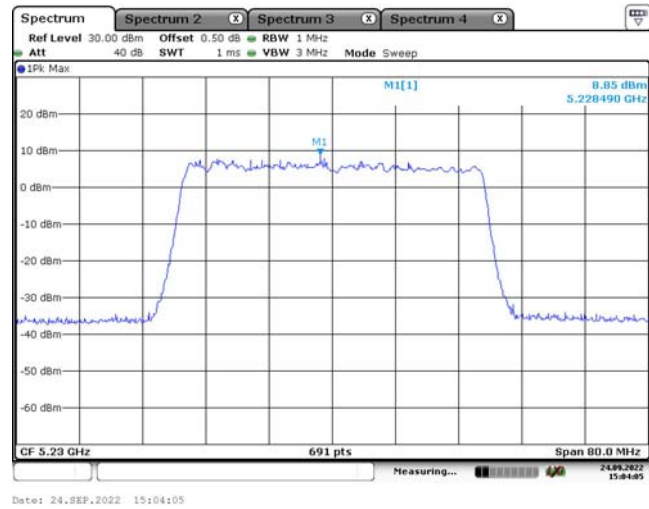
### 802.11 ax20-5320 MHz



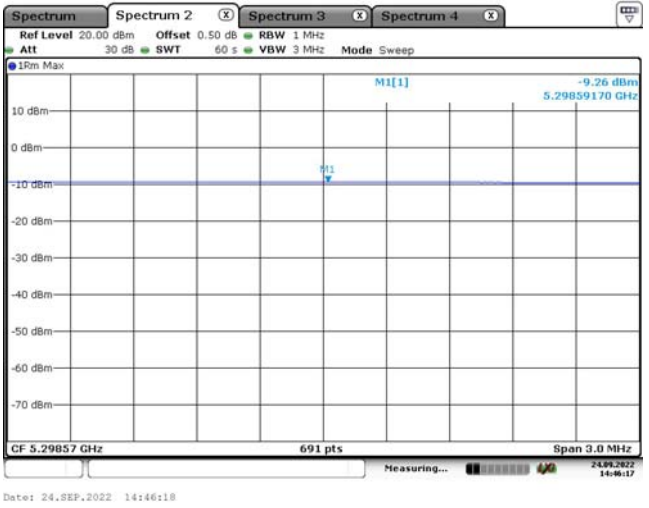
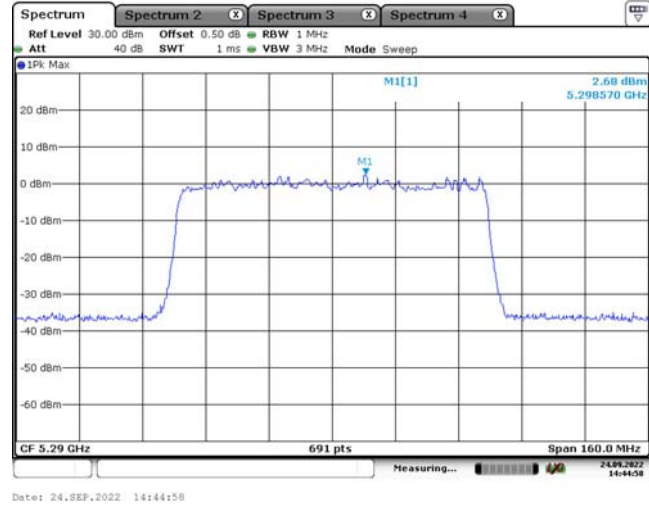
### 802.11 ax40-5270 MHz



802.11 ax40-5310 MHz



802.11 ax80-5290 MHz



## 4 – TRANSMITTER UNWANTED EMISSIONS OUTSIDE THE 5 GHZ RLAN BANDS

### Definition

Transmitter unwanted emissions outside the 5 GHz RLAN bands are radio frequency emissions outside the 5 GHz RLAN bands defined in clause 3.1.

### Limit

The level of transmitter unwanted emissions outside the 5 GHz RLAN bands shall not exceed the limits given in table 4.

**Table 4: Transmitter unwanted emission limits outside the 5 GHz RLAN bands**

Frequency range	Maximum power	Bandwidth
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87,5 MHz	-36 dBm	100 kHz
87,5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 862 MHz	-54 dBm	100 kHz
862 MHz to 1 GHz	-36 dBm	100 kHz
1 GHz to 5,15 GHz	-30 dBm	1 MHz
5,35 GHz to 5,47 GHz	-30 dBm	1 MHz
5,725 GHz to 26 GHz	-30 dBm	1 MHz

### Test Procedure

According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.5

**Test Data**

**Test Result:** Compliant, please refer to following tables.

**802.11 a Chain 0 5180 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.20	H	49.89	-67.27	-6.48	0.24	-73.99	-54.00	19.99
49.00	V	52.78	-52.75	-15.88	0.21	-68.84	-54.00	14.84
10360.00	H	50.26	-49.48	13.48	0.40	-36.40	-30.00	6.40
10360.00	V	50.14	-49.04	13.48	0.40	-35.96	-30.00	5.96

**802.11 a Chain 0 5240 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.00	H	50.12	-66.92	-6.59	0.24	-73.75	-54.00	19.75
49.20	V	51.33	-54.53	-15.68	0.21	-70.42	-54.00	16.42
10480.00	H	50.23	-49.51	13.32	0.30	-36.49	-30.00	6.49
10480.00	V	50.14	-48.86	13.32	0.30	-35.84	-30.00	5.84

**802.11 a Chain 0 5260 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.40	H	49.38	-66.16	-7.97	0.23	-74.36	-54.00	20.36
47.50	V	53.13	-49.91	-17.35	0.21	-67.47	-54.00	13.47
10520.00	H	50.41	-49.28	13.24	0.30	-36.34	-30.00	6.34
10520.00	V	50.20	-48.72	13.24	0.30	-35.78	-30.00	5.78

**802.11 a Chain 0 5320 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.50	H	50.01	-67.32	-6.33	0.24	-73.89	-54.00	19.89
49.80	V	52.44	-54.42	-15.10	0.21	-69.73	-54.00	15.73
10640.00	H	50.32	-49.08	13.04	0.43	-36.47	-30.00	6.47
10640.00	V	50.41	-48.27	13.04	0.43	-35.66	-30.00	5.66

802.11 a Chain 1

5180 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.00	H	49.86	-67.18	-6.59	0.24	-74.01	-54.00	20.01
48.20	V	53.64	-50.56	-16.66	0.21	-67.43	-54.00	13.43
10360.00	H	50.62	-49.12	13.48	0.40	-36.04	-30.00	6.04
10360.00	V	50.74	-48.44	13.48	0.40	-35.36	-30.00	5.36

802.11 a Chain 1

5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.40	H	50.25	-67.02	-6.38	0.24	-73.64	-54.00	19.64
49.10	V	52.33	-53.37	-15.78	0.21	-69.36	-54.00	15.36
10480.00	H	50.48	-49.26	13.32	0.30	-36.24	-30.00	6.24
10480.00	V	50.23	-48.77	13.32	0.30	-35.75	-30.00	5.75

802.11 a Chain 1

5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.20	H	49.67	-67.49	-6.48	0.24	-74.21	-54.00	20.21
49.20	V	52.87	-52.99	-15.68	0.21	-68.88	-54.00	14.88
10520.00	H	50.62	-49.07	13.24	0.30	-36.13	-30.00	6.13
10520.00	V	50.27	-48.65	13.24	0.30	-35.71	-30.00	5.71

802.11 a Chain 1

5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.00	H	49.78	-67.26	-6.59	0.24	-74.09	-54.00	20.09
50.10	V	52.68	-54.57	-14.85	0.21	-69.63	-54.00	15.63
10640.00	H	50.26	-49.14	13.04	0.43	-36.53	-30.00	6.53
10640.00	V	50.22	-48.46	13.04	0.43	-35.85	-30.00	5.85

## 802.11 n20

## 5180 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.90	H	49.37	-67.62	-6.64	0.24	-74.50	-54.00	20.50
48.50	V	52.61	-52.09	-16.37	0.21	-68.67	-54.00	14.67
10360.00	H	50.62	-49.12	13.48	0.40	-36.04	-30.00	6.04
10360.00	V	50.74	-48.44	13.48	0.40	-35.36	-30.00	5.36

## 802.11 n20

## 5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.00	H	49.88	-67.16	-6.59	0.24	-73.99	-54.00	19.99
49.20	V	53.11	-52.75	-15.68	0.21	-68.64	-54.00	14.64
10480.00	H	49.25	-50.49	13.32	0.30	-37.47	-30.00	7.47
10480.00	V	50.22	-48.78	13.32	0.30	-35.76	-30.00	5.76

## 802.11 n20

## 5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.60	H	49.20	-66.45	-7.86	0.23	-74.54	-54.00	20.54
47.60	V	52.36	-50.85	-17.25	0.21	-68.31	-54.00	14.31
10520.00	H	50.30	-49.39	13.24	0.30	-36.45	-30.00	6.45
10520.00	V	49.26	-49.66	13.24	0.30	-36.72	-30.00	6.72

## 802.11 n20

## 5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.40	H	49.92	-67.35	-6.38	0.24	-73.97	-54.00	19.97
50.30	V	51.98	-55.39	-14.76	0.21	-70.36	-54.00	16.36
10640.00	H	50.45	-48.95	13.04	0.43	-36.34	-30.00	6.34
10640.00	V	50.63	-48.05	13.04	0.43	-35.44	-30.00	5.44

## 802.11 n40

## 5190 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.10	H	49.93	-67.17	-6.54	0.24	-73.95	-54.00	19.95
49.00	V	52.84	-52.69	-15.88	0.21	-68.78	-54.00	14.78
10380.00	H	50.69	-49.05	13.44	0.38	-35.99	-30.00	5.99
10380.00	V	50.74	-48.41	13.44	0.38	-35.35	-30.00	5.35

## 802.11 n40

## 5230 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.30	H	50.21	-67.01	-6.43	0.24	-73.68	-54.00	19.68
48.80	V	52.68	-52.52	-16.08	0.21	-68.81	-54.00	14.81
10460.00	H	50.06	-49.68	13.34	0.31	-36.65	-30.00	6.65
10460.00	V	49.22	-49.81	13.34	0.31	-36.78	-30.00	6.78

## 802.11 n40

## 5270 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.90	H	49.97	-67.02	-6.64	0.24	-73.90	-54.00	19.90
48.90	V	53.07	-52.29	-15.98	0.21	-68.48	-54.00	14.48
10540.00	H	50.41	-49.23	13.18	0.32	-36.37	-30.00	6.37
10540.00	V	50.69	-48.19	13.18	0.32	-35.33	-30.00	5.33

## 802.11 n40

## 5310 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.20	H	49.89	-67.27	-6.48	0.24	-73.99	-54.00	19.99
49.80	V	52.36	-54.50	-15.10	0.21	-69.81	-54.00	15.81
10620.00	H	50.23	-49.22	13.02	0.41	-36.61	-30.00	6.61
10620.00	V	50.14	-48.58	13.02	0.41	-35.97	-30.00	5.97



## 802.11 ac20

## 5180 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.20	H	50.24	-66.92	-6.48	0.24	-73.64	-54.00	19.64
49.10	V	53.06	-52.64	-15.78	0.21	-68.63	-54.00	14.63
10360.00	H	50.62	-49.12	13.48	0.40	-36.04	-30.00	6.04
10360.00	V	50.49	-48.69	13.48	0.40	-35.61	-30.00	5.61

## 802.11 ac20

## 5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.10	H	50.11	-66.99	-6.54	0.24	-73.77	-54.00	19.77
48.90	V	52.56	-52.80	-15.98	0.21	-68.99	-54.00	14.99
10480.00	H	50.03	-49.71	13.32	0.30	-36.69	-30.00	6.69
10480.00	V	50.41	-48.59	13.32	0.30	-35.57	-30.00	5.57

## 802.11 ac20

## 5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.60	H	49.65	-66.00	-7.86	0.23	-74.09	-54.00	20.09
47.70	V	52.46	-50.91	-17.15	0.21	-68.27	-54.00	14.27
10520.00	H	50.46	-49.23	13.24	0.30	-36.29	-30.00	6.29
10520.00	V	50.16	-48.76	13.24	0.30	-35.82	-30.00	5.82

## 802.11 ac20

## 5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
68.00	H	49.92	-67.70	-6.06	0.24	-74.00	-54.00	20.00
50.50	V	53.08	-54.41	-14.67	0.21	-69.29	-54.00	15.29
10640.00	H	50.31	-49.09	13.04	0.43	-36.48	-30.00	6.48
10640.00	V	50.25	-48.43	13.04	0.43	-35.82	-30.00	5.82

## 802.11 ac40

## 5190 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.00	H	50.32	-66.72	-6.59	0.24	-73.55	-54.00	19.55
49.20	V	53.29	-52.57	-15.68	0.21	-68.46	-54.00	14.46
10380.00	H	50.62	-49.12	13.44	0.38	-36.06	-30.00	6.06
10380.00	V	50.49	-48.66	13.44	0.38	-35.60	-30.00	5.60

## 802.11 ac40

## 5230 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.30	H	50.21	-67.01	-6.43	0.24	-73.68	-54.00	19.68
48.80	V	52.68	-52.52	-16.08	0.21	-68.81	-54.00	14.81
10460.00	H	50.03	-49.71	13.34	0.31	-36.68	-30.00	6.68
10460.00	V	50.85	-48.18	13.34	0.31	-35.15	-30.00	5.15

## 802.11 ac40

## 5270 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.90	H	49.60	-67.39	-6.64	0.24	-74.27	-54.00	20.27
48.90	V	52.69	-52.67	-15.98	0.21	-68.86	-54.00	14.86
10540.00	H	50.10	-49.54	13.18	0.32	-36.68	-30.00	6.68
10540.00	V	50.47	-48.41	13.18	0.32	-35.55	-30.00	5.55

## 802.11 ac40

## 5310 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.80	H	49.77	-67.74	-6.17	0.24	-74.15	-54.00	20.15
50.40	V	52.49	-54.94	-14.72	0.21	-69.87	-54.00	15.87
10620.00	H	50.36	-49.09	13.02	0.41	-36.48	-30.00	6.48
10620.00	V	50.57	-48.15	13.02	0.41	-35.54	-30.00	5.54

**802.11 ac80****5210 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.80	H	50.21	-66.72	-6.70	0.24	-73.66	-54.00	19.66
49.20	V	52.74	-53.12	-15.68	0.21	-69.01	-54.00	15.01
10420.00	H	50.62	-49.12	13.38	0.35	-36.09	-30.00	6.09
10420.00	V	50.84	-48.25	13.38	0.35	-35.22	-30.00	5.22

**802.11 ac80****5290 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.00	H	49.91	-67.13	-6.59	0.24	-73.96	-54.00	19.96
47.80	V	53.26	-50.28	-17.06	0.21	-67.55	-54.00	13.55
10580.00	H	50.36	-49.19	13.06	0.37	-36.50	-30.00	6.50
10580.00	V	50.20	-48.60	13.06	0.37	-35.91	-30.00	5.91

**802.11 ac160****5250 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.80	H	50.14	-66.79	-6.70	0.24	-73.73	-54.00	19.73
49.10	V	52.67	-53.03	-15.78	0.21	-69.02	-54.00	15.02
10500.00	H	50.64	-49.10	13.30	0.28	-36.08	-30.00	6.08
10500.00	V	50.94	-48.03	13.30	0.28	-35.01	-30.00	5.01

**802.11 ax20****5180 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.70	H	50.34	-66.53	-6.75	0.24	-73.52	-54.00	19.52
49.20	V	52.74	-53.12	-15.68	0.21	-69.01	-54.00	15.01
10360.00	H	50.62	-49.12	13.48	0.40	-36.04	-30.00	6.04
10360.00	V	50.49	-48.69	13.48	0.40	-35.61	-30.00	5.61

## 802.11 ax20

## 5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.20	H	50.09	-67.07	-6.48	0.24	-73.79	-54.00	19.79
49.40	V	52.77	-53.42	-15.49	0.21	-69.12	-54.00	15.12
10480.00	H	50.47	-49.27	13.32	0.30	-36.25	-30.00	6.25
10480.00	V	50.36	-48.64	13.32	0.30	-35.62	-30.00	5.62

## 802.11 ax20

## 5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.70	H	50.23	-66.64	-6.75	0.24	-73.63	-54.00	19.63
48.90	V	52.69	-52.67	-15.98	0.21	-68.86	-54.00	14.86
10520.00	H	50.94	-48.75	13.24	0.30	-35.81	-30.00	5.81
10520.00	V	50.49	-48.43	13.24	0.30	-35.49	-30.00	5.49

## 802.11 ax20

## 5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.10	H	49.25	-67.85	-6.54	0.24	-74.63	-54.00	20.63
50.10	V	52.61	-54.64	-14.85	0.21	-69.70	-54.00	15.70
10640.00	H	50.32	-49.08	13.04	0.43	-36.47	-30.00	6.47
10640.00	V	50.20	-48.48	13.04	0.43	-35.87	-30.00	5.87

## 802.11 ax40

## 5190 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.20	H	50.31	-66.85	-6.48	0.24	-73.57	-54.00	19.57
49.00	V	52.97	-52.56	-15.88	0.21	-68.65	-54.00	14.65
10380.00	H	50.84	-48.90	13.44	0.38	-35.84	-30.00	5.84
10380.00	V	50.36	-48.79	13.44	0.38	-35.73	-30.00	5.73

## 802.11 ax40

5230 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.20	H	50.25	-66.91	-6.48	0.24	-73.63	-54.00	19.63
49.00	V	53.12	-52.41	-15.88	0.21	-68.50	-54.00	14.50
10460.00	H	50.22	-49.52	13.34	0.31	-36.49	-30.00	6.49
10460.00	V	50.14	-48.89	13.34	0.31	-35.86	-30.00	5.86

## 802.11 ax40

5270 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.10	H	49.71	-67.39	-6.54	0.24	-74.17	-54.00	20.17
49.20	V	53.01	-52.85	-15.68	0.21	-68.74	-54.00	14.74
10540.00	H	50.63	-49.01	13.18	0.32	-36.15	-30.00	6.15
10540.00	V	50.05	-48.83	13.18	0.32	-35.97	-30.00	5.97

## 802.11 ax40

5310 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.50	H	49.48	-67.85	-6.33	0.24	-74.42	-54.00	20.42
49.70	V	52.33	-54.36	-15.19	0.21	-69.76	-54.00	15.76
10620.00	H	50.12	-49.33	13.02	0.41	-36.72	-30.00	6.72
10620.00	V	50.23	-48.49	13.02	0.41	-35.88	-30.00	5.88

## 802.11 ax80

5210 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.00	H	49.20	-67.84	-6.59	0.24	-74.67	-54.00	20.67
48.60	V	52.39	-52.48	-16.27	0.21	-68.96	-54.00	14.96
10420.00	H	49.15	-50.59	13.38	0.35	-37.56	-30.00	7.56
10420.00	V	50.61	-48.48	13.38	0.35	-35.45	-30.00	5.45

**802.11 ax80****5290 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
66.90	H	50.23	-66.76	-6.64	0.24	-73.64	-54.00	19.64
49.00	V	52.81	-52.72	-15.88	0.21	-68.81	-54.00	14.81
10580.00	H	50.26	-49.29	13.06	0.37	-36.60	-30.00	6.60
10580.00	V	50.91	-47.89	13.06	0.37	-35.20	-30.00	5.20

**802.11 ax160****5250 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
67.10	H	49.11	-67.99	-6.54	0.24	-74.77	-54.00	20.77
48.90	V	52.68	-52.68	-15.98	0.21	-68.87	-54.00	14.87
10500.00	H	50.63	-49.11	13.30	0.28	-36.09	-30.00	6.09
10500.00	V	50.61	-48.36	13.30	0.28	-35.34	-30.00	5.34

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

Note 2:

Absolute Level = Substituted Level - Cable loss + Antenna Gain

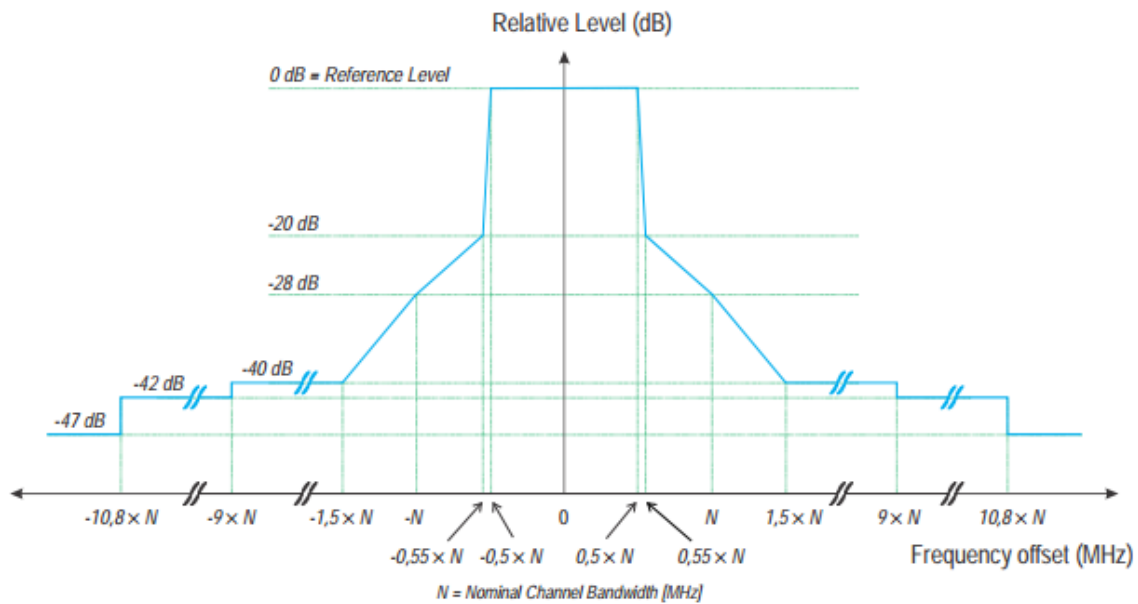
Margin = Limit- Absolute Level

## 5 – TRANSMITTER UNWANTED EMISSIONS WITHIN THE 5 GHZ RLAN BANDS

### Definition

Transmitter unwanted emissions within the 5 GHz RLAN bands are radio frequency emissions within the 5 GHz RLAN bands defined in clause 3.1.

### Limit



**Figure 1: Transmit spectral power mask**

### Test Procedure

According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.6

### Test Data

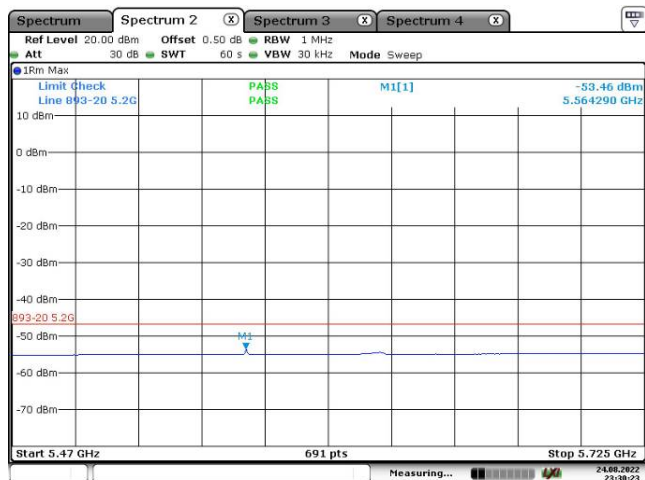
**Test Result:** Compliant. Please refer to following Plots:

Chain0-5.2G

802.11 a-5180 MHz

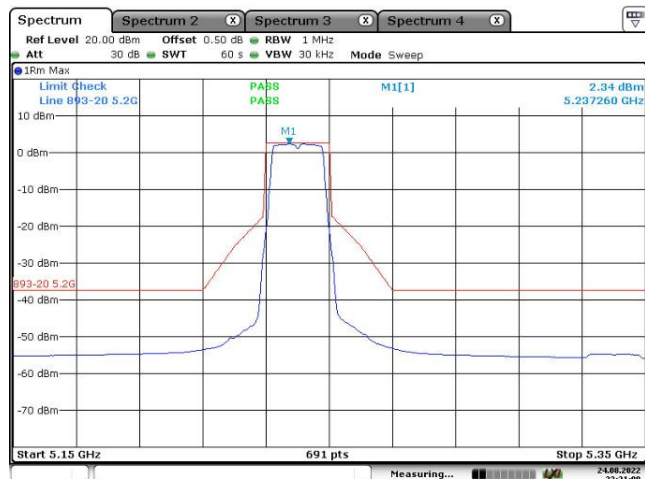


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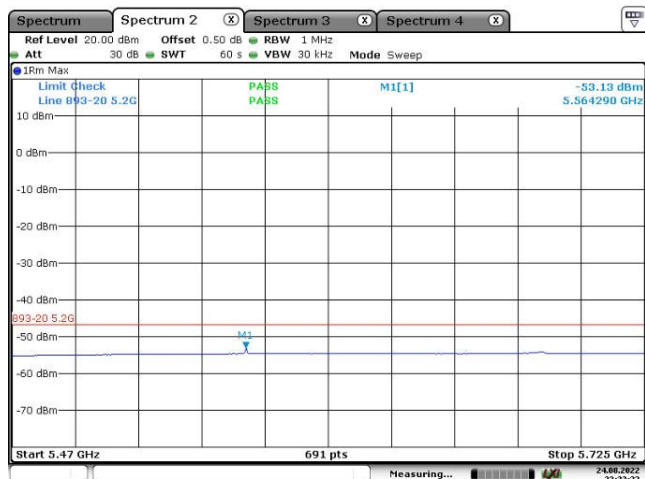


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802.11 a-5240 MHz



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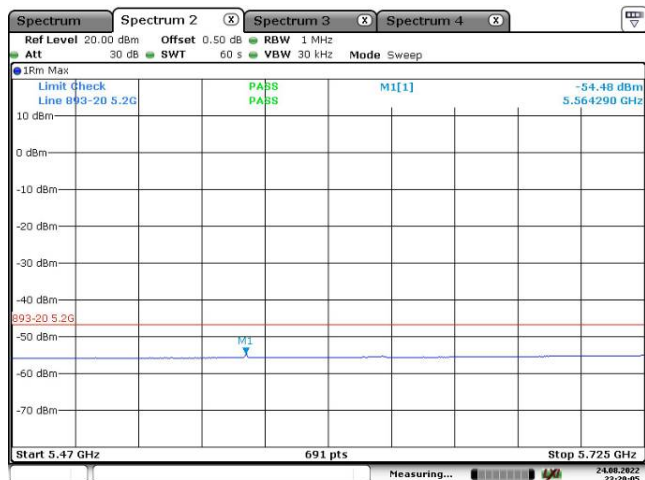


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802.11 n20-5180 MHz



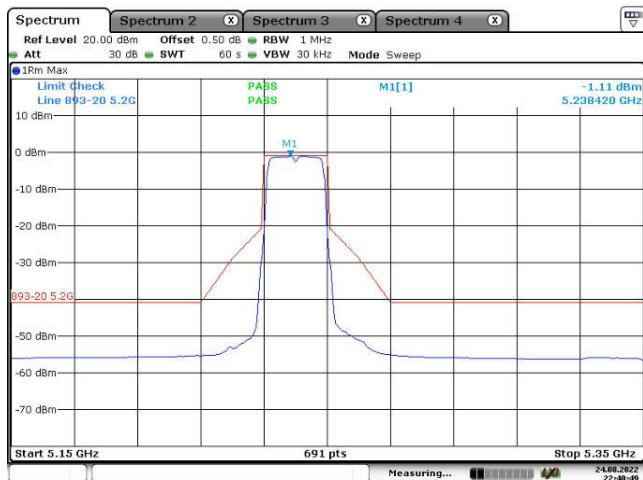
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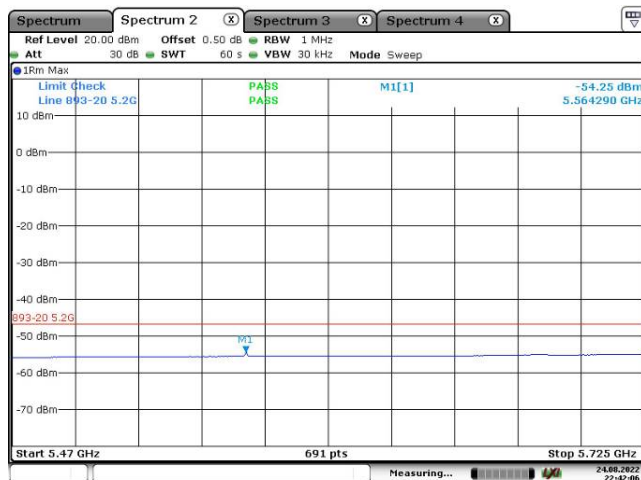
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802.11 n20-5240 MHz

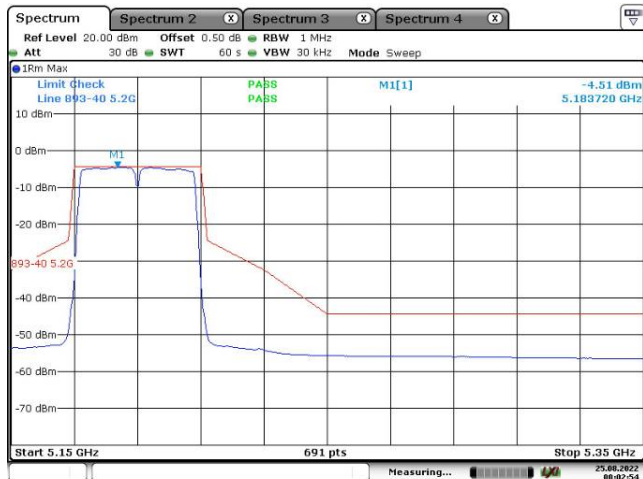


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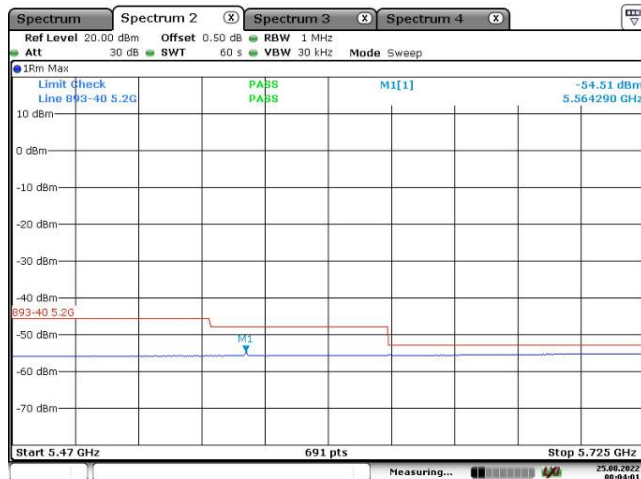


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802.11 n40-5190 MHz

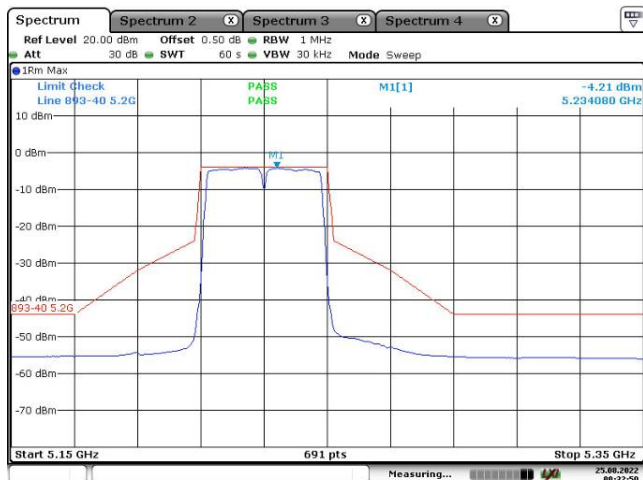


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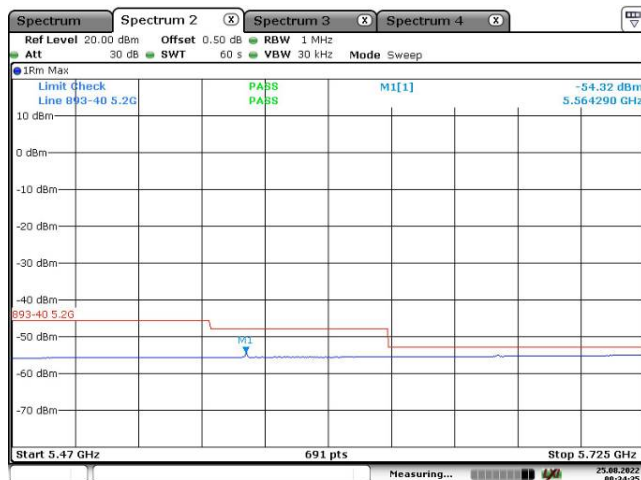


Date: 25.AUG.2022 00:04:02

802.11 n40-5230 MHz

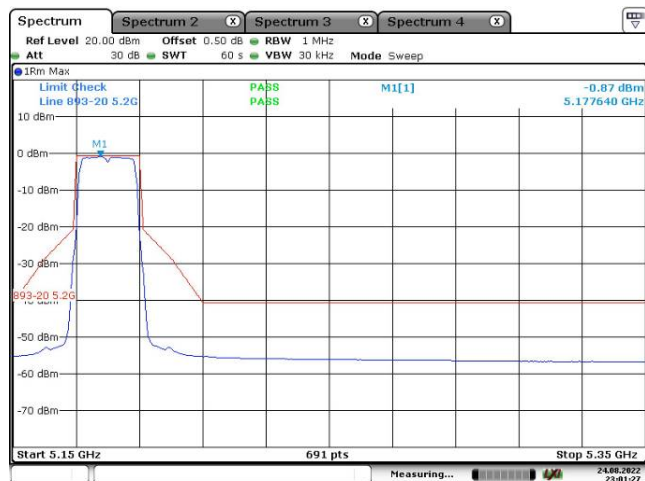


Date: 25.AUG.2022 00:32:51

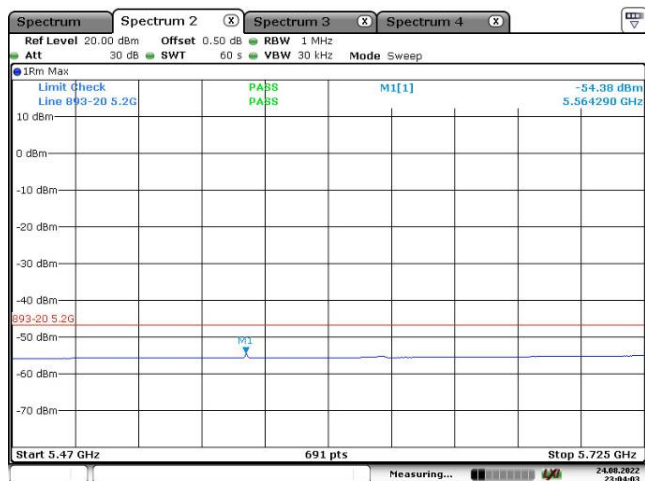


Date: 25.AUG.2022 00:34:36

### 802.11 ac20-5180 MHz

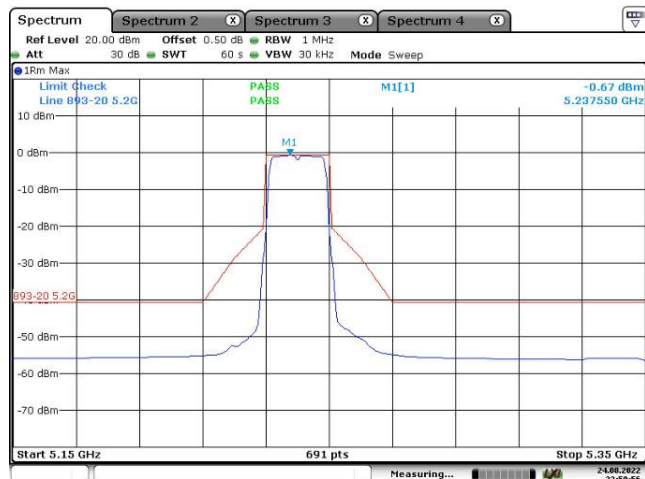


Date: 24.AUG.2022 23:01:28

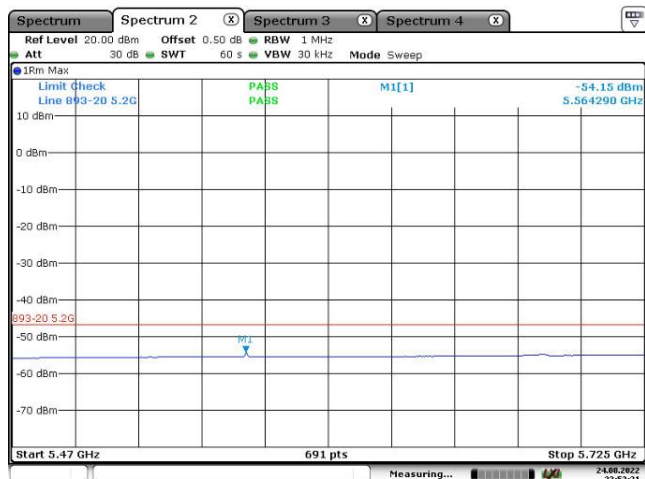


Date: 24.AUG.2022 23:04:04

### 802.11 ac20-5240 MHz



Date: 24.AUG.2022 22:50:57

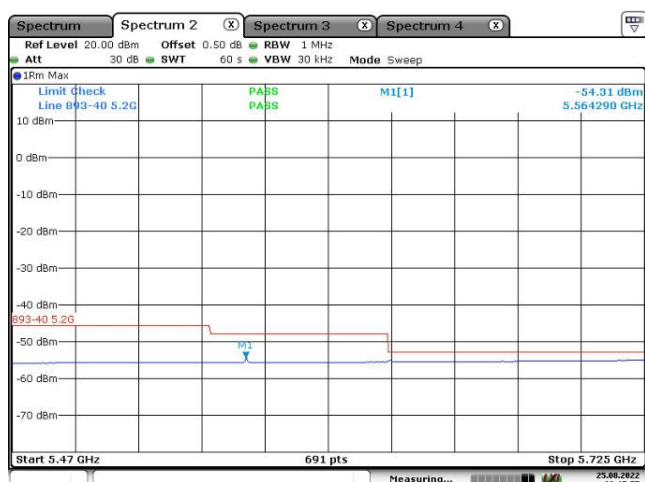


Date: 24.AUG.2022 22:53:22

### 802.11 ac40-5190 MHz

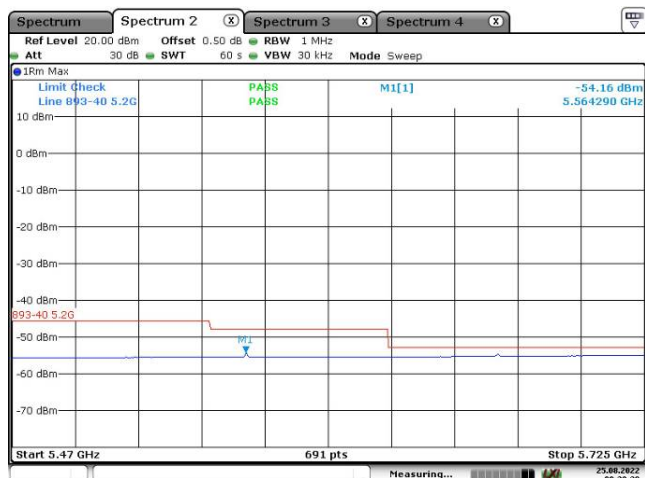
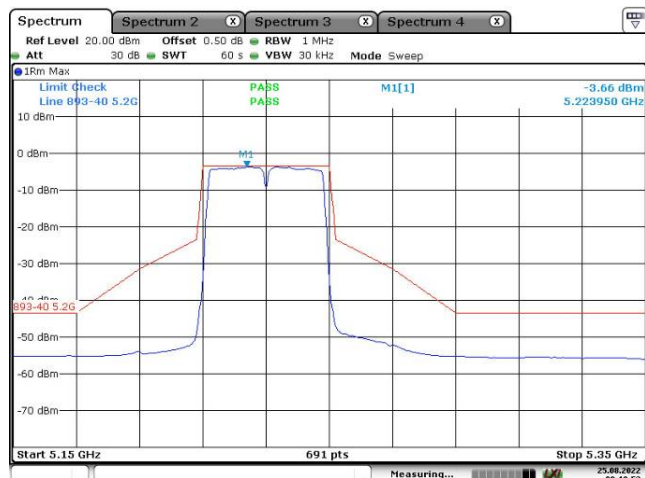


Date: 25.AUG.2022 00:14:45

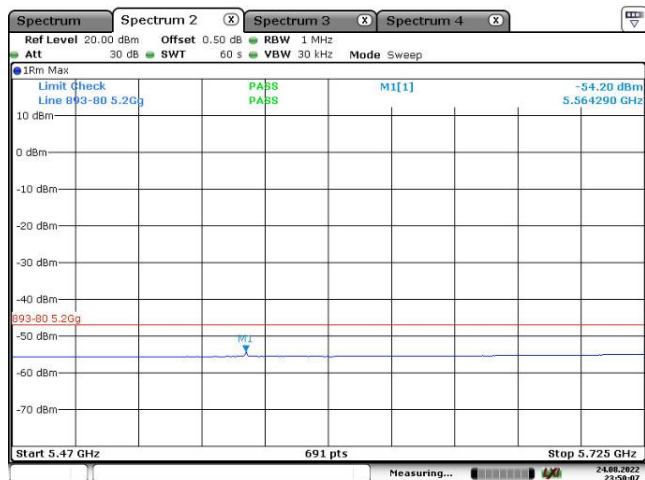


Date: 25.AUG.2022 00:15:57

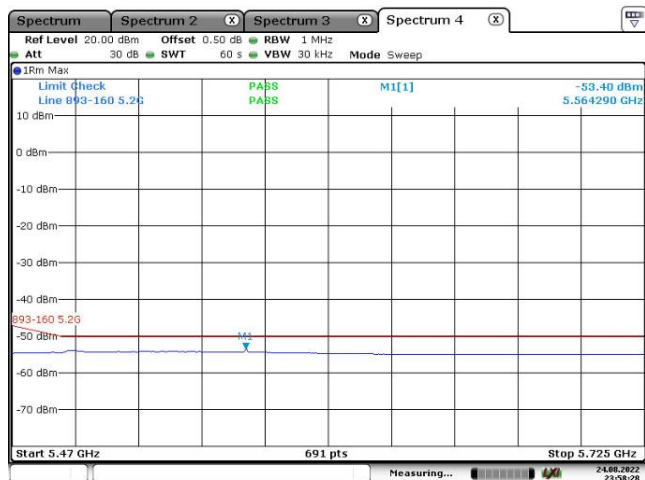
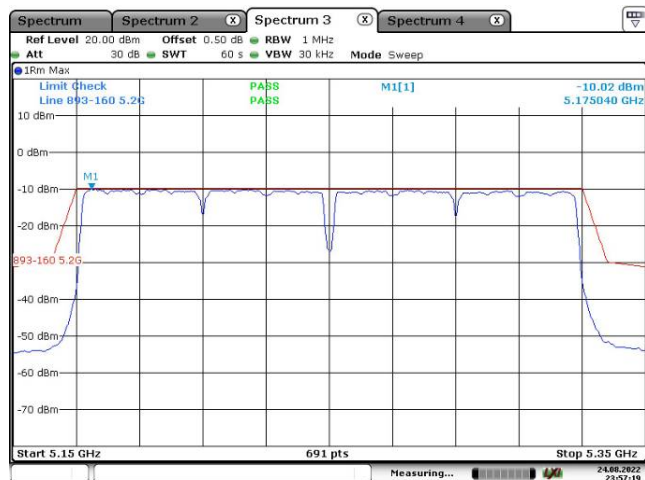
### 802.11 ac40-5230 MHz



### 802.11 ac80-5210 MHz

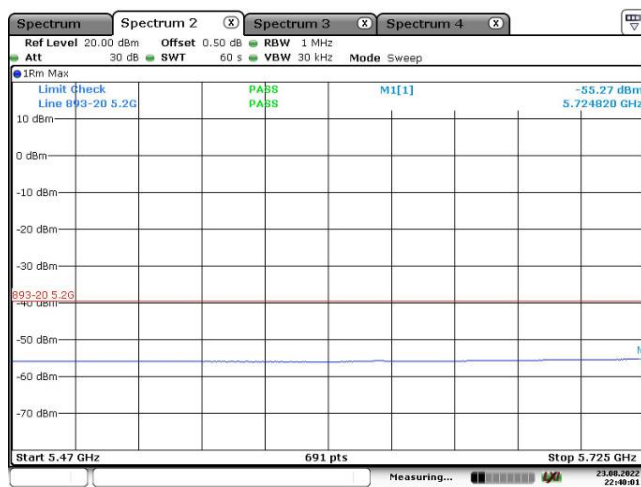
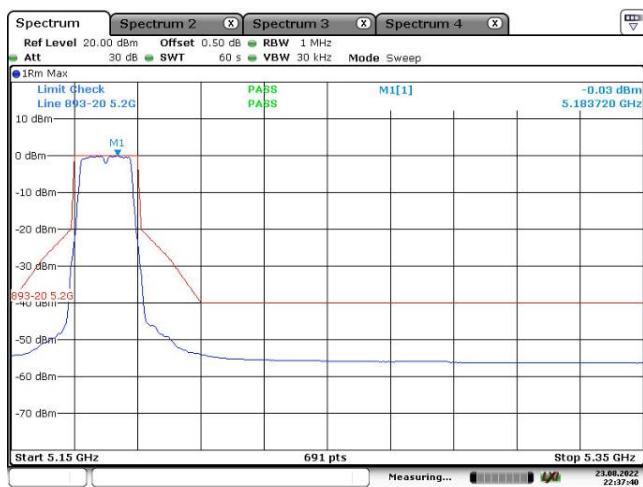


### 802.11 ac160-5250 MHz

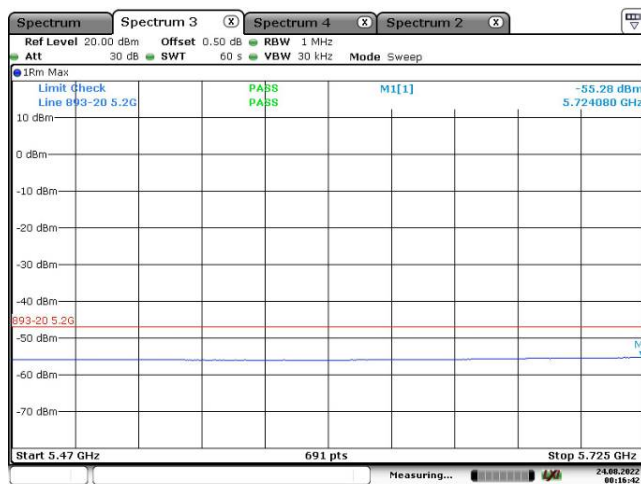
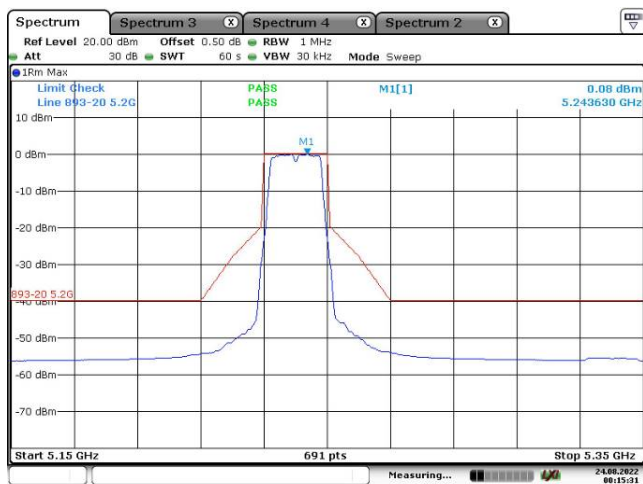


Chain1-5.2G

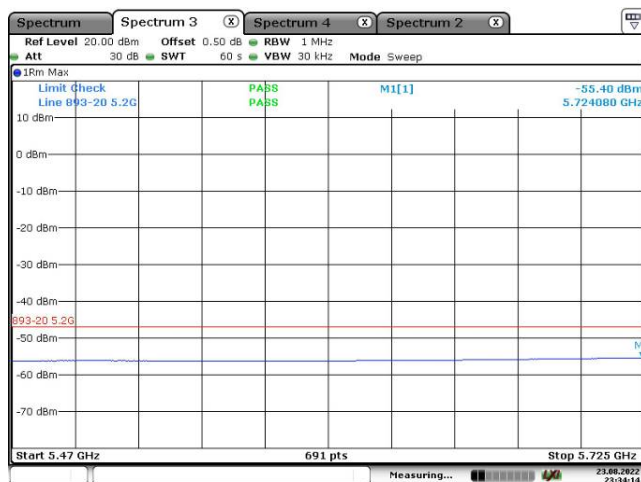
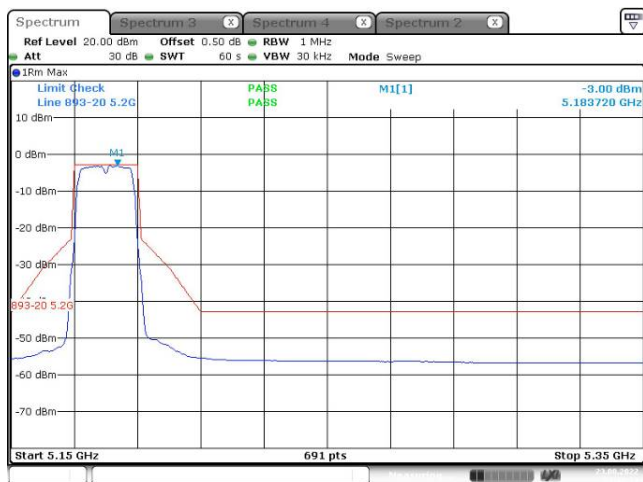
802.11 a-5180 MHz



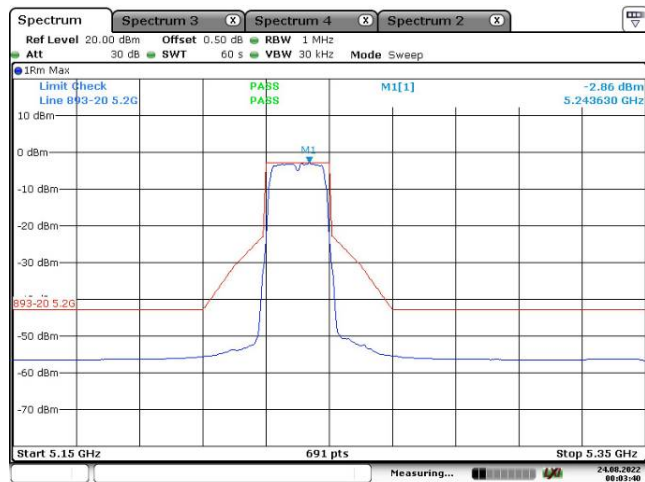
802.11 a-5240 MHz



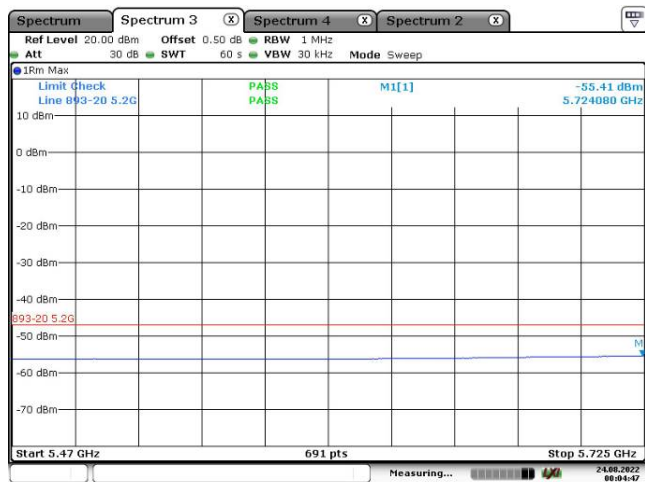
802.11 n20-5180 MHz



802.11 n20-5240 MHz



Date: 24.AUG.2022 00:03:40



Date: 24.AUG.2022 00:04:48

802.11 n40-5190 MHz

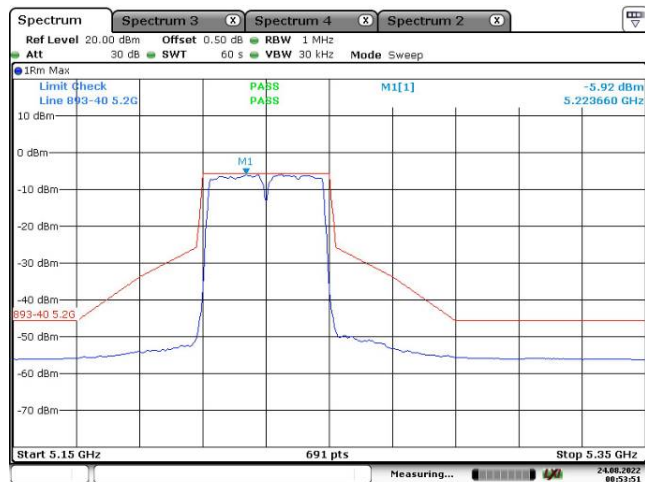


Date: 24.AUG.2022 00:20:27

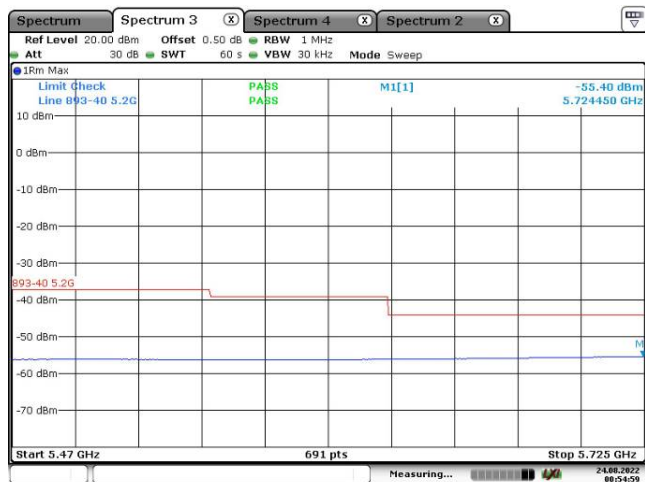


Date: 24.AUG.2022 00:22:05

802.11 n40-5230 MHz

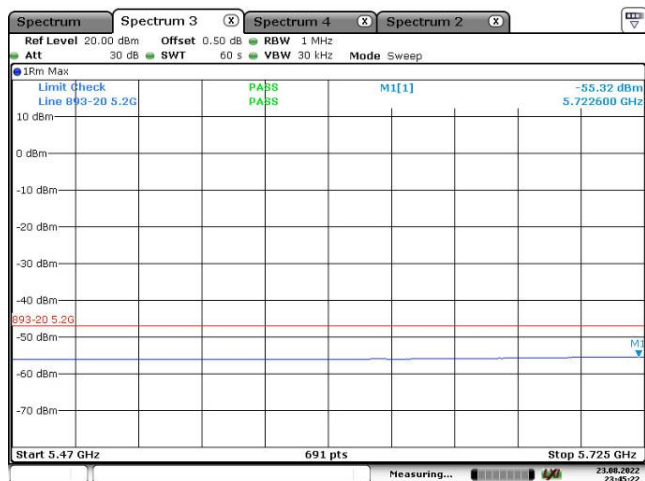
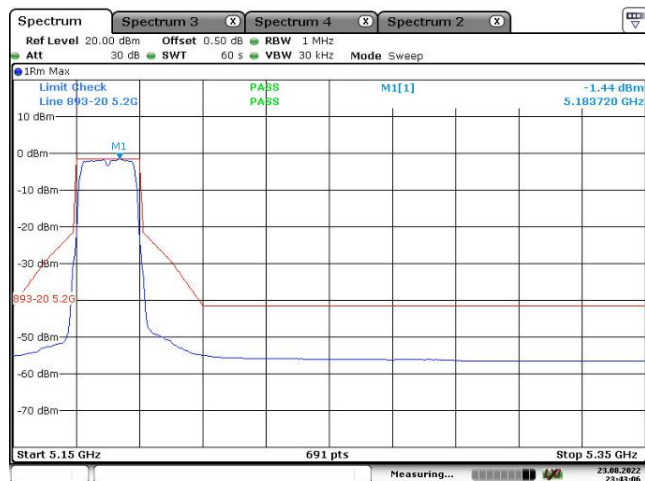


Date: 24.AUG.2022 00:53:52

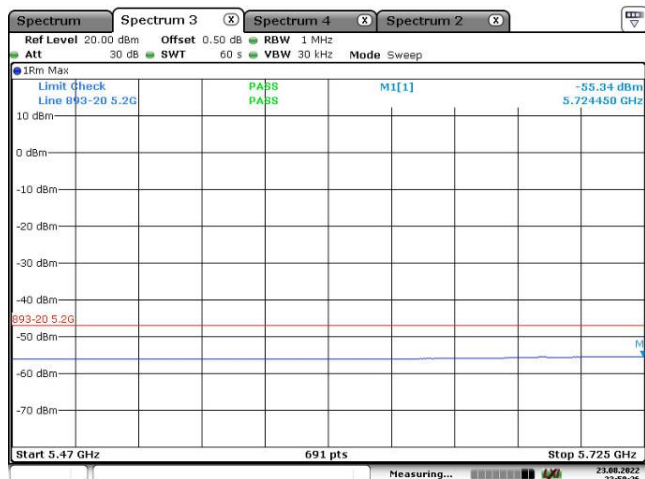
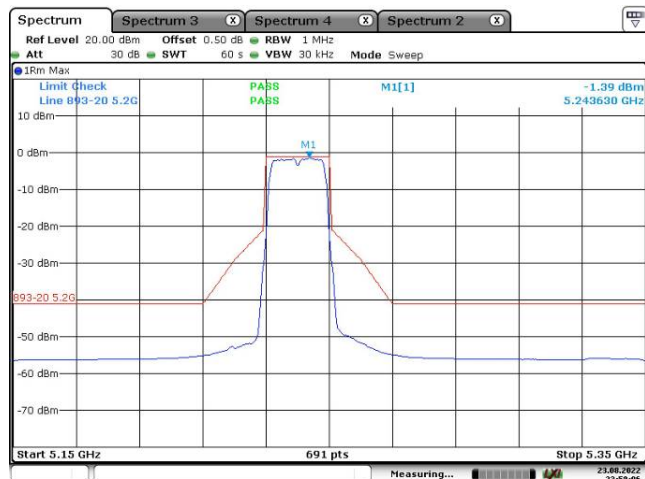


Date: 24.AUG.2022 00:55:00

### 802.11 ac20-5180 MHz



### 802.11 ac20-5240 MHz

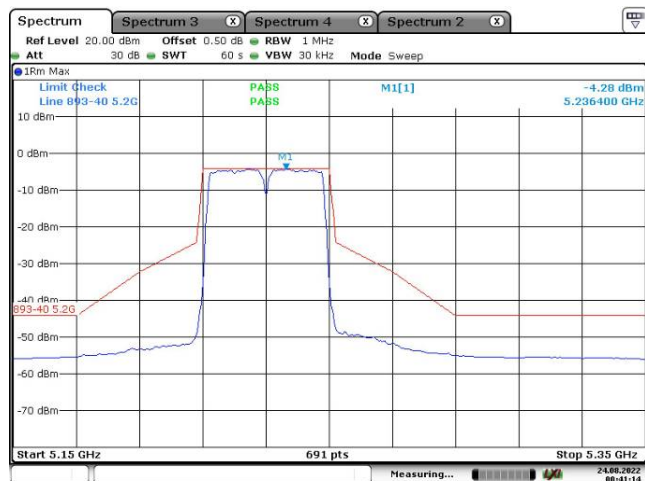


### 802.11 ac40-5190 MHz

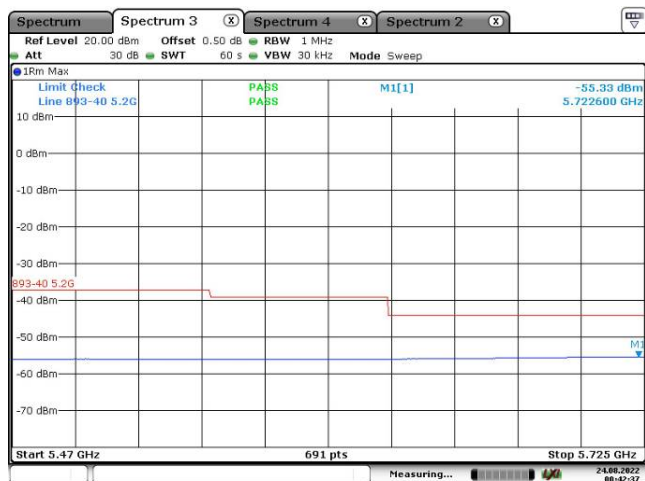




802.11 ac40-5230 MHz

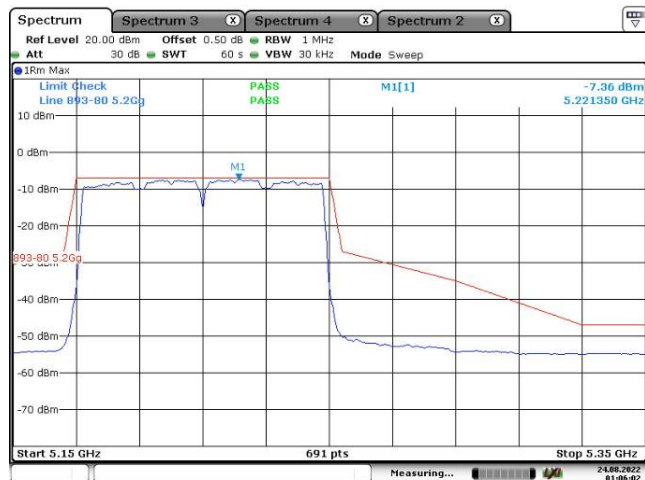


Date: 24.AUG.2022 00:41:15

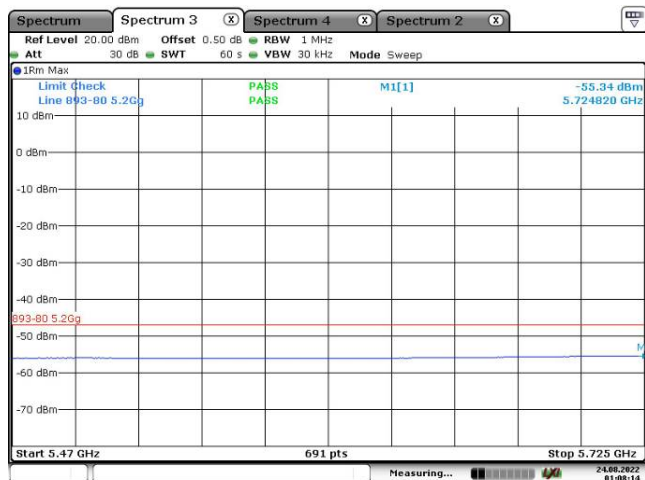


Date: 24.AUG.2022 00:42:38

802.11 ac80-5210 MHz

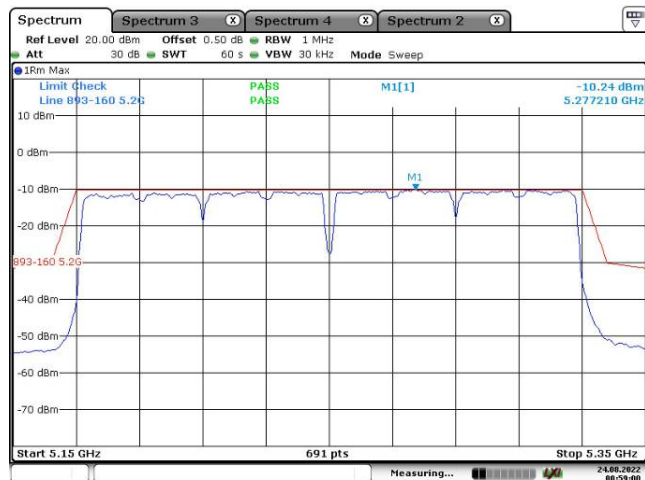


Date: 24.AUG.2022 01:06:03

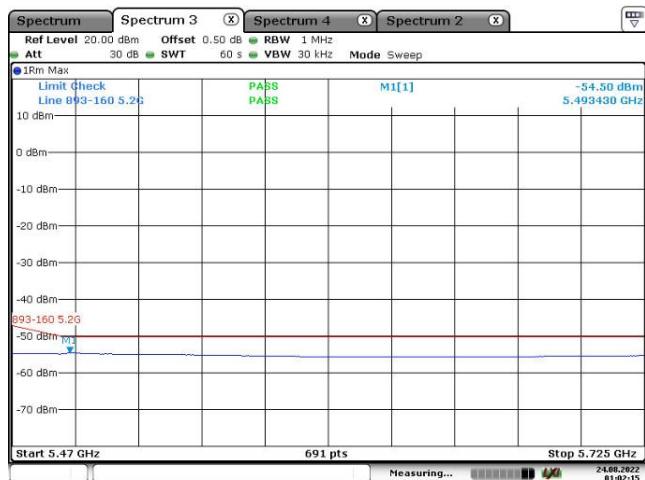


Date: 24.AUG.2022 01:08:15

802.11 ac160-5250 MHz



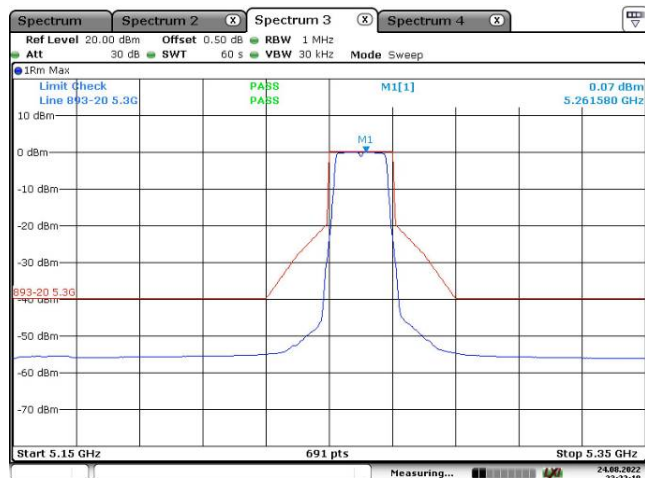
Date: 24.AUG.2022 00:59:01



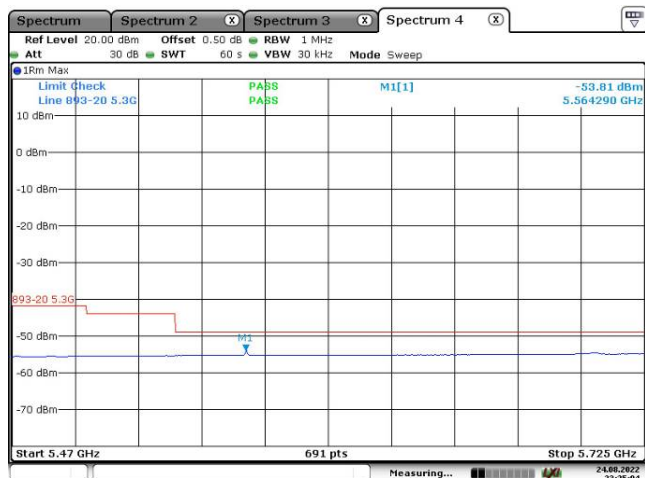
Date: 24.AUG.2022 01:02:16

Chain0-5.3G

802.11 a-5260 MHz



Date: 24.AUG.2022 23:32:19

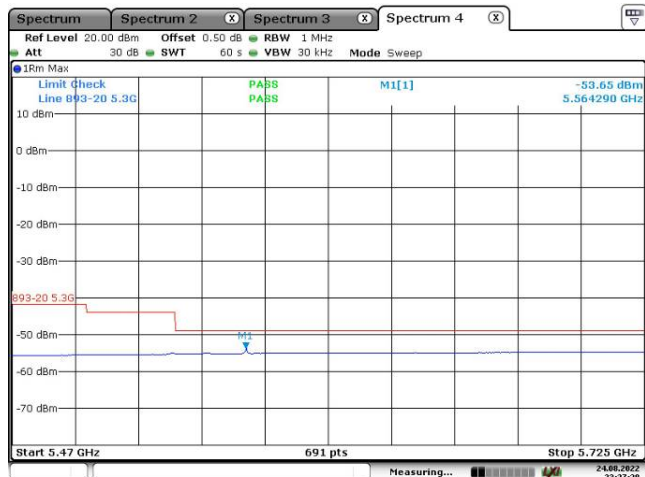


Date: 24.AUG.2022 23:35:05

802.11 a-5320 MHz

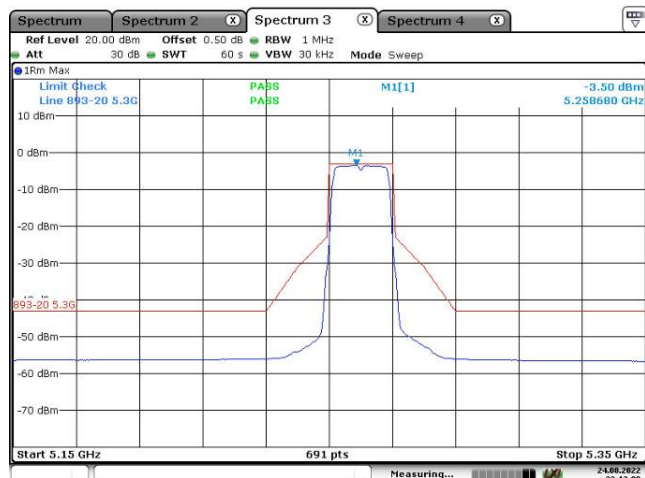


Date: 24.AUG.2022 22:35:30

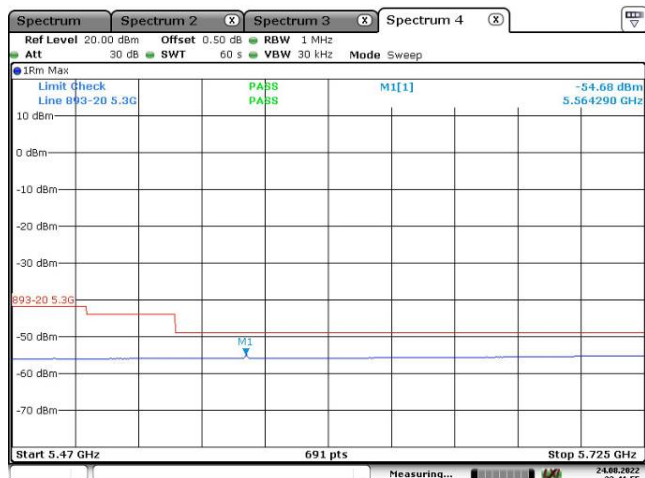


Date: 24.AUG.2022 23:37:29

802.11 n20-5260 MHz



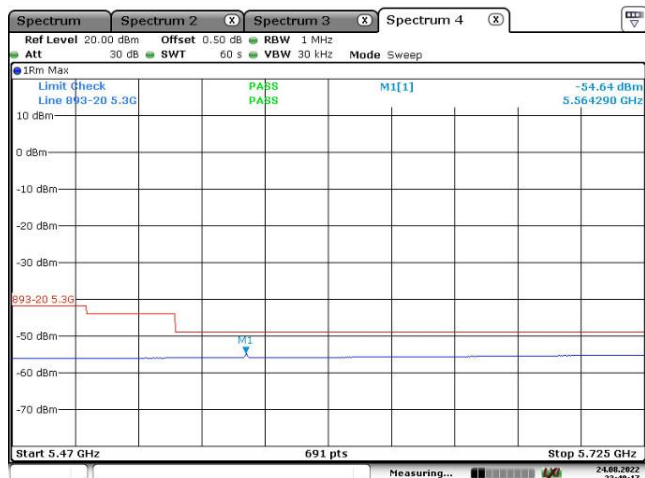
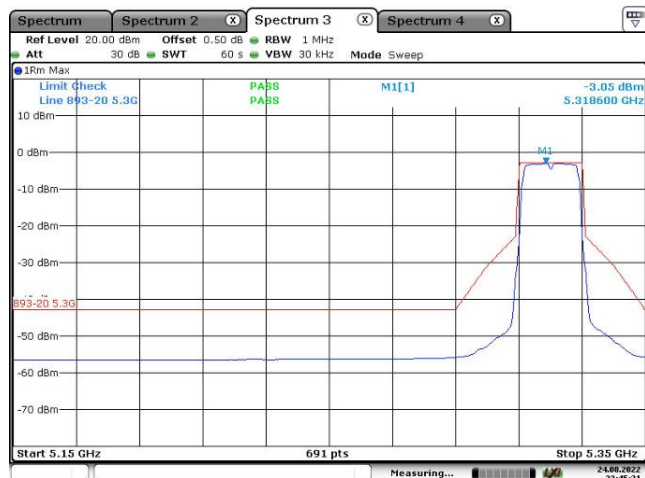
Date: 24.AUG.2022 23:12:01



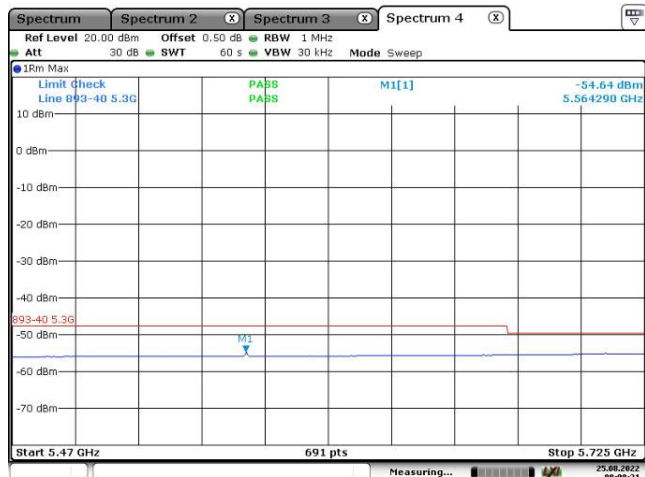
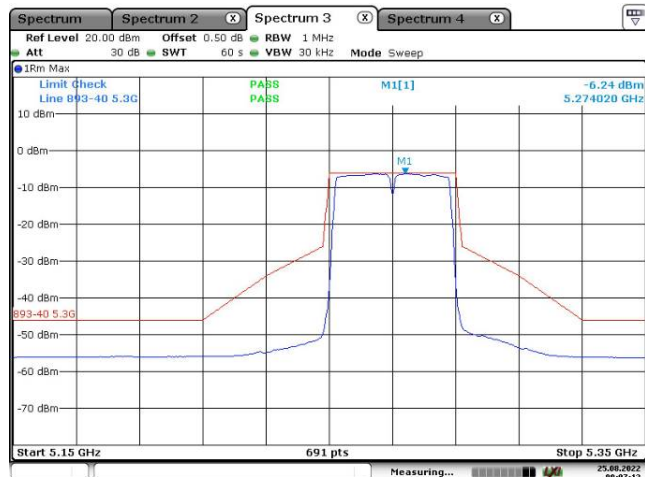
Date: 24.AUG.2022 23:41:56



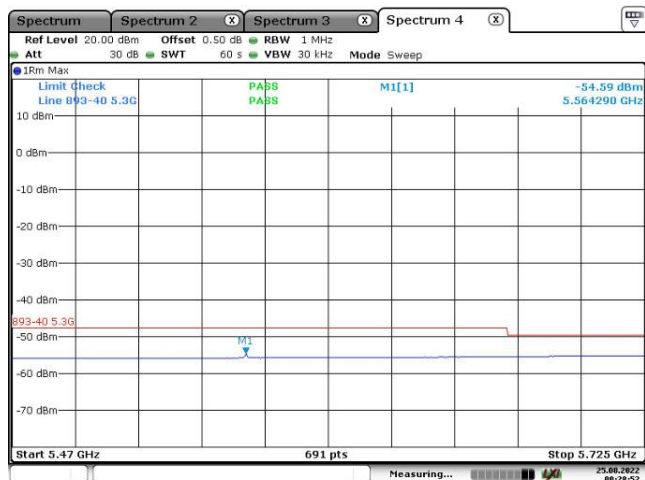
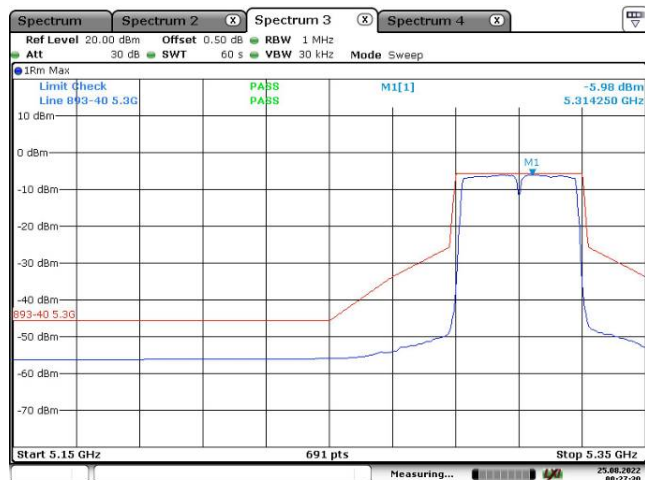
802.11 n20-5320 MHz



802.11 n40-5270 MHz



802.11 n40-5310 MHz



The screenshot displays the Spectrum Analyzer interface with the following details:

- Top Panel:** Four tabs labeled "Spectrum", "Spectrum 2", "Spectrum 3", and "Spectrum 4". The "Spectrum" tab is active. Below the tabs, parameters are set: Ref Level 20.00 dBm, Offset 0.50 dB, RBW 1 MHz, Att 30 dB, SWT 60 s, VBW 30 kHz, and Mode Sweep.
- Main Display:** A plot of power spectral density (dBm) versus frequency (GHz). The y-axis ranges from -70 dBm to 10 dBm. The x-axis ranges from 5.15 GHz to 5.35 GHz. A signal trace is shown with a prominent peak at 5.30 GHz. The peak is labeled "M1" and has a value of -3.08 dBm. The trace is identified as "PA[88]" and "PA[88]".
- Bottom Panel:** A status bar showing "Start 5.15 GHz", "691 pts", and "Stop 5.35 GHz". On the right, it indicates "Measuring..." with a progress bar and a timestamp of "24.08.2022 23:05:40".

Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 20.00 dBm Offset 0.50 dB RBW 1 MHz  
 Att 30 dB SWT 60 s YBW 30 kHz Mode Sweep

IRm Max

Limit check PAS8 M1[1] ~54.57 dBm  
 Line 093-20 5.3G PASS 5.564290 GHz

10 dBm  
 0 dBm  
 -10 dBm  
 -20 dBm  
 -30 dBm  
 -50 dBm  
 -60 dBm  
 -70 dBm

093-20 5.3G

M1

Start 5.47 GHz 691 pts Stop 5.725 GHz

Measuring... 24.08.2022 23:43:39

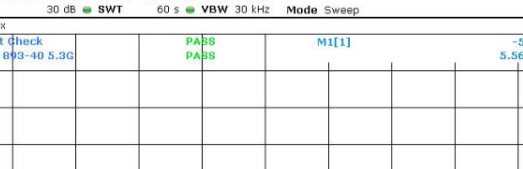
The screenshot displays a spectrum analyzer interface with two active traces. The top trace, in red, is labeled 'Limit check Line 893-20 5.3G' and shows a signal that rises sharply at 5.3 GHz to a peak of -2.74 dBm at 5.317440 GHz. The bottom trace, in blue, is labeled 'MI[1]' and shows a similar but lower signal. The interface includes various control knobs and a data table at the bottom.

Frequency	Power	Marker
893-20 5.3G	-50 dBm	1
5.317440 GHz	-2.74 dBm	2

Spectrum Analyzer screenshot showing a red trace for a signal at 5.30 GHz and a blue trace for a limit check. The red trace is labeled "893-20 5.30" and the blue trace is labeled "M1[1]". The y-axis is labeled "dBm" and ranges from -70 to 20.00. The x-axis is labeled "Start 5.47 GHz" and "Stop 5.725 GHz". The red trace shows a signal level of approximately -44.45 dBm at 5.30 GHz. The blue trace shows a limit check level of approximately -54.45 dBm. The signal is labeled "PA[8]" and "PA[5]".

The screenshot displays a Spectrum Analyzer interface with the following details:

- Top Panel:**
  - Spectrum 1:** Ref Level 20.00 dBm, Att 30 dB, Offset 0.50 dB, RBW 1 MHz.
  - Spectrum 2:** SWT 60 s, VBW 30 kHz.
  - Spectrum 3:** Mode Sweep.
  - Spectrum 4:** (Inactive)
- Left Panel:**
  - 1Rm Max:** Selected.
  - Limit Check:** Line 093-40 5.3G.
  - Pass/Fail:** PASS (green text).
- Main Display:**
  - Y-axis:** Power level in dBm, ranging from -70 dBm to 10 dBm.
  - X-axis:** Frequency in GHz, ranging from 5.15 GHz to 5.35 GHz.
  - Trace:** A blue line representing the signal spectrum, showing a flat baseline at approximately -60 dBm with a sharp, narrow peak reaching about -10 dBm at 5.273440 GHz.
  - Limit Line:** A red line representing the limit check, which is flat at -50 dBm and has a rectangular window opening from approximately 5.25 GHz to 5.29 GHz, peaking at -10 dBm.
  - Annotations:**
    - M1:** A label pointing to the signal peak.
    - M1[1]:** A label indicating the peak level is -5.60 dBm.
    - Frequency:** 5.273440 GHz.
- Bottom Panel:**
  - Start:** 5.15 GHz.
  - Stop:** 5.35 GHz.
  - Resolution:** 691 pts.
  - Measuring...:** A progress bar and numerical value 25.68,2622.



**Spectrum 2** **Spectrum 3** **Spectrum 4**

**Ref Level** 20.00 dBm **Offset** 0.50 dB **RBW** 1 MHz  
**Att** 30 dB **SWT** 60 s **VBW** 30 kHz **Mode** Sweep

**1Rm Max**

**Limit Check**  
**Line 993-40 5.3G**

**PASS**  
**PASS**

**M1[1]**

-54.42 dBm  
5.564290 GHz

10 dBm  
0 dBm  
-10 dBm  
-20 dBm  
-30 dBm  
-40 dBm  
-50 dBm  
-60 dBm  
-70 dBm

993-40 5.3G

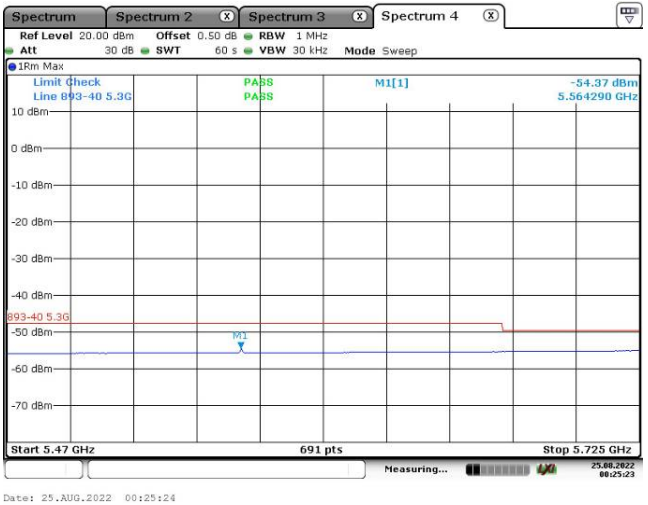
M1

Start 5.47 GHz 691 pts Stop 5.725 GHz

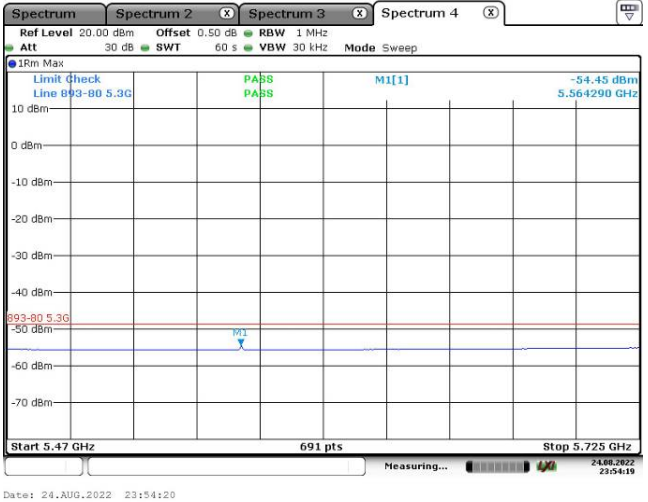
Measuring... 25.88.7822 88-13-20

Date: 25.AUG.2022 00:12:29

802.11 ac40-5310 MHz

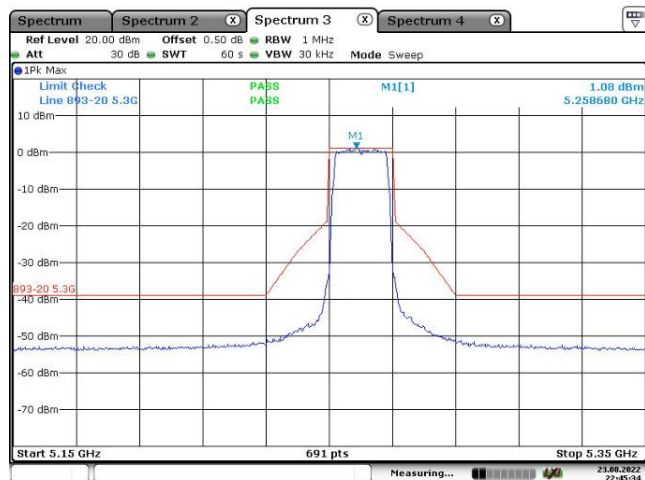


802.11 ac80-5290 MHz

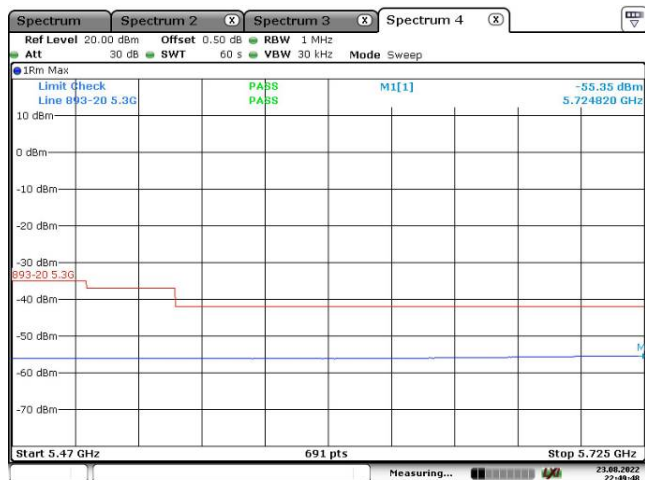


Chain1-5.3G

802.11 a-5260 MHz



Date: 23.AUG.2022 22:45:34

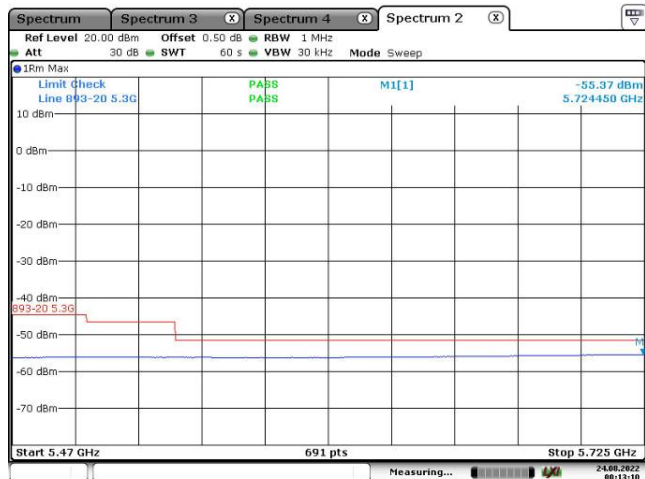


Date: 23.AUG.2022 22:49:49

802.11 a-5320 MHz

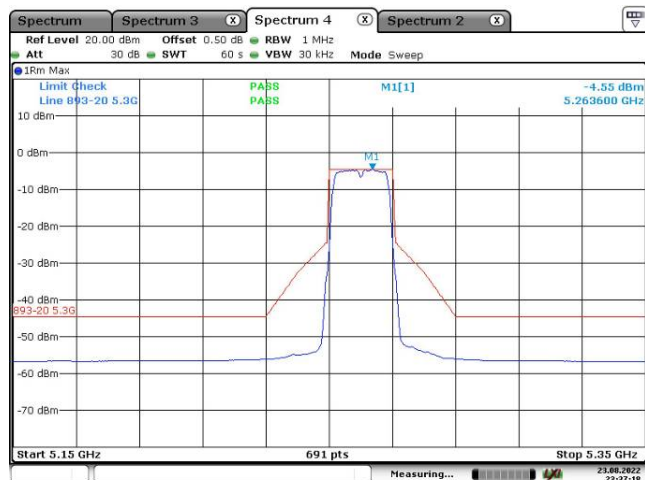


Date: 24.AUG.2022 00:11:46

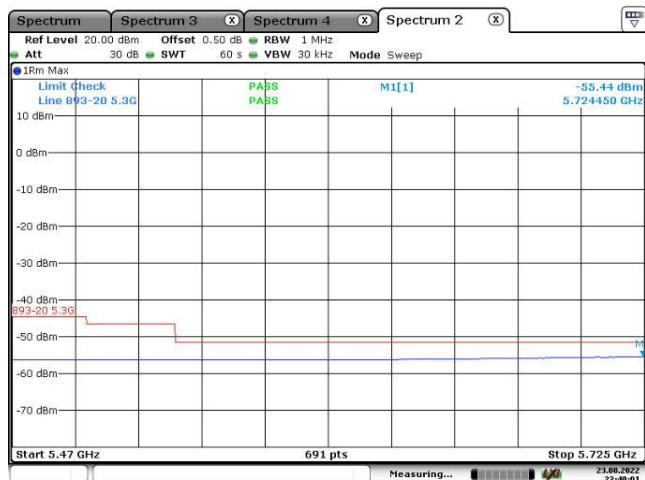


Date: 24.AUG.2022 00:13:10

802.11 n20-5260 MHz

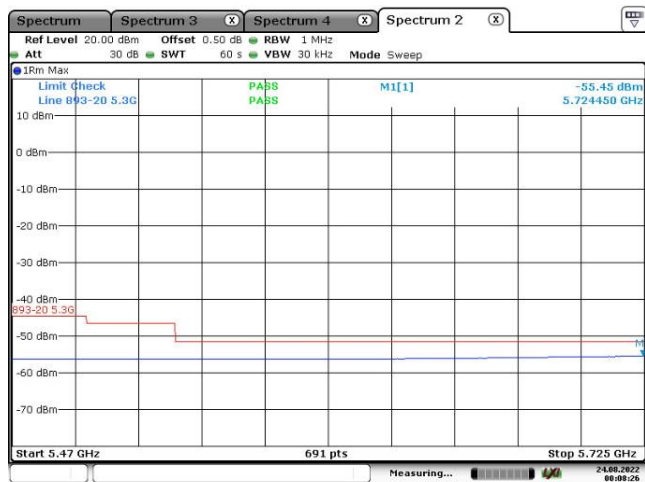
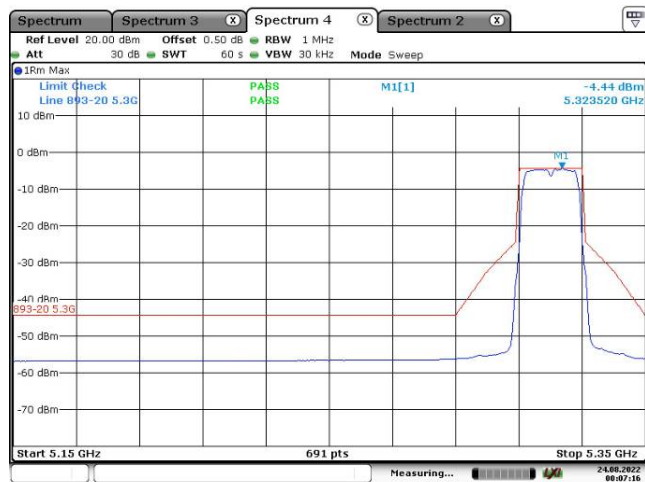


Date: 23.AUG.2022 23:37:19

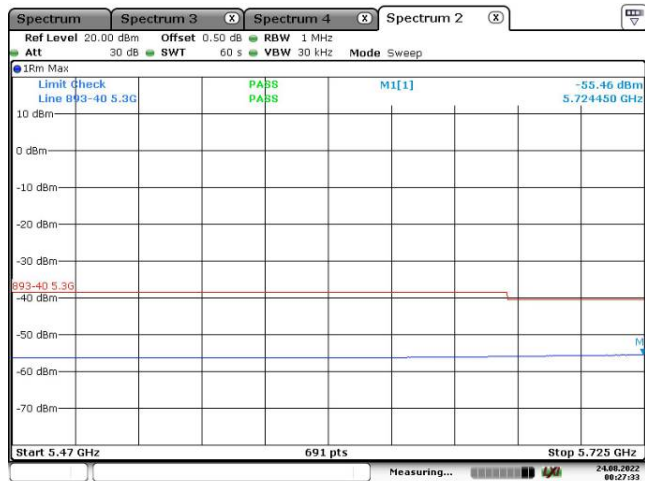
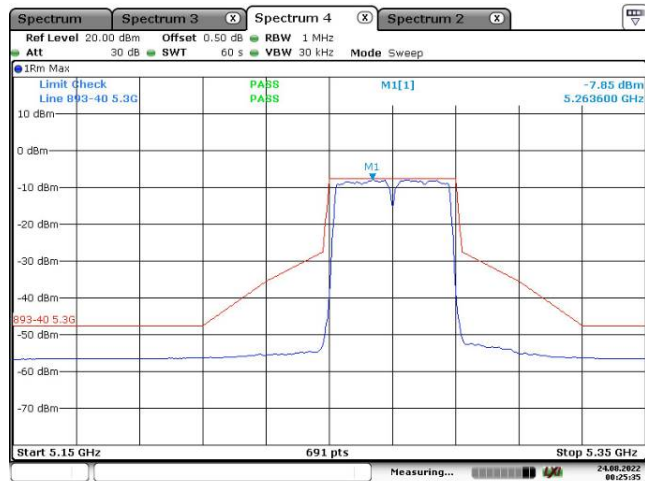


Date: 23.AUG.2022 23:40:01

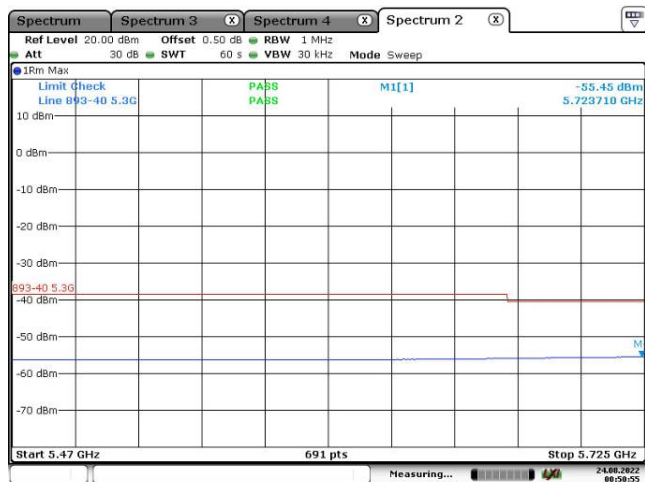
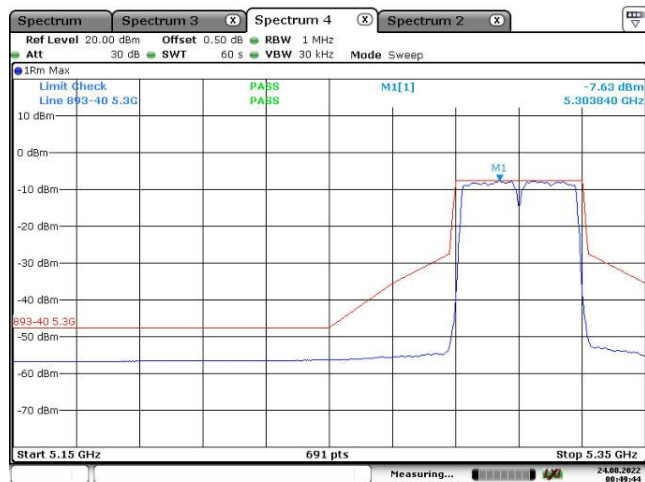
802.11 n20-5320 MHz



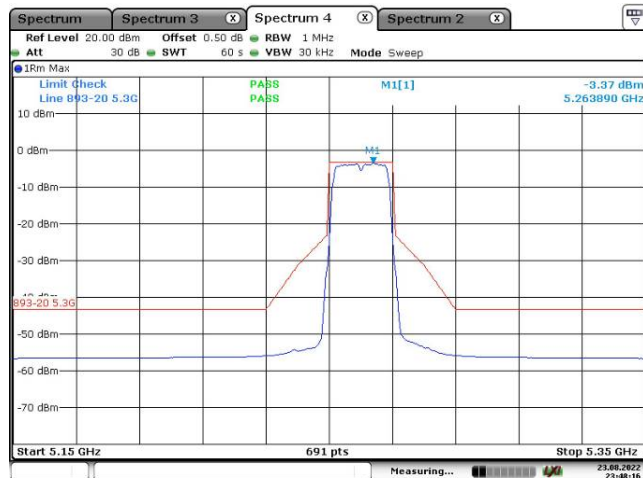
802.11 n40-5270 MHz



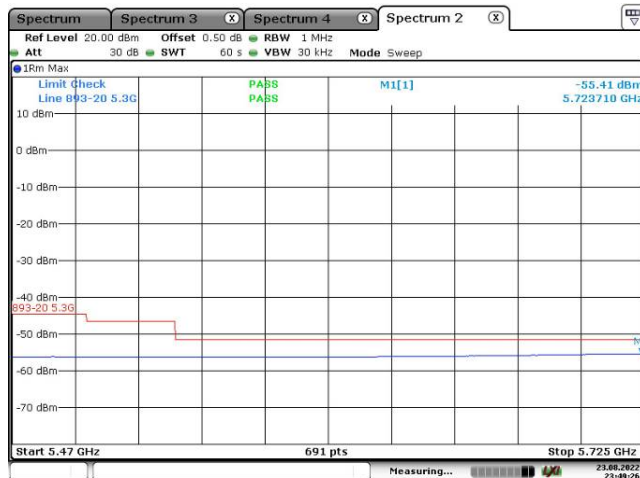
802.11 n40-5310 MHz



### 802.11 ac20-5260 MHz



Date: 23.AUG.2022 23:48:16

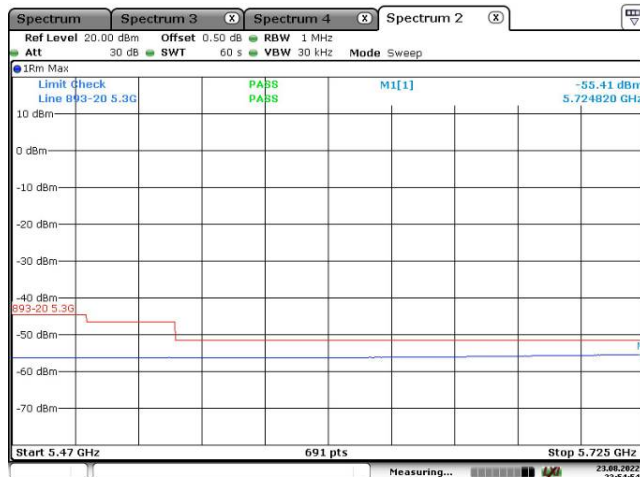


Date: 23.AUG.2022 23:49:27

### 802.11 ac20-5320 MHz

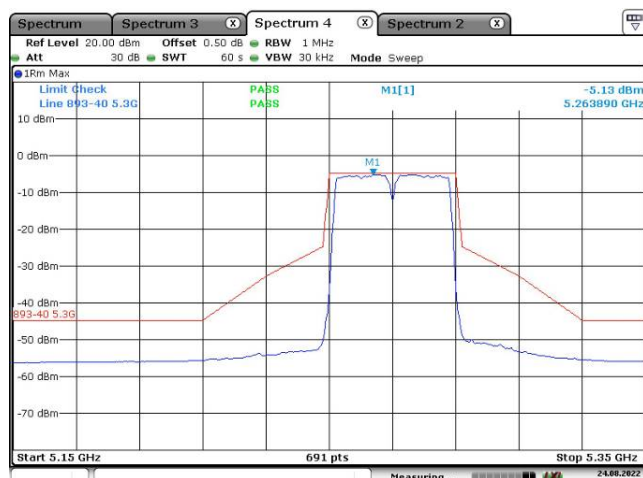


Date: 23.AUG.2022 23:52:40

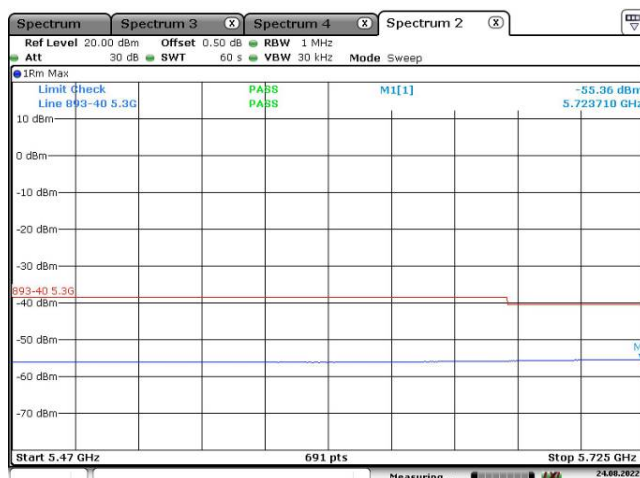


Date: 23.AUG.2022 23:54:55

### 802.11 ac40-5270 MHz

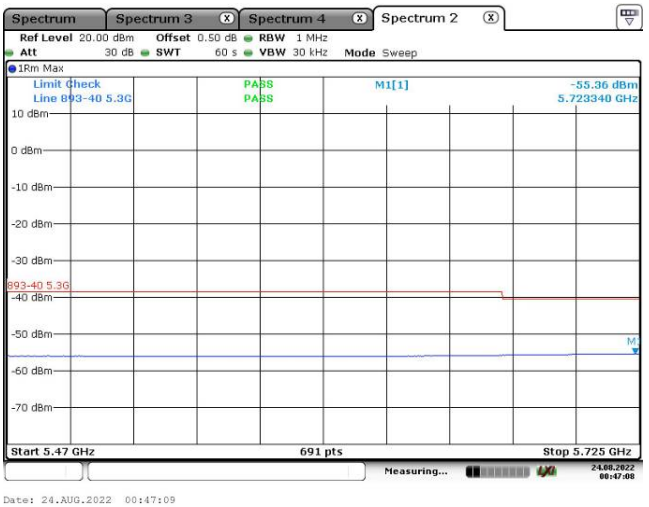


Date: 24.AUG.2022 00:32:44

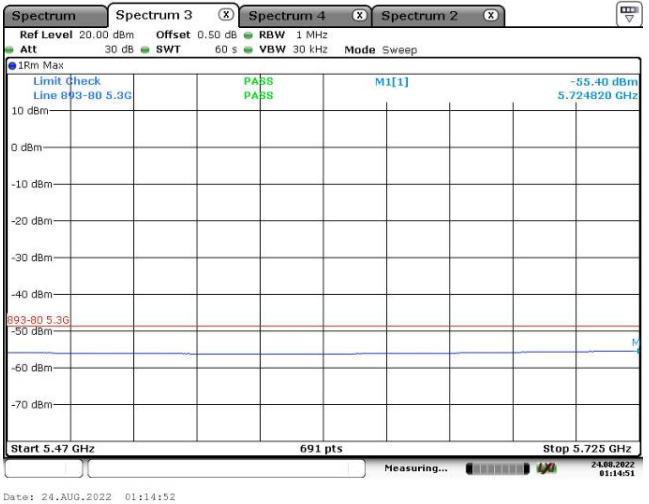


Date: 24.AUG.2022 00:34:06

802.11 ac40-5310 MHz



802.11 ac80-5290 MHz

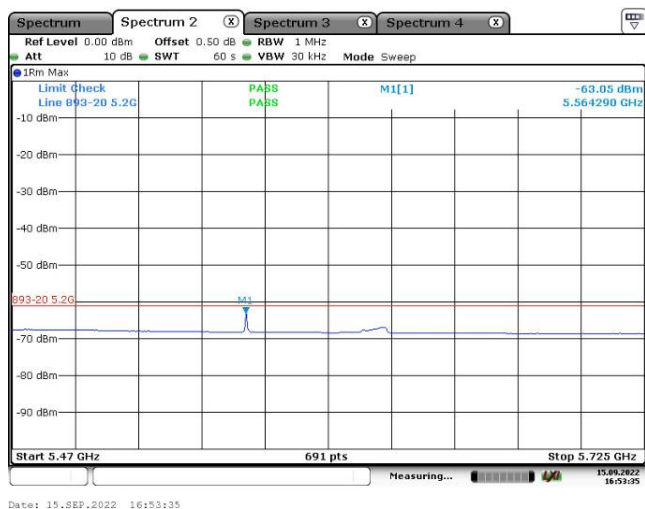
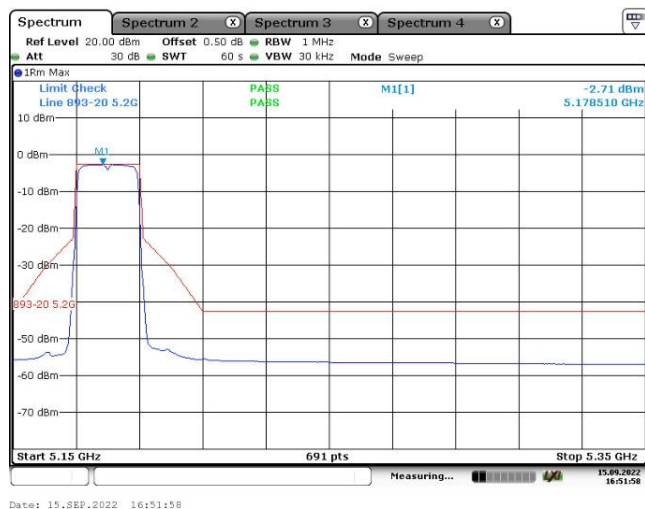




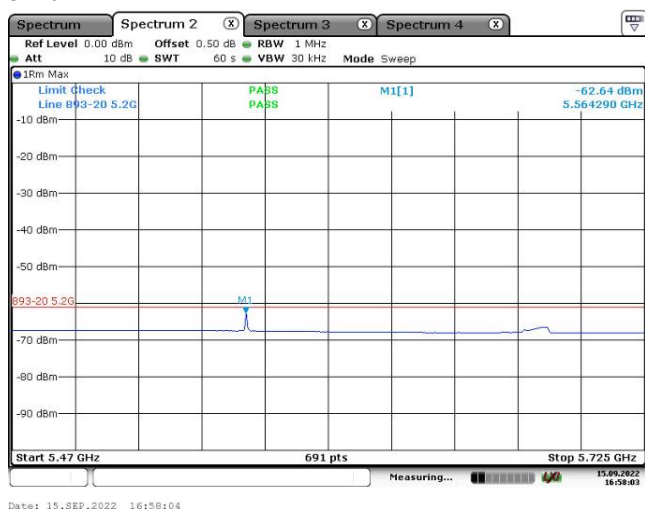
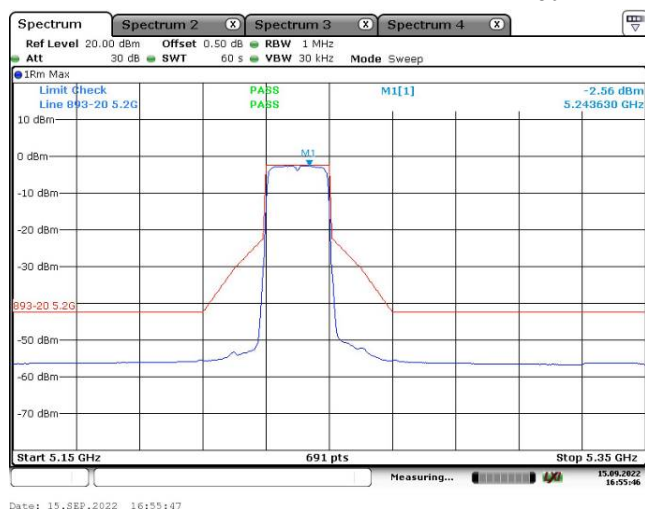
802.11ax mode

Chain0-5.2G

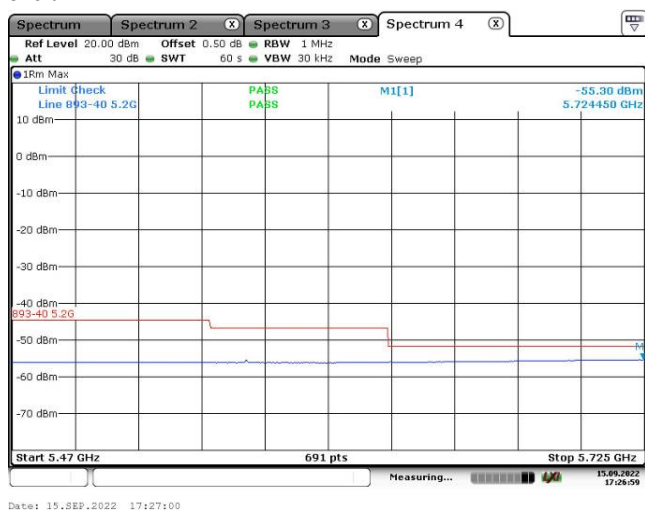
802.11 ax20-5180 MHz



802.11 ax20-5240 MHz

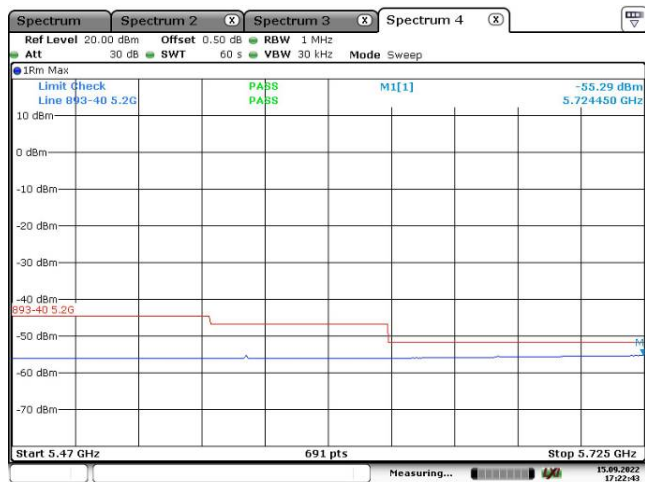
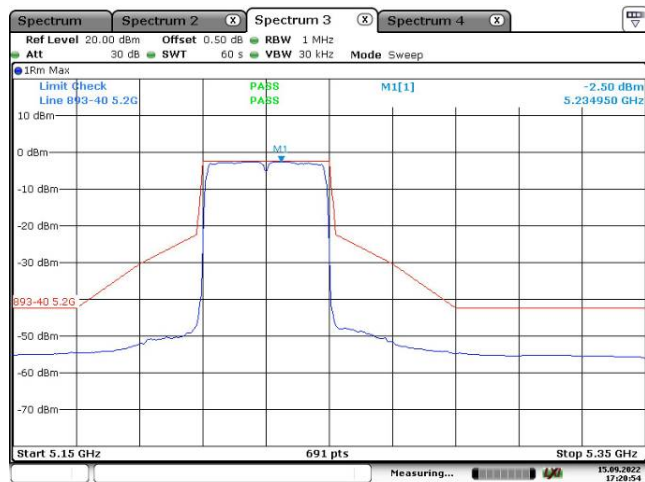


802.11 ax40-5190 MHz

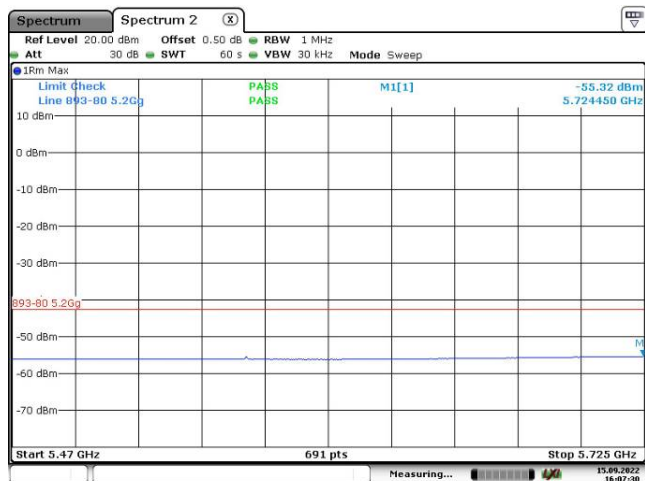




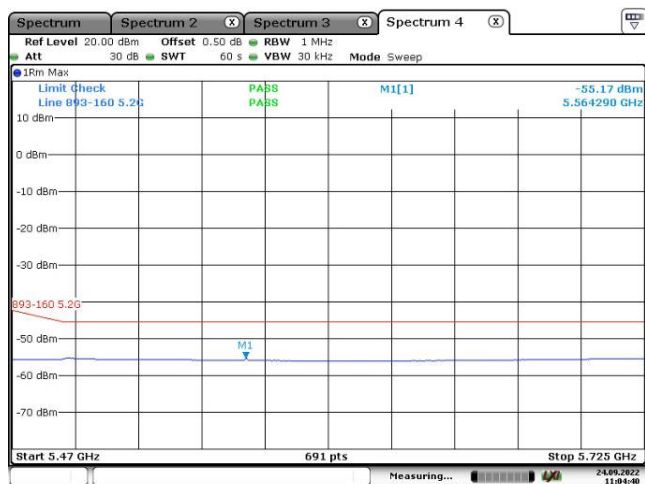
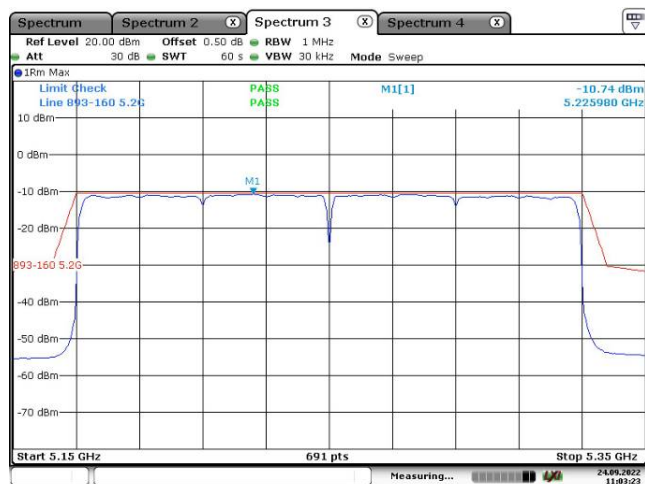
### 802.11 ax40-5230 MHz



### 802.11 ax80-5210 MHz

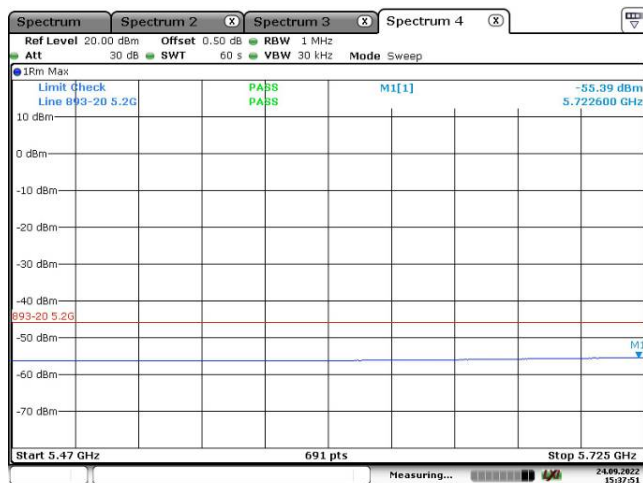
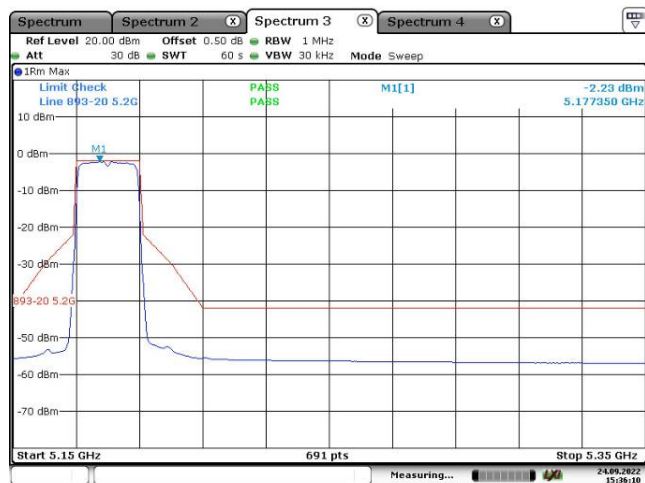


### 802.11 ax160-5250 MHz

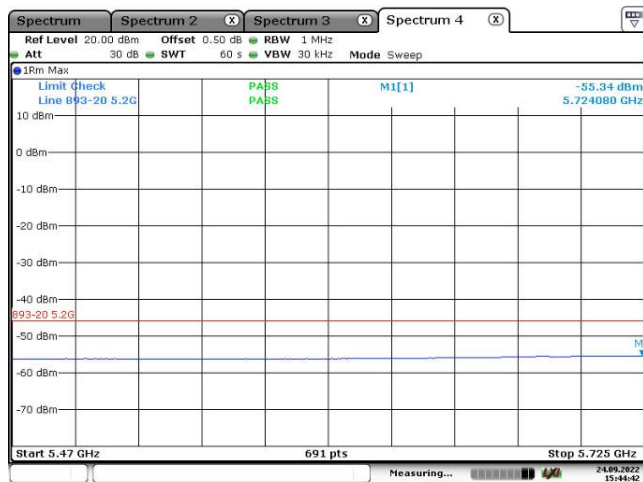
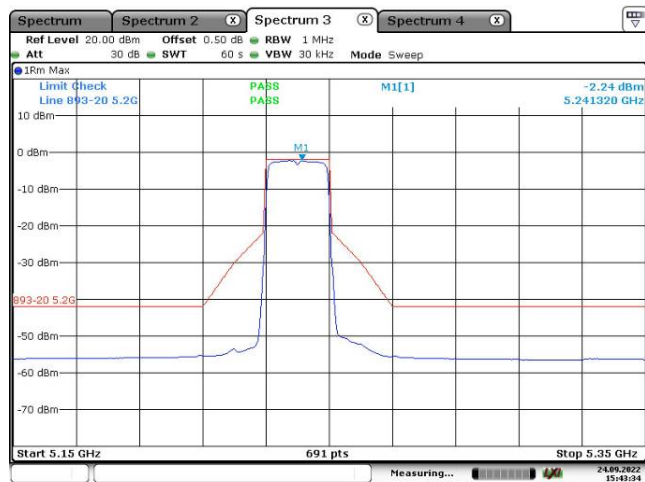


## Chain1-5.2G

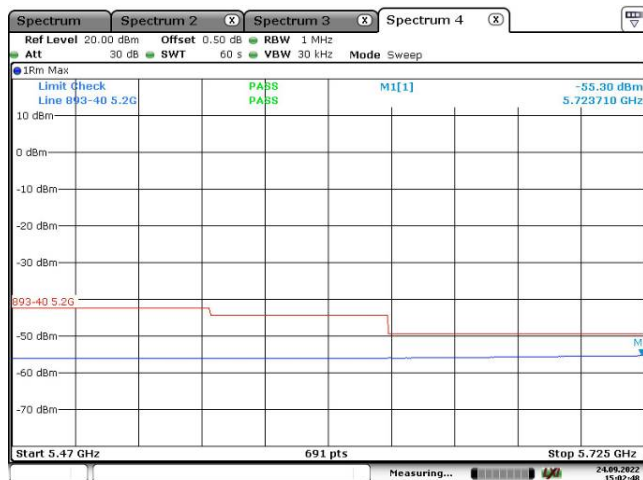
802.11 ax20-5180 MHz



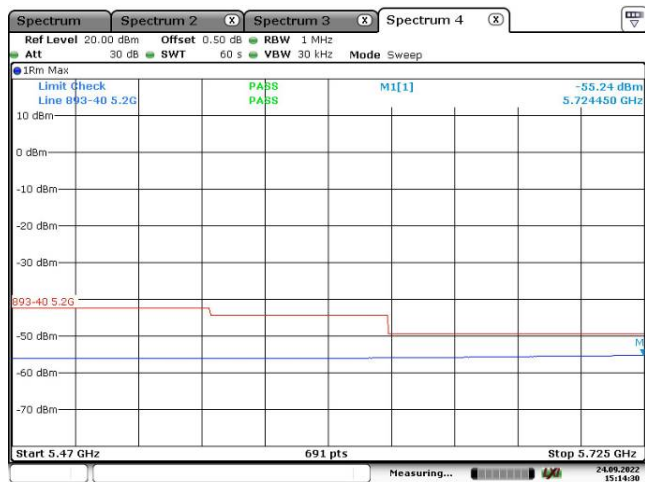
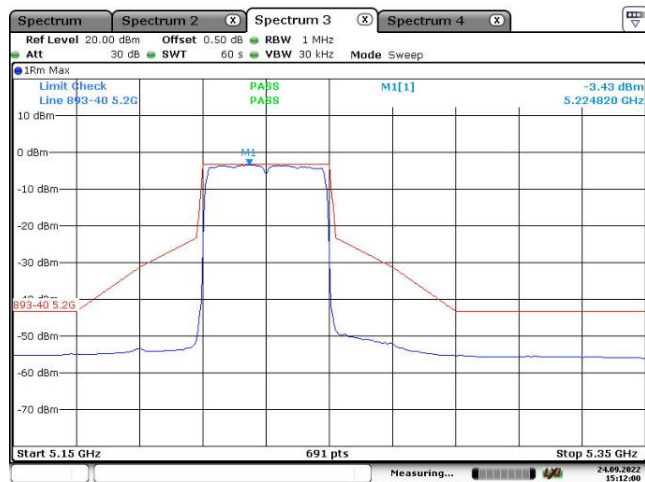
802.11 ax20-5240 MHz



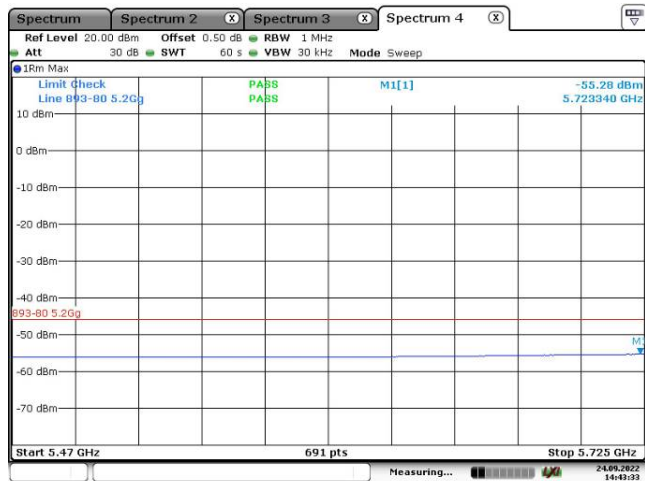
802.11 ax40-5190 MHz



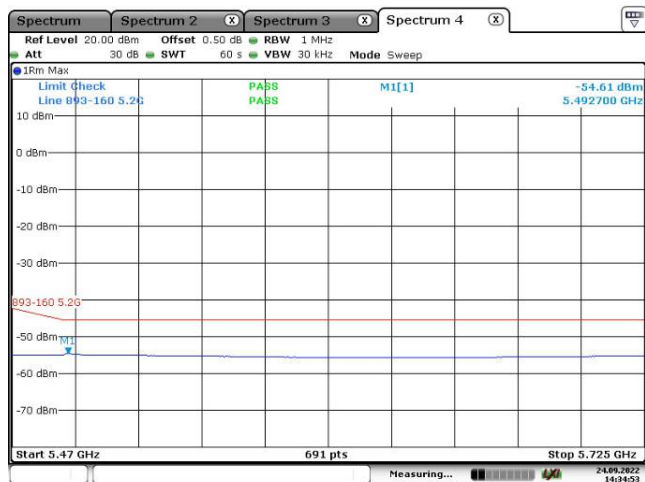
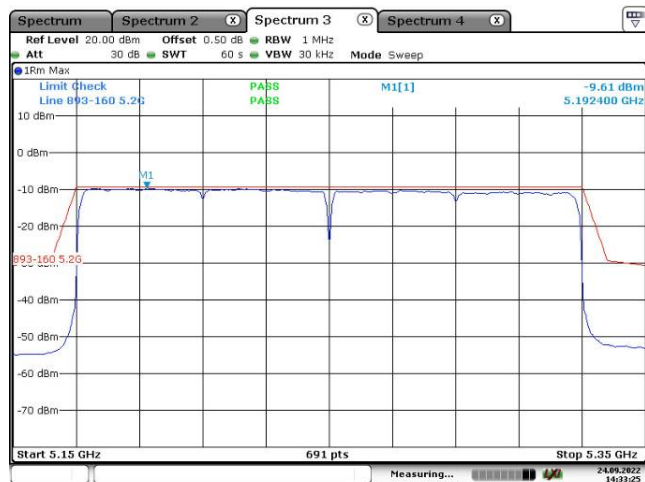
802.11 ax40-5230 MHz



802.11 ax80-5210 MHz

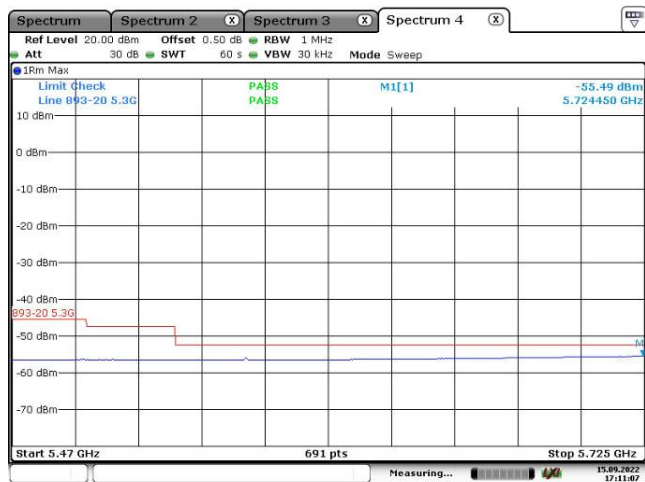
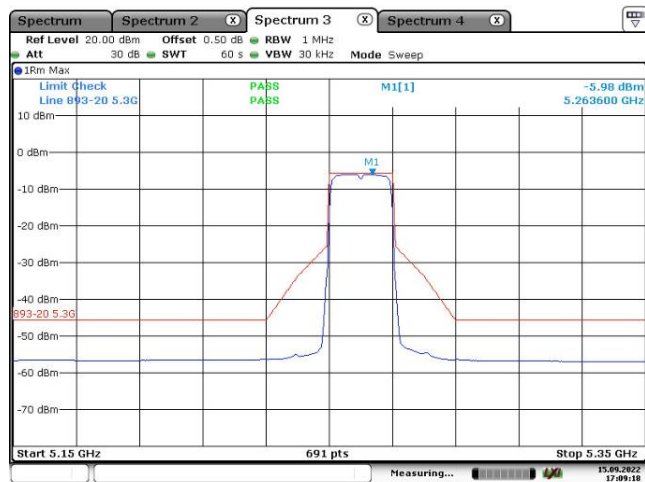


802.11 ax160-5250 MHz

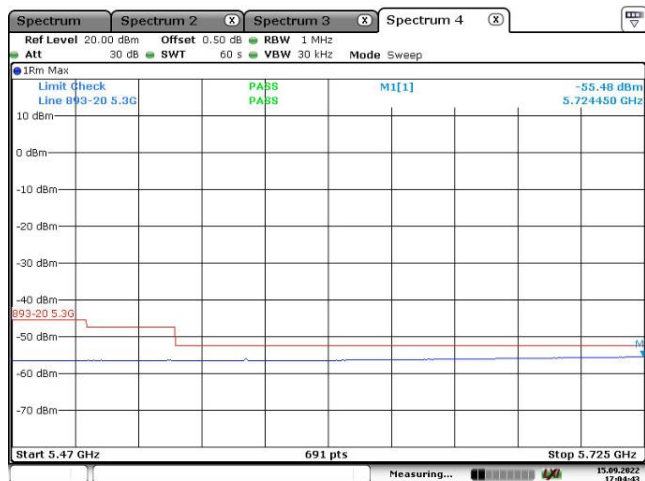
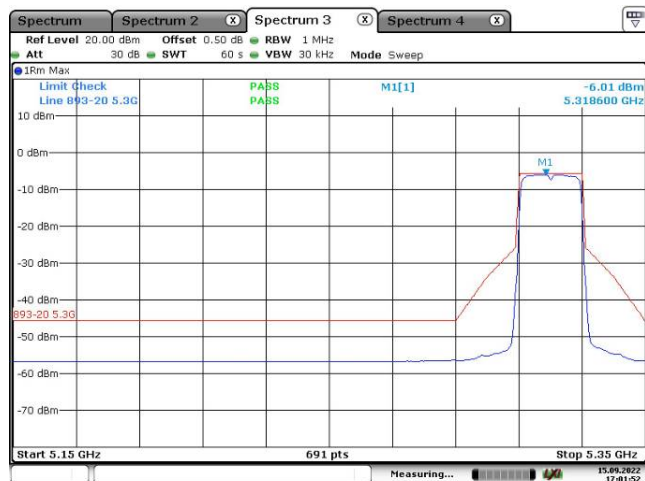


Chain0-5.3G

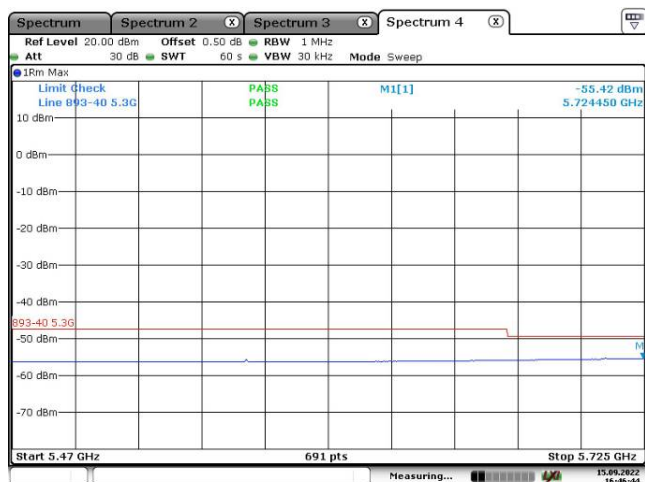
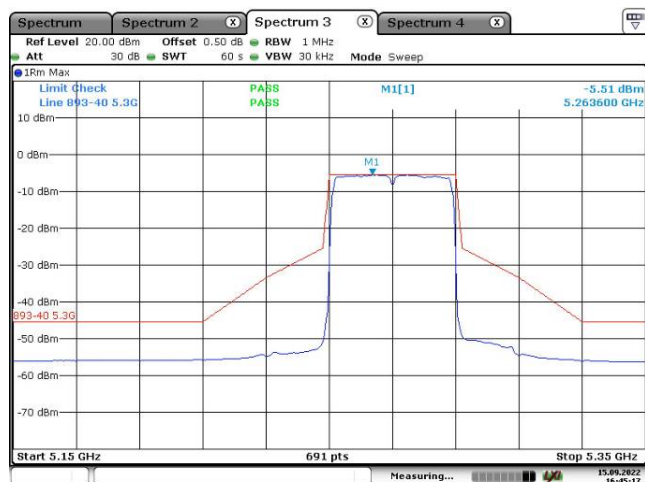
802.11 ax20-5260 MHz



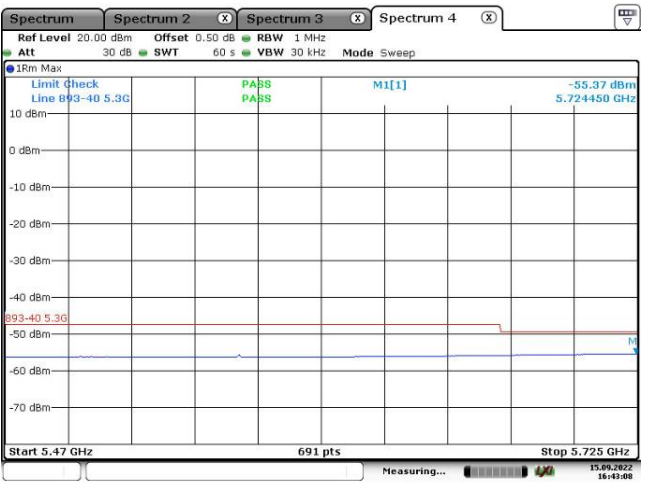
802.11 ax20-5320 MHz



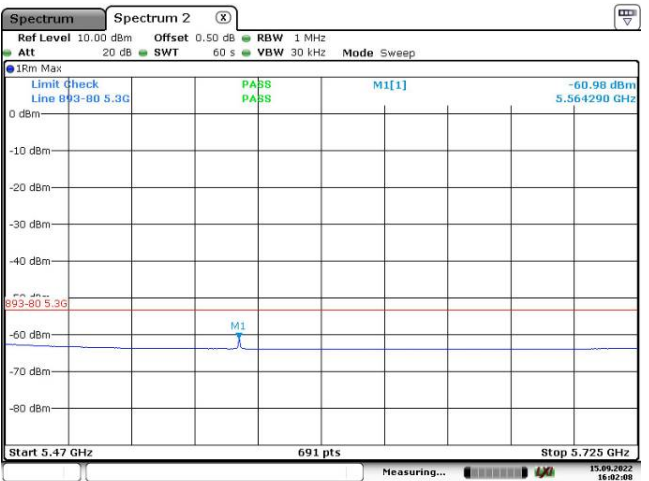
802.11 ax40-5270 MHz



802.11 ax40-5310 MHz

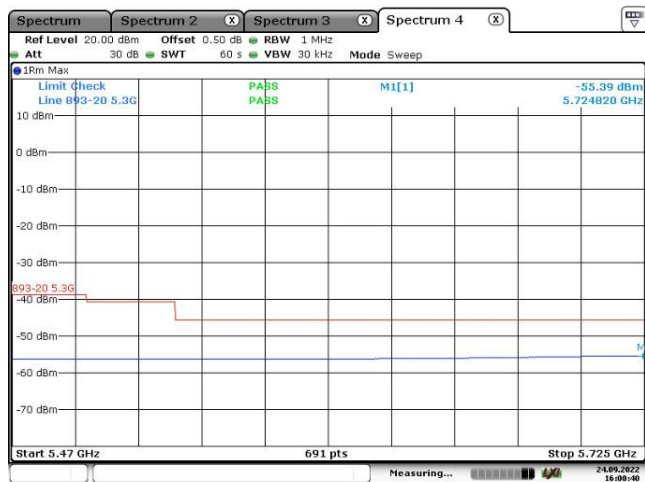
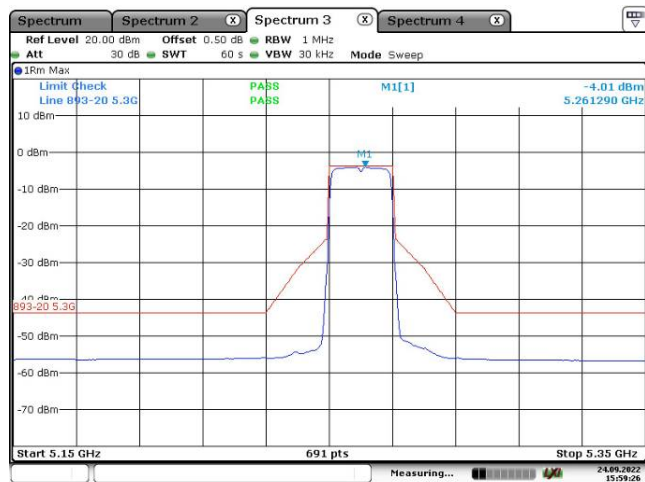


802.11 ax80-5290 MHz

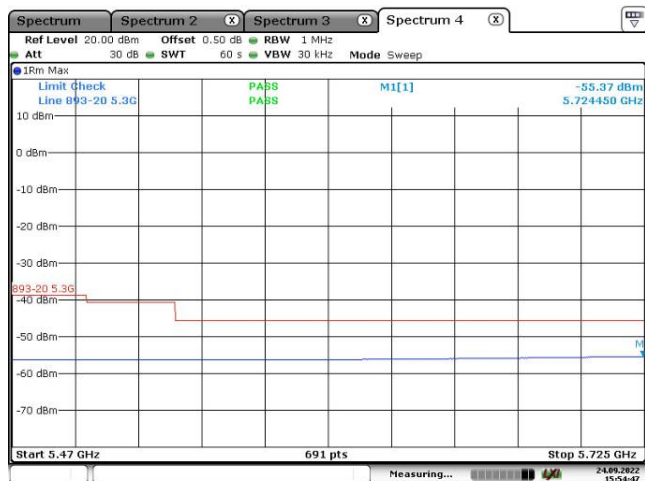
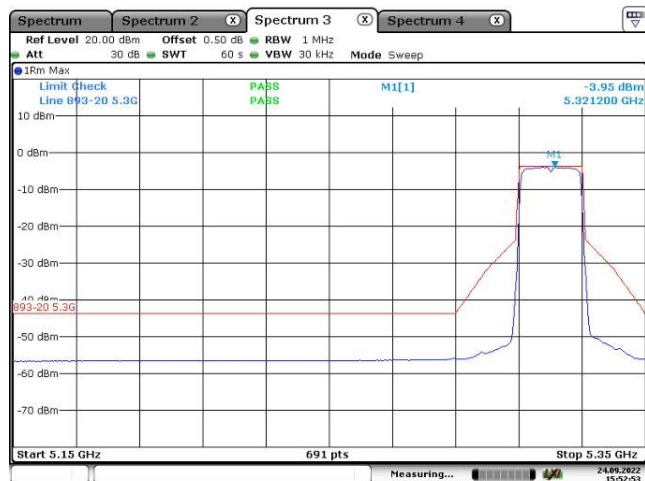


Chain1-5.3G

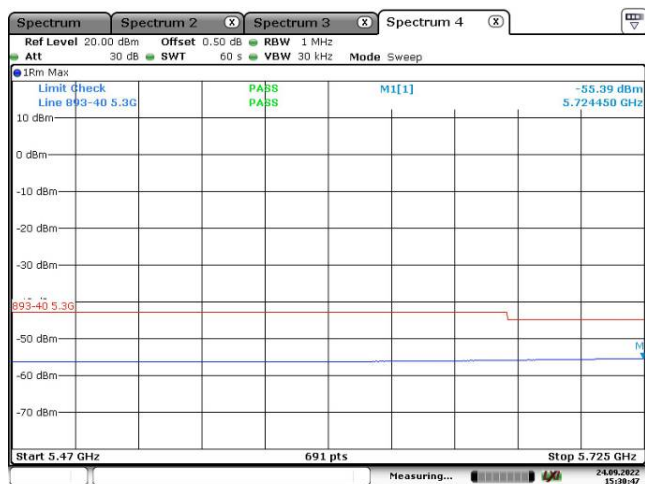
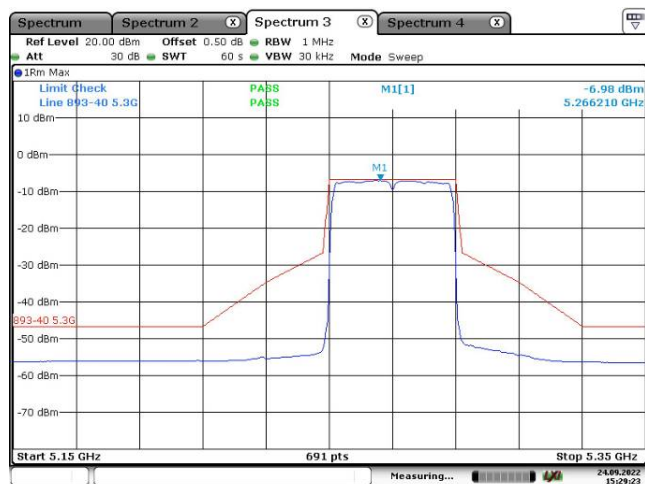
802.11 ax20-5260 MHz



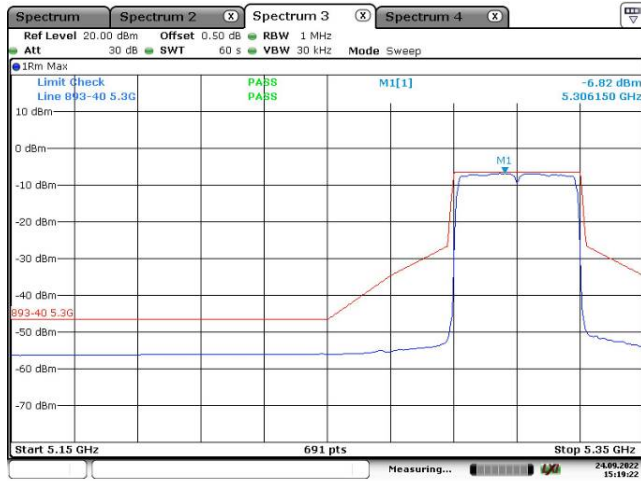
802.11 ax20-5320 MHz



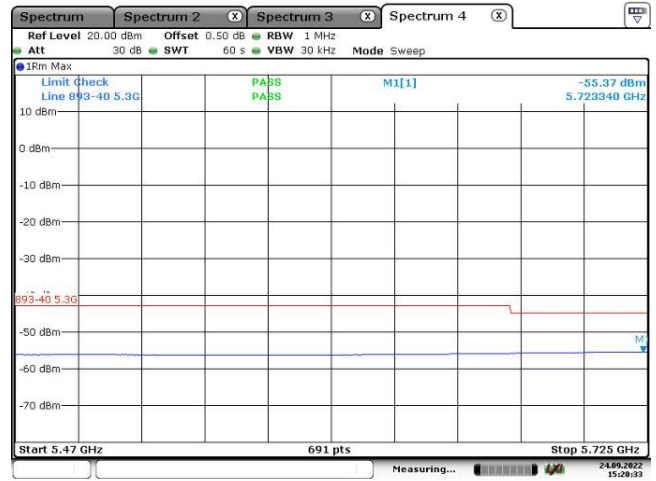
802.11 ax40-5270 MHz



## 802.11 ax40-5310 MHz

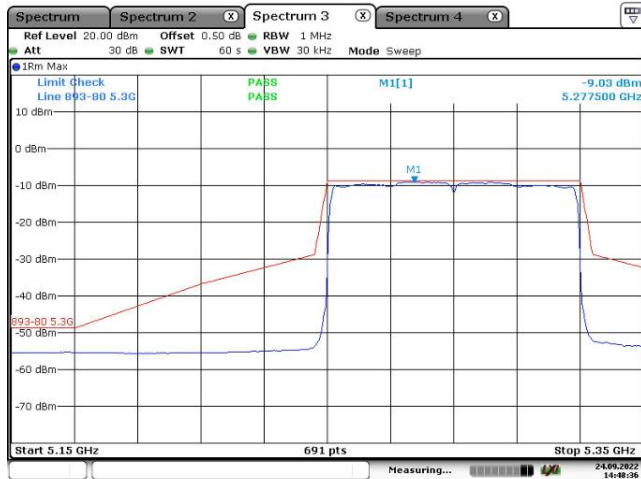


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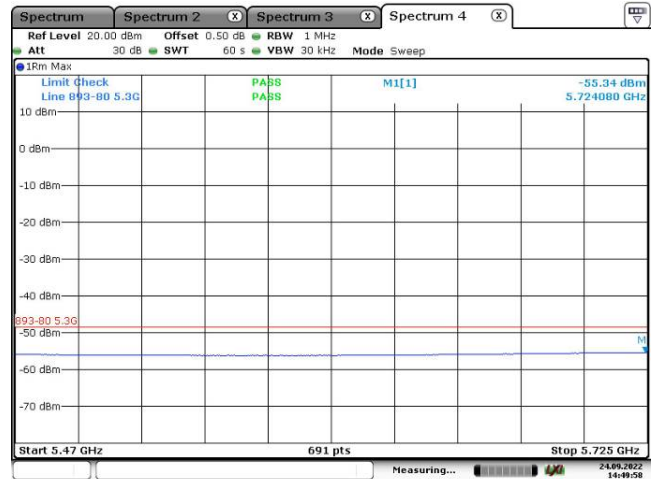


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## 802.11 ax80-5290 MHz



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## 6 – RECEIVER SPURIOUS EMISSIONS

### Definition

Receiver spurious emissions are emissions at any frequency when the equipment is in receive mode.

### Limit

The spurious emissions of the receiver shall not exceed the limits given in table 5.

In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz.

**Table 5: Spurious radiated emission limits**

Frequency range	Maximum power	Measurement bandwidth
30 MHz to 1 GHz	-57 dBm	100 kHz
1 GHz to 26 GHz	-47 dBm	1 MHz

### Test Procedure

According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.7



**Test Data**

**Test Result:** Compliant. Pre-scan all modes, worst case please refer to following tables.

**802.11 a Chain 0 5180 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.80	H	49.62	-66.73	-7.23	0.24	-74.20	-57.00	17.20
49.40	V	52.69	-53.50	-15.49	0.21	-69.20	-57.00	12.20
1380.00	H	50.62	-66.58	8.86	1.20	-58.92	-47.00	11.92
1202.00	V	49.69	-68.25	7.32	1.09	-62.02	-47.00	15.02

**802.11 a Chain 0 5240 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.30	H	49.38	-66.68	-7.49	0.24	-74.41	-57.00	17.41
51.30	V	51.93	-56.03	-14.30	0.21	-70.54	-57.00	13.54
1380.00	H	53.21	-63.99	8.86	1.20	-56.33	-47.00	9.33
1202.00	V	50.23	-67.71	7.32	1.09	-61.48	-47.00	14.48

**802.11 a Chain 0 5260 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	51.22	-65.19	-7.17	0.24	-72.60	-57.00	15.60
59.50	V	52.97	-59.86	-10.53	0.23	-70.62	-57.00	13.62
1380.00	H	50.62	-66.58	8.86	1.20	-58.92	-47.00	11.92
1202.50	V	49.69	-68.26	7.33	1.09	-62.02	-47.00	15.02

**802.11 a Chain 0 5320 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.20	H	50.60	-64.82	-8.07	0.23	-73.12	-57.00	16.12
52.60	V	52.94	-55.79	-13.70	0.22	-69.71	-57.00	12.71
1226.50	H	49.56	-67.44	7.57	1.12	-60.99	-47.00	13.99
1558.20	V	50.26	-69.23	9.85	0.96	-60.34	-47.00	13.34

## 802.11 a Chain 1

5180 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.30	H	49.38	-66.68	-7.49	0.24	-74.41	-57.00	17.41
59.90	V	51.93	-61.14	-10.35	0.23	-71.72	-57.00	14.72
1380.00	H	49.62	-67.58	8.86	1.20	-59.92	-47.00	12.92
1202.00	V	50.12	-67.82	7.32	1.09	-61.59	-47.00	14.59

## 802.11 a Chain 1

5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	50.20	-66.21	-7.17	0.24	-73.62	-57.00	16.62
49.60	V	52.14	-54.39	-15.29	0.21	-69.89	-57.00	12.89
1380.00	H	49.68	-67.52	8.86	1.20	-59.86	-47.00	12.86
1200.60	V	50.18	-67.76	7.31	1.09	-61.54	-47.00	14.54

## 802.11 a Chain 1

5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.20	H	50.04	-65.96	-7.54	0.24	-73.74	-57.00	16.74
59.20	V	53.12	-59.53	-10.67	0.23	-70.43	-57.00	13.43
1380.00	H	50.64	-66.56	8.86	1.20	-58.90	-47.00	11.90
1200.00	V	49.71	-68.23	7.30	1.09	-62.02	-47.00	15.02

## 802.11 a Chain 1

5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	49.33	-67.08	-7.17	0.24	-74.49	-57.00	17.49
50.78	V	52.71	-54.94	-14.54	0.21	-69.69	-57.00	12.69
1220.50	H	50.06	-66.90	7.51	1.11	-60.50	-47.00	13.50
1289.60	V	49.85	-68.45	8.20	1.18	-61.43	-47.00	14.43

## 802.11 n20

## 5180 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.50	H	50.09	-66.08	-7.39	0.24	-73.71	-57.00	16.71
49.60	V	52.49	-54.04	-15.29	0.21	-69.54	-57.00	12.54
1380.00	H	50.61	-66.59	8.86	1.20	-58.93	-47.00	11.93
1202.00	V	50.84	-67.10	7.32	1.09	-60.87	-47.00	13.87

## 802.11 n20

## 5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.40	H	49.93	-66.19	-7.44	0.24	-73.87	-57.00	16.87
49.80	V	52.27	-54.59	-15.10	0.21	-69.90	-57.00	12.90
1380.00	H	50.74	-66.46	8.86	1.20	-58.80	-47.00	11.80
1450.60	V	49.62	-69.04	9.25	1.28	-61.07	-47.00	14.07

## 802.11 n20

## 5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.90	H	50.32	-65.51	-7.70	0.23	-73.44	-57.00	16.44
49.70	V	52.33	-54.36	-15.19	0.21	-69.76	-57.00	12.76
1380.00	H	49.68	-67.52	8.86	1.20	-59.86	-47.00	12.86
1200.60	V	50.18	-67.76	7.31	1.09	-61.54	-47.00	14.54

## 802.11 n20

## 5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.40	H	50.33	-65.79	-7.44	0.24	-73.47	-57.00	16.47
49.80	V	51.92	-54.94	-15.10	0.21	-70.25	-57.00	13.25
1326.50	H	50.26	-67.11	8.49	1.19	-59.81	-47.00	12.81
1448.02	V	50.47	-68.14	9.24	1.27	-60.17	-47.00	13.17

## 802.11 n40

## 5190 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	50.20	-66.21	-7.17	0.24	-73.62	-57.00	16.62
49.60	V	52.14	-54.39	-15.29	0.21	-69.89	-57.00	12.89
1380.00	H	49.84	-67.36	8.86	1.20	-59.70	-47.00	12.70
1202.00	V	50.20	-67.74	7.32	1.09	-61.51	-47.00	14.51

## 802.11 n40

## 5230 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	49.81	-66.60	-7.17	0.24	-74.01	-57.00	17.01
52.60	V	52.98	-55.75	-13.70	0.22	-69.67	-57.00	12.67
1380.00	H	49.74	-67.46	8.86	1.20	-59.80	-47.00	12.80
1220.80	V	50.62	-67.40	7.51	1.11	-61.00	-47.00	14.00

## 802.11 n40

## 5270 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.80	H	49.42	-66.93	-7.23	0.24	-74.40	-57.00	17.40
49.70	V	52.97	-53.72	-15.19	0.21	-69.12	-57.00	12.12
1380.00	H	50.61	-66.59	8.86	1.20	-58.93	-47.00	11.93
1450.60	V	49.85	-68.81	9.25	1.28	-60.84	-47.00	13.84

## 802.11 n40

## 5310 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.40	H	50.12	-66.00	-7.44	0.24	-73.68	-57.00	16.68
51.30	V	52.49	-55.47	-14.30	0.21	-69.98	-57.00	12.98
1220.30	H	50.22	-66.74	7.50	1.11	-60.35	-47.00	13.35
1448.69	V	50.19	-68.43	9.24	1.27	-60.46	-47.00	13.46

## 802.11 ac20

## 5180 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.20	H	49.53	-66.47	-7.54	0.24	-74.25	-57.00	17.25
49.10	V	52.78	-52.92	-15.78	0.21	-68.91	-57.00	11.91
1380.00	H	49.20	-68.00	8.86	1.20	-60.34	-47.00	13.34
1202.00	V	49.70	-68.24	7.32	1.09	-62.01	-47.00	15.01

## 802.11 ac20

## 5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	49.26	-67.15	-7.17	0.24	-74.56	-57.00	17.56
49.80	V	52.73	-54.13	-15.10	0.21	-69.44	-57.00	12.44
1854.60	H	50.65	-66.45	11.48	0.87	-55.84	-47.00	8.84
1669.45	V	50.20	-68.20	10.59	0.73	-58.34	-47.00	11.34

## 802.11 ac20

## 5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.30	H	49.31	-66.75	-7.49	0.24	-74.48	-57.00	17.48
50.10	V	52.37	-54.88	-14.85	0.21	-69.94	-57.00	12.94
1380.00	H	50.74	-66.46	8.86	1.20	-58.80	-47.00	11.80
1450.60	V	49.62	-69.04	9.25	1.28	-61.07	-47.00	14.07

## 802.11 ac20

## 5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.30	H	50.32	-65.74	-7.49	0.24	-73.47	-57.00	16.47
50.50	V	52.74	-54.75	-14.67	0.21	-69.63	-57.00	12.63
1558.00	H	53.62	-65.48	9.85	0.96	-56.59	-47.00	9.59
1089.20	V	50.14	-68.06	7.45	0.99	-61.60	-47.00	14.60

## 802.11 ac40

## 5190 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.40	H	49.93	-66.19	-7.44	0.24	-73.87	-57.00	16.87
49.80	V	52.27	-54.59	-15.10	0.21	-69.90	-57.00	12.90
1380.00	H	50.26	-66.94	8.86	1.20	-59.28	-47.00	12.28
1202.00	V	50.71	-67.23	7.32	1.09	-61.00	-47.00	14.00

## 802.11 ac40

## 5230 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.40	H	49.28	-66.84	-7.44	0.24	-74.52	-57.00	17.52
49.60	V	52.34	-54.19	-15.29	0.21	-69.69	-57.00	12.69
1220.00	H	52.26	-64.70	7.50	1.11	-58.31	-47.00	11.31
1385.20	V	50.26	-67.57	8.90	1.20	-59.87	-47.00	12.87

## 802.11 ac40

## 5270 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.40	H	49.87	-66.25	-7.44	0.24	-73.93	-57.00	16.93
49.30	V	53.61	-52.42	-15.59	0.21	-68.22	-57.00	11.22
1380.00	H	50.62	-66.58	8.86	1.20	-58.92	-47.00	11.92
1220.00	V	49.80	-68.22	7.50	1.11	-61.83	-47.00	14.83

## 802.11 ac40

## 5310 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
63.40	H	49.97	-64.99	-8.50	0.23	-73.72	-57.00	16.72
52.10	V	52.67	-55.77	-13.93	0.21	-69.91	-57.00	12.91
1153.50	H	51.49	-65.71	7.35	1.06	-59.42	-47.00	12.42
1559.00	V	50.26	-69.23	9.85	0.95	-60.33	-47.00	13.33

**802.11 ac80****5210 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.30	H	49.63	-66.43	-7.49	0.24	-74.16	-57.00	17.16
49.20	V	52.19	-53.67	-15.68	0.21	-69.56	-57.00	12.56
1380.00	H	50.61	-66.59	8.86	1.20	-58.93	-47.00	11.93
1202.00	V	49.61	-68.33	7.32	1.09	-62.10	-47.00	15.10

**802.11 ac80****5290 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.50	H	49.31	-66.86	-7.39	0.24	-74.49	-57.00	17.49
49.20	V	52.36	-53.50	-15.68	0.21	-69.39	-57.00	12.39
1380.00	H	50.26	-66.94	8.86	1.20	-59.28	-47.00	12.28
1200.80	V	50.81	-67.13	7.31	1.09	-60.91	-47.00	13.91

**802.11 ac160****5250 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	49.81	-66.60	-7.17	0.24	-74.01	-57.00	17.01
59.40	V	52.98	-59.79	-10.58	0.23	-70.60	-57.00	13.60
1380.00	H	53.21	-63.99	8.86	1.20	-56.33	-47.00	9.33
1202.00	V	50.23	-67.71	7.32	1.09	-61.48	-47.00	14.48

**802.11 ax20****5180 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.70	H	49.38	-66.91	-7.28	0.24	-74.43	-57.00	17.43
49.50	V	52.47	-53.89	-15.39	0.21	-69.49	-57.00	12.49
1380.00	H	50.61	-66.59	8.86	1.20	-58.93	-47.00	11.93
1200.00	V	50.21	-67.73	7.30	1.09	-61.52	-47.00	14.52

## 802.11 ax20

## 5240 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.30	H	49.88	-65.60	-8.02	0.23	-73.85	-57.00	16.85
50.20	V	53.12	-54.19	-14.81	0.21	-69.21	-57.00	12.21
1380.00	H	56.52	-60.68	8.86	1.20	-53.02	-47.00	6.02
2695.15	V	50.62	-65.14	13.10	1.25	-53.29	-47.00	6.29

## 802.11 ax20

## 5260 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.30	H	49.93	-66.13	-7.49	0.24	-73.86	-57.00	16.86
49.80	V	52.66	-54.20	-15.10	0.21	-69.51	-57.00	12.51
1380.00	H	49.61	-67.59	8.86	1.20	-59.93	-47.00	12.93
1200.40	V	50.60	-67.34	7.30	1.09	-61.13	-47.00	14.13

## 802.11 ax20

## 5320 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.70	H	49.20	-66.51	-7.81	0.23	-74.55	-57.00	17.55
50.30	V	52.16	-55.21	-14.76	0.21	-70.18	-57.00	13.18
1532.60	H	50.10	-69.16	9.70	1.13	-60.59	-47.00	13.59
2106.50	V	50.03	-66.38	11.36	1.10	-56.12	-47.00	9.12

## 802.11 ax40

## 5190 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.90	H	49.26	-67.15	-7.17	0.24	-74.56	-57.00	17.56
49.80	V	52.73	-54.13	-15.10	0.21	-69.44	-57.00	12.44
1380.00	H	49.65	-67.55	8.86	1.20	-59.89	-47.00	12.89
1200.00	V	50.29	-67.65	7.30	1.09	-61.44	-47.00	14.44



## 802.11 ax40

5230 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
63.20	H	50.12	-64.72	-8.60	0.23	-73.55	-57.00	16.55
48.70	V	53.05	-51.98	-16.17	0.21	-68.36	-57.00	11.36
1223.00	H	50.36	-66.62	7.53	1.11	-60.20	-47.00	13.20
1448.20	V	49.26	-69.36	9.24	1.27	-61.39	-47.00	14.39

## 802.11 ax40

5270 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
64.90	H	50.21	-65.62	-7.70	0.23	-73.55	-57.00	16.55
49.70	V	52.74	-53.95	-15.19	0.21	-69.35	-57.00	12.35
1380.00	H	49.74	-67.46	8.86	1.20	-59.80	-47.00	12.80
1220.80	V	50.62	-67.40	7.51	1.11	-61.00	-47.00	14.00

## 802.11 ax40

5310 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
63.70	H	49.56	-65.57	-8.34	0.23	-74.14	-57.00	17.14
48.90	V	52.74	-52.62	-15.98	0.21	-68.81	-57.00	11.81
1332.50	H	50.29	-67.06	8.53	1.19	-59.72	-47.00	12.72
1485.60	V	50.65	-68.65	9.43	1.33	-60.55	-47.00	13.55

## 802.11 ax80

5210 MHz

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.30	H	50.02	-66.04	-7.49	0.24	-73.77	-57.00	16.77
49.40	V	52.67	-53.52	-15.49	0.21	-69.22	-57.00	12.22
1380.00	H	50.64	-66.56	8.86	1.20	-58.90	-47.00	11.90
1200.00	V	50.31	-67.63	7.30	1.09	-61.42	-47.00	14.42

**802.11 ax80****5290 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.20	H	49.61	-66.39	-7.54	0.24	-74.17	-57.00	17.17
49.80	V	52.47	-54.39	-15.10	0.21	-69.70	-57.00	12.70
1380.00	H	50.69	-66.51	8.86	1.20	-58.85	-47.00	11.85
3680.00	V	50.19	-61.79	14.02	1.76	-49.53	-47.00	2.53

**802.11 ax160****5250 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
65.40	H	49.28	-66.84	-7.44	0.24	-74.52	-57.00	17.52
49.60	V	52.34	-54.19	-15.29	0.21	-69.69	-57.00	12.69
1380.00	H	50.90	-66.30	8.86	1.20	-58.64	-47.00	11.64
1200.00	V	50.41	-67.53	7.30	1.09	-61.32	-47.00	14.32

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

Note 2:

Absolute Level = Substituted Level - Cable loss + Antenna Gain

Margin = Limit- Absolute Level

## 8 – ADAPTIVITY

### Applicable Standard

Adaptivity (Channel Access Mechanism) is an automatic mechanism by which a device limits its transmissions and gains access to an Operating Channel.

#### §4.2.7.3.1 Frame Based Equipment:

Frame Based Equipment shall implement a Listen Before Talk (LBT) based Channel Access Mechanism to detect the presence of other RLAN transmissions on an Operating Channel.

#### §4.2.7.3.2 Load Based Equipment:

Load based Equipment shall implement a Listen Before Talk (LBT) based Channel Access Mechanism to detect the presence of other RLAN transmissions on an Operating Channel.

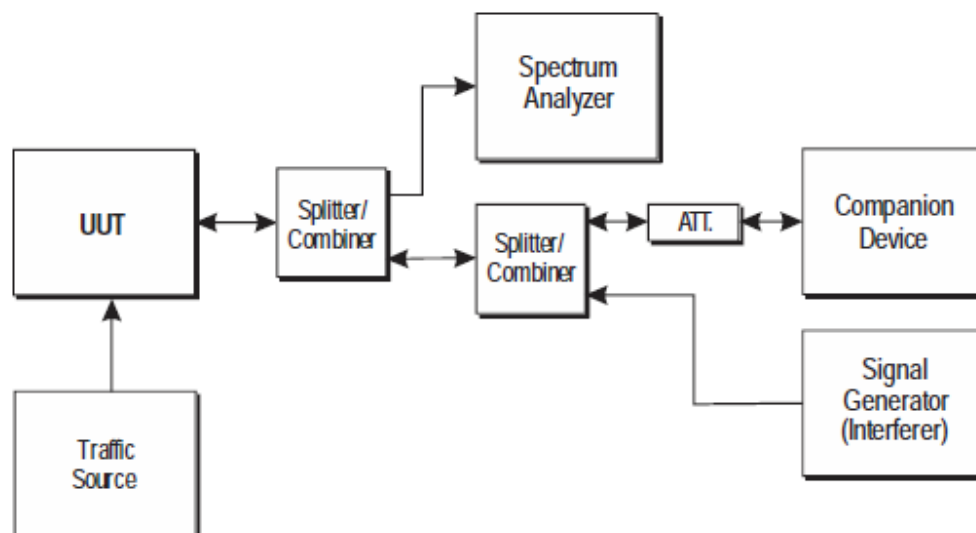
### Limit

According to ETSI EN 301 893 V2.1.1 (2017-05) §4.2.7.3.1&§4.2.7.3.2

### Test Procedure

According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.9

### Block Diagram of Test Setup



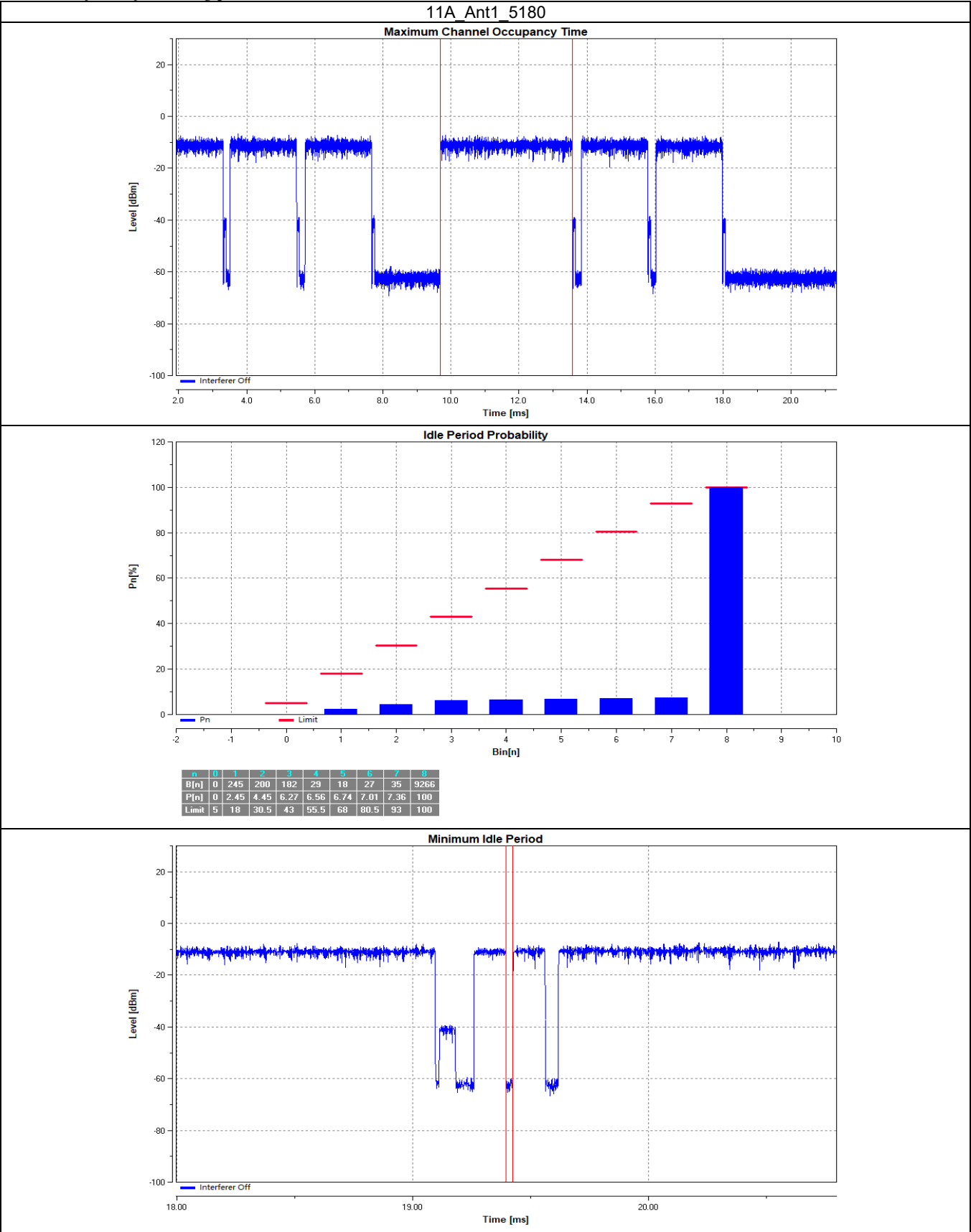
**Test Data**

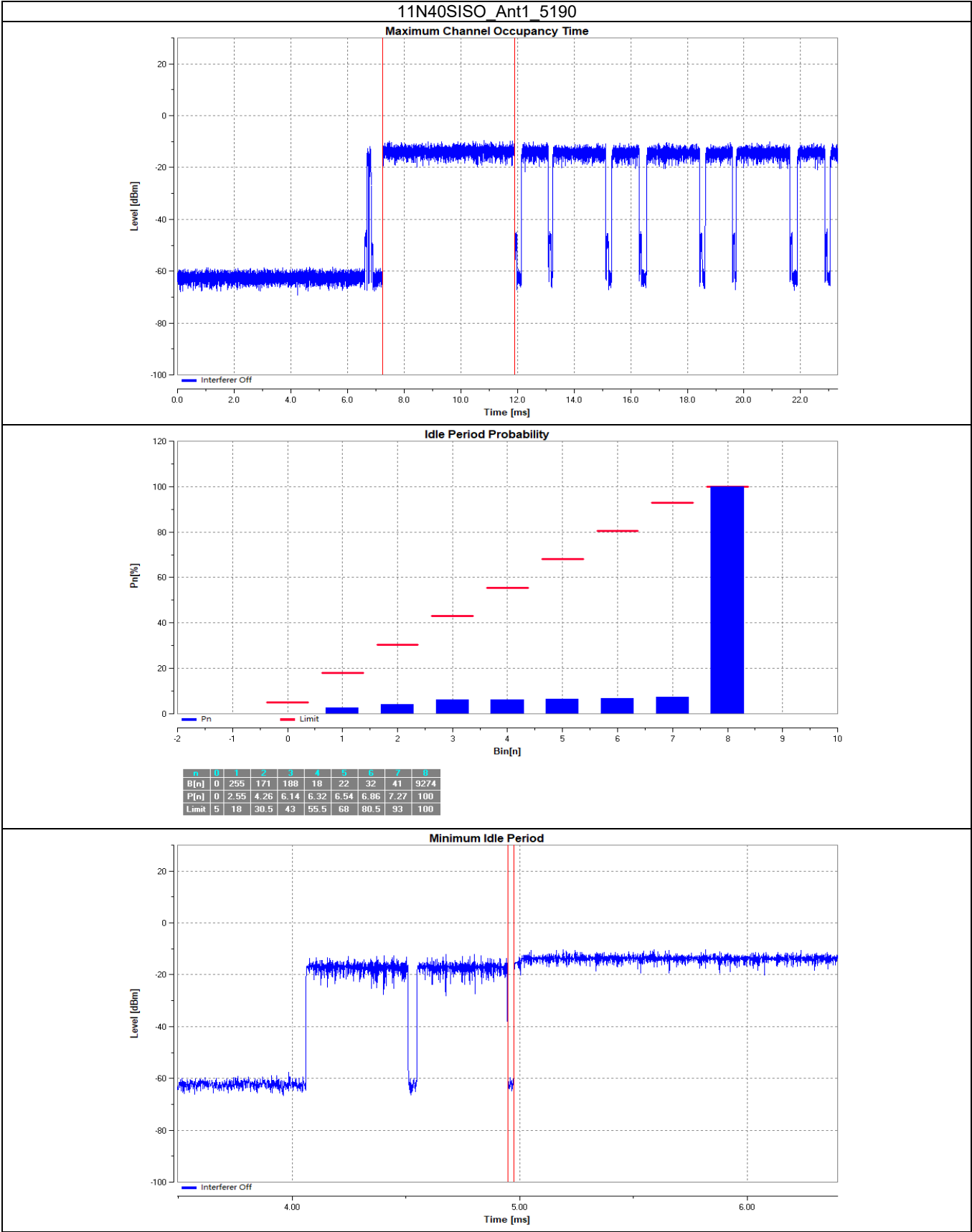
**Test Result:** Compliant. Please refer to following tables(Testing was performed with Chain 0).

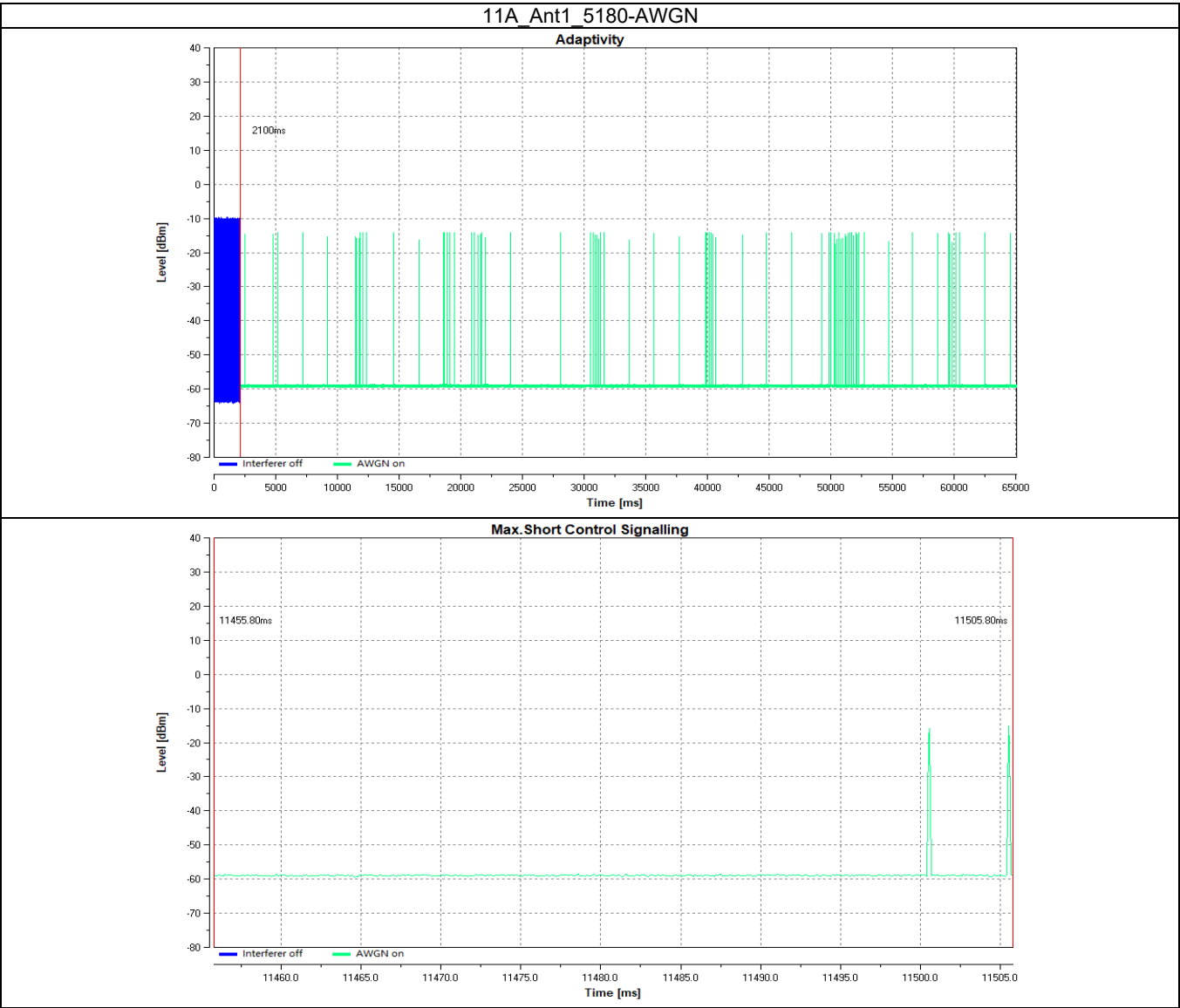
Test Mode	Channel	Priority Class	COT Num [n]	Max. COT [ms]	Limit [ms]	Min.Idle Time[ms]	Limit [ms]	Idle Period probability	Verdict
802.11a	5180	3	10020	3.881	6.000	0.028	0.027	See the graph	PASS
802.11n40	5190	3	10020	4.661	6.000	0.029	0.027	See the graph	PASS

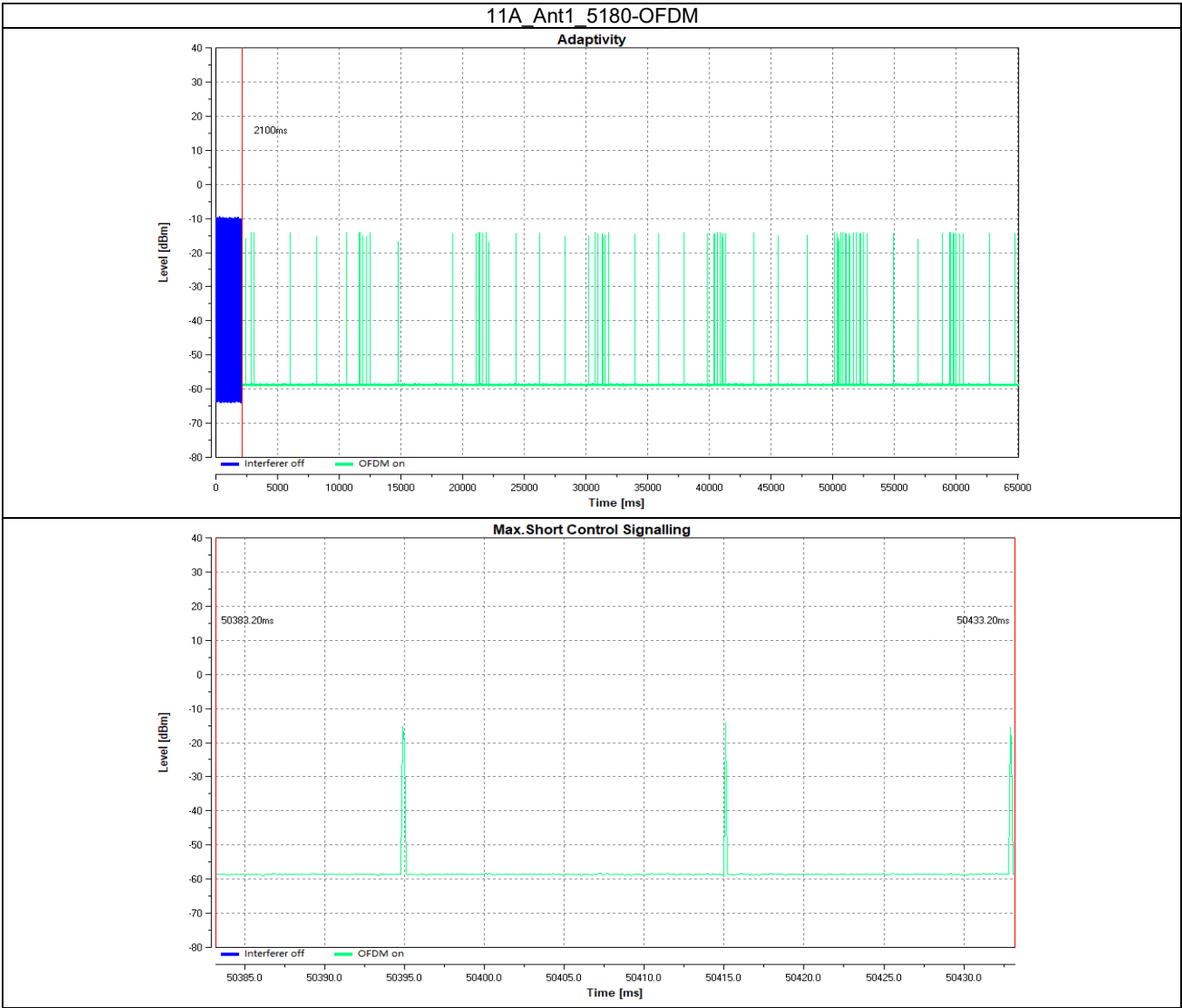
Test Mode	Channel	Interference Type	Add interference Time[ms]	Max.Short Control number[n]	Limit [n]	Max.Short Control Time[ms]	Limit [ms]	Verdict
802.11a	5180	AWGN	2114	2	50	0.4	2.5	PASS
		OFDM	2114	3	50	0.5	2.5	PASS
		LTE	2114	2	50	0.4	2.5	PASS
802.11n40	5190	AWGN	2114	1	50	0.1	2.5	PASS

Please refer to following plots:

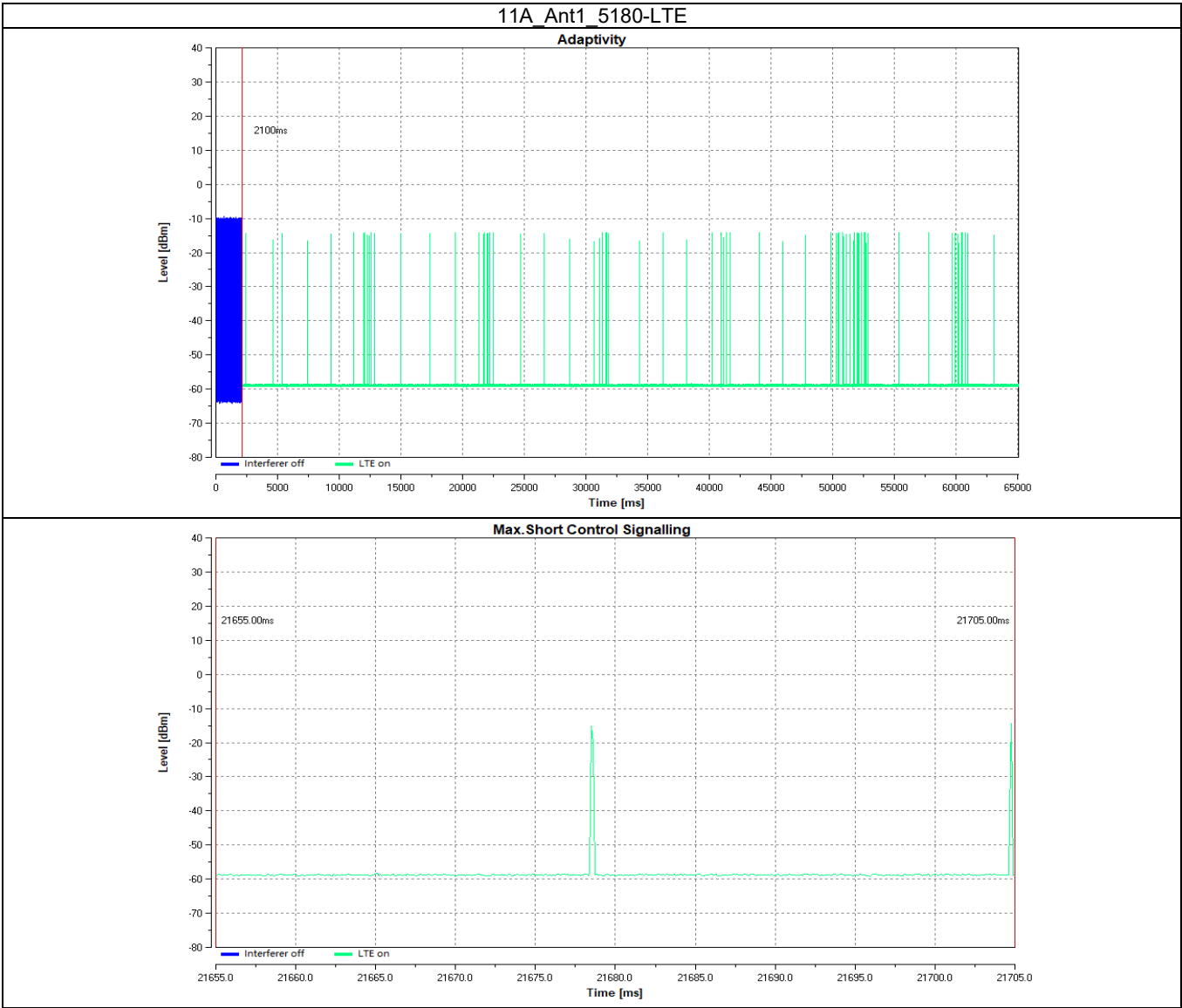


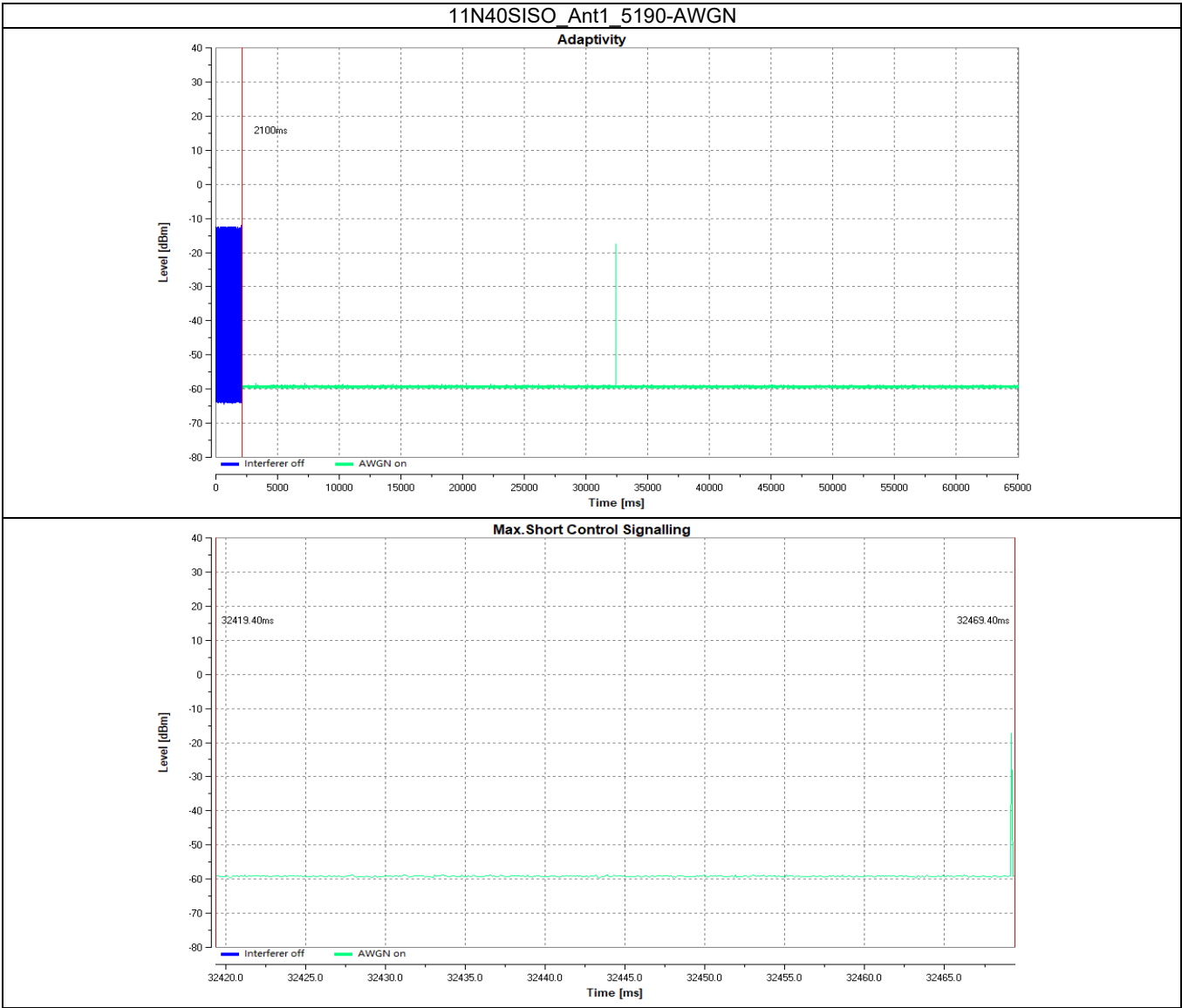












## 9 – RECEIVER BLOCKING

### Applicable Standard

Receiver blocking is a measure of the capability of the equipment to receive a wanted signal on its operating channel without exceeding a given degradation due to the presence of an unwanted input signal (blocking signal) on frequencies other than those of the operating bands provided in table 1.

### Limit

The minimum performance criterion shall be a PER of less than or equal to 10 %. The manufacturer may declare alternative performance criteria as long as that is appropriate for the intended use of the equipment

While maintaining the minimum performance criteria as defined in clause 4.2.8.3, the blocking levels at specified frequency offsets shall be equal to or greater than the limits defined in table 9.

**Table 9: Receiver Blocking parameters**

Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)		Type of blocking signal
		Master or Slave with radar detection (see table D.2, note 2)	Slave without radar detection (see table D.2, note 2)	
P <sub>min</sub> + 6 dB	5 100	-53	-59	Continuous Wave
P <sub>min</sub> + 6 dB	4 900 5 000 5 975	-47	-53	Continuous Wave

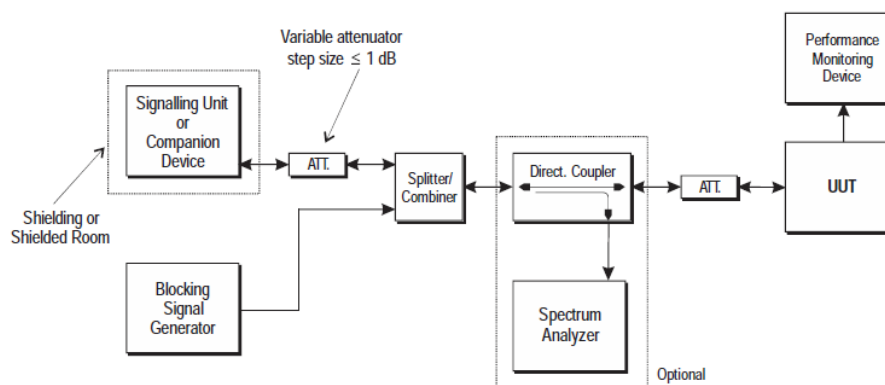
NOTE 1: P<sub>min</sub> is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined clause 4.2.8.3 in the absence of any blocking signal.

NOTE 2: The levels specified are levels in front of the UUT antenna. In case of conducted measurements, the same levels should be used at the antenna connector irrespective of antenna gain.

### Test Procedure

According to ETSI EN 301 893 V2.1.1 (2017-05) §5.4.10

### Block Diagram of Test Setup



**Figure 14: Test Set-up for receiver blocking**

**Test Data**

**Test Result:** Compliant. Please refer to following tables.

Note: CMW500 was used to monitor the PER, and the worst case as below.

Test Mode	Pmin (dBm)	Wanted signal Power from companion device (dBm)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)	Max Blocking Signal Power (dBm)	PER (%)	Limit (%)
802.11 a (5180 MHz)	-92	-86	5100	-53	-46	3.2	≤ 10
			4900	-47	-40	4.6	
			5000	-47	-42	3.4	
			5975	-47	-41	4.1	

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## **EXHIBIT A – EUT PHOTOGRAPHS**

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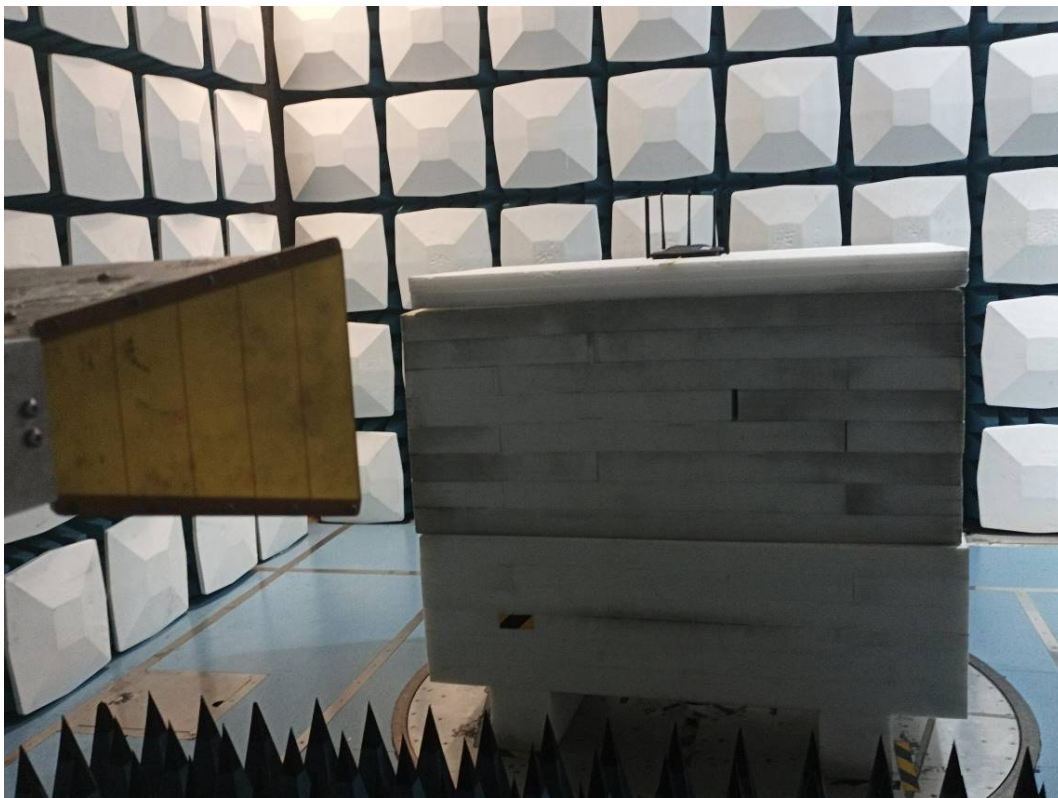
For photos in this section, please refer to report No.: DG2220812-36651E-02 EXHIBIT A..

## EXHIBIT B – TEST SET UP PHOTOGRAPHS

Radiated Emission Below 1GHz View



Radiated Emission Above 1GHz View



## DECLARATION OF SIMILARITY LETTER

SHENZHEN TENDA TECHNOLOGY CO.,LTD.

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518052

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E-mail: cert@tenda.cn

### DECLARATION OF SIMILARITY

Date: 2022-08-16

To whom it may concern

Dear Sir or Madam:

We, SHENZHEN TENDA TECHNOLOGY CO.,LTD., hereby declare that the product: AX3000 Dual Band Gigabit WiFi 6 Router, model: TX12 Pro are electrically identical with the model: RX12 Pro which was tested by BACL(Dongguan) with the same electromagnetic emissions and electromagnetic compatibility characteristics.

A description of the differences between those models and that are declared similar are as follows:

They are the same product, and just the different model name. the rest are the same.

The detail information, please check the reports.

Please contact me should there be need for any additional clarification or information.

Best Regards,

Signature:

  
Printed Name: Shen Yue

Title: Engineer

\*\*\*\*\*END OF REPORT\*\*\*\*\*