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Dates of Tests: May 23, 2023 ~ June 28, 2023
Test Report S/N: LR500112306A
Test Site : LTA CO., LTD.

CERTIFICATION OF COMPLIANCE

FCC ID.

2BBRCHN-SSC

APPLICANT

Honeynaps Co., Ltd

Equipment Class	:	Unlicensed National Information Infrastructure TX (NII)
Manufacturing Description	:	Sleep Sensing Device
Manufacturer	:	Honeynaps Co., Ltd
Model name	:	HN-SSC
Test Device Serial No.:	:	Identical prototype
Rule Part(s)	:	FCC Part 15.407 Subpart E ; ANSI C63.10 - 2013
Frequency Range	:	802.11 a/ an20/ an40/ ac20/ ac40/ ac80 5150 ~ 5250 MHz, 5725 ~ 5850 MHz
Max. Output Power	:	Max 6.16 dBm - Conducted
Data of issue	:	June 28, 2023

This test report is issued under the authority of:

The test was supervised by:

Ja-Beom Koo, Manager

Eun-Hwan Jung, Test Engineer

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1. General information

1-1 Test Performed

Company name : LTA Co., Ltd.
 Address : 243, Jubug-ri, Yangji-Myeon, Youngin-Si, Kyunggi-Do, Korea. 17159
 Web site : <http://www.ltalab.com>
 E-mail : chahn@ltalab.com
 Telephone : +82-31-323-6008
 Facsimile : +82-31-323-6010

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

1-2 Accredited agencies

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

Agency	Country	Accreditation No.	Validity	Reference
NVLAP	U.S.A	200723-0	2023-09-28	ECT accredited Lab.
RRA	KOREA	KR0049	-	EMC accredited Lab.
FCC	U.S.A	649054	2024-04-08	FCC CAB
VCCI	JAPAN	C-4948,	2023-09-10	VCCI registration
VCCI	JAPAN	T-2416,	2023-09-10	VCCI registration
VCCI	JAPAN	R-4483(10 m),	2023-10-15	VCCI registration
VCCI	JAPAN	G-847	2024-12-13	VCCI registration
IC	CANADA	5799A-1	2024-08-15	IC filing

2. Information about test item

2-1 Client & Manufacturer

Client Company name	: Honeynaps Co., Ltd
Address	: 4F, 529, Nonhyeon-ro, Gangnam-gu, Seoul, Republic of Korea
Tel / Fax	: +82 10-6795-8804 / +82 2-567-0134
Manufacturer	Honeynaps Co., Ltd
Address	4F, 529, Nonhyeon-ro, Gangnam-gu, Seoul, Republic of Korea
Tel / Fax	+82 10-6795-8804 / +82 2-567-0134

2-2 Equipment Under Test (EUT)

Model name	: HN-SSC
Serial number	: Identical prototype
Date of receipt	: May 23, 2023
EUT condition	: Pre-production, not damaged
Antenna type	: FPCB Antenna (Max Gain : 5 dBi)
Frequency Range	: 802.11 a/ an20/ an40/ ac20/ ac40/ ac80 5150 ~ 5250 MHz, 5725 ~ 5850 MHz
RF output power	: Max 6.16 dBm – Conducted
Type of Modulation	: BPSK, QPSK, 16-QAM, 64-QAM
Power Source	: DC 5 V

2-3 Tested frequency

	LOW	MID	HIGH
Frequency (MHz) 802.11 a/an20/ac20	5180	5200	5240
	5745	5785	5825
Frequency (MHz) 802.11 an40/ac40	5190		5230
	5755		5795
Frequency (MHz) 802.11 ac80		5210	
		5775	

2-4 Ancillary Equipment

Equipment	Model No.	Serial No.	Manufacturer
Notebook	-	MS-1736	MSI

3. Test Report

3.1 Summary of tests

FCC Part Section(s)	Parameter	Test Condition	Status (note 1)
15.407(a)(3)	26 dB Bandwidth	Conducted	C
15.407(a)(3)	Transmitter Peak Output Power		C
15.407(a)(3)	Peak power spectral density		C
15.407(b)(4)	Band Edge & Conducted Spurious emission		C
15.407(e)	6 dB Bandwidth		C
15.209	Transmitter emission	Radiated	C
15.207	AC Conducted Emissions	Conducted	N/A
15.203	Antenna requirement	-	C

N/A : This product is battery-enabled and excludes the test.

N/A1 : It is a product in a band that does not have DFS function.

The above equipment was tested by LTA Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10-2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 2 and Part 15.407 The test results of this report relate only to the tested sample identified in this report.

The tests were performed according to the method of measurements prescribed in KDB No.789033.

→ Antenna Requirement

Honeynaps Co., Ltd FCC ID: 2BBRCHN-SSC unit complies with the requirement of §15.203.

The antenna type is FPCB Antenna

3.2 Technical Characteristics Test

3.2.1 26 dB, 99% Bandwidth

Procedure:

The 99-percent occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section H)3)d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the 26-dB emission bandwidth to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section E). However, the 26-dB bandwidth must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 1 % to 5 % of the OBW

Span = 3 X RBW

Set VBW $\geq$ 3 X RBW

Set span = 1.5 times to 5.0 times the OBW.

Trace = max hold

Detector function = peak

Measurement Data : **Complies**

Mode	Frequency (MHz)	Test Results		
		26 dB Bandwidth(MHz)	99 % Bandwidth(MHz)	Result
a	5180	31.838	16.860	Complies
	5200	33.357	16.787	
	5240	31.187	16.787	
	5745	20.550	16.498	
	5785	20.478	16.425	
	5825	20.550	16.425	
an20	5180	20.912	17.583	Complies
	5200	20.839	17.511	
	5240	20.912	17.583	
	5745	20.550	17.511	
	5785	20.550	17.511	
	5825	20.550	17.511	
ac20	5180	20.695	17.583	Complies
	5200	20.550	17.583	
	5240	20.695	17.511	
	5745	20.478	17.583	
	5785	20.550	17.532	
	5825	20.550	17.583	

Mode	Frequency (MHz)	Test Results		
		26 dB Bandwidth(MHz)	99 % Bandwidth(MHz)	Result
an40	5190	42.692	35.962	Complies
	5230	42.185	35.962	
	5755	42.185	35.890	
	5795	42.258	35.890	
ac40	5190	42.185	35.962	Complies
	5230	42.041	35.890	
	5755	42.185	36.252	
	5795	41.968	36.252	

Mode	Frequency (MHz)	Test Results		
		26 dB Bandwidth(MHz)	99 % Bandwidth(MHz)	Result
ac80	5210	82.920	76.122	Complies
	5775	82.780	76.122	

- See next pages for actual measured spectrum plots.

Minimum Standard:

Measurement Setup

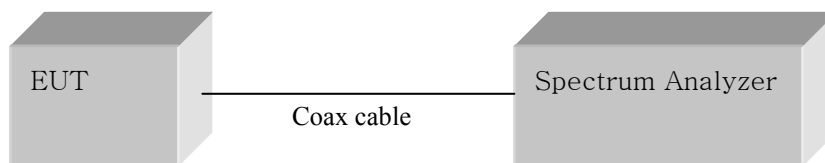
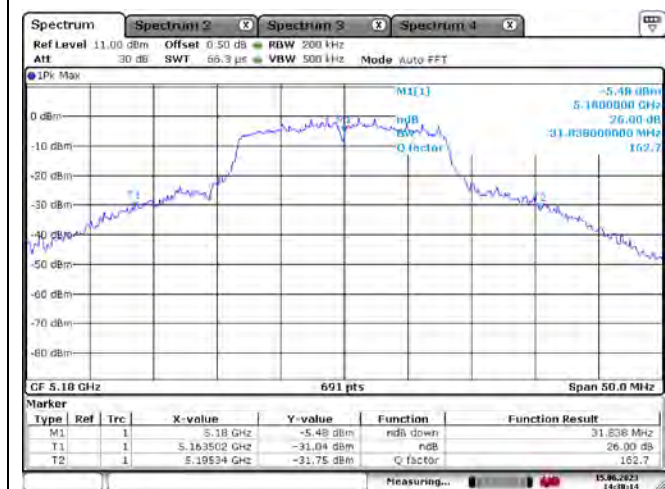


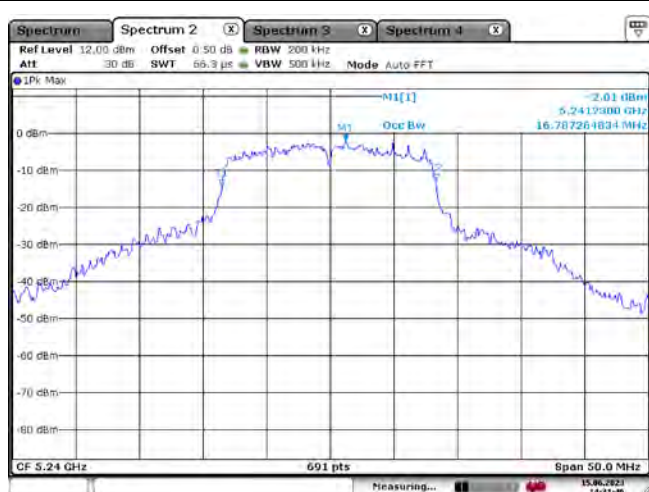
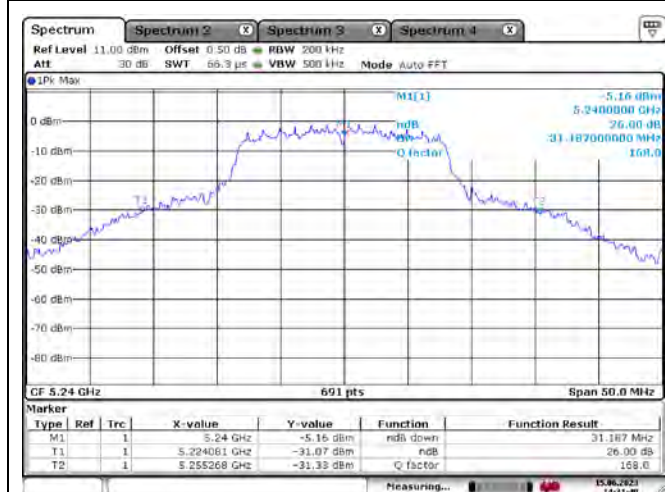
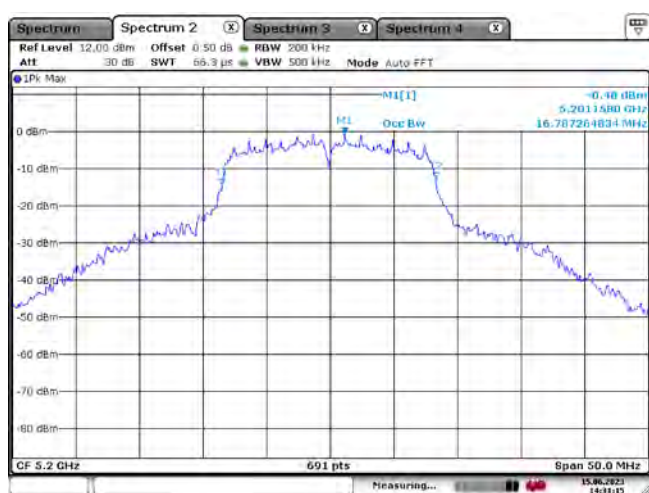
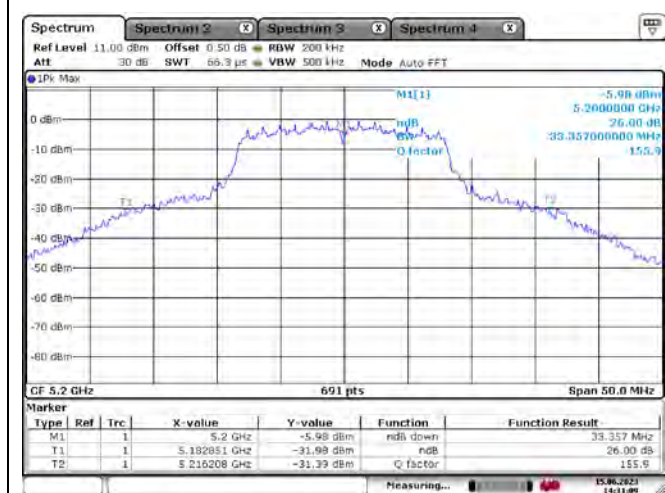
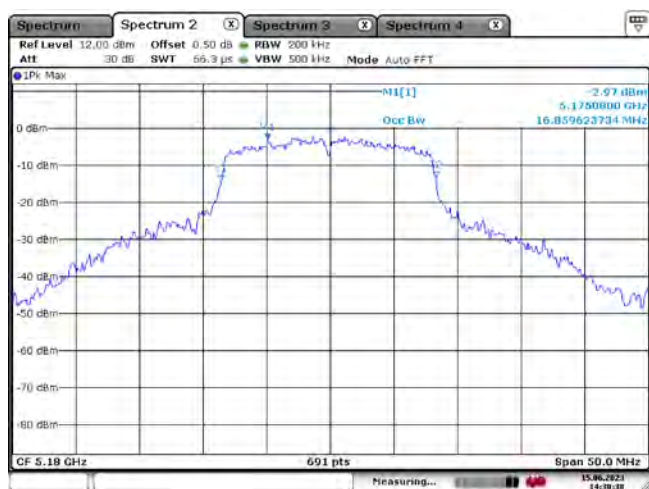
Figure 1: Measurement setup for the carrier frequency separation

802.11 a Band 1

26 dB Bandwidth

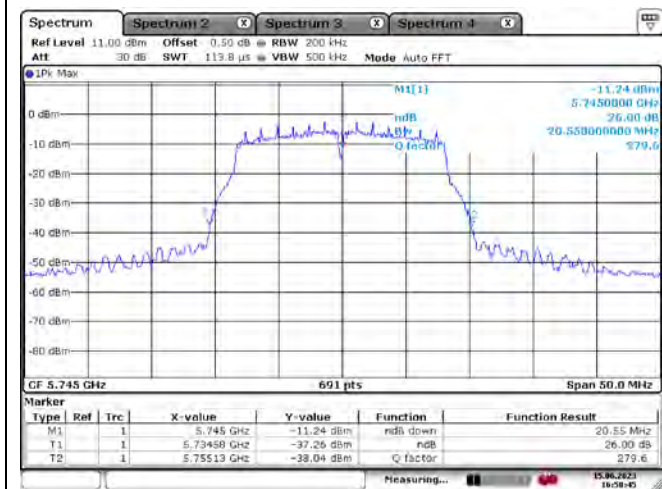


99% Bandwidth

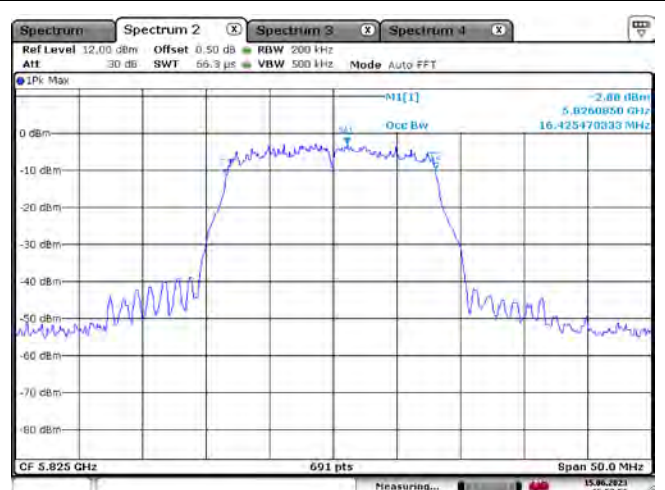
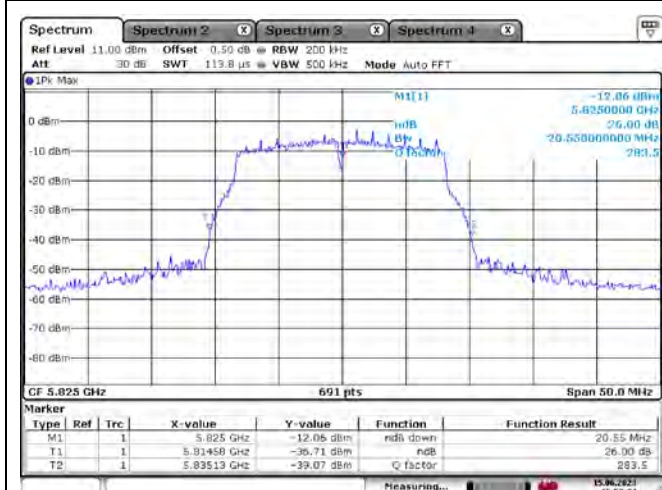
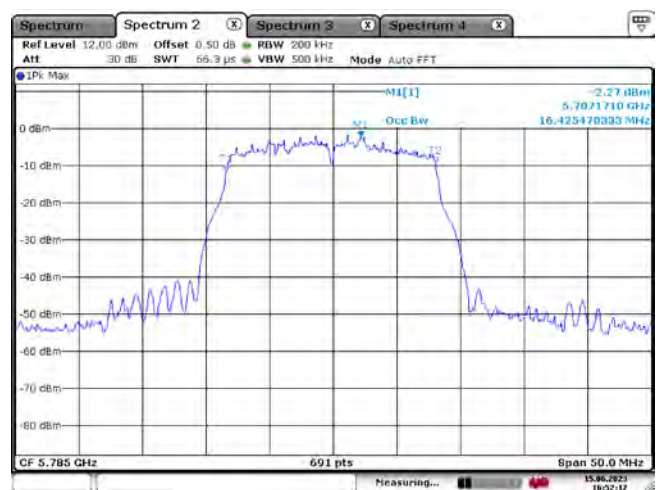
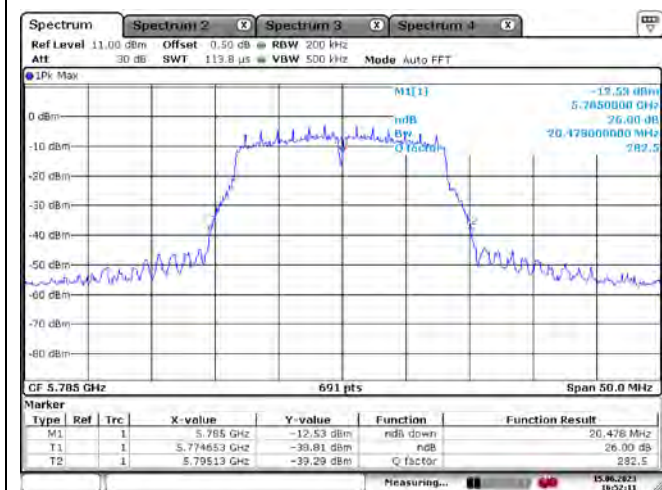
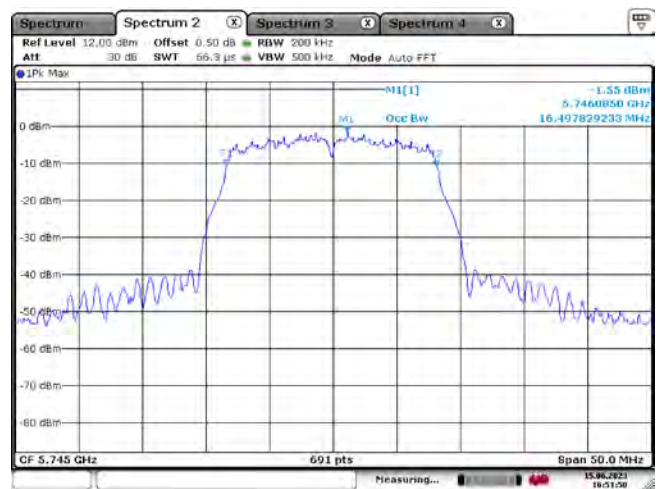


802.11 a Band 2

26 dB Bandwidth

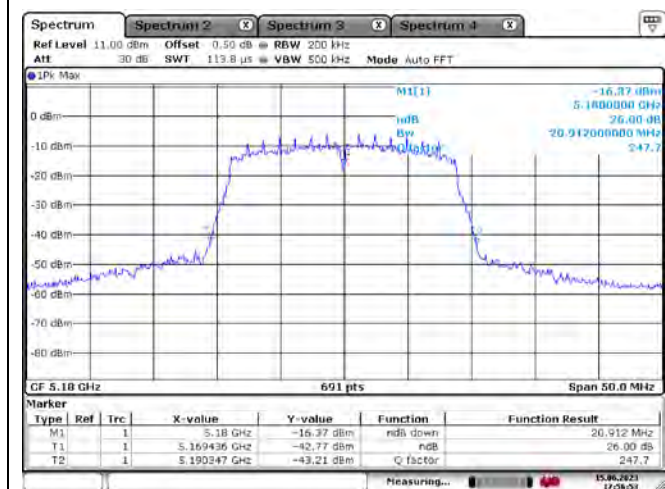


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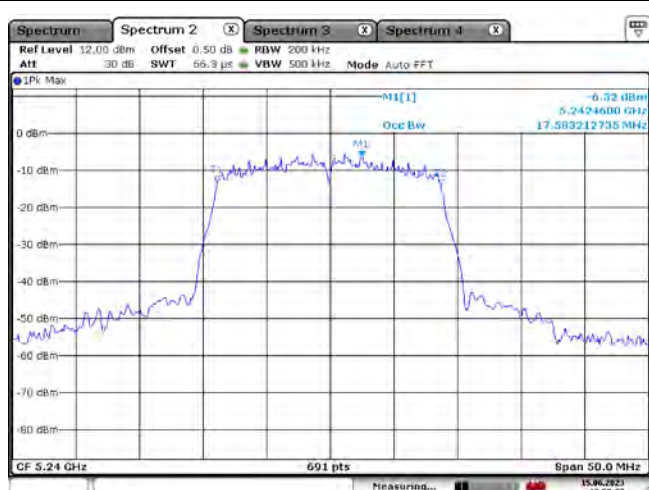
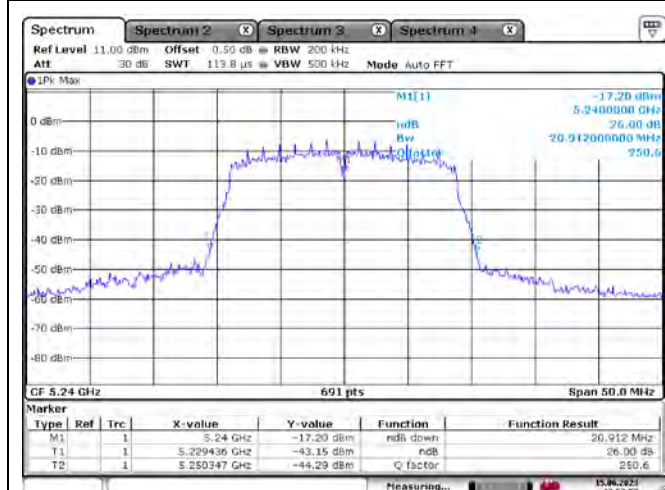
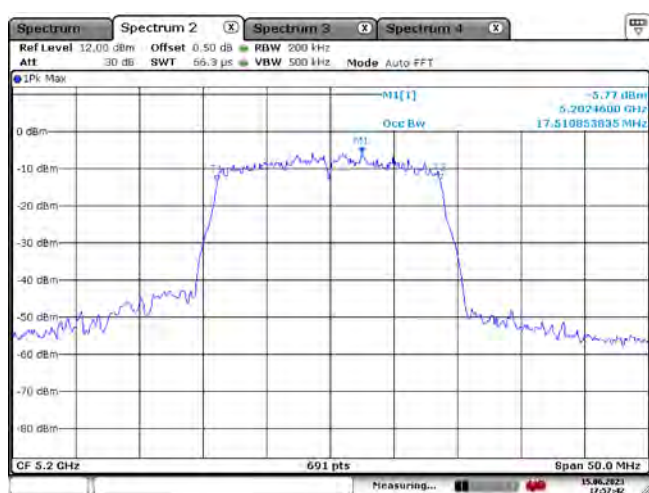
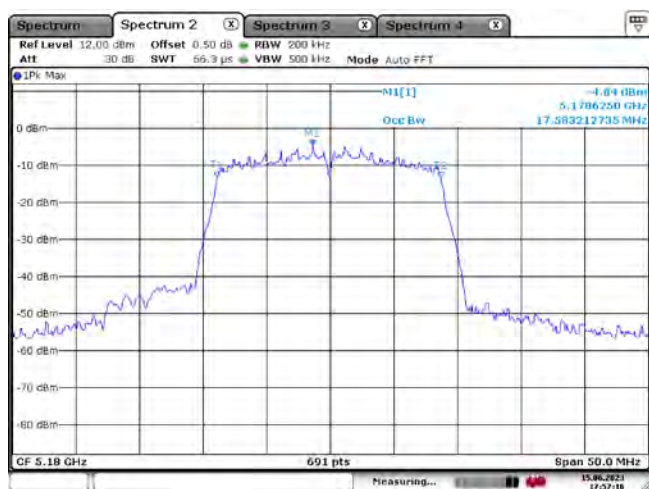


802.11 an20 Band 1

26 dB Bandwidth

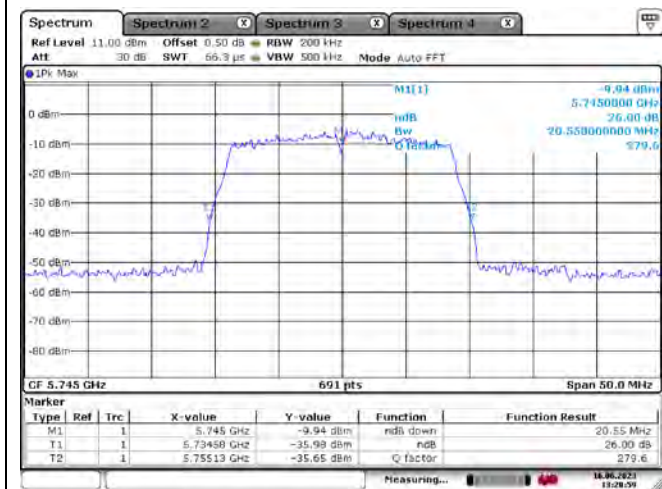


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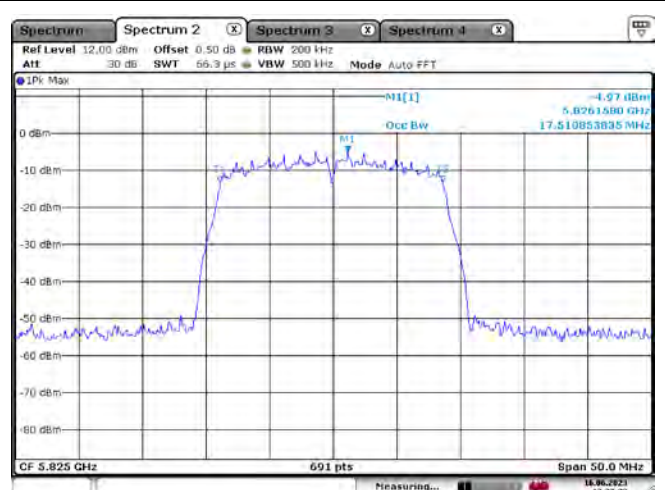
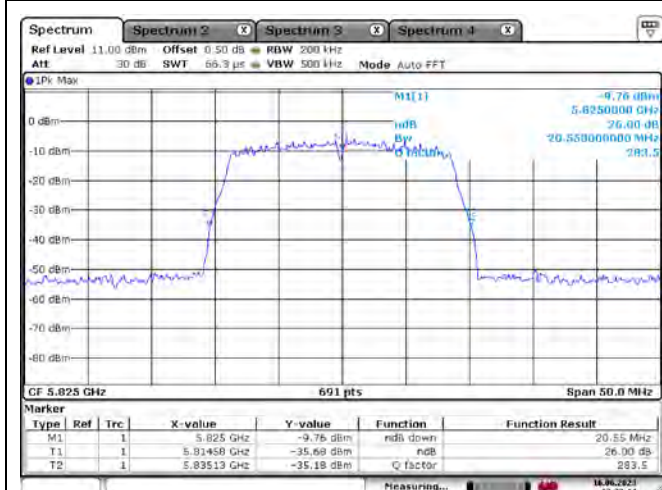
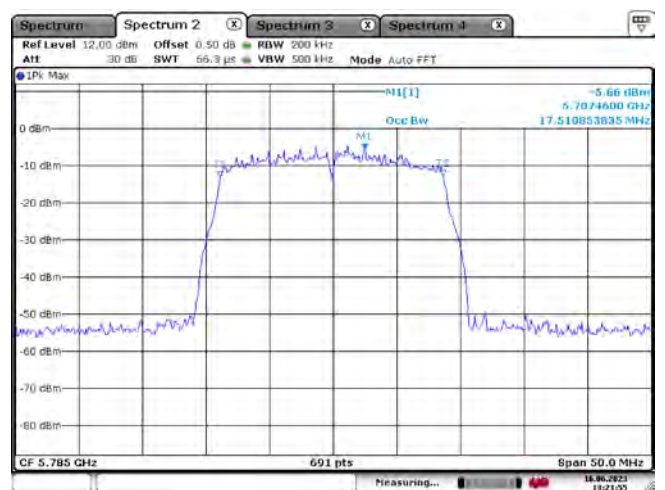
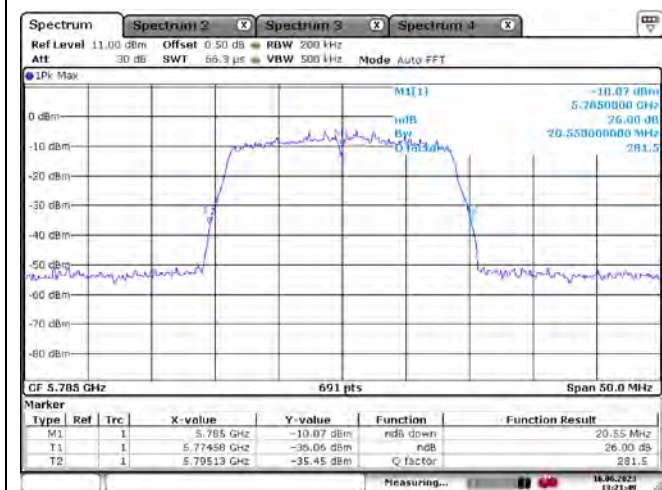
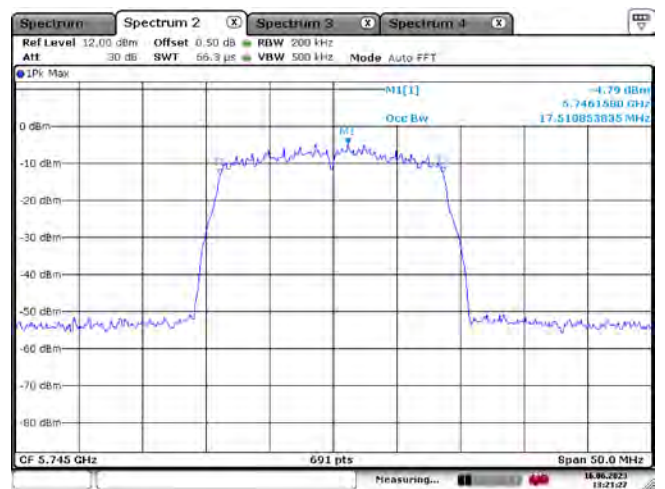


802.11 an20 Band 2

26 dB Bandwidth

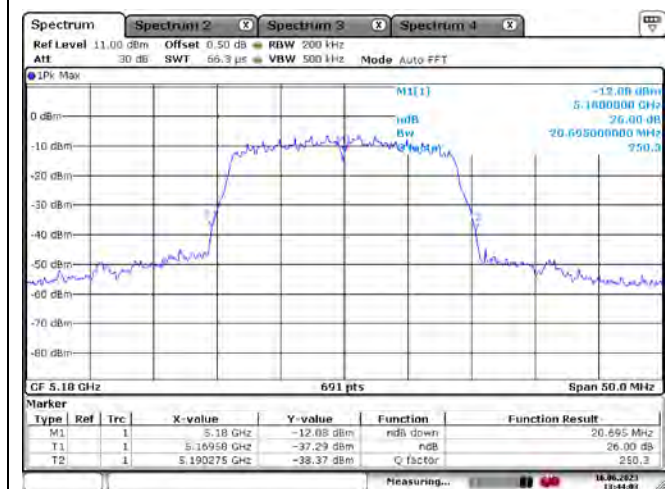


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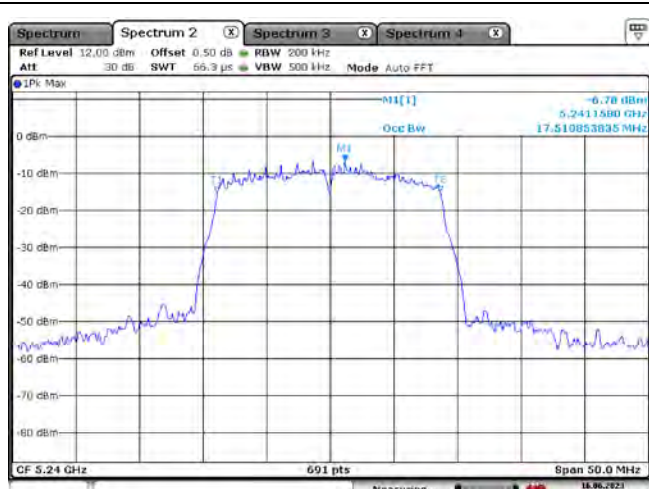
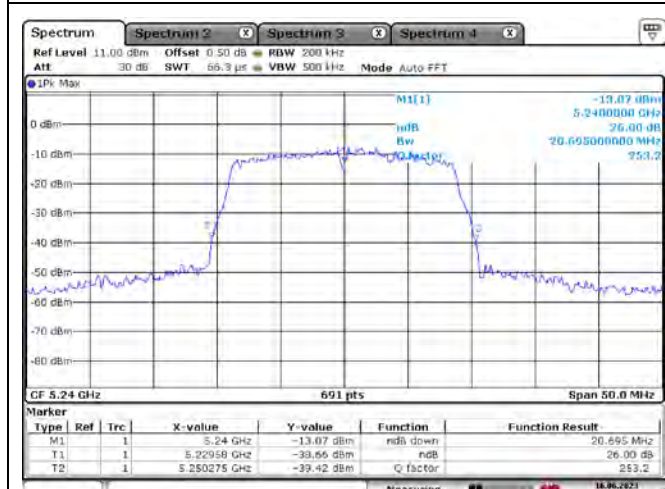
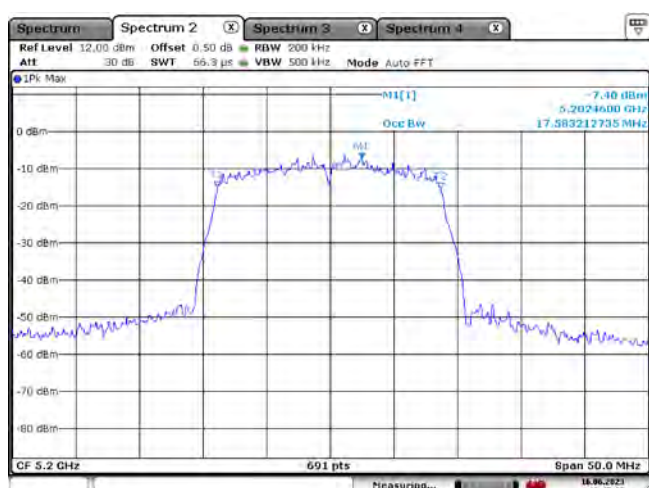
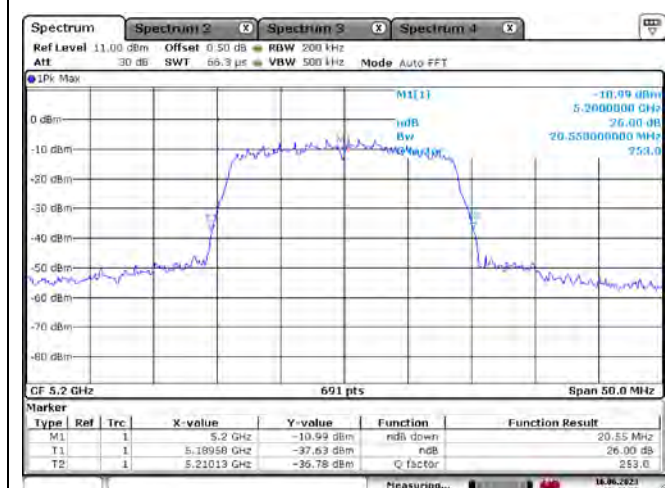
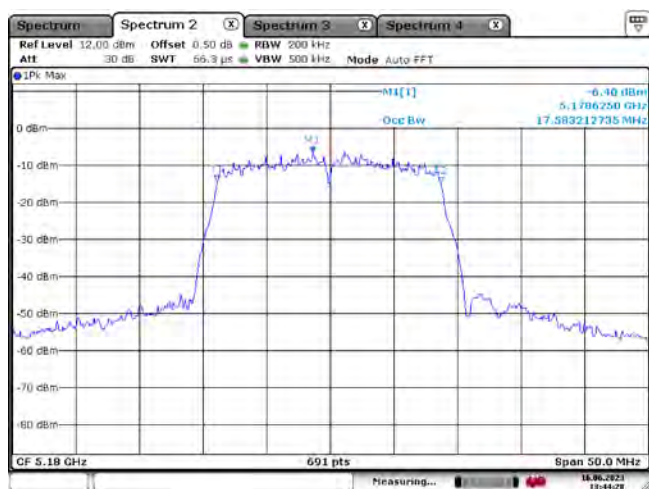


802.11 ac20 Band 1

26 dB Bandwidth

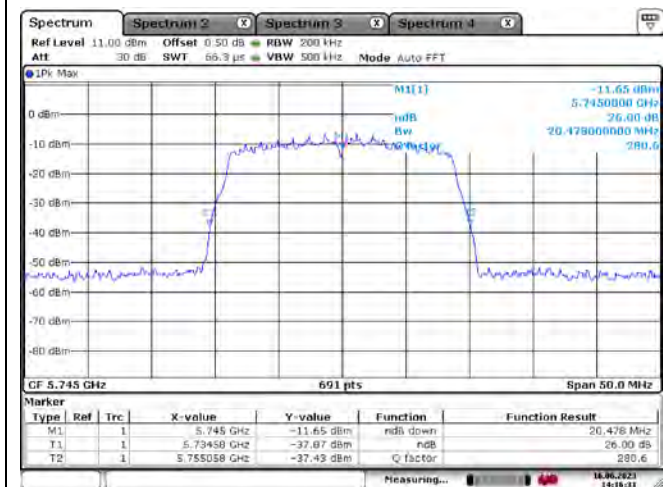


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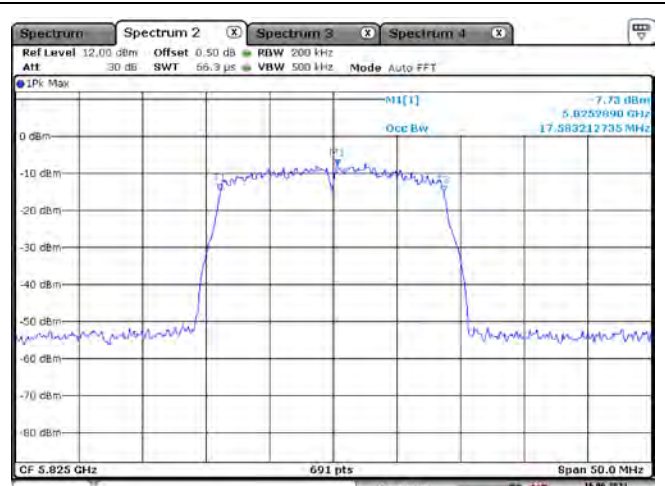
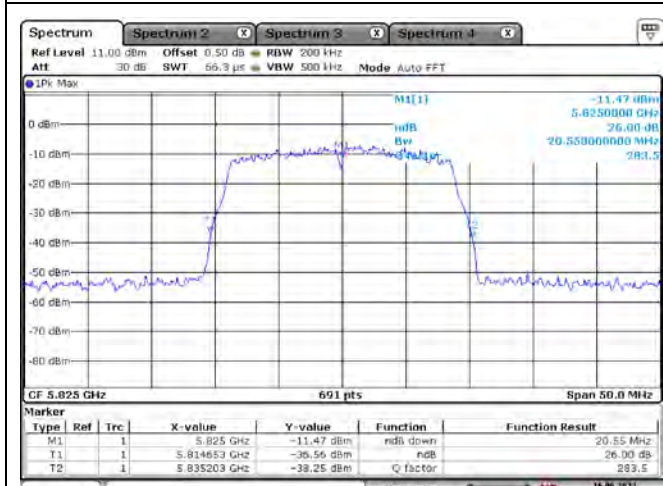
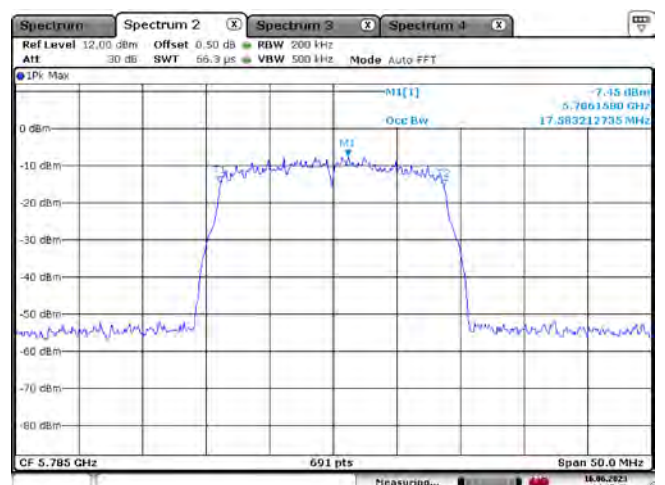
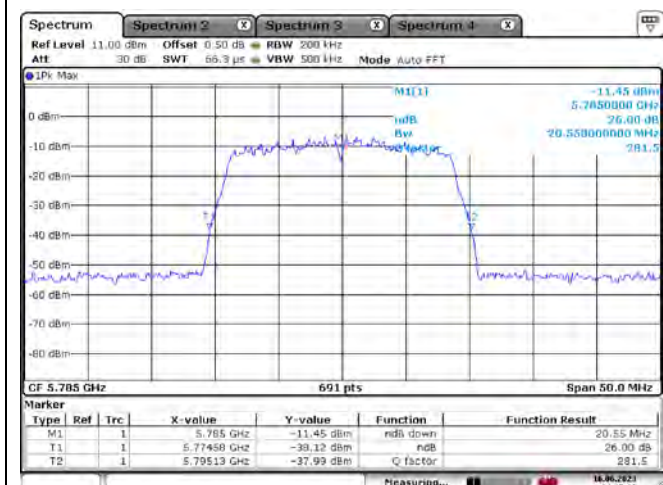
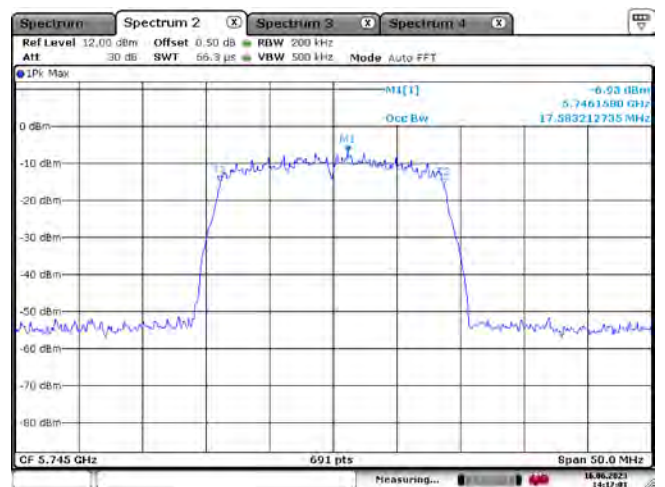


802.11 ac20 Band 2

26 dB Bandwidth

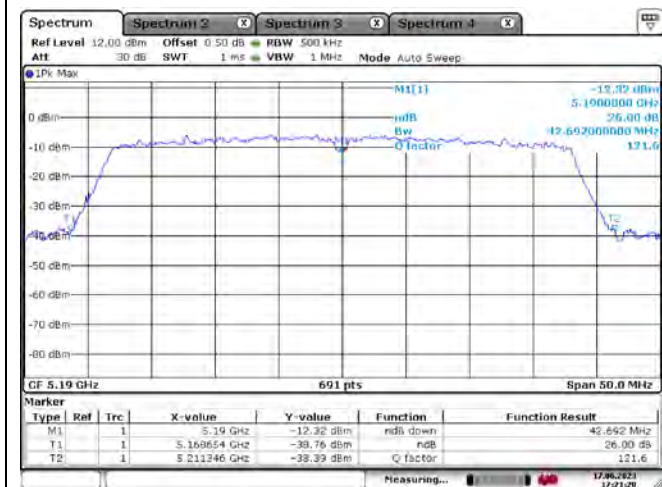


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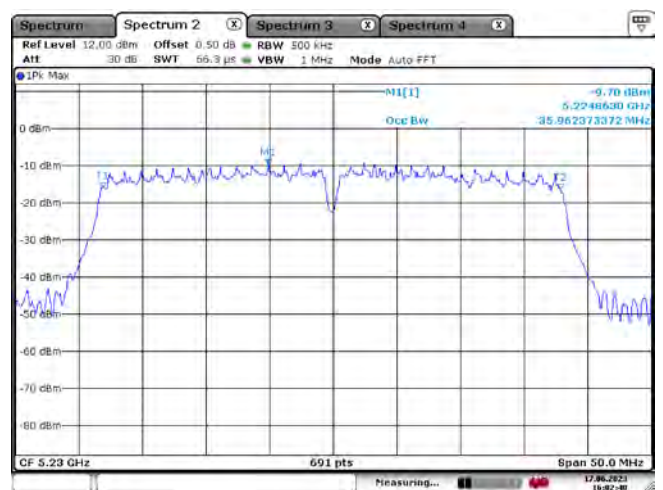
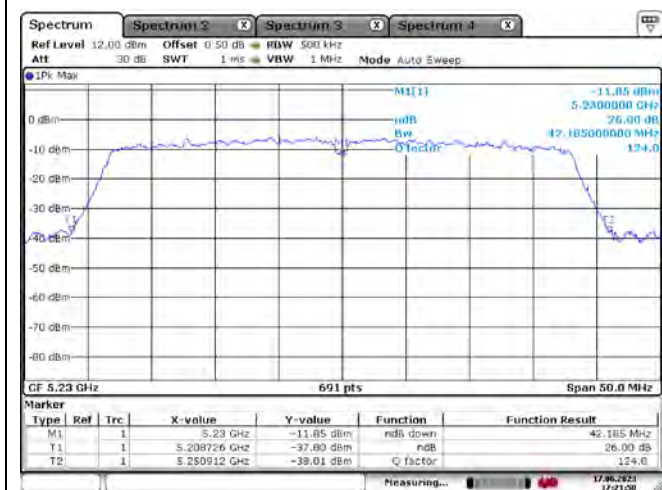
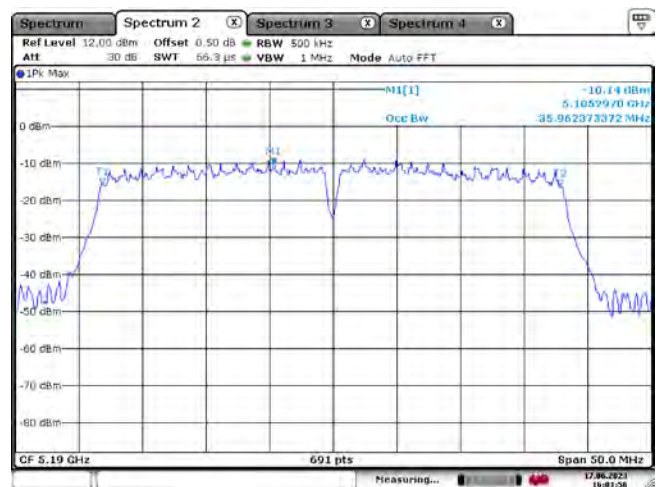


802.11 an40 Band 1

26 dB Bandwidth

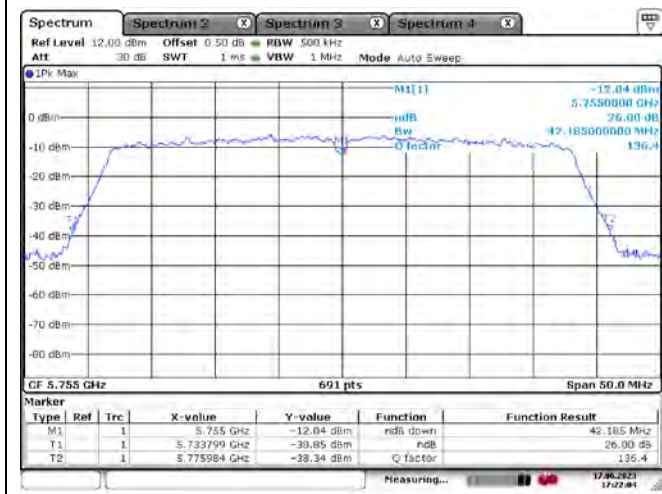


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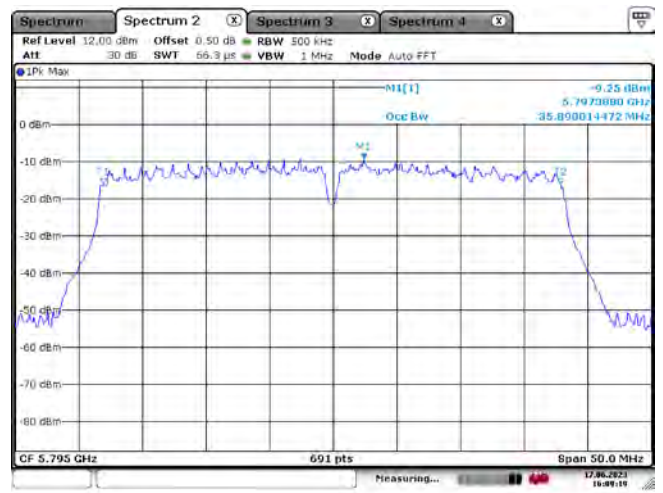
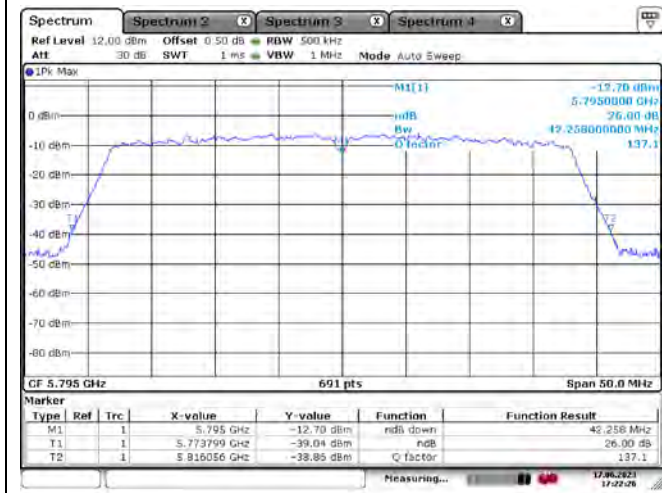
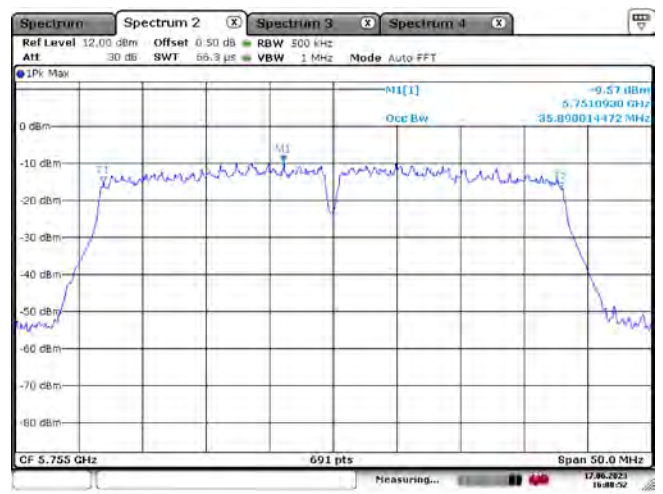


802.11 an40 Band 2

26 dB Bandwidth

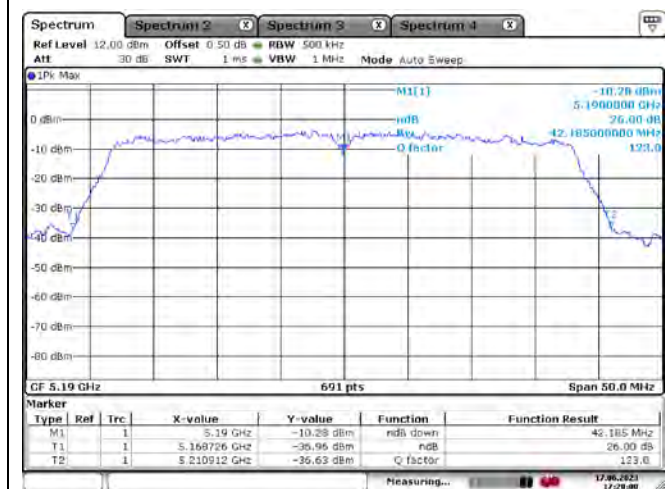


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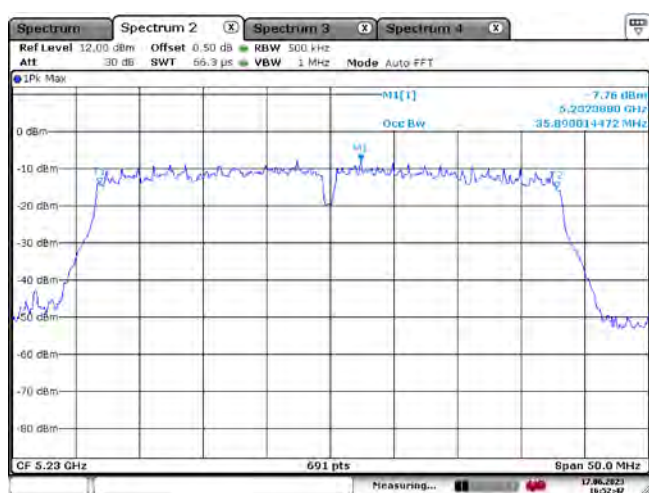
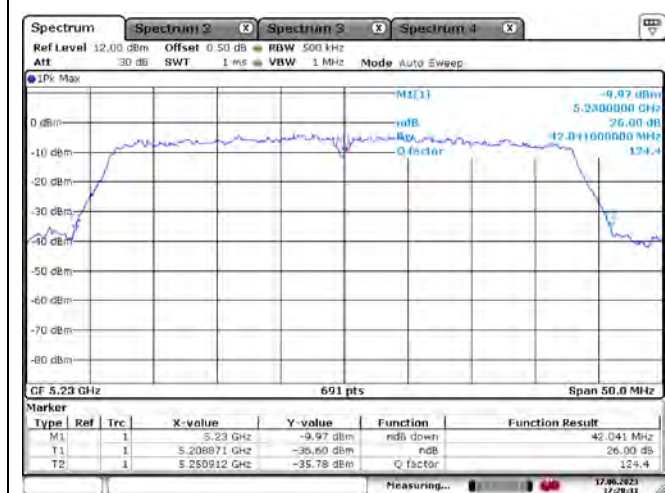
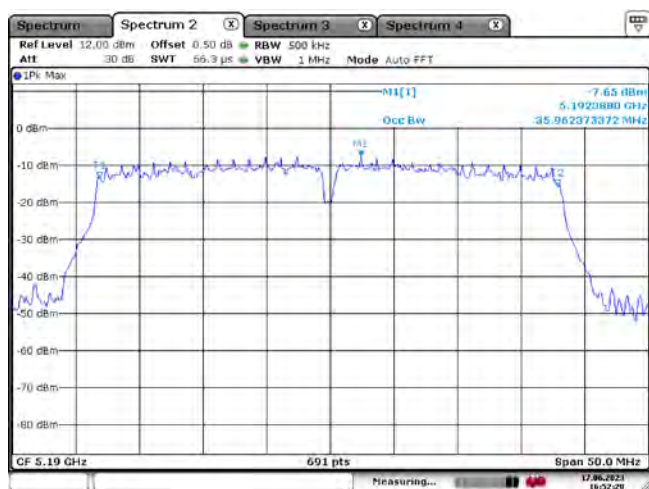


802.11 ac40 Band 1

26 dB Bandwidth

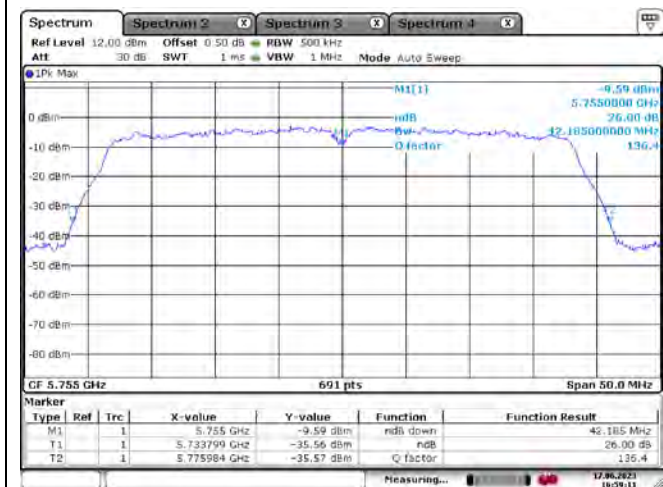


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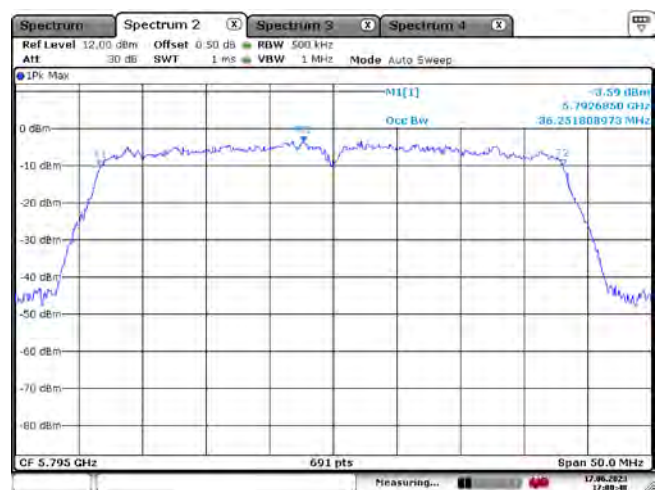
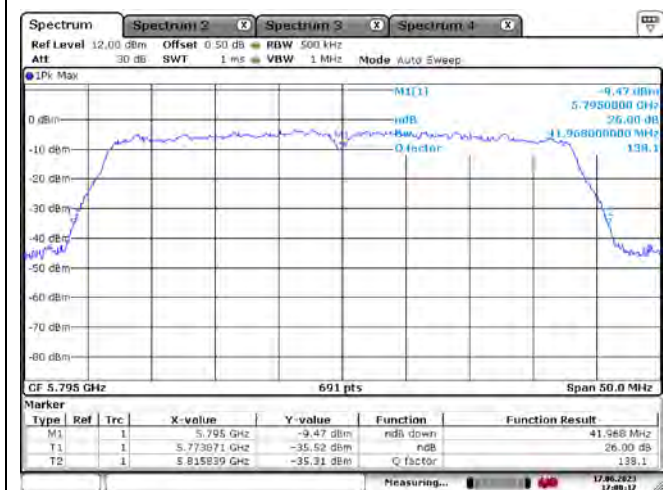
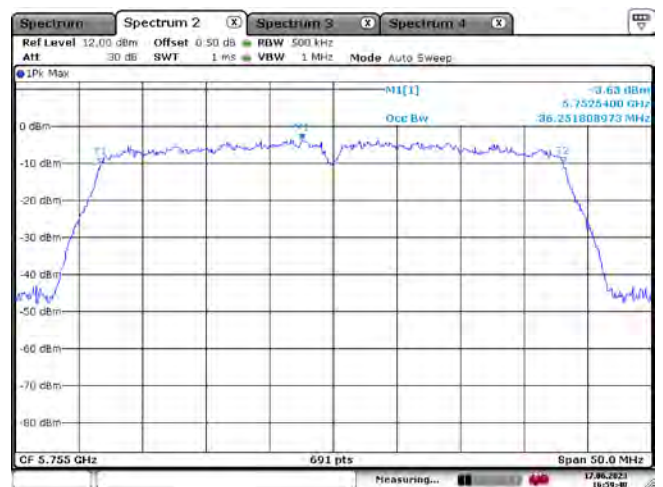


802.11 ac40 Band 2

26 dB Bandwidth

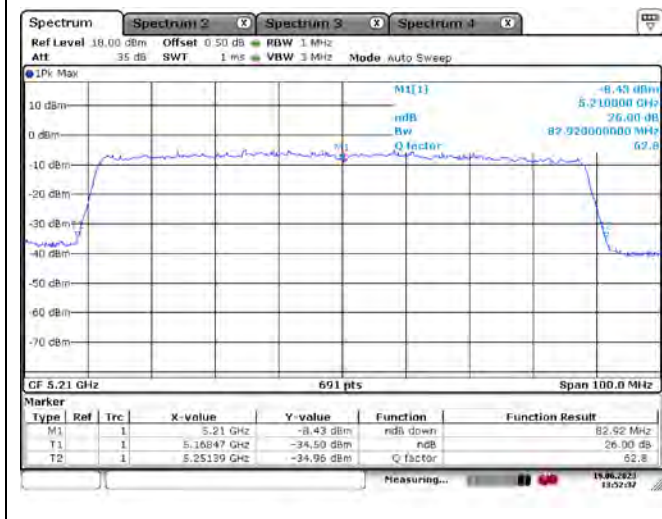


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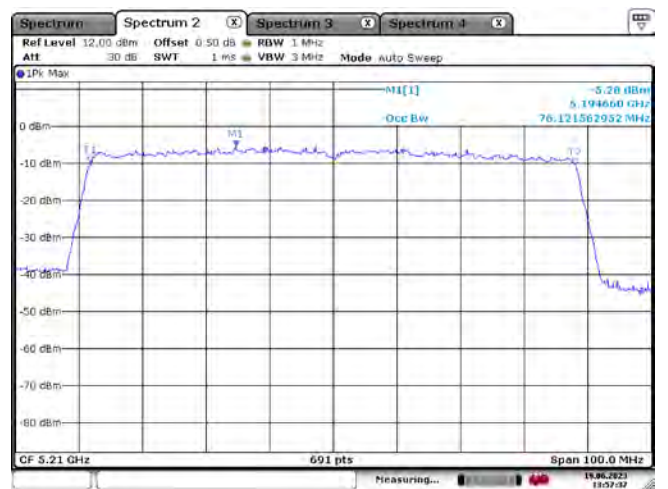


802.11 ac80 Band 1

26 dB Bandwidth

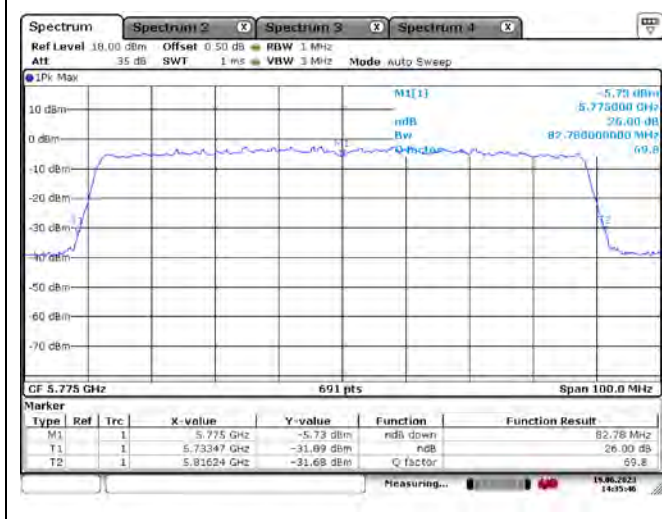


99% Bandwidth

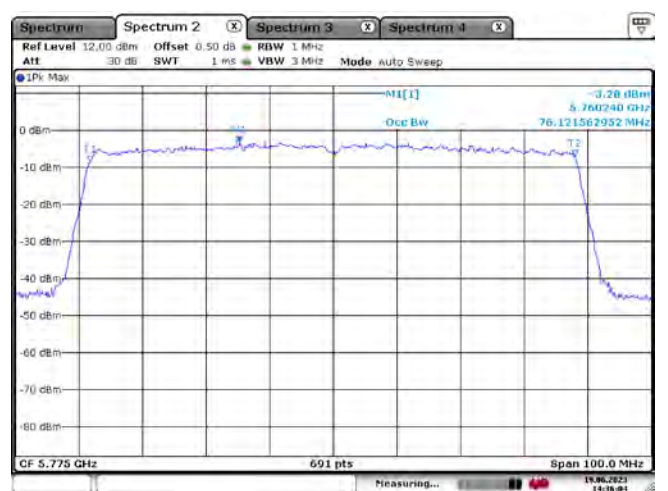


802.11 ac80 Band 2

26 dB Bandwidth



99% Bandwidth



3.2.2 Peak Output Power Measurement

Procedure:

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

Set RBW = 1 MHz.

Span $\geq 3 \times$ RBW

VBW = 3 X RBW

Sweep = auto

Detector = AV

● Duty cycle

Mode	Frequency(MHz)	Duty Cycle	Duty Factor (dB)
a	5200	1.00	0
	5785	1.00	0
an20	5200	1.00	0
	5785	1.00	0
ac20	5200	1.00	0
	5785	1.00	0
an40	5190	1.00	0
	5755	1.00	0
ac40	5190	1.00	0
	5755	1.00	0
ac80	5210	1.00	0
	5775	1.00	0

Measurement Data : **Complies**

Mode	Frequency (MHz)	Test Results	
		Measured data (dBm)	Result
a	5180	6.16	Complies
	5200	5.88	
	5240	5.57	
	5745	5.50	
	5785	5.04	
	5825	5.06	
an20	5180	1.69	Complies
	5200	1.73	
	5240	1.41	
	5745	2.55	
	5785	1.64	

	5825	1.39	
ac20	5180	0.44	Complies
	5200	0.06	
	5240	-0.08	
	5745	-2.87	
	5785	-3.17	
	5825	-3.27	

Mode	Frequency (MHz)	Test Results	
		Measured data (dBm)	Result
an40	5190	-2.40	Complies
	5230	-2.54	
	5755	-2.26	
	5795	-2.41	
ac40	5190	-0.59	Complies
	5230	-0.80	
	5755	-0.49	
	5795	-0.47	

Mode	Frequency (MHz)	Test Results	
		Measured data (dBm)	Result
ac80	5210	-3.72	Complies
	5775	-3.39	

- See next pages for actual measured spectrum plots.

Minimum Standard:

Peak output power	
5150~5250 MHz	Fixed : 30 dBm Mobile and portable : 24 dBm
5250~5350 MHz	24 dBm
5470~5725 MHz	24 dBm
5725~5850 MHz	30 dBm

Measurement Setup

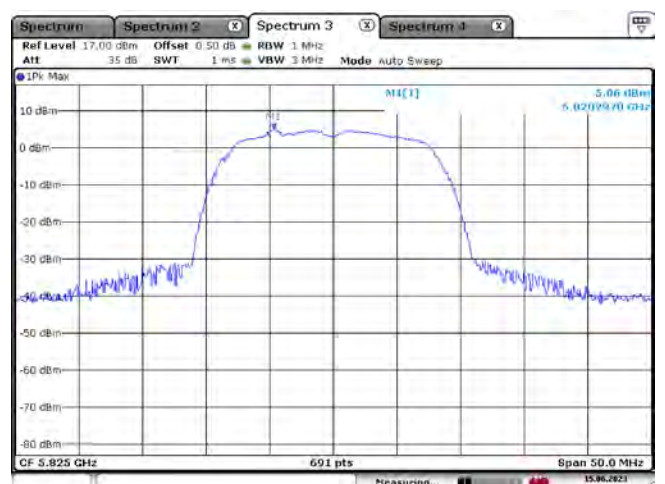
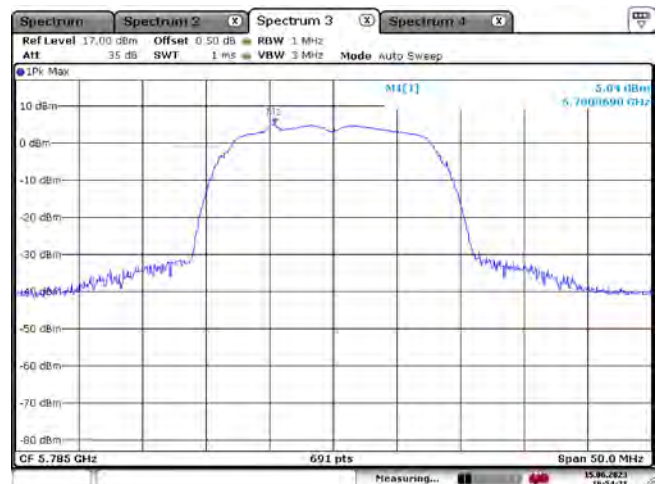
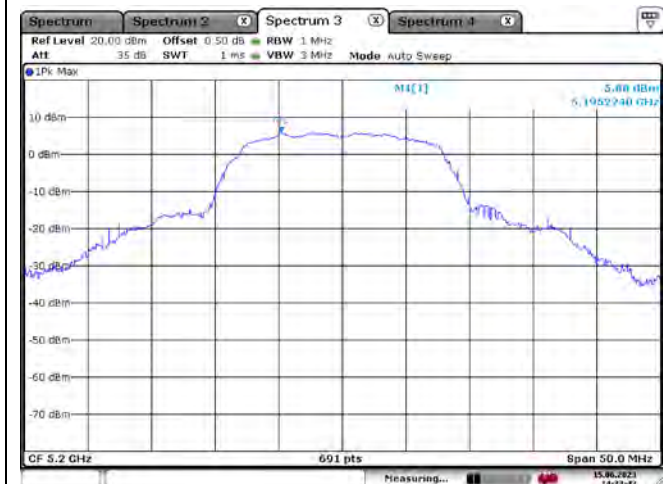
Same as the Chapter 3.2.1 (Figure 1)

802.11 a

Band 1



Band 2

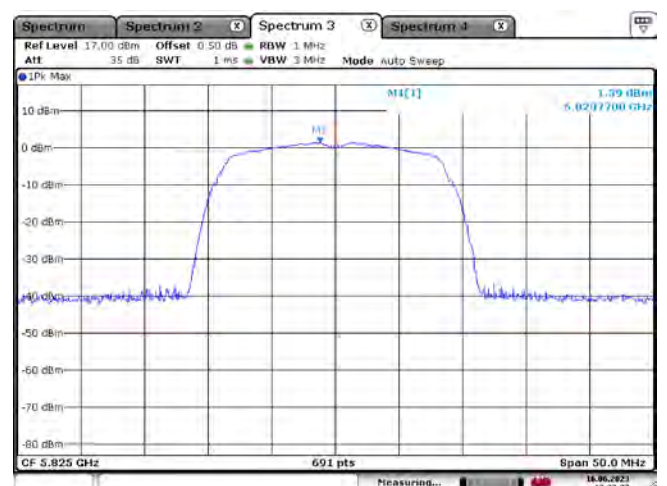
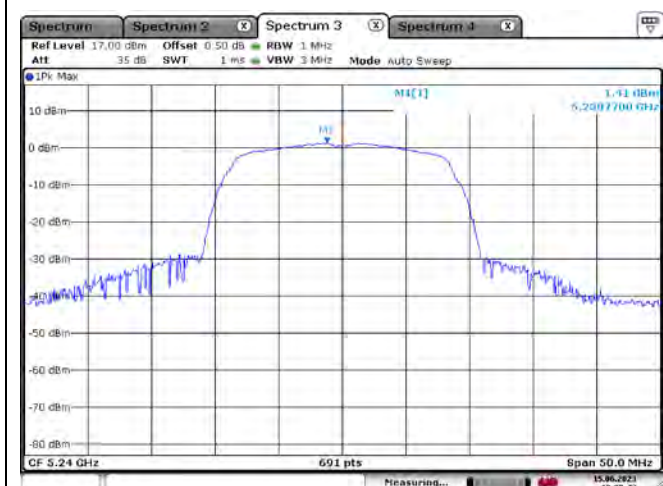
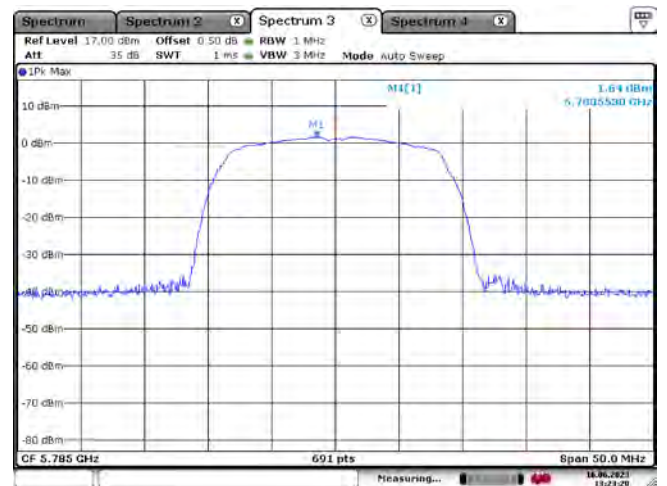
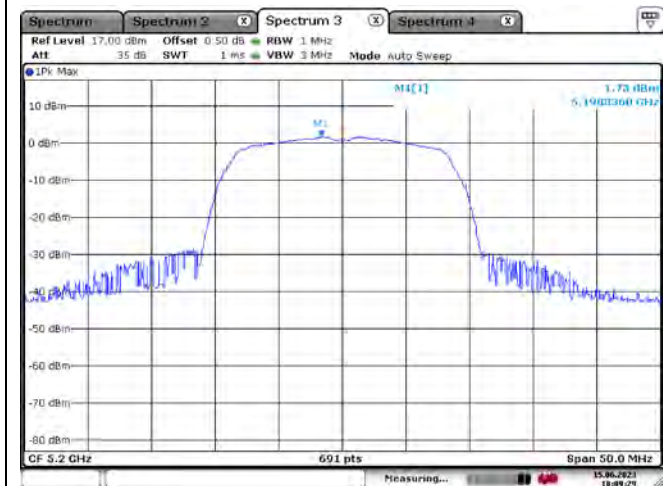
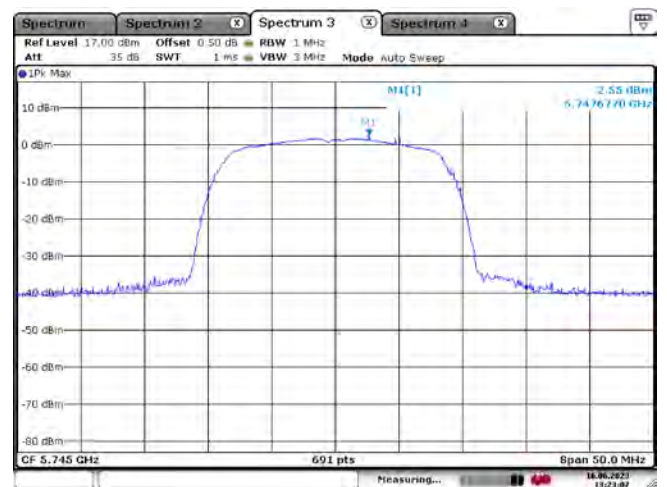


802.11 an20

Band 1



Band 2

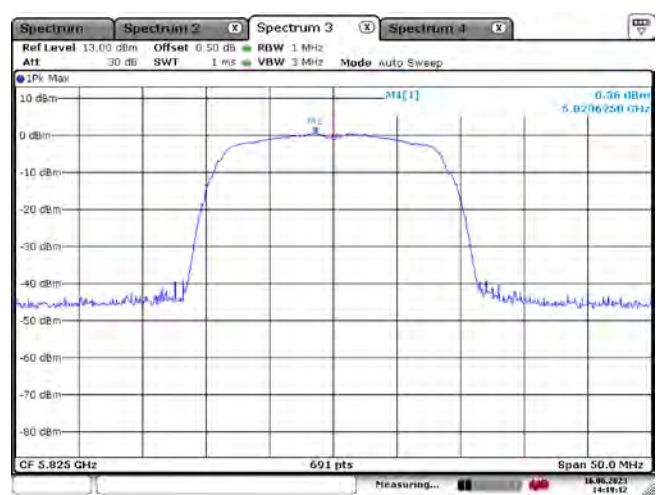
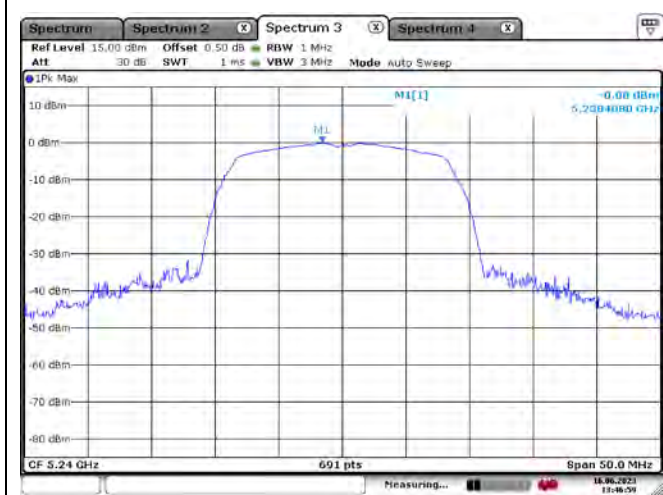
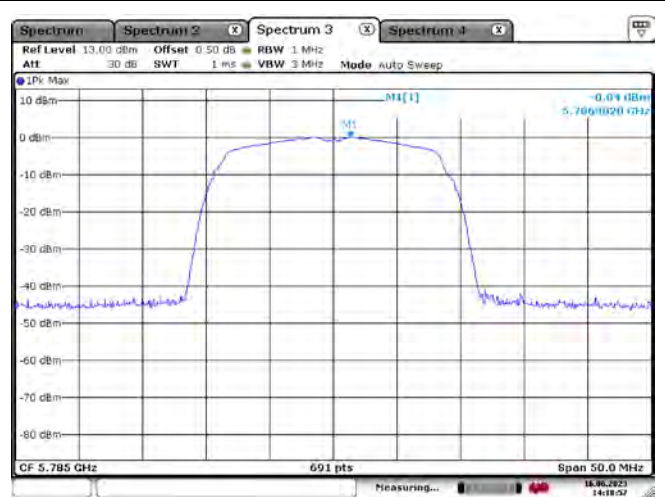
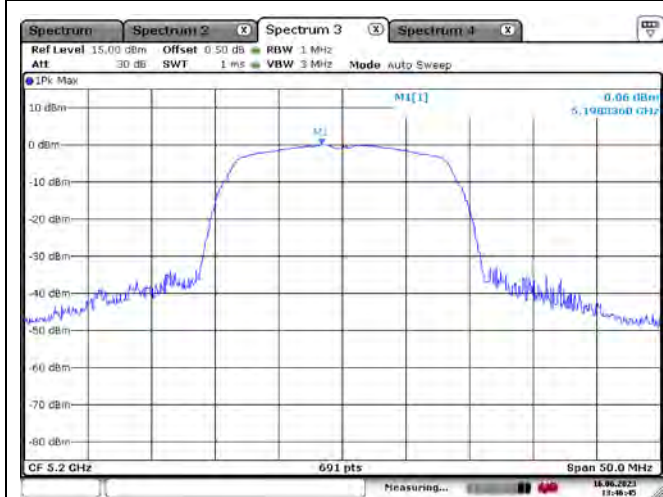
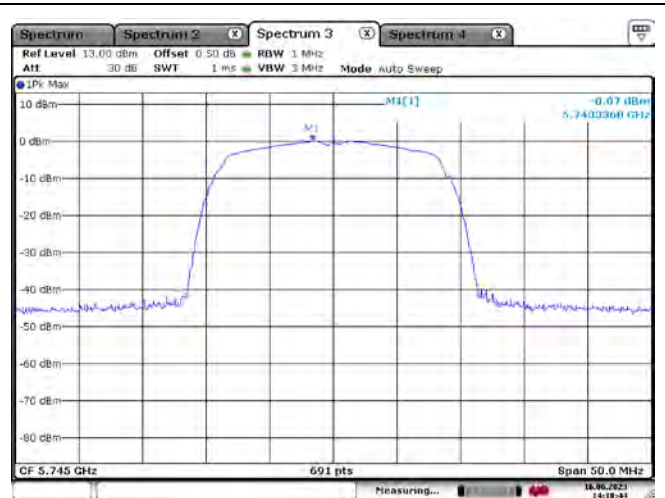


802.11 ac20

Band 1



Band 2

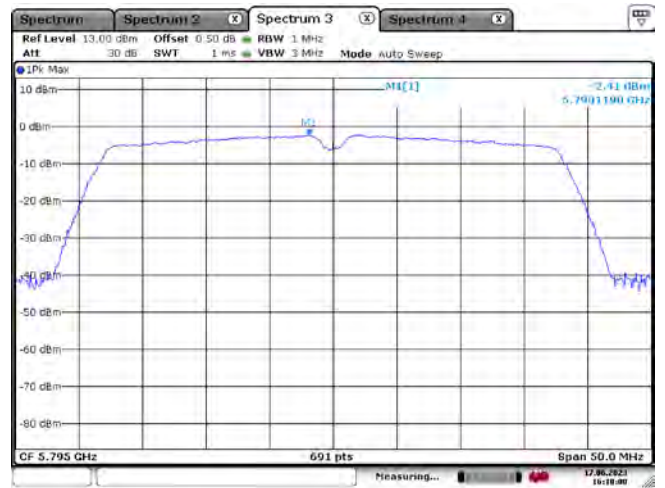
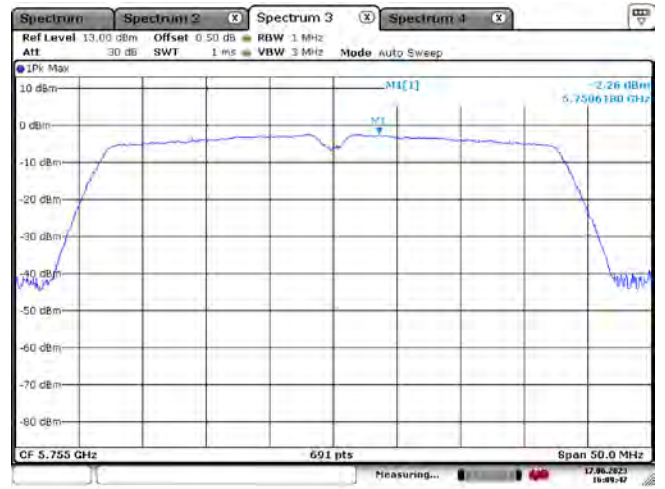


802.11 an40

Band 1

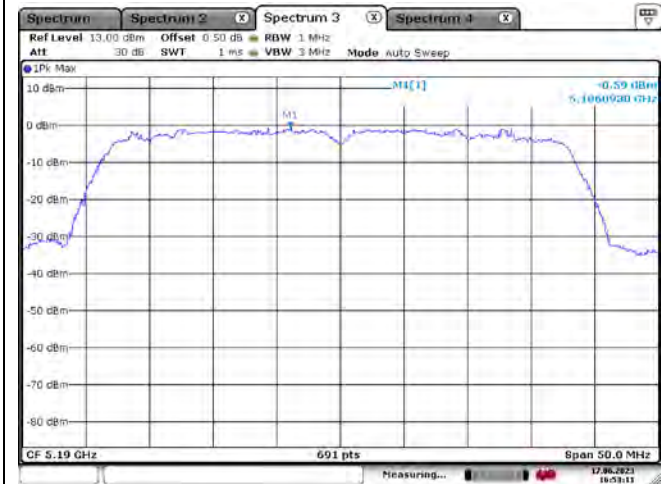


Band 2

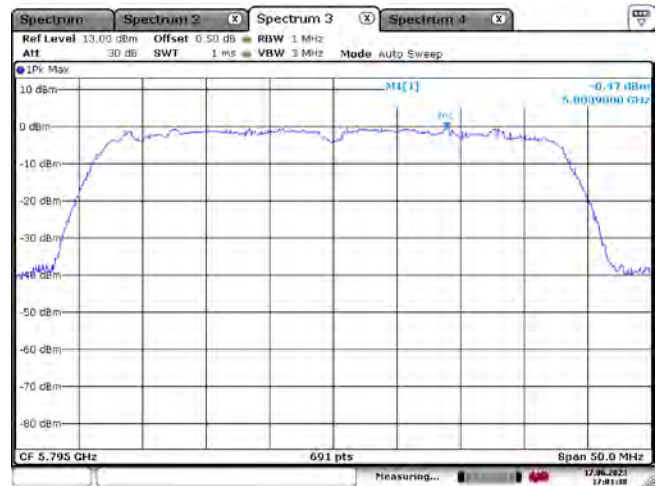
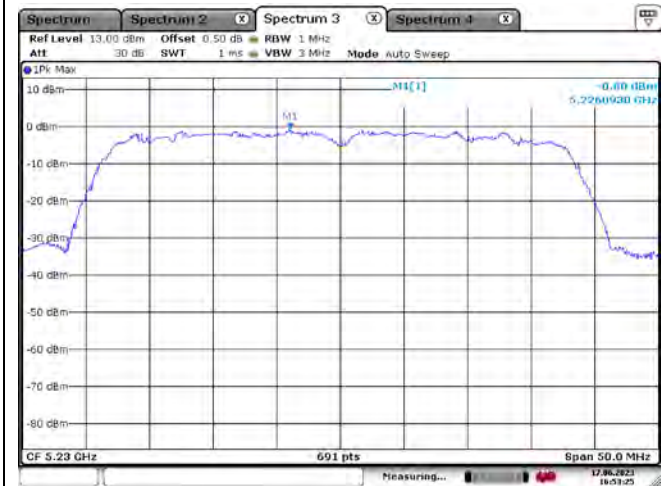
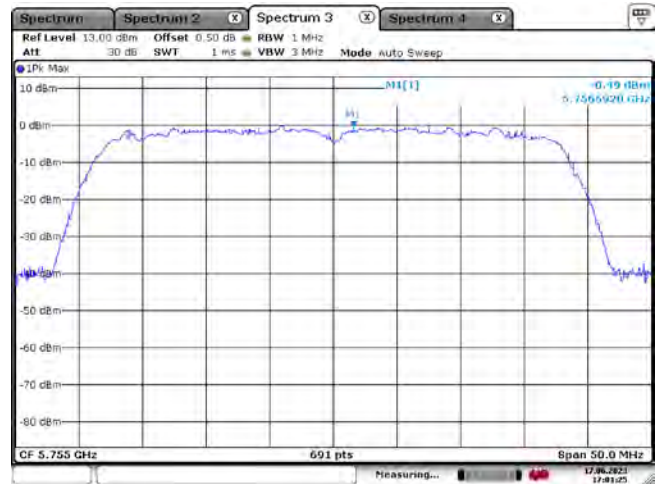


802.11 ac40

Band 1

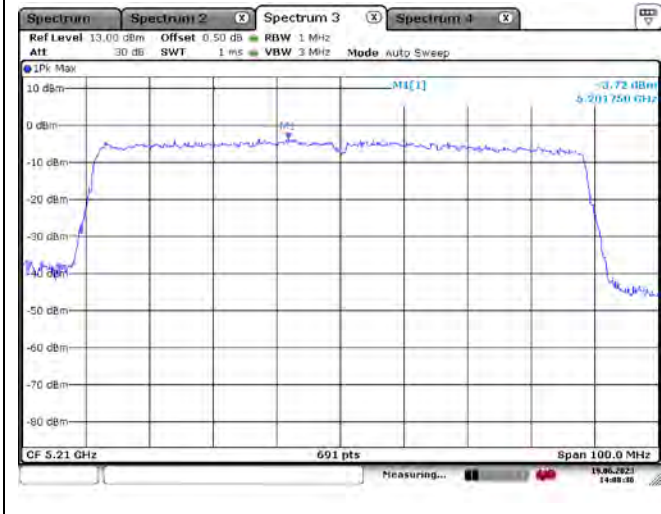


Band 2

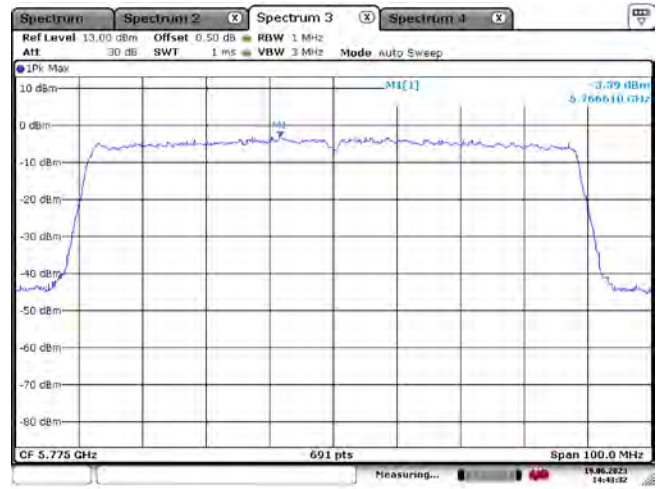


802.11 ac80

Band 1



Band 2



3.2.3 Peak power spectral density

Procedure:

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance.

The spectrum analyzer is set to:

Set RBW = 1 MHz

VBW = 3 X RBW

Set detector = RMS

Sweep = auto

Trace = max hold

Measurement Data : **Complies**

Mode	Frequency (MHz)	Test Results	
		Measured data (dBm)	Result
a	5180	-1.50	Complies
	5200	-1.27	
	5240	-1.44	
	5745	1.53	
	5785	2.76	
	5825	2.29	
an20	5180	-1.35	Complies
	5200	-1.32	
	5240	-1.41	
	5745	-1.58	
	5785	-1.47	
	5825	-2.04	
ac20	5180	-2.87	Complies
	5200	-3.17	
	5240	-3.27	
	5745	-3.43	
	5785	-3.20	
	5825	-2.67	

Mode	Frequency (MHz)	Test Results	
		Measured data (dBm)	Result
an40	5190	-5.82	Complies
	5230	-5.58	
	5755	-5.78	
	5795	-5.82	
ac40	5190	-3.58	Complies
	5230	-3.61	
	5755	-3.20	
	5795	-2.54	

Mode	Frequency (MHz)	Test Results	
		Measured data (dBm)	Result
ac80	5210	-7.38	Complies
	5775	-5.76	

- See next pages for actual measured spectrum plots.

Minimum Standard:

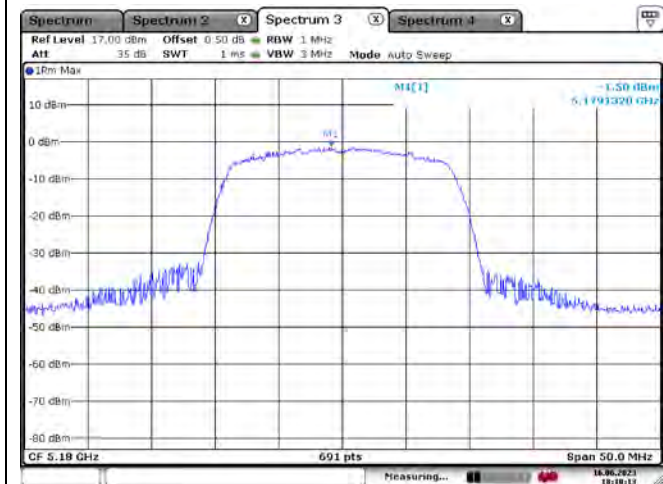
Power Density	shall not exceed the lesser of 1 W or 17 dBm/MHz + 10 log B
---------------	---

Measurement Setup

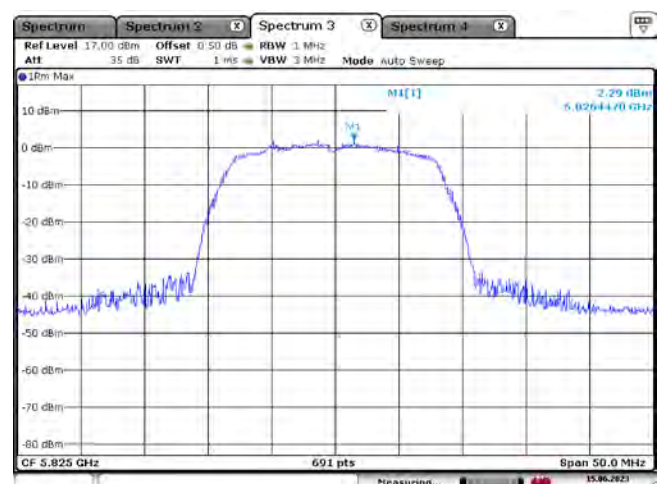
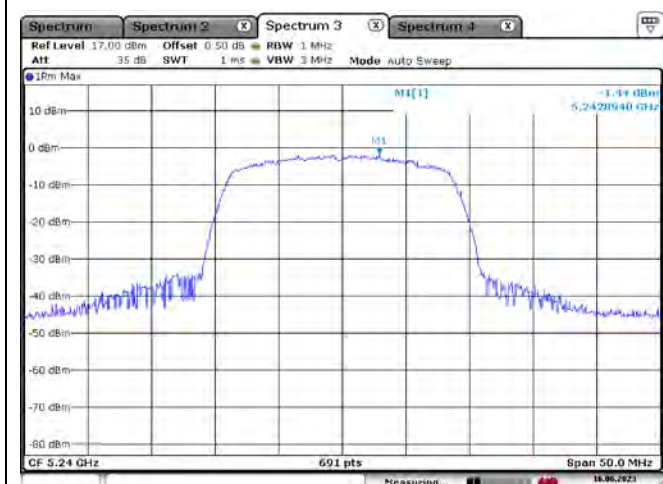
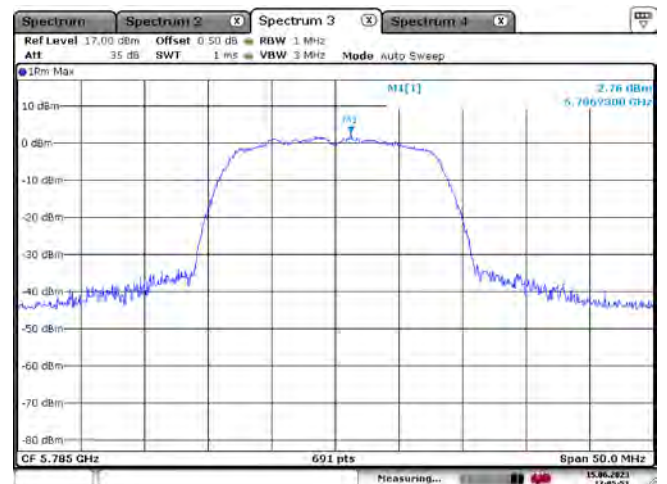
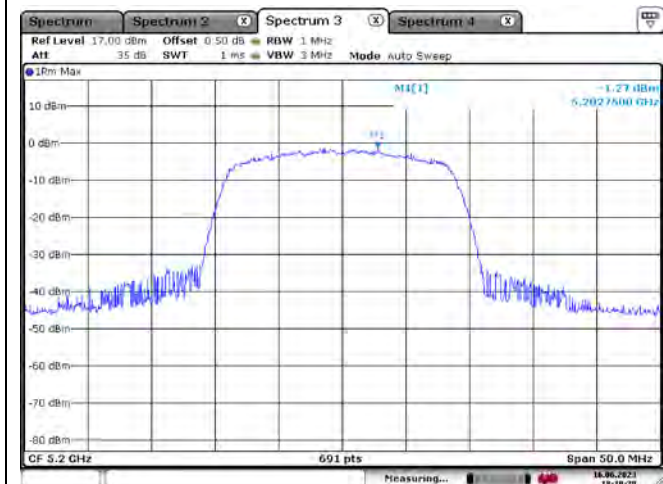
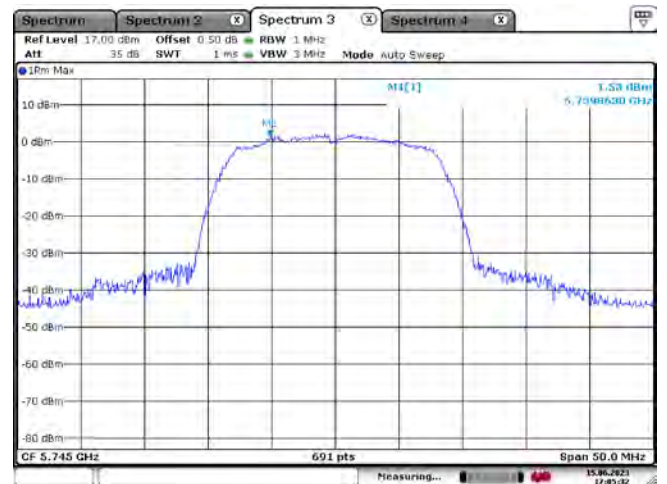
Same as the Chapter 3.2.1 (Figure 1)

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Band 1

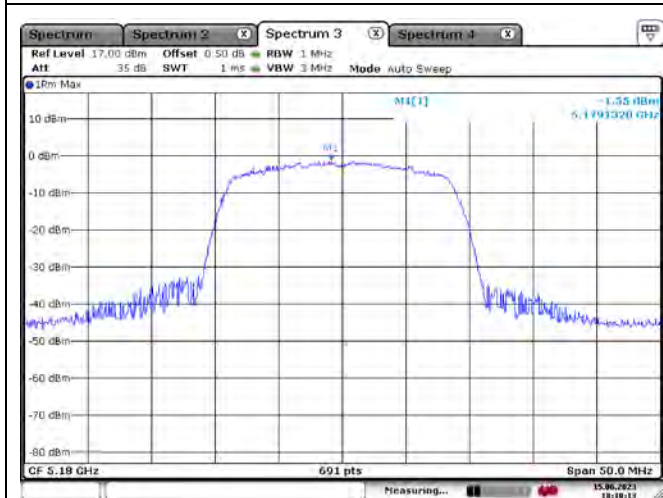


Band 2

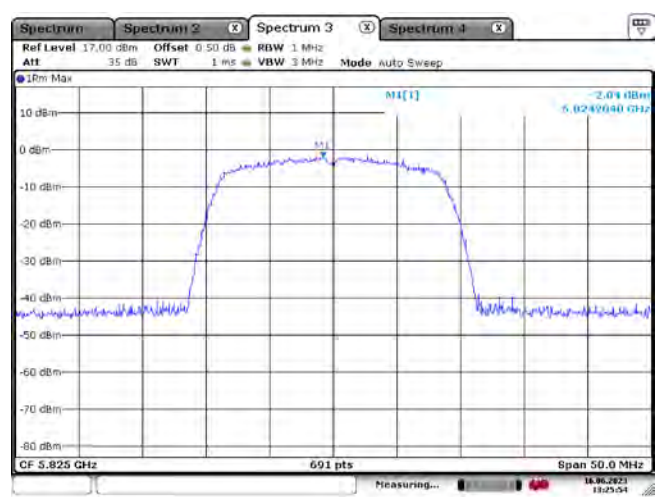
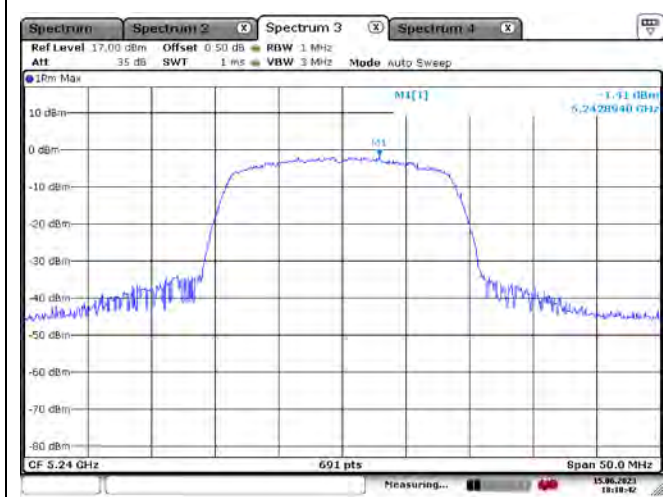
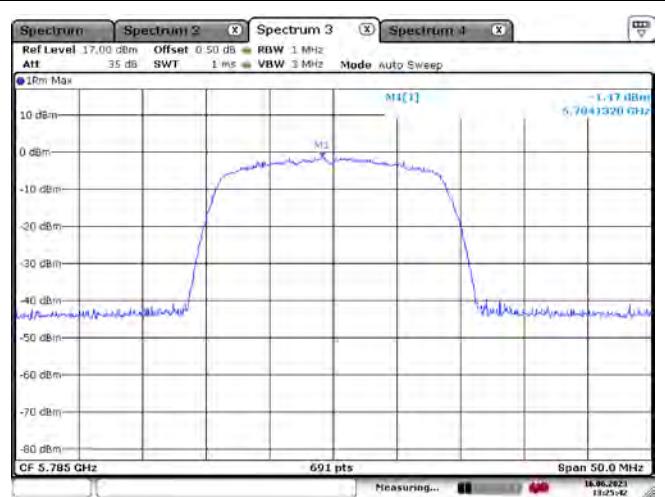
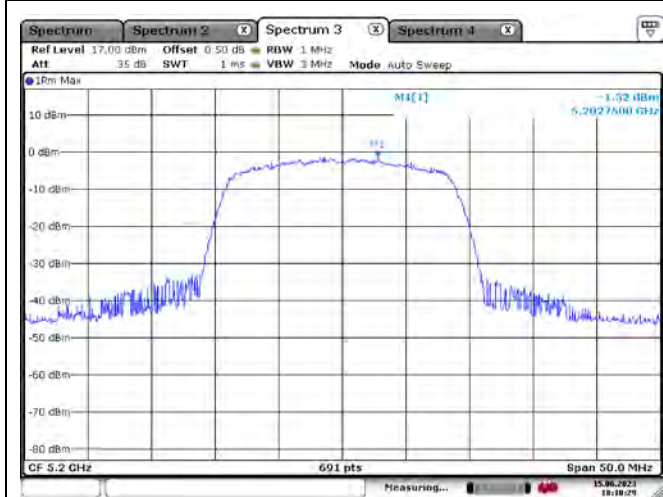
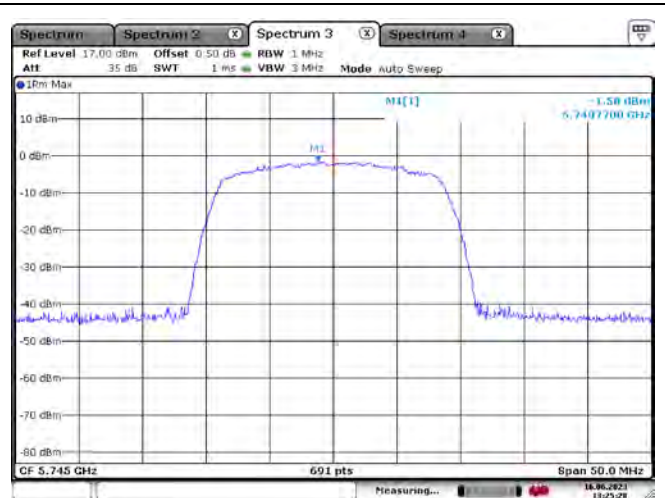


802.11 an20

Band 1

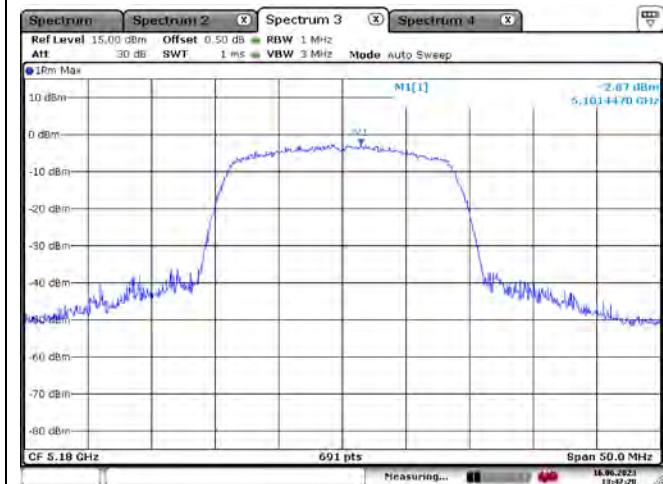


Band 2

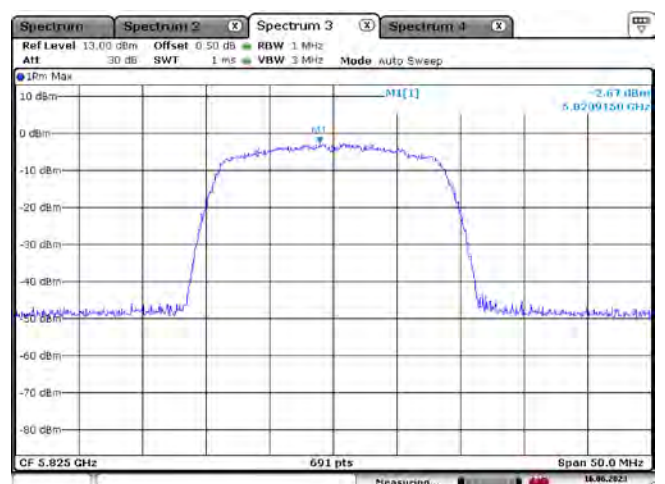
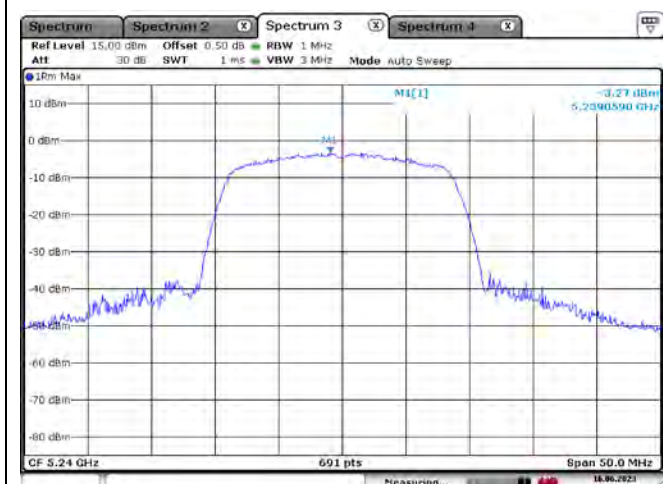
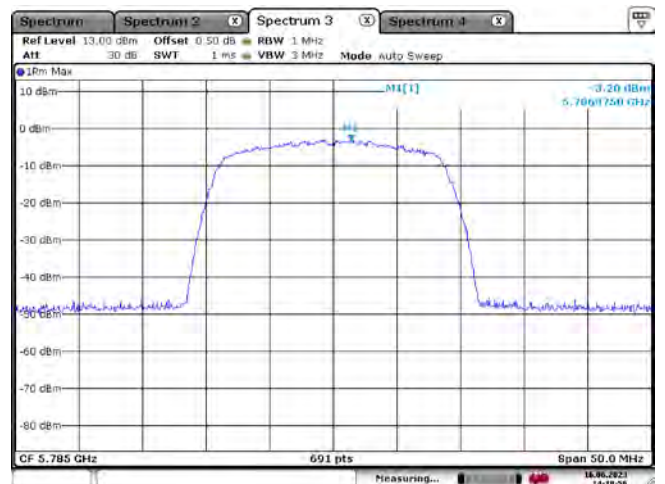
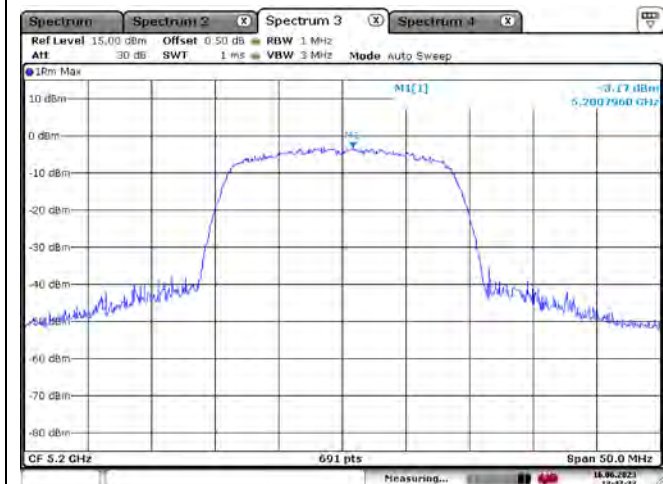
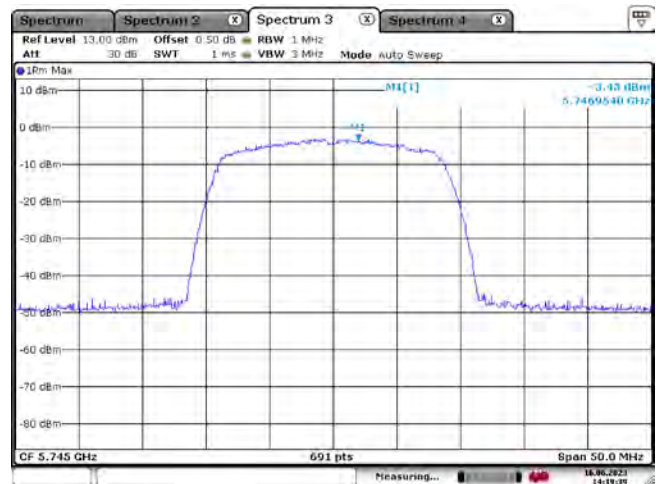


802.11 ac20

Band 1

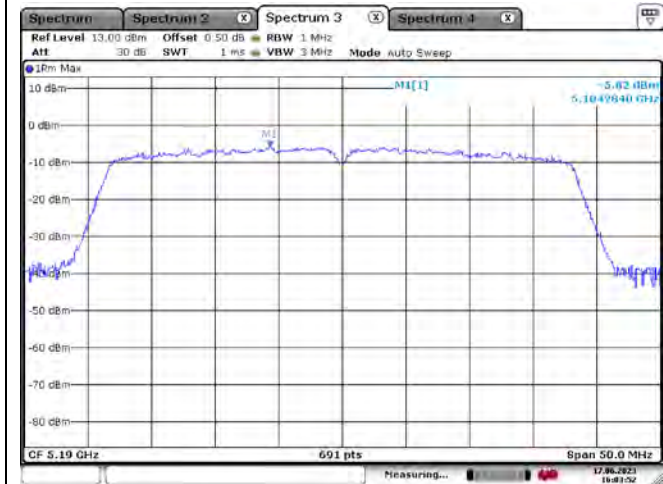


Band 2

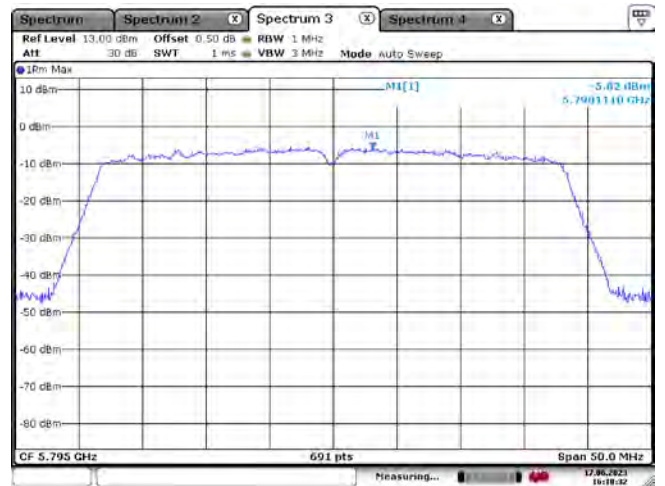
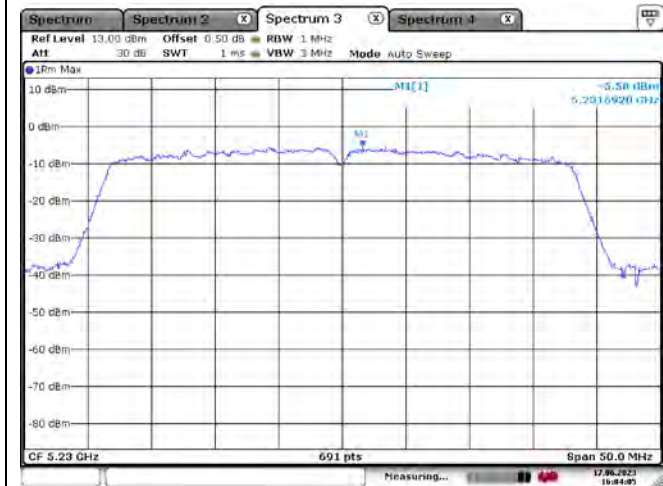
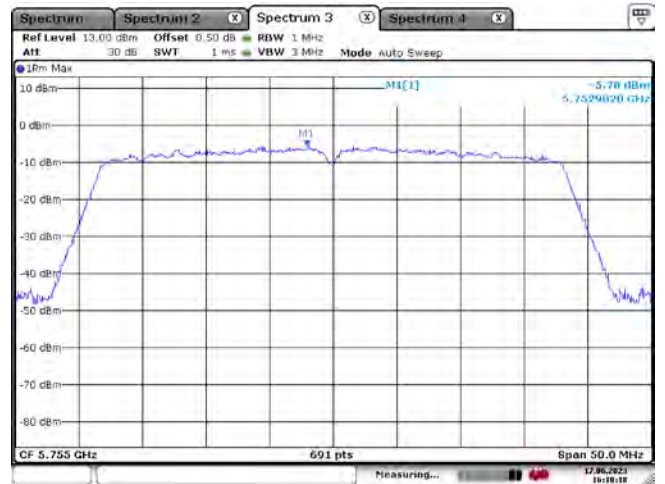


802.11 an40

Band 1

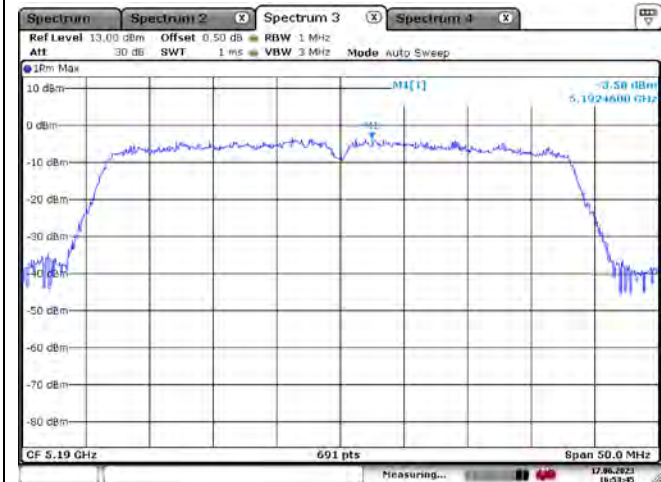


Band 2

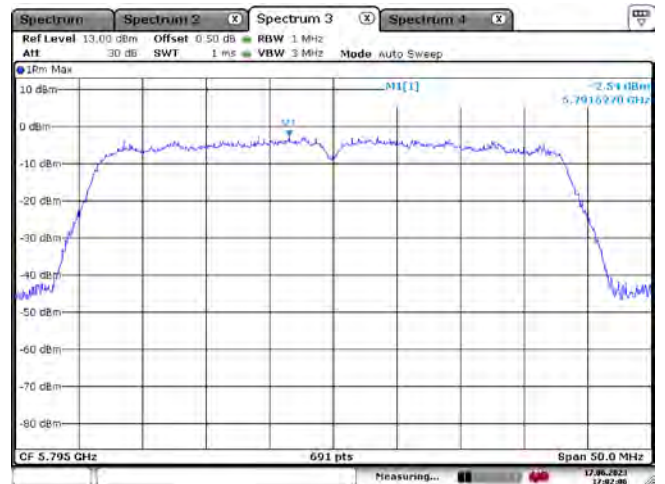
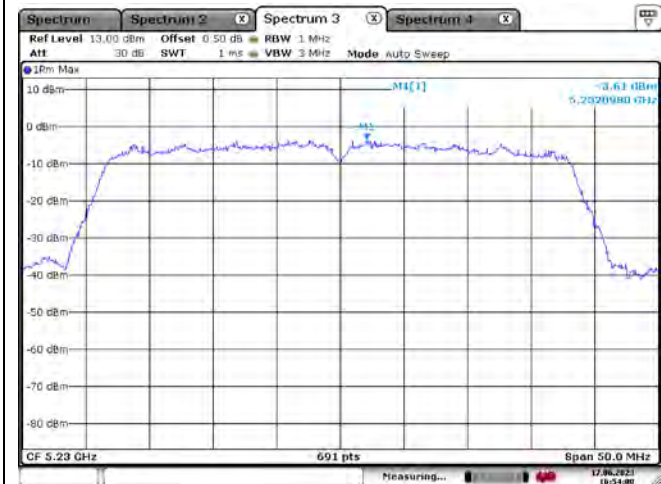
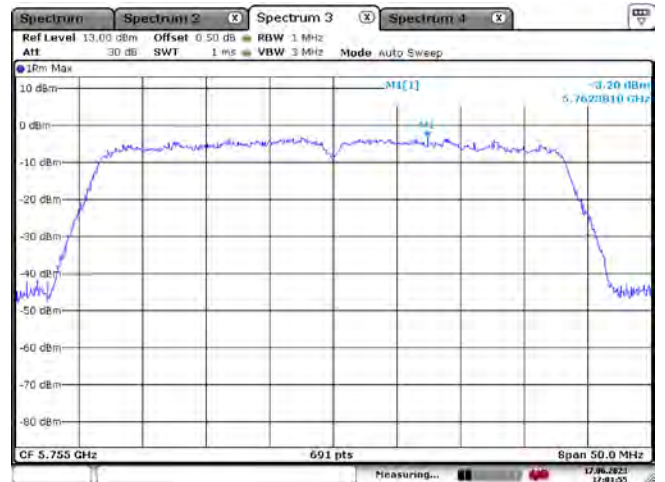


802.11 ac40

Band 1

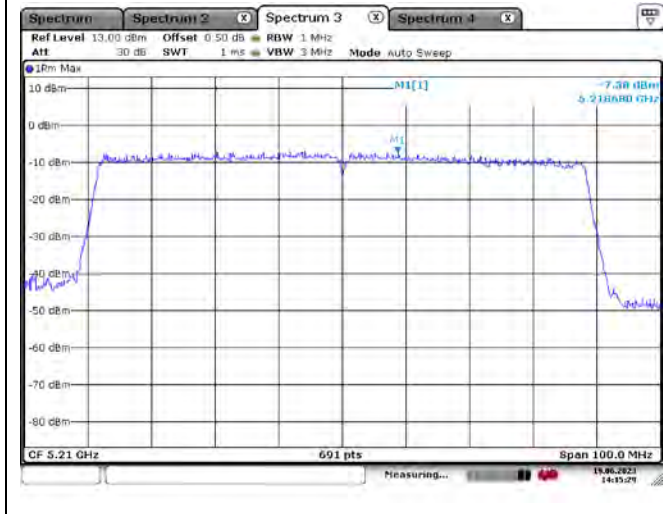


Band 2

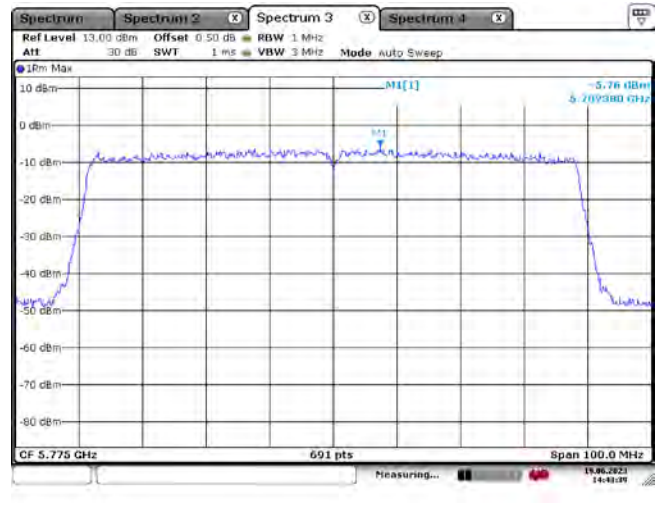


802.11 ac80

Band 1



Band 2



3.2.4 6 dB Bandwidth

Procedure:

The bandwidth at 6 dB below the highest in-band spectral density was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 6 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz

Span = 3 X RBW

VBW = 3 X RBW

Sweep = auto

Trace = max hold

Detector function = peak

Measurement Data : Complies

Mode	Frequency (MHz)	Test Results	
		Measured data (MHz)	Result
a	5180	16.787	Complies
	5200	16.787	
	5240	16.787	
	5745	16.643	
	5785	16.715	
	5825	16.787	
an20	5180	18.017	Complies
	5200	18.017	
	5240	18.017	
	5745	17.945	
	5785	17.945	
	5825	18.017	
ac20	5180	18.017	Complies
	5200	18.017	
	5240	18.017	
	5745	17.945	
	5785	18.017	
	5825	17.945	

Mode	Frequency (MHz)	Test Results	
		Measured data (MHz)	Result
an40	5190	37.699	Complies
	5230	37.771	
	5755	37.771	
	5795	38.205	
ac40	5190	37.699	Complies
	5230	37.916	
	5755	37.699	
	5795	37.844	

Mode	Frequency (MHz)	Test Results	
		Measured data (MHz)	Result
ac80	5210	78.000	Complies
	5775	77.570	

- See next pages for actual measured spectrum plots.

Minimum Standard:

6 dB Bandwidth $\geq$ 500 kHz

Measurement Setup

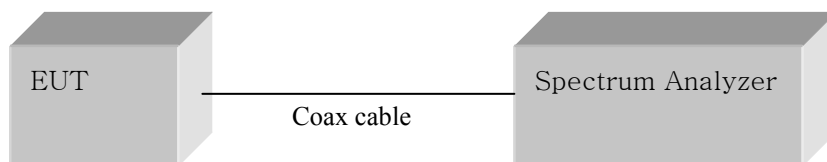


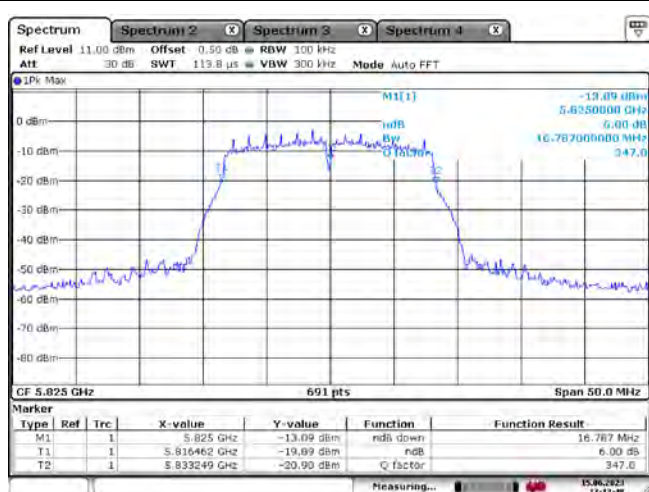
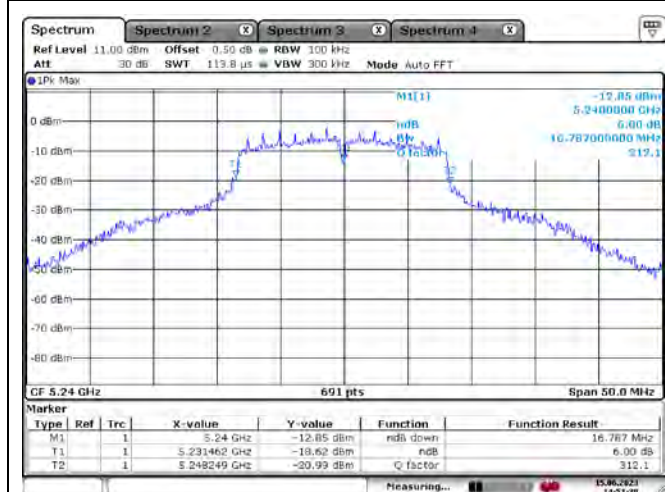
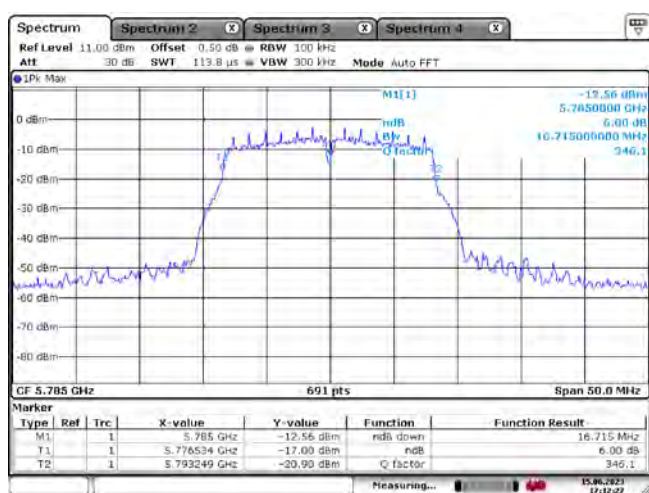
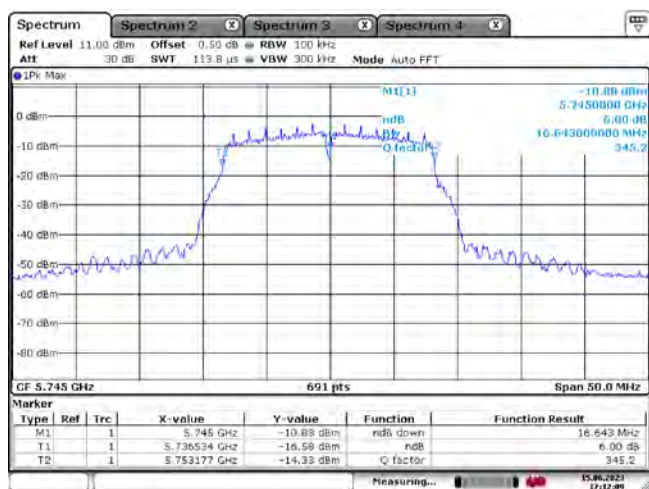
Figure 1: Measurement setup for the carrier frequency separation

802.11 a

Band 1

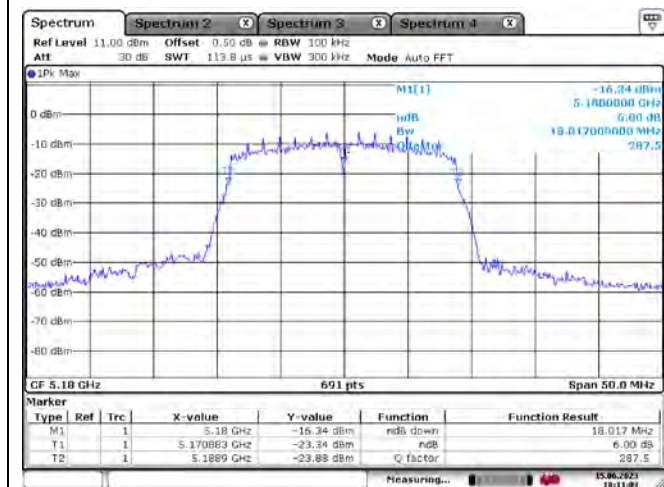


Band 2

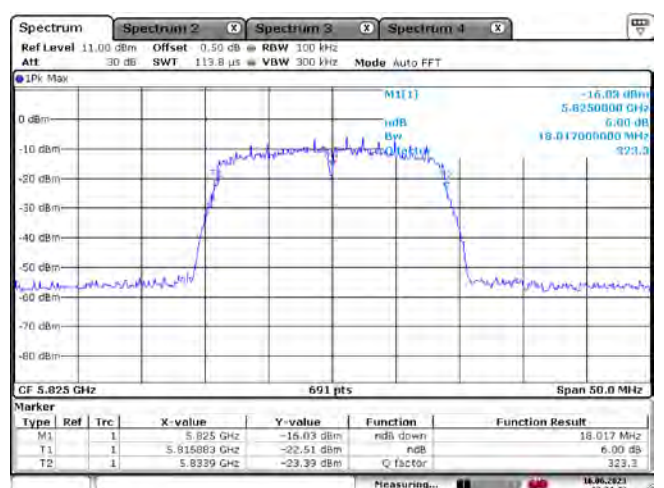
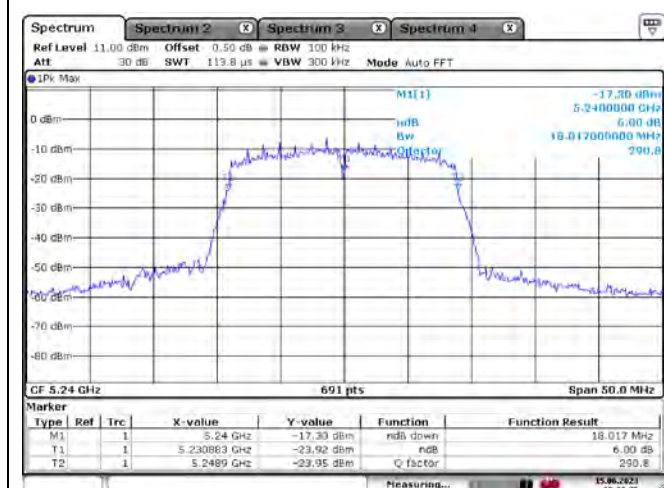
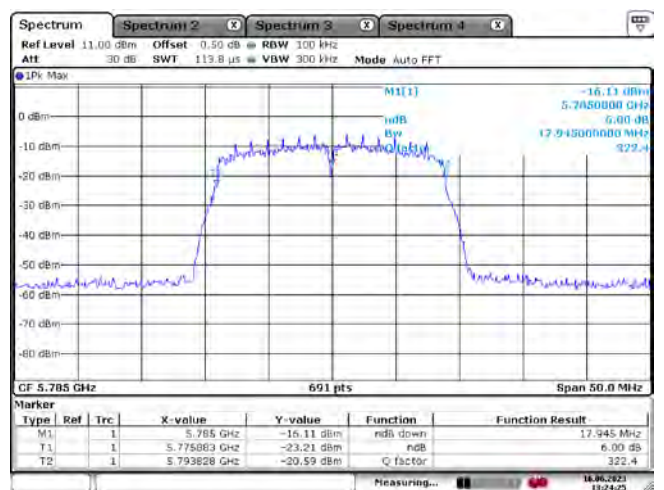
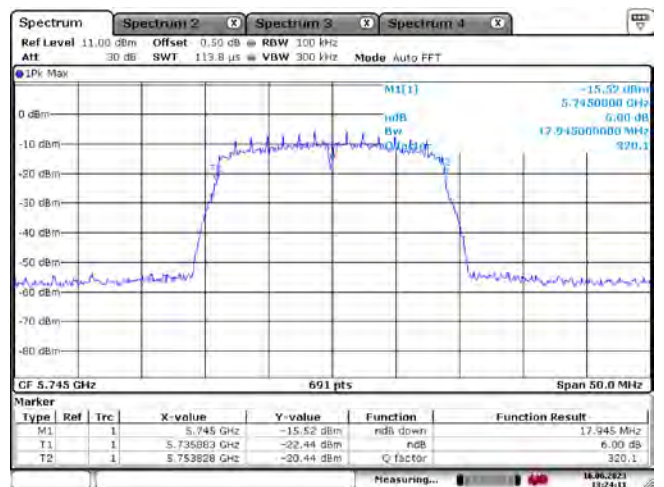


802.11 an20

Band 1

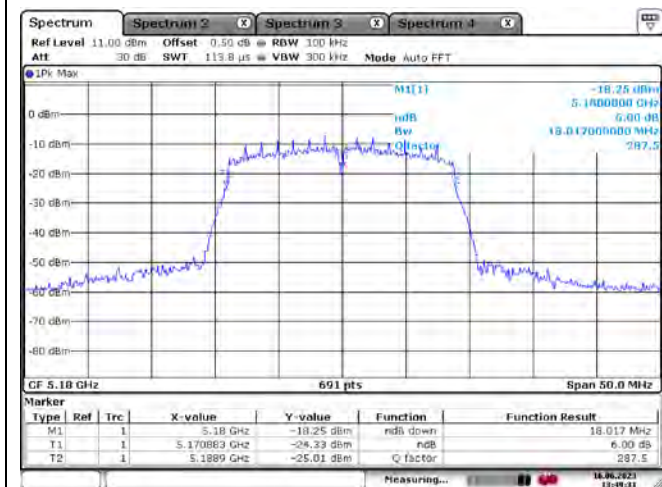


Band 2

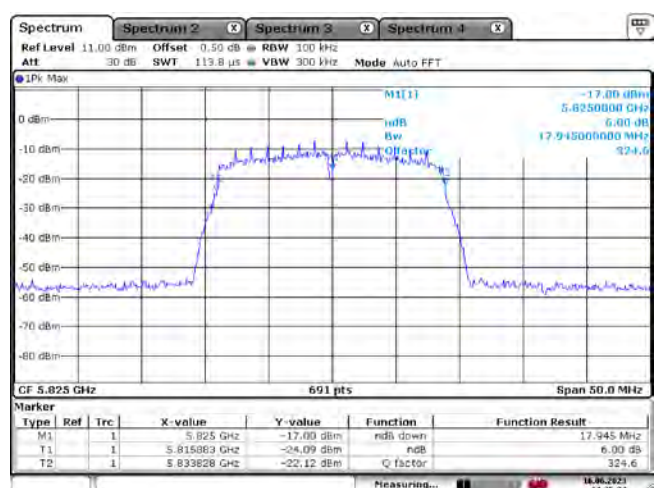
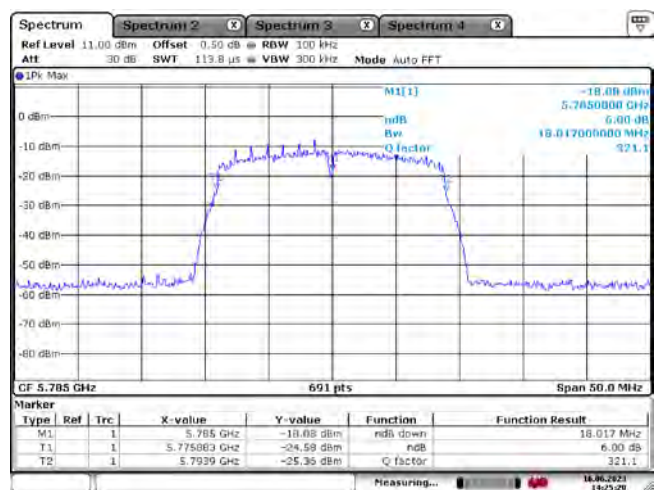
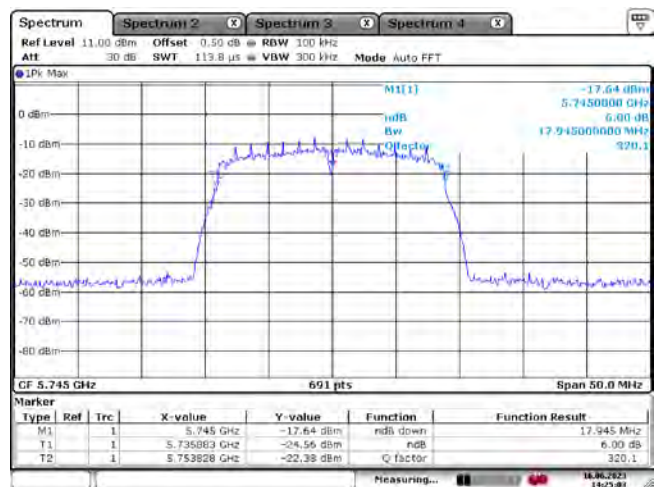


802.11 ac20

Band 1

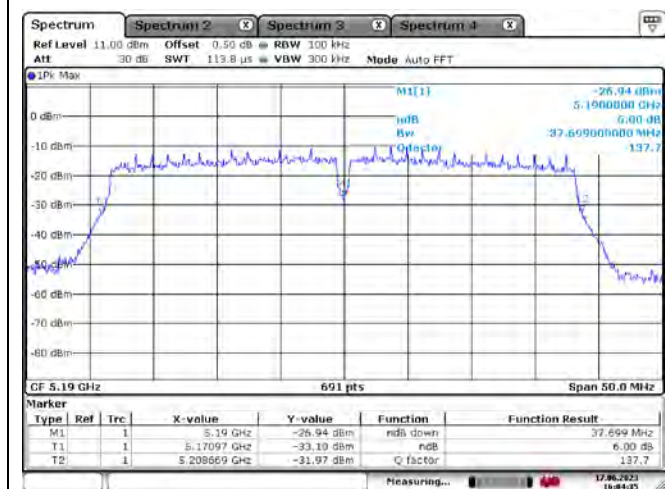


Band 2

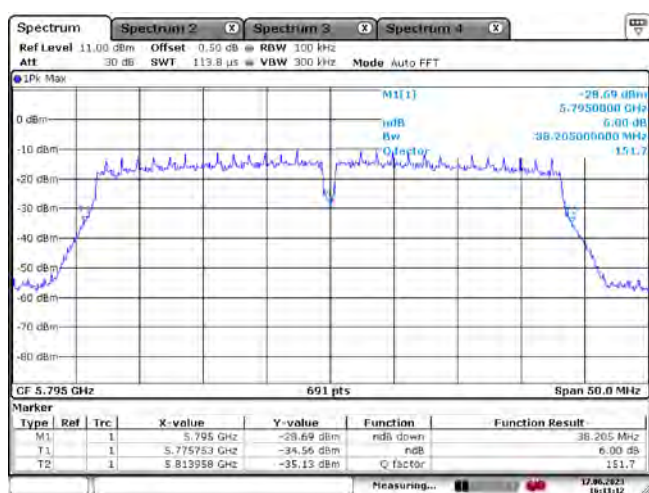
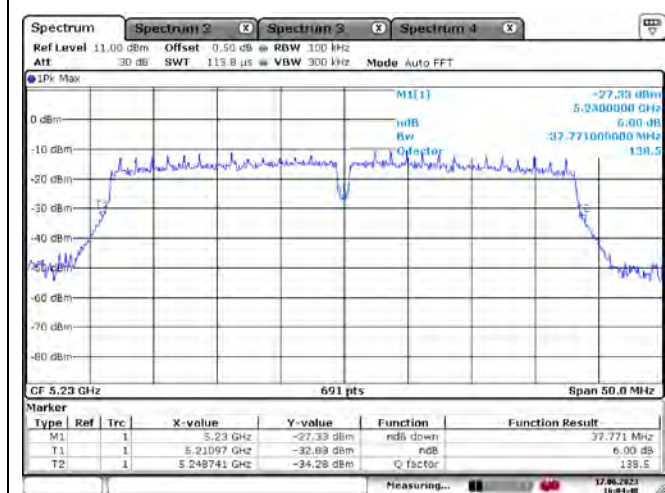
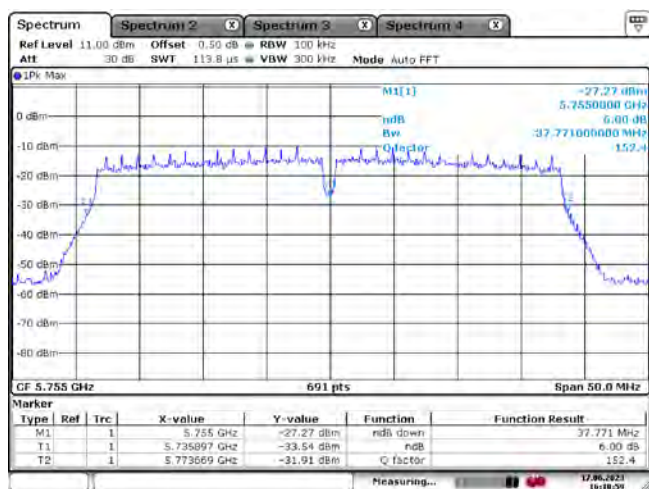


802.11 an40

Band 1

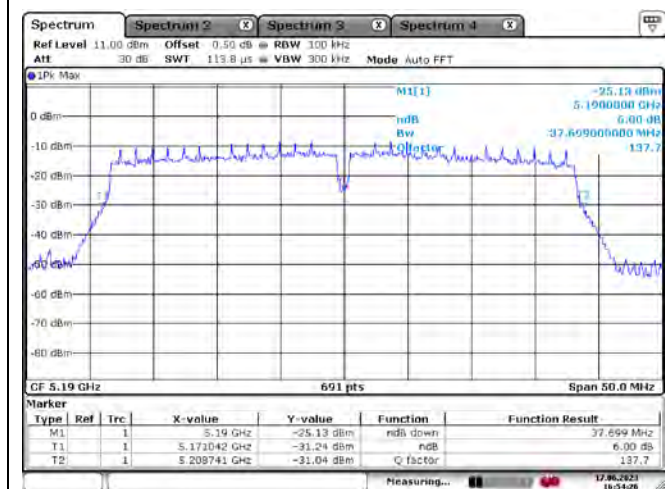


Band 2

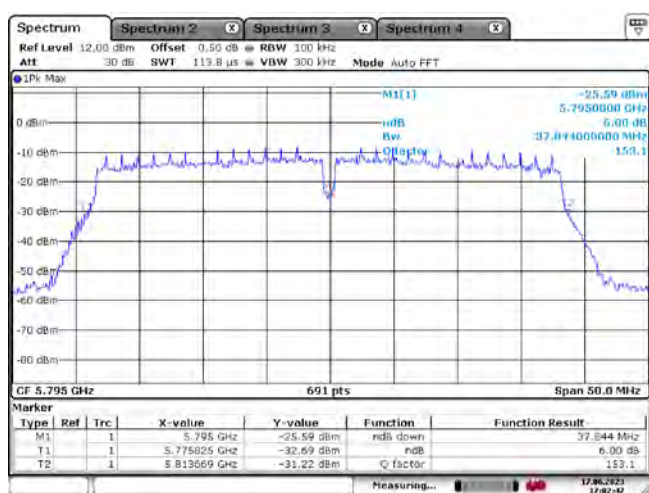
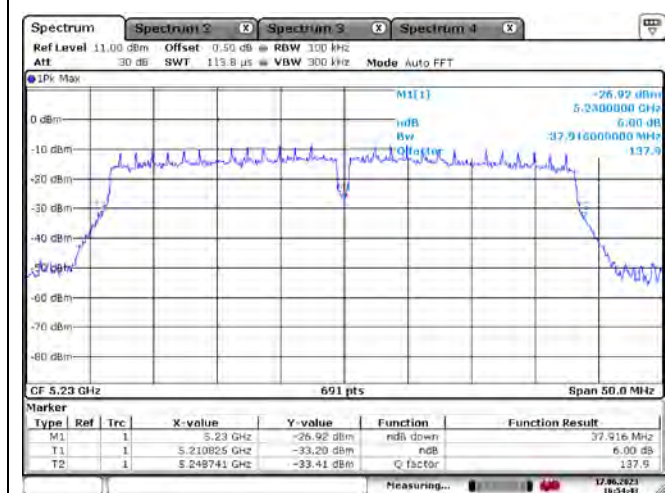
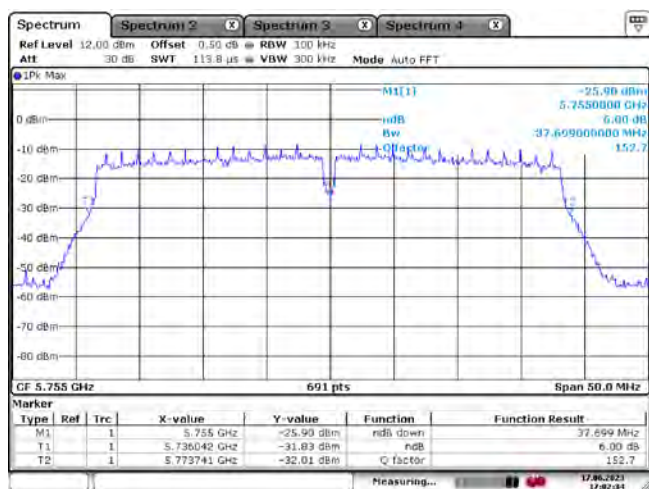


802.11 ac40

Band 1

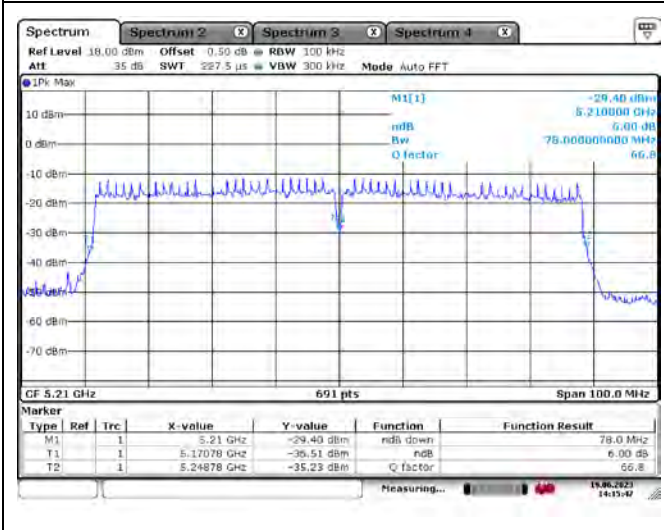


Band 2

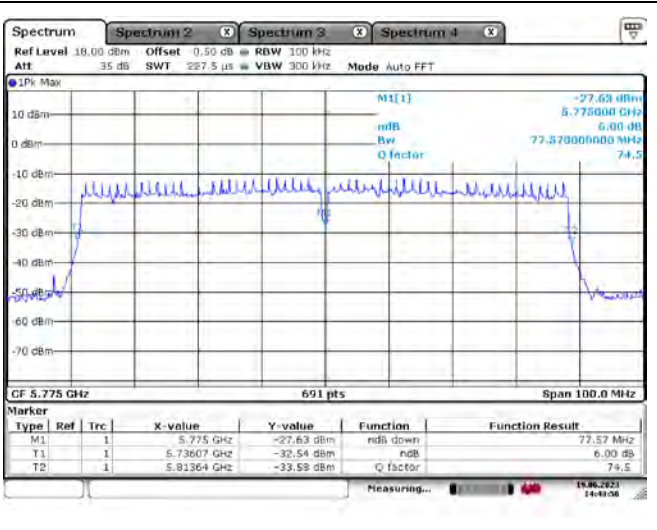


802.11 ac80

Band 1



Band 2



3.2.5 Band Edge

Procedure:

For transmitters operating in band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 1 MHz

VBW $\geq 3 \times$ RBW

Detector = RMS

Trace = max hold

Sweep = auto

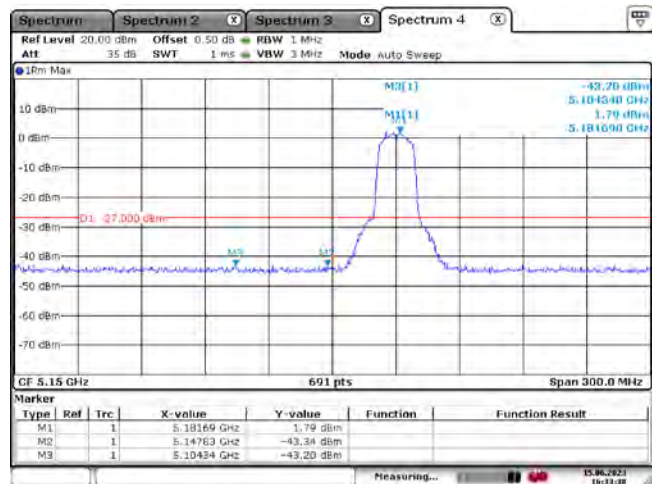
Measurement Data: Complies

- See next pages for actual measured spectrum plots.

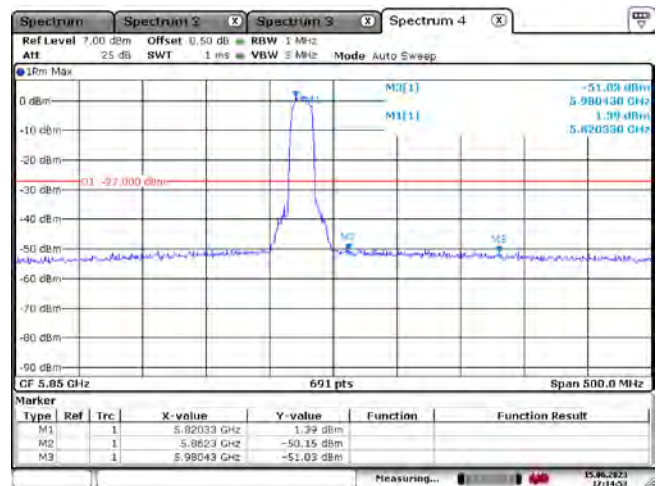
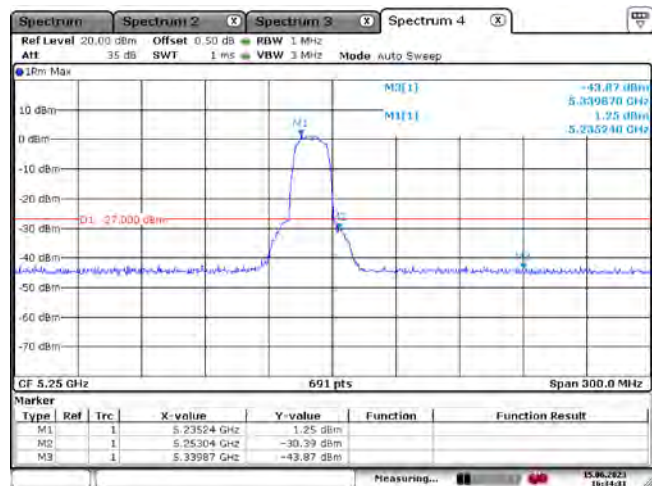
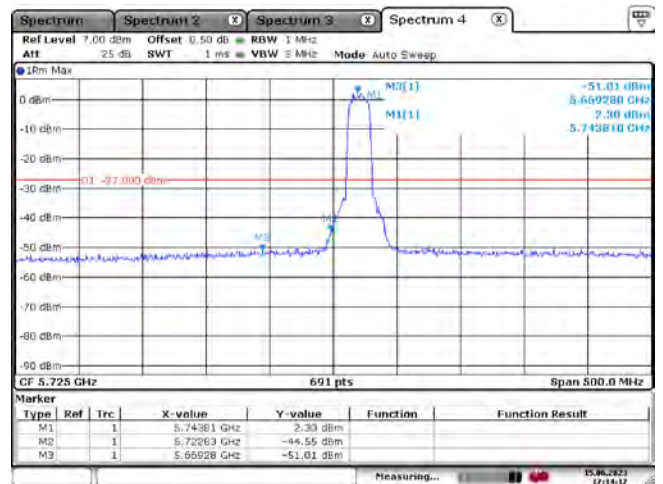
Minimum Standard:	≤ -17 dBm/MHz
--------------------------	--------------------

802.11 a

Band 1

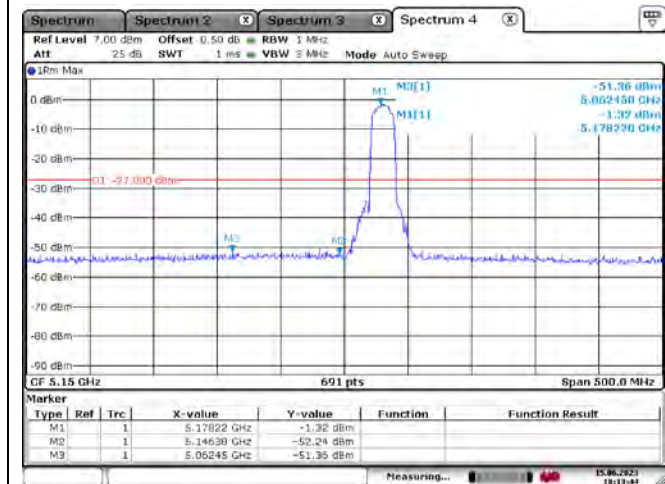


Band 2

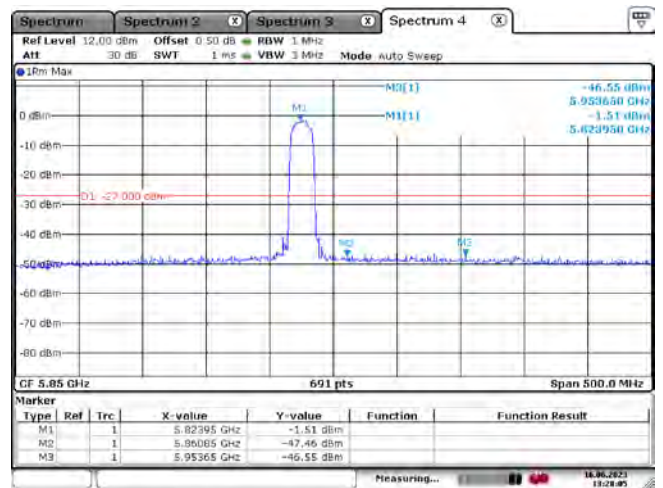
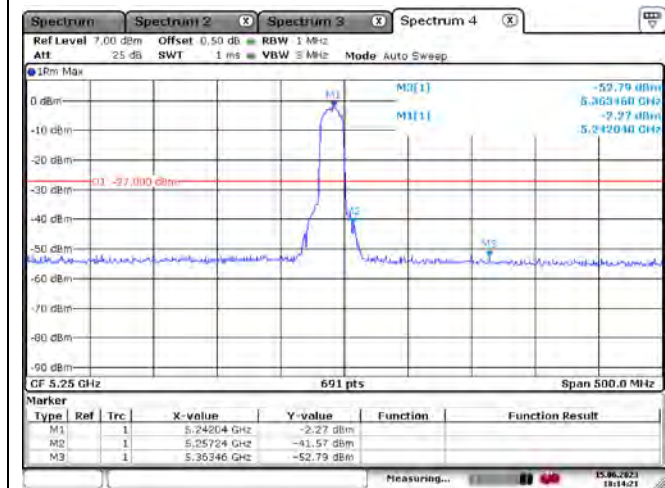
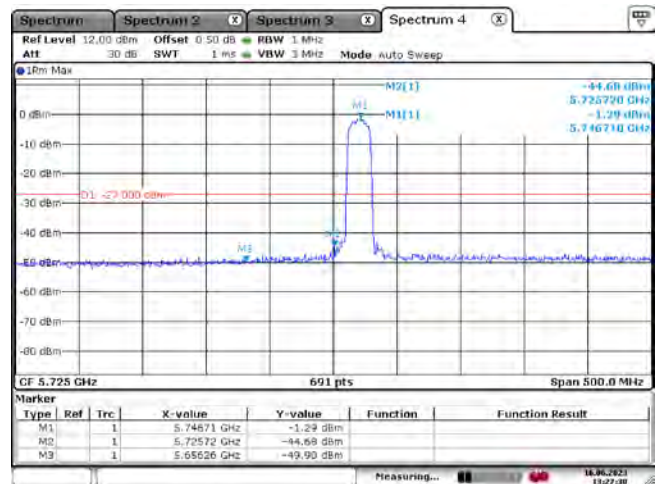


802.11 an20

Band 1

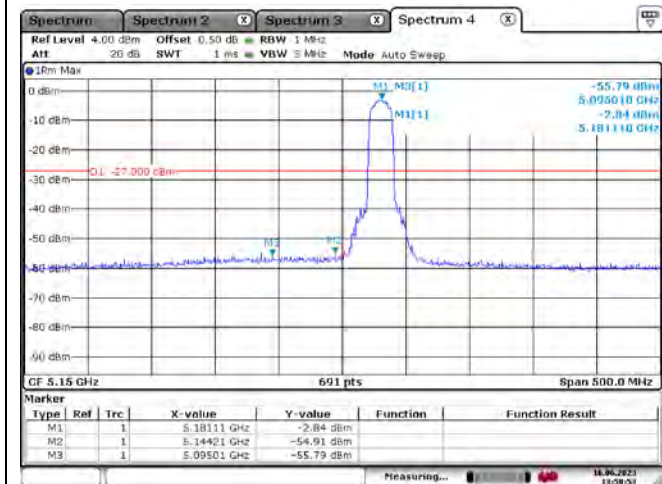


Band 2

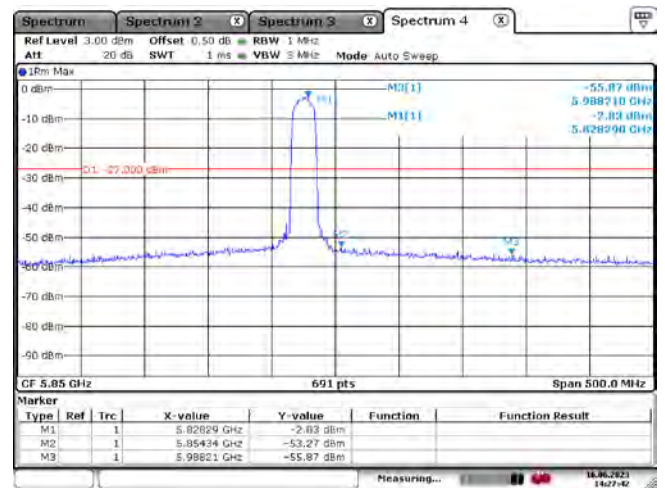
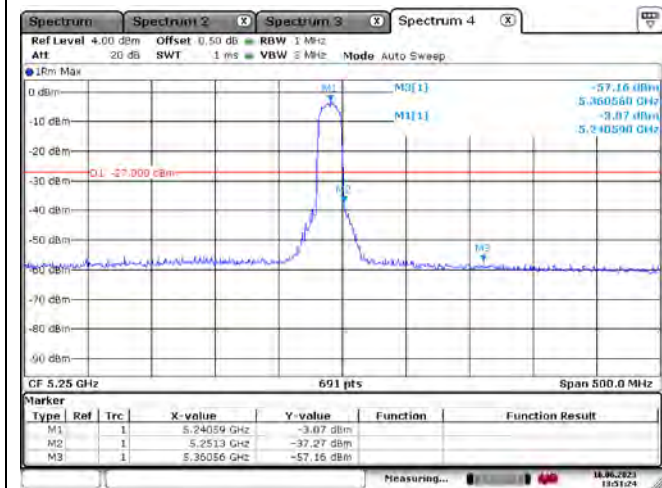
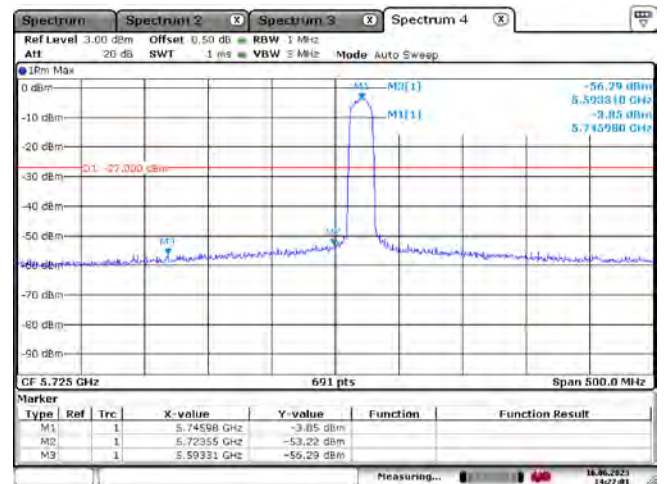


802.11 ac20

Band 1

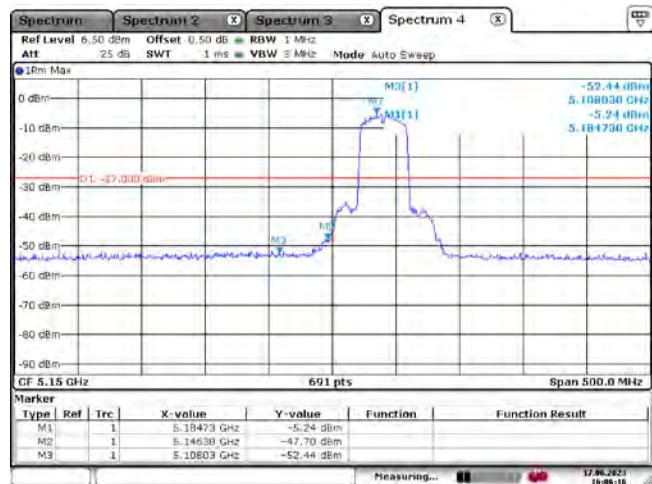


Band 2

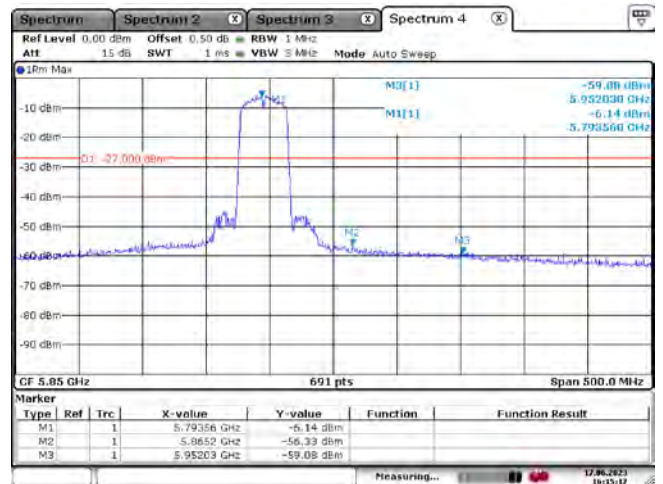
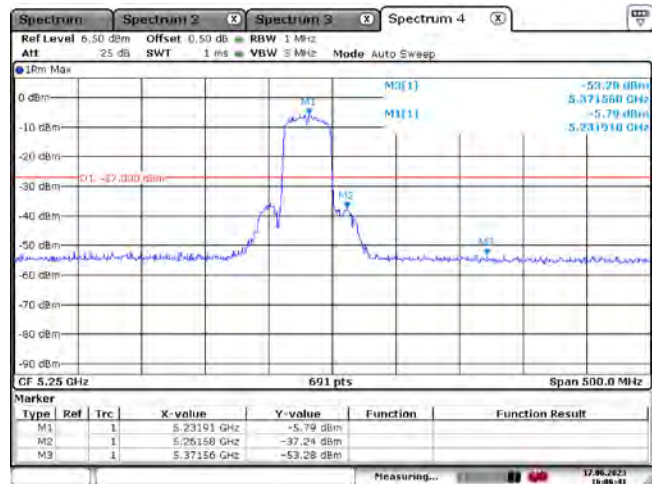
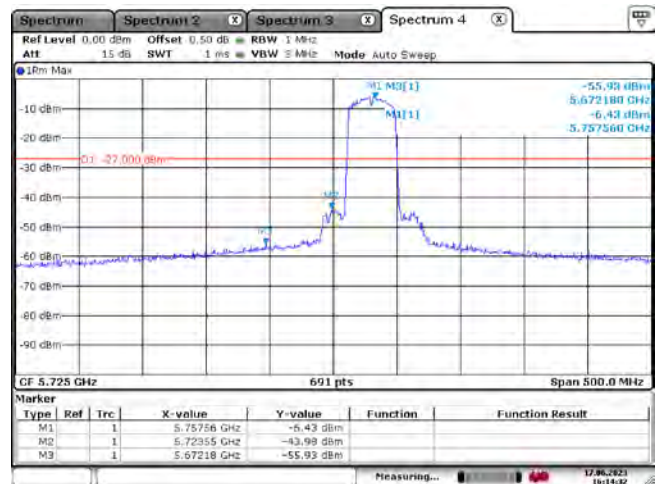


802.11 an40

Band 1

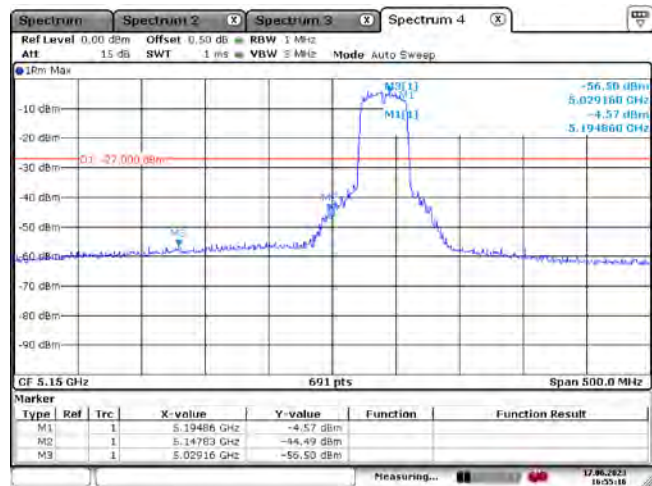


Band 2

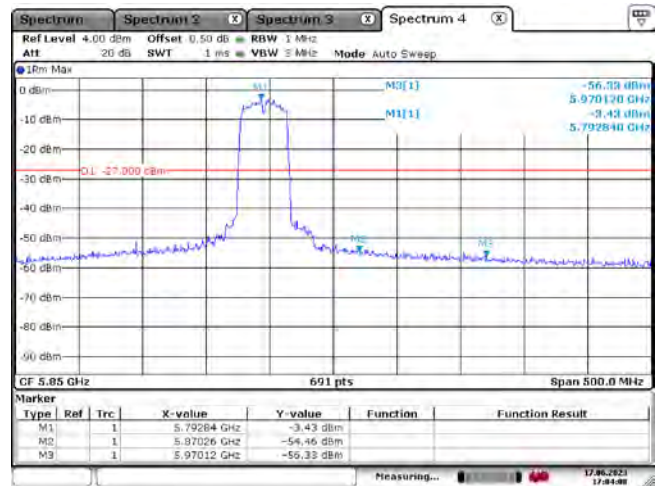
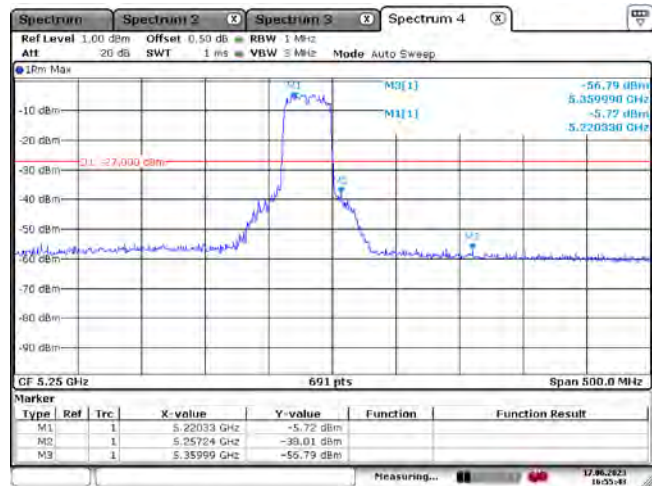
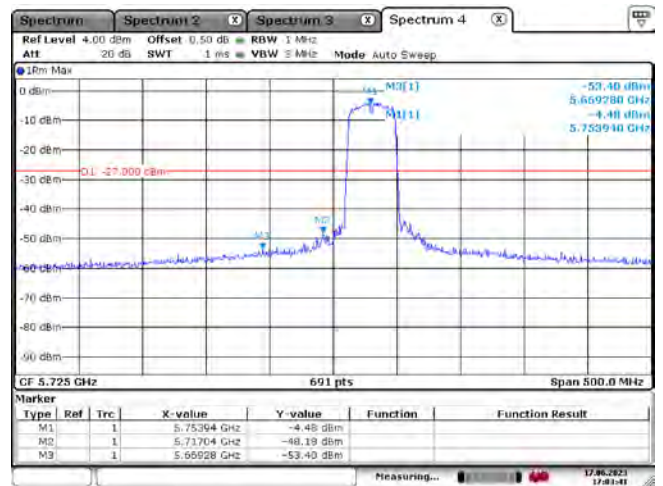


802.11 ac40

Band 1

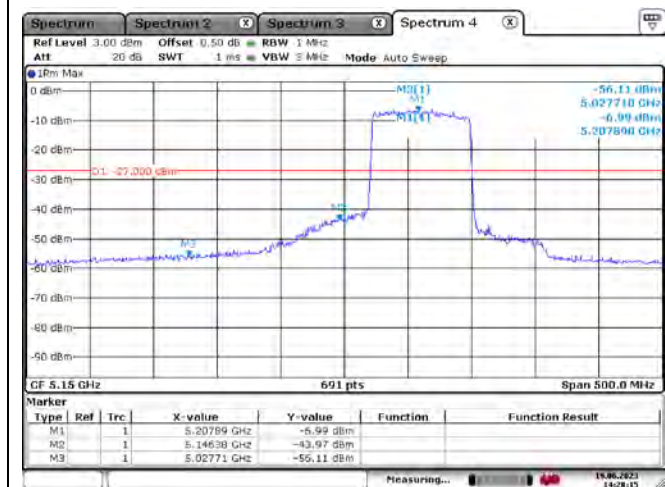


Band 2

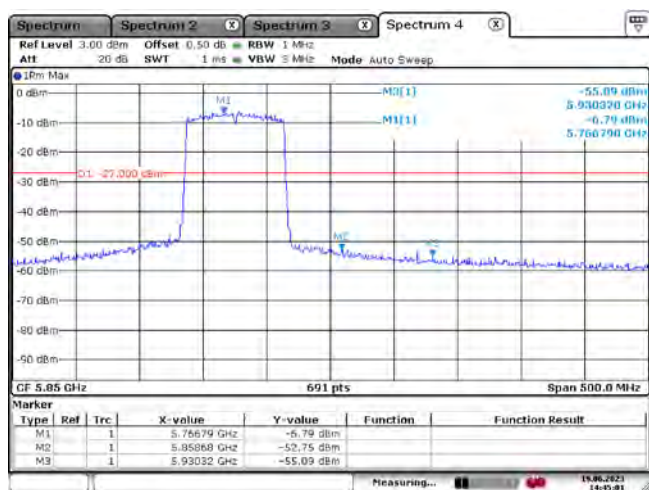
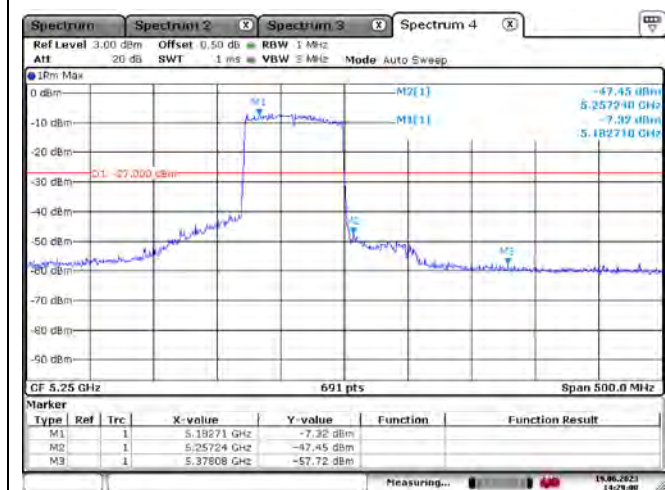
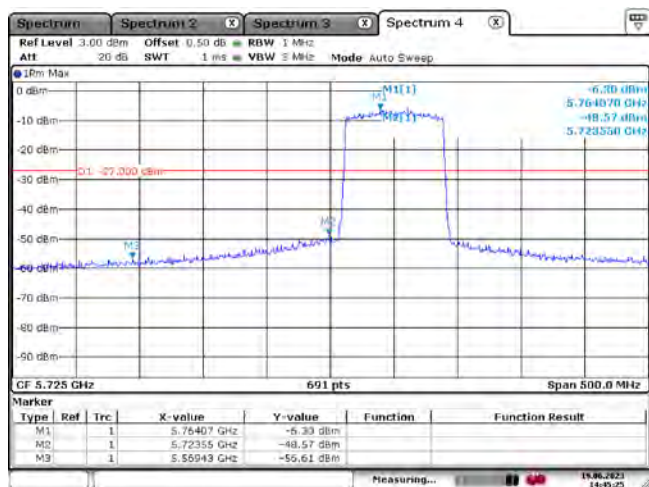


802.11 ac80

Band 1



Band 2



3.2.6 Conducted Spurious Emissions

Procedure:

The test follows KDB789033. The conducted spurious emissions were measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function disabled at the highest, middle and the lowest available channels.

After the trace being stable, set the marker on the peak of any spurious emission recorded.

The spectrum analyzer is set to:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions

RBW = 100 kHz

Sweep = auto

VBW = 100 kHz

Detector function = peak

Trace = max hold

Measurement Data: **Complies**

- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 27 dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.
- See next pages for actual measured spectrum plots.

Mode	Frequency (MHz)	Test Results	
		Measured data (dBc)	Result
a	5180	50.71	Complies
	5200	54.32	
	5240	51.01	
	5745	52.30	
	5785	49.29	
	5825	49.79	
an20	5180	40.79	Complies
	5200	40.40	
	5240	39.95	
	5745	47.96	
	5785	50.50	
	5825	48.01	
ac20	5180	47.40	Complies
	5200	47.29	
	5240	48.18	

	5745	47.29	
	5785	50.31	
	5825	47.58	

Mode	Frequency (MHz)	Test Results	
		Measured data (dBc)	Result
an40	5190	58.21	Complies
	5230	56.71	
	5755	47.68	
	5795	48.17	
ac40	5190	50.54	Complies
	5230	46.02	
	5755	48.12	
	5795	48.58	

Mode	Frequency (MHz)	Test Results	
		Measured data (dBc)	Result
ac80	5210	48.78	Complies
	5775	46.38	

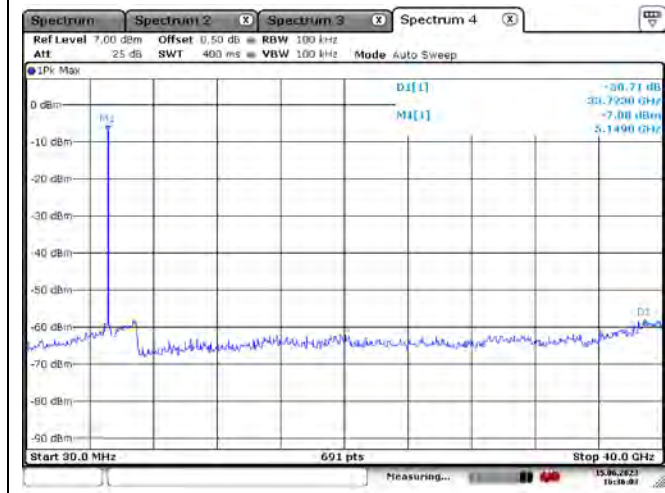
Minimum Standard:	≥ 27 dBc
-------------------	---------------

Measurement Setup

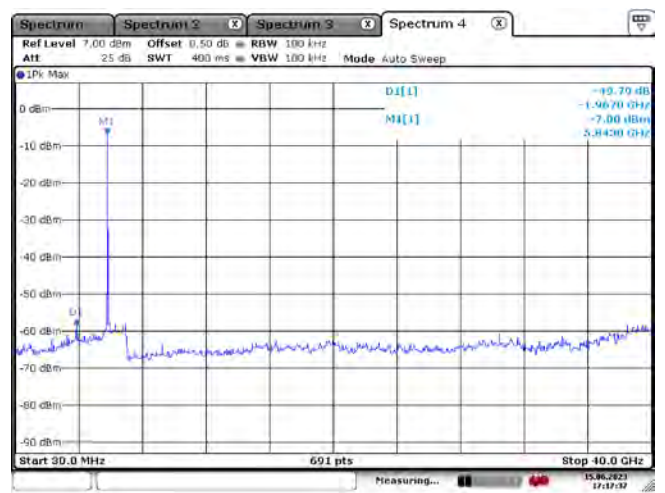
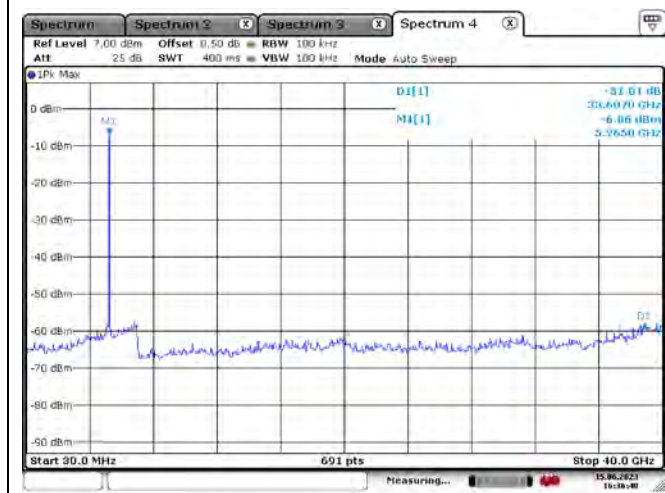
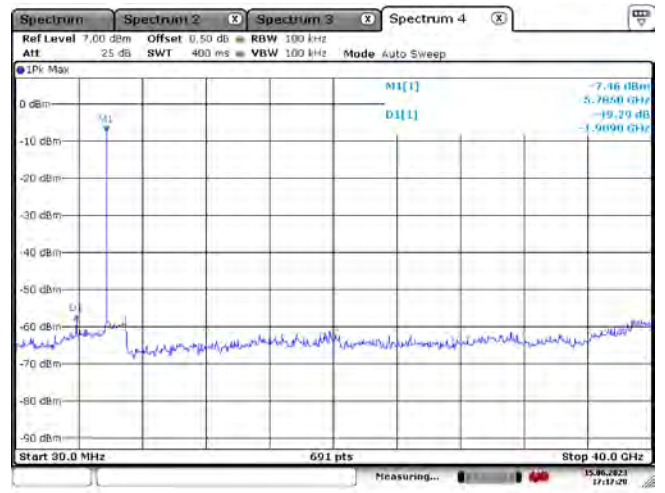
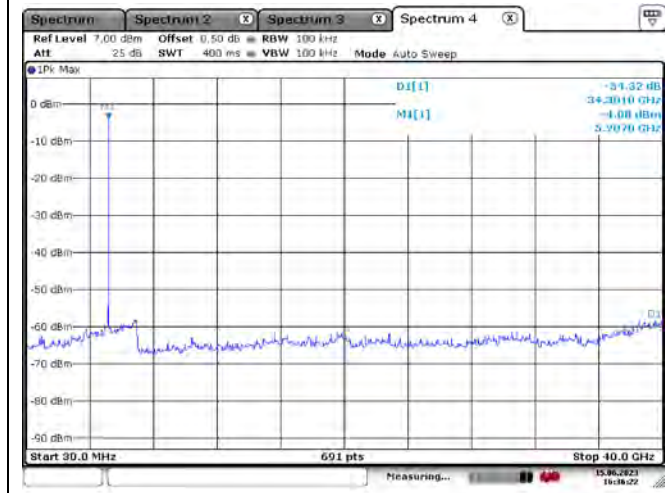
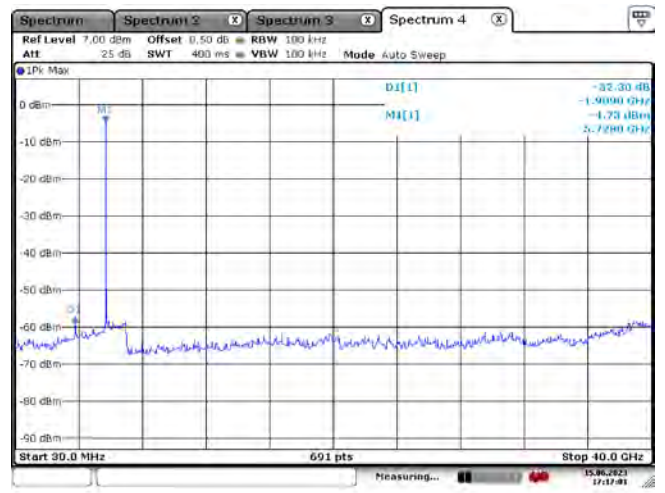
Same as the Chapter 3.2.1 (Figure 1)

802.11 a

Band 1

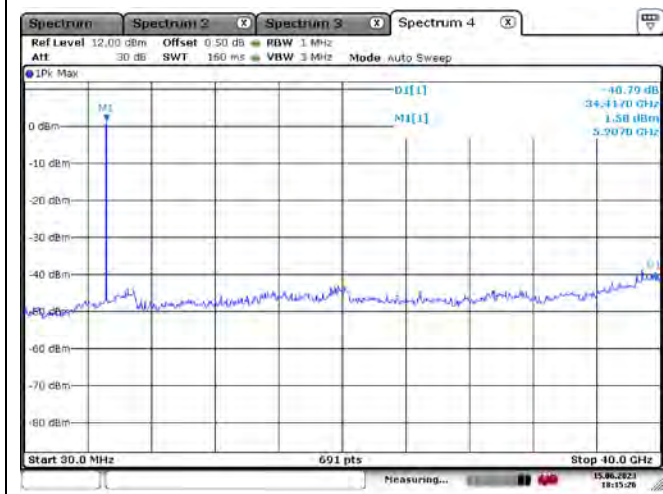


Band 2

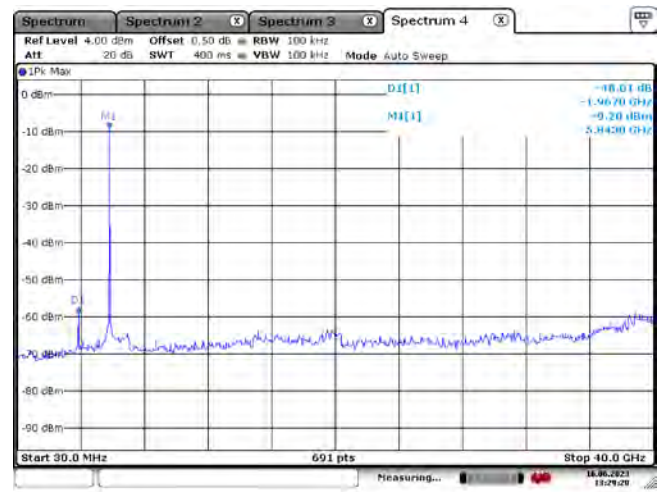
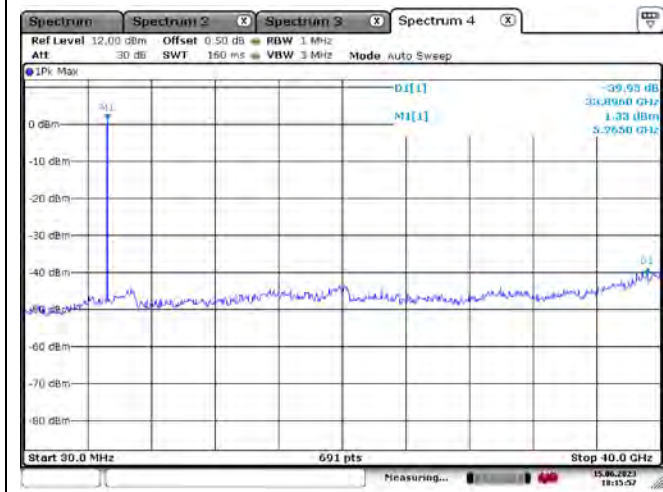
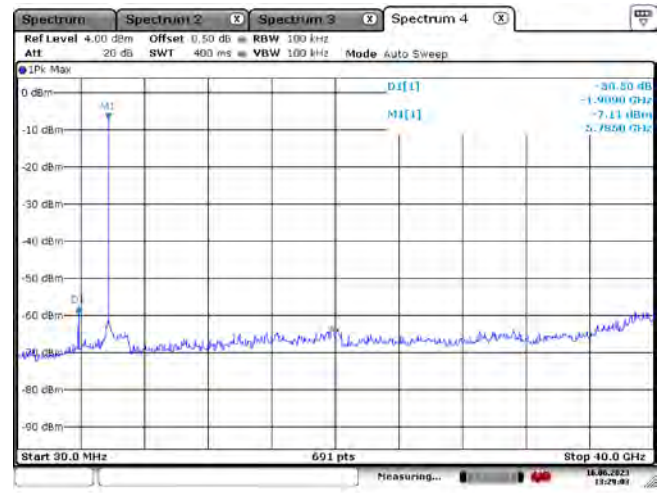
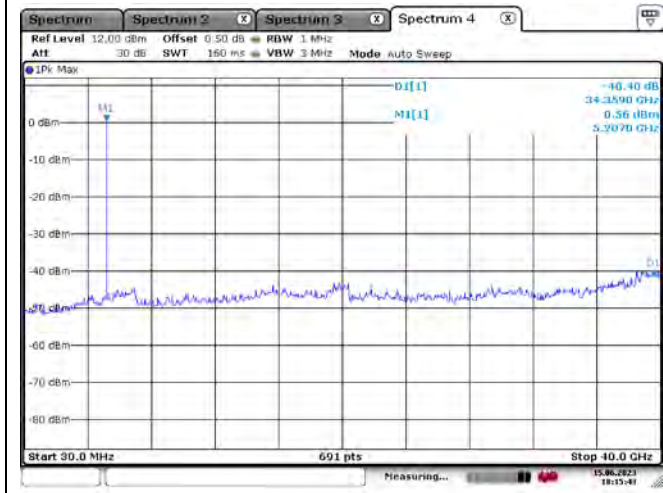
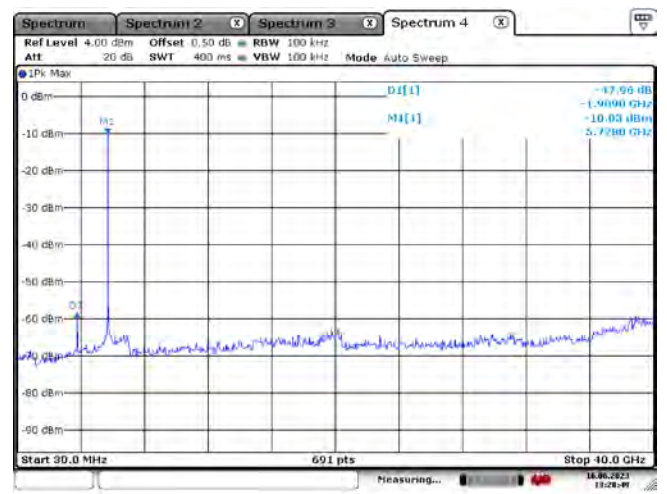


802.11 an20

Band 1

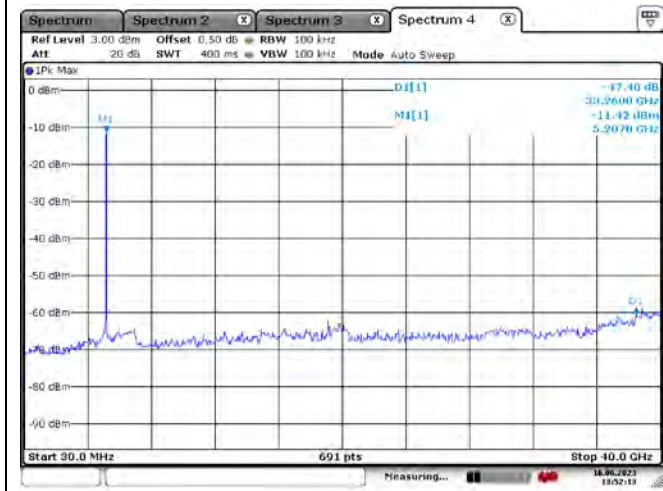


Band 2

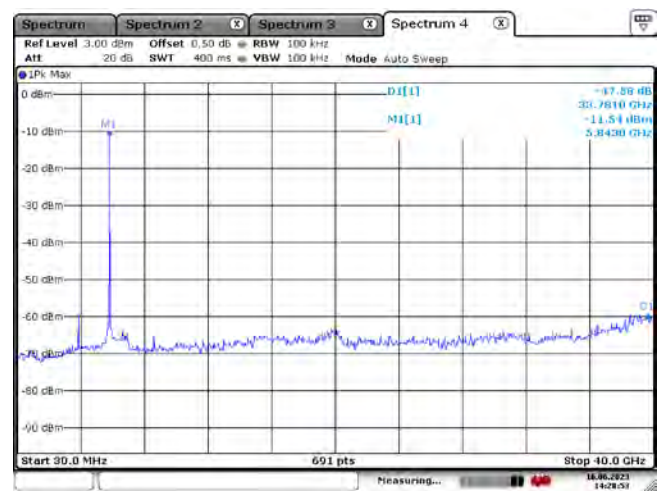
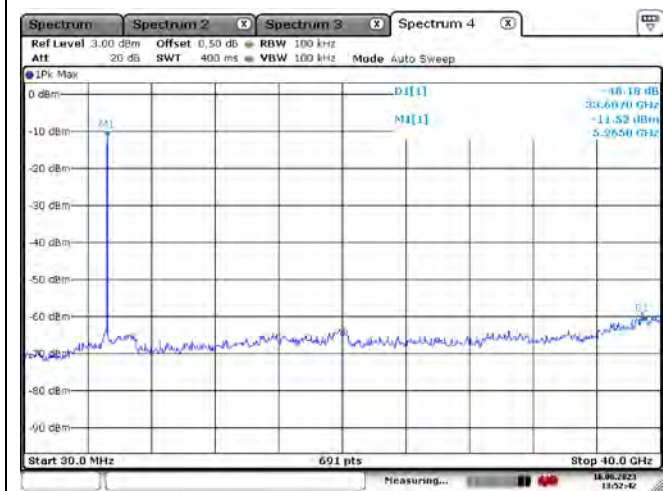
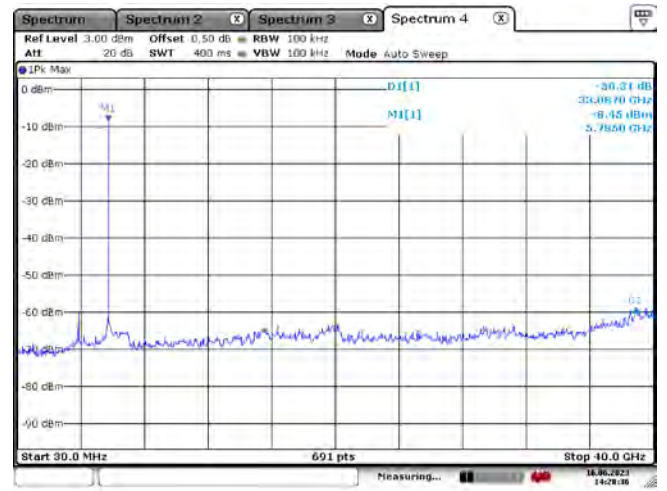
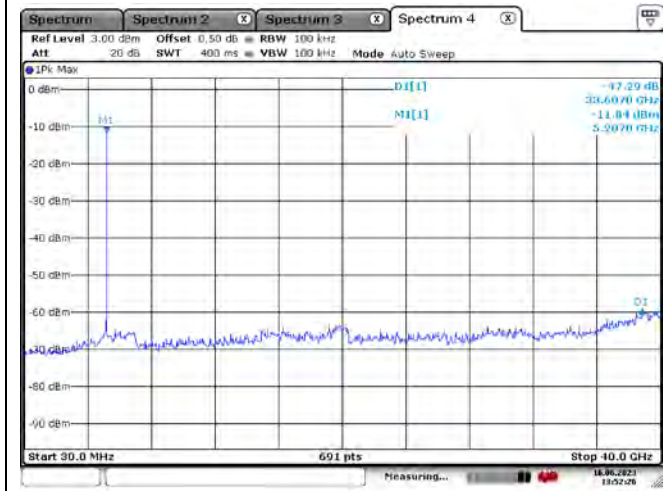
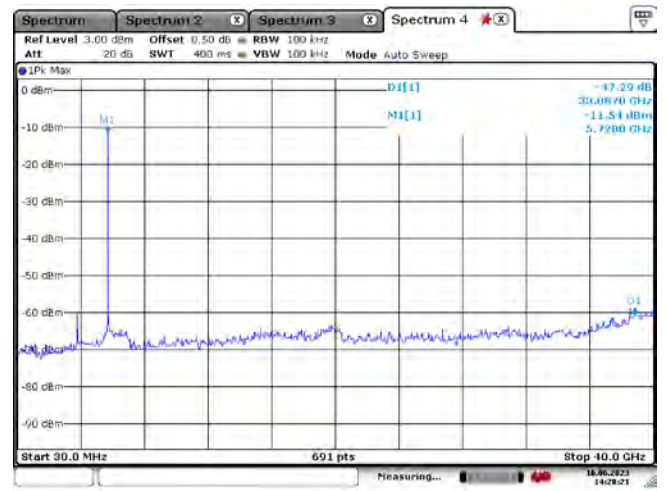


802.11 ac20

Band 1

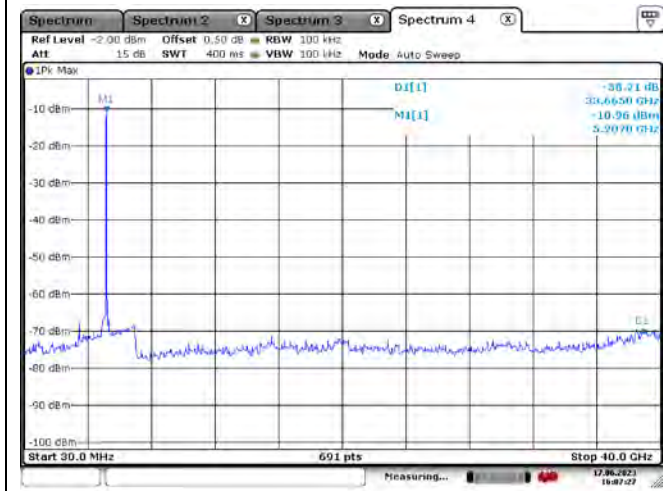


Band 2

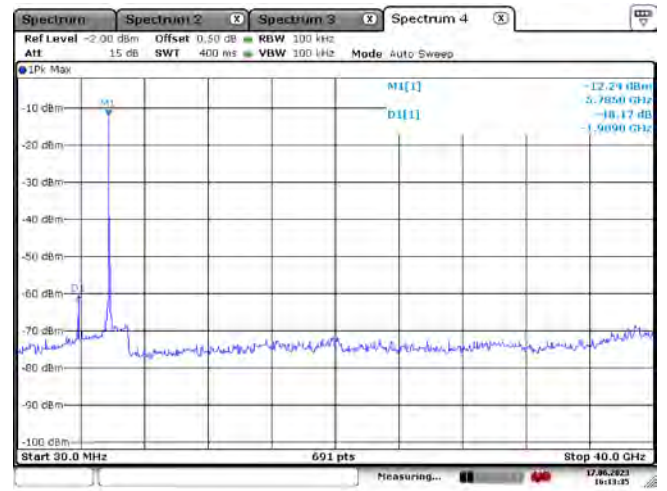
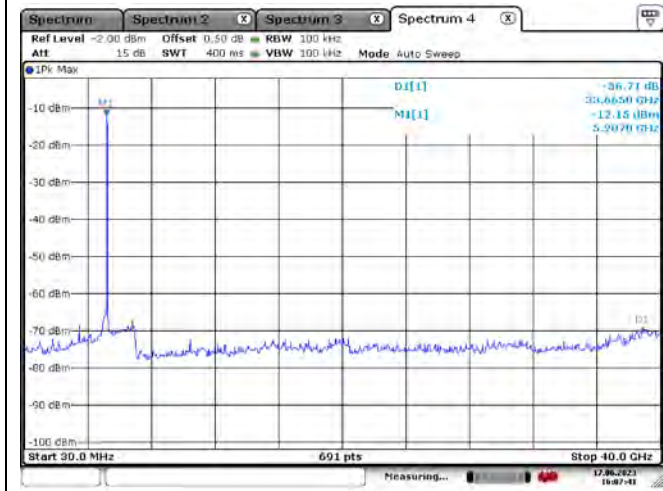
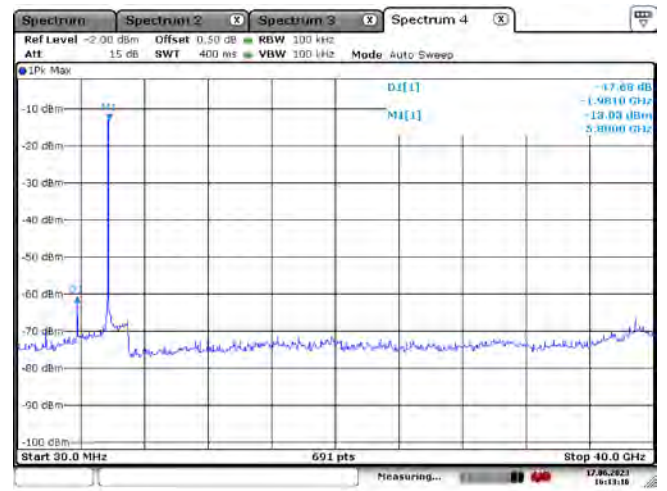


802.11 an40

Band 1

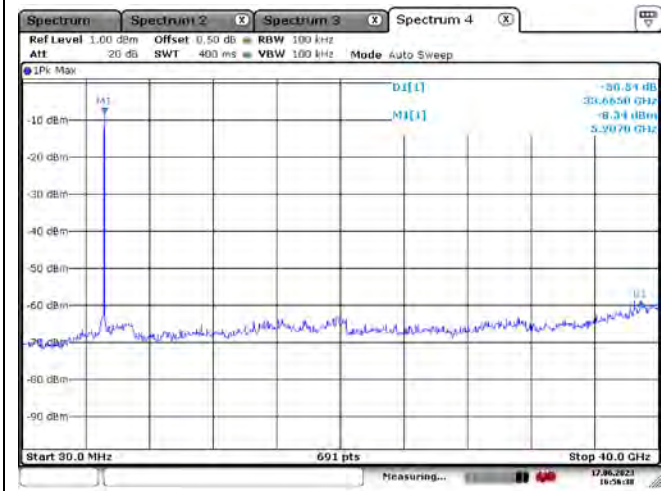


Band 2

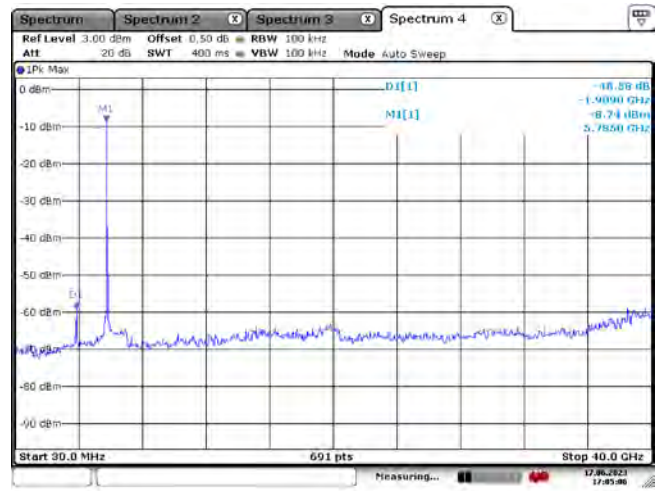
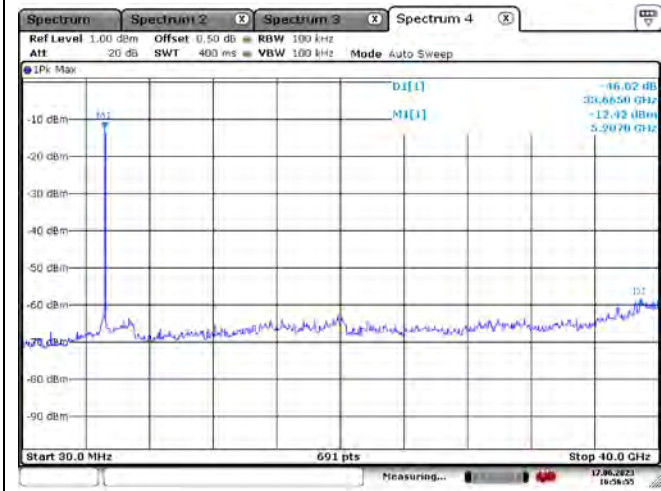
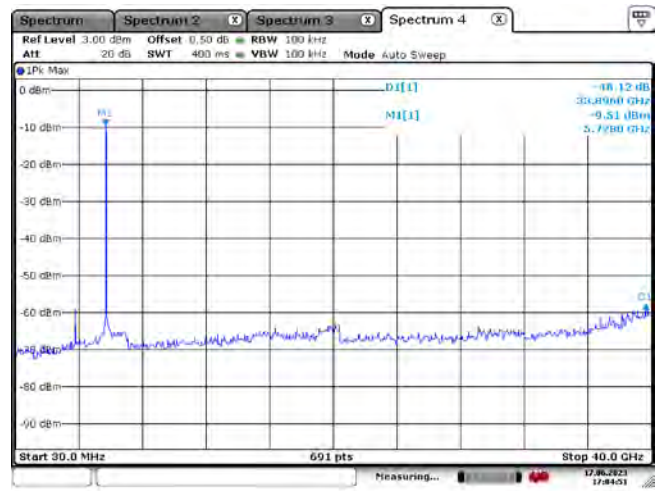


802.11 ac40

Band 1

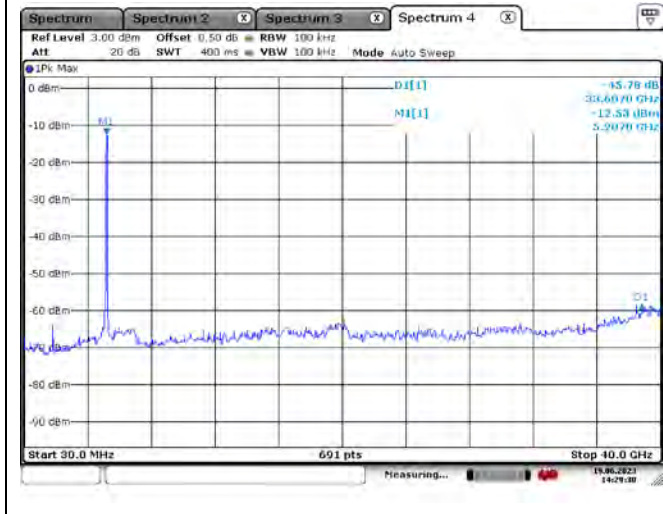


Band 2

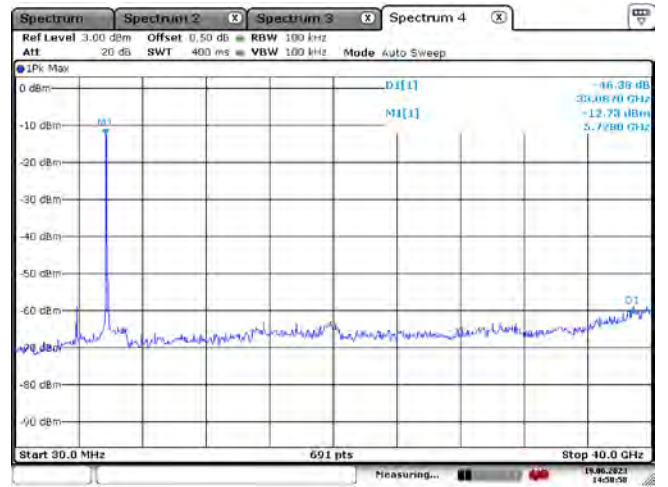


802.11 ac80

Band 1



Band 2



3.2.7 Radiated Spurious Emissions

Procedure:

Radiated emissions from 30 MHz to 25 GHz were measured according to the methods defines in ANSI C63.10-2013.

The EUT is a placed on as turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.

The spectrum analyzer is set to:

Center frequency = the worst channel

Frequency Range = 9 kHz ~ 10th harmonic.

RBW = 120 kHz (30 MHz ~ 1 GHz)

VBW $\geq$ RBW

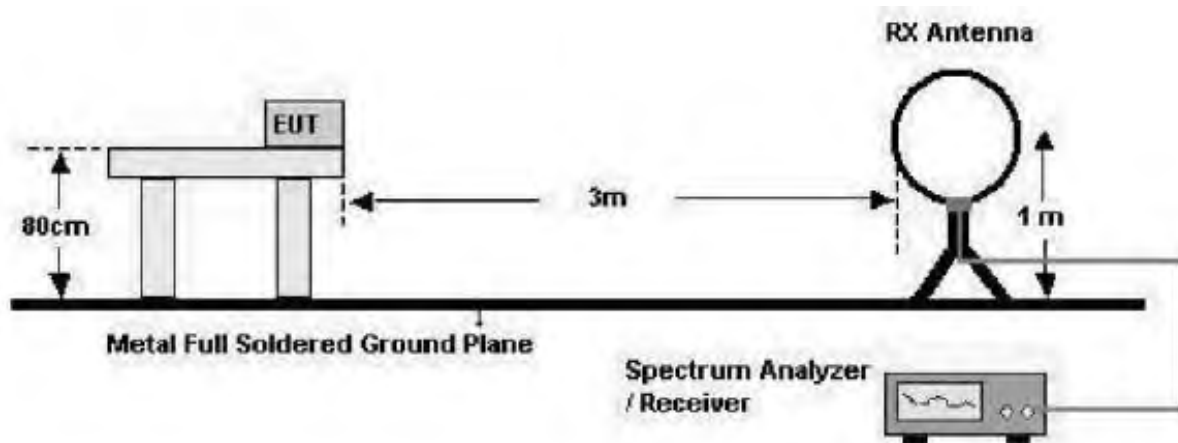
= 1 MHz (1 GHz ~ 10th harmonic)

Trace = max hold

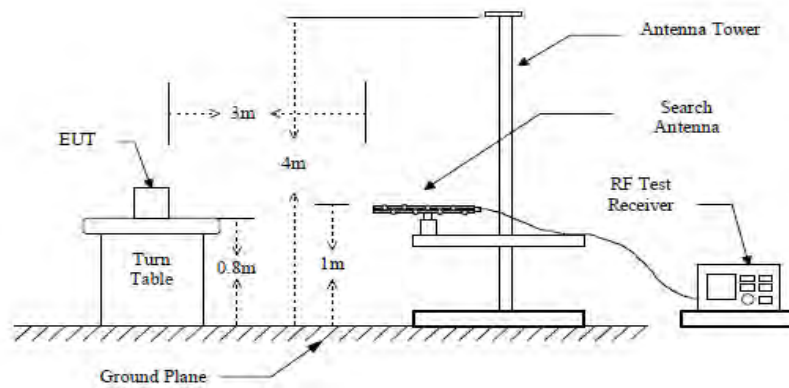
Detector function = peak

Sweep = auto

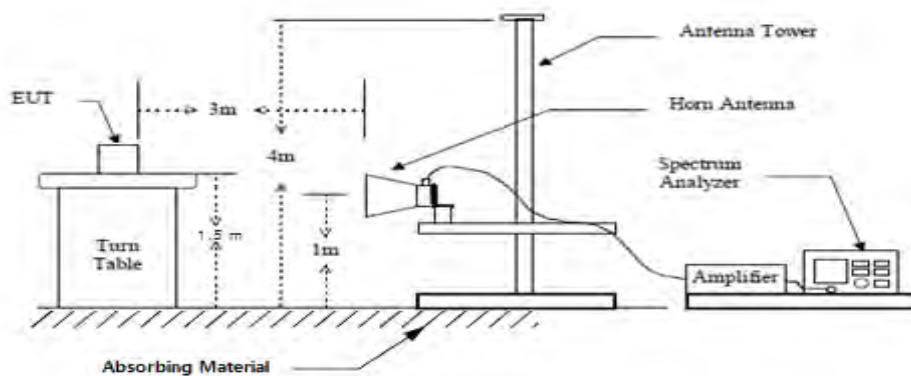
below 30 MHz



below 1 GHz (30 MHz to 1 GHz)



above 1 GHz



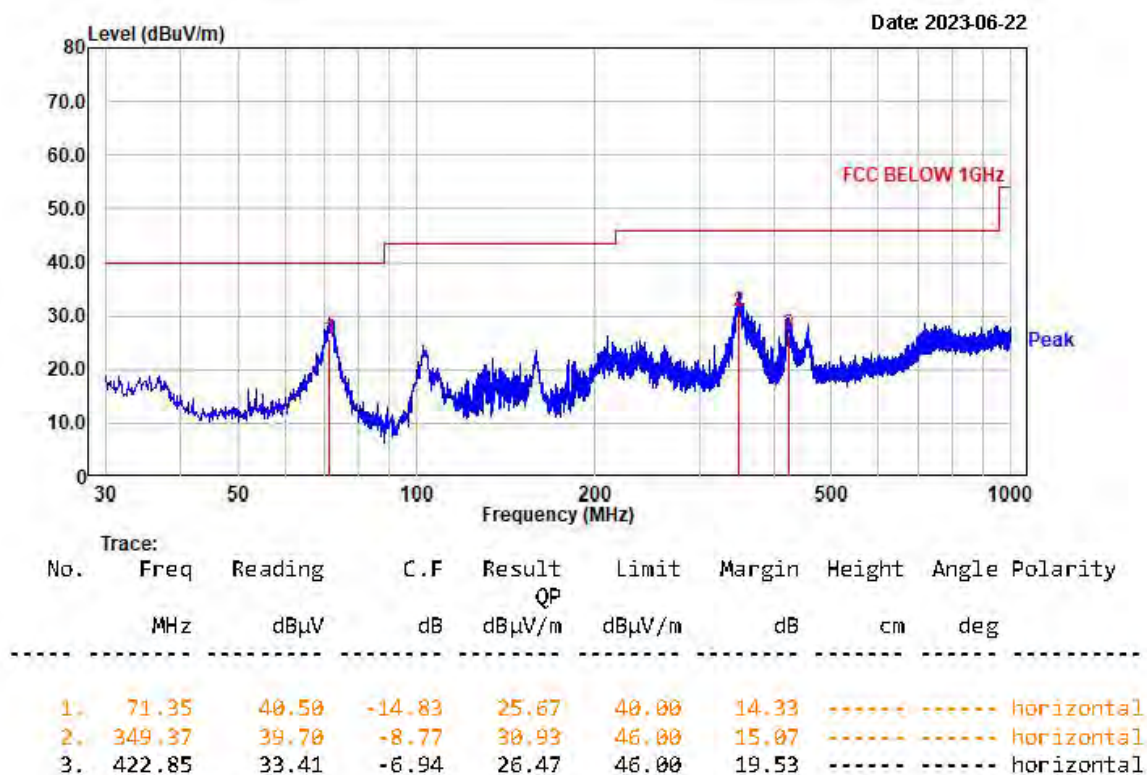
Measurement Data: Complies

- See next pages for actual measured data.
- No other emissions were detected at a level greater than 20 dB below limit include from 9 kHz to 30MHz.
- The test results for the worst of the various operating modes are presented in accordance with 6.3.4 of ANSI C63.10.
- Checked with a red circle is the fundamental frequency.

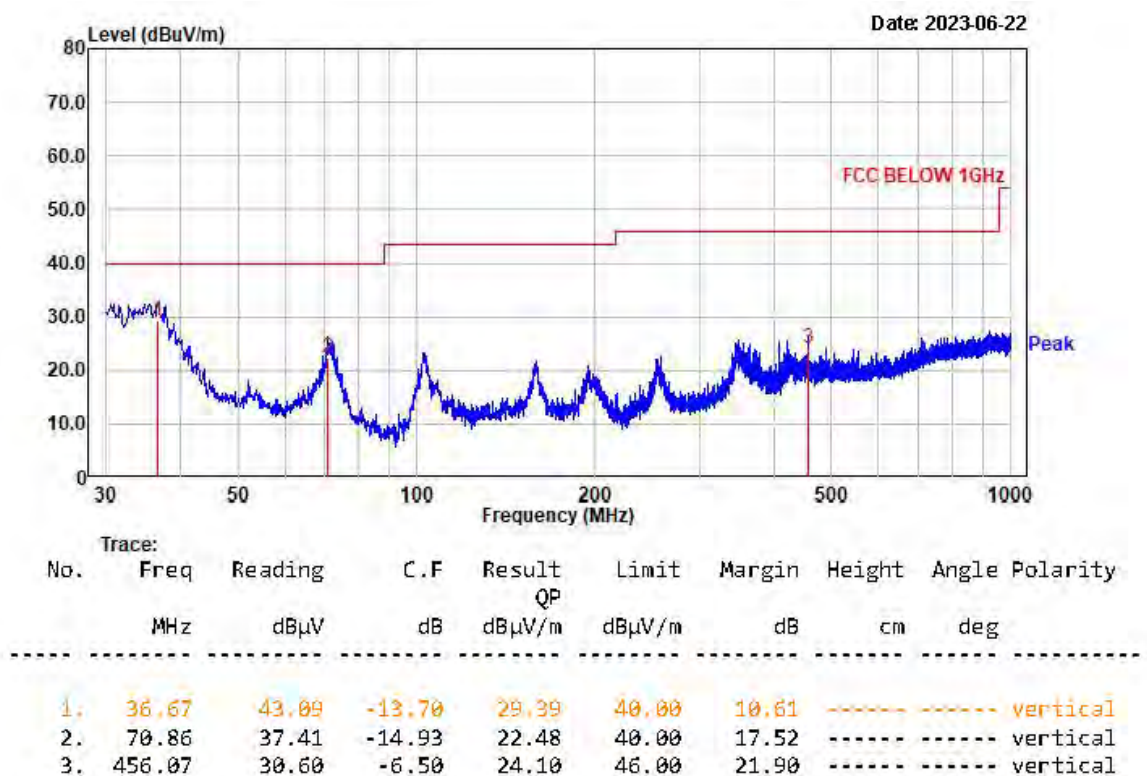
Minimum Standard: FCC Part 15.209(a)

Frequency (MHz)	Limit (uV/m) @ 3 m
0.009 ~ 0.490	2400/F(kHz) (@ 300 m)
0.490 ~ 1.705	24000/F(kHz) (@ 30 m)
1.705 ~ 30	30(@ 30 m)
30 ~ 88	100 **
88 ~ 216	150 **
216 ~ 960	200 **
Above 960	500

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

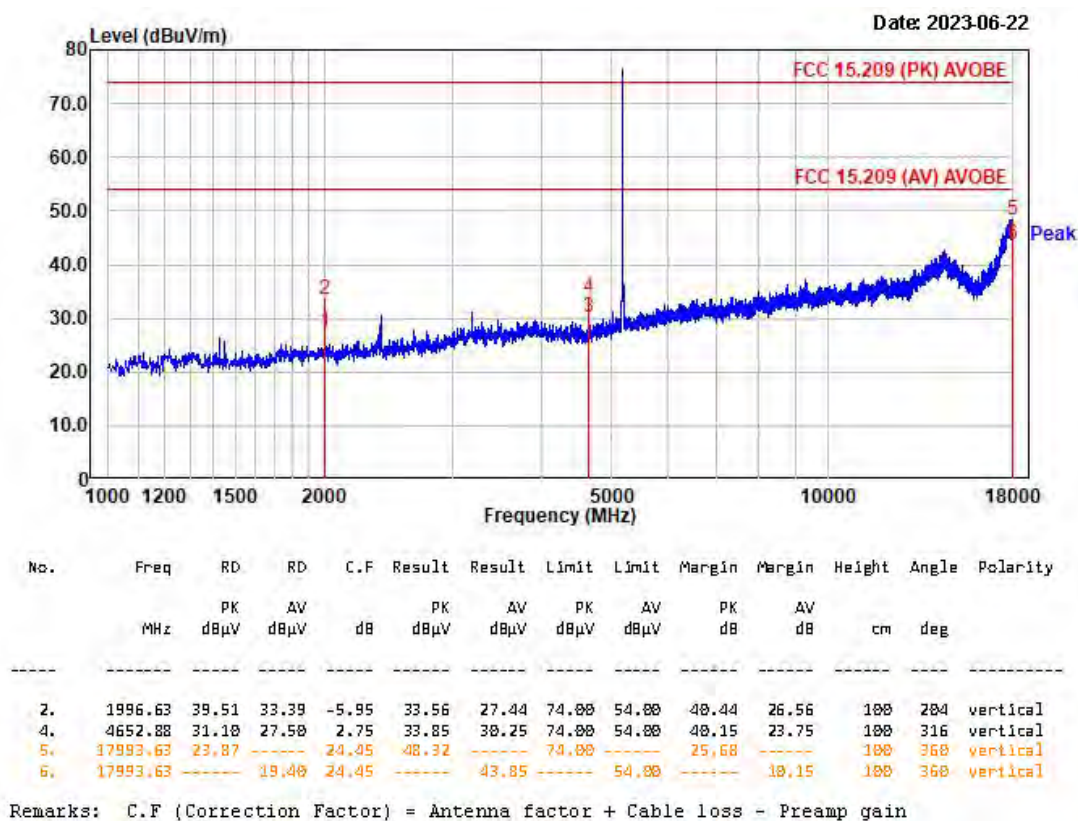
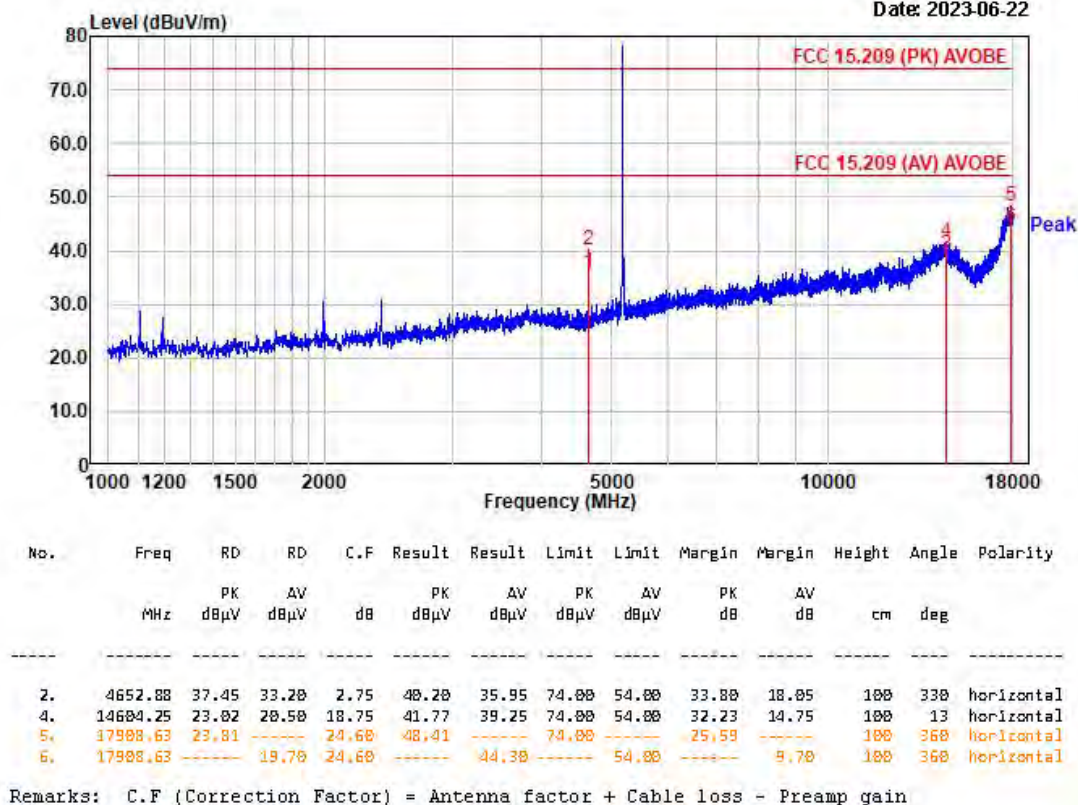
Radiated Emissions – 802.11 a mode Band 1

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

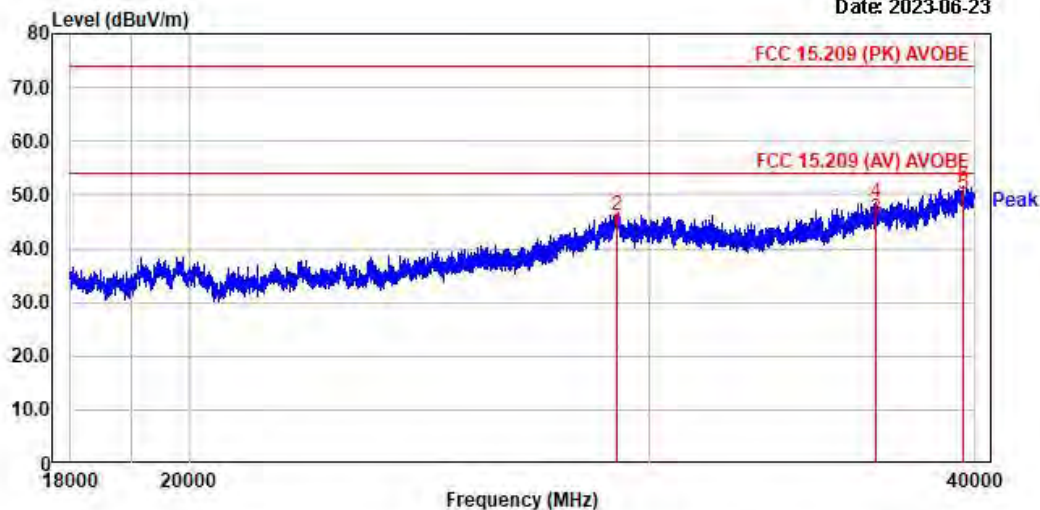


Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



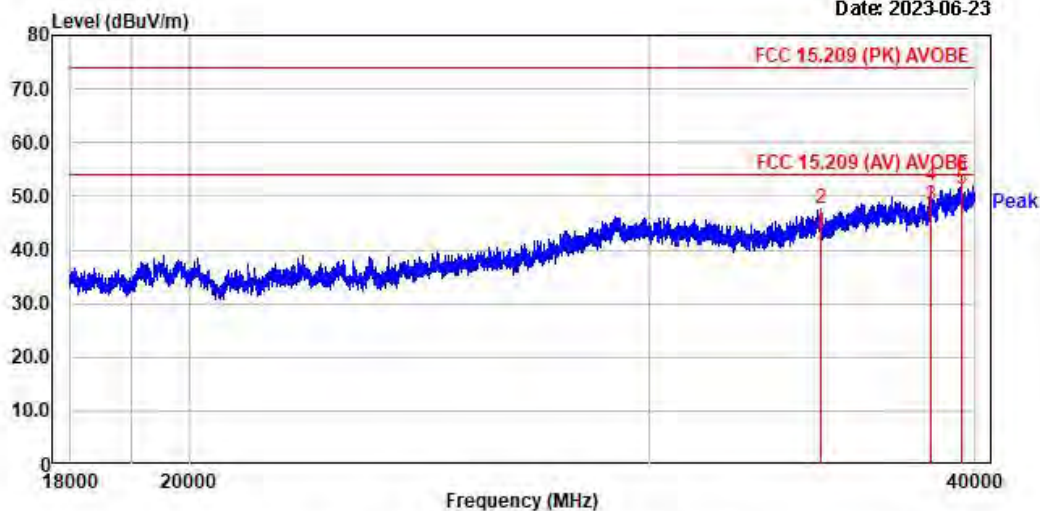
Date: 2023-06-23



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	29178.75	21.66	18.60	24.62	46.28	43.22	74.00	54.00	27.72	10.78	100	360	horizontal
4.	36691.75	23.20	20.10	25.46	48.66	45.56	74.00	54.00	25.34	8.44	100	284	horizontal
5.	39628.75	25.42	23.70	26.30	51.72	50.00	74.00	54.00	22.28	4.00	100	360	horizontal

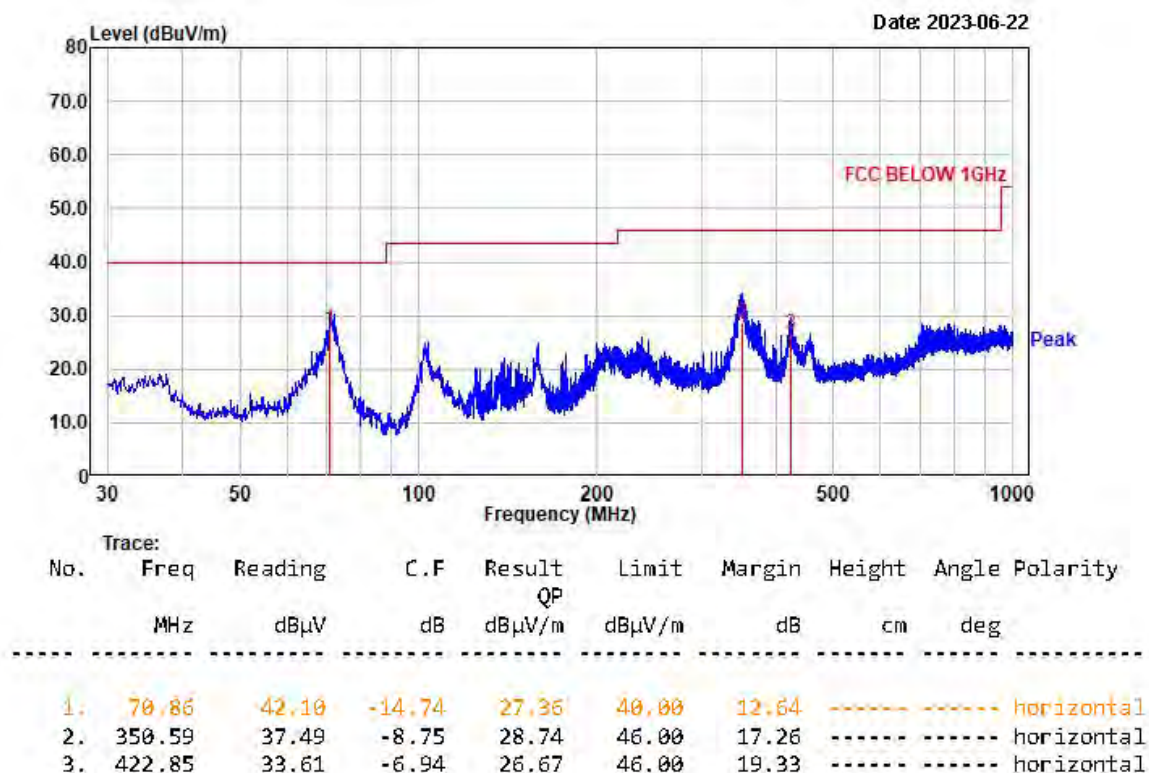
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-23

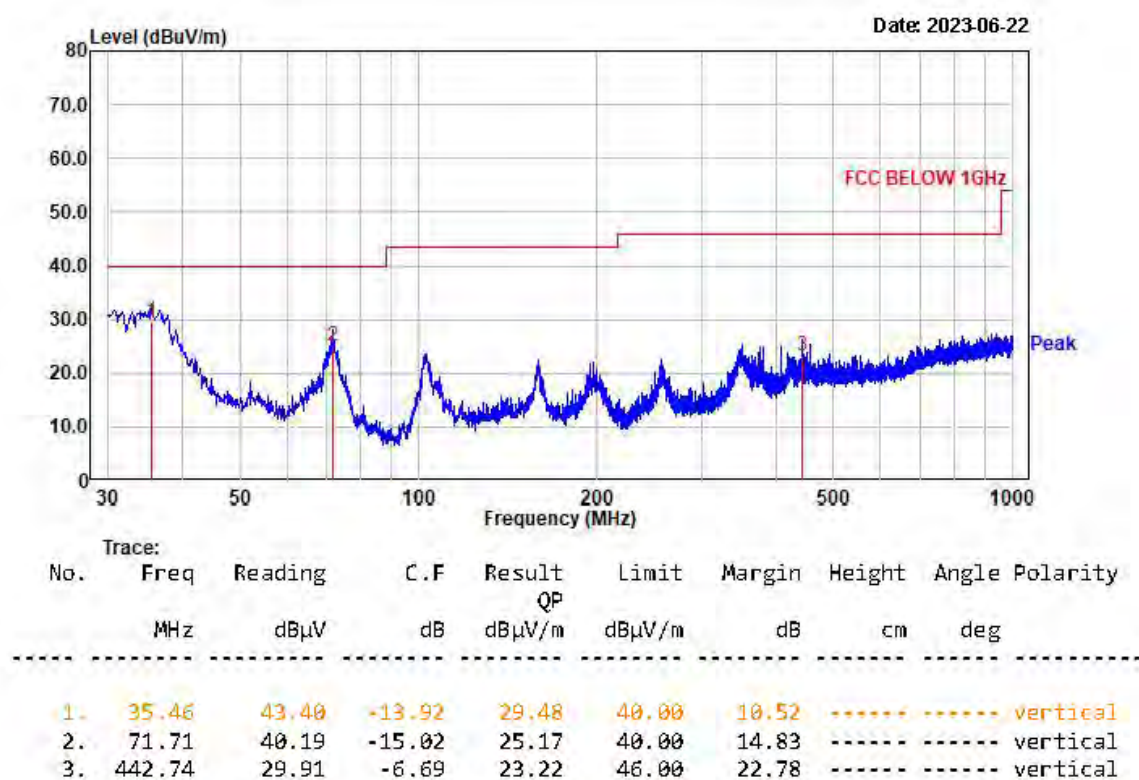


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	34918.00	22.92	18.39	24.85	47.77	43.24	74.00	54.00	26.23	10.76	100	315	vertical
4.	38484.75	27.51	24.01	24.28	51.79	48.29	74.00	54.00	22.21	5.71	100	109	vertical
5.	39554.50	27.35	24.80	26.46	53.81	51.26	74.00	54.00	20.19	2.74	100	267	vertical

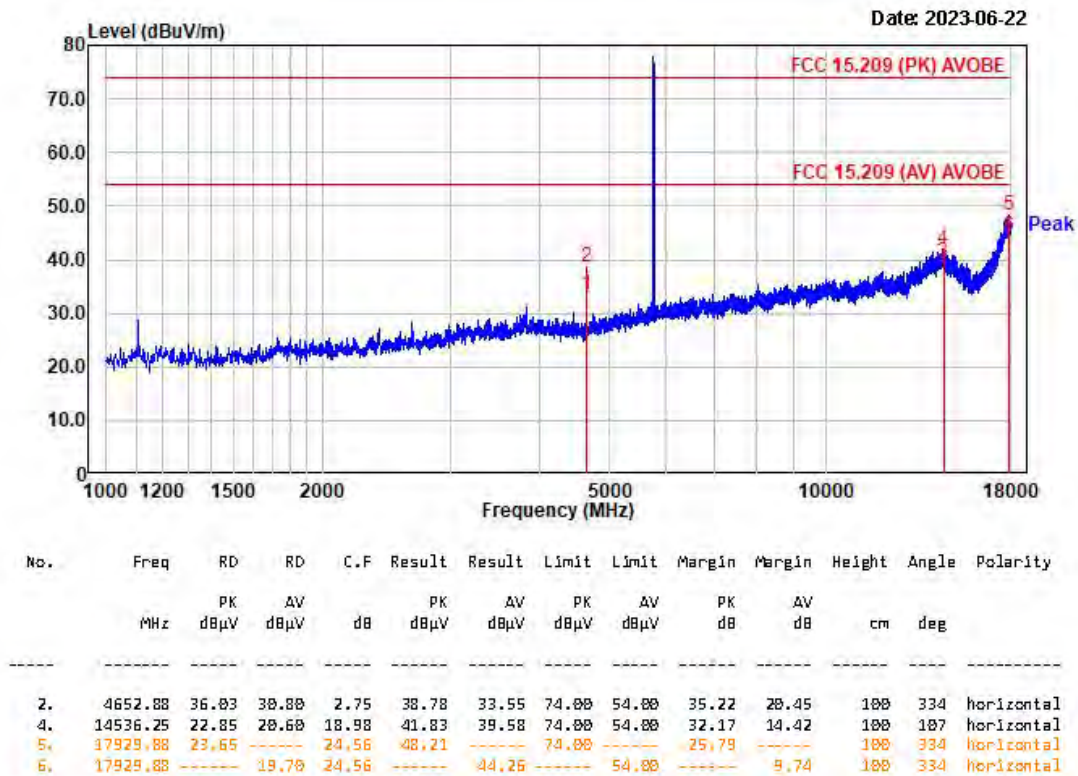
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions – 802.11 a mode Band 2

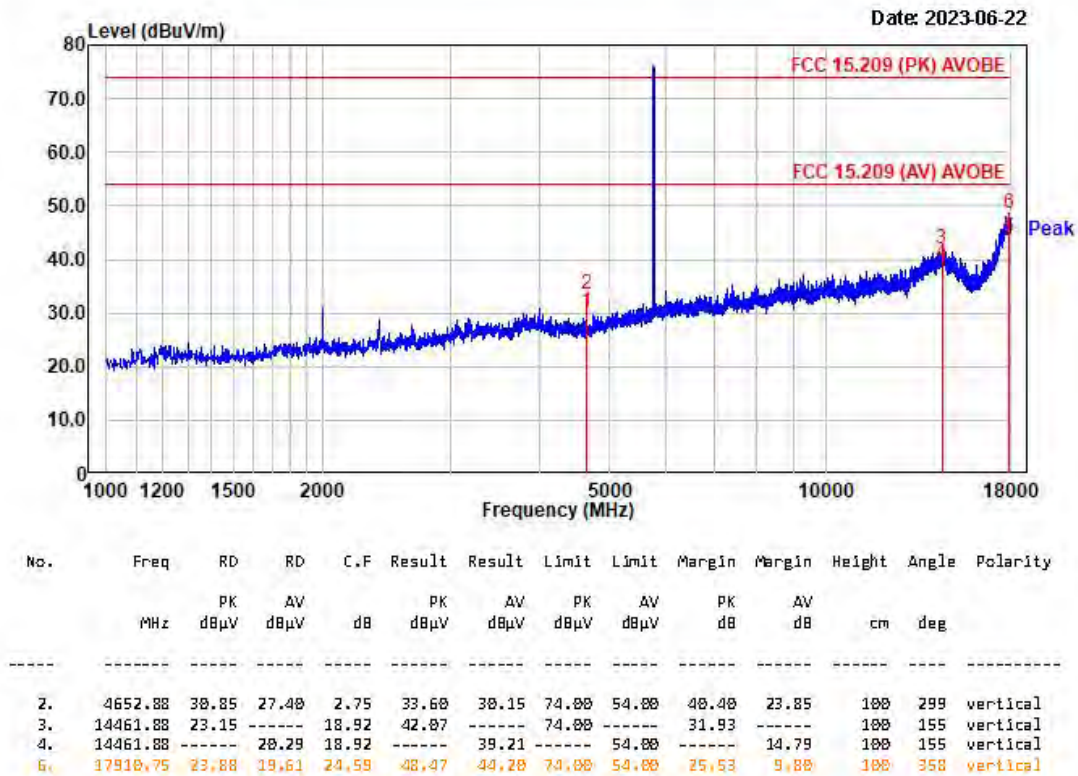
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

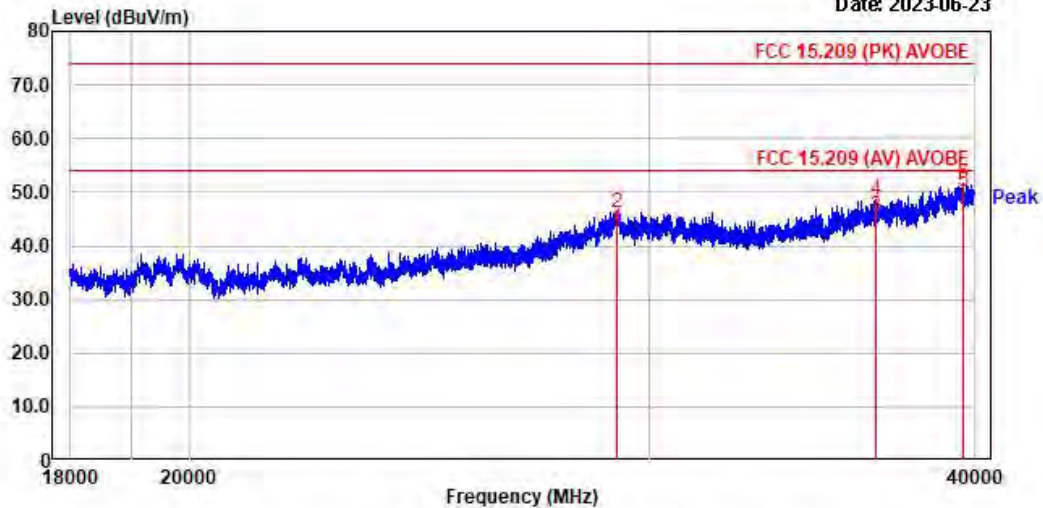


Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

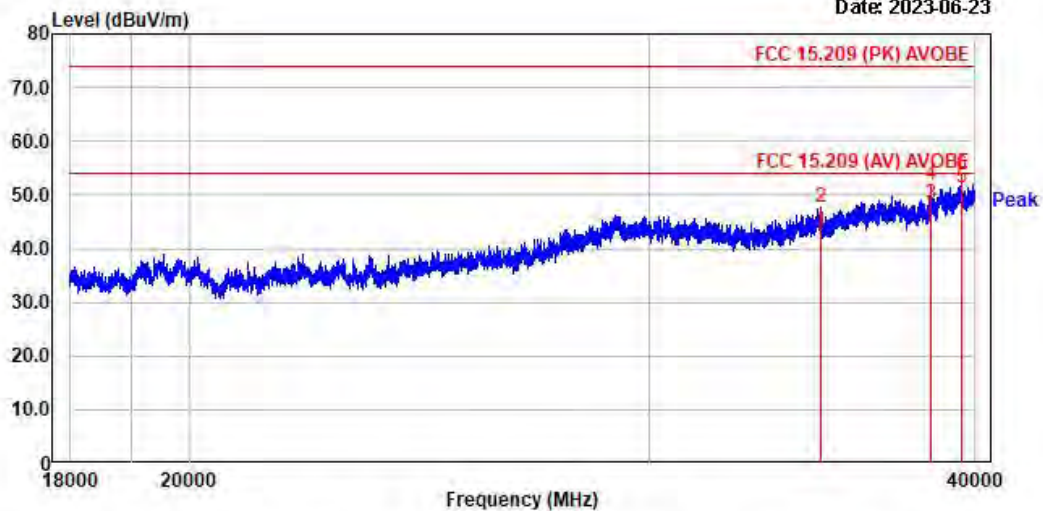
Date: 2023-06-23



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV		PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV	dB	dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	29178.75	21.66	18.60	24.62	46.28	43.22	74.00	54.00	27.72	10.78	100	360	horizontal
4.	36691.75	23.20	20.10	25.46	48.66	45.56	74.00	54.00	25.34	8.44	100	284	horizontal
6.	39628.75	25.42	23.70	26.30	51.72	50.00	74.00	54.00	22.28	4.00	100	360	horizontal

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-23

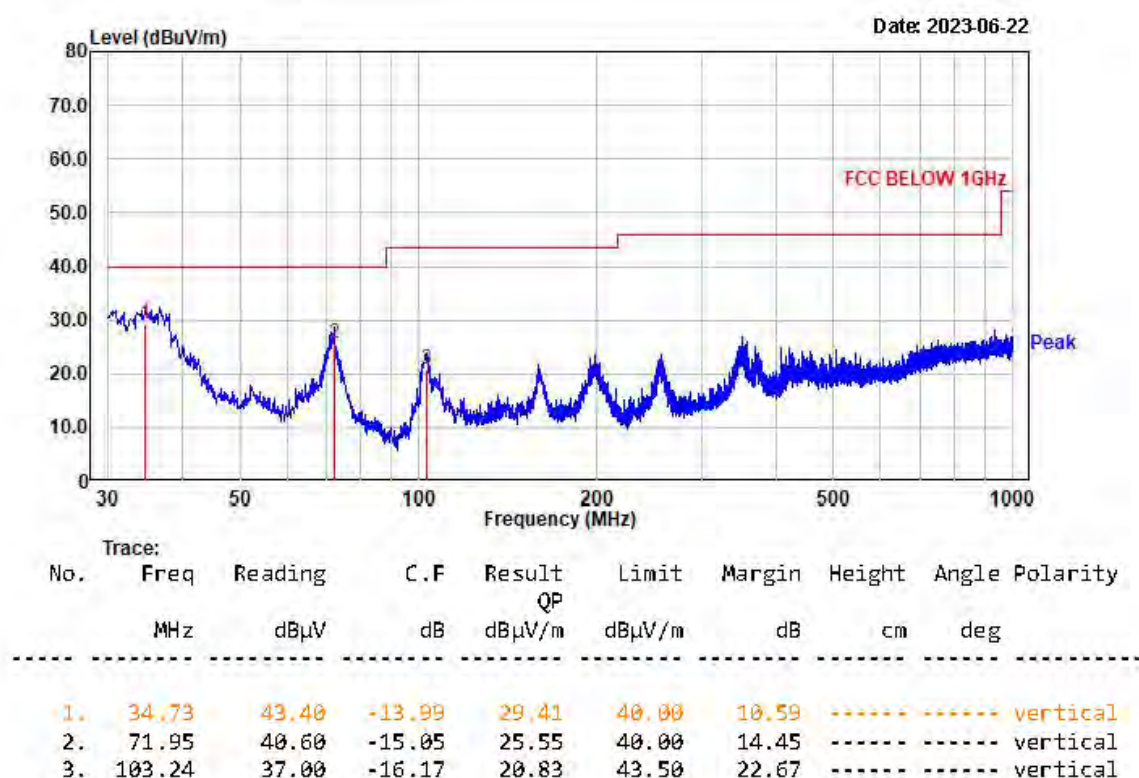


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV		PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV	dB	dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	34918.00	22.92	18.39	24.85	47.77	43.24	74.00	54.00	26.23	10.76	100	315	vertical
4.	38484.75	27.51	24.01	24.28	51.79	48.29	74.00	54.00	22.21	5.71	100	109	vertical
6.	39554.50	27.35	24.80	26.46	53.81	51.26	74.00	54.00	20.19	2.74	100	267	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

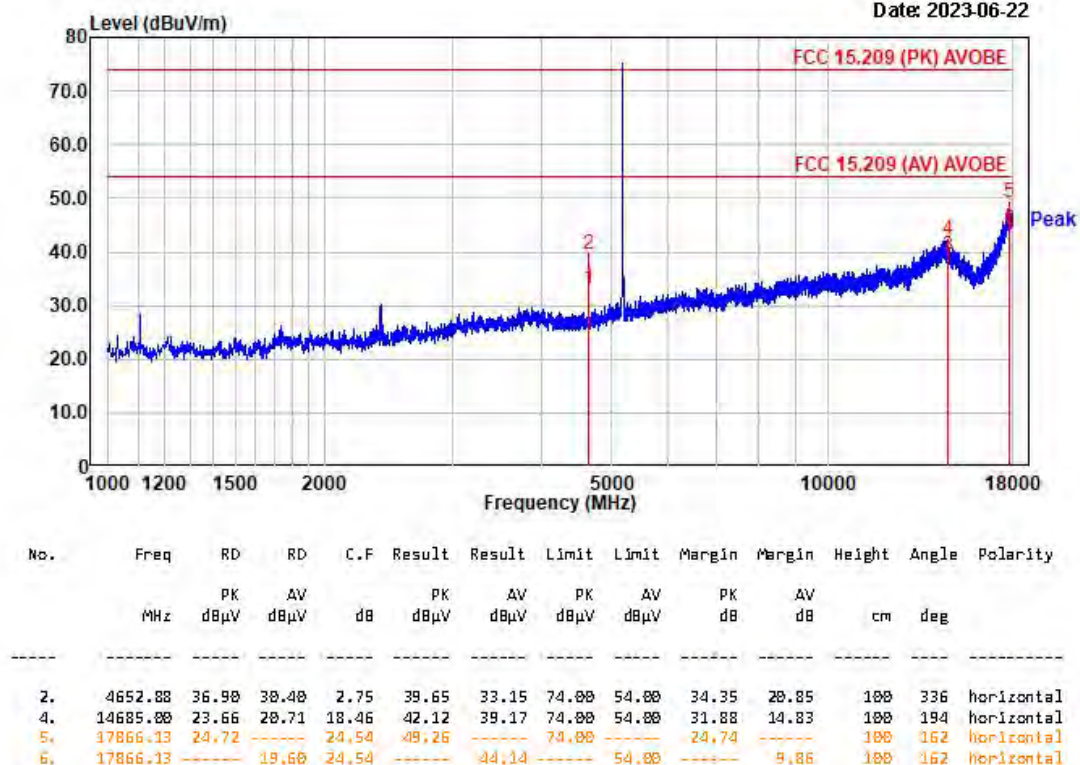
Radiated Emissions – 802.11 an20 mode Band 1

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



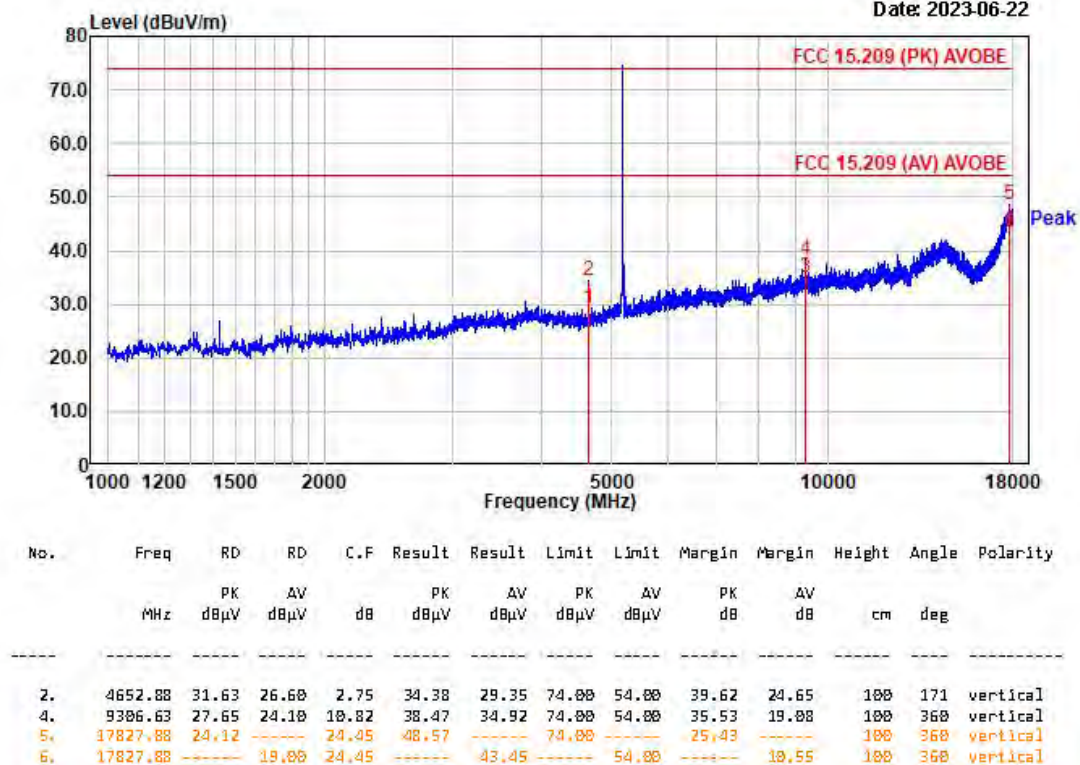
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



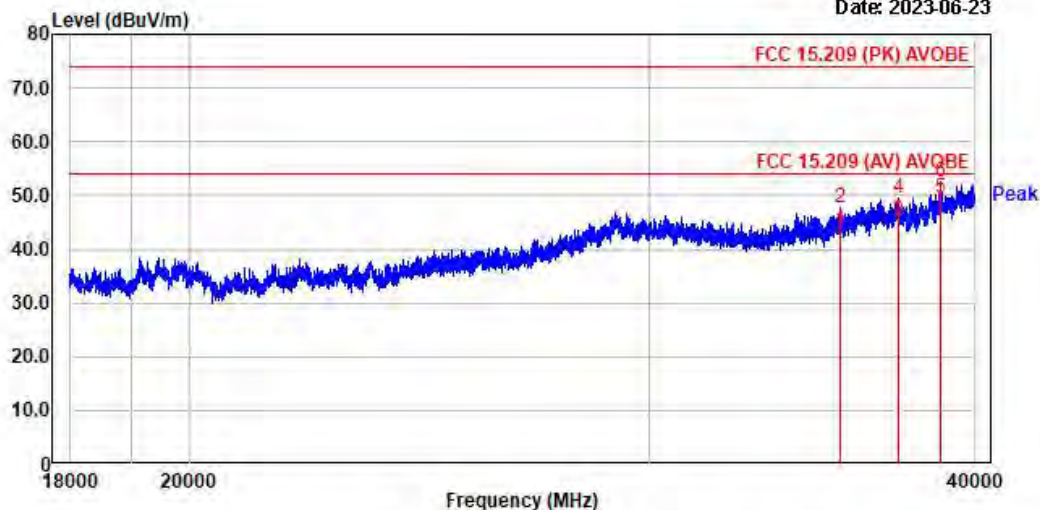
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

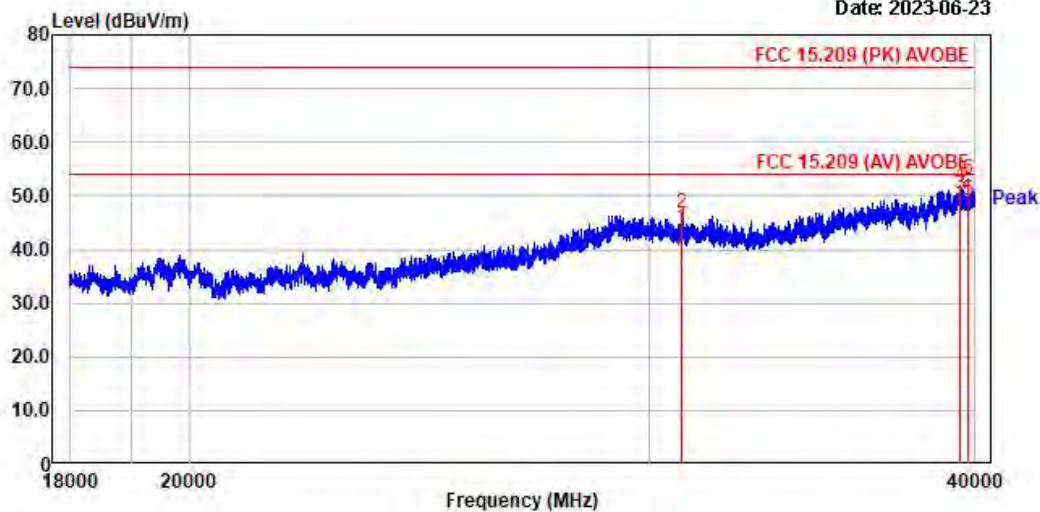
Date: 2023-06-23



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	35512.00	22.80	18.60	24.81	47.61	43.41	74.00	54.00	26.39	10.59	100	88	horizontal
4.	37387.50	24.93	20.70	24.69	49.62	45.39	74.00	54.00	24.38	8.61	100	281	horizontal
5.	38836.75	28.10	25.00	24.53	52.63	49.53	74.00	54.00	21.37	4.47	100	360	horizontal

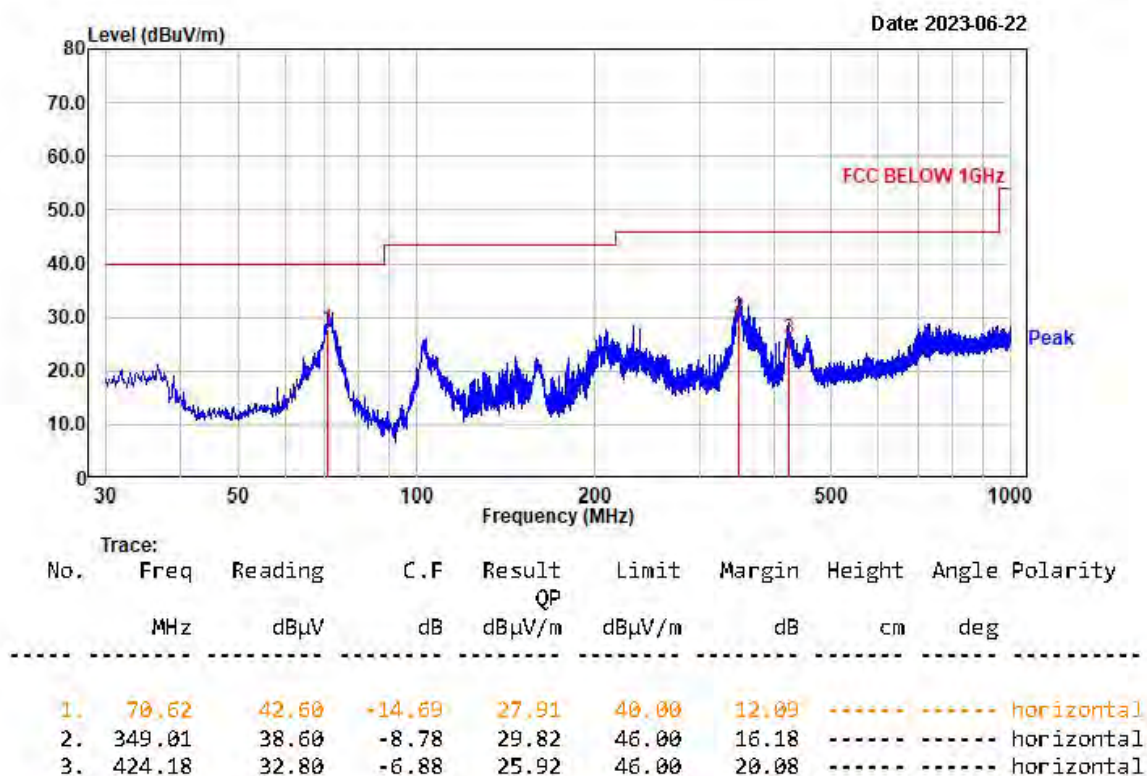
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-23

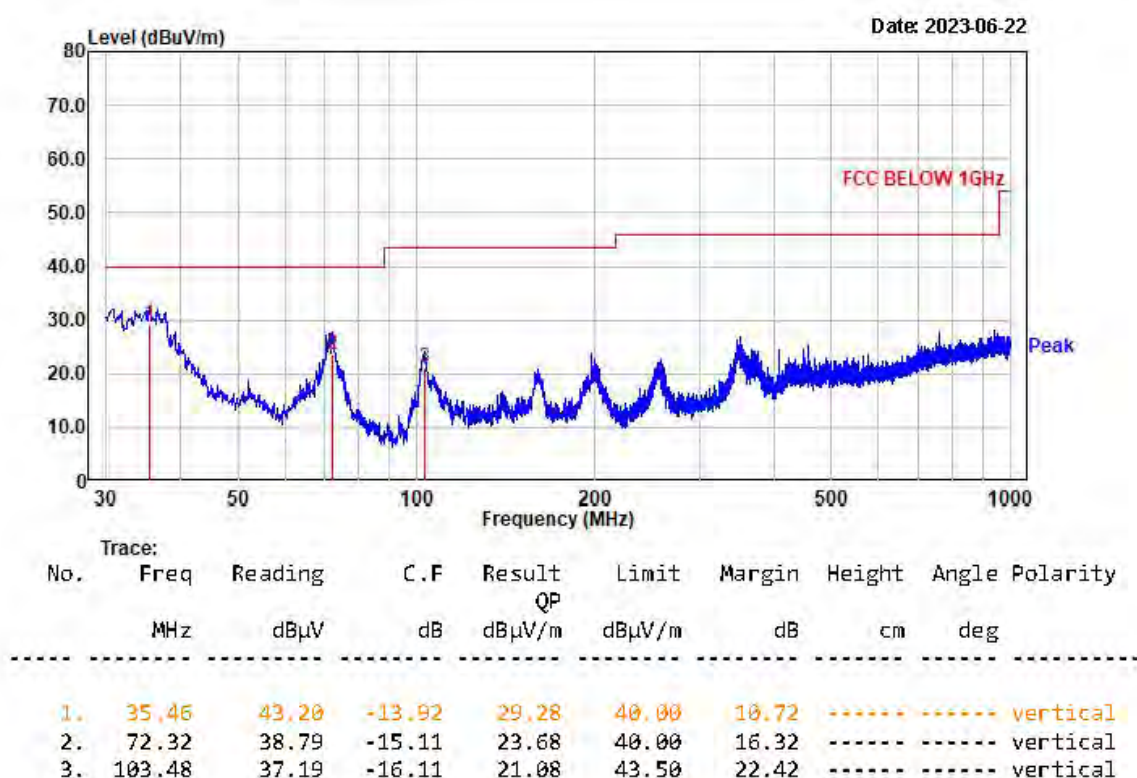


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	30886.50	23.00	20.31	23.64	46.72	43.95	74.00	54.00	27.28	10.05	100	347	vertical
4.	39499.50	25.50	24.00	26.48	51.98	50.48	74.00	54.00	22.02	3.52	100	0	vertical
5.	39791.00	26.52	22.80	26.51	53.03	49.31	74.00	54.00	20.97	4.69	100	92	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

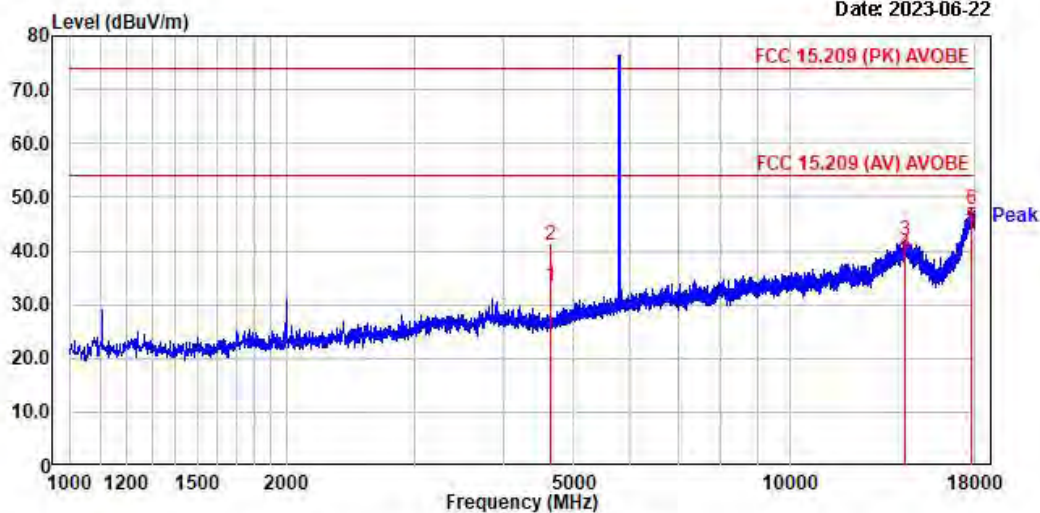
Radiated Emissions – 802.11 an20 mode Band 2

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

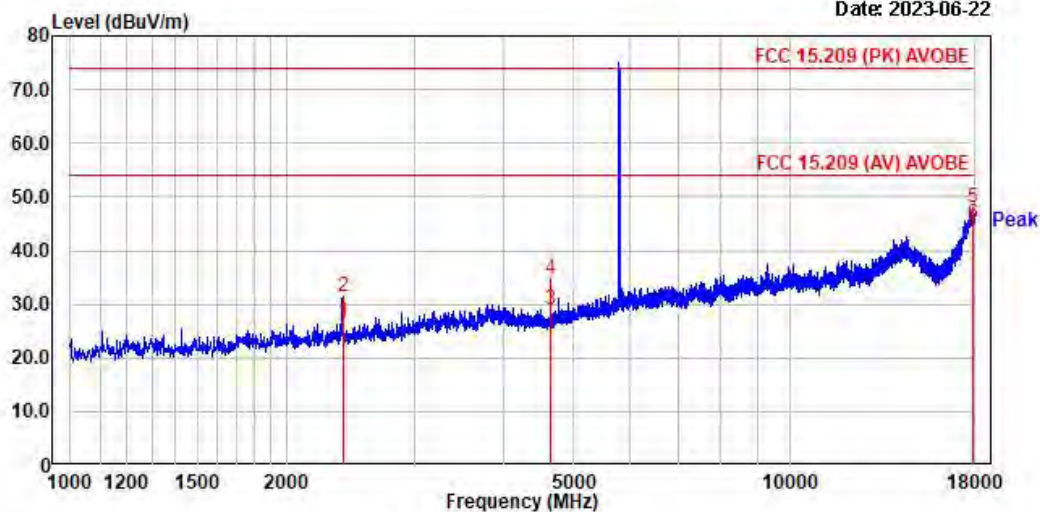
Date: 2023-06-22



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV		dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	4652.88	38.37	38.78	2.75	41.12	33.45	74.88	54.88	32.88	28.55	188	328	horizontal
3.	14398.13	23.18	28.98	18.78	41.88	39.68	74.88	54.88	32.12	14.32	188	296	horizontal
4.	14398.13	23.18	28.98	18.78	41.88	39.68	74.88	54.88	32.12	14.32	188	296	horizontal
6.	17884.58	23.23	28.18	24.48	47.63	44.58	74.88	54.88	26.37	9.58	188	74	horizontal

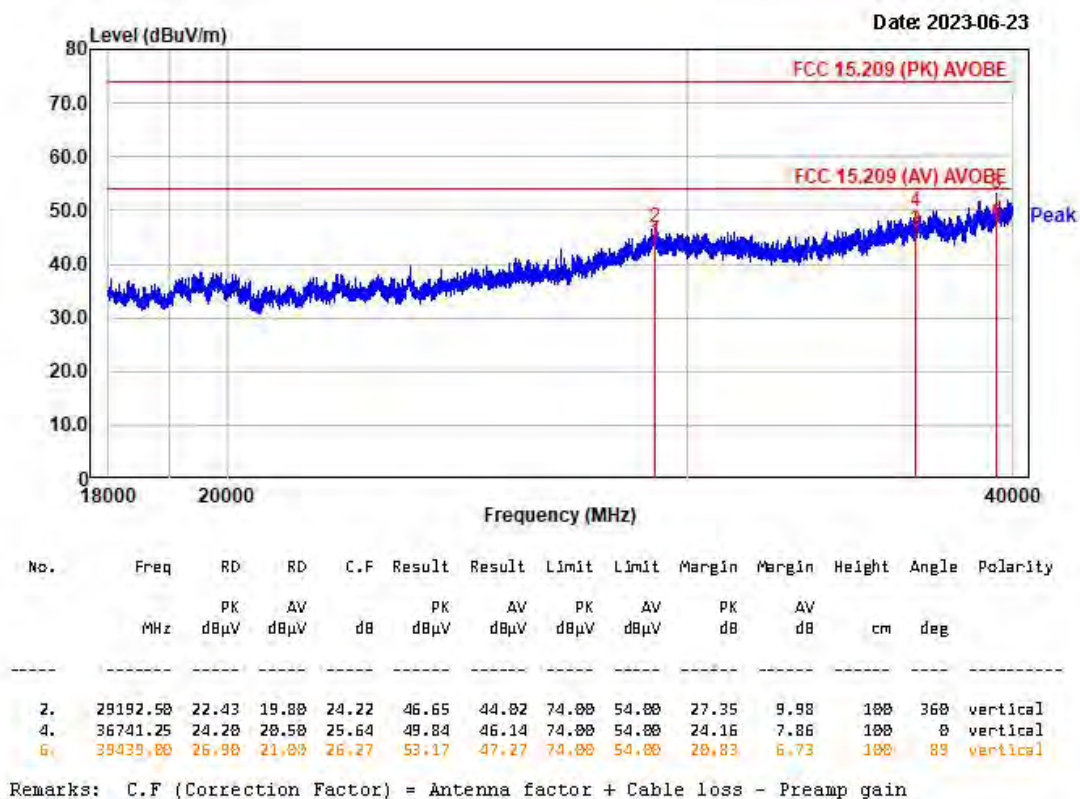
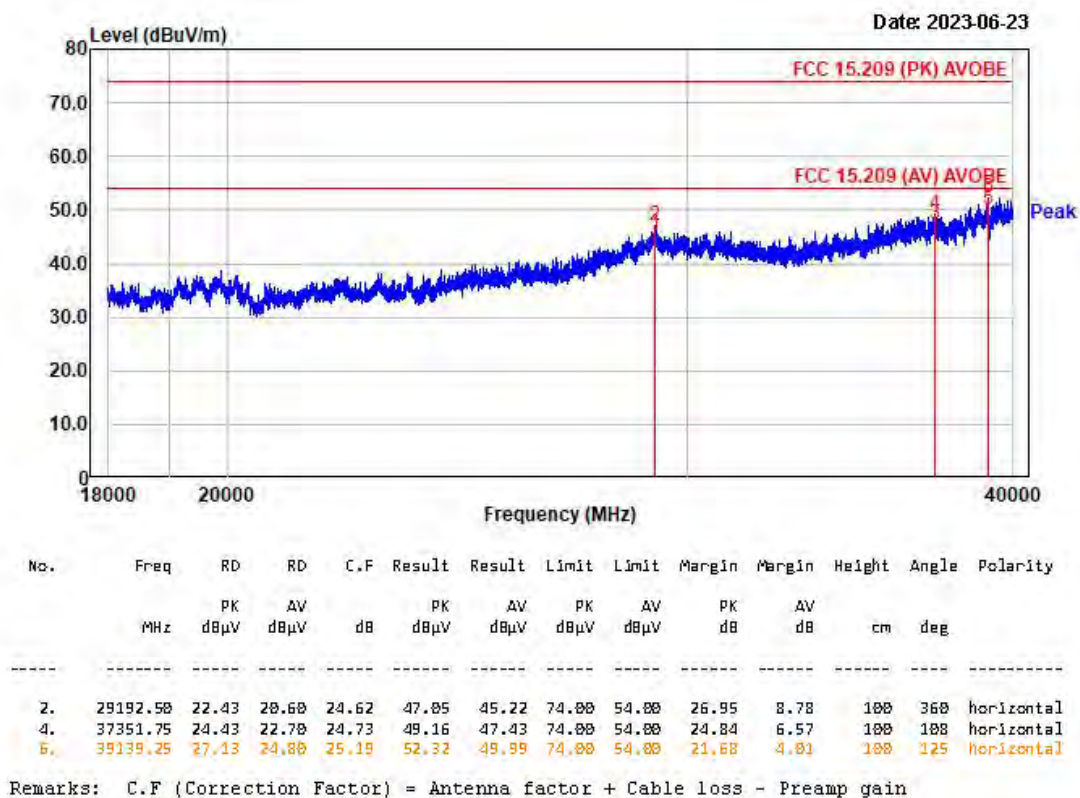
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

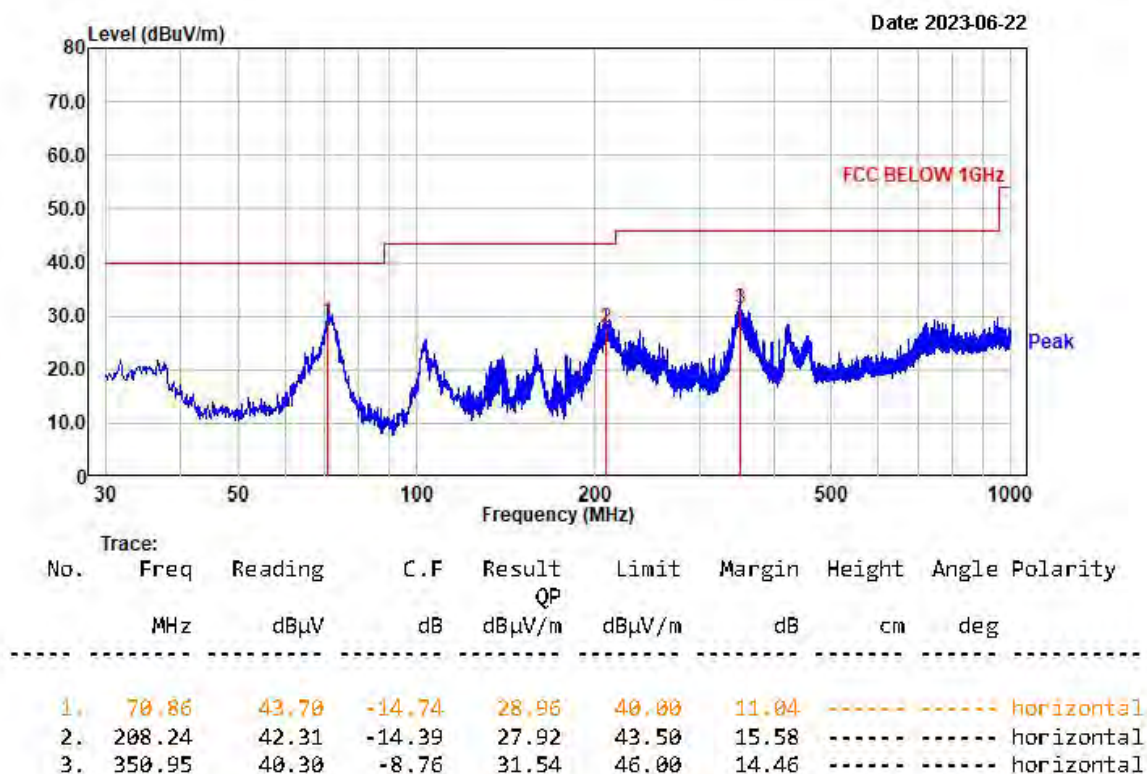
Date: 2023-06-22



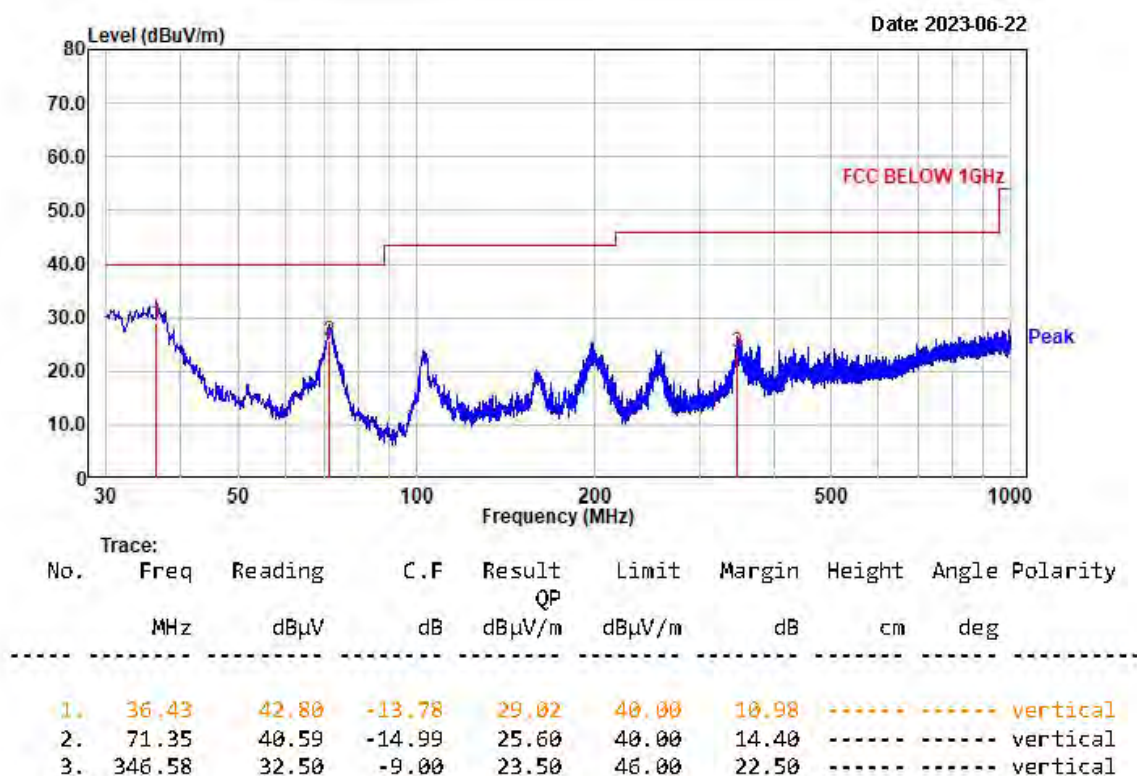
No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK dBμV	AV dBμV	dB	PK dBμV	AV dBμV	PK dBμV	AV dBμV	PK dB	AV dB	cm	deg	
2.	2389.75	35.74	38.78	-4.25	31.49	26.45	74.88	54.88	42.51	27.55	188	169	vertical
4.	4652.88	31.96	26.38	2.75	34.71	29.85	74.88	54.88	39.29	24.95	188	89	vertical
5.	17883.13	23.39	24.57	47.96	47.96	74.88	74.88	54.88	26.84	188	368	vertical	
6.	17883.13	28.31	24.57	44.88	44.88	54.88	54.88	54.88	9.12	188	368	vertical	

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



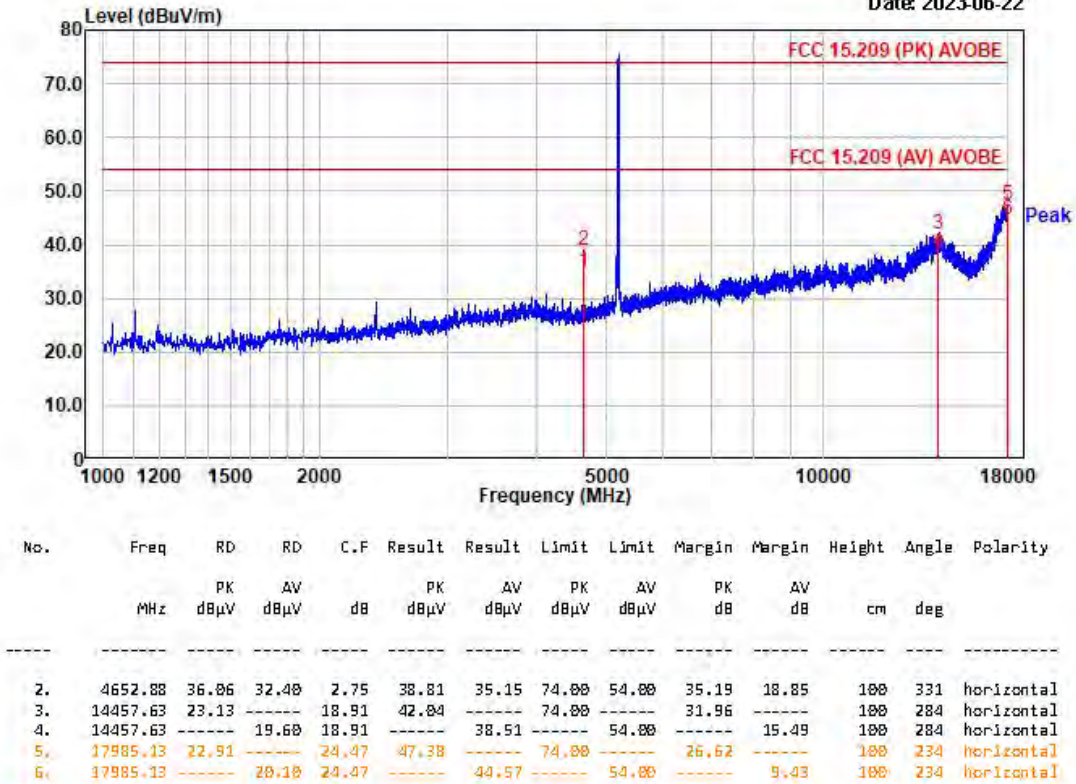
Radiated Emissions – 802.11 an40 mode Band 1

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

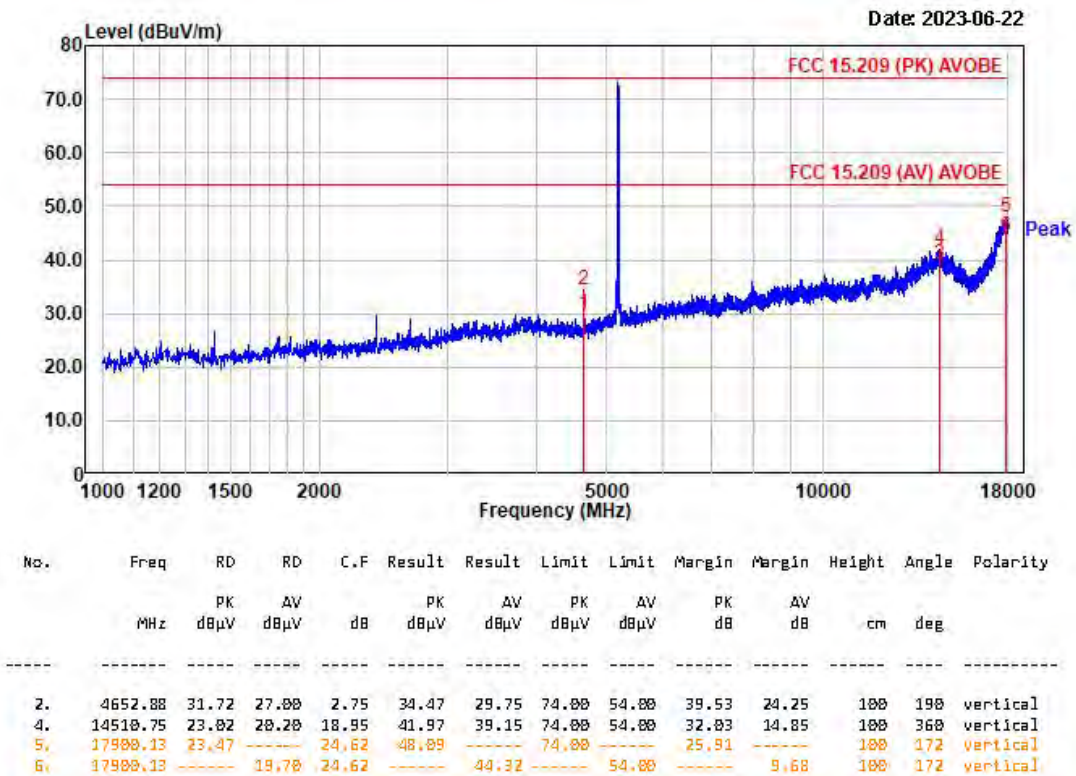


Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

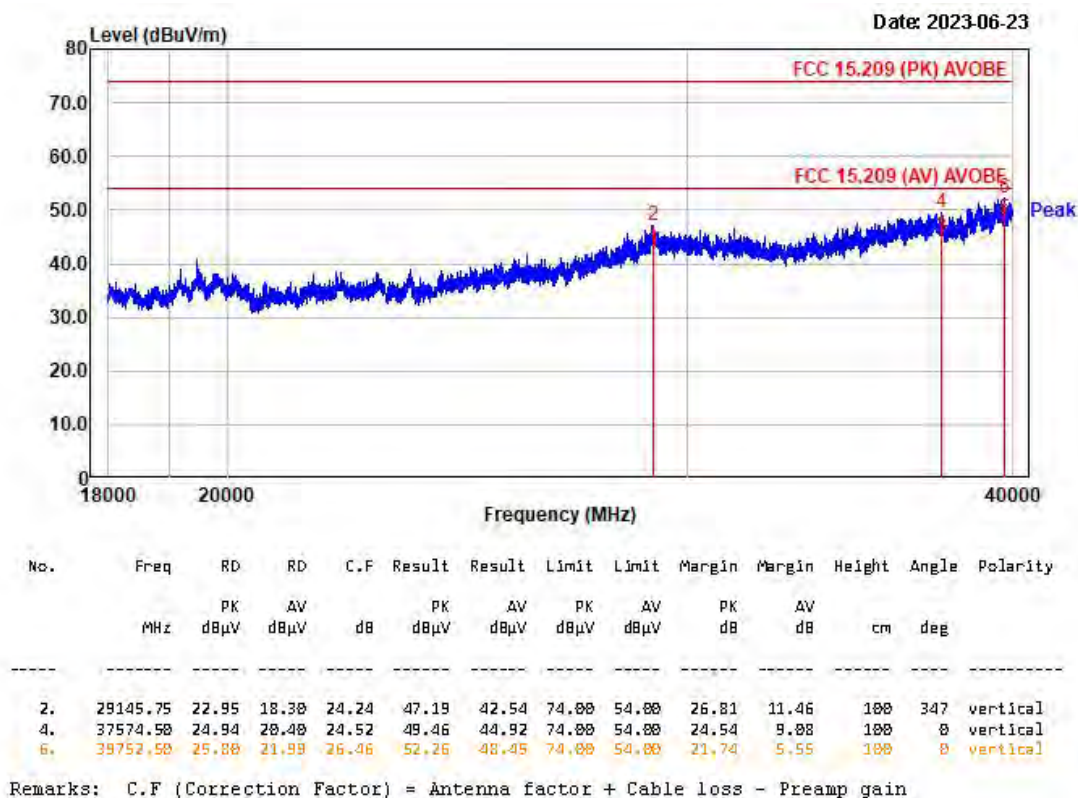
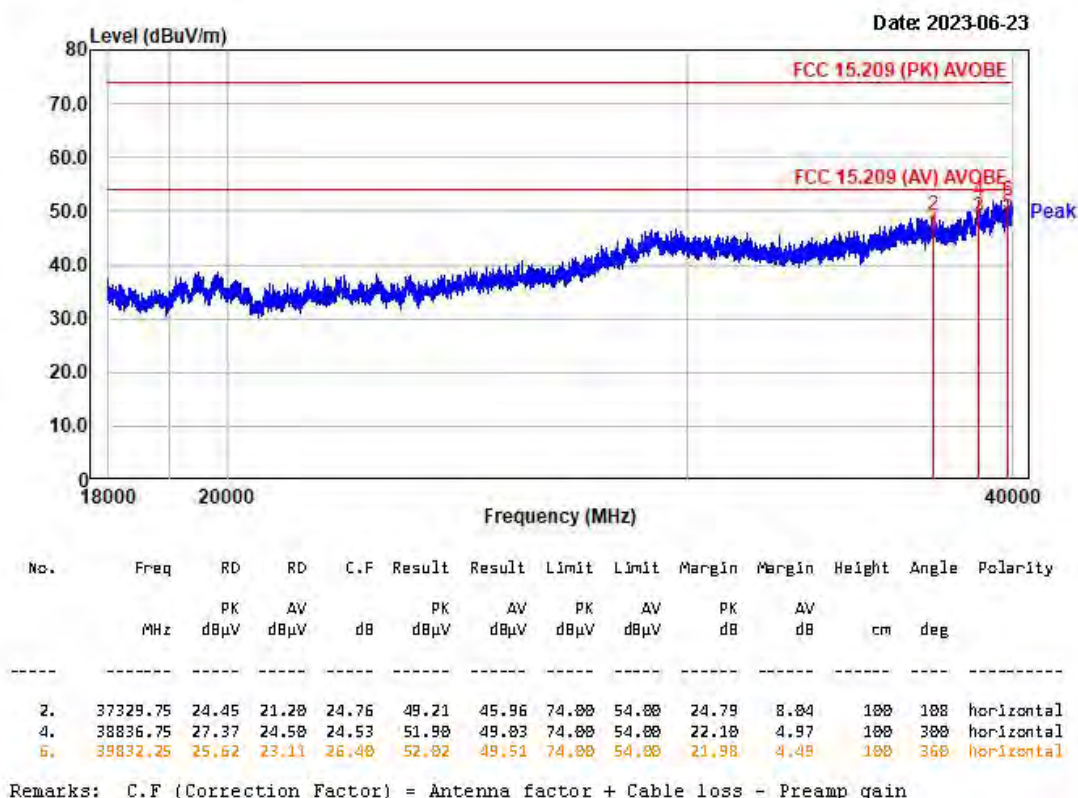
Date: 2023-06-22



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

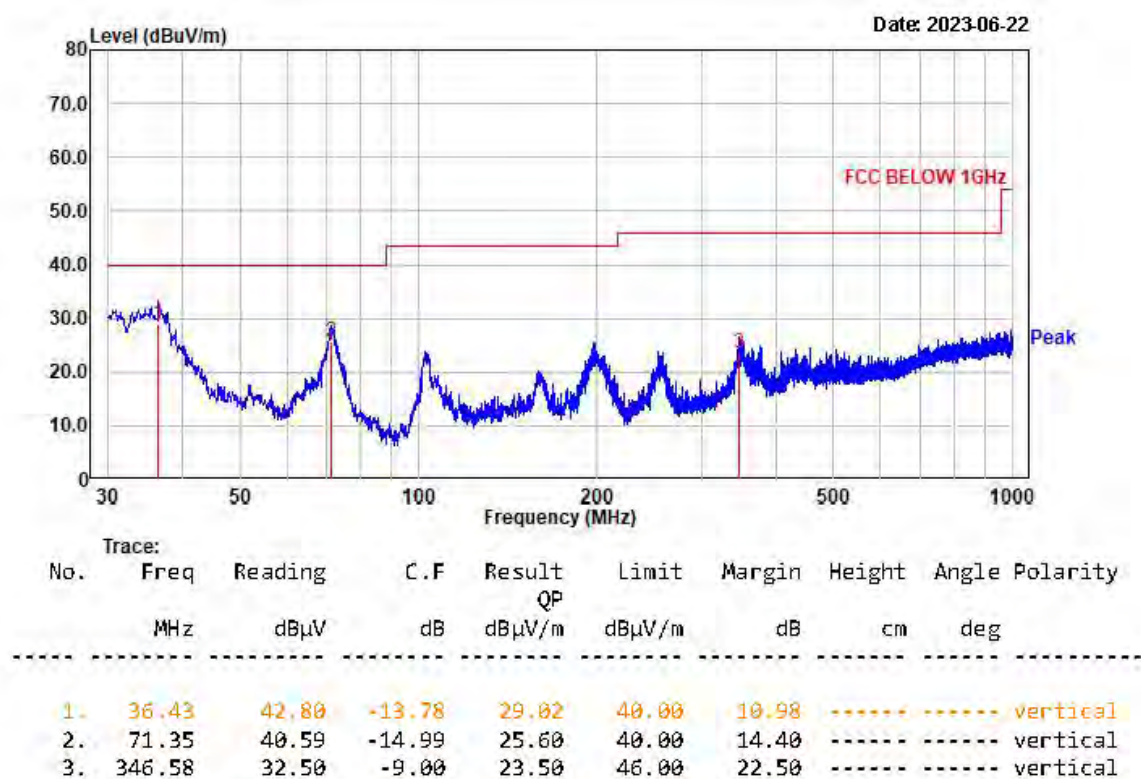


Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



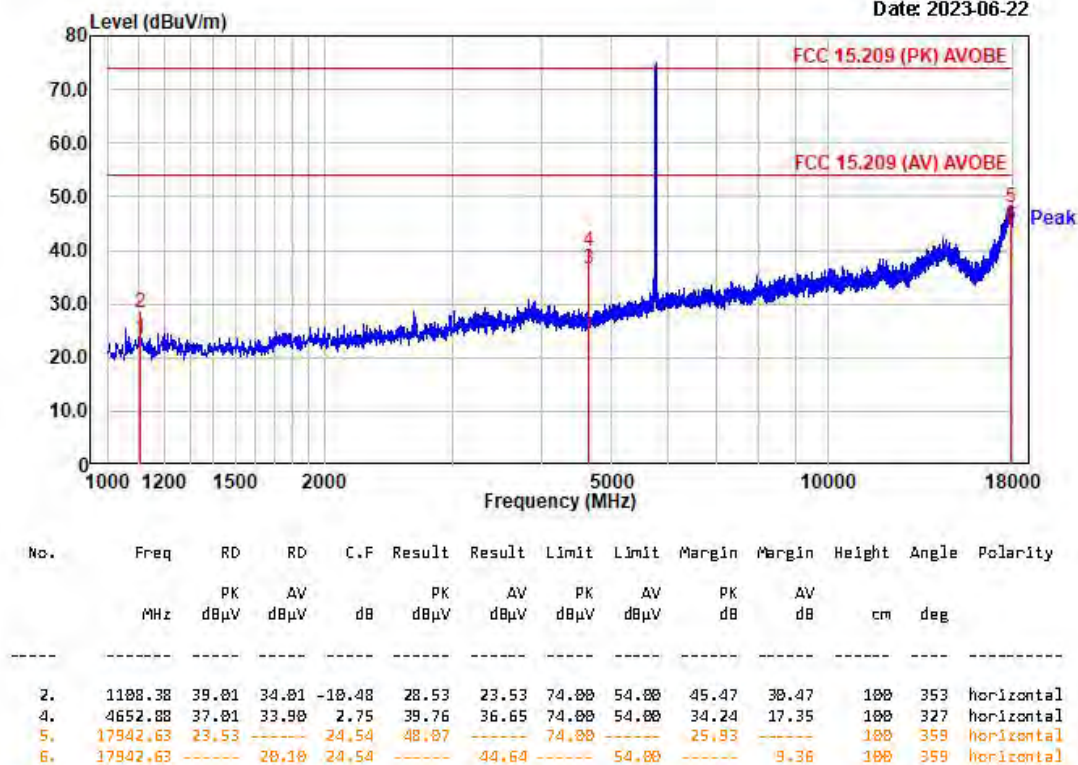
Radiated Emissions – 802.11 an40 mode Band 2

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



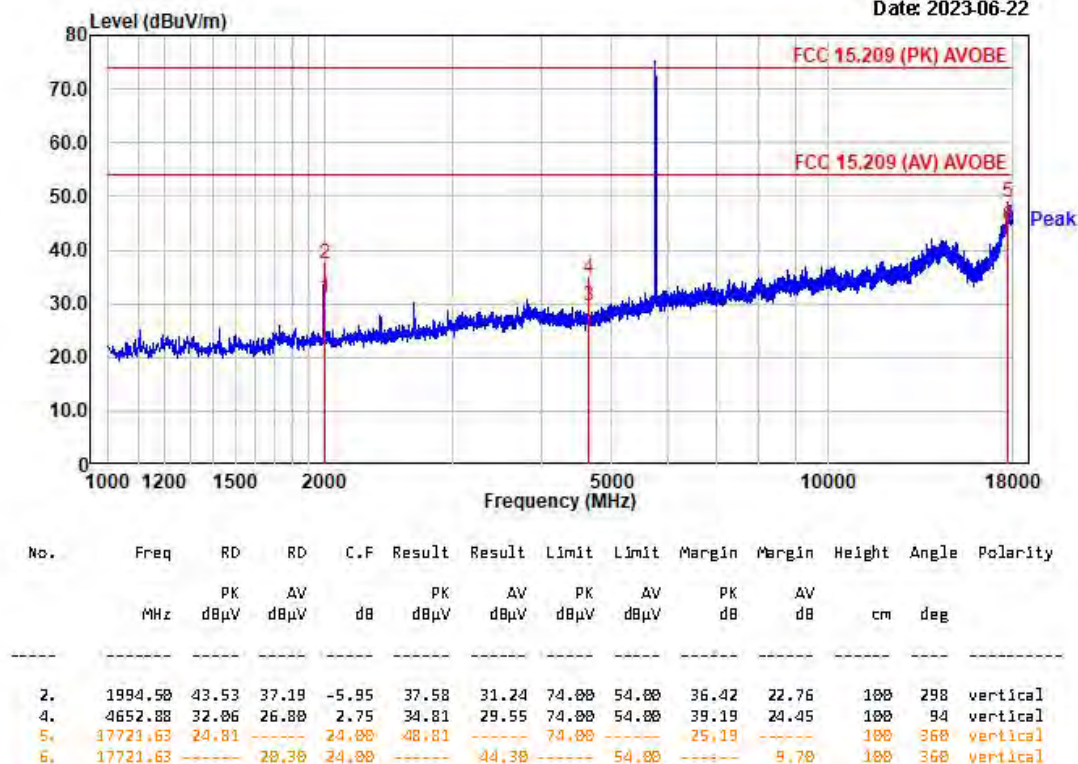
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



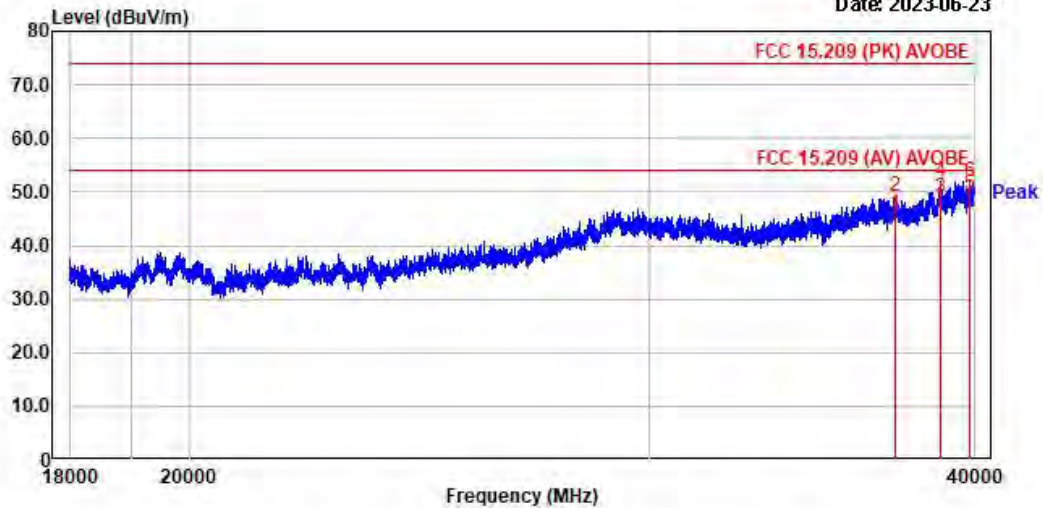
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

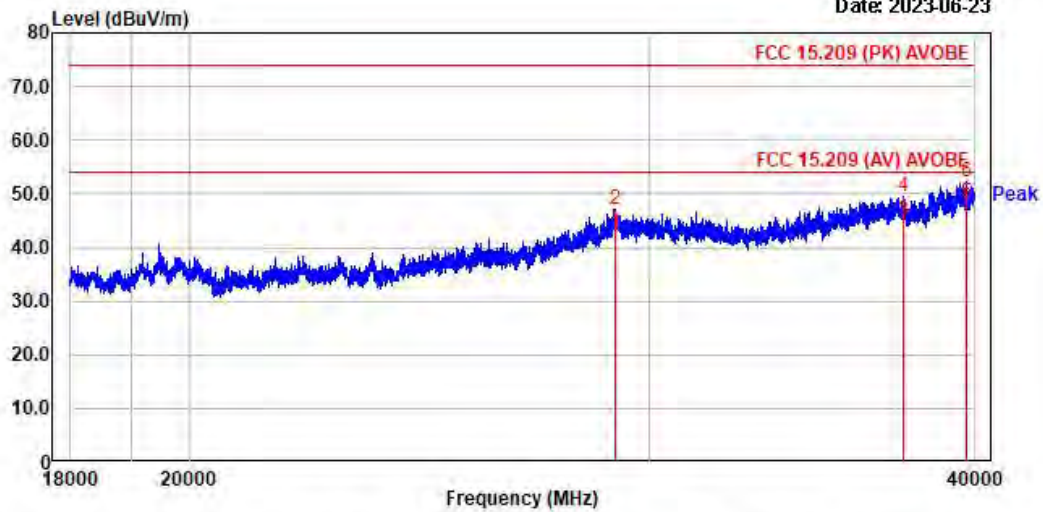
Date: 2023-06-23



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	37329.75	24.45	21.28	24.76	49.21	45.96	74.00	54.00	24.79	8.04	100	108	horizontal
4.	38836.75	27.37	24.50	24.53	51.90	49.03	74.00	54.00	22.10	4.97	100	300	horizontal
6.	39832.25	25.62	23.11	26.90	52.02	49.51	74.00	54.00	21.98	4.49	100	360	horizontal

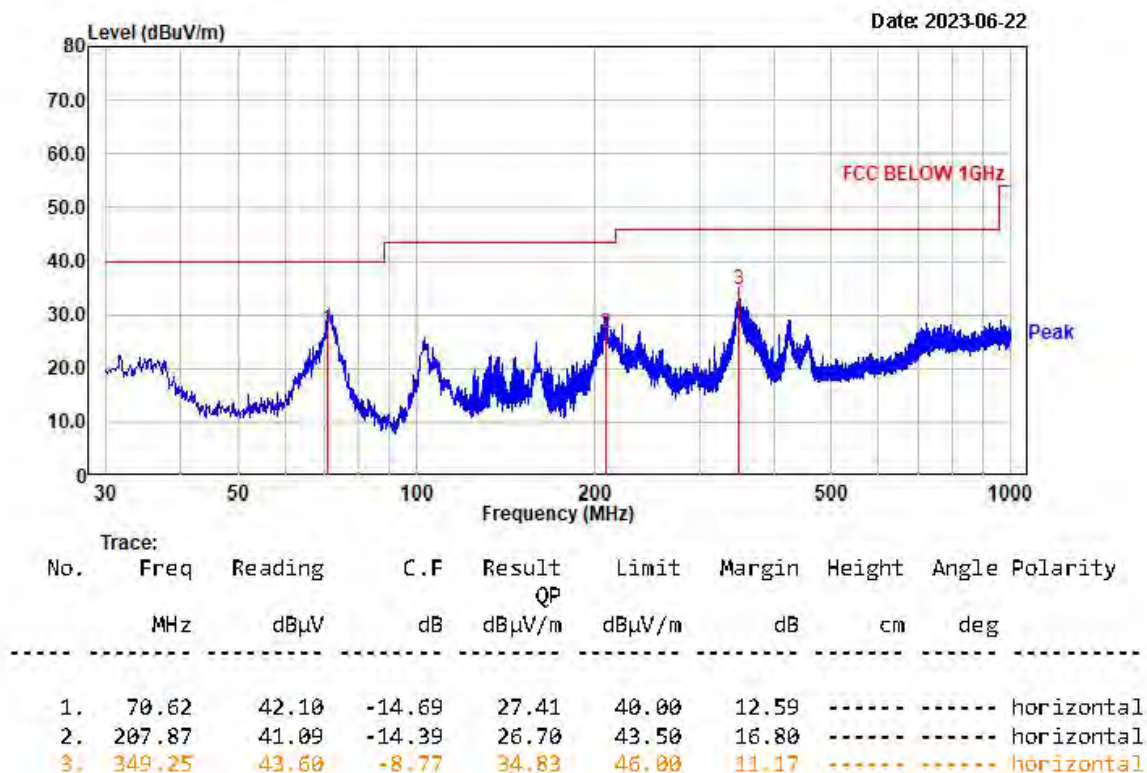
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-23

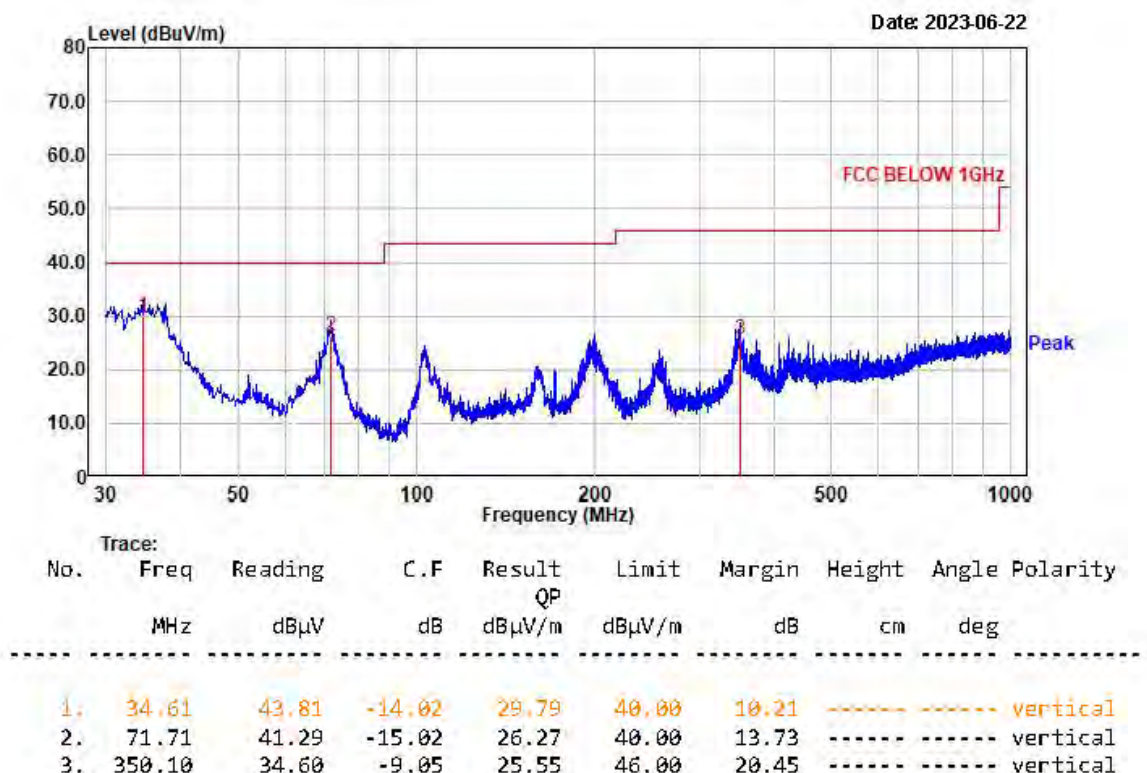


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	29145.75	22.95	18.30	24.24	47.19	42.54	74.00	54.00	26.81	11.46	100	347	vertical
4.	37574.50	24.94	20.40	24.52	49.46	44.92	74.00	54.00	24.54	9.08	100	0	vertical
6.	39752.50	25.80	21.99	26.46	52.26	48.45	74.00	54.00	21.74	5.55	100	0	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

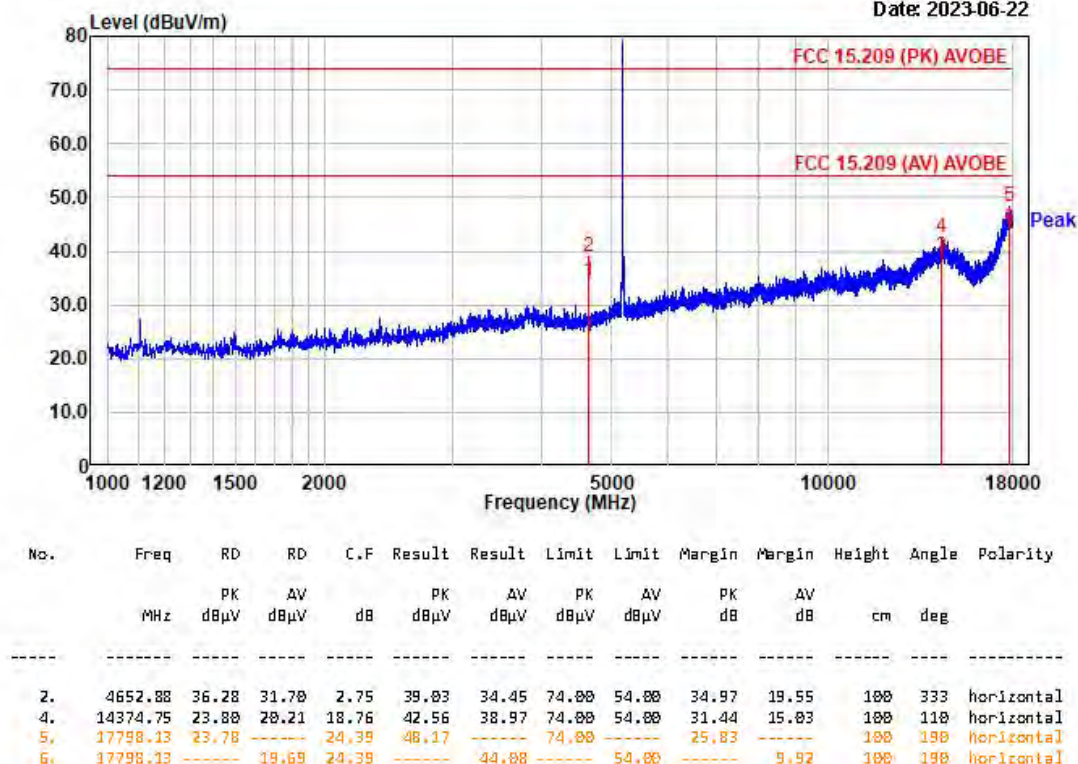
Radiated Emissions – 802.11 ac20 mode Band 1

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



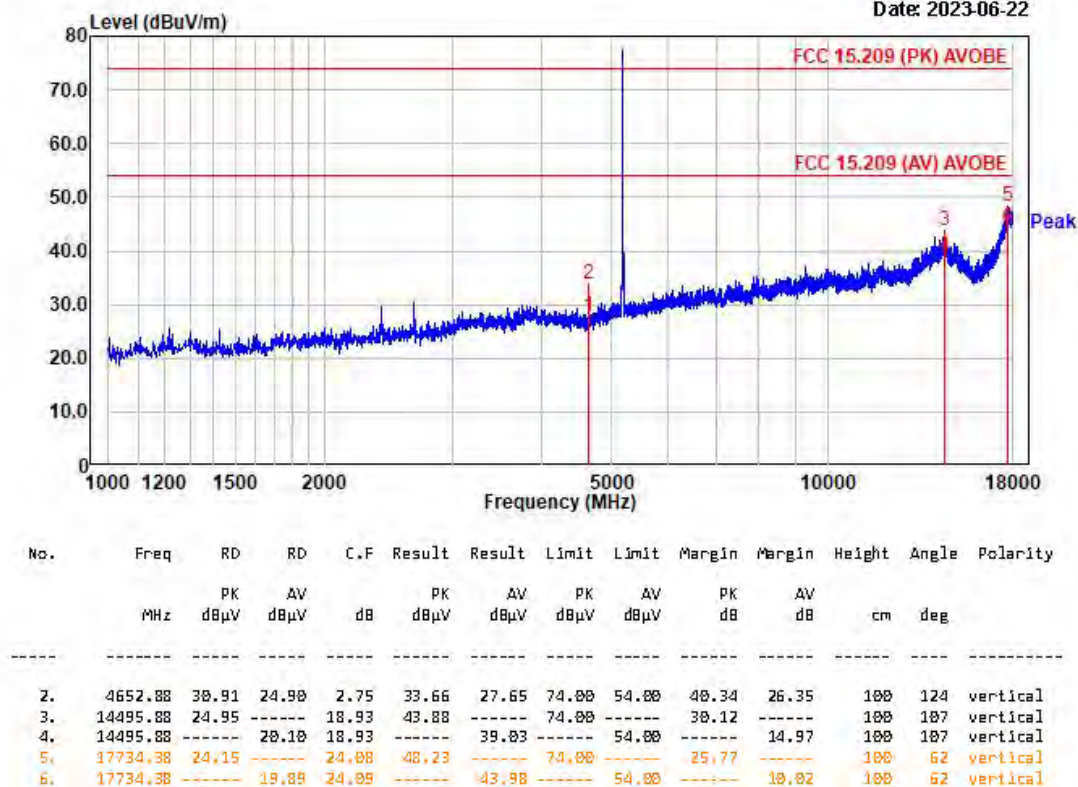
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



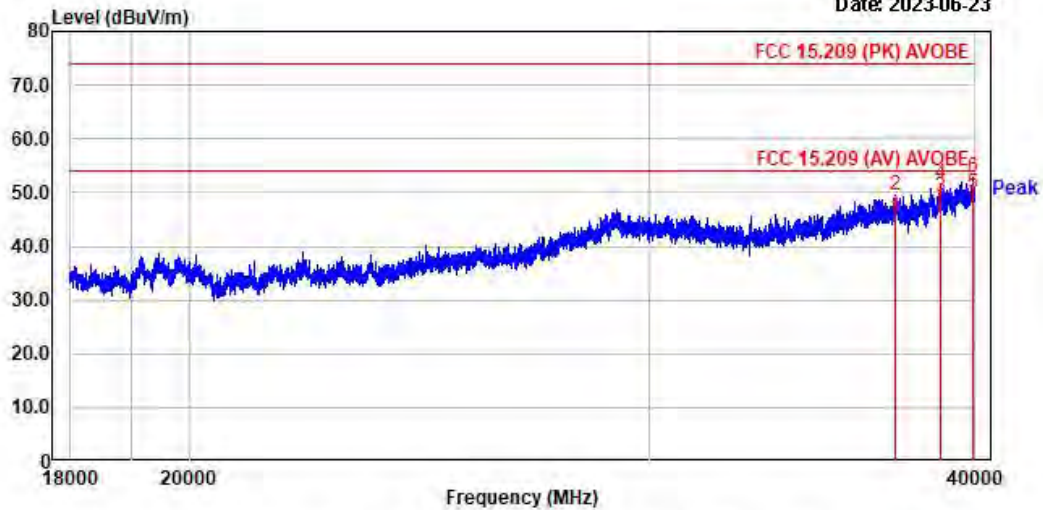
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

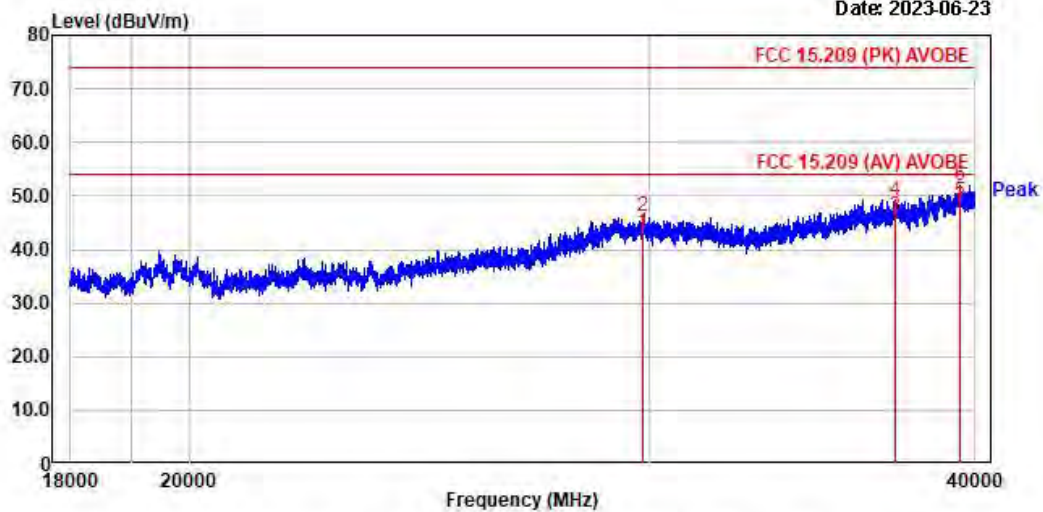
Date: 2023-06-23



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV		dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	37321.58	24.66	28.68	24.77	49.43	45.37	74.88	54.88	24.57	8.63	188	368	horizontal
4.	38834.88	27.18	24.71	24.53	51.63	49.24	74.88	54.88	22.37	4.76	188	382	horizontal
6.	39969.75	26.48	23.48	26.31	52.89	49.81	74.88	54.88	21.11	4.19	188	382	horizontal

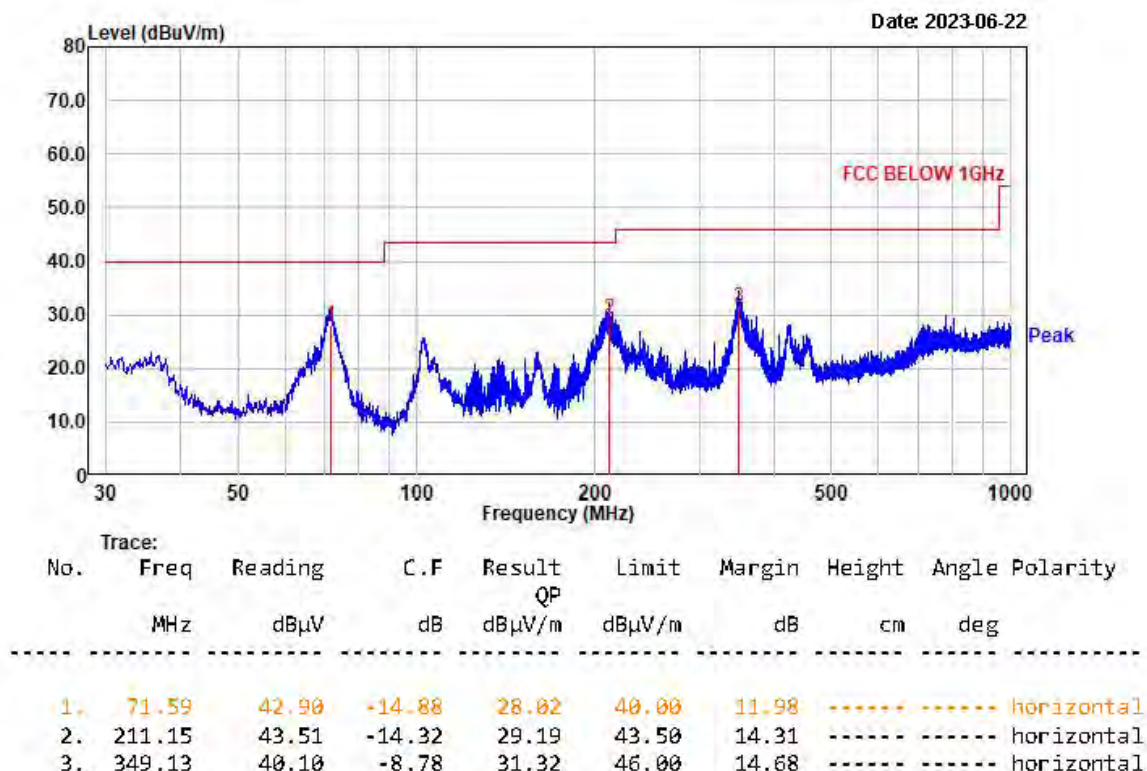
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-23

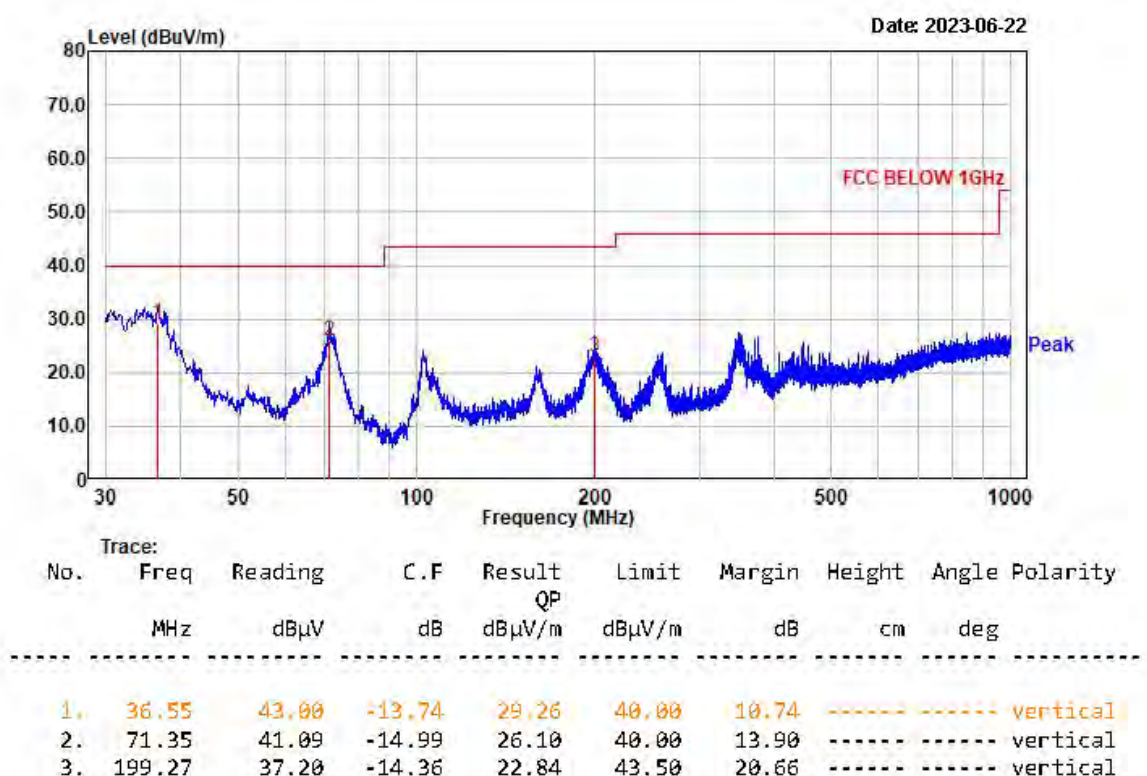


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV		dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	29849.75	22.21	19.38	23.85	46.86	43.15	74.88	54.88	27.94	18.85	188	165	vertical
4.	37318.75	24.29	21.19	24.98	49.27	46.17	74.88	54.88	24.73	7.83	188	368	vertical
6.	39488.58	25.45	22.68	26.34	51.89	49.84	74.88	54.88	22.11	4.96	188	8	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

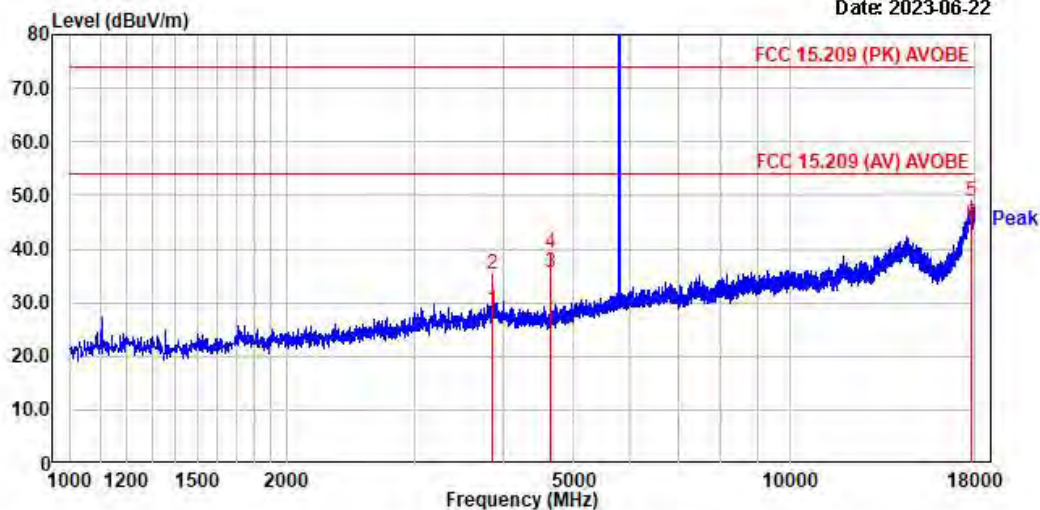
Radiated Emissions – 802.11 ac20 mode Band 2

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

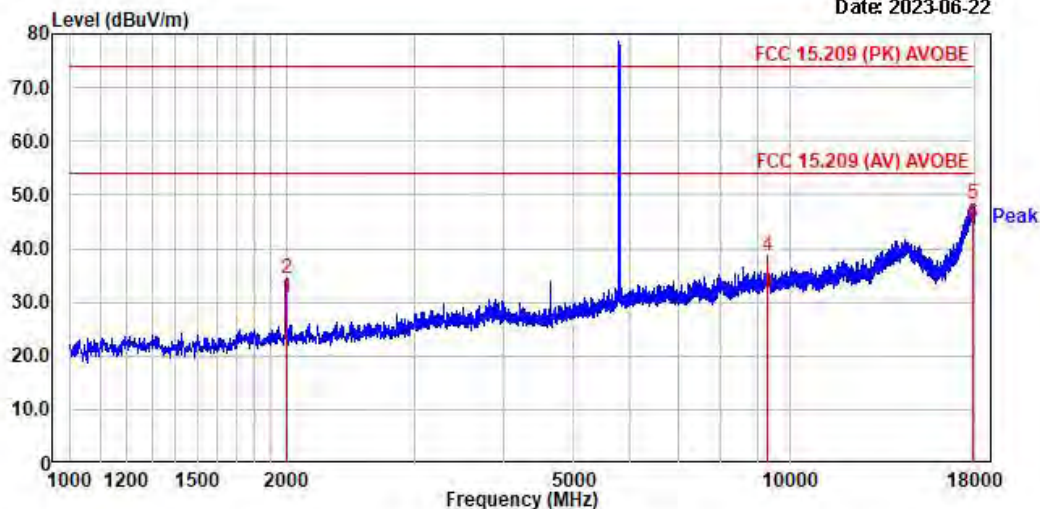
Date: 2023-06-22



No.	Freq MHz	RD		C.F	Result		Limit		Margin		Height	Angle	Polarity
		PK dBUV	AV dBUV		PK dBUV	AV dBUV	PK dBUV	AV dBUV	PK dB	AV dB			
2.	3856.88	32.81	26.18	2.61	35.42	28.71	74.00	54.00	38.58	25.29	100	314	horizontal
4.	4652.88	36.46	33.00	2.75	39.21	35.75	74.00	54.00	34.79	18.25	100	329	horizontal
5.	17806.63	24.51	-----	24.41	48.92	-----	74.00	-----	25.08	-----	100	0	horizontal
6.	17806.63	-----	20.30	24.41	-----	44.71	-----	54.00	-----	9.29	100	0	horizontal

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

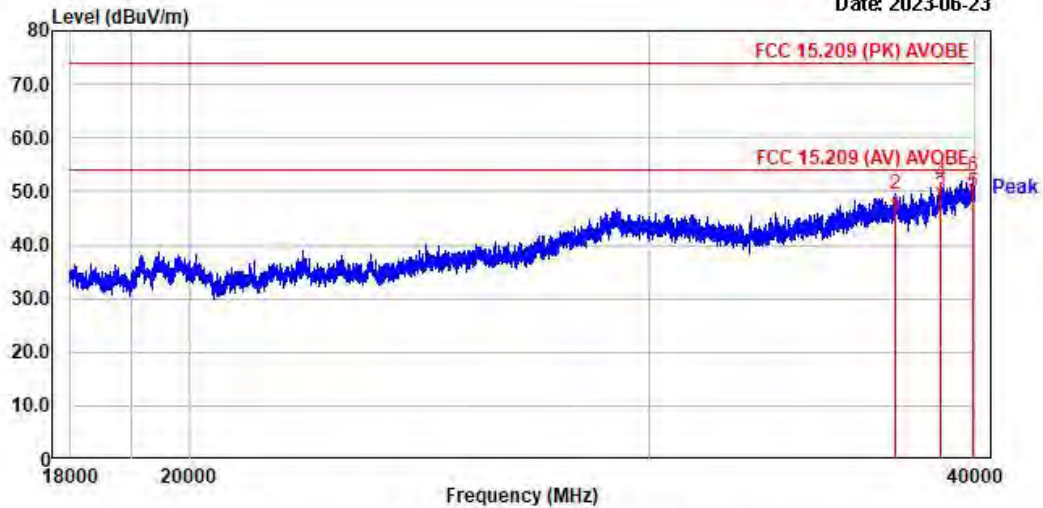
Date: 2023-06-22



No.	Freq MHz	RD		C.F	Result		Limit		Margin		Height	Angle	Polarity
		PK dBUV	AV dBUV		PK dBUV	AV dBUV	PK dBUV	AV dBUV	PK dB	AV dB			
2.	1994.50	40.42	36.89	-5.95	34.47	30.94	74.00	54.00	39.53	23.06	100	331	vertical
4.	9306.63	27.77	20.80	10.82	38.59	31.62	74.00	54.00	35.41	22.38	100	0	vertical
5.	17900.13	23.67	-----	24.62	48.29	-----	74.00	-----	25.71	-----	100	360	vertical
6.	17900.13	-----	20.10	24.62	-----	44.72	-----	54.00	-----	9.28	100	300	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

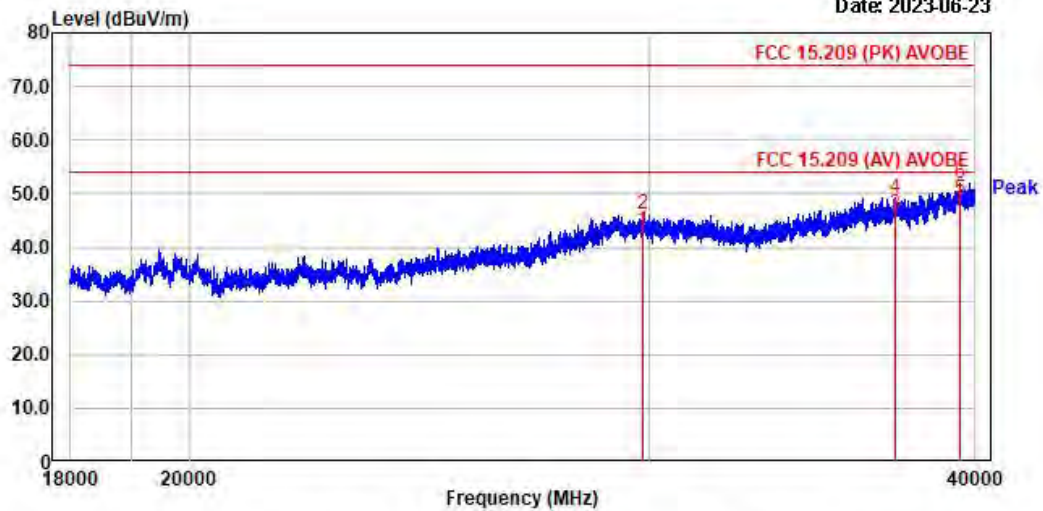
Date: 2023-06-23



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV		dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	37321.58	24.66	28.68	24.77	49.43	45.37	74.88	54.88	24.57	8.63	188	368	horizontal
4.	38834.88	27.18	24.71	24.53	51.63	49.24	74.88	54.88	22.37	4.76	188	382	horizontal
6.	39969.75	26.48	23.48	26.41	52.89	49.81	74.88	54.88	21.11	4.19	188	382	horizontal

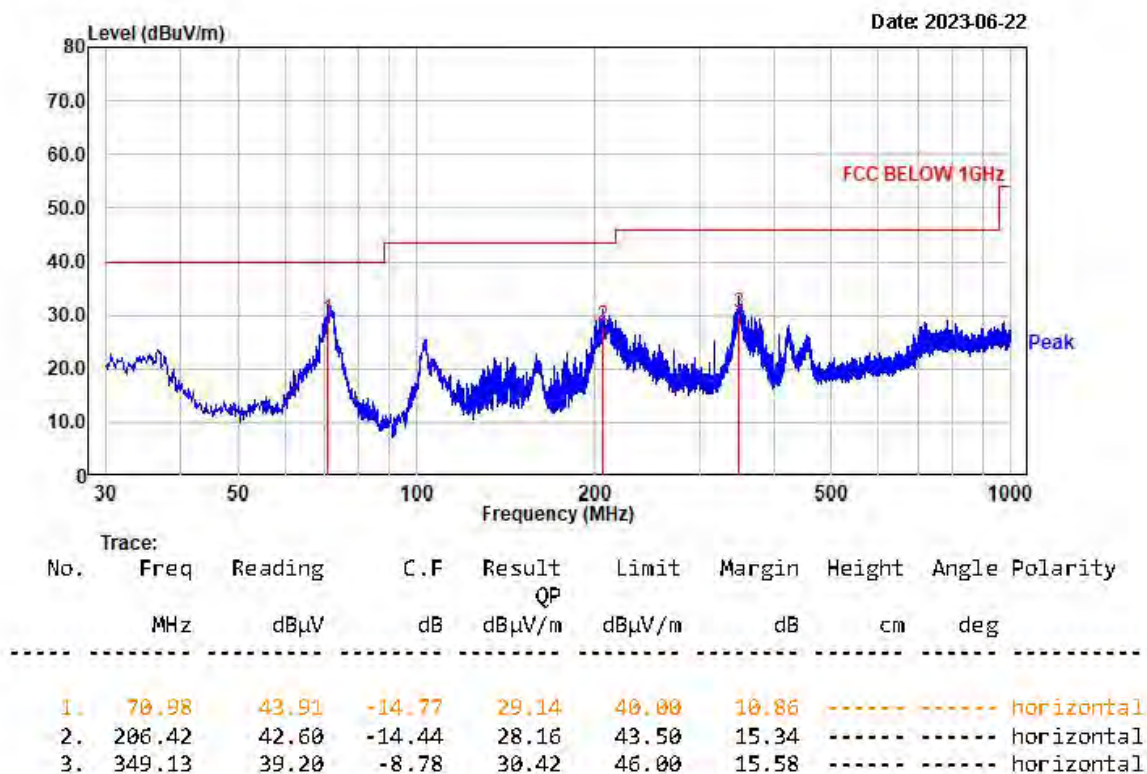
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-23

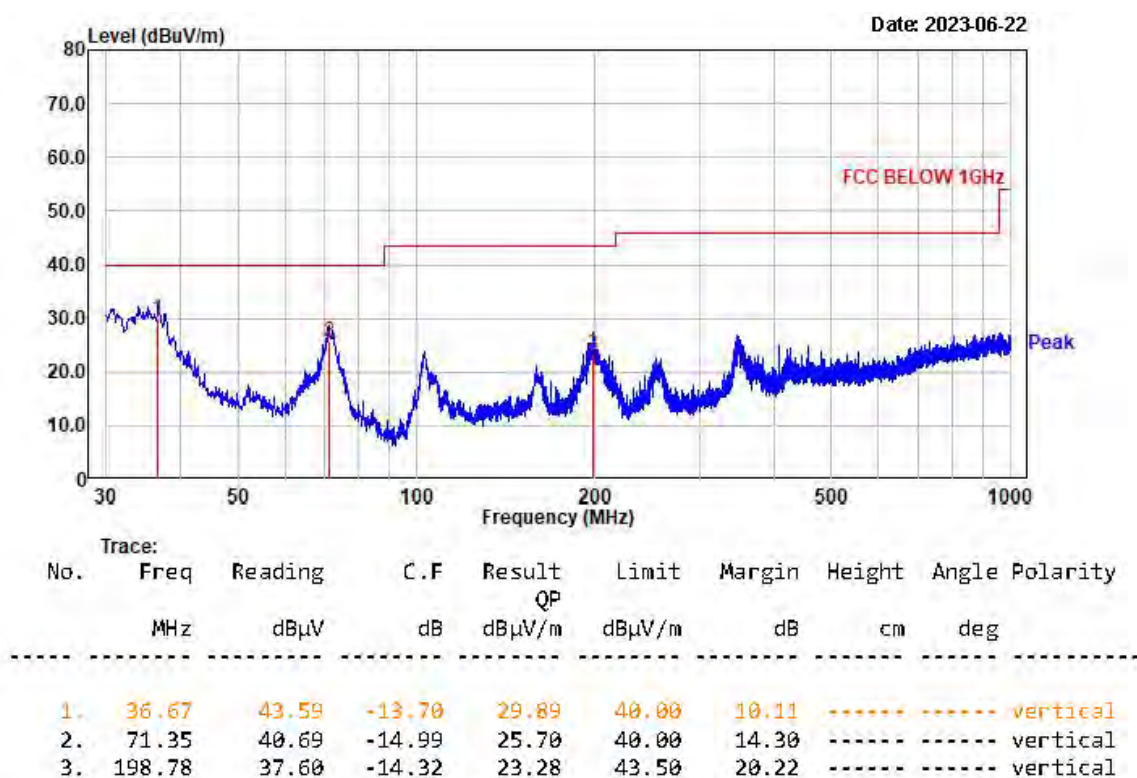


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV		dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	29849.75	22.21	19.38	23.85	46.86	43.15	74.88	54.88	27.94	18.85	188	165	vertical
4.	37318.75	24.29	21.19	24.98	49.27	46.17	74.88	54.88	24.73	7.83	188	368	vertical
6.	39488.58	25.45	22.58	26.44	51.89	49.84	74.88	54.88	22.11	4.96	188	8	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

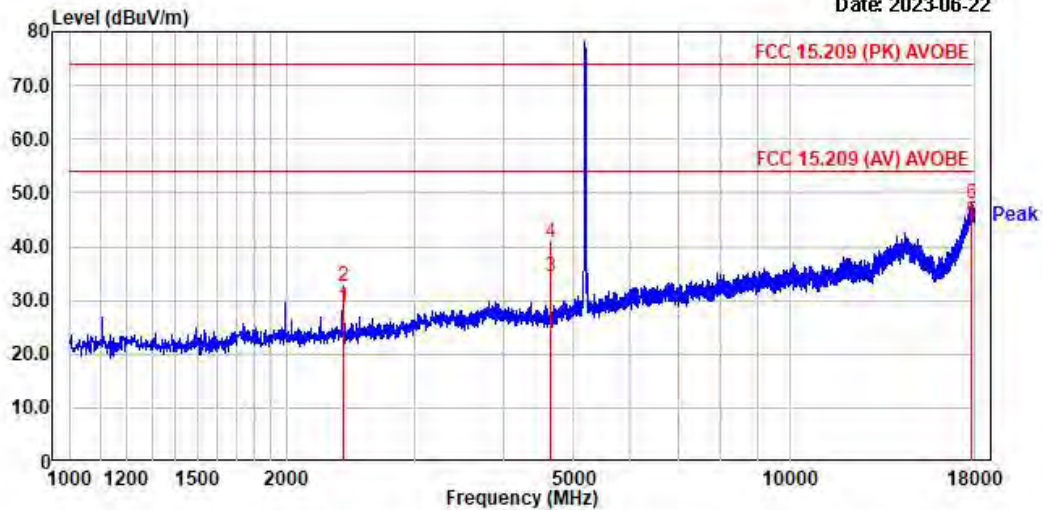
Radiated Emissions – 802.11 ac40 mode Band 1

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

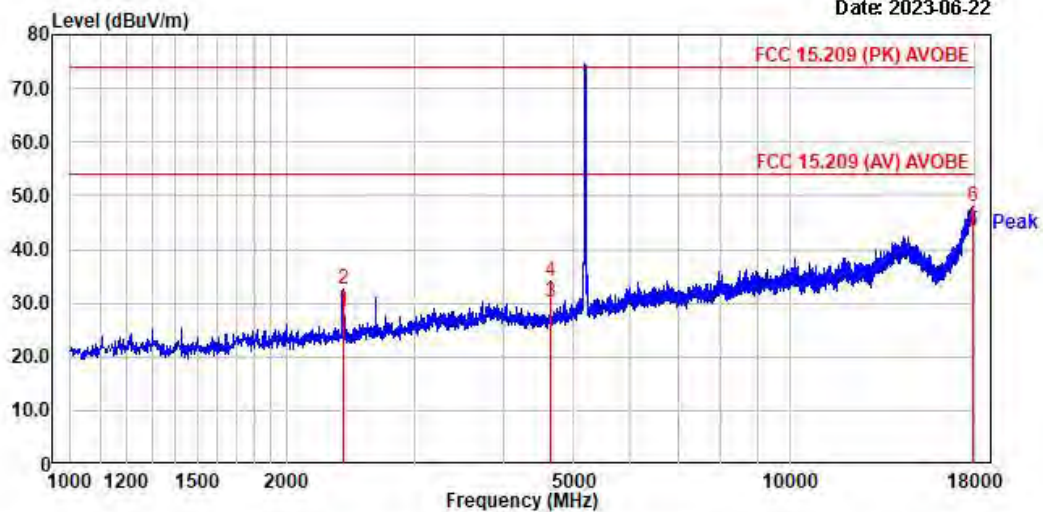
Date: 2023-06-22



No.	Freq MHz	RD		C.F	Result		Limit		Margin		Height	Angle	Polarity
		PK dBUV	AV dBUV		PK dBUV	AV dBUV	PK dBUV	AV dBUV	PK dB	AV dB			
2.	2398.25	36.97	32.79	-4.26	32.71	28.53	74.00	54.00	41.29	25.47	100	298	horizontal
4.	4652.88	37.94	31.70	2.75	40.69	34.45	74.00	54.00	33.31	19.55	100	330	horizontal
6.	17821.58	23.46	20.29	24.45	47.91	44.74	74.00	54.00	26.09	9.26	100	104	horizontal

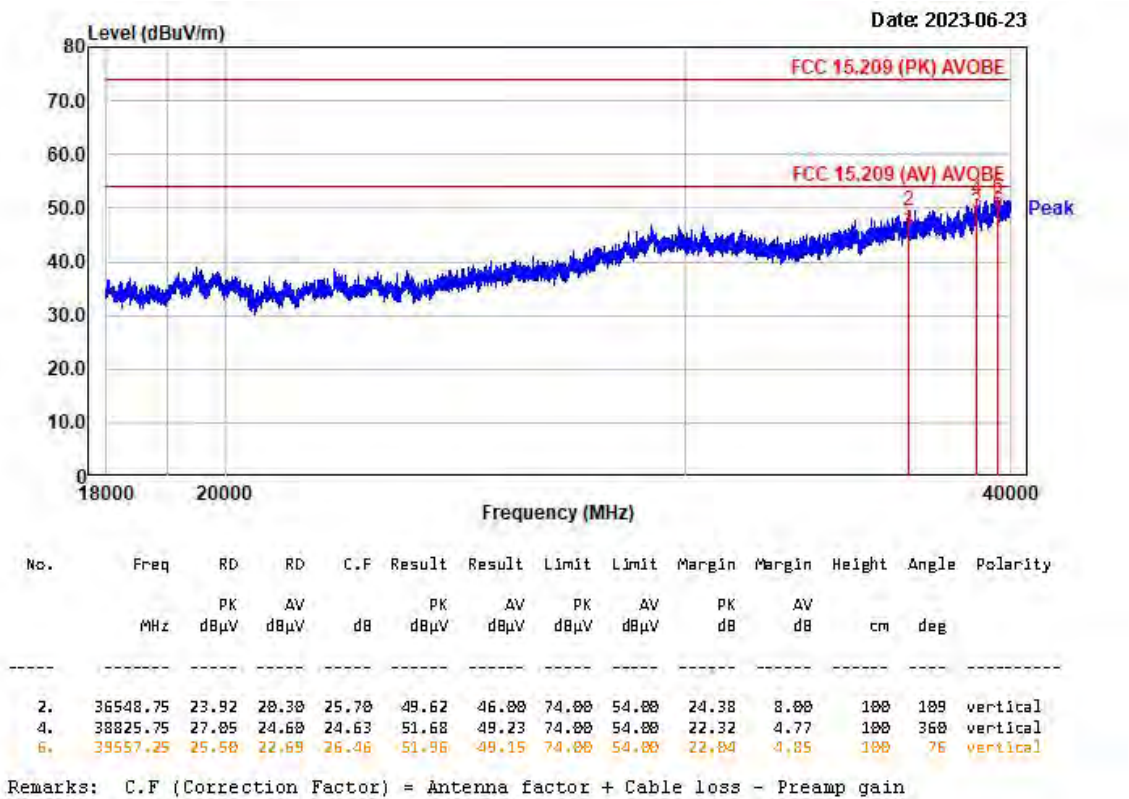
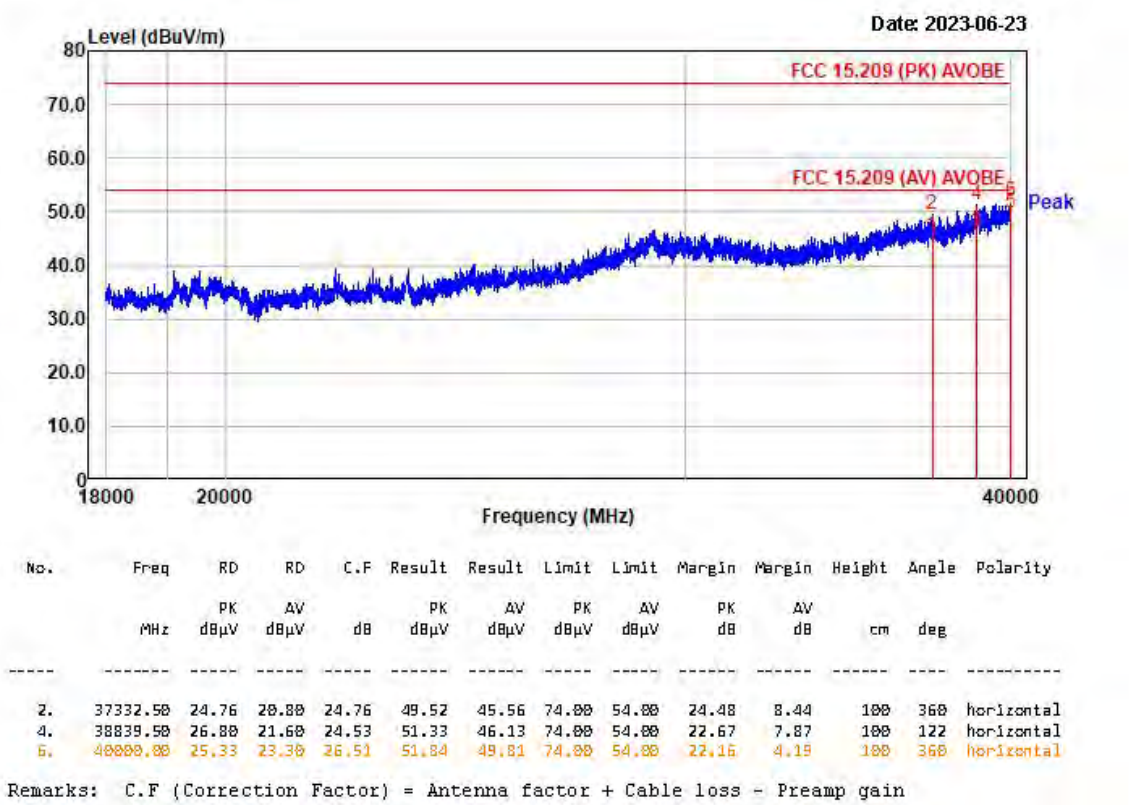
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

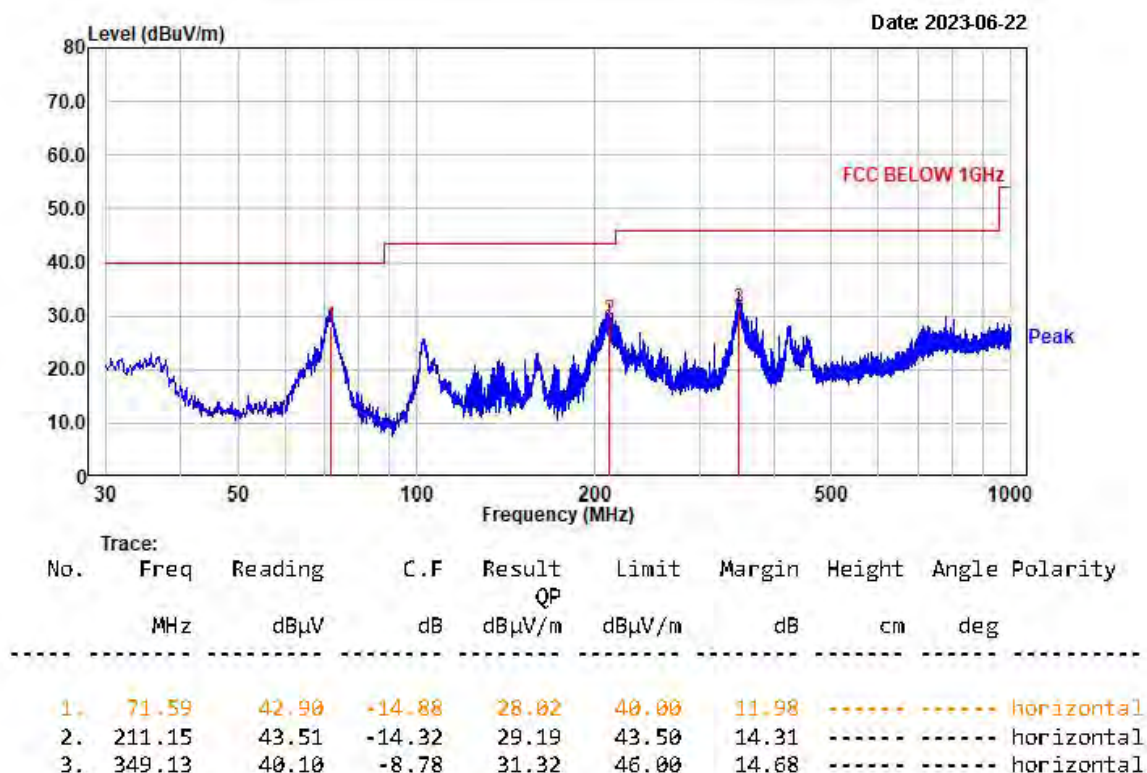
Date: 2023-06-22



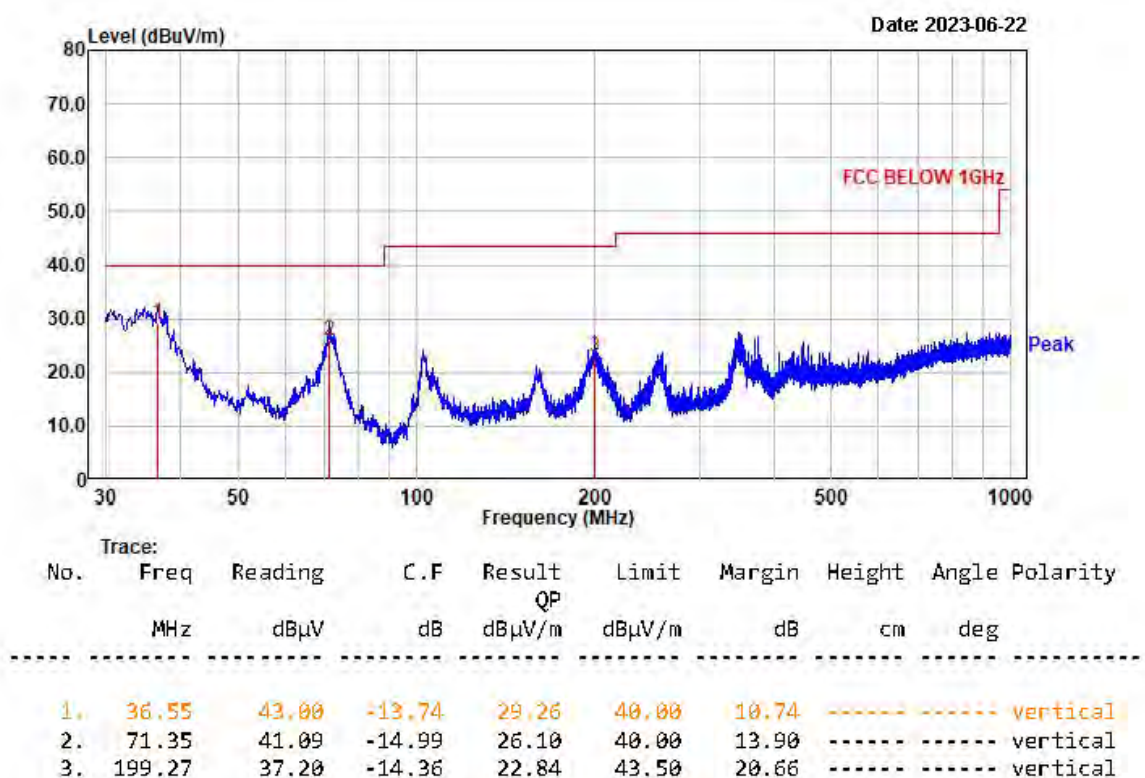
No.	Freq MHz	RD		C.F	Result		Limit		Margin		Height	Angle	Polarity
		PK dBUV	AV dBUV		PK dBUV	AV dBUV	PK dBUV	AV dBUV	PK dB	AV dB			
2.	2398.25	36.85	32.59	-4.26	32.59	28.33	74.00	54.00	41.41	25.67	100	202	vertical
4.	4652.88	31.34	27.40	2.75	34.09	30.15	74.00	54.00	39.91	23.85	100	105	vertical
6.	17889.58	23.35	18.09	24.60	47.95	43.49	74.00	54.00	26.05	10.51	100	360	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



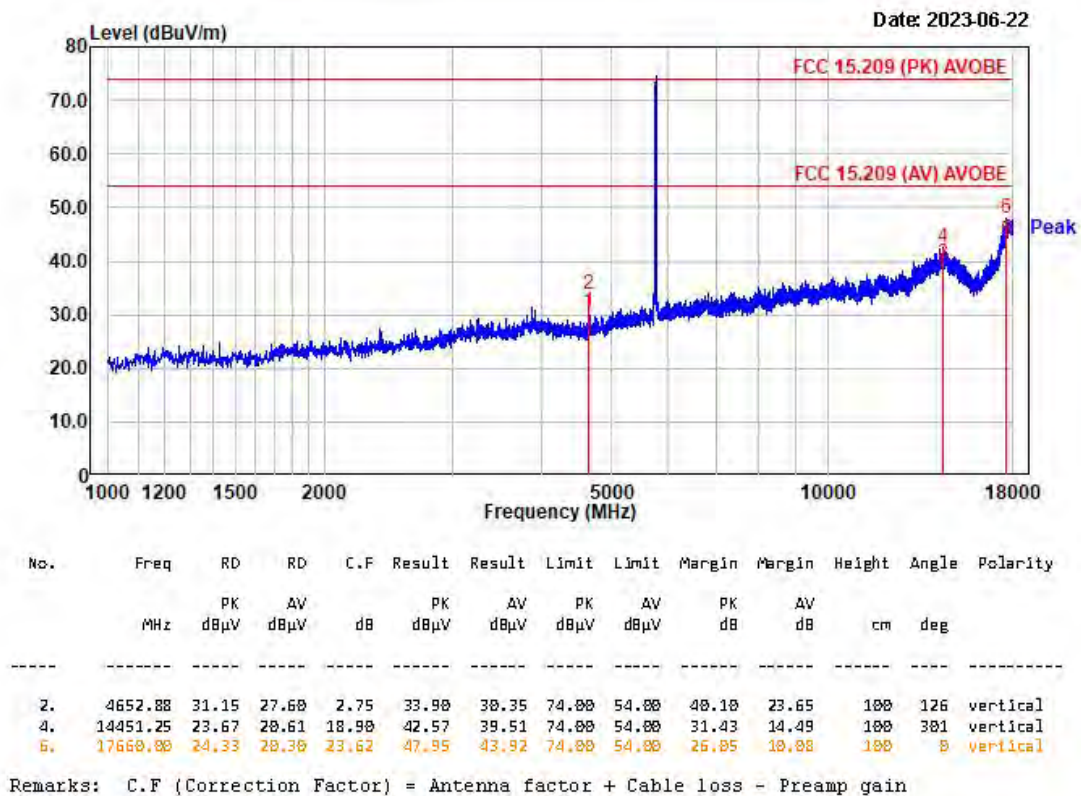
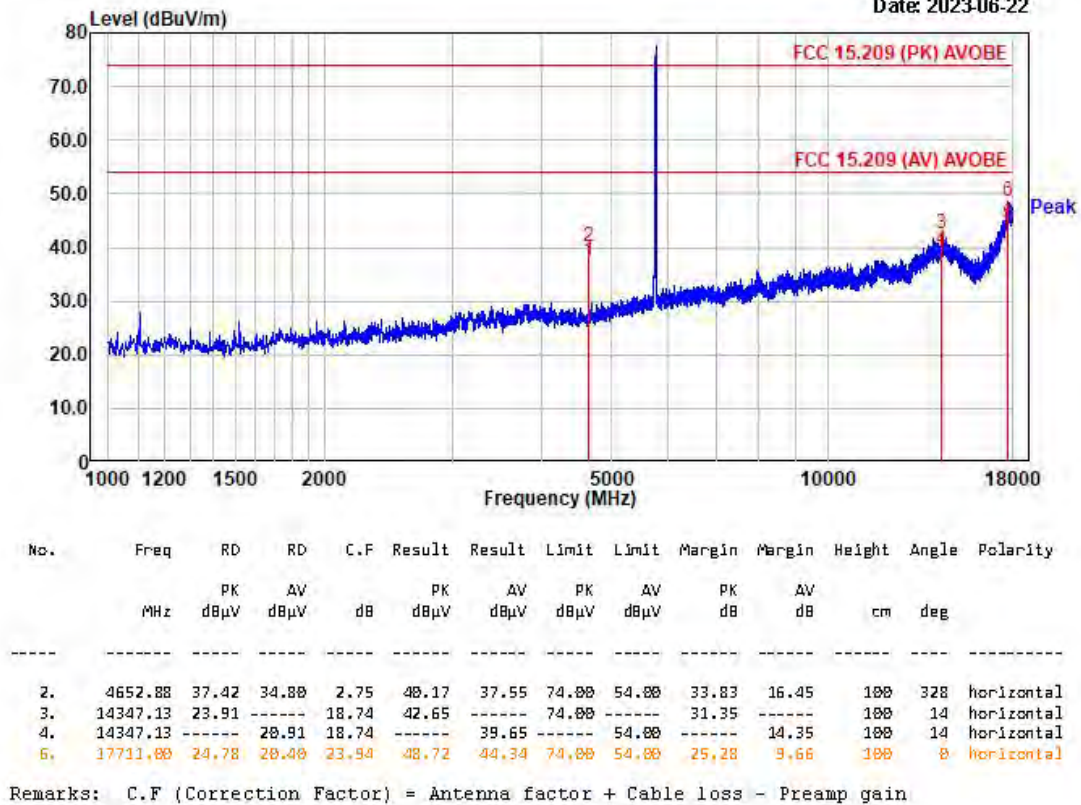
Radiated Emissions – 802.11 ac40 mode Band 2

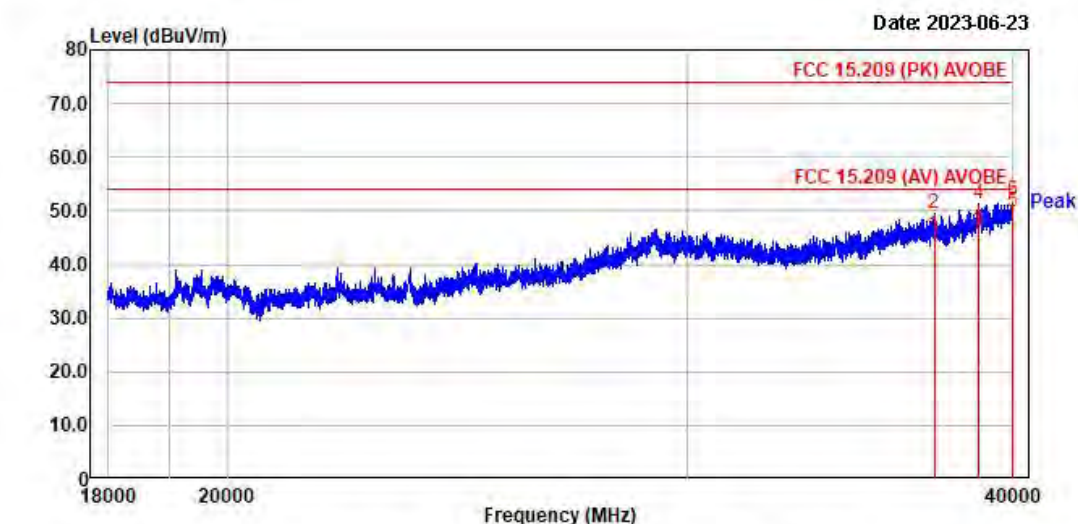
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

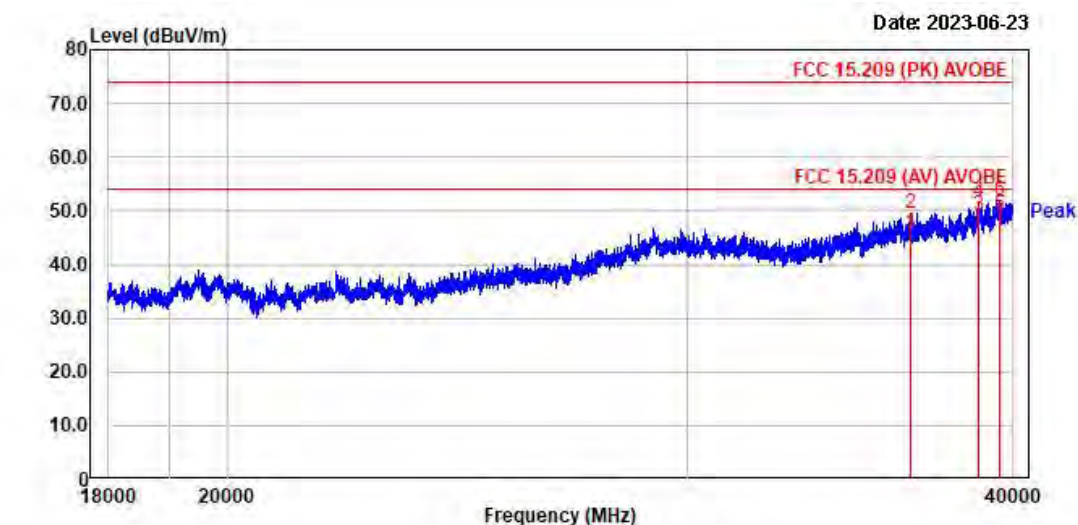
Date: 2023-06-22





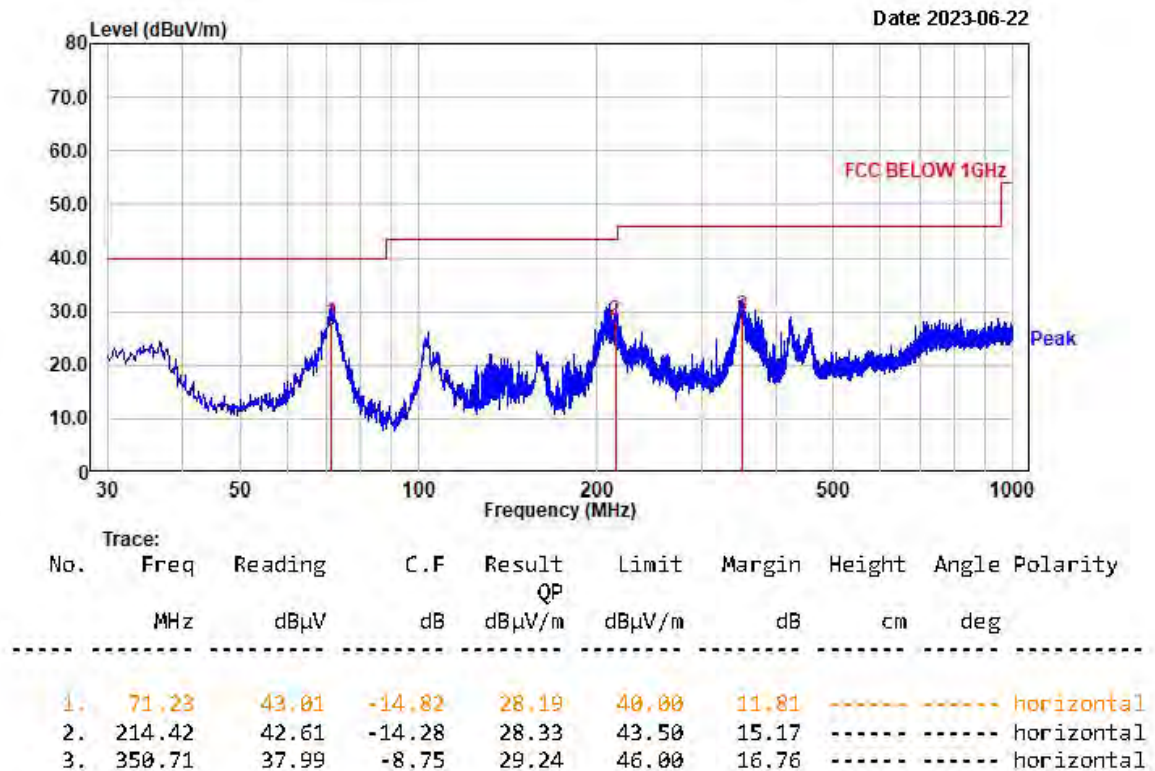
No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	37332.50	24.76	20.80	24.76	49.52	45.56	74.00	54.00	24.48	8.44	100	360	horizontal
4.	38839.50	26.80	21.60	24.53	51.33	46.13	74.00	54.00	22.67	7.87	100	122	horizontal
5.	40000.00	25.33	23.30	26.51	51.84	49.81	74.00	54.00	22.16	4.19	100	360	horizontal

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

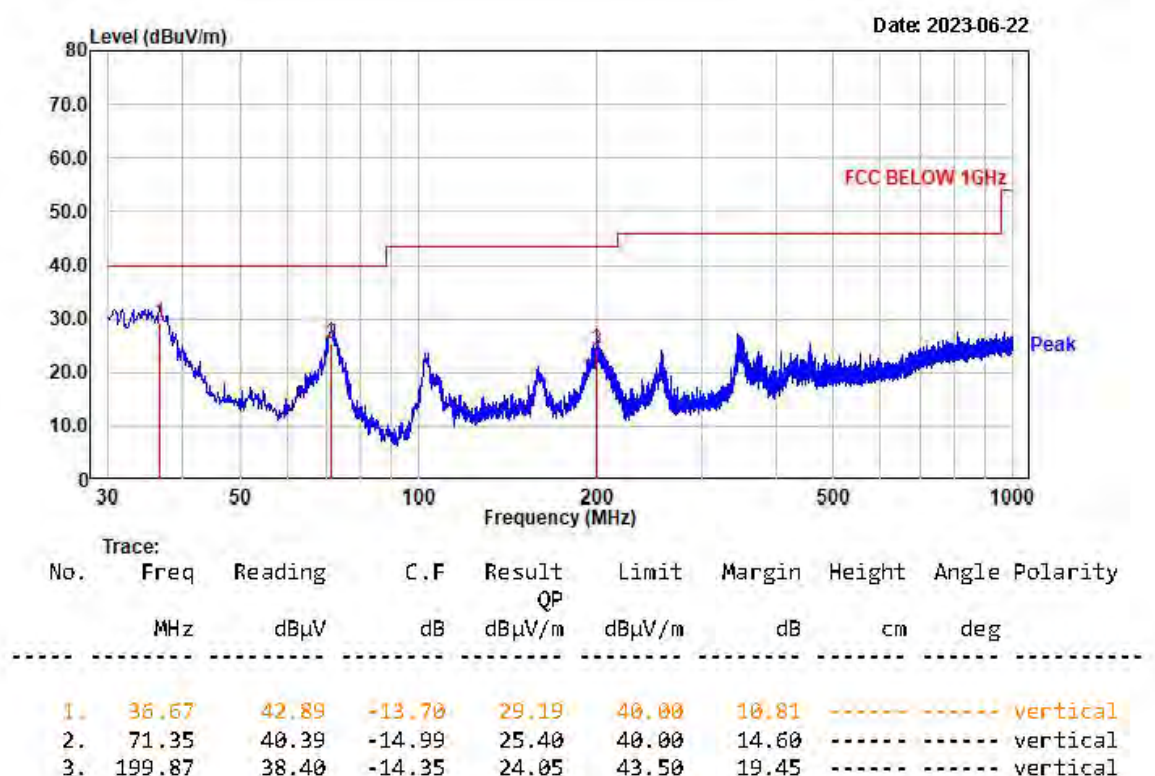


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	36548.75	23.92	20.30	25.70	49.62	46.00	74.00	54.00	24.38	8.00	100	109	vertical
4.	38825.75	27.05	24.60	24.63	51.68	49.23	74.00	54.00	22.32	4.77	100	360	vertical
5.	39557.25	25.50	22.60	26.46	51.96	49.45	74.00	54.00	22.04	4.05	100	76	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

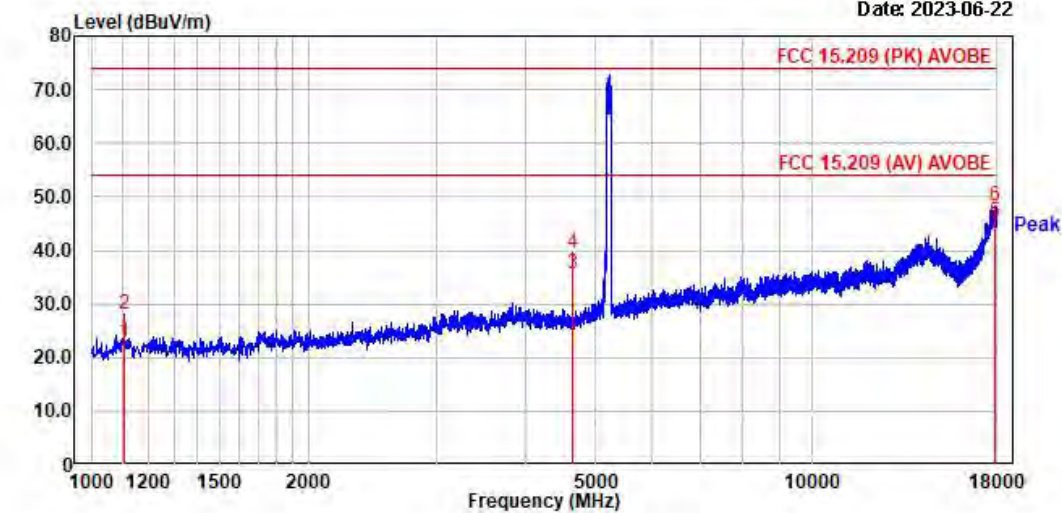
Radiated Emissions – 802.11 ac80 mode Band 1

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

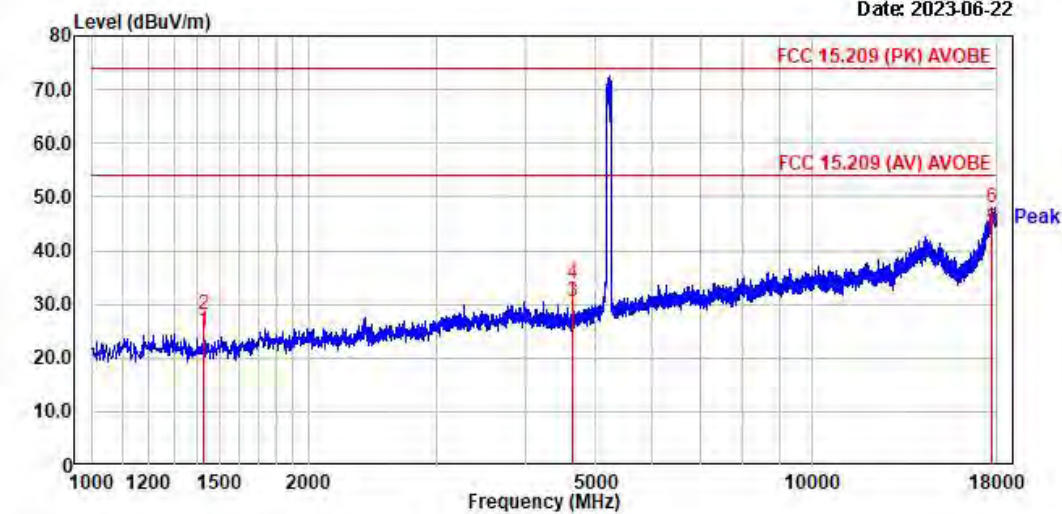
Date: 2023-06-22



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	1188.38	38.44	33.41	-10.48	27.96	22.93	74.00	54.00	46.04	31.07	100	156	horizontal
4.	4652.88	36.81	32.80	2.75	39.56	35.55	74.00	54.00	34.44	18.45	100	331	horizontal
6.	17885.25	23.78	20.69	24.59	48.37	45.28	74.00	54.00	25.63	8.72	100	237	horizontal

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

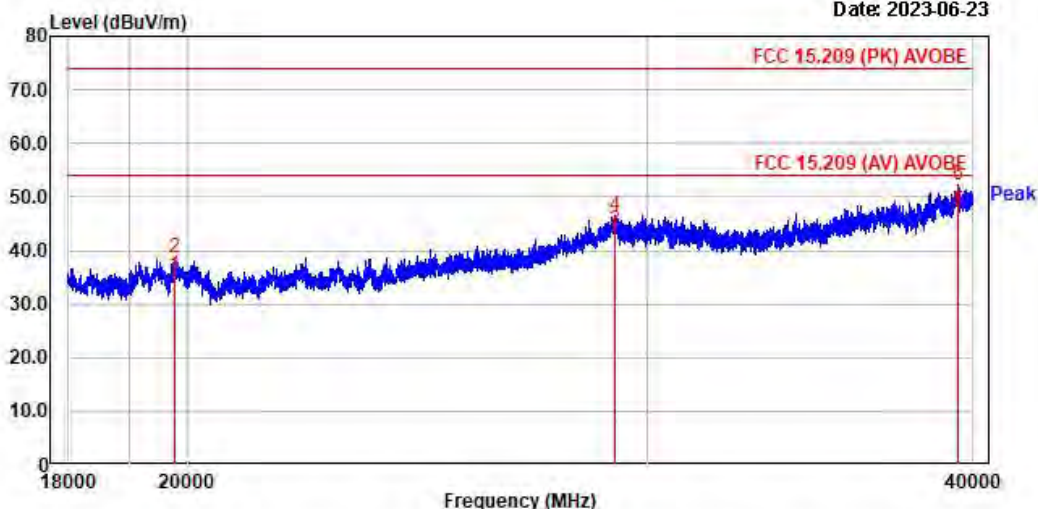
Date: 2023-06-22



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	1427.13	37.43	34.41	-9.26	28.17	25.15	74.00	54.00	45.83	28.85	100	314	vertical
4.	4652.88	31.04	27.80	2.75	33.79	30.55	74.00	54.00	40.21	23.45	100	314	vertical
6.	17782.50	24.17	20.10	23.88	48.05	43.98	74.00	54.00	25.95	10.02	100	202	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

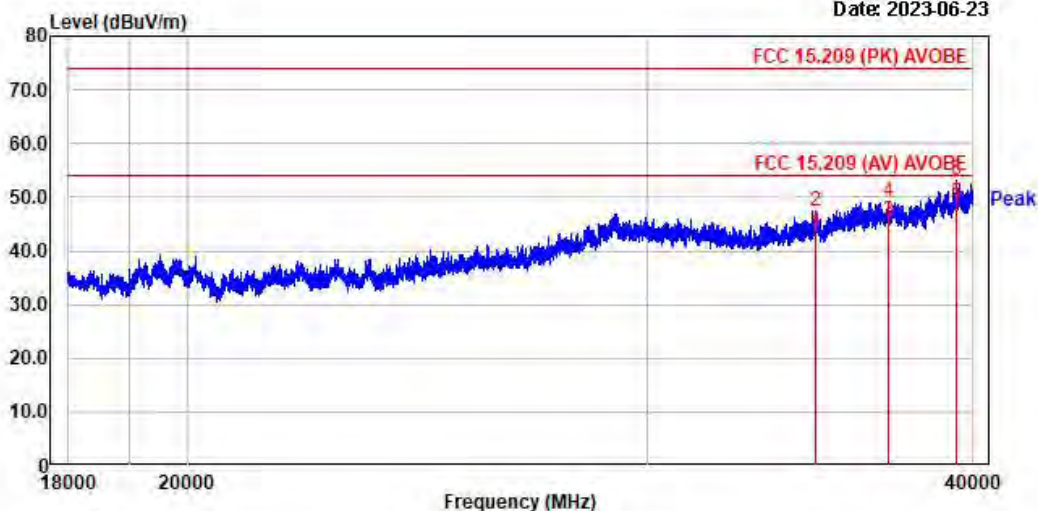
Date: 2023-06-23



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	19787.50	23.92	20.51	14.78	38.70	35.29	74.00	54.00	35.30	18.71	100	360	horizontal
4.	29189.75	22.00	19.10	24.62	46.62	43.72	74.00	54.00	27.38	10.28	100	45	horizontal
6.	39485.75	26.07	21.31	26.17	52.24	47.48	74.00	54.00	21.76	6.52	100	360	horizontal

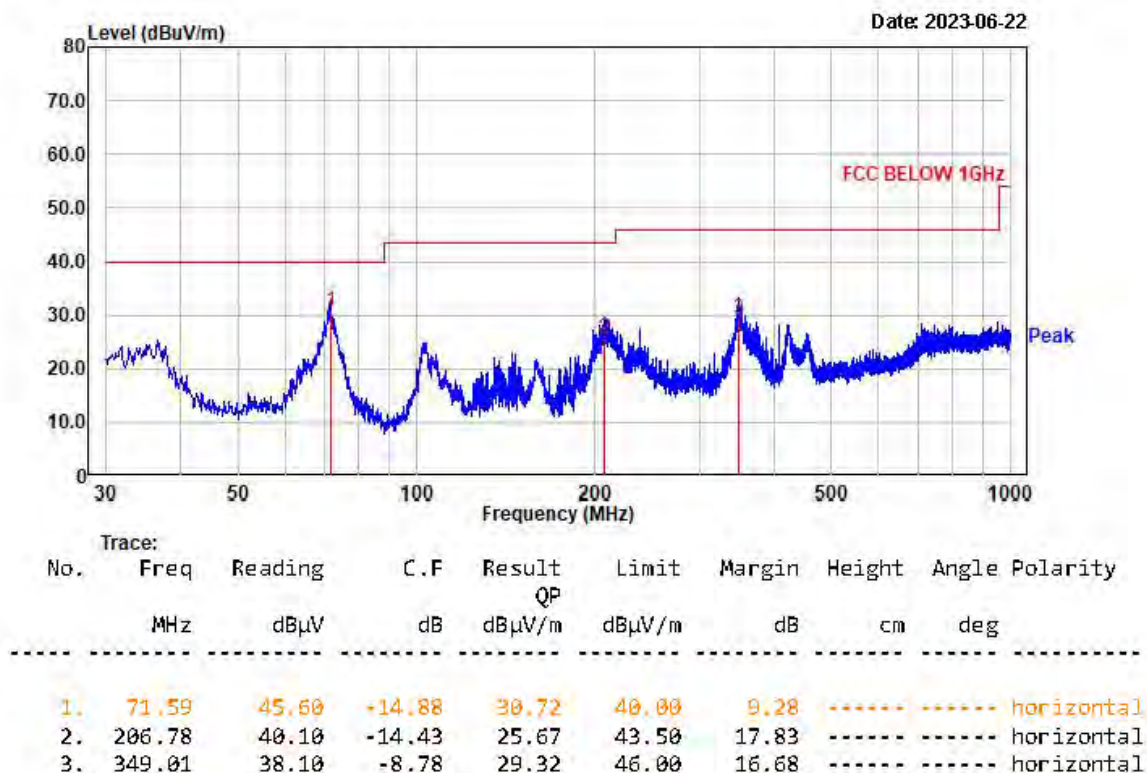
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-23

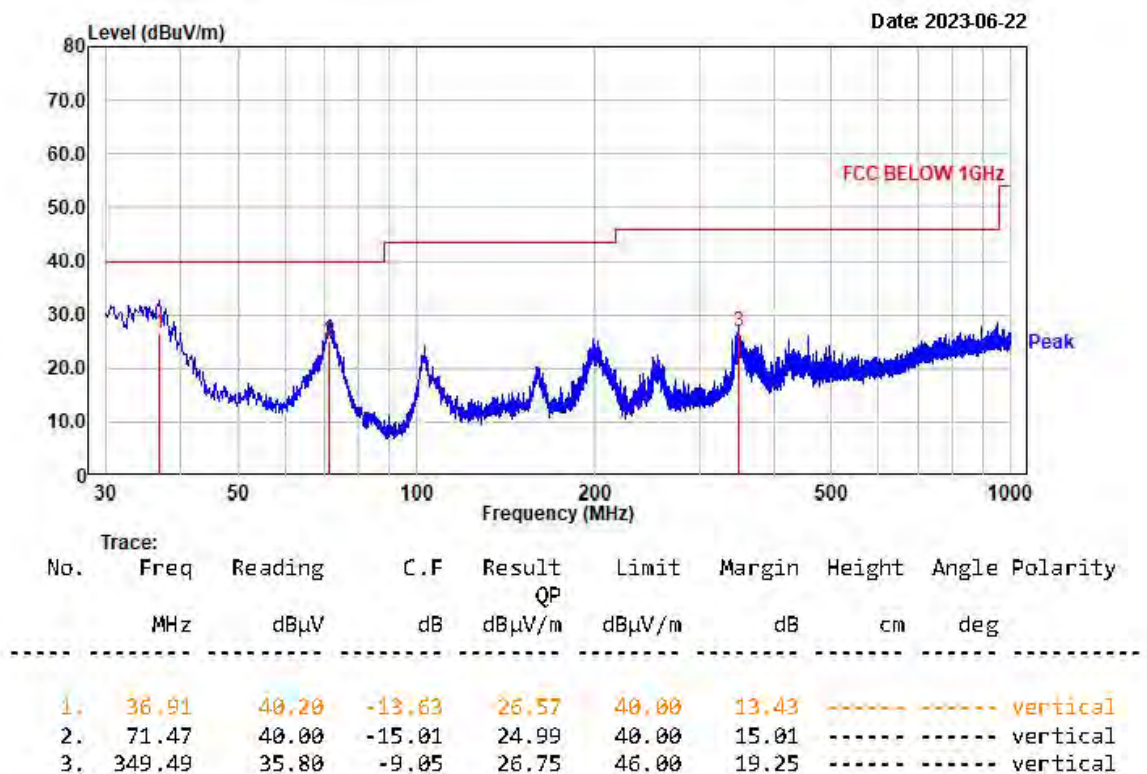


No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV	dB	PK	AV	PK	AV	PK	AV	cm	deg	
2.	34854.75	22.49	18.70	24.83	47.32	43.53	74.00	54.00	26.68	10.47	100	0	vertical
4.	37162.00	23.92	20.30	25.20	49.12	45.50	74.00	54.00	24.88	8.50	100	360	vertical
6.	39441.75	26.75	22.51	26.27	53.02	48.78	74.00	54.00	20.98	5.22	100	269	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

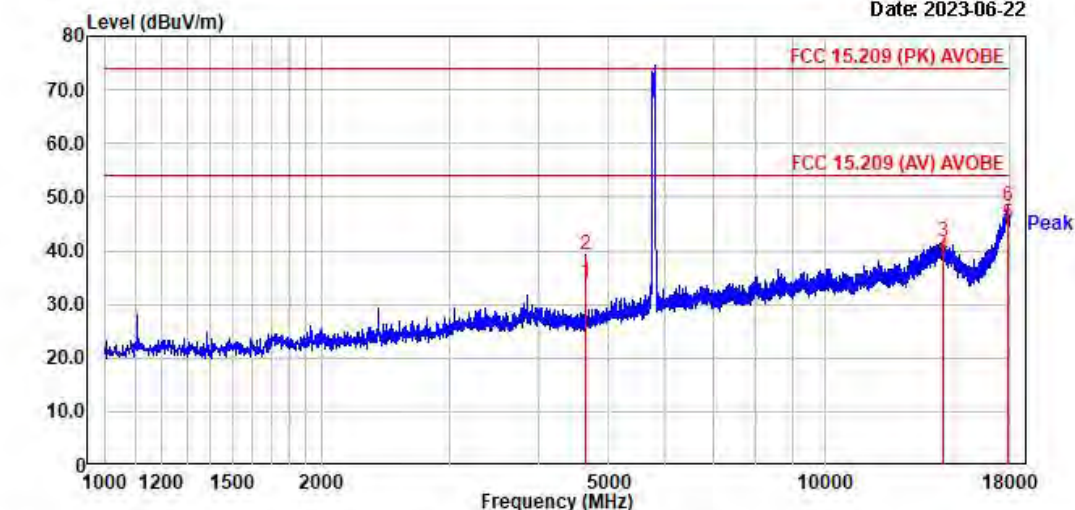
Radiated Emissions – 802.11 ac80 mode Band 2

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

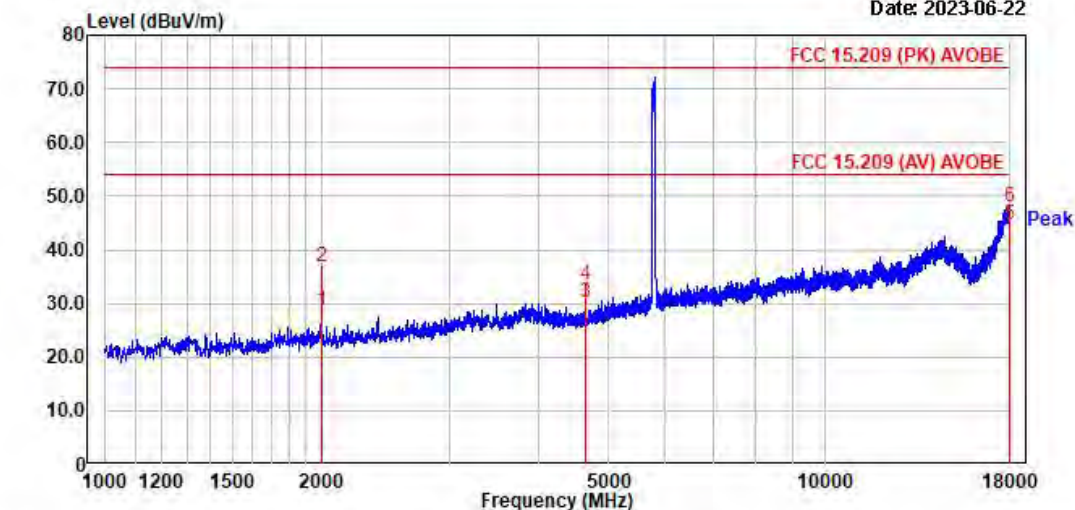
Date: 2023-06-22



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV		PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV	dB	dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	4652.88	36.51	31.50	2.75	39.26	34.25	74.00	54.00	34.74	19.75	100	332	horizontal
3.	14589.38	22.77	-----	18.81	41.58	-----	74.00	-----	32.42	-----	100	159	horizontal
4.	14589.38	-----	20.01	18.81	-----	38.82	-----	54.00	-----	15.18	100	159	horizontal
6.	17889.58	23.82	20.29	24.60	48.42	44.89	74.00	54.00	25.58	9.11	100	191	horizontal

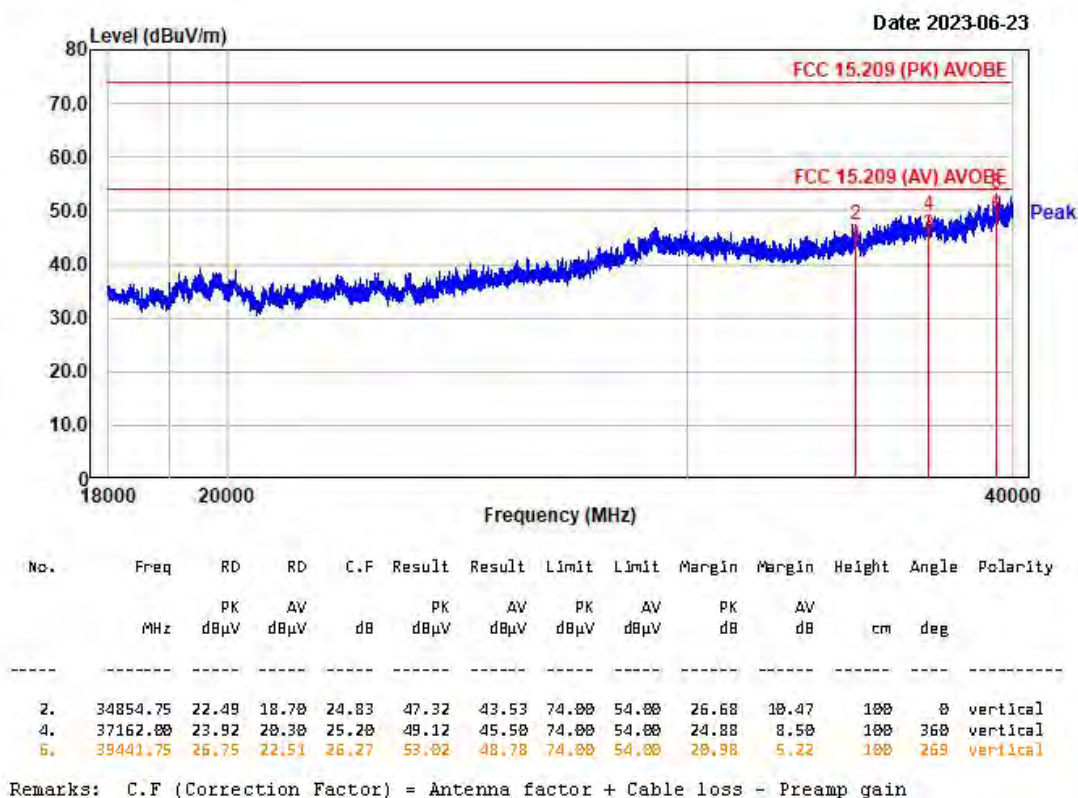
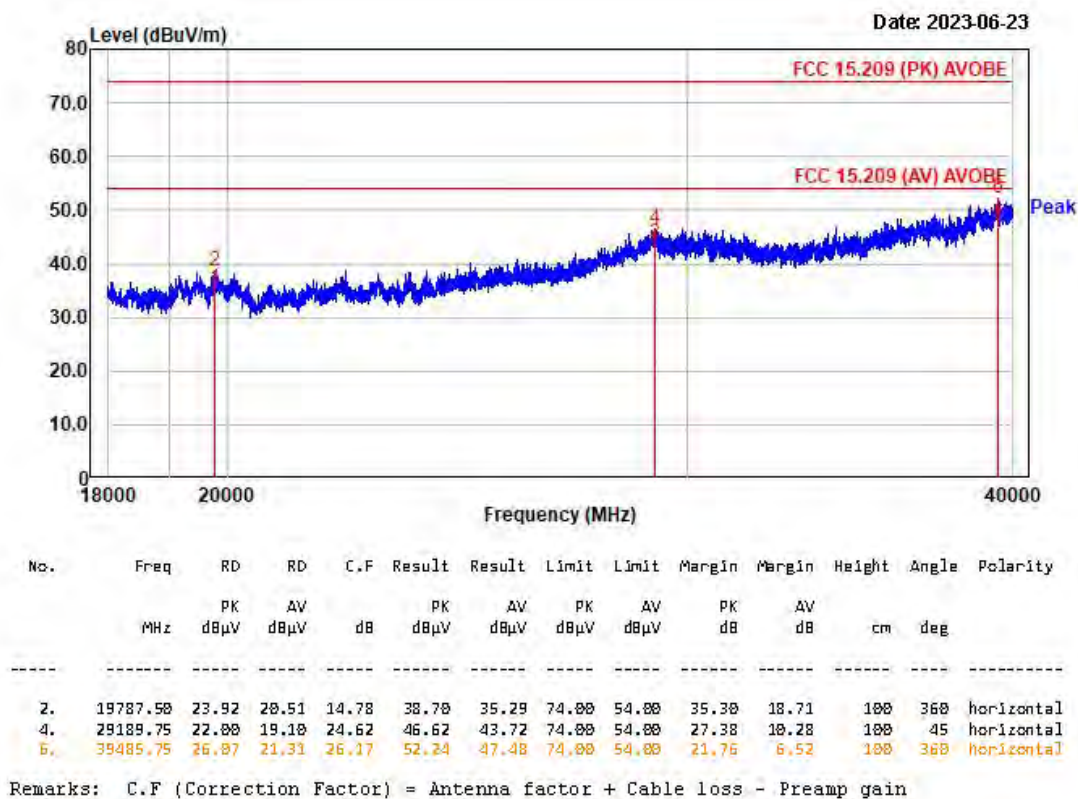
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Date: 2023-06-22



No.	Freq	RD	RD	C.F	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Polarity
	MHz	PK	AV		PK	AV	PK	AV	PK	AV	cm	deg	
		dBμV	dBμV	dB	dBμV	dBμV	dBμV	dBμV	dB	dB			
2.	1998.75	42.67	34.60	-5.95	36.72	28.65	74.00	54.00	37.28	25.35	100	316	vertical
4.	4652.88	30.78	27.30	2.75	33.53	30.85	74.00	54.00	40.47	23.95	100	331	vertical
6.	17991.58	23.60	20.09	24.46	48.06	44.55	74.00	54.00	25.94	9.45	100	0	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain



3.2.8 AC Conducted Emissions

Procedure:

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its hopping function disabled at the middle channels in line with Section 15.31(m). Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

Minimum Standard: FCC Part 15.207(a) / EN 55022

Measurement Data: N/A

Class B

Frequency Range	quasi-peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency

APPENDIX

TEST EQUIPMENT USED FOR TESTS

	Use	Description	Model No.	Serial No.	Manufacturer	Interval	Next Cal. Date
1		Signal Analyzer (9 kHz ~ 30 GHz)	FSV30	100757	R&S	1 year	2023-08-30
2	■	Signal Generator (~3.2 GHz)	8648C	3623A02597	HP	1 year	2024-03-14
3		SYNTHESIZED CW GENERATOR	83711B	US34490456	HP	1 year	2024-03-14
4	■	Double Ridge Horn Antenna	3116B	133350	ETS	1 year	2024-04-03
5	■	AMPLIFIER	PAM-840A	461314	COM-POWER CORPORATION	2 year	2024-03-15
6	■	EMI Test Receiver (~7 GHz)	ESCI7	100722	R&S	1 year	2023-08-30
7		RF Amplifier (~1.3 GHz)	8447D OPT 010	2944A07684	HP	1 year	2023-08-30
8		RF Amplifier (1~26.5 GHz)	8449B	3008A02126	HP	1 year	2024-03-14
9	■	Horn Antenna (1~18 GHz)	3115	00114105	ETS	2 year	2023-08-30
10		DRG Horn (Small)	3116B	81109	ETS-Lindgren	2 year	2024-03-18
11		DRG Horn (Small)	3116B	133350	ETS-Lindgren	2 year	2024-03-18
12	■	TRILOG Antenna	VULB 9160	9160-3237	SCHWARZBECK	2 year	2024-03-14
13		Temp.Humidity Data Logger	SK-L200TH II A	00801	SATO	1 year	2024-03-14
14		Splitter (SMA)	ZFSC-2-2500	SF617800326	Mini-Circuits	-	-
15	■	DC Power Supply	6674A	3637A01657	Agilent	-	-
17	■	Power Meter	EPM-441A	GB32481702	HP	1 year	2024-03-14
18	■	Power Sensor	8481A	3318A94972	HP	1 year	2023-08-30
19		Audio Analyzer	8903B	3729A18901	HP	1 year	2023-08-30
20		Modulation Analyzer	8901B	3749A05878	HP	1 year	2023-08-30
21		TEMP & HUMIDITY Chamber	YJ-500	LTAS06041	JinYoung Tech	1 year	2023-08-30
22		Stop Watch	HS-3	812Q08R	CASIO	2 year	2026-03-14
23		LISN	KNW-407	8-1430-1	Kyoritsu	1 year	2024-03-14
24		Two-Lime V-Network	ESH3-Z5	893045/017	R&S	1 year	2024-03-14
25		UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	106243	R&S	1 year	2024-03-14
26		Highpass Filter	WHKX1.5/15G-10SS	74	Wainwright Instruments	1 year	2024-03-14
27		Highpass Filter	WHKX3.0/18G-10SS	118	Wainwright Instruments	1 year	2024-03-14
28		OSP120 BASE UNIT	OSP120	101230	R&S	1 year	2024-03-14
29		Signal Generator(100 kHz ~ 40 GHz)	SMB100A03	177621	R&S	1 year	2024-03-14
30	■	Signal Analyzer (10 Hz ~ 40 GHz)	FSV40	101367	R&S	1 year	2024-03-14
31	■	Active Loop Antenna	FMZB 1519	1519-031	SCHWARZBECK	2 year	2024-03-16