

TEST REPORT

EUT Description	WLAN and BT, 2x2 PCIe M.2 2230 adapter card
Brand Name	Intel® Wi-Fi 6E AX210
Model Name	AX210NGW
FCC/IC ID	FCCID: PD9AX210NG / IC 1000M-AX210NG
Date of Test Start/End	2020-07-23 / 2020-10-21
Features	802.11ax, Dual Band, 2x2 Wi-Fi 6 + Bluetooth® 5.2 (see section 5)

Applicant	Intel Mobile Communications
Address	100 Center Point Circle, Suite 200 Columbia, South Carolina 29210 USA
Contact Person	Steven Hackett
Telephone/Fax/ Email	steven.c.hackett@intel.com

Reference Standards	FCC CFR Title 47 Part 15 E RSS-247 issue 2, RSS-Gen issue 5 A1 (see section 1)
---------------------	--

Test Report identification	200611-03.TR02
Revision Control	Rev. 03 This test report revision replaces any previous test report revision (see section 8)

The test results relate only to the samples tested.

This report shall not be reproduced, except in full, without the written approval of the laboratory.

Reference to accreditation shall be used only by full reproduction of test report.

Issued by

Reviewed by

Zayd Ouachicha
(Test Engineer Lead)

Cheiel IN
(Technical Manager)

Intel Corporation S.A.S – WRF Lab
425 rue de Goa – Le Cargo B6 - 06600, Antibes, France
Tel. +33493001400 / Fax +33493001401

Table of Contents

1. Standards, reference documents and applicable test methods	3
2. General conditions, competences and guarantees	3
3. Environmental Conditions	3
4. Test samples	4
5. EUT Features	5
6. Remarks and comments	5
7. Test Verdicts summary	6
7.1. 802.11 A/N/AC/AX – U-NII-2C	6
8. Document Revision History	6
Annex A. Test & System Description	7
A.1 MEASUREMENT SYSTEM.....	7
A.2 TEST EQUIPMENT LIST	9
A.3 MEASUREMENT UNCERTAINTY EVALUATION	11
Annex B. Test Results U-NII-2C	12
B.1 TEST CONDITIONS.....	12
B.2 TEST RESULTS TABLES	13
B.2.1 26dB & 99% Bandwidth	13
B.2.2 Power Limits. Maximum Output power & Maximum power spectral Density	17
B.2.3 Undesirable emission limits : out of band (Conducted).....	30
B.2.4 Radiated spurious emission.....	31
B.3 TEST RESULTS SCREENSHOTS	48
B.3.1 26dB Bandwidth	48
B.3.2 99% Bandwidth.....	52
B.3.3 Maximum Output Power & Maximum power spectral Density	57
B.3.4 Maximum output power & Maximum power spectral Density (Overlapped Channel)	64
B.3.5 Undesirable emission limits : out of band (Conducted).....	70
Annex C. Photographs	96
C.1 TEST SETUP	96
C.2 TEST SAMPLE	98

1. Standards, reference documents and applicable test methods

FCC	1. FCC Title 47 CFR part 15 – Subpart E – Unlicensed National Information Infrastructure Devices. 2019-10-01 Edition 2. FCC Title 47 CFR part 15 - Subpart C – §15.209 Radiated emission limits; general requirements. 2019-10-01 Edition 3. FCC OET KDB 789033 D02 v02r01 - General U-NII Test Procedures New Rules – Guidelines for compliance testing of Unlicensed National Information Infrastructure (U-NII) Devices (Part 15, Subpart E) 4. FCC OET KDB 662911 D01 v02r01 - Emissions Testing of Transmitters with Multiple Outputs in the Same Band. 5. ANSI C63.10-2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.
ISED	1. RSS-Gen Issue 5 Amendment 1 - General Requirements for Compliance of Radio Apparatus. 2. RSS-247 Issue 2 - Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices. 3. FCC OET KDB 789033 D02 v02r01 - General U-NII Test Procedures New Rules – Guidelines for compliance testing of Unlicensed National Information Infrastructure (U-NII) Devices (Part 15, Subpart E) 4. FCC OET KDB 662911 D01 v02r01 - Emissions Testing of Transmitters with Multiple Outputs in the Same Band. 5. ANSI C63.10-2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

2. General conditions, competences and guarantees

- ✓ Tests performed under FCC standards identified in section 1 are covered by A2LA accreditation.
- ✓ Tests performed under ISED standards identified in section 1 are covered by Cofrac accreditation.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2017 laboratory accredited by the American Association for Laboratory Accreditation (A2LA) with the certificate number 3478.01.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an Accredited Test Firm recognized by the FCC, with Designation Number FR0011.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2017 testing laboratory accredited by the French Committee for Accreditation (Cofrac) with the certificate number 1-6736.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is a Registered Test Site listed by ISED, with ISED #1000Y.
- ✓ Intel WRF Lab declines any responsibility with respect to the identified information provided by the customer and that may affect the validity of results.
- ✓ Intel WRF Lab only provides testing services and is committed to providing reliable, unbiased test results and interpretations.
- ✓ Intel WRF Lab is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.
- ✓ Intel WRF Lab has developed calibration and proficiency programs for its measurement equipment to ensure correlated and reliable results to its customers.
- ✓ This report is only referred to the item that has undergone the test.
- ✓ This report does not imply an approval of the product by the Certification Bodies or competent Authorities.
- ✓ Complete or partial reproduction of the report cannot be made without written permission of Intel WRF Lab.

3. Environmental Conditions

- ✓ At the site where the measurements were performed the following limits were not exceeded during the tests:

Temperature	23°C ± 2°C
Humidity	61% ± 13%

4. Test samples

Sample	Control #	Description	Model	Serial #	Date of receipt	Note
#01	200611-03.S03	WiFi 6E Module	AX210NGW	WFM:9C297662CA0A	2020-07-15	Used for 1-6.4 GHz RSE tests except for #03
	170209-01.S16	Laptop	Dell Latitude E5470	C1HTPF2	2017-05-24	
	200226-02.S04	Extender	ADEXELEC	-	2020-04-30	
	200611-03.S13	Main Antenna	Skycross	-	2020-07-15	
	200611-03.S14	Aux Antenna	Skycross	-	2020-07-15	
#02	200611-03.S01	WiFi 6E Module	AX210NGW			Used for 6.4-18 GHz RSE tests
	170000-01.S01	Laptop	Dell Latitude E5470	DBPLMC2	2017-03-28	
	200611-03.S26	Extender	ADEXELEC	416	2020-07-01	
	200611-03.S20	Main Antenna	Skycross	-	2020-07-01	
	200611-03.S21	Aux Antenna	Skycross	-	2020-07-01	
#03	200611-03.S03	WiFi 6E Module	AX210NGW	WFM:9C297662CA0A	2020-07-15	Used for 1-6.4 GHz RSE following configurations: 802.11n20, Ch140 chain A, B, A+B, 802.11HE20, Ch140 chain A+B 802.11n40 Ch102F chain A, B, A+B, 802.11HE40 102F chain A+B
	170000-01.S01	Laptop	Dell Latitude E5470	DBPLMC2	2017-03-28	
	200611-03.S26	Extender	ADEXELEC	416	2020-07-01	
	200611-03.S20	Main Antenna	Skycross	-	2020-07-01	
	200611-03.S21	Aux Antenna	Skycross	-	2020-07-01	
#04	200611-03.S01	WiFi 6E Module	AX210NGW	WFM:9C297662CA5F	2020-07-15	Used for 30MHz-1GHz & 18GHz-40GHz RSE tests
	200504-04.S07	Laptop	Latitude 5401	SN:BVHLK13	2020-06-02	
	200504-04.S07	Extender	ADEXELEC-	-	2020-06-02	
	200611-03.S11	Main Antenna	Skycross	-	2020-07-15	
	200611-03.S12	Aux Antenna	Skycross	-	2020-07-15	
#05	200611-03.S10	WiFi 6E Module	AX210NGW	WFM:9C297662C6BD	2020-07-15	RF Conducted
	170000-01.S02	Laptop	Latitude E5450	21HTPF2	2017-03-28	
	170524-01.S13	Extender	PCB00495	4955013-032	2017-05-29	

5. EUT Features

The herein information is provided by the customer

Brand Name	Intel® Wi-Fi 6E AX210		
Model Name	AX210NGW		
Software Version	DRTU version: OEM_DRTU_CommonApp_00830_99_3500_51W DRTU version: OEM_DRTU_CommonApp_01299_99_3500_51W used for 802.11ax RU test on output power and band edges measurements		
Driver Version	99.0.55.2 V0.13.2.15 99.0.55.2 V0.13.2.16 used for 802.11ax RU test on output power and band edges measurements		
Prototype / Production	Production		
Supported Radios	802.11b/g/n/ax2.4GHz (2400.0 – 2483.5 MHz) 802.11a/n/ac/ax5.2GHz (5150.0 – 5350.0 MHz) 5.6GHz (5470.0 – 5725.0 MHz) 5.8GHz (5725.0 – 5895.0 MHz) Bluetooth 5.22.4GHz (2400.0 – 2483.5 MHz)		
Antenna Information	Transmitter	Chain A (Main)	Chain B(Aux)
	Manufacturer	Skycross	Skycross
	Antenna type	PIFA antenna	PIFA antenna
	Part number	NA	NA
	Declared Antenna gain (dBi)	+5	+5
Document			
	Filename		Date of receipt
	Intel_Ref_Antenna data_HMC-M2Ant_Spec_Universe_SkyCross Antenna		2013-01-28

6. Remarks and comments

1. No deviations were made from the test methods listed in section 1 of this report
2. Only the worst case plot per 802.11 mode and test case have been reported excepted for band edge measurements where all plots were reported

7. Test Verdicts summary

The statement of conformity to applicable standards in the table below are based on the measured values, without taking into account the measurement uncertainties.

7.1. 802.11 a/n/ac/ax – U-NII-2C

FCC part	RSS clause	Test name	Verdict
15.407 (a) (2)	RSS-247 Clause 6.2.3.1	Power Limits. Maximum output power	P
15.407 (a) (2)	RSS-247 Clause 6.2.3.1	Power spectral density	P
15.407 (b) (3) 15.209 (a)	RSS-247 Clause 6.2.3.2 RSS-GEN A1 Clause 8.9	Undesirable emissions limits: out of band (conducted)	P
15.407 (b) (3) 15.209 (a)	RSS-247 Clause 6.2.3.2 RSS-GEN A1 Clause 8.9	Undesirable emissions limits (radiated)	P

P: Pass

F: Fail

NM: Not Measured

NA: Not Applicable

8. Document Revision History

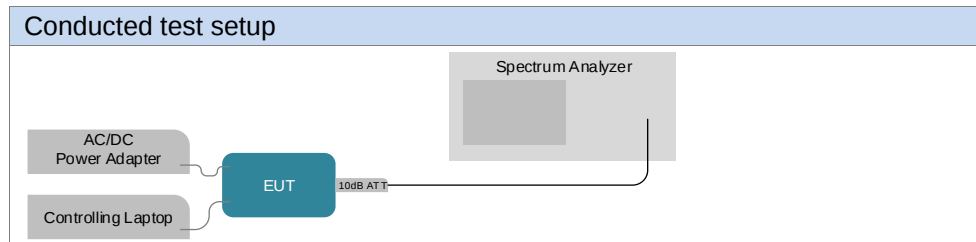
Revision #	Modified by	Revision Details
Rev. 00	I.Kharrat	First Issue
Rev. 01	Z.OUACHICHA	Modification of EUT features section. Addition of frequency column on table results.
Rev.02	Z.Ouachicha	Retest of maximum output power for MIMO on 802.11n40 (5590MHz) and 802.11ax40(5590MHz) mode.
Rev.03	Z.Ouachicha	Plots added for MIMO 802.11n40 (5590MHz) and 802.11ax40(5590MHz) mode

Annex A. Test & System Description

A.1 Measurement System

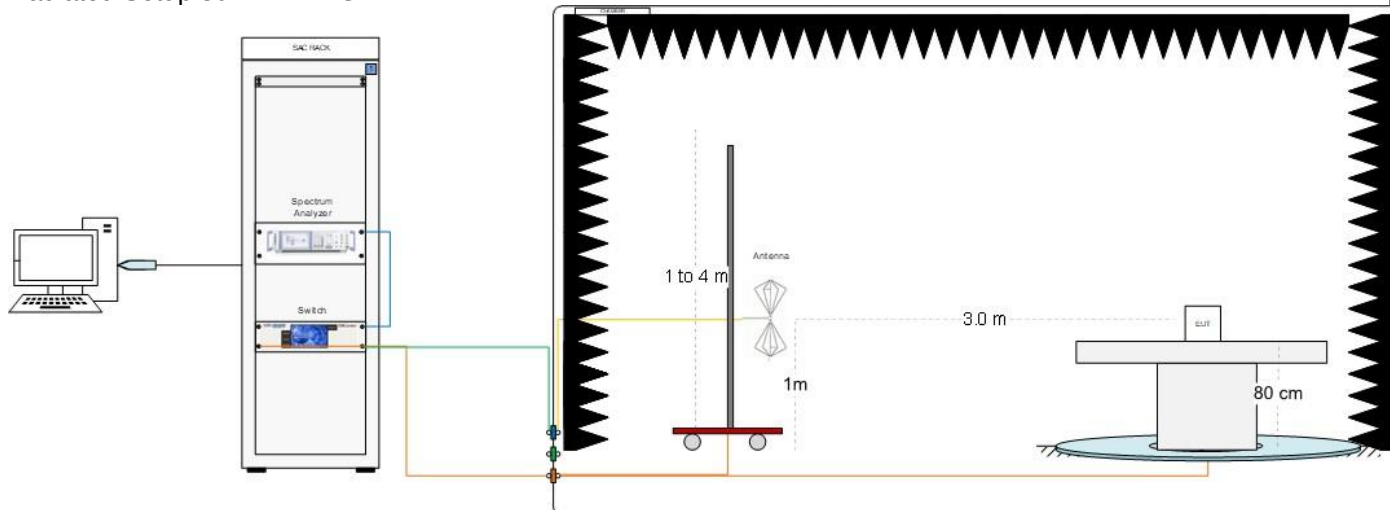
Measurements were performed using the following setups, made in accordance to the general provisions of FCC OET KDB 789033 D02 General UNII Test Procedures.

The DUT was installed in a test fixture and this test fixture is connected to a laptop computer and AC/DC power adapter. The laptop computer was used to configure the EUT to continuously transmit at a specified output power using all different modes and modulation schemes, using the Intel proprietary tool DRTU.

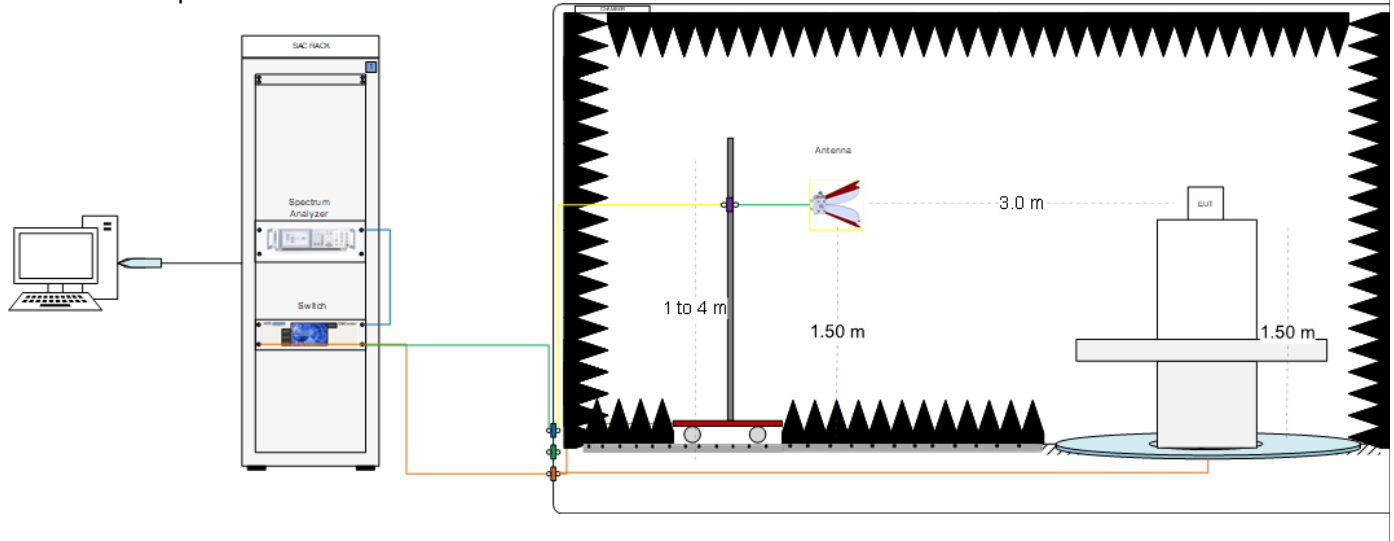


Radiated test setup

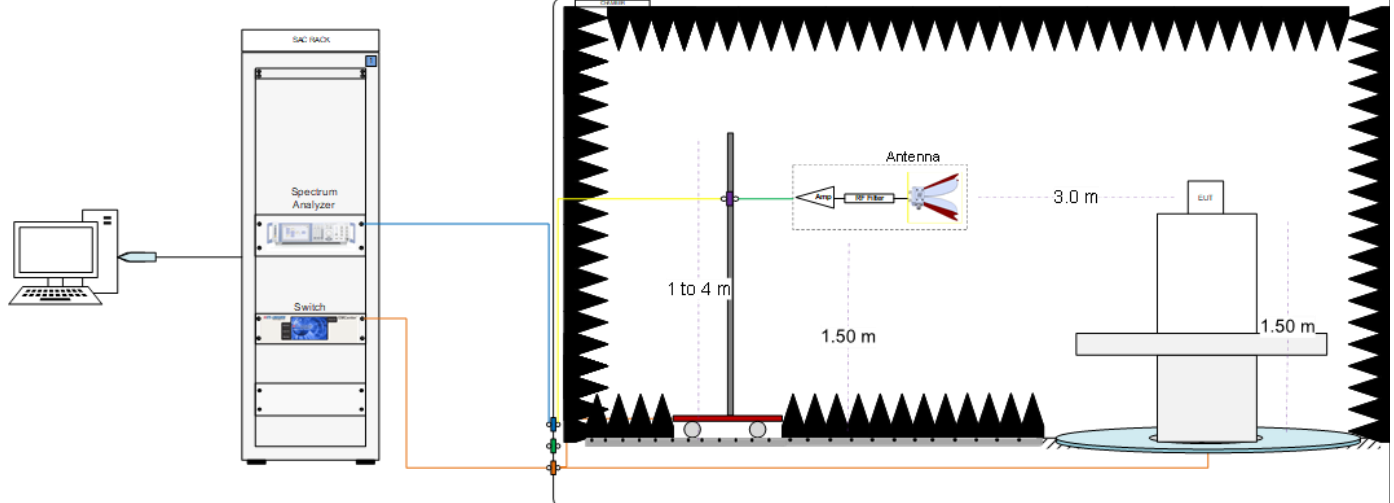
Radiated Setup 30 MHz - 1 GHz



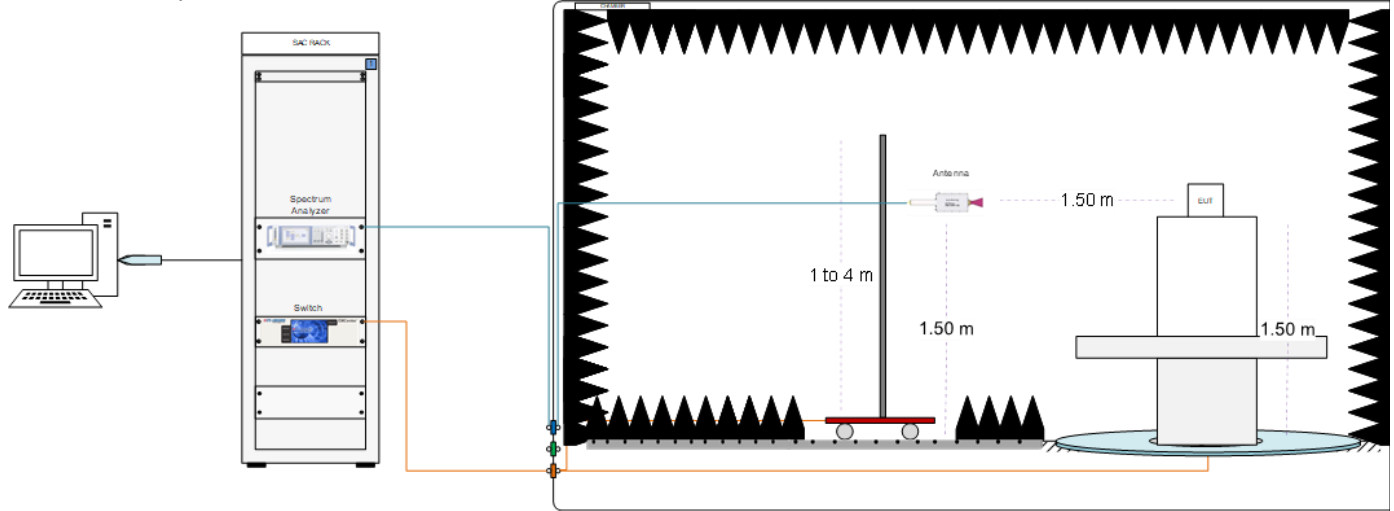
Radiated Setup 1 GHz – 6.4 GHz



Radiated Setup 6.4 GHz - 18 GHz



Radiated Setup 18 GHz – 40 GHz



Sample Calculation

The spurious received voltage $V(\text{dB}\mu\text{V})$ in the spectrum Analyzer is converted to Electric field strength using the transducer factor F corresponding to the Rx path Loss:

$$F(\text{dB/m}) = \text{Rx Antenna Factor (dB/m)} + \text{Cable losses (dB)} - \text{Amplifiers Gain (dBi)}$$

$$E(\text{dB}\mu\text{V/m}) = V(\text{dB}\mu\text{V}) + F(\text{dB/m})$$

For field strength measurements made at other than the distance at which the applicable limit is specified, the field strength of the emission at the distance specified by the limit is deduced as follows:

$$E_{\text{SpecLimit}} = E_{\text{Meas}} + 20 \cdot \log(D_{\text{Meas}}/D_{\text{SpecLimit}})$$

where

$E_{\text{SpecLimit}}$ is the field strength of the emission at the distance specified by the limit, in $\text{dB}\mu\text{V/m}$

E_{Meas} is the field strength of the emission at the measurement distance, in $\text{dB}\mu\text{V/m}$

D_{Meas} is the measurement distance, in m

$D_{\text{SpecLimit}}$ is the distance specified by the limit, in m

A.2 Test Equipment List

Conducted setup

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0316	Spectrum Analyzer	FSV30	103309	Rohde & Schwarz	2019-09-02	2021-09-02
0443	RF cable 100cm	Coax 2.92mm Male To 2.92mm Male	N/A	PASTERNAK	N/A	N/A
1044	10dB Attenuator + MH4	N/A	N/A	N/A	N/A	N/A
0583	Temp & Humidity Logger	RA12E-TH1-RAS	RA12-B9D6E	AVTECH	2019-09-06	2021-09-06
1002	Measurement SW v1.4.10.8	Octopi	N/A	Step AT	N/A	N/A

Radiated Setup #1

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0135	Anechoic Chamber	FACT3	5720	ETS-Lindgren	2020-07-06	2022-07-06
0136	Turn Table	ETS	-	ETS-Lindgren	N/A	N/A
0147	Switch & Positioning systems	EMC Center	00159757	ETS-Lindgren	N/A	N/A
1033	Boresight antenna mast	BAM 4.0-P	P/278/2890.01	Maturo	N/A	N/A
0420	Spectrum Analyzer	FSV40	101556	Rohde & Schwarz	2020-05-25	2022-05-25
0530	Measurement SW, v10.40.10	EMC32	100623	Rohde & Schwarz	N/A	N/A
0993	Biconical antenna 30 MHz – 1 GHz	UBAA9115 + BBVU9135 + DGA9552N	0286 + CH 9044	Schwarzbeck	2019-11-22	2021-11-22
0334	Double-Ridged Waveguide Horn with Pre-Amplifier 18 GHz to 40 GHz	3116C+PA	00169308bis + 00196308	ETS-Lindgren	2019-07-24	2021-07-24
0325	Horn antenna 3117	3117	00157734	ETS-Lindgren	N/A	N/A
0141	Horn Antenna 3117 + Amplifier + HPF6.4	3117	00157736	ETS-Lindgren	2020-04-01	2022-04-01
0202	Cable 1m - 30MHz to 18 GHz	UFB311A-0-3360- 50U300	MFR 64639223229-001	Micro-coax	N/A	N/A
0206	Cable 1.2m – 18 to 40 GHz	UFA147A-0-0480- 200200	MFR 64639223720-003	Micro-coax	N/A	N/A
0263	Cable 1m - 1GHz to 18GHz	UFA147A	-	Utilflex	N/A	N/A
0369	Cable 2m - 26.5GHz to 40GHz	794-9191-2000A	E00327	Atem	N/A	N/A
0371	Cable 1m – 30 MHz - 18GHz	UFB311A-0-0590- 50U50U	MFR 64639 223230-001	Micro-coax	N/A	N/A
0758	Cable 7.5m - 30MHz to 18GHz	0501051057000GX	18.23.181	Radiall	N/A	N/A
0809	Cable 7m - 18GHz to 40GHz	R286304009	-	Radiall	N/A	N/A
0859	Cable 2.5m - 30MHz to 18GHz	0500990992500KE	19.23.395	Radiall	N/A	N/A
0797	Temp & Humidity Logger	RA12E-TH1-RAS	RA12-D0EB1A	Avtech	2019-07-04	2021-07-04

N/A: Not Applicable

Radiated Setup #2

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0337	Anechoic chamber	RFD-FA-100	5996	ETS Lindgren	2020-07-06	2022-07-06
0238	Switch & Positioner	EMCenter	00151232	ETS Lindgren	N/A	N/A
0382	Antenna Tower	2171B-3.0M	00150123	ETS Lindgren	N/A	N/A
0383	Turntable	-	-	ETS Lindgren	N/A	N/A
0329	Measurement SW, v10.50.10	EMC32	100401	Rohde & Schwarz	N/A	N/A
0419	Spectrum Analyzer	FSW67	103266	Rohde & Schwarz	2019-02-04	2021-02-04
0138	Double Ridge Horn (1- 18GHz)	3117	00152266	ETS Lindgren	2020-03-08	2022-03-08
0860	RF Cable 1-18GHz, 1.2 m	2301761761200PJ	12.22.1104	Radiall	N/A	N/A
0275	RF Cable 1-18GHz - 6.5m	140-8500-11-51	001	Spectrum	N/A	N/A
0684	RF Cable 1GHz-18GHz 1.5m	-	-	Spirent	N/A	N/A
0133	Spectrum Analyzer	FSV40	101358	Rohde & Schwarz	2020-02-25	2022-02-25
0141	Horn Antenna 3117 + Amplifier + HPF6.4	3117	00157736	ETS-Lindgren	2020-04-01	2022-04-01
0871	RF Cable 1-18GHz - 1.5m	0501050991200GX	19.21.710	Radiall	N/A	N/A
0796	Temp & Humidity Logger	RA12E-TH1-RAS	RA12-D4F316	Avtech	2019-07-05	2021-07-05

N/A: Not Applicable

Shared Radiated Equipment

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0616	Power Sensor	NRP-Z81	104385	Rohde & Schwarz	2020-04-08	2022-04-08
0617	Power Sensor	NRP-Z81	104386	Rohde & Schwarz	2020-04-08	2022-04-08
0618	Power Sensor	NRP-Z81	104382	Rohde & Schwarz	2020-04-08	2022-04-08

A.3 Measurement Uncertainty Evaluation

The system uncertainty evaluation is shown in the table below with a coverage factor of $k = 2$ to indicate a 95% level of confidence:

Measurement type	Uncertainty	Unit
Timing	± 0.12	%
Power Spectral density	± 1.47	dB
Occupied bandwidth	± 2.07	%
Conducted Power	± 1.03	dB
Conducted Spurious Emission <26.5 GHz	± 2.90	dB
Radiated tests <1GHz	± 2.95	dB
Radiated tests 1GHz – 26.5 GHz	± 5.02	dB

Annex B. Test Results U-NII-2C

The herein test results were performed by:

Test case measurement	Test Engineer
Power Limits. Maximum output power	Cedric Requin
26dB and 99% Bandwidth measurement	Cedric Requin
Maximum power spectral density	Cedric Requin
Undesirable emissions limits: out of band (conducted)	Cedric Requin
Undesirable emissions limits: spurious emissions (radiated)	R. Luciani N. Bui A. Lounes I. Kharrat N. Nachabe

B.1 Test Conditions

For 802.11a mode the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, but not simultaneously.

For 802.11n20 & 802.11ax20 (20 MHz channel bandwidth), 802.11n40 & 802.11ax40 (40MHz channel bandwidth), 802.11ac80 & 802.11ax80 (80MHz channel bandwidth) and 802.11ac160 & 802.11ax160 (160MHz channel bandwidth) modes the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, and also simultaneously.

The following data rates were selected based on preliminary testing that identified those rates as the worst cases for output power and spurious levels at the band edges:

Transmission	Mode	Bandwidth (MHz)	Worst Case Data Rate
SISO	802.11a	20	6Mbps
	802.11n	20	HT0
		40	HT0
	802.11ac	80	VHT0
		160	VHT0
	802.11ax	20	HE0
		40	HE0
		80	HE0
		160	HE0
MIMO	802.11n	20/40	HT8
	802.11ac	80/160	VHT0
	802.11ax	20/40/80/160	HE0

B.2 Test Results Tables

B.2.1 26dB & 99% Bandwidth

Test procedure

The conducted setup shown in section *Test & System Description* was used to measure the 26dB & 99% bandwidth. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.

For the overlapped channels between U-NII-2C and U-NII-3 bands, and according to FCC OET KDB 789033 D02, the boundary frequency between the bands is used as one edge for defining the portion of the 26dB bandwidth that falls within a particular U-NII band. This rule is only applicable for the 26dB bandwidth and for those channels marked as overlapped.

Results tables

U-NII-2C channels

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	26dB BW [MHz]	99% BW [MHz]
SISO A	802.11a20	100	5500	6Mbps	NA	23.30	16.59
SISO A	802.11a20	120	5600	6Mbps	NA	24.40	16.66
SISO A	802.11a20	140	5700	6Mbps	NA	24.20	16.61
SISO A	802.11n20	100	5500	HT0	NA	23.75	17.75
SISO A	802.11n20	120	5600	HT0	NA	24.50	17.77
SISO A	802.11n20	140	5700	HT0	NA	23.65	17.75
SISO A	802.11n40	102	5510	HT0	NA	43.92	36.00
SISO A	802.11n40	118	5590	HT0	NA	44.10	36.16
SISO A	802.11n40	134	5670	HT0	NA	45.72	36.16
SISO A	802.11ac80	106	5530	VHT0	NA	86.83	75.00
SISO A	802.11ac80	122	5610	VHT0	NA	89.68	75.24
SISO A	802.11ac160	114	5570	VHT0	NA	163.68	153.20
SISO A	802.11ax20	100	5500	HE0	FullBW	23.50	18.93
SISO A	802.11ax20	100	5500	HE0	26/0	20.70	18.37
SISO A	802.11ax20	100	5500	HE0	52/37	21.70	18.39
SISO A	802.11ax20	100	5500	HE0	106/53	22.50	18.33
SISO A	802.11ax20	120	5600	HE0	FullBW	23.75	18.91
SISO A	802.11ax20	140	5700	HE0	FullBW	24.25	18.88
SISO A	802.11ax20	140	5700	HE0	26/8	21.15	18.59
SISO A	802.11ax20	140	5700	HE0	52/40	22.50	18.65
SISO A	802.11ax20	140	5700	HE0	106/54	23.45	18.29
SISO A	802.11ax40	102	5510	HE0	FullBW	42.57	37.68
SISO A	802.11ax40	102	5510	HE0	242/61	24.30	18.88
SISO A	802.11ax40	118	5590	HE0	FullBW	43.20	37.52
SISO A	802.11ax40	134	5670	HE0	FullBW	43.29	37.60
SISO A	802.11ax40	134	5670	HE0	242/62	24.75	18.80
SISO A	802.11ax80	106	5530	HE0	FullBW	83.79	76.56
SISO A	802.11ax80	106	5530	HE0	484/65	42.94	37.44
SISO A	802.11ax80	122	5610	HE0	FullBW	84.36	76.80
SISO A	802.11ax80	114	5570	HE0	FullBW	164.01	154.80
SISO A	802.11ax160	114	5570	HE0	996/67	90.75	77.00
SISO A	802.11ax160	114	5570	HE0	996/S67	85.80	77.00

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	26dB BW [MHz]	99% BW [MHz]
SISO B	802.11a20	100	5500	6Mbps	NA	23.25	16.61
SISO B	802.11a20	120	5600	6Mbps	NA	23.50	16.61
SISO B	802.11a20	140	5700	6Mbps	NA	23.50	16.54
SISO B	802.11n20	100	5500	HT0	NA	24.20	17.73
SISO B	802.11n20	120	5600	HT0	NA	23.80	17.79
SISO B	802.11n20	140	5700	HT0	NA	23.65	17.69
SISO B	802.11n40	102	5510	HT0	NA	43.11	36.08
SISO B	802.11n40	118	5590	HT0	NA	45.09	36.00
SISO B	802.11n40	134	5670	HT0	NA	45.18	36.16
SISO B	802.11ac80	106	5530	VHT0	NA	86.26	75.00
SISO B	802.11ac80	122	5610	VHT0	NA	86.83	75.00
SISO B	802.11ac160	114	5570	VHT0	NA	165.66	153.00
SISO B	802.11ax20	100	5500	HE0	FullBW	23.45	18.90
SISO B	802.11ax20	100	5500	HE0	26/0	20.75	18.37
SISO B	802.11ax20	100	5500	HE0	52/37	21.80	18.37
SISO B	802.11ax20	100	5500	HE0	106/53	22.65	18.33
SISO B	802.11ax20	120	5600	HE0	FullBW	23.45	18.88
SISO B	802.11ax20	140	5700	HE0	FullBW	24.00	18.87
SISO B	802.11ax20	140	5700	HE0	26/8	21.20	18.77
SISO B	802.11ax20	140	5700	HE0	52/40	22.25	18.52
SISO B	802.11ax20	140	5700	HE0	106/54	23.50	18.37
SISO B	802.11ax40	102	5510	HE0	FullBW	42.21	37.52
SISO B	802.11ax40	102	5510	HE0	242/61	30.51	18.96
SISO B	802.11ax40	118	5590	HE0	FullBW	43.92	37.60
SISO B	802.11ax40	134	5670	HE0	FullBW	43.29	37.68
SISO B	802.11ax40	134	5670	HE0	242/62	24.48	18.88
SISO B	802.11ax80	106	5530	HE0	FullBW	84.17	76.92
SISO B	802.11ax80	106	5530	HE0	484/65	43.32	37.44
SISO B	802.11ax80	122	5610	HE0	FullBW	83.79	76.68
SISO B	802.11ax80	114	5570	HE0	FullBW	162.69	154.60
SISO B	802.11ax160	114	5570	HE0	996/67	90.09	77.20
SISO B	802.11ax160	114	5570	HE0	996/S67	86.12	77.00

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	26dB BW [MHz]	99% BW [MHz]
MIMO A	802.11n20	100	5500	HT8	NA	24.35	17.83
MIMO A	802.11n20	120	5600	HT8	NA	24.75	17.70
MIMO A	802.11n20	140	5700	HT8	NA	24.1	17.84
MIMO A	802.11n40	102	5510	HT8	NA	44.10	36.08
MIMO A	802.11n40	118	5590	HT8	NA	46.44	36.24
MIMO A	802.11n40	134	5670	HT8	NA	43.92	36.16
MIMO A	802.11ac80	106	5530	VHT0	NA	87.40	75.12
MIMO A	802.11ac80	122	5610	VHT0	NA	90.63	75.24
MIMO A	802.11ac160	114	5570	VHT0	NA	163.68	153.20
MIMO A	802.11ax20	100	5500	HE0	NA	24.05	18.87
MIMO A	802.11ax20	100	5500	HE0	26/0	20.45	18.28
MIMO A	802.11ax20	100	5500	HE0	52/37	20.90	18.35
MIMO A	802.11ax20	100	5500	HE0	106/53	22.70	18.27
MIMO A	802.11ax20	120	5600	HE0	FullBW	25.00	18.97
MIMO A	802.11ax20	140	5700	HE0	FullBW	23.95	18.90
MIMO A	802.11ax20	140	5700	HE0	26/8	21.20	18.49
MIMO A	802.11ax20	140	5700	HE0	52/40	21.80	18.51
MIMO A	802.11ax20	140	5700	HE0	106/54	23.55	18.54
MIMO A	802.11ax40	102	5510	HE0	FullBW	43.74	37.60
MIMO A	802.11ax40	102	5510	HE0	242/61	26.55	18.88
MIMO A	802.11ax40	118	5590	HE0	FullBW	44.46	37.60
MIMO A	802.11ax40	134	5670	HE0	FullBW	43.92	37.60
MIMO A	802.11ax40	134	5670	HE0	242/62	24.21	19.04
MIMO A	802.11ax80	106	5530	HE0	FullBW	83.79	76.80
MIMO A	802.11ax80	106	5530	HE0	484/65	49.40	37.92
MIMO A	802.11ax80	122	5610	HE0	FullBW	83.79	76.68
MIMO A	802.11ax80	114	5570	HE0	FullBW	163.02	154.60
MIMO A	802.11ax160	114	5570	HE0	996/67	87.78	76.80
MIMO A	802.11ax160	114	5570	HE0	996/S67	86.13	77.00

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	26dB BW [MHz]	99% BW [MHz]
MIMO B	802.11n20	100	5500	HT8	NA	23.80	17.73
MIMO B	802.11n20	120	5600	HT8	NA	23.45	17.74
MIMO B	802.11n20	140	5700	HT8	NA	23.95	17.67
MIMO B	802.11n40	102	5510	HT8	NA	43.47	36.00
MIMO B	802.11n40	118	5590	HT8	NA	43.47	36.16
MIMO B	802.11n40	134	5670	HT8	NA	42.21	36.08
MIMO B	802.11ac80	106	5530	VHT0	NA	87.78	75.00
MIMO B	802.11ac80	122	5610	VHT0	NA	86.45	75.00
MIMO B	802.11ac160	114	5570	VHT0	NA	162.69	153.00
MIMO B	802.11ax20	100	5500	HE0	FullBW	23.45	18.93
MIMO B	802.11ax20	100	5500	HE0	26/0	20.05	18.31
MIMO B	802.11ax20	100	5500	HE0	52/37	20.75	18.17
MIMO B	802.11ax20	100	5500	HE0	106/53	21.55	18.12
MIMO B	802.11ax20	120	5600	HE0	FullBW	23.15	18.85
MIMO B	802.11ax20	140	5700	HE0	FullBW	24.25	18.91
MIMO B	802.11ax20	140	5700	HE0	26/8	20.45	18.35
MIMO B	802.11ax20	140	5700	HE0	52/40	20.3	18.23
MIMO B	802.11ax20	140	5700	HE0	106/54	23.15	18.32
MIMO B	802.11ax40	102	5510	HE0	FullBW	41.76	37.52
MIMO B	802.11ax40	102	5510	HE0	242/61	25.83	18.96
MIMO B	802.11ax40	118	5590	HE0	FullBW	42.21	37.44
MIMO B	802.11ax40	134	5670	HE0	FullBW	43.47	37.52
MIMO B	802.11ax40	134	5670	HE0	242/62	23.94	18.88
MIMO B	802.11ax80	106	5530	HE0	FullBW	83.41	76.56
MIMO B	802.11ax80	106	5530	HE0	484/65	49.40	37.56
MIMO B	802.11ax80	122	5610	HE0	FullBW	82.84	76.68
MIMO B	802.11ax80	114	5570	HE0	FullBW	162.69	154.40
MIMO B	802.11ax160	114	5570	HE0	996/67	86.13	77.00
MIMO B	802.11ax160	114	5570	HE0	996/S67	86.13	76.80

Max Value

Overlapped channels between U-NII-2C and U-NII-3

Mode	Rate	Channel	Frequency (MHz)	Antenna	Chain	26dB BW [MHz] UNII2C
802.11n20	HT0	144	5720	SISO	A	17.02
					B	16.57
	HT8			MIMO	A	16.78
					B	16.42
802.11n40	HT0	142	5710	SISO	A	37.81
					B	37.73
	HT8			MIMO	A	38.17
					B	37.63
802.11ac80	VHT0	138	5690	SISO	A	79.55
					B	79.74
				MIMO	A	78.41
					B	77.46
802.11ax20	HE0	144	5720	SISO	A	17.07
					B	16.52
				MIMO	A	16.82
					B	16.92
802.11ax40	HE0	142	5710	SISO	A	36.28
					B	36.11
				MIMO	A	36.55
					B	36.37
802.11ax80	HE0	138	5690	SISO	A	77.46
					B	77.08
				MIMO	A	76.51
					B	17.02

Max Value

See Section B.3.1 and B.3.2 Section for the screenshot results.

B.2.2 Power Limits. Maximum Output power & Maximum power spectral Density

Test limits

Part	Limits
FCC 15.407 (a) (2)	For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band.
RSS-247 Clause 6.2.3 (1)	The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band. The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Test procedure

The Maximum Conducted Output Power was measured using the channel integration method according to section E) 2) e) (Method SA-2 Alternative) of FCC OET KDB 789033 D02.

The maximum power spectral density (PSD) was measured using the method according to section F) (Method SA-2 Alternative) of FCC OET KDB 789033 D02.

In the measure-and-sum approach for MIMO mode, the conducted emission level (e.g., transmit power or power in specified bandwidth) is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically in linear power units to determine the total emission level from the device.

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power. The declared maximum antenna gain is +5dBi.

The conducted setup shown in section *Test & System Description* was used to measure the maximum conducted output power and power spectral density. The antenna terminal of the EUT is connected to the spectrum analyser through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.

For the overlapped channels between U-NII-2C and U-NII-3, and according to FCC OET KDB 789033 D02 the power is computed based on the portion of the emission bandwidth contained within that band. This rule is only applicable for those channels marked as overlapped

Results tables

Duty cycle

Mode	Rate	Antenna	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
802.11a	6Mbps	SISO A	2.08	2.14	96.95%
		SISO B	2.08	2.14	96.95%
802.11n20	HT0	SISO A	3.97	4.03	98.60%
		SISO B	3.97	4.03	98.60%
	HT8	MIMO A	3.97	4.03	98.51%
		MIMO B	3.97	4.03	98.51%
802.11ax20	HE0	SISO A	3.95	4.01	98.48%
		SISO B	3.95	4.01	98.48%
		MIMO A	3.95	4.01	98.54%
		MIMO B	3.95	4.01	98.54%
802.11n40	HT0	SISO A	3.94	4.02	98.01%
		SISO B	3.94	4.02	98.01%
	HT8	MIMO A	3.93	4.02	97.82%
		MIMO B	3.93	4.02	97.82%
802.11ax40	HE0	SISO A	3.93	4.00	98.32%
		SISO B	3.93	4.00	98.32%
		MIMO A	3.94	4.01	98.21%
		MIMO B	3.94	4.01	98.21%
802.11ac80	VHT0	SISO A	3.95	4.01	98.46%
		SISO B	3.95	4.01	98.46%
		MIMO A	3.94	4.01	98.32%
		MIMO B	3.94	4.01	98.32%
802.11ax80	HE0	SISO A	3.94	4.04	97.62%
		SISO B	3.94	4.04	97.62%
		MIMO A	3.94	4.01	98.32%
		MIMO B	3.94	4.01	98.32%
802.11ac160	VTH0	SISO A	3.96	4.01	98.73%
		SISO B	3.96	4.01	98.73%
		MIMO A	2.25	2.33	96.84%
		MIMO B	2.25	2.33	96.84%
802.11ax160	HE0	SISO A	3.93	4.01	98.00%
		SISO B	3.93	4.01	98.00%
		MIMO A	2.25	2.33	96.84%
		MIMO B	2.25	2.33	96.84%

Maximum output power – U-NII-2C Channels

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average Conducted Ouput Power [dBm]	Avg Max* Conducted Ouput Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]
SISO A	802.11a20	100	5500	6Mbps	NA	20.55	20.68	25.68	116.95
SISO A	802.11a20	120	5600	6Mbps	NA	21.32	21.45	26.45	139.64
SISO A	802.11a20	140	5700	6Mbps	NA	20.32	20.45	25.45	110.92
SISO A	802.11n20	100	5500	HT0	NA	20.30	20.30	25.30	107.15
SISO A	802.11n20	120	5600	HT0	NA	21.24	21.24	26.24	133.05
SISO A	802.11n20	140	5700	HT0	NA	20.25	20.25	25.25	105.93
SISO A	802.11n40	102	5510	HT0	NA	19.34	19.34	24.34	85.90
SISO A	802.11n40	118	5590	HT0	NA	21.14	21.14	26.14	130.02
SISO A	802.11n40	134	5670	HT0	NA	21.33	21.33	26.33	135.83
SISO A	802.11ac80	106	5530	VHT0	NA	19.92	19.92	24.92	98.17
SISO A	802.11ac80	122	5610	VHT0	NA	21.16	21.16	26.16	130.62
SISO A	802.11ac160	114	5570	VHT0	NA	16.36	16.36	21.36	43.25
SISO A	802.11ax20	100	5500	HE0	FullBW	20.44	20.44	25.44	110.66
SISO A	802.11ax20	100	5500	HE0	26/0	13.95	13.95	18.95	24.83
SISO A	802.11ax20	100	5500	HE0	52/37	16.96	16.96	21.96	49.66
SISO A	802.11ax20	100	5500	HE0	106/53	19.83	19.83	24.83	96.16
SISO A	802.11ax20	120	5600	HE0	FullBW	21.09	21.09	26.09	128.53
SISO A	802.11ax20	140	5700	HE0	FullBW	19.99	19.99	24.99	99.77
SISO A	802.11ax20	140	5700	HE0	26/8	13.69	13.69	18.69	23.39
SISO A	802.11ax20	140	5700	HE0	52/40	16.83	16.83	21.83	48.19
SISO A	802.11ax20	140	5700	HE0	106/54	20.07	20.07	25.07	101.62
SISO A	802.11ax40	102	5510	HE0	FullBW	18.84	18.84	23.84	76.56
SISO A	802.11ax40	102	5510	HE0	242/61	20.28	20.28	25.28	106.66
SISO A	802.11ax40	118	5590	HE0	FullBW	21.20	21.20	26.20	131.83
SISO A	802.11ax40	134	5670	HE0	FullBW	20.41	20.41	25.41	109.90
SISO A	802.11ax40	134	5670	HE0	242/62	21.17	21.17	26.17	130.92
SISO A	802.11ax80	106	5530	HE0	FullBW	19.75	19.85	24.85	96.61
SISO A	802.11ax80	106	5530	HE0	484/65	19.00	19.10	24.10	81.28
SISO A	802.11ax80	122	5610	HE0	FullBW	20.98	21.08	26.08	128.23
SISO A	802.11ax80	114	5570	HE0	FullBW	16.58	16.67	21.67	46.45
SISO A	802.11ax160	114	5570	HE0	996/67	16.09	16.18	21.18	41.50
SISO A	802.11ax160	114	5570	HE0	996/S67	19.72	19.81	24.81	95.72

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average Conducted Output Power [dBm]	Avg Max* Conducted Output Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]
SISO B	802.11a20	100	5500	6Mbps	NA	20.25	20.38	25.38	109.14
SISO B	802.11a20	120	5600	6Mbps	NA	21.11	21.24	26.24	133.05
SISO B	802.11a20	140	5700	6Mbps	NA	20.14	20.27	25.27	106.41
SISO B	802.11n20	100	5500	HT0	NA	19.88	19.88	24.88	97.27
SISO B	802.11n20	120	5600	HT0	NA	21.02	21.02	26.02	126.47
SISO B	802.11n20	140	5700	HT0	NA	19.42	19.42	24.42	87.50
SISO B	802.11n40	102	5510	HT0	NA	19.00	19.00	24.00	79.43
SISO B	802.11n40	118	5590	HT0	NA	20.99	20.99	25.99	125.60
SISO B	802.11n40	134	5670	HT0	NA	21.07	21.07	26.07	127.94
SISO B	802.11ac80	106	5530	VHT0	NA	18.64	18.64	23.64	73.11
SISO B	802.11ac80	122	5610	VHT0	NA	20.34	20.34	25.34	108.14
SISO B	802.11ac160	114	5570	VHT0	NA	15.42	15.42	20.42	34.83
SISO B	802.11ax20	100	5500	HE0	FullBW	19.99	19.99	24.99	99.77
SISO B	802.11ax20	100	5500	HE0	26/0	13.75	13.75	18.75	23.71
SISO B	802.11ax20	100	5500	HE0	52/37	16.83	16.83	21.83	48.19
SISO B	802.11ax20	100	5500	HE0	106/53	19.87	19.87	24.87	97.05
SISO B	802.11ax20	120	5600	HE0	FullBW	20.81	20.81	25.81	120.50
SISO B	802.11ax20	140	5700	HE0	FullBW	19.77	19.77	24.77	94.84
SISO B	802.11ax20	140	5700	HE0	26/8	13.82	13.82	18.82	24.10
SISO B	802.11ax20	140	5700	HE0	52/40	16.89	16.89	21.89	48.87
SISO B	802.11ax20	140	5700	HE0	106/54	19.99	19.99	24.99	99.77
SISO B	802.11ax40	102	5510	HE0	FullBW	18.50	18.50	23.50	70.79
SISO B	802.11ax40	102	5510	HE0	242/61	19.55	19.55	24.55	90.16
SISO B	802.11ax40	118	5590	HE0	FullBW	20.90	20.90	25.90	123.03
SISO B	802.11ax40	134	5670	HE0	FullBW	20.12	20.12	25.12	102.80
SISO B	802.11ax40	134	5670	HE0	242/62	20.92	20.92	25.92	123.59
SISO B	802.11ax80	106	5530	HE0	FullBW	18.66	18.76	23.76	75.16
SISO B	802.11ax80	106	5530	HE0	484/65	18.71	18.81	23.81	76.03
SISO B	802.11ax80	122	5610	HE0	FullBW	20.19	20.29	25.29	106.91
SISO B	802.11ax80	114	5570	HE0	FullBW	15.26	15.35	20.35	34.28
SISO B	802.11ax160	114	5570	HE0	996/67	14.89	14.98	19.98	31.48
SISO B	802.11ax160	114	5570	HE0	996/S67	19.40	19.49	24.49	88.92

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average Conducted Output Power [dBm]	Avg Max* Conducted Output Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]
MIMO A	802.11n20	100	5500	HT8	NA	18.81	18.81	23.81	76.03
MIMO A	802.11n20	120	5600	HT8	NA	18.87	18.87	23.87	77.09
MIMO A	802.11n20	140	5700	HT8	NA	18.86	18.86	23.86	76.91
MIMO A	802.11n40	102	5510	HT8	NA	17.05	17.15	22.15	51.88
MIMO A	802.11n40	118	5590	HT8	NA	20.84	20.94	25.94	124.17
MIMO A	802.11n40	134	5670	HT8	NA	18.70	18.80	23.80	75.86
MIMO A	802.11ac80	106	5530	VHT0	NA	17.31	17.31	22.31	53.83
MIMO A	802.11ac80	122	5610	VHT0	NA	21.15	21.15	26.15	130.32
MIMO A	802.11ac160	114	5570	VHT0	NA	14.98	15.12	20.12	32.51
MIMO A	802.11ax20	100	5500	HE0	FullBW	18.17	18.17	23.17	65.61
MIMO A	802.11ax20	100	5500	HE0	26/0	10.71	10.71	15.71	11.78
MIMO A	802.11ax20	100	5500	HE0	52/37	13.64	13.64	18.64	23.12
MIMO A	802.11ax20	100	5500	HE0	106/53	16.55	16.55	21.55	45.19
MIMO A	802.11ax20	120	5600	HE0	FullBW	19.17	19.17	24.17	82.60
MIMO A	802.11ax20	140	5700	HE0	FullBW	19.00	19.00	24.00	79.43
MIMO A	802.11ax20	140	5700	HE0	26/8	10.58	10.58	15.58	11.43
MIMO A	802.11ax20	140	5700	HE0	52/40	13.89	13.89	18.89	24.49
MIMO A	802.11ax20	140	5700	HE0	106/54	16.35	16.35	21.35	43.15
MIMO A	802.11ax40	102	5510	HE0	FullBW	16.85	16.85	21.85	48.42
MIMO A	802.11ax40	102	5510	HE0	242/61	18.70	18.70	23.70	74.13
MIMO A	802.11ax40	118	5590	HE0	FullBW	21.03	21.03	26.03	126.77
MIMO A	802.11ax40	134	5670	HE0	FullBW	20.44	20.44	25.44	110.66
MIMO A	802.11ax40	134	5670	HE0	242/62	19.12	19.12	24.12	81.66
MIMO A	802.11ax80	106	5530	HE0	FullBW	17.03	17.03	22.03	50.47
MIMO A	802.11ax80	106	5530	HE0	484/65	16.64	16.64	21.64	46.13
MIMO A	802.11ax80	122	5610	HE0	FullBW	20.88	20.88	25.88	122.46
MIMO A	802.11ax80	114	5570	HE0	FullBW	14.89	15.03	20.03	31.84
MIMO A	802.11ax160	114	5570	HE0	996/67	15.18	15.32	20.32	34.04
MIMO A	802.11ax160	114	5570	HE0	996/S67	17.91	18.05	23.05	63.83

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average Conducted Output Power [dBm]	Avg Max* Conducted Output Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]
MIMO B	802.11n20	100	5500	HT8	NA	18.15	18.15	23.15	65.31
MIMO B	802.11n20	120	5600	HT8	NA	18.94	18.94	23.94	78.34
MIMO B	802.11n20	140	5700	HT8	NA	18.87	18.87	23.87	77.09
MIMO B	802.11n40	102	5510	HT8	NA	16.58	16.68	21.68	46.56
MIMO B	802.11n40	118	5590	HT8	NA	20.69	20.79	25.79	119.95
MIMO B	802.11n40	134	5670	HT8	NA	19.65	19.75	24.75	94.41
MIMO B	802.11ac80	106	5530	VHT0	NA	16.82	16.82	21.82	48.08
MIMO B	802.11ac80	122	5610	VHT0	NA	19.88	19.88	24.88	97.27
MIMO B	802.11ac160	114	5570	VHT0	NA	14.70	14.84	19.84	30.48
MIMO B	802.11ax20	100	5500	HE0	FullBW	18.03	18.03	23.03	63.53
MIMO B	802.11ax20	100	5500	HE0	26/0	10.64	10.64	15.64	11.59
MIMO B	802.11ax20	100	5500	HE0	52/37	13.35	13.35	18.35	21.63
MIMO B	802.11ax20	100	5500	HE0	106/53	14.47	14.47	19.47	27.99
MIMO B	802.11ax20	120	5600	HE0	FullBW	19.08	19.08	24.08	80.91
MIMO B	802.11ax20	140	5700	HE0	FullBW	19.05	19.05	24.05	80.35
MIMO B	802.11ax20	140	5700	HE0	26/8	10.76	10.76	15.76	11.91
MIMO B	802.11ax20	140	5700	HE0	52/40	13.84	13.84	18.84	24.21
MIMO B	802.11ax20	140	5700	HE0	106/54	16.23	16.23	21.23	41.98
MIMO B	802.11ax40	102	5510	HE0	FullBW	16.41	16.41	21.41	43.75
MIMO B	802.11ax40	102	5510	HE0	242/61	18.17	18.17	23.17	65.61
MIMO B	802.11ax40	118	5590	HE0	FullBW	20.73	20.73	25.73	118.30
MIMO B	802.11ax40	134	5670	HE0	FullBW	19.92	19.92	24.92	98.17
MIMO B	802.11ax40	134	5670	HE0	242/62	19.08	19.08	24.08	80.91
MIMO B	802.11ax80	106	5530	HE0	FullBW	16.68	16.68	21.68	46.56
MIMO B	802.11ax80	106	5530	HE0	484/65	15.82	15.82	20.82	38.19
MIMO B	802.11ax80	122	5610	HE0	FullBW	20.04	20.04	25.04	100.93
MIMO B	802.11ax80	114	5570	HE0	FullBW	14.59	14.73	19.73	29.72
MIMO B	802.11ax160	114	5570	HE0	996/67	14.67	14.81	19.81	30.27
MIMO B	802.11ax160	114	5570	HE0	996/S67	17.81	17.95	22.95	62.37

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average Conducted Output Power [dBm]	Avg Max* Conducted Output Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]
Combined A+ B	802.11n20	100	5500	HT8	NA	21.50	21.50	26.50	141.35
Combined A+ B	802.11n20	120	5600	HT8	NA	21.92	21.92	26.92	155.43
Combined A+ B	802.11n20	140	5700	HT8	NA	21.88	21.88	26.88	154.00
Combined A+ B	802.11n40	102	5510	HT8	NA	19.83	19.93	24.93	98.44
Combined A+ B	802.11n40	118	5590	HT8	NA	23.78	23.88	28.88	244.12
Combined A+ B	802.11n40	134	5670	HT8	NA	22.21	22.31	27.31	170.26
Combined A+ B	802.11ac80	106	5530	VHT0	NA	20.08	20.08	25.08	101.91
Combined A+ B	802.11ac80	122	5610	VHT0	NA	23.57	23.57	28.57	227.59
Combined A+ B	802.11ac160	114	5570	VHT0	NA	17.85	17.99	22.99	62.99
Combined A+ B	802.11ax20	100	5500	HE0	FullBW	21.11	21.11	26.11	129.15
Combined A+ B	802.11ax20	100	5500	HE0	26/0	13.69	13.69	18.69	23.36
Combined A+ B	802.11ax20	100	5500	HE0	52/37	16.51	16.51	21.51	44.75
Combined A+ B	802.11ax20	100	5500	HE0	106/53	18.64	18.64	23.64	73.18
Combined A+ B	802.11ax20	120	5600	HE0	FullBW	22.14	22.14	27.14	163.51

Combined A+ B	802.11ax20	140	5700	HE0	FullBW	22.04	22.04	27.04	159.79
Combined A+ B	802.11ax20	140	5700	HE0	26/8	13.68	13.68	18.68	23.34
Combined A+ B	802.11ax20	140	5700	HE0	52/40	16.88	16.88	21.88	48.70
Combined A+ B	802.11ax20	140	5700	HE0	106/54	19.30	19.30	24.30	85.13
Combined A+ B	802.11ax40	102	5510	HE0	FullBW	19.65	19.65	24.65	92.17
Combined A+ B	802.11ax40	102	5510	HE0	242/61	21.45	21.45	26.45	139.75
Combined A+ B	802.11ax40	118	5590	HE0	FullBW	23.89	23.89	28.89	245.07
Combined A+ B	802.11ax40	134	5670	HE0	FullBW	23.20	23.20	28.20	208.84
Combined A+ B	802.11ax40	134	5670	HE0	242/62	22.11	22.11	27.11	162.57
Combined A+ B	802.11ax80	106	5530	HE0	FullBW	19.87	19.87	24.87	97.02
Combined A+ B	802.11ax80	106	5530	HE0	484/65	19.26	19.26	24.26	84.33
Combined A+ B	802.11ax80	122	5610	HE0	FullBW	23.49	23.49	28.49	223.39
Combined A+ B	802.11ax80	114	5570	HE0	FullBW	17.75	17.89	22.89	61.56
Combined A+ B	802.11ax160	114	5570	HE0	996/67	17.94	18.08	23.08	64.31
Combined A+ B	802.11ax160	114	5570	HE0	996/S67	20.87	21.01	26.01	126.20

* Maximum values are the duty cycle compensated values calculated from the average (measured) values

Max/Min Value

Maximum output power – Overlapped channels between U-NII-2C and U-NII-3

Mode	Rate	Antenna	Chain	Channel	Frequency (MHz)	Average Cond. Output Power - UNII-2C [dBm]	Max.* Cond. Output Power - UNII-2C [dBm]	Max.* EIRP UNII2C [dBm]	Max.* Cond. Output Power - UNII-2C [mW]
802.11n20	HT0	SISO	A	144	5720	19.95	20.01	25.01	100.22
			B		5720	19.73	19.79	24.79	95.27
	HT8	MIMO	A		5720	17.81	17.87	22.87	61.28
			B		5720	17.87	17.93	22.93	62.13
		Combined	A+B		5720	20.85	20.91	25.91	123.41
802.11n40	HT0	SISO	A	142	5710	20.95	21.01	26.01	126.13
			B		5710	20.53	20.59	25.59	114.51
	HT8	MIMO	A		5710	20.91	20.97	25.97	124.99
			B		5710	21.12	21.18	26.18	131.18
		Combined	A+B		5710	23.91	23.96	28.96	248.89
802.11ac80	VHT0	SISO	A	138	5690	21.04	21.10	26.10	128.77
			B		5690	20.97	21.03	26.03	126.71
		MIMO	A		5690	20.21	20.27	25.27	106.43
			B		5690	20.73	20.79	25.79	119.97
		Combined	A+B		5690	23.49	23.55	28.55	226.41
802.11ax20	HE0	SISO	A	144	5720	19.79	19.85	24.85	96.57
			B		5720	19.87	19.93	24.93	98.35
		MIMO	A		5720	18.20	18.26	23.26	66.96
			B		5720	18.19	18.25	23.25	66.81
		Combined	A+B		5720	21.21	21.26	26.26	133.76
802.11ax40	HE0	SISO	A	142	5710	20.89	20.95	25.95	124.40
			B		5710	20.41	20.47	25.47	111.42
		MIMO	A		5710	20.21	20.27	25.27	106.40
			B		5710	20.75	20.81	25.81	120.45
		Combined	A+B		5710	23.50	23.56	28.56	226.85
802.11ax80	HE0	SISO	A	138	5690	20.26	20.32	25.32	107.62
			B		5690	20.61	20.67	25.67	116.63
		MIMO	A		5690	20.90	20.96	25.96	124.68
			B		5690	20.34	20.40	25.40	109.64
		Combined	A+B		5690	23.64	23.70	28.70	234.32

* Maximum values are the duty cycle compensated values calculated from the average (measured) values

Max/Min Value

Maximum Power Spectral Density (PSD) – U-NII-2C channels

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]
SISO A	802.11a20	100	5500	6Mbps	NA	9.75	9.88
SISO A	802.11a20	120	5600	6Mbps	NA	10.52	10.65
SISO A	802.11a20	140	5700	6Mbps	NA	9.50	9.63
SISO A	802.11n20	100	5500	HT0	NA	9.29	9.29
SISO A	802.11n20	120	5600	HT0	NA	10.23	10.23
SISO A	802.11n20	140	5700	HT0	NA	9.23	9.23
SISO A	802.11n40	102	5510	HT0	NA	4.91	4.91
SISO A	802.11n40	118	5590	HT0	NA	6.68	6.68
SISO A	802.11n40	134	5670	HT0	NA	6.89	6.89
SISO A	802.11ac80	106	5530	VHT0	NA	2.41	2.41
SISO A	802.11ac80	122	5610	VHT0	NA	3.65	3.65
SISO A	802.11ac160	114	5570	VHT0	NA	-4.00	-4.00
SISO A	802.11ax20	100	5500	HE0	FullBW	9.23	9.23
SISO A	802.11ax20	100	5500	HE0	26/0	10.92	10.92
SISO A	802.11ax20	100	5500	HE0	52/37	10.87	10.87
SISO A	802.11ax20	100	5500	HE0	106/53	10.79	10.79
SISO A	802.11ax20	120	5600	HE0	FullBW	9.88	9.88
SISO A	802.11ax20	140	5700	HE0	FullBW	8.84	8.84
SISO A	802.11ax20	140	5700	HE0	26/8	10.78	10.78
SISO A	802.11ax20	140	5700	HE0	52/40	10.79	10.79
SISO A	802.11ax20	140	5700	HE0	106/54	10.99	10.99
SISO A	802.11ax40	102	5510	HE0	FullBW	4.21	4.21
SISO A	802.11ax40	102	5510	HE0	242/61	9.20	9.20
SISO A	802.11ax40	118	5590	HE0	FullBW	6.58	6.58
SISO A	802.11ax40	134	5670	HE0	FullBW	5.78	5.78
SISO A	802.11ax40	134	5670	HE0	242/62	9.98	9.98
SISO A	802.11ax80	106	5530	HE0	FullBW	2.14	2.24
SISO A	802.11ax80	106	5530	HE0	484/65	4.62	4.72
SISO A	802.11ax80	122	5610	HE0	FullBW	3.38	3.48
SISO A	802.11ax80	114	5570	HE0	FullBW	-3.92	-3.83
SISO A	802.11ax160	114	5570	HE0	996/67	-1.48	-1.39
SISO A	802.11ax160	114	5570	HE0	996/S67	2.21	2.30

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]
SISO B	802.11a20	100	5500	6Mbps	NA	9.43	9.56
SISO B	802.11a20	120	5600	6Mbps	NA	10.32	10.45
SISO B	802.11a20	140	5700	6Mbps	NA	9.32	9.45
SISO B	802.11n20	100	5500	HT0	NA	8.85	8.85
SISO B	802.11n20	120	5600	HT0	NA	10.00	10.00
SISO B	802.11n20	140	5700	HT0	NA	8.39	8.39
SISO B	802.11n40	102	5510	HT0	NA	4.56	4.56
SISO B	802.11n40	118	5590	HT0	NA	6.54	6.54
SISO B	802.11n40	134	5670	HT0	NA	6.63	6.63
SISO B	802.11ac80	106	5530	VHT0	NA	1.15	1.15
SISO B	802.11ac80	122	5610	VHT0	NA	2.84	2.84
SISO B	802.11ac160	114	5570	VHT0	NA	-4.95	-4.95
SISO B	802.11ax20	100	5500	HE0	FullBW	8.77	8.77
SISO B	802.11ax20	100	5500	HE0	26/0	10.71	10.71
SISO B	802.11ax20	100	5500	HE0	52/37	10.79	10.79
SISO B	802.11ax20	100	5500	HE0	106/53	10.82	10.82
SISO B	802.11ax20	120	5600	HE0	FullBW	9.60	9.60
SISO B	802.11ax20	140	5700	HE0	FullBW	8.56	8.56
SISO B	802.11ax20	140	5700	HE0	26/8	10.74	10.74
SISO B	802.11ax20	140	5700	HE0	52/40	10.86	10.86
SISO B	802.11ax20	140	5700	HE0	106/54	10.92	10.92
SISO B	802.11ax40	102	5510	HE0	FullBW	3.90	3.90
SISO B	802.11ax40	102	5510	HE0	242/61	8.28	8.28
SISO B	802.11ax40	118	5590	HE0	FullBW	6.27	6.27

SISO B	802.11ax40	134	5670	HE0	FullBW	5.48	5.48
SISO B	802.11ax40	134	5670	HE0	242/62	9.72	9.72
SISO B	802.11ax80	106	5530	HE0	FullBW	1.06	1.16
SISO B	802.11ax80	106	5530	HE0	484/65	4.29	4.39
SISO B	802.11ax80	122	5610	HE0	FullBW	2.58	2.68
SISO B	802.11ax80	114	5570	HE0	FullBW	-5.27	-5.18
SISO B	802.11ax160	114	5570	HE0	996/67	-2.66	-2.57
SISO B	802.11ax160	114	5570	HE0	996/S67	1.95	2.04

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]
MIMO A	802.11n20	100	5500	HT8	NA	7.82	7.82
MIMO A	802.11n20	120	5600	HT8	NA	7.85	7.85
MIMO A	802.11n20	140	5700	HT8	NA	7.84	7.84
MIMO A	802.11n40	102	5510	HT8	NA	2.60	2.70
MIMO A	802.11n40	118	5590	HT8	NA	6.42	6.52
MIMO A	802.11n40	134	5670	HT8	NA	4.23	4.33
MIMO A	802.11ac80	106	5530	VHT0	NA	-0.17	-0.17
MIMO A	802.11ac80	122	5610	VHT0	NA	3.71	3.71
MIMO A	802.11ac160	114	5570	VHT0	NA	-5.41	-5.27
MIMO A	802.11ax20	100	5500	HE0	FullBW	7.04	7.04
MIMO A	802.11ax20	100	5500	HE0	26/0	7.73	7.73
MIMO A	802.11ax20	100	5500	HE0	52/37	7.59	7.59
MIMO A	802.11ax20	100	5500	HE0	106/53	7.54	7.54
MIMO A	802.11ax20	120	5600	HE0	FullBW	7.98	7.98
MIMO A	802.11ax20	140	5700	HE0	FullBW	7.82	7.82
MIMO A	802.11ax20	140	5700	HE0	26/8	7.68	7.68
MIMO A	802.11ax20	140	5700	HE0	52/40	7.88	7.88
MIMO A	802.11ax20	140	5700	HE0	106/54	7.34	7.34
MIMO A	802.11ax40	102	5510	HE0	FullBW	2.27	2.27
MIMO A	802.11ax40	102	5510	HE0	242/61	7.43	7.43
MIMO A	802.11ax40	118	5590	HE0	FullBW	6.44	6.44
MIMO A	802.11ax40	134	5670	HE0	FullBW	5.83	5.83
MIMO A	802.11ax40	134	5670	HE0	242/62	7.94	7.94
MIMO A	802.11ax80	106	5530	HE0	FullBW	-0.51	-0.51
MIMO A	802.11ax80	106	5530	HE0	484/65	2.15	2.15
MIMO A	802.11ax80	122	5610	HE0	FullBW	3.36	3.36
MIMO A	802.11ax80	114	5570	HE0	FullBW	-5.62	-5.48
MIMO A	802.11ax160	114	5570	HE0	996/67	-2.34	-2.20
MIMO A	802.11ax160	114	5570	HE0	996/S67	0.45	0.59

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]
MIMO B	802.11n20	100	5500	HT8	NA	7.13	7.13
MIMO B	802.11n20	120	5600	HT8	NA	7.93	7.93
MIMO B	802.11n20	140	5700	HT8	NA	7.85	7.85
MIMO B	802.11n40	102	5510	HT8	NA	2.17	2.27
MIMO B	802.11n40	118	5590	HT8	NA	6.24	6.34
MIMO B	802.11n40	134	5670	HT8	NA	5.19	5.29
MIMO B	802.11ac80	106	5530	VHT0	NA	-0.58	-0.58
MIMO B	802.11ac80	122	5610	VHT0	NA	2.40	2.40
MIMO B	802.11ac160	114	5570	VHT0	NA	-5.63	-5.49
MIMO B	802.11ax20	100	5500	HE0	FullBW	6.82	6.82
MIMO B	802.11ax20	100	5500	HE0	26/0	7.56	7.56
MIMO B	802.11ax20	100	5500	HE0	52/37	7.23	7.23
MIMO B	802.11ax20	100	5500	HE0	106/53	5.42	5.42
MIMO B	802.11ax20	120	5600	HE0	FullBW	7.91	7.91
MIMO B	802.11ax20	140	5700	HE0	FullBW	7.80	7.80
MIMO B	802.11ax20	140	5700	HE0	26/8	7.85	7.85
MIMO B	802.11ax20	140	5700	HE0	52/40	7.79	7.79
MIMO B	802.11ax20	140	5700	HE0	106/54	7.23	7.23
MIMO B	802.11ax40	102	5510	HE0	FullBW	1.77	1.77
MIMO B	802.11ax40	102	5510	HE0	242/61	6.89	6.89
MIMO B	802.11ax40	118	5590	HE0	FullBW	6.10	6.10
MIMO B	802.11ax40	134	5670	HE0	FullBW	5.29	5.29
MIMO B	802.11ax40	134	5670	HE0	242/62	7.88	7.88
MIMO B	802.11ax80	106	5530	HE0	FullBW	-0.81	-0.81
MIMO B	802.11ax80	106	5530	HE0	484/65	1.33	1.33
MIMO B	802.11ax80	122	5610	HE0	FullBW	2.46	2.46
MIMO B	802.11ax80	114	5570	HE0	FullBW	-5.9	-5.76
MIMO B	802.11ax160	114	5570	HE0	996/67	-2.80	-2.66
MIMO B	802.11ax160	114	5570	HE0	996/S67	0.45	0.59

Antenna	Mode	Channel	Freq [MHz]	Rate	RU config.	Combined Maximum* conducted PSD [dBm/MHz]
Combined A+B	802.11n20	100	5500	NA	FullBW	10.50
Combined A+B	802.11n20	120	5600	NA	FullBW	10.90
Combined A+B	802.11n20	140	5700	NA	FullBW	10.86
Combined A+B	802.11n40	102	5510	NA	FullBW	5.50
Combined A+B	802.11n40	118	5590	NA	FullBW	9.44
Combined A+B	802.11n40	134	5670	NA	FullBW	7.85
Combined A+B	802.11ac80	106	5530	NA	FullBW	2.64
Combined A+B	802.11ac80	122	5610	NA	FullBW	6.11
Combined A+B	802.11ac160	114	5570	NA	FullBW	-2.37
Combined A+B	802.11ax20	100	5500	HE0	FullBW	9.94
Combined A+B	802.11ax20	100	5500	HE0	26/0	10.66
Combined A+B	802.11ax20	100	5500	HE0	52/37	10.42
Combined A+B	802.11ax20	100	5500	HE0	106/53	9.62
Combined A+B	802.11ax20	120	5600	HE0	FullBW	10.96

Combined A+B	802.11ax20	140	5700	HE0	FullBW	10.82
Combined A+B	802.11ax20	140	5700	HE0	26/8	10.78
Combined A+B	802.11ax20	140	5700	HE0	52/40	10.85
Combined A+B	802.11ax20	140	5700	HE0	106/54	10.30
Combined A+B	802.11ax40	102	5510	HE0	FullBW	5.04
Combined A+B	802.11ax40	102	5510	HE0	242/61	10.18
Combined A+B	802.11ax40	118	5590	HE0	FullBW	9.28
Combined A+B	802.11ax40	134	5670	HE0	FullBW	8.58
Combined A+B	802.11ax40	134	5670	HE0	242/62	10.92
Combined A+B	802.11ax80	106	5530	HE0	FullBW	2.35
Combined A+B	802.11ax80	106	5530	HE0	484/65	4.77
Combined A+B	802.11ax80	122	5610	HE0	FullBW	5.94
Combined A+B	802.11ax80	114	5570	HE0	FullBW	-2.61
Combined A+B	802.11ax160	114	5570	HE0	996/67	0.59
Combined A+B	802.11ax160	114	5570	HE0	996/S67	3.60

* Maximum values are the duty cycle compensated values calculated from the average (measured) values

Maximum Power Spectral Density (PSD) – Overlapped channels between U-NII-2C and U-NII-3

Mode	Rate	Channel	Frequency (MHz)	Antenna	Chain	Average conducted PSD UNII-2C [dBm/MHz]	Maximum* conducted PSD UNII-2C [dBm/MHz]
802.11n20	HT0	144	5720	SISO	A	9.76	9.82
					B	9.39	9.45
	HT8			MIMO	A	7.66	7.72
					B	7.72	7.00
	Combined			A+B	10.70	10.39	
802.11n40	HT0	142	5710	SISO	A	6.69	6.75
					B	6.28	6.34
	HT8			MIMO	A	9.78	9.84
					B	6.67	6.73
	Combined			A+B	6.87	6.93	
802.11ac80	VHT0	138	5690	SISO	A	3.56	3.62
					B	3.45	3.51
				MIMO	A	3.29	3.35
					B	3.34	3.40
				Combined	A+B	6.33	6.39
802.11ax20	HE0	144	5720	SISO	A	9.30	9.36
					B	9.39	9.45
				MIMO	A	7.83	7.89
					B	7.85	7.91
				Combined	A+B	10.85	10.91
802.11ax40	HE0	142	5710	SISO	A	6.51	6.57
					B	6.03	6.09
				MIMO	A	9.28	9.34
					B	6.16	6.22
				Combined	A+B	6.37	6.43
802.11ax80	HE0	138	5690	SISO	A	2.17	2.23
					B	3.17	3.23
				MIMO	A	3.42	3.48
					B	2.56	2.62
				Combined	A+B	6.02	6.08

* Maximum values are the duty cycle compensated values calculated from the average (measured) values

See Section B.3.3 for the screenshot results.

B.2.3 Undesirable emission limits : out of band (Conducted)

Test limits

FCC part	RSS clause	Limits																				
15.407 (b) (3)	RSS-247 Clause 6.2.3 (2)	For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.																				
15.209	RSS-GEN A1, Clause 8.9	Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a):																				
		<table><tr><th>Freq Range (MHz)</th><th>Field Strength (μV/m)</th><th>Field Strength (dBμV/m)</th><th>Meas. Distance (m)</th></tr><tr><td>30-88</td><td>100</td><td>40</td><td>3</td></tr><tr><td>88-216</td><td>150</td><td>43.5</td><td>3</td></tr><tr><td>216-960</td><td>200</td><td>46</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>54</td><td>3</td></tr></table>	Freq Range (MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Meas. Distance (m)	30-88	100	40	3	88-216	150	43.5	3	216-960	200	46	3	Above 960	500	54	3
		Freq Range (MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Meas. Distance (m)																	
		30-88	100	40	3																	
		88-216	150	43.5	3																	
		216-960	200	46	3																	
Above 960	500	54	3																			
The emission limits shown in the table above are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.																						
For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.																						

Test procedure

The conducted setup shown in section *Test & System Description* was used to measure undesirable emissions on the out of band domain. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss and the declared Antenna Gain.

For out of band measurements on the lower side, Integration method was used according to section (paragraph II.G.3.d) of FCC OET KDB 789033 D02

For the upper side of the out of band, the integration method was used as defined in the out of band measurements section (paragraph II.G.3.d) of FCC OET KDB 789033 D02

In case of out of band measurements falling in restricted bands, the declared Antenna Gain is also compensated in the graph. The declared maximum antenna gain is +5dBi.

The following limits in dBm were applied for the average detector after the conversion from the limits detailed above in dBμV/m, according to FCC 47 CFR part 15 - Subpart C – §15.209(a). The limits in dBm for peak detector are 20dB above the indicated values in the table.

§15.209(a)			Converted values	
Freq Range (MHz)	Distance (m)	Field strength (microvolts/meter)	Field strength (dB microvolts/meter)	Power (dBm)
Above 960	3	500	53.98	-41.2

See Section B.3.5 for the screenshot results.

B.2.4 Radiated spurious emission

Standard references

FCC part	RSS clause	Limits																				
15.407 (b) (3)	RSS-247 Clause 6.2.3 (2)	For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.																				
15.209	RSS-GEN A1, Clause 8.9	Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a): <table><tr><th>Freq Range (MHz)</th><th>Field Strength (μV/m)</th><th>Field Strength (dBμV/m)</th><th>Meas. Distance (m)</th></tr><tr><td>30-88</td><td>100</td><td>40</td><td>3</td></tr><tr><td>88-216</td><td>150</td><td>43.5</td><td>3</td></tr><tr><td>216-960</td><td>200</td><td>46</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>54</td><td>3</td></tr></table> The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.	Freq Range (MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Meas. Distance (m)	30-88	100	40	3	88-216	150	43.5	3	216-960	200	46	3	Above 960	500	54	3
Freq Range (MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Meas. Distance (m)																			
30-88	100	40	3																			
88-216	150	43.5	3																			
216-960	200	46	3																			
Above 960	500	54	3																			

Test procedure

The radiated setups shown in section *Test & System Description* were used to measure the radiated spurious emissions. Depending of the frequency range and bands being tested, different antennas and filters were used. The final measurement is done by varying the antenna height from 1 m to 4 m, the EUT azimuth over 360° and for both Vertical and Horizontal polarizations.

The radiated spurious emission was measured on the worst case configuration selected from the chapter B.1 and using the low, middle and high channels.

For 802.11ax20, 802.11ax40, 802.11ax80 and 802.11ax160 modes, the worst case spurious emission result among the low, mid and high channels tested separately on Chain A and B is used to perform the test on MIMO mode (Chain A+B).

For 802.11n20, 802.11n40, 802.11ac80 and 802.11ac160 modes the worst channel found among all 802.11ax modes mentioned above is chosen to perform the test in Chain A, B , and MIMO (Chain A+B).

Test Results

Radiated spurious - 30 MHz – 1 GHz

Radiated Spurious – All modes

Frequency	MaxPeak	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dB	
241.2	25.3	46.0	20.7	H
408.0	35.7	46.0	10.3	H

Note 1: The spurious signals detected do not depend on either the operating channel or the modulation mode.

1 GHz – 40 GHz, 802.11a, 6Mbps, Chain A

Radiated Spurious – CH100

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3378.0	59.0	---	68.2	9.2	V
8945.7	47.8	---	68.2	20.4	H
16494.9	50.3	---	68.2	17.9	V
25922.5	48.2	---	68.2	20.0	V
39848.5	58.8	---	68.2	9.4	V

Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3386.0	58.7	---	68.2	9.5	V
16392.9	47.9	---	68.2	20.3	V
25260.4	47.6	---	68.2	20.6	V
39855.2	58.9	---	68.2	9.3	V

Radiated Spurious – CH140

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3386.0	60.7	---	68.2	7.5	H
11402.0	49.3	---	74.0	24.7	H
11406.4	---	38.3	54.0	15.7	V
25248.6	48.2	---	68.2	20.0	V
39854.5	59.4	---	68.2	8.8	V

1 GHz – 40 GHz, 802.11a, 6Mbps, Chain B

Radiated Spurious – CH100

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3372.5	59.3	---	68.2	8.9	H
13406.9	48.3	---	68.2	19.9	V
25608.4	48.7	---	68.2	19.5	V
39838.8	59.0	---	68.2	9.2	V

Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3342.5	59.7	---	68.2	8.5	H
16401.1	48.0	---	68.2	20.2	V
25923.9	47.9	---	68.2	20.3	V
39838.0	59.3	---	68.2	8.9	V

Radiated Spurious – CH140

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3390.0	60.1	---	68.2	8.1	H
16406.9	48.5	---	68.2	19.7	V
25624.5	48.1	---	68.2	20.1	V
39879.2	59.0	---	68.2	9.2	H

1 GHz – 40 GHz, 802.11n20, HT0, Chain A
Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3382.5	59.7	---	68.2	8.5	V
16425.3	48.8	---	68.2	19.4	V
25609.4	48.2	---	68.2	20.0	V
39848.5	57.0	---	68.2	11.3	H

1 GHz – 40 GHz, 802.11n20, HT0, Chain B
Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3395.5	59.8	---	68.2	8.4	V
17109.2	48.5	---	68.2	19.7	H
25249.1	48.2	---	68.2	20.0	V
39851.5	57.6	---	68.2	10.6	H

1 GHz – 40 GHz, 802.11n20, HT8, Chain A+B

Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
4982.1	---	46.8	54.0	7.2	V
4982.1	58.5	---	74.0	15.5	V
16428.2	49.2	---	68.2	19.0	H
25969.2	50.6	---	68.2	17.6	H

1 GHz – 40 GHz, 802.11ax20, HE0, Chain A

Radiated Spurious – CH100

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3394.0	59.7	---	68.2	8.5	V
10983.0	49.1	---	74.0	24.9	H
10983.0	---	40.8	54.0	13.2	H
25248.1	49.2	---	68.2	19.0	V
39852.2	58.2	---	68.2	10.0	V

Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3389.0	59.9	---	68.2	8.3	H
16775.7	45.3	---	68.2	22.9	V
22365.7	46.8	---	74.0	27.2	V
22365.7	---	36.0	54.0	18.0	V

Radiated Spurious – CH140

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3389.0	59.2	---	68.2	9.0	V
11382.7	51.1	---	74.0	22.9	V
11383.2	---	42.5	54.0	11.5	V
25260.9	48.0	---	68.2	20.2	V
39848.5	57.6	---	68.2	10.6	H

1 GHz – 40 GHz, 802.11ax20, HE0, Chain B
Radiated Spurious – CH100

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3393.0	59.5	---	68.2	8.7	H
10983.0	46.7	---	74.0	27.3	H
10 983.5	---	36.8	54.0	17.2	V
16472.7	49.0	---	68.2	19.2	V
21965.7	47.2	---	68.2	21.0	V

Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3389.0	59.9	---	68.2	8.3	H
11100.4	48.1	---	74.0	25.9	V
11100.4	---	35.0	54.0	19.0	V
11183.1	---	36.7	54.0	17.3	V
11183.1	47.2	---	74.0	26.8	V
16775.7	45.3	---	68.2	22.9	V
22365.7	46.8	---	74.0	27.2	V
22365.7	---	36.0	54.0	18.0	V

Radiated Spurious – CH140

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3387.0	59.1	---	68.2	9.1	V
11383.2	46.6	---	74.0	27.4	H
11383.2	---	37.5	54.0	16.5	V
17075.4	50.1	---	68.2	18.1	V
22766.6	46.8	---	74.0	27.3	V
22766.6	---	37.6	54.0	16.4	V

1 GHz – 40 GHz, 802.11ax20, HE0, Chain A+B

Radiated Spurious – CH120

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
5000.9	---	47.0	54.0	7.0	V
5001.1	58.1	---	74.0	15.9	V
11183.1	48.6	---	74.0	25.4	V
11183.6	---	36.7	54.0	17.3	V
16774.8	48.0	---	68.2	20.2	V
25265.1	49.5	---	68.2	18.7	V

1 GHz – 40 GHz, 802.11n40, HT0, Chain A

Radiated Spurious – CH102

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3369.0	57.5	---	68.2	10.7	V
9616.1	48.3	---	68.2	19.9	V
25924.8	50.1	---	68.2	18.1	H

Radiated Spurious – CH134

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3371.0	59.2	---	68.2	9.0	H
11301.5	---	35.5	54.0	18.5	V
11301.5	48.2	---	74.0	25.8	V
25250.0	48.0	---	68.2	20.2	V
39853.8	57.0	---	68.2	11.2	H

1 GHz – 40 GHz, 802.11n40, HT0, Chain B

Radiated Spurious – CH102

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3324.5	58.6	---	68.2	9.6	H
16394.8	48.3	---	68.2	19.9	V
24255.1	50.5	---	68.2	17.8	H

Radiated Spurious – CH134

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3384.5	59.2	---	68.2	9.0	V
17107.8	48.5	---	68.2	19.8	H
20214.2	46.1	---	74.0	27.9	H
20214.2	---	35.8	54.0	18.2	H

1 GHz – 40 GHz, 802.11n40, HT8, Chain A+B
Radiated Spurious – CH134

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3352.5	---	45.9	54.0	8.1	V
3352.5	58.4	---	74.0	15.6	V
13428.6	49.0	---	68.2	19.2	V
25245.3	49.8	---	68.2	18.5	H
39650.5	57.5	---	68.2	10.7	V

1 GHz – 40 GHz, 802.11ax40, HE0, Chain A
Radiated Spurious – CH102

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3399.0	59.1	---	68.2	9.1	H
10983.9	51.0	---	74.0	23.0	H
10983.9	---	41.2	54.0	12.8	H
16476.0	48.4	---	68.2	19.8	V
25240.6	47.8	---	68.2	20.4	H
39847.8	58.1	---	68.2	10.1	V

Radiated Spurious – CH118

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3396.0	58.7	---	68.2	9.5	V
11144.4	48.7	---	74.0	25.3	V
11144.4	---	36.3	54.0	17.7	V
16714.8	45.8	---	68.2	22.4	V
22288.7	46.1	---	74.0	27.9	V
22288.7	---	36.4	54.0	17.7	V

Radiated Spurious – CH134

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3174.5	59.4	---	68.2	8.9	H
11304.9	50.7	---	74.0	23.3	H
11304.9	---	40.5	54.0	13.5	V
16957.0	47.9	---	68.2	20.3	V
25274.6	49.8	---	68.2	18.4	H
39037.0	57.1	---	68.2	11.1	V

1 GHz – 40 GHz, 802.11ax40, HE0, Chain B
Radiated Spurious – CH102

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3380.0	58.6	---	68.2	9.6	H
10983.0	47.4	---	74.0	26.7	V
10983.0	---	37.9	54.0	16.1	V
16475.1	51.5	---	68.2	16.7	V
21968.1	45.5	---	68.2	22.7	V
30832.0	49.4	---	68.2	18.8	H

Radiated Spurious – CH118

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3396.0	59.6	---	68.2	8.6	H
11145.4	48.0	---	74.0	26.0	V
11145.4	---	38.2	54.0	15.8	V
16716.3	47.7	---	68.2	20.5	V
25249.6	48.2	---	68.2	20.0	H
39855.2	57.4	---	68.2	10.8	H

Radiated Spurious – CH134

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3258.5	61.0	---	68.2	7.2	V
11304.4	47.4	---	74.0	26.6	V
11304.4	---	37.5	54.0	16.5	V
16954.5	48.4	---	68.2	19.8	V
22607.5	48.1	---	74.0	25.9	V
22607.5	---	38.4	54.0	15.6	V

1 GHz – 40 GHz, 802.11ax40, HE0, Chain A+B
Radiated Spurious – CH134F

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3174.5	59.4	---	68.2	8.9	H
11304.9	50.7	---	74.0	23.3	H
11304.9	---	42.1	54.0	11.9	H
16957.0	47.9	---	68.2	20.3	V
25274.6	49.8	---	68.2	18.4	H
39037.0	57.1	---	68.2	11.1	V

1 GHz – 40 GHz, 802.11ac80, VHT0, Chain A

Radiated Spurious – CH106

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3385.5	59.1	---	68.2	9.1	H
16406.5	49.3	---	68.2	18.9	H
25252.9	48.0	---	68.2	20.2	V
39823.8	58.6	---	68.2	9.6	H

1 GHz – 40 GHz, 802.11ac80, VHT0, Chain B

Radiated Spurious – CH106

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3395.5	59.0	---	68.2	9.2	V
16377.5	49.5	---	68.2	18.7	H
25246.7	47.5	---	68.2	20.7	V
39859.8	59.0	---	68.2	9.2	V

1 GHz – 40 GHz, 802.11ac80, VHT0, Chain A+B

Radiated Spurious – CH106

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3189.0	59.7	---	68.2	8.5	H
17087.5	49.5	---	68.2	18.7	V
25264.2	49.5	---	68.2	18.7	H
39010.0	56.8	---	68.2	11.4	H

1 GHz – 40 GHz, 802.11ax80, HE0, Chain A

Radiated Spurious – CH106

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3397.0	60.2	---	68.2	8.0	H
10983.9	49.5	---	74.0	24.5	H
10983.9	---	41.2	54.0	12.8	H
16476.0	49.6	---	68.2	18.6	V
23006.5	47.7	---	74.0	26.3	H
23006.5	---	36.2	54.0	17.8	V
39847.0	58.9	---	68.2	9.3	H

Radiated Spurious – CH122

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3394.0	59.6	---	68.2	8.6	H
6974.2	48.0	---	68.2	20.2	V
11144.4	46.7	---	74.0	27.3	V
11144.4	---	36.4	54.0	17.6	V
16716.8	46.7	---	68.2	21.5	V
25245.3	47.9	---	68.2	20.3	V
39865.0	59.2	---	68.2	9.0	V

Radiated Spurious – CH138

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3389.0	59.7	---	68.2	8.5	V
11304.4	---	40.3	54.0	13.7	H
11305.4	50.3	---	74.0	23.7	H
25248.6	47.4	---	68.2	20.9	H
39637.8	58.5	---	68.2	9.7	H

1 GHz – 40 GHz, 802.11ax80, HE0, Chain B

Radiated Spurious – CH106

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3391.0	60.1	---	68.2	8.2	H
10983.5	46.7	---	74.0	27.3	V
10983.5	---	37.8	54.0	16.2	V
16475.6	53.1	---	68.2	15.1	V
25251.0	48.1	---	68.2	20.1	H
39856.0	58.8	---	68.2	9.4	V

Radiated Spurious – CH122

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3385.5	60.1	---	68.2	8.1	V
11143.4	46.9	---	74.0	27.1	V
11143.4	---	38.2	54.0	15.8	V
16715.3	49.2	---	68.2	19.0	V
25249.6	48.2	---	68.2	20.0	V
39860.5	58.4	---	68.2	9.9	V

Radiated Spurious – CH138

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3382.0	59.8	---	68.2	8.4	V
11305.4	48.0	---	74.0	26.0	H
11305.4	---	37.9	54.0	16.1	V
16957.0	48.2	---	68.2	20.0	V
22607.5	49.0	---	74.0	25.0	V
22607.5	---	38.9	54.0	15.1	V

1 GHz – 40 GHz, 802.11ax80, HE0, Chain A+B

Radiated Spurious – CH106

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
2923.0	59.1	---	68.2	9.1	V
10985.9	49.9	---	74.0	24.1	H
10985.9	---	40.8	54.0	13.2	H
16475.6	52.8	---	68.2	15.4	V
25245.8	47.7	---	68.2	20.5	H
39844.8	57.1	---	68.2	11.1	H

1 GHz – 40 GHz, 802.11ac160, VHT0, Chain A

Radiated Spurious – CH114

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3389.0	60.0	---	68.2	8.2	H
17484.8	49.4	---	68.2	18.8	V
25250.5	47.9	---	68.2	20.3	V
39831.2	58.7	---	68.2	9.5	V

1 GHz – 40 GHz, 802.11ac160, VHT0, Chain B

Radiated Spurious – CH114

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3332.0	59.3	---	68.2	8.9	V
17093.8	48.9	---	68.2	19.3	H
25615.1	50.6	---	68.2	17.6	H
39848.5	59.4	---	68.2	8.8	V

1 GHz – 40 GHz, 802.11ac160, VHT0, Chain A+B

Radiated Spurious – CH114

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3247.0	59.2	---	68.2	9.0	V
17094.7	49.6	---	68.2	18.6	V
25250.0	50.3	---	68.2	17.9	H
39836.5	58.7	---	68.2	9.5	V

1 GHz – 40 GHz, 802.11ax160, HE0, Chain A
Radiated Spurious – CH114

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3199.0	60.1	---	68.2	8.1	H
10983.5	49.3	---	74.0	24.7	H
10983.5	---	40.3	54.0	13.7	H
16475.6	48.9	---	68.2	19.3	V
25237.3	49.0	---	68.2	19.3	V
39872.5	59.1	---	68.2	9.1	H

1 GHz – 40 GHz, 802.11ax160, HE0, Chain B
Radiated Spurious – CH114

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3224.0	59.9	---	68.2	8.3	H
10983.5	46.9	---	74.0	27.1	V
10983.5	---	37.9	54.0	16.1	V
16475.1	51.5	---	68.2	16.7	V
25917.8	49.7	---	68.2	18.5	V
39836.5	59.2	---	68.2	9.0	V

1 GHz – 40 GHz, 802.11ax160, HE0, Chain A+B

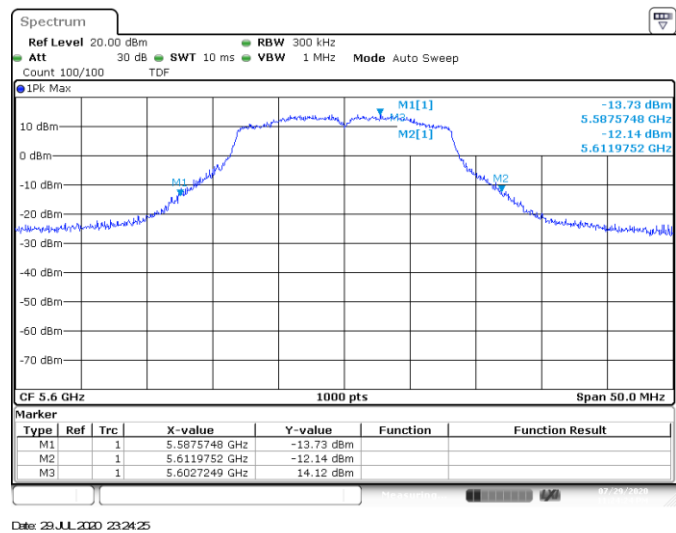
Radiated Spurious – CH114

Frequency	MaxPeak	Avg	Limit	Margin	Polarization
MHz	dBμV/m	dBμV/m	dBμV/m	dB	
3116.5	59.7	---	68.2	8.5	H
17097.1	49.1	---	68.2	19.1	V
25253.3	49.5	---	68.2	18.7	V
39838.8	57.9	---	68.2	10.3	H

B.3 Test Results Screenshots

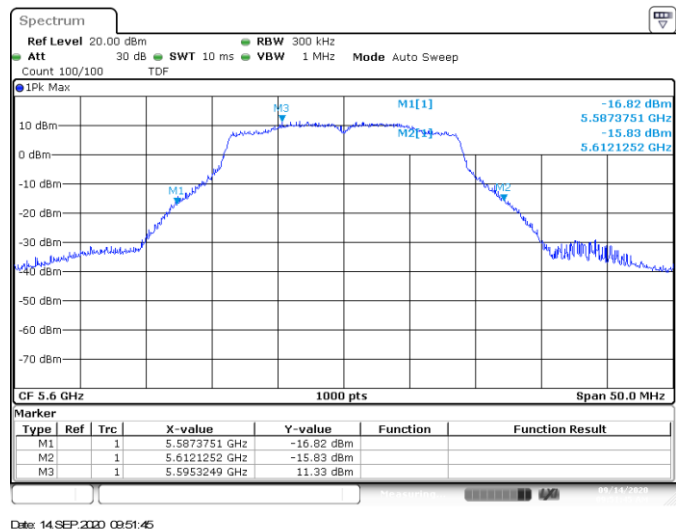
B.3.1 26dB Bandwidth

SISO-A, 802.11a, 6Mbps



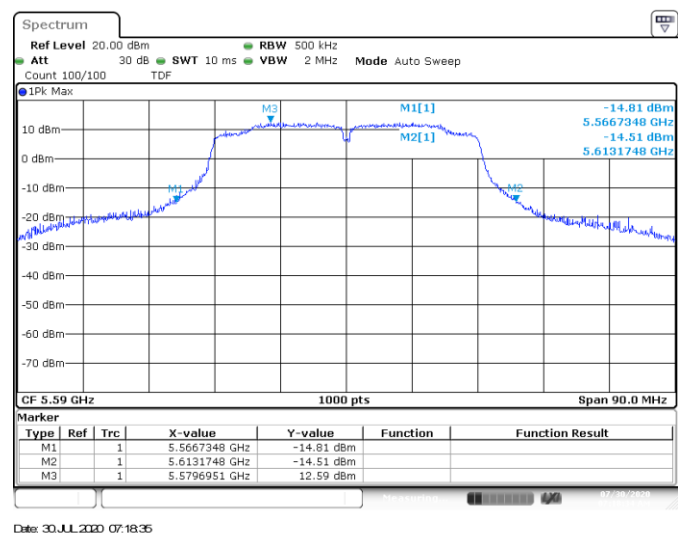
Channel 120

MIMO-A, 802.11n20, HT8



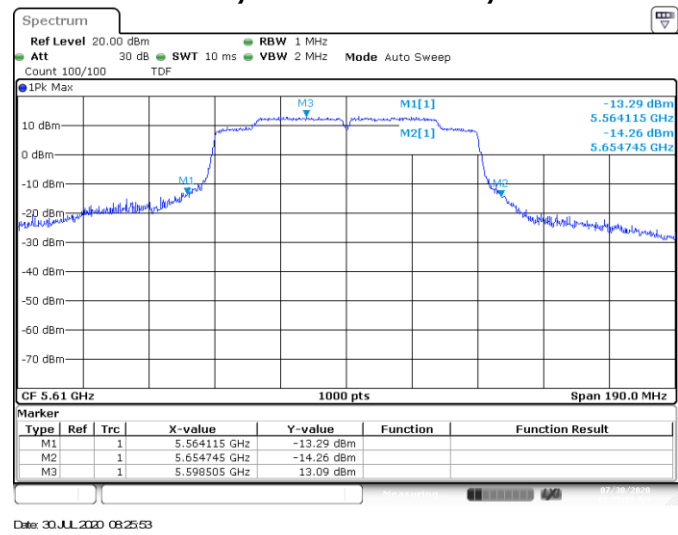
Channel 120

MIMO-A, 802.11n40, HT8



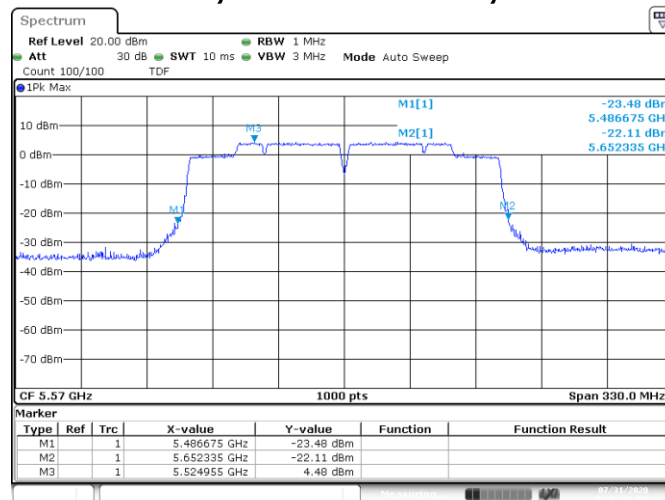
Channel 118

MIMO-A, 802.11ac80, VHT0



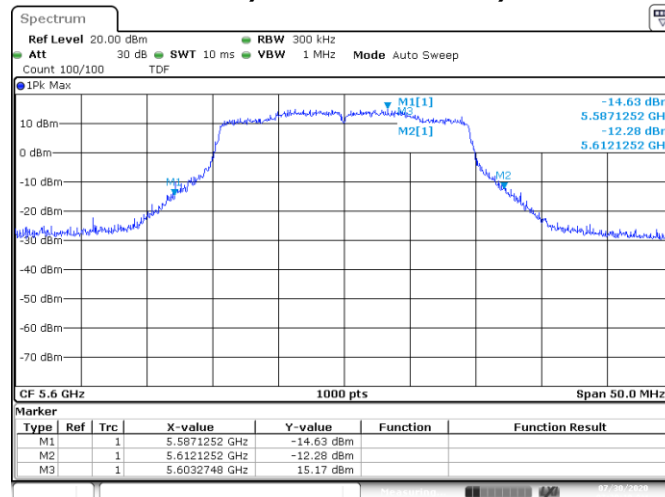
Channel 122

SISO-B, 802.11ac160, VHT0



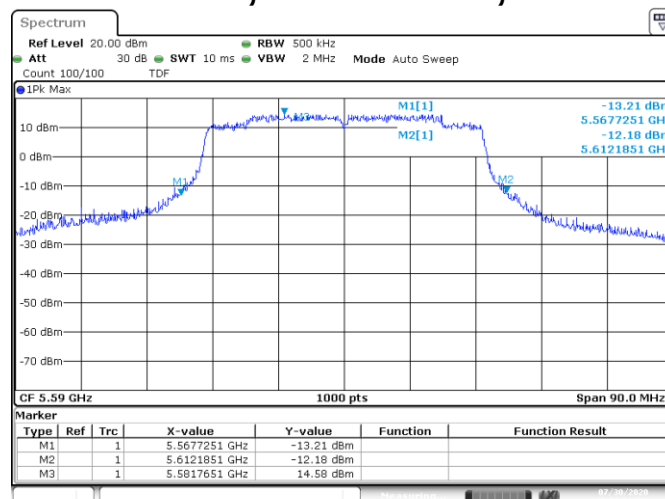
Channel 114

MIMO-A, 802.11ax20, HE0



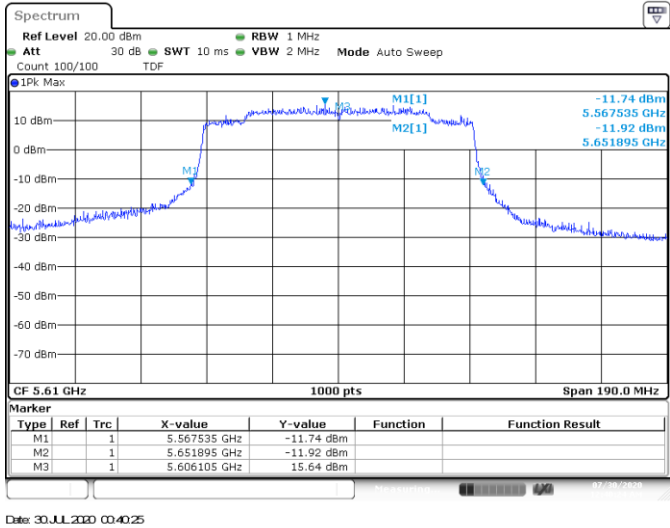
Channel 120

MIMO-A, 802.11ax40, HE0



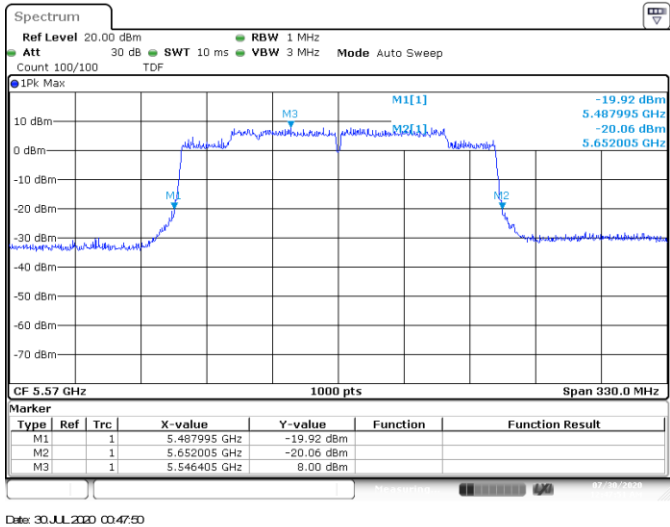
Channel 118

SISO-A, 802.11ax80, HE0



Channel 122

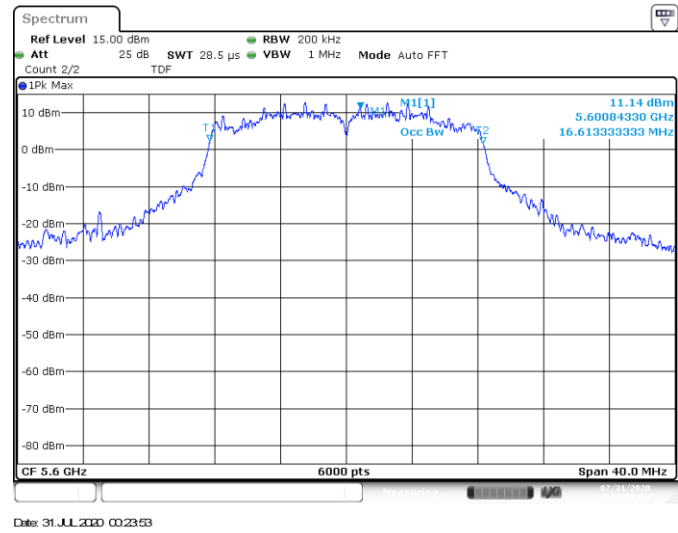
SISO-A, 802.11ax160, HE0



Channel 114

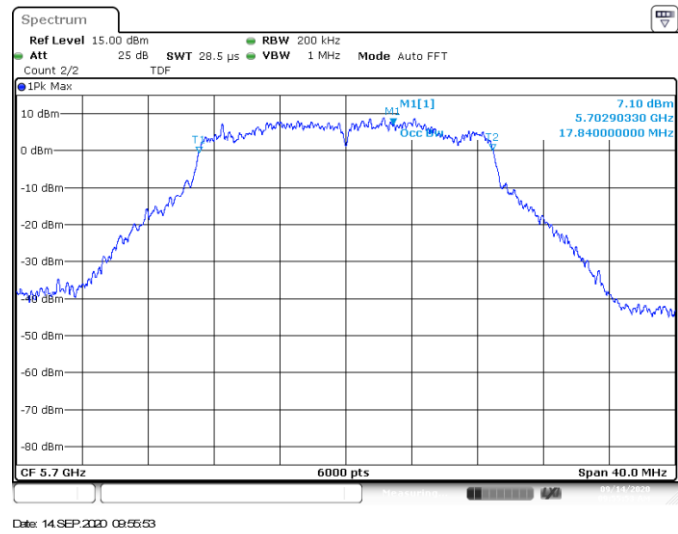
B.3.2 99% Bandwidth

SISO-B, 802.11a, 6Mbps



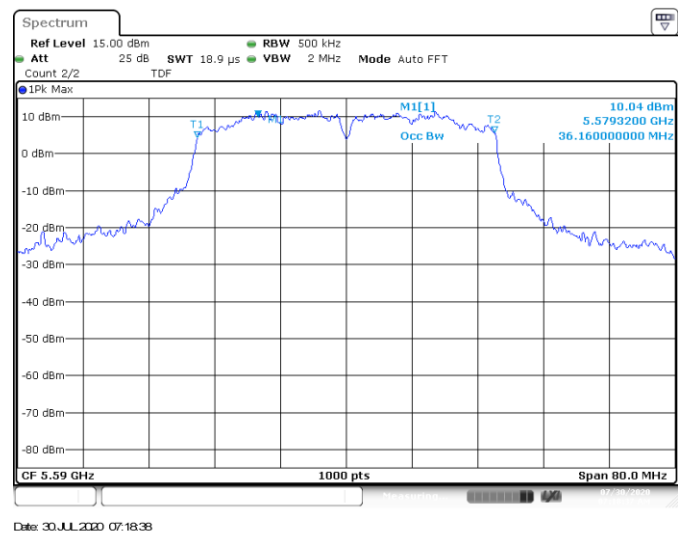
Channel 120

MIMO-A, 802.11n20, HT8



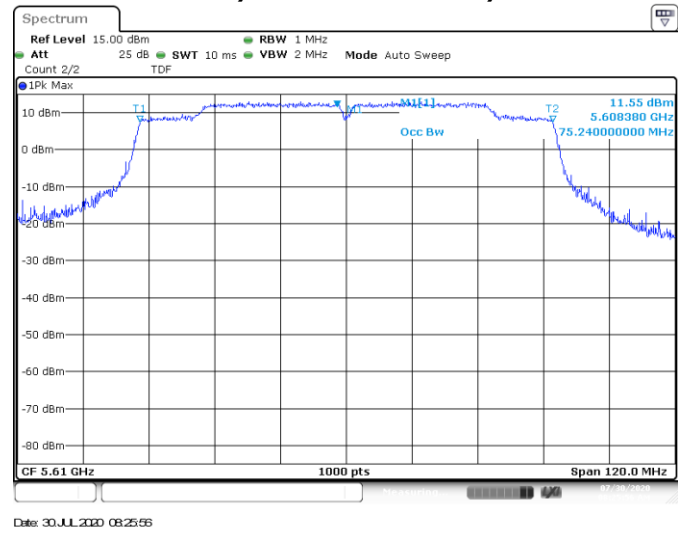
Channel 140

MIMO-A, 802.11n40, HT8



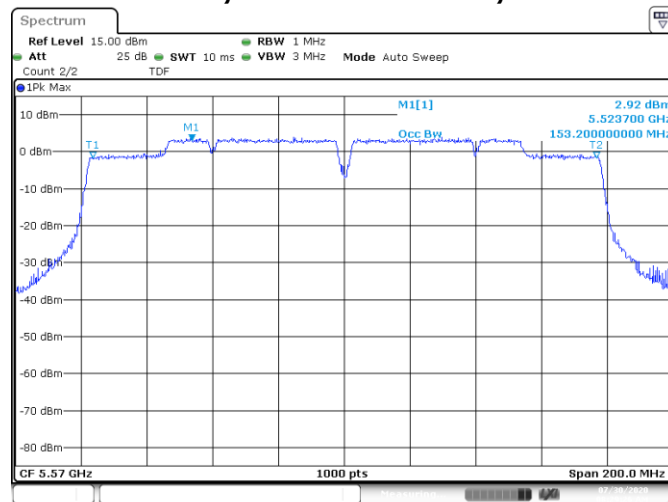
Channel 118

MIMO-A, 802.11ac80, VHT0



Channel 122

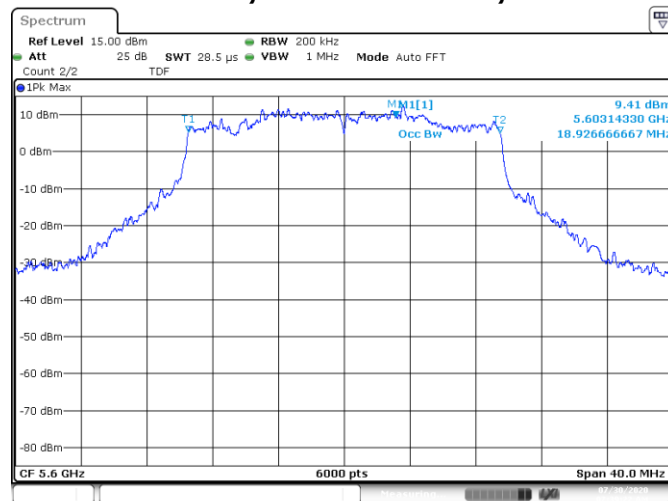
MIMO-A, 802.11ac160, VHT0



Date: 30.JUL.2020 08:29:27

Channel 114

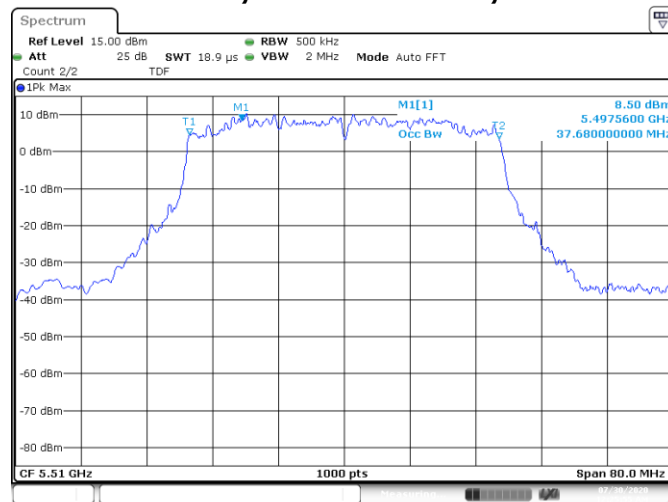
MIMO-A, 802.11ax20, HE0



Date: 30.JUL.2020 07:39:22

Channel 120

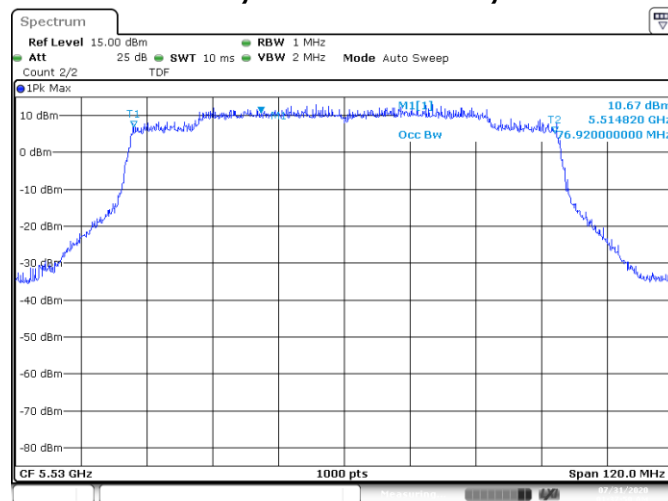
SISO-A, 802.11ax40, HE0



Date: 30.JUL.2020 00:25:55

Channel 102

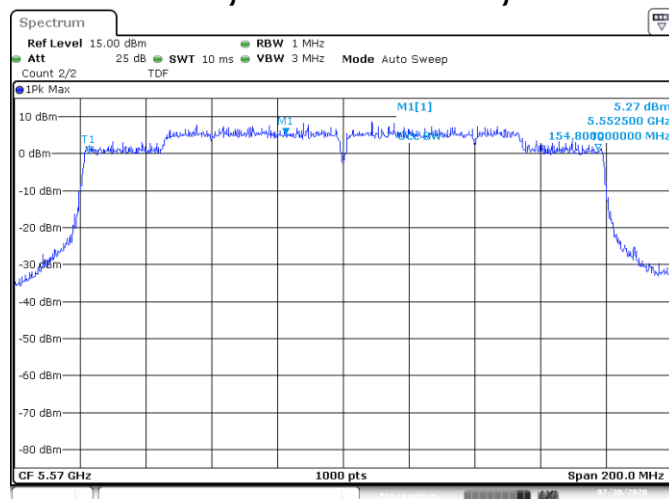
SISO-B, 802.11ax80, HE0



Date: 31.JUL.2020 01:37:51

Channel 106

SISO-A, 802.11ax160, HE0

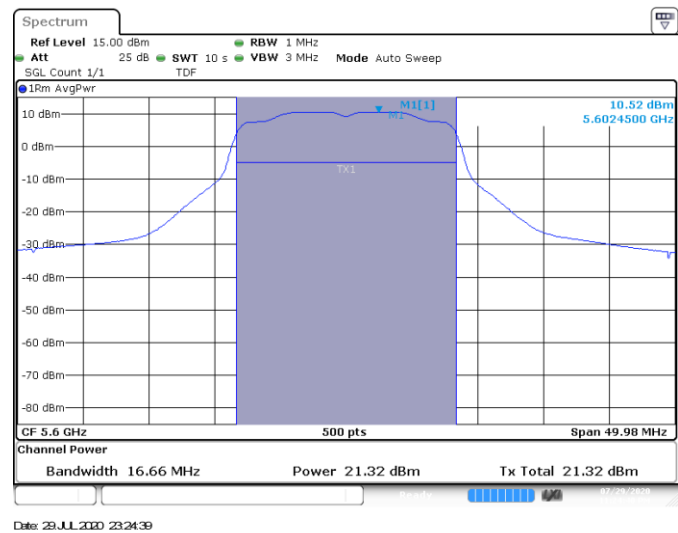


Date: 30.JUL.2020 00:47:54

Channel 114

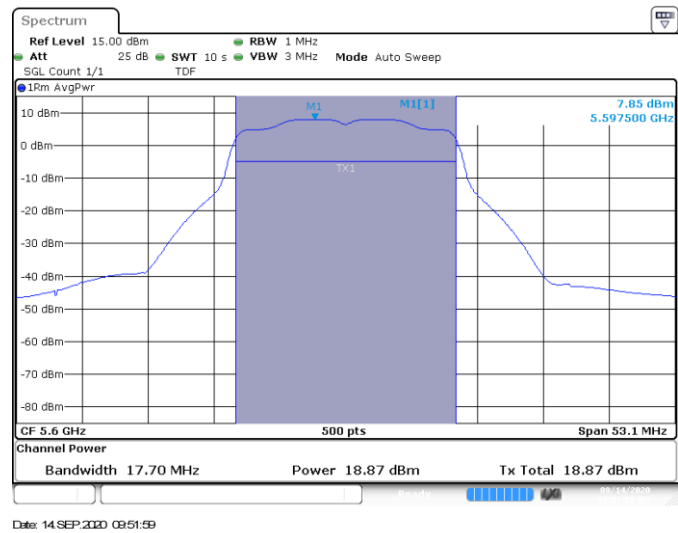
B.3.3 Maximum Output Power & Maximum power spectral Density

SISO-A, 802.11a, 6Mbps



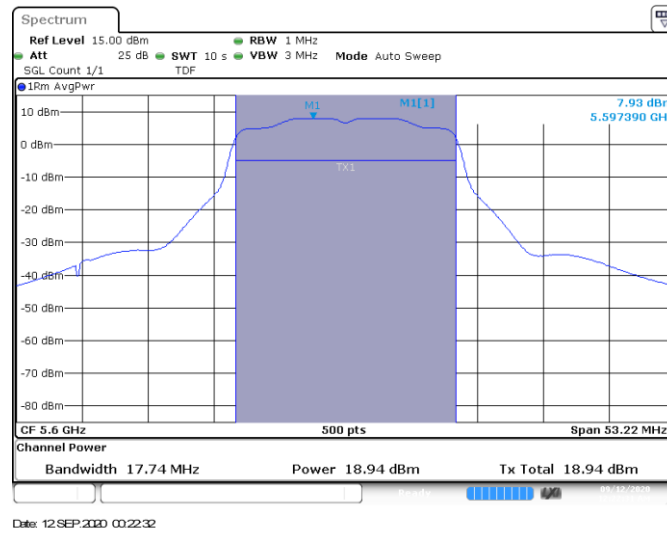
Channel 120

MIMO-A, 802.11n20, HT8



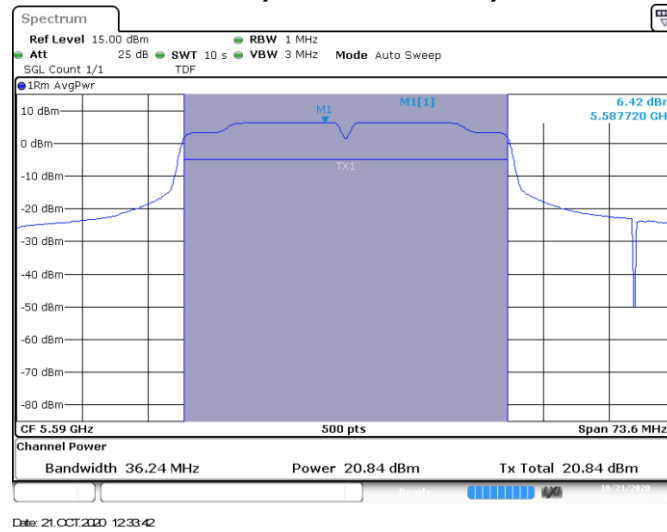
Channel 120

MIMO-B, 802.11n20, HT8



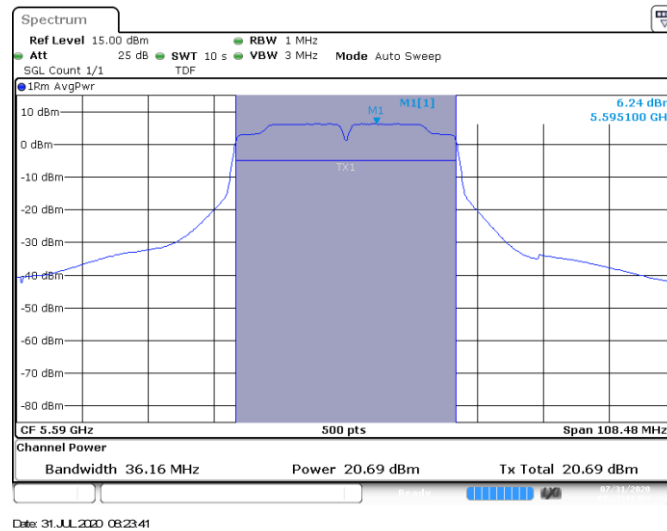
Channel 120

MIMO-A, 802.11n40, HT8



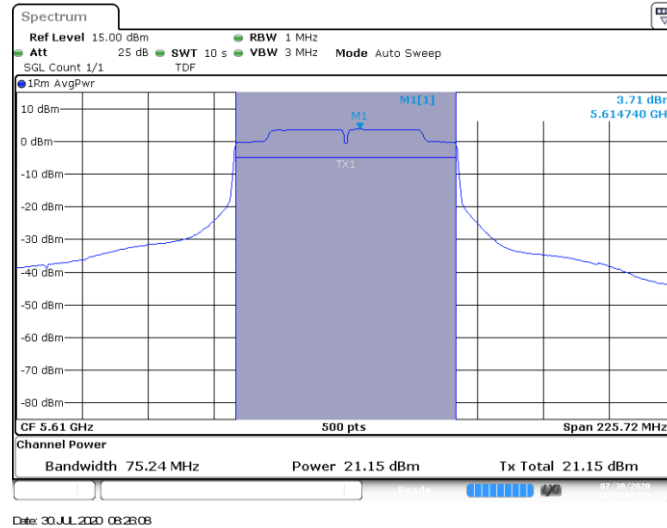
Channel 118

MIMO-B, 802.11n40, HT8



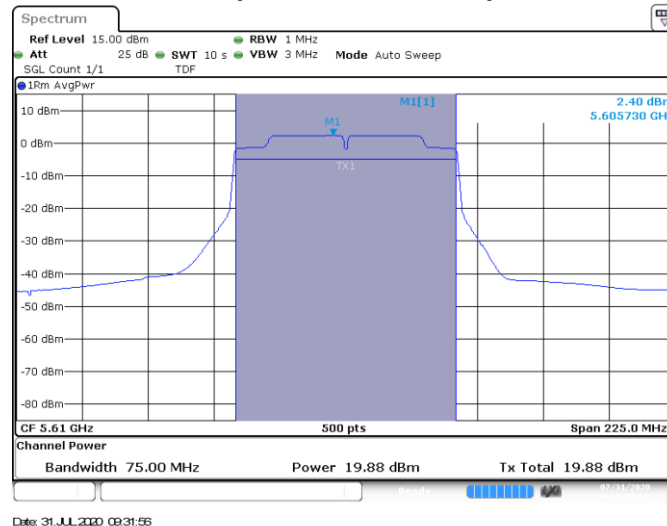
Channel 118

MIMO-A, 802.11ac80, VHT0



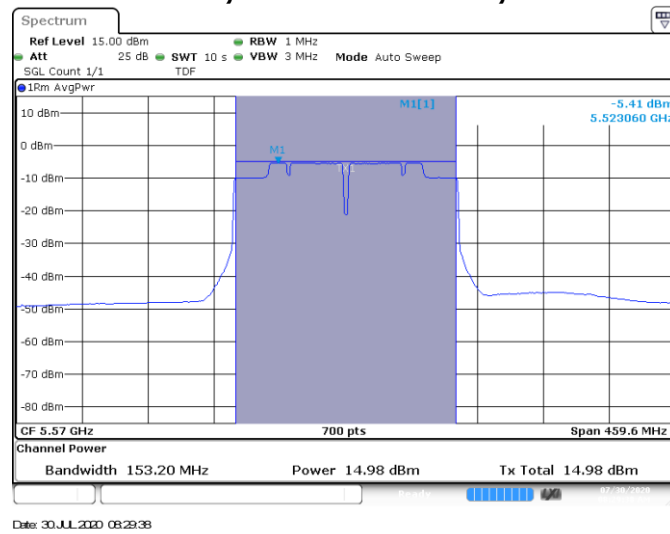
Channel 122

MIMO-B, 802.11ac80, VHT0



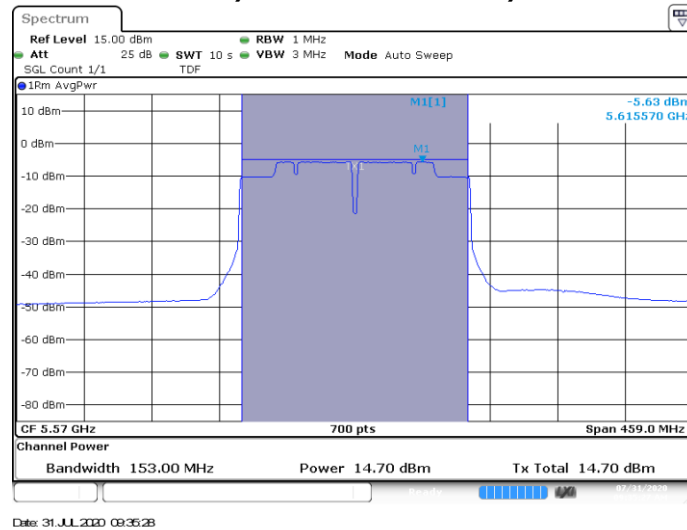
Channel 122

MIMO-A, 802.11ac160, VHT0



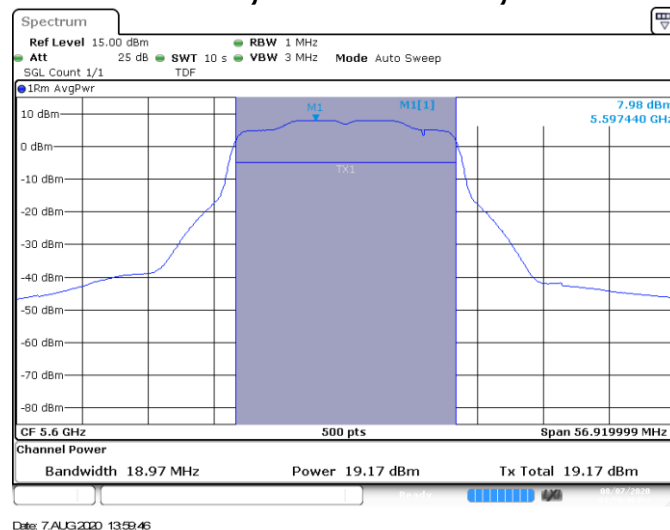
Channel 114

MIMO-B, 802.11ac160, VHT0



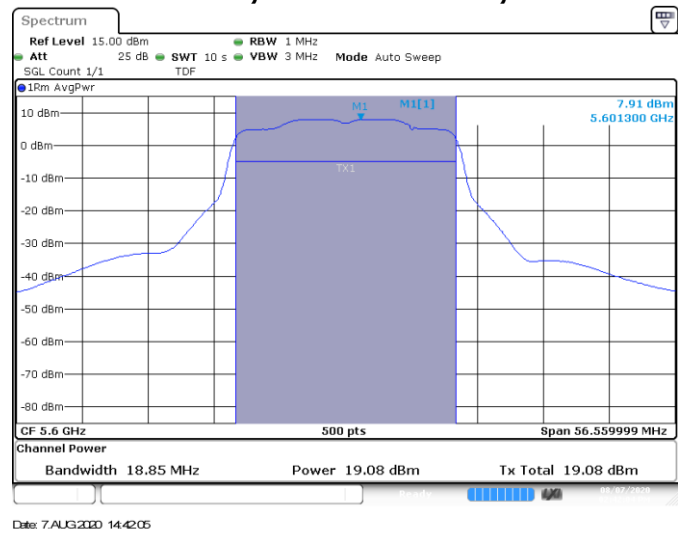
Channel 114

MIMO-A, 802.11ax20, HE0



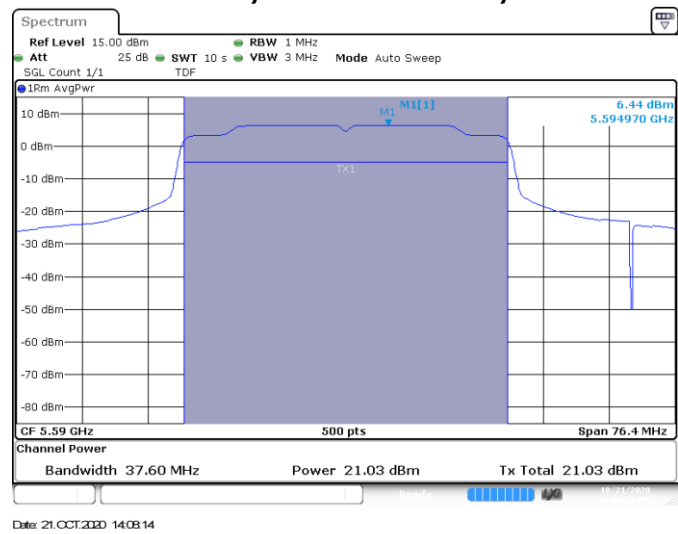
Channel 120

MIMO-B, 802.11ax20, HE0



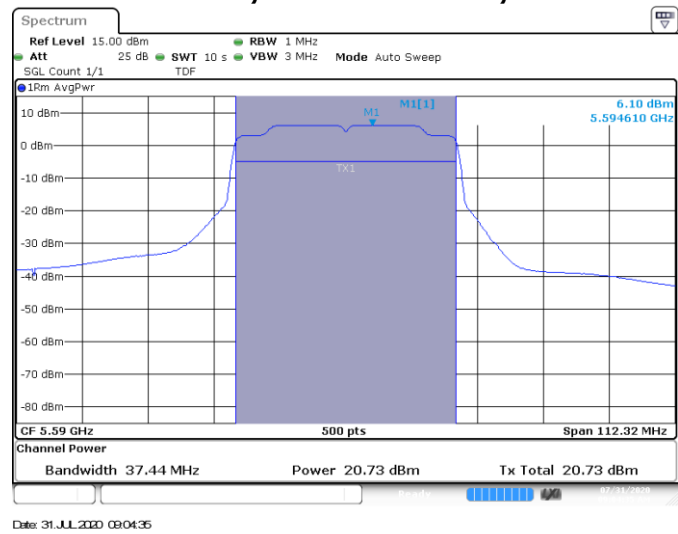
Channel 120

MIMO-A, 802.11ax40, HE0



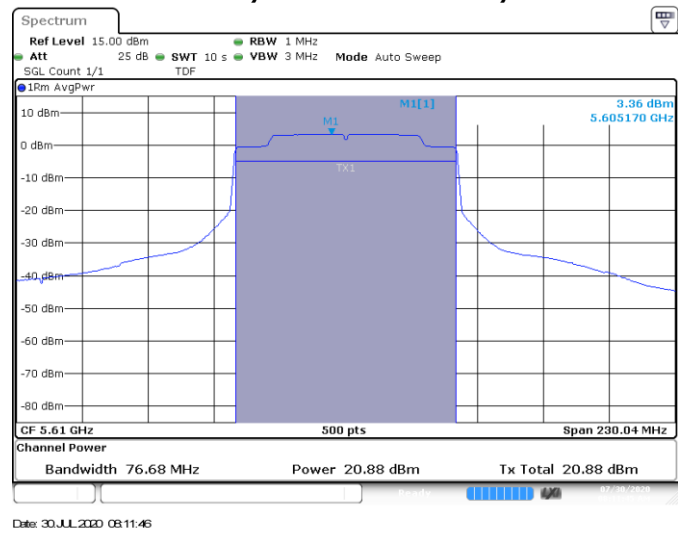
Channel 118

MIMO-B, 802.11ax40, HE0



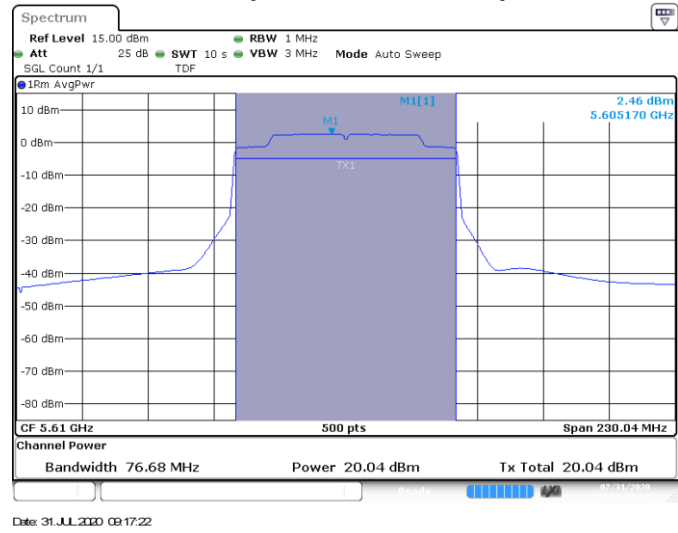
Channel 118

MIMO-A, 802.11ax80, HE0



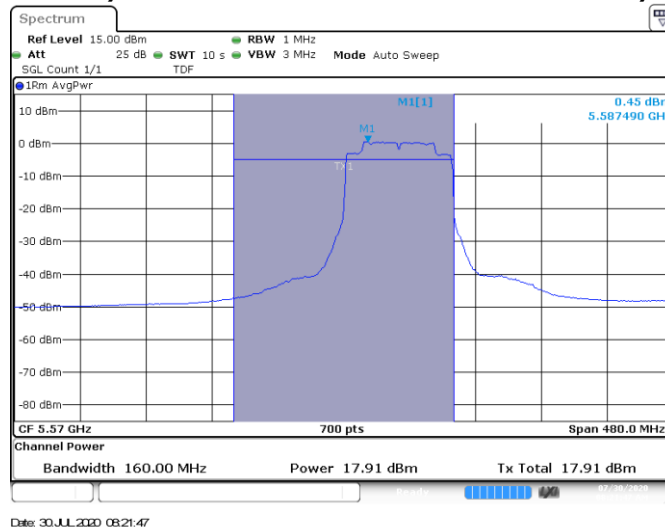
Channel 122

MIMO-B, 802.11ax80, HE0



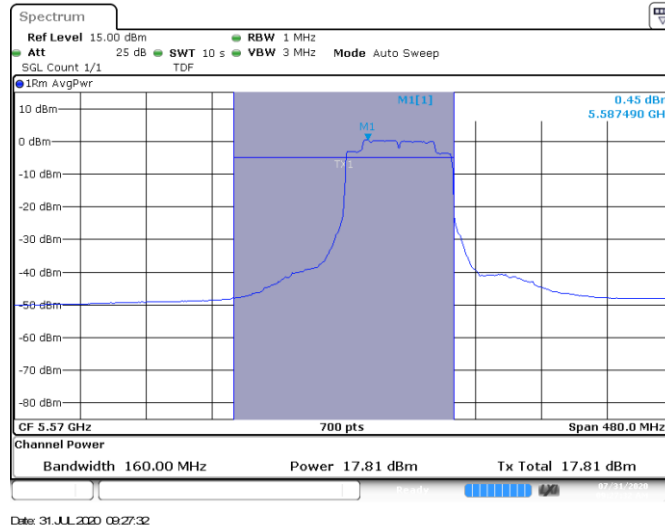
Channel 122

MIMO-A, 802.11ax160 RU: 996/S67, HE0



Channel 114

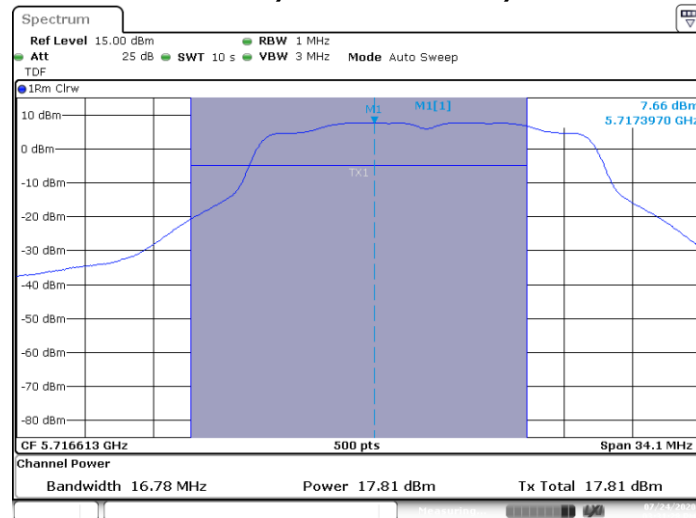
MIMO-B, 802.11ax160 RU: 996/S67, HE0



Channel 114

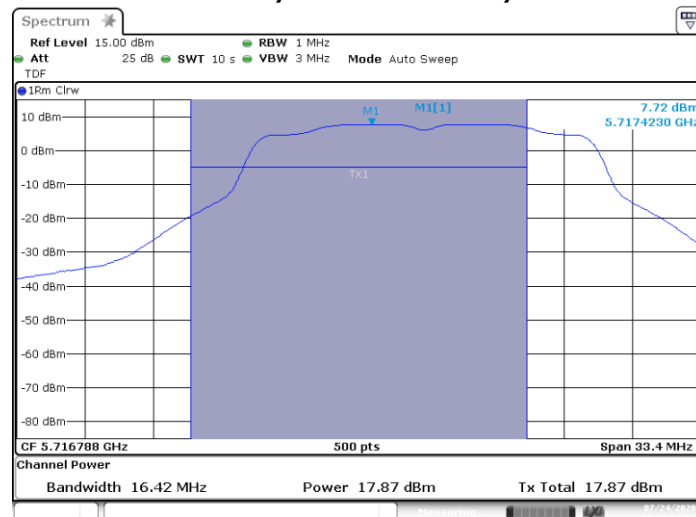
B.3.4 Maximum output power & Maximum power spectral Density (Overlapped Channel)

MIMO-A, 802.11n20, HT8



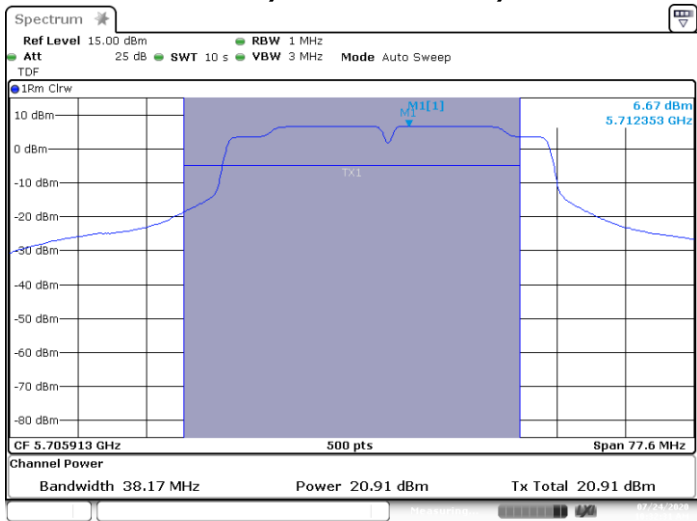
Channel 144 (Overlapped Channel)

MIMO-B, 802.11n20, HT8



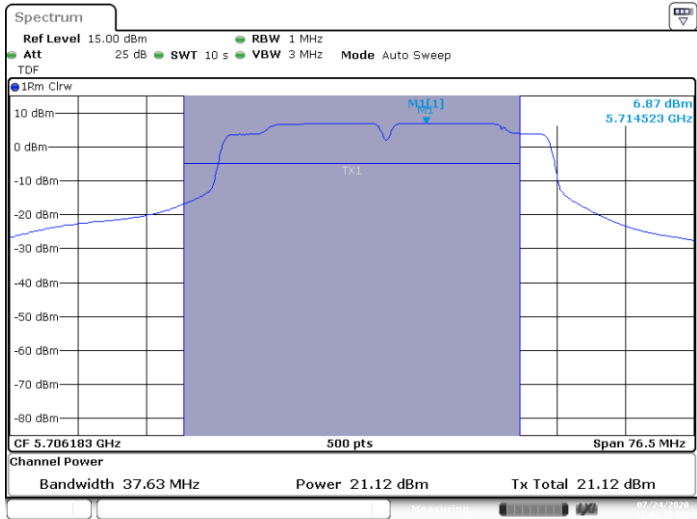
Channel 144 (Overlapped Channel)

MIMO-A, 802.11n40, HT8



Channel 142 (Overlapped Channel)

MIMO-B, 802.11n40, HT8



Channel 142 (Overlapped Channel)