

TEST REPORT

EUT Description	WLAN and BT, 2x2 PCIe M.2 1216 SD adapter card, LTE Coexistence
Brand Name	Intel® Wi-Fi 6 AX200
Model Name	AX200D2WL
FCC ID	PD9AX200D2L
Date of Test Start/End	2018-12-20 / 2019-01-18
Features	802.11ax, Dual Band, 2x2 Wi-Fi + Bluetooth® 5 (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 (see section 1)
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Test Report identification	181210-02.TR01
Revision Control	Rev. 00 This test report revision replaces any previous test report revision (see section 8)

The test results relate only to the samples tested.
The test report shall not be reproduced in full, without written approval of the laboratory.

Issued by _____

Reviewed by _____

Gregory Roustan
(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

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1. Standards, reference documents and applicable test methods

1. FCC 47 CFR part 15 – Subpart E – Unlicensed National Information Infrastructure Devices.
2. FCC 47 CFR part 15 - Subpart C – §15.209 Radiated emission limits; general requirements.
3. FCC OET KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 – Guidelines for compliance testing of Unlicensed National Information Infrastructure (U-NII) Devices (Part 15, Subpart E).
4. ANSI C63.10-2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

2. General conditions, competences and guarantees

- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2005 testing 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 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.

3. Environmental Conditions

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

Temperature	22 °C ±3 °C
Humidity	38 % ± 7 %

4. Test samples

Sample	Control #	Description	Model	Serial #	Date of receipt	Note
#01	181210-02.S03	RF MODULE	AX200D2WL	WFM : 3413E8B10C42	2018-12-13	Used for conducted tests
	180001-01.S18	Adapter	Socket	8882-031	2017-11-22	
	170524-01.S12	EXTENDER	PCB00495	4955013-375	2017-05-29	
	170000-01.S01	LAPTOP	LATITUDE E5470	DBLMC2	2017-03-28	
#02	181210-02.S04	RF Module	AX200D2WL	WFM:3413E8B10B66	2018-12-13	Radiated Spurious emission from 30 MHz to 6.4 GHz
	180001-01.S17	Adapter	Socket	8882-043	2018-11-22	
	180000-01.S15	Extender	PCB00495/PCB0 0496	4950414-064	2018-11-22	
	181210-02.S16	Antenna	WIMAX/WLAN	-	2019-01-04	
	181210-02.S17	Antenna	WIMAX/WLAN	-	2019-01-04	
	170209-01.S16	PC Dell	Latitude E5470	C1HTPF2	2017-02-09	
#03	181210-02.S05	RF Module	AX200D2WL	WFM:3413E8B10BA7	2018-12-13	Radiated Spurious emission from 6.4 GHz to 40 GHz
	180001-01.S16	Adapter	Socket	8882-017	2018-12-19	
	180000-01.S12	Extender	PCB00495/PCB0 0496	ASS00495-001 4950414-028	2018-11-22	
	181210-02.S18	Antenna	WIMAX/WLAN	-	2019-01-04	
	181210-02.S19	Antenna	WIMAX/WLAN	-	2019-01-04	
	170801-01.S10	PC Dell	Latitude E5470	7KNOXF2	2017-09-08	

5. EUT Features

Brand Name	Intel® Wi-Fi 6 AX200
Model Name	AX200D2WL
FCC ID	PD9AX200D2L
Software Version	OEM_DRTU_08900_11_1850_0G
Driver Version	99.0.41.5; 20.90.0.5
Prototype / Production	Production
Supported Radios	802.11b/g/n/ax 2.4GHz (2400.0 – 2483.5 MHz) 802.11a/n/ac/ax 5.2GHz (5150.0 – 5350.0 MHz) 5.6GHz (5470.0 – 5725.0 MHz) 5.8GHz (5725.0 – 5850.0 MHz) Bluetooth 5 2.4GHz (2400.0 – 2483.5 MHz)
Antenna Information	CHAIN A: PIFA antenna. WiFi 2.4GHz & 5GHz and BT CHAIN B: PIFA antenna. WiFi 2.4GHz & 5GHz
Additional Information	

6. Remarks and comments

N/A

7. Test Verdicts summary

7.1. 802.11 a/n/ac/ax – U-NII-1

FCC part	Test name	Verdict
15.407 (a) (1)	Power Limits. Maximum output power	P
15.407 (a) (1)	Peak power spectral density	P
15.407 (b) (1) 15.209	Undesirable emissions limits: Band Edge (conducted)	P
15.407 (b) (1) 15.209	Undesirable emissions limits (radiated)	P

7.2. 802.11 a/n/ac/ax – U-NII-2A

FCC part	Test name	Verdict
15.407 (a) (2)	Power Limits. Maximum output power	P
15.407 (a) (2)	Peak power spectral density	P
15.407 (b) (2) 15.209	Undesirable emissions limits: Band Edge (conducted)	P
15.407 (b) (2) 15.209	Undesirable emissions limits (radiated)	P

P: Pass
 F: Fail
 NM: Not Measured
 NA: Not Applicable

8. Document Revision History

Revision #	Date	Modified by	Revision Details
Rev. 00	2019-01-29	M.Lefebvre	First Issue

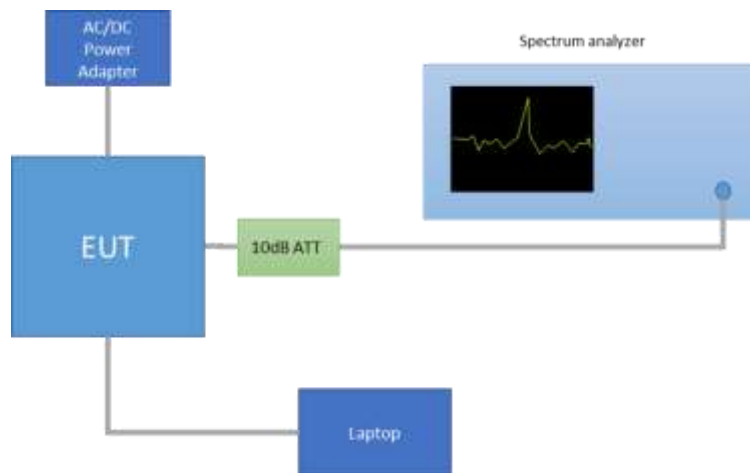
Annex A. Test & System Description

A.1 Measurement System

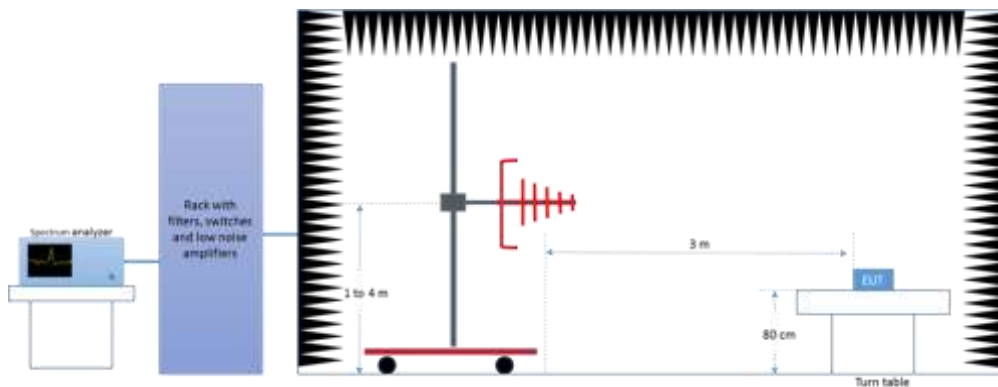
Measurements were performed using the following setups, made in accordance to the general provisions of FCC KDB 789033 D02 General UNII Test Procedures.

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.

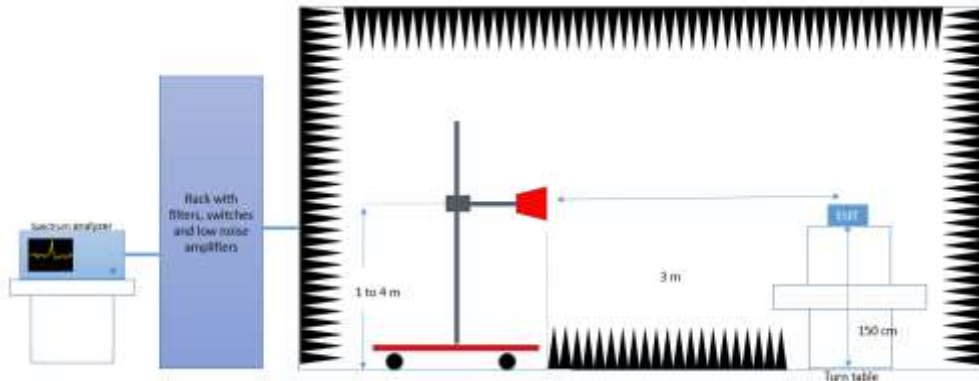
Conducted Setup



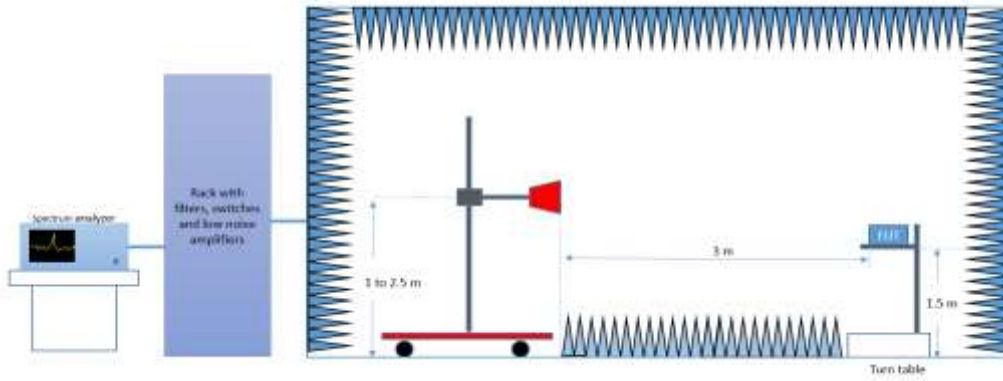
Radiated Setup 30 MHz - 1GHz



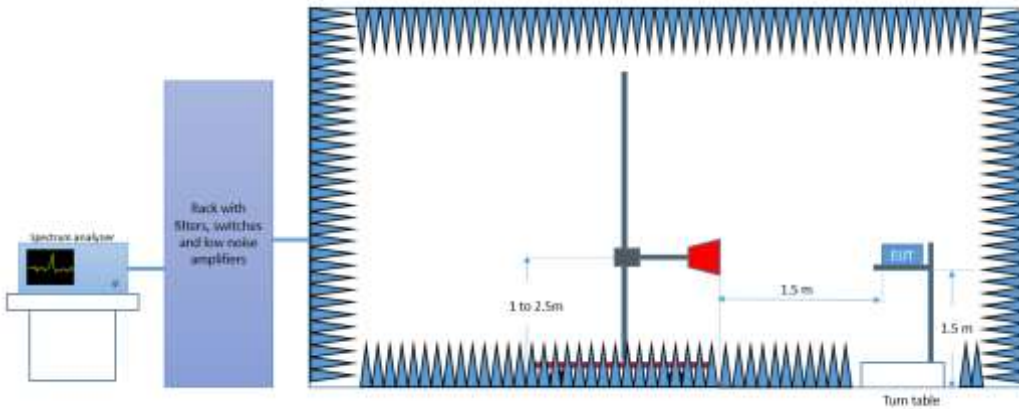
Radiated Setup 1 GHz – 6.4 GHz



Radiated Setup 6.4 GHz – 18 GHz



Radiated Setup 18 GHz – 40 GHz



Sample Calculation

The field strength is deduced from the radiated measurement using the following equation:

$$E = 126.8 - 20 \cdot \log(\lambda) + P - G$$

where

E is the field strength of the emission at the measurement distance, in dB μ V/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [$300/f_{MHz}$], in m

G is the gain of the test antenna, in dBi

NOTE – The measured power P includes all applicable instrument correction factors up to the connection to the test Antenna e.g. cable losses, amplifier gains.

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:

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

where

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

E_{Meas} is the field strength of the emission at the measurement distance, in dB μ V/m

D_{Meas} is the measurement distance, in m

D_{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
0315	Spectrum analyzer	FSV30	103307	Rohde & Schwarz	2018-04-10	2020-04-10

Radiated Setup-1

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0420	Spectrum analyzer	FSV40	101556	Rohde & Schwarz	2018-04-11	2020-04-11
0137	Log antenna 30 MHz – 1 GHz	3142E	00156946	ETS Lindgren	2017-12-19	2019-12-19
0325	Double Ridged Horn Antenna 1 GHz – 18 GHz	3117	00157734	ETS Lindgren	2017-08-22	2019-08-22
0135	Semi Anechoic chamber	FACT 3	5720	ETS Lindgren	2018-04-18	2020-04-18
0530	Measurement Software	EMC32	100623	Rohde & Schwarz	N/A	N/A
0616	Power Sensor 50MHz-18GHz	NRP-Z81	104385	Rohde & Schwarz	2018-04-16	2020-04-16
0013	Power Sensor 50MHz-18GHz	NRP-Z81	101152	Rohde & Schwarz	2018-04-16	2020-04-16

N/A: Not Applicable

Radiated Setup-2

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0133	Spectrum analyzer	FSV40	101358	Rohde & Schwarz	2018-05-17	2020-05-17
0141	Double Ridged Horn Antenna 1 GHz – 18 GHz	3117	00157736	ETS Lindgren	2018-05-11	2020-05-11
0334	Double Ridged Horn Antenna 18 GHz – 40 GHz	3116C-PA	00196308	ETS Lindgren	2017-08-22	2019-08-22
0337	Full Anechoic chamber	RFD_FA_100	5996	ETS Lindgren	2018-04-17	2020-04-17
0329	Measurement Software	EMC32	100401	Rohde & Schwarz	N/A	N/A
0617	Power Sensor 50MHz-18GHz	NRP-Z81	104386	Rohde & Schwarz	2018-04-16	2020-04-16
0618	Power Sensor 50MHz-18GHz	NRP-Z81	104382	Rohde & Schwarz	2018-04-16	2020-04-16

N/A: Not Applicable

A.3 Measurement Uncertainty Evaluation

The system uncertainty evaluation is shown in the below table:

Measurement type	Uncertainty [±dB]
Conducted Power	±1.0
Conducted Spurious Emission	±2.9
Radiated tests <1GHz	±3.8
Radiated tests 1GHz - 40 GHz	±4.7

Annex B. Test Results U-NII-1 & U-NII-2A

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 conducted RF output power at each chain was adjusted according to the client's supplied target values (see following table) using the Intel DRTU tool and measuring the power by using a spectrum analyser with the channel integration method according to section II) E) 2) e) (Method SA-2 Alternative) of Guidance 789033 D02.

Measured values for adjustment were within +/- 0.25 dB from the declared target values.

UNII-1					Conducted Power, Target Value (dBm)		
Mode	BW (MHz)	Data Rate	CH #	Freq. (MHz)	SISO Chain A	SISO Chain B	MIMO at both ports A and B
802.11a	20	6Mbps	36	5180	19.5	19.5	-
			40	5200	21.0	21.0	-
			48	5240	21.0	21.5	-
802.11n	20	HT0 HT8*	36	5180	19.5	19.0	21.5
			40	5200	21.0	21.0	22.5
			48	5240	21.0	21.0	22.5
802.11n	40	HT0 HT8*	38	5190	18.5	19.0	20.0
			46	5230	20.5	20.5	22.5
802.11ac	80	VHT0	42	5210	18.5	18.5	20.0
802.11ac	160	VHT0	50	5250	15.5	15.0	16.5
802.11ax	20	HE0	36	5180	19.0	19.0	21.5
			40	5200	21.0	21.0	22.5
			48	5240	21.0	21.0	22.5
802.11ax	40	HE0	38	5190	18.5	18.5	20.0
			46	5230	20.0	20.0	22.5
802.11ax	80	HE0	42	5210	18.5	18.5	20.0
802.11ax	160	HE0	50	5250	15.0	15.0	16.5

* Note: HT8 for MIMO modes only

UNII-2A					Conducted Power, Target Value (dBm)		
Mode	BW (MHz)	Data Rate	CH #	Freq. (MHz)	SISO Chain A	SISO Chain B	MIMO at both ports A and B
802.11a	20	6Mbps	52	5260	21.0	21.0	-
			56	5280	21.0	21.0	-
			64	5320	19.0	19.0	-
802.11n	20	HT0 HT8*	52	5260	21.0	21.0	23.0
			56	5280	21.0	21.0	22.5
			64	5320	19.0	19.0	21.0
802.11n	40	HT0 HT8*	54	5270	20.0	20.0	22.5
			62	5310	17.5	17.5	19.5
802.11ac	80	VHT0	58	5290	17.5	17.5	19.0
802.11ax	20	HE0	52	5260	21.0	21.0	23.0
			56	5280	21.0	21.0	22.5
			64	5320	19.0	19.0	20.5
802.11ax	40	HE0	54	5270	20.0	20.0	22.0
			62	5310	17.5	17.5	19.5
802.11ax	80	HE0	58	5290	17.5	17.5	19.5

* Note: HT8 for MIMO modes only

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

Alternative channels to the lowest and highest channels per band have been also tested for Band Edge compliance.

B.2 Test Results Tables U-NII-1

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.

Results tables

Mode	Rate	Antenna	Channel	Freq [MHz]	26dB BW [MHz]	99% BW [MHz]
802.11a	6Mbps	SISO A	36	5180	24.62	16.88
			40	5200	25.13	17.00
			48	5240	26.38	17.12
		SISO B	36	5180	24.47	16.92
			40	5200	25.78	17.16
			48	5240	25.82	17.12
802.11n20	HT0	SISO A	36	5180	25.03	17.92
			40	5200	26.03	18.04
			48	5240	26.47	18.12
		SISO B	36	5180	25.33	18.00
			40	5200	26.68	18.12
			48	5240	27.28	18.16
	HT8	MIMO A	36	5180	25.83	18.00
			40	5200	25.93	18.04
			48	5240	25.83	18.04
		MIMO B	36	5180	25.28	18.00
			40	5200	26.63	18.08
			48	5240	24.98	18.04
802.11n40	HT0	SISO A	38	5190	44.86	36.64
			46	5230	45.32	36.64
		SISO B	38	5190	45.14	36.64
			46	5230	45.14	36.64
	HT8	MIMO A	38	5190	44.86	36.56
			46	5230	45.95	36.72
		MIMO B	38	5190	43.42	36.40
			46	5230	44.68	36.40
802.11ac80	VHT0	SISO A	42	5210	86.35	75.12
		SISO B			86.54	75.12
		MIMO A			86.92	75.24
		MIMO B			89.01	75.12
802.11ac160	VHT0	SISO A	50	5250	164.83	153.20
		SISO B			164.84	153.20
		MIMO A			164.84	153.20
		MIMO B			165.50	153.00

Max Value

Mode	Rate	Antenna	Channel	Freq [MHz]	RU config.	26dB BW [MHz]	99% BW [MHz]
802.11ax20	HE0	SISO A	36	5180	Full	24.42	19.12
					26/0	20.72	18.44
					52/37	21.32	18.32
					106/53	22.17	18.20
			40	5200	Full	25.43	19.12
			48	5240	Full	25.23	19.12
		SISO B	36	5180	Full	24.87	19.12
					26/0	20.57	18.56
					52/37	21.42	18.40
					106/53	22.12	18.28
			40	5200	Full	25.63	19.16
			48	5240	Full	25.98	19.16
		MIMO A	36	5180	Full	24.92	19.12
					26/0	20.67	18.56
					52/37	20.87	18.28
					106/53	22.77	18.24
			40	5200	Full	24.87	19.16
			48	5240	Full	25.08	19.12
		MIMO B	36	5180	Full	25.08	19.16
					26/0	20.67	18.64
					52/37	21.02	18.16
					106/53	22.42	18.28
			40	5200	Full	24.92	19.16
			48	5240	Full	24.47	19.08
802.11ax40	HE0	SISO A	38	5190	Full	44.77	37.92
					242/61	24.77	19.12
		SISO B	46	5230	Full	44.50	37.92
					242/61	24.59	19.20
		MIMO A	38	5190	Full	44.32	37.92
					242/61	24.96	19.20
		MIMO B	46	5230	Full	43.60	37.92
					242/61	24.96	19.20
		MIMO A	46	5230	Full	44.68	37.92
					242/61	25.50	19.12
					Full	45.14	37.92
					242/61	25.50	19.12
MIMO B	46	5230	Full	44.68	37.84		
			242/61	25.50	19.12		
			Full	44.68	37.84		
			242/61	25.50	19.12		
802.11ax80	HE0	SISO A	42	5210	Full	83.68	76.80
					484/65	44.69	37.92
		SISO B	42	5210	Full	84.25	76.80
					484/65	44.51	37.92
		MIMO A	42	5210	Full	84.44	76.80
					484/65	44.70	38.04
		MIMO B	42	5210	Full	83.87	76.80
					484/65	44.70	37.92
802.11ax160	HE0	SISO A	50	5250	Full	163.51	154.80
					996/67	84.23	76.80
					996/S67	85.23	77.00
		SISO B	50	5250	Full	164.17	154.80
					996/67	84.23	76.80
					996/S67	85.23	77.00
		MIMO A	50	5250	Full	164.17	154.80
					996/67	84.89	76.80
					996/S67	85.89	77.00
		MIMO B	50	5250	Full	163.18	12.92
					996/67	85.23	76.80
					996/S67	85.56	76.80

Max Value

See Section B.4.1 for the screenshot results.

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

Test limits

FCC part	Limits
15.407 (a) (1) (iv)	For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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 KDB 789033 D02.

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

Results tables
Duty cycle

Mode	Rate	Antenna	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
802.11a	6Mbps	SISO A	2.07	2.13	97.51%
		SISO B	2.07	2.13	97.51%
802.11n20	HT0	SISO A	3.96	4.01	98.67%
		SISO B	3.96	4.01	98.67%
	HT8	MIMO A	3.97	4.02	98.67%
		MIMO B	3.97	4.02	98.67%
802.11ax20	HE0	SISO A	3.93	3.98	98.60%
		SISO B	3.93	3.98	98.60%
		MIMO A	3.97	4.02	98.61%
		MIMO B	3.97	4.02	98.61%
802.11n40	HT0	SISO A	3.96	4.01	98.70%
		SISO B	3.96	4.01	98.70%
	HT8	MIMO A	3.97	4.02	98.58%
		MIMO B	3.97	4.02	98.58%
802.11ax40	HE0	SISO A	3.96	4.01	98.77%
		SISO B	3.96	4.01	98.77%
		MIMO A	3.95	4.00	98.70%
		MIMO B	3.95	4.00	98.70%
802.11ac80	VHT0	SISO A	3.95	4.00	98.73%
		SISO B	3.95	4.00	98.73%
		MIMO A	3.95	4.00	98.55%
		MIMO B	3.95	4.00	98.55%
802.11ax80	HE0	SISO A	3.95	4.00	98.68%
		SISO B	3.95	4.00	98.68%
		MIMO A	3.97	4.02	98.64%
		MIMO B	3.97	4.02	98.64%
802.11ac160	VTH0	SISO A	3.94	3.99	98.74%
		SISO B	3.94	3.99	98.74%
		MIMO A	2.77	2.82	98.29%
		MIMO B	2.77	2.82	98.29%
802.11ax160	HE0	SISO A	3.96	4.01	98.66%
		SISO B	3.96	4.01	98.66%
		MIMO A	2.39	2.45	97.50%
		MIMO B	2.39	2.45	97.50%

Maximum output power

Mode	Rate	Channel	Freq [MHz]	Antenna	Average Conducted Ouput Power [dBm]	Avg Max* Conducted Ouput Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]	
802.11a	6Mbps	36	5180	SISO A	19.27	19.38	24.38	86.69	
				SISO B	19.28	19.39	24.39	86.89	
		40	5200	SISO A	20.73	20.84	25.84	121.32	
				SISO B	20.93	21.04	26.04	127.04	
		48	5240	SISO A	21.11	21.22	26.22	132.42	
				SISO B	21.09	21.20	26.20	131.81	
802.11n20	HT0	36	5180	SISO A	19.26	19.26	24.26	84.33	
				SISO B	18.93	18.93	23.93	78.16	
		40	5200	SISO A	20.88	20.88	25.88	122.46	
				SISO B	20.95	20.95	25.95	124.45	
		48	5240	SISO A	21.14	21.14	26.14	130.02	
				SISO B	21.14	21.14	26.14	130.02	
	HT8	36	5180	MIMO A	18.38	18.38	23.38	68.87	
				MIMO B	18.48	18.48	23.48	70.47	
				Combined A+B	21.44	21.44	26.44	139.33	
		40	5200	MIMO A	19.77	19.77	24.77	94.84	
				MIMO B	19.55	19.55	24.55	90.16	
				Combined A+B	22.67	22.67	27.67	185.00	
	48	5240	MIMO A	19.74	19.74	24.74	94.19		
			MIMO B	19.71	19.71	24.71	93.54		
			Combined A+B	22.74	22.74	27.74	187.73		
	802.11n40	HT0	38	5190	SISO A	18.65	18.65	23.65	73.28
					SISO B	18.77	18.77	23.77	75.34
			46	5230	SISO A	20.27	20.27	25.27	106.41
SISO B					20.41	20.41	25.41	109.90	
HT8		38	5190	MIMO A	17.12	17.12	22.12	51.52	
				MIMO B	16.70	16.70	21.70	46.77	
				Combined A+B	19.93	19.93	24.93	98.30	
		46	5230	MIMO A	19.37	19.37	24.37	86.50	
MIMO B				19.31	19.31	24.31	85.31		
Combined A+B				22.35	22.35	27.35	171.81		
802.11ac80		VHT0	42	5210	SISO A	18.64	18.64	23.64	73.11
					SISO B	18.58	18.58	23.58	72.11
	MIMO A				17.36	17.36	22.36	54.45	
	MIMO B				16.50	16.50	21.50	44.67	
	Combined A+B				19.96	19.96	24.96	99.12	
802.11ac160	VHT0	50	5250	SISO A	15.32	15.32	20.32	34.04	
				SISO B	14.90	14.90	19.90	30.90	
				MIMO A	13.79	13.79	18.79	23.93	
				MIMO B	13.55	13.55	18.55	22.65	
				Combined A+B	16.68	16.68	21.68	46.58	

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

Max Value

Min Value



Mode	Rate	Channel	Freq [MHz]	Antenna	RU config.	Average Conducted Output Power [dBm]	Avg Max* Conducted Output Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]	
802.11ax20	HE0	36	5180	SISO A	Full	19.18	19.18	24.18	82.79	
					26/0	13.49	13.49	18.49	22.34	
					52/37	16.60	16.60	21.60	45.71	
					106/53	19.66	19.66	24.66	92.47	
				SISO B	Full	19.21	19.21	24.21	83.37	
					26/0	13.60	13.60	18.60	22.91	
					52/37	16.52	16.52	21.52	44.87	
					106/53	19.68	19.68	24.68	92.90	
				MIMO A	Full	18.39	18.39	23.39	69.02	
					26/0	10.77	10.77	15.77	11.94	
					52/37	13.58	13.58	18.58	22.80	
					106/53	16.67	16.67	21.67	46.45	
		MIMO B	Full	18.25	18.25	23.25	66.83			
			26/0	10.64	10.64	15.64	11.59			
			52/37	13.54	13.54	18.54	22.59			
			106/53	16.64	16.64	21.64	46.13			
		Combined A+B	Full	21.33	21.33	26.33	135.86			
			26/0	13.72	13.72	18.72	23.53			
			52/37	16.57	16.57	21.57	45.40			
			106/53	19.67	19.67	24.67	92.58			
		40	5200	SISO A	Full	21.01	21.01	26.01	126.18	
					SISO B	Full	20.88	20.88	25.88	122.46
					MIMO A	Full	19.73	19.73	24.73	93.97
					MIMO B	Full	19.65	19.65	24.65	92.26
Combined A+B	Full				22.70	22.70	27.70	186.23		
48	5240	SISO A	Full	21.03	21.03	26.03	126.77			
			SISO B	Full	21.04	21.04	26.04	127.06		
			MIMO A	Full	19.67	19.67	24.67	92.68		
			MIMO B	Full	19.71	19.71	24.71	93.54		
			Combined A+B	Full	22.70	22.70	27.70	186.22		
802.11ax40	HE0	38	5190	SISO A	Full	18.62	18.62	23.62	72.78	
					242/61	19.11	19.11	24.11	81.47	
				SISO B	Full	18.50	18.50	23.50	70.79	
					242/61	19.06	19.06	24.06	80.54	
				MIMO A	Full	17.01	17.01	22.01	50.23	
					242/61	18.18	18.18	23.18	65.77	
		MIMO B	Full	16.56	16.56	21.56	45.29			
			242/61	18.14	18.14	23.14	65.16			
		Combined A+B	Full	19.80	19.80	24.80	95.52			
			242/61	21.17	21.17	26.17	130.93			
		46	5230	SISO A	Full	20.19	20.19	25.19	104.47	
					SISO B	Full	20.11	20.11	25.11	102.57
MIMO A	Full				19.34	19.34	24.34	85.90		
MIMO B	Full				19.24	19.24	24.24	83.95		
Combined A+B	Full				22.30	22.30	27.30	169.85		
802.11ax80	HE0	42	5210	SISO A	Full	18.60	18.60	23.60	72.44	
					484/65	18.24	18.24	23.24	66.68	
				SISO B	Full	18.41	18.41	23.41	69.34	
					484/65	18.31	18.31	23.31	67.76	
				MIMO A	Full	17.28	17.28	22.28	53.46	
					484/65	15.61	15.61	20.61	36.39	
				MIMO B	Full	16.92	16.92	21.92	49.20	
					484/65	15.57	15.57	20.57	36.06	
				Combined A+B	Full	20.11	20.11	25.11	102.66	
					484/65	18.60	18.60	23.60	72.45	

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

Max Value

Min Value

Mode	Rate	Channel	Freq [MHz]	Antenna	RU config.	Average Conducted Ouput Power [dBm]	Avg Max* Conducted Ouput Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]
802.11ax160	HE0	50	5250	SISO A	Full	15.24	15.24	20.24	33.42
					996/67	18.17	18.17	23.17	65.61
					996/S67	16.20	16.20	21.20	41.69
				SISO B	Full	14.97	14.97	19.97	31.41
					996/67	18.04	18.04	23.04	63.68
					996/S67	16.74	16.74	21.74	47.21
				MIMO A	Full	13.50	13.61	18.61	22.96
					996/67	15.57	15.68	20.68	36.98
					996/S67	15.47	15.58	20.58	36.14
				MIMO B	Full	12.92	13.03	18.03	20.09
					996/67	15.25	15.36	20.36	34.35
					996/S67	15.78	15.89	20.89	38.81
				Combined A+B	Full	16.23	16.34	21.34	43.05
					996/67	18.42	18.53	23.53	71.33
					996/S67	18.64	18.75	23.75	74.95

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

Max Value

Min Value

Maximum power spectral Density (PSD)

Mode	Rate	Channel	Freq [MHz]	Antenna	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]	
802.11a	6Mbps	36	5180	SISO A	7.67	7.78	
				SISO B	7.65	7.76	
		40	5200	SISO A	9.08	9.19	
				SISO B	9.28	9.39	
		48	5240	SISO A	9.45	9.56	
				SISO B	9.43	9.54	
802.11n20	HT0	36	5180	SISO A	-5.00	-5.00	
				SISO B	-5.49	-5.49	
		40	5200	SISO A	-6.53	-6.53	
				SISO B	-6.79	-6.79	
		48	5240	SISO A	-3.65	-3.65	
				SISO B	1.09	1.09	
	HT8	36	5180	MIMO A	1.05	1.05	
				MIMO B	-0.18	-0.18	
				Combined A+B	-0.95	-0.95	
		40	5200	MIMO A	2.46	2.46	
				MIMO B	7.32	7.32	
				Combined A+B	6.98	6.98	
	48	5240	MIMO A	8.93	8.93		
			MIMO B	8.98	8.98		
			Combined A+B	9.17	9.17		
	802.11n40	HT0	38	5190	SISO A	9.20	9.20
					SISO B	6.42	6.42
			46	5230	SISO A	6.52	6.52
SISO B					9.48	9.48	
HT8		38	5190	MIMO A	7.81	7.81	
				MIMO B	7.59	7.59	
				Combined A+B	10.71	10.71	
		46	5230	MIMO A	7.78	7.78	
				MIMO B	7.75	7.75	
				Combined A+B	10.78	10.78	
802.11ac80		VHT0	42	5210	SISO A	3.56	3.56
					SISO B	3.68	3.68
	MIMO A				5.16	5.16	
	MIMO B				5.31	5.31	
	Combined A+B				2.03	2.03	
802.11ac160	VHT0	50	5250	SISO A	1.66	1.66	
				SISO B	4.86	4.86	
				MIMO A	4.27	4.27	
				MIMO B	4.23	4.23	
				Combined A+B	7.26	7.26	

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

Mode	Rate	#Ch	Freq [MHz]	Antenna	RU config.	Average cond.PSD [dBm/MHz]	Max*cond.PSD [dBm/MHz]	
802.11ax20	HE0	36	5180	SISO A	Full	6.92	6.92	
					26/0	10.75	10.75	
					52/37	10.86	10.86	
					106/53	10.89	10.89	
				SISO B	Full	6.96	6.96	
					26/0	10.73	10.73	
					52/37	10.86	10.86	
					106/53	10.89	10.89	
				MIMO A	Full	6.12	6.12	
					26/0	7.91	7.91	
					52/37	7.83	7.83	
					106/53	7.86	7.86	
		MIMO B	Full	6.00	6.00			
			26/0	7.84	7.84			
			52/37	7.85	7.85			
			106/53	7.84	7.84			
		Combined A+B	Full	9.07	9.07			
			26/0	10.89	10.89			
			52/37	10.85	10.85			
			106/53	10.86	10.86			
		40	5200	SISO A	Full	8.75	8.75	
					SISO B	Full	8.62	8.62
					MIMO A	Full	7.47	7.47
					MIMO B	Full	7.38	7.38
Combined A+B	Full				10.44	10.44		
48	5240	SISO A	Full	8.79	8.79			
			SISO B	Full	8.78	8.78		
			MIMO A	Full	7.41	7.41		
			MIMO B	Full	7.45	7.45		
			Combined A+B	Full	10.44	10.44		
802.11ax40	HE0	38	5190	SISO A	Full	3.31	3.31	
					242/61	6.67	6.67	
				SISO B	Full	3.18	3.18	
					242/61	6.74	6.74	
				MIMO A	Full	1.75	1.75	
					242/61	5.85	5.85	
		MIMO B	Full	1.29	1.29			
			242/61	5.81	5.81			
		Combined A+B	Full	4.54	4.54			
			242/61	8.84	8.84			
		46	5230	SISO A	Full	4.87	4.87	
					SISO B	Full	4.78	4.78
MIMO A	Full				4.02	4.02		
MIMO B	Full				3.92	3.92		
Combined A+B	Full				6.98	6.98		
802.11ax80	HE0	42	5210	SISO A	Full	0.98	0.98	
					484/65	2.97	2.97	
				SISO B	Full	0.79	0.79	
					484/65	3.06	3.06	
				MIMO A	Full	-0.37	-0.37	
					484/65	0.36	0.36	
				MIMO B	Full	-0.71	-0.71	
					484/65	0.31	0.31	
				Combined A+B	Full	2.47	2.47	
					484/65	3.35	3.35	
802.11ax160	HE0	50	5250	SISO A	Full	-5.20	-5.20	
					996/67	0.66	0.66	
					996/S67	-1.43	-1.43	
				SISO B	Full	-5.49	-5.49	
					996/67	0.55	0.55	
					996/S67	-0.91	-0.91	
				MIMO A	Full	-6.95	-6.84	
					996/67	-1.95	-1.84	
					996/S67	-2.11	-2.00	
				MIMO B	Full	-7.50	-7.39	
					996/67	-2.27	-2.16	
					996/S67	-1.72	-1.61	
Combined A+B	Full	-4.21	-4.10					
	996/67	0.90	1.01					
					996/S67	1.10	1.21	

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

See Section B.4.2 for the screenshot results.

B.2.3 Undesirable emission limits : Band Edge (Conducted)

Test limits

FCC part	Limits																				
15.407 (b) (1)	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.																				
15.209	<p>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):</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #d9e1f2;">Freq Range (MHz)</th> <th style="background-color: #d9e1f2;">Field Strength (µV/m)</th> <th style="background-color: #d9e1f2;">Field Strength (dBµV/m)</th> <th style="background-color: #d9e1f2;">Meas. Distance (m)</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>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.</p>	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 conducted setup shown in section *Test & System Description* was used to measure undesirable emissions on the Band Edge 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 Band Edge measurements in average mode on the low frequency section, one of the two methods is used according to section G) 6) (KDB 789033 D02):

- 1) Method AD (Average Detection) as per paragraph II.G.6.c.
- 2) Method VB (Averaging using reduced video bandwidth) as per paragraph II.G.6.d.

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

For Band Edge measurements falling in restricted bands, 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	54.0	-41.2

See Section B.4.3 for the screenshot results.

B.2.4 Radiated spurious emission

Standard references

FCC part	Limits																																
15.407 (b) (1)	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.																																
15.209	<p>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):</p> <table border="1" data-bbox="541 562 1331 911"> <thead> <tr> <th data-bbox="547 568 740 631">Freq Range (MHz)</th> <th data-bbox="740 568 933 631">Field Strength ($\mu\text{V/m}$)</th> <th data-bbox="933 568 1126 631">Field Strength ($\text{dB}\mu\text{V/m}$)</th> <th data-bbox="1126 568 1324 631">Meas. Distance (m)</th> </tr> </thead> <tbody> <tr> <td data-bbox="547 631 740 672">0.009-0.490</td> <td data-bbox="740 631 933 672">2400/f(kHz)</td> <td data-bbox="933 631 1126 672">-</td> <td data-bbox="1126 631 1324 672">300</td> </tr> <tr> <td data-bbox="547 672 740 712">0.490-1.705</td> <td data-bbox="740 672 933 712">24000/f(kHz)</td> <td data-bbox="933 672 1126 712">-</td> <td data-bbox="1126 672 1324 712">300</td> </tr> <tr> <td data-bbox="547 712 740 752">1.705-30.0</td> <td data-bbox="740 712 933 752">30</td> <td data-bbox="933 712 1126 752">-</td> <td data-bbox="1126 712 1324 752">30</td> </tr> <tr> <td data-bbox="547 752 740 792">30-88</td> <td data-bbox="740 752 933 792">100</td> <td data-bbox="933 752 1126 792">40</td> <td data-bbox="1126 752 1324 792">3</td> </tr> <tr> <td data-bbox="547 792 740 833">88-216</td> <td data-bbox="740 792 933 833">150</td> <td data-bbox="933 792 1126 833">43.5</td> <td data-bbox="1126 792 1324 833">3</td> </tr> <tr> <td data-bbox="547 833 740 873">216-960</td> <td data-bbox="740 833 933 873">200</td> <td data-bbox="933 833 1126 873">46</td> <td data-bbox="1126 833 1324 873">3</td> </tr> <tr> <td data-bbox="547 873 740 911">Above 960</td> <td data-bbox="740 873 933 911">500</td> <td data-bbox="933 873 1126 911">54</td> <td data-bbox="1126 873 1324 911">3</td> </tr> </tbody> </table> <p data-bbox="389 943 1484 1061">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.</p> <p data-bbox="389 1061 1484 1153">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.</p>	Freq Range (MHz)	Field Strength ($\mu\text{V/m}$)	Field Strength ($\text{dB}\mu\text{V/m}$)	Meas. Distance (m)	0.009-0.490	2400/f(kHz)	-	300	0.490-1.705	24000/f(kHz)	-	300	1.705-30.0	30	-	30	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 ($\mu\text{V/m}$)	Field Strength ($\text{dB}\mu\text{V/m}$)	Meas. Distance (m)																														
0.009-0.490	2400/f(kHz)	-	300																														
0.490-1.705	24000/f(kHz)	-	300																														
1.705-30.0	30	-	30																														
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 setup shown in section *Test & System Description* was 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, 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 section B.2.2 and using the low, middle and high channel.

For technologies 802.11ax20, 802.11ax40, 802.11ax80 and 802.11ax160 the worst case in terms of spurious emissions found among the low, mid and high channels tested on chain A and B separately is used to perform the test in MIMO mode (Chain A+B).

For technologies 802.11n20, 802.11n40, 802.11ac80 and 802.11ac160 the worst case in terms of spurious emissions found among the low, mid and high channels tested on 802.11ax20, 802.11ax40, 802.11ax80 and 802.11ax160 is used to perform the test in chain A, B ,and A+B modes.

Test Results

802.11a

30 MHz – 40 GHz, 802.11a, 6Mbps, Chain A

Radiated Spurious – CH36

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.6	---	68.2	34.6
1195.5	45.7	---	74.0	28.3
1196.0	---	33.9	54.0	20.1
6474.9	46.5	---	68.2	21.7
10359.0	50.5	---	68.2	17.7
15539.8	---	42.7	54.0	11.3
15550.0	53.7	---	74.0	20.3
20719.7	46.4	---	74.0	27.6
20719.7	---	38.9	54.0	15.1

Radiated Spurious – CH40

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.7	---	68.2	35.5
1195.0	45.2	---	74.0	28.8
1197.5	---	34.0	54.0	20.0
6479.8	46.6	---	68.2	21.6
15601.2	---	39.7	54.0	14.3
15702.7	49.5	---	74.0	24.5
20800.0	47.3	---	74.0	26.7
20800.0	---	39.0	54.0	15.0

Radiated Spurious – CH48

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	31.9	---	68.2	36.3
1032.5	46.6	---	74.0	27.4
1035.5	---	35.7	54.0	18.3
1196.0	---	34.1	54.0	19.9
1197.0	45.4	---	74.0	28.6
6539.2	46.6	---	68.2	21.6
20959.9	---	40.8	54.0	13.2
20959.9	---	41.5	54.0	12.5
20960.4	47.8	---	74.0	26.2
20963.3	46.9	---	74.0	27.1

30 MHz – 40 GHz, 802.11a, 6Mbps, Chain B

Radiated Spurious – CH36

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.5	---	68.2	35.7
1197.0	---	34.2	54.0	19.8
1197.0	45.3	---	74.0	28.7
6474.9	46.5	---	68.2	21.7
10359.0	50.5	---	68.2	17.7
15539.8	---	42.7	54.0	11.3
15550.0	53.7	---	74.0	20.3
20720.0	---	45.0	54.0	9.0
20720.0	48.8	---	74.0	25.2

Radiated Spurious – CH40

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
624.0	34.0	---	68.2	34.2
1198.0	---	33.9	54.0	20.1
1198.0	45.2	---	74.0	28.8
6475.4	47.3	---	68.2	20.9
20800.0	47.7	---	74.0	26.3
20800.0	---	41.3	54.0	12.7

Radiated Spurious – CH48

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.3	---	68.2	35.9
1030.5	44.0	---	74.0	30.0
1035.0	---	33.3	54.0	20.7
1197.5	---	33.9	54.0	20.1
1197.5	45.6	---	74.0	28.4
6543.6	47.1	---	68.2	21.1
20959.9	---	41.5	54.0	12.5
20960.4	47.8	---	74.0	26.2

802.11n

30 MHz – 40 GHz, 802.11n20, HT0, Chain A

Radiated Spurious – CH36

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
407.7	27.7	---	46.0	18.3
624.0	34.2	---	68.2	34.0
6344.5	58.4	---	68.2	9.8
6474.4	47.1	---	68.2	21.1
10358.0	49.7	---	68.2	18.5
20719.7	---	39.0	54.0	15.0
20726.9	46.2	---	74.0	27.8

30 MHz – 40 GHz, 802.11n20, HT0, Chain B

Radiated Spurious – CH36

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
408.1	29.0	---	46.0	17.0
624.0	34.0	---	68.2	34.2
6325.0	56.9	---	68.2	11.3
15515.2	---	45.1	54.0	8.9
15516.2	54.2	---	74.0	19.8
20719.7	47.8	---	74.0	26.2
20720.0	---	41.5	54.0	12.5

30 MHz – 40 GHz, 802.11n20, HT8, Chain A+B**Radiated Spurious – CH36**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
408.0	28.5	---	46.0	17.5
624.0	33.8	---	68.2	34.4
6375.5	58.8	---	68.2	9.4
6479.3	47.5	---	68.2	20.7
10359.5	51.4	---	68.2	16.8
15536.0	---	43.0	54.0	11.0
15545.2	52.8	---	74.0	21.2
20715.0	47.4	---	74.0	26.6
20720.8	---	40.1	54.0	13.9

30 MHz – 40 GHz, 802.11n40, HT0, Chain A
Radiated Spurious – CH38

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.1	33.2	---	68.2	35.0
1195.5	---	33.9	54.0	20.1
1197.5	45.5	---	74.0	28.5
6487.5	47.1	---	68.2	21.1
20759.8	47.5	---	74.0	26.5
20760.1	---	39.5	54.0	14.5

30 MHz – 40 GHz, 802.11n40, HT0, Chain B
Radiated Spurious – CH38

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	32.2	---	68.2	36.0
1196.5	46.6	---	74.0	27.4
1197.5	---	34.2	54.0	19.8
6488.5	46.9	---	68.2	21.3
20759.8	---	40.6	54.0	13.4
20759.8	47.1	---	74.0	26.9

30 MHz – 40 GHz, 802.11n40, HT8, Chain A+B
Radiated Spurious – CH38

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	32.9	---	68.2	35.3
1000.5	44.8	---	74.0	29.2
1000.5	---	34.2	54.0	19.8
6496.2	46.9	---	68.2	21.3
20737.8	47.4	---	74.0	26.6
20760.6	---	39.9	54.0	14.1

802.11ac
30 MHz – 40 GHz, 802.11ac80, VHT0, Chain A
Radiated Spurious – CH42

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	32.2	---	68.2	36.0
1001.5	45.3	---	74.0	28.7
1002.5	---	34.8	54.0	19.2
1198.5	---	33.6	54.0	20.4
1199.0	44.8	---	74.0	29.2
6485.6	47.9	---	68.2	20.3
20773.1	47.0	---	74.0	27.0
20839.8	---	40.5	54.0	13.5

30 MHz – 40 GHz, 802.11ac80, VHT0, Chain B
Radiated Spurious – CH42

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	32.7	---	68.2	35.5
1003.0	---	32.6	54.0	21.4
1003.5	44.6	---	74.0	29.4
1195.0	45.3	---	74.0	28.7
1197.5	---	34.2	54.0	19.8
6510.7	47.7	---	68.2	20.5
16668.4	52.4	---	68.2	15.8
20839.5	48.0	---	74.0	26.0
20840.1	---	41.3	54.0	12.7

30 MHz – 40 GHz, 802.11ac80, VHT0, Chain A+B**Radiated Spurious – CH42**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	33.1	---	68.2	35.1
1195.5	45.9	---	74.0	28.1
1196.5	---	33.9	54.0	20.1
6512.1	47.5	---	68.2	20.7
17150.3	52.4	---	68.2	15.8
20839.8	---	39.9	54.0	14.1
20873.8	47.5	---	74.0	26.5

30 MHz – 40 GHz, 802.11ac160, VHT0, Chain A

Radiated Spurious – CH50

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.2	---	68.2	35.0
1196.0	45.5	---	74.0	28.5
1197.0	---	34.3	54.0	19.7
6543.1	48.1	---	68.2	20.1
16723.0	52.3	---	68.2	15.9
21000.0	46.5	---	74.0	27.5
21000.0	---	38.8	54.0	15.2

30 MHz – 40 GHz, 802.11ac160, VHT0, Chain B

Radiated Spurious – CH50

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.4	---	68.2	34.8
1195.0	46.3	---	74.0	27.7
1198.5	---	34.0	54.0	20.0
6553.7	47.5	---	68.2	20.7
16726.4	51.9	---	68.2	16.3
21000.0	---	40.5	54.0	13.5
21000.2	47.7	---	74.0	26.3

30 MHz – 40 GHz, 802.11ac160, VHT0, Chain A+B**Radiated Spurious – CH50**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	33.4	---	68.2	34.8
1197.0	---	34.8	54.0	19.2
1199.5	44.1	---	74.0	29.9
6542.1	49.5	---	68.2	18.7
15822.6	51.5	---	74.0	22.5
15823.1	---	40.7	54.0	13.3
20986.7	47.0	---	74.0	27.0
21000.2	---	40.0	54.0	14.0

802.11ax
30 MHz – 40 GHz, 802.11ax20, HE0, Chain A
Radiated Spurious – CH36

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	33.0	---	68.2	35.2
1194.5	45.9	---	74.0	28.1
1197.0	---	33.9	54.0	20.1
10342.1	53.1	---	74.0	20.9
15514.2	---	46.2	54.0	7.8
15516.2	56.5	---	74.0	17.5
25860.1	54.6	---	68.2	13.6

Radiated Spurious – CH40

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	32.2	---	68.2	36.0
1196.0	---	34.3	54.0	19.7
1197.5	45.2	---	74.0	28.8
6515.0	47.2	---	68.2	21.0
15573.7	50.6	---	74.0	23.4
15574.6	---	40.3	54.0	13.7
20800.0	---	39.1	54.0	14.9
20812.2	46.3	---	74.0	27.7

Radiated Spurious – CH48

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	32.7	---	68.2	35.5
1026.0	50.4	---	74.0	23.6
1026.5	---	40.7	54.0	13.3
1195.5	---	34.1	54.0	19.9
1195.5	45.7	---	74.0	28.3
6552.3	48.7	---	68.2	19.5
9983.9	51.8	---	68.2	16.4
20960.1	---	39.2	54.0	14.8
20960.7	46.5	---	74.0	27.5

30 MHz – 40 GHz, 802.11ax20, HE0, Chain B

Radiated Spurious – CH36

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
624.0	34.9	---	68.2	33.3
1197.0	---	35.7	54.0	18.3
1197.5	47.3	---	74.0	26.8
1396.5	---	31.8	54.0	22.2
1398.0	42.7	---	74.0	31.3
10343.5	54.1	---	68.2	14.1
15515.2	---	46.1	54.0	7.9
15515.7	55.6	---	74.0	18.4
20719.7	48.0	---	74.0	26.0
20720.0	---	43.4	54.0	10.6

Radiated Spurious – CH40

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.3	---	68.2	34.9
1196.0	---	34.2	54.0	19.8
1197.0	45.6	---	74.0	28.4
6509.7	47.0	---	68.2	21.2
10381.7	51.0	---	68.2	17.2
15574.2	---	40.9	54.0	13.1
15575.6	50.8	---	74.0	23.2
20800.0	47.3	---	74.0	26.7
20800.0	---	41.0	54.0	13.0

Radiated Spurious – CH48

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.0	---	68.2	35.2
1026.0	47.4	---	74.0	26.6
1026.5	---	38.4	54.0	15.6
1196.0	---	34.2	54.0	19.8
1196.0	46.0	---	74.0	28.1
6549.8	48.6	---	68.2	19.6
15694.0	---	44.5	54.0	9.5
15696.4	54.5	---	74.0	19.5
20959.6	---	41.3	54.0	12.7
20959.9	47.6	---	74.0	26.4

30 MHz – 40 GHz, 802.11ax20, HE0, Chain A+B

Radiated Spurious – CH36

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
407.7	27.7	---	46.0	18.4
624.0	34.4	---	68.2	33.8
3876.0	51.8	---	74.0	22.2
3876.5	---	41.1	54.0	12.9
10342.1	53.7	---	68.2	14.5
15514.2	---	47.6	54.0	6.4
15516.2	56.3	---	74.0	17.7
20677.2	46.7	---	74.0	27.3
20720.3	---	40.0	54.0	14.0

30 MHz – 40 GHz, 802.11ax40, HE0, Chain A

Radiated Spurious – CH38F

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.4	---	68.2	35.8
1196.0	---	34.2	54.0	19.8
1197.0	45.6	---	74.0	28.4
3873.5	52.0	---	74.0	22.0
3874.5	---	41.1	54.0	12.9
10344.5	51.0	---	68.2	17.2
15515.7	54.7	---	74.0	19.3
15516.6	---	43.2	54.0	10.8
20759.8	---	39.5	54.0	14.5
20760.1	47.0	---	74.0	27.0

Radiated Spurious – CH46

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.7	---	68.2	35.5
1007.0	53.6	---	74.0	20.4
1007.0	---	44.6	54.0	9.4
1198.0	---	34.1	54.0	19.9
1198.0	45.3	---	74.0	28.7
6527.1	47.6	---	68.2	20.6
10424.7	49.9	---	68.2	18.3
15635.5	51.1	---	74.0	22.9
15636.0	---	41.1	54.0	12.9
20850.2	49.2	---	74.0	24.8
20919.8	---	40.6	54.0	13.4

30 MHz – 40 GHz, 802.11ax40, HE0, Chain B

Radiated Spurious – CH38

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.1	32.8	---	68.2	35.4
1195.0	---	34.1	54.0	19.9
1199.5	45.8	---	74.0	28.2
3874.0	52.9	---	74.0	21.1
3875.0	---	42.7	54.0	11.3
10344.0	55.5	---	68.2	12.7
15516.2	---	46.4	54.0	7.6
15517.6	57.2	---	74.0	16.8
20759.8	47.0	---	74.0	27.0
20760.1	---	40.3	54.0	13.7

Radiated Spurious – CH46

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.4	---	68.2	34.9
1006.5	50.4	---	74.0	23.6
1007.0	---	40.7	54.0	13.3
1195.5	---	34.0	54.0	20.0
1198.0	45.7	---	74.0	28.3
6532.4	47.3	---	68.2	20.9
20919.2	47.8	---	74.0	26.2
20919.8	---	42.3	54.0	11.7

30 MHz – 40 GHz, 802.11ax40, HE0, Chain A+B**Radiated Spurious – CH38**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	33.2	---	68.2	35.0
1196.5	---	34.2	54.0	19.8
1198.5	45.9	---	74.0	28.1
3874.5	---	41.4	54.0	12.6
3875.5	52.8	---	74.0	21.2
10343.5	55.4	---	68.2	12.8
15516.2	58.7	---	74.0	15.3
15516.6	---	48.5	54.0	5.5
20760.1	47.4	---	74.0	26.6
20760.1	---	40.8	54.0	13.2

30 MHz – 40 GHz, 802.11ax80, HE0, Chain A

Radiated Spurious – CH42

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.6	---	68.2	35.6
1196.5	---	33.6	54.0	20.4
1198.0	45.4	---	74.0	28.6
6512.1	47.9	---	68.2	20.3
10343.0	50.6	---	68.2	17.6
15515.7	54.0	---	74.0	20.0
15516.2	---	45.7	54.0	8.3
20840.1	---	39.2	54.0	14.8
20840.3	46.8	---	74.0	27.2

30 MHz – 40 GHz, 802.11ax80, HE0, Chain B

Radiated Spurious – CH42

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	31.9	---	68.2	36.3
1194.5	45.5	---	74.0	28.5
1196.0	---	34.1	54.0	19.9
3869.5	---	43.8	54.0	10.2
3870.0	53.1	---	74.0	21.0
6541.1	47.7	---	68.2	20.5
10345.0	51.9	---	68.2	16.3
15515.7	---	42.1	54.0	11.9
15517.1	52.4	---	74.0	21.6
20839.8	---	40.6	54.0	13.4
20840.1	47.4	---	74.0	26.6

30 MHz – 40 GHz, 802.11ax80, HE0, Chain A+B

Radiated Spurious – CH42

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.7	---	68.2	34.5
1196.0	---	34.1	54.0	19.9
1197.0	46.2	---	74.0	27.8
3869.5	52.9	---	74.0	21.1
3869.5	---	42.0	54.0	12.0
6512.1	47.9	---	68.2	20.3
10344.0	53.5	---	68.2	14.7
15516.2	---	46.0	54.0	8.0
15516.2	55.8	---	74.0	18.2
20804.5	46.6	---	74.0	27.4
20840.3	---	40.0	54.0	14.0

30 MHz – 40 GHz, 802.11ax160, HE0, Chain A

Radiated Spurious – CH50

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.4	---	68.2	34.8
3859.0	53.2	---	74.0	20.8
3859.5	---	42.2	54.0	11.8
5483.5	63.3	---	68.2	4.9
6494.3	48.1	---	68.2	20.1
10345.0	50.4	---	68.2	17.8
15515.7	---	42.5	54.0	11.5
15517.1	53.1	---	74.0	20.9
20637.1	47.8	---	74.0	26.2
20720.0	---	39.6	54.0	14.4

30 MHz – 40 GHz, 802.11ax160, HE0, Chain B

Radiated Spurious – CH50

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.4	---	68.2	35.9
3859.1	55.3	---	74.0	18.7
3859.8	---	45.4	54.0	8.6
5482.0	66.2	---	68.2	2.0
6484.1	48.2	---	68.2	20.0
10345.0	53.6	---	68.2	14.6
15516.2	---	43.8	54.0	10.2
15516.6	54.3	---	74.0	19.7
21240.1	---	42.1	54.0	11.9
21240.6	48.1	---	74.0	25.9

30 MHz – 40 GHz, 802.11ax160, HE0, Chain A+B

Radiated Spurious – CH50

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.4	---	68.2	34.8
1197.0	46.3	---	74.0	27.7
1199.0	---	33.8	54.0	20.2
3859.5	---	42.7	54.0	11.3
3859.5	52.8	---	74.0	21.2
5016.2	---	49.0	54.0	5.0
5016.8	60.6	---	74.0	13.4
5482.6	63.1	---	68.2	5.1
6484.1	48.8	---	68.2	19.4
10344.5	56.1	---	68.2	12.1
15516.2	58.2	---	74.0	15.8
15516.6	---	49.4	54.0	4.6
21000.0	---	40.6	54.0	13.5
21000.2	47.7	---	74.0	26.3

B.3 Test Results Tables U-NII-2A

B.3.1 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 through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.

Results tables

Mode	Rate	Antenna	Channel	Freq [MHz]	26dB BW [MHz]	99% BW [MHz]
802.11a	6Mbps	SISO A	52	5260	26.28	17.16
			56	5280	26.48	17.24
			64	5320	24.62	16.88
		SISO B	52	5260	25.73	17.08
			56	5280	25.53	17.12
			64	5320	24.47	16.88
802.11n20	HT0	SISO A	52	5260	27.63	18.16
			56	5280	26.93	18.16
			64	5320	24.77	17.96
		SISO B	52	5260	21.88	18.16
			56	5280	26.48	18.08
			64	5320	25.03	17.96
	HT8	MIMO A	52	5260	25.98	18.08
			56	5280	25.83	18.08
			64	5320	25.32	18.04
		MIMO B	52	5260	26.08	18.04
			56	5280	25.58	18.00
			64	5320	24.87	17.96
802.11n40	HT0	SISO A	54	5270	45.41	36.64
			62	5310	44.96	36.64
		SISO B	54	5270	44.96	36.64
			62	5310	44.68	36.64
	HT8	MIMO A	54	5270	45.77	36.64
			62	5310	45.05	36.64
		MIMO B	54	5270	44.41	36.40
			62	5310	44.41	36.40
802.11ac80	VHT0	SISO A	58	5290	85.41	75.12
		SISO B			56.94	5.12
		MIMO A			88.20	75.12
		MIMO B			85.50	75.12

Max Value

Mode	Rate	Antenna	Channel	Freq [MHz]	RU config.	26dB BW [MHz]	99% BW [MHz]
802.11ax20	HE0	SISO A	52	5260	Full	25.53	19.16
			56	5280	Full	26.03	19.16
			64	5320	Full	23.92	19.12
					26/8	20.57	18.52
					52/40	22.02	18.32
					106/54	23.03	18.20
		SISO B	52	5260	Full	25.68	19.16
			56	5280	Full	26.23	19.16
			64	5320	Full	24.32	19.08
					26/8	20.72	18.56
					52/40	22.12	18.32
					106/54	23.27	18.20
		MIMO A	52	5260	Full	25.78	19.12
			56	5280	Full	25.43	19.12
			64	5320	Full	24.47	19.12
					26/8	20.72	18.44
					52/40	21.17	18.24
					106/54	23.47	18.24
		MIMO B	52	5260	Full	24.77	19.16
			56	5280	Full	25.23	19.12
			64	5320	Full	23.92	19.08
					26/8	20.27	18.28
					52/40	20.32	18.16
					106/54	23.62	18.28
802.11ax40	HE0	SISO A	54	5270	Full	44.05	37.92
			62	5310	Full	43.51	37.92
					242/62	25.23	19.12
		SISO B	54	5270	Full	43.96	37.92
			62	5310	Full	44.41	37.92
					242/62	24.96	19.20
		MIMO A	54	5270	Full	44.96	37.92
			62	5310	Full	44.50	37.84
					242/62	24.96	19.12
		MIMO B	54	5270	Full	45.14	37.84
			62	5310	Full	44.50	37.84
					242/62	25.32	19.12
802.11ax80	HE0	SISO A	58	5290	Full	83.96	76.68
					484/66	44.50	37.92
		SISO B			Full	82.52	76.80
					484/66	44.59	38.04
		MIMO A			Full	83.78	76.92
					484/66	44.68	37.92
		MIMO B			Full	82.70	76.68
					484/66	44.86	37.92

Max Value

See Section B.5.1 for the screenshot results.

B.3.2 Power Limits. Maximum Output power & Maximum power spectral density

Test limits

FCC part	Limits
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.

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 KDB 789033 D02.

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

Results tables
Duty cycle

Mode	Rate	Antenna	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
802.11a	6Mbps	SISO A	2.07	2.13	97.51%
		SISO B	2.07	2.13	97.51%
802.11n20	HT0	SISO A	3.96	4.01	98.67%
		SISO B	3.96	4.01	98.67%
	HT8	MIMO A	3.97	4.02	98.67%
		MIMO B	3.97	4.02	98.67%
802.11ax20	HE0	SISO A	3.93	3.98	98.60%
		SISO B	3.93	3.98	98.60%
		MIMO A	3.97	4.02	98.61%
		MIMO B	3.97	4.02	98.61%
802.11n40	HT0	SISO A	3.96	4.01	98.70%
		SISO B	3.96	4.01	98.70%
	HT8	MIMO A	3.97	4.02	98.58%
		MIMO B	3.97	4.02	98.58%
802.11ax40	HE0	SISO A	3.96	4.01	98.77%
		SISO B	3.96	4.01	98.77%
		MIMO A	3.95	4.00	98.70%
		MIMO B	3.95	4.00	98.70%
802.11ac80	VHT0	SISO A	3.95	4.00	98.73%
		SISO B	3.95	4.00	98.73%
		MIMO A	3.95	4.00	98.55%
		MIMO B	3.95	4.00	98.55%
802.11ax80	HE0	SISO A	3.95	4.00	98.68%
		SISO B	3.95	4.00	98.68%
		MIMO A	3.97	4.02	98.64%
		MIMO B	3.97	4.02	98.64%
802.11ac160	VTH0	SISO A	3.94	3.99	98.74%
		SISO B	3.94	3.99	98.74%
		MIMO A	2.77	2.82	98.29%
		MIMO B	2.77	2.82	98.29%
802.11ax160	HE0	SISO A	3.96	4.01	98.66%
		SISO B	3.96	4.01	98.66%
		MIMO A	2.39	2.45	97.50%
		MIMO B	2.39	2.45	97.50%

Maximum output power

Mode	Rate	Channel	Freq [MHz]	Antenna	Average Conducted Ouput Power [dBm]	Avg Max* Conducted Ouput Power [dBm]	Avg Max*. EIRP [dBm]	Avg Max* Conducted Power [mW]	
802.11a	6Mbps	52	5260	SISO A	21.11	21.22	26.22	132.42	
				SISO B	21.08	21.19	26.19	131.51	
		56	5280	SISO A	21.13	21.24	26.24	133.03	
				SISO B	21.13	21.24	26.24	133.03	
		64	5320	SISO A	18.86	18.97	23.97	78.88	
				SISO B	18.74	18.85	23.85	76.73	
802.11n20	HT0	52	5260	SISO A	21.11	21.11	26.11	129.12	
				SISO B	21.18	21.18	26.18	131.22	
		56	5280	SISO A	21.16	21.16	26.16	130.62	
				SISO B	21.18	21.18	26.18	131.22	
		64	5320	SISO A	19.06	19.06	24.06	80.54	
				SISO B	19.07	19.07	24.07	80.72	
	HT8	52	5260	MIMO A	19.85	19.85	24.85	96.61	
				MIMO B	19.85	19.85	24.85	96.61	
				Combined A+B	22.86	22.86	27.86	193.21	
		56	5280	MIMO A	19.65	19.65	24.65	92.26	
				MIMO B	19.74	19.74	24.74	94.19	
		Combined A+B	22.71	22.71	27.71	186.45			
	64	5320	MIMO A	17.86	17.86	22.86	61.09		
			MIMO B	17.64	17.64	22.64	58.08		
			Combined A+B	20.76	20.76	25.76	119.17		
	802.11n40	HT0	54	5270	SISO A	20.05	20.05	25.05	101.16
					SISO B	20.09	20.09	25.09	102.09
			62	5310	SISO A	17.49	17.49	22.49	56.10
SISO B					17.41	17.41	22.41	55.08	
HT8		54	5270	MIMO A	19.28	19.28	24.28	84.72	
				MIMO B	19.27	19.27	24.27	84.53	
				Combined A+B	22.29	22.29	27.29	169.25	
		62	5310	MIMO A	16.64	16.64	21.64	46.13	
				MIMO B	16.56	16.56	21.56	45.29	
				Combined A+B	19.61	19.61	24.61	91.42	
802.11ac80	VHT0	58	5290	SISO A	17.63	17.63	22.63	57.94	
				SISO B	17.60	17.60	22.60	57.54	
				MIMO A	16.50	16.50	21.50	44.67	
				MIMO B	15.90	15.90	20.90	38.90	
				Combined A+B	19.22	19.22	24.22	83.57	

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

Max Value

Min Value

Mode	Rate	Channel	Freq [MHz]	Antenna	RU config.	Average Conducted Output Power [dBm]	Avg Max* Conducted Output Power [dBm]	Avg Max* EIRP [dBm]	Avg Max* Conducted Power [mW]		
802.11ax20	HE0	52	5260	SISO A	Full	21.14	21.14	26.14	130.02		
				SISO B	Full	21.17	21.17	26.17	130.92		
				MIMO A	Full	19.78	19.78	24.78	95.06		
				MIMO B	Full	19.82	19.82	24.82	95.94		
				Combined A+B	Full	22.81	22.81	27.81	191.00		
		56	5280	SISO A	Full	21.12	21.12	26.12	129.42		
				SISO B	Full	21.18	21.18	26.18	131.22		
				MIMO A	Full	19.62	19.62	24.62	91.62		
				MIMO B	Full	19.68	19.68	24.68	92.90		
				Combined A+B	Full	22.66	22.66	27.66	184.52		
		64	5320	SISO A	Full	19.05	19.05	24.05	80.35		
					26/8	13.70	13.70	18.70	23.44		
					52/40	16.66	16.66	21.66	46.34		
					106/54	19.63	19.63	24.63	91.83		
				SISO B	Full	19.01	19.01	24.01	79.62		
					26/8	13.62	13.62	18.62	23.01		
					52/40	16.63	16.63	21.63	46.03		
					106/54	19.60	19.60	24.60	91.20		
				MIMO A	Full	17.67	17.67	22.67	58.48		
					26/8	10.52	10.52	15.52	11.27		
					52/40	13.56	13.56	18.56	22.70		
					106/54	16.66	16.66	21.66	46.34		
				MIMO B	Full	17.65	17.65	22.65	58.21		
					26/8	10.60	10.60	15.60	11.48		
					52/40	13.50	13.50	18.50	22.39		
					106/54	16.67	16.67	21.67	46.45		
				Combined A+B	Full	20.67	20.67	25.67	116.69		
					26/8	13.57	13.57	18.57	22.75		
					52/40	16.54	16.54	21.54	45.09		
					106/54	19.68	19.68	24.68	92.80		
		802.11ax40	HE0	54	5270	SISO A	Full	20.05	20.05	25.05	101.16
						SISO B	Full	20.02	20.02	25.02	100.46
						MIMO A	Full	19.26	19.26	24.26	84.33
						MIMO B	Full	19.17	19.17	24.17	82.60
				Combined A+B	Full	22.23	22.23	27.23	166.94		
				62	5310	SISO A	Full	17.46	17.46	22.46	55.72
242/62	18.82						18.82	23.82	76.21		
SISO B	Full					17.45	17.45	22.45	55.59		
	242/62					18.86	18.86	23.86	76.91		
MIMO A	Full					16.62	16.62	21.62	45.92		
	242/62					18.08	18.08	23.08	64.27		
MIMO B	Full					16.53	16.53	21.53	44.98		
	242/62					17.97	17.97	22.97	62.66		
Combined A+B	Full			19.59	19.59	24.59	90.90				
242/62	21.04			21.04	26.04	126.93					
802.11ax80	HE0			58	5290	SISO A	Full	17.71	17.71	22.71	59.02
		484/66	16.94				16.94	21.94	49.43		
		SISO B	Full			17.55	17.55	22.55	56.89		
			484/66			17.08	17.08	22.08	51.05		
		MIMO A	Full			16.51	16.51	21.51	44.77		
			484/66			16.13	16.13	21.13	41.02		
		MIMO B	Full			16.16	16.16	21.16	41.30		
			484/66			16.15	16.15	21.15	41.21		
		Combined A+B	Full			19.35	19.35	24.35	86.08		
			484/66			19.15	19.15	24.15	82.23		

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

Max/Min Value

Maximum Power Spectral Density (PSD)

Mode	Rate	Channel	Freq [MHz]	Antenna	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]	
802.11a	6Mbps	52	5260	SISO A	9.43	9.54	
				SISO B	9.41	9.52	
		56	5280	SISO A	9.44	9.55	
				SISO B	9.45	9.56	
		64	5320	SISO A	7.21	7.32	
				SISO B	7.09	7.20	
802.11n20	HT0	52	5260	SISO A	9.13	9.13	
				SISO B	9.20	9.20	
		56	5280	SISO A	9.17	9.17	
				SISO B	9.19	9.19	
		64	5320	SISO A	7.10	7.10	
				SISO B	7.10	7.10	
	HT8	52	5260	MIMO A	7.86	7.86	
				MIMO B	7.88	7.88	
				Combined A+B	10.88	10.88	
		56	5280	MIMO A	7.67	7.67	
				MIMO B	7.76	7.76	
				Combined A+B	10.73	10.73	
	64	5320	MIMO A	5.88	5.88		
			MIMO B	5.68	5.68		
			Combined A+B	8.79	8.79		
	802.11n40	HT0	54	5270	SISO A	4.93	4.93
					SISO B	4.96	4.96
			62	5310	SISO A	2.36	2.36
SISO B					2.28	2.28	
HT8		54	5270	MIMO A	4.17	4.17	
				MIMO B	4.20	4.20	
				Combined A+B	7.20	7.20	
		62	5310	MIMO A	1.50	1.50	
				MIMO B	1.45	1.45	
				Combined A+B	4.49	4.49	
802.11ac80		VHT0	58	5290	SISO A	0.08	0.08
					SISO B	0.12	0.12
	MIMO A				-1.03	-1.03	
	MIMO B				-1.65	-1.65	
	Combined A+B				1.68	1.68	

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

Mode	Rate	#Ch	Freq [MHz]	Antenna	RU config.	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]
802.11ax20	HE0	52	5260	SISO A	Full	8.85	8.85
				SISO B	Full	8.87	8.87
				MIMO A	Full	7.49	7.49
				MIMO B	Full	7.53	7.53
				Combined A+B	Full	10.52	10.52
		56	5280	SISO A	Full	8.85	8.85
				SISO B	Full	8.88	8.88
				MIMO A	Full	7.34	7.34
				MIMO B	Full	7.39	7.39
				Combined A+B	Full	10.38	10.38
		64	5320	SISO A	Full	6.77	6.77
					26/8	10.91	10.91
					52/40	10.93	10.93
				SISO B	Full	6.74	6.74
					26/8	10.81	10.81
					52/40	10.92	10.92
				MIMO A	Full	5.38	5.38
					26/8	7.74	7.74
					52/40	7.84	7.84
				MIMO B	Full	7.84	7.84
					26/8	7.89	7.89
					52/40	7.84	7.84
				Combined A+B	Full	7.86	7.86
					26/8	7.86	7.86
52/40	7.86	7.86					
106/54	7.86	7.86					
802.11ax40	HE0	54	5270	SISO A	Full	4.71	4.71
				SISO B	Full	4.67	4.67
				MIMO A	Full	3.94	3.94
				MIMO B	Full	3.86	3.86
				Combined A+B	Full	6.91	6.91
		62	5310	SISO A	Full	2.19	2.19
					242/62	6.41	6.41
				SISO B	Full	2.10	2.10
					242/62	6.46	6.46
				MIMO A	Full	1.28	1.28
					242/62	5.71	5.71
				MIMO B	Full	1.28	1.28
					242/62	5.62	5.62
				Combined A+B	Full	4.29	4.29
242/62	8.68	8.68					
802.11ax80	HE0	58	5290	SISO A	Full	0.07	0.07
					484/66	1.64	1.64
				SISO B	Full	-0.10	-0.10
					484/66	1.72	1.72
				MIMO A	Full	-1.07	-1.07
					484/66	0.76	0.76
				MIMO B	Full	-1.45	-1.45
					484/66	0.89	0.89
				Combined A+B	Full	1.75	1.75
					484/66	3.84	3.84

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

See Section B.5.2 for the screenshot results.

B.3.3 Undesirable emissions limits : Band Edge (Conducted)

Test limits

FCC part	Limits																				
15.407 (b) (2)	For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.																				
15.209	<p>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):</p> <table border="1"> <thead> <tr> <th>Freq Range (MHz)</th> <th>Field Strength (μV/m)</th> <th>Field Strength (dBμV/m)</th> <th>Meas. Distance (m)</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>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.</p> <p>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.</p>	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 conducted setup shown in section *Test & System Description* was used to measure undesirable emissions on the Band Edge 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 Band Edge measurements in average mode on the low frequency section, one of the two methods is used according to section G) 6) (KDB 789033 D02):

- 1) Method AD (Average Detection) as per paragraph II.G.6.c.
- 2) Method VB (Averaging using reduced video bandwidth) as per paragraph II.G.6.d.

In case of Band Edge 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)
960-25000	3	500	53.98	-41.2

See Section B.5.3 for the screenshot results.

B.3.4 Radiated spurious emission

Standard references

FCC part	Limits																				
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.																				
15.209	<p>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):</p> <table border="1" data-bbox="541 629 1331 840"> <thead> <tr> <th data-bbox="547 638 740 698">Freq Range (MHz)</th> <th data-bbox="740 638 933 698">Field Strength (µV/m)</th> <th data-bbox="933 638 1126 698">Field Strength (dBµV/m)</th> <th data-bbox="1126 638 1324 698">Meas. Distance (m)</th> </tr> </thead> <tbody> <tr> <td data-bbox="547 698 740 730">30-88</td> <td data-bbox="740 698 933 730">100</td> <td data-bbox="933 698 1126 730">40</td> <td data-bbox="1126 698 1324 730">3</td> </tr> <tr> <td data-bbox="547 730 740 761">88-216</td> <td data-bbox="740 730 933 761">150</td> <td data-bbox="933 730 1126 761">43.5</td> <td data-bbox="1126 730 1324 761">3</td> </tr> <tr> <td data-bbox="547 761 740 792">216-960</td> <td data-bbox="740 761 933 792">200</td> <td data-bbox="933 761 1126 792">46</td> <td data-bbox="1126 761 1324 792">3</td> </tr> <tr> <td data-bbox="547 792 740 840">Above 960</td> <td data-bbox="740 792 933 840">500</td> <td data-bbox="933 792 1126 840">54</td> <td data-bbox="1126 792 1324 840">3</td> </tr> </tbody> </table> <p>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.</p> <p>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.</p>	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, 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 section B.3.2 and using the low, middle and high channel.

For technologies 802.11ax20, 802.11ax40, 802.11ax80 and 802.11ax160 the worst case in terms of spurious emissions found among the low, mid and high channels tested on chain A and B separately is used to perform the test in MIMO mode (Chain A+B).

For technologies 802.11n20, 802.11n40, 802.11ac80 and 802.11ac160 the worst case in terms of spurious emissions found among the low, mid and high channels tested on 802.11ax20, 802.11ax40, 802.11ax80 and 802.11ax160 is used to perform the test in A, B ,and A+B modes.

Test Results

802.11a

30 MHz – 40 GHz, 802.11a, 6Mbps, Chain A

Radiated Spurious – CH52

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.9	---	68.2	35.3
1194.5	44.7	---	74.0	29.3
1195.5	---	34.4	54.0	19.6
7011.4	49.0	---	68.2	19.2
15770.9	52.0	---	74.0	22.0
15787.8	---	41.3	54.0	12.7
21031.3	47.4	---	74.0	26.6
21039.5	---	39.9	54.0	14.1

Radiated Spurious – CH56

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.2	---	68.2	35.0
1195.0	45.9	---	74.0	28.1
1197.0	---	34.9	54.0	19.1
6572.6	47.7	---	68.2	20.5
15840.0	53.3	---	74.0	20.7
15842.4	---	42.0	54.0	12.0
21119.8	48.2	---	74.0	25.8
21119.8	---	40.4	54.0	13.6

Radiated Spurious – CH64

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	33.3	---	68.2	34.9
1114.5	---	34.8	54.0	19.2
1115.0	46.2	---	74.0	27.8
1195.5	---	34.4	54.0	19.6
1196.5	46.3	---	74.0	27.7
7000.3	48.0	---	68.2	20.2
15954.1	52.3	---	74.0	21.7
15957.0	---	42.3	54.0	11.7
21279.7	47.7	---	74.0	26.3
21279.7	---	41.7	54.0	12.3

30 MHz – 40 GHz, 802.11a, 6Mbps, Chain B

Radiated Spurious – CH52

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.4	---	68.2	35.8
1055.5	---	32.1	54.0	22.0
1056.0	43.2	---	74.0	30.8
1195.5	---	34.4	54.0	19.6
1196.5	45.7	---	74.0	28.3
7007.6	48.1	---	68.2	20.1
15785.9	---	41.2	54.0	12.8
15793.6	51.5	---	74.0	22.5
21039.8	---	40.5	54.0	13.5
21040.6	48.0	---	74.0	26.0

Radiated Spurious – CH56

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.1	32.2	---	68.2	36.0
1075.0	43.2	---	74.0	30.8
1075.0	---	32.4	54.0	21.6
1196.5	46.3	---	74.0	27.7
1197.0	---	34.8	54.0	19.2
6590.4	48.1	---	68.2	20.1
15835.2	---	41.3	54.0	12.7
15841.4	51.9	---	74.0	22.1
21119.8	47.2	---	74.0	26.8
21119.8	---	40.6	54.0	13.4

Radiated Spurious – CH64

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	32.9	---	68.2	35.3
1115.0	42.6	---	74.0	31.4
1115.0	---	32.1	54.0	21.9
1198.0	---	34.9	54.0	19.1
1200.0	46.5	---	74.0	27.6
7008.0	49.5	---	68.2	18.7
15962.3	53.3	---	74.0	20.7
15963.7	---	41.8	54.0	12.2
21279.7	---	42.2	54.0	11.8
21279.7	48.2	---	74.0	25.8

802.11n
30 MHz – 40 GHz, 802.11n20, HT0, Chain A
Radiated Spurious – CH56

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
408.1	28.6	---	46.0	17.4
624.0	34.2	---	68.2	34.0
1071.0	44.8	---	74.0	29.2
1075.5	---	33.7	54.0	20.3
6614.6	47.2	---	68.2	21.0
21119.8	---	41.4	54.0	12.6
21120.0	47.4	---	74.0	26.6

30 MHz – 40 GHz, 802.11n20, HT0, Chain B
Radiated Spurious – CH56

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
624.0	35.4	---	68.2	32.8
1073.5	45.0	---	74.0	29.0
1074.0	---	33.7	54.0	20.3
15802.3	50.8	---	74.0	23.2
15829.8	---	40.3	54.0	13.7
21117.6	49.3	---	74.0	24.7
21119.8	---	42.6	54.0	11.4

30 MHz – 40 GHz, 802.11n20, HT8, Chain A+B**Radiated Spurious – CH56**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
624.0	37.7	---	68.2	30.5
1074.5	---	35.7	54.0	18.3
1079.5	47.0	---	74.0	27.0
16719.7	52.6	---	68.2	15.6
21120.3	---	41.9	54.0	12.1
21120.3	49.5	---	74.0	24.5

30 MHz – 40 GHz, 802.11n40, HT0, Chain A

Radiated Spurious – CH62

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
624.0	34.9	---	68.2	33.3
1103.0	43.1	---	74.0	30.9
1104.5	---	32.4	54.0	21.7
16763.6	51.9	---	68.2	16.3
21240.1	---	42.1	54.0	11.9
21240.6	48.1	---	74.0	25.9

30 MHz – 40 GHz, 802.11n40, HT0, Chain B

Radiated Spurious – CH62

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
407.9	29.1	---	46.0	16.9
624.0	34.5	---	68.2	33.7
1101.5	42.6	---	74.0	31.4
1102.5	---	31.1	54.0	22.9
15874.8	57.8	---	74.0	16.2
15876.7	---	48.9	54.0	5.1
21239.8	48.4	---	74.0	25.6
21239.8	---	41.8	54.0	12.2

30 MHz – 40 GHz, 802.11n40, HT8, Chain A+B

Radiated Spurious – CH62

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
408.0	28.9	---	46.0	17.1
624.0	35.1	---	68.2	33.1
1107.0	---	33.4	54.0	20.6
1107.0	44.7	---	74.0	29.3
15917.3	57.4	---	74.0	16.6
15920.7	---	41.5	54.0	12.5
21240.1	---	41.2	54.0	12.8
21241.7	48.1	---	74.0	25.9

802.11ac

30 MHz – 40 GHz, 802.11ac80, HT0, Chain A

Radiated Spurious – CH58

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.3	---	68.2	34.9
6389.0	57.5	---	68.2	10.7
6621.9	47.7	---	68.2	20.5
21124.8	49.2	---	74.0	24.8
21159.6	---	42.4	54.0	11.6

30 MHz – 40 GHz, 802.11ac80, HT0, Chain B

Radiated Spurious – CH58

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.7	---	68.2	34.5
6377.0	56.0	---	68.2	12.2
6589.5	47.8	---	68.2	20.4
21159.9	---	41.8	54.0	12.2
21233.5	49.0	---	74.0	25.0

30 MHz – 40 GHz, 802.11ac80, HT8, Chain A+B

Radiated Spurious – CH58

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.1	---	68.2	35.2
6391.5	58.3	---	68.2	9.9
17846.3	51.1	---	74.0	22.9
17846.8	---	40.2	54.0	13.8
21160.9	---	41.8	54.0	12.2
21185.9	48.3	---	74.0	25.7

802.11ax
30 MHz – 40 GHz, 802.11ax20, HE0, Chain A
Radiated Spurious – CH52

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.9	---	68.2	34.3
1046.5	---	41.5	54.0	12.5
1047.0	51.0	---	74.0	23.0
7000.3	47.9	---	68.2	20.3
15754.4	53.1	---	74.0	20.9
15754.4	---	44.7	54.0	9.3
21005.8	48.8	---	74.0	25.2
21006.3	---	39.2	54.0	14.8
21039.8	47.4	---	74.0	26.6
21039.8	---	39.6	54.0	14.4

Radiated Spurious – CH56

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.8	---	68.2	35.4
1066.5	50.7	---	74.0	23.3
1066.5	---	41.9	54.0	12.1
7012.9	47.9	---	68.2	20.3
16739.5	52.1	---	68.2	16.1
21086.3	---	41.7	54.0	12.3
21088.2	51.4	---	74.0	22.6
21120.0	47.3	---	74.0	26.7
21120.0	---	41.1	54.0	12.9

Radiated Spurious – CH64

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.1	33.0	---	68.2	35.2
1106.5	---	41.9	54.0	12.1
1107.0	51.1	---	74.0	22.9
6660.5	47.3	---	68.2	20.9
15934.7	---	45.6	54.0	8.4
15935.7	55.2	---	74.0	18.8
21279.9	---	41.9	54.0	12.1
21294.3	47.9	---	74.0	26.1

30 MHz – 40 GHz, 802.11ax20, HE0, Chain B

Radiated Spurious – CH52

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.3	---	68.2	35.9
1046.5	---	40.7	54.0	13.3
1047.0	51.5	---	74.0	22.5
6990.2	47.6	---	68.2	20.6
15753.5	54.3	---	74.0	19.7
15754.9	---	45.9	54.0	8.1
21006.3	---	39.4	54.0	14.6
21007.7	49.2	---	74.0	24.8
21039.8	47.4	---	74.0	26.6
21039.8	---	41.7	54.0	12.3

Radiated Spurious – CH56

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.5	---	68.2	34.8
1066.5	---	41.2	54.0	12.8
1066.5	51.4	---	74.0	22.6
6976.1	47.7	---	68.2	20.5
15813.4	55.5	---	74.0	18.5
15814.4	---	47.3	54.0	6.7
21086.3	---	40.7	54.0	13.3
21086.8	51.1	---	74.0	22.9
21119.8	47.2	---	74.0	26.8
21119.8	---	41.3	54.0	12.7

Radiated Spurious – CH64

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
576.0	33.2	---	68.2	35.0
1106.5	48.3	---	74.0	25.7
1106.5	---	39.7	54.0	14.3
6618.0	47.3	---	68.2	20.9
15934.7	---	46.4	54.0	7.6
15935.7	55.5	---	74.0	18.5
21279.9	47.7	---	74.0	26.3
21279.9	---	41.3	54.0	12.7

30 MHz – 40 GHz, 802.11ax20, HE0, Chain A+B**Radiated Spurious – CH56**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dB μ V/m	dB μ V/m	dB μ V/m	dB
624.0	37.0	---	68.2	31.2
1066.5	---	42.5	54.0	11.5
1067.0	54.2	---	74.0	19.8
7001.8	47.5	---	68.2	20.7
21087.4	51.7	---	74.0	22.3
21087.4	---	43.7	54.0	10.3
21121.4	47.7	---	74.0	26.3
21121.9	---	39.9	54.0	14.1

30 MHz – 40 GHz, 802.11ax40, HE0, Chain A

Radiated Spurious – CH54

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.5	---	68.2	34.7
1046.5	---	41.3	54.0	12.7
1047.5	50.6	---	74.0	23.4
7009.0	47.7	---	68.2	20.5
16750.1	51.8	---	68.2	16.4
21006.3	49.5	---	74.0	24.5
21007.1	---	39.8	54.0	14.2
21079.9	---	40.5	54.0	13.5
21081.0	47.6	---	74.0	26.4

Radiated Spurious – CH62

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.3	---	68.2	34.9
1086.5	51.5	---	74.0	22.5
1087.0	---	42.5	54.0	11.5
6548.4	47.5	---	68.2	20.7
15875.3	---	46.9	54.0	7.1
15877.2	56.1	---	74.0	17.9
21239.6	48.1	---	74.0	25.9
21239.8	---	42.4	54.0	11.6

30 MHz – 40 GHz, 802.11ax40, HE0, Chain B

Radiated Spurious – CH54

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	33.4	---	68.2	34.8
1047.0	---	41.0	54.0	13.0
1047.0	51.1	---	74.0	22.9
7004.2	48.5	---	68.2	19.7
15754.9	54.3	---	74.0	19.7
15755.9	---	45.2	54.0	8.8
21008.2	---	39.9	54.0	14.1
21008.7	51.4	---	74.0	22.6
21079.7	47.6	---	74.0	26.4
21079.9	---	42.4	54.0	11.6

Radiated Spurious – CH62

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
576.0	32.2	---	68.2	36.0
1086.5	48.1	---	74.0	25.9
1087.0	---	39.0	54.0	15.0
6604.5	48.5	---	68.2	19.7
15875.8	---	47.4	54.0	6.6
15878.2	55.2	---	74.0	18.8
21239.8	---	42.5	54.0	11.5
21240.1	48.3	---	74.0	25.7

30 MHz – 40 GHz, 802.11ax40, HE0, Chain A+B

Radiated Spurious – CH62

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
408.0	29.0	---	46.0	17.0
624.0	34.6	---	68.2	33.6
6324.0	56.4	---	68.2	11.8
16476.5	57.0	---	68.2	11.2
21168.6	---	37.7	54.0	16.3
21169.4	47.1	---	74.0	26.9
21241.7	47.5	---	74.0	26.5
21242.0	---	39.8	54.0	14.2

30 MHz – 40 GHz, 802.11ax80, HE0, Chain A

Radiated Spurious – CH58

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
408.0	29.2	---	46.0	16.8
624.0	34.8	---	68.2	33.4
1047.0	---	43.6	54.0	10.5
1047.0	52.8	---	74.0	21.2
10503.5	48.9	---	68.2	19.3
15756.4	---	46.6	54.0	7.4
15757.8	56.2	---	74.0	17.8
21511.3	47.7	---	68.2	20.5

30 MHz – 40 GHz, 802.11ax80, HE0, Chain B

Radiated Spurious – CH58

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
408.0	28.8	---	46.0	17.2
624.0	34.2	---	68.2	34.0
1046.5	50.5	---	74.0	23.5
1047.0	---	41.1	54.0	12.9
17821.7	50.5	---	74.0	23.5
17843.9	---	40.1	54.0	13.9
21158.5	48.0	---	74.0	26.0
21159.6	---	40.8	54.0	13.2
22009.3	46.7	---	68.2	21.5

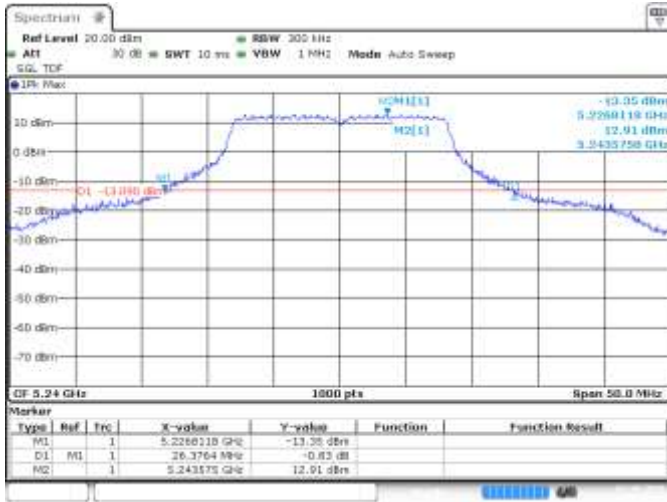
30 MHz – 40 GHz, 802.11ax80, HE0, Chain A+B

Radiated Spurious – CH58

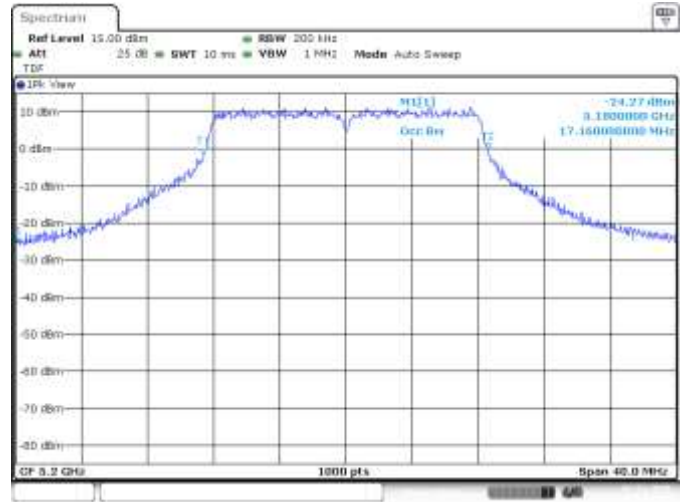
Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBµV/m	dBµV/m	dBµV/m	dB
408.0	30.6	---	46.0	15.4
576.0	33.9	---	68.2	34.3
6323.0	56.5	---	68.2	11.7
15756.4	---	49.3	54.0	4.7
15756.9	57.0	---	74.0	17.0
21007.4	---	39.8	54.0	14.2
21009.5	49.0	---	74.0	25.0
21136.8	47.5	---	74.0	26.5
21159.9	---	41.4	54.0	12.6

B.4 Test Results Screenshot U-NII-1

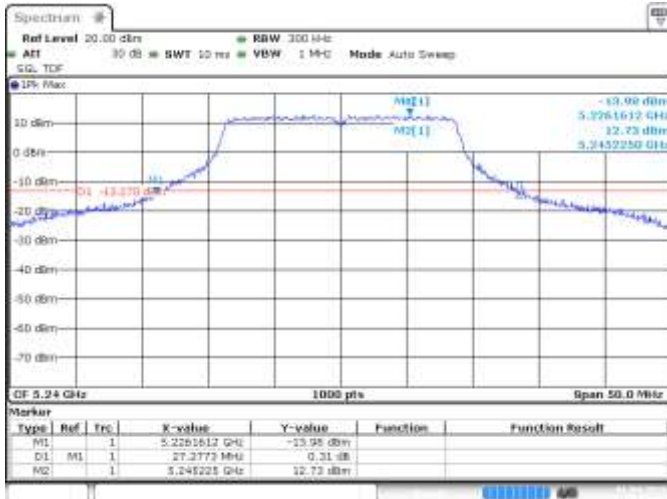
B.4.1 26dB & 99% Bandwidth



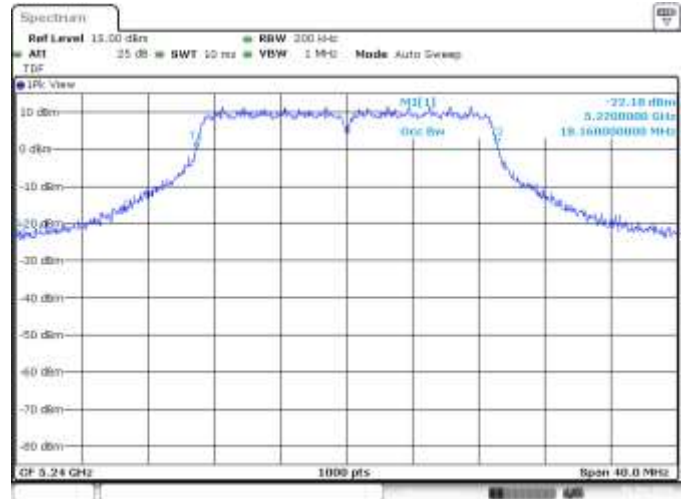
SISO A, CH48, 802.11a, 6Mbps, 26dB BW



SISO B, CH40, 802.11a, 6Mbps, 99% BW



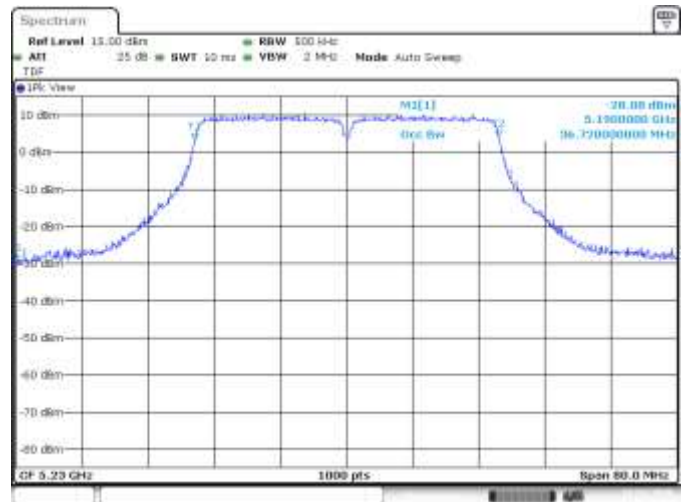
SISO B, CH48, 802.11n20, HT0, 26dB BW



SISO B, CH48, 802.11n20, HT0, 99% BW



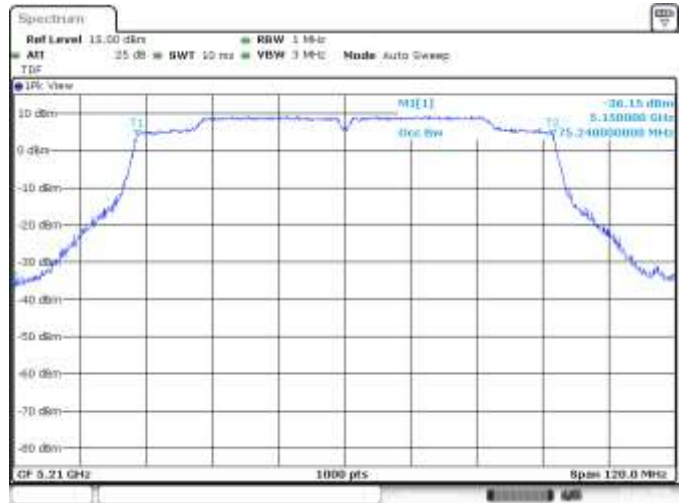
MIMO A, CH46, 802.11n40, HT0, 26dB BW



MIMO A, CH46, 802.11n40, HT0, 26dB BW



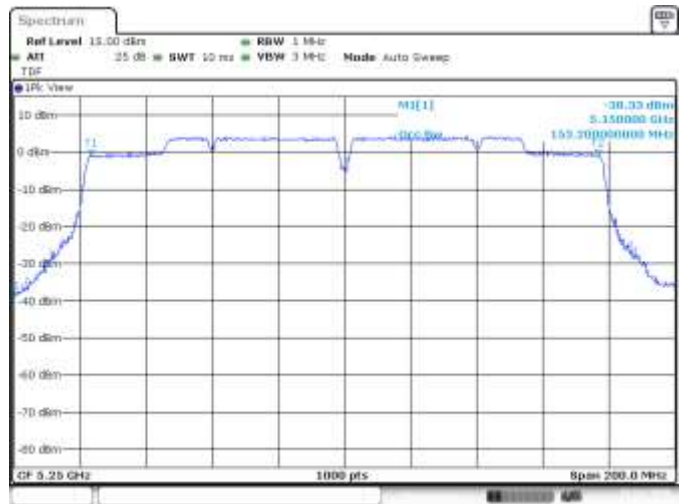
MIMO B, CH42, 802.11ac80, VHT0, 26dB BW



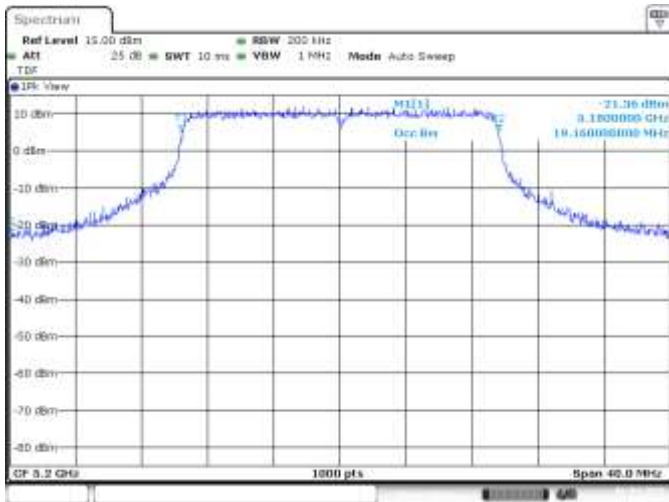
MIMO A, CH42, 802.11ac80, VHT0, 99% BW



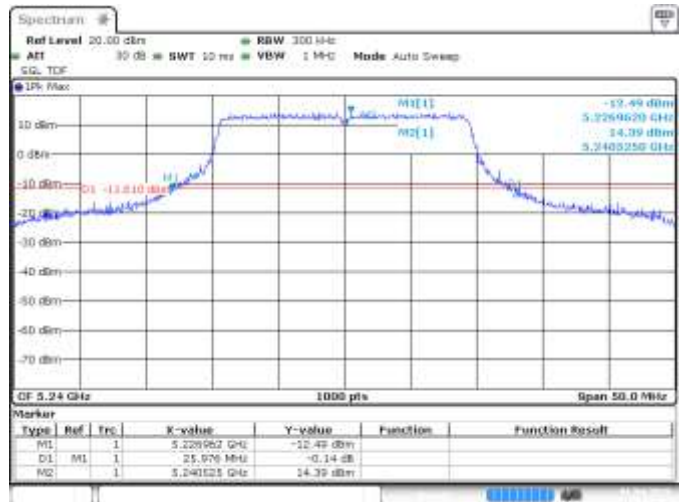
MIMO B, CH50, 802.11ac160, VHT0, 26dB BW



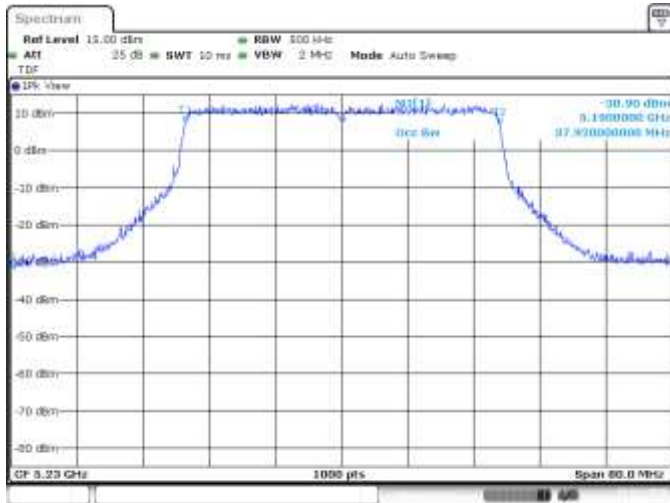
MIMO A, CH50, 802.11ac160, VHT0, 99% BW



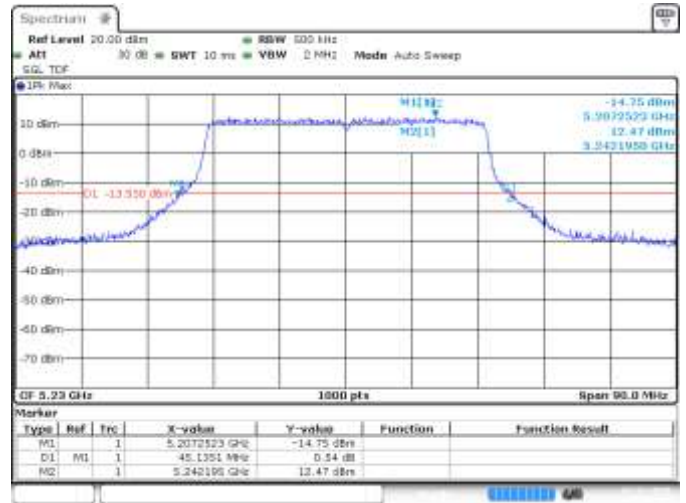
SISO A, CH40, 802.11ax20, HE0, 99% BW



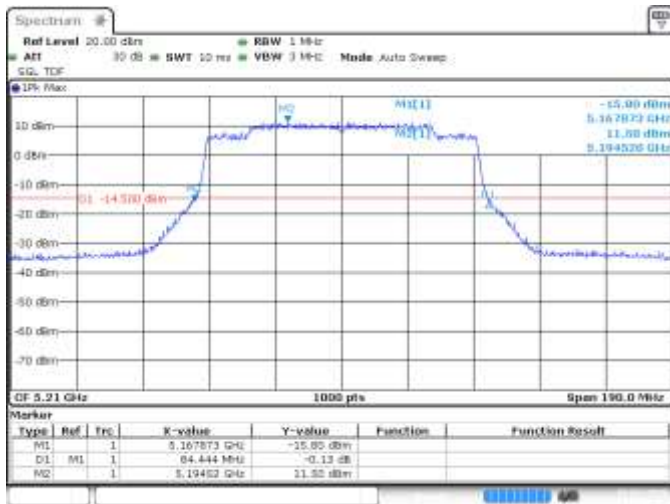
SISO B, CH48, 802.11ax20, HE0, 26dB BW



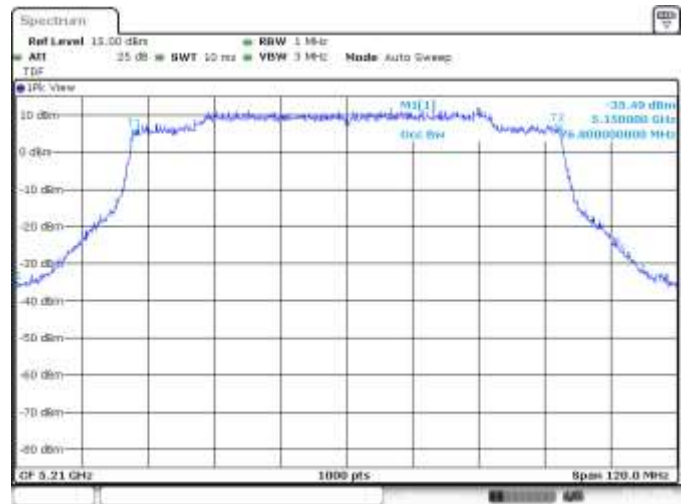
MIMO A, CH46, 802.11ax40, HE0, 99% BW



MIMO A, CH46, 802.11ax40, HE0, 26dB BW



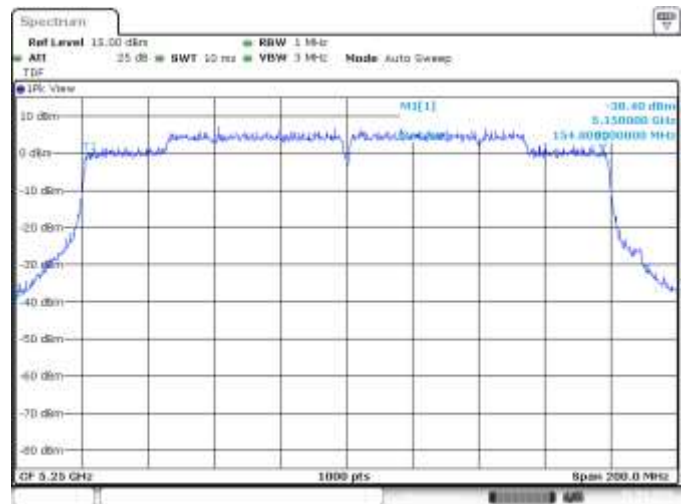
MIMO A, CH42, 802.11ax80, HE0, 26dB BW



MIMO A, CH42, 802.11ax80, HE0, 99% BW

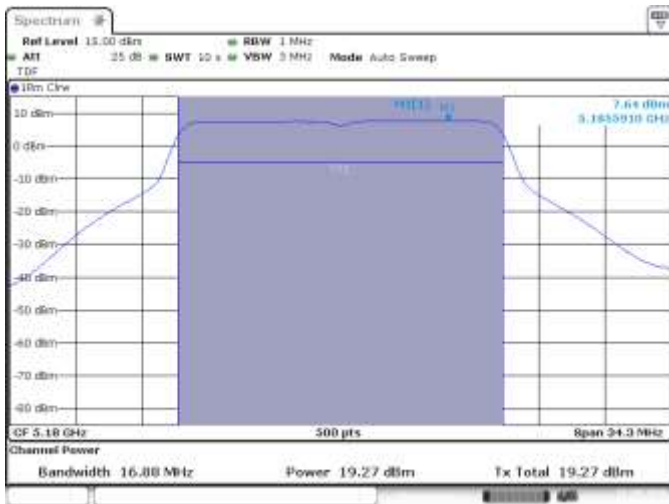


SISO B, CH50, 802.11ax160, HE0, 26dB BW

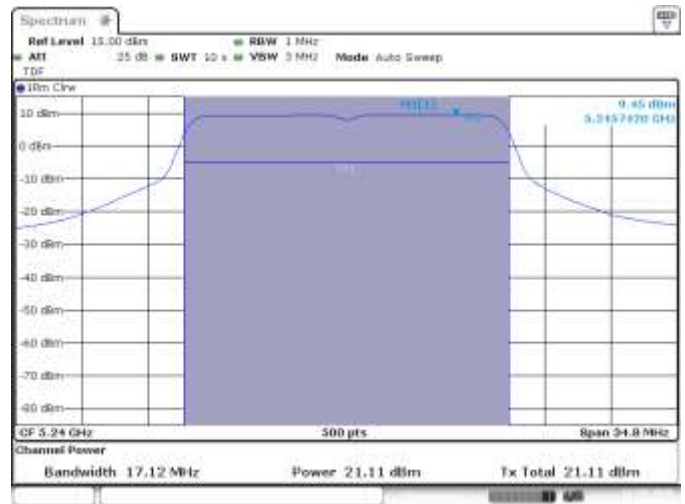


SISO B, CH50, 802.11ax160, HE0, 99% BW

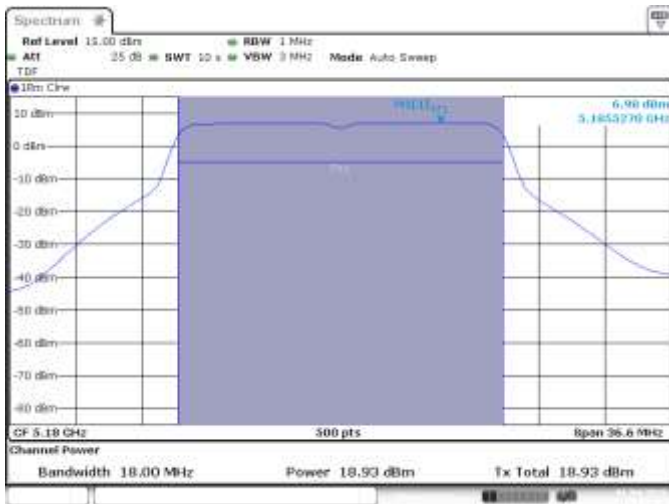
B.4.2 Power Limits. Maximum Output power & Maximum power spectral density



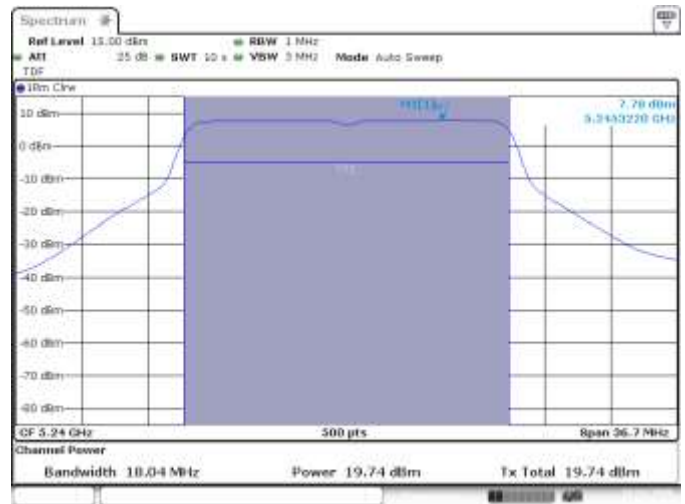
SISO A, CH36, 802.11a, 6Mbps



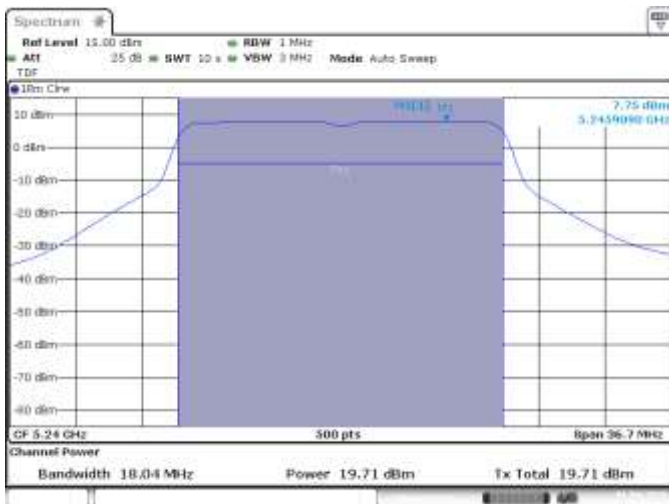
SISO A, CH48, 802.11a, 6Mbps



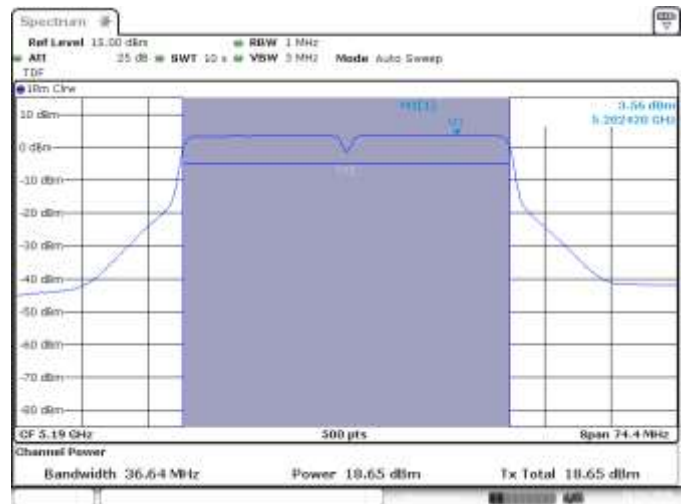
SISO B, CH36, 802.11n20, CH36, HT0



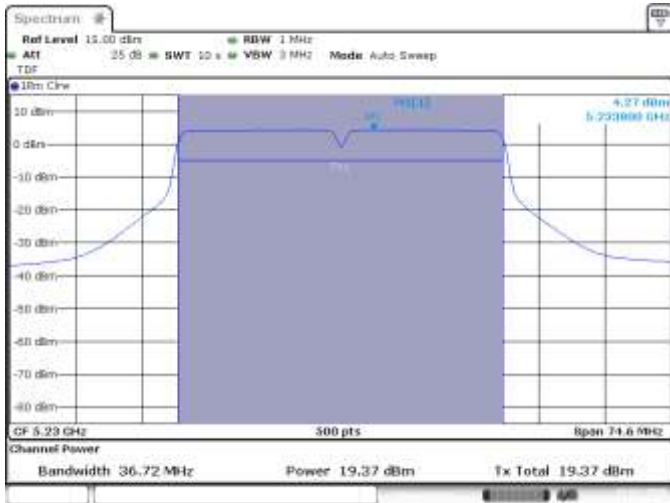
MIMO A, CH48, 802.11n20, HT8



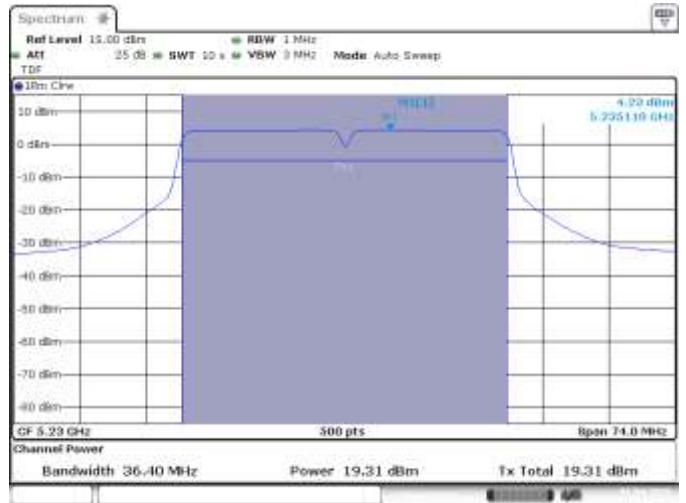
MIMO B, CH48, 802.11n20, HT8



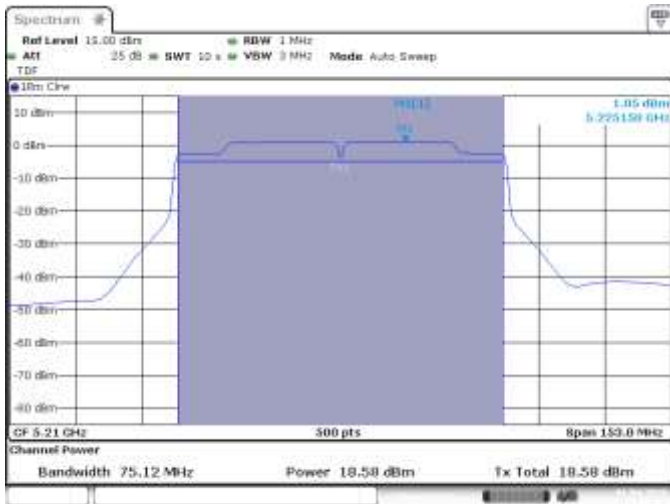
SISO A, CH38, 802.11n40, HT0



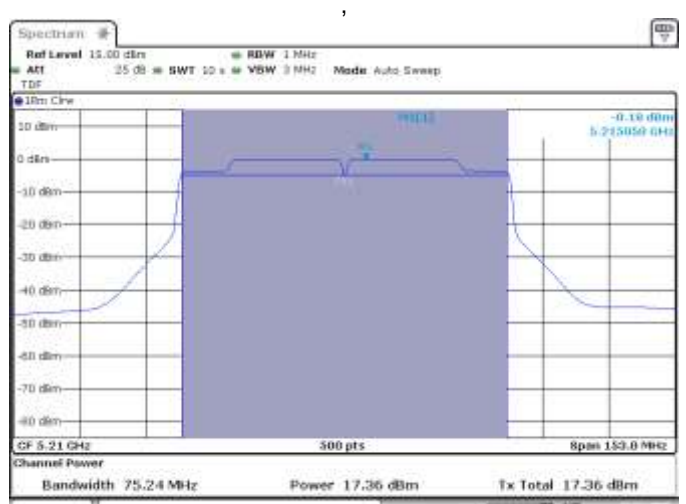
MIMO A, CH46, 802.11n40, HT8



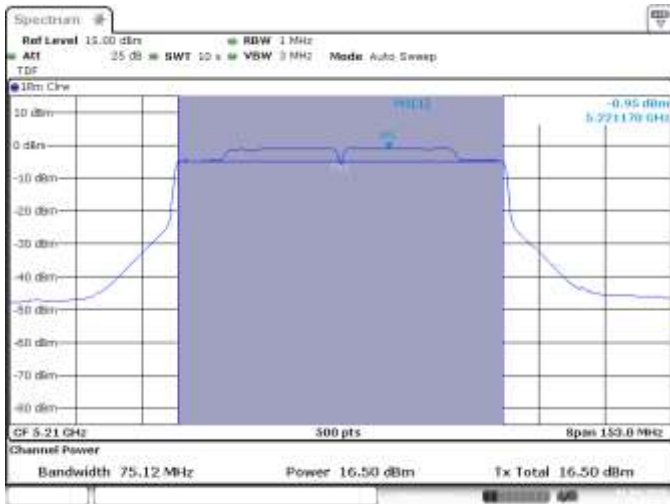
MIMO B, CH46, 802.11n40, HT8



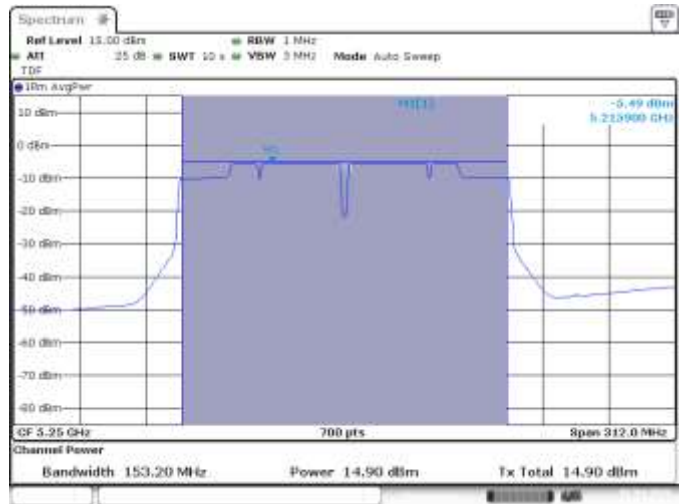
SISO B, 802.11ac80, CH42, VHT0



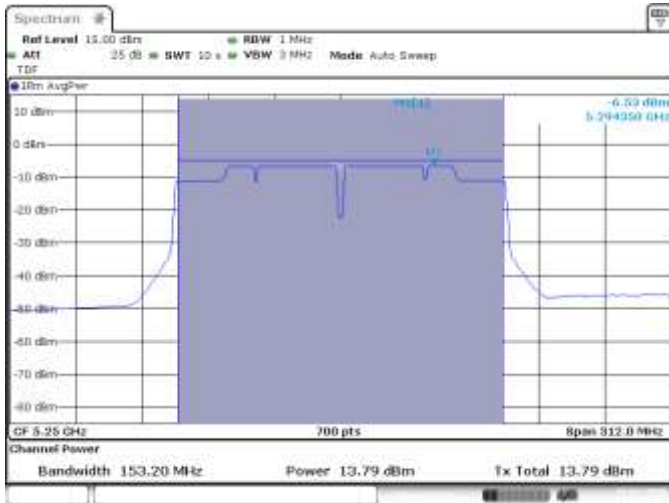
MIMO A, 802.11ac80, CH42, VHT0



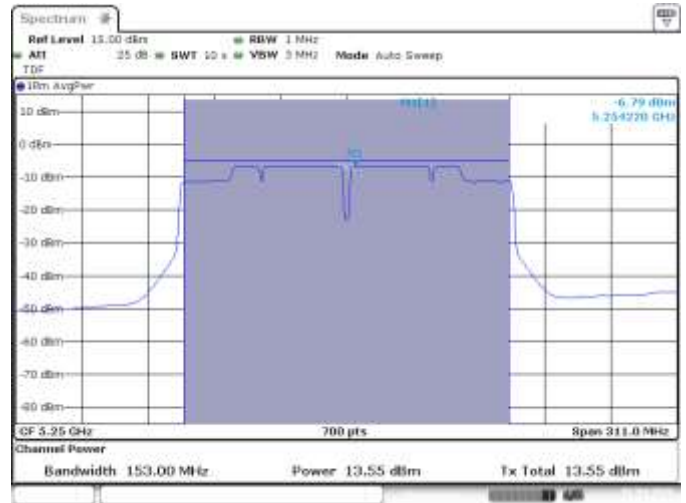
MIMO B, 802.11ac80, CH42, VHT0



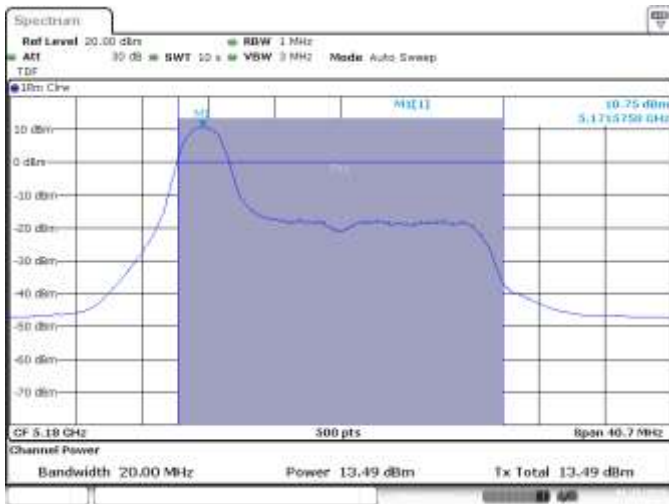
SISO B, 802.11ac160, CH50, VHT0



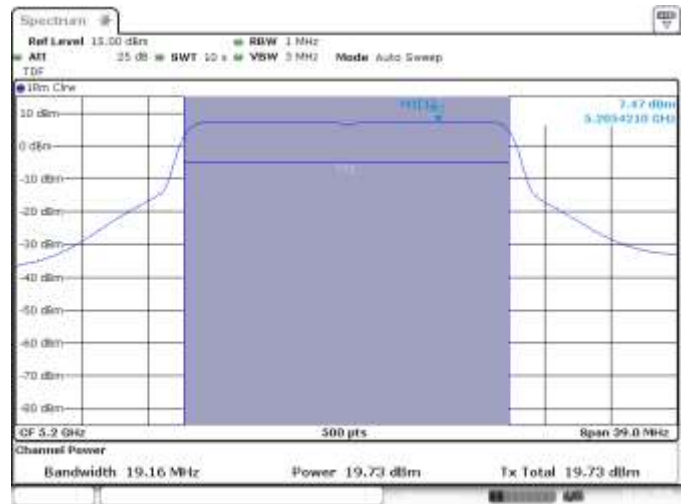
MIMO A, 802.11ac160,CH50, VHT0



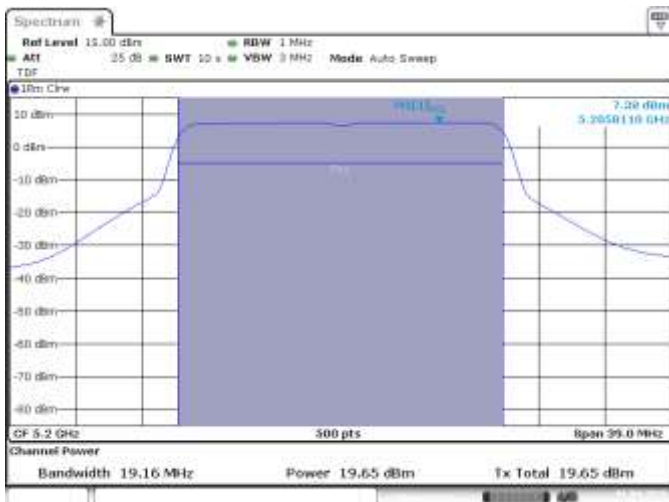
MIMO B, 802.11ac160,CH50, VHT0



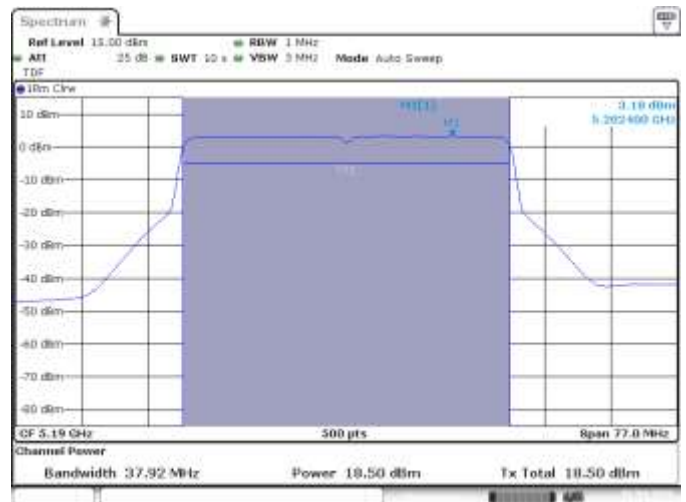
SISO A, CH36, 802.11ax20, HE0, RU 26_0



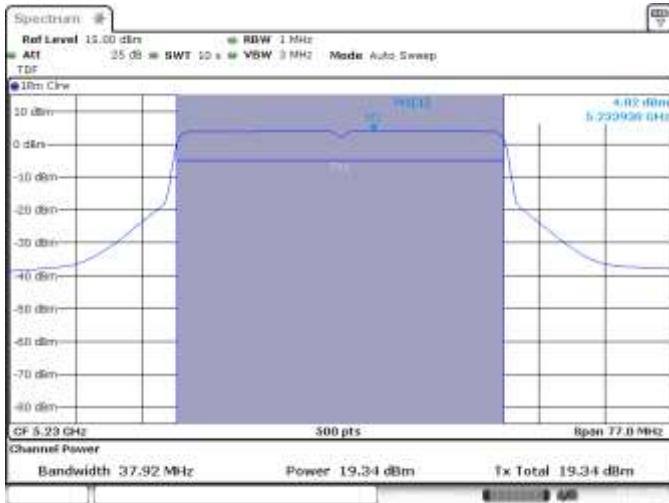
MIMO A, CH40, 802.11ax20, HE0



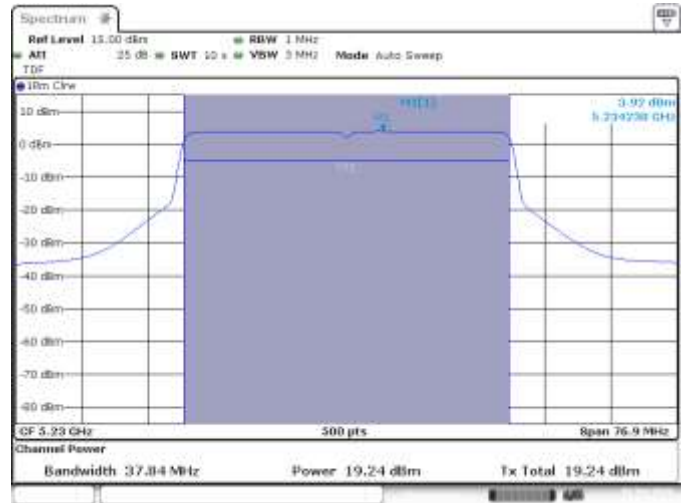
MIMO B, CH40, 802.11ax20, HE0



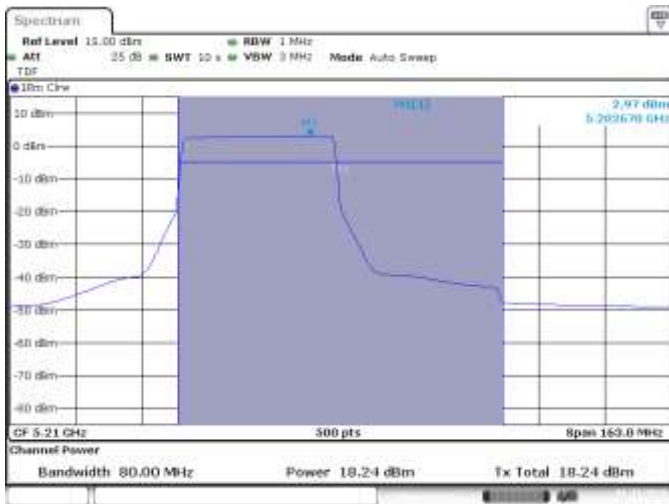
SISO B, CH38, 802.11ax40, HE0



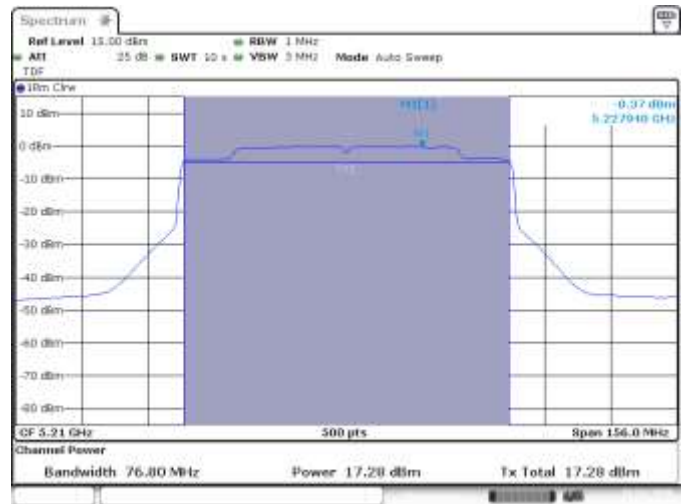
MIMO A, CH46, 802.11ax40, HE0



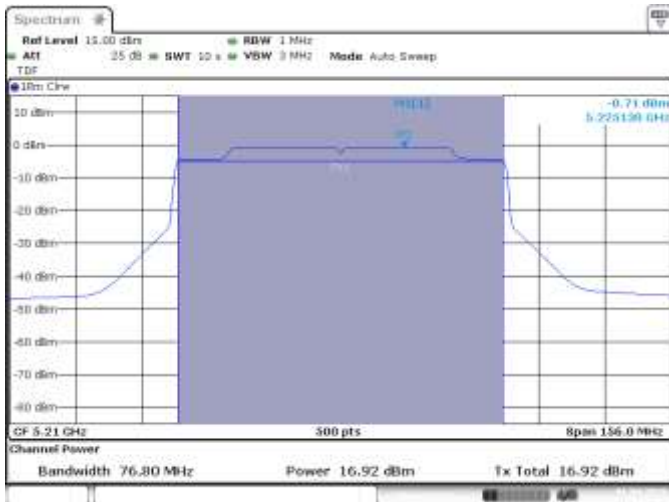
MIMO B, CH46, 802.11ax40, HE0



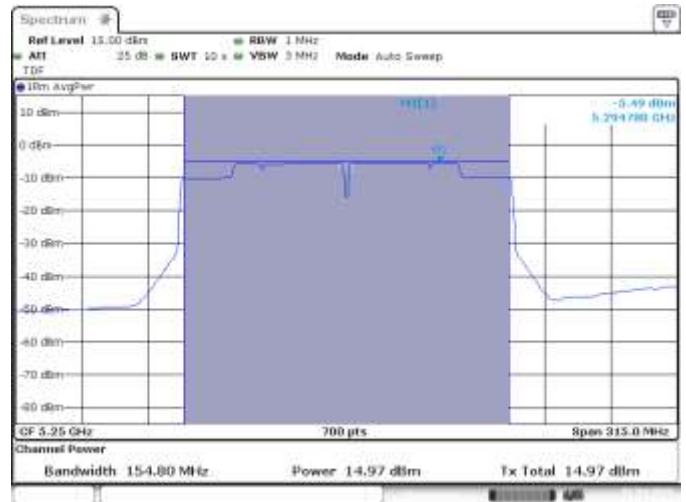
SISO B, CH42, 802.11ax80, HE0, RU 484_65 Power & PSD



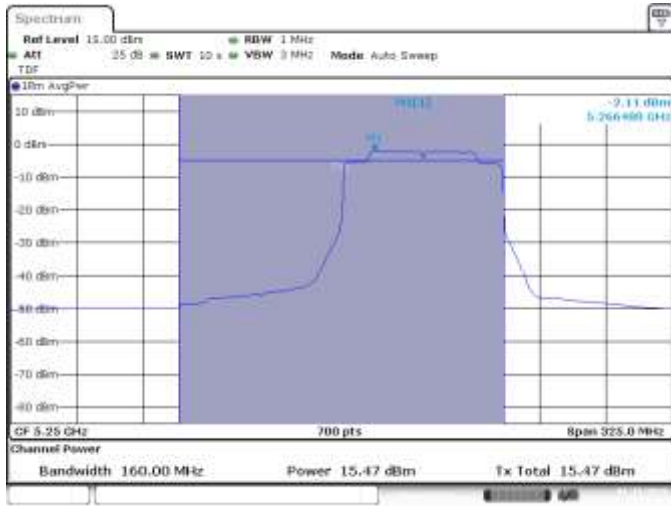
MIMO A, CH42, 802.11ax80, HE0



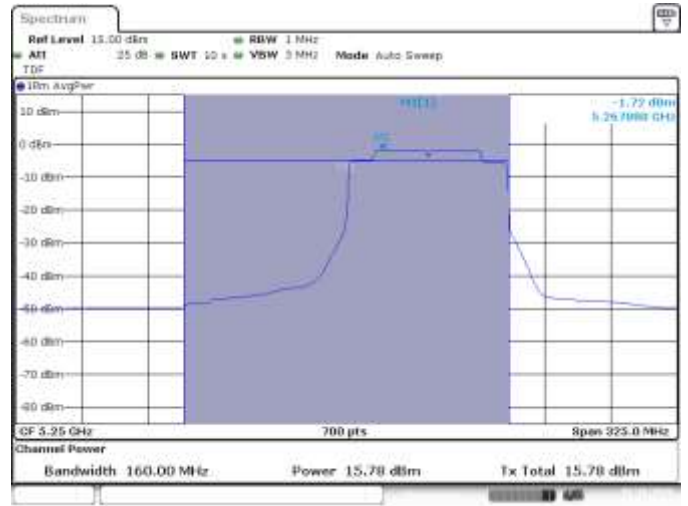
MIMO B, CH42, 802.11ax80, HE0



SISO B, CH50, 802.11ax160, HE0

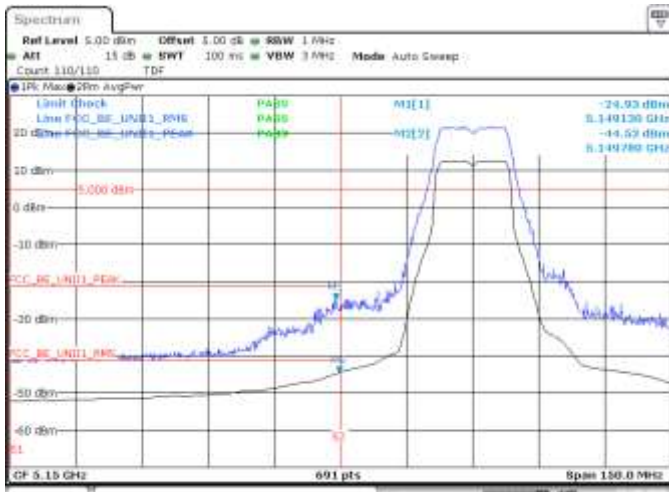


MIMO A, CH50, 802.11ax160, HE0, RU 996_S67



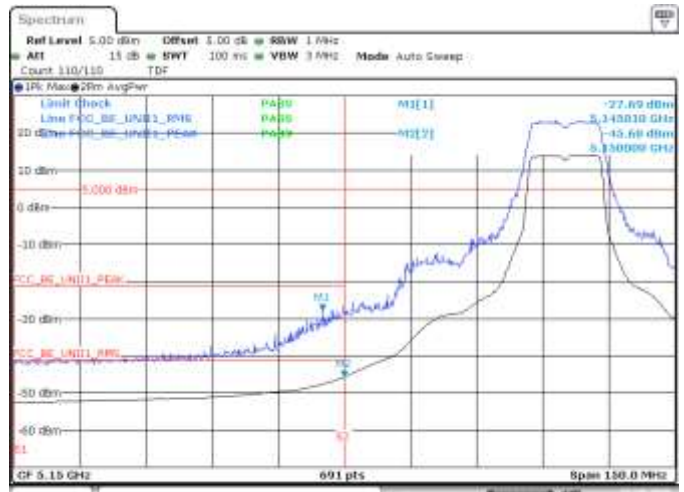
MIMO B, CH50, 802.11ax160, HE0, RU 996_S67

B.4.3 Undesirable emission limits : Band Edge (Conducted)



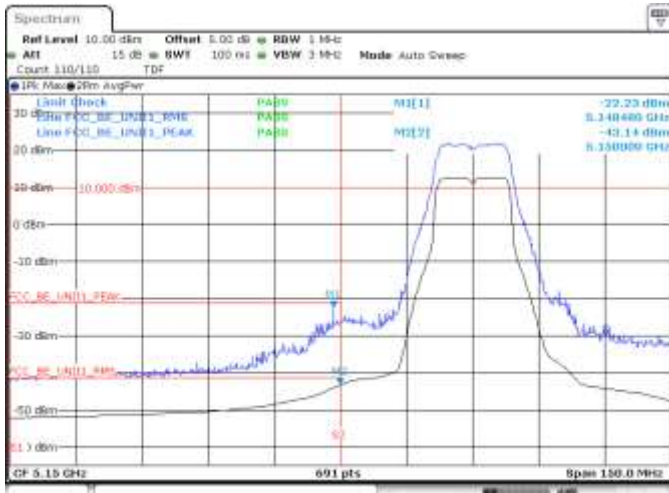
Date: 20/DEC/2008 20:11:46

SISO A, 802.11a, 6Mbps, CH36, BE Low, RMS, Peak



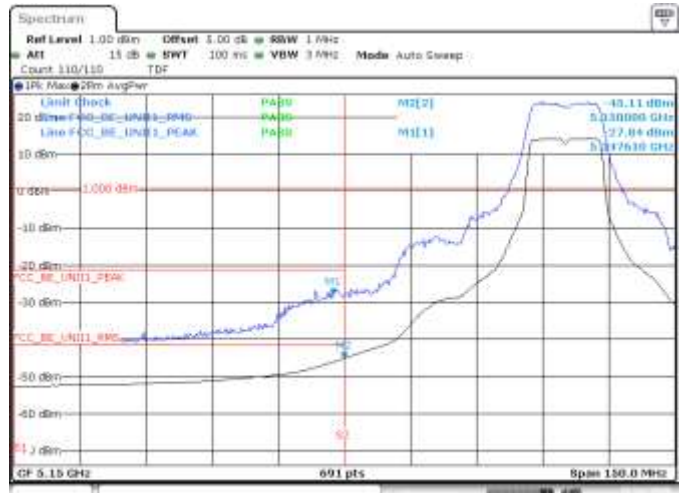
Date: 20/DEC/2008 20:08:03

SISO A, 802.11a, 6Mbps, CH40, BE Low, RMS, Peak



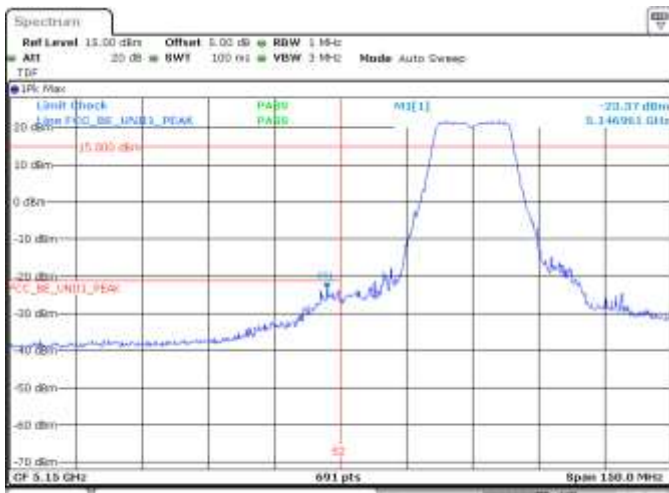
Date: 21/DEC/2008 17:03:32

SISO B, 802.11a, 6Mbps, CH36, BE Low, RMS, Peak



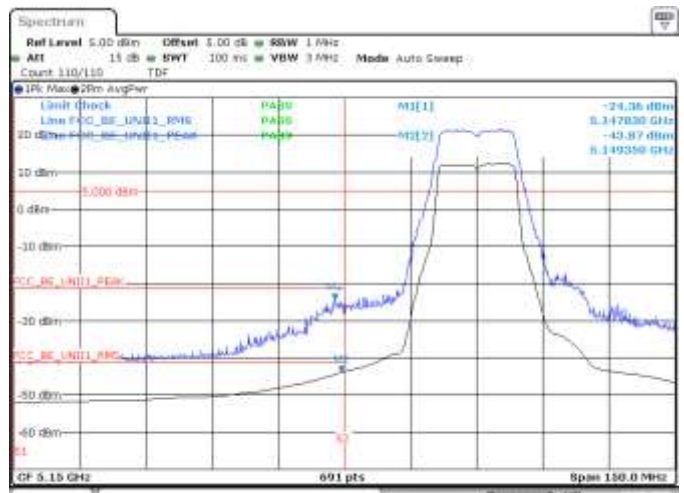
Date: 21/DEC/2008 17:42:05

SISO B, 802.11a, 6Mbps, CH40, BE Low, RMS, Peak



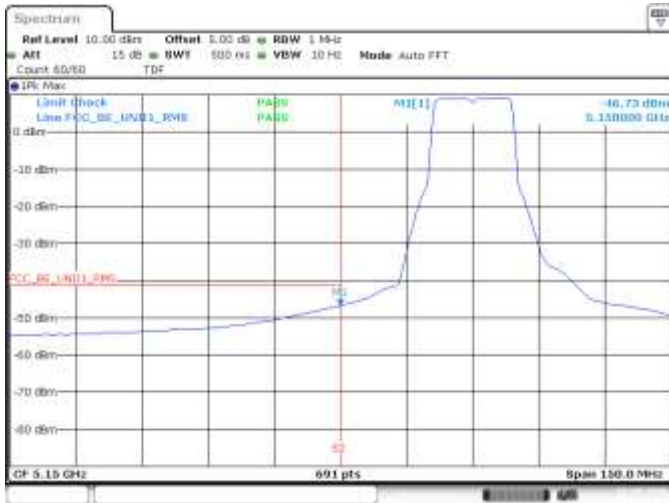
Date: 20/DEC/2008 21:05:11

SISO A, 802.11n20, HT0, CH36, BE Low, Peak



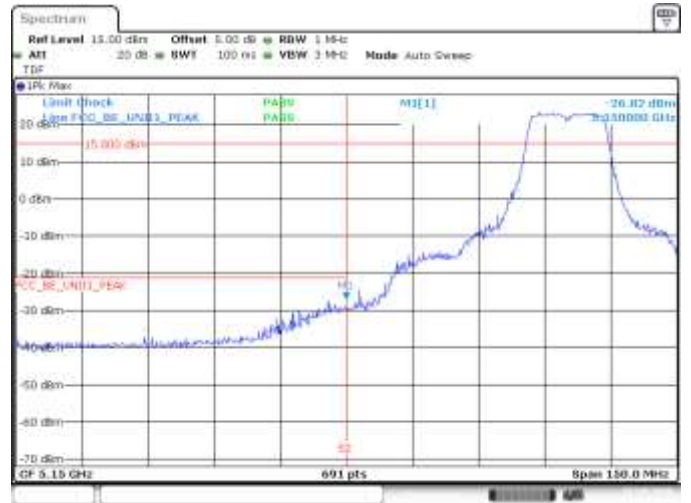
Date: 20/DEC/2008 20:38:22

SISO A, 802.11n20, HT0, CH36, BE Low, RMS, Peak



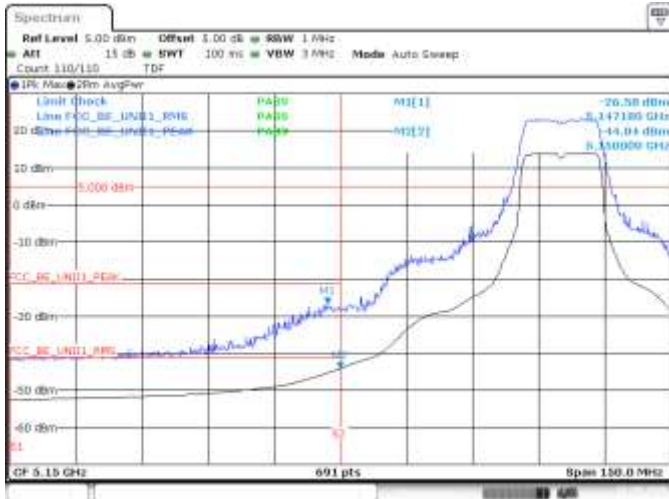
Date: 20DEC2008 21:04:14

SISO A, 802.11n20, HT0, CH36, BE Low, RMS



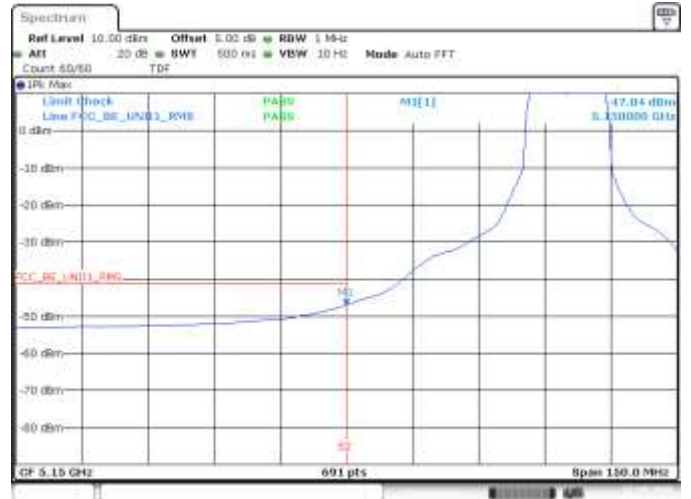
Date: 20DEC2008 20:46:05

SISO A, 802.11n20, HT0, CH40, BE Low, Peak



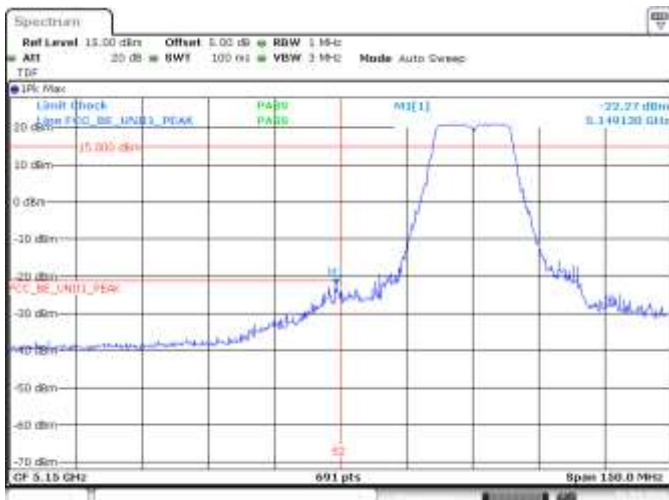
Date: 20DEC2008 20:31:01

SISO A, 802.11n20, HT0, CH40, BE Low, RMS, Peak



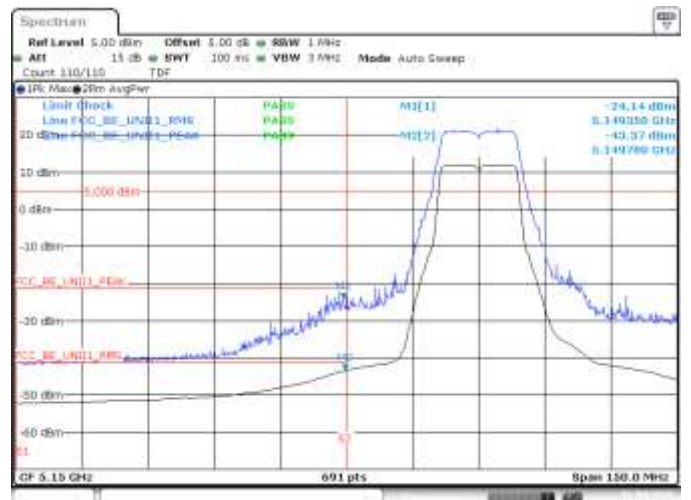
Date: 20DEC2008 20:38:37

SISO A, 802.11n20, HT0, CH40, BE Low, RMS



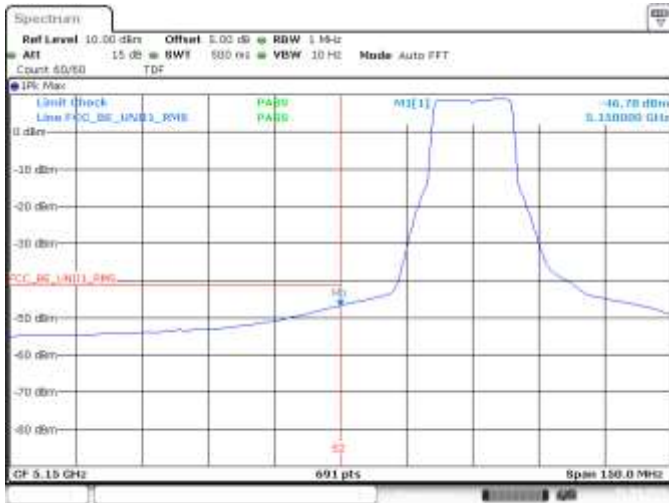
Date: 4 JAN 2009 11:40:07

SISO B, 802.11n20, HT0, CH36, BE Low, Peak



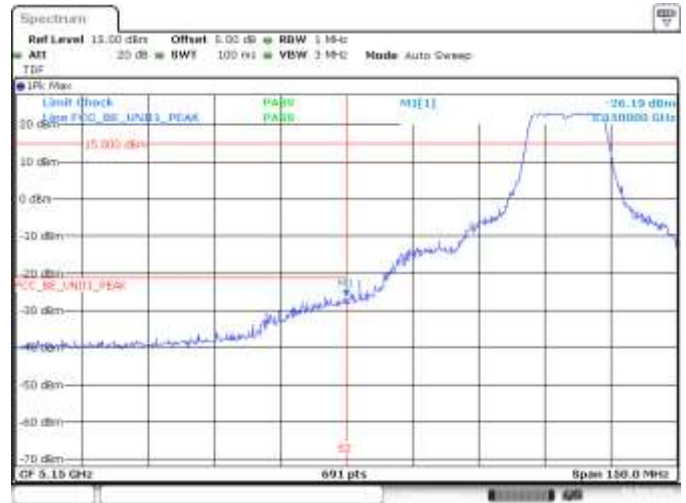
Date: 4 JAN 2009 11:35:45

SISO B, 802.11n20, HT0, CH36, BE Low, RMS, Peak



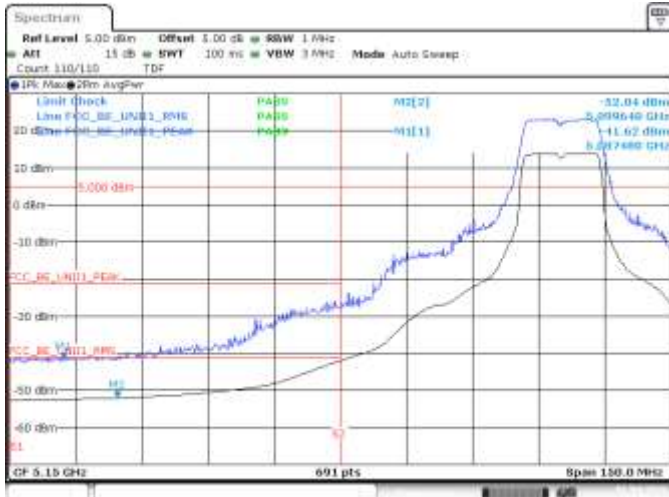
Date: 4 JAN 2018 11:38:39

SISO B, 802.11n20, HT0, CH36, BE Low, RMS



Date: 4 JAN 2018 11:55:43

SISO B, 802.11n20, HT0, CH40, BE Low, Peak



Date: 4 JAN 2018 11:55:37

SISO B, 802.11n20, HT0, CH40, BE Low, RMS, Peak



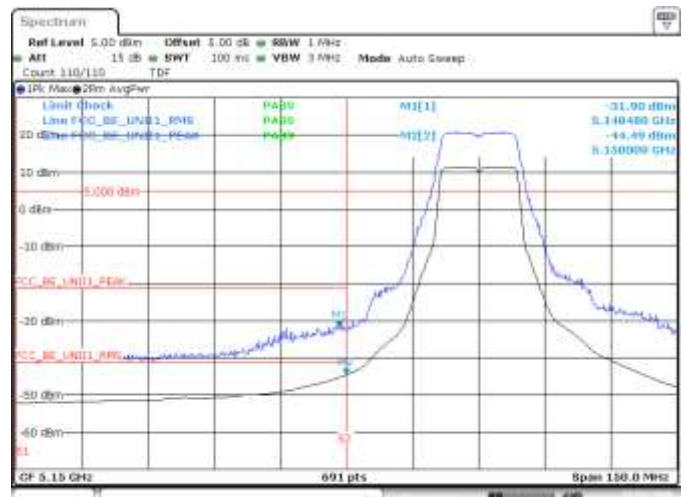
Date: 4 JAN 2018 11:55:28

SISO B, 802.11n20, HT0, CH40, BE Low, RMS



Date: 21 DEC 2018 11:21:38

MIMO A, 802.11n20, HT8, CH36, BE Low, Peak



Date: 21 DEC 2018 11:23:37

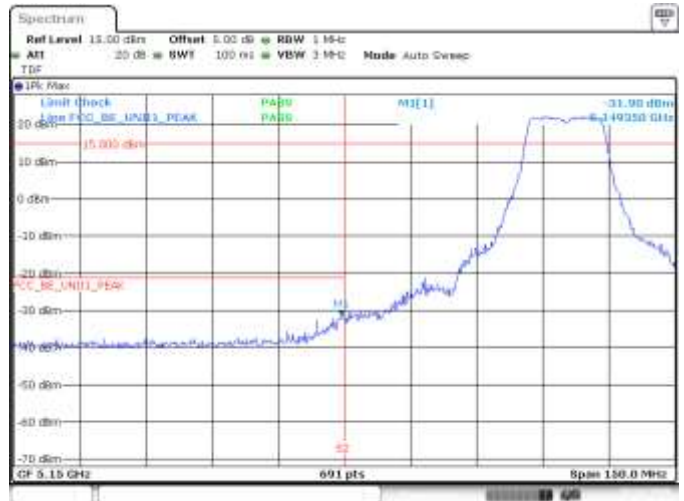
MIMO A, 802.11n20, HT8, CH36, BE Low, RMS, Peak

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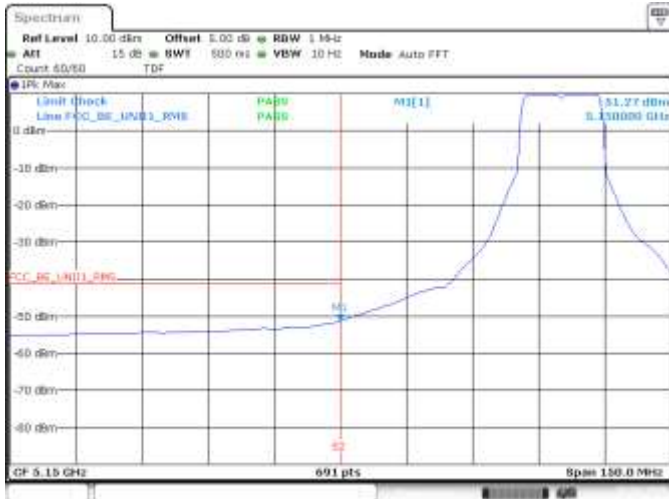
Date: 21 DEC 2018 11:30:47

MIMO A, 802.11n20, HT8, CH36, BE Low, RMS



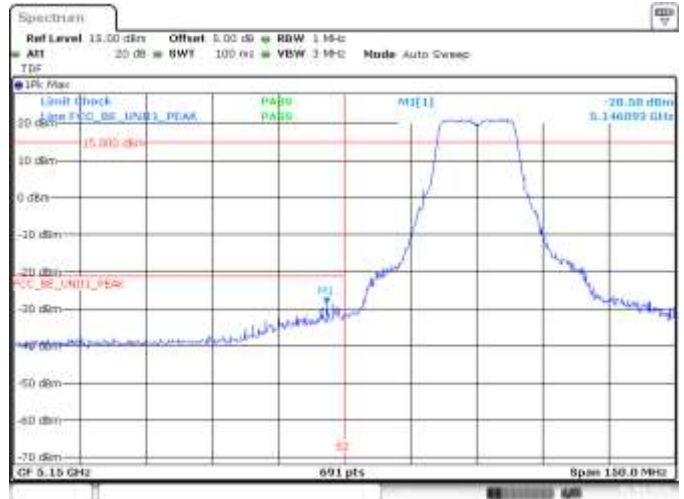
Date: 21 DEC 2018 11:30:21

MIMO A, 802.11n20, HT8, CH40, BE Low, Peak



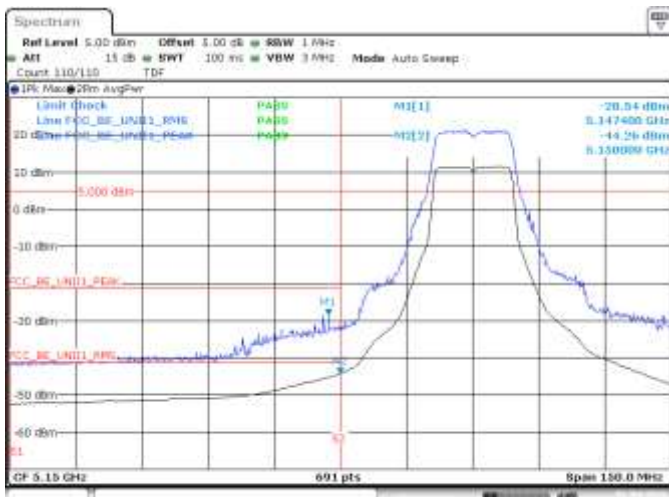
Date: 21 DEC 2018 11:32:01

MIMO A, 802.11n20, HT8, CH40, BE Low, RMS



Date: 4 JAN 2019 12:20:02

MIMO B, 802.11n20, HT8, CH36, BE Low, Peak



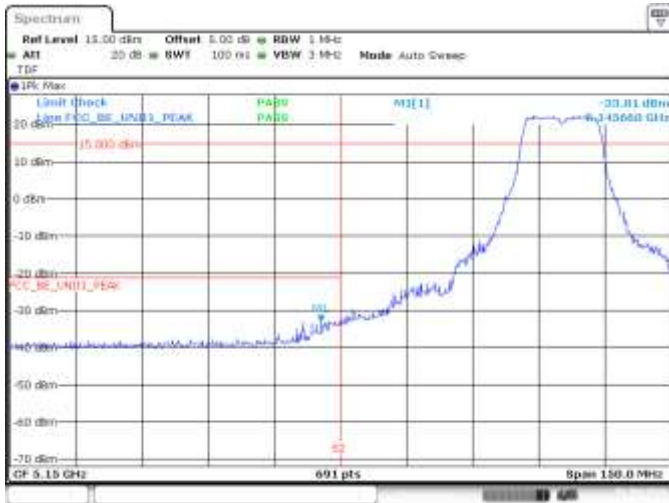
Date: 4 JAN 2019 12:20:31

MIMO B, 802.11n20, HT8, CH36, BE Low, RMS, Peak



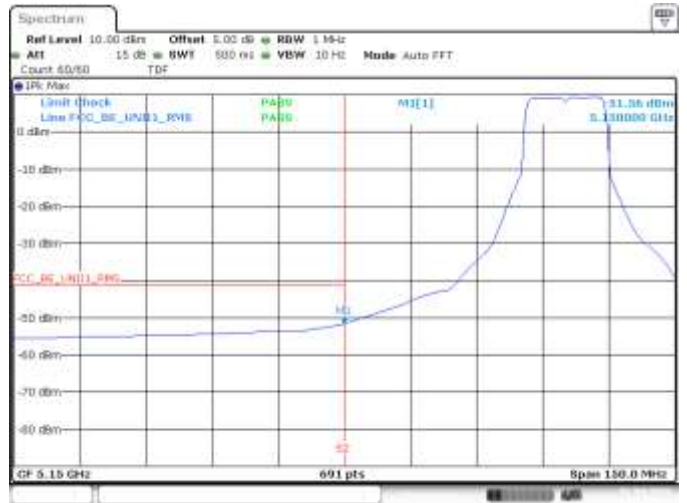
Date: 4 JAN 2019 12:19:41

MIMO B, 802.11n20, HT8, CH36, BE Low, RMS



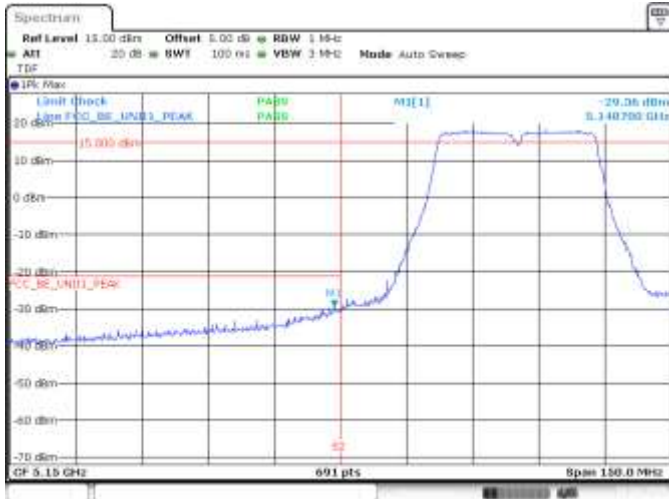
Date 4 JAN 2018 12:27:30

MIMO B, 802.11n20, HT8, CH40, BE Low, Peak



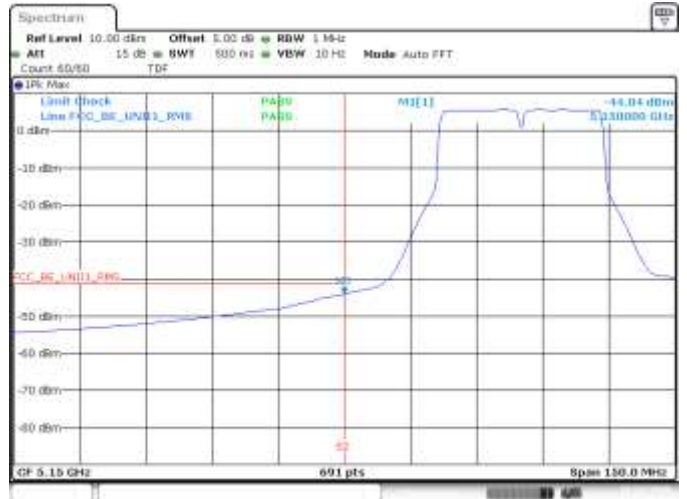
Date 4 JAN 2018 12:28:04

MIMO B, 802.11n20, HT8, CH40, BE Low, RMS



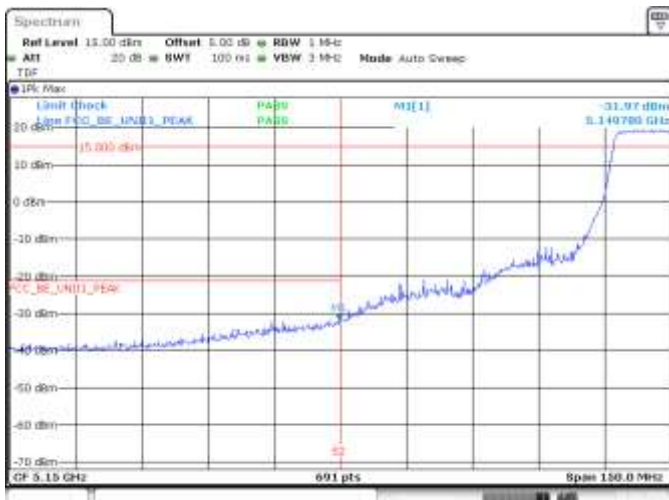
Date 21 DEC 2018 12:43:45

SISO A, 802.11n40, HT0, CH38, BE Low, Peak



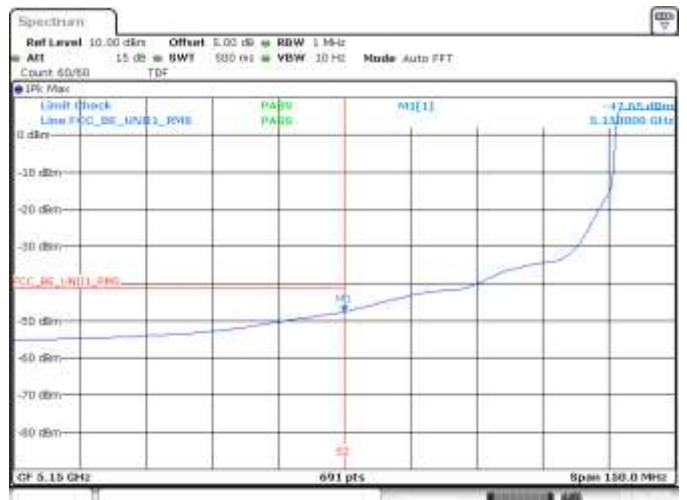
Date 21 DEC 2018 12:46:22

SISO A, 802.11n40, HT0, CH38, BE Low, RMS



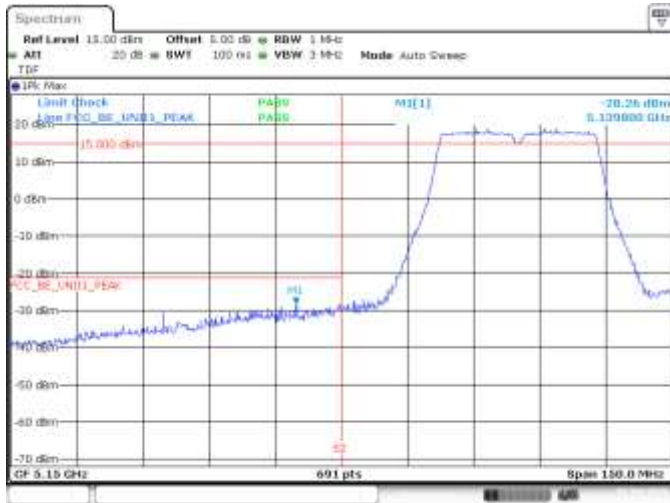
Date 21 DEC 2018 12:47:08

SISO A, 802.11n40, HT0, CH46, BE Low, Peak



Date 21 DEC 2018 12:46:27

SISO A, 802.11n40, HT0, CH46, BE Low, RMS



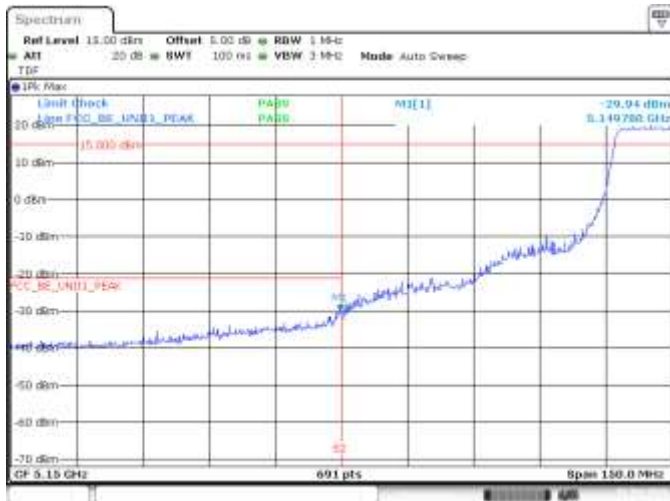
Date: 4 JUN 2018 13:27:49

SISO B, 802.11n40, HT0, CH38, BE Low, Peak



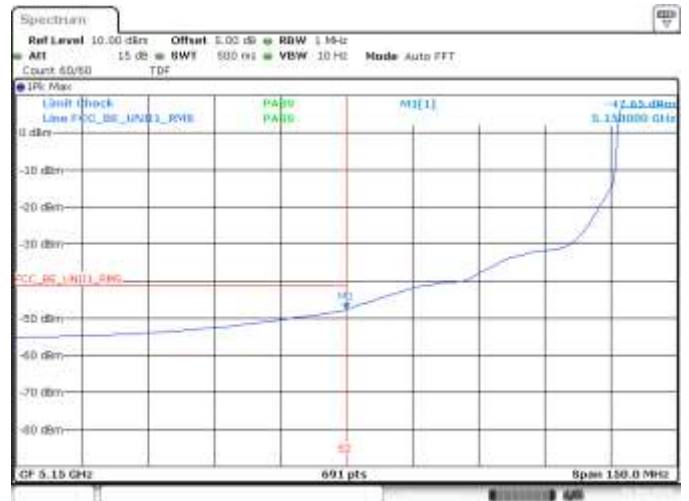
Date: 4 JUN 2018 13:28:05

SISO B, 802.11n40, HT0, CH38, BE Low, RMS



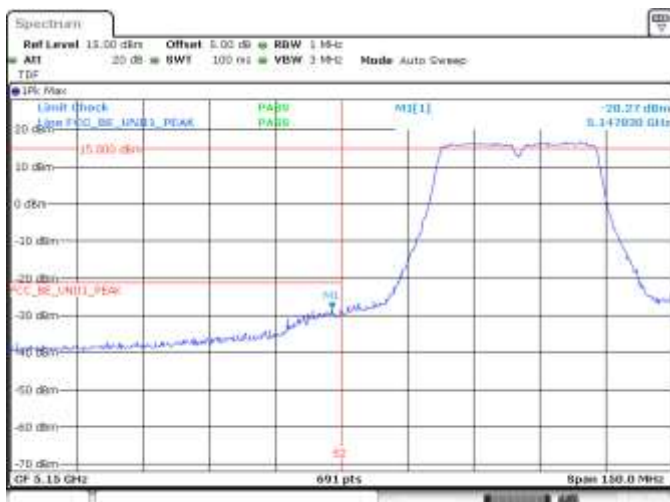
Date: 4 JUN 2018 13:32:21

SISO B, 802.11n40, HT0, CH46, BE Low, Peak



Date: 4 JUN 2018 13:32:05

SISO B, 802.11n40, HT0, CH46, BE Low, RMS



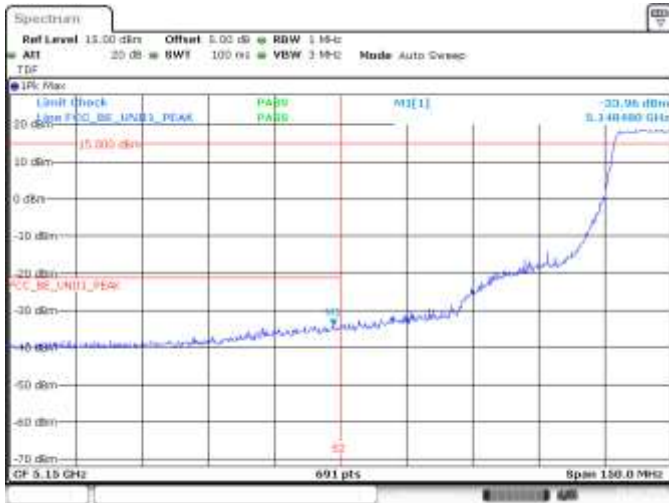
Date: 21 DEC 2018 12:58:39

MIMO A, 802.11n40, HT8, CH38, BE Low, Peak



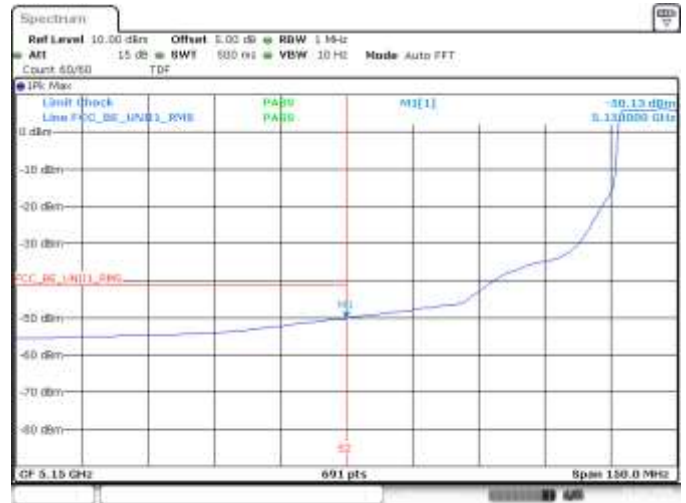
Date: 21 DEC 2018 12:58:01

MIMO A, 802.11n40, HT8, CH38, BE Low, RMS



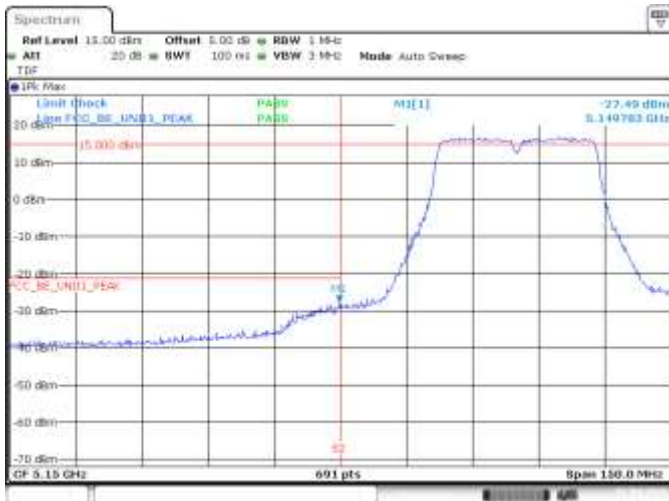
Date: 21 DEC 2016 13:03:00

MIMO A, 802.11n40, HT8, CH46, BE Low, Peak



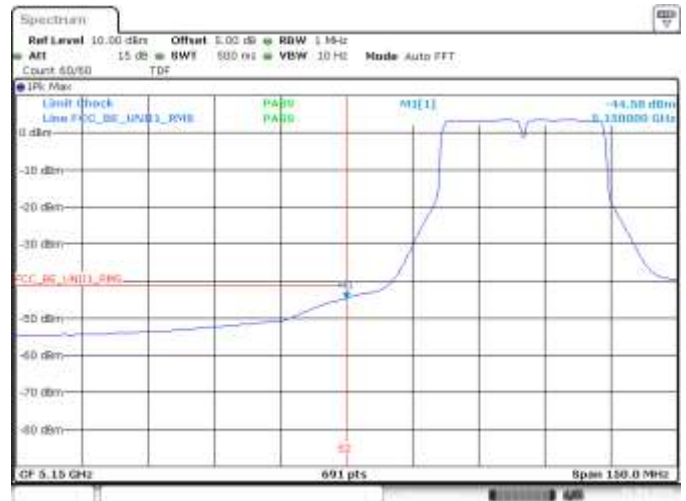
Date: 21 DEC 2016 13:03:20

MIMO A, 802.11n40, HT8, CH46, BE Low, RMS



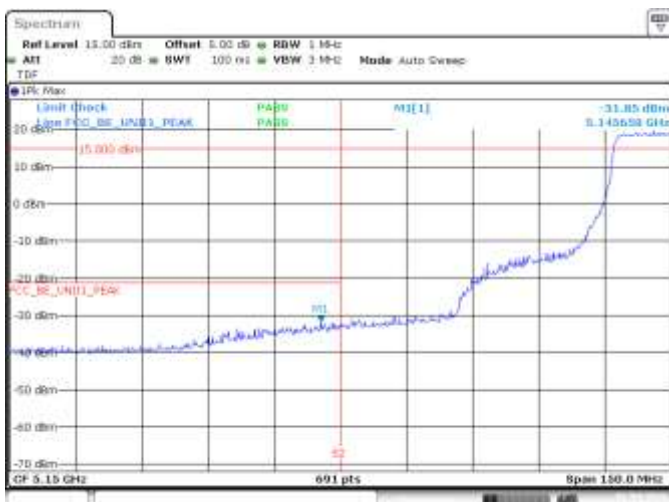
Date: 4 JAN 2016 13:38:27

MIMO B, 802.11n40, HT8, CH38, BE Low, Peak



Date: 4 JAN 2016 13:38:45

MIMO B, 802.11n40, HT8, CH38, BE Low, RMS



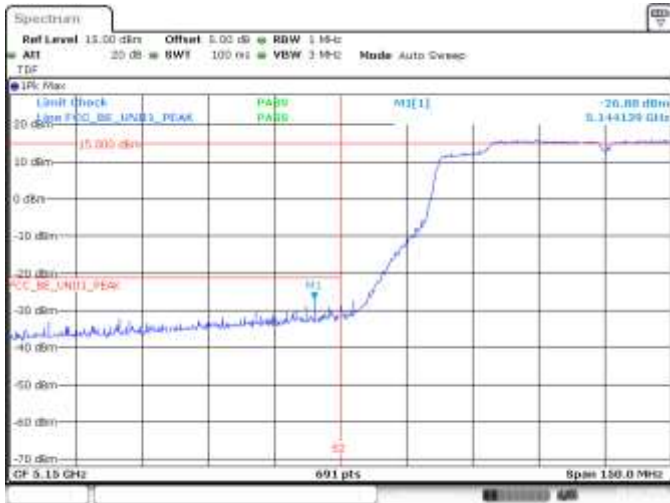
Date: 4 JAN 2016 13:40:00

MIMO B, 802.11n40, HT8, CH46, BE Low, Peak

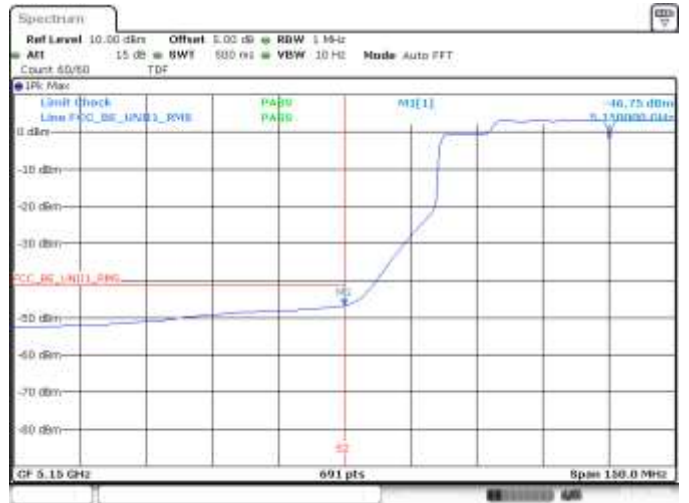


Date: 4 JAN 2016 13:40:21

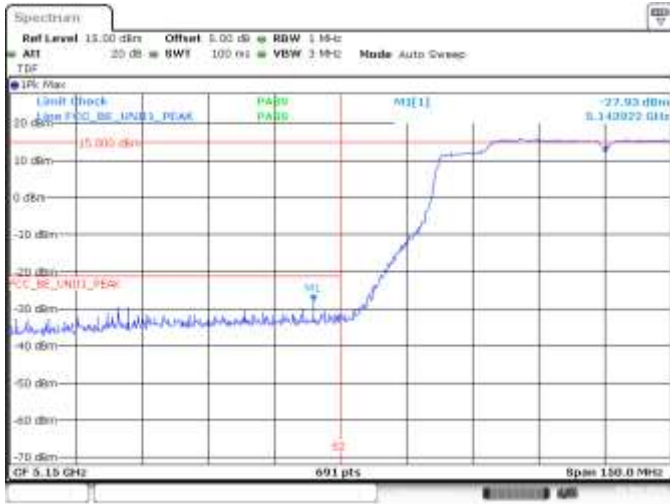
MIMO B, 802.11n40, HT8, CH46, BE Low, RMS



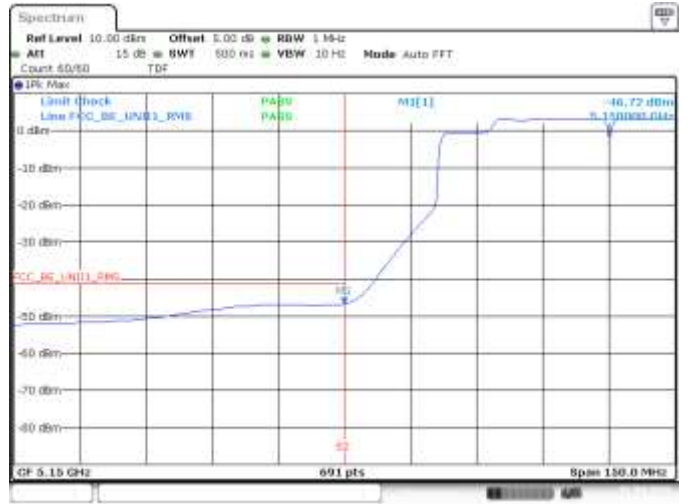
SISO A, 802.11ac80, VHT0, CH42, BE Low, Peak



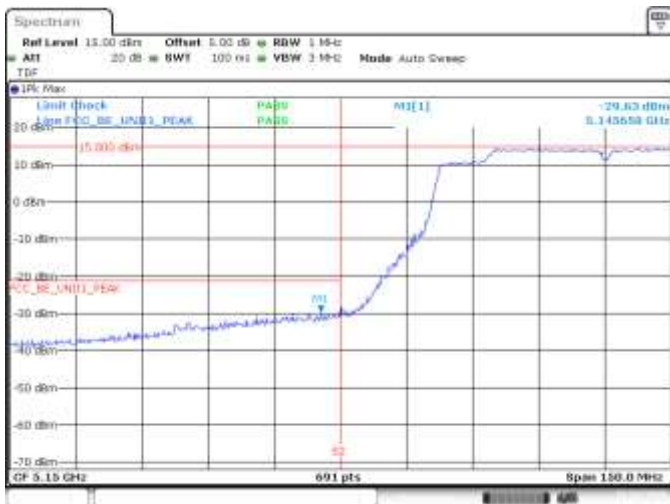
SISO A, 802.11ac80, VHT0, CH42, BE Low, RMS



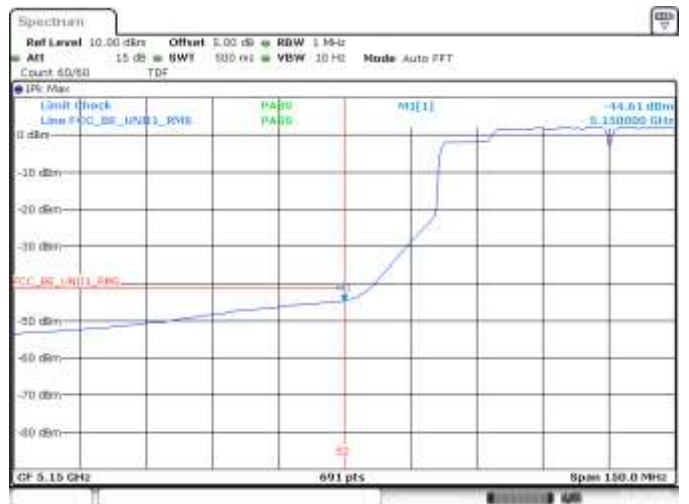
SISO B, 802.11ac80, VHT0, CH42, BE Low, Peak



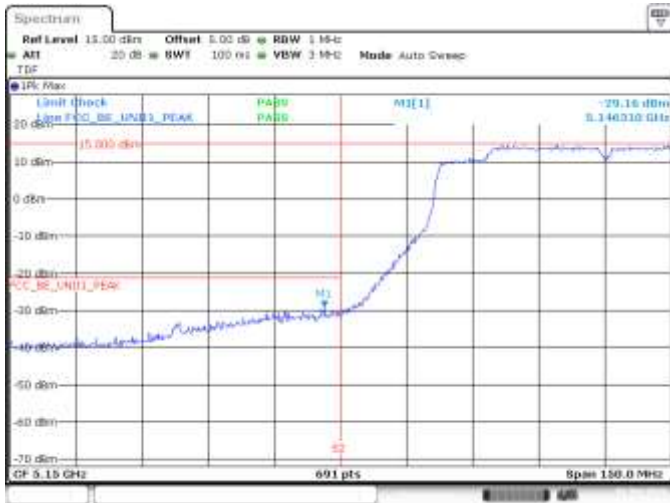
SISO B, 802.11ac80, VHT0, CH42, BE Low, RMS



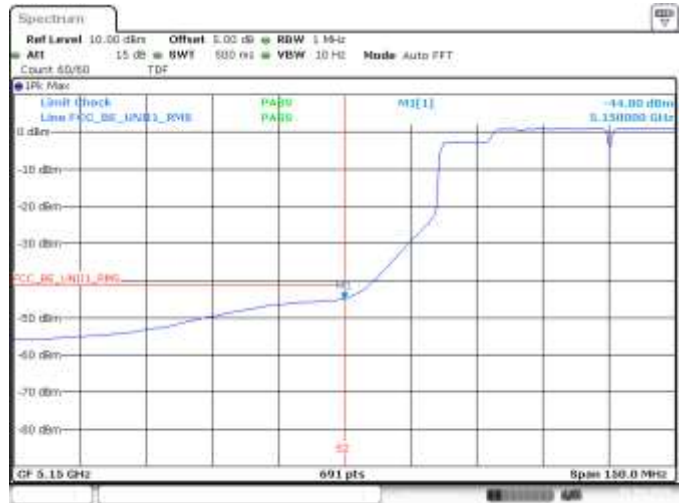
MIMO A, 802.11ac80, VHT0, CH42, BE Low, Peak



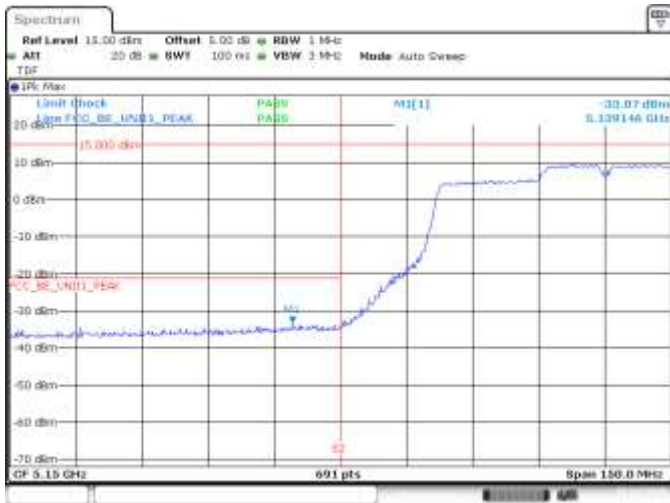
MIMO A, 802.11ac80, VHT0, CH42, BE Low, RMS



MIMO B, 802.11ac80, VHT0, CH42, BE Low, Peak



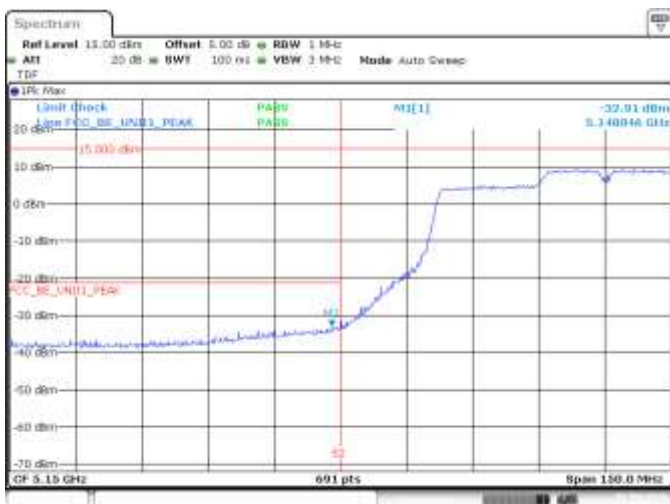
MIMO B, 802.11ac80, VHT0, CH42, BE Low, RMS



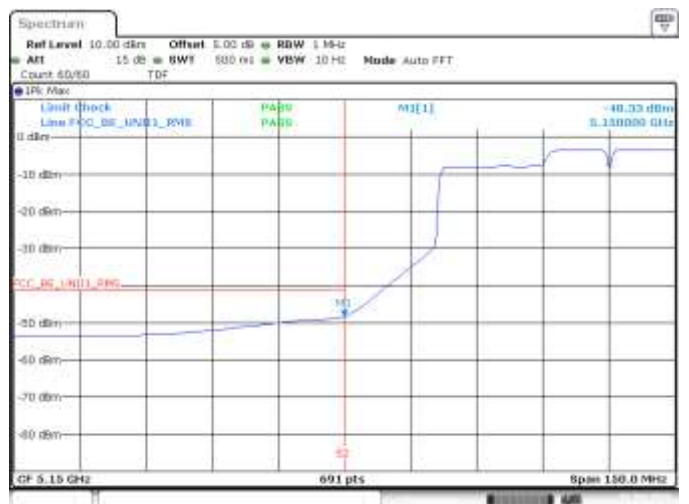
SISO A, 802.11ac160, VHT0, CH50, BE Low, Peak



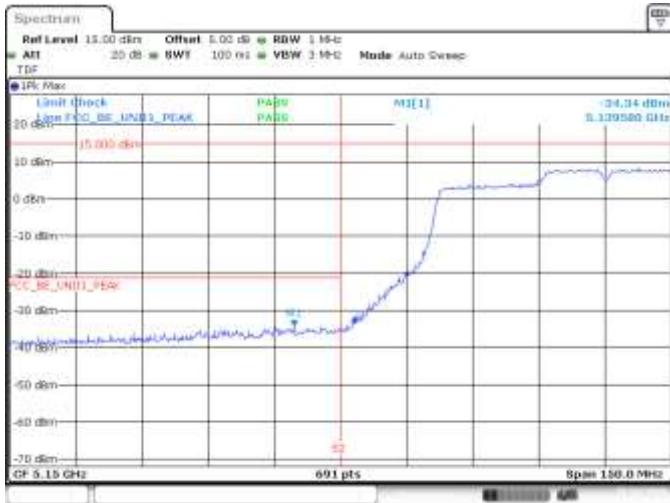
SISO A, 802.11ac160, VHT0, CH50, BE Low, RMS



SISO B, 802.11ac160, VHT0, CH50, BE Low, Peak

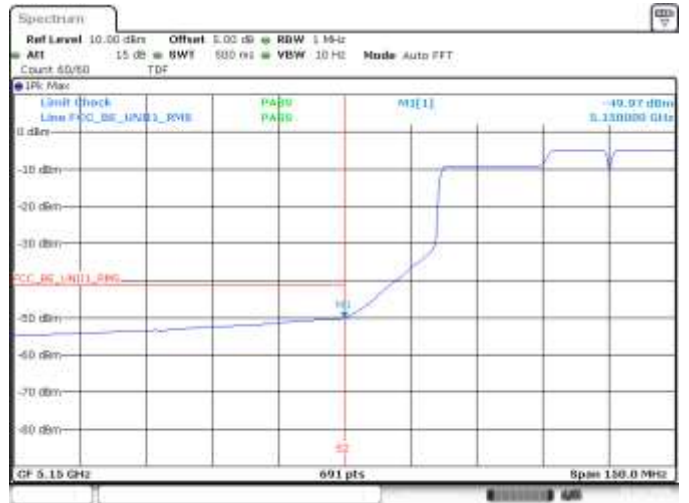


SISO B, 802.11ac160, VHT0, CH50, BE Low, RMS



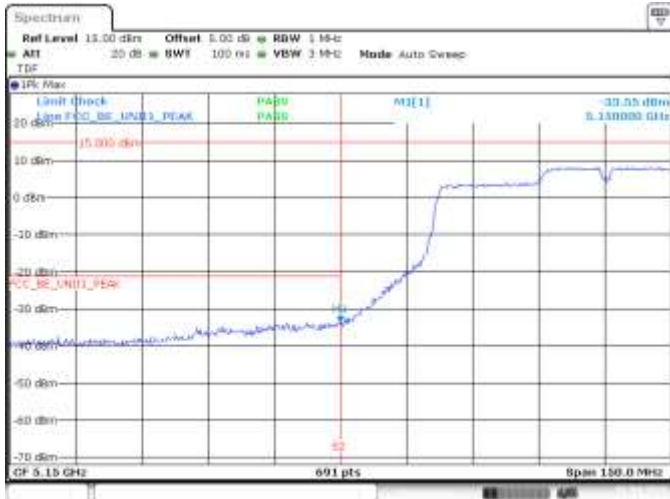
Date: 21 DEC 2018 14:37:30

MIMO A, 802.11ac160, VHT0, CH50, BE Low, Peak



Date: 21 DEC 2018 14:38:45

MIMO A, 802.11ac160, VHT0, CH50, BE Low, RMS



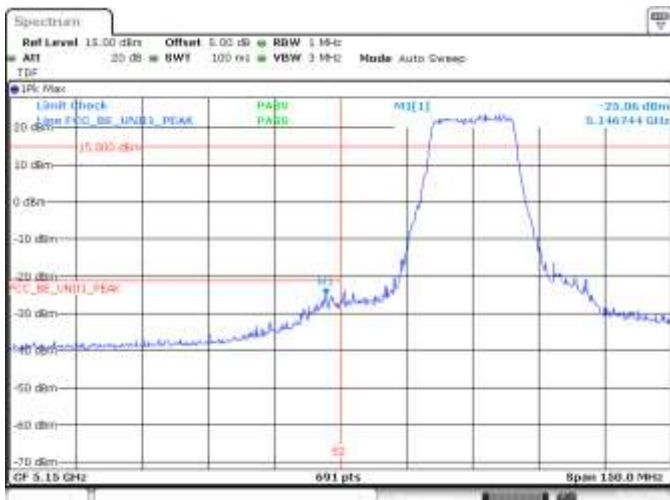
Date: 4 JAN 2019 10:00:00

MIMO B, 802.11ac160, VHT0, CH50, BE Low, Peak



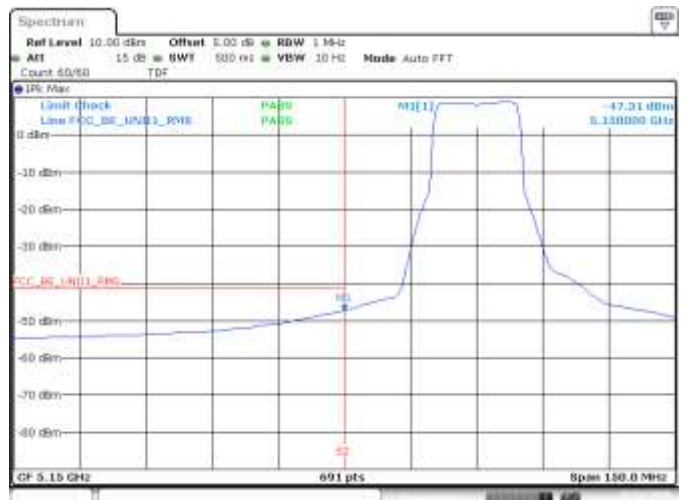
Date: 4 JAN 2019 10:59:27

MIMO B, 802.11ac160, VHT0, CH50, BE Low, RMS



Date: 21 DEC 2018 11:53:05

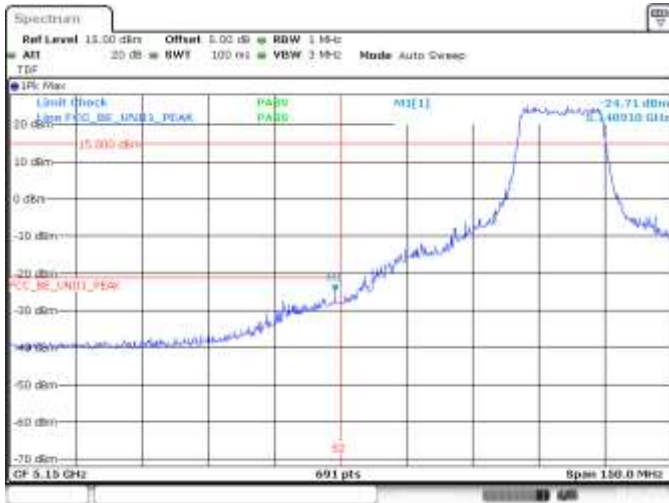
SISO A, 802.11ax20, HE0, CH36, BE Low, Peak



Date: 21 DEC 2018 11:55:41

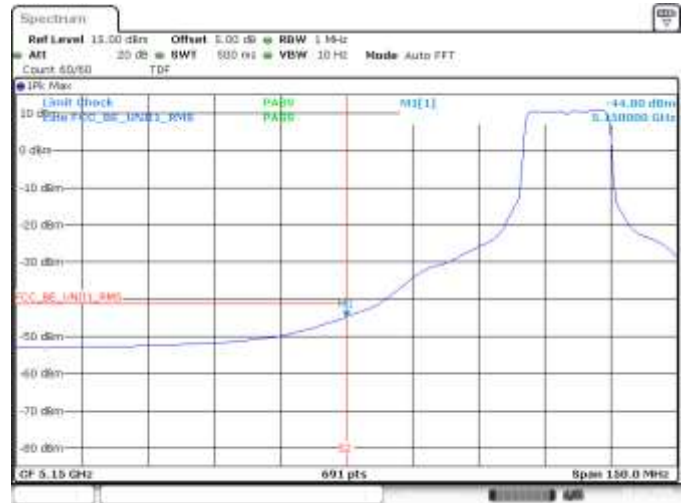
SISO A, 802.11ax20, HE0, CH36, BE Low, RMS

Test Report N° 181210-02.TR01



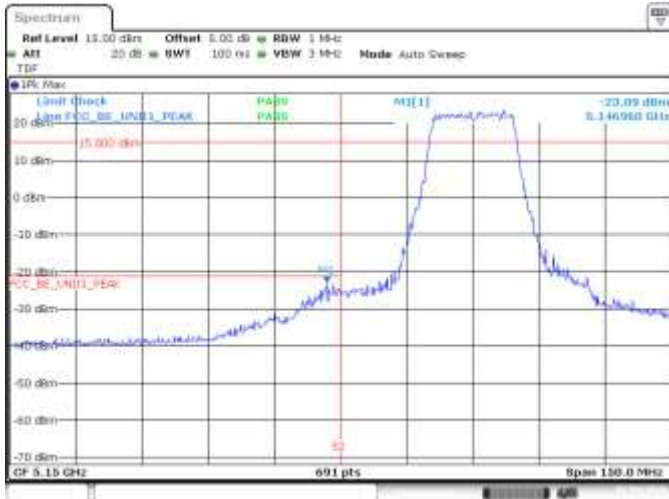
Date: 21 DEC 2018 12:03:09

SISO A, 802.11ax20, HE0, CH40, BE Low, Peak



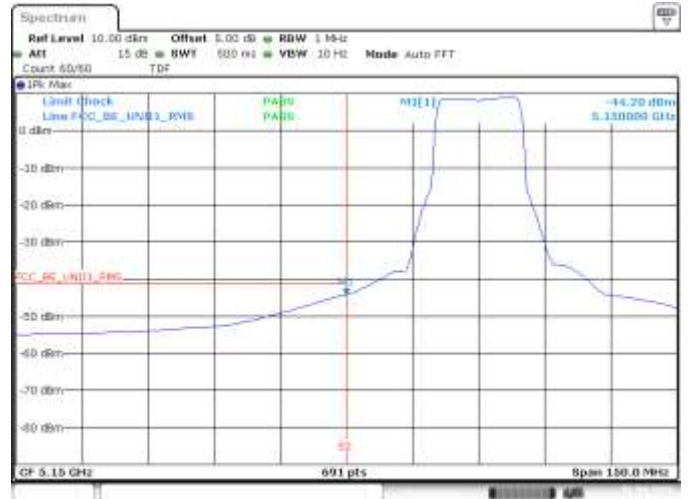
Date: 21 DEC 2018 12:01:54

SISO A, 802.11ax20, HE0, CH40, BE Low, RMS



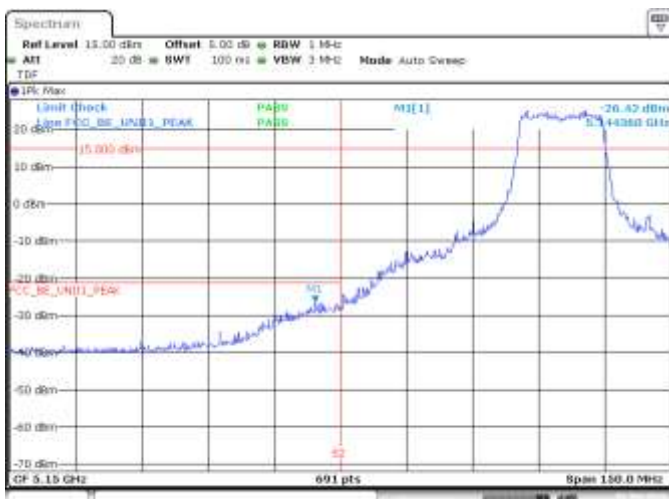
Date: 4 JAN 2019 12:42:25

SISO B, 802.11ax20, HE0, CH36, BE Low, Peak



Date: 4 JAN 2019 12:38:04

SISO B, 802.11ax20, HE0, CH36, BE Low, RMS



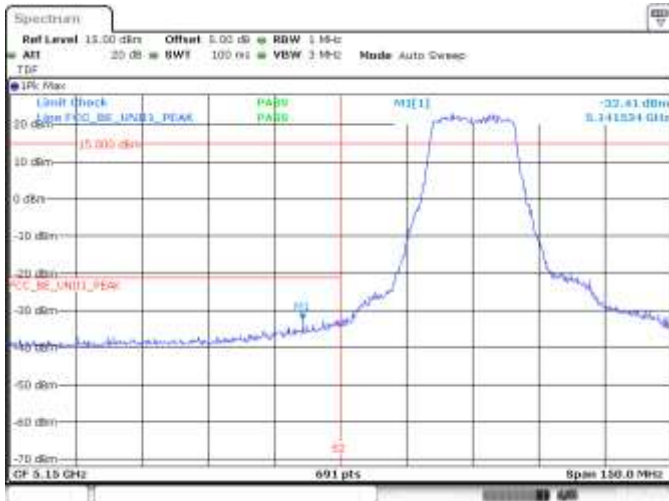
Date: 4 JAN 2019 12:47:01

SISO B, 802.11ax20, HE0, CH40, BE Low, Peak



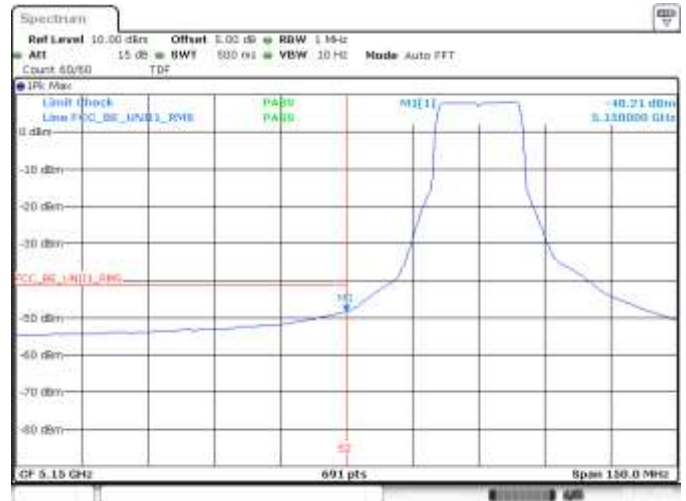
Date: 4 JAN 2019 12:46:05

SISO B, 802.11ax20, HE0, CH40, BE Low, RMS



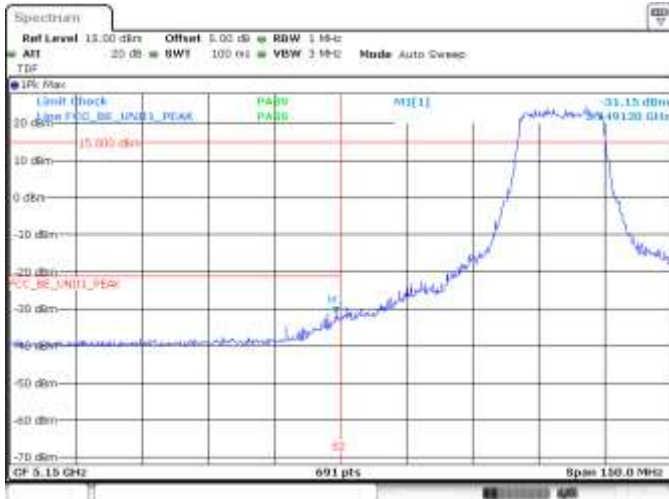
Date: 21 DEC 2018 12:17:23

MIMO A, 802.11ax20, HE0, CH36, BE Low, Peak



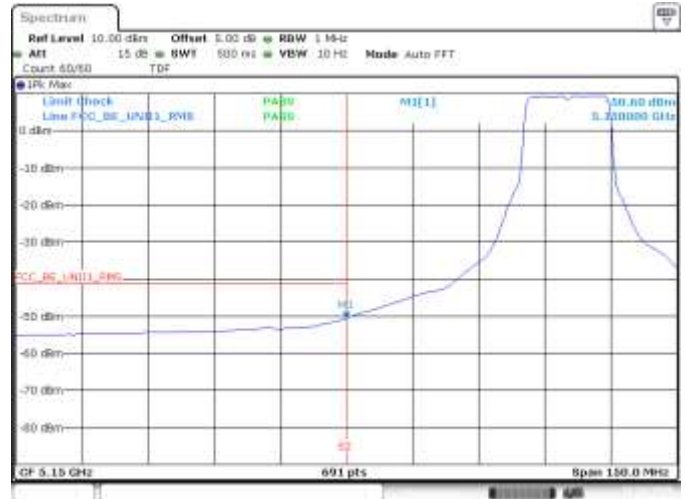
Date: 21 DEC 2018 12:18:09

MIMO A, 802.11ax20, HE0, CH36, BE Low, RMS



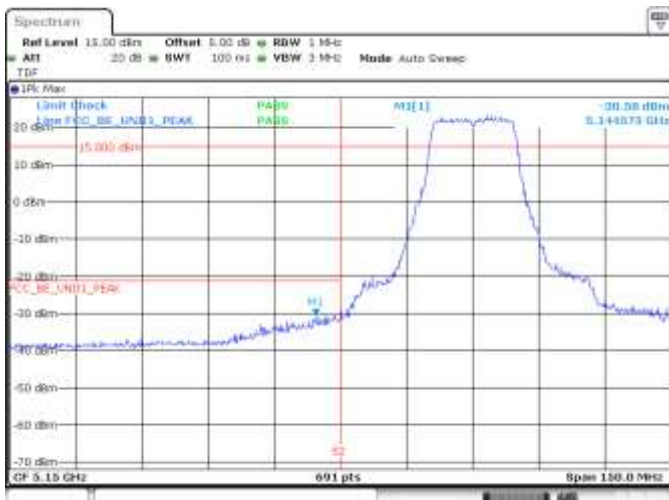
Date: 21 DEC 2018 12:26:22

MIMO A, 802.11ax20, HE0, CH40, BE Low, Peak



Date: 21 DEC 2018 12:26:41

MIMO A, 802.11ax20, HE0, CH40, BE Low, RMS



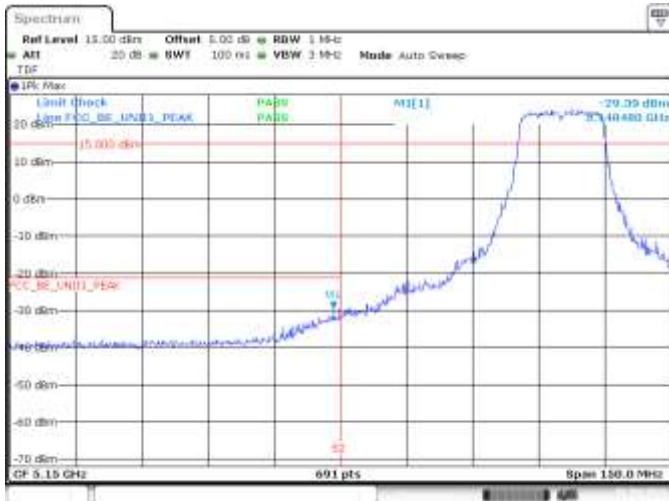
Date: 4 JAN 2019 13:02:01

MIMO B, 802.11ax20, HE0, CH36, BE Low, Peak



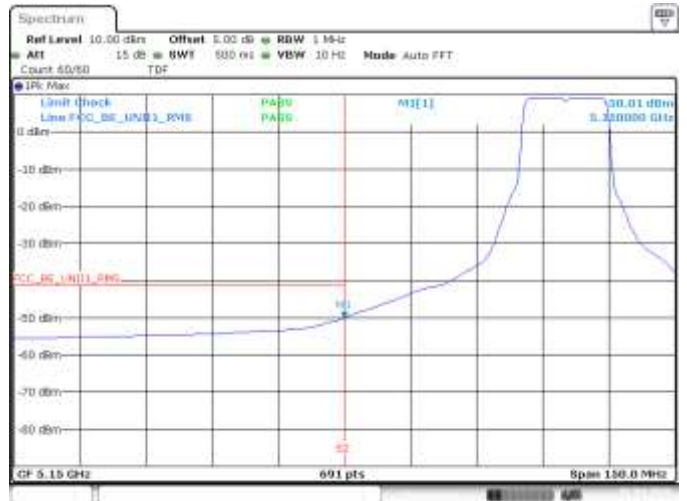
Date: 4 JAN 2019 13:03:47

MIMO B, 802.11ax20, HE0, CH36, BE Low, RMS



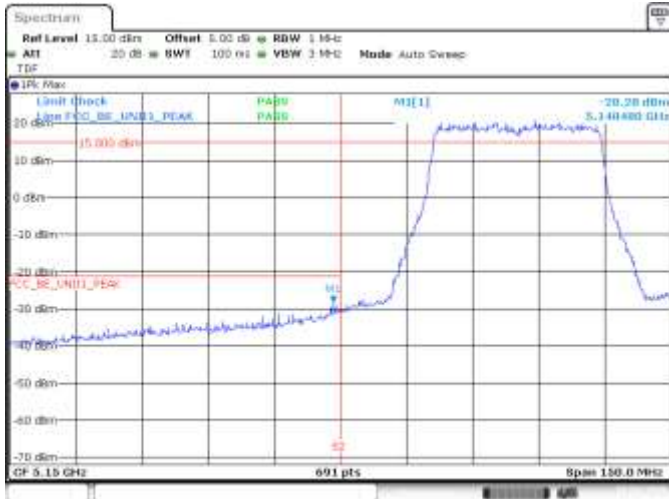
Date 4 JAN 2019 13:12:36

MIMO B, 802.11ax20, HE0, CH40, BE Low, Peak



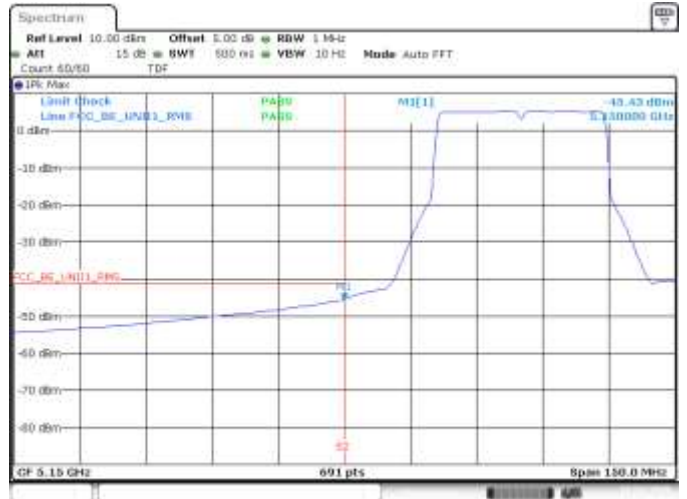
Date 4 JAN 2019 13:12:09

MIMO B, 802.11ax20, HE0, CH40, BE Low, RMS



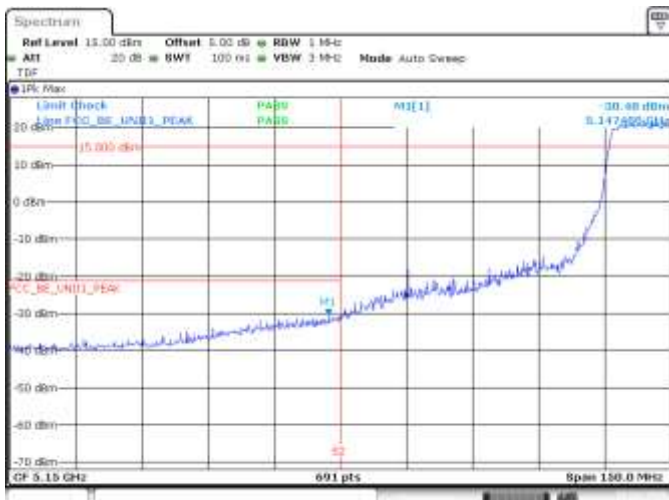
Date 21 DEC 2018 13:15:08

SISO A, 802.11ax40, HE0, CH38, BE Low, Peak



Date 21 DEC 2018 13:14:40

SISO A, 802.11ax40, HE0, CH38, BE Low, RMS



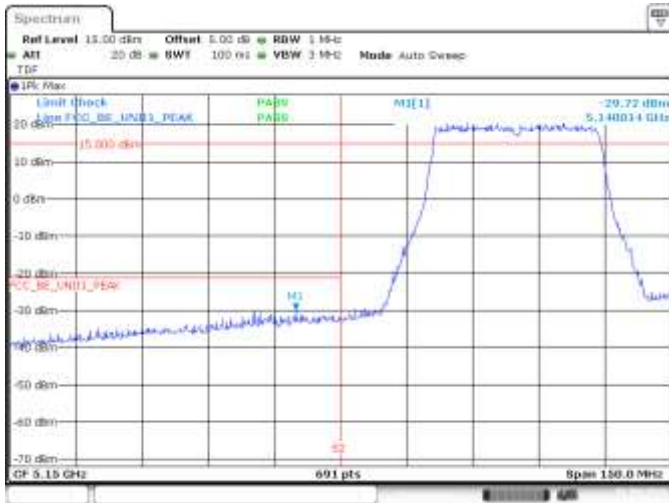
Date 21 DEC 2018 13:16:40

SISO A, 802.11ax40, HE0, CH46, BE Low, Peak



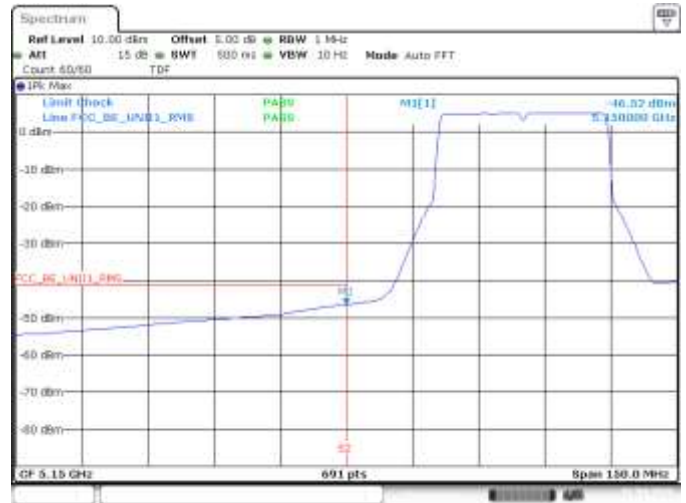
Date 21 DEC 2018 13:16:09

SISO A, 802.11ax40, HE0, CH46, BE Low, RMS



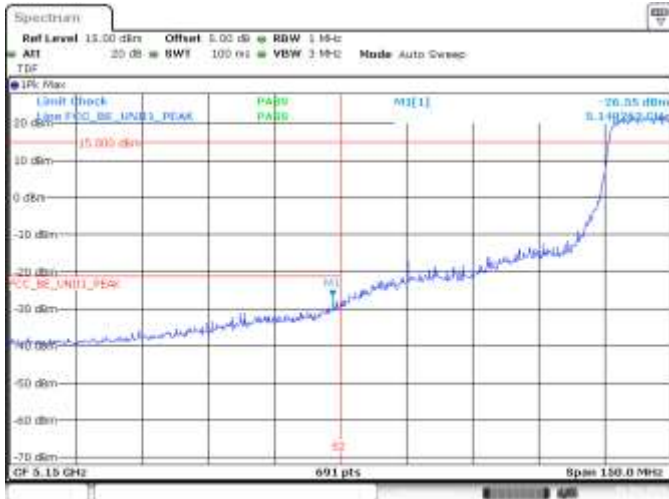
Date: 4 JUN 2018 13:07:52

SISO B, 802.11ax40, HE0, CH38, BE Low, Peak



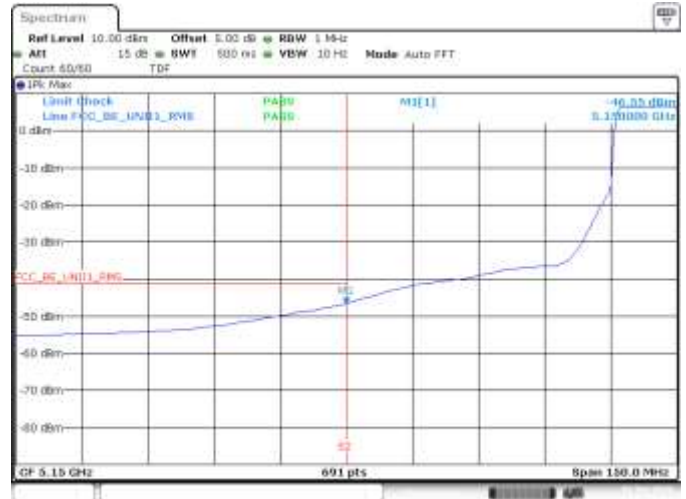
Date: 4 JUN 2018 13:08:53

SISO B, 802.11ax40, HE0, CH38, BE Low, RMS



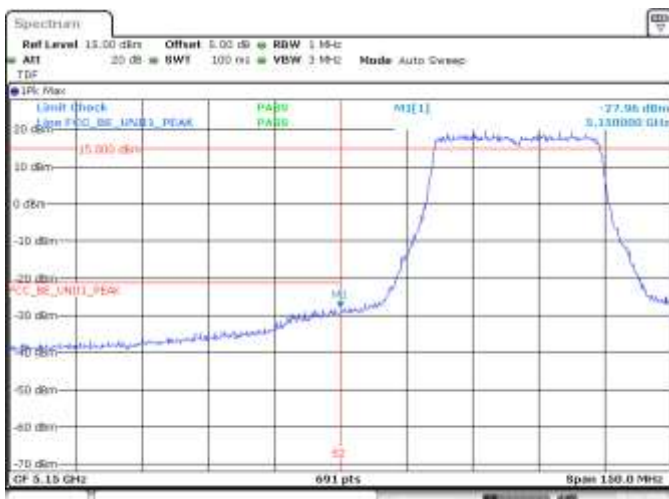
Date: 4 JUN 2018 14:04:20

SISO B, 802.11ax40, HE0, CH46, BE Low, Peak



Date: 4 JUN 2018 14:05:20

SISO B, 802.11ax40, HE0, CH46, BE Low, RMS



Date: 21 DEC 2018 13:26:21

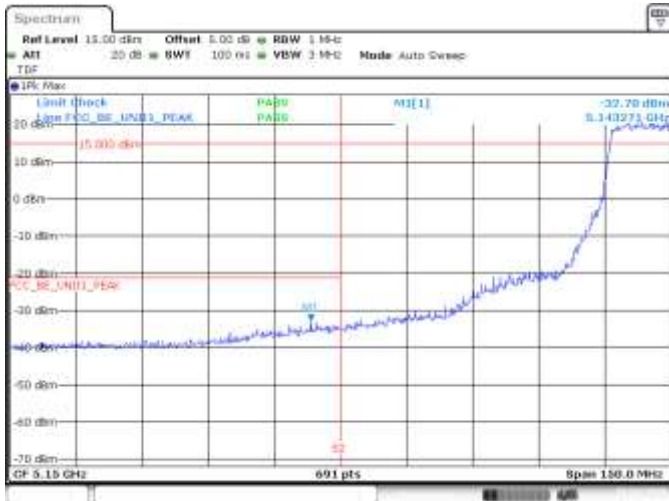
MIMO A, 802.11ax40, HE0, CH38, BE Low, Peak



Date: 21 DEC 2018 13:26:45

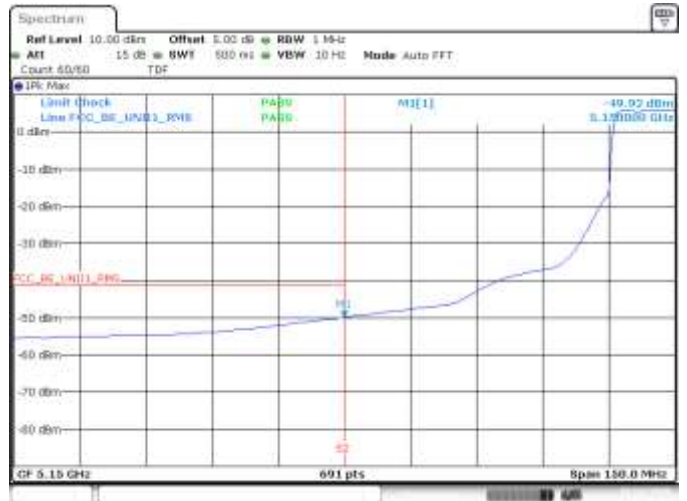
MIMO A, 802.11ax40, HE0, CH38, BE Low, RMS

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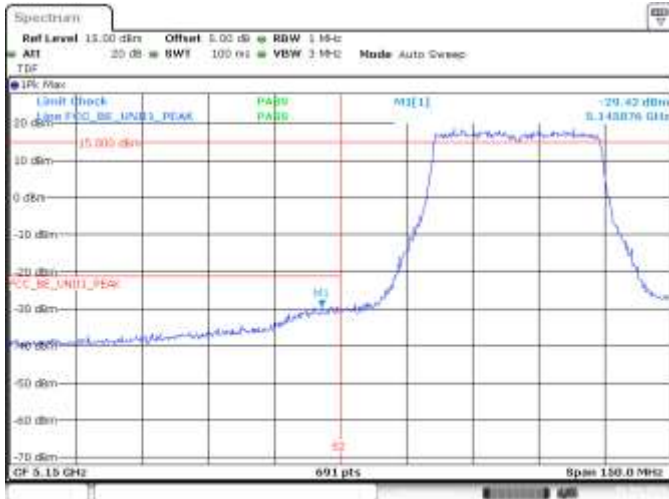
Date: 21 DEC 2018 13:31:02

MIMO A, 802.11ax40, HE0, CH46, BE Low, Peak



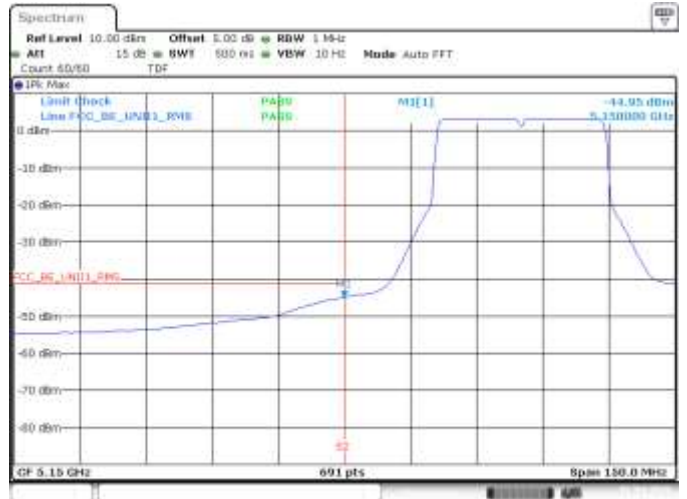
Date: 21 DEC 2018 13:31:33

MIMO A, 802.11ax40, HE0, CH46, BE Low, RMS



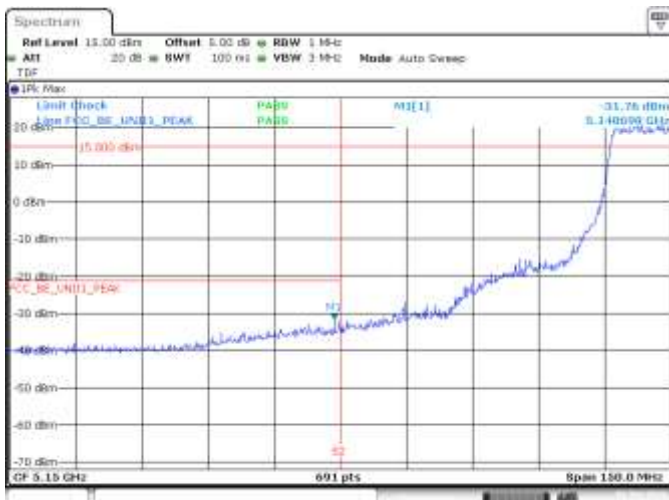
Date: 4 JAN 2019 14:18:55

MIMO B, 802.11ax40, HE0, CH38, BE Low, Peak



Date: 4 JAN 2019 14:17:57

MIMO B, 802.11ax40, HE0, CH38, BE Low, RMS



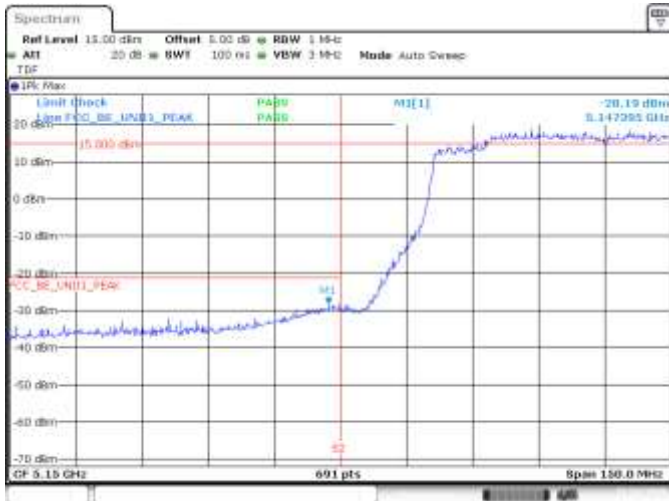
Date: 4 JAN 2019 14:23:21

MIMO B, 802.11ax40, HE0, CH46, BE Low, Peak



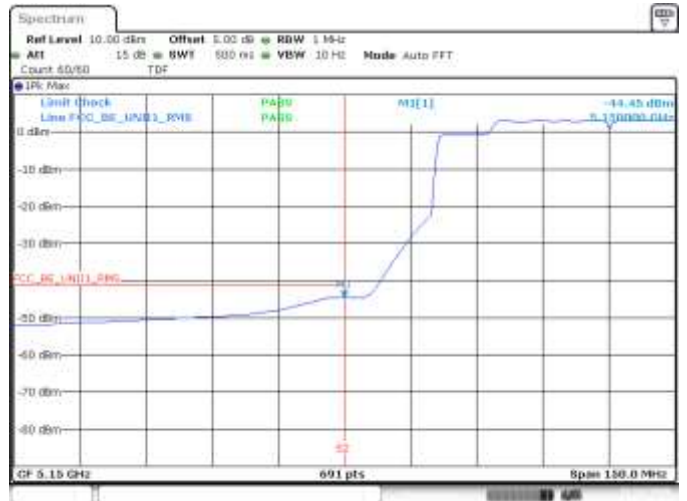
Date: 4 JAN 2019 14:23:02

MIMO B, 802.11ax40, HE0, CH46, BE Low, RMS



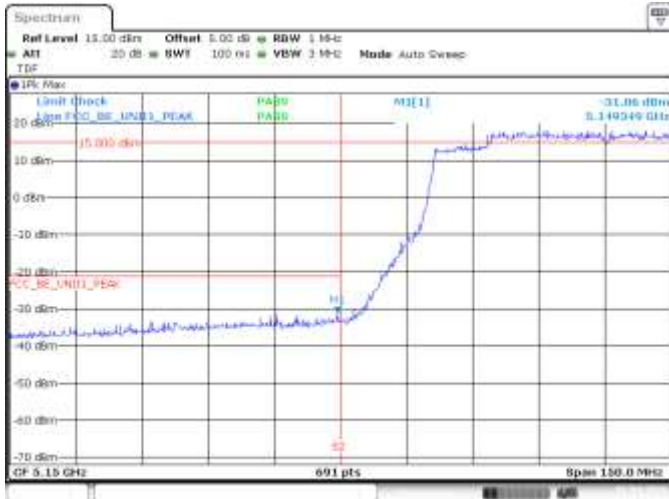
Date: 21 DEC 2018 14:03:49

SISO A, 802.11ax80, HE0, CH42, BE Low, Peak



Date: 21 DEC 2018 14:03:20

SISO A, 802.11ax80, HE0, CH42, BE Low, RMS



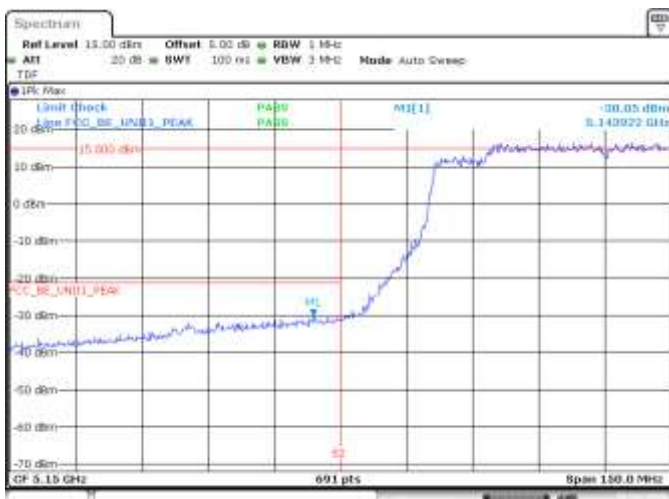
Date: 4 JAN 2019 10:10:35

SISO B, 802.11ax80, HE0, CH42, BE Low, Peak



Date: 4 JAN 2019 10:08:53

SISO B, 802.11ax80, HE0, CH42, BE Low, RMS



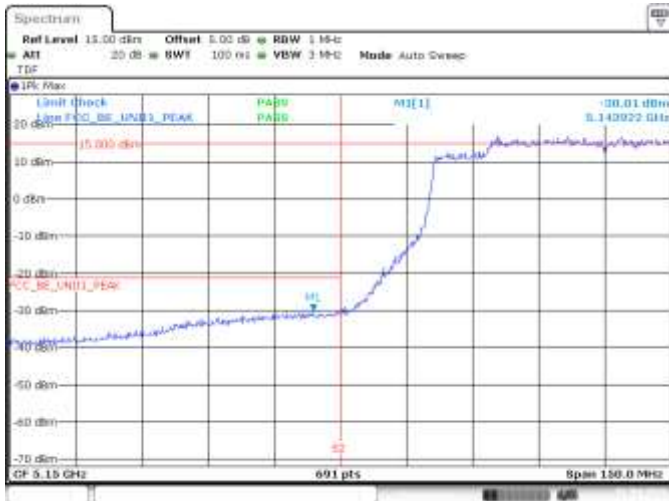
Date: 21 DEC 2018 14:10:25

MIMO A, 802.11ax80, HE0, CH42, BE Low, Peak



Date: 21 DEC 2018 14:10:01

MIMO A, 802.11ax80, HE0, CH42, BE Low, RMS



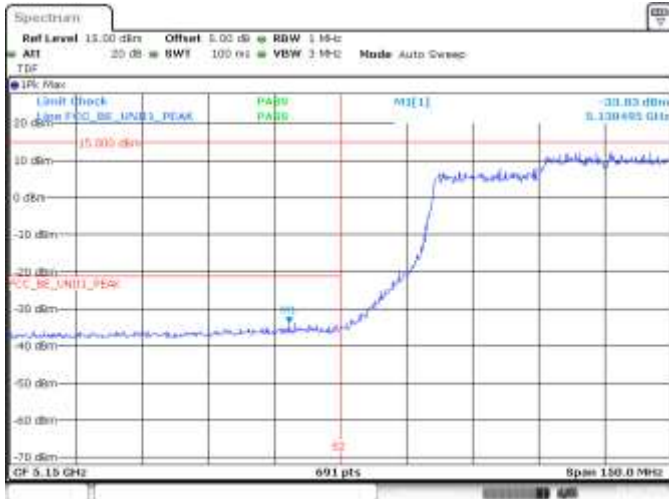
Date: 4 JAN 2019 15:25:57

MIMO B, 802.11ax80, HE0, CH42, BE Low, Peak



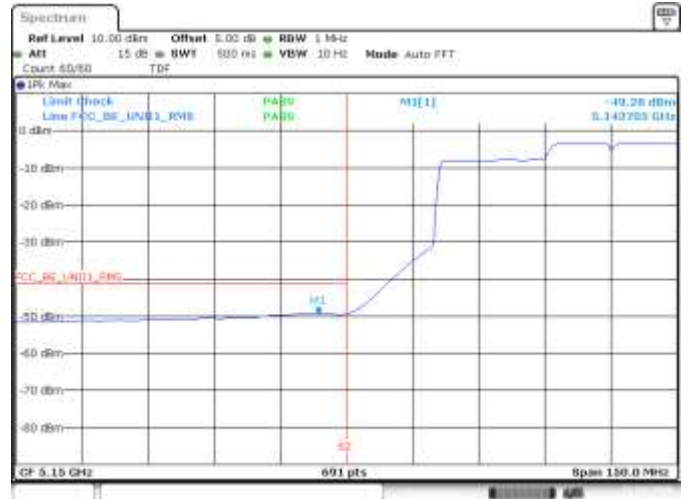
Date: 4 JAN 2019 15:25:54

MIMO B, 802.11ax80, HE0, CH42, BE Low, RMS



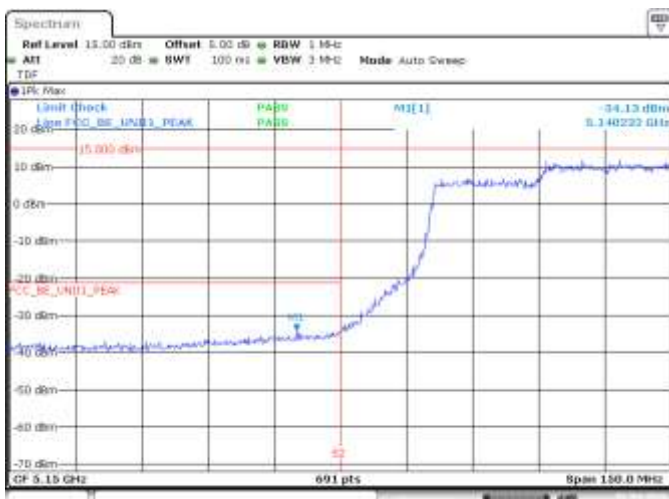
Date: 21 DEC 2018 10:04:38

SISO A, 802.11ax160, HE0, CH50, BE Low, Peak



Date: 21 DEC 2018 10:04:25

SISO A, 802.11ax160, HE0, CH50, BE Low, RMS



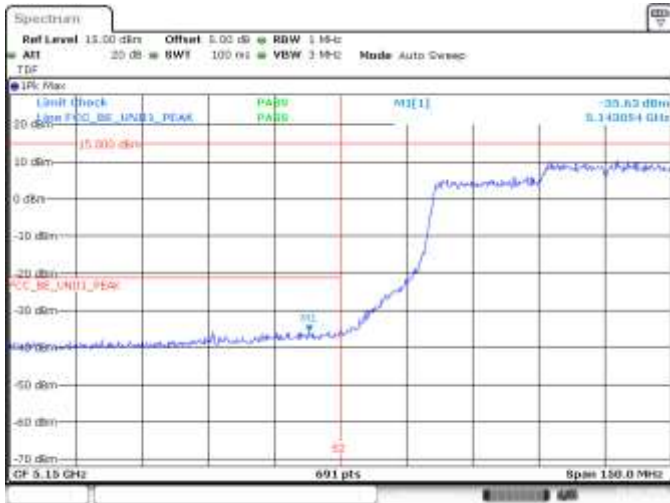
Date: 4 JAN 2019 15:12:05

SISO B, 802.11ax160, HE0, CH50, BE Low, Peak



Date: 4 JAN 2019 15:11:52

SISO B, 802.11ax160, HE0, CH50, BE Low, RMS



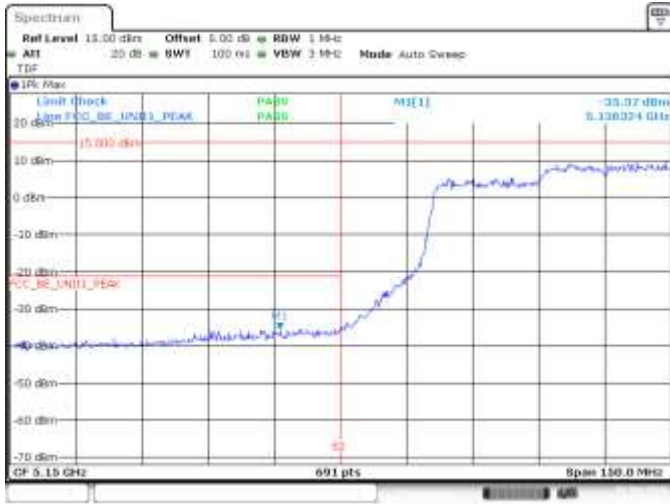
Date: 21 DEC 2018 10:11:27

MIMO A, 802.11ax160, HE0, CH50, BE Low, Peak



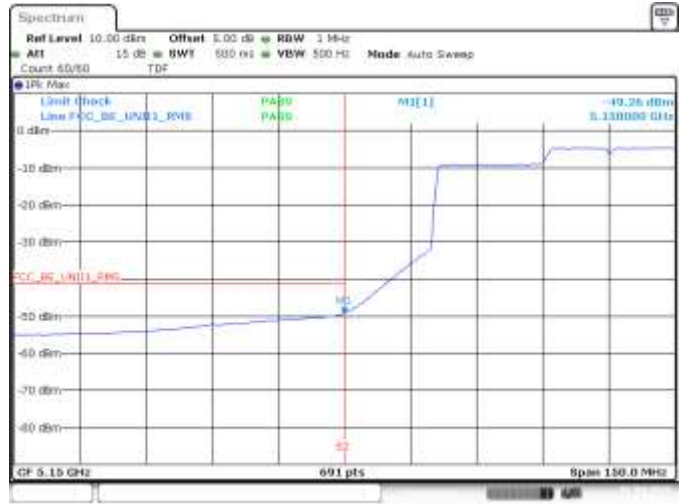
Date: 21 DEC 2018 10:11:11

MIMO A, 802.11ax160, HE0, CH50, BE Low, RMS



Date: 4 JAN 2019 10:23:23

MIMO B, 802.11ax160, HE0, CH50, BE Low, Peak

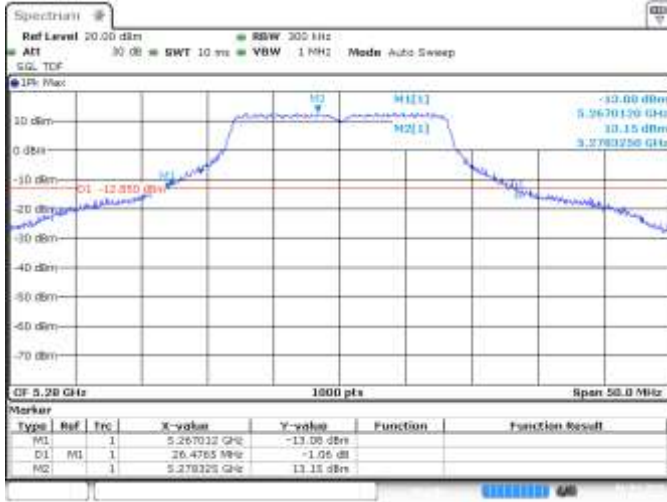


Date: 4 JAN 2019 10:23:00

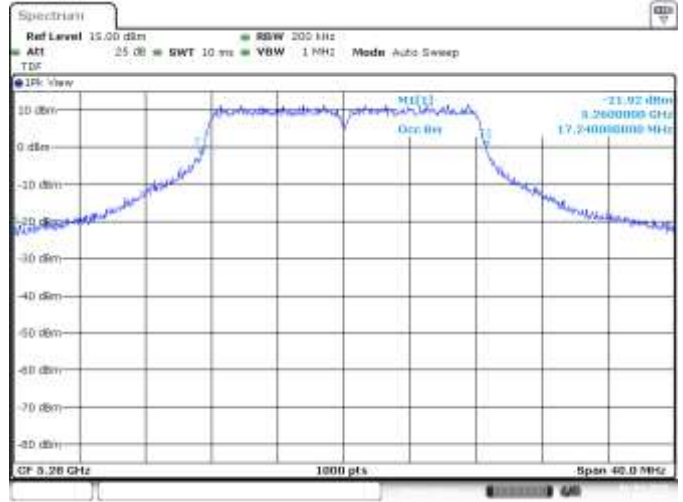
MIMO B, 802.11ax160, HE0, CH50, BE Low, RMS

B.5 Test Results Screenshot U-NII-2A

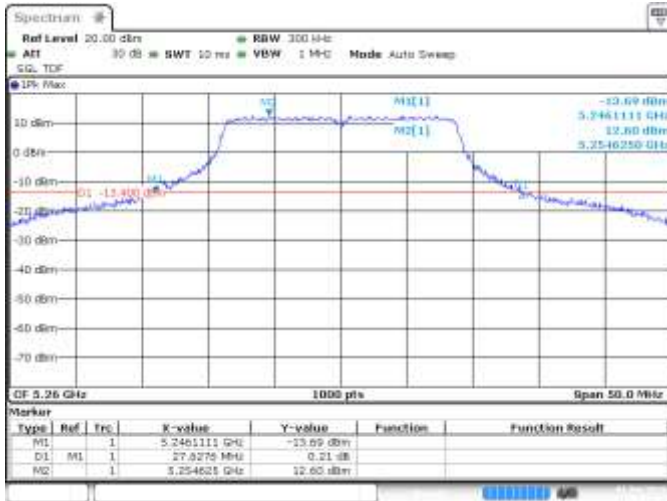
B.5.1 26dB & 99% Bandwidth



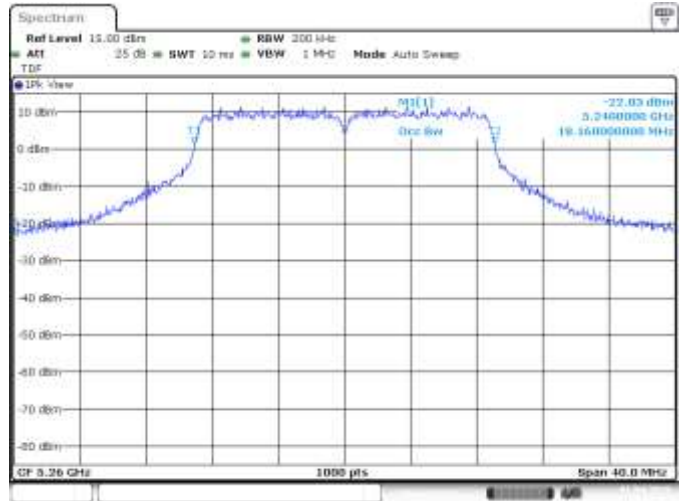
SISO A, CH56, 802.11a, 6Mbps, 26dB BW



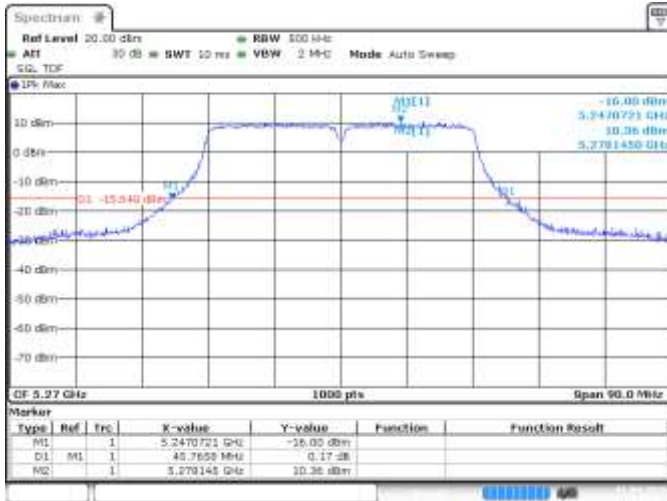
SISO A, CH56, 802.11a, 6Mbps, 99% BW



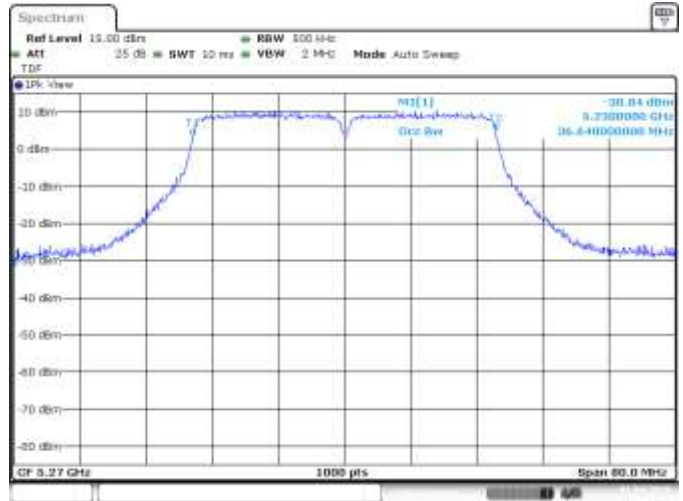
SISO A, CH52, 802.11n20, HT0, 26dB BW



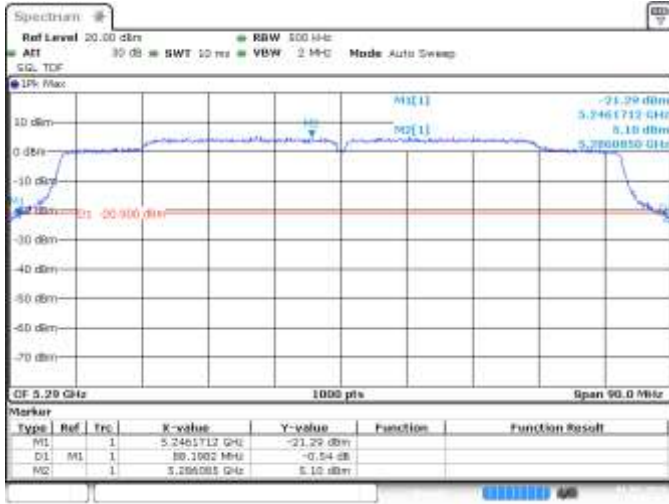
SISO A, CH52, 802.11n20, HT0, 99% BW



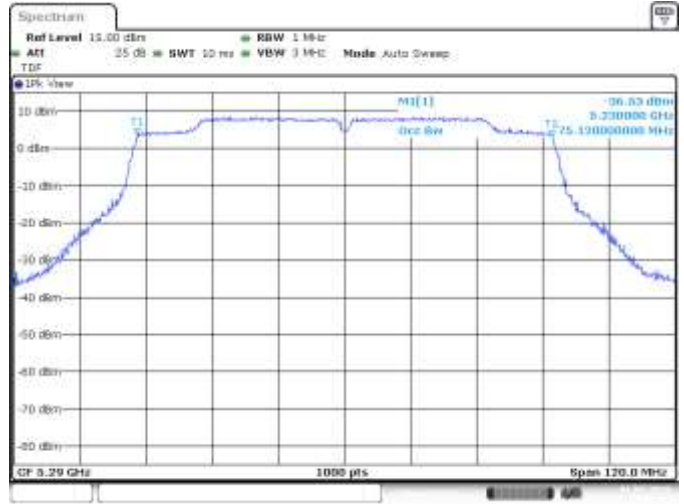
MIMO A, CH54, 802.11n40, HT0, 26dB BW



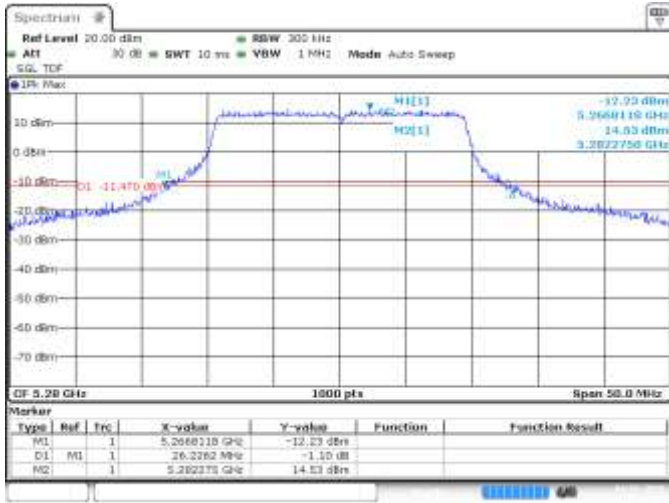
MIMO A, CH54, 802.11n40, HT0, 26dB BW



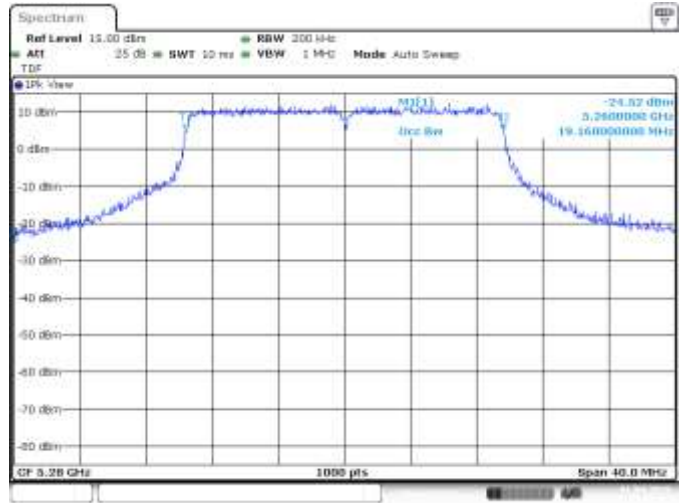
MIMO A, CH58, 802.11ac80, VHT0, 26dB BW



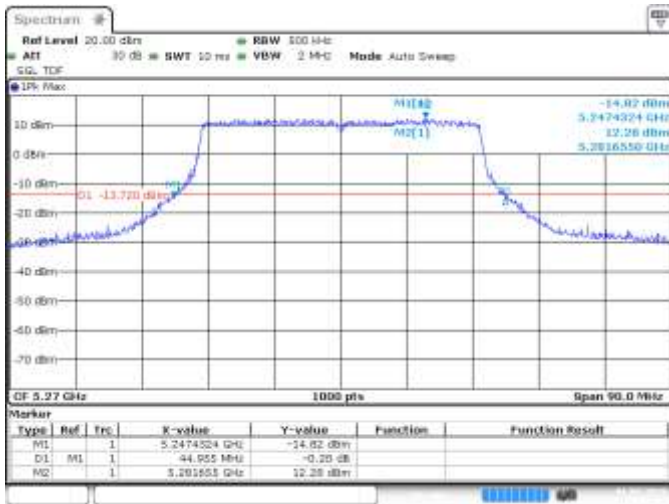
MIMO A, CH58, 802.11ac80, VHT0, 99% BW



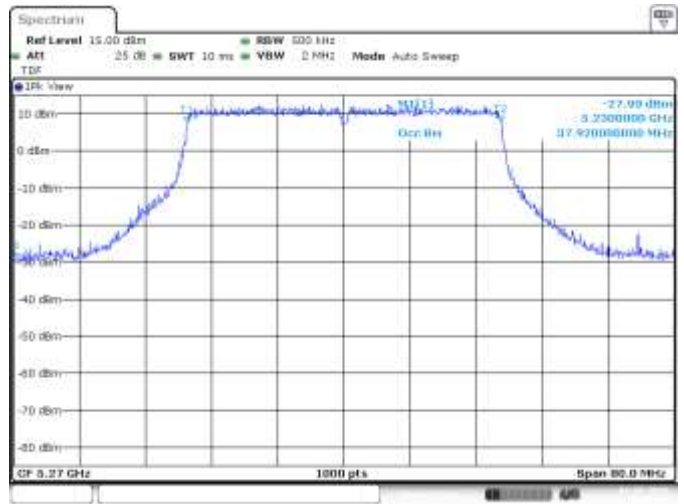
SISO B, CH56, 802.11ax20, HE0, 26dB BW



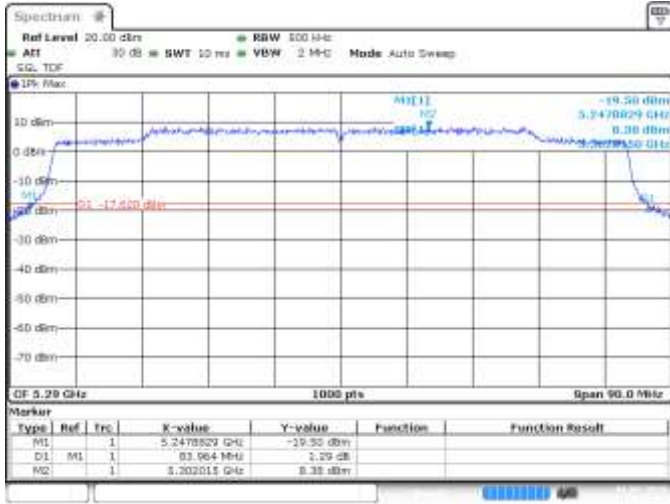
SISO B, CH56, 802.11ax20, HE0, 99% BW



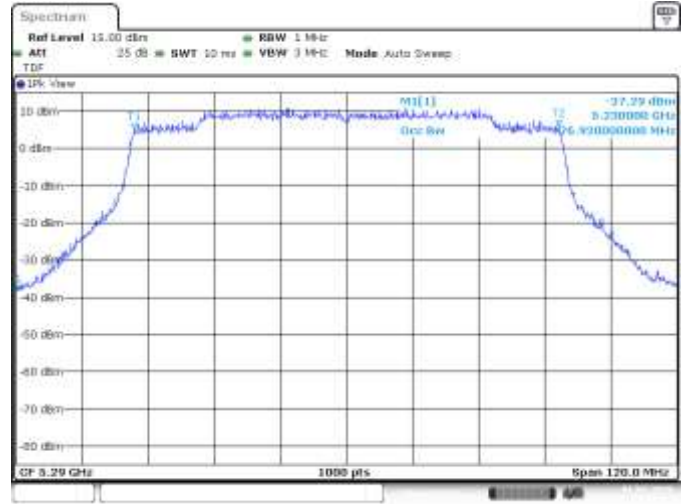
MIMO A, CH54, 802.11ax40, HE0, 26dB BW



MIMO A, CH54, 802.11ax40, HE0, 99% BW

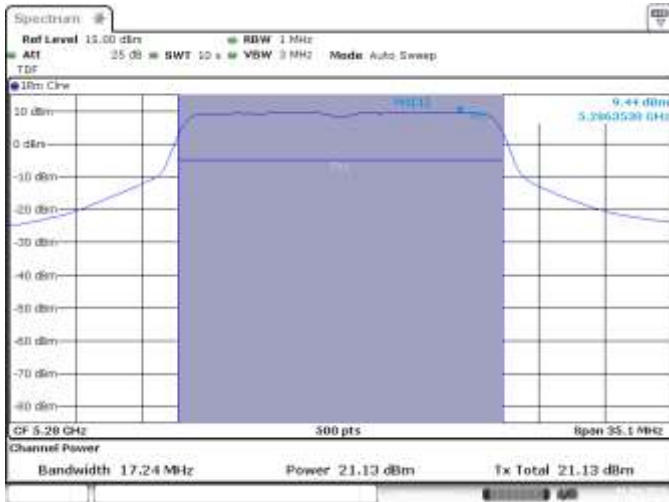


SISO A, CH58, 802.11ax80, HE0, 26dB BW

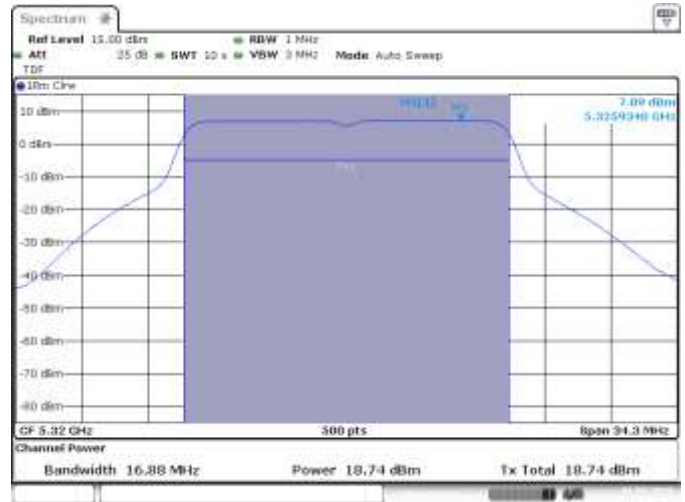


MIMO A, CH58, 802.11ax80, HE0, 99% BW

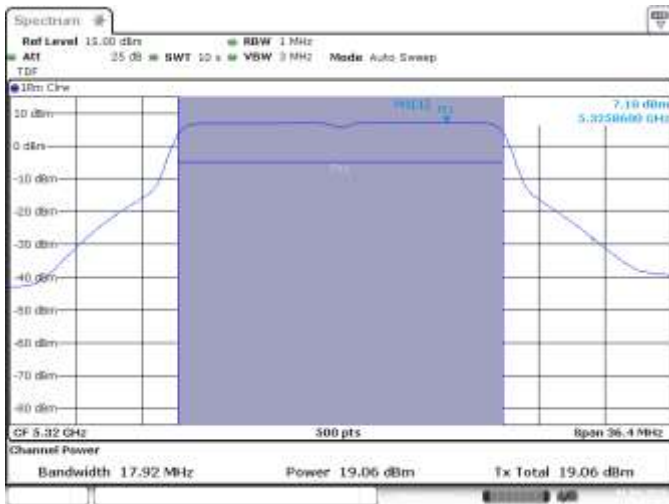
B.5.2 Power Limits. Maximum Output power & Maximum power spectral density



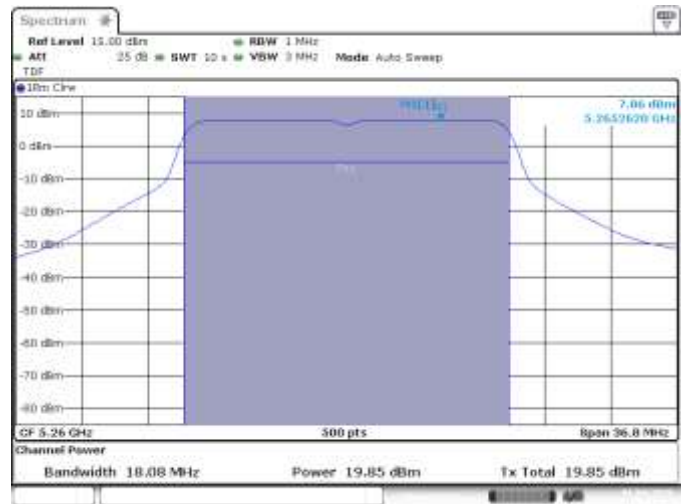
SISO A, CH56, 802.11a, 6Mbps



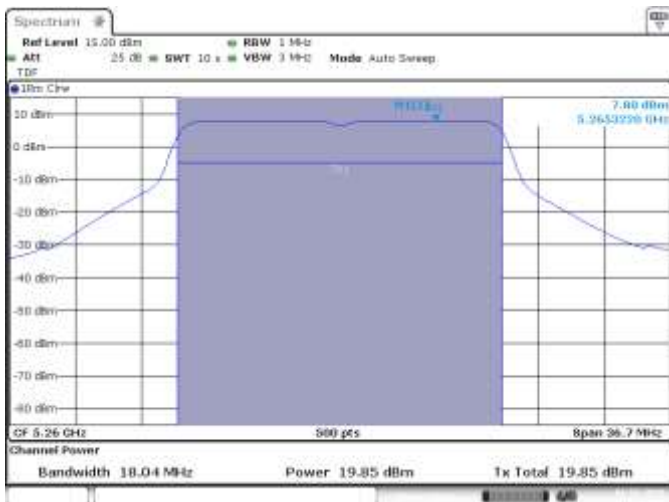
SISO B, CH64, 802.11a, 6Mbps



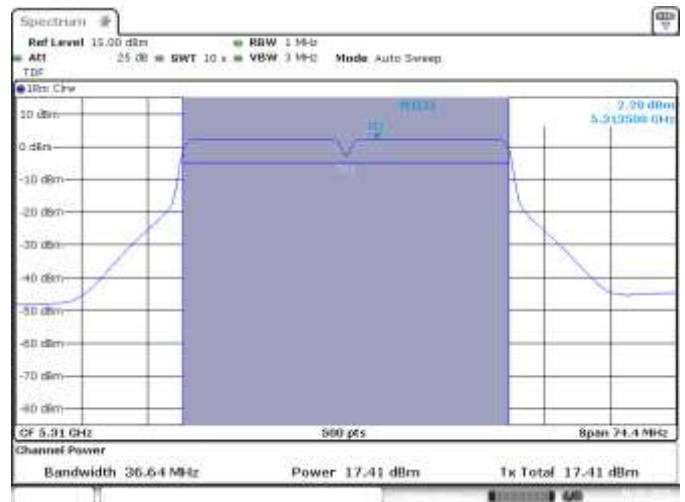
SISO A, 802.11n20, CH64, HT0



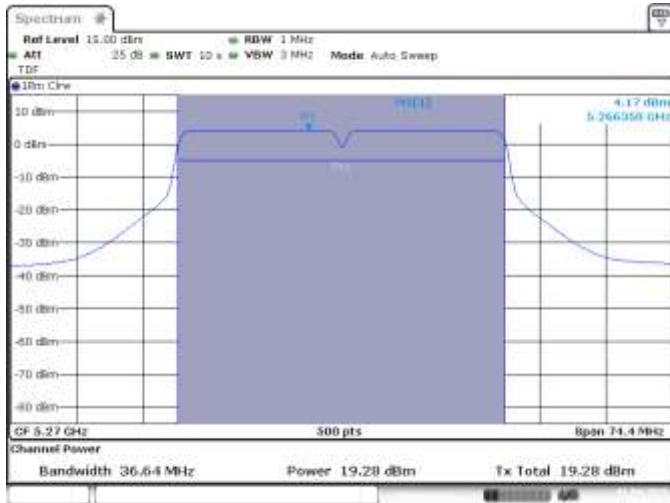
MIMO A, CH52, 802.11n20, HT8



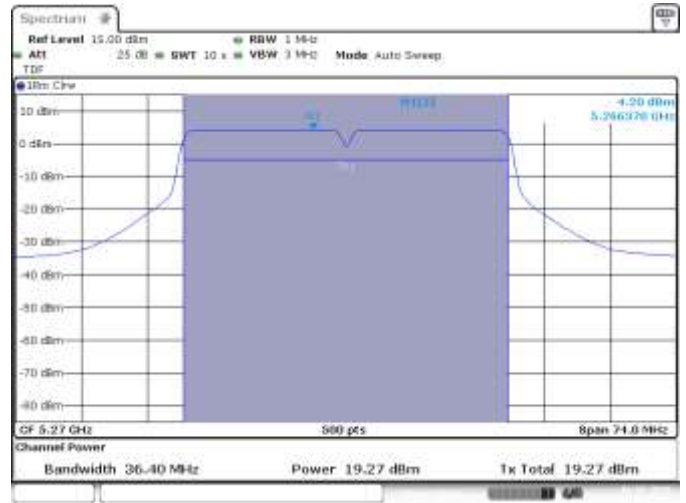
MIMO B, CH52, 802.11n20, HT8



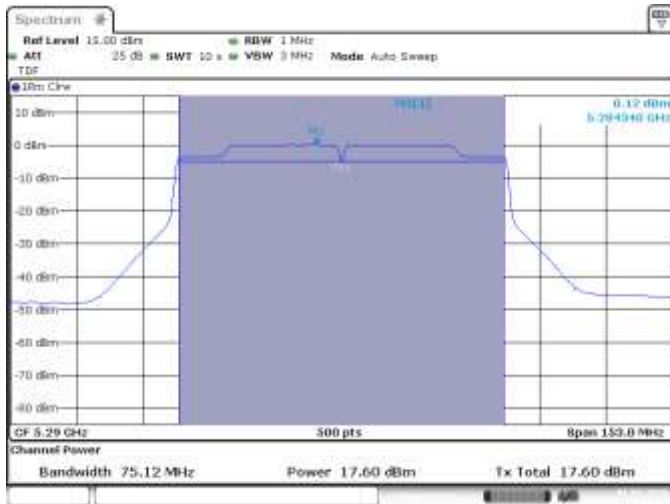
SISO B, CH62, 802.11n40, HT0



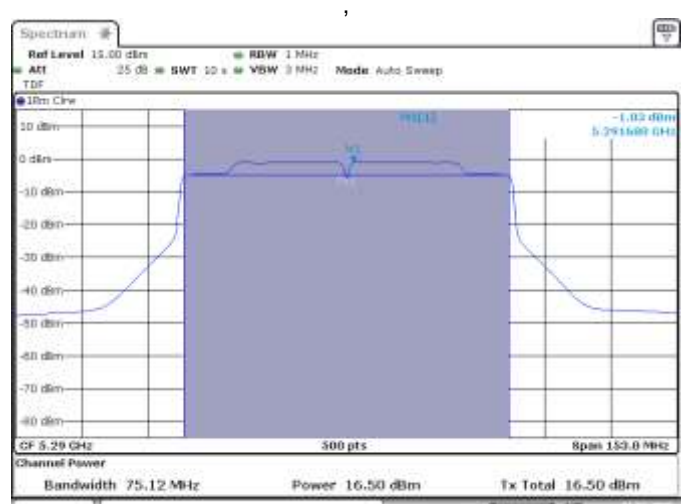
MIMO A, CH54, 802.11n40, HT8



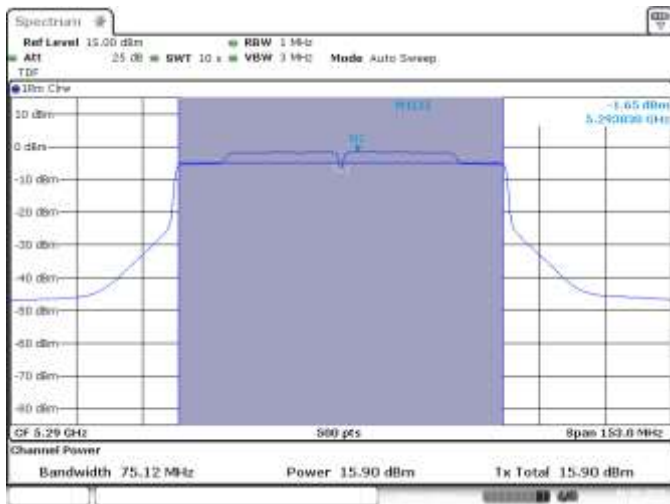
MIMO B, CH54, 802.11n40, HT8



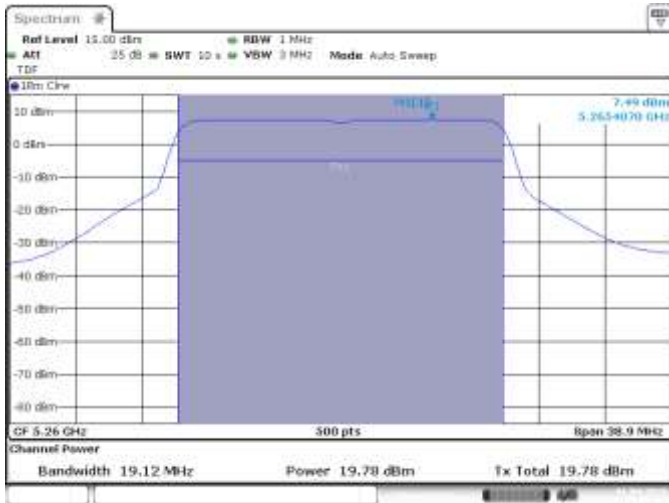
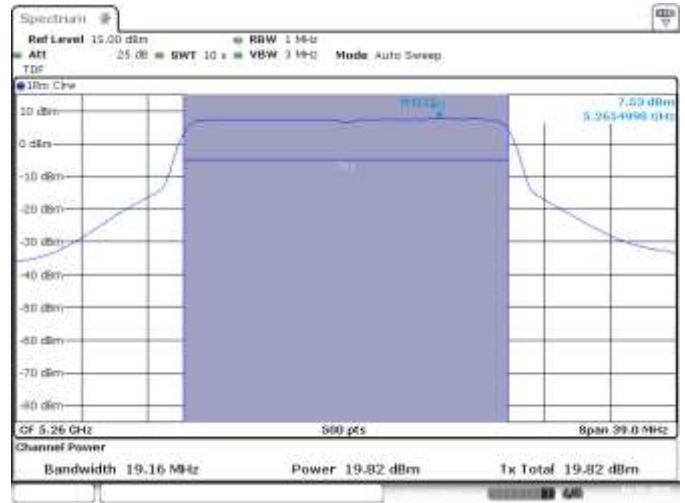
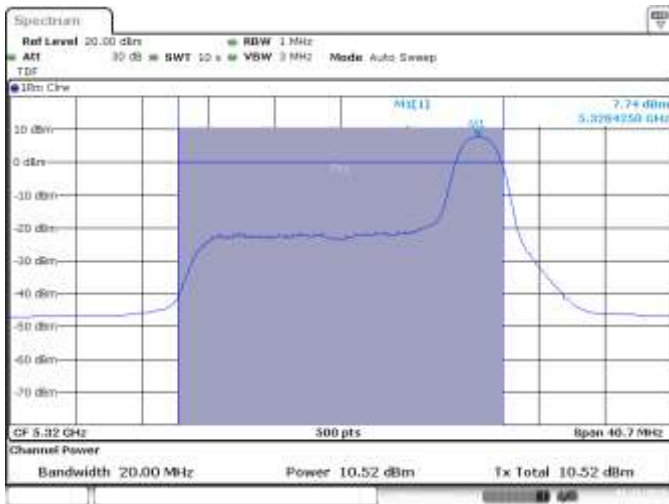
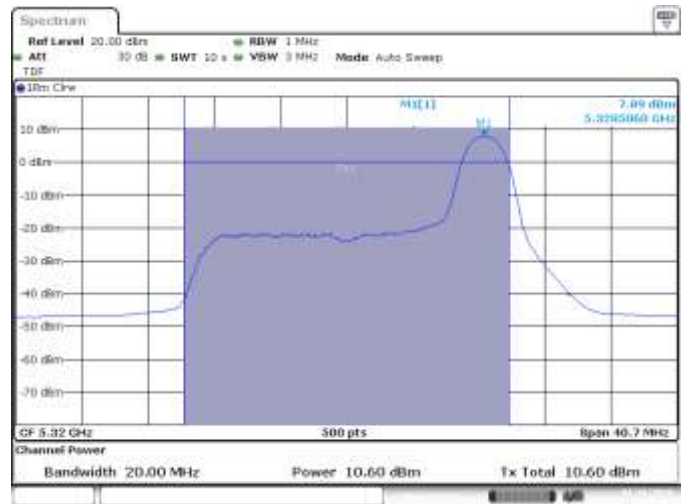
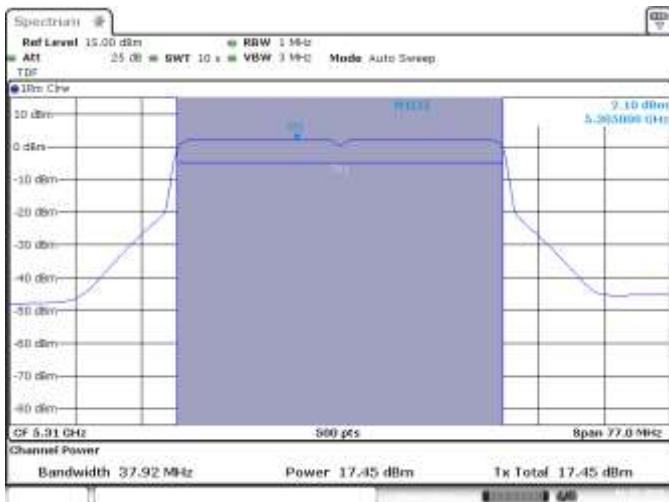
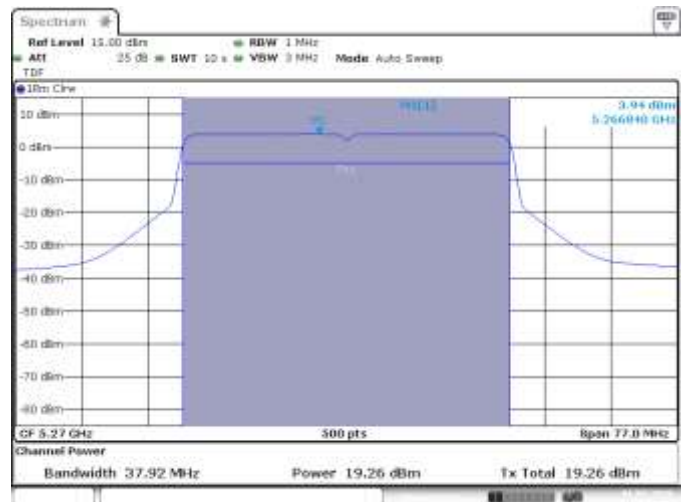
SISO B, 802.11ac80, CH58, VHT0

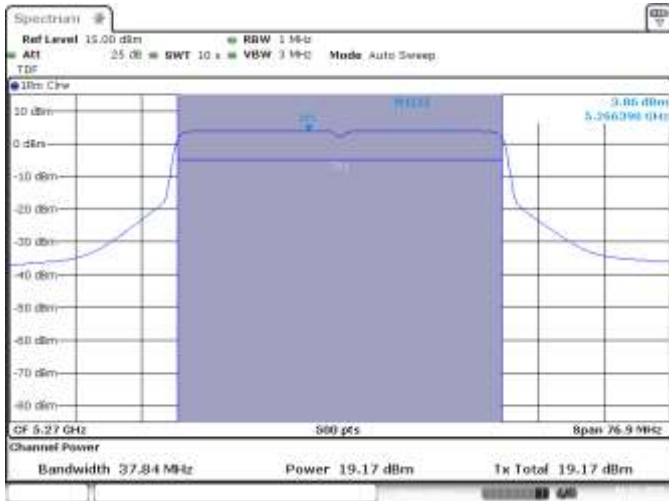


MIMO A, 802.11ac80, CH58, VHT0



MIMO B, 802.11ac80, CH58, VHT0

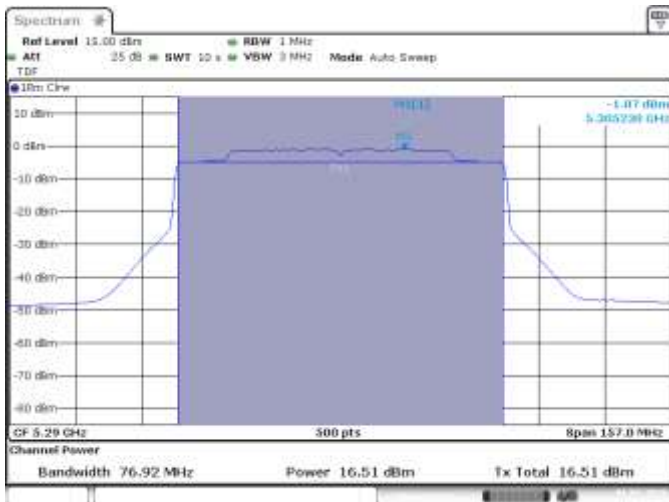
**MIMO A, CH52, 802.11ax20, HE0****MIMO B, CH52, 802.11ax20, HE0****MIMO A, CH64, 802.11ax20, HE0, RU26_8****MIMO B, CH64, 802.11ax20, HE0, HE0, RU26_8****SISO B, CH62, 802.11ax40, HE0****MIMO A, CH54, 802.11ax40, HE0**



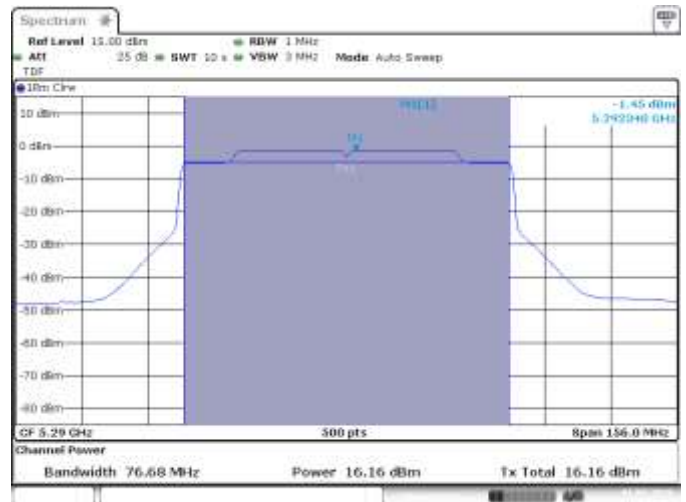
MIMO B, CH54, 802.11ax40, HE0



SISO A, CH58, 802.11ax80, HE0, RU 284_66

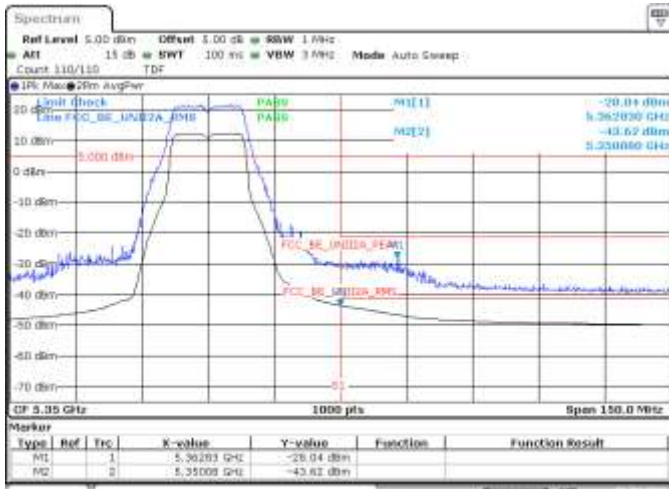


MIMO A, CH58, 802.11ax80, HE0



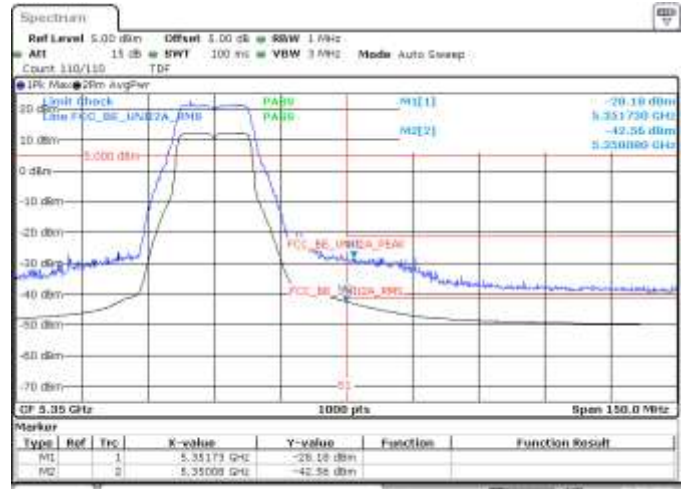
MIMO B, CH58, 802.11ax80, HE0

B.5.3 Undesirable emissions limits : Band Edge (Conducted)



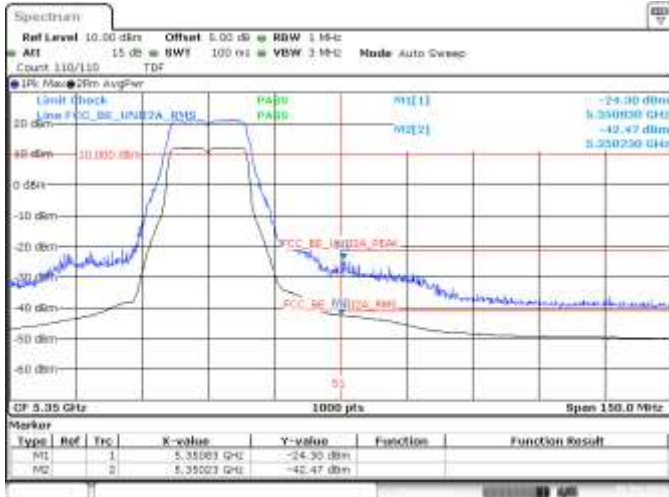
Date: 4.JAN.2019 17:38:35

SISO A, 802.11a, 6Mbps, CH64, BE High RMS, Peak



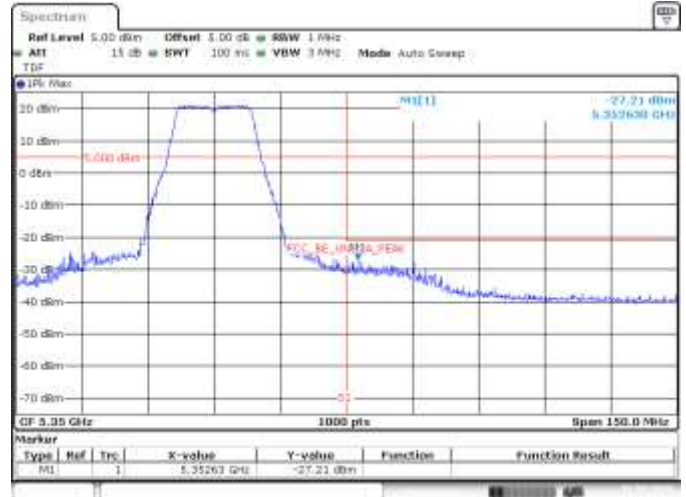
Date: 7.JAN.2019 12:30:05

SISO B, 802.11a, 6Mbps, CH64, BE High RMS, Peak



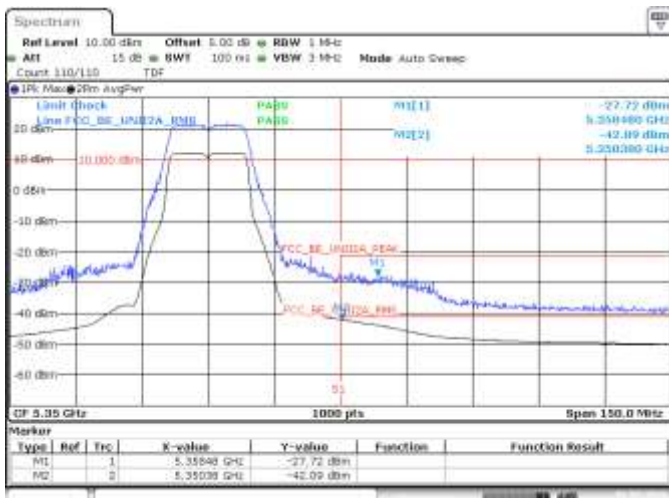
Date: 4.JAN.2019 17:52:14

SISO A, 802.11n20, HT0, CH64, BE High RMS, Peak



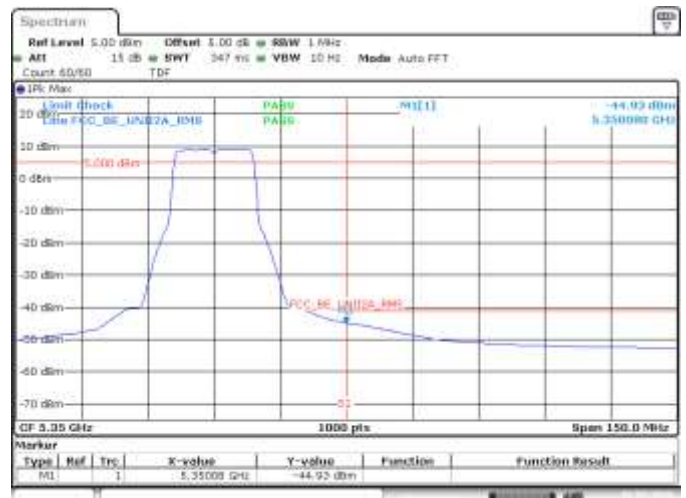
Date: 7.JAN.2019 12:46:58

SISO B, 802.11n20, HT0, CH64, BE High Peak



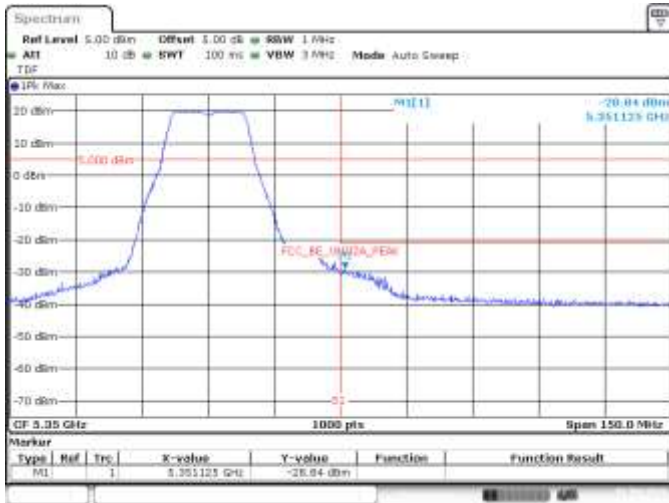
Date: 7.JAN.2019 12:43:05

SISO B, 802.11n20, HT0, CH64, BE High RMS, Peak



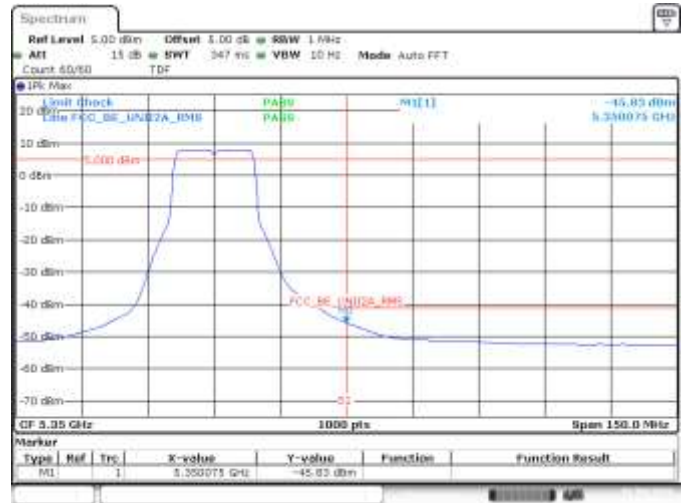
Date: 7.JAN.2019 12:43:05

SISO B, 802.11n20, HT0, CH64, BE High RMS



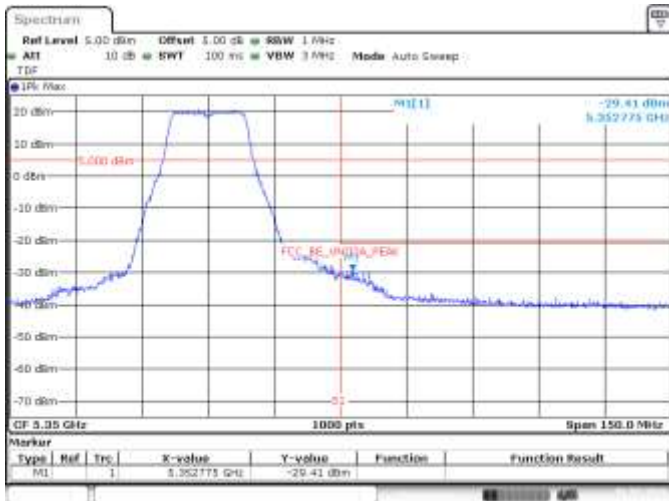
Date: 4 JAN 2019 19:20:00

MIMO A, 802.11n20, HT8, CH64, BE High Peak



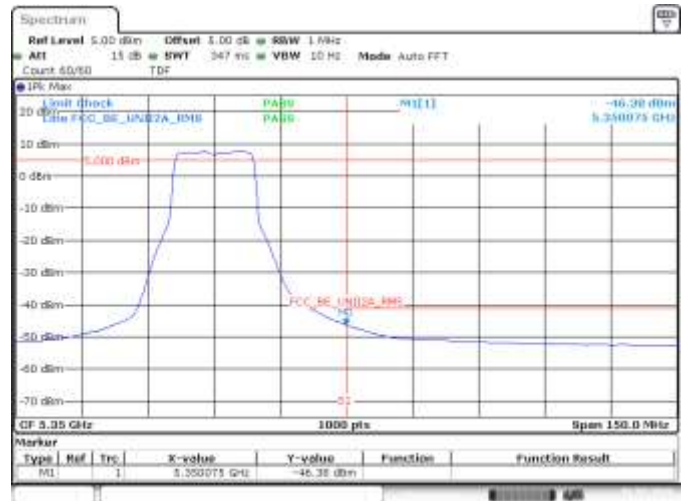
Date: 4 JAN 2019 19:40:00

MIMO A, 802.11n20, HT8, CH64, BE High RMS



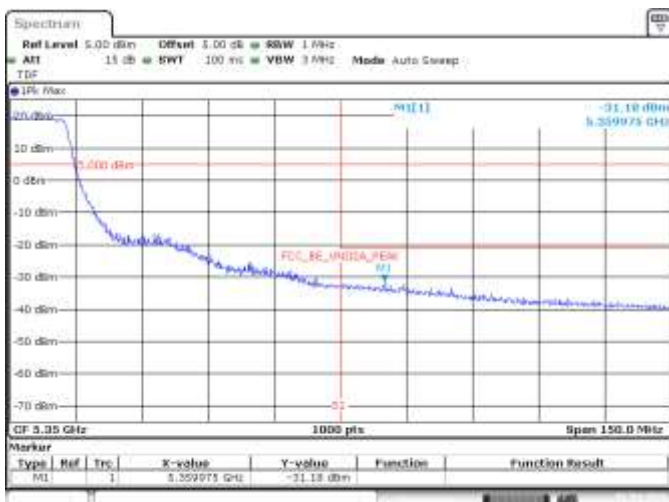
Date: 7 JAN 2019 12:59:02

MIMO B, 802.11n20, HT8, CH64, BE High Peak



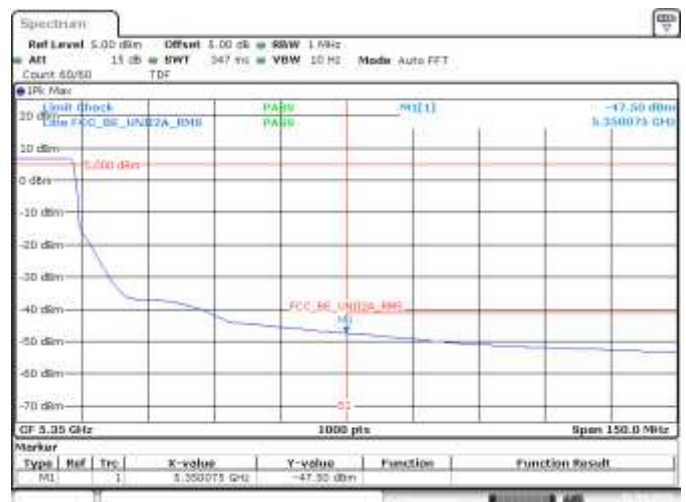
Date: 7 JAN 2019 12:59:45

MIMO B, 802.11n20, HT8, CH64, BE High RMS



Date: 4 JAN 2019 19:15:00

SISO A, 802.11n40, HT0, CH54, BE High Peak



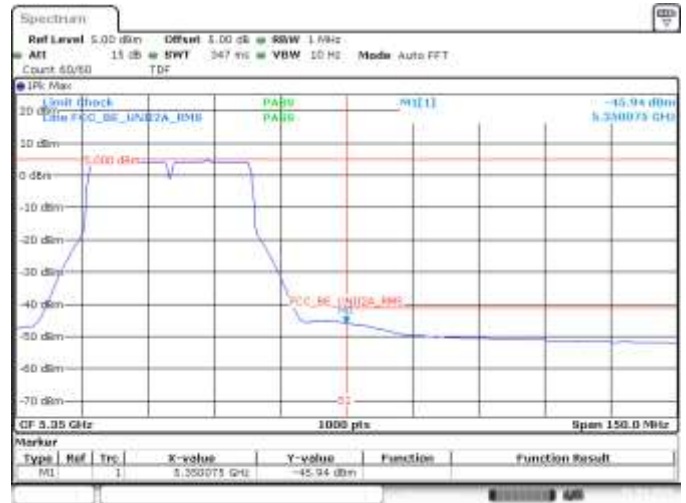
Date: 4 JAN 2019 19:18:05

SISO A, 802.11n40, HT0, CH54, BE High RMS



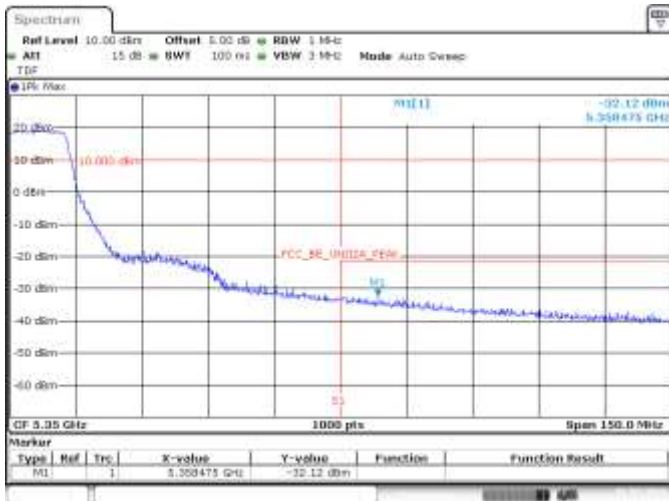
Date: 4_JAN_2019 19:27:36

SISO A, 802.11n40, HT0, CH62, BE High Peak



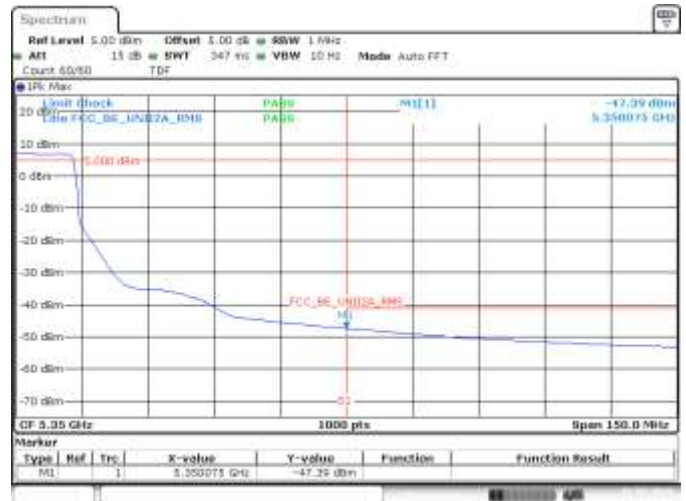
Date: 4_JAN_2019 19:25:28

SISO A, 802.11n40, HT0, CH62, BE High RMS



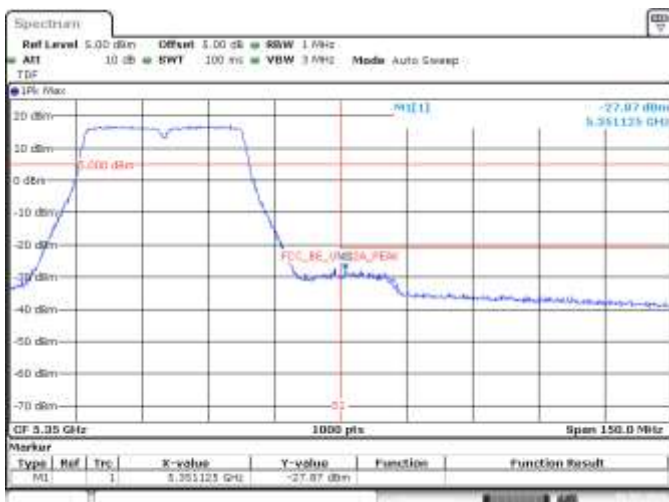
Date: 7_JAN_2019 13:25:47

SISO B, 802.11n40, HT0, CH54, BE High Peak



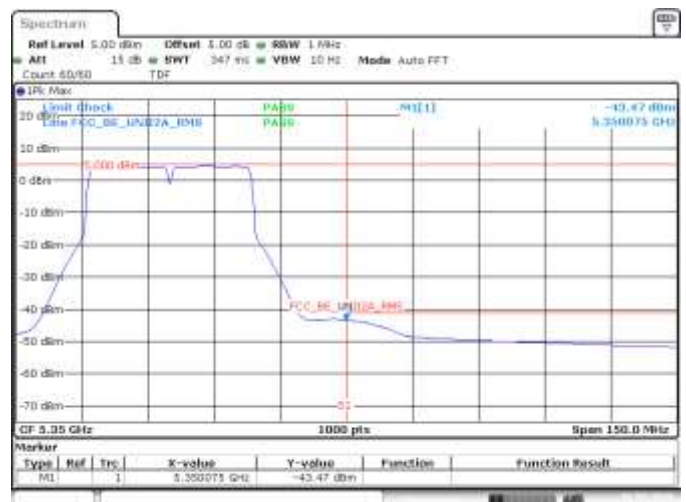
Date: 7_JAN_2019 13:24:09

SISO B, 802.11n40, HT0, CH54, BE High RMS



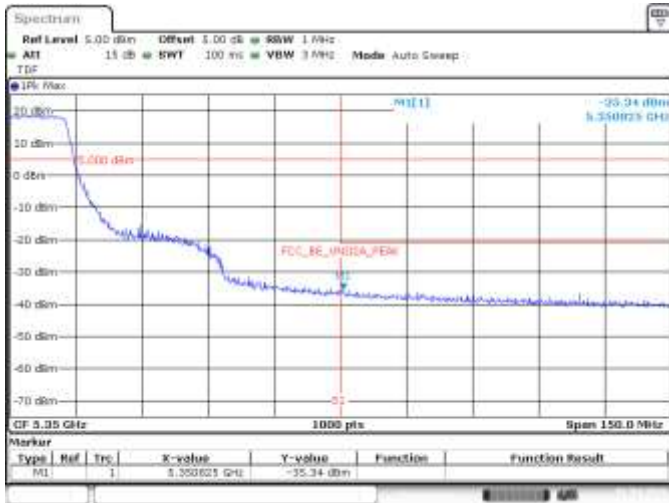
Date: 7_JAN_2019 13:30:45

SISO B, 802.11n40, HT0, CH62, BE High Peak



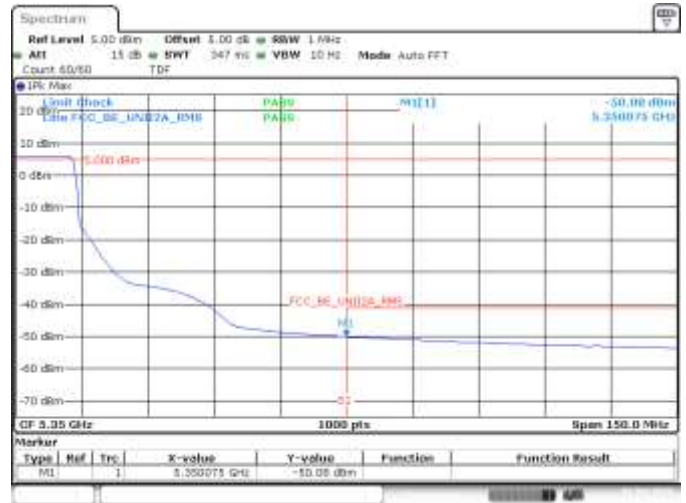
Date: 7_JAN_2019 13:30:08

SISO B, 802.11n40, HT0, CH62, BE High RMS



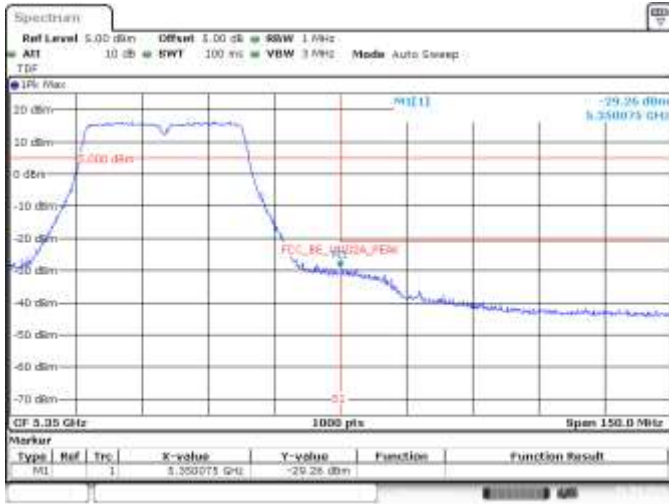
Date: 4 JAN 2019 19:20:45

MIMO A, 802.11n40, HT8, CH54, BE High Peak



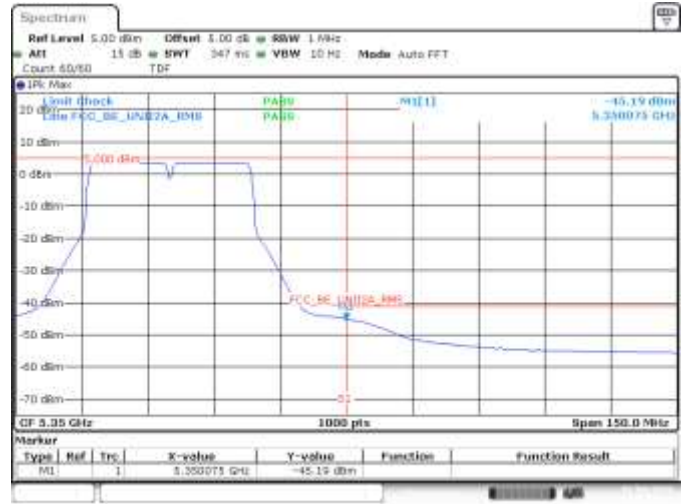
Date: 4 JAN 2019 19:20:53

MIMO A, 802.11n40, HT8, CH54, BE High RMS



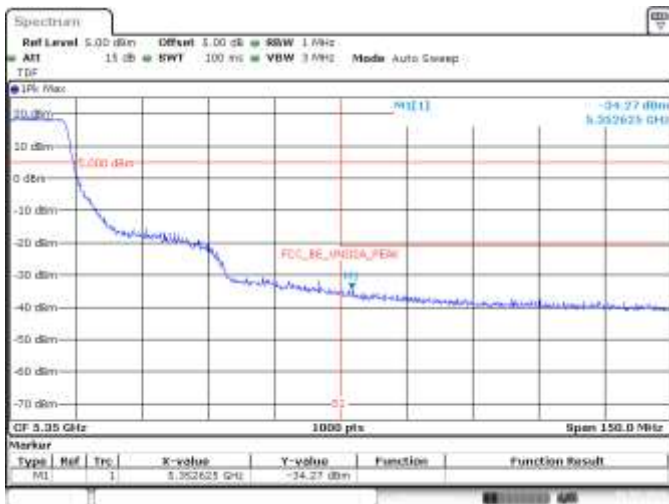
Date: 4 JAN 2019 19:20:49

MIMO A, 802.11n40, HT8, CH62, BE High Peak



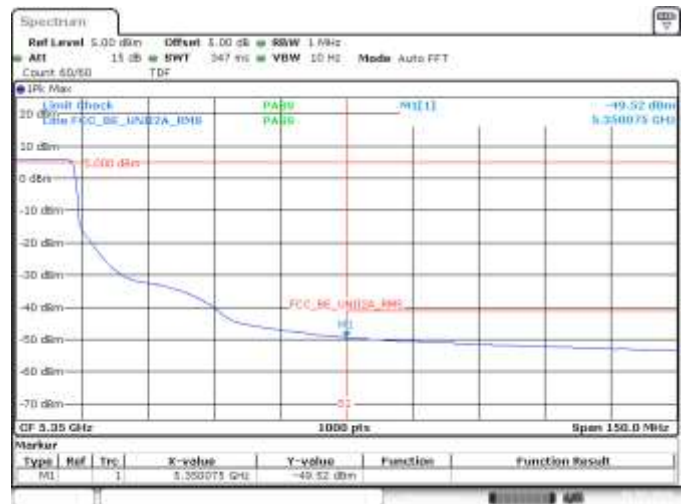
Date: 4 JAN 2019 19:20:54

MIMO A, 802.11n40, HT8, CH62, BE High RMS



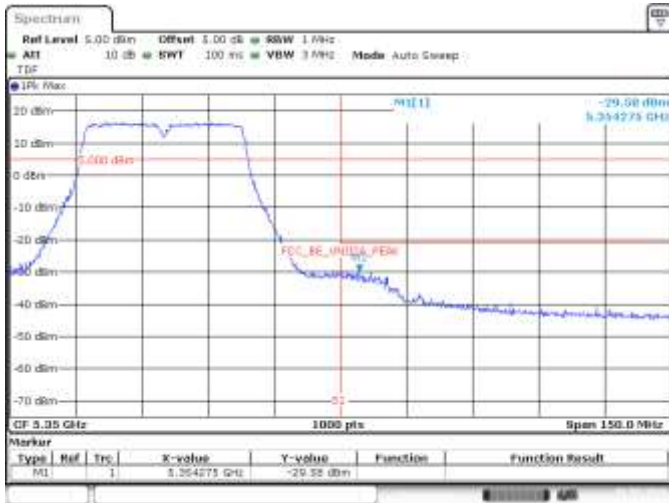
Date: 7 JAN 2019 13:27:24

MIMO B, 802.11n40, HT8, CH54, BE High Peak



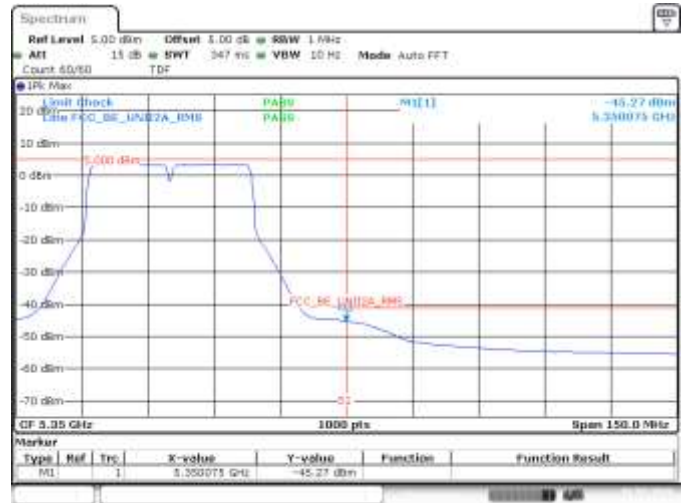
Date: 7 JAN 2019 13:36:53

MIMO B, 802.11n40, HT8, CH54, BE High RMS



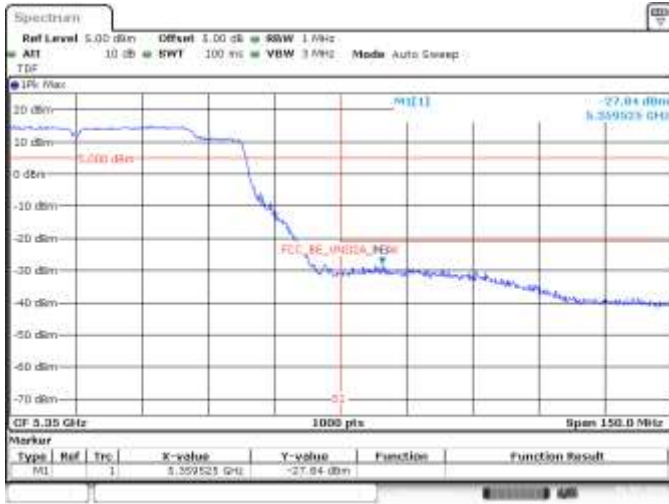
Date: 7.JAN.2019 13:45:30

MIMO B, 802.11n40, HT8, CH62, BE High Peak



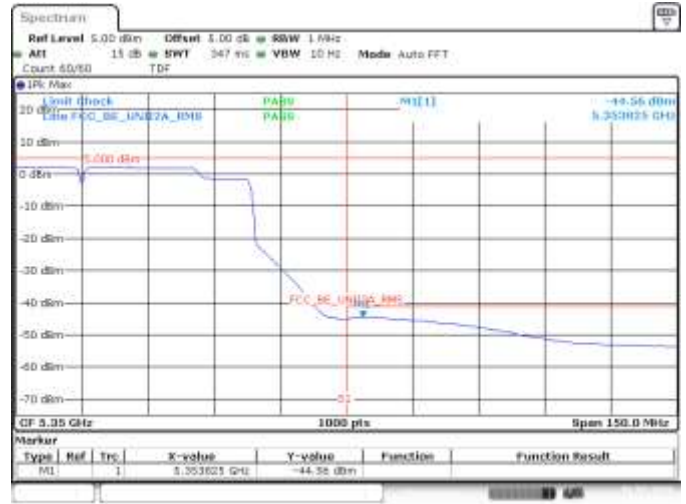
Date: 7.JAN.2019 13:45:55

MIMO B, 802.11n40, HT8, CH62, BE High RMS



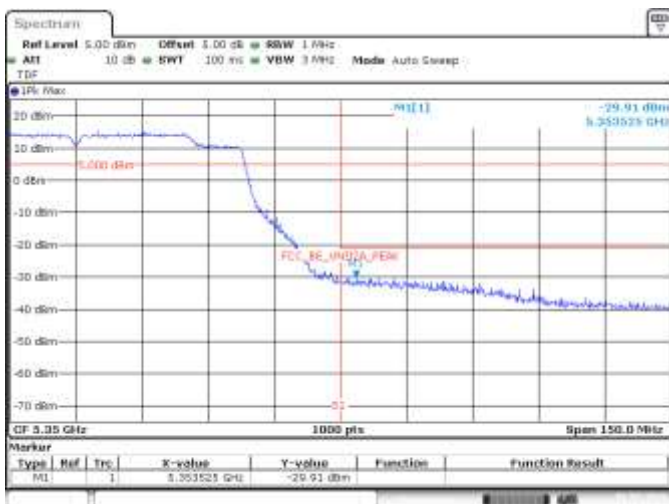
Date: 7.JAN.2019 12:02:24

SISO A, 802.11ac80, VHT0, CH58, BE High Peak



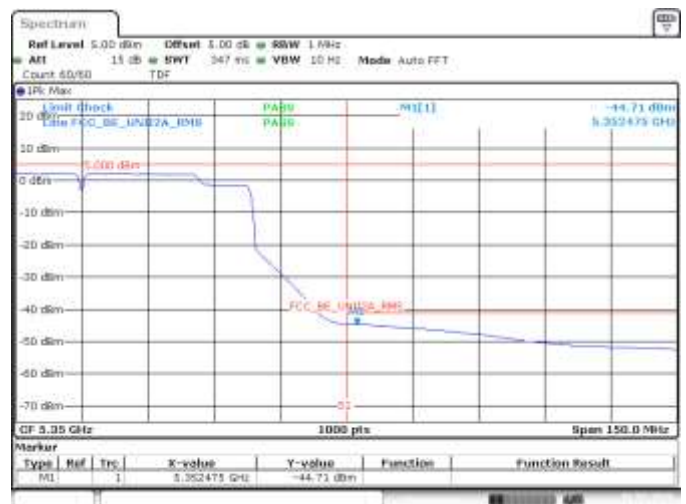
Date: 7.JAN.2019 12:01:14

SISO A, 802.11ac80, VHT0, CH58, BE High RMS



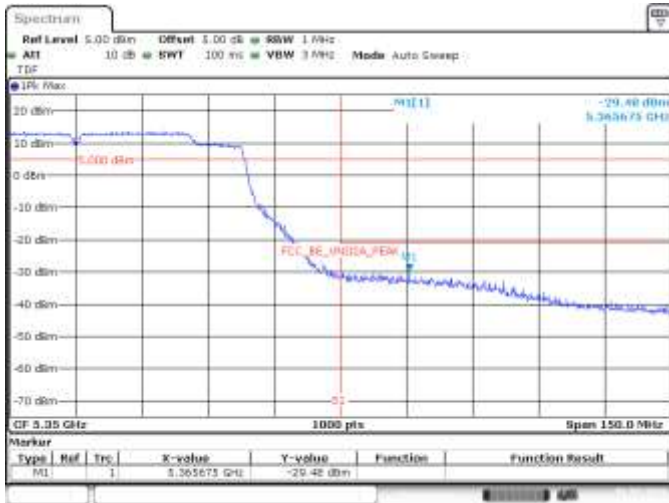
Date: 7.JAN.2019 14:22:41

SISO B, 802.11ac80, VHT0, CH58, BE High Peak



Date: 7.JAN.2019 14:22:12

SISO B, 802.11ac80, VHT0, CH58, BE High RMS



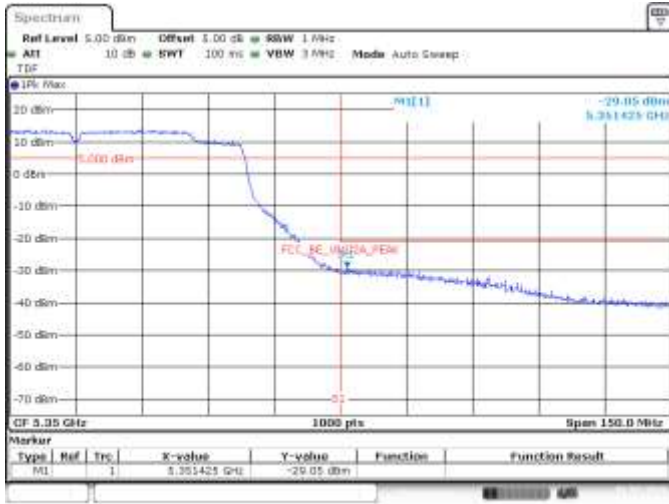
Date: 7.JAN.2019 12:08:34

MIMO A, 802.11ac80, VHT0, CH58, BE High Peak



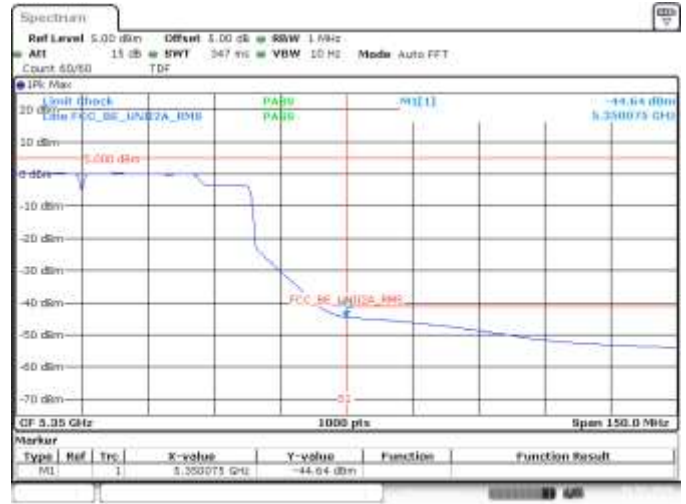
Date: 7.JAN.2019 12:08:30

MIMO A, 802.11ac80, VHT0, CH58, BE High RMS



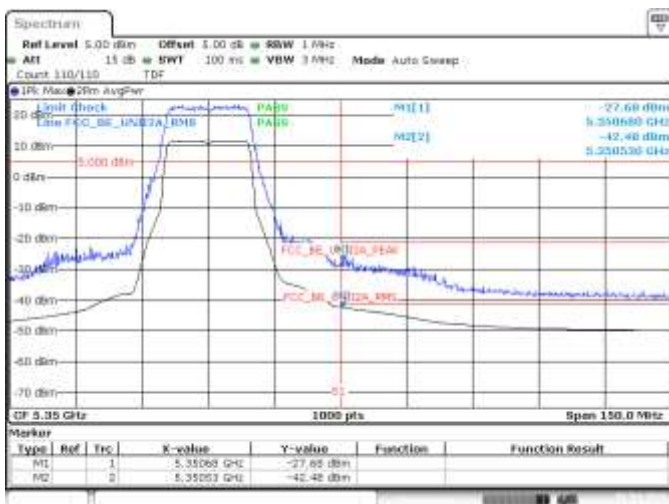
Date: 7.JAN.2019 14:40:07

MIMO B, 802.11ac80, VHT0, CH58, BE High Peak



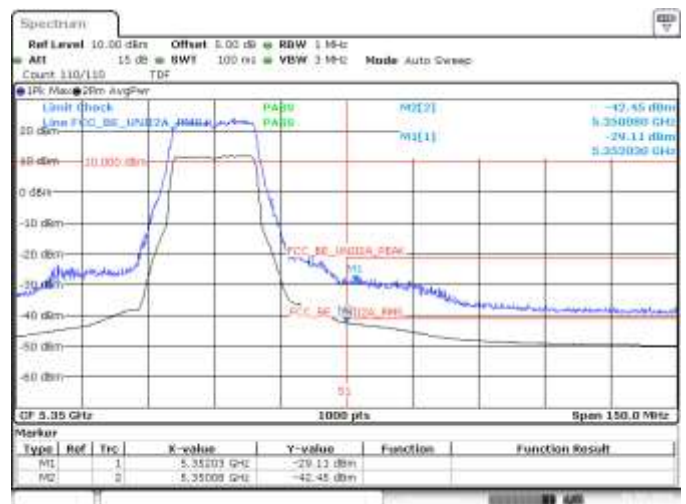
Date: 7.JAN.2019 14:40:07

MIMO B, 802.11ac80, VHT0, CH58, BE High RMS



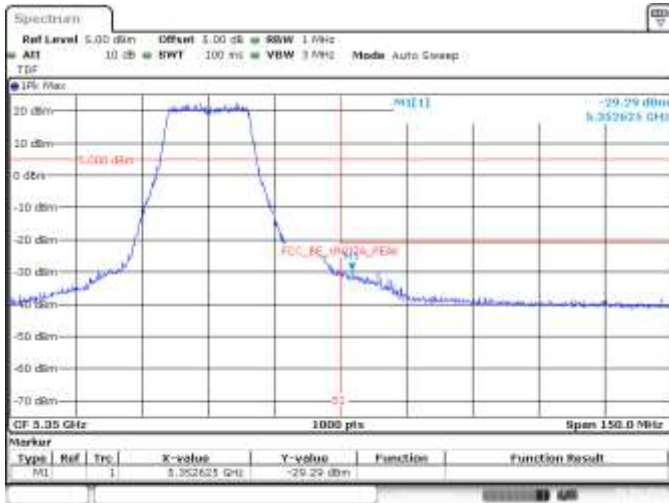
Date: 4.JAN.2019 16:10:24

SISO A, 802.11ax20, HE0, CH64, BE High RMS, Peak



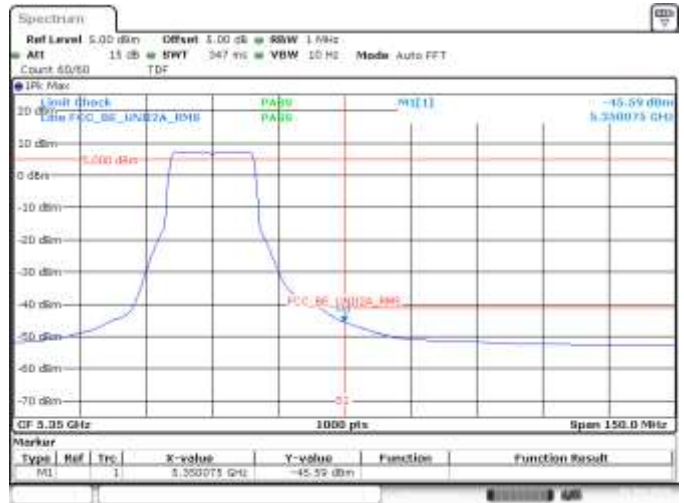
Date: 7.JAN.2019 12:10:34

SISO B, 802.11ax20, HE0, CH64, BE High RMS, Peak



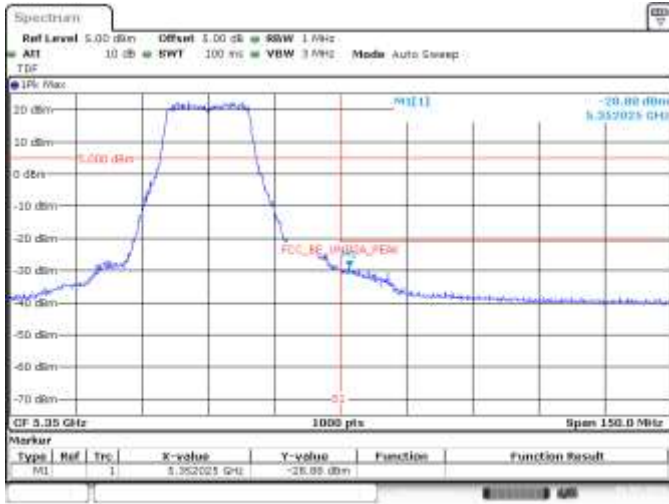
Date: 4 JAN 2019 19:20:14

MIMO A, 802.11ax20, HE0, CH64, BE High Peak



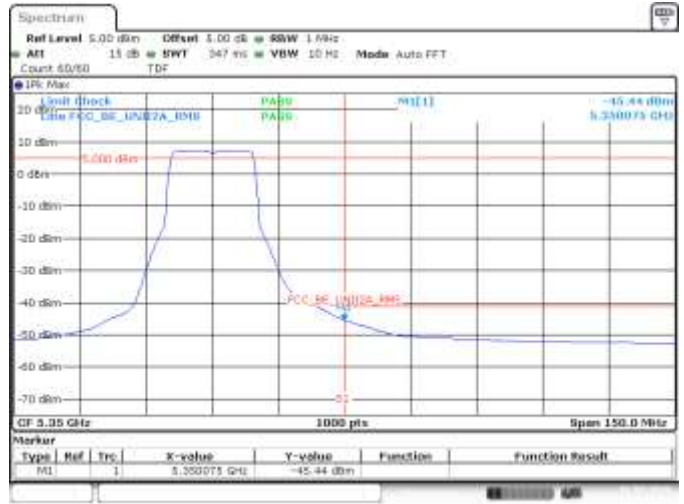
Date: 4 JAN 2019 19:20:10

MIMO A, 802.11ax20, HE0, CH64, BE High RMS



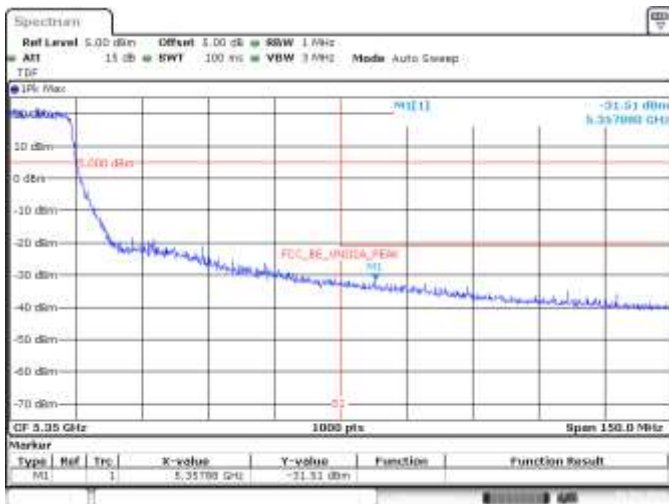
Date: 7 JAN 2019 13:20:45

MIMO B, 802.11ax20, HE0, CH64, BE High Peak



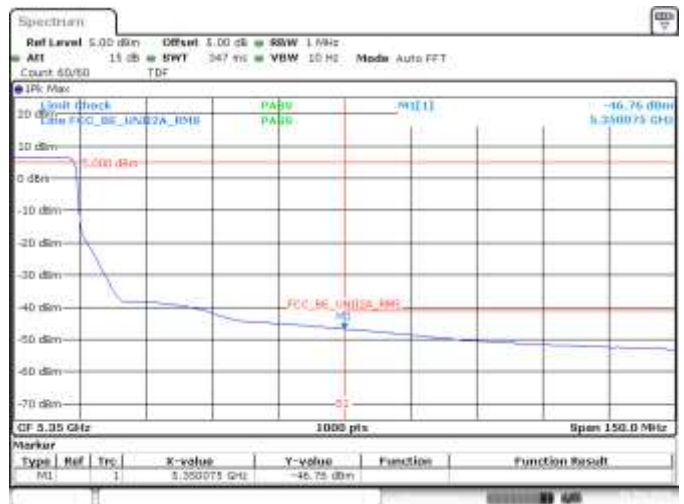
Date: 7 JAN 2019 13:20:00

MIMO B, 802.11ax20, HE0, CH64, BE High RMS



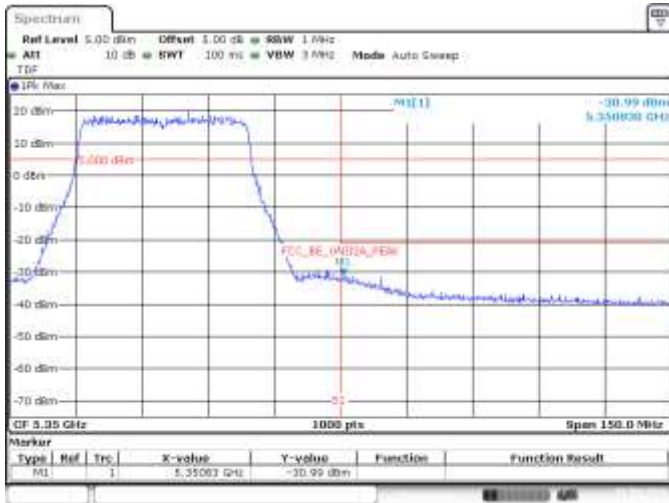
Date: 4 JAN 2019 19:51:43

SISO A, 802.11ax40, HE0, CH54, BE High Peak



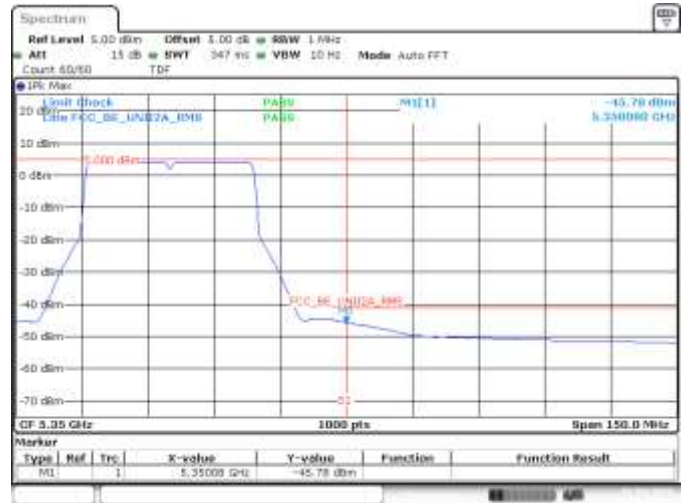
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SISO A, 802.11ax40, HE0, CH54, BE High RMS



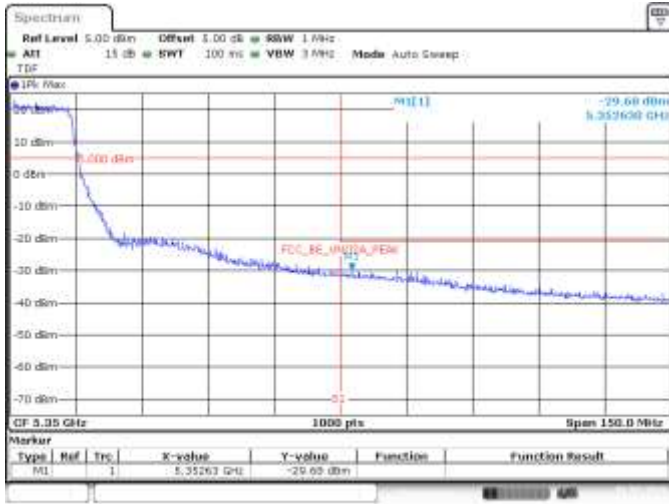
Date: 4.JAN.2019 19:52:05

SISO A, 802.11ax40, HE0, CH62, BE High Peak



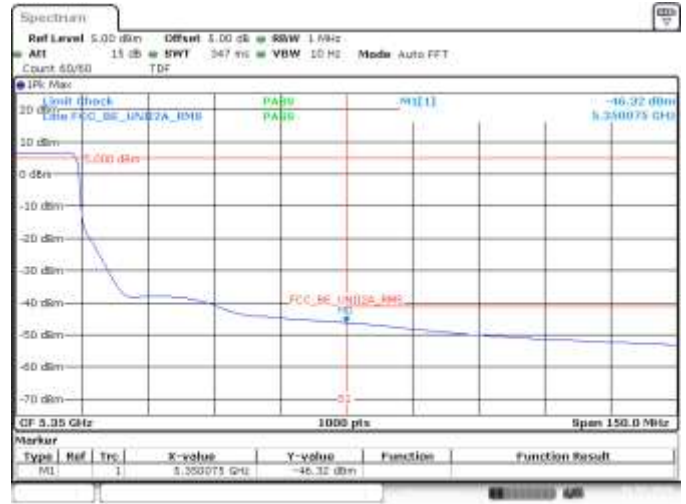
Date: 4.JAN.2019 19:54:14

SISO A, 802.11ax40, HE0, CH62, BE High RMS



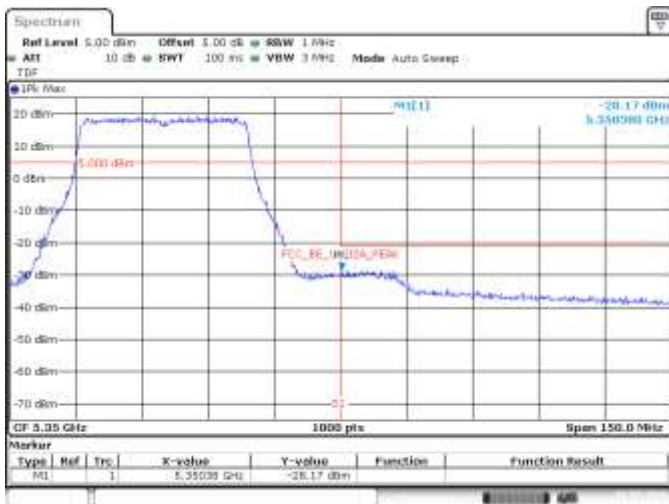
Date: 7.JAN.2019 13:01:25

SISO B, 802.11ax40, HE0, CH54, BE High Peak



Date: 7.JAN.2019 13:01:32

SISO B, 802.11ax40, HE0, CH54, BE High RMS



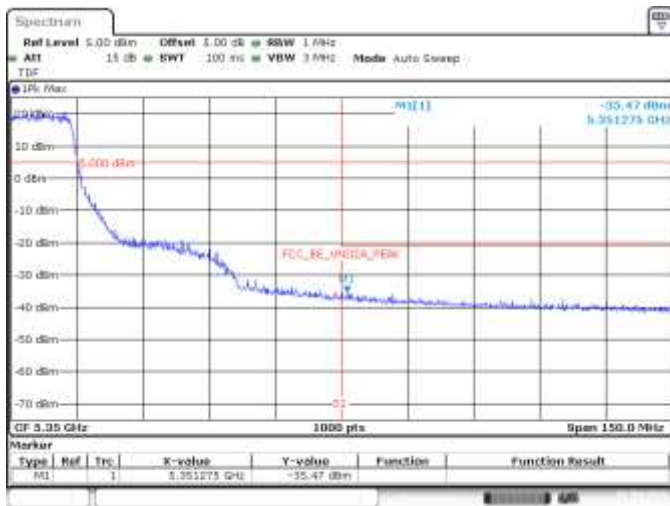
Date: 7.JAN.2019 13:07:52

SISO B, 802.11ax40, HE0, CH62, BE High Peak



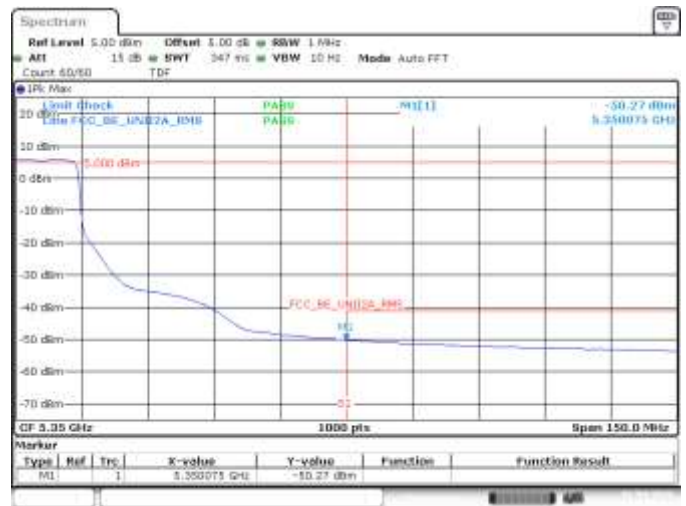
Date: 7.JAN.2019 13:07:50

SISO B, 802.11ax40, HE0, CH62, BE High RMS



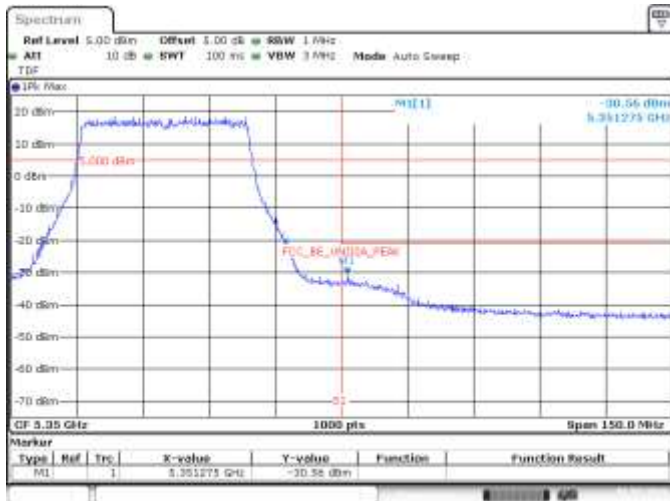
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MIMO A, 802.11ax40, HE0, CH54, BE High Peak



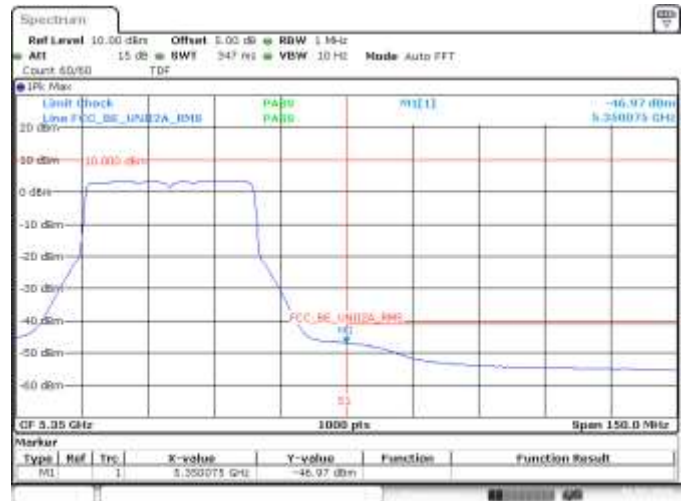
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MIMO A, 802.11ax40, HE0, CH54, BE High RMS



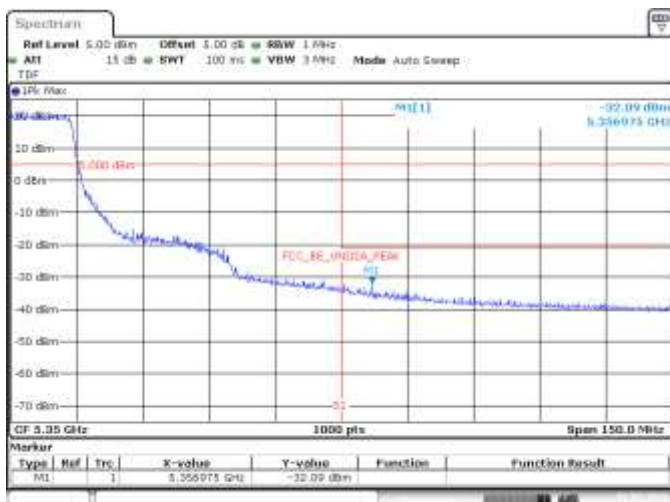
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MIMO A, 802.11ax40, HE0, CH62, BE High Peak



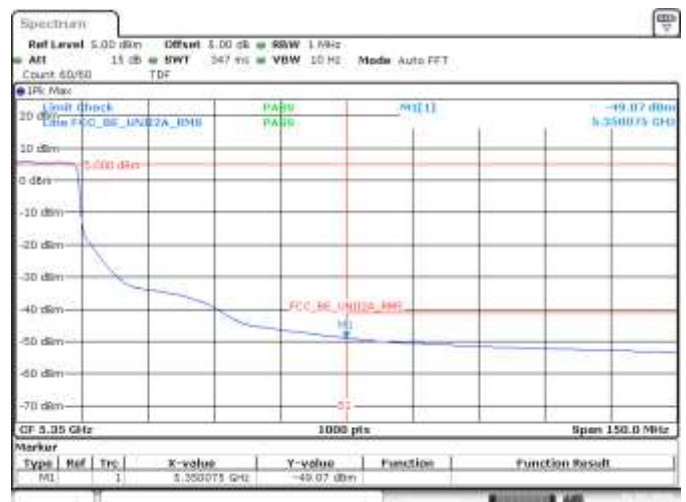
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MIMO A, 802.11ax40, HE0, CH62, BE High RMS



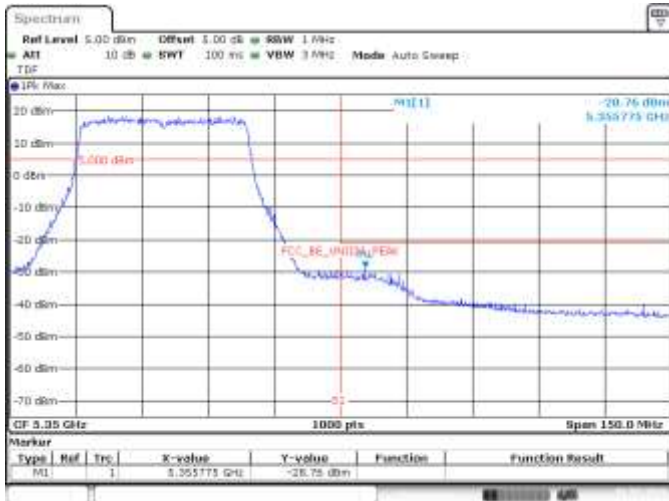
Date: 7_JAN_2019 14:10:45

MIMO B, 802.11ax40, HE0, CH54, BE High Peak



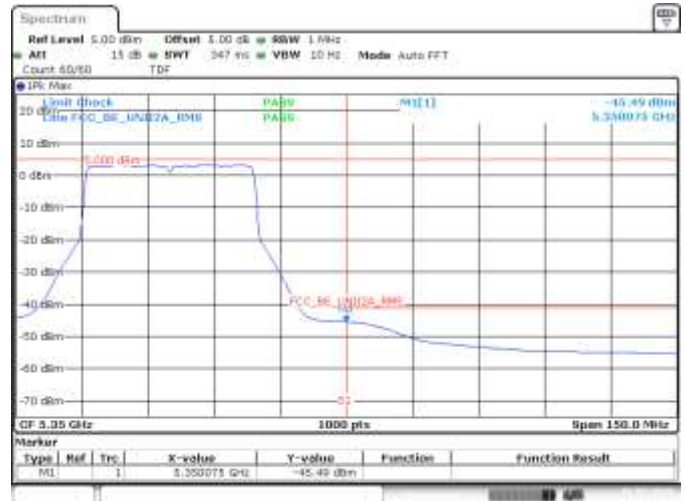
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MIMO B, 802.11ax40, HE0, CH54, BE High RMS



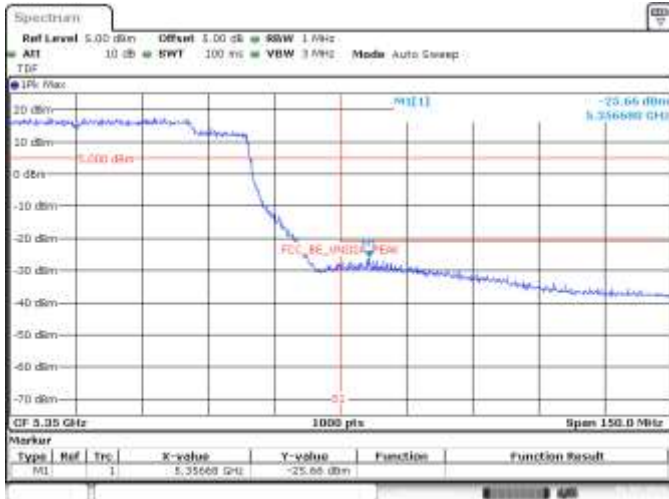
Date: 7_JAN_2019 14:10:53

MIMO B, 802.11ax40, HE0, CH62, BE High Peak



Date: 7_JAN_2019 14:10:27

MIMO B, 802.11ax40, HE0, CH62, BE High RMS



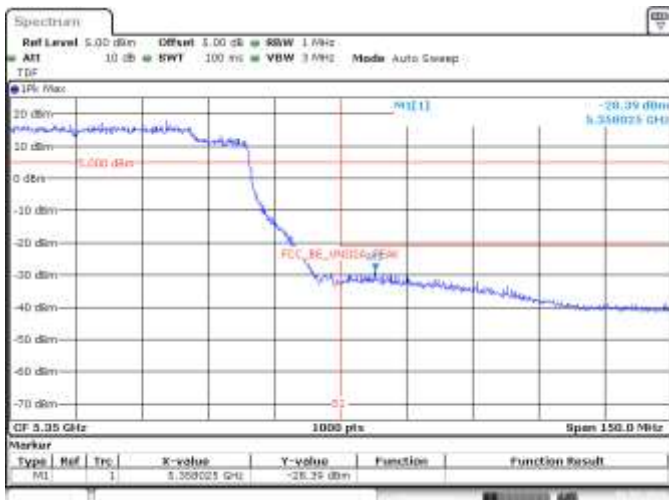
Date: 7_JAN_2019 12:13:35

SISO A, 802.11ax80, HE0, CH58, BE High Peak



Date: 7_JAN_2019 12:14:42

SISO A, 802.11ax80, HE0, CH58, BE High RMS



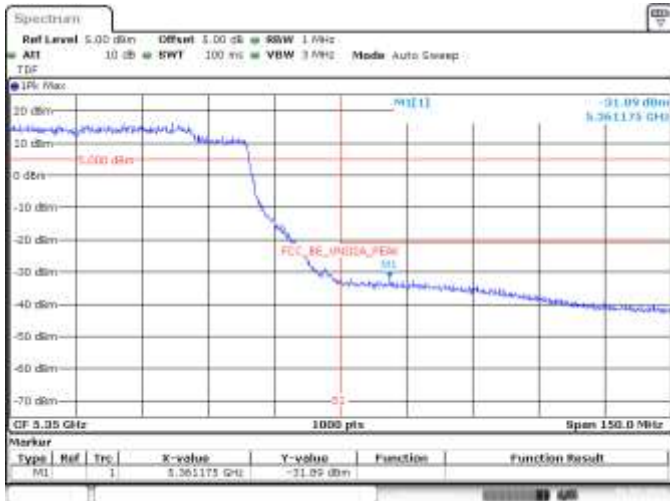
Date: 7_JAN_2019 15:48:30

SISO B, 802.11ax80, HE0, CH58, BE High Peak



Date: 7_JAN_2019 15:48:44

SISO B, 802.11ax80, HE0, CH58, BE High RMS



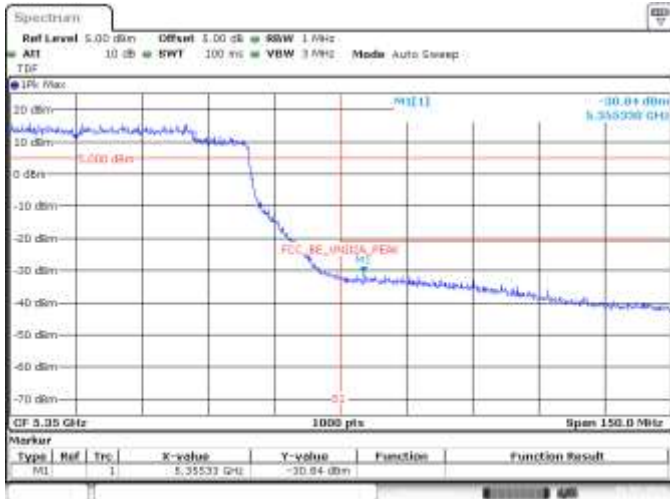
Date: 7.JAN.2019 12:17:30

MIMO A, 802.11ax80, HE0, CH58, BE High Peak



Date: 7.JAN.2019 12:17:30

MIMO A, 802.11ax80, HE0, CH58, BE High RMS



Date: 7.JAN.2019 15:41:11

MIMO B, 802.11ax80, HE0, CH58, BE High Peak



Date: 7.JAN.2019 15:40:43

MIMO B, 802.11ax80, HE0, CH58, BE High RMS