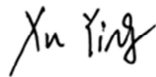


RF TEST REPORT

Applicant	MeiG Smart Technology Co., Ltd
FCC ID	2APJ4-SNM909F
Product	Smart Module
Brand	MEIGLink
Model	SNM909F
Report No.	EFTA26050274-IE-07-R3V1
Issue Date	September 16, 2026

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.



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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	August 18, 2026
Rev.1	Updated information.	September 16, 2026
Note: This revised report (Report No.: EFTA26050274-IE-07-R3V1) supersedes and replaces the previously issued report (Report No.: EFTA26050274-IE-07-R3). Please discard or destroy the previously issued report and dispose of it accordingly.		

Summary of measurement results

Number	Test Case	Clause in FCC rules	Verdict
1	Average output power	15.407(a)	PASS
2	Occupied bandwidth	15.407(e)	PASS
3	Frequency stability	15.407(g)	PASS
4	Power spectral density	15.407(a)	PASS
5	Unwanted Emissions	15.407(b), 15.205, 15.209	PASS
6	Conducted Emissions	15.207	PASS
Date of Testing: May 28, 2026 ~ June 9, 2026			
Date of Sample Received: May 22, 2026			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

1. Test Laboratory

1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.
Address: Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City: Shanghai
Post code: 201201
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E-mail: Kain.Xu@cpt.eurofinscn.com

2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	MeiG Smart Technology Co., Ltd
Applicant address	2nd Floor, Office Building, No.5 Lingxia Road, Fenghuang, Fuyong Street, Bao'an District, Shenzhen, China.
Manufacturer	MeiG Smart Technology Co., Ltd
Manufacturer address	2nd Floor, Office Building, No.5 Lingxia Road, Fenghuang, Fuyong Street, Bao'an District, Shenzhen, China.

2.2. General information

EUT Description			
Model	SNM909F		
SN	Conducted	M909F4AAYG041400031	
	Radiated	M909F4AAYG041400003	
Hardware Version	V1.0F		
Software Version	V01_T05		
Power Supply	External power supply		
Antenna Type	External Antenna		
Antenna Connector	IPEX antenna (meet with the standard FCC Part 15.203 requirement)		
Antenna Gain		Antenna 1 (dBi)	Antenna 2 (dBi)
	U-NII-1	2.70	2.70
	U-NII-2A	2.07	2.07
	U-NII-2C	1.48	1.48
	U-NII-3	1.48	1.48
Directional Gain		For Power (dBi)	For PSD (dBi)
	U-NII-1	2.70	5.71
	U-NII-2A	2.07	5.08
	U-NII-2C	1.48	4.49
	U-NII-3	1.48	4.49
Operating Frequency Range(s)	U-NII-1: 5150MHz-5250MHz U-NII-2A: 5250MHz -5350MHz U-NII-2C: 5470MHz-5725MHz U-NII-3: 5725MHz -5850MHz		
Modulation Type	802.11a: OFDM 802.11n (HT20/HT40): OFDM 802.11ac (VHT20/VHT40/VHT80): OFDM		
Max. Output Power	U-NII-1: 21.15 dBm (0.130 W)		
	U-NII-2A: 20.57 dBm (0.114 W)		

	U-NII-2C: 21.35 dBm (0.136 W)
	U-NII-3: 21.06 dBm (0.537 W)
Operating temperature range	-25 ° C to 75 ° C
Operating voltage range	3.50 VDC to 4.35 VDC
Testing temperature range	-30 ° C to 50° C
Testing voltage range	3.50 VDC – 3.80 VDC – 4.35 VDC
State voltage	3.80 VDC

Note:

1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.
2. This device support automatically discontinue transmission, while the device is not transmitting any information, the device can automatically discontinue transmission and become standby mode for power saving. The device can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.
3. (a) Manufacturers implements security features in any digitally modulated devices capable of operating in any of the U-NII bands, so that third parties are not able to reprogram the device to operate outside the parameters for which the device was certified. The software prevents the user from operating the transmitter with operating frequencies, output power, modulation types or other radio frequency parameters outside those that were approved for the device. Manufacturers uses means including, but not limited to the use of a private network that allows only authenticated users to download software, electronic signatures in software or coding in hardware that is decoded by software to verify that new software can be legally loaded into a device to meet these requirements and must describe the methods in their application for equipment authorization.
(b) Manufacturers take steps to ensure that DFS functionality cannot be disabled by the operator of the U-NII device.

3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR47 Part 15E Unlicensed National Information Infrastructure Devices

ANSI C63.10-2020+Cor.1-2023

Reference standard:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

4. Test Configuration

Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

WLAN Support SISO and MIMO mode, the power setting for MIMO mode is equal or higher than SISO Mode, So only MIMO mode has been assessed.

The test software is used QRCT.

Worst-case data rates are shown as following table.

Mode	Data Rate
	MIMO
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS8
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

The worst case Antenna mode for each of the following tests for Wi-Fi:

Test Cases	MIMO
Average conducted output power	O
Occupied bandwidth	O
Frequency stability	O
Power Spectral Density	O
Unwanted Emissions	O
Conducted Emissions	O
Note: "O": test all bands	

Wireless Technology and Frequency Range

Wireless Technology		Bandwidth	Channel	Frequency
Wi-Fi	U-NII-1	20 MHz	36	5180MHz
			40	5200MHz
			44	5220MHz
			48	5240MHz
		40 MHz	38	5190MHz
			46	5230MHz
		80 MHz	42	5210MHz
	U-NII-2A	20 MHz	52	5260MHz
			56	5280MHz
			60	5300MHz
			64	5320MHz
		40 MHz	54	5270MHz
			62	5310MHz
		80 MHz	58	5290MHz
	U-NII-2C	20 MHz	100	5500MHz
			104	5520MHz
			108	5540MHz
			112	5560MHz
			116	5580MHz
			120	5600MHz
			124	5620MHz
			128	5640MHz
			132	5660MHz
			136	5680MHz
			140	5700MHz
			144	5720MHz
		40 MHz	102	5510MHz
			110	5550MHz
			118	5590MHz
			126	5630MHz
			134	5670MHz
			142	5710MHz
		80 MHz	106	5530MHz
			122	5610MHz
			138	5690MHz
	U-NII-3	20 MHz	149	5745MHz
			153	5765MHz
			157	5785MHz
			161	5805MHz
			165	5825MHz

Test Report		Report No.: EP-1A2000027412-01		
		40 MHz	151	5755MHz
			159	5795MHz
		80 MHz	155	5775MHz
Does this device support TPC Function? ☐ Yes ☒ No				
Does this device support TDWR Band? ☒ Yes ☐ No				

5. Test Case

5.1. Occupied Bandwidth

Ambient condition

Temperature	Relative humidity	Pressure
25°C	57%	101.3 kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator and a known loss cable.

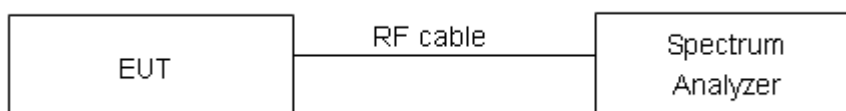
For U-NII-1/U-NII-2A/U-NII-2C, set RBW = 1% to 5% of the emission bandwidth, VBW > RBW, Detector = peak, Trace mode = max hold, measure the maximum width of the emission that is 26 dB down from the peak of emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is in the range of 1% to 5%.

For U-NII-3, Set RBW = 100 kHz, $VBW \geq 3 \times RBW$, Detector = peak, Trace mode = max hold, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

Use the 99 % power bandwidth function of the instrument.

Test Setup



Limits

For U-NII-1/U-NII-2A/U-NII-2C

No specific occupied bandwidth requirements in Part 15.407.

For U-NII-3

Rule FCC Part §15.407(e)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

5.2. Average Power Output

Ambient condition

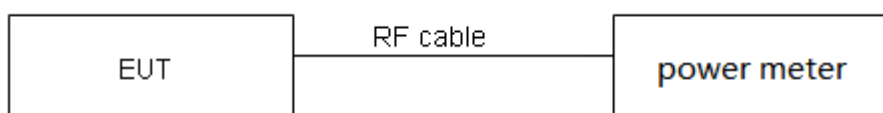
Temperature	Relative humidity	Pressure
25°C	57%	101.3 kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test Setup



Limits

Rule FCC Part 15.407(a)(1) / FCC Part 15.407(a) (2) / FCC Part 15.407(a) (3)

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23

dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(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.

(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 $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. 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.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.44 \text{ dB}$.

5.3. Frequency Stability

Ambient condition

Temperature	Relative humidity	Pressure
25°C	57%	101.3 kPa

Method of Measurement

1. Frequency stability with respect to ambient temperature

- a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.
- b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.
- c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
- e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
- f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.
- g) Measure the frequency at each of frequencies specified in 5.6.
- h) Switch OFF the EUT but do not switch OFF the oscillator heater.
- i) Lower the chamber temperature by not more than 10°C, and allow the temperature inside the chamber to stabilize.
- j) Repeat step f) through step i) down to the lowest specified temperature.

2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

- a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

- b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- c) Measure the frequency at each of the frequencies specified in 5.6.
- d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936\text{Hz}$

5.4. Power Spectral Density

Ambient condition

Temperature	Relative humidity	Pressure
25°C	57%	101.3 kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator and a known loss cable.

For U-NII 1/2A/2C

Set span to encompass the entire 99% OBW of the signal

RBW = 1MHz

VBW = 3MHz

Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$

Sweep time = auto

Detector = RMS

For U-NII 3

Set span to encompass the entire 99% OBW of the signal

RBW = 500kHz (510kHz if the SA can not set 500kHz, add $10 \log (500 \text{ kHz} / \text{RBW})$ to the test result)

VBW = 2MHz

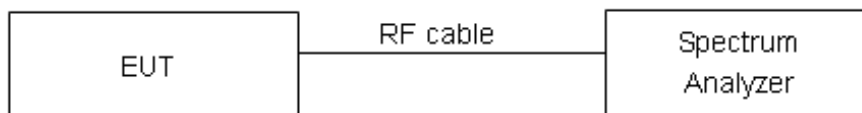
Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$

Sweep time = auto

Detector = RMS

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test setup



Limits

Rule FCC Part 15.407(a)(1) / FCC Part 15.407(a)(2) / FCC Part 15.407(a)(3)

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 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.

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.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, 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.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz 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.

Frequency Bands/GHz	Limits
5.15-5.25	11dBm/MHz
5.25-5.35 and 5.47-5.725	11dBm/MHz
5.725-5.85	30dBm/500kHz

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.75\text{dB}$.

5.5. Unwanted Emission

Ambient condition

Temperature	Relative humidity	Pressure
25°C	57%	101.3 kPa

Method of Measurement

The test set-up was made in accordance to the general provisions of ANSI C63.10. The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m/10m below 1GHz, 3m above 1GHz between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration.

Sweep the whole frequency band range from 9kHz to the 10th harmonic of the carrier, and the emissions less than 20 dB below the permissible value are reported.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

9kHz~150 kHz

RBW=200Hz, VBW=1kHz/ Sweep=AUTO

150 kHz~30MHz

RBW=9kHz, VBW=30kHz,/ Sweep=AUTO

Below 1GHz

RBW=100kHz / VBW=300kHz / Sweep=AUTO

a) Peak emission levels are measured by setting the instrument as follows:

Above 1GHz

PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO

b) Average emission levels are measured by setting the instrument as follows:

Above 1GHz

AVERAGE: RBW=1MHz / VBW=3MHz / Sweep=AUTO

c) Detector: The measurements employing a 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.

d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)

e) Sweep time = auto.

f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific

emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)

g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is $[10 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.

2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is $[20 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.

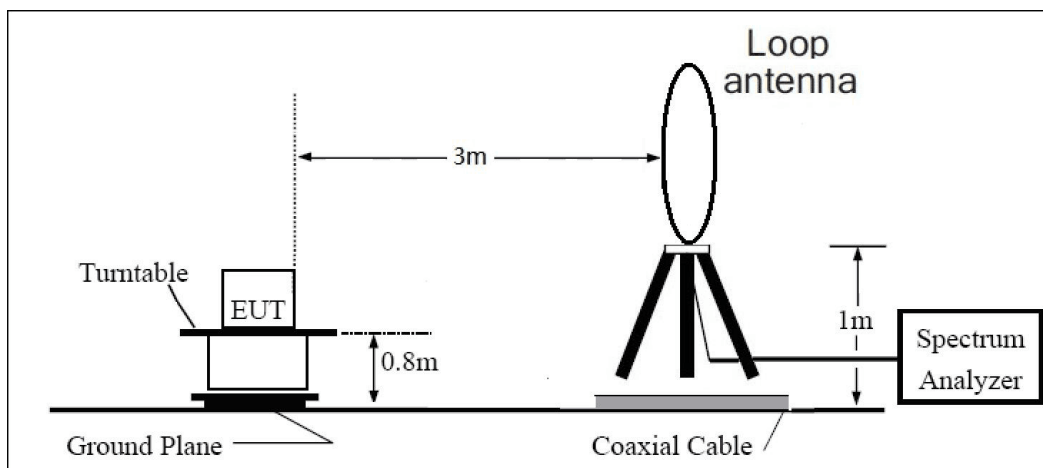
Reduce the video bandwidth until no significant variations in the displayed signal are observed in subsequent traces, provided the video bandwidth is no less than 1 Hz. For regulatory requirements that specify averaging only over the transmit duration (e.g., digital transmission system [DTS] and Unlicensed National Information Infrastructure [U-NII]), the video bandwidth shall be greater than $[1 / (\text{minimum transmitter on time})]$ and no less than 1 Hz.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the loop antenna is vertical, others antenna are vertical and horizontal.

The test is in transmitting mode.

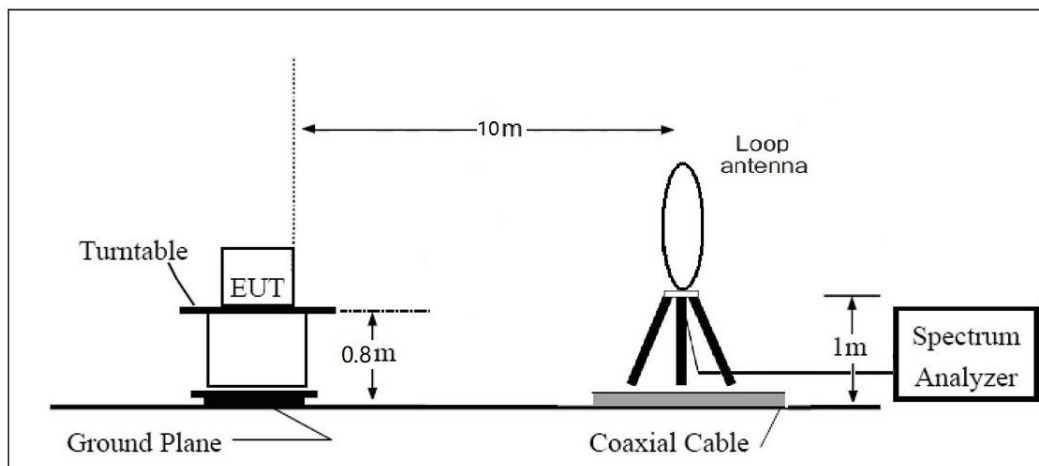
Test setup

9kHz~ 30MHz



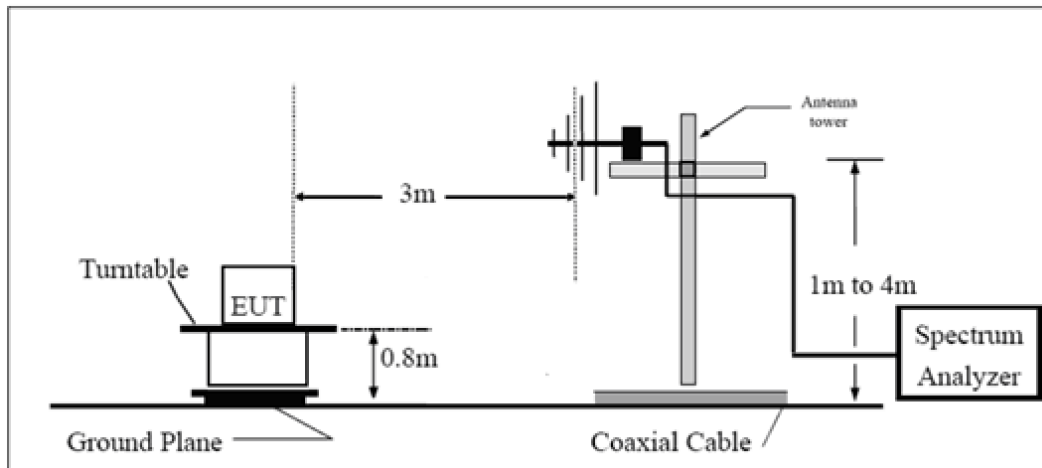
Note: Area side:2.4mX3.6m

Distance 10m



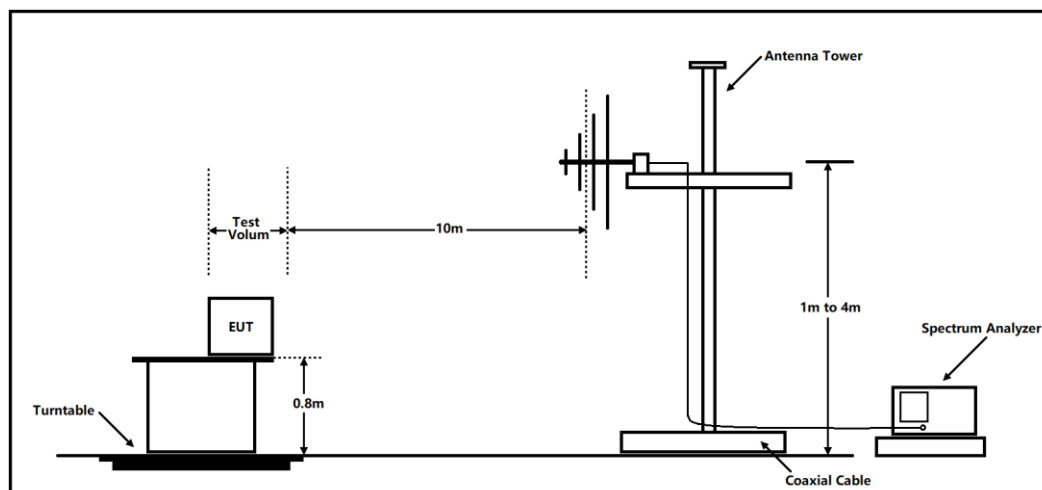
Note: Area side: 21m x 12m

30MHz~ 1GHz



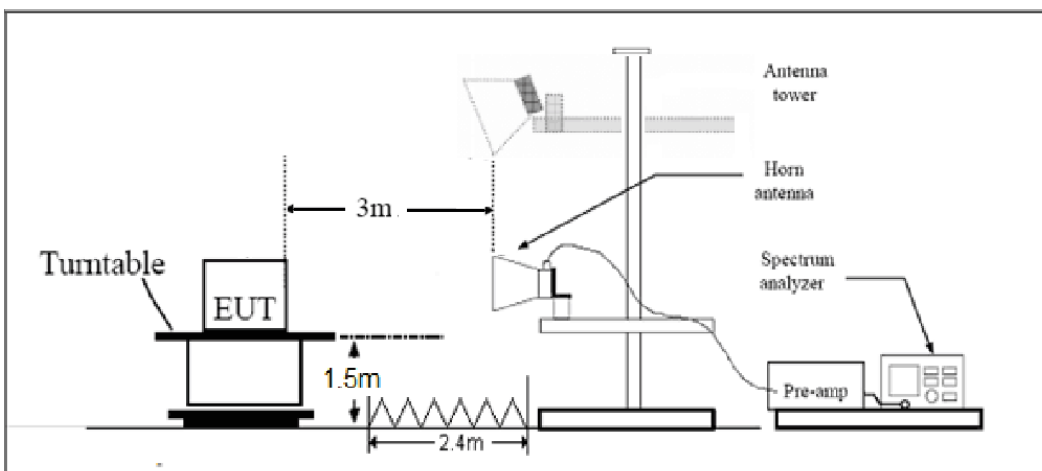
Note: Area side:2.4mX3.6m

Distance 10m



Note: Area side: 21m x 12m

Above 1GHz



Note: Area side:2.4mX3.6m

Limits

- (1) For transmitters operating in the 5725-5850 MHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- (2) 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(68.2dBμV/m).
- (3) 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 e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).
- (4) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).

Note: the following formula is used to convert the EIRP to field strength

§1、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{meters}]) + 104.77$, where E = field strength and

d = distance at which field strength limit is specified in the rules;

§2、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] + 95.2$, for d = 3 meters

- (5) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table.

Frequency of emission (MHz)	Field strength(μV/m)	Field strength(dBμV/m)
0.009–0.490	2400/F(kHz)	/
0.490–1.705	24000/F(kHz)	/
1.705–30.0	30	/
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty for 3m
9kHz-30MHz	3.55 dB
30MHz-200MHz	4.17 dB
200MHz-1GHz	4.84 dB
1-18GHz	4.35 dB
18-26.5GHz	5.90 dB
26.5GHz~40GHz	5.92 dB
Frequency	Uncertainty for 10m
30MHz – 200MHz	3.39 dB
200MHz – 1GHz	3.82 dB
1GHz – 18GHz	6.51 dB
18GHz – 40GHz	6.31 dB

5.6. Conducted Emission

Ambient condition

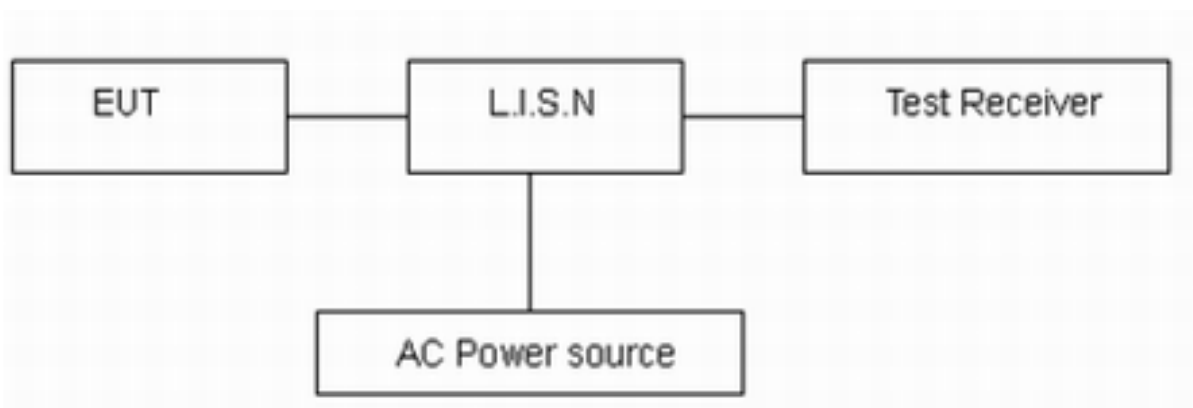
Temperature	Relative humidity	Pressure
25°C	57%	101.3 kPa

Methods of Measurement

The EUT IS placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.10. Connect the AC power line of the EUT to the LISN Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9kHz, VBW is set to 30kHz The measurement result should include both L line and N line.

The test is in transmitting mode.

Test Setup



Note: AC Power source is used to change the voltage 110V/60Hz.

Limits

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

*: Decreases with the logarithm of the frequency.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 2.69$ dB.

6. Test Results

6.1. Occupied Bandwidth

U-NII-1

Mode	Frequency (MHz)	Antenna	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5180	Ant1	16.686	22.896	Pass
802.11a	5180	Ant2	16.639	22.046	Pass
802.11a	5200	Ant1	16.647	22.841	Pass
802.11a	5200	Ant2	16.621	22.334	Pass
802.11a	5240	Ant1	16.683	22.587	Pass
802.11a	5240	Ant2	16.645	23.008	Pass
802.11ac(VHT20)	5180	Ant1	17.841	24.544	Pass
802.11ac(VHT20)	5180	Ant2	17.836	24.275	Pass
802.11ac(VHT20)	5200	Ant1	17.796	22.886	Pass
802.11ac(VHT20)	5200	Ant2	17.767	23.917	Pass
802.11ac(VHT20)	5240	Ant1	17.851	23.055	Pass
802.11ac(VHT20)	5240	Ant2	17.826	24.435	Pass
802.11ac(VHT40)	5190	Ant1	36.235	41.860	Pass
802.11ac(VHT40)	5190	Ant2	36.295	41.503	Pass
802.11ac(VHT40)	5230	Ant1	36.285	41.551	Pass
802.11ac(VHT40)	5230	Ant2	36.314	41.865	Pass
802.11ac(VHT80)	5210	Ant1	75.773	83.472	Pass
802.11ac(VHT80)	5210	Ant2	75.680	83.276	Pass
802.11n(HT20)	5180	Ant1	17.786	23.272	Pass
802.11n(HT20)	5180	Ant2	17.826	23.400	Pass
802.11n(HT20)	5200	Ant1	17.831	22.825	Pass
802.11n(HT20)	5200	Ant2	17.804	23.893	Pass
802.11n(HT20)	5240	Ant1	17.872	23.849	Pass
802.11n(HT20)	5240	Ant2	17.820	23.043	Pass
802.11n(HT40)	5190	Ant1	36.247	41.851	Pass
802.11n(HT40)	5190	Ant2	36.239	41.540	Pass
802.11n(HT40)	5230	Ant1	36.303	41.586	Pass
802.11n(HT40)	5230	Ant2	36.322	41.422	Pass

U-NII-2A

Mode	Frequency (MHz)	Antenna	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5260	Ant1	16.707	22.679	Pass
802.11a	5260	Ant2	16.646	22.432	Pass
802.11a	5300	Ant1	16.640	22.061	Pass
802.11a	5300	Ant2	16.641	23.421	Pass
802.11a	5320	Ant1	16.694	22.477	Pass
802.11a	5320	Ant2	16.659	21.868	Pass
802.11ac(VHT20)	5260	Ant1	17.761	24.125	Pass
802.11ac(VHT20)	5260	Ant2	17.890	23.228	Pass
802.11ac(VHT20)	5300	Ant1	17.831	23.988	Pass
802.11ac(VHT20)	5300	Ant2	17.843	23.370	Pass
802.11ac(VHT20)	5320	Ant1	17.803	23.534	Pass
802.11ac(VHT20)	5320	Ant2	17.848	23.983	Pass
802.11ac(VHT40)	5270	Ant1	36.286	41.928	Pass
802.11ac(VHT40)	5270	Ant2	36.216	41.423	Pass
802.11ac(VHT40)	5310	Ant1	36.317	41.532	Pass
802.11ac(VHT40)	5310	Ant2	36.271	41.093	Pass
802.11ac(VHT80)	5290	Ant1	75.709	83.126	Pass
802.11ac(VHT80)	5290	Ant2	75.752	83.820	Pass
802.11n(HT20)	5260	Ant1	17.928	23.520	Pass
802.11n(HT20)	5260	Ant2	17.803	23.711	Pass
802.11n(HT20)	5300	Ant1	17.819	23.895	Pass
802.11n(HT20)	5300	Ant2	17.776	23.641	Pass
802.11n(HT20)	5320	Ant1	17.776	22.939	Pass
802.11n(HT20)	5320	Ant2	17.774	22.538	Pass
802.11n(HT40)	5270	Ant1	36.237	41.590	Pass
802.11n(HT40)	5270	Ant2	36.302	41.751	Pass
802.11n(HT40)	5310	Ant1	36.291	41.694	Pass
802.11n(HT40)	5310	Ant2	36.281	41.206	Pass

U-NII-2C

Mode	Frequency (MHz)	Antenna	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5500	Ant1	16.687	22.830	Pass
802.11a	5500	Ant2	16.629	22.672	Pass
802.11a	5600	Ant1	16.708	22.916	Pass
802.11a	5600	Ant2	16.666	22.076	Pass
802.11a	5700	Ant1	16.733	22.817	Pass
802.11a	5700	Ant2	16.619	22.399	Pass
802.11a	5720	Ant1	16.707	23.287	Pass
802.11a	5720	Ant2	16.663	22.220	Pass
802.11ac(VHT20)	5500	Ant1	17.853	23.086	Pass
802.11ac(VHT20)	5500	Ant2	17.756	23.639	Pass
802.11ac(VHT20)	5600	Ant1	17.887	23.555	Pass
802.11ac(VHT20)	5600	Ant2	17.772	22.755	Pass
802.11ac(VHT20)	5700	Ant1	17.888	24.338	Pass
802.11ac(VHT20)	5700	Ant2	17.790	23.414	Pass
802.11ac(VHT20)	5720	Ant1	17.890	23.669	Pass
802.11ac(VHT20)	5720	Ant2	17.813	22.948	Pass
802.11ac(VHT40)	5510	Ant1	36.280	41.397	Pass
802.11ac(VHT40)	5510	Ant2	36.239	41.418	Pass
802.11ac(VHT40)	5590	Ant1	36.213	40.954	Pass
802.11ac(VHT40)	5590	Ant2	36.264	41.436	Pass
802.11ac(VHT40)	5670	Ant1	36.211	41.232	Pass
802.11ac(VHT40)	5670	Ant2	36.273	41.632	Pass
802.11ac(VHT40)	5710	Ant1	36.304	41.350	Pass
802.11ac(VHT40)	5710	Ant2	36.270	40.839	Pass
802.11ac(VHT80)	5610	Ant1	75.806	83.445	Pass
802.11ac(VHT80)	5610	Ant2	75.771	84.134	Pass
802.11ac(VHT80)	5690	Ant1	75.720	83.759	Pass
802.11ac(VHT80)	5690	Ant2	75.775	84.348	Pass
802.11n(HT20)	5500	Ant1	17.826	23.127	Pass
802.11n(HT20)	5500	Ant2	17.768	22.450	Pass
802.11n(HT20)	5600	Ant1	17.897	23.753	Pass
802.11n(HT20)	5600	Ant2	17.802	23.622	Pass
802.11n(HT20)	5700	Ant1	17.868	24.046	Pass
802.11n(HT20)	5700	Ant2	17.823	22.401	Pass
802.11n(HT20)	5720	Ant1	17.913	23.617	Pass
802.11n(HT20)	5720	Ant2	17.771	22.938	Pass
802.11n(HT40)	5510	Ant1	36.307	41.221	Pass
802.11n(HT40)	5510	Ant2	36.243	41.752	Pass
802.11n(HT40)	5590	Ant1	36.328	41.633	Pass

802.11n(HT40)	5590	Ant2	36.300	41.361	Pass
802.11n(HT40)	5670	Ant1	36.322	41.412	Pass
802.11n(HT40)	5670	Ant2	36.256	41.399	Pass
802.11n(HT40)	5710	Ant1	36.358	41.421	Pass
802.11n(HT40)	5710	Ant2	36.302	41.399	Pass

U-NII-3

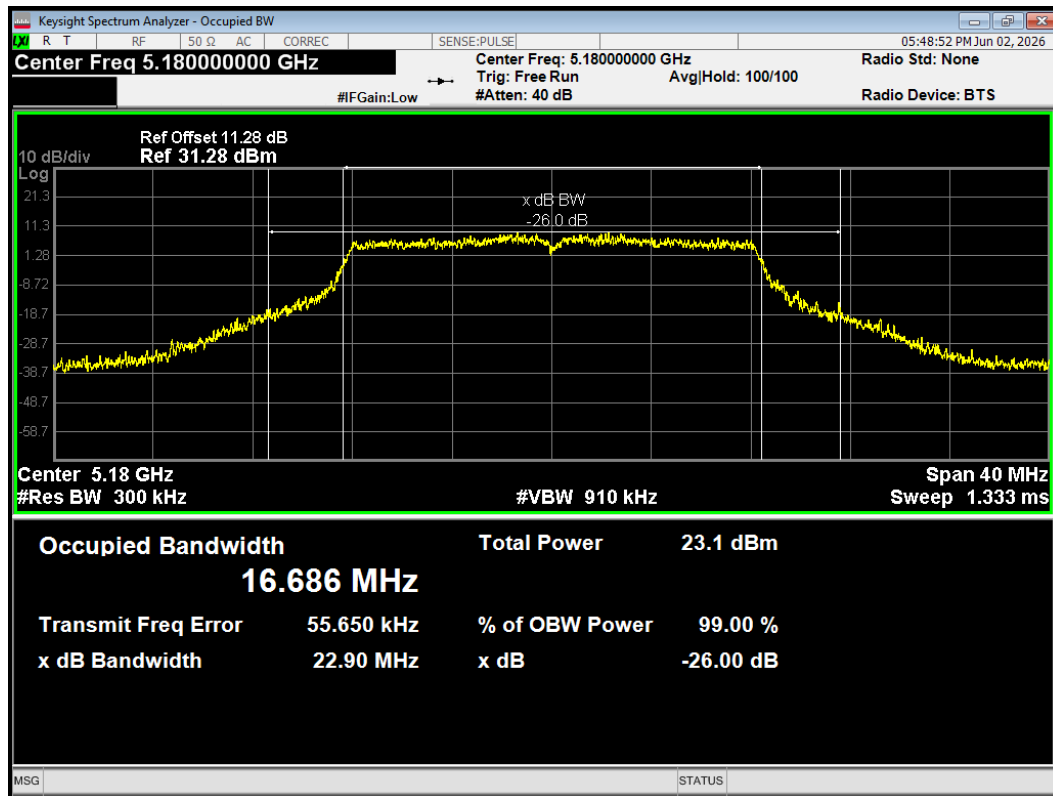
Mode	Carrier frequency (MHz)	Antenna	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11a	5720	Ant1	16.677	15.923	500	Pass
802.11a	5720	Ant2	16.640	15.031	500	Pass
802.11a	5745	Ant1	16.725	16.310	500	Pass
802.11a	5745	Ant2	16.611	13.167	500	Pass
802.11a	5785	Ant1	16.823	16.060	500	Pass
802.11a	5785	Ant2	16.647	15.133	500	Pass
802.11a	5825	Ant1	17.008	16.044	500	Pass
802.11a	5825	Ant2	16.631	16.323	500	Pass
802.11ac(VHT20)	5720	Ant1	17.853	15.159	500	Pass
802.11ac(VHT20)	5720	Ant2	17.813	14.961	500	Pass
802.11ac(VHT20)	5745	Ant1	17.867	15.111	500	Pass
802.11ac(VHT20)	5745	Ant2	17.841	17.534	500	Pass
802.11ac(VHT20)	5785	Ant1	17.933	17.294	500	Pass
802.11ac(VHT20)	5785	Ant2	17.770	15.113	500	Pass
802.11ac(VHT20)	5825	Ant1	18.004	16.901	500	Pass
802.11ac(VHT20)	5825	Ant2	17.880	15.901	500	Pass
802.11ac(VHT40)	5710	Ant1	36.295	36.027	500	Pass
802.11ac(VHT40)	5710	Ant2	36.251	35.122	500	Pass
802.11ac(VHT40)	5755	Ant1	36.261	35.703	500	Pass
802.11ac(VHT40)	5755	Ant2	36.284	35.301	500	Pass
802.11ac(VHT40)	5795	Ant1	36.302	35.289	500	Pass
802.11ac(VHT40)	5795	Ant2	36.319	36.296	500	Pass
802.11ac(VHT80)	5690	Ant1	75.734	75.144	500	Pass
802.11ac(VHT80)	5690	Ant2	75.732	75.078	500	Pass
802.11ac(VHT80)	5775	Ant1	75.742	75.081	500	Pass
802.11ac(VHT80)	5775	Ant2	75.777	74.998	500	Pass
802.11n(HT20)	5720	Ant1	17.842	16.782	500	Pass
802.11n(HT20)	5720	Ant2	17.790	16.030	500	Pass
802.11n(HT20)	5745	Ant1	17.912	16.990	500	Pass
802.11n(HT20)	5745	Ant2	17.843	16.772	500	Pass
802.11n(HT20)	5785	Ant1	17.837	17.309	500	Pass
802.11n(HT20)	5785	Ant2	17.798	15.627	500	Pass

802.11n(HT20)	5825	Ant1	17.838	16.817	500	Pass
802.11n(HT20)	5825	Ant2	17.754	15.081	500	Pass
802.11n(HT40)	5710	Ant1	36.330	35.585	500	Pass
802.11n(HT40)	5710	Ant2	36.239	35.284	500	Pass
802.11n(HT40)	5755	Ant1	36.260	35.698	500	Pass
802.11n(HT40)	5755	Ant2	36.339	35.704	500	Pass
802.11n(HT40)	5795	Ant1	36.300	35.655	500	Pass
802.11n(HT40)	5795	Ant2	36.287	35.421	500	Pass

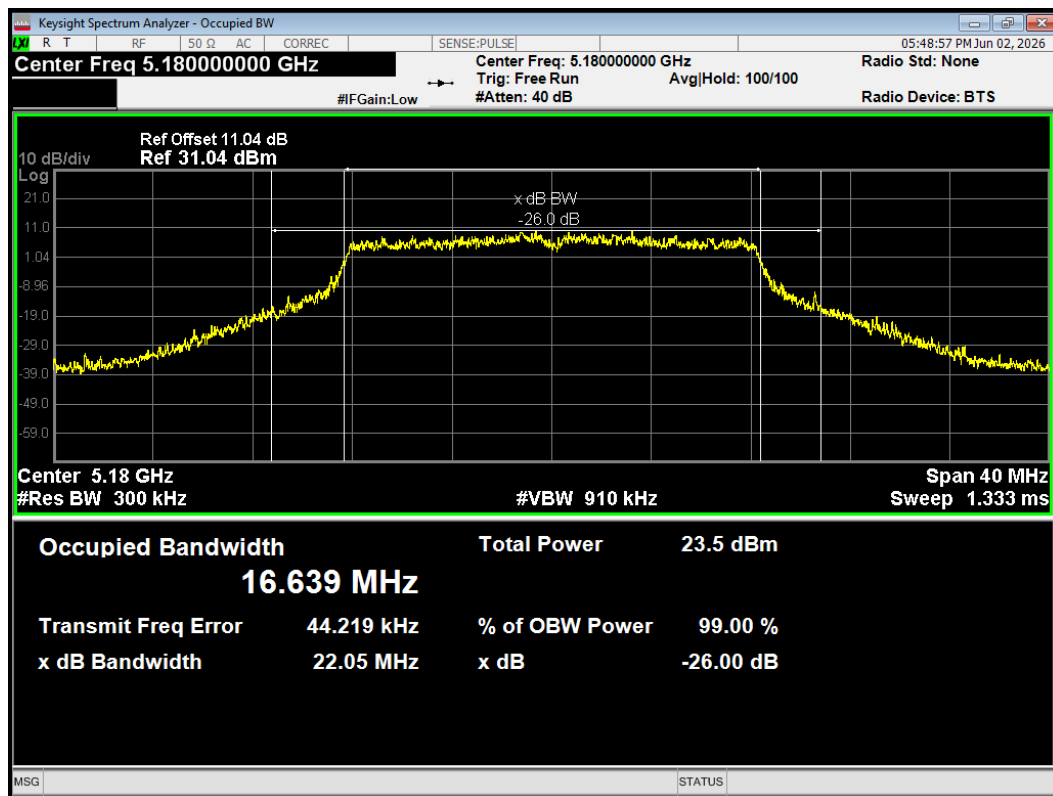
99% bandwidth

U-NII-1

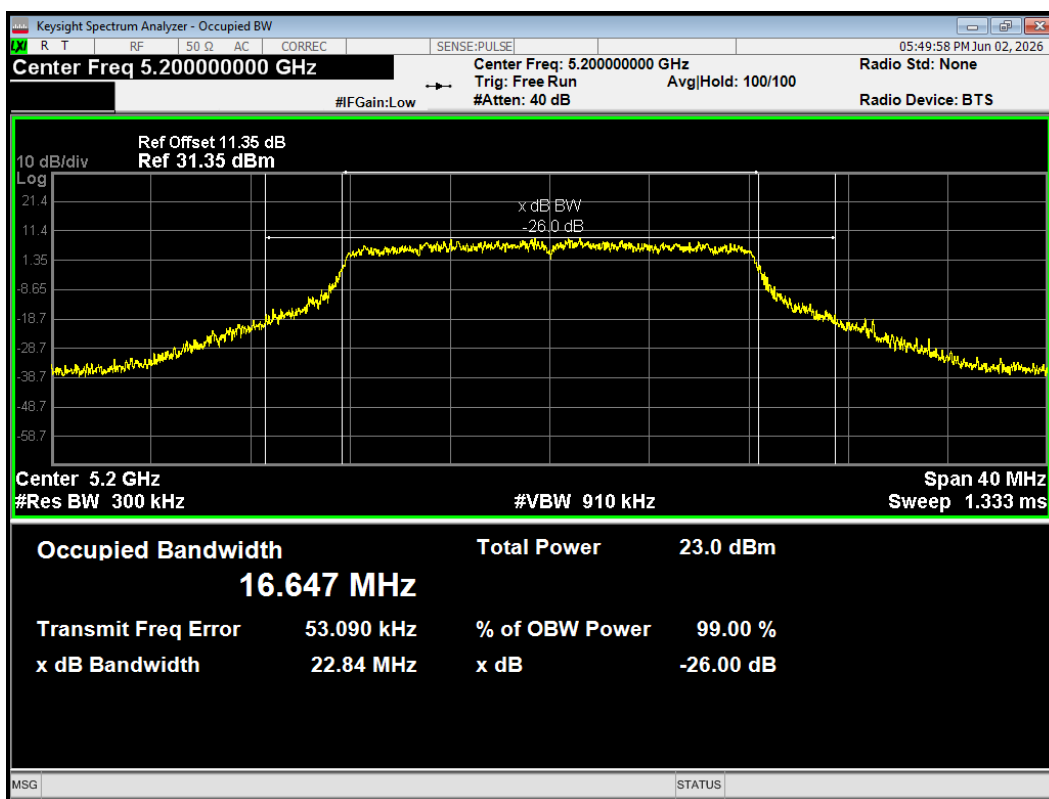
OBW 802.11a 5180MHz Ant1



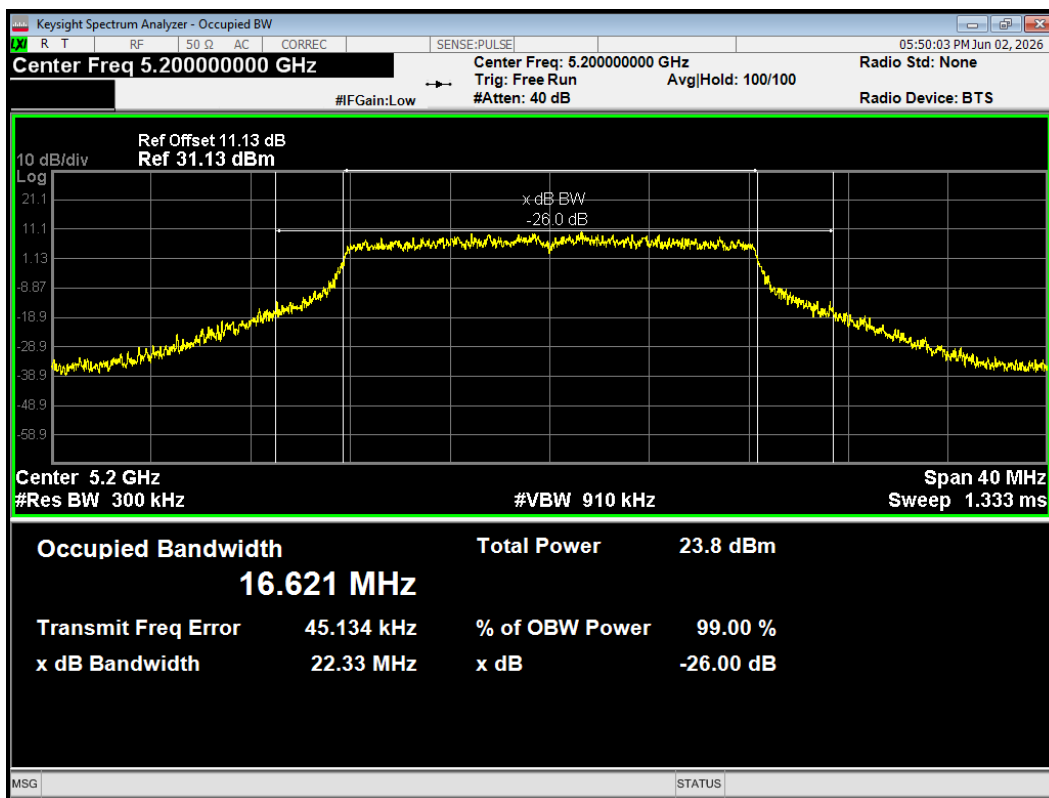
OBW 802.11a 5180MHz Ant2



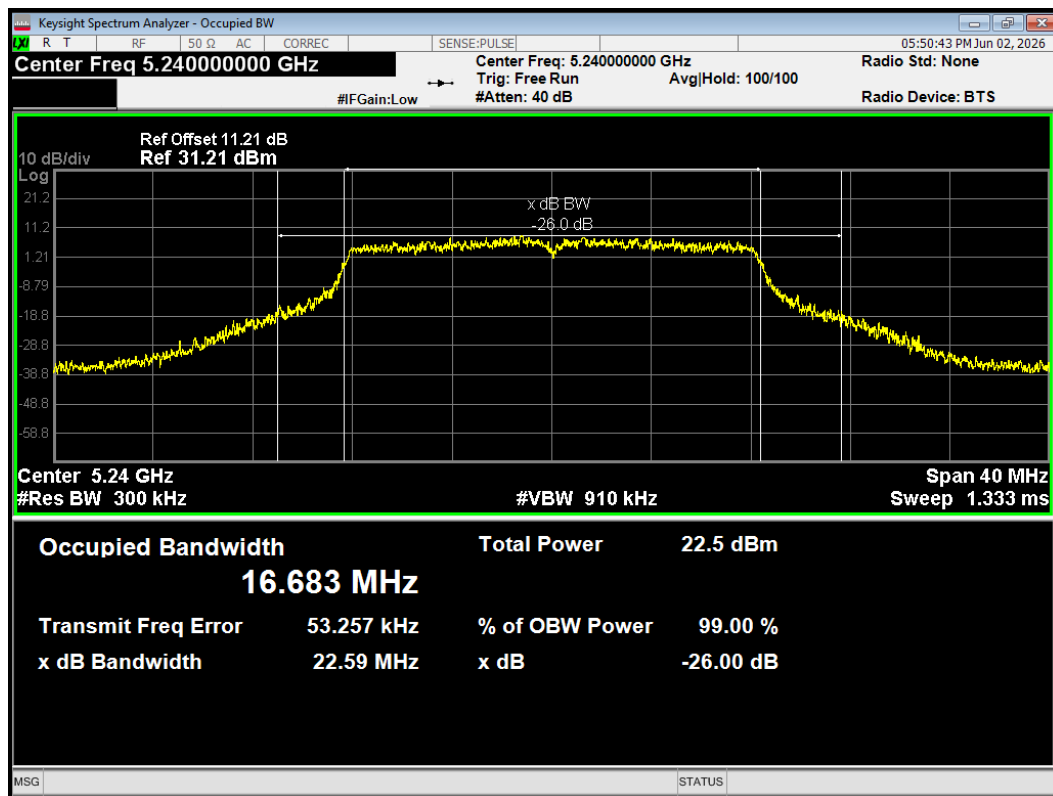
OBW 802.11a 5200MHz Ant1



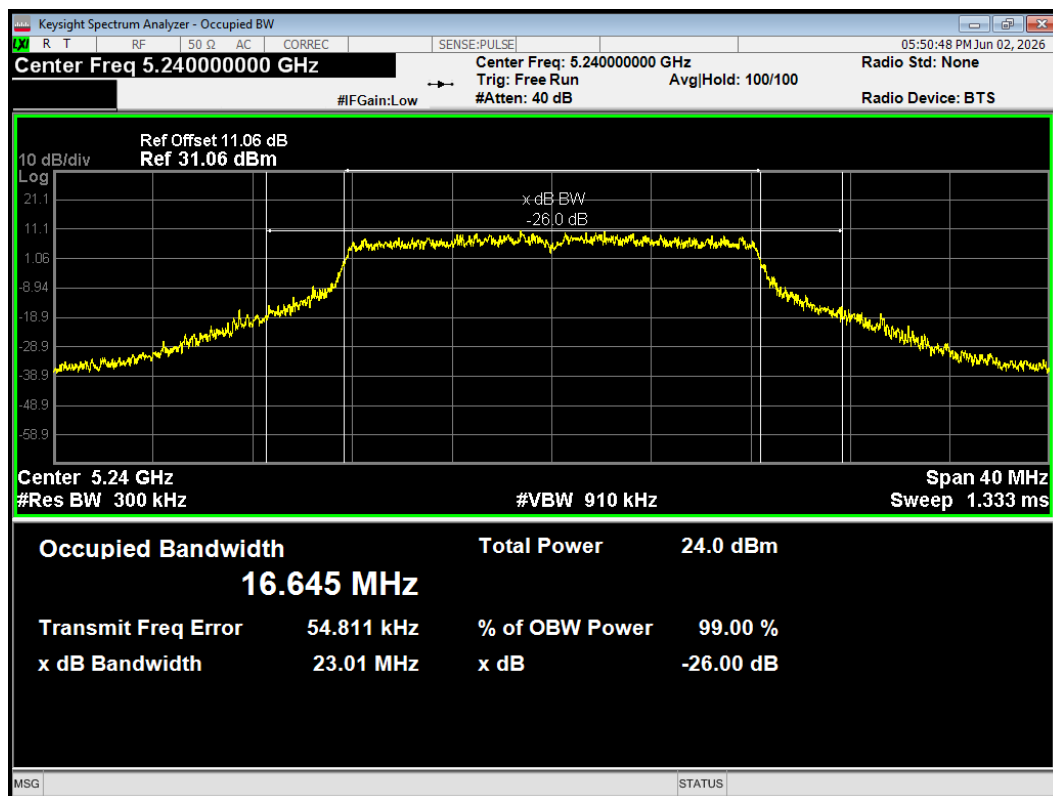
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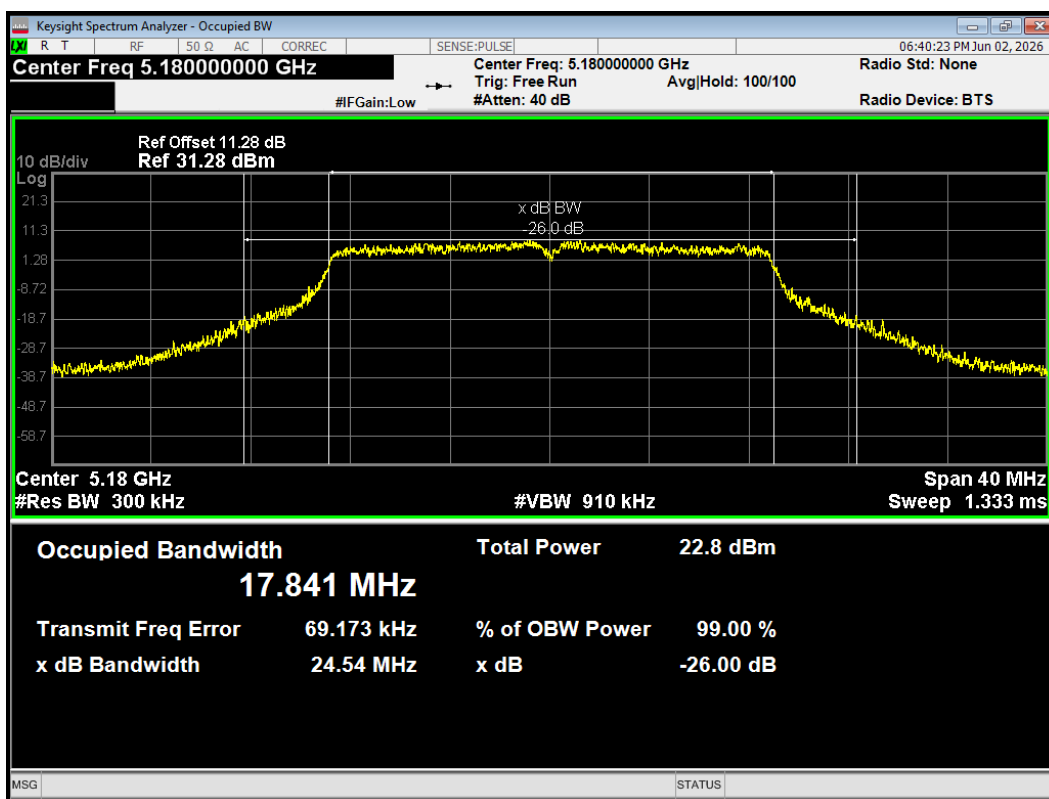
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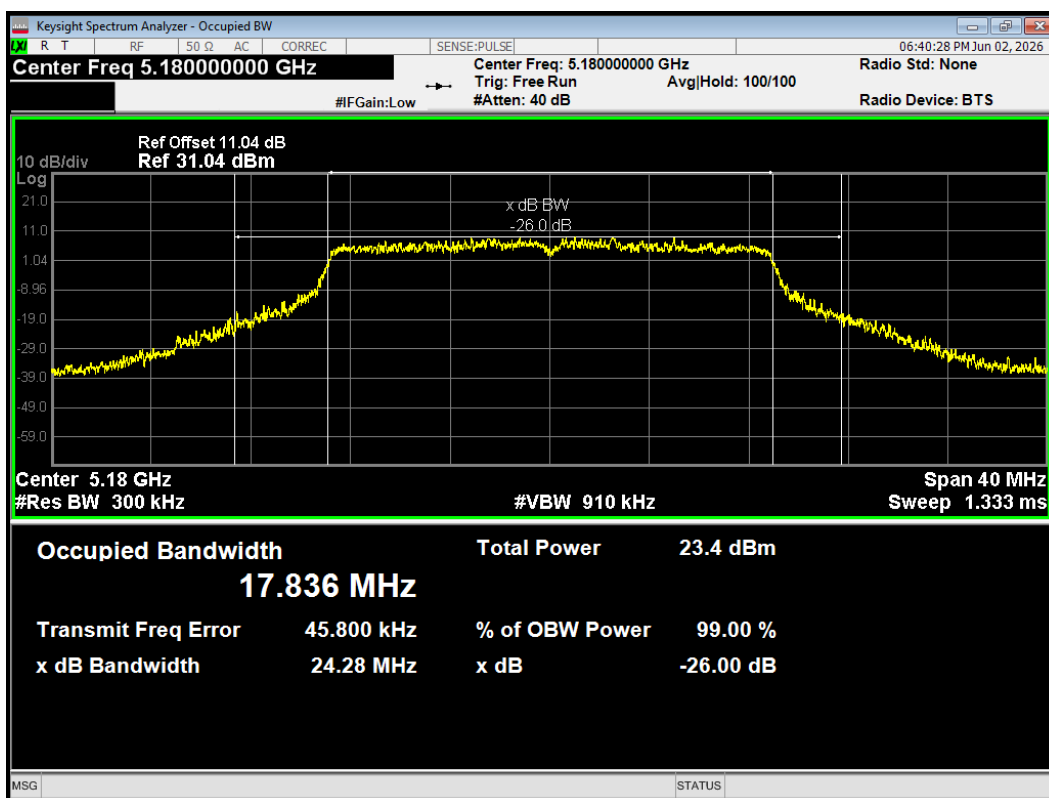
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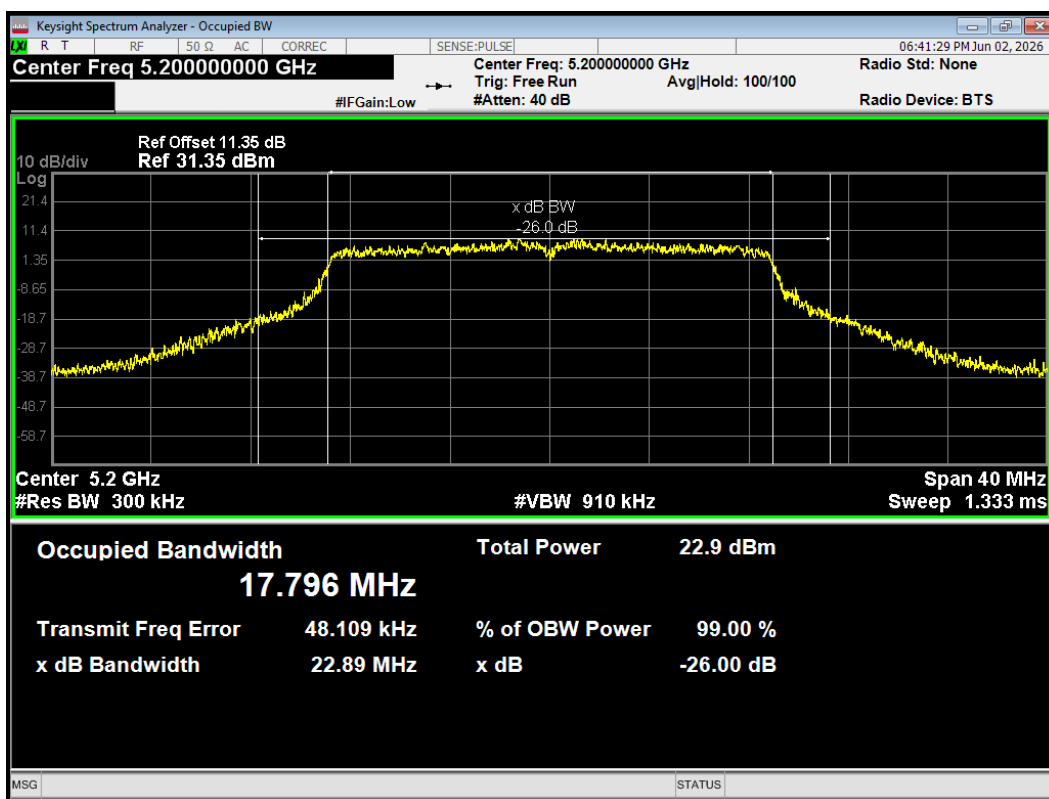
OBW 802.11ac(VHT20) 5180MHz Ant1



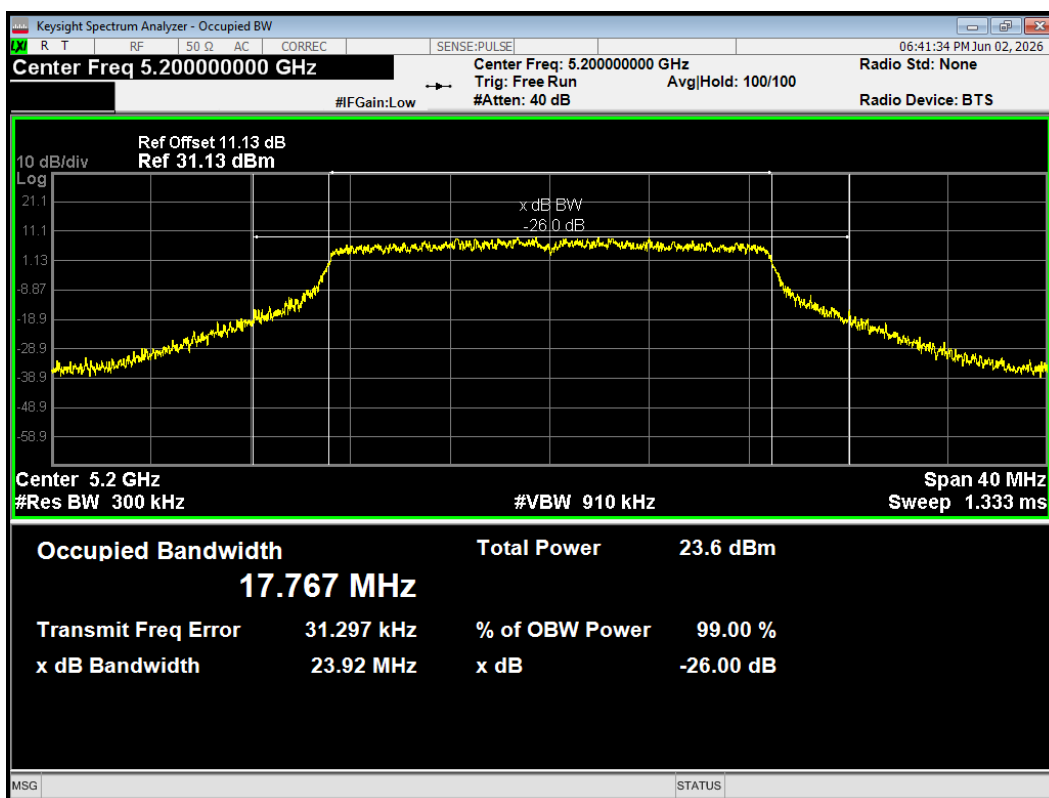
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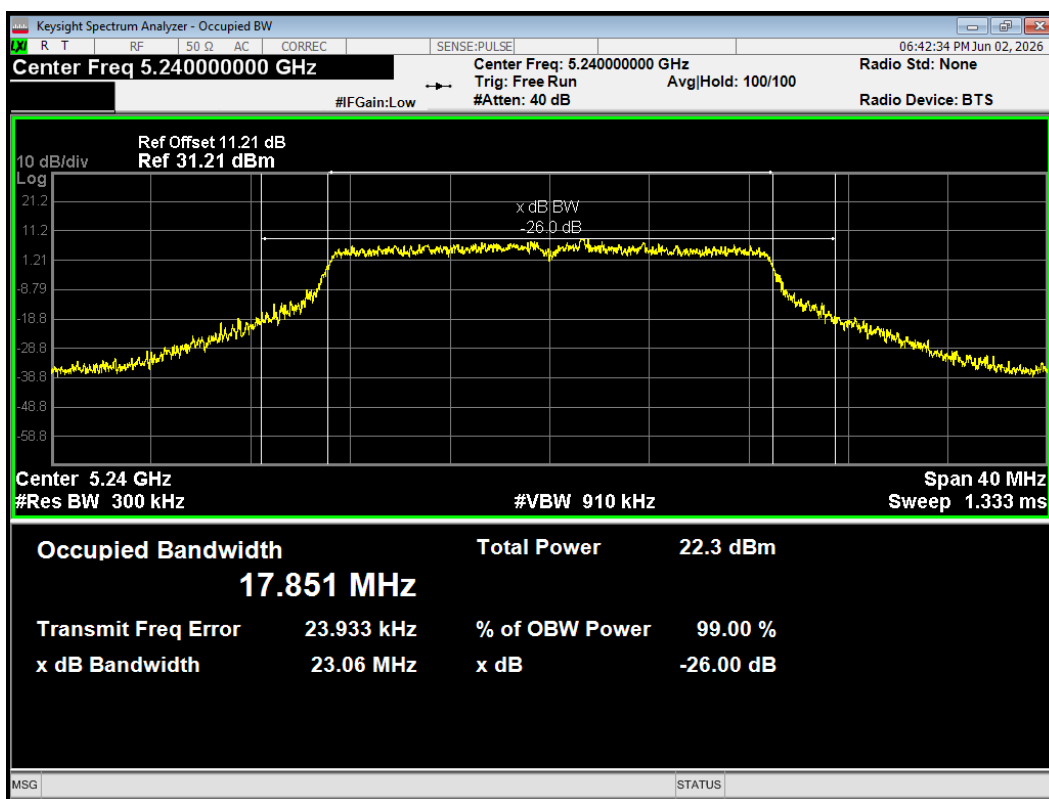
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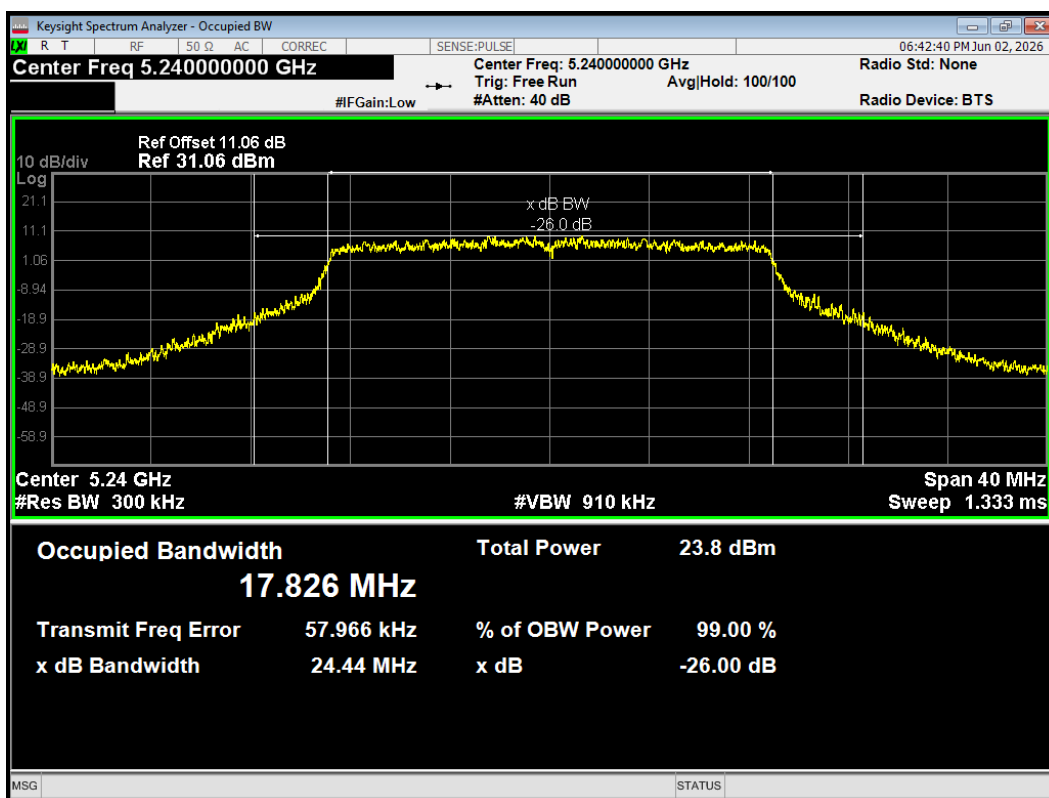
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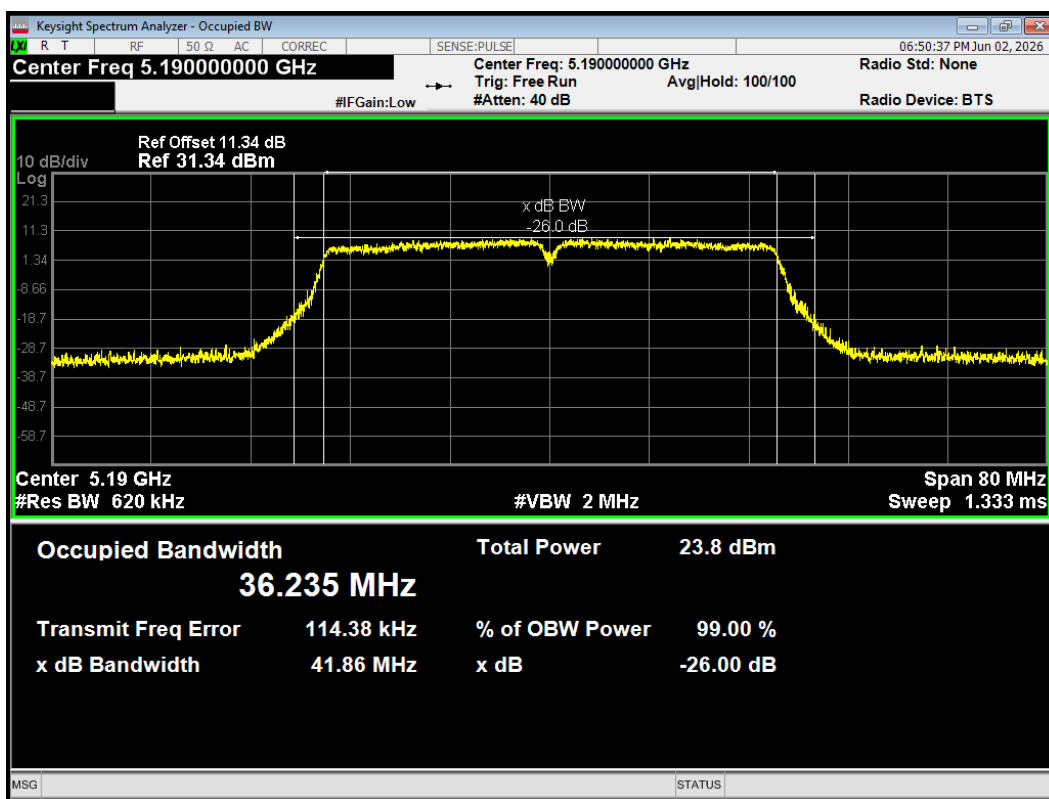
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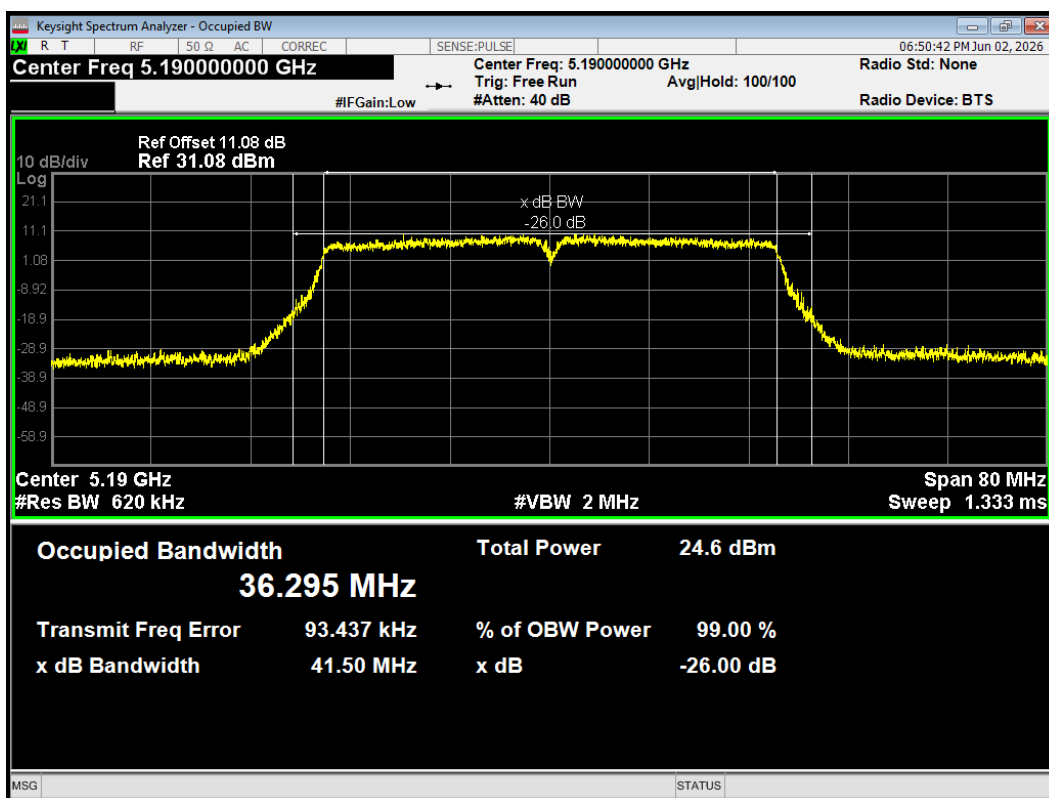
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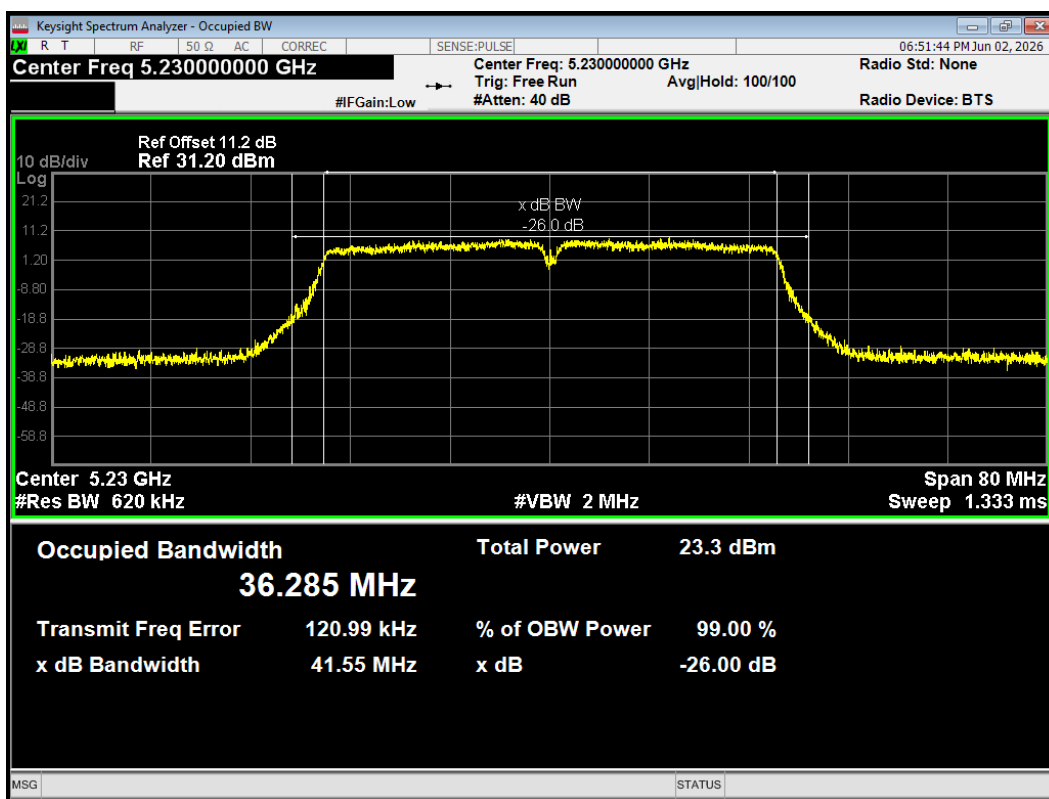
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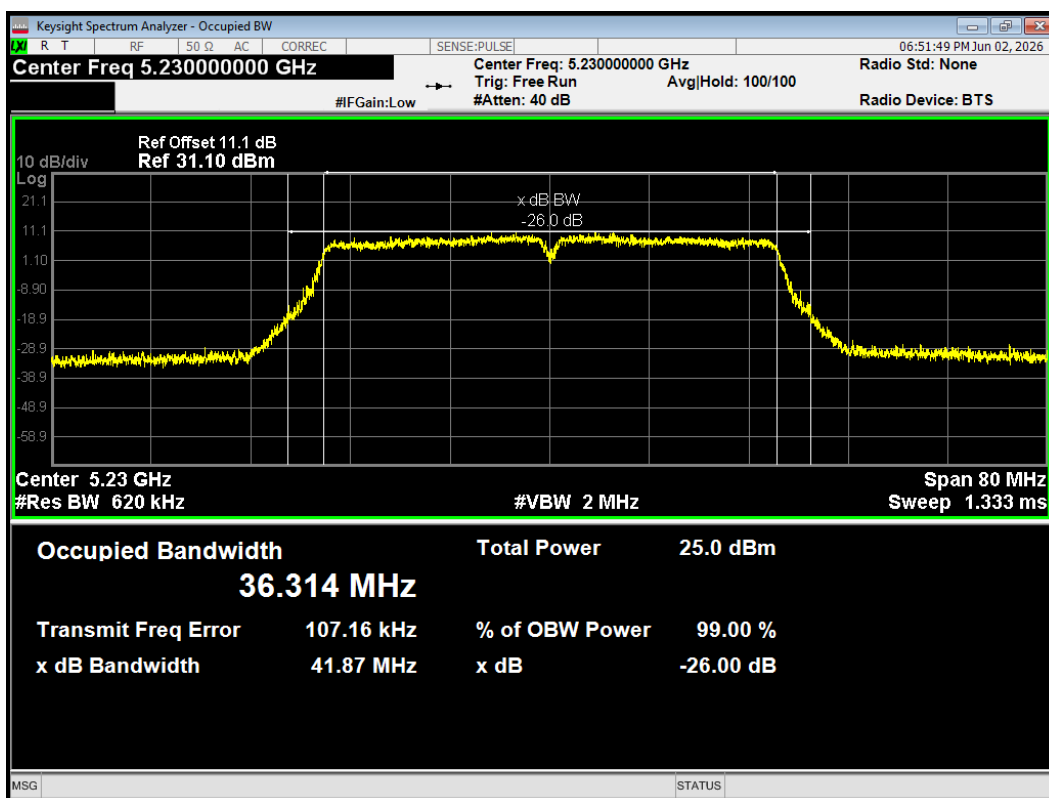
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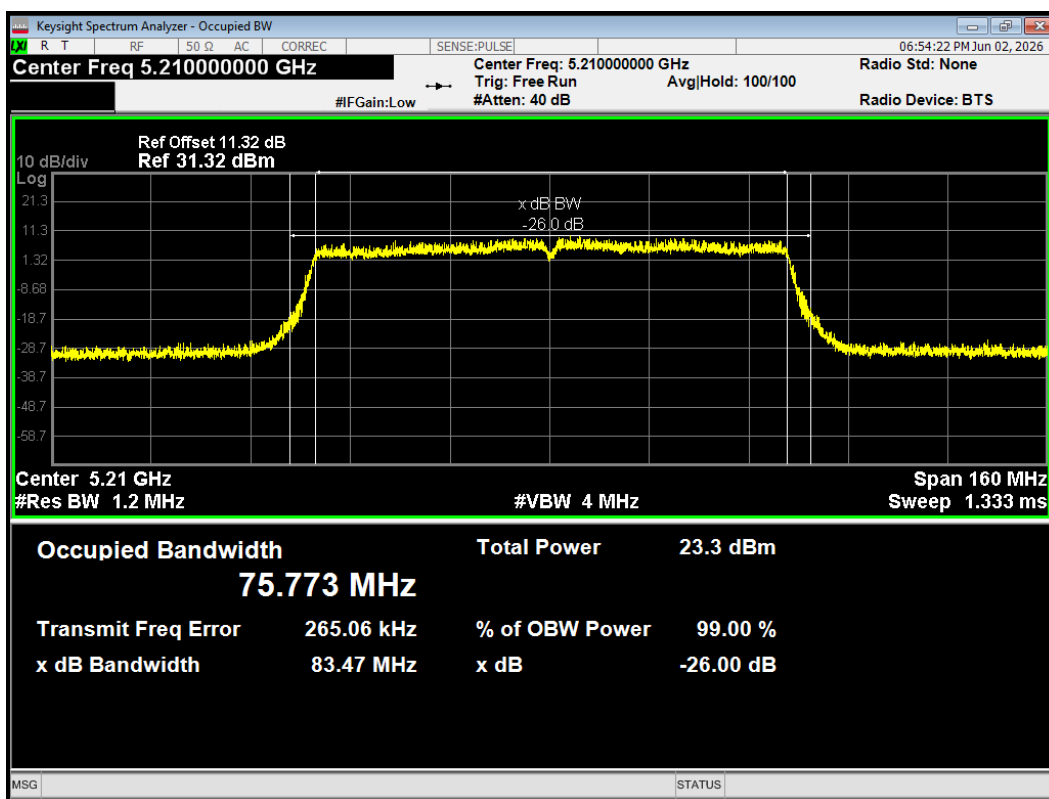
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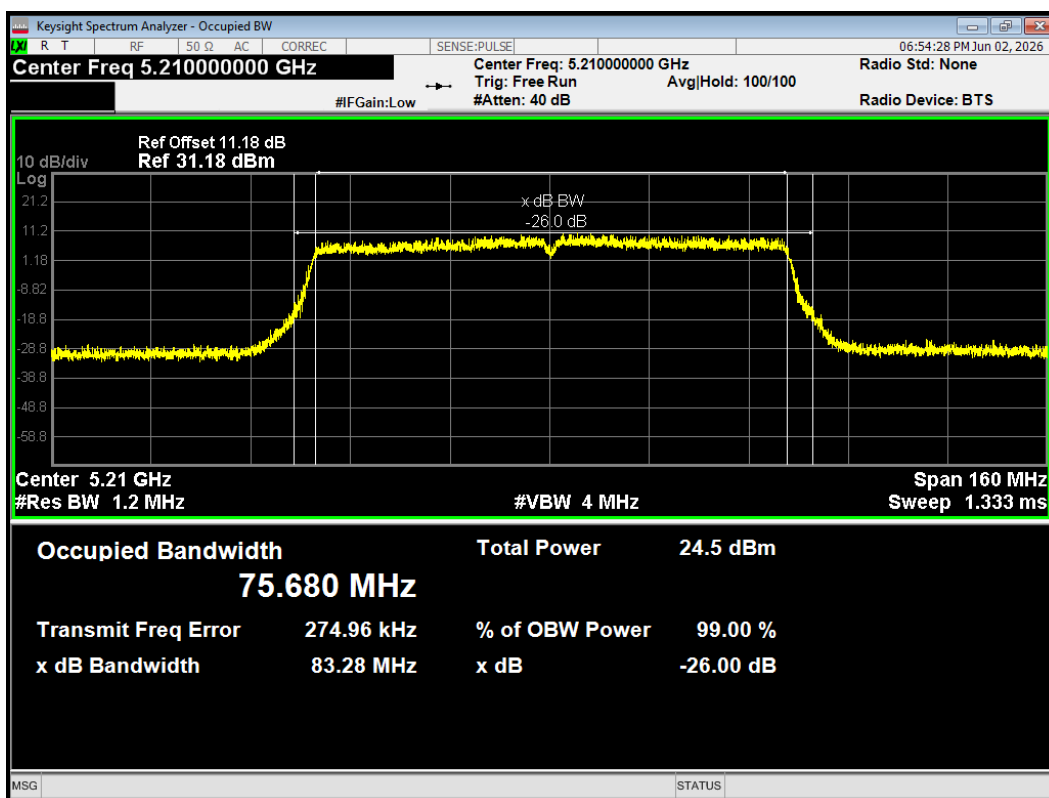
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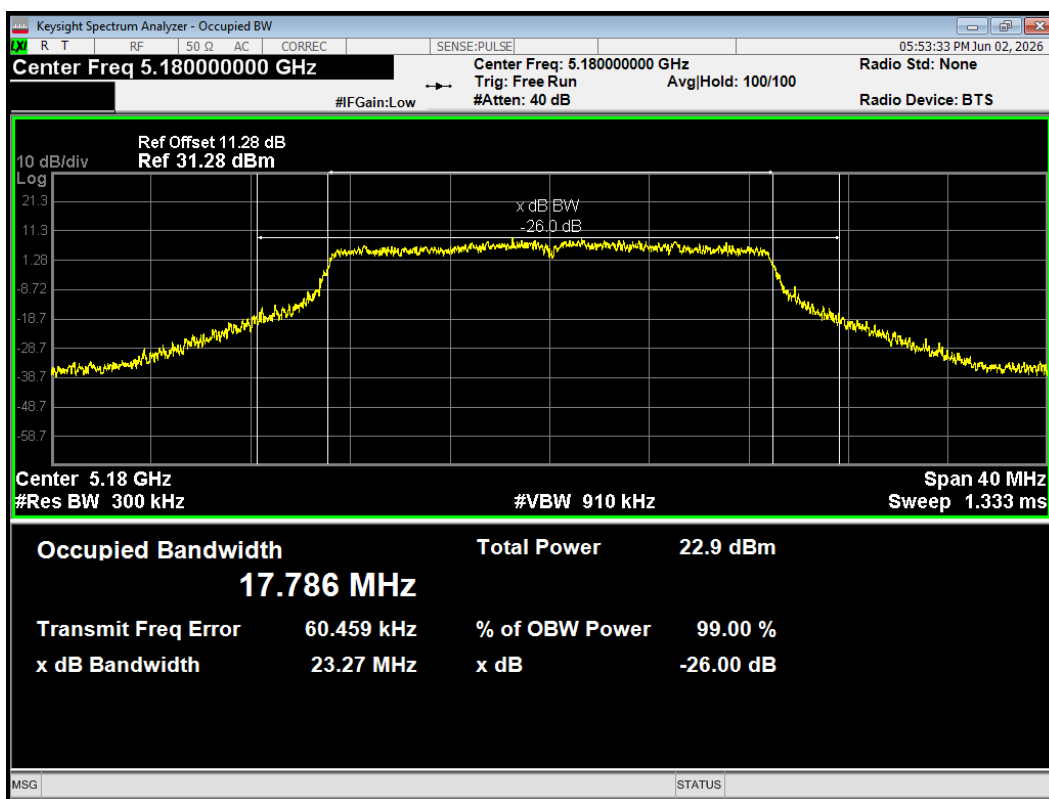
OBW 802.11ac(VHT80) 5210MHz Ant1



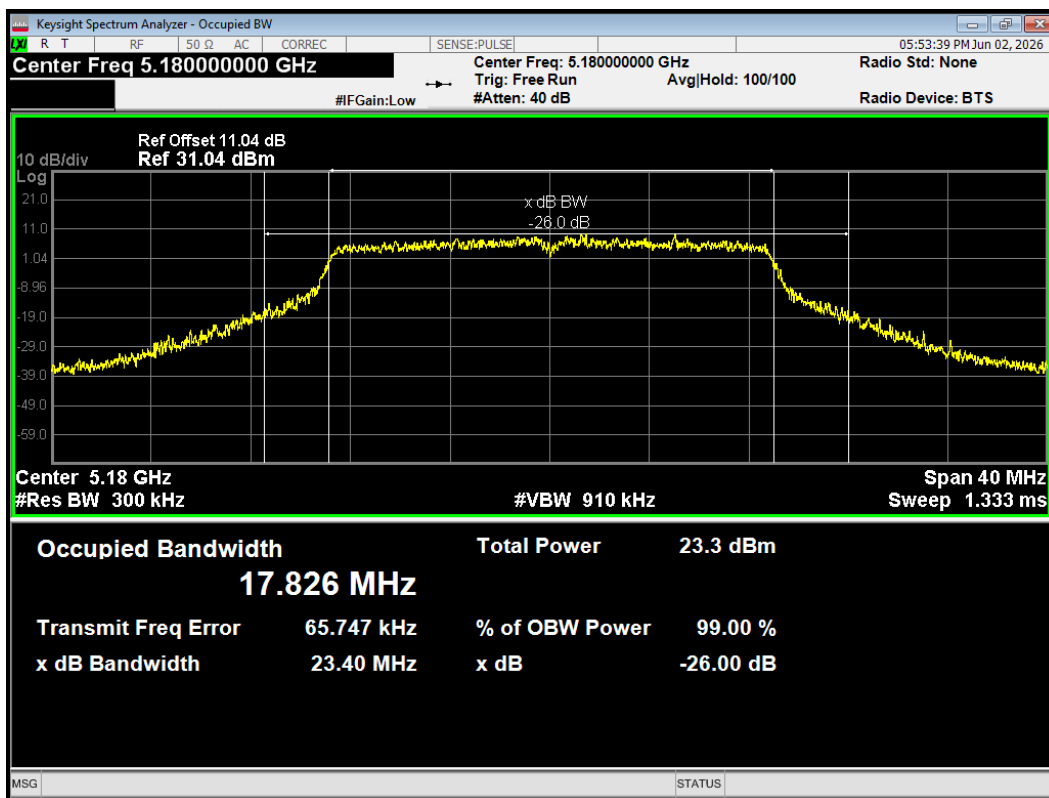
OBW 802.11ac(VHT80) 5210MHz Ant2



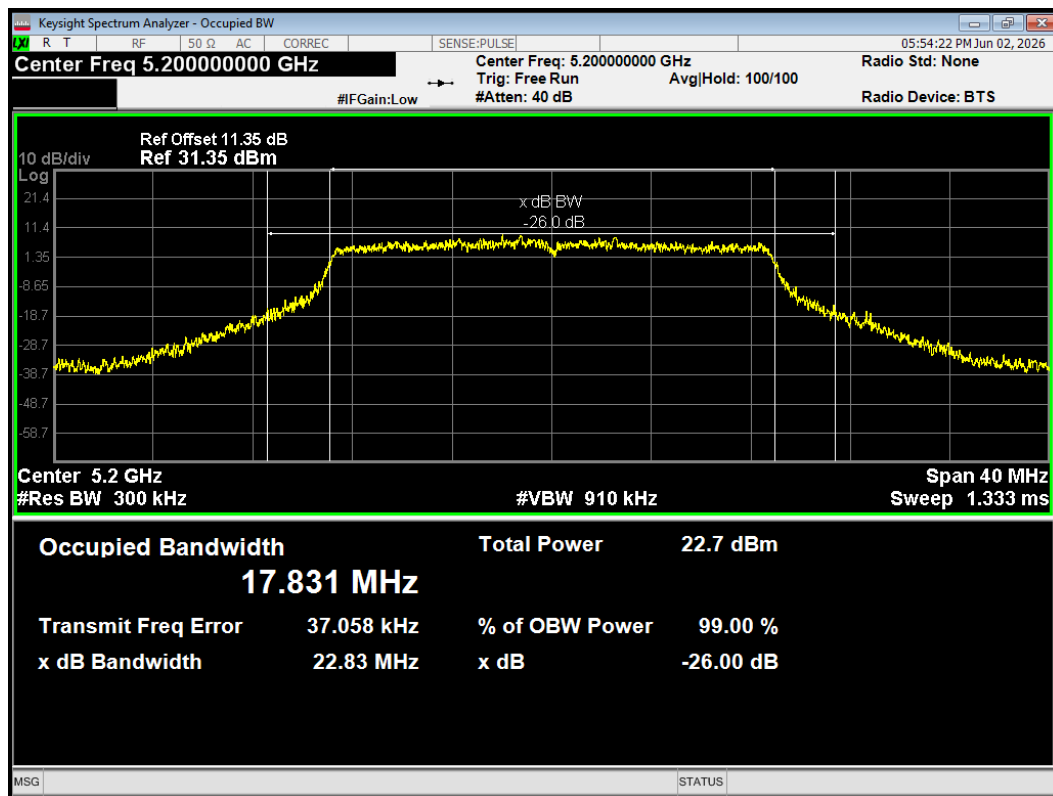
OBW 802.11n(HT20) 5180MHz Ant1



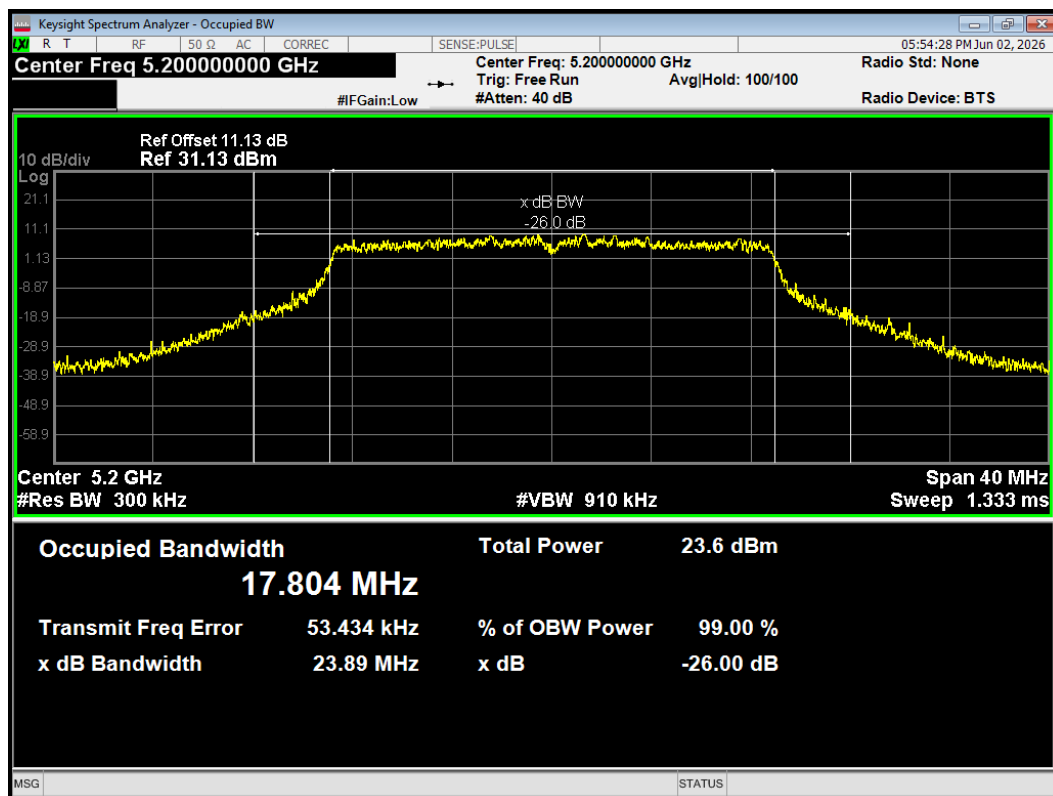
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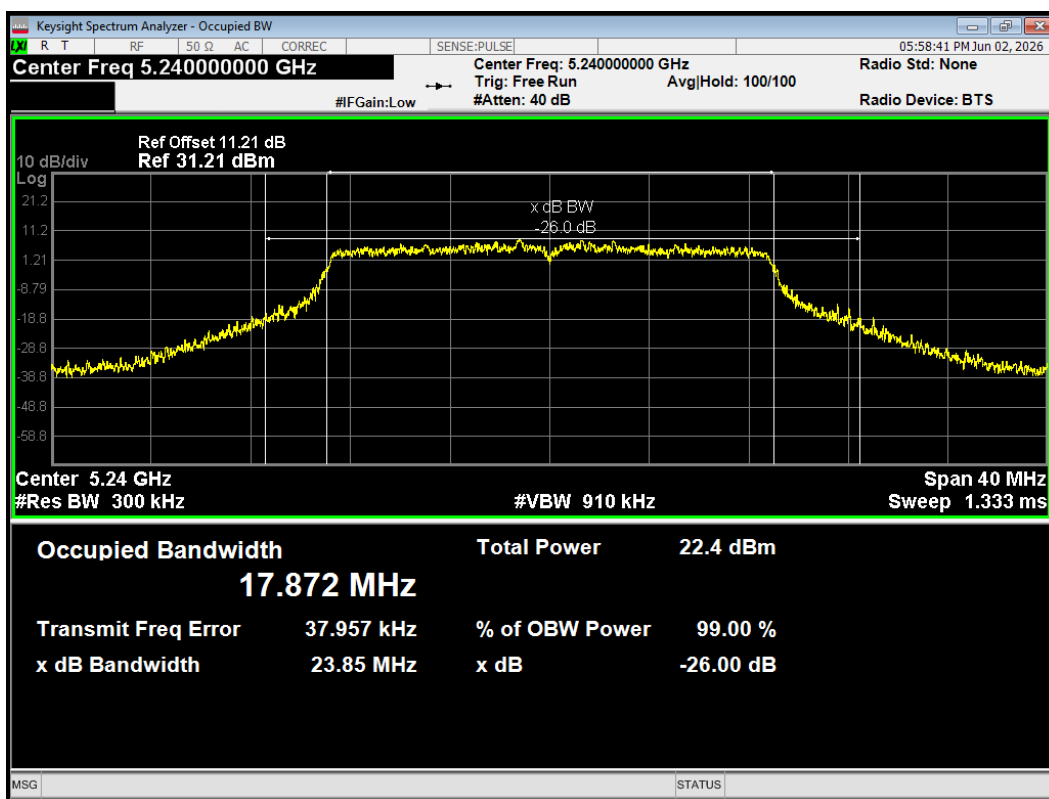
OBW 802.11n(HT20) 5200MHz Ant1



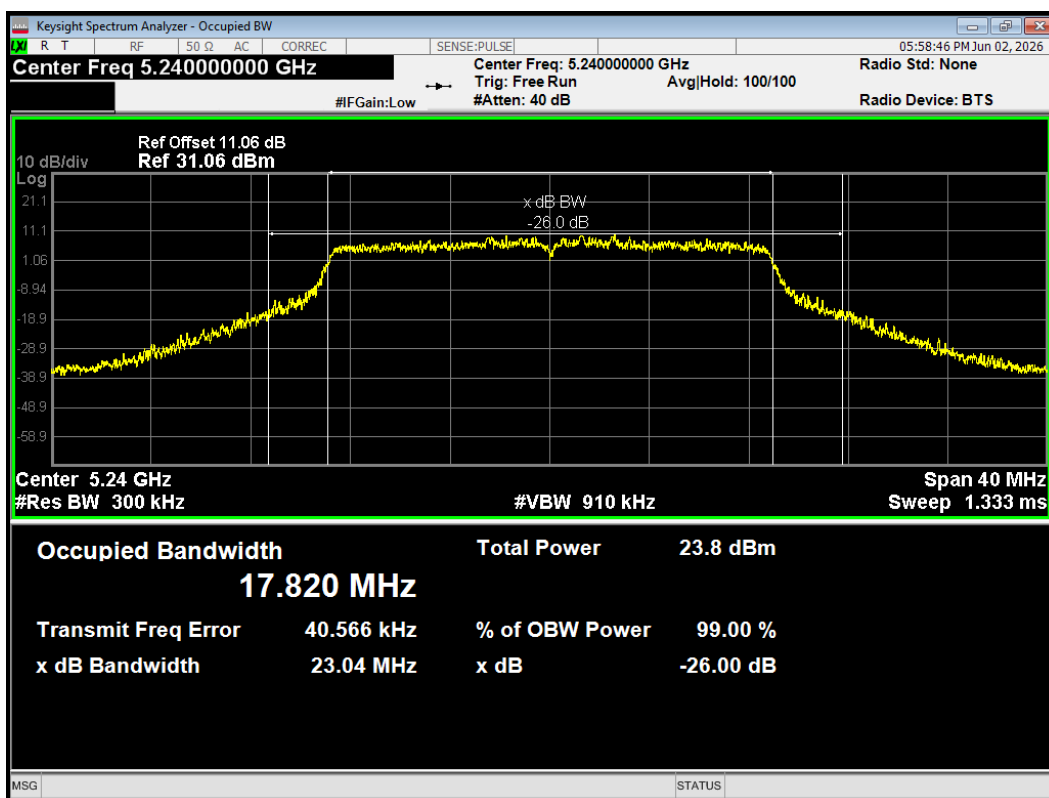
OBW 802.11n(HT20) 5200MHz Ant2



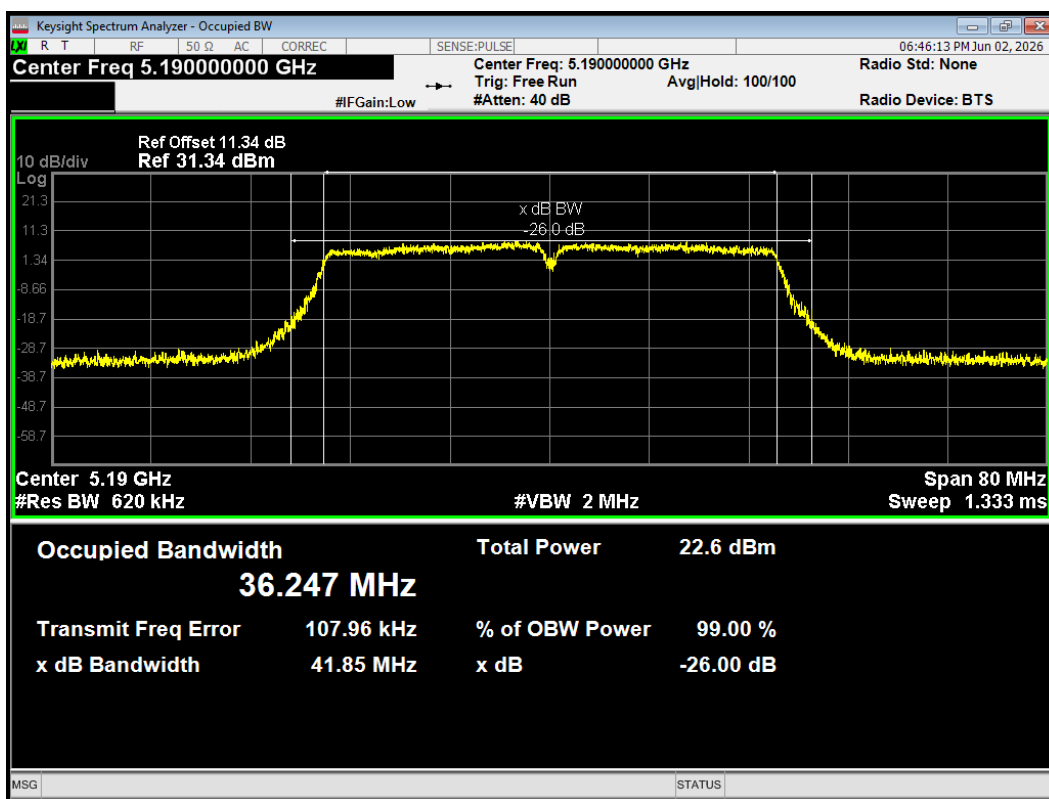
OBW 802.11n(HT20) 5240MHz Ant1



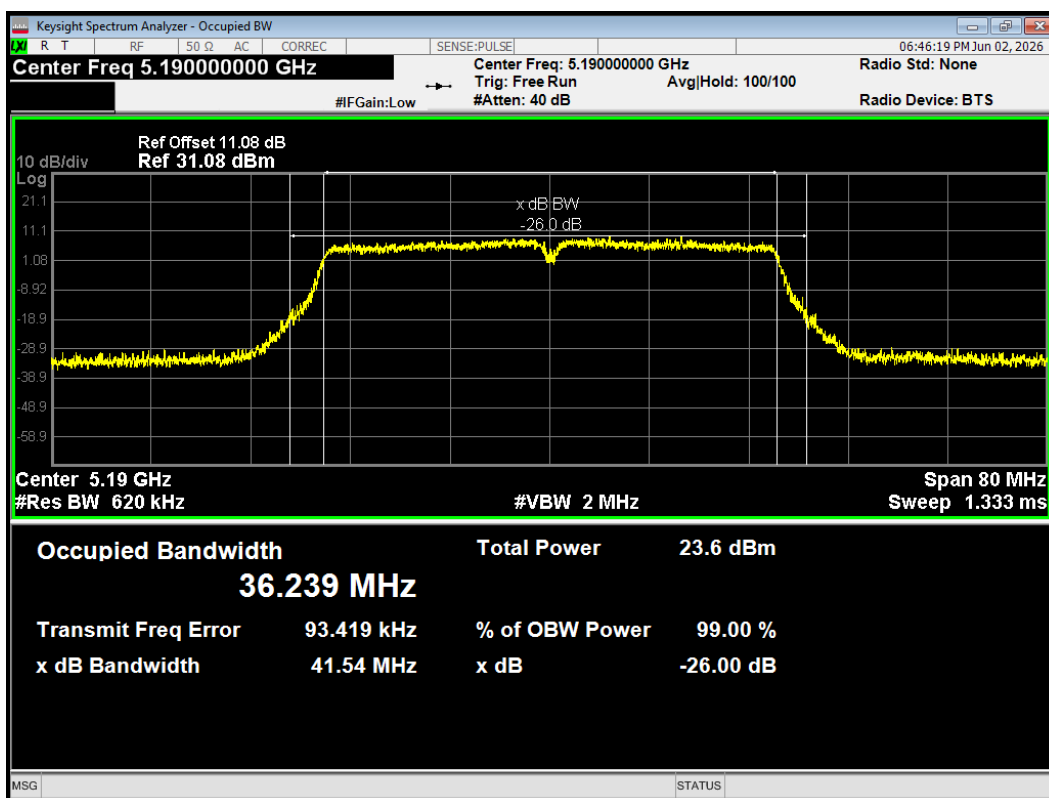
OBW 802.11n(HT20) 5240MHz Ant2



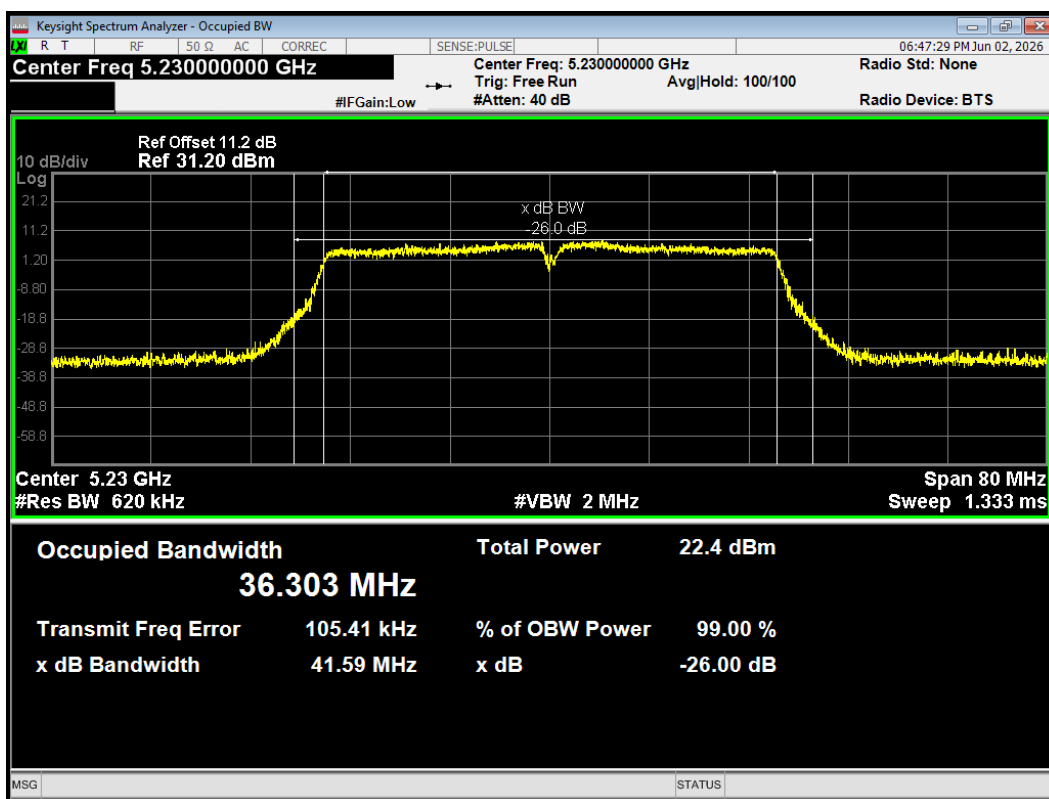
OBW 802.11n(HT40) 5190MHz Ant1



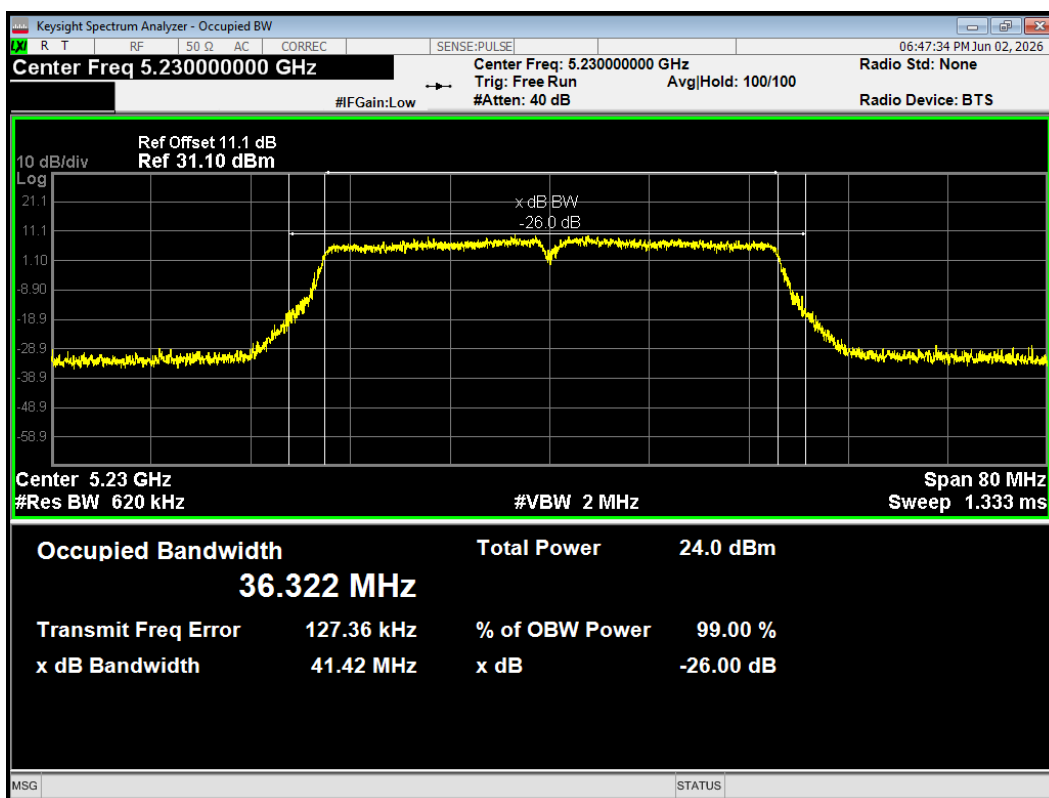
OBW 802.11n(HT40) 5190MHz Ant2



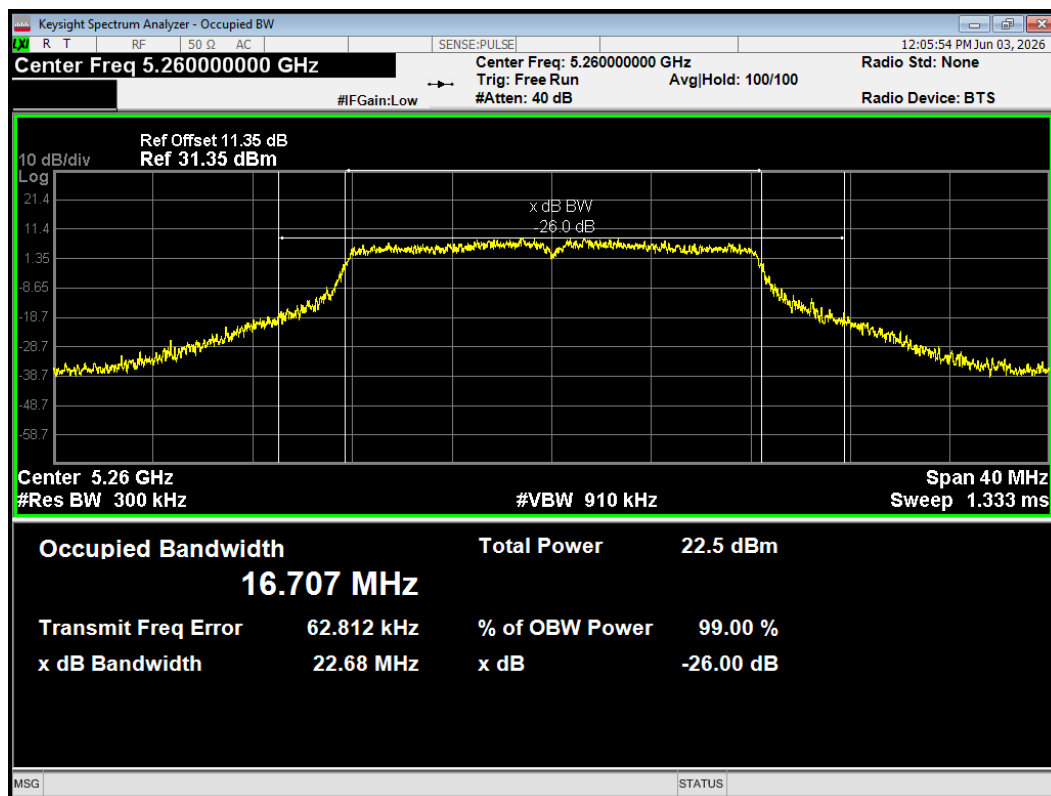
OBW 802.11n(HT40) 5230MHz Ant1



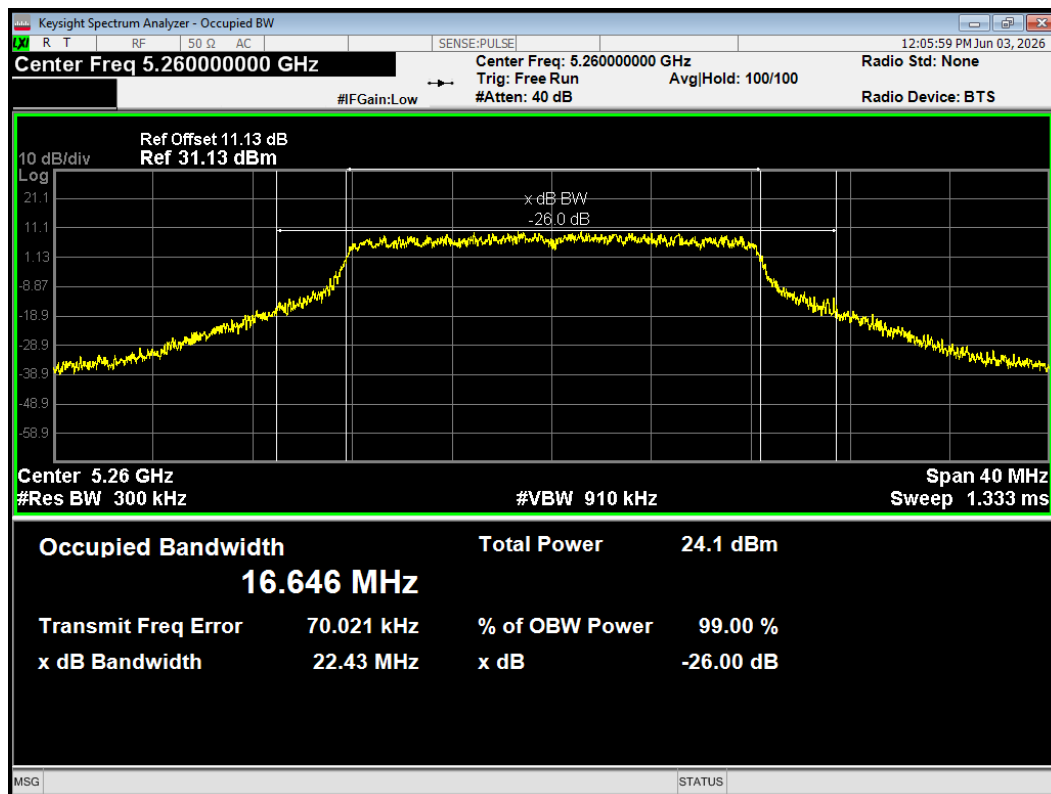
OBW 802.11n(HT40) 5230MHz Ant2



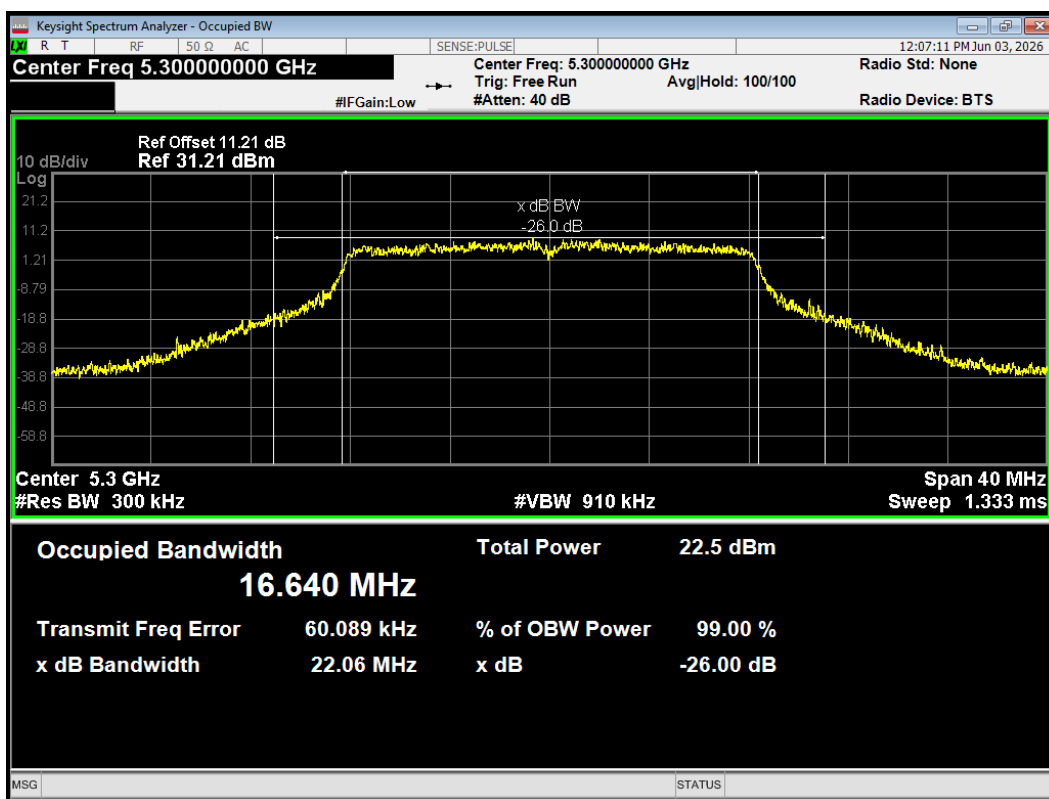
OBW 802.11a 5260MHz Ant1



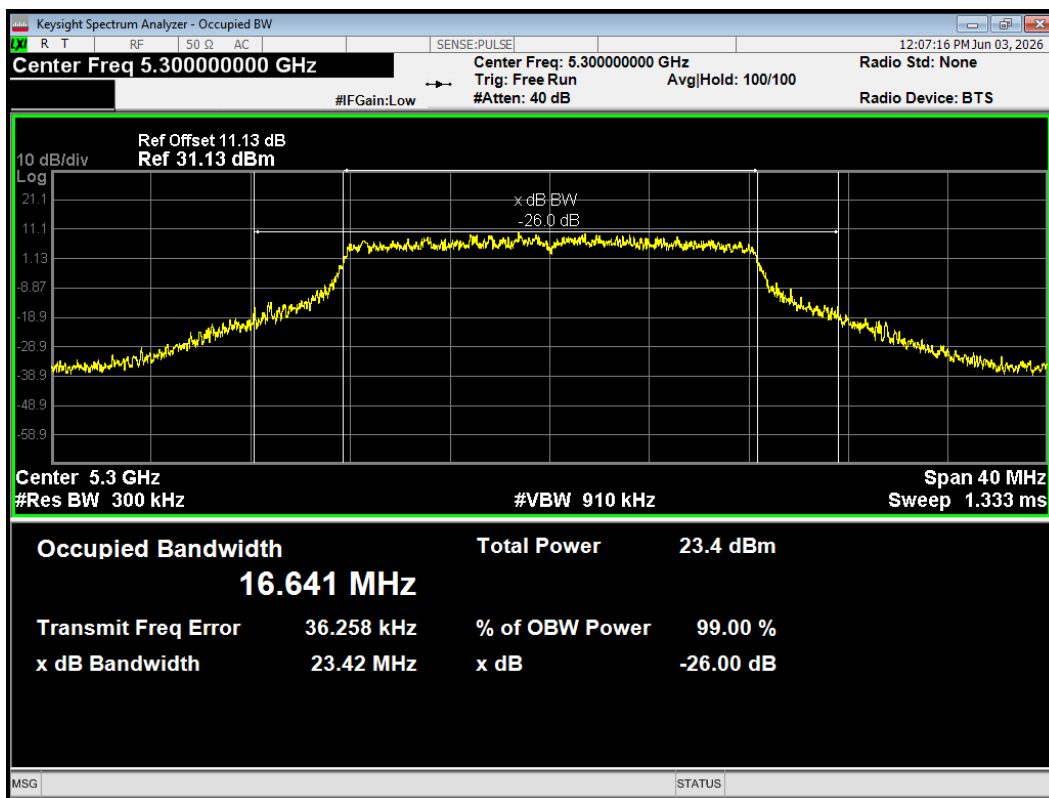
OBW 802.11a 5260MHz Ant2



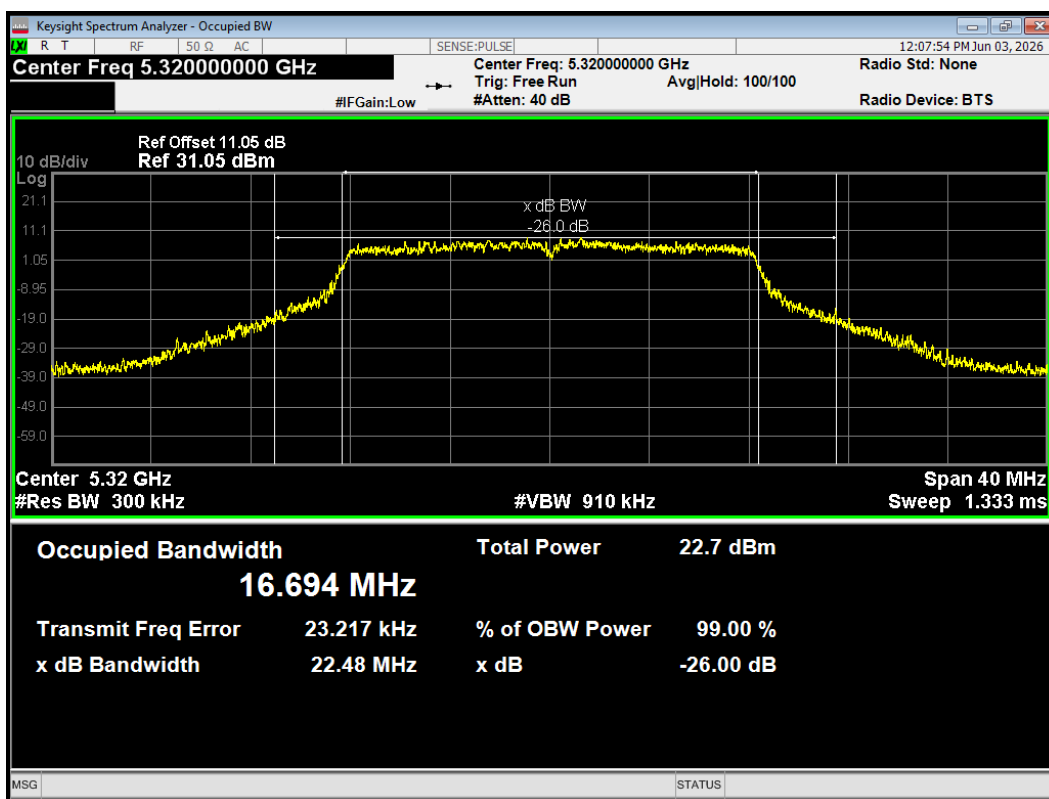
OBW 802.11a 5300MHz Ant1



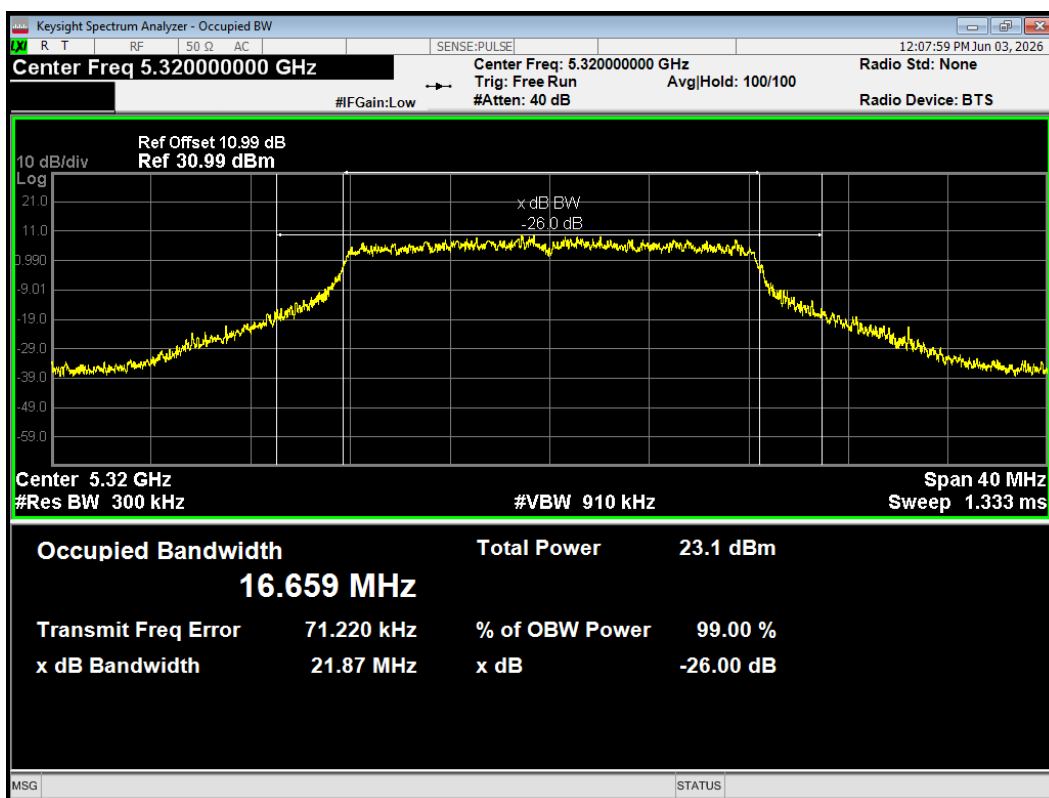
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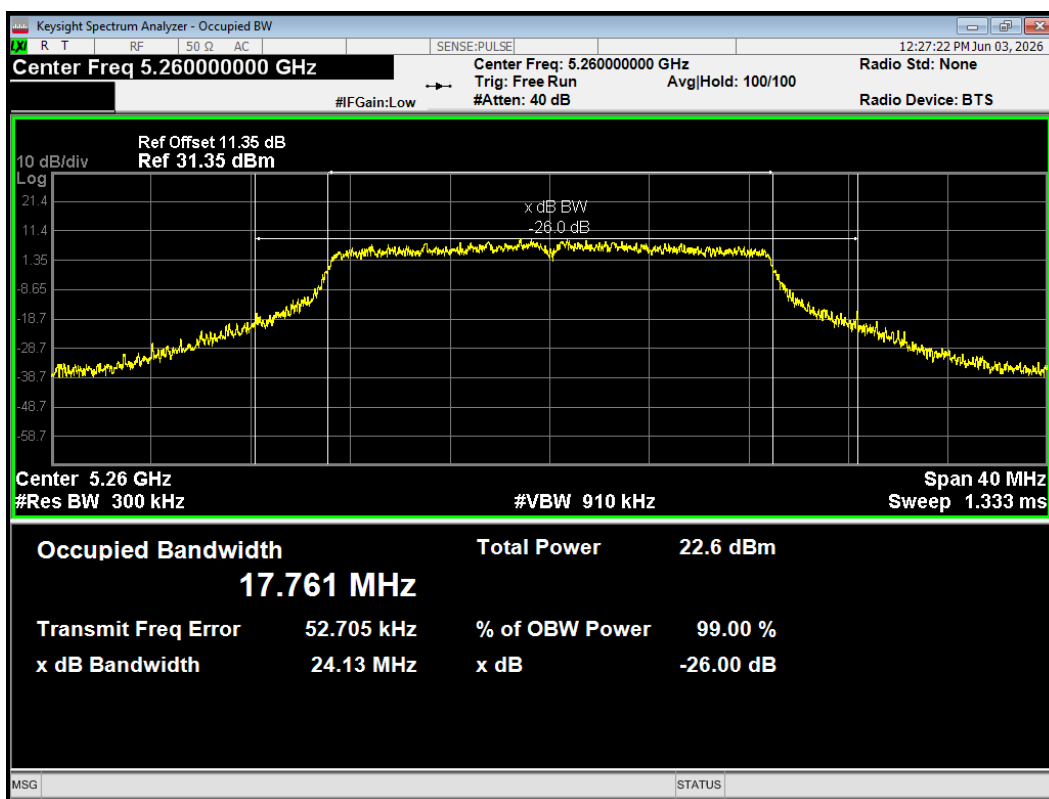
OBW 802.11a 5320MHz Ant1



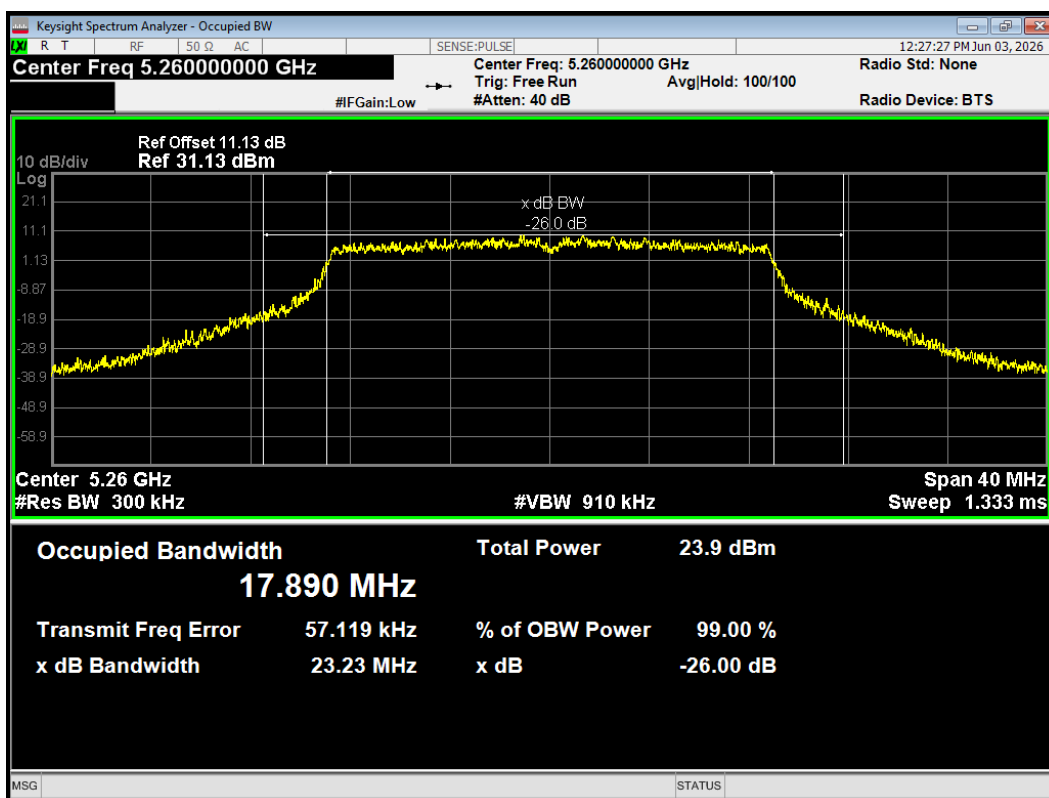
OBW 802.11a 5320MHz Ant2



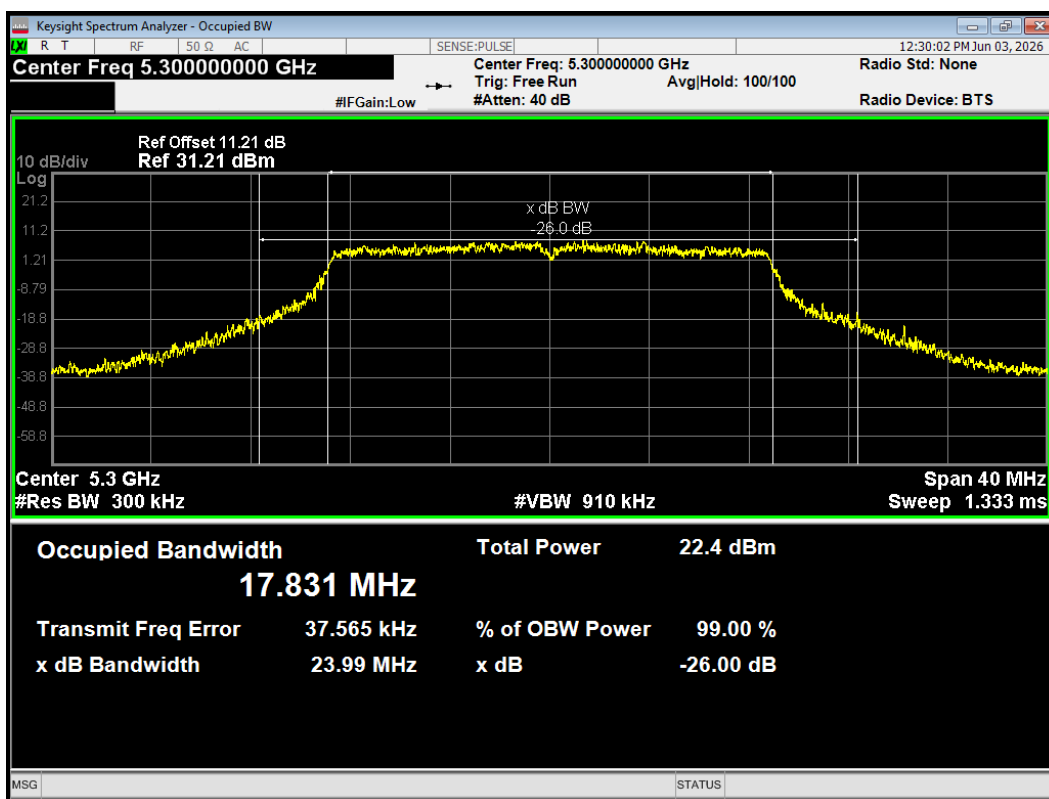
OBW 802.11ac(VHT20) 5260MHz Ant1



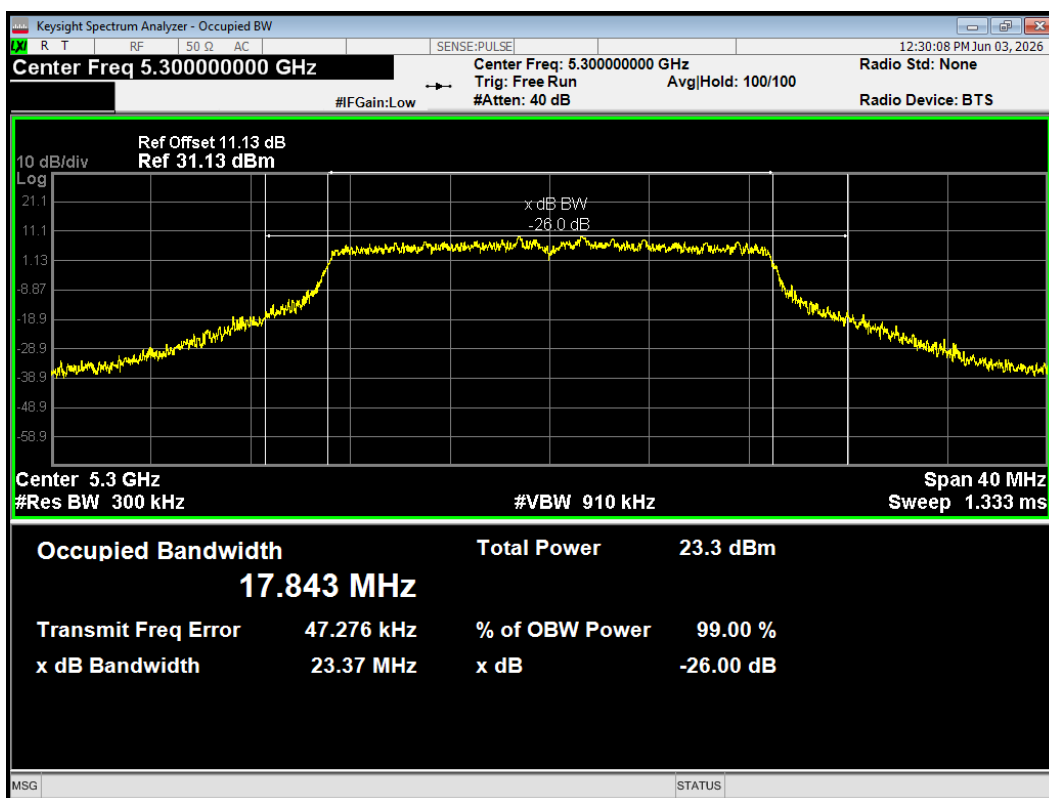
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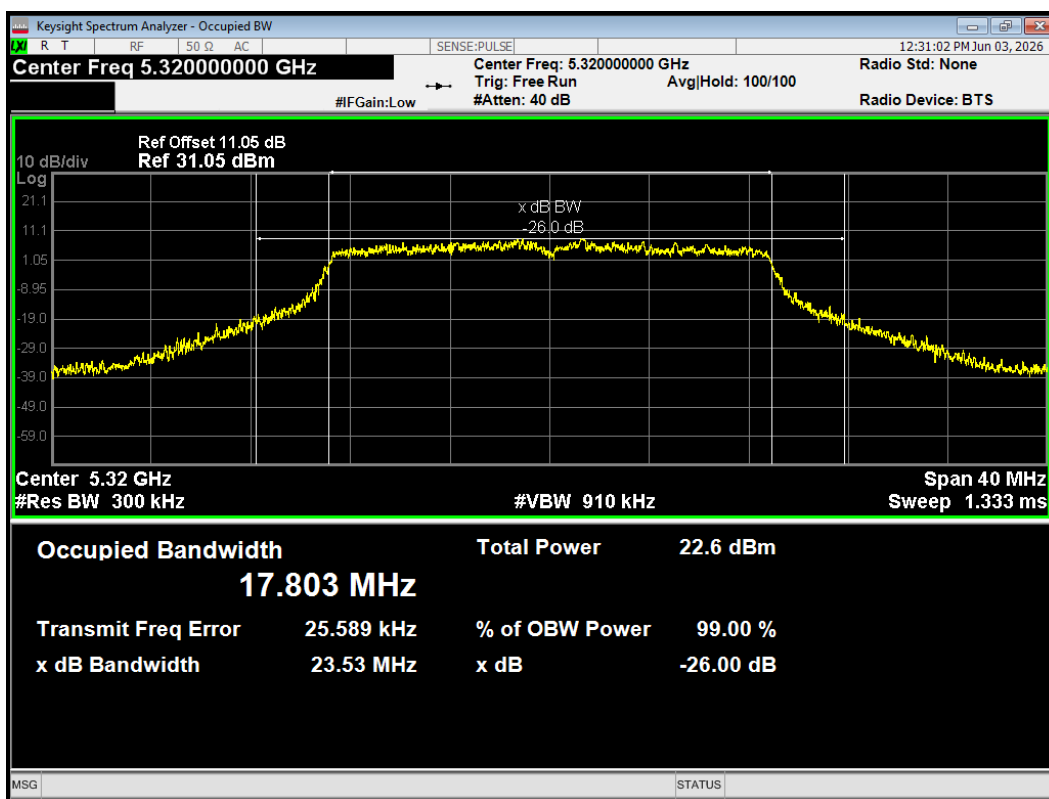
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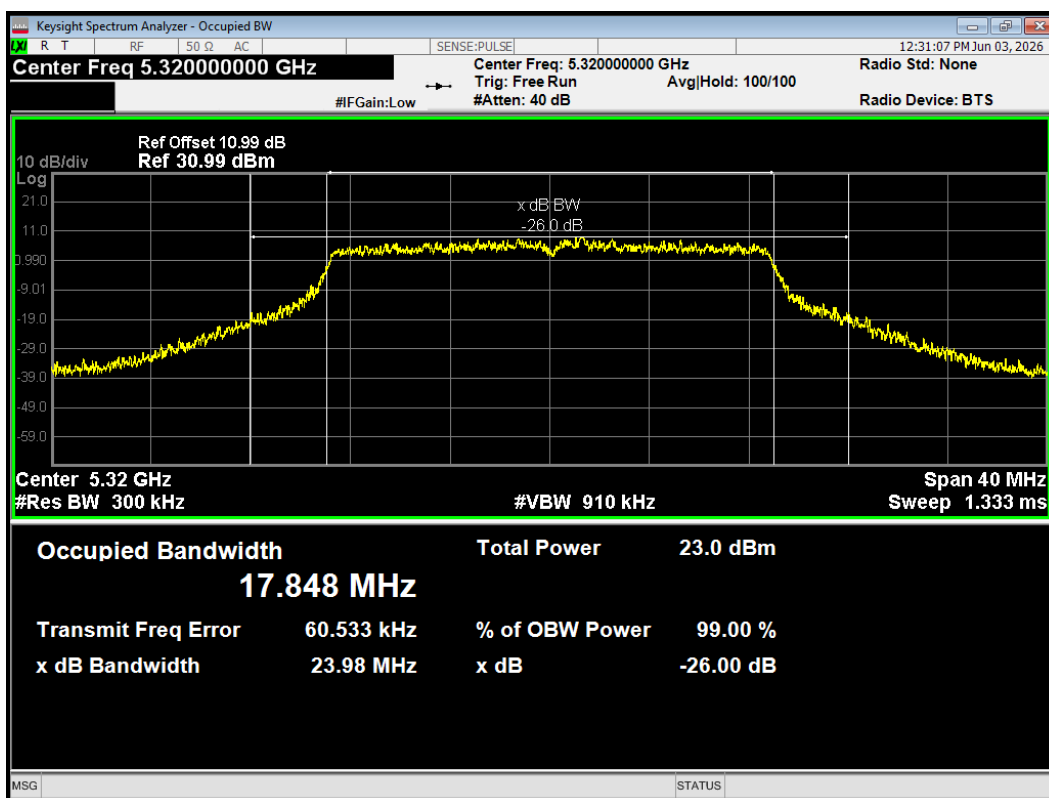
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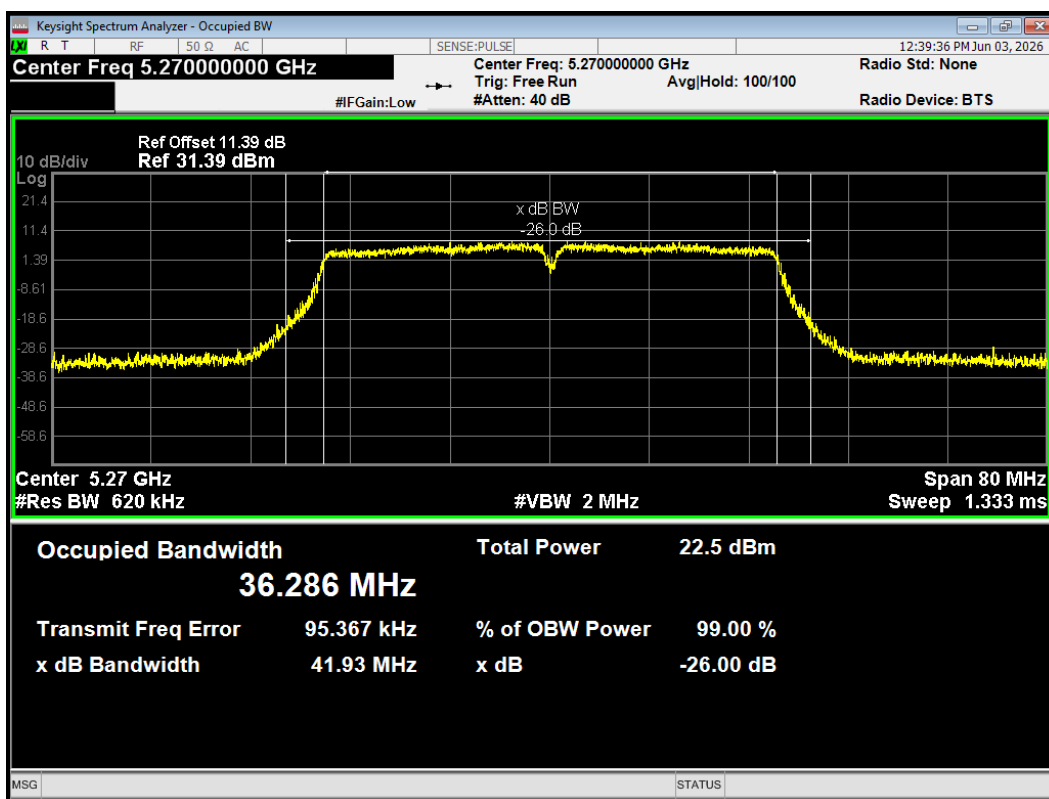
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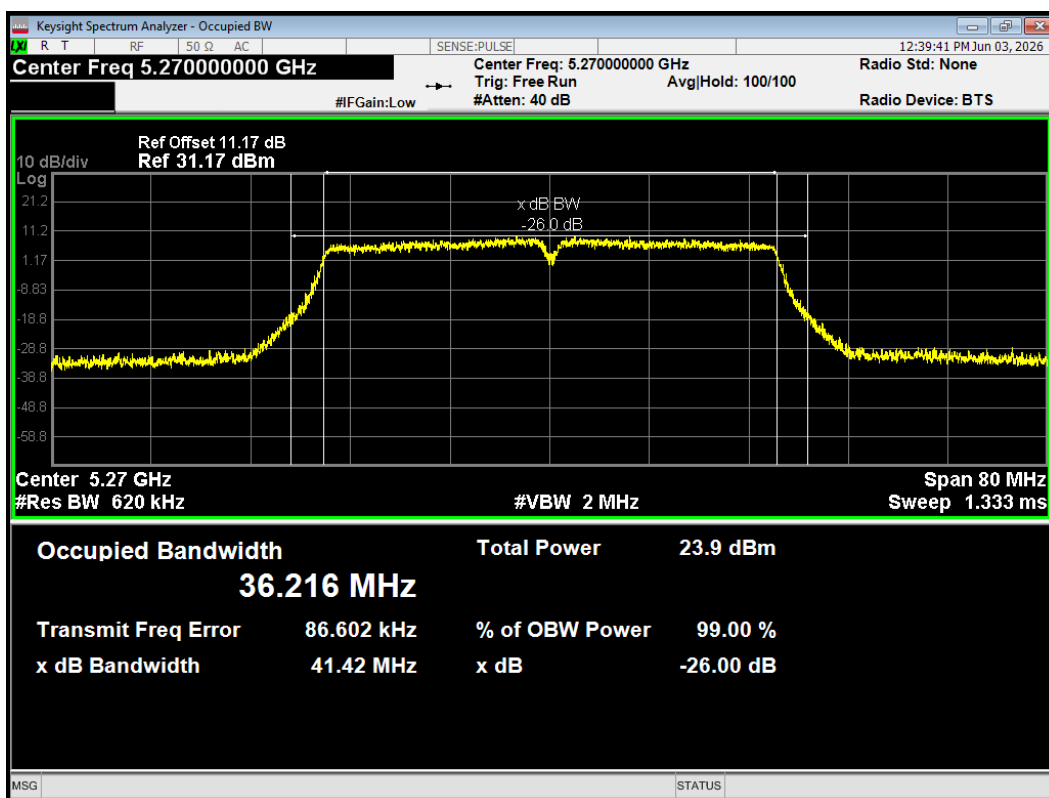
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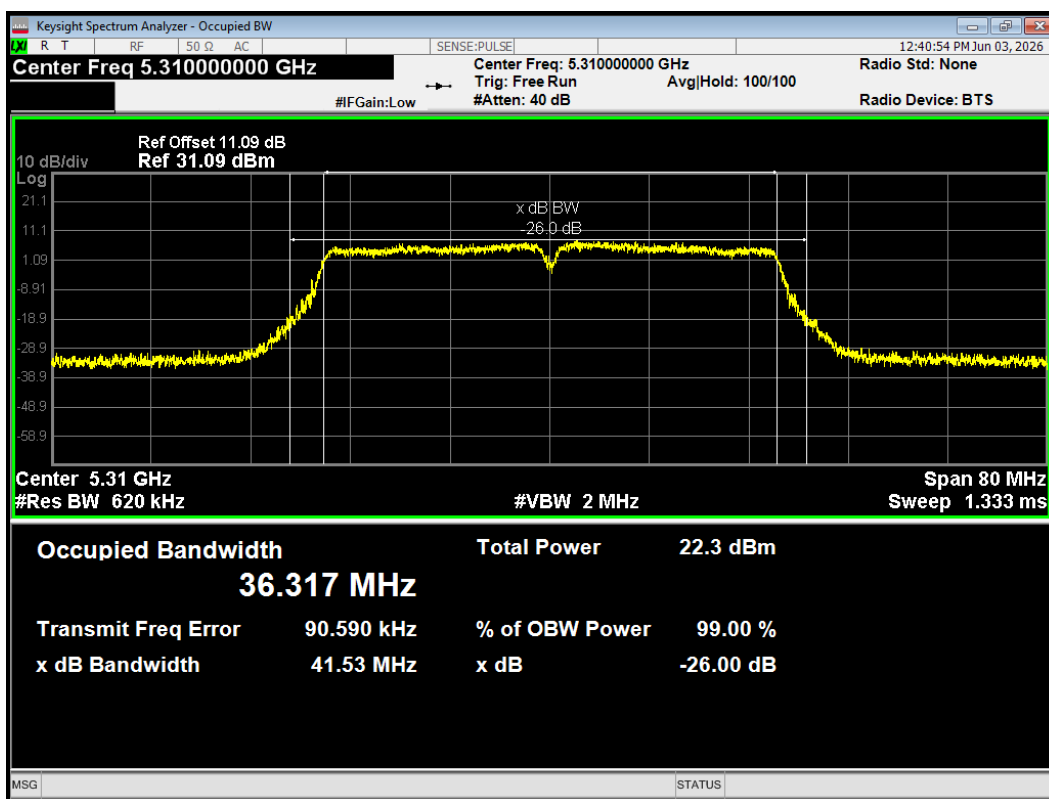
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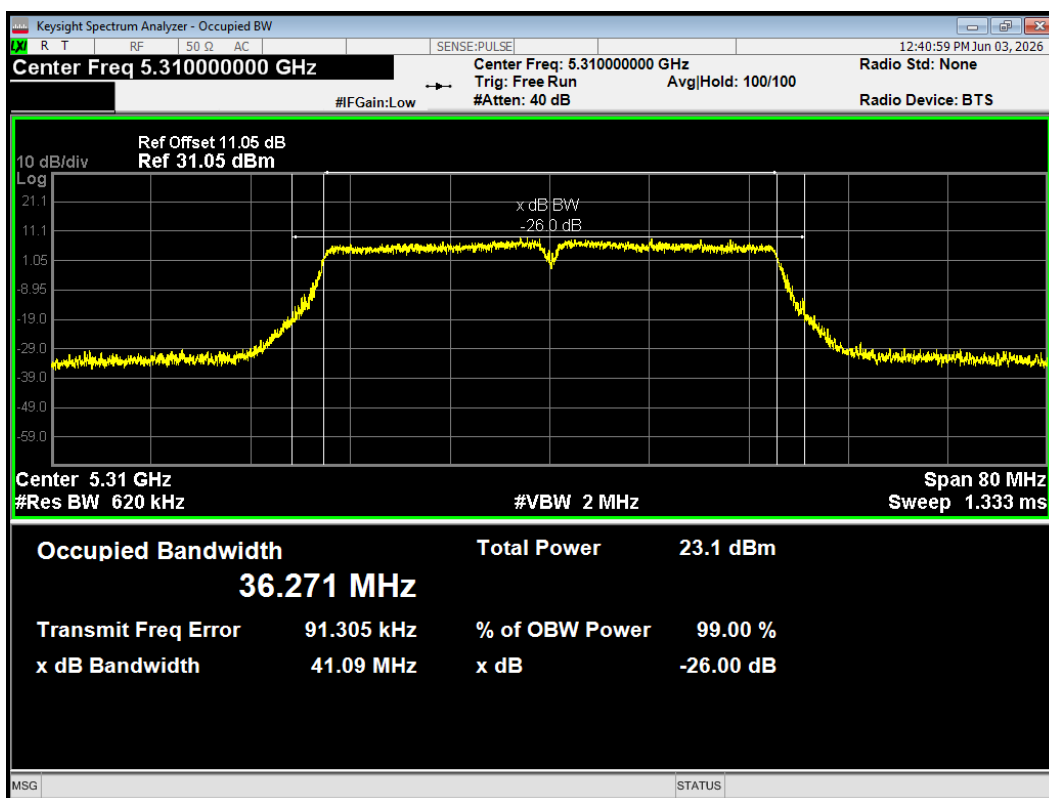
OBW 802.11ac(VHT40) 5270MHz Ant2



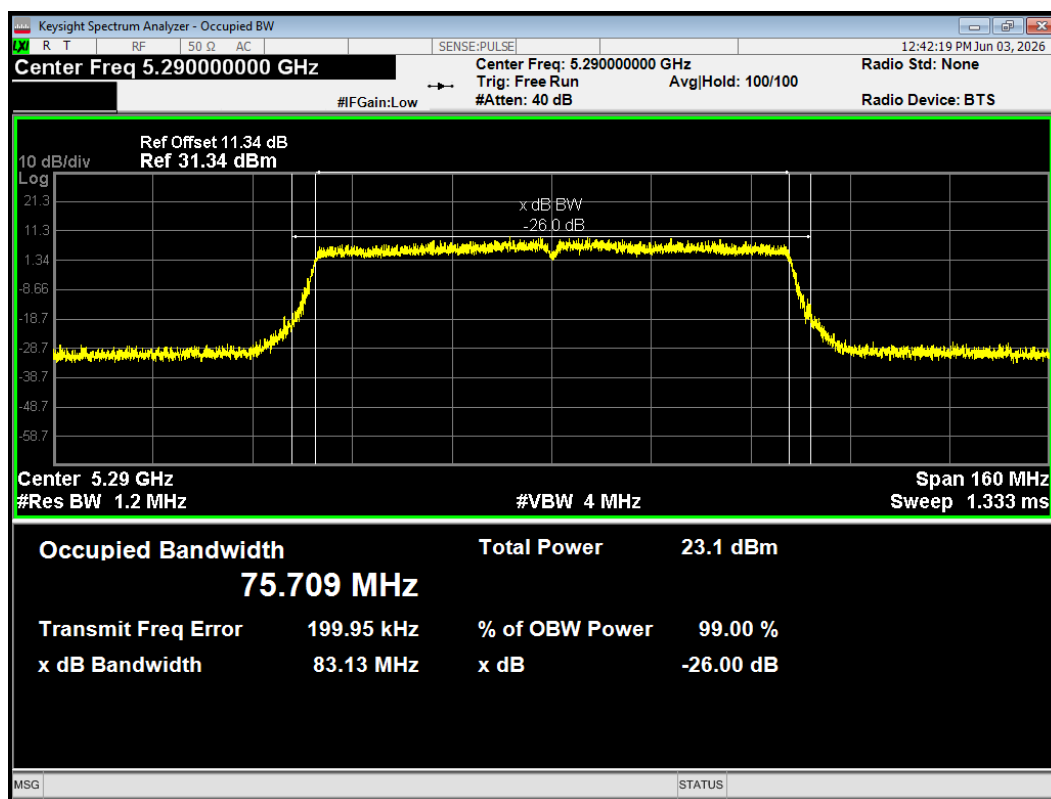
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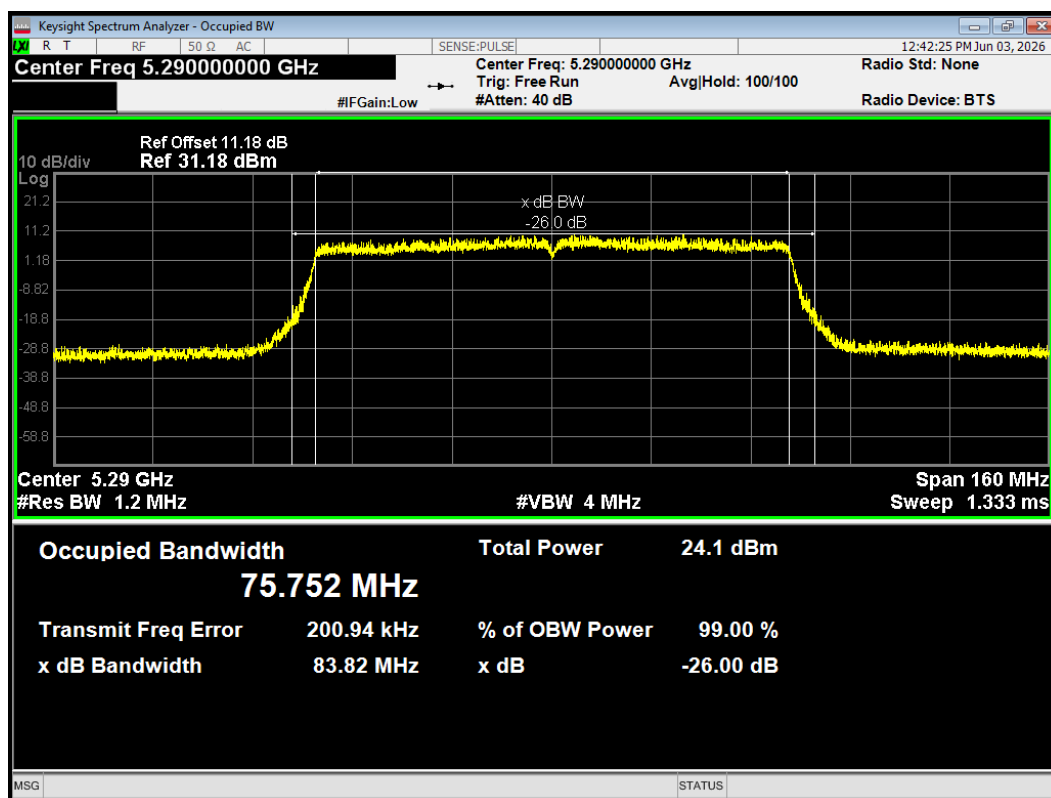
OBW 802.11ac(VHT40) 5310MHz Ant2



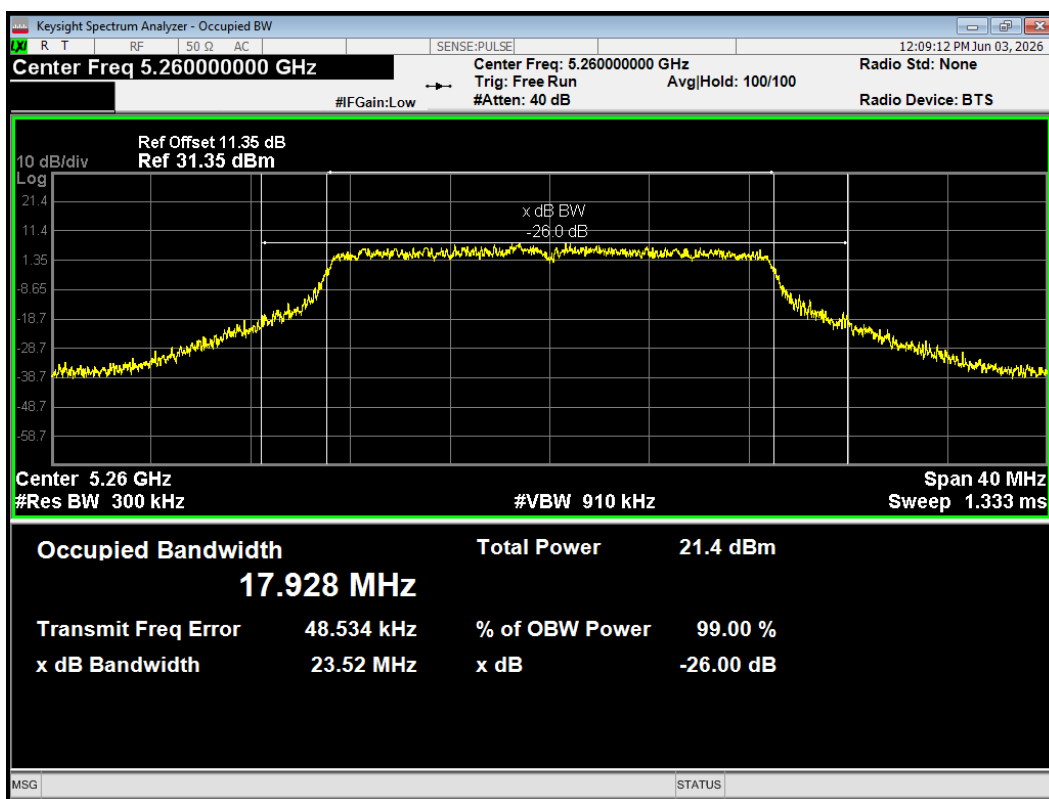
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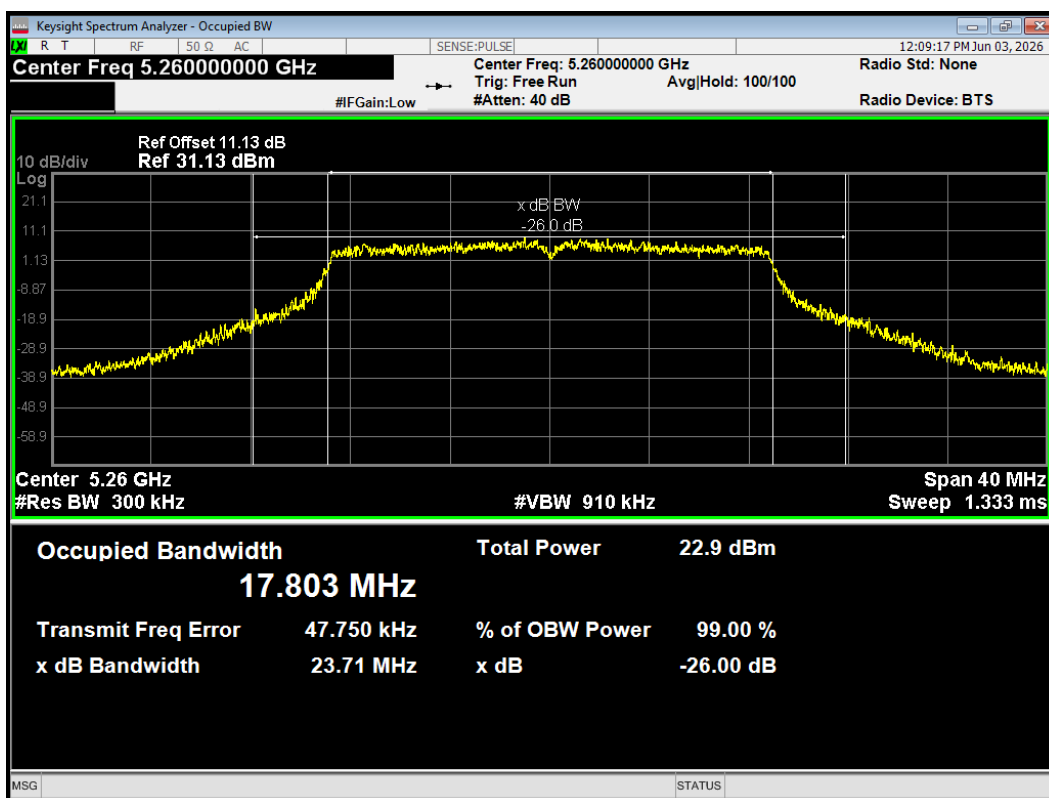
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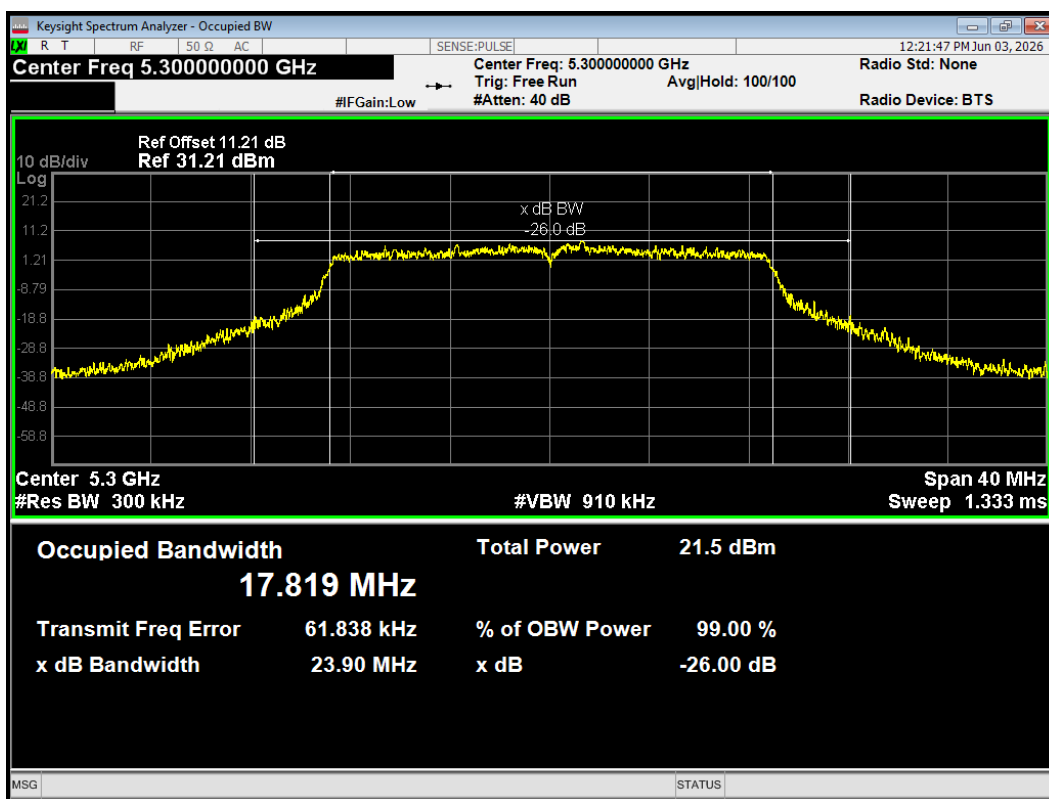
OBW 802.11n(HT20) 5260MHz Ant1



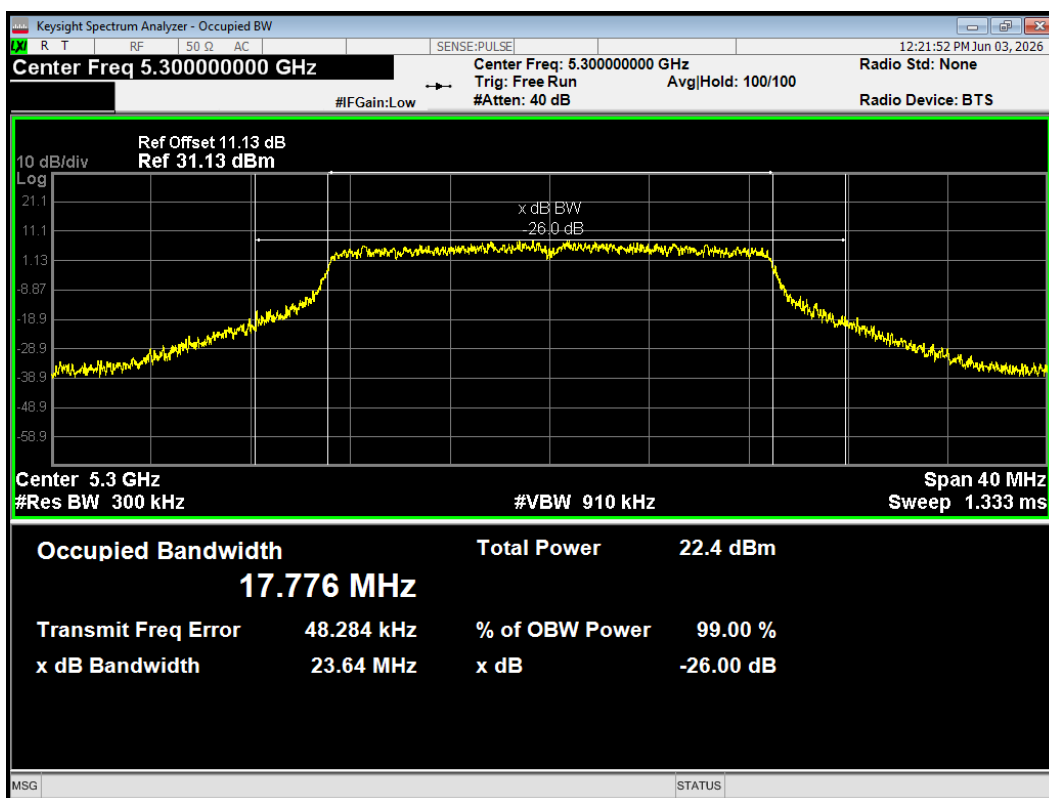
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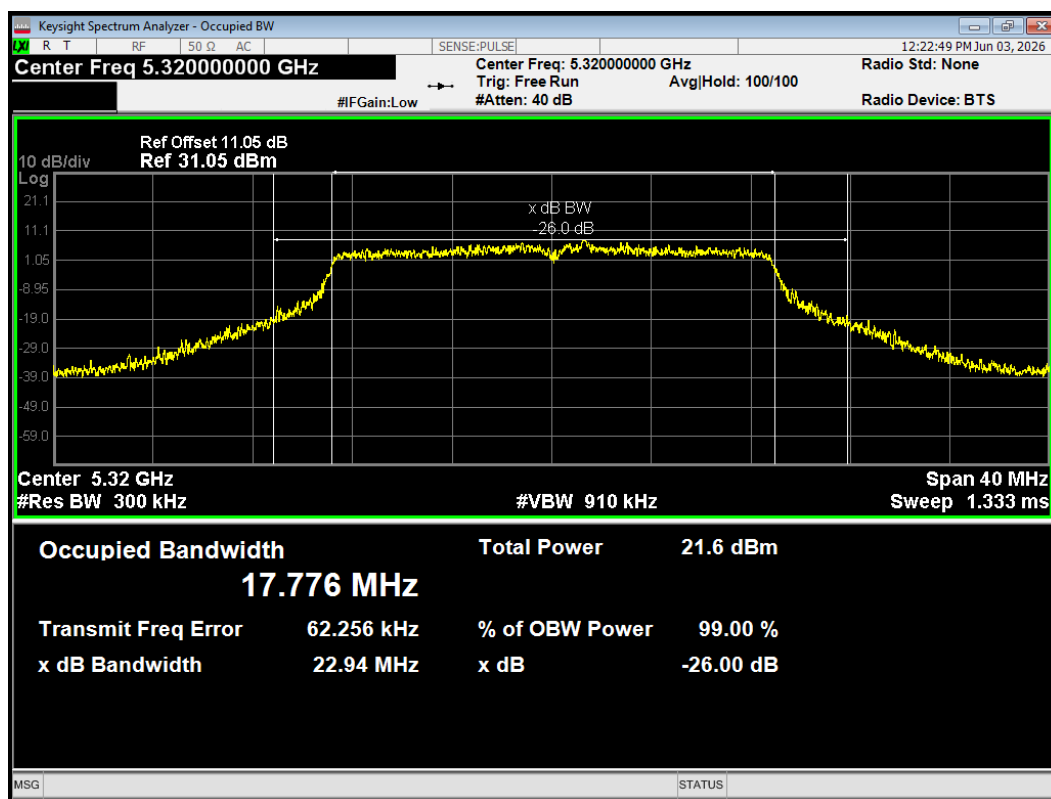
OBW 802.11n(HT20) 5300MHz Ant1



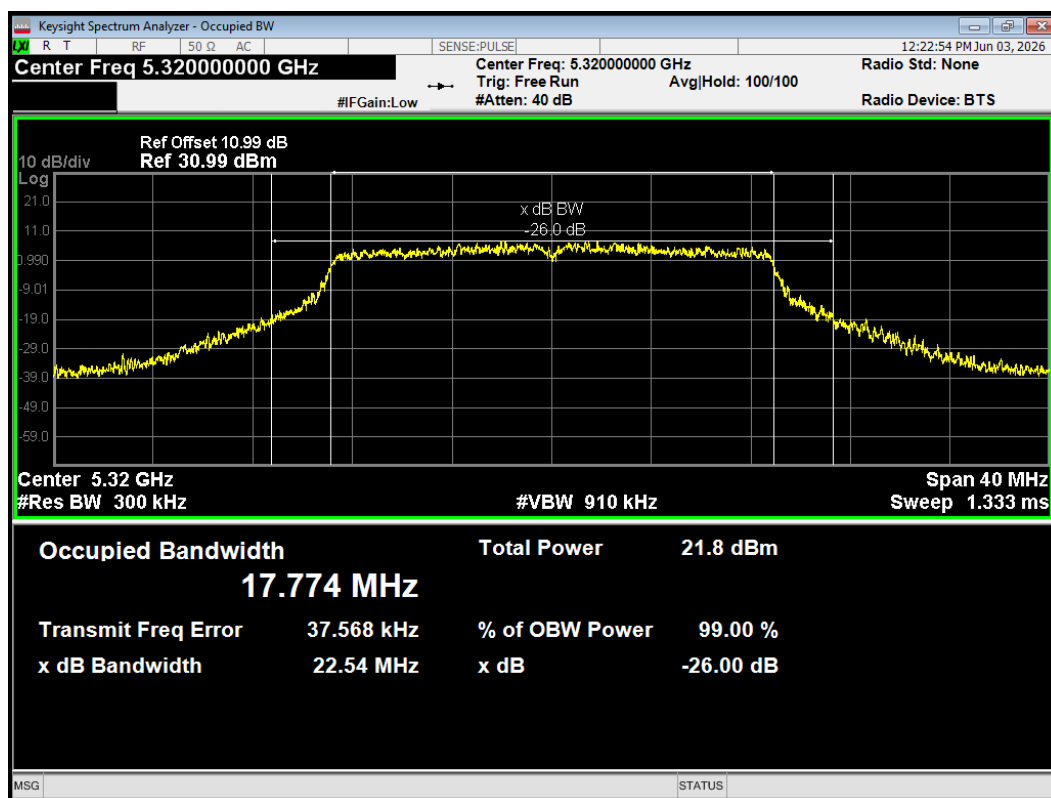
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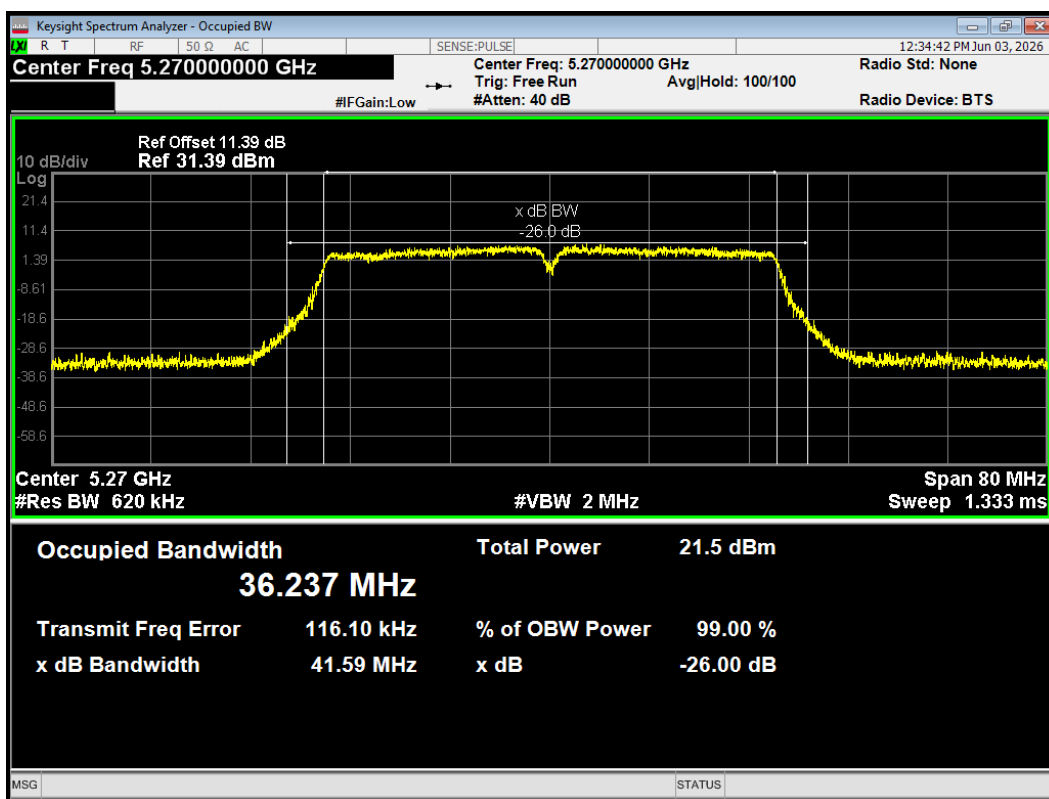
OBW 802.11n(HT20) 5320MHz Ant1



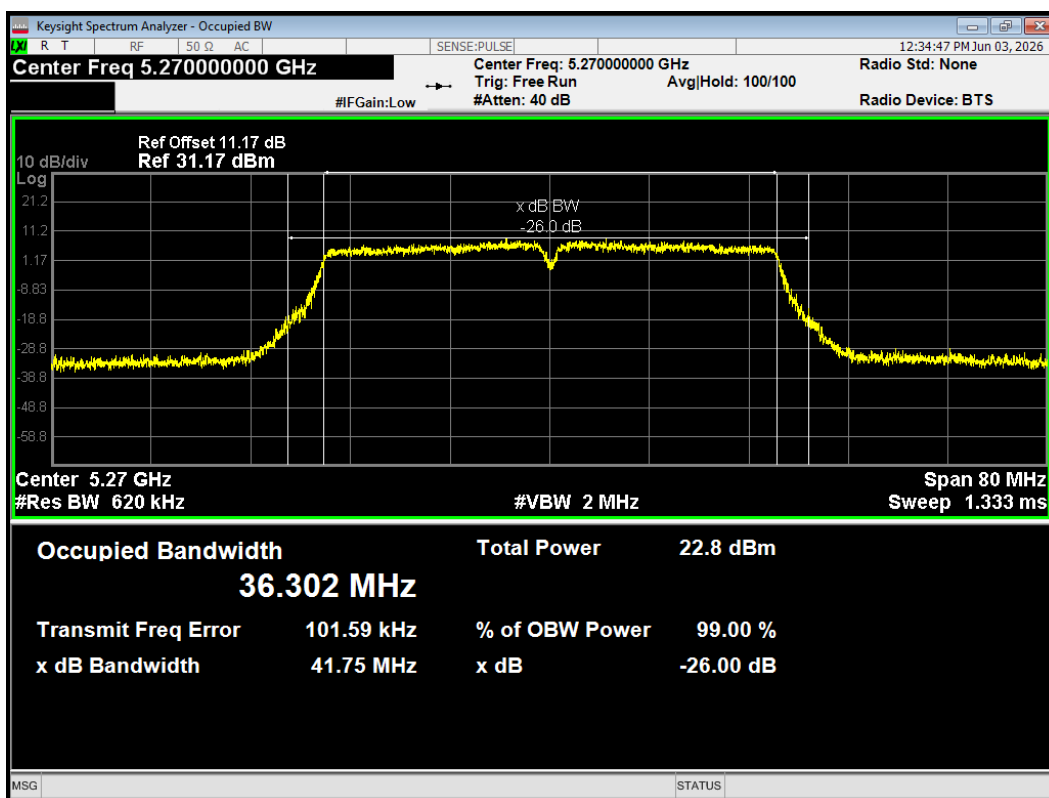
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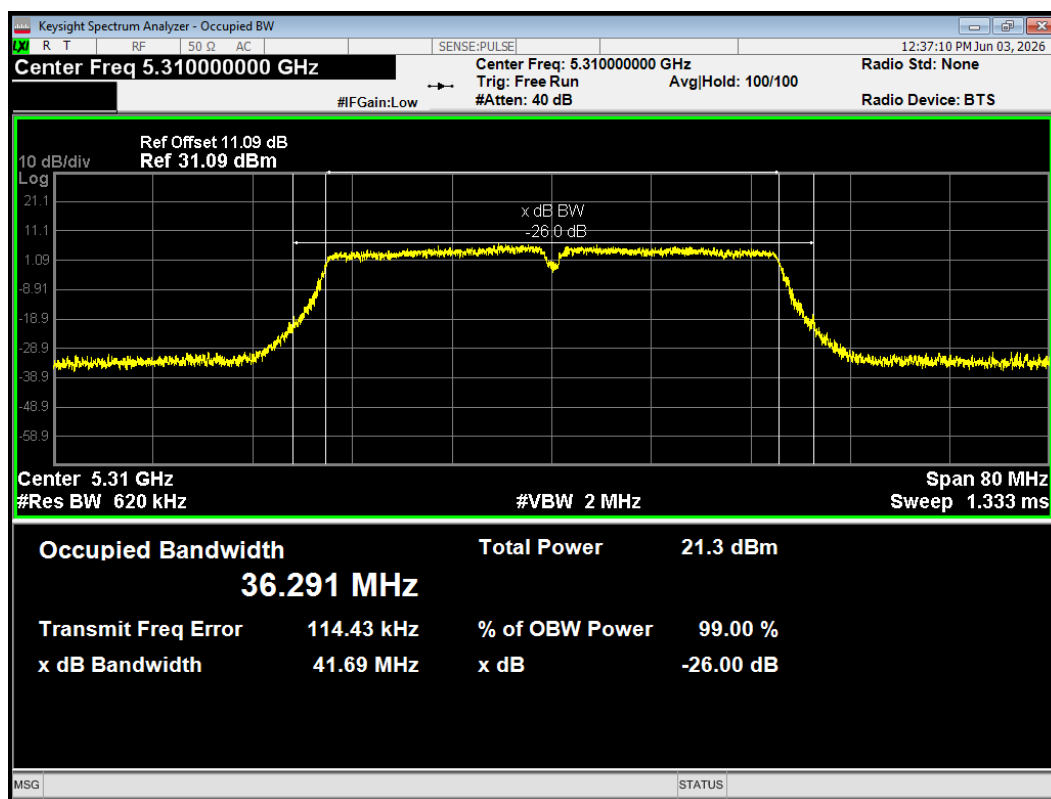
OBW 802.11n(HT40) 5270MHz Ant1



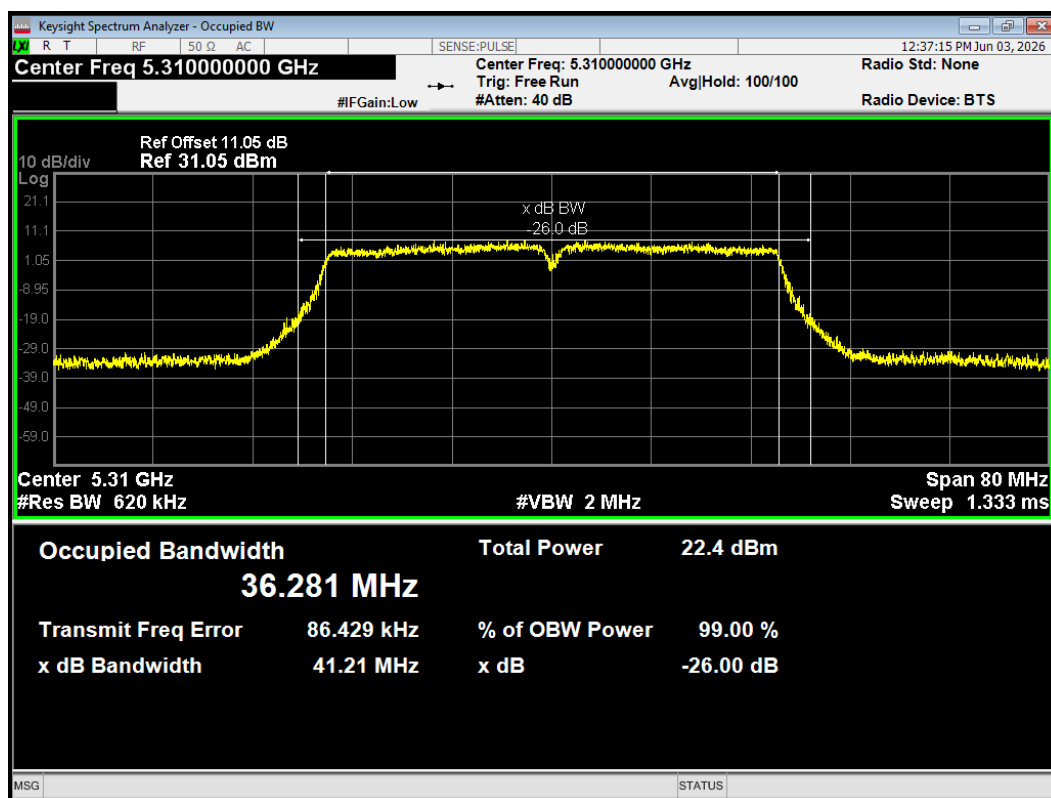
OBW 802.11n(HT40) 5270MHz Ant2



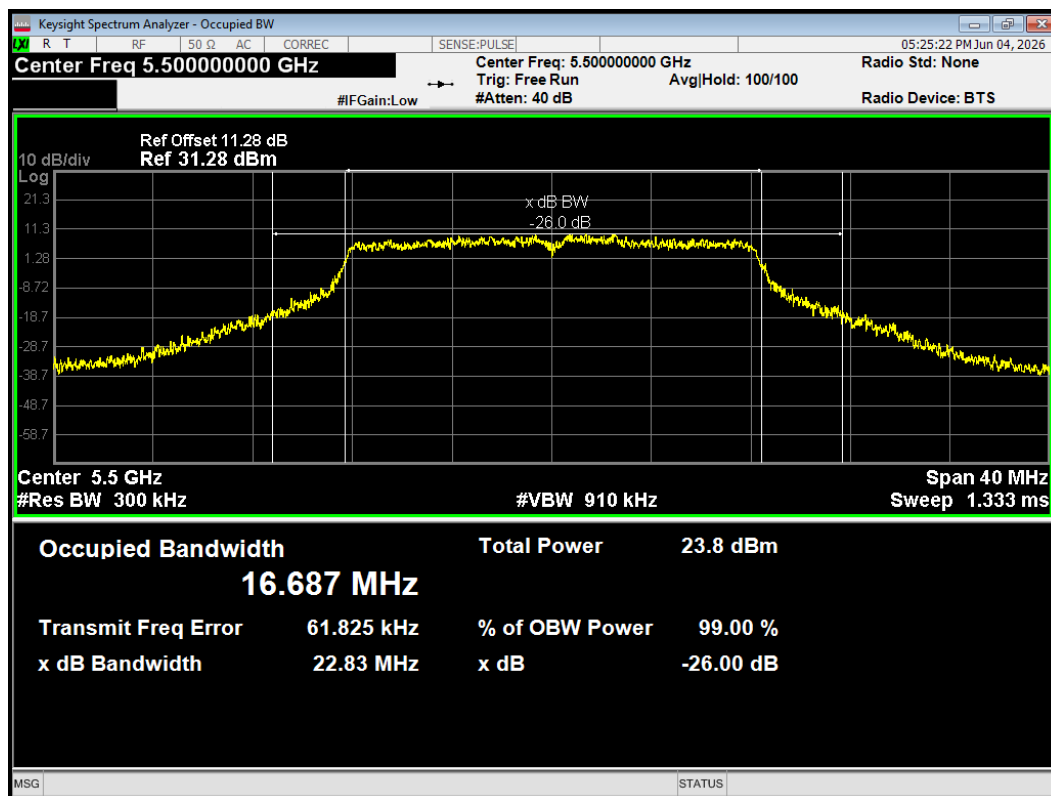
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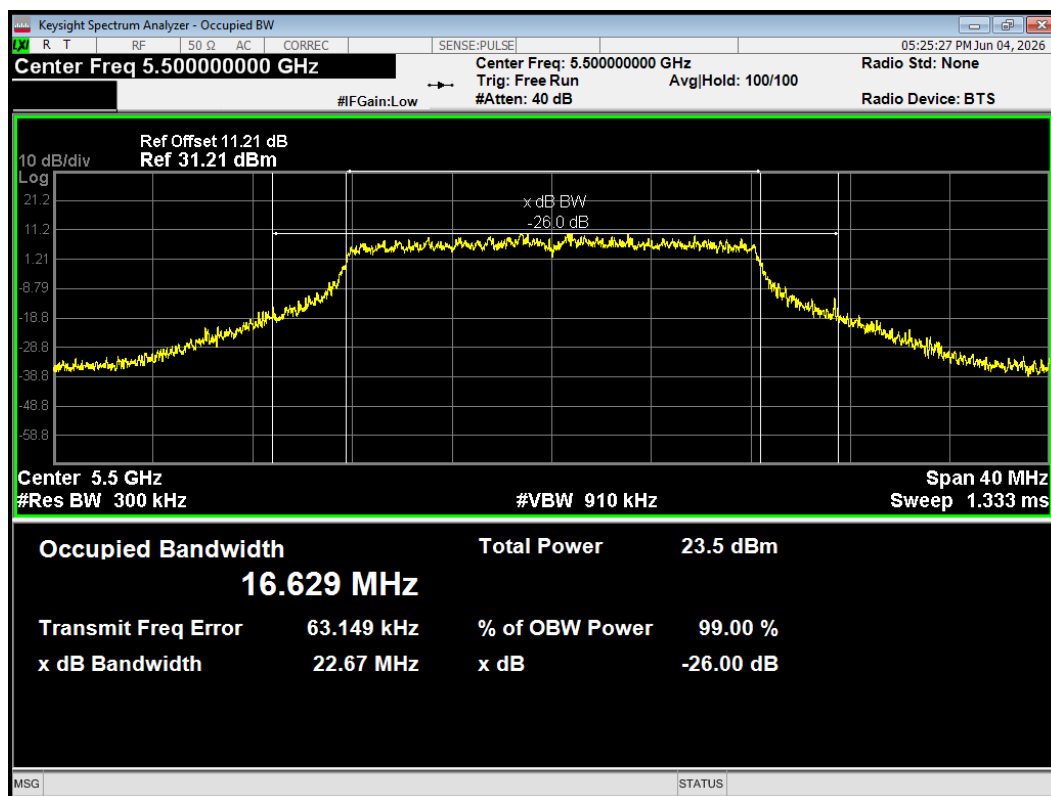
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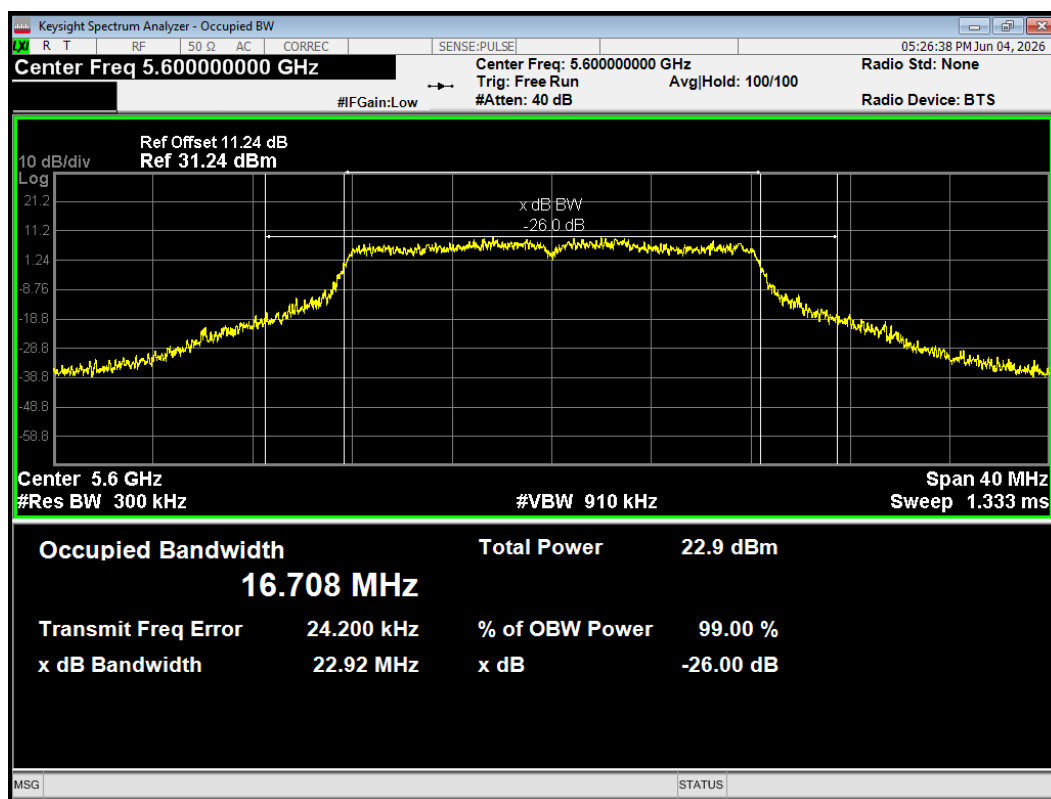
OBW 802.11a 5500MHz Ant1



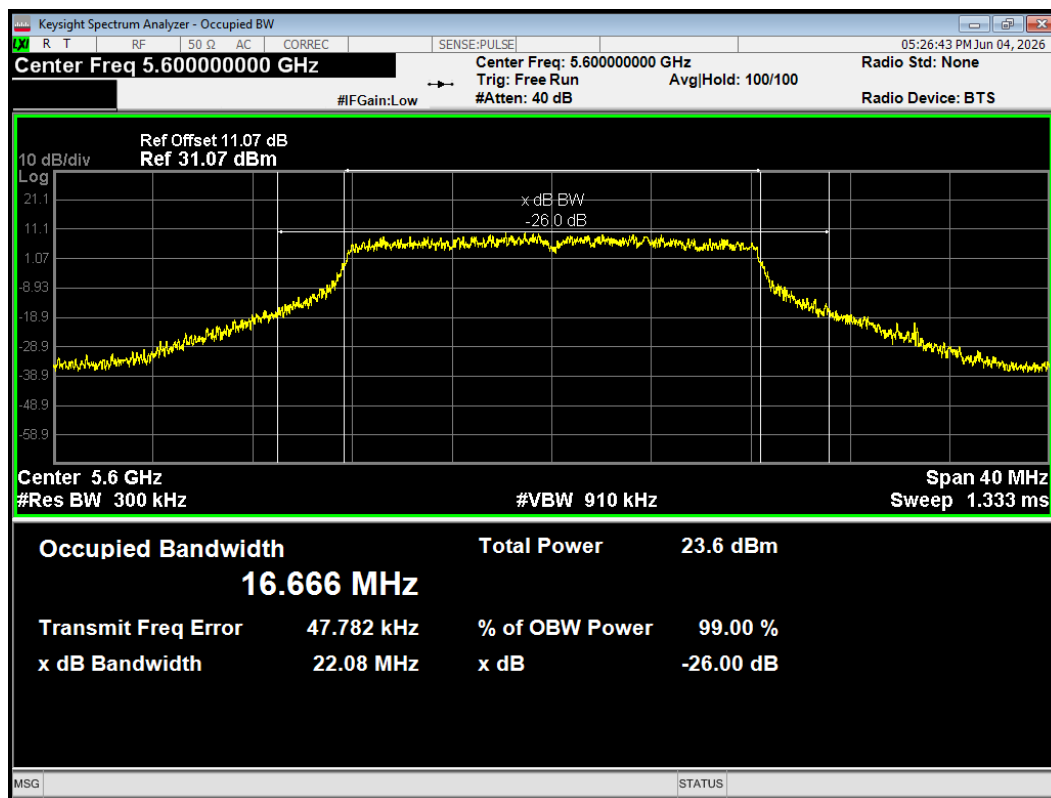
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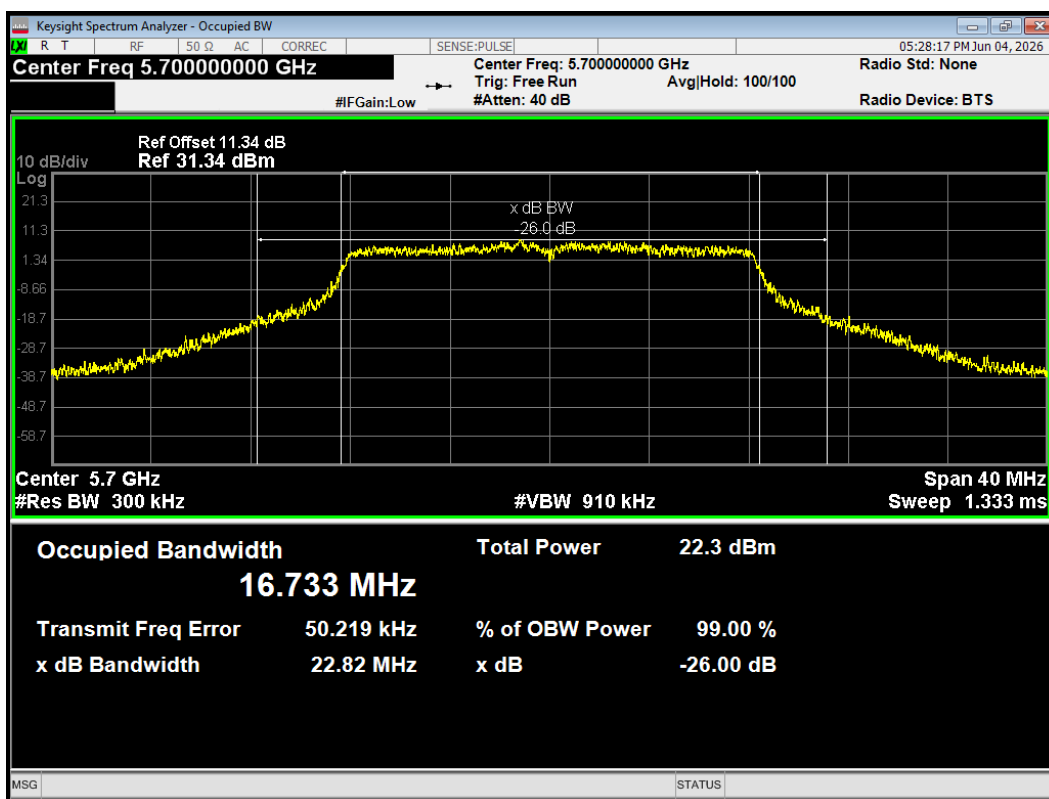
OBW 802.11a 5600MHz Ant1



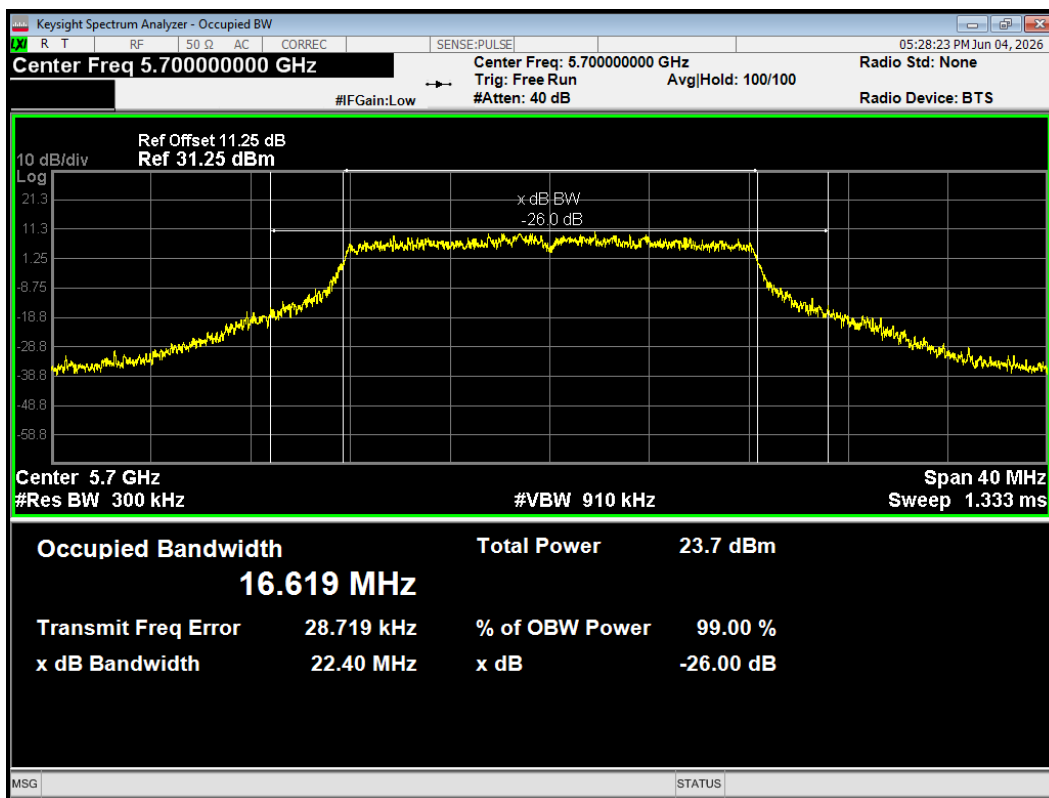
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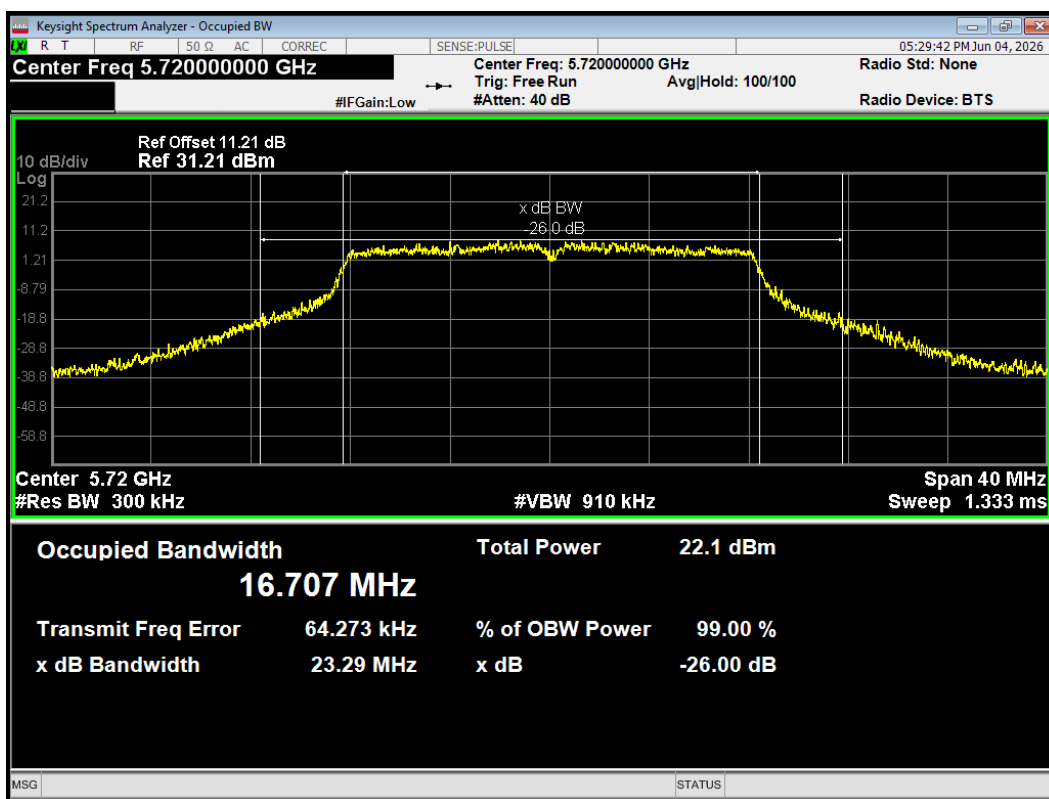
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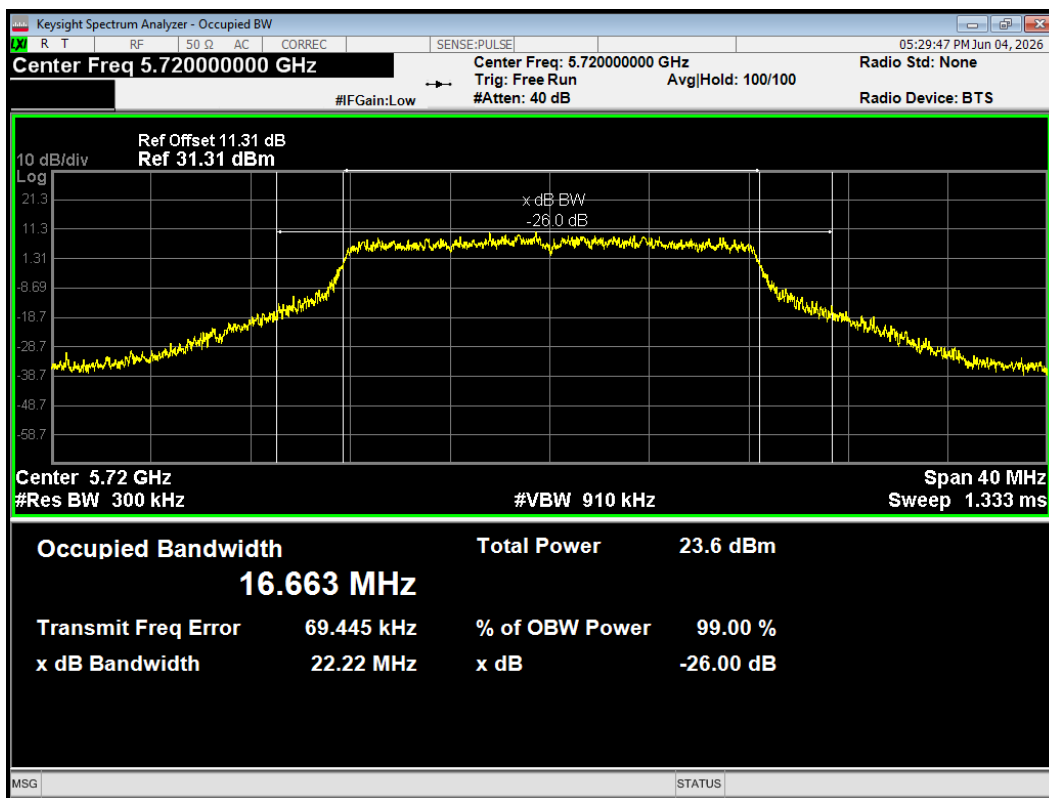
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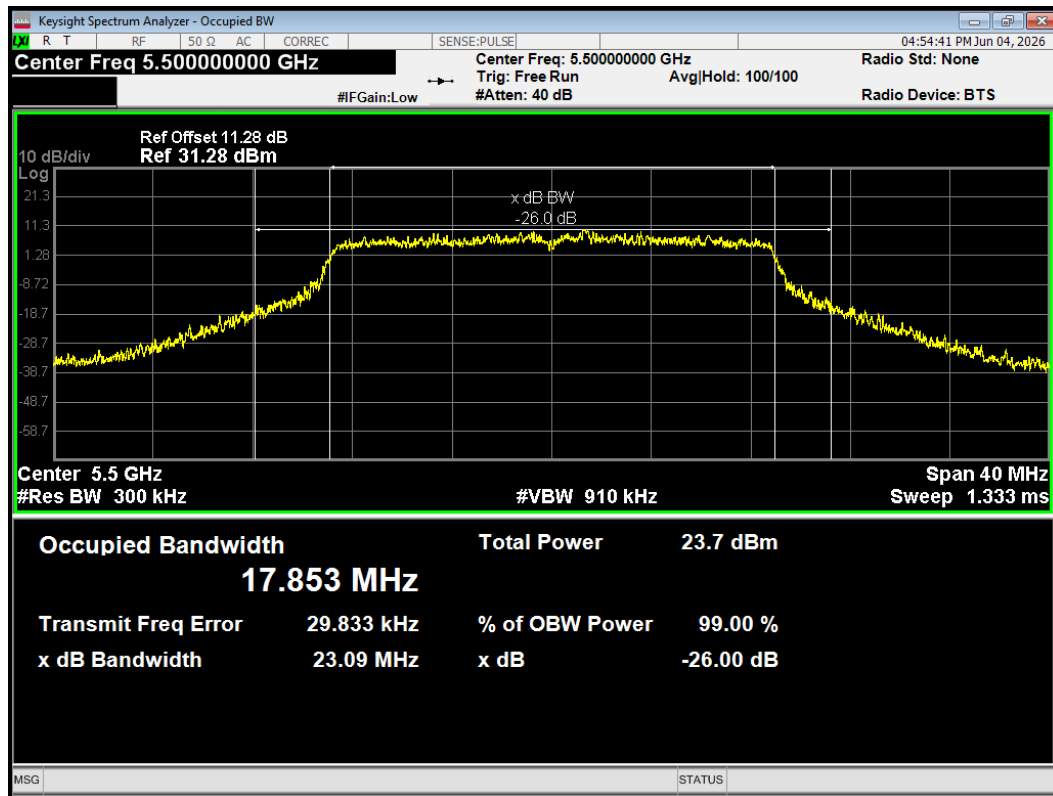
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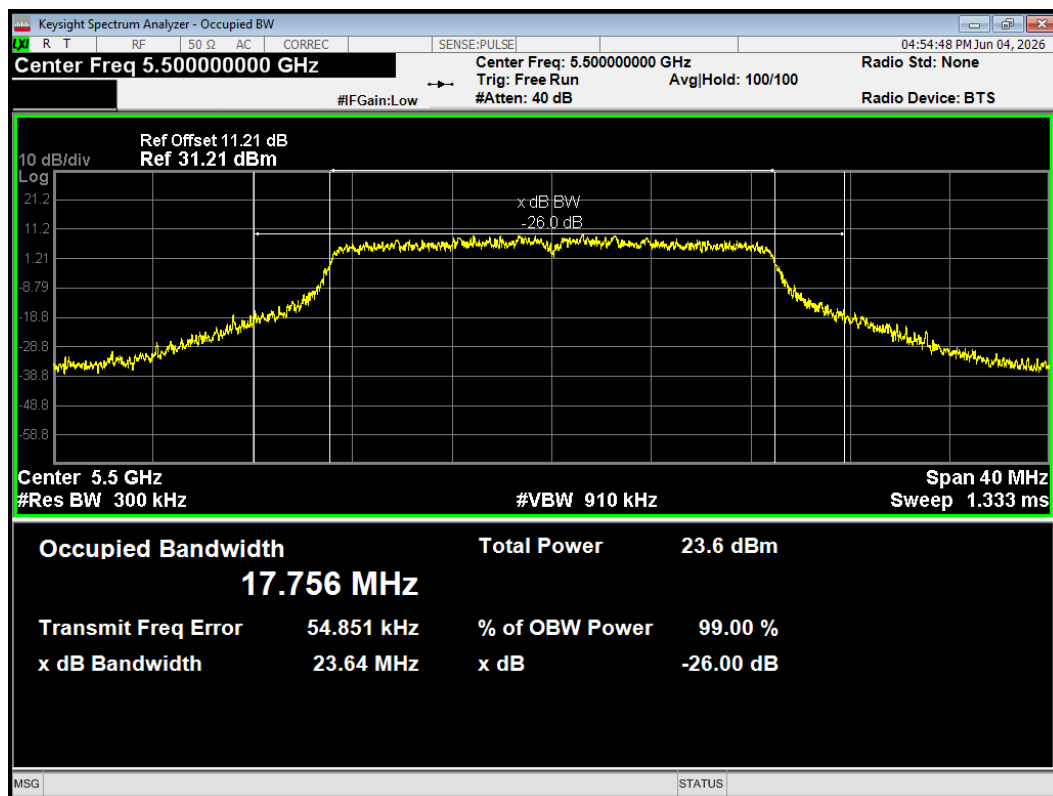
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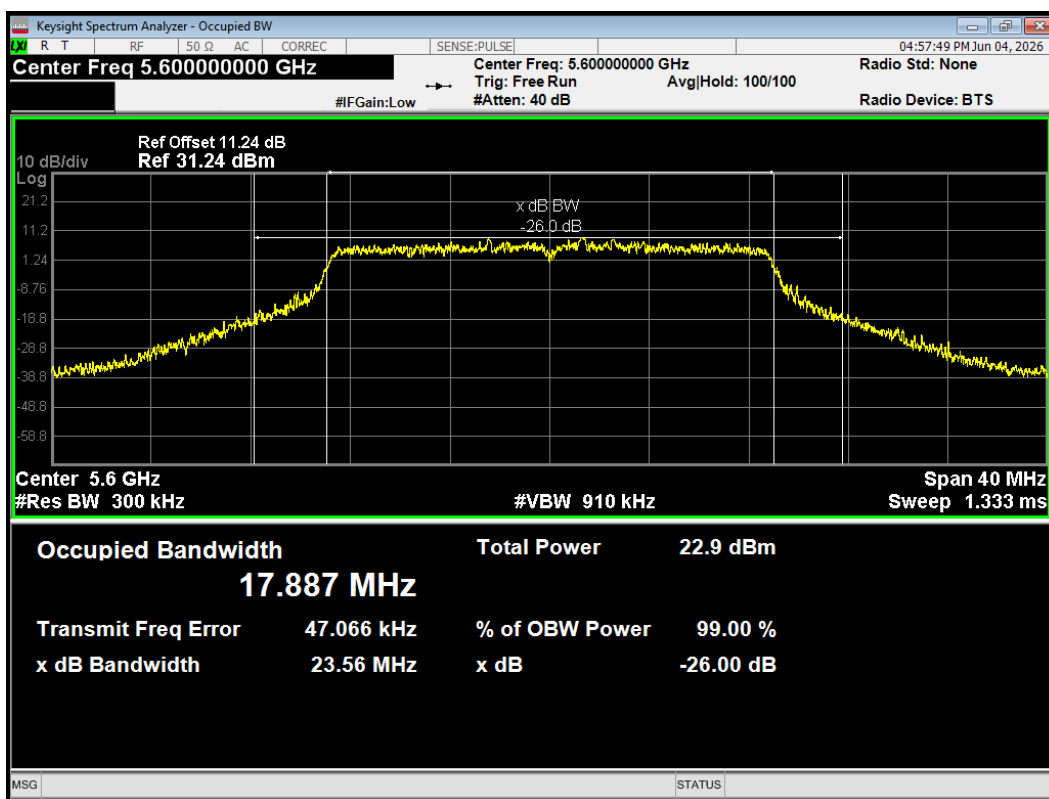
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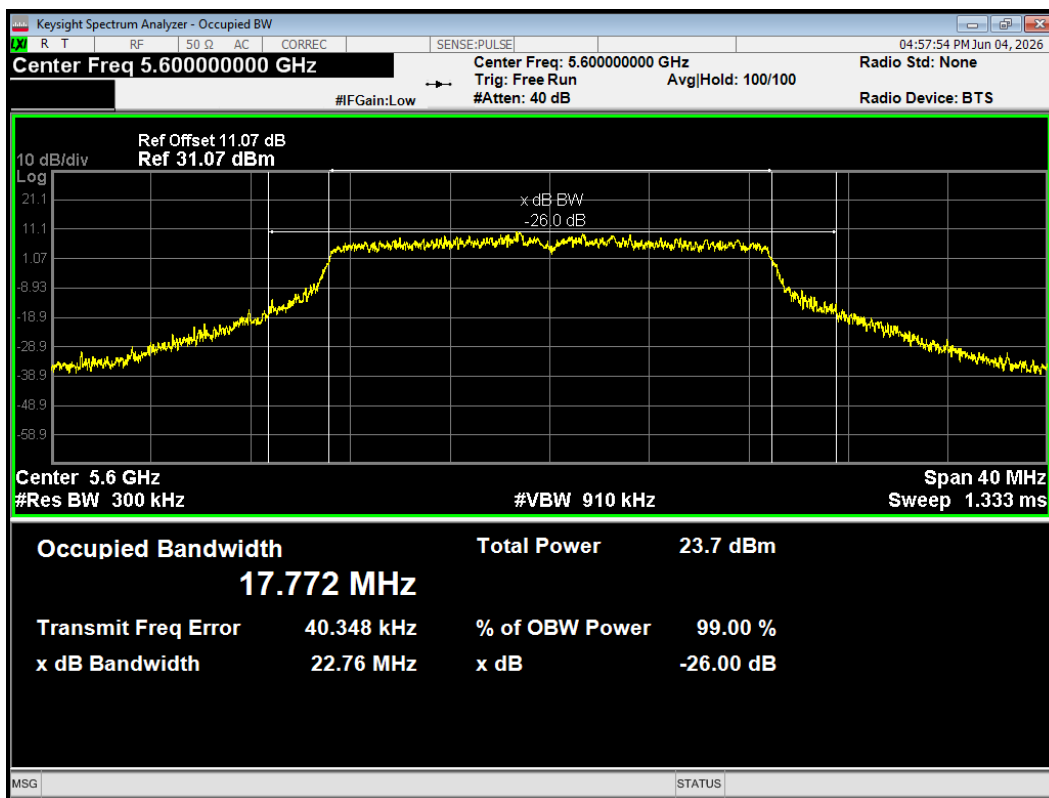
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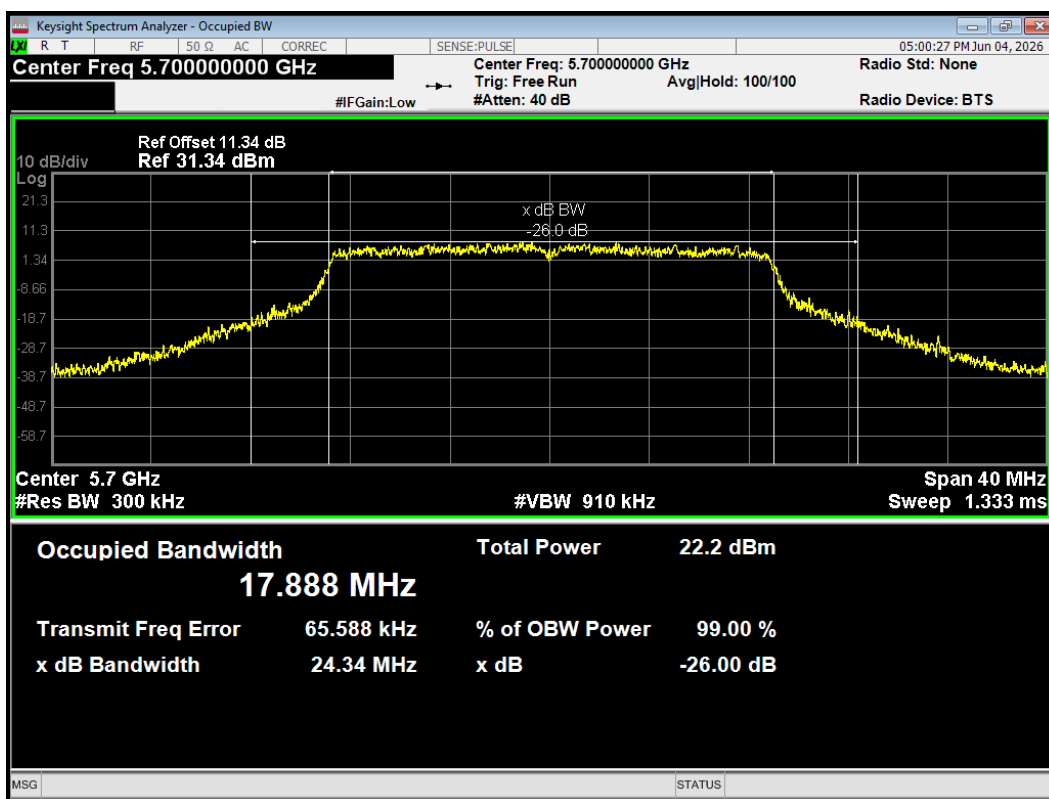
OBW 802.11ac(VHT20) 5600MHz Ant1



OBW 802.11ac(VHT20) 5600MHz Ant2



OBW 802.11ac(VHT20) 5700MHz Ant1



OBW 802.11ac(VHT20) 5700MHz Ant2

