# FCC Test Report

Report No.: AGC15863230701FR04

| | | |
|---|---|---|
| **FCC ID** | : | 2BCNZ-FYX7663BU |
| **APPLICATION PURPOSE** | : | Original Equipment |
| **PRODUCT DESIGNATION** | : | WiFi module |
| **BRAND NAME** | : | FEIYUXIN |
| **MODEL NAME** | : | FYX7663BU |
| **APPLICANT** | : | Shenzhen FEIYUXIN electronics co., ltd |
| **DATE OF ISSUE** | : | Sep. 26, 2023 |
| **STANDARD(S)** | : | FCC Part 15 Subpart E §15.407 |
| **REPORT VERSION** | : | V1.0 |

Attestation of Global Compliance (Shenzhen) Co., Ltd

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## Report Revise Record

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|---|---|---|---|---|
| V1.0 | / | Sep. 26, 2023 | Valid | Initial Release |

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## 1. General Information

| | |
|---|---|
| Applicant | Shenzhen FEIYUXIN electronics co., ltd |
| Address | Floor 1-4, Workshop No.76 Baotong South Road, Xikeng Community, Yuanshan Street, Longgang District, Shenzhen City, Guangdong Province, China |
| Manufacturer | Shenzhen FEIYUXIN electronics co., ltd |
| Address | Floor 1-4, Workshop No.76 Baotong South Road, Xikeng Community, Yuanshan Street, Longgang District, Shenzhen City, Guangdong Province, China |
| Factory | Shenzhen FEIYUXIN electronics co., ltd |
| Address | Floor 1-4, Workshop No.76 Baotong South Road, Xikeng Community, Yuanshan Street, Longgang District, Shenzhen City, Guangdong Province, China |
| Product Designation | WiFi module |
| Brand Name | FEIYUXIN |
| Test Model | FYX7663BU |
| Series Model(s) | N/A |
| Difference Description | N/A |
| Date of receipt of test item | Aug. 11, 2023 |
| Date of Test | Aug. 25, 2023 – Sep. 26, 2023 |
| Deviation from Standard | No any deviation from the test method |
| Condition of Test Sample | Normal |
| Test Result | Pass |
| Test Report Form No | AGCER-FCC-5G WLAN-V1 |

Note: The test results of this report relate only to the tested sample identified in this report.

| | | |
|---|---|---|
| Prepared By | Cici Li<br>(Project Engineer) | Sep. 26, 2023 |
| Reviewed By | Calvin Liu<br>(Reviewer) | Sep. 26, 2023 |
| Approved By | Max Zhang<br>Authorized Officer | Sep. 26, 2023 |

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# 2. Product Information

## 2.1 Product Technical Description

| | |
|---|---|
| Equipment Type | ☐ Outdoor access points ☐ Indoor access points<br>☐ Fixed P2P access points ☒ Client devices |
| Operation Frequency | ☒ U-NII 1:5150MHz~5250MHz ☒ U-NII 2A: 5250MHz~5350MHz<br>☐ U-NII 2C:5470MHz~5725MHz ☒ U-NII 3: 5725MHz~5850MHz |
| DFS Design Type | ☐ Master ☐ Slave with radar detection ☒ Slave without radar detection |
| TPC Function | ☐ Yes ☒ No |
| Hardware Version | 1.0 |
| Software Version | 1.0 |
| Test Frequency Range | For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5260~5320MHz, 5745~5825MHz<br>For 802.11n-HT40: 5190~5230MHz, 5270~5310MHz, 5755~5795MHz |
| RF Output Power | IEEE 802.11a(HT20):12.33dBm; IEEE 802.11n(HT20):11.34dBm;<br>IEEE802.11n(HT40):11.58dBm; IEEE 802.11ac(VHT20):11.22dBm |
| RF Output Power_MIMO | IEEE 802.11nHT(20):13.60dBm;IEEE802.11n(HT40):14.03dBm<br>IEEE 802.11ac(VHT20):13.68dBm |
| Modulation | 802.11a/n:(64-QAM, 16-QAM, QPSK, BPSK) OFDM<br>802.11ac :(256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) OFDM |
| Data Rate | 802.11a:6/9/12/18/24/36/48/54Mbps;<br>802.11n:up to 300Mbps;<br>802.11ac:up to 866.8Mbps |
| Number of channels | 6 channels of U-NII-1 Band<br>6 channels of U- NII-2A Band<br>7 channels of U- NII 3 Band |
| Antenna Designation | PCB Antenna |
| Antenna Gain | Refer to Chapter 2.9 of the report. |
| Power Supply | DC 3.3V |

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## 2.2 Table of Carrier Frequency

**For 5180~5240MHz:**

**4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):**

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 36 | 5180 MHz | 44 | 5220 MHz |
| 40 | 5200 MHz | 48 | 5240 MHz |

**2 channels are provided for 802.11n (HT40):**

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 38 | 5190 MHz | 46 | 5230 MHz |

**For 5260~5320MHz:**

**4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):**

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 52 | 5260 MHz | 60 | 5300 MHz |
| 56 | 5280 MHz | 64 | 5320 MHz |

**2 channels are provided for 802.11n (HT40):**

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 54 | 5270 MHz | 62 | 5310 MHz |

**For 5745~5825MHz:**

**5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):**

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 149 | 5745 MHz | 161 | 5805 MHz |
| 153 | 5765 MHz | 165 | 5825 MHz |
| 157 | 5785 MHz | -- | -- |

**2 channels are provided for 802.11n (HT40):**

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 151 | 5755 MHz | 159 | 5795 MHz |

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### 2.3 IEEE 802.11n Modulation Scheme

| MCS Index | Nss | Modulation | R | $N_{BPSC}$ | $N_{CBPS}$ | | $N_{DBPS}$ | | Data rate (Mbps) 800nsGI | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 20MHz | 40MHz | 20MHz | 40MHz | 20MHz | 40MHz |
| 0 | 1 | BPSK | 1/2 | 1 | 52 | 108 | 26 | 54 | 6.5 | 13.5 |
| 1 | 1 | QPSK | 1/2 | 2 | 104 | 216 | 52 | 108 | 13.0 | 27.0 |
| 2 | 1 | QPSK | 3/4 | 2 | 104 | 216 | 78 | 162 | 19.5 | 40.5 |
| 3 | 1 | 16-QAM | 1/2 | 4 | 208 | 432 | 104 | 216 | 26.0 | 54.0 |
| 4 | 1 | 16-QAM | 3/4 | 4 | 208 | 432 | 156 | 324 | 39.0 | 81.0 |
| 5 | 1 | 64-QAM | 2/3 | 6 | 312 | 648 | 208 | 432 | 52.0 | 108.0 |
| 6 | 1 | 64-QAM | 3/4 | 6 | 312 | 648 | 234 | 489 | 58.5 | 121.5 |
| 7 | 1 | 64-QAM | 5/6 | 6 | 312 | 648 | 260 | 540 | 65.0 | 135.0 |

| Symbol | Explanation |
|---|---|
| NSS | Number of spatial streams |
| R | Code rate |
| NBPSC | Number of coded bits per single carrier |
| NCBPS | Number of coded bits per symbol |
| NDBPS | Number of data bits per symbol |
| GI | Guard interval |

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### 2.4 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for **FCC ID: 2BCNZ-FYX7663BU** filing to comply with the FCC Part 15 requirements.

### 2.5 Test Methodology

| No. | Identity | Document Title |
|---|---|---|
| 1 | FCC 47 CFR Part 2 | Frequency allocations and radio treaty matters; general rules and regulations |
| 2 | FCC 47 CFR Part 15 | Radio Frequency Devices |
| 3 | ANSI C63.10-2013 | American National Standard for Testing Unlicensed Wireless Devices |
| 4 | KDB 662911 | 662911 D01 Multiple Transmitter Output v02r01 |
| 5 | KDB 789033 | 789033 D02 General U-NII Test Procedures New Rules v02r01 |

### 2.6 Special Accessories

Refer to section 4.4.

### 2.7 Equipment Modifications

Not available for this EUT intended for grant.

### 2.8 Antenna Requirement

| Standard Requirement |
|---|
| **15.203 requirement:**<br>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antennathat uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a brokenantenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. |
| **EUT Antenna:** |
| The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna refer to Section 2.9 of the report |

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**2.9 Description of Available Antennas**

| Antenna Type | Frequency Band (MHz) | TX Paths | Bandwidth (MHz) | Max Peak Gain (dBi) | | Max Directional Gain (dBi) |
|---|---|---|---|---|---|---|
| | | | | Ant 1 | Ant 2 | |
| 5G WIFI PIFA Antenna List (5GHz 2*2 MIMO) | | | | | | |
| PCB Antenna | 5150 ~ 5250 | 2 | 20,40,80 | 1.77 | 1.82 | 4.83 |
| | 5280 ~ 5350 | 2 | 20,40,80 | 1.91 | 1.73 | 4.92 |
| | 5725 ~ 5850 | 2 | 20,40,80 | 1.79 | 1.49 | 4.80 |

Note 1: The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11n/ac mode.

Note 2: The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

If all antennas have the same gain, $G_{ANT}$, Directional gain = $G_{ANT}$ + Array Gain, where Array Gain is as follows.

- For power spectral density (PSD) measurements on devices:

  Array Gain = 10 log ($N_{ANT}$/ $N_{SS}$) dB = 3.01;

- For power measurements on IEEE 802.1devices:

  Array Gain = 0 dB for $N_{ANT} \leq 4$;

  Array Gain = 0 dB (i.e., no array gain) for channel widths ≥40 MHz for any $N_{ANT}$;

  Array Gain = 5 log($N_{ANT}$/$N_{SS}$) dB or 3 dB, whichever is less, for 20 MHz channel widths with $N_{ANT} \geq 5$.

If antenna gains are not equal, Directional gain may be calculated by using the formulas applicable to equal gain antennas with $G_{ANT}$ set equal to the gain of the antenna having the highest gain.

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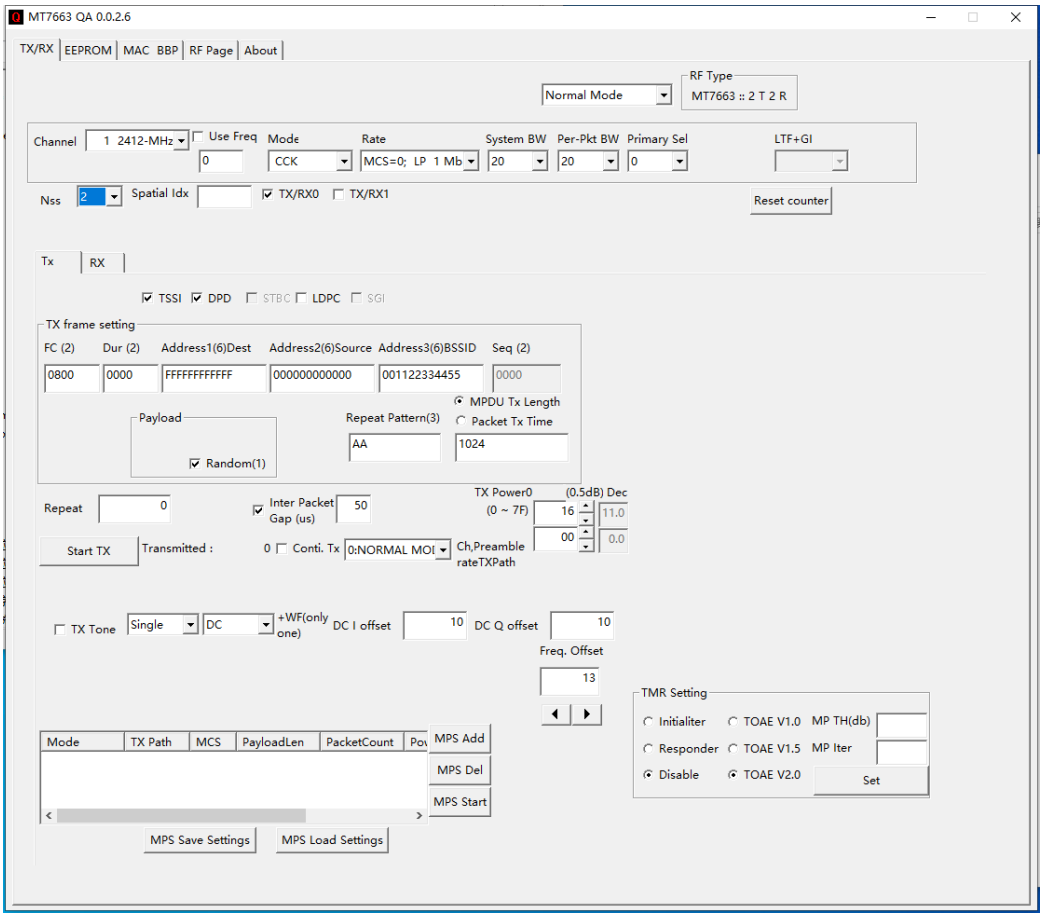
## 2.10 Description of Test Software

**<u>For IEEE 802.11 mode:</u>**

The test utility software used during testing was “MT7663 QA 0.0.2.6”.

Software Setting Diagram

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| Mode (5150-5250MHz) | Channel | Power Index | |
|---|---|---|---|
| | | Chain 1 | Chain 2 |
| 802.11a | L/M/H | 16 | 18 |
| 802.11n(HT20) | L/M/H | 16 | 18 |
| 802.11n(HT40) | L/M/H | 16 | 18 |
| 802.11ac(VHT20) | L/M/H | 16 | 18 |
| **Mode (5250-5350MHz)** | **Channel** | **Power Index** | |
| | | **Chain 1** | **Chain 2** |
| 802.11a | L/M/H | 16 | 18 |
| 802.11n(HT20) | L/M/H | 16 | 18 |
| 802.11n(HT40) | L/M/H | 16 | 18 |
| 802.11ac(VHT20) | L/M/H | 16 | 18 |
| **Mode (5725-5850MHz)** | **Channel** | **Power Index** | |
| | | **Chain 1** | **Chain 2** |
| 802.11a | L/M/H | 16 | 18 |
| 802.11n(HT20) | L/M/H | 16 | 18 |
| 802.11n(HT40) | L/M/H | 16 | 18 |
| 802.11ac(VHT20) | L/M/H | 16 | 18 |

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# 3. Test Environment

## 3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

## 3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

**CNAS-Lab Code: L5488**

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

**A2LA-Lab Cert. No.: 5054.02**

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

**FCC-Registration No.: 975832**

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

**IC-Registration No.: 24842 (CAB identifier: CN0063)**

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

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### 3.3 Environmental Conditions

| | Normal Conditions |
|---|---|
| Temperature range (℃) | 15 - 35 |
| Relative humidity range | 20% - 75% |
| Pressure range (kPa) | 86 - 106 |
| Power supply | 5V |

### 3.4 Measurement Uncertainty

The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

| Item | Measurement Uncertainty |
|---|---|
| Uncertainty of Conducted Emission for AC Port | $U_c$ = ±2.9 dB |
| Uncertainty of Radiated Emission below 1GHz | $U_c$ = ±3.9 dB |
| Uncertainty of Radiated Emission above 1GHz | $U_c$ = ±4.9 dB |
| Uncertainty of total RF power, conducted | $U_c$ = ±0.8 dB |
| Uncertainty of RF power density, conducted | $U_c$ = ±2.6 dB |
| Uncertainty of spurious emissions, conducted | $U_c$ = ±2 % |
| Uncertainty of Occupied Channel Bandwidth | $U_c$ = ±2.7 % |

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### 3.5 List of Equipment Used

| ● RF Conducted Test System | | | | | | | |
|---|---|---|---|---|---|---|---|
| Used | Equipment No. | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ☒ | AGC-ER-E036 | Spectrum Analyzer | Agilent | N9020A | MY49100060 | 2023-06-01 | 2024-05-31 |
| ☒ | AGC-ER-E062 | Power Sensor | Agilent | U2021XA | MY54110007 | 2023-03-03 | 2024-03-02 |
| ☒ | AGC-ER-E063 | Power Sensor | Agilent | U2021XA | MY54110009 | 2023-03-03 | 2024-03-02 |
| ☒ | AGC-EM-A152 | 6dB Attenuator | Eeatsheep | LM-XX-6-5W | N/A | 2023-06-09 | 2024-06-08 |
| ☒ | AGC-ER-E083 | Signal Generator | Agilent | E4421B | US39340815 | 2023-06-01 | 2024-05-31 |
| ☒ | N/A | RF Connection Cable | N/A | 1# | N/A | Each time | N/A |
| ☒ | N/A | RF Connection Cable | N/A | 2# | N/A | Each time | N/A |

| ● Radiated Spurious Emission | | | | | | | |
|---|---|---|---|---|---|---|---|
| Used | Equipment No. | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ☐ | AGC-EM-E046 | EMI Test Receiver | R&S | ESCI | 10096 | 2023-02-18 | 2024-02-17 |
| ☒ | AGC-EM-E116 | EMI Test Receiver | R&S | ESCI | 100034 | 2023-06-03 | 2024-06-02 |
| ☒ | AGC-EM-E061 | Spectrum Analyzer | Agilent | N9010A | MY53470504 | 2023-06-01 | 2024-05-31 |
| ☒ | AGC-EM-E086 | Loop Antenna | ZHINAN | ZN30900C | 18051 | 2022-03-12 | 2024-03-11 |
| ☒ | AGC-EM-E001 | Wideband Antenna | SCHWARZBECK | VULB9168 | D69250 | 2023-05-11 | 2025-05-10 |
| ☒ | AGC-EM-E029 | Broadband Ridged Horn Antenna | ETS | 3117 | 00034609 | 2023-03-23 | 2024-03-22 |
| ☒ | AGC-EM-E082 | Horn Antenna | SCHWARZBECK | BBHA 9170 | #768 | 2021-10-31 | 2023-10-30 |
| ☒ | AGC-EM-E146 | Pre-amplifier | ETS | 3117-PA | 00246148 | 2022-08-04 | 2024-08-03 |
| ☒ | AGC-EM-A118 | 5G Filter | SongYi | BRM50716 | N/A | 2023-06-01 | 2024-05-31 |
| ☒ | AGC-EM-A138 | 6dB Attenuator | Eeatsheep | LM-XX-6-5W | N/A | 2023-06-09 | 2024-06-08 |
| ☐ | AGC-EM-A139 | 6dB Attenuator | Eeatsheep | LM-XX-6-5W | N/A | 2023-06-09 | 2024-06-08 |

| ● AC Power Line Conducted Emission | | | | | | | |
|---|---|---|---|---|---|---|---|
| Used | Equipment No. | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ☒ | AGC-EM-E045 | EMI Test Receiver | R&S | ESPI | 101206 | 2023-06-03 | 2024-06-02 |
| ☒ | AGC-EM-E023 | AMN | R&S | 100086 | ESH2-Z5 | 2023-06-03 | 2024/06/02 |
| ☒ | AGC-EM-A130 | 6dB Attenuator | Eeatsheep | LM-XX-6-5W | DC-6GZ | 2023-06-09 | 2024-06-08 |

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| ● Test Software | | | | | |
|---|---|---|---|---|---|
| Used | Equipment No. | Test Equipment | Manufacturer | Model No. | Version Information |
| ☒ | AGC-EM-S001 | CE Test System | R&S | ES-K1 | V1.71 |
| ☒ | AGC-EM-S004 | RE Test System | Tonscend | TS$^{+}$ Ver2.1(JS32-RE) | 4.0.0.0 |
| ☒ | AGC-ER-S012 | BT/WIFI-Test System | Tonscend | JS1120-2 | 2.6 |
| ☒ | AGC-EM-S011 | RSE Test System | Tonscend | TS+-Ver2.1(JS36-RSE) | 4.0.0.0 |

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# 4.System Test Configuration

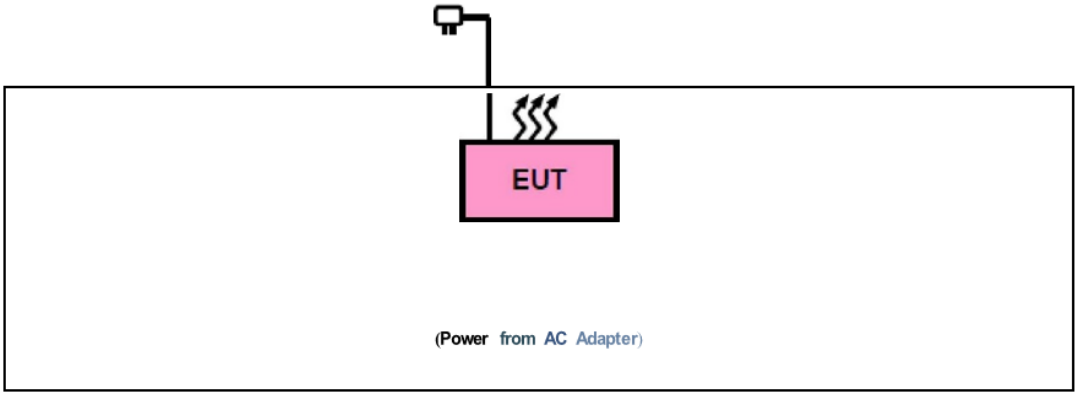
## 4.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

## 4.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

## 4.3 Configuration of Tested System




## 4.4 Equipment Used in Tested System

The following peripheral devices and interface cables were connected during the measurement:

☒ Test Accessories Come From The Laboratory

| No. | Equipment | Model No. | Manufacturer | Specification Information | Cable |
|---|---|---|---|---|---|
| 1 | Huawei Notebook PC 2 | huawei | D15 | -- | 2.2m,unshielded |
| 2 | Adapter(PC) | MI | AD651 | -- | -- |

☒ Test Accessories Come From The Manufacturer

| No. | Equipment | Model No. | Manufacturer | Specification Information | Cable |
|---|---|---|---|---|---|
| 1 | Control Box | N/A | N/A | USB-TTL | -- |

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### 4.5 Summary of Test Results

| Item | FCC Rules | Description Of Test | Result |
|---|---|---|---|
| 1 | §15.203 | Antenna Equipment | Pass |
| 2 | §15.407(a/1/2/3) | RF Output Power | Pass |
| 3 | §15.407(e) | 6dB Bandwidth Measurement | Pass |
| 4 | §2.1049 | 26dB bandwidth Measurement | Pass |
| 5 | §15.407(a/1/2/3) | Power Spectral Density | Pass |
| 6 | §15.407(b)(1/2/3/4) | Conducted Spurious Emission | Pass |
| 7 | §15.209,§15.407(b)(1/2/3/4) | Radiated Emission& Band Edge | Pass |
| 8 | §15.207 | AC Power Line Conducted Emission | Pass |

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## 5. Description of Test Modes

| EUT CONFIGURE MODE | APPLICABLE TO | | | | DESCRIPTION |
|---|---|---|---|---|---|
| | RE > 1G | RE < 1G | PLC | APCM | |
| A | -- | -- | -- | -- | Powered by Adapter with WIFI(5G) Link |
| B | -- | -- | -- | -- | Powered by Battery with WIFI(5G) Link |
| C | ☒ | ☒ | ☒ | ☒ | Powered by USB with WIFI(5G) Link |

Where, **RE > 1G: Radiated Emission above 1GHz** **PLC: Power Line Conducted Emission**

**RE < 1G: Radiated Emission below 1GHz** **APCM: Antenna Port Conducted Measurement**

NOTE 1: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane.

NOTE 2: "--"means no effect.

NOTE 3: The radiation part tests the dual-antenna MIMO as the worst combination.

**Radiated Emission Test (Above 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (IF EUT with antenna diversity architecture).

☒ The equipment under test has multiple antennas, and only the MIMO mode is recorded as the worst.

☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| C | 802.11n (20MHz) | 5180-5240 | 36 to 48 | 36, 40, 48 | OFDM | 6.5 |
| C | 802.11n (20MHz) | 5260-5320 | 52 to 64 | 52, 60, 64 | OFDM | 6.5 |
| C | 802.11n (20MHz) | 5745-5825 | 149 to 165 | 149, 157, 165 | OFDM | 6.5 |

**Radiated Emission Test (Below 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).

☒ The equipment under test has multiple antennas, and only the MIMO mode is recorded as the worst.

☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| C | 802.11n(20MHz) | 5180-5240 | 36 to 48 | 36 | OFDM | 6.5 |

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**Power Line Conducted Emission Test:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).
☒ The equipment under test has multiple antennas, and only the MIMO mode is recorded as the worst.
☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| C | 802.11n(20MHz) | 5180-5240 | 36 to 48 | 36 | OFDM | 6.5 |

**Bandedge Measurement:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).
☒ The equipment under test has multiple antennas, when there is no MIMO technology mode, antenna 1 is evaluated. When there is MIMO technology mode, antenna 1 + antenna 2 are evaluated as the worst data.
☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| C | 802.11a | 5180-5240 | 36 to 48 | 36 | OFDM | 6.0 |
| C | 802.11n (40MHz) | | 38 to 46 | 38 | OFDM | MCS0 |
| C | 802.11a | 5260-5320 | 52 to 64 | 64 | OFDM | 6.0 |
| C | 802.11n (40MHz) | | 54 to 62 | 62 | OFDM | MCS0 |

**Antenna Port Conducted Measurement:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| C | 802.11a | 5180-5240 | 36 to 48 | 36, 40, 48 | OFDM | 6.0 |
| C | 802.11n (20MHz) | | 36 to 48 | 36, 40, 48 | OFDM | MCS0 |
| C | 802.11n (40MHz) | | 38 to 46 | 38, 46 | OFDM | MCS0 |
| C | 802.11ac (20MHz) | | 36 to 48 | 36, 40, 48 | OFDM | MCS0 |
| C | 802.11a | 5260-5320 | 52 to 64 | 52, 60, 64 | OFDM | 6.0 |
| C | 802.11n (20MHz) | | 52 to 64 | 52, 60, 64 | OFDM | MCS0 |
| C | 802.11n (40MHz) | | 54 to 62 | 54, 62 | OFDM | MCS0 |
| C | 802.11ac (20MHz) | | 52 to 64 | 52, 60, 64 | OFDM | MCS0 |
| C | 802.11a | 5745-5825 | 149 to 165 | 149, 157, 165 | OFDM | 6.0 |
| C | 802.11n (20MHz) | | 149 to 165 | 149, 157, 165 | OFDM | MCS0 |
| C | 802.11n (40MHz) | | 151 to 159 | 151, 159 | OFDM | MCS0 |
| C | 802.11ac (20MHz) | | 149 to 165 | 149, 157, 165 | OFDM | MCS0 |

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## 6. Duty Cycle Measurement

5GHz WLAN (NII) operation is possible in 20MHz and 40MHzchannel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Peak. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

| Operating mode | Data rates (Mbps) | Duty Cycle (%) | Duty Cycle Factor (dB) | 1/ T Minimum VBW (kHz) | Average Factor (dB) |
|---|---|---|---|---|---|
| For band 5.150-5.250 GHz: | | | | | |
| IEEE 802.11a | 6 | 95.08 | 0.22 | 0.72 | -0.44 |
| IEEE 802.11n-HT20 | MCS0 | 94.69 | 0.24 | 0.77 | -0.47 |
| IEEE 802.11n-HT40 | MCS0 | 90.00 | 0.46 | 1.54 | -0.92 |
| IEEE 802.11ac-VHT20 | MCS0 | 94.94 | 0.23 | 0.76 | -0.45 |
| For band 5.25-5.35 GHz: | | | | | |
| IEEE 802.11a | 6 | 95.08 | 0.22 | 0.72 | -0.44 |
| IEEE 802.11n-HT20 | MCS0 | 94.75 | 0.23 | 0.77 | -0.47 |
| IEEE 802.11n-HT40 | MCS0 | 90.26 | 0.45 | 1.54 | -0.89 |
| IEEE 802.11ac-VHT20 | MCS0 | 94.79 | 0.23 | 0.76 | -0.46 |
| For band 5.725-5.850 GHz: | | | | | |
| IEEE 802.11a | 6 | 94.95 | 0.23 | 0.72 | -0.45 |
| IEEE 802.11n-HT20 | MCS0 | 94.75 | 0.23 | 0.77 | -0.47 |
| IEEE 802.11n-HT40 | MCS0 | 90.00 | 0.46 | 1.54 | -0.92 |
| IEEE 802.11ac-VHT20 | MCS0 | 94.80 | 0.23 | 0.76 | -0.46 |

Remark:

1. Duty Cycle factor = 10 * log (1/ Duty cycle)
2. Average factor = 20 log10 Duty Cycle
3. The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value.

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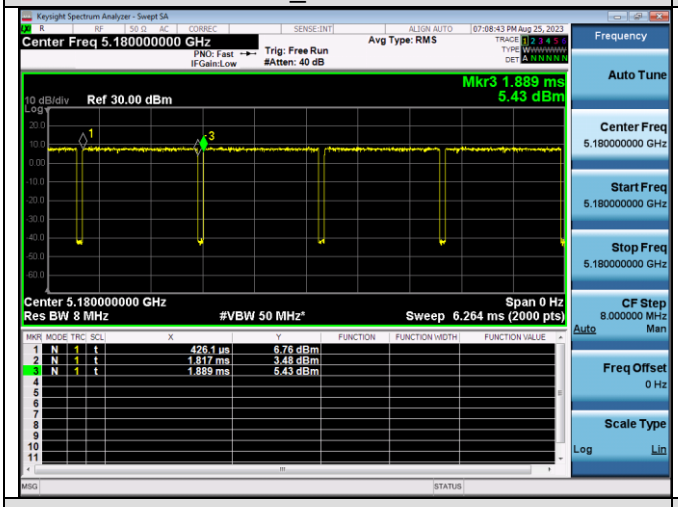
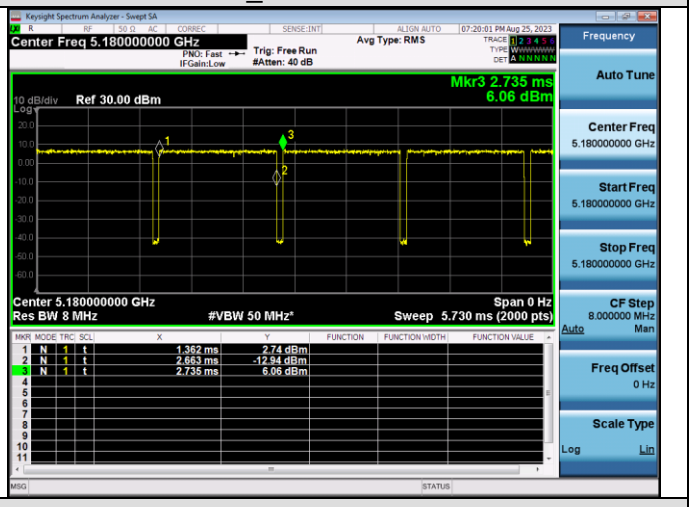
The test plots as follows:

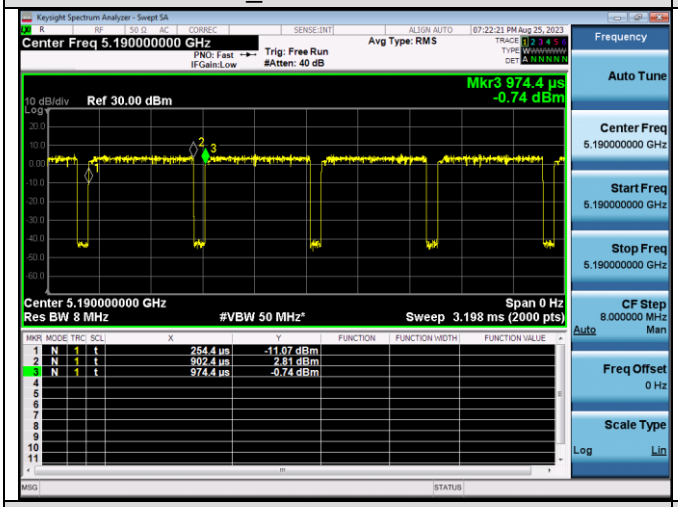
U-NII 1_IEEE 802.11a



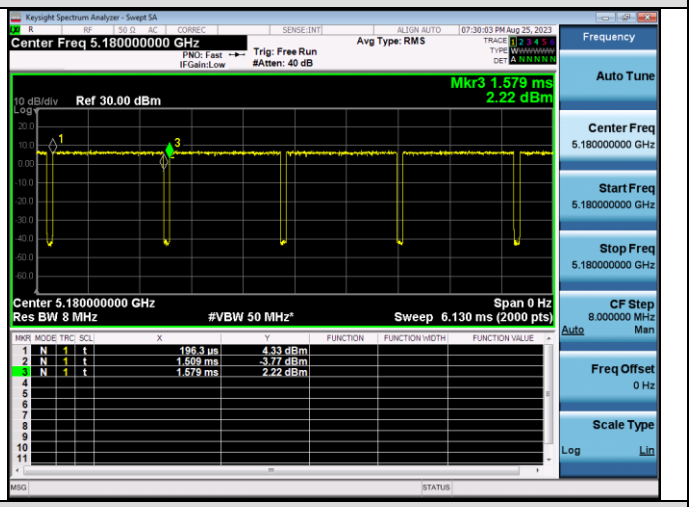

U-NII 1_IEEE 802.11n-HT20



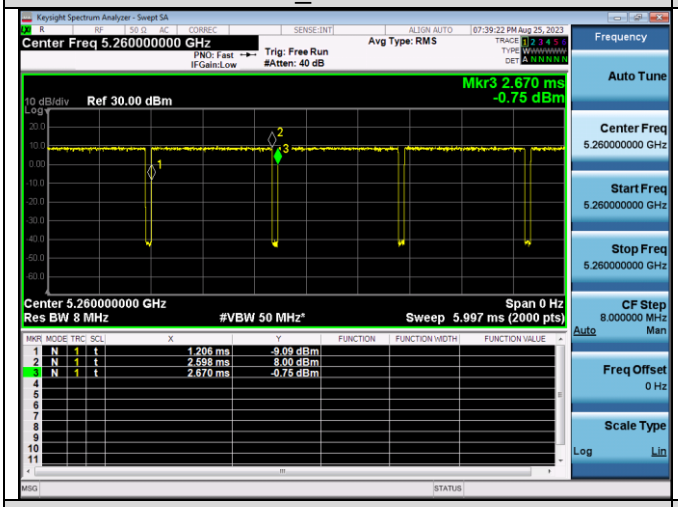

U-NII 1_ IEEE 802.11n-HT40




IEEE 802.11ac-VHT20




U-NII 2A_ IEEE 802.11a

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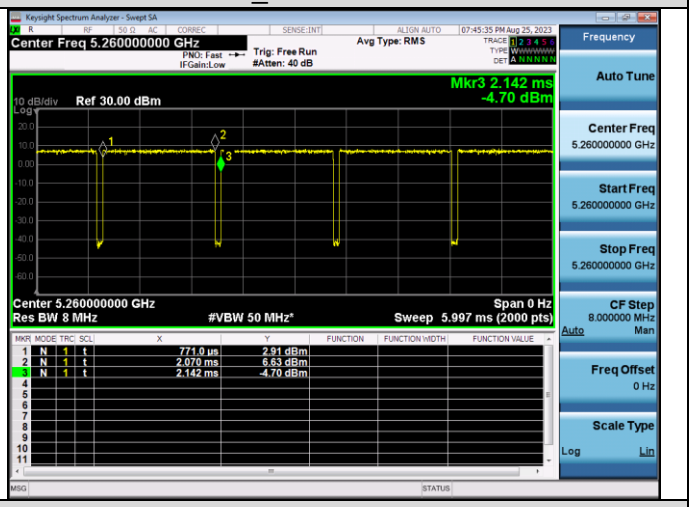


U-NII 2A_ IEEE 802.11n-HT40

U-NII 2A_ IEEE 802.11ac-VHT20

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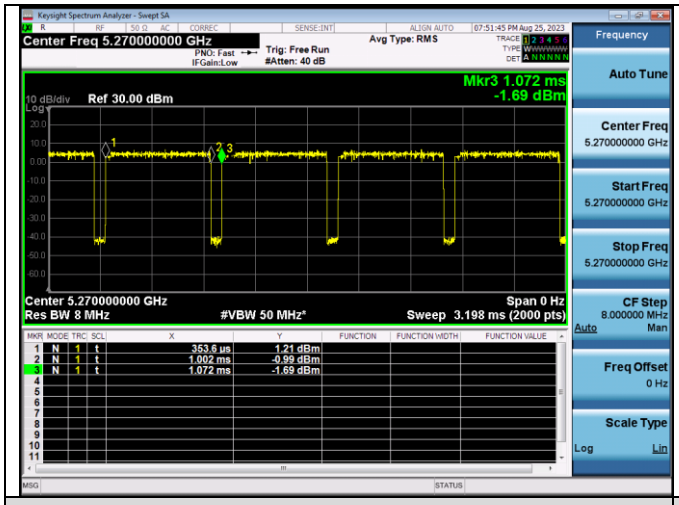
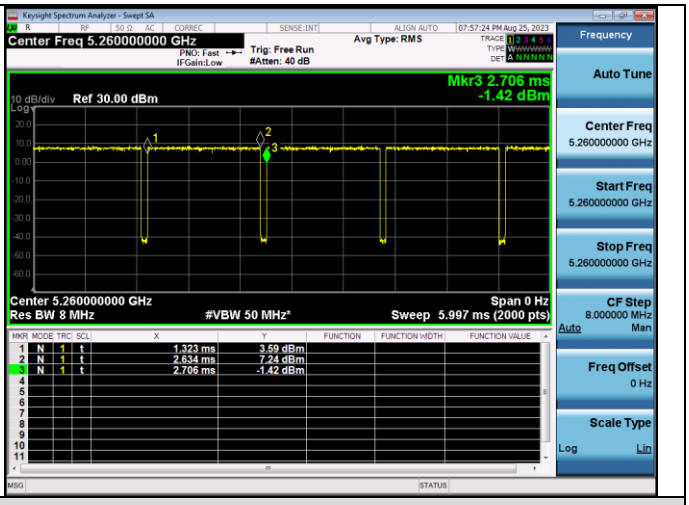
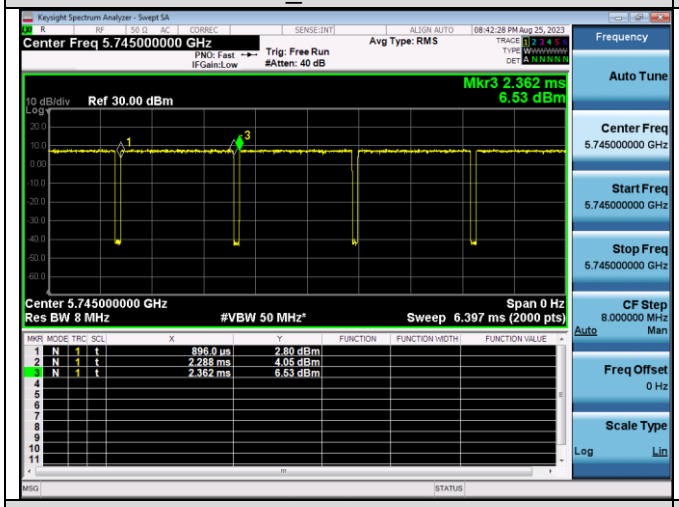


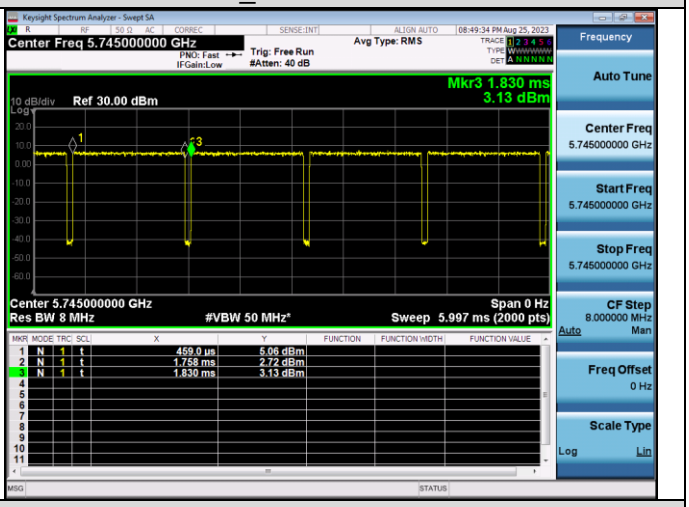

U-NII 3_ IEEE 802.11a



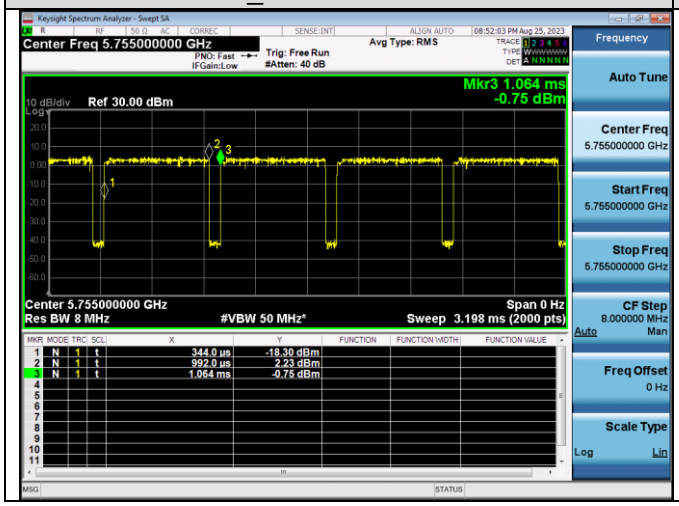

U-NII 3_ IEEE 802.11n-HT20

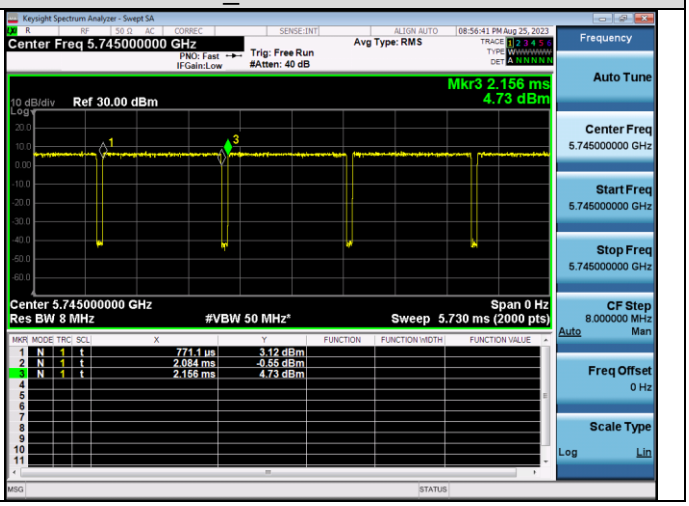



U-NII 3_ IEEE 802.11n-HT40




U-NII 3_ IEEE 802.11ac-VHT20

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# 7. RF Output Power Measurement

## 7.1 Provisions Applicable

| Operation Band | EUT Category | | LIMIT |
|---|---|---|---|
| U-NII-1 | ☐ | Outdoor Access Point | 1 Watt (30 dBm)<br>(Max. e.i.r.p < 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon) |
| | ☐ | Fixed point-to-point Access Point | 1 Watt (30 dBm) |
| | ☐ | Indoor Access Point | 1 Watt (30 dBm) |
| | ☒ | Client devices | 250mW (23.98 dBm) |
| U-NII-2A | / | | 250mW (23.98 dBm) or 11 dBm+10 log B* |
| U-NII-3 | / | | 1 Watt (30 dBm) |

Note: Where B is the 26dB emission bandwidth in MHz.

## 7.2 Measurement Procedure

☒Method PM is Measurement using an RF average power meter. The procedure for this method is as follows:

1. The testing follows the ANSI C63.10 Section 12.3.3.1
2. Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
3. The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
4. At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
5. The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
6. Determine according to the duty cycle of the equipment: when it is less than 98%, follow the steps below.
7. Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
8. Adjust the measurement in dBm by adding [10 log (1 / D)], where D is the duty cycle {e.g., [10 log (1 / 0.25)], if the duty cycle is 25%}.
9. Record the test results in the report.

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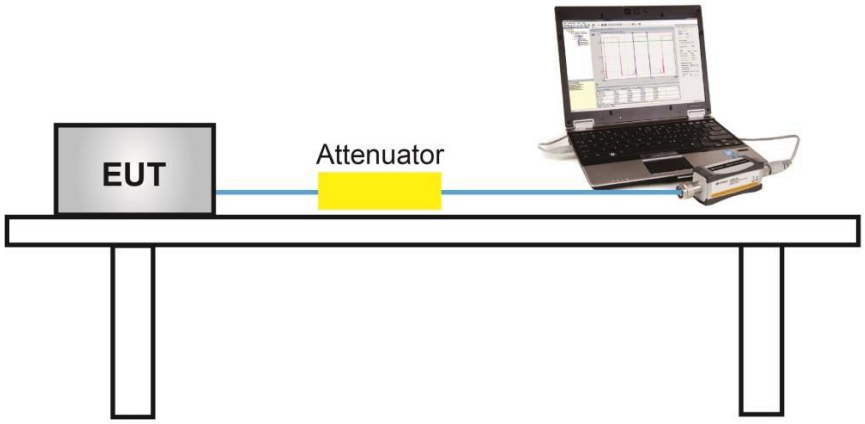
### 7.3 Measurement Setup (Block Diagram of Configuration)




### 7.4 Measurement Result

| Test Data of Conducted Output Power for band 5.15-5.25 GHz-ANT 1 | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11a | 5180 | 9.95 | 23.98 | Pass |
| | 5200 | 9.46 | 23.98 | Pass |
| | 5240 | 8.81 | 23.98 | Pass |
| 802.11n20 | 5180 | 8.90 | 23.98 | Pass |
| | 5200 | 8.30 | 23.98 | Pass |
| | 5240 | 7.62 | 23.98 | Pass |
| 802.11n40 | 5190 | 8.86 | 23.98 | Pass |
| | 5230 | 8.23 | 23.98 | Pass |
| 802.11ac20 | 5180 | 8.73 | 23.98 | Pass |
| | 5200 | 8.07 | 23.98 | Pass |
| | 5240 | 7.50 | 23.98 | Pass |

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| Test Data of Conducted Output Power for band 5.15-5.25 GHz-ANT 2 | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11a | 5180 | 9.77 | 23.98 | Pass |
| | 5200 | 9.46 | 23.98 | Pass |
| | 5240 | 9.50 | 23.98 | Pass |
| 802.11n20 | 5180 | 8.56 | 23.98 | Pass |
| | 5200 | 8.43 | 23.98 | Pass |
| | 5240 | 8.42 | 23.98 | Pass |
| 802.11n40 | 5190 | 8.82 | 23.98 | Pass |
| | 5230 | 8.91 | 23.98 | Pass |
| 802.11ac20 | 5180 | 8.46 | 23.98 | Pass |
| | 5200 | 8.33 | 23.98 | Pass |
| | 5240 | 8.33 | 23.98 | Pass |

| Test Data of Conducted Output Power for band 5.15-5.25 GHz-MIMO | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11n20 | 5180 | 11.74 | 23.98 | Pass |
| | 5200 | 11.38 | 23.98 | Pass |
| | 5240 | 11.05 | 23.98 | Pass |
| 802.11n40 | 5190 | 11.85 | 23.98 | Pass |
| | 5230 | 11.59 | 23.98 | Pass |
| 802.11ac20 | 5180 | 11.61 | 23.98 | Pass |
| | 5200 | 11.21 | 23.98 | Pass |
| | 5240 | 10.95 | 23.98 | Pass |

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| Test Data of Conducted Output Power for band 5.25-5.35 GHz-ANT 1 | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11a | 5260 | 10.91 | 23.98 | Pass |
| | 5300 | 8.30 | 23.98 | Pass |
| | 5320 | 8.15 | 23.98 | Pass |
| 802.11n20 | 5260 | 9.69 | 23.98 | Pass |
| | 5300 | 7.32 | 23.98 | Pass |
| | 5320 | 7.18 | 23.98 | Pass |
| 802.11n40 | 5270 | 10.38 | 23.98 | Pass |
| | 5310 | 7.93 | 23.98 | Pass |
| 802.11ac20 | 5260 | 10.05 | 23.98 | Pass |
| | 5300 | 7.62 | 23.98 | Pass |
| | 5320 | 7.31 | 23.98 | Pass |

| Test Data of Conducted Output Power for band 5.25-5.35 GHz-ANT 2 | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11a | 5260 | 12.33 | 23.98 | Pass |
| | 5300 | 9.82 | 23.98 | Pass |
| | 5320 | 9.53 | 23.98 | Pass |
| 802.11n20 | 5260 | 11.34 | 23.98 | Pass |
| | 5300 | 8.71 | 23.98 | Pass |
| | 5320 | 8.36 | 23.98 | Pass |
| 802.11n40 | 5270 | 11.58 | 23.98 | Pass |
| | 5310 | 8.97 | 23.98 | Pass |
| 802.11ac20 | 5260 | 11.22 | 23.98 | Pass |
| | 5300 | 8.76 | 23.98 | Pass |
| | 5320 | 8.41 | 23.98 | Pass |

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| Test Data of Conducted Output Power for band 5.25-5.35 GHz-MIMO | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11n20 | 5260 | 13.60 | 23.98 | Pass |
| | 5300 | 11.08 | 23.98 | Pass |
| | 5320 | 10.82 | 23.98 | Pass |
| 802.11n40 | 5270 | 14.03 | 23.98 | Pass |
| | 5310 | 11.49 | 23.98 | Pass |
| 802.11ac20 | 5260 | 13.68 | 23.98 | Pass |
| | 5300 | 11.24 | 23.98 | Pass |
| | 5320 | 10.91 | 23.98 | Pass |

| Test Data of Conducted Output Power for band 5.725-5.850 GHz-ANT 1 | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11a | 5745 | 9.74 | 30 | Pass |
| | 5785 | 9.08 | 30 | Pass |
| | 5825 | 6.34 | 30 | Pass |
| 802.11n20 | 5745 | 8.65 | 30 | Pass |
| | 5785 | 7.97 | 30 | Pass |
| | 5825 | 5.21 | 30 | Pass |
| 802.11n40 | 5755 | 8.88 | 30 | Pass |
| | 5795 | 8.10 | 30 | Pass |
| 802.11ac20 | 5745 | 8.67 | 30 | Pass |
| | 5785 | 8.04 | 30 | Pass |
| | 5825 | 5.22 | 30 | Pass |

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| Test Data of Conducted Output Power for band 5.725-5.850 GHz-ANT 2 | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11a | 5745 | 9.97 | 30 | Pass |
| | 5785 | 9.24 | 30 | Pass |
| | 5825 | 6.79 | 30 | Pass |
| 802.11n20 | 5745 | 8.85 | 30 | Pass |
| | 5785 | 8.18 | 30 | Pass |
| | 5825 | 5.77 | 30 | Pass |
| 802.11n40 | 5755 | 9.07 | 30 | Pass |
| | 5795 | 8.31 | 30 | Pass |
| 802.11ac20 | 5745 | 8.85 | 30 | Pass |
| | 5785 | 8.17 | 30 | Pass |
| | 5825 | 5.73 | 30 | Pass |

| Test Data of Conducted Output Power for band 5.725-5.85 GHz-MIMO | | | | |
|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | Average Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11n20 | 5745 | 11.76 | 30 | Pass |
| | 5785 | 11.09 | 30 | Pass |
| | 5825 | 8.51 | 30 | Pass |
| 802.11n40 | 5755 | 11.99 | 30 | Pass |
| | 5795 | 11.22 | 30 | Pass |
| 802.11ac20 | 5745 | 11.77 | 30 | Pass |
| | 5785 | 11.12 | 30 | Pass |
| | 5825 | 8.49 | 30 | Pass |

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# 8. 6dB&26dB Bandwidth Measurement

## 8.1 Provisions Applicable

The minimum 6dB bandwidth shall be at least 500 kHz.

## 8.2 Measurement Procedure

◆ **-6dB bandwidth (DTS bandwidth) Test setting:**

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW ⩾3*RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

◆ **99% occupied bandwidth test setting:**

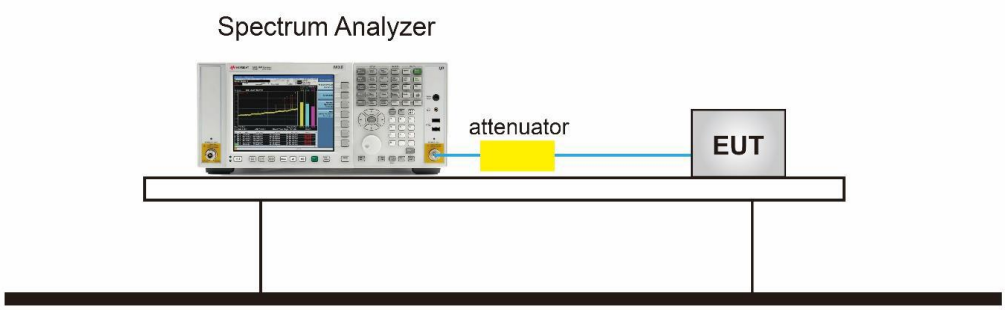
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel
   The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

◆ **-26dB Bandwidth test setting:**

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

**Note:** The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

## 8.3 Measurement Setup (Block Diagram of Configuration)

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### 8.4 Measurement Results

| Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz-ANT 1 | | | | | |
|---|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | 99% Occupied Bandwidth (MHz) | -26dB Bandwidth (MHz) | Limits (MHz) | Pass or Fail |
| 802.11a | 5180 | 16.416 | 19.906 | N/A | Pass |
| | 5200 | 16.410 | 19.995 | N/A | Pass |
| | 5240 | 16.462 | 19.891 | N/A | Pass |
| 802.11n20 | 5180 | 17.553 | 19.896 | N/A | Pass |
| | 5200 | 17.572 | 20.090 | N/A | Pass |
| | 5240 | 17.564 | 20.033 | N/A | Pass |
| 802.11n40 | 5190 | 35.961 | 39.979 | N/A | Pass |
| | 5230 | 35.993 | 40.286 | N/A | Pass |
| 802.11ac20 | 5180 | 17.540 | 19.898 | N/A | Pass |
| | 5200 | 17.566 | 20.076 | N/A | Pass |
| | 5240 | 17.535 | 20.028 | N/A | Pass |

| Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz-ANT 2 | | | | | |
|---|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | 99% Occupied Bandwidth (MHz) | -26dB Bandwidth (MHz) | Limits (MHz) | Pass or Fail |
| 802.11a | 5180 | 16.417 | 19.824 | N/A | Pass |
| | 5200 | 16.445 | 19.759 | N/A | Pass |
| | 5240 | 16.417 | 20.084 | N/A | Pass |
| 802.11n20 | 5180 | 17.550 | 20.252 | N/A | Pass |
| | 5200 | 17.563 | 19.925 | N/A | Pass |
| | 5240 | 17.565 | 19.916 | N/A | Pass |
| 802.11n40 | 5190 | 35.989 | 39.950 | N/A | Pass |
| | 5230 | 35.967 | 40.134 | N/A | Pass |
| 802.11ac20 | 5180 | 17.521 | 19.900 | N/A | Pass |
| | 5200 | 17.556 | 19.992 | N/A | Pass |
| | 5240 | 17.546 | 19.902 | N/A | Pass |

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| Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.25-5.35 GHz-ANT 1 | | | | | |
|---|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | 99% Occupied Bandwidth (MHz) | -26dB Bandwidth (MHz) | Limits (MHz) | Pass or Fail |
| 802.11a | 5260 | 16.456 | 19.883 | N/A | Pass |
| | 5300 | 16.446 | 19.712 | N/A | Pass |
| | 5320 | 16.452 | 20.079 | N/A | Pass |
| 802.11n20 | 5260 | 17.573 | 20.081 | N/A | Pass |
| | 5300 | 17.568 | 19.896 | N/A | Pass |
| | 5320 | 17.555 | 20.092 | N/A | Pass |
| 802.11n40 | 5270 | 36.035 | 40.592 | N/A | Pass |
| | 5310 | 35.995 | 40.514 | N/A | Pass |
| 802.11ac20 | 5260 | 17.575 | 20.428 | N/A | Pass |
| | 5300 | 17.547 | 20.124 | N/A | Pass |
| | 5320 | 17.546 | 20.090 | N/A | Pass |

| Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.25-5.35 GHz-ANT 2 | | | | | |
|---|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | 99% Occupied Bandwidth (MHz) | -26dB Bandwidth (MHz) | Limits (MHz) | Pass or Fail |
| 802.11a | 5260 | 16.479 | 19.941 | N/A | Pass |
| | 5300 | 16.450 | 19.853 | N/A | Pass |
| | 5320 | 16.439 | 19.879 | N/A | Pass |
| 802.11n20 | 5260 | 17.557 | 20.113 | N/A | Pass |
| | 5300 | 17.543 | 20.062 | N/A | Pass |
| | 5320 | 17.552 | 20.129 | N/A | Pass |
| 802.11n40 | 5270 | 35.968 | 40.353 | N/A | Pass |
| | 5310 | 35.947 | 40.058 | N/A | Pass |
| 802.11ac20 | 5260 | 17.547 | 20.144 | N/A | Pass |
| | 5300 | 17.539 | 20.301 | N/A | Pass |
| | 5320 | 17.577 | 20.153 | N/A | Pass |

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| Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz-ANT 1 | | | | | |
|---|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | 99% Occupied Bandwidth (MHz) | DTS Bandwidth (MHz) | DTS Limits (MHz) | Pass or Fail |
| 802.11a | 5745 | 16.485 | 15.091 | 0.5 | Pass |
| | 5785 | 16.471 | 13.221 | 0.5 | Pass |
| | 5825 | 16.434 | 12.937 | 0.5 | Pass |
| 802.11n20 | 5745 | 17.578 | 15.113 | 0.5 | Pass |
| | 5785 | 17.560 | 15.312 | 0.5 | Pass |
| | 5825 | 17.557 | 13.883 | 0.5 | Pass |
| 802.11n40 | 5755 | 36.013 | 35.119 | 0.5 | Pass |
| | 5795 | 36.024 | 35.087 | 0.5 | Pass |
| 802.11ac20 | 5745 | 17.564 | 14.419 | 0.5 | Pass |
| | 5785 | 17.568 | 15.095 | 0.5 | Pass |
| | 5825 | 17.568 | 16.060 | 0.5 | Pass |

| Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz-ANT 2 | | | | | |
|---|---|---|---|---|---|
| Test Mode | Test Channel (MHz) | 99% Occupied Bandwidth (MHz) | DTS Bandwidth (MHz) | DTS Limits (MHz) | Pass or Fail |
| 802.11a | 5745 | 16.481 | 15.067 | 0.5 | Pass |
| | 5785 | 16.496 | 15.353 | 0.5 | Pass |
| | 5825 | 16.467 | 15.106 | 0.5 | Pass |
| 802.11n20 | 5745 | 17.565 | 15.126 | 0.5 | Pass |
| | 5785 | 17.586 | 15.044 | 0.5 | Pass |
| | 5825 | 17.576 | 15.099 | 0.5 | Pass |
| 802.11n40 | 5755 | 35.988 | 35.104 | 0.5 | Pass |
| | 5795 | 36.065 | 35.066 | 0.5 | Pass |
| 802.11ac20 | 5745 | 17.596 | 15.000 | 0.5 | Pass |
| | 5785 | 17.561 | 15.113 | 0.5 | Pass |
| | 5825 | 17.576 | 15.072 | 0.5 | Pass |

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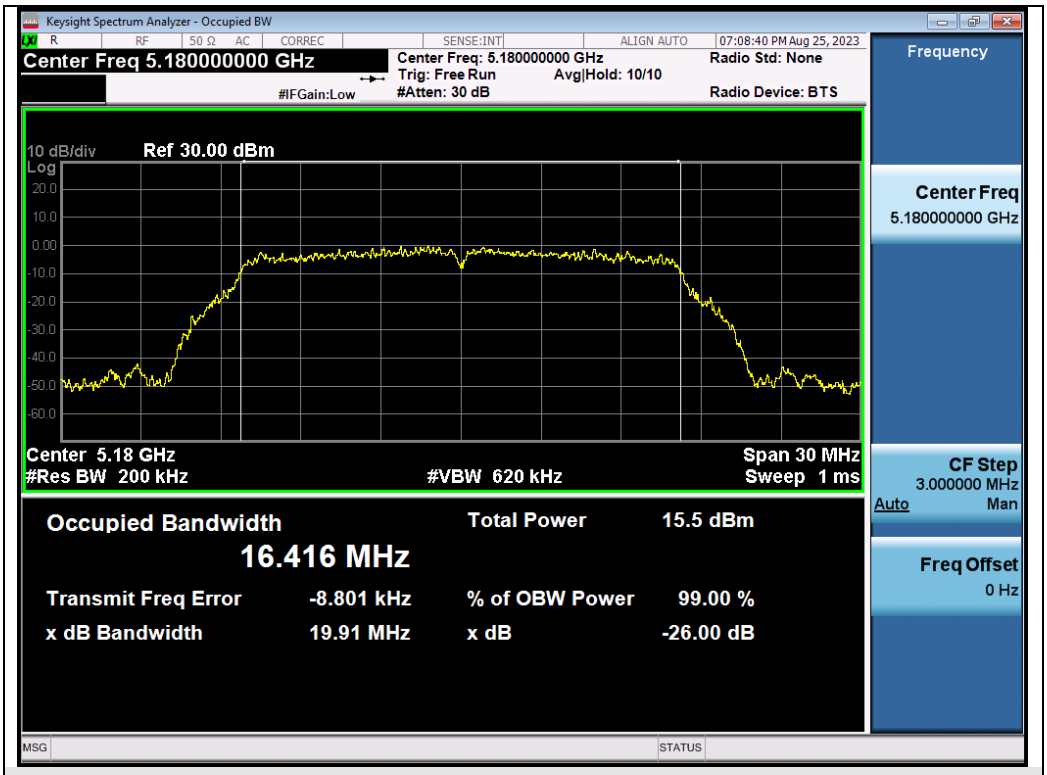
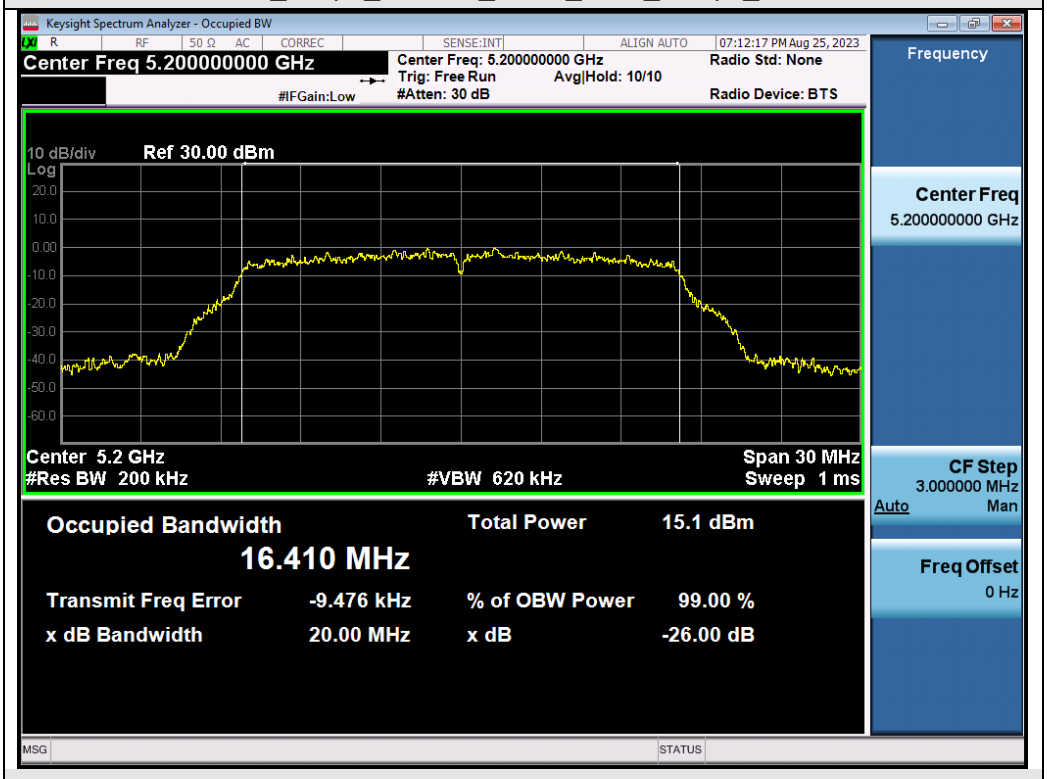
## Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz




Test_Graph_802.11a_ANT1_5180_6Mbps_OBW




Test_Graph_802.11a_ANT1_5200_6Mbps_OBW

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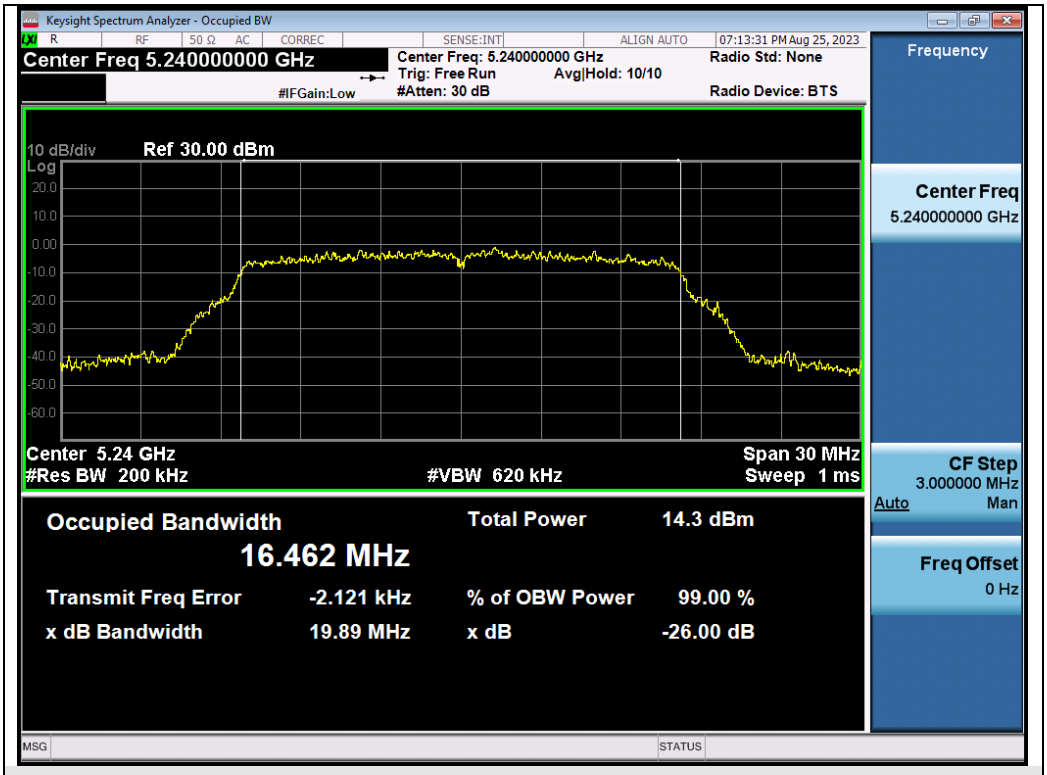
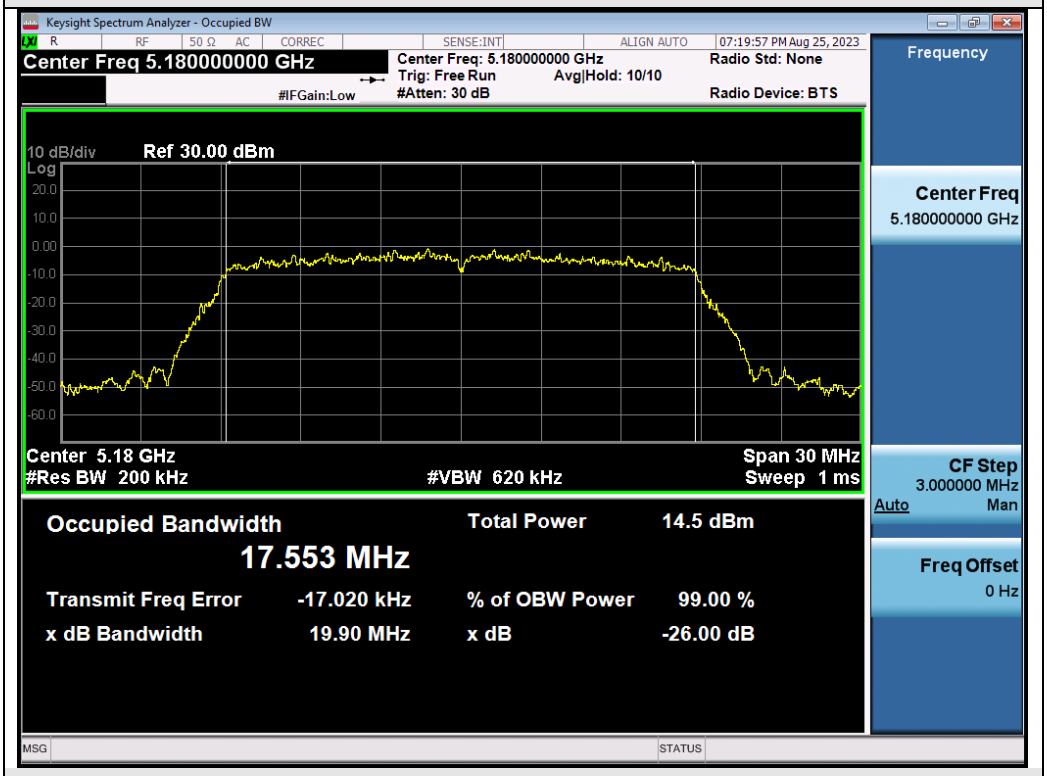



Test_Graph_802.11a_ANT1_5240_6Mbps_OBW




Test_Graph_802.11n20_ANT1_5180_MCS0_OBW

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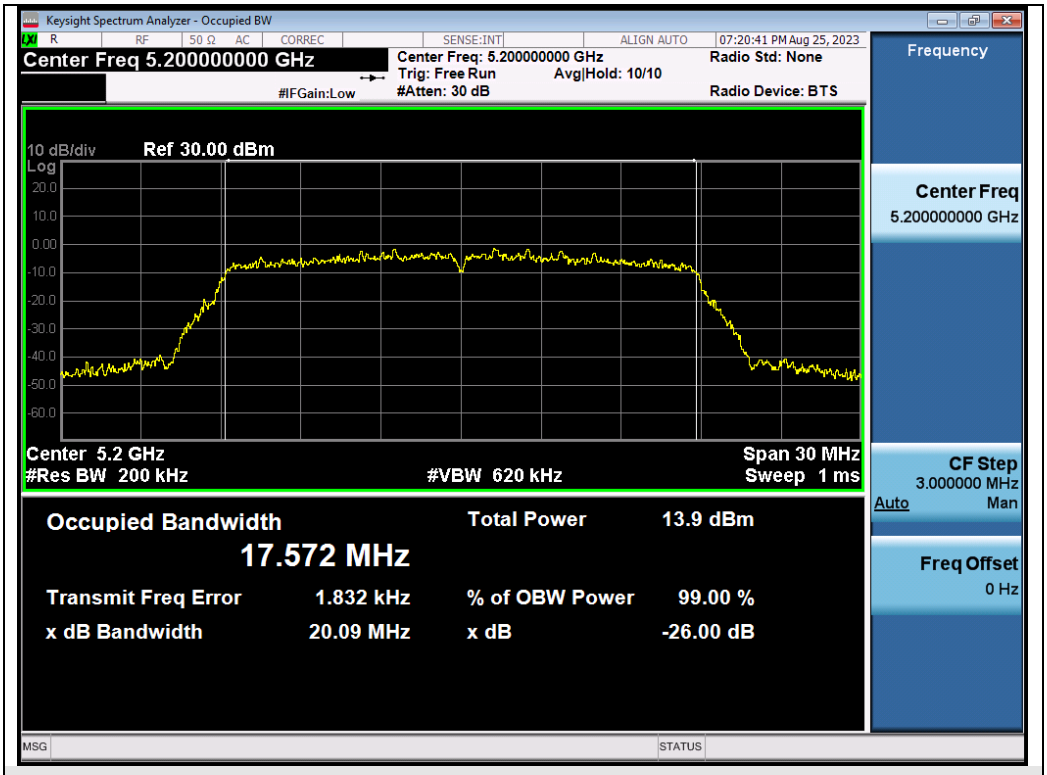
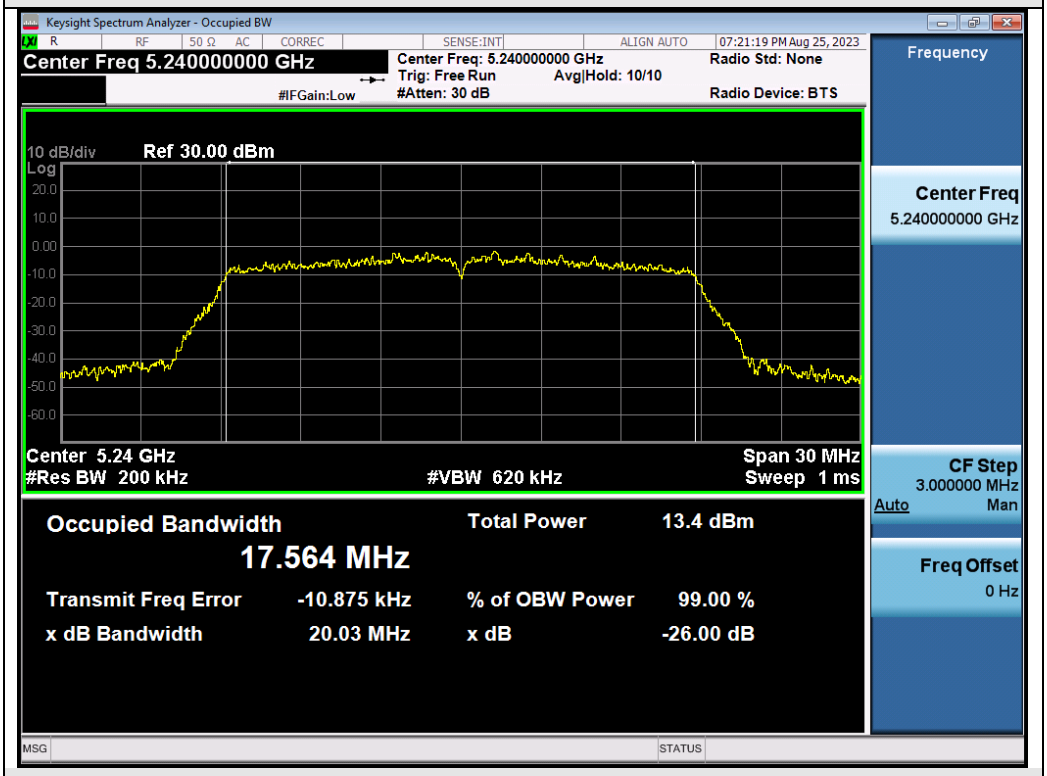



Test_Graph_802.11n20_ANT1_5200_MCS0_OBW




Test_Graph_802.11n20_ANT1_5240_MCS0_OBW

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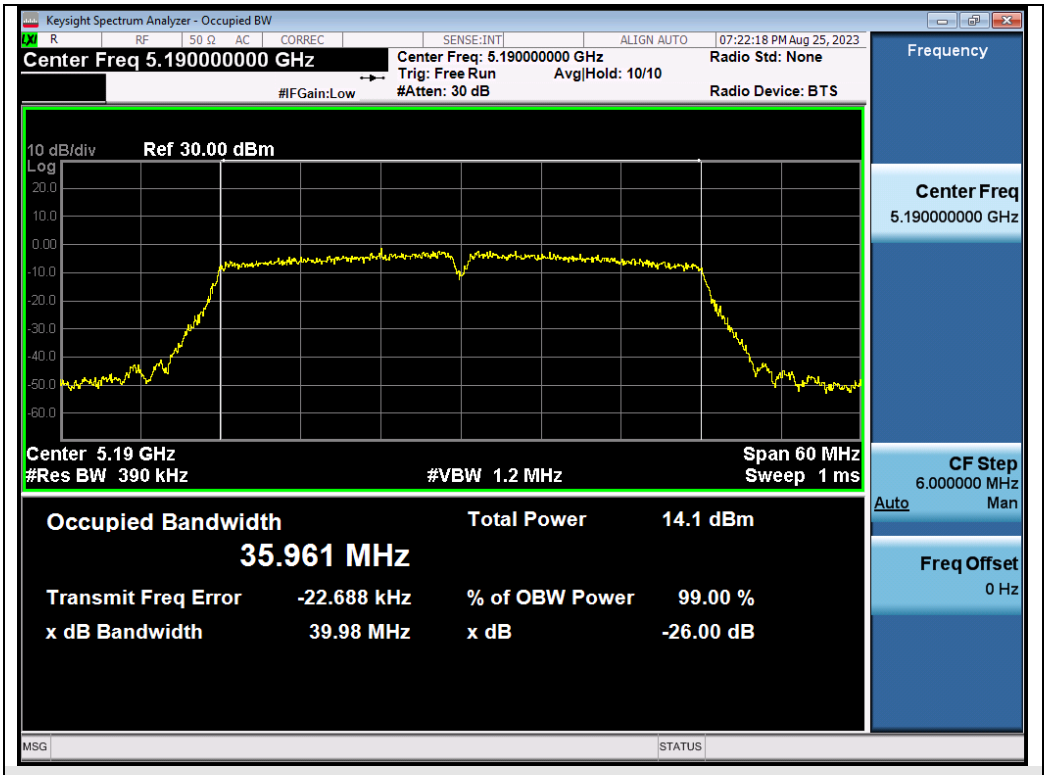
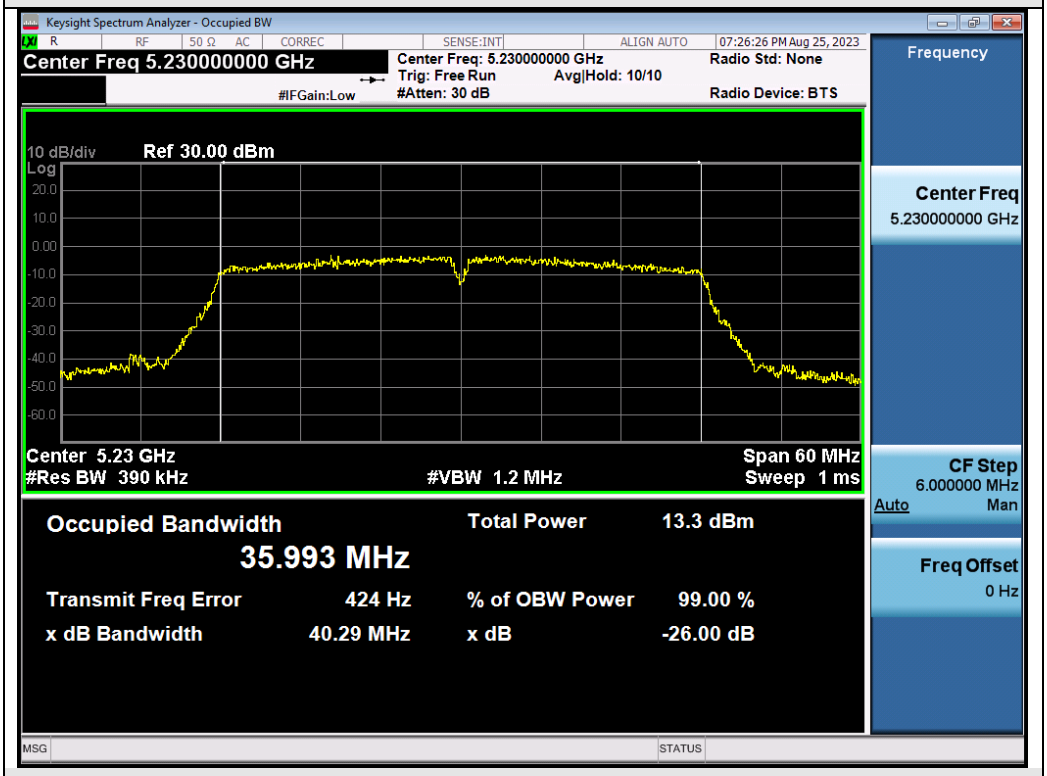



Test_Graph_802.11n40_ANT1_5190_MCS0_OBW




Test_Graph_802.11n40_ANT1_5230_MCS0_OBW

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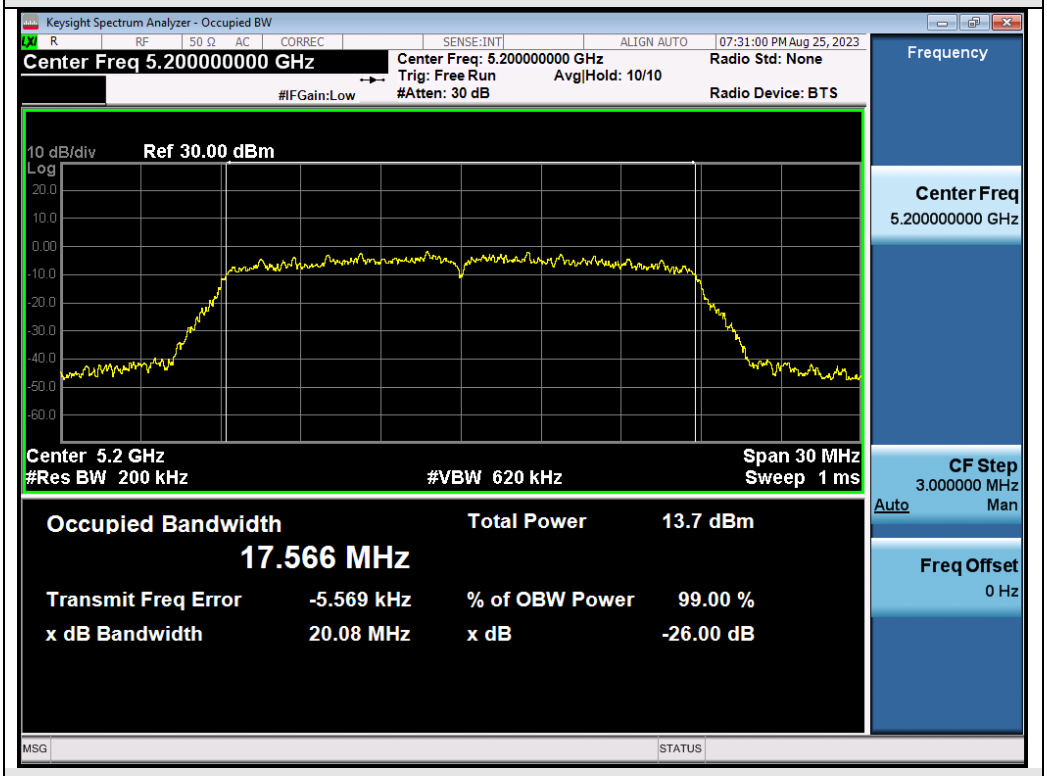
Test_Graph_802.11ac20_ANT1_5180_MCS0_OBW




Test_Graph_802.11ac20_ANT1_5200_MCS0_OBW

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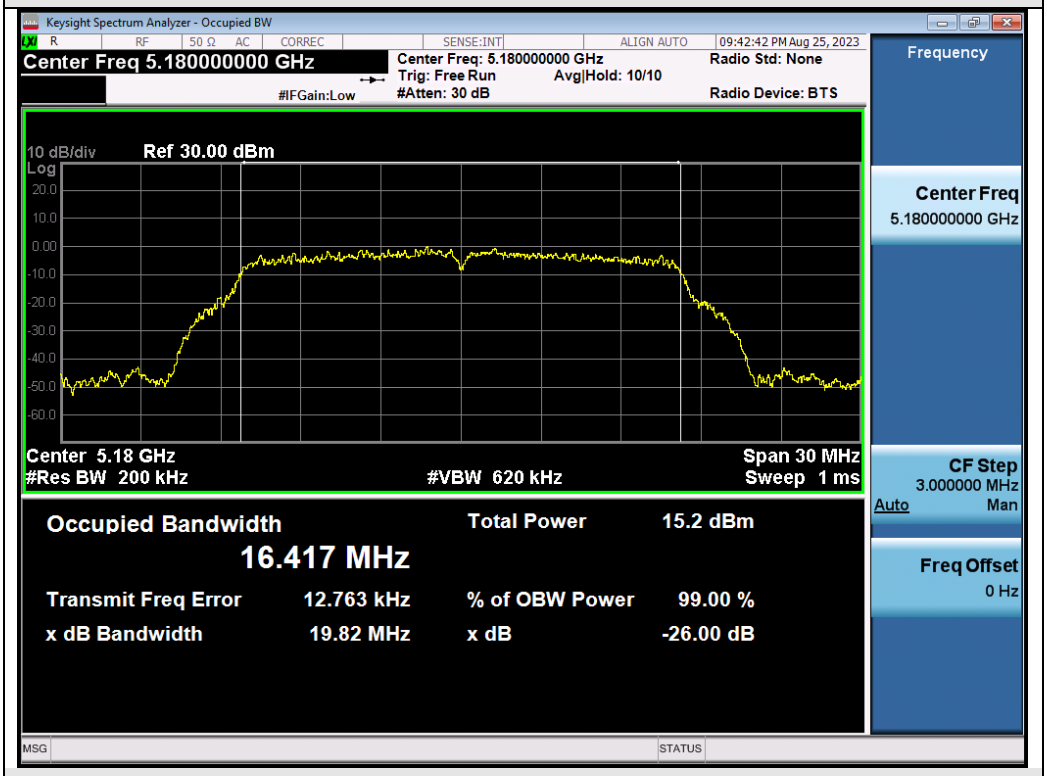
Test_Graph_802.11ac20_ANT1_5240_MCS9_OBW




Test_Graph_802.11a_ANT2_5180_6Mbps_OBW

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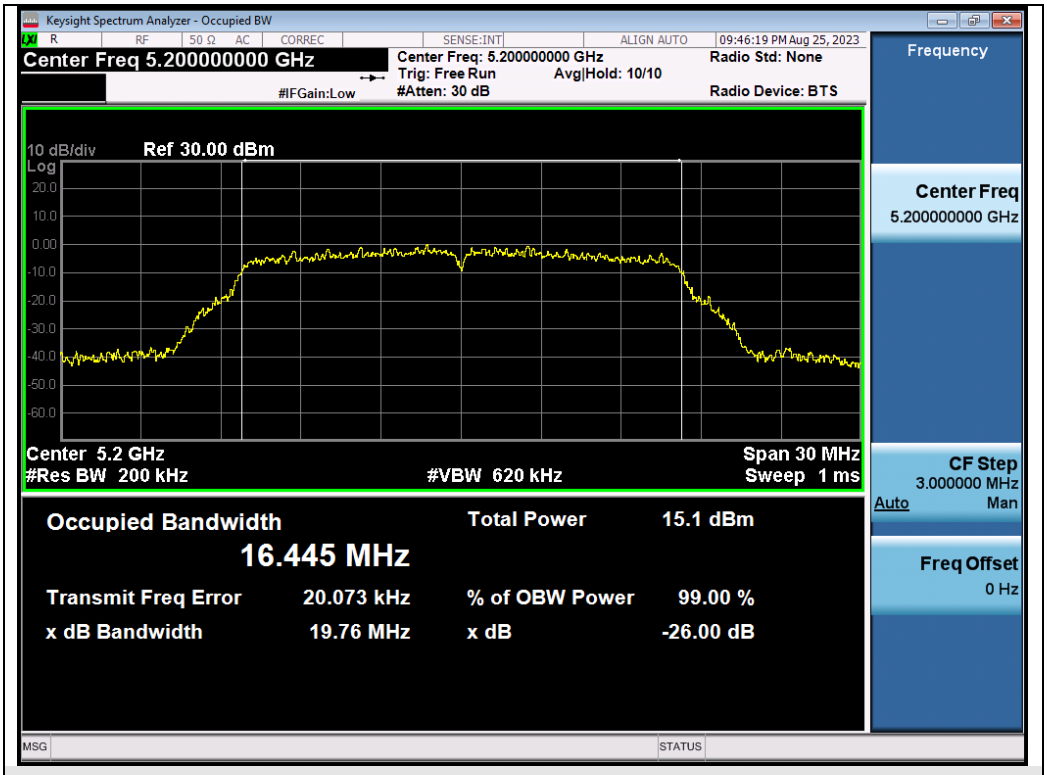
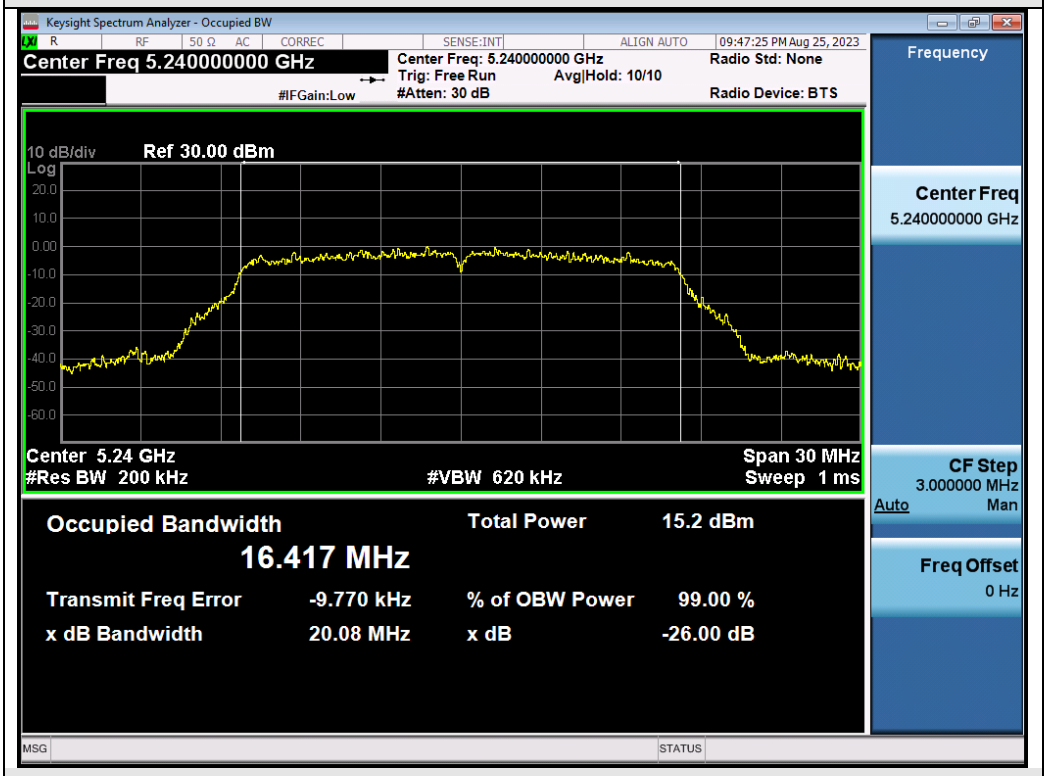



Test_Graph_802.11a_ANT2_5200_6Mbps_OBW




Test_Graph_802.11a_ANT2_5240_6Mbps_OBW

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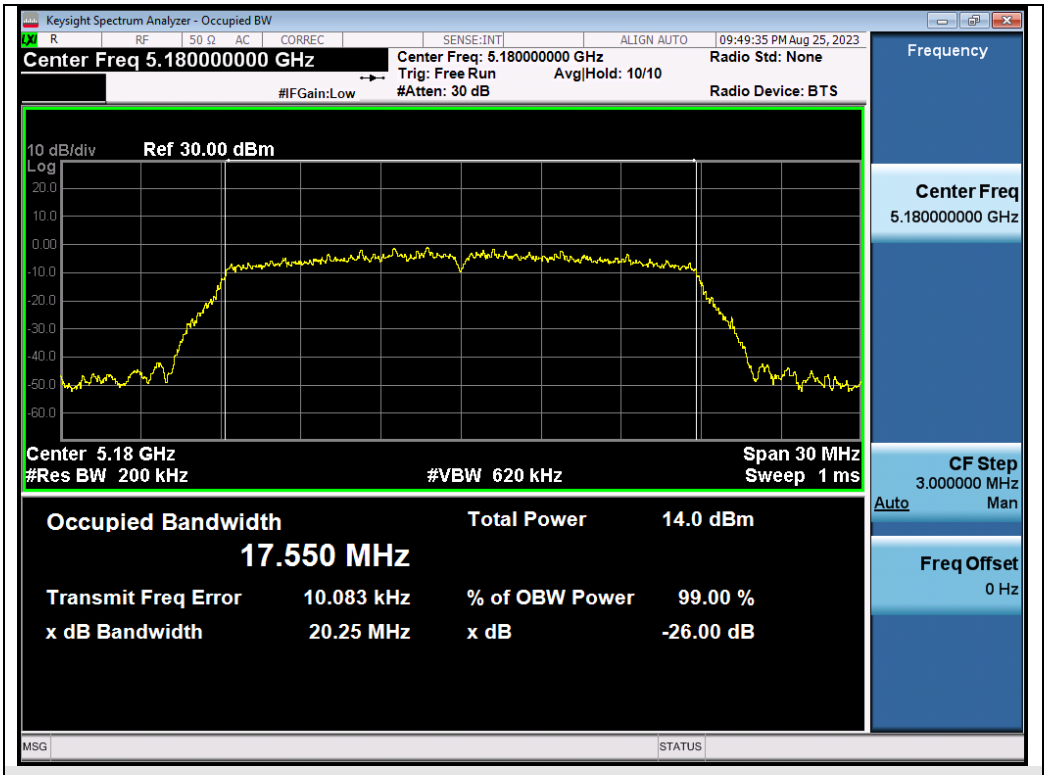
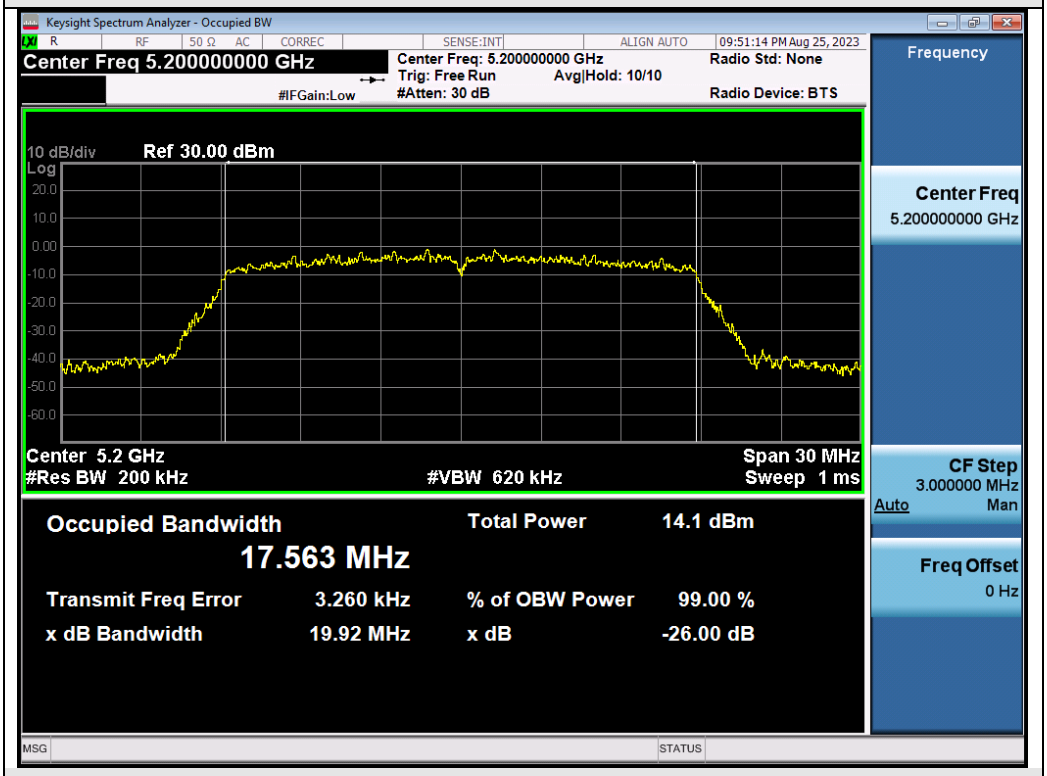



Test_Graph_802.11n20_ANT2_5180_MCS0_OBW




Test_Graph_802.11n20_ANT2_5200_MCS0_OBW

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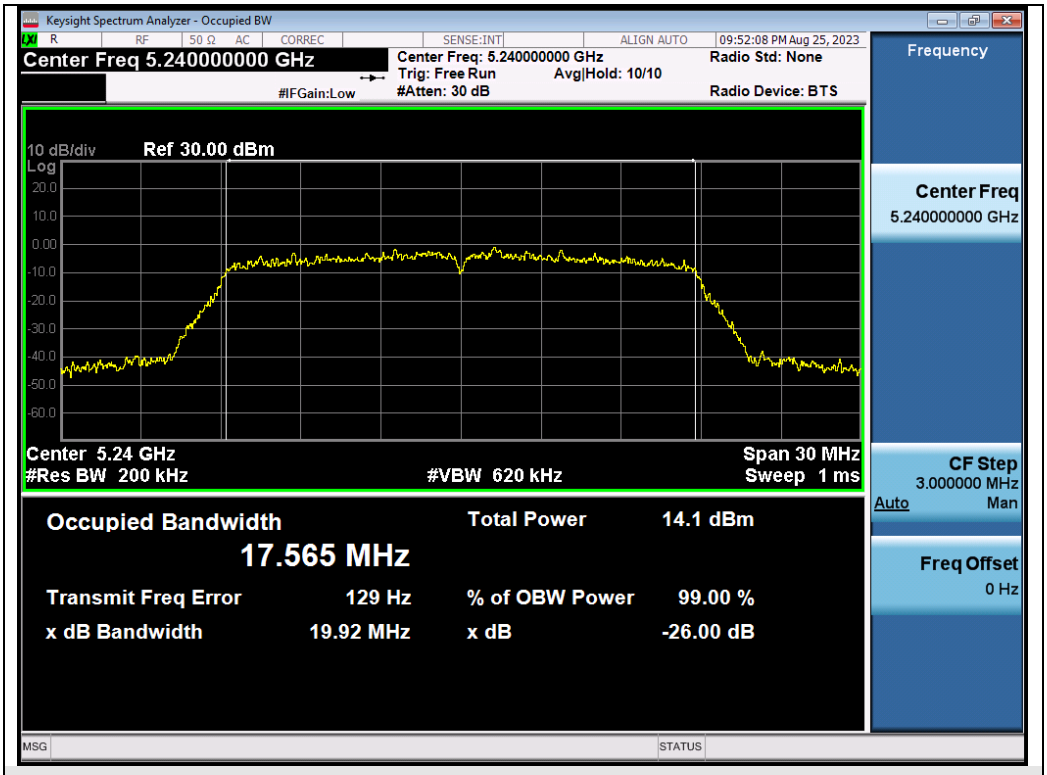


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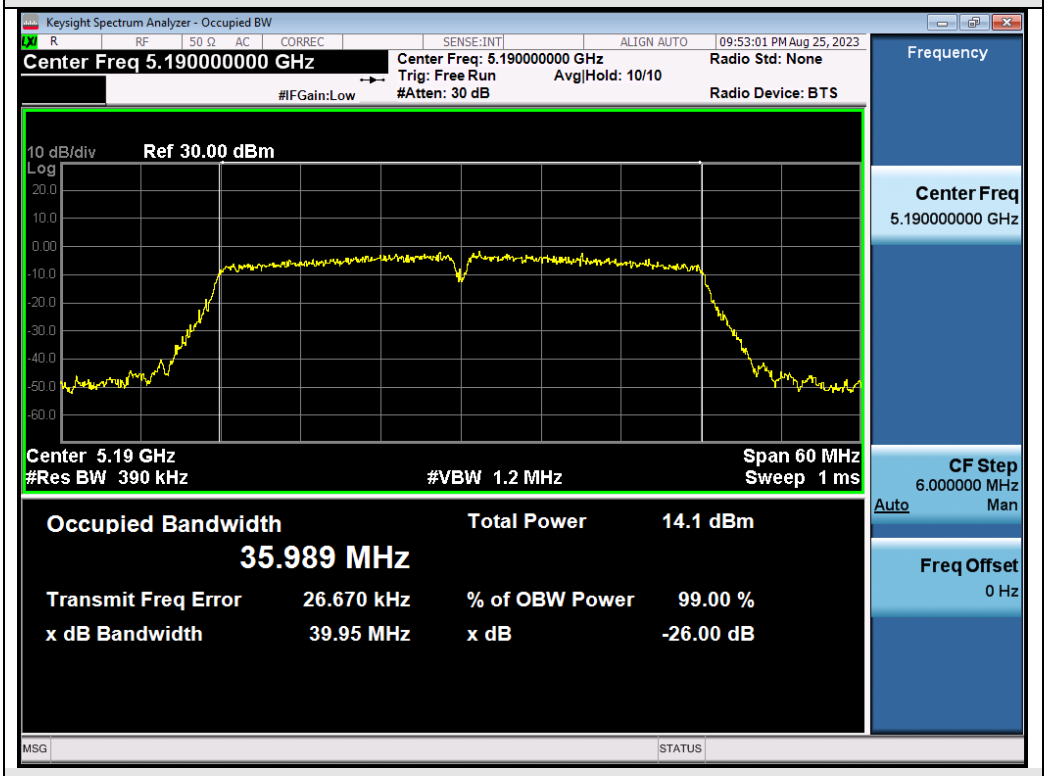


Test_Graph_802.11n40_ANT2_5190_MCS0_OBW

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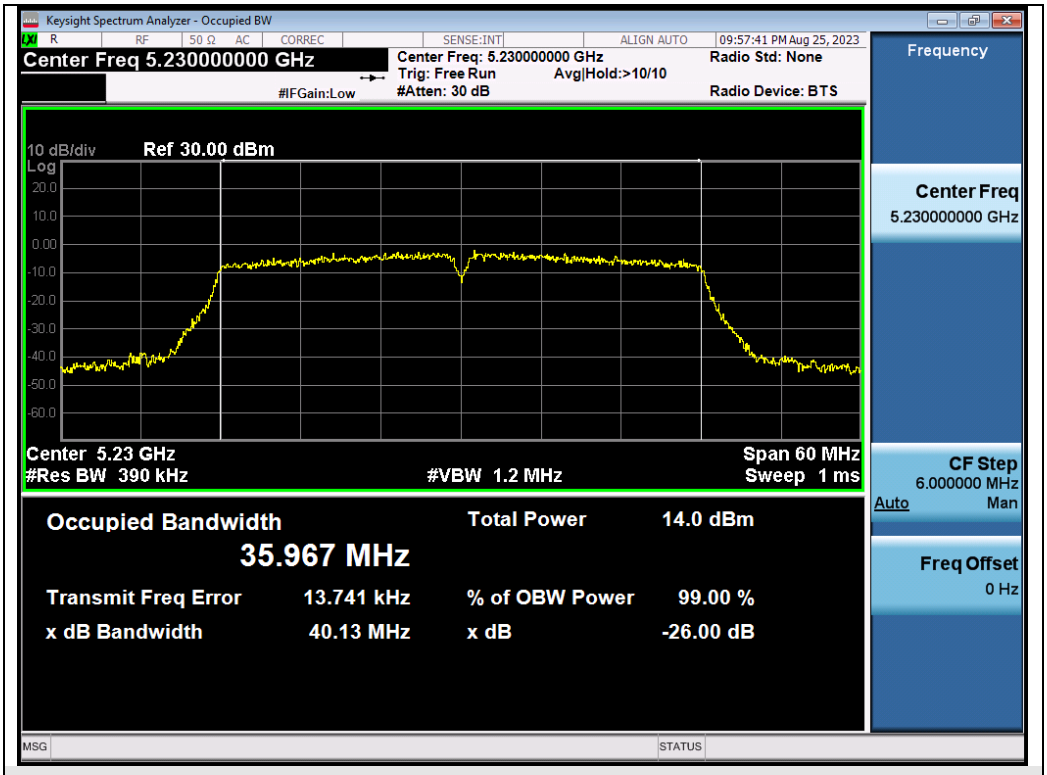


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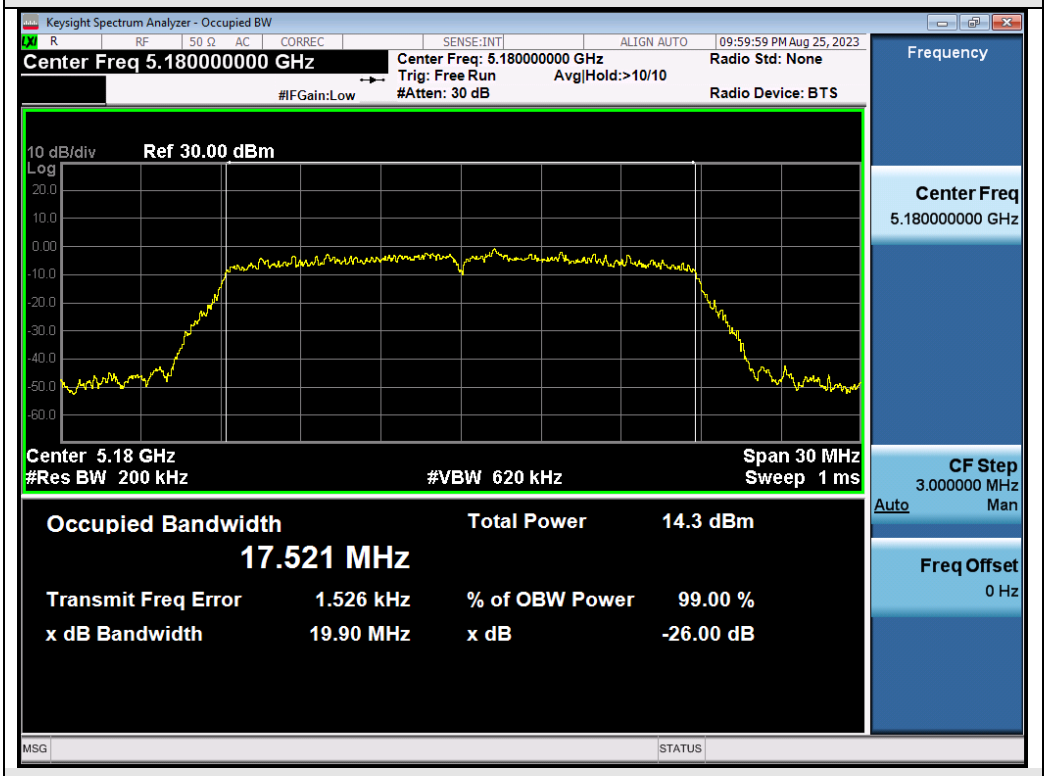


Test_Graph_802.11ac20_ANT2_5180_MCS0_OBW

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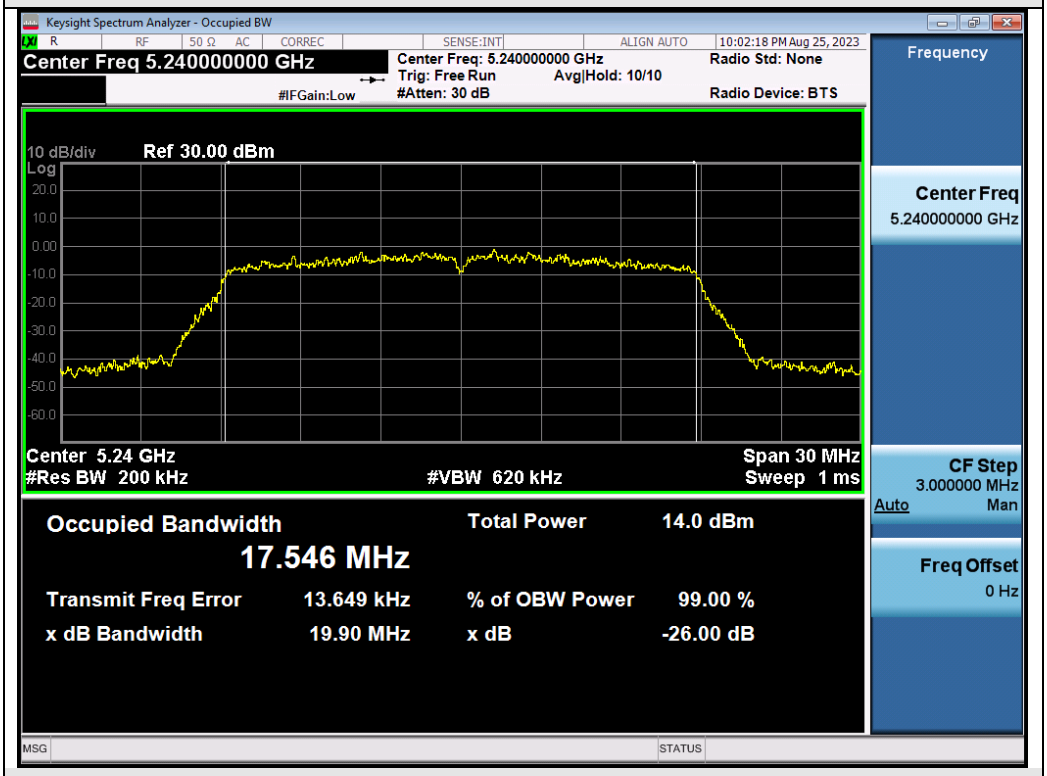
Test_Graph_802.11ac20_ANT2_5200_MCS0_OBW




Test_Graph_802.11ac20_ANT2_5240_MCS9_OBW

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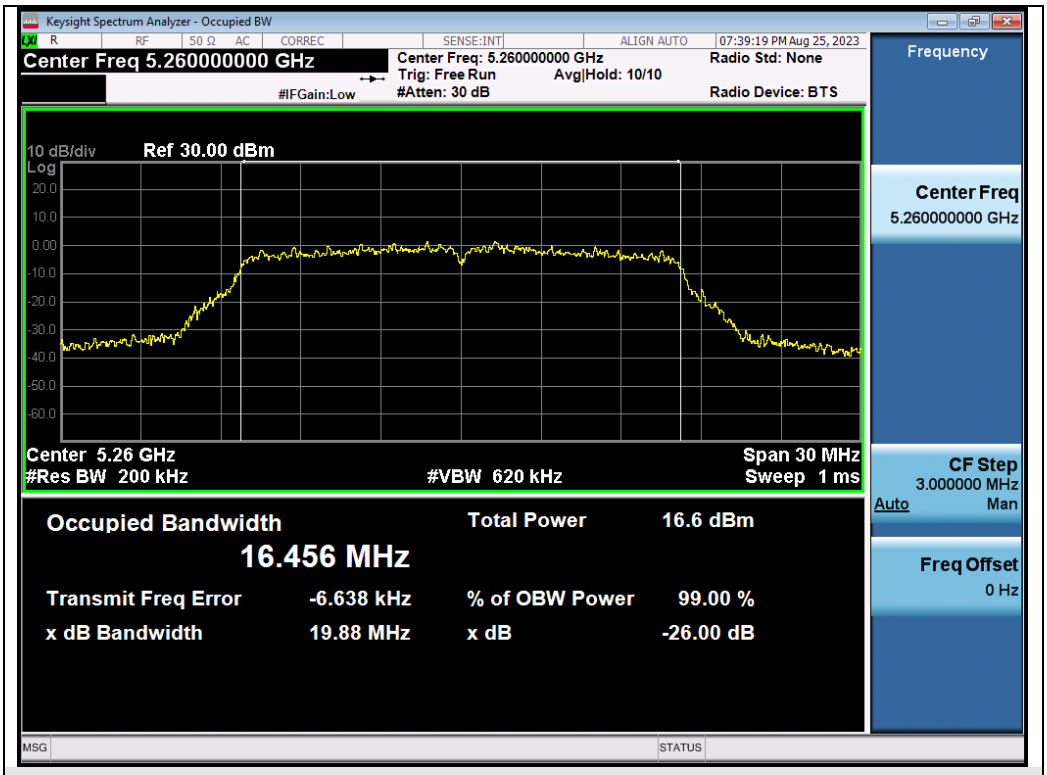
## Test Graphs of Occupied Bandwidth for band 5.25-5.35 GHz




Test_Graph_802.11a_ANT1_5260_6Mbps_OBW

Test_Graph_802.11a_ANT1_5300_6Mbps_OBW

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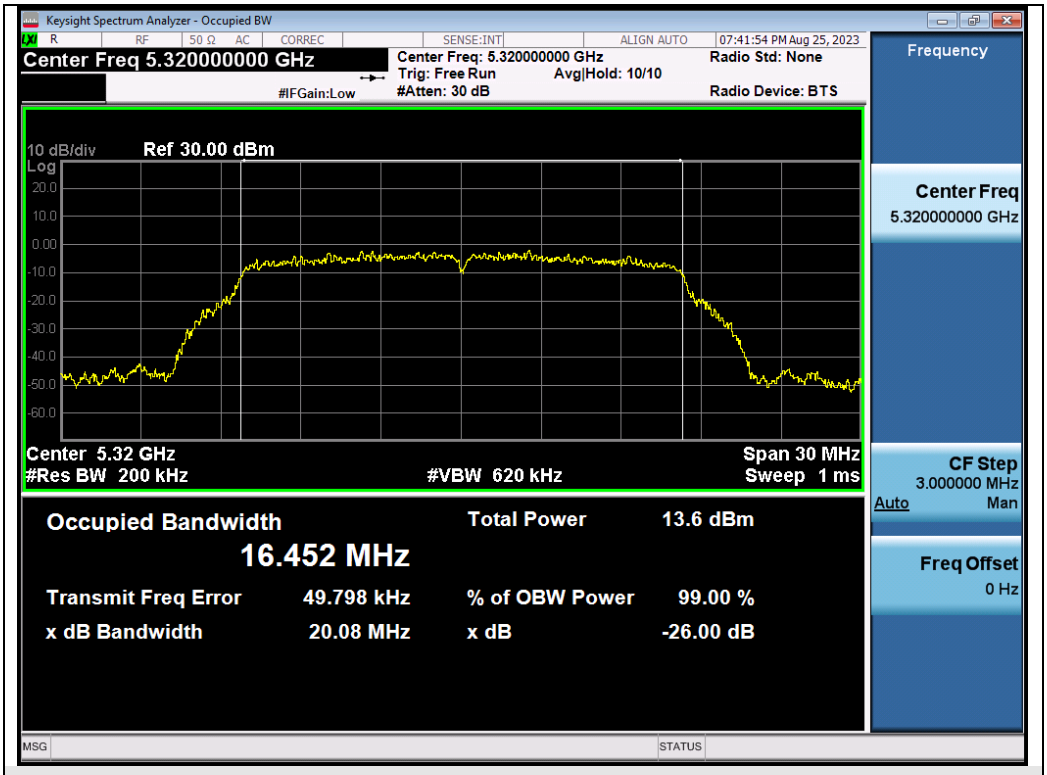


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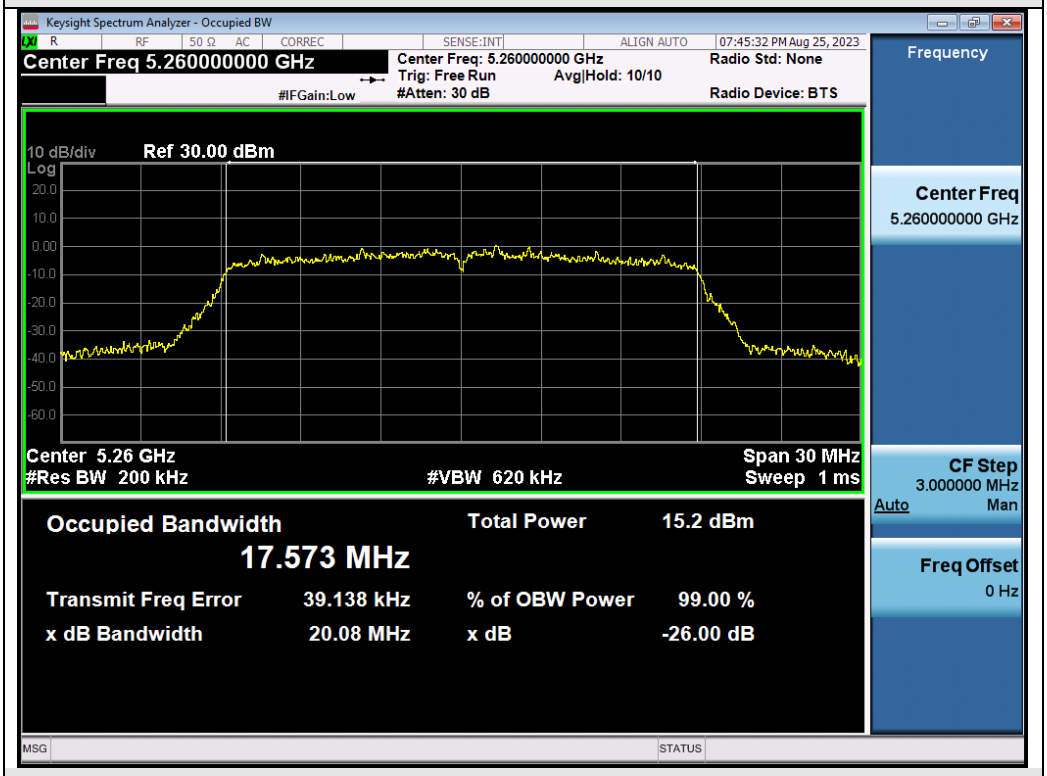


Test_Graph_802.11n20_ANT1_5260_MCS0_OBW

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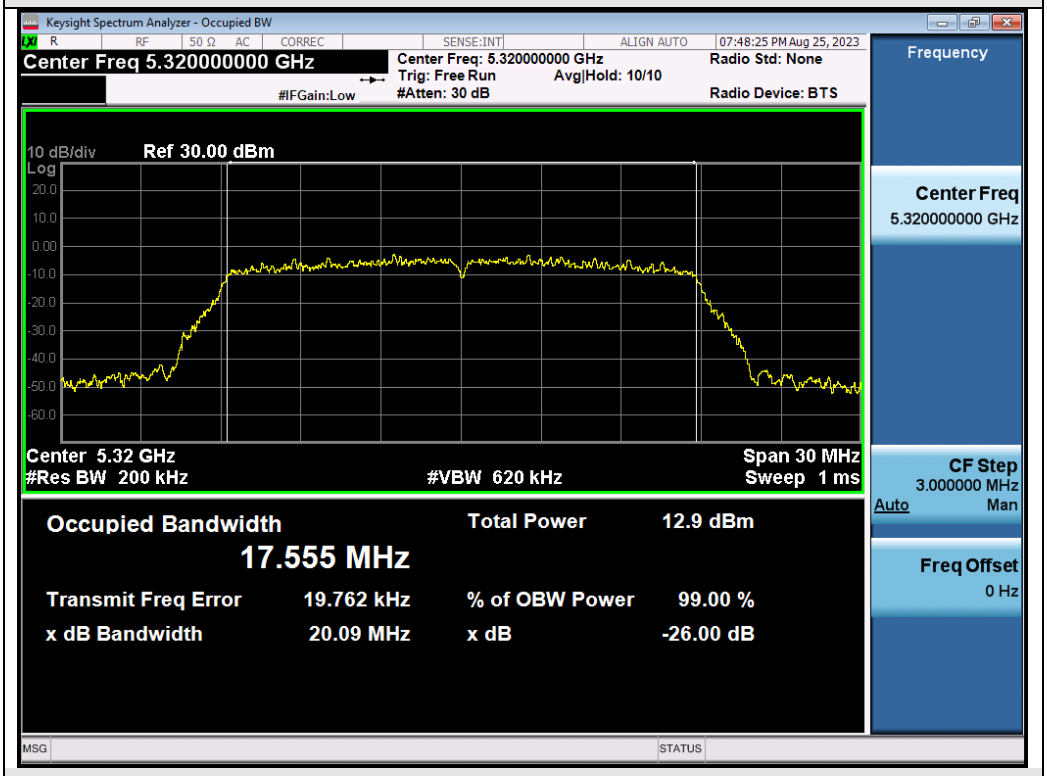
Test_Graph_802.11n20_ANT1_5300_MCS0_OBW




Test_Graph_802.11n20_ANT1_5320_MCS0_OBW

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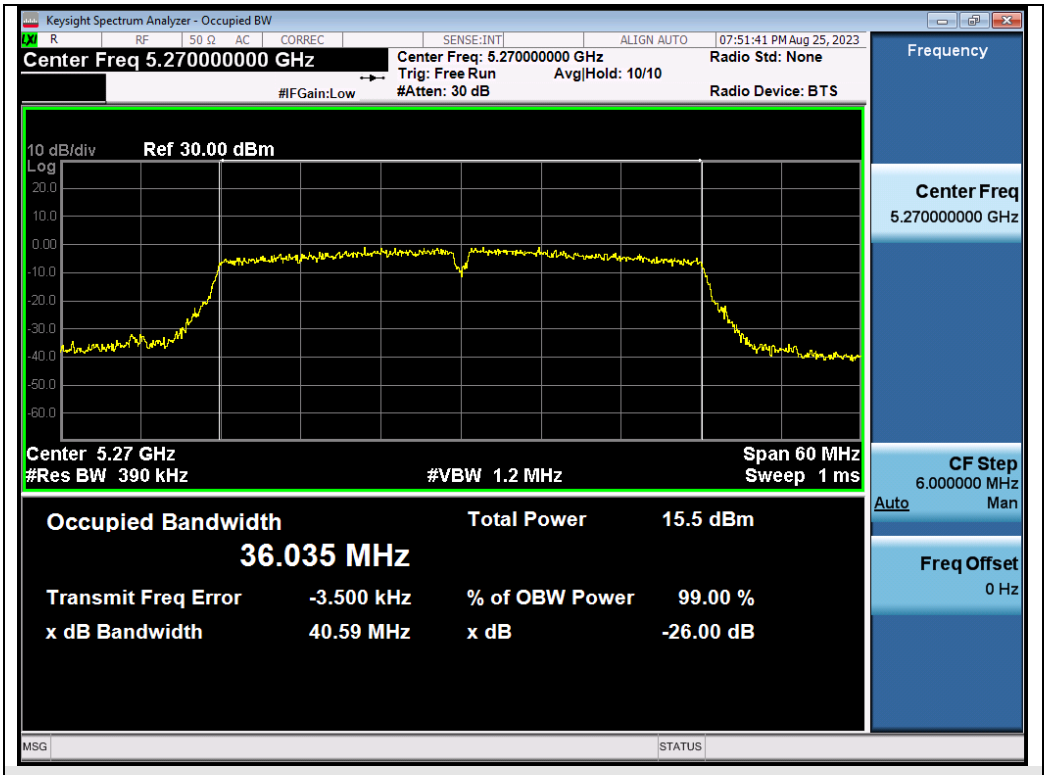


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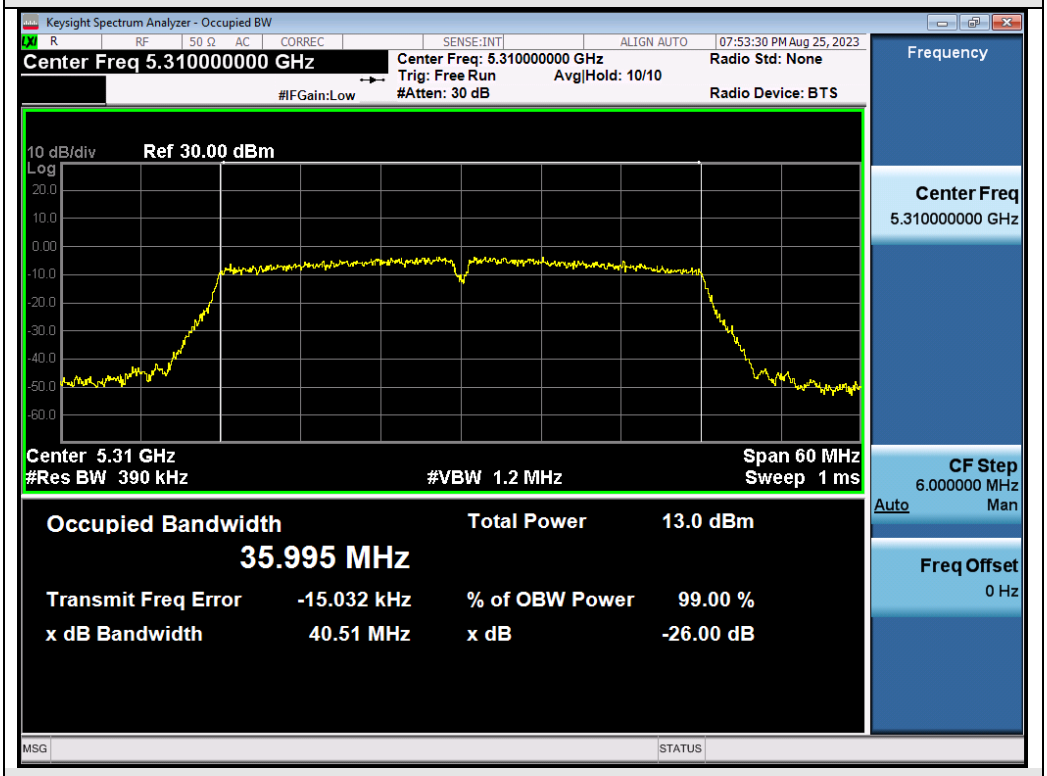


Test_Graph_802.11n40_ANT1_5310_MCS0_OBW

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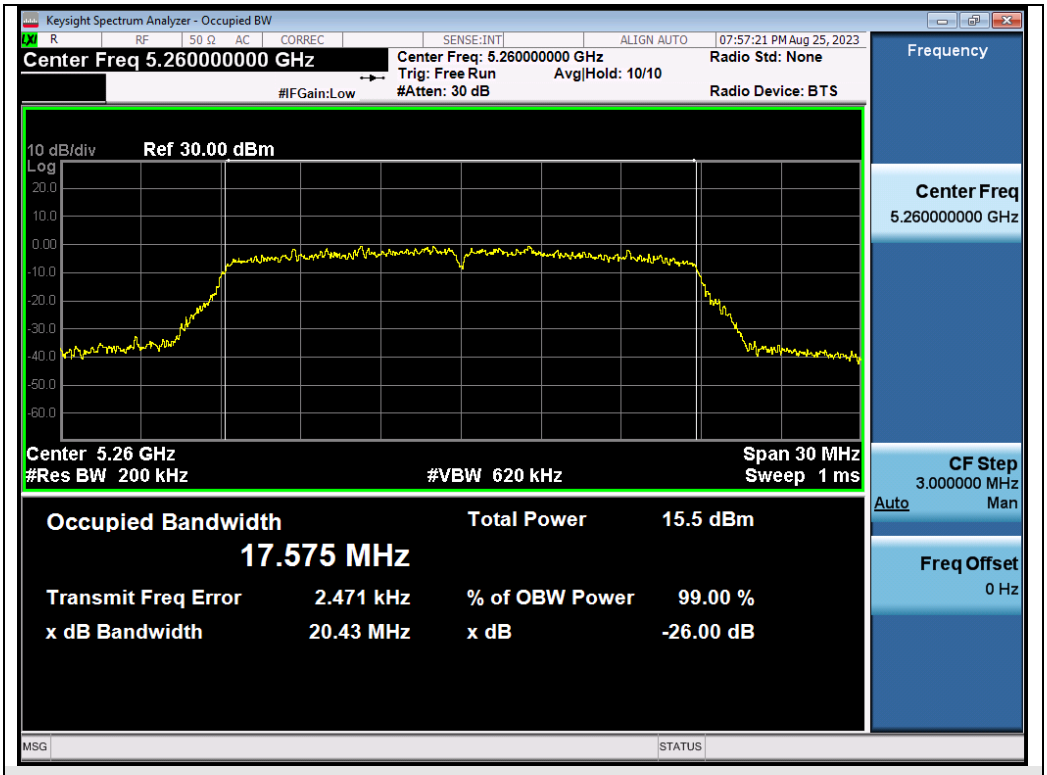
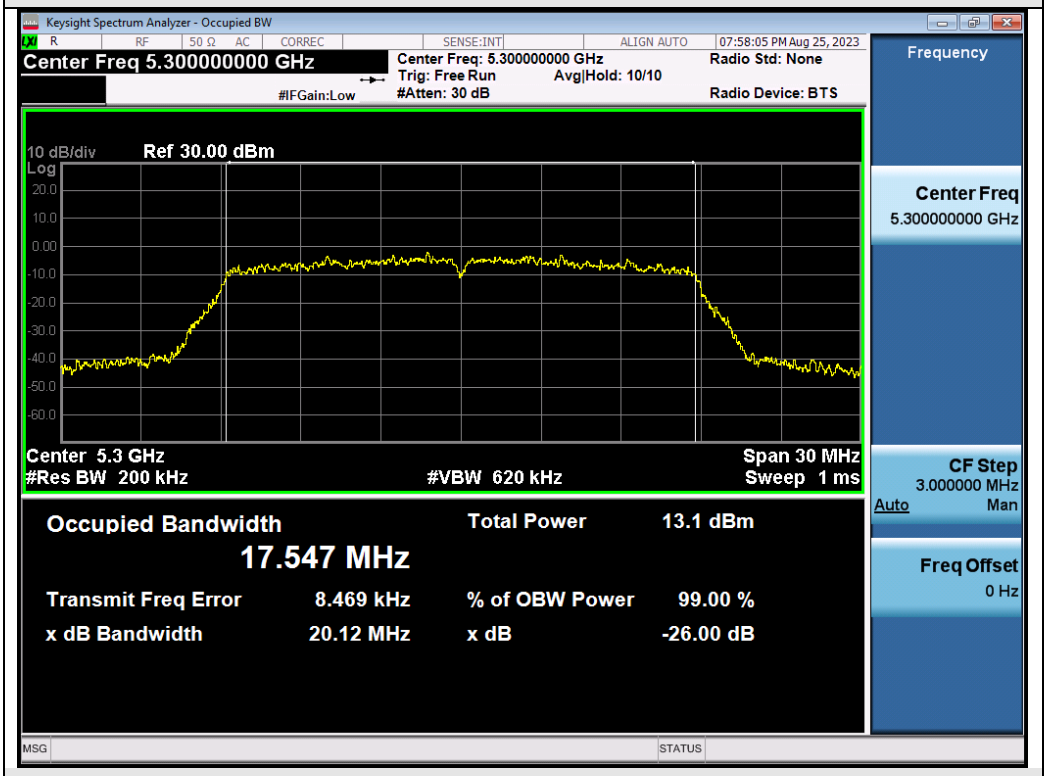



Test_Graph_802.11ac20_ANT1_5260_MCS0_OBW




Test_Graph_802.11ac20_ANT1_5300_MCS0_OBW

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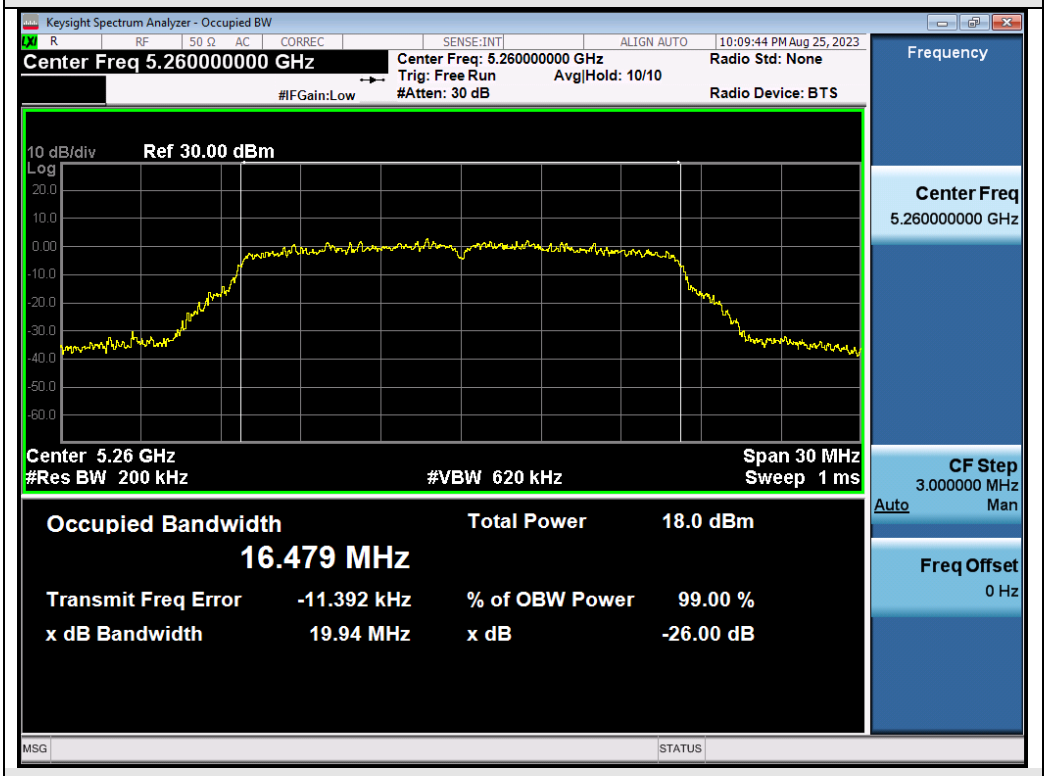
Test_Graph_802.11ac20_ANT1_5320_MCS9_OBW




Test_Graph_802.11a_ANT2_5260_6Mbps_OBW

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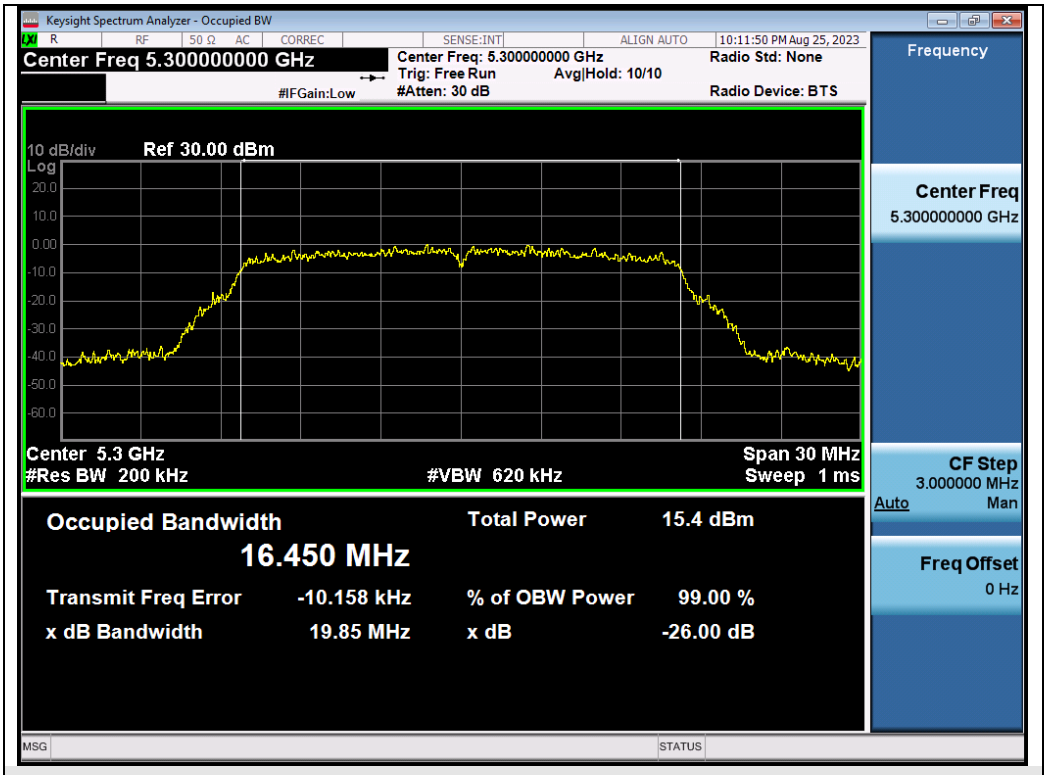


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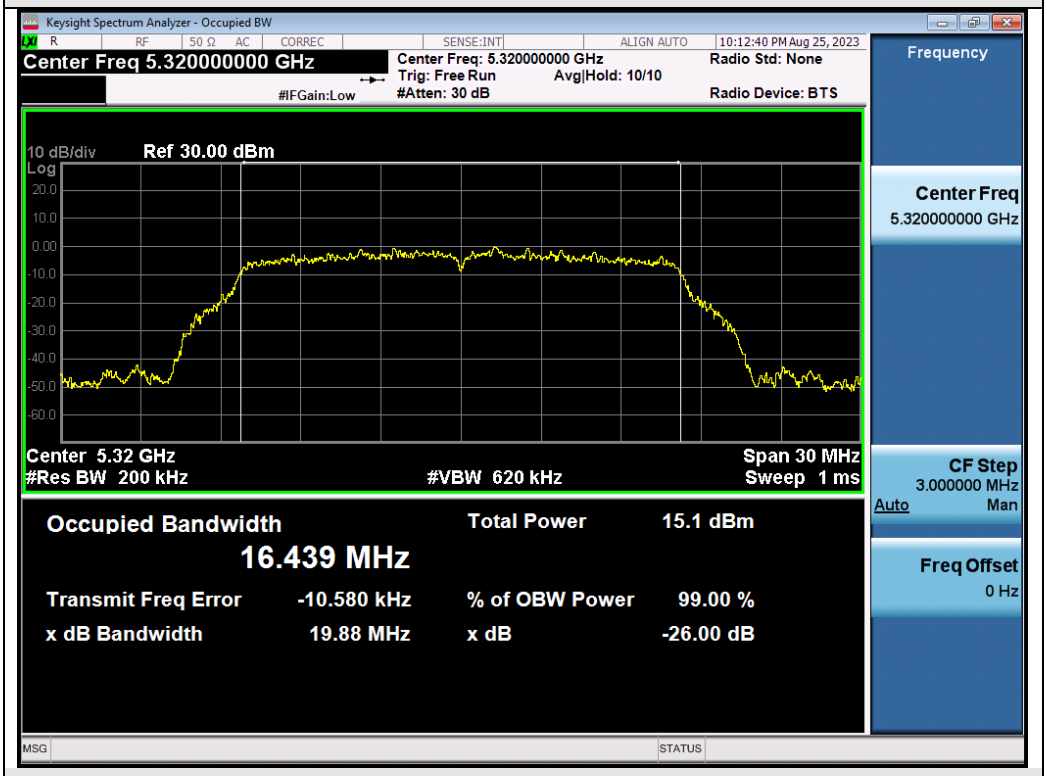


Test_Graph_802.11a_ANT2_5320_6Mbps_OBW

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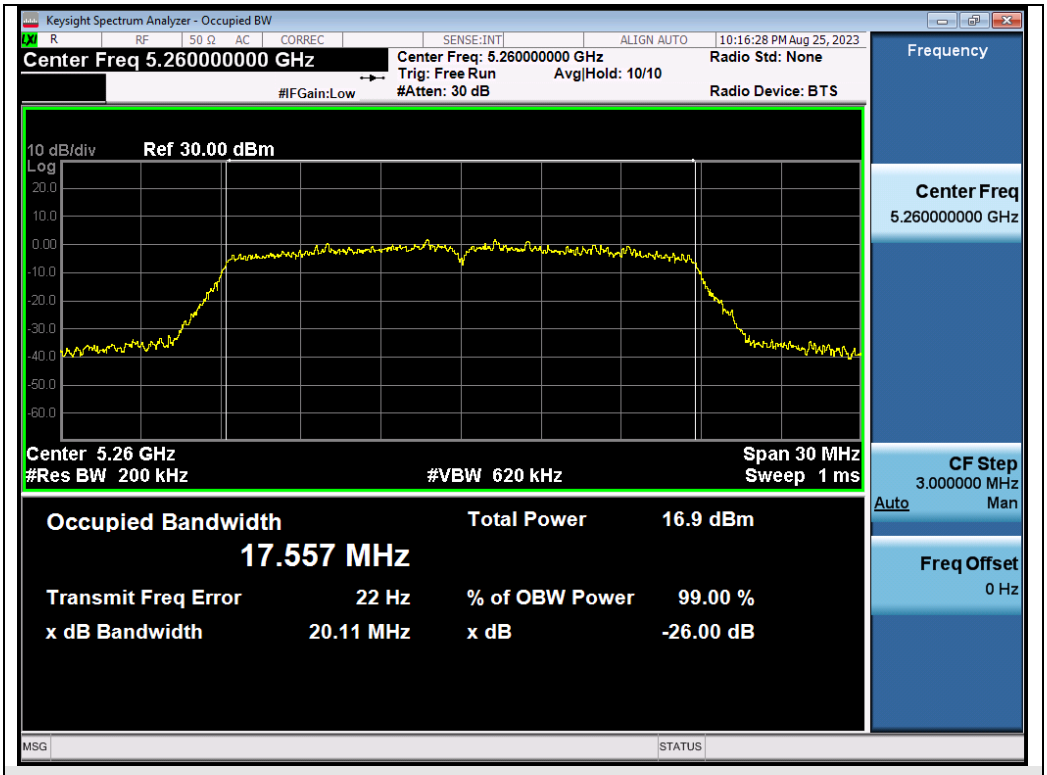


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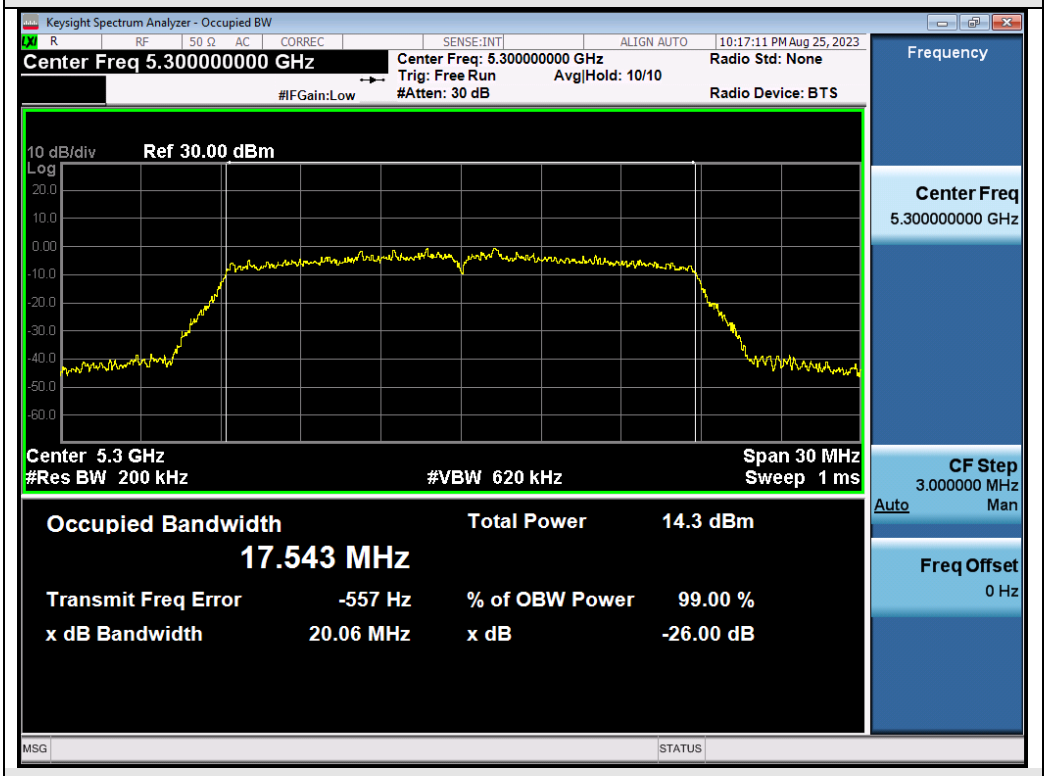


Test_Graph_802.11n20_ANT2_5300_MCS0_OBW

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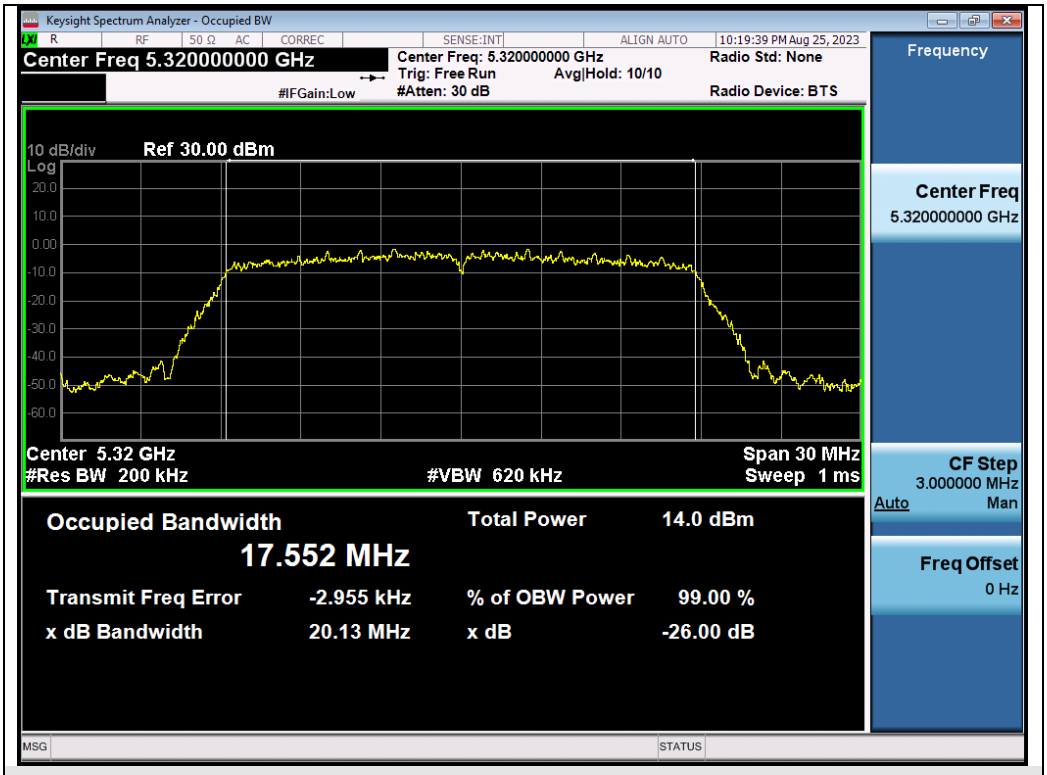


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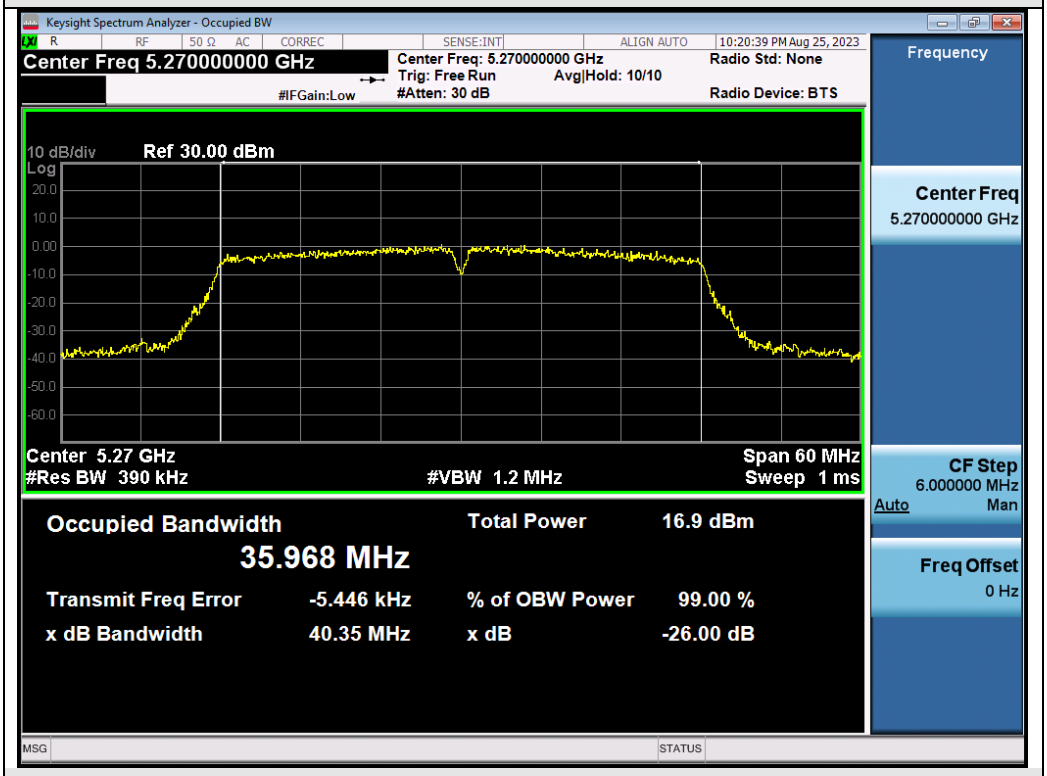


Test_Graph_802.11n40_ANT2_5270_MCS0_OBW

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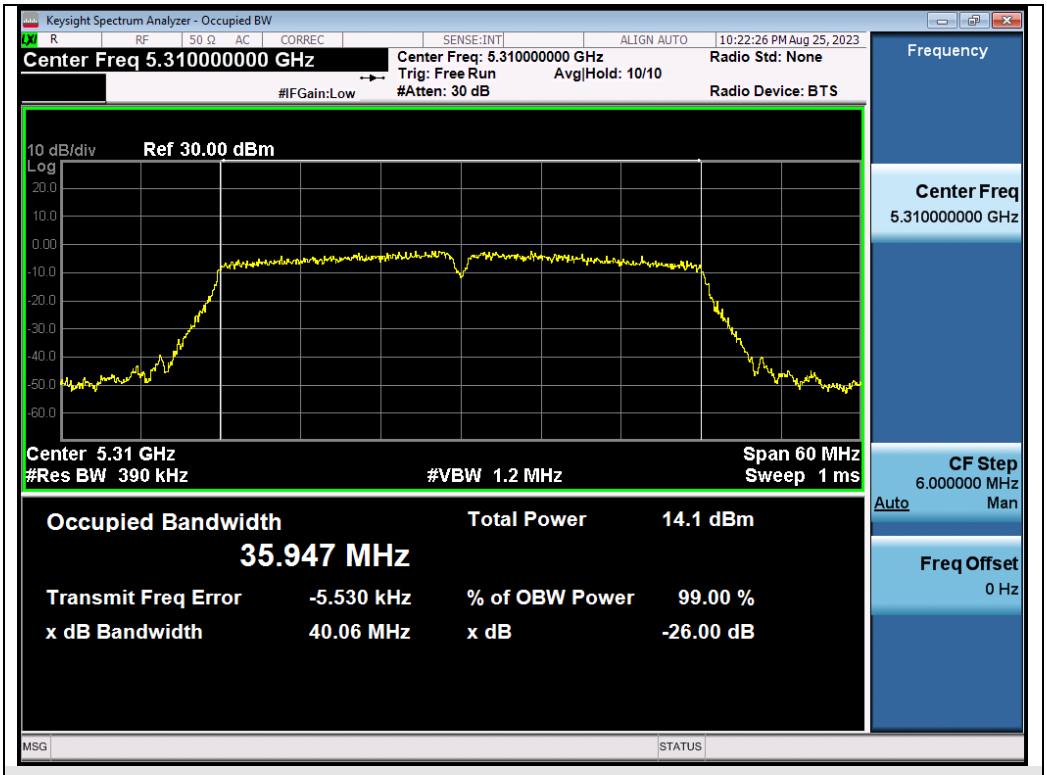


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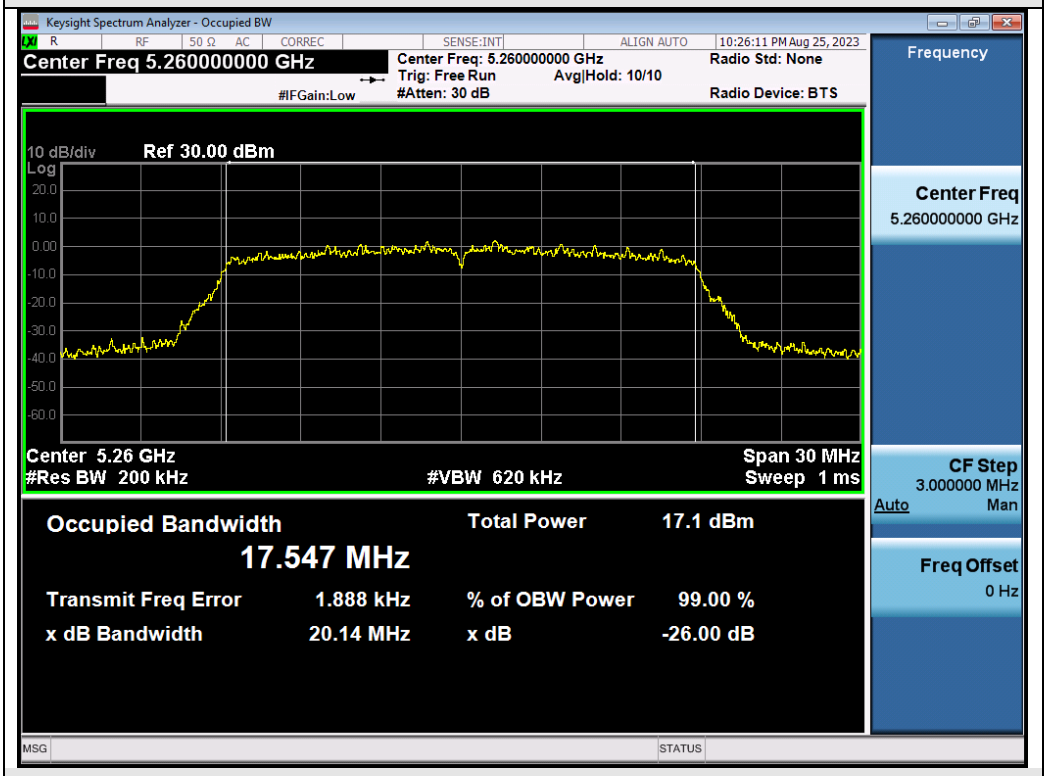


Test_Graph_802.11ac20_ANT2_5260_MCS0_OBW

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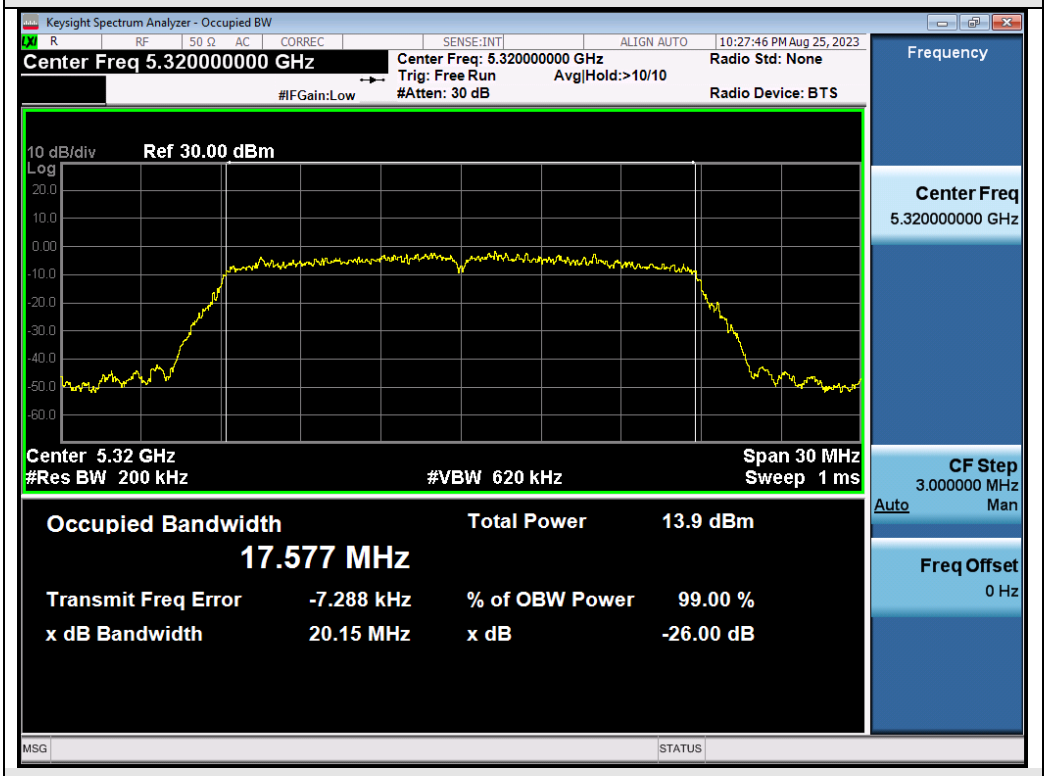
Test_Graph_802.11ac20_ANT2_5300_MCS0_OBW




Test_Graph_802.11ac20_ANT2_5320_MCS9_OBW

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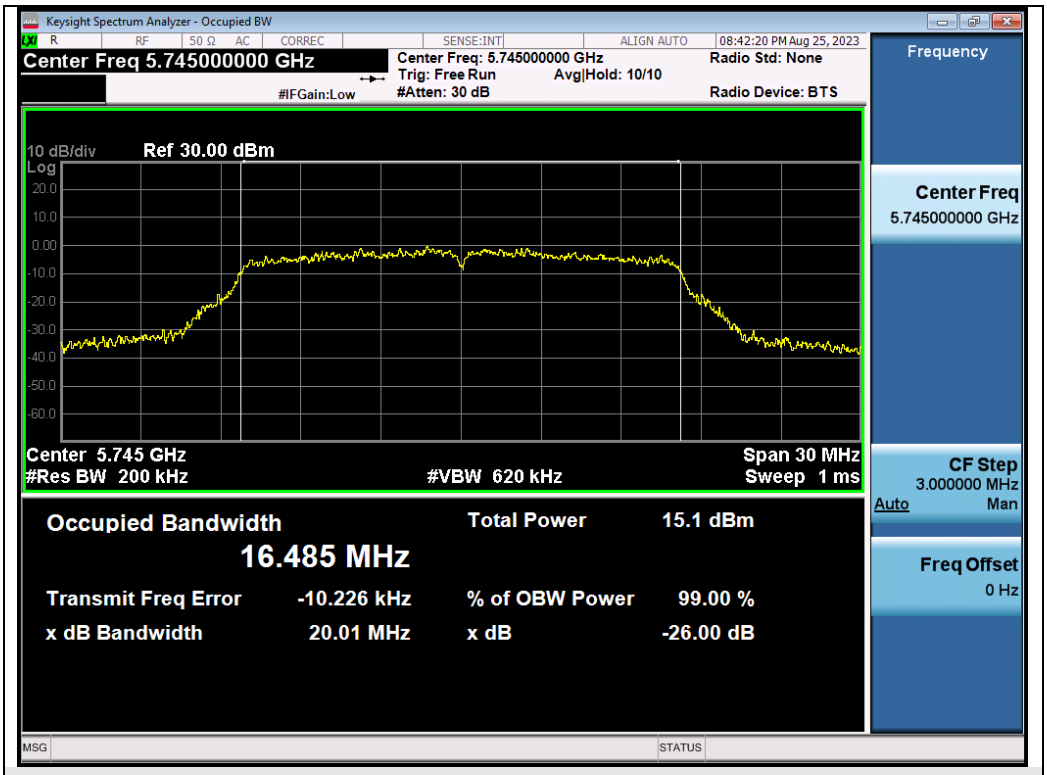
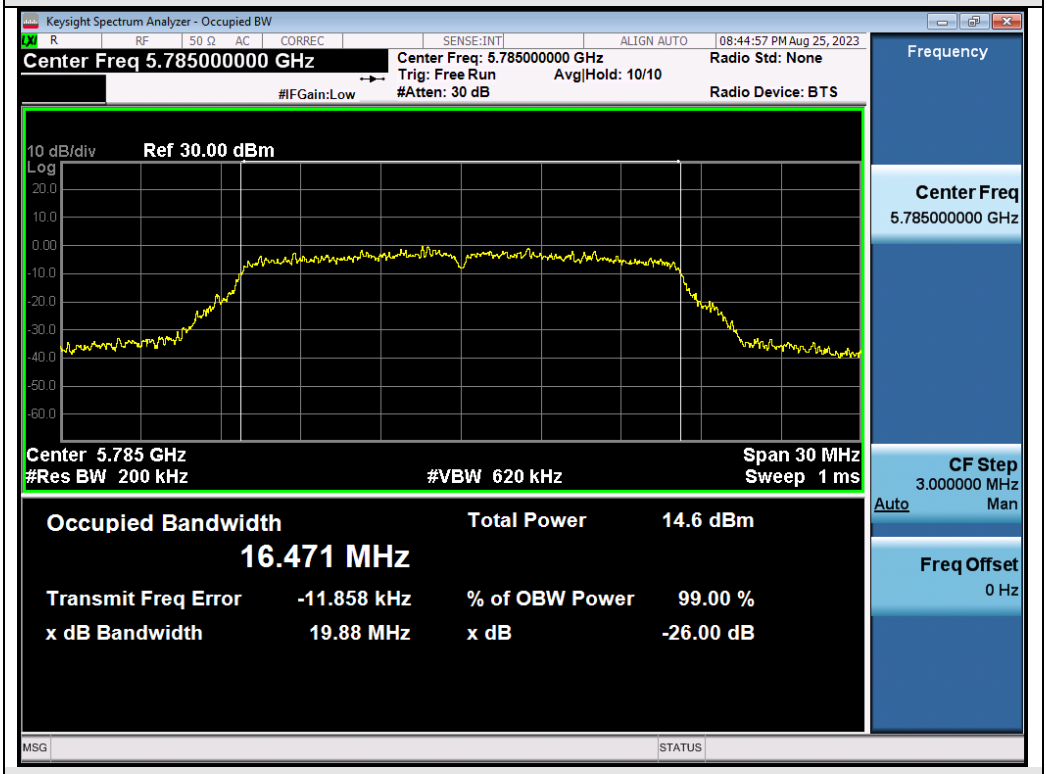
## Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.745-5.825 GHz




Test_Graph_802.11a_ANT1_5745_6Mbps_OBW




Test_Graph_802.11a_ANT1_5785_6Mbps_OBW

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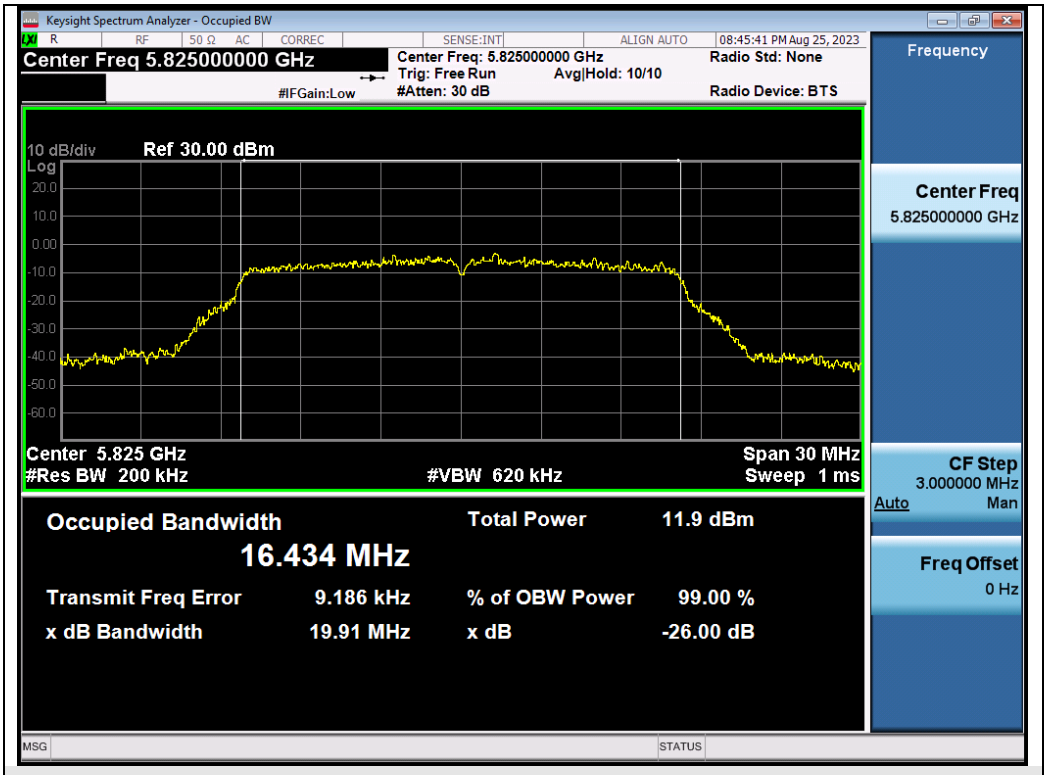
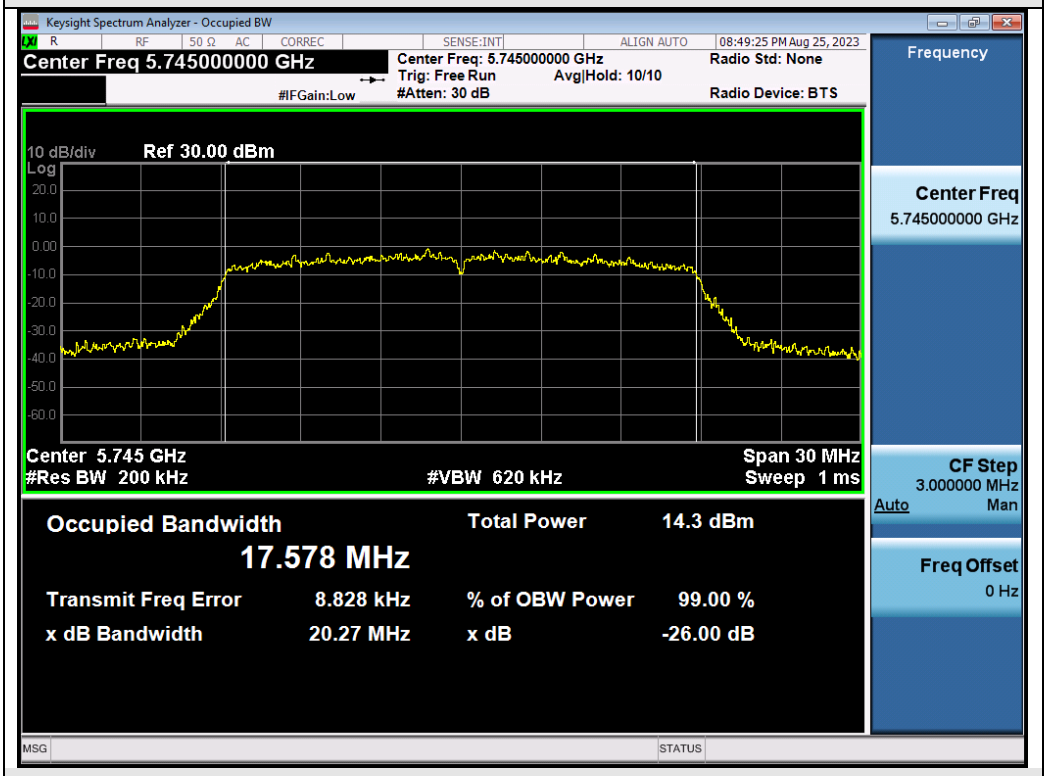



Test_Graph_802.11a_ANT1_5825_6Mbps_OBW




Test_Graph_802.11n20_ANT1_5745_MCS0_OBW

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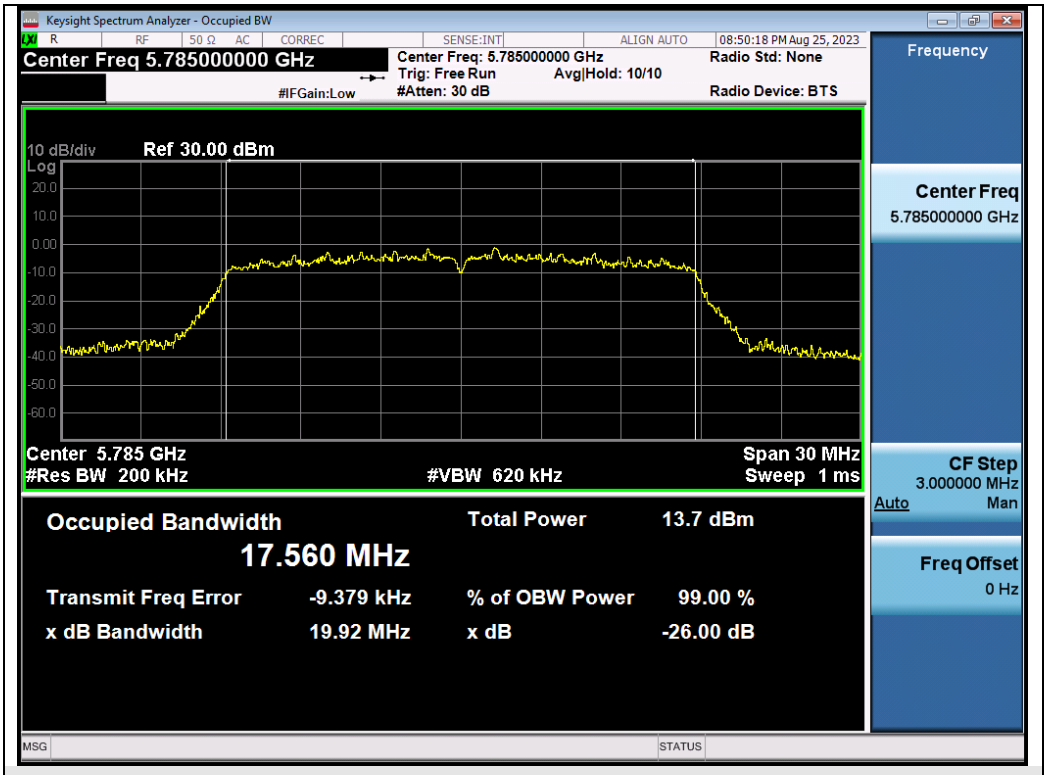
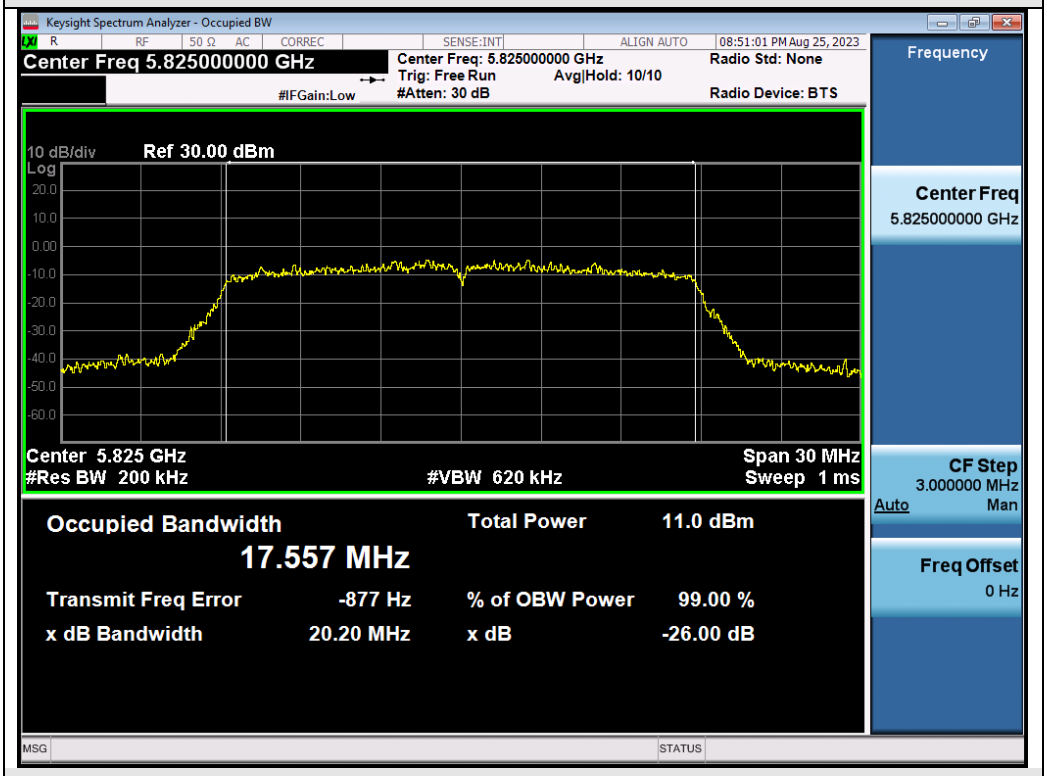



Test_Graph_802.11n20_ANT1_5785_MCS0_OBW




Test_Graph_802.11n20_ANT1_5825_MCS0_OBW

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