

# FCC Test Report

Report No.: AGC16740241101FR07

**FCC ID** : WQ8-DV2377

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION** : NEXT LEVEL DIAGNOSTICS & MEASUREMENT SYSTEM

**BRAND NAME** : AUTEL

**MODEL NAME** : MaxiSys Ultra S2, MaxiSys Ultra EV S2, MaxiSys Ultra S2&ADAS, MaxiSys Ultra EV S2&ADAS, MaxiSys Ultra S2 ADAS

**APPLICANT** : Autel Intelligent Technology Corp., Ltd.

**DATE OF ISSUE** : Dec. 25, 2024

**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           | /           | Dec. 25, 2024 | Valid         | Initial Release |

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## 1. General Information

|                              |                                                                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant                    | Autel Intelligent Technology Corp., Ltd.                                                                                                                   |
| Address                      | Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili, Nanshan, Shenzhen 518055, China                                   |
| Manufacturer                 | Autel Intelligent Technology Corp., Ltd.                                                                                                                   |
| Address                      | Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili, Nanshan, Shenzhen 518055, China                                   |
| Factory                      | Autel Intelligent Technology Corp., Ltd. Guangming Branch                                                                                                  |
| Address                      | 7F&6F, East Wing, Building 2, and 6F of Electronical Building, Yanxiang Industrial Zone, Gaoxin Rd, Dongzhou Community of Guangming New District, Shenzhen |
| Product Designation          | NEXT LEVEL DIAGNOSTICS & MEASUREMENT SYSTEM                                                                                                                |
| Brand Name                   | AUTEL                                                                                                                                                      |
| Test Model                   | MaxiSys Ultra S2                                                                                                                                           |
| Series Model(s)              | MaxiSys Ultra EV S2, MaxiSys Ultra S2&ADAS, MaxiSys Ultra EV S2&ADAS, MaxiSys Ultra S2 ADAS                                                                |
| Difference Description       | The model name and software function configuration are different                                                                                           |
| Date of receipt of test item | Nov. 04, 2024                                                                                                                                              |
| Date of Test                 | Nov. 04, 2024~Dec. 25, 2024                                                                                                                                |
| Deviation from Standard      | No any deviation from the test method                                                                                                                      |
| Condition of Test Sample     | Normal                                                                                                                                                     |
| Test Result                  | Pass                                                                                                                                                       |
| Test Report Form No          | AGCER-FCC-5.9G WLAN-V1                                                                                                                                     |

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

|             |                                                                                     |               |
|-------------|-------------------------------------------------------------------------------------|---------------|
| Prepared By |  |               |
|             | Jack Gui                                                                            |               |
|             | (Project Engineer)                                                                  | Dec. 25, 2024 |
| Reviewed By |  |               |
|             | Calvin Liu                                                                          |               |
|             | (Reviewer)                                                                          | Dec. 25, 2024 |
| Approved By |  |               |
|             | Angela Li                                                                           |               |
|             | (Authorized Officer)                                                                | Dec. 25, 2024 |

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## 2. Product Information

### 2.1 Product Technical Description

|                      |                                                                                                                                                                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment Type       | Client devices                                                                                                                                                                                                                               |
| Operation Frequency  | U-NII 4: 5850MHz~5895MHz (Cross-band U-NII 3: 5725-5850MHz)                                                                                                                                                                                  |
| Hardware Version     | DV2377_MAIN_V2                                                                                                                                                                                                                               |
| Software Version     | V01.01.00                                                                                                                                                                                                                                    |
| Test Frequency Range | For 802.11a/n(HT20)/ac (VHT20)/ax(HE20): 5845-5885MHz<br>For 802.11a/n(HT20)/ac (VHT40)/ax(HE40): 5835-5875MHz<br>For 802.11ac (VHT80)/ax(HE80): 5835MHz<br>For 802.11ac (VHT160)/ax(HE160): 5815MHz                                         |
| Max. E.I.R.P.        | 802.11a:16.43dBm; 802.11n20:12.45dBm; 802.11n40:15.90dBm;<br>802.11ac20:12.47dBm; 802.11ac40:15.94dBm; 802.11ac80:15.89dBm;<br>802.11ac160:15.64dBm; 802.11ax20:11.41dBm; 802.11ax40:15.34dBm;<br>802.11ax80:15.60dBm; 802.11ax160:15.28dBm; |
| Max. E.I.R.P. (MIMO) | 802.11n20:18.36dBm; 802.11n40:21.71dBm; 802.11ac20:18.37dBm;<br>802.11ac40:21.72dBm; 802.11ac80:21.65dBm; 802.11ac160:21.50dBm;<br>802.11ax20:17.38dBm; 802.11ax40:21.19dBm; 802.11ax80: 21.45dBm;<br>802.11ax160:20.96dBm;                  |
| Modulation           | 802.11a/n:(64-QAM, 16-QAM, QPSK, BPSK) OFDM<br>802.11ac:(256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) OFDM<br>802.11ax:(1024-QAM,256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) OFDMA                                                                          |
| Data Rate            | 802.11a: 6/9/12/18/24/36/48/54Mbps;<br>802.11n: up to 300Mbps;<br>802.11ac: up to 866.7Mbps;<br>802.11ax: up to 1201Mbps                                                                                                                     |
| Number of channels   | 9                                                                                                                                                                                                                                            |
| Antenna Designation  | FPC Antenna                                                                                                                                                                                                                                  |
| Antenna Gain         | Refer to Chapter 2.8 of the report.                                                                                                                                                                                                          |
| Power Supply         | DC 3.85V by battery or DC 12V by adapter                                                                                                                                                                                                     |

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## 2.2 Table of Carrier Frequency

### For UNII-3/4 Band:

3 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 169     | 5845 MHz  | 173     | 5865 MHz  |
| 177     | 5885 MHz  | --      | --        |

1 channel are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 167     | 5835 MHz  | 175     | 5875 MHz  |

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

| Channel | Frequency |
|---------|-----------|
| 171     | 5855 MHz  |

1 channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

| Channel | Frequency |
|---------|-----------|
| 163     | 5815 MHz  |

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

This submittal(s) (test report) is intended for FCC ID: WQ8-DV2377 filing to comply with the FCC Part 15 requirements.

## 2.4 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                     |

## 2.5 Special Accessories

Refer to section 4.4.

## 2.6 Equipment Modifications

Not available for this EUT intended for grant.

## 2.7 Antenna Requirement

| Standard Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>15.203 requirement:</b><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 antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. |
| <b>EUT Antenna:</b><br>The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna refer to Section 2.8 of the report                                                                                                                                                                                                                                                                                                           |

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## 2.8 Description of Available Antennas

| Antenna Type                             | Frequency Band (MHz) | TX Paths | Bandwidth (MHz) | Max Peak Gain (dBi) |         | Max Directional Gain (dBi) |
|------------------------------------------|----------------------|----------|-----------------|---------------------|---------|----------------------------|
|                                          |                      |          |                 | Chain A             | Chain B |                            |
| 5G WIFI FPC Antenna List (5GHz 2*2 MIMO) |                      |          |                 |                     |         |                            |
| FPC Antenna                              | 5845-5885            | 2        | 20              | 3.1                 | 2.9     | 6.01                       |
|                                          | 5835-5875            | 2        | 40              | 3.1                 | 2.9     | 6.01                       |
|                                          | 5855                 | 2        | 80              | 3.1                 | 2.9     | 6.01                       |
|                                          | 5815                 | 2        | 160             | 3.0                 | 2.8     | 5.91                       |

Note 1: The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11n/ac/ax 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 =  $G_{ANT} + \text{Array Gain}$ , 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 802.11 devices:
    - Array Gain = 0 dB for  $N_{ANT} \leq 4$ ;
    - Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  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.

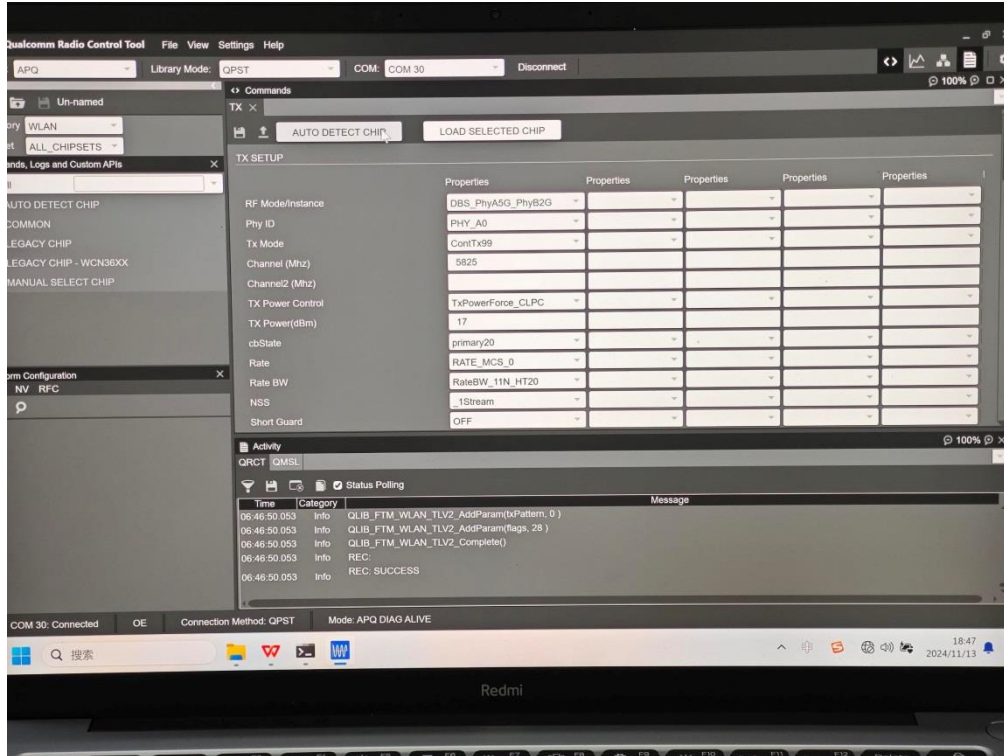
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## 2.9 Description of Test Software

### For IEEE 802.11 mode:

The test utility software used during testing was “Qualcomm Radio Control Tool”, and the version was “4.0.00132.0”.

Software Setting Diagram



| Test Mode        | Channel | Power Index |         |
|------------------|---------|-------------|---------|
|                  |         | Chain A     | Chain B |
| 802.11a          | L/M/H   | 17          | 17      |
| 802.11n(HT20)    | L/M/H   | 16          | 16      |
| 802.11n(HT40)    | L/H     | 16          | 16      |
| 802.11ac(VHT20)  | L/M/H   | 16          | 16      |
| 802.11ac(VHT40)  | L/H     | 16          | 16      |
| 802.11ac(VHT80)  | M       | 16          | 16      |
| 802.11ac(VHT160) | L       | 16          | 16      |
| 802.11ax(HE20)   | L/M/H   | 16          | 16      |
| 802.11ax(HE40)   | L/H     | 16          | 16      |
| 802.11ax(HE80)   | M       | 16          | 16      |
| 802.11ax(HE160)  | L       | 16          | 16      |

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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 (°C)  | 15 - 35                                  |
| Relative humidity range | 20% - 75%                                |
| Pressure range (kPa)    | 86 - 106                                 |
| Power supply            | DC 3.85V by battery or DC 12V by adapter |

### 3.4 Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expanded 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 | $U_c = \pm 2.9 \text{ dB}$ |
| Uncertainty of Radiated Emission below 1GHz   | $U_c = \pm 3.9 \text{ dB}$ |
| Uncertainty of Radiated Emission above 1GHz   | $U_c = \pm 4.9 \text{ dB}$ |
| Uncertainty of total RF power, conducted      | $U_c = \pm 0.8 \text{ dB}$ |
| Uncertainty of RF power density, conducted    | $U_c = \pm 2.6 \text{ dB}$ |
| Uncertainty of spurious emissions, conducted  | $U_c = \pm 2 \%$           |
| Uncertainty of Occupied Channel Bandwidth     | $U_c = 2.0 \%$             |

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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) |
| <input checked="" type="checkbox"/> | AGC-ER-E036   | Spectrum Analyzer   | Agilent      | N9020A     | MY49100060 | 2024-05-24                | 2025-05-23                |
| <input checked="" type="checkbox"/> | AGC-ER-E062   | Power Sensor        | Agilent      | U2021XA    | MY54110007 | 2024-02-01                | 2025-01-31                |
| <input checked="" type="checkbox"/> | AGC-ER-E063   | Power Sensor        | Agilent      | U2021XA    | MY54110009 | 2024-02-01                | 2025-01-31                |
| <input checked="" type="checkbox"/> | AGC-ER-A001   | 6dB Attenuator      | Eeatsheep    | LM-XX-6-5W | N/A        | 2023-09-21                | 2025-09-20                |
| <input checked="" type="checkbox"/> | N/A           | RF Connection Cable | N/A          | 1#         | N/A        | Each time                 | N/A                       |
| <input checked="" type="checkbox"/> | 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) |
| <input checked="" type="checkbox"/> | AGC-EM-E046   | EMI Test Receiver             | R&S          | ESCI        | 10096      | 2024-02-01                | 2025-01-31                |
| <input checked="" type="checkbox"/> | AGC-EM-E116   | EMI Test Receiver             | R&S          | ESCI        | 100034     | 2024-05-24                | 2025-05-23                |
| <input checked="" type="checkbox"/> | AGC-EM-E061   | Spectrum Analyzer             | Agilent      | N9010A      | MY53470504 | 2024-05-28                | 2025-05-27                |
| <input checked="" type="checkbox"/> | AGC-EM-E086   | Loop Antenna                  | ZHINAN       | ZN30900C    | 18051      | 2024-03-05                | 2026-03-04                |
| <input checked="" type="checkbox"/> | AGC-EM-E001   | Wideband Antenna              | SCHWARZBECK  | VULB9168    | D69250     | 2023-05-11                | 2025-05-10                |
| <input checked="" type="checkbox"/> | AGC-EM-E029   | Broadband Ridged Horn Antenna | ETS          | 3117        | 00034609   | 2024-03-31                | 2025-03-30                |
| <input checked="" type="checkbox"/> | AGC-EM-E082   | Horn Antenna                  | SCHWARZBECK  | BBHA 9170   | #768       | 2023-09-24                | 2025-09-23                |
| <input checked="" type="checkbox"/> | AGC-EM-E083   | Pre-amplifier                 | CHENGXI      | EMC184045SE | 980508     | 2023-09-20                | 2025-09-19                |
| <input checked="" type="checkbox"/> | AGC-EM-E146   | Pre-amplifier                 | ETS          | 3117-PA     | 00246148   | 2024-07-24                | 2026-07-23                |
| <input checked="" type="checkbox"/> | AGC-EM-A118   | 5G Filter                     | SongYi       | BRM50716    | N/A        | 2024-05-23                | 2025-05-22                |
| <input checked="" type="checkbox"/> | AGC-EM-A138   | 6dB Attenuator                | Eeatsheep    | LM-XX-6-5W  | N/A        | 2023-06-09                | 2025-06-08                |

| ● Test Software                     |               |                     |              |                      |                     |
|-------------------------------------|---------------|---------------------|--------------|----------------------|---------------------|
| Used                                | Equipment No. | Test Equipment      | Manufacturer | Model No.            | Version Information |
| <input checked="" type="checkbox"/> | AGC-EM-S001   | CE Test System      | R&S          | ES-K1                | V1.71               |
| <input checked="" type="checkbox"/> | AGC-EM-S003   | RE Test System      | FARA         | EZ-EMC               | VRA-03A             |
| <input checked="" type="checkbox"/> | AGC-ER-S012   | BT/WIFI Test System | Tonscend     | JS1120-2             | 2.6                 |
| <input checked="" type="checkbox"/> | AGC-EM-S011   | RSE Test System     | Tonscend     | TS+-Ver2.1(JS36-RSE) | 4.0.0.0             |

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## 4. System Test Configuration

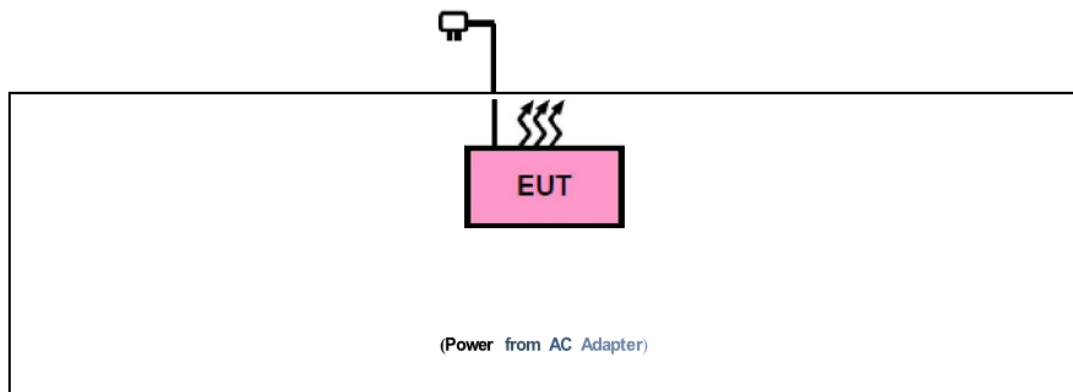
### 4.1 EUT Configuration

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   | Control Box | RISYM     | USB-TTL      | --                        | --    |

☒ Test Accessories Come From The Manufacturer

| No. | Equipment | Model No.                                         | Manufacturer   | Specification Information             | Cable |
|-----|-----------|---------------------------------------------------|----------------|---------------------------------------|-------|
| 1   | Adapter   | Dong Guan City<br>GangOi<br>Electronic<br>Co.,Ltd | GQ80-120600-E1 | AC:100-240V 50/60Hz 1.8A<br>DC:12V 6A | --    |

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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)(3)(iii)              | RF Output Power and E.I.R.P.                  | Pass                 |
| 3    | §15.407(e)                      | DTS Bandwidth                                 | Pass                 |
| 4    | §2.1049                         | 99%Occupied Bandwidth                         | Pass                 |
| 5    | §15.407(a)(3)(iii)              | E.I.R.P. Power Spectral Density               | Pass                 |
| 6    | §15.407(g)                      | Frequency Stability                           | Pass<br>(See Note 1) |
| 7    | §15.407(c)                      | Transmission Discontinuation Requirement      | Pass<br>(See Note 2) |
| 8    | §15.407(b)(5)(ii)(iii)          | Conducted Band Edge and Out-of-Band Emissions | Pass                 |
| 9    | §15.209, §15.407(b)(5)(ii)(iii) | Radiated Spurious Emission and Band Edge      | Pass                 |
| 10   | §15.207                         | AC Power Line Conducted Emission              | Pass                 |

Note:

1. Refer to the manufacturer's declaration in the user manual.
2. The device operates without the transmission of information.

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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     |
| Measurement Annotation                                                                             |                                       |               |         |     |                                          |                                       |
| 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. Positioning in three axes was pre-tested, with the worst case being positioning in the X-plane. |                                       |               |         |     |                                          |                                       |
| 2. The radiation part tests the dual-antenna MIMO as the worst combination.                        |                                       |               |         |     |                                          |                                       |
| 3. "--"means no effect.                                                                            |                                       |               |         |     |                                          |                                       |

| ● Radiated Emission Test (Above 1GHz)            |                                                                                                                                                                                                       |                  |                   |                |            |                  |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|----------------|------------|------------------|
| <input type="checkbox"/>                         | 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). |                  |                   |                |            |                  |
| <input type="checkbox"/>                         | The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records Cjain A as the worst data.     |                  |                   |                |            |                  |
| Select Channel Parameter Configuration Test List |                                                                                                                                                                                                       |                  |                   |                |            |                  |
| EUT Configure Mode                               | Mode                                                                                                                                                                                                  | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
| A                                                | 802.11n (20MHz)                                                                                                                                                                                       | 5845-5885        | 169 to 177        | 169,173,177    | OFDM       | MCS0             |
| A                                                | 802.11n (40MHz)                                                                                                                                                                                       | 5835-5875        | 167,175           | 167,175        | OFDM       | MCS0             |
| A                                                | 802.11ax (80MHz)                                                                                                                                                                                      | 5855             | 171               | 171            | OFDM       | MCS0             |
| A                                                | 802.11ax (160MHz)                                                                                                                                                                                     | 5815             | 163               | 163            | OFDM       | MCS0             |

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| ● Radiated Emission Test (Below 1GHz)            |                                                                                                                                                                                                       |                  |                   |                |            |                  |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|----------------|------------|------------------|
| <input checked="" type="checkbox"/>              | 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). |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records antenna 1 as the worst data.   |                  |                   |                |            |                  |
| Select Channel Parameter Configuration Test List |                                                                                                                                                                                                       |                  |                   |                |            |                  |
| EUT Configure Mode                               | Mode                                                                                                                                                                                                  | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
| A                                                | 802.11n (20MHz)                                                                                                                                                                                       | 5845-5885        | 169 to 177        | 169            | OFDM       | MCS0             |

| ● Power Line Conducted Emission Test             |                                                                                                                                                                                                       |                  |                   |                |            |                  |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|----------------|------------|------------------|
| <input checked="" type="checkbox"/>              | 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). |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records antenna 1 as the worst data.   |                  |                   |                |            |                  |
| Select Channel Parameter Configuration Test List |                                                                                                                                                                                                       |                  |                   |                |            |                  |
| EUT Configure Mode                               | Mode                                                                                                                                                                                                  | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
| A                                                | 802.11n (20MHz)                                                                                                                                                                                       | 5845-5885        | 169 to 177        | 169            | OFDM       | MCS0             |

| ● Band edge Measurement                          |                                                                                                                                                                                                       |                  |                   |                |            |                  |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|----------------|------------|------------------|
| <input checked="" type="checkbox"/>              | 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). |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | The device supports multiple antenna transmission, allowing MIMO technology mode to be recorded as the worst.                                                                                         |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | MIMO technology is not supported, and the 802.11a mode only records the worst antenna (Chain A) as the worst                                                                                          |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | Support 802.11ax, device debugging is tested in Full RU state.                                                                                                                                        |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | The device antenna gain and cable loss are added to the spectrum compensation coefficient or offset through software.                                                                                 |                  |                   |                |            |                  |
| Select Channel Parameter Configuration Test List |                                                                                                                                                                                                       |                  |                   |                |            |                  |
| EUT Configure Mode                               | Mode                                                                                                                                                                                                  | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
| A                                                | 802.11a                                                                                                                                                                                               | 5845-5885        | 169 to 177        | 169,177        | OFDM       | 6.0              |
| A                                                | 802.11n (40MHz)                                                                                                                                                                                       | 5835-5875        | 167,175           | 167,175        | OFDM       | MCS0             |
| A                                                | 802.11ac (160MHz)                                                                                                                                                                                     | 5815             | 163               | 163            | OFDMA      | MCS0             |
| A                                                | 802.11ax (160MHz)                                                                                                                                                                                     | 5815             | 163               | 163            | OFDMA      | MCS0             |

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| ● Antenna Conducted Measurement                  |                                                                                                                                                                                                       |                  |                   |                |            |                  |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|----------------|------------|------------------|
| <input checked="" type="checkbox"/>              | 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). |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | The device supports multiple antenna transmission, allowing MIMO technology mode to be recorded as the worst.                                                                                         |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | MIMO technology is not supported, and the 802.11a mode only records the worst antenna (Chain A) as the worst                                                                                          |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | Support 802.11ax, device debugging is tested in Full RU state.                                                                                                                                        |                  |                   |                |            |                  |
| <input checked="" type="checkbox"/>              | The device antenna gain and cable loss are added to the spectrum compensation coefficient or offset through software.                                                                                 |                  |                   |                |            |                  |
| Select Channel Parameter Configuration Test List |                                                                                                                                                                                                       |                  |                   |                |            |                  |
| EUT Configure Mode                               | Mode                                                                                                                                                                                                  | Freq. Band (MHz) | Available Channel | Tested Channel | Modulation | Data Rate (Mbps) |
| A                                                | 802.11a                                                                                                                                                                                               | 5845-5885        | 169 to 177        | 169,173,177    | OFDM       | 6.0              |
| A                                                | 802.11n (20MHz)                                                                                                                                                                                       |                  | 169 to 177        | 169,173,177    | OFDM       | MCS0             |
| A                                                | 802.11ac (20MHz)                                                                                                                                                                                      |                  | 169 to 177        | 169,173,177    | OFDM       | MCS0             |
| A                                                | 802.11ax (20MHz)                                                                                                                                                                                      |                  | 169 to 177        | 169,173,177    | OFDM       | MCS0             |
| A                                                | 802.11n (40MHz)                                                                                                                                                                                       | 5835-5875        | 167,175           | 167,175        | OFDM       | MCS0             |
| A                                                | 802.11ac (40MHz)                                                                                                                                                                                      |                  | 167,175           | 167,175        | OFDM       | MCS0             |
| A                                                | 802.11ax (40MHz)                                                                                                                                                                                      |                  | 167,175           | 167,175        | OFDM       | MCS0             |
| A                                                | 802.11ac (80MHz)                                                                                                                                                                                      | 5855             | 171               | 171            | OFDM       | MCS0             |
| A                                                | 802.11ax (80MHz)                                                                                                                                                                                      |                  | 171               | 171            | OFDMA      | MCS0             |
| A                                                | 802.11ac (160MHz)                                                                                                                                                                                     | 5815             | 163               | 163            | OFDM       | MCS0             |
| A                                                | 802.11ax (160MHz)                                                                                                                                                                                     |                  | 163               | 163            | OFDMA      | MCS0             |

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## 6. Duty Cycle Measurement

5GHz WLAN (NII) operation is possible in 20MHz, 40MHz 80MHz and 160MHz channel 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 = Average. 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) |
|----------------------------------------|-------------------|----------------|------------------------|
| Band U-NII 3/4:5725MHz-5895MHz-Chain A |                   |                |                        |
| 802.11a                                | 6                 | 100            | /                      |
| 802.11n_HT20                           | MCS0              | 100            | /                      |
| 802.11ac_VHT20                         | MCS0              | 100            | /                      |
| 802.11ax_HE20                          | MCS0              | 100            | /                      |
| 802.11n_HT40                           | MCS0              | 100            | /                      |
| 802.11ac_VHT40                         | MCS0              | 100            | /                      |
| 802.11ax_HE40                          | MCS0              | 100            | /                      |
| 802.11ac_VHT80                         | MCS0              | 100            | /                      |
| 802.11ax_HE80                          | MCS0              | 100            | /                      |
| 802.11ac_VHT160                        | MCS0              | 100            | /                      |
| 802.11ax_HE160                         | MCS0              | 100            | /                      |

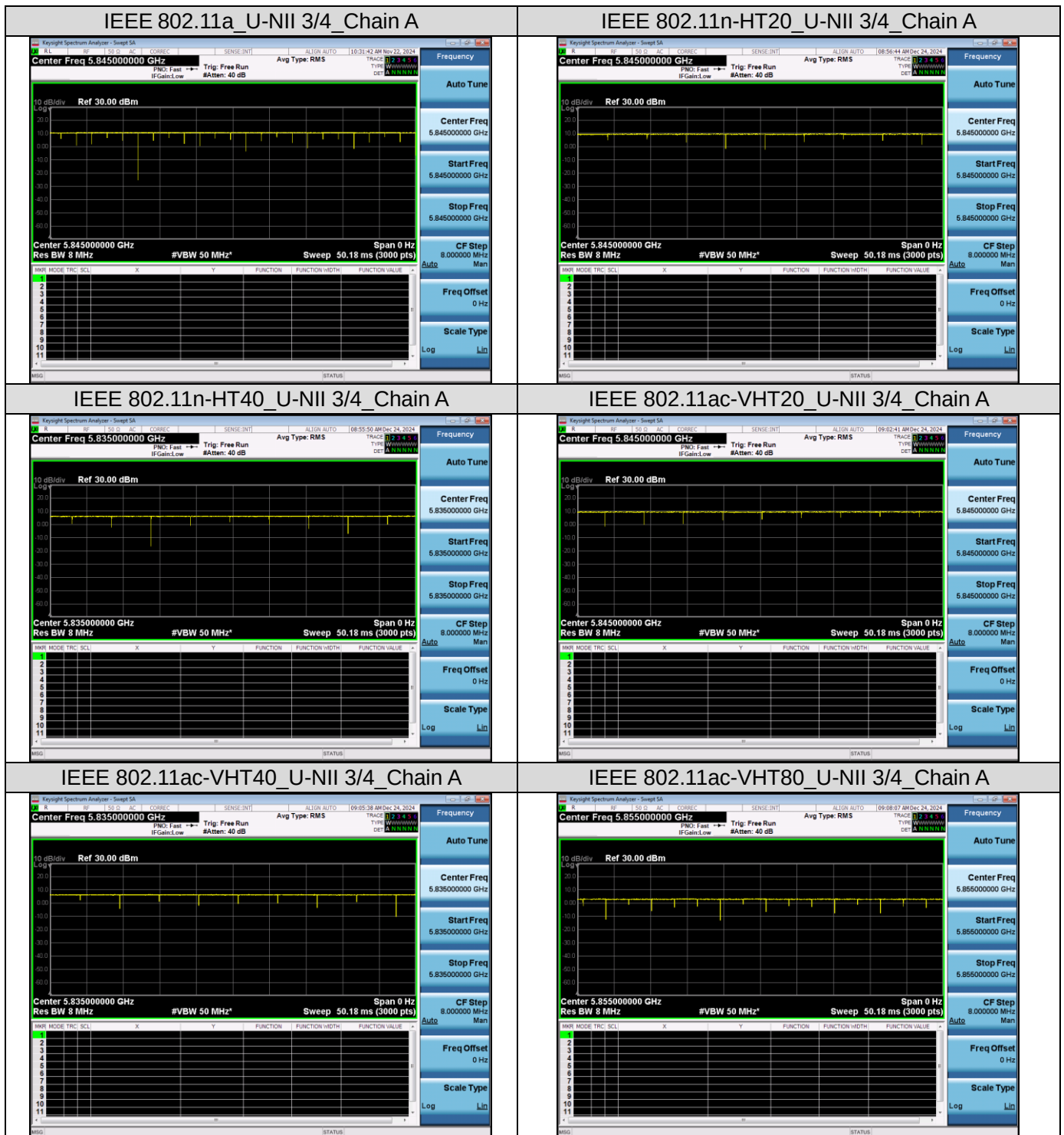
| Operating mode                          | Data rates (Mbps) | Duty Cycle (%) | Duty Cycle Factor (dB) |
|-----------------------------------------|-------------------|----------------|------------------------|
| Band U-NII 3/4:5725MHz-5895MHz- Chain B |                   |                |                        |
| 802.11a                                 | 6                 | 100            | /                      |
| 802.11n_HT20                            | MCS0              | 100            | /                      |
| 802.11ac_VHT20                          | MCS0              | 100            | /                      |
| 802.11ax_HE20                           | MCS0              | 100            | /                      |
| 802.11n_HT40                            | MCS0              | 100            | /                      |
| 802.11ac_VHT40                          | MCS0              | 100            | /                      |
| 802.11ax_HE40                           | MCS0              | 100            | /                      |
| 802.11ac_VHT80                          | MCS0              | 100            | /                      |
| 802.11ax_HE80                           | MCS0              | 100            | /                      |
| 802.11ac_VHT160                         | MCS0              | 100            | /                      |
| 802.11ax_HE160                          | MCS0              | 100            | /                      |

Remark:

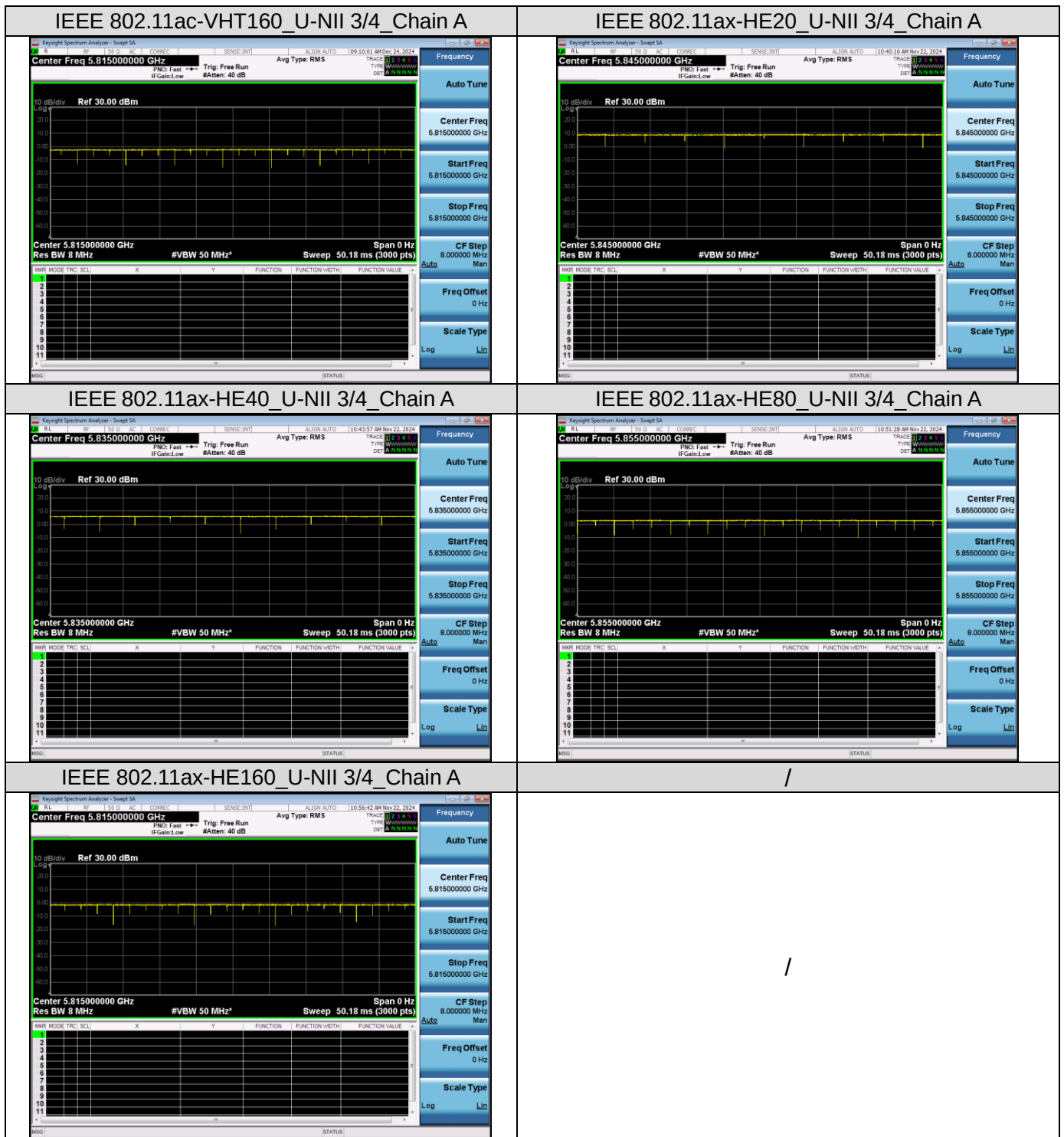
1. Duty Cycle factor =  $10 * \log (1/ \text{Duty cycle})$
2. The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value.
3. Involving the test items of duty cycle compensation coefficient, the final results have been added and calculated by the software and presented.

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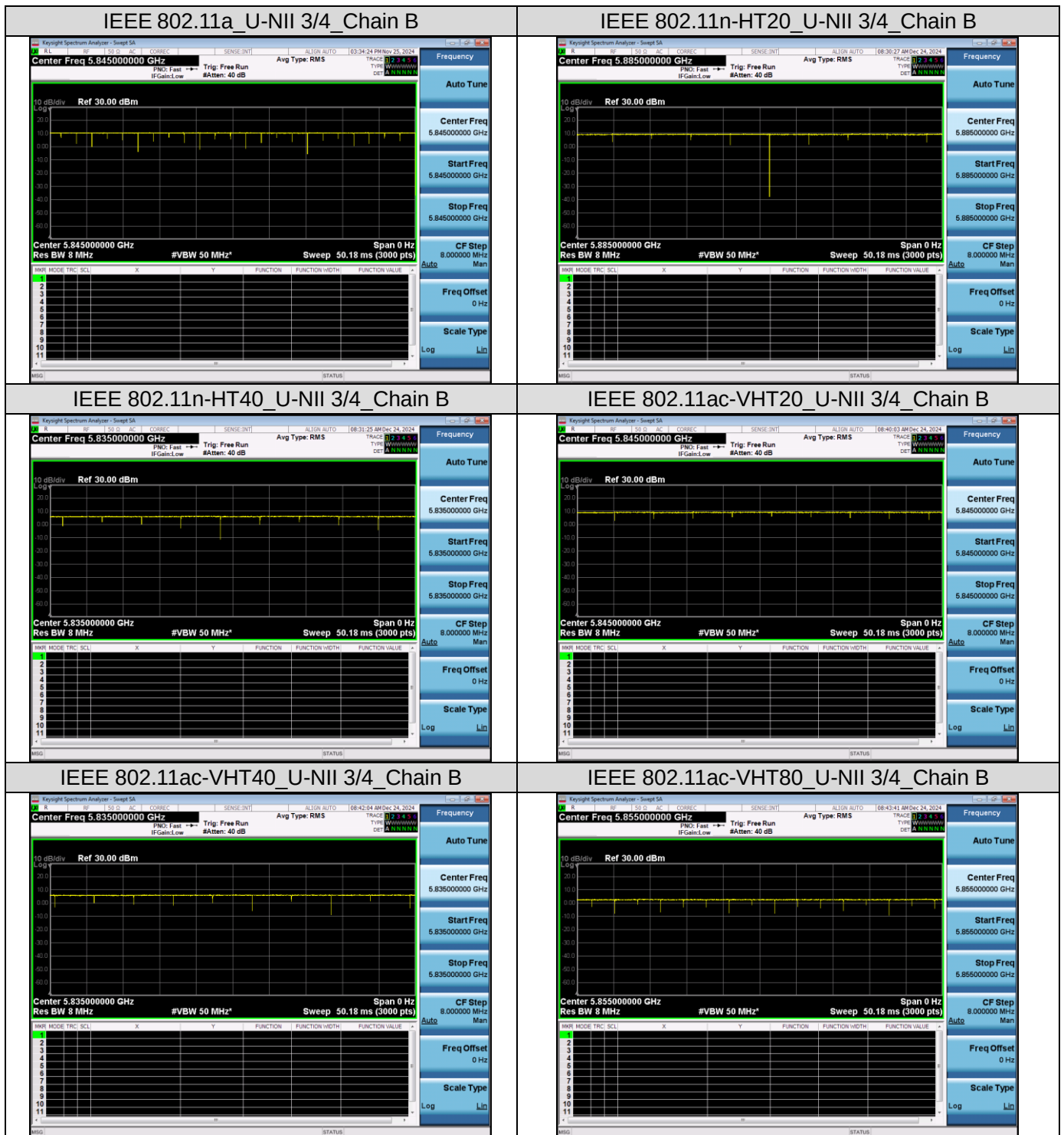
- The test plots as follows:



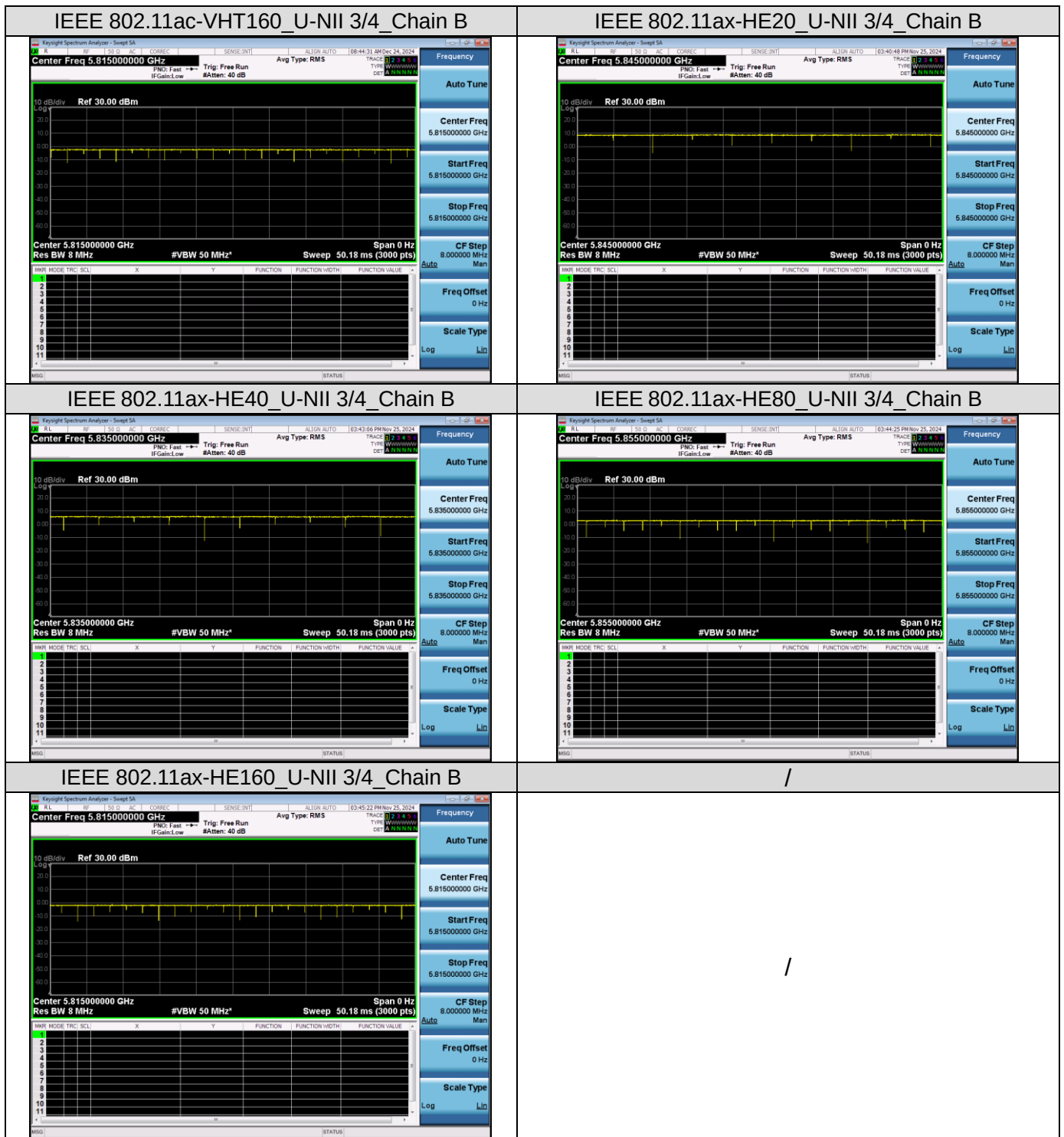
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## 7. RF Output Power Measurement

### 7.1 Provisions Applicable

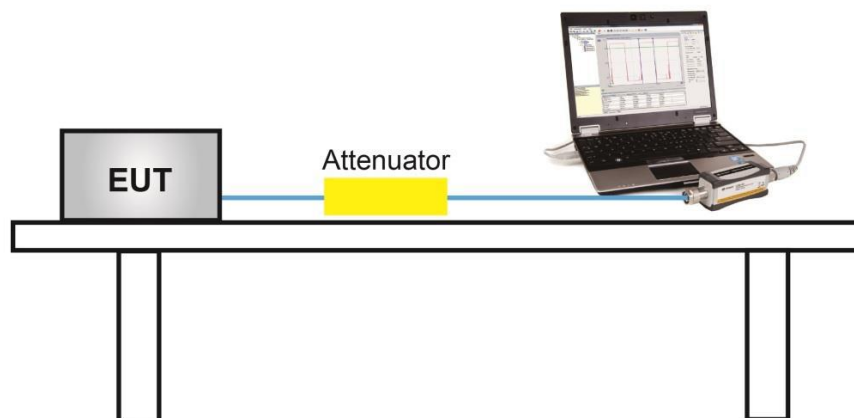
For client devices operating under the control of an indoor access point in the 5.850- 5.895 GHz band, the maximum power spectral density must not exceed 14 dBm E.I.R.P. in any 1MHz band, and the maximum E.I.R.P. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an E.I.R.P. of 30 dBm.

### 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 resulting measurement value in dBm by adding  $[10 \log (1 / D)]$ , where D is the duty cycle {for example, if the duty cycle is 25%, then  $[10 \log (1 / 0.25)]$ }.
9. The final test results have been increased by the duty cycle factor and recorded in the report.

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



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#### 7.4 Measurement Result

| Test Data of E.I.R.P. for UNII-3/4 Band (5.725-5.895GHz) |                 |         |                     |                |                |              |        |
|----------------------------------------------------------|-----------------|---------|---------------------|----------------|----------------|--------------|--------|
| Mode                                                     | Frequency (MHz) | Antenna | Average Power (dBm) | Ant Gain (dBi) | E.I.R.P. (dBm) | Limits (dBm) | Result |
| 802.11a                                                  | 5845            | Chain A | 13.33               | 3.1            | 16.43          | ≤30          | PASS   |
|                                                          | 5865            | Chain A | 13.26               | 3.1            | 16.36          | ≤30          | PASS   |
|                                                          | 5885            | Chain A | 13.32               | 3.1            | 16.42          | ≤30          | PASS   |
| 802.11n20                                                | 5845            | Chain A | 9.35                | 3.1            | 12.45          | ≤30          | PASS   |
|                                                          | 5865            | Chain A | 9.25                | 3.1            | 12.35          | ≤30          | PASS   |
|                                                          | 5885            | Chain A | 9.31                | 3.1            | 12.41          | ≤30          | PASS   |
| 802.11n40                                                | 5835            | Chain A | 12.80               | 3.1            | 15.90          | ≤30          | PASS   |
|                                                          | 5875            | Chain A | 12.65               | 3.1            | 15.75          | ≤30          | PASS   |
| 802.11ac20                                               | 5845            | Chain A | 9.37                | 3.1            | 12.47          | ≤30          | PASS   |
|                                                          | 5865            | Chain A | 9.13                | 3.1            | 12.23          | ≤30          | PASS   |
|                                                          | 5885            | Chain A | 9.20                | 3.1            | 12.30          | ≤30          | PASS   |
| 802.11ac40                                               | 5835            | Chain A | 12.84               | 3.1            | 15.94          | ≤30          | PASS   |
|                                                          | 5875            | Chain A | 12.64               | 3.1            | 15.74          | ≤30          | PASS   |
| 802.11ac80                                               | 5855            | Chain A | 12.79               | 3.1            | 15.89          | ≤30          | PASS   |
| 802.11ac160                                              | 5815            | Chain A | 12.64               | 3.0            | 15.64          | ≤30          | PASS   |
| 802.11ax20                                               | 5845            | Chain A | 8.31                | 3.1            | 11.41          | ≤30          | PASS   |
|                                                          | 5865            | Chain A | 8.18                | 3.1            | 11.28          | ≤30          | PASS   |
|                                                          | 5885            | Chain A | 8.16                | 3.1            | 11.26          | ≤30          | PASS   |
| 802.11ax40                                               | 5835            | Chain A | 12.24               | 3.1            | 15.34          | ≤30          | PASS   |
|                                                          | 5875            | Chain A | 12.15               | 3.1            | 15.25          | ≤30          | PASS   |
| 802.11ax80                                               | 5855            | Chain A | 12.50               | 3.1            | 15.60          | ≤30          | PASS   |
| 802.11ax160                                              | 5815            | Chain A | 12.28               | 3.0            | 15.28          | ≤30          | PASS   |

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| Test Data of E.I.R.P. for UNII-3/4 Band (5.725-5.895GHz) |                 |         |                     |                |                |              |        |
|----------------------------------------------------------|-----------------|---------|---------------------|----------------|----------------|--------------|--------|
| Mode                                                     | Frequency (MHz) | Antenna | Average Power (dBm) | Ant Gain (dBi) | E.I.R.P. (dBm) | Limits (dBm) | Result |
| 802.11a                                                  | 5845            | Chain B | 13.10               | 6.6            | 16.00          | ≤30          | PASS   |
|                                                          | 5865            | Chain B | 13.08               | 6.6            | 15.98          | ≤30          | PASS   |
|                                                          | 5885            | Chain B | 13.43               | 6.6            | 16.33          | ≤30          | PASS   |
| 802.11n20                                                | 5845            | Chain B | 9.33                | 6.6            | 12.23          | ≤30          | PASS   |
|                                                          | 5865            | Chain B | 9.14                | 6.6            | 12.04          | ≤30          | PASS   |
|                                                          | 5885            | Chain B | 9.29                | 6.6            | 12.19          | ≤30          | PASS   |
| 802.11n40                                                | 5835            | Chain B | 12.57               | 6.6            | 15.47          | ≤30          | PASS   |
|                                                          | 5875            | Chain B | 12.23               | 6.6            | 15.13          | ≤30          | PASS   |
| 802.11ac20                                               | 5845            | Chain B | 9.32                | 6.6            | 12.22          | ≤30          | PASS   |
|                                                          | 5865            | Chain B | 9.10                | 6.6            | 12.00          | ≤30          | PASS   |
|                                                          | 5885            | Chain B | 9.29                | 6.6            | 12.19          | ≤30          | PASS   |
| 802.11ac40                                               | 5835            | Chain B | 12.55               | 6.6            | 15.35          | ≤30          | PASS   |
|                                                          | 5875            | Chain B | 12.23               | 6.6            | 15.13          | ≤30          | PASS   |
| 802.11ac80                                               | 5855            | Chain B | 12.46               | 6.6            | 15.36          | ≤30          | PASS   |
| 802.11ac160                                              | 5815            | Chain B | 12.52               | 6.5            | 15.42          | ≤30          | PASS   |
| 802.11ax20                                               | 5845            | Chain B | 8.40                | 6.6            | 11.30          | ≤30          | PASS   |
|                                                          | 5865            | Chain B | 8.23                | 6.6            | 11.13          | ≤30          | PASS   |
|                                                          | 5885            | Chain B | 8.37                | 6.6            | 11.27          | ≤30          | PASS   |
| 802.11ax40                                               | 5835            | Chain B | 12.09               | 6.6            | 14.99          | ≤30          | PASS   |
|                                                          | 5875            | Chain B | 12.11               | 6.6            | 15.01          | ≤30          | PASS   |
| 802.11ax80                                               | 5855            | Chain B | 12.36               | 6.6            | 15.26          | ≤30          | PASS   |
| 802.11ax160                                              | 5815            | Chain B | 11.79               | 6.5            | 14.59          | ≤30          | PASS   |

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| Test Data of E.I.R.P. for UNII-3/4 Band (5.725-5.895GHz) |                 |         |                     |            |                |              |        |
|----------------------------------------------------------|-----------------|---------|---------------------|------------|----------------|--------------|--------|
| Mode                                                     | Frequency (MHz) | Antenna | Average Power (dBm) | D.G. (dBi) | E.I.R.P. (dBm) | Limits (dBm) | Result |
| 802.11n20                                                | 5845            | MIMO    | 12.35               | 6.01       | 18.36          | ≤30          | PASS   |
|                                                          | 5865            | MIMO    | 12.21               | 6.01       | 18.22          | ≤30          | PASS   |
|                                                          | 5885            | MIMO    | 12.31               | 6.01       | 18.32          | ≤30          | PASS   |
| 802.11n40                                                | 5835            | MIMO    | 15.70               | 6.01       | 21.71          | ≤30          | PASS   |
|                                                          | 5875            | MIMO    | 15.46               | 6.01       | 21.47          | ≤30          | PASS   |
| 802.11ac20                                               | 5845            | MIMO    | 12.36               | 6.01       | 18.37          | ≤30          | PASS   |
|                                                          | 5865            | MIMO    | 12.13               | 6.01       | 18.14          | ≤30          | PASS   |
|                                                          | 5885            | MIMO    | 12.26               | 6.01       | 18.27          | ≤30          | PASS   |
| 802.11ac40                                               | 5835            | MIMO    | 15.71               | 6.01       | 21.72          | ≤30          | PASS   |
|                                                          | 5875            | MIMO    | 15.45               | 6.01       | 21.46          | ≤30          | PASS   |
| 802.11ac80                                               | 5855            | MIMO    | 15.64               | 6.01       | 21.65          | ≤30          | PASS   |
| 802.11ac160                                              | 5815            | MIMO    | 15.59               | 5.91       | 21.50          | ≤30          | PASS   |
| 802.11ax20                                               | 5845            | MIMO    | 11.37               | 6.01       | 17.38          | ≤30          | PASS   |
|                                                          | 5865            | MIMO    | 11.22               | 6.01       | 17.23          | ≤30          | PASS   |
|                                                          | 5885            | MIMO    | 11.28               | 6.01       | 17.29          | ≤30          | PASS   |
| 802.11ax40                                               | 5835            | MIMO    | 15.18               | 6.01       | 21.19          | ≤30          | PASS   |
|                                                          | 5875            | MIMO    | 15.14               | 6.01       | 21.15          | ≤30          | PASS   |
| 802.11ax80                                               | 5855            | MIMO    | 15.44               | 6.01       | 21.45          | ≤30          | PASS   |
| 802.11ax160                                              | 5815            | MIMO    | 15.05               | 5.91       | 20.96          | ≤30          | PASS   |

Note:

1. E.I.R.P. (dBm)= Average Powe(dBm)+ANT Gain(dBi)
2. Total E.I.R.P. (dBm)= Total Average Powe(dBm)+ Directional gain (dBi)

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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  $\geq 3 \times$  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:

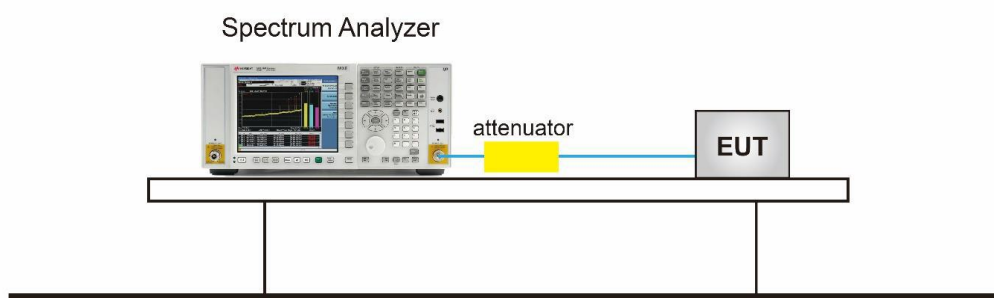
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel
4. The nominal IF filter bandwidth (3 dB RBW) shall 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
5. 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 UNII-3/4 Band (5.725-5.895GHz)-Chain A |                 |                     |                       |              |        |
|------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------------|--------------|--------|
| Mode                                                                                           | Frequency (MHz) | 99% Bandwidth (MHz) | -26dB Bandwidth (MHz) | Limits (MHz) | Result |
| 802.11a                                                                                        | 5845            | 16.375              | 18.56                 | N/A          | PASS   |
|                                                                                                | 5865            | 16.392              | 18.91                 | N/A          | PASS   |
|                                                                                                | 5885            | 16.366              | 19.10                 | N/A          | PASS   |
| 802.11n20                                                                                      | 5845            | 17.574              | 20.19                 | N/A          | PASS   |
|                                                                                                | 5865            | 17.562              | 20.19                 | N/A          | PASS   |
|                                                                                                | 5885            | 17.558              | 20.33                 | N/A          | PASS   |
| 802.11n40                                                                                      | 5835            | 36.051              | 39.61                 | N/A          | PASS   |
|                                                                                                | 5875            | 36.051              | 39.43                 | N/A          | PASS   |
| 802.11ac20                                                                                     | 5845            | 17.588              | 19.98                 | N/A          | PASS   |
|                                                                                                | 5865            | 17.588              | 20.22                 | N/A          | PASS   |
|                                                                                                | 5885            | 17.600              | 20.12                 | N/A          | PASS   |
| 802.11ac40                                                                                     | 5835            | 36.015              | 39.35                 | N/A          | PASS   |
|                                                                                                | 5875            | 36.025              | 39.57                 | N/A          | PASS   |
| 802.11ac80                                                                                     | 5855            | 75.412              | 82.08                 | N/A          | PASS   |
| 802.11ac160                                                                                    | 5815            | 154.339             | 165.4                 | N/A          | PASS   |
| 802.11ax20                                                                                     | 5845            | 18.902              | 21.14                 | N/A          | PASS   |
|                                                                                                | 5865            | 18.943              | 20.72                 | N/A          | PASS   |
|                                                                                                | 5885            | 18.928              | 21.09                 | N/A          | PASS   |
| 802.11ax40                                                                                     | 5835            | 37.781              | 39.95                 | N/A          | PASS   |
|                                                                                                | 5875            | 37.747              | 40.62                 | N/A          | PASS   |
| 802.11ax80                                                                                     | 5855            | 77.087              | 81.61                 | N/A          | PASS   |
| 802.11ax160                                                                                    | 5815            | 156.064             | 164.7                 | N/A          | PASS   |

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| Test Data of Occupied Bandwidth and -26dB Bandwidth for UNII-3/4 Band (5.725-5.895GHz)-Chain A |                 |                     |                     |              |        |
|------------------------------------------------------------------------------------------------|-----------------|---------------------|---------------------|--------------|--------|
| Mode                                                                                           | Frequency (MHz) | 99% Bandwidth (MHz) | DTS Bandwidth (MHz) | Limits (MHz) | Result |
| 802.11a                                                                                        | 5845            | 16.352              | 16.353              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 16.334              | 16.352              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 16.341              | 16.333              | $\geq 0.5$   | PASS   |
| 802.11n20                                                                                      | 5845            | 17.581              | 17.615              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 17.555              | 17.323              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 17.561              | 17.590              | $\geq 0.5$   | PASS   |
| 802.11n40                                                                                      | 5835            | 36.026              | 35.259              | $\geq 0.5$   | PASS   |
|                                                                                                | 5875            | 36.099              | 36.425              | $\geq 0.5$   | PASS   |
| 802.11ac20                                                                                     | 5845            | 17.573              | 17.672              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 17.583              | 17.716              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 17.582              | 17.072              | $\geq 0.5$   | PASS   |
| 802.11ac40                                                                                     | 5835            | 36.003              | 35.699              | $\geq 0.5$   | PASS   |
|                                                                                                | 5875            | 36.029              | 36.357              | $\geq 0.5$   | PASS   |
| 802.11ac80                                                                                     | 5855            | 75.331              | 75.530              | $\geq 0.5$   | PASS   |
| 802.11ac160                                                                                    | 5815            | 154.42              | 155.438             | $\geq 0.5$   | PASS   |
| 802.11ax20                                                                                     | 5845            | 18.897              | 18.770              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 18.897              | 18.577              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 18.892              | 18.936              | $\geq 0.5$   | PASS   |
| 802.11ax40                                                                                     | 5835            | 37.702              | 37.827              | $\geq 0.5$   | PASS   |
|                                                                                                | 5875            | 37.702              | 37.524              | $\geq 0.5$   | PASS   |
| 802.11ax80                                                                                     | 5855            | 77.105              | 77.850              | $\geq 0.5$   | PASS   |
| 802.11ax160                                                                                    | 5815            | 155.96              | 157.834             | $\geq 0.5$   | PASS   |

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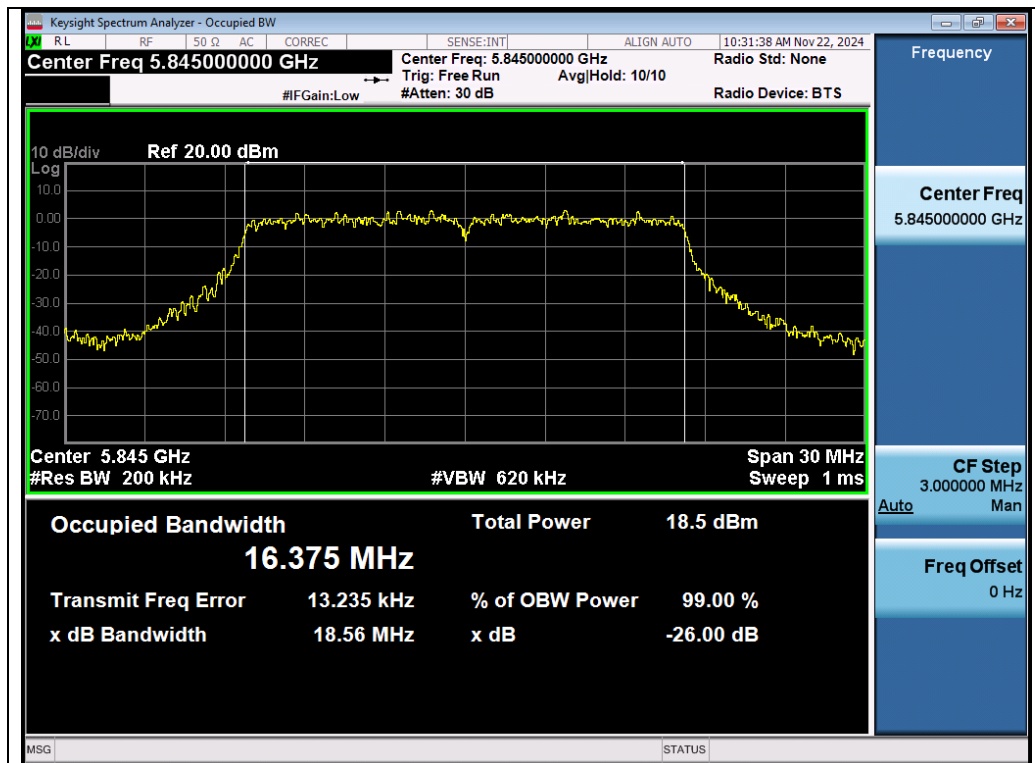
| Test Data of Occupied Bandwidth and -26dB Bandwidth for UNII-3/4 Band (5.725-5.895GHz)-Chain B |                 |                     |                       |              |        |
|------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------------|--------------|--------|
| Mode                                                                                           | Frequency (MHz) | 99% Bandwidth (MHz) | -26dB Bandwidth (MHz) | Limits (MHz) | Result |
| 802.11a                                                                                        | 5845            | 16.387              | 18.65                 | N/A          | PASS   |
|                                                                                                | 5865            | 16.374              | 18.73                 | N/A          | PASS   |
|                                                                                                | 5885            | 16.376              | 19.04                 | N/A          | PASS   |
| 802.11n20                                                                                      | 5845            | 17.576              | 20.15                 | N/A          | PASS   |
|                                                                                                | 5865            | 17.571              | 20.04                 | N/A          | PASS   |
|                                                                                                | 5885            | 17.572              | 19.94                 | N/A          | PASS   |
| 802.11n40                                                                                      | 5835            | 36.085              | 39.10                 | N/A          | PASS   |
|                                                                                                | 5875            | 36.032              | 39.44                 | N/A          | PASS   |
| 802.11ac20                                                                                     | 5845            | 17.582              | 20.03                 | N/A          | PASS   |
|                                                                                                | 5865            | 17.594              | 20.21                 | N/A          | PASS   |
|                                                                                                | 5885            | 17.593              | 19.89                 | N/A          | PASS   |
| 802.11ac40                                                                                     | 5835            | 36.051              | 39.70                 | N/A          | PASS   |
|                                                                                                | 5875            | 36.051              | 39.71                 | N/A          | PASS   |
| 802.11ac80                                                                                     | 5855            | 75.431              | 81.51                 | N/A          | PASS   |
| 802.11ac160                                                                                    | 5815            | 154.499             | 163.9                 | N/A          | PASS   |
| 802.11ax20                                                                                     | 5845            | 18.928              | 20.70                 | N/A          | PASS   |
|                                                                                                | 5865            | 18.916              | 20.92                 | N/A          | PASS   |
|                                                                                                | 5885            | 18.934              | 20.89                 | N/A          | PASS   |
| 802.11ax40                                                                                     | 5835            | 37.780              | 40.12                 | N/A          | PASS   |
|                                                                                                | 5875            | 37.669              | 40.37                 | N/A          | PASS   |
| 802.11ax80                                                                                     | 5855            | 77.116              | 81.02                 | N/A          | PASS   |
| 802.11ax160                                                                                    | 5815            | 156.066             | 165.1                 | N/A          | PASS   |

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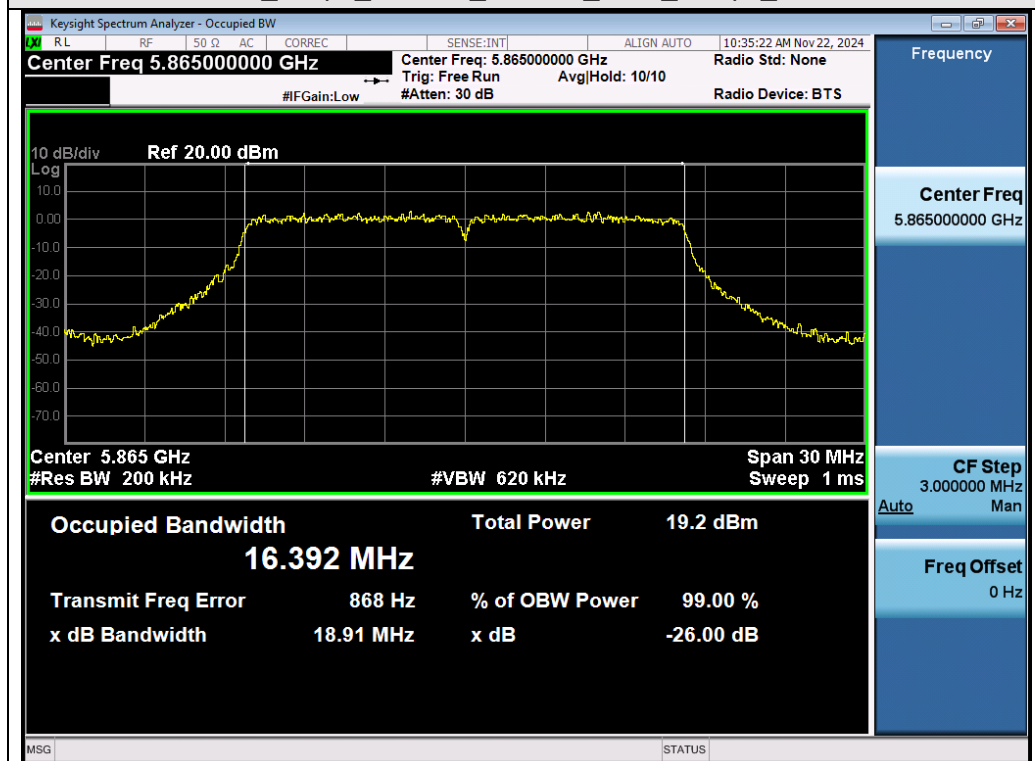
| Test Data of Occupied Bandwidth and -26dB Bandwidth for UNII-3/4 Band (5.725-5.895GHz)-Chain B |                 |                     |                     |              |        |
|------------------------------------------------------------------------------------------------|-----------------|---------------------|---------------------|--------------|--------|
| Mode                                                                                           | Frequency (MHz) | 99% Bandwidth (MHz) | DTS Bandwidth (MHz) | Limits (MHz) | Result |
| 802.11a                                                                                        | 5845            | 16.363              | 16.378              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 16.359              | 16.333              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 16.350              | 16.370              | $\geq 0.5$   | PASS   |
| 802.11n20                                                                                      | 5845            | 17.577              | 17.666              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 17.572              | 17.577              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 17.563              | 17.567              | $\geq 0.5$   | PASS   |
| 802.11n40                                                                                      | 5835            | 36.047              | 36.348              | $\geq 0.5$   | PASS   |
|                                                                                                | 5875            | 36.029              | 36.019              | $\geq 0.5$   | PASS   |
| 802.11ac20                                                                                     | 5845            | 17.570              | 17.613              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 17.584              | 17.615              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 17.585              | 17.626              | $\geq 0.5$   | PASS   |
| 802.11ac40                                                                                     | 5835            | 36.096              | 36.446              | $\geq 0.5$   | PASS   |
|                                                                                                | 5875            | 36.080              | 34.289              | $\geq 0.5$   | PASS   |
| 802.11ac80                                                                                     | 5855            | 75.480              | 72.769              | $\geq 0.5$   | PASS   |
| 802.11ac160                                                                                    | 5815            | 154.37              | 151.973             | $\geq 0.5$   | PASS   |
| 802.11ax20                                                                                     | 5845            | 18.890              | 18.885              | $\geq 0.5$   | PASS   |
|                                                                                                | 5865            | 18.915              | 18.491              | $\geq 0.5$   | PASS   |
|                                                                                                | 5885            | 18.919              | 18.531              | $\geq 0.5$   | PASS   |
| 802.11ax40                                                                                     | 5835            | 37.695              | 37.599              | $\geq 0.5$   | PASS   |
|                                                                                                | 5875            | 37.680              | 37.698              | $\geq 0.5$   | PASS   |
| 802.11ax80                                                                                     | 5855            | 77.155              | 77.885              | $\geq 0.5$   | PASS   |
| 802.11ax160                                                                                    | 5815            | 155.93              | 156.713             | $\geq 0.5$   | PASS   |

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### Test Graphs of Occupied Bandwidth and -26dB Bandwidth for UNII-3/4 Band (5.725-5.895GHz)

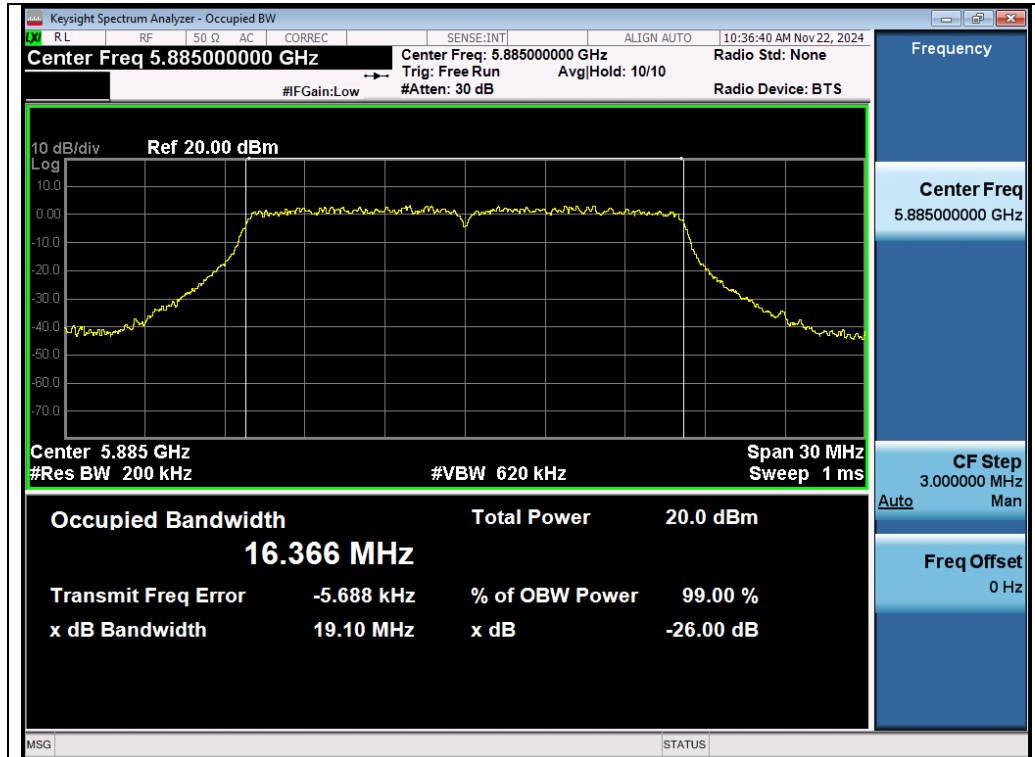


Test\_Graph\_802.11a\_Chain A\_5845\_6Mbps\_OBW

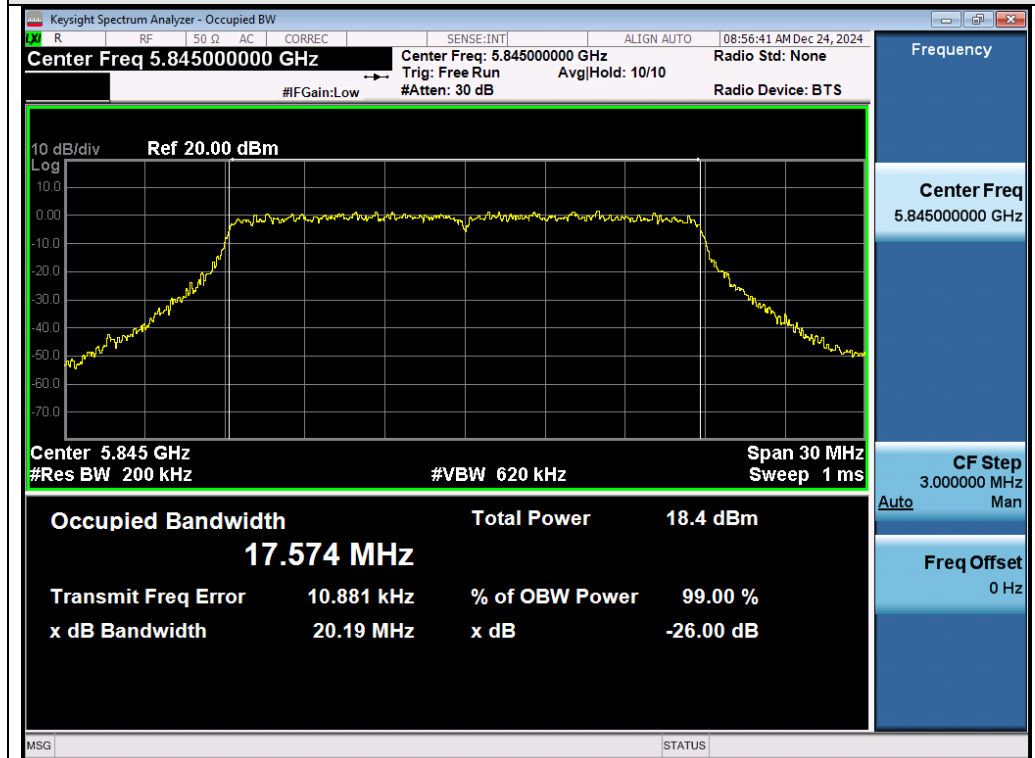


Test\_Graph\_802.11a\_Chain A\_5865\_6Mbps\_OBW

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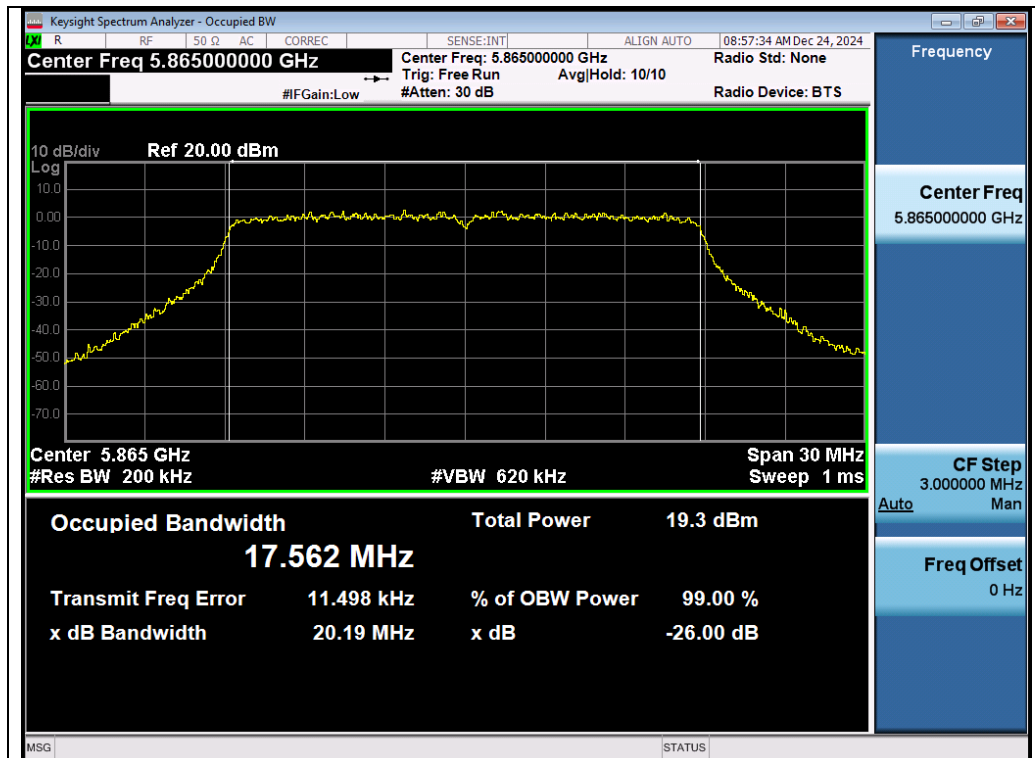


Test\_Graph\_802.11a\_Chain A\_5885\_6Mbps\_OBW

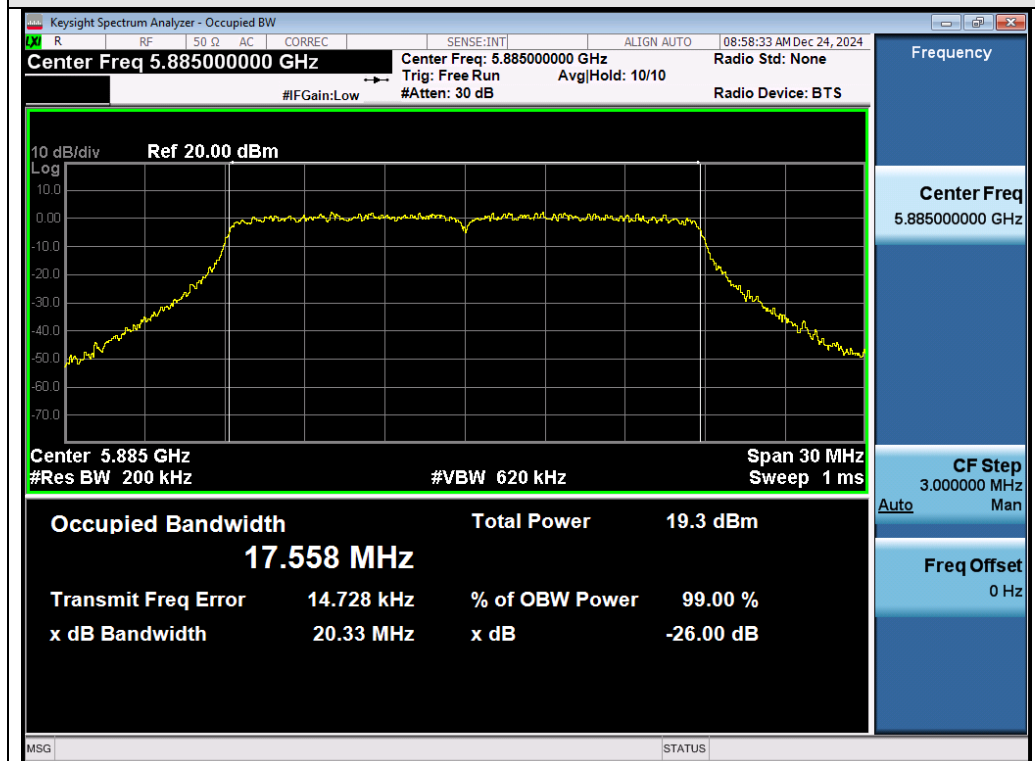


Test\_Graph\_802.11n20\_Chain A\_5845\_MCS0\_OBW

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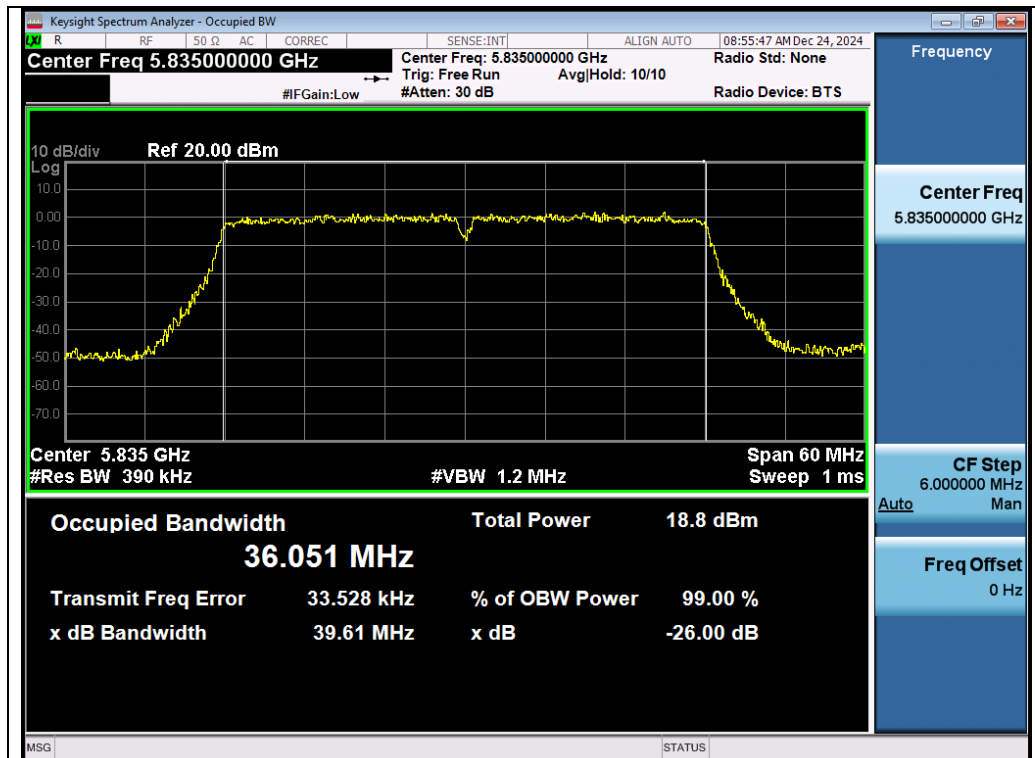


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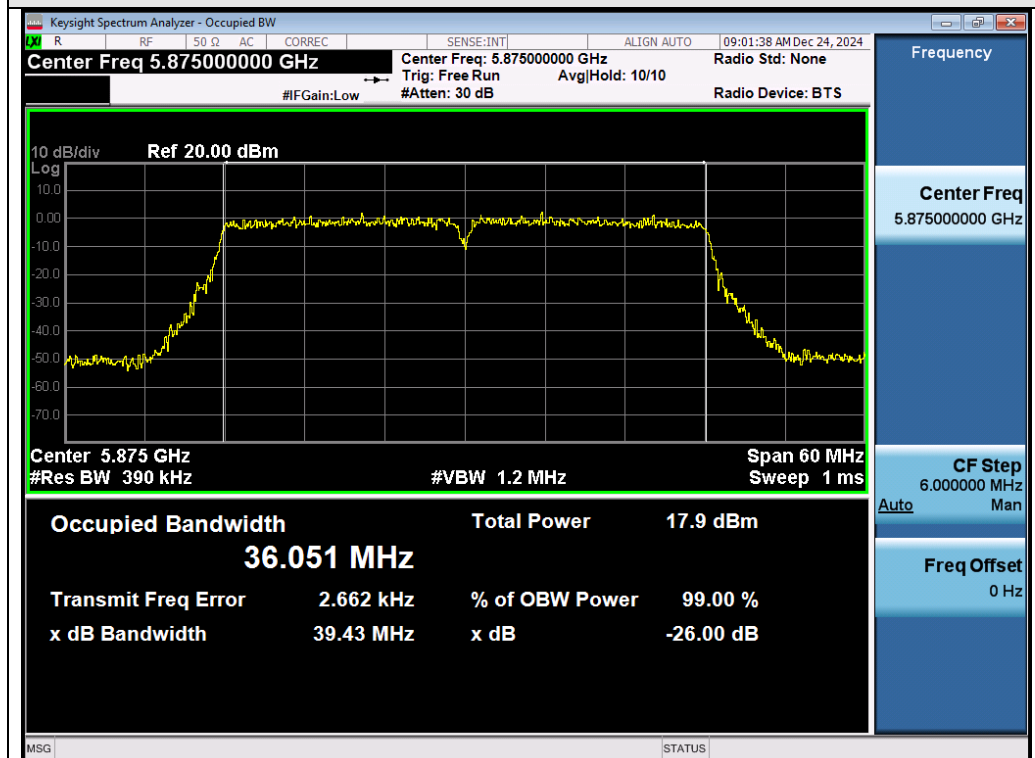


Test\_Graph\_802.11n20\_Chain A\_5885\_MCS0\_OBW

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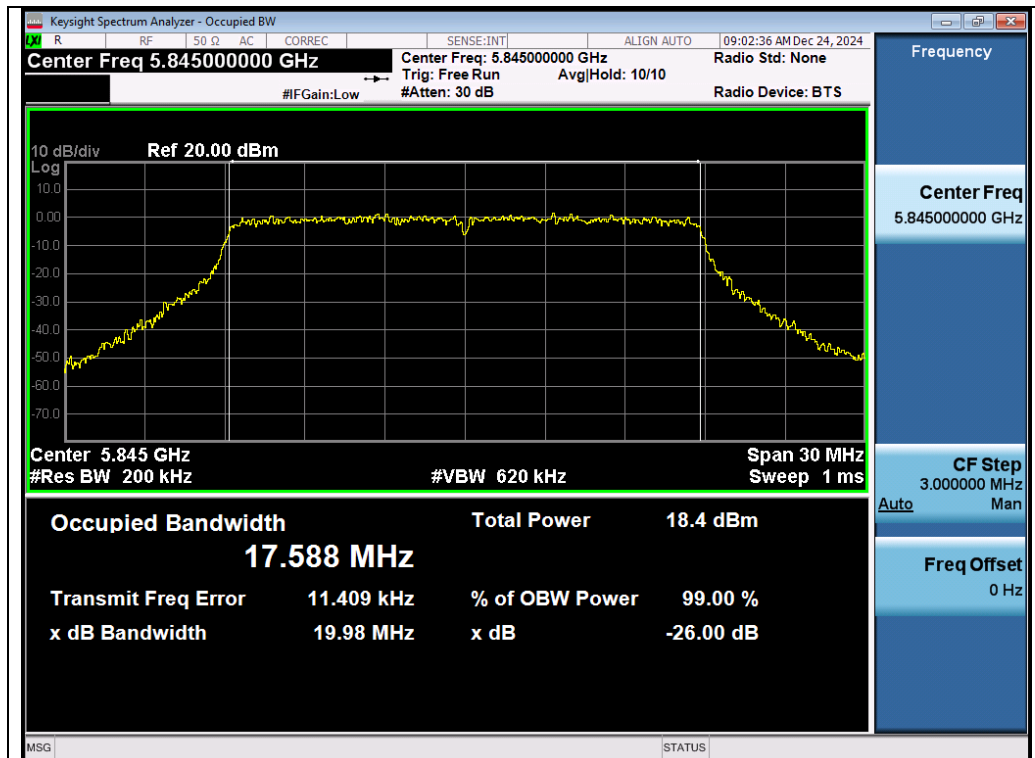


Test\_Graph\_802.11n40\_Chain A\_5835\_MCS0\_OBW

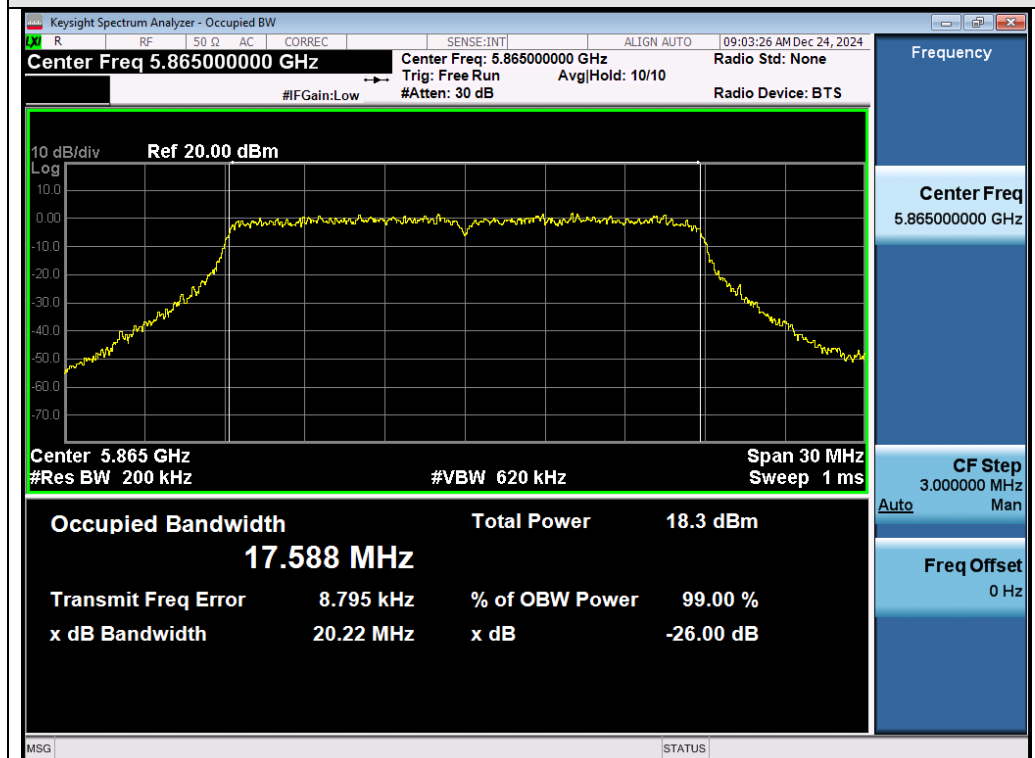


Test\_Graph\_802.11n40\_Chain A\_5875\_MCS0\_OBW

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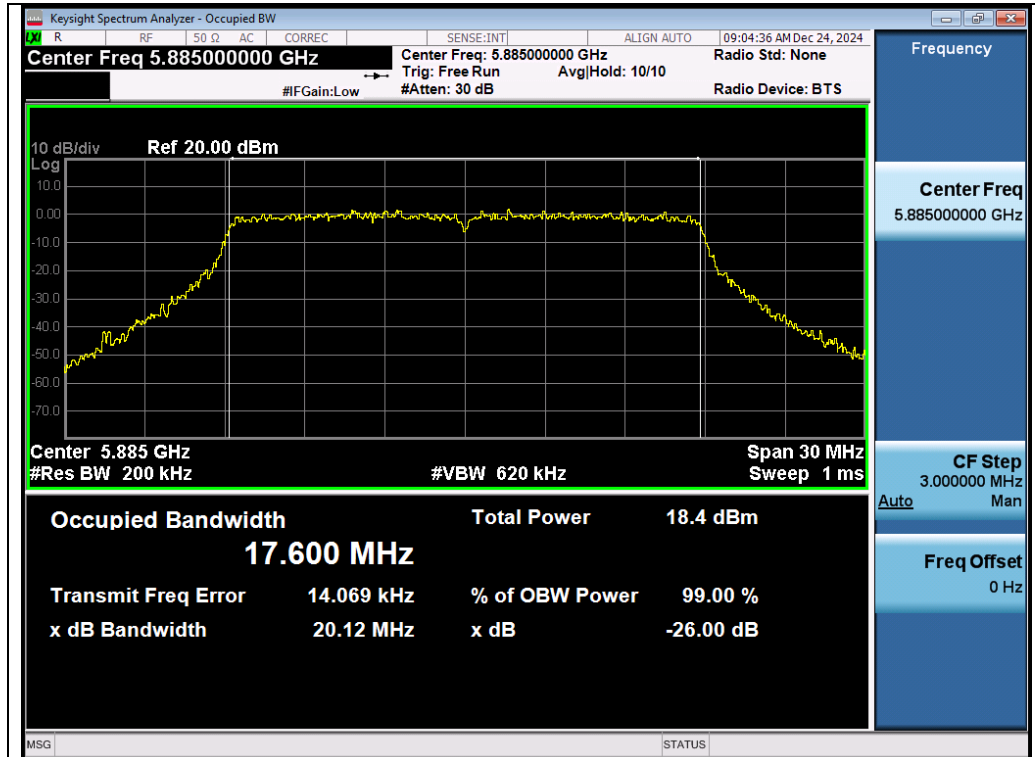


Test\_Graph\_802.11ac20\_Chain A\_5845\_MCS0\_OBW

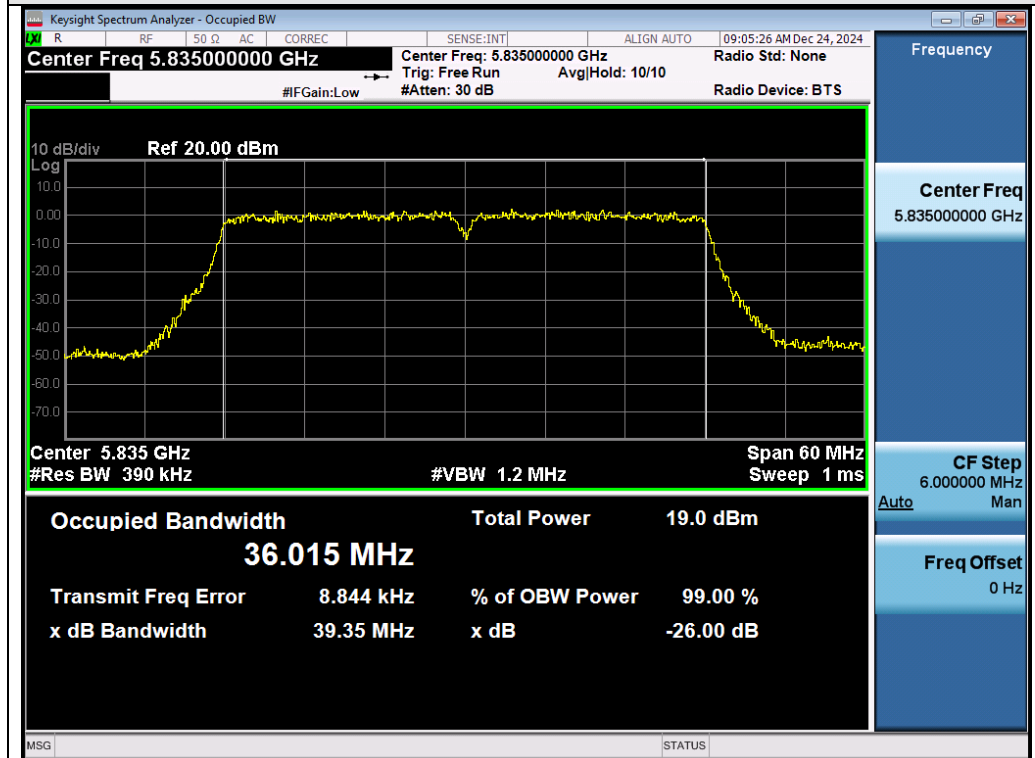


Test\_Graph\_802.11ac20\_Chain A\_5865\_MCS0\_OBW

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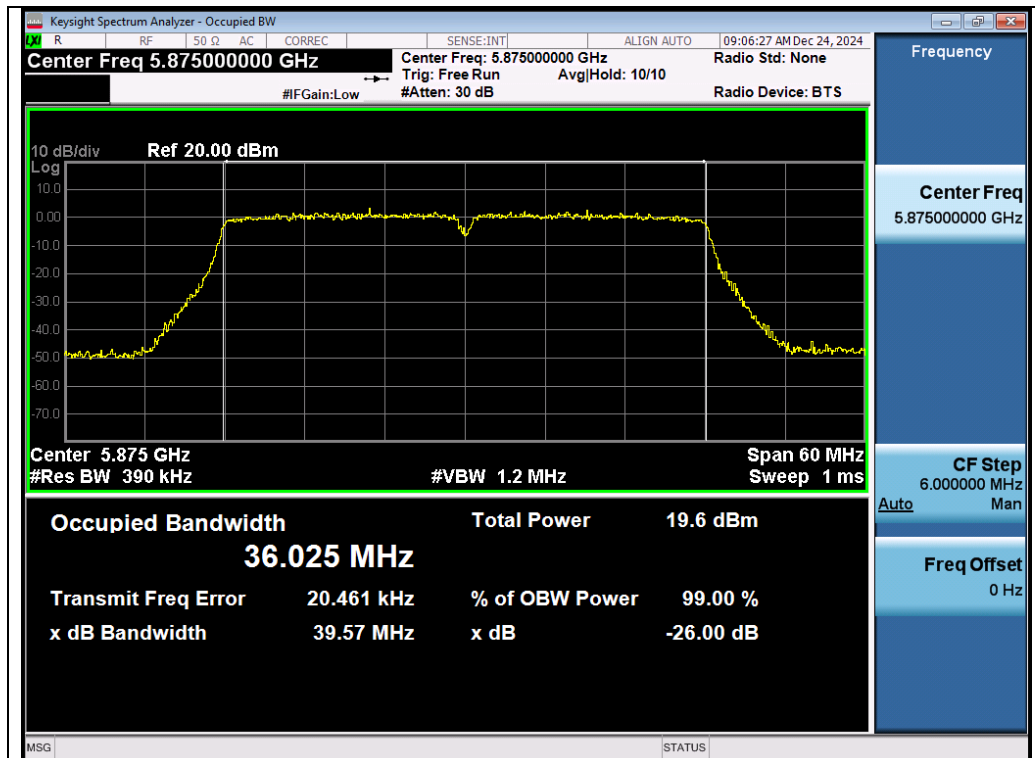


Test\_Graph\_802.11ac20\_Chain A\_5885\_MCS0\_OBW

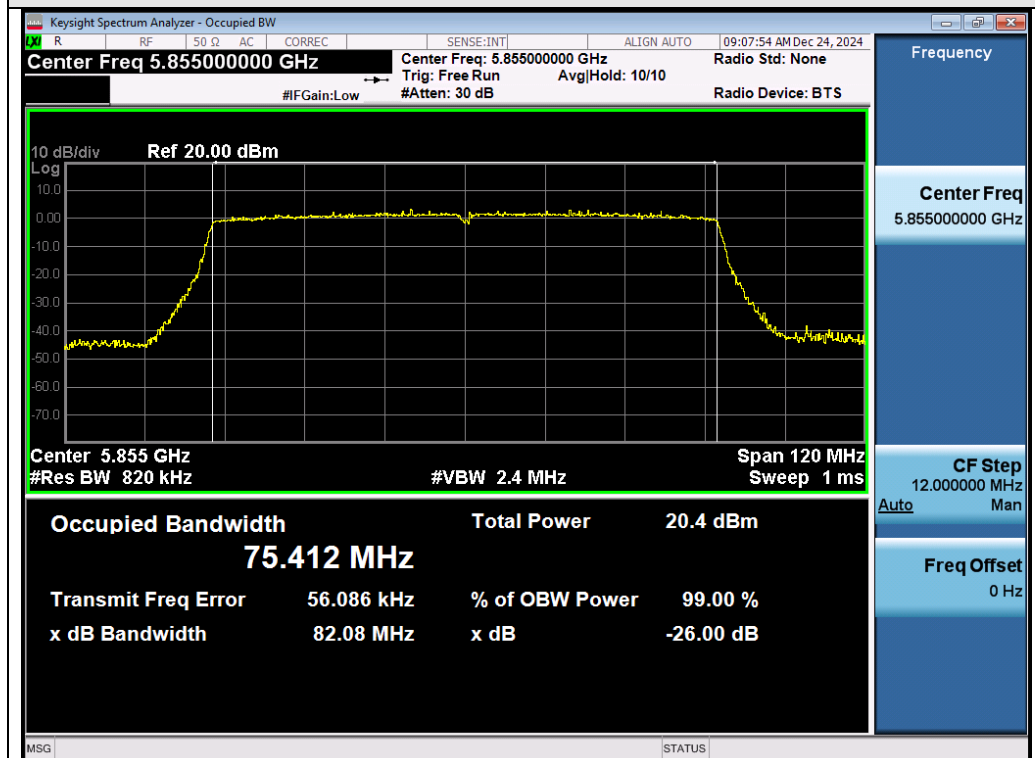


Test\_Graph\_802.11ac40\_Chain A\_5835\_MCS0\_OBW

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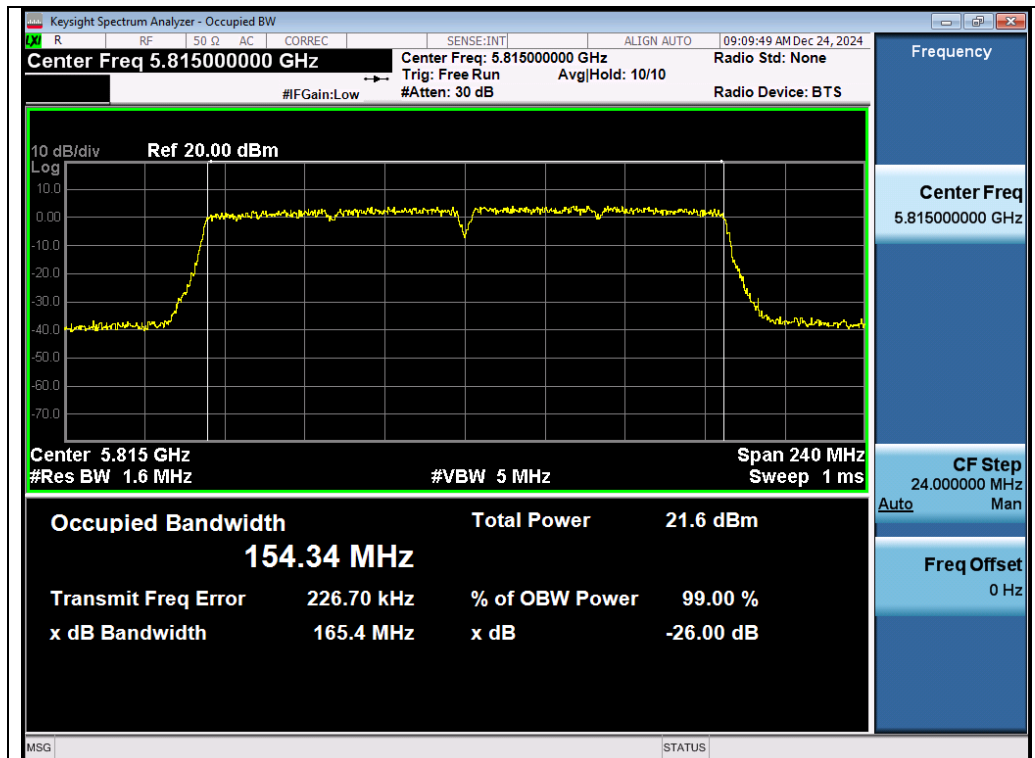
Test\_Graph\_802.11ac40\_Chain A\_5875\_MCS0\_OBW



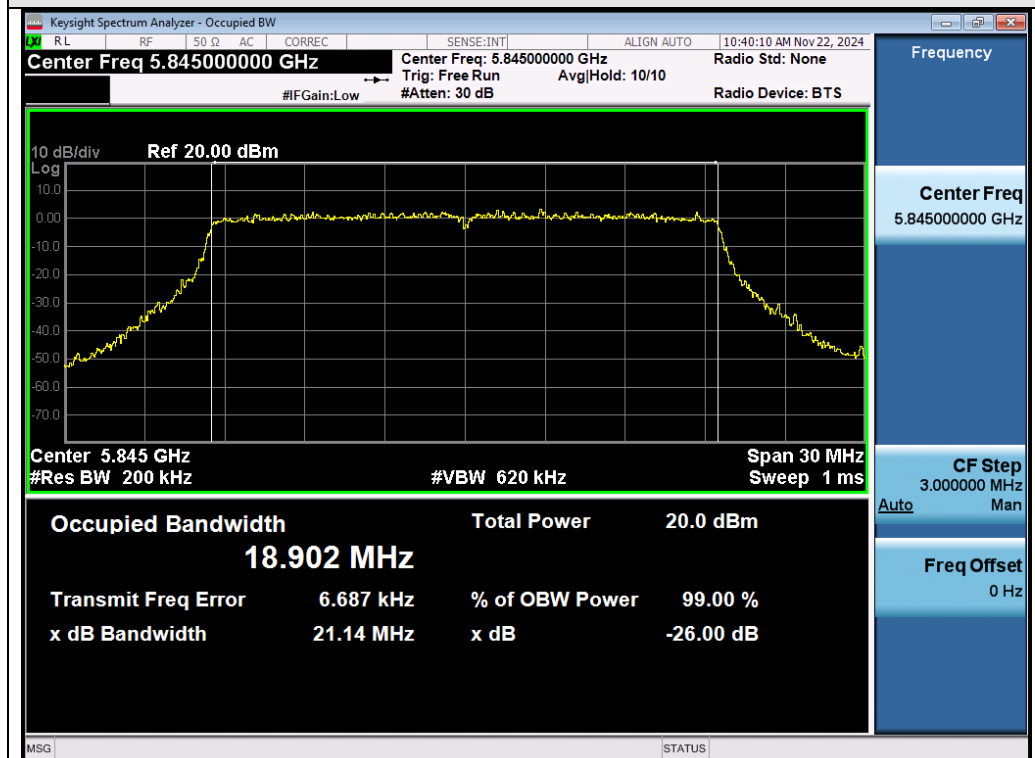
Test\_Graph\_802.11ac80\_Chain A\_5855\_MCS0\_OBW

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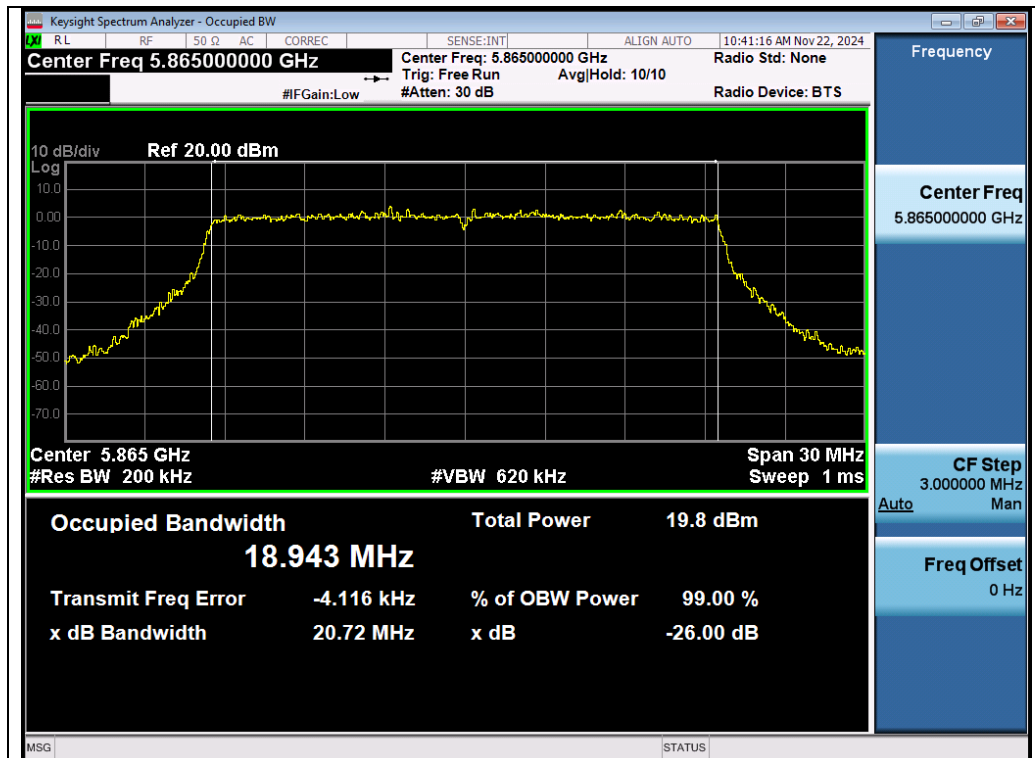


Test\_Graph\_802.11ac160\_Chain A\_5815\_MCS0\_OBW

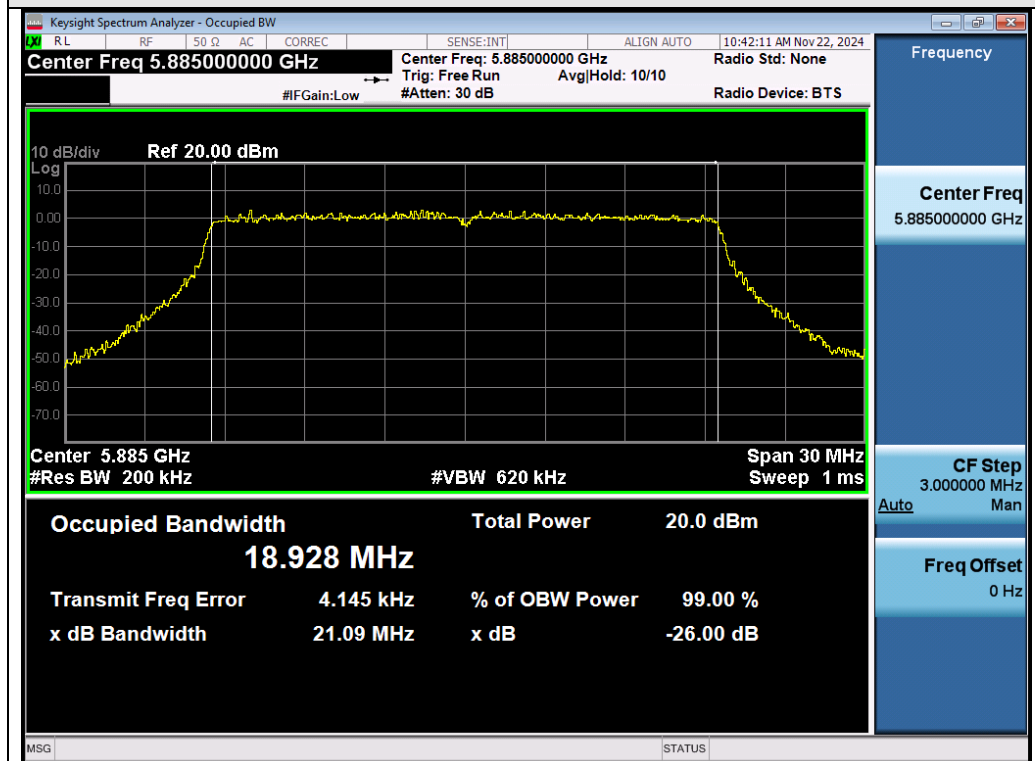


Test\_Graph\_802.11ax20\_Chain A\_5845\_MCS0\_OBW

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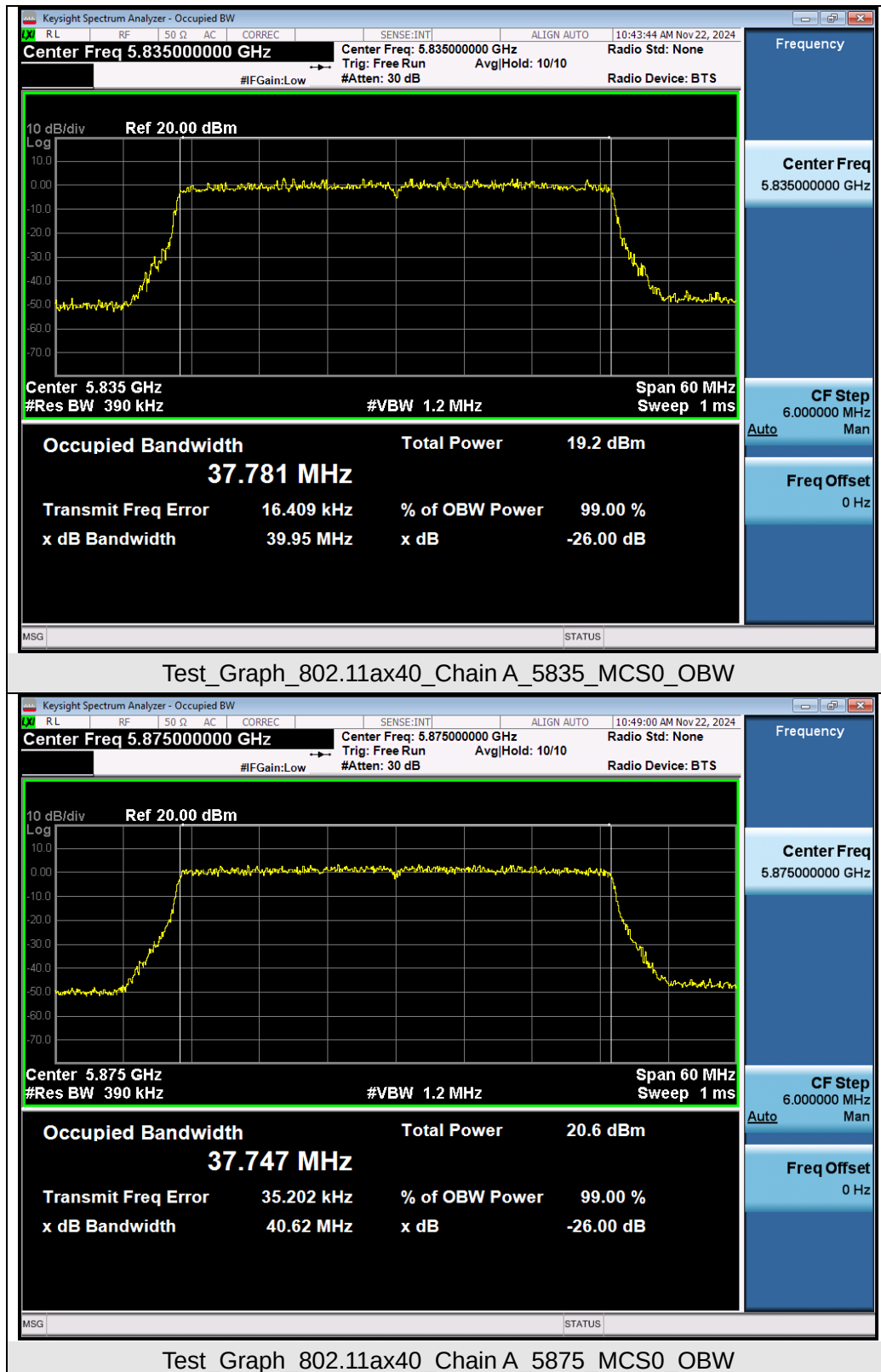
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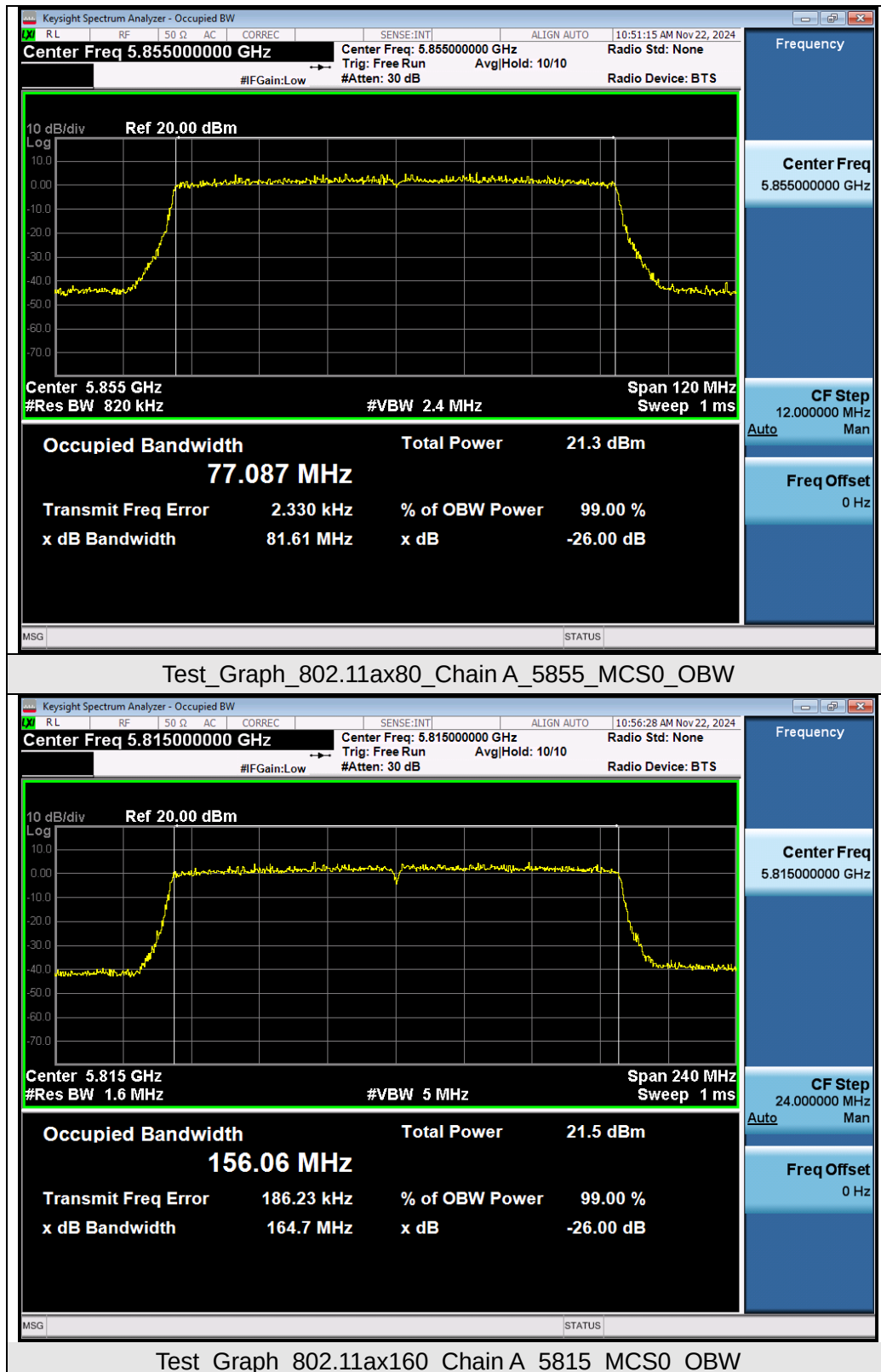
Test\_Graph\_802.11ax20\_Chain A\_5885\_MCS0\_OBW

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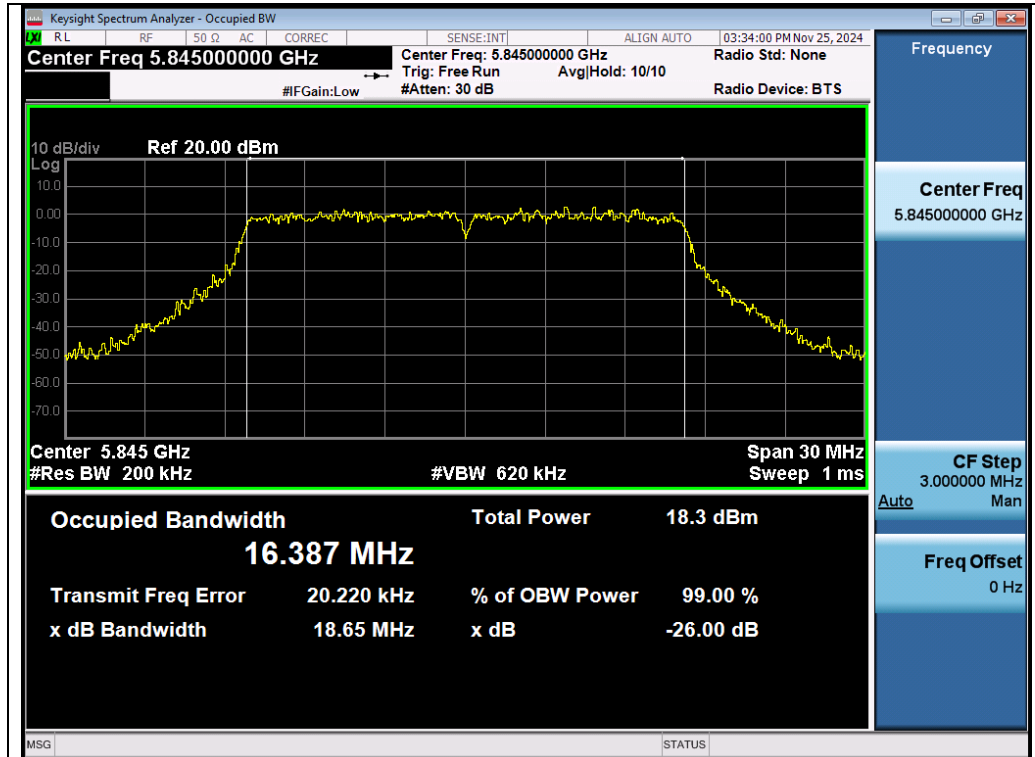
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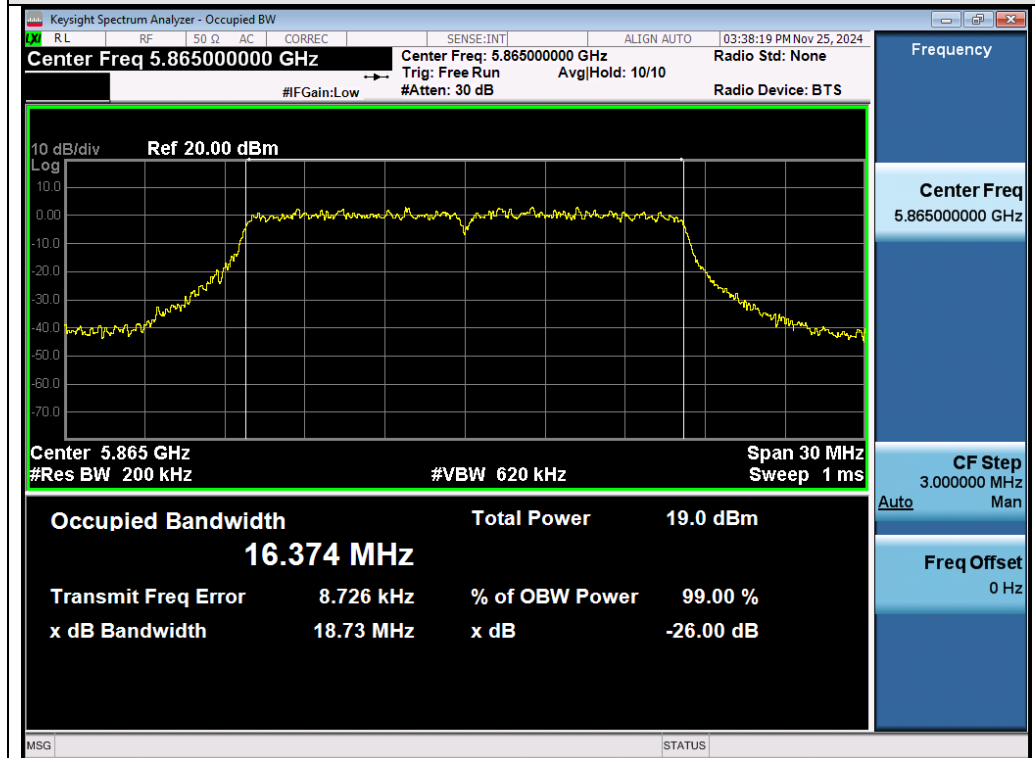
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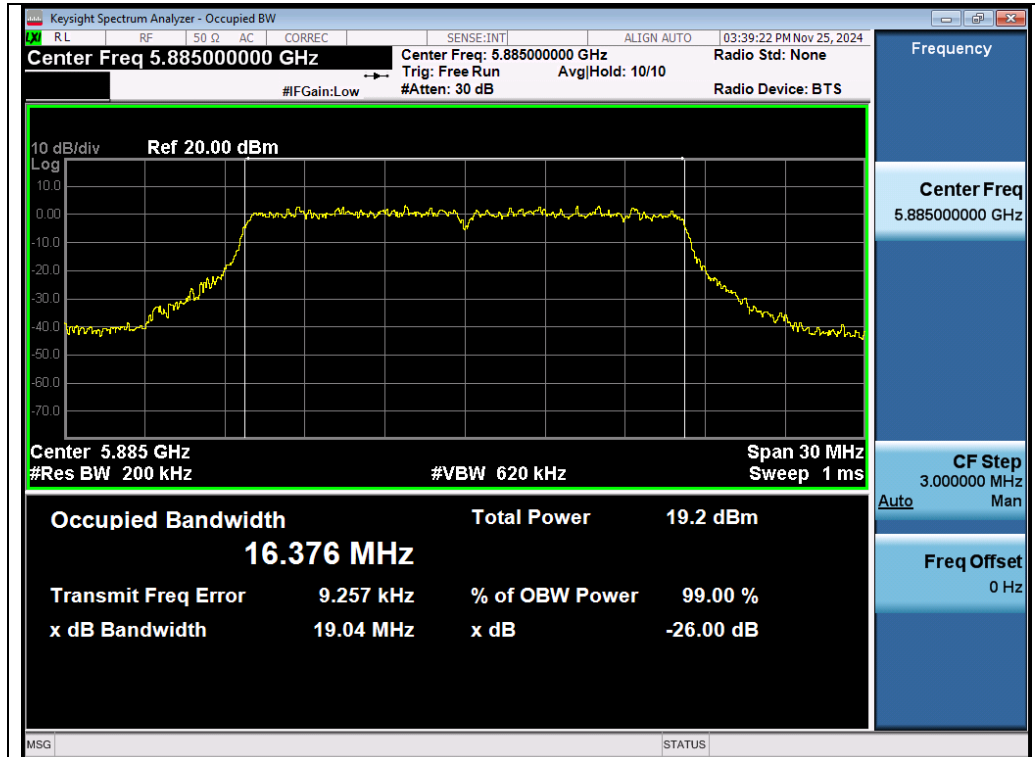


Test\_Graph\_802.11a\_Chain B\_5845\_6Mbps\_OBW

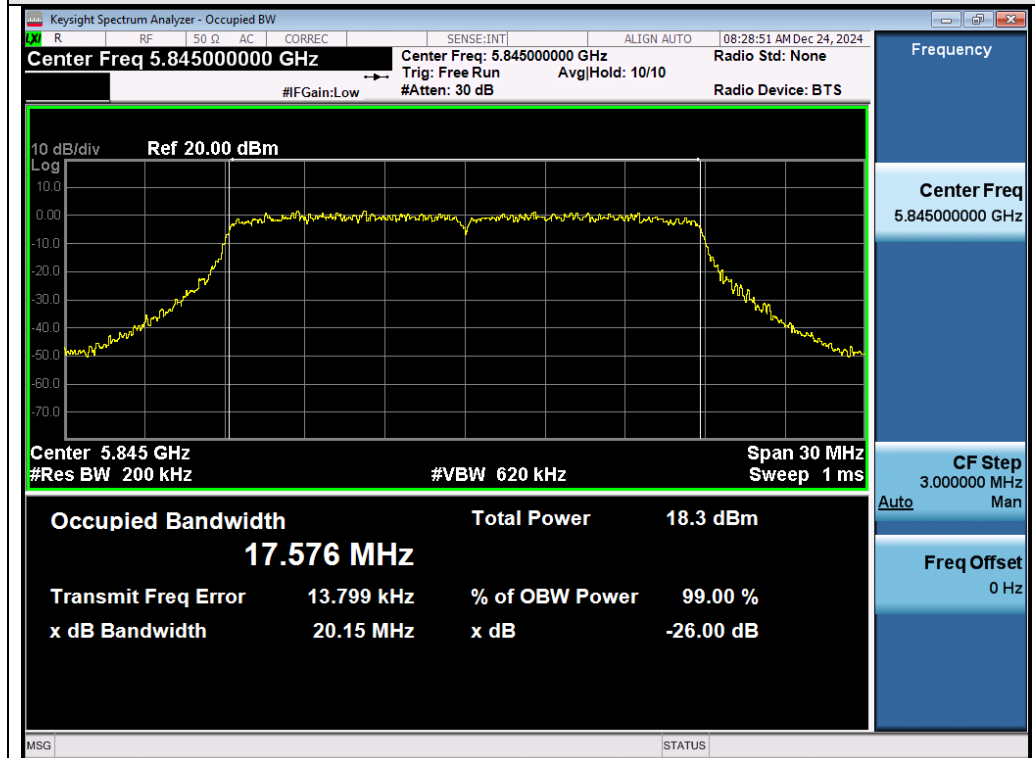


Test\_Graph\_802.11a\_Chain B\_5865\_6Mbps\_OBW

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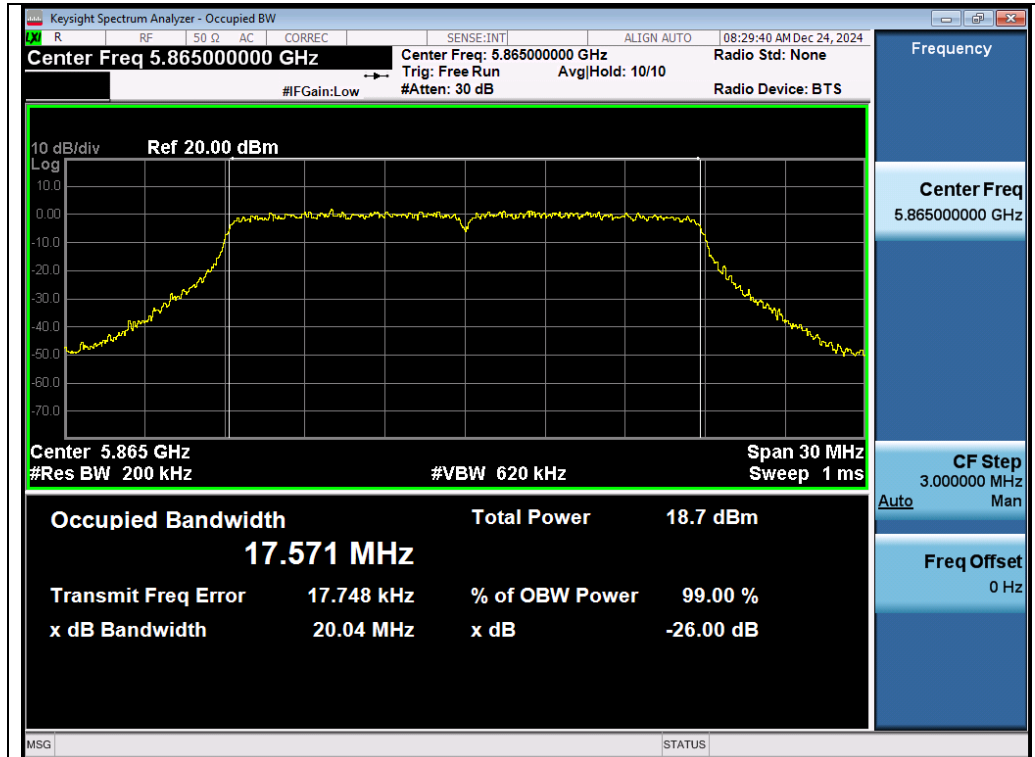


Test\_Graph\_802.11a\_Chain B\_5885\_6Mbps\_OBW

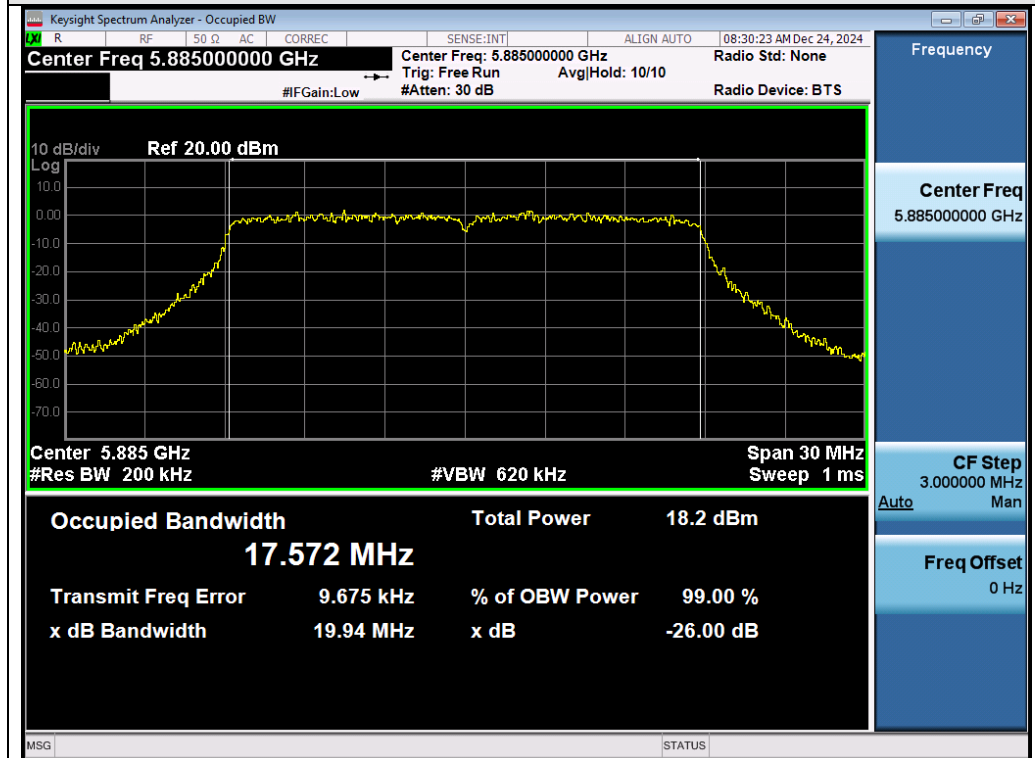


Test\_Graph\_802.11n20\_Chain B\_5845\_MCS0\_OBW

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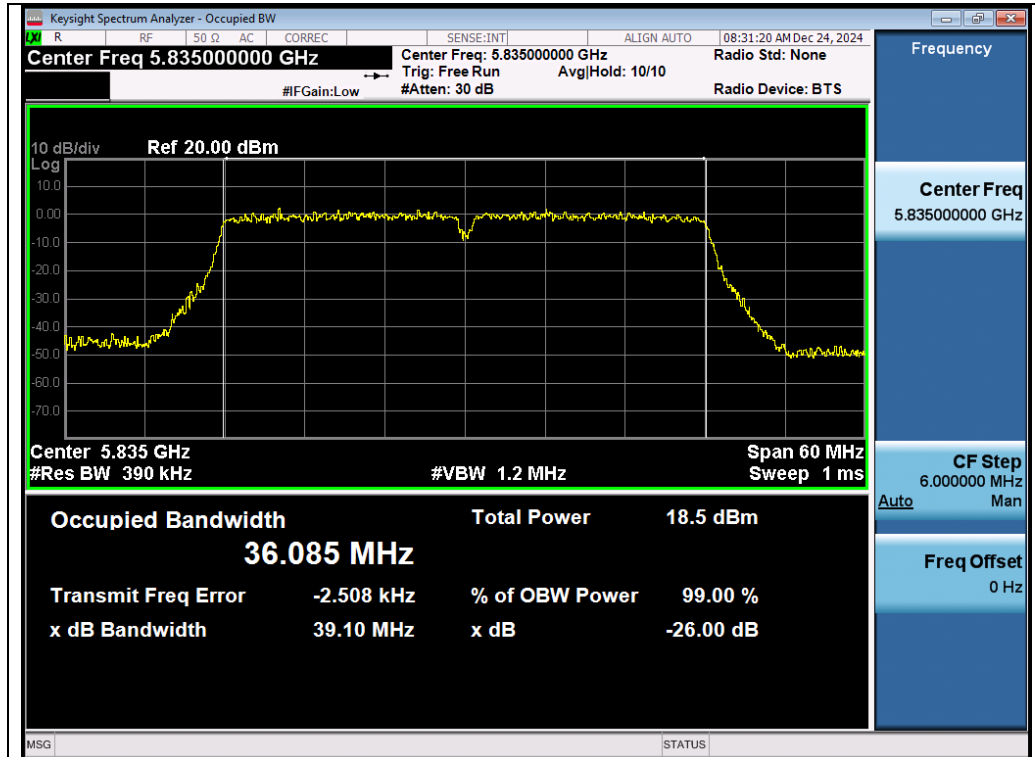


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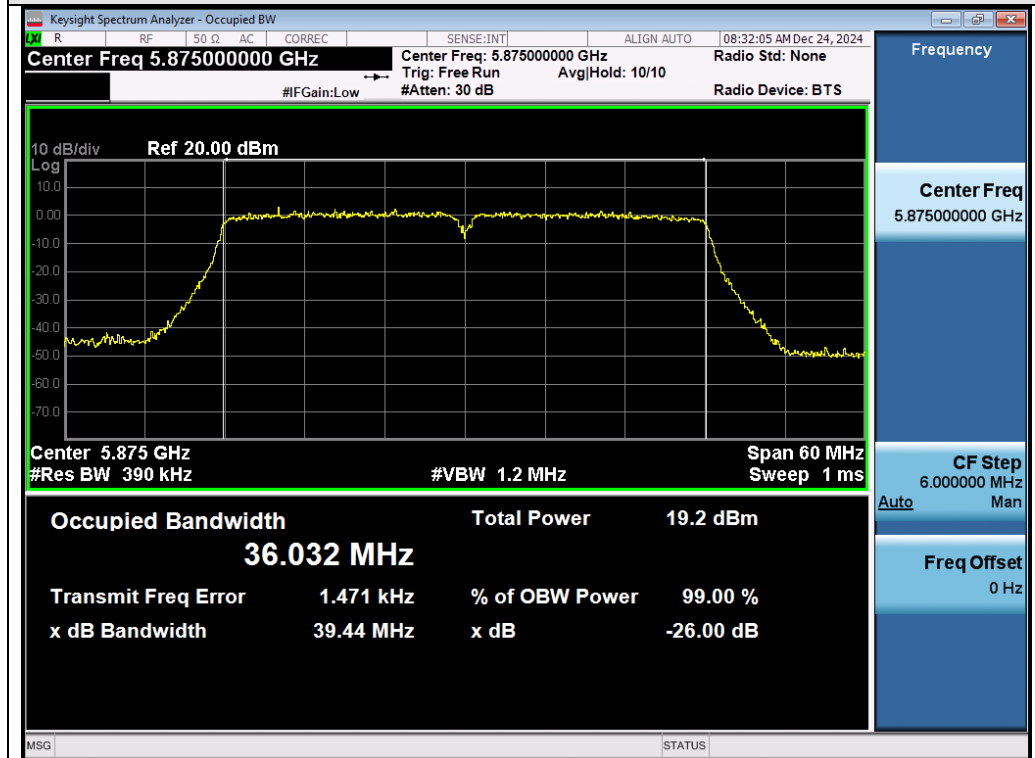


Test\_Graph\_802.11n20\_Chain B\_5885\_MCS0\_OBW

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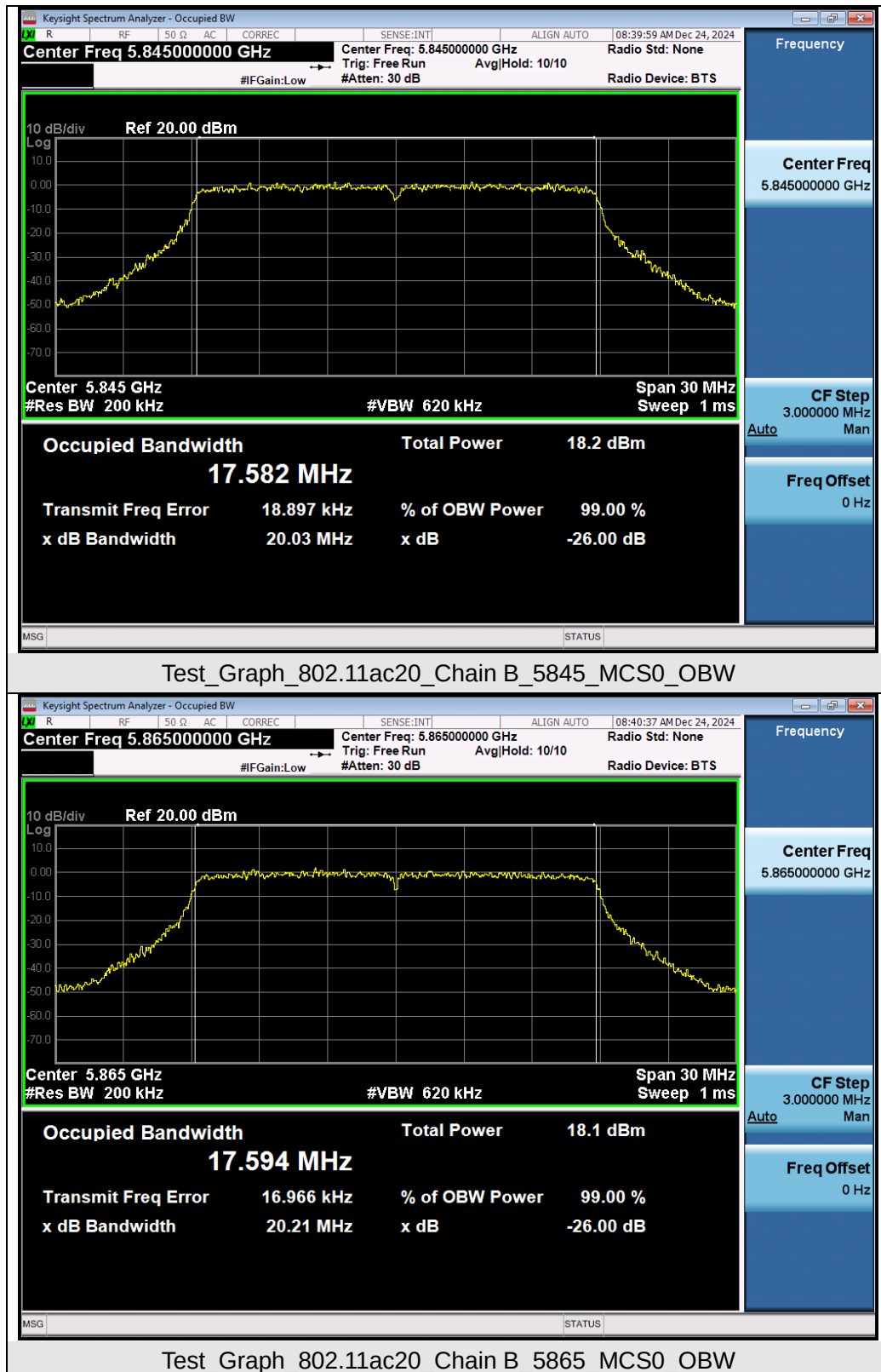


Test\_Graph\_802.11n40\_Chain B\_5835\_MCS0\_OBW

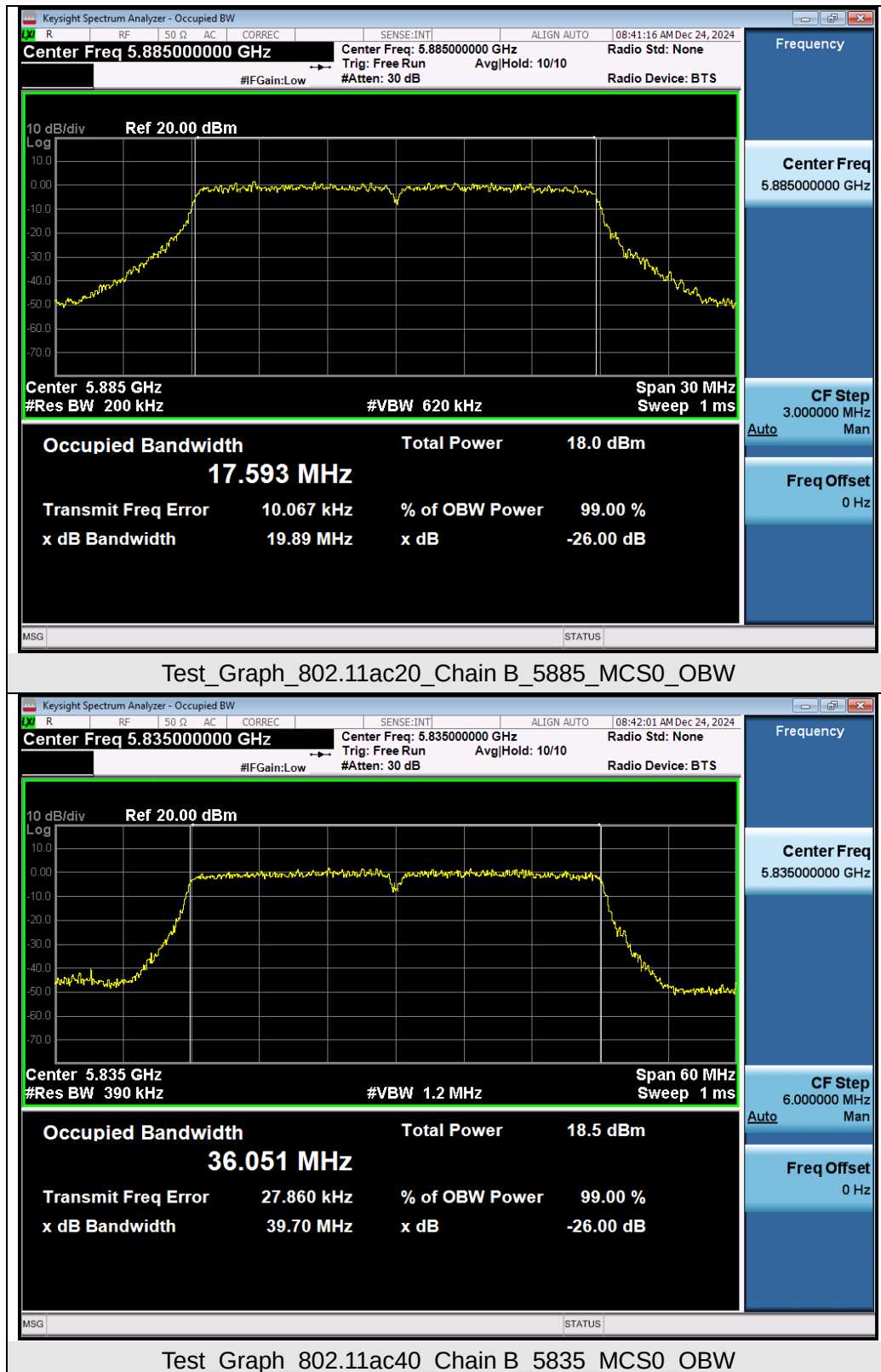


Test\_Graph\_802.11n40\_Chain B\_5875\_MCS0\_OBW

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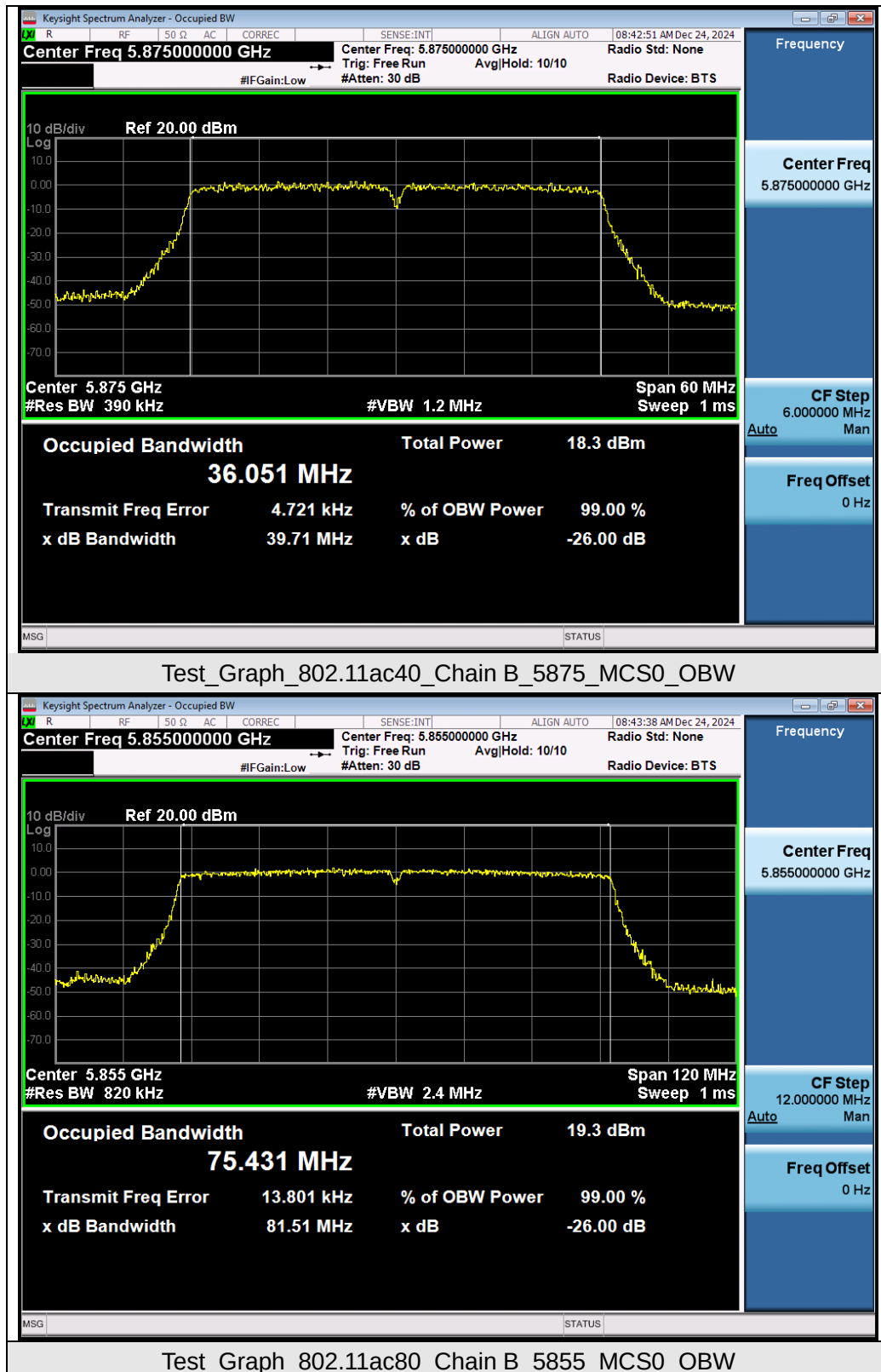


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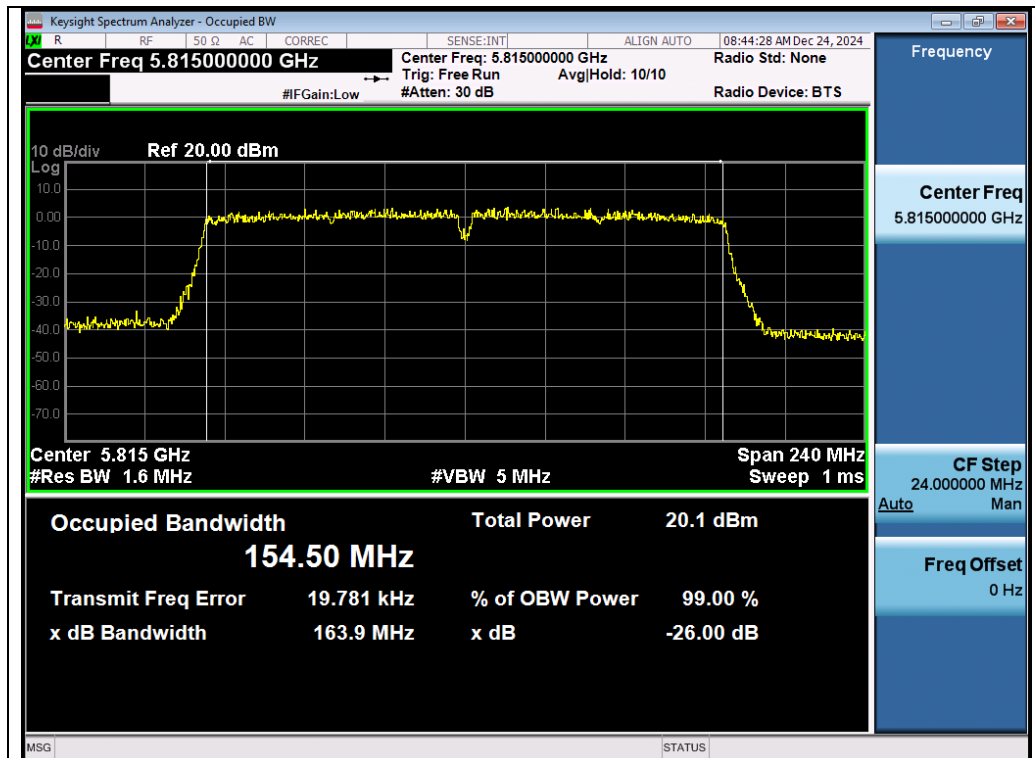
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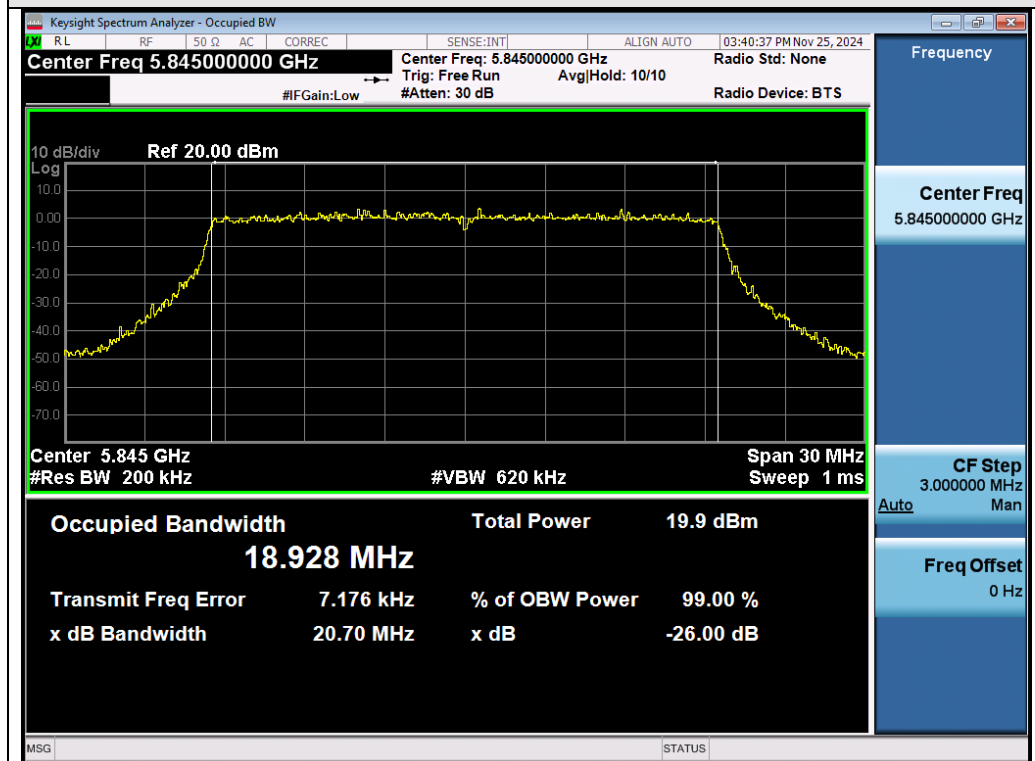


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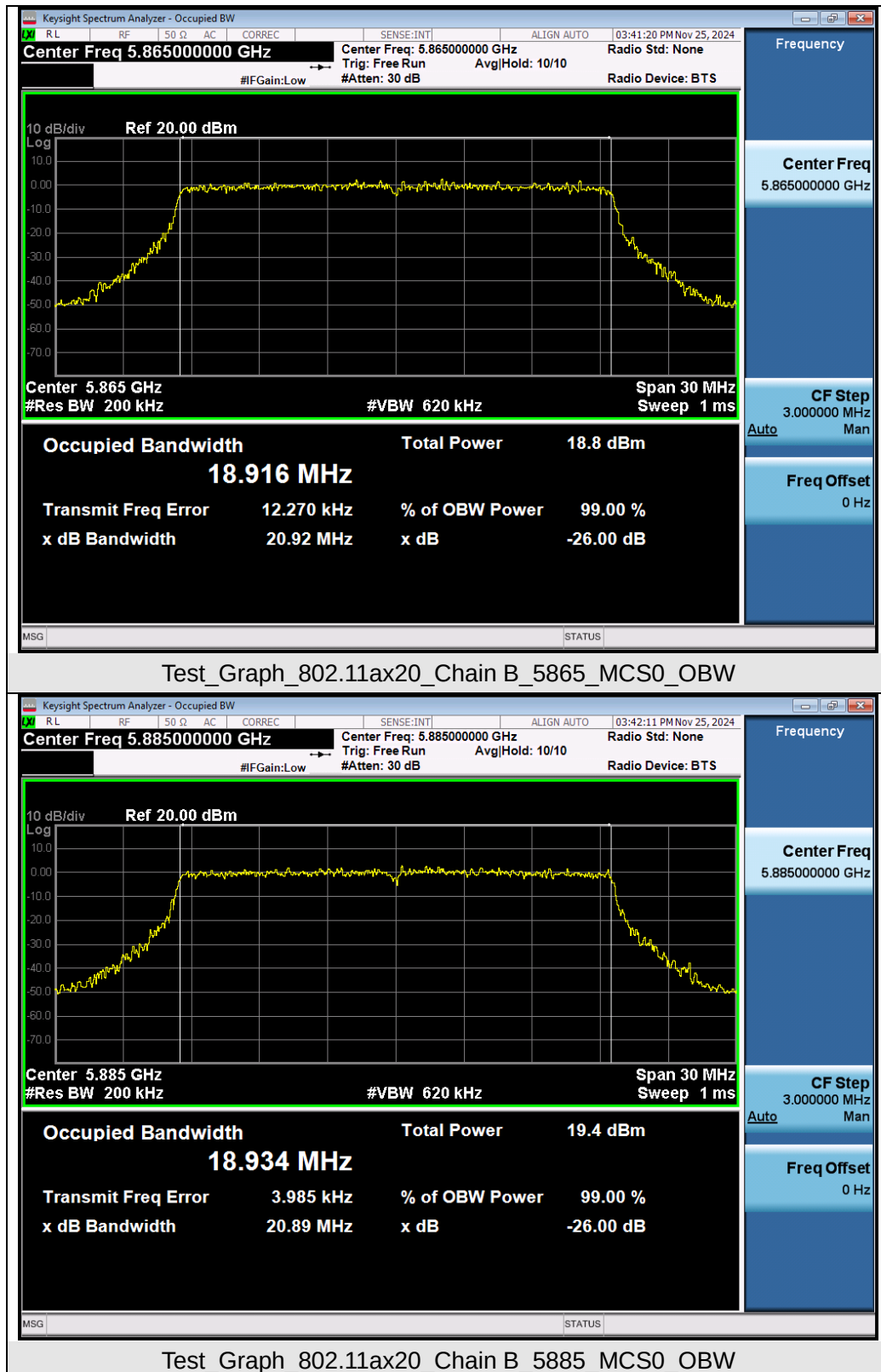


Test\_Graph\_802.11ac160\_Chain B\_5815\_MCS0\_OBW

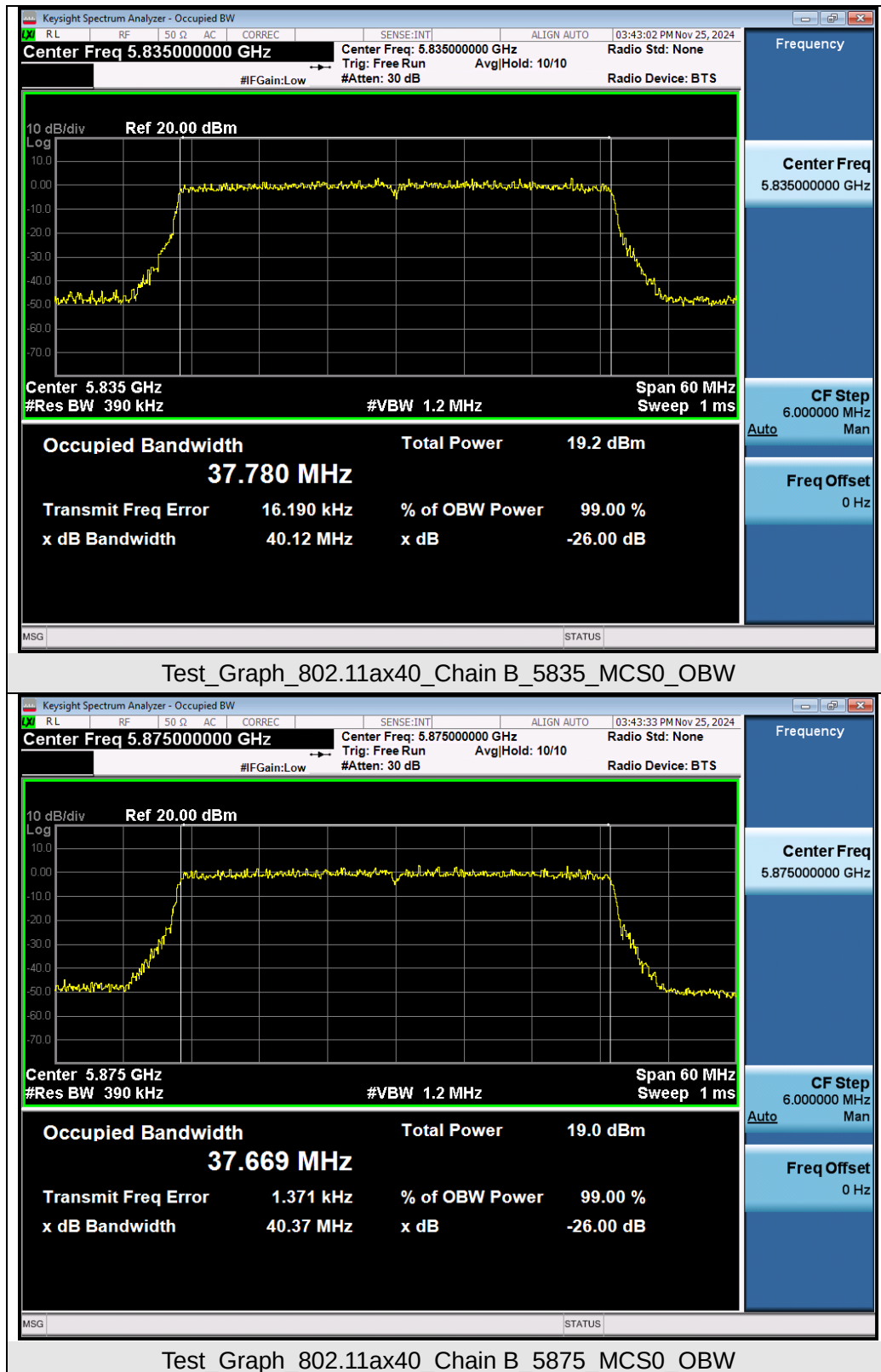


Test\_Graph\_802.11ax20\_Chain B\_5845\_MCS0\_OBW

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