



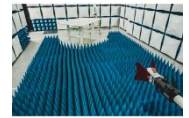
# Element Materials Technology

(formerly PCTEST)

18855 Adams Court, Morgan Hill, CA 95037 USA

Tel. 408.538.5600

<http://www.element.com>



## PART 27 MEASUREMENT REPORT

**Applicant Name:**

Apple Inc.  
One Apple Park Way  
Cupertino, CA 95014  
United States

**Date of Testing:**

12/20/2024 - 7/19/2025

**Test Report Issue Date:**

8/6/2025

**Test Site/Location:**

Element Materials Technology, Morgan Hill, CA, USA

**Test Report Serial No.:**

1C2503270037-03.BCG

**FCC ID:**

**BCG-A3328**

**APPLICANT:**

**Apple Inc.**

**Application Type:**

Certification

**Model:**

A3328, A3329

**EUT Type:**

Watch

**FCC Classification:**

PCS Licensed Transmitter Worn on Body (PCT)

**FCC Rule Part:**

27

**Test Procedure(s):**

ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

RJ Ortanez  
Executive Vice President




|  |  |                           |  |
|--|--|---------------------------|--|
| <b>FCC ID:</b> BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>            |                           | <b>Approved by:</b><br>Technical Manager |
| <b>Test Report S/N:</b><br>1C2503270037-03.BCG | <b>Test Dates:</b><br>12/20/2024 - 7/19/2025 | <b>EUT Type:</b><br>Watch | Page 1 of 202                            |

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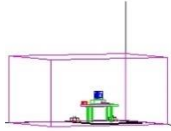
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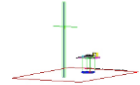
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|---|---|----------------------------|-----------------------------------|
| FCC ID: BCG-A3328                       |  | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
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## PART 27 MEASUREMENT REPORT



| Mode        | Bandwidth | Modulation | Tx Frequency Range [MHz] | OBW [MHz] | ERP             |                  | Emission Designator |
|-------------|-----------|------------|--------------------------|-----------|-----------------|------------------|---------------------|
|             |           |            |                          |           | Max. Power [mW] | Max. Power [dBm] |                     |
| LTE Band 71 | 5 MHz     | QPSK       | 665.5 - 695.5            | 4.5480    | 0.248           | -6.06            | 4M55G7W             |
|             |           | 16QAM      | 665.5 - 695.5            | 4.5253    | 0.203           | -6.93            | 4M53D7W             |
|             | 10 MHz    | QPSK       | 668.0 - 693.0            | 9.0134    | 0.254           | -5.96            | 9M01G7W             |
|             |           | 16QAM      | 668.0 - 693.0            | 5.0855    | 0.209           | -6.79            | 5M09D7W             |
|             | 15 MHz    | QPSK       | 670.5 - 690.5            | 13.5168   | 0.252           | -5.99            | 13M5G7W             |
|             |           | 16QAM      | 670.5 - 690.5            | 5.3621    | 0.205           | -6.89            | 5M36D7W             |
|             | 20 MHz    | QPSK       | 673.0 - 688.0            | 18.0108   | 0.251           | -6.01            | 18M0G7W             |
|             |           | 16QAM      | 673.0 - 688.0            | 5.5846    | 0.210           | -6.77            | 5M58D7W             |
| LTE Band 12 | 1.4 MHz   | QPSK       | 699.7 - 715.3            | 1.0966    | 0.303           | -5.18            | 1M10G7W             |
|             |           | 16QAM      | 699.7 - 715.3            | 1.1095    | 0.251           | -6.00            | 1M11D7W             |
|             | 3 MHz     | QPSK       | 700.5 - 714.5            | 2.7123    | 0.294           | -5.32            | 2M71G7W             |
|             |           | 16QAM      | 700.5 - 714.5            | 2.7113    | 0.243           | -6.14            | 2M71D7W             |
|             | 5 MHz     | QPSK       | 701.5 - 713.5            | 4.5460    | 0.296           | -5.28            | 4M55G7W             |
|             |           | 16QAM      | 701.5 - 713.5            | 4.5191    | 0.248           | -6.05            | 4M52D7W             |
|             | 10 MHz    | QPSK       | 704.0 - 711.0            | 9.0215    | 0.294           | -5.32            | 9M02G7W             |
|             |           | 16QAM      | 704.0 - 711.0            | 5.0790    | 0.243           | -6.14            | 5M08D7W             |
| LTE Band 17 | 5 MHz     | QPSK       | 706.5 - 713.5            | 4.5460    | 0.294           | -5.32            | 4M55G7W             |
|             |           | 16QAM      | 706.5 - 713.5            | 4.5191    | 0.244           | -6.12            | 4M52D7W             |
|             | 10 MHz    | QPSK       | 709.0 - 711.0            | 9.0215    | 0.288           | -5.41            | 9M02G7W             |
|             |           | 16QAM      | 709.0 - 711.0            | 5.0790    | 0.242           | -6.17            | 5M08D7W             |
| LTE Band 13 | 5 MHz     | QPSK       | 779.5 - 784.5            | 4.5478    | 0.431           | -3.66            | 4M55G7W             |
|             |           | 16QAM      | 779.5 - 784.5            | 4.5211    | 0.385           | -4.14            | 4M52D7W             |
|             | 10 MHz    | QPSK       | 782.0                    | 9.0085    | 0.427           | -3.70            | 9M01G7W             |
|             |           | 16QAM      | 782.0                    | 5.0905    | 0.349           | -4.57            | 5M09D7W             |
| NR Band n71 | 5 MHz     | TT/2 BPSK  | 665.5 - 695.5            | 4.4803    | 0.264           | -5.78            | 4M48G7W             |
|             |           | QPSK       | 665.5 - 695.5            | 4.4753    | 0.266           | -5.75            | 4M48G7W             |
|             |           | 16QAM      | 665.5 - 695.5            | 4.4849    | 0.208           | -6.81            | 4M48D7W             |
|             |           | 64QAM      | 665.5 - 695.5            | 4.4917    | 0.167           | -7.76            | 4M49D7W             |
|             | 10 MHz    | TT/2 BPSK  | 668.0 - 693.0            | 8.9691    | 0.262           | -5.81            | 8M97G7W             |
|             |           | QPSK       | 668.0 - 693.0            | 9.2934    | 0.266           | -5.75            | 9M29G7W             |
|             |           | 16QAM      | 668.0 - 693.0            | 9.2987    | 0.207           | -6.85            | 9M30D7W             |
|             |           | 64QAM      | 668.0 - 693.0            | 9.2653    | 0.165           | -7.83            | 9M27D7W             |
|             | 15 MHz    | TT/2 BPSK  | 670.5 - 690.5            | 13.4060   | 0.266           | -5.75            | 13M4G7W             |
|             |           | QPSK       | 670.5 - 690.5            | 14.1370   | 0.264           | -5.78            | 14M1G7W             |
|             |           | 16QAM      | 670.5 - 690.5            | 14.1180   | 0.209           | -6.80            | 14M1D7W             |
|             |           | 64QAM      | 670.5 - 690.5            | 14.1800   | 0.168           | -7.75            | 14M2D7W             |
|             | 20 MHz    | TT/2 BPSK  | 673.0 - 688.0            | 17.8590   | 0.259           | -5.86            | 17M9G7W             |
|             |           | QPSK       | 673.0 - 688.0            | 18.9170   | 0.266           | -5.75            | 18M9G7W             |
|             |           | 16QAM      | 673.0 - 688.0            | 18.8740   | 0.211           | -6.75            | 18M9D7W             |
|             |           | 64QAM      | 673.0 - 688.0            | 18.9910   | 0.167           | -7.78            | 19M0D7W             |
| NR Band n12 | 5 MHz     | TT/2 BPSK  | 701.5 - 713.5            | 4.4910    | 0.313           | -5.05            | 4M49G7W             |
|             |           | QPSK       | 701.5 - 713.5            | 4.4814    | 0.312           | -5.06            | 4M48G7W             |
|             |           | 16QAM      | 701.5 - 713.5            | 4.4844    | 0.244           | -6.12            | 4M48D7W             |
|             |           | 64QAM      | 701.5 - 713.5            | 4.4746    | 0.195           | -7.09            | 4M47D7W             |
|             | 10 MHz    | TT/2 BPSK  | 704.0 - 711.0            | 8.9408    | 0.312           | -5.06            | 8M94G7W             |
|             |           | QPSK       | 704.0 - 711.0            | 9.2916    | 0.313           | -5.05            | 9M29G7W             |
|             |           | 16QAM      | 704.0 - 711.0            | 9.3275    | 0.246           | -6.09            | 9M33D7W             |
|             |           | 64QAM      | 704.0 - 711.0            | 9.2495    | 0.197           | -7.06            | 9M25D7W             |
|             | 15 MHz    | TT/2 BPSK  | 706.5 - 708.5            | 13.4600   | 0.310           | -5.09            | 13M5G7W             |
|             |           | QPSK       | 706.5 - 708.5            | 14.0420   | 0.313           | -5.05            | 14M0G7W             |
|             |           | 16QAM      | 706.5 - 708.5            | 14.1150   | 0.248           | -6.05            | 14M1D7W             |
|             |           | 64QAM      | 706.5 - 708.5            | 14.1280   | 0.199           | -7.01            | 14M1D7W             |


Overview Table (<1GHz Band)

|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       |  <b>PART 27 MEASUREMENT REPORT</b> |                    | Approved by:<br>Technical Manager |
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| Mode        | Bandwidth | Modulation | Tx Frequency Range [MHz] | OBW [MHz] | PAR at 0.1% [dB] | EIRP            |                  | Emission Designator |
|-------------|-----------|------------|--------------------------|-----------|------------------|-----------------|------------------|---------------------|
|             |           |            |                          |           |                  | Max. Power [mW] | Max. Power [dBm] |                     |
| LTE Band 4  | 1.4 MHz   | QPSK       | 1710.7 - 1754.3          | 1.0976    | 5.10             | 19.364          | 12.87            | 1M10G7W             |
|             |           | 16QAM      | 1710.7 - 1754.3          | 1.1102    | 5.89             | 16.672          | 12.22            | 1M11D7W             |
|             | 3 MHz     | QPSK       | 1711.5 - 1753.5          | 2.7150    | 5.20             | 18.707          | 12.72            | 2M72G7W             |
|             |           | 16QAM      | 1711.5 - 1753.5          | 2.7122    | 5.89             | 16.788          | 12.25            | 2M71D7W             |
|             | 5 MHz     | QPSK       | 1712.5 - 1752.5          | 4.5450    | 5.28             | 19.231          | 12.84            | 4M55G7W             |
|             |           | 16QAM      | 1712.5 - 1752.5          | 4.5199    | 5.90             | 17.498          | 12.43            | 4M52D7W             |
|             | 10MHz     | QPSK       | 1715.0 - 1750.0          | 9.0200    | 5.34             | 19.055          | 12.80            | 9M02G7W             |
|             |           | 16QAM      | 1715.0 - 1750.0          | 5.0991    | 5.72             | 16.904          | 12.28            | 5M10D7W             |
|             | 15 MHz    | QPSK       | 1717.5 - 1747.5          | 13.5276   | 5.29             | 19.679          | 12.94            | 13M5G7W             |
|             |           | 16QAM      | 1717.5 - 1747.5          | 5.3464    | 5.69             | 16.711          | 12.23            | 5M35D7W             |
|             | 20 MHz    | QPSK       | 1720.0 - 1745.0          | 18.0358   | 5.22             | 19.953          | 13.00            | 18M0G7W             |
|             |           | 16QAM      | 1720.0 - 1745.0          | 5.5200    | 5.67             | 17.179          | 12.35            | 5M52D7W             |
| LTE Band 66 | 1.4 MHz   | QPSK       | 1710.7 - 1779.3          | 1.0976    | 5.14             | 19.275          | 12.85            | 1M10G7W             |
|             |           | 16QAM      | 1710.7 - 1779.3          | 1.1102    | 6.13             | 16.218          | 12.10            | 1M11D7W             |
|             | 3 MHz     | QPSK       | 1711.5 - 1778.5          | 2.7150    | 5.26             | 18.836          | 12.75            | 2M72G7W             |
|             |           | 16QAM      | 1711.5 - 1778.5          | 2.7122    | 5.91             | 16.331          | 12.13            | 2M71D7W             |
|             | 5 MHz     | QPSK       | 1712.5 - 1777.5          | 4.5450    | 5.33             | 18.967          | 12.78            | 4M55G7W             |
|             |           | 16QAM      | 1712.5 - 1777.5          | 4.5199    | 5.91             | 16.982          | 12.30            | 4M52D7W             |
|             | 10 MHz    | QPSK       | 1715.0 - 1775.0          | 9.0200    | 5.38             | 18.880          | 12.76            | 9M02G7W             |
|             |           | 16QAM      | 1715.0 - 1775.0          | 5.0991    | 5.77             | 16.331          | 12.13            | 5M10D7W             |
|             | 15 MHz    | QPSK       | 1717.5 - 1772.5          | 13.5276   | 5.37             | 19.953          | 13.00            | 13M5G7W             |
|             |           | 16QAM      | 1717.5 - 1772.5          | 5.3464    | 5.77             | 16.482          | 12.17            | 5M35D7W             |
|             | 20 MHz    | QPSK       | 1720.0 - 1770.0          | 18.0358   | 5.16             | 19.770          | 12.96            | 18M0G7W             |
|             |           | 16QAM      | 1720.0 - 1770.0          | 5.5200    | 5.69             | 16.943          | 12.29            | 5M52D7W             |
| NR Band n66 | 5 MHz     | TT/2 BPSK  | 1712.5 - 1777.5          | 4.4728    | 4.24             | 19.634          | 12.93            | 4M47G7W             |
|             |           | QPSK       | 1712.5 - 1777.5          | 4.4994    | 5.22             | 19.953          | 13.00            | 4M50G7W             |
|             |           | 16QAM      | 1712.5 - 1777.5          | 4.4605    | 5.93             | 15.812          | 11.99            | 4M46D7W             |
|             |           | 64QAM      | 1712.5 - 1777.5          | 4.4839    | 6.35             | 12.445          | 10.95            | 4M48D7W             |
|             | 10 MHz    | TT/2 BPSK  | 1715.0 - 1775.0          | 8.9721    | 4.20             | 19.953          | 13.00            | 8M97G7W             |
|             |           | QPSK       | 1715.0 - 1775.0          | 9.3129    | 5.38             | 19.907          | 12.99            | 9M31G7W             |
|             |           | 16QAM      | 1715.0 - 1775.0          | 9.3101    | 6.08             | 15.922          | 12.02            | 9M31D7W             |
|             |           | 64QAM      | 1715.0 - 1775.0          | 9.3043    | 6.32             | 12.618          | 11.01            | 9M30D7W             |
|             | 15 MHz    | TT/2 BPSK  | 1717.5 - 1772.5          | 13.4330   | 4.15             | 19.588          | 12.92            | 13M4G7W             |
|             |           | QPSK       | 1717.5 - 1772.5          | 14.1410   | 5.28             | 19.953          | 13.00            | 14M1G7W             |
|             |           | 16QAM      | 1717.5 - 1772.5          | 14.1340   | 6.02             | 15.776          | 11.98            | 14M1D7W             |
|             |           | 64QAM      | 1717.5 - 1772.5          | 14.0840   | 6.10             | 12.162          | 10.85            | 14M1D7W             |
|             | 20 MHz    | TT/2 BPSK  | 1720.0 - 1770.0          | 17.9100   | 4.10             | 19.953          | 13.00            | 17M9G7W             |
|             |           | QPSK       | 1720.0 - 1770.0          | 18.9790   | 5.19             | 19.861          | 12.98            | 19M0G7W             |
|             |           | 16QAM      | 1720.0 - 1770.0          | 18.9580   | 5.83             | 15.849          | 12.00            | 19M0D7W             |
|             |           | 64QAM      | 1720.0 - 1770.0          | 18.9370   | 6.32             | 12.388          | 10.93            | 18M9D7W             |

Overview Table (>1GHz Bands)

|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
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## 1.0 INTRODUCTION

### 1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.


### 1.2 Element Materials Technology Test Location

These measurement tests were conducted at the Element Materials Technology facility located at 18855 Adams Court, Morgan Hill, CA 95037. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01r01.

### 1.3 Test Facility / Accreditations

Measurements were performed at Element Materials Technology

- Element Materials Technology is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.02 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- Element Washington DC LLC TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).
- Element Materials Technology facility is a registered (22831) test laboratory with the site description on file with ISED.
- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutual Agreements (MRAs).

|   |   |                            |                                   |
|---|---|----------------------------|-----------------------------------|
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## 2.0 PRODUCT INFORMATION

### 2.1 Equipment Description

The Equipment Under Test (EUT) is the **Apple Watch FCC ID: BCG-A3328**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 27.

**Test Device Serial No.:** L2F7HR6WJC, LDWD7GHHXW, MXT40JXY0C, FN6HFX0011W0000YCL, FN6HFX000390000YCL

### 2.2 Device Capabilities

This device contains the following capabilities:

Multi-band LTE, 5G NR (FR1), 802.11b/g/n WLAN, Bluetooth (1x, EDR, HDR4, HDR8, LE1M, LE2M), NFC.

This device supports simultaneous transmission operations, which allows for multiple transmitters to transmit simultaneously on the same antenna. The table below shows all configurations possible.


| Simultaneous Tx Config | Antenna FCM |                          |               |
|------------------------|-------------|--------------------------|---------------|
|                        | WLAN        | Bluetooth                | LTE/FR1       |
|                        | 802.11b/g/n | BDR, EDR, HDR4/8, LE1/2M | Mid/High Band |
| Config 1               | ✓           | ✗                        | ✓             |
| Config 2               | ✗           | ✓                        | ✓             |

**Table 2-1. Simultaneous Transmission Configurations**

✓ = Support; ✗ = Not Support

#### **Note:**

All the above simultaneous transmission configurations have been tested and the worst-case configuration was found to be Config 2 and reported in RF Bluetooth, and RF FCC Part 27b test reports.

|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
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## 2.3 Antenna Description

The following antenna gains provided by manufacturer were used for testing.


| Band           | Antenna Gain [dBi] |       |
|----------------|--------------------|-------|
|                | BCM                | FCM   |
| LTE Band 12/17 | -28.6              | -     |
| NR Band 12     |                    |       |
| LTE Band 13    | -27.0              | -     |
| LTE Band 4/66  | -                  | -12.2 |
| NR Band n66    |                    |       |
| LTE Band 71    | -29.3              | -     |
| NR Band n71    |                    |       |

Table 2-2. Highest Antenna Gain

## 2.4 Test Support Equipment

|   |                        |        |                  |      |                        |
|---|------------------------|--------|------------------|------|------------------------|
| 1 | Apple Macbook          | Model: | A1398            | S/N: | FVFDHG8TP3XY           |
|   | w/AC/DC Adapter        | Model: | A1435            | S/N: | N/A                    |
| 2 | Apple USB-C cable      | Model: | N/A              | S/N: | N/A                    |
|   | w/ Charging Dock       | Model: | N/A              | S/N: | SAA24DEN24xP2444600777 |
|   | w/ Cradle              | Model: | N/A              | S/N: | SAA24FTN24xP1430200500 |
| 3 | Apple Magnetic Charger | Model: | A2515            | S/N: | DLC313306ZQ1NR1A7      |
|   | Apple Magnetic Charger | Model: | A2879            | S/N: | DLCH5T0012A00000WB     |
| 4 | Pathfinder Davenport   | Model: | 920-15901-01     | S/N: | DLCH640006H0000QA0     |
|   | SiP Socket             | Model: | P1 N24X B PF 029 | S/N: | DLCH9T0001J0000UR6     |
| 5 | DC Power Supply        | Model: | KPS3010D         | S/N: | N/A                    |

Table 2-3. Test Support Equipment

|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
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## 2.5 Test Configuration

The EUT was tested per the guidance of ANSI C63.26 2015, TIA-603-E-2016 and KDB 971168 D01 v03r01. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

The worst case configuration was investigated for the various types of wristbands, metal and non-metal wristbands. The EUT was also investigated with and without wireless charger. The worst case configuration found was used for all testing.

For emissions from 1GHz – 18GHz, low, mid, and high channels were tested with highest power and worst case configuration. The emissions below 1GHz and above 18GHz were tested with the highest transmitting power and the worst case channel.

The EUT was manipulated through three orthogonal planes of X-orientation (flatbed), Y-orientation (landscape), and Z-orientation (portrait) during the testing. Only the worst case emissions were reported in this test report.


This device only supports 27RBs or less for LTE 16-QAM uplink.

## 2.6 Software and Firmware

The test was conducted with firmware version watchOS 26 installed on the EUT.

## 2.7 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

|  |   |                           |  |
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## 3.0 DESCRIPTION OF TESTS

### 3.1 Evaluation Procedure

The measurement procedures described in the documents titled “American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services” (ANSI C63.26-2015 and TIA-603-E-2016) and “Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems” (KDB 971168 D01 v03r01) were used in the measurement of the EUT.

Deviation from Measurement Procedure.....None

### 3.2 Radiated Spurious Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer.

For radiated spurious emissions measurements and calculations, conversion method is used per the formulas in KDB 971168 Section 5.8.4. Field Strength (EIRP) is calculated using the following formulas:

$$E_{[\text{dB}\mu\text{V/m}]} = \text{Measured amplitude level}_{[\text{dBm}]} + 107 + \text{Cable Loss}_{[\text{dB}]} + \text{Antenna Factor}_{[\text{dB/m}]}$$


And

$$\text{EIRP}_{[\text{dBm}]} = E_{[\text{dB}\mu\text{V/m}]} + 20\log D - 104.8; \text{ where } D \text{ is the measurement distance in meters.}$$

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014.

Per KDB 414788 D01 v01r01, radiated emission test sites other than open-field test sites (e.g., shielded anechoic chambers), may be employed for emission measurements below 30MHz if characterized so that the measurements correspond to those obtained at an open-field test site. To determine test site equivalency, a reference sample transmitting at 149kHz was measured on an open field test site (asphalt with no ground plane) and then measured in the 3m semi-anechoic chamber. A calibrated 60cm loop antenna was used while the reference device was rotated through the X, Y and Z axis in order to capture the worst case level. A maximum deviation of 2.77dB at 149kHz was measured when comparing the 3 meter semi-anechoic chamber to the open field site.

Radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI C63.26-2015 and TIA-603-E-2016.

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## 4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.23-2012. All measurement uncertainty values are shown with a coverage factor of  $k = 2$  to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the  $U_{\text{CISPR}}$  measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

| Contribution                      | Expanded Uncertainty ( $\pm$ dB) |
|-----------------------------------|----------------------------------|
| Conducted Bench Top Measurements  | 2.07                             |
| Radiated Disturbance (<30MHz)     | 4.12                             |
| Radiated Disturbance (30MHz-1GHz) | 4.85                             |
| Radiated Disturbance (1-18GHz)    | 5.08                             |
| Radiated Disturbance (>18GHz)     | 5.22                             |

|   |  |                                   |
|---|--|-----------------------------------|
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## 5.0 TEST EQUIPMENT CALIBRATION DATA


Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

| Manufacturer         | Model        | Description                              | Cal Date   | Cal Interval | Cal Due    | Serial Number |
|----------------------|--------------|--|------------|--------------|------------|---------------|
| Agilent Technologies | N9030A       | 3Hz-26.5GHz PXA Signal Analyzer          | 10/31/2024 | Annual       | 10/31/2025 | MY55330128    |
| ATM                  | 180-442-KF   | 20dB Nominal Gain Horn Antenna           | 3/24/2025  | Annual       | 3/24/2026  | T058601-02    |
| ESPEC                | SU-241       | Tabletop Temperature Chamber             | 10/24/2024 | Annual       | 10/24/2025 | 92009574      |
| ETS-Lindgren         | 3117         | Double Ridged Guide Antenna (1-18 GHz)   | 9/25/2024  | Annual       | 9/25/2025  | 240109        |
| Fairview Microwave   | FMCA1975-36  | 30MHz-40GHz Conducted Cable *            | 6/17/2025  | Annual       | 6/17/2026  | -             |
| Fairview Microwave   | M2CP1122-10  | 30MHz-40GHz Conducted Coupler *          | 6/17/2025  | Annual       | 6/17/2026  | 1946          |
| Keysight Technology  | N9040B       | UXA Signal Analyzer                      | 6/9/2025   | Annual       | 6/9/2026   | MY57212015    |
| MCL                  | BW-K10-2W44+ | Attenuator *                             | 6/17/2025  | Annual       | 6/17/2026  | -             |
| Rohde & Schwarz      | ESW44        | EMI Test Receiver                        | 10/17/2024 | Annual       | 10/17/2025 | 101668        |
| Rohde & Schwarz      | FSV40        | Signal Analyzer (10Hz-40GHz)             | 5/20/2025  | Annual       | 5/20/2026  | 101619        |
| Rohde & Schwarz      | FSW67        | Signal and Spectrum Analyzer (2Hz-67GHz) | 1/7/2025   | Annual       | 1/7/2026   | 101366        |
| Rohde & Schwarz      | TS-PR18      | Pre-Amplifier (1GHz - 18GHz)             | 8/14/2024  | Annual       | 8/14/2025  | 101648        |
| Rohde & Schwarz      | CMW500       | Wideband Radio Communication Tester      | 12/10/2024 | Annual       | 12/10/2025 | 161616        |
| Rohde & Schwarz      | CMW500       | Wideband Radio Communication Tester      | 3/4/2025   | Annual       | 3/4/2026   | 164715        |
| Rohde & Schwarz      | HFH2-Z2      | Loop Antenna                             | 5/12/2025  | Annual       | 5/12/2026  | 100546        |
| Rohde & Schwarz      | HFH2-Z2      | Loop Antenna                             | 6/26/2025  | Annual       | 6/26/2026  | 100519        |
| Rohde & Schwarz      | TS-PR1840    | Pre-Amplifier (18GHz - 40GHz)            | 6/3/2025   | Annual       | 6/3/2026   | 100052        |
| Rohde & Schwarz      | TS-PR8       | Pre-Amplifier (30MHz - 8GHz)             | 11/15/2024 | Annual       | 11/15/2025 | 102326        |
| Schwarzbeck          | VULB 9162    | Bilog Antenna (30MHz - 6GHz)             | 9/18/2024  | Annual       | 9/18/2025  | 358           |

**Table 5-1. Test Equipment**

### Notes:

1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
2. \* denotes passive equipment that have been internally verified/calibrated.

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## 6.0 SAMPLE CALCULATIONS

### Emission Designator

#### $\pi/2$ BPSK / QPSK Modulation

**Emission Designator = 8M62G7W**

BW = 8.62 MHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination of Any

#### QAM Modulation

**Emission Designator = 8M45D7W**

LTE BW = 8.45 MHz

D = Amplitude/Angle Modulated


7 = Quantized/Digital Info

W = Combination of Any

### Spurious Radiated Emission

#### **Example: Middle Channel LTE Mode 2<sup>nd</sup> Harmonic (1564 MHz)**

The average spectrum analyzer reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 1564 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm - (-24.80).

|   |   |                            |                                   |
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## 7.0 TEST RESULTS

### 7.1 Summary

Company Name: Apple Inc.  
 FCC ID: BCG-A3328  
 FCC Classification: PCS Licensed Transmitter Worn on Body (PCT)  
 Mode(s): LTE/NR

| Test Condition | Test Description   | FCC Part Section(s) | Test Limit   | Test Result | Reference              |
|----------------|--|---------------------|--|-------------|------------------------|
| CONDUCTED      | Occupied Bandwidth   | 2.1049              | N/A  | N/A         | Section 7.2            |
|                | Conducted Band Edge / Spurious Emissions (LTE Band 71, 12/17, 4/66) (NR Band n71, n12, n66)            | 2.1051, 27.53       | -13 dBm at Band Edge and for all out-of-band emissions   | PASS        | Sections 7.3, 7.4      |
|                | Conducted Band Edge / Spurious Emissions (LTE Band 13)   | 2.1051, 27.53       | -13 dBm at Band Edge and for all out-of-band emissions<br>< -70 dBW/MHz (for wideband signals)<br>< -80 dBW (for discrete emissions less than 700Hz BW)<br>For all emissions in the band 1559 - 1610 MHz | PASS        | Sections 7.3, 7.4      |
|                | Peak-Average Ratio   | 27.50(d)(5)         | < 13 dB  | PASS        | Section 7.5            |
|                | Transmitter Conducted Output Power   | 2.1046              | N/A  | N/A         | See RF Exposure Report |
|                | Frequency Stability  | 2.1055, 27.54       | Fundamental emissions stay within authorized frequency block over the temperature and voltage range as tested  | PASS        | Section 7.8            |
|                | Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 71, 12/17) (NR Band n71, n12) | 27.50(b)(10)        | < 3 Watts max. ERP   | PASS        | Section 7.6            |
|                | Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 13)                           | 27.50(c)(10)        | < 3 Watts max. ERP   | PASS        | Section 7.6            |
|                | Equivalent Isotropic Radiated Power (LTE Band 4/66) (NR Band n66)                                      | 27.50(d)(4)         | < 1 Watts max. ERP   | PASS        | Section 7.6            |
| RADIATED       | Radiated Spurious Emissions (LTE Band 13)  | 2.1053, 27.53(f)    | -13 dBm for all out-of-band emissions<br>< -70 dBW/MHz (for wideband signals)<br>< -80 dBW (for discrete emissions less than 700Hz BW)<br>For all emissions in the band 1559 - 1610 MHz                  | PASS        | Section 7.7            |
|                | Radiated Spurious Emissions (LTE Band 71, 12/17, 4/66) (NR Band n71, n12, n66)                         | 2.1053, 27.53       | -13 dBm for all out-of-band emissions  | PASS        | Section 7.7            |

Table 7-1. Summary of Test Results


|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
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**Notes:**

1. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
2. The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
3. All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
4. All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is Element EMC Software Tool v1.1.
5. For radiated spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is Element "Chamber Automation," Version 3.4.2.

|  |   |                           |  |
|--|---|---------------------------|--|
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## 7.2 Occupied Bandwidth

\$2.1049

### Test Overview


The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

### Test Procedure Used

KDB 971168 D01 v03r01 – Section 4.2

### Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW  $\geq 3 \times$  RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

|   |   |                                   |
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## Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

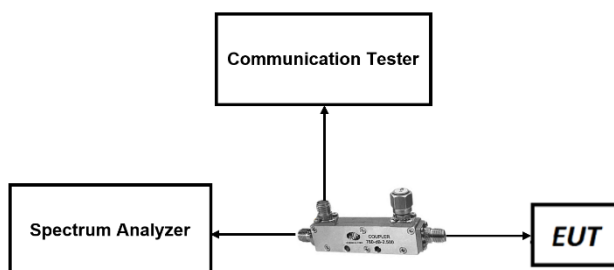


Figure 7-1. LTE Test Instrument & Measurement Setup

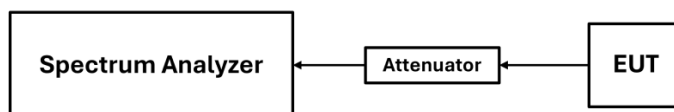



Figure 7-2. FR1 Test Instrument & Measurement Setup

## Test Notes

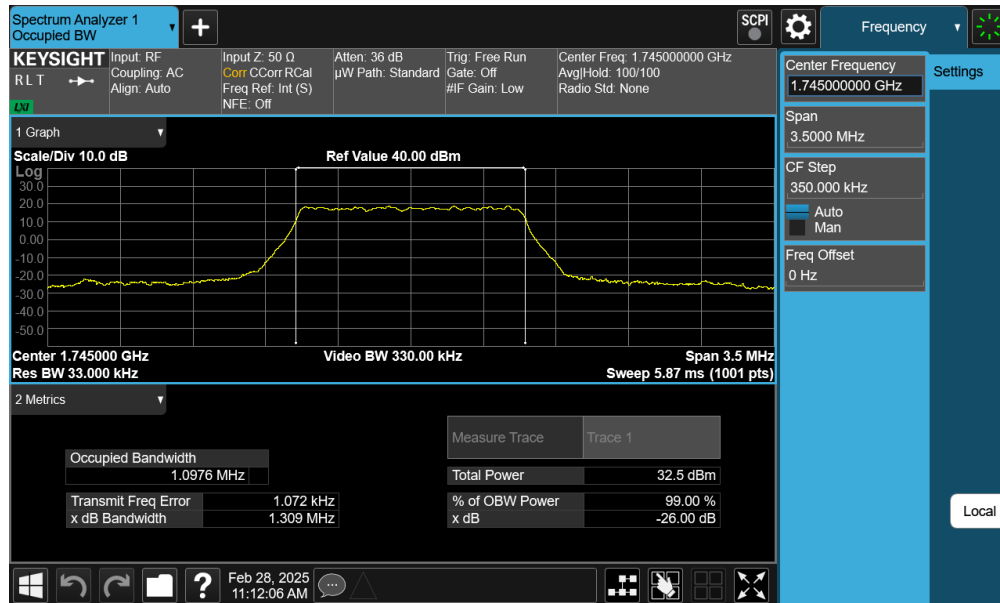
- For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

|   |   |                    |                                   |
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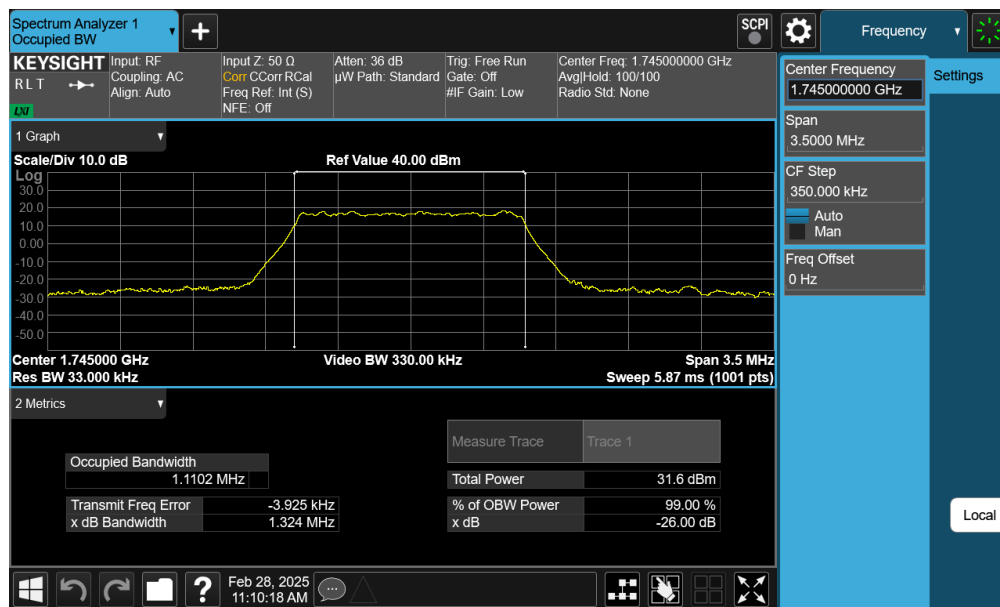
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## LTE Band 66/4



Plot 7-1. Occupied Bandwidth Plot (LTE Band 66/4 - 1.4MHz QPSK - Full RB)

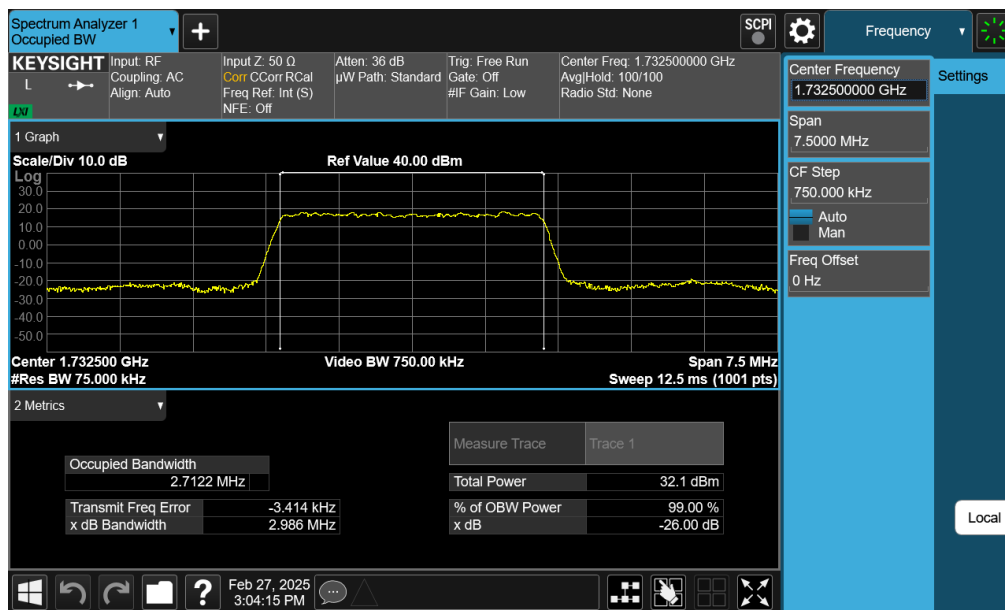
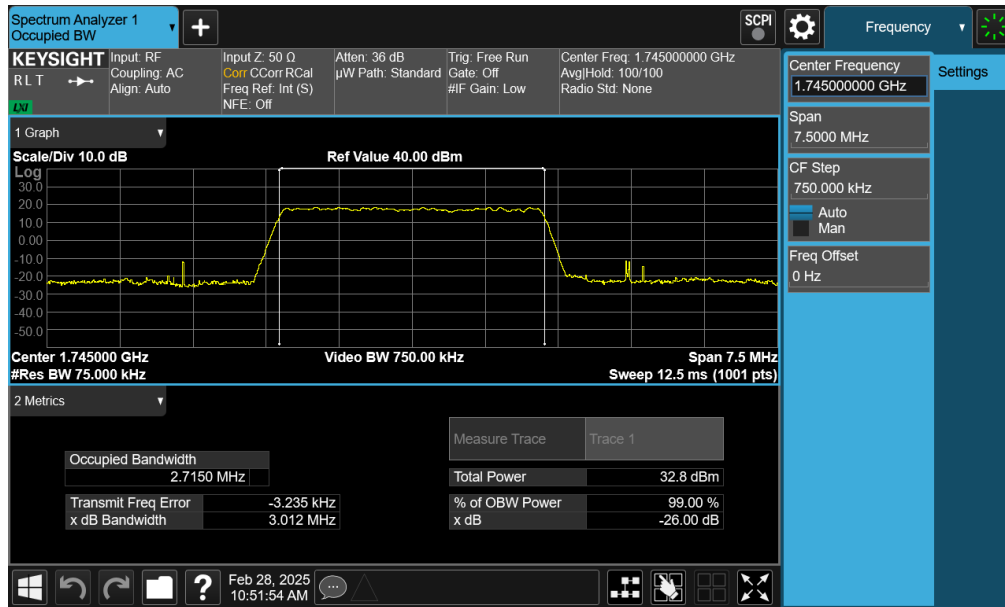


Plot 7-2. Occupied Bandwidth Plot (LTE Band 66/4 - 1.4MHz 16-QAM - Full RB)

|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
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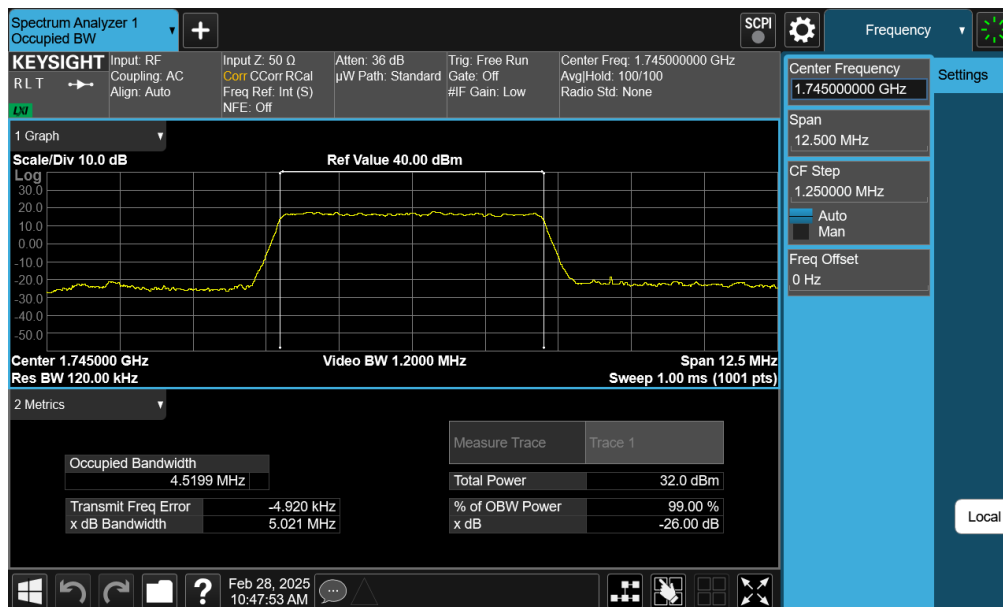
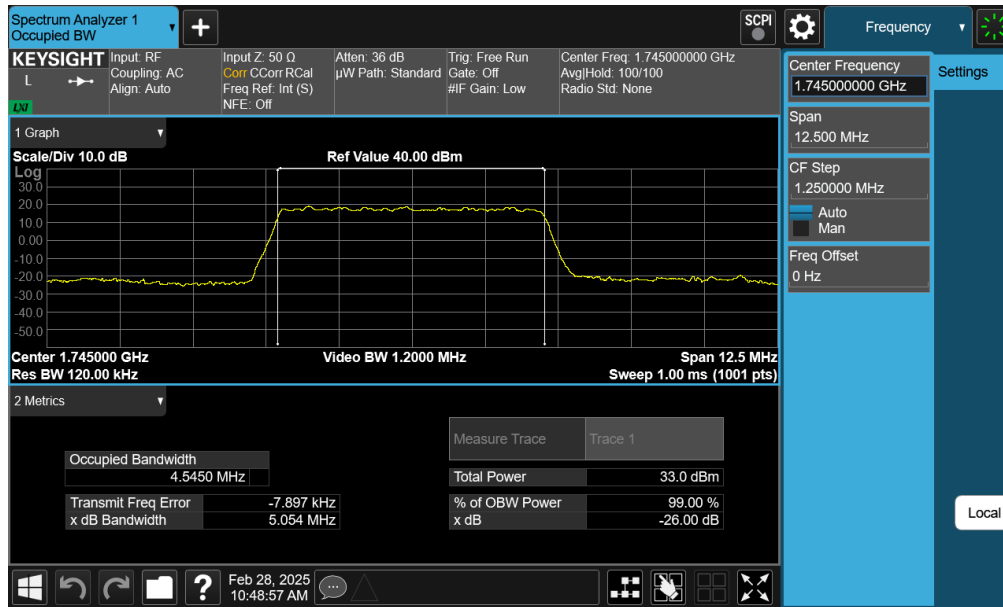
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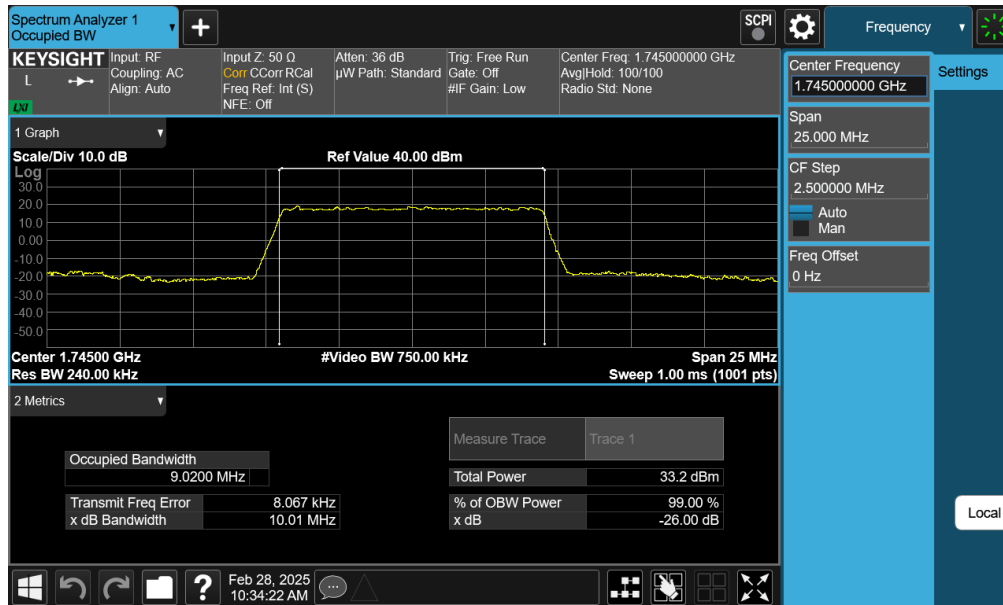
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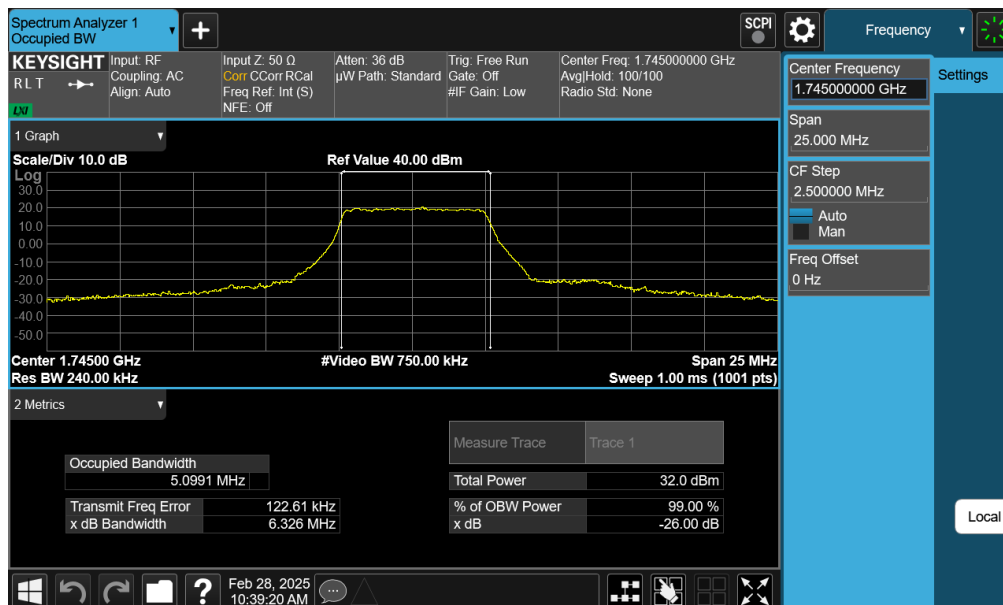
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
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Plot 7-7. Occupied Bandwidth Plot (LTE Band 66/4 - 10MHz QPSK - Full RB)

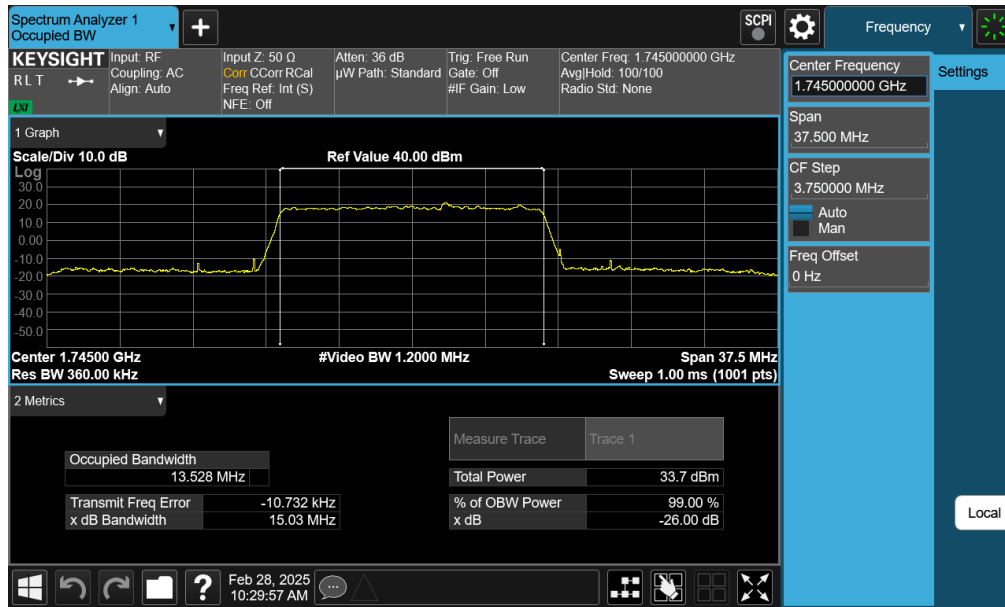


Plot 7-8. Occupied Bandwidth Plot (LTE Band 66/4 - 10MHz 16-QAM - Full RB)

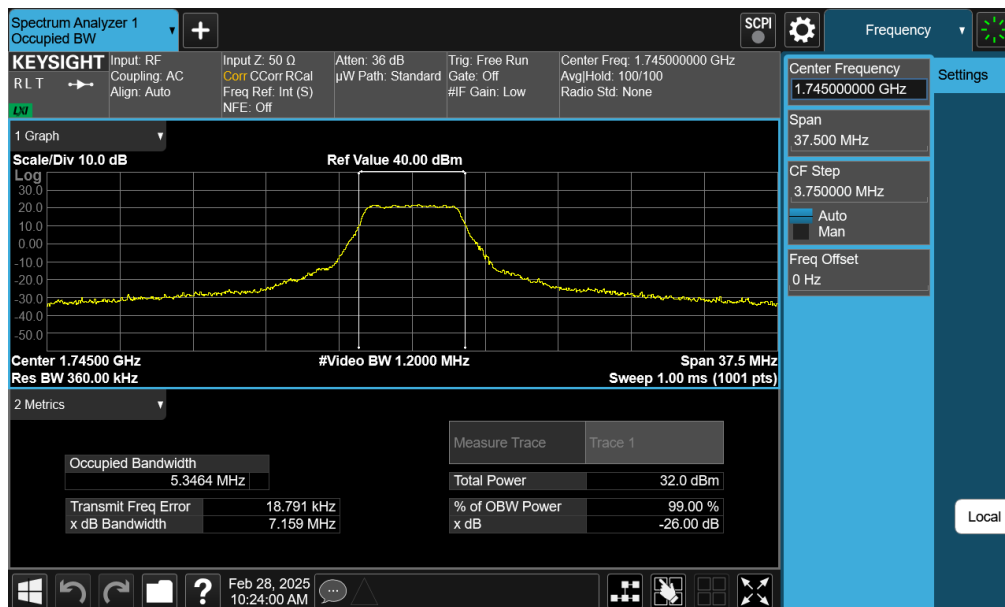
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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Plot 7-9. Occupied Bandwidth Plot (LTE Band 66/4 - 15MHz QPSK - Full RB)

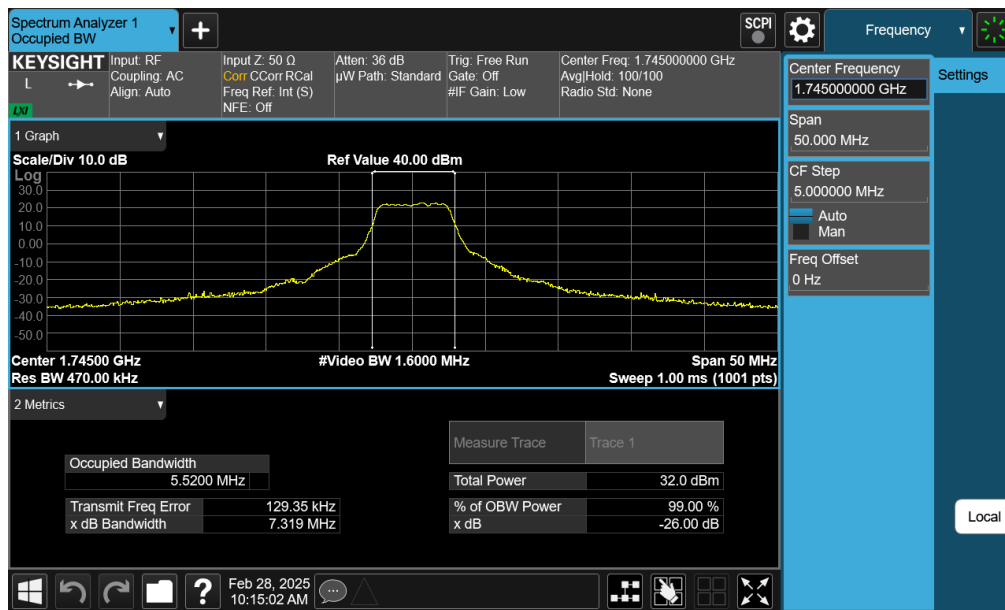
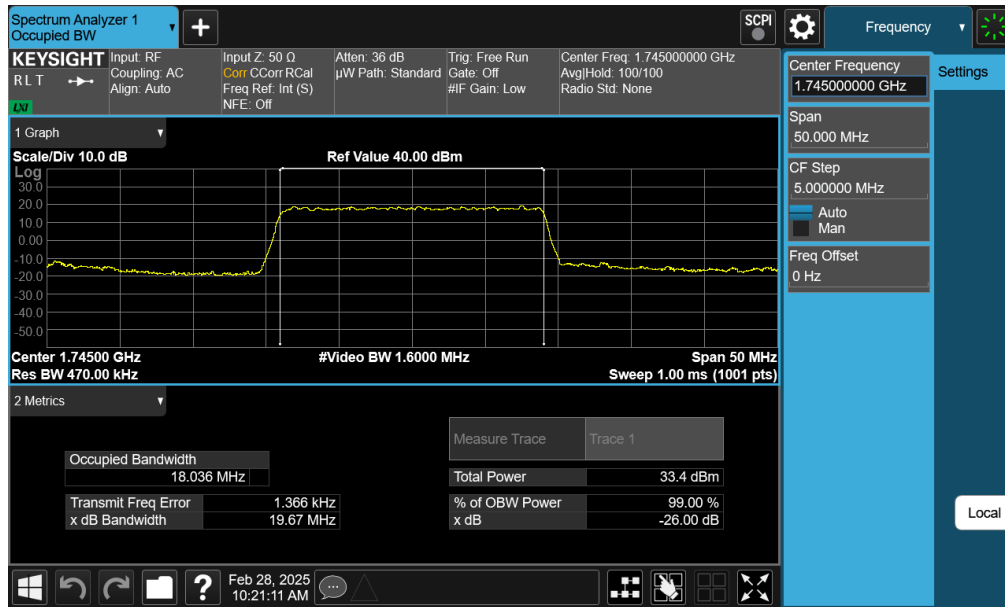


Plot 7-10. Occupied Bandwidth Plot (LTE Band 66/4 - 15MHz 16-QAM - Full RB)

|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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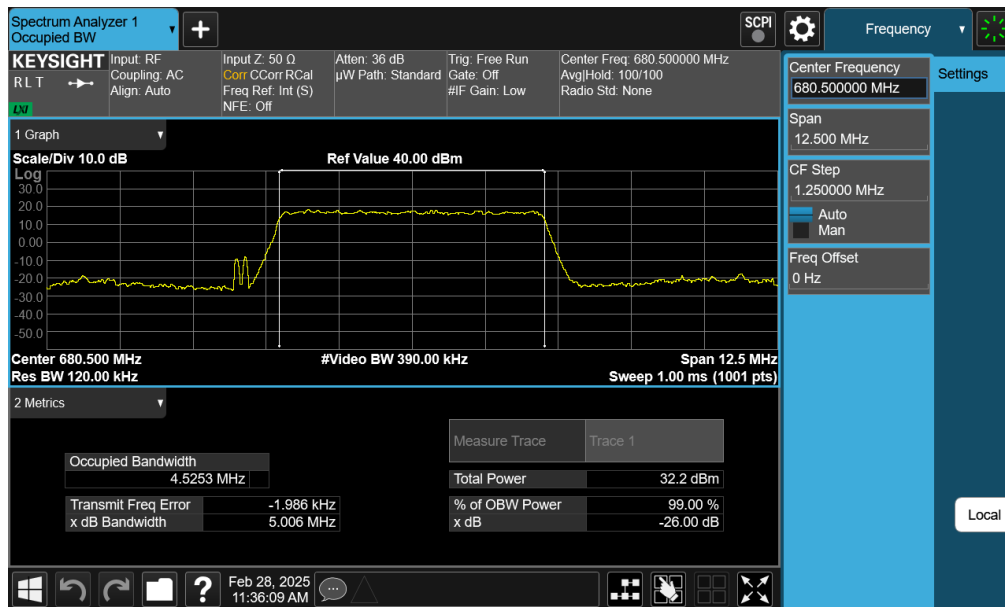
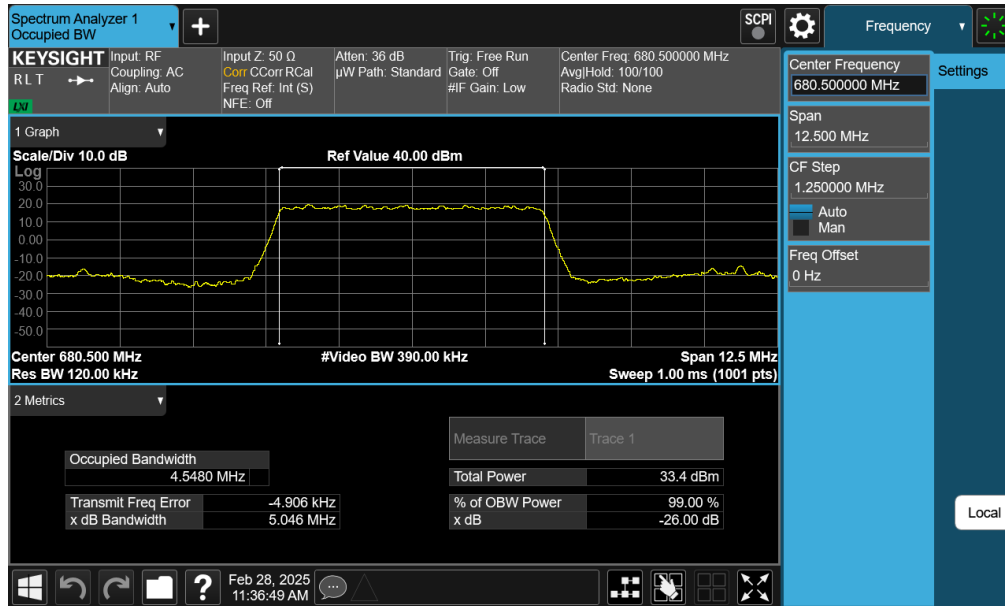



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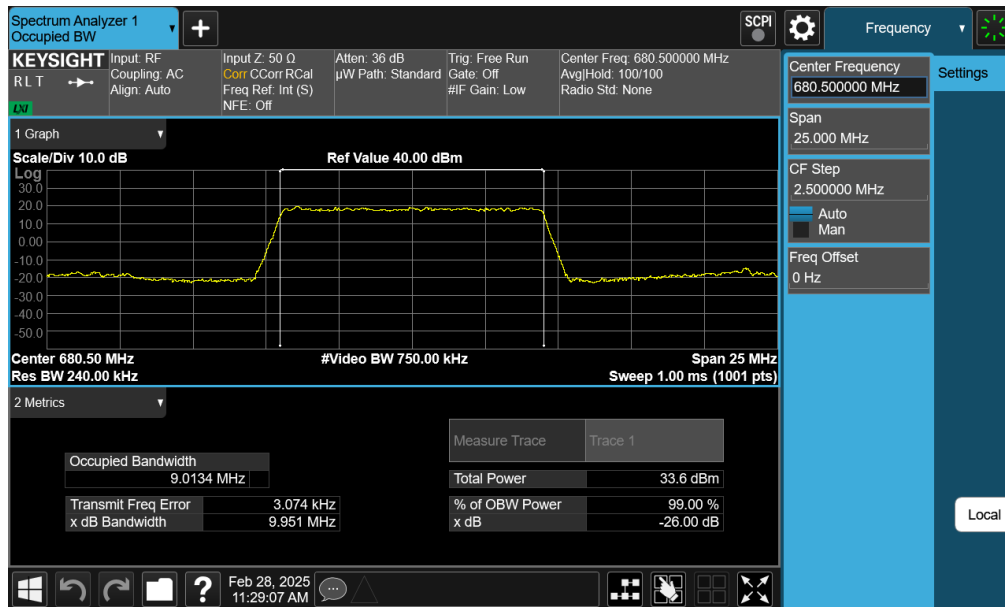
## LTE Band 71



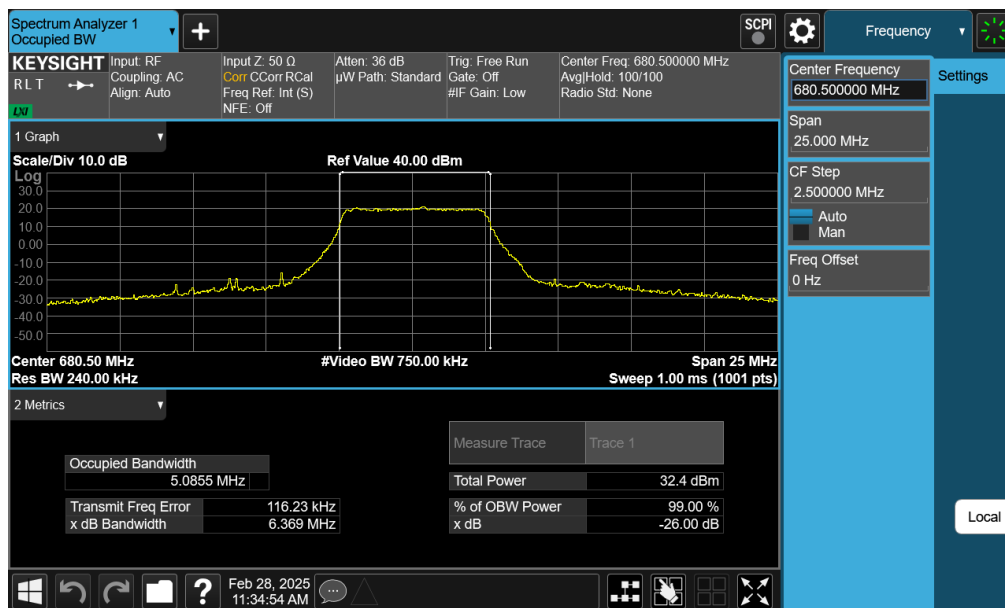
|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       |  <b>PART 27 MEASUREMENT REPORT</b> |                    | Approved by:<br>Technical Manager |
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Plot 7-15. Occupied Bandwidth Plot (LTE Band 71 - 10MHz QPSK - Full RB)



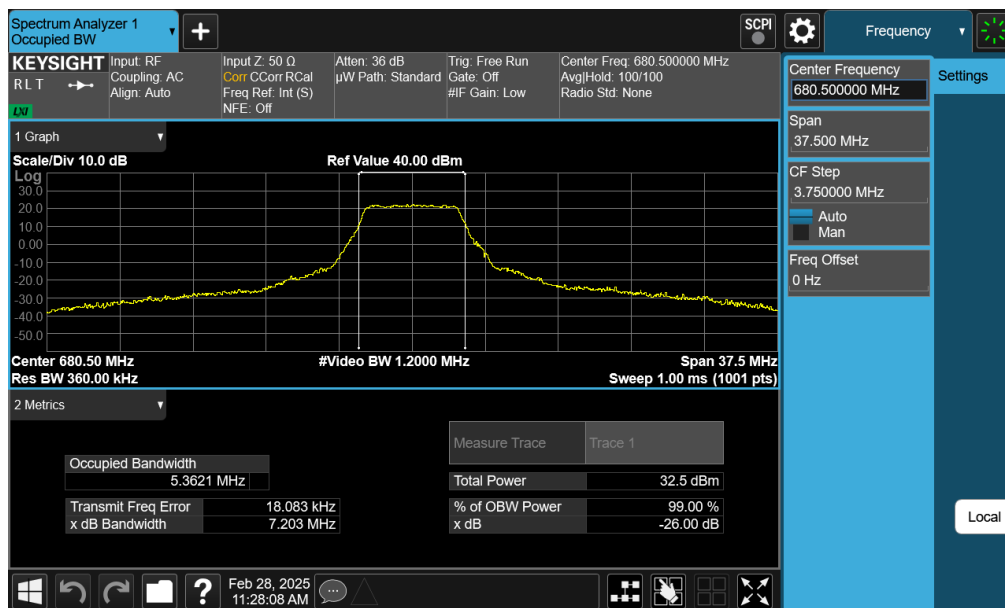
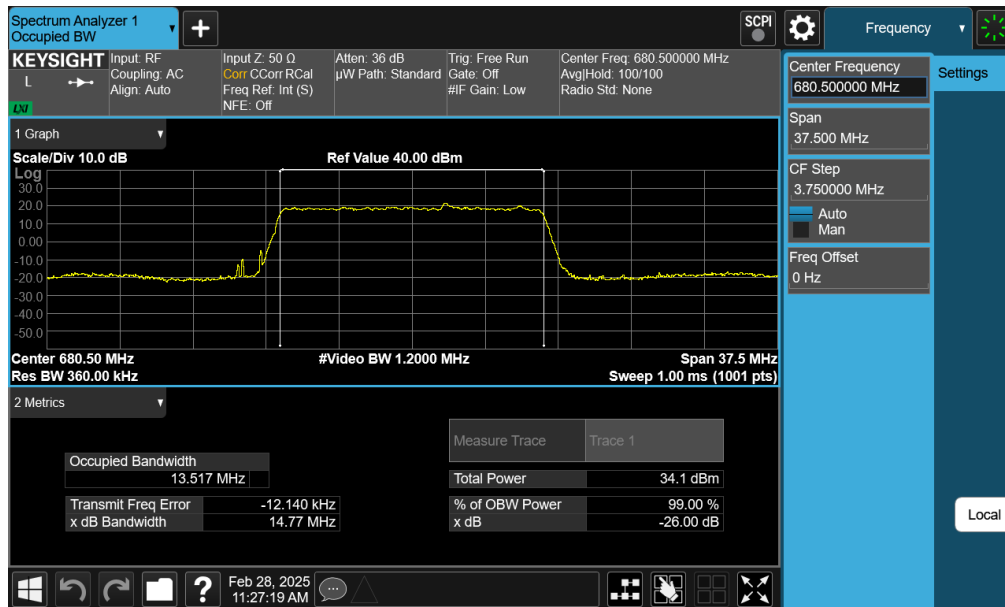
Plot 7-16. Occupied Bandwidth Plot (LTE Band 71 - 10MHz 16-QAM - Full RB)

|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
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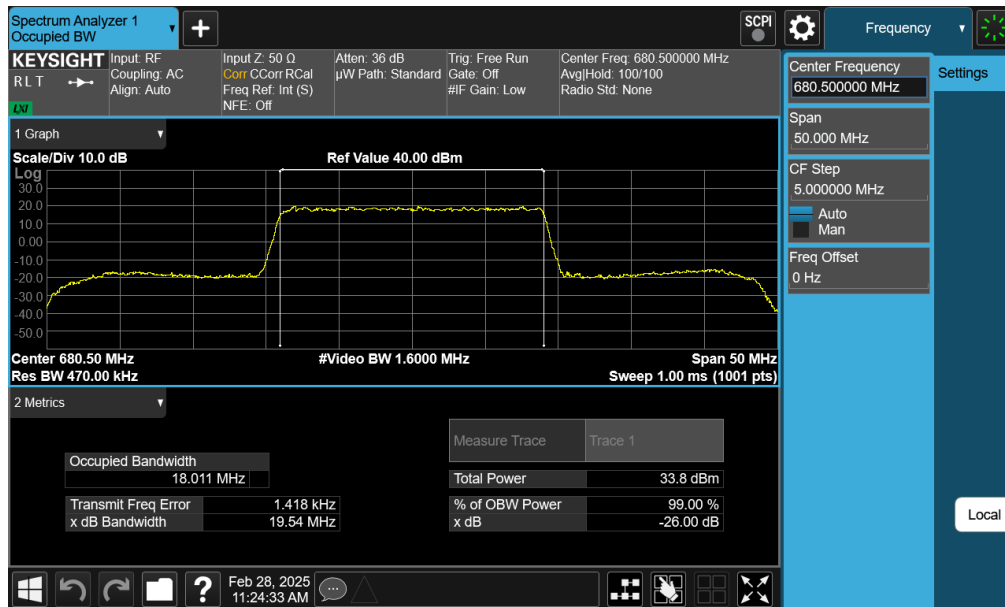




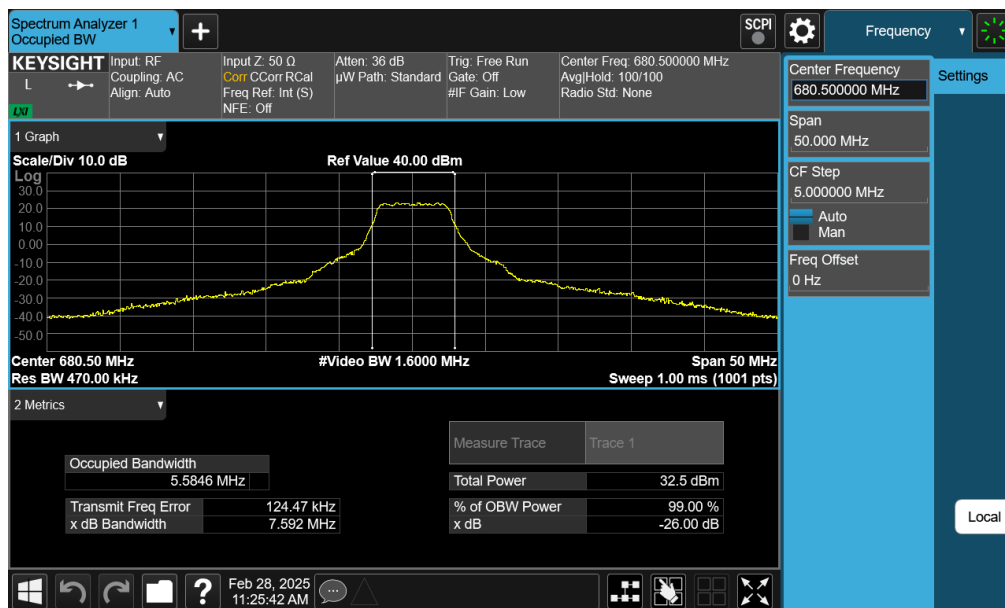
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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Plot 7-19. Occupied Bandwidth Plot (LTE Band 71 - 20MHz QPSK - Full RB)

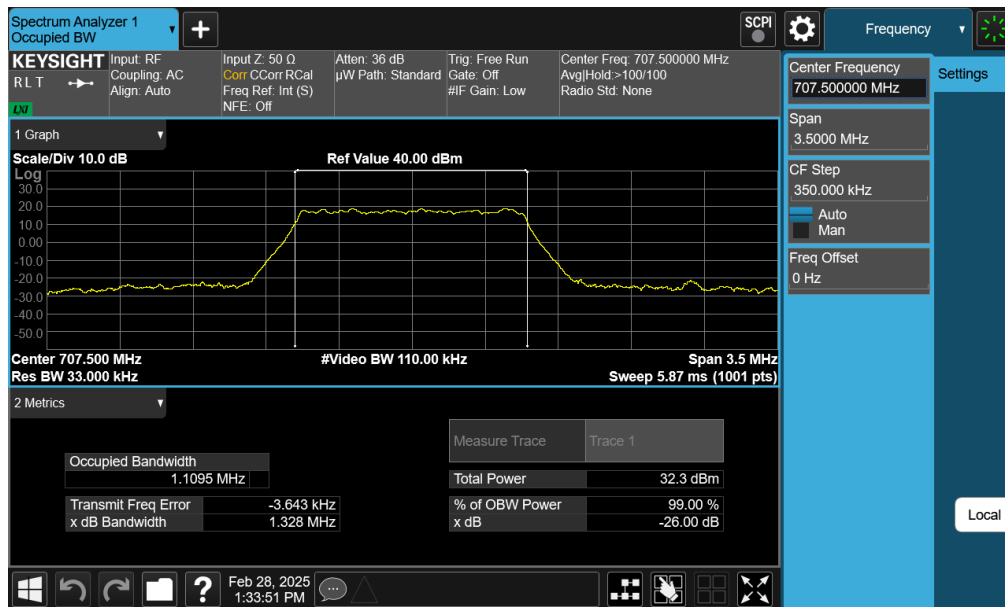
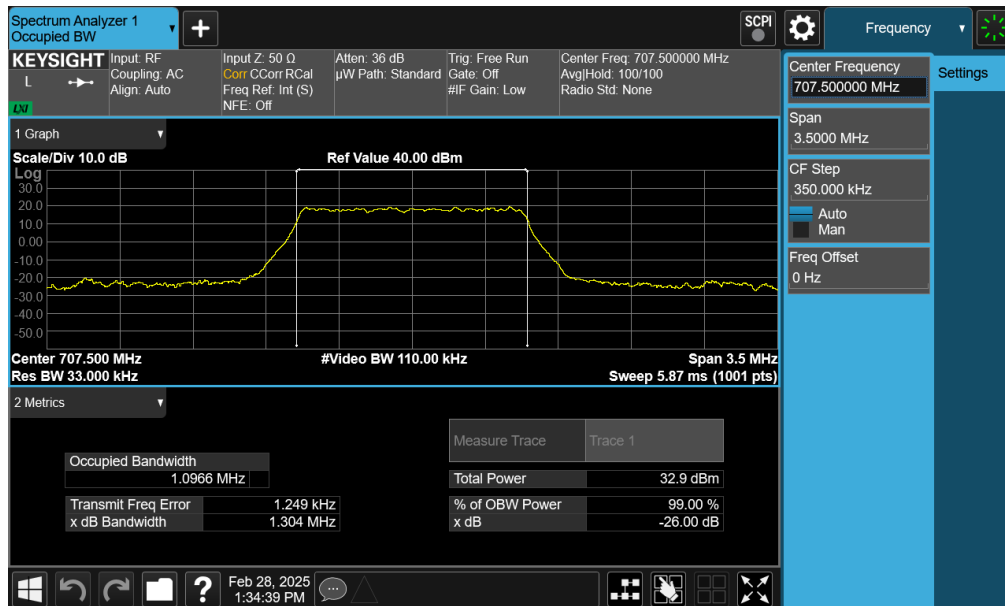



Plot 7-20. Occupied Bandwidth Plot (LTE Band 71 - 20MHz 16-QAM - Full RB)

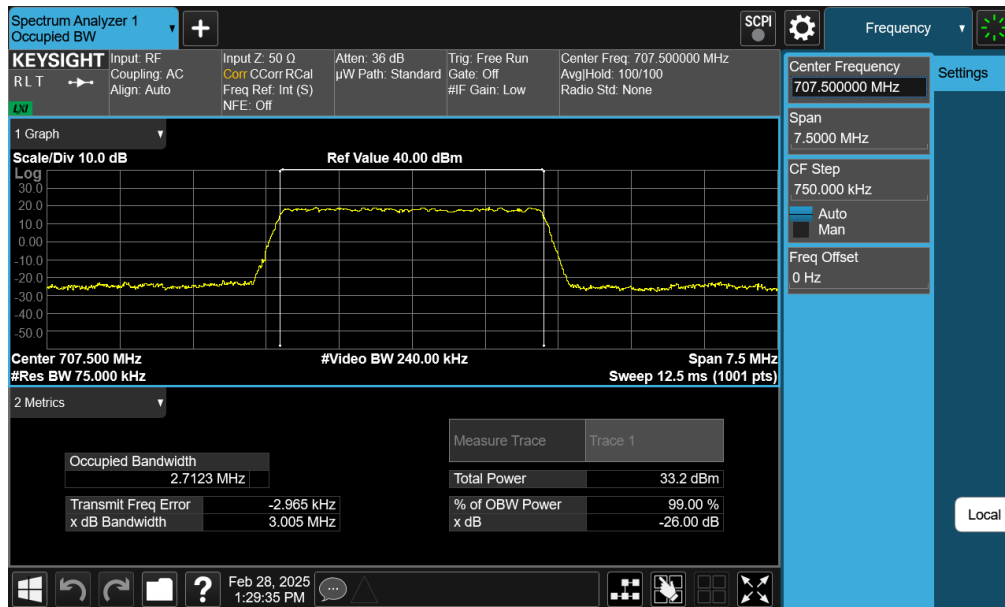
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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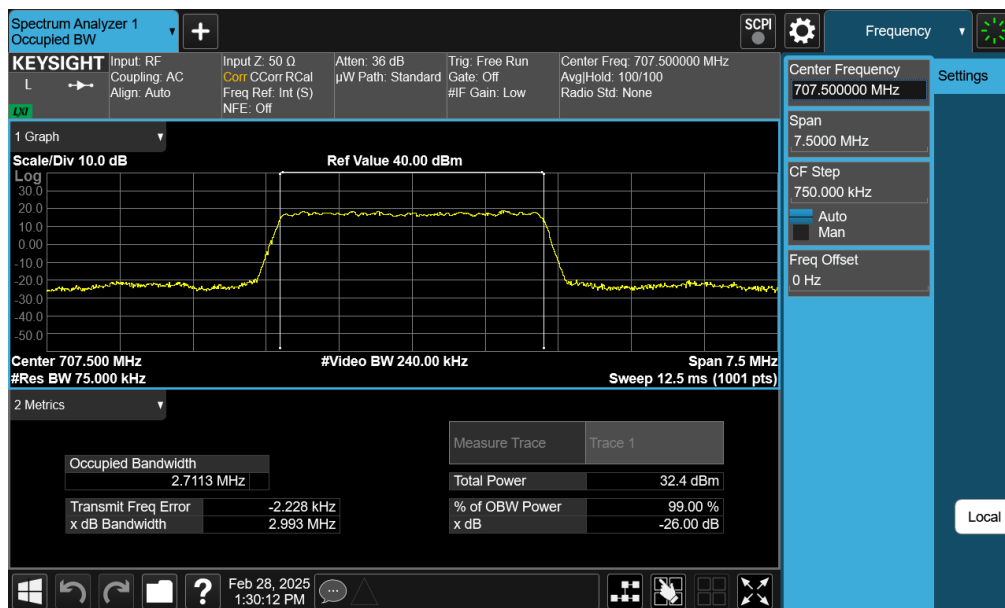
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Plot 7-23. Occupied Bandwidth Plot (LTE Band 12/17 - 3MHz QPSK - Full RB)

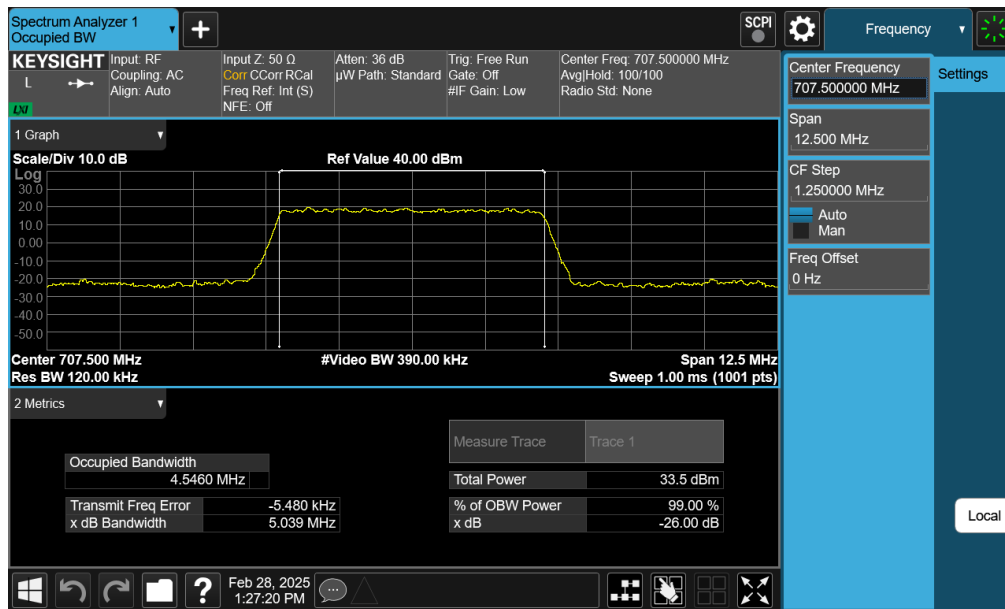


Plot 7-24. Occupied Bandwidth Plot (LTE Band 12/17 - 3MHz 16-QAM - Full RB)

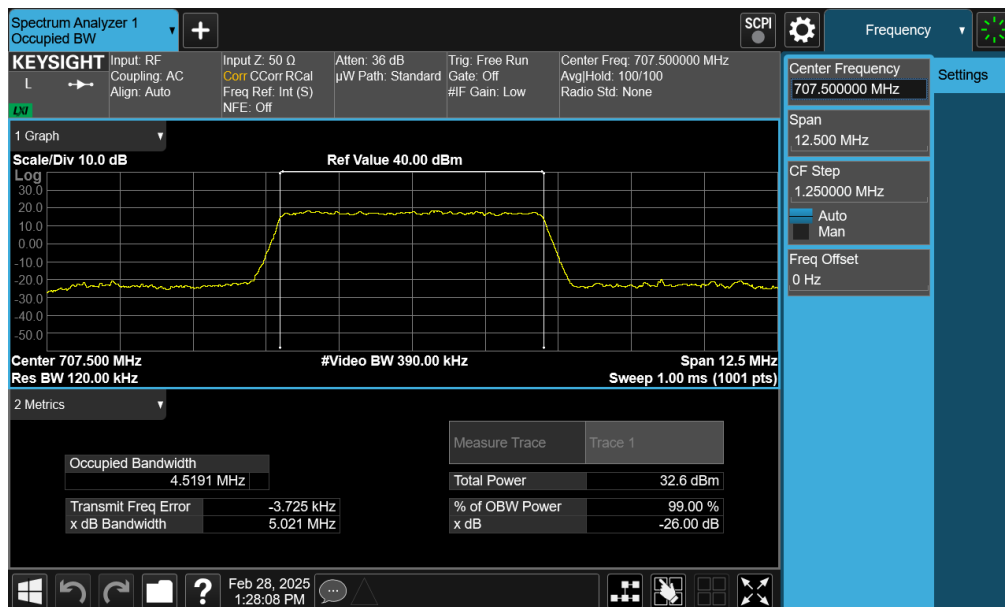
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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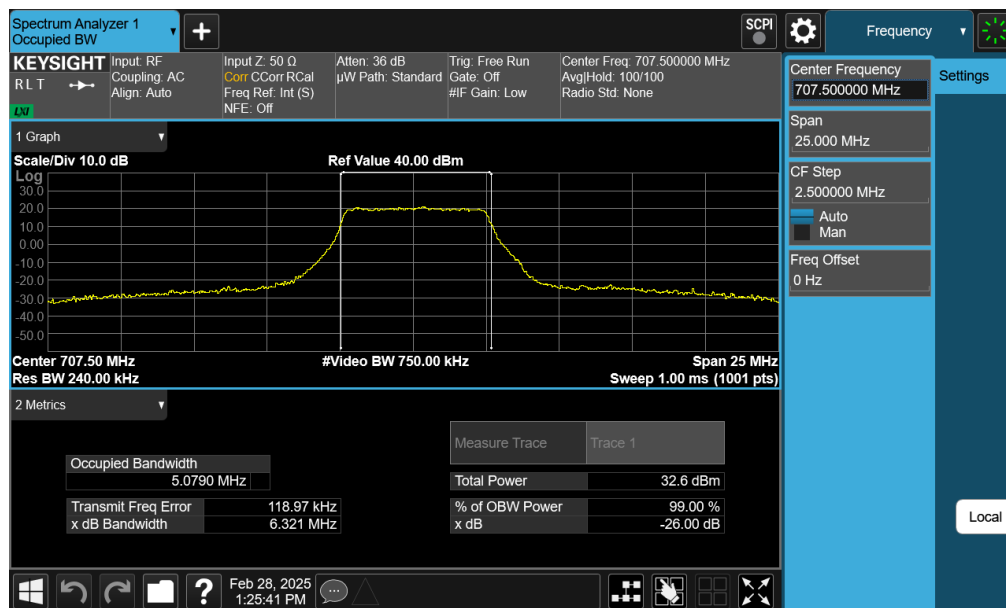
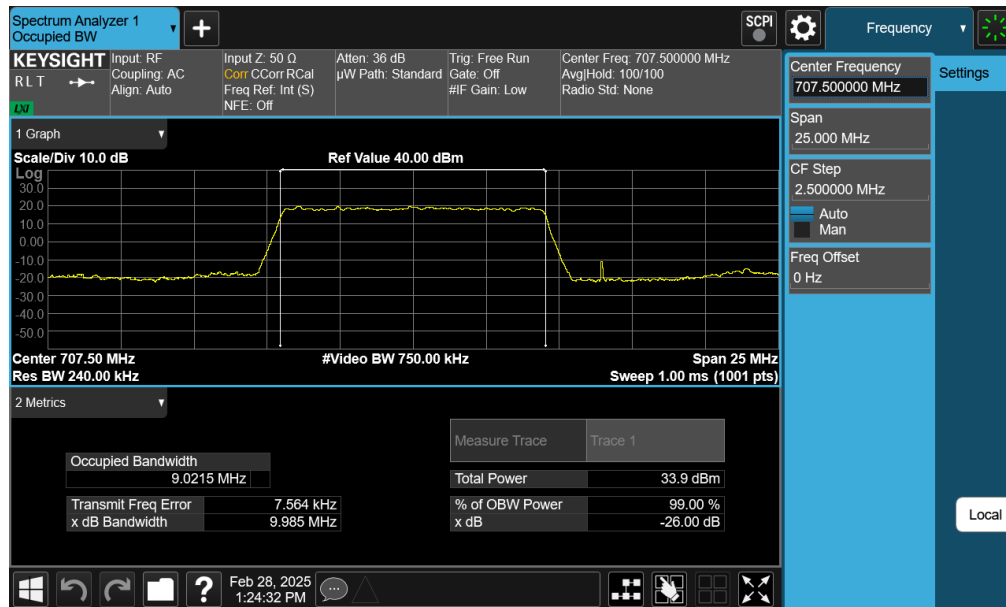
Plot 7-25. Occupied Bandwidth Plot (LTE Band 12/17 - 5MHz QPSK - Full RB)



Plot 7-26. Occupied Bandwidth Plot (LTE Band 12/17 - 5MHz 16-QAM - Full RB)

|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
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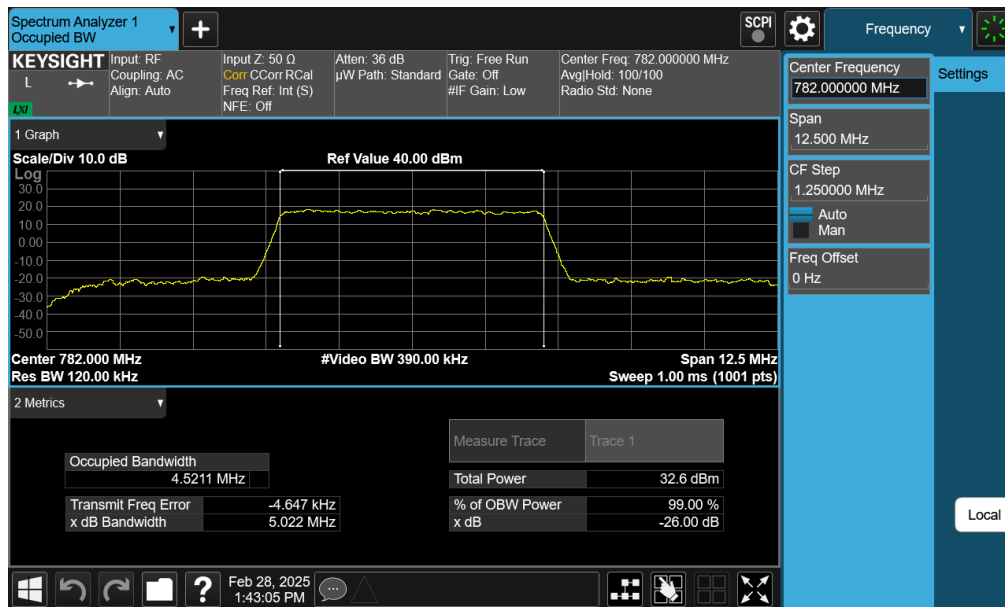
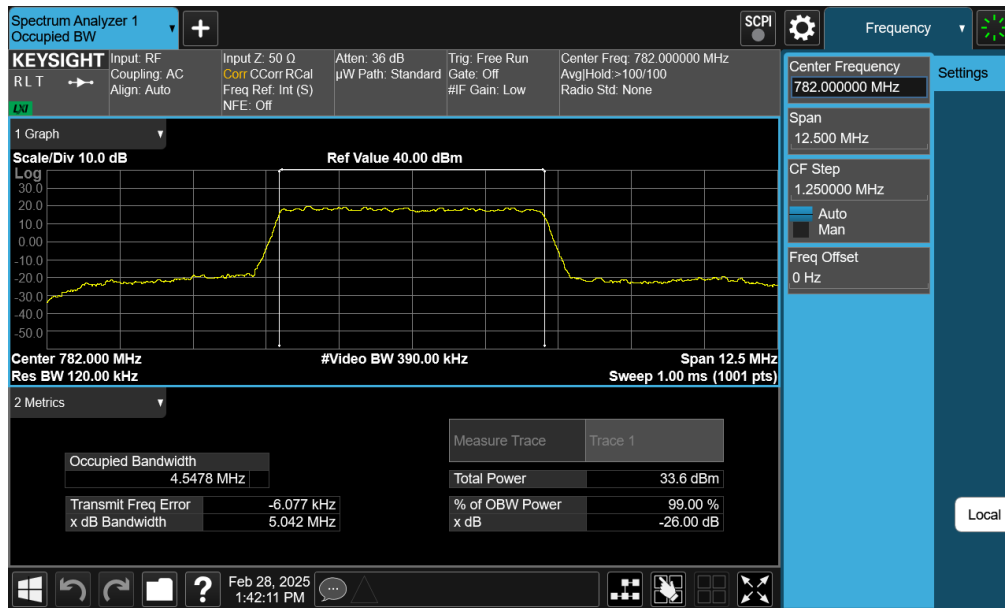



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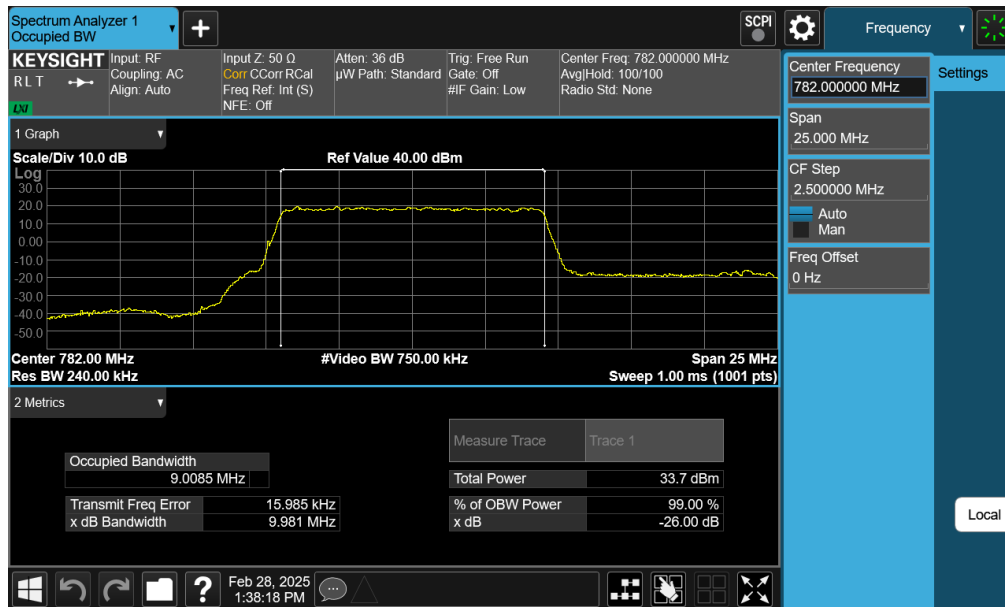
## LTE Band 13



|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       |  <b>PART 27 MEASUREMENT REPORT</b> |                    | Approved by:<br>Technical Manager |
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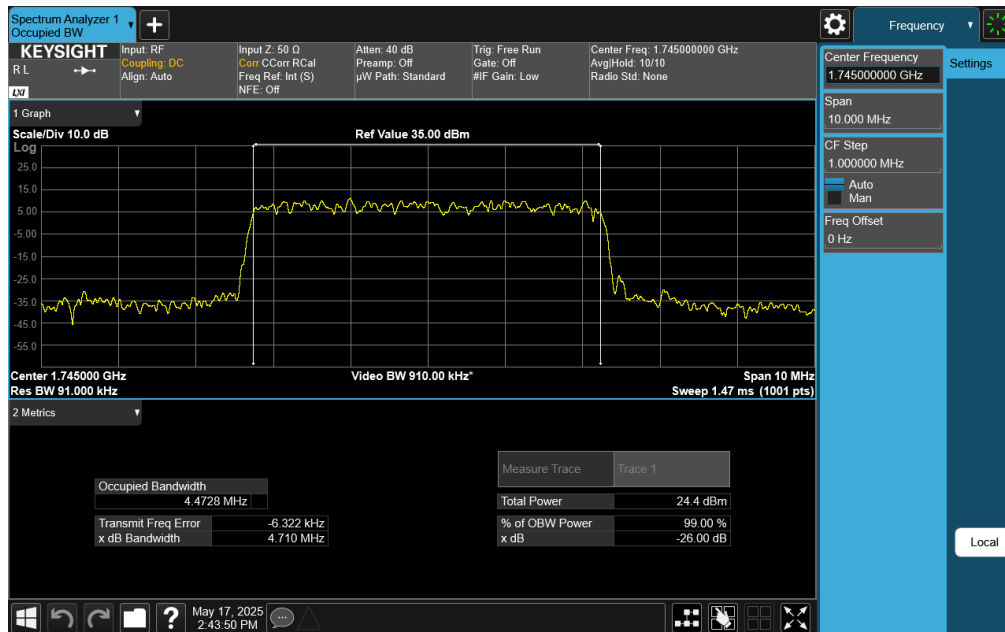


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|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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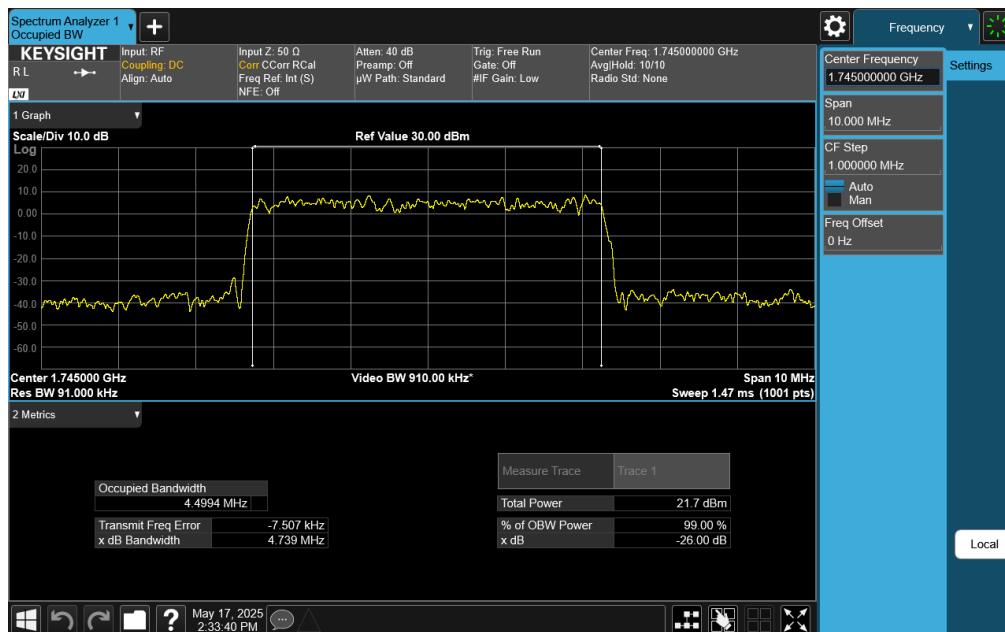
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Plot 7-33. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz DFT-s-OFDM  $\pi/2$  BPSK - Full RB)

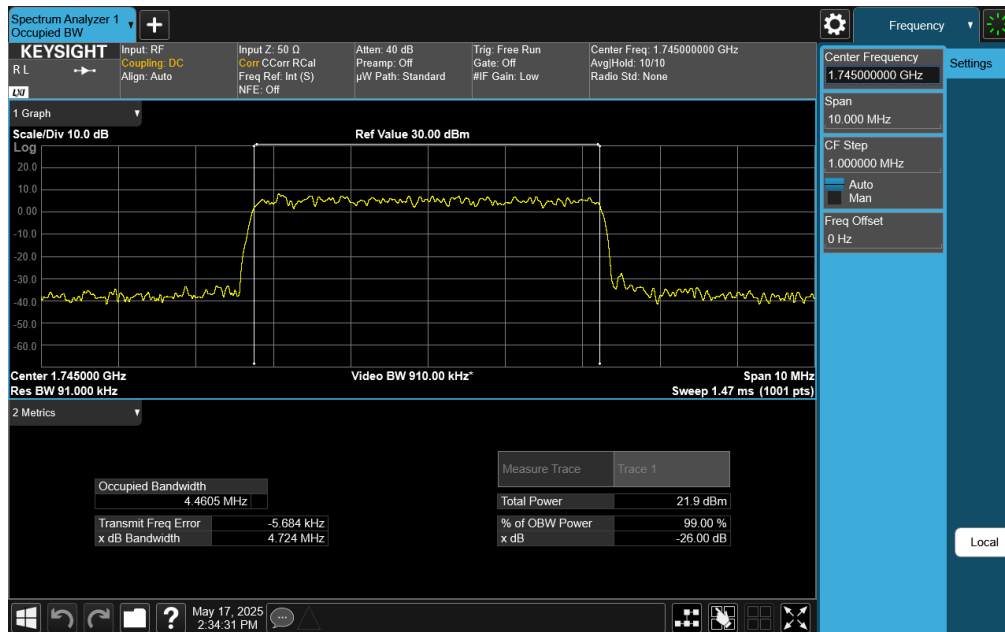


Plot 7-34. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz CP-OFDM QPSK - Full RB)

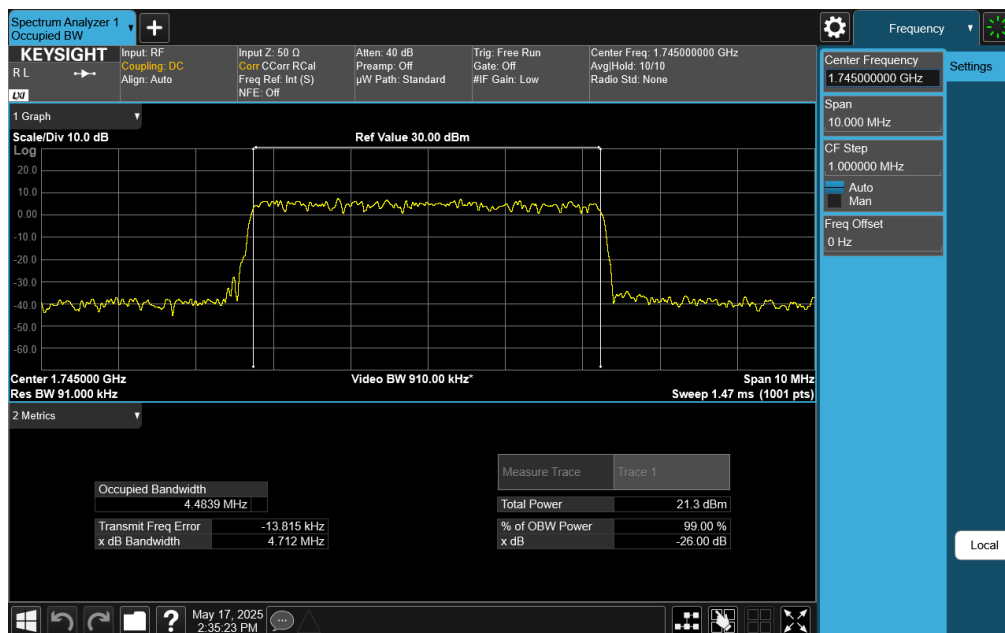
|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       |  <b>PART 27 MEASUREMENT REPORT</b> |                    | Approved by:<br>Technical Manager |
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Plot 7-35. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz CP-OFDM 16QAM - Full RB)

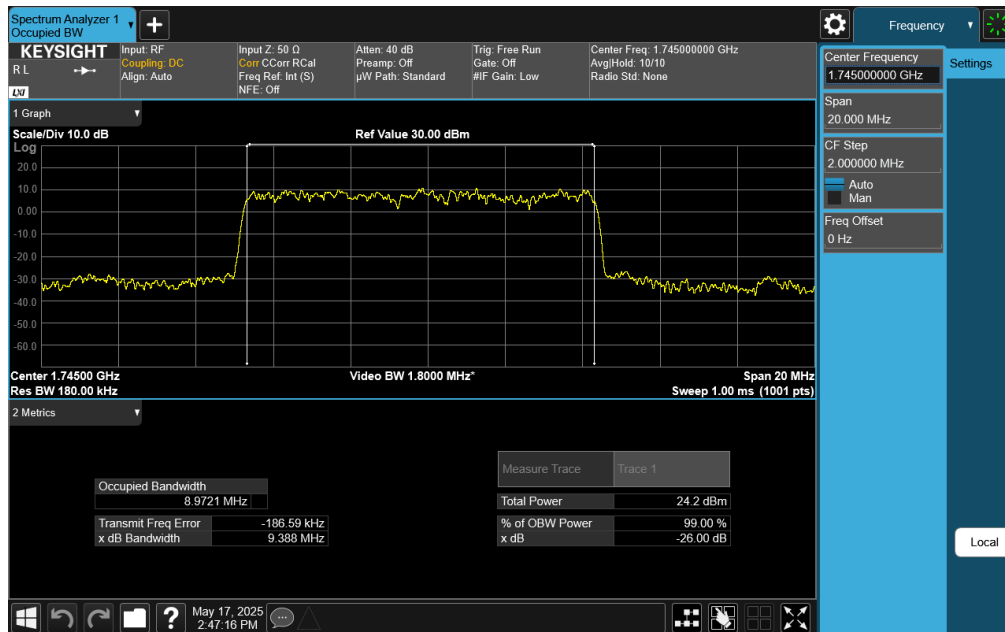


Plot 7-36. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz CP-OFDM 64QAM - Full RB)

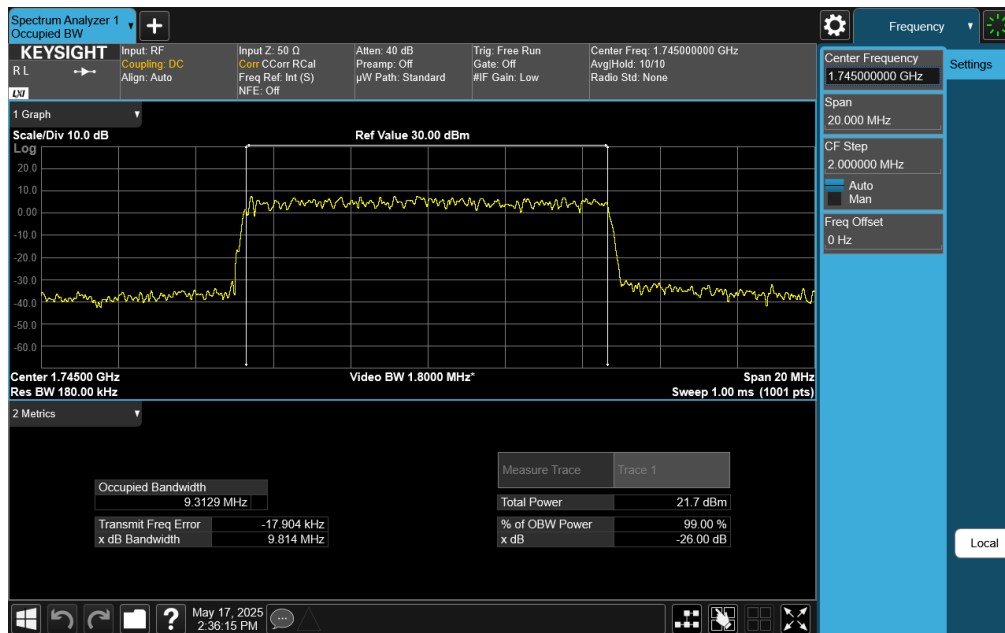
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
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Plot 7-37. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz DFT-s-OFDM  $\pi/2$  BPSK - Full RB)

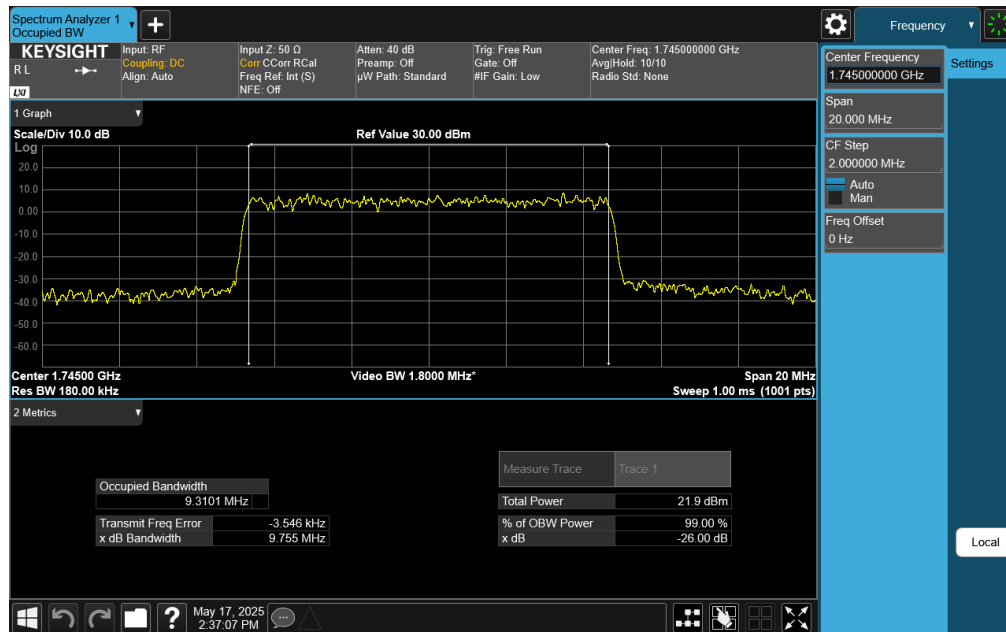


Plot 7-38. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz CP-OFDM QPSK - Full RB)

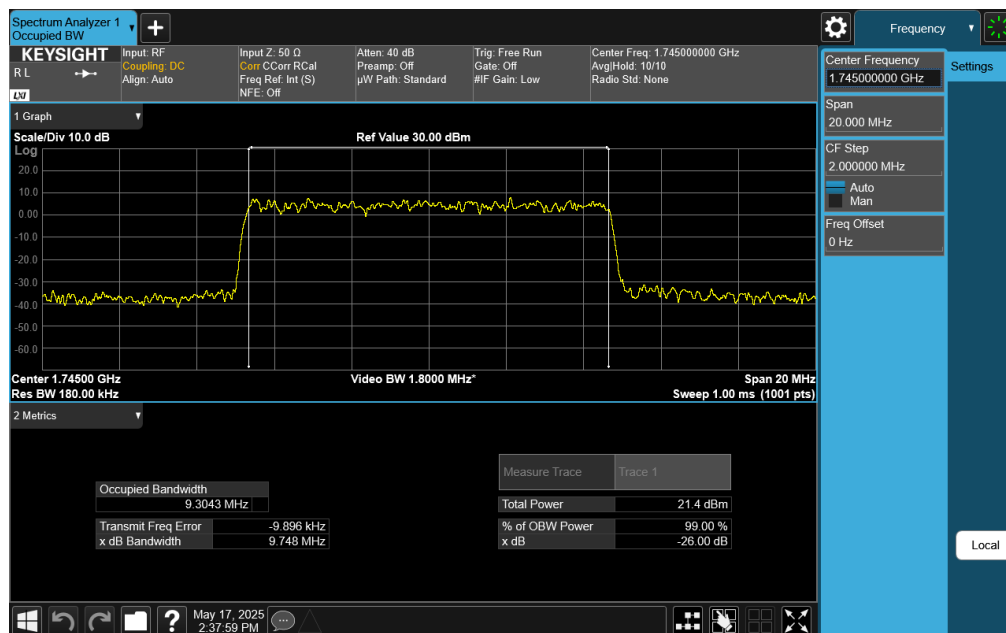
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | PART 27 MEASUREMENT REPORT            |                    | Approved by:<br>Technical Manager |
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Plot 7-39. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz CP-OFDM 16QAM - Full RB)

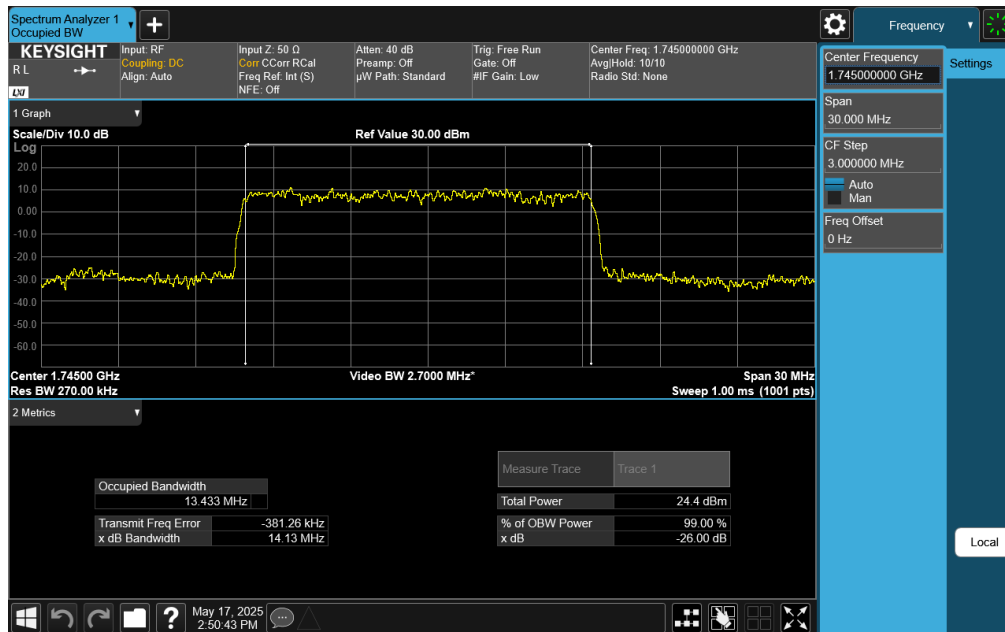


Plot 7-40. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz CP-OFDM 64QAM - Full RB)

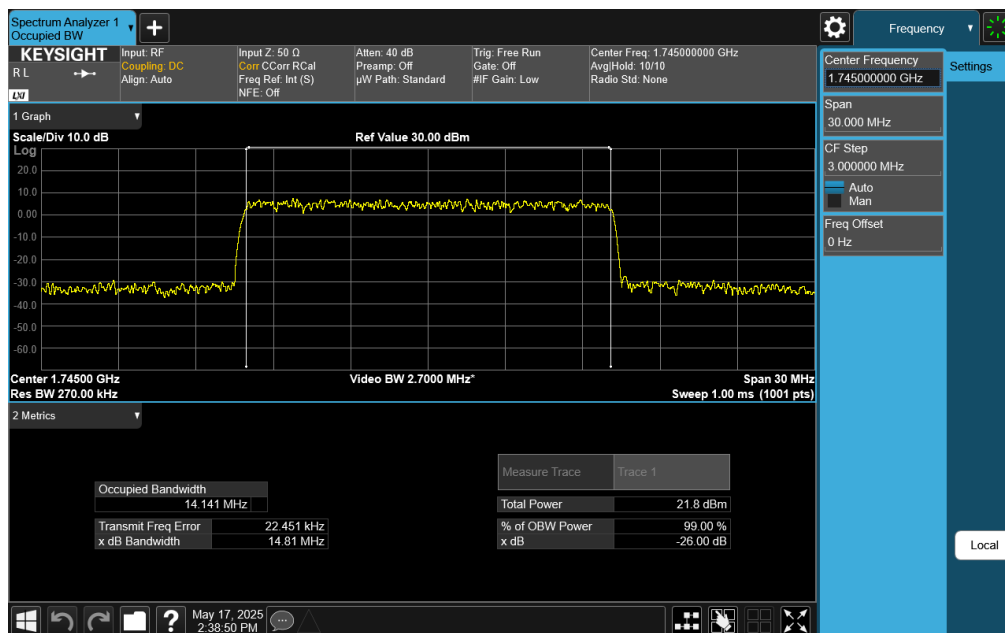
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
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Plot 7-41. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz DFT-s-OFDM  $\pi/2$  BPSK - Full RB)

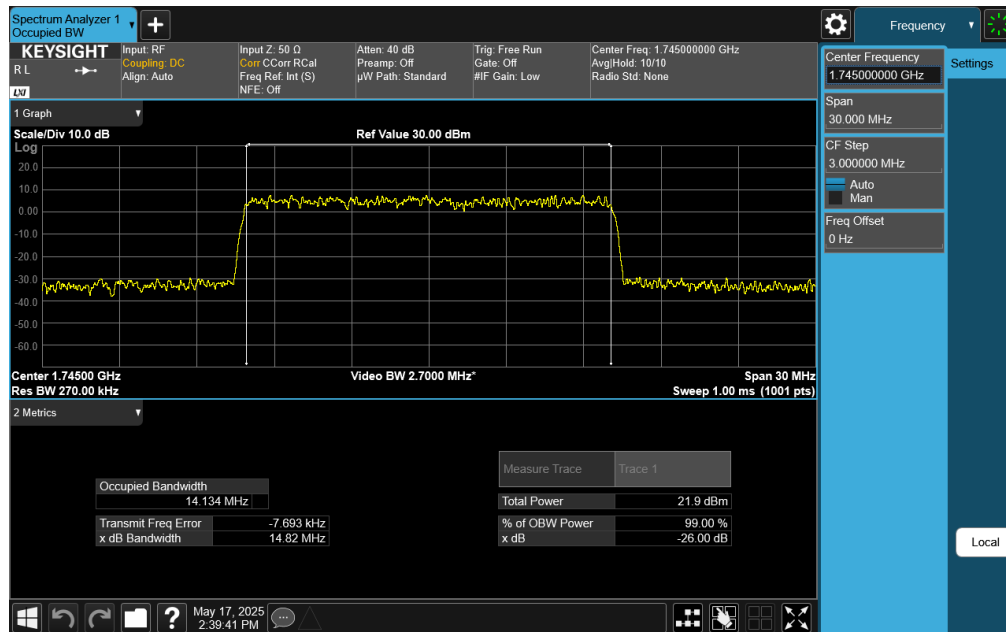


Plot 7-42. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz CP-OFDM QPSK - Full RB)

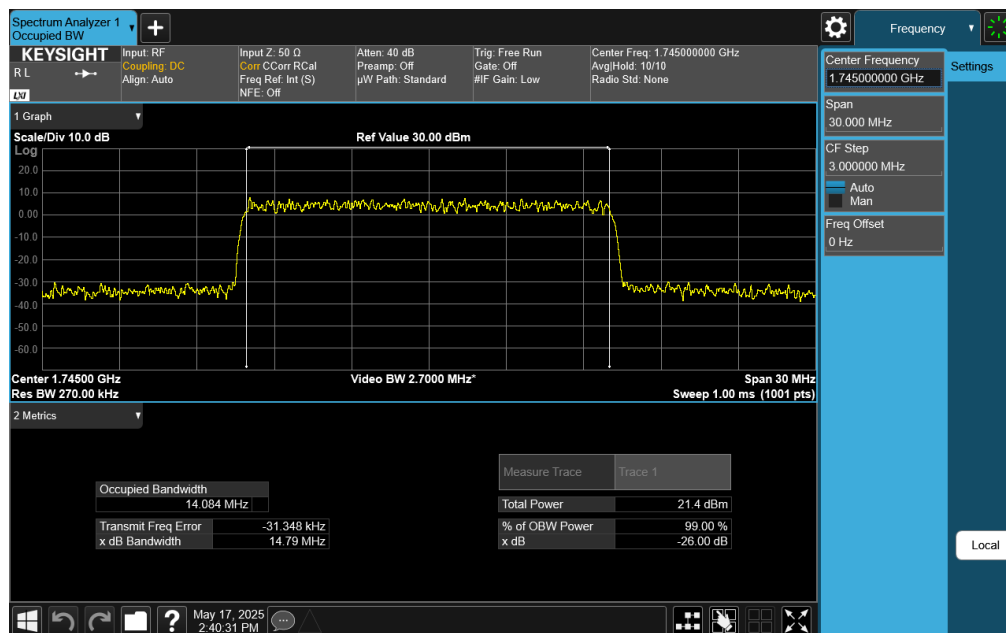
|   |                                       |                            |                                   |
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| FCC ID: BCG-A3328                       | element                               | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
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Plot 7-43. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz CP-OFDM 16QAM - Full RB)

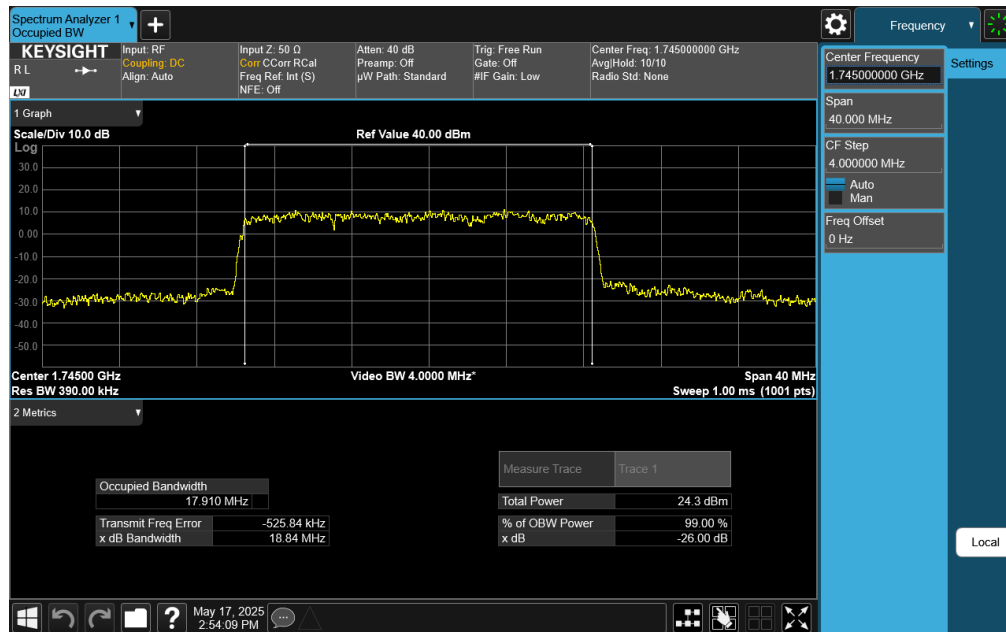


Plot 7-44. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz CP-OFDM 64QAM - Full RB)

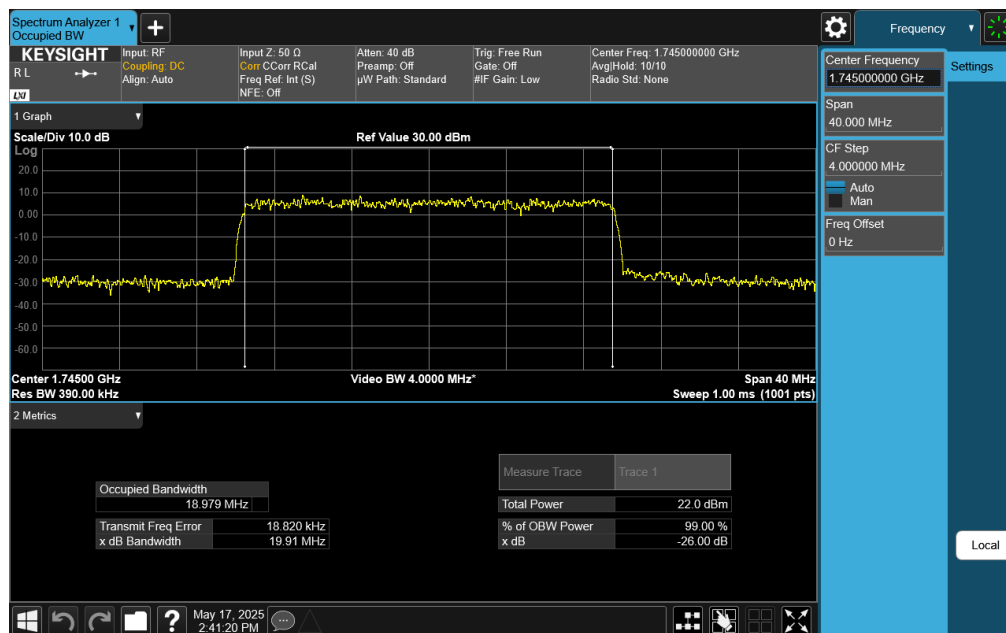
|   |                                       |                    |                                   |
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Plot 7-45. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz DFT-s-OFDM  $\pi/2$  BPSK - Full RB)

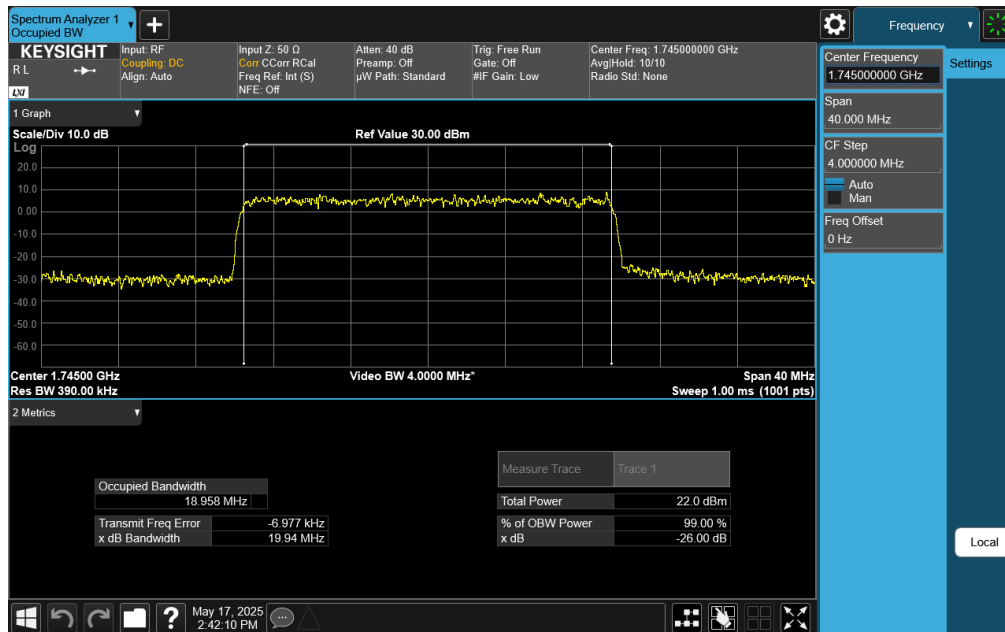


Plot 7-46. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz CP-OFDM QPSK - Full RB)

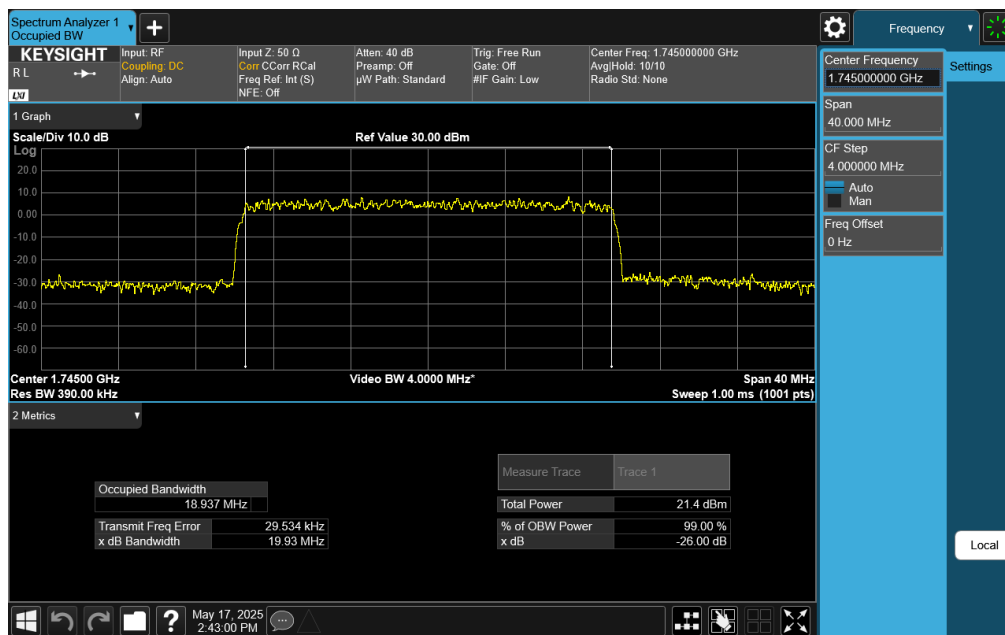
|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       |  <b>PART 27 MEASUREMENT REPORT</b> |                    | Approved by:<br>Technical Manager |
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Plot 7-47. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz CP-OFDM 16QAM - Full RB)



Plot 7-48. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz CP-OFDM 64QAM - Full RB)

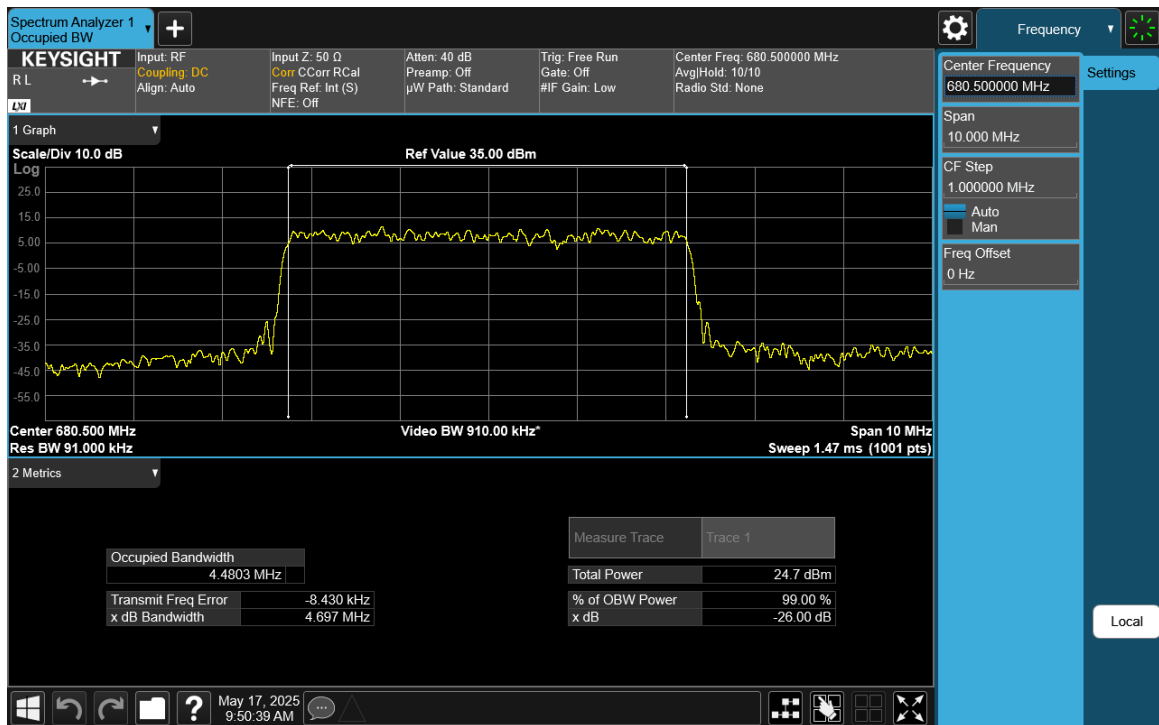
|   |                                       |                            |                                   |
|---|---------------------------------------|----------------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | element                               | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
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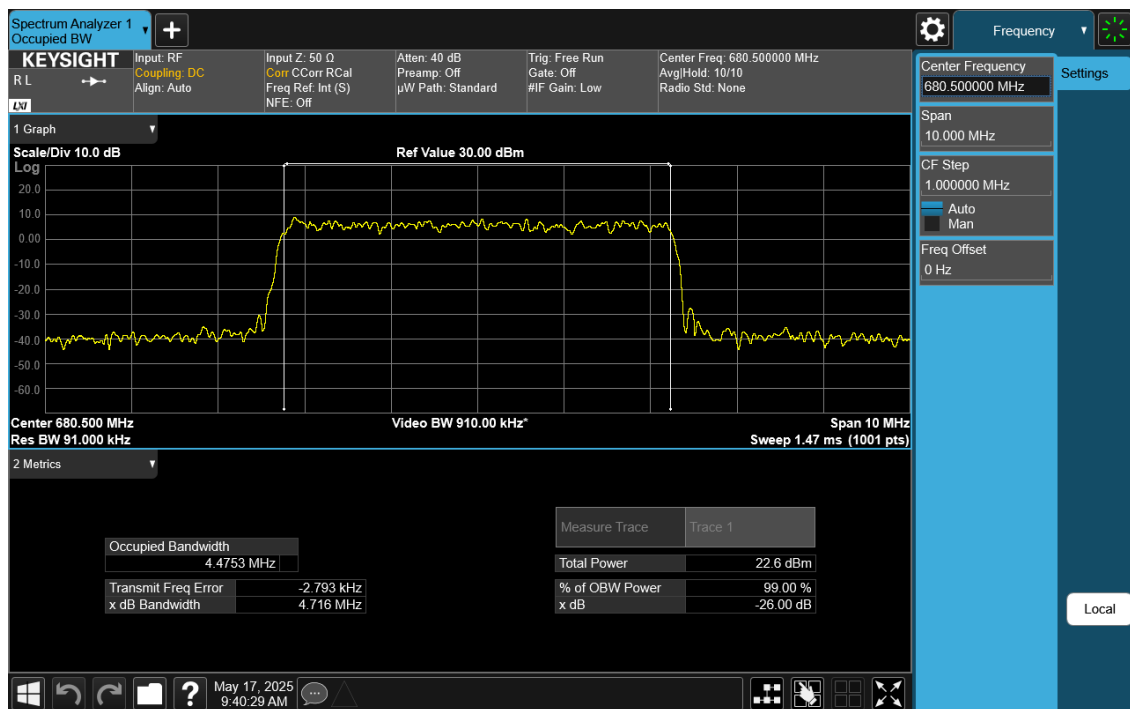
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## NR Band n71



Plot 7-49. Occupied Bandwidth Plot (NR Band n71 - 5MHz DFT-s-OFDM  $\pi/2$  BPSK - Full RB)

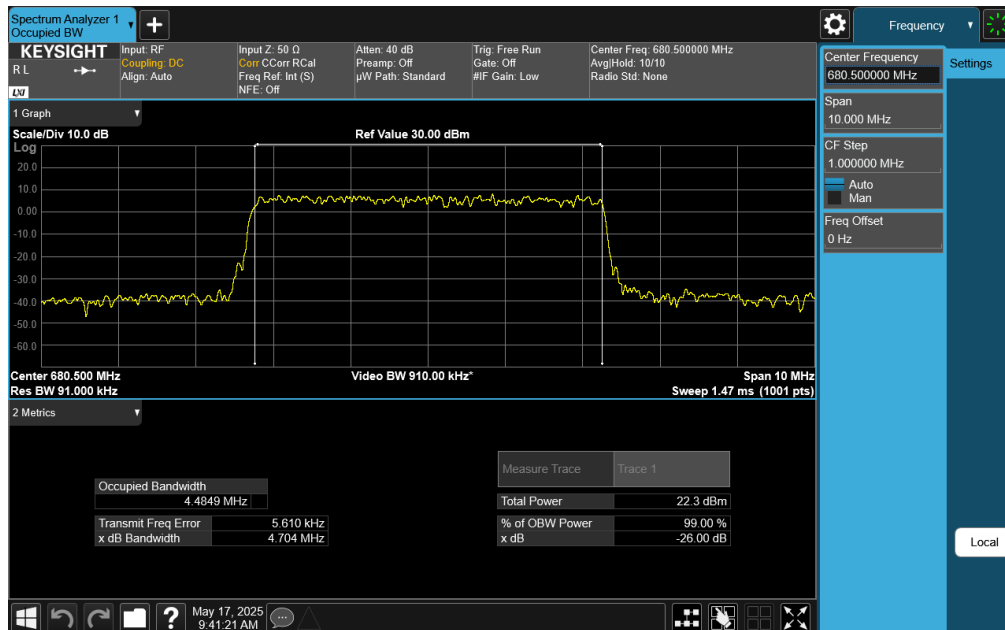


Plot 7-50. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM QPSK - Full RB)

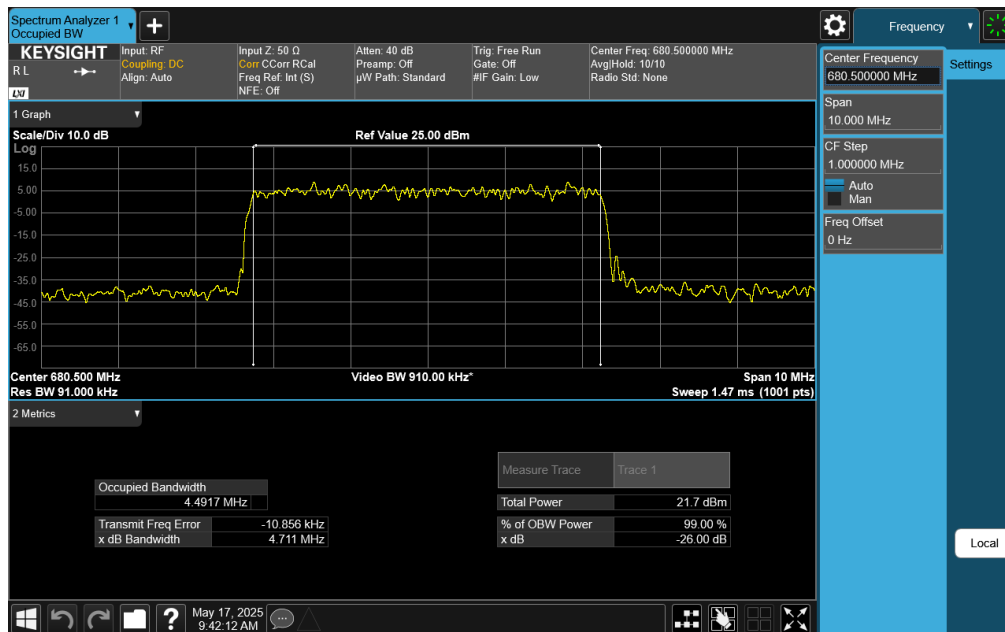
|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       |  <b>PART 27 MEASUREMENT REPORT</b> |                    | Approved by:<br>Technical Manager |
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Plot 7-51. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM 16-QAM - Full RB)

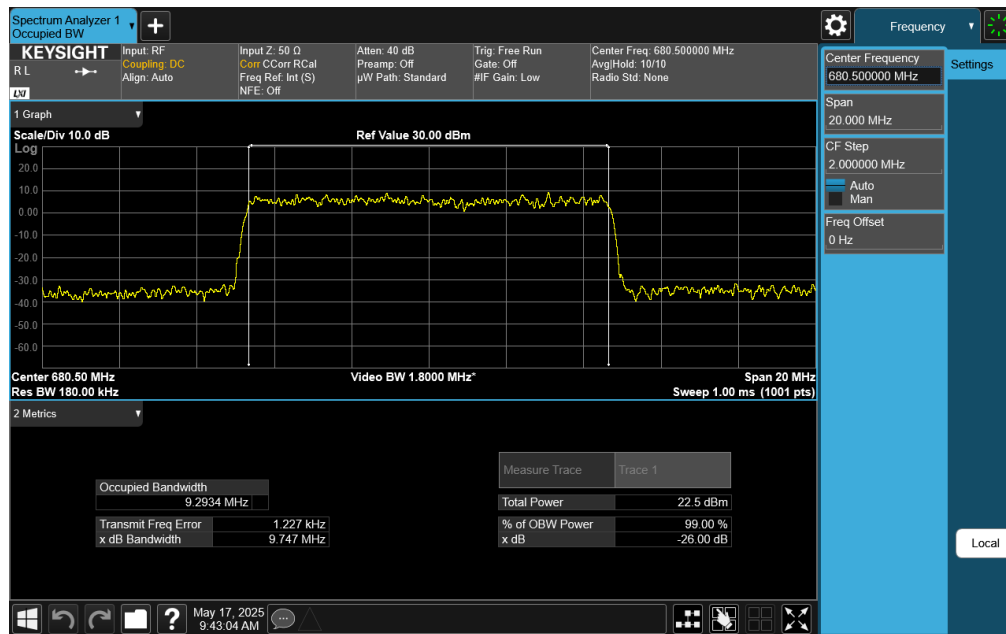
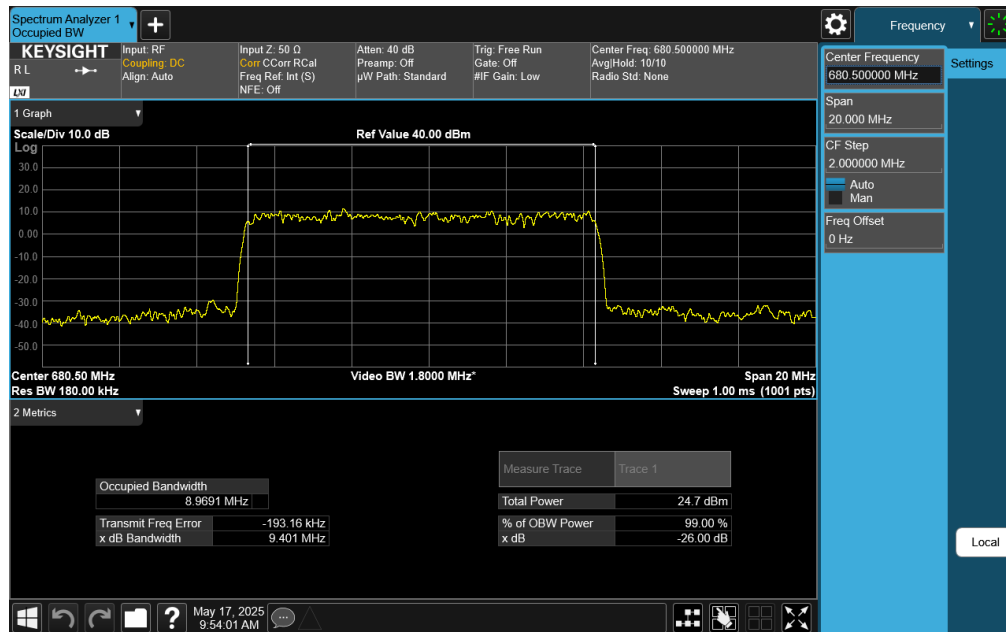


Plot 7-52. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM 64-QAM - Full RB)

|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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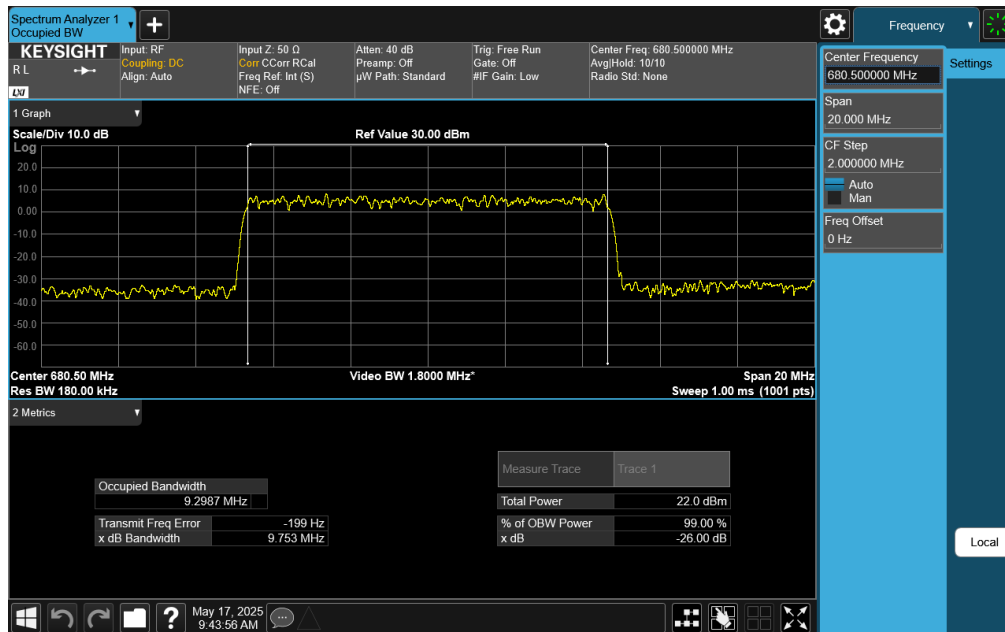
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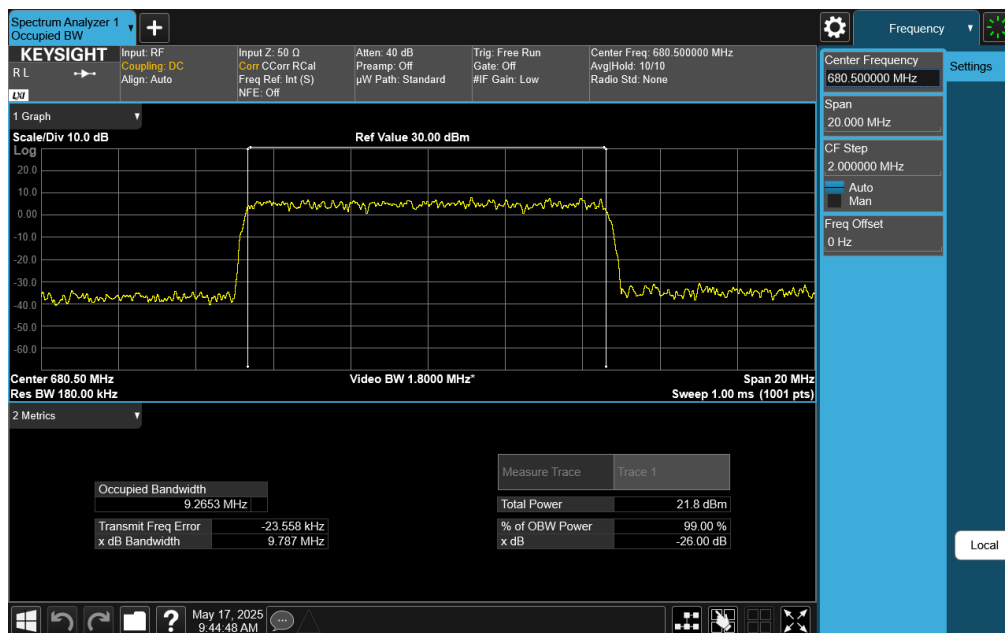
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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Plot 7-55. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM 16-QAM - Full RB)

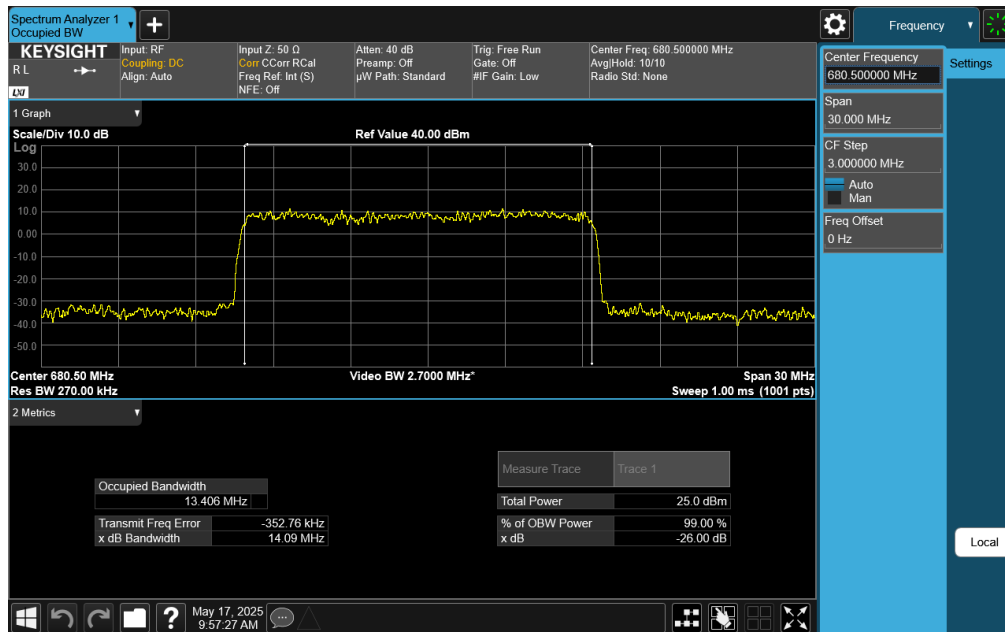


Plot 7-56. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM 64-QAM - Full RB)

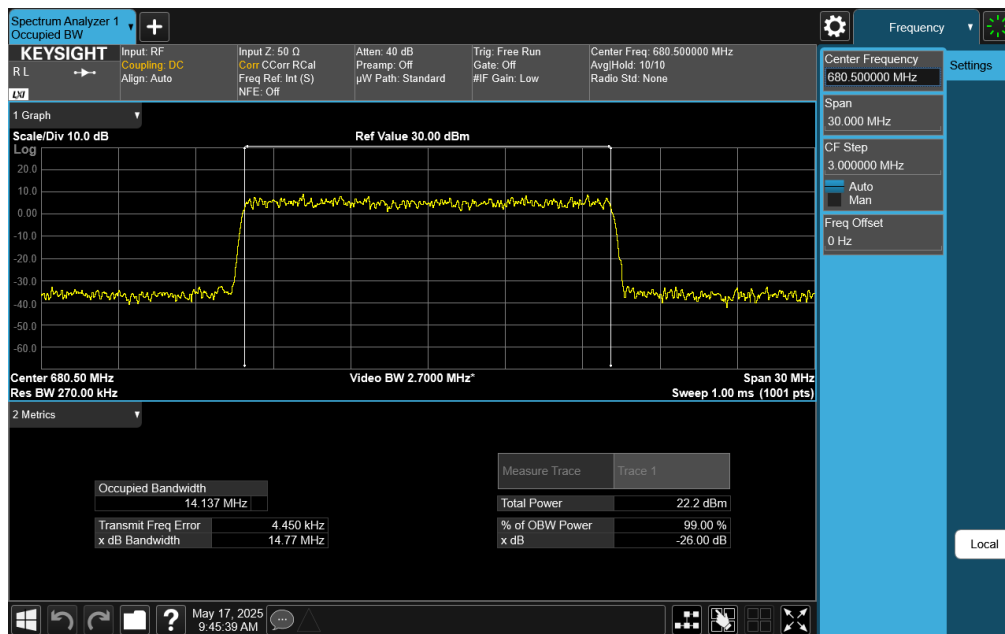
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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Plot 7-57. Occupied Bandwidth Plot (NR Band n71 - 15MHz DFT-s-OFDM  $\pi/2$  BPSK - Full RB)

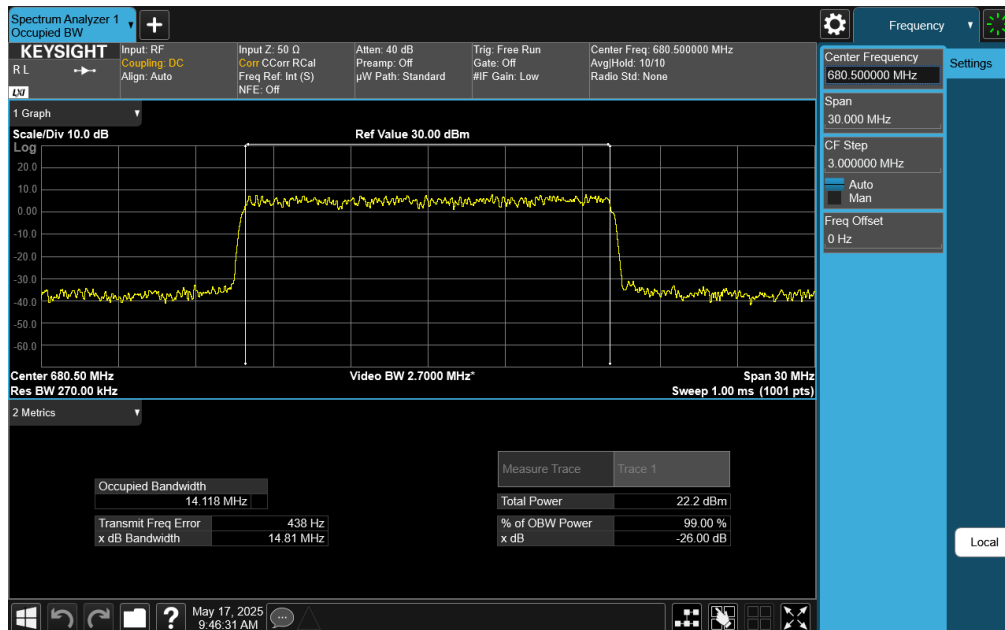


Plot 7-58. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM QPSK - Full RB)

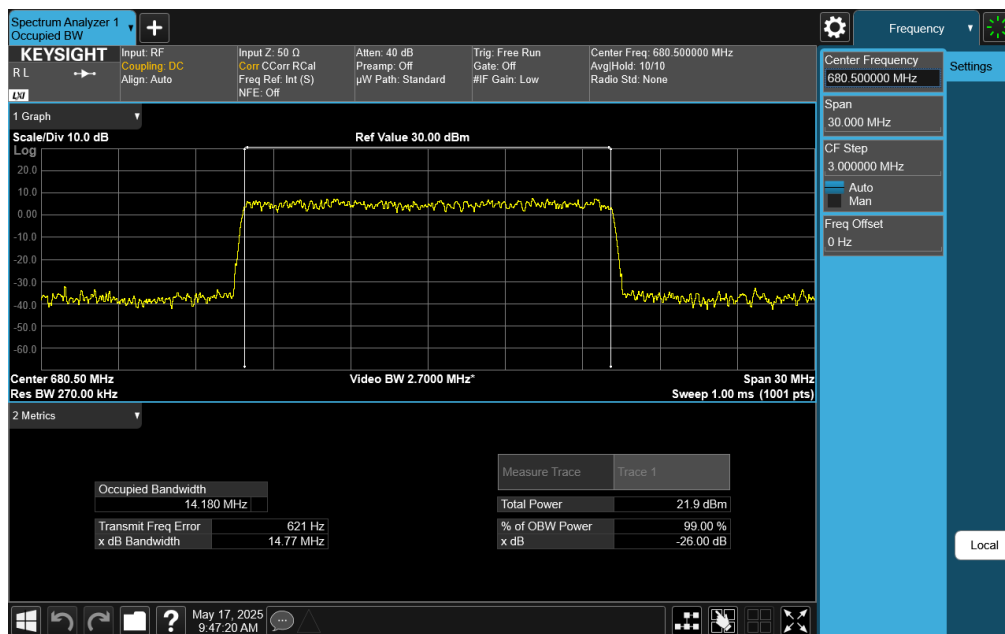
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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Plot 7-59. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM 16-QAM - Full RB)

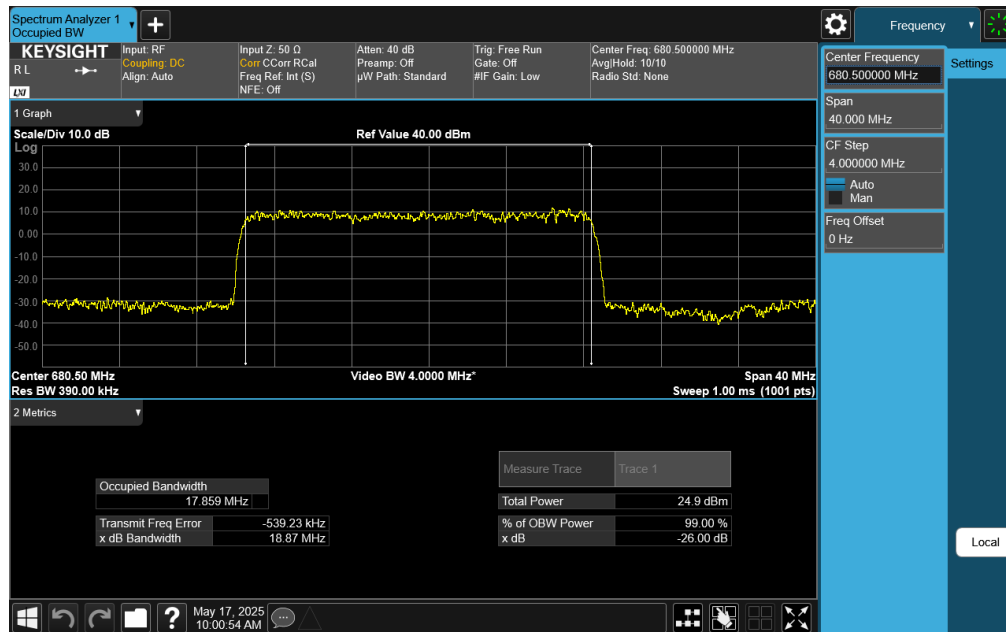


Plot 7-60. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM 64-QAM - Full RB)

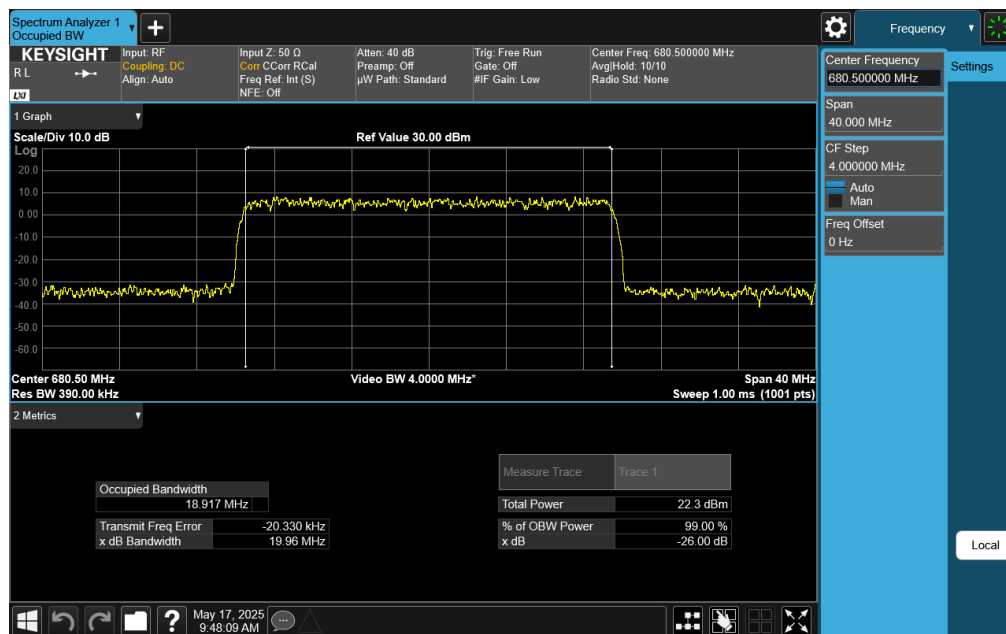
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3328                       | <b>PART 27 MEASUREMENT REPORT</b>     |                    | Approved by:<br>Technical Manager |
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Plot 7-61. Occupied Bandwidth Plot (NR Band n71 - 20MHz DFT-s-OFDM  $\pi/2$  BPSK - Full RB)

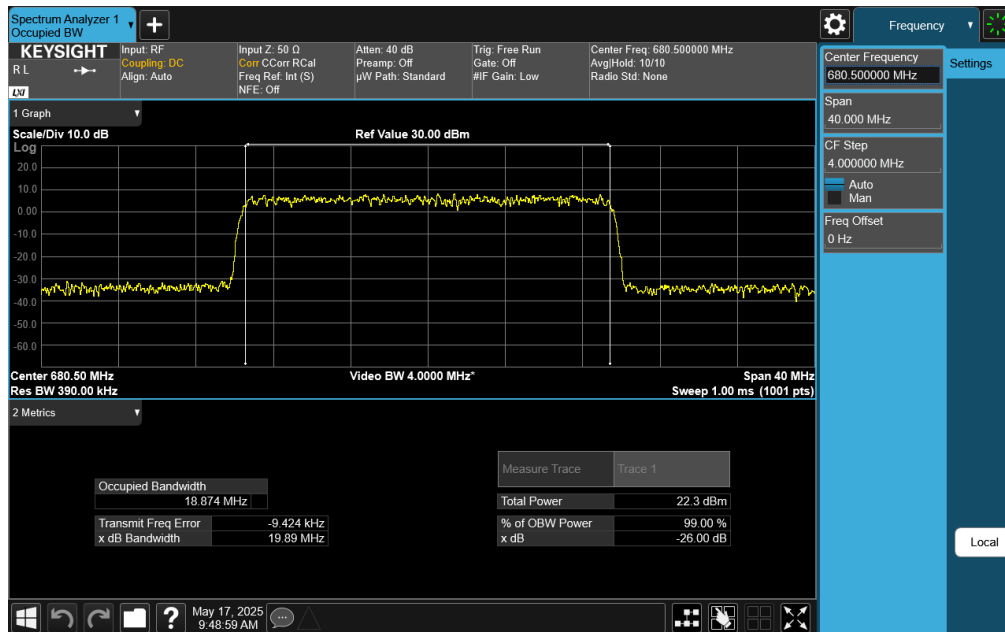


Plot 7-62. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM QPSK - Full RB)

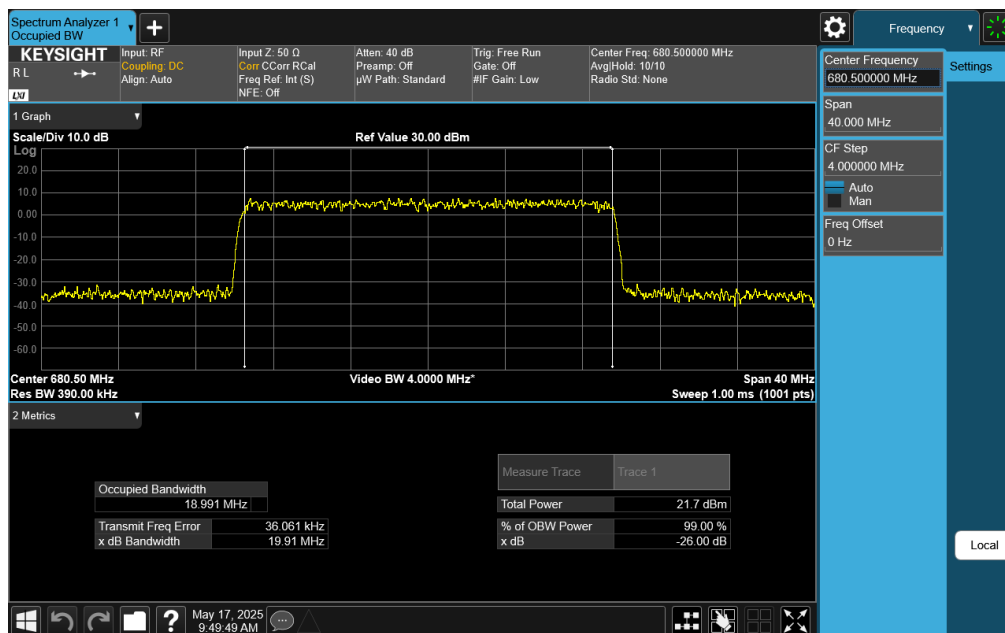
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
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Plot 7-63. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM 16-QAM - Full RB)



Plot 7-64. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM 64-QAM - Full RB)

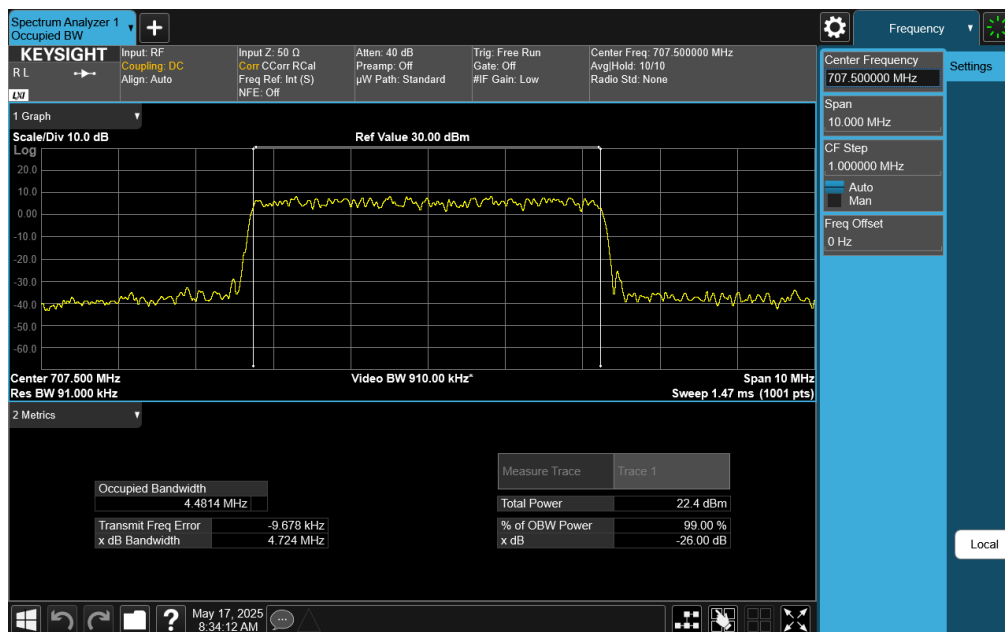
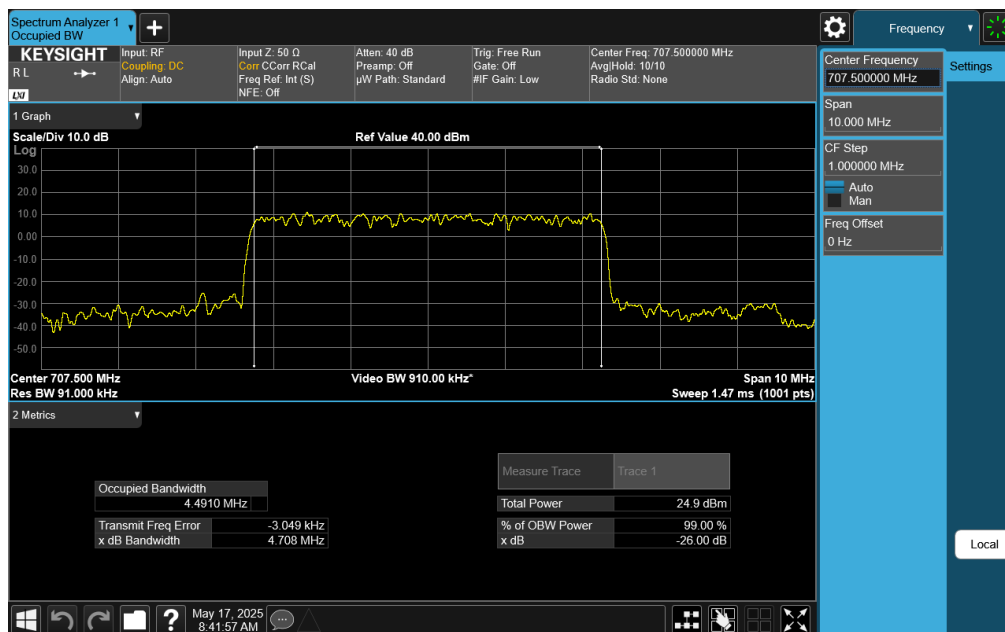
|   |                                       |                    |                                   |
|---|---------------------------------------|--------------------|-----------------------------------|
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## NR Band n12



|   |   |                    |                                   |
|---|---|--------------------|-----------------------------------|
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