

# TEST REPORT

FCC Sub6 n66 Test for SM-A276U  
Certification

APPLICANT  
SAMSUNG Electronics Co., Ltd.

REPORT NO.  
HCT-RF-2604-FC031

DATE OF ISSUE  
April 23, 2026

Tested by  
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## TEST REPORT

REPORT NO.

HCT-RF-2604-FC031

DATE OF ISSUE

April 23, 2026

Additional Model

SM-A276U1, SM-S276V

Applicant

**SAMSUNG Electronics Co., Ltd.**

129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Product Name

Mobile Phone

Model Name

SM-A276U

Date of Test

March 11, 2026 ~ April 22, 2026

FCC ID

A3LSMA276U

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing

(Address : 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)

FCC Classification:

PCS Licensed Transmitter Held to Ear (PCE)

Test Standard Used

FCC Rule Part: § 27

Test Results

PASS

## REVISION HISTORY

The revision history for this test report is shown in table.

| Revision No. | Date of Issue  | Description     |
|--------------|----------------|-----------------|
| 0            | April 23, 2026 | Initial Release |

## Notice

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### Content

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The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S. C. 853(a)

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked \*.

Information provided by the applicant is marked \*\*.

Test results provided by external providers are marked \*\*\*.

When confirmation of authenticity of this test report is required, please contact [www.hct.co.kr](http://www.hct.co.kr)

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

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## MEASUREMENT REPORT

### 1. GENERAL INFORMATION

|                     |                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model(s):           | SM-A276U                                                                                                                                                                                                                                                                                                                                                                    |
| Additional Model    | SM-A276U1, SM-S276V                                                                                                                                                                                                                                                                                                                                                         |
| SCS(kHz):           | 15                                                                                                                                                                                                                                                                                                                                                                          |
| Bandwidth(MHz):     | 5, 10, 15, 20, 25, 30, 35, 40                                                                                                                                                                                                                                                                                                                                               |
| Waveform:           | CP-OFDM, DFT-S-OFDM                                                                                                                                                                                                                                                                                                                                                         |
| Modulation:         | DFT-S-OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM<br>CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM                                                                                                                                                                                                                                                                                    |
| Tx Frequency:       | 1712.5 MHz – 1777.5 MHz (Sub6 n66(5 MHz))<br>1715.0 MHz – 1775.0 MHz (Sub6 n66(10 MHz))<br>1717.5 MHz – 1772.5 MHz (Sub6 n66(15 MHz))<br>1720.0 MHz – 1770.0 MHz (Sub6 n66(20 MHz))<br>1722.5 MHz – 1767.5 MHz (Sub6 n66(25 MHz))<br>1725.0 MHz – 1765.0 MHz (Sub6 n66(30 MHz))<br>1727.5 MHz – 1762.5 MHz (Sub6 n66(35 MHz))<br>1730.0 MHz – 1760.0 MHz (Sub6 n66(40 MHz)) |
| Serial number:      | Radiated : R37L300TFBR<br>Conducted : 9aece1613d127ece                                                                                                                                                                                                                                                                                                                      |
| Antenna Information | Please refer to the Antenna Specification document.                                                                                                                                                                                                                                                                                                                         |

# 1.1. MAXIMUM OUTPUT POWER

Main 1 ANT

| Mode<br>(MHz) | Tx Frequency<br>(MHz) | Emission<br>Designator | Modulation | EIRP              |                     |
|---------------|-----------------------|------------------------|------------|-------------------|---------------------|
|               |                       |                        |            | Max. Power<br>(W) | Max. Power<br>(dBm) |
| Sub6 n66 (5)  | 1712.5 – 1777.5       | 4M49G7D                | PI/2 BPSK  | 0.150             | 21.76               |
|               |                       | 4M50G7D                | QPSK       | 0.146             | 21.65               |
|               |                       | 4M49W7D                | 16QAM      | 0.118             | 20.73               |
|               |                       | 4M52W7D                | 64QAM      | 0.086             | 19.32               |
|               |                       | 4M51W7D                | 256QAM     | 0.047             | 16.70               |
| Sub6 n66 (10) | 1715.0 – 1775.0       | 8M97G7D                | PI/2 BPSK  | 0.147             | 21.66               |
|               |                       | 8M95G7D                | QPSK       | 0.146             | 21.65               |
|               |                       | 8M96W7D                | 16QAM      | 0.119             | 20.77               |
|               |                       | 8M98W7D                | 64QAM      | 0.087             | 19.40               |
|               |                       | 8M97W7D                | 256QAM     | 0.047             | 16.71               |
| Sub6 n66 (15) | 1717.5 – 1772.5       | 13M4G7D                | PI/2 BPSK  | 0.155             | 21.91               |
|               |                       | 13M4G7D                | QPSK       | 0.155             | 21.90               |
|               |                       | 13M4W7D                | 16QAM      | 0.121             | 20.82               |
|               |                       | 13M5W7D                | 64QAM      | 0.090             | 19.52               |
|               |                       | 13M4W7D                | 256QAM     | 0.049             | 16.89               |
| Sub6 n66 (20) | 1720.0 – 1770.0       | 17M8G7D                | PI/2 BPSK  | 0.152             | 21.81               |
|               |                       | 17M9G7D                | QPSK       | 0.151             | 21.79               |
|               |                       | 17M8W7D                | 16QAM      | 0.122             | 20.87               |
|               |                       | 17M8W7D                | 64QAM      | 0.089             | 19.48               |
|               |                       | 17M8W7D                | 256QAM     | 0.048             | 16.80               |
| Sub6 n66 (25) | 1722.5 – 1767.5       | 22M8G7D                | PI/2 BPSK  | 0.157             | 21.96               |
|               |                       | 22M8G7D                | QPSK       | 0.156             | 21.93               |
|               |                       | 22M9W7D                | 16QAM      | 0.124             | 20.92               |
|               |                       | 22M8W7D                | 64QAM      | 0.093             | 19.68               |
|               |                       | 22M9W7D                | 256QAM     | 0.049             | 16.88               |
| Sub6 n66 (30) | 1725.0 – 1765.0       | 28M4G7D                | PI/2 BPSK  | 0.156             | 21.93               |
|               |                       | 28M5G7D                | QPSK       | 0.155             | 21.91               |
|               |                       | 28M5W7D                | 16QAM      | 0.124             | 20.94               |
|               |                       | 28M5W7D                | 64QAM      | 0.091             | 19.61               |
|               |                       | 28M4W7D                | 256QAM     | 0.051             | 17.07               |
| Sub6 n66 (35) | 1727.5 – 1762.5       | 32M0G7D                | PI/2 BPSK  | 0.164             | 22.15               |
|               |                       | 32M1G7D                | QPSK       | 0.154             | 21.88               |
|               |                       | 32M1W7D                | 16QAM      | 0.125             | 20.96               |
|               |                       | 32M0W7D                | 64QAM      | 0.089             | 19.50               |
|               |                       | 32M2W7D                | 256QAM     | 0.050             | 16.98               |
| Sub6 n66 (40) | 1730.0 – 1760.0       | 38M4G7D                | PI/2 BPSK  | 0.156             | 21.93               |
|               |                       | 38M5G7D                | QPSK       | 0.153             | 21.86               |
|               |                       | 38M4W7D                | 16QAM      | 0.124             | 20.94               |
|               |                       | 38M4W7D                | 64QAM      | 0.091             | 19.59               |
|               |                       | 38M4W7D                | 256QAM     | 0.051             | 17.04               |

## Sub 2-2 ANT

| Mode<br>(MHz) | Tx Frequency<br>(MHz) | Emission<br>Designator | Modulation | EIRP              |                     |
|---------------|-----------------------|------------------------|------------|-------------------|---------------------|
|               |                       |                        |            | Max. Power<br>(W) | Max. Power<br>(dBm) |
| Sub6 n66 (5)  | 1712.5 – 1777.5       | 4M53G7D                | PI/2 BPSK  | 0.100             | 20.02               |
|               |                       | 4M50G7D                | QPSK       | 0.099             | 19.96               |
|               |                       | 4M49W7D                | 16QAM      | 0.079             | 18.95               |
|               |                       | 4M53W7D                | 64QAM      | 0.057             | 17.55               |
|               |                       | 4M50W7D                | 256QAM     | 0.032             | 15.01               |
| Sub6 n66 (10) | 1715.0 – 1775.0       | 8M98G7D                | PI/2 BPSK  | 0.105             | 20.20               |
|               |                       | 9M00G7D                | QPSK       | 0.104             | 20.18               |
|               |                       | 8M99W7D                | 16QAM      | 0.084             | 19.23               |
|               |                       | 8M98W7D                | 64QAM      | 0.060             | 17.78               |
|               |                       | 8M97W7D                | 256QAM     | 0.033             | 15.12               |
| Sub6 n66 (15) | 1717.5 – 1772.5       | 13M4G7D                | PI/2 BPSK  | 0.104             | 20.16               |
|               |                       | 13M5G7D                | QPSK       | 0.101             | 20.05               |
|               |                       | 13M5W7D                | 16QAM      | 0.082             | 19.13               |
|               |                       | 13M5W7D                | 64QAM      | 0.059             | 17.70               |
|               |                       | 13M5W7D                | 256QAM     | 0.033             | 15.22               |
| Sub6 n66 (20) | 1720.0 – 1770.0       | 17M9G7D                | PI/2 BPSK  | 0.107             | 20.28               |
|               |                       | 18M0G7D                | QPSK       | 0.104             | 20.18               |
|               |                       | 18M0W7D                | 16QAM      | 0.084             | 19.26               |
|               |                       | 17M9W7D                | 64QAM      | 0.062             | 17.93               |
|               |                       | 18M0W7D                | 256QAM     | 0.034             | 15.26               |
| Sub6 n66 (25) | 1722.5 – 1767.5       | 22M9G7D                | PI/2 BPSK  | 0.112             | 20.51               |
|               |                       | 23M0G7D                | QPSK       | 0.111             | 20.45               |
|               |                       | 23M0W7D                | 16QAM      | 0.090             | 19.56               |
|               |                       | 23M0W7D                | 64QAM      | 0.065             | 18.10               |
|               |                       | 22M9W7D                | 256QAM     | 0.036             | 15.52               |
| Sub6 n66 (30) | 1725.0 – 1765.0       | 28M7G7D                | PI/2 BPSK  | 0.108             | 20.35               |
|               |                       | 28M6G7D                | QPSK       | 0.105             | 20.23               |
|               |                       | 28M7W7D                | 16QAM      | 0.085             | 19.31               |
|               |                       | 28M7W7D                | 64QAM      | 0.060             | 17.81               |
|               |                       | 28M7W7D                | 256QAM     | 0.034             | 15.27               |
| Sub6 n66 (35) | 1727.5 – 1762.5       | 32M4G7D                | PI/2 BPSK  | 0.108             | 20.32               |
|               |                       | 32M5G7D                | QPSK       | 0.107             | 20.29               |
|               |                       | 32M3W7D                | 16QAM      | 0.088             | 19.46               |
|               |                       | 32M3W7D                | 64QAM      | 0.062             | 17.90               |
|               |                       | 32M2W7D                | 256QAM     | 0.034             | 15.34               |
| Sub6 n66 (40) | 1730.0 – 1760.0       | 38M7G7D                | PI/2 BPSK  | 0.112             | 20.50               |
|               |                       | 38M7G7D                | QPSK       | 0.110             | 20.40               |
|               |                       | 38M7W7D                | 16QAM      | 0.089             | 19.48               |
|               |                       | 38M7W7D                | 64QAM      | 0.064             | 18.06               |
|               |                       | 38M7W7D                | 256QAM     | 0.035             | 15.47               |

## 2. INTRODUCTION

### 2.1. DESCRIPTION OF EUT

Please refer to the [2G3G] Test Report.

### 2.2. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

### 2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea.

Detailed description of test facility was submitted to the Commission and accepted dated February 26, 2026 (Registration Number: KR0032).

### 2.4. EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to ANSI/USEMCSC C63.2-2023, "American National Standard for Specifications of Electromagnetic Interference and Field Strength Measuring Instrumentation in the Frequency Range 9 kHz to 40 GHz".

### 3. DESCRIPTION OF TESTS

#### 3.1 TEST PROCEDURE

| Test Description                                    | Test Procedure Used                                                                     |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------|
| Occupied Bandwidth                                  | - KDB 971168 D01 v03r01 – Section 4.3<br>- ANSI C63.26-2015 – Section 5.4.4             |
| Band Edge                                           | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7               |
| Spurious and Harmonic Emissions at Antenna Terminal | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7               |
| Conducted Output Power                              | - KDB 971168 D01 v03r01 - Section 5.2.4<br>- ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2 |
| Peak- to- Average Ratio                             | - KDB 971168 D01 v03r01 – Section 5.7<br>- ANSI C63.26-2015 – Section 5.2.3.4           |
| Frequency stability                                 | - ANSI C63.26-2015 – Section 5.6                                                        |
| Radiated Power                                      | - ANSI C63.26-2015 – Section 5.2.4.4<br>- KDB 971168 D01 v03r01 – Section 5.8           |
| Radiated Spurious and Harmonic Emissions            | - ANSI C63.26-2015 – Section 5.5.3<br>- KDB 971168 D01 v03r01 – Section 5.8             |

### 3.2 RADIATED POWER

#### Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna.

#### Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW, not to exceed 1 MHz
3. VBW  $\geq$  3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

#### Test Note

1. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission.
2. A half wave dipole is then substituted in place of the EUT. For emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.

The power is calculated by the following formula;

$$P_d \text{ (dBm)} = P_g \text{ (dBm)} - \text{cable loss (dB)} + \text{antenna gain (dB)}$$

Where:  $P_d$  is the dipole equivalent power and  $P_g$  is the generator output power into the substitution antenna.

3. The maximum value is calculated by adding the forward power to the calibrated source plus its appropriate gain value.

These steps are repeated with the receiving antenna in both vertical and horizontal polarization. the difference between the gain of the horn and an isotropic antenna are taken into consideration

4. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
5. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

### 3.3 RADIATED SPURIOUS EMISSIONS

#### Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method.

#### Test Settings

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
2. VBW  $\geq$  3 x RBW
3. No. of sweep points > 2 x span / RBW
4. Detector = Peak
5. Trace mode = Max Hold
6. The trace was allowed to stabilize
7. Test channel : Low/ Middle/ High
8. Frequency range : We are performed all frequency to 10<sup>th</sup> harmonics from 9 kHz.

#### Test Note

1. Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data
3. For spurious emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated. The spurious emissions is calculated by the following formula;

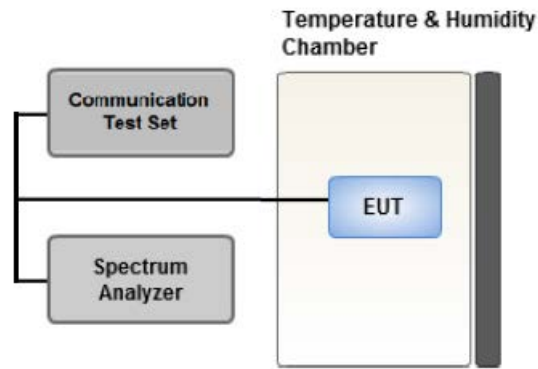
$$\text{Result}_{(dBm)} = P_{g_{(dBm)}} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

Where:  $P_g$  is the generator output power into the substitution antenna.

If the fundamental frequency is below 1 GHz, RF output power has been converted to EIRP.

$$\text{EIRP}_{(dBm)} = \text{ERP}_{(dBm)} + 2.15$$

### 3.4 PEAK- TO- AVERAGE RATIO

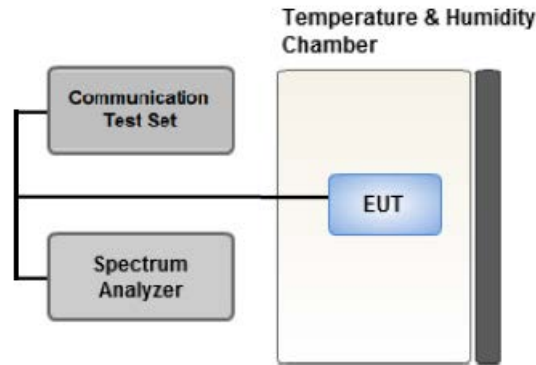


Test setup

#### Test Settings

1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:
  - . - for continuous transmissions, set to 1 ms,
  - . - or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
4. Record the maximum PAPR level associated with a probability of 0.1 %.

### 3.5 OCCUPIED BANDWIDTH.



#### Test setup

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

The EUT makes a call to the communication simulator.

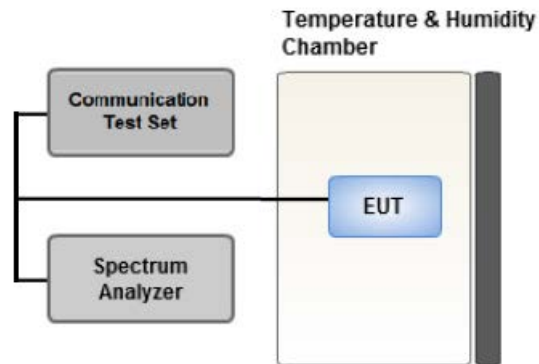
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

#### Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99 % occupied bandwidth and the 26 dB 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 x 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

### 3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

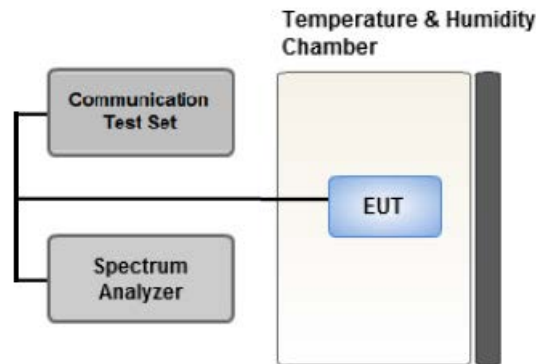
#### Test Overview

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates 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.

#### Test Settings

1. RBW = 1 MHz
2. VBW  $\geq$  3 MHz
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep time = auto
6. Number of points in sweep = 1001 pts

### 3.7 BAND EDGE



Test setup

#### Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates 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.

#### Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points  $\geq 2 \times \text{Span/RBW}$
7. Trace mode = trace average
8. Sweep time > (Number of Points)  $\times$  (Symbol Period)
9. The trace was allowed to stabilize

### Test Notes

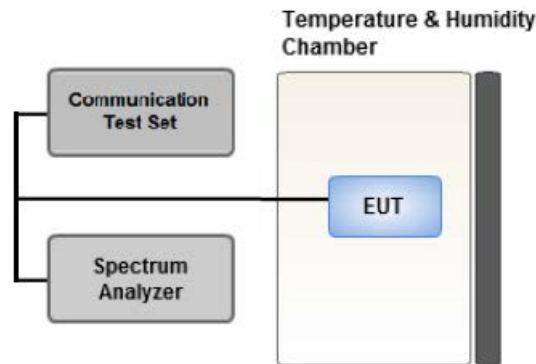
According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

All measurements were done at 2 channels (low and high operational frequency range.)

The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

Where  $\text{Margin} < 1$  dB the emission level is either corrected by  $10 \log(1 \text{ MHz} / \text{RB})$  or the emission is integrated over a 1 MHz bandwidth to determine the final result. When using the integration method the integration window is either centered on the emission or, for emissions at the band edge, centered by an offset of 500 kHz from the block edge so that the integration window is the 1 MHz adjacent to the block edge.

### 3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

#### Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.

The frequency stability of the transmitter is measured by:

1. Temperature:

The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.

2. Primary Supply Voltage:

- . - Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
- . - For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

#### Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20 °C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter.  
Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10 °C intervals ranging from -30 °C to +50 °C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

### 3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.  
(Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.  
Mode: SA, NSA  
Worst case: SA  
Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)  
Worst case : Stand alone
- All simultaneous transmission scenarios of operation were investigated, and the test results showed no additional significant emissions relative to the least restrictive limit were observed.  
Therefore, only the worst case(stand-alone) results were reported.
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).  
All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.  
The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.  
Please refer to the table below.
- In the case of radiated spurious emissions, all bandwidth of operation was investigated and the worst case bandwidth results are reported. (Worst case : 35 MHz(Main 1 ANT), 25 MHz(Sub 2-2 ANT))
- SM-A276U & additional models were tested and the worst case results are reported.  
(Worst case : SM-A276U)

[ Main 1 ANT Worst case ]

| Test Description                         | Modulation                                        | RB size         | RB offset | Axis |
|------------------------------------------|---------------------------------------------------|-----------------|-----------|------|
| Equivalent Isotropic Radiated Power      | PI/2 BPSK,<br>QPSK,<br>16QAM,<br>64QAM,<br>256QAM | See Section 8.1 |           | X    |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK                                         | See Section 8.2 |           | Y    |

[ Sub 2-2 ANT Worst case ]

| Test Description                         | Modulation                                        | RB size         | RB offset | Axis |
|------------------------------------------|---------------------------------------------------|-----------------|-----------|------|
| Equivalent Isotropic Radiated Power      | PI/2 BPSK,<br>QPSK,<br>16QAM,<br>64QAM,<br>256QAM | See Section 9.1 |           | X    |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK                                         | See Section 9.2 |           | Z    |

### 3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.  
(Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.  
(Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.  
Mode: SA, NSA  
Worst case: SA
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.  
Please refer to the table below.
- SM-A276U & additional models were tested and the worst case results are reported.  
(Worst case : SM-A276U)

[ Worst case ]

| Test Description                                       | Modulation                                        | Bandwidth (MHz)                  | Frequency            | RB size | RB offset |
|--------------------------------------------------------|---------------------------------------------------|----------------------------------|----------------------|---------|-----------|
| Occupied Bandwidth,<br>Peak-To-Average Ratio           | PI/2 BPSK,<br>QPSK,<br>16QAM,<br>64QAM,<br>256QAM | 5, 10, 15, 20,<br>25, 30, 35, 40 | Mid                  | Full RB | 0         |
| Band Edge                                              | PI/2 BPSK                                         | 5                                | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 24        |
|                                                        |                                                   | 10                               | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 51        |
|                                                        |                                                   | 15                               | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 78        |
|                                                        |                                                   | 20                               | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 105       |
|                                                        |                                                   | 25                               | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 132       |
|                                                        |                                                   | 30                               | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 159       |
|                                                        |                                                   | 35                               | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 187       |
|                                                        |                                                   | 40                               | Low                  | 1       | 0         |
|                                                        |                                                   |                                  | High                 | 1       | 215       |
|                                                        |                                                   | 5, 10, 15, 20,<br>25, 30, 35, 40 | Low,<br>High         | Full RB | 0         |
| Spurious and Harmonic Emissions at<br>Antenna Terminal | PI/2 BPSK                                         | 5, 10, 15, 20,<br>25, 30, 35, 40 | Low,<br>Mid,<br>High | 1       | 1         |

#### 4. LIST OF TEST EQUIPMENT

| Equipment                        | Model                   | Manufacture     | Serial No.  | Due to Calibration | Calibration Interval |
|----------------------------------|-------------------------|-----------------|-------------|--------------------|----------------------|
| Dipole Antenna                   | UHAP                    | Schwarzbeck     | 01273       | 03/05/2028         | Biennial             |
| Dipole Antenna                   | UHAP                    | Schwarzbeck     | 01274       | 03/05/2028         | Biennial             |
| Horn Antenna                     | BBHA 9120D              | Schwarzbeck     | 02289       | 02/10/2028         | Biennial             |
| Horn Antenna                     | BBHA 9120D              | Schwarzbeck     | 9120D-1299  | 04/17/2027         | Biennial             |
| Horn Antenna                     | BBHA 9170               | Schwarzbeck     | BBHA9170342 | 09/20/2026         | Biennial             |
| Horn Antenna                     | BBHA 9170               | Schwarzbeck     | BBHA9170124 | 03/23/2027         | Biennial             |
| Loop Antenna                     | FMZB1513                | Schwarzbeck     | 1513-175    | 06/24/2027         | Biennial             |
| Bilog Antenna                    | VULB9160                | Schwarzbeck     | 3150        | 03/05/2027         | Biennial             |
| Hybrid Antenna                   | VULB9168                | Schwarzbeck     | 760         | 02/17/2027         | Biennial             |
| RF Switching System              | FBSR-06B (1G HPF + LNA) | T&M SYSTEM      | F3L1        | 05/08/2026         | Annual               |
| RF Switching System              | FBSR-06B (3G HPF + LNA) | T&M SYSTEM      | F3L2        | 05/08/2026         | Annual               |
| RF Switching System              | FBSR-06B (6G HPF + LNA) | T&M SYSTEM      | F3L3        | 05/08/2026         | Annual               |
| RF Switching System              | FBSR-06B (LNA)          | T&M SYSTEM      | F3L4        | 05/08/2026         | Annual               |
| Broadband LNA                    | CBL18265035             | CERNEX          | 22966       | 10/21/2026         | Annual               |
| Broadband LNA                    | CBL26405040             | CERNEX          | 25956       | 02/09/2027         | Annual               |
| DC Power Supply                  | E3632A                  | Hewlett Packard | MY40004427  | 08/11/2026         | Annual               |
| Power Splitter                   | 11667B                  | Hewlett Packard | 11275       | 01/26/2027         | Annual               |
| Chamber                          | SU-642                  | ESPEC           | 93008124    | 02/04/2027         | Annual               |
| Signal Analyzer                  | N9020A                  | Agilent         | MY51110063  | 04/01/2027         | Annual               |
| 20dB ATTENUATOR                  | 8493C                   | Hewlett Packard | 15233       | 12/10/2026         | Annual               |
| Signal Analyzer                  | FSV40                   | ROHDE & SCHWARZ | 101436      | 01/29/2027         | Annual               |
| Signal & Spectrum Analyzer       | FSW67                   | ROHDE & SCHWARZ | 101736      | 05/27/2026         | Annual               |
| Wireless Communications Set      | E5515C                  | Agilent         | MY48360800  | 07/29/2026         | Annual               |
| Radio Communication Analyzer     | MT8821C                 | Anritsu Corp.   | 6262287701  | 05/14/2026         | Annual               |
| Radio Communication Test Station | MT8000A                 | Anritsu Corp.   | 6262302511  | 05/08/2026         | Annual               |
| Signal Analyzer                  | N9030B                  | KEYSIGHT        | MY55480167  | 05/14/2026         | Annual               |
| UXM 5G Wireless Test Platform    | E7515B                  | KEYSIGHT        | MY60101126  | 01/29/2027         | Annual               |
| Power Divider                    | ZC4PD-K1844+            | Mini-Circuits   | 942907      | 09/05/2026         | Annual               |
| SIGNAL GENERATOR                 | SMB100A                 | ROHDE & SCHWARZ | 177633      | 07/22/2026         | Annual               |
| Automation Software              | FCC 2G/3G/4G Conducted  | HCT CO., LTD    | -           | -                  | -                    |
| Automation Software              | FCC NR Conducted        | HCT CO., LTD    | -           | -                  | -                    |
| Automation Software              | FCC LTE Radiated        | HCT CO., LTD    | -           | -                  | -                    |
| Automation Software              | FCC NR Radiated         | HCT CO., LTD    | -           | -                  | -                    |

#### Note:

1. Equipment whose calibration due date was updated during the test period was not used between the previous due date and the update. All reported measurements were performed using equipment within valid calibration.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of ANSI C63.5-2017.

## 5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014.

All measurement uncertainty values are shown with a coverage factor of  $k=2$  to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the  $U_{CISPR}$  measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

| Parameter           | Expanded Uncertainty ( $\pm$ kHz)        |
|---------------------|------------------------------------------|
| Occupied Bandwidth  | 95 (Confidence level about 95 %, $k=2$ ) |
| Frequency stability | 28 (Confidence level about 95 %, $k=2$ ) |

| Parameter                              | Expanded Uncertainty ( $\pm$ dB)           |
|----------------------------------------|--------------------------------------------|
| Block Edge                             | 0.70 (Confidence level about 95 %, $k=2$ ) |
| Conducted Spurious Emissions           | 1.11 (Confidence level about 95 %, $k=2$ ) |
| Peak- to- Average Ratio                | 0.73 (Confidence level about 95 %, $k=2$ ) |
| Radiated Power                         | 4.74 (Confidence level about 95 %, $k=2$ ) |
| Radiated Disturbance (9 kHz ~ 30 MHz)  | 4.54 (Confidence level about 95 %, $k=2$ ) |
| Radiated Disturbance (30 MHz ~ 1 GHz)  | 5.74 (Confidence level about 95 %, $k=2$ ) |
| Radiated Disturbance (1 GHz ~ 18 GHz)  | 5.80 (Confidence level about 95 %, $k=2$ ) |
| Radiated Disturbance (18 GHz ~ 40 GHz) | 5.86 (Confidence level about 95 %, $k=2$ ) |
| Radiated Disturbance (Above 40 GHz)    | 5.44 (Confidence level about 95 %, $k=2$ ) |

## 6. SUMMARY OF TEST RESULTS

-. The decision rule applies 'simple acceptance'

### 6.1 Test Condition: Conducted Test

| Test Description                                                 | FCC Part Section(s)     | Test Limit                                                                            | Test Result          |
|------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------|----------------------|
| Occupied Bandwidth                                               | § 2.1049                | N/A                                                                                   | PASS                 |
| Band Edge / Spurious and Harmonic Emissions at Antenna Terminal. | § 2.1051,<br>§ 27.53(h) | $< 43 + 10\log_{10} (P[\text{Watts}])$ at Band Edge and for all out-of-band emissions | PASS                 |
| Conducted Output Power                                           | § 2.1046                | N/A                                                                                   | PASS<br><u>Note1</u> |
| Peak- to- Average Ratio                                          | § 27.50(d)(5)           | $< 13 \text{ dB}$                                                                     | PASS                 |
| Frequency stability / variation of ambient temperature           | § 2.1055,<br>§ 27.54    | Emission must remain in band                                                          | PASS                 |

#### Note:

1. Refer to the SAR report
2. All conducted tests were tested using 5G Wireless Tester.

### 6.2 Test Condition: Radiated Test

| Test Description                         | FCC Part Section(s)     | Test Limit                                                           | Test Result |
|------------------------------------------|-------------------------|----------------------------------------------------------------------|-------------|
| Equivalent Isotropic Radiated Power      | § 27.50(d)(4)           | $< 1 \text{ Watts max. EIRP}$                                        | PASS        |
| Radiated Spurious and Harmonic Emissions | § 2.1053,<br>§ 27.53(h) | $< 43 + 10\log_{10} (P[\text{Watts}])$ for all out-of band emissions | PASS        |

#### Note:

1. Radiated tests were tested using 5G Wireless Tester.

## 7. SAMPLE CALCULATION

### 7.1 ERP Sample Calculation

| Ch./Freq. |            | Measured<br>Level (dBm) | Substitute<br>Level (dBm) | Ant. Gain<br>(dBd) | C.L  | Pol. | ERP   |       |
|-----------|------------|-------------------------|---------------------------|--------------------|------|------|-------|-------|
| channel   | Freq.(MHz) |                         |                           |                    |      |      | W     | dBm   |
| 128       | 824.20     | -21.37                  | 38.40                     | -10.61             | 0.95 | H    | 0.483 | 26.84 |

$$\text{ERP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
- 2) During the test, the turn table is rotated until the maximum signal is found.
- 3) Record the field strength meter's level.
- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
- 6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

### 7.2 EIRP Sample Calculation

| Ch./Freq. |            | Measured<br>Level (dBm) | Substitute<br>Level (dBm) | Ant. Gain<br>(dBi) | C.L  | Pol. | EIRP  |       |
|-----------|------------|-------------------------|---------------------------|--------------------|------|------|-------|-------|
| channel   | Freq.(MHz) |                         |                           |                    |      |      | W     | dBm   |
| 20175     | 1,732.50   | -15.75                  | 18.45                     | 9.90               | 1.76 | H    | 0.456 | 26.59 |

$$\text{EIRP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
- 2) During the test, the turn table is rotated until the maximum signal is found.
- 3) Record the field strength meter's level.
- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
- 6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.

### 7.3. Emission Designator

#### GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

#### EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

#### WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

#### QPSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

#### QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

## 8. TEST DATA (Main 1 ANT)

### 8.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1712.5        | Sub6 n66/<br>5 MHz<br>[15 kHz]   | PI/2 BPSK  | -20.86                     | 12.37                        | 9.64               | 2.06 | H   | < 1.00 | 0.099 | 19.95 | 1    | 1      |
|               |                                  | QPSK       | -21.31                     | 11.92                        | 9.64               | 2.06 | H   |        | 0.089 | 19.50 |      |        |
|               |                                  | 16-QAM     | -22.20                     | 11.03                        | 9.64               | 2.06 | H   |        | 0.073 | 18.61 |      |        |
|               |                                  | 64-QAM     | -23.56                     | 9.67                         | 9.64               | 2.06 | H   |        | 0.053 | 17.25 |      |        |
|               |                                  | 256-QAM    | -25.90                     | 7.33                         | 9.64               | 2.06 | H   |        | 0.031 | 14.91 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -19.76                     | 13.39                        | 9.88               | 2.08 | H   |        | 0.132 | 21.19 | 1    | 23     |
|               |                                  | QPSK       | -19.78                     | 13.37                        | 9.88               | 2.08 | H   |        | 0.131 | 21.17 |      |        |
|               |                                  | 16-QAM     | -20.80                     | 12.35                        | 9.88               | 2.08 | H   |        | 0.104 | 20.15 |      |        |
|               |                                  | 64-QAM     | -21.95                     | 11.20                        | 9.88               | 2.08 | H   |        | 0.079 | 19.00 |      |        |
|               |                                  | 256-QAM    | -24.62                     | 8.53                         | 9.88               | 2.08 | H   |        | 0.043 | 16.33 |      |        |
| 1777.5        |                                  | PI/2 BPSK  | -19.24                     | 13.89                        | 9.99               | 2.12 | H   |        | 0.150 | 21.76 | 1    | 12     |
|               |                                  | QPSK       | -19.35                     | 13.78                        | 9.99               | 2.12 | H   |        | 0.146 | 21.65 |      |        |
|               |                                  | 16-QAM     | -20.27                     | 12.86                        | 9.99               | 2.12 | H   |        | 0.118 | 20.73 |      |        |
|               |                                  | 64-QAM     | -21.68                     | 11.45                        | 9.99               | 2.12 | H   |        | 0.086 | 19.32 |      |        |
|               |                                  | 256-QAM    | -24.30                     | 8.83                         | 9.99               | 2.12 | H   |        | 0.047 | 16.70 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1715.0        |                                  | PI/2 BPSK  | -20.76                     | 12.47                        | 9.64               | 2.06 | H   | < 1.00 | 0.101 | 20.05 | 1    | 1      |
|               |                                  | QPSK       | -20.82                     | 12.41                        | 9.64               | 2.06 | H   |        | 0.100 | 19.99 |      |        |
|               |                                  | 16-QAM     | -21.70                     | 11.53                        | 9.64               | 2.06 | H   |        | 0.081 | 19.11 |      |        |
|               |                                  | 64-QAM     | -23.08                     | 10.15                        | 9.64               | 2.06 | H   |        | 0.059 | 17.73 |      |        |
|               |                                  | 256-QAM    | -25.65                     | 7.58                         | 9.64               | 2.06 | H   |        | 0.033 | 15.16 |      |        |
| 1745.0        | Sub6 n66/<br>10 MHz<br>[15 kHz]  | PI/2 BPSK  | -19.47                     | 13.68                        | 9.88               | 2.08 | H   | < 1.00 | 0.141 | 21.48 | 1    | 50     |
|               |                                  | QPSK       | -19.71                     | 13.44                        | 9.88               | 2.08 | H   |        | 0.133 | 21.24 |      |        |
|               |                                  | 16-QAM     | -20.38                     | 12.77                        | 9.88               | 2.08 | H   |        | 0.114 | 20.57 |      |        |
|               |                                  | 64-QAM     | -21.80                     | 11.35                        | 9.88               | 2.08 | H   |        | 0.082 | 19.15 |      |        |
|               |                                  | 256-QAM    | -24.41                     | 8.74                         | 9.88               | 2.08 | H   |        | 0.045 | 16.54 |      |        |
| 1775.0        |                                  | PI/2 BPSK  | -19.29                     | 13.79                        | 9.98               | 2.11 | H   | < 1.00 | 0.147 | 21.66 | 1    | 50     |
|               |                                  | QPSK       | -19.30                     | 13.78                        | 9.98               | 2.11 | H   |        | 0.146 | 21.65 |      |        |
|               |                                  | 16-QAM     | -20.18                     | 12.90                        | 9.98               | 2.11 | H   |        | 0.119 | 20.77 |      |        |
|               |                                  | 64-QAM     | -21.55                     | 11.53                        | 9.98               | 2.11 | H   |        | 0.087 | 19.40 |      |        |
|               |                                  | 256-QAM    | -24.24                     | 8.84                         | 9.98               | 2.11 | H   |        | 0.047 | 16.71 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1717.5        | Sub6 n66/<br>15 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.75                     | 12.45                        | 9.68               | 2.07 | H   | < 1.00 | 0.101 | 20.06 | 1    | 1      |
|               |                                  | QPSK       | -21.01                     | 12.19                        | 9.68               | 2.07 | H   |        | 0.095 | 19.80 |      |        |
|               |                                  | 16-QAM     | -21.88                     | 11.32                        | 9.68               | 2.07 | H   |        | 0.078 | 18.93 |      |        |
|               |                                  | 64-QAM     | -23.33                     | 9.87                         | 9.68               | 2.07 | H   |        | 0.056 | 17.48 |      |        |
|               |                                  | 256-QAM    | -25.58                     | 7.62                         | 9.68               | 2.07 | H   |        | 0.033 | 15.23 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -19.43                     | 13.72                        | 9.88               | 2.08 | H   |        | 0.142 | 21.52 | 1    | 77     |
|               |                                  | QPSK       | -19.55                     | 13.60                        | 9.88               | 2.08 | H   |        | 0.138 | 21.40 |      |        |
|               |                                  | 16-QAM     | -20.39                     | 12.76                        | 9.88               | 2.08 | H   |        | 0.114 | 20.56 |      |        |
|               |                                  | 64-QAM     | -21.92                     | 11.23                        | 9.88               | 2.08 | H   |        | 0.080 | 19.03 |      |        |
|               |                                  | 256-QAM    | -24.58                     | 8.57                         | 9.88               | 2.08 | H   |        | 0.043 | 16.37 |      |        |
| 1772.5        |                                  | PI/2 BPSK  | -19.04                     | 14.04                        | 9.98               | 2.11 | H   |        | 0.155 | 21.91 | 1    | 77     |
|               |                                  | QPSK       | -19.05                     | 14.03                        | 9.98               | 2.11 | H   |        | 0.155 | 21.90 |      |        |
|               |                                  | 16-QAM     | -20.13                     | 12.95                        | 9.98               | 2.11 | H   |        | 0.121 | 20.82 |      |        |
|               |                                  | 64-QAM     | -21.43                     | 11.65                        | 9.98               | 2.11 | H   |        | 0.090 | 19.52 |      |        |
|               |                                  | 256-QAM    | -24.06                     | 9.02                         | 9.98               | 2.11 | H   |        | 0.049 | 16.89 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1720.0        | Sub6 n66/<br>20 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.62                     | 12.58                        | 9.68               | 2.07 | H   | < 1.00 | 0.104 | 20.19 | 1    | 1      |
|               |                                  | QPSK       | -21.06                     | 12.14                        | 9.68               | 2.07 | H   |        | 0.094 | 19.75 |      |        |
|               |                                  | 16-QAM     | -21.91                     | 11.29                        | 9.68               | 2.07 | H   |        | 0.078 | 18.90 |      |        |
|               |                                  | 64-QAM     | -23.36                     | 9.84                         | 9.68               | 2.07 | H   |        | 0.056 | 17.45 |      |        |
|               |                                  | 256-QAM    | -25.62                     | 7.58                         | 9.68               | 2.07 | H   |        | 0.033 | 15.19 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -19.42                     | 13.73                        | 9.88               | 2.08 | H   |        | 0.142 | 21.53 | 1    | 104    |
|               |                                  | QPSK       | -19.43                     | 13.72                        | 9.88               | 2.08 | H   |        | 0.142 | 21.52 |      |        |
|               |                                  | 16-QAM     | -20.37                     | 12.78                        | 9.88               | 2.08 | H   |        | 0.114 | 20.58 |      |        |
|               |                                  | 64-QAM     | -21.64                     | 11.51                        | 9.88               | 2.08 | H   |        | 0.085 | 19.31 |      |        |
|               |                                  | 256-QAM    | -24.36                     | 8.79                         | 9.88               | 2.08 | H   |        | 0.046 | 16.59 |      |        |
| 1770.0        |                                  | PI/2 BPSK  | -19.09                     | 13.95                        | 9.97               | 2.11 | H   |        | 0.152 | 21.81 | 1    | 104    |
|               |                                  | QPSK       | -19.11                     | 13.93                        | 9.97               | 2.11 | H   |        | 0.151 | 21.79 |      |        |
|               |                                  | 16-QAM     | -20.03                     | 13.01                        | 9.97               | 2.11 | H   |        | 0.122 | 20.87 |      |        |
|               |                                  | 64-QAM     | -21.42                     | 11.62                        | 9.97               | 2.11 | H   |        | 0.089 | 19.48 |      |        |
|               |                                  | 256-QAM    | -24.10                     | 8.94                         | 9.97               | 2.11 | H   |        | 0.048 | 16.80 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1722.5        | Sub6 n66/<br>25 MHz<br>[15 kHz]  | PI/2 BPSK  | -19.99                     | 13.24                        | 9.72               | 2.07 | H   | < 1.00 | 0.123 | 20.89 | 1    | 131    |
|               |                                  | QPSK       | -20.95                     | 12.28                        | 9.72               | 2.07 | H   |        | 0.098 | 19.93 |      |        |
|               |                                  | 16-QAM     | -21.72                     | 11.51                        | 9.72               | 2.07 | H   |        | 0.082 | 19.16 |      |        |
|               |                                  | 64-QAM     | -22.95                     | 10.28                        | 9.72               | 2.07 | H   |        | 0.062 | 17.93 |      |        |
|               |                                  | 256-QAM    | -24.90                     | 8.33                         | 9.72               | 2.07 | H   |        | 0.040 | 15.98 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -19.06                     | 14.09                        | 9.88               | 2.08 | H   |        | 0.155 | 21.89 | 1    | 131    |
|               |                                  | QPSK       | -19.34                     | 13.81                        | 9.88               | 2.08 | H   |        | 0.145 | 21.61 |      |        |
|               |                                  | 16-QAM     | -20.32                     | 12.83                        | 9.88               | 2.08 | H   |        | 0.116 | 20.63 |      |        |
|               |                                  | 64-QAM     | -21.80                     | 11.35                        | 9.88               | 2.08 | H   |        | 0.082 | 19.15 |      |        |
|               |                                  | 256-QAM    | -24.07                     | 9.08                         | 9.88               | 2.08 | H   |        | 0.049 | 16.88 |      |        |
| 1767.5        |                                  | PI/2 BPSK  | -18.94                     | 14.10                        | 9.97               | 2.11 | H   |        | 0.157 | 21.96 | 1    | 131    |
|               |                                  | QPSK       | -18.97                     | 14.07                        | 9.97               | 2.11 | H   |        | 0.156 | 21.93 |      |        |
|               |                                  | 16-QAM     | -19.98                     | 13.06                        | 9.97               | 2.11 | H   |        | 0.124 | 20.92 |      |        |
|               |                                  | 64-QAM     | -21.22                     | 11.82                        | 9.97               | 2.11 | H   |        | 0.093 | 19.68 |      |        |
|               |                                  | 256-QAM    | -24.04                     | 9.00                         | 9.97               | 2.11 | H   |        | 0.049 | 16.86 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1725.0        |                                  | PI/2 BPSK  | -19.62                     | 13.61                        | 9.72               | 2.07 | H   |        | 0.134 | 21.26 | 1    | 158    |
|               |                                  | QPSK       | -19.79                     | 13.44                        | 9.72               | 2.07 | H   |        | 0.129 | 21.09 |      |        |
|               |                                  | 16-QAM     | -20.64                     | 12.59                        | 9.72               | 2.07 | H   |        | 0.106 | 20.24 |      |        |
|               |                                  | 64-QAM     | -21.99                     | 11.24                        | 9.72               | 2.07 | H   |        | 0.077 | 18.89 |      |        |
|               |                                  | 256-QAM    | -24.43                     | 8.80                         | 9.72               | 2.07 | H   |        | 0.044 | 16.45 |      |        |
| 1745.0        | Sub6 n66/<br>30 MHz<br>[15 kHz]  | PI/2 BPSK  | -19.43                     | 13.72                        | 9.88               | 2.08 | H   | < 1.00 | 0.142 | 21.52 | 1    | 158    |
|               |                                  | QPSK       | -20.11                     | 13.04                        | 9.88               | 2.08 | H   |        | 0.121 | 20.84 |      |        |
|               |                                  | 16-QAM     | -21.00                     | 12.15                        | 9.88               | 2.08 | H   |        | 0.099 | 19.95 |      |        |
|               |                                  | 64-QAM     | -22.32                     | 10.83                        | 9.88               | 2.08 | H   |        | 0.073 | 18.63 |      |        |
|               |                                  | 256-QAM    | -24.41                     | 8.74                         | 9.88               | 2.08 | H   |        | 0.045 | 16.54 |      |        |
| 1765.0        |                                  | PI/2 BPSK  | -19.02                     | 14.08                        | 9.95               | 2.10 | H   |        | 0.156 | 21.93 | 1    | 158    |
|               |                                  | QPSK       | -19.04                     | 14.06                        | 9.95               | 2.10 | H   |        | 0.155 | 21.91 |      |        |
|               |                                  | 16-QAM     | -20.01                     | 13.09                        | 9.95               | 2.10 | H   |        | 0.124 | 20.94 |      |        |
|               |                                  | 64-QAM     | -21.34                     | 11.76                        | 9.95               | 2.10 | H   |        | 0.091 | 19.61 |      |        |
|               |                                  | 256-QAM    | -23.88                     | 9.22                         | 9.95               | 2.10 | H   |        | 0.051 | 17.07 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1727.5        | Sub6 n66/<br>35 MHz<br>[15 kHz]  | PI/2 BPSK  | -19.41                     | 13.84                        | 9.77               | 2.07 | H   | < 1.00 | 0.143 | 21.54 | 1    | 186    |
|               |                                  | QPSK       | -19.43                     | 13.82                        | 9.77               | 2.07 | H   |        | 0.142 | 21.52 |      |        |
|               |                                  | 16-QAM     | -20.42                     | 12.83                        | 9.77               | 2.07 | H   |        | 0.113 | 20.53 |      |        |
|               |                                  | 64-QAM     | -21.70                     | 11.55                        | 9.77               | 2.07 | H   |        | 0.084 | 19.25 |      |        |
|               |                                  | 256-QAM    | -24.39                     | 8.86                         | 9.77               | 2.07 | H   |        | 0.045 | 16.56 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -19.38                     | 13.77                        | 9.88               | 2.08 | H   |        | 0.144 | 21.57 | 1    | 186    |
|               |                                  | QPSK       | -20.26                     | 12.89                        | 9.88               | 2.08 | H   |        | 0.117 | 20.69 |      |        |
|               |                                  | 16-QAM     | -21.17                     | 11.98                        | 9.88               | 2.08 | H   |        | 0.095 | 19.78 |      |        |
|               |                                  | 64-QAM     | -22.50                     | 10.65                        | 9.88               | 2.08 | H   |        | 0.070 | 18.45 |      |        |
|               |                                  | 256-QAM    | -24.66                     | 8.49                         | 9.88               | 2.08 | H   |        | 0.043 | 16.29 |      |        |
| 1762.5        |                                  | PI/2 BPSK  | -18.80                     | 14.30                        | 9.95               | 2.10 | H   |        | 0.164 | 22.15 | 1    | 186    |
|               |                                  | QPSK       | -19.07                     | 14.03                        | 9.95               | 2.10 | H   |        | 0.154 | 21.88 |      |        |
|               |                                  | 16-QAM     | -19.99                     | 13.11                        | 9.95               | 2.10 | H   |        | 0.125 | 20.96 |      |        |
|               |                                  | 64-QAM     | -21.45                     | 11.65                        | 9.95               | 2.10 | H   |        | 0.089 | 19.50 |      |        |
|               |                                  | 256-QAM    | -23.97                     | 9.13                         | 9.95               | 2.10 | H   |        | 0.050 | 16.98 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1730.0        | Sub6 n66/<br>40 MHz<br>[15 kHz]  | PI/2 BPSK  | -19.35                     | 13.90                        | 9.77               | 2.07 | H   | < 1.00 | 0.145 | 21.60 | 1    | 214    |
|               |                                  | QPSK       | -19.38                     | 13.87                        | 9.77               | 2.07 | H   |        | 0.144 | 21.57 |      |        |
|               |                                  | 16-QAM     | -20.23                     | 13.02                        | 9.77               | 2.07 | H   |        | 0.118 | 20.72 |      |        |
|               |                                  | 64-QAM     | -21.67                     | 11.58                        | 9.77               | 2.07 | H   |        | 0.085 | 19.28 |      |        |
|               |                                  | 256-QAM    | -24.12                     | 9.13                         | 9.77               | 2.07 | H   |        | 0.048 | 16.83 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -19.37                     | 13.78                        | 9.88               | 2.08 | H   |        | 0.144 | 21.58 | 1    | 214    |
|               |                                  | QPSK       | -20.47                     | 12.68                        | 9.88               | 2.08 | H   |        | 0.112 | 20.48 |      |        |
|               |                                  | 16-QAM     | -21.17                     | 11.98                        | 9.88               | 2.08 | H   |        | 0.095 | 19.78 |      |        |
|               |                                  | 64-QAM     | -22.60                     | 10.55                        | 9.88               | 2.08 | H   |        | 0.068 | 18.35 |      |        |
|               |                                  | 256-QAM    | -24.56                     | 8.59                         | 9.88               | 2.08 | H   |        | 0.044 | 16.39 |      |        |
| 1760.0        |                                  | PI/2 BPSK  | -19.07                     | 14.08                        | 9.94               | 2.09 | H   |        | 0.156 | 21.93 | 1    | 214    |
|               |                                  | QPSK       | -19.14                     | 14.01                        | 9.94               | 2.09 | H   |        | 0.153 | 21.86 |      |        |
|               |                                  | 16-QAM     | -20.06                     | 13.09                        | 9.94               | 2.09 | H   |        | 0.124 | 20.94 |      |        |
|               |                                  | 64-QAM     | -21.41                     | 11.74                        | 9.94               | 2.09 | H   |        | 0.091 | 19.59 |      |        |
|               |                                  | 256-QAM    | -23.96                     | 9.19                         | 9.94               | 2.09 | H   |        | 0.051 | 17.04 |      |        |

## 8.2 RADIATED SPURIOUS EMISSIONS

|             |                  |
|-------------|------------------|
| NR Band:    | <u>NR n66</u>    |
| Bandwidth:  | <u>35 MHz</u>    |
| Modulation: | <u>PI/2 BPSK</u> |
| Distance:   | <u>3 meters</u>  |
| SCS:        | <u>15 kHz</u>    |

| Ch                 | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L  | Pol | Result (dBm) | Limit (dBm) | RB   |        |
|--------------------|------------|----------------------|-----------------|------------------------|------|-----|--------------|-------------|------|--------|
|                    |            |                      |                 |                        |      |     |              |             | Size | Offset |
| 345500<br>(1727.5) | 3 455.00   | -59.28               | 11.38           | -59.56                 | 3.02 | V   | -51.20       | -13.00      | 1    | 186    |
|                    |            | -59.80               |                 | -60.08                 |      | H   | -51.72       | -13.00      |      |        |
|                    | 5 182.50   | -60.64               | 11.43           | -54.10                 | 3.83 | V   | -46.50       | -13.00      |      |        |
|                    |            | -60.69               |                 | -54.15                 |      | H   | -46.55       | -13.00      |      |        |
|                    | 6 910.00   | -61.49               | 11.31           | -48.22                 | 4.54 | V   | -41.45       | -13.00      |      |        |
|                    |            | -61.30               |                 | -48.03                 |      | H   | -41.26       | -13.00      |      |        |
| 349000<br>(1745.0) | 3 490.00   | -58.84               | 11.49           | -59.35                 | 3.06 | V   | -50.92       | -13.00      | 1    | 186    |
|                    |            | -59.19               |                 | -59.70                 |      | H   | -51.27       | -13.00      |      |        |
|                    | 5 235.00   | -60.72               | 11.55           | -54.34                 | 3.86 | V   | -46.65       | -13.00      |      |        |
|                    |            | -60.43               |                 | -54.05                 |      | H   | -46.36       | -13.00      |      |        |
|                    | 6 980.00   | -60.72               | 11.34           | -47.03                 | 4.55 | V   | -40.24       | -13.00      |      |        |
|                    |            | -61.49               |                 | -47.80                 |      | H   | -41.01       | -13.00      |      |        |
| 352500<br>(1762.5) | 3 525.00   | -58.41               | 11.60           | -59.27                 | 3.08 | V   | -50.75       | -13.00      | 1    | 186    |
|                    |            | -58.68               |                 | -59.54                 |      | H   | -51.02       | -13.00      |      |        |
|                    | 5 287.50   | -60.75               | 11.66           | -54.00                 | 3.88 | V   | -46.22       | -13.00      |      |        |
|                    |            | -60.37               |                 | -53.62                 |      | H   | -45.84       | -13.00      |      |        |
|                    | 7 050.00   | -57.86               | 11.13           | -43.60                 | 4.56 | V   | -37.03       | -13.00      |      |        |
|                    |            | -57.61               |                 | -43.35                 |      | H   | -36.78       | -13.00      |      |        |

### 8.3 PEAK-TO-AVERAGE RATIO

| Band     | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) | Limit (dB) |
|----------|------------|-----------------|------------|---------------------|-----------------------|------------|------------|
| Sub6 n66 | 5 MHz      | 1745.0          | PI/2 BPSK  | 25                  | 0                     | 4.42       | 13.00      |
|          |            |                 | QPSK       |                     |                       | 5.65       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.63       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.69       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.71       |            |
|          | 10 MHz     |                 | PI/2 BPSK  | 50                  |                       | 4.18       |            |
|          |            |                 | QPSK       |                     |                       | 5.41       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.21       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.54       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.45       |            |
|          | 15 MHz     |                 | PI/2 BPSK  | 75                  |                       | 4.42       |            |
|          |            |                 | QPSK       |                     |                       | 5.39       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.16       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.48       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.68       |            |
|          | 20 MHz     |                 | PI/2 BPSK  | 100                 |                       | 4.09       |            |
|          |            |                 | QPSK       |                     |                       | 5.36       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.06       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.40       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.46       |            |
|          | 25 MHz     |                 | PI/2 BPSK  | 128                 |                       | 3.86       |            |
|          |            |                 | QPSK       |                     |                       | 5.11       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.05       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.33       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.61       |            |
|          | 30 MHz     |                 | PI/2 BPSK  | 160                 |                       | 4.24       |            |
|          |            |                 | QPSK       |                     |                       | 4.97       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.01       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.26       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.53       |            |
|          | 35 MHz     |                 | PI/2 BPSK  | 187                 |                       | 3.84       |            |
|          |            |                 | QPSK       |                     |                       | 5.27       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.09       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.35       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.63       |            |
|          | 40 MHz     |                 | PI/2 BPSK  | 216                 |                       | 4.10       |            |
|          |            |                 | QPSK       |                     |                       | 5.13       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.12       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.30       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.58       |            |

#### 8.4 OCCUPIED BANDWIDTH

| Band     | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (MHz) |
|----------|------------|-----------------|------------|---------------------|-----------------------|------------|
| Sub6 n66 | 5 MHz      | 1745.0          | PI/2 BPSK  | 25                  | 0                     | 4.4933     |
|          |            |                 | QPSK       |                     |                       | 4.4953     |
|          |            |                 | 16-QAM     |                     |                       | 4.4919     |
|          |            |                 | 64-QAM     |                     |                       | 4.5171     |
|          |            |                 | 256-QAM    |                     |                       | 4.5098     |
|          | 10 MHz     |                 | PI/2 BPSK  | 50                  |                       | 8.9702     |
|          |            |                 | QPSK       |                     |                       | 8.9528     |
|          |            |                 | 16-QAM     |                     |                       | 8.9578     |
|          |            |                 | 64-QAM     |                     |                       | 8.9756     |
|          |            |                 | 256-QAM    |                     |                       | 8.9687     |
|          | 15 MHz     |                 | PI/2 BPSK  | 75                  |                       | 13.410     |
|          |            |                 | QPSK       |                     |                       | 13.438     |
|          |            |                 | 16-QAM     |                     |                       | 13.356     |
|          |            |                 | 64-QAM     |                     |                       | 13.460     |
|          |            |                 | 256-QAM    |                     |                       | 13.440     |
|          | 20 MHz     |                 | PI/2 BPSK  | 100                 |                       | 17.839     |
|          |            |                 | QPSK       |                     |                       | 17.845     |
|          |            |                 | 16-QAM     |                     |                       | 17.810     |
|          |            |                 | 64-QAM     |                     |                       | 17.830     |
|          |            |                 | 256-QAM    |                     |                       | 17.797     |
|          | 25 MHz     |                 | PI/2 BPSK  | 128                 |                       | 22.777     |
|          |            |                 | QPSK       |                     |                       | 22.811     |
|          |            |                 | 16-QAM     |                     |                       | 22.862     |
|          |            |                 | 64-QAM     |                     |                       | 22.774     |
|          |            |                 | 256-QAM    |                     |                       | 22.859     |
|          | 30 MHz     |                 | PI/2 BPSK  | 160                 |                       | 28.406     |
|          |            |                 | QPSK       |                     |                       | 28.466     |
|          |            |                 | 16-QAM     |                     |                       | 28.448     |
|          |            |                 | 64-QAM     |                     |                       | 28.471     |
|          |            |                 | 256-QAM    |                     |                       | 28.434     |
|          | 35 MHz     |                 | PI/2 BPSK  | 187                 |                       | 31.951     |
|          |            |                 | QPSK       |                     |                       | 32.086     |
|          |            |                 | 16-QAM     |                     |                       | 32.129     |
|          |            |                 | 64-QAM     |                     |                       | 31.997     |
|          |            |                 | 256-QAM    |                     |                       | 32.170     |
|          | 40 MHz     |                 | PI/2 BPSK  | 216                 |                       | 38.349     |
|          |            |                 | QPSK       |                     |                       | 38.530     |
|          |            |                 | 16-QAM     |                     |                       | 38.382     |
|          |            |                 | 64-QAM     |                     |                       | 38.374     |
|          |            |                 | 256-QAM    |                     |                       | 38.399     |

## 8.5 CONDUCTED SPURIOUS EMISSIONS

| Band     | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|----------|------------------|-----------------|-------------------------------------|-------------|--------------------------------|--------------|-------------|
| Sub6 n66 | 5                | 1712.5          | 9.9900                              | 29.116      | -62.496                        | -33.380      | -13.00      |
|          |                  | 1745.0          | 9.9202                              | 29.116      | -62.193                        | -33.077      |             |
|          |                  | 1777.5          | 3.7987                              | 28.533      | -64.097                        | -35.564      |             |
|          | 10               | 1715.0          | 6.0519                              | 29.116      | -63.628                        | -34.512      |             |
|          |                  | 1745.0          | 3.2902                              | 28.533      | -63.741                        | -35.208      |             |
|          |                  | 1775.0          | 5.7628                              | 29.116      | -63.590                        | -34.474      |             |
|          | 15               | 1717.5          | 6.0020                              | 29.116      | -62.855                        | -33.739      |             |
|          |                  | 1745.0          | 4.8954                              | 28.533      | -63.381                        | -34.848      |             |
|          |                  | 1772.5          | 8.5942                              | 29.116      | -63.228                        | -34.112      |             |
|          | 20               | 1720.0          | 8.6840                              | 29.116      | -63.049                        | -33.933      |             |
|          |                  | 1745.0          | 9.8006                              | 29.116      | -63.319                        | -34.203      |             |
|          |                  | 1770.0          | 9.1825                              | 29.116      | -63.333                        | -34.217      |             |
|          | 25               | 1722.5          | 7.9661                              | 29.116      | -63.027                        | -33.911      |             |
|          |                  | 1745.0          | 3.7887                              | 28.533      | -63.145                        | -34.612      |             |
|          |                  | 1767.5          | 3.7488                              | 28.533      | -63.611                        | -35.078      |             |
|          | 30               | 1725.0          | 9.3918                              | 29.116      | -63.735                        | -34.619      |             |
|          |                  | 1745.0          | 8.0060                              | 29.116      | -62.818                        | -33.702      |             |
|          |                  | 1765.0          | 9.9003                              | 29.116      | -62.773                        | -33.657      |             |
|          | 35               | 1727.5          | 9.7308                              | 29.116      | -63.255                        | -34.139      |             |
|          |                  | 1745.0          | 5.9821                              | 29.116      | -63.752                        | -34.636      |             |
|          |                  | 1762.5          | 6.0519                              | 29.116      | -63.921                        | -34.805      |             |
|          | 40               | 1730.0          | 3.7289                              | 29.116      | -63.648                        | -34.532      |             |
|          |                  | 1745.0          | 3.8186                              | 29.116      | -63.438                        | -34.322      |             |
|          |                  | 1760.0          | 3.7289                              | 29.116      | -63.115                        | -33.999      |             |

### Note:

1. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter

| Frequency Range (GHz) | Factor [dB] |
|-----------------------|-------------|
| 0.03 – 1              | 27.012      |
| 1 – 5                 | 28.533      |
| 5 – 10                | 29.116      |
| 10 – 15               | 30.025      |
| 15 – 20               | 31.052      |
| Above 20              | 31.613      |

## 8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Section 10.4.

## 8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 5 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1712.5             | 100 %          | +20(Ref) | 1712 499 998 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1712 499 997 | -0.7       | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1712 499 998 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1712 499 996 | -1.3       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1712 499 998 | 0.5        | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1712 499 995 | -2.2       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1712 499 996 | -1.3       | 0.000 000 | -0.001 |
|                    | 100 %          | +40      | 1712 499 995 | -2.7       | 0.000 000 | -0.002 |
|                    | 100 %          | +50      | 1712 499 995 | -2.1       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1712 499 995 | -2.8       | 0.000 000 | -0.002 |
| 1777.5             | 100 %          | +20(Ref) | 1777 500 002 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1777 500 002 | 0.4        | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1777 500 001 | -1.3       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1777 500 002 | -0.2       | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1777 500 004 | 2.1        | 0.000 000 | 0.001  |
|                    | 100 %          | +10      | 1777 500 002 | 0.4        | 0.000 000 | 0.000  |
|                    | 100 %          | +30      | 1777 500 000 | -1.5       | 0.000 000 | -0.001 |
|                    | 100 %          | +40      | 1777 500 002 | 0.4        | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1777 500 004 | 2.4        | 0.000 000 | 0.001  |
|                    | Batt. Endpoint | +20      | 1777 500 004 | 1.8        | 0.000 000 | 0.001  |

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1715.0             | 100 %          | +20(Ref) | 1714 999 997 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1714 999 996 | -0.8       | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1714 999 997 | -0.8       | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1714 999 997 | 0.1        | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1714 999 997 | -0.7       | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1714 999 995 | -2.2       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1714 999 996 | -1.4       | 0.000 000 | -0.001 |
|                    | 100 %          | +40      | 1714 999 997 | -0.7       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1714 999 998 | 0.7        | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1714 999 997 | -0.2       | 0.000 000 | 0.000  |
| 1775.0             | 100 %          | +20(Ref) | 1775 000 000 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1774 999 998 | -2.0       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1775 000 001 | 0.6        | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1774 999 999 | -1.7       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1774 999 998 | -2.3       | 0.000 000 | -0.001 |
|                    | 100 %          | +10      | 1774 999 999 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1775 000 000 | 0.1        | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1775 000 000 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1774 999 999 | -1.6       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1774 999 998 | -2.0       | 0.000 000 | -0.001 |

- ▣ BandWidth: 15 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1717.5             | 100 %          | +20(Ref) | 1717 500 002 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1717 500 004 | 2.5        | 0.000 000 | 0.001  |
|                    | 100 %          | -20      | 1717 500 003 | 1.5        | 0.000 000 | 0.001  |
|                    | 100 %          | -10      | 1717 500 003 | 1.2        | 0.000 000 | 0.001  |
|                    | 100 %          | 0        | 1717 500 004 | 1.8        | 0.000 000 | 0.001  |
|                    | 100 %          | +10      | 1717 500 004 | 2.4        | 0.000 000 | 0.001  |
|                    | 100 %          | +30      | 1717 500 005 | 2.9        | 0.000 000 | 0.002  |
|                    | 100 %          | +40      | 1717 500 001 | -0.3       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1717 500 004 | 1.7        | 0.000 000 | 0.001  |
|                    | Batt. Endpoint | +20      | 1717 500 003 | 1.6        | 0.000 000 | 0.001  |
| 1772.5             | 100 %          | +20(Ref) | 1772 499 998 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1772 499 991 | -7.3       | 0.000 000 | -0.004 |
|                    | 100 %          | -20      | 1772 499 996 | -2.1       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1772 499 998 | -0.1       | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1772 499 994 | -3.9       | 0.000 000 | -0.002 |
|                    | 100 %          | +10      | 1772 499 997 | -1.9       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1772 500 001 | 2.9        | 0.000 000 | 0.002  |
|                    | 100 %          | +40      | 1772 499 998 | -0.8       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1772 499 997 | -1.4       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1772 499 997 | -0.9       | 0.000 000 | -0.001 |

- ▣ BandWidth: 20 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1720.0             | 100 %          | +20(Ref) | 1720 000 000 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1719 999 998 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1719 999 998 | -1.7       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1719 999 998 | -1.7       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1719 999 998 | -1.9       | 0.000 000 | -0.001 |
|                    | 100 %          | +10      | 1719 999 997 | -2.2       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1719 999 997 | -2.3       | 0.000 000 | -0.001 |
|                    | 100 %          | +40      | 1719 999 996 | -3.3       | 0.000 000 | -0.002 |
|                    | 100 %          | +50      | 1719 999 999 | -0.3       | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1719 999 997 | -2.2       | 0.000 000 | -0.001 |
| 1770.0             | 100 %          | +20(Ref) | 1770 000 002 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1770 000 002 | -0.1       | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1770 000 006 | 3.7        | 0.000 000 | 0.002  |
|                    | 100 %          | -10      | 1770 000 008 | 5.3        | 0.000 000 | 0.003  |
|                    | 100 %          | 0        | 1770 000 003 | 0.9        | 0.000 000 | 0.001  |
|                    | 100 %          | +10      | 1770 000 007 | 4.2        | 0.000 000 | 0.002  |
|                    | 100 %          | +30      | 1770 000 004 | 1.2        | 0.000 000 | 0.001  |
|                    | 100 %          | +40      | 1770 000 006 | 3.5        | 0.000 000 | 0.002  |
|                    | 100 %          | +50      | 1770 000 007 | 4.9        | 0.000 000 | 0.003  |
|                    | Batt. Endpoint | +20      | 1770 000 005 | 2.6        | 0.000 000 | 0.001  |

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1722.5             | 100 %          | +20(Ref) | 1722 499 999 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1722 499 999 | -0.3       | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1722 499 998 | -1.5       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1722 500 000 | 0.6        | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1722 499 998 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | +10      | 1722 499 999 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | +30      | 1722 499 999 | -0.7       | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1722 499 999 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1722 500 000 | 0.4        | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1722 500 000 | 0.6        | 0.000 000 | 0.000  |
| 1767.5             | 100 %          | +20(Ref) | 1767 499 999 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1767 499 999 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1767 499 999 | 0.5        | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1767 499 998 | -1.3       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1767 500 000 | 0.8        | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1767 500 000 | 1.4        | 0.000 000 | 0.001  |
|                    | 100 %          | +30      | 1767 499 998 | -0.7       | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1767 499 998 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | +50      | 1767 500 000 | 0.7        | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1767 499 998 | -1.4       | 0.000 000 | -0.001 |

☐ BandWidth: 30 MHz  
☐ Voltage(100 %): 3.880 VDC  
☐ Batt. Endpoint: 3.300 VDC  
☐ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm   |
|--------------------|----------------|----------|--------------|------------|-----------|-------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |       |
| 1725.0             | 100 %          | +20(Ref) | 1725 000 005 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1725 000 012 | 7.0        | 0.000 000 | 0.004 |
|                    | 100 %          | -20      | 1725 000 010 | 4.9        | 0.000 000 | 0.003 |
|                    | 100 %          | -10      | 1725 000 011 | 6.0        | 0.000 000 | 0.003 |
|                    | 100 %          | 0        | 1725 000 009 | 4.0        | 0.000 000 | 0.002 |
|                    | 100 %          | +10      | 1725 000 011 | 6.4        | 0.000 000 | 0.004 |
|                    | 100 %          | +30      | 1725 000 012 | 6.6        | 0.000 000 | 0.004 |
|                    | 100 %          | +40      | 1725 000 010 | 4.8        | 0.000 000 | 0.003 |
|                    | 100 %          | +50      | 1725 000 012 | 6.9        | 0.000 000 | 0.004 |
|                    | Batt. Endpoint | +20      | 1725 000 010 | 5.3        | 0.000 000 | 0.003 |
| 1765.0             | 100 %          | +20(Ref) | 1765 000 002 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1765 000 006 | 4.0        | 0.000 000 | 0.002 |
|                    | 100 %          | -20      | 1765 000 005 | 3.0        | 0.000 000 | 0.002 |
|                    | 100 %          | -10      | 1765 000 006 | 4.1        | 0.000 000 | 0.002 |
|                    | 100 %          | 0        | 1765 000 006 | 3.3        | 0.000 000 | 0.002 |
|                    | 100 %          | +10      | 1765 000 007 | 4.8        | 0.000 000 | 0.003 |
|                    | 100 %          | +30      | 1765 000 007 | 5.2        | 0.000 000 | 0.003 |
|                    | 100 %          | +40      | 1765 000 005 | 2.9        | 0.000 000 | 0.002 |
|                    | 100 %          | +50      | 1765 000 006 | 3.3        | 0.000 000 | 0.002 |
|                    | Batt. Endpoint | +20      | 1765 000 008 | 5.8        | 0.000 000 | 0.003 |

☐ BandWidth: 35 MHz  
☐ Voltage(100 %): 3.880 VDC  
☐ Batt. Endpoint: 3.300 VDC  
☐ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1727.5             | 100 %          | +20(Ref) | 1727 499 999 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1727 499 997 | -2.0       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1727 499 998 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1727 499 996 | -2.5       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1727 499 998 | -0.4       | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1727 499 997 | -2.1       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1727 499 996 | -2.5       | 0.000 000 | -0.001 |
|                    | 100 %          | +40      | 1727 499 997 | -2.1       | 0.000 000 | -0.001 |
|                    | 100 %          | +50      | 1727 499 997 | -1.4       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1727 499 997 | -1.8       | 0.000 000 | -0.001 |
| 1762.5             | 100 %          | +20(Ref) | 1762 499 999 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1762 499 999 | 0.7        | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1762 499 999 | 0.2        | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1762 499 999 | 0.2        | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1762 499 998 | -1.0       | 0.000 000 | -0.001 |
|                    | 100 %          | +10      | 1762 499 997 | -1.6       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1762 500 000 | 1.1        | 0.000 000 | 0.001  |
|                    | 100 %          | +40      | 1762 499 999 | 0.7        | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1762 499 997 | -1.3       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1762 499 998 | -0.7       | 0.000 000 | 0.000  |

- ▣ BandWidth: 40 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm   |
|--------------------|----------------|----------|--------------|------------|-----------|-------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |       |
| 1730.0             | 100 %          | +20(Ref) | 1730 000 009 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1730 000 018 | 9.1        | 0.000 001 | 0.005 |
|                    | 100 %          | -20      | 1730 000 018 | 9.4        | 0.000 001 | 0.005 |
|                    | 100 %          | -10      | 1730 000 016 | 7.5        | 0.000 000 | 0.004 |
|                    | 100 %          | 0        | 1730 000 017 | 8.1        | 0.000 000 | 0.005 |
|                    | 100 %          | +10      | 1730 000 019 | 9.6        | 0.000 001 | 0.006 |
|                    | 100 %          | +30      | 1730 000 017 | 8.6        | 0.000 000 | 0.005 |
|                    | 100 %          | +40      | 1730 000 019 | 10.6       | 0.000 001 | 0.006 |
|                    | 100 %          | +50      | 1730 000 018 | 8.8        | 0.000 001 | 0.005 |
|                    | Batt. Endpoint | +20      | 1730 000 018 | 8.8        | 0.000 001 | 0.005 |
| 1760.0             | 100 %          | +20(Ref) | 1760 000 010 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1760 000 018 | 8.1        | 0.000 000 | 0.005 |
|                    | 100 %          | -20      | 1760 000 017 | 7.2        | 0.000 000 | 0.004 |
|                    | 100 %          | -10      | 1760 000 019 | 9.9        | 0.000 001 | 0.006 |
|                    | 100 %          | 0        | 1760 000 020 | 10.7       | 0.000 001 | 0.006 |
|                    | 100 %          | +10      | 1760 000 019 | 9.3        | 0.000 001 | 0.005 |
|                    | 100 %          | +30      | 1760 000 018 | 8.3        | 0.000 000 | 0.005 |
|                    | 100 %          | +40      | 1760 000 018 | 8.1        | 0.000 000 | 0.005 |
|                    | 100 %          | +50      | 1760 000 018 | 8.7        | 0.000 000 | 0.005 |
|                    | Batt. Endpoint | +20      | 1760 000 019 | 9.2        | 0.000 001 | 0.005 |

## 9. TEST DATA (Sub 2-2 ANT)

### 9.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1712.5        |                                  | PI/2 BPSK  | -20.83                     | 12.40                        | 9.64               | 2.06 | H   | < 1.00 | 0.100 | 19.98 | 1    | 12     |
|               |                                  | QPSK       | -20.85                     | 12.38                        | 9.64               | 2.06 | H   |        | 0.099 | 19.96 |      |        |
|               |                                  | 16-QAM     | -21.90                     | 11.33                        | 9.64               | 2.06 | H   |        | 0.078 | 18.91 |      |        |
|               |                                  | 64-QAM     | -23.41                     | 9.82                         | 9.64               | 2.06 | H   |        | 0.055 | 17.40 |      |        |
|               |                                  | 256-QAM    | -25.85                     | 7.38                         | 9.64               | 2.06 | H   |        | 0.031 | 14.96 |      |        |
| 1745.0        | Sub6 n66/<br>5 MHz<br>[15 kHz]   | PI/2 BPSK  | -20.93                     | 12.22                        | 9.88               | 2.08 | H   | < 1.00 | 0.100 | 20.02 | 1    | 1      |
|               |                                  | QPSK       | -21.00                     | 12.15                        | 9.88               | 2.08 | H   |        | 0.099 | 19.95 |      |        |
|               |                                  | 16-QAM     | -22.00                     | 11.15                        | 9.88               | 2.08 | H   |        | 0.079 | 18.95 |      |        |
|               |                                  | 64-QAM     | -23.40                     | 9.75                         | 9.88               | 2.08 | H   |        | 0.057 | 17.55 |      |        |
|               |                                  | 256-QAM    | -25.94                     | 7.21                         | 9.88               | 2.08 | H   |        | 0.032 | 15.01 |      |        |
| 1777.5        |                                  | PI/2 BPSK  | -21.81                     | 11.32                        | 9.99               | 2.12 | H   | < 1.00 | 0.083 | 19.19 | 1    | 1      |
|               |                                  | QPSK       | -21.83                     | 11.30                        | 9.99               | 2.12 | H   |        | 0.083 | 19.17 |      |        |
|               |                                  | 16-QAM     | -22.87                     | 10.26                        | 9.99               | 2.12 | H   |        | 0.065 | 18.13 |      |        |
|               |                                  | 64-QAM     | -24.38                     | 8.75                         | 9.99               | 2.12 | H   |        | 0.046 | 16.62 |      |        |
|               |                                  | 256-QAM    | -26.90                     | 6.23                         | 9.99               | 2.12 | H   |        | 0.026 | 14.10 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1715.0        |                                  | PI/2 BPSK  | -20.71                     | 12.52                        | 9.64               | 2.06 | H   | < 1.00 | 0.102 | 20.10 | 1    | 50     |
|               |                                  | QPSK       | -20.72                     | 12.51                        | 9.64               | 2.06 | H   |        | 0.102 | 20.09 |      |        |
|               |                                  | 16-QAM     | -21.72                     | 11.51                        | 9.64               | 2.06 | H   |        | 0.081 | 19.09 |      |        |
|               |                                  | 64-QAM     | -23.24                     | 9.99                         | 9.64               | 2.06 | H   |        | 0.057 | 17.57 |      |        |
|               |                                  | 256-QAM    | -25.69                     | 7.54                         | 9.64               | 2.06 | H   |        | 0.033 | 15.12 |      |        |
| 1745.0        | Sub6 n66/<br>10 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.75                     | 12.40                        | 9.88               | 2.08 | H   | < 1.00 | 0.105 | 20.20 | 1    | 1      |
|               |                                  | QPSK       | -20.77                     | 12.38                        | 9.88               | 2.08 | H   |        | 0.104 | 20.18 |      |        |
|               |                                  | 16-QAM     | -21.72                     | 11.43                        | 9.88               | 2.08 | H   |        | 0.084 | 19.23 |      |        |
|               |                                  | 64-QAM     | -23.17                     | 9.98                         | 9.88               | 2.08 | H   |        | 0.060 | 17.78 |      |        |
|               |                                  | 256-QAM    | -25.84                     | 7.31                         | 9.88               | 2.08 | H   |        | 0.032 | 15.11 |      |        |
| 1775.0        |                                  | PI/2 BPSK  | -21.71                     | 11.37                        | 9.98               | 2.11 | H   | < 1.00 | 0.084 | 19.24 | 1    | 1      |
|               |                                  | QPSK       | -21.82                     | 11.26                        | 9.98               | 2.11 | H   |        | 0.082 | 19.13 |      |        |
|               |                                  | 16-QAM     | -22.70                     | 10.38                        | 9.98               | 2.11 | H   |        | 0.067 | 18.25 |      |        |
|               |                                  | 64-QAM     | -24.26                     | 8.82                         | 9.98               | 2.11 | H   |        | 0.047 | 16.69 |      |        |
|               |                                  | 256-QAM    | -26.80                     | 6.28                         | 9.98               | 2.11 | H   |        | 0.026 | 14.15 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1717.5        |                                  | PI/2 BPSK  | -20.65                     | 12.55                        | 9.68               | 2.07 | H   | < 1.00 | 0.104 | 20.16 | 1    | 77     |
|               |                                  | QPSK       | -20.84                     | 12.36                        | 9.68               | 2.07 | H   |        | 0.099 | 19.97 |      |        |
|               |                                  | 16-QAM     | -21.68                     | 11.52                        | 9.68               | 2.07 | H   |        | 0.082 | 19.13 |      |        |
|               |                                  | 64-QAM     | -23.16                     | 10.04                        | 9.68               | 2.07 | H   |        | 0.058 | 17.65 |      |        |
|               |                                  | 256-QAM    | -25.59                     | 7.61                         | 9.68               | 2.07 | H   |        | 0.033 | 15.22 |      |        |
| 1745.0        | Sub6 n66/<br>15 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.88                     | 12.27                        | 9.88               | 2.08 | H   | < 1.00 | 0.102 | 20.07 | 1    | 1      |
|               |                                  | QPSK       | -20.90                     | 12.25                        | 9.88               | 2.08 | H   |        | 0.101 | 20.05 |      |        |
|               |                                  | 16-QAM     | -21.84                     | 11.31                        | 9.88               | 2.08 | H   |        | 0.081 | 19.11 |      |        |
|               |                                  | 64-QAM     | -23.25                     | 9.90                         | 9.88               | 2.08 | H   |        | 0.059 | 17.70 |      |        |
|               |                                  | 256-QAM    | -25.99                     | 7.16                         | 9.88               | 2.08 | H   |        | 0.031 | 14.96 |      |        |
| 1772.5        |                                  | PI/2 BPSK  | -21.58                     | 11.50                        | 9.98               | 2.11 | H   | < 1.00 | 0.086 | 19.37 | 1    | 1      |
|               |                                  | QPSK       | -21.63                     | 11.45                        | 9.98               | 2.11 | H   |        | 0.086 | 19.32 |      |        |
|               |                                  | 16-QAM     | -22.61                     | 10.47                        | 9.98               | 2.11 | H   |        | 0.068 | 18.34 |      |        |
|               |                                  | 64-QAM     | -23.99                     | 9.09                         | 9.98               | 2.11 | H   |        | 0.050 | 16.96 |      |        |
|               |                                  | 256-QAM    | -26.65                     | 6.43                         | 9.98               | 2.11 | H   |        | 0.027 | 14.30 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1720.0        |                                  | PI/2 BPSK  | -20.53                     | 12.67                        | 9.68               | 2.07 | H   | < 1.00 | 0.107 | 20.28 | 1    | 104    |
|               |                                  | QPSK       | -20.63                     | 12.57                        | 9.68               | 2.07 | H   |        | 0.104 | 20.18 |      |        |
|               |                                  | 16-QAM     | -21.56                     | 11.64                        | 9.68               | 2.07 | H   |        | 0.084 | 19.25 |      |        |
|               |                                  | 64-QAM     | -23.02                     | 10.18                        | 9.68               | 2.07 | H   |        | 0.060 | 17.79 |      |        |
|               |                                  | 256-QAM    | -25.64                     | 7.56                         | 9.68               | 2.07 | H   |        | 0.033 | 15.17 |      |        |
| 1745.0        | Sub6 n66/<br>20 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.71                     | 12.44                        | 9.88               | 2.08 | H   | < 1.00 | 0.106 | 20.24 | 1    | 1      |
|               |                                  | QPSK       | -20.77                     | 12.38                        | 9.88               | 2.08 | H   |        | 0.104 | 20.18 |      |        |
|               |                                  | 16-QAM     | -21.69                     | 11.46                        | 9.88               | 2.08 | H   |        | 0.084 | 19.26 |      |        |
|               |                                  | 64-QAM     | -23.02                     | 10.13                        | 9.88               | 2.08 | H   |        | 0.062 | 17.93 |      |        |
|               |                                  | 256-QAM    | -25.69                     | 7.46                         | 9.88               | 2.08 | H   |        | 0.034 | 15.26 |      |        |
| 1770.0        |                                  | PI/2 BPSK  | -21.60                     | 11.44                        | 9.97               | 2.11 | H   | < 1.00 | 0.085 | 19.30 | 1    | 1      |
|               |                                  | QPSK       | -22.00                     | 11.04                        | 9.97               | 2.11 | H   |        | 0.078 | 18.90 |      |        |
|               |                                  | 16-QAM     | -22.77                     | 10.27                        | 9.97               | 2.11 | H   |        | 0.065 | 18.13 |      |        |
|               |                                  | 64-QAM     | -24.05                     | 8.99                         | 9.97               | 2.11 | H   |        | 0.048 | 16.85 |      |        |
|               |                                  | 256-QAM    | -26.58                     | 6.46                         | 9.97               | 2.11 | H   |        | 0.027 | 14.32 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1722.5        |                                  | PI/2 BPSK  | -20.40                     | 12.83                        | 9.72               | 2.07 | H   | < 1.00 | 0.112 | 20.48 | 1    | 131    |
|               |                                  | QPSK       | -20.44                     | 12.79                        | 9.72               | 2.07 | H   |        | 0.111 | 20.44 |      |        |
|               |                                  | 16-QAM     | -21.47                     | 11.76                        | 9.72               | 2.07 | H   |        | 0.087 | 19.41 |      |        |
|               |                                  | 64-QAM     | -22.78                     | 10.45                        | 9.72               | 2.07 | H   |        | 0.065 | 18.10 |      |        |
|               |                                  | 256-QAM    | -25.36                     | 7.87                         | 9.72               | 2.07 | H   |        | 0.036 | 15.52 |      |        |
| 1745.0        | Sub6 n66/<br>25 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.44                     | 12.71                        | 9.88               | 2.08 | H   | < 1.00 | 0.112 | 20.51 | 1    | 1      |
|               |                                  | QPSK       | -20.50                     | 12.65                        | 9.88               | 2.08 | H   |        | 0.111 | 20.45 |      |        |
|               |                                  | 16-QAM     | -21.39                     | 11.76                        | 9.88               | 2.08 | H   |        | 0.090 | 19.56 |      |        |
|               |                                  | 64-QAM     | -22.85                     | 10.30                        | 9.88               | 2.08 | H   |        | 0.065 | 18.10 |      |        |
|               |                                  | 256-QAM    | -25.53                     | 7.62                         | 9.88               | 2.08 | H   |        | 0.035 | 15.42 |      |        |
| 1767.5        |                                  | PI/2 BPSK  | -21.66                     | 11.38                        | 9.97               | 2.11 | H   | < 1.00 | 0.084 | 19.24 | 1    | 1      |
|               |                                  | QPSK       | -22.43                     | 10.61                        | 9.97               | 2.11 | H   |        | 0.070 | 18.47 |      |        |
|               |                                  | 16-QAM     | -23.10                     | 9.94                         | 9.97               | 2.11 | H   |        | 0.060 | 17.80 |      |        |
|               |                                  | 64-QAM     | -24.09                     | 8.95                         | 9.97               | 2.11 | H   |        | 0.048 | 16.81 |      |        |
|               |                                  | 256-QAM    | -26.13                     | 6.91                         | 9.97               | 2.11 | H   |        | 0.030 | 14.77 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1725.0        | Sub6 n66/<br>30 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.57                     | 12.66                        | 9.72               | 2.07 | H   | < 1.00 | 0.107 | 20.31 | 1    | 80     |
|               |                                  | QPSK       | -20.66                     | 12.57                        | 9.72               | 2.07 | H   |        | 0.105 | 20.22 |      |        |
|               |                                  | 16-QAM     | -21.57                     | 11.66                        | 9.72               | 2.07 | H   |        | 0.085 | 19.31 |      |        |
|               |                                  | 64-QAM     | -23.07                     | 10.16                        | 9.72               | 2.07 | H   |        | 0.060 | 17.81 |      |        |
|               |                                  | 256-QAM    | -25.61                     | 7.62                         | 9.72               | 2.07 | H   |        | 0.034 | 15.27 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -20.60                     | 12.55                        | 9.88               | 2.08 | H   |        | 0.108 | 20.35 | 1    | 1      |
|               |                                  | QPSK       | -20.72                     | 12.43                        | 9.88               | 2.08 | H   |        | 0.105 | 20.23 |      |        |
|               |                                  | 16-QAM     | -21.69                     | 11.46                        | 9.88               | 2.08 | H   |        | 0.084 | 19.26 |      |        |
|               |                                  | 64-QAM     | -23.15                     | 10.00                        | 9.88               | 2.08 | H   |        | 0.060 | 17.80 |      |        |
|               |                                  | 256-QAM    | -25.89                     | 7.26                         | 9.88               | 2.08 | H   |        | 0.032 | 15.06 |      |        |
| 1765.0        |                                  | PI/2 BPSK  | -21.62                     | 11.48                        | 9.95               | 2.10 | H   |        | 0.086 | 19.33 | 1    | 1      |
|               |                                  | QPSK       | -22.26                     | 10.84                        | 9.95               | 2.10 | H   |        | 0.074 | 18.69 |      |        |
|               |                                  | 16-QAM     | -22.88                     | 10.22                        | 9.95               | 2.10 | H   |        | 0.064 | 18.07 |      |        |
|               |                                  | 64-QAM     | -24.01                     | 9.09                         | 9.95               | 2.10 | H   |        | 0.049 | 16.94 |      |        |
|               |                                  | 256-QAM    | -26.32                     | 6.78                         | 9.95               | 2.10 | H   |        | 0.029 | 14.63 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1727.5        |                                  | PI/2 BPSK  | -20.66                     | 12.59                        | 9.77               | 2.07 | H   | < 1.00 | 0.107 | 20.29 | 1    | 94     |
|               |                                  | QPSK       | -20.77                     | 12.48                        | 9.77               | 2.07 | H   |        | 0.104 | 20.18 |      |        |
|               |                                  | 16-QAM     | -21.70                     | 11.55                        | 9.77               | 2.07 | H   |        | 0.084 | 19.25 |      |        |
|               |                                  | 64-QAM     | -23.20                     | 10.05                        | 9.77               | 2.07 | H   |        | 0.060 | 17.75 |      |        |
|               |                                  | 256-QAM    | -25.61                     | 7.64                         | 9.77               | 2.07 | H   |        | 0.034 | 15.34 |      |        |
| 1745.0        | Sub6 n66/<br>35 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.63                     | 12.52                        | 9.88               | 2.08 | H   | < 1.00 | 0.108 | 20.32 | 1    | 1      |
|               |                                  | QPSK       | -20.66                     | 12.49                        | 9.88               | 2.08 | H   |        | 0.107 | 20.29 |      |        |
|               |                                  | 16-QAM     | -21.49                     | 11.66                        | 9.88               | 2.08 | H   |        | 0.088 | 19.46 |      |        |
|               |                                  | 64-QAM     | -23.05                     | 10.10                        | 9.88               | 2.08 | H   |        | 0.062 | 17.90 |      |        |
|               |                                  | 256-QAM    | -25.61                     | 7.54                         | 9.88               | 2.08 | H   |        | 0.034 | 15.34 |      |        |
| 1762.5        |                                  | PI/2 BPSK  | -20.94                     | 12.16                        | 9.95               | 2.10 | H   | < 1.00 | 0.100 | 20.01 | 1    | 1      |
|               |                                  | QPSK       | -20.95                     | 12.15                        | 9.95               | 2.10 | H   |        | 0.100 | 20.00 |      |        |
|               |                                  | 16-QAM     | -21.92                     | 11.18                        | 9.95               | 2.10 | H   |        | 0.080 | 19.03 |      |        |
|               |                                  | 64-QAM     | -23.35                     | 9.75                         | 9.95               | 2.10 | H   |        | 0.058 | 17.60 |      |        |
|               |                                  | 256-QAM    | -25.95                     | 7.15                         | 9.95               | 2.10 | H   |        | 0.032 | 15.00 |      |        |

| Freq<br>(MHz) | Mod/<br>Bandwidth<br>[SCS (kHz)] | Modulation | Measured<br>Level<br>(dBm) | Substitute<br>Level<br>(dBm) | Ant. Gain<br>(dBi) | C.L  | Pol | Limit  | EIRP  |       | RB   |        |
|---------------|----------------------------------|------------|----------------------------|------------------------------|--------------------|------|-----|--------|-------|-------|------|--------|
|               |                                  |            |                            |                              |                    |      |     | W      | W     | dBm   | Size | Offset |
| 1730.0        | Sub6 n66/<br>40 MHz<br>[15 kHz]  | PI/2 BPSK  | -20.59                     | 12.66                        | 9.77               | 2.07 | H   | < 1.00 | 0.109 | 20.36 | 1    | 108    |
|               |                                  | QPSK       | -20.67                     | 12.58                        | 9.77               | 2.07 | H   |        | 0.107 | 20.28 |      |        |
|               |                                  | 16-QAM     | -21.62                     | 11.63                        | 9.77               | 2.07 | H   |        | 0.086 | 19.33 |      |        |
|               |                                  | 64-QAM     | -23.07                     | 10.18                        | 9.77               | 2.07 | H   |        | 0.061 | 17.88 |      |        |
|               |                                  | 256-QAM    | -25.65                     | 7.60                         | 9.77               | 2.07 | H   |        | 0.034 | 15.30 |      |        |
| 1745.0        |                                  | PI/2 BPSK  | -20.54                     | 12.61                        | 9.88               | 2.08 | H   |        | 0.110 | 20.41 | 1    | 1      |
|               |                                  | QPSK       | -20.61                     | 12.54                        | 9.88               | 2.08 | H   |        | 0.108 | 20.34 |      |        |
|               |                                  | 16-QAM     | -21.47                     | 11.68                        | 9.88               | 2.08 | H   |        | 0.089 | 19.48 |      |        |
|               |                                  | 64-QAM     | -22.90                     | 10.25                        | 9.88               | 2.08 | H   |        | 0.064 | 18.05 |      |        |
|               |                                  | 256-QAM    | -25.48                     | 7.67                         | 9.88               | 2.08 | H   |        | 0.035 | 15.47 |      |        |
| 1760.0        |                                  | PI/2 BPSK  | -20.50                     | 12.65                        | 9.94               | 2.09 | H   |        | 0.112 | 20.50 | 1    | 1      |
|               |                                  | QPSK       | -20.60                     | 12.55                        | 9.94               | 2.09 | H   |        | 0.110 | 20.40 |      |        |
|               |                                  | 16-QAM     | -21.56                     | 11.59                        | 9.94               | 2.09 | H   |        | 0.088 | 19.44 |      |        |
|               |                                  | 64-QAM     | -22.94                     | 10.21                        | 9.94               | 2.09 | H   |        | 0.064 | 18.06 |      |        |
|               |                                  | 256-QAM    | -25.66                     | 7.49                         | 9.94               | 2.09 | H   |        | 0.034 | 15.34 |      |        |

## 9.2 RADIATED SPURIOUS EMISSIONS

|             |                  |
|-------------|------------------|
| NR Band:    | <u>NR n66</u>    |
| Bandwidth:  | <u>25 MHz</u>    |
| Modulation: | <u>PI/2 BPSK</u> |
| Distance:   | <u>3 meters</u>  |
| SCS:        | <u>15 kHz</u>    |

| Ch                 | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L  | Pol | Result (dBm) | Limit (dBm) | RB   |        |
|--------------------|------------|----------------------|-----------------|------------------------|------|-----|--------------|-------------|------|--------|
|                    |            |                      |                 |                        |      |     |              |             | Size | Offset |
| 344500<br>(1722.5) | 3 445.00   | -60.51               | 11.35           | -60.83                 | 3.02 | V   | -52.50       | -13.00      | 1    | 131    |
|                    |            | -60.56               |                 | -60.88                 |      | H   | -52.55       | -13.00      |      |        |
|                    | 5 167.50   | -60.89               | 11.38           | -54.45                 | 3.80 | V   | -46.87       | -13.00      |      |        |
|                    |            | -60.88               |                 | -54.44                 |      | H   | -46.86       | -13.00      |      |        |
|                    | 6 890.00   | -63.46               | 11.28           | -50.44                 | 4.53 | V   | -43.69       | -13.00      |      |        |
|                    |            | -63.51               |                 | -50.49                 |      | H   | -43.74       | -13.00      |      |        |
| 349000<br>(1745.0) | 3 490.00   | -60.49               | 11.49           | -61.00                 | 3.06 | V   | -52.57       | -13.00      | 1    | 1      |
|                    |            | -60.53               |                 | -61.04                 |      | H   | -52.61       | -13.00      |      |        |
|                    | 5 235.00   | -61.59               | 11.55           | -55.21                 | 3.86 | V   | -47.52       | -13.00      |      |        |
|                    |            | -61.62               |                 | -55.24                 |      | H   | -47.55       | -13.00      |      |        |
|                    | 6 980.00   | -63.64               | 11.34           | -49.95                 | 4.55 | V   | -43.16       | -13.00      |      |        |
|                    |            | -63.38               |                 | -49.69                 |      | H   | -42.90       | -13.00      |      |        |
| 353500<br>(1767.5) | 3 535.00   | -59.15               | 11.64           | -60.11                 | 3.09 | V   | -51.56       | -13.00      | 1    | 1      |
|                    |            | -59.24               |                 | -60.20                 |      | H   | -51.65       | -13.00      |      |        |
|                    | 5 302.50   | -61.86               | 11.68           | -55.34                 | 3.88 | V   | -47.54       | -13.00      |      |        |
|                    |            | -61.10               |                 | -54.58                 |      | H   | -46.78       | -13.00      |      |        |
|                    | 7 070.00   | -63.60               | 11.05           | -48.81                 | 4.58 | V   | -42.34       | -13.00      |      |        |
|                    |            | -63.22               |                 | -48.43                 |      | H   | -41.96       | -13.00      |      |        |

### 9.3 PEAK-TO-AVERAGE RATIO

| Band     | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) | Limit (dB) |
|----------|------------|-----------------|------------|---------------------|-----------------------|------------|------------|
| Sub6 n66 | 5 MHz      | 1745.0          | PI/2 BPSK  | 25                  | 0                     | 4.37       | 13.00      |
|          |            |                 | QPSK       |                     |                       | 5.29       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.26       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.48       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.98       |            |
|          | 10 MHz     |                 | PI/2 BPSK  | 50                  |                       | 4.25       |            |
|          |            |                 | QPSK       |                     |                       | 5.36       |            |
|          |            |                 | 16-QAM     |                     |                       | 5.93       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.34       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.80       |            |
|          | 15 MHz     |                 | PI/2 BPSK  | 75                  |                       | 4.10       |            |
|          |            |                 | QPSK       |                     |                       | 5.14       |            |
|          |            |                 | 16-QAM     |                     |                       | 5.99       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.23       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.52       |            |
|          | 20 MHz     |                 | PI/2 BPSK  | 100                 |                       | 4.13       |            |
|          |            |                 | QPSK       |                     |                       | 5.35       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.05       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.32       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.77       |            |
|          | 25 MHz     |                 | PI/2 BPSK  | 128                 |                       | 3.81       |            |
|          |            |                 | QPSK       |                     |                       | 5.14       |            |
|          |            |                 | 16-QAM     |                     |                       | 5.97       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.33       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.70       |            |
|          | 30 MHz     |                 | PI/2 BPSK  | 160                 |                       | 4.09       |            |
|          |            |                 | QPSK       |                     |                       | 5.33       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.08       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.33       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.64       |            |
|          | 35 MHz     |                 | PI/2 BPSK  | 187                 |                       | 4.06       |            |
|          |            |                 | QPSK       |                     |                       | 5.28       |            |
|          |            |                 | 16-QAM     |                     |                       | 6.04       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.26       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.66       |            |
|          | 40 MHz     |                 | PI/2 BPSK  | 216                 |                       | 4.16       |            |
|          |            |                 | QPSK       |                     |                       | 5.21       |            |
|          |            |                 | 16-QAM     |                     |                       | 5.98       |            |
|          |            |                 | 64-QAM     |                     |                       | 6.26       |            |
|          |            |                 | 256-QAM    |                     |                       | 6.66       |            |

#### 9.4 OCCUPIED BANDWIDTH

| Band        | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (MHz) |
|-------------|------------|-----------------|------------|---------------------|-----------------------|------------|
| Sub6<br>n66 | 5 MHz      | 1745.0          | PI/2 BPSK  | 25                  | 0                     | 4.5302     |
|             |            |                 | QPSK       |                     |                       | 4.5035     |
|             |            |                 | 16-QAM     |                     |                       | 4.4941     |
|             |            |                 | 64-QAM     |                     |                       | 4.5308     |
|             |            |                 | 256-QAM    |                     |                       | 4.4995     |
|             | 10 MHz     |                 | PI/2 BPSK  | 50                  |                       | 8.9815     |
|             |            |                 | QPSK       |                     |                       | 8.9978     |
|             |            |                 | 16-QAM     |                     |                       | 8.9884     |
|             |            |                 | 64-QAM     |                     |                       | 8.9778     |
|             |            |                 | 256-QAM    |                     |                       | 8.9660     |
|             | 15 MHz     |                 | PI/2 BPSK  | 75                  |                       | 13.442     |
|             |            |                 | QPSK       |                     |                       | 13.494     |
|             |            |                 | 16-QAM     |                     |                       | 13.490     |
|             |            |                 | 64-QAM     |                     |                       | 13.483     |
|             |            |                 | 256-QAM    |                     |                       | 13.497     |
|             | 20 MHz     |                 | PI/2 BPSK  | 100                 |                       | 17.911     |
|             |            |                 | QPSK       |                     |                       | 17.988     |
|             |            |                 | 16-QAM     |                     |                       | 17.998     |
|             |            |                 | 64-QAM     |                     |                       | 17.916     |
|             |            |                 | 256-QAM    |                     |                       | 17.967     |
|             | 25 MHz     |                 | PI/2 BPSK  | 128                 |                       | 22.937     |
|             |            |                 | QPSK       |                     |                       | 22.960     |
|             |            |                 | 16-QAM     |                     |                       | 22.962     |
|             |            |                 | 64-QAM     |                     |                       | 22.954     |
|             |            |                 | 256-QAM    |                     |                       | 22.905     |
|             | 30 MHz     |                 | PI/2 BPSK  | 160                 |                       | 28.653     |
|             |            |                 | QPSK       |                     |                       | 28.637     |
|             |            |                 | 16-QAM     |                     |                       | 28.669     |
|             |            |                 | 64-QAM     |                     |                       | 28.720     |
|             |            |                 | 256-QAM    |                     |                       | 28.659     |
|             | 35 MHz     |                 | PI/2 BPSK  | 187                 |                       | 32.386     |
|             |            |                 | QPSK       |                     |                       | 32.461     |
|             |            |                 | 16-QAM     |                     |                       | 32.246     |
|             |            |                 | 64-QAM     |                     |                       | 32.269     |
|             |            |                 | 256-QAM    |                     |                       | 32.190     |
|             | 40 MHz     |                 | PI/2 BPSK  | 216                 |                       | 38.683     |
|             |            |                 | QPSK       |                     |                       | 38.672     |
|             |            |                 | 16-QAM     |                     |                       | 38.700     |
|             |            |                 | 64-QAM     |                     |                       | 38.724     |
|             |            |                 | 256-QAM    |                     |                       | 38.700     |

## 9.5 CONDUCTED SPURIOUS EMISSIONS

| Band     | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|----------|------------------|-----------------|-------------------------------------|-------------|--------------------------------|--------------|-------------|
| Sub6 n66 | 5                | 1712.5          | 5.2044                              | 29.116      | -63.248                        | -34.132      | -13.00      |
|          |                  | 1745.0          | 8.8335                              | 29.116      | -62.872                        | -33.756      |             |
|          |                  | 1777.5          | 3.8186                              | 28.533      | -63.004                        | -34.471      |             |
|          | 10               | 1715.0          | 8.3749                              | 29.116      | -63.093                        | -33.977      |             |
|          |                  | 1745.0          | 8.0060                              | 29.116      | -63.261                        | -34.145      |             |
|          |                  | 1775.0          | 4.0479                              | 28.533      | -62.357                        | -33.824      |             |
|          | 15               | 1717.5          | 4.0280                              | 28.533      | -61.991                        | -33.458      |             |
|          |                  | 1745.0          | 3.7289                              | 28.533      | -62.894                        | -34.361      |             |
|          |                  | 1772.5          | 4.9253                              | 28.533      | -63.173                        | -34.640      |             |
|          | 20               | 1720.0          | 9.6610                              | 29.116      | -63.771                        | -34.655      |             |
|          |                  | 1745.0          | 9.7109                              | 29.116      | -63.134                        | -34.018      |             |
|          |                  | 1770.0          | 6.0619                              | 29.116      | -62.678                        | -33.562      |             |
|          | 25               | 1722.5          | 9.9103                              | 29.116      | -63.358                        | -34.242      |             |
|          |                  | 1745.0          | 5.2044                              | 29.116      | -61.699                        | -32.583      |             |
|          |                  | 1767.5          | 4.0180                              | 28.533      | -62.940                        | -34.407      |             |
|          | 30               | 1725.0          | 4.0180                              | 28.533      | -63.003                        | -34.470      |             |
|          |                  | 1745.0          | 9.9502                              | 29.116      | -62.870                        | -33.754      |             |
|          |                  | 1765.0          | 8.2852                              | 29.116      | -63.406                        | -34.290      |             |
|          | 35               | 1727.5          | 4.9053                              | 28.533      | -62.759                        | -34.226      |             |
|          |                  | 1745.0          | 6.0419                              | 29.116      | -63.216                        | -34.100      |             |
|          |                  | 1762.5          | 5.2044                              | 29.116      | -63.834                        | -34.718      |             |
|          | 40               | 1730.0          | 3.8685                              | 28.533      | -63.673                        | -35.140      |             |
|          |                  | 1745.0          | 4.0778                              | 29.116      | -63.233                        | -34.117      |             |
|          |                  | 1760.0          | 8.5444                              | 29.116      | -63.361                        | -34.245      |             |

### Note:

1. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter

| Frequency Range (GHz) | Factor [dB] |
|-----------------------|-------------|
| 0.03 – 1              | 27.012      |
| 1 – 5                 | 28.533      |
| 5 – 10                | 29.116      |
| 10 – 15               | 30.025      |
| 15 – 20               | 31.052      |
| Above 20              | 31.613      |

## 9.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Section 11.4.

## 9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 5 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1712.5             | 100 %          | +20(Ref) | 1712 499 998 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1712 499 996 | -2.1       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1712 499 995 | -2.5       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1712 499 996 | -1.4       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1712 499 996 | -1.8       | 0.000 000 | -0.001 |
|                    | 100 %          | +10      | 1712 499 995 | -2.5       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1712 499 995 | -2.6       | 0.000 000 | -0.002 |
|                    | 100 %          | +40      | 1712 499 997 | -0.3       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1712 499 997 | -0.7       | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1712 499 997 | -0.5       | 0.000 000 | 0.000  |
| 1777.5             | 100 %          | +20(Ref) | 1777 500 003 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1777 500 003 | 0.2        | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1777 500 004 | 0.9        | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1777 500 005 | 1.8        | 0.000 000 | 0.001  |
|                    | 100 %          | 0        | 1777 500 003 | -0.5       | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1777 500 004 | 1.0        | 0.000 000 | 0.001  |
|                    | 100 %          | +30      | 1777 500 004 | 0.8        | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1777 500 003 | -0.1       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1777 500 002 | -0.8       | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1777 500 004 | 0.8        | 0.000 000 | 0.000  |

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1715.0             | 100 %          | +20(Ref) | 1715 000 000 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1714 999 999 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1715 000 000 | -0.5       | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1715 000 000 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1715 000 000 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1714 999 999 | -1.1       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1715 000 001 | 0.3        | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1715 000 000 | -0.8       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1715 000 001 | 0.8        | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1715 000 001 | 1.0        | 0.000 000 | 0.001  |
| 1775.0             | 100 %          | +20(Ref) | 1774 999 998 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1774 999 998 | 0.2        | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1774 999 997 | -0.5       | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1774 999 997 | -0.4       | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1774 999 999 | 1.1        | 0.000 000 | 0.001  |
|                    | 100 %          | +10      | 1774 999 996 | -1.9       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1774 999 997 | -0.4       | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1774 999 999 | 1.1        | 0.000 000 | 0.001  |
|                    | 100 %          | +50      | 1774 999 996 | -1.9       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1774 999 997 | -0.4       | 0.000 000 | 0.000  |

☐ BandWidth: 15 MHz  
☐ Voltage(100 %): 3.880 VDC  
☐ Batt. Endpoint: 3.300 VDC  
☐ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1717.5             | 100 %          | +20(Ref) | 1717 500 001 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1717 500 004 | 2.5        | 0.000 000 | 0.001  |
|                    | 100 %          | -20      | 1717 500 002 | 0.8        | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1717 500 001 | 0.3        | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1717 500 002 | 1.1        | 0.000 000 | 0.001  |
|                    | 100 %          | +10      | 1717 500 003 | 2.0        | 0.000 000 | 0.001  |
|                    | 100 %          | +30      | 1717 500 001 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1717 500 003 | 1.6        | 0.000 000 | 0.001  |
|                    | 100 %          | +50      | 1717 500 003 | 1.6        | 0.000 000 | 0.001  |
|                    | Batt. Endpoint | +20      | 1717 500 001 | 0.2        | 0.000 000 | 0.000  |
| 1772.5             | 100 %          | +20(Ref) | 1772 499 997 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1772 499 995 | -1.8       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1772 499 992 | -4.5       | 0.000 000 | -0.003 |
|                    | 100 %          | -10      | 1772 499 992 | -4.9       | 0.000 000 | -0.003 |
|                    | 100 %          | 0        | 1772 499 993 | -3.2       | 0.000 000 | -0.002 |
|                    | 100 %          | +10      | 1772 499 991 | -5.2       | 0.000 000 | -0.003 |
|                    | 100 %          | +30      | 1772 499 992 | -4.7       | 0.000 000 | -0.003 |
|                    | 100 %          | +40      | 1772 499 994 | -2.3       | 0.000 000 | -0.001 |
|                    | 100 %          | +50      | 1772 499 995 | -1.2       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1772 499 996 | -0.7       | 0.000 000 | 0.000  |

- ▣ BandWidth: 20 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1720.0             | 100 %          | +20(Ref) | 1719 999 998 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1719 999 996 | -2.1       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1719 999 995 | -2.9       | 0.000 000 | -0.002 |
|                    | 100 %          | -10      | 1719 999 995 | -3.1       | 0.000 000 | -0.002 |
|                    | 100 %          | 0        | 1719 999 995 | -2.8       | 0.000 000 | -0.002 |
|                    | 100 %          | +10      | 1719 999 998 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | +30      | 1719 999 998 | -0.1       | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1719 999 997 | -1.4       | 0.000 000 | -0.001 |
|                    | 100 %          | +50      | 1719 999 995 | -2.8       | 0.000 000 | -0.002 |
|                    | Batt. Endpoint | +20      | 1719 999 997 | -1.1       | 0.000 000 | -0.001 |
| 1770.0             | 100 %          | +20(Ref) | 1770 000 000 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1770 000 000 | 0.8        | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1769 999 998 | -1.4       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1769 999 998 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1769 999 999 | -0.5       | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1770 000 001 | 1.9        | 0.000 000 | 0.001  |
|                    | 100 %          | +30      | 1769 999 999 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | +40      | 1770 000 002 | 2.7        | 0.000 000 | 0.002  |
|                    | 100 %          | +50      | 1770 000 002 | 2.3        | 0.000 000 | 0.001  |
|                    | Batt. Endpoint | +20      | 1770 000 003 | 3.7        | 0.000 000 | 0.002  |

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1722.5             | 100 %          | +20(Ref) | 1722 500 000 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1722 499 999 | -0.4       | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1722 499 999 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | -10      | 1722 499 999 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | 0        | 1722 499 999 | -1.1       | 0.000 000 | -0.001 |
|                    | 100 %          | +10      | 1722 499 999 | -0.8       | 0.000 000 | 0.000  |
|                    | 100 %          | +30      | 1722 499 999 | -1.2       | 0.000 000 | -0.001 |
|                    | 100 %          | +40      | 1722 499 999 | -0.5       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1722 499 999 | -0.4       | 0.000 000 | 0.000  |
|                    | Batt. Endpoint | +20      | 1722 500 000 | 0.5        | 0.000 000 | 0.000  |
| 1767.5             | 100 %          | +20(Ref) | 1767 499 998 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1767 499 997 | -1.4       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1767 499 997 | -1.1       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1767 499 997 | -1.0       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1767 499 998 | -0.6       | 0.000 000 | 0.000  |
|                    | 100 %          | +10      | 1767 499 997 | -1.7       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1767 499 997 | -1.3       | 0.000 000 | -0.001 |
|                    | 100 %          | +40      | 1767 499 997 | -1.3       | 0.000 000 | -0.001 |
|                    | 100 %          | +50      | 1767 499 997 | -1.4       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1767 499 997 | -1.2       | 0.000 000 | -0.001 |

- ▣ BandWidth: 30 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm   |
|--------------------|----------------|----------|--------------|------------|-----------|-------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |       |
| 1725.0             | 100 %          | +20(Ref) | 1725 000 006 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1725 000 010 | 4.9        | 0.000 000 | 0.003 |
|                    | 100 %          | -20      | 1725 000 013 | 7.7        | 0.000 000 | 0.004 |
|                    | 100 %          | -10      | 1725 000 011 | 5.0        | 0.000 000 | 0.003 |
|                    | 100 %          | 0        | 1725 000 012 | 6.2        | 0.000 000 | 0.004 |
|                    | 100 %          | +10      | 1725 000 011 | 5.7        | 0.000 000 | 0.003 |
|                    | 100 %          | +30      | 1725 000 010 | 4.7        | 0.000 000 | 0.003 |
|                    | 100 %          | +40      | 1725 000 013 | 7.1        | 0.000 000 | 0.004 |
|                    | 100 %          | +50      | 1725 000 012 | 6.4        | 0.000 000 | 0.004 |
|                    | Batt. Endpoint | +20      | 1725 000 011 | 5.0        | 0.000 000 | 0.003 |
| 1765.0             | 100 %          | +20(Ref) | 1765 000 002 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1765 000 006 | 3.2        | 0.000 000 | 0.002 |
|                    | 100 %          | -20      | 1765 000 006 | 4.0        | 0.000 000 | 0.002 |
|                    | 100 %          | -10      | 1765 000 007 | 4.6        | 0.000 000 | 0.003 |
|                    | 100 %          | 0        | 1765 000 005 | 2.6        | 0.000 000 | 0.001 |
|                    | 100 %          | +10      | 1765 000 006 | 3.4        | 0.000 000 | 0.002 |
|                    | 100 %          | +30      | 1765 000 005 | 2.8        | 0.000 000 | 0.002 |
|                    | 100 %          | +40      | 1765 000 006 | 3.4        | 0.000 000 | 0.002 |
|                    | 100 %          | +50      | 1765 000 003 | 1.1        | 0.000 000 | 0.001 |
|                    | Batt. Endpoint | +20      | 1765 000 005 | 2.3        | 0.000 000 | 0.001 |

- ▣ BandWidth: 35 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm    |
|--------------------|----------------|----------|--------------|------------|-----------|--------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |        |
| 1727.5             | 100 %          | +20(Ref) | 1727 499 997 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1727 499 995 | -2.1       | 0.000 000 | -0.001 |
|                    | 100 %          | -20      | 1727 499 996 | -1.3       | 0.000 000 | -0.001 |
|                    | 100 %          | -10      | 1727 499 995 | -1.8       | 0.000 000 | -0.001 |
|                    | 100 %          | 0        | 1727 499 994 | -3.2       | 0.000 000 | -0.002 |
|                    | 100 %          | +10      | 1727 499 995 | -2.1       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1727 499 994 | -3.0       | 0.000 000 | -0.002 |
|                    | 100 %          | +40      | 1727 499 995 | -2.3       | 0.000 000 | -0.001 |
|                    | 100 %          | +50      | 1727 499 995 | -2.1       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1727 499 997 | 0.2        | 0.000 000 | 0.000  |
| 1762.5             | 100 %          | +20(Ref) | 1762 500 000 | 0.0        | 0.000 000 | 0.000  |
|                    | 100 %          | -30      | 1762 500 001 | 0.2        | 0.000 000 | 0.000  |
|                    | 100 %          | -20      | 1762 500 002 | 1.6        | 0.000 000 | 0.001  |
|                    | 100 %          | -10      | 1762 500 001 | 1.0        | 0.000 000 | 0.001  |
|                    | 100 %          | 0        | 1762 500 001 | 1.0        | 0.000 000 | 0.001  |
|                    | 100 %          | +10      | 1762 499 999 | -1.5       | 0.000 000 | -0.001 |
|                    | 100 %          | +30      | 1762 500 002 | 1.2        | 0.000 000 | 0.001  |
|                    | 100 %          | +40      | 1762 500 000 | -0.1       | 0.000 000 | 0.000  |
|                    | 100 %          | +50      | 1762 499 999 | -1.0       | 0.000 000 | -0.001 |
|                    | Batt. Endpoint | +20      | 1762 500 003 | 2.3        | 0.000 000 | 0.001  |

- ▣ BandWidth: 40 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

| Test.<br>Frequency | Voltage        | Temp.    | Frequency    | Frequency  | Deviation | ppm   |
|--------------------|----------------|----------|--------------|------------|-----------|-------|
| (MHz)              | (%)            | (°C)     | (Hz)         | Error (Hz) | (%)       |       |
| 1730.0             | 100 %          | +20(Ref) | 1730 000 009 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1730 000 016 | 7.6        | 0.000 000 | 0.004 |
|                    | 100 %          | -20      | 1730 000 018 | 9.1        | 0.000 001 | 0.005 |
|                    | 100 %          | -10      | 1730 000 017 | 8.1        | 0.000 000 | 0.005 |
|                    | 100 %          | 0        | 1730 000 017 | 8.3        | 0.000 000 | 0.005 |
|                    | 100 %          | +10      | 1730 000 018 | 9.1        | 0.000 001 | 0.005 |
|                    | 100 %          | +30      | 1730 000 015 | 6.2        | 0.000 000 | 0.004 |
|                    | 100 %          | +40      | 1730 000 018 | 8.6        | 0.000 000 | 0.005 |
|                    | 100 %          | +50      | 1730 000 017 | 7.9        | 0.000 000 | 0.005 |
|                    | Batt. Endpoint | +20      | 1730 000 015 | 6.4        | 0.000 000 | 0.004 |
| 1760.0             | 100 %          | +20(Ref) | 1760 000 010 | 0.0        | 0.000 000 | 0.000 |
|                    | 100 %          | -30      | 1760 000 017 | 7.3        | 0.000 000 | 0.004 |
|                    | 100 %          | -20      | 1760 000 016 | 6.6        | 0.000 000 | 0.004 |
|                    | 100 %          | -10      | 1760 000 020 | 10.8       | 0.000 001 | 0.006 |
|                    | 100 %          | 0        | 1760 000 017 | 7.3        | 0.000 000 | 0.004 |
|                    | 100 %          | +10      | 1760 000 018 | 8.0        | 0.000 000 | 0.005 |
|                    | 100 %          | +30      | 1760 000 017 | 7.2        | 0.000 000 | 0.004 |
|                    | 100 %          | +40      | 1760 000 016 | 6.3        | 0.000 000 | 0.004 |
|                    | 100 %          | +50      | 1760 000 018 | 8.0        | 0.000 000 | 0.005 |
|                    | Batt. Endpoint | +20      | 1760 000 019 | 9.3        | 0.000 001 | 0.005 |

## 10. TEST PLOTS(Main 1 ANT)

## 10.1 PEAK-TO-AVERAGE RATIO

NR n66\_5 M\_PAR\_Mid\_PI/2 BPSK\_FullRB



NR n66\_5 M\_PAR\_Mid\_QPSK\_FullRB



NR n66\_5 M\_PAR\_Mid\_16QAM\_FullRB



NR n66\_5 M\_PAR\_Mid\_64QAM\_FullRB



## NR n66\_5 M\_PAR\_Mid\_256QAM\_FullRB



NR n66\_10 M\_PAR\_Mid\_PI/2 BPSK\_FullIRB



NR n66\_10 M\_PAR\_Mid\_QPSK\_FullRB



NR n66\_10 M\_PAR\_Mid\_16QAM\_FullRB



NR n66\_10 M\_PAR\_Mid\_64QAM\_FullRB



## NR n66\_10 M\_PAR\_Mid\_256QAM\_FullRB



NR n66\_15 M\_PAR\_Mid\_PI/2 BPSK\_FullIRB



NR n66\_15 M\_PAR\_Mid\_QPSK\_FullRB



## NR n66\_15 M\_PAR\_Mid\_16QAM\_FullRB



## NR n66\_15 M\_PAR\_Mid\_64QAM\_FullRB



## NR n66\_15 M\_PAR\_Mid\_256QAM\_FullRB



NR n66\_20 M\_PAR\_Mid\_PI/2 BPSK\_FullIRB



NR n66\_20 M\_PAR\_Mid\_QPSK\_FullRB



NR n66\_20 M\_PAR\_Mid\_16QAM\_FullRB



NR n66\_20 M\_PAR\_Mid\_64QAM\_FullRB



## NR n66\_20 M\_PAR\_Mid\_256QAM\_FullRB



NR n66\_25 M\_PAR\_Mid\_PI/2 BPSK\_FullIRB



NR n66\_25 M\_PAR\_Mid\_QPSK\_FullRB



## NR n66\_25 M\_PAR\_Mid\_16QAM\_FullRB



NR n66\_25 M\_PAR\_Mid\_64QAM\_FullRB



## NR n66\_25 M\_PAR\_Mid\_256QAM\_FullRB



NR n66\_30 M\_PAR\_Mid\_PI/2 BPSK\_FullRB



## NR n66\_30 M\_PAR\_Mid\_QPSK\_FullRB



## NR n66\_30 M\_PAR\_Mid\_16QAM\_FullRB



NR n66\_30 M\_PAR\_Mid\_64QAM\_FullRB



## NR n66\_30 M\_PAR\_Mid\_256QAM\_FullRB



NR n66\_35 M\_PAR\_Mid\_PI/2 BPSK\_FullIRB



NR n66\_35 M\_PAR\_Mid\_QPSK\_FullRB



NR n66\_35 M\_PAR\_Mid\_16QAM\_FullRB



NR n66\_35 M\_PAR\_Mid\_64QAM\_FullRB



NR n66\_35 M\_PAR\_Mid\_256QAM\_FullRB



NR n66\_40 M\_PAR\_Mid\_PI/2 BPSK\_FullIRB



NR n66\_40 M\_PAR\_Mid\_QPSK\_FullRB



NR n66\_40 M\_PAR\_Mid\_16QAM\_FullRB



NR n66\_40 M\_PAR\_Mid\_64QAM\_FullRB

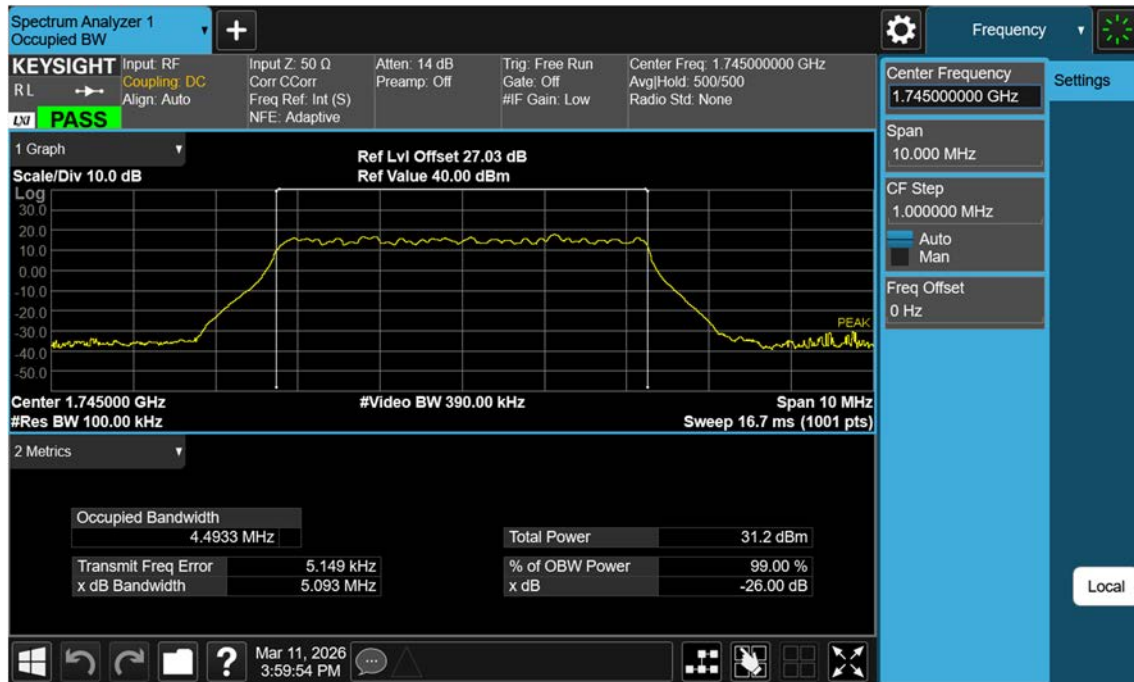


## NR n66\_40 M\_PAR\_Mid\_256QAM\_FullRB



## 10.2 OCCUPIED BANDWIDTH

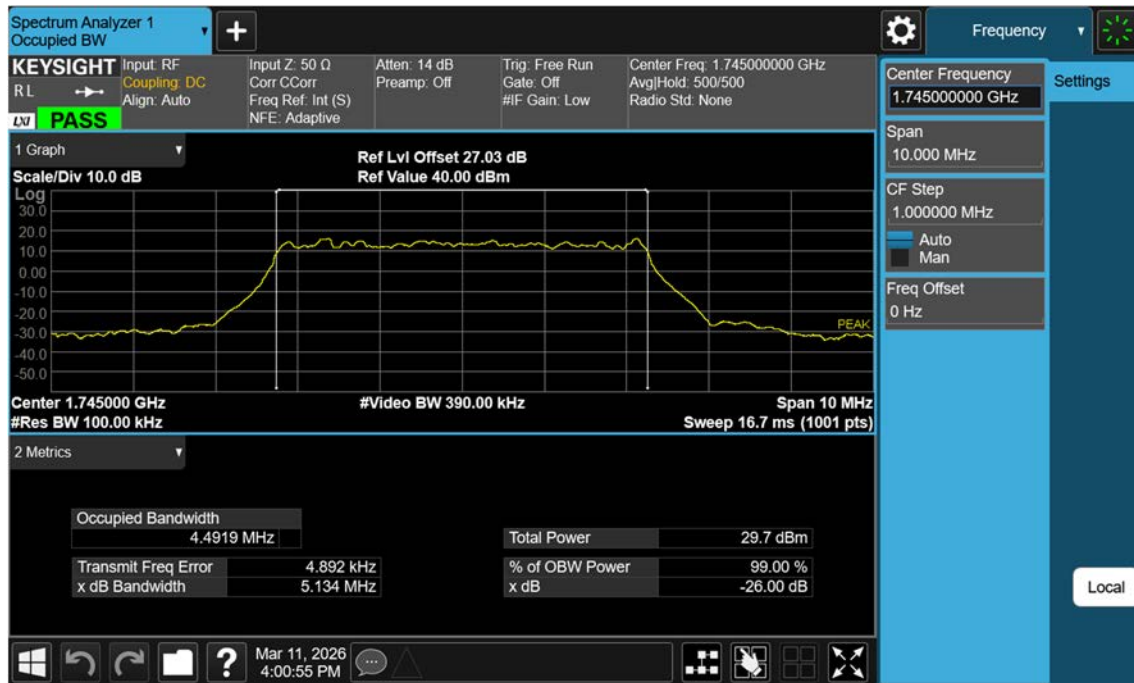
NR n66\_5 M\_OBW\_Mid\_PI/2 BPSK\_FullRB



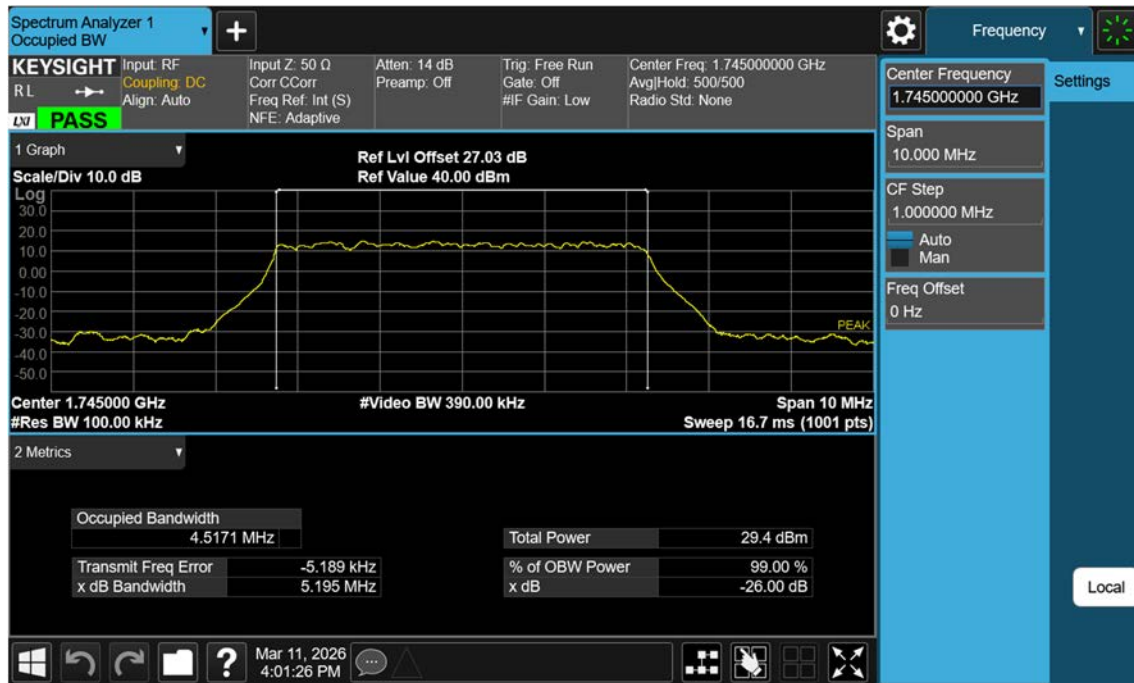
## NR n66\_5 M\_OBW\_Mid\_QPSK\_FullRB



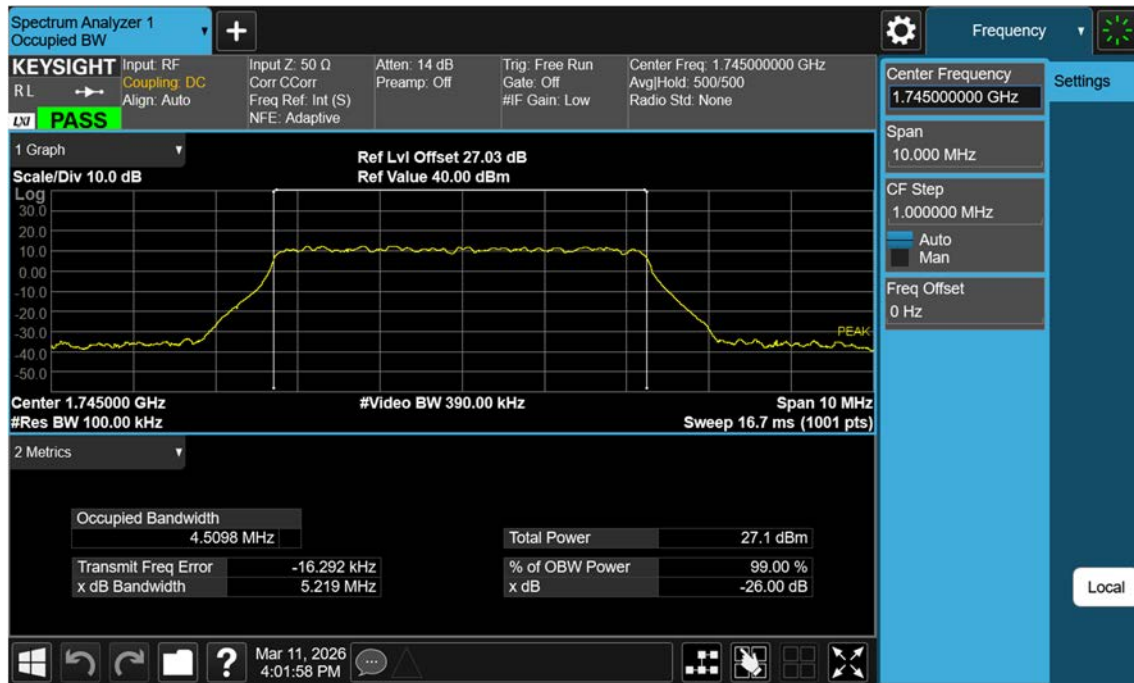
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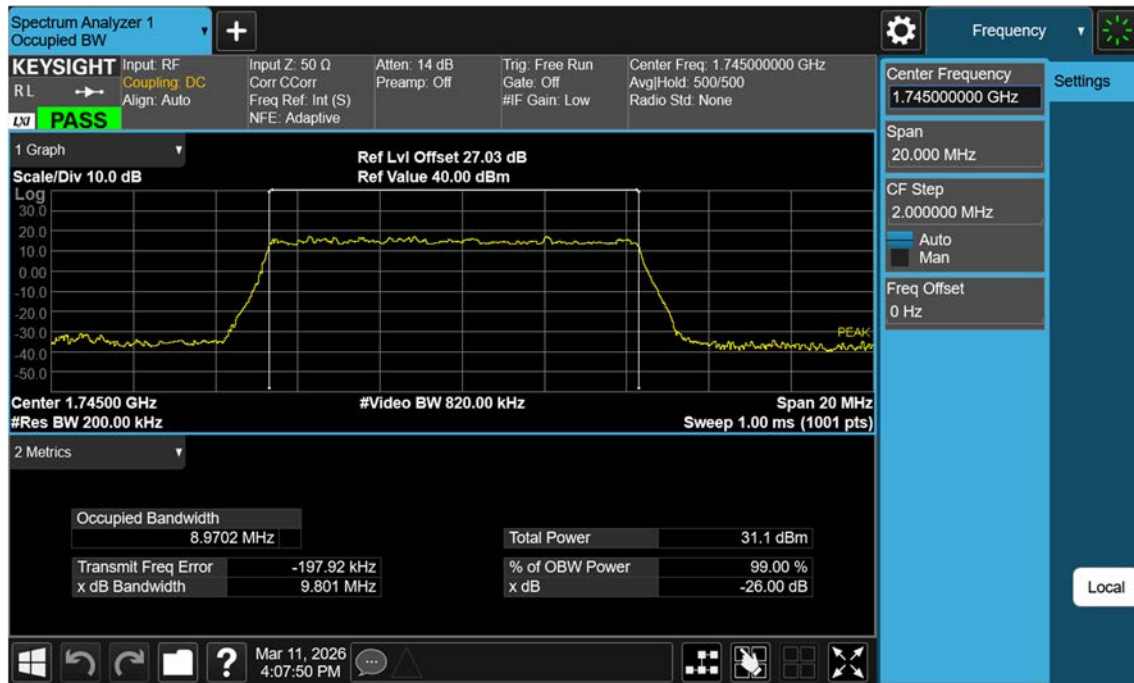
## NR n66\_5 M\_OBW\_Mid\_64QAM\_FullRB



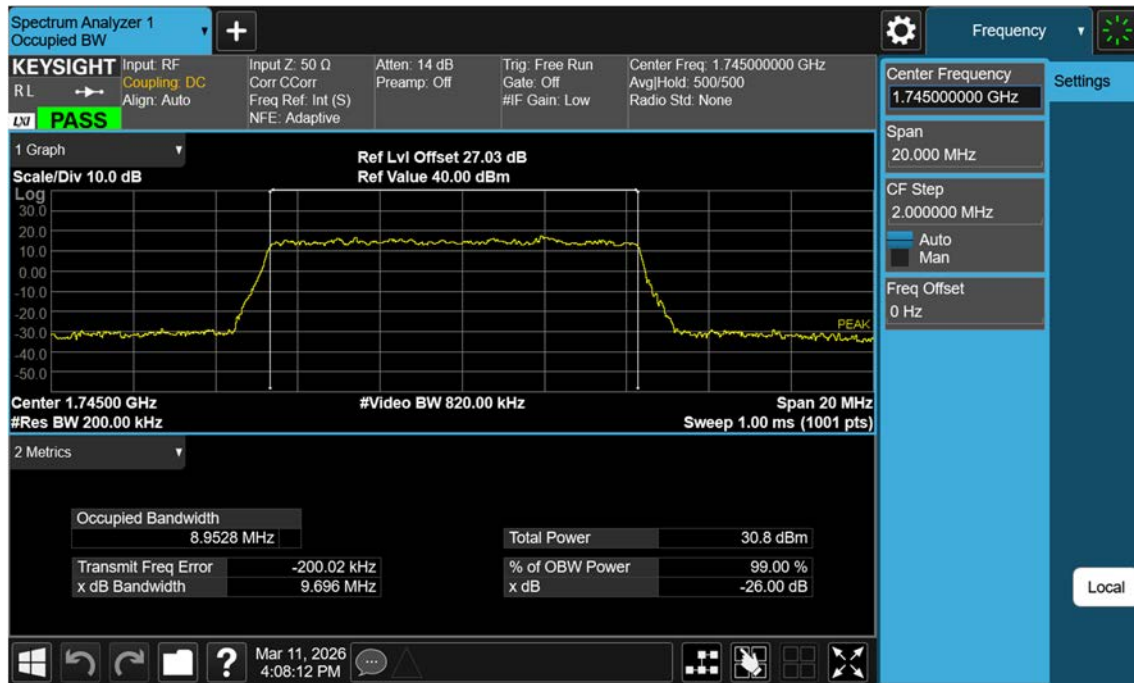
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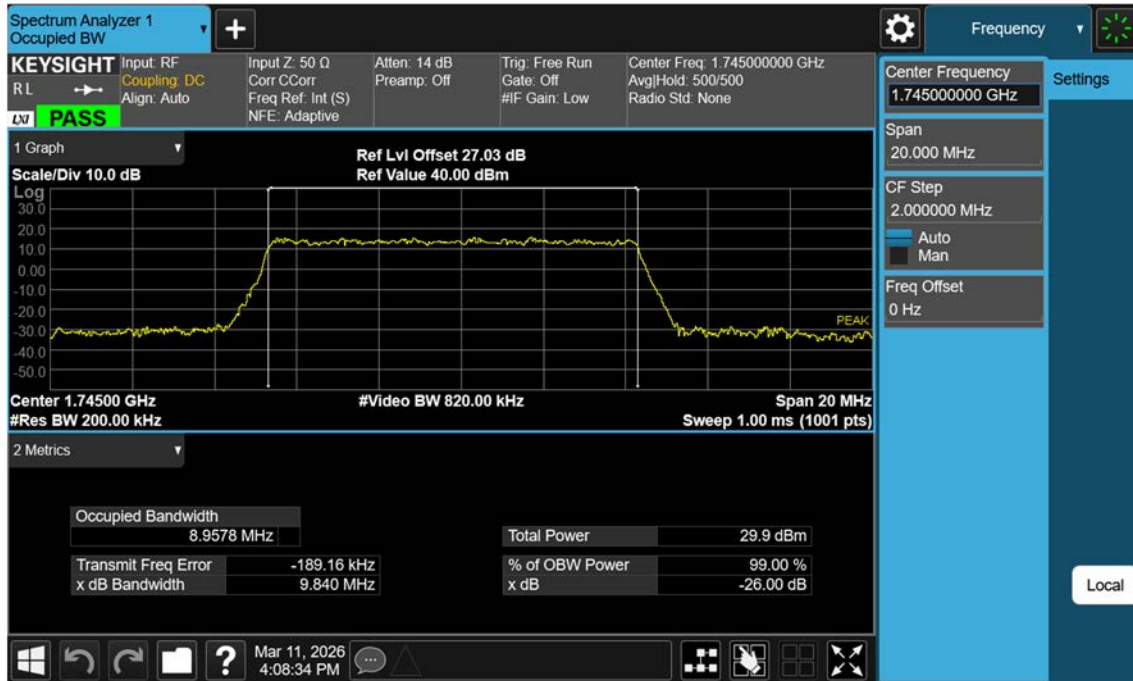
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## NR n66\_10 M\_OBW\_Mid\_QPSK\_FullRB



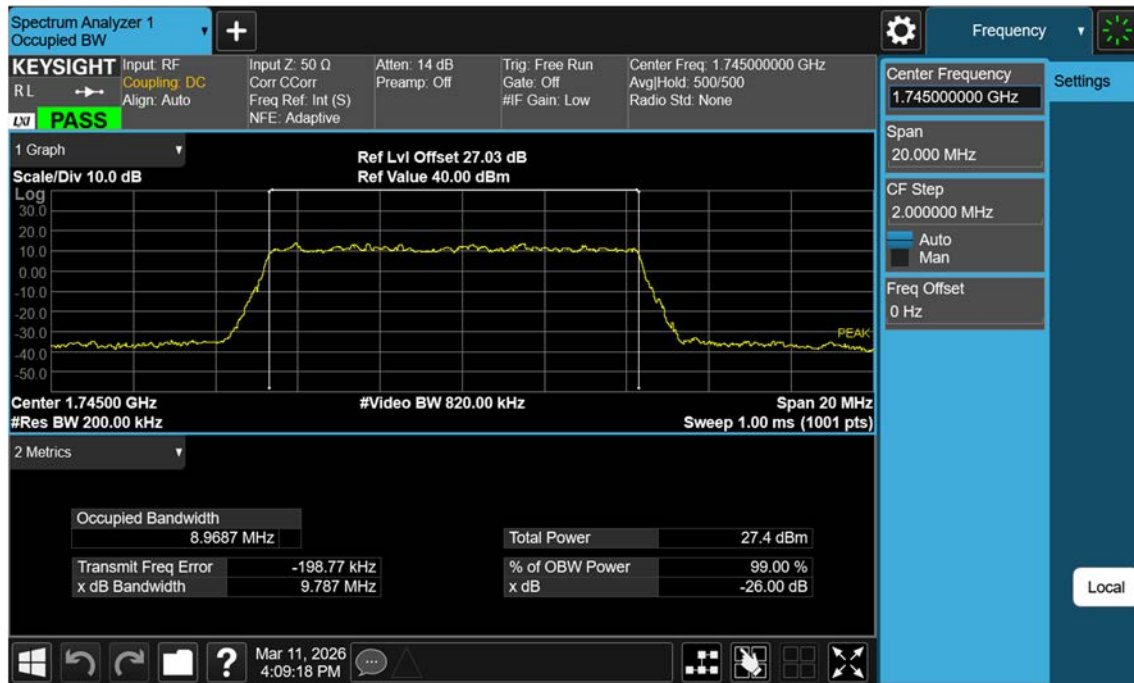
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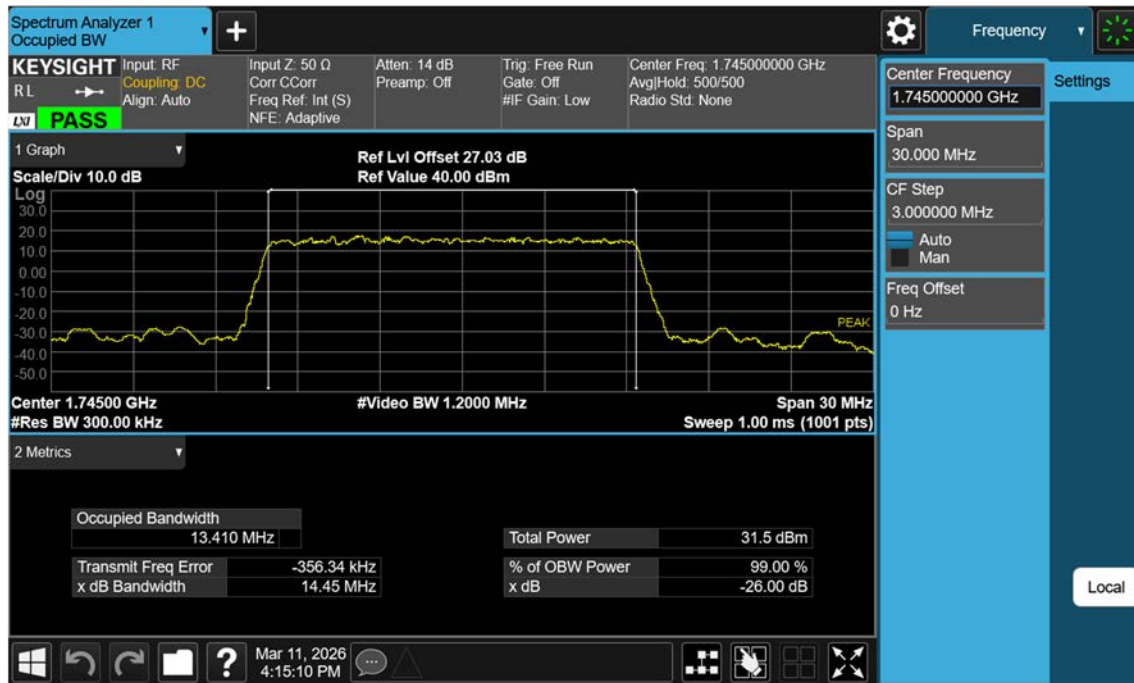
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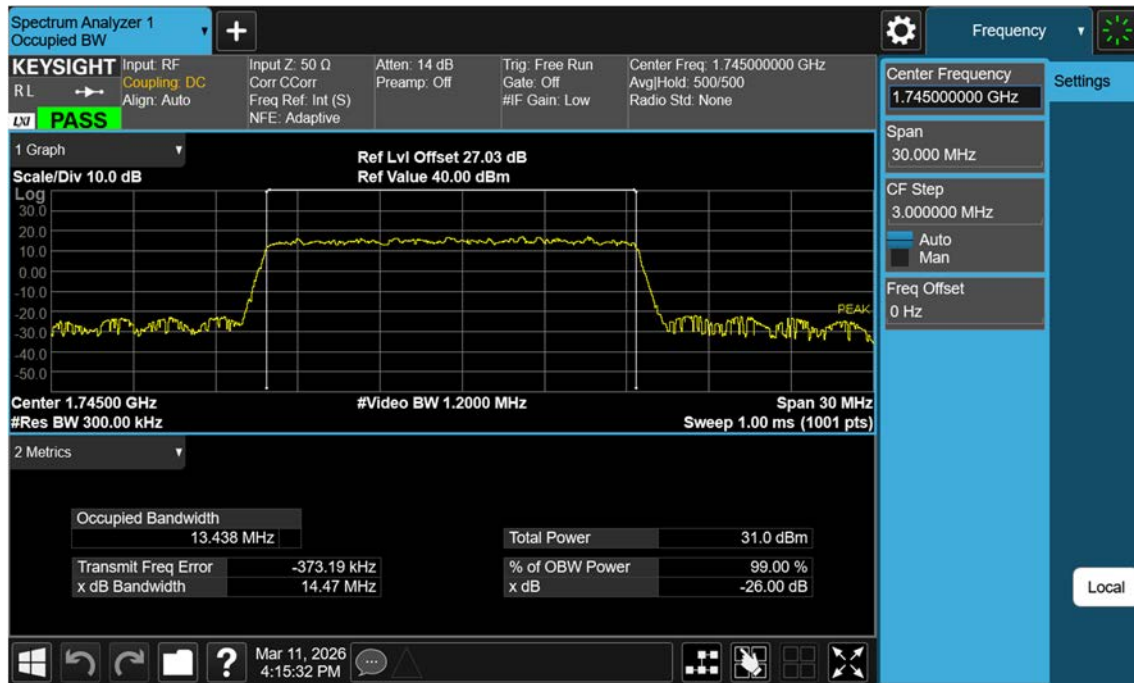
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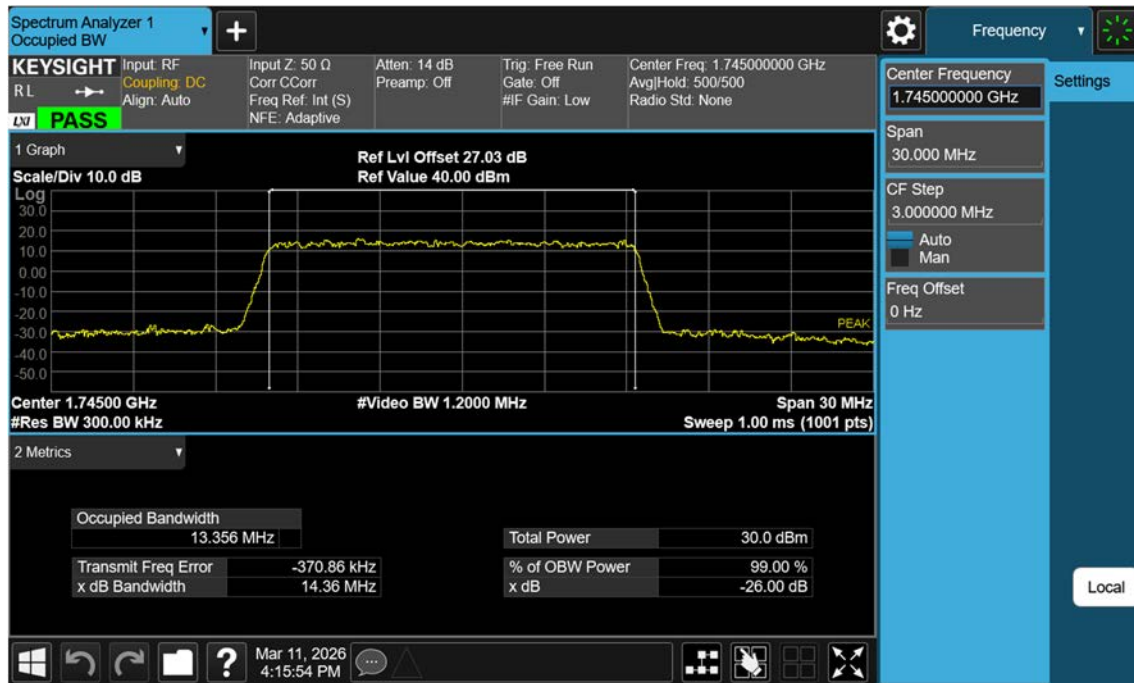
NR n66\_15 M\_OBW\_Mid\_PI/2 BPSK\_FullRB



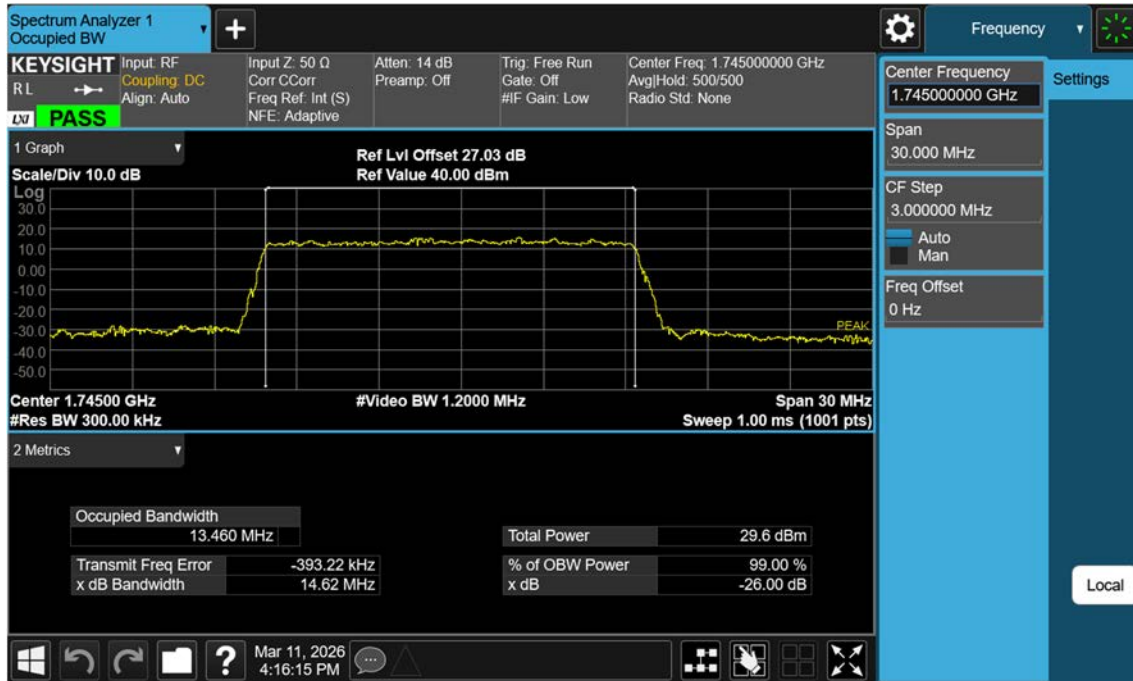
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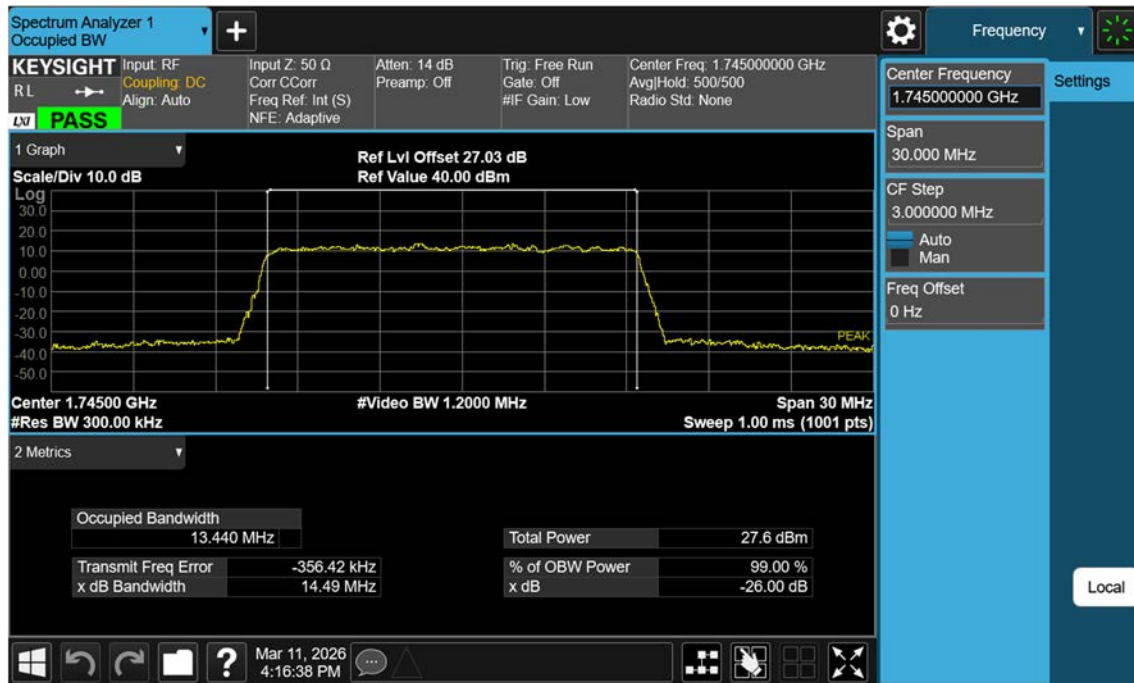
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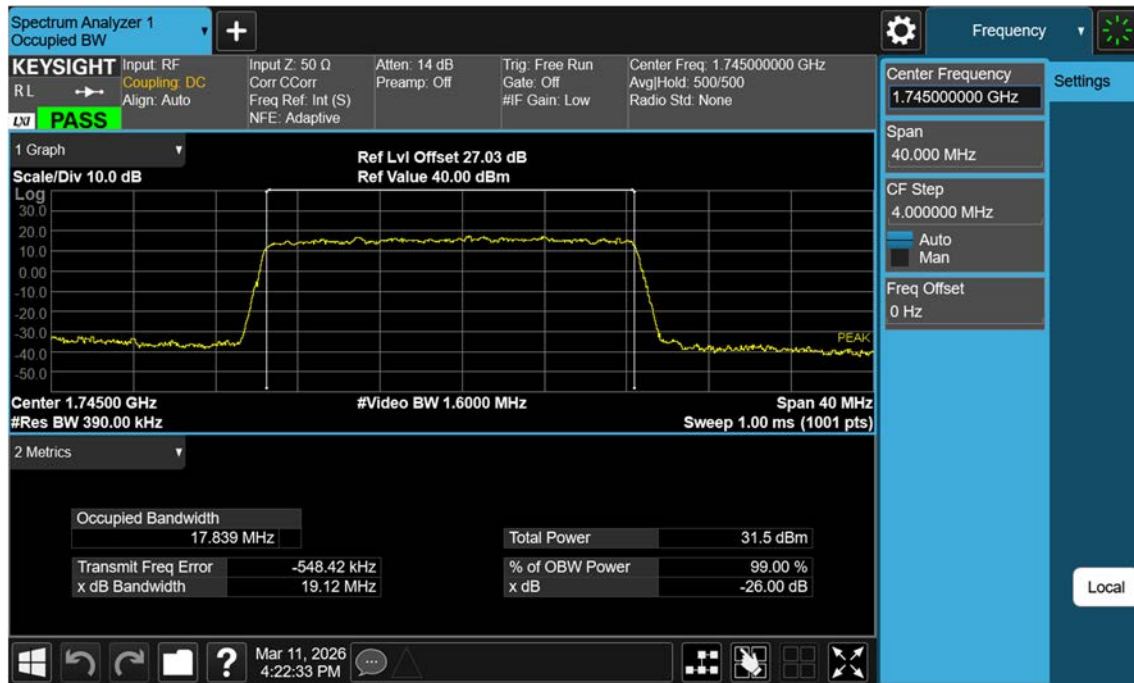
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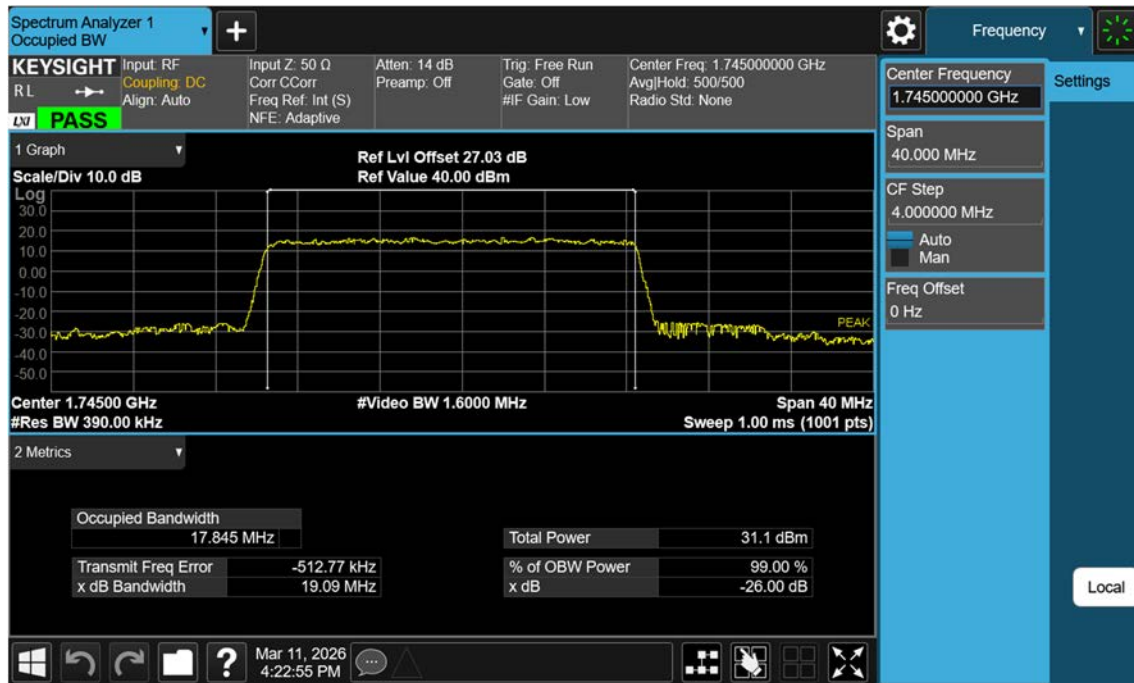
NR n66\_15 M\_OBW\_Mid\_256QAM\_FullRB



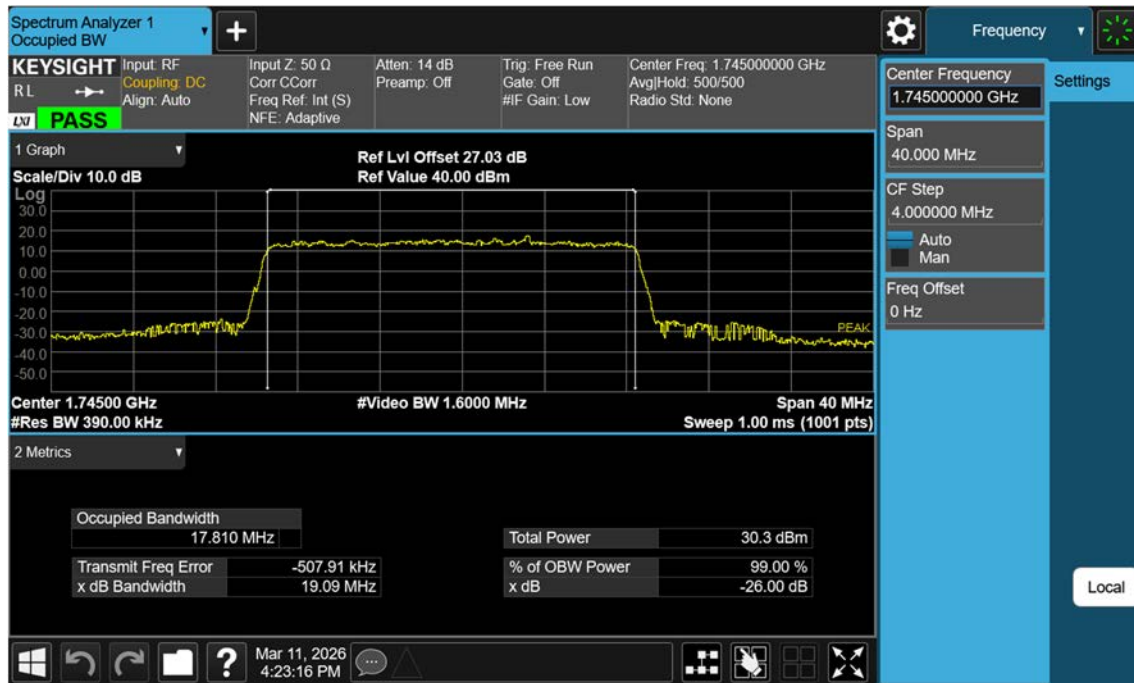
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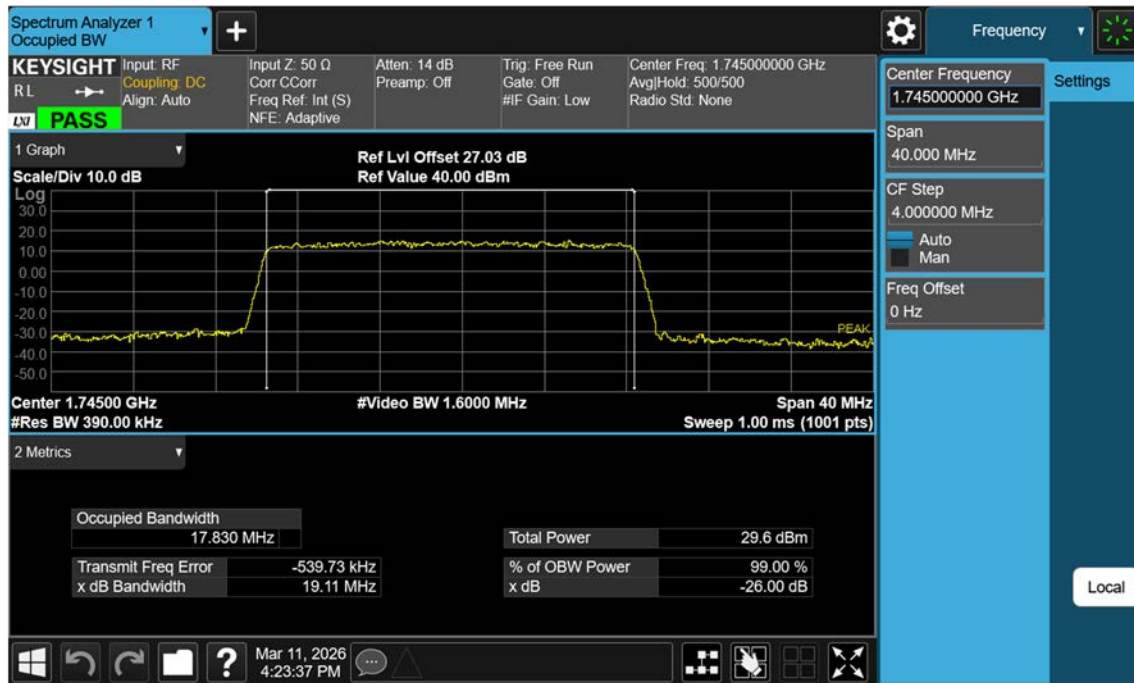
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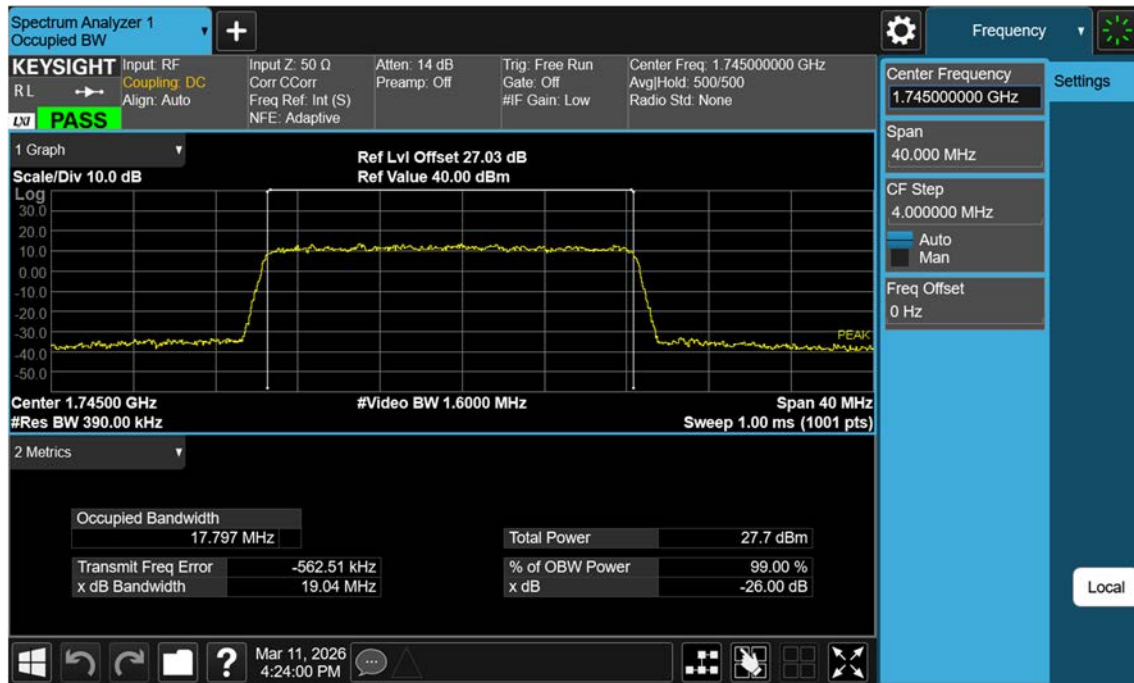
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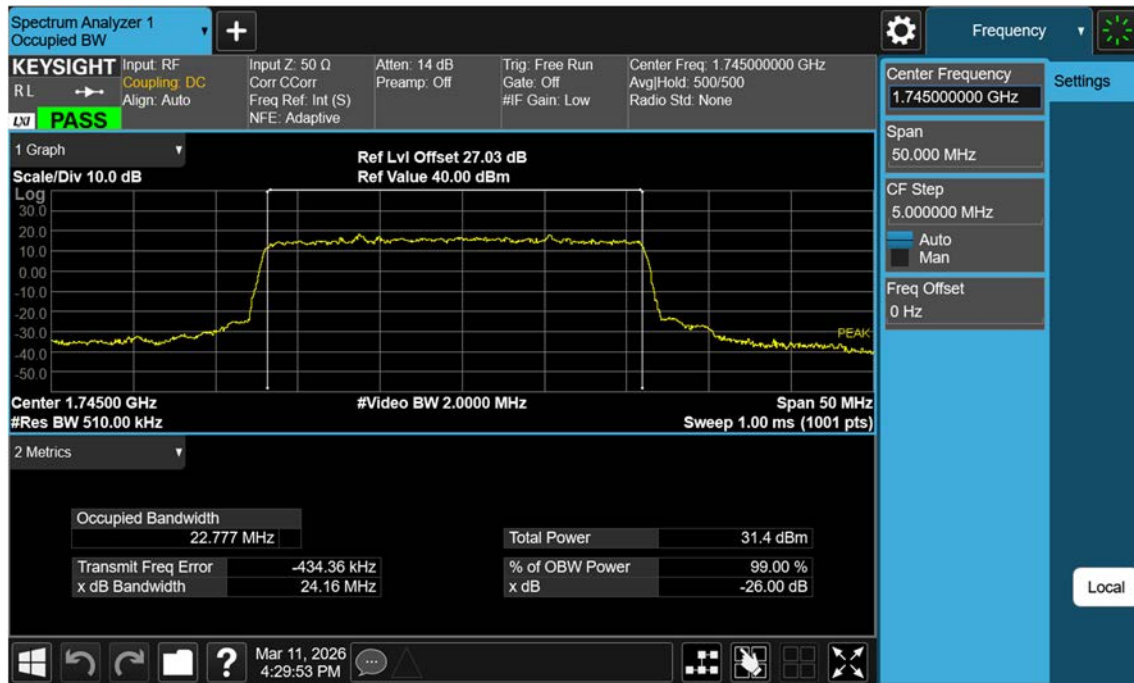
NR n66\_20 M\_OBW\_Mid\_64QAM\_FullRB



NR n66\_20 M\_OBW\_Mid\_256QAM\_FullRB



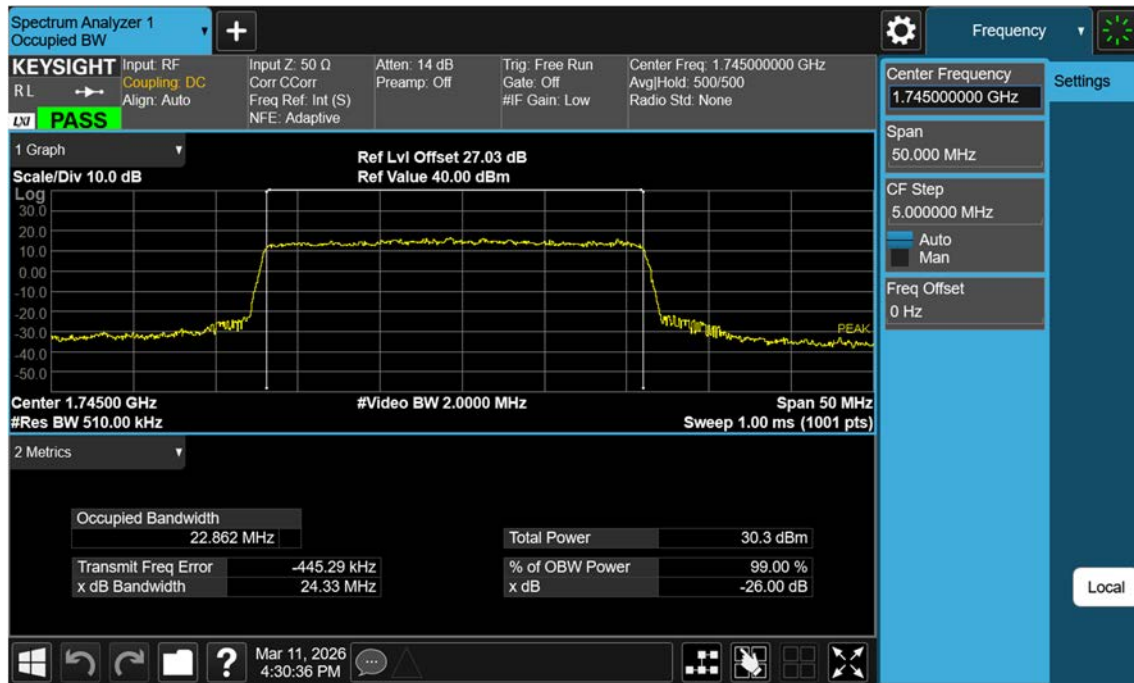
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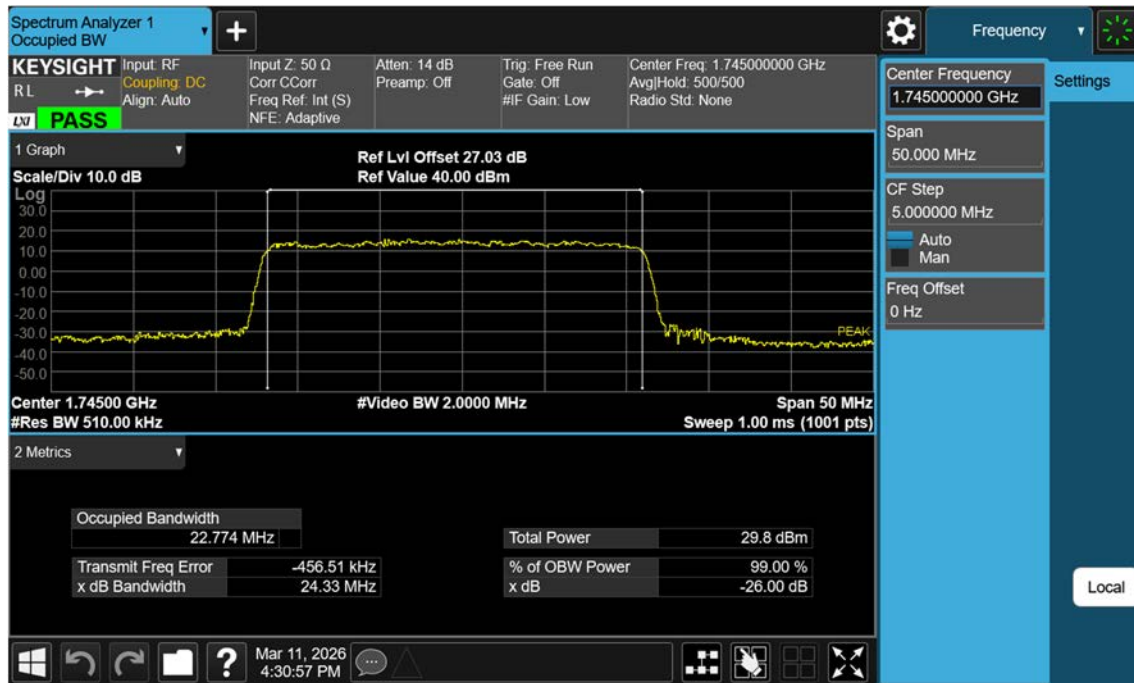
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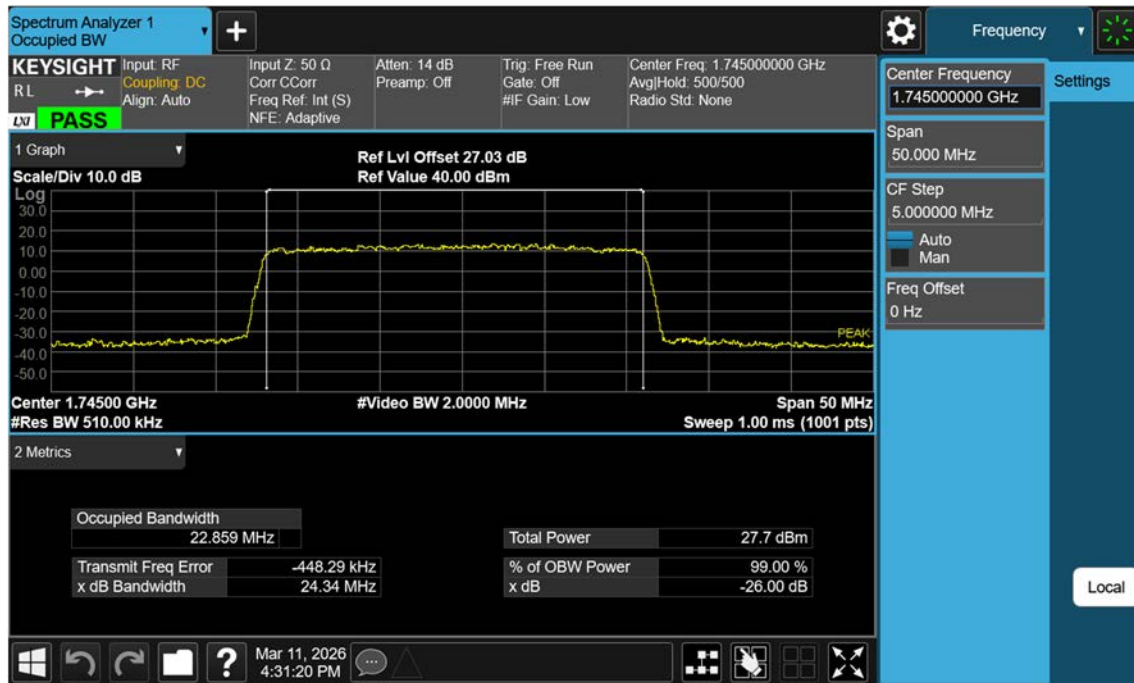
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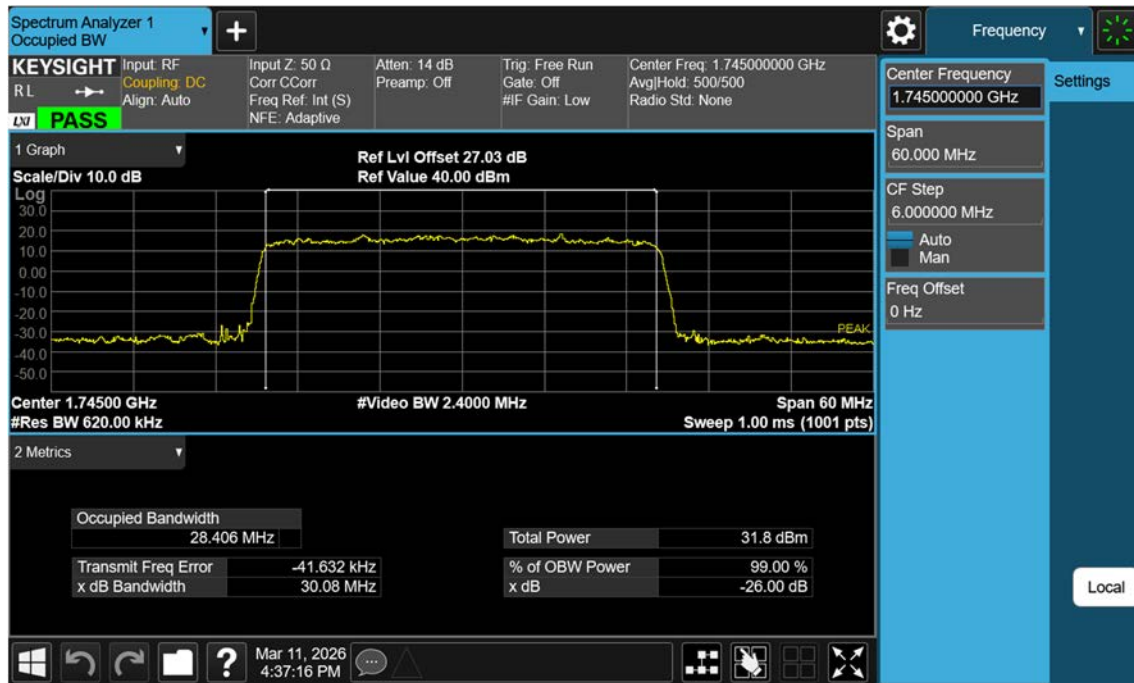
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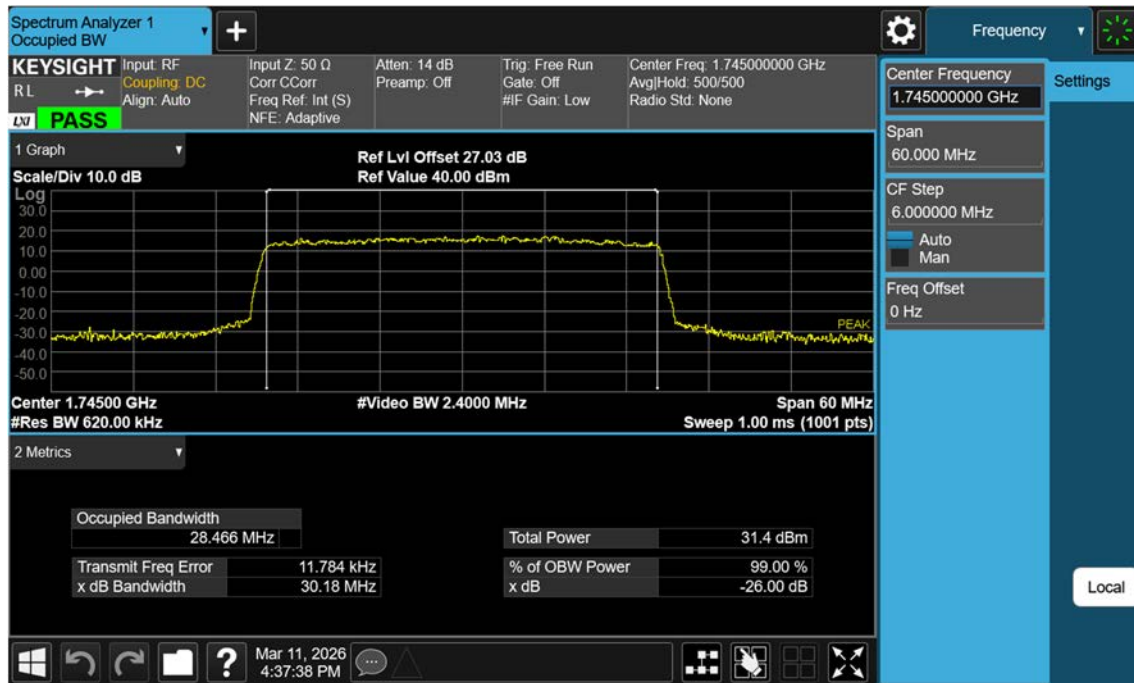
NR n66\_25 M\_OBW\_Mid\_256QAM\_FullRB



## NR n66\_30 M\_OBW\_Mid\_PI/2 BPSK\_FullRB



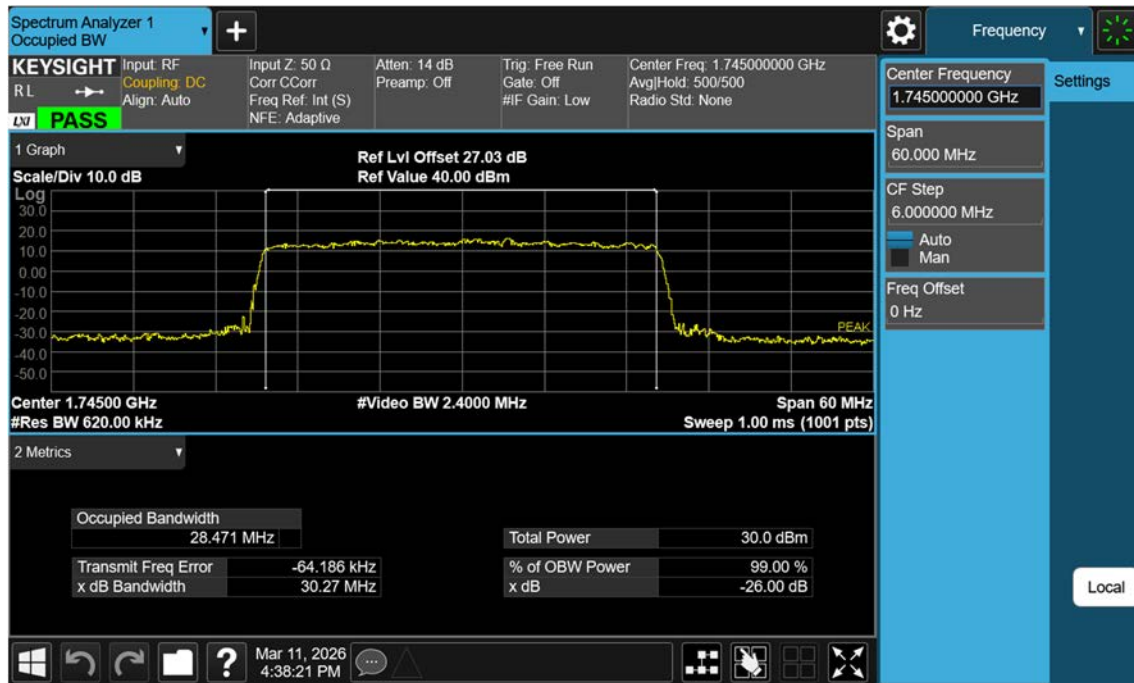
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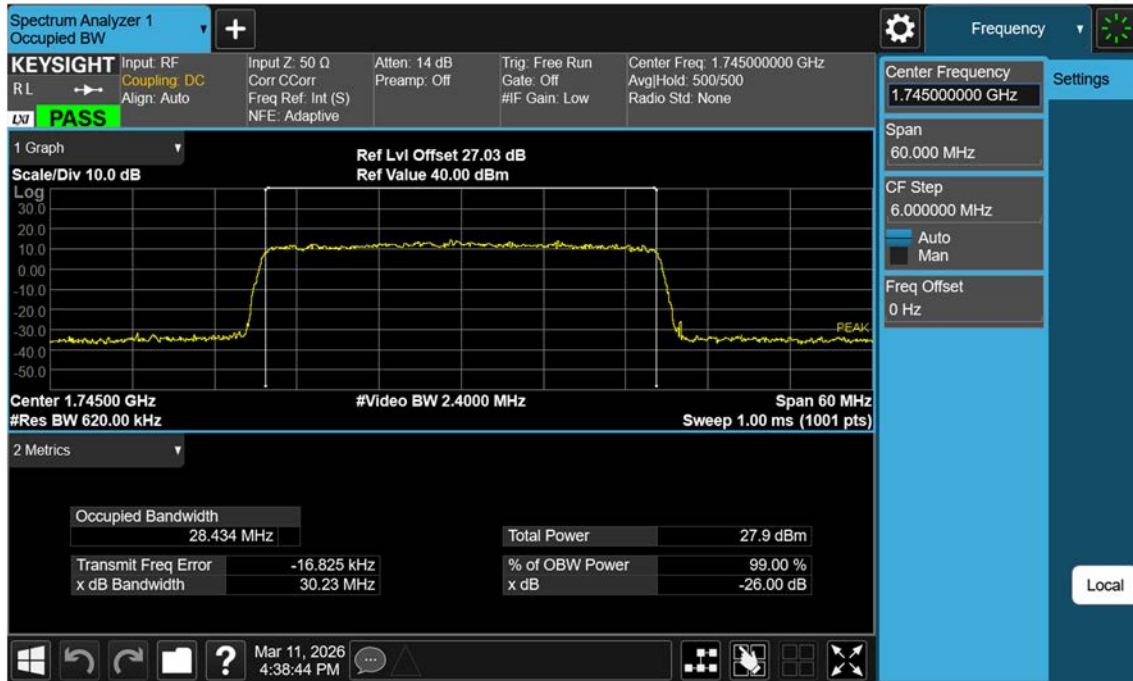
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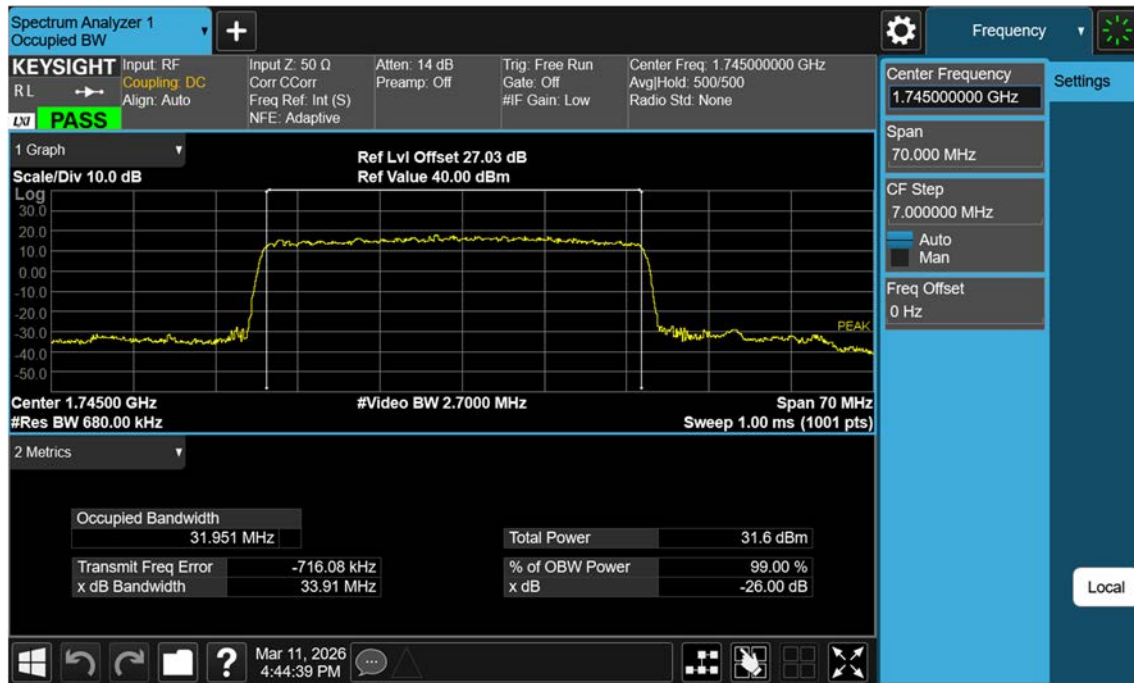
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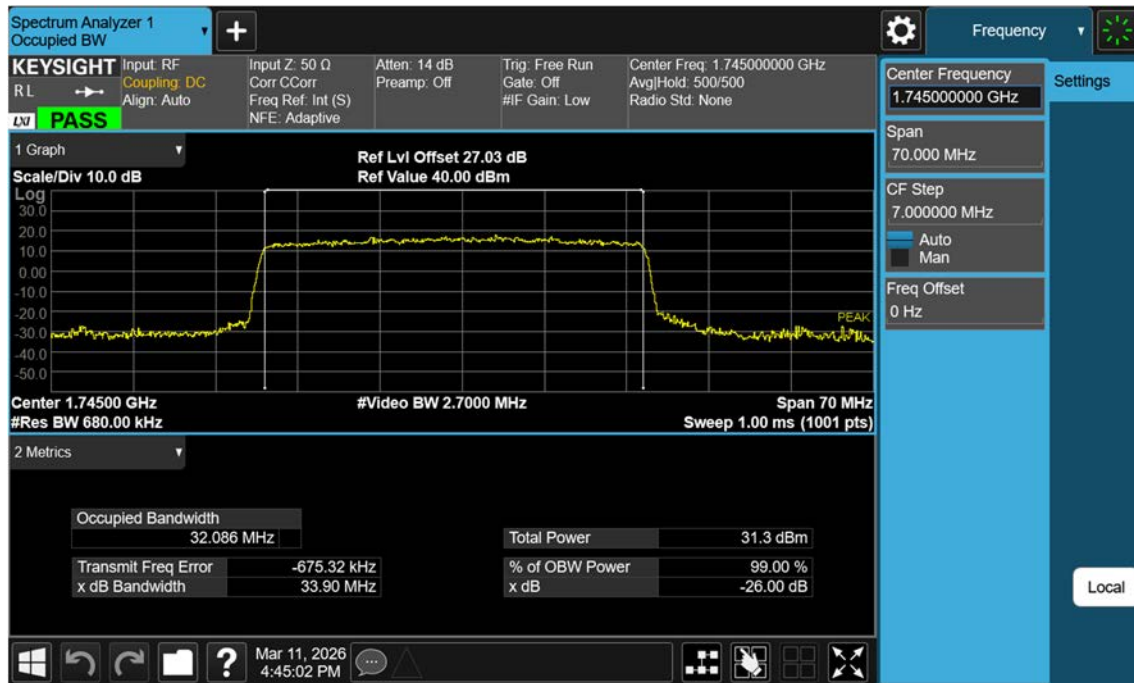
NR n66\_30 M\_OBW\_Mid\_256QAM\_FullRB



NR n66\_35 M\_OBW\_Mid\_PI/2 BPSK\_FullRB



## NR n66\_35 M\_OBW\_Mid\_QPSK\_FullRB



## NR n66\_35 M\_OBW\_Mid\_16QAM\_FullRB

