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# TEST REPORT

FCC Sub6 n48 Test for WM-H801UE
Certification

**APPLICANT**
Woori-Net

**REPORT NO.**
HCT-RF-2211-FC042-R1

**DATE OF ISSUE**
December 14, 2022

**Tested by**
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# TEST REPORT

FCC LTE Test for WM-H801UE

REPORT NO.
HCT-RF-2211-FC042-R1

DATE OF ISSUE
December 14, 2022

Additional Model
-

| | |
|---|---|
| Applicant | **Woori-Net**<br>Woori-net Bldg., 353, Simindaero, Dongan-Gu, Anyang-si, GyeongGi-do, 14057 Korea |
| Eut Type<br>Model Name | 5G CBRS M.2 Module<br>WM-H801UE |
| FCC ID | 2A9FK-WM-H801UE |
| FCC Classification: | Citizens Band End User Devices (CBE) |
| FCC Rule Part(s): | § 96, § 2 |

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

## REVISION HISTORY

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

| Revision No. | Date of Issue | Description |
|---|---|---|
| 0 | December 08, 2022 | Initial Release |
| 1 | December 14, 2022 | - Revised the last column list on page 38 – 49<br>- Added the table on page 7 |

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)

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

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# MEASUREMENT REPORT

## 1. GENERAL INFORMATION

| | |
|---|---|
| Applicant Name: | Woori-Net |
| Address: | Woori-net Bldg., 353, Simindaero, Dongan-Gu, Anyang-si, GyeongGi-do, 14057 Korea |
| FCC ID: | 2A9FK-WM-H801UE |
| Application Type: | Certification |
| FCC Classification: | Citizens Band End User Devices (CBE) |
| FCC Rule(s): | § 96, § 2 |
| EUT Type: | 5G CBRS M.2 Module |
| Model(s): | WM-H801UE |
| **SCS(kHz):** | 30 |
| **Bandwidth(MHz):** | 10, 20, 30, 40 |
| **Modulation:** | DFT-S-OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM<br>CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM |
| **Tx Frequency:** | 3555.00 – 3694.98 : (Sub6 n48(10 MHz))<br>3560.01 – 3690.00 : (Sub6 n48(20 MHz))<br>3565.02 – 3684.99 : (Sub6 n48(30 MHz))<br>3570.00 – 3679.98 : (Sub6 n48(40 MHz)) |
| **Date(s) of Tests:** | October 17, 2022~ November 25, 2022 |
| **Serial number:** | WM-H801UE-01 |
| **Antenna Port** | Ant Port 0: TRX<br>Ant Port 1: RX<br>Ant Port 2: TRX<br>Ant Port 3: RX |
| **Antenna Configuration** | SISO: Ant0, Ant2<br>MIMO: Ant0+Ant2 |
| **Waveform:** | SISO: CP-OFDM, DFT-S-OFDM<br>MIMO: CP-OFDM |
| **Architecture** | Only SA (NSA not supported) |

## 1.1. MAXIMUM OUTPUT POWER

**MAXIMUM OUTPUT POWER (ANT 2)**

| Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | EIRP | |
|---|---|---|---|---|---|
| | | | | Max. Power (W/10 MHz) | Max. Power (dBm/10 MHz) |
| Sub6 n48 (10) | 3555.00 – 3694.98 | 8M63G7D | PI/2 BPSK | 0.145 | 21.60 |
| | | 8M64G7D | QPSK | 0.140 | 21.47 |
| | | 8M67W7D | 16QAM | 0.110 | 20.40 |
| | | 8M66W7D | 64QAM | 0.082 | 19.12 |
| | | 8M65W7D | 256QAM | 0.049 | 16.94 |
| Sub6 n48 (20) | 3560.01 – 3690.00 | 17M9G7D | PI/2 BPSK | 0.146 | 21.64 |
| | | 18M0G7D | QPSK | 0.145 | 21.60 |
| | | 17M9W7D | 16QAM | 0.115 | 20.59 |
| | | 17M9W7D | 64QAM | 0.081 | 19.10 |
| | | 18M0W7D | 256QAM | 0.049 | 16.92 |
| Sub6 n48 (30) | 3565.02 – 3684.99 | 26M9G7D | PI/2 BPSK | 0.149 | 21.72 |
| | | 26M9G7D | QPSK | 0.143 | 21.56 |
| | | 26M9W7D | 16QAM | 0.114 | 20.57 |
| | | 26M9W7D | 64QAM | 0.080 | 19.02 |
| | | 27M0W7D | 256QAM | 0.049 | 16.94 |
| Sub6 n48 (40) | 3570.00 – 3679.98 | 35M9G7D | PI/2 BPSK | 0.156 | 21.92 |
| | | 35M9G7D | QPSK | 0.154 | 21.87 |
| | | 35M8W7D | 16QAM | 0.119 | 20.77 |
| | | 35M9W7D | 64QAM | 0.087 | 19.39 |
| | | 35M8W7D | 256QAM | 0.052 | 17.12 |

**MAXIMUM OUTPUT POWER (ANT 0)**

| Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | EIRP | |
|---|---|---|---|---|---|
| | | | | Max. Power (W/10 MHz) | Max. Power (dBm/10 MHz) |
| Sub6 n48 (10) | 3555.00 – 3694.98 | 8M62G7D | PI/2 BPSK | 0.117 | 20.68 |
| | | 8M66G7D | QPSK | 0.117 | 20.67 |
| | | 8M64W7D | 16QAM | 0.091 | 19.60 |
| | | 8M63W7D | 64QAM | 0.066 | 18.20 |
| | | 8M63W7D | 256QAM | 0.039 | 15.89 |
| Sub6 n48 (20) | 3560.01 – 3690.00 | 17M9G7D | PI/2 BPSK | 0.127 | 21.04 |
| | | 17M9G7D | QPSK | 0.126 | 21.02 |
| | | 18M0W7D | 16QAM | 0.098 | 19.93 |
| | | 17M9W7D | 64QAM | 0.074 | 18.67 |
| | | 18M0W7D | 256QAM | 0.044 | 16.42 |
| Sub6 n48 (30) | 3565.02 – 3684.99 | 26M8G7D | PI/2 BPSK | 0.129 | 21.10 |
| | | 26M9G7D | QPSK | 0.128 | 21.06 |
| | | 26M9W7D | 16QAM | 0.100 | 20.00 |
| | | 27M0W7D | 64QAM | 0.072 | 18.58 |
| | | 26M9W7D | 256QAM | 0.043 | 16.35 |
| Sub6 n48 (40) | 3570.00 – 3679.98 | 36M8G7D | PI/2 BPSK | 0.124 | 20.92 |
| | | 36M8G7D | QPSK | 0.121 | 20.81 |
| | | 35M8W7D | 16QAM | 0.093 | 19.67 |
| | | 35M7W7D | 64QAM | 0.067 | 18.23 |
| | | 36M9W7D | 256QAM | 0.041 | 16.13 |

**MAXIMUM OUTPUT POWER (MIMO)**

| Mode (MHz) | Tx Frequency (MHz) | Modulation | EIRP | |
|---|---|---|---|---|
| | | | Max. Power (W/10 MHz) | Max. Power (dBm/10 MHz) |
| Sub6 n48 (10) | 3555.00 – 3694.98 | QPSK | 0.140 | 21.45 |
| | | 16QAM | 0.109 | 20.39 |
| | | 64QAM | 0.081 | 19.08 |
| | | 256QAM | 0.045 | 16.57 |
| Sub6 n48 (20) | 3560.01 – 3690.00 | QPSK | 0.144 | 21.57 |
| | | 16QAM | 0.112 | 20.51 |
| | | 64QAM | 0.081 | 19.07 |
| | | 256QAM | 0.049 | 16.89 |
| Sub6 n48 (30) | 3565.02 – 3684.99 | QPSK | 0.137 | 21.36 |
| | | 16QAM | 0.113 | 20.54 |
| | | 64QAM | 0.079 | 18.99 |
| | | 256QAM | 0.044 | 16.42 |
| Sub6 n48 (40) | 3570.00 – 3679.98 | QPSK | 0.143 | 21.56 |
| | | 16QAM | 0.119 | 20.75 |
| | | 64QAM | 0.084 | 19.25 |
| | | 256QAM | 0.048 | 16.79 |

# 2. INTRODUCTION

## 2.1. DESCRIPTION OF EUT

The EUT was a 5G CBRS M.2 Module with Sub6.

## 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

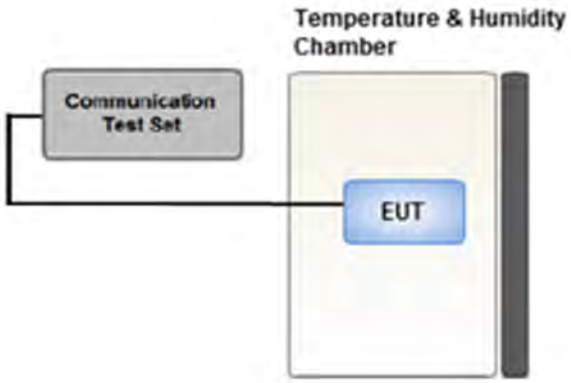
The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.**

# 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<br>- KDB 940660 D01 v01 |
| Channel Edge | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7<br>- KDB 940660 D01 v01 |
| Spurious and Harmonic Emissions at Antenna Terminal | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7<br>- KDB 940660 D01 v01 |
| Conducted Output Power | - KDB 971168 D01 v03r01 – Section 5.2 |
| Peak- to- Average Ratio | - KDB 971168 D01 v03r01 – Section 5.7<br>- ANSI C63.26-2015 – Section 5.2.3.4<br>- KDB 940660 D01 v01 |
| Frequency stability | - ANSI C63.26-2015 – Section 5.6<br>- KDB 940660 D01 v01 |
| Effective Radiated Power/ Effective Isotropic Radiated Power | - KDB 971168 D01 v03r01 – Section 5.2 & 5.8<br>- ANSI/TIA-603-E-2016 – Section 2.2.17<br>- KDB 940660 D01 v01 |
| Radiated Spurious and Harmonic Emissions | - KDB 971168 D01 v03r01 – Section 6.2<br>- ANSI/TIA-603-E-2016 – Section 2.2.12<br>- KDB 940660 D01 v01 |
| End User Device Additional Requirement (CBSD Protocol) | - KDB 940660 D01 v01<br>- WINNF-18-IN-00178 v1.0.0.00 |

## 3.2. CONDUCTED OUTPUT POWER




Test Setup

**Test Overview**

When an average power meter is used to perform RF output power measurements, the fundamental condition that measurements be performed only over durations of active transmissions at maximum output power level applies.

Conducted Output Power was tested in accordance with KDB971168 D01 Power Meas License Digital Systems v03r01, Section 5.2.

## 3.3. 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 in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17.

**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 ≥ 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 set equal to 10 MHz.
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 1GHz, 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;

   $$P_{d(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dB)}$$

   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.

## 3.4. RADIATED SPURIOUS EMISSIONS

**Test Overview**

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA-603-E-2016.

**Test Settings**

1. RBW = 100 kHz for emissions below 1 GHz and NormalHz for emissions above 1 GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to $10^{th}$ 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;

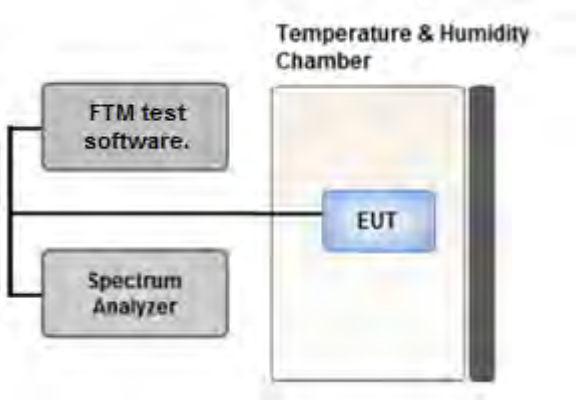
$$Result_{(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

$$EIRP_{(dBm)} = ERP_{(dBm)} + 2.15$$

## 3.5. PEAK- TO- AVERAGE RATIO




Test setup

① CCDF Procedure for PAPR

Test Settings

1. Set resolution/measurement bandwidth ≥ 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 %.

② Alternate Procedure for PAPR

Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as $P_{Pk}$. Use one of the applicable procedures presented 5.2(ANSI C63.26-2015) to measure the total average power and record as $P_{Avg}$. Determine the P.A.R. from:

$$P.A.R_{(dB)} = P_{Pk\,(dBm)} - P_{Avg\,(dBm)}$$ ($P_{Avg}$ = Average Power + Duty cycle Factor)

**Test Settings (Peak Power)**

The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

1. Set the RBW ≥ OBW.
2. Set VBW ≥ 3 × RBW.
3. Set span ≥ 2 × OBW.
4. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period).
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the peak amplitude level.

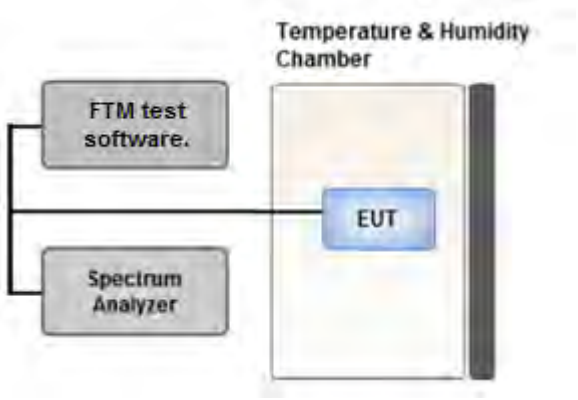
**Test Settings (Average Power)**

1. Set span to 2 × to 3 × the OBW.
2. Set RBW ≥ OBW.
3. Set VBW ≥ 3 × RBW.
4. Set number of measurement points in sweep ≥ 2 × span / RBW.
5. Sweep time:

   Set ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep

   (automation-compatible) measurement. The transmission period is the (on + off) time.
6. Detector = power averaging (rms).
7. Set sweep trigger to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. (To accurately determine the average power over the on and off period of the transmitter, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.)
9. Use the peak marker function to determine the maximum amplitude level.
10. Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25%.

## 3.6. OCCUPIED BANDWIDTH




**Test setup**

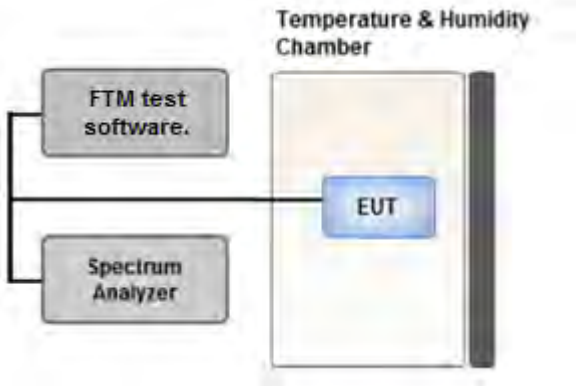
The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

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 ≥ 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

## 3.7. 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 ≥ 3 MHz
3. Detector = RMS
4. Trace Mode = Average
5. Sweep time = auto
6. Number of points in sweep ≥ 2 x Span / RBW

**Test Notes**

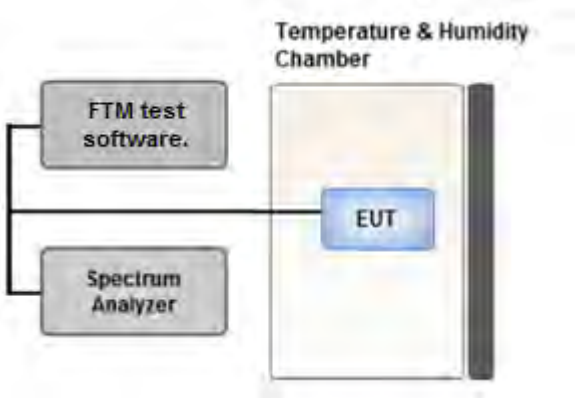
1. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter

   Result(dBm) = Reading + Factor

2. Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 26.252 |
| 1 – 5 | 28.523 |
| 5 – 10 | 30.324 |
| 10 – 15 | 31.523 |
| 15 – 20 | 32.523 |
| Above 20 | 34.042 |

## 3.8. CHANNEL EDGE




**Test setup**

**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. Within 1 MHz of the channel edge the RBW should be 2% of EBW, then 1 MHz after that.
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

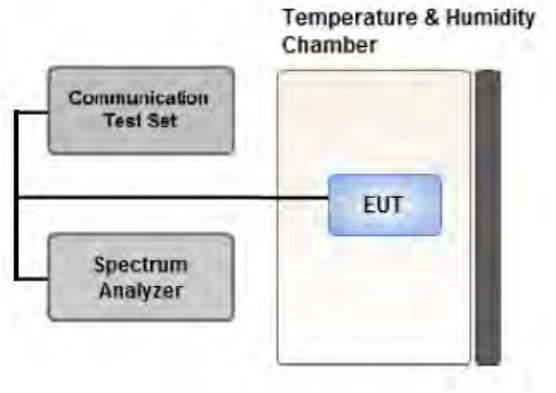
**Test Notes**

The conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed －13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any emission shall not exceed －25 dBm/MHz.

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/Mhz

Where Margin < 1 dB the emission level is either corrected by 10 log(1 MHz/ 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.

## 3.9. Adjacent Channel Leakage Ratio




**Test setup**

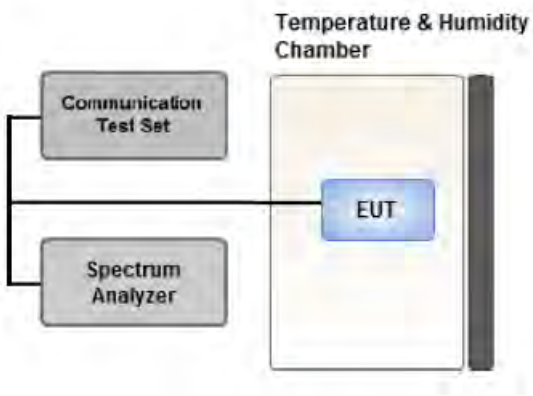
**Test Settings**

1. Use ACP measurement function of Spectrum analyzer to measure adjacent channel leakage ratio
2. Integ BW = Assigned channel bandwidth
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = 1 s
9. The trace was allowed to stabilize

**Test Notes**

the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

## 3.10. 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:

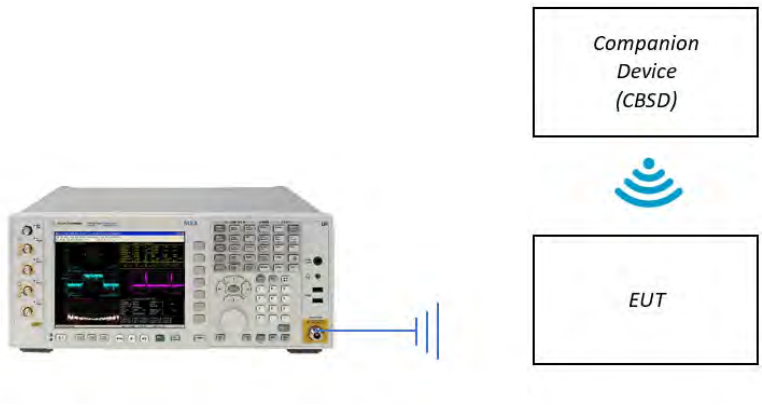
   .- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.

   .- 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.

## 3.11. End User Device Additional Requirement (CBSD Protocol)




**Test setup**

**Test Overview**

End user device additional requirements (CBSD Protocol) are tested per the test procedures listed below. During testing, the EUT is connected to a certified CBSD (FCC ID: PIDAS2900) as a companion device to show compliance with Part 96.47.

End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.

**Test Channel & Power**

1. Setup companion device with 3570 MHz - 3610 MHz(BW 40MHz) and power level 15 dBm
2. Setup companion device with 3600 MHz - 3640 MHz(BW 40MHz) and power level 5 dBm

**Test Procedure**

1. Enable AP service from companion device.
2. EUT is connected to a companion device.
3. Check EUT Tx frequency and power.
4. Disable AP service from companion device and check EUT stop transmission within 10 s.

## 3.12. WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM(SISO), CP-OFDM(MIMO))
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- In the case of MIMO radiated spurious emissions, all bandwidth of operation were investigated and the worst case bandwidth results are reported.
  (Worst case : 20 MHz)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.

[SISO Worst case ]

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

[MIMO Worst case ]

| Test Description | Modulation | RB size | RB offset | Axis |
|---|---|---|---|---|
| Effective Isotropic Radiated Power | QPSK, 16QAM, 64QAM, 256QAM | See Section 8.1 | | Y |
| Radiated Spurious and Harmonic Emissions | QPSK | See Section 8.2 | | Y |

## 3.13. WORST CASE(CONDUCTED TEST)

- SISO (ANT 2, ANT 0) and MIMO operations were tested, and the worst case results were reported.
(Worst case: SISO(ANT 2, ANT 0))
- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM(SISO))
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
(Worst case: PI/2 BPSK)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.

[ Worst case ]

| Test Description | Modulation | Bandwidth (MHz) | Frequency | RB size | RB offset |
|---|---|---|---|---|---|
| Occupied Bandwidth, Peak-To-Average Radio | PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM | 10, 20, 30, 40 | Mid | Full RB | 0 |
| Channel Edge | PI/2 BPSK | 10 | Low | 1 | 0 |
| | | | High | 1 | 23 |
| | | 20 | Low | 1 | 0 |
| | | | High | 1 | 50 |
| | | 30 | Low | 1 | 0 |
| | | | High | 1 | 77 |
| | | 40 | Low | 1 | 0 |
| | | | High | 1 | 105 |
| | | 10, 20, 30, 40 | Low, Mid, High | Full RB | 0 |
| Spurious and Harmonic Emissions at Antenna Terminal | PI/2 BPSK | 10, 20, 30, 40 | Low, Mid, High | 1 | 1 |
| Adjacent Channel Leakage Ratio | PI/2 BPSK | 10, 20, 30, 40 | Low, Mid, High | Full RB | 0 |

## 4. LIST OF TEST EQUIPMENT

| Equipment | Model | Manufacture | Serial No. | Due to Calibration | Calibration Interval |
|---|---|---|---|---|---|
| Precision Dipole Antenna | UHAP | Schwarzbeck | 01273 | 03/27/2024 | Biennial |
| Precision Dipole Antenna | UHAP | Schwarzbeck | 01274 | 03/27/2024 | Biennial |
| Horn Antenna(1~18 GHz) | BBHA 9120D | Schwarzbeck | 02289 | 03/21/2024 | Biennial |
| Horn Antenna(1~18 GHz) | BBHA 9120D | Schwarzbeck | 9120D-1299 | 05/04/2023 | Biennial |
| Horn Antenna(15~40 GHz) | BBHA 9170 | Schwarzbeck | BBHA9170342 | 09/29/2024 | Biennial |
| Horn Antenna(15~40 GHz) | BBHA 9170 | Schwarzbeck | BBHA9170124 | 04/12/2023 | Biennial |
| Loop Antenna(9 kHz~30 MHz) | FMZB1513 | Rohde & Schwarz | 1513-175 | 06/04/2023 | Biennial |
| Bilog Antenna | VULB9160 | Schwarzbeck | 3150 | 03/03/2023 | Biennial |
| Hybrid Antenna | VULB9160 | Schwarzbeck | 760 | 02/22/2023 | Biennial |
| High Pass Filter | WHKX10-900-1000-15000-40SS | Wainwright Instruments | 15 | 05/18/2023 | Annual |
| High Pass Filter | WHKX10-2700-3000-18000-40SS | Wainwright Instruments | 145 | 05/18/2023 | Annual |
| High Pass Filter | WHNX6-4740-6000-26500-40CC | Wainwright Instruments | 11 | 05/18/2023 | Annual |
| LOW NOISE AMP (100 MHz ~ 18 GHz) | CBLU1183540B-01 | CERNEX | 26822 | 05/18/2023 | Annual |
| Power Amplifier | CBL18265035 | CERNEX | 22966 | 12/01/2023 | Annual |
| Power Amplifier | CBL26405040 | CERNEX | 25956 | 03/11/2023 | Annual |
| DC Power Supply | E3632A | Hewlett Packard | MY40004427 | 09/05/2023 | Annual |
| Power Splitter(DC~26.5 GHz) | 11667B | Hewlett Packard | 11275 | 03/11/2023 | Annual |
| Chamber | SU-642 | ESPEC | 93008124 | 03/04/2023 | Annual |
| Signal Analyzer(10 Hz~26.5 GHz) | N9020A | Agilent | MY51110063 | 04/19/2023 | Annual |
| ATTENUATOR(20 dB) | 8493C | Hewlett Packard | 17280 | 05/18/2023 | Annual |
| Spectrum Analyzer(10 Hz~40 GHz) | FSV40 | REOHDE & SCHWARZ | 101436 | 02/25/2023 | Annual |
| Base Station | 8960 (E5515C) | Agilent | MY48360800 | 08/18/2023 | Annual |
| Wideband Radio Communication Tester | MT8821C | Anritsu Corp. | 6262287700 | 05/19/2023 | Annual |
| Wideband Radio Communication Tester | MT8000A | Anritsu Corp. | 6262302511 | 05/18/2023 | Annual |
| SIGNAL GENERATOR (100 kHz~40 GHz) | SMB100A | REOHDE & SCHWARZ | 177633 | 07/05/2023 | Annual |
| Signal Analyzer(5 Hz~40.0 GHz) | N9030B | KEYSIGHT | MY55480167 | 05/30/2023 | Annual |
| 4-Way Divider | ZC4PD-K1844+ | Mini-Circuits | 942907 | 09/27/2023 | Annual |
| FCC LTE Mobile Conducted RF Automation Test Software | - | HCT CO., LTD., | - | - | - |
| Companion device (FCC ID: PIDAS2900) | AirSpeed 2900 | Airspan Networks inc | - | - | - |

Note:
1. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 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 (± dB) |
|---|---|
| Conducted Disturbance (150 kHz ~ 30 MHz) | 2.00 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (9 kHz ~ 30 MHz) | 4.40 (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) | 5.51 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (18 GHz ~ 40 GHz) | 5.92 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (Above 40 GHz) | 5.48 (Confidence level about 95 %, *k*=2) |

## 6. SUMMARY OF TEST RESULTS

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, § 96.41(e) | ■ -13 dBm/Mhz at frequencies within 0-10 MHz of channel edge<br>■ -25 dBm/MHz at frequencies greater than 10 MHz above and below channel edge<br>■ -40 dBm/MHz at frequencies below 3530 MHz and above 3720 MHz | PASS |
| Adjacent Channel Leakage Ratio | § 96.41(e) | At least 30 dB. | PASS |
| Conducted Output Power | § 2.1046 | N/A | PASS |
| Peak- to- Average Ratio | § 96.41(g) | < 13 dB | PASS |
| Frequency stability / variation of ambient temperature | § 2.1055, | Emission must remain in band | PASS |

Note:
1. 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 | § 96.41(b) | 23 dBm/10 MHz | PASS |
| Radiated Spurious and Harmonic Emissions | § 2.1053, § 96.41(e) | -40 dBm/MHz | PASS |
| End User Device Additional Requirements (CBSD Protocol) | § 96.47 | End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation. An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD. | PASS |

**Note:**
1. Radiated tests were tested using 5G Wireless Tester.

## 7. SAMPLE CALCULATION

### 7.1 ERP Sample Calculation

| Ch./ Freq. | | Measured Level(dBm) | Substitute Level(dBm) | Ant. Gain (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 |

ERP = Substitute LEVEL(dBm) + Ant. Gain – 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 Level(dBm) | Substitute Level(dBm) | Ant. Gain (dBi) | C.L | Pol. | EIRP | |
|---|---|---|---|---|---|---|---|---|
| channel | Freq.(MHz) | | | | | | W | dBm |
| 349000 | 1,732.50 | -15.75 | 18.45 | 9.90 | 1.76 | H | 0.456 | 26.59 |

EIRP = Substitute LEVEL(dBm) + Ant. Gain – 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)

**PSK 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

## 8.1. CONDUCTED OUTPUT POWER

CONDUCTED OUTPUT POWER(ANT 2)

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637000 | 641666 | 646332 |
| | | | | | | 3555 MHz | 3624.99 MHz | 3694.98 MHz |
| 10 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 18.84 | 19.87 | 20.61 |
| | | | | 1 | 12 | 18.93 | 19.86 | 20.59 |
| | | | | 1 | 22 | 19.09 | 19.93 | 20.60 |
| | | | | 12 | 0 | 18.45 | 19.45 | 20.18 |
| | | | | 12 | 6 | 19.03 | 19.96 | 20.67 |
| | | | | 12 | 12 | 18.60 | 19.48 | 20.20 |
| | | | | 24 | 0 | 18.55 | 19.45 | 20.20 |
| | | | QPSK | 1 | 1 | 18.83 | 19.86 | 20.61 |
| | | | | 1 | 12 | 18.96 | 19.85 | 20.58 |
| | | | | 1 | 22 | 19.08 | 19.89 | 20.61 |
| | | | | 12 | 0 | 17.95 | 18.97 | 19.66 |
| | | | | 12 | 6 | 19.04 | 19.95 | 20.67 |
| | | | | 12 | 12 | 18.13 | 18.98 | 19.71 |
| | | | | 24 | 0 | 18.07 | 18.95 | 19.68 |
| | | | 16QAM | 1 | 1 | 17.79 | 18.80 | 19.53 |
| | | | 64QAM | 1 | 1 | 16.38 | 17.42 | 18.15 |
| | | | 256QAM | 1 | 1 | 14.20 | 15.20 | 15.93 |
| | | CP | QPSK | 1 | 1 | 17.42 | 18.38 | 19.15 |

Note:

Conducted Output Power are for reporting purposes only.

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637334 | 641666 | 646000 |
| | | | | | | 3560.01 MHz | 3624.99 MHz | 3690 MHz |
| 20 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 19.06 | 20.10 | 20.73 |
| | | | | 1 | 26 | 19.33 | 20.03 | 20.74 |
| | | | | 1 | 49 | 19.65 | 20.07 | 20.69 |
| | | | | 25 | 0 | 18.73 | 19.61 | 20.28 |
| | | | | 25 | 13 | 19.42 | 20.14 | 20.79 |
| | | | | 25 | 26 | 19.07 | 19.63 | 20.27 |
| | | | | 50 | 0 | 18.89 | 19.59 | 20.29 |
| | | | QPSK | 1 | 1 | 19.03 | 20.06 | 20.69 |
| | | | | 1 | 26 | 19.30 | 20.01 | 20.70 |
| | | | | 1 | 49 | 19.63 | 20.06 | 20.70 |
| | | | | 25 | 0 | 18.24 | 19.12 | 19.77 |
| | | | | 25 | 13 | 19.39 | 20.13 | 20.78 |
| | | | | 25 | 26 | 18.56 | 19.12 | 19.77 |
| | | | | 50 | 0 | 18.41 | 19.14 | 19.79 |
| | | | 16QAM | 1 | 1 | 17.99 | 19.00 | 19.65 |
| | | | 64QAM | 1 | 1 | 16.57 | 17.58 | 18.24 |
| | | | 256QAM | 1 | 1 | 14.38 | 15.39 | 16.05 |
| | | CP | QPSK | 1 | 1 | 17.62 | 18.58 | 19.29 |

Note:

Conducted Output Power are for reporting purposes only.

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637668 | 641666 | 645666 |
| | | | | | | 3565.02 MHz | 3624.99 MHz | 3684.99 MHz |
| 30 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 19.24 | 20.32 | 20.83 |
| | | | | 1 | 39 | 19.60 | 20.18 | 20.92 |
| | | | | 1 | 76 | 19.99 | 20.22 | 20.89 |
| | | | | 36 | 0 | 18.95 | 19.82 | 20.34 |
| | | | | 36 | 21 | 19.66 | 20.26 | 20.87 |
| | | | | 36 | 42 | 19.38 | 19.79 | 20.36 |
| | | | | 75 | 0 | 16.69 | 19.71 | 16.86 |
| | | | QPSK | 1 | 1 | 19.23 | 20.18 | 20.75 |
| | | | | 1 | 39 | 19.56 | 20.17 | 20.80 |
| | | | | 1 | 76 | 19.98 | 20.25 | 20.78 |
| | | | | 36 | 0 | 18.46 | 19.25 | 19.85 |
| | | | | 36 | 21 | 19.64 | 20.19 | 20.89 |
| | | | | 36 | 42 | 18.87 | 19.28 | 19.88 |
| | | | | 75 | 0 | 16.68 | 19.23 | 16.86 |
| | | | 16QAM | 1 | 1 | 18.23 | 19.12 | 19.69 |
| | | | 64QAM | 1 | 1 | 16.77 | 17.76 | 18.26 |
| | | | 256QAM | 1 | 1 | 14.58 | 15.56 | 16.10 |
| | | CP | QPSK | 1 | 1 | 17.82 | 18.76 | 19.32 |

Note:

Conducted Output Power are for reporting purposes only.

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 638000 | 641666 | 645332 |
| | | | | | | 3570 MHz | 3624.99 MHz | 3679.98 MHz |
| 40 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 19.20 | 20.25 | 20.60 |
| | | | | 1 | 53 | 19.84 | 20.21 | 20.78 |
| | | | | 1 | 104 | 20.36 | 20.44 | 20.93 |
| | | | | 50 | 0 | 19.07 | 19.85 | 20.30 |
| | | | | 50 | 28 | 19.90 | 20.27 | 20.84 |
| | | | | 50 | 56 | 19.68 | 19.82 | 20.35 |
| | | | | 100 | 0 | 16.90 | 19.84 | 16.81 |
| | | | QPSK | 1 | 1 | 19.21 | 20.24 | 20.59 |
| | | | | 1 | 53 | 19.81 | 20.16 | 20.75 |
| | | | | 1 | 104 | 20.32 | 20.39 | 20.84 |
| | | | | 50 | 0 | 18.58 | 19.32 | 19.78 |
| | | | | 50 | 28 | 19.89 | 20.25 | 20.82 |
| | | | | 50 | 56 | 19.16 | 19.24 | 19.85 |
| | | | | 100 | 0 | 16.87 | 19.32 | 16.80 |
| | | | 16QAM | 1 | 1 | 18.15 | 19.17 | 19.55 |
| | | | 64QAM | 1 | 1 | 16.74 | 17.76 | 18.14 |
| | | | 256QAM | 1 | 1 | 14.56 | 15.56 | 15.95 |
| | | CP | QPSK | 1 | 1 | 17.74 | 18.78 | 19.16 |

Note:

Conducted Output Power are for reporting purposes only.

CONDUCTED OUTPUT POWER(ANT 0)

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637000 | 641666 | 646332 |
| | | | | | | 3555 MHz | 3624.99 MHz | 3694.98 MHz |
| 10 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 18.23 | 18.98 | 19.82 |
| | | | | 1 | 12 | 18.29 | 18.94 | 19.79 |
| | | | | 1 | 22 | 18.40 | 18.95 | 19.77 |
| | | | | 12 | 0 | 17.81 | 18.50 | 19.34 |
| | | | | 12 | 6 | 18.35 | 19.01 | 19.86 |
| | | | | 12 | 12 | 17.94 | 18.50 | 19.34 |
| | | | | 24 | 0 | 17.88 | 18.51 | 19.35 |
| | | | QPSK | 1 | 1 | 18.24 | 18.97 | 19.79 |
| | | | | 1 | 12 | 18.29 | 18.91 | 19.77 |
| | | | | 1 | 22 | 18.40 | 18.93 | 19.76 |
| | | | | 12 | 0 | 17.35 | 18.00 | 18.85 |
| | | | | 12 | 6 | 18.34 | 18.97 | 19.82 |
| | | | | 12 | 12 | 17.45 | 17.99 | 18.84 |
| | | | | 24 | 0 | 17.40 | 18.02 | 18.85 |
| | | | 16QAM | 1 | 1 | 17.17 | 17.89 | 18.73 |
| | | | 64QAM | 1 | 1 | 15.79 | 16.50 | 17.34 |
| | | | 256QAM | 1 | 1 | 13.57 | 14.29 | 15.13 |
| | | CP | QPSK | 1 | 1 | 16.83 | 17.50 | 18.37 |

Note:

Conducted Output Power are for reporting purposes only.

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637334 | 641666 | 646000 |
| | | | | | | 3560.01 MHz | 3624.99 MHz | 3690 MHz |
| 20 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 18.44 | 19.19 | 20.04 |
| | | | | 1 | 26 | 18.63 | 19.10 | 19.97 |
| | | | | 1 | 49 | 18.91 | 19.08 | 19.87 |
| | | | | 25 | 0 | 18.08 | 18.73 | 19.54 |
| | | | | 25 | 13 | 18.71 | 19.15 | 20.01 |
| | | | | 25 | 26 | 18.37 | 18.65 | 19.46 |
| | | | | 50 | 0 | 18.21 | 18.67 | 19.51 |
| | | | QPSK | 1 | 1 | 18.44 | 19.18 | 19.89 |
| | | | | 1 | 26 | 18.62 | 19.07 | 19.90 |
| | | | | 1 | 49 | 18.92 | 19.07 | 19.83 |
| | | | | 25 | 0 | 17.58 | 18.23 | 19.01 |
| | | | | 25 | 13 | 18.70 | 19.12 | 19.92 |
| | | | | 25 | 26 | 17.84 | 18.14 | 18.90 |
| | | | | 50 | 0 | 17.74 | 18.18 | 18.94 |
| | | | 16QAM | 1 | 1 | 17.38 | 18.18 | 18.83 |
| | | | 64QAM | 1 | 1 | 15.94 | 16.72 | 17.52 |
| | | | 256QAM | 1 | 1 | 13.78 | 14.53 | 15.30 |
| | | CP | QPSK | 1 | 1 | 17.00 | 17.77 | 18.52 |

Note:

Conducted Output Power are for reporting purposes only.

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637668 | 641666 | 645666 |
| | | | | | | 3565.02 MHz | 3624.99 MHz | 3684.99 MHz |
| 30 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 18.61 | 19.47 | 20.05 |
| | | | | 1 | 39 | 18.87 | 19.21 | 20.05 |
| | | | | 1 | 76 | 19.29 | 19.24 | 19.92 |
| | | | | 36 | 0 | 18.31 | 18.87 | 19.64 |
| | | | | 36 | 21 | 18.96 | 19.23 | 20.07 |
| | | | | 36 | 42 | 18.72 | 18.80 | 19.54 |
| | | | | 75 | 0 | 16.02 | 18.79 | 16.08 |
| | | | QPSK | 1 | 1 | 18.61 | 19.37 | 20.01 |
| | | | | 1 | 39 | 18.87 | 19.10 | 20.01 |
| | | | | 1 | 76 | 19.29 | 19.25 | 19.90 |
| | | | | 36 | 0 | 17.80 | 18.33 | 19.15 |
| | | | | 36 | 21 | 18.96 | 19.19 | 20.10 |
| | | | | 36 | 42 | 18.23 | 18.20 | 19.05 |
| | | | | 75 | 0 | 16.02 | 18.29 | 16.08 |
| | | | 16QAM | 1 | 1 | 17.47 | 18.33 | 18.97 |
| | | | 64QAM | 1 | 1 | 16.09 | 16.90 | 17.58 |
| | | | 256QAM | 1 | 1 | 13.90 | 14.70 | 15.40 |
| | | CP | QPSK | 1 | 1 | 17.20 | 17.95 | 18.60 |

Note:

Conducted Output Power are for reporting purposes only.

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 638000 | 641666 | 645332 |
| | | | | | | 3570 MHz | 3624.99 MHz | 3679.98 MHz |
| 40 MHz | 30 | DFT-s | pi/2 BPSK | 1 | 1 | 18.56 | 19.46 | 19.79 |
| | | | | 1 | 53 | 19.12 | 19.13 | 20.02 |
| | | | | 1 | 104 | 19.64 | 19.42 | 19.93 |
| | | | | 50 | 0 | 18.33 | 18.87 | 19.54 |
| | | | | 50 | 28 | 19.17 | 19.21 | 20.08 |
| | | | | 50 | 56 | 18.98 | 18.75 | 19.52 |
| | | | | 100 | 0 | 16.19 | 18.80 | 16.04 |
| | | | QPSK | 1 | 1 | 18.48 | 19.46 | 19.79 |
| | | | | 1 | 53 | 19.09 | 19.09 | 19.99 |
| | | | | 1 | 104 | 19.65 | 19.31 | 19.91 |
| | | | | 50 | 0 | 17.78 | 18.37 | 18.99 |
| | | | | 50 | 28 | 19.12 | 19.19 | 20.05 |
| | | | | 50 | 56 | 18.48 | 18.18 | 19.00 |
| | | | | 100 | 0 | 16.08 | 18.30 | 16.02 |
| | | | 16QAM | 1 | 1 | 17.42 | 18.38 | 18.72 |
| | | | 64QAM | 1 | 1 | 16.02 | 16.97 | 17.27 |
| | | | 256QAM | 1 | 1 | 13.84 | 14.81 | 15.13 |
| | | CP | QPSK | 1 | 1 | 17.05 | 18.00 | 18.33 |

Note:

Conducted Output Power are for reporting purposes only.

## CONDUCTED OUTPUT POWER(MIMO)

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637000 | 641666 | 646332 |
| | | | | | | 3555 MHz | 3624.99 MHz | 3694.98 MHz |
| 10 MHz | 30 | CP | QPSK | 1 | 1 | 19.40 | 18.06 | 18.08 |
| | | | | 24 | 0 | 18.00 | 16.40 | 16.75 |
| | | | 16QAM | 1 | 1 | 19.04 | 17.32 | 17.45 |
| | | | 64QAM | 1 | 1 | 17.90 | 15.70 | 16.19 |
| | | | 256QAM | 1 | 1 | 14.26 | 12.66 | 13.20 |

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637334 | 641666 | 646000 |
| | | | | | | 3560.01 MHz | 3624.99 MHz | 3690 MHz |
| 20 MHz | 30 | CP | QPSK | 1 | 1 | 20.20 | 18.45 | 18.07 |
| | | | | 50 | 0 | 18.42 | 16.63 | 16.71 |
| | | | 16QAM | 1 | 1 | 19.76 | 18.15 | 17.74 |
| | | | 64QAM | 1 | 1 | 18.10 | 16.70 | 16.34 |
| | | | 256QAM | 1 | 1 | 15.12 | 13.40 | 13.40 |

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 637668 | 641666 | 645666 |
| | | | | | | 3565.02 MHz | 3624.99 MHz | 3684.99 MHz |
| 30 MHz | 30 | CP | QPSK | 1 | 1 | 20.04 | 18.12 | 17.95 |
| | | | | 78 | 0 | 18.37 | 16.39 | 16.70 |
| | | | 16QAM | 1 | 1 | 19.39 | 17.68 | 17.20 |
| | | | 64QAM | 1 | 1 | 18.00 | 16.11 | 15.90 |
| | | | 256QAM | 1 | 1 | 14.60 | 13.19 | 12.97 |

| Band Width | SCS(kHz) | OFDM | Modulation | RB Size | RB Offset | Max. output power(dBm) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 638000 | 641666 | 645332 |
| | | | | | | 3570 MHz | 3624.99 MHz | 3679.98 MHz |
| 40 MHz | 30 | CP | QPSK | 1 | 1 | 19.98 | 18.04 | 18.00 |
| | | | | 106 | 0 | 18.21 | 16.37 | 16.72 |
| | | | 16QAM | 1 | 1 | 19.54 | 17.40 | 17.44 |
| | | | 64QAM | 1 | 1 | 18.20 | 16.14 | 16.28 |
| | | | 256QAM | 1 | 1 | 15.05 | 13.05 | 13.13 |

Note:

Conducted Output Power are for reporting purposes only.

## 8.2. EQUIVALENT ISOTROPIC RADIATED POWER

EQUIVALENT ISOTROPIC RADIATED POWER(ANT 2)

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3555.00 | Sub6 n48/ 10 MHz [30 kHz] | PI/2 BPSK | -25.99 | 12.25 | 11.40 | 3.02 | H | 20.63 | 23.0 | 1 | 12 |
| | | QPSK | -26.06 | 12.18 | 11.40 | 3.02 | H | 20.56 | | | |
| | | 16-QAM | -27.03 | 11.21 | 11.40 | 3.02 | H | 19.59 | | | |
| | | 64-QAM | -28.48 | 9.76 | 11.40 | 3.02 | H | 18.14 | | | |
| | | 256-QAM | -30.71 | 7.53 | 11.40 | 3.02 | H | 15.91 | | | |
| 3624.99 | | PI/2 BPSK | -25.53 | 13.13 | 11.50 | 3.03 | H | 21.60 | | 1 | 1 |
| | | QPSK | -25.66 | 13.00 | 11.50 | 3.03 | H | 21.47 | | | |
| | | 16-QAM | -26.73 | 11.93 | 11.50 | 3.03 | H | 20.40 | | | |
| | | 64-QAM | -28.01 | 10.65 | 11.50 | 3.03 | H | 19.12 | | | |
| | | 256-QAM | -30.19 | 8.47 | 11.50 | 3.03 | H | 16.94 | | | |
| 3694.98 | | PI/2 BPSK | -26.31 | 12.17 | 11.45 | 3.06 | H | 20.56 | | 1 | 1 |
| | | QPSK | -26.36 | 12.12 | 11.45 | 3.06 | H | 20.51 | | | |
| | | 16-QAM | -27.60 | 10.88 | 11.45 | 3.06 | H | 19.27 | | | |
| | | 64-QAM | -28.96 | 9.52 | 11.45 | 3.06 | H | 17.91 | | | |
| | | 256-QAM | -31.11 | 7.37 | 11.45 | 3.06 | H | 15.76 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3560.01 | Sub6 n48/ 20 MHz [30 kHz] | PI/2 BPSK | -25.91 | 12.37 | 11.40 | 3.01 | H | 20.76 | 23.0 | 1 | 25 |
| | | QPSK | -25.96 | 12.32 | 11.40 | 3.01 | H | 20.71 | | | |
| | | 16-QAM | -27.00 | 11.28 | 11.40 | 3.01 | H | 19.67 | | | |
| | | 64-QAM | -28.41 | 9.87 | 11.40 | 3.01 | H | 18.26 | | | |
| | | 256-QAM | -30.65 | 7.63 | 11.40 | 3.01 | H | 16.02 | | | |
| 3624.99 | | PI/2 BPSK | -25.49 | 13.17 | 11.50 | 3.03 | H | 21.64 | | 1 | 1 |
| | | QPSK | -25.53 | 13.13 | 11.50 | 3.03 | H | 21.60 | | | |
| | | 16-QAM | -26.54 | 12.12 | 11.50 | 3.03 | H | 20.59 | | | |
| | | 64-QAM | -28.03 | 10.63 | 11.50 | 3.03 | H | 19.10 | | | |
| | | 256-QAM | -30.21 | 8.45 | 11.50 | 3.03 | H | 16.92 | | | |
| 3690.00 | | PI/2 BPSK | -25.94 | 12.56 | 11.50 | 3.06 | H | 21.00 | | 1 | 25 |
| | | QPSK | -26.03 | 12.47 | 11.50 | 3.06 | H | 20.91 | | | |
| | | 16-QAM | -27.14 | 11.36 | 11.50 | 3.06 | H | 19.80 | | | |
| | | 64-QAM | -28.46 | 10.04 | 11.50 | 3.06 | H | 18.48 | | | |
| | | 256-QAM | -30.75 | 7.75 | 11.50 | 3.06 | H | 16.19 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3565.02 | Sub6 n48/ 30 MHz [30 kHz] | PI/2 BPSK | -25.64 | 12.59 | 11.40 | 3.00 | H | 20.99 | 23.0 | 1 | 39 |
| | | QPSK | -25.73 | 12.50 | 11.40 | 3.00 | H | 20.90 | | | |
| | | 16-QAM | -26.67 | 11.56 | 11.40 | 3.00 | H | 19.96 | | | |
| | | 64-QAM | -28.24 | 9.99 | 11.40 | 3.00 | H | 18.39 | | | |
| | | 256-QAM | -30.36 | 7.87 | 11.40 | 3.00 | H | 16.27 | | | |
| 3624.99 | | PI/2 BPSK | -25.41 | 13.25 | 11.50 | 3.03 | H | 21.72 | | 1 | 1 |
| | | QPSK | -25.57 | 13.09 | 11.50 | 3.03 | H | 21.56 | | | |
| | | 16-QAM | -26.56 | 12.10 | 11.50 | 3.03 | H | 20.57 | | | |
| | | 64-QAM | -28.11 | 10.55 | 11.50 | 3.03 | H | 19.02 | | | |
| | | 256-QAM | -30.19 | 8.47 | 11.50 | 3.03 | H | 16.94 | | | |
| 3684.99 | | PI/2 BPSK | -26.01 | 12.56 | 11.50 | 3.06 | H | 21.00 | | 1 | 1 |
| | | QPSK | -26.11 | 12.46 | 11.50 | 3.06 | H | 20.90 | | | |
| | | 16-QAM | -27.11 | 11.46 | 11.50 | 3.06 | H | 19.90 | | | |
| | | 64-QAM | -28.52 | 10.05 | 11.50 | 3.06 | H | 18.49 | | | |
| | | 256-QAM | -30.79 | 7.78 | 11.50 | 3.06 | H | 16.22 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3570.00 | Sub6 n48/ 40 MHz [30 kHz] | PI/2 BPSK | -25.69 | 12.49 | 11.40 | 2.99 | H | 20.90 | 23.0 | 1 | 53 |
| | | QPSK | -25.71 | 12.47 | 11.40 | 2.99 | H | 20.88 | | | |
| | | 16-QAM | -26.73 | 11.45 | 11.40 | 2.99 | H | 19.86 | | | |
| | | 64-QAM | -28.33 | 9.85 | 11.40 | 2.99 | H | 18.26 | | | |
| | | 256-QAM | -30.52 | 7.66 | 11.40 | 2.99 | H | 16.07 | | | |
| 3624.99 | | PI/2 BPSK | -25.21 | 13.45 | 11.50 | 3.03 | H | 21.92 | | 1 | 1 |
| | | QPSK | -25.26 | 13.40 | 11.50 | 3.03 | H | 21.87 | | | |
| | | 16-QAM | -26.36 | 12.30 | 11.50 | 3.03 | H | 20.77 | | | |
| | | 64-QAM | -27.74 | 10.92 | 11.50 | 3.03 | H | 19.39 | | | |
| | | 256-QAM | -30.01 | 8.65 | 11.50 | 3.03 | H | 17.12 | | | |
| 3679.98 | | PI/2 BPSK | -25.96 | 12.67 | 11.50 | 3.05 | H | 21.12 | | 1 | 1 |
| | | QPSK | -26.03 | 12.60 | 11.50 | 3.05 | H | 21.05 | | | |
| | | 16-QAM | -27.09 | 11.54 | 11.50 | 3.05 | H | 19.99 | | | |
| | | 64-QAM | -28.51 | 10.12 | 11.50 | 3.05 | H | 18.57 | | | |
| | | 256-QAM | -30.86 | 7.77 | 11.50 | 3.05 | H | 16.22 | | | |

EQUIVALENT ISOTROPIC RADIATED POWER(ANT 0)

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3555.00 | Sub6 n48/ 10 MHz [30 kHz] | PI/2 BPSK | -27.21 | 11.03 | 11.40 | 3.02 | H | 19.41 | 23.0 | 1 | 12 |
| | | QPSK | -27.24 | 11.00 | 11.40 | 3.02 | H | 19.38 | | | |
| | | 16-QAM | -28.23 | 10.01 | 11.40 | 3.02 | H | 18.39 | | | |
| | | 64-QAM | -29.76 | 8.48 | 11.40 | 3.02 | H | 16.86 | | | |
| | | 256-QAM | -31.94 | 6.30 | 11.40 | 3.02 | H | 14.68 | | | |
| 3624.99 | | PI/2 BPSK | -26.45 | 12.21 | 11.50 | 3.03 | H | 20.68 | | 1 | 12 |
| | | QPSK | -26.46 | 12.20 | 11.50 | 3.03 | H | 20.67 | | | |
| | | 16-QAM | -27.53 | 11.13 | 11.50 | 3.03 | H | 19.60 | | | |
| | | 64-QAM | -28.93 | 9.73 | 11.50 | 3.03 | H | 18.20 | | | |
| | | 256-QAM | -31.24 | 7.42 | 11.50 | 3.03 | H | 15.89 | | | |
| 3694.98 | | PI/2 BPSK | -26.71 | 11.77 | 11.45 | 3.06 | H | 20.16 | | 1 | 12 |
| | | QPSK | -26.74 | 11.74 | 11.45 | 3.06 | H | 20.13 | | | |
| | | 16-QAM | -27.83 | 10.65 | 11.45 | 3.06 | H | 19.04 | | | |
| | | 64-QAM | -29.27 | 9.21 | 11.45 | 3.06 | H | 17.60 | | | |
| | | 256-QAM | -31.49 | 6.99 | 11.45 | 3.06 | H | 15.38 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3560.01 | Sub6 n48/ 20 MHz [30 kHz] | PI/2 BPSK | -27.36 | 10.92 | 11.40 | 3.01 | H | 19.31 | 23.0 | 1 | 25 |
| | | QPSK | -27.41 | 10.87 | 11.40 | 3.01 | H | 19.26 | | | |
| | | 16-QAM | -28.26 | 10.02 | 11.40 | 3.01 | H | 18.41 | | | |
| | | 64-QAM | -29.67 | 8.61 | 11.40 | 3.01 | H | 17.00 | | | |
| | | 256-QAM | -31.86 | 6.42 | 11.40 | 3.01 | H | 14.81 | | | |
| 3624.99 | | PI/2 BPSK | -26.17 | 12.49 | 11.50 | 3.03 | H | 21.04 | | 1 | 25 |
| | | QPSK | -26.11 | 12.55 | 11.50 | 3.03 | H | 21.02 | | | |
| | | 16-QAM | -27.23 | 11.43 | 11.50 | 3.03 | H | 19.90 | | | |
| | | 64-QAM | -28.46 | 10.20 | 11.50 | 3.03 | H | 18.67 | | | |
| | | 256-QAM | -30.71 | 7.95 | 11.50 | 3.03 | H | 16.42 | | | |
| 3690.00 | | PI/2 BPSK | -25.98 | 12.52 | 11.50 | 3.06 | H | 20.96 | | 1 | 25 |
| | | QPSK | -26.01 | 12.49 | 11.50 | 3.06 | H | 20.93 | | | |
| | | 16-QAM | -27.01 | 11.49 | 11.50 | 3.06 | H | 19.93 | | | |
| | | 64-QAM | -28.48 | 10.02 | 11.50 | 3.06 | H | 18.46 | | | |
| | | 256-QAM | -30.67 | 7.83 | 11.50 | 3.06 | H | 16.27 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3565.02 | Sub6 n48/ 30 MHz [30 kHz] | PI/2 BPSK | -27.33 | 10.90 | 11.40 | 3.00 | H | 19.30 | 23.0 | 1 | 39 |
| | | QPSK | -27.39 | 10.84 | 11.40 | 3.00 | H | 19.24 | | | |
| | | 16-QAM | -28.40 | 9.83 | 11.40 | 3.00 | H | 18.23 | | | |
| | | 64-QAM | -29.73 | 8.50 | 11.40 | 3.00 | H | 16.90 | | | |
| | | 256-QAM | -32.01 | 6.22 | 11.40 | 3.00 | H | 14.62 | | | |
| 3624.99 | | PI/2 BPSK | -26.31 | 12.35 | 11.50 | 3.03 | H | 20.82 | | 1 | 39 |
| | | QPSK | -26.34 | 12.32 | 11.50 | 3.03 | H | 20.79 | | | |
| | | 16-QAM | -27.45 | 11.21 | 11.50 | 3.03 | H | 19.68 | | | |
| | | 64-QAM | -28.76 | 9.90 | 11.50 | 3.03 | H | 18.37 | | | |
| | | 256-QAM | -31.01 | 7.65 | 11.50 | 3.03 | H | 16.12 | | | |
| 3684.99 | | PI/2 BPSK | -25.91 | 12.66 | 11.50 | 3.06 | H | 21.10 | | 1 | 39 |
| | | QPSK | -25.95 | 12.62 | 11.50 | 3.06 | H | 21.06 | | | |
| | | 16-QAM | -27.01 | 11.56 | 11.50 | 3.06 | H | 20.00 | | | |
| | | 64-QAM | -28.43 | 10.14 | 11.50 | 3.06 | H | 18.58 | | | |
| | | 256-QAM | -30.66 | 7.91 | 11.50 | 3.06 | H | 16.35 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3570.00 | Sub6 n48/ 40 MHz [30 kHz] | PI/2 BPSK | -27.01 | 11.17 | 11.40 | 2.99 | H | 19.58 | 23.0 | 1 | 53 |
| | | QPSK | -27.06 | 11.12 | 11.40 | 2.99 | H | 19.53 | | | |
| | | 16-QAM | -28.01 | 10.17 | 11.40 | 2.99 | H | 18.58 | | | |
| | | 64-QAM | -29.51 | 8.67 | 11.40 | 2.99 | H | 17.08 | | | |
| | | 256-QAM | -31.81 | 6.37 | 11.40 | 2.99 | H | 14.78 | | | |
| 3624.99 | | PI/2 BPSK | -26.21 | 12.45 | 11.50 | 3.03 | H | 20.92 | | 1 | 53 |
| | | QPSK | -26.32 | 12.34 | 11.50 | 3.03 | H | 20.81 | | | |
| | | 16-QAM | -27.46 | 11.20 | 11.50 | 3.03 | H | 19.67 | | | |
| | | 64-QAM | -28.90 | 9.76 | 11.50 | 3.03 | H | 18.23 | | | |
| | | 256-QAM | -31.00 | 7.66 | 11.50 | 3.03 | H | 16.13 | | | |
| 3679.98 | | PI/2 BPSK | -26.51 | 12.12 | 11.50 | 3.05 | H | 20.57 | | 1 | 53 |
| | | QPSK | -26.53 | 12.10 | 11.50 | 3.05 | H | 20.55 | | | |
| | | 16-QAM | -27.61 | 11.02 | 11.50 | 3.05 | H | 19.47 | | | |
| | | 64-QAM | -29.06 | 9.57 | 11.50 | 3.05 | H | 18.02 | | | |
| | | 256-QAM | -31.21 | 7.42 | 11.50 | 3.05 | H | 15.87 | | | |

EQUIVALENT ISOTROPIC RADIATED POWER(MIMO)

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3555.00 | Sub6 n48/ 10 MHz [30 kHz] | QPSK | -25.44 | 12.80 | 11.40 | 3.02 | V | 21.18 | 23.0 | 1 | 1 |
| | | 16-QAM | -26.26 | 11.98 | 11.40 | 3.02 | V | 20.36 | | | |
| | | 64-QAM | -27.56 | 10.68 | 11.40 | 3.02 | V | 19.06 | | | |
| | | 256-QAM | -30.37 | 7.87 | 11.40 | 3.02 | V | 16.25 | | | |
| 3624.99 | | QPSK | -25.68 | 12.98 | 11.50 | 3.03 | V | 21.45 | | 1 | 12 |
| | | 16-QAM | -26.74 | 11.92 | 11.50 | 3.03 | V | 20.39 | | | |
| | | 64-QAM | -28.05 | 10.61 | 11.50 | 3.03 | V | 19.08 | | | |
| | | 256-QAM | -30.56 | 8.10 | 11.50 | 3.03 | V | 16.57 | | | |
| 3694.98 | | QPSK | -27.27 | 11.21 | 11.45 | 3.06 | V | 19.60 | | 1 | 1 |
| | | 16-QAM | -28.11 | 10.37 | 11.45 | 3.06 | V | 18.76 | | | |
| | | 64-QAM | -29.64 | 8.84 | 11.45 | 3.06 | V | 17.23 | | | |
| | | 256-QAM | -32.21 | 6.27 | 11.45 | 3.06 | V | 14.66 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3560.010 | Sub6 n48/ 20 MHz [30 kHz] | QPSK | -25.20 | 13.08 | 11.40 | 3.01 | V | 21.47 | 23.0 | 1 | 1 |
| | | 16-QAM | -26.31 | 11.97 | 11.40 | 3.01 | V | 20.36 | | | |
| | | 64-QAM | -27.61 | 10.67 | 11.40 | 3.01 | V | 19.06 | | | |
| | | 256-QAM | -29.86 | 8.42 | 11.40 | 3.01 | V | 16.81 | | | |
| 3624.990 | | QPSK | -25.56 | 13.10 | 11.50 | 3.03 | V | 21.57 | | 1 | 1 |
| | | 16-QAM | -26.62 | 12.04 | 11.50 | 3.03 | V | 20.51 | | | |
| | | 64-QAM | -28.06 | 10.60 | 11.50 | 3.03 | V | 19.07 | | | |
| | | 256-QAM | -30.24 | 8.42 | 11.50 | 3.03 | V | 16.89 | | | |
| 3690.000 | | QPSK | -26.53 | 11.97 | 11.50 | 3.06 | V | 20.41 | | 1 | 1 |
| | | 16-QAM | -27.53 | 10.97 | 11.50 | 3.06 | V | 19.41 | | | |
| | | 64-QAM | -28.74 | 9.76 | 11.50 | 3.06 | V | 18.20 | | | |
| | | 256-QAM | -31.77 | 6.73 | 11.50 | 3.06 | V | 15.17 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3565.020 | Sub6 n48/ 30 MHz [30 kHz] | QPSK | -25.49 | 12.74 | 11.40 | 3.00 | V | 21.14 | 23.0 | 1 | 1 |
| | | 16-QAM | -26.20 | 12.03 | 11.40 | 3.00 | V | 20.43 | | | |
| | | 64-QAM | -27.66 | 10.57 | 11.40 | 3.00 | V | 18.97 | | | |
| | | 256-QAM | -30.21 | 8.02 | 11.40 | 3.00 | V | 16.42 | | | |
| 3624.990 | | QPSK | -25.77 | 12.89 | 11.50 | 3.03 | V | 21.36 | | 1 | 1 |
| | | 16-QAM | -26.59 | 12.07 | 11.50 | 3.03 | V | 20.54 | | | |
| | | 64-QAM | -28.14 | 10.52 | 11.50 | 3.03 | V | 18.99 | | | |
| | | 256-QAM | -31.09 | 7.57 | 11.50 | 3.03 | V | 16.04 | | | |
| 3684.990 | | QPSK | -26.51 | 12.06 | 11.50 | 3.06 | V | 20.50 | | 1 | 1 |
| | | 16-QAM | -27.06 | 11.51 | 11.50 | 3.06 | V | 19.95 | | | |
| | | 64-QAM | -28.53 | 10.04 | 11.50 | 3.06 | V | 18.48 | | | |
| | | 256-QAM | -31.49 | 7.08 | 11.50 | 3.06 | V | 15.52 | | | |

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | EIRP dBm/10 MHz | Limit | RB Size | RB Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3570.000 | Sub6 n48/ 40 MHz [30 kHz] | QPSK | -25.39 | 12.79 | 11.40 | 2.99 | V | 21.20 | 23.0 | 1 | 1 |
| | | 16-QAM | -25.93 | 12.25 | 11.40 | 2.99 | V | 20.66 | | | |
| | | 64-QAM | -27.43 | 10.75 | 11.40 | 2.99 | V | 19.16 | | | |
| | | 256-QAM | -30.43 | 7.75 | 11.40 | 2.99 | V | 16.16 | | | |
| 3624.990 | | QPSK | -25.57 | 13.09 | 11.50 | 3.03 | V | 21.56 | | 1 | 1 |
| | | 16-QAM | -26.38 | 12.28 | 11.50 | 3.03 | V | 20.75 | | | |
| | | 64-QAM | -27.88 | 10.78 | 11.50 | 3.03 | V | 19.25 | | | |
| | | 256-QAM | -30.34 | 8.32 | 11.50 | 3.03 | V | 16.79 | | | |
| 3679.980 | | QPSK | -26.04 | 12.59 | 11.50 | 3.05 | V | 21.04 | | 1 | 1 |
| | | 16-QAM | -26.61 | 12.02 | 11.50 | 3.05 | V | 20.47 | | | |
| | | 64-QAM | -28.12 | 10.51 | 11.50 | 3.05 | V | 18.96 | | | |
| | | 256-QAM | -30.95 | 7.68 | 11.50 | 3.05 | V | 16.13 | | | |

## 8.3. RADIATED SPURIOUS EMISSIONS

### RADIATED SPURIOUS EMISSIONS(ANT 2)

- ▣ NR Band: N48
- ▣ Bandwidth: 10 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meters
- ▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 637000 (3555.00) | 7 110.00 | -56.56 | 10.50 | -49.49 | 4.35 | V | -43.34 | -40.00 | Peak | 1 | 12 |
| | 10 665.00 | -64.01 | 11.00 | -52.41 | 5.48 | V | -46.89 | -40.00 | Peak | | |
| | 14 220.00 | -60.46 | 12.40 | -51.23 | 6.44 | V | -45.27 | -40.00 | Average | | |
| 641666 (3624.99) | 7 249.98 | -58.56 | 10.10 | -50.64 | 4.42 | V | -44.96 | -40.00 | Peak | 1 | 1 |
| | 10 874.97 | -63.58 | 11.20 | -52.32 | 5.53 | H | -46.65 | -40.00 | Peak | | |
| | 14 499.96 | -57.16 | 12.90 | -50.35 | 6.49 | H | -43.94 | -40.00 | Average | | |
| 646332 (3694.98) | 7 389.96 | -58.16 | 10.60 | -50.58 | 4.46 | V | -44.44 | -40.00 | Peak | 1 | 1 |
| | 11 084.94 | -64.24 | 11.30 | -53.10 | 5.59 | H | -47.39 | -40.00 | Peak | | |
| | 14 779.92 | -58.05 | 13.10 | -51.95 | 6.56 | H | -45.41 | -40.00 | Peak | | |

▣ NR Band: N48

▣ Bandwidth: 20 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 637334 (3560.01) | 7 120.02 | -56.97 | 10.50 | -49.86 | 4.39 | H | -43.75 | -40.00 | Peak | 1 | 25 |
| | 10 680.03 | -62.28 | 11.10 | -50.81 | 5.46 | H | -45.17 | -40.00 | Peak | | |
| | 14 240.04 | -58.91 | 12.40 | -50.05 | 6.44 | H | -44.09 | -40.00 | Average | | |
| 641666 (3624.99) | 7 249.98 | -56.68 | 10.10 | -48.76 | 4.42 | H | -43.08 | -40.00 | Peak | 1 | 1 |
| | 10 874.97 | -61.43 | 11.20 | -50.17 | 5.53 | H | -44.50 | -40.00 | Peak | | |
| | 14 499.96 | -56.76 | 12.90 | -49.95 | 6.49 | H | -43.54 | -40.00 | Average | | |
| 646000 (3690.00) | 7 380.00 | -57.81 | 10.60 | -50.05 | 4.45 | H | -43.90 | -40.00 | Peak | 1 | 25 |
| | 11 070.00 | -65.00 | 11.30 | -53.28 | 5.61 | H | -47.59 | -40.00 | Peak | | |
| | 14 760.00 | -58.46 | 13.10 | -52.49 | 6.58 | H | -45.97 | -40.00 | Average | | |

▣ NR Band: N48

▣ Bandwidth: 30 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 637668 (3565.02) | 7 130.04 | -58.31 | 10.50 | -50.81 | 4.40 | H | -44.71 | -40.00 | Average | 1 | 39 |
| | 10 695.06 | -63.74 | 11.10 | -52.58 | 5.48 | H | -46.96 | -40.00 | Peak | | |
| | 14 260.08 | -57.71 | 12.50 | -49.27 | 6.44 | H | -43.21 | -40.00 | Average | | |
| 641666 (3624.99) | 7 249.98 | -58.80 | 10.10 | -50.88 | 4.42 | H | -45.20 | -40.00 | Average | 1 | 1 |
| | 10 874.97 | -63.32 | 11.20 | -52.06 | 5.53 | H | -46.39 | -40.00 | Peak | | |
| | 14 499.96 | -56.69 | 12.90 | -49.88 | 6.49 | H | -43.47 | -40.00 | Average | | |
| 645666 (3684.99) | 7 369.98 | -57.56 | 10.60 | -49.68 | 4.44 | H | -43.52 | -40.00 | Peak | 1 | 1 |
| | 11 054.97 | -63.95 | 11.30 | -51.97 | 5.61 | H | -46.28 | -40.00 | Peak | | |
| | 14 739.96 | -56.65 | 13.00 | -49.99 | 6.59 | H | -43.58 | -40.00 | Peak | | |

▣ NR Band: N48

▣ Bandwidth: 40 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 638000 (3570.00) | 7 140.00 | -57.25 | 10.50 | -49.39 | 4.41 | H | -43.30 | -40.00 | Average | 1 | 53 |
| | 10 710.00 | -62.39 | 11.10 | -50.89 | 5.47 | H | -45.26 | -40.00 | Peak | | |
| | 14 280.00 | -58.00 | 12.50 | -49.72 | 6.43 | H | -43.65 | -40.00 | Average | | |
| 641666 (3624.99) | 7 249.98 | -59.31 | 10.10 | -51.39 | 4.42 | H | -45.71 | -40.00 | Average | 1 | 1 |
| | 10 874.97 | -62.14 | 11.20 | -50.88 | 5.53 | H | -45.21 | -40.00 | Peak | | |
| | 14 499.96 | -56.79 | 12.90 | -49.98 | 6.49 | H | -43.57 | -40.00 | Average | | |
| 645332 (3679.98) | 7 359.96 | -60.01 | 10.60 | -52.25 | 4.44 | H | -46.09 | -40.00 | Average | 1 | 1 |
| | 11 039.94 | -64.09 | 11.30 | -52.05 | 5.59 | H | -46.34 | -40.00 | Peak | | |
| | 14 719.92 | -59.21 | 13.00 | -52.09 | 6.59 | H | -45.68 | -40.00 | Average | | |

## RADIATED SPURIOUS EMISSIONS(ANT 0)

▣ NR Band: N48

▣ Bandwidth: 10 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 637000 (3555.00) | 7 110.00 | -58.69 | 10.50 | -51.62 | 4.35 | H | -45.47 | -40.00 | Average | 1 | 12 |
| | 10 665.00 | -62.17 | 11.00 | -50.57 | 5.48 | V | -45.05 | -40.00 | Peak | | |
| | 14 220.00 | -58.90 | 12.40 | -49.67 | 6.44 | H | -43.71 | -40.00 | Peak | | |
| 641666 (3624.99) | 7 249.98 | -56.89 | 10.10 | -48.97 | 4.42 | H | -43.29 | -40.00 | Average | 1 | 12 |
| | 10 874.97 | -65.04 | 11.20 | -53.78 | 5.53 | V | -48.11 | -40.00 | Peak | | |
| | 14 499.96 | -56.61 | 12.90 | -49.80 | 6.49 | H | -43.39 | -40.00 | Average | | |
| 646332 (3694.98) | 7 389.96 | -57.91 | 10.60 | -50.33 | 4.46 | H | -44.19 | -40.00 | Average | 1 | 12 |
| | 11 084.94 | -63.10 | 11.30 | -51.96 | 5.59 | V | -46.25 | -40.00 | Peak | | |
| | 14 779.92 | -55.67 | 13.10 | -49.57 | 6.56 | H | -43.03 | -40.00 | Peak | | |

▣ NR Band: N48

▣ Bandwidth: 20 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 637334 (3560.01) | 7 120.02 | -56.61 | 10.50 | -49.50 | 4.39 | H | -43.39 | -40.00 | Peak | 1 | 25 |
| | 10 680.03 | -61.63 | 11.10 | -50.16 | 5.46 | H | -44.52 | -40.00 | Peak | | |
| | 14 240.04 | -59.01 | 12.40 | -50.15 | 6.44 | H | -44.19 | -40.00 | Average | | |
| 641666 (3624.99) | 7 249.98 | -57.36 | 10.10 | -49.44 | 4.42 | H | -43.76 | -40.00 | Average | 1 | 25 |
| | 10 874.97 | -63.50 | 11.20 | -52.24 | 5.53 | H | -46.57 | -40.00 | Peak | | |
| | 14 499.96 | -56.61 | 12.90 | -49.80 | 6.49 | H | -43.39 | -40.00 | Average | | |
| 646000 (3690.00) | 7 380.00 | -60.01 | 10.60 | -52.25 | 4.45 | H | -46.10 | -40.00 | Average | 1 | 25 |
| | 11 070.00 | -63.05 | 11.30 | -51.33 | 5.61 | H | -45.64 | -40.00 | Peak | | |
| | 14 760.00 | -56.56 | 13.10 | -50.59 | 6.58 | H | -44.07 | -40.00 | Peak | | |

▣ NR Band: N48

▣ Bandwidth: 30 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 637668 (3565.02) | 7 130.04 | -58.21 | 10.50 | -50.71 | 4.40 | H | -44.61 | -40.00 | Average | 1 | 39 |
| | 10 695.06 | -63.10 | 11.10 | -51.94 | 5.48 | H | -46.32 | -40.00 | Peak | | |
| | 14 260.08 | -58.23 | 12.50 | -49.79 | 6.44 | H | -43.73 | -40.00 | Average | | |
| 641666 (3624.99) | 7 249.98 | -59.76 | 10.10 | -51.84 | 4.42 | H | -46.16 | -40.00 | Average | 1 | 39 |
| | 10 874.97 | -63.73 | 11.20 | -52.47 | 5.53 | H | -46.80 | -40.00 | Peak | | |
| | 14 499.96 | -56.63 | 12.90 | -49.82 | 6.49 | H | -43.41 | -40.00 | Average | | |
| 645666 (3684.99) | 7 369.98 | -57.60 | 10.60 | -49.72 | 4.44 | H | -43.56 | -40.00 | Average | 1 | 39 |
| | 11 054.97 | -63.89 | 11.30 | -51.91 | 5.61 | H | -46.22 | -40.00 | Peak | | |
| | 14 739.96 | -57.52 | 13.00 | -50.86 | 6.59 | H | -44.45 | -40.00 | Peak | | |

▣ NR Band: N48

▣ Bandwidth: 40 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 638000 (3570.00) | 7 140.00 | -58.26 | 10.50 | -50.40 | 4.41 | H | -44.31 | -40.00 | Average | 1 | 53 |
| | 10 710.00 | -63.30 | 11.10 | -51.80 | 5.47 | H | -46.17 | -40.00 | Peak | | |
| | 14 280.00 | -57.61 | 12.50 | -49.33 | 6.43 | H | -43.26 | -40.00 | Average | | |
| 641666 (3624.99) | 7 249.98 | -57.14 | 10.10 | -49.22 | 4.42 | H | -43.54 | -40.00 | Average | 1 | 53 |
| | 10 874.97 | -63.52 | 11.20 | -52.26 | 5.53 | H | -46.59 | -40.00 | Peak | | |
| | 14 499.96 | -56.54 | 12.90 | -49.73 | 6.49 | H | -43.32 | -40.00 | Average | | |
| 645332 (3679.98) | 7 359.96 | -58.91 | 10.60 | -51.15 | 4.44 | H | -44.99 | -40.00 | Average | 1 | 53 |
| | 11 039.94 | -64.67 | 11.30 | -52.63 | 5.59 | H | -46.92 | -40.00 | Peak | | |
| | 14 719.92 | -58.42 | 13.00 | -51.30 | 6.59 | H | -44.89 | -40.00 | Peak | | |

## RADIATED SPURIOUS EMISSIONS(MIMO)

▣ NR Band: N48

▣ Bandwidth: 20 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | Detector | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Size | Offset |
| 637334 (3560.01) | 7 120.02 | -59.26 | 10.50 | -52.15 | 4.39 | H | -46.04 | -40.00 | Average | 1 | 1 |
| | 10 680.03 | -62.81 | 11.10 | -51.34 | 5.46 | V | -45.70 | -40.00 | Peak | | |
| | 14 240.04 | -57.88 | 12.40 | -49.02 | 6.44 | H | -43.06 | -40.00 | Peak | | |
| 641666 (3624.99) | 7 249.98 | -59.11 | 10.10 | -51.19 | 4.42 | H | -45.51 | -40.00 | Average | 1 | 1 |
| | 10 874.97 | -62.46 | 11.20 | -51.20 | 5.53 | V | -45.53 | -40.00 | Peak | | |
| | 14 499.96 | -57.86 | 12.90 | -51.05 | 6.49 | V | -44.64 | -40.00 | Average | | |
| 646000 (3690.00) | 7 380.00 | -62.21 | 10.60 | -54.45 | 4.45 | H | -48.30 | -40.00 | Average | 1 | 1 |
| | 11 070.00 | -64.77 | 11.30 | -53.05 | 5.61 | V | -47.36 | -40.00 | Peak | | |
| | 14 760.00 | -56.81 | 13.10 | -50.84 | 6.58 | V | -44.32 | -40.00 | Peak | | |

## 8.4. PEAK-TO-AVERAGE RATIO

PEAK-TO-AVERAGE RATIO(ANT 2)

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n48 | 10 MHz | 3624.99 | BPSK | 24 | 0 | 3.91 |
| | | | QPSK | | | 4.55 |
| | | | 16-QAM | | | 5.60 |
| | | | 64-QAM | | | 6.04 |
| | | | 256-QAM | | | 6.75 |
| | 20 MHz | | BPSK | 50 | | 3.86 |
| | | | QPSK | | | 4.59 |
| | | | 16-QAM | | | 5.54 |
| | | | 64-QAM | | | 6.01 |
| | | | 256-QAM | | | 6.72 |
| | 30 MHz | | BPSK | 75 | | 3.93 |
| | | | QPSK | | | 4.60 |
| | | | 16-QAM | | | 5.60 |
| | | | 64-QAM | | | 6.09 |
| | | | 256-QAM | | | 6.55 |
| | 40 MHz | | BPSK | 100 | | 4.30 |
| | | | QPSK | | | 4.68 |
| | | | 16-QAM | | | 5.58 |
| | | | 64-QAM | | | 6.02 |
| | | | 256-QAM | | | 6.58 |

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 104 ~ 123.

PEAK-TO-AVERAGE RATIO(ANT 0)

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n48 | 10 MHz | 3624.99 | BPSK | 24 | 0 | 3.91 |
| | | | QPSK | | | 4.56 |
| | | | 16-QAM | | | 5.55 |
| | | | 64-QAM | | | 6.05 |
| | | | 256-QAM | | | 6.54 |
| | 20 MHz | | BPSK | 50 | | 3.85 |
| | | | QPSK | | | 4.56 |
| | | | 16-QAM | | | 5.56 |
| | | | 64-QAM | | | 6.02 |
| | | | 256-QAM | | | 6.76 |
| | 30 MHz | | BPSK | 75 | | 3.85 |
| | | | QPSK | | | 4.55 |
| | | | 16-QAM | | | 5.60 |
| | | | 64-QAM | | | 6.10 |
| | | | 256-QAM | | | 6.70 |
| | 40 MHz | | BPSK | 100 | | 4.12 |
| | | | QPSK | | | 4.61 |
| | | | 16-QAM | | | 5.56 |
| | | | 64-QAM | | | 5.97 |
| | | | 256-QAM | | | 6.59 |

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 225 ~ 244.

## 8.5. OCCUPIED BANDWIDTH

OCCUPIED BANDWIDTH(ANT 2)

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n48 | 10 MHz | 3624.99 | BPSK | 24 | 0 | 8.6247 |
| | | | QPSK | | | 8.6419 |
| | | | 16-QAM | | | 8.6711 |
| | | | 64-QAM | | | 8.6570 |
| | | | 256-QAM | | | 8.6530 |
| | 20 MHz | | BPSK | 50 | | 17.926 |
| | | | QPSK | | | 17.947 |
| | | | 16-QAM | | | 17.848 |
| | | | 64-QAM | | | 17.927 |
| | | | 256-QAM | | | 17.950 |
| | 30 MHz | | BPSK | 75 | | 26.918 |
| | | | QPSK | | | 26.900 |
| | | | 16-QAM | | | 26.884 |
| | | | 64-QAM | | | 26.845 |
| | | | 256-QAM | | | 26.962 |
| | 40 MHz | | BPSK | 100 | | 35.849 |
| | | | QPSK | | | 35.876 |
| | | | 16-QAM | | | 35.838 |
| | | | 64-QAM | | | 35.889 |
| | | | 256-QAM | | | 35.839 |

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 84 ~ 103.

OCCUPIED BANDWIDTH(ANT 0)

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n48 | 10 MHz | 3624.99 | BPSK | 24 | 0 | 8.6210 |
| | | | QPSK | | | 8.6583 |
| | | | 16-QAM | | | 8.6419 |
| | | | 64-QAM | | | 8.6255 |
| | | | 256-QAM | | | 8.6251 |
| | 20 MHz | | BPSK | 50 | | 17.902 |
| | | | QPSK | | | 17.866 |
| | | | 16-QAM | | | 17.962 |
| | | | 64-QAM | | | 17.915 |
| | | | 256-QAM | | | 17.986 |
| | 30 MHz | | BPSK | 75 | | 26.839 |
| | | | QPSK | | | 26.858 |
| | | | 16-QAM | | | 26.892 |
| | | | 64-QAM | | | 26.946 |
| | | | 256-QAM | | | 26.926 |
| | 40 MHz | | BPSK | 100 | | 35.797 |
| | | | QPSK | | | 35.825 |
| | | | 16-QAM | | | 35.802 |
| | | | 64-QAM | | | 35.718 |
| | | | 256-QAM | | | 35.846 |

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 205 ~ 224.

## 8.6. CONDUCTED SPURIOUS EMISSIONS

**CONDUCTED SPURIOUS EMISSIONS(ANT 2)**

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n48 | 10 | 3555.00 | 8.2976 | 30.324 | -78.523 | -48.199 | -40.00 |
| | | 3624.99 | 4.0993 | 28.523 | -78.353 | -49.830 | |
| | | 3694.98 | 8.8290 | 30.324 | -78.268 | -47.944 | |
| | 20 | 3560.01 | 9.0519 | 30.324 | -77.054 | -46.730 | |
| | | 3624.99 | 4.9073 | 28.523 | -76.386 | -47.863 | |
| | | 3690.00 | 8.9043 | 30.324 | -77.019 | -46.695 | |
| | 30 | 3565.02 | 3.7558 | 28.523 | -77.083 | -48.560 | |
| | | 3624.99 | 8.8988 | 30.324 | -77.007 | -46.683 | |
| | | 3684.99 | 5.9731 | 30.324 | -76.864 | -46.540 | |
| | 40 | 3570.00 | 3.7633 | 28.523 | -75.967 | -47.444 | |
| | | 3624.99 | 8.2627 | 30.324 | -76.865 | -46.541 | |
| | | 3679.98 | 9.9352 | 30.324 | -76.856 | -46.532 | |

**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 180 ~ 203.
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
3. Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 26.252 |
| 1 – 5 | 28.523 |
| 5 – 10 | 30.324 |
| 10 – 15 | 31.523 |
| 15 – 20 | 32.523 |
| Above 20 | 34.042 |

CONDUCTED SPURIOUS EMISSIONS(ANT 0)

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n48 | 10 | 3555.00 | 9.1471 | 30.324 | -76.315 | -45.991 | -40.00 |
| | | 3624.99 | 8.5828 | 30.324 | -77.250 | -46.926 | |
| | | 3694.98 | 8.8520 | 30.324 | -77.469 | -47.145 | |
| | 20 | 3560.01 | 9.6909 | 30.324 | -77.241 | -46.917 | |
| | | 3624.99 | 8.6386 | 30.324 | -77.137 | -46.813 | |
| | | 3690.00 | 9.9731 | 30.324 | -76.440 | -46.116 | |
| | 30 | 3565.02 | 9.1605 | 30.324 | -77.121 | -46.797 | |
| | | 3624.99 | 9.1735 | 30.324 | -76.658 | -46.334 | |
| | | 3684.99 | 4.0539 | 28.523 | -77.236 | -48.713 | |
| | 40 | 3570.00 | 3.7692 | 28.523 | -77.202 | -48.679 | |
| | | 3624.99 | 9.6506 | 30.324 | -76.543 | -46.219 | |
| | | 3679.98 | 9.4292 | 30.324 | -77.070 | -46.746 | |

**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 301 ~ 324.
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
3. Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 26.252 |
| 1 – 5 | 28.523 |
| 5 – 10 | 30.324 |
| 10 – 15 | 31.523 |
| 15 – 20 | 32.523 |
| Above 20 | 34.042 |

## 8.7. CHANNEL EDGE

**CHANNEL EDGE(ANT 2)**

| BW (MHz) | RB (Size/ Offset) | Freq. (MHz) | Outside of the authorized band (dBm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lower Side(MHz) | | | | Upper Side(MHz) | | | |
| | | | Below 3530 MHz | -[B]MHz ~ 3530 MHz | -1 MHz ~ -[B]MHz | 0 MHz ~ -1 MHz | 0 MHz ~ +1 MHz | 1 MHz ~ +[B]MHz | +[B]MHz ~ 3720 MHz | Above 3720 MHz |
| 10 | 24/0 | 3555.00 | -54.39 | -48.60 | -32.71 | -30.71 | -30.68 | -33.36 | -46.38 | — |
| | | 3624.99 | — | -43.29 | -32.68 | -30.08 | -29.49 | -32.82 | -44.28 | — |
| | | 3694.98 | — | -46.64 | -32.04 | -30.21 | -29.42 | -31.92 | -42.80 | -43.49 |
| 20 | 50/0 | 3560.01 | -52.91 | -37.61 | -35.01 | -31.97 | -38.01 | -36.12 | -42.27 | — |
| | | 3624.99 | — | -51.80 | -32.25 | -31.02 | -35.24 | -33.22 | -44.11 | — |
| | | 3690.00 | — | -48.42 | -33.56 | -32.24 | -37.22 | -35.41 | -40.18 | -42.55 |
| 30 | 75/0 | 3565.02 | -46.51 | -40.34 | -40.66 | -36.81 | -39.80 | -37.17 | -45.74 | — |
| | | 3624.99 | — | -48.79 | -34.22 | -31.19 | -38.55 | -36.69 | -45.83 | — |
| | | 3684.99 | — | -46.74 | -40.21 | -36.35 | -41.68 | -39.02 | -38.60 | -42.24 |
| 40 | 100/0 | 3570.00 | -44.24 | -39.92 | -39.33 | -34.61 | -40.06 | -35.47 | -45.10 | — |
| | | 3624.99 | — | -48.77 | -36.61 | -33.12 | -40.02 | -36.83 | -44.34 | — |
| | | 3679.98 | — | -44.25 | -43.90 | -36.51 | -41.81 | -38.78 | -38.24 | -41.55 |
| Limit (dBm) | | | -40.00 | -25.00 | -13.00 | -13.00 | -13.00 | -13.00 | -25.00 | -40.00 |

Note:

1. C.E = Channel Edge
2. Plots of the EUT's Channel Edge are shown Page 136 ~ 179.
3. Duty Cycle factor already applied on the factor.
   - Duty Cycle Factor(dB) = 6.99
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator
   - Result(dBm) = Reading + Factor

| BW (MHz) | RB (Size/ Offset) | Freq. (MHz) | Outside of the authorized band (dBm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lower Side(MHz) | | | | Upper Side(MHz) | | | |
| | | | Below 3530 MHz | -[B]MHz ~ 3530 MHz | -1 MHz ~ -[B]MHz | 0 MHz ~ -1 MHz | 0 MHz ~ +1 MHz | 1 MHz ~ +[B]MHz | +[B]MHz ~ 3720 MHz | Above 3720 MHz |
| 10 | Lower Side: 1/0 Upper Side: 1/23 | 3555.00 | -54.92 | -54.10 | -32.21 | -26.00 | -29.22 | -33.20 | -53.88 | — |
| | | 3624.99 | — | -45.22 | -31.94 | -25.86 | -28.48 | -33.06 | -49.19 | — |
| | | 3694.98 | — | -48.93 | -32.64 | -26.51 | -28.95 | -33.70 | -44.59 | -43.33 |
| 20 | Lower Side: 1/0 Upper Side: 1/50 | 3560.01 | -54.72 | -53.78 | -33.05 | -27.63 | -28.41 | -32.74 | -44.13 | — |
| | | 3624.99 | — | -54.07 | -32.13 | -27.98 | -29.33 | -33.59 | -49.18 | — |
| | | 3690.00 | — | -49.14 | -33.39 | -29.17 | -28.37 | -32.19 | -43.93 | -43.03 |
| 30 | Lower Side: 1/0 Upper Side: 1/77 | 3565.02 | -53.81 | -53.80 | -35.92 | -34.15 | -33.49 | -35.15 | -47.17 | — |
| | | 3624.99 | — | -54.46 | -35.38 | -32.01 | -34.24 | -35.99 | -46.44 | — |
| | | 3684.99 | — | -46.56 | -35.63 | -32.83 | -34.91 | -34.86 | -44.03 | -43.06 |
| 40 | Lower Side: 1/0 Upper Side: 1/105 | 3570.00 | -54.13 | -53.80 | -35.34 | -31.61 | -33.84 | -35.21 | -48.73 | — |
| | | 3624.99 | — | -54.59 | -35.15 | -30.76 | -32.22 | -34.17 | -45.21 | — |
| | | 3679.98 | — | -44.27 | -34.01 | -30.55 | -34.65 | -34.93 | -44.03 | -43.01 |
| Limit (dBm) | | | -40.00 | -25.00 | -13.00 | -13.00 | -13.00 | -13.00 | -25.00 | -40.00 |

Note:

1. C.E = Channel Edge
2. Plots of the EUT's Channel Edge are shown Page 136 ~ 179.
3. Duty Cycle factor already applied on the factor.
   - Duty Cycle Factor(dB) = 6.99
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator
   - Result(dBm) = Reading + Factor

CHANNEL EDGE(ANT 0)

| BW (MHz) | RB (Size/ Offset) | Freq. (MHz) | Outside of the authorized band (dBm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lower Side(MHz) | | | | Upper Side(MHz) | | | |
| | | | Below 3530 MHz | -[B]MHz ~ 3530 MHz | -1 MHz ~ -[B]MHz | 0 MHz ~ -1 MHz | 0 MHz ~ +1 MHz | 1 MHz ~ +[B]MHz | +[B]MHz ~ 3720 MHz | Above 3720 MHz |
| 10 | 24/0 | 3555.00 | -53.26 | -46.58 | -30.24 | -30.14 | -32.11 | -33.29 | -43.77 | — |
| | | 3624.99 | — | -43.47 | -31.43 | -30.02 | -31.52 | -33.13 | -42.62 | — |
| | | 3694.98 | — | -45.31 | -30.28 | -29.68 | -29.52 | -31.14 | -42.78 | -42.90 |
| 20 | 50/0 | 3560.01 | -52.50 | -36.89 | -33.55 | -31.64 | -38.54 | -36.23 | -41.53 | — |
| | | 3624.99 | — | -50.78 | -33.60 | -31.93 | -36.55 | -34.10 | -43.22 | — |
| | | 3690.00 | — | -48.76 | -30.54 | -31.73 | -33.74 | -30.29 | -41.10 | -42.42 |
| 30 | 75/0 | 3565.02 | -46.96 | -37.53 | -37.96 | -35.99 | -38.63 | -33.49 | -41.46 | — |
| | | 3624.99 | — | -46.29 | -30.77 | -31.14 | -37.11 | -32.22 | -42.03 | — |
| | | 3684.99 | — | -46.32 | -40.55 | -37.08 | -41.57 | -37.27 | -37.75 | -42.28 |
| 40 | 100/0 | 3570.00 | -43.46 | -38.97 | -38.56 | -34.78 | -37.87 | -33.00 | -43.23 | — |
| | | 3624.99 | — | -44.56 | -33.91 | -32.67 | -35.28 | -31.40 | -43.35 | — |
| | | 3679.98 | — | -44.60 | -38.13 | -35.95 | -40.70 | -36.91 | -36.31 | -41.44 |
| Limit (dBm) | | | -40.00 | -25.00 | -13.00 | -13.00 | -13.00 | -13.00 | -25.00 | -40.00 |

Note:

1. C.E = Channel Edge
2. Plots of the EUT's Channel Edge are shown Page 257 ~ 300.
3. Duty Cycle factor already applied on the factor.
   - Duty Cycle Factor(dB) = 6.99
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator
   - Result(dBm) = Reading + Factor

| BW (MHz) | RB (Size/ Offset) | Freq. (MHz) | Outside of the authorized band (dBm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lower Side(MHz) | | | | Upper Side(MHz) | | | |
| | | | Below 3530 MHz | -[B]MHz ~ 3530 MHz | -1 MHz ~ -[B]MHz | 0 MHz ~ -1 MHz | 0 MHz ~ +1 MHz | 1 MHz ~ +[B]MHz | +[B]MHz ~ 3720 MHz | Above 3720 MHz |
| 10 | Lower Side: 1/0 Upper Side: 1/23 | 3555.00 | -54.58 | -53.45 | -32.69 | -27.26 | -28.77 | -33.53 | -53.43 | — |
| | | 3624.99 | — | -44.66 | -32.64 | -26.84 | -26.60 | -31.67 | -48.61 | — |
| | | 3694.98 | — | -48.27 | -31.05 | -26.18 | -26.68 | -31.31 | -43.92 | -42.84 |
| 20 | Lower Side: 1/0 Upper Side: 1/50 | 3560.01 | -54.54 | -53.43 | -32.82 | -28.94 | -31.35 | -34.49 | -43.73 | — |
| | | 3624.99 | — | -54.13 | -33.36 | -28.36 | -30.11 | -34.44 | -49.49 | — |
| | | 3690.00 | — | -49.27 | -32.43 | -28.58 | -30.03 | -33.04 | -44.02 | -43.00 |
| 30 | Lower Side: 1/0 Upper Side: 1/77 | 3565.02 | -52.48 | -53.59 | -36.32 | -32.64 | -35.10 | -35.95 | -47.07 | — |
| | | 3624.99 | — | -54.39 | -33.56 | -32.02 | -32.01 | -35.22 | -46.57 | — |
| | | 3684.99 | — | -46.25 | -35.09 | -33.30 | -34.10 | -35.38 | -43.84 | -43.02 |
| 40 | Lower Side: 1/0 Upper Side: 1/105 | 3570.00 | -53.45 | -53.71 | -35.52 | -33.15 | -32.73 | -35.09 | -49.00 | — |
| | | 3624.99 | — | -54.77 | -33.69 | -31.68 | -31.89 | -34.80 | -45.43 | — |
| | | 3679.98 | — | -44.66 | -34.70 | -31.66 | -32.73 | -33.59 | -44.26 | -43.20 |
| Limit (dBm) | | | -40.00 | -25.00 | -13.00 | -13.00 | -13.00 | -13.00 | -25.00 | -40.00 |

Note:

1. C.E = Channel Edge
2. Plots of the EUT's Channel Edge are shown Page 257 ~ 300.
3. Duty Cycle factor already applied on the factor.
   - Duty Cycle Factor(dB) = 6.99
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator
   - Result(dBm) = Reading + Factor

## 8.8. Adjacent Channel Leakage Ratio(ACLR)

Adjacent Channel Leakage Ratio(ACLR)(ANT 2)

| Band Width | RB (Size/ Offset) | Frequency (MHz) | Adjacent Channel Leakage Ratio(dB) | |
|---|---|---|---|---|
| | | | Lower Side | Upper Side |
| 10 MHz | 24/0 | 3555.00 | 45.68 | 46.80 |
| | | 3624.99 | 46.14 | 45.54 |
| | | 3694.98 | 44.67 | 45.43 |
| 20 MHz | 50/0 | 3560.01 | 43.82 | 45.48 |
| | | 3624.99 | 47.43 | 49.39 |
| | | 3690.00 | 46.07 | 50.30 |
| 30 MHz | 75/0 | 3565.02 | 45.11 | 46.43 |
| | | 3624.99 | 47.22 | 51.01 |
| | | 3684.99 | 45.31 | 47.32 |
| 40 MHz | 100/0 | 3570.00 | 38.08 | 44.20 |
| | | 3624.99 | 38.87 | 51.11 |
| | | 3679.98 | 38.98 | 44.50 |
| Limit (dB) | | | ACLR > 30dB | ACLR > 30dB |

Note:

1. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990
2. Plots of the EUT's Adjacent Channel Leakage Ratio(ACLR) are shown Page 124 ~ 135.

Adjacent Channel Leakage Ratio(ACLR)(ANT 0)

| Band Width | RB (Size/ Offset) | Frequency (MHz) | Adjacent Channel Leakage Ratio(dB) | |
|---|---|---|---|---|
| | | | Lower Side | Upper Side |
| 10 MHz | 24/0 | 3555.00 | 44.76 | 43.82 |
| | | 3624.99 | 45.76 | 45.11 |
| | | 3694.98 | 44.44 | 45.46 |
| 20 MHz | 50/0 | 3560.01 | 46.30 | 46.89 |
| | | 3624.99 | 45.44 | 45.27 |
| | | 3690.00 | 47.16 | 47.94 |
| 30 MHz | 75/0 | 3565.02 | 44.30 | 42.24 |
| | | 3624.99 | 46.38 | 49.42 |
| | | 3684.99 | 47.25 | 47.44 |
| 40 MHz | 100/0 | 3570.00 | 38.24 | 42.74 |
| | | 3624.99 | 38.33 | 47.86 |
| | | 3679.98 | 39.29 | 47.08 |
| Limit (dB) | | | ACLR > 30dB | ACLR > 30dB |

Note:

1. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990
2. Plots of the EUT's Adjacent Channel Leakage Ratio(ACLR) are shown Page 245~256.

## 8.9. FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

**FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE(ANT 2)**

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3555.000 | 100 % | +20(Ref) | 3554 999 996 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3554 999 978 | -18.0 | -0.000 001 | -0.005 |
| | 100 % | -20 | 3554 999 985 | -11.6 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3554 999 989 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3554 999 976 | -20.8 | -0.000 001 | -0.006 |
| | 100 % | +10 | 3554 999 978 | -18.8 | -0.000 001 | -0.005 |
| | 100 % | +30 | 3554 999 988 | -8.9 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3554 999 991 | -5.9 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3554 999 989 | -7.5 | 0.000 000 | -0.002 |
| | Batt. Endpoint | +20 | 3554 999 980 | -16.0 | 0.000 000 | -0.004 |
| 3694.980 | 100 % | +20(Ref) | 3694 979 984 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3694 979 973 | -10.9 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3694 979 975 | -9.2 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3694 979 977 | -6.5 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3694 979 973 | -10.9 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3694 979 962 | -22.0 | -0.000 001 | -0.006 |
| | 100 % | +30 | 3694 979 974 | -10.4 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3694 979 981 | -3.4 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3694 979 966 | -17.8 | 0.000 000 | -0.005 |
| | Batt. Endpoint | +20 | 3694 979 973 | -10.7 | 0.000 000 | -0.003 |

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3560.010 | 100 % | +20(Ref) | 3560 009 992 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3560 009 975 | -16.9 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3560 009 994 | 2.0 | 0.000 000 | 0.001 |
| | 100 % | -10 | 3560 009 991 | -1.2 | 0.000 000 | 0.000 |
| | 100 % | 0 | 3560 009 986 | -5.6 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3560 009 979 | -12.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3560 009 977 | -14.4 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3560 009 991 | -0.8 | 0.000 000 | 0.000 |
| | 100 % | +50 | 3560 009 988 | -4.1 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3560 009 983 | -8.3 | 0.000 000 | -0.002 |
| 3690.000 | 100 % | +20(Ref) | 3689 999 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3689 999 971 | -17.0 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3689 999 980 | -8.7 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3689 999 981 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3689 999 973 | -15.5 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3689 999 982 | -6.4 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3689 999 978 | -10.5 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3689 999 970 | -18.5 | -0.000 001 | -0.005 |
| | 100 % | +50 | 3689 999 969 | -19.1 | -0.000 001 | -0.005 |
| | Batt. Endpoint | +20 | 3689 999 979 | -9.7 | 0.000 000 | -0.003 |

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3565.020 | 100 % | +20(Ref) | 3565 019 996 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3565 019 984 | -12.6 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3565 019 985 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3565 019 986 | -10.4 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3565 019 992 | -4.5 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3565 019 996 | -0.7 | 0.000 000 | 0.000 |
| | 100 % | +30 | 3565 019 985 | -11.5 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3565 019 982 | -13.9 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3565 019 984 | -12.8 | 0.000 000 | -0.004 |
| | Batt. Endpoint | +20 | 3565 019 994 | -2.2 | 0.000 000 | -0.001 |
| 3.100 | 100 % | +20(Ref) | 3684 989 997 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3684 989 986 | -11.2 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3684 989 993 | -4.0 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3684 990 000 | 2.5 | 0.000 000 | 0.001 |
| | 100 % | 0 | 3684 989 988 | -9.3 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3684 989 982 | -15.2 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3684 989 976 | -21.0 | -0.000 001 | -0.006 |
| | 100 % | +40 | 3684 989 993 | -4.4 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3684 989 981 | -15.8 | 0.000 000 | -0.004 |
| | Batt. Endpoint | +20 | 3684 989 985 | -11.6 | 0.000 000 | -0.003 |

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3570.000 | 100 % | +20(Ref) | 3569 999 987 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3569 999 978 | -9.0 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3569 999 993 | 5.7 | 0.000 000 | 0.002 |
| | 100 % | -10 | 3569 999 983 | -3.5 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3569 999 977 | -9.6 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3569 999 986 | -1.4 | 0.000 000 | 0.000 |
| | 100 % | +30 | 3569 999 994 | 6.9 | 0.000 000 | 0.002 |
| | 100 % | +40 | 3569 999 987 | -0.1 | 0.000 000 | 0.000 |
| | 100 % | +50 | 3569 999 977 | -10.5 | 0.000 000 | -0.003 |
| | Batt. Endpoint | +20 | 3569 999 984 | -3.5 | 0.000 000 | -0.001 |
| 3679.980 | 100 % | +20(Ref) | 3679 979 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3679 979 983 | -7.7 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3679 979 986 | -5.3 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3679 979 978 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3679 979 986 | -5.2 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3679 979 989 | -1.9 | 0.000 000 | -0.001 |
| | 100 % | +30 | 3679 979 982 | -8.5 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3679 979 983 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3679 979 973 | -17.7 | 0.000 000 | -0.005 |
| | Batt. Endpoint | +20 | 3679 979 986 | -5.4 | 0.000 000 | -0.001 |

## FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE(ANT 0)

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3555.000 | 100 % | +20(Ref) | 3554 999 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3554 999 978 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3554 999 979 | -9.7 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3554 999 976 | -13.0 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3554 999 982 | -6.8 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3554 999 973 | -15.7 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3554 999 980 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3554 999 983 | -5.7 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3554 999 986 | -2.4 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3554 999 981 | -8.1 | 0.000 000 | -0.002 |
| 3694.980 | 100 % | +20(Ref) | 3694 979 993 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3694 979 974 | -19.1 | -0.000 001 | -0.005 |
| | 100 % | -20 | 3694 979 985 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3694 979 978 | -15.2 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3694 979 985 | -8.0 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3694 979 984 | -8.5 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3694 979 982 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3694 979 978 | -15.0 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3694 979 978 | -14.3 | 0.000 000 | -0.004 |
| | Batt. Endpoint | +20 | 3694 979 978 | -14.5 | 0.000 000 | -0.004 |

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3560.010 | 100 % | +20(Ref) | 3560 009 996 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3560 009 985 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3560 009 988 | -8.2 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3560 009 989 | -7.0 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3560 009 990 | -6.0 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3560 009 991 | -5.2 | 0.000 000 | -0.001 |
| | 100 % | +30 | 3560 009 990 | -6.5 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3560 009 995 | -1.3 | 0.000 000 | 0.000 |
| | 100 % | +50 | 3560 009 990 | -6.1 | 0.000 000 | -0.002 |
| | Batt. Endpoint | +20 | 3560 009 978 | -18.5 | -0.000 001 | -0.005 |
| 3690.000 | 100 % | +20(Ref) | 3690 000 001 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3689 999 995 | -5.6 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3690 000 004 | 3.1 | 0.000 000 | 0.001 |
| | 100 % | -10 | 3689 999 995 | -5.7 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3689 999 992 | -8.2 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3690 000 002 | 1.2 | 0.000 000 | 0.000 |
| | 100 % | +30 | 3689 999 999 | -1.8 | 0.000 000 | 0.000 |
| | 100 % | +40 | 3689 999 990 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3690 000 005 | 4.4 | 0.000 000 | 0.001 |
| | Batt. Endpoint | +20 | 3689 999 994 | -6.2 | 0.000 000 | -0.002 |

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3565.020 | 100 % | +20(Ref) | 3565 020 000 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3565 019 993 | -7.6 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3565 019 985 | -15.8 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3565 019 994 | -6.6 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3565 020 001 | 0.2 | 0.000 000 | 0.000 |
| | 100 % | +10 | 3565 019 992 | -8.1 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3565 019 997 | -3.6 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3565 019 998 | -2.5 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3565 019 992 | -8.2 | 0.000 000 | -0.002 |
| | Batt. Endpoint | +20 | 3565 020 000 | -0.4 | 0.000 000 | 0.000 |
| 3.100 | 100 % | +20(Ref) | 3684 989 996 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3684 989 982 | -14.1 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3684 989 992 | -3.5 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3684 989 985 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3684 989 985 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3684 989 987 | -8.7 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3684 989 987 | -8.5 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3684 989 985 | -11.1 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3684 989 993 | -2.7 | 0.000 000 | -0.001 |
| | Batt. Endpoint | +20 | 3684 989 984 | -11.2 | 0.000 000 | -0.003 |

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.300 VDC

▣ Batt. Endpoint: 3.135 VDC

▣ LIMIT: Emission must remain in band

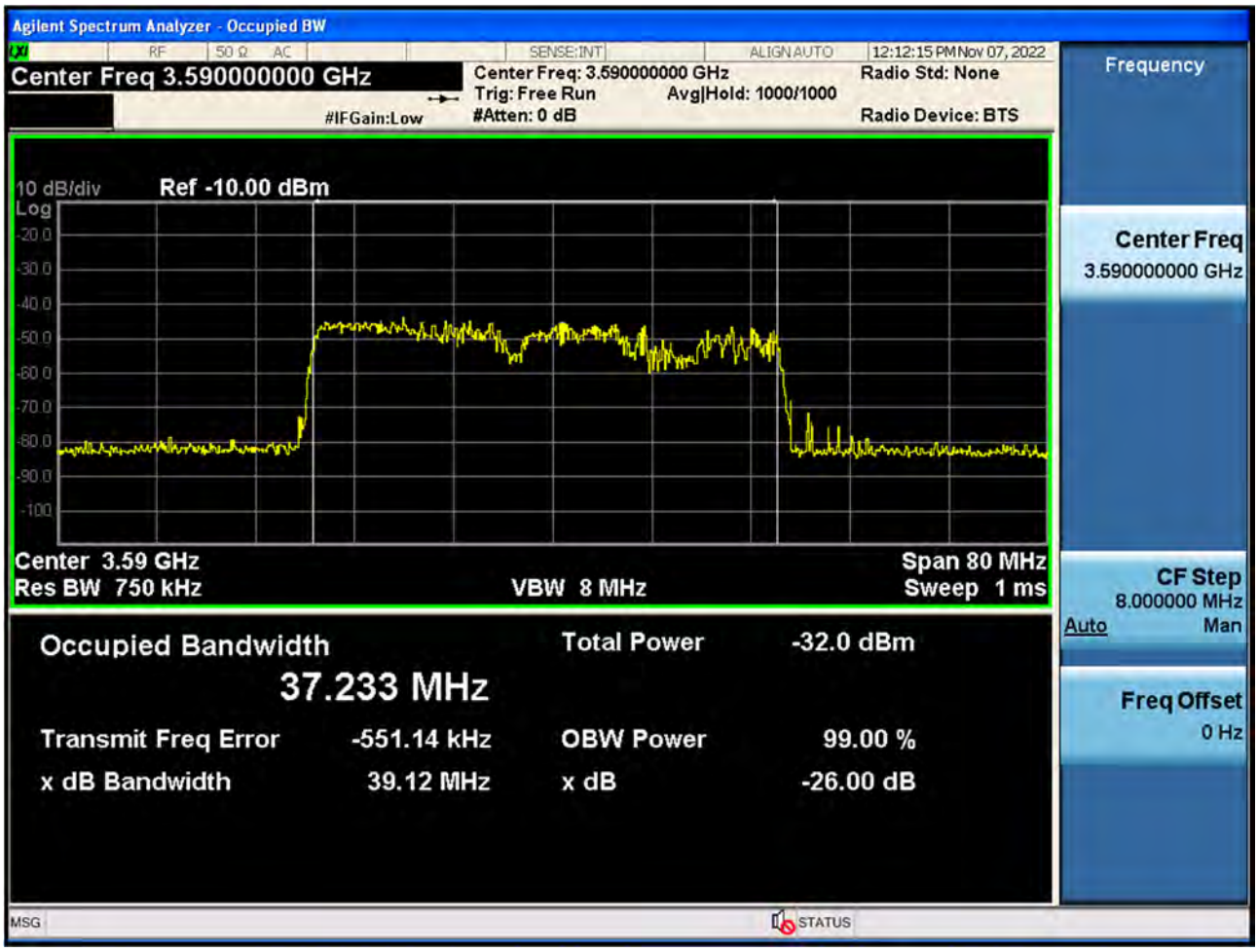
| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3570.000 | 100 % | +20(Ref) | 3570 000 000 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3569 999 998 | -1.3 | 0.000 000 | 0.000 |
| | 100 % | -20 | 3569 999 995 | -4.4 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3569 999 996 | -3.4 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3569 999 998 | -2.0 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3569 999 994 | -5.5 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3569 999 996 | -4.0 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3569 999 993 | -6.8 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3569 999 986 | -13.5 | 0.000 000 | -0.004 |
| | Batt. Endpoint | +20 | 3569 999 990 | -9.7 | 0.000 000 | -0.003 |
| 3679.980 | 100 % | +20(Ref) | 3679 979 985 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3679 979 977 | -8.0 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3679 979 980 | -5.6 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3679 979 977 | -8.1 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3679 979 970 | -14.9 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3679 979 962 | -23.5 | -0.000 001 | -0.006 |
| | 100 % | +30 | 3679 979 980 | -5.2 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3679 979 965 | -20.0 | -0.000 001 | -0.005 |
| | 100 % | +50 | 3679 979 984 | -1.6 | 0.000 000 | 0.000 |
| | Batt. Endpoint | +20 | 3679 979 978 | -7.7 | 0.000 000 | -0.002 |

## 8.10. End User Device Additional Requirements (CBSD Protocol)

SISO (ANT 2, ANT 0) and MIMO operations were tested, and the worst case results were reported.

(Worst case: MIMO)

**Test#1: 3590 MHz(BW: 40 MHz)**



**Stop Operation Within 10 s**

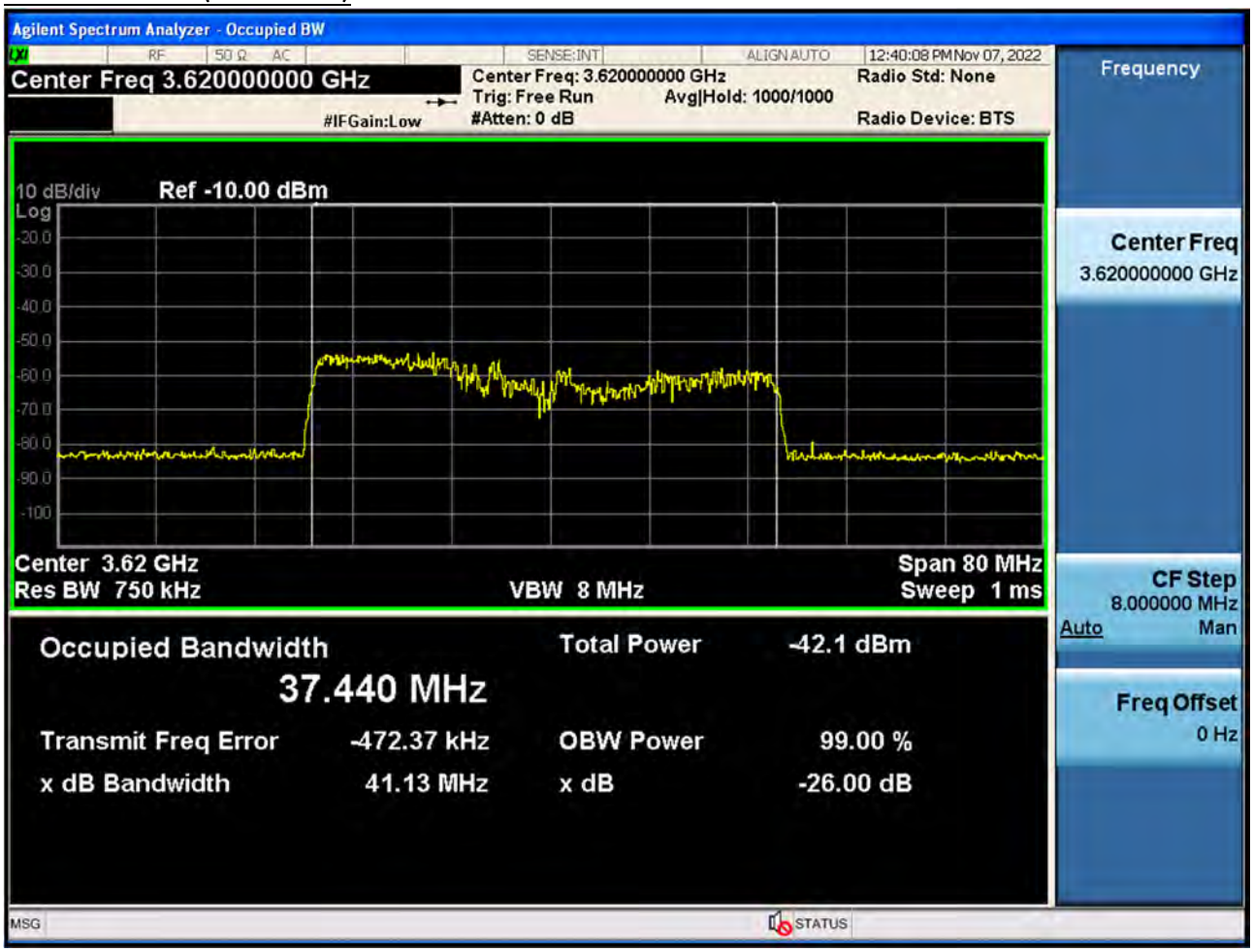

**Note:**

Marker 2: CBSD sends instructions to discontinue NR n48 operations.

Marker 1△2: EUT discontinues operation. (300 ms)

Marker 3△4: 10 seconds elapsed time from CBSD sending instructions to EUT.(10.0 s)

Test#2: 3620 MHz(BW: 40 MHz)



**Stop Operation Within 10 s**


**Note:**

Marker 2: CBSD sends instructions to discontinue NR n48 operations.

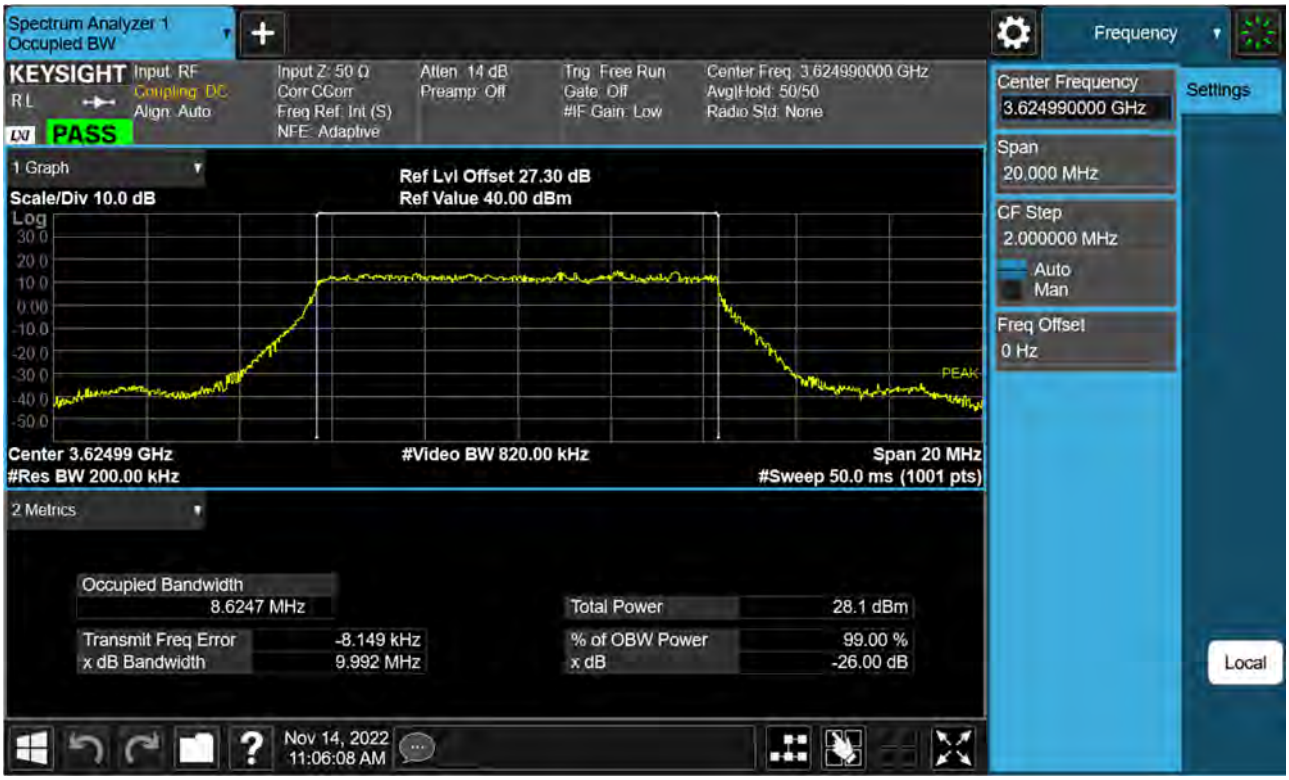
Marker 1△2: EUT discontinues operation. (360 ms)

Marker 3△4: 10 seconds elapsed time from CBSD sending instructions to EUT.(10.0 s)

# 9. TEST PLOTS

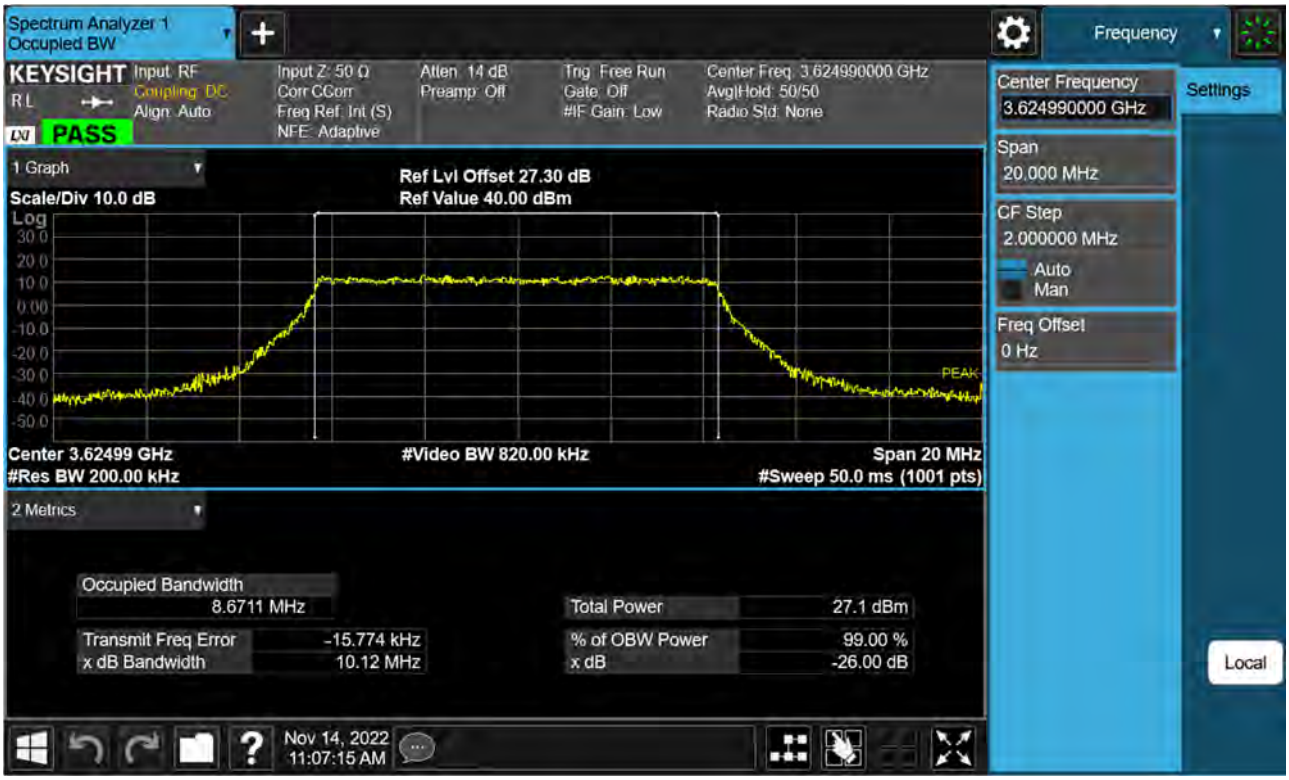
## 9.1 ANT 2

Sub6 n48. Occupied Bandwidth Plot (10 MHz Ch. 641666 BPSK RB 24)

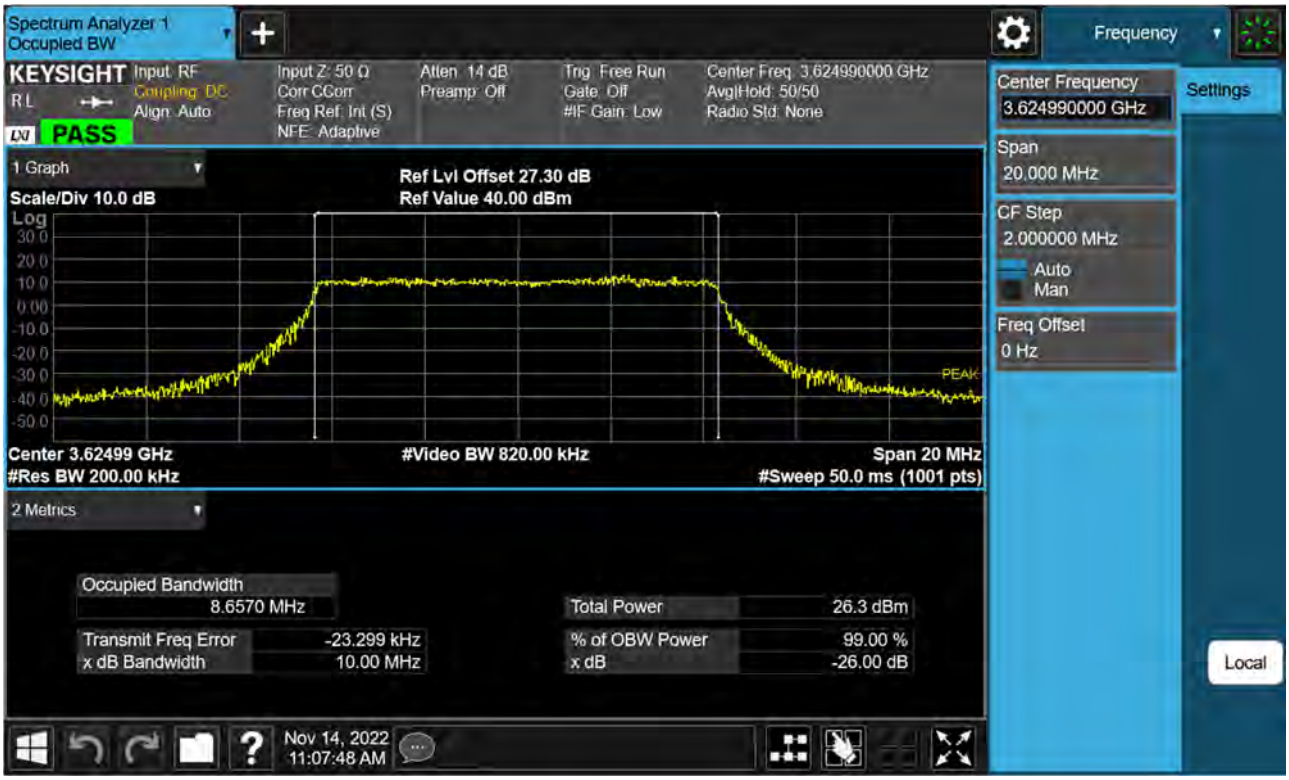


Sub6 n48. Occupied Bandwidth Plot (10 MHz Ch. 641666 QPSK RB 24)

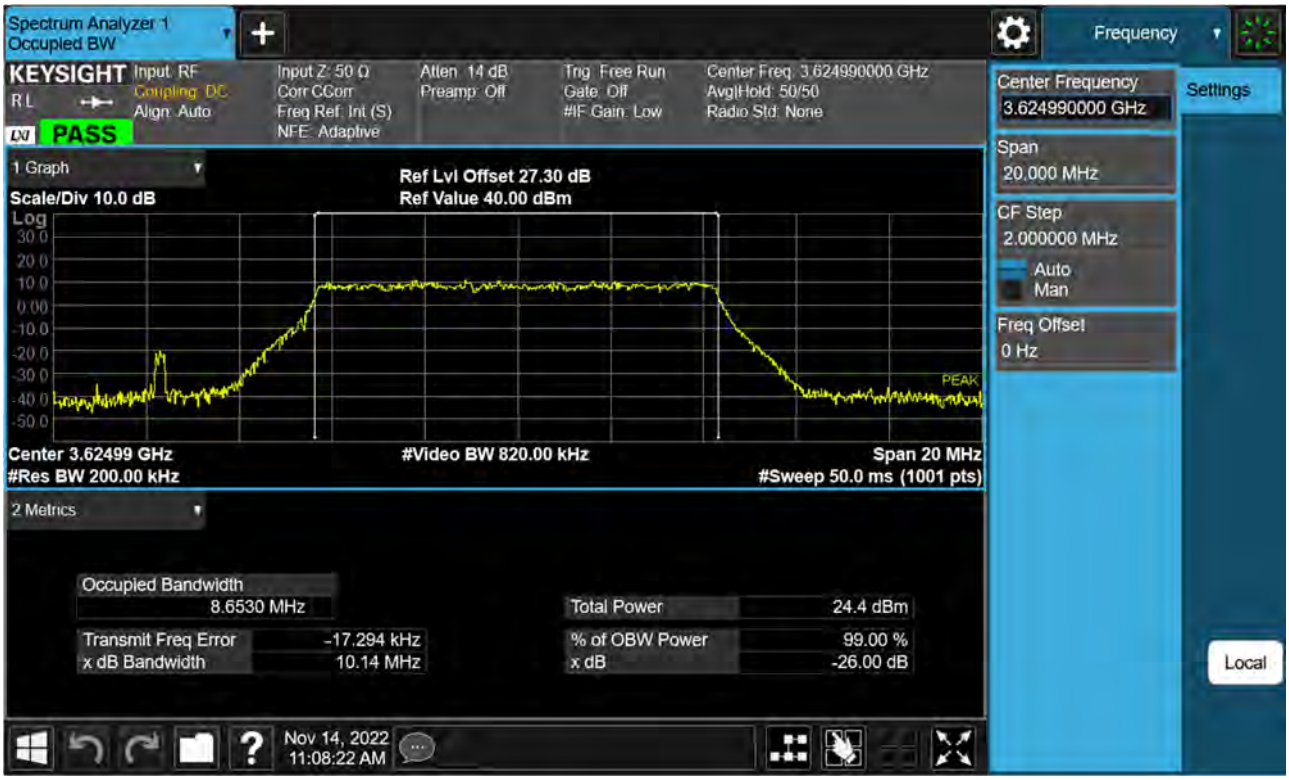
Sub6 n48. Occupied Bandwidth Plot (10 MHz Ch.641666 16-QAM RB 24)



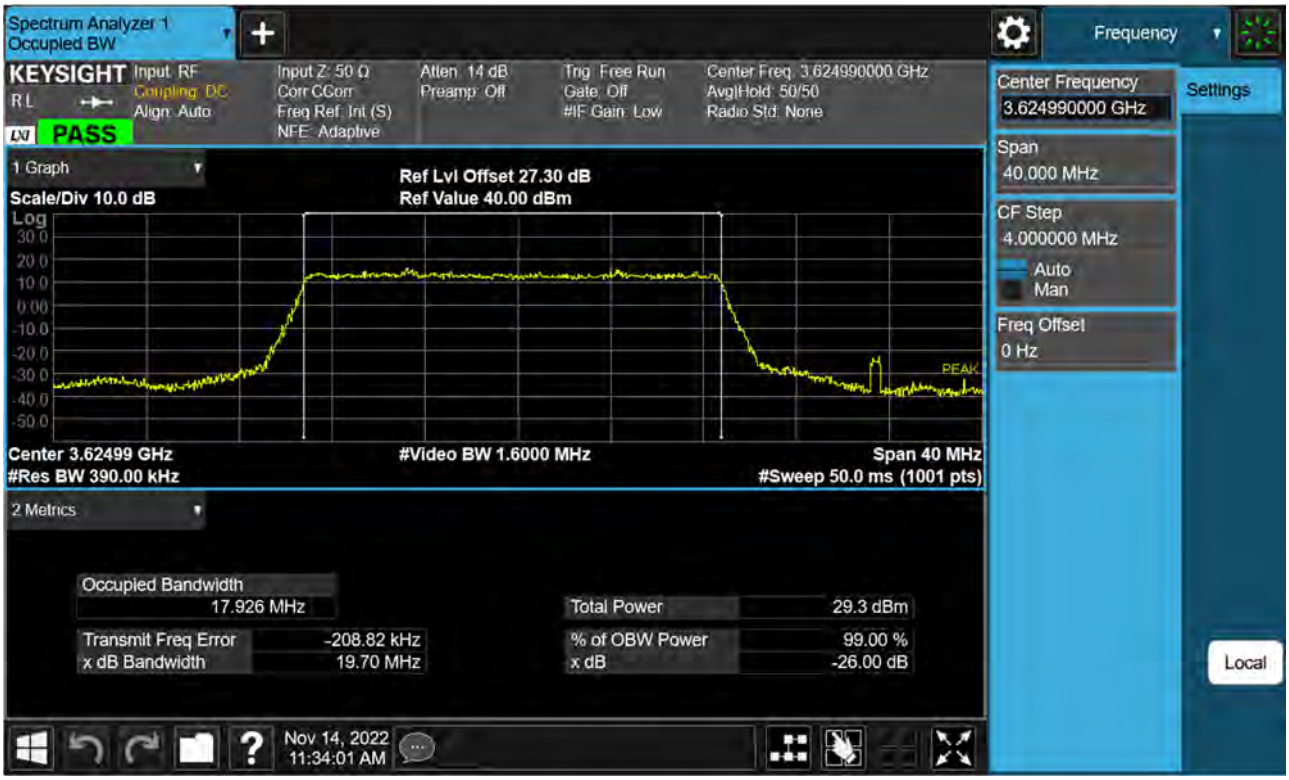
Sub6 n48. Occupied Bandwidth Plot (10 MHz Ch.641666 64-QAM RB 24)



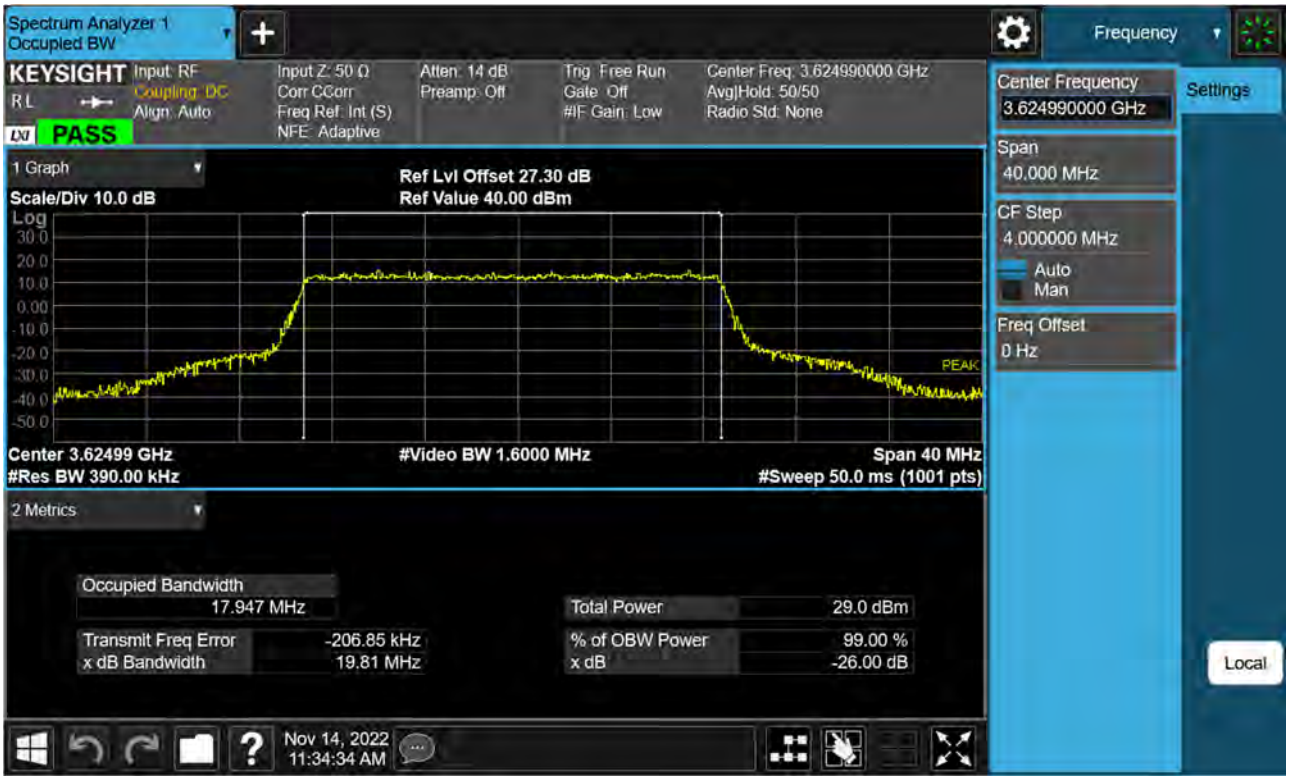
Sub6 n48. Occupied Bandwidth Plot (10 MHz Ch.641666 256-QAM RB 24)



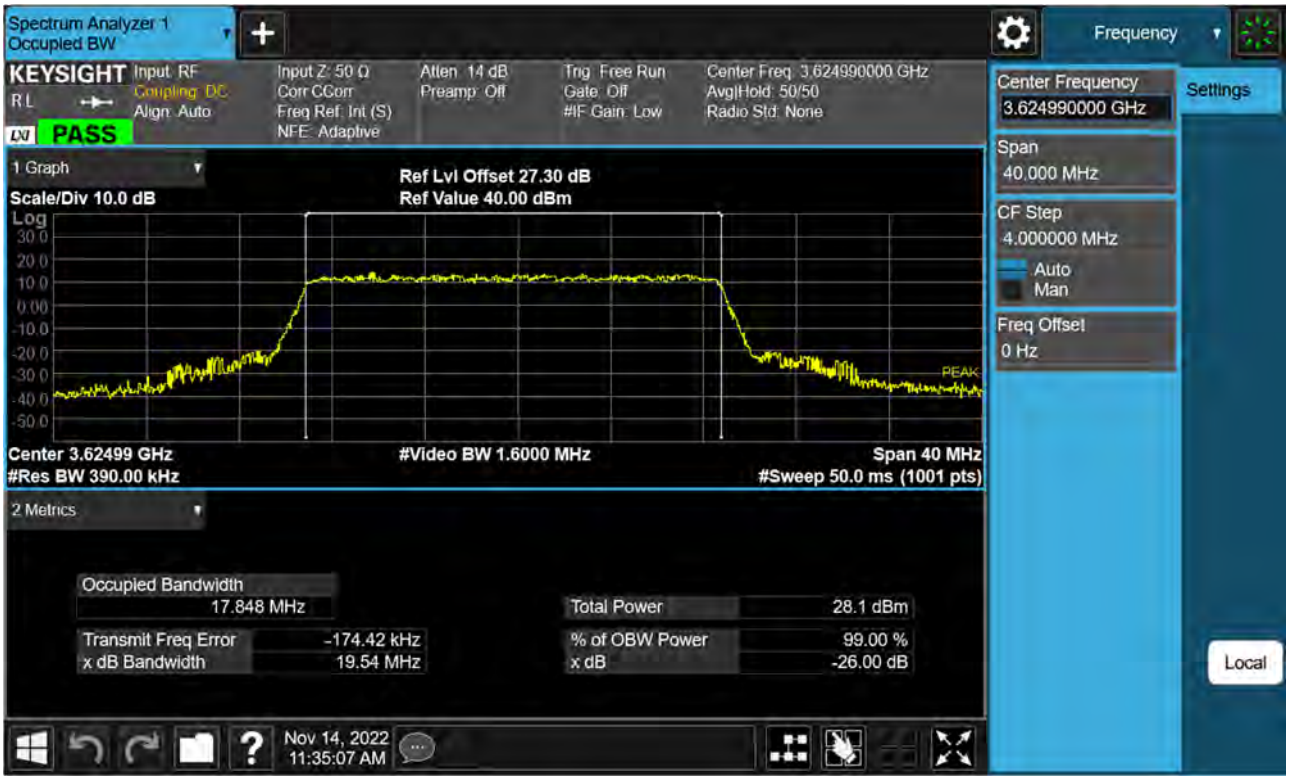
Sub6 n48. Occupied Bandwidth Plot (20 MHz Ch. 641666 BPSK RB 50)



Sub6 n48. Occupied Bandwidth Plot (20 MHz Ch. 641666 QPSK RB 50)



Sub6 n48. Occupied Bandwidth Plot (20 MHz Ch.641666 16-QAM RB 50)



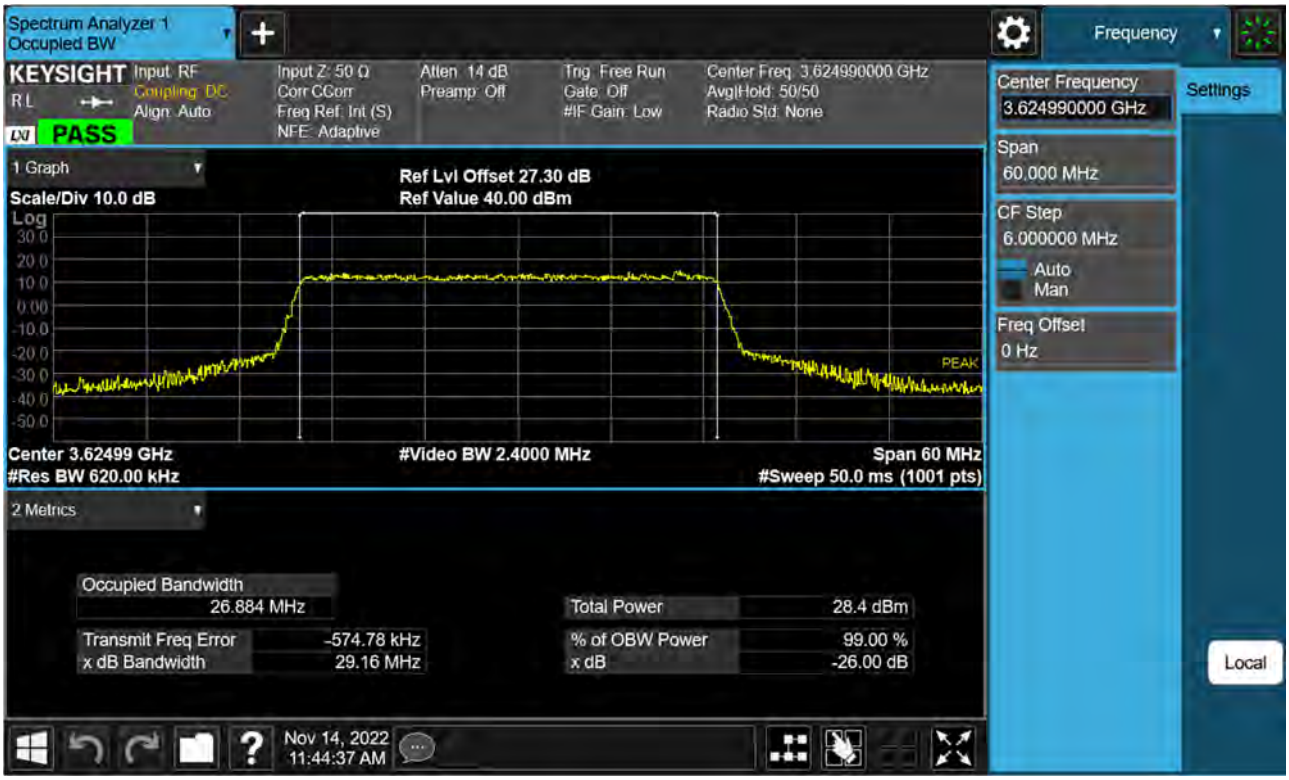
Sub6 n48. Occupied Bandwidth Plot (20 MHz Ch.641666 64-QAM RB 50)

Sub6 n48. Occupied Bandwidth Plot (20 MHz Ch.641666 256-QAM RB 50)

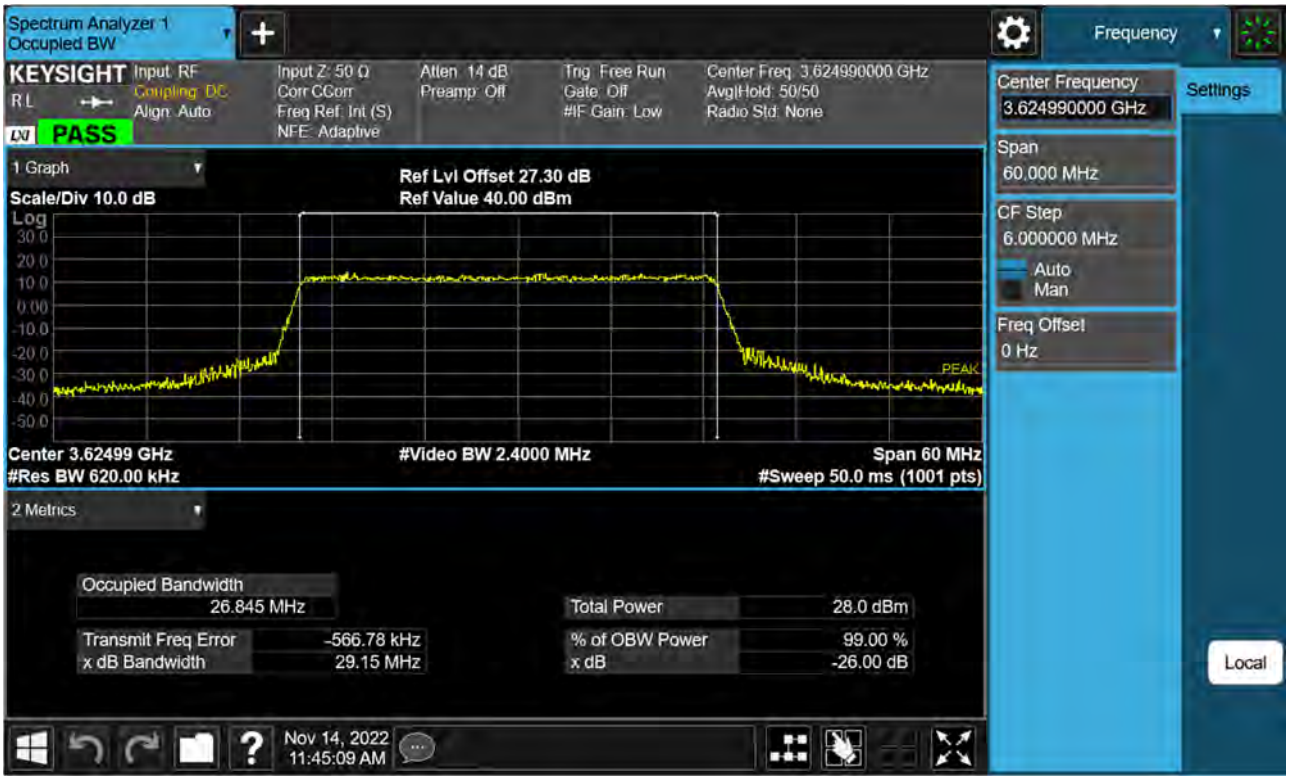
Sub6 n48. Occupied Bandwidth Plot (30 MHz Ch. 641666 BPSK RB 75)

Sub6 n48. Occupied Bandwidth Plot (30 MHz Ch. 641666 QPSK RB 75)

Sub6 n48. Occupied Bandwidth Plot (30 MHz Ch.641666 16-QAM RB 75)

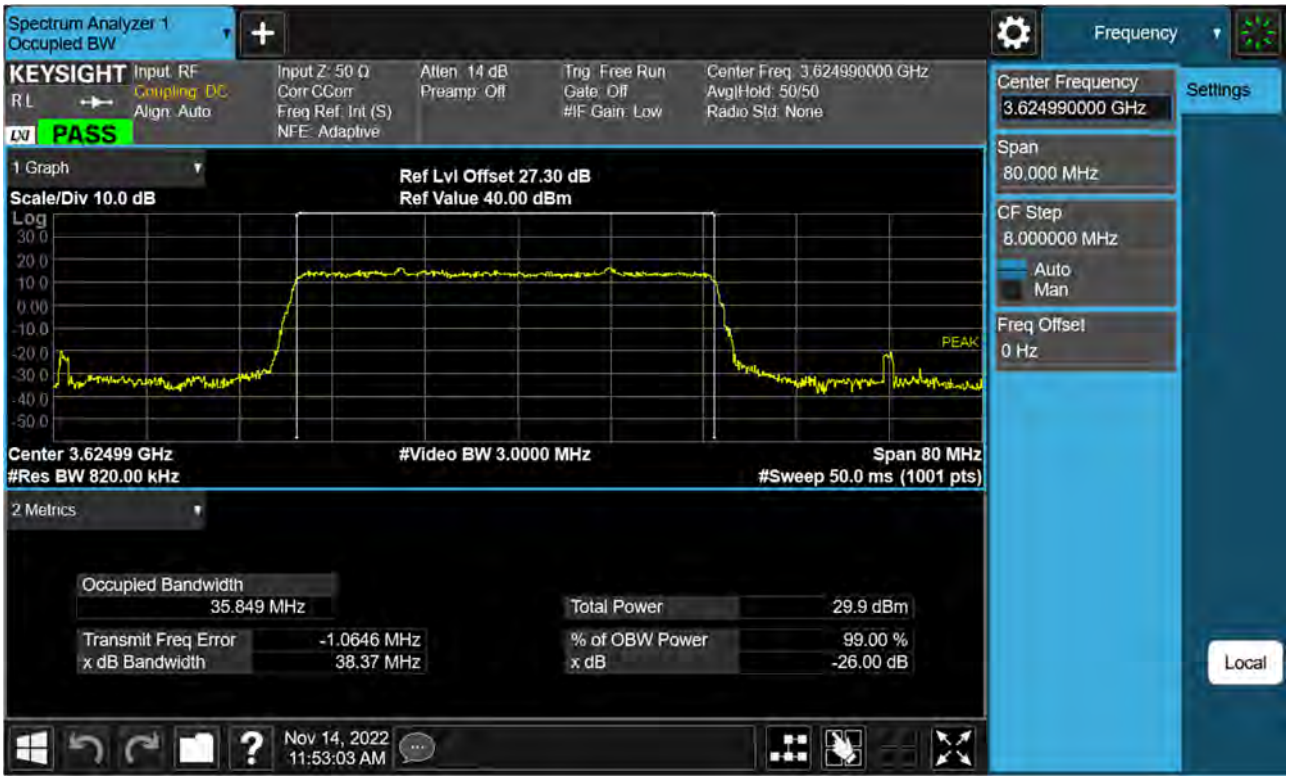


Sub6 n48. Occupied Bandwidth Plot (30 MHz Ch.641666 64-QAM RB 75)

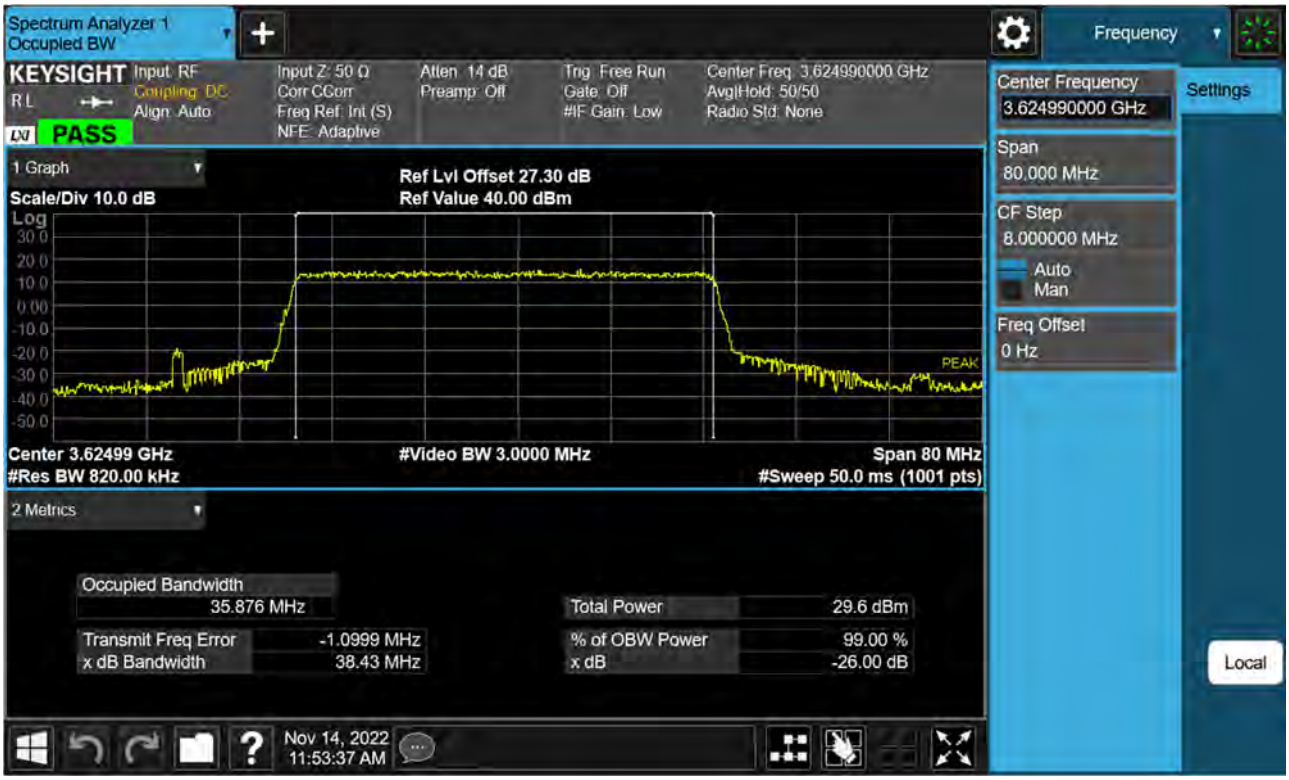


Sub6 n48. Occupied Bandwidth Plot (30 MHz Ch.641666 256-QAM RB 75)

Sub6 n48. Occupied Bandwidth Plot (40 MHz Ch. 641666 BPSK RB 100)



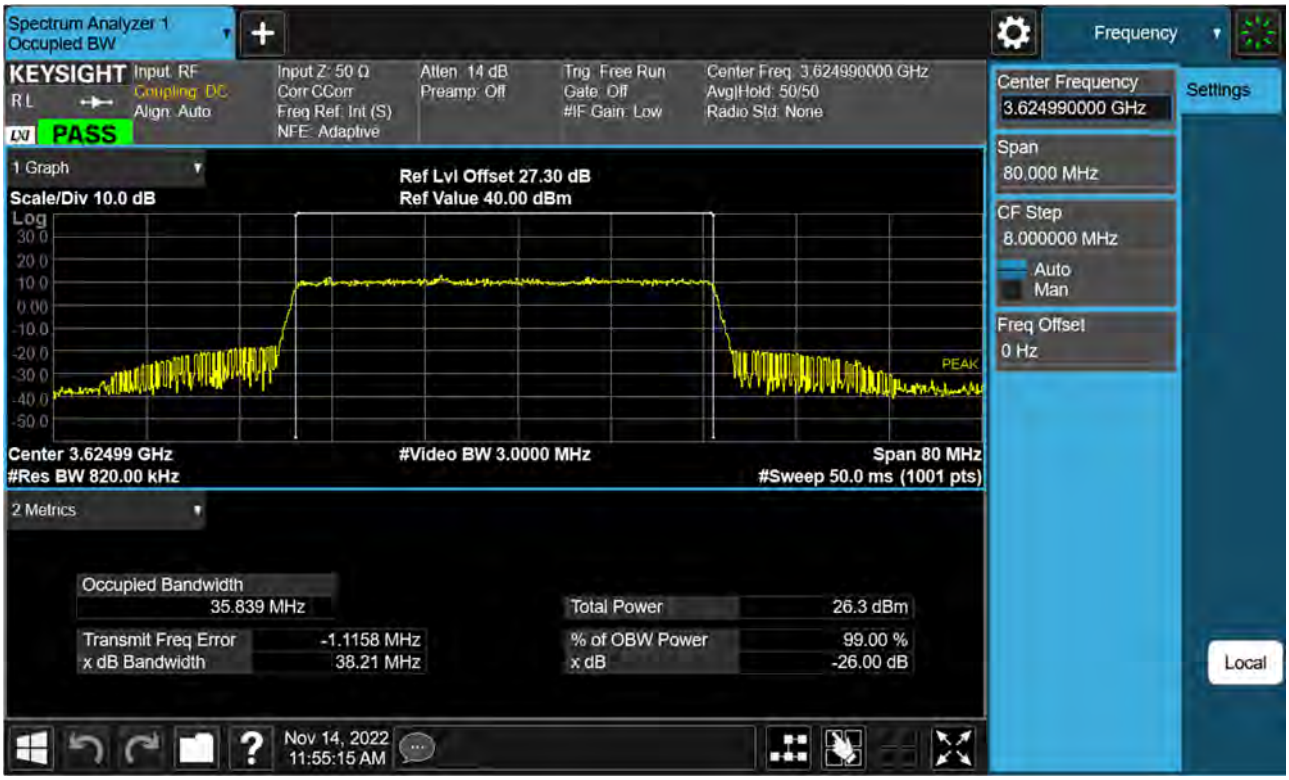
Sub6 n48. Occupied Bandwidth Plot (40 MHz Ch. 641666 QPSK RB 100)



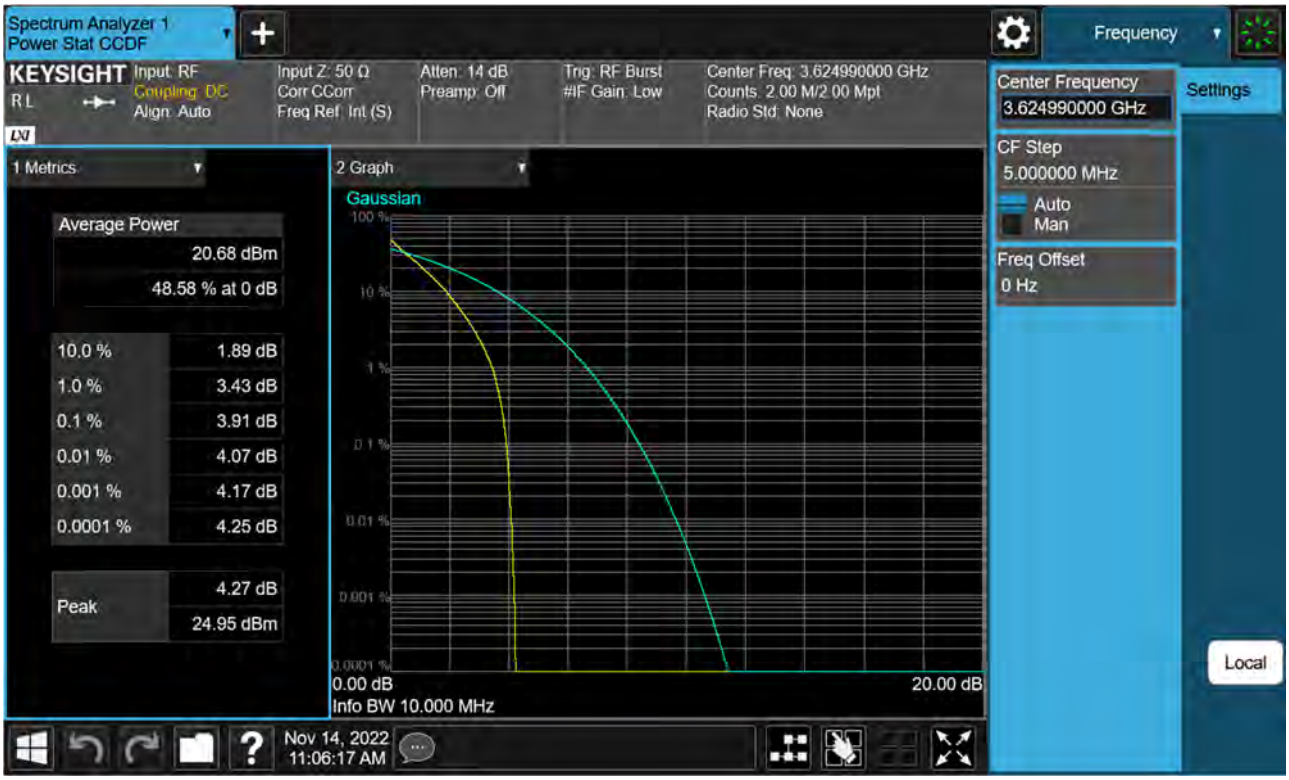
Sub6 n48. Occupied Bandwidth Plot (40 MHz Ch.641666 16-QAM RB 100)

Sub6 n48. Occupied Bandwidth Plot (40 MHz Ch.641666 64-QAM RB 100)

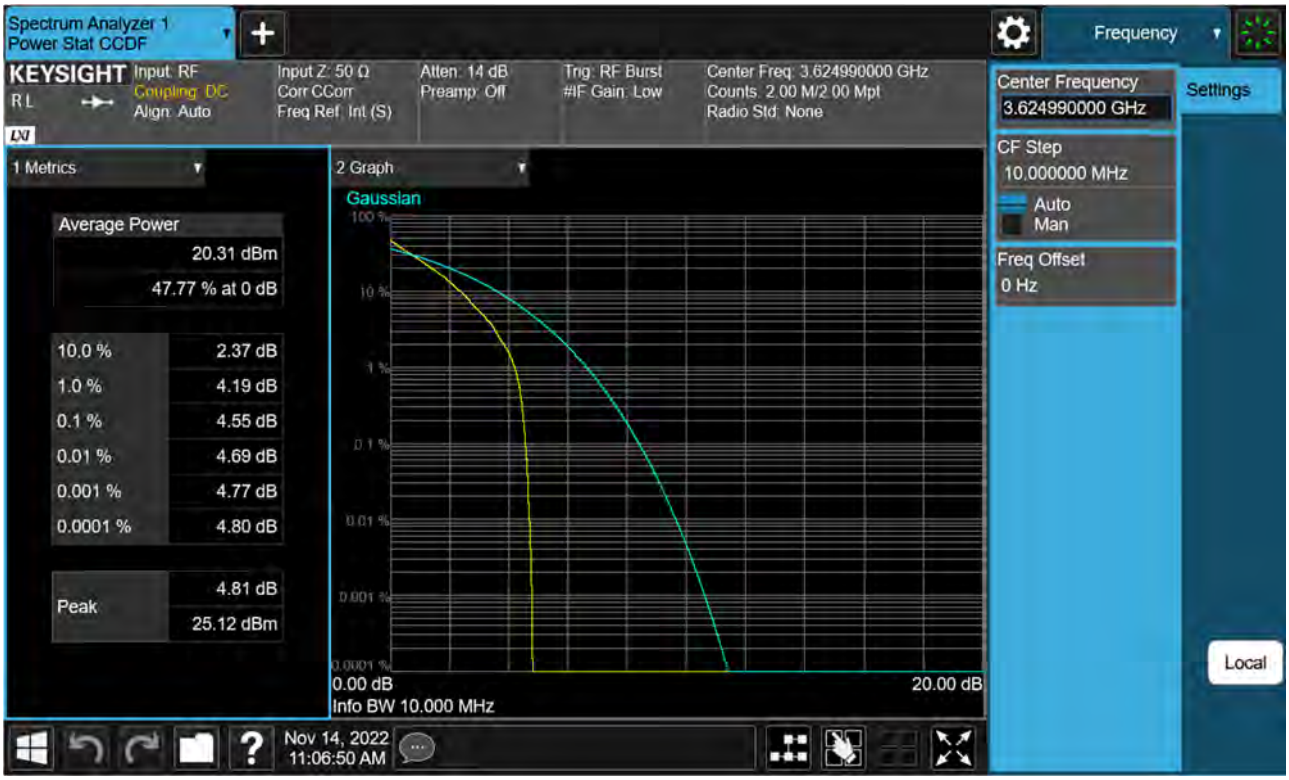
Sub6 n48. Occupied Bandwidth Plot (40 MHz Ch.641666 256-QAM RB 100)



Sub6 n48. PAR Plot (10 MHz Ch. 641666 BPSK RB 24)



Sub6 n48. PAR Plot (10 MHz Ch. 641666 QPSK RB 24)

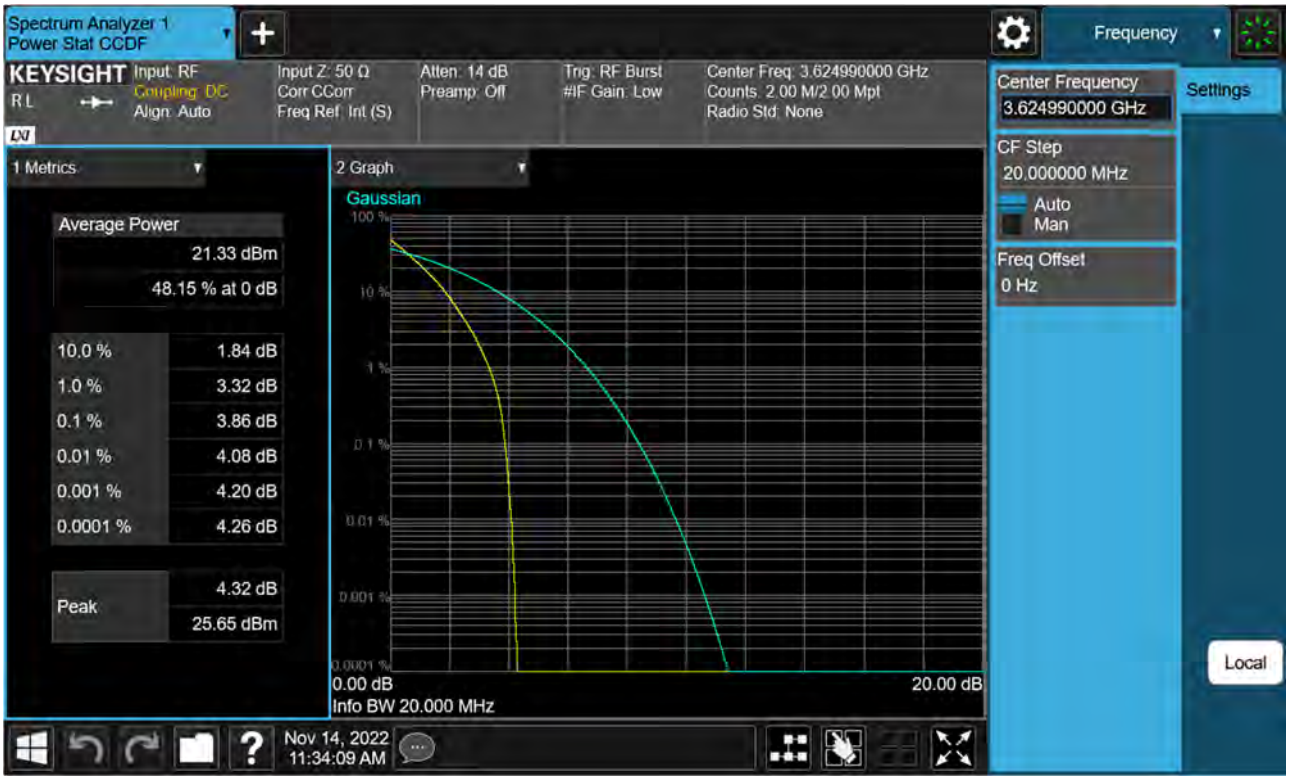


Sub6 n48. PAR Plot (10 MHz Ch.641666 16-QAM RB 24)

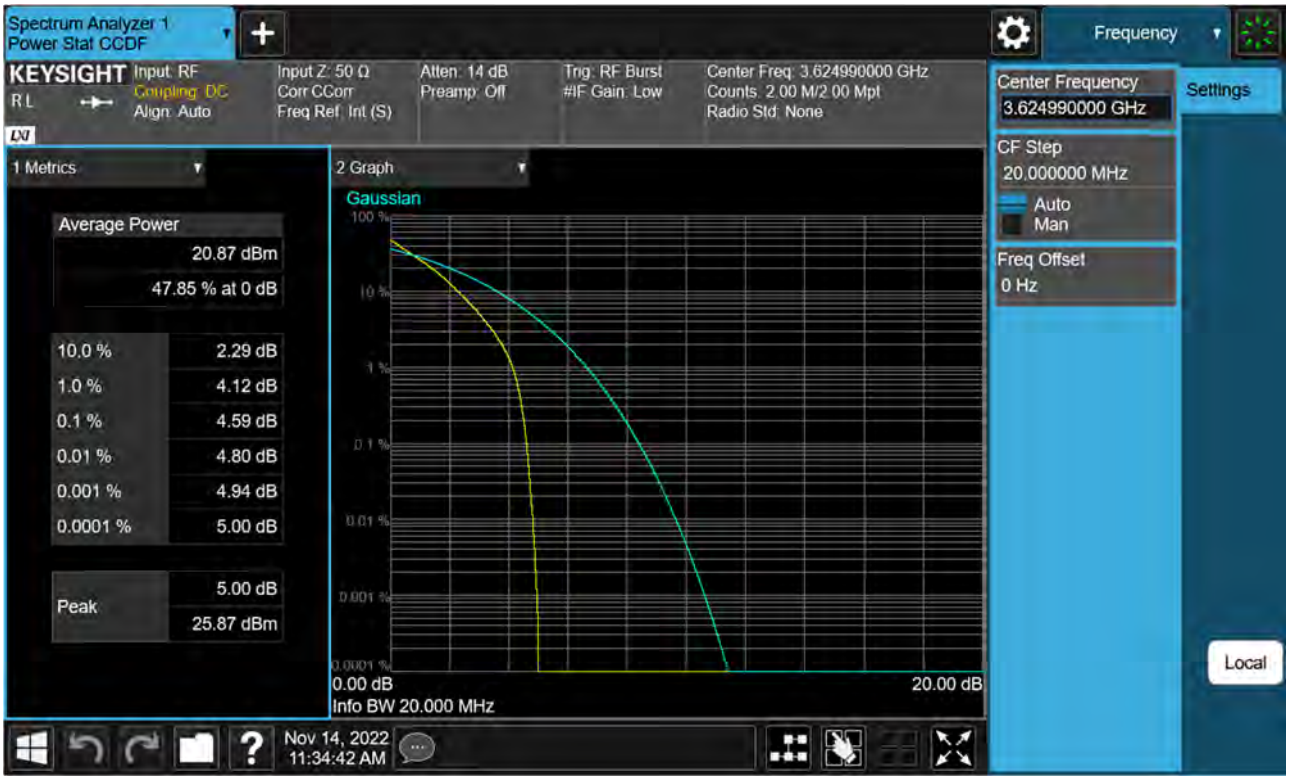
Sub6 n48. PAR Plot (10 MHz Ch.641666 64-QAM RB 24)

Sub6 n48. PAR Plot (10 MHz Ch.641666 256-QAM RB 24)

Sub6 n48. PAR Plot (20 MHz Ch. 641666 BPSK RB 50)



Sub6 n48. PAR Plot (20 MHz Ch. 641666 QPSK RB 50)

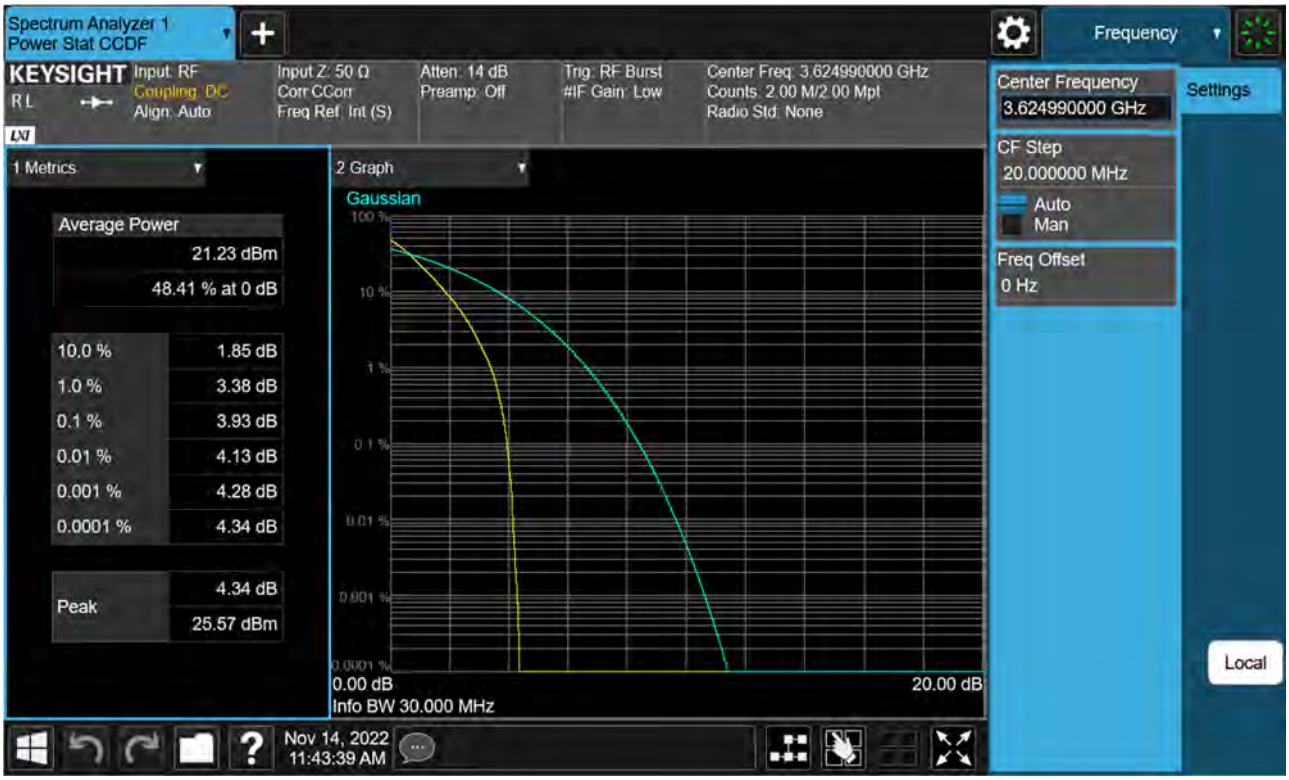


Sub6 n48. PAR Plot (20 MHz Ch.641666 16-QAM RB 50)

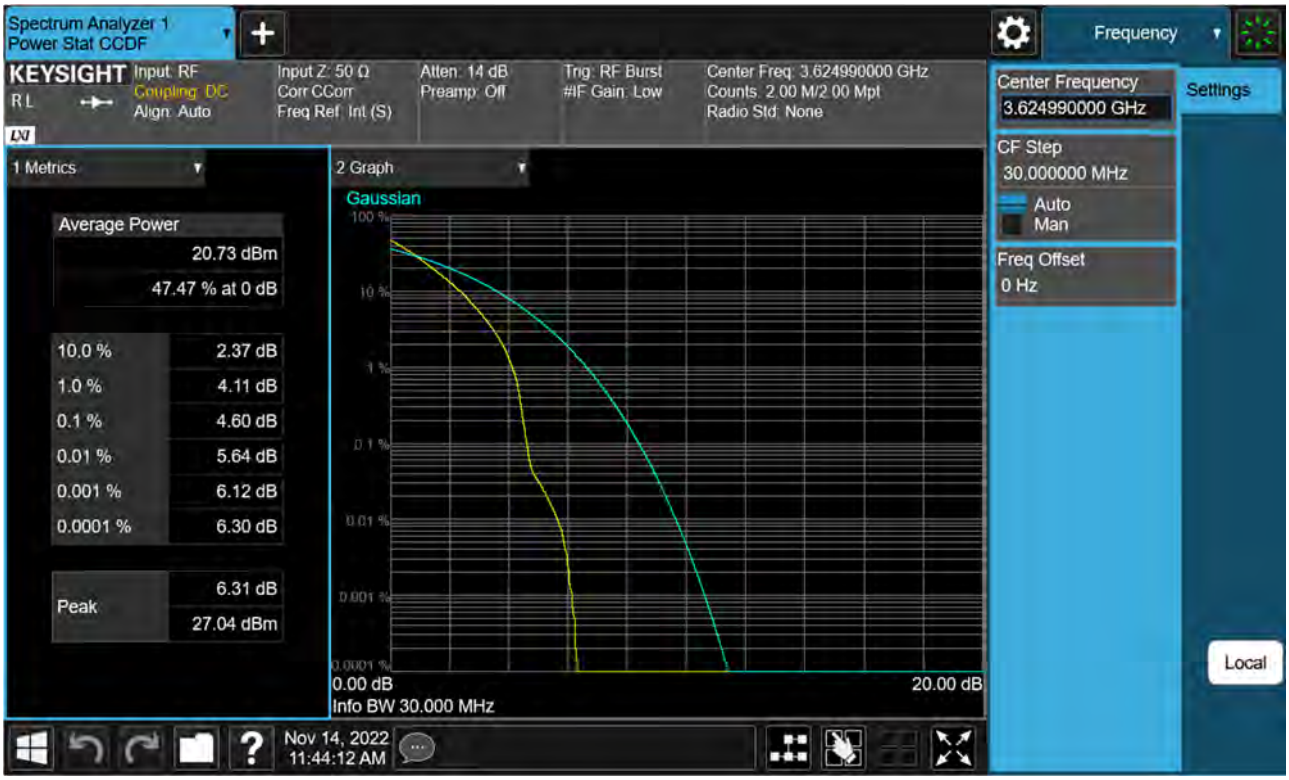
Sub6 n48. PAR Plot (20 MHz Ch.641666 64-QAM RB 50)

Sub6 n48. PAR Plot (20 MHz Ch.641666 256-QAM RB 50)

Sub6 n48. PAR Plot (30 MHz Ch. 641666 BPSK RB 75)



Sub6 n48. PAR Plot (30 MHz Ch. 641666 QPSK RB 75)



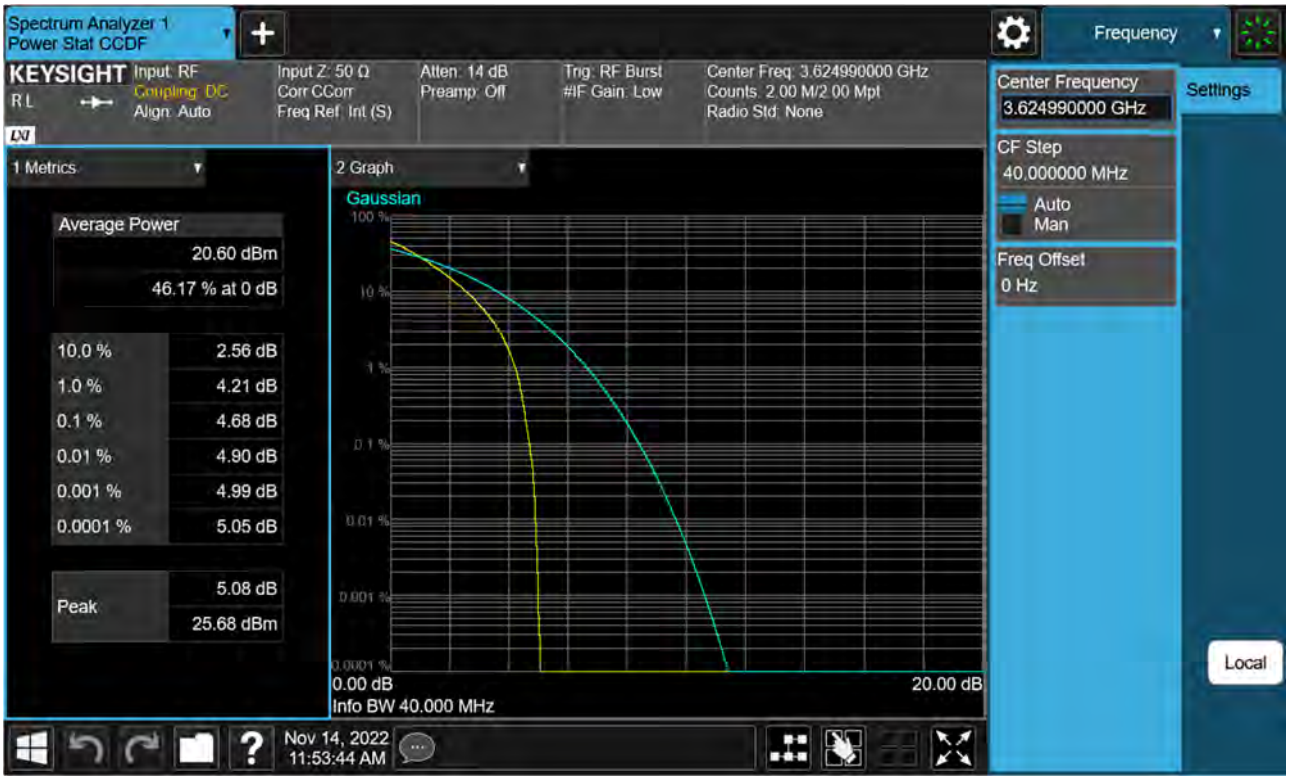
Sub6 n48. PAR Plot (30 MHz Ch.641666 16-QAM RB 75)

Sub6 n48. PAR Plot (30 MHz Ch.641666 64-QAM RB 75)

Sub6 n48. PAR Plot (30 MHz Ch.641666 256-QAM RB 75)

Sub6 n48. PAR Plot (40 MHz Ch. 641666 BPSK RB 100)

Sub6 n48. PAR Plot (40 MHz Ch. 641666 QPSK RB 100)

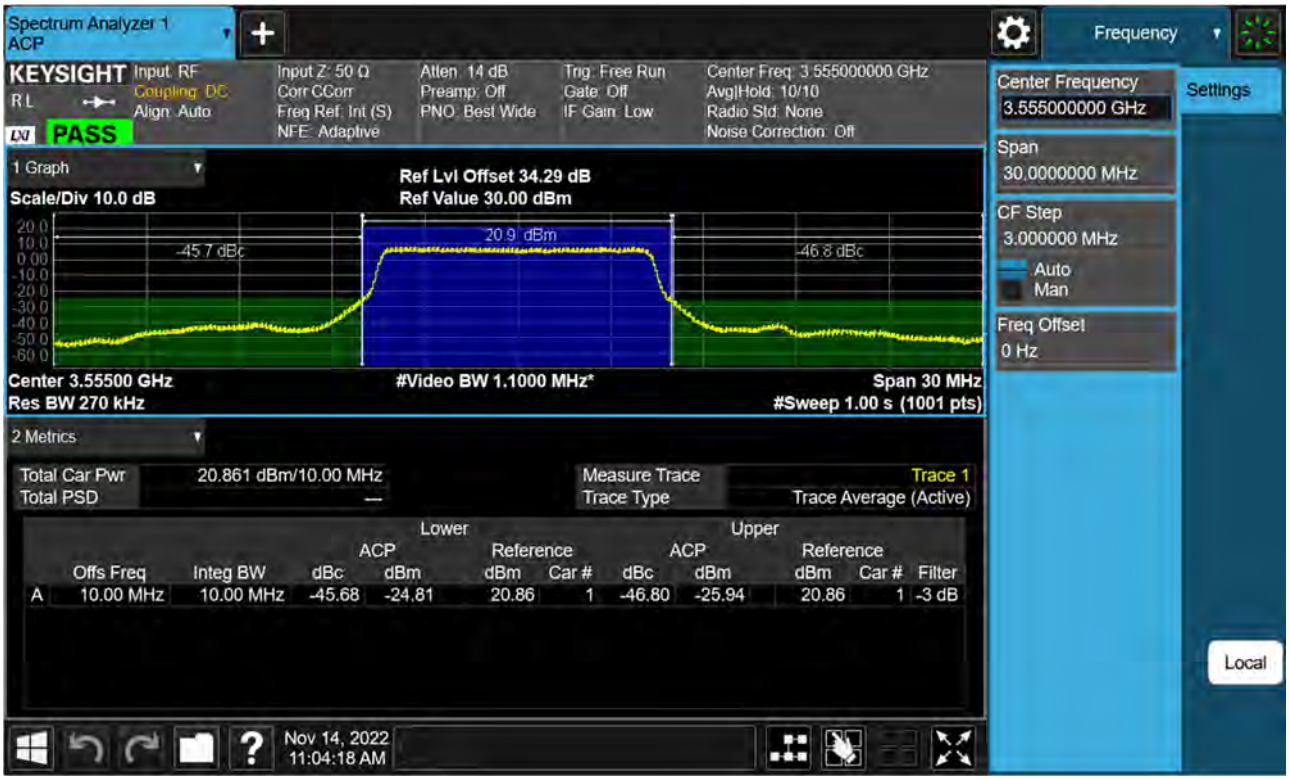


Sub6 n48. PAR Plot (40 MHz Ch.641666 16-QAM RB 100)

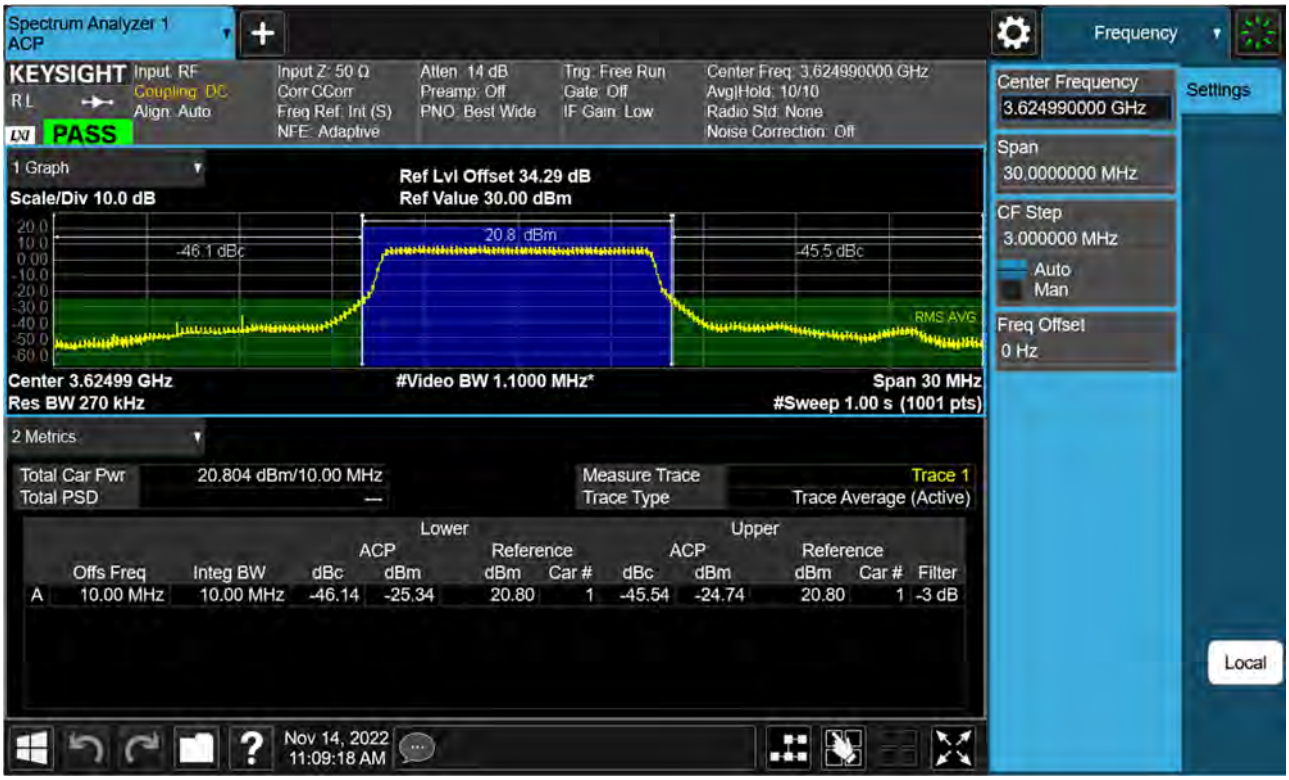
Sub6 n48. PAR Plot (40 MHz Ch.641666 64-QAM RB 100)

Sub6 n48. PAR Plot (40 MHz Ch.641666 256-QAM RB 100)

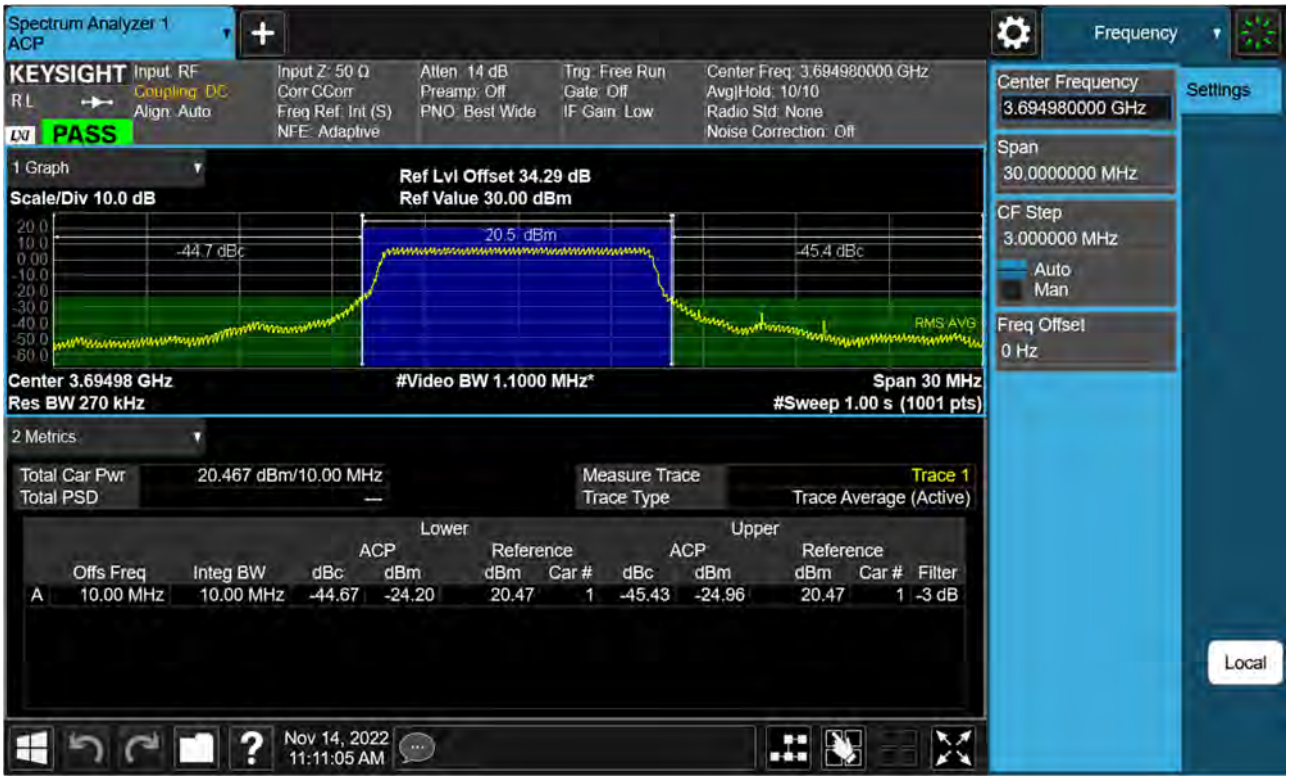
Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (10 MHz Ch.637000 BPSK RB 24, Offset 0)



Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (10 MHz Ch.641666 BPSK RB 24, Offset 0)

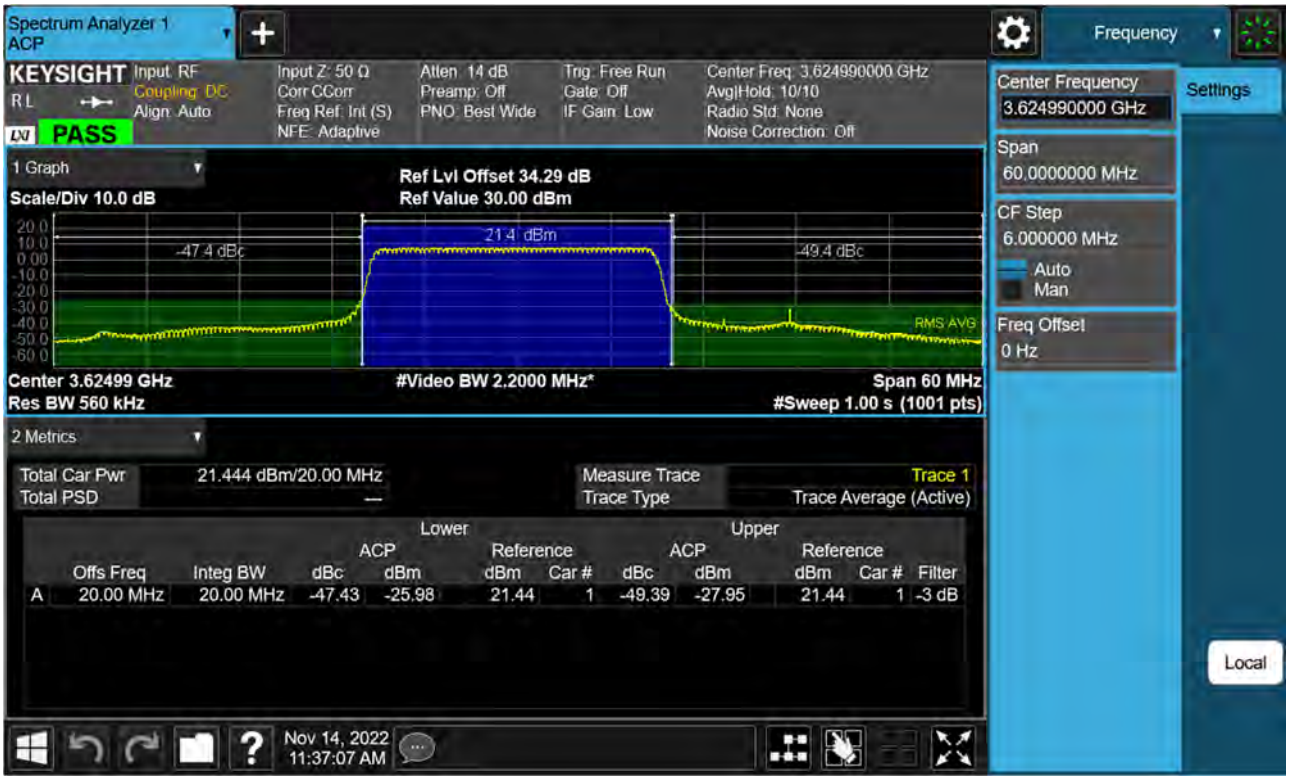


Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (10 MHz Ch.646332 BPSK RB 24, Offset 0)

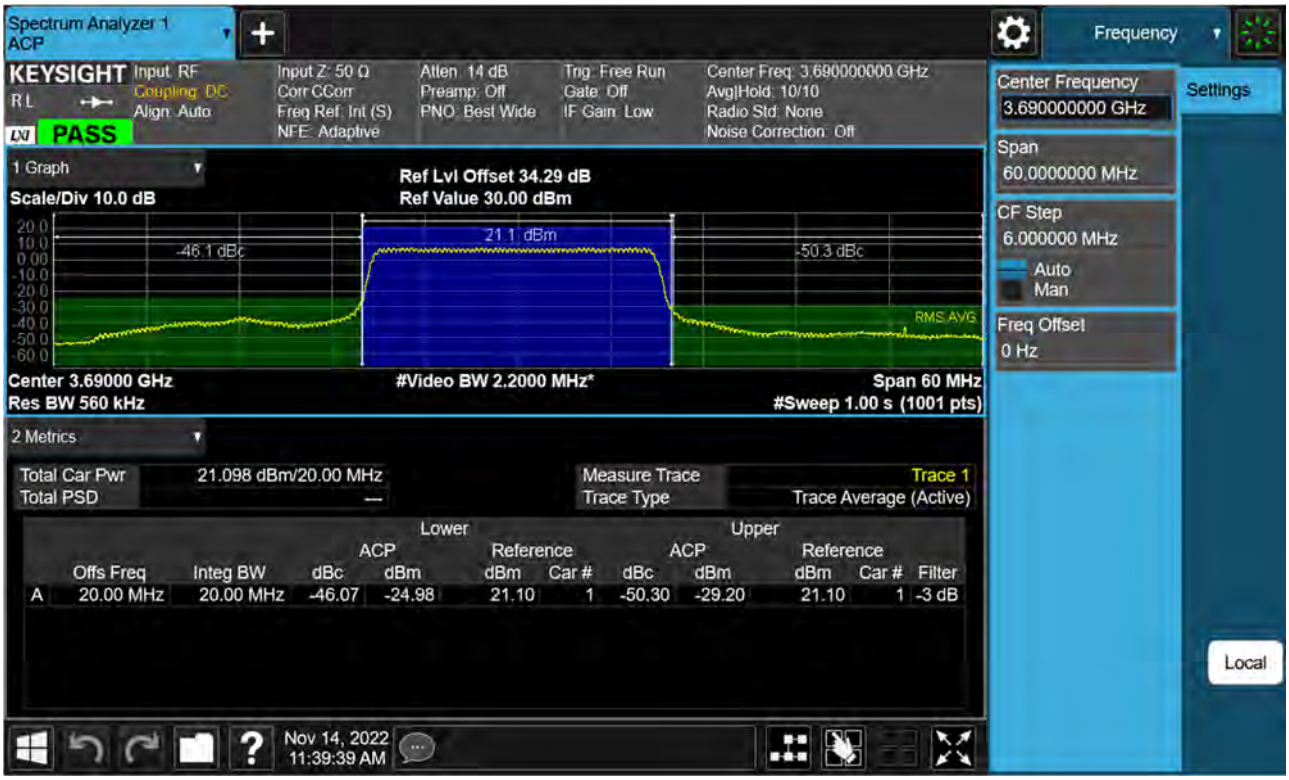


Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (20 MHz Ch.637334 BPSK RB 50, Offset 0)

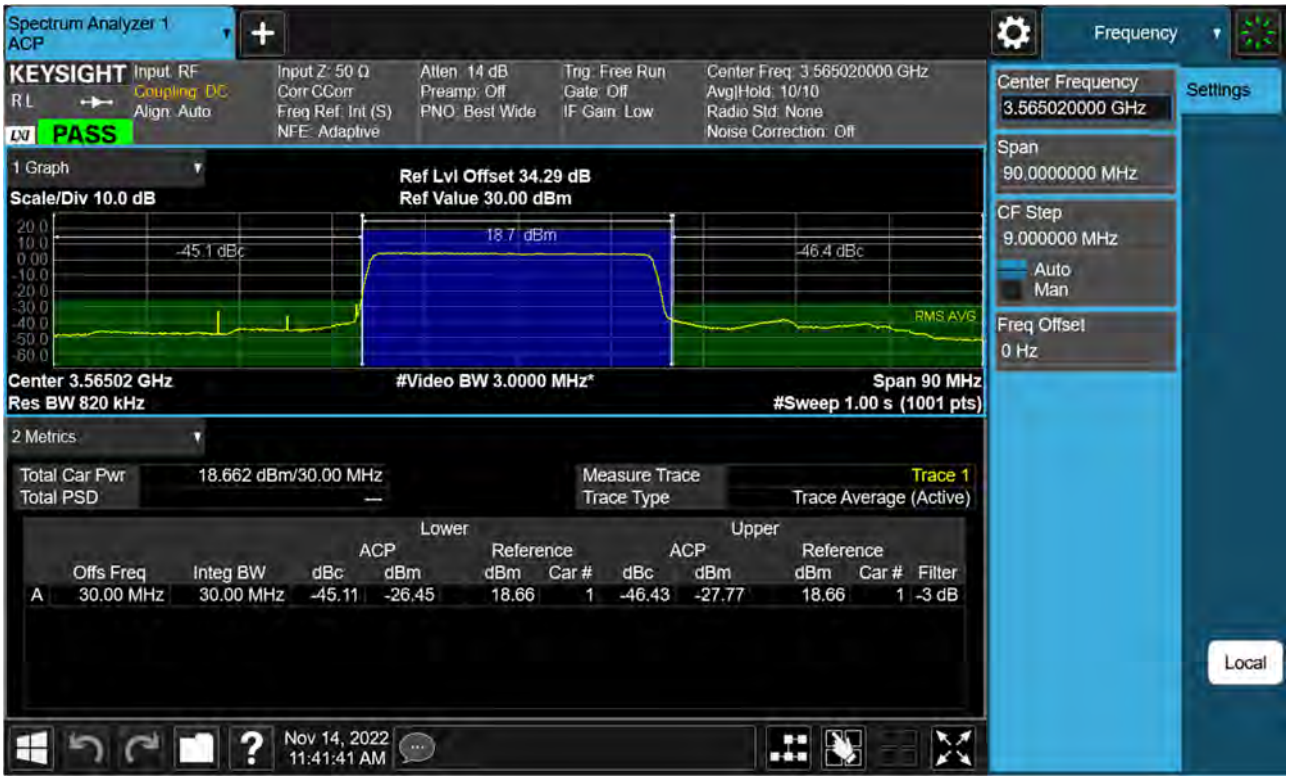
Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (20 MHz Ch.641666 BPSK RB 50, Offset 0)



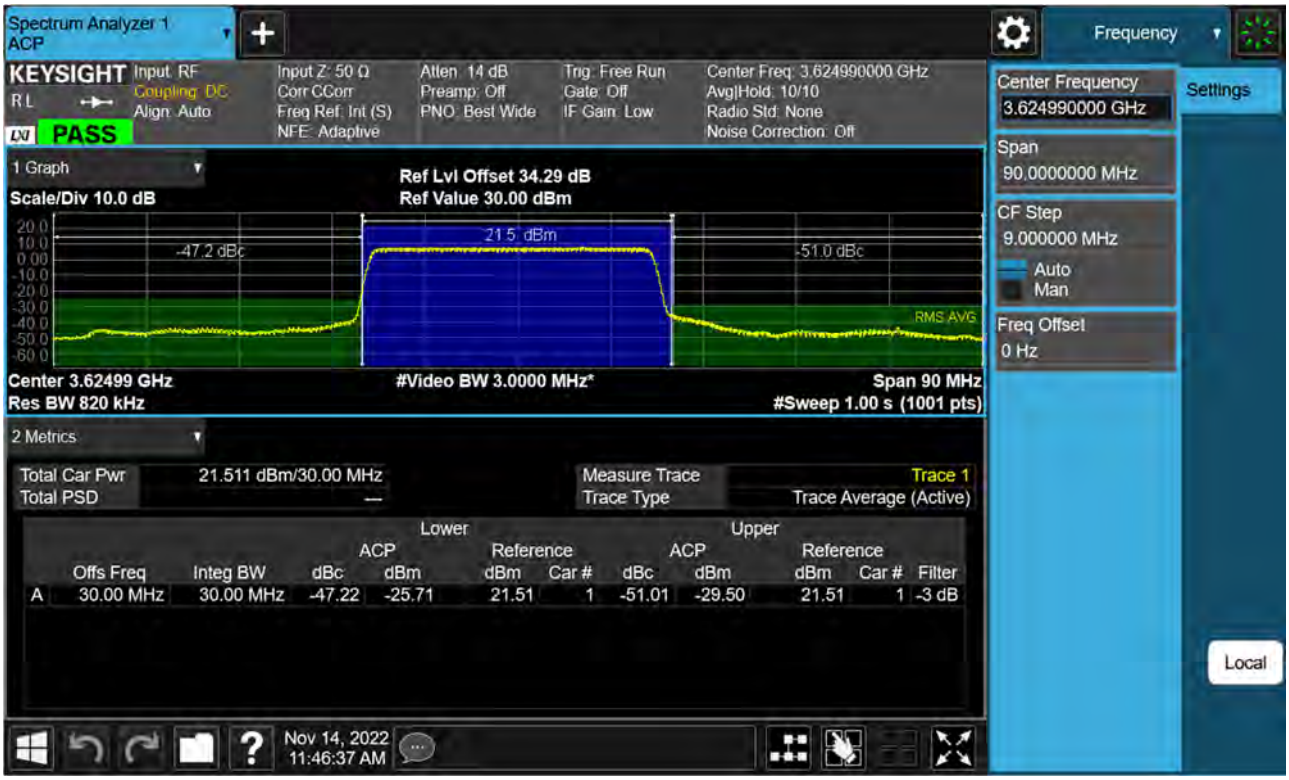
Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (20 MHz Ch.646000 BPSK RB 50, Offset 0)



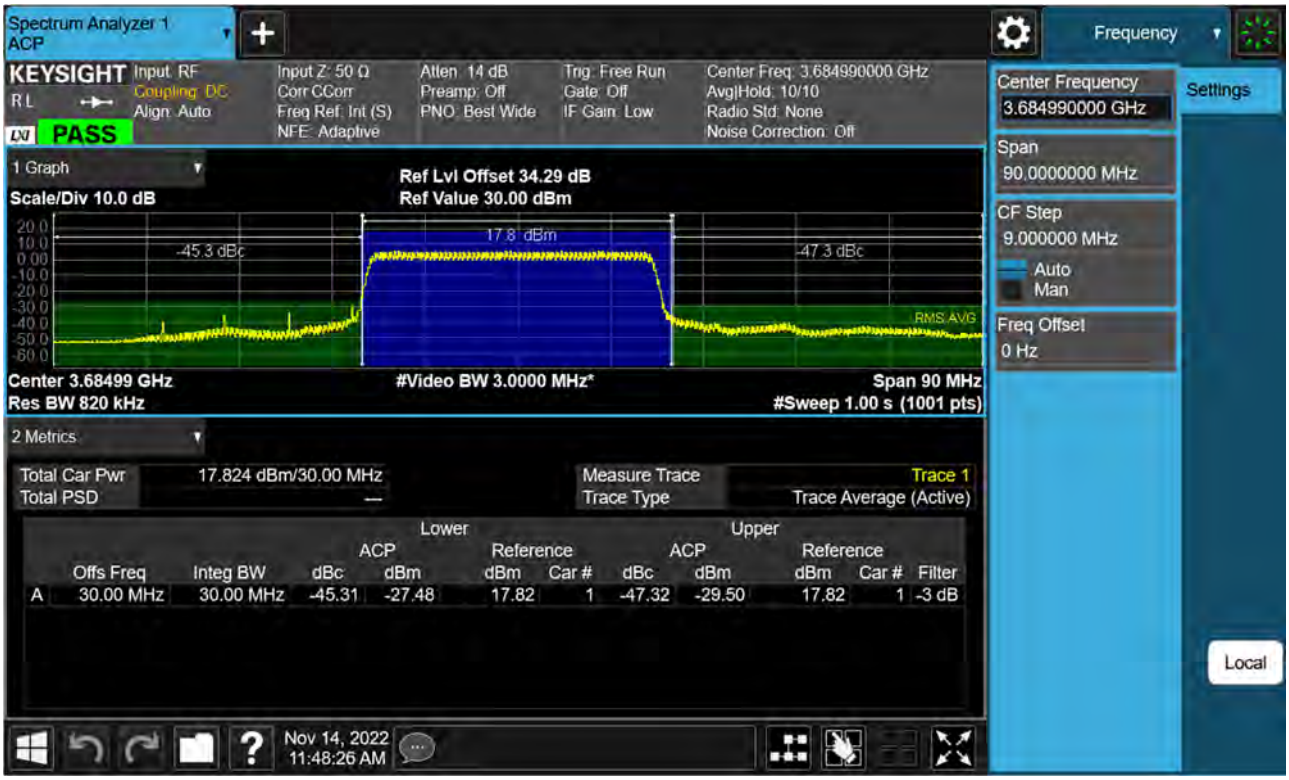
Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (30 MHz Ch.638000 BPSK RB 75, Offset 0)



Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (30 MHz Ch.641666 BPSK RB 75, Offset 0)

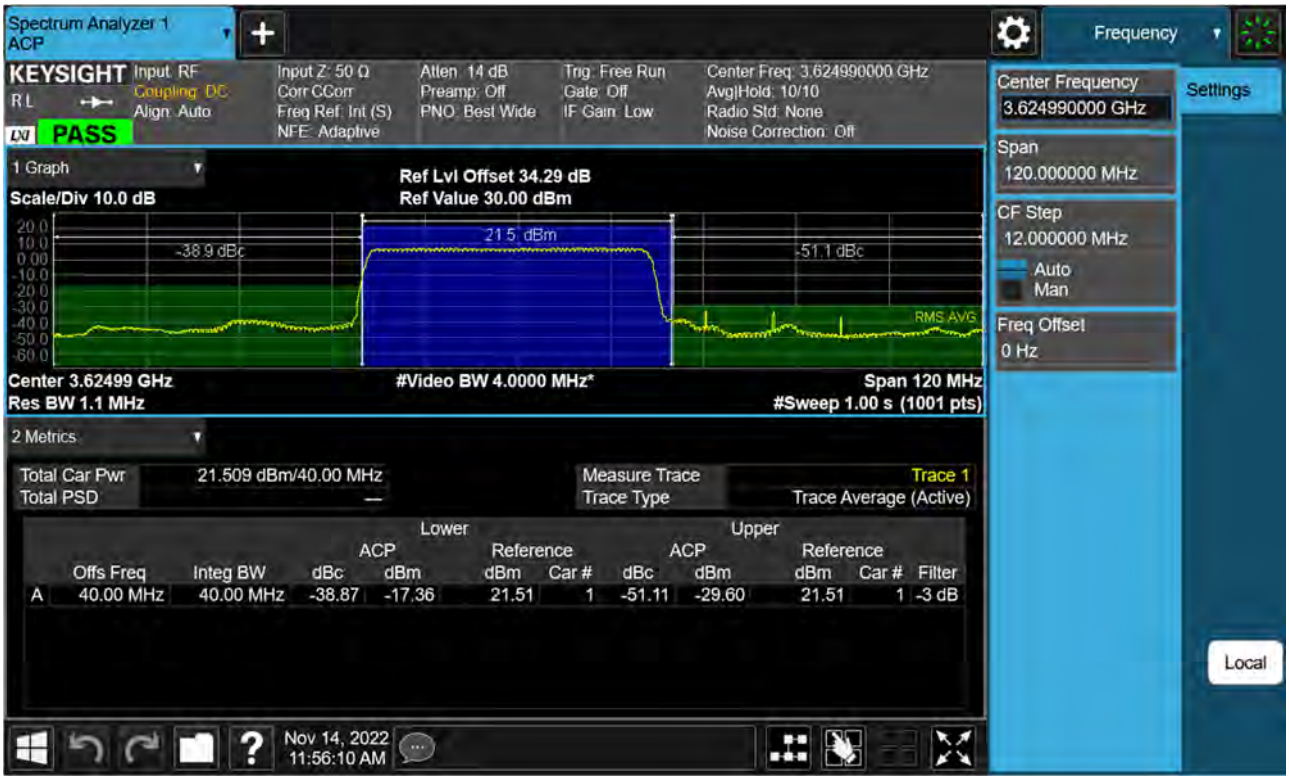


Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (30 MHz Ch.645332 BPSK RB 75, Offset 0)

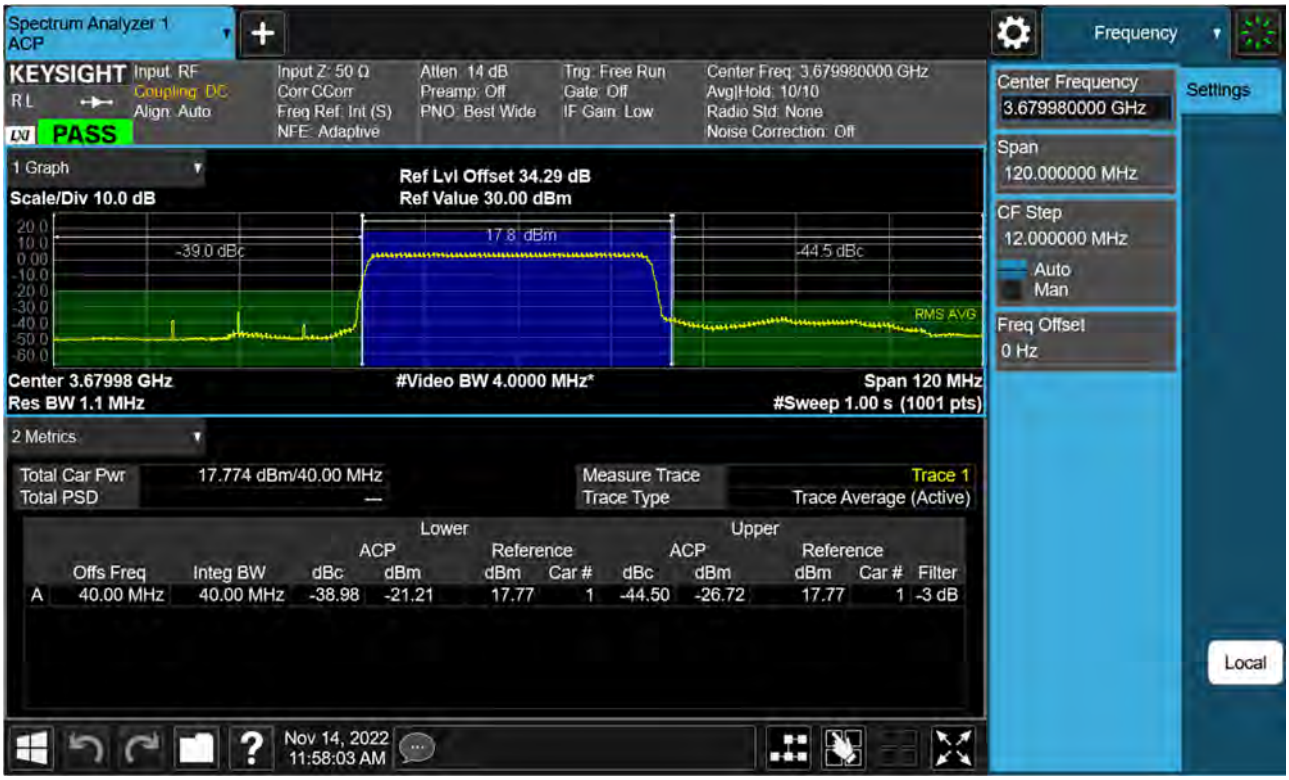


Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (40 MHz Ch.638000 BPSK RB 100, Offset 0)

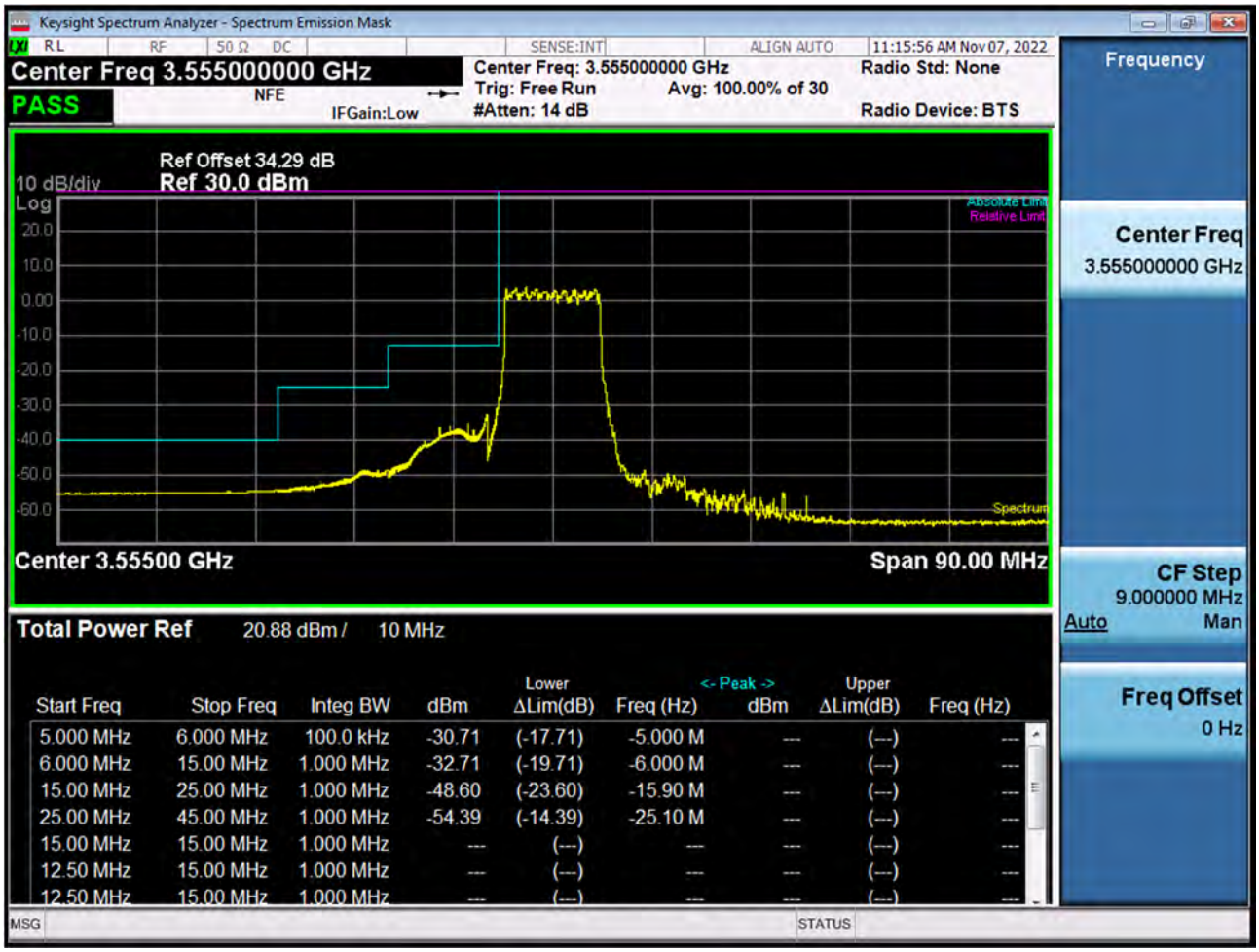
Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (40 MHz Ch.641666 BPSK RB 100, Offset 0)



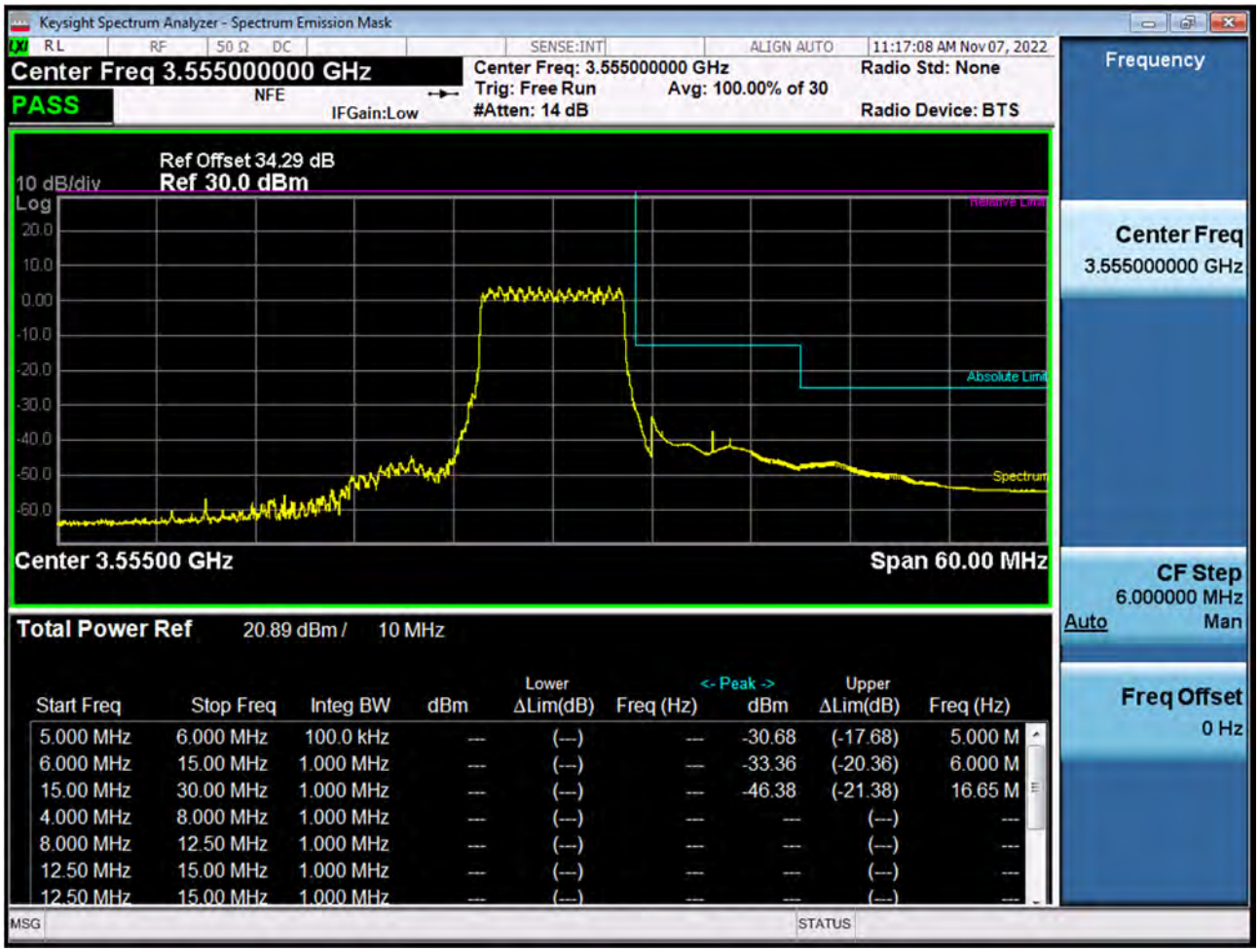
Sub6 n48. Adjacent Channel Leakage Ratio(ACLR) Plot (40 MHz Ch.645332 BPSK RB 100, Offset 0)



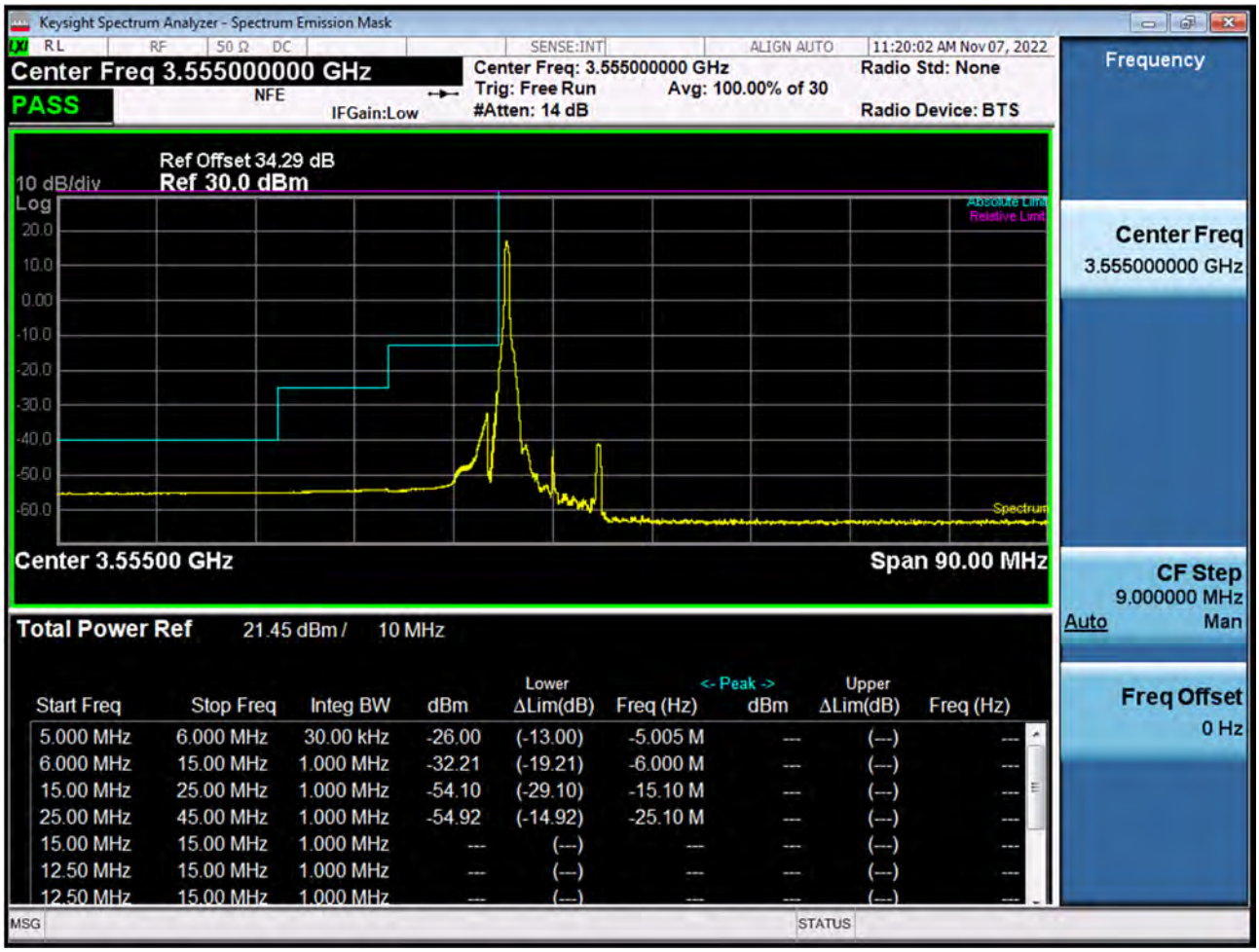
Sub6 n48. 10 M BandEdge(Lower)_Low_3555.00 MHz_BPSK_FullRB



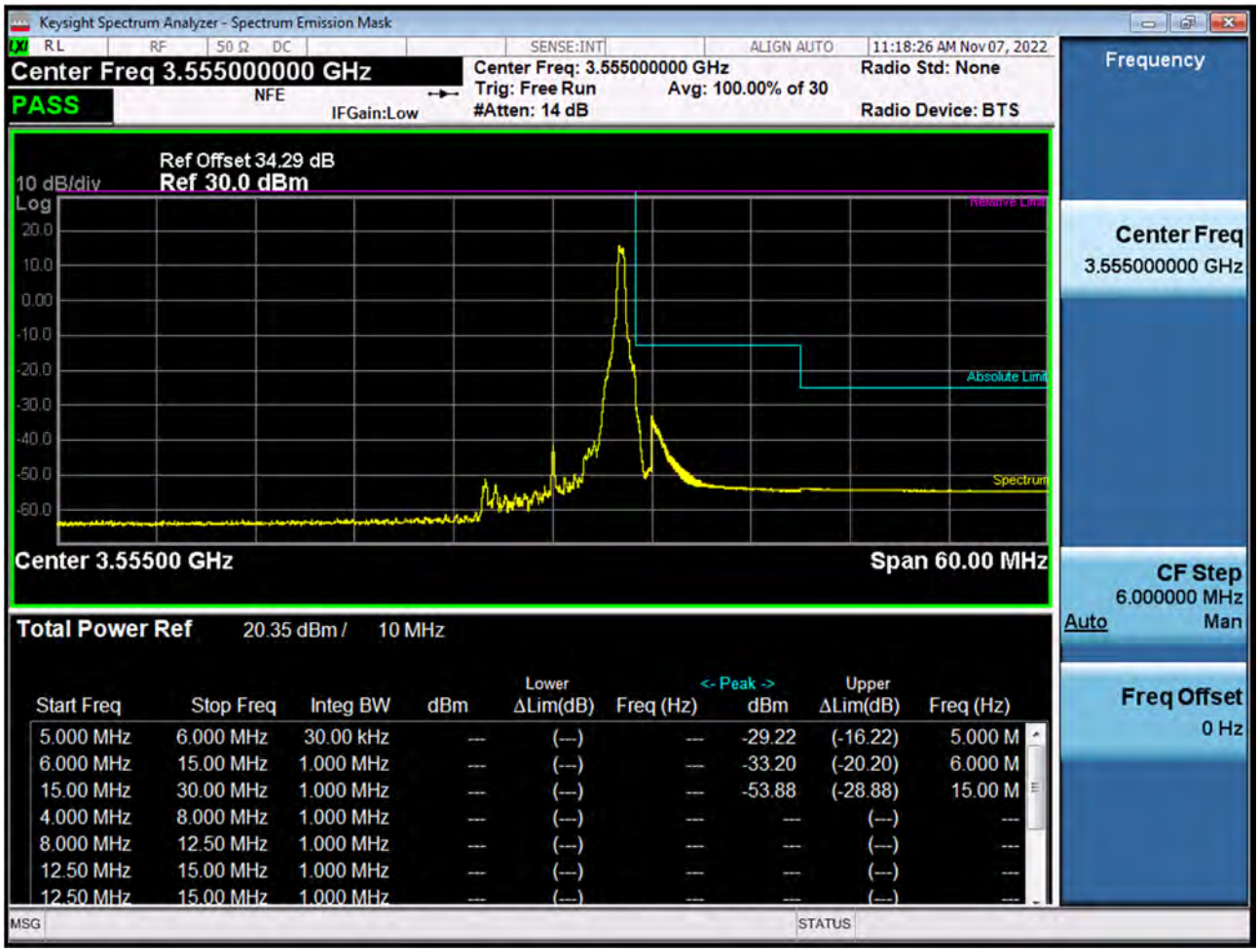
Sub6 n48. 10 M_BandEdge(Upper)_Low_ 3555.00 MHz_BPSK_FullRB



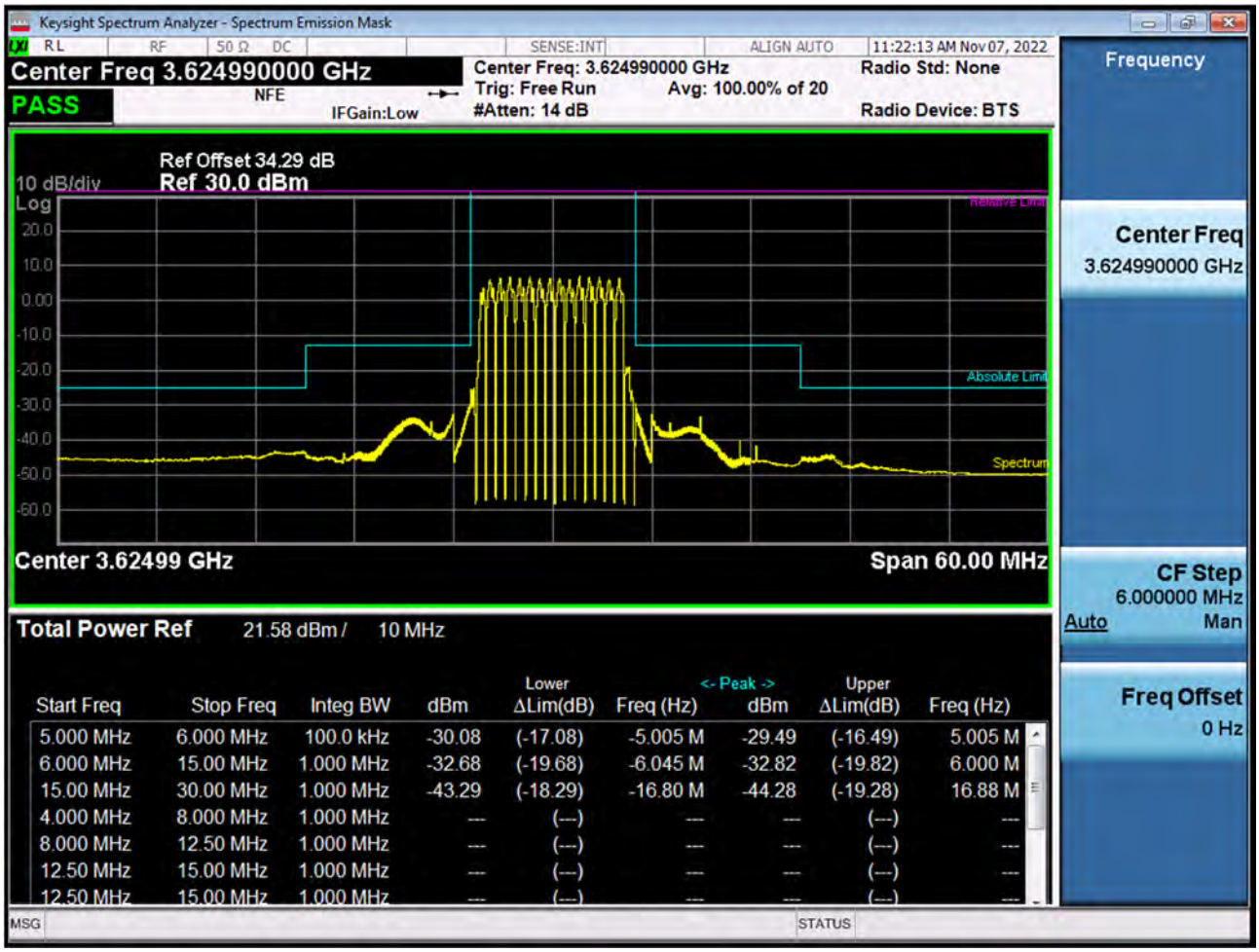
Sub6 n48. 10 M_BandEdge(Lower)_Low_ 3555.00 MHz_BPSK_1RB



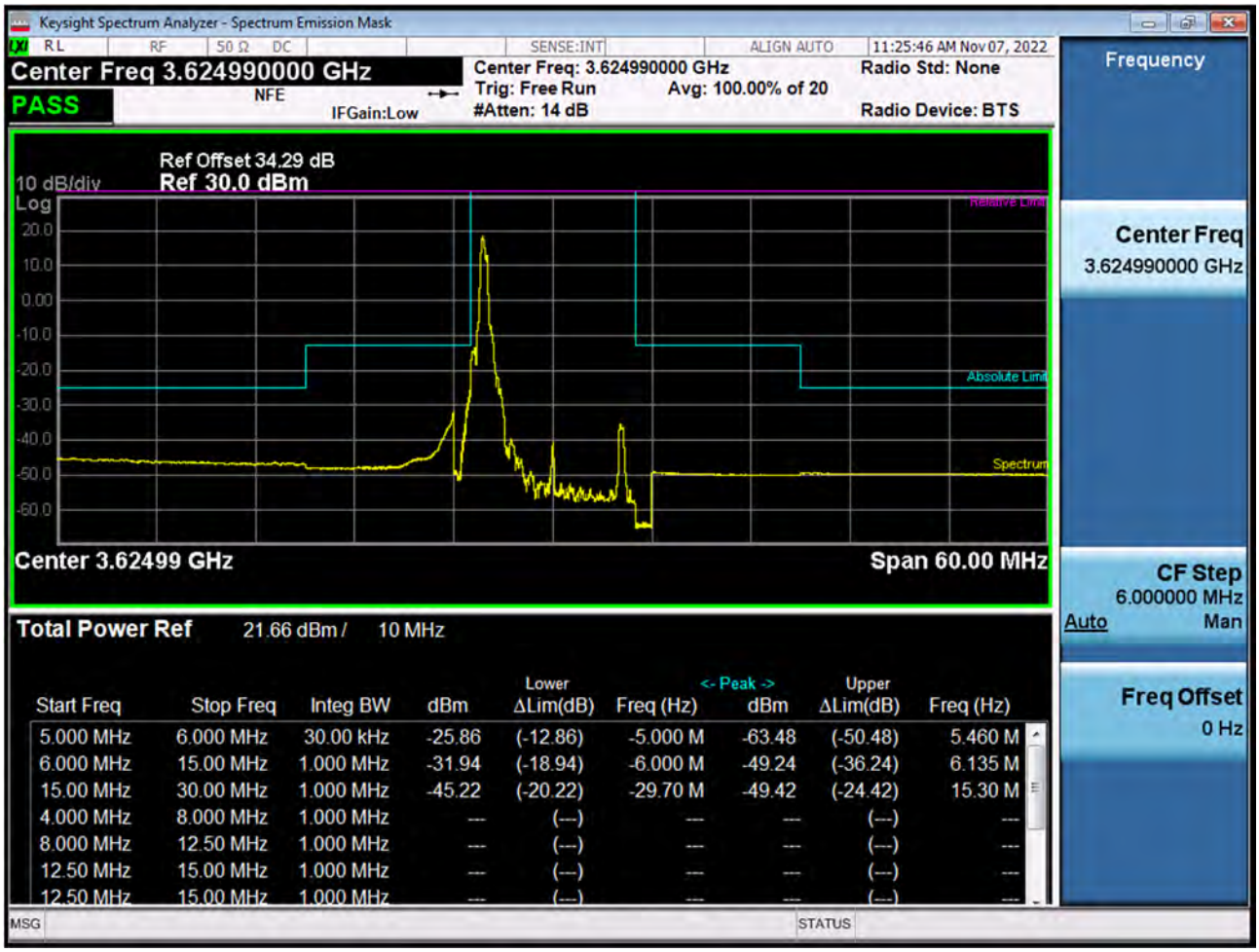
Sub6 n48. 10 M_BandEdge(Upper)_Low_ 3555.00 MHz_BPSK_1RB



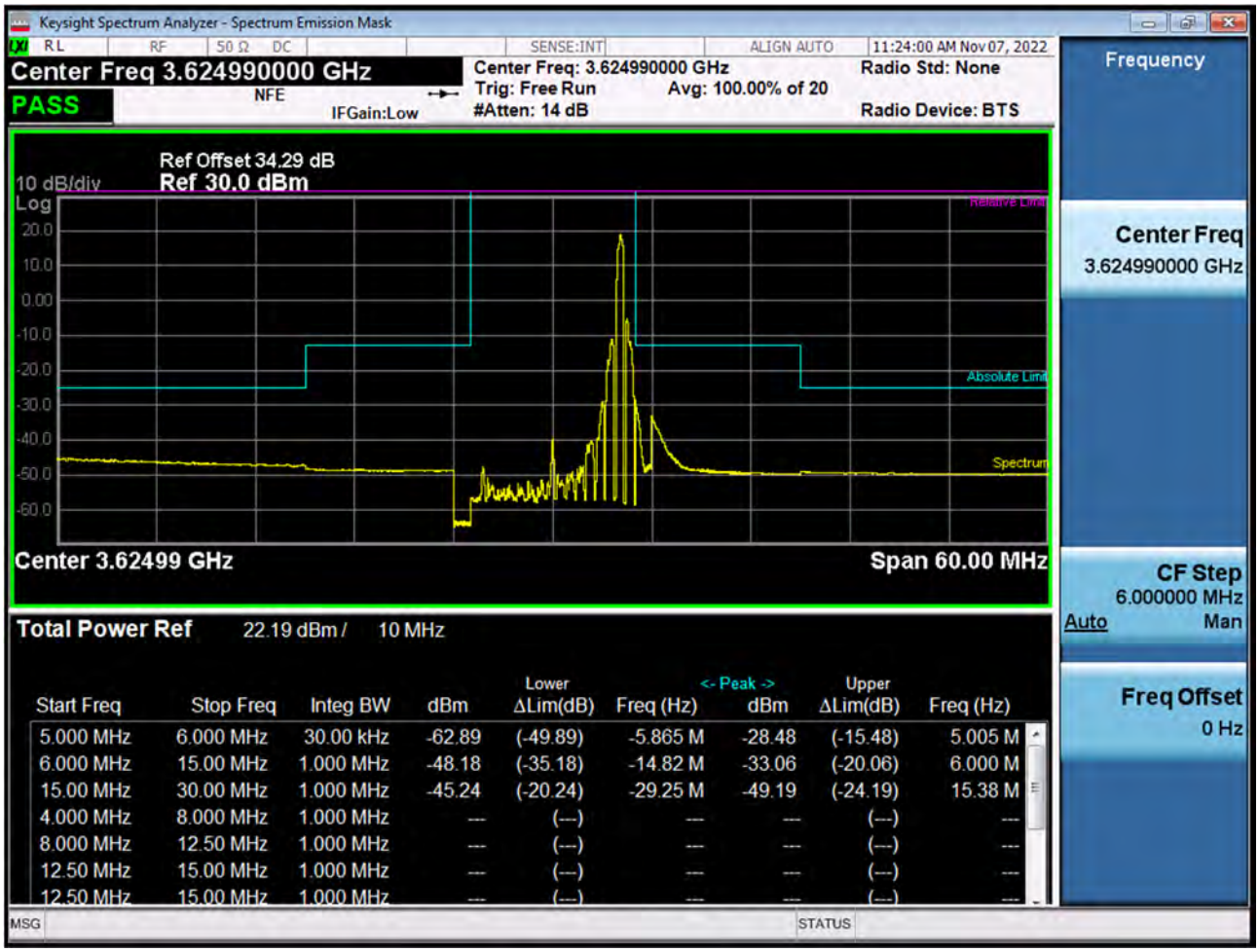
Sub6 n48. 10 M_BandEdge(Center)_Mid_3624.99 MHz_BPSK_FullRB



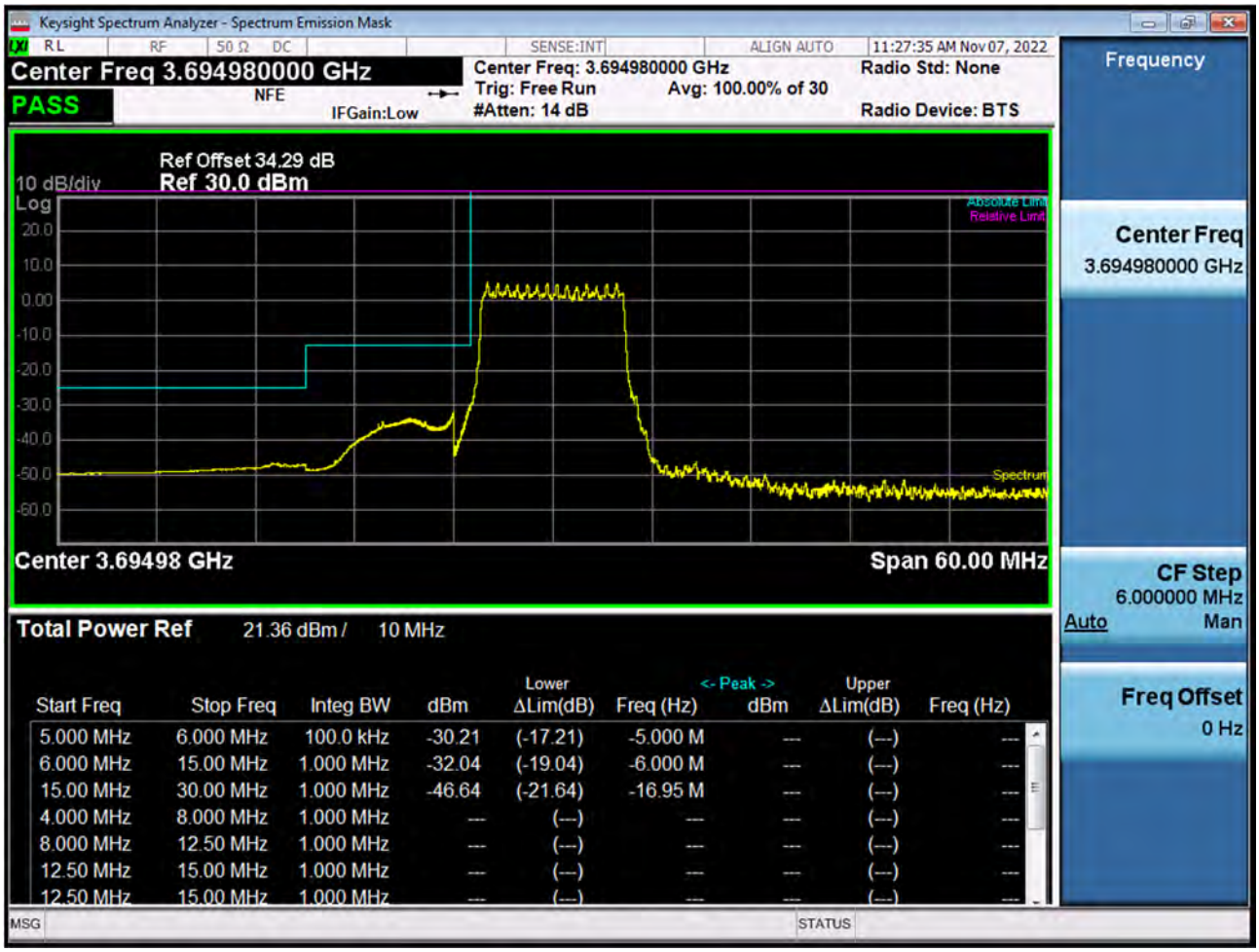
Sub6 n48. 10 M_BandEdge(Lower)_Mid_3624.99 MHz_BPSK_1RB



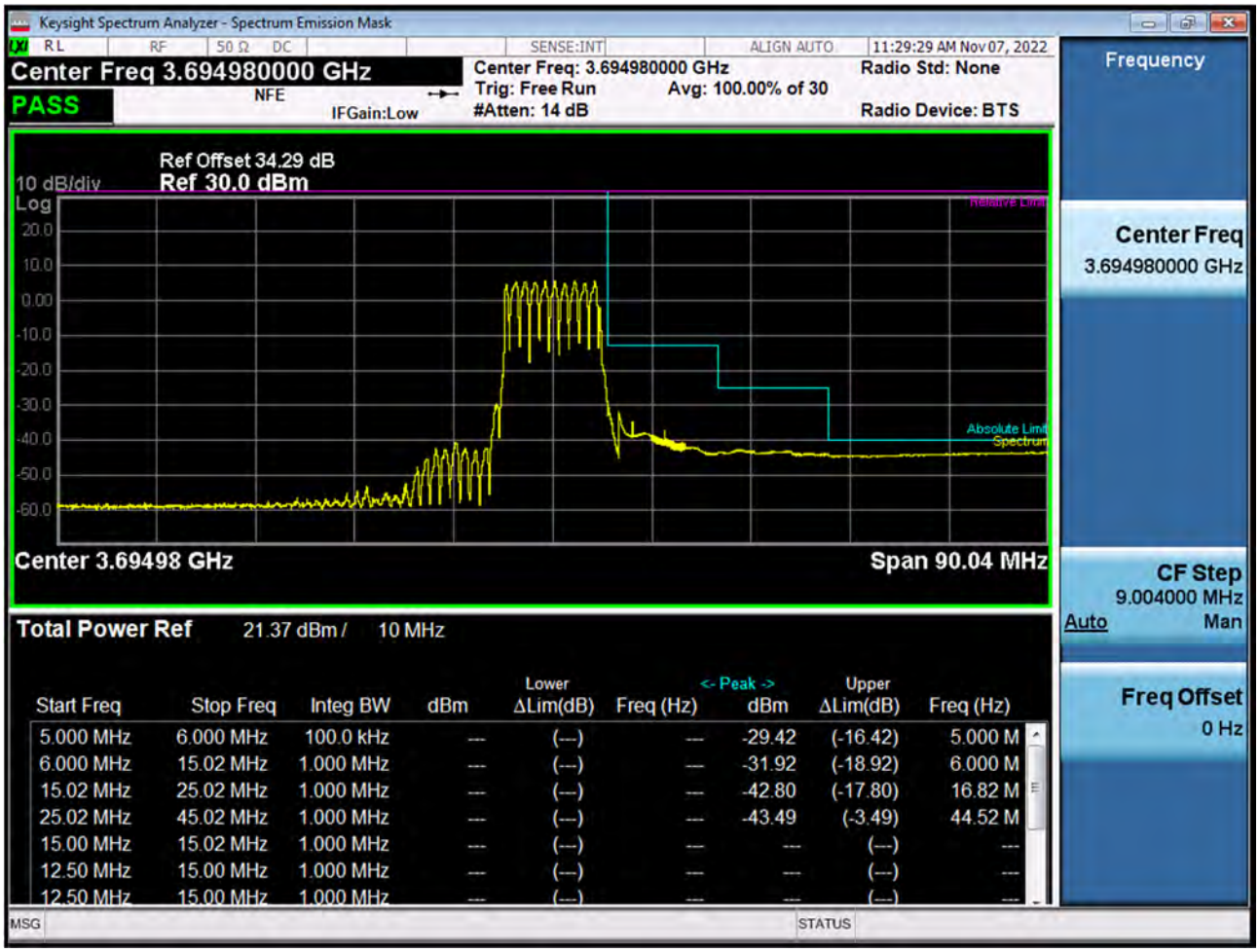
Sub6 n48. 10 M_BandEdge(Upper)_Mid_3624.99 MHz_BPSK_1RB



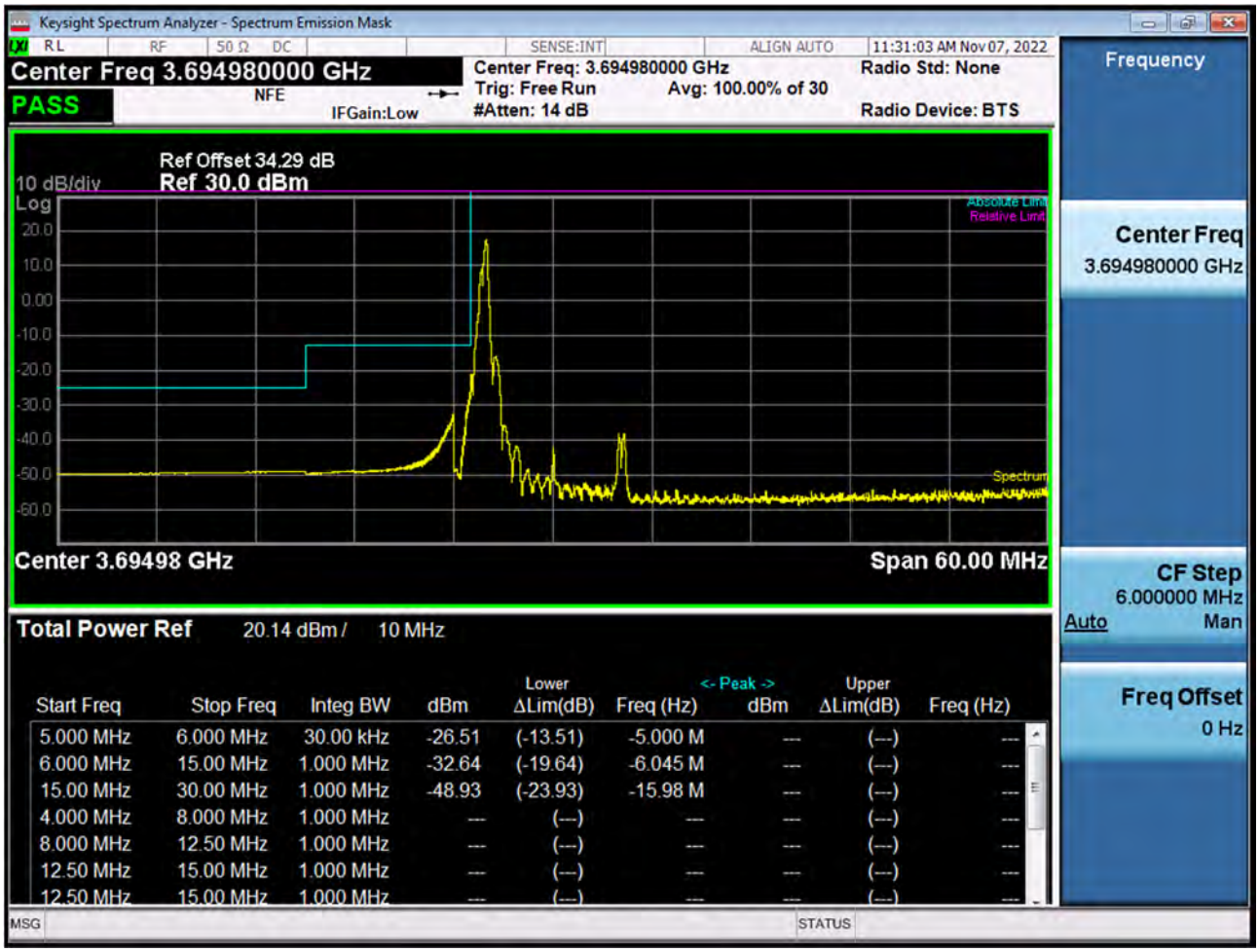
Sub6 n48. 10 M_BandEdge(Lower)_High_ 3694.98 MHz_BPSK_FullRB



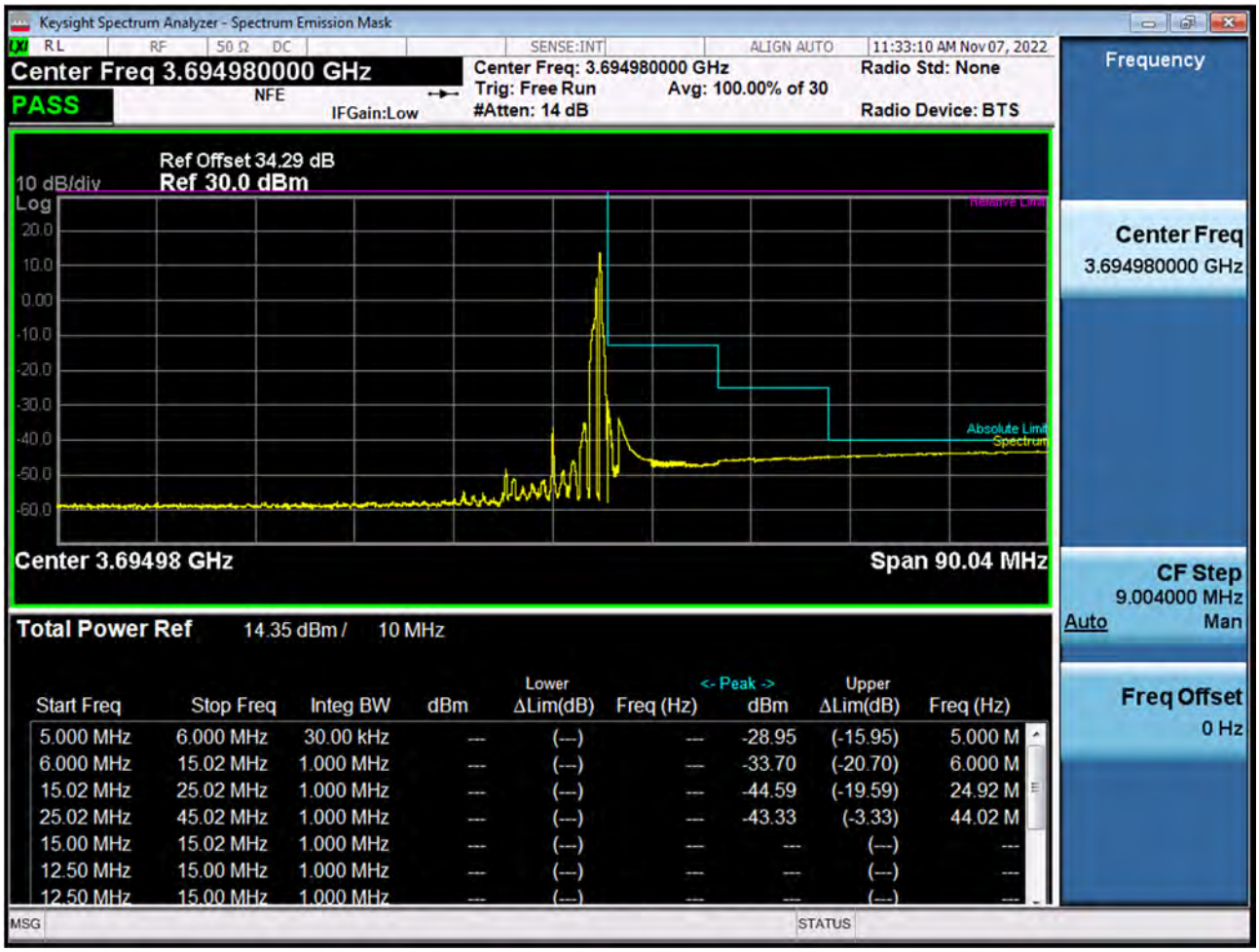
Sub6 n48. 10 M_BandEdge(Upper)_High_ 3694.98 MHz_BPSK_FullRB



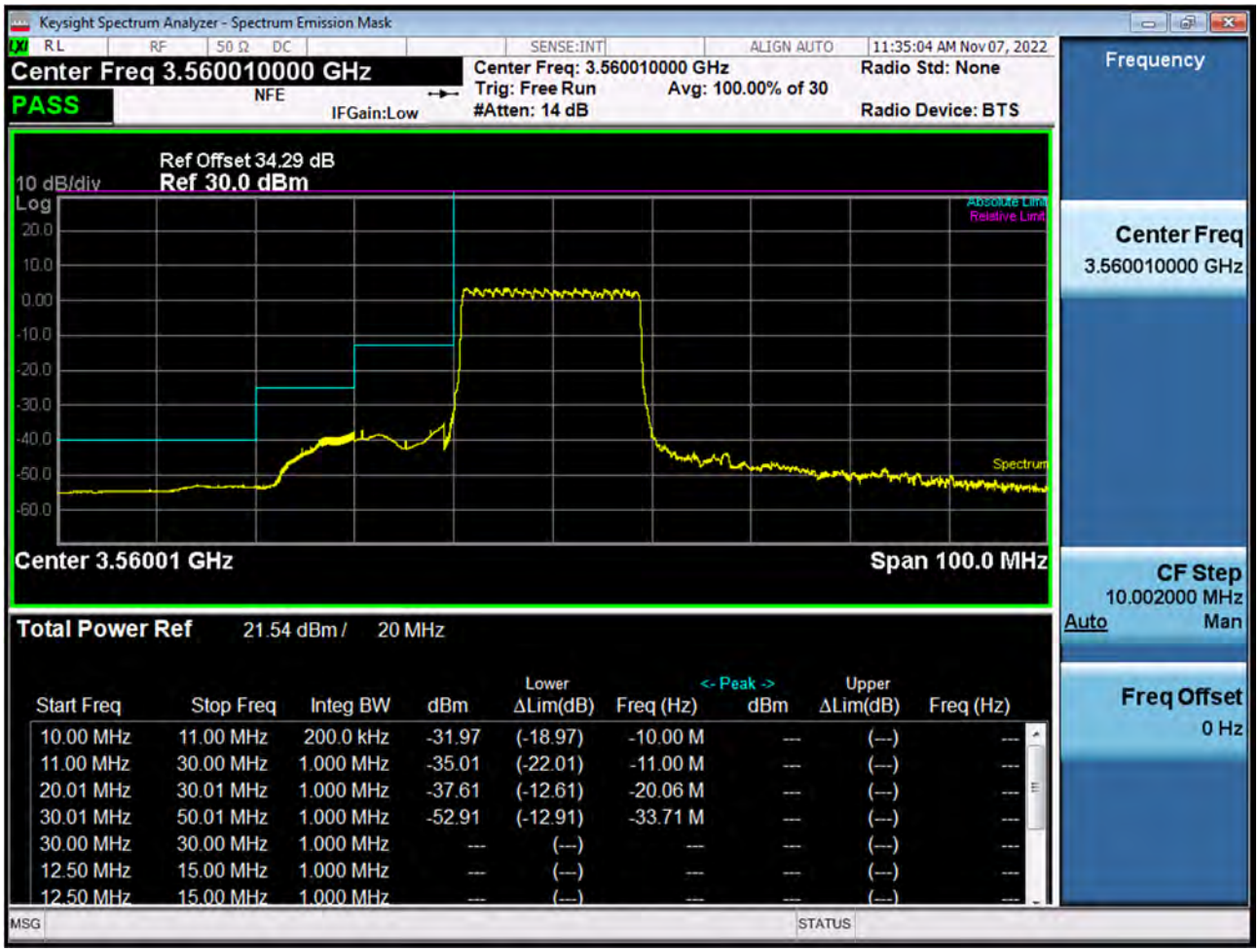
Sub6 n48. 10 M_BandEdge(Lower)_High_ 3694.98 MHz_BPSK_1RB



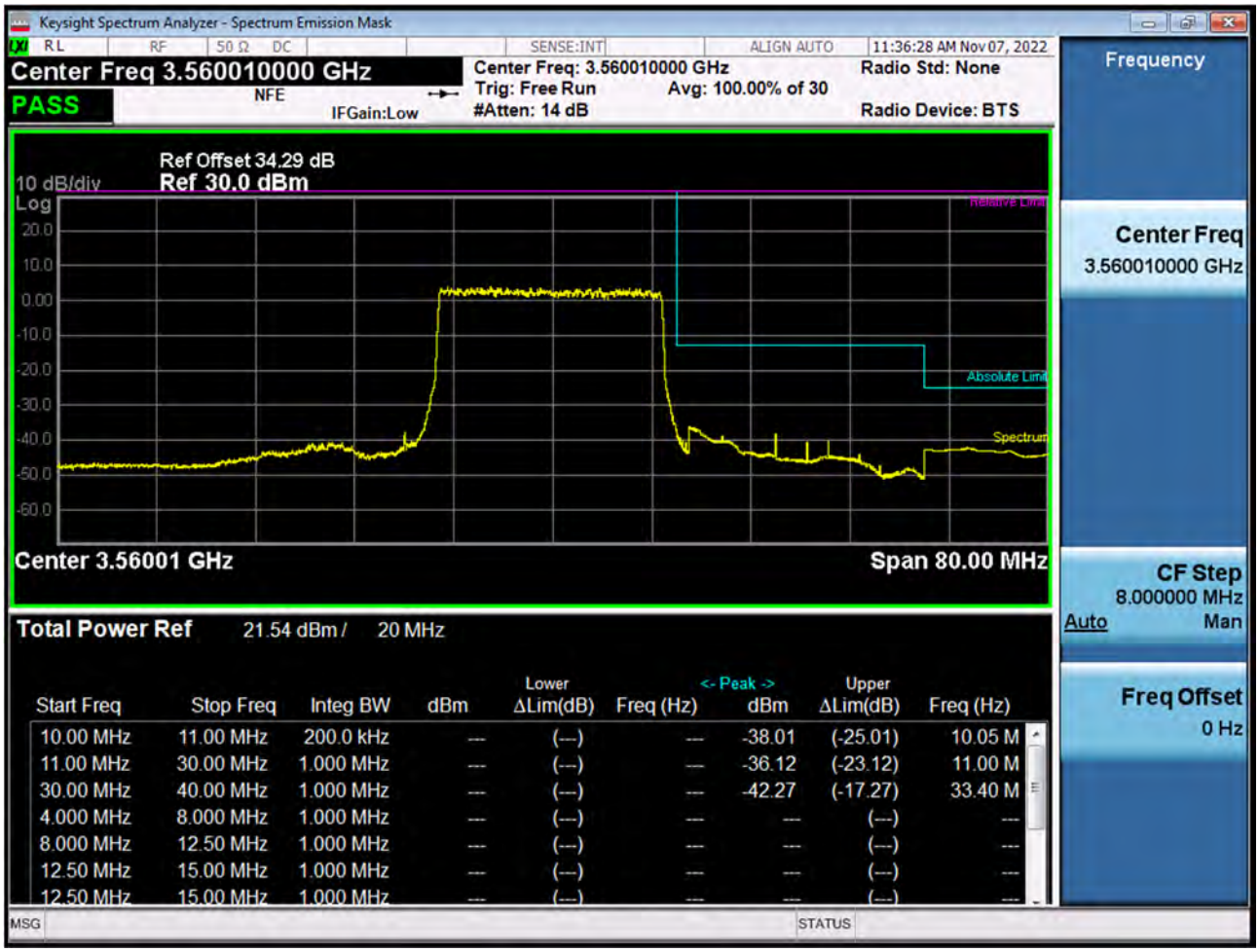
Sub6 n48. 10 M_BandEdge(Upper)_High_ 3694.98 MHz_BPSK_1RB



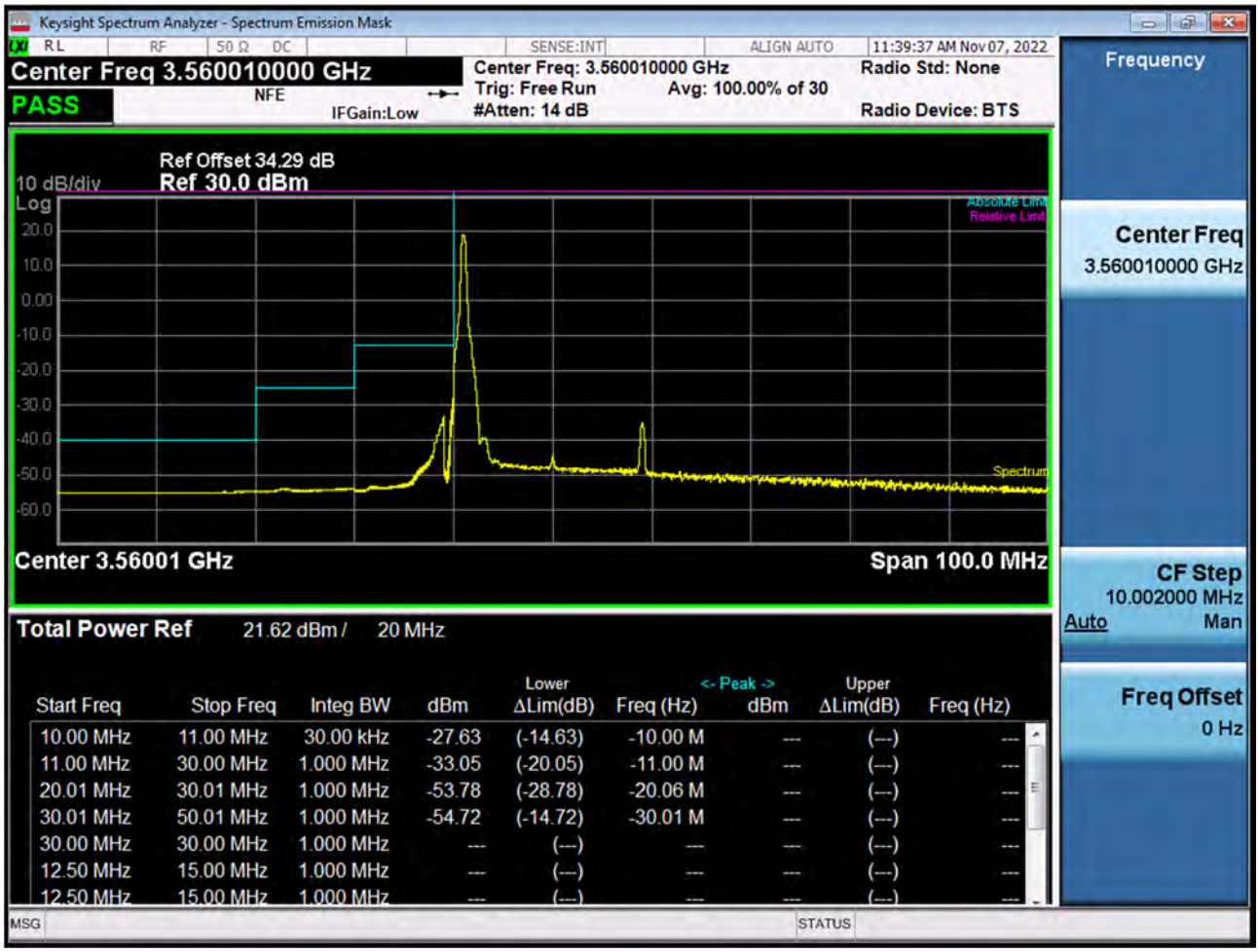
Sub6 n48. 20 M BandEdge(Lower)_Low_ 3560.01 MHz_BPSK_FullRB



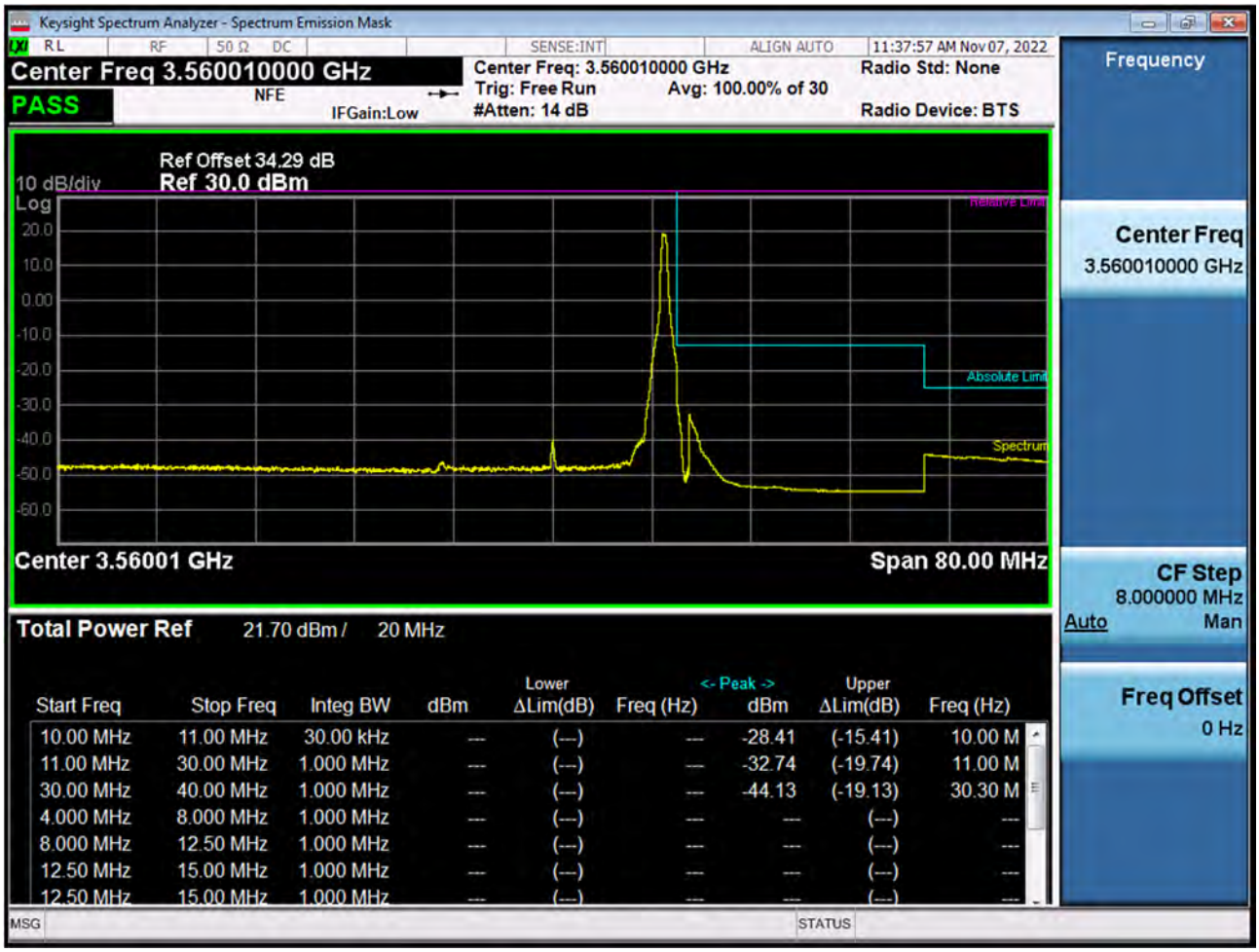
Sub6 n48. 20 M_BandEdge(Upper)_Low_ 3560.01 MHz_BPSK_FullRB



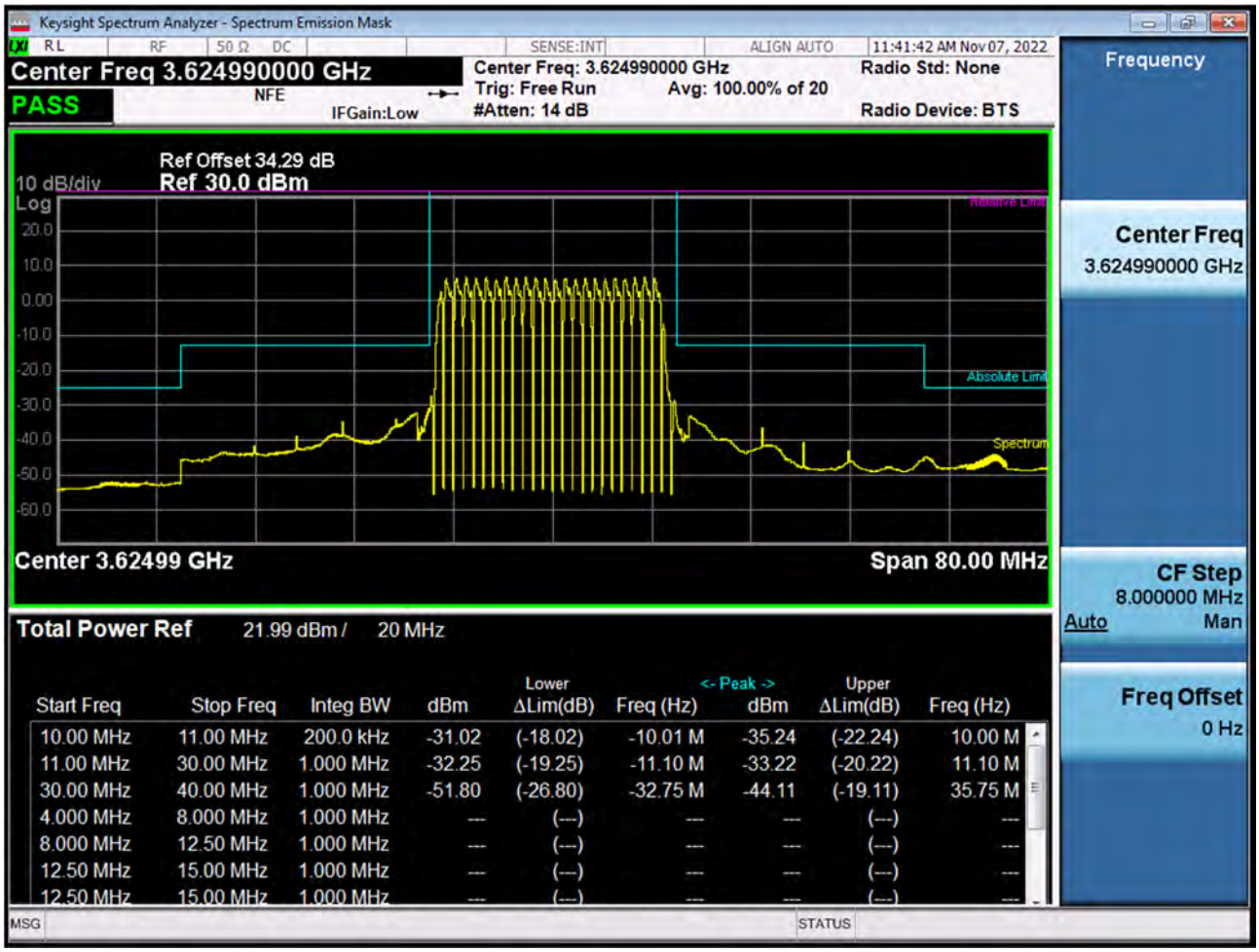
Sub6 n48. 20 M_BandEdge(Lower)_Low_ 3560.01 MHz_BPSK_1RB



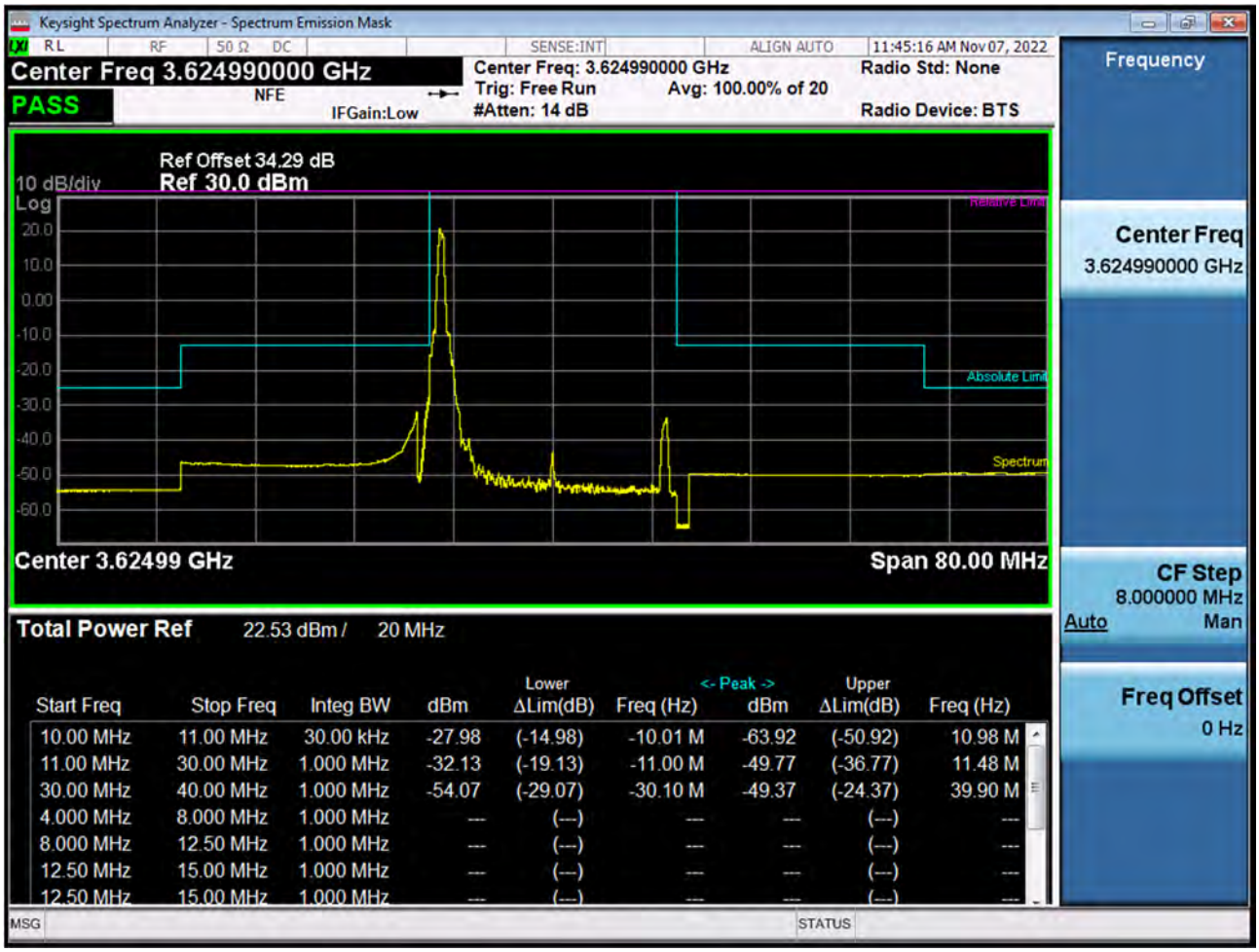
Sub6 n48. 20 M_BandEdge(Upper)_Low_ 3560.01 MHz_BPSK_1RB



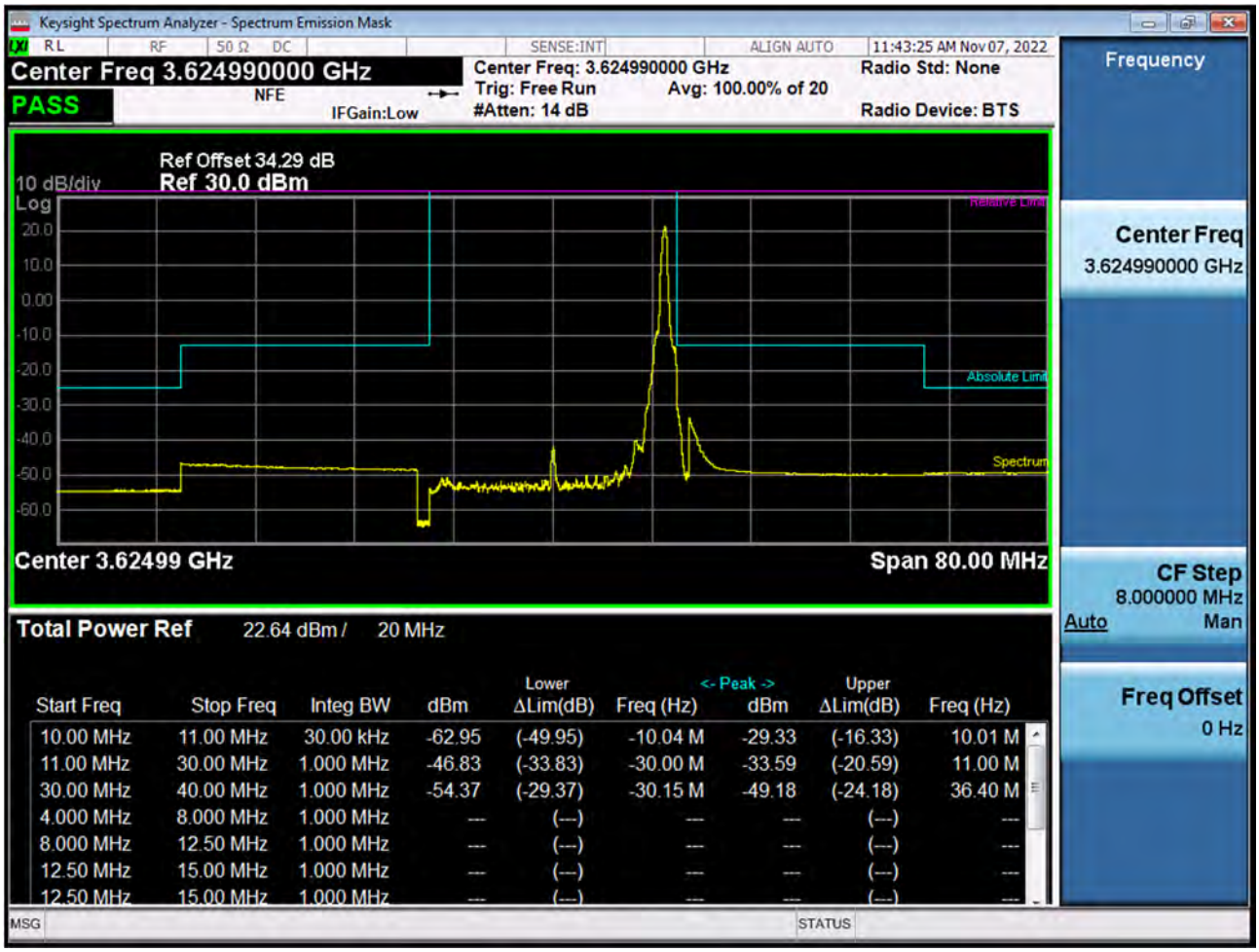
Sub6 n48. 20 M_BandEdge(Center)_Mid_3624.99 MHz_BPSK_FullRB



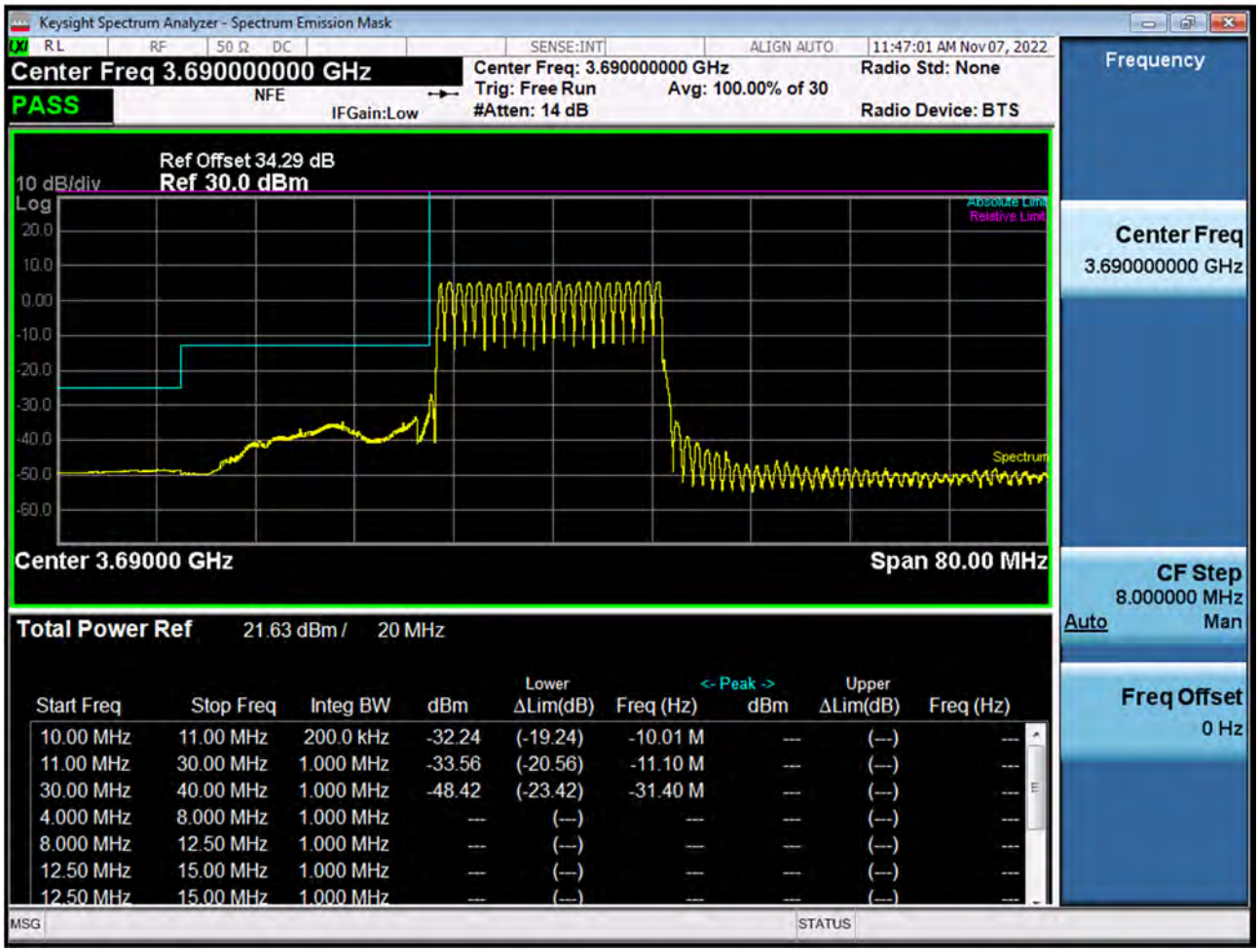
Sub6 n48. 20 M_BandEdge(Lower)_Mid_3624.99 MHz_BPSK_1RB



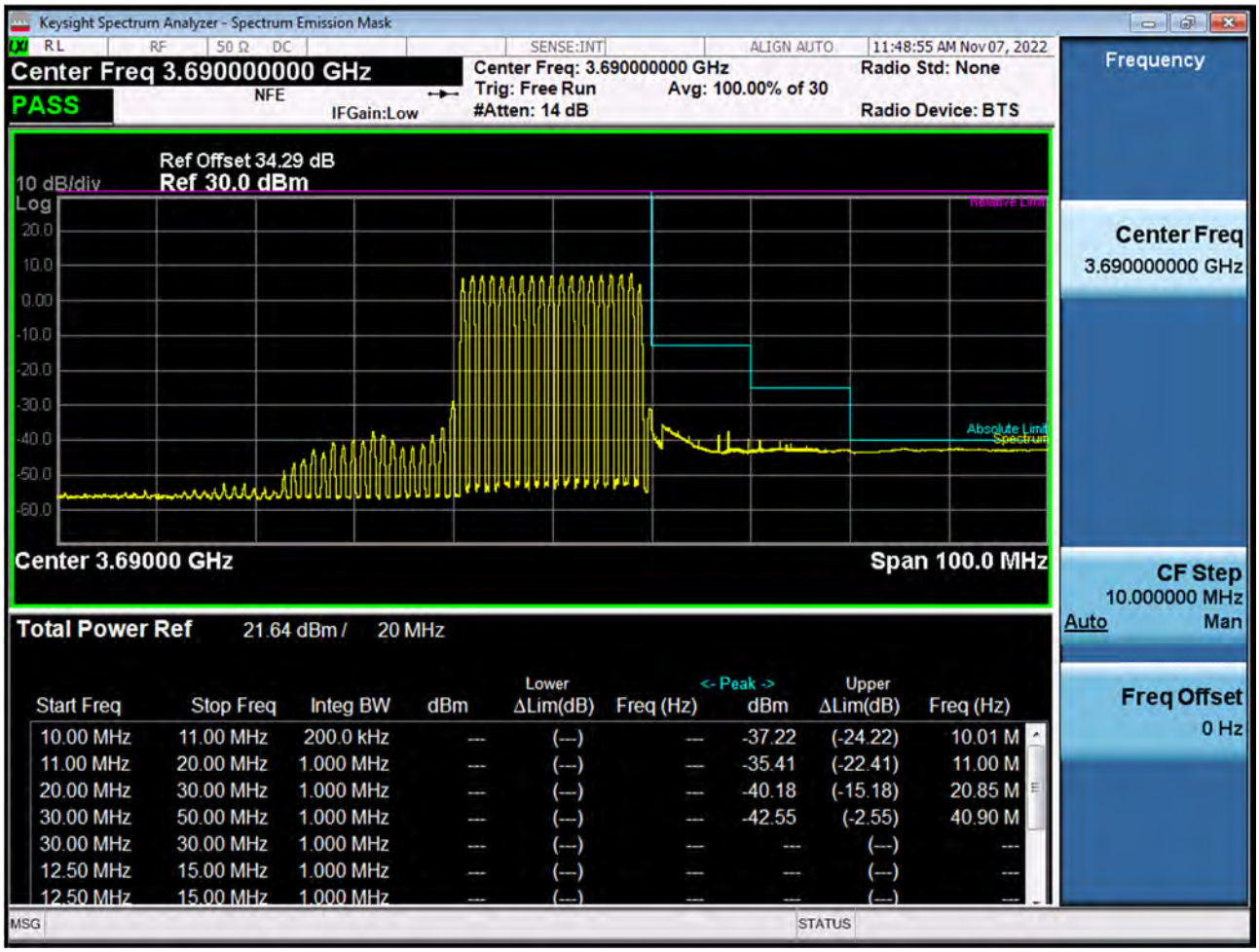
Sub6 n48. 20 M_BandEdge(Upper)_Mid_3624.99 MHz_BPSK_1RB



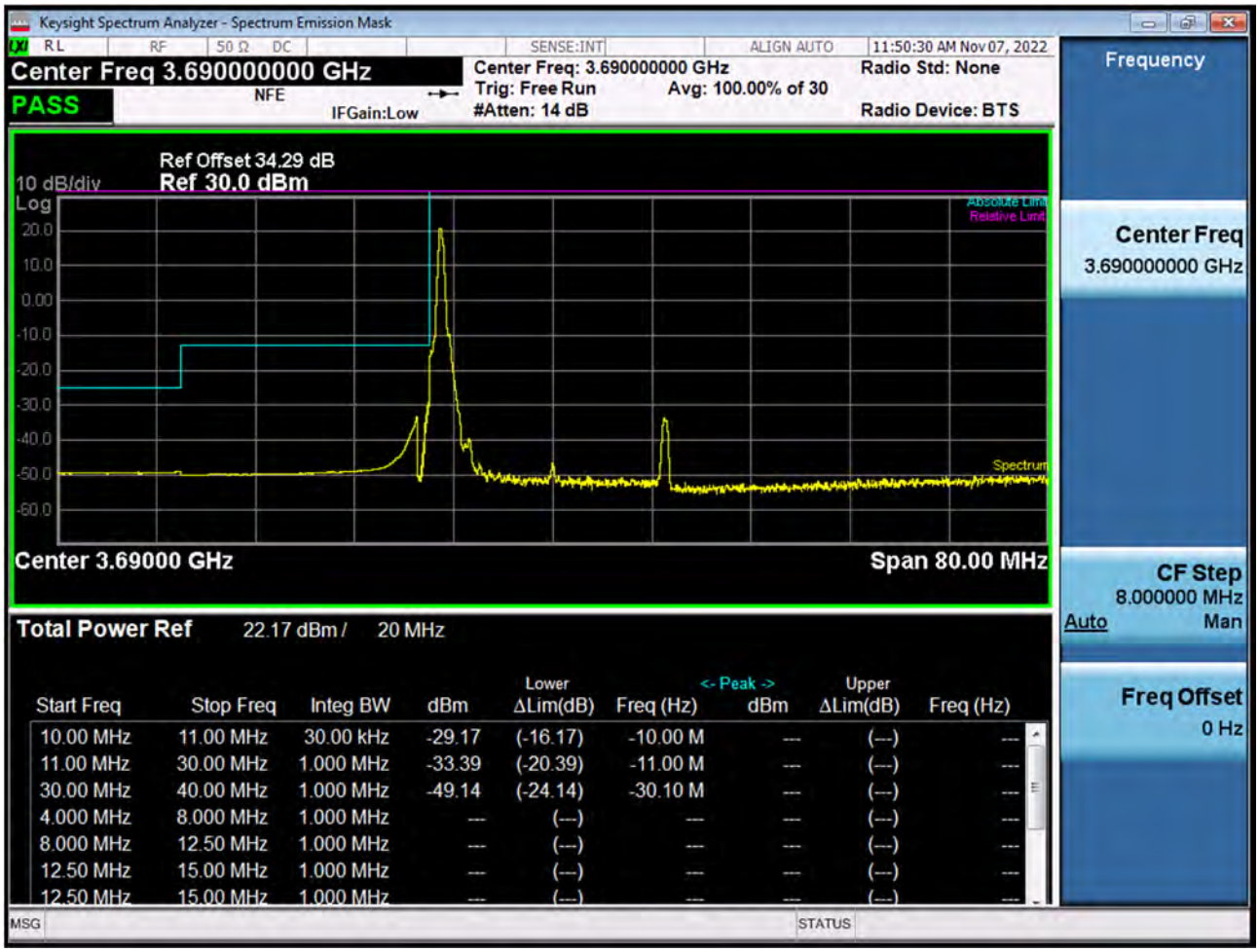
Sub6 n48. 20 M_BandEdge(Lower)_High_ 3690.00 MHz_BPSK_FullRB



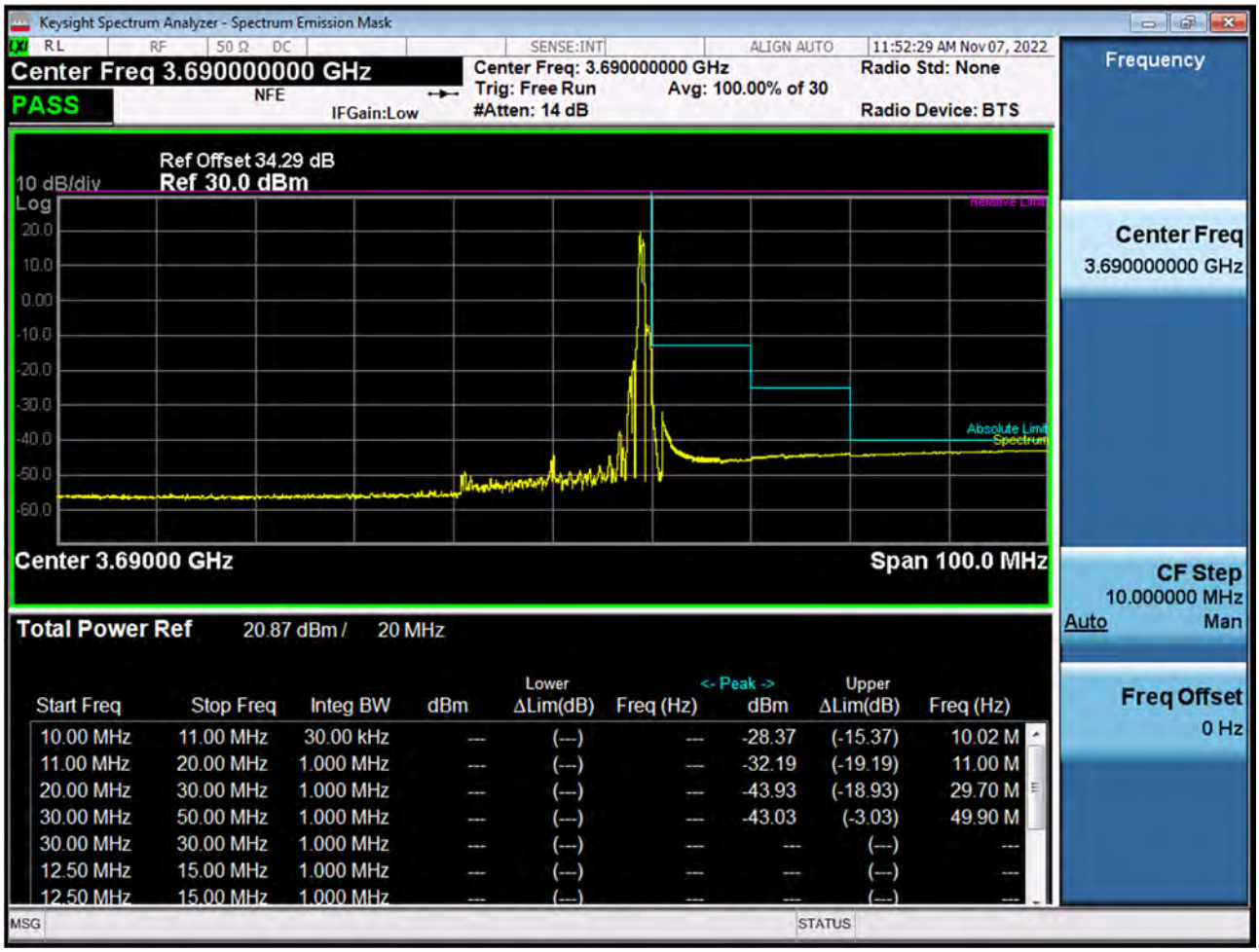
Sub6 n48. 20 M_BandEdge(Upper)_High_ 3690.00 MHz_BPSK_FullRB



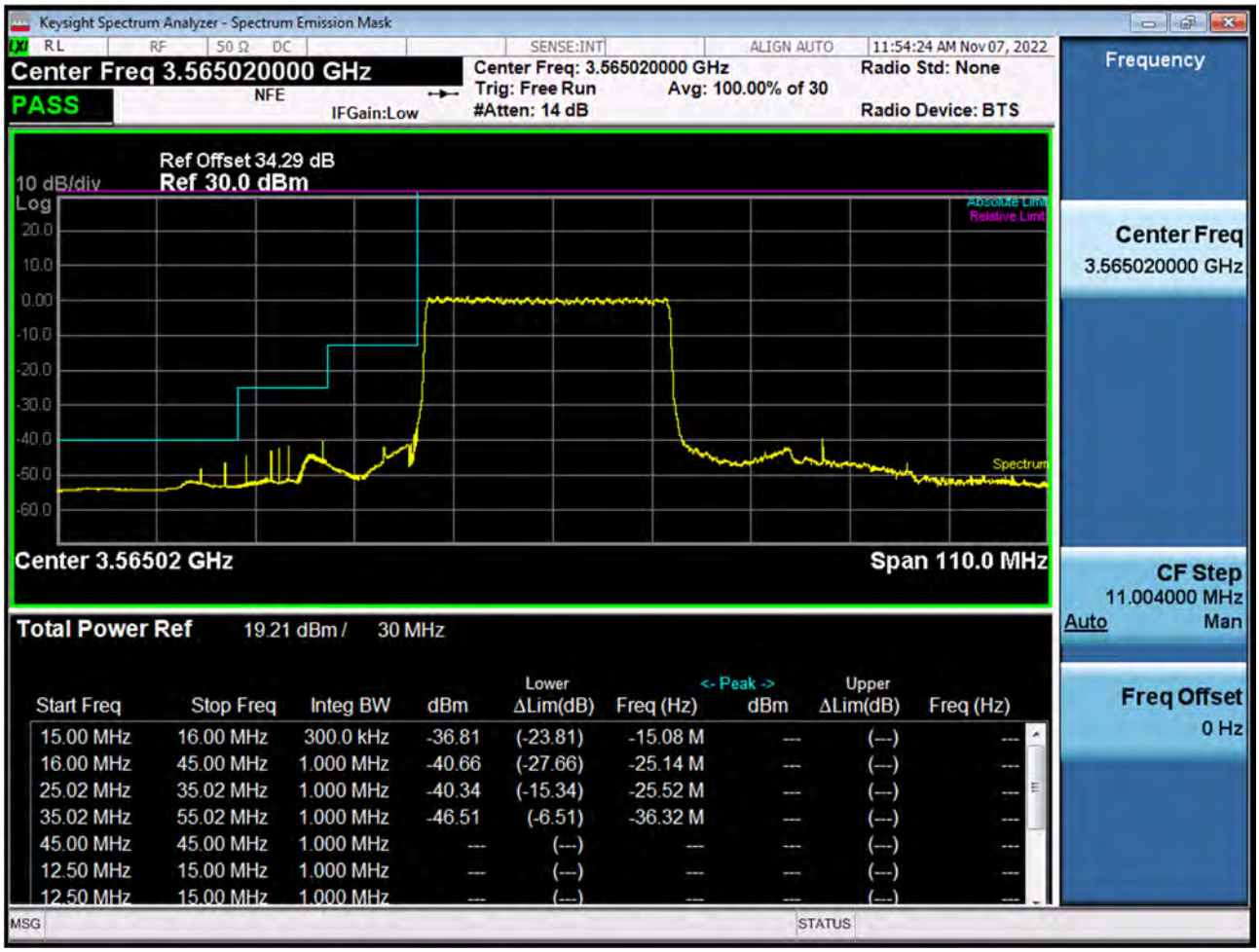
Sub6 n48. 20 M_BandEdge(Lower)_High_ 3690.00 MHz_BPSK_1RB



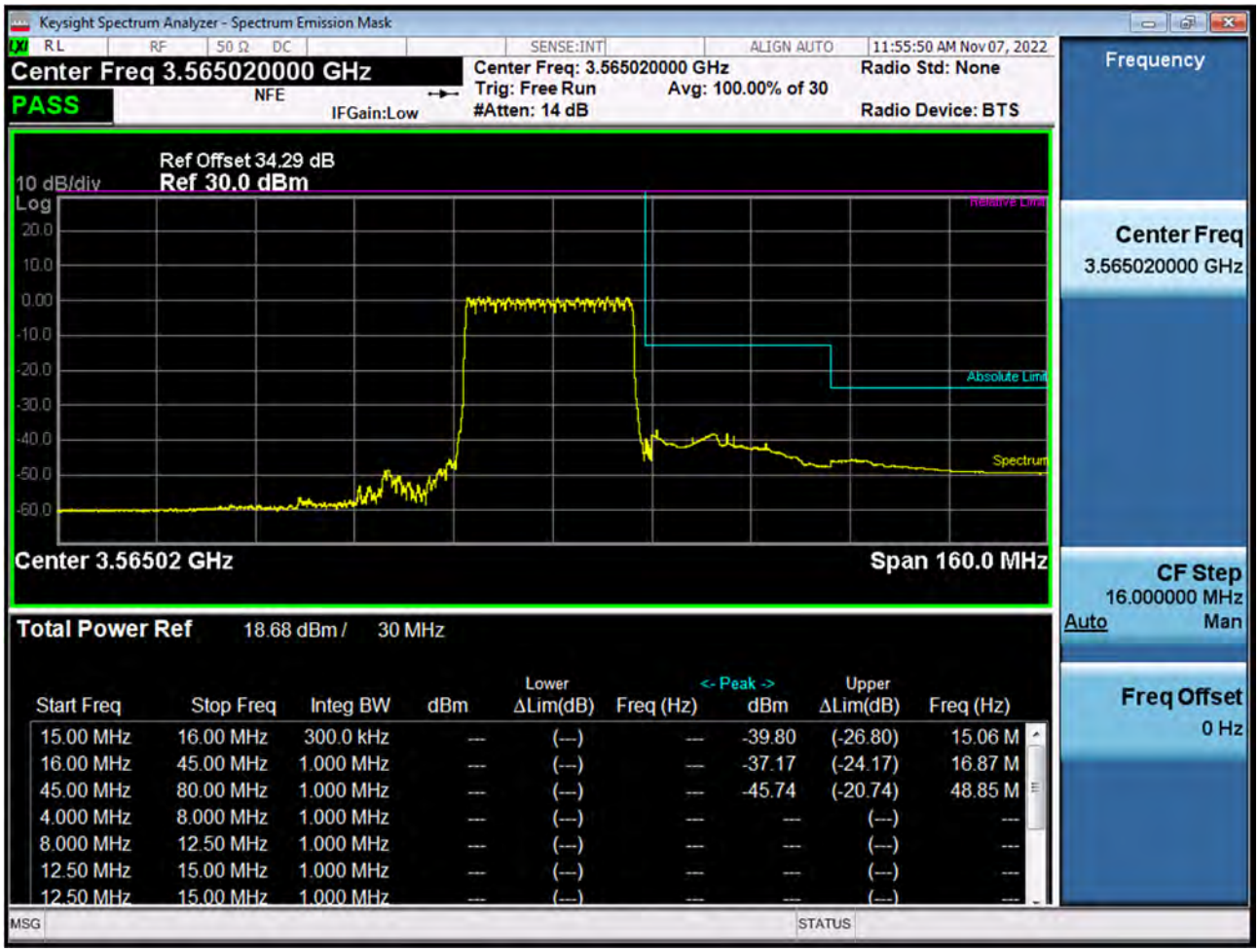
Sub6 n48. 20 M_BandEdge(Upper)_High_ 3690.00 MHz_BPSK_1RB



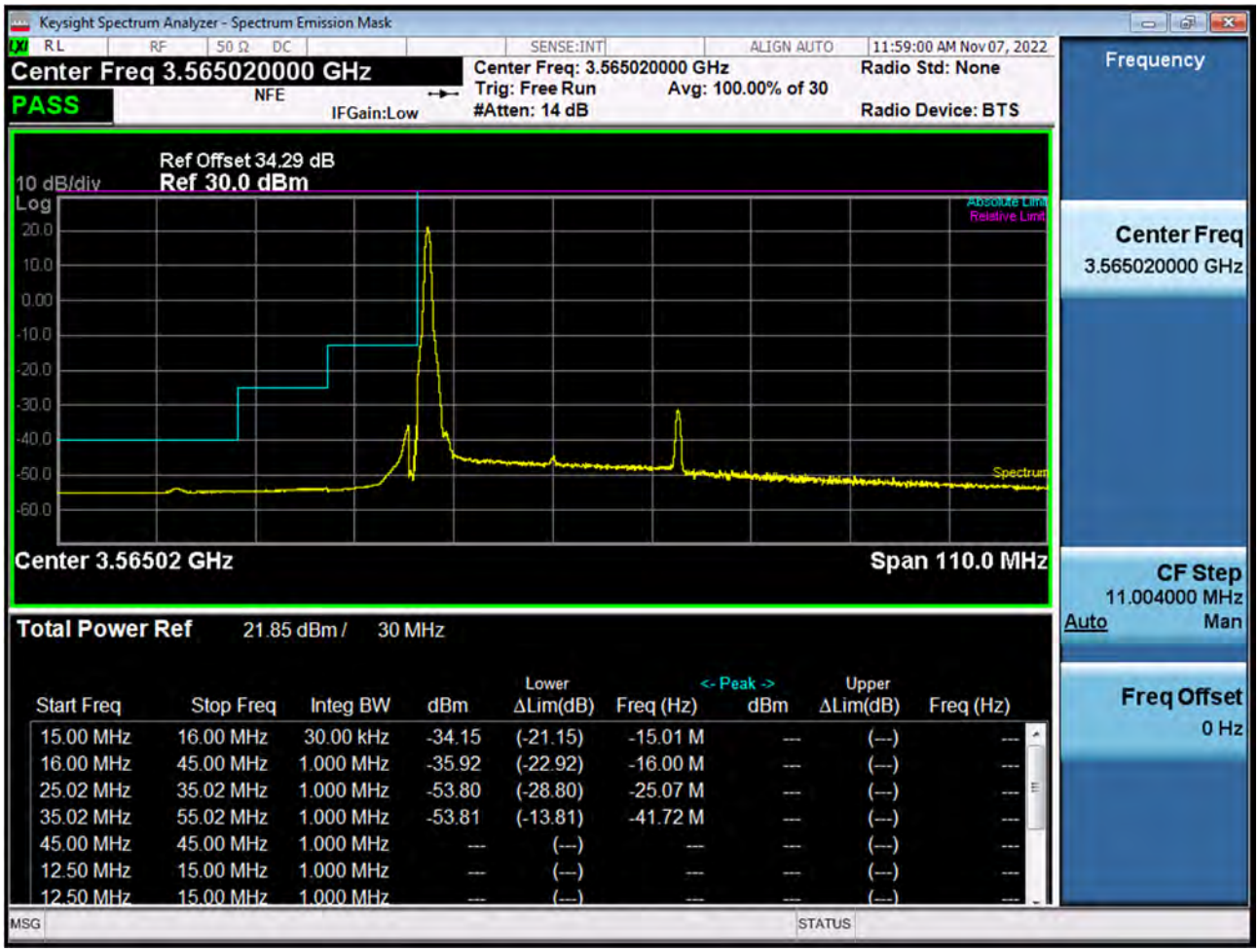
Sub6 n48. 30 M BandEdge(Lower)_Low_3565.02 MHz_BPSK_FullRB



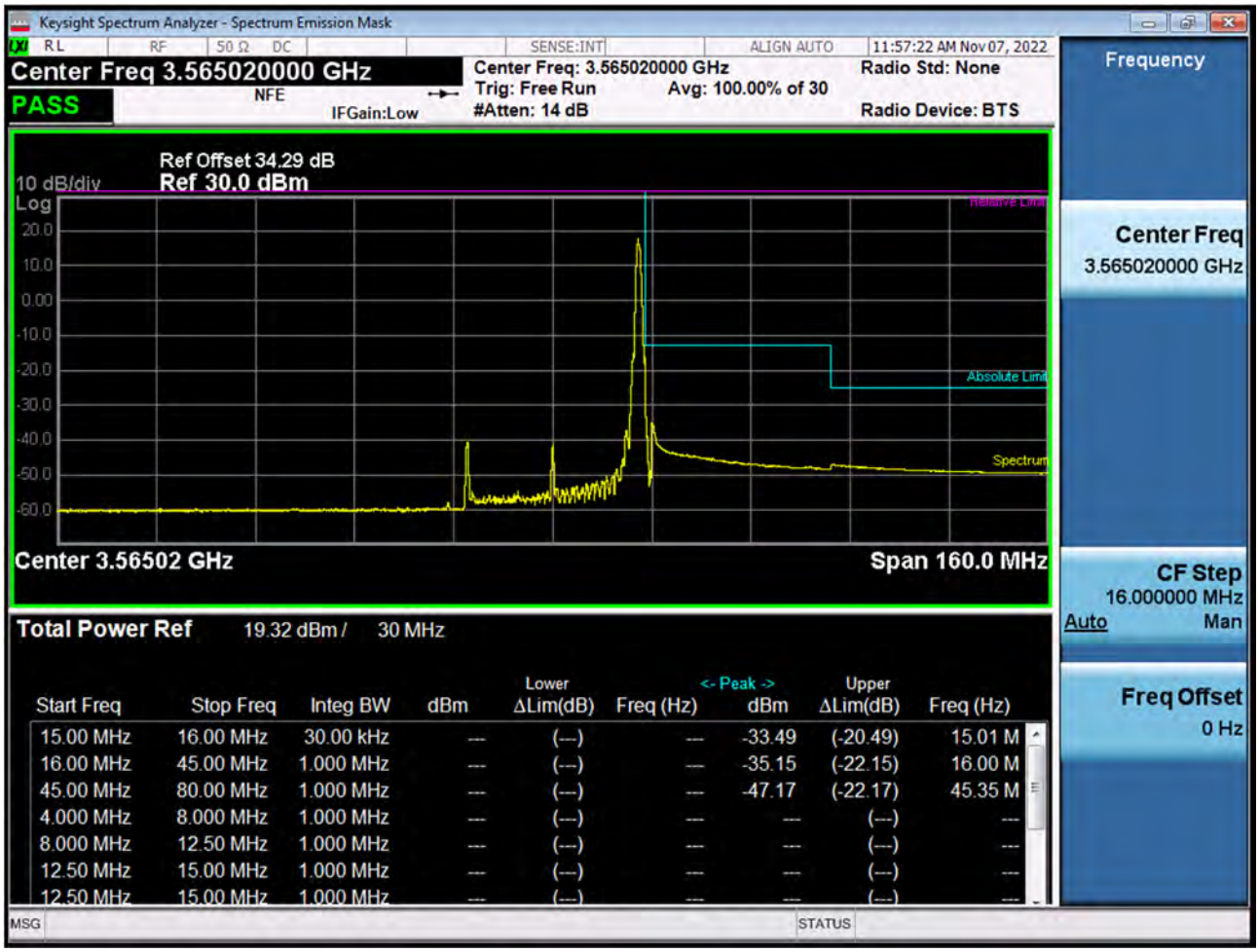
Sub6 n48. 30 M_BandEdge(Upper)_Low_ 3565.02 MHz_BPSK_FullRB



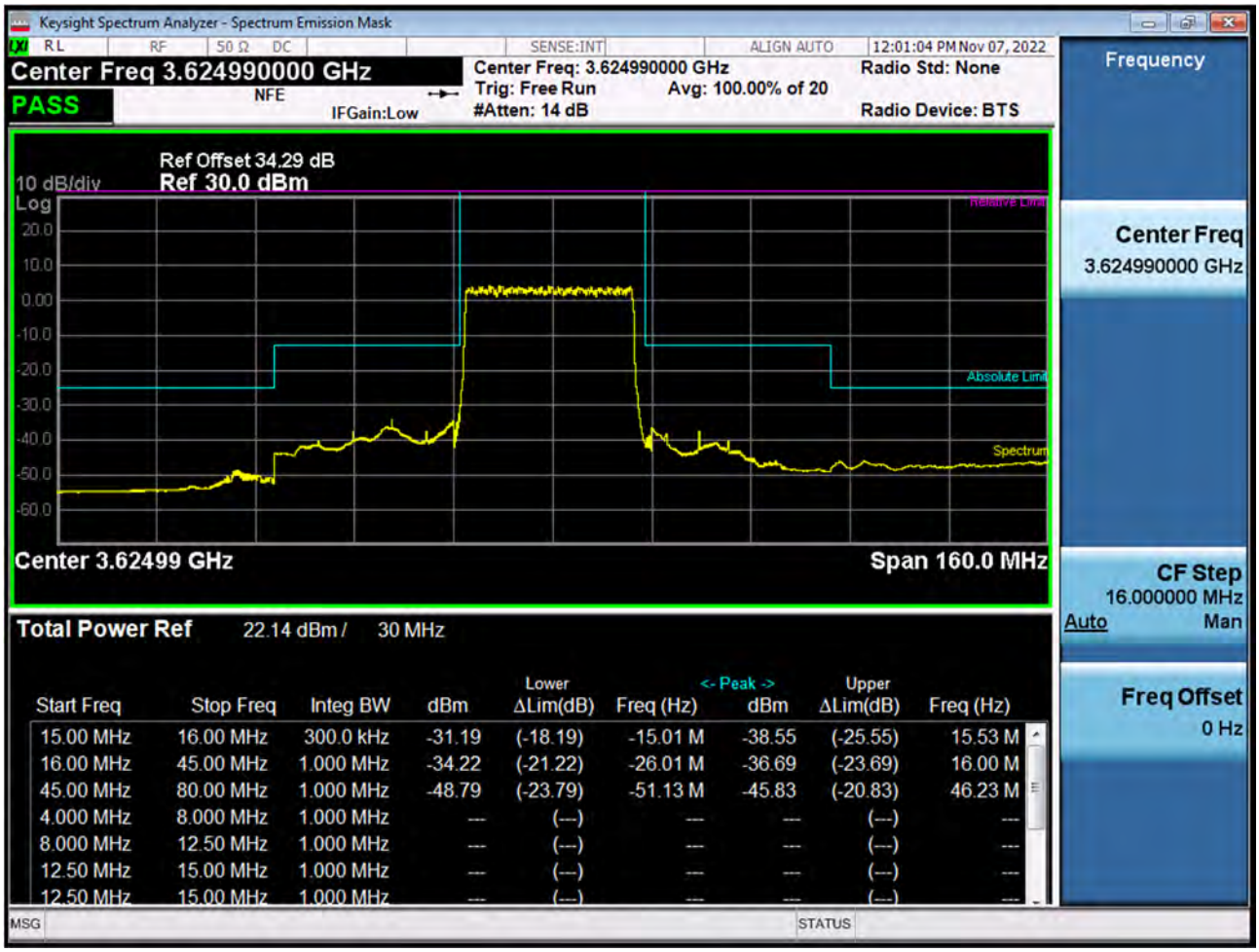
Sub6 n48. 30 M_BandEdge(Lower)_Low_ 3565.02 MHz_BPSK_1RB



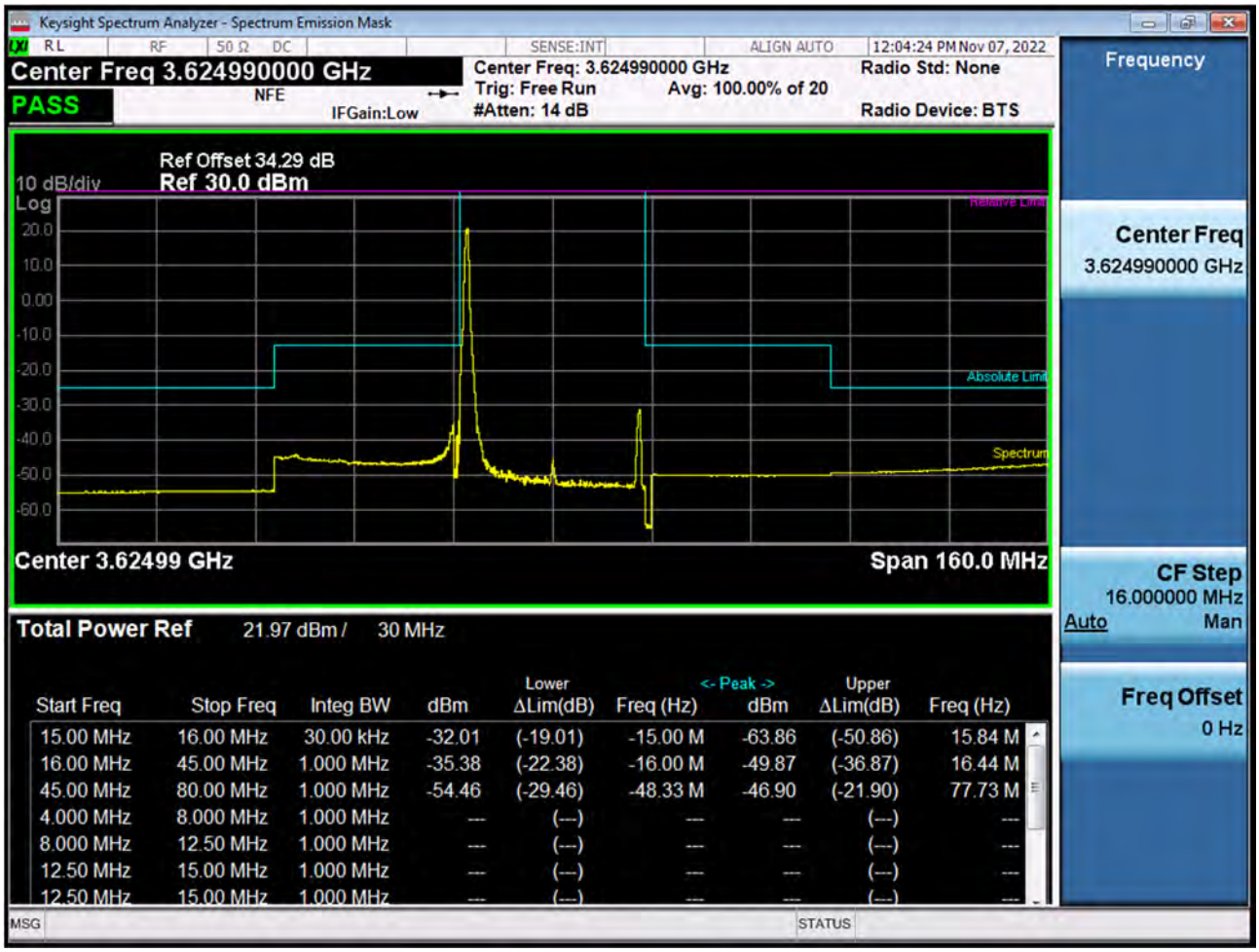
Sub6 n48. 30 M_BandEdge(Upper)_Low_ 3565.02 MHz_BPSK_1RB



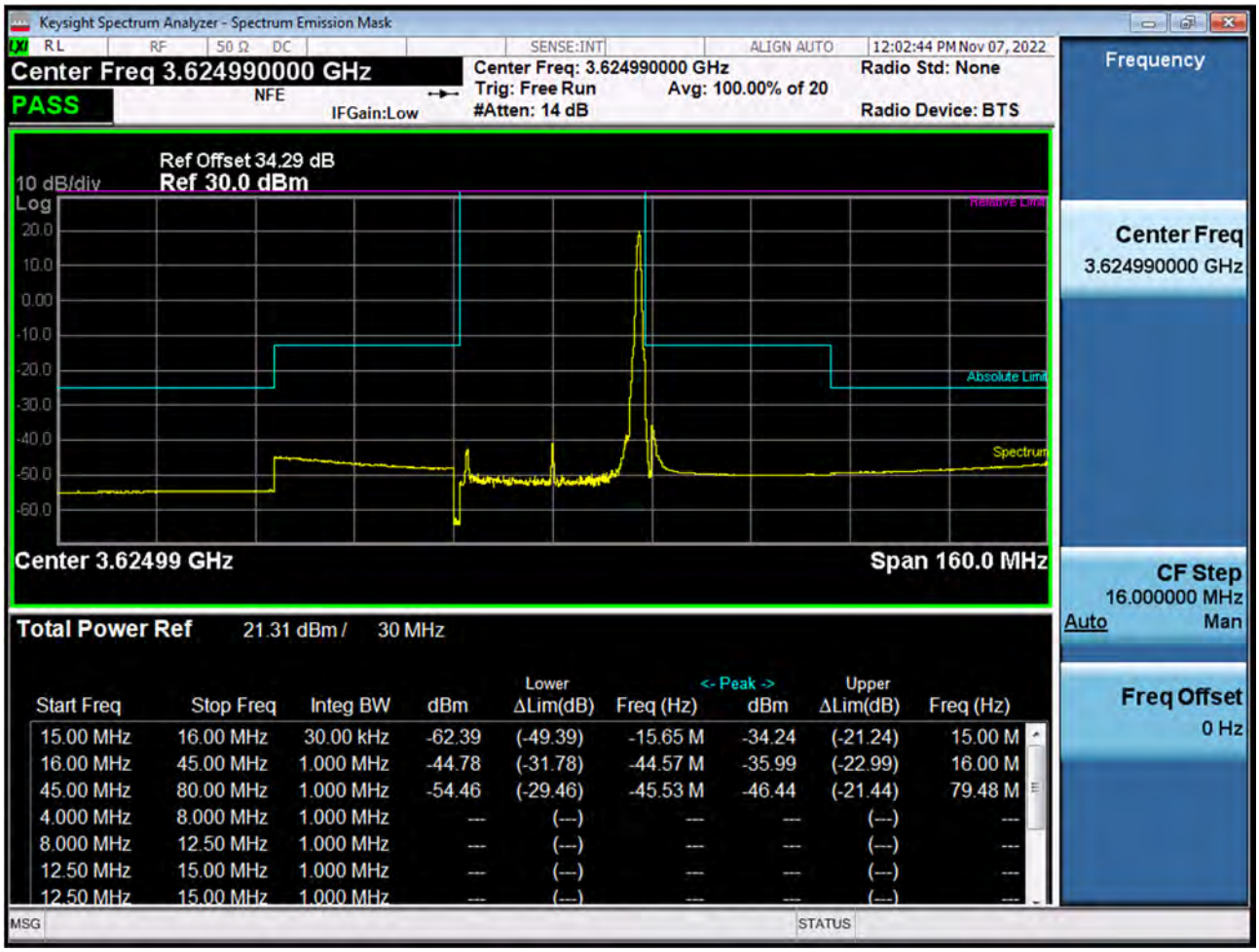
Sub6 n48. 30 M_BandEdge(Center)_Mid_3624.99 MHz_BPSK_FullRB



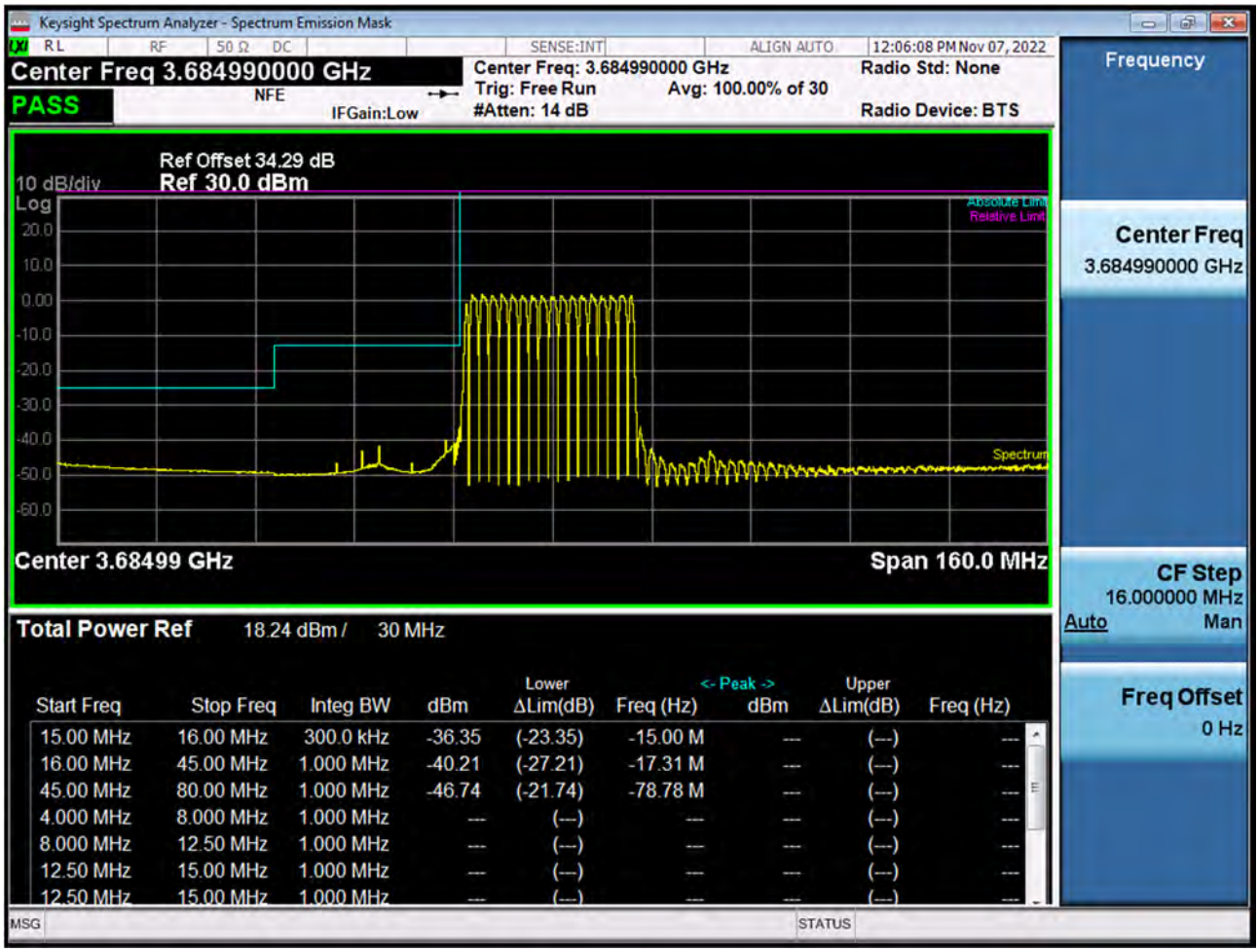
Sub6 n48. 30 M_BandEdge(Lower)_Mid_3624.99 MHz_BPSK_1RB



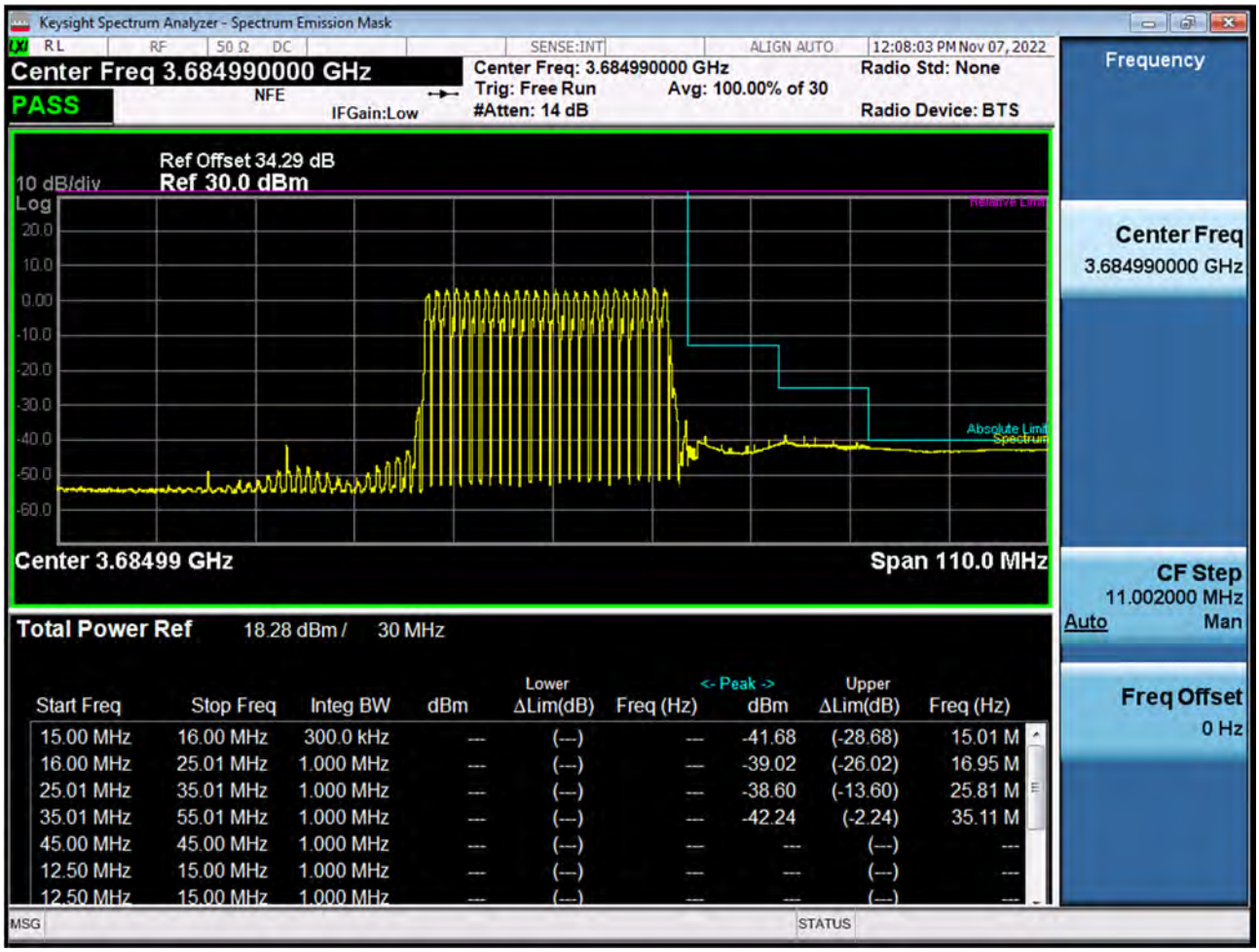
Sub6 n48. 30 M_BandEdge(Upper)_Mid_3624.99 MHz_BPSK_1RB



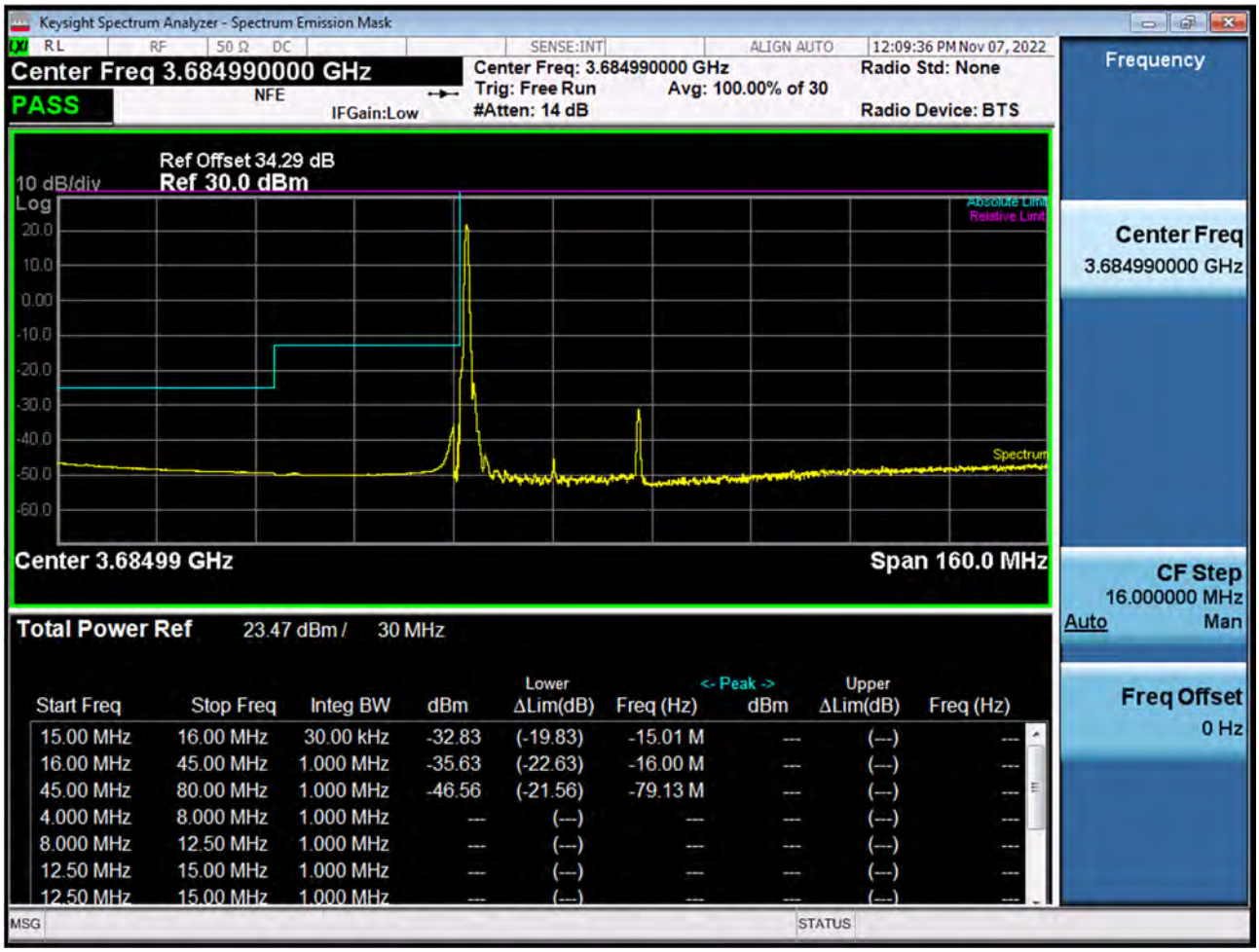
Sub6 n48. 30 M_BandEdge(Lower)_High_ 3684.99 MHz_BPSK_FullRB



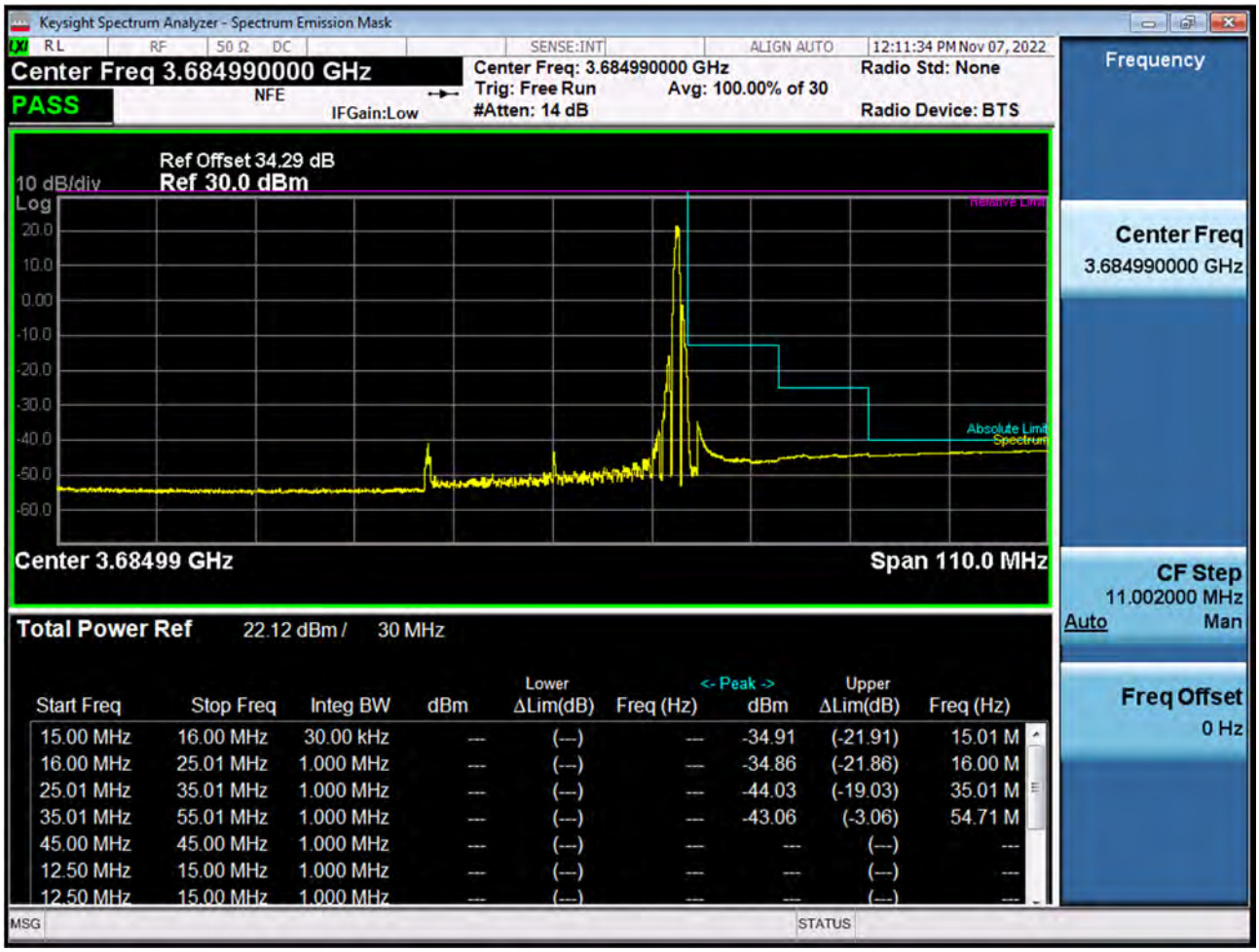
Sub6 n48. 30 M_BandEdge(Upper)_High_ 3684.99 MHz_BPSK_FullRB



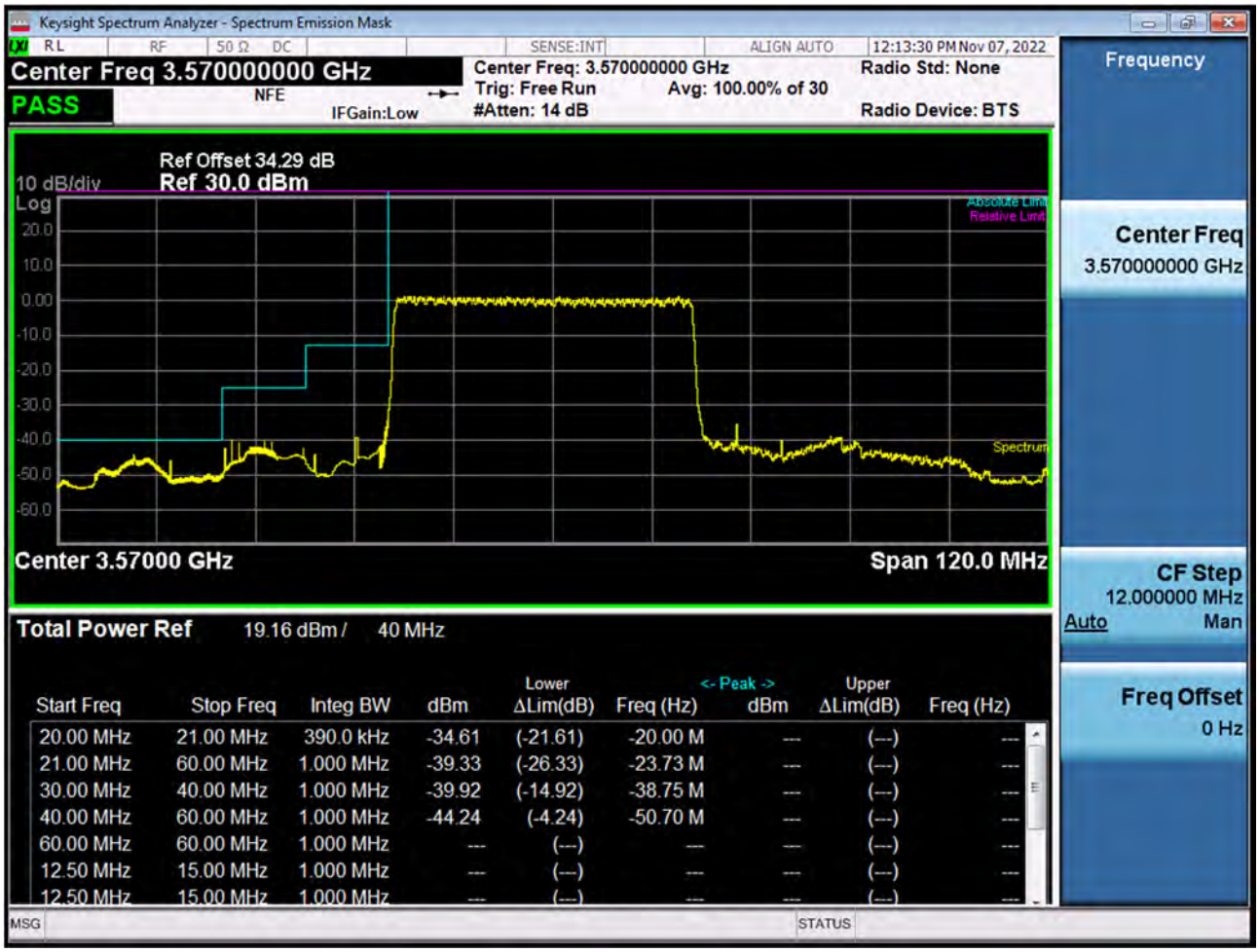
Sub6 n48. 30 M_BandEdge(Lower)_High_ 3684.99 MHz_BPSK_1RB



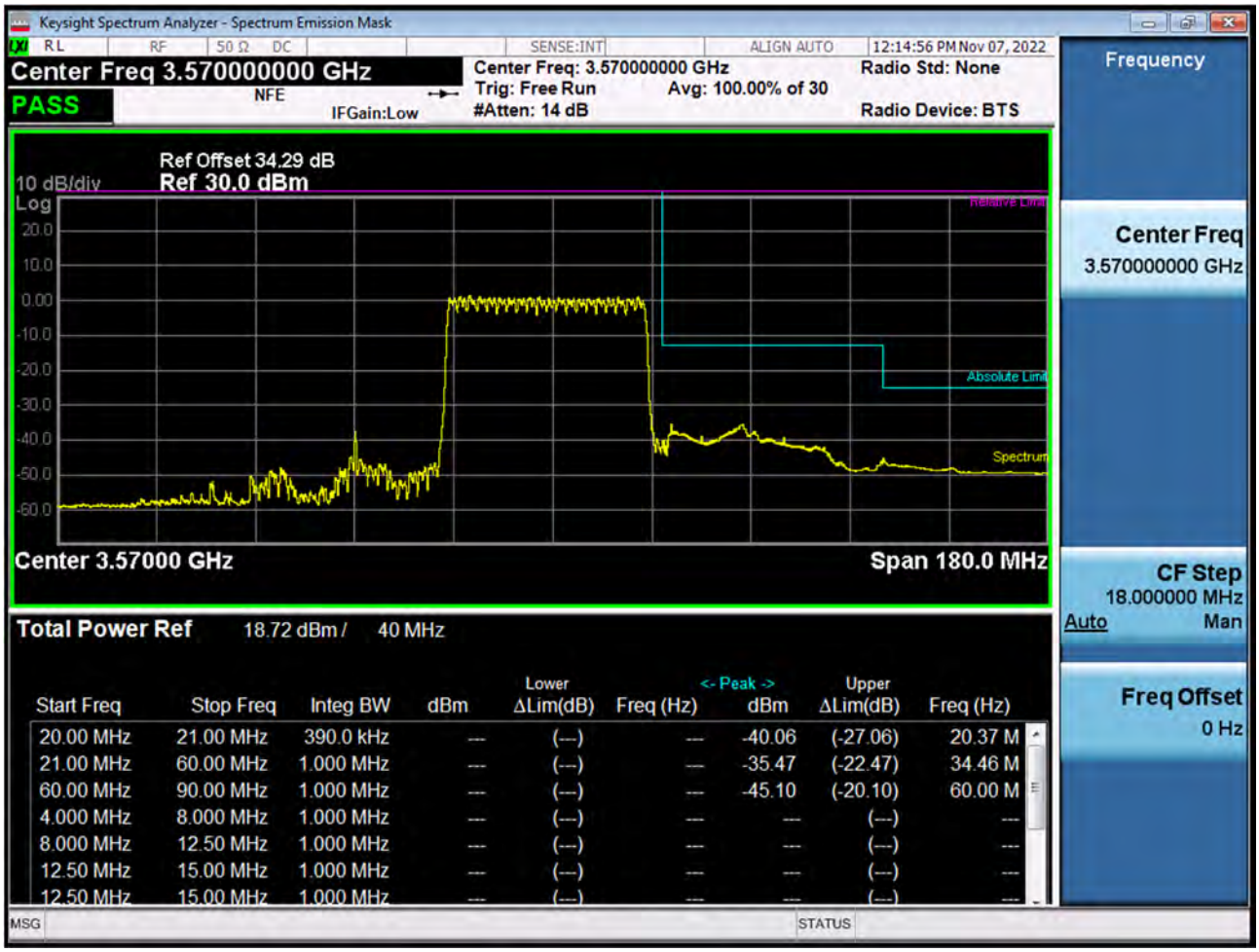
Sub6 n48. 30 M_BandEdge(Upper)_High_ 3684.99 MHz_BPSK_1RB



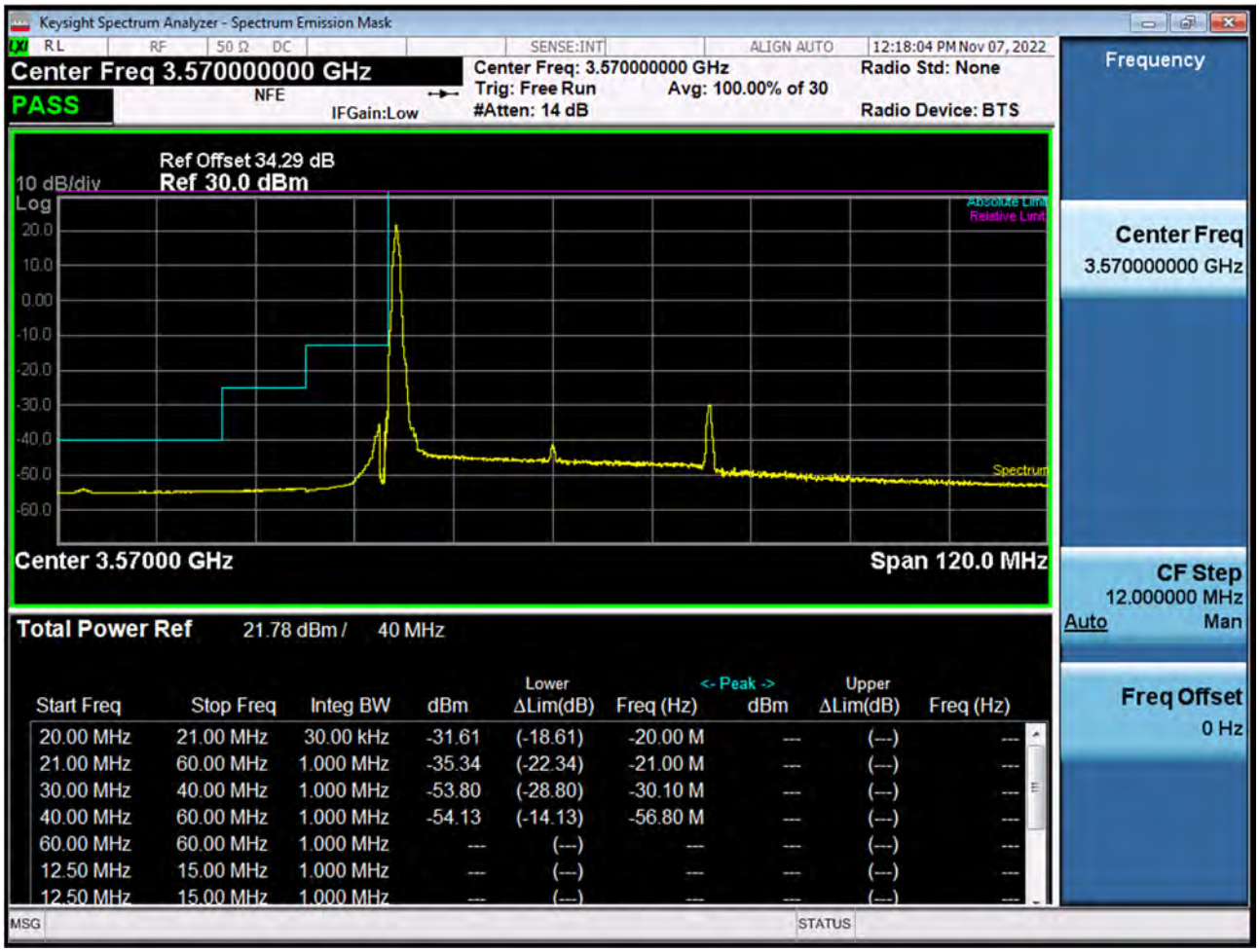
Sub6 n48. 40 M BandEdge(Lower)_Low_ 3570.00 MHz_BPSK_FullRB



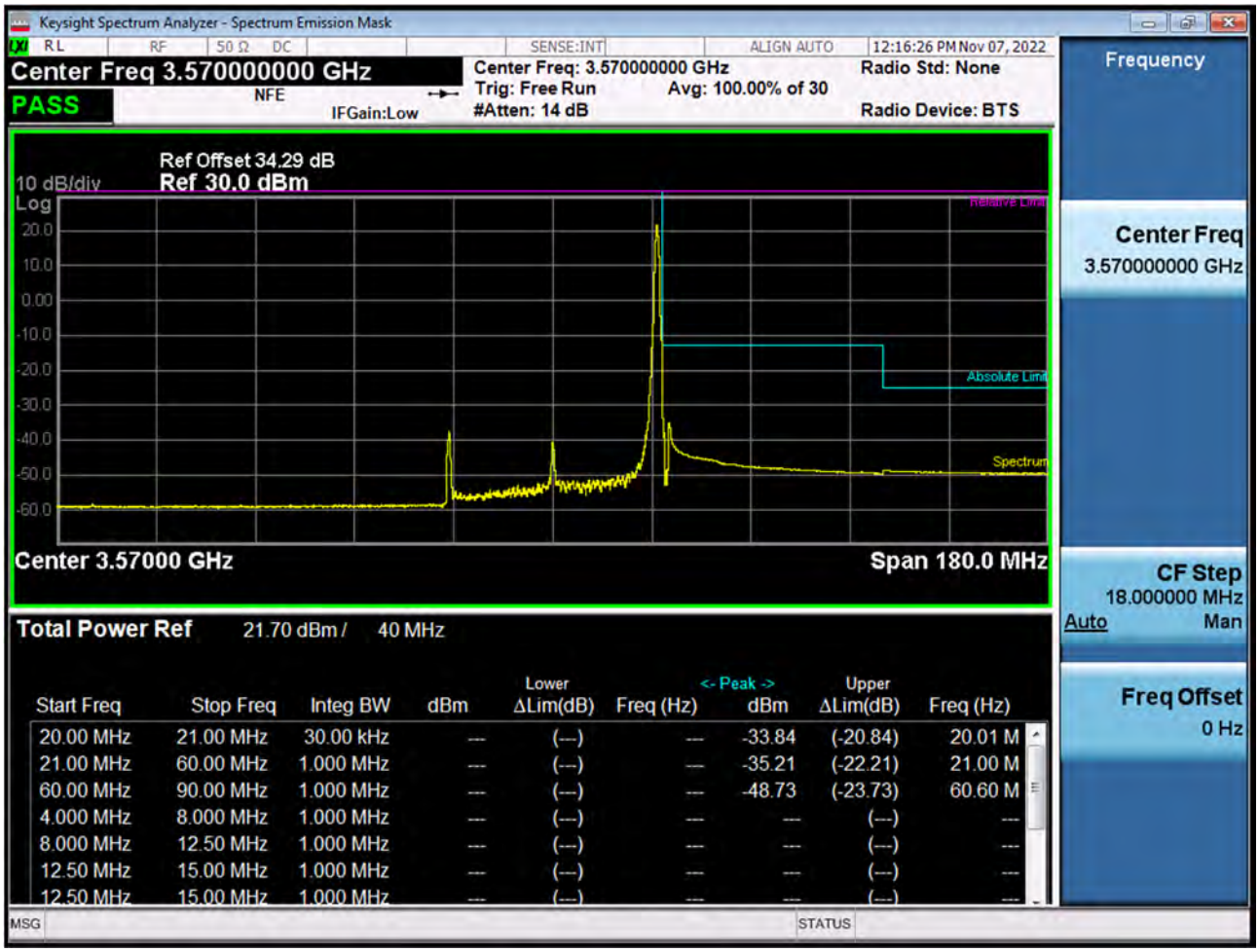
Sub6 n48. 40 M_BandEdge(Upper)_Low_ 3570.00 MHz_BPSK_FullRB



Sub6 n48. 40 M_BandEdge(Lower)_Low_ 3570.00 MHz_BPSK_1RB



Sub6 n48. 40 M_BandEdge(Upper)_Low_ 3570.00 MHz_BPSK_1RB



Sub6 n48. 40 M_BandEdge(Center)_Mid_3624.99 MHz_BPSK_FullRB