TEST REPORT

FCC Sub6 n66 Test for SC-54E
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2405-FC041-R1

DATE OF ISSUE
May 31, 2024

Tested by
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TEST REPORT

REPORT NO.
HCT-RF-2405-FC041-R1

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Additional Model
SCG29

Applicant	**SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Product Name Model Name	Mobile Phone SC-54E
Date of Test	April 23, 2024 ~ May 21, 2024
Location of Test	■ Permanent Testing Lab ☐ On Site Testing (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 Republic of Korea)
FCC ID	A3LSMF741B
FCC Classification	PCS Licensed Transmitter Held to Ear (PCE)
Test Standard Used	FCC Rule Part(s) : § 27
Test Results	PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	May 24, 2024	Initial Release
1	May 31, 2024	Revised the frequency stability result. (25 MHz & 35 MHz frequency typo(42, 44, 62, 64 pages.))

Notice

Content
The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a) The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated. The test results have only been applied with the test methods required by the standard(s). The laboratory is not accredited for the test results marked *. Information provided by the applicant is marked **. Test results provided by external providers are marked ***. When confirmation of authenticity of this test report is required, please contact www.hct.co.kr The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

CONTENTS

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMF741JPN
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 27
EUT Type:	Mobile phone
Model(s):	SC-54E
Additional Model(s)	SCG29
Tx Frequency:	1712.5 MHz – 1777.5 MHz (Sub6 n66(5 MHz)) 1715.0 MHz – 1775.0 MHz (Sub6 n66(10 MHz)) 1717.5 MHz – 1772.5 MHz (Sub6 n66(15 MHz)) 1720.0 MHz – 1770.0 MHz (Sub6 n66(20 MHz)) 1722.5 MHz – 1767.5 MHz (Sub6 n66(25 MHz)) 1725.0 MHz – 1765.0 MHz (Sub6 n66(30 MHz)) 1727.5 MHz – 1762.5 MHz (Sub6 n66(35 MHz)) 1730.0 MHz – 1760.0 MHz (Sub6 n66(40 MHz))
Date(s) of Tests:	April 23, 2024 ~ May 21, 2024
Serial number:	Radiated : R3CX30L0NDB Conducted : R3CX30L0KSV (ANT A) R3CX30L0KYR (ANT I)

1.1. MAXIMUM OUTPUT POWER

ANT A

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n66 (5)	1712.5 – 1777.5	4M59G7D	PI/2 BPSK	0.152	21.82
		4M56G7D	QPSK	0.149	21.73
		4M55W7D	16QAM	0.110	20.41
		4M60W7D	64QAM	0.086	19.36
		4M55W7D	256QAM	0.046	16.64
Sub6 n66 (10)	1715.0 – 1775.0	8M98G7D	PI/2 BPSK	0.149	21.73
		9M00G7D	QPSK	0.145	21.61
		8M98W7D	16QAM	0.108	20.32
		8M96W7D	64QAM	0.084	19.24
		8M96W7D	256QAM	0.046	16.67
Sub6 n66 (15)	1717.5 – 1772.5	13M5G7D	PI/2 BPSK	0.149	21.74
		13M4G7D	QPSK	0.148	21.71
		13M5W7D	16QAM	0.112	20.48
		13M5W7D	64QAM	0.085	19.29
		13M5W7D	256QAM	0.046	16.62
Sub6 n66 (20)	1720.0 – 1770.0	17M9G7D	PI/2 BPSK	0.151	21.80
		18M0G7D	QPSK	0.147	21.66
		18M0W7D	16QAM	0.111	20.47
		17M9W7D	64QAM	0.087	19.41
		17M9W7D	256QAM	0.047	16.72
Sub6 n66 (25)	1722.5 – 1767.5	22M9G7D	PI/2 BPSK	0.159	22.02
		23M0G7D	QPSK	0.158	21.99
		23M0W7D	16QAM	0.125	20.96
		23M0W7D	64QAM	0.089	19.50
		22M9W7D	256QAM	0.049	16.87
Sub6 n66 (30)	1725.0 – 1765.0	28M7G7D	PI/2 BPSK	0.152	21.83
		28M7G7D	QPSK	0.149	21.74
		28M7W7D	16QAM	0.117	20.69
		28M7W7D	64QAM	0.084	19.22
		28M7W7D	256QAM	0.047	16.76
Sub6 n66 (35)	1727.5 – 1762.5	32M4G7D	PI/2 BPSK	0.150	21.77
		32M4G7D	QPSK	0.148	21.71
		32M2W7D	16QAM	0.117	20.70
		32M3W7D	64QAM	0.084	19.24
		32M2W7D	256QAM	0.045	16.56
Sub6 n66 (40)	1730.0 – 1760.0	38M7G7D	PI/2 BPSK	0.150	21.77
		38M7G7D	QPSK	0.146	21.64
		38M7W7D	16QAM	0.117	20.67
		38M7W7D	64QAM	0.083	19.18
		38M7W7D	256QAM	0.046	16.63

ANT I

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n66 (5)	1712.5 – 1777.5	4M48G7D	PI/2 BPSK	0.188	22.75
		4M49G7D	QPSK	0.163	22.13
		4M50W7D	16QAM	0.134	21.26
		4M52W7D	64QAM	0.098	19.91
		4M49W7D	256QAM	0.058	17.64
Sub6 n66 (10)	1715.0 – 1775.0	8M97G7D	PI/2 BPSK	0.187	22.73
		8M98G7D	QPSK	0.177	22.49
		8M95W7D	16QAM	0.139	21.42
		9M00W7D	64QAM	0.102	20.10
		9M04W7D	256QAM	0.056	17.51
Sub6 n66 (15)	1717.5 – 1772.5	13M5G7D	PI/2 BPSK	0.200	23.00
		13M4G7D	QPSK	0.174	22.40
		13M5W7D	16QAM	0.136	21.35
		13M4W7D	64QAM	0.100	20.01
		13M5W7D	256QAM	0.060	17.79
Sub6 n66 (20)	1720.0 – 1770.0	17M9G7D	PI/2 BPSK	0.199	22.99
		17M9G7D	QPSK	0.177	22.48
		17M9W7D	16QAM	0.135	21.29
		17M9W7D	64QAM	0.101	20.05
		18M0W7D	256QAM	0.060	17.81
Sub6 n66 (25)	1722.5 – 1767.5	22M9G7D	PI/2 BPSK	0.198	22.97
		22M9G7D	QPSK	0.193	22.85
		22M9W7D	16QAM	0.148	21.71
		23M0W7D	64QAM	0.109	20.38
		23M0W7D	256QAM	0.060	17.81
Sub6 n66 (30)	1725.0 – 1765.0	28M6G7D	PI/2 BPSK	0.197	22.94
		28M6G7D	QPSK	0.177	22.47
		28M5W7D	16QAM	0.140	21.46
		28M7W7D	64QAM	0.103	20.14
		28M6W7D	256QAM	0.062	17.94
Sub6 n66 (35)	1727.5 – 1762.5	32M2G7D	PI/2 BPSK	0.187	22.71
		32M1G7D	QPSK	0.169	22.29
		32M2W7D	16QAM	0.138	21.39
		32M1W7D	64QAM	0.099	19.96
		32M1W7D	256QAM	0.056	17.52
Sub6 n66 (40)	1730.0 – 1760.0	38M6G7D	PI/2 BPSK	0.195	22.89
		38M6G7D	QPSK	0.175	22.42
		38M6W7D	16QAM	0.136	21.34
		38M5W7D	64QAM	0.100	20.02
		38M6W7D	256QAM	0.058	17.63

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE, Sub 6.
It also supports IEEE 802.11 a/b/g/n/ac/ax (20/40/80/160 MHz), Bluetooth(iPA, ePA), BT LE(iPA, ePA), NFC, WPT, WIFI 6E.

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 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- N/A (See SAR Report)
Peak- to- Average Ratio	- KDB 971168 D01 v03r01 – Section 5.7 - ANSI C63.26-2015 – Section 5.2.3.4
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/ Effective Isotropic Radiated Power	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8 - ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - ANSI/TIA-603-E-2016 – Section 2.2.12

3.2 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.
The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna 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 roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Note

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

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

   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.

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz 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 = Peak
6. Trace mode = Max Hold
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;

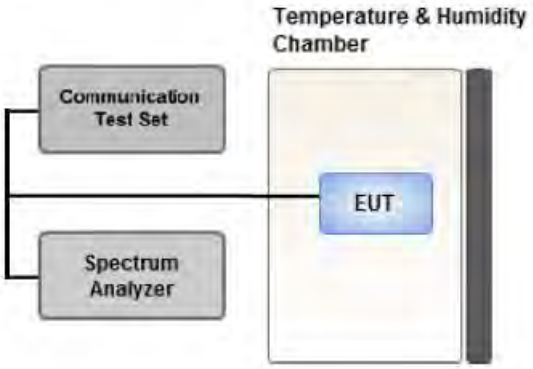
$$\text{Result}_{(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

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

3.4 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:

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

Test Settings(Peak Power)

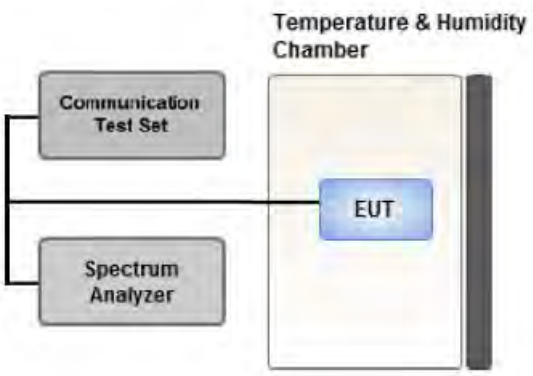
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

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 %.

3.5 OCCUPIED BANDWIDTH.



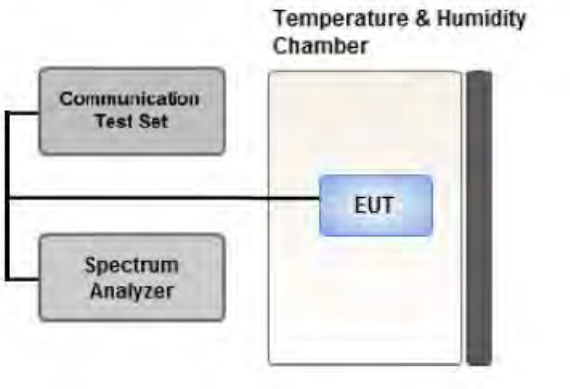
Test setup

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.
The EUT makes a call to the communication simulator.
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

Test Settings

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

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

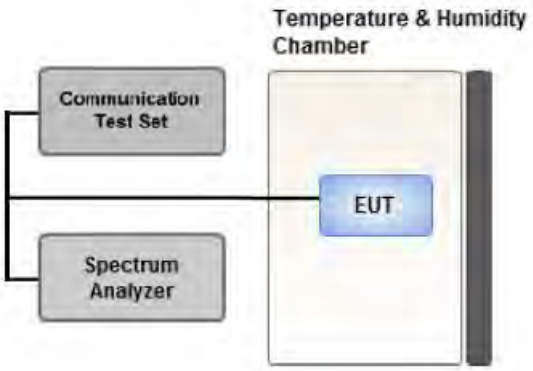
Test Overview

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

Test Settings

1. RBW = 1 MHz
2. VBW ≥ 3 MHz
3. Detector = RMS
4. Trace Mode = trace average
5. Sweep time = auto
6. Number of points in sweep ≥ 2 x Span / RBW

3.7 BAND EDGE



Test setup

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of
operation were investigated and the worst case configuration results are reported in this section.

Test Settings

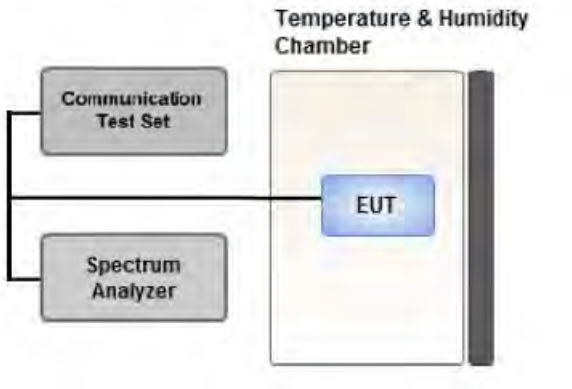
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW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

Test Notes

According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.
All measurements were done at 2 channels(low and high operational frequency range.)
The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

Where 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.

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.
The frequency stability of the transmitter is measured by:

1. Temperature:
   The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.
2. Primary Supply Voltage:
   .- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
   .- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

Test Settings

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

3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- The EUT was tested in three modes(Open, Half-folded, Closed), the worst case configuration results are reported. (Ant A Worst case: Half-folded mode, Ant I Worst case: Open)
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: NSA. SA
  Worst case: SA
  Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
  Worst case : Stand alone
- We were performed the RSE test in condition of co-location.
  Mode : Stand alone, Simultaneous transmission scenarios
  Worst case : Stand alone
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
  All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
  The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- In the case of radiated spurious emissions, all bandwidth of operation was investigated and the worst case bandwidth results are reported. (Worst case : 25 MHz(ANT A), 15 MHz(ANT I))

[ANT A 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		Z
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 8.2		X

[ANT I 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		X

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
  (Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: NSA, SA
  Worst case: SA
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- SC-54E & additional models were tested and the worst case results are reported.
  (Worst case : SC-54E)

[Worst case]

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

4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacture	Serial No.	Due to Calibration	Calibration Interval
Precision Dipole Antenna	UHAP	Schwarzbeck	01273	03/10/2026	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	02289	02/14/2026	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	04/27/2025	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/16/2025	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/09/2025	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/24/2025	Biennial
RF Switching System	FBSR-06B (1G HPF + LNA)	T&M SYSTEM	F3L1	05/14/2025	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/14/2025	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/14/2025	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/14/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/17/2024	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/26/2025	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/25/2024	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	02/29/2025	Annual
Chamber	SU-642	ESPEC	93008124	02/19/2025	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/04/2025	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/17/2025	Annual
Spectrum Analyzer(10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/13/2025	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/10/2024	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/16/2025	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/14/2025	Annual
SIGNAL GENERATOR (100 kHz~40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	06/22/2024	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/17/2025	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/19/2024	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

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)	1.98 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.36 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.70 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.52 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.66 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.58 (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, § 27.53(h)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046	N/A	See Note1
Peak- to- Average Ratio	§ 27.50(d)(5)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§ 2.1055, § 27.54	Emission must remain in band	PASS

Note:

1. See SAR Report
2. All conducted tests were tested using 5G Wireless Tester.

6.2 Test Condition: Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§ 27.50(d)(4)	< 1 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 27.53(h)	< 43 + 10log10 (P[Watts]) for all out-of band emissions	PASS

Note:

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

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

Ch./ Freq.		Measured 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
20175	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)

QPSK Modulation

Emission Designator = 4M48G7D
LTE BW = 4.48 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D
LTE BW = 4.48 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

8. TEST DATA (ANT A)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1712.5	Sub6 n66/ 5 MHz [15 kHz]	PI/2 BPSK	-20.55	12.81	9.60	2.00	V	< 1.00	0.110	20.41	1	12
		QPSK	-20.62	12.74	9.60	2.00	V		0.108	20.34		
		16-QAM	-21.80	11.56	9.60	2.00	V		0.082	19.16		
		64-QAM	-23.07	10.29	9.60	2.00	V		0.062	17.89		
		256-QAM	-25.76	7.60	9.60	2.00	V		0.033	15.20		
1745.0		PI/2 BPSK	-19.49	14.11	9.75	2.04	V		0.152	21.82	1	23
		QPSK	-19.58	14.02	9.75	2.04	V		0.149	21.73		
		16-QAM	-20.90	12.70	9.75	2.04	V		0.110	20.41		
		64-QAM	-21.95	11.65	9.75	2.04	V		0.086	19.36		
		256-QAM	-24.67	8.93	9.75	2.04	V		0.046	16.64		
1777.5		PI/2 BPSK	-19.95	13.59	9.90	2.08	V		0.138	21.41	1	12
		QPSK	-19.99	13.55	9.90	2.08	V		0.137	21.37		
		16-QAM	-21.27	12.27	9.90	2.08	V		0.102	20.09		
		64-QAM	-22.37	11.17	9.90	2.08	V		0.079	18.99		
		256-QAM	-25.10	8.44	9.90	2.08	V		0.042	16.26		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1715.0	Sub6 n66/ 10 MHz [15 kHz]	PI/2 BPSK	-20.65	12.71	9.60	2.00	V	< 1.00	0.107	20.31	1	1
		QPSK	-20.80	12.56	9.60	2.00	V		0.104	20.16		
		16-QAM	-21.96	11.40	9.60	2.00	V		0.079	19.00		
		64-QAM	-23.14	10.22	9.60	2.00	V		0.061	17.82		
		256-QAM	-25.76	7.60	9.60	2.00	V		0.033	15.20		
1745.0		PI/2 BPSK	-19.58	14.02	9.75	2.04	V		0.149	21.73	1	50
		QPSK	-19.70	13.90	9.75	2.04	V		0.145	21.61		
		16-QAM	-20.99	12.61	9.75	2.04	V		0.108	20.32		
		64-QAM	-22.07	11.53	9.75	2.04	V		0.084	19.24		
		256-QAM	-24.64	8.96	9.75	2.04	V		0.046	16.67		
1775.0		PI/2 BPSK	-19.93	13.61	9.90	2.08	V		0.139	21.43	1	1
		QPSK	-20.07	13.47	9.90	2.08	V		0.135	21.29		
		16-QAM	-21.37	12.17	9.90	2.08	V		0.100	19.99		
		64-QAM	-22.34	11.20	9.90	2.08	V		0.080	19.02		
		256-QAM	-25.03	8.51	9.90	2.08	V		0.043	16.33		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1717.5	Sub6 n66/ 15 MHz [15 kHz]	PI/2 BPSK	-20.66	12.70	9.60	2.00	V	< 1.00	0.107	20.30	1	1
		QPSK	-20.77	12.59	9.60	2.00	V		0.104	20.19		
		16-QAM	-21.94	11.42	9.60	2.00	V		0.080	19.02		
		64-QAM	-23.18	10.18	9.60	2.00	V		0.060	17.78		
		256-QAM	-25.78	7.58	9.60	2.00	V		0.033	15.18		
1745.0		PI/2 BPSK	-19.57	14.03	9.75	2.04	V		0.149	21.74	1	1
		QPSK	-19.60	14.00	9.75	2.04	V		0.148	21.71		
		16-QAM	-20.83	12.77	9.75	2.04	V		0.112	20.48		
		64-QAM	-22.02	11.58	9.75	2.04	V		0.085	19.29		
		256-QAM	-24.69	8.91	9.75	2.04	V		0.046	16.62		
1772.5		PI/2 BPSK	-20.00	13.54	9.90	2.08	V		0.137	21.36	1	1
		QPSK	-20.14	13.40	9.90	2.08	V		0.132	21.22		
		16-QAM	-21.31	12.23	9.90	2.08	V		0.101	20.05		
		64-QAM	-22.37	11.17	9.90	2.08	V		0.079	18.99		
		256-QAM	-24.99	8.55	9.90	2.08	V		0.043	16.37		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1720.0	Sub6 n66/ 20 MHz [15 kHz]	PI/2 BPSK	-20.70	12.80	9.60	2.00	V	< 1.00	0.110	20.40	1	1
		QPSK	-20.89	12.61	9.60	2.00	V		0.105	20.21		
		16-QAM	-21.97	11.53	9.60	2.00	V		0.082	19.13		
		64-QAM	-23.23	10.27	9.60	2.00	V		0.061	17.87		
		256-QAM	-25.92	7.58	9.60	2.00	V		0.033	15.18		
1745.0		PI/2 BPSK	-19.51	14.09	9.75	2.04	V		0.151	21.80	1	1
		QPSK	-19.65	13.95	9.75	2.04	V		0.147	21.66		
		16-QAM	-20.84	12.76	9.75	2.04	V		0.111	20.47		
		64-QAM	-21.90	11.70	9.75	2.04	V		0.087	19.41		
		256-QAM	-24.59	9.01	9.75	2.04	V		0.047	16.72		
1770.0		PI/2 BPSK	-19.97	13.67	9.90	2.09	V		0.141	21.48	1	53
		QPSK	-20.16	13.48	9.90	2.09	V		0.135	21.29		
		16-QAM	-21.47	12.17	9.90	2.09	V		0.100	19.98		
		64-QAM	-22.44	11.20	9.90	2.09	V		0.080	19.01		
		256-QAM	-25.13	8.51	9.90	2.09	V		0.043	16.32		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1722.5	Sub6 n66/ 25 MHz [15 kHz]	PI/2 BPSK	-20.57	12.99	9.60	2.01	V	< 1.00	0.114	20.58	1	1
		QPSK	-20.73	12.83	9.60	2.01	V		0.110	20.42		
		16-QAM	-21.65	11.91	9.60	2.01	V		0.089	19.50		
		64-QAM	-23.15	10.41	9.60	2.01	V		0.063	18.00		
		256-QAM	-25.59	7.97	9.60	2.01	V		0.036	15.56		
1745.0		PI/2 BPSK	-19.29	14.31	9.75	2.04	V		0.159	22.02	1	1
		QPSK	-19.32	14.28	9.75	2.04	V		0.158	21.99		
		16-QAM	-20.35	13.25	9.75	2.04	V		0.125	20.96		
		64-QAM	-21.81	11.79	9.75	2.04	V		0.089	19.50		
		256-QAM	-24.44	9.16	9.75	2.04	V		0.049	16.87		
1767.5		PI/2 BPSK	-19.63	13.85	9.90	2.09	V		0.147	21.66	1	1
		QPSK	-19.80	13.68	9.90	2.09	V		0.141	21.49		
		16-QAM	-20.89	12.59	9.90	2.09	V		0.110	20.40		
		64-QAM	-22.08	11.40	9.90	2.09	V		0.083	19.21		
		256-QAM	-24.68	8.80	9.90	2.09	V		0.046	16.61		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1725.0	Sub6 n66/ 30 MHz [15 kHz]	PI/2 BPSK	-20.54	13.02	9.60	2.01	V	< 1.00	0.115	20.61	1	1
		QPSK	-20.70	12.86	9.60	2.01	V		0.111	20.45		
		16-QAM	-21.70	11.86	9.60	2.01	V		0.088	19.45		
		64-QAM	-23.08	10.48	9.60	2.01	V		0.064	18.07		
		256-QAM	-25.58	7.98	9.60	2.01	V		0.036	15.57		
1745.0		PI/2 BPSK	-19.48	14.12	9.75	2.04	V		0.152	21.83	1	1
		QPSK	-19.57	14.03	9.75	2.04	V		0.149	21.74		
		16-QAM	-20.62	12.98	9.75	2.04	V		0.117	20.69		
		64-QAM	-22.09	11.51	9.75	2.04	V		0.084	19.22		
		256-QAM	-24.55	9.05	9.75	2.04	V		0.047	16.76		
1765.0		PI/2 BPSK	-19.63	13.85	9.90	2.09	V		0.147	21.66	1	1
		QPSK	-19.84	13.64	9.90	2.09	V		0.140	21.45		
		16-QAM	-20.80	12.68	9.90	2.09	V		0.112	20.49		
		64-QAM	-22.16	11.32	9.90	2.09	V		0.082	19.13		
		256-QAM	-24.76	8.72	9.90	2.09	V		0.045	16.53		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1727.5	Sub6 n66/ 35 MHz [15 kHz]	PI/2 BPSK	-20.72	12.84	9.60	2.01	V	< 1.00	0.110	20.43	1	1
		QPSK	-20.84	12.72	9.60	2.01	V		0.107	20.31		
		16-QAM	-21.93	11.63	9.60	2.01	V		0.084	19.22		
		64-QAM	-23.30	10.26	9.60	2.01	V		0.061	17.85		
		256-QAM	-25.92	7.64	9.60	2.01	V		0.033	15.23		
1745.0		PI/2 BPSK	-19.54	14.06	9.75	2.04	V		0.150	21.77	1	1
		QPSK	-19.60	14.00	9.75	2.04	V		0.148	21.71		
		16-QAM	-20.61	12.99	9.75	2.04	V		0.117	20.70		
		64-QAM	-22.07	11.53	9.75	2.04	V		0.084	19.24		
		256-QAM	-24.75	8.85	9.75	2.04	V		0.045	16.56		
1762.5		PI/2 BPSK	-19.67	13.65	9.90	2.09	V		0.140	21.46	1	1
		QPSK	-19.73	13.59	9.90	2.09	V		0.138	21.40		
		16-QAM	-20.84	12.48	9.90	2.09	V		0.107	20.29		
		64-QAM	-22.16	11.16	9.90	2.09	V		0.079	18.97		
		256-QAM	-24.81	8.51	9.90	2.09	V		0.043	16.32		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1730.0	Sub6 n66/ 40 MHz [15 kHz]	PI/2 BPSK	-20.68	12.93	9.60	2.01	V	< 1.00	0.113	20.52	1	1
		QPSK	-20.74	12.87	9.60	2.01	V		0.111	20.46		
		16-QAM	-21.79	11.82	9.60	2.01	V		0.087	19.41		
		64-QAM	-23.31	10.30	9.60	2.01	V		0.062	17.89		
		256-QAM	-25.87	7.74	9.60	2.01	V		0.034	15.33		
1745.0		PI/2 BPSK	-19.54	14.06	9.75	2.04	V		0.150	21.77	1	1
		QPSK	-19.67	13.93	9.75	2.04	V		0.146	21.64		
		16-QAM	-20.64	12.96	9.75	2.04	V		0.117	20.67		
		64-QAM	-22.13	11.47	9.75	2.04	V		0.083	19.18		
		256-QAM	-24.69	8.91	9.75	2.04	V		0.046	16.62		
1760.0		PI/2 BPSK	-19.43	13.89	9.90	2.09	V		0.148	21.70	1	1
		QPSK	-19.56	13.76	9.90	2.09	V		0.144	21.57		
		16-QAM	-20.58	12.74	9.90	2.09	V		0.114	20.55		
		64-QAM	-21.95	11.37	9.90	2.09	V		0.083	19.18		
		256-QAM	-24.50	8.82	9.90	2.09	V		0.046	16.63		

8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N66
▣ Bandwidth: 25 MHz
▣ Modulation: PI/2 BPSK
▣ Distance: 3 meters
▣ SCS: 15 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
344500 (1722.5)	3 445.00	-60.75	11.15	-61.95	2.97	V	-53.77	-13.00	1	1
	5 167.50	-61.53	11.00	-56.39	3.70	V	-49.09	-13.00		
	6 890.00	-64.08	10.80	-52.45	4.29	V	-45.94	-13.00		
	8 612.50	-62.48	10.40	-48.54	4.80	V	-42.94	-13.00		
	10 335.00	-63.10	11.10	-45.78	5.34	V	-40.02	-13.00		
349000 (1745.0)	3 490.00	-60.35	11.20	-61.79	3.00	V	-53.59	-13.00	1	1
	5 235.00	-62.12	11.10	-57.19	3.70	V	-49.79	-13.00		
	6 980.00	-64.51	10.90	-51.80	4.30	V	-45.20	-13.00		
	8 725.00	-62.67	10.30	-48.31	4.88	V	-42.89	-13.00		
	10 470.00	-64.24	11.30	-46.51	5.43	V	-40.64	-13.00		
353500 (1767.5)	3 535.00	-60.90	11.30	-62.87	3.00	V	-54.57	-13.00	1	1
	5 302.50	-62.34	11.40	-57.72	3.67	V	-49.99	-13.00		
	7 070.00	-61.88	10.70	-48.04	4.34	V	-41.68	-13.00		
	8 837.50	-61.73	10.50	-47.69	4.91	V	-42.10	-13.00		
	10 605.00	-63.54	11.20	-44.80	5.40	V	-39.00	-13.00		

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n66	5 MHz	1745.0	BPSK	25	0	4.01
			QPSK			4.59
			16-QAM			5.55
			64-QAM			6.08
			256-QAM			6.73
	10 MHz		BPSK	50		3.84
			QPSK			4.53
			16-QAM			5.46
			64-QAM			5.91
			256-QAM			6.57
	15 MHz		BPSK	75		3.95
			QPSK			4.48
			16-QAM			5.34
			64-QAM			5.89
			256-QAM			6.48
	20 MHz		BPSK	100		4.04
			QPSK			4.50
			16-QAM			5.47
			64-QAM			5.91
			256-QAM			6.62
	25 MHz		BPSK	128		4.18
			QPSK			4.53
			16-QAM			5.67
			64-QAM			6.01
			256-QAM			6.55
	30 MHz		BPSK	160		4.06
			QPSK			4.50
			16-QAM			5.42
			64-QAM			5.98
			256-QAM			6.62
	35 MHz		BPSK	187		4.01
			QPSK			4.49
			16-QAM			5.38
			64-QAM			5.88
			256-QAM			6.50
	40 MHz		BPSK	216		4.02
			QPSK			4.56
			16-QAM			5.46
			64-QAM			5.95
			256-QAM			6.60

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 67 ~ 106.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n66	5 MHz	1745.0	BPSK	25	0	4.5904
			QPSK			4.5564
			16-QAM			4.5460
			64-QAM			4.6009
			256-QAM			4.5534
	10 MHz		BPSK	50		8.9821
			QPSK			8.9948
			16-QAM			8.9820
			64-QAM			8.9628
			256-QAM			8.9550
	15 MHz		BPSK	75		13.450
			QPSK			13.444
			16-QAM			13.483
			64-QAM			13.467
			256-QAM			13.493
	20 MHz		BPSK	100		17.893
			QPSK			17.977
			16-QAM			17.990
			64-QAM			17.912
			256-QAM			17.930
	25 MHz		BPSK	128		22.938
			QPSK			22.966
			16-QAM			22.978
			64-QAM			22.957
			256-QAM			22.910
	30 MHz		BPSK	160		28.651
			QPSK			28.648
			16-QAM			28.654
			64-QAM			28.710
			256-QAM			28.645
	35 MHz		BPSK	187		32.350
			QPSK			32.377
			16-QAM			32.221
			64-QAM			32.253
			256-QAM			32.188
	40 MHz		BPSK	216		38.645
			QPSK			38.669
			16-QAM			38.672
			64-QAM			38.706
			256-QAM			38.713

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 107 ~ 146.

8.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n66	5	1712.5	3.6676	30.200	-67.345	-37.145	-13.00
		1745.0	3.6865	30.200	-67.184	-36.984	
		1777.5	3.6900	30.200	-67.187	-36.987	
	10	1715.0	3.7164	30.200	-67.466	-37.266	
		1745.0	3.7005	30.200	-67.315	-37.115	
		1775.0	3.7099	30.200	-67.449	-37.249	
	15	1717.5	3.7015	30.200	-67.012	-36.812	
		1745.0	3.6745	30.200	-67.205	-37.005	
		1772.5	3.1830	30.200	-67.259	-37.059	
	20	1720.0	3.6656	30.200	-67.146	-36.946	
		1745.0	3.6725	30.200	-67.256	-37.056	
		1770.0	3.7079	30.200	-67.140	-36.940	
	25	1722.5	3.6700	30.200	-67.247	-37.047	
		1745.0	3.6880	30.200	-67.115	-36.915	
		1767.5	3.7089	30.200	-67.471	-37.271	
	30	1725.0	3.7029	30.200	-67.538	-37.338	
		1745.0	3.7015	30.200	-67.118	-36.918	
		1765.0	3.7044	30.200	-67.187	-36.987	
	35	1727.5	3.6990	30.200	-67.413	-37.213	
		1745.0	3.6835	30.200	-67.284	-37.084	
		1762.5	3.6750	30.200	-67.062	-36.862	
	40	1730.0	3.7149	30.200	-67.388	-37.188	
		1745.0	3.6740	30.200	-66.704	-36.504	
		1760.0	3.7079	30.200	-66.977	-36.777	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 147 ~ 194.
2. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
3. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 – 1	27.494
1 – 5	30.200
5 – 10	30.815
10 – 15	31.340
15 – 20	31.713
Above 20	32.355

8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 195 ~ 242.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 5 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1712.5	100 %	+20(Ref)	1712 499 997	0.0	0.000 000	0.000
	100 %	-30	1712 499 996	-1.4	0.000 000	-0.001
	100 %	-20	1712 499 996	-0.7	0.000 000	0.000
	100 %	-10	1712 499 996	-1.5	0.000 000	-0.001
	100 %	0	1712 499 997	0.1	0.000 000	0.000
	100 %	+10	1712 499 996	-0.6	0.000 000	0.000
	100 %	+30	1712 499 995	-1.6	0.000 000	-0.001
	100 %	+40	1712 499 995	-1.9	0.000 000	-0.001
	100 %	+50	1712 499 996	-0.8	0.000 000	0.000
	Batt. Endpoint	+20	1712 499 995	-2.1	0.000 000	-0.001
1777.5	100 %	+20(Ref)	1777 500 001	0.0	0.000 000	0.000
	100 %	-30	1777 500 003	2.8	0.000 000	0.002
	100 %	-20	1777 500 003	2.0	0.000 000	0.001
	100 %	-10	1777 500 000	-0.4	0.000 000	0.000
	100 %	0	1777 500 000	-0.2	0.000 000	0.000
	100 %	+10	1777 500 001	0.8	0.000 000	0.000
	100 %	+30	1777 500 002	1.3	0.000 000	0.001
	100 %	+40	1777 500 000	-0.4	0.000 000	0.000
	100 %	+50	1777 500 003	2.7	0.000 000	0.001
	Batt. Endpoint	+20	1777 500 001	0.4	0.000 000	0.000

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1715.0	100 %	+20(Ref)	1714 999 999	0.0	0.000 000	0.000
	100 %	-30	1714 999 999	-0.1	0.000 000	0.000
	100 %	-20	1714 999 997	-2.3	0.000 000	-0.001
	100 %	-10	1714 999 999	-0.1	0.000 000	0.000
	100 %	0	1715 000 001	1.6	0.000 000	0.001
	100 %	+10	1714 999 998	-0.8	0.000 000	0.000
	100 %	+30	1714 999 998	-1.6	0.000 000	-0.001
	100 %	+40	1714 999 999	-0.5	0.000 000	0.000
	100 %	+50	1715 000 000	1.1	0.000 000	0.001
	Batt. Endpoint	+20	1714 999 998	-0.6	0.000 000	0.000
1775.0	100 %	+20(Ref)	1774 999 997	0.0	0.000 000	0.000
	100 %	-30	1774 999 997	-0.5	0.000 000	0.000
	100 %	-20	1774 999 998	0.6	0.000 000	0.000
	100 %	-10	1774 999 999	1.6	0.000 000	0.001
	100 %	0	1774 999 997	0.1	0.000 000	0.000
	100 %	+10	1774 999 997	-0.6	0.000 000	0.000
	100 %	+30	1775 000 000	2.3	0.000 000	0.001
	100 %	+40	1774 999 998	0.2	0.000 000	0.000
	100 %	+50	1775 000 000	2.2	0.000 000	0.001
	Batt. Endpoint	+20	1774 999 998	1.0	0.000 000	0.001

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1717.5	100 %	+20(Ref)	1717 500 000	0.0	0.000 000	0.000
	100 %	-30	1717 500 001	1.2	0.000 000	0.001
	100 %	-20	1717 500 001	1.2	0.000 000	0.001
	100 %	-10	1717 500 000	0.7	0.000 000	0.000
	100 %	0	1717 500 002	2.1	0.000 000	0.001
	100 %	+10	1717 500 000	0.2	0.000 000	0.000
	100 %	+30	1717 500 002	2.1	0.000 000	0.001
	100 %	+40	1717 500 001	1.4	0.000 000	0.001
	100 %	+50	1717 499 999	-0.8	0.000 000	0.000
	Batt. Endpoint	+20	1717 500 001	1.1	0.000 000	0.001
1772.5	100 %	+20(Ref)	1772 500 000	0.0	0.000 000	0.000
	100 %	-30	1772 500 000	-0.3	0.000 000	0.000
	100 %	-20	1772 500 001	0.4	0.000 000	0.000
	100 %	-10	1772 500 000	0.1	0.000 000	0.000
	100 %	0	1772 500 002	1.6	0.000 000	0.001
	100 %	+10	1772 500 000	-0.6	0.000 000	0.000
	100 %	+30	1772 500 001	1.2	0.000 000	0.001
	100 %	+40	1772 500 000	0.1	0.000 000	0.000
	100 %	+50	1772 500 001	1.1	0.000 000	0.001
	Batt. Endpoint	+20	1772 500 001	0.6	0.000 000	0.000

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1720.0	100 %	+20(Ref)	1720 000 000	0.0	0.000 000	0.000
	100 %	-30	1719 999 997	-3.0	0.000 000	-0.002
	100 %	-20	1719 999 998	-1.4	0.000 000	-0.001
	100 %	-10	1719 999 999	-0.5	0.000 000	0.000
	100 %	0	1719 999 997	-2.3	0.000 000	-0.001
	100 %	+10	1720 000 000	0.1	0.000 000	0.000
	100 %	+30	1719 999 998	-1.6	0.000 000	-0.001
	100 %	+40	1719 999 999	-0.6	0.000 000	0.000
	100 %	+50	1719 999 999	-0.1	0.000 000	0.000
	Batt. Endpoint	+20	1719 999 998	-1.5	0.000 000	-0.001
1770.0	100 %	+20(Ref)	1770 000 003	0.0	0.000 000	0.000
	100 %	-30	1770 000 006	2.8	0.000 000	0.002
	100 %	-20	1770 000 006	3.6	0.000 000	0.002
	100 %	-10	1770 000 005	2.5	0.000 000	0.001
	100 %	0	1770 000 005	2.0	0.000 000	0.001
	100 %	+10	1770 000 006	3.5	0.000 000	0.002
	100 %	+30	1770 000 006	3.6	0.000 000	0.002
	100 %	+40	1770 000 003	-0.2	0.000 000	0.000
	100 %	+50	1770 000 004	1.1	0.000 000	0.001
	Batt. Endpoint	+20	1770 000 004	1.5	0.000 000	0.001

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1722.5	100 %	+20(Ref)	1722 500 001	0.0	0.000 000	0.000
	100 %	-30	1722 499 999	-1.7	0.000 000	-0.001
	100 %	-20	1722 500 002	1.0	0.000 000	0.001
	100 %	-10	1722 500 002	0.9	0.000 000	0.001
	100 %	0	1722 500 002	1.4	0.000 000	0.001
	100 %	+10	1722 500 001	-0.4	0.000 000	0.000
	100 %	+30	1722 499 999	-1.9	0.000 000	-0.001
	100 %	+40	1722 500 000	-1.4	0.000 000	-0.001
	100 %	+50	1722 500 001	-0.5	0.000 000	0.000
	Batt. Endpoint	+20	1722 500 001	0.5	0.000 000	0.000
1767.5	100 %	+20(Ref)	1767 500 000	0.0	0.000 000	0.000
	100 %	-30	1767 500 002	1.2	0.000 000	0.001
	100 %	-20	1767 500 001	0.5	0.000 000	0.000
	100 %	-10	1767 500 002	1.3	0.000 000	0.001
	100 %	0	1767 499 999	-1.5	0.000 000	-0.001
	100 %	+10	1767 499 998	-2.1	0.000 000	-0.001
	100 %	+30	1767 500 000	-0.3	0.000 000	0.000
	100 %	+40	1767 500 000	-0.2	0.000 000	0.000
	100 %	+50	1767 499 999	-1.7	0.000 000	-0.001
	Batt. Endpoint	+20	1767 500 002	1.2	0.000 000	0.001

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1725.0	100 %	+20(Ref)	1725 000 007	0.0	0.000 000	0.000
	100 %	-30	1725 000 014	7.5	0.000 000	0.004
	100 %	-20	1725 000 014	7.8	0.000 000	0.004
	100 %	-10	1725 000 015	8.5	0.000 000	0.005
	100 %	0	1725 000 013	7.0	0.000 000	0.004
	100 %	+10	1725 000 014	7.9	0.000 000	0.005
	100 %	+30	1725 000 014	7.3	0.000 000	0.004
	100 %	+40	1725 000 014	7.7	0.000 000	0.004
	100 %	+50	1725 000 015	8.4	0.000 000	0.005
	Batt. Endpoint	+20	1725 000 014	7.9	0.000 000	0.005
1765.0	100 %	+20(Ref)	1765 000 005	0.0	0.000 000	0.000
	100 %	-30	1765 000 008	2.5	0.000 000	0.001
	100 %	-20	1765 000 011	5.2	0.000 000	0.003
	100 %	-10	1765 000 011	6.0	0.000 000	0.003
	100 %	0	1765 000 012	6.3	0.000 000	0.004
	100 %	+10	1765 000 010	4.3	0.000 000	0.002
	100 %	+30	1765 000 011	5.1	0.000 000	0.003
	100 %	+40	1765 000 009	4.0	0.000 000	0.002
	100 %	+50	1765 000 008	2.7	0.000 000	0.002
	Batt. Endpoint	+20	1765 000 008	2.8	0.000 000	0.002

▣ BandWidth: 35 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1727.5	100 %	+20(Ref)	1727 500 001	0.0	0.000 000	0.000
	100 %	-30	1727 500 006	4.8	0.000 000	0.003
	100 %	-20	1727 500 007	6.0	0.000 000	0.003
	100 %	-10	1727 500 008	7.2	0.000 000	0.004
	100 %	0	1727 500 006	5.1	0.000 000	0.003
	100 %	+10	1727 500 005	3.9	0.000 000	0.002
	100 %	+30	1727 500 006	5.5	0.000 000	0.003
	100 %	+40	1727 500 005	4.4	0.000 000	0.003
	100 %	+50	1727 500 006	5.4	0.000 000	0.003
	Batt. Endpoint	+20	1727 500 006	5.1	0.000 000	0.003
1762.5	100 %	+20(Ref)	1762 500 011	0.0	0.000 000	0.000
	100 %	-30	1762 500 022	10.4	0.000 001	0.006
	100 %	-20	1762 500 020	8.7	0.000 000	0.005
	100 %	-10	1762 500 023	11.6	0.000 001	0.007
	100 %	0	1762 500 022	11.0	0.000 001	0.006
	100 %	+10	1762 500 023	11.3	0.000 001	0.006
	100 %	+30	1762 500 023	11.7	0.000 001	0.007
	100 %	+40	1762 500 022	10.9	0.000 001	0.006
	100 %	+50	1762 500 022	11.0	0.000 001	0.006
	Batt. Endpoint	+20	1762 500 022	11.0	0.000 001	0.006

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1730.0	100 %	+20(Ref)	1730 000 005	0.0	0.000 000	0.000
	100 %	-30	1730 000 011	5.8	0.000 000	0.003
	100 %	-20	1730 000 012	6.7	0.000 000	0.004
	100 %	-10	1730 000 011	5.5	0.000 000	0.003
	100 %	0	1730 000 012	7.1	0.000 000	0.004
	100 %	+10	1730 000 013	8.2	0.000 000	0.005
	100 %	+30	1730 000 011	6.1	0.000 000	0.004
	100 %	+40	1730 000 010	5.0	0.000 000	0.003
	100 %	+50	1730 000 013	7.6	0.000 000	0.004
	Batt. Endpoint	+20	1730 000 012	7.4	0.000 000	0.004
1760.0	100 %	+20(Ref)	1760 000 009	0.0	0.000 000	0.000
	100 %	-30	1760 000 018	9.0	0.000 001	0.005
	100 %	-20	1760 000 015	6.8	0.000 000	0.004
	100 %	-10	1760 000 016	7.2	0.000 000	0.004
	100 %	0	1760 000 016	7.6	0.000 000	0.004
	100 %	+10	1760 000 013	4.1	0.000 000	0.002
	100 %	+30	1760 000 013	4.9	0.000 000	0.003
	100 %	+40	1760 000 017	8.3	0.000 000	0.005
	100 %	+50	1760 000 018	9.0	0.000 001	0.005
	Batt. Endpoint	+20	1760 000 014	5.3	0.000 000	0.003

9. TEST DATA (ANT I)

9.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1712.5	Sub6 n66/ 5 MHz [15 kHz]	PI/2 BPSK	-19.56	13.80	9.60	2.00	H	< 1.00	0.138	21.40	1	12
		QPSK	-19.61	13.75	9.60	2.00	H		0.136	21.35		
		16-QAM	-20.56	12.80	9.60	2.00	H		0.110	20.40		
		64-QAM	-22.00	11.36	9.60	2.00	H		0.079	18.96		
		256-QAM	-24.68	8.68	9.60	2.00	H		0.042	16.28		
1745.0		PI/2 BPSK	-19.02	14.58	9.75	2.04	H		0.169	22.29	1	23
		QPSK	-19.18	14.42	9.75	2.04	H		0.163	22.13		
		16-QAM	-20.05	13.55	9.75	2.04	H		0.134	21.26		
		64-QAM	-21.40	12.20	9.75	2.04	H		0.098	19.91		
		256-QAM	-24.14	9.46	9.75	2.04	H		0.052	17.17		
1777.5		PI/2 BPSK	-18.61	14.93	9.90	2.08	H		0.188	22.75	1	23
		QPSK	-19.45	14.09	9.90	2.08	H		0.155	21.91		
		16-QAM	-20.28	13.26	9.90	2.08	H		0.128	21.08		
		64-QAM	-21.47	12.07	9.90	2.08	H		0.097	19.89		
		256-QAM	-23.72	9.82	9.90	2.08	H		0.058	17.64		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1715.0	Sub6 n66/ 10 MHz [15 kHz]	PI/2 BPSK	-19.27	14.09	9.60	2.00	H	< 1.00	0.148	21.69	1	50
		QPSK	-19.69	13.67	9.60	2.00	H		0.134	21.27		
		16-QAM	-20.46	12.90	9.60	2.00	H		0.112	20.50		
		64-QAM	-21.89	11.47	9.60	2.00	H		0.081	19.07		
		256-QAM	-24.64	8.72	9.60	2.00	H		0.043	16.32		
1745.0		PI/2 BPSK	-18.67	14.93	9.75	2.04	H		0.184	22.64	1	50
		QPSK	-18.82	14.78	9.75	2.04	H		0.177	22.49		
		16-QAM	-19.89	13.71	9.75	2.04	H		0.139	21.42		
		64-QAM	-21.21	12.39	9.75	2.04	H		0.102	20.10		
		256-QAM	-23.94	9.66	9.75	2.04	H		0.055	17.37		
1775.0		PI/2 BPSK	-18.63	14.91	9.90	2.08	H		0.187	22.73	1	50
		QPSK	-19.41	14.13	9.90	2.08	H		0.157	21.95		
		16-QAM	-20.39	13.15	9.90	2.08	H		0.125	20.97		
		64-QAM	-21.65	11.89	9.90	2.08	H		0.094	19.71		
		256-QAM	-23.85	9.69	9.90	2.08	H		0.056	17.51		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1717.5	Sub6 n66/ 15 MHz [15 kHz]	PI/2 BPSK	14.18	9.60	2.00	H	14.18	< 1.00	0.151	21.78	1	77
		QPSK	13.61	9.60	2.00	H	13.61		0.132	21.21		
		16-QAM	12.70	9.60	2.00	H	12.70		0.107	20.30		
		64-QAM	11.33	9.60	2.00	H	11.33		0.078	18.93		
		256-QAM	8.90	9.60	2.00	H	8.90		0.045	16.50		
1745.0		PI/2 BPSK	14.84	9.75	2.04	H	14.84		0.180	22.55	1	77
		QPSK	14.69	9.75	2.04	H	14.69		0.174	22.40		
		16-QAM	13.64	9.75	2.04	H	13.64		0.136	21.35		
		64-QAM	12.30	9.75	2.04	H	12.30		0.100	20.01		
		256-QAM	9.52	9.75	2.04	H	9.52		0.053	17.23		
1772.5		PI/2 BPSK	15.18	9.90	2.08	H	15.18		0.200	23.00	1	77
		QPSK	14.23	9.90	2.08	H	14.23		0.160	22.05		
		16-QAM	13.22	9.90	2.08	H	13.22		0.127	21.04		
		64-QAM	12.03	9.90	2.08	H	12.03		0.097	19.85		
		256-QAM	9.97	9.90	2.08	H	9.97		0.060	17.79		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1720.0	Sub6 n66/ 20 MHz [15 kHz]	PI/2 BPSK	-19.20	14.30	9.60	2.00	H	< 1.00	0.155	21.90	1	104
		QPSK	-20.00	13.50	9.60	2.00	H		0.129	21.10		
		16-QAM	-20.98	12.52	9.60	2.00	H		0.103	20.12		
		64-QAM	-22.18	11.32	9.60	2.00	H		0.078	18.92		
		256-QAM	-24.49	9.01	9.60	2.00	H		0.046	16.61		
1745.0		PI/2 BPSK	-18.75	14.85	9.75	2.04	H		0.180	22.56	1	104
		QPSK	-18.83	14.77	9.75	2.04	H		0.177	22.48		
		16-QAM	-20.02	13.58	9.75	2.04	H		0.135	21.29		
		64-QAM	-21.26	12.34	9.75	2.04	H		0.101	20.05		
		256-QAM	-23.88	9.72	9.75	2.04	H		0.055	17.43		
1770.0		PI/2 BPSK	-18.46	15.18	9.90	2.09	H		0.199	22.99	1	104
		QPSK	-19.18	14.46	9.90	2.09	H		0.169	22.27		
		16-QAM	-20.17	13.47	9.90	2.09	H		0.134	21.28		
		64-QAM	-21.40	12.24	9.90	2.09	H		0.101	20.05		
		256-QAM	-23.64	10.00	9.90	2.09	H		0.060	17.81		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1722.5	Sub6 n66/ 25 MHz [15 kHz]	PI/2 BPSK	-18.93	14.63	9.60	2.01	H	< 1.00	0.167	22.22	1	131
		QPSK	-19.75	13.81	9.60	2.01	H		0.138	21.40		
		16-QAM	-20.77	12.79	9.60	2.01	H		0.109	20.38		
		64-QAM	-21.88	11.68	9.60	2.01	H		0.085	19.27		
		256-QAM	-24.23	9.33	9.60	2.01	H		0.049	16.92		
1745.0		PI/2 BPSK	-18.38	15.22	9.75	2.04	H		0.196	22.93	1	131
		QPSK	-18.46	15.14	9.75	2.04	H		0.193	22.85		
		16-QAM	-19.60	14.00	9.75	2.04	H		0.148	21.71		
		64-QAM	-20.93	12.67	9.75	2.04	H		0.109	20.38		
		256-QAM	-23.62	9.98	9.75	2.04	H		0.059	17.69		
1767.5		PI/2 BPSK	-18.32	15.16	9.90	2.09	H		0.198	22.97	1	131
		QPSK	-19.13	14.35	9.90	2.09	H		0.164	22.16		
		16-QAM	-20.14	13.34	9.90	2.09	H		0.130	21.15		
		64-QAM	-21.38	12.10	9.90	2.09	H		0.098	19.91		
		256-QAM	-23.48	10.00	9.90	2.09	H		0.060	17.81		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1725.0	Sub6 n66/ 30 MHz [15 kHz]	PI/2 BPSK	-18.97	14.59	9.60	2.01	H	< 1.00	0.165	22.18	1	158
		QPSK	-19.90	13.66	9.60	2.01	H		0.133	21.25		
		16-QAM	-20.77	12.79	9.60	2.01	H		0.109	20.38		
		64-QAM	-21.99	11.57	9.60	2.01	H		0.082	19.16		
		256-QAM	-24.11	9.45	9.60	2.01	H		0.051	17.04		
1745.0		PI/2 BPSK	-18.70	14.90	9.75	2.04	H		0.182	22.61	1	158
		QPSK	-18.84	14.76	9.75	2.04	H		0.177	22.47		
		16-QAM	-19.85	13.75	9.75	2.04	H		0.140	21.46		
		64-QAM	-21.17	12.43	9.75	2.04	H		0.103	20.14		
		256-QAM	-23.88	9.72	9.75	2.04	H		0.055	17.43		
1765.0		PI/2 BPSK	-18.35	15.13	9.90	2.09	H		0.197	22.94	1	158
		QPSK	-19.30	14.18	9.90	2.09	H		0.158	21.99		
		16-QAM	-20.24	13.24	9.90	2.09	H		0.127	21.05		
		64-QAM	-21.43	12.05	9.90	2.09	H		0.097	19.86		
		256-QAM	-23.35	10.13	9.90	2.09	H		0.062	17.94		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1727.5	Sub6 n66/ 35 MHz [15 kHz]	PI/2 BPSK	-18.86	14.70	9.60	2.01	H	< 1.00	0.169	22.29	1	186
		QPSK	-19.44	14.12	9.60	2.01	H		0.148	21.71		
		16-QAM	-20.27	13.29	9.60	2.01	H		0.123	20.88		
		64-QAM	-21.52	12.04	9.60	2.01	H		0.092	19.63		
		256-QAM	-23.97	9.59	9.60	2.01	H		0.052	17.18		
1745.0		PI/2 BPSK	-18.66	14.94	9.75	2.04	H		0.184	22.65	1	186
		QPSK	-19.02	14.58	9.75	2.04	H		0.169	22.29		
		16-QAM	-19.92	13.68	9.75	2.04	H		0.138	21.39		
		64-QAM	-21.35	12.25	9.75	2.04	H		0.099	19.96		
		256-QAM	-24.00	9.60	9.75	2.04	H		0.054	17.31		
1762.5		PI/2 BPSK	-18.42	14.90	9.90	2.09	H		0.187	22.71	1	186
		QPSK	-19.38	13.94	9.90	2.09	H		0.150	21.75		
		16-QAM	-20.29	13.03	9.90	2.09	H		0.121	20.84		
		64-QAM	-21.57	11.75	9.90	2.09	H		0.090	19.56		
		256-QAM	-23.61	9.71	9.90	2.09	H		0.056	17.52		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1730.0	Sub6 n66/ 40 MHz [15 kHz]	PI/2 BPSK	-18.62	14.99	9.60	2.01	H	< 1.00	0.181	22.58	1	214
		QPSK	-18.78	14.83	9.60	2.01	H		0.175	22.42		
		16-QAM	-19.95	13.66	9.60	2.01	H		0.133	21.25		
		64-QAM	-21.18	12.43	9.60	2.01	H		0.100	20.02		
		256-QAM	-23.88	9.73	9.60	2.01	H		0.054	17.32		
1745.0		PI/2 BPSK	-18.42	15.18	9.75	2.04	H		0.195	22.89	1	214
		QPSK	-19.07	14.53	9.75	2.04	H		0.167	22.24		
		16-QAM	-19.97	13.63	9.75	2.04	H		0.136	21.34		
		64-QAM	-21.30	12.30	9.75	2.04	H		0.100	20.01		
		256-QAM	-23.68	9.92	9.75	2.04	H		0.058	17.63		
1760.0		PI/2 BPSK	-18.49	14.83	9.90	2.09	H		0.184	22.64	1	214
		QPSK	-19.45	13.87	9.90	2.09	H		0.147	21.68		
		16-QAM	-20.35	12.97	9.90	2.09	H		0.120	20.78		
		64-QAM	-21.55	11.77	9.90	2.09	H		0.091	19.58		
		256-QAM	-23.77	9.55	9.90	2.09	H		0.054	17.36		

9.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N66
▣ Bandwidth: 15 MHz
▣ Modulation: PI/2 BPSK
▣ Distance: 3 meters
▣ SCS: 15 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
343500 (1717.5)	3 435.00	-60.30	11.10	-61.14	2.97	H	-53.01	-13.00	1	39
	5 152.50	-61.89	11.00	-57.17	3.67	H	-49.84	-13.00		
	6 870.00	-63.79	10.80	-52.03	4.28	H	-45.51	-13.00		
	8 587.50	-62.68	10.50	-49.39	4.85	H	-43.74	-13.00		
	10 305.00	-64.33	11.10	-46.81	5.35	H	-41.06	-13.00		
349000 (1745.0)	3 490.00	-57.70	11.20	-59.14	3.00	H	-50.94	-13.00	1	77
	5 235.00	-61.67	11.10	-56.74	3.70	H	-49.34	-13.00		
	6 980.00	-63.86	10.90	-51.15	4.30	H	-44.55	-13.00		
	8 725.00	-61.65	10.30	-47.29	4.88	H	-41.87	-13.00		
	10 470.00	-64.44	11.30	-46.71	5.43	H	-40.84	-13.00		
354500 (1772.5)	3 545.00	-59.27	11.35	-61.07	3.02	H	-52.74	-13.00	1	1
	5 317.50	-61.63	11.40	-57.22	3.66	H	-49.48	-13.00		
	7 090.00	-63.22	10.70	-49.16	4.35	H	-42.81	-13.00		
	8 862.50	-63.00	10.50	-49.15	4.95	H	-43.60	-13.00		
	10 635.00	-63.28	11.20	-44.51	5.47	H	-38.78	-13.00		

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n66	5 MHz	1745.0	BPSK	25	0	3.95
			QPSK			5.42
			16-QAM			5.98
			64-QAM			6.13
			256-QAM			6.34
	10 MHz		BPSK	50		4.05
			QPSK			5.29
			16-QAM			6.07
			64-QAM			6.35
			256-QAM			6.53
	15 MHz		BPSK	75		4.21
			QPSK			5.35
			16-QAM			6.13
			64-QAM			6.24
			256-QAM			6.45
	20 MHz		BPSK	100		4.34
			QPSK			5.30
			16-QAM			6.12
			64-QAM			6.37
			256-QAM			6.56
	25 MHz		BPSK	128		4.14
			QPSK			5.31
			16-QAM			6.12
			64-QAM			6.19
			256-QAM			6.47
	30 MHz		BPSK	160		3.97
			QPSK			5.07
			16-QAM			6.00
			64-QAM			6.31
			256-QAM			6.46
	35 MHz		BPSK	187		3.78
			QPSK			5.41
			16-QAM			6.09
			64-QAM			6.41
			256-QAM			6.40
	40 MHz		BPSK	216		3.83
			QPSK			5.15
			16-QAM			6.02
			64-QAM			6.33
			256-QAM			6.46

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 244 ~ 283.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n66	5 MHz	1745.0	BPSK	25	0	4.4773
			QPSK			4.4942
			16-QAM			4.4945
			64-QAM			4.5185
			256-QAM			4.4869
	10 MHz		BPSK	50		8.9729
			QPSK			8.9826
			16-QAM			8.9456
			64-QAM			9.0033
			256-QAM			9.0444
	15 MHz		BPSK	75		13.454
			QPSK			13.413
			16-QAM			13.481
			64-QAM			13.432
			256-QAM			13.461
	20 MHz		BPSK	100		17.907
			QPSK			17.926
			16-QAM			17.871
			64-QAM			17.907
			256-QAM			17.959
	25 MHz		BPSK	128		22.930
			QPSK			22.914
			16-QAM			22.885
			64-QAM			22.947
			256-QAM			22.948
	30 MHz		BPSK	160		28.571
			QPSK			28.585
			16-QAM			28.528
			64-QAM			28.705
			256-QAM			28.640
	35 MHz		BPSK	187		32.153
			QPSK			32.084
			16-QAM			32.153
			64-QAM			32.105
			256-QAM			32.083
	40 MHz		BPSK	216		38.563
			QPSK			38.612
			16-QAM			38.593
			64-QAM			38.487
			256-QAM			38.606

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 284 ~ 323.

9.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n66	5	1712.5	5.2059	30.815	-70.177	-39.362	-13.00
		1745.0	4.9038	30.200	-70.052	-39.852	
		1777.5	4.9552	30.200	-70.501	-40.301	
	10	1715.0	4.9886	30.200	-70.542	-40.342	
		1745.0	9.1256	30.815	-70.495	-39.680	
		1775.0	8.3744	30.815	-70.445	-39.630	
	15	1717.5	9.6894	30.815	-70.497	-39.682	
		1745.0	4.0539	30.200	-70.338	-40.138	
		1772.5	8.6236	30.815	-70.588	-39.773	
	20	1720.0	3.8141	30.200	-70.318	-40.118	
		1745.0	9.7318	30.815	-69.861	-39.046	
		1770.0	8.5364	30.815	-70.794	-39.979	
	25	1722.5	5.2124	30.815	-70.321	-39.506	
		1745.0	3.7837	30.200	-70.179	-39.979	
		1767.5	3.7767	30.200	-69.973	-39.773	
	30	1725.0	9.7159	30.815	-70.481	-39.666	
		1745.0	9.7079	30.815	-70.173	-39.358	
		1765.0	8.8320	30.815	-70.370	-39.555	
	35	1727.5	8.3275	30.815	-70.668	-39.853	
		1745.0	8.3066	30.815	-70.624	-39.809	
		1762.5	4.0290	30.200	-70.645	-40.445	
	40	1730.0	9.1057	30.815	-70.506	-39.691	
		1745.0	3.8031	30.815	-69.883	-39.068	
		1760.0	9.4292	30.815	-70.354	-39.539	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 324 ~ 371.
2. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
3. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 – 1	27.494
1 – 5	30.200
5 – 10	30.815
10 – 15	31.340
15 – 20	31.713
Above 20	32.355

8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 372 ~ 419.

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 5 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1712.5	100 %	+20(Ref)	1712 499 999	0.0	0.000 000	0.000
	100 %	-30	1712 499 999	-0.5	0.000 000	0.000
	100 %	-20	1712 499 999	-0.9	0.000 000	-0.001
	100 %	-10	1712 499 995	-4.2	0.000 000	-0.002
	100 %	0	1712 499 994	-5.4	0.000 000	-0.003
	100 %	+10	1712 499 994	-5.6	0.000 000	-0.003
	100 %	+30	1712 499 994	-5.1	0.000 000	-0.003
	100 %	+40	1712 499 994	-5.4	0.000 000	-0.003
	100 %	+50	1712 499 995	-4.0	0.000 000	-0.002
	Batt. Endpoint	+20	1712 499 995	-4.7	0.000 000	-0.003
1777.5	100 %	+20(Ref)	1777 499 999	0.0	0.000 000	0.000
	100 %	-30	1777 500 000	0.9	0.000 000	0.001
	100 %	-20	1777 500 002	2.9	0.000 000	0.002
	100 %	-10	1777 500 002	3.2	0.000 000	0.002
	100 %	0	1777 500 001	2.1	0.000 000	0.001
	100 %	+10	1777 500 000	0.8	0.000 000	0.000
	100 %	+30	1777 500 000	1.5	0.000 000	0.001
	100 %	+40	1777 500 000	0.8	0.000 000	0.000
	100 %	+50	1777 500 000	0.8	0.000 000	0.000
	Batt. Endpoint	+20	1777 499 999	0.5	0.000 000	0.000

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1715.0	100 %	+20(Ref)	1714 999 995	0.0	0.000 000	0.000
	100 %	-30	1714 999 993	-2.5	0.000 000	-0.001
	100 %	-20	1714 999 992	-3.6	0.000 000	-0.002
	100 %	-10	1714 999 992	-3.0	0.000 000	-0.002
	100 %	0	1714 999 992	-3.1	0.000 000	-0.002
	100 %	+10	1714 999 991	-4.8	0.000 000	-0.003
	100 %	+30	1714 999 994	-1.5	0.000 000	-0.001
	100 %	+40	1714 999 991	-4.6	0.000 000	-0.003
	100 %	+50	1714 999 991	-4.4	0.000 000	-0.003
	Batt. Endpoint	+20	1714 999 993	-2.5	0.000 000	-0.001
1775.0	100 %	+20(Ref)	1774 999 996	0.0	0.000 000	0.000
	100 %	-30	1774 999 991	-4.6	0.000 000	-0.003
	100 %	-20	1774 999 992	-4.1	0.000 000	-0.002
	100 %	-10	1774 999 993	-2.7	0.000 000	-0.002
	100 %	0	1774 999 990	-5.6	0.000 000	-0.003
	100 %	+10	1774 999 993	-3.3	0.000 000	-0.002
	100 %	+30	1774 999 996	-0.1	0.000 000	0.000
	100 %	+40	1774 999 994	-2.2	0.000 000	-0.001
	100 %	+50	1774 999 993	-3.1	0.000 000	-0.002
	Batt. Endpoint	+20	1774 999 992	-4.2	0.000 000	-0.002

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1717.5	100 %	+20(Ref)	1717 500 001	0.0	0.000 000	0.000
	100 %	-30	1717 500 000	-1.1	0.000 000	-0.001
	100 %	-20	1717 500 002	1.3	0.000 000	0.001
	100 %	-10	1717 500 000	-0.2	0.000 000	0.000
	100 %	0	1717 500 000	-0.8	0.000 000	0.000
	100 %	+10	1717 500 001	0.6	0.000 000	0.000
	100 %	+30	1717 500 001	0.0	0.000 000	0.000
	100 %	+40	1717 500 001	0.4	0.000 000	0.000
	100 %	+50	1717 500 001	0.3	0.000 000	0.000
	Batt. Endpoint	+20	1717 500 000	-1.1	0.000 000	-0.001
1772.5	100 %	+20(Ref)	1772 500 001	0.0	0.000 000	0.000
	100 %	-30	1772 499 997	-4.0	0.000 000	-0.002
	100 %	-20	1772 499 997	-3.5	0.000 000	-0.002
	100 %	-10	1772 500 000	-1.1	0.000 000	-0.001
	100 %	0	1772 500 000	-1.2	0.000 000	-0.001
	100 %	+10	1772 499 996	-4.4	0.000 000	-0.003
	100 %	+30	1772 500 001	0.2	0.000 000	0.000
	100 %	+40	1772 499 998	-3.3	0.000 000	-0.002
	100 %	+50	1772 499 998	-3.0	0.000 000	-0.002
	Batt. Endpoint	+20	1772 499 996	-5.0	0.000 000	-0.003

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1720.0	100 %	+20(Ref)	1719 999 998	0.0	0.000 000	0.000
	100 %	-30	1719 999 998	-0.5	0.000 000	0.000
	100 %	-20	1719 999 995	-2.8	0.000 000	-0.002
	100 %	-10	1719 999 994	-4.1	0.000 000	-0.002
	100 %	0	1719 999 995	-3.1	0.000 000	-0.002
	100 %	+10	1719 999 996	-2.4	0.000 000	-0.001
	100 %	+30	1719 999 996	-2.7	0.000 000	-0.002
	100 %	+40	1719 999 997	-1.5	0.000 000	-0.001
	100 %	+50	1719 999 995	-2.9	0.000 000	-0.002
	Batt. Endpoint	+20	1719 999 996	-2.7	0.000 000	-0.002
1770.0	100 %	+20(Ref)	1770 000 000	0.0	0.000 000	0.000
	100 %	-30	1770 000 002	2.3	0.000 000	0.001
	100 %	-20	1770 000 000	-0.2	0.000 000	0.000
	100 %	-10	1770 000 002	2.2	0.000 000	0.001
	100 %	0	1770 000 002	1.7	0.000 000	0.001
	100 %	+10	1770 000 002	2.1	0.000 000	0.001
	100 %	+30	1770 000 002	2.2	0.000 000	0.001
	100 %	+40	1770 000 001	0.4	0.000 000	0.000
	100 %	+50	1770 000 000	0.0	0.000 000	0.000
	Batt. Endpoint	+20	1770 000 001	0.7	0.000 000	0.000

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1722.5	100 %	+20(Ref)	1722 499 994	0.0	0.000 000	0.000
	100 %	-30	1722 499 990	-4.2	0.000 000	-0.002
	100 %	-20	1722 499 993	-1.2	0.000 000	-0.001
	100 %	-10	1722 499 991	-2.8	0.000 000	-0.002
	100 %	0	1722 499 991	-2.9	0.000 000	-0.002
	100 %	+10	1722 499 991	-3.0	0.000 000	-0.002
	100 %	+30	1722 499 989	-5.5	0.000 000	-0.003
	100 %	+40	1722 499 989	-4.7	0.000 000	-0.003
	100 %	+50	1722 499 992	-2.2	0.000 000	-0.001
	Batt. Endpoint	+20	1722 499 990	-3.9	0.000 000	-0.002
1767.5	100 %	+20(Ref)	1767 499 997	0.0	0.000 000	0.000
	100 %	-30	1767 499 990	-7.0	0.000 000	-0.004
	100 %	-20	1767 499 994	-3.8	0.000 000	-0.002
	100 %	-10	1767 499 995	-2.2	0.000 000	-0.001
	100 %	0	1767 499 992	-5.7	0.000 000	-0.003
	100 %	+10	1767 499 994	-3.2	0.000 000	-0.002
	100 %	+30	1767 499 994	-2.9	0.000 000	-0.002
	100 %	+40	1767 499 993	-3.9	0.000 000	-0.002
	100 %	+50	1767 499 994	-3.5	0.000 000	-0.002
	Batt. Endpoint	+20	1767 499 995	-1.9	0.000 000	-0.001

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.330 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1725.0	100 %	+20(Ref)	1725 000 005	0.0	0.000 000	0.000
	100 %	-30	1725 000 011	6.0	0.000 000	0.004
	100 %	-20	1725 000 012	6.6	0.000 000	0.004
	100 %	-10	1725 000 014	8.6	0.000 001	0.005
	100 %	0	1725 000 011	5.8	0.000 000	0.003
	100 %	+10	1725 000 012	6.3	0.000 000	0.004
	100 %	+30	1725 000 011	6.1	0.000 000	0.004
	100 %	+40	1725 000 011	5.7	0.000 000	0.003
	100 %	+50	1725 000 010	4.7	0.000 000	0.003
	Batt. Endpoint	+20	1725 000 010	4.7	0.000 000	0.003
1765.0	100 %	+20(Ref)	1765 000 001	0.0	0.000 000	0.000
	100 %	-30	1765 000 004	2.9	0.000 000	0.002
	100 %	-20	1765 000 004	2.9	0.000 000	0.002
	100 %	-10	1765 000 006	5.4	0.000 000	0.003
	100 %	0	1765 000 007	6.5	0.000 000	0.004
	100 %	+10	1765 000 003	2.6	0.000 000	0.001
	100 %	+30	1765 000 005	3.7	0.000 000	0.002
	100 %	+40	1765 000 005	4.1	0.000 000	0.002
	100 %	+50	1765 000 004	2.7	0.000 000	0.002
	Batt. Endpoint	+20	1765 000 003	1.8	0.000 000	0.001

▣ BandWidth: 35 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1727.5	100 %	+20(Ref)	1727 500 004	0.0	0.000 000	0.000
	100 %	-30	1727 500 009	4.6	0.000 000	0.003
	100 %	-20	1727 500 010	5.8	0.000 000	0.003
	100 %	-10	1727 500 011	7.0	0.000 000	0.004
	100 %	0	1727 500 010	6.2	0.000 000	0.004
	100 %	+10	1727 500 010	6.3	0.000 000	0.004
	100 %	+30	1727 500 010	5.6	0.000 000	0.003
	100 %	+40	1727 500 008	4.1	0.000 000	0.002
	100 %	+50	1727 500 009	5.0	0.000 000	0.003
	Batt. Endpoint	+20	1727 500 009	4.5	0.000 000	0.003
1762.5	100 %	+20(Ref)	1762 500 009	0.0	0.000 000	0.000
	100 %	-30	1762 500 019	9.9	0.000 001	0.006
	100 %	-20	1762 500 016	6.6	0.000 000	0.004
	100 %	-10	1762 500 018	8.6	0.000 000	0.005
	100 %	0	1762 500 019	9.9	0.000 001	0.006
	100 %	+10	1762 500 017	8.5	0.000 000	0.005
	100 %	+30	1762 500 017	8.0	0.000 000	0.005
	100 %	+40	1762 500 016	7.5	0.000 000	0.004
	100 %	+50	1762 500 018	9.3	0.000 001	0.005
	Batt. Endpoint	+20	1762 500 017	7.7	0.000 000	0.004

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.880 VDC

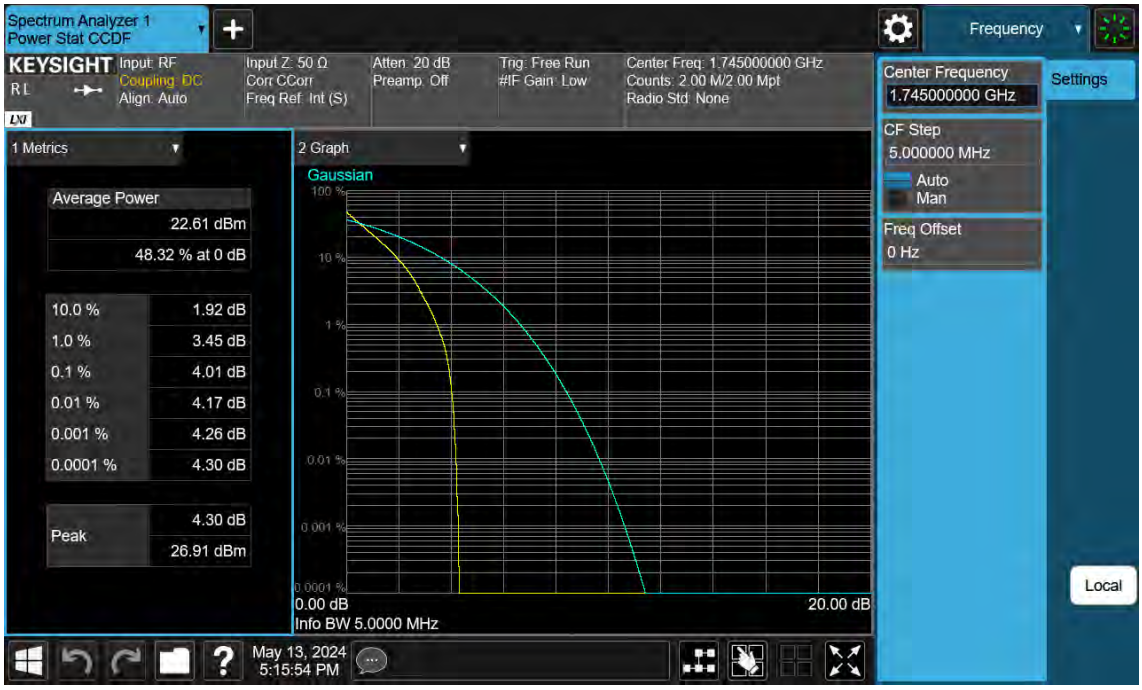
▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

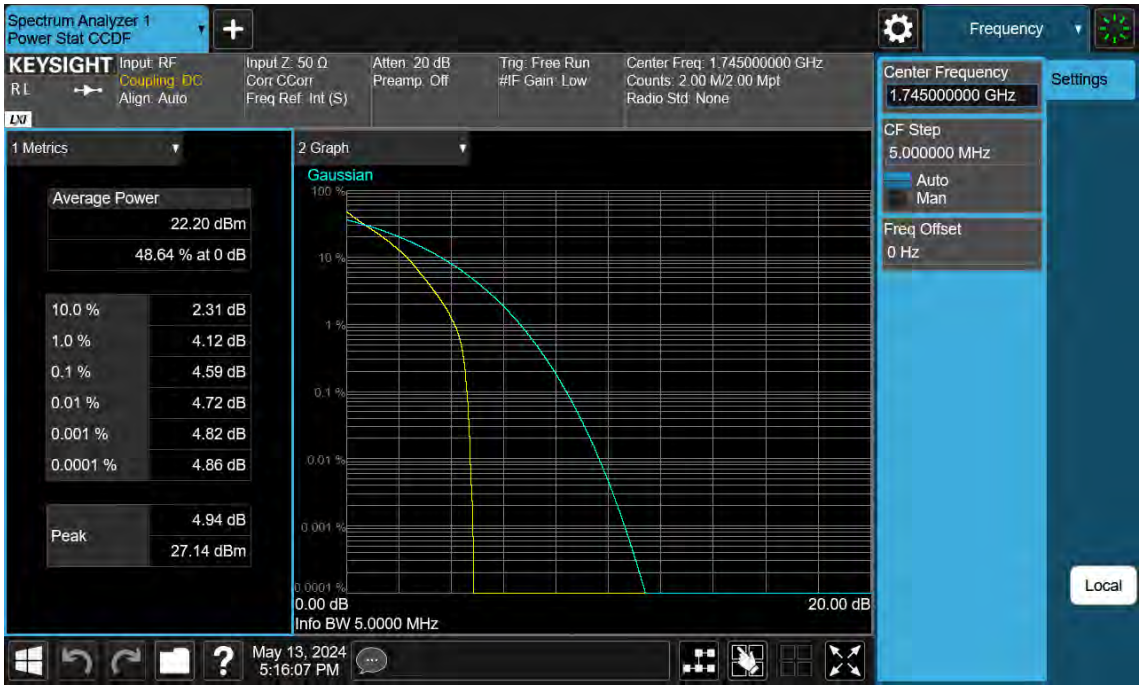
Test. Frequncy	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
1730.0	100 %	+20(Ref)	1730 000 004	0.0	0.000 000	0.000
	100 %	-30	1730 000 009	5.0	0.000 000	0.003
	100 %	-20	1730 000 010	6.6	0.000 000	0.004
	100 %	-10	1730 000 009	4.9	0.000 000	0.003
	100 %	0	1730 000 008	3.8	0.000 000	0.002
	100 %	+10	1730 000 009	5.3	0.000 000	0.003
	100 %	+30	1730 000 008	4.6	0.000 000	0.003
	100 %	+40	1730 000 006	2.5	0.000 000	0.001
	100 %	+50	1730 000 007	3.6	0.000 000	0.002
	Batt. Endpoint	+20	1730 000 009	5.6	0.000 000	0.003
1760.0	100 %	+20(Ref)	1760 000 006	0.0	0.000 000	0.000
	100 %	-30	1760 000 014	7.9	0.000 000	0.004
	100 %	-20	1760 000 013	7.1	0.000 000	0.004
	100 %	-10	1760 000 012	5.8	0.000 000	0.003
	100 %	0	1760 000 011	5.3	0.000 000	0.003
	100 %	+10	1760 000 013	7.6	0.000 000	0.004
	100 %	+30	1760 000 011	5.8	0.000 000	0.003
	100 %	+40	1760 000 012	6.8	0.000 000	0.004
	100 %	+50	1760 000 013	7.6	0.000 000	0.004
	Batt. Endpoint	+20	1760 000 011	5.3	0.000 000	0.003

10. TEST PLOTS (ANT A)

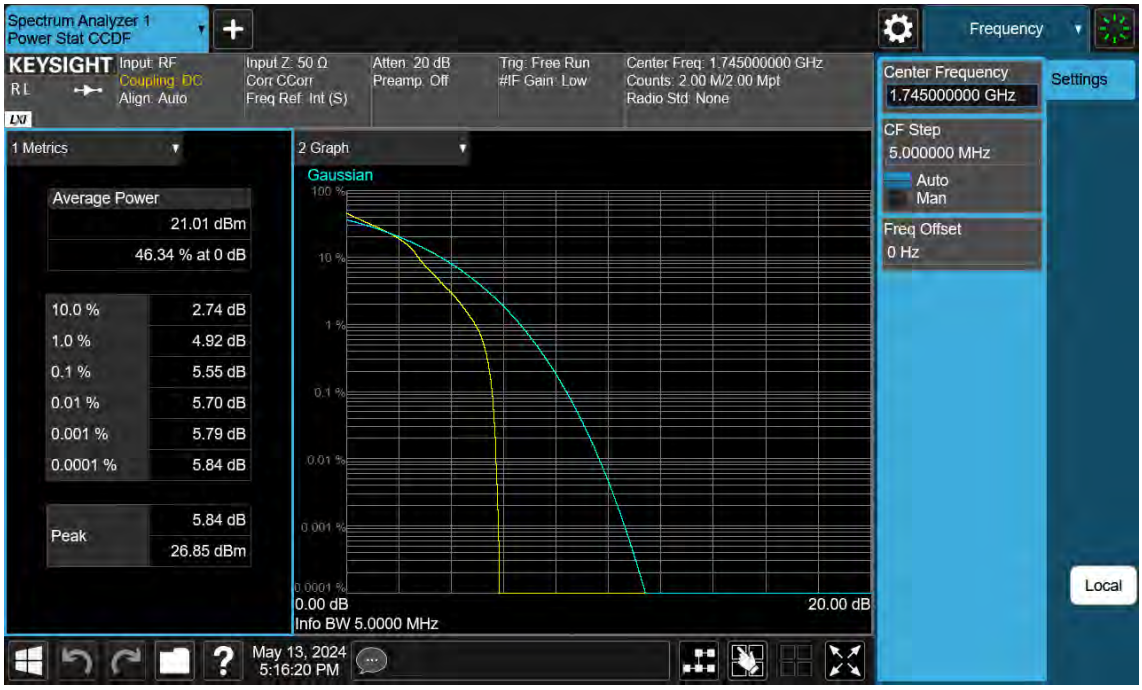
Sub6 n66_5 M_PAR_Mid_BPSK_FullRB



Sub6 n66_5 M_PAR_Mid_QPSK_FullRB

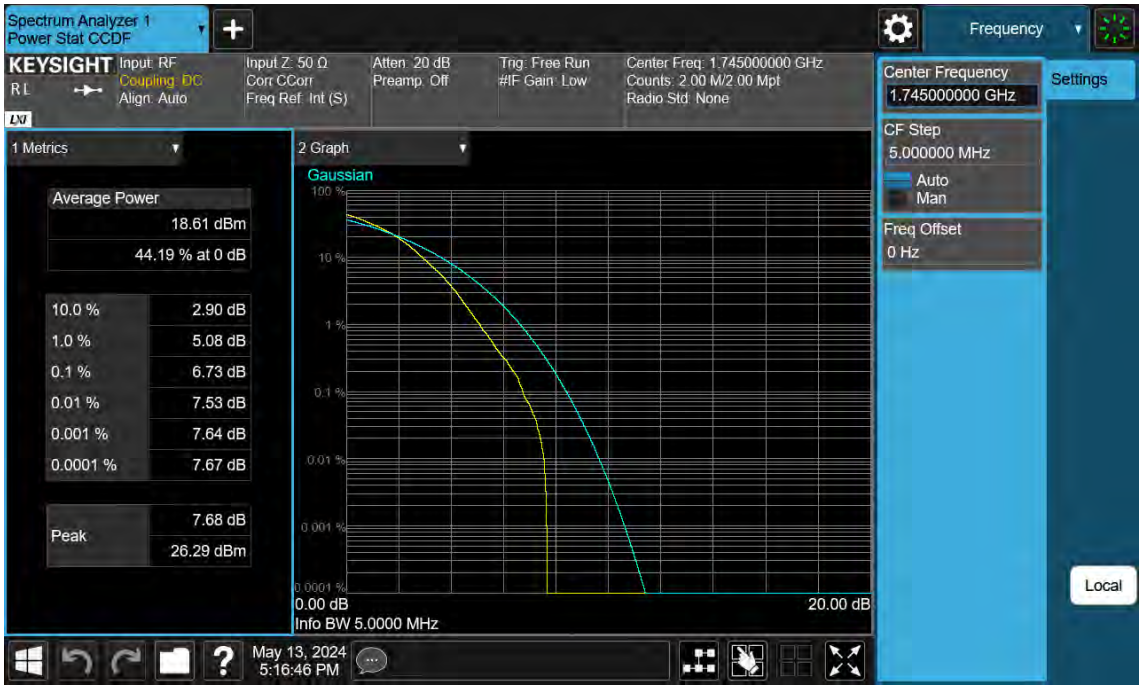


Sub6 n66_5 M_PAR_Mid_16QAM_FullRB

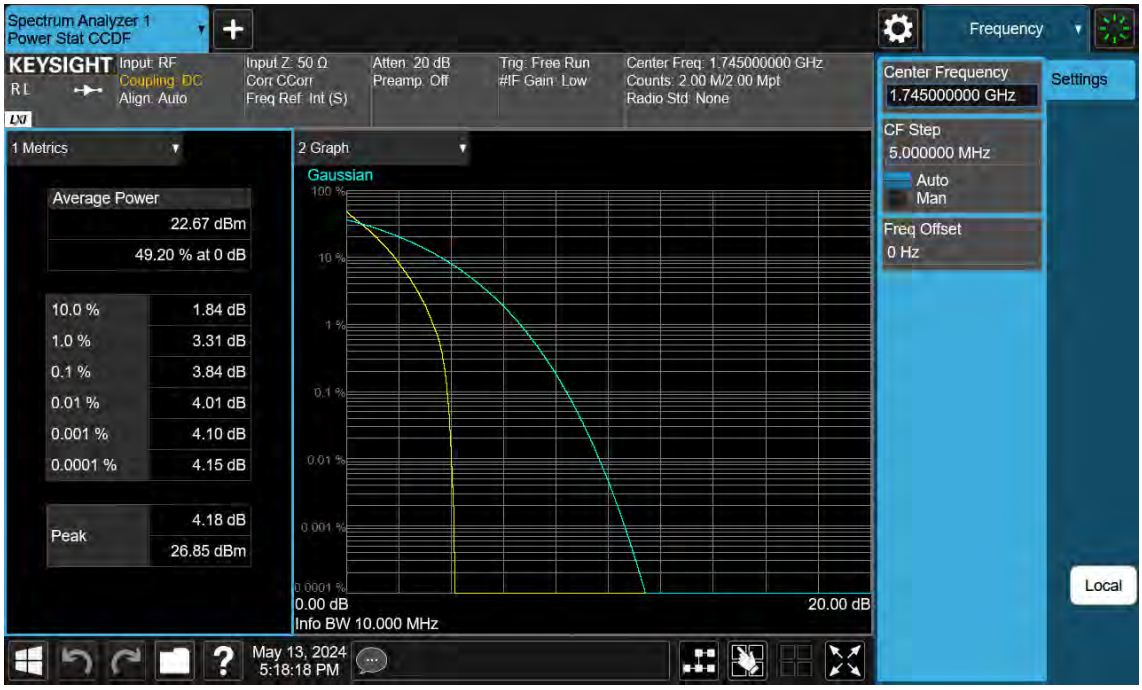


Sub6 n66_5 M_PAR_Mid_64QAM_FullRB

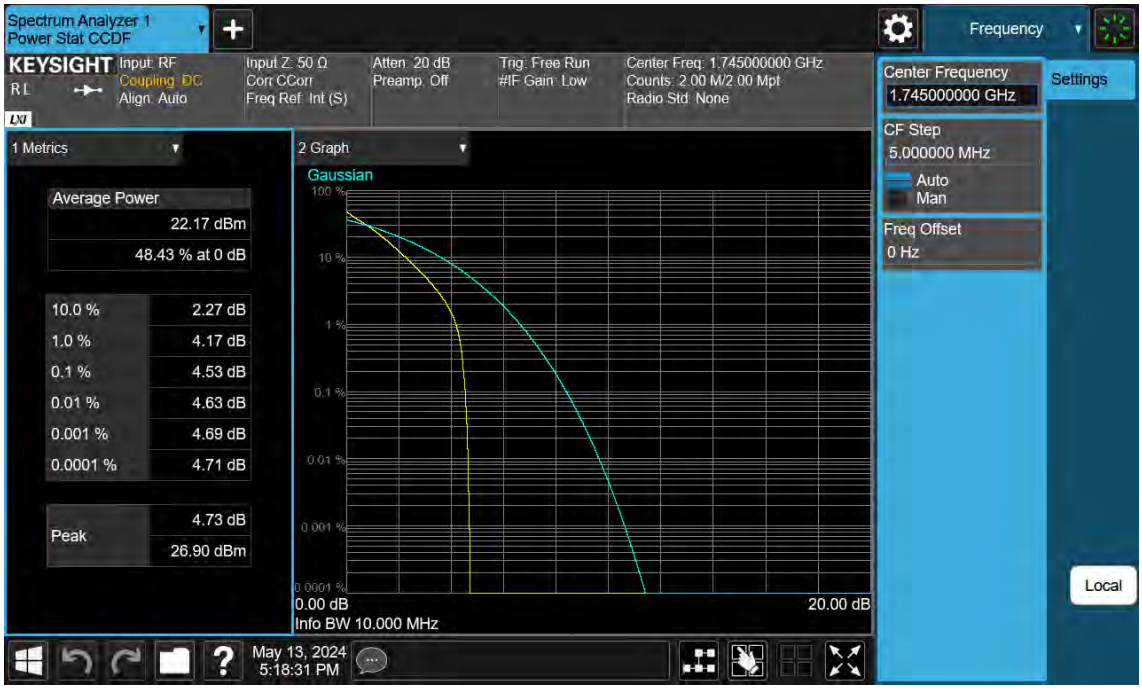
Sub6 n66_5 M_PAR_Mid_256QAM_FullRB



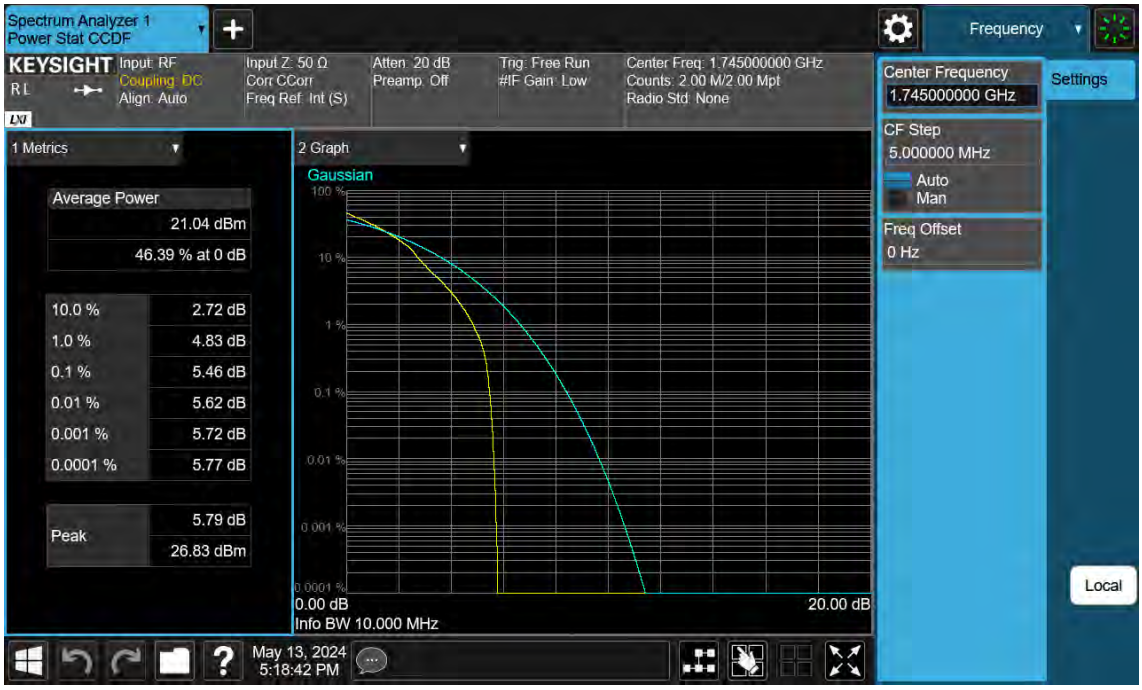
Sub6 n66_10 M_PAR_Mid_BPSK_FullRB



Sub6 n66_10 M_PAR_Mid_QPSK_FullRB



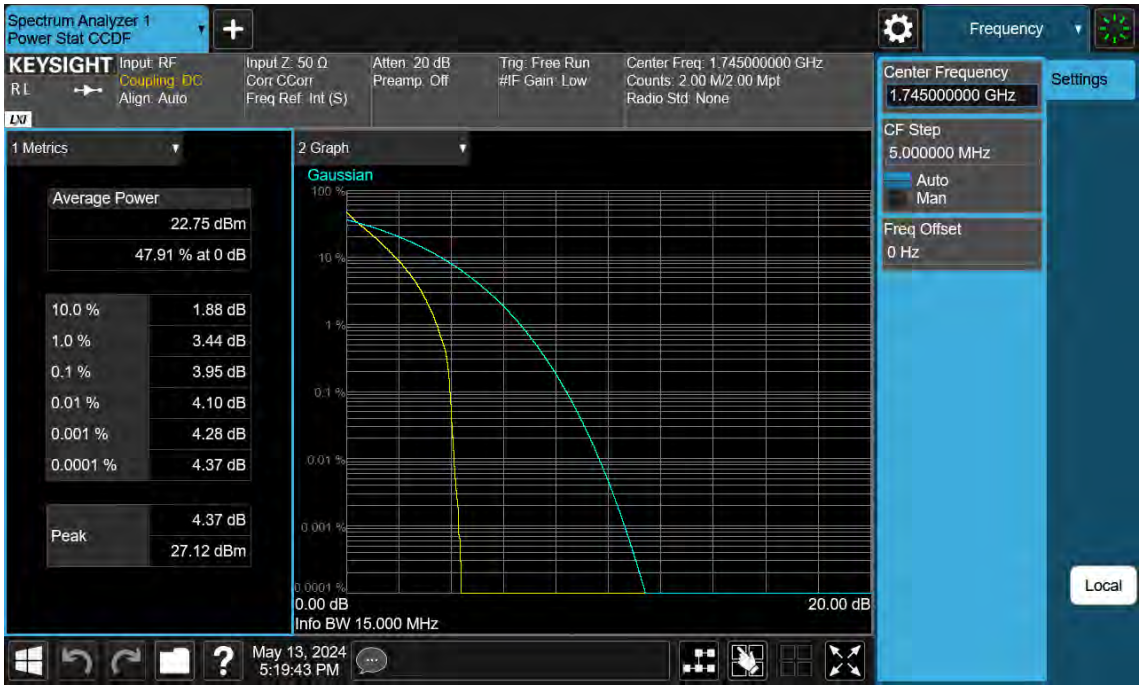
Sub6 n66_10 M_PAR_Mid_16QAM_FullRB



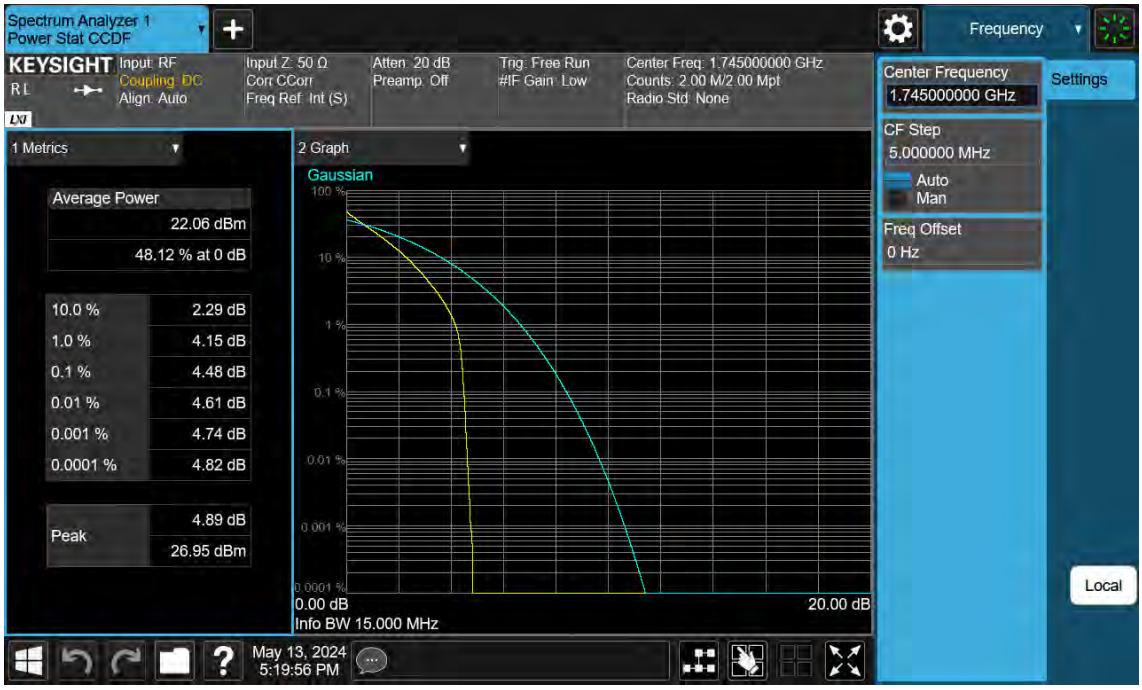
Sub6 n66_10 M_PAR_Mid_64QAM_FullRB

Sub6 n66_10 M_PAR_Mid_256QAM_FullRB

Sub6 n66_15 M_PAR_Mid_BPSK_FullRB



Sub6 n66_15 M_PAR_Mid_QPSK_FullRB

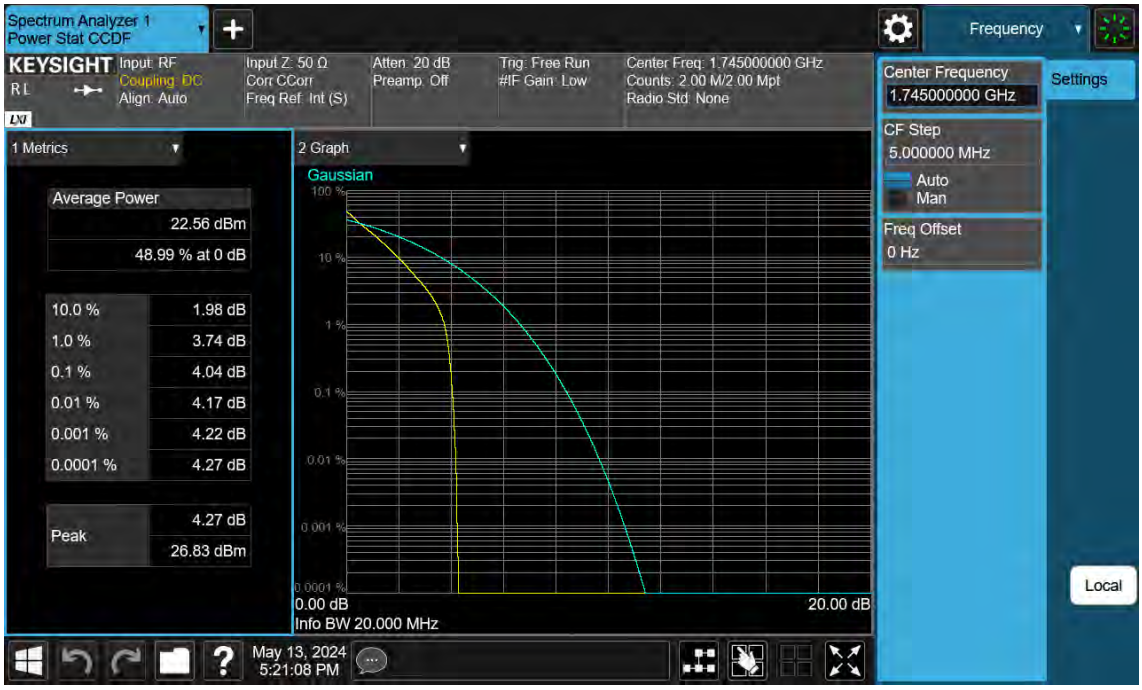


Sub6 n66_15 M_PAR_Mid_16QAM_FullRB

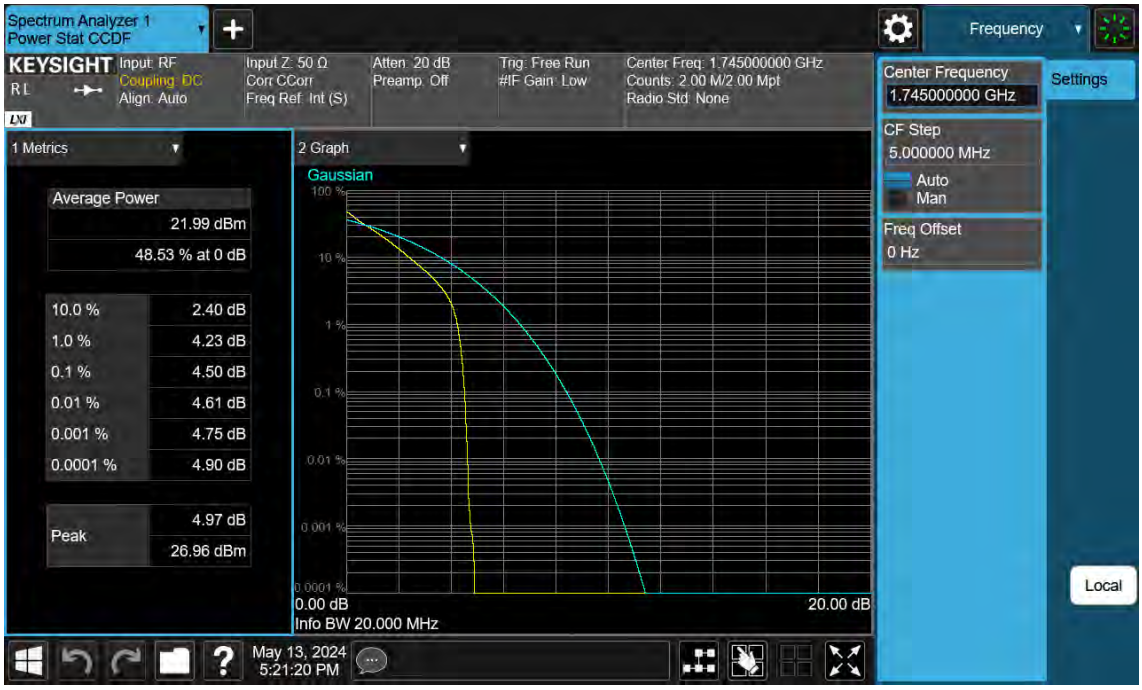
Sub6 n66_15 M_PAR_Mid_64QAM_FullRB

Sub6 n66_15 M_PAR_Mid_256QAM_FullRB

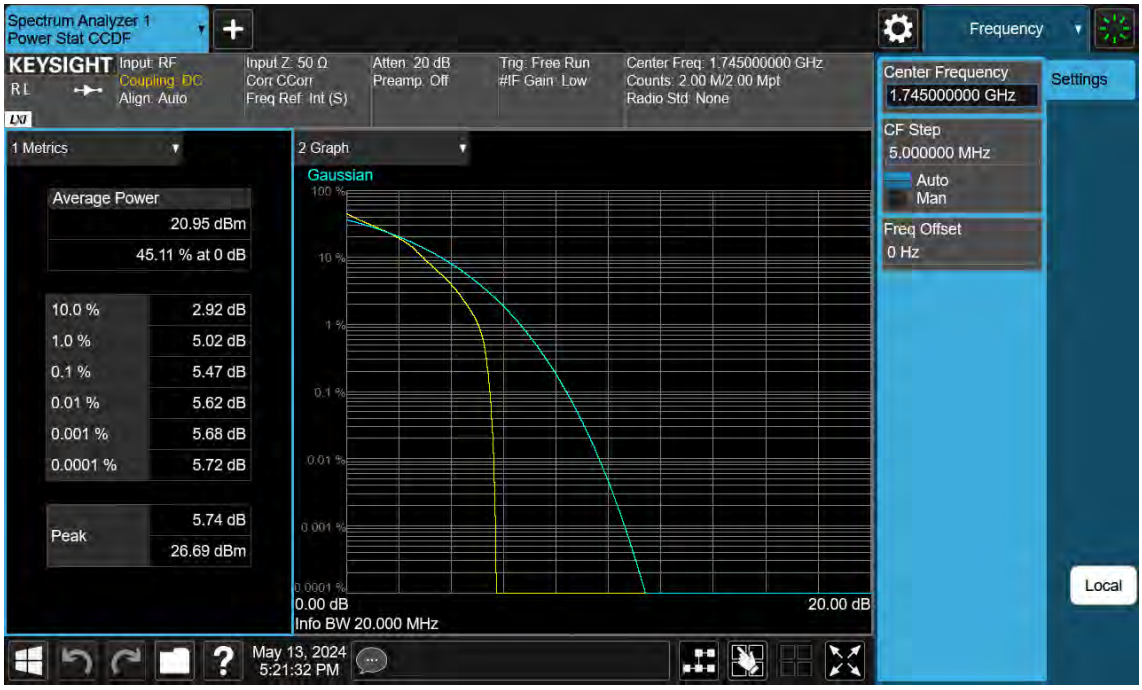
Sub6 n66_20 M_PAR_Mid_BPSK_FullRB



Sub6 n66_20 M_PAR_Mid_QPSK_FullRB

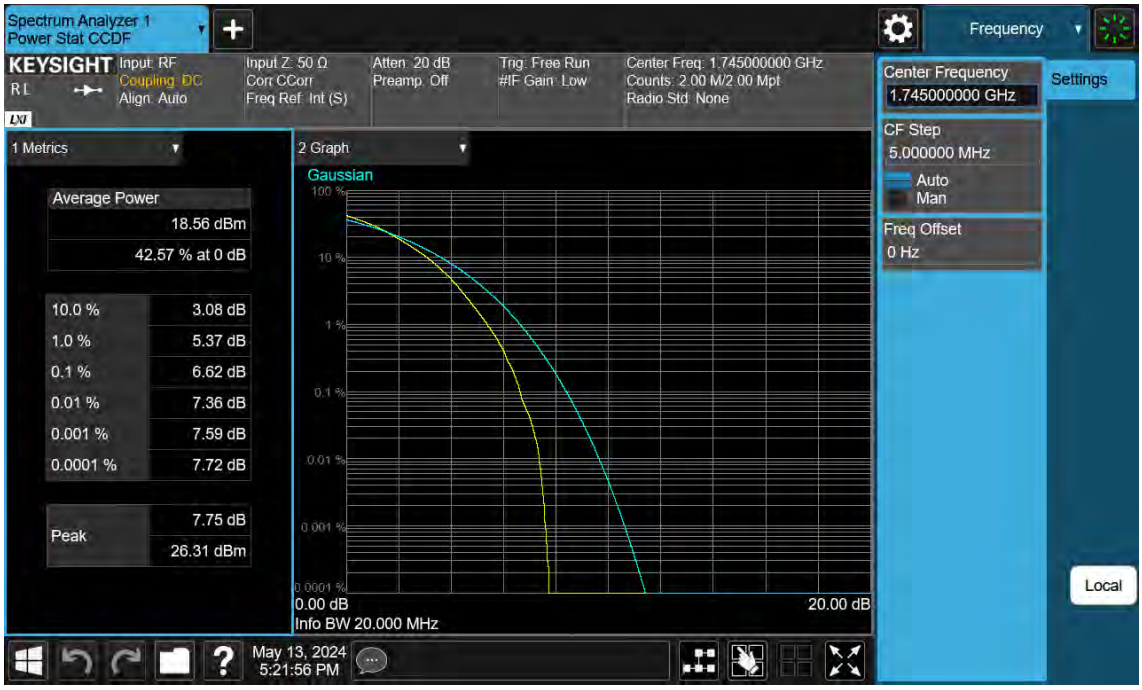


Sub6 n66_20 M_PAR_Mid_16QAM_FullRB

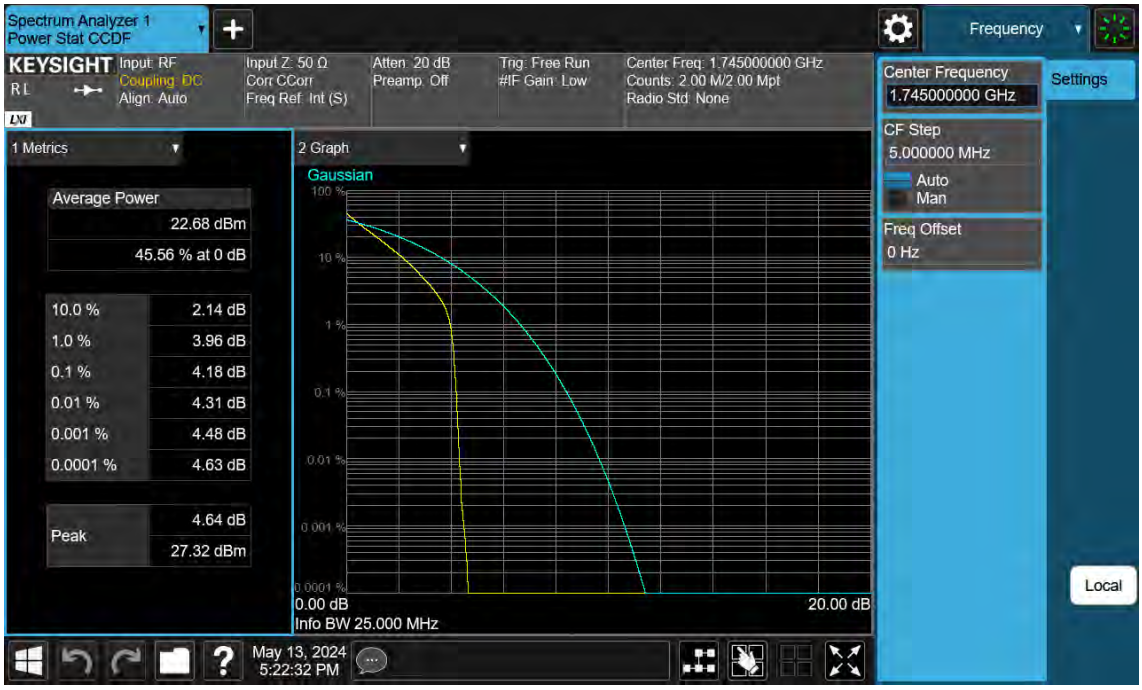


Sub6 n66_20 M_PAR_Mid_64QAM_FullRB

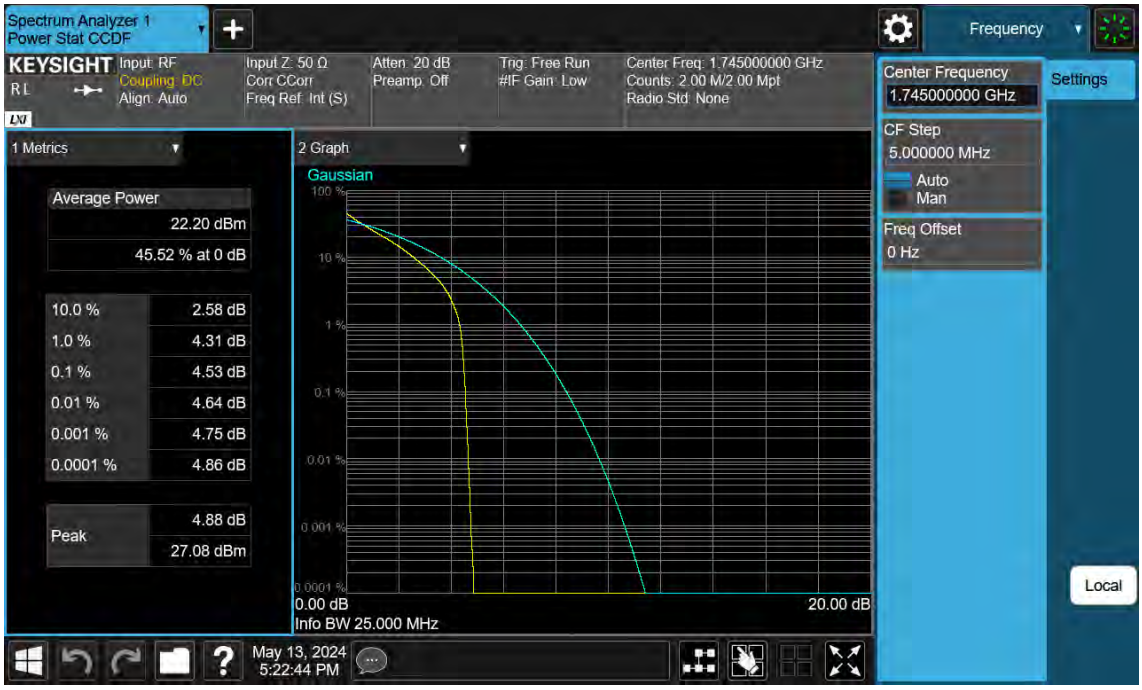
Sub6 n66_20 M_PAR_Mid_256QAM_FullRB



Sub6 n66_25 M_PAR_Mid_BPSK_FullRB



Sub6 n66_25 M_PAR_Mid_QPSK_FullRB

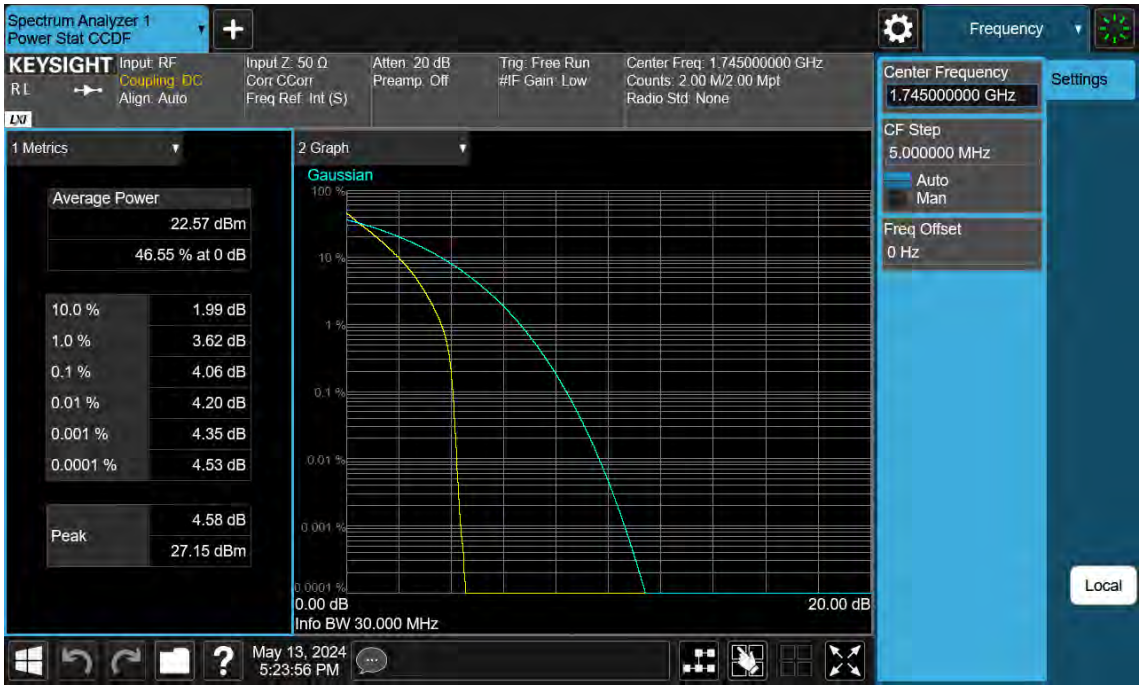


Sub6 n66_25 M_PAR_Mid_16QAM_FullRB

Sub6 n66_25 M_PAR_Mid_64QAM_FullRB

Sub6 n66_25 M_PAR_Mid_256QAM_FullRB

Sub6 n66_30 M_PAR_Mid_BPSK_FullRB



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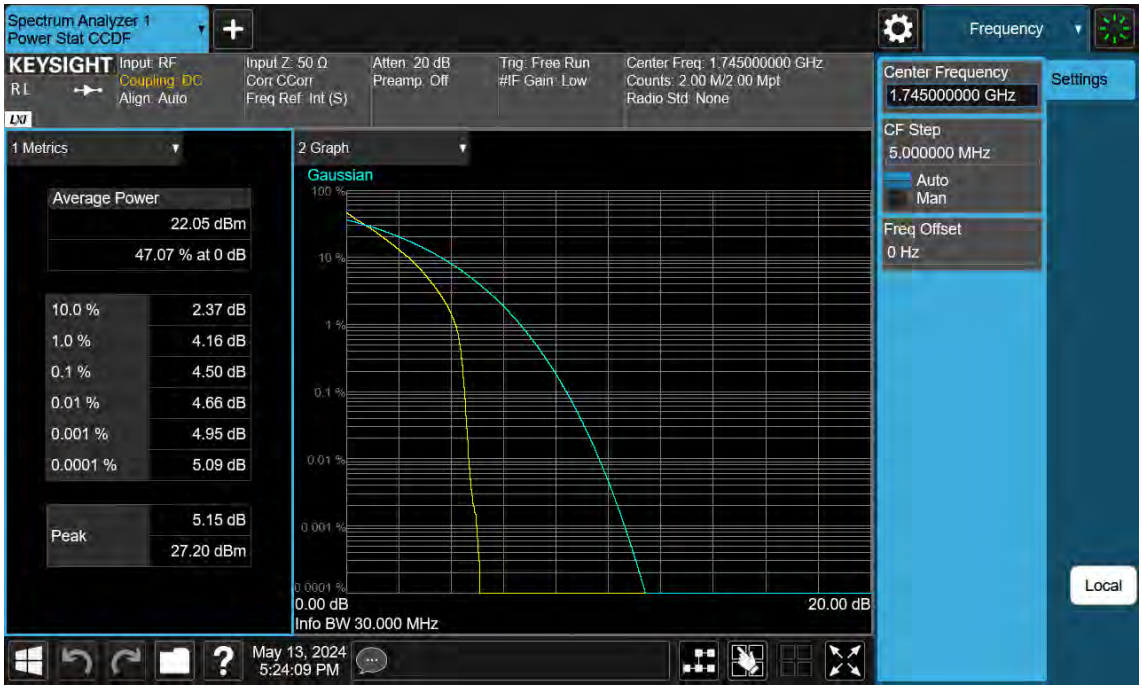

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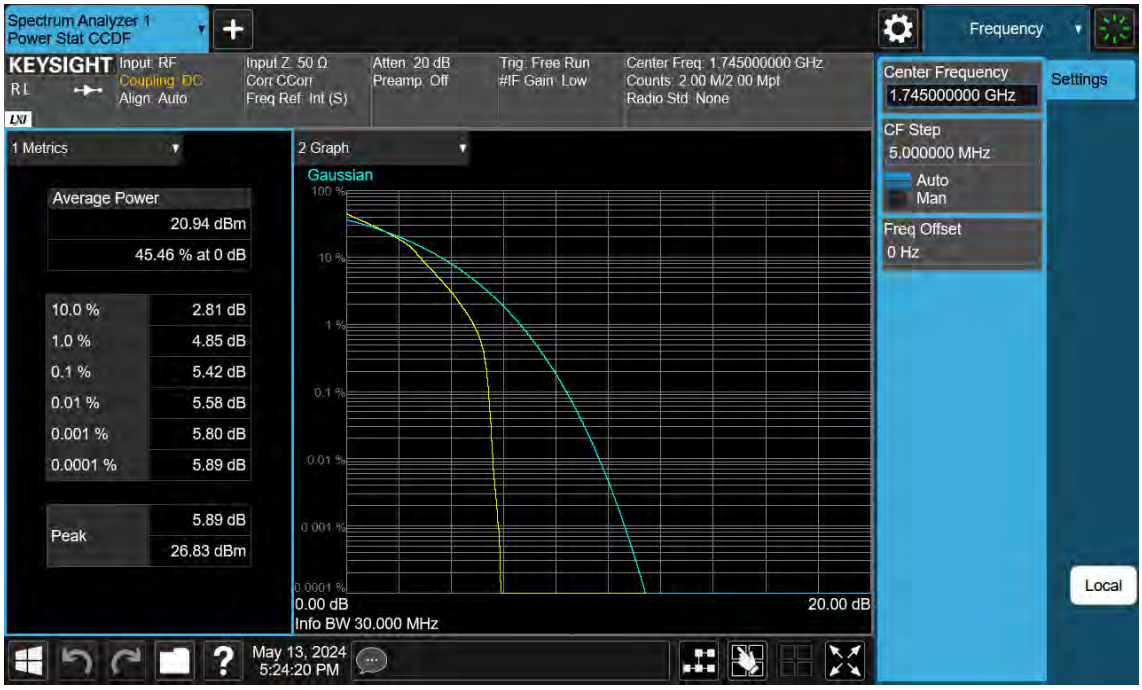
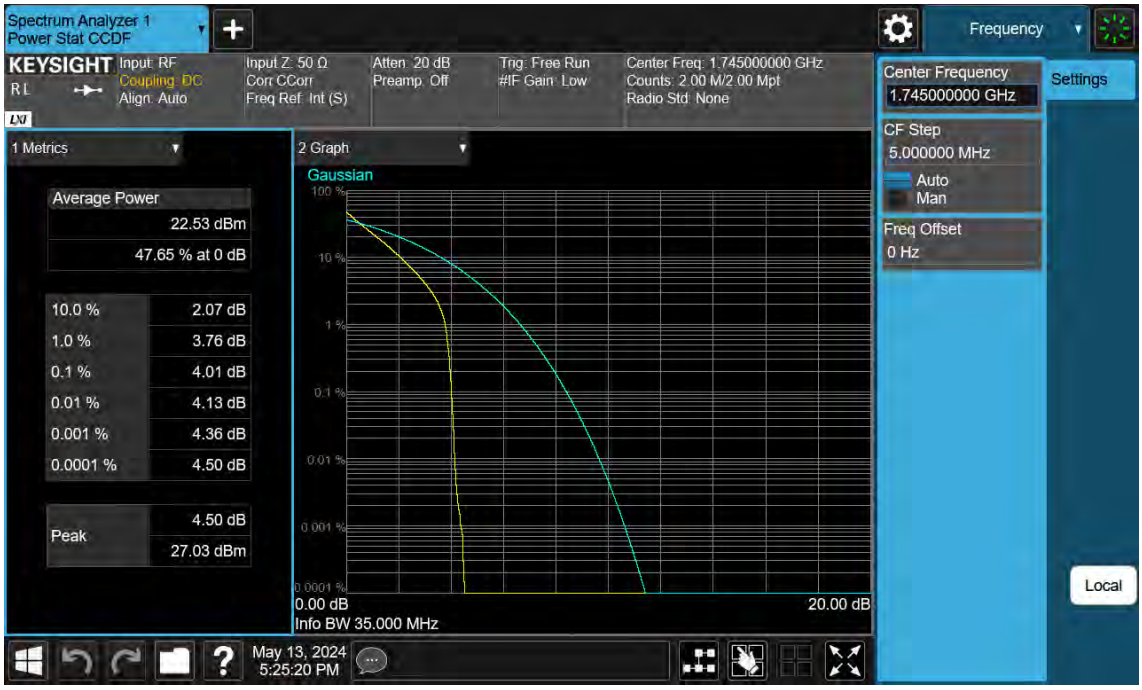


Sub6 n66_30 M_PAR_Mid_64QAM_FullRB

Sub6 n66_30 M_PAR_Mid_256QAM_FullRB

Sub6 n66_35 M_PAR_Mid_BPSK_FullRB



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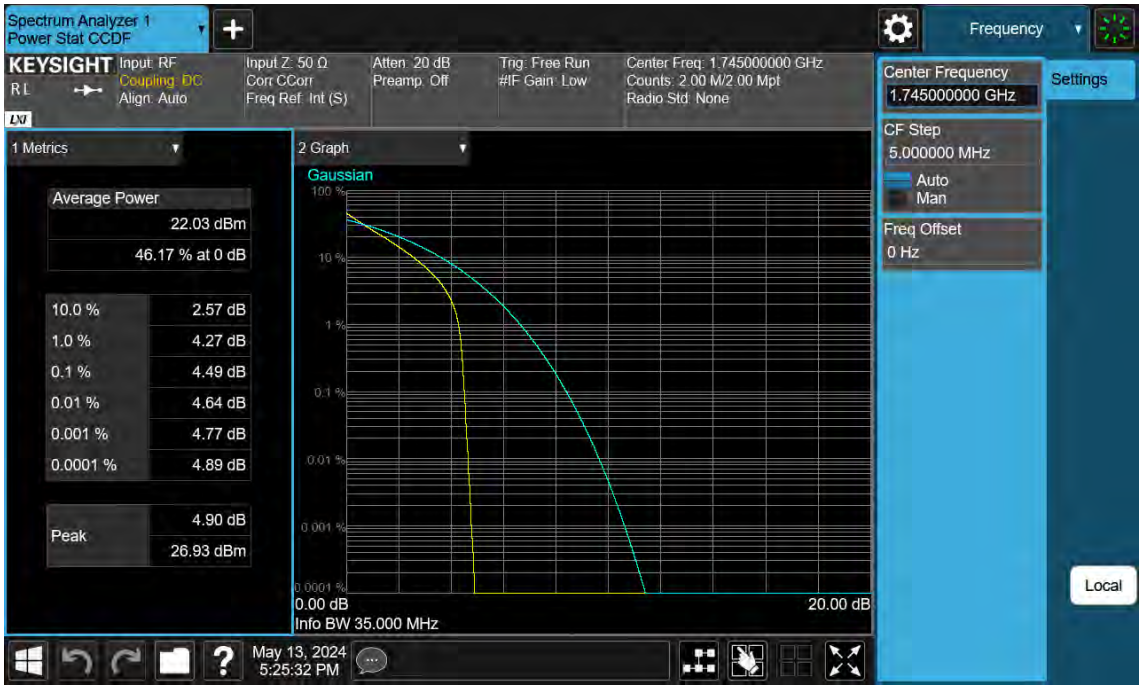

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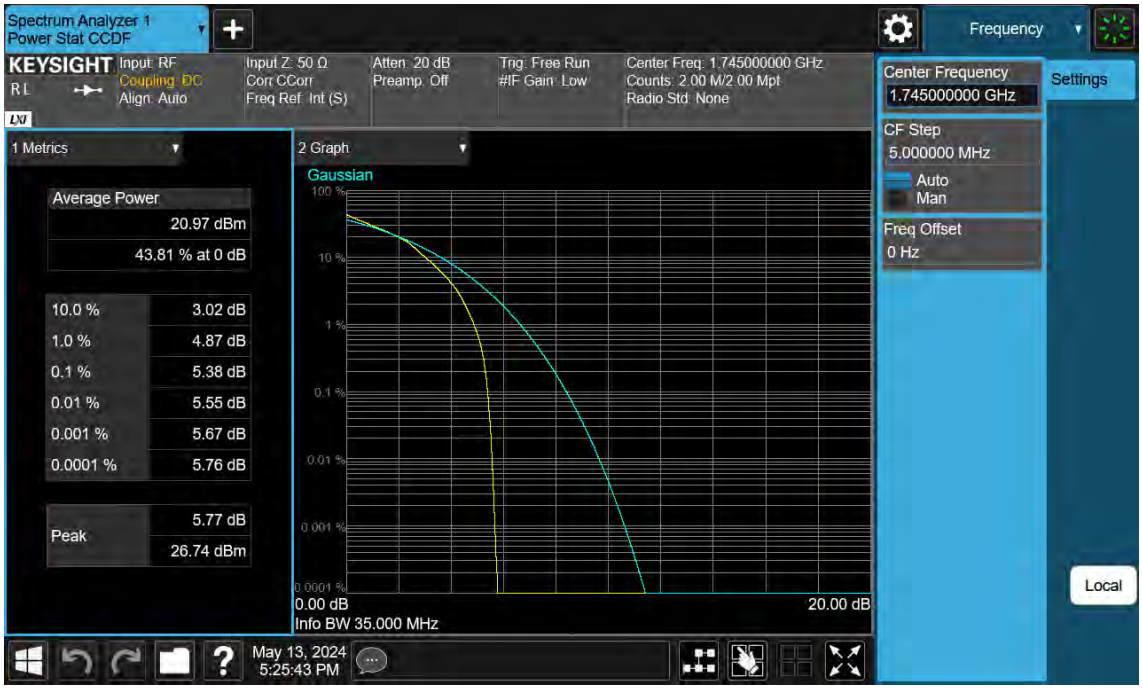

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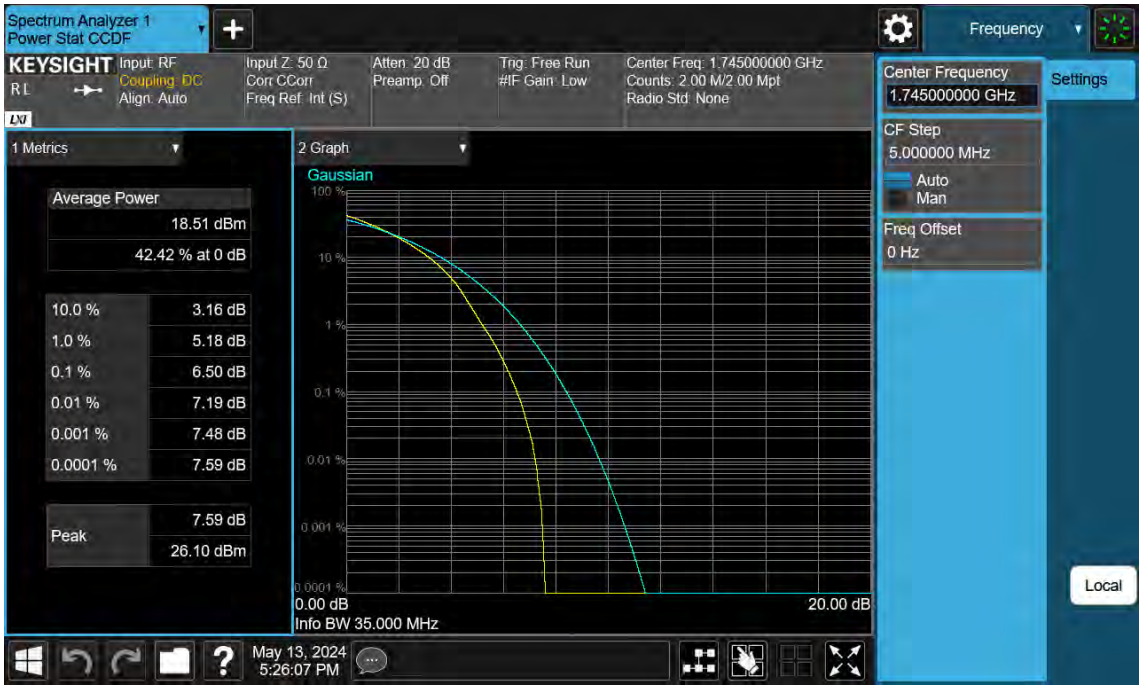
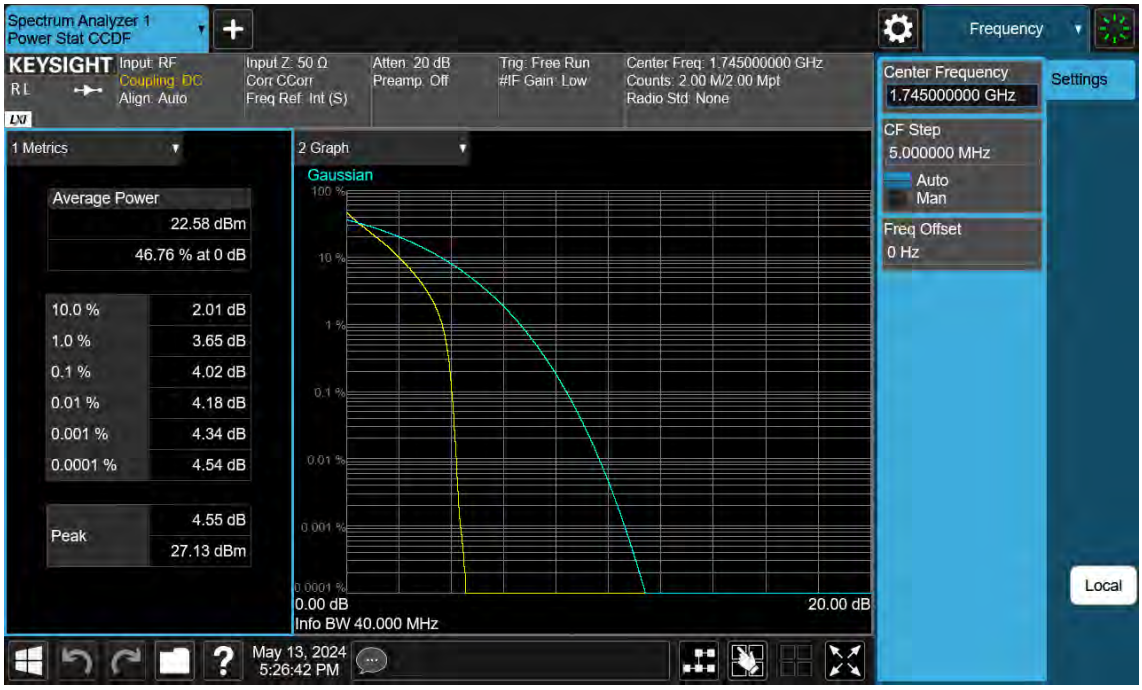
Sub6 n66_35 M_PAR_Mid_256QAM_FullRB



Sub6 n66_40 M_PAR_Mid_BPSK_FullRB



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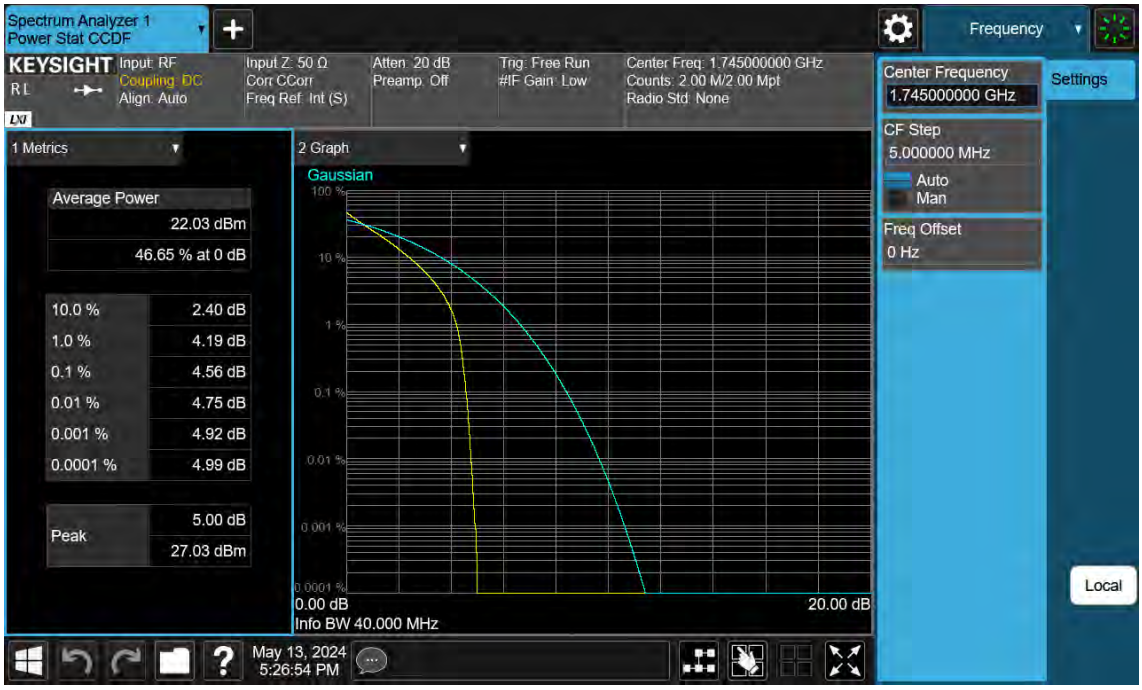

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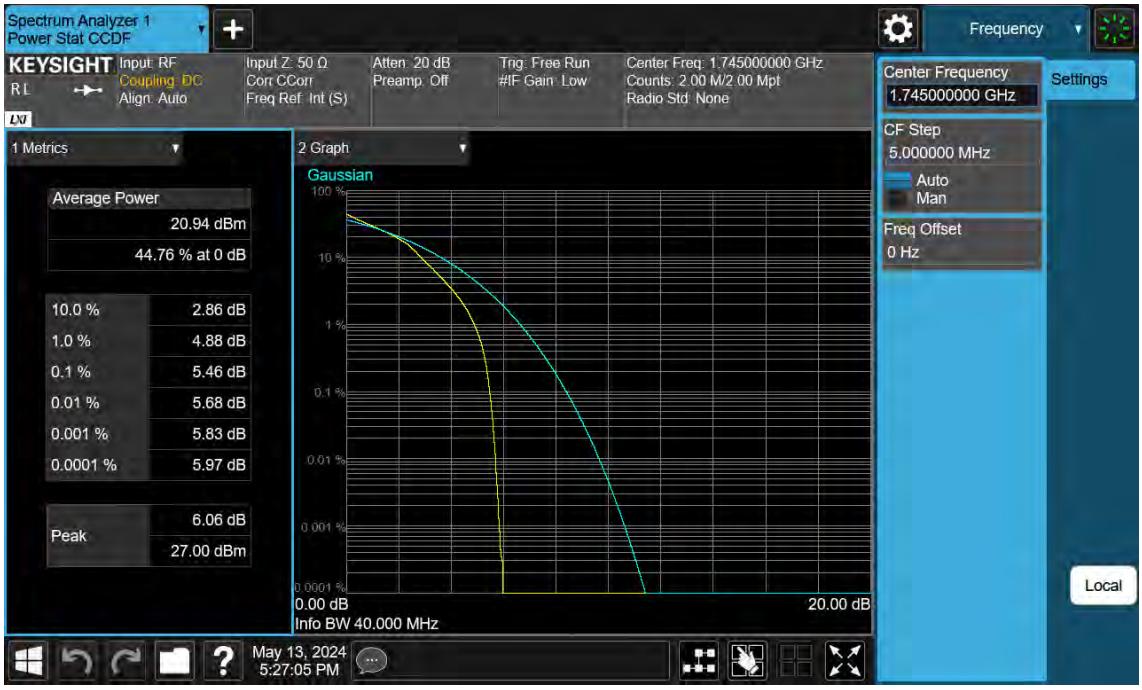
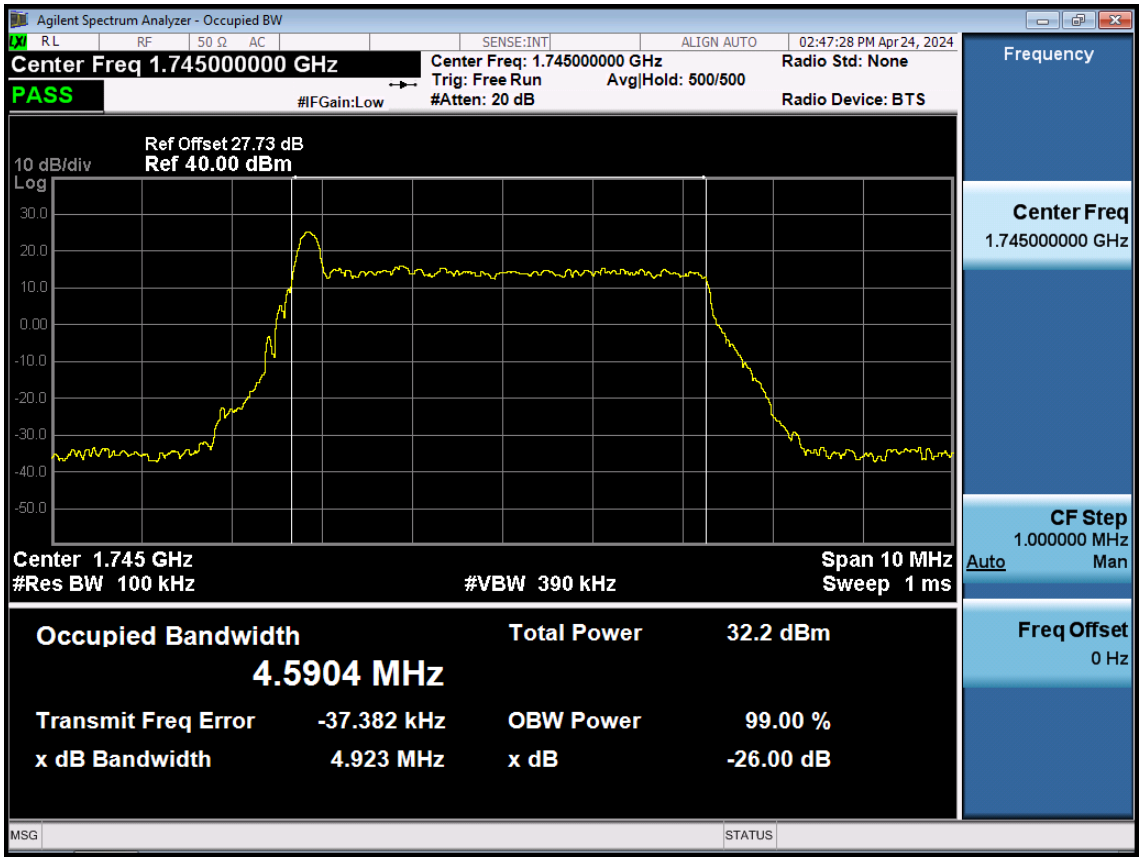


Sub6 n66_40 M_PAR_Mid_64QAM_FullRB

Sub6 n66_40 M_PAR_Mid_256QAM_FullRB

Sub6 n66_5 M_OBW_Mid_BPSK_FullRB



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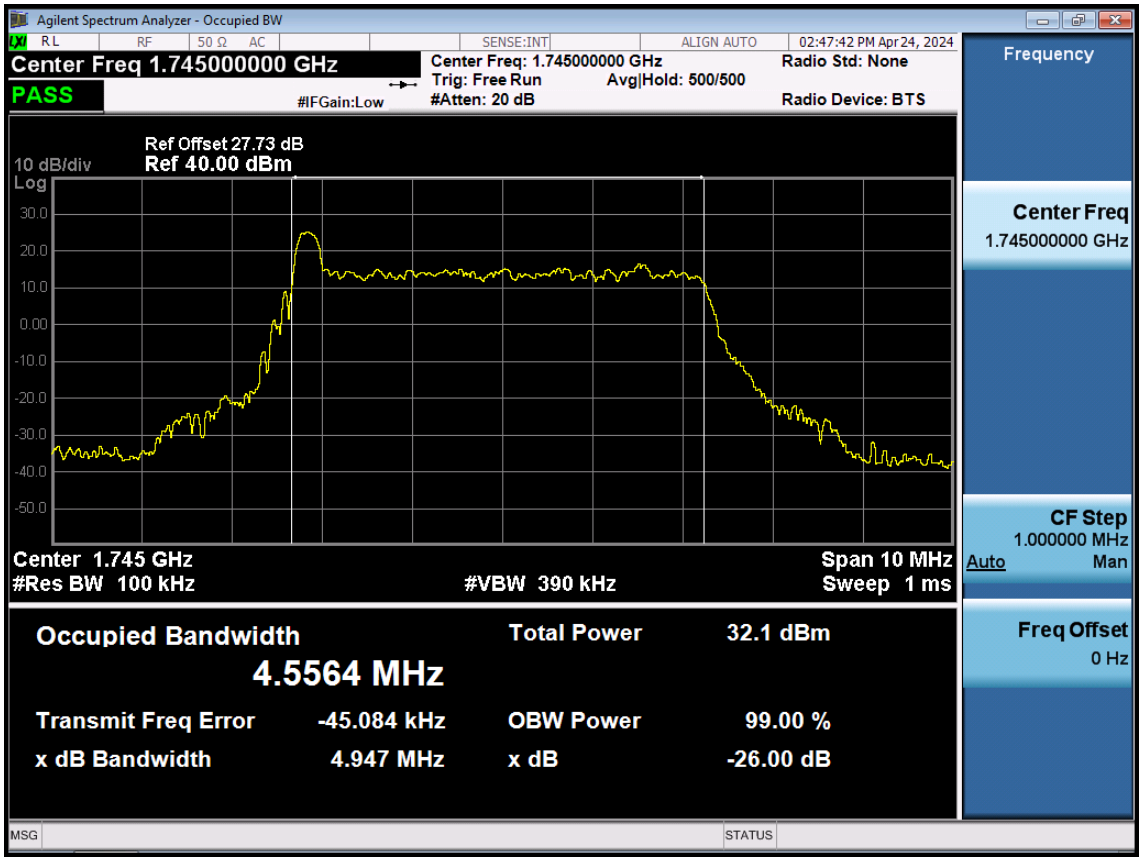

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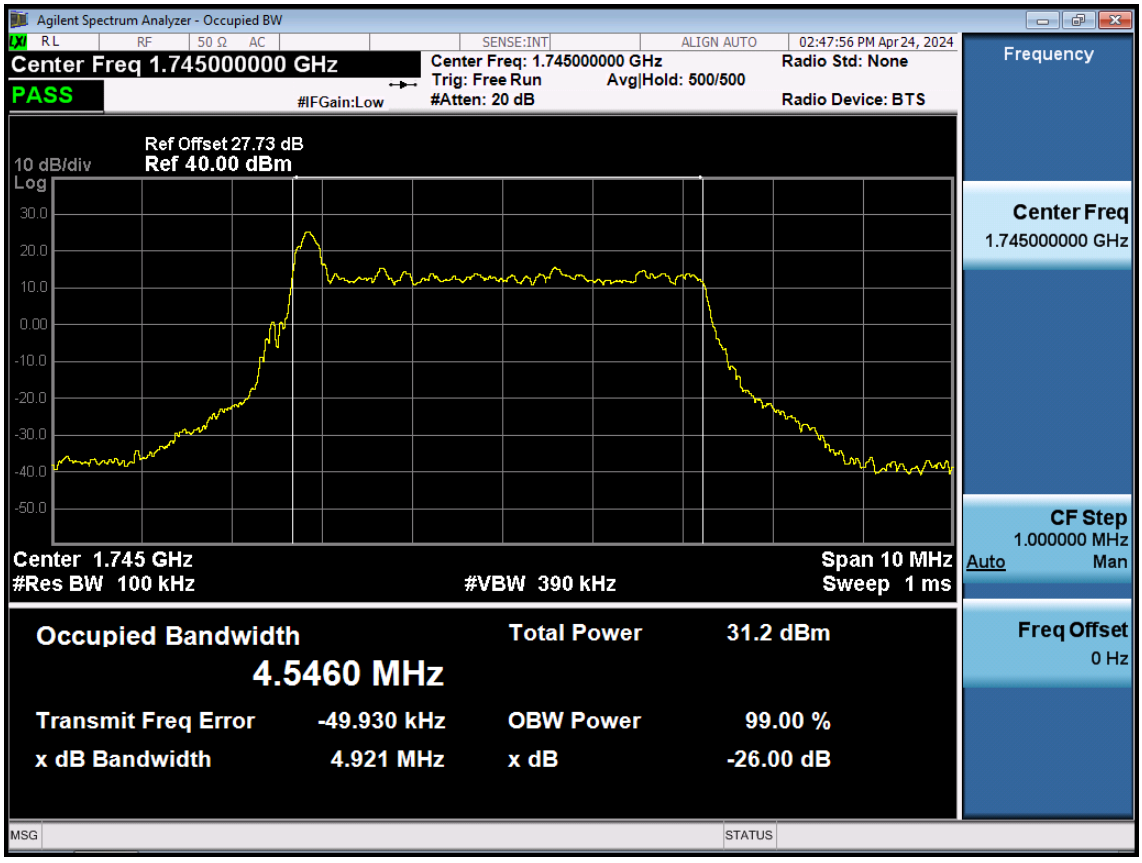

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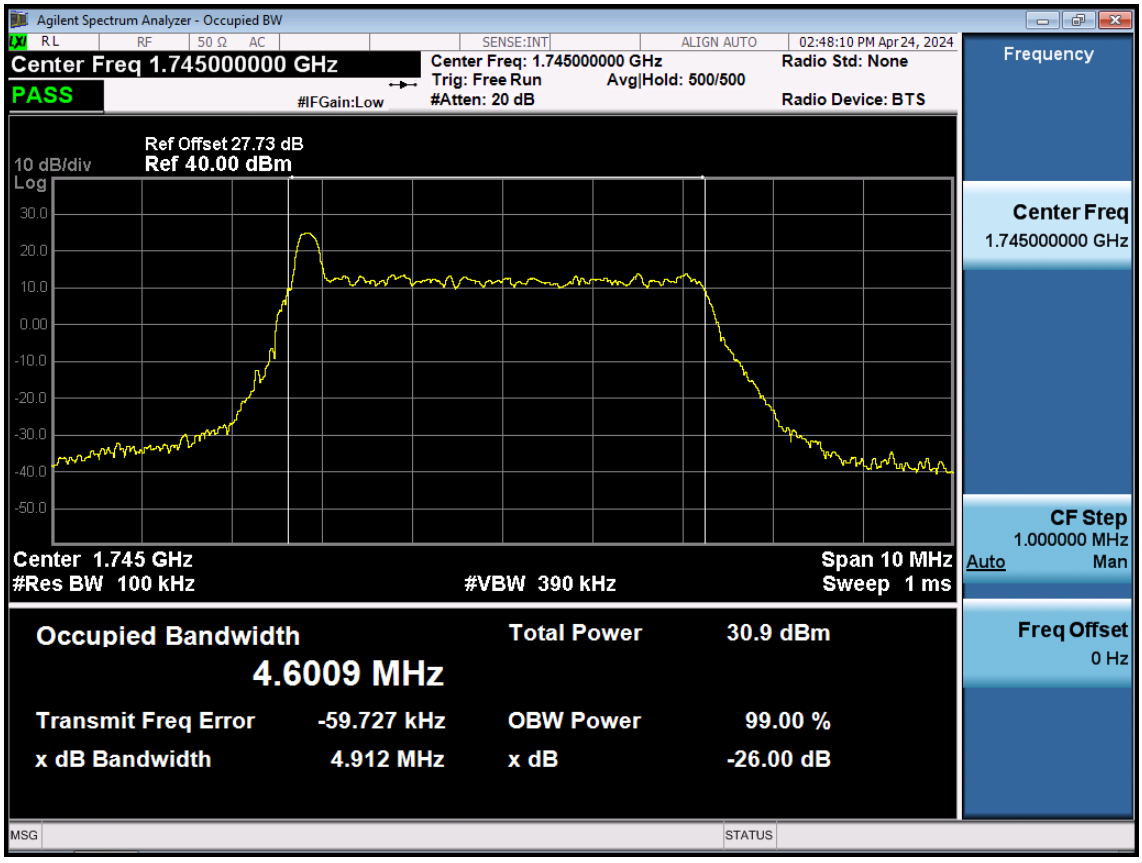
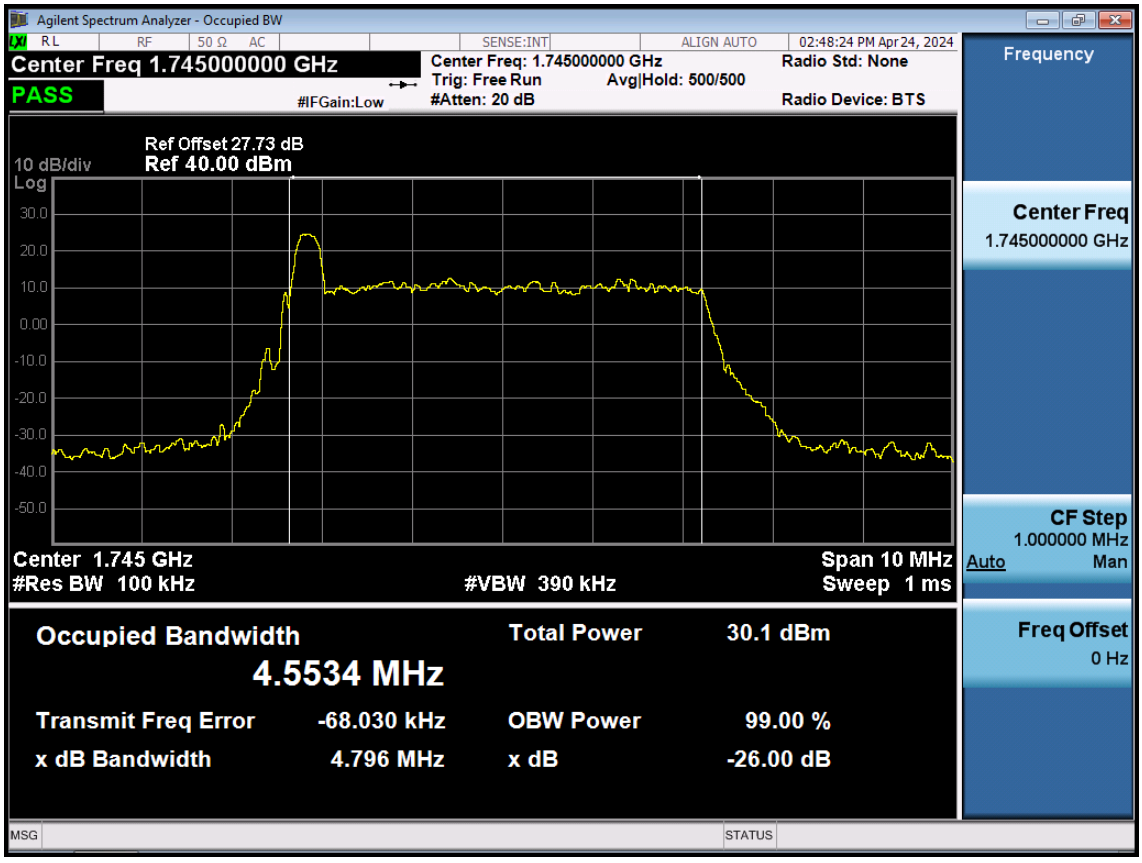
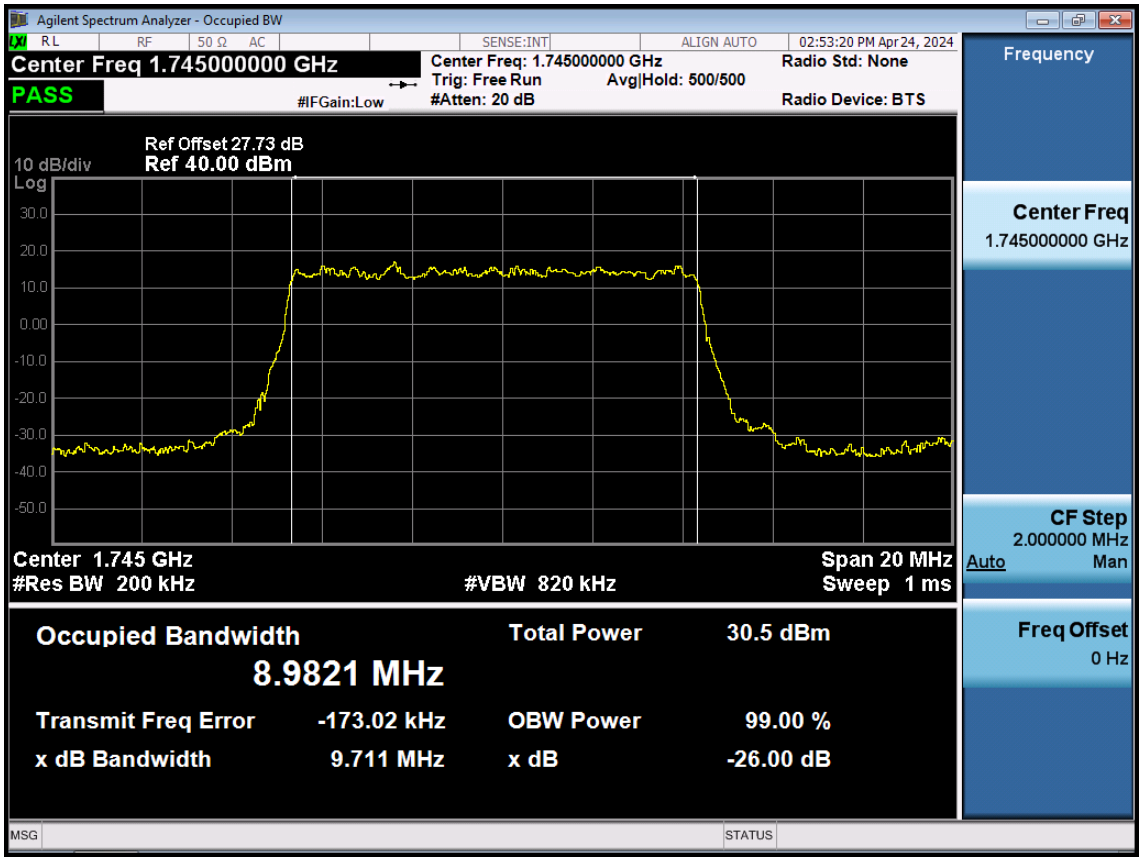


Sub6 n66_5 M_OBW_Mid_256QAM_FullRB



Sub6 n66_10 M_OBW_Mid_BPSK_FullRB



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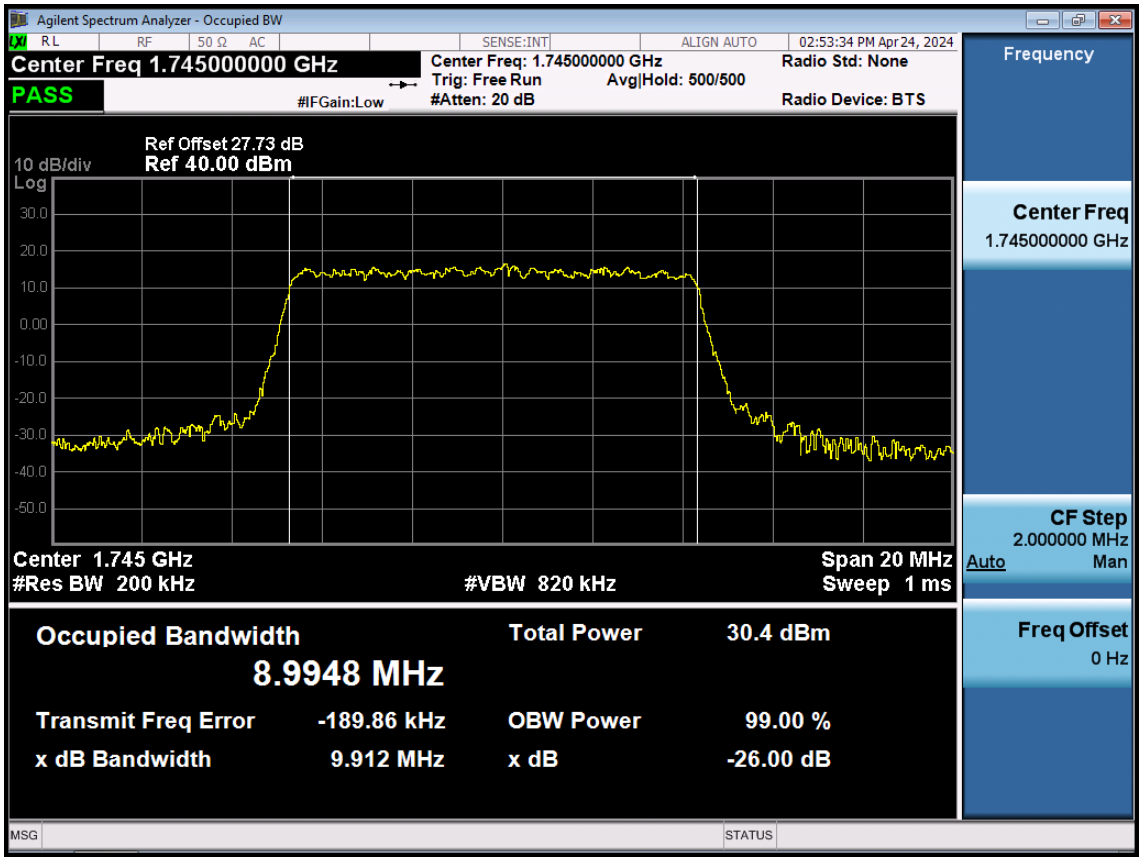

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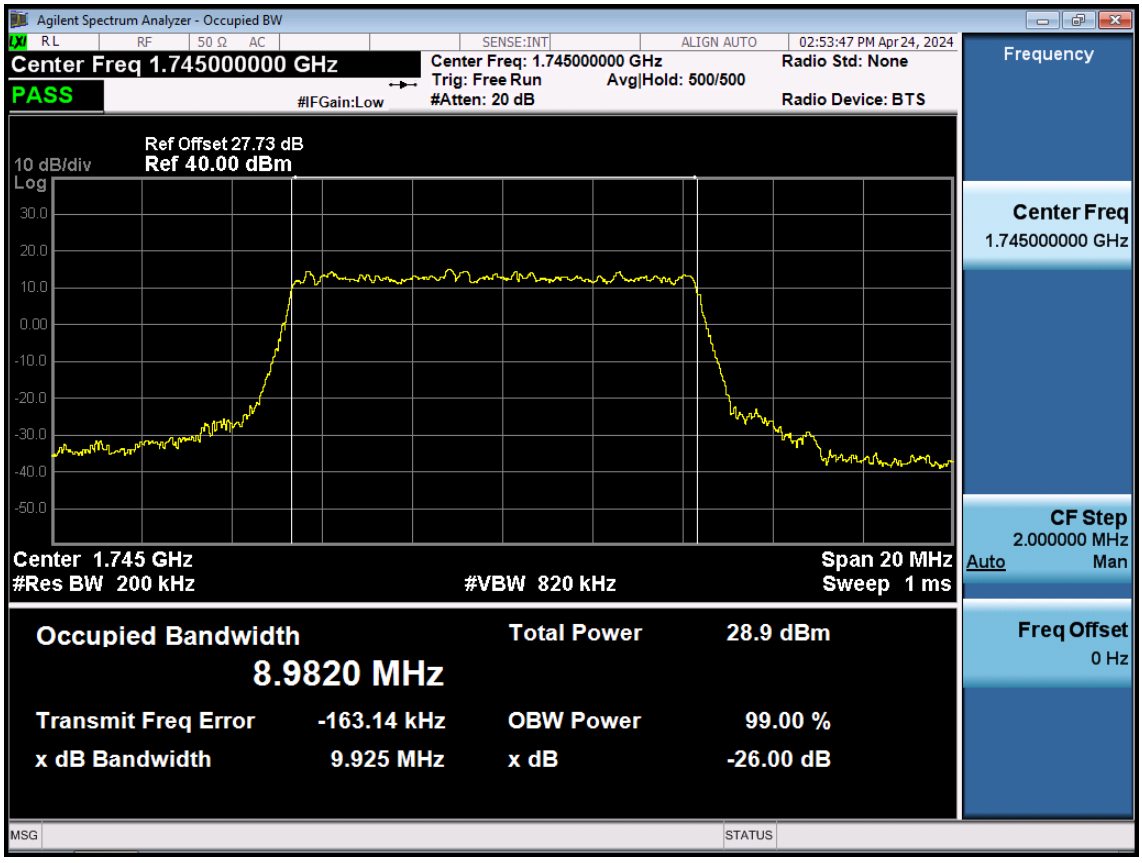

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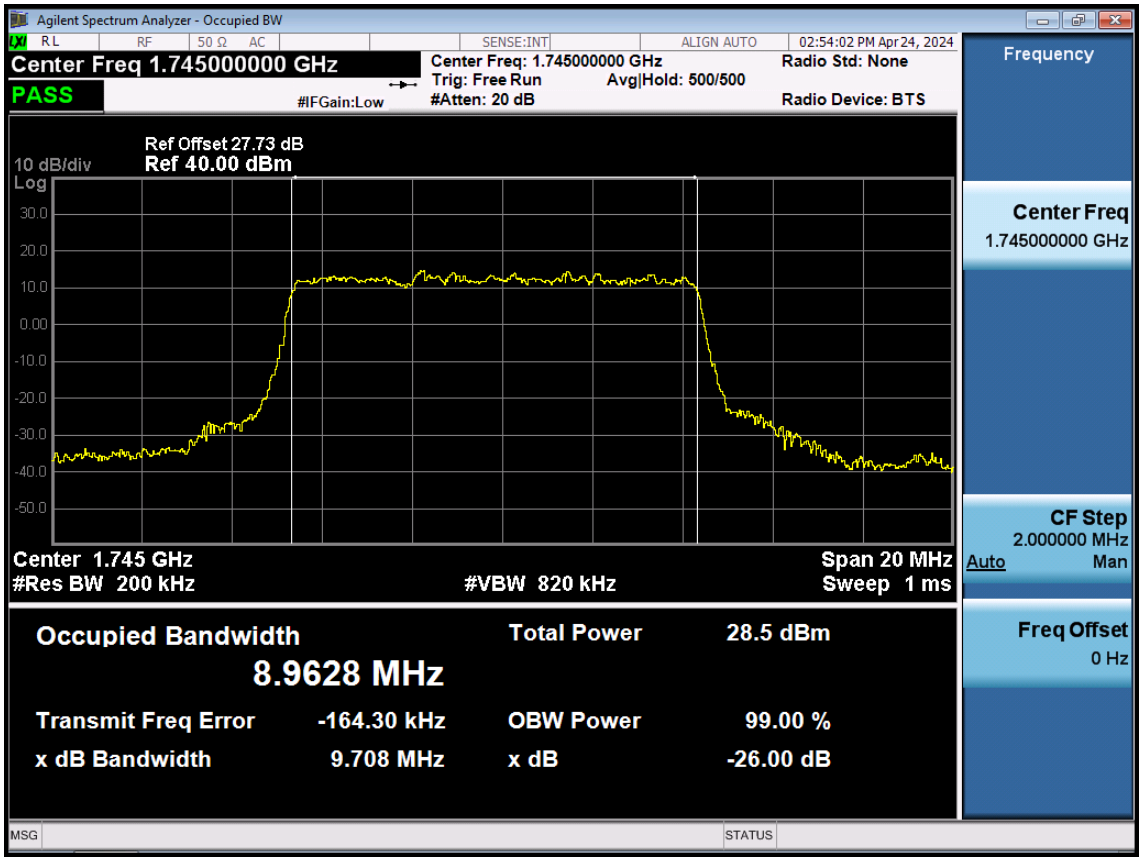
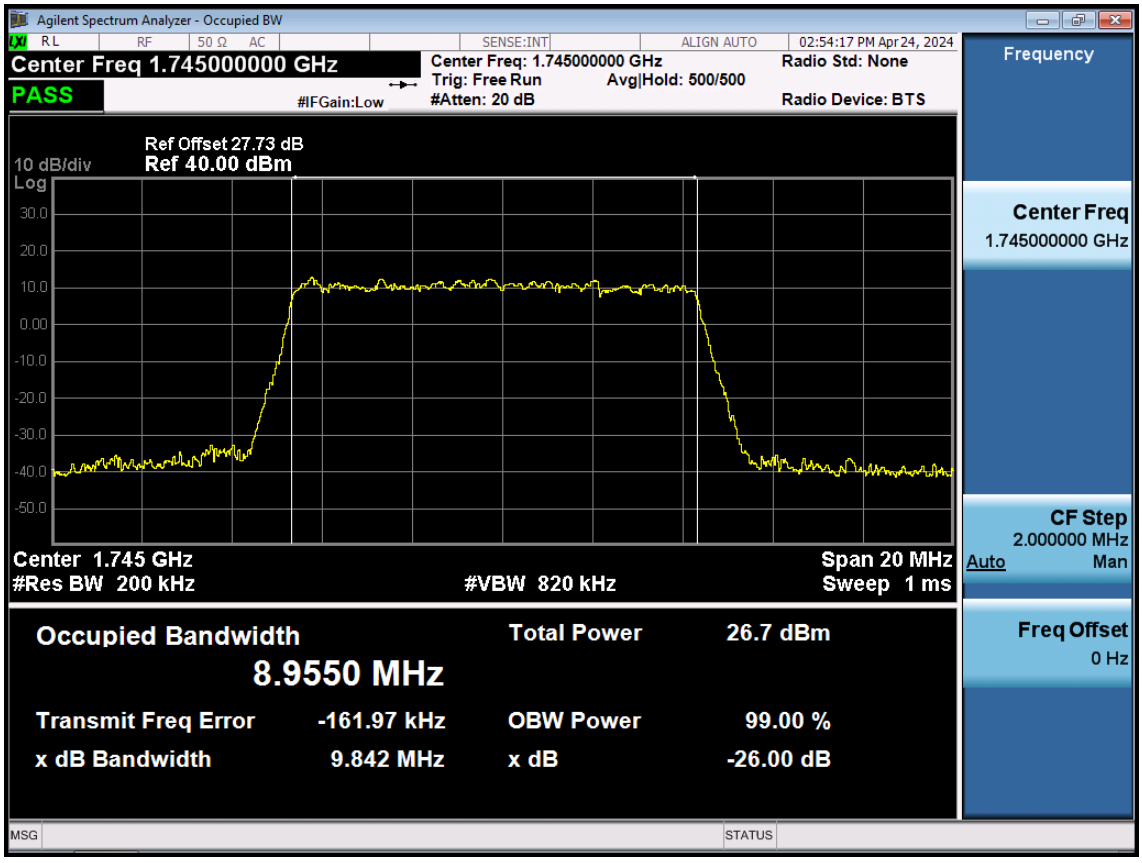


Sub6 n66_10 M_OBW_Mid_256QAM_FullRB



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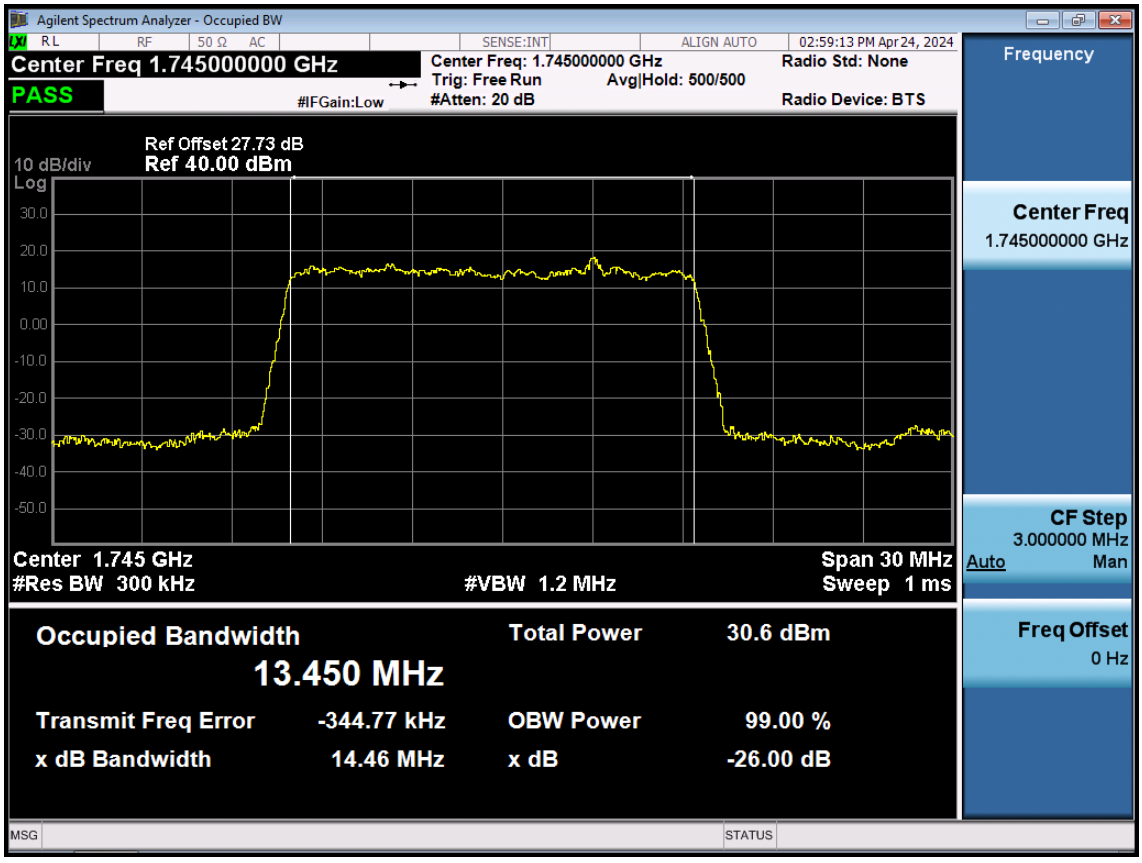

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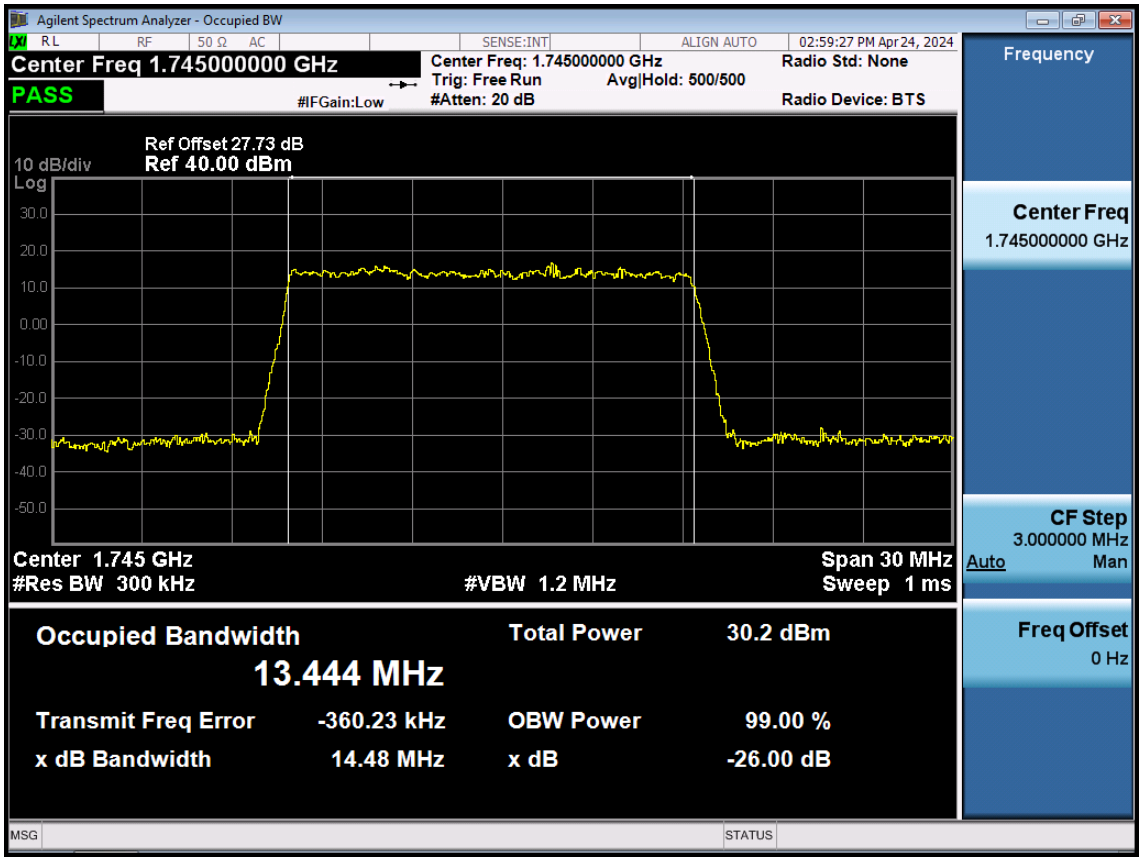

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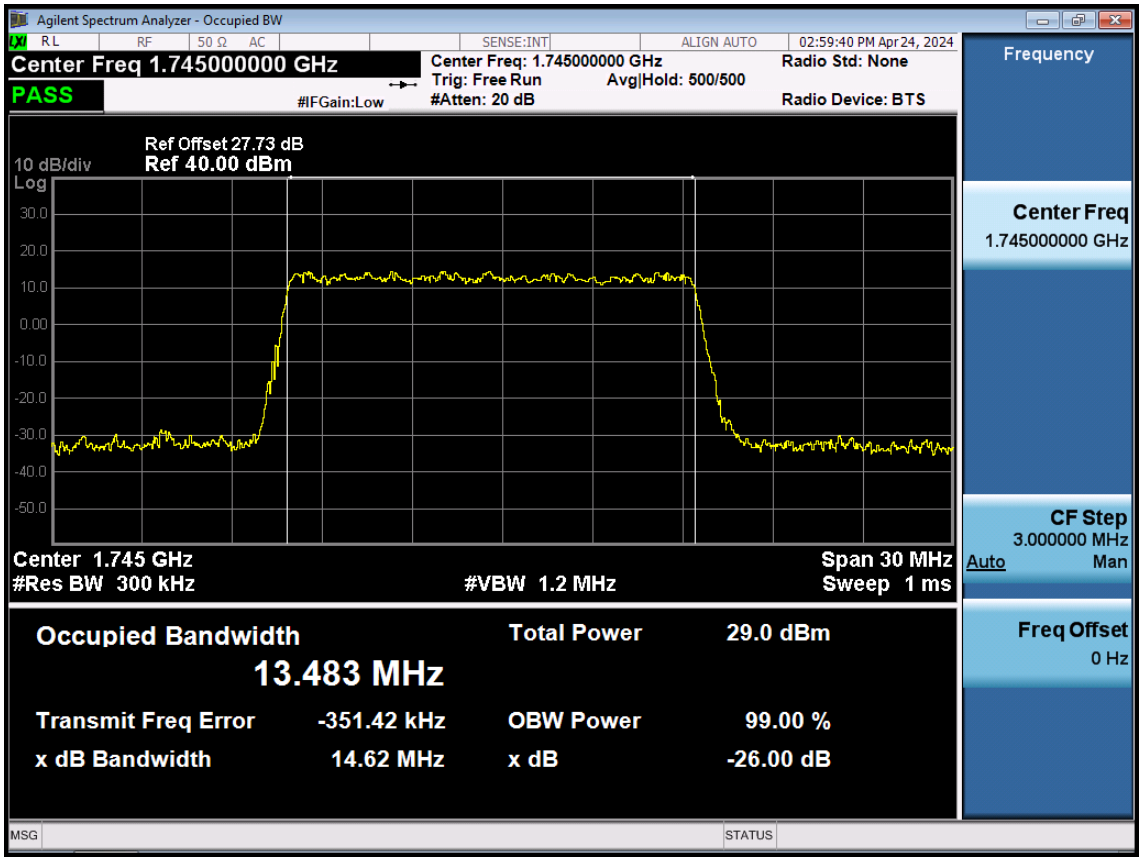

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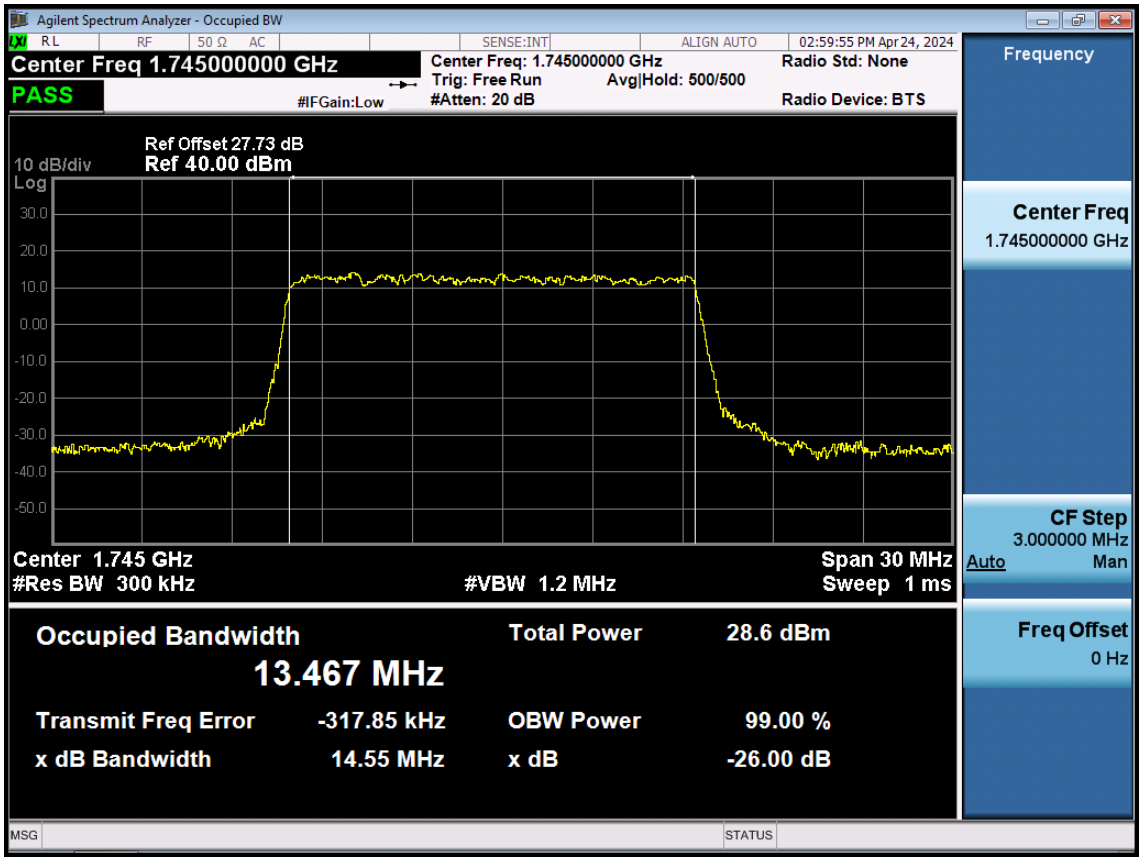
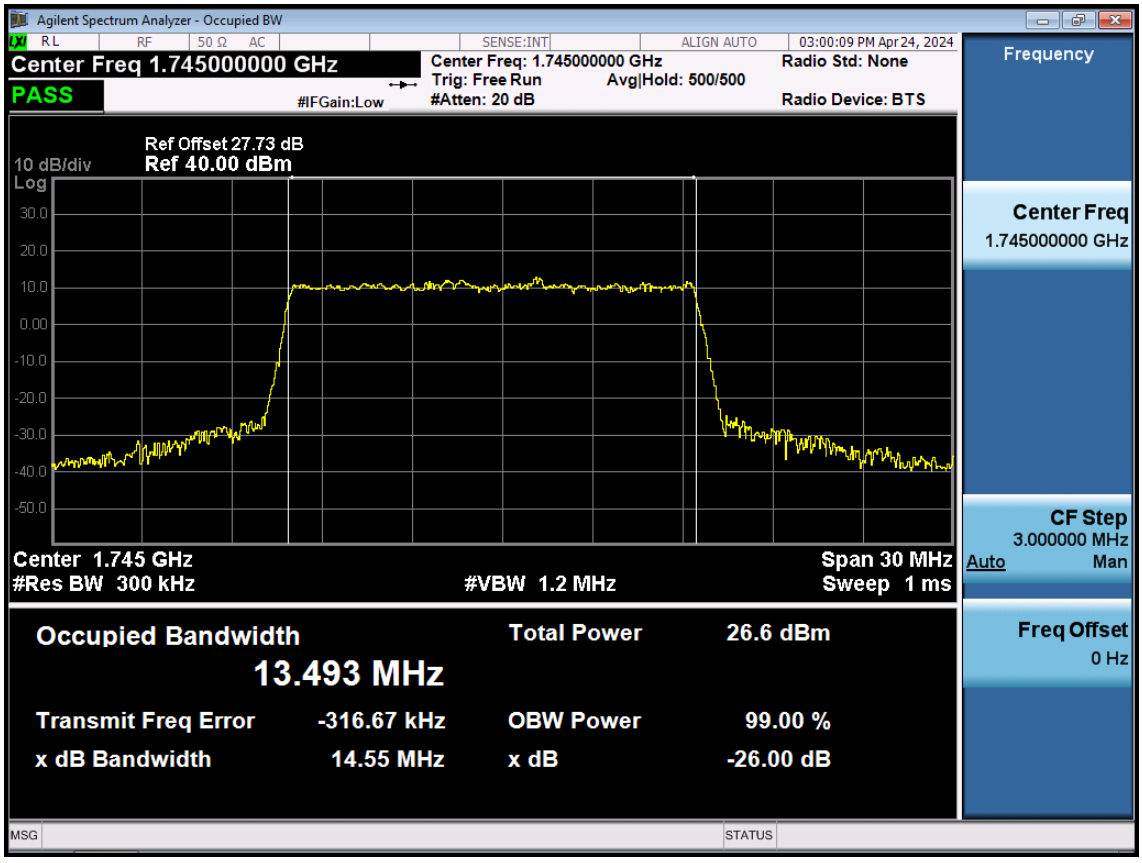


Sub6 n66_15 M_OBW_Mid_256QAM_FullRB



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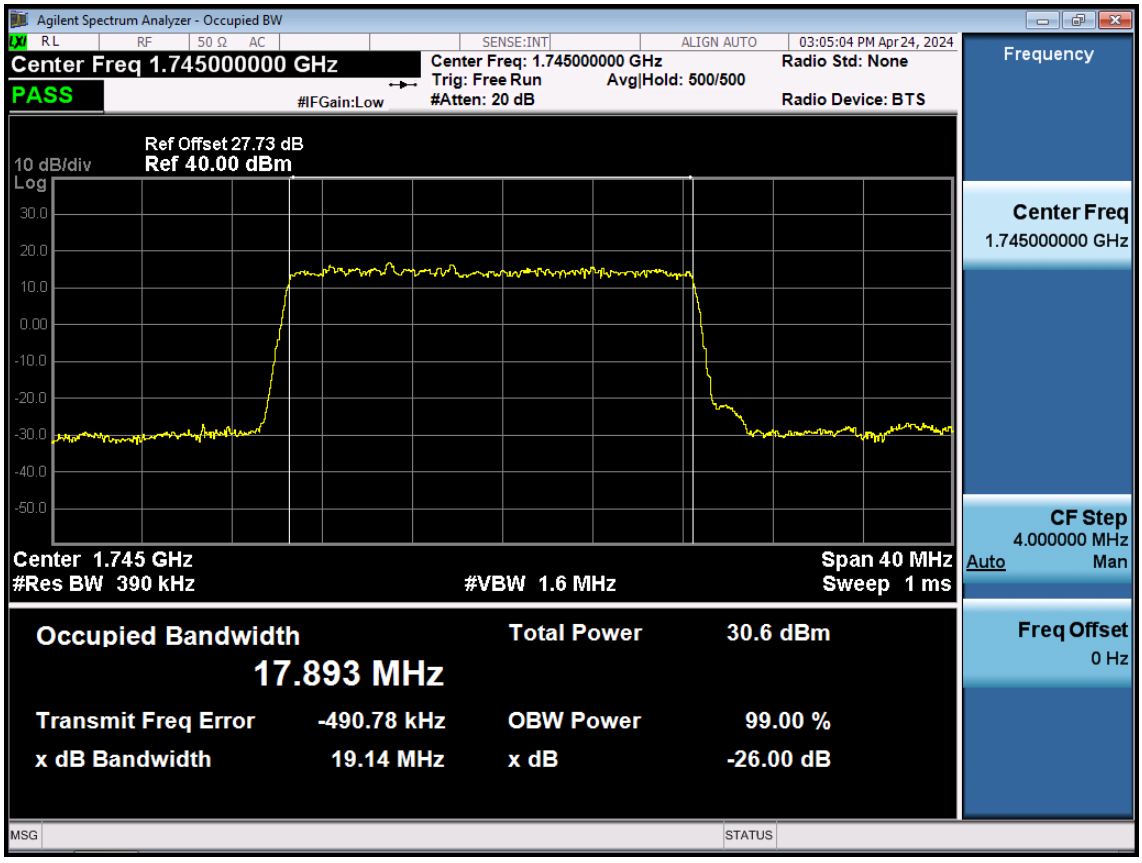

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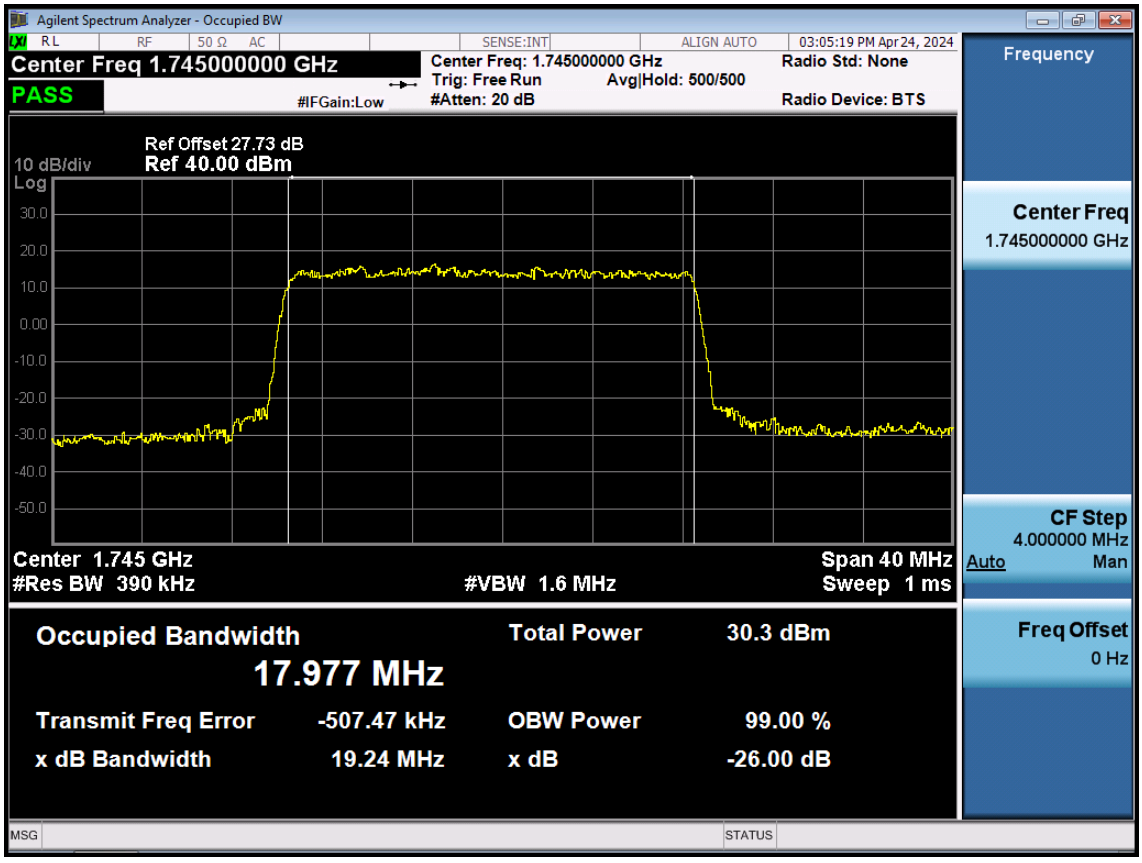

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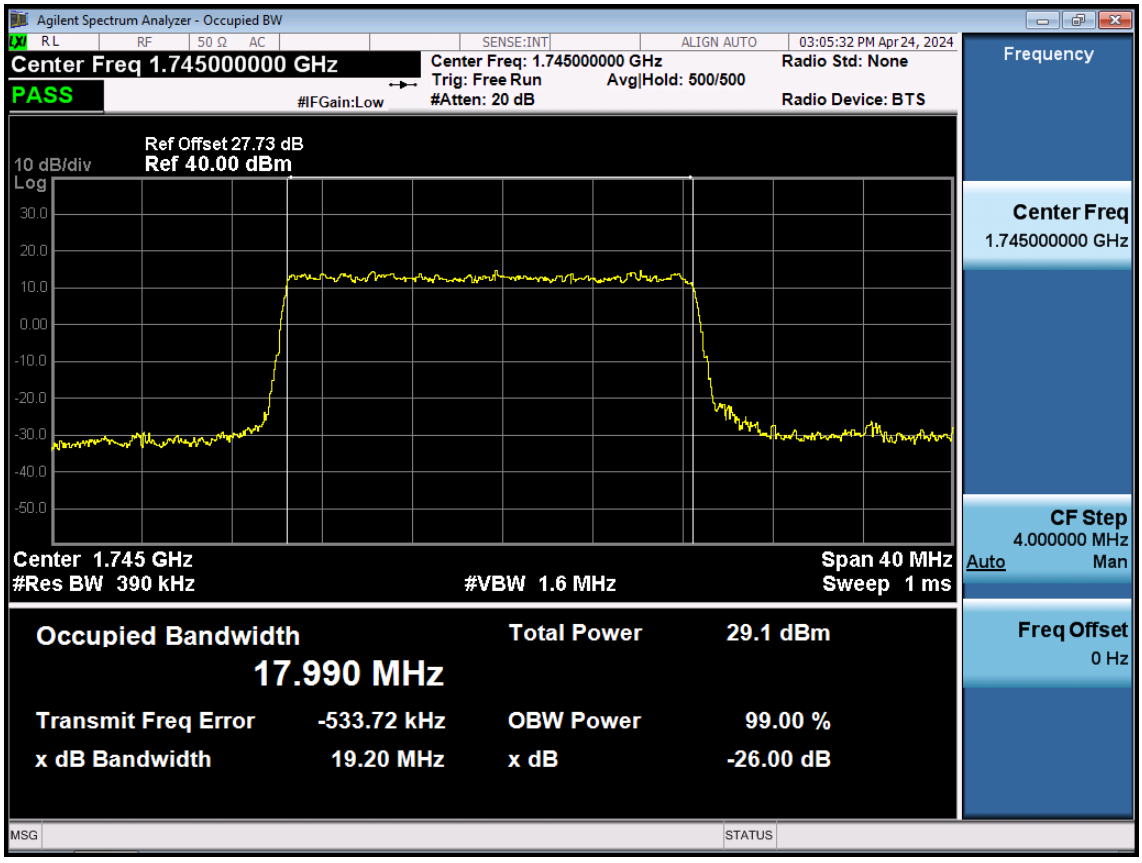

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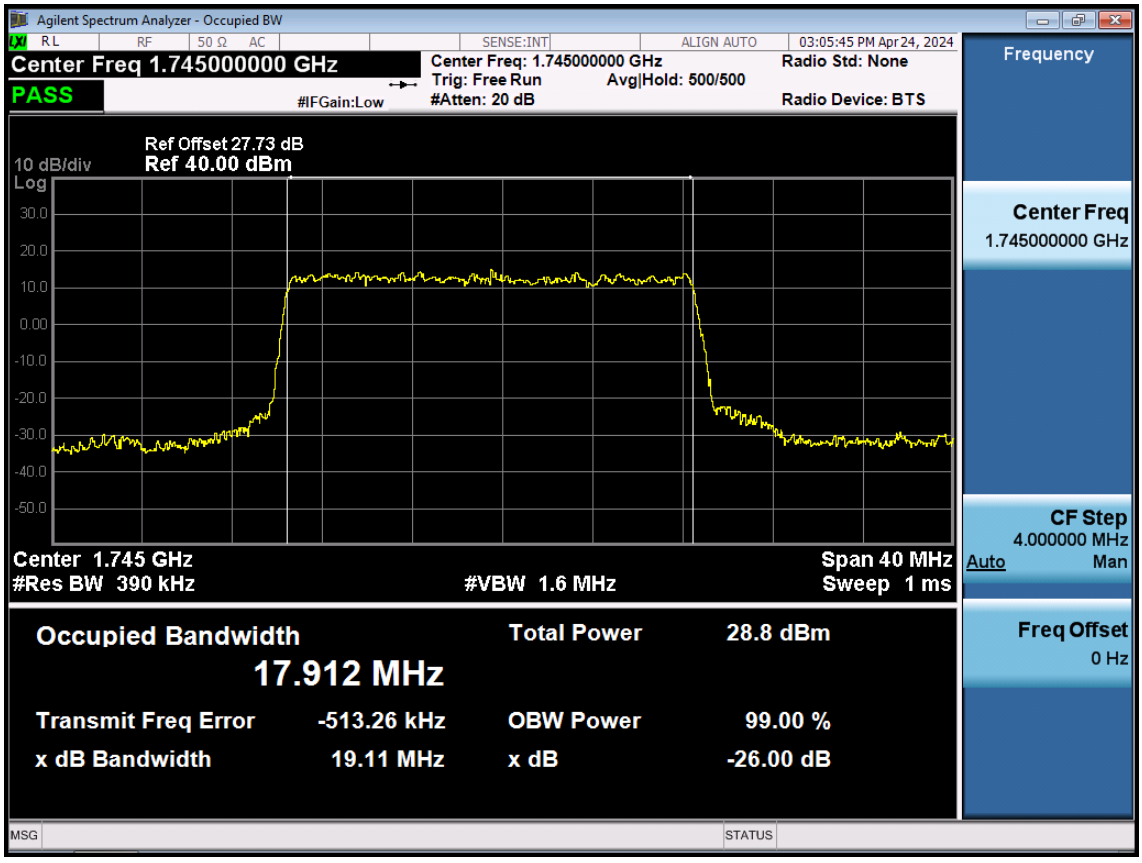
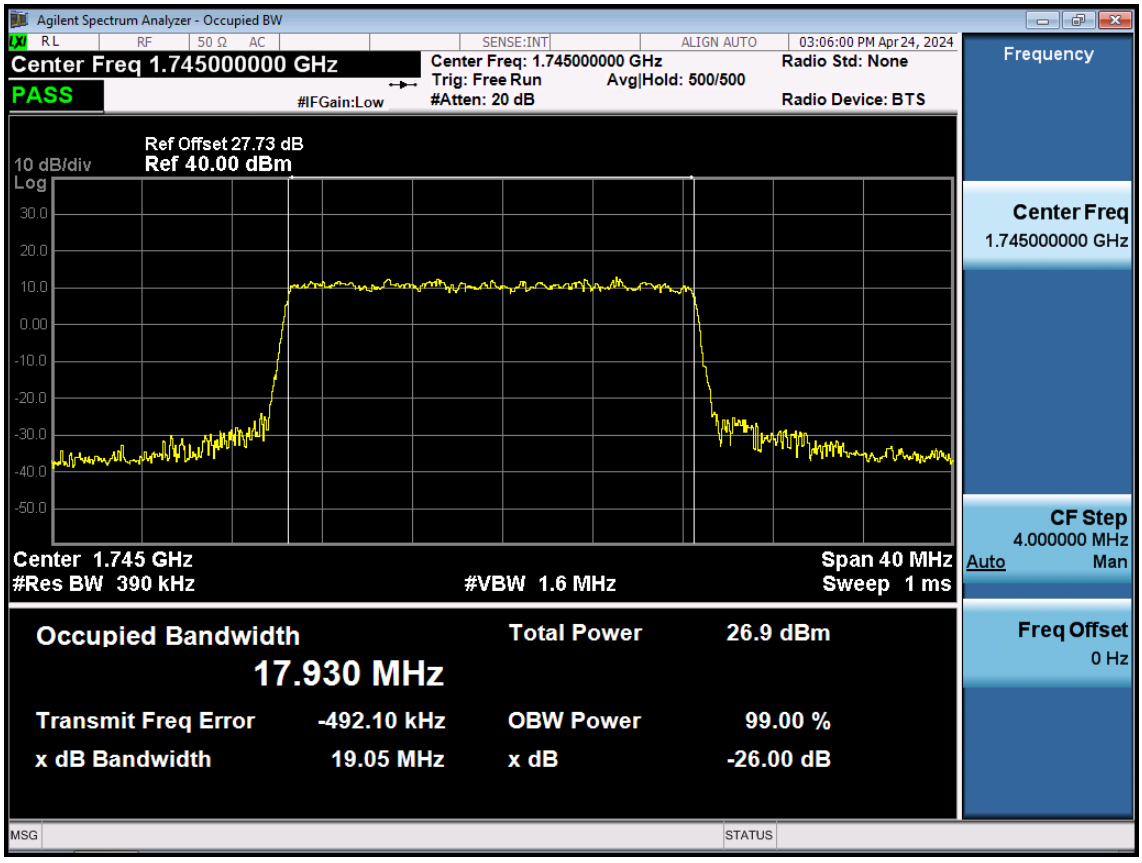


Sub6 n66_20 M_OBW_Mid_256QAM_FullRB



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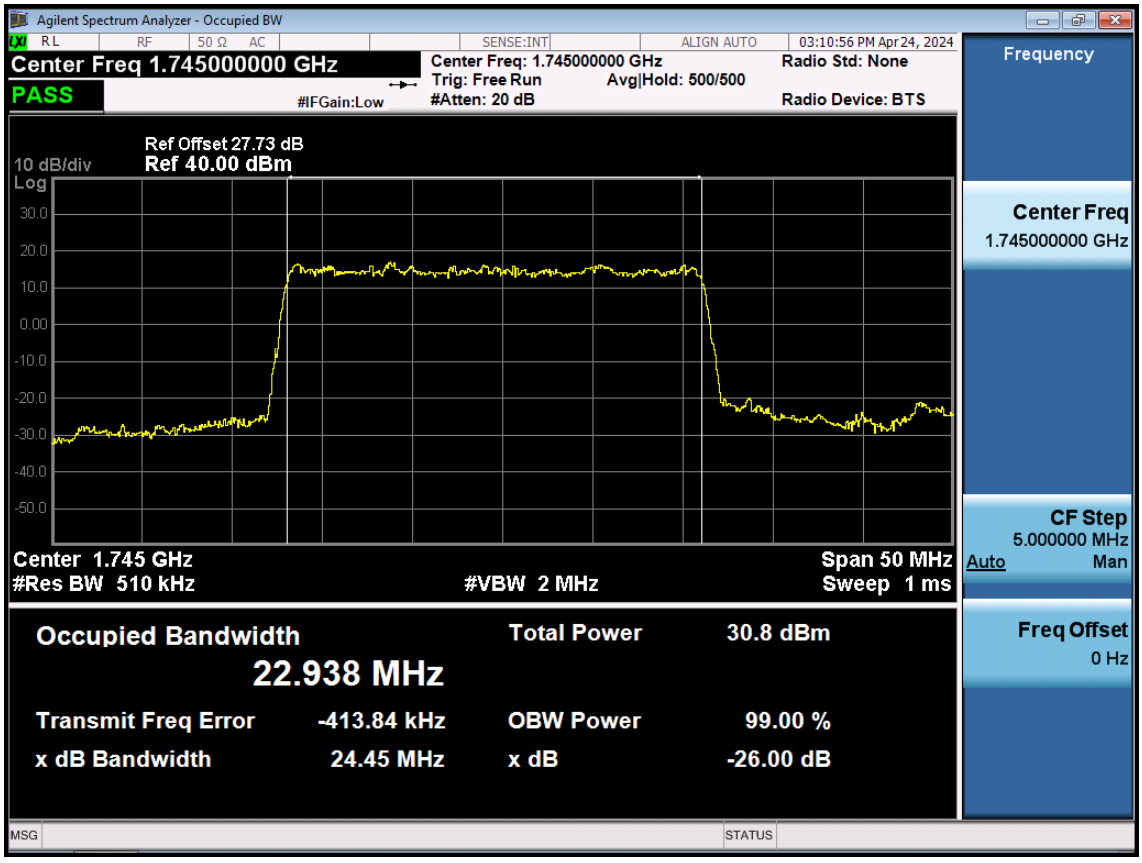

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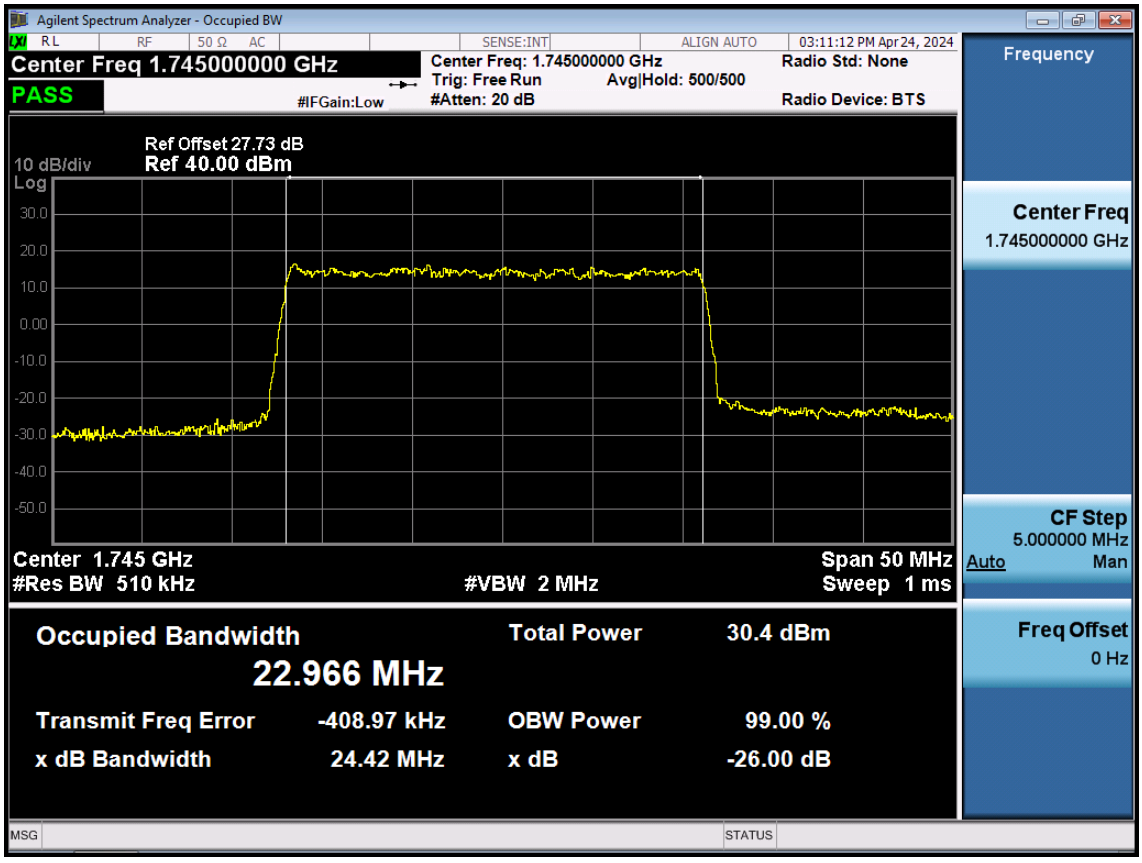

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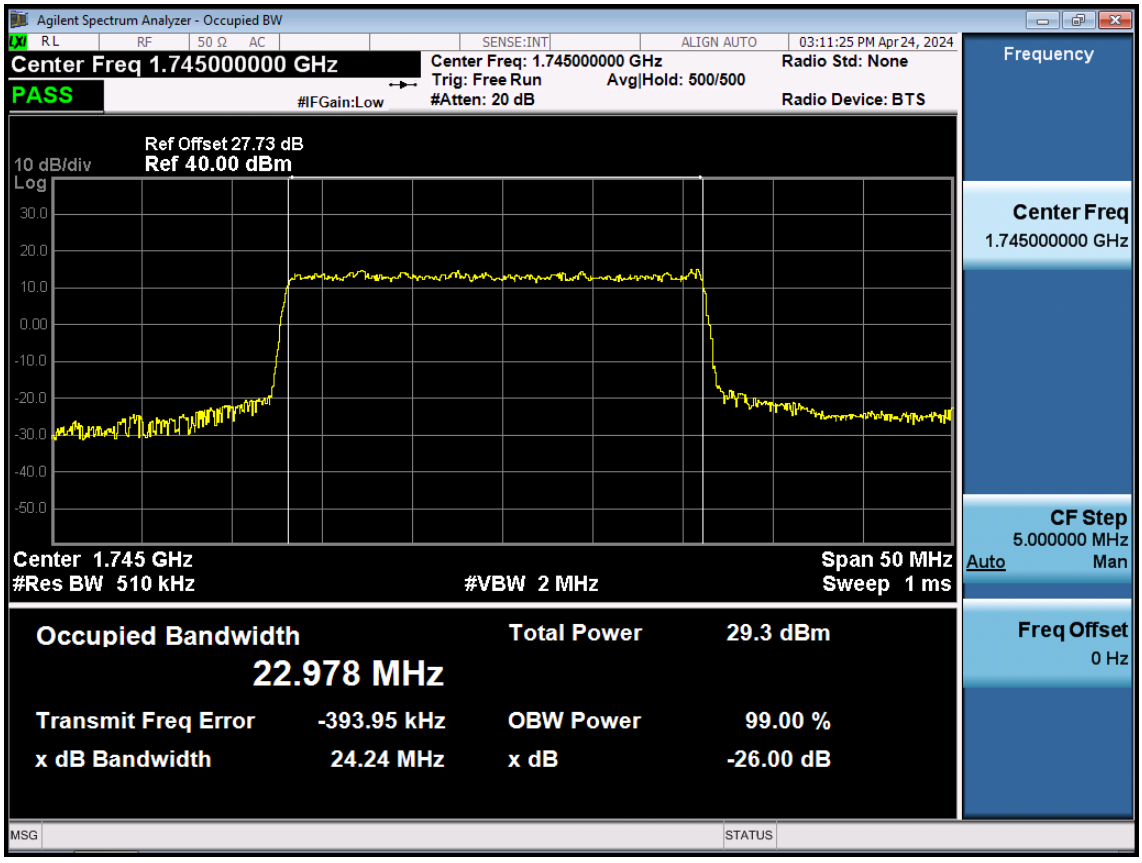

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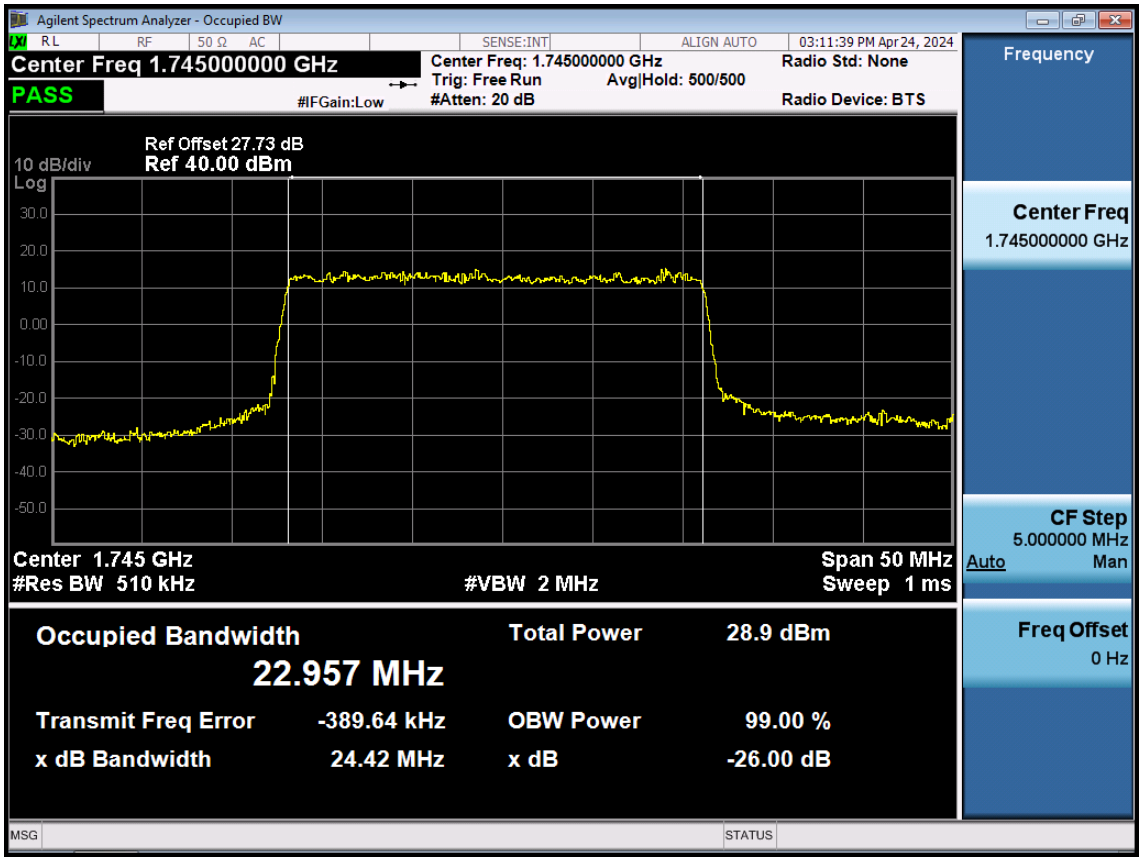

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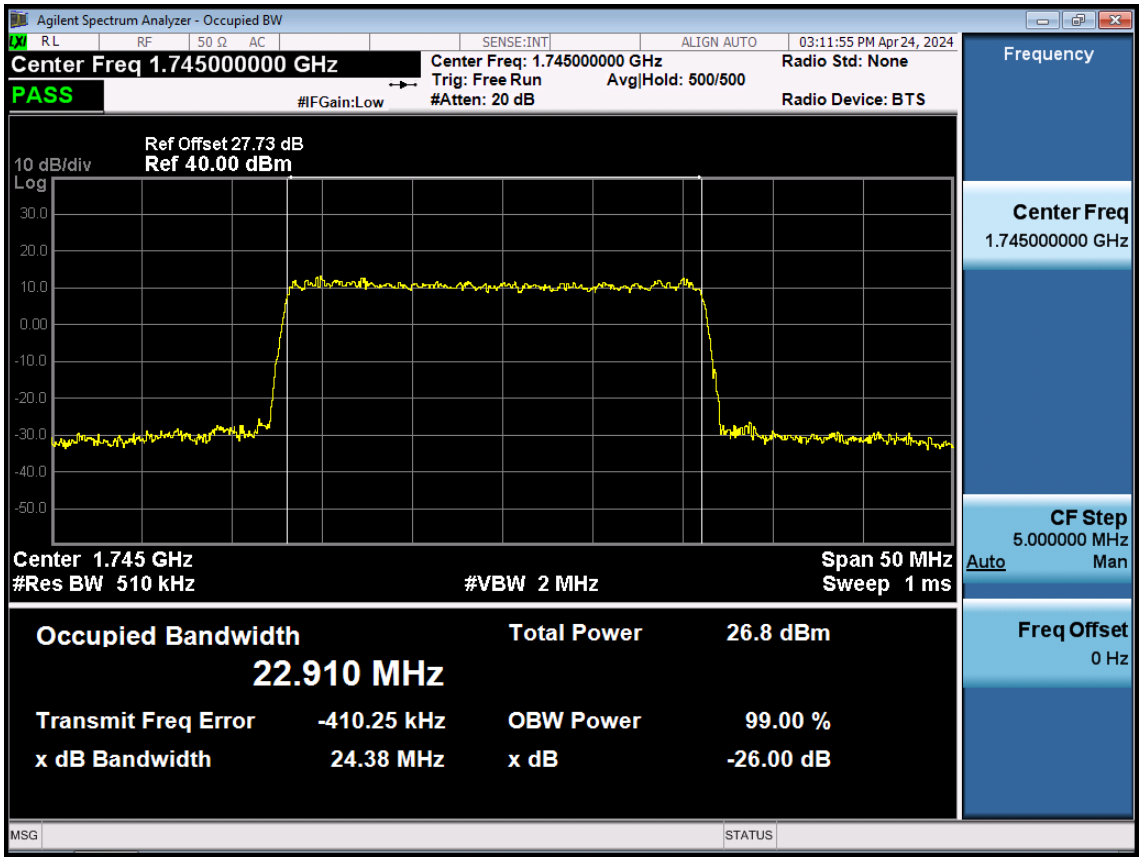

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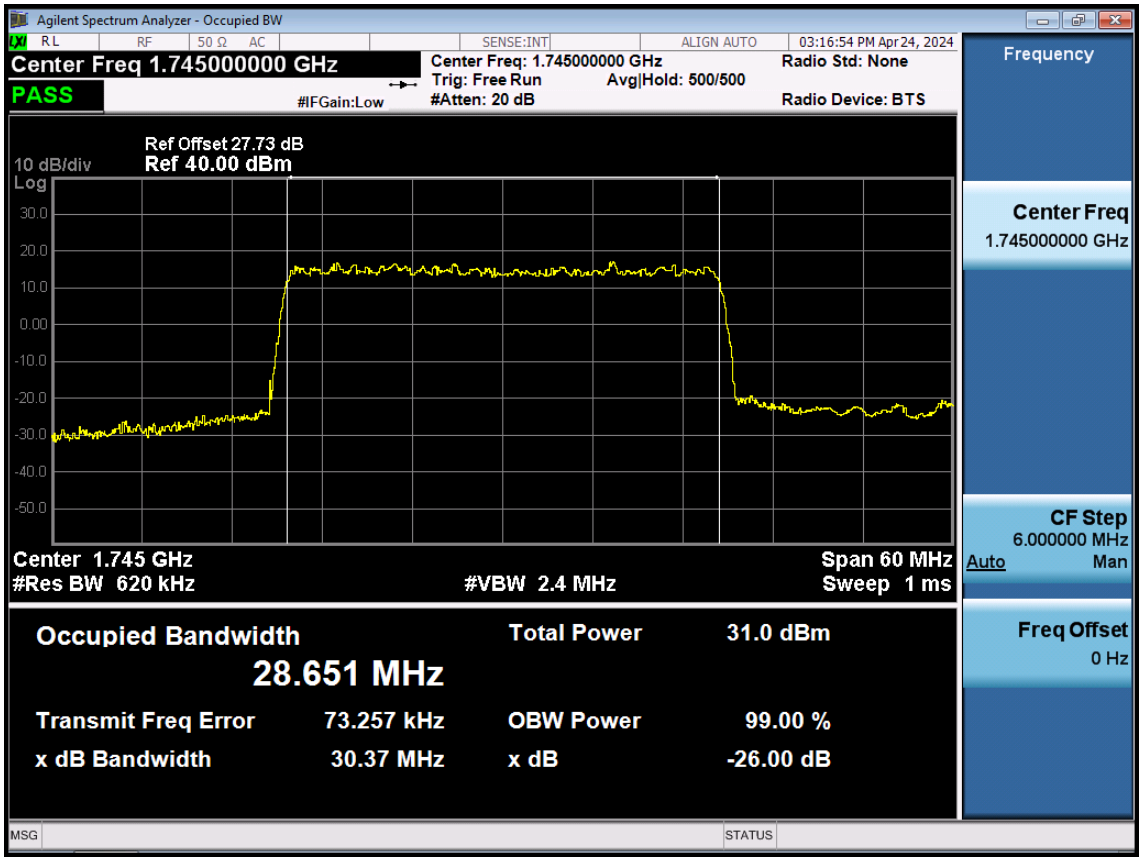

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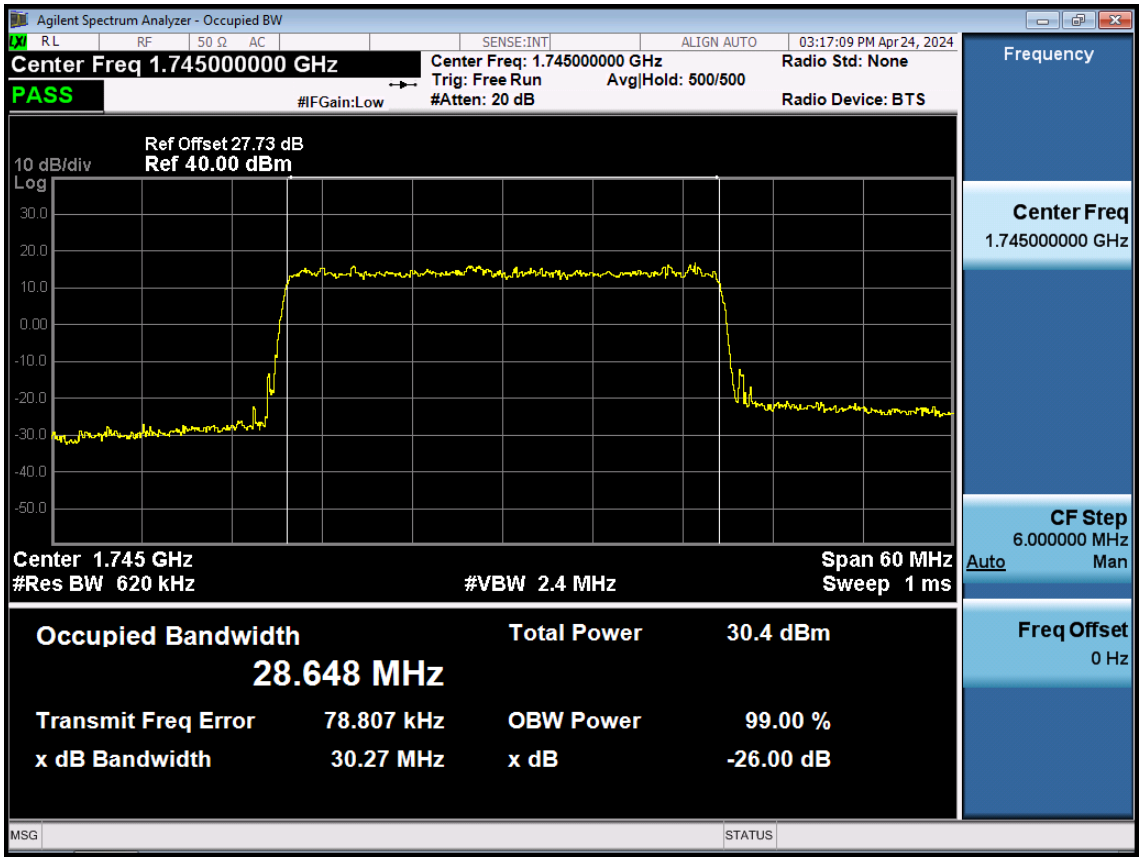

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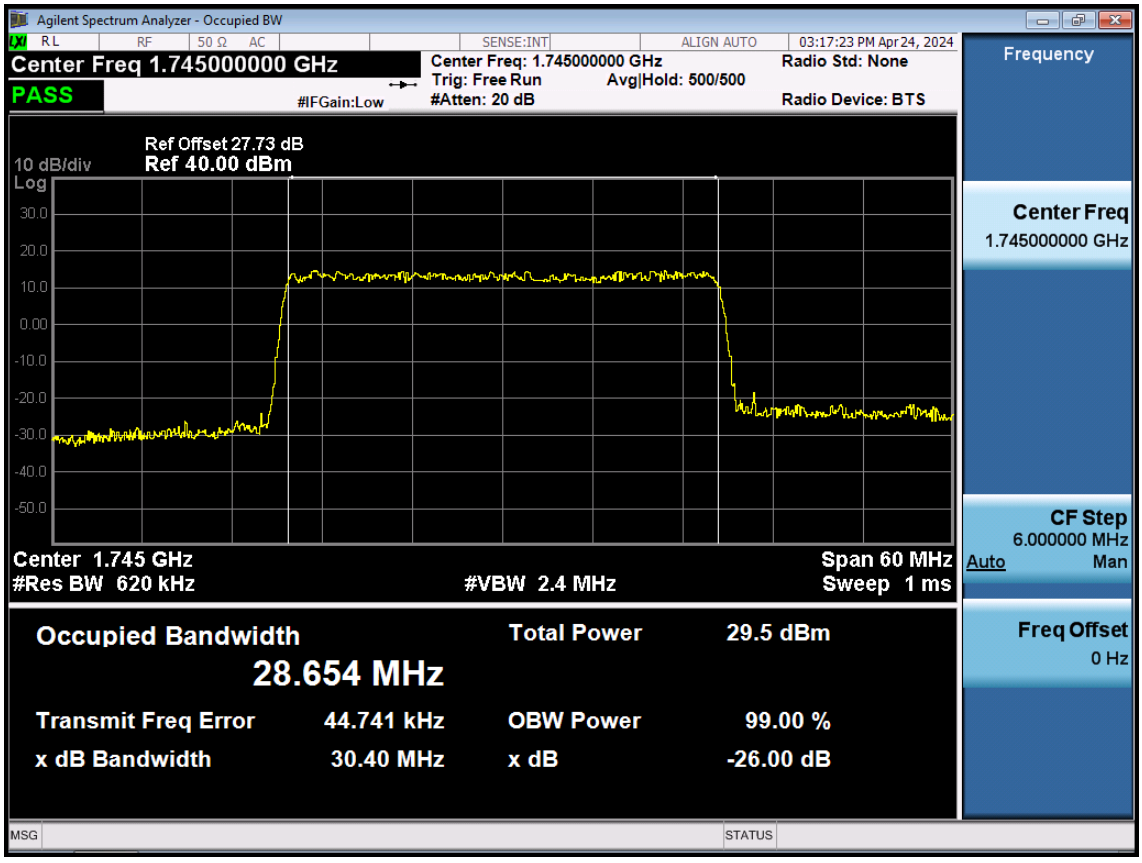

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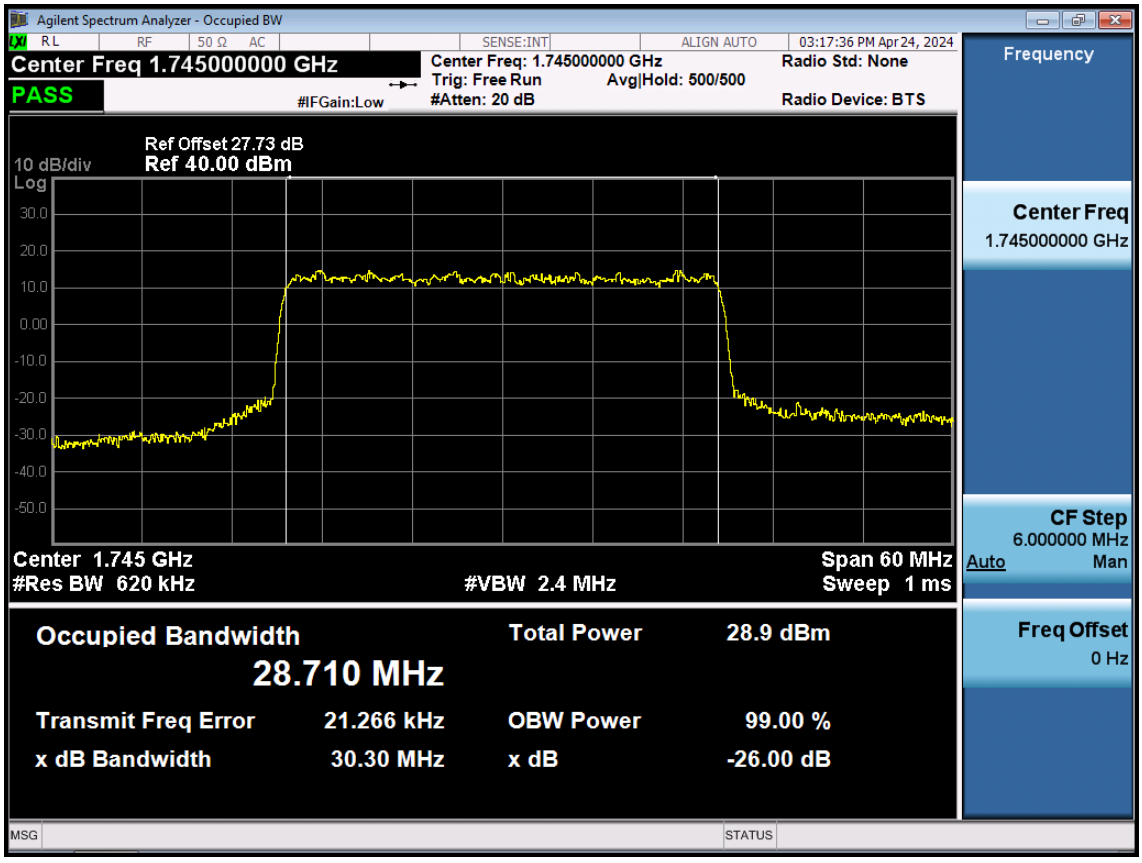
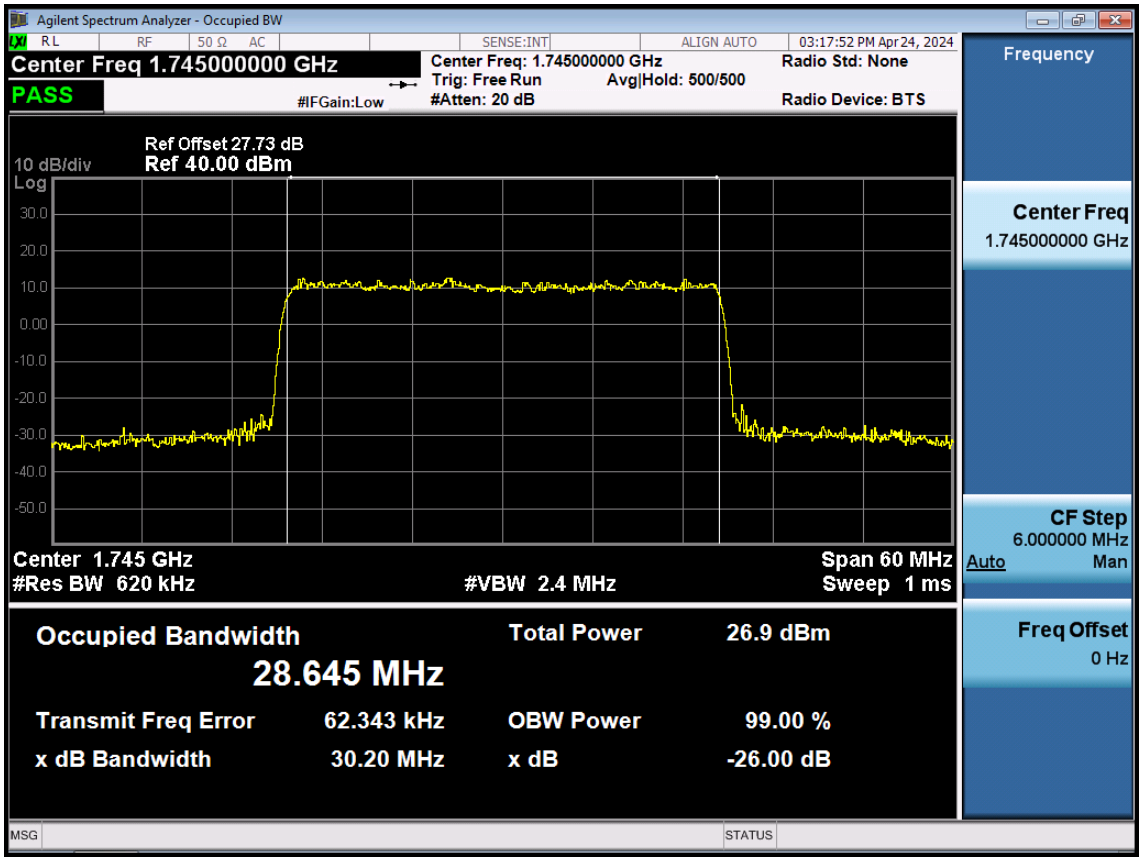


Sub6 n66_30 M_OBW_Mid_256QAM_FullRB



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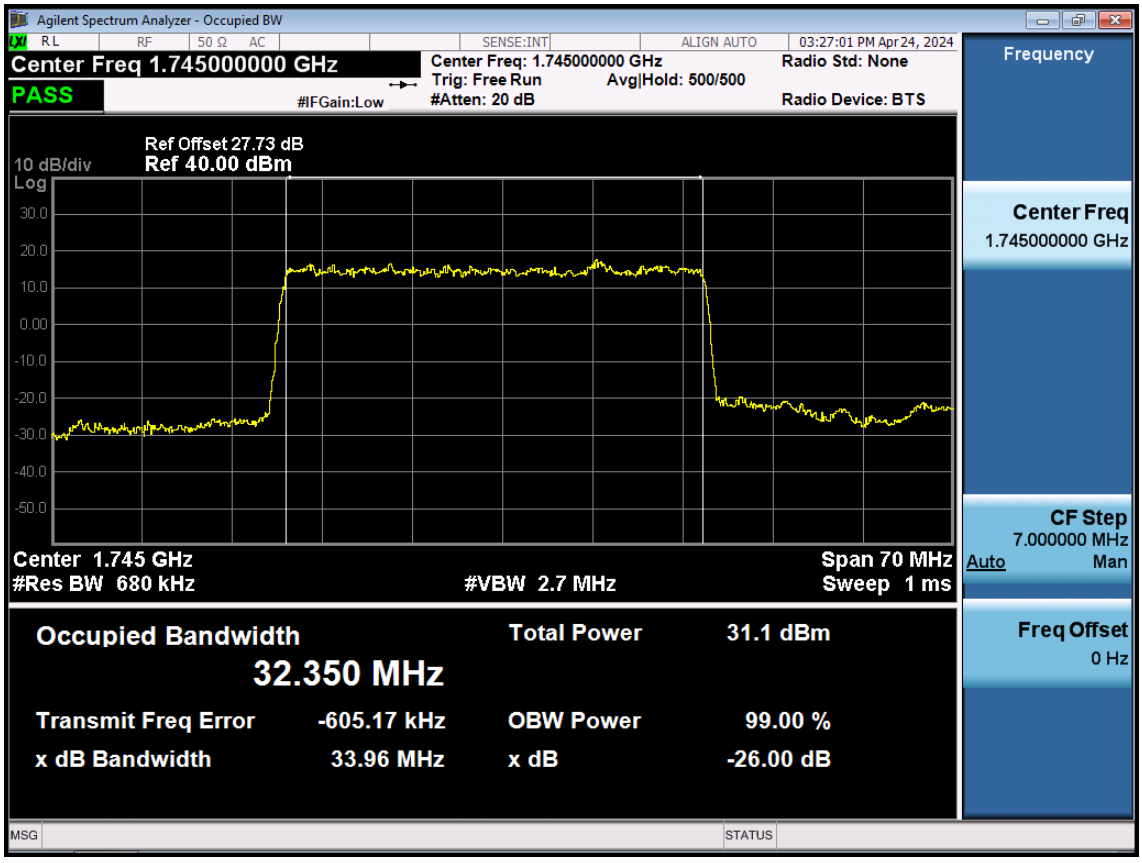

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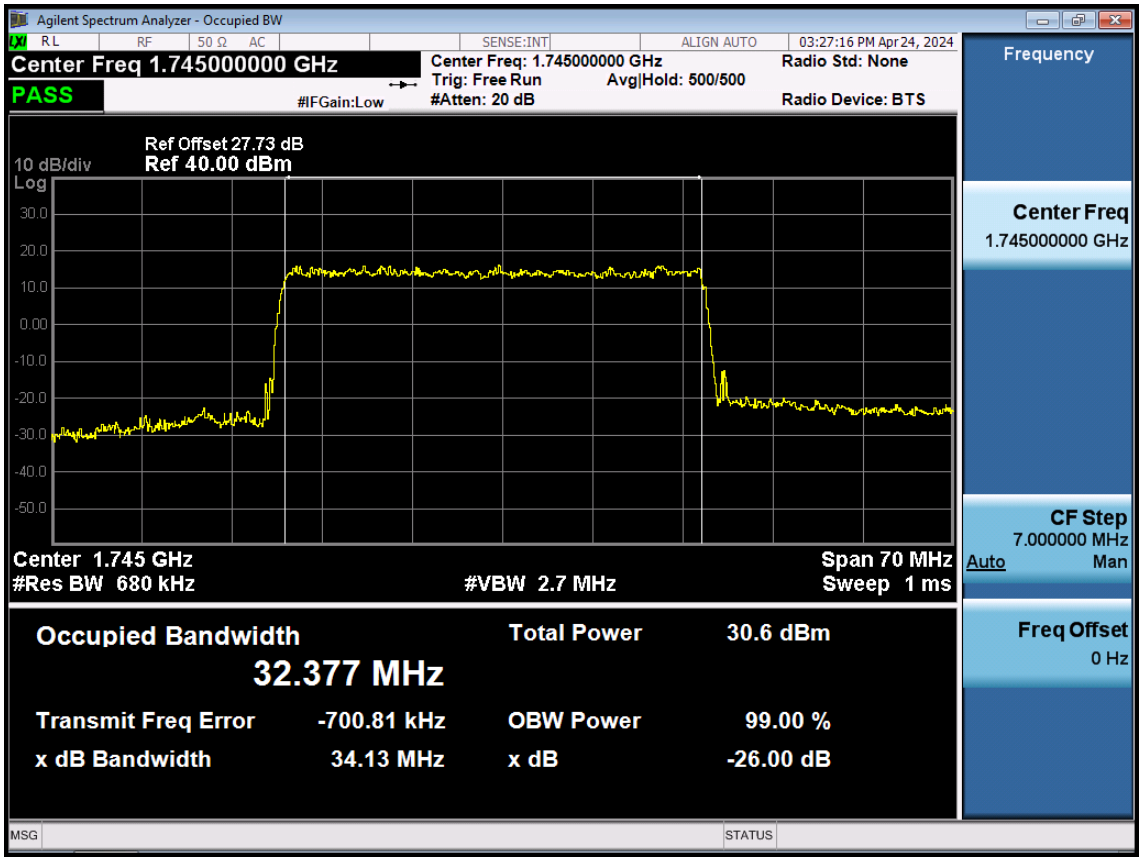

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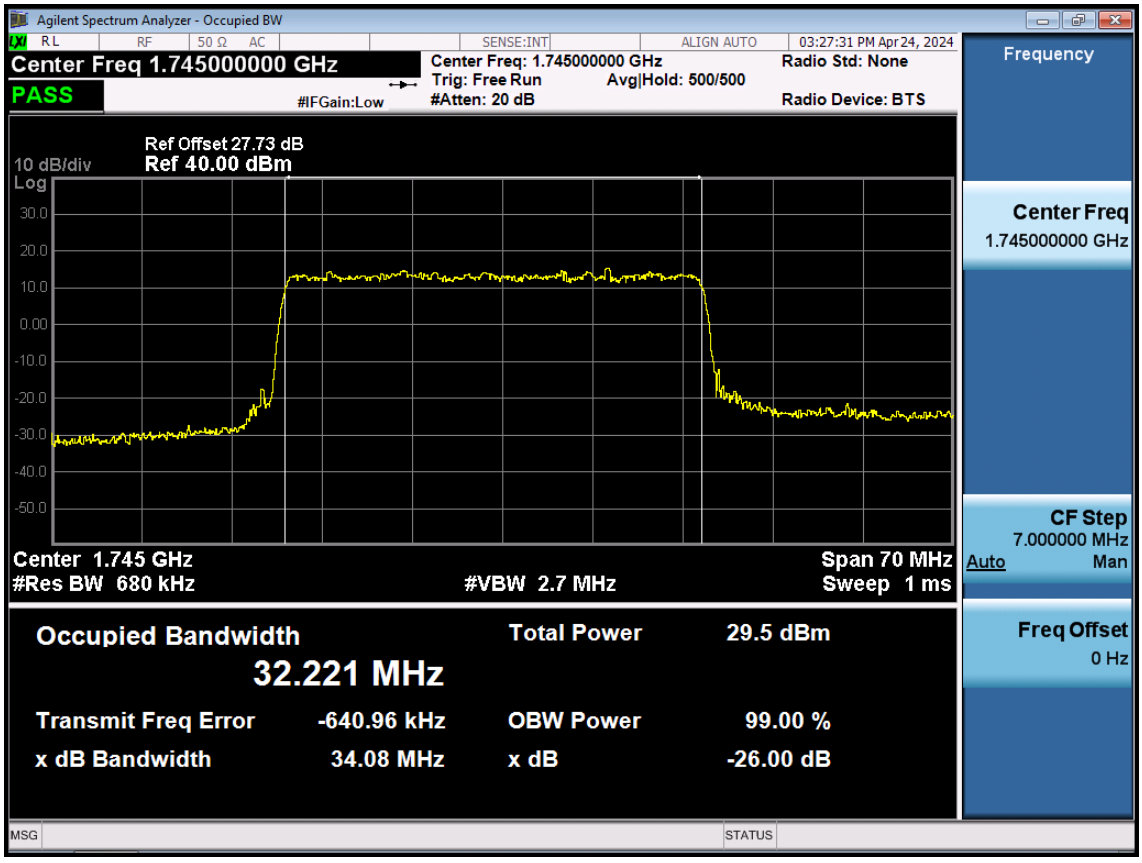

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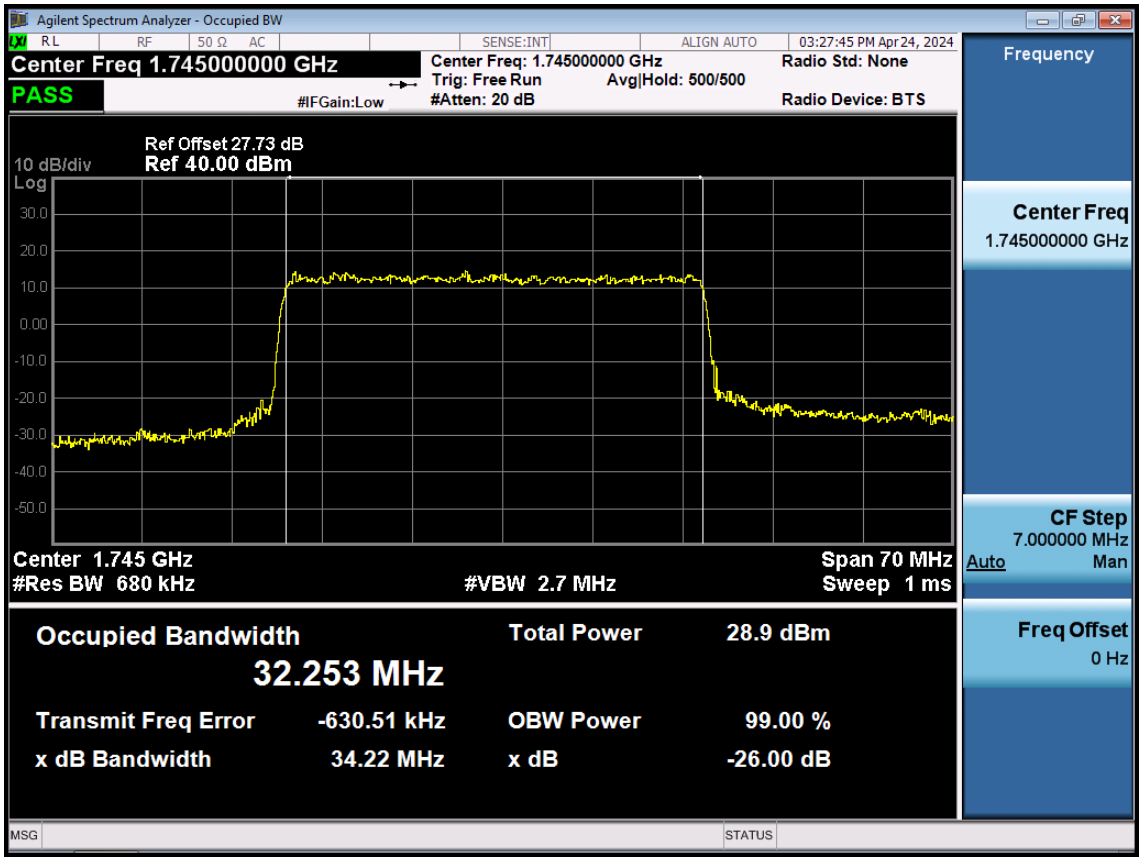

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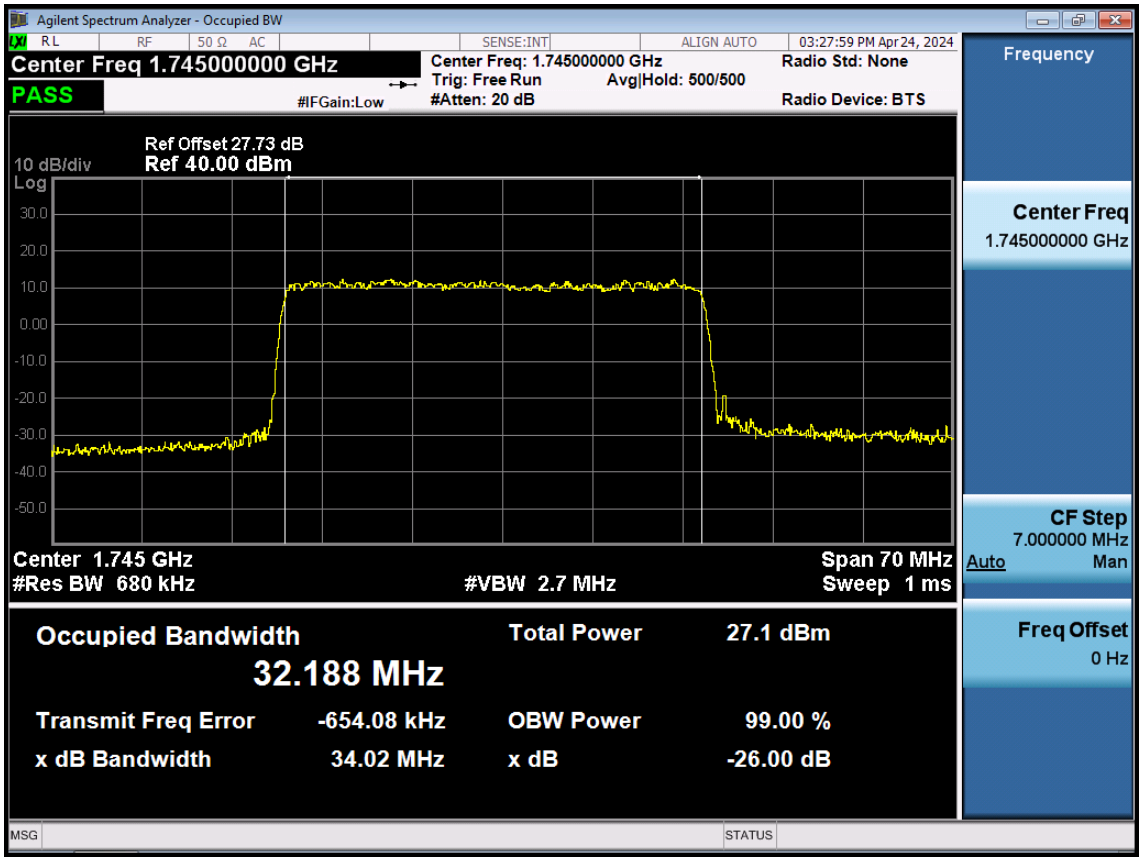
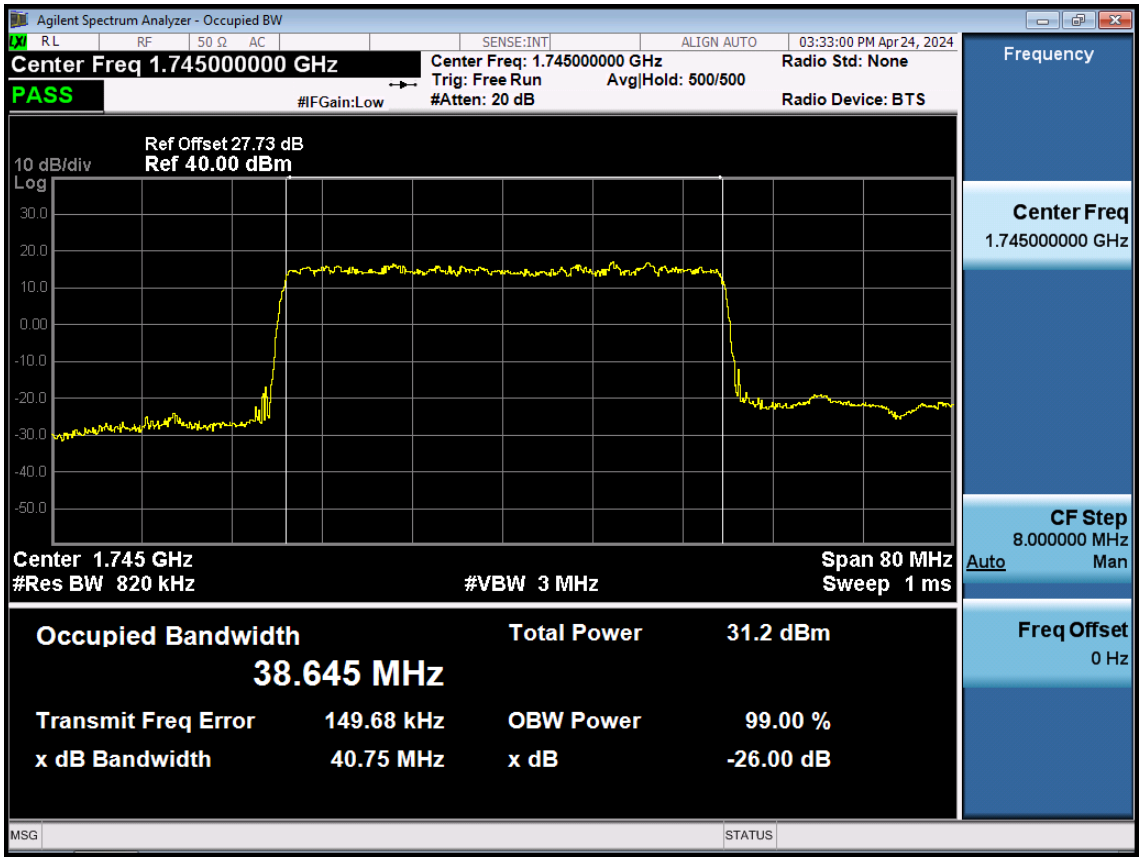


Sub6 n66_40 M_OBW_Mid_BPSK_FullRB



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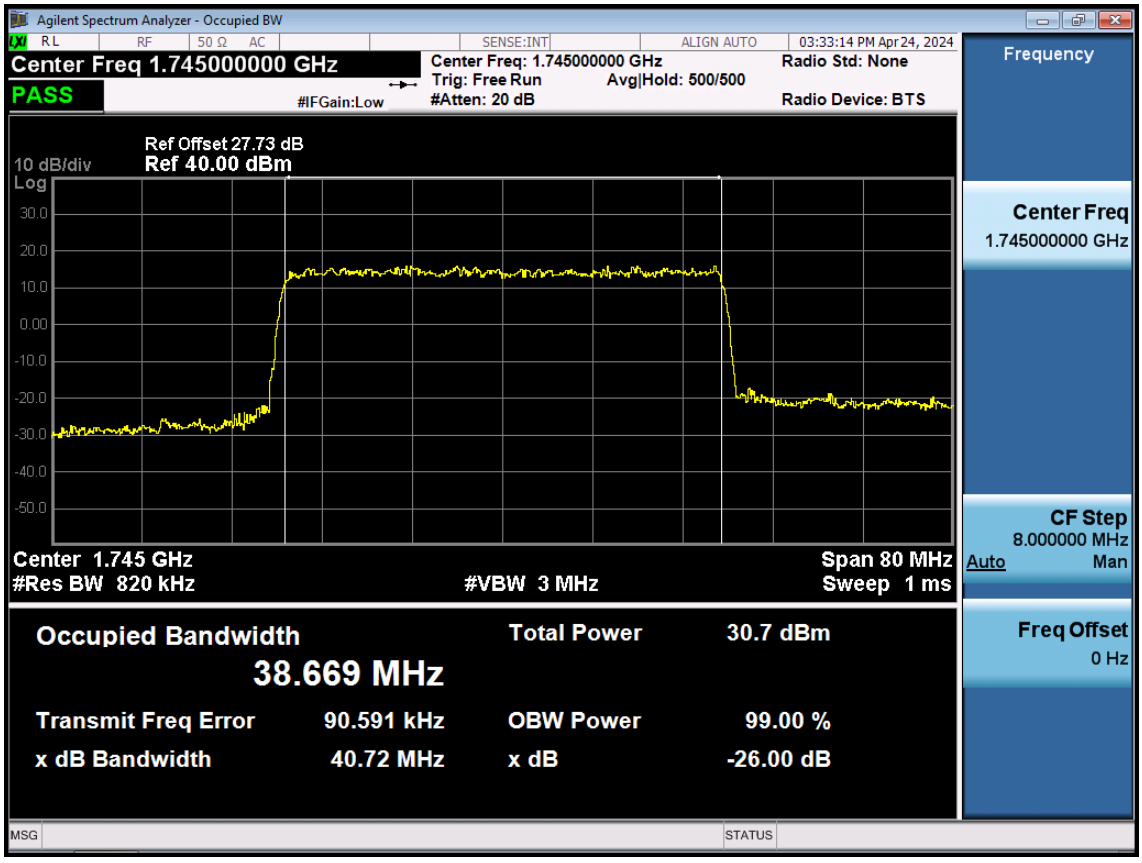

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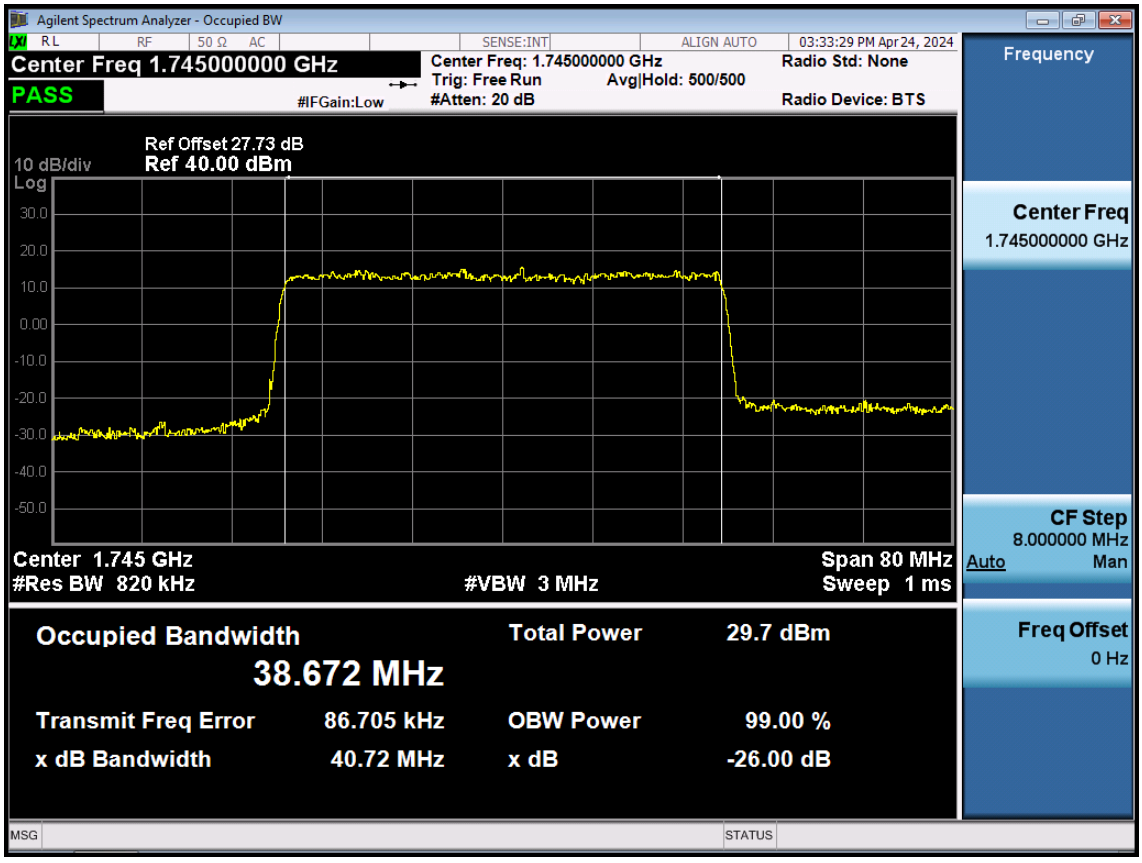

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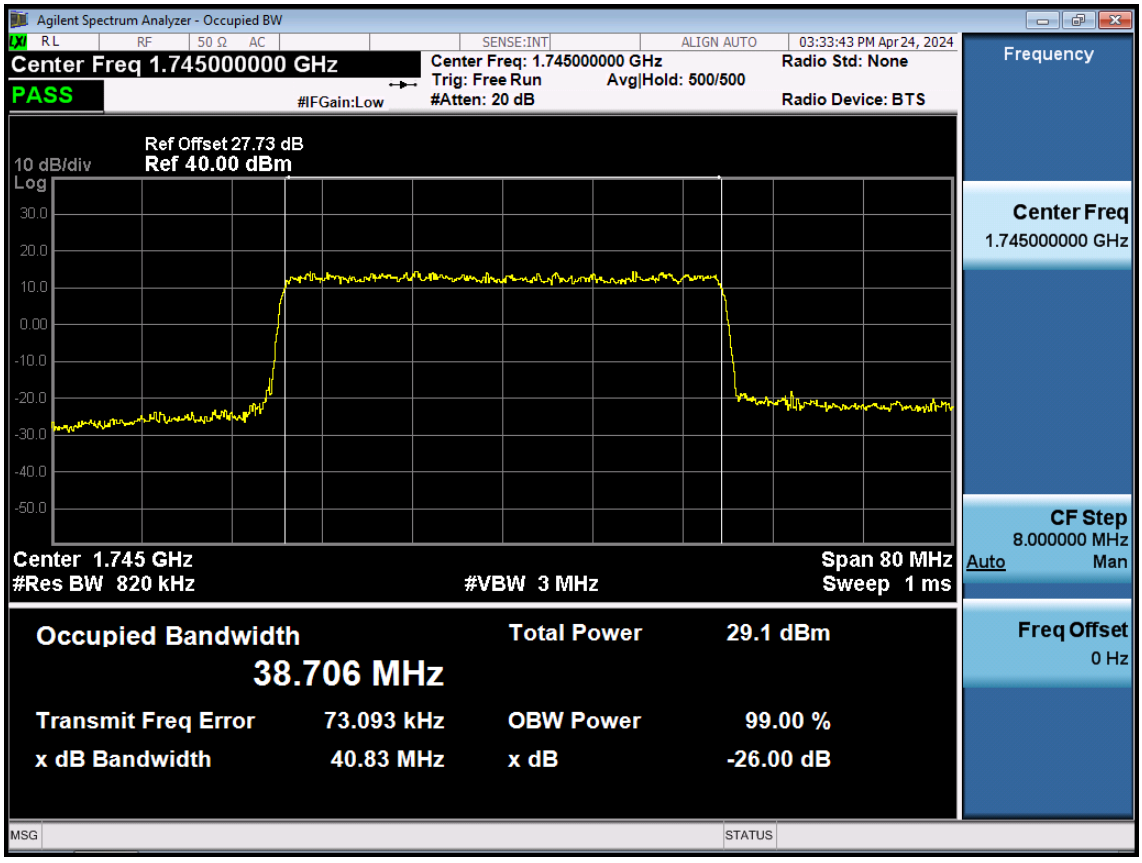
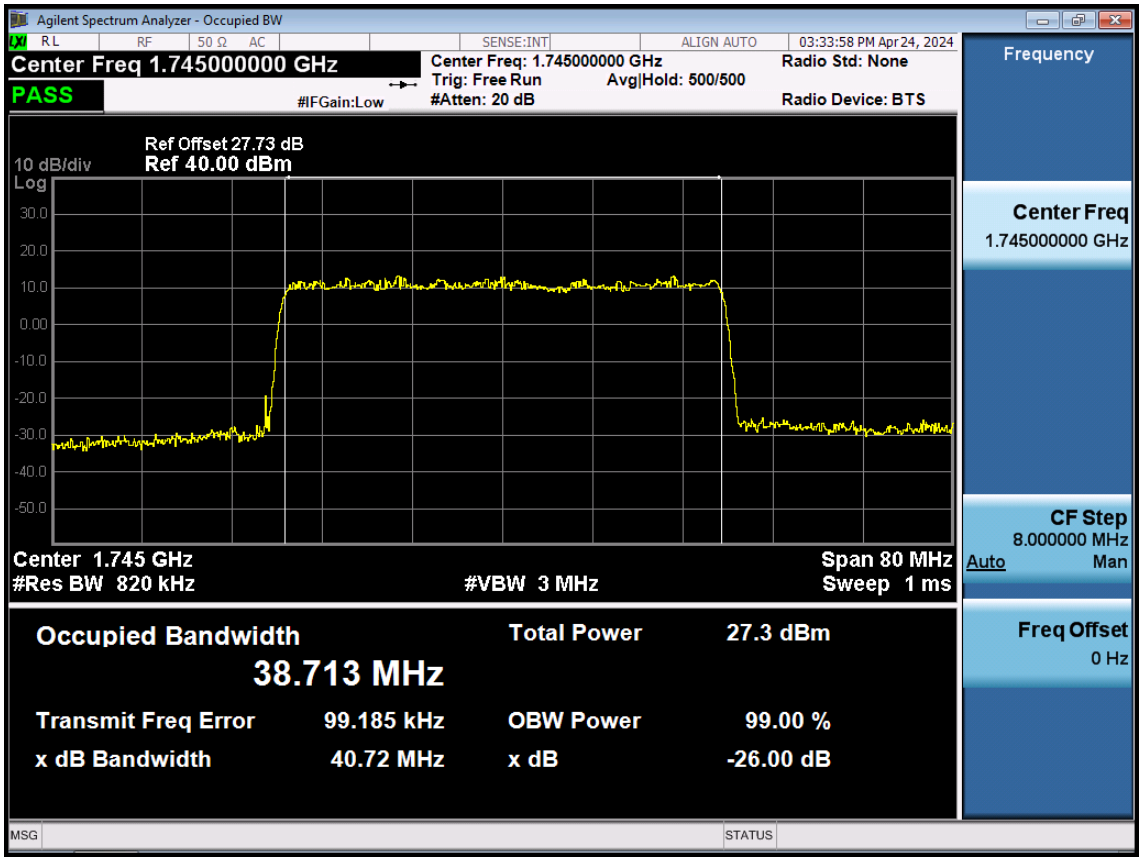
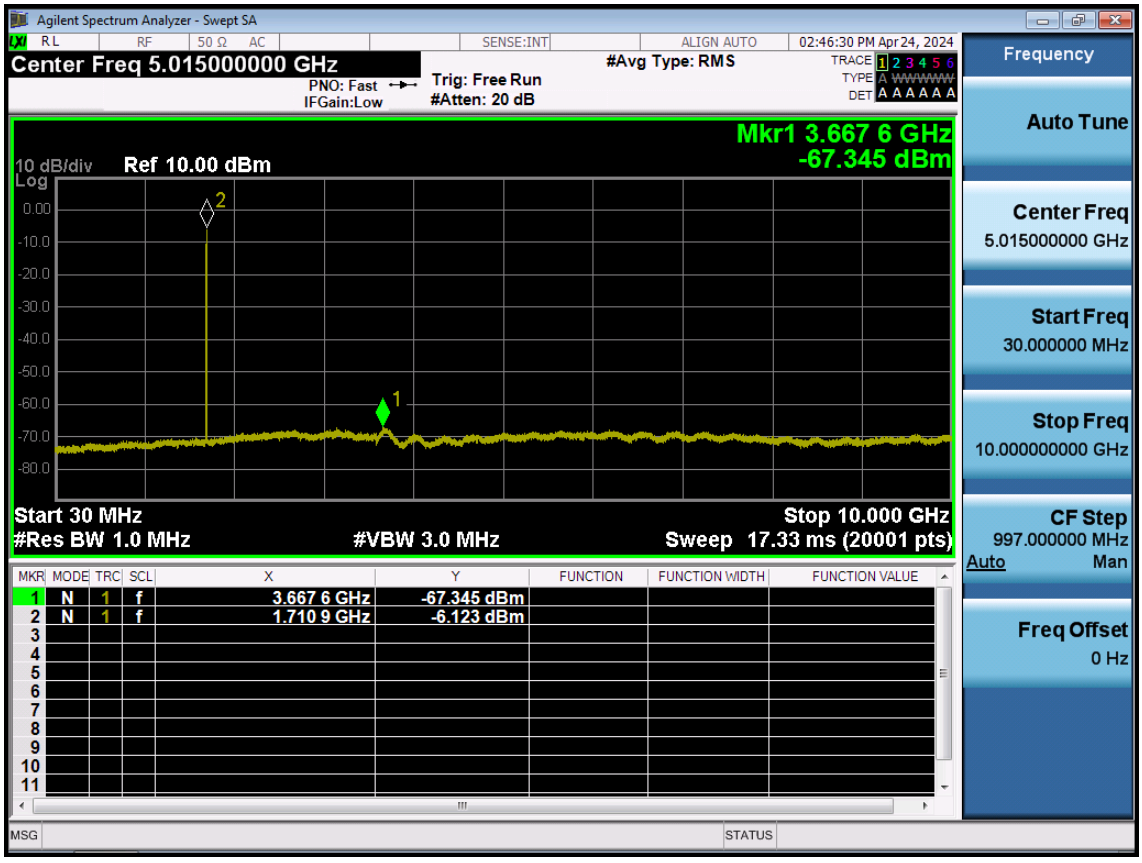


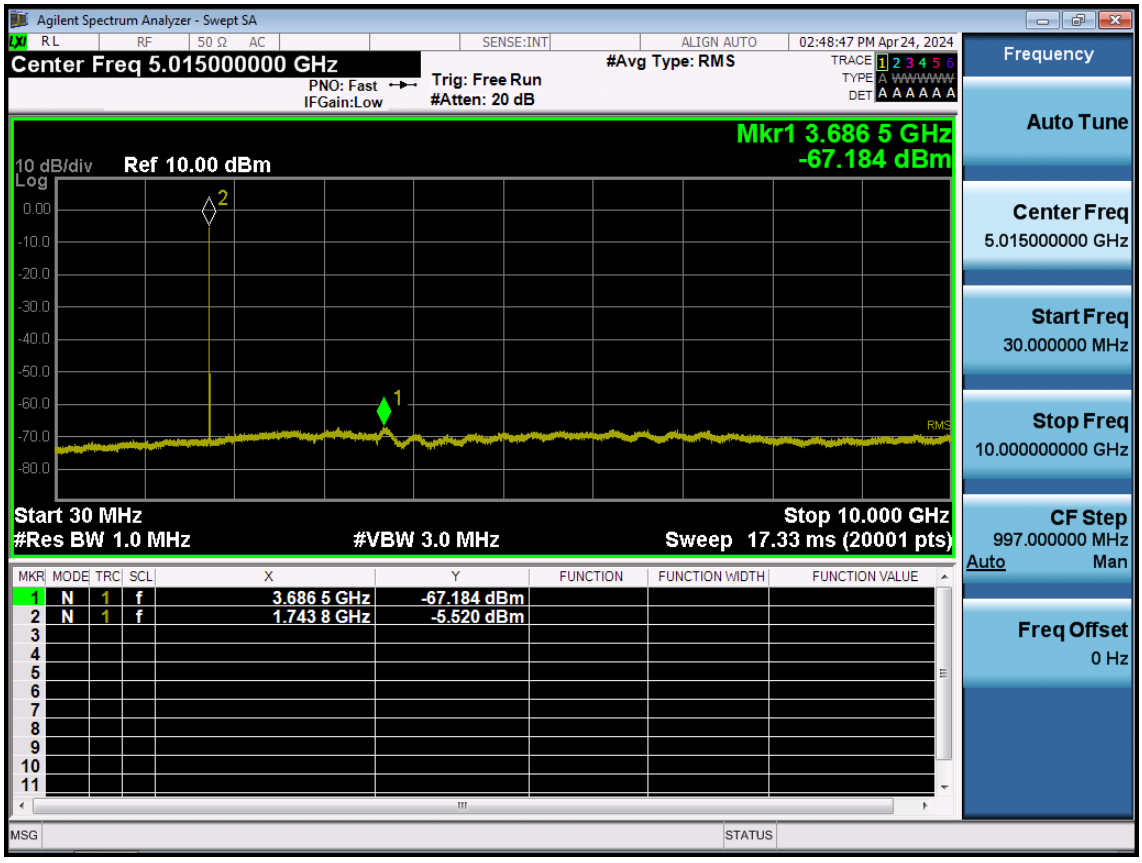
Sub6 n66_40 M_OBW_Mid_256QAM_FullRB



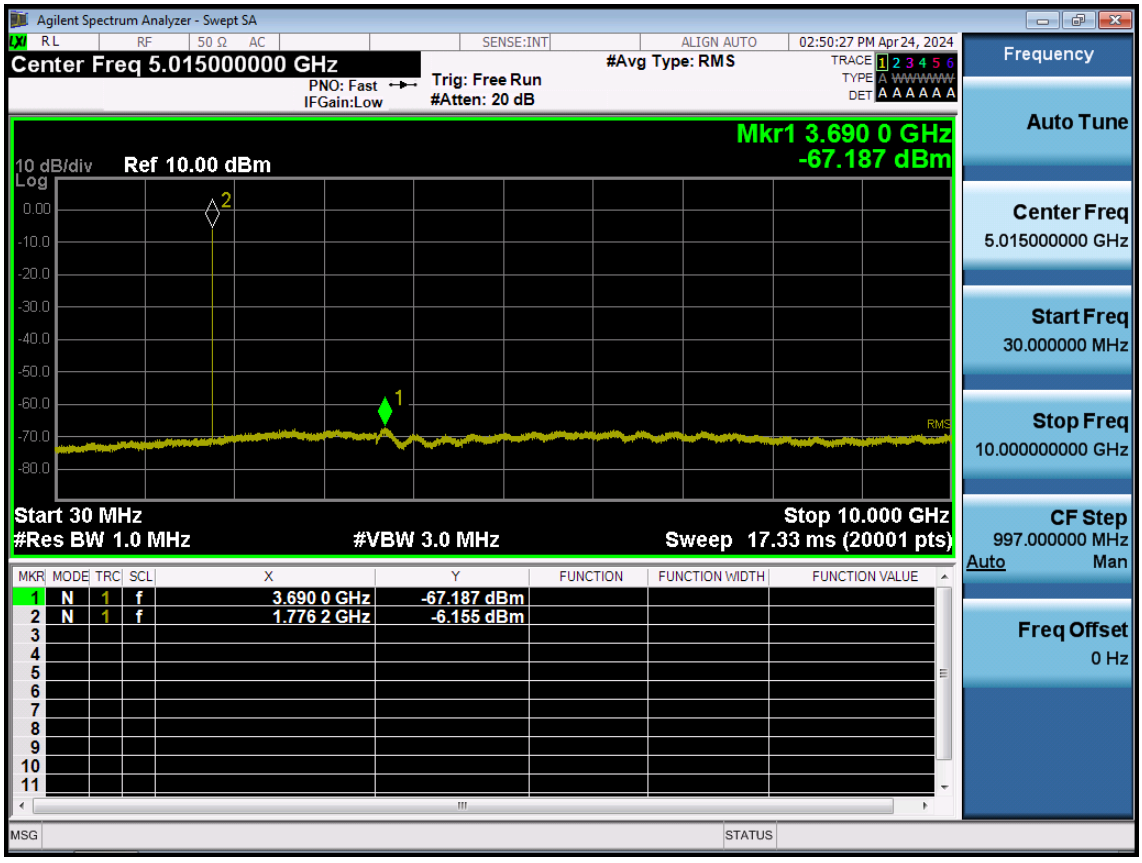
Sub6 n66_5 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



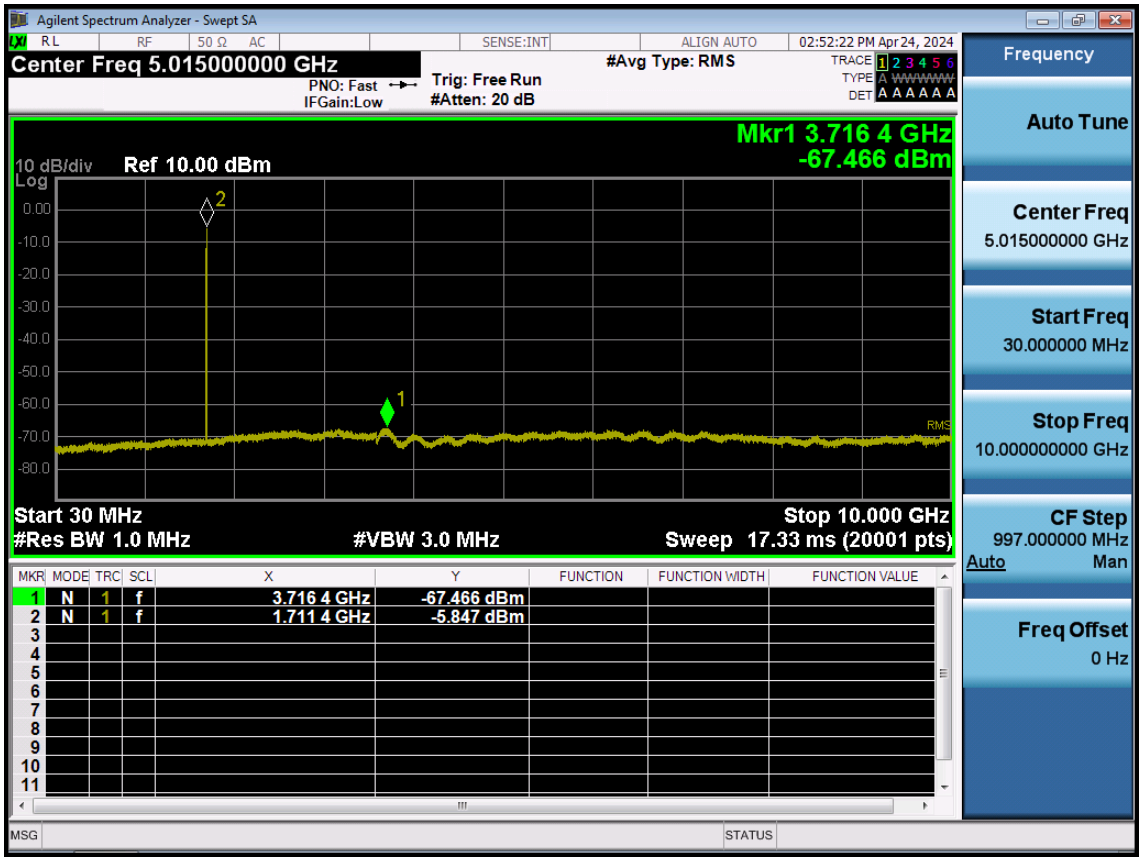
Sub6 n66_5 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_FullRB



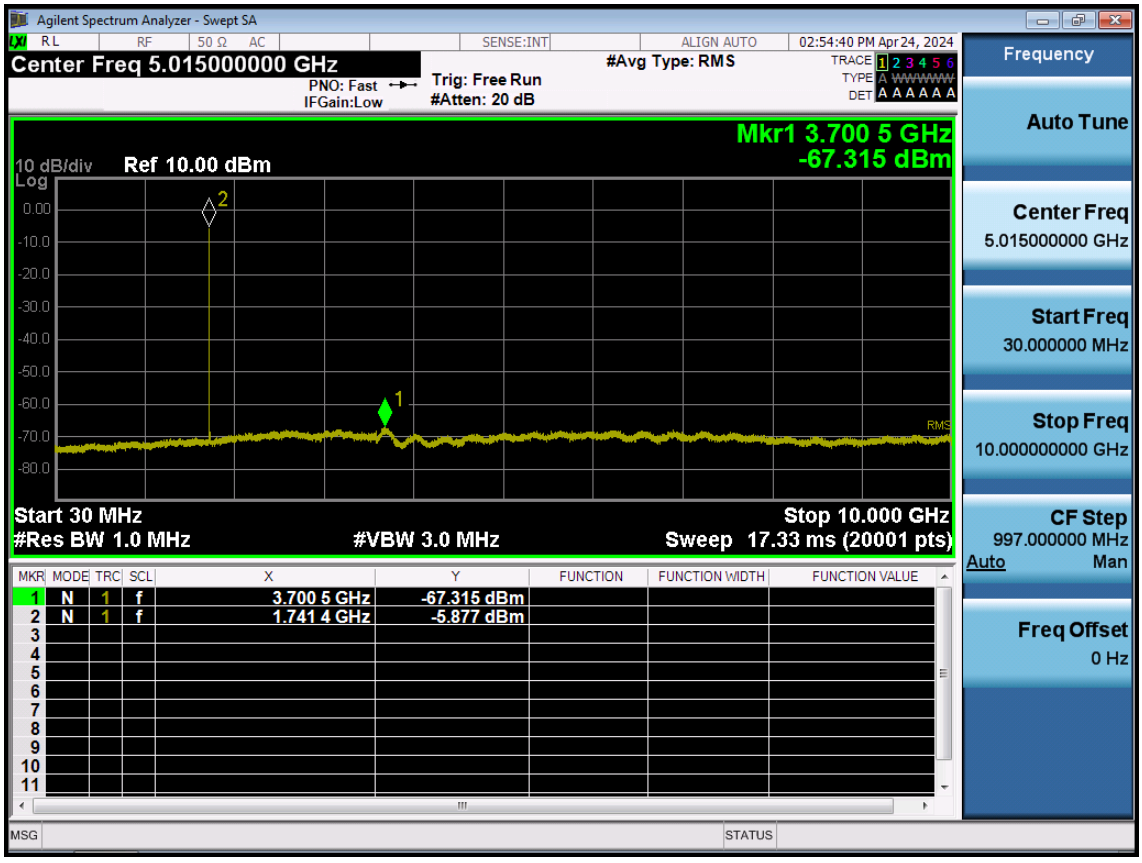
Sub6 n66_5 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



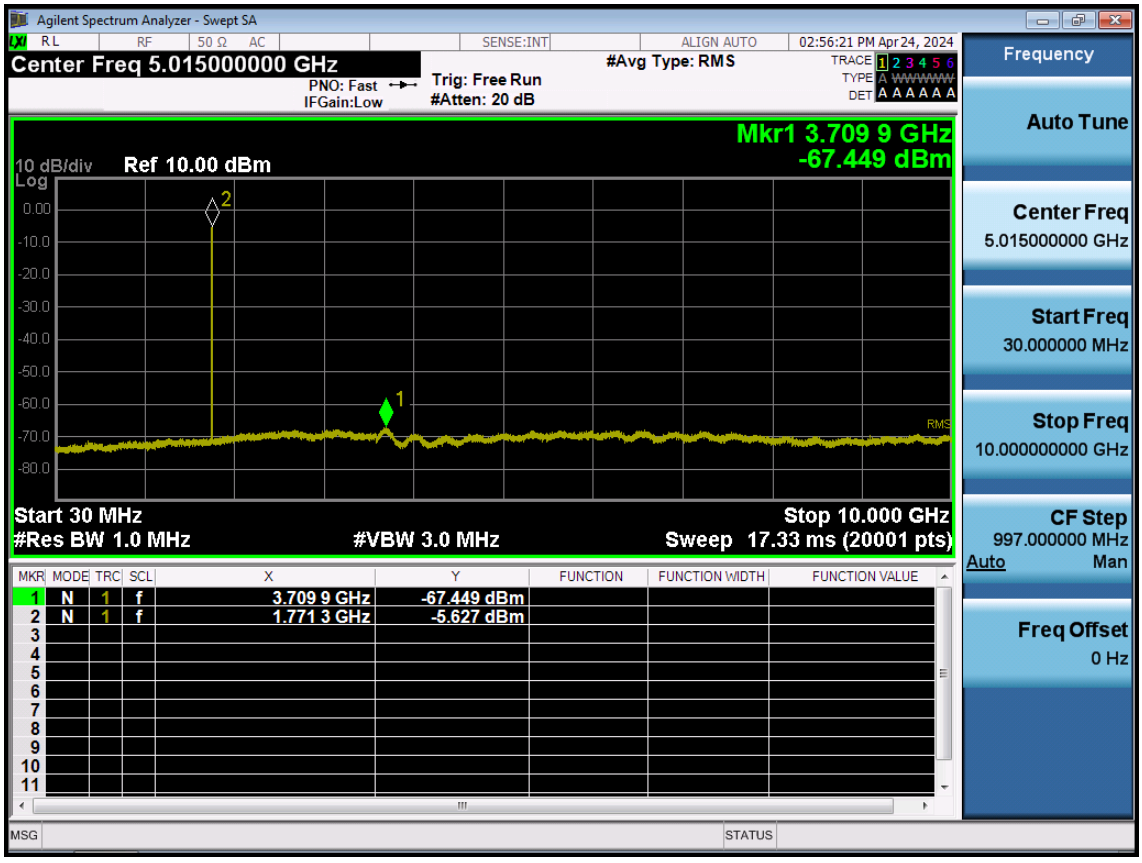
Sub6 n66_10 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



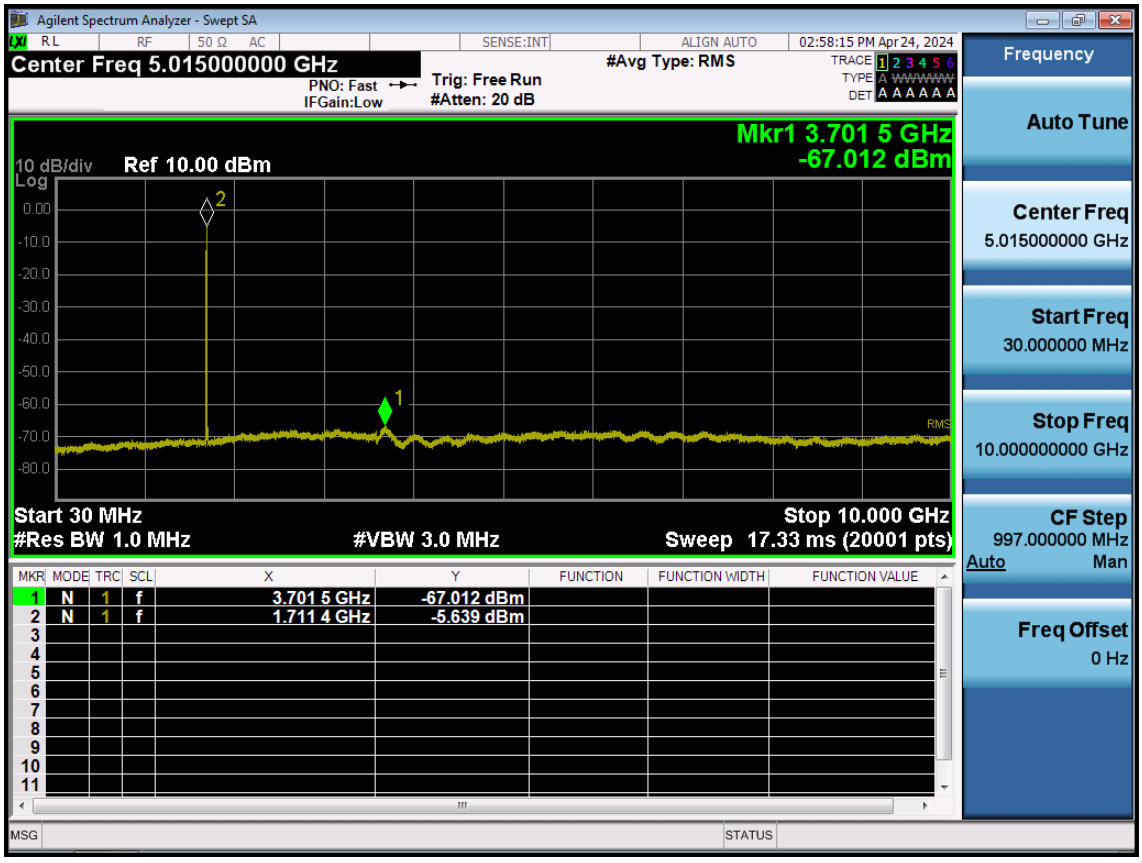
Sub6 n66_10 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_FullRB



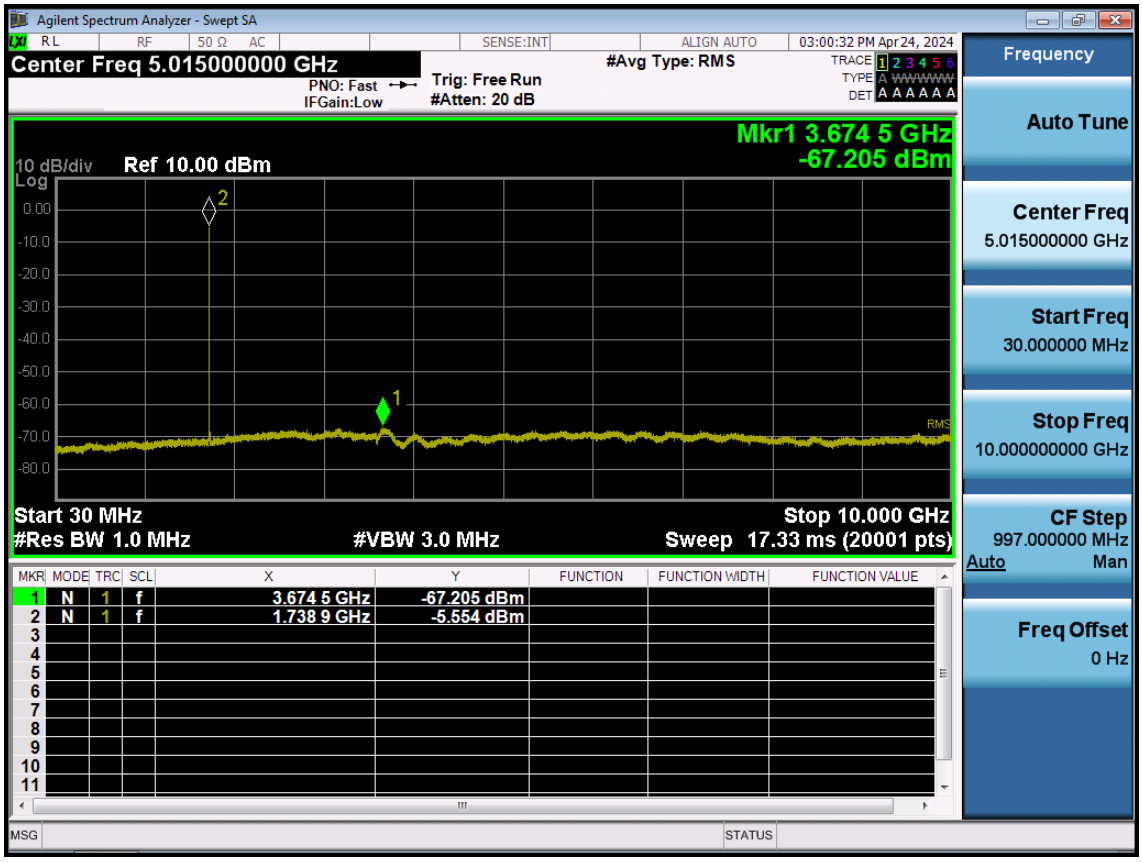
Sub6 n66_10 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



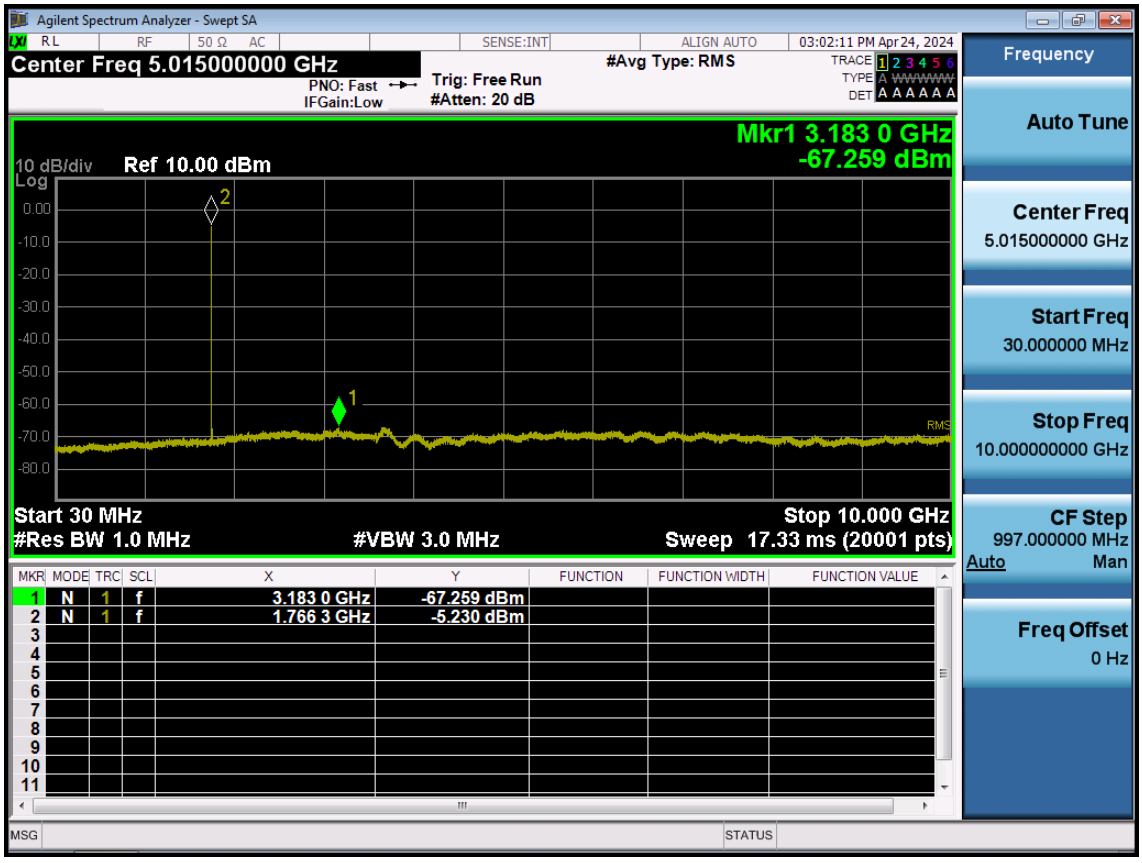
Sub6 n66_15 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



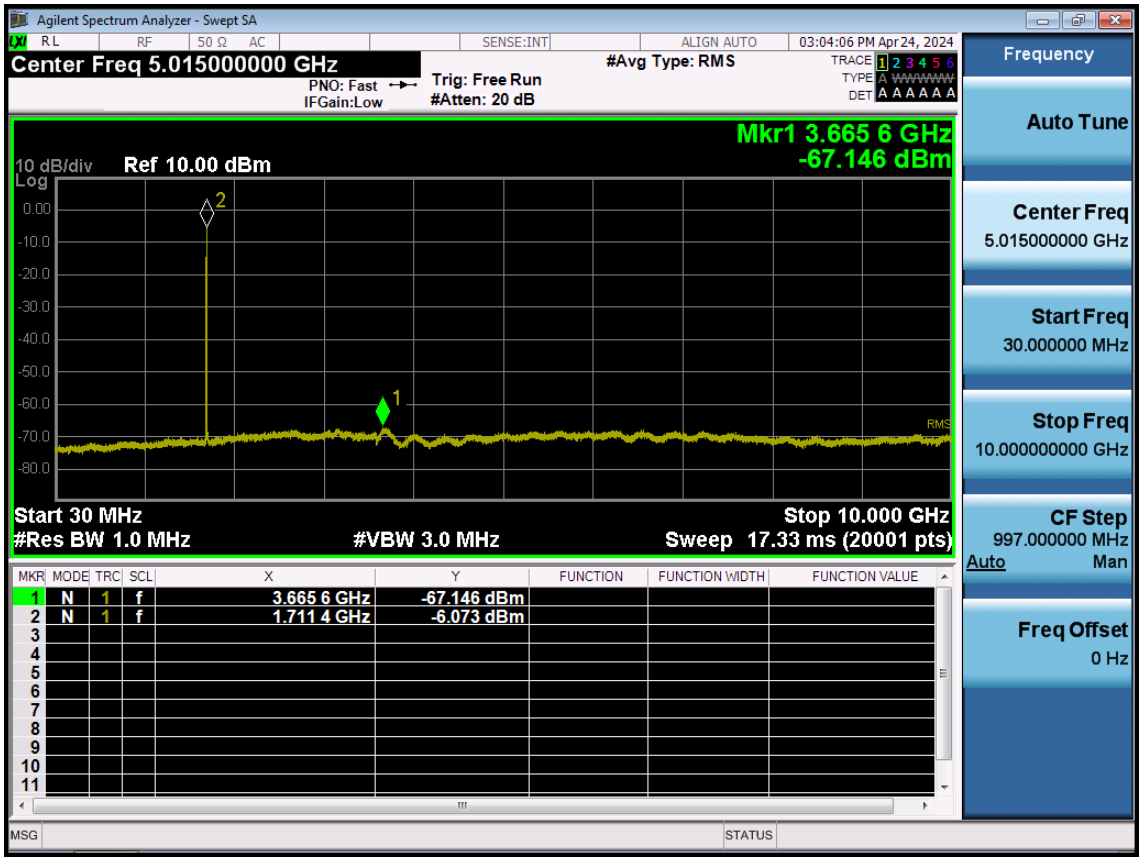
Sub6 n66_15 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_FullRB



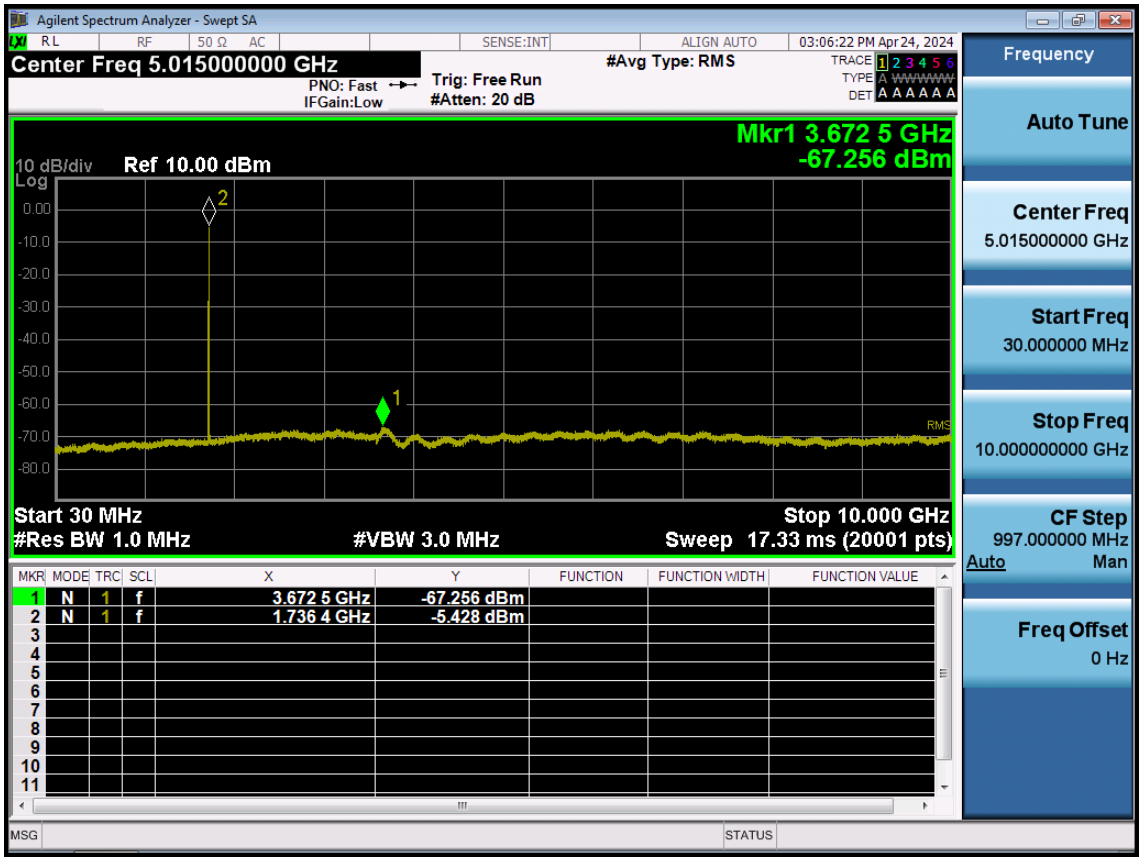
Sub6 n66_15 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



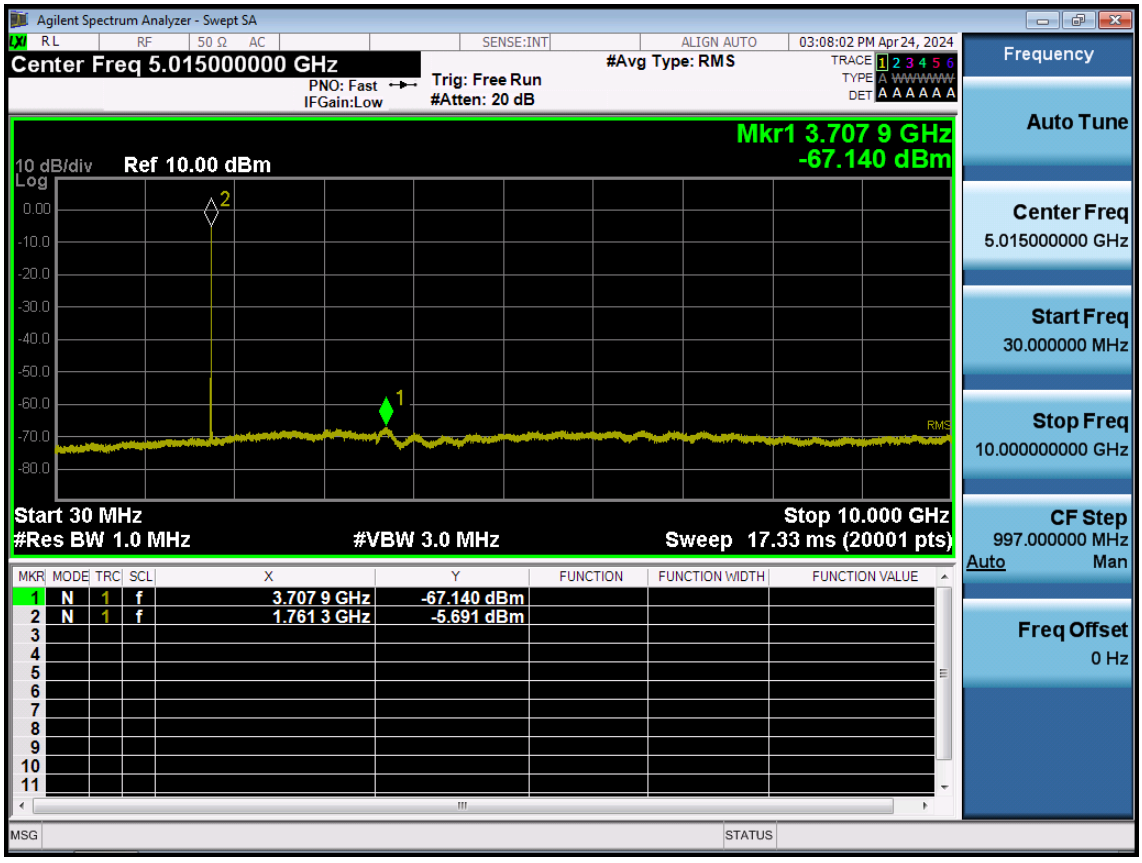
Sub6 n66_20 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



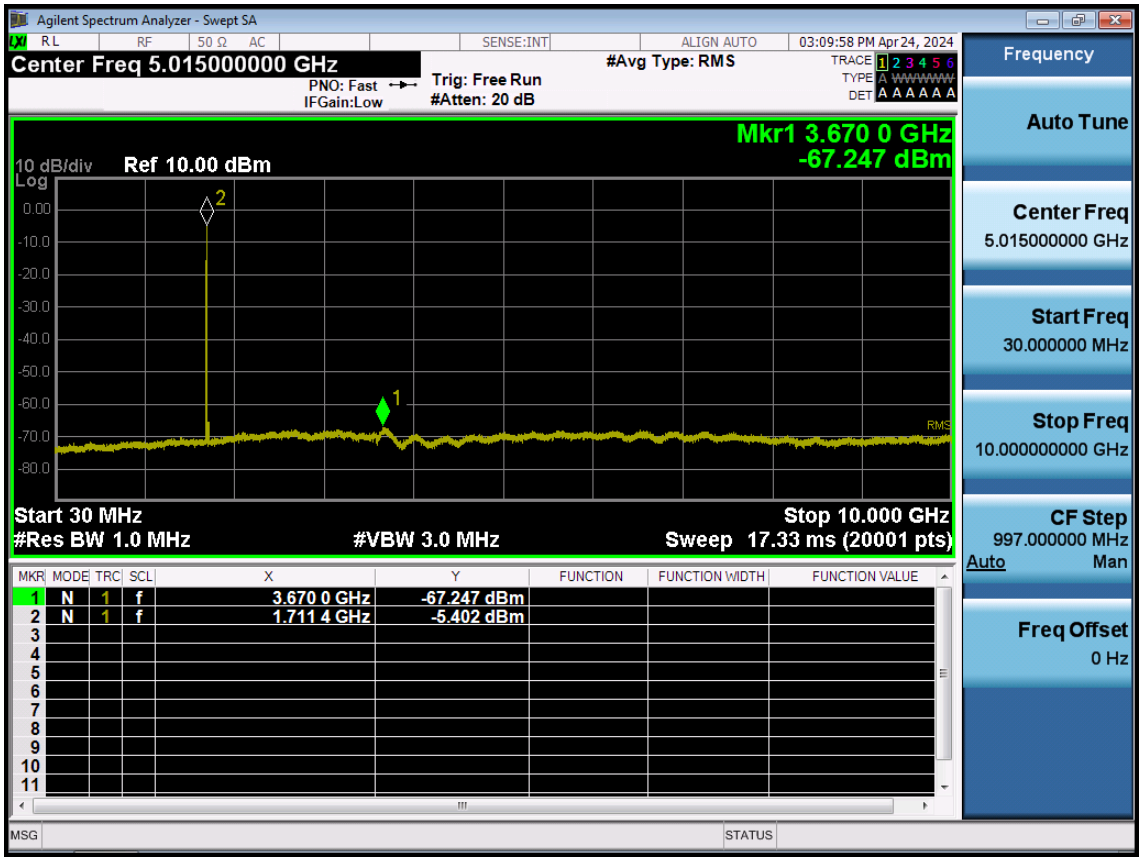
Sub6 n66_20 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_FullRB



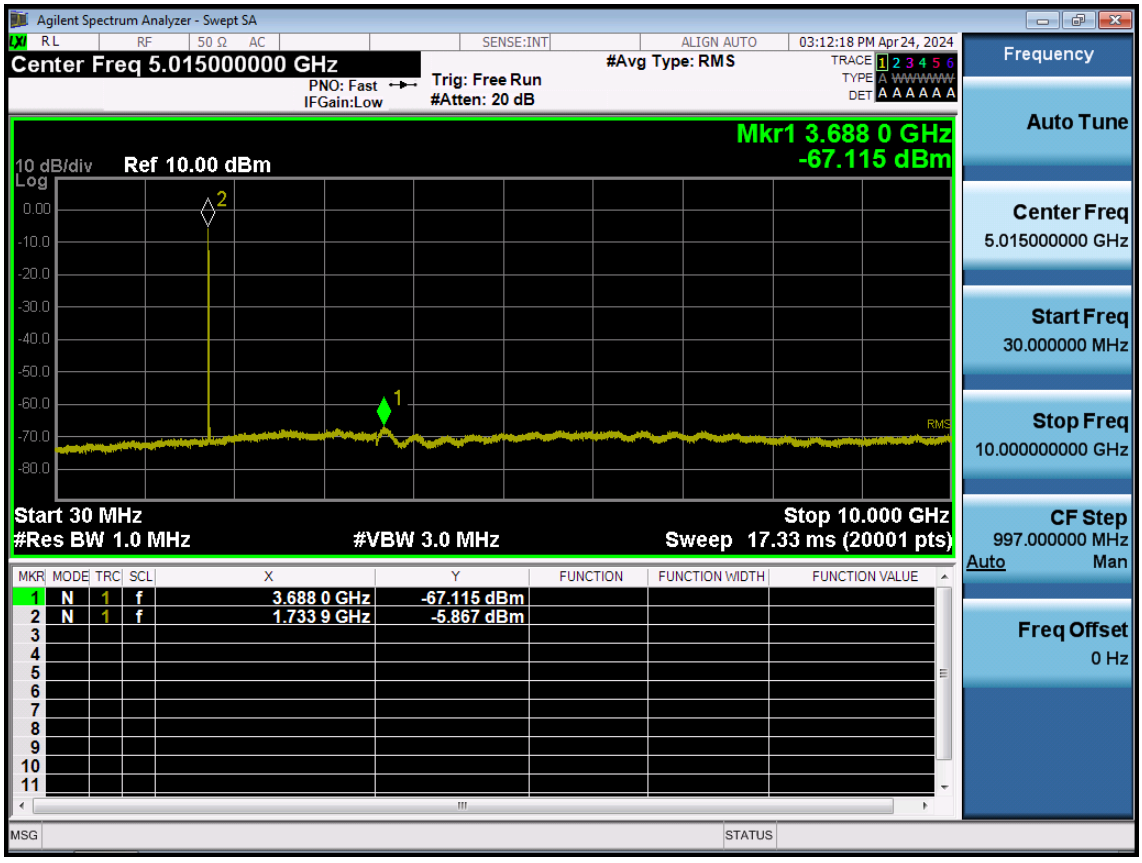
Sub6 n66_20 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



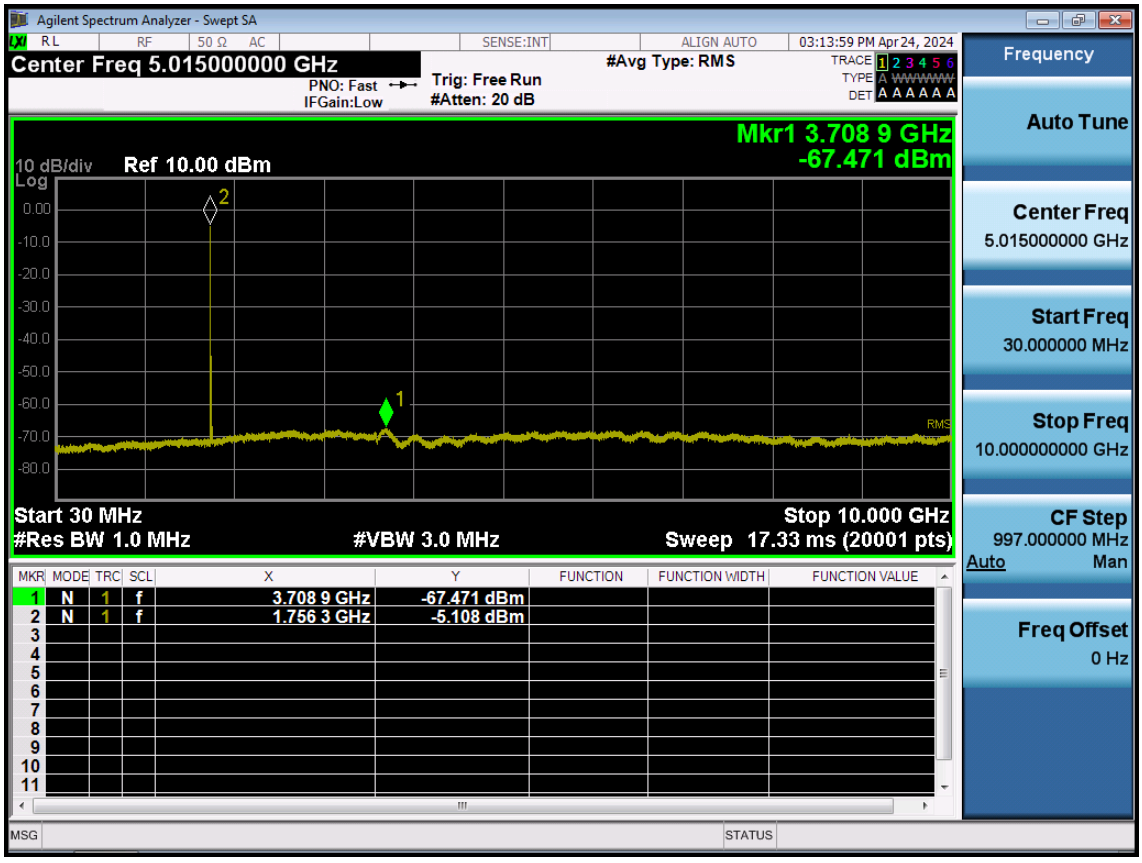
Sub6 n66_25 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



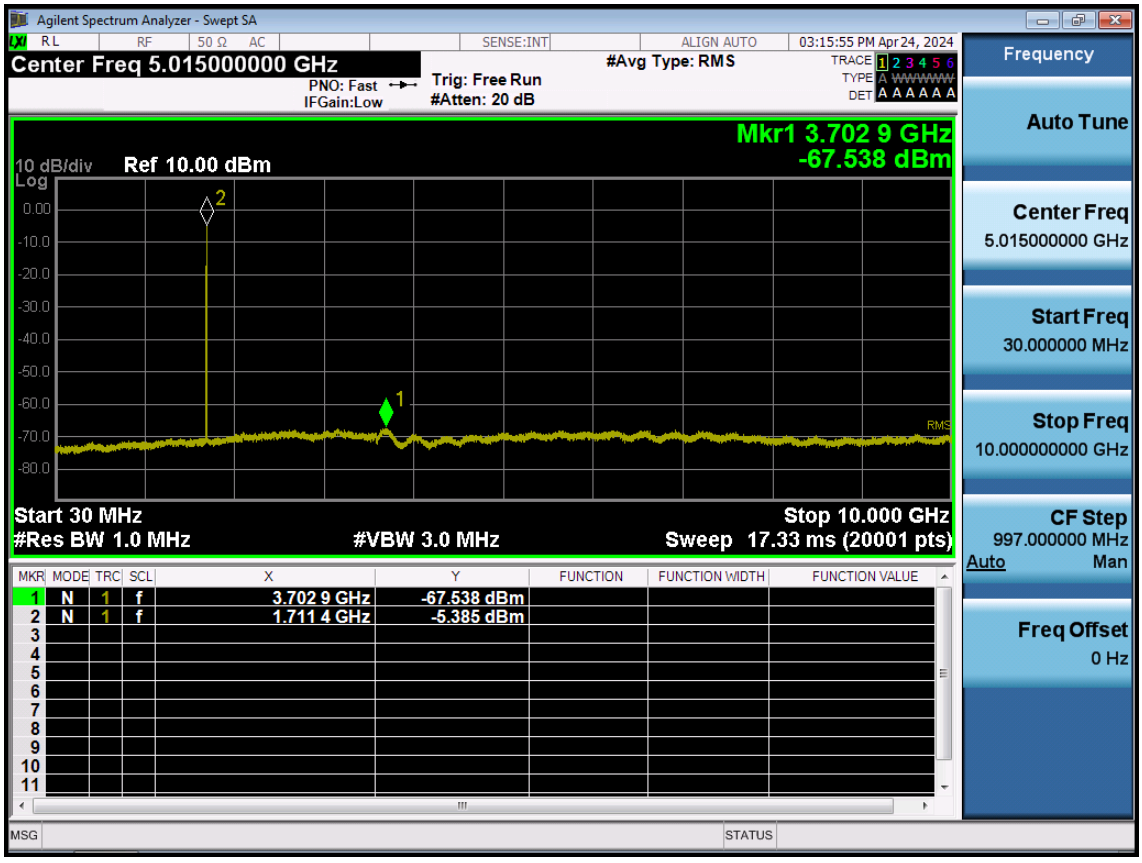
Sub6 n66_25 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_FullRB



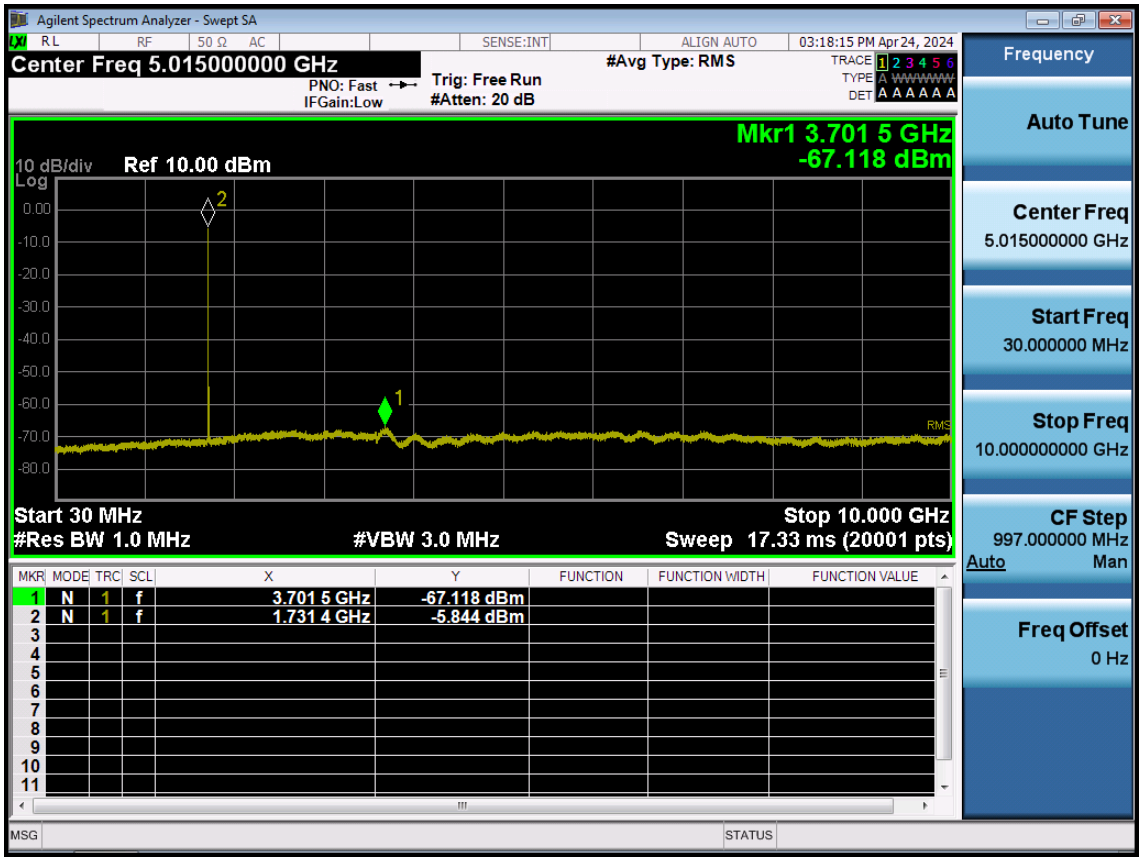
Sub6 n66_25 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



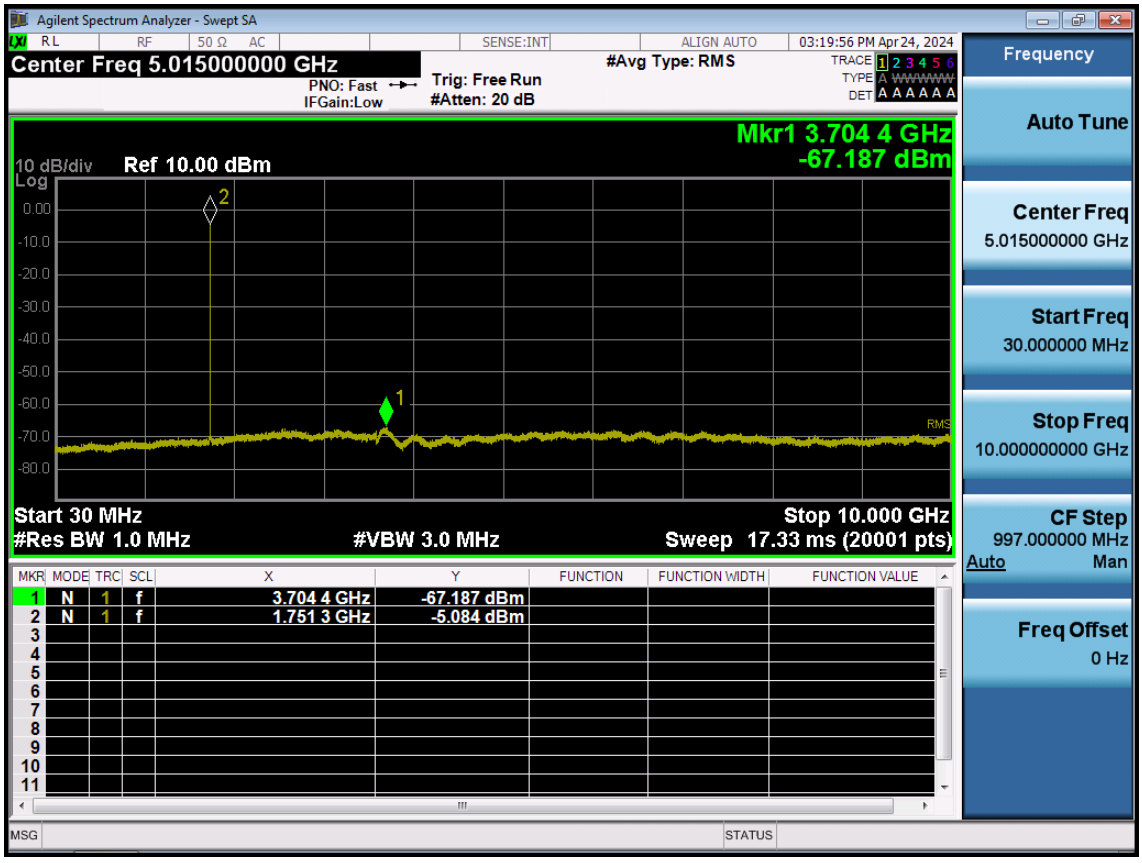
Sub6 n66_30 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



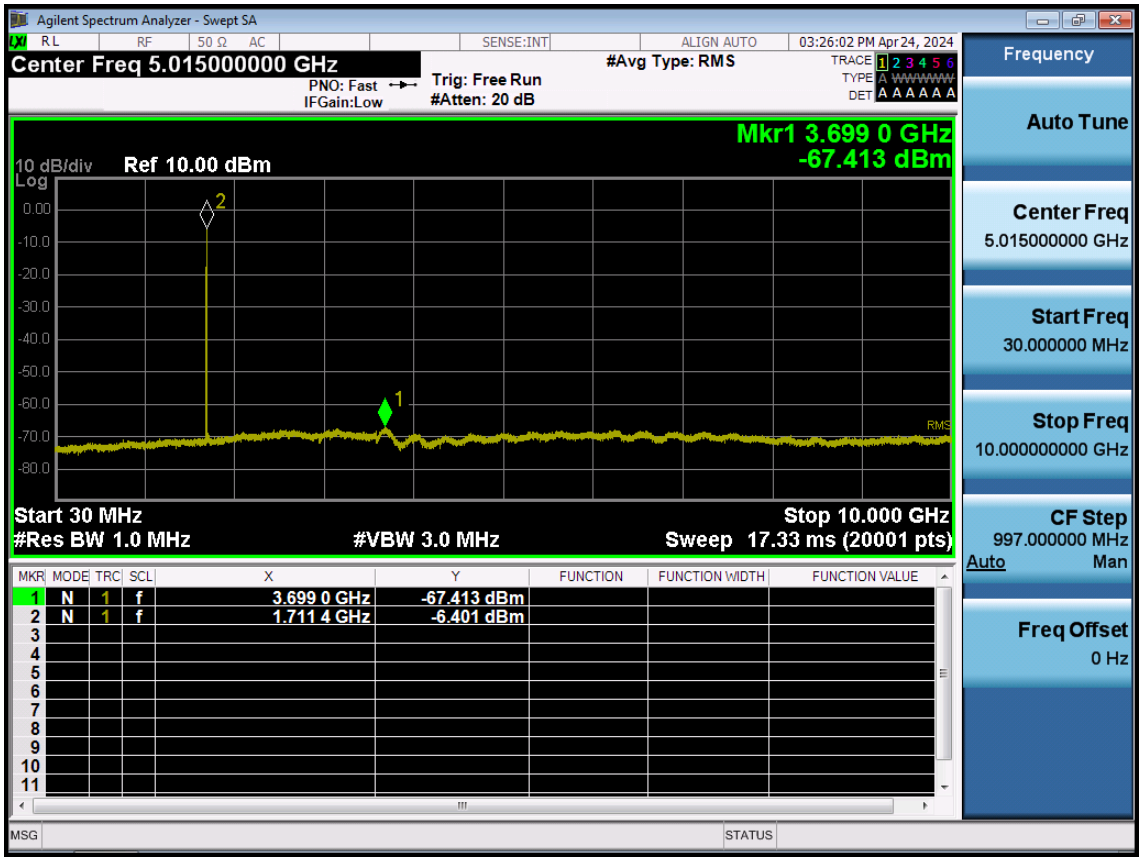
Sub6 n66_30 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_FullRB



Sub6 n66_30 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



Sub6 n66_35 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



Sub6 n66_35 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_FullRB