

TEST REPORT

FCC Sub6 n7 Test for SM-F761U
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2504-FC069

DATE OF ISSUE
April 29, 2025

Tested by
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TEST REPORT

REPORT NO.

HCT-RF-2504-FC069

DATE OF ISSUE

April 29, 2025

Additional Model

SM-F761U1

Applicant

SAMSUNG Electronics Co., Ltd.

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

Product Name

Mobile Phone

Model Name

SM-F761U

Date of Test

February 26, 2025 ~ April 28, 2025

FCC ID

A3LSMF761U

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing

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

FCC Classification:

PCS Licensed Transmitter Held to Ear (PCE)

Test Standard Used

FCC Rule Part: § 27

Test Results

PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	April 29, 2025	Initial Release

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).

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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:	A3LSMF761U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 27
EUT Type:	Mobile phone
Model(s):	SM-F761U
Additional Model(s)	SM-F761U1
SCS(kHz):	15
Bandwidth(MHz):	5, 10, 15, 20, 25, 30, 35, 40
Waveform:	CP-OFDM, DFT-S-OFDM
Modulation:	DFT-S-OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM
Tx Frequency:	2502.5 MHz – 2567.5 MHz (Sub6 n7(5 MHz)) 2505.0 MHz – 2565.0 MHz (Sub6 n7(10 MHz)) 2507.5 MHz – 2562.5 MHz (Sub6 n7(15 MHz)) 2510.0 MHz – 2560.0 MHz (Sub6 n7(20 MHz)) 2512.5 MHz – 2557.5 MHz (Sub6 n7(25 MHz)) 2515.0 MHz – 2555.0 MHz (Sub6 n7(30 MHz)) 2517.5 MHz – 2552.5 MHz (Sub6 n7(35 MHz)) 2520.0 MHz – 2550.0 MHz (Sub6 n7(40 MHz))
Date(s) of Tests:	February 26, 2025 ~ April 28, 2025
Serial number:	Radiated : R3CY20BS0BY Conducted : R3CY30G6AZT(Main 2 ANT), R3CY30G6ATA(Sub 5 ANT)
Antenna Information	Please refer to the Antenna Specification document.

1.1. MAXIMUM OUTPUT POWER

Main 2 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n7 (5)	2502.5 – 2567.5	4M53G7D	PI/2 BPSK	0.165	22.18
		4M52G7D	QPSK	0.164	22.15
		4M51W7D	16QAM	0.129	21.09
		4M52W7D	64QAM	0.093	19.67
		4M51W7D	256QAM	0.058	17.65
Sub6 n7 (10)	2505.0 – 2565.0	9M02G7D	PI/2 BPSK	0.165	22.18
		9M01G7D	QPSK	0.163	22.11
		9M01W7D	16QAM	0.133	21.25
		9M04W7D	64QAM	0.096	19.81
		8M99W7D	256QAM	0.057	17.57
Sub6 n7 (15)	2507.5 – 2562.5	13M5G7D	PI/2 BPSK	0.158	22.00
		13M5G7D	QPSK	0.153	21.86
		13M5W7D	16QAM	0.123	20.89
		13M5W7D	64QAM	0.084	19.26
		13M5W7D	256QAM	0.055	17.37
Sub6 n7 (20)	2510.0 – 2560.0	17M9G7D	PI/2 BPSK	0.164	22.16
		18M0G7D	QPSK	0.161	22.07
		17M9W7D	16QAM	0.126	20.99
		18M0W7D	64QAM	0.091	19.57
		17M9W7D	256QAM	0.057	17.58
Sub6 n7 (25)	2512.5 – 2557.5	23M0G7D	PI/2 BPSK	0.164	22.14
		23M0G7D	QPSK	0.163	22.13
		23M0W7D	16QAM	0.132	21.19
		23M1W7D	64QAM	0.094	19.72
		23M0W7D	256QAM	0.060	17.77
Sub6 n7 (30)	2515.0 – 2555.0	28M8G7D	PI/2 BPSK	0.161	22.07
		28M8G7D	QPSK	0.159	22.02
		28M8W7D	16QAM	0.130	21.13
		28M8W7D	64QAM	0.090	19.54
		28M9W7D	256QAM	0.056	17.51
Sub6 n7 (35)	2517.5 – 2552.5	32M4G7D	PI/2 BPSK	0.163	22.12
		32M4G7D	QPSK	0.163	22.11
		32M4W7D	16QAM	0.129	21.11
		32M4W7D	64QAM	0.091	19.58
		32M4W7D	256QAM	0.057	17.59
Sub6 n7 (40)	2520.0 – 2550.0	38M9G7D	PI/2 BPSK	0.163	22.11
		38M8G7D	QPSK	0.156	21.93
		38M8W7D	16QAM	0.125	20.97
		38M8W7D	64QAM	0.089	19.48
		38M9W7D	256QAM	0.055	17.43

Sub 5 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n7 (5)	2502.5 – 2567.5	4M52G7D	PI/2 BPSK	0.181	22.58
		4M52G7D	QPSK	0.179	22.52
		4M51W7D	16QAM	0.140	21.45
		4M51W7D	64QAM	0.100	20.02
		4M51W7D	256QAM	0.064	18.06
Sub6 n7 (10)	2505.0 – 2565.0	9M02G7D	PI/2 BPSK	0.188	22.75
		9M05G7D	QPSK	0.176	22.45
		8M98W7D	16QAM	0.144	21.59
		9M02W7D	64QAM	0.102	20.09
		8M97W7D	256QAM	0.063	17.97
Sub6 n7 (15)	2507.5 – 2562.5	13M4G7D	PI/2 BPSK	0.167	22.24
		13M5G7D	QPSK	0.167	22.22
		13M5W7D	16QAM	0.130	21.15
		13M5W7D	64QAM	0.093	19.68
		13M5W7D	256QAM	0.059	17.71
Sub6 n7 (20)	2510.0 – 2560.0	17M9G7D	PI/2 BPSK	0.169	22.29
		18M0G7D	QPSK	0.169	22.27
		18M0W7D	16QAM	0.135	21.29
		17M9W7D	64QAM	0.093	19.67
		17M9W7D	256QAM	0.059	17.68
Sub6 n7 (25)	2512.5 – 2557.5	23M1G7D	PI/2 BPSK	0.177	22.47
		23M0G7D	QPSK	0.175	22.43
		22M9W7D	16QAM	0.137	21.38
		23M0W7D	64QAM	0.098	19.92
		22M9W7D	256QAM	0.062	17.89
Sub6 n7 (30)	2515.0 – 2555.0	28M9G7D	PI/2 BPSK	0.155	21.90
		28M8G7D	QPSK	0.154	21.87
		28M8W7D	16QAM	0.121	20.82
		28M8W7D	64QAM	0.086	19.32
		28M8W7D	256QAM	0.054	17.33
Sub6 n7 (35)	2517.5 – 2552.5	32M4G7D	PI/2 BPSK	0.155	21.90
		32M4G7D	QPSK	0.152	21.81
		32M4W7D	16QAM	0.122	20.88
		32M4W7D	64QAM	0.084	19.26
		32M4W7D	256QAM	0.053	17.21
Sub6 n7 (40)	2520.0 – 2550.0	38M8G7D	PI/2 BPSK	0.156	21.94
		38M9G7D	QPSK	0.156	21.92
		38M8W7D	16QAM	0.122	20.87
		38M8W7D	64QAM	0.086	19.32
		38M8W7D	256QAM	0.054	17.29

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

Please refer to the [2G3G] Test Report.

2.2. MEASURING INSTRUMENT CALIBRATION

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

2.3. TEST FACILITY

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

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
Channel 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
Radiated Power	- ANSI C63.26-2015 – Section 5.2.4.4 - KDB 971168 D01 v03r01 – Section 5.8
Radiated Spurious and Harmonic Emissions	- ANSI C63.26-2015 – Section 5.5.3 - KDB 971168 D01 v03r01 – Section 5.8

3.2 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

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

Test Note

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

The power is calculated by the following formula;

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

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

3. The maximum value is calculated by adding the forward power to the calibrated source plus its appropriate gain value.
These steps are repeated with the receiving antenna in both vertical and horizontal polarization. the difference between the gain of the horn and an isotropic antenna are taken into consideration
4. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
5. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method.

Test Settings

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
2. VBW $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $> 2 \times$ 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 10th 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;

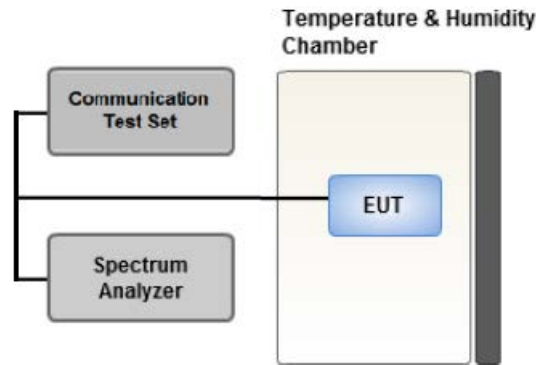
$$\text{Result}_{(\text{dBm})} = \text{Pg}_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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

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

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

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① CCDF Procedure for PAPR

Test Settings

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

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:

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

Test Settings(Peak Power)

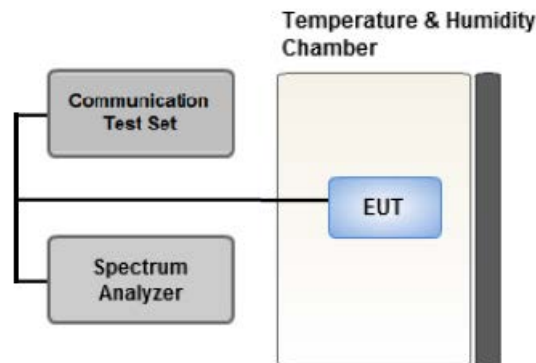
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW $\geq 3 \times$ RBW.

1. Set the RBW $\geq$ OBW.
2. Set VBW $\geq 3 \times$ RBW.
3. Set span $\geq 2 \times$ OBW.
4. Sweep time $\geq 10 \times$ (number of points in sweep) $\times$ (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 $2 \times$ to $3 \times$ the OBW.
2. Set RBW $\geq$ OBW.
3. Set VBW $\geq 3 \times$ RBW.
4. Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
5. Sweep time:
Set $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission period})]$ 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 $[10 \log (1/\text{duty cycle})]$ to the measured maximum power level to compute the average power during continuous transmission. For example, add $[10 \log (1/0.25)] = 6 \text{ dB}$ 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.

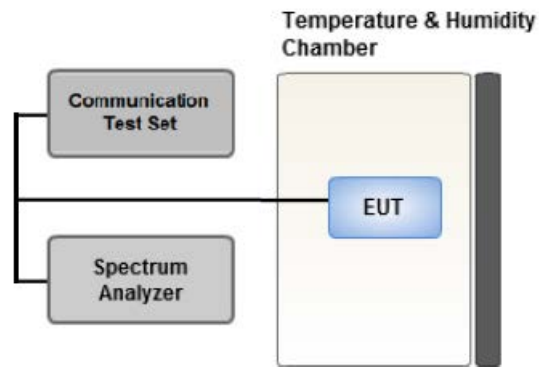
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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 $\geq$ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5 % of the 99 % occupied bandwidth observed in Step 7

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

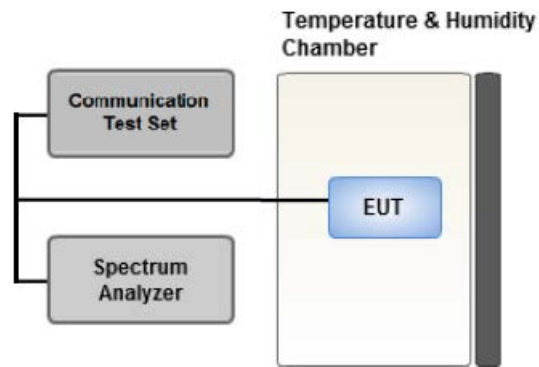
Test Overview

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

Test Settings

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

3.7 CHANNEL 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 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

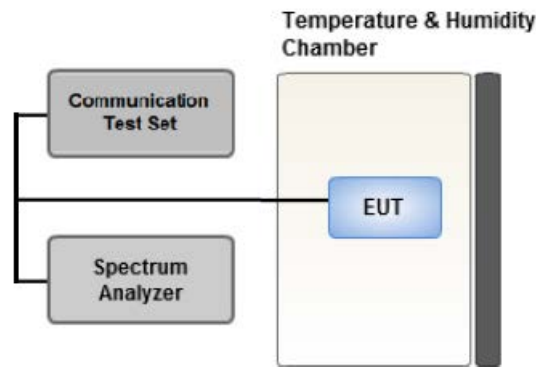
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. Within 1MHz of the channel edge the RBW should be 2% of EBW, then 1 MHz after that.
4. VBW > 3 x RBW
5.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

Test Notes

1. The attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge,
2. $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge.
3. $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge.
4. The attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz.
5. $55 + 10 \log (P)$ dB at or below 2490.5 MHz.
6. X is the greater of 6MHz or the actual emission bandwidth
7. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer

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

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

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

The frequency stability of the transmitter is measured by:

1. Temperature:

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

2. Primary Supply Voltage:

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

.- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature

(20 °C to provide a reference).

2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter.

Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

3. Frequency measurements are made at 10 °C intervals ranging from -30 °C to +50 °C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
Mode: SA Only
Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
Worst case : Stand alone
- The EUT was tested in three modes(Open, Half-open, Closed), the worst case configuration results are reported.
- Worst case (Equivalent Isotropic Radiated Power)
: Main 2 ANT (Open), Sub 5 ANT (Open)
- Worst case (Radiated Spurious Emissions)
: Main 2 ANT (Open), Sub 5 ANT (Open)
- All simultaneous transmission scenarios of operation were investigated, and the test results showed no additional significant emissions relative to the least restrictive limit were observed.
Therefore, only the worst case(stand-alone) results were reported.
- 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 : 10 MHz)
- SM-F761U & additional models were tested and the worst case results are reported.
(Worst case : SM-F761U)

[Main 2 ANT Worst case]

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

[Sub 5 ANT Worst case]

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

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
(Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
Mode: SA Only
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.
- SM-F761U & additional models were tested and the worst case results are reported.
(Worst case : SM-F761U)

[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
Channel 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	04/17/2027	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/23/2027	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/06/2027	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/05/2027	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/17/2027	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	11/07/2025	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/19/2026	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/22/2025	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	02/04/2026	Annual
Chamber	SU-642	ESPEC	93008124	02/11/2026	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	03/21/2026	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/10/2026	Annual
Spectrum Analyzer (10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/04/2026	Annual
Signal & Spectrum Analyzer (2 Hz~67 GHz)	FSW67	REOHDE & SCHWARZ	101736	05/23/2025	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	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
UXM 5G Wireless Test Platform	E7515B	KEYSIGHT	MY60101126	02/10/2026	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/17/2025	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/10/2025	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/26/2025	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

- Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
- 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 ($\pm$ kHz)
Occupied Bandwidth	95 (Confidence level about 95 %, $k=2$)
Frequency stability	28 (Confidence level about 95 %, $k=2$)

Parameter	Expanded Uncertainty ($\pm$ dB)
Block Edge	0.70 (Confidence level about 95 %, $k=2$)
Conducted Spurious Emissions	1.18 (Confidence level about 95 %, $k=2$)
Peak- to- Average Ratio	0.68 (Confidence level about 95 %, $k=2$)
Radiated Power	4.74 (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)	5.68 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.75 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.82 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (Above 40 GHz)	5.58 (Confidence level about 95 %, $k=2$)

6. SUMMARY OF TEST RESULTS

-. The decision rule applies 'simple acceptance'

6.1 Test Condition: Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§ 2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 27.53(m)(4)	■ $< 40 + 10\log_{10} (P[\text{Watts}])$ at Channel edges ■ $< 43 + 10\log_{10} (P[\text{Watts}])$ between 5 and X MHz from Channel edges ■ $< 55 + 10\log_{10} (P[\text{Watts}])$ beyond X MHz beyond from Channel edges ■ $< 43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz	PASS
Conducted Output Power	§ 2.1046	N/A	<u>See Note1</u>
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(h)(2)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 27.53(m)(4)	$< 55 + 10\log_{10} (P[\text{Watts}])$	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

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

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

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured 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

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

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

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

8. TEST DATA(Main 2 ANT)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)			W	W	dBm	Size	Offset
2502.5	Sub6 n7/ 5 MHz [15 kHz]	PI/2 BPSK	-23.32	13.54	10.58	2.51	H	< 2.00	0.145	21.61	1	12
		QPSK	-23.35	13.51	10.58	2.51	H		0.144	21.58		
		16-QAM	-24.35	12.51	10.58	2.51	H		0.114	20.58		
		64-QAM	-25.85	11.01	10.58	2.51	H		0.081	19.08		
		256-QAM	-27.87	8.99	10.58	2.51	H		0.051	17.06		
2535.0		PI/2 BPSK	-22.71	13.75	10.59	2.54	H		0.151	21.80	1	12
		QPSK	-22.85	13.61	10.59	2.54	H		0.146	21.66		
		16-QAM	-23.78	12.68	10.59	2.54	H		0.118	20.73		
		64-QAM	-25.31	11.15	10.59	2.54	H		0.083	19.20		
		256-QAM	-27.29	9.17	10.59	2.54	H		0.053	17.22		
2567.5		PI/2 BPSK	-23.09	14.00	10.83	2.65	H		0.165	22.18	1	1
		QPSK	-23.12	13.97	10.83	2.65	H		0.164	22.15		
		16-QAM	-24.18	12.91	10.83	2.65	H		0.129	21.09		
		64-QAM	-25.60	11.49	10.83	2.65	H		0.093	19.67		
		256-QAM	-27.62	9.47	10.83	2.65	H		0.058	17.65		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	W dBm	Size	Offset
2505.0		PI/2 BPSK	-23.24	13.62	10.58	2.51	H	< 2.00	0.148	21.69	1	50
		QPSK	-23.29	13.57	10.58	2.51	H		0.146	21.64		
		16-QAM	-24.21	12.65	10.58	2.51	H		0.118	20.72		
		64-QAM	-25.87	10.99	10.58	2.51	H		0.081	19.06		
		256-QAM	-27.83	9.03	10.58	2.51	H		0.051	17.10		
2535.0	Sub6 n7/ 10 MHz [15 kHz]	PI/2 BPSK	-22.75	13.71	10.59	2.54	H	< 2.00	0.150	21.76	1	26
		QPSK	-22.80	13.66	10.59	2.54	H		0.148	21.71		
		16-QAM	-23.79	12.67	10.59	2.54	H		0.118	20.72		
		64-QAM	-25.28	11.18	10.59	2.54	H		0.084	19.23		
		256-QAM	-27.35	9.11	10.59	2.54	H		0.052	17.16		
2565.0		PI/2 BPSK	-23.07	14.01	10.79	2.62	H	< 2.00	0.165	22.18	1	26
		QPSK	-23.14	13.94	10.79	2.62	H		0.163	22.11		
		16-QAM	-24.00	13.08	10.79	2.62	H		0.133	21.25		
		64-QAM	-25.44	11.64	10.79	2.62	H		0.096	19.81		
		256-QAM	-27.68	9.40	10.79	2.62	H		0.057	17.57		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2507.5	Sub6 n7/ 15 MHz [15 kHz]	PI/2 BPSK	-22.96	13.96	10.55	2.51	H	< 2.00	0.158	22.00	1	39
		QPSK	-23.10	13.82	10.55	2.51	H		0.153	21.86		
		16-QAM	-24.07	12.85	10.55	2.51	H		0.123	20.89		
		64-QAM	-25.70	11.22	10.55	2.51	H		0.084	19.26		
		256-QAM	-27.68	9.24	10.55	2.51	H		0.054	17.28		
2535.0		PI/2 BPSK	-22.80	13.66	10.59	2.54	H		0.148	21.71	1	39
		QPSK	-22.91	13.55	10.59	2.54	H		0.145	21.60		
		16-QAM	-23.87	12.59	10.59	2.54	H		0.116	20.64		
		64-QAM	-25.45	11.01	10.59	2.54	H		0.081	19.06		
		256-QAM	-27.31	9.15	10.59	2.54	H		0.053	17.20		
2562.5	PI/2 BPSK	-23.25	13.83	10.79	2.62	H	0.158	22.00	1	39		
	QPSK	-23.40	13.68	10.79	2.62	H	0.153	21.85				
	16-QAM	-24.44	12.64	10.79	2.62	H	0.121	20.81				
	64-QAM	-25.99	11.09	10.79	2.62	H	0.084	19.26				
	256-QAM	-27.88	9.20	10.79	2.62	H	0.055	17.37				

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2510.0	Sub6 n7/ 20 MHz [15 kHz]	PI/2 BPSK	-23.12	13.80	10.55	2.51	H	< 2.00	0.153	21.84	1	104
		QPSK	-23.22	13.70	10.55	2.51	H		0.149	21.74		
		16-QAM	-24.22	12.70	10.55	2.51	H		0.119	20.74		
		64-QAM	-25.61	11.31	10.55	2.51	H		0.086	19.35		
		256-QAM	-27.72	9.20	10.55	2.51	H		0.053	17.24		
2535.0		PI/2 BPSK	-22.77	13.69	10.59	2.54	H		0.149	21.74	1	53
		QPSK	-22.84	13.62	10.59	2.54	H		0.147	21.67		
		16-QAM	-23.99	12.47	10.59	2.54	H		0.113	20.52		
		64-QAM	-25.32	11.14	10.59	2.54	H		0.083	19.19		
		256-QAM	-27.34	9.12	10.59	2.54	H		0.052	17.17		
2560.0	PI/2 BPSK	-23.07	13.99	10.76	2.59	H	0.164	22.16	1	1		
	QPSK	-23.16	13.90	10.76	2.59	H	0.161	22.07				
	16-QAM	-24.24	12.82	10.76	2.59	H	0.126	20.99				
	64-QAM	-25.66	11.40	10.76	2.59	H	0.091	19.57				
	256-QAM	-27.65	9.41	10.76	2.59	H	0.057	17.58				

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	dBm	Size	Offset
2512.5		PI/2 BPSK	-23.08	13.85	10.52	2.53	H	< 2.00	0.153	21.84	1	131
		QPSK	-23.14	13.79	10.52	2.53	H		0.151	21.78		
		16-QAM	-24.18	12.75	10.52	2.53	H		0.118	20.74		
		64-QAM	-25.78	11.15	10.52	2.53	H		0.082	19.14		
		256-QAM	-27.64	9.29	10.52	2.53	H		0.054	17.28		
2535.0	Sub6 n7/ 25 MHz [15 kHz]	PI/2 BPSK	-22.71	13.75	10.59	2.54	H	< 2.00	0.151	21.80	1	1
		QPSK	-22.72	13.74	10.59	2.54	H		0.151	21.79		
		16-QAM	-23.73	12.73	10.59	2.54	H		0.120	20.78		
		64-QAM	-25.13	11.33	10.59	2.54	H		0.087	19.38		
		256-QAM	-27.12	9.34	10.59	2.54	H		0.055	17.39		
2557.5		PI/2 BPSK	-23.09	13.97	10.76	2.59	H	< 2.00	0.164	22.14	1	66
		QPSK	-23.10	13.96	10.76	2.59	H		0.163	22.13		
		16-QAM	-24.04	13.02	10.76	2.59	H		0.132	21.19		
		64-QAM	-25.51	11.55	10.76	2.59	H		0.094	19.72		
		256-QAM	-27.46	9.60	10.76	2.59	H		0.060	17.77		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	dBm	Size	Offset
2515.0		PI/2 BPSK	-22.89	14.04	10.52	2.53	H	< 2.00	0.160	22.03	1	80
		QPSK	-23.00	13.93	10.52	2.53	H		0.156	21.92		
		16-QAM	-23.99	12.94	10.52	2.53	H		0.124	20.93		
		64-QAM	-25.42	11.51	10.52	2.53	H		0.089	19.50		
		256-QAM	-27.50	9.43	10.52	2.53	H		0.055	17.42		
2535.0	Sub6 n7/ 30 MHz [15 kHz]	PI/2 BPSK	-22.64	13.82	10.59	2.54	H	< 2.00	0.154	21.87	1	80
		QPSK	-22.75	13.71	10.59	2.54	H		0.150	21.76		
		16-QAM	-23.75	12.71	10.59	2.54	H		0.119	20.76		
		64-QAM	-25.30	11.16	10.59	2.54	H		0.083	19.21		
		256-QAM	-27.32	9.14	10.59	2.54	H		0.052	17.19		
2555.0		PI/2 BPSK	-22.89	13.91	10.72	2.56	H	< 2.00	0.161	22.07	1	1
		QPSK	-22.94	13.86	10.72	2.56	H		0.159	22.02		
		16-QAM	-23.83	12.97	10.72	2.56	H		0.130	21.13		
		64-QAM	-25.42	11.38	10.72	2.56	H		0.090	19.54		
		256-QAM	-27.45	9.35	10.72	2.56	H		0.056	17.51		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	dBm	Size	Offset
2517.5		PI/2 BPSK	-22.95	13.98	10.49	2.54	H	< 2.00	0.156	21.93	1	94
		QPSK	-23.02	13.91	10.49	2.54	H		0.154	21.86		
		16-QAM	-23.97	12.96	10.49	2.54	H		0.123	20.91		
		64-QAM	-25.39	11.54	10.49	2.54	H		0.089	19.49		
		256-QAM	-27.49	9.44	10.49	2.54	H		0.055	17.39		
2535.0	Sub6 n7/ 35 MHz [15 kHz]	PI/2 BPSK	-22.66	13.80	10.59	2.54	H	< 2.00	0.153	21.85	1	94
		QPSK	-22.79	13.67	10.59	2.54	H		0.149	21.72		
		16-QAM	-23.86	12.60	10.59	2.54	H		0.116	20.65		
		64-QAM	-25.25	11.21	10.59	2.54	H		0.084	19.26		
		256-QAM	-27.28	9.18	10.59	2.54	H		0.053	17.23		
2552.5		PI/2 BPSK	-22.85	13.95	10.72	2.56	H	< 2.00	0.163	22.12	1	1
		QPSK	-22.84	13.96	10.72	2.56	H		0.163	22.11		
		16-QAM	-23.85	12.95	10.72	2.56	H		0.129	21.11		
		64-QAM	-25.38	11.42	10.72	2.56	H		0.091	19.58		
		256-QAM	-27.37	9.43	10.72	2.56	H		0.057	17.59		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	W dBm	Size	Offset
2520.0		PI/2 BPSK	-22.77	14.16	10.49	2.54	H	< 2.00	0.163	22.11	1	108
		QPSK	-22.95	13.98	10.49	2.54	H		0.156	21.93		
		16-QAM	-23.91	13.02	10.49	2.54	H		0.125	20.97		
		64-QAM	-25.40	11.53	10.49	2.54	H		0.089	19.48		
		256-QAM	-27.45	9.48	10.49	2.54	H		0.055	17.43		
2535.0	Sub6 n7/ 40 MHz [15 kHz]	PI/2 BPSK	-22.68	13.78	10.59	2.54	H	< 2.00	0.152	21.83	1	1
		QPSK	-22.71	13.75	10.59	2.54	H		0.151	21.80		
		16-QAM	-23.68	12.78	10.59	2.54	H		0.121	20.83		
		64-QAM	-25.26	11.20	10.59	2.54	H		0.084	19.25		
		256-QAM	-27.23	9.23	10.59	2.54	H		0.053	17.28		
2550.0		PI/2 BPSK	-22.86	13.67	10.69	2.53	H	< 2.00	0.152	21.83	1	108
		QPSK	-22.90	13.63	10.69	2.53	H		0.151	21.79		
		16-QAM	-23.88	12.65	10.69	2.53	H		0.121	20.81		
		64-QAM	-25.29	11.24	10.69	2.53	H		0.087	19.40		
		256-QAM	-27.37	9.16	10.69	2.53	H		0.054	17.32		

8.2 RADIATED SPURIOUS EMISSIONS

NR Band:	<u>N7</u>
Bandwidth:	<u>5 MHz</u>
Modulation:	<u>PI/2 BPSK</u>
Distance:	<u>1 meters</u>
SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
500500 (2502.5)	5 005.00	-61.27	11.20	-62.70	3.71	V	-55.21	-25.00	1	12
	7 507.50	-63.51	11.55	-55.97	4.60	V	-49.02			
	10 010.00	-61.50	11.47	-52.42	5.47	V	-46.42			
507000 (2535.0)	5 070.00	-60.82	11.25	-61.98	3.80	V	-54.53		1	12
	7 605.00	-63.57	11.60	-56.52	4.64	V	-49.56			
	10 140.00	-61.55	11.36	-51.61	5.48	V	-45.73			
513500 (2567.5)	5 135.00	-62.03	11.43	-62.96	3.81	V	-55.34		1	1
	7 702.50	-63.36	11.42	-55.83	4.66	V	-49.07			
	10 270.00	-62.87	11.51	-51.61	5.57	V	-45.67			

NR Band:	<u>N7</u>
Bandwidth:	<u>10 MHz</u>
Modulation:	<u>PI/2 BPSK</u>
Distance:	<u>1 meters</u>
SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
501000 (2505.0)	5 010.00	-61.48	11.18	-62.62	3.72	V	-55.16	-25.00	1	50
	7 515.00	-62.84	11.56	-55.26	4.60	V	-48.30			
	10 020.00	-61.77	11.46	-52.09	5.47	V	-46.10			
507000 (2535.0)	5 070.00	-61.52	11.25	-62.68	3.80	V	-55.23		1	26
	7 605.00	-62.61	11.60	-55.56	4.64	V	-48.60			
	10 140.00	-62.55	11.36	-52.61	5.48	V	-46.73			
513000 (2565.0)	5 130.00	-61.54	11.41	-62.51	3.81	V	-54.91		1	26
	7 695.00	-62.94	11.44	-55.21	4.66	V	-48.43			
	10 260.00	-63.55	11.49	-52.93	5.56	V	-47.00			

■ NR Band: N7
 ■ Bandwidth: 15 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
501500 (2507.5)	5 015.00	-62.00	11.17	-62.92	3.70	V	-55.45	-25.00	1	39
	7 522.50	-61.55	11.57	-53.90	4.61	V	-46.94			
	10 030.00	-60.89	11.45	-51.85	5.47	V	-45.87			
507000 (2535.0)	5 070.00	-62.44	11.25	-63.60	3.80	V	-56.15		1	39
	7 605.00	-63.51	11.60	-56.46	4.64	V	-49.50			
	10 140.00	-63.00	11.36	-53.06	5.48	V	-47.18			
512500 (2562.5)	5 125.00	-62.49	11.40	-63.66	3.81	V	-56.07		1	39
	7 687.50	-62.50	11.45	-54.74	4.66	V	-47.95			
	10 250.00	-62.74	11.47	-51.52	5.54	V	-45.59			

■ NR Band:	<u>N7</u>
■ Bandwidth:	<u>20 MHz</u>
■ Modulation:	<u>PI/2 BPSK</u>
■ Distance:	<u>1 meters</u>
■ SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
502000 (2510.0)	5 020.00	-63.55	11.17	-64.25	3.69	V	-56.77	-25.00	1	104
	7 530.00	-63.08	11.57	-55.42	4.60	V	-48.45			
	10 040.00	-63.18	11.44	-53.72	5.49	V	-47.77			
507000 (2535.0)	5 070.00	-62.90	11.25	-64.06	3.80	V	-56.61		1	53
	7 605.00	-62.61	11.60	-55.56	4.64	V	-48.60			
	10 140.00	-62.57	11.36	-52.63	5.48	V	-46.75			
512000 (2560.0)	5 120.00	-63.00	11.38	-64.37	3.81	V	-56.80		1	1
	7 680.00	-63.40	11.47	-55.74	4.70	V	-48.97			
	10 240.00	-62.29	11.45	-51.62	5.54	V	-45.71			

■ NR Band: N7
 ■ Bandwidth: 25 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
502500 (2512.5)	5 025.00	-62.91	11.18	-63.68	3.68	V	-56.18	-25.00	1	131
	7 537.50	-62.36	11.58	-54.83	4.61	V	-47.86			
	10 050.00	-63.58	11.43	-54.38	5.48	V	-48.43			
507000 (2535.0)	5 070.00	-63.50	11.25	-64.66	3.80	V	-57.21		1	1
	7 605.00	-63.02	11.60	-55.97	4.64	V	-49.01			
	10 140.00	-61.99	11.36	-52.05	5.48	V	-46.17			
511500 (2557.5)	5,115.00	-62.04	11.36	-63.42	3.80	V	-55.86		1	66
	7,672.50	-64.12	11.48	-56.55	4.70	V	-49.77			
	10,230.00	-63.63	11.43	-52.72	5.54	V	-46.83			

■ NR Band: N7
 ■ Bandwidth: 30 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
503000 (2515.0)	5 030.00	-61.67	11.19	-62.51	3.67	V	-54.99	-25.00	1	80
	7 545.00	-62.50	11.58	-55.04	4.62	V	-48.08			
	10 060.00	-62.59	11.42	-53.47	5.48	V	-47.53			
507000 (2535.0)	5 070.00	-63.25	11.25	-64.41	3.80	V	-56.96		1	80
	7 605.00	-62.84	11.60	-55.79	4.64	V	-48.83			
	10 140.00	-61.99	11.36	-52.05	5.48	V	-46.17			
511000 (2555.0)	5 110.00	-62.08	11.34	-63.47	3.79	V	-55.92		1	1
	7 665.00	-62.62	11.50	-55.33	4.70	V	-48.53			
	10 220.00	-62.49	11.42	-52.11	5.54	V	-46.23			

■ NR Band: N7
 ■ Bandwidth: 35 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
503500 (2517.5)	5 035.00	-62.00	11.19	-62.94	3.67	V	-55.42	-25.00	1	94
	7 552.50	-63.01	11.59	-55.55	4.63	V	-48.59			
	10 070.00	-62.19	11.42	-52.87	5.47	V	-46.92			
507000 (2535.0)	5 070.00	-62.85	11.25	-64.01	3.80	V	-56.56		1	94
	7 605.00	-64.25	11.60	-57.20	4.64	V	-50.24			
	10 140.00	-62.34	11.36	-52.40	5.48	V	-46.52			
510500 (2552.5)	5 105.00	-62.66	11.32	-63.94	3.79	V	-56.41		1	1
	7 657.50	-63.47	11.51	-56.39	4.69	V	-49.57			
	10 210.00	-62.75	11.40	-52.73	5.54	V	-46.87			

■ NR Band: N7
 ■ Bandwidth: 40 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
504000 (2520.0)	5 040.00	-62.84	11.20	-63.88	3.68	V	-56.36	-25.00	1	108
	7 560.00	-62.64	11.60	-55.10	4.64	V	-48.14			
	10 080.00	-61.55	11.41	-52.54	5.47	V	-46.60			
507000 (2535.0)	5 070.00	-63.00	11.25	-64.16	3.80	V	-56.71		1	1
	7 605.00	-62.46	11.60	-55.41	4.64	V	-48.45			
	10 140.00	-61.55	11.36	-51.61	5.48	V	-45.73			
510000 (2550.0)	5 100.00	-63.11	11.31	-64.30	3.78	V	-56.77		1	108
	7 650.00	-62.84	11.52	-55.71	4.68	V	-48.87			
	10 200.00	-61.69	11.38	-51.53	5.54	V	-45.69			

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n7	5 MHz	2535.0	BPSK	25	0	4.54
			QPSK			5.81
			16-QAM			6.48
			64-QAM			6.90
			256-QAM			6.45
	10 MHz		BPSK	50		4.59
			QPSK			5.82
			16-QAM			6.51
			64-QAM			6.81
			256-QAM			6.71
	15 MHz		BPSK	75		4.47
			QPSK			5.77
			16-QAM			6.48
			64-QAM			6.67
			256-QAM			6.54
	20 MHz		BPSK	100		4.56
			QPSK			5.80
			16-QAM			6.45
			64-QAM			6.70
			256-QAM			6.46
	25 MHz		BPSK	128		4.77
			QPSK			5.71
			16-QAM			6.33
			64-QAM			6.44
			256-QAM			6.50
	30 MHz		BPSK	160		4.54
			QPSK			5.59
			16-QAM			6.35
			64-QAM			6.34
			256-QAM			6.51

	35 MHz		BPSK	180		5.86
			QPSK			6.03
			16-QAM			6.52
			64-QAM			6.60
			256-QAM			6.57
	40 MHz		BPSK	216		4.65
			QPSK			5.73
			16-QAM			6.36
			64-QAM			6.50
			256-QAM			6.60

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 89 ~ 128.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n7	5 MHz	2535.0	BPSK	25	0	4.5342
			QPSK			4.5227
			16-QAM			4.5062
			64-QAM			4.5183
			256-QAM			4.5116
	10 MHz		BPSK	50		9.0190
			QPSK			9.0126
			16-QAM			9.0064
			64-QAM			9.0433
			256-QAM			8.9921
	15 MHz		BPSK	75		13.461
			QPSK			13.493
			16-QAM			13.491
			64-QAM			13.465
			256-QAM			13.447
	20 MHz		BPSK	100		17.910
			QPSK			17.955
			16-QAM			17.910
			64-QAM			17.967
			256-QAM			17.902
	25 MHz		BPSK	128		23.023
			QPSK			23.006
			16-QAM			23.001
			64-QAM			23.064
			256-QAM			22.954
	30 MHz		BPSK	160		28.829
			QPSK			28.811
			16-QAM			28.813
			64-QAM			28.768
			256-QAM			28.858

	35 MHz		BPSK	180		32.426
			QPSK			32.345
			16-QAM			32.388
			64-QAM			32.381
			256-QAM			32.423
	40 MHz		BPSK	216		38.921
			QPSK			38.828
			16-QAM			38.842
			64-QAM			38.835
			256-QAM			38.944

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 129 ~ 168.

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 n7	5	2502.500	4.0280	29.722	-62.058	-32.336	-25.00
		2535.000	7.1486	30.315	-61.773	-31.458	
		2567.500	4.0379	29.722	-60.568	-30.846	
	10	2505.000	10.0000	30.315	-61.415	-31.100	
		2535.000	3.7987	29.722	-61.023	-31.301	
		2565.000	4.9751	29.722	-60.181	-30.459	
	15	2507.500	4.9652	29.722	-61.641	-31.919	
		2535.000	4.0978	29.722	-61.272	-31.550	
		2562.500	3.7887	29.722	-61.980	-32.258	
	20	2510.000	4.0679	29.722	-61.734	-32.012	
		2535.000	8.6042	30.315	-61.986	-31.671	
		2560.000	4.2972	29.722	-61.546	-31.824	
	25	2512.500	8.0957	30.315	-61.739	-31.424	
		2535.000	4.0679	29.722	-61.773	-32.051	
		2557.500	7.2483	30.315	-61.356	-31.041	
	30	2515.000	9.7607	30.315	-60.849	-30.534	
		2535.000	3.7688	29.722	-60.921	-31.199	
		2555.000	5.1546	30.315	-61.223	-30.908	
	35	2517.500	8.0957	30.315	-61.883	-31.568	
		2535.000	4.7159	29.722	-61.858	-32.136	
		2552.500	4.0379	29.722	-61.467	-31.745	
	40	2520.000	8.6042	30.315	-61.455	-31.140	
		2535.000	4.9951	29.722	-61.726	-32.004	
		2550.000	4.0479	29.722	-60.777	-31.055	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 169 ~ 216
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	27.012
1 – 5	29.722
5 – 10	30.315
10 – 15	30.840
15 – 20	31.213
Above 20	31.855

8.6 CHANNEL EDGE

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	2 500 MHz ~ 2 496 MHz	C.E ~ (C.E +1 MHz)	2 490.5 MHz ~ 2 496 MHz	(C.E + 1 MHz) ~ (C.E + 5 MHz)	Below 2 490.5 MHz	(C.E + 5 MHz) ~ (C.E + X MHz)	Above (C.E + X MHz)
				Lower	Upper	Lower	Upper	Lower	Upper	Upper
5	2502.500	BPSK	Full RB	-21.37	-21.68	-34.31	-27.59	-42.38	-35.45	-36.70
10	2505.000	BPSK	Full RB	-23.35	-31.69	-33.88	-30.78	-42.56	-33.63	-39.13
15	2507.500	BPSK	Full RB	-26.39	-37.81	-39.62	-33.70	-41.54	-33.60	-44.14
20	2510.000	BPSK	Full RB	-26.47	-38.09	-39.43	-35.71	-41.89	-34.58	-44.22
25	2512.500	BPSK	Full RB	-24.21	-33.48	-38.51	-34.36	-38.72	-33.06	-44.24
30	2515.000	BPSK	Full RB	-23.14	-22.18	-35.88	-27.45	-37.07	-31.27	-44.69
35	2517.500	BPSK	Full RB	-21.97	-31.70	-35.26	-31.60	-38.07	-31.13	-48.20
40	2520.000	BPSK	Full RB	-14.93	-15.32	-36.17	-27.34	-37.79	-31.13	-50.04
Limit(dBm)				-10.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	C.E ~ (C.E ± 1 MHz)		(C.E ± 1 MHz) ~ (C.E ± 5 MHz)	
				Lower	Upper	Lower	Upper
5	2535.000	BPSK	Full RB	-20.80	-22.26	-27.05	-29.25
	2567.500	BPSK	Full RB	-21.58	-21.27	-27.34	-29.06
10	2535.000	BPSK	Full RB	-22.80	-31.92	-30.74	-32.59
	2565.000	BPSK	Full RB	-22.45	-32.62	-29.24	-31.98
15	2535.000	BPSK	Full RB	-24.68	-38.76	-31.57	-35.25
	2562.500	BPSK	Full RB	-24.61	-38.33	-30.35	-34.62
20	2535.000	BPSK	Full RB	-25.01	-39.00	-31.22	-36.80
	2560.000	BPSK	Full RB	-25.16	-37.72	-31.87	-36.13
25	2535.000	BPSK	Full RB	-22.84	-33.82	-28.96	-34.26
	2557.500	BPSK	Full RB	-22.65	-33.49	-29.12	-32.26
30	2535.000	BPSK	Full RB	-21.59	-22.36	-27.15	-28.00
	2555.000	BPSK	Full RB	-21.90	-23.86	-27.71	-29.16
35	2535.000	BPSK	Full RB	-21.41	-32.35	-27.52	-33.65
	2552.500	BPSK	Full RB	-21.78	-32.83	-28.02	-33.29
40	2535.000	BPSK	Full RB	-13.47	-15.20	-27.52	-29.01
	2550.000	BPSK	Full RB	-14.40	-16.43	-28.46	-29.64
Limi(dBm)				-10.0		-10.0	

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	(C.E $\pm$ 5 MHz)		Above (C.E $\pm$ X MHz)	
				~ (C.E $\pm$ X MHz)			
				Lower	Upper	Lower	Upper
5	2535.000	BPSK	Full RB	-37.05	-37.14	-37.53	-37.47
	2567.500	BPSK	Full RB	-36.69	-38.04	-36.99	-38.58
10	2535.000	BPSK	Full RB	-33.38	-34.01	-43.84	-44.03
	2565.000	BPSK	Full RB	-32.17	-34.48	-42.95	-44.56
15	2535.000	BPSK	Full RB	-31.21	-35.07	-42.71	-44.56
	2562.500	BPSK	Full RB	-30.60	-34.43	-44.71	-46.00
20	2535.000	BPSK	Full RB	-32.07	-36.74	-45.63	-45.70
	2560.000	BPSK	Full RB	-32.92	-35.16	-46.08	-50.41
25	2535.000	BPSK	Full RB	-31.44	-36.17	-44.28	-44.94
	2557.500	BPSK	Full RB	-33.83	-33.23	-44.70	-55.45
30	2535.000	BPSK	Full RB	-34.61	-37.91	-47.48	-47.91
	2555.000	BPSK	Full RB	-33.58	-32.64	-46.10	-55.87
35	2535.000	BPSK	Full RB	-32.62	-34.69	-53.02	-50.31
	2552.500	BPSK	Full RB	-35.87	-34.32	-49.94	-59.55
40	2535.000	BPSK	Full RB	-37.21	-37.14	-59.92	-58.87
	2550.000	BPSK	Full RB	-34.57	-33.86	-51.43	-59.50
Limit(dBm)				-13.0		-25.0	

Note:

1. C.E = Channel Edge
2. X = X is the greater of 6 MHz or the actual emission bandwidth
3. Result(dBm) = Reading + Factor
- Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter
4. Plots of the EUT's Channel Edge are shown Page 217 ~ 272.

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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2502.500	100 %	+20(Ref)	2502 500 000	0.0	0.000 000	0.000
	100 %	-30	2502 500 001	1.0	0.000 000	0.000
	100 %	-20	2502 500 000	-0.4	0.000 000	0.000
	100 %	-10	2502 500 001	0.4	0.000 000	0.000
	100 %	0	2502 500 000	0.1	0.000 000	0.000
	100 %	+10	2502 500 001	0.4	0.000 000	0.000
	100 %	+30	2502 500 001	1.0	0.000 000	0.000
	100 %	+40	2502 500 000	0.1	0.000 000	0.000
	100 %	+50	2502 500 001	0.4	0.000 000	0.000
	Batt. Endpoint	+20	2502 500 000	0.1	0.000 000	0.000
2567.500	100 %	+20(Ref)	2567 499 998	0.0	0.000 000	0.000
	100 %	-30	2567 499 999	1.2	0.000 000	0.000
	100 %	-20	2567 499 998	-0.1	0.000 000	0.000
	100 %	-10	2567 499 997	-1.1	0.000 000	0.000
	100 %	0	2567 499 996	-1.6	0.000 000	-0.001
	100 %	+10	2567 499 996	-1.5	0.000 000	-0.001
	100 %	+30	2567 499 998	0.0	0.000 000	0.000
	100 %	+40	2567 500 001	3.0	0.000 000	0.001
	100 %	+50	2567 499 998	-0.1	0.000 000	0.000
	Batt. Endpoint	+20	2567 499 998	-0.1	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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2505.000	100 %	+20(Ref)	2504 999 999	0.0	0.000 000	0.000
	100 %	-30	2504 999 998	-1.0	0.000 000	0.000
	100 %	-20	2504 999 999	-0.3	0.000 000	0.000
	100 %	-10	2504 999 999	-0.9	0.000 000	0.000
	100 %	0	2504 999 999	-0.6	0.000 000	0.000
	100 %	+10	2504 999 998	-1.0	0.000 000	0.000
	100 %	+30	2504 999 998	-1.9	0.000 000	-0.001
	100 %	+40	2504 999 998	-0.9	0.000 000	0.000
	100 %	+50	2505 000 000	0.3	0.000 000	0.000
	Batt. Endpoint	+20	2504 999 999	-0.1	0.000 000	0.000
2565.000	100 %	+20(Ref)	2565 000 001	0.0	0.000 000	0.000
	100 %	-30	2565 000 000	-0.6	0.000 000	0.000
	100 %	-20	2565 000 001	-0.2	0.000 000	0.000
	100 %	-10	2565 000 001	-0.2	0.000 000	0.000
	100 %	0	2565 000 000	-0.5	0.000 000	0.000
	100 %	+10	2565 000 002	1.7	0.000 000	0.001
	100 %	+30	2565 000 000	-0.7	0.000 000	0.000
	100 %	+40	2565 000 001	0.1	0.000 000	0.000
	100 %	+50	2565 000 002	1.4	0.000 000	0.001
	Batt. Endpoint	+20	2565 000 000	-0.9	0.000 000	0.000

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2507.500	100 %	+20(Ref)	2507 499 999	0.0	0.000 000	0.000
	100 %	-30	2507 499 999	-0.7	0.000 000	0.000
	100 %	-20	2507 499 999	-0.5	0.000 000	0.000
	100 %	-10	2507 499 998	-1.5	0.000 000	-0.001
	100 %	0	2507 500 000	0.8	0.000 000	0.000
	100 %	+10	2507 499 999	0.0	0.000 000	0.000
	100 %	+30	2507 499 999	-0.5	0.000 000	0.000
	100 %	+40	2507 499 999	-0.8	0.000 000	0.000
	100 %	+50	2507 499 999	-0.6	0.000 000	0.000
	Batt. Endpoint	+20	2507 499 999	0.1	0.000 000	0.000
2562.500	100 %	+20(Ref)	2562 499 997	0.0	0.000 000	0.000
	100 %	-30	2562 499 995	-1.3	0.000 000	-0.001
	100 %	-20	2562 499 993	-3.5	0.000 000	-0.001
	100 %	-10	2562 499 993	-3.6	0.000 000	-0.001
	100 %	0	2562 499 996	-0.8	0.000 000	0.000
	100 %	+10	2562 499 994	-2.9	0.000 000	-0.001
	100 %	+30	2562 499 992	-4.6	0.000 000	-0.002
	100 %	+40	2562 499 993	-3.9	0.000 000	-0.002
	100 %	+50	2562 499 994	-2.2	0.000 000	-0.001
	Batt. Endpoint	+20	2562 499 994	-2.1	0.000 000	-0.001

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2510.000	100 %	+20(Ref)	2509 999 998	0.0	0.000 000	0.000
	100 %	-30	2509 999 997	-1.1	0.000 000	0.000
	100 %	-20	2509 999 997	-1.6	0.000 000	-0.001
	100 %	-10	2509 999 998	-0.8	0.000 000	0.000
	100 %	0	2509 999 998	-0.5	0.000 000	0.000
	100 %	+10	2509 999 997	-1.1	0.000 000	0.000
	100 %	+30	2509 999 998	-0.2	0.000 000	0.000
	100 %	+40	2509 999 997	-1.2	0.000 000	0.000
	100 %	+50	2509 999 997	-1.2	0.000 000	0.000
	Batt. Endpoint	+20	2509 999 997	-1.0	0.000 000	0.000
2560.000	100 %	+20(Ref)	2559 999 999	0.0	0.000 000	0.000
	100 %	-30	2560 000 001	2.0	0.000 000	0.001
	100 %	-20	2559 999 999	-0.1	0.000 000	0.000
	100 %	-10	2559 999 999	-0.1	0.000 000	0.000
	100 %	0	2560 000 000	1.3	0.000 000	0.001
	100 %	+10	2560 000 001	2.1	0.000 000	0.001
	100 %	+30	2560 000 001	2.2	0.000 000	0.001
	100 %	+40	2560 000 000	0.7	0.000 000	0.000
	100 %	+50	2559 999 998	-1.2	0.000 000	0.000
	Batt. Endpoint	+20	2559 999 998	-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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2512.500	100 %	+20(Ref)	2512 500 000	0.0	0.000 000	0.000
	100 %	-30	2512 500 000	0.0	0.000 000	0.000
	100 %	-20	2512 500 000	-0.1	0.000 000	0.000
	100 %	-10	2512 499 999	-0.3	0.000 000	0.000
	100 %	0	2512 499 999	-0.4	0.000 000	0.000
	100 %	+10	2512 499 999	-1.2	0.000 000	0.000
	100 %	+30	2512 499 999	-0.8	0.000 000	0.000
	100 %	+40	2512 499 999	-0.7	0.000 000	0.000
	100 %	+50	2512 499 999	-0.8	0.000 000	0.000
	Batt. Endpoint	+20	2512 500 000	-0.2	0.000 000	0.000
2557.500	100 %	+20(Ref)	2557 500 001	0.0	0.000 000	0.000
	100 %	-30	2557 500 000	-0.7	0.000 000	0.000
	100 %	-20	2557 500 000	-0.8	0.000 000	0.000
	100 %	-10	2557 500 000	-0.1	0.000 000	0.000
	100 %	0	2557 500 001	0.1	0.000 000	0.000
	100 %	+10	2557 500 000	-0.5	0.000 000	0.000
	100 %	+30	2557 500 001	0.4	0.000 000	0.000
	100 %	+40	2557 500 000	-0.4	0.000 000	0.000
	100 %	+50	2557 500 000	-0.7	0.000 000	0.000
	Batt. Endpoint	+20	2557 500 001	0.1	0.000 000	0.000

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2515.000	100 %	+20(Ref)	2515 000 000	0.0	0.000 000	0.000
	100 %	-30	2515 000 000	-0.1	0.000 000	0.000
	100 %	-20	2514 999 999	-0.4	0.000 000	0.000
	100 %	-10	2514 999 999	-0.2	0.000 000	0.000
	100 %	0	2514 999 999	-0.9	0.000 000	0.000
	100 %	+10	2515 000 000	0.0	0.000 000	0.000
	100 %	+30	2515 000 000	0.4	0.000 000	0.000
	100 %	+40	2514 999 999	-0.5	0.000 000	0.000
	100 %	+50	2515 000 000	0.1	0.000 000	0.000
	Batt. Endpoint	+20	2514 999 999	-0.3	0.000 000	0.000
2555.000	100 %	+20(Ref)	2554 999 999	0.0	0.000 000	0.000
	100 %	-30	2554 999 997	-2.0	0.000 000	-0.001
	100 %	-20	2554 999 999	-0.5	0.000 000	0.000
	100 %	-10	2554 999 998	-1.4	0.000 000	-0.001
	100 %	0	2554 999 997	-2.7	0.000 000	-0.001
	100 %	+10	2554 999 998	-1.1	0.000 000	0.000
	100 %	+30	2554 999 999	-0.4	0.000 000	0.000
	100 %	+40	2554 999 998	-0.9	0.000 000	0.000
	100 %	+50	2554 999 997	-1.8	0.000 000	-0.001
	Batt. Endpoint	+20	2554 999 997	-2.6	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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2517.500	100 %	+20(Ref)	2517 500 000	0.0	0.000 000	0.000
	100 %	-30	2517 500 001	0.4	0.000 000	0.000
	100 %	-20	2517 500 001	0.6	0.000 000	0.000
	100 %	-10	2517 500 000	-0.2	0.000 000	0.000
	100 %	0	2517 500 000	0.0	0.000 000	0.000
	100 %	+10	2517 500 000	-0.1	0.000 000	0.000
	100 %	+30	2517 499 999	-0.9	0.000 000	0.000
	100 %	+40	2517 500 000	-0.6	0.000 000	0.000
	100 %	+50	2517 500 001	1.1	0.000 000	0.000
	Batt. Endpoint	+20	2517 500 001	0.3	0.000 000	0.000
2552.500	100 %	+20(Ref)	2552 500 001	0.0	0.000 000	0.000
	100 %	-30	2552 500 001	0.2	0.000 000	0.000
	100 %	-20	2552 500 000	-0.2	0.000 000	0.000
	100 %	-10	2552 500 000	-0.1	0.000 000	0.000
	100 %	0	2552 500 000	-0.3	0.000 000	0.000
	100 %	+10	2552 499 999	-1.4	0.000 000	-0.001
	100 %	+30	2552 500 000	-0.8	0.000 000	0.000
	100 %	+40	2552 500 001	0.0	0.000 000	0.000
	100 %	+50	2552 500 000	-0.9	0.000 000	0.000
	Batt. Endpoint	+20	2552 500 000	-0.2	0.000 000	0.000

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2520.000	100 %	+20(Ref)	2519 999 999	0.0	0.000 000	0.000
	100 %	-30	2519 999 999	0.1	0.000 000	0.000
	100 %	-20	2519 999 998	-0.8	0.000 000	0.000
	100 %	-10	2519 999 998	-0.6	0.000 000	0.000
	100 %	0	2520 000 000	0.5	0.000 000	0.000
	100 %	+10	2519 999 999	-0.4	0.000 000	0.000
	100 %	+30	2519 999 998	-0.7	0.000 000	0.000
	100 %	+40	2519 999 999	0.0	0.000 000	0.000
	100 %	+50	2519 999 999	-0.4	0.000 000	0.000
	Batt. Endpoint	+20	2519 999 998	-1.3	0.000 000	-0.001
2550.000	100 %	+20(Ref)	2550 000 000	0.0	0.000 000	0.000
	100 %	-30	2549 999 999	-0.4	0.000 000	0.000
	100 %	-20	2550 000 000	-0.1	0.000 000	0.000
	100 %	-10	2550 000 000	-0.1	0.000 000	0.000
	100 %	0	2550 000 000	-0.3	0.000 000	0.000
	100 %	+10	2550 000 000	-0.2	0.000 000	0.000
	100 %	+30	2550 000 000	-0.3	0.000 000	0.000
	100 %	+40	2550 000 000	0.4	0.000 000	0.000
	100 %	+50	2549 999 999	-0.4	0.000 000	0.000
	Batt. Endpoint	+20	2549 999 999	-0.9	0.000 000	0.000

9. TEST DATA(Sub 5 ANT)

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
2502.5	Sub6 n7/ 5 MHz [15 kHz]	PI/2 BPSK	-23.49	13.37	10.58	2.51	H	< 2.00	0.139	21.44	1	1
		QPSK	-24.20	12.66	10.58	2.51	H		0.118	20.73		
		16-QAM	-24.27	12.59	10.58	2.51	H		0.116	20.66		
		64-QAM	-26.80	10.06	10.58	2.51	H		0.065	18.13		
		256-QAM	-28.75	8.11	10.58	2.51	H		0.042	16.18		
2535.0		PI/2 BPSK	-22.88	13.58	10.59	2.54	H		0.146	21.63	1	23
		QPSK	-22.98	13.48	10.59	2.54	H		0.142	21.53		
		16-QAM	-23.96	12.50	10.59	2.54	H		0.114	20.55		
		64-QAM	-25.65	10.81	10.59	2.54	H		0.077	18.86		
		256-QAM	-27.60	8.86	10.59	2.54	H		0.049	16.91		
2567.5		PI/2 BPSK	-22.69	14.40	10.83	2.65	H	0.181	22.58	1	1	
		QPSK	-22.75	14.34	10.83	2.65	H	0.179	22.52			
		16-QAM	-23.82	13.27	10.83	2.65	H	0.140	21.45			
		64-QAM	-25.25	11.84	10.83	2.65	H	0.101	20.02			
		256-QAM	-27.21	9.88	10.83	2.65	H	0.064	18.06			

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2505.0	Sub6 n7/ 10 MHz [15 kHz]	Pl/2 BPSK	-24.32	12.54	10.58	2.51	H	< 2.00	0.115	20.61	1	1
		QPSK	-24.33	12.53	10.58	2.51	H		0.115	20.60		
		16-QAM	-25.32	11.54	10.58	2.51	H		0.091	19.61		
		64-QAM	-26.90	9.96	10.58	2.51	H		0.064	18.03		
		256-QAM	-28.79	8.07	10.58	2.51	H		0.041	16.14		
2535.0		Pl/2 BPSK	-22.75	13.71	10.59	2.54	H		0.150	21.76	1	26
		QPSK	-22.76	13.70	10.59	2.54	H		0.150	21.75		
		16-QAM	-23.75	12.71	10.59	2.54	H		0.119	20.76		
		64-QAM	-25.40	11.06	10.59	2.54	H		0.081	19.11		
		256-QAM	-27.49	8.97	10.59	2.54	H		0.050	17.02		
2565.0	Pl/2 BPSK	-22.50	14.58	10.79	2.62	H	0.189	22.75	1	26		
	QPSK	-22.80	14.28	10.79	2.62	H	0.176	22.45				
	16-QAM	-23.66	13.42	10.79	2.62	H	0.144	21.59				
	64-QAM	-25.16	11.92	10.79	2.62	H	0.102	20.09				
	256-QAM	-27.28	9.80	10.79	2.62	H	0.063	17.97				

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2507.5	Sub6 n7/ 15 MHz [15 kHz]	PI/2 BPSK	-24.06	12.86	10.55	2.51	H	< 2.00	0.123	20.90	1	77
		QPSK	-24.08	12.84	10.55	2.51	H		0.123	20.88		
		16-QAM	-25.09	11.83	10.55	2.51	H		0.097	19.87		
		64-QAM	-26.71	10.21	10.55	2.51	H		0.067	18.25		
		256-QAM	-28.76	8.16	10.55	2.51	H		0.042	16.20		
2535.0		PI/2 BPSK	-22.86	13.60	10.59	2.54	H		0.146	21.65	1	77
		QPSK	-22.87	13.59	10.59	2.54	H		0.146	21.64		
		16-QAM	-23.86	12.60	10.59	2.54	H		0.116	20.65		
		64-QAM	-25.42	11.04	10.59	2.54	H		0.081	19.09		
		256-QAM	-27.57	8.89	10.59	2.54	H		0.050	16.94		
2562.5	PI/2 BPSK	-23.01	14.07	10.79	2.62	H	0.168	22.24	1	1		
	QPSK	-23.03	14.05	10.79	2.62	H	0.167	22.22				
	16-QAM	-24.10	12.98	10.79	2.62	H	0.130	21.15				
	64-QAM	-25.57	11.51	10.79	2.62	H	0.093	19.68				
	256-QAM	-27.54	9.54	10.79	2.62	H	0.059	17.71				

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2510.0	Sub6 n7/ 20 MHz [15 kHz]	PI/2 BPSK	-23.83	13.09	10.55	2.51	H	< 2.00	0.130	21.13	1	104
		QPSK	-23.84	13.08	10.55	2.51	H		0.130	21.12		
		16-QAM	-24.87	12.05	10.55	2.51	H		0.102	20.09		
		64-QAM	-26.41	10.51	10.55	2.51	H		0.072	18.55		
		256-QAM	-28.45	8.47	10.55	2.51	H		0.045	16.51		
2535.0		PI/2 BPSK	-22.65	13.81	10.59	2.54	H		0.154	21.86	1	53
		QPSK	-22.84	13.62	10.59	2.54	H		0.147	21.67		
		16-QAM	-24.06	12.40	10.59	2.54	H		0.111	20.45		
		64-QAM	-25.51	10.95	10.59	2.54	H		0.079	19.00		
		256-QAM	-27.44	9.02	10.59	2.54	H		0.051	17.07		
2560.0	PI/2 BPSK	-22.94	14.12	10.76	2.59	H	0.169	22.29	1	1		
	QPSK	-22.96	14.10	10.76	2.59	H	0.169	22.27				
	16-QAM	-23.94	13.12	10.76	2.59	H	0.135	21.29				
	64-QAM	-25.56	11.50	10.76	2.59	H	0.093	19.67				
	256-QAM	-27.55	9.51	10.76	2.59	H	0.059	17.68				

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2512.5	Sub6 n7/ 25 MHz [15 kHz]	PI/2 BPSK	-23.38	13.55	10.52	2.53	H	< 2.00	0.143	21.54	1	131
		QPSK	-23.41	13.52	10.52	2.53	H		0.142	21.51		
		16-QAM	-24.38	12.55	10.52	2.53	H		0.113	20.54		
		64-QAM	-26.02	10.91	10.52	2.53	H		0.078	18.90		
		256-QAM	-27.94	8.99	10.52	2.53	H		0.050	16.98		
2535.0		PI/2 BPSK	-22.82	13.64	10.59	2.54	H		0.148	21.69	1	66
		QPSK	-22.99	13.47	10.59	2.54	H		0.142	21.52		
		16-QAM	-23.91	12.55	10.59	2.54	H		0.115	20.60		
		64-QAM	-25.39	11.07	10.59	2.54	H		0.082	19.12		
		256-QAM	-27.41	9.05	10.59	2.54	H		0.051	17.10		
2557.5	PI/2 BPSK	-22.76	14.30	10.76	2.59	H	0.177	22.47	1	66		
	QPSK	-22.80	14.26	10.76	2.59	H	0.175	22.43				
	16-QAM	-23.85	13.21	10.76	2.59	H	0.138	21.38				
	64-QAM	-25.31	11.75	10.76	2.59	H	0.098	19.92				
	256-QAM	-27.34	9.72	10.76	2.59	H	0.062	17.89				

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
2515.0		PI/2 BPSK	-23.22	13.71	10.52	2.53	H	< 2.00	0.148	21.70	1	158
		QPSK	-23.27	13.66	10.52	2.53	H		0.146	21.65		
		16-QAM	-24.24	12.69	10.52	2.53	H		0.117	20.68		
		64-QAM	-25.86	11.07	10.52	2.53	H		0.081	19.06		
		256-QAM	-27.91	9.02	10.52	2.53	H		0.050	17.01		
2535.0	Sub6 n7/ 30 MHz [15 kHz]	PI/2 BPSK	-22.86	13.60	10.59	2.54	H	< 2.00	0.146	21.65	1	158
		QPSK	-22.87	13.59	10.59	2.54	H		0.146	21.64		
		16-QAM	-23.84	12.62	10.59	2.54	H		0.117	20.67		
		64-QAM	-25.44	11.02	10.59	2.54	H		0.081	19.07		
		256-QAM	-27.49	8.97	10.59	2.54	H		0.050	17.02		
2555.0		PI/2 BPSK	-23.06	13.74	10.72	2.56	H	< 2.00	0.155	21.90	1	80
		QPSK	-23.09	13.71	10.72	2.56	H		0.154	21.87		
		16-QAM	-24.14	12.66	10.72	2.56	H		0.121	20.82		
		64-QAM	-25.64	11.16	10.72	2.56	H		0.086	19.32		
		256-QAM	-27.63	9.17	10.72	2.56	H		0.054	17.33		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	dBm	Size	Offset
2517.5		PI/2 BPSK	-23.04	13.89	10.49	2.54	H	< 2.00	0.153	21.84	1	186
		QPSK	-23.10	13.83	10.49	2.54	H		0.151	21.78		
		16-QAM	-24.05	12.88	10.49	2.54	H		0.121	20.83		
		64-QAM	-25.65	11.28	10.49	2.54	H		0.084	19.23		
		256-QAM	-27.67	9.26	10.49	2.54	H		0.053	17.21		
2535.0	Sub6 n7/ 35 MHz [15 kHz]	PI/2 BPSK	-22.84	13.62	10.59	2.54	H	< 2.00	0.147	21.67	1	94
		QPSK	-22.93	13.53	10.59	2.54	H		0.144	21.58		
		16-QAM	-23.77	12.69	10.59	2.54	H		0.119	20.74		
		64-QAM	-25.43	11.03	10.59	2.54	H		0.081	19.08		
		256-QAM	-27.51	8.95	10.59	2.54	H		0.050	17.00		
2552.5		PI/2 BPSK	-23.06	13.74	10.72	2.56	H	< 2.00	0.155	21.90	1	94
		QPSK	-23.15	13.65	10.72	2.56	H		0.152	21.81		
		16-QAM	-24.08	12.72	10.72	2.56	H		0.122	20.88		
		64-QAM	-25.70	11.10	10.72	2.56	H		0.084	19.26		
		256-QAM	-27.79	9.01	10.72	2.56	H		0.052	17.17		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2520.0	Sub6 n7/ 40 MHz [15 kHz]	Pl/2 BPSK	-23.07	13.86	10.49	2.54	H	< 2.00	0.152	21.81	1	214
		QPSK	-23.13	13.80	10.49	2.54	H		0.150	21.75		
		16-QAM	-24.13	12.80	10.49	2.54	H		0.119	20.75		
		64-QAM	-25.71	11.22	10.49	2.54	H		0.083	19.17		
		256-QAM	-27.84	9.09	10.49	2.54	H		0.051	17.04		
2535.0		Pl/2 BPSK	-22.75	13.71	10.59	2.54	H		0.150	21.76	1	108
		QPSK	-22.81	13.65	10.59	2.54	H		0.148	21.70		
		16-QAM	-23.89	12.57	10.59	2.54	H		0.115	20.62		
		64-QAM	-25.42	11.04	10.59	2.54	H		0.081	19.09		
		256-QAM	-27.52	8.94	10.59	2.54	H		0.050	16.99		
2550.0	Pl/2 BPSK	-22.75	13.78	10.69	2.53	H	0.156	21.94	1	108		
	QPSK	-22.77	13.76	10.69	2.53	H	0.156	21.92				
	16-QAM	-23.82	12.71	10.69	2.53	H	0.122	20.87				
	64-QAM	-25.37	11.16	10.69	2.53	H	0.086	19.32				
	256-QAM	-27.40	9.13	10.69	2.53	H	0.054	17.29				

9.2 RADIATED SPURIOUS EMISSIONS

NR Band:	<u>N7</u>
Bandwidth:	<u>5 MHz</u>
Modulation:	<u>PI/2 BPSK</u>
Distance:	<u>1 meters</u>
SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
500500 (2502.5)	5 005.00	-58.65	11.20	-60.08	3.71	H	-52.59	-25.00	1	1
	7 507.50	-50.89	11.55	-43.35	4.60	H	-36.40			
	10 010.00	-61.97	11.47	-52.89	5.47	H	-46.89			
507000 (2535.0)	5 070.00	-58.46	11.25	-59.62	3.80	H	-52.17		1	23
	7 605.00	-47.15	11.60	-40.10	4.64	H	-33.14			
	10 140.00	-62.45	11.36	-52.51	5.48	H	-46.63			
513500 (2567.5)	5 135.00	-57.89	11.43	-58.82	3.81	H	-51.20		1	1
	7 702.50	-47.07	11.42	-39.54	4.66	H	-32.78			
	10 270.00	-62.82	11.51	-51.56	5.57	H	-45.62			

■ NR Band: N7
 ■ Bandwidth: 10 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
501000 (2505.0)	5 010.00	-58.80	11.18	-59.94	3.72	H	-52.48	-25.00	1	1
	7 515.00	-51.98	11.56	-44.40	4.60	H	-37.44			
	10 020.00	-62.16	11.46	-52.48	5.47	H	-46.49			
507000 (2535.0)	5 070.00	-58.60	11.25	-59.76	3.80	H	-52.31		1	26
	7 605.00	-47.21	11.60	-40.16	4.64	H	-33.20			
	10 140.00	-62.59	11.36	-52.65	5.48	H	-46.77			
513000 (2565.0)	5 130.00	-59.66	11.41	-60.63	3.81	H	-53.03		1	26
	7 695.00	-46.91	11.44	-39.18	4.66	H	-32.40			
	10 260.00	-63.01	11.49	-52.39	5.56	H	-46.46			

■ NR Band: N7
 ■ Bandwidth: 15 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
501500 (2507.5)	5 015.00	-59.24	11.17	-60.16	3.70	H	-52.69	-25.00	1	77
	7 522.50	-50.37	11.57	-42.72	4.61	H	-35.76			
	10 030.00	-62.13	11.45	-53.09	5.47	H	-47.11			
507000 (2535.0)	5 070.00	-58.66	11.25	-59.82	3.80	H	-52.37		1	77
	7 605.00	-47.04	11.60	-39.99	4.64	H	-33.03			
	10 140.00	-62.64	11.36	-52.70	5.48	H	-46.82			
512500 (2562.5)	5 125.00	-59.31	11.40	-60.48	3.81	H	-52.89		1	1
	7 687.50	-46.80	11.45	-39.04	4.66	H	-32.25			
	10 250.00	-62.96	11.47	-51.74	5.54	H	-45.81			

■ NR Band:	<u>N7</u>
■ Bandwidth:	<u>20 MHz</u>
■ Modulation:	<u>PI/2 BPSK</u>
■ Distance:	<u>1 meters</u>
■ SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
502000 (2510.0)	5 020.00	-58.55	11.17	-59.25	3.69	H	-51.77	-25.00	1	104
	7 530.00	-50.58	11.57	-42.92	4.60	H	-35.95			
	10 040.00	-62.11	11.44	-52.65	5.49	H	-46.70			
507000 (2535.0)	5 070.00	-58.65	11.25	-59.81	3.80	H	-52.36		1	53
	7 605.00	-46.83	11.60	-39.78	4.64	H	-32.82			
	10 140.00	-62.60	11.36	-52.66	5.48	H	-46.78			
512000 (2560.0)	5 120.00	-59.99	11.38	-61.36	3.81	H	-53.79		1	1
	7 680.00	-47.03	11.47	-39.37	4.70	H	-32.60			
	10 240.00	-62.99	11.45	-52.32	5.54	H	-46.41			

■ NR Band: N7
 ■ Bandwidth: 25 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
502500 (2512.5)	5 025.00	-58.77	11.18	-59.54	3.68	H	-52.04	-25.00	1	131
	7 537.50	-49.50	11.58	-41.97	4.61	H	-35.00			
	10 050.00	-62.09	11.43	-52.89	5.48	H	-46.94			
507000 (2535.0)	5 070.00	-58.64	11.25	-59.80	3.80	H	-52.35		1	66
	7 605.00	-46.38	11.60	-39.33	4.64	H	-32.37			
	10 140.00	-62.55	11.36	-52.61	5.48	H	-46.73			
511500 (2557.5)	5 115.00	-58.31	11.36	-59.69	3.80	H	-52.13		1	66
	7 672.50	-46.43	11.48	-38.86	4.70	H	-32.08			
	10 230.00	-62.95	11.43	-52.04	5.54	H	-46.15			

▣ NR Band:	<u>N7</u>
▣ Bandwidth:	<u>30 MHz</u>
▣ Modulation:	<u>PI/2 BPSK</u>
▣ Distance:	<u>1 meters</u>
▣ SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
503000 (2515.0)	5 030.00	-58.84	11.19	-59.68	3.67	H	-52.16	-25.00	1	158
	7 545.00	-48.19	11.58	-40.73	4.62	H	-33.77			
	10 060.00	-62.14	11.42	-53.02	5.48	H	-47.08			
507000 (2535.0)	5 070.00	-58.61	11.25	-59.77	3.80	H	-52.32		1	158
	7 605.00	-47.11	11.60	-40.06	4.64	H	-33.10			
	10 140.00	-62.57	11.36	-52.63	5.48	H	-46.75			
511000 (2555.0)	5 110.00	-58.65	11.34	-60.04	3.79	H	-52.49		1	80
	7 665.00	-46.43	11.50	-39.14	4.70	H	-32.34			
	10 220.00	-63.02	11.42	-52.64	5.54	H	-46.76			

■ NR Band: N7
 ■ Bandwidth: 35 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 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
503500 (2517.5)	5 035.00	-58.15	11.19	-59.09	3.67	H	-51.57	-25.00	1	186
	7 552.50	-50.22	11.59	-42.76	4.63	H	-35.80			
	10 070.00	-62.10	11.42	-52.78	5.47	H	-46.83			
507000 (2535.0)	5 070.00	-58.59	11.25	-59.75	3.80	H	-52.30		1	94
	7 605.00	-46.76	11.60	-39.71	4.64	H	-32.75			
	10 140.00	-62.58	11.36	-52.64	5.48	H	-46.76			
510500 (2552.5)	5 105.00	-58.57	11.32	-59.85	3.79	H	-52.32		1	94
	7 657.50	-46.82	11.51	-39.74	4.69	H	-32.92			
	10 210.00	-63.05	11.40	-53.03	5.54	H	-47.17			

■ NR Band:	<u>N7</u>
■ Bandwidth:	<u>40 MHz</u>
■ Modulation:	<u>PI/2 BPSK</u>
■ Distance:	<u>1 meters</u>
■ SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
504000 (2520.0)	5 040.00	-60.33	11.20	-61.37	3.68	H	-53.85	-25.00	1	214
	7 560.00	-47.17	11.60	-39.63	4.64	H	-32.67			
	10 080.00	-61.66	11.41	-52.65	5.47	H	-46.71			
507000 (2535.0)	5 070.00	-57.46	11.25	-58.62	3.80	H	-51.17		1	108
	7 605.00	-47.87	11.60	-40.82	4.64	H	-33.86			
	10 140.00	-62.89	11.36	-52.95	5.48	H	-47.07			
510000 (2550.0)	5 100.00	-59.21	11.31	-60.40	3.78	H	-52.87		1	108
	7 650.00	-49.16	11.52	-42.03	4.68	H	-35.19			
	10 200.00	-63.72	11.38	-53.56	5.54	H	-47.72			

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n7	5 MHz	2535.0	BPSK	25	0	4.68
			QPSK			5.90
			16-QAM			6.60
			64-QAM			6.88
			256-QAM			6.58
	10 MHz		BPSK	50		4.72
			QPSK			5.97
			16-QAM			6.64
			64-QAM			6.81
			256-QAM			6.87
	15 MHz		BPSK	75		4.62
			QPSK			5.85
			16-QAM			6.60
			64-QAM			6.73
			256-QAM			6.68
	20 MHz		BPSK	100		5.06
			QPSK			5.86
			16-QAM			6.53
			64-QAM			6.77
			256-QAM			6.63
	25 MHz		BPSK	128		4.98
			QPSK			5.93
			16-QAM			6.58
			64-QAM			6.66
			256-QAM			6.61
	30 MHz		BPSK	160		4.76
			QPSK			5.97
			16-QAM			6.56
			64-QAM			6.72
			256-QAM			6.58

	35 MHz		BPSK	180		4.85
			QPSK			5.92
			16-QAM			6.61
			64-QAM			6.71
			256-QAM			6.61
	40 MHz		BPSK	216		4.76
			QPSK			5.93
			16-QAM			6.67
			64-QAM			6.80
			256-QAM			6.59

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 274 ~ 313.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n7	5 MHz	2535.0	BPSK	25	0	4.5226
			QPSK			4.5221
			16-QAM			4.5137
			64-QAM			4.5129
			256-QAM			4.5128
	10 MHz		BPSK	50		9.0201
			QPSK			9.0544
			16-QAM			8.9826
			64-QAM			9.0167
			256-QAM			8.9739
	15 MHz		BPSK	75		13.422
			QPSK			13.456
			16-QAM			13.466
			64-QAM			13.476
			256-QAM			13.450
	20 MHz		BPSK	100		17.919
			QPSK			17.946
			16-QAM			17.950
			64-QAM			17.932
			256-QAM			17.908
	25 MHz		BPSK	128		23.072
			QPSK			23.038
			16-QAM			22.931
			64-QAM			23.021
			256-QAM			22.917
	30 MHz		BPSK	160		28.849
			QPSK			28.835
			16-QAM			28.764
			64-QAM			28.765
			256-QAM			28.771

	35 MHz		BPSK	180		32.393
			QPSK			32.370
			16-QAM			32.374
			64-QAM			32.363
			256-QAM			32.424
	40 MHz		BPSK	216		38.842
			QPSK			38.893
			16-QAM			38.749
			64-QAM			38.844
			256-QAM			38.835

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 314 ~ 353.

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 n7	5	2502.500	9.8106	30.315	-61.576	-31.261	-25.00
		2535.000	3.8086	29.722	-61.824	-32.102	
		2567.500	3.7688	29.722	-62.192	-32.470	
	10	2505.000	3.7787	29.722	-60.893	-31.171	
		2535.000	3.8086	29.722	-61.175	-31.453	
		2565.000	3.7787	29.722	-61.328	-31.606	
	15	2507.500	3.9283	29.722	-61.973	-32.251	
		2535.000	3.7887	29.722	-62.143	-32.421	
		2562.500	3.7787	29.722	-61.345	-31.623	
	20	2510.000	9.7408	30.315	-61.915	-31.600	
		2535.000	4.9352	29.722	-61.647	-31.925	
		2560.000	4.0579	29.722	-60.679	-30.957	
	25	2512.500	4.9253	29.722	-61.145	-31.423	
		2535.000	5.2244	30.315	-61.825	-31.510	
		2557.500	4.9652	29.722	-61.068	-31.346	
	30	2515.000	4.9253	29.722	-61.370	-31.648	
		2535.000	8.8235	30.315	-61.454	-31.139	
		2555.000	4.9552	29.722	-61.245	-31.523	
	35	2517.500	8.1855	30.315	-61.862	-31.547	
		2535.000	5.9921	30.315	-60.501	-30.186	
		2552.500	3.7688	29.722	-61.227	-31.505	
	40	2520.000	3.7588	29.722	-61.346	-31.624	
		2535.000	6.0020	30.315	-61.687	-31.372	
		2550.000	4.0579	29.722	-61.012	-31.290	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 354 ~ 401.
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	27.012
1 – 5	29.722
5 – 10	30.315
10 – 15	30.840
15 – 20	31.213
Above 20	31.855

9.6 CHANNEL EDGE

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	2 500 MHz ~ 2 496 MHz	C.E ~ (C.E +1 MHz)	2 490.5 MHz ~ 2 496 MHz	(C.E + 1 MHz) ~ (C.E + 5 MHz)	Below 2 490.5 MHz	(C.E + 5 MHz) ~ (C.E + X MHz)	Above (C.E + X MHz)
				Lower	Upper	Lower	Upper	Lower	Upper	Upper
5	2502.500	BPSK	Full RB	-19.28	-21.50	-37.16	-28.81	-51.87	-37.44	-38.55
10	2505.000	BPSK	Full RB	-24.69	-32.20	-36.96	-29.02	-46.77	-32.98	-38.55
15	2507.500	BPSK	Full RB	-26.48	-35.78	-38.99	-31.17	-47.51	-31.10	-41.15
20	2510.000	BPSK	Full RB	-27.03	-36.40	-42.96	-34.59	-47.20	-33.15	-46.00
25	2512.500	BPSK	Full RB	-25.48	-34.58	-42.69	-34.39	-45.24	-33.97	-42.79
30	2515.000	BPSK	Full RB	-24.24	-23.86	-40.09	-29.04	-47.04	-33.51	-43.21
35	2517.500	BPSK	Full RB	-23.89	-33.45	-39.75	-34.08	-47.17	-33.49	-42.75
40	2520.000	BPSK	Full RB	-16.39	-17.39	-38.49	-29.94	-48.57	-34.48	-46.42
Limit(dBm)				-10.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	C.E ~ (C.E ± 1 MHz)		(C.E ± 1 MHz) ~ (C.E ± 5 MHz)	
				Lower	Upper	Lower	Upper
5	2535.000	BPSK	Full RB	-22.77	-21.53	-26.35	-26.69
	2567.500	BPSK	Full RB	-19.33	-23.77	-27.58	-28.78
10	2535.000	BPSK	Full RB	-23.45	-30.66	-28.22	-29.51
	2565.000	BPSK	Full RB	-24.18	-31.96	-31.63	-29.40
15	2535.000	BPSK	Full RB	-25.36	-35.09	-29.67	-32.72
	2562.500	BPSK	Full RB	-25.77	-35.06	-32.16	-32.68
20	2535.000	BPSK	Full RB	-26.30	-34.71	-30.24	-33.24
	2560.000	BPSK	Full RB	-26.25	-33.26	-32.71	-30.38
25	2535.000	BPSK	Full RB	-23.11	-32.20	-27.93	-31.96
	2557.500	BPSK	Full RB	-24.67	-31.88	-30.10	-31.06
30	2535.000	BPSK	Full RB	-22.24	-23.04	-26.67	-27.76
	2555.000	BPSK	Full RB	-23.04	-23.40	-28.61	-27.60
35	2535.000	BPSK	Full RB	-21.27	-32.63	-27.45	-33.60
	2552.500	BPSK	Full RB	-22.89	-30.84	-28.99	-30.12
40	2535.000	BPSK	Full RB	-14.52	-16.51	-27.88	-29.34
	2550.000	BPSK	Full RB	-15.22	-16.71	-28.98	-28.55
Limi(dBm)				-10.0		-10.0	

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	(C.E $\pm$ 5 MHz)		Above (C.E $\pm$ X MHz)	
				~ (C.E $\pm$ X MHz)			
				Lower	Upper	Lower	Upper
5	2535.000	BPSK	Full RB	-36.90	-37.45	-37.18	-37.80
	2567.500	BPSK	Full RB	-36.51	-38.14	-37.99	-39.65
10	2535.000	BPSK	Full RB	-29.88	-29.74	-40.95	-41.72
	2565.000	BPSK	Full RB	-34.13	-32.52	-37.63	-40.11
15	2535.000	BPSK	Full RB	-31.14	-31.57	-43.71	-44.70
	2562.500	BPSK	Full RB	-34.13	-32.40	-44.92	-51.18
20	2535.000	BPSK	Full RB	-32.11	-32.55	-44.54	-43.92
	2560.000	BPSK	Full RB	-35.19	-33.09	-41.88	-50.64
25	2535.000	BPSK	Full RB	-33.17	-33.29	-44.39	-43.74
	2557.500	BPSK	Full RB	-33.90	-33.11	-42.81	-52.87
30	2535.000	BPSK	Full RB	-32.89	-32.44	-52.34	-44.12
	2555.000	BPSK	Full RB	-33.90	-33.13	-41.84	-59.58
35	2535.000	BPSK	Full RB	-34.84	-33.60	-59.51	-53.47
	2552.500	BPSK	Full RB	-32.64	-34.67	-42.77	-59.63
40	2535.000	BPSK	Full RB	-34.63	-34.85	-59.91	-54.51
	2550.000	BPSK	Full RB	-34.72	-36.13	-52.57	-59.52
Limit(dBm)				-13.0		-25.0	

Note:

1. C.E = Channel Edge
2. X = X is the greater of 6 MHz or the actual emission bandwidth
3. Result(dBm) = Reading + Factor
4. Plots of the EUT's Channel Edge are shown Page 402 ~ 457.

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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2502.500	100 %	+20(Ref)	2502 499 999	0.0	0.000 000	0.000
	100 %	-30	2502 500 000	0.0	0.000 000	0.000
	100 %	-20	2502 499 999	-0.7	0.000 000	0.000
	100 %	-10	2502 499 999	-0.1	0.000 000	0.000
	100 %	0	2502 500 000	0.1	0.000 000	0.000
	100 %	+10	2502 499 999	0.0	0.000 000	0.000
	100 %	+30	2502 499 999	-0.3	0.000 000	0.000
	100 %	+40	2502 499 999	-0.4	0.000 000	0.000
	100 %	+50	2502 499 999	-0.1	0.000 000	0.000
	Batt. Endpoint	+20	2502 499 999	-0.8	0.000 000	0.000
2567.500	100 %	+20(Ref)	2567 500 001	0.0	0.000 000	0.000
	100 %	-30	2567 500 002	0.8	0.000 000	0.000
	100 %	-20	2567 500 002	0.9	0.000 000	0.000
	100 %	-10	2567 500 002	1.1	0.000 000	0.000
	100 %	0	2567 500 001	0.4	0.000 000	0.000
	100 %	+10	2567 500 001	0.0	0.000 000	0.000
	100 %	+30	2567 500 002	0.7	0.000 000	0.000
	100 %	+40	2567 500 001	0.0	0.000 000	0.000
	100 %	+50	2567 500 002	0.7	0.000 000	0.000
	Batt. Endpoint	+20	2567 500 001	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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2505.000	100 %	+20(Ref)	2504 999 999	0.0	0.000 000	0.000
	100 %	-30	2504 999 999	-0.4	0.000 000	0.000
	100 %	-20	2504 999 997	-1.5	0.000 000	-0.001
	100 %	-10	2504 999 998	-0.8	0.000 000	0.000
	100 %	0	2504 999 997	-1.8	0.000 000	-0.001
	100 %	+10	2504 999 998	-0.7	0.000 000	0.000
	100 %	+30	2504 999 998	-1.1	0.000 000	0.000
	100 %	+40	2504 999 998	-1.2	0.000 000	0.000
	100 %	+50	2504 999 998	-1.0	0.000 000	0.000
	Batt. Endpoint	+20	2504 999 998	-1.1	0.000 000	0.000
2565.000	100 %	+20(Ref)	2564 999 999	0.0	0.000 000	0.000
	100 %	-30	2564 999 998	-0.9	0.000 000	0.000
	100 %	-20	2564 999 999	0.1	0.000 000	0.000
	100 %	-10	2564 999 998	-0.8	0.000 000	0.000
	100 %	0	2564 999 999	-0.4	0.000 000	0.000
	100 %	+10	2564 999 998	-0.9	0.000 000	0.000
	100 %	+30	2564 999 998	-1.0	0.000 000	0.000
	100 %	+40	2564 999 999	-0.4	0.000 000	0.000
	100 %	+50	2564 999 999	-0.3	0.000 000	0.000
	Batt. Endpoint	+20	2564 999 998	-1.0	0.000 000	0.000

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2507.500	100 %	+20(Ref)	2507 500 000	0.0	0.000 000	0.000
	100 %	-30	2507 499 999	-0.5	0.000 000	0.000
	100 %	-20	2507 499 999	-0.2	0.000 000	0.000
	100 %	-10	2507 499 999	-0.8	0.000 000	0.000
	100 %	0	2507 499 999	-0.3	0.000 000	0.000
	100 %	+10	2507 500 000	0.8	0.000 000	0.000
	100 %	+30	2507 499 999	-0.2	0.000 000	0.000
	100 %	+40	2507 500 000	0.6	0.000 000	0.000
	100 %	+50	2507 500 000	0.1	0.000 000	0.000
	Batt. Endpoint	+20	2507 500 000	0.1	0.000 000	0.000
2562.500	100 %	+20(Ref)	2562 500 000	0.0	0.000 000	0.000
	100 %	-30	2562 500 000	0.0	0.000 000	0.000
	100 %	-20	2562 499 999	-0.9	0.000 000	0.000
	100 %	-10	2562 499 999	-1.3	0.000 000	0.000
	100 %	0	2562 499 999	-0.5	0.000 000	0.000
	100 %	+10	2562 499 999	-1.1	0.000 000	0.000
	100 %	+30	2562 499 999	-0.8	0.000 000	0.000
	100 %	+40	2562 499 999	-0.5	0.000 000	0.000
	100 %	+50	2562 499 999	-0.9	0.000 000	0.000
	Batt. Endpoint	+20	2562 499 999	-1.1	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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2510.000	100 %	+20(Ref)	2510 000 000	0.0	0.000 000	0.000
	100 %	-30	2509 999 999	-0.9	0.000 000	0.000
	100 %	-20	2510 000 000	0.2	0.000 000	0.000
	100 %	-10	2509 999 998	-1.2	0.000 000	0.000
	100 %	0	2509 999 998	-1.3	0.000 000	-0.001
	100 %	+10	2509 999 998	-1.3	0.000 000	-0.001
	100 %	+30	2509 999 999	-0.8	0.000 000	0.000
	100 %	+40	2509 999 999	-0.7	0.000 000	0.000
	100 %	+50	2509 999 999	-0.8	0.000 000	0.000
	Batt. Endpoint	+20	2509 999 999	-1.0	0.000 000	0.000
2560.000	100 %	+20(Ref)	2559 999 999	0.0	0.000 000	0.000
	100 %	-30	2559 999 999	0.0	0.000 000	0.000
	100 %	-20	2559 999 998	-1.3	0.000 000	0.000
	100 %	-10	2559 999 999	0.0	0.000 000	0.000
	100 %	0	2559 999 998	-0.8	0.000 000	0.000
	100 %	+10	2559 999 999	-0.2	0.000 000	0.000
	100 %	+30	2559 999 999	-0.5	0.000 000	0.000
	100 %	+40	2559 999 999	0.0	0.000 000	0.000
	100 %	+50	2559 999 999	0.0	0.000 000	0.000
	Batt. Endpoint	+20	2559 999 998	-1.4	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. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2512.500	100 %	+20(Ref)	2512 499 999	0.0	0.000 000	0.000
	100 %	-30	2512 499 997	-1.4	0.000 000	-0.001
	100 %	-20	2512 499 998	-1.1	0.000 000	0.000
	100 %	-10	2512 499 998	-0.5	0.000 000	0.000
	100 %	0	2512 499 999	-0.2	0.000 000	0.000
	100 %	+10	2512 499 998	-1.1	0.000 000	0.000
	100 %	+30	2512 499 998	-0.4	0.000 000	0.000
	100 %	+40	2512 499 998	-1.2	0.000 000	0.000
	100 %	+50	2512 499 997	-2.0	0.000 000	-0.001
	Batt. Endpoint	+20	2512 499 997	-1.7	0.000 000	-0.001
2557.500	100 %	+20(Ref)	2557 500 000	0.0	0.000 000	0.000
	100 %	-30	2557 499 998	-1.8	0.000 000	-0.001
	100 %	-20	2557 499 999	-0.8	0.000 000	0.000
	100 %	-10	2557 499 998	-1.6	0.000 000	-0.001
	100 %	0	2557 499 999	-0.4	0.000 000	0.000
	100 %	+10	2557 499 998	-1.2	0.000 000	0.000
	100 %	+30	2557 499 999	-0.7	0.000 000	0.000
	100 %	+40	2557 499 999	-0.1	0.000 000	0.000
	100 %	+50	2557 499 998	-1.3	0.000 000	-0.001
	Batt. Endpoint	+20	2557 499 998	-1.1	0.000 000	0.000

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2515.000	100 %	+20(Ref)	2515 000 000	0.0	0.000 000	0.000
	100 %	-30	2514 999 999	-1.0	0.000 000	0.000
	100 %	-20	2514 999 999	-0.8	0.000 000	0.000
	100 %	-10	2514 999 999	-0.3	0.000 000	0.000
	100 %	0	2514 999 999	-0.9	0.000 000	0.000
	100 %	+10	2514 999 998	-1.3	0.000 000	-0.001
	100 %	+30	2514 999 999	-1.0	0.000 000	0.000
	100 %	+40	2515 000 000	0.1	0.000 000	0.000
	100 %	+50	2515 000 000	0.5	0.000 000	0.000
	Batt. Endpoint	+20	2514 999 999	-0.8	0.000 000	0.000
2555.000	100 %	+20(Ref)	2554 999 999	0.0	0.000 000	0.000
	100 %	-30	2554 999 998	-1.4	0.000 000	-0.001
	100 %	-20	2554 999 998	-0.9	0.000 000	0.000
	100 %	-10	2554 999 998	-0.9	0.000 000	0.000
	100 %	0	2554 999 998	-0.8	0.000 000	0.000
	100 %	+10	2554 999 999	-0.5	0.000 000	0.000
	100 %	+30	2554 999 998	-1.0	0.000 000	0.000
	100 %	+40	2554 999 998	-1.3	0.000 000	0.000
	100 %	+50	2554 999 999	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	2554 999 998	-1.0	0.000 000	0.000

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

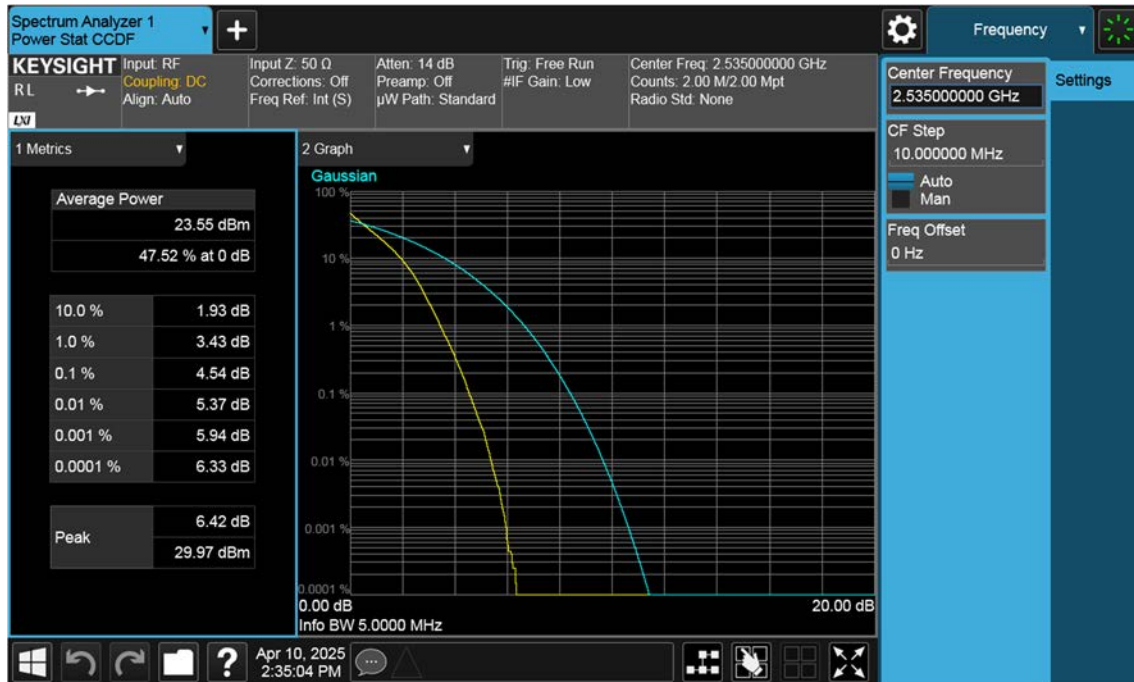
Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2517.500	100 %	+20(Ref)	2517 500 000	0.0	0.000 000	0.000
	100 %	-30	2517 499 999	-0.3	0.000 000	0.000
	100 %	-20	2517 499 999	-0.4	0.000 000	0.000
	100 %	-10	2517 499 999	-0.2	0.000 000	0.000
	100 %	0	2517 499 999	-0.1	0.000 000	0.000
	100 %	+10	2517 500 000	0.1	0.000 000	0.000
	100 %	+30	2517 499 999	-0.6	0.000 000	0.000
	100 %	+40	2517 499 999	-0.1	0.000 000	0.000
	100 %	+50	2517 500 000	0.5	0.000 000	0.000
	Batt. Endpoint	+20	2517 499 999	-0.4	0.000 000	0.000
2552.500	100 %	+20(Ref)	2552 499 999	0.0	0.000 000	0.000
	100 %	-30	2552 499 999	-0.7	0.000 000	0.000
	100 %	-20	2552 499 998	-1.1	0.000 000	0.000
	100 %	-10	2552 499 998	-1.7	0.000 000	-0.001
	100 %	0	2552 499 999	-0.6	0.000 000	0.000
	100 %	+10	2552 499 998	-0.9	0.000 000	0.000
	100 %	+30	2552 499 998	-0.9	0.000 000	0.000
	100 %	+40	2552 499 999	-0.4	0.000 000	0.000
	100 %	+50	2552 499 999	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	2552 499 998	-1.0	0.000 000	0.000

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

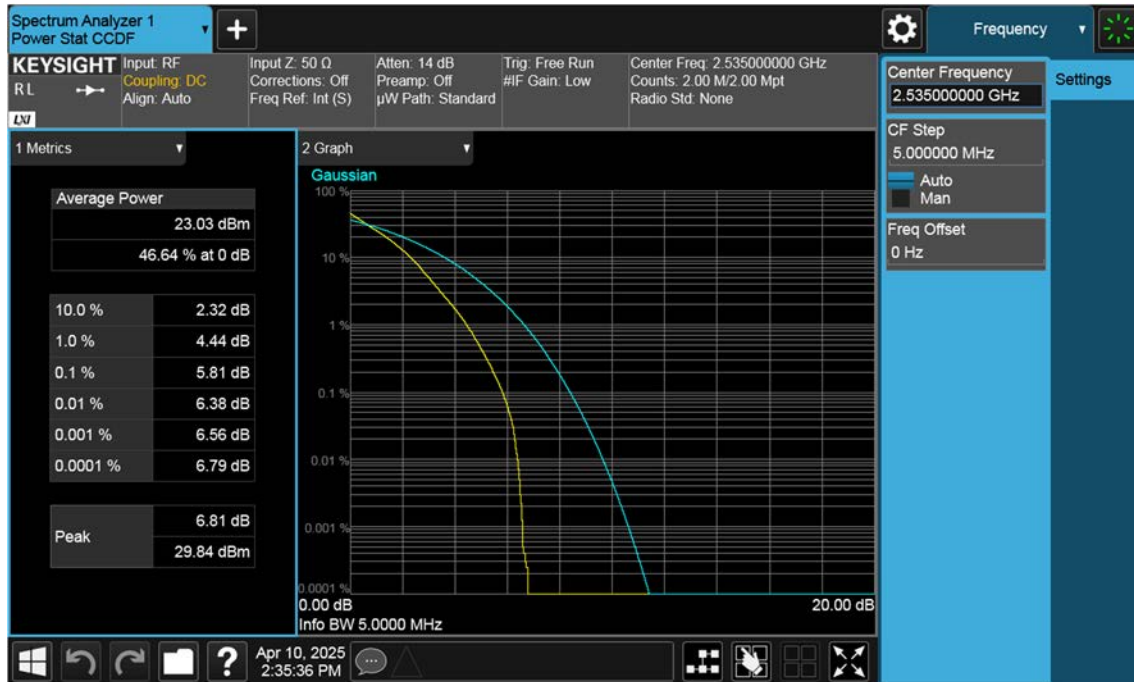
Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2520.000	100 %	+20(Ref)	2519 999 999	0.0	0.000 000	0.000
	100 %	-30	2519 999 998	-0.6	0.000 000	0.000
	100 %	-20	2519 999 998	-1.1	0.000 000	0.000
	100 %	-10	2519 999 997	-1.4	0.000 000	-0.001
	100 %	0	2519 999 999	-0.2	0.000 000	0.000
	100 %	+10	2519 999 997	-1.9	0.000 000	-0.001
	100 %	+30	2519 999 998	-1.2	0.000 000	0.000
	100 %	+40	2519 999 998	-1.1	0.000 000	0.000
	100 %	+50	2519 999 998	-0.9	0.000 000	0.000
	Batt. Endpoint	+20	2519 999 998	-1.0	0.000 000	0.000
2550.000	100 %	+20(Ref)	2549 999 999	0.0	0.000 000	0.000
	100 %	-30	2549 999 998	-1.4	0.000 000	-0.001
	100 %	-20	2549 999 999	-0.5	0.000 000	0.000
	100 %	-10	2549 999 999	-0.8	0.000 000	0.000
	100 %	0	2549 999 999	-0.2	0.000 000	0.000
	100 %	+10	2549 999 998	-1.1	0.000 000	0.000
	100 %	+30	2549 999 999	-0.4	0.000 000	0.000
	100 %	+40	2549 999 999	-0.7	0.000 000	0.000
	100 %	+50	2549 999 998	-1.3	0.000 000	0.000
	Batt. Endpoint	+20	2549 999 998	-1.1	0.000 000	0.000

10. TEST PLOTS(Main 2 ANT)

5 M_PAR_Mid_BPSK_FullRB



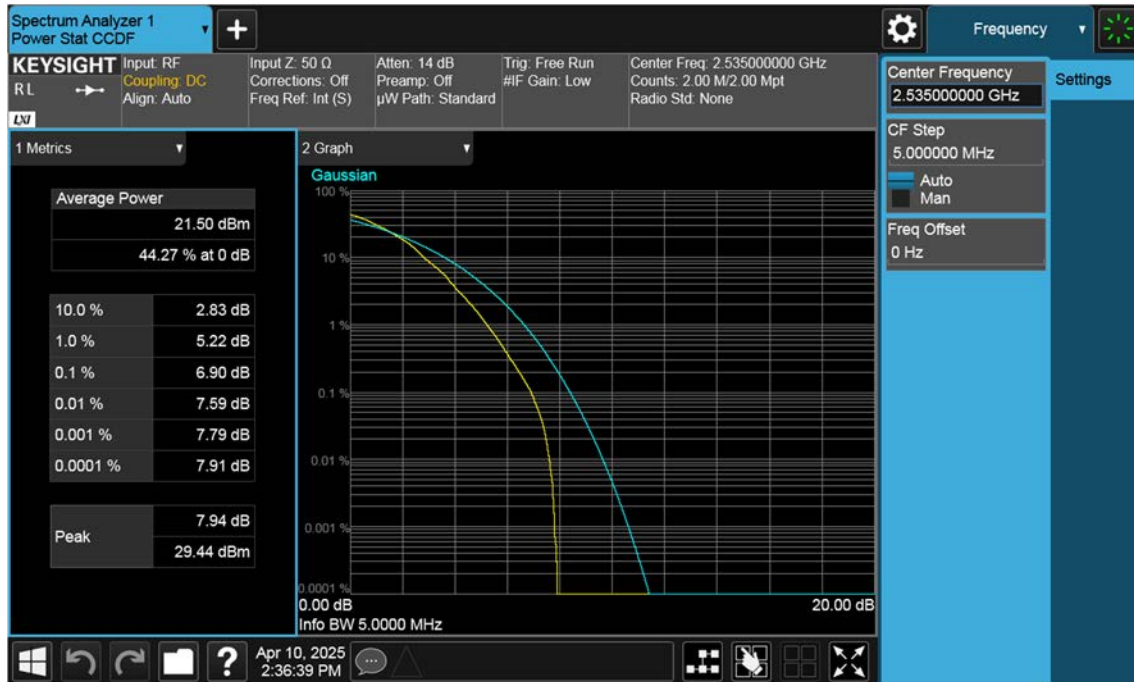
5 M_PAR_Mid_QPSK_FullRB



5 M_PAR_Mid_16QAM_FullRB



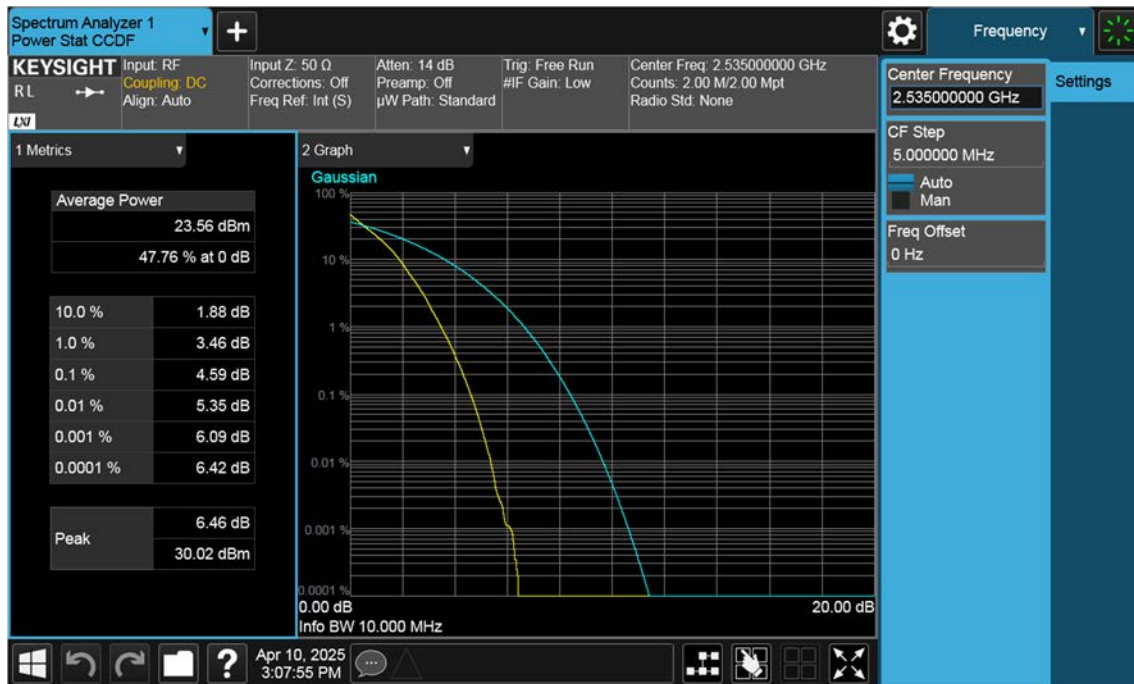
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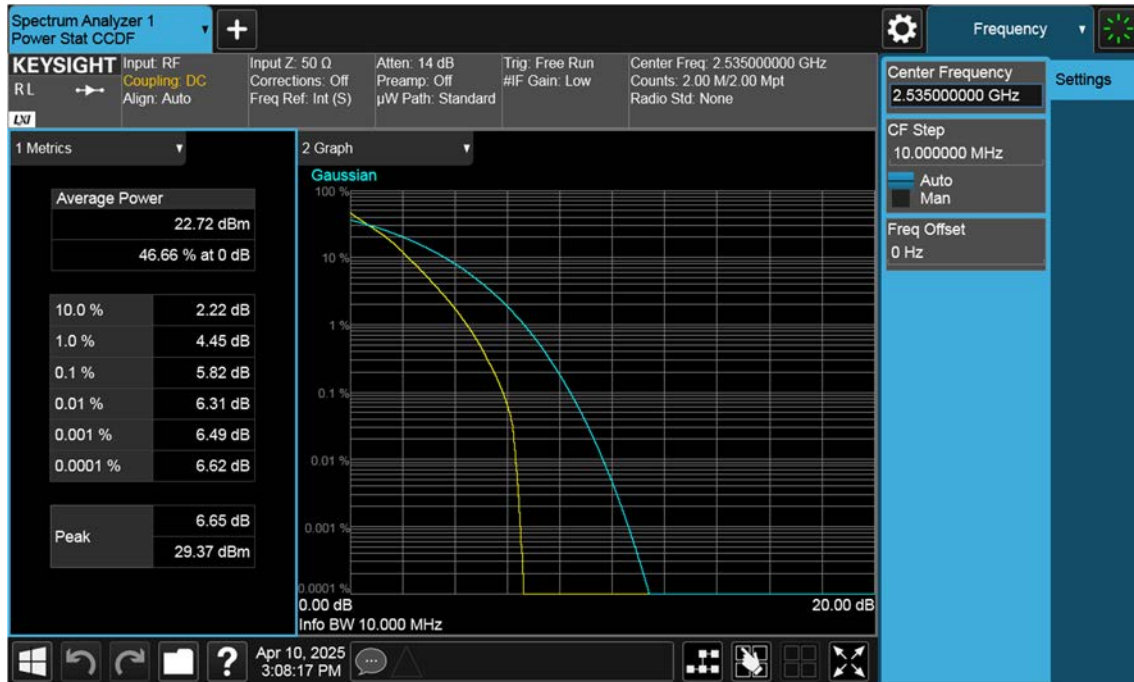
5 M_PAR_Mid_256QAM_FullRB



10 M_PAR_Mid_BPSK_FullRB



10 M_PAR_Mid_QPSK_FullRB



10 M_PAR_Mid_16QAM_FullRB



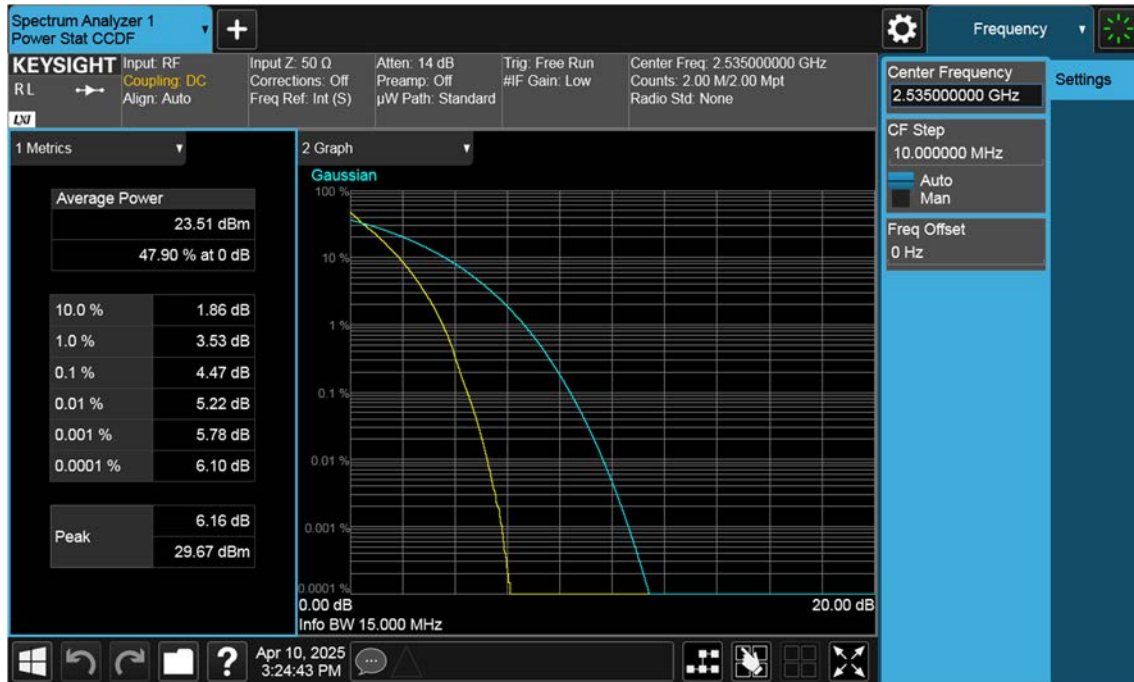
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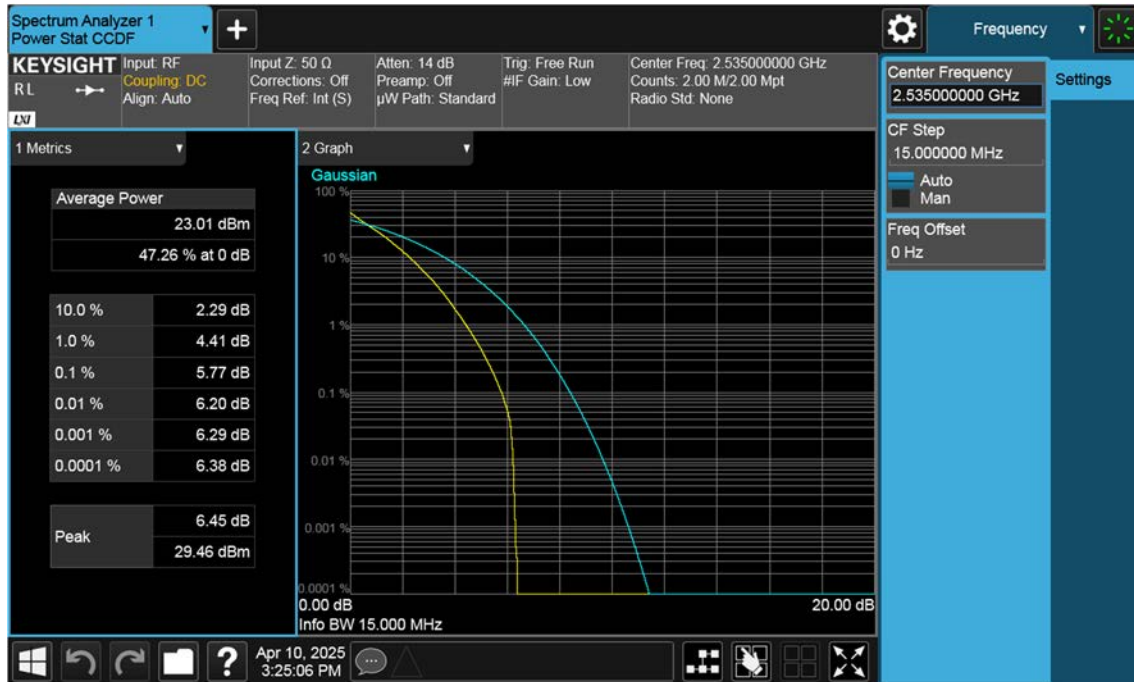
10 M_PAR_Mid_256QAM_FullRB



15 M_PAR_Mid_BPSK_FullIRB



15 M_PAR_Mid_QPSK_FullRB



15 M_PAR_Mid_16QAM_FullRB



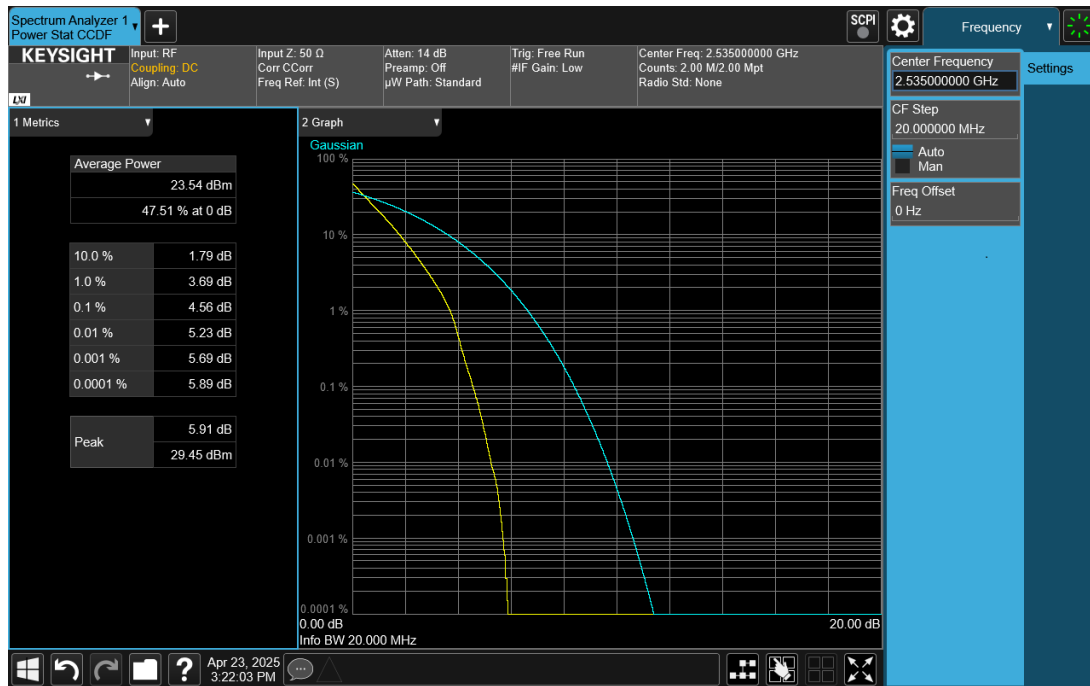
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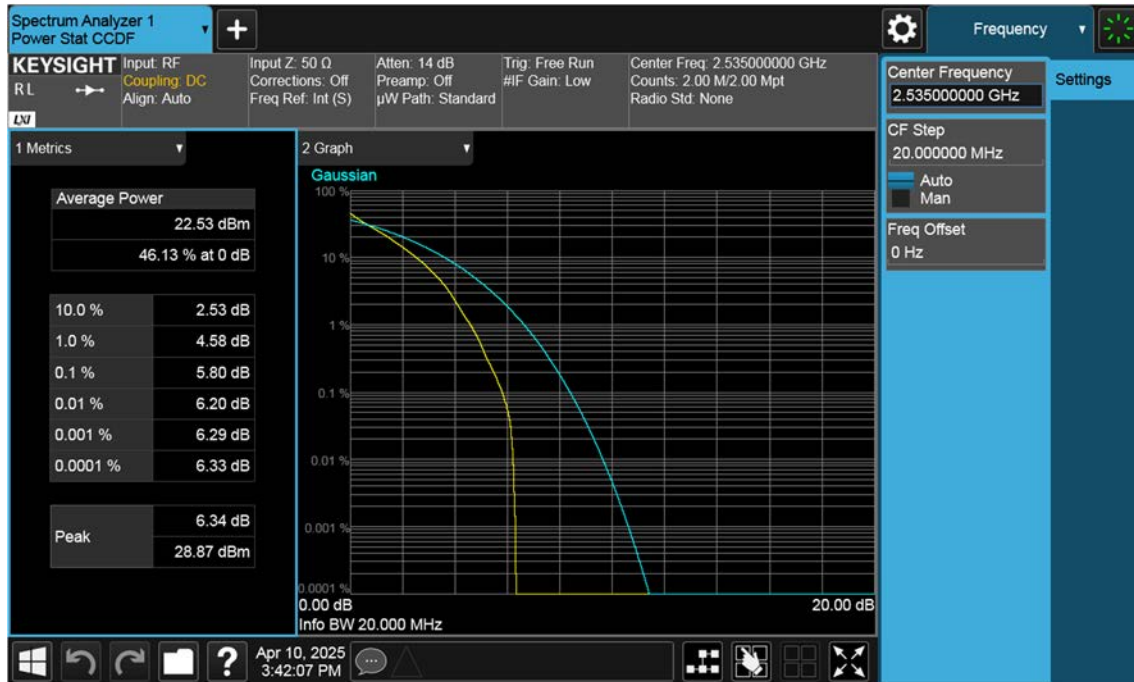
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20 M_PAR_Mid_BPSK_FullIRB



20 M_PAR_Mid_QPSK_FullRB



20 M_PAR_Mid_16QAM_FullRB



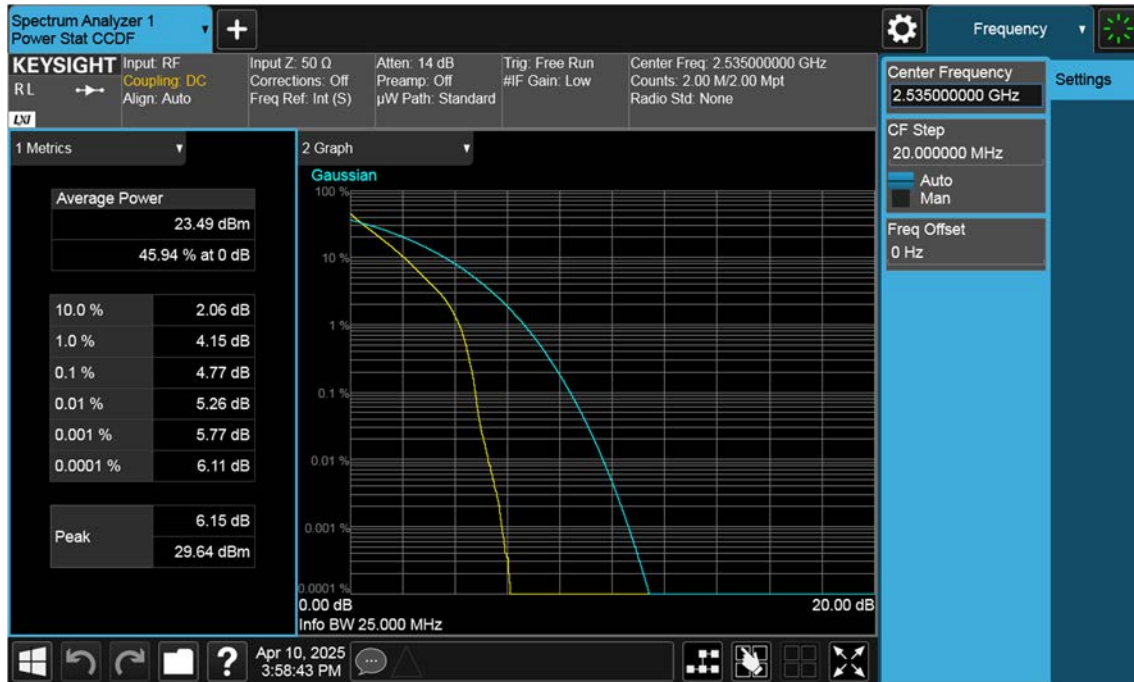
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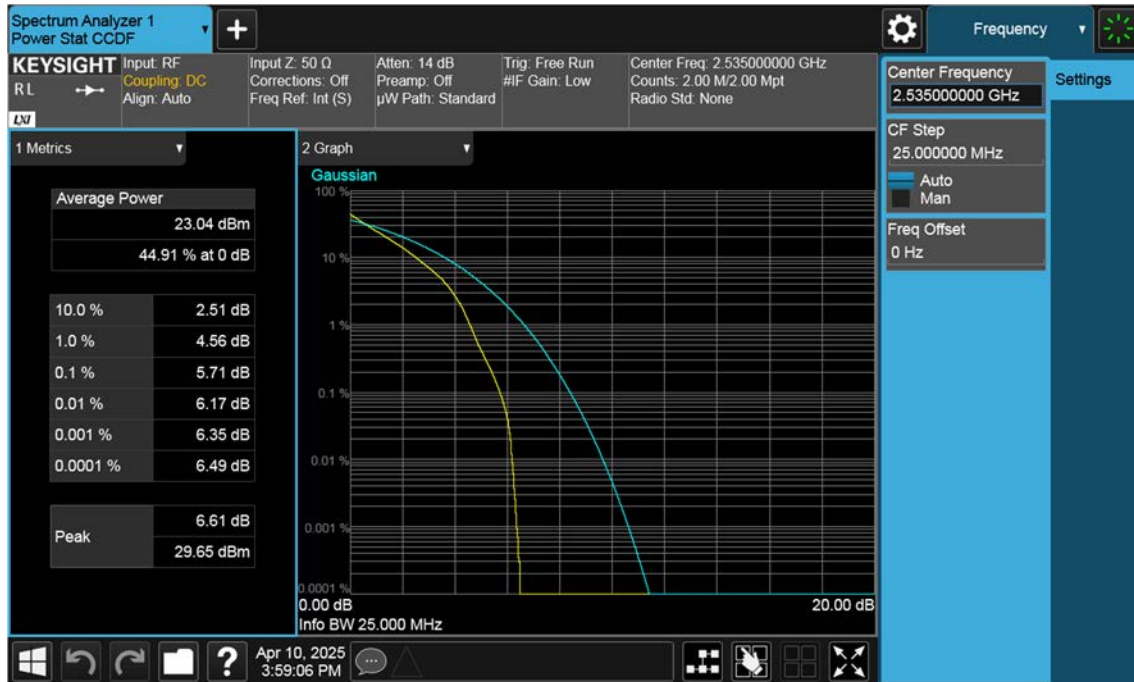
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25 M_PAR_Mid_BPSK_FullRB



25 M_PAR_Mid_QPSK_FullRB



25 M_PAR_Mid_16QAM_FullRB



25 M_PAR_Mid_64QAM_FullRB



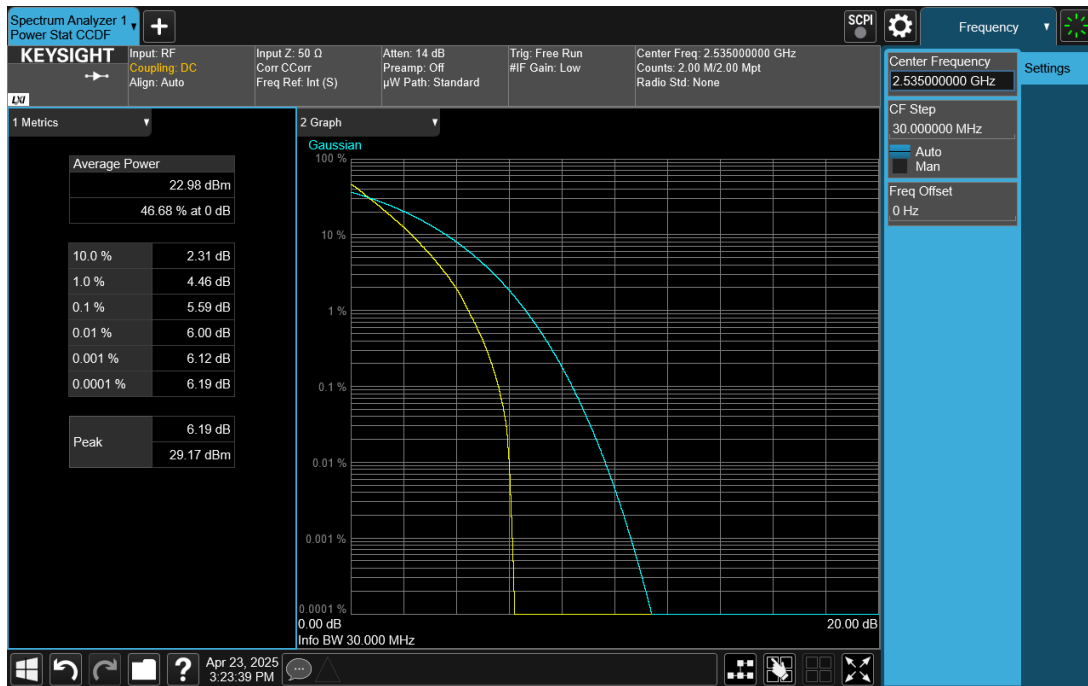
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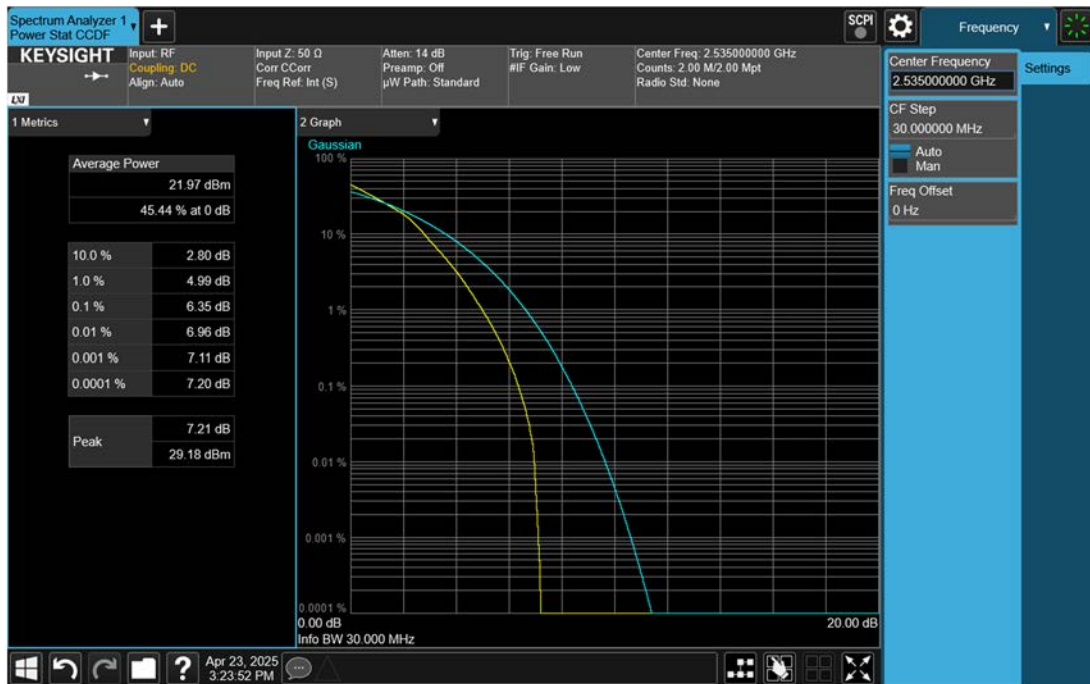
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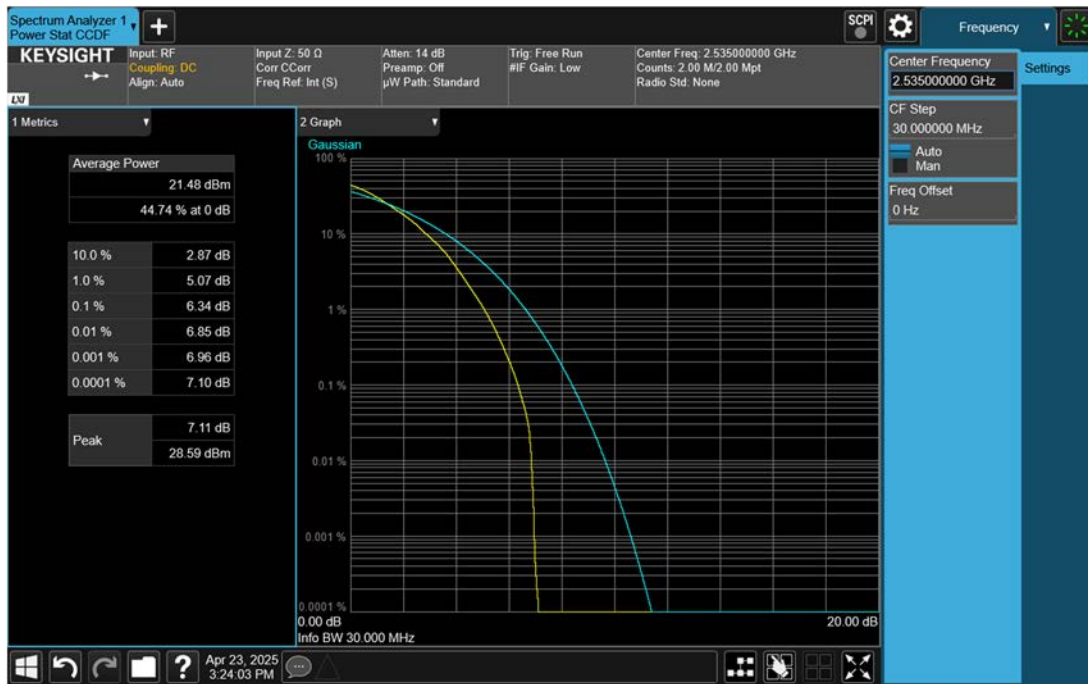
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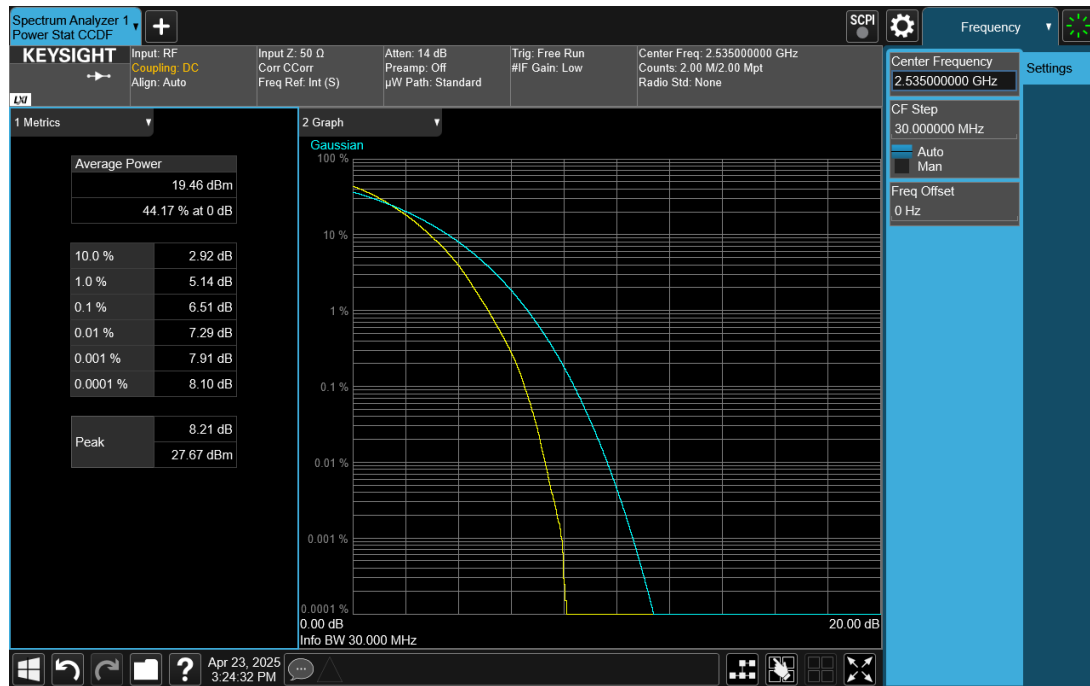
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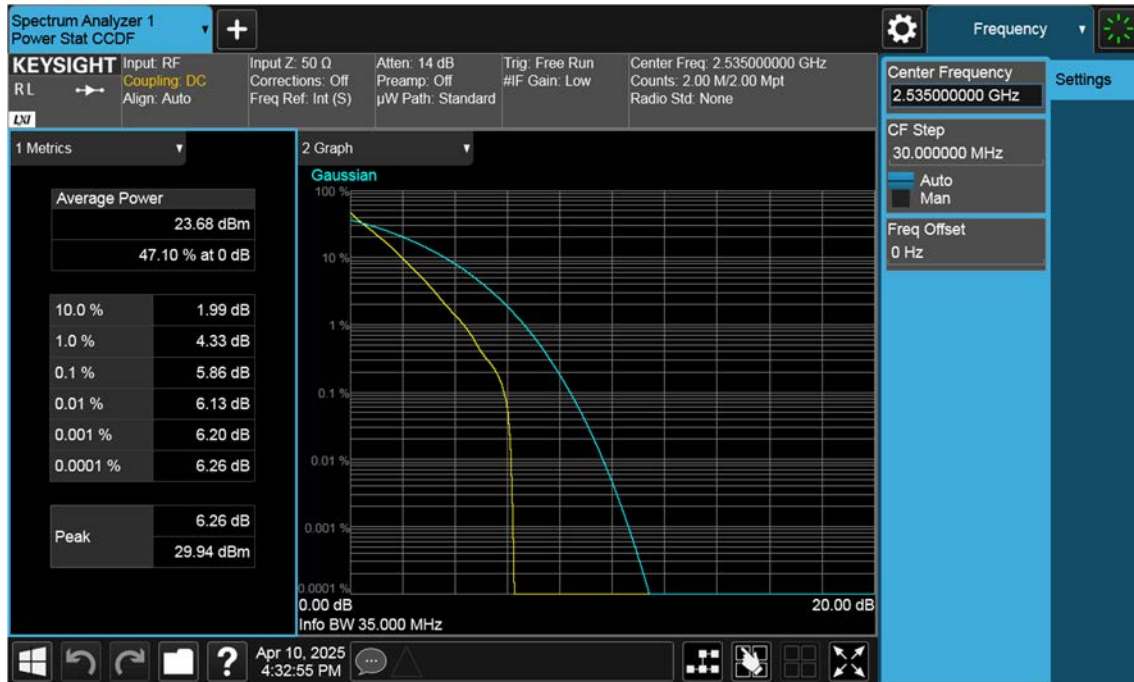
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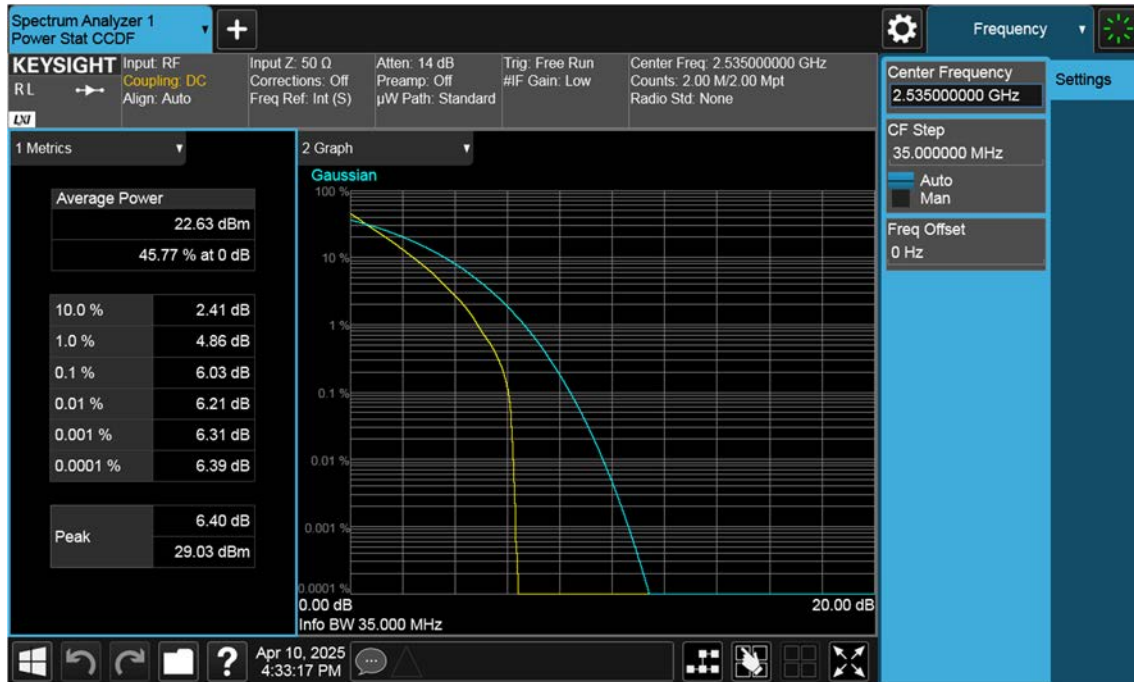
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35 M_PAR_Mid_BPSK_FullRB



35 M_PAR_Mid_QPSK_FullRB



35 M_PAR_Mid_16QAM_FullRB



35 M_PAR_Mid_64QAM_FullRB



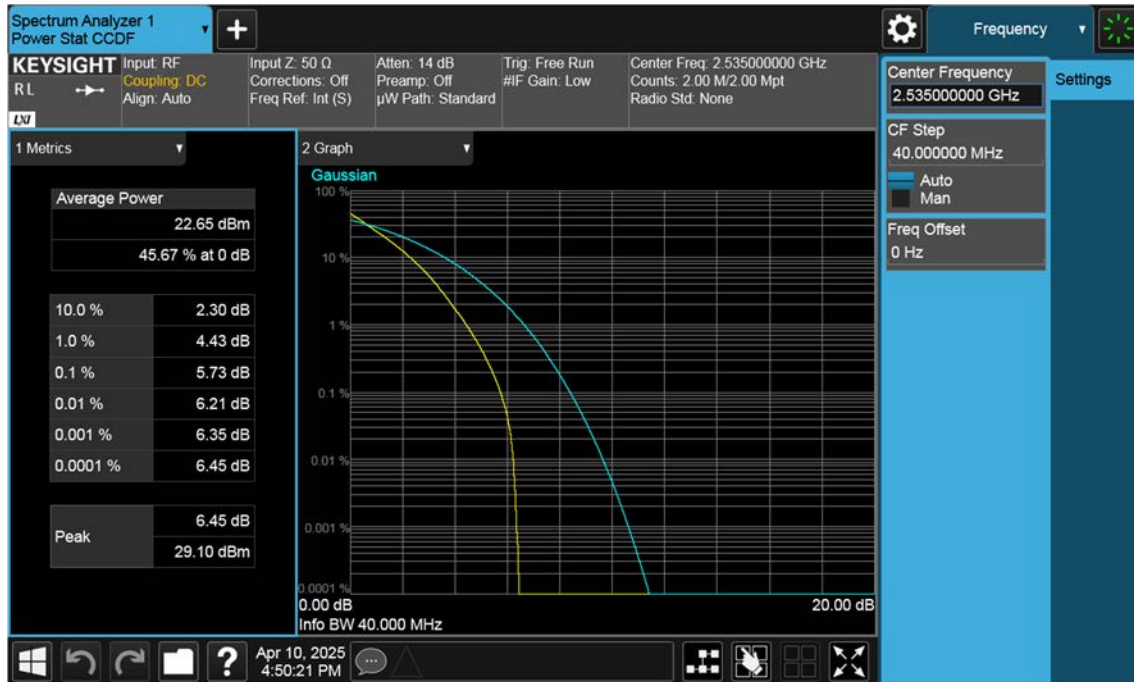
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40 M_PAR_Mid_BPSK_FullRB



40 M_PAR_Mid_QPSK_FullRB



40 M_PAR_Mid_16QAM_FullRB



40 M_PAR_Mid_64QAM_FullRB



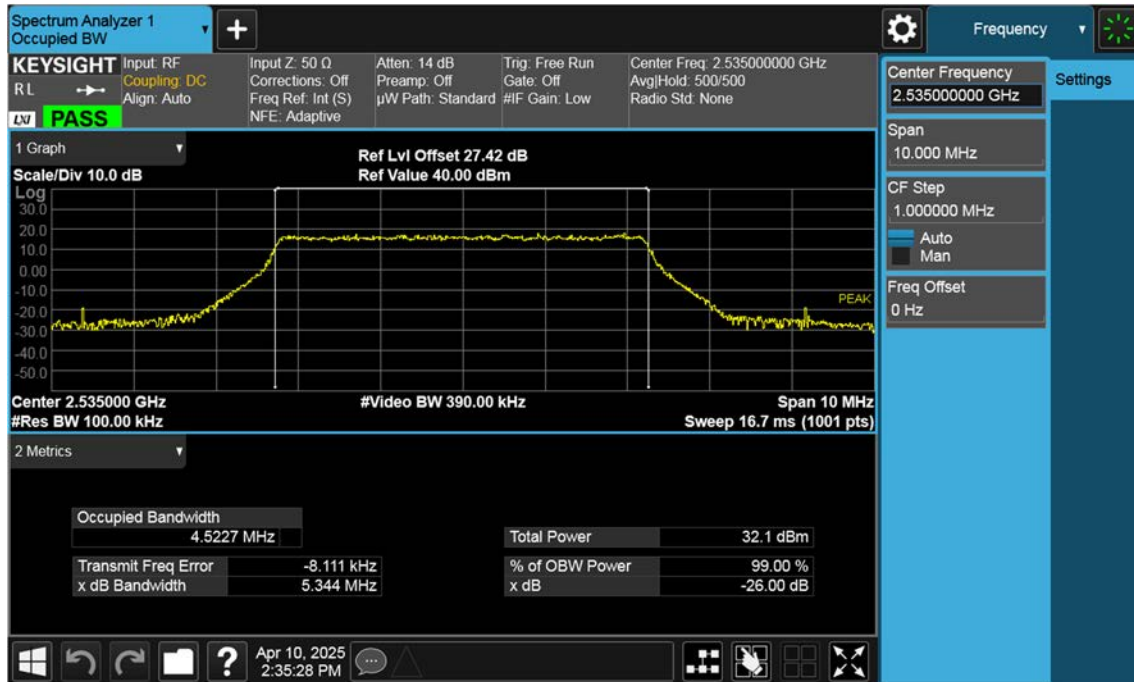
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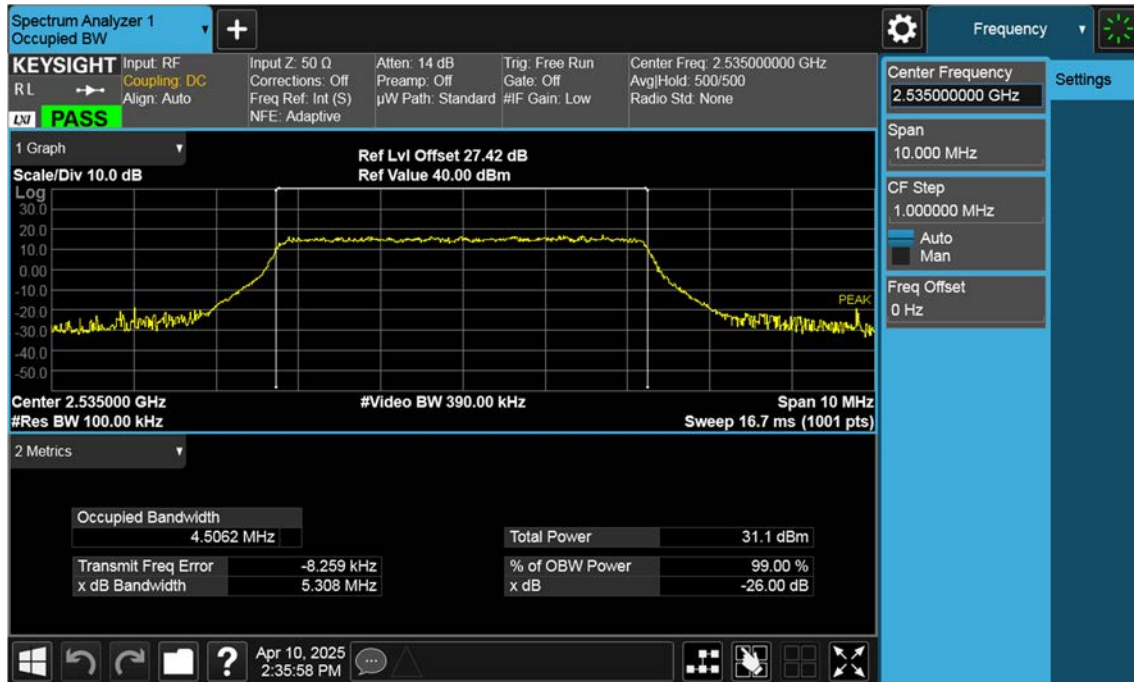
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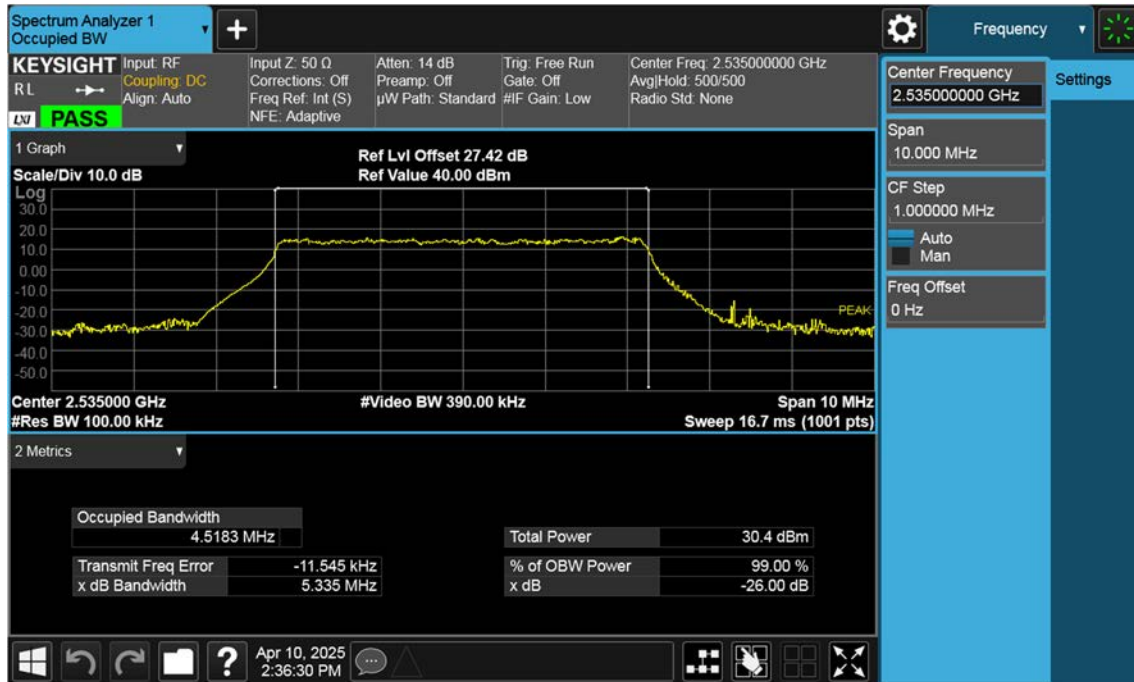
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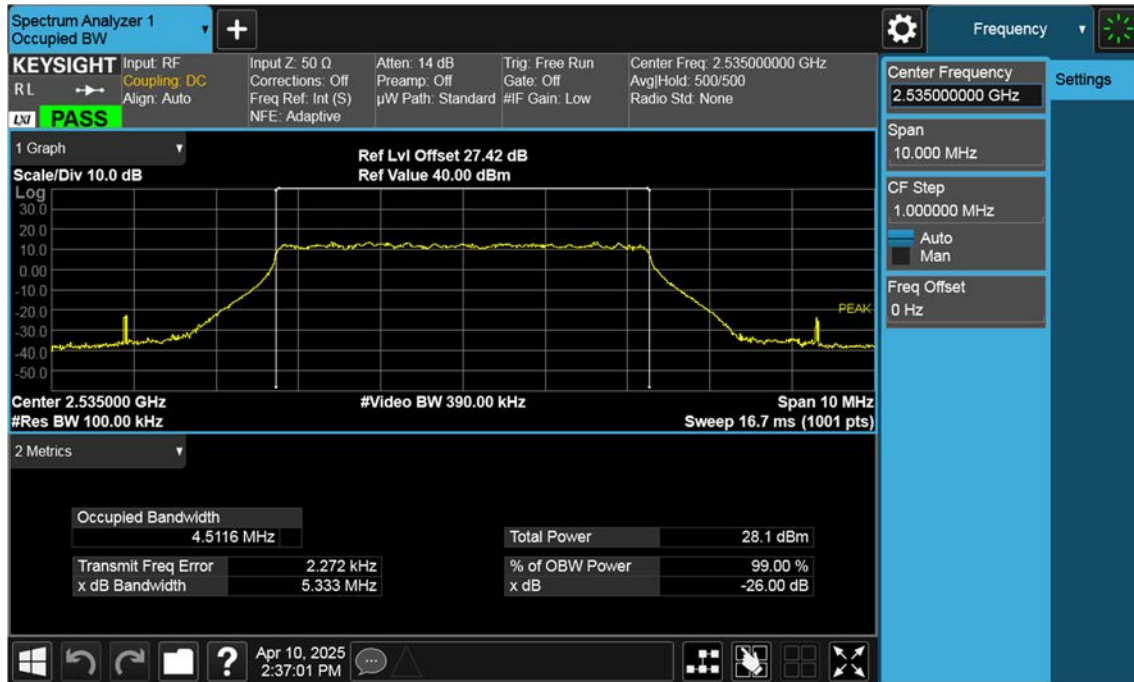
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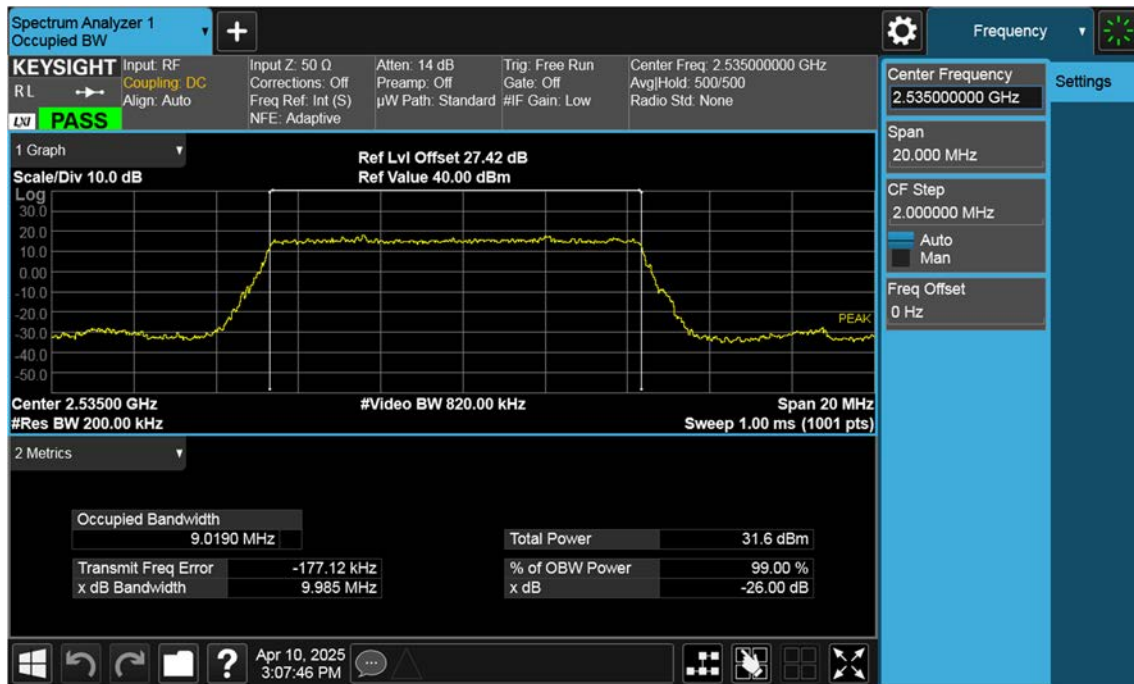
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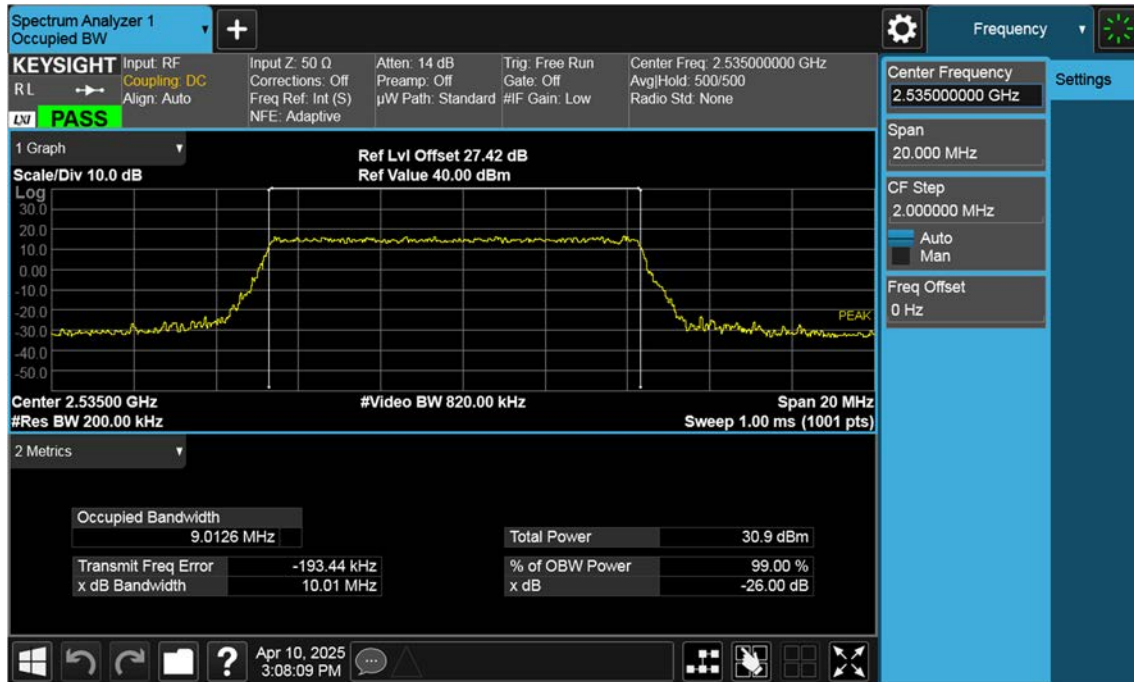
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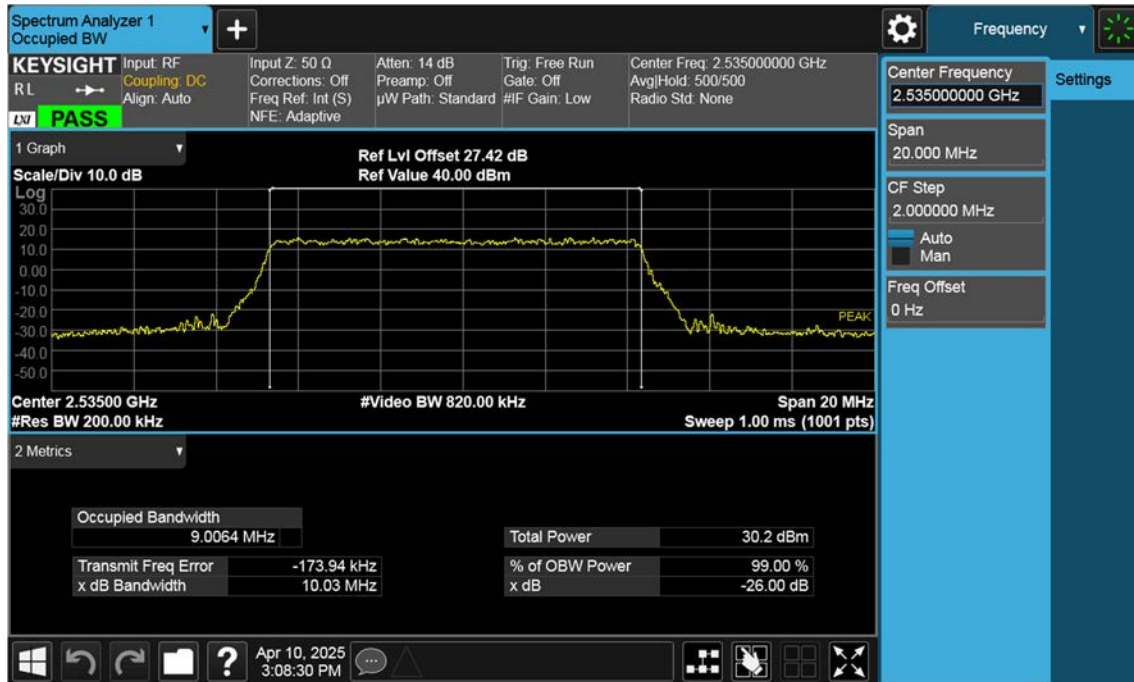
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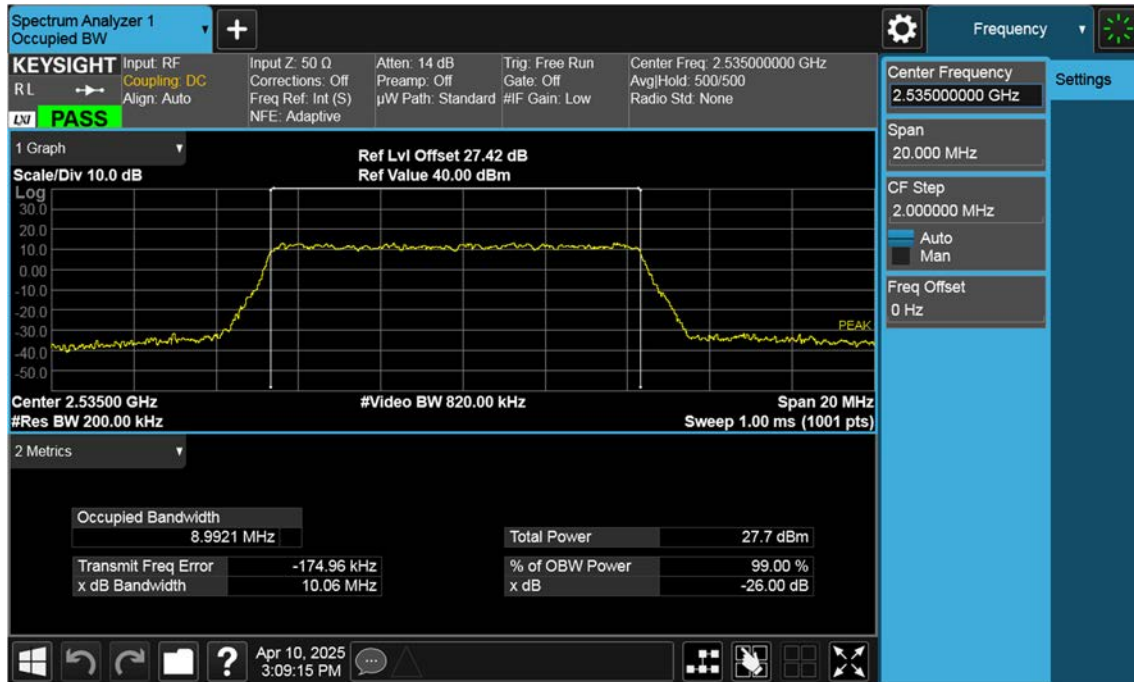
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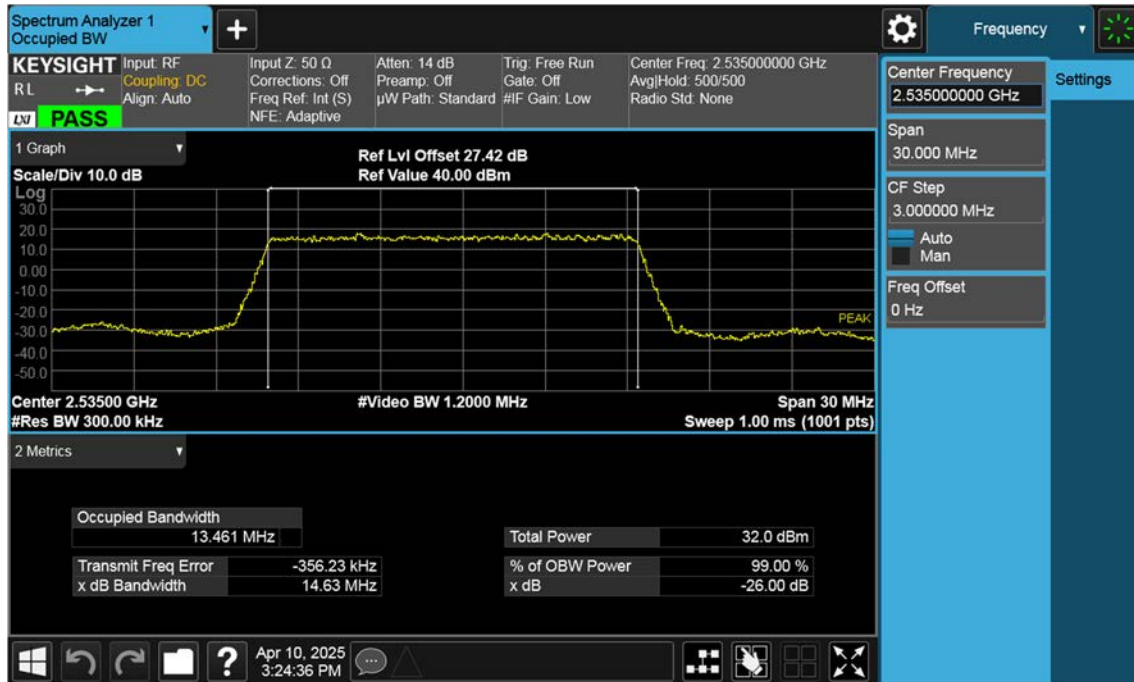
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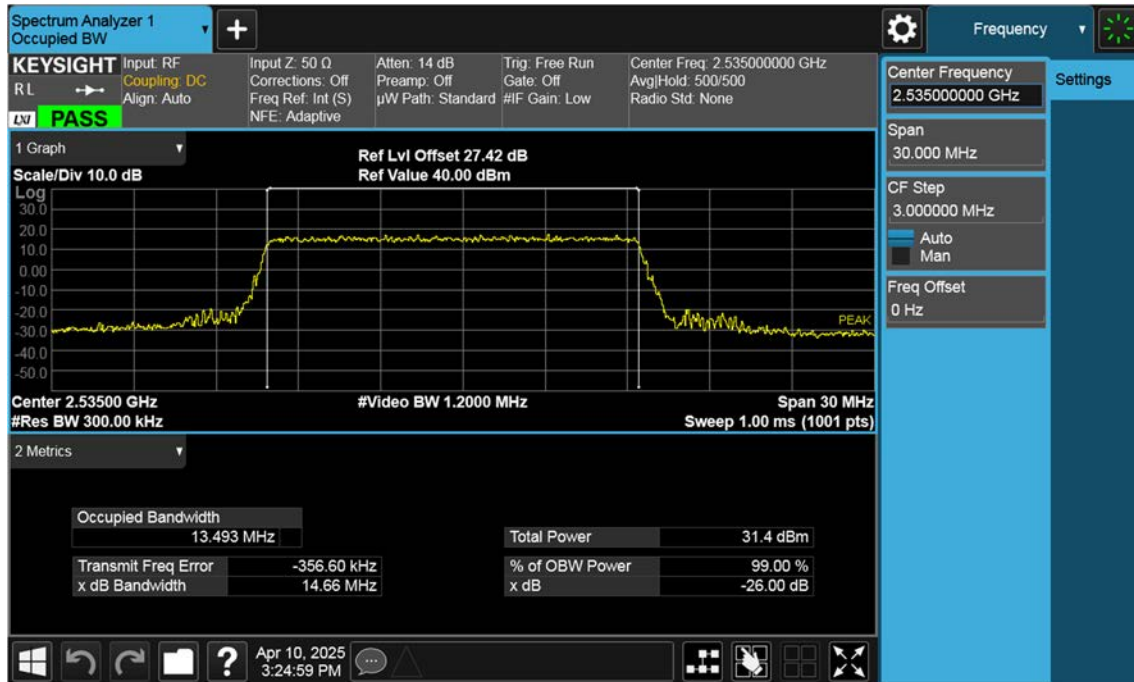
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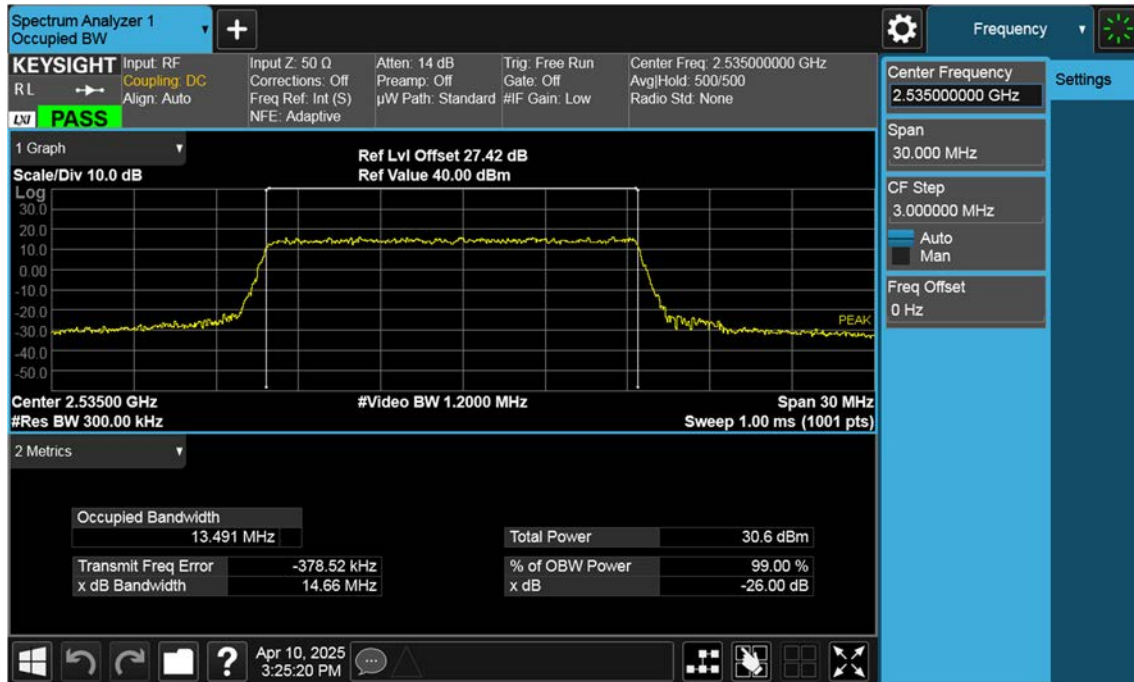
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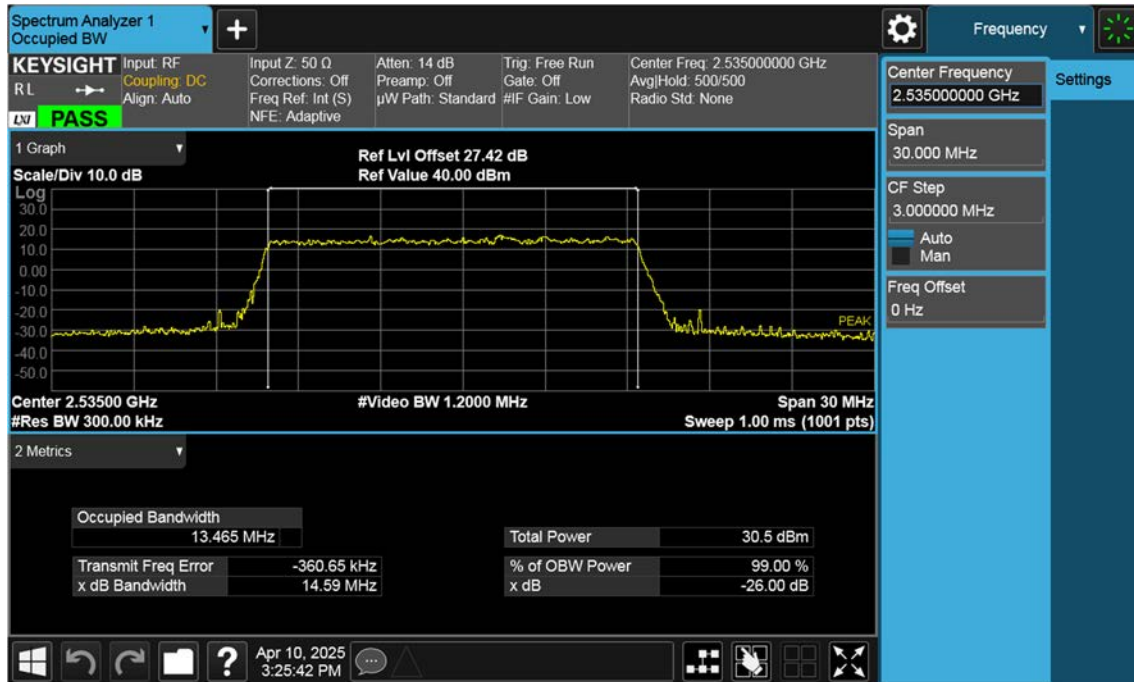
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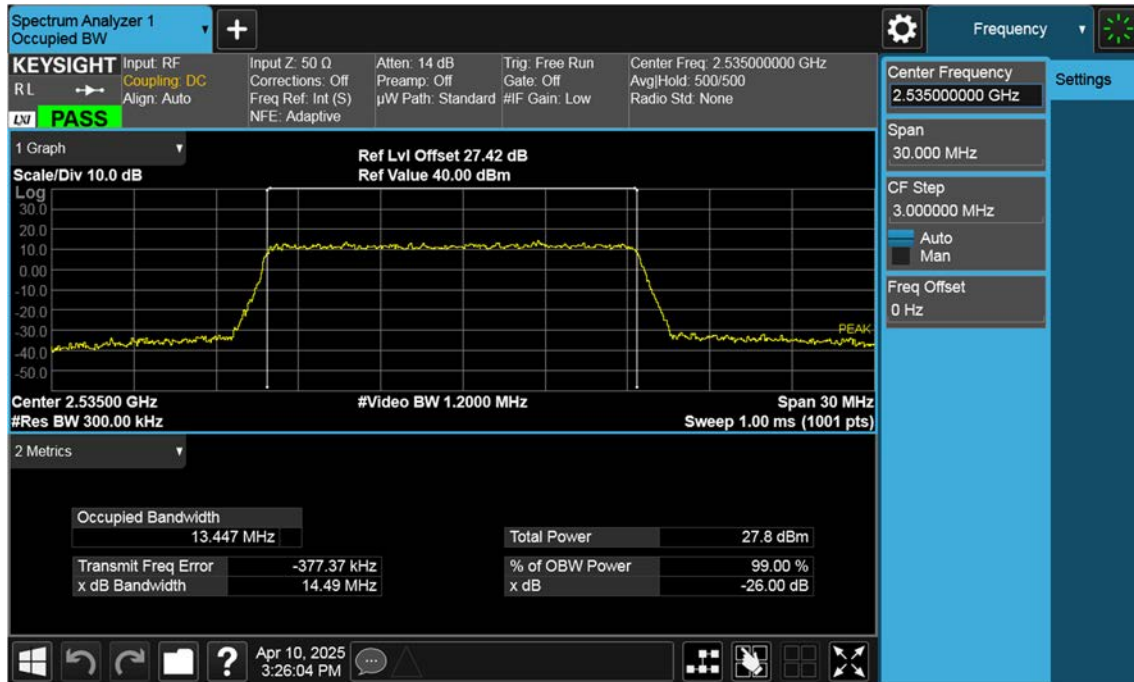
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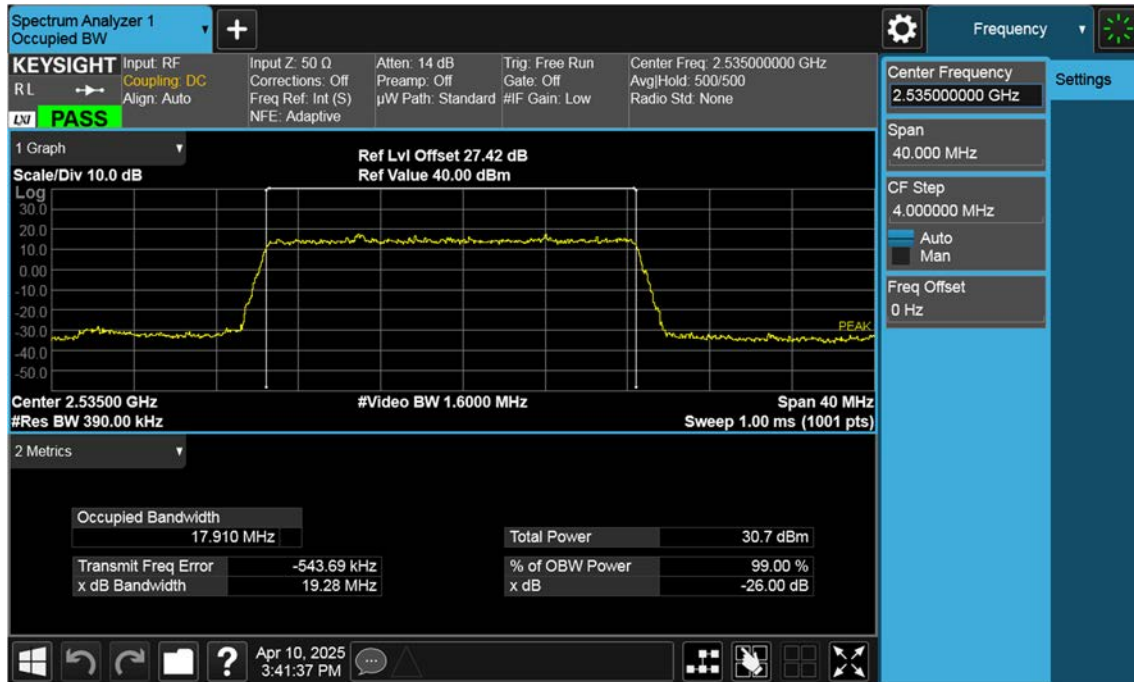
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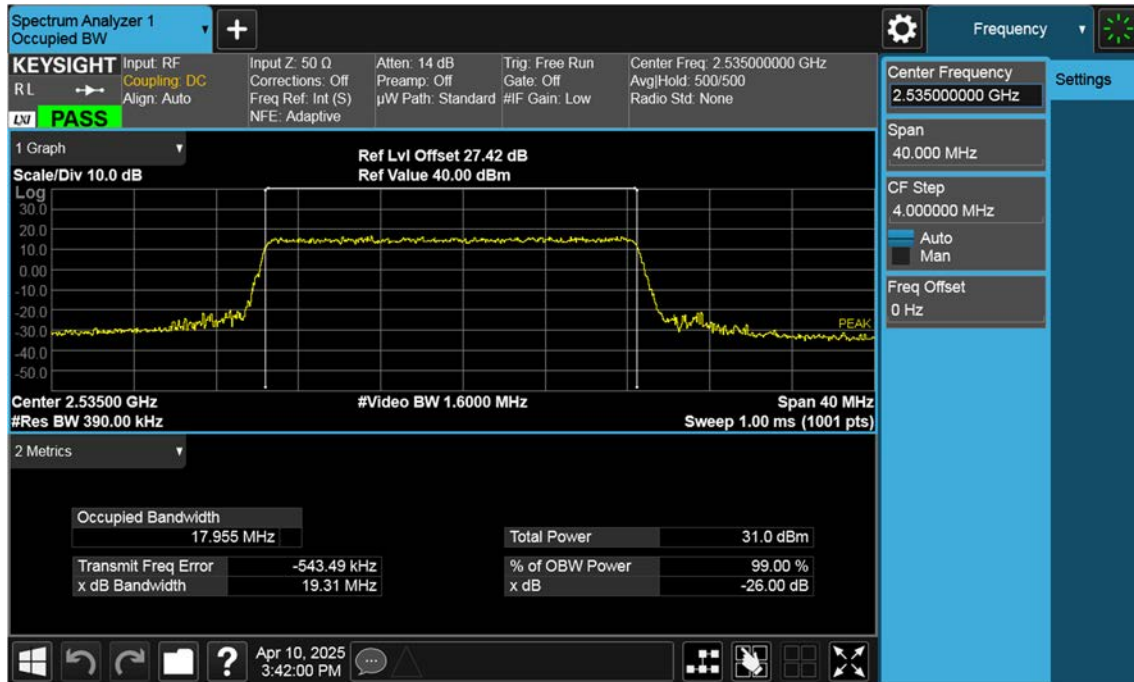
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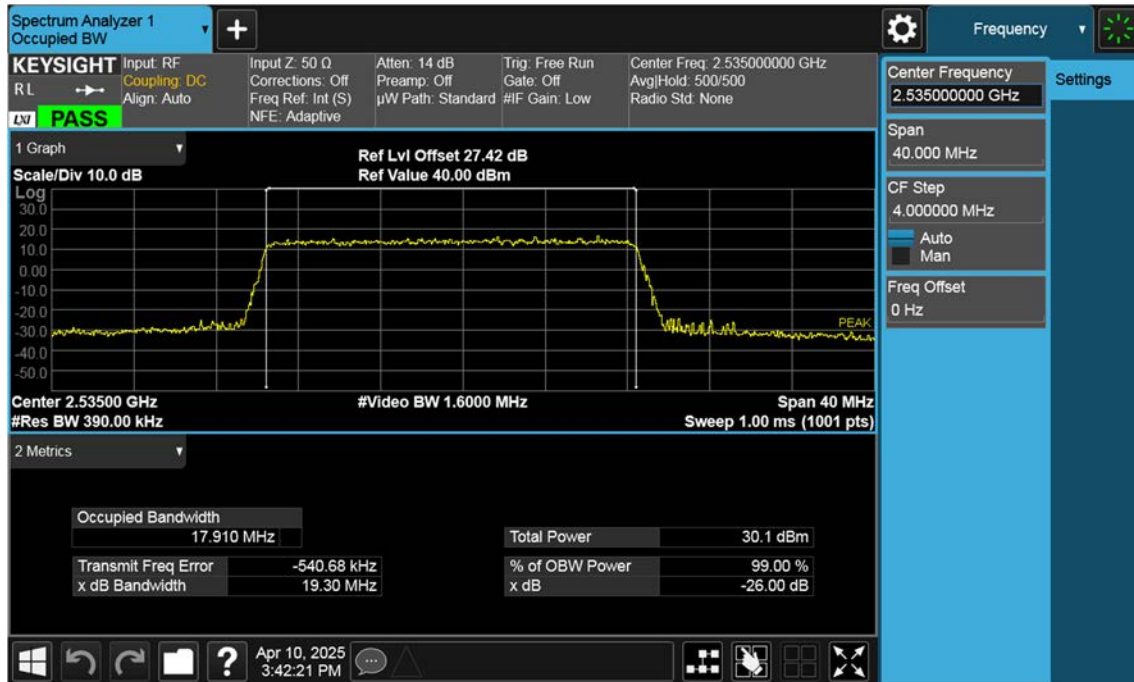
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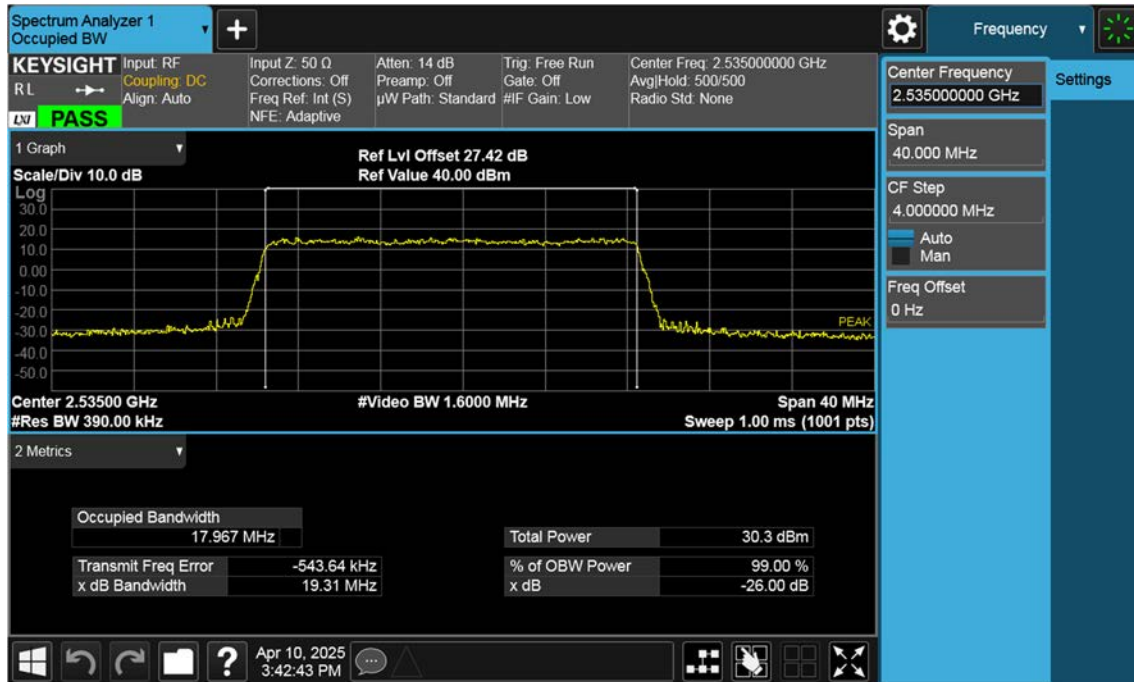
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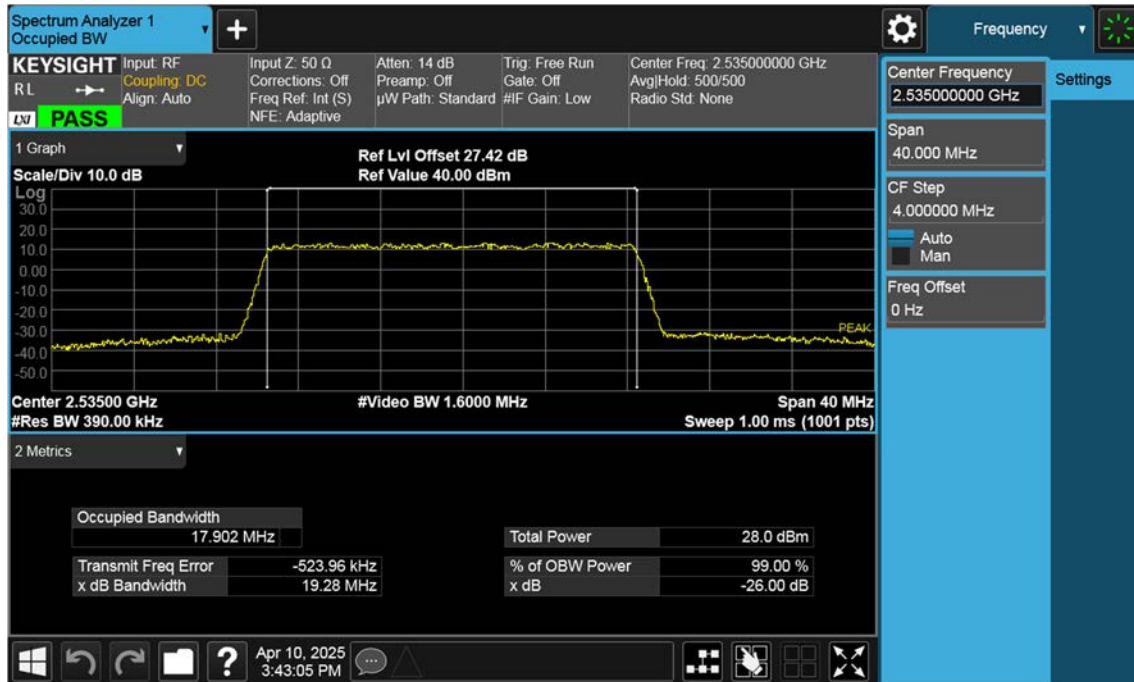
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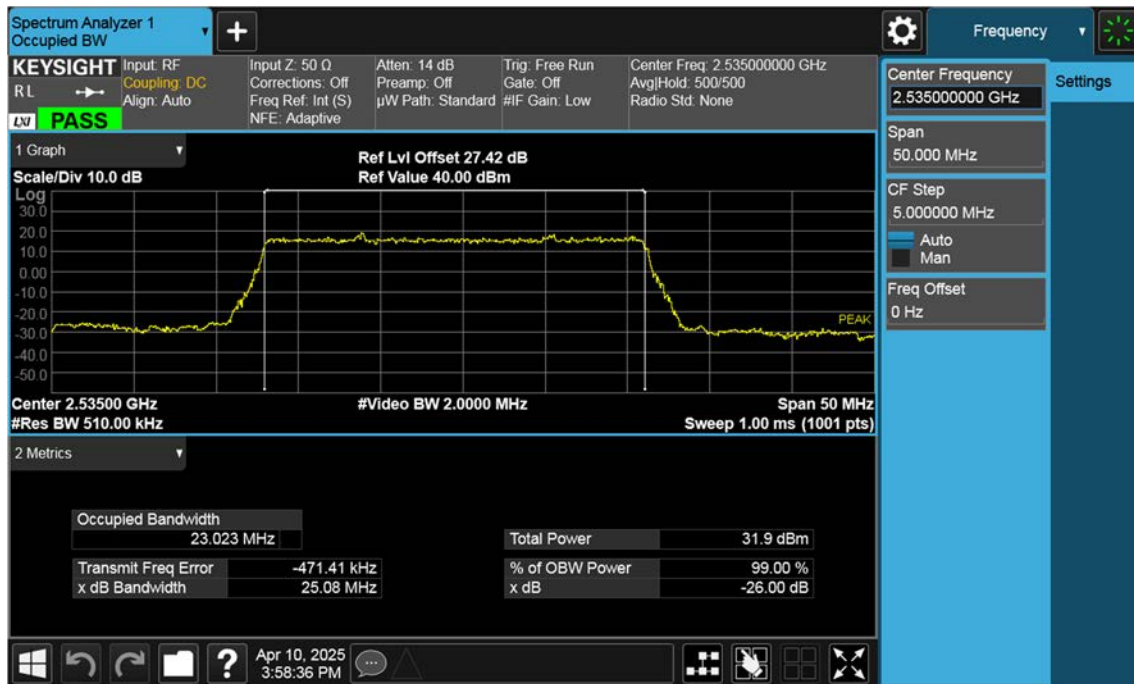
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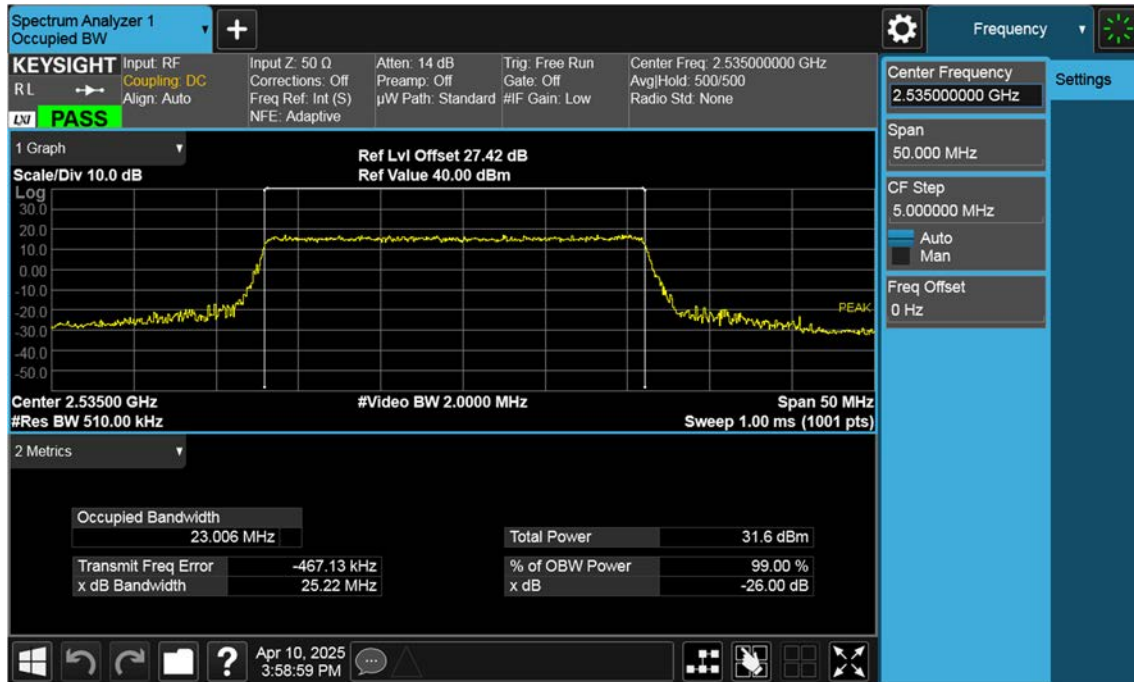
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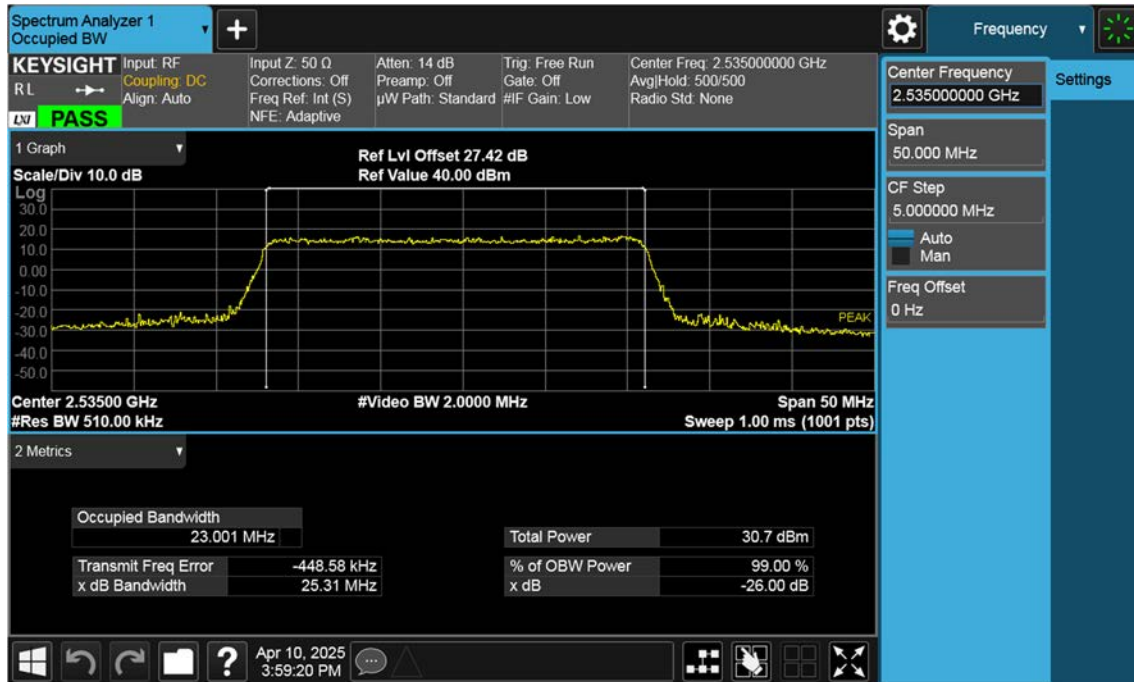
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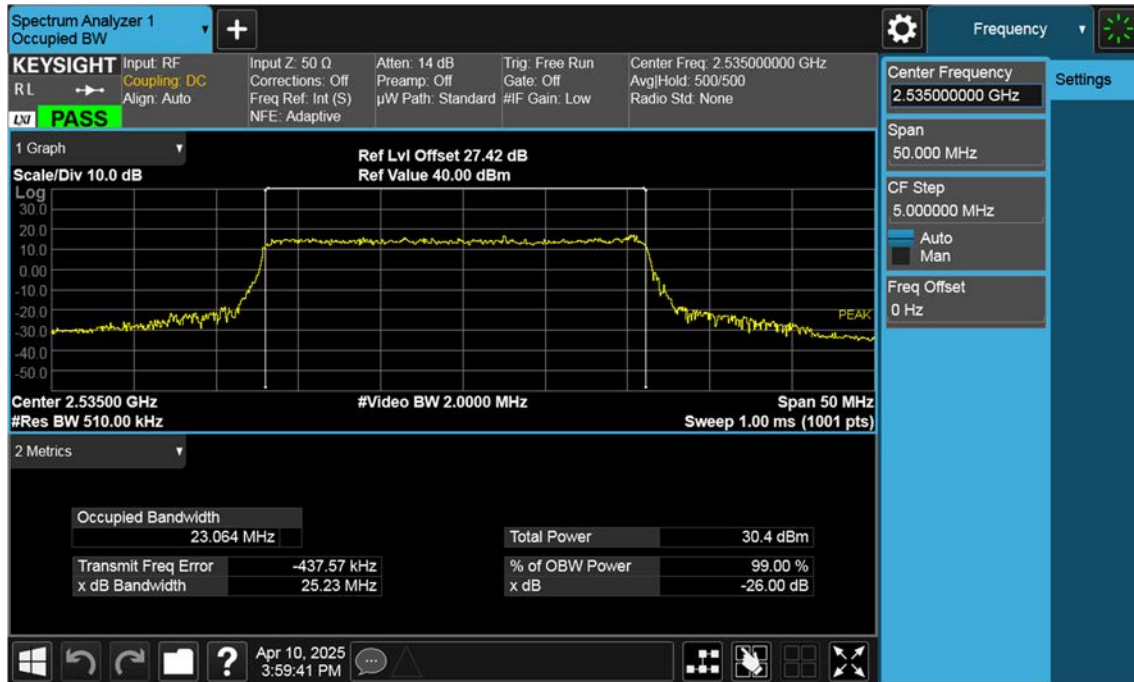
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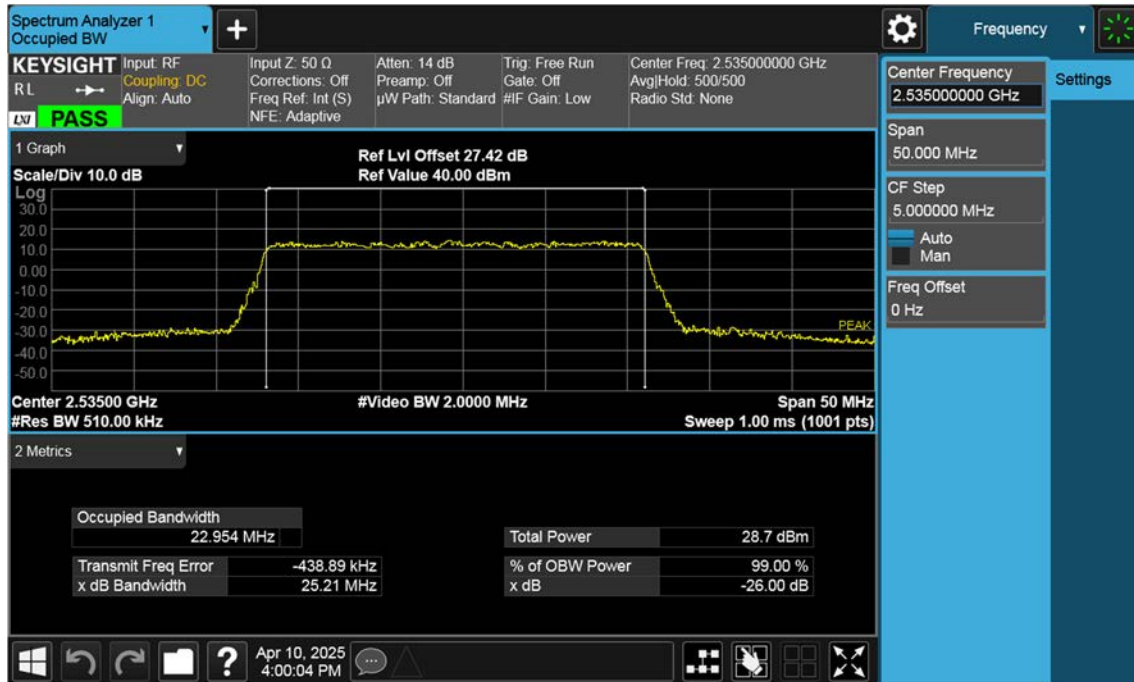
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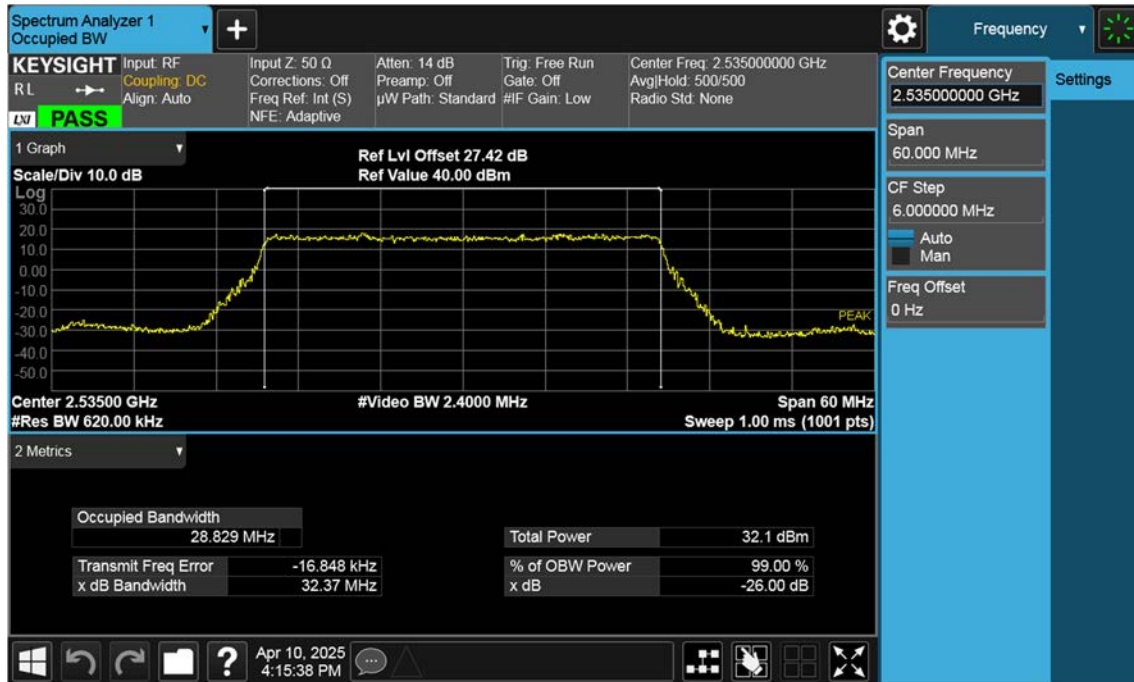
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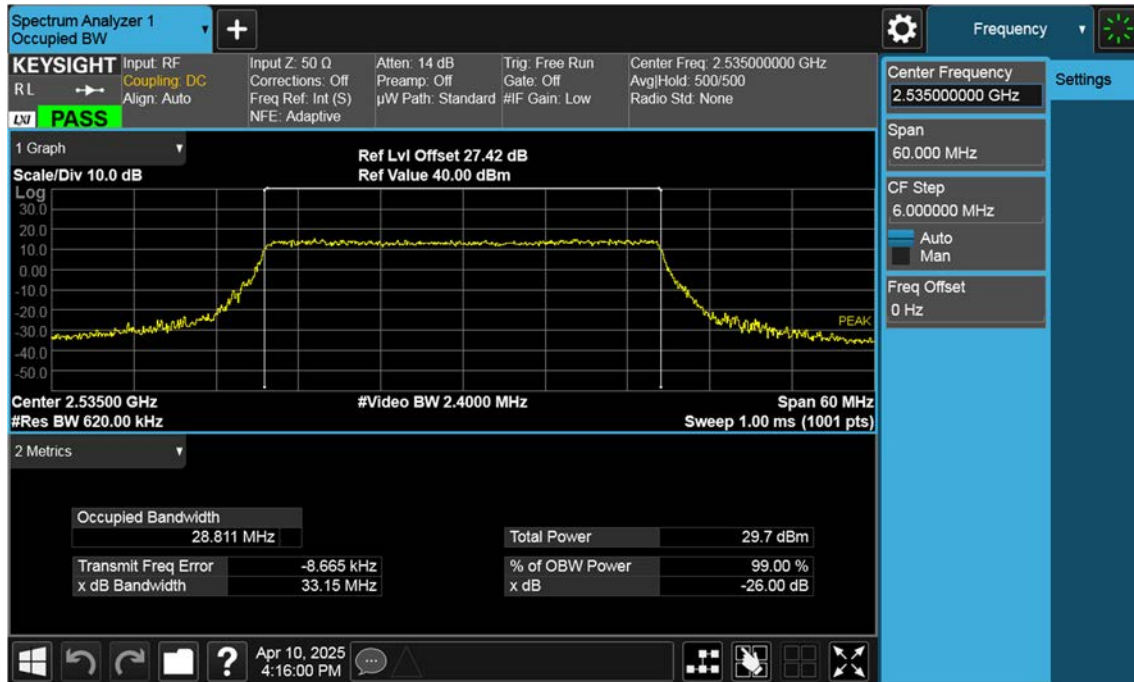
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