

TEST REPORT

FCC Sub6 n25(2) Test for SM-A176U
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2510-FC019

DATE OF ISSUE
October 15, 2025

Tested by
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TEST REPORT

REPORT NO.

HCT-RF-2510-FC019

DATE OF ISSUE

October 15, 2025

Additional Model

SM-A176U1, SM-S176V

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-A176U

Date of Test

August 28, 2025 ~ September 29, 2025

FCC ID

A3LSMA176U

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 : § 24

Test Results

PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	October 15, 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

Model(s):	SM-A176U
Additional Model(s)	SM-A176U1, SM-S176V
SCS(kHz):	15
Bandwidth(MHz):	5, 10, 15, 20, 25, 30, 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:	1852.5 MHz – 1912.5 MHz (Sub6 n25(2) (5 MHz)) 1855.0 MHz – 1910.0 MHz (Sub6 n25(2) (10 MHz)) 1857.5 MHz – 1907.5 MHz (Sub6 n25(2) (15 MHz)) 1860.0 MHz – 1905.0 MHz (Sub6 n25(2) (20 MHz)) 1862.5 MHz – 1902.5 MHz (Sub6 n25(2) (25 MHz)) 1865.0 MHz – 1900.0 MHz (Sub6 n25(2) (30 MHz)) 1870.0 MHz – 1895.0 MHz (Sub6 n25(2) (40 MHz)) 1852.5 MHz – 1907.5 MHz (Sub6 n2 (5 MHz)) 1855.0 MHz – 1905.0 MHz (Sub6 n2 (10 MHz)) 1857.5 MHz – 1902.5 MHz (Sub6 n2 (15 MHz)) 1860.0 MHz – 1900.0 MHz (Sub6 n2 (20 MHz)) 1862.5 MHz – 1897.5 MHz (Sub6 n2 (25 MHz)) 1865.0 MHz – 1895.0 MHz (Sub6 n2 (30 MHz)) 1870.0 MHz – 1890.0 MHz (Sub6 n2 (40 MHz))
Serial number:	Radiated : R3CY70RH3SM(Main1 ANT), R3CY80LZRZM(Sub 2 ANT) Conducted : R3CY70RH35D(Main1 ANT), R3CY80LZSDY(Sub 2 ANT)
Antenna Information	Please refer to the Antenna Specification document.

1.1. MAXIMUM OUTPUT POWER

Main1 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n25(2) (5)	1852.5 - 1912.5	4M67G7D	PI/2 BPSK	0.242	23.84
		4M62G7D	QPSK	0.241	23.82
		4M61W7D	16QAM	0.193	22.85
		4M68W7D	64QAM	0.135	21.29
		4M62W7D	256QAM	0.085	19.27
Sub6 n25(2) (10)	1855.0 - 1910.0	9M01G7D	PI/2 BPSK	0.249	23.97
		8M99G7D	QPSK	0.244	23.88
		9M02W7D	16QAM	0.192	22.84
		8M98W7D	64QAM	0.137	21.36
		8M97W7D	256QAM	0.085	19.30
Sub6 n25(2) (15)	1857.5 - 1907.5	13M5G7D	PI/2 BPSK	0.250	23.98
		13M4G7D	QPSK	0.240	23.80
		13M5W7D	16QAM	0.194	22.88
		13M4W7D	64QAM	0.135	21.31
		13M4W7D	256QAM	0.085	19.28
Sub6 n25(2) (20)	1860.0 - 1905.0	17M9G7D	PI/2 BPSK	0.255	24.06
		17M9G7D	QPSK	0.243	23.86
		17M9W7D	16QAM	0.192	22.84
		17M9W7D	64QAM	0.136	21.35
		18M0W7D	256QAM	0.084	19.25
Sub6 n25(2) (25)	1862.5 - 1902.5	23M0G7D	PI/2 BPSK	0.252	24.01
		23M0G7D	QPSK	0.245	23.90
		23M0W7D	16QAM	0.196	22.92
		23M0W7D	64QAM	0.139	21.44
		22M9W7D	256QAM	0.086	19.35
Sub6 n25(2) (30)	1865.0 - 1900.0	28M7G7D	PI/2 BPSK	0.260	24.15
		28M7G7D	QPSK	0.249	23.97
		28M7W7D	16QAM	0.201	23.03
		28M7W7D	64QAM	0.137	21.38
		28M7W7D	256QAM	0.086	19.33
Sub6 n25(2) (40)	1870.0 - 1895.0	38M8G7D	PI/2 BPSK	0.254	24.04
		38M7G7D	QPSK	0.245	23.89
		38M7W7D	16QAM	0.197	22.94
		38M8W7D	64QAM	0.137	21.37
		38M6W7D	256QAM	0.086	19.33

Sub 2 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n2 (5)	1852.5 - 1907.5	4M70G7D	PI/2 BPSK	0.163	22.11
		4M66G7D	QPSK	0.162	22.10
		4M69W7D	16QAM	0.133	21.23
		4M69W7D	64QAM	0.095	19.76
		4M67W7D	256QAM	0.059	17.72
Sub6 n2 (10)	1855.0 - 1905.0	9M01G7D	PI/2 BPSK	0.166	22.19
		9M02G7D	QPSK	0.165	22.17
		8M99W7D	16QAM	0.129	21.11
		9M00W7D	64QAM	0.094	19.74
		8M98W7D	256QAM	0.058	17.66
Sub6 n2 (15)	1857.5 - 1902.5	13M5G7D	PI/2 BPSK	0.172	22.36
		13M5G7D	QPSK	0.163	22.11
		13M5W7D	16QAM	0.129	21.12
		13M5W7D	64QAM	0.092	19.66
		13M5W7D	256QAM	0.059	17.69
Sub6 n2 (20)	1860.0 - 1900.0	17M9G7D	PI/2 BPSK	0.163	22.12
		18M0G7D	QPSK	0.162	22.10
		17M9W7D	16QAM	0.129	21.11
		18M0W7D	64QAM	0.091	19.61
		17M9W7D	256QAM	0.058	17.61
Sub6 n2 (25)	1862.5 - 1897.5	23M1G7D	PI/2 BPSK	0.171	22.32
		23M1G7D	QPSK	0.163	22.11
		23M0W7D	16QAM	0.129	21.09
		23M0W7D	64QAM	0.092	19.63
		23M0W7D	256QAM	0.058	17.64
Sub6 n2 (30)	1865.0 - 1895.0	28M8G7D	PI/2 BPSK	0.169	22.27
		28M9G7D	QPSK	0.161	22.08
		28M8W7D	16QAM	0.126	21.02
		28M8W7D	64QAM	0.091	19.60
		28M8W7D	256QAM	0.058	17.65
Sub6 n2 (40)	1870.0 - 1890.0	38M9G7D	PI/2 BPSK	0.182	22.60
		38M8G7D	QPSK	0.171	22.32
		38M8W7D	16QAM	0.126	21.01
		38M8W7D	64QAM	0.089	19.50
		38M9W7D	256QAM	0.056	17.52

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

Please refer to the [2G3G] Test Report.

2.2. MEASURING INSTRUMENT CALIBRATION

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

2.3. TEST FACILITY

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

Detailed description of test facility was submitted to the Commission and accepted dated March 11, 2024 (Registration Number: KR0032).

2.4. EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

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

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- KDB 971168 D01 v03r01 - Section 5.2.4 - ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2
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;

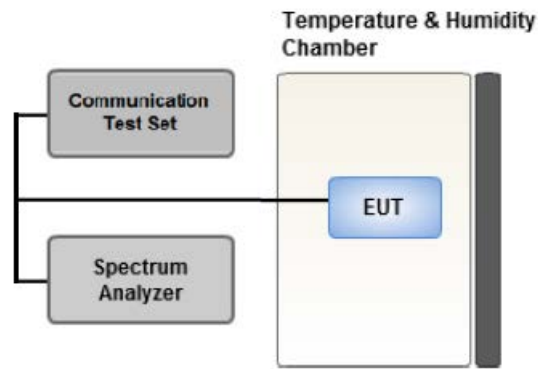
$$\text{Result}_{(\text{dBm})} = \text{Pg}_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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)

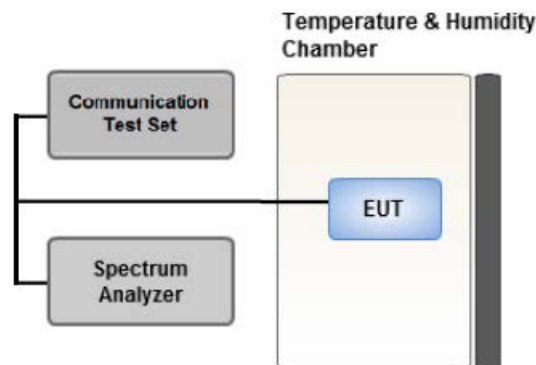
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW $\geq 3 \times$ RBW.

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.

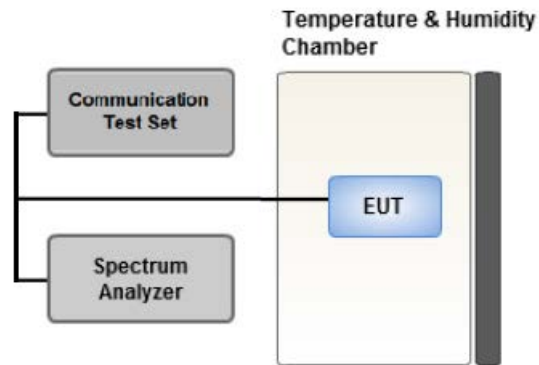
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

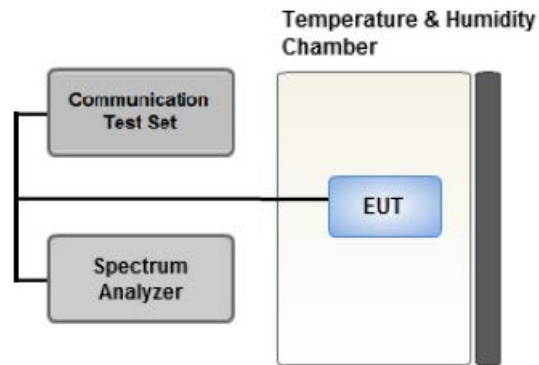
Test Overview

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 BAND EDGE



Test setup

Test Overview

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

Test Settings

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

Test Notes

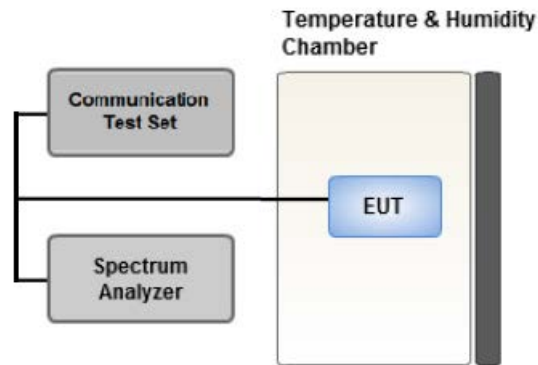
According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block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

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

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

Where 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: NSA. SA
Worst case: SA (Main 1 ANT), NSA_30A-n2A (Sub2 ANT)
Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
Worst case : Stand alone
- All simultaneous transmission scenarios of operation were investigated, and the test results showed no additional significant emissions relative to the least restrictive limit were observed.
Therefore, only the worst case(stand-alone) results were reported.
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.
- In the case of radiated spurious emissions, all bandwidth of operation was investigated and the worst case bandwidth results are reported. (Worst case : 30 MHz(Main1 ANT), 40 MHz(Sub 2 ANT))
- Sub6 n25 (1 850 – 1 915 MHz, 5/10/15/20/25/30/40 MHz bandwidth) overlaps the entire frequency range of Sub6 n2 (1 850 – 1 910 MHz, 5/10/15/20/25/30/40 MHz bandwidth) and they have the same Tune-up power. Therefore, test data provided in this report covers Sub6 n25 as well as Sub6 n2.
- SM-A176U & additional models were tested and the worst case results are reported.
(Worst case : SM-A176U)

[Main1 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		Y

[Sub 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 9.1		X
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 9.2		X

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
(Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
Mode: NSA, SA
Worst case: SA (Main 1 ANT), NSA_30A-n2A (Sub2 ANT)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.
- Sub6 n25 (1 850 – 1 915 MHz, 5/10/15/20/25/30/40 MHz bandwidth) overlaps the entire frequency range of Sub6 n2 (1 850 – 1 910 MHz, 5/10/15/20/25/30/40 MHz bandwidth) and they have the same Tune-up power. Therefore, test data provided in this report covers Sub6 n25 as well as Sub6 n2.
- SM-A176U & additional models were tested and the worst case results are reported.
(Worst case : SM-A176U)

[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, 40	Mid	Full RB	0
Band Edge	PI/2 BPSK	5	Low	1	0
			High	1	24
		10	Low	1	0
			High	1	51
		15	Low	1	0
			High	1	78
		20	Low	1	0
			High	1	105
		25	Low	1	0
			High	1	132
		30	Low	1	0
			High	1	159
		40	Low	1	0
			High	1	215
		5, 10, 15, 20, 25, 30, 40	Low, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	5, 10, 15, 20, 25, 30, 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	04/17/2026	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	05/08/2026	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/08/2026	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/08/2026	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/08/2026	Annual
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	08/11/2026	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	05/27/2026	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	07/29/2026	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/14/2026	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/08/2026	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/14/2026	Annual
UXM 5G Wireless Test Platform	E7515B	KEYSIGHT	MY60101126	02/10/2026	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/05/2026	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/22/2026	Annual
Automation Software	FCC 2G/3G/4G Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC NR Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC LTE Radiated	HCT CO., LTD	-	-	-
Automation Software	FCC NR Radiated	HCT CO., LTD	-	-	-

Note:

1. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

5. MEASUREMENT UNCERTAINTY

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

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

Parameter	Expanded Uncertainty ($\pm$ 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, § 24.238(a)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046	N/A	<u>Note1</u>
Peak- to- Average Ratio	§ 24.232(d)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§ 24.235	Emission must remain in band	PASS

Note:

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

6.2 Test Condition: Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§ 24.232(c)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 24.238(a)	< 43 + 10log10 (P[Watts]) for all out-of band emissions	PASS

Note:

1. Radiated tests were tested using 5G Wireless Tester

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

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

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

- 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(Main1 ANT)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1852.5	Sub6 n25(2)/ 5 MHz [15 kHz]	PI/2 BPSK	-17.81	15.54	10.45	2.15	H	< 2.00	0.242	23.84	1	12
		QPSK	-17.83	15.52	10.45	2.15	H		0.241	23.82		
		16-QAM	-18.86	14.49	10.45	2.15	H		0.190	22.79		
		64-QAM	-20.40	12.95	10.45	2.15	H		0.133	21.25		
		256-QAM	-22.40	10.95	10.45	2.15	H		0.084	19.25		
1882.5		PI/2 BPSK	-18.02	15.70	10.32	2.18	H		0.242	23.84	1	12
		QPSK	-18.12	15.60	10.32	2.18	H		0.236	23.74		
		16-QAM	-19.01	14.71	10.32	2.18	H		0.193	22.85		
		64-QAM	-20.57	13.15	10.32	2.18	H		0.135	21.29		
		256-QAM	-22.59	11.13	10.32	2.18	H		0.085	19.27		
1912.5		PI/2 BPSK	-18.11	15.77	10.19	2.19	H		0.238	23.77	1	1
		QPSK	-18.14	15.74	10.19	2.19	H		0.237	23.74		
		16-QAM	-19.19	14.69	10.19	2.19	H		0.186	22.69		
		64-QAM	-20.62	13.26	10.19	2.19	H		0.134	21.26		
		256-QAM	-22.69	11.19	10.19	2.19	H		0.083	19.19		

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
1855.0	Sub6 n25(2)/ 10 MHz [15 kHz]	PI/2 BPSK	-17.82	15.53	10.45	2.15	H	< 2.00	0.241	23.83	1	50
		QPSK	-17.83	15.52	10.45	2.15	H		0.241	23.82		
		16-QAM	-18.86	14.49	10.45	2.15	H		0.190	22.79		
		64-QAM	-20.33	13.02	10.45	2.15	H		0.135	21.32		
		256-QAM	-22.36	10.99	10.45	2.15	H		0.085	19.29		
1882.5		PI/2 BPSK	-17.89	15.83	10.32	2.18	H		0.249	23.97	1	1
		QPSK	-17.98	15.74	10.32	2.18	H		0.244	23.88		
		16-QAM	-19.02	14.70	10.32	2.18	H		0.192	22.84		
		64-QAM	-20.50	13.22	10.32	2.18	H		0.137	21.36		
		256-QAM	-22.56	11.16	10.32	2.18	H		0.085	19.30		
1910.0		PI/2 BPSK	-17.98	15.75	10.21	2.19	H		0.238	23.77	1	26
		QPSK	-18.00	15.73	10.21	2.19	H		0.237	23.75		
		16-QAM	-18.97	14.76	10.21	2.19	H		0.189	22.78		
		64-QAM	-20.66	13.07	10.21	2.19	H		0.129	21.09		
		256-QAM	-22.55	11.18	10.21	2.19	H		0.083	19.20		

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
1857.5	Sub6 n25(2)/ 15 MHz [15 kHz]	PI/2 BPSK	-17.93	15.38	10.43	2.16	H	< 2.00	0.232	23.65	1	39
		QPSK	-18.00	15.31	10.43	2.16	H		0.228	23.58		
		16-QAM	-19.04	14.27	10.43	2.16	H		0.179	22.54		
		64-QAM	-20.42	12.89	10.43	2.16	H		0.131	21.16		
		256-QAM	-22.52	10.79	10.43	2.16	H		0.081	19.06		
1882.5		PI/2 BPSK	-17.88	15.84	10.32	2.18	H		0.250	23.98	1	39
		QPSK	-18.07	15.65	10.32	2.18	H		0.239	23.79		
		16-QAM	-19.13	14.59	10.32	2.18	H		0.187	22.73		
		64-QAM	-20.55	13.17	10.32	2.18	H		0.135	21.31		
		256-QAM	-22.58	11.14	10.32	2.18	H		0.085	19.28		
1907.5		PI/2 BPSK	-17.93	15.80	10.21	2.19	H		0.241	23.82	1	1
		QPSK	-17.95	15.78	10.21	2.19	H		0.240	23.80		
		16-QAM	-18.87	14.86	10.21	2.19	H		0.194	22.88		
		64-QAM	-20.51	13.22	10.21	2.19	H		0.133	21.24		
		256-QAM	-22.54	11.19	10.21	2.19	H		0.083	19.21		

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
1860.0	Sub6 n25(2)/ 20 MHz [15 kHz]	PI/2 BPSK	-17.52	15.79	10.43	2.16	H	< 2.00	0.255	24.06	1	53
		QPSK	-17.72	15.59	10.43	2.16	H		0.243	23.86		
		16-QAM	-18.74	14.57	10.43	2.16	H		0.192	22.84		
		64-QAM	-20.23	13.08	10.43	2.16	H		0.136	21.35		
		256-QAM	-22.33	10.98	10.43	2.16	H		0.084	19.25		
1882.5		PI/2 BPSK	-18.01	15.71	10.32	2.18	H		0.243	23.85	1	53
		QPSK	-18.04	15.68	10.32	2.18	H		0.241	23.82		
		16-QAM	-19.03	14.69	10.32	2.18	H		0.192	22.83		
		64-QAM	-20.53	13.19	10.32	2.18	H		0.136	21.33		
		256-QAM	-22.61	11.11	10.32	2.18	H		0.084	19.25		
1905.0		PI/2 BPSK	-18.19	15.56	10.23	2.19	H		0.229	23.60	1	53
		QPSK	-18.28	15.47	10.23	2.19	H		0.225	23.51		
		16-QAM	-19.29	14.46	10.23	2.19	H		0.178	22.50		
		64-QAM	-20.82	12.93	10.23	2.19	H		0.125	20.97		
		256-QAM	-22.83	10.92	10.23	2.19	H		0.079	18.96		

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
1862.5	Sub6 n25(2)/ 25 MHz [15 kHz]	PI/2 BPSK	-17.78	15.62	10.41	2.16	H	< 2.00	0.244	23.87	1	66
		QPSK	-17.83	15.57	10.41	2.16	H		0.241	23.82		
		16-QAM	-18.79	14.61	10.41	2.16	H		0.193	22.86		
		64-QAM	-20.30	13.10	10.41	2.16	H		0.136	21.35		
		256-QAM	-22.38	11.02	10.41	2.16	H		0.085	19.27		
1882.5		PI/2 BPSK	-17.95	15.77	10.32	2.18	H		0.246	23.91	1	1
		QPSK	-17.96	15.76	10.32	2.18	H		0.245	23.90		
		16-QAM	-18.96	14.76	10.32	2.18	H		0.195	22.90		
		64-QAM	-20.43	13.29	10.32	2.18	H		0.139	21.43		
		256-QAM	-22.51	11.21	10.32	2.18	H		0.086	19.35		
1902.5		PI/2 BPSK	-17.78	15.97	10.23	2.19	H		0.252	24.01	1	66
		QPSK	-17.89	15.86	10.23	2.19	H		0.246	23.90		
		16-QAM	-18.87	14.88	10.23	2.19	H		0.196	22.92		
		64-QAM	-20.35	13.40	10.23	2.19	H		0.139	21.44		
		256-QAM	-22.47	11.28	10.23	2.19	H		0.085	19.32		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1865.0	Sub6 n25(2)/ 30 MHz [15 kHz]	PI/2 BPSK	-17.88	15.52	10.41	2.16	H	< 2.00	0.238	23.77	1	80
		QPSK	-17.92	15.48	10.41	2.16	H		0.236	23.73		
		16-QAM	-18.97	14.43	10.41	2.16	H		0.186	22.68		
		64-QAM	-20.44	12.96	10.41	2.16	H		0.132	21.21		
		256-QAM	-22.44	10.96	10.41	2.16	H		0.083	19.21		
1882.5		PI/2 BPSK	-17.71	16.01	10.32	2.18	H		0.260	24.15	1	1
		QPSK	-17.89	15.83	10.32	2.18	H		0.249	23.97		
		16-QAM	-18.83	14.89	10.32	2.18	H		0.201	23.03		
		64-QAM	-20.48	13.24	10.32	2.18	H		0.137	21.38		
		256-QAM	-22.53	11.19	10.32	2.18	H		0.086	19.33		
1900.0		PI/2 BPSK	-17.93	15.85	10.25	2.19	H		0.246	23.91	1	80
		QPSK	-18.01	15.77	10.25	2.19	H		0.242	23.83		
		16-QAM	-18.92	14.86	10.25	2.19	H		0.196	22.92		
		64-QAM	-20.73	13.05	10.25	2.19	H		0.129	21.11		
		256-QAM	-22.59	11.19	10.25	2.19	H		0.084	19.25		

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
1870.0	Sub6 n25(2)/ 40 MHz [15 kHz]	PI/2 BPSK	-17.89	15.60	10.39	2.17	H	< 2.00	0.241	23.82	1	108
		QPSK	-17.91	15.58	10.39	2.17	H		0.240	23.80		
		16-QAM	-18.82	14.67	10.39	2.17	H		0.194	22.89		
		64-QAM	-20.37	13.12	10.39	2.17	H		0.136	21.34		
		256-QAM	-22.53	10.96	10.39	2.17	H		0.083	19.18		
1882.5		PI/2 BPSK	-17.82	15.90	10.32	2.18	H		0.254	24.04	1	214
		QPSK	-17.97	15.75	10.32	2.18	H		0.245	23.89		
		16-QAM	-18.92	14.80	10.32	2.18	H		0.197	22.94		
		64-QAM	-20.49	13.23	10.32	2.18	H		0.137	21.37		
		256-QAM	-22.53	11.19	10.32	2.18	H		0.086	19.33		
1895.0		PI/2 BPSK	-18.09	15.67	10.28	2.19	H		0.237	23.76	1	1
		QPSK	-18.11	15.65	10.28	2.19	H		0.237	23.74		
		16-QAM	-19.07	14.69	10.28	2.19	H		0.190	22.78		
		64-QAM	-20.70	13.06	10.28	2.19	H		0.130	21.15		
		256-QAM	-22.61	11.15	10.28	2.19	H		0.084	19.24		

8.2 RADIATED SPURIOUS EMISSIONS

☒ NR Band: N25(2)
☒ Bandwidth: 30 MHz
☒ Modulation: PI/2 BPSK
☒ Distance: 3 meters
☒ SCS: 15 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
373000 (1865.0)	3,730.00	-60.56	12.04	-60.28	3.18	V	-51.42	-13.00	1	80
	5,595.00	-60.22	12.22	-53.46	4.01	V	-45.25	-13.00		
	7,460.00	-62.78	11.37	-48.26	4.69	V	-41.58	-13.00		
376500 (1882.5)	3,765.00	-60.07	11.88	-59.11	3.21	V	-50.44	-13.00	1	1
	5,647.50	-61.67	12.11	-54.61	4.05	V	-46.55	-13.00		
	7,530.00	-64.32	11.57	-49.71	4.74	V	-42.88	-13.00		
380000 (1900.0)	3,800.00	-60.76	11.71	-59.19	3.20	V	-50.68	-13.00	1	80
	5,700.00	-62.29	11.95	-54.52	4.06	V	-46.63	-13.00		
	7,600.00	-63.42	11.61	-49.11	4.77	V	-42.27	-13.00		

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)	Limit (dB)
Sub6 n25(2)	5 MHz	1882.5	BPSK	25	0	4.74	13.00
			QPSK			5.46	
			16-QAM			5.94	
			64-QAM			6.10	
			256-QAM			6.79	
	10 MHz		BPSK	50		5.32	
			QPSK			5.63	
			16-QAM			6.09	
			64-QAM			6.50	
			256-QAM			6.60	
	15 MHz		BPSK	75		4.36	
			QPSK			5.51	
			16-QAM			6.11	
			64-QAM			6.42	
			256-QAM			6.49	
	20 MHz		BPSK	100		5.66	
			QPSK			5.93	
			16-QAM			6.29	
			64-QAM			6.49	
			256-QAM			6.65	
	25 MHz		BPSK	128		4.54	
			QPSK			5.68	
			16-QAM			6.28	
			64-QAM			6.49	
			256-QAM			6.71	
	30 MHz		BPSK	160		5.38	
			QPSK			5.74	
			16-QAM			6.27	
			64-QAM			6.47	
			256-QAM			6.79	
	40 MHz		BPSK	216		5.09	
			QPSK			5.69	
			16-QAM			6.35	
			64-QAM			6.49	
			256-QAM			6.67	

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 64 ~ 98.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n25(2)	5 MHz	1882.5	BPSK	25	0	4.6653
			QPSK			4.6226
			16-QAM			4.6116
			64-QAM			4.6826
			256-QAM			4.6157
	10 MHz		BPSK	50		9.0098
			QPSK			8.9941
			16-QAM			9.0237
			64-QAM			8.9842
			256-QAM			8.9701
	15 MHz		BPSK	75		13.450
			QPSK			13.437
			16-QAM			13.468
			64-QAM			13.449
			256-QAM			13.412
	20 MHz		BPSK	100		17.946
			QPSK			17.896
			16-QAM			17.920
			64-QAM			17.859
			256-QAM			17.956
	25 MHz		BPSK	128		23.046
			QPSK			22.976
			16-QAM			22.981
			64-QAM			22.964
			256-QAM			22.933
	30 MHz		BPSK	160		28.740
			QPSK			28.742
			16-QAM			28.687
			64-QAM			28.699
			256-QAM			28.743
	40 MHz		BPSK	216		38.788
			QPSK			38.728
			16-QAM			38.666
			64-QAM			38.849
			256-QAM			38.649

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 99 ~ 133.

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 n25(2)	5	1852.5	4.8056	29.722	-62.868	-33.146	-13.00
		1882.5	3.7488	29.722	-62.411	-32.689	
		1912.5	3.8086	29.722	-63.173	-33.451	
	10	1855.0	3.7787	29.722	-63.638	-33.916	
		1882.5	9.1226	30.315	-63.731	-33.416	
		1910.0	8.8235	30.315	-63.205	-32.890	
	15	1857.5	4.0878	29.722	-62.372	-32.650	
		1882.5	9.9502	30.315	-62.061	-31.746	
		1907.5	5.5035	30.315	-63.586	-33.271	
	20	1860.0	3.7289	29.722	-63.329	-33.607	
		1882.5	3.7887	29.722	-62.856	-33.134	
		1905.0	9.3819	30.315	-62.900	-32.585	
	25	1862.5	4.0080	29.722	-62.816	-33.094	
		1882.5	4.9352	29.722	-62.867	-33.145	
		1902.5	6.0020	30.315	-62.370	-32.055	
	30	1865.0	4.9153	29.722	-63.568	-33.846	
		1882.5	4.0180	29.722	-62.709	-32.987	
		1900.0	4.0280	29.722	-63.839	-34.117	
	40	1870.0	4.8954	29.722	-63.164	-33.442	
		1882.5	9.9801	30.315	-63.500	-33.185	
		1895.0	8.2852	30.315	-63.363	-33.048	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 134 ~ 175.
2. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
3. Factor(dB) = Cable Loss + 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 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 176 ~ 217.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth:	<u>5 MHz</u>
▣ Voltage(100 %):	<u>3.880 VDC</u>
▣ Batt. Endpoint:	<u>3.400 VDC</u>
▣ LIMIT:	<u>Emission must remain in band</u>

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1852.5	100 %	+20(Ref)	1852 499 999	0.0	0.000 000	0.000
	100 %	-30	1852 499 997	-1.7	0.000 000	-0.001
	100 %	-20	1852 499 999	0.2	0.000 000	0.000
	100 %	-10	1852 499 999	-0.5	0.000 000	0.000
	100 %	0	1852 499 999	-0.3	0.000 000	0.000
	100 %	+10	1852 499 998	-1.2	0.000 000	-0.001
	100 %	+30	1852 499 997	-1.8	0.000 000	-0.001
	100 %	+40	1852 499 998	-0.9	0.000 000	0.000
	100 %	+50	1852 499 999	0.3	0.000 000	0.000
	Batt. Endpoint	+20	1852 499 999	-0.5	0.000 000	0.000
1912.5	100 %	+20(Ref)	1912 499 999	0.0	0.000 000	0.000
	100 %	-30	1912 500 000	0.6	0.000 000	0.000
	100 %	-20	1912 499 998	-0.9	0.000 000	0.000
	100 %	-10	1912 499 999	-0.3	0.000 000	0.000
	100 %	0	1912 500 000	0.9	0.000 000	0.000
	100 %	+10	1912 499 999	0.2	0.000 000	0.000
	100 %	+30	1912 499 999	-0.5	0.000 000	0.000
	100 %	+40	1912 500 000	0.4	0.000 000	0.000
	100 %	+50	1912 499 999	-0.7	0.000 000	0.000
	Batt. Endpoint	+20	1912 499 999	0.2	0.000 000	0.000

☐ BandWidth: 10 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1855.0	100 %	+20(Ref)	1854 999 999	0.0	0.000 000	0.000
	100 %	-30	1854 999 998	-1.2	0.000 000	-0.001
	100 %	-20	1855 000 000	0.4	0.000 000	0.000
	100 %	-10	1855 000 000	0.5	0.000 000	0.000
	100 %	0	1855 000 001	1.7	0.000 000	0.001
	100 %	+10	1855 000 003	3.8	0.000 000	0.002
	100 %	+30	1854 999 998	-0.9	0.000 000	0.000
	100 %	+40	1855 000 000	0.7	0.000 000	0.000
	100 %	+50	1854 999 999	-0.3	0.000 000	0.000
	Batt. Endpoint	+20	1855 000 000	1.2	0.000 000	0.001
1910.0	100 %	+20(Ref)	1910 000 001	0.0	0.000 000	0.000
	100 %	-30	1910 000 001	0.5	0.000 000	0.000
	100 %	-20	1909 999 999	-1.6	0.000 000	-0.001
	100 %	-10	1910 000 001	-0.1	0.000 000	0.000
	100 %	0	1910 000 000	-0.4	0.000 000	0.000
	100 %	+10	1910 000 000	-0.3	0.000 000	0.000
	100 %	+30	1910 000 000	-0.2	0.000 000	0.000
	100 %	+40	1910 000 000	-0.3	0.000 000	0.000
	100 %	+50	1910 000 002	0.9	0.000 000	0.000
	Batt. Endpoint	+20	1910 000 001	0.7	0.000 000	0.000

☐ BandWidth: 15 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1857.5	100 %	+20(Ref)	1857 499 999	0.0	0.000 000	0.000
	100 %	-30	1857 499 999	-0.8	0.000 000	0.000
	100 %	-20	1857 500 000	0.3	0.000 000	0.000
	100 %	-10	1857 499 999	-0.9	0.000 000	0.000
	100 %	0	1857 499 999	-0.8	0.000 000	0.000
	100 %	+10	1857 499 999	-0.5	0.000 000	0.000
	100 %	+30	1857 499 999	-0.9	0.000 000	0.000
	100 %	+40	1857 499 998	-1.0	0.000 000	-0.001
	100 %	+50	1857 499 999	-0.7	0.000 000	0.000
	Batt. Endpoint	+20	1857 499 999	-0.3	0.000 000	0.000
1907.5	100 %	+20(Ref)	1907 500 000	0.0	0.000 000	0.000
	100 %	-30	1907 499 999	-0.8	0.000 000	0.000
	100 %	-20	1907 499 999	-0.6	0.000 000	0.000
	100 %	-10	1907 500 000	-0.5	0.000 000	0.000
	100 %	0	1907 500 000	-0.3	0.000 000	0.000
	100 %	+10	1907 500 000	-0.1	0.000 000	0.000
	100 %	+30	1907 499 999	-0.8	0.000 000	0.000
	100 %	+40	1907 500 000	-0.4	0.000 000	0.000
	100 %	+50	1907 500 000	0.3	0.000 000	0.000
	Batt. Endpoint	+20	1907 500 001	1.1	0.000 000	0.001

☐ BandWidth: 20 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1860.0	100 %	+20(Ref)	1859 999 998	0.0	0.000 000	0.000
	100 %	-30	1859 999 998	-0.6	0.000 000	0.000
	100 %	-20	1859 999 998	-0.7	0.000 000	0.000
	100 %	-10	1859 999 998	-0.6	0.000 000	0.000
	100 %	0	1859 999 998	-0.5	0.000 000	0.000
	100 %	+10	1859 999 999	0.3	0.000 000	0.000
	100 %	+30	1859 999 998	-0.8	0.000 000	0.000
	100 %	+40	1859 999 998	-0.1	0.000 000	0.000
	100 %	+50	1859 999 998	-0.6	0.000 000	0.000
	Batt. Endpoint	+20	1859 999 998	-0.6	0.000 000	0.000
1905.0	100 %	+20(Ref)	1905 000 000	0.0	0.000 000	0.000
	100 %	-30	1905 000 000	-0.2	0.000 000	0.000
	100 %	-20	1905 000 001	0.5	0.000 000	0.000
	100 %	-10	1905 000 000	-0.1	0.000 000	0.000
	100 %	0	1905 000 000	0.0	0.000 000	0.000
	100 %	+10	1905 000 000	-0.5	0.000 000	0.000
	100 %	+30	1904 999 999	-1.1	0.000 000	-0.001
	100 %	+40	1905 000 000	0.1	0.000 000	0.000
	100 %	+50	1905 000 000	0.0	0.000 000	0.000
	Batt. Endpoint	+20	1905 000 000	-0.7	0.000 000	0.000

☐ BandWidth: 25 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1862.5	100 %	+20(Ref)	1862 500 000	0.0	0.000 000	0.000
	100 %	-30	1862 500 000	0.0	0.000 000	0.000
	100 %	-20	1862 499 999	-0.9	0.000 000	0.000
	100 %	-10	1862 500 000	0.3	0.000 000	0.000
	100 %	0	1862 500 000	0.0	0.000 000	0.000
	100 %	+10	1862 500 000	-0.2	0.000 000	0.000
	100 %	+30	1862 499 999	-1.1	0.000 000	-0.001
	100 %	+40	1862 500 000	-0.2	0.000 000	0.000
	100 %	+50	1862 500 000	0.0	0.000 000	0.000
	Batt. Endpoint	+20	1862 500 000	0.0	0.000 000	0.000
1902.5	100 %	+20(Ref)	1902 499 999	0.0	0.000 000	0.000
	100 %	-30	1902 499 999	-0.3	0.000 000	0.000
	100 %	-20	1902 499 999	-0.4	0.000 000	0.000
	100 %	-10	1902 499 999	-0.4	0.000 000	0.000
	100 %	0	1902 499 999	-0.3	0.000 000	0.000
	100 %	+10	1902 499 999	-0.3	0.000 000	0.000
	100 %	+30	1902 500 000	0.3	0.000 000	0.000
	100 %	+40	1902 499 999	-0.4	0.000 000	0.000
	100 %	+50	1902 499 999	-0.6	0.000 000	0.000
	Batt. Endpoint	+20	1902 500 000	0.2	0.000 000	0.000

■ BandWidth:	<u>30 MHz</u>
■ Voltage(100 %):	<u>3.880 VDC</u>
■ Batt. Endpoint:	<u>3.400 VDC</u>
■ LIMIT:	<u>Emission must remain in band</u>

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1865.0	100 %	+20(Ref)	1864 999 999	0.0	0.000 000	0.000
	100 %	-30	1864 999 998	-1.1	0.000 000	-0.001
	100 %	-20	1865 000 000	0.5	0.000 000	0.000
	100 %	-10	1864 999 999	0.2	0.000 000	0.000
	100 %	0	1865 000 000	0.3	0.000 000	0.000
	100 %	+10	1864 999 999	-0.2	0.000 000	0.000
	100 %	+30	1864 999 999	-0.1	0.000 000	0.000
	100 %	+40	1864 999 999	0.1	0.000 000	0.000
	100 %	+50	1864 999 999	-0.8	0.000 000	0.000
	Batt. Endpoint	+20	1864 999 999	-0.1	0.000 000	0.000
1900.0	100 %	+20(Ref)	1900 000 000	0.0	0.000 000	0.000
	100 %	-30	1900 000 000	-0.3	0.000 000	0.000
	100 %	-20	1900 000 000	0.4	0.000 000	0.000
	100 %	-10	1900 000 000	0.1	0.000 000	0.000
	100 %	0	1900 000 000	-0.1	0.000 000	0.000
	100 %	+10	1900 000 000	0.3	0.000 000	0.000
	100 %	+30	1900 000 000	-0.2	0.000 000	0.000
	100 %	+40	1900 000 000	0.0	0.000 000	0.000
	100 %	+50	1900 000 000	0.6	0.000 000	0.000
	Batt. Endpoint	+20	1900 000 000	0.2	0.000 000	0.000

☐ BandWidth: 40 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1870.0	100 %	+20(Ref)	1869 999 999	0.0	0.000 000	0.000
	100 %	-30	1870 000 000	0.2	0.000 000	0.000
	100 %	-20	1869 999 999	-0.2	0.000 000	0.000
	100 %	-10	1869 999 999	-0.1	0.000 000	0.000
	100 %	0	1869 999 997	-1.8	0.000 000	-0.001
	100 %	+10	1869 999 999	-0.2	0.000 000	0.000
	100 %	+30	1869 999 999	-0.1	0.000 000	0.000
	100 %	+40	1869 999 998	-0.8	0.000 000	0.000
	100 %	+50	1869 999 999	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	1869 999 999	-0.6	0.000 000	0.000
1895.0	100 %	+20(Ref)	1895 000 001	0.0	0.000 000	0.000
	100 %	-30	1895 000 001	-0.1	0.000 000	0.000
	100 %	-20	1895 000 000	-0.4	0.000 000	0.000
	100 %	-10	1895 000 000	-0.6	0.000 000	0.000
	100 %	0	1895 000 000	-0.7	0.000 000	0.000
	100 %	+10	1895 000 000	-0.8	0.000 000	0.000
	100 %	+30	1895 000 001	0.1	0.000 000	0.000
	100 %	+40	1895 000 000	-0.6	0.000 000	0.000
	100 %	+50	1895 000 000	-1.2	0.000 000	-0.001
	Batt. Endpoint	+20	1895 000 001	0.2	0.000 000	0.000

9. TEST DATA(Sub 2 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
1852.5	Sub6 n2/ 5 MHz [15 kHz]	PI/2 BPSK	-19.54	13.81	10.45	2.15	H	< 2.00	0.163	22.11	1	12
		QPSK	-19.55	13.80	10.45	2.15	H		0.162	22.10		
		16-QAM	-20.42	12.93	10.45	2.15	H		0.133	21.23		
		64-QAM	-21.89	11.46	10.45	2.15	H		0.095	19.76		
		256-QAM	-23.93	9.42	10.45	2.15	H		0.059	17.72		
1880.0		PI/2 BPSK	-19.78	13.93	10.34	2.18	H		0.162	22.09	1	12
		QPSK	-19.80	13.91	10.34	2.18	H		0.161	22.07		
		16-QAM	-20.66	13.05	10.34	2.18	H		0.132	21.21		
		64-QAM	-22.22	11.49	10.34	2.18	H		0.092	19.65		
		256-QAM	-24.25	9.46	10.34	2.18	H		0.058	17.62		
1907.5		PI/2 BPSK	-20.11	13.62	10.21	2.19	H		0.146	21.64	1	23
		QPSK	-20.14	13.59	10.21	2.19	H		0.145	21.61		
		16-QAM	-21.15	12.58	10.21	2.19	H		0.115	20.60		
		64-QAM	-22.59	11.14	10.21	2.19	H		0.082	19.16		
		256-QAM	-24.65	9.08	10.21	2.19	H		0.051	17.10		

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
1855.0	Sub6 n2/ 10 MHz [15 kHz]	PI/2 BPSK	-19.47	13.88	10.45	2.15	H	< 2.00	0.165	22.18	1	50
		QPSK	-19.48	13.87	10.45	2.15	H		0.165	22.17		
		16-QAM	-20.54	12.81	10.45	2.15	H		0.129	21.11		
		64-QAM	-21.91	11.44	10.45	2.15	H		0.094	19.74		
		256-QAM	-23.99	9.36	10.45	2.15	H		0.058	17.66		
1880.0		PI/2 BPSK	-19.68	14.03	10.34	2.18	H		0.166	22.19	1	50
		QPSK	-19.86	13.85	10.34	2.18	H		0.159	22.01		
		16-QAM	-21.16	12.55	10.34	2.18	H		0.118	20.71		
		64-QAM	-22.51	11.20	10.34	2.18	H		0.086	19.36		
		256-QAM	-24.48	9.23	10.34	2.18	H		0.055	17.39		
1905.0		PI/2 BPSK	-19.99	13.76	10.23	2.19	H		0.151	21.80	1	1
		QPSK	-20.05	13.70	10.23	2.19	H		0.149	21.74		
		16-QAM	-21.10	12.65	10.23	2.19	H		0.117	20.69		
		64-QAM	-22.53	11.22	10.23	2.19	H		0.084	19.26		
		256-QAM	-24.54	9.21	10.23	2.19	H		0.053	17.25		

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
1857.5	Sub6 n2/ 15 MHz [15 kHz]	PI/2 BPSK	-19.70	13.61	10.43	2.16	H	< 2.00	0.154	21.88	1	39
		QPSK	-19.73	13.58	10.43	2.16	H		0.153	21.85		
		16-QAM	-20.73	12.58	10.43	2.16	H		0.122	20.85		
		64-QAM	-22.25	11.06	10.43	2.16	H		0.086	19.33		
		256-QAM	-24.15	9.16	10.43	2.16	H		0.055	17.43		
1880.0		PI/2 BPSK	-19.51	14.20	10.34	2.18	H		0.172	22.36	1	39
		QPSK	-19.76	13.95	10.34	2.18	H		0.163	22.11		
		16-QAM	-20.75	12.96	10.34	2.18	H		0.129	21.12		
		64-QAM	-22.21	11.50	10.34	2.18	H		0.092	19.66		
		256-QAM	-24.18	9.53	10.34	2.18	H		0.059	17.69		
1902.5		PI/2 BPSK	-20.02	13.73	10.23	2.19	H		0.150	21.77	1	39
		QPSK	-20.05	13.70	10.23	2.19	H		0.149	21.74		
		16-QAM	-21.04	12.71	10.23	2.19	H		0.119	20.75		
		64-QAM	-22.59	11.16	10.23	2.19	H		0.083	19.20		
		256-QAM	-24.51	9.24	10.23	2.19	H		0.053	17.28		

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
1860.0	Sub6 n2/ 20 MHz [15 kHz]	PI/2 BPSK	-19.46	13.85	10.43	2.16	H	< 2.00	0.163	22.12	1	53
		QPSK	-19.48	13.83	10.43	2.16	H		0.162	22.10		
		16-QAM	-20.47	12.84	10.43	2.16	H		0.129	21.11		
		64-QAM	-21.97	11.34	10.43	2.16	H		0.091	19.61		
		256-QAM	-23.97	9.34	10.43	2.16	H		0.058	17.61		
1880.0		PI/2 BPSK	-19.83	13.88	10.34	2.18	H		0.160	22.04	1	53
		QPSK	-19.87	13.84	10.34	2.18	H		0.158	22.00		
		16-QAM	-20.84	12.87	10.34	2.18	H		0.127	21.03		
		64-QAM	-22.31	11.40	10.34	2.18	H		0.090	19.56		
		256-QAM	-24.30	9.41	10.34	2.18	H		0.057	17.57		
1900.0		PI/2 BPSK	-20.16	13.62	10.25	2.19	H		0.147	21.68	1	53
		QPSK	-20.22	13.56	10.25	2.19	H		0.145	21.62		
		16-QAM	-21.07	12.71	10.25	2.19	H		0.119	20.77		
		64-QAM	-22.69	11.09	10.25	2.19	H		0.082	19.15		
		256-QAM	-24.69	9.09	10.25	2.19	H		0.052	17.15		

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
1862.5	Sub6 n2/ 25 MHz [15 kHz]	PI/2 BPSK	-19.70	13.70	10.41	2.16	H	< 2.00	0.157	21.95	1	66
		QPSK	-19.74	13.66	10.41	2.16	H		0.155	21.91		
		16-QAM	-20.69	12.71	10.41	2.16	H		0.125	20.96		
		64-QAM	-22.23	11.17	10.41	2.16	H		0.087	19.42		
		256-QAM	-24.08	9.32	10.41	2.16	H		0.057	17.57		
1880.0		PI/2 BPSK	-19.55	14.16	10.34	2.18	H		0.171	22.32	1	1
		QPSK	-19.76	13.95	10.34	2.18	H		0.163	22.11		
		16-QAM	-20.78	12.93	10.34	2.18	H		0.129	21.09		
		64-QAM	-22.24	11.47	10.34	2.18	H		0.092	19.63		
		256-QAM	-24.23	9.48	10.34	2.18	H		0.058	17.64		
1897.5		PI/2 BPSK	-19.83	13.95	10.25	2.19	H		0.159	22.01	1	1
		QPSK	-19.85	13.93	10.25	2.19	H		0.158	21.99		
		16-QAM	-20.87	12.91	10.25	2.19	H		0.125	20.97		
		64-QAM	-22.31	11.47	10.25	2.19	H		0.090	19.53		
		256-QAM	-24.23	9.55	10.25	2.19	H		0.058	17.61		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1865.0	Sub6 n2/ 30 MHz [15 kHz]	PI/2 BPSK	-19.82	13.58	10.41	2.16	H	< 2.00	0.152	21.83	1	15
		QPSK	-19.85	13.55	10.41	2.16	H		0.151	21.80		
		16-QAM	-20.91	12.49	10.41	2.16	H		0.119	20.74		
		64-QAM	-22.41	10.99	10.41	2.16	H		0.084	19.24		
		256-QAM	-24.43	8.97	10.41	2.16	H		0.053	17.22		
1880.0		PI/2 BPSK	-19.60	14.11	10.34	2.18	H		0.169	22.27	1	1
		QPSK	-19.79	13.92	10.34	2.18	H		0.161	22.08		
		16-QAM	-20.85	12.86	10.34	2.18	H		0.126	21.02		
		64-QAM	-22.27	11.44	10.34	2.18	H		0.091	19.60		
		256-QAM	-24.22	9.49	10.34	2.18	H		0.058	17.65		
1895.0		PI/2 BPSK	-19.98	13.78	10.28	2.19	H		0.154	21.87	1	1
		QPSK	-20.00	13.76	10.28	2.19	H		0.153	21.85		
		16-QAM	-20.92	12.84	10.28	2.19	H		0.124	20.93		
		64-QAM	-22.41	11.35	10.28	2.19	H		0.088	19.44		
		256-QAM	-24.42	9.34	10.28	2.19	H		0.055	17.43		

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
1870.0	Sub6 n2/ 40 MHz [15 kHz]	PI/2 BPSK	-19.62	13.87	10.39	2.17	H	< 2.00	0.162	22.09	1	108
		QPSK	-19.70	13.79	10.39	2.17	H		0.159	22.01		
		16-QAM	-20.70	12.79	10.39	2.17	H		0.126	21.01		
		64-QAM	-22.25	11.24	10.39	2.17	H		0.088	19.46		
		256-QAM	-24.19	9.30	10.39	2.17	H		0.056	17.52		
1880.0		PI/2 BPSK	-19.27	14.44	10.34	2.18	H		0.182	22.60	1	1
		QPSK	-19.55	14.16	10.34	2.18	H		0.171	22.32		
		16-QAM	-21.00	12.71	10.34	2.18	H		0.122	20.87		
		64-QAM	-22.53	11.18	10.34	2.18	H		0.086	19.34		
		256-QAM	-24.48	9.23	10.34	2.18	H		0.055	17.39		
1890.0		PI/2 BPSK	-19.90	13.83	10.30	2.18	H		0.157	21.95	1	1
		QPSK	-19.95	13.78	10.30	2.18	H		0.155	21.90		
		16-QAM	-20.90	12.83	10.30	2.18	H		0.124	20.95		
		64-QAM	-22.35	11.38	10.30	2.18	H		0.089	19.50		
		256-QAM	-24.38	9.35	10.30	2.18	H		0.056	17.47		

9.2 RADIATED SPURIOUS EMISSIONS

☒ NR Band: N2
☒ Bandwidth: 40 MHz
☒ Modulation: PI/2 BPSK
☒ Distance: 3 meters
☒ SCS: 15 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
374000 (1870.0)	3,740.00	-60.82	12.00	-60.32	3.18	V	-51.50	-13.00	1	108
	5,610.00	-62.88	12.21	-56.15	4.00	V	-47.94	-13.00		
	7,480.00	-63.49	11.45	-49.01	4.72	V	-42.28	-13.00		
376500 (1880.0)	3,760.00	-60.93	11.90	-59.98	3.21	V	-51.29	-13.00	1	108
	5,640.00	-61.92	12.14	-54.72	4.03	V	-46.61	-13.00		
	7,520.00	-62.67	11.56	-48.51	4.73	V	-41.68	-13.00		
378000 (1890.0)	3,780.00	-60.82	11.81	-59.59	3.20	V	-50.98	-13.00	1	1
	5,670.00	-63.24	12.05	-56.00	4.06	V	-48.01	-13.00		
	7,560.00	-63.09	11.60	-48.65	4.75	V	-41.80	-13.00		

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)	Limit (dB)
Sub6 n2	5 MHz	1880.0	BPSK	25	0	4.24	13.00
			QPSK			5.45	
			16-QAM			6.16	
			64-QAM			6.23	
			256-QAM			6.60	
	10 MHz		BPSK	50		4.36	
			QPSK			5.52	
			16-QAM			6.30	
			64-QAM			6.51	
			256-QAM			6.93	
	15 MHz		BPSK	75		4.79	
			QPSK			5.46	
			16-QAM			6.17	
			64-QAM			6.49	
			256-QAM			6.67	
	20 MHz		BPSK	100		4.30	
			QPSK			5.47	
			16-QAM			6.22	
			64-QAM			6.39	
			256-QAM			6.74	
	25 MHz		BPSK	128		4.38	
			QPSK			5.54	
			16-QAM			6.20	
			64-QAM			6.47	
			256-QAM			6.71	
	30 MHz		BPSK	160		4.45	
			QPSK			5.47	
			16-QAM			6.25	
			64-QAM			6.41	
			256-QAM			6.73	
	40 MHz		BPSK	216		4.44	
			QPSK			5.46	
			16-QAM			6.25	
			64-QAM			6.46	
			256-QAM			6.71	

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 219 ~ 253.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n2	5 MHz	1880.0	BPSK	25	0	4.6954
			QPSK			4.6634
			16-QAM			4.6935
			64-QAM			4.6904
			256-QAM			4.6648
	10 MHz		BPSK	50		9.0085
			QPSK			9.0147
			16-QAM			8.9917
			64-QAM			9.0012
			256-QAM			8.9827
	15 MHz		BPSK	75		13.472
			QPSK			13.451
			16-QAM			13.458
			64-QAM			13.498
			256-QAM			13.450
	20 MHz		BPSK	100		17.927
			QPSK			17.969
			16-QAM			17.939
			64-QAM			17.961
			256-QAM			17.944
	25 MHz		BPSK	128		23.056
			QPSK			23.074
			16-QAM			23.020
			64-QAM			23.009
			256-QAM			22.997
	30 MHz		BPSK	160		28.833
			QPSK			28.866
			16-QAM			28.765
			64-QAM			28.845
			256-QAM			28.798
	40 MHz		BPSK	216		38.859
			QPSK			38.843
			16-QAM			38.780
			64-QAM			38.764
			256-QAM			38.864

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 254 ~ 288.

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 n2	5	1852.5	3.9981	29.722	-63.624	-33.902	-13.00
		1880.0	4.5963	29.722	-63.062	-33.340	
		1907.5	5.2144	30.315	-63.684	-33.369	
	10	1855.0	7.9861	30.315	-63.506	-33.191	
		1880.0	8.5544	30.315	-63.068	-32.753	
		1905.0	5.1646	30.315	-62.533	-32.218	
	15	1857.5	6.3410	30.315	-63.949	-33.634	
		1880.0	3.7987	29.722	-63.502	-33.780	
		1902.5	6.2812	30.315	-63.396	-33.081	
	20	1860.0	7.9562	30.315	-63.060	-32.745	
		1880.0	3.7787	29.722	-63.427	-33.705	
		1900.0	2.7319	29.722	-63.672	-33.950	
	25	1862.5	4.0679	29.722	-62.533	-32.811	
		1880.0	3.7787	29.722	-63.771	-34.049	
		1897.5	9.6909	30.315	-62.562	-32.247	
	30	1865.0	9.3918	30.315	-62.441	-32.126	
		1880.0	8.0259	30.315	-63.351	-33.036	
		1895.0	4.8156	29.722	-63.322	-33.600	
	40	1870.0	7.1885	30.315	-63.286	-32.971	
		1880.0	3.7289	29.722	-63.023	-33.301	
		1890.0	7.7368	30.315	-63.752	-33.437	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 289 ~ 330.
2. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
3. Factor(dB) = Cable Loss + Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 – 1	27.012
1 – 5	27.922
5 – 10	30.315
10 – 15	30.840
15 – 20	31.213
Above 20	31.855

9.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 331 ~ 372.

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ☐ BandWidth: 5 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1852.5	100 %	+20(Ref)	1852 499 993	0.0	0.000 000	0.000
	100 %	-30	1852 499 989	-4.6	0.000 000	-0.002
	100 %	-20	1852 499 991	-2.0	0.000 000	-0.001
	100 %	-10	1852 499 991	-2.2	0.000 000	-0.001
	100 %	0	1852 499 989	-3.8	0.000 000	-0.002
	100 %	+10	1852 499 987	-6.2	0.000 000	-0.003
	100 %	+30	1852 499 989	-4.0	0.000 000	-0.002
	100 %	+40	1852 499 991	-2.5	0.000 000	-0.001
	100 %	+50	1852 499 993	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	1852 499 998	4.5	0.000 000	0.002
1907.5	100 %	+20(Ref)	1907 500 002	0.0	0.000 000	0.000
	100 %	-30	1907 500 003	0.4	0.000 000	0.000
	100 %	-20	1907 500 003	0.6	0.000 000	0.000
	100 %	-10	1907 500 001	-0.7	0.000 000	0.000
	100 %	0	1907 500 002	0.2	0.000 000	0.000
	100 %	+10	1907 500 003	0.9	0.000 000	0.000
	100 %	+30	1907 500 001	-1.2	0.000 000	-0.001
	100 %	+40	1907 500 000	-1.8	0.000 000	-0.001
	100 %	+50	1907 500 002	0.3	0.000 000	0.000
	Batt. Endpoint	+20	1907 500 003	0.7	0.000 000	0.000

☐ BandWidth: 10 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1855.0	100 %	+20(Ref)	1855 000 006	0.0	0.000 000	0.000
	100 %	-30	1855 000 004	-2.2	0.000 000	-0.001
	100 %	-20	1855 000 006	0.5	0.000 000	0.000
	100 %	-10	1855 000 008	1.9	0.000 000	0.001
	100 %	0	1855 000 007	0.8	0.000 000	0.000
	100 %	+10	1855 000 006	-0.3	0.000 000	0.000
	100 %	+30	1855 000 006	0.2	0.000 000	0.000
	100 %	+40	1855 000 007	1.2	0.000 000	0.001
	100 %	+50	1855 000 006	-0.3	0.000 000	0.000
	Batt. Endpoint	+20	1855 000 009	2.8	0.000 000	0.002
1905.0	100 %	+20(Ref)	1905 000 002	0.0	0.000 000	0.000
	100 %	-30	1905 000 001	-0.1	0.000 000	0.000
	100 %	-20	1905 000 002	0.7	0.000 000	0.000
	100 %	-10	1905 000 002	-0.1	0.000 000	0.000
	100 %	0	1905 000 000	-1.3	0.000 000	-0.001
	100 %	+10	1905 000 002	0.7	0.000 000	0.000
	100 %	+30	1905 000 001	-0.5	0.000 000	0.000
	100 %	+40	1905 000 001	-0.5	0.000 000	0.000
	100 %	+50	1905 000 002	0.0	0.000 000	0.000
	Batt. Endpoint	+20	1905 000 001	-0.4	0.000 000	0.000

☐ BandWidth: 15 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1857.5	100 %	+20(Ref)	1857 500 000	0.0	0.000 000	0.000
	100 %	-30	1857 499 998	-1.9	0.000 000	-0.001
	100 %	-20	1857 500 000	0.1	0.000 000	0.000
	100 %	-10	1857 500 001	0.6	0.000 000	0.000
	100 %	0	1857 500 001	1.0	0.000 000	0.001
	100 %	+10	1857 500 000	-0.4	0.000 000	0.000
	100 %	+30	1857 500 000	-0.1	0.000 000	0.000
	100 %	+40	1857 500 000	-0.1	0.000 000	0.000
	100 %	+50	1857 500 000	0.2	0.000 000	0.000
	Batt. Endpoint	+20	1857 500 000	0.1	0.000 000	0.000
1902.5	100 %	+20(Ref)	1902 499 998	0.0	0.000 000	0.000
	100 %	-30	1902 499 999	0.5	0.000 000	0.000
	100 %	-20	1902 499 998	-0.7	0.000 000	0.000
	100 %	-10	1902 499 999	0.6	0.000 000	0.000
	100 %	0	1902 499 999	0.6	0.000 000	0.000
	100 %	+10	1902 499 999	0.6	0.000 000	0.000
	100 %	+30	1902 499 998	-0.7	0.000 000	0.000
	100 %	+40	1902 499 999	1.0	0.000 000	0.001
	100 %	+50	1902 499 998	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	1902 499 998	-0.7	0.000 000	0.000

☐ BandWidth: 20 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1860.0	100 %	+20(Ref)	1860 000 000	0.0	0.000 000	0.000
	100 %	-30	1859 999 999	-0.3	0.000 000	0.000
	100 %	-20	1860 000 000	0.3	0.000 000	0.000
	100 %	-10	1860 000 000	0.4	0.000 000	0.000
	100 %	0	1860 000 000	1.0	0.000 000	0.001
	100 %	+10	1860 000 000	0.8	0.000 000	0.000
	100 %	+30	1859 999 999	-0.6	0.000 000	0.000
	100 %	+40	1859 999 998	-1.3	0.000 000	-0.001
	100 %	+50	1859 999 999	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	1860 000 000	0.3	0.000 000	0.000
1900.0	100 %	+20(Ref)	1899 999 999	0.0	0.000 000	0.000
	100 %	-30	1899 999 999	-0.5	0.000 000	0.000
	100 %	-20	1900 000 000	0.9	0.000 000	0.000
	100 %	-10	1899 999 999	0.1	0.000 000	0.000
	100 %	0	1899 999 999	0.0	0.000 000	0.000
	100 %	+10	1900 000 001	1.6	0.000 000	0.001
	100 %	+30	1900 000 000	0.9	0.000 000	0.000
	100 %	+40	1900 000 000	0.6	0.000 000	0.000
	100 %	+50	1899 999 999	0.2	0.000 000	0.000
	Batt. Endpoint	+20	1900 000 000	0.9	0.000 000	0.000

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1862.5	100 %	+20(Ref)	1862 500 001	0.0	0.000 000	0.000
	100 %	-30	1862 500 001	0.7	0.000 000	0.000
	100 %	-20	1862 499 997	-3.3	0.000 000	-0.002
	100 %	-10	1862 500 002	1.2	0.000 000	0.001
	100 %	0	1862 500 003	2.5	0.000 000	0.001
	100 %	+10	1862 499 999	-1.9	0.000 000	-0.001
	100 %	+30	1862 500 001	0.6	0.000 000	0.000
	100 %	+40	1862 499 999	-1.6	0.000 000	-0.001
	100 %	+50	1862 500 003	2.6	0.000 000	0.001
	Batt. Endpoint	+20	1862 499 998	-2.7	0.000 000	-0.001
1897.5	100 %	+20(Ref)	1897 500 000	0.0	0.000 000	0.000
	100 %	-30	1897 499 999	-0.2	0.000 000	0.000
	100 %	-20	1897 500 000	0.6	0.000 000	0.000
	100 %	-10	1897 500 001	1.4	0.000 000	0.001
	100 %	0	1897 500 000	-0.1	0.000 000	0.000
	100 %	+10	1897 500 000	0.4	0.000 000	0.000
	100 %	+30	1897 499 998	-1.2	0.000 000	-0.001
	100 %	+40	1897 499 999	-0.2	0.000 000	0.000
	100 %	+50	1897 500 000	0.2	0.000 000	0.000
	Batt. Endpoint	+20	1897 500 000	0.0	0.000 000	0.000

BandWidth:	30 MHz
Voltage(100 %):	3.880 VDC
Batt. Endpoint:	3.400 VDC
LIMIT:	Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1865.0	100 %	+20(Ref)	1865 000 000	0.0	0.000 000	0.000
	100 %	-30	1865 000 000	0.4	0.000 000	0.000
	100 %	-20	1865 000 001	0.9	0.000 000	0.000
	100 %	-10	1864 999 999	-0.6	0.000 000	0.000
	100 %	0	1864 999 999	-0.9	0.000 000	0.000
	100 %	+10	1864 999 999	-0.7	0.000 000	0.000
	100 %	+30	1865 000 000	0.4	0.000 000	0.000
	100 %	+40	1864 999 999	-0.8	0.000 000	0.000
	100 %	+50	1865 000 000	-0.1	0.000 000	0.000
	Batt. Endpoint	+20	1865 000 000	0.2	0.000 000	0.000
1895.0	100 %	+20(Ref)	1895 000 000	0.0	0.000 000	0.000
	100 %	-30	1895 000 000	0.1	0.000 000	0.000
	100 %	-20	1895 000 000	-0.7	0.000 000	0.000
	100 %	-10	1895 000 000	0.1	0.000 000	0.000
	100 %	0	1895 000 000	-0.3	0.000 000	0.000
	100 %	+10	1895 000 001	1.0	0.000 000	0.001
	100 %	+30	1895 000 000	-0.3	0.000 000	0.000
	100 %	+40	1895 000 001	0.4	0.000 000	0.000
	100 %	+50	1895 000 000	0.0	0.000 000	0.000
	Batt. Endpoint	+20	1895 000 001	0.9	0.000 000	0.000

BandWidth:	40 MHz
Voltage(100 %):	3.880 VDC
Batt. Endpoint:	3.400 VDC
LIMIT:	Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
1870.0	100 %	+20(Ref)	1869 999 999	0.0	0.000 000	0.000
	100 %	-30	1869 999 999	0.4	0.000 000	0.000
	100 %	-20	1869 999 999	0.0	0.000 000	0.000
	100 %	-10	1869 999 998	-0.7	0.000 000	0.000
	100 %	0	1869 999 999	0.2	0.000 000	0.000
	100 %	+10	1869 999 999	-0.2	0.000 000	0.000
	100 %	+30	1869 999 999	-0.6	0.000 000	0.000
	100 %	+40	1870 000 000	0.6	0.000 000	0.000
	100 %	+50	1869 999 998	-1.3	0.000 000	-0.001
	Batt. Endpoint	+20	1869 999 998	-0.9	0.000 000	0.000
1890.0	100 %	+20(Ref)	1889 999 998	0.0	0.000 000	0.000
	100 %	-30	1889 999 997	-0.9	0.000 000	-0.001
	100 %	-20	1889 999 999	0.4	0.000 000	0.000
	100 %	-10	1889 999 999	0.3	0.000 000	0.000
	100 %	0	1889 999 999	0.2	0.000 000	0.000
	100 %	+10	1889 999 999	0.6	0.000 000	0.000
	100 %	+30	1889 999 998	-0.5	0.000 000	0.000
	100 %	+40	1889 999 999	0.4	0.000 000	0.000
	100 %	+50	1889 999 998	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	1889 999 999	0.4	0.000 000	0.000

10. TEST PLOTS(Main1 ANT)

NR25_5 M_PAR_Mid_BPSK_FullRB



NR25_5 M_PAR_Mid_QPSK_FullIRB



NR25_5 M_PAR_Mid_16QAM_FullRB



NR25_5 M_PAR_Mid_64QAM_FullRB



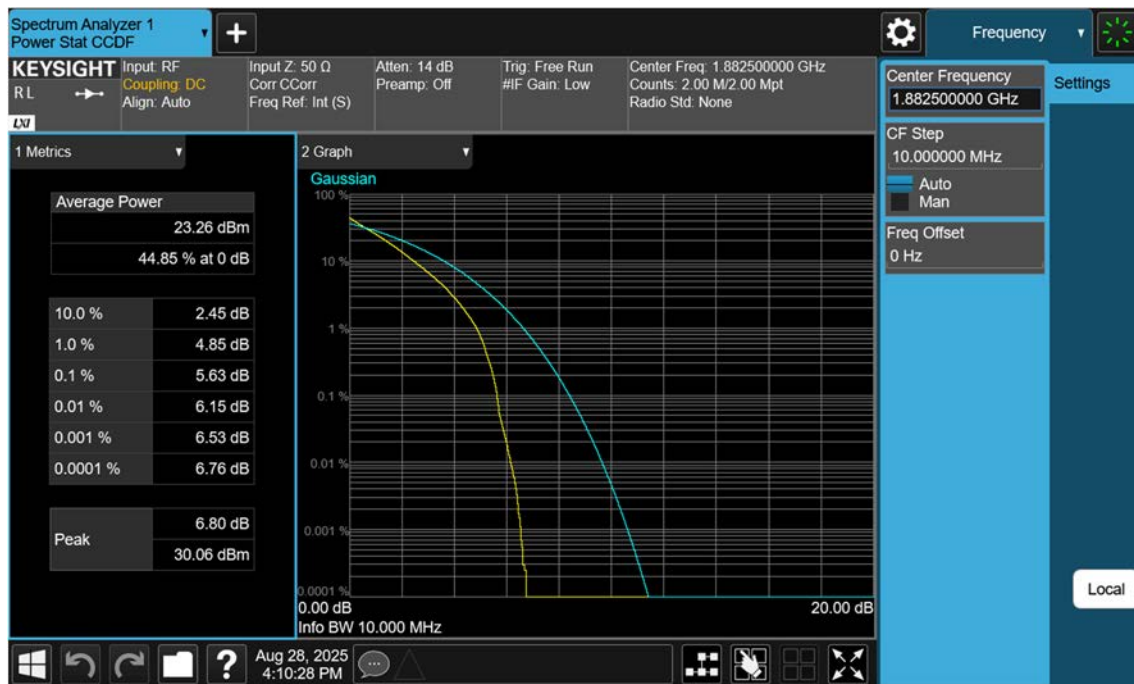
NR25_5 M_PAR_Mid_256QAM_FullRB



NR25_10 M_PAR_Mid_BPSK_FullRB



NR25_10 M_PAR_Mid_QPSK_FullRB



NR25_10 M_PAR_Mid_16QAM_FullRB



NR25_10 M_PAR_Mid_64QAM_FullRB



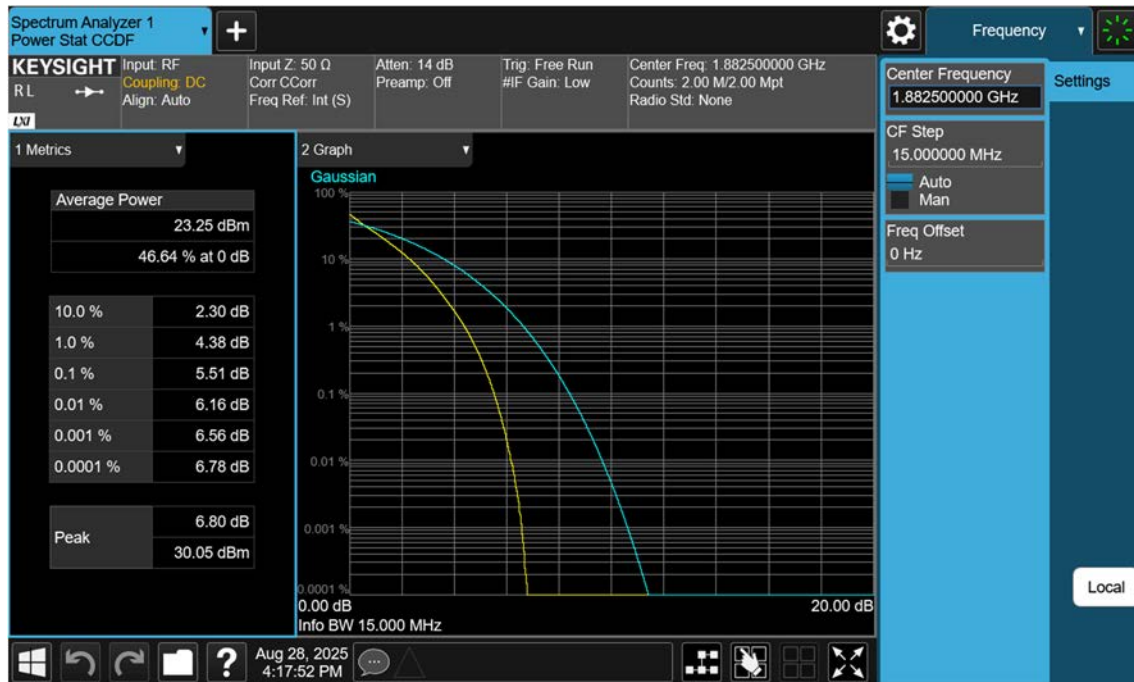
NR25_10 M_PAR_Mid_256QAM_FullRB



NR25_15 M_PAR_Mid_BPSK_FullRB



NR25_15 M_PAR_Mid_QPSK_FullRB



NR25_15 M_PAR_Mid_16QAM_FullRB



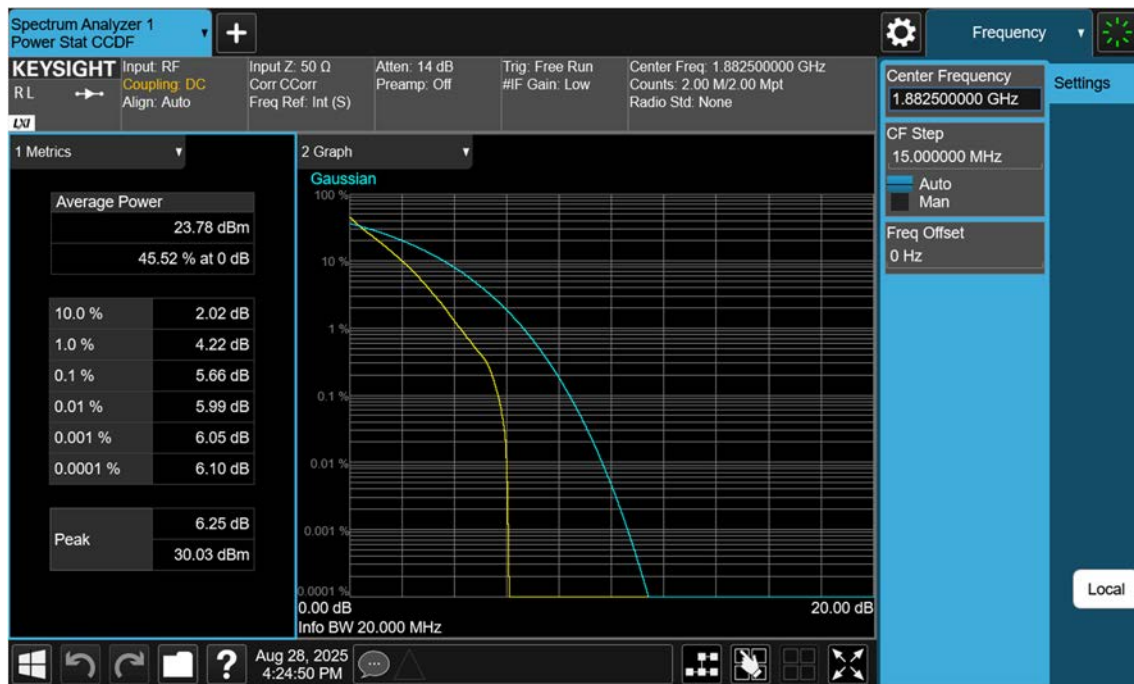
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NR25_15 M_PAR_Mid_256QAM_FullRB



NR25_20 M_PAR_Mid_BPSK_FullRB



NR25_20 M_PAR_Mid_QPSK_FullRB



NR25_20 M_PAR_Mid_16QAM_FullRB



NR25_20 M_PAR_Mid_64QAM_FullRB



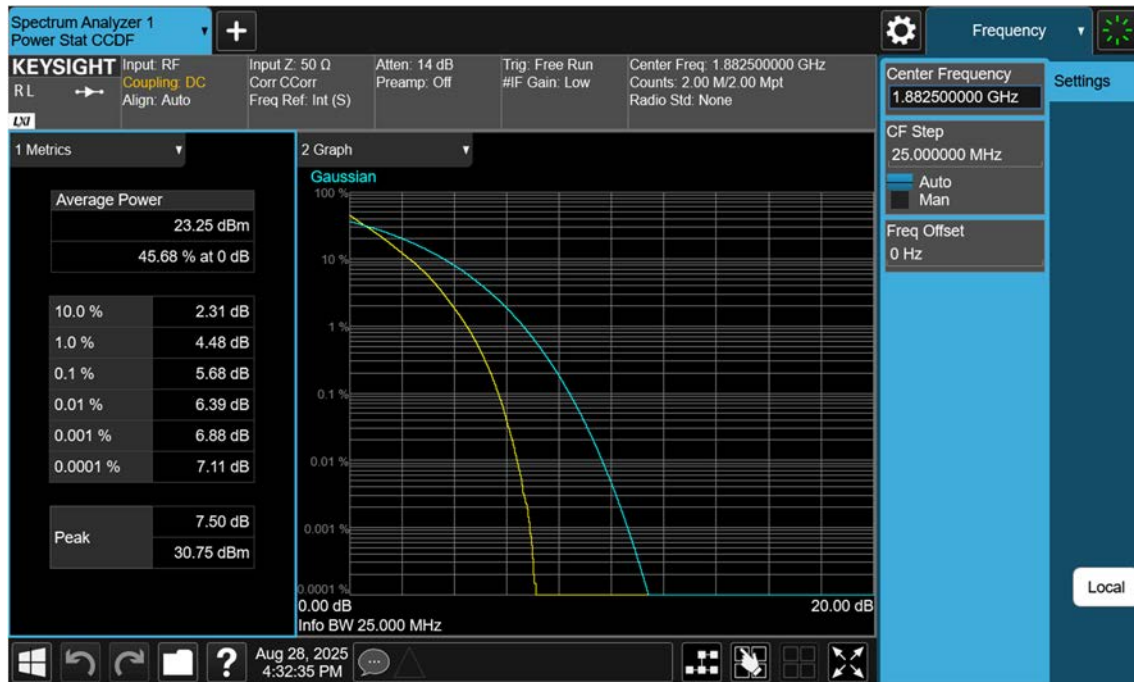
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NR25_25 M_PAR_Mid_BPSK_FullRB



NR25_25 M_PAR_Mid_QPSK_FullRB



NR25_25 M_PAR_Mid_16QAM_FullRB



NR25_25 M_PAR_Mid_64QAM_FullRB



NR25_25 M_PAR_Mid_256QAM_FullRB



NR25_30 M_PAR_Mid_BPSK_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT **RL** **→** **Coupling: DC** **Align: Auto** **Input Z: 50 Ω** **Corr CCorr** **Freq Ref: Int (S)** **Atten: 14 dB** **Preamp: Off** **Trig: Free Run** **#IF Gain: Low** **Center Freq: 1.882500000 GHz** **Counts: 2.00 M/2.00 Mpt** **Radio Std: None**

1 Metrics

Average Power	
	23.18 dBm
	43.80 % at 0 dB

10.0 %	2.51 dB
1.0 %	4.94 dB
0.1 %	5.74 dB
0.01 %	6.37 dB
0.001 %	6.88 dB
0.0001 %	7.15 dB

Peak	
	7.23 dB
	30.41 dBm

2 Graph

Gaussian

100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.00001 %

0.00 dB
0.00 MHz
20.00 dB
Info BW 30.000 MHz

Center Frequency
1.882500000 GHz

CF Step
30.000000 MHz

Auto
Man

Freq Offset
0 Hz

Settings

Local

Aug 28, 2025
4:39:57 PM

NR25_30 M_PAR_Mid_16QAM_FullRB



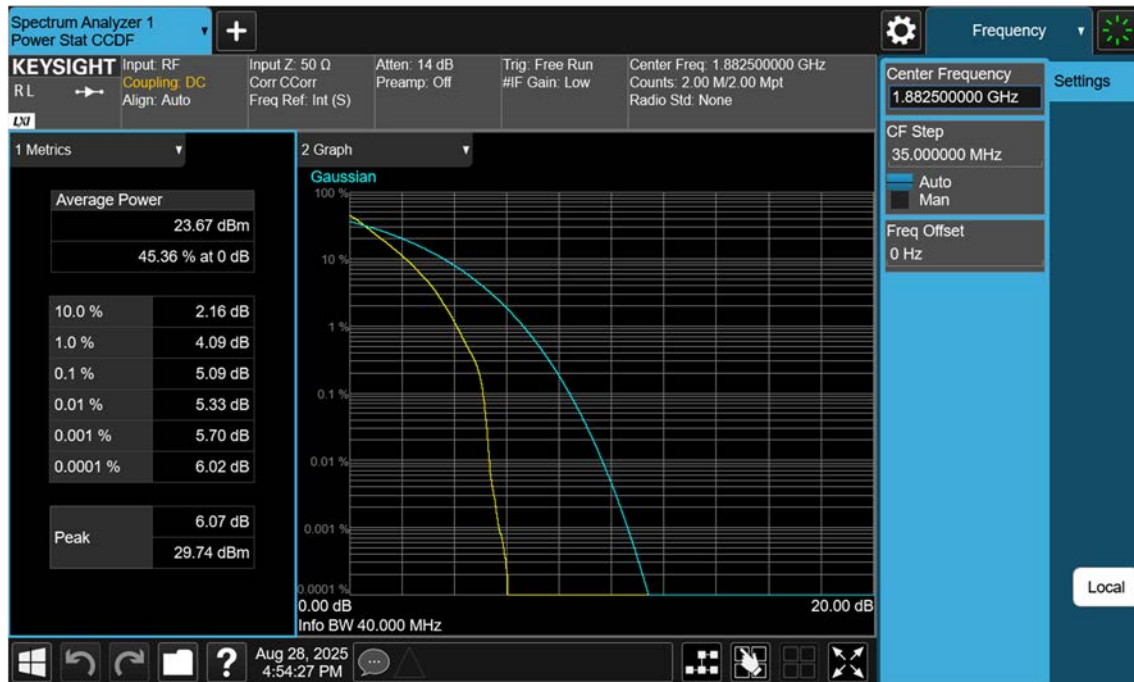
NR25_30 M_PAR_Mid_64QAM_FullRB



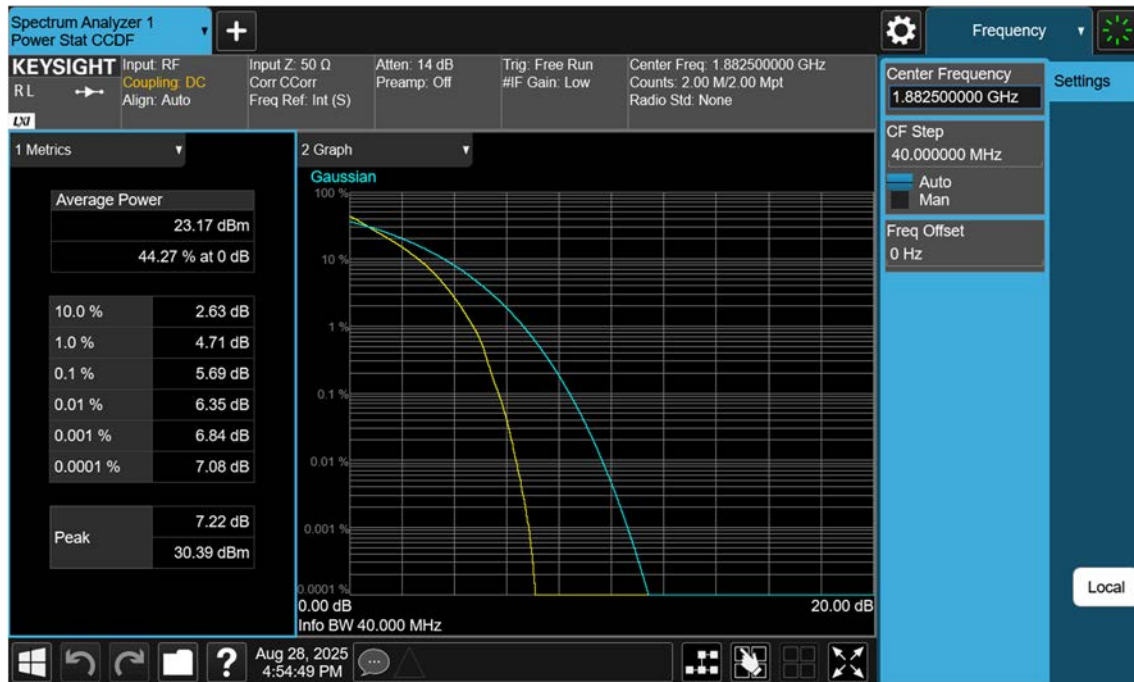
NR25_30 M_PAR_Mid_256QAM_FullRB



NR25_40 M_PAR_Mid_BPSK_FullRB



NR25_40 M_PAR_Mid_QPSK_FullRB



NR25_40 M_PAR_Mid_16QAM_FullRB



Spectrum Analyzer 1 Power Stat CCDF

Input: RF
Coupling: DC
Align: Auto

Input Z: 50 Ω
Corr C/Corr
Freq Ref: Int (S)

Atten: 14 dB
Preamp: Off

Trig: Free Run
#/F Gain: Low

Center Freq: 1.882500000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

1 Metrics

Average Power

21.65 dBm
42.28 % at 0 dB

10.0 %	3.18 dB
1.0 %	5.24 dB
0.1 %	6.49 dB
0.01 %	7.40 dB
0.001 %	8.08 dB
0.0001 %	8.28 dB

Peak

8.32 dB
29.97 dBm

2 Graph

Gaussian

100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.00001 %

0.00 dB
20.00 dB

Info BW 40.000 MHz

Settings

Center Frequency
1.882500000 GHz

CF Step
40.000000 MHz

Auto
Man

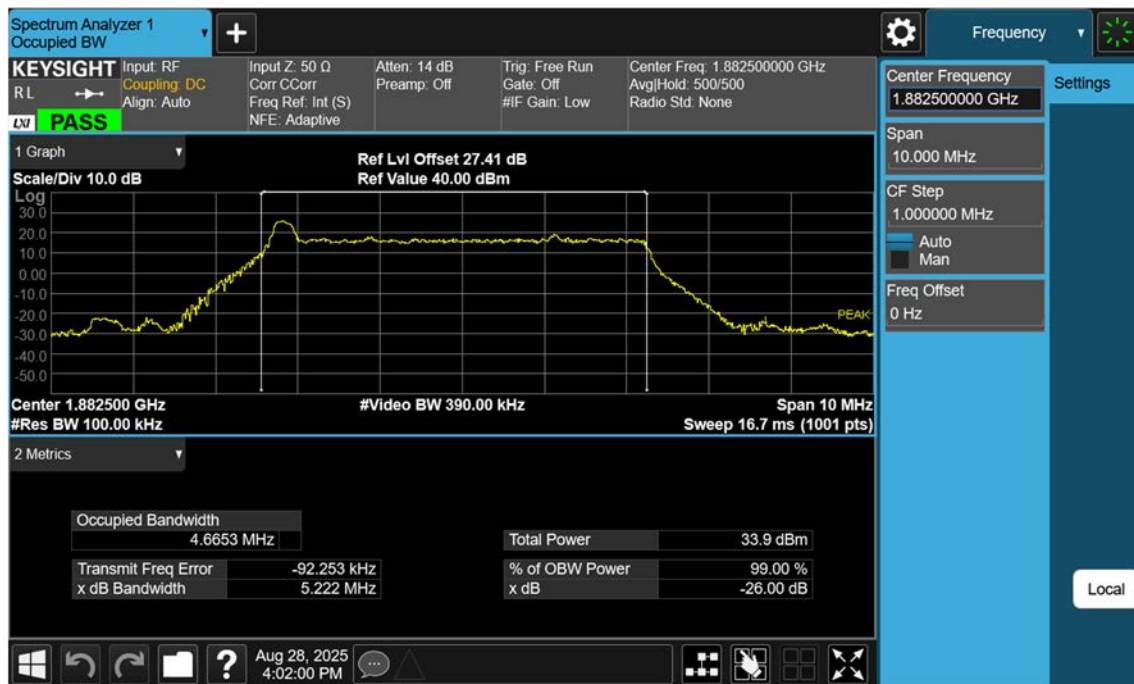
Freq Offset
0 Hz

Aug 28, 2025 4:55:32 PM

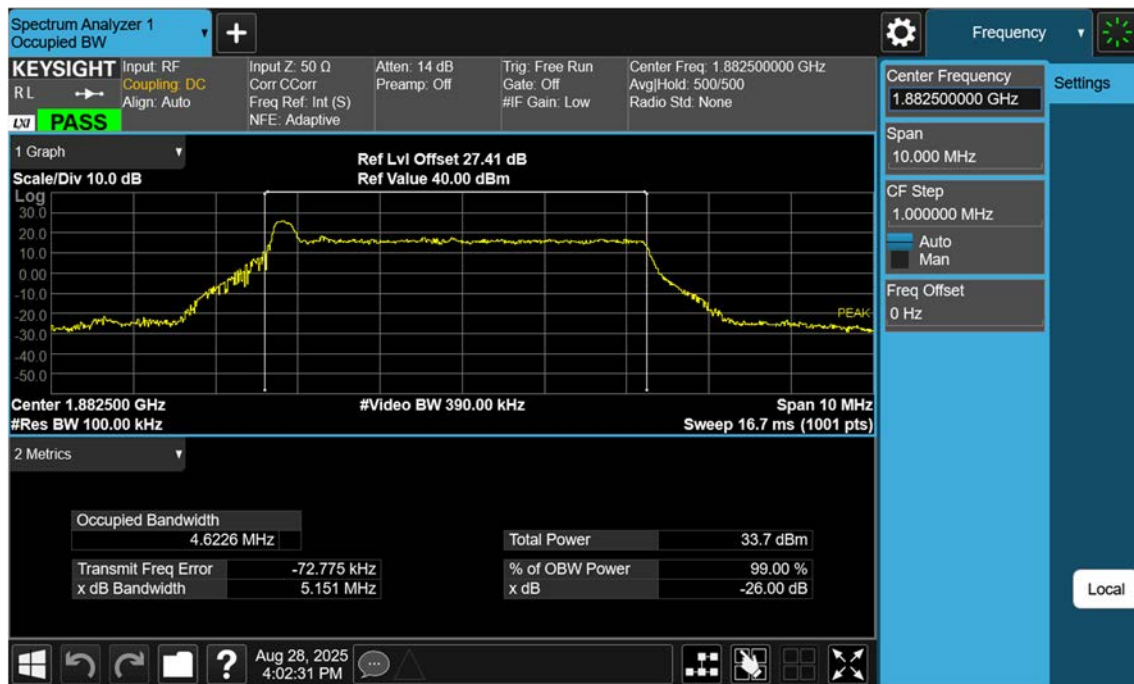
NR25_40 M_PAR_Mid_256QAM_FullRB



NR25_5 M_OBW_Mid_BPSK_FullRB



NR25_5 M_OBW_Mid_QPSK_FullRB



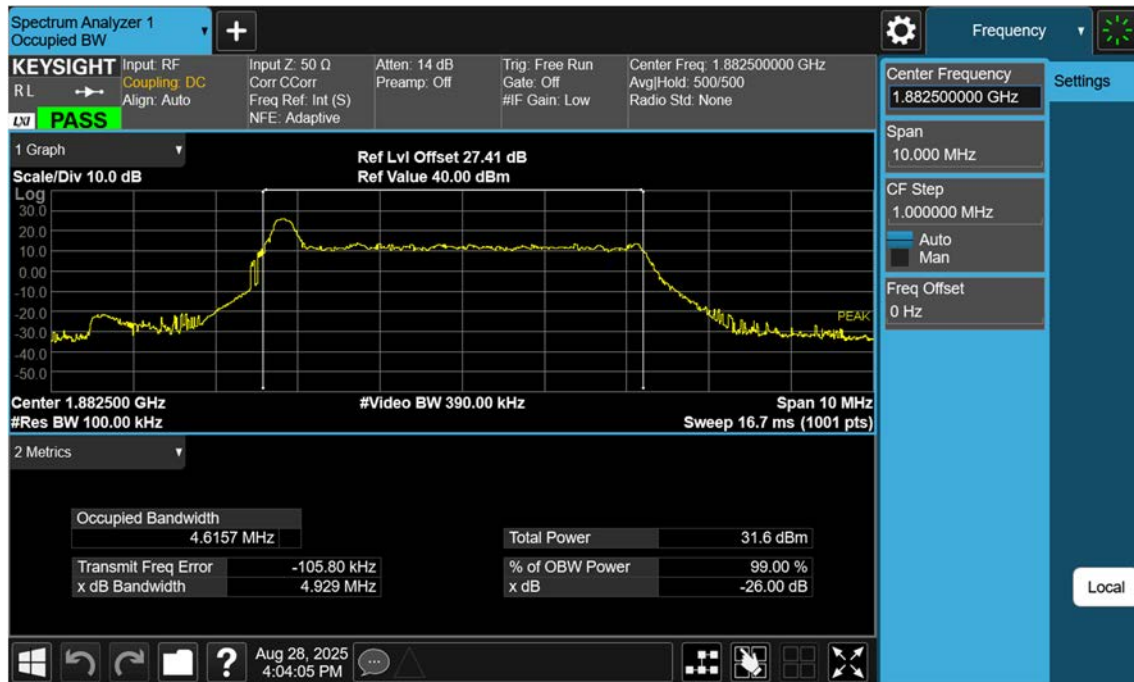
NR25_5 M_OBW_Mid_16QAM_FullRB



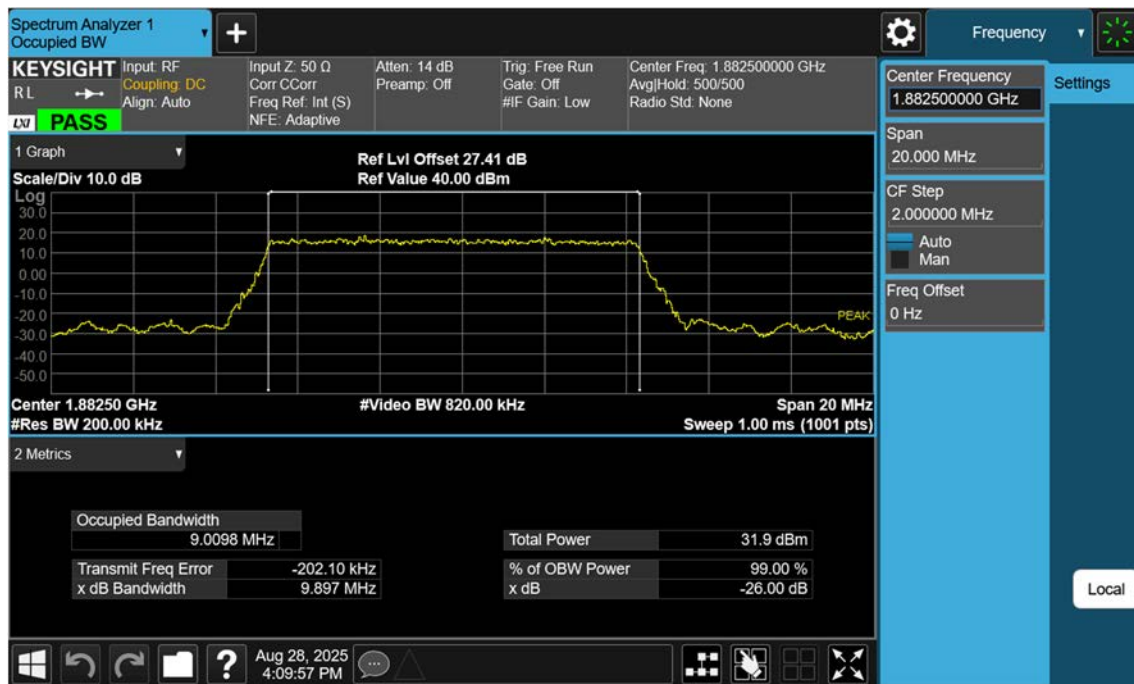
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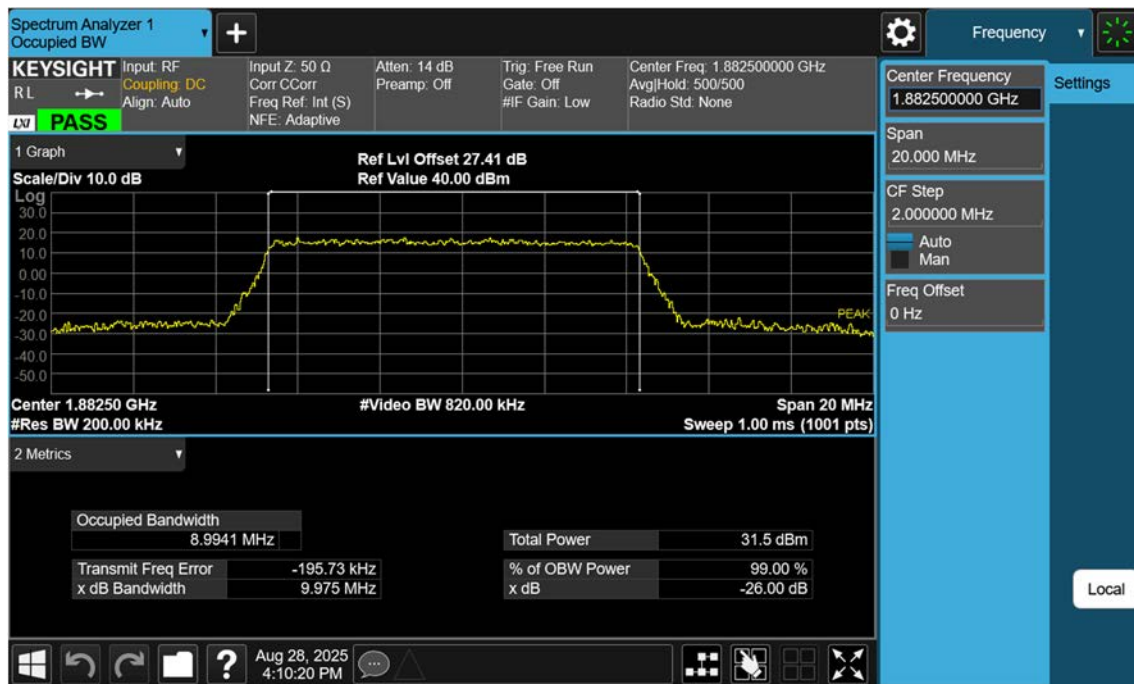
NR25_5 M_OBW_Mid_256QAM_FullRB



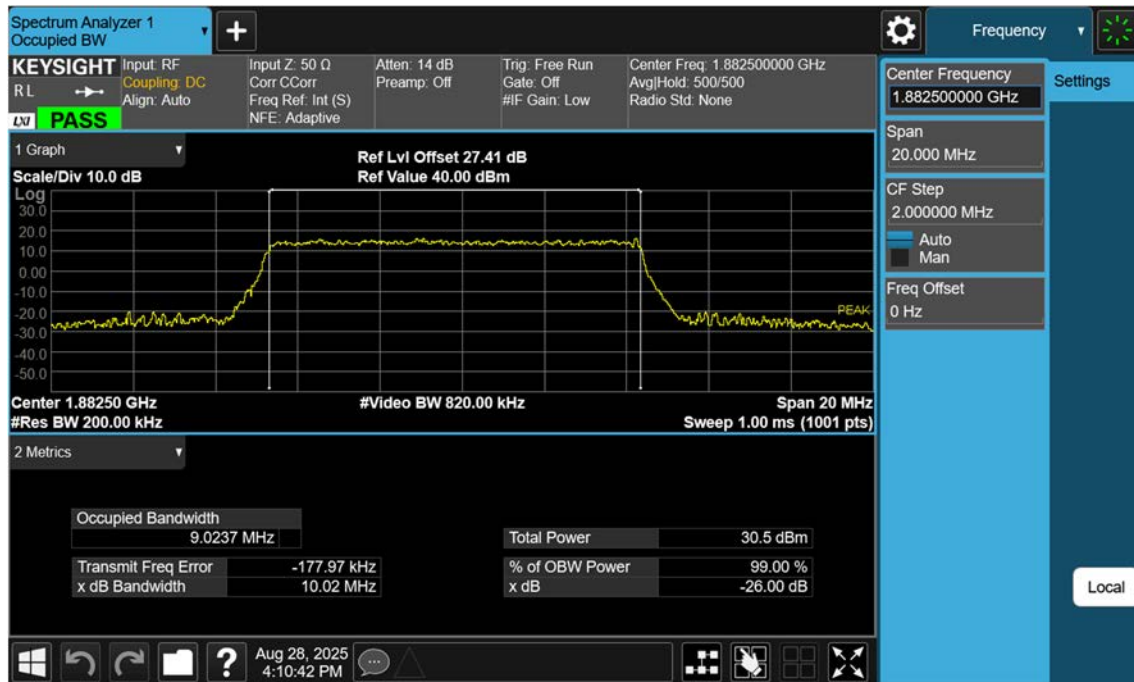
NR25_10 M_OBW_Mid_BPSK_FullRB



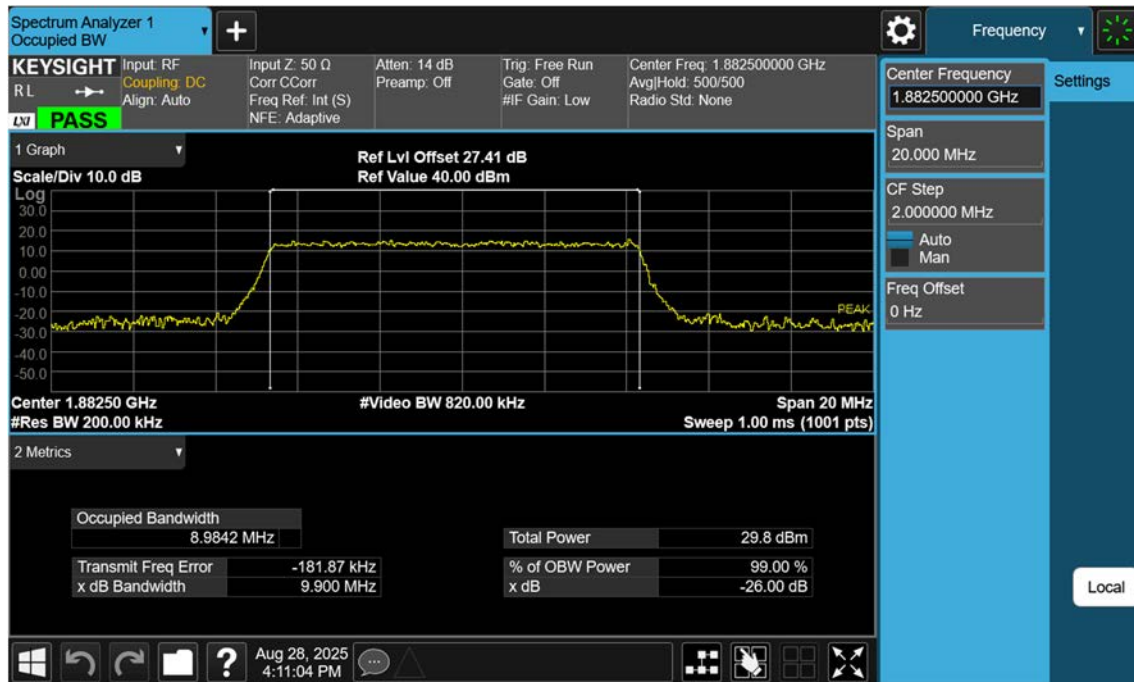
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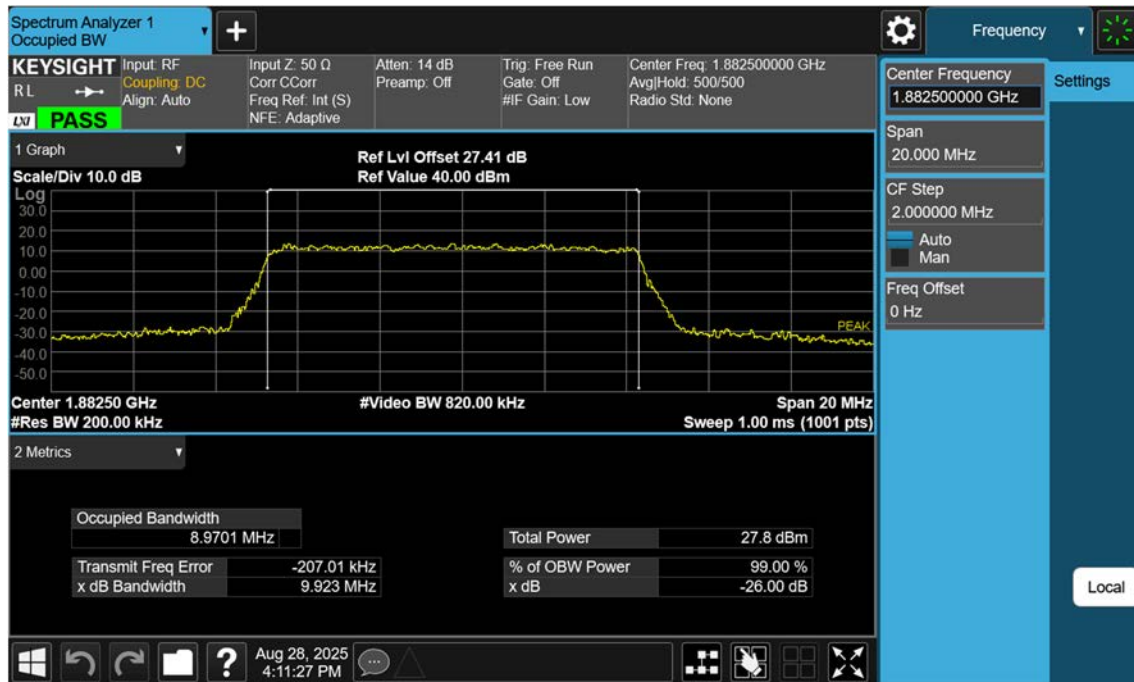
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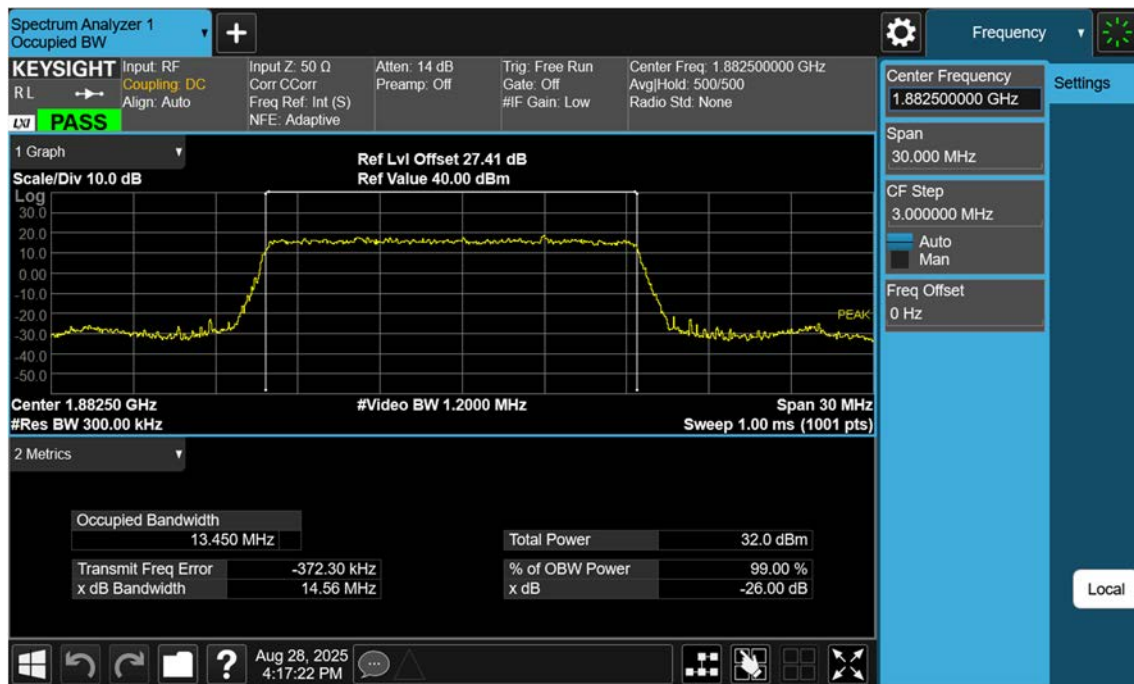
NR25_10 M_OBW_Mid_64QAM_FullRB



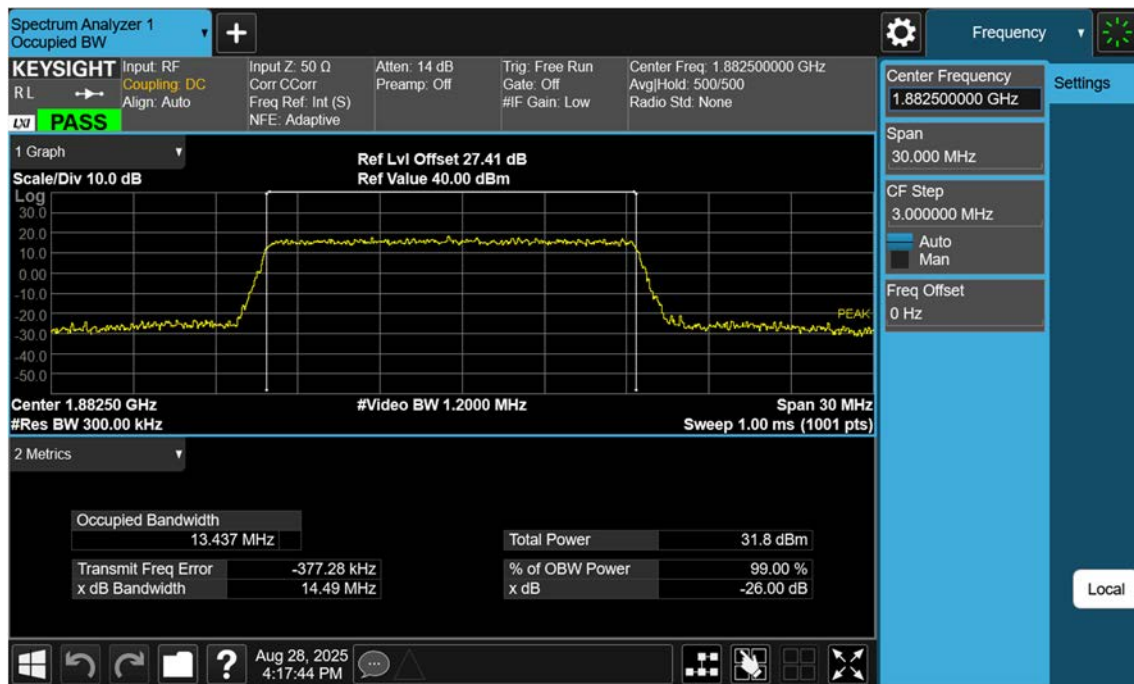
NR25_10 M_OBW_Mid_256QAM_FullRB



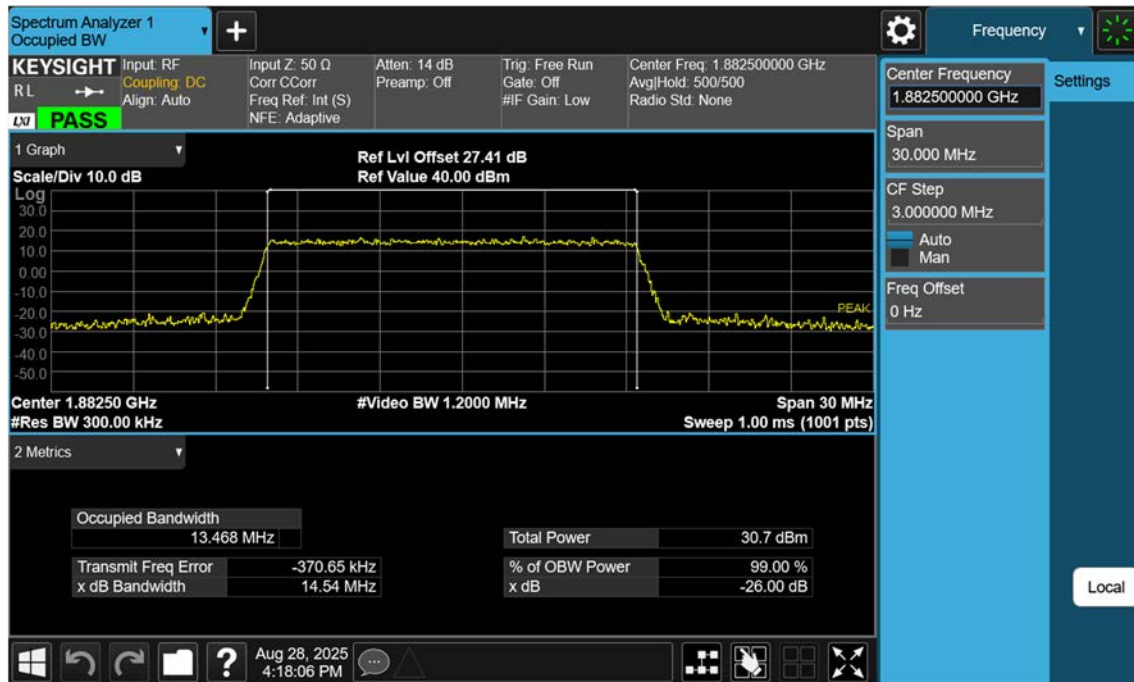
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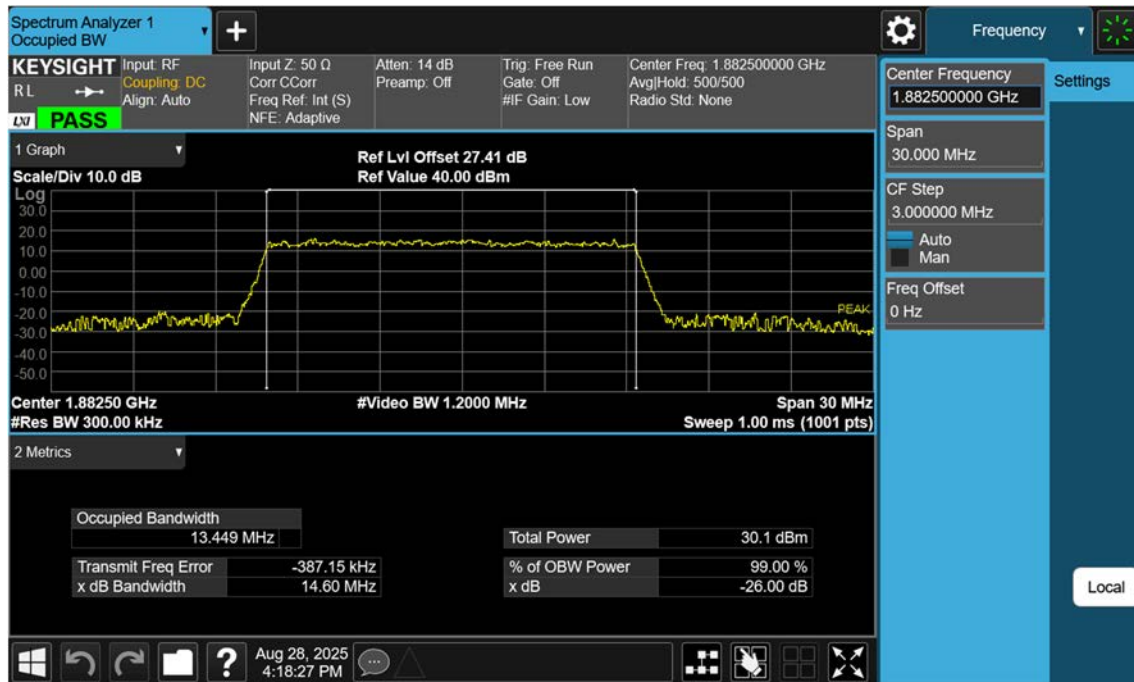
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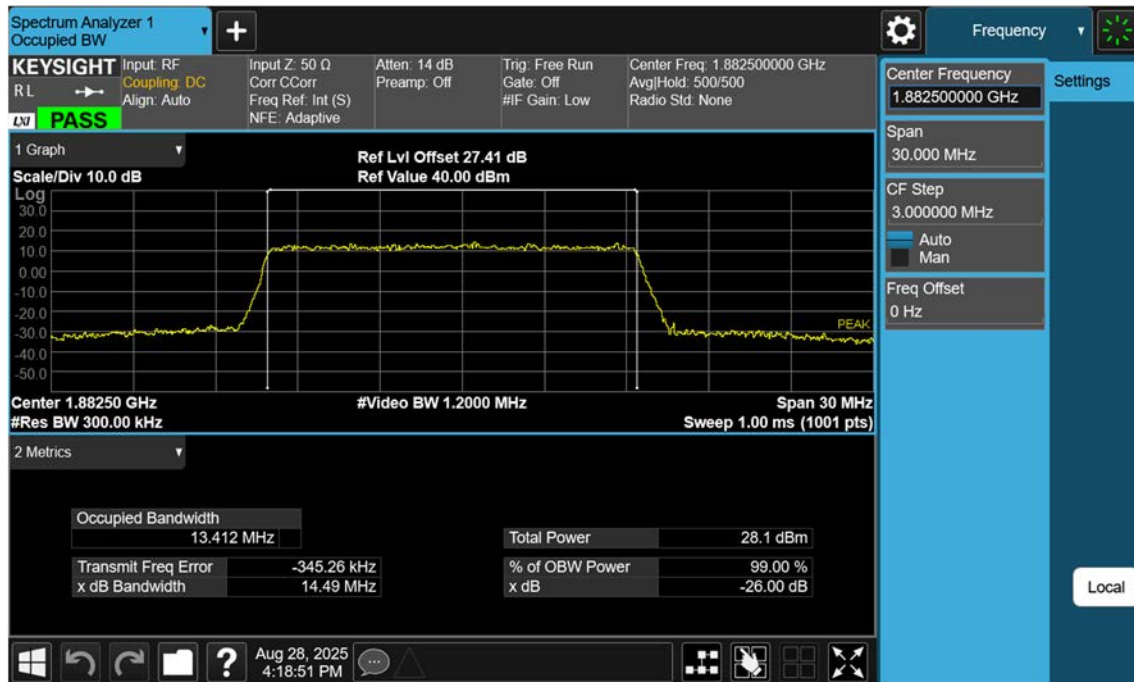
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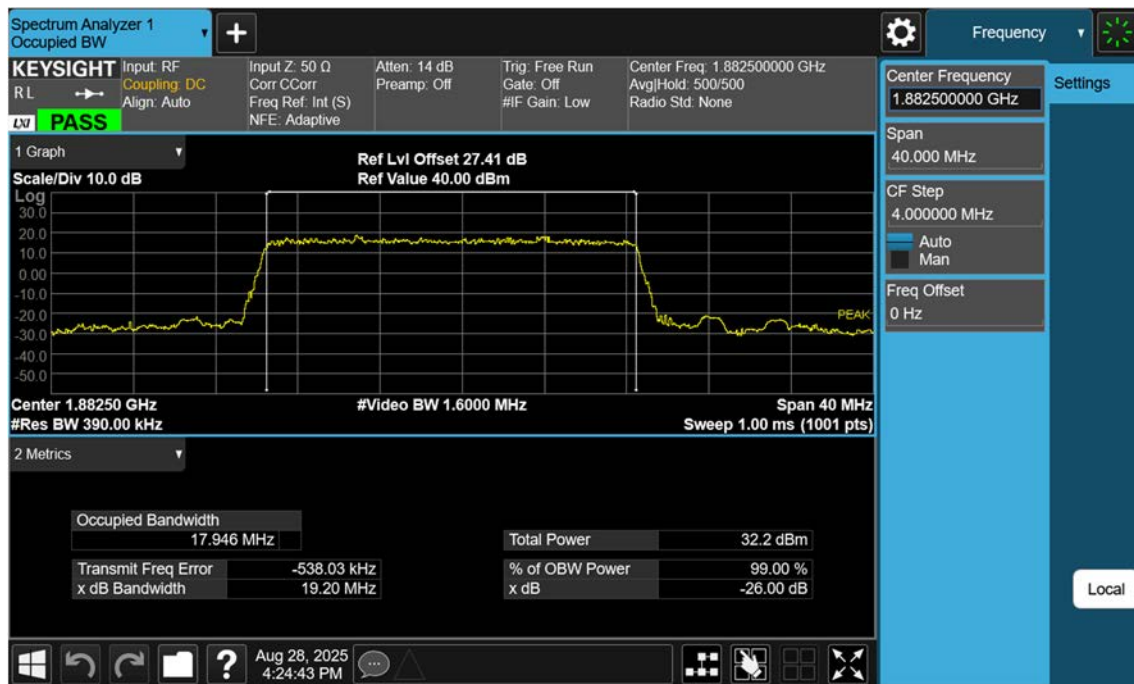
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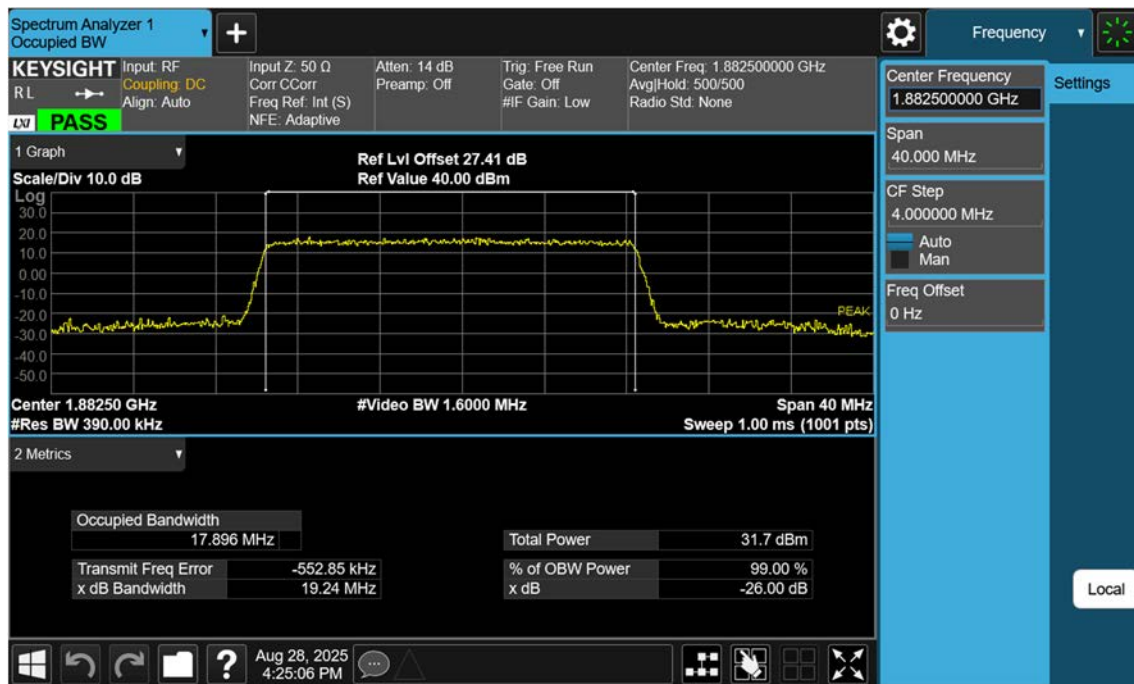
NR25_15 M_OBW_Mid_256QAM_FullRB



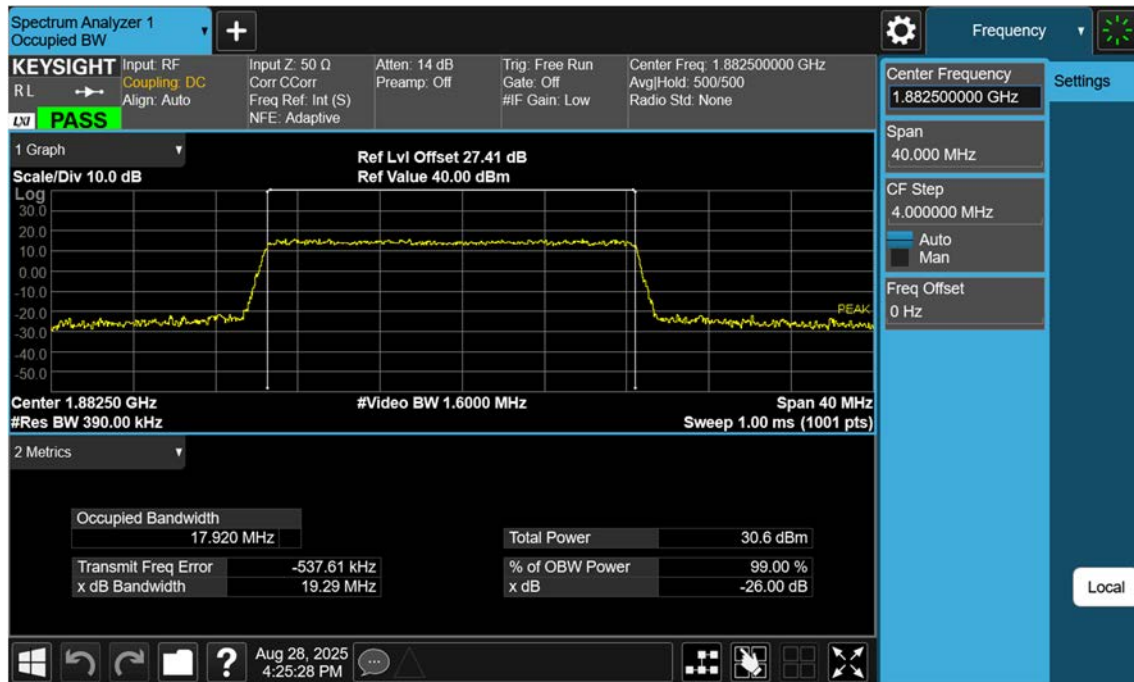
NR25_20 M_OBW_Mid_BPSK_FullRB



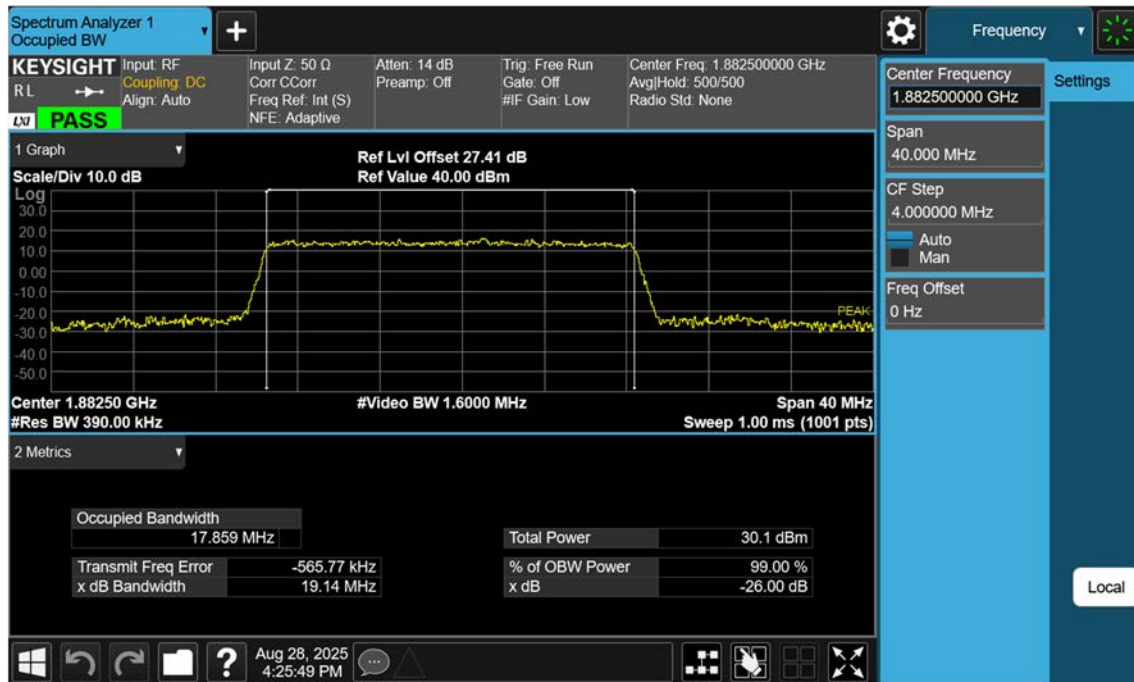
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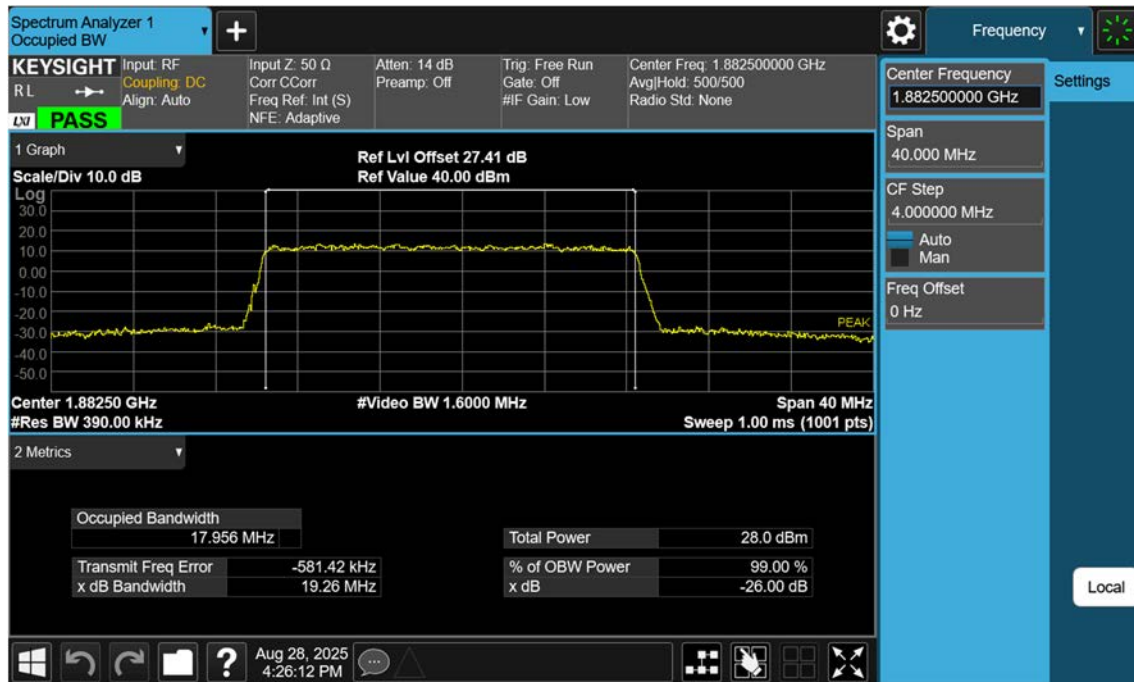
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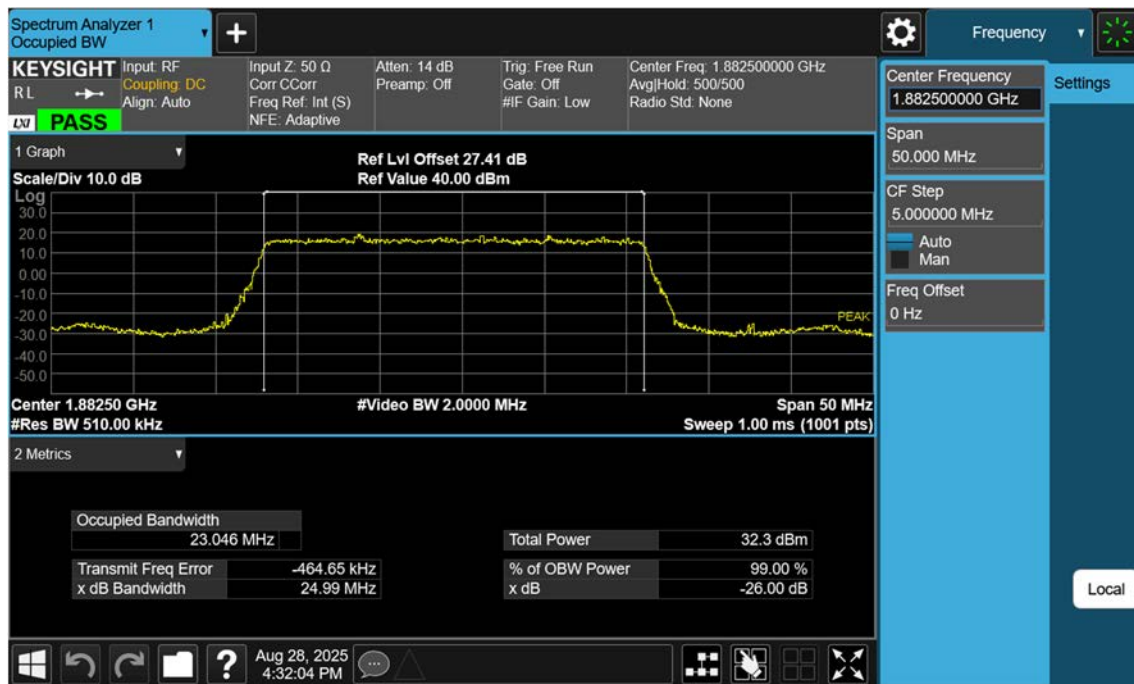
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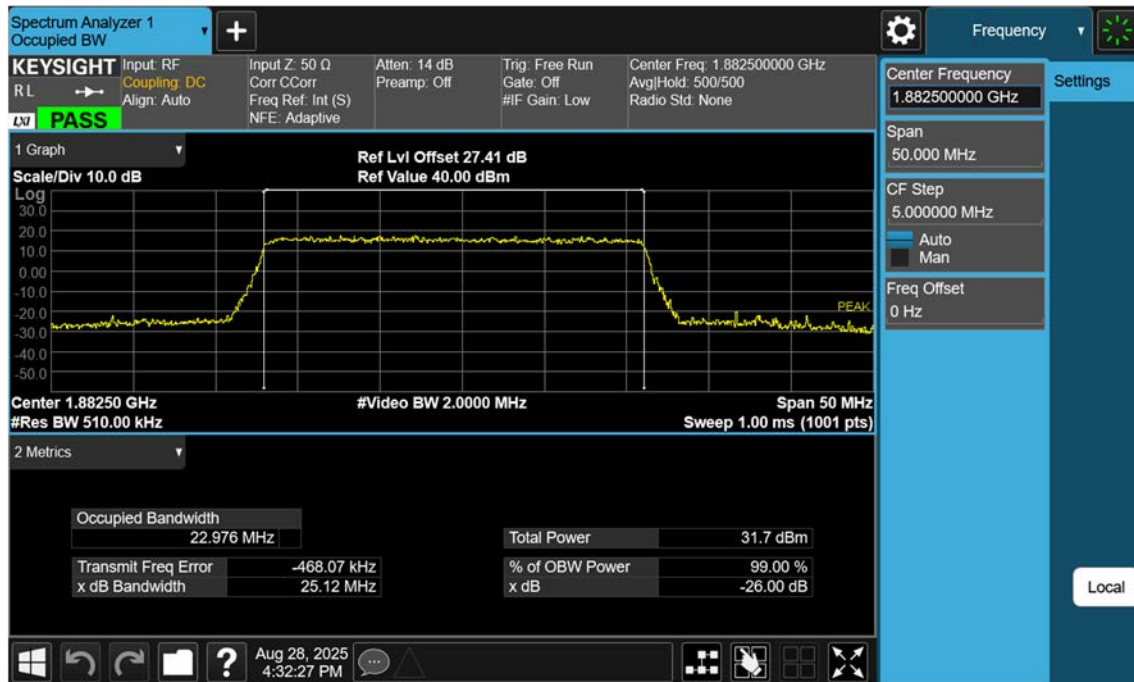
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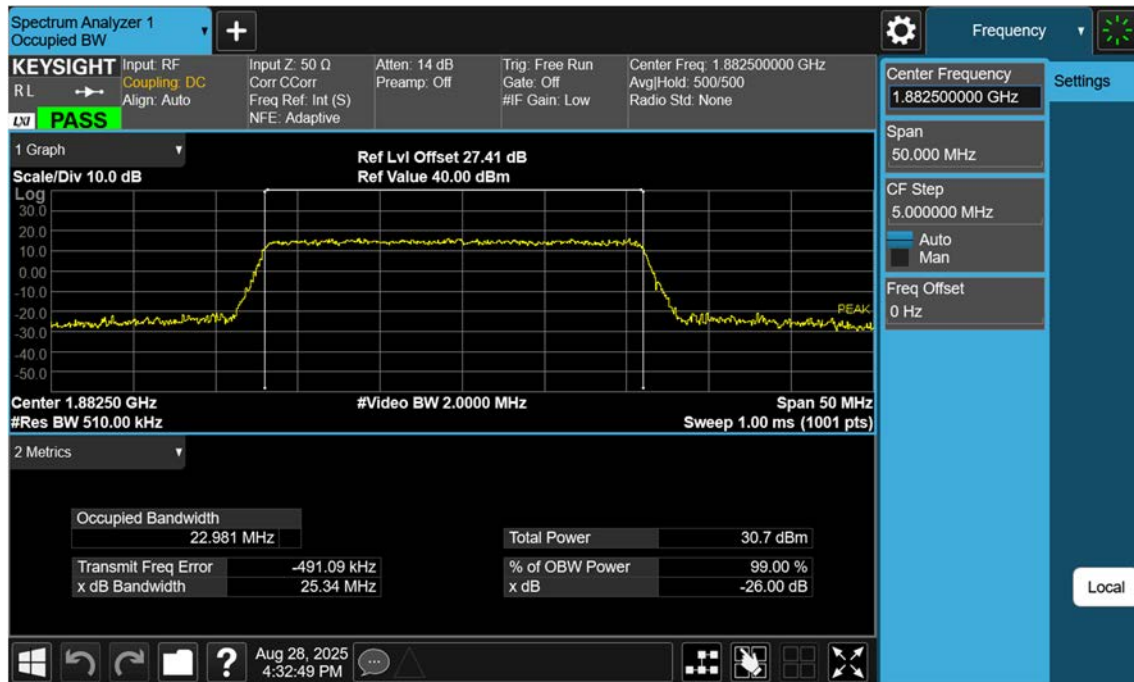
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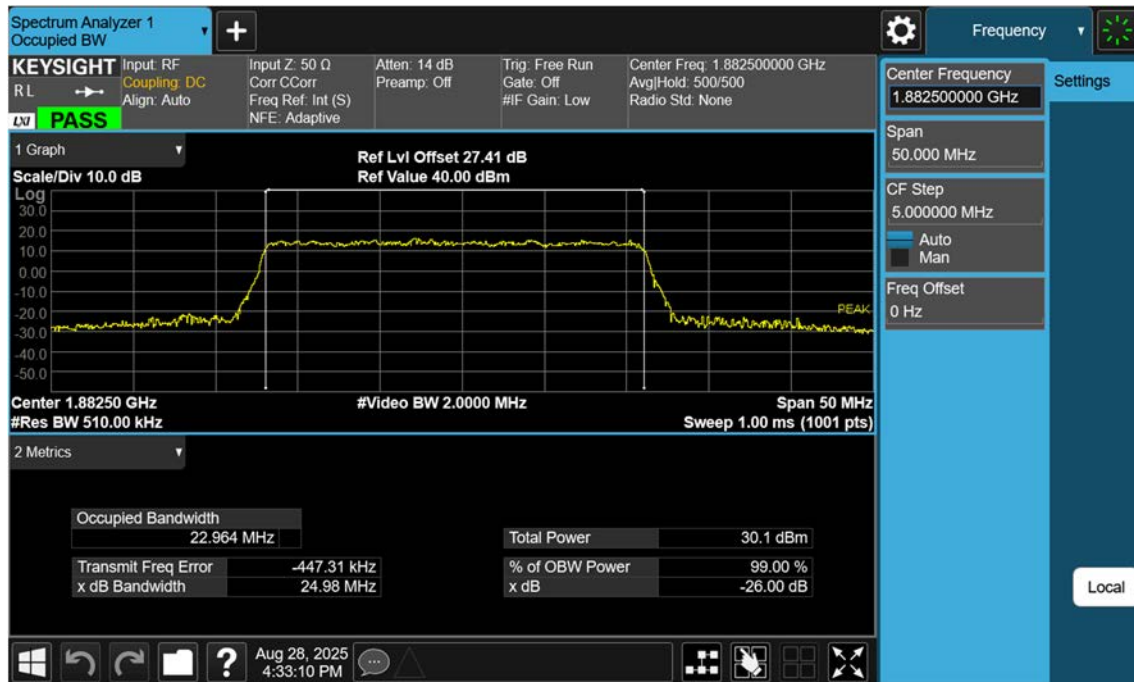
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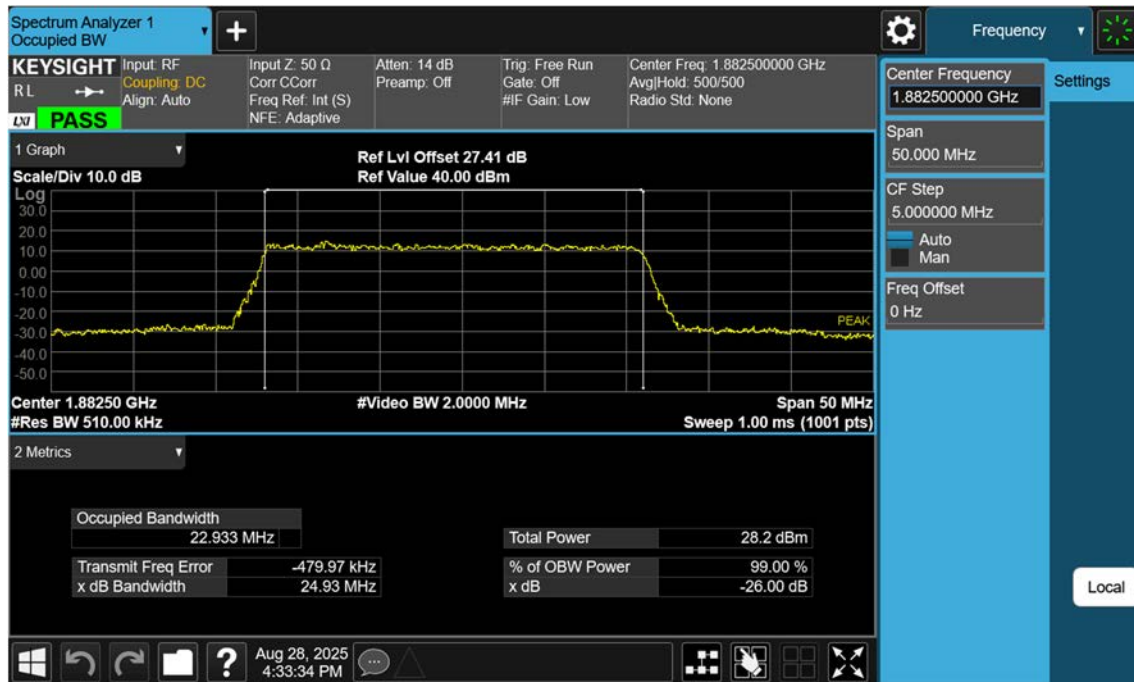
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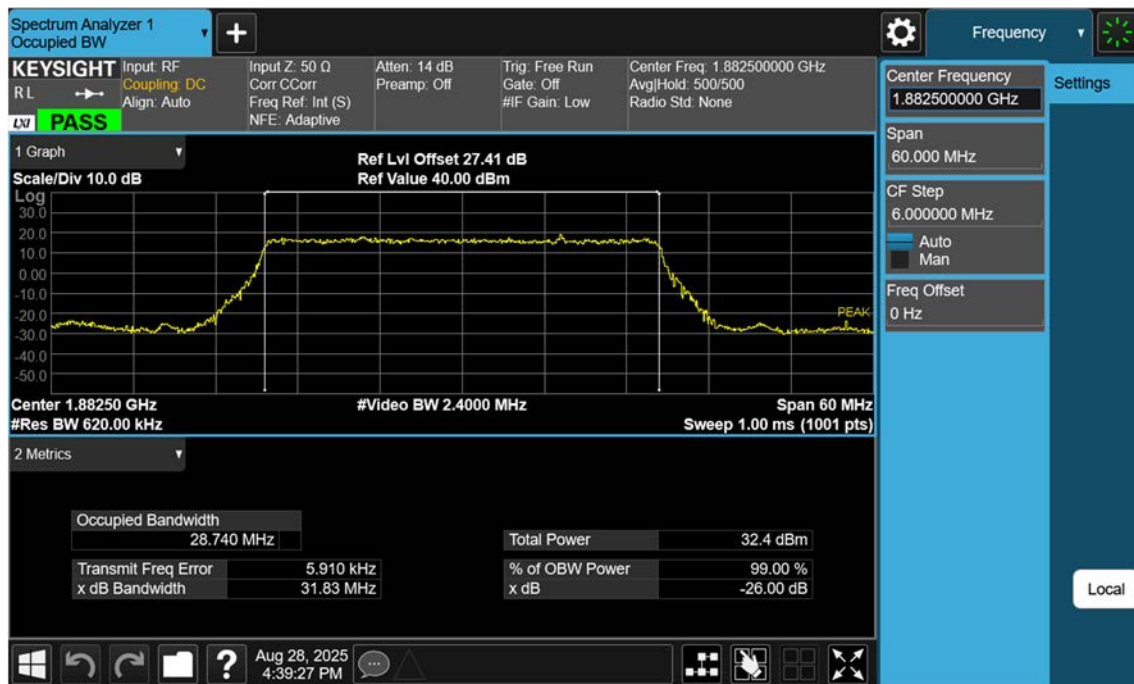
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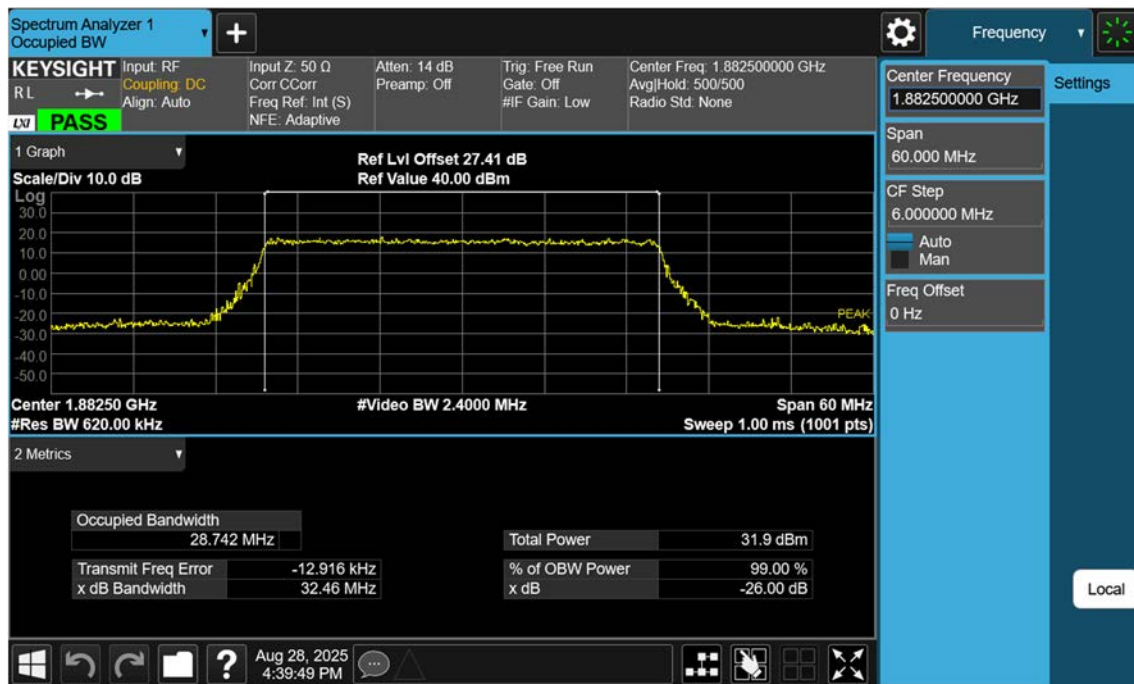
NR25_25 M_OBW_Mid_256QAM_FullRB



NR25_30 M_OBW_Mid_BPSK_FullRB



NR25_30 M_OBW_Mid_QPSK_FullRB



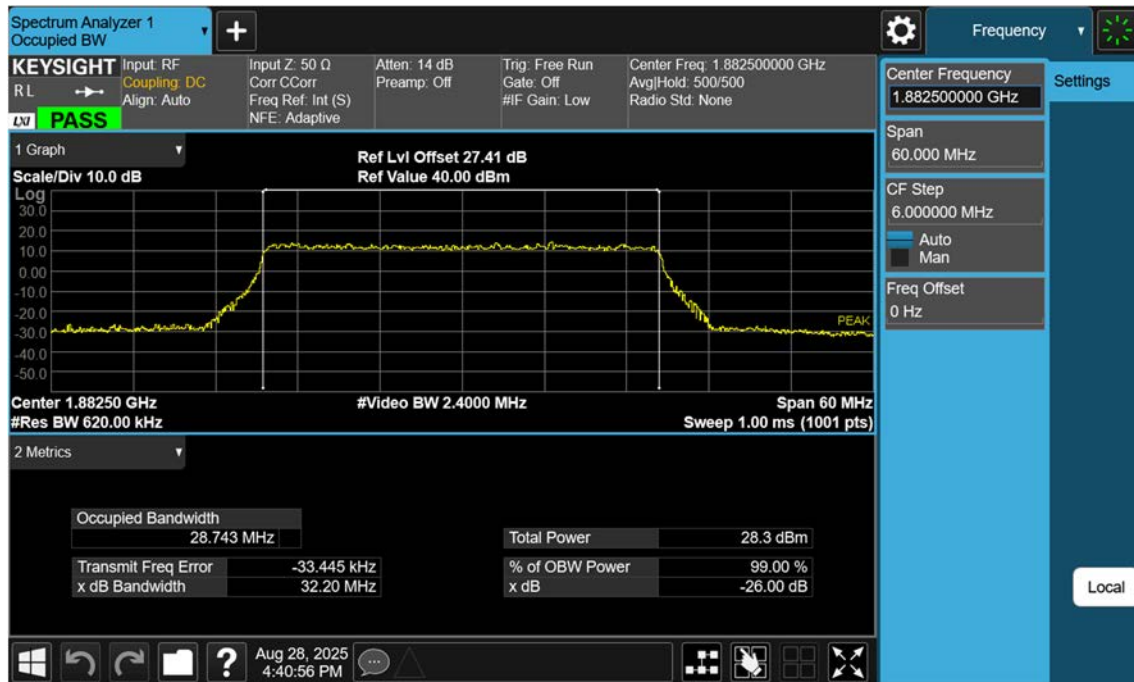
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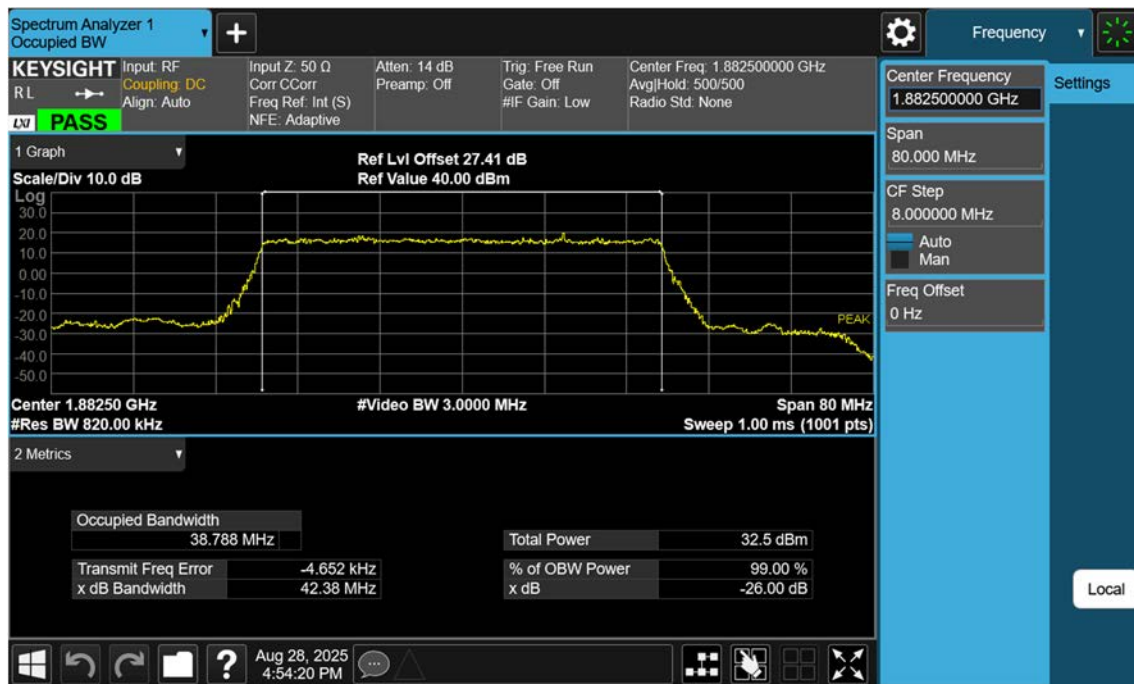
NR25_30 M_OBW_Mid_64QAM_FullRB



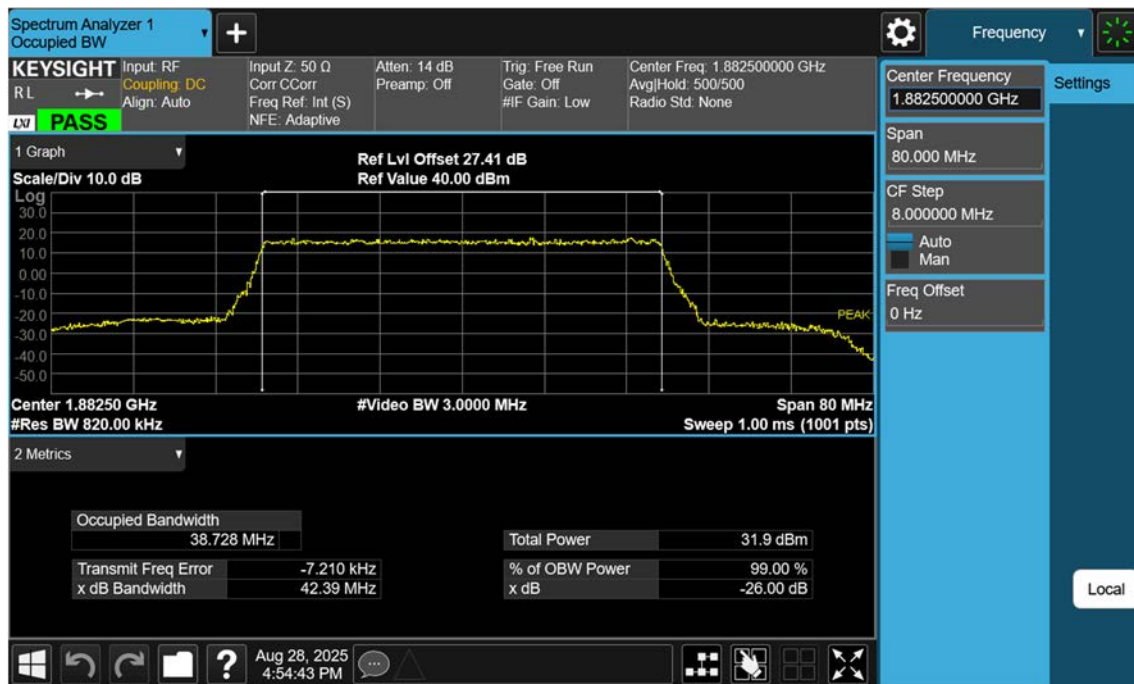
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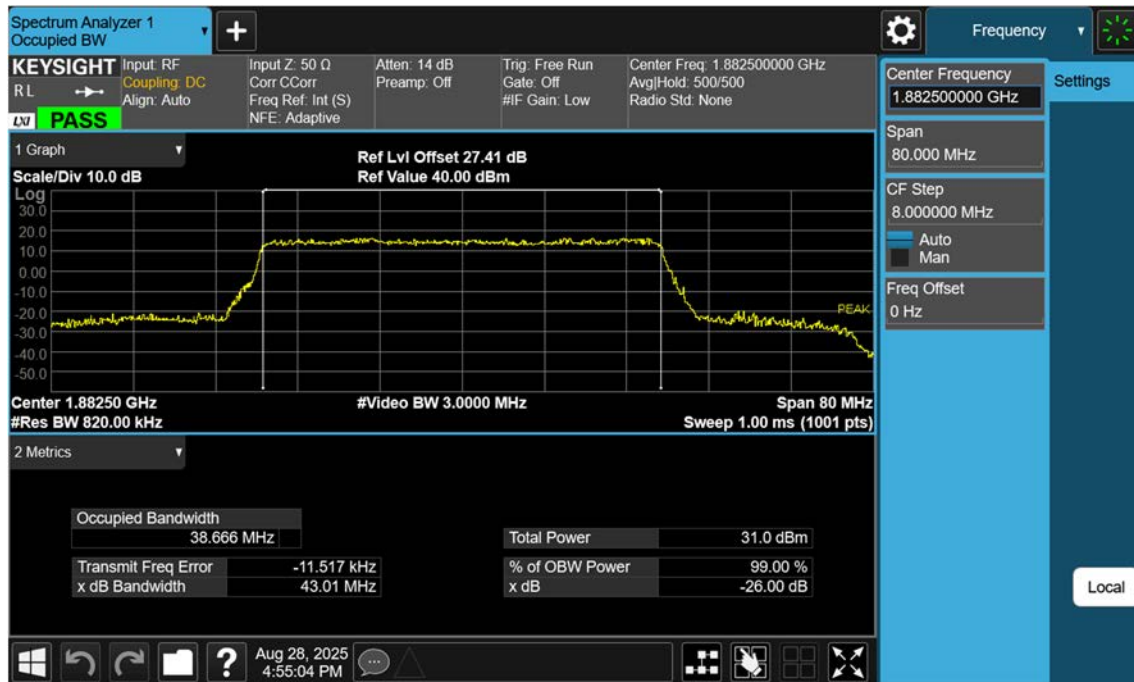
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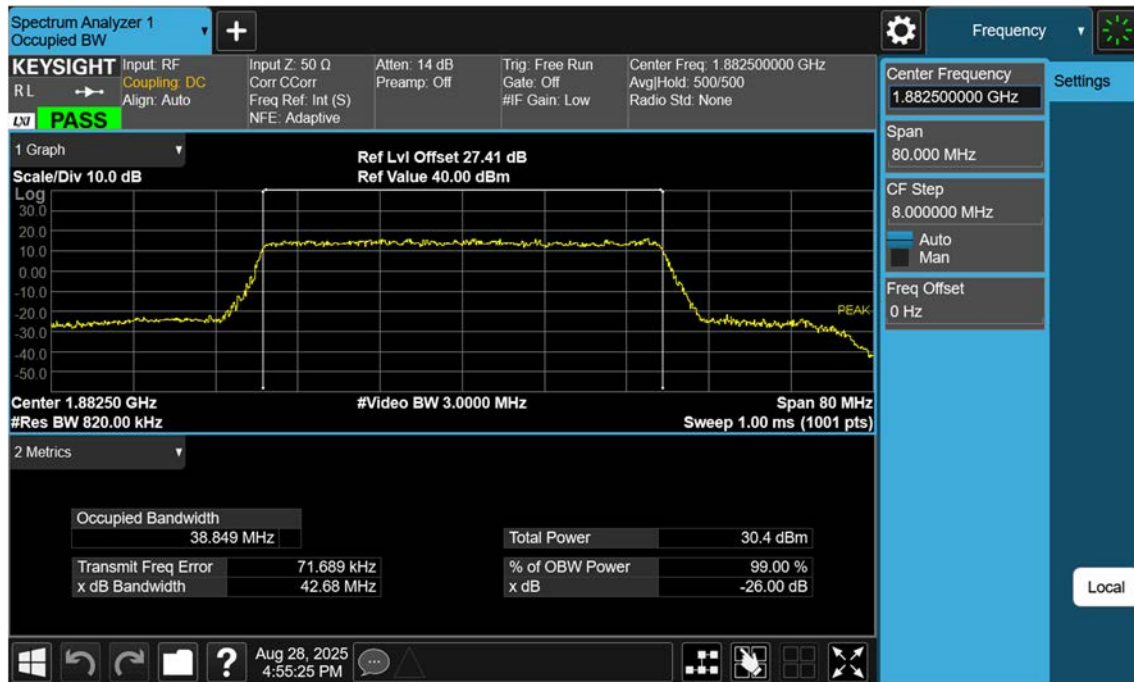
NR25_40 M_OBW_Mid_QPSK_FullRB



NR25_40 M_OBW_Mid_16QAM_FullRB



NR25_40 M_OBW_Mid_64QAM_FullRB



NR25_40 M_OBW_Mid_256QAM_FullRB

