

TEST REPORT

FCC Sub6 n7 Test for TM18FNNABM0
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2506-FC065-R1

DATE OF ISSUE
July 21, 2025

Tested by
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Accredited by KOLAS, Republic of KOREA

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Applicant **LG Electronics Inc.**
128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea

Product Name Telematics
Model Name TM18FNNABM0

Date of Test February 08, 2025 ~ June 13, 2025

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 ID 2B03LTM18FNNABM0

FCC Classification PCS Licensed Transmitter (PCB)

Test Standard Used FCC Rule Part(s) : § 27

Test Results PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	June 17, 2025	Initial Release
1	July 21, 2025	- Corrected the EIRP test result on page 28. - Revised the note on page 19.

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

This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.

(KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)

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MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	LG Electronics Inc.
Address:	128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
FCC ID:	2BO3LTM18FNNABM0
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	§ 27
EUT Type:	Telematics
Model(s):	TM18FNNABM0
Voltage:	4.2V
SCS(kHz):	15
Bandwidth(MHz):	5, 10, 15, 20, 25, 30, 40, 50
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)) 2520.0 MHz – 2550.0 MHz (Sub6 n7(40 MHz)) 2525.0 MHz – 2545.0 MHz (Sub6 n7(50 MHz))
Date(s) of Tests:	February 08, 2025 ~ June 13, 2025
EUT Serial number:	Radiated : BMW ICON-25SF Radiated #1 Conducted : BMW ICON-25SF Conducted #3
Antenna Information	Please refer to the Antenna Specification document.

1.1. SUPPORTED BANDS PER ANTENNA PORT

Antenna Port	Supported bands
MIMO 1	- WCDMA: B2, 5 - LTE: B2, 4, 5, 7, 12, 13, 17, 25, 66, 26, 38, 42, 48, 71 - NR: n2, 5, 7, 12, 25, 41, 48, 66, 71, 77, 78
MIMO 2	- LTE: B42, 48 - NR: n48, 77, 78
MIMO 3	Only RX
MIMO 4	Only RX
Int. BUA (Back Up Antenna)	- WCDMA: B2, 5 - LTE: B2, 4, 5, 7, 25, 26, 38, 66 - NR: n2, 5, 7, 25, 41, 66

Note:

1. Since the Int. BUA uses the same antenna port as MIMO1, only radiated testing was performed.

1.2 MAXIMUM OUTPUT POWER

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	Conducted Output Power	
				Max. Power (W)	Max. Power (dBm)
Sub6 n7 (5)	2502.5 – 2567.5	4M49G7D	PI/2 BPSK	0.255	24.06
		4M49G7D	QPSK	0.255	24.07
		4M50W7D	16QAM	0.205	23.11
		4M51W7D	64QAM	0.138	21.39
		4M50W7D	256QAM	0.082	19.12
Sub6 n7 (10)	2505.0 – 2565.0	8M97G7D	PI/2 BPSK	0.243	23.85
		9M03G7D	QPSK	0.244	23.88
		8M96W7D	16QAM	0.197	22.94
		8M97W7D	64QAM	0.133	21.23
		8M94W7D	256QAM	0.089	19.47
Sub6 n7 (15)	2507.5 – 2562.5	13M5G7D	PI/2 BPSK	0.248	23.94
		13M5G7D	QPSK	0.249	23.96
		13M5W7D	16QAM	0.207	23.15
		13M4W7D	64QAM	0.136	21.34
		13M5W7D	256QAM	0.091	19.60
Sub6 n7 (20)	2510.0 – 2560.0	18M0G7D	PI/2 BPSK	0.249	23.97
		18M0G7D	QPSK	0.247	23.93
		17M9W7D	16QAM	0.197	22.94
		17M9W7D	64QAM	0.140	21.46
		17M9W7D	256QAM	0.082	19.14
Sub6 n7 (25)	2512.5 – 2557.5	23M0G7D	PI/2 BPSK	0.249	23.97
		22M9G7D	QPSK	0.248	23.95
		22M9W7D	16QAM	0.187	22.73
		22M9W7D	64QAM	0.133	21.24
		23M0W7D	256QAM	0.075	18.76
Sub6 n7 (30)	2515.0 – 2555.0	28M6G7D	PI/2 BPSK	0.231	23.63
		28M6G7D	QPSK	0.235	23.71
		28M7W7D	16QAM	0.198	22.96
		28M6W7D	64QAM	0.130	21.15
		28M6W7D	256QAM	0.088	19.45
Sub6 n7 (40)	2520.0 – 2550.0	38M7G7D	PI/2 BPSK	0.230	23.62
		38M6G7D	QPSK	0.224	23.50
		38M6W7D	16QAM	0.191	22.80
		38M6W7D	64QAM	0.125	20.97
		38M6W7D	256QAM	0.084	19.22
Sub6 n7 (50)	2525.0 – 2545.0	48M5G7D	PI/2 BPSK	0.244	23.88
		48M2G7D	QPSK	0.238	23.77
		48M3W7D	16QAM	0.184	22.65
		48M3W7D	64QAM	0.141	21.48
		48M3W7D	256QAM	0.083	19.21

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

Please refer to the [3G] 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

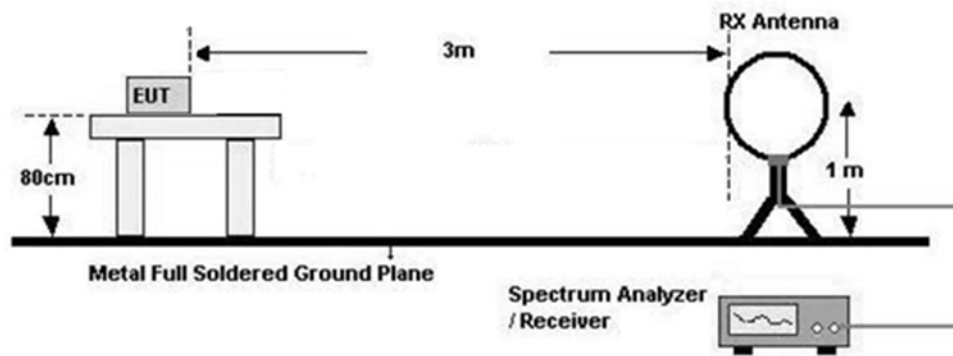
3.2 RADIATED POWER

Test Overview

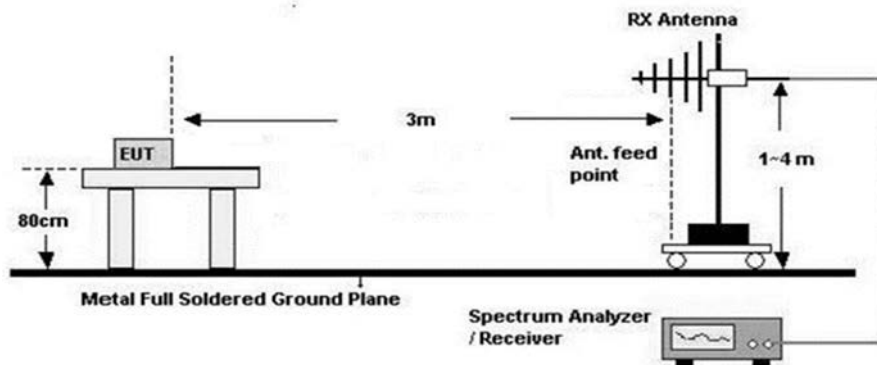
Radiated tests are performed in the semi-anechoic chamber. The equipment under test is placed on a non-conductive table on semi-anechoic chamber.

Test Configuration

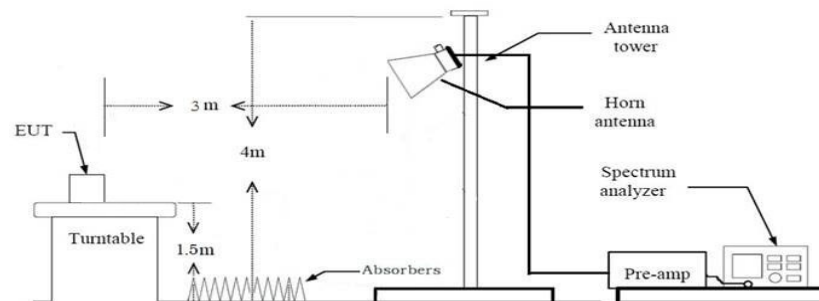
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



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 EUT is placed on a turntable, which is 0.8 m above ground plane. (Below 1 GHz)
2. The EUT is placed on a turntable, which is 1.5 m above ground plane. (Above 1 GHz)
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
5. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
6. 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.
7. $\text{Total(dB}\mu\text{V/m)} = \text{Measured Value(dB}\mu\text{V)} + \text{Cable Loss(dB)} + \text{Antenna Factor(dB/m)} + \text{Distance Factor(D.F)}$
8. EIRP (dBm)
 $= \text{Total (dB}\mu\text{V/m)} + 20 \log D - 104.8$ (where D is the measurement distance in meters. D=3)
 $= \text{Total (dB}\mu\text{V/m)} - 95.2(\text{dB})$
9. $\text{ERP(dBm)} = \text{EIRP(dBm)} - 2.15(\text{dB})$

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;

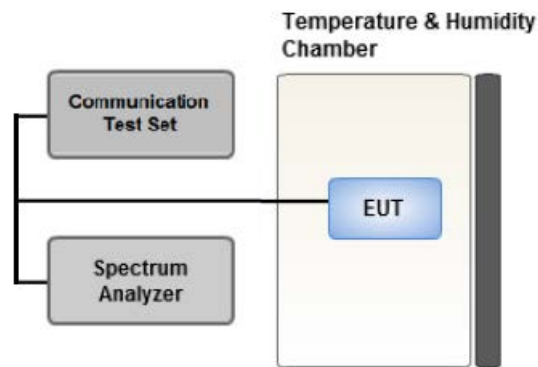
$$\text{Result}_{(\text{dBm})} = P_g_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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



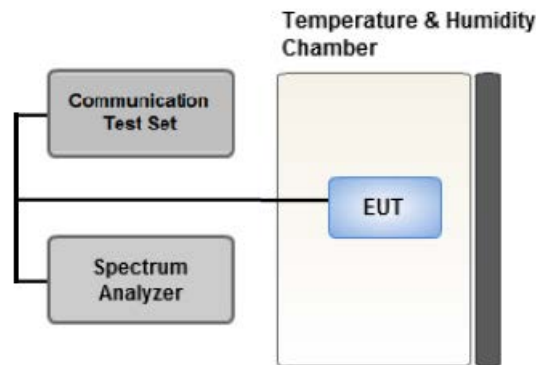
Test setup

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 %.

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 $\geq 3 \times$ RBW

4. Detector = Peak

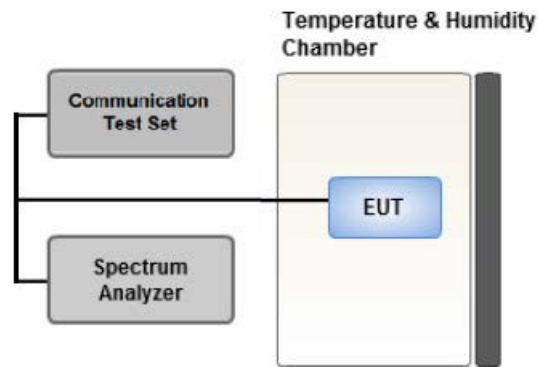
5. Trace mode = max hold

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

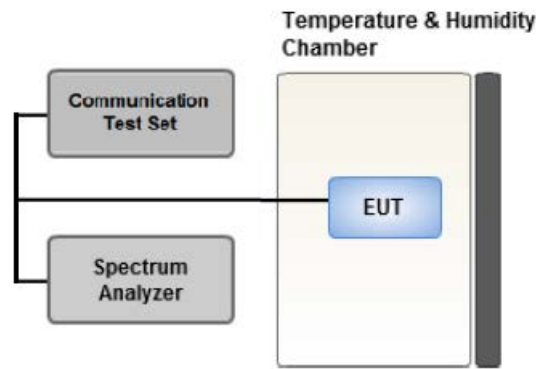
Test Overview

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

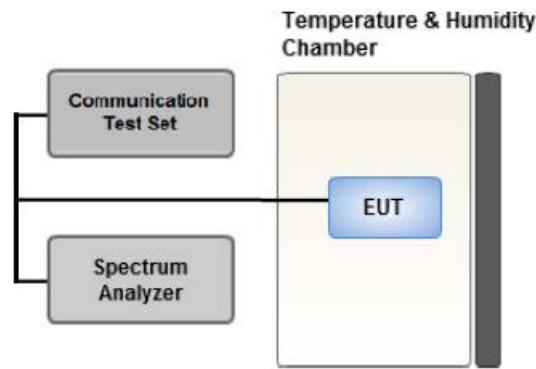
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. Within 1MHz of the channel edge the RBW should be 2 % of EBW, then 1 MHz after that.
4. VBW > 3 x RBW
5.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

- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data.
- The EUT supports only SA. Therefore, it was tested in SA mode only.
- 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.
- MIMO3 and MIMO4 have three types of Rx antennas. Operating modes were investigated for all Rx antennas, and the worst-case configuration results were reported.
(Worst-case: FSA antenna)

[External(MIMO1) 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		Z
Radiated Spurious Emissions	PI/2 BPSK	See Section 8.2		Y

[Internal(BUA) 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		Y
Radiated Spurious 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.
- The EUT supports only SA. Therefore, it was tested in SA mode only.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.
- Both 85% and 115% conditions were measured for the Frequency Stability test, and results for the worst-case configuration (85%) were reported.
- In accordance with the customer's specification of 3.7V as the lowest operating voltage, testing was performed at 3.7V instead of 85% (3.57V).

[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, 40,50	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
		40	Low	1	0
			High	1	215
		50	Low	1	0
			High	1	269
		5, 10, 15, 20, 25, 30, 40,50	Low, Mid, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	5, 10, 15, 20, 25, 30, 40,50	Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

[Radiated]

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
RF Switch System	FBSR-04C(3G HPF+LNA)	TNM System	S4L1	03/12/2026	Annual
RF Switch System	FBSR-04C(7G HPF+LNA)	TNM System	S4L5	03/12/2026	Annual
RF Switch System	FBSR-04C(LNA)	TNM System	S4L4	03/12/2026	Annual
RF Switch System	FBSR-04C(Thru)	TNM System	S4L6	03/12/2026	Annual
Antenna Position Tower	MA4640	Innco systems	S4AM	08/07/2025	Annual
Turn Table	DS2000-S	Innco systems	N/A	N/A	-
Controller (Antenna mast & Turn Table)	CO3000	Innco systems	CO3000/1251/48920320/P	N/A	-
Amp & Filter Bank Switch Controller	FBSM-01B	TNM system	TM20090002	N/A	-
RF Switching System	Switch box(1 G HPF+LNA)	HCT CO., LTD.,	F2L2	12/12/2025	Annual
RF Switching System	Switch box(3 G HPF+LNA)	HCT CO., LTD.,	F2L3	12/12/2025	Annual
RF Switching System	Switch box(LNA)	HCT CO., LTD.,	F2L5	12/12/2025	Annual
RF Switching System	Switch box(6 G HPF+LNA)	HCT CO., LTD.,	F2L14	12/12/2025	Annual
HIGHPASS FILTER	WHKX10-900-1000-15000-40SS	WAINWRIGHT INSTRUMENTS	16	07/24/2025	Annual
LOW NOISE AMPLIFIER	310N	SONOMA Instrument	186169	02/05/2026	Annual
LOW NOISE AMPLIFIER	TK-PA1840H	TESTEK	170011-L	10/11/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/07/2025	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/19/2026	Annual
Power Splitter(DC ~ 26.5 GHz)	11667B	Hewlett Packard	5001	04/10/2026	Annual
DC Power Supply	E3632A	Agilent	MY40010147	08/06/2025	Annual
Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Dipole Antenna	UHAP	Schwarzbeck	01288	08/07/2026	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	03197	11/28/2025	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	03201	11/28/2025	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120	Schwarzbeck	937	02/07/2027	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/23/2027	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Spectrum Analyzer(10 Hz ~ 40 GHz)	FSV40	ROHDE & SCHWARZ	101733	09/19/2025	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	08/05/2025	Annual
Loop Antenna(9 kHz ~ 30 MHz)	FMZB1513	Schwarzbeck	1513-333	03/07/2026	Biennial
Trilog Broadband Antenna	VULB 9168	Schwarzbeck	9168-0895	08/28/2026	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	895	08/28/2026	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	1135	08/19/2026	Biennial
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/14/2026	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6272613402	08/28/2025	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/26/2025	Annual
Automation Software	FCC LTE Radiated	HCT CO., LTD	-	-	-
Automation Software	FCC NR Radiated	HCT CO., LTD	-	-	-

[Conducted]

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Power Splitter (DC ~ 26.5 GHz)	11667B	Hewlett Packard	5001	04/10/2026	Annual
DC Power Supply	E3632A	Agilent	MY40010147	08/06/2025	Annual
Chamber	SU-642	ESPEC	93008124	02/11/2026	Annual
ATTENUATOR (20 dB)	8493C	Hewlett Packard	17280	04/10/2026	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262094331	11/13/2025	Annual
UXM 5G Wireless Test Platform	E7515B	KEYSIGHT	MY60101126	02/10/2026	Annual
Signal Analyzer (2 Hz ~ 50.0 GHz)	N9030B	KEYSIGHT	MY56320554	02/03/2026	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.	-	-	-
Automation Software	FCC 2G/3G/4G Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC NR Conducted	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, § 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	Note ¹
Frequency stability / variation of ambient temperature	§ 2.1055, § 27.54	Emission must remain in band	PASS

Note:

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

6.2 Test Condition : Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§ 27.50(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 (MIMO1)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2502.5		PI/2 BPSK	84.51	29.90	4.62	119.03	V		0.242	23.83	1	12
		QPSK	84.35	29.90	4.62	118.87	V		0.233	23.67		
		16-QAM	83.45	29.90	4.62	117.97	V		0.189	22.77		
		64-QAM	82.21	29.90	4.62	116.73	V		0.142	21.53		
		256-QAM	79.84	29.90	4.62	114.36	V		0.082	19.16		
2535.0	Sub6 n7/ 5 MHz [15 kHz]	PI/2 BPSK	84.83	30.20	4.63	119.66	V		0.279	24.46	1	23
		QPSK	84.76	30.20	4.63	119.59	V		0.275	24.39		
		16-QAM	83.92	30.20	4.63	118.75	V	< 2.00	0.226	23.55		
		64-QAM	82.55	30.20	4.63	117.38	V		0.165	22.18		
		256-QAM	80.18	30.20	4.63	115.00	V		0.096	19.80		
2567.5		PI/2 BPSK	82.53	29.90	4.70	117.13	V		0.156	21.93	1	1
		QPSK	82.51	29.90	4.70	117.11	V		0.155	21.91		
		16-QAM	81.54	29.90	4.70	116.14	V		0.124	20.94		
		64-QAM	80.15	29.90	4.70	114.74	V		0.090	19.54		
		256-QAM	77.87	29.90	4.70	112.47	V		0.053	17.27		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2505.0		PI/2 BPSK	84.79	29.90	4.62	119.31	V		0.258	24.11	1	26
		QPSK	84.59	29.90	4.62	119.11	V		0.246	23.91		
		16-QAM	83.82	29.90	4.62	118.34	V		0.206	23.14		
		64-QAM	82.90	29.90	4.62	117.42	V		0.167	22.22		
		256-QAM	80.67	29.90	4.62	115.19	V		0.100	19.99		
2535.0	Sub6 n7/ 10 MHz [15 kHz]	PI/2 BPSK	84.67	30.20	4.63	119.49	V	< 2.00	0.269	24.29	1	26
		QPSK	84.57	30.20	4.63	119.40	V		0.263	24.20		
		16-QAM	83.71	30.20	4.63	118.53	V		0.216	23.33		
		64-QAM	82.87	30.20	4.63	117.69	V		0.178	22.49		
		256-QAM	80.60	30.20	4.63	115.42	V		0.105	20.22		
2565.0		PI/2 BPSK	83.04	29.90	4.70	117.64	V		0.175	22.44	1	26
		QPSK	82.98	29.90	4.70	117.58	V		0.173	22.38		
		16-QAM	82.20	29.90	4.70	116.80	V		0.145	21.60		
		64-QAM	81.35	29.90	4.70	115.95	V		0.119	20.75		
		256-QAM	78.97	29.90	4.70	113.57	V		0.069	18.37		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2507.5		PI/2 BPSK	84.23	29.90	4.62	118.75	V		0.227	23.55	1	77
		QPSK	84.22	29.90	4.62	118.74	V		0.226	23.54		
		16-QAM	83.28	29.90	4.62	117.80	V		0.182	22.60		
		64-QAM	82.33	29.90	4.62	116.85	V		0.146	21.65		
		256-QAM	80.02	29.90	4.62	114.54	V		0.086	19.34		
2535.0	Sub6 n7/ 15 MHz [15 kHz]	PI/2 BPSK	84.59	30.20	4.63	119.42	V	< 2.00	0.264	24.22	1	1
		QPSK	84.59	30.20	4.63	119.42	V		0.264	24.22		
		16-QAM	83.74	30.20	4.63	118.57	V		0.217	23.37		
		64-QAM	82.93	30.20	4.63	117.76	V		0.180	22.56		
		256-QAM	80.58	30.20	4.63	115.41	V		0.105	20.21		
2562.5		PI/2 BPSK	83.31	29.90	4.70	117.90	V		0.186	22.70	1	1
		QPSK	83.23	29.90	4.70	117.83	V		0.183	22.63		
		16-QAM	82.34	29.90	4.70	116.93	V		0.149	21.73		
		64-QAM	81.48	29.90	4.70	116.07	V		0.122	20.87		
		256-QAM	79.22	29.90	4.70	113.81	V		0.073	18.61		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2510.0		PI/2 BPSK	84.53	29.90	4.62	119.05	V		0.243	23.85	1	104
		QPSK	84.46	29.90	4.62	118.98	V		0.239	23.78		
		16-QAM	83.65	29.90	4.62	118.17	V		0.198	22.97		
		64-QAM	82.83	29.90	4.62	117.35	V		0.164	22.15		
		256-QAM	80.44	29.90	4.62	114.96	V		0.095	19.76		
2535.0	Sub6 n7/ 20 MHz [15 kHz]	PI/2 BPSK	84.50	30.20	4.63	119.32	V	< 2.00	0.259	24.12	1	1
		QPSK	84.50	30.20	4.63	119.32	V		0.259	24.12		
		16-QAM	83.75	30.20	4.63	118.58	V		0.218	23.38		
		64-QAM	82.95	30.20	4.63	117.78	V		0.181	22.58		
		256-QAM	80.63	30.20	4.63	115.46	V		0.106	20.26		
2560.0		PI/2 BPSK	83.71	29.90	4.70	118.31	V		0.205	23.11	1	1
		QPSK	83.62	29.90	4.70	118.22	V		0.201	23.02		
		16-QAM	82.79	29.90	4.70	117.39	V		0.165	22.19		
		64-QAM	81.90	29.90	4.70	116.50	V		0.135	21.30		
		256-QAM	79.67	29.90	4.70	114.27	V		0.081	19.07		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2512.5		PI/2 BPSK	83.98	29.90	4.62	118.50	V		0.214	23.30	1	131
		QPSK	83.93	29.90	4.62	118.45	V		0.211	23.25		
		16-QAM	83.07	29.90	4.62	117.59	V		0.173	22.39		
		64-QAM	82.18	29.90	4.62	116.70	V		0.141	21.50		
		256-QAM	79.95	29.90	4.62	114.47	V		0.085	19.27		
2535.0	Sub6 n7/ 25 MHz [15 kHz]	PI/2 BPSK	83.97	30.20	4.63	118.80	V	< 2.00	0.229	23.60	1	66
		QPSK	83.93	30.20	4.63	118.76	V		0.227	23.56		
		16-QAM	83.03	30.20	4.63	117.86	V		0.185	22.66		
		64-QAM	82.20	30.20	4.63	117.03	V		0.152	21.83		
		256-QAM	79.73	30.20	4.63	114.56	V		0.086	19.36		
2557.5		PI/2 BPSK	83.47	29.90	4.70	118.07	V		0.194	22.87	1	1
		QPSK	83.47	29.90	4.70	118.07	V		0.194	22.87		
		16-QAM	82.54	29.90	4.70	117.14	V		0.156	21.94		
		64-QAM	81.64	29.90	4.70	116.24	V		0.127	21.04		
		256-QAM	79.28	29.90	4.70	113.88	V		0.074	18.68		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2515.0		PI/2 BPSK	84.07	29.90	4.62	118.59	V		0.218	23.39	1	158
		QPSK	83.94	29.90	4.62	118.46	V		0.212	23.26		
		16-QAM	83.14	29.90	4.62	117.66	V		0.176	22.46		
		64-QAM	82.15	29.90	4.62	116.67	V		0.140	21.47		
		256-QAM	79.77	29.90	4.62	114.29	V		0.081	19.09		
2535.0	Sub6 n7/ 30 MHz [15 kHz]	PI/2 BPSK	84.02	30.20	4.63	118.85	V	< 2.00	0.232	23.65	1	80
		QPSK	83.93	30.20	4.63	118.76	V		0.227	23.56		
		16-QAM	83.05	30.20	4.63	117.88	V		0.185	22.68		
		64-QAM	82.16	30.20	4.63	116.99	V		0.151	21.79		
		256-QAM	79.71	30.20	4.63	114.54	V		0.086	19.34		
2555.0		PI/2 BPSK	83.55	29.90	4.70	118.15	V		0.197	22.95	1	1
		QPSK	83.50	29.90	4.70	118.09	V		0.195	22.89		
		16-QAM	82.73	29.90	4.70	117.33	V		0.163	22.13		
		64-QAM	81.90	29.90	4.70	116.50	V		0.135	21.30		
		256-QAM	79.68	29.90	4.70	114.28	V		0.081	19.08		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2520.0		PI/2 BPSK	83.99	29.90	4.62	118.51	V		0.214	23.31	1	108
		QPSK	83.92	29.90	4.62	118.43	V		0.211	23.23		
		16-QAM	83.01	29.90	4.62	117.53	V		0.171	22.33		
		64-QAM	82.02	29.90	4.62	116.54	V		0.136	21.34		
		256-QAM	79.80	29.90	4.62	114.32	V		0.082	19.12		
2535.0	Sub6 n7/ 40 MHz [15 kHz]	PI/2 BPSK	83.91	30.20	4.63	118.74	V	< 2.00	0.226	23.54	1	108
		QPSK	83.90	30.20	4.63	118.73	V		0.225	23.53		
		16-QAM	83.00	30.20	4.63	117.83	V		0.183	22.63		
		64-QAM	82.14	30.20	4.63	116.97	V		0.150	21.77		
		256-QAM	79.74	30.20	4.63	114.57	V		0.087	19.37		
2550.0		PI/2 BPSK	83.89	29.90	4.70	118.48	V		0.213	23.28	1	1
		QPSK	83.87	29.90	4.70	118.46	V		0.212	23.26		
		16-QAM	82.93	29.90	4.70	117.52	V		0.171	22.32		
		64-QAM	82.06	29.90	4.70	116.65	V		0.140	21.45		
		256-QAM	79.74	29.90	4.70	114.33	V		0.082	19.13		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2525.0		PI/2 BPSK	84.03	29.90	4.62	118.55	V		0.216	23.35	1	135
		QPSK	83.84	29.90	4.62	118.36	V		0.207	23.16		
		16-QAM	83.11	29.90	4.62	117.63	V		0.175	22.43		
		64-QAM	82.28	29.90	4.62	116.80	V		0.145	21.60		
		256-QAM	79.83	29.90	4.62	114.35	V		0.082	19.15		
2535.0	Sub6 n7/ 50 MHz [15 kHz]	PI/2 BPSK	84.03	30.20	4.63	118.86	V	< 2.00	0.232	23.66	1	135
		QPSK	83.91	30.20	4.63	118.73	V		0.226	23.53		
		16-QAM	83.12	30.20	4.63	117.95	V		0.188	22.75		
		64-QAM	82.14	30.20	4.63	116.97	V		0.150	21.77		
		256-QAM	79.72	30.20	4.63	114.55	V		0.086	19.35		
2545.0		PI/2 BPSK	83.99	29.90	4.70	118.59	V		0.218	23.39	1	1
		QPSK	83.90	29.90	4.70	118.50	V		0.214	23.30		
		16-QAM	83.02	29.90	4.70	117.62	V		0.175	22.42		
		64-QAM	82.17	29.90	4.70	116.77	V		0.144	21.57		
		256-QAM	79.96	29.90	4.70	114.56	V		0.086	19.36		

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	-55.64	10.91	-62.18	3.71	V	-54.98	-25.00	1	12
	7 507.50	-55.88	11.59	-57.99	4.60	V	-51.00			
	10 010.00	-55.95	11.39	-55.54	5.47	V	-49.62			
	12 512.50	-57.98	13.16	-54.46	6.09	V	-47.39			
	15 015.00	-67.90	14.28	-49.78	6.76	V	-42.26			
507000 (2535.0)	5 070.00	-55.54	10.92	-62.30	3.80	V	-55.18		1	23
	7 605.00	-56.74	11.66	-58.93	4.64	H	-51.91			
	10 140.00	-55.85	11.34	-55.21	5.48	H	-49.35			
	12 675.00	-57.61	12.88	-53.58	6.24	H	-46.94			
	15 210.00	-68.71	14.81	-50.29	6.81	V	-42.29			
513500 (2567.5)	5 135.00	-56.01	11.04	-63.12	3.81	H	-55.89		1	1
	7 702.50	-55.55	11.56	-57.21	4.66	V	-50.31			
	10 270.00	-56.29	11.46	-55.65	5.57	V	-49.76			
	12 837.50	-57.78	12.73	-53.16	6.24	V	-46.67			
	15 405.00	-69.13	15.34	-49.98	6.85	V	-41.49			

☐ 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	-55.94	10.91	-62.53	3.72	V	-55.34	-25.00	1	26
	7 515.00	-56.42	11.59	-58.66	4.60	V	-51.67			
	10 020.00	-55.92	11.39	-55.07	5.47	H	-49.15			
	12 525.00	-57.94	13.14	-54.46	6.09	V	-47.41			
	15 030.00	-67.82	14.32	-50.01	6.73	V	-42.42			
507000 (2535.0)	5 070.00	-55.60	10.92	-62.36	3.80	V	-55.24		1	26
	7 605.00	-56.70	11.66	-58.89	4.64	H	-51.87			
	10 140.00	-56.20	11.34	-55.56	5.48	H	-49.70			
	12 675.00	-57.50	12.88	-53.47	6.24	H	-46.83			
	15 210.00	-68.60	14.81	-50.18	6.81	V	-42.18			
513000 (2565.0)	5 130.00	-56.64	11.02	-63.55	3.81	V	-56.34		1	26
	7 695.00	-56.07	11.58	-57.90	4.66	H	-50.98			
	10 260.00	-56.50	11.44	-55.83	5.56	H	-49.95			
	12 825.00	-58.51	12.74	-54.16	6.21	V	-47.63			
	15 390.00	-69.45	15.30	-50.22	6.85	V	-41.77			

☐ 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	-55.61	10.91	-62.16	3.70	V	-54.95	-25.00	1	77
	7 522.50	-56.30	11.60	-58.68	4.61	V	-51.69			
	10 030.00	-55.60	11.39	-54.95	5.47	H	-49.03			
	12 537.50	-57.90	13.13	-54.32	6.13	V	-47.32			
	15 045.00	-67.80	14.35	-49.91	6.75	V	-42.31			
507000 (2535.0)	5 070.00	-55.16	10.92	-61.92	3.80	V	-54.80		1	1
	7 605.00	-56.80	11.66	-58.99	4.64	H	-51.97			
	10 140.00	-56.16	11.34	-55.52	5.48	H	-49.66			
	12 675.00	-57.78	12.88	-53.75	6.24	H	-47.11			
	15 210.00	-68.60	14.81	-50.18	6.81	V	-42.18			
512500 (2562.5)	5 125.00	-56.23	11.01	-63.24	3.81	H	-56.04		1	1
	7 687.50	-56.35	11.58	-58.23	4.66	V	-51.31			
	10 250.00	-56.68	11.42	-56.31	5.54	H	-50.43			
	12 812.50	-58.62	12.74	-54.36	6.20	H	-47.82			
	15 375.00	-69.25	15.26	-50.02	6.87	H	-41.63			

☐ NR Band: N7
☐ Bandwidth: 20 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
502000 (2510.0)	5 020.00	-55.23	10.90	-61.71	3.69	V	-54.50	-25.00	1	104
	7 530.00	-56.34	11.61	-58.75	4.60	V	-51.74			
	10 040.00	-55.78	11.38	-55.26	5.49	H	-49.37			
	12 550.00	-57.92	13.11	-54.28	6.19	V	-47.36			
	15 060.00	-67.70	14.39	-49.74	6.78	V	-42.13			
507000 (2535.0)	5 070.00	-55.34	10.92	-62.10	3.80	V	-54.98		1	1
	7 605.00	-56.70	11.66	-58.89	4.64	H	-51.87			
	10 140.00	-56.16	11.34	-55.52	5.48	H	-49.66			
	12 675.00	-57.34	12.88	-53.31	6.24	H	-46.67			
	15 210.00	-68.64	14.81	-50.22	6.81	V	-42.22			
512000 (2560.0)	5 120.00	-56.62	11.00	-63.73	3.81	H	-56.54		1	1
	7 680.00	-56.18	11.60	-58.15	4.70	H	-51.25			
	10 240.00	-56.82	11.41	-56.39	5.54	H	-50.52			
	12 800.00	-58.23	12.75	-53.97	6.21	H	-47.43			
	15 360.00	-69.21	15.21	-49.65	6.88	V	-41.32			

☐ 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	-55.54	10.90	-62.25	3.68	V	-55.03	-25.00	1	131
	7 537.50	-56.40	11.62	-58.84	4.61	V	-51.83			
	10 050.00	-55.92	11.38	-55.48	5.48	H	-49.58			
	12 562.50	-57.91	13.09	-54.25	6.24	V	-47.40			
	15 075.00	-67.77	14.42	-49.73	6.82	V	-42.13			
507000 (2535.0)	5 070.00	-55.84	10.92	-62.60	3.80	V	-55.48		1	66
	7 605.00	-56.71	11.66	-58.90	4.64	H	-51.88			
	10 140.00	-56.26	11.34	-55.62	5.48	H	-49.76			
	12 675.00	-57.84	12.88	-53.81	6.24	H	-47.17			
	15 210.00	-68.65	14.81	-50.23	6.81	V	-42.23			
511500 (2557.5)	5 115.00	-56.35	10.98	-63.48	3.80	V	-56.30		1	1
	7 672.50	-56.23	11.60	-58.20	4.70	V	-51.30			
	10 230.00	-56.53	11.39	-56.06	5.54	H	-50.21			
	12 787.50	-58.50	12.76	-54.23	6.22	H	-47.69			
	15 345.00	-69.23	15.17	-50.15	6.86	V	-41.84			

☐ 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	-55.61	10.90	-62.55	3.67	V	-55.32	-25.00	1	158
	7 545.00	-56.52	11.63	-58.94	4.62	V	-51.93			
	10 060.00	-55.95	11.37	-55.32	5.48	H	-49.43			
	12 575.00	-57.91	13.07	-54.24	6.25	V	-47.42			
	15 090.00	-67.73	14.46	-50.01	6.81	V	-42.36			
507000 (2535.0)	5 070.00	-55.48	10.92	-62.24	3.80	V	-55.12		1	80
	7 605.00	-56.78	11.66	-58.97	4.64	H	-51.95			
	10 140.00	-56.21	11.34	-55.57	5.48	H	-49.71			
	12 675.00	-57.23	12.88	-53.20	6.24	H	-46.56			
	15 210.00	-68.61	14.81	-50.19	6.81	V	-42.19			
511000 (2555.0)	5 110.00	-56.71	10.97	-63.87	3.79	V	-56.69		1	1
	7 665.00	-56.17	11.62	-58.14	4.70	H	-51.22			
	10 220.00	-56.59	11.38	-56.13	5.54	H	-50.29			
	12 775.00	-58.51	12.76	-54.31	6.23	V	-47.78			
	15 330.00	-69.18	15.13	-50.43	6.82	V	-42.12			

☐ 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	-55.12	10.90	-61.79	3.68	V	-54.57	-25.00	1	108
	7 560.00	-56.64	11.64	-58.83	4.64	V	-51.83			
	10 080.00	-55.94	11.37	-55.57	5.47	H	-49.67			
	12 600.00	-57.91	13.03	-54.13	6.18	V	-47.28			
	15 120.00	-67.23	14.54	-49.22	6.80	V	-41.48			
507000 (2535.0)	5 070.00	-55.45	10.92	-62.21	3.80	V	-55.09		1	108
	7 605.00	-56.71	11.66	-58.90	4.64	H	-51.88			
	10 140.00	-56.18	11.34	-55.54	5.48	H	-49.68			
	12 675.00	-57.35	12.88	-53.32	6.24	H	-46.68			
	15 210.00	-68.65	14.81	-50.23	6.81	V	-42.23			
510000 (2550.0)	5 100.00	-56.49	10.95	-63.21	3.78	H	-56.04		1	1
	7 650.00	-56.07	11.64	-58.14	4.68	H	-51.18			
	10 200.00	-56.80	11.35	-56.28	5.54	H	-50.47			
	12 750.00	-58.51	12.78	-54.38	6.23	V	-47.83			
	15 300.00	-69.25	15.06	-50.44	6.83	V	-42.21			

☐ NR Band: N7
☐ Bandwidth: 50 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
505000 (2525.0)	5 050.00	-55.28	10.90	-62.01	3.73	V	-54.84	-25.00	1	135
	7 575.00	-56.13	11.65	-58.37	4.65	V	-51.37			
	10 100.00	-55.91	11.36	-55.27	5.46	H	-49.37			
	12 625.00	-57.91	12.98	-54.00	6.22	V	-47.24			
	15 150.00	-67.38	14.61	-49.27	6.80	V	-41.46			
507000 (2535.0)	5 070.00	-55.19	10.92	-61.95	3.80	V	-54.83		1	135
	7 605.00	-56.67	11.66	-58.86	4.64	H	-51.84			
	10 140.00	-56.49	11.34	-55.85	5.48	H	-49.99			
	12 675.00	-57.68	12.88	-53.65	6.24	H	-47.01			
	15 210.00	-68.58	14.81	-50.16	6.81	V	-42.16			
509000 (2545.0)	5 090.00	-56.70	10.94	-63.57	3.78	V	-56.41		1	1
	7 635.00	-56.28	11.64	-58.38	4.67	H	-51.41			
	10 180.00	-56.23	11.34	-55.57	5.51	H	-49.74			
	12 725.00	-58.40	12.81	-54.71	6.21	H	-48.11			
	15 270.00	-69.16	14.99	-50.63	6.82	V	-42.46			

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	5.13
			QPSK			6.05
			16-QAM			6.61
			64-QAM			6.68
			256-QAM			6.97
	10 MHz		BPSK	50		5.50
			QPSK			5.82
			16-QAM			6.41
			64-QAM			6.48
			256-QAM			6.82
	15 MHz		BPSK	75		4.44
			QPSK			5.61
			16-QAM			6.18
			64-QAM			6.59
			256-QAM			6.64
	20 MHz		BPSK	100		5.87
			QPSK			6.09
			16-QAM			6.38
			64-QAM			6.71
			256-QAM			6.72
	25 MHz		BPSK	128		4.46
			QPSK			5.67
			16-QAM			6.45
			64-QAM			6.58
			256-QAM			6.61
	30 MHz		BPSK	160		5.41
			QPSK			5.74
			16-QAM			6.30
			64-QAM			6.58
			256-QAM			6.58
40 MHz	BPSK	216	4.45			
	QPSK		5.65			
	16-QAM		6.47			
	64-QAM		6.50			
	256-QAM		6.66			
50 MHz	BPSK	270	4.98			
	QPSK		5.70			
	16-QAM		6.23			
	64-QAM		6.50			
	256-QAM		6.67			

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 74 ~ 113.

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	4.4845
			QPSK			4.4927
			16-QAM			4.5035
			64-QAM			4.5064
			256-QAM			4.4959
	10 MHz		BPSK	50		8.9711
			QPSK			9.0266
			16-QAM			8.9623
			64-QAM			8.9724
			256-QAM			8.9428
	15 MHz		BPSK	75		13.460
			QPSK			13.445
			16-QAM			13.454
			64-QAM			13.444
			256-QAM			13.483
	20 MHz		BPSK	100		17.948
			QPSK			17.956
			16-QAM			17.921
			64-QAM			17.885
			256-QAM			17.929
	25 MHz		BPSK	128		22.989
			QPSK			22.920
			16-QAM			22.923
			64-QAM			22.923
			256-QAM			22.978
	30 MHz		BPSK	160		28.594
			QPSK			28.602
			16-QAM			28.652
			64-QAM			28.565
			256-QAM			28.625
	40 MHz		BPSK	216		38.662
			QPSK			38.588
			16-QAM			38.554
			64-QAM			38.635
			256-QAM			38.598
	50 MHz		BPSK	270		48.532
			QPSK			48.243
			16-QAM			48.276
			64-QAM			48.326
			256-QAM			48.293

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 114 ~ 153.

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	3.8286	29.320	-61.535	-32.215	-25.00
		2535.000	4.9053	29.320	-61.885	-32.565	
		2567.500	4.9253	29.320	-61.677	-32.357	
	10	2505.000	4.0679	29.320	-60.853	-31.533	
		2535.000	3.7887	29.320	-61.263	-31.943	
		2565.000	3.7289	29.320	-61.400	-32.080	
	15	2507.500	7.9462	29.910	-61.515	-31.605	
		2535.000	3.6990	29.320	-61.168	-31.848	
		2562.500	3.8186	29.320	-61.579	-32.259	
	20	2510.000	3.7488	29.320	-60.864	-31.544	
		2535.000	3.8086	29.320	-61.737	-32.417	
		2560.000	3.7588	29.320	-59.208	-29.888	
	25	2512.500	5.1945	29.910	-62.072	-32.162	
		2535.000	4.9153	29.320	-60.468	-31.148	
		2557.500	3.7488	29.320	-61.743	-32.423	
	30	2515.000	3.7787	29.320	-62.191	-32.871	
		2535.000	4.0579	29.320	-60.177	-30.857	
		2555.000	4.0479	29.320	-61.735	-32.415	
	40	2520.000	4.9352	29.320	-61.199	-31.879	
		2535.000	3.7688	29.320	-61.783	-32.463	
		2550.000	5.2144	29.910	-60.826	-30.916	
	50	2525.000	7.4776	29.910	-61.758	-31.848	
		2535.000	4.9153	29.320	-60.927	-31.607	
		2545.000	4.0579	29.320	-61.576	-32.256	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 154 ~ 201.
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	27.250
1 – 5	29.320
5 – 10	29.910
10 – 15	30.530
15 – 20	31.840
Above 20	32.520

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 MHz	2502.500	BPSK	Full RB	-28.94	-32.28	-30.78	-24.27	-47.06	-31.90	-32.43
10 MHz	2505.000	BPSK	Full RB	-30.68	-34.32	-32.31	-29.12	-40.39	-31.47	-35.88
15 MHz	2507.500	BPSK	Full RB	-30.26	-34.20	-32.07	-30.32	-37.35	-32.88	-36.39
20 MHz	2510.000	BPSK	Full RB	-28.54	-31.74	-31.55	-29.47	-36.33	-31.82	-39.49
25 MHz	2512.500	BPSK	Full RB	-28.45	-31.98	-30.94	-30.18	-37.07	-32.06	-40.78
30 MHz	2515.000	BPSK	Full RB	-26.96	-28.25	-32.19	-29.64	-38.05	-31.26	-40.42
40 MHz	2520.000	BPSK	Full RB	-15.95	-17.72	-32.96	-28.55	-37.61	-31.22	-47.46
50 MHz	2525.000	BPSK	Full RB	-13.88	-14.17	-31.33	-29.56	-37.80	-32.83	-63.12
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 MHz	2535.000	BPSK	Full RB	-29.70	-30.76	-28.85	-28.26
	2567.500	BPSK	Full RB	-29.16	-28.25	-24.02	-25.97
10 MHz	2535.000	BPSK	Full RB	-32.53	-34.75	-30.34	-28.57
	2565.000	BPSK	Full RB	-27.56	-27.80	-24.92	-27.70
15 MHz	2535.000	BPSK	Full RB	-31.73	-35.88	-32.40	-31.72
	2562.500	BPSK	Full RB	-28.07	-27.36	-25.62	-25.08
20 MHz	2535.000	BPSK	Full RB	-29.44	-33.98	-30.87	-28.75
	2560.000	BPSK	Full RB	-26.77	-30.39	-26.17	-27.22
25 MHz	2535.000	BPSK	Full RB	-29.95	-35.67	-30.62	-33.25
	2557.500	BPSK	Full RB	-28.55	-31.61	-27.11	-29.05
30 MHz	2535.000	BPSK	Full RB	-26.87	-31.05	-29.59	-32.34
	2555.000	BPSK	Full RB	-25.90	-27.22	-29.30	-30.93
40 MHz	2535.000	BPSK	Full RB	-15.22	-16.53	-32.31	-32.18
	2550.000	BPSK	Full RB	-16.18	-17.67	-31.77	-32.28
50 MHz	2535.000	BPSK	Full RB	-12.62	-13.86	-28.94	-35.10
	2545.000	BPSK	Full RB	-12.98	-14.75	-30.19	-29.45
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 MHz	2535.000	BPSK	Full RB	-33.10	-32.45	-34.53	-33.67
	2567.500	BPSK	Full RB	-29.54	-33.19	-30.03	-34.45
10 MHz	2535.000	BPSK	Full RB	-31.92	-32.60	-35.79	-35.09
	2565.000	BPSK	Full RB	-28.28	-31.50	-31.29	-38.44
15 MHz	2535.000	BPSK	Full RB	-32.65	-34.03	-38.08	-38.19
	2562.500	BPSK	Full RB	-28.12	-29.63	-33.58	-42.23
20 MHz	2535.000	BPSK	Full RB	-31.61	-31.29	-39.77	-37.98
	2560.000	BPSK	Full RB	-29.58	-29.71	-36.59	-44.51
25 MHz	2535.000	BPSK	Full RB	-32.24	-33.84	-42.02	-41.13
	2557.500	BPSK	Full RB	-31.84	-29.21	-38.73	-50.30
30 MHz	2535.000	BPSK	Full RB	-31.49	-31.91	-44.71	-39.11
	2555.000	BPSK	Full RB	-31.98	-34.58	-40.16	-62.90
40 MHz	2535.000	BPSK	Full RB	-32.09	-31.58	-63.27	-53.05
	2550.000	BPSK	Full RB	-33.14	-35.04	-48.40	-62.93
50 MHz	2535.000	BPSK	Full RB	-31.05	-33.84	-63.46	-62.99
	2545.000	BPSK	Full RB	-32.39	-29.99	-62.10	-62.77
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. Plots of the EUT's Channel Edge are shown Page 202 ~ 257.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 5 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 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 499 996	0.0	0.000 000	0.000
	100 %	-30	2502 499 993	-2.7	0.000 000	-0.001
	100 %	-20	2502 499 991	-5.2	0.000 000	-0.002
	100 %	-10	2502 499 990	-6.3	0.000 000	-0.003
	100 %	0	2502 499 992	-4.0	0.000 000	-0.002
	100 %	+10	2502 499 989	-7.3	0.000 000	-0.003
	100 %	+30	2502 499 990	-6.5	0.000 000	-0.003
	100 %	+40	2502 499 988	-7.8	0.000 000	-0.003
	100 %	+50	2502 499 990	-6.0	0.000 000	-0.002
	Lowest voltage	+20	2502 499 991	-4.8	0.000 000	-0.002
2567.500	100 %	+20(Ref)	2567 499 998	0.0	0.000 000	0.000
	100 %	-30	2567 499 998	0.3	0.000 000	0.000
	100 %	-20	2567 500 000	1.9	0.000 000	0.001
	100 %	-10	2567 499 999	1.4	0.000 000	0.001
	100 %	0	2567 499 998	0.1	0.000 000	0.000
	100 %	+10	2567 499 995	-2.2	0.000 000	-0.001
	100 %	+30	2567 499 994	-3.2	0.000 000	-0.001
	100 %	+40	2567 499 993	-4.6	0.000 000	-0.002
	100 %	+50	2567 499 990	-7.2	0.000 000	-0.003
	Lowest voltage	+20	2567 499 995	-2.8	0.000 000	-0.001

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 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 999 997	-1.8	0.000 000	-0.001
	100 %	-20	2505 000 001	1.5	0.000 000	0.001
	100 %	-10	2504 999 999	0.4	0.000 000	0.000
	100 %	0	2504 999 997	-2.3	0.000 000	-0.001
	100 %	+10	2504 999 998	-1.0	0.000 000	0.000
	100 %	+30	2504 999 997	-2.1	0.000 000	-0.001
	100 %	+40	2504 999 997	-2.3	0.000 000	-0.001
	100 %	+50	2504 999 999	0.3	0.000 000	0.000
	Lowest voltage	+20	2505 000 000	0.7	0.000 000	0.000
2565.000	100 %	+20(Ref)	2564 999 998	0.0	0.000 000	0.000
	100 %	-30	2564 999 993	-4.7	0.000 000	-0.002
	100 %	-20	2564 999 994	-3.4	0.000 000	-0.001
	100 %	-10	2564 999 997	-0.5	0.000 000	0.000
	100 %	0	2564 999 996	-1.6	0.000 000	-0.001
	100 %	+10	2564 999 996	-1.5	0.000 000	-0.001
	100 %	+30	2564 999 996	-1.9	0.000 000	-0.001
	100 %	+40	2564 999 995	-2.6	0.000 000	-0.001
	100 %	+50	2564 999 996	-1.5	0.000 000	-0.001
	Lowest voltage	+20	2564 999 998	0.0	0.000 000	0.000

- ▣ BandWidth: 15 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 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 499 996	0.0	0.000 000	0.000
	100 %	-30	2507 499 992	-3.9	0.000 000	-0.002
	100 %	-20	2507 499 991	-4.1	0.000 000	-0.002
	100 %	-10	2507 499 991	-4.4	0.000 000	-0.002
	100 %	0	2507 499 990	-5.7	0.000 000	-0.002
	100 %	+10	2507 499 988	-7.4	0.000 000	-0.003
	100 %	+30	2507 499 991	-4.6	0.000 000	-0.002
	100 %	+40	2507 499 989	-6.8	0.000 000	-0.003
	100 %	+50	2507 499 988	-7.4	0.000 000	-0.003
	Lowest voltage	+20	2507 499 991	-4.8	0.000 000	-0.002
2562.500	100 %	+20(Ref)	2562 499 995	0.0	0.000 000	0.000
	100 %	-30	2562 499 996	1.3	0.000 000	0.001
	100 %	-20	2562 499 991	-3.6	0.000 000	-0.001
	100 %	-10	2562 499 991	-3.4	0.000 000	-0.001
	100 %	0	2562 499 993	-1.8	0.000 000	-0.001
	100 %	+10	2562 499 993	-1.8	0.000 000	-0.001
	100 %	+30	2562 499 992	-2.9	0.000 000	-0.001
	100 %	+40	2562 499 990	-4.4	0.000 000	-0.002
	100 %	+50	2562 499 994	-0.5	0.000 000	0.000
	Lowest voltage	+20	2562 499 992	-2.2	0.000 000	-0.001

- ▣ BandWidth: 20 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 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	2510 000 000	-0.4	0.000 000	0.000
	100 %	-20	2510 000 002	1.9	0.000 000	0.001
	100 %	-10	2510 000 002	1.2	0.000 000	0.000
	100 %	0	2509 999 999	-1.8	0.000 000	-0.001
	100 %	+10	2509 999 999	-1.0	0.000 000	0.000
	100 %	+30	2509 999 999	-1.7	0.000 000	-0.001
	100 %	+40	2509 999 999	-1.4	0.000 000	-0.001
	100 %	+50	2510 000 003	2.2	0.000 000	0.001
	Lowest voltage	+20	2510 000 004	3.2	0.000 000	0.001
2560.000	100 %	+20(Ref)	2560 000 003	0.0	0.000 000	0.000
	100 %	-30	2560 000 006	2.8	0.000 000	0.001
	100 %	-20	2560 000 007	3.6	0.000 000	0.001
	100 %	-10	2560 000 005	1.5	0.000 000	0.001
	100 %	0	2560 000 006	2.8	0.000 000	0.001
	100 %	+10	2560 000 005	1.7	0.000 000	0.001
	100 %	+30	2560 000 004	0.1	0.000 000	0.000
	100 %	+40	2560 000 005	1.9	0.000 000	0.001
	100 %	+50	2560 000 005	1.2	0.000 000	0.000
	Lowest voltage	+20	2560 000 006	2.5	0.000 000	0.001

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 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 500 001	0.0	0.000 000	0.000
	100 %	-30	2512 500 002	0.6	0.000 000	0.000
	100 %	-20	2512 500 004	2.5	0.000 000	0.001
	100 %	-10	2512 500 002	1.2	0.000 000	0.000
	100 %	0	2512 500 001	0.0	0.000 000	0.000
	100 %	+10	2512 500 003	1.5	0.000 000	0.001
	100 %	+30	2512 500 003	1.8	0.000 000	0.001
	100 %	+40	2512 499 999	-1.8	0.000 000	-0.001
	100 %	+50	2512 500 000	-0.8	0.000 000	0.000
	Lowest voltage	+20	2512 499 999	-2.3	0.000 000	-0.001
2557.500	100 %	+20(Ref)	2557 500 001	0.0	0.000 000	0.000
	100 %	-30	2557 500 001	0.0	0.000 000	0.000
	100 %	-20	2557 500 002	0.6	0.000 000	0.000
	100 %	-10	2557 500 003	1.7	0.000 000	0.001
	100 %	0	2557 500 002	0.5	0.000 000	0.000
	100 %	+10	2557 499 998	-3.5	0.000 000	-0.001
	100 %	+30	2557 500 001	-0.1	0.000 000	0.000
	100 %	+40	2557 500 003	2.0	0.000 000	0.001
	100 %	+50	2557 500 004	2.3	0.000 000	0.001
	Lowest voltage	+20	2557 499 998	-3.6	0.000 000	-0.001

- ▣ BandWidth: 30 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 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)	2514 999 998	0.0	0.000 000	0.000
	100 %	-30	2514 999 992	-6.4	0.000 000	-0.003
	100 %	-20	2514 999 992	-5.6	0.000 000	-0.002
	100 %	-10	2514 999 997	-1.2	0.000 000	0.000
	100 %	0	2514 999 994	-3.8	0.000 000	-0.002
	100 %	+10	2514 999 996	-2.1	0.000 000	-0.001
	100 %	+30	2514 999 992	-5.8	0.000 000	-0.002
	100 %	+40	2514 999 994	-3.9	0.000 000	-0.002
	100 %	+50	2514 999 993	-4.7	0.000 000	-0.002
	Lowest voltage	+20	2514 999 993	-4.6	0.000 000	-0.002
2555.000	100 %	+20(Ref)	2554 999 994	0.0	0.000 000	0.000
	100 %	-30	2554 999 989	-5.3	0.000 000	-0.002
	100 %	-20	2554 999 989	-4.6	0.000 000	-0.002
	100 %	-10	2554 999 990	-4.2	0.000 000	-0.002
	100 %	0	2554 999 987	-6.8	0.000 000	-0.003
	100 %	+10	2554 999 987	-7.5	0.000 000	-0.003
	100 %	+30	2554 999 986	-7.6	0.000 000	-0.003
	100 %	+40	2554 999 987	-7.5	0.000 000	-0.003
	100 %	+50	2554 999 986	-7.6	0.000 000	-0.003
	Lowest voltage	+20	2554 999 985	-9.3	0.000 000	-0.004

- ▣ BandWidth: 40 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 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 999 997	-2.3	0.000 000	-0.001
	100 %	-20	2519 999 997	-1.6	0.000 000	-0.001
	100 %	-10	2519 999 997	-2.2	0.000 000	-0.001
	100 %	0	2519 999 998	-1.3	0.000 000	-0.001
	100 %	+10	2520 000 000	1.3	0.000 000	0.001
	100 %	+30	2519 999 999	-0.2	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
	Lowest voltage	+20	2519 999 999	0.3	0.000 000	0.000
2550.000	100 %	+20(Ref)	2550 000 002	0.0	0.000 000	0.000
	100 %	-30	2550 000 003	1.8	0.000 000	0.001
	100 %	-20	2550 000 003	1.7	0.000 000	0.001
	100 %	-10	2550 000 004	2.1	0.000 000	0.001
	100 %	0	2550 000 003	1.9	0.000 000	0.001
	100 %	+10	2550 000 001	-0.3	0.000 000	0.000
	100 %	+30	2550 000 006	4.0	0.000 000	0.002
	100 %	+40	2550 000 000	-1.7	0.000 000	-0.001
	100 %	+50	2549 999 998	-3.1	0.000 000	-0.001
	Lowest voltage	+20	2550 000 000	-2.1	0.000 000	-0.001

- ▣ BandWidth: 50 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
2525.000	100 %	+20(Ref)	2524 999 998	0.0	0.000 000	0.000
	100 %	-30	2524 999 991	-6.7	0.000 000	-0.003
	100 %	-20	2524 999 994	-3.5	0.000 000	-0.001
	100 %	-10	2524 999 993	-4.5	0.000 000	-0.002
	100 %	0	2524 999 993	-4.6	0.000 000	-0.002
	100 %	+10	2524 999 991	-6.8	0.000 000	-0.003
	100 %	+30	2524 999 992	-5.8	0.000 000	-0.002
	100 %	+40	2524 999 992	-6.0	0.000 000	-0.002
	100 %	+50	2524 999 992	-6.0	0.000 000	-0.002
	Lowest voltage	+20	2524 999 992	-5.5	0.000 000	-0.002
2545.000	100 %	+20(Ref)	2544 999 999	0.0	0.000 000	0.000
	100 %	-30	2544 999 999	-0.6	0.000 000	0.000
	100 %	-20	2544 999 998	-0.7	0.000 000	0.000
	100 %	-10	2544 999 999	-0.3	0.000 000	0.000
	100 %	0	2545 000 002	2.6	0.000 000	0.001
	100 %	+10	2544 999 999	0.0	0.000 000	0.000
	100 %	+30	2545 000 004	5.0	0.000 000	0.002
	100 %	+40	2545 000 002	3.2	0.000 000	0.001
	100 %	+50	2545 000 002	3.3	0.000 000	0.001
	Lowest voltage	+20	2545 000 001	1.5	0.000 000	0.001

9. TEST DATA (Internal(BUA))

9.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2502.5	Sub6 n7/ 5 MHz [15 kHz]	PI/2 BPSK	85.17	29.90	4.62	119.69	H	< 2.00	0.281	24.49	1	12
		QPSK	85.12	29.90	4.62	119.64	H		0.278	24.44		
		16-QAM	84.05	29.90	4.62	118.57	H		0.217	23.37		
		64-QAM	82.94	29.90	4.62	117.46	H		0.168	22.26		
		256-QAM	80.65	29.90	4.62	115.17	H		0.099	19.97		
2535.0		PI/2 BPSK	85.88	30.20	4.63	120.71	H		0.356	25.51	1	12
		QPSK	85.80	30.20	4.63	120.63	H		0.349	25.43		
		16-QAM	84.72	30.20	4.63	119.55	H		0.273	24.35		
		64-QAM	83.83	30.20	4.63	118.66	H		0.222	23.46		
		256-QAM	81.07	30.20	4.63	115.90	H		0.118	20.70		
2567.5		PI/2 BPSK	82.95	29.90	4.70	117.54	H		0.172	22.34	1	23
		QPSK	82.95	29.90	4.70	117.54	H		0.172	22.34		
		16-QAM	81.94	29.90	4.70	116.54	H		0.136	21.34		
		64-QAM	80.19	29.90	4.70	114.78	H		0.091	19.58		
		256-QAM	78.30	29.90	4.70	112.90	H		0.059	17.70		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2505.0		PI/2 BPSK	85.74	29.90	4.62	120.26	H		0.320	25.06	1	1
		QPSK	85.52	29.90	4.62	120.03	H		0.304	24.83		
		16-QAM	84.61	29.90	4.62	119.13	H		0.247	23.93		
		64-QAM	82.92	29.90	4.62	117.44	H		0.167	22.24		
		256-QAM	82.74	29.90	4.62	117.26	H		0.161	22.06		
2535.0	Sub6 n7/ 10 MHz [15 kHz]	PI/2 BPSK	85.42	30.20	4.63	120.25	H		0.320	25.05	1	26
		QPSK	85.34	30.20	4.63	120.17	H		0.314	24.97		
		16-QAM	84.66	30.20	4.63	119.49	H	< 2.00	0.269	24.29		
		64-QAM	83.30	30.20	4.63	118.13	H		0.196	22.93		
		256-QAM	80.29	30.20	4.63	115.12	H		0.098	19.92		
2565.0		PI/2 BPSK	82.85	29.90	4.70	117.45	H		0.168	22.25	1	1
		QPSK	82.35	29.90	4.70	116.95	H		0.150	21.75		
		16-QAM	81.15	29.90	4.70	115.75	H		0.114	20.55		
		64-QAM	80.12	29.90	4.70	114.71	H		0.089	19.51		
		256-QAM	78.98	29.90	4.70	113.58	H		0.069	18.38		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2507.5		PI/2 BPSK	85.68	29.90	4.62	120.20	H		0.316	25.00	1	1
		QPSK	85.46	29.90	4.62	119.98	H		0.301	24.78		
		16-QAM	84.66	29.90	4.62	119.18	H		0.250	23.98		
		64-QAM	82.73	29.90	4.62	117.25	H		0.160	22.05		
		256-QAM	81.53	29.90	4.62	116.05	H		0.122	20.85		
2535.0	Sub6 n7/ 15 MHz [15 kHz]	PI/2 BPSK	85.70	30.20	4.63	120.52	H	< 2.00	0.341	25.32	1	39
		QPSK	85.39	30.20	4.63	120.22	H		0.317	25.02		
		16-QAM	84.50	30.20	4.63	119.33	H		0.259	24.13		
		64-QAM	83.03	30.20	4.63	117.86	H		0.184	22.66		
		256-QAM	82.77	30.20	4.63	117.60	H		0.174	22.40		
2562.5		PI/2 BPSK	82.86	29.90	4.70	117.46	H		0.168	22.26	1	1
		QPSK	82.75	29.90	4.70	117.35	H		0.164	22.15		
		16-QAM	81.82	29.90	4.70	116.42	H		0.132	21.22		
		64-QAM	80.27	29.90	4.70	114.87	H		0.093	19.67		
		256-QAM	79.00	29.90	4.70	113.60	H		0.069	18.40		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2510.0		PI/2 BPSK	85.67	29.90	4.62	120.19	H		0.316	24.99	1	1
		QPSK	85.46	29.90	4.62	119.98	H		0.300	24.78		
		16-QAM	84.68	29.90	4.62	119.20	H		0.251	24.00		
		64-QAM	83.18	29.90	4.62	117.70	H		0.178	22.50		
		256-QAM	81.03	29.90	4.62	115.55	H		0.108	20.35		
2535.0	Sub6 n7/ 20 MHz [15 kHz]	PI/2 BPSK	85.46	30.20	4.63	120.29	H	< 2.00	0.323	25.09	1	53
		QPSK	85.46	30.20	4.63	120.29	H		0.323	25.09		
		16-QAM	84.45	30.20	4.63	119.28	H		0.256	24.08		
		64-QAM	83.22	30.20	4.63	118.05	H		0.193	22.85		
		256-QAM	79.40	30.20	4.63	114.23	H		0.080	19.03		
2560.0		PI/2 BPSK	83.61	29.90	4.70	118.21	H		0.200	23.01	1	1
		QPSK	83.42	29.90	4.70	118.02	H		0.192	22.82		
		16-QAM	81.12	29.90	4.70	115.72	H		0.113	20.52		
		64-QAM	81.16	29.90	4.70	115.76	H		0.114	20.56		
		256-QAM	80.77	29.90	4.70	115.37	H		0.104	20.17		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2512.5		PI/2 BPSK	85.03	29.90	4.62	119.55	H		0.272	24.35	1	1
		QPSK	84.86	29.90	4.62	119.38	H		0.262	24.18		
		16-QAM	82.34	29.90	4.62	116.86	H		0.147	21.66		
		64-QAM	81.17	29.90	4.62	115.69	H		0.112	20.49		
		256-QAM	78.44	29.90	4.62	112.96	H		0.060	17.76		
2535.0	Sub6 n7/ 25 MHz [15 kHz]	PI/2 BPSK	85.05	30.20	4.63	119.88	H	< 2.00	0.294	24.68	1	66
		QPSK	84.89	30.20	4.63	119.72	H		0.283	24.52		
		16-QAM	81.93	30.20	4.63	116.76	H		0.143	21.56		
		64-QAM	81.02	30.20	4.63	115.85	H		0.116	20.65		
		256-QAM	77.74	30.20	4.63	112.57	H		0.055	17.37		
2557.5		PI/2 BPSK	83.45	29.90	4.70	118.05	H		0.193	22.85	1	1
		QPSK	83.43	29.90	4.70	118.03	H		0.192	22.83		
		16-QAM	80.69	29.90	4.70	115.29	H		0.102	20.09		
		64-QAM	79.87	29.90	4.70	114.47	H		0.085	19.27		
		256-QAM	76.88	29.90	4.70	111.48	H		0.042	16.28		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2515.0		PI/2 BPSK	84.98	29.90	4.62	119.50	H		0.269	24.30	1	1
		QPSK	84.82	29.90	4.62	119.34	H		0.259	24.14		
		16-QAM	83.92	29.90	4.62	118.44	H		0.211	23.24		
		64-QAM	82.03	29.90	4.62	116.55	H		0.136	21.35		
		256-QAM	80.38	29.90	4.62	114.90	H		0.093	19.70		
2535.0	Sub6 n7/ 30 MHz [15 kHz]	PI/2 BPSK	84.94	30.20	4.63	119.77	H	< 2.00	0.287	24.57	1	80
		QPSK	84.73	30.20	4.63	119.56	H		0.273	24.36		
		16-QAM	82.20	30.20	4.63	117.02	H		0.152	21.82		
		64-QAM	63.11	30.20	4.63	97.94	H		0.002	2.74		
		256-QAM	77.75	30.20	4.63	112.58	H		0.055	17.38		
2555.0		PI/2 BPSK	84.13	29.90	4.70	118.73	H		0.225	23.53	1	1
		QPSK	84.00	29.90	4.70	118.60	H		0.219	23.40		
		16-QAM	82.88	29.90	4.70	117.48	H		0.169	22.28		
		64-QAM	81.69	29.90	4.70	116.29	H		0.129	21.09		
		256-QAM	79.29	29.90	4.70	113.89	H		0.074	18.69		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2520.0		PI/2 BPSK	85.03	29.90	4.62	119.55	H		0.272	24.35	1	1
		QPSK	84.82	29.90	4.62	119.33	H		0.259	24.13		
		16-QAM	83.91	29.90	4.62	118.43	H		0.210	23.23		
		64-QAM	81.98	29.90	4.62	116.50	H		0.135	21.30		
		256-QAM	82.09	29.90	4.62	116.61	H		0.138	21.41		
2535.0	Sub6 n7/ 40 MHz [15 kHz]	PI/2 BPSK	84.90	30.20	4.63	119.73	H	< 2.00	0.284	24.53	1	108
		QPSK	84.79	30.20	4.63	119.62	H		0.276	24.42		
		16-QAM	83.72	30.20	4.63	118.55	H		0.216	23.35		
		64-QAM	82.81	30.20	4.63	117.63	H		0.175	22.43		
		256-QAM	80.41	30.20	4.63	115.23	H		0.101	20.03		
2550.0		PI/2 BPSK	84.76	29.90	4.70	119.36	H		0.261	24.16	1	1
		QPSK	84.75	29.90	4.70	119.35	H		0.260	24.15		
		16-QAM	83.72	29.90	4.70	118.32	H		0.205	23.12		
		64-QAM	82.68	29.90	4.70	117.28	H		0.161	22.08		
		256-QAM	80.23	29.90	4.70	114.83	H		0.092	19.63		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured (dBμV/m)	Ant. Factor + Dis. Factor(dB)	Cable loss(dB)	Total (dBμV/m)	Pol.	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2525.0		PI/2 BPSK	84.81	29.90	4.62	119.33	H		0.259	24.13	1	1
		QPSK	84.80	29.90	4.62	119.32	H		0.258	24.12		
		16-QAM	83.72	29.90	4.62	118.24	H		0.201	23.04		
		64-QAM	82.75	29.90	4.62	117.27	H		0.161	22.07		
		256-QAM	80.42	29.90	4.62	114.94	H		0.094	19.74		
2535.0	Sub6 n7/ 50 MHz [15 kHz]	PI/2 BPSK	84.99	30.20	4.63	119.81	H	< 2.00	0.289	24.61	1	135
		QPSK	84.83	30.20	4.63	119.65	H		0.279	24.45		
		16-QAM	83.79	30.20	4.63	118.62	H		0.220	23.42		
		64-QAM	82.18	30.20	4.63	117.01	H		0.152	21.81		
		256-QAM	81.09	30.20	4.63	115.92	H		0.118	20.72		
2545.0		PI/2 BPSK	84.77	29.90	4.70	119.37	H		0.261	24.17	1	1
		QPSK	84.60	29.90	4.70	119.20	H		0.251	24.00		
		16-QAM	82.25	29.90	4.70	116.85	H		0.146	21.65		
		64-QAM	81.10	29.90	4.70	115.70	H		0.112	20.50		
		256-QAM	79.68	29.90	4.70	114.28	H		0.081	19.08		

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	-54.96	10.91	-61.50	3.71	H	-54.30	-25.00	1	12
	7 507.50	-56.07	11.59	-58.18	4.60	H	-51.19			
	10 010.00	-54.38	11.39	-53.97	5.47	V	-48.05			
	12 512.50	-58.17	13.16	-54.65	6.09	H	-47.58			
	15 015.00	-68.80	14.28	-50.68	6.76	V	-43.16			
507000 (2535.0)	5 070.00	-55.81	10.92	-62.57	3.80	H	-55.45		1	12
	7 605.00	-54.41	11.66	-56.60	4.64	V	-49.58			
	10 140.00	-56.87	11.34	-56.23	5.48	V	-50.37			
	12 675.00	-58.21	12.88	-54.18	6.24	H	-47.54			
	15 210.00	-68.02	14.81	-49.60	6.81	H	-41.60			
513500 (2567.5)	5 135.00	-55.84	11.04	-62.95	3.81	V	-55.72		1	23
	7 702.50	-55.79	11.56	-57.45	4.66	V	-50.55			
	10 270.00	-57.05	11.46	-56.41	5.57	V	-50.52			
	12 837.50	-56.73	12.73	-52.11	6.24	H	-45.62			
	15 405.00	-68.87	15.34	-49.72	6.85	H	-41.23			

☐ 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	-57.30	10.91	-63.89	3.72	H	-56.70	-25.00	1	1
	7 515.00	-56.13	11.59	-58.37	4.60	H	-51.38			
	10 020.00	-54.56	11.39	-53.71	5.47	V	-47.79			
	12 525.00	-58.49	13.14	-55.01	6.09	H	-47.96			
	15 030.00	-69.35	14.32	-51.54	6.73	H	-43.95			
507000 (2535.0)	5 070.00	-57.30	10.92	-64.06	3.80	H	-56.94		1	26
	7 605.00	-55.21	11.66	-57.40	4.64	H	-50.38			
	10 140.00	-56.78	11.34	-56.14	5.48	H	-50.28			
	12 675.00	-59.23	12.88	-55.20	6.24	H	-48.56			
	15 210.00	-68.35	14.81	-49.93	6.81	H	-41.93			
513000 (2565.0)	5 130.00	-55.84	11.02	-62.75	3.81	V	-55.54		1	1
	7 695.00	-55.70	11.58	-57.53	4.66	V	-50.61			
	10 260.00	-57.41	11.44	-56.74	5.56	V	-50.86			
	12 825.00	-56.70	12.74	-52.35	6.21	H	-45.82			
	15 390.00	-68.75	15.30	-49.52	6.85	H	-41.07			

☐ 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	-57.58	10.91	-64.13	3.70	H	-56.92	-25.00	1	1
	7 522.50	-56.09	11.60	-58.47	4.61	H	-51.48			
	10 030.00	-54.41	11.39	-53.76	5.47	V	-47.84			
	12 537.50	-58.51	13.13	-54.93	6.13	H	-47.93			
	15 045.00	-69.50	14.35	-51.61	6.75	H	-44.01			
507000 (2535.0)	5 070.00	-57.20	10.92	-63.96	3.80	H	-56.84		1	39
	7 605.00	-55.60	11.66	-57.79	4.64	H	-50.77			
	10 140.00	-56.71	11.34	-56.07	5.48	H	-50.21			
	12 675.00	-58.19	12.88	-54.16	6.24	H	-47.52			
	15 210.00	-68.53	14.81	-50.11	6.81	H	-42.11			
512500 (2562.5)	5 125.00	-55.70	11.01	-62.71	3.81	V	-55.51		1	1
	7 687.50	-55.76	11.58	-57.64	4.66	V	-50.72			
	10 250.00	-57.35	11.42	-56.98	5.54	V	-51.10			
	12 812.50	-56.71	12.74	-52.45	6.20	H	-45.91			
	15 375.00	-68.82	15.26	-49.59	6.87	H	-41.20			

☐ NR Band: N7
☐ Bandwidth: 20 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
502000 (2510.0)	5 020.00	-57.23	10.90	-63.71	3.69	H	-56.50	-25.00	1	1
	7 530.00	-56.13	11.61	-58.54	4.60	H	-51.53			
	10 040.00	-54.45	11.38	-53.93	5.49	V	-48.04			
	12 550.00	-58.51	13.11	-54.87	6.19	H	-47.95			
	15 060.00	-69.35	14.39	-51.39	6.78	H	-43.78			
507000 (2535.0)	5 070.00	-57.51	10.92	-64.27	3.80	V	-57.15		1	53
	7 605.00	-55.48	11.66	-57.67	4.64	H	-50.65			
	10 140.00	-56.92	11.34	-56.28	5.48	H	-50.42			
	12 675.00	-59.23	12.88	-55.20	6.24	H	-48.56			
	15 210.00	-68.71	14.81	-50.29	6.81	H	-42.29			
512000 (2560.0)	5 120.00	-55.88	11.00	-62.99	3.81	V	-55.80		1	1
	7 680.00	-55.81	11.60	-57.78	4.70	V	-50.88			
	10 240.00	-57.51	11.41	-57.08	5.54	V	-51.21			
	12 800.00	-56.70	12.75	-52.44	6.21	H	-45.90			
	15 360.00	-68.76	15.21	-49.20	6.88	H	-40.87			

☐ 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	-57.35	10.90	-64.06	3.68	H	-56.84	-25.00	1	1
	7 537.50	-56.16	11.62	-58.60	4.61	H	-51.59			
	10 050.00	-54.34	11.38	-53.90	5.48	V	-48.00			
	12 562.50	-58.61	13.09	-54.95	6.24	H	-48.10			
	15 075.00	-69.25	14.42	-51.21	6.82	H	-43.61			
507000 (2535.0)	5 070.00	-57.40	10.92	-64.16	3.80	V	-57.04		1	66
	7 605.00	-55.32	11.66	-57.51	4.64	H	-50.49			
	10 140.00	-56.91	11.34	-56.27	5.48	H	-50.41			
	12 675.00	-59.21	12.88	-55.18	6.24	H	-48.54			
	15 210.00	-68.21	14.81	-49.79	6.81	H	-41.79			
511500 (2557.5)	5 115.00	-55.75	10.98	-62.88	3.80	V	-55.70		1	1
	7 672.50	-55.81	11.60	-57.78	4.70	V	-50.88			
	10 230.00	-57.42	11.39	-56.95	5.54	V	-51.10			
	12 787.50	-56.21	12.76	-51.94	6.22	H	-45.40			
	15 345.00	-68.76	15.17	-49.68	6.86	H	-41.37			

☐ 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	-57.32	10.90	-64.26	3.67	H	-57.03	-25.00	1	1
	7 545.00	-56.23	11.63	-58.65	4.62	H	-51.64			
	10 060.00	-54.84	11.37	-54.21	5.48	V	-48.32			
	12 575.00	-58.42	13.07	-54.75	6.25	H	-47.93			
	15 090.00	-69.35	14.46	-51.63	6.81	H	-43.98			
507000 (2535.0)	5 070.00	-57.16	10.92	-63.92	3.80	H	-56.80		1	80
	7 605.00	-55.60	11.66	-57.79	4.64	H	-50.77			
	10 140.00	-56.91	11.34	-56.27	5.48	H	-50.41			
	12 675.00	-59.12	12.88	-55.09	6.24	H	-48.45			
	15 210.00	-68.61	14.81	-50.19	6.81	H	-42.19			
511000 (2555.0)	5 110.00	-55.75	10.97	-62.91	3.79	V	-55.73		1	1
	7 665.00	-55.70	11.62	-57.67	4.70	V	-50.75			
	10 220.00	-57.47	11.38	-57.01	5.54	V	-51.17			
	12 775.00	-56.71	12.76	-52.51	6.23	H	-45.98			
	15 330.00	-68.96	15.13	-50.21	6.82	H	-41.90			

☐ NR Band: N7
☐ Bandwidth: 40 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meters
☐ SCS: 15 kHz

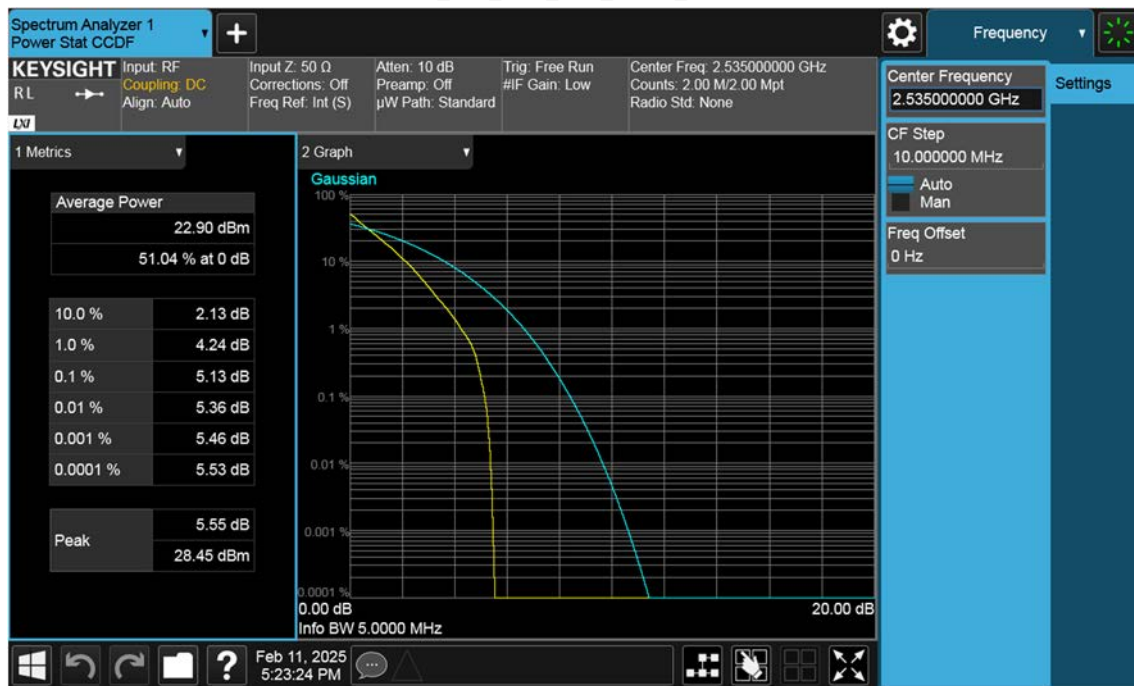
Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
504000 (2520.0)	5 040.00	-57.22	10.90	-63.89	3.68	H	-56.67	-25.00	1	1
	7 560.00	-56.98	11.64	-59.17	4.64	H	-52.17			
	10 080.00	-54.38	11.37	-54.01	5.47	V	-48.11			
	12 600.00	-58.15	13.03	-54.37	6.18	H	-47.52			
	15 120.00	-69.35	14.54	-51.34	6.80	H	-43.60			
507000 (2535.0)	5 070.00	-57.22	10.92	-63.98	3.80	H	-56.86		1	108
	7 605.00	-55.60	11.66	-57.79	4.64	H	-50.77			
	10 140.00	-57.64	11.34	-57.00	5.48	H	-51.14			
	12 675.00	-59.13	12.88	-55.10	6.24	H	-48.46			
	15 210.00	-68.81	14.81	-50.39	6.81	H	-42.39			
510000 (2550.0)	5 100.00	-55.72	10.95	-62.44	3.78	V	-55.27		1	1
	7 650.00	-55.72	11.64	-57.79	4.68	V	-50.83			
	10 200.00	-57.68	11.35	-57.16	5.54	H	-51.35			
	12 750.00	-56.71	12.78	-52.58	6.23	H	-46.03			
	15 300.00	-68.71	15.06	-49.90	6.83	H	-41.67			

☐ NR Band: N7
☐ Bandwidth: 50 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
505000 (2525.0)	5 050.00	-57.65	10.90	-64.38	3.73	H	-57.21	-25.00	1	1
	7 575.00	-56.19	11.65	-58.43	4.65	H	-51.43			
	10 100.00	-54.42	11.36	-53.78	5.46	V	-47.88			
	12 625.00	-58.23	12.98	-54.32	6.22	H	-47.56			
	15 150.00	-69.34	14.61	-51.23	6.80	H	-43.42			
507000 (2535.0)	5 070.00	-57.18	10.92	-63.94	3.80	H	-56.82		1	135
	7 605.00	-55.48	11.66	-57.67	4.64	H	-50.65			
	10 140.00	-56.91	11.34	-56.27	5.48	H	-50.41			
	12 675.00	-59.34	12.88	-55.31	6.24	H	-48.67			
	15 210.00	-68.57	14.81	-50.15	6.81	H	-42.15			
509000 (2545.0)	5 090.00	-55.82	10.94	-62.69	3.78	V	-55.53		1	1
	7 635.00	-56.21	11.64	-58.31	4.67	V	-51.34			
	10 180.00	-57.41	11.34	-56.75	5.51	V	-50.92			
	12 725.00	-56.79	12.81	-53.10	6.21	H	-46.50			
	15 270.00	-68.76	14.99	-50.23	6.82	H	-42.06			

10. TEST PLOTS

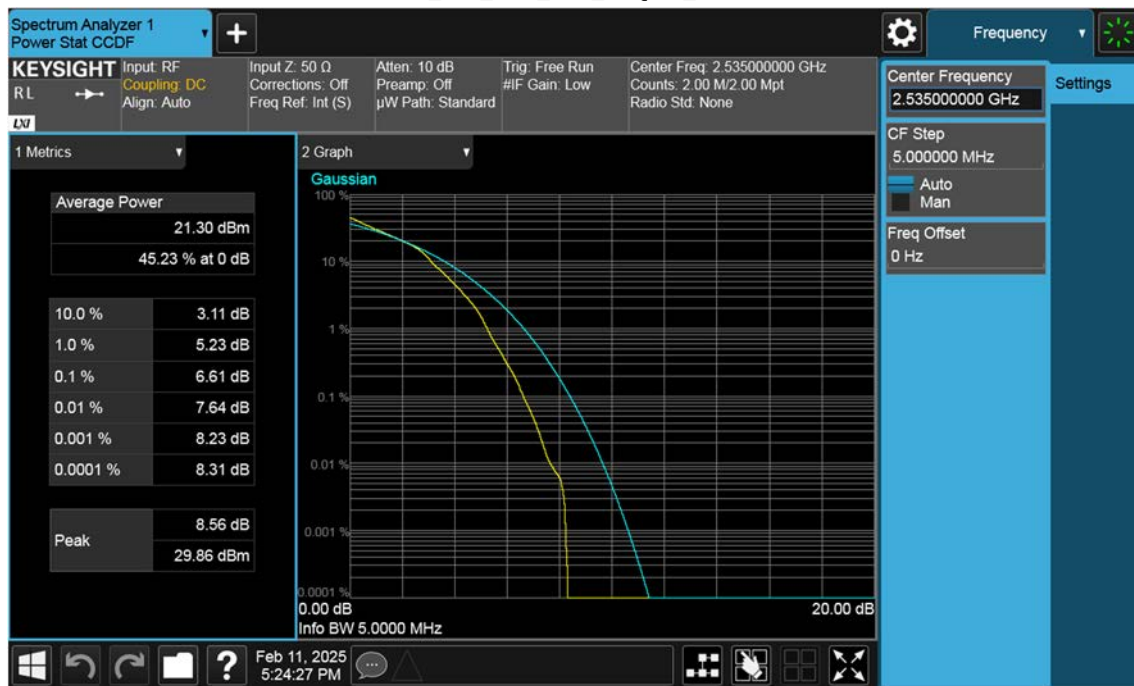
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NR7_5 M_PAR_Mid_QPSK_FullRB



NR7_5 M_PAR_Mid_16QAM_FullRB



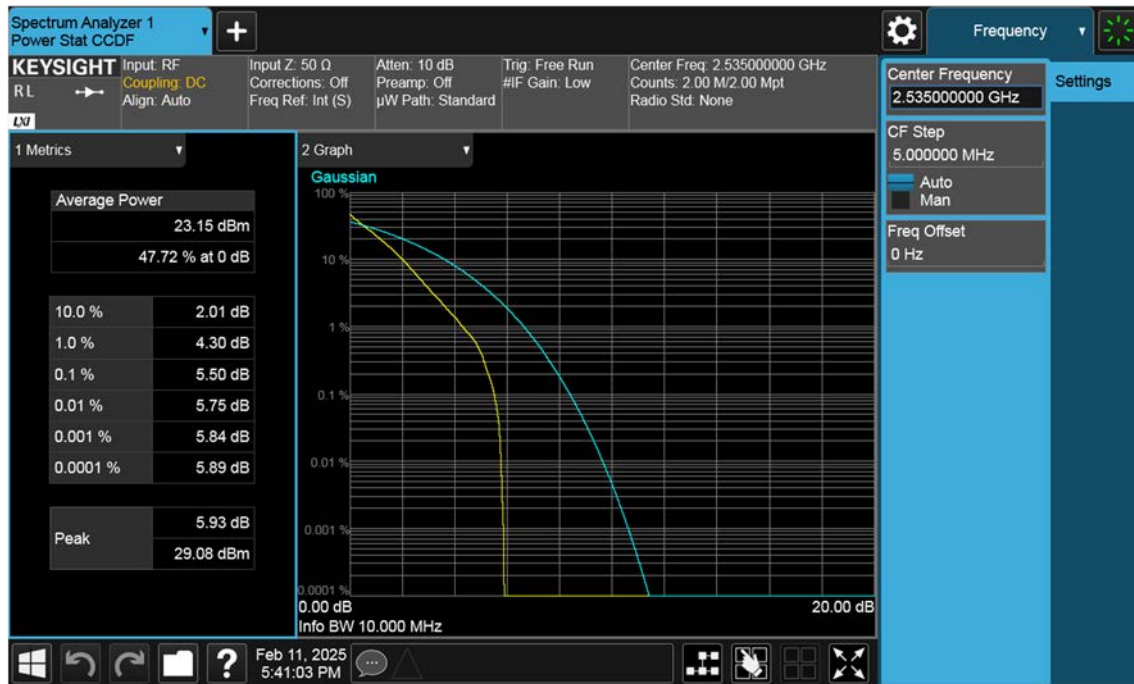
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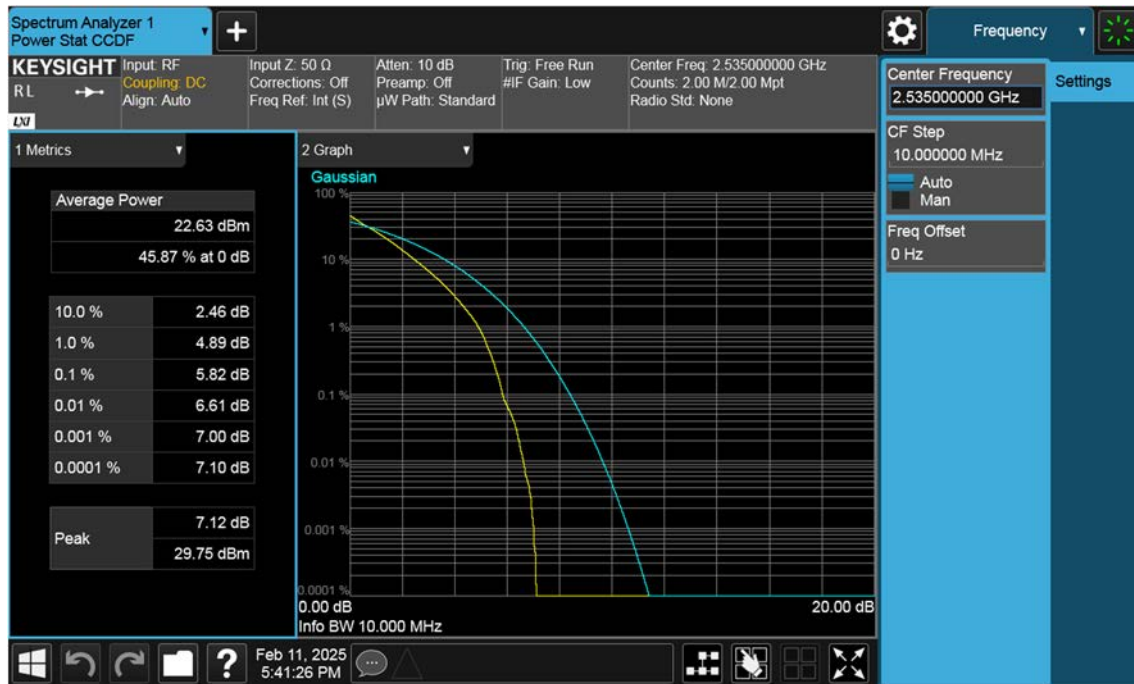
NR7_5 M_PAR_Mid_256QAM_FullRB



NR7_10 M_PAR_Mid_BPSK_FullIRB



NR7_10 M_PAR_Mid_QPSK_FullIRB



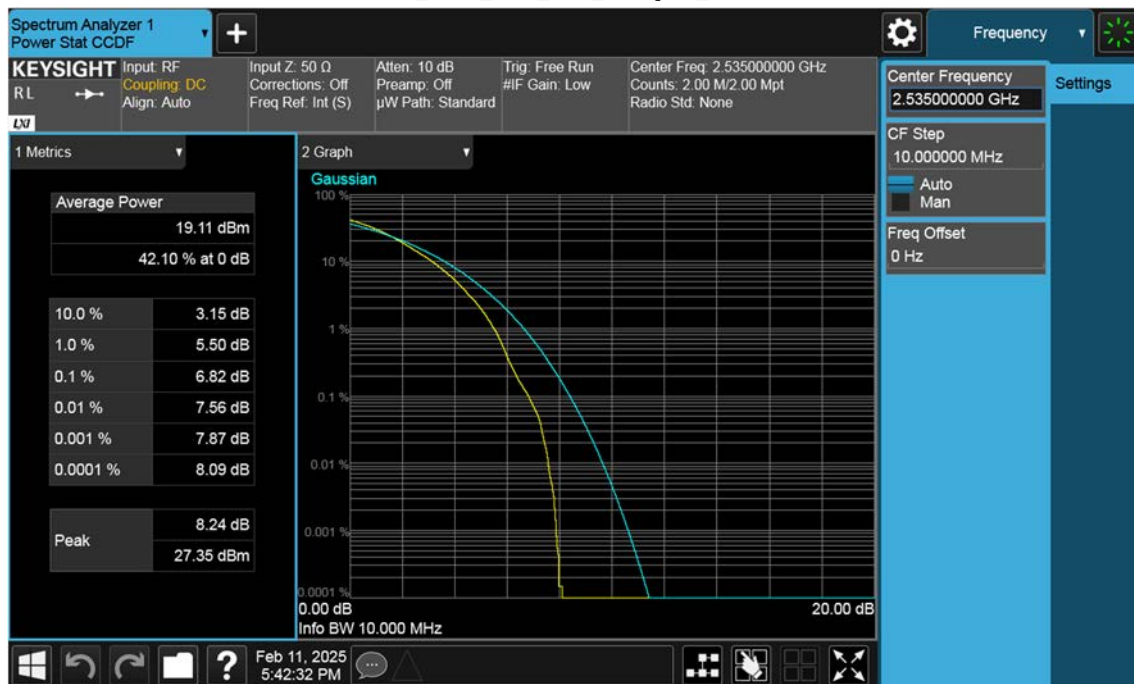
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NR7_10 M_PAR_Mid_64QAM_FullRB



NR7_10 M_PAR_Mid_256QAM_FullRB



NR7_15 M_PAR_Mid_BPSK_FullIRB



NR7_15 M_PAR_Mid_QPSK_FullIRB



NR7_15 M_PAR_Mid_16QAM_FullRB



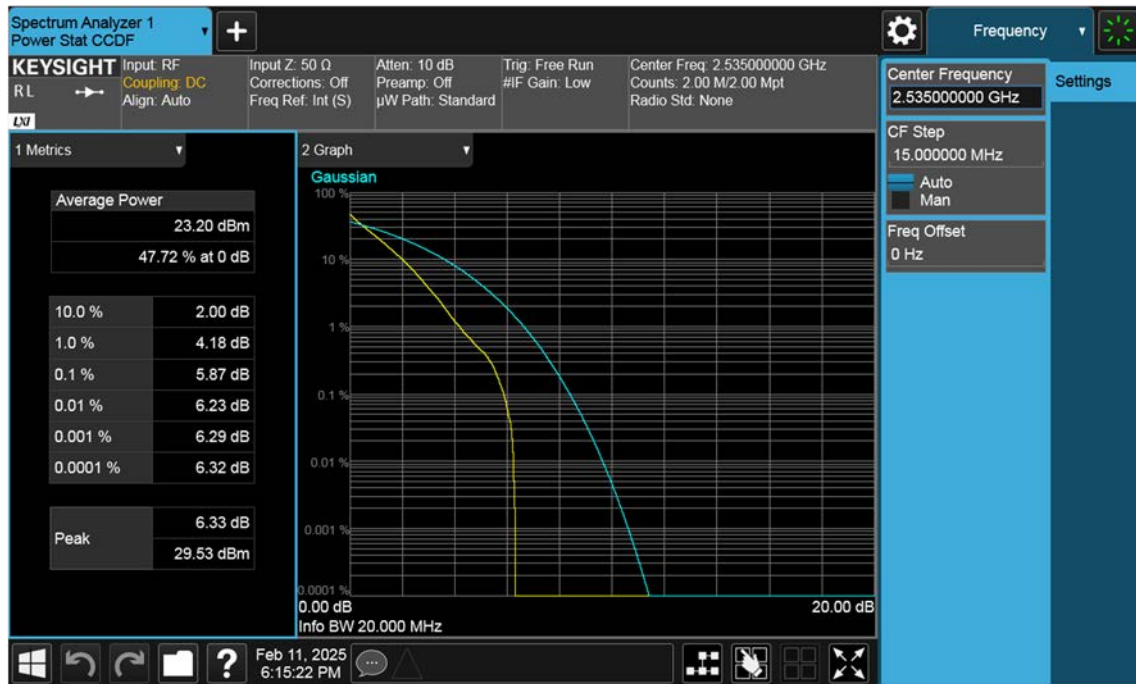
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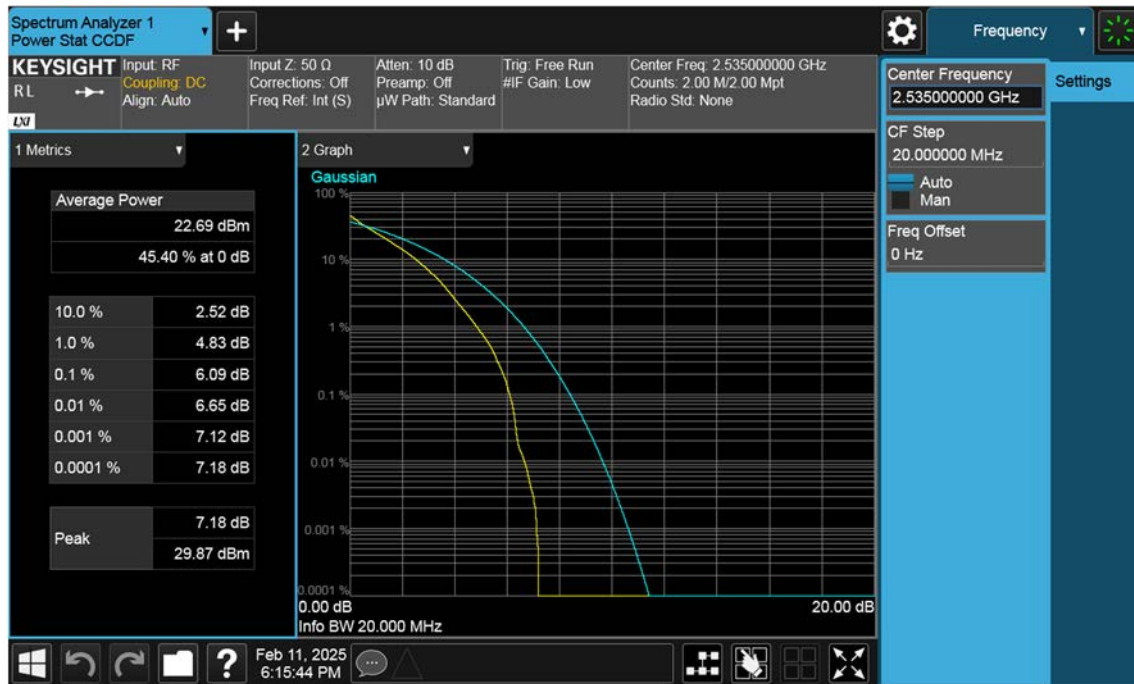
NR7_15 M_PAR_Mid_256QAM_FullRB



NR7_20 M_PAR_Mid_BPSK_FullIRB



NR7_20 M_PAR_Mid_QPSK_FullIRB



NR7_20 M_PAR_Mid_16QAM_FullRB



NR7_20 M_PAR_Mid_64QAM_FullRB



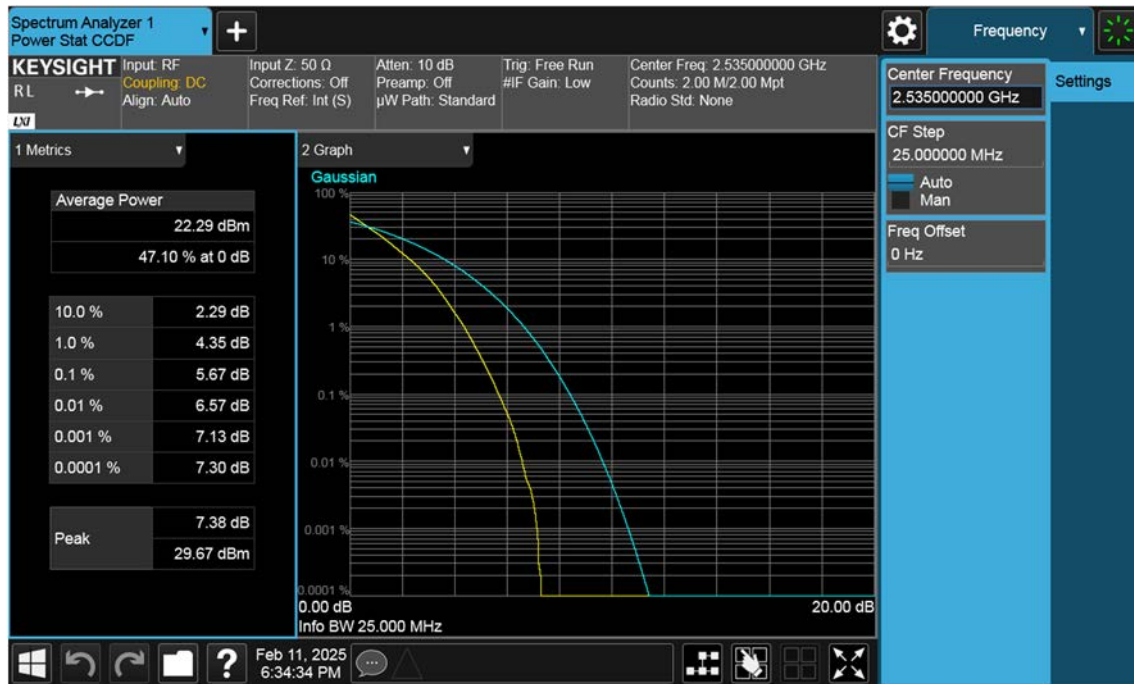
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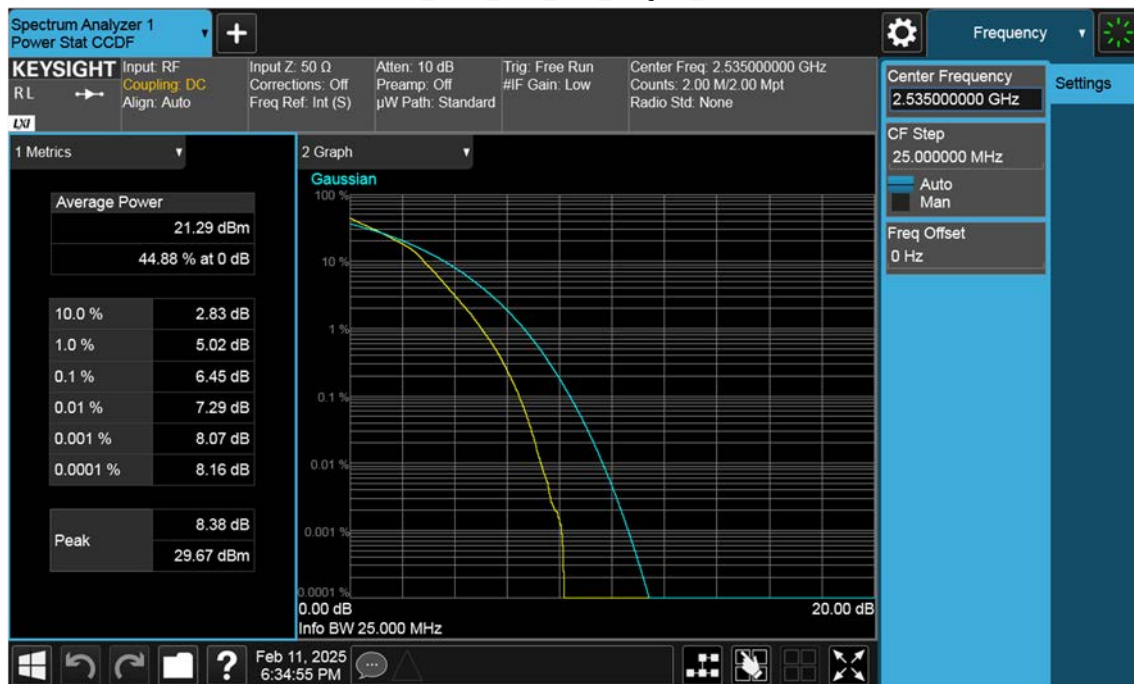
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NR7_25 M_PAR_Mid_QPSK_FullIRB



NR7_25 M_PAR_Mid_16QAM_FullRB



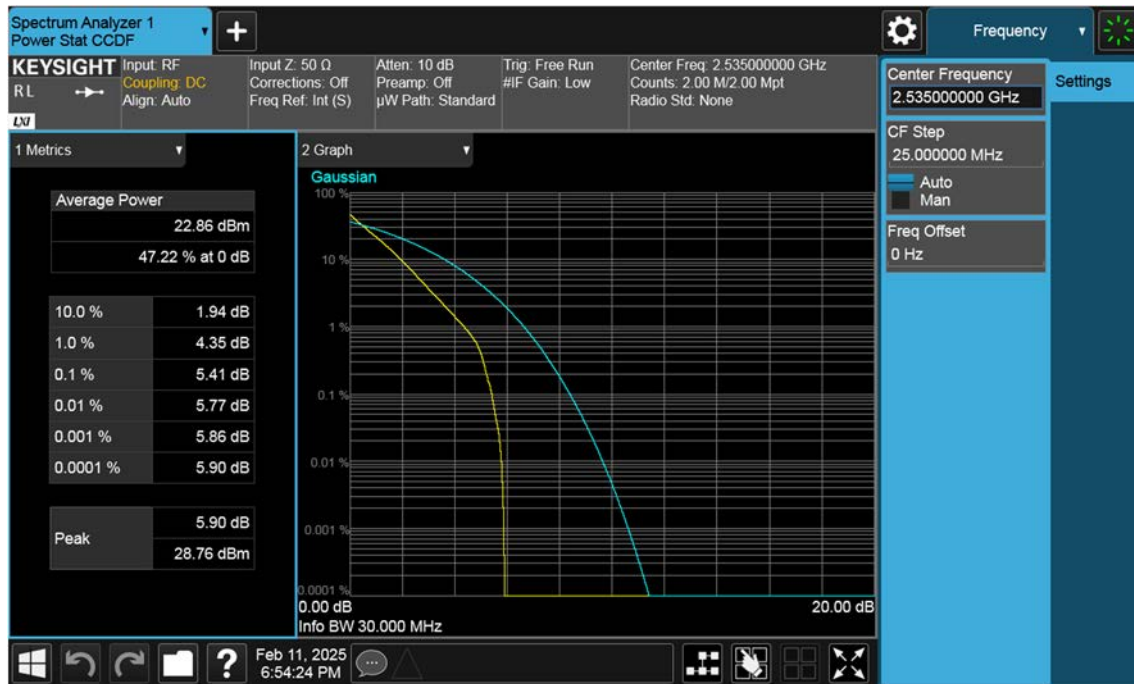
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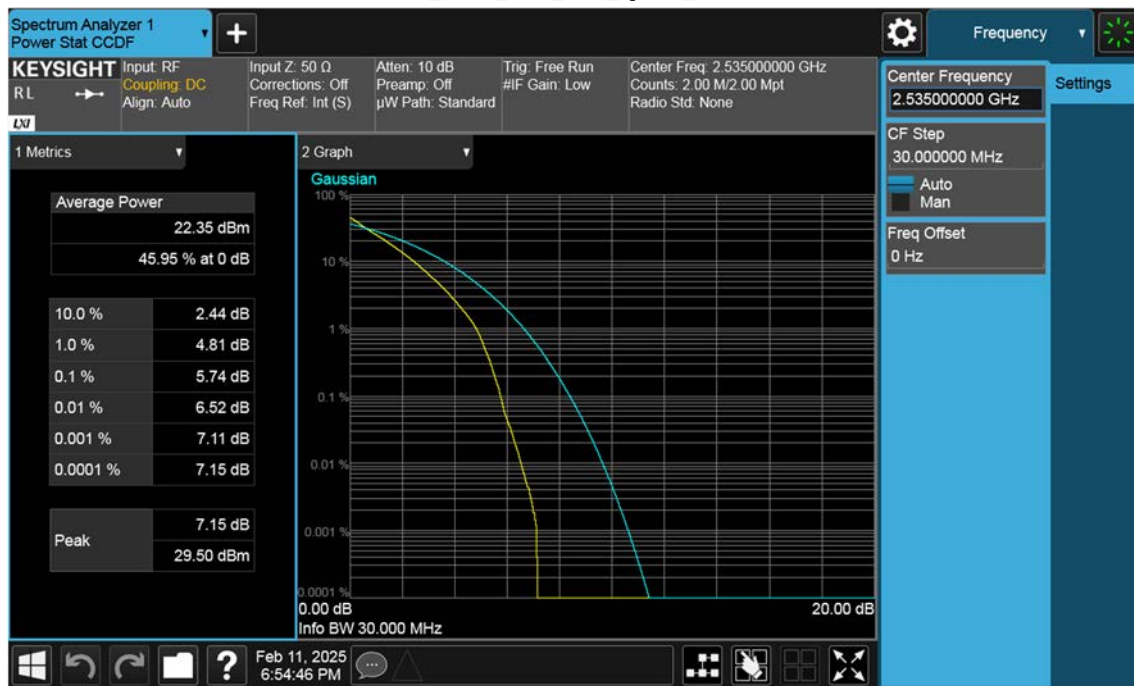
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NR7_30 M_PAR_Mid_BPSK_FullIRB



NR7_30 M_PAR_Mid_QPSK_FullIRB



NR7_30 M_PAR_Mid_16QAM_FullRB



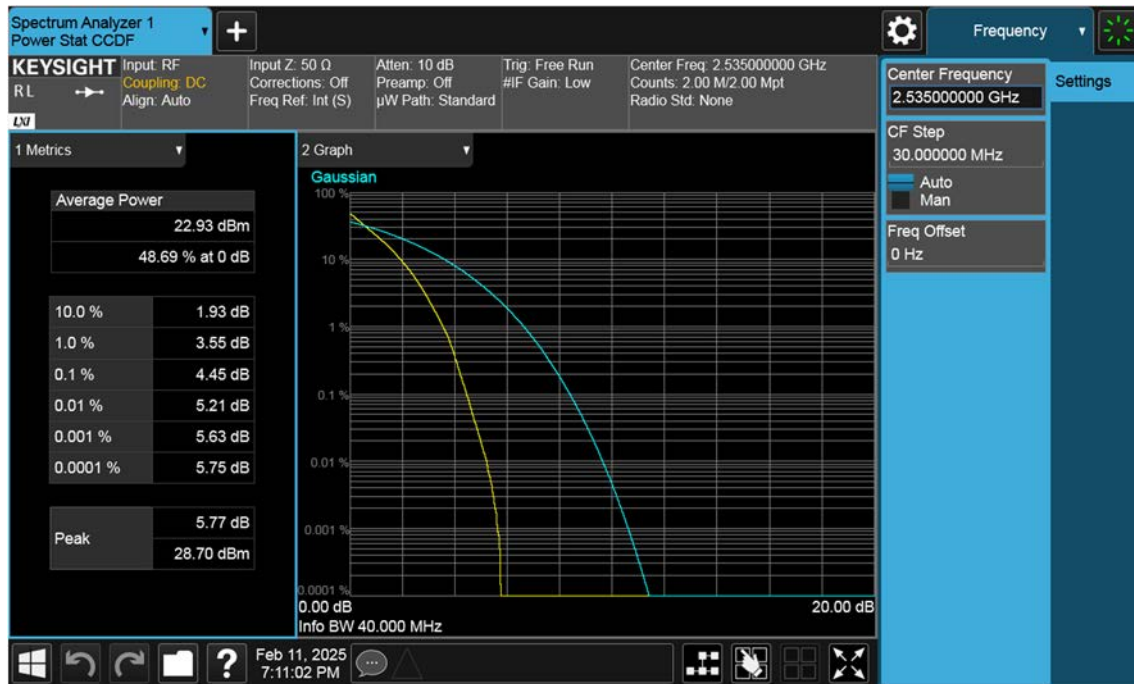
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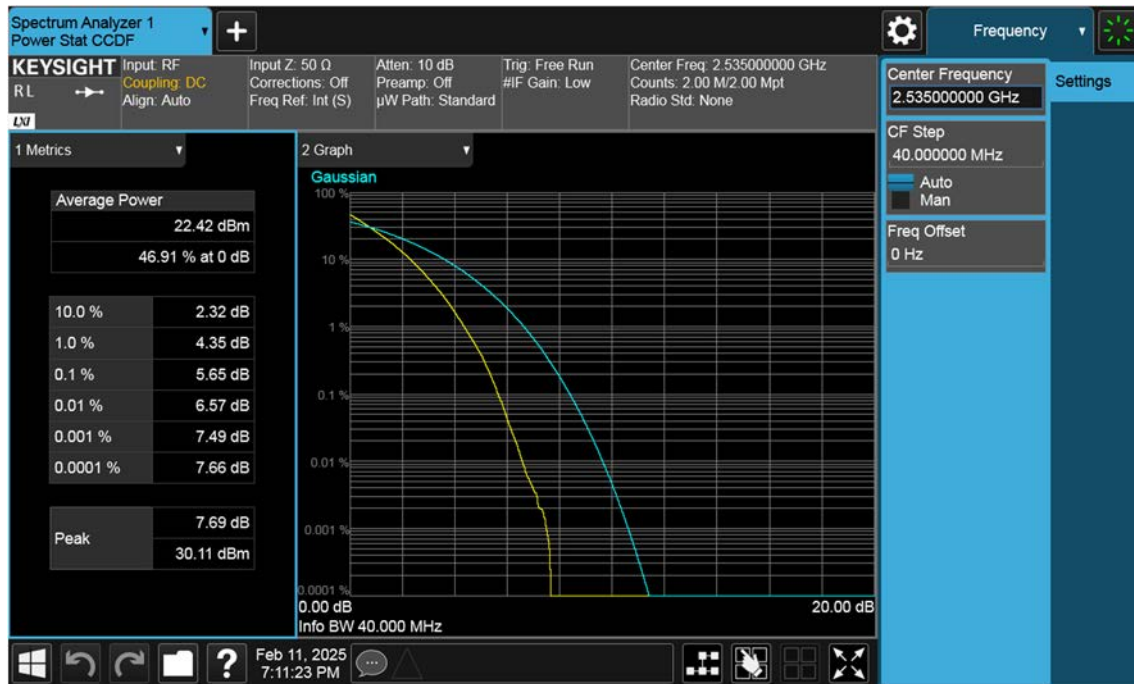
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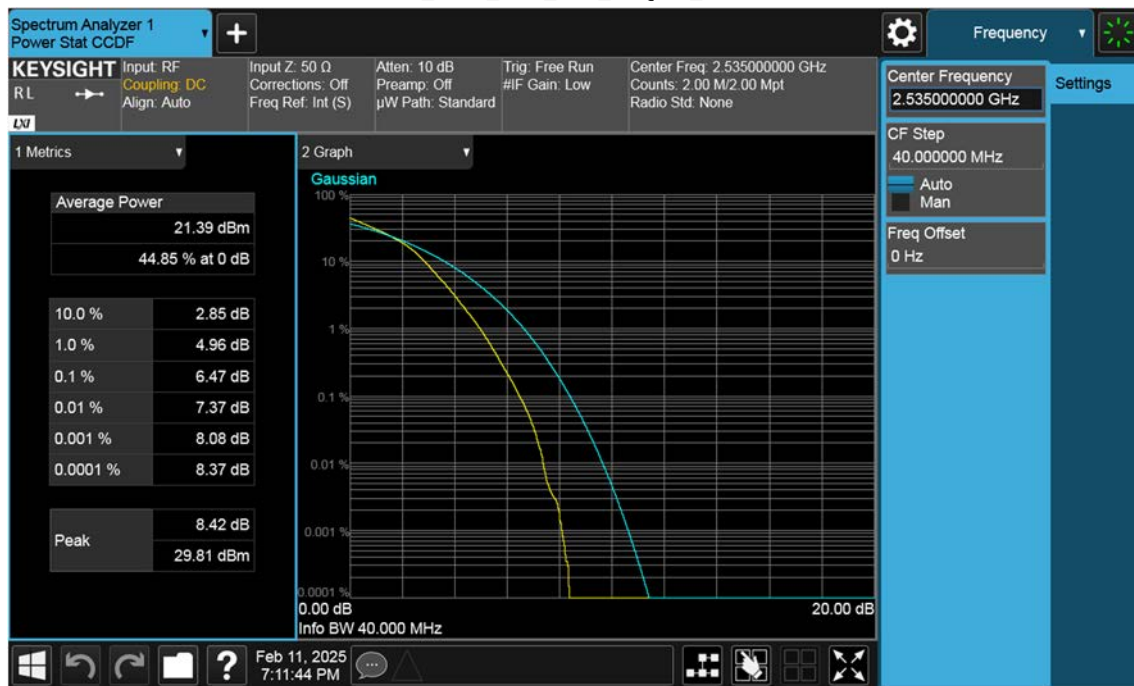
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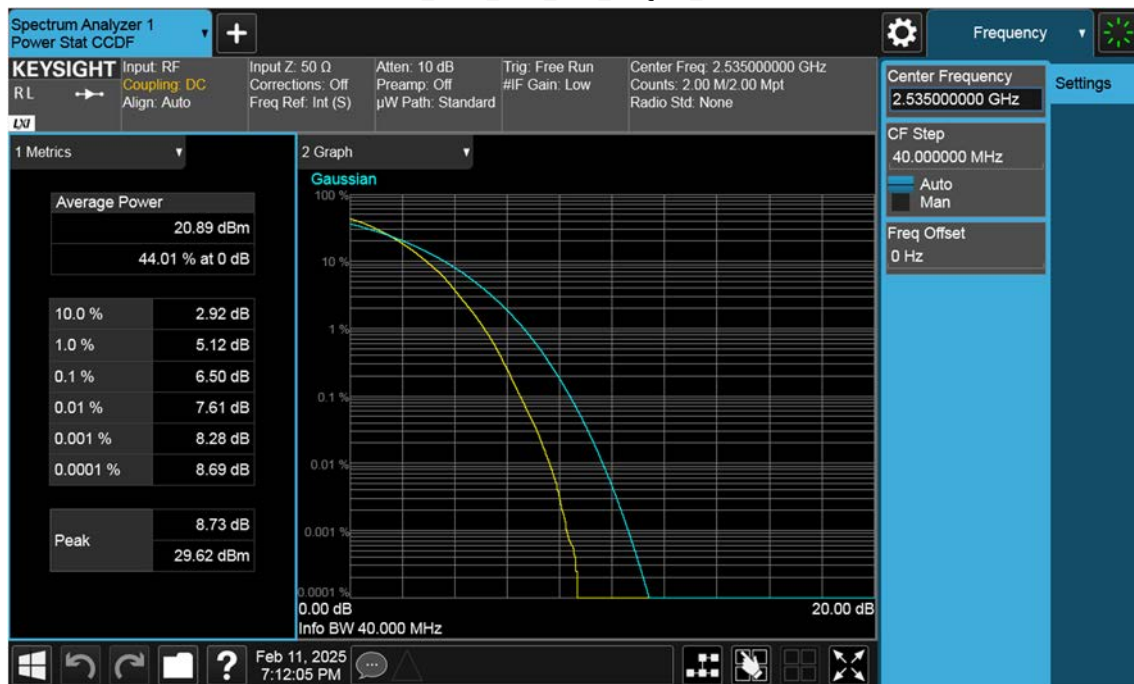
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NR7_40 M_PAR_Mid_16QAM_FullRB



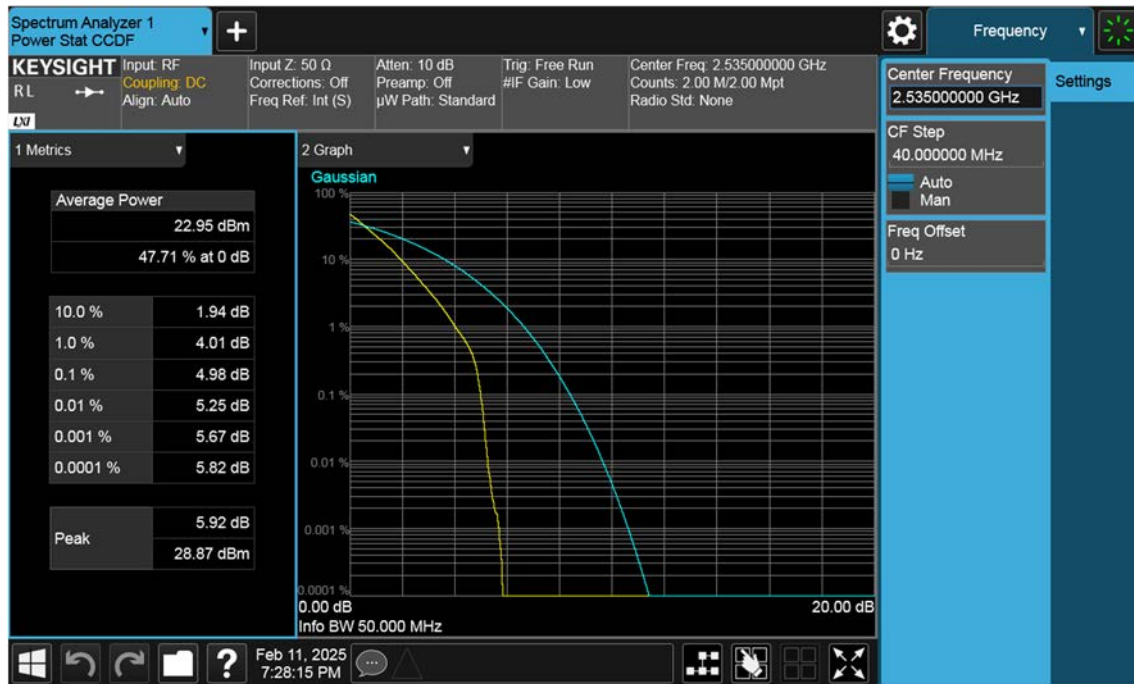
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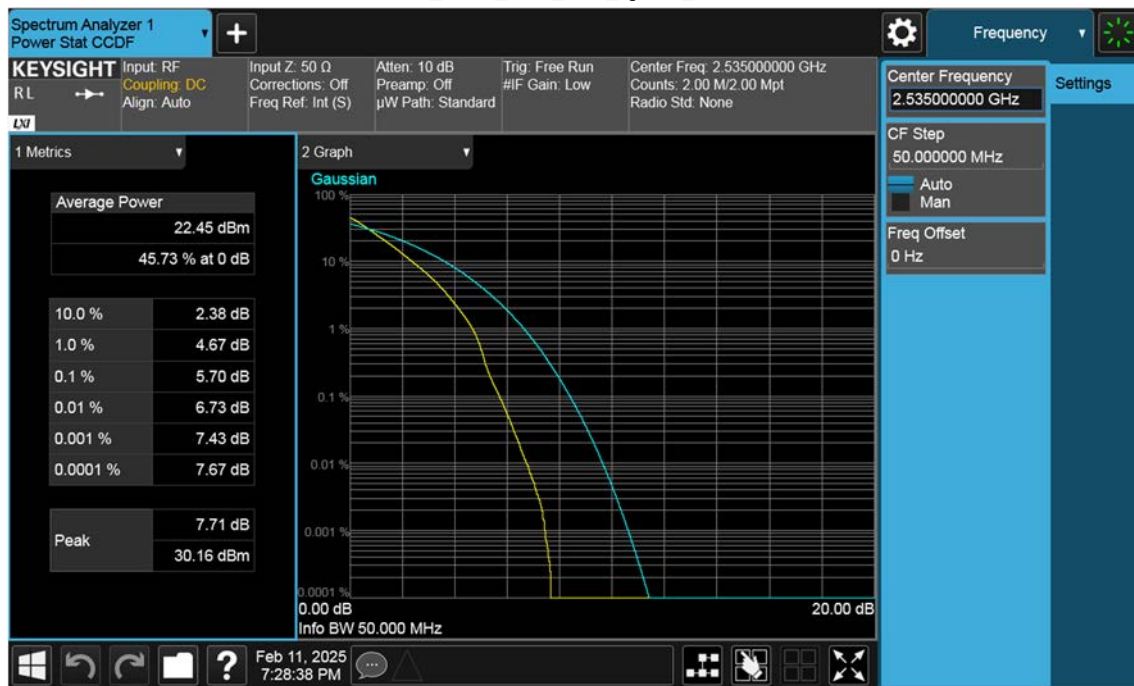
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NR7_50 M_PAR_Mid_BPSK_FullIRB



NR7_50 M_PAR_Mid_QPSK_FullIRB



NR7_50 M_PAR_Mid_16QAM_FullRB



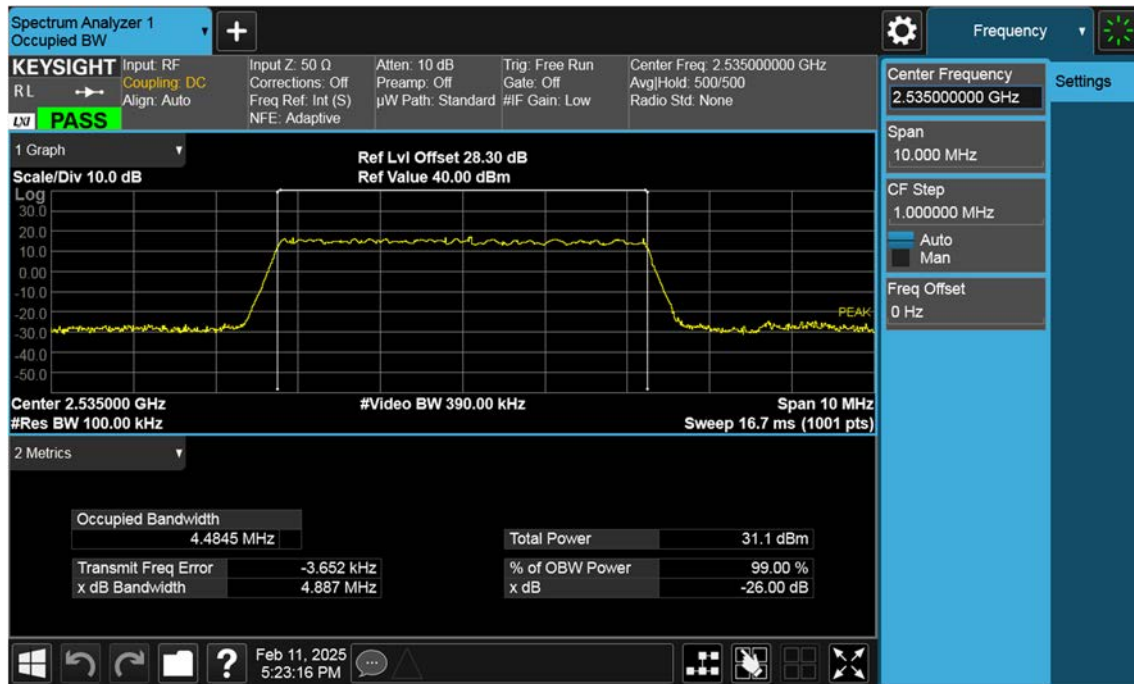
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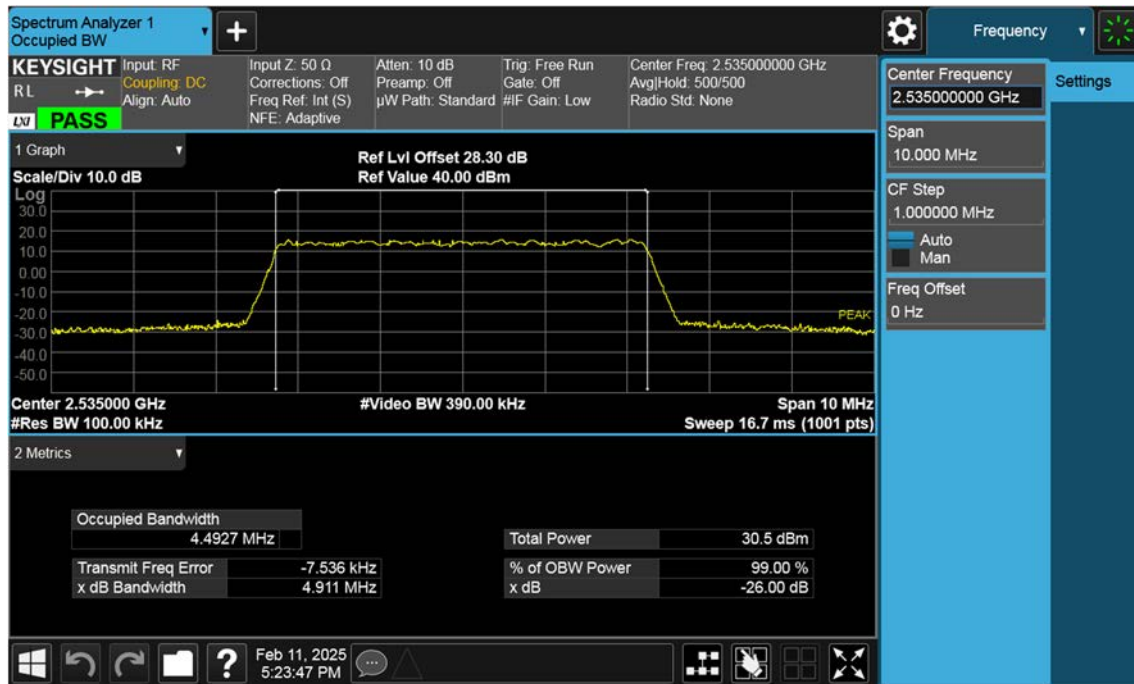
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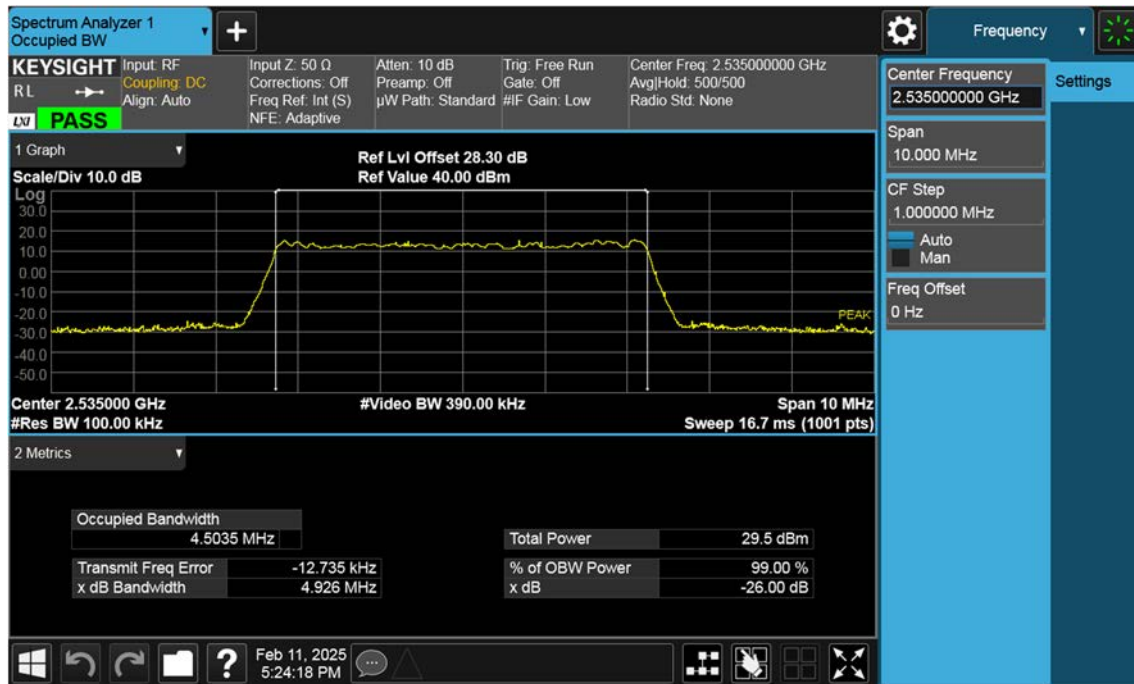
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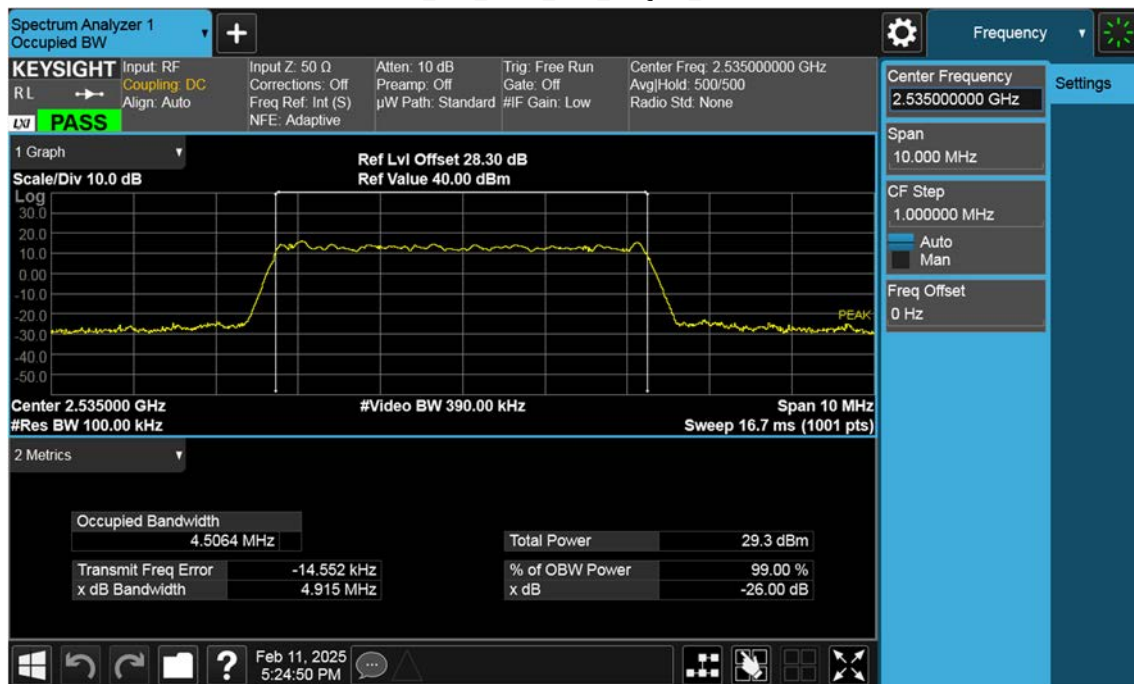
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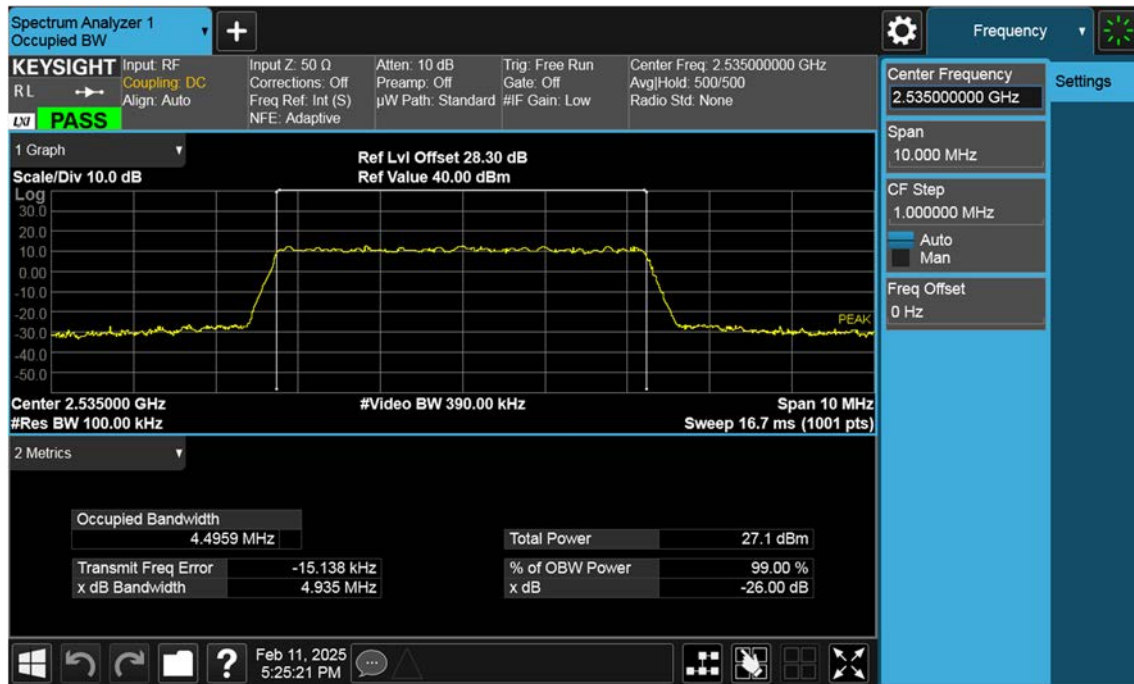
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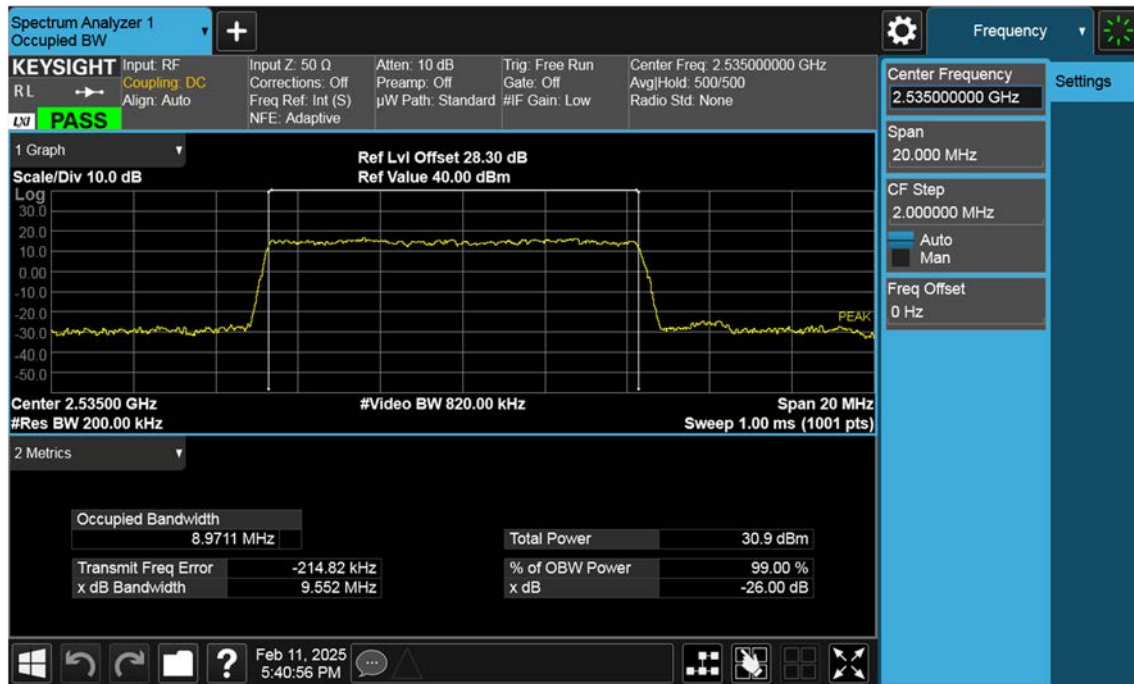
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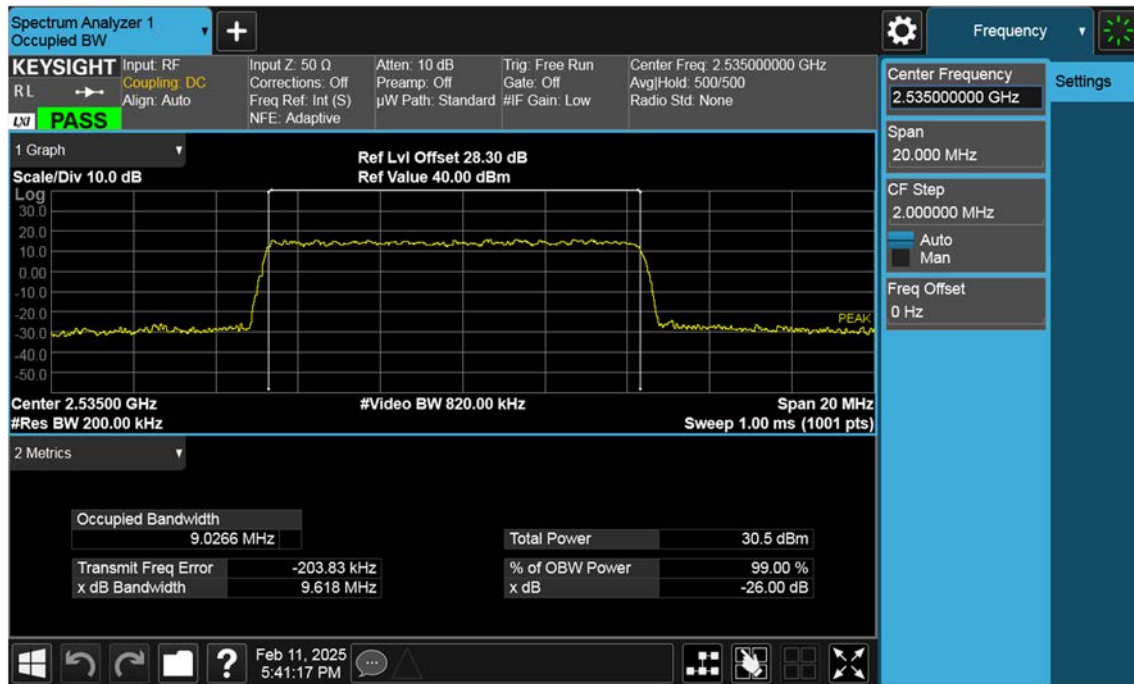
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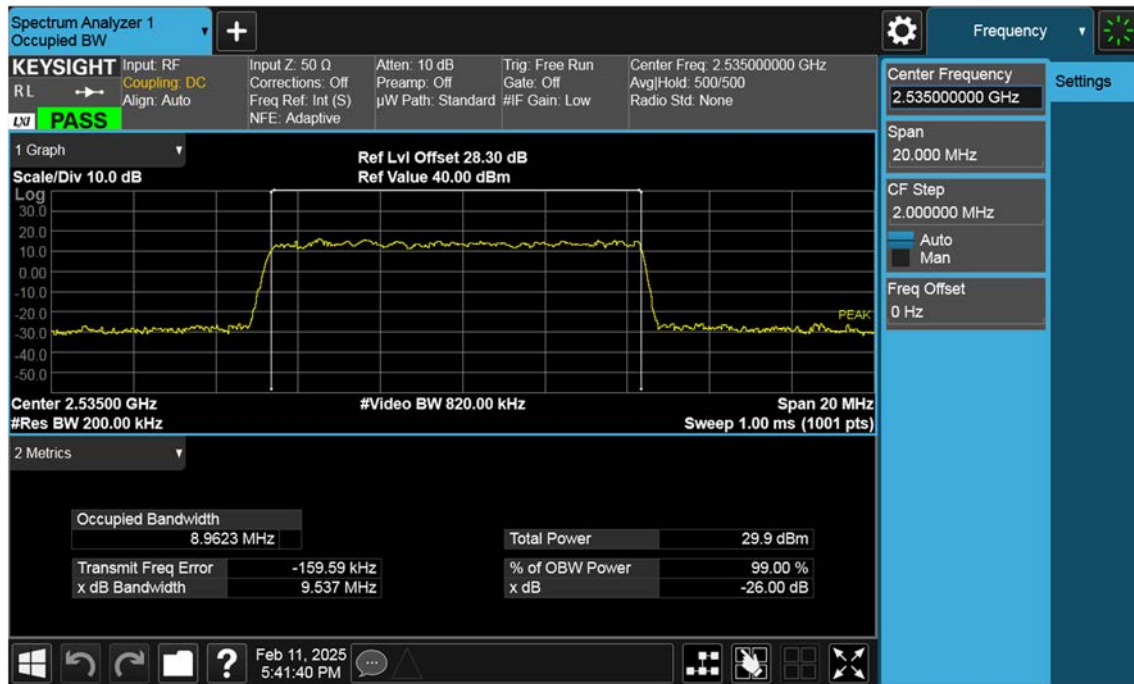
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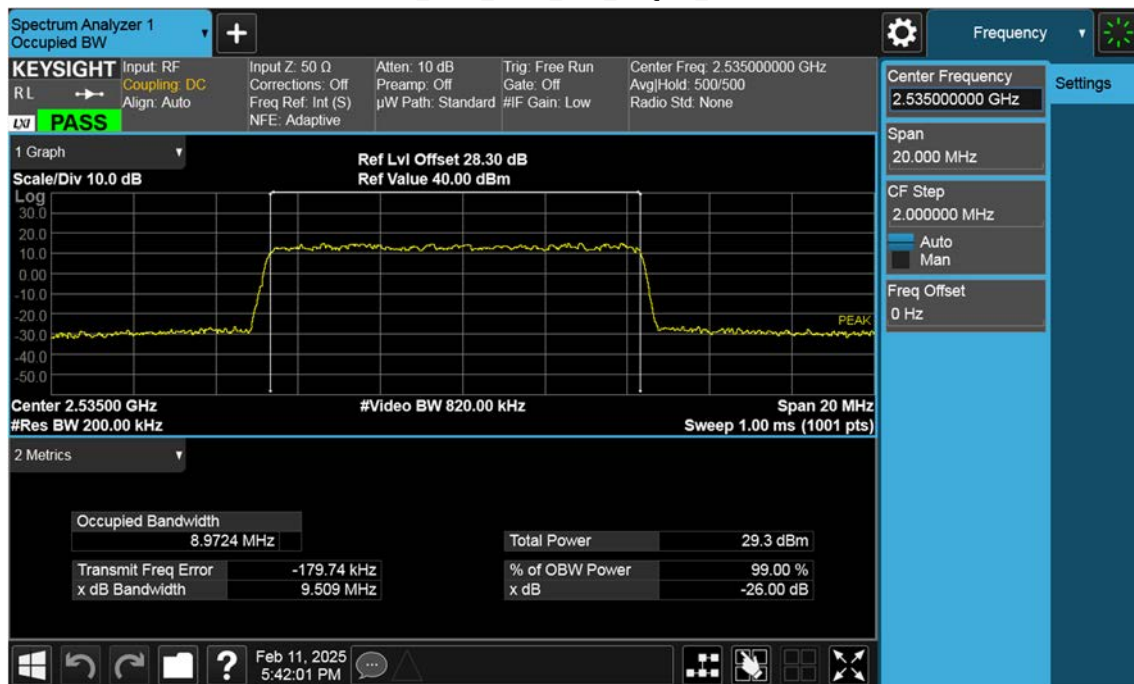
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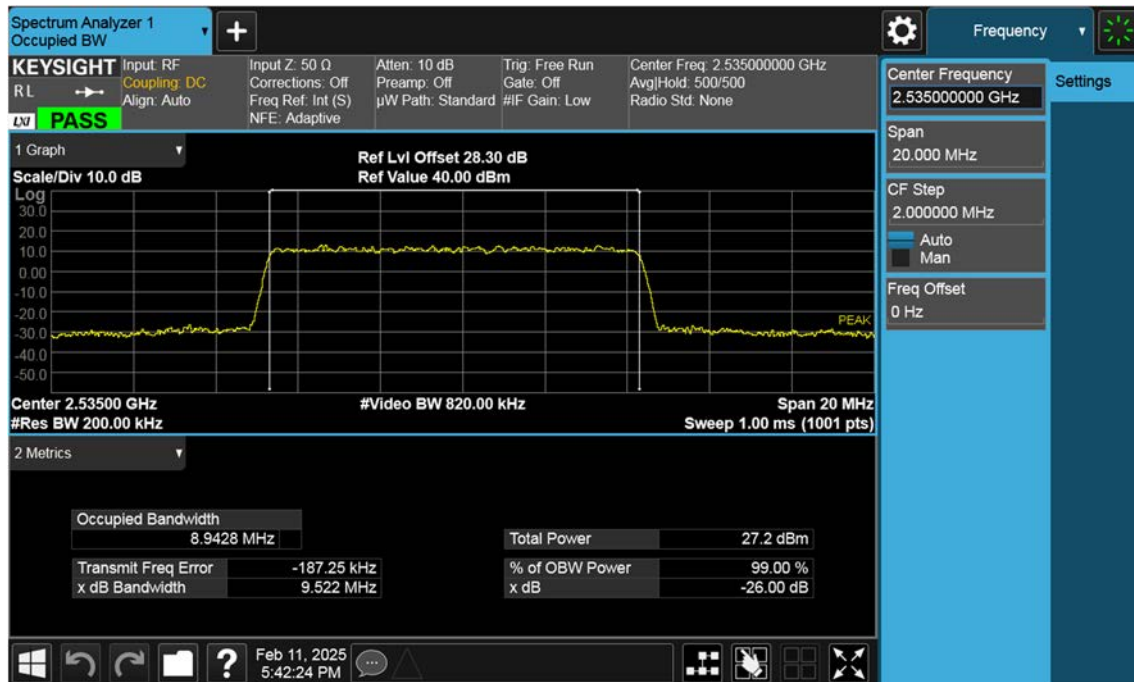
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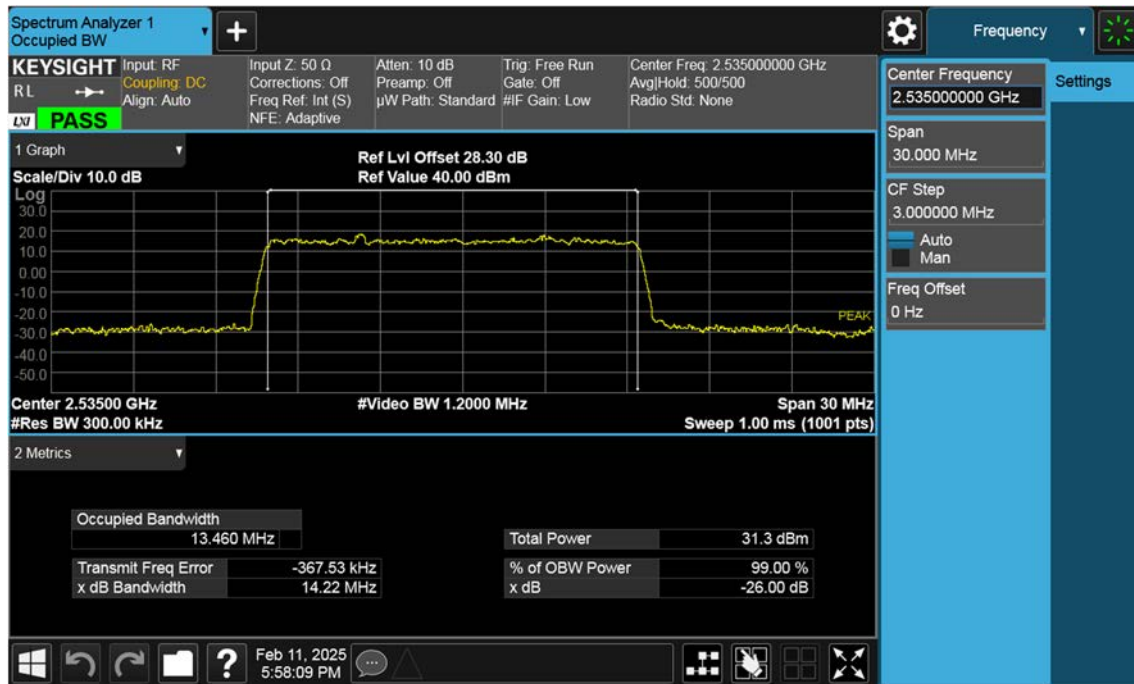
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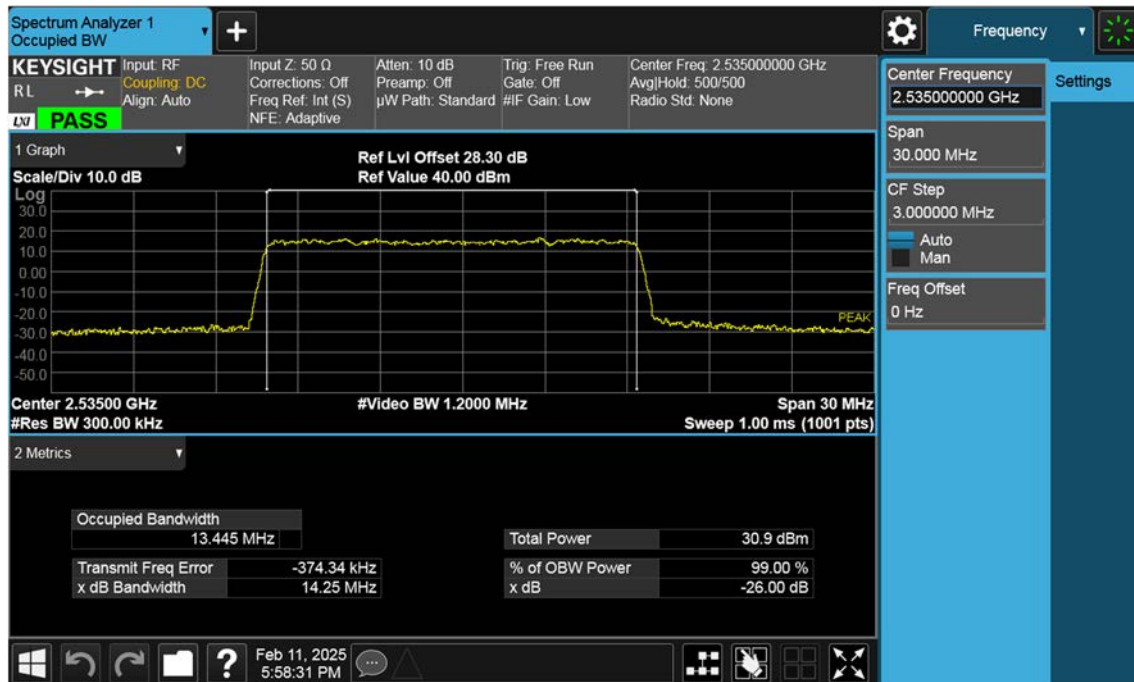
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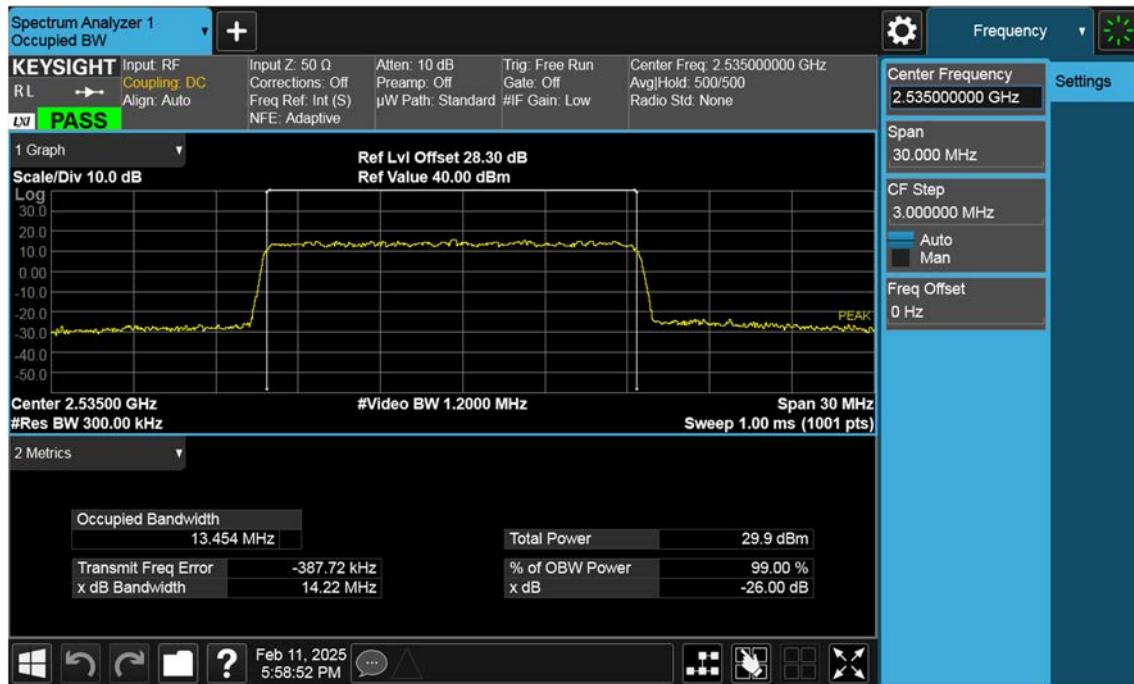
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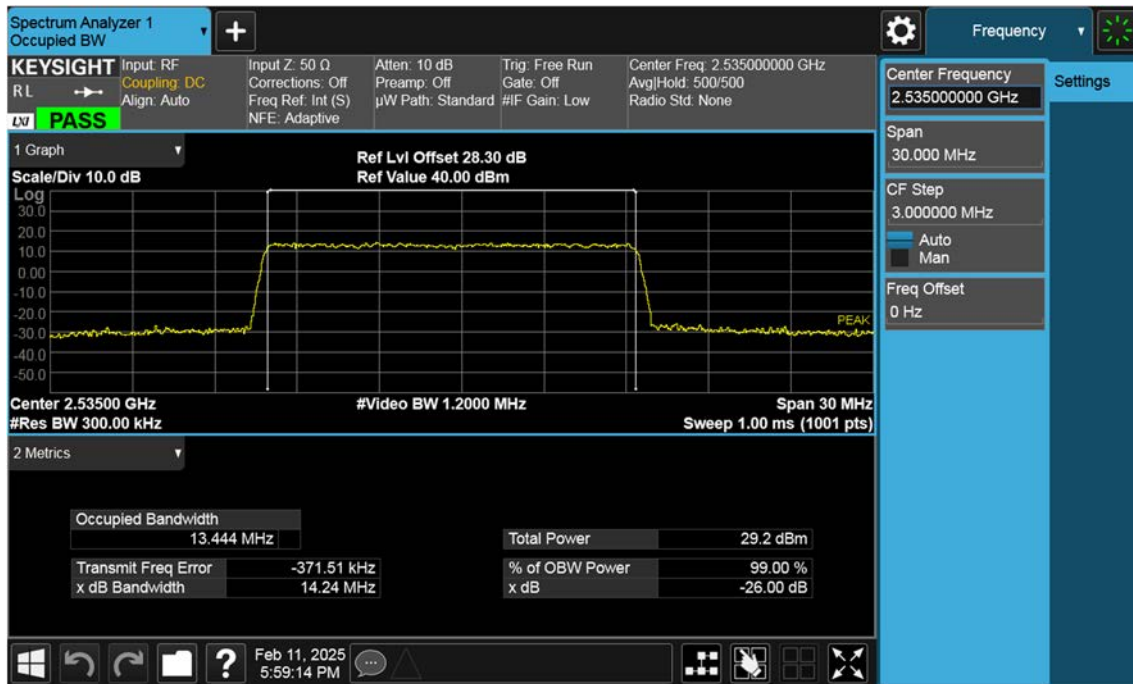
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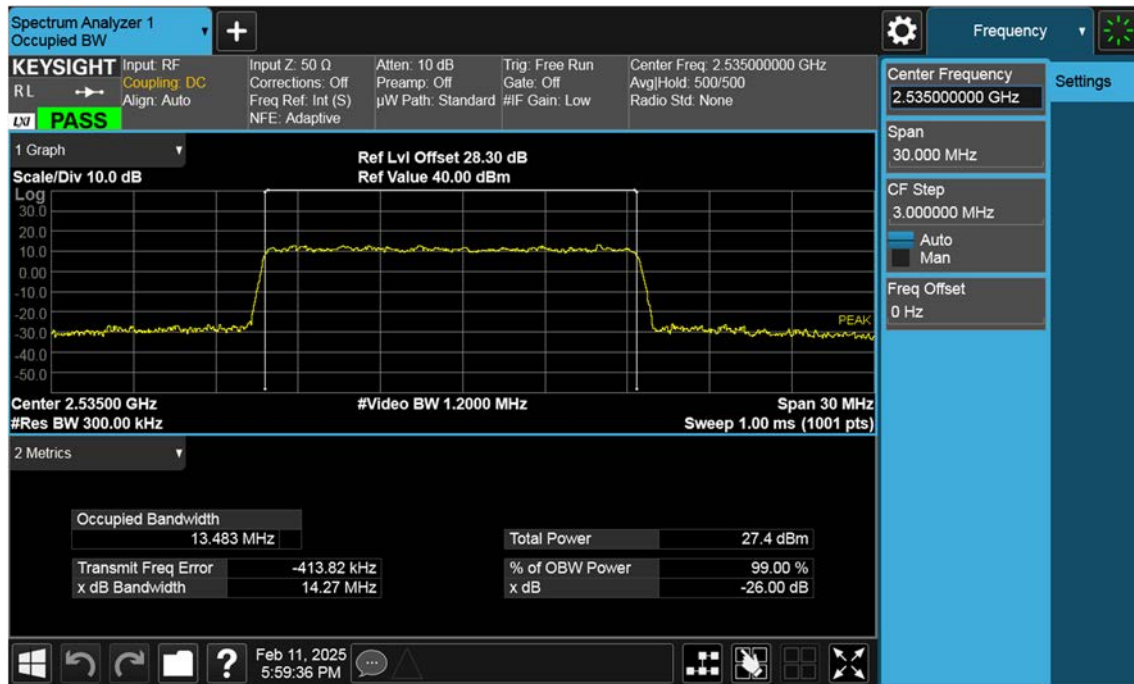
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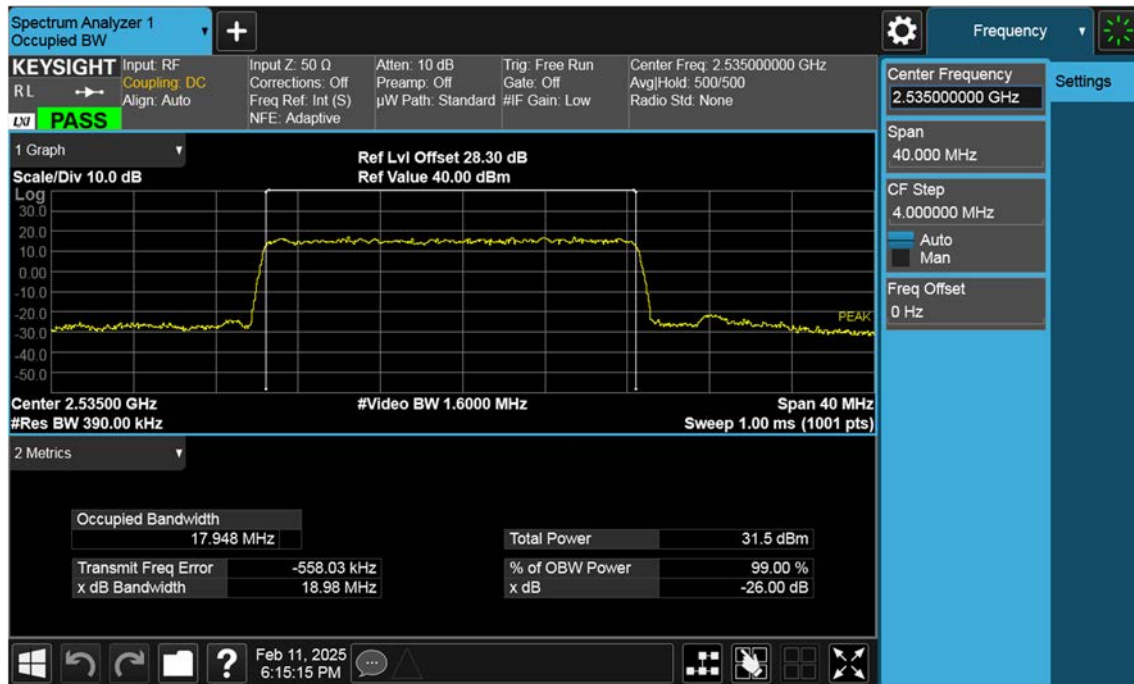
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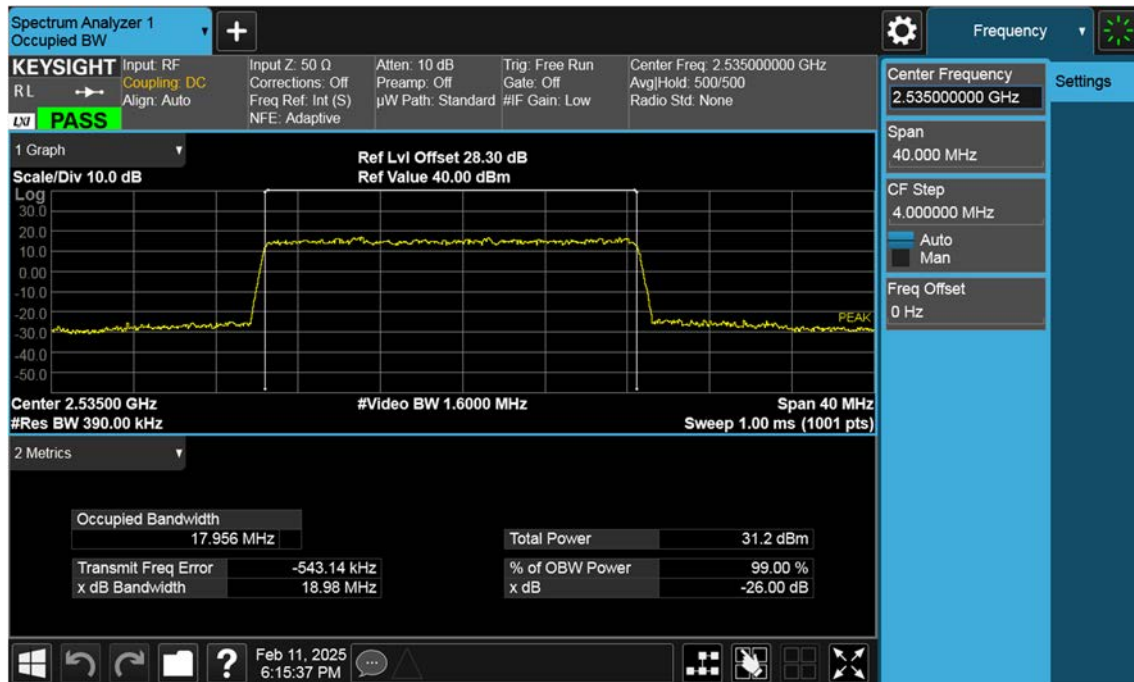
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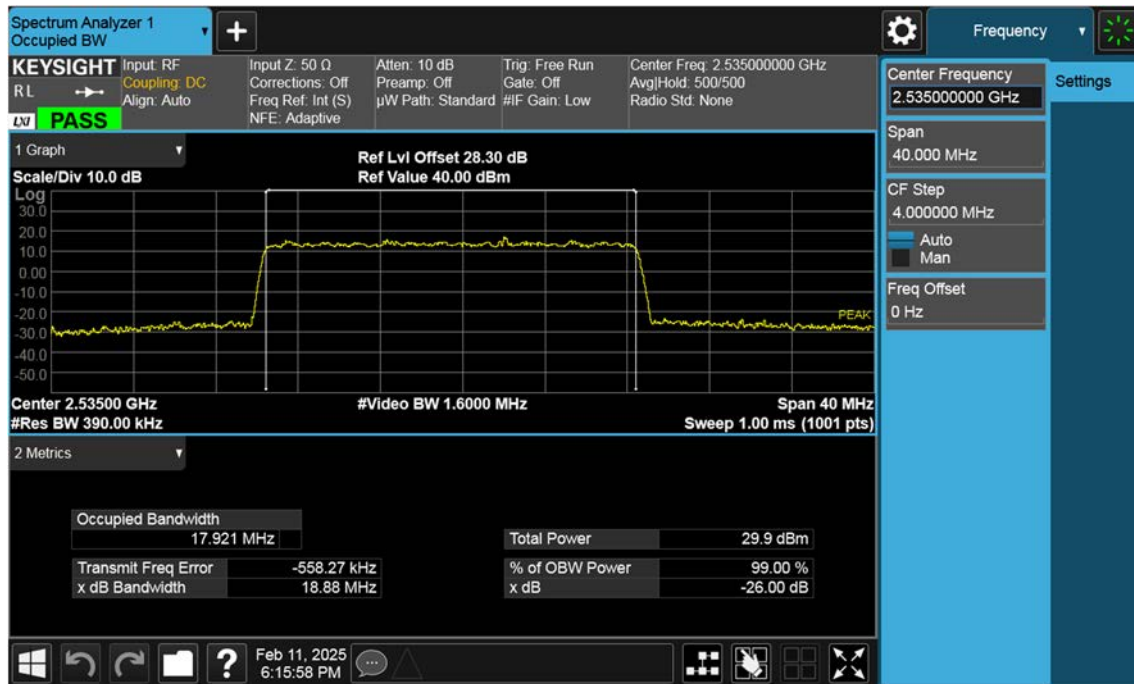
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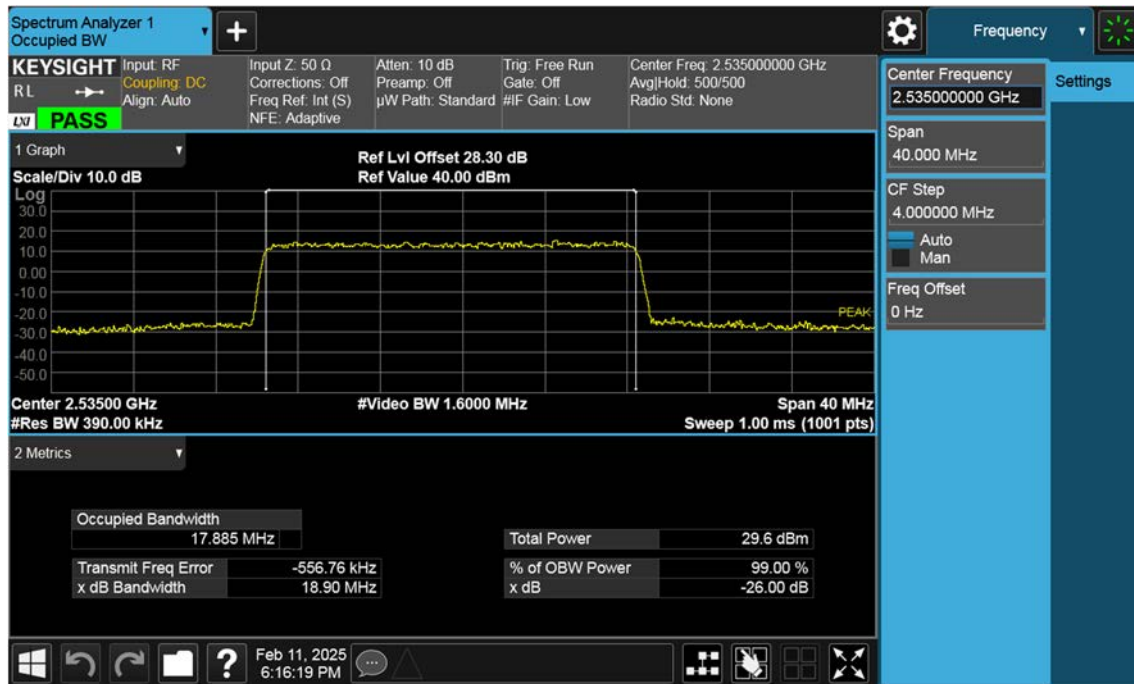
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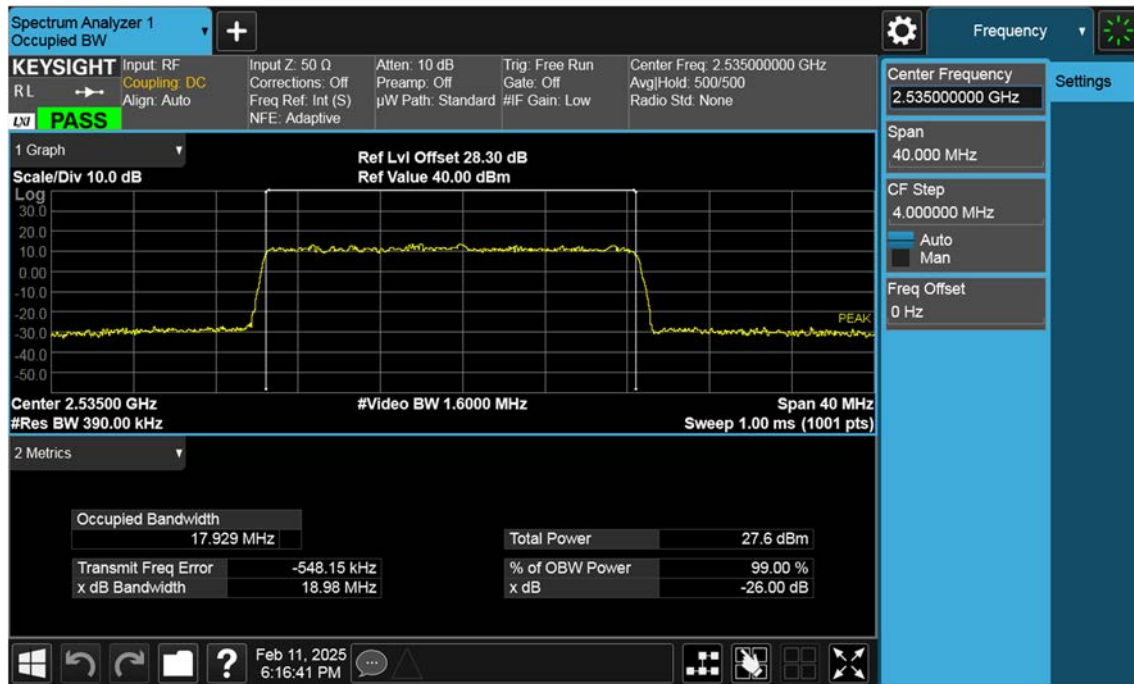
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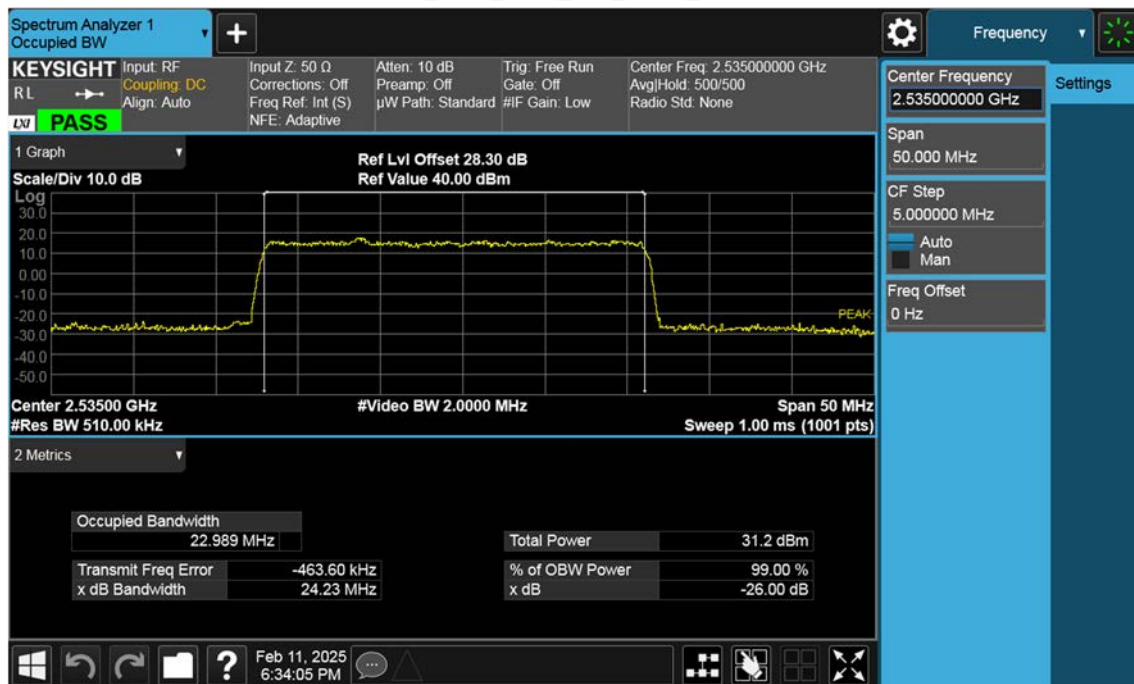
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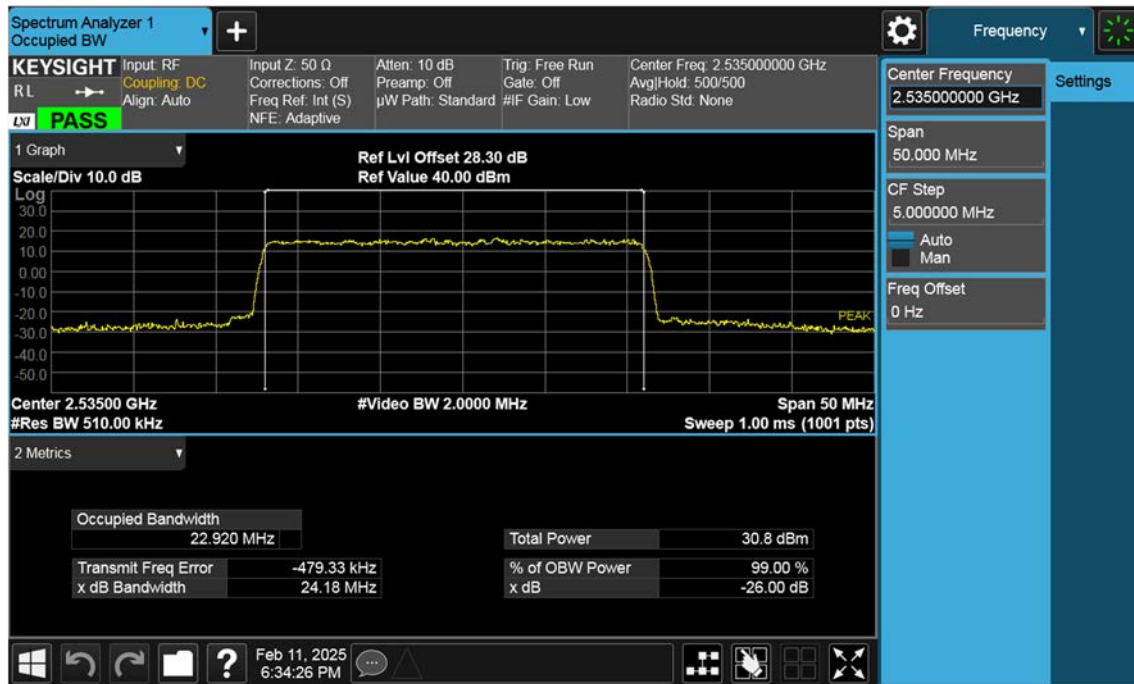
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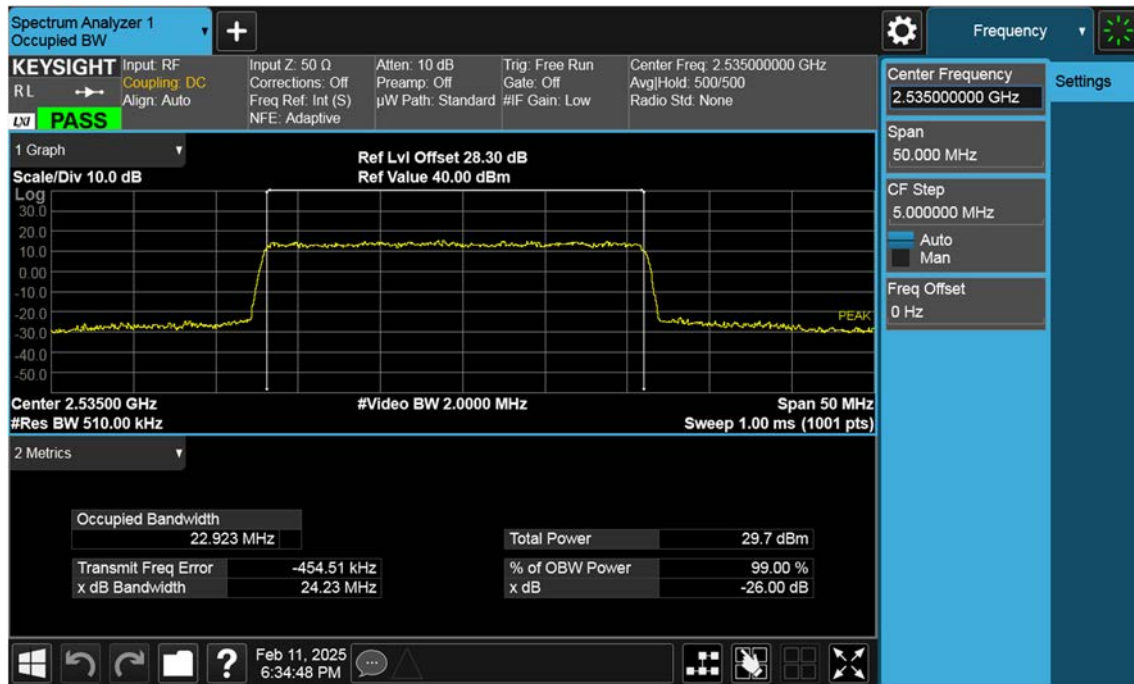
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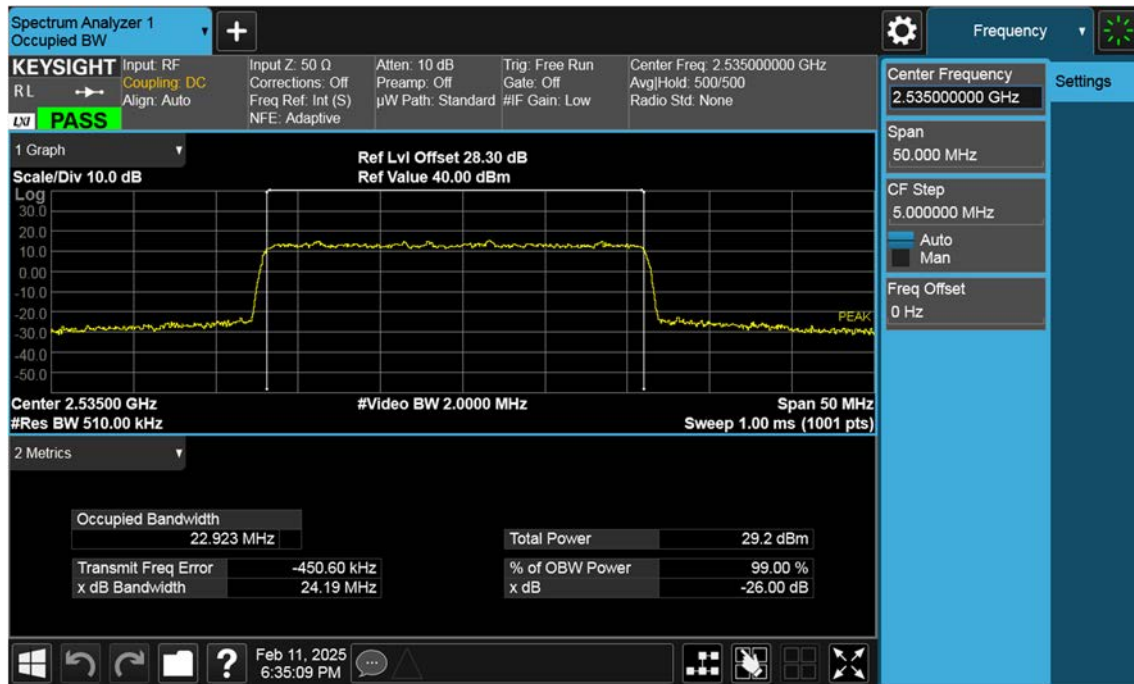
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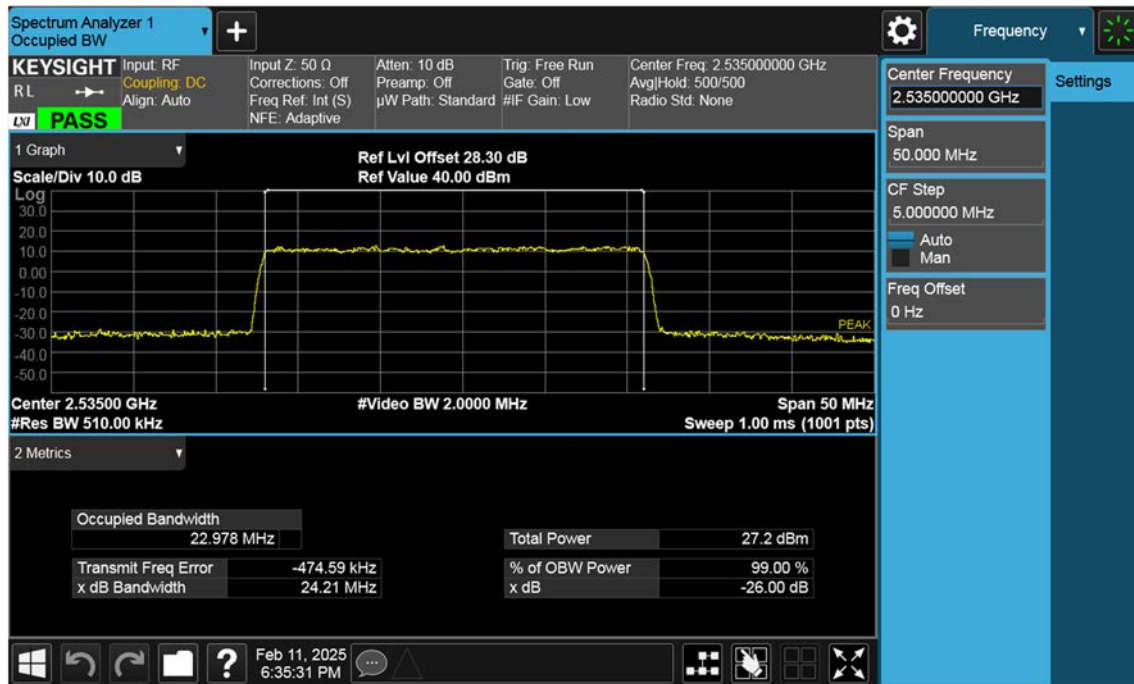
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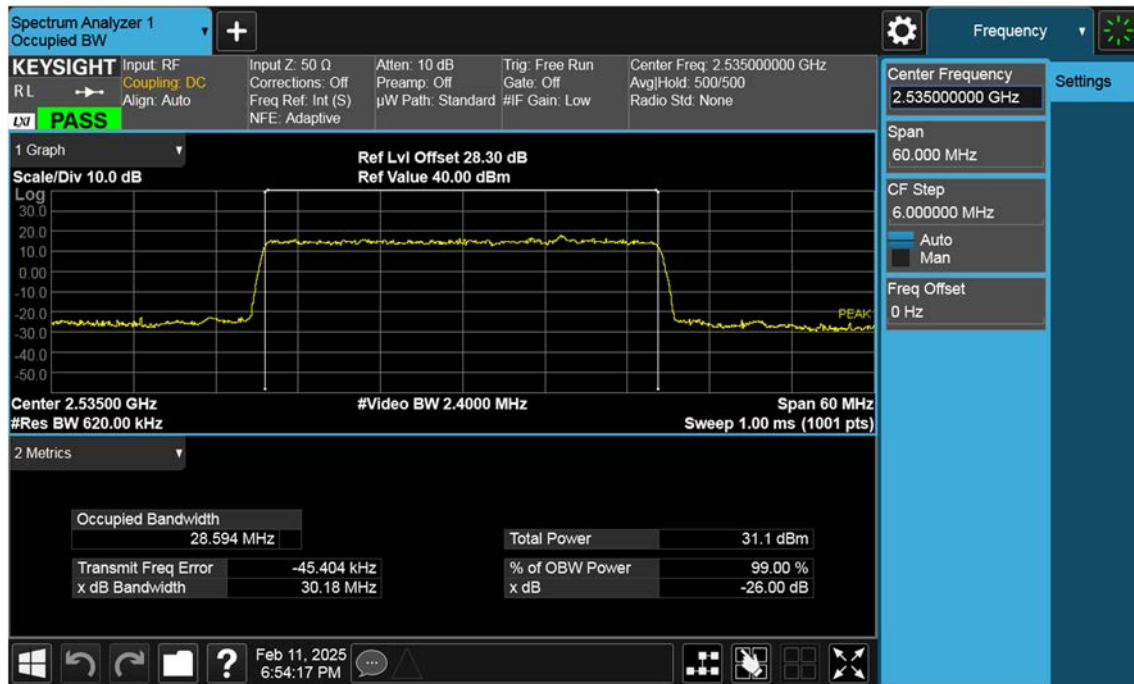
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NR7_25 M_OBW_Mid_256QAM_FullRB



NR7_30 M_OBW_Mid_BPSK_FullRB



NR7_30 M_OBW_Mid_QPSK_FullRB

