

TEST REPORT

FCC Sub6 n41(38) Test for SM-S931U
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2410-FC065

DATE OF ISSUE
October 29, 2024

Tested by
Jin Woo Yu

유준우

Technical Manager
Jong Seok Lee

이정석

HCT CO., LTD.
Bongjai Huh
BongJai Huh / CEO

**HCT CO.,LTD.**

2-6, 73, 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea
Tel. +82 31 645 6300 Fax. +82 31 645 6401

TEST REPORT

REPORT NO.

HCT-RF-2410-FC065

DATE OF ISSUE

October 29, 2024

Additional Model

SM-S931U1

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-S931U

Date of Test

August 26, 2024 ~ October 28, 2024

FCC ID

A3LSMS931U

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing

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

FCC Classification:

PCS Licensed Transmitter Held to Ear (PCE)

Test Standard Used

FCC Rule Part: § 27

Test Results

PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	October 29, 2024	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 Bs marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

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MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMS931U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 27
EUT Type:	Mobile phone
Model(s):	SM-S931U
Additional Model(s)	SM-S931U1
SCS(kHz):	30
Bandwidth(MHz):	Sub6 n41 : 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 Sub6 n38 : 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:	2501.010 – 2685.000 : 10 MHz(Sub6 n41(38)) 2503.500 – 2682.480 : 15 MHz(Sub6 n41(38)) 2506.020 – 2679.990 : 20 MHz(Sub6 n41(38)) 2508.510 – 2677.500 : 25 MHz(Sub6 n41(38)) 2511.000 – 2674.980 : 30 MHz(Sub6 n41(38)) 2516.010 – 2670.000 : 40 MHz(Sub6 n41(38)) 2521.020 – 2664.990 : 50 MHz(Sub6 n41) 2526.000 – 2659.980 : 60 MHz(Sub6 n41) 2531.010 – 2655.000 : 70 MHz(Sub6 n41) 2536.020 – 2649.990 : 80 MHz(Sub6 n41) 2541.000 – 2644.980 : 90 MHz(Sub6 n41) 2546.010 – 2640.000 : 100 MHz(Sub6 n41)
Date(s) of Tests:	August 26, 2024 ~ October 28, 2024
Serial number:	Radiated : R3CXA0930CK Conducted : R3CX80PDR6W(Main 2 ANT), R3CX70H9H0B(Sub 2 ANT) UPLINK CARRIER AGGREGATION : R3CXA0930CK

1.1. MAXIMUM OUTPUT POWER

Main 2 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n41(38) (10)	2501.010 – 2685.000	8M62G7D	PI/2 BPSK	0.219	23.41
		8M65G7D	QPSK	0.218	23.38
		8M71W7D	16QAM	0.168	22.26
		8M62W7D	64QAM	0.121	20.84
		8M67W7D	256QAM	0.072	18.58
Sub6 n41(38) (15)	2503.500 – 2682.480	13M0G7D	PI/2 BPSK	0.237	23.75
		13M0G7D	QPSK	0.233	23.67
		12M9W7D	16QAM	0.182	22.59
		13M0W7D	64QAM	0.130	21.15
		12M9W7D	256QAM	0.077	18.89
Sub6 n41(38) (20)	2506.020 – 2679.990	17M9G7D	PI/2 BPSK	0.255	24.07
		18M0G7D	QPSK	0.253	24.03
		17M9W7D	16QAM	0.193	22.85
		18M0W7D	64QAM	0.139	21.44
		17M9W7D	256QAM	0.083	19.20
Sub6 n41(38) (25)	2508.510 – 2677.500	23M0G7D	PI/2 BPSK	0.264	24.22
		23M0G7D	QPSK	0.261	24.16
		23M0W7D	16QAM	0.200	23.00
		23M1W7D	64QAM	0.145	21.61
		22M9W7D	256QAM	0.086	19.36
Sub6 n41(38) (30)	2511.000 – 2674.980	27M0G7D	PI/2 BPSK	0.269	24.29
		26M9G7D	QPSK	0.267	24.26
		27M0W7D	16QAM	0.208	23.18
		27M0W7D	64QAM	0.148	21.71
		26M9W7D	256QAM	0.088	19.46
Sub6 n41(38) (40)	2516.010 – 2670.000	35M9G7D	PI/2 BPSK	0.256	24.09
		35M9G7D	QPSK	0.256	24.08
		35M8W7D	16QAM	0.190	22.79
		35M9W7D	64QAM	0.145	21.61
		35M9W7D	256QAM	0.084	19.25
Sub6 n41 (50)	2521.020 – 2664.990	46M0G7D	PI/2 BPSK	0.262	24.18
		45M7G7D	QPSK	0.256	24.08
		45M7W7D	16QAM	0.203	23.08
		45M8W7D	64QAM	0.146	21.63
		45M9W7D	256QAM	0.089	19.48

Sub6 n41 (60)	2526.000 – 2659.980	58M1G7D	PI/2 BPSK	0.245	23.89
		57M8G7D	QPSK	0.243	23.86
		58M1W7D	16QAM	0.179	22.53
		58M0W7D	64QAM	0.135	21.31
		57M9W7D	256QAM	0.080	19.04
Sub6 n41 (70)	2531.010 – 2655.000	64M5G7D	PI/2 BPSK	0.238	23.76
		64M5G7D	QPSK	0.237	23.75
		64M4W7D	16QAM	0.182	22.61
		64M4W7D	64QAM	0.134	21.26
		64M8W7D	256QAM	0.079	18.96
Sub6 n41 (80)	2536.020 – 2649.990	77M2G7D	PI/2 BPSK	0.243	23.86
		77M4G7D	QPSK	0.240	23.81
		77M3W7D	16QAM	0.185	22.68
		77M0W7D	64QAM	0.138	21.39
		77M3W7D	256QAM	0.082	19.12
Sub6 n41 (90)	2541.000 – 2644.980	86M9G7D	PI/2 BPSK	0.274	24.37
		86M8G7D	QPSK	0.273	24.36
		86M9W7D	16QAM	0.208	23.18
		86M8W7D	64QAM	0.154	21.88
		86M9W7D	256QAM	0.093	19.68
Sub6 n41 (100)	2546.010 – 2640.000	96M6G7D	PI/2 BPSK	0.271	24.33
		96M8G7D	QPSK	0.270	24.32
		96M7W7D	16QAM	0.204	23.09
		96M5W7D	64QAM	0.152	21.82
		96M5W7D	256QAM	0.090	19.53

Sub 2 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n41(38) (10)	2501.010 – 2685.000	8M66G7D	PI/2 BPSK	0.238	23.76
		8M70G7D	QPSK	0.206	23.13
		8M71W7D	16QAM	0.177	22.47
		8M72W7D	64QAM	0.124	20.93
		8M69W7D	256QAM	0.075	18.73
Sub6 n41(38) (15)	2503.500 – 2682.480	13M0G7D	PI/2 BPSK	0.229	23.60
		13M1G7D	QPSK	0.225	23.52
		12M9W7D	16QAM	0.167	22.24
		13M0W7D	64QAM	0.126	21.00
		13M0W7D	256QAM	0.073	18.64
Sub6 n41(38) (20)	2506.020 – 2679.990	18M0G7D	PI/2 BPSK	0.218	23.39
		18M0G7D	QPSK	0.216	23.35
		18M0W7D	16QAM	0.164	22.15
		18M0W7D	64QAM	0.122	20.85
		18M0W7D	256QAM	0.071	18.53
Sub6 n41(38) (25)	2508.510 – 2677.500	23M0G7D	PI/2 BPSK	0.221	23.45
		23M0G7D	QPSK	0.220	23.42
		23M0W7D	16QAM	0.166	22.20
		23M0W7D	64QAM	0.121	20.84
		22M9W7D	256QAM	0.074	18.71
Sub6 n41(38) (30)	2511.000 – 2674.980	26M9G7D	PI/2 BPSK	0.226	23.55
		26M9G7D	QPSK	0.219	23.41
		27M0W7D	16QAM	0.171	22.33
		26M9W7D	64QAM	0.122	20.87
		26M9W7D	256QAM	0.073	18.66
Sub6 n41(38) (40)	2516.010 – 2670.000	35M9G7D	PI/2 BPSK	0.222	23.46
		35M9G7D	QPSK	0.218	23.38
		35M8W7D	16QAM	0.172	22.36
		35M8W7D	64QAM	0.123	20.90
		35M7W7D	256QAM	0.073	18.64

Sub6 n41 (50)	2521.020 – 2664.990	45M9G7D	PI/2 BPSK	0.224	23.51
		45M7G7D	QPSK	0.223	23.49
		45M8W7D	16QAM	0.174	22.40
		45M7W7D	64QAM	0.125	20.98
		45M8W7D	256QAM	0.076	18.81
Sub6 n41 (60)	2526.000 – 2659.980	57M9G7D	PI/2 BPSK	0.211	23.24
		57M9G7D	QPSK	0.210	23.23
		57M9W7D	16QAM	0.164	22.15
		57M8W7D	64QAM	0.119	20.77
		58M0W7D	256QAM	0.071	18.51
Sub6 n41 (70)	2531.010 – 2655.000	64M5G7D	PI/2 BPSK	0.219	23.40
		64M3G7D	QPSK	0.218	23.39
		64M4W7D	16QAM	0.170	22.30
		64M2W7D	64QAM	0.128	21.06
		64M5W7D	256QAM	0.076	18.79
Sub6 n41 (80)	2536.020 – 2649.990	77M4G7D	PI/2 BPSK	0.215	23.32
		77M1G7D	QPSK	0.214	23.30
		77M2W7D	16QAM	0.164	22.16
		77M0W7D	64QAM	0.121	20.81
		77M3W7D	256QAM	0.074	18.67
Sub6 n41 (90)	2541.000 – 2644.980	86M7G7D	PI/2 BPSK	0.236	23.73
		86M8G7D	QPSK	0.232	23.65
		86M6W7D	16QAM	0.179	22.53
		86M8W7D	64QAM	0.130	21.15
		86M7W7D	256QAM	0.079	18.95
Sub6 n41 (100)	2546.010 – 2640.000	96M4G7D	PI/2 BPSK	0.256	24.08
		96M3G7D	QPSK	0.253	24.03
		96M6W7D	16QAM	0.201	23.03
		96M5W7D	64QAM	0.143	21.56
		96M4W7D	256QAM	0.085	19.29

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE, Sub 6, mmWave. It also supports IEEE 802.11 a/b/g/n/ac/ax/be (20/40/80/160/320 MHz), Bluetooth(iPA, ePA), BT LE(iPA, ePA), NFC, WPT, WIFI 6E.

2.2. MEASURING INSTRUMENT CALIBRATION

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

2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 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 - ANSI C63.26-2015 – Section 5.2.6(only GSM)
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/ Effective Isotropic Radiated Power	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8 - ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - ANSI/TIA-603-E-2016 – Section 2.2.12

3.2 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17.

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW, not to exceed 1 MHz
3. VBW $\geq$ 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 according to ANSI/TIA-603-E-2016.

Test Settings

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
2. VBW $\geq 3 \times$ 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;

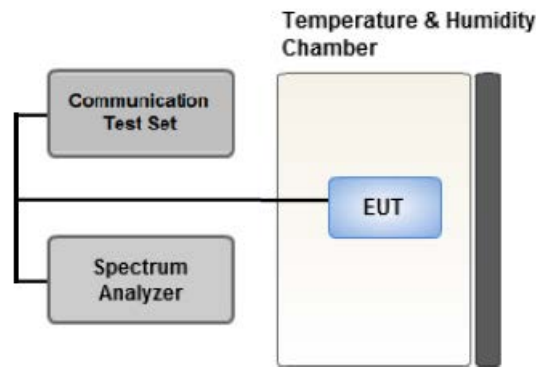
$$\text{Result}_{(\text{dBm})} = P_g_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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

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)

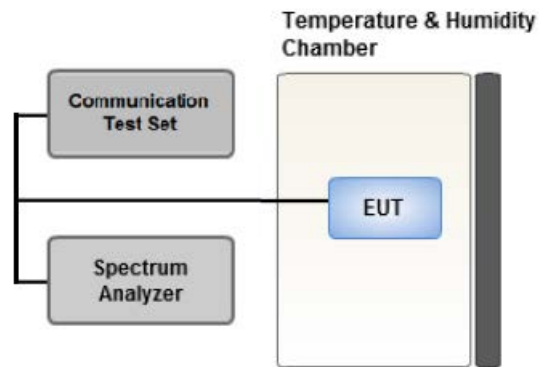
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW $\geq 3 \times$ RBW.

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.

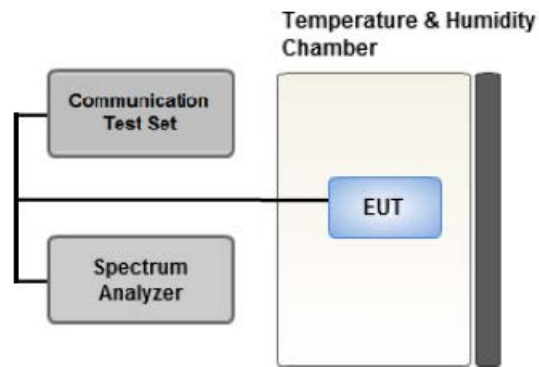
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

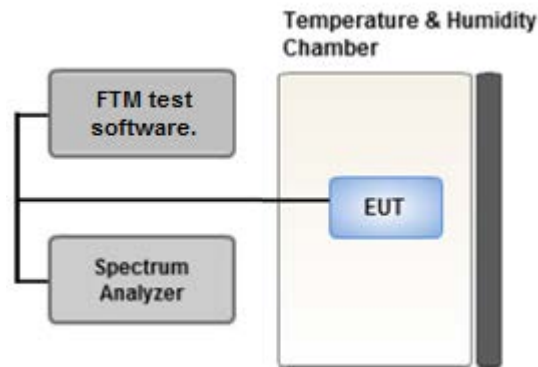
Test Overview

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 = RMS
4. Trace Mode = trace average
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

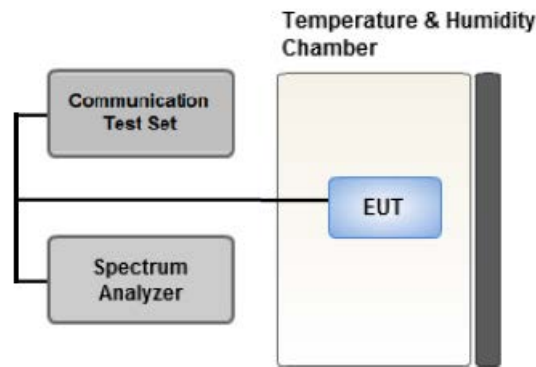
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. Within 1 MHz of the channel edge the RBW should be 2 % of EBW, then 1 MHz after that.
4. VBW > 3 x RBW
5.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

Test Notes

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

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

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

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

The frequency stability of the transmitter is measured by:

1. Temperature:

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

2. Primary Supply Voltage:

- .- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
- .- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

Test Settings

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

3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
Mode: NSA, SA, SRS
Worst case: SA
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.
- Sub6 n41 (2 496 – 2 690 MHz, 10/15/20/25/30/40/50/60/80/90/100 MHz bandwidth) overlaps the entire frequency range of Sub6 n38 (2 570 - 2 620 MHz, 10/15/20/25/30/40 MHz bandwidth).
Therefore, test data provided in this report covers Sub6 n38 as well as Sub6 n41.
- SM-S931U & additional models were tested and the worst case results are reported.
(Worst case : SM-S931U)

[Main 2 ANT Worst case]

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

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

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
(Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
Mode: NSA, SA, SRS
Worst case: SA
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.
- SM-S931U & additional models were tested and the worst case results are reported.
(Worst case : SM-S931U)
- Sub6 n41 (2 496 – 2 690 MHz, 10/15/20/25/30/40/50/60/80/90/100 MHz bandwidth) overlaps the entire frequency range of Sub6 n38 (2 570 - 2 620 MHz, 10/15/20/25/30/40 MHz bandwidth).
Therefore, test data provided in this report covers Sub6 n38 as well as Sub6 n41.

[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	10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100	Mid	Full RB	0
Channel Edge	PI/2 BPSK	10	Low	1	0
			High	1	23
		15	Low	1	0
			High	1	37
		20	Low	1	0
			High	1	50
		25	Low	1	0
			High	1	64
		30	Low	1	0
			High	1	77
		40	Low	1	0
			High	1	105
		50	Low	1	0
			High	1	132
		60	Low	1	0
			High	1	161
		70	Low	1	0
			High	1	188
		80	Low	1	0
			High	1	216
		90	Low	1	0
			High	1	244
		100	Low	1	0
			High	1	272
		10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100	Low, Mid, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100	Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

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

Note:

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

5. MEASUREMENT UNCERTAINTY

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

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

Parameter	Expanded Uncertainty ($\pm$ dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.98 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.36 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.70 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.52 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.66 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (Above 40 GHz)	5.58 (Confidence level about 95 %, $k=2$)

6. SUMMARY OF TEST RESULTS

6.1 Test Condition: Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§ 2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 27.53(m)(4)	■ $< 40 + 10\log_{10} (P[\text{Watts}])$ at Channel edges ■ $< 43 + 10\log_{10} (P[\text{Watts}])$ between 5 and X MHz from Channel edges ■ $< 55 + 10\log_{10} (P[\text{Watts}])$ beyond X MHz beyond from Channel edges ■ $< 43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz	PASS
Conducted Output Power	§ 2.1046	N/A	<u>See Note1</u>
Frequency stability / variation of ambient temperature	§ 2.1055, § 27.54	Emission must remain in band	PASS

Note:

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

6.2 Test Condition: Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§ 27.50(h)(2)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 27.53(m)(4)	$< 55 + 10\log_{10} (P[\text{Watts}])$	PASS

Note:

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

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

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

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

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

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
20175	1,732.50	-15.75	18.45	9.90	1.76	H	0.456	26.59

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

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

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW
GSM BW = 249 kHz
G = Phase Modulation
X = Cases not otherwise covered
W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W
GSM BW = 249 kHz
G = Phase Modulation
7 = Quantized/Digital Info
W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W
WCDMA BW = 4.17 MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination (Audio/Data)

QPSK Modulation

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

QAM Modulation

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

8. TEST DATA(Main 2 ANT)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2501.010	Sub6 n41(38) / 10 MHz [30 kHz]	PI/2 BPSK	-21.69	15.11	10.61	2.50	H	< 2.00	0.210	23.22	1	22
		QPSK	-21.73	15.07	10.61	2.50	H		0.208	23.18		
		16-QAM	-22.82	13.98	10.61	2.50	H		0.162	22.09		
		64-QAM	-24.18	12.62	10.61	2.50	H		0.118	20.73		
		256-QAM	-26.53	10.27	10.61	2.50	H		0.069	18.38		
2592.990		PI/2 BPSK	-21.75	14.96	11.00	2.55	H		0.219	23.41	1	1
		QPSK	-21.78	14.93	11.00	2.55	H		0.218	23.38		
		16-QAM	-22.90	13.81	11.00	2.55	H		0.168	22.26		
		64-QAM	-24.32	12.39	11.00	2.55	H		0.121	20.84		
		256-QAM	-26.58	10.13	11.00	2.55	H		0.072	18.58		
2685.000		PI/2 BPSK	-23.65	13.91	10.82	2.61	H	0.163	22.12	1	22	
		QPSK	-23.75	13.81	10.82	2.61	H	0.159	22.02			
		16-QAM	-24.87	12.69	10.82	2.61	H	0.123	20.90			
		64-QAM	-26.31	11.25	10.82	2.61	H	0.088	19.46			
		256-QAM	-28.50	9.06	10.82	2.61	H	0.053	17.27			

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2503.500		PI/2 BPSK	-21.18	15.68	10.58	2.51	H		0.237	23.75	1	36
		QPSK	-21.26	15.60	10.58	2.51	H		0.233	23.67		
		16-QAM	-22.34	14.52	10.58	2.51	H		0.182	22.59		
		64-QAM	-23.78	13.08	10.58	2.51	H		0.130	21.15		
		256-QAM	-26.04	10.82	10.58	2.51	H		0.077	18.89		
2592.990	Sub6 n41(38) / 15 MHz [30 kHz]	PI/2 BPSK	-21.48	15.23	11.00	2.55	H	< 2.00	0.233	23.68	1	1
		QPSK	-21.61	15.10	11.00	2.55	H		0.227	23.55		
		16-QAM	-22.73	13.98	11.00	2.55	H		0.175	22.43		
		64-QAM	-24.07	12.64	11.00	2.55	H		0.129	21.09		
		256-QAM	-26.34	10.37	11.00	2.55	H		0.076	18.82		
2682.480		PI/2 BPSK	-23.52	14.15	10.84	2.61	H		0.173	22.38	1	36
		QPSK	-23.68	13.99	10.84	2.61	H		0.167	22.22		
		16-QAM	-24.77	12.90	10.84	2.61	H		0.130	21.13		
		64-QAM	-26.20	11.47	10.84	2.61	H		0.093	19.70		
		256-QAM	-28.48	9.19	10.84	2.61	H		0.055	17.42		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2506.020		PI/2 BPSK	-20.86	16.00	10.58	2.51	H		0.255	24.07	1	49
		QPSK	-20.90	15.96	10.58	2.51	H		0.253	24.03		
		16-QAM	-22.08	14.78	10.58	2.51	H		0.193	22.85		
		64-QAM	-23.49	13.37	10.58	2.51	H		0.139	21.44		
		256-QAM	-25.73	11.13	10.58	2.51	H		0.083	19.20		
2592.990	Sub6 n41(38) / 20 MHz [30 kHz]	PI/2 BPSK	-21.75	14.96	11.00	2.55	H	< 2.00	0.219	23.41	1	25
		QPSK	-21.86	14.85	11.00	2.55	H		0.214	23.30		
		16-QAM	-23.00	13.71	11.00	2.55	H		0.164	22.16		
		64-QAM	-24.22	12.49	11.00	2.55	H		0.124	20.94		
		256-QAM	-26.54	10.17	11.00	2.55	H		0.073	18.62		
2679.990		PI/2 BPSK	-23.63	14.04	10.84	2.61	H		0.169	22.27	1	49
		QPSK	-23.80	13.87	10.84	2.61	H		0.162	22.10		
		16-QAM	-24.87	12.80	10.84	2.61	H		0.127	21.03		
		64-QAM	-26.30	11.37	10.84	2.61	H		0.091	19.60		
		256-QAM	-28.48	9.19	10.84	2.61	H		0.055	17.42		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2508.510		PI/2 BPSK	-20.74	16.18	10.55	2.51	H		0.264	24.22	1	63
		QPSK	-20.80	16.12	10.55	2.51	H		0.261	24.16		
		16-QAM	-21.96	14.96	10.55	2.51	H		0.200	23.00		
		64-QAM	-23.35	13.57	10.55	2.51	H		0.145	21.61		
		256-QAM	-25.60	11.32	10.55	2.51	H		0.086	19.36		
2592.990	Sub6 n41(38) / 25 MHz [30 kHz]	PI/2 BPSK	-21.52	15.19	11.00	2.55	H	< 2.00	0.231	23.64	1	1
		QPSK	-21.55	15.16	11.00	2.55	H		0.230	23.61		
		16-QAM	-22.72	13.99	11.00	2.55	H		0.175	22.44		
		64-QAM	-24.03	12.68	11.00	2.55	H		0.130	21.13		
		256-QAM	-26.26	10.45	11.00	2.55	H		0.078	18.90		
2677.500		PI/2 BPSK	-23.54	14.13	10.84	2.61	H		0.172	22.36	1	63
		QPSK	-23.58	14.09	10.84	2.61	H		0.171	22.32		
		16-QAM	-24.85	12.82	10.84	2.61	H		0.127	21.05		
		64-QAM	-26.20	11.47	10.84	2.61	H		0.093	19.70		
		256-QAM	-28.48	9.19	10.84	2.61	H		0.055	17.42		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2511.000		PI/2 BPSK	-20.67	16.25	10.55	2.51	H		0.269	24.29	1	76
		QPSK	-20.70	16.22	10.55	2.51	H		0.267	24.26		
		16-QAM	-21.78	15.14	10.55	2.51	H		0.208	23.18		
		64-QAM	-23.25	13.67	10.55	2.51	H		0.148	21.71		
		256-QAM	-25.50	11.42	10.55	2.51	H		0.088	19.46		
2592.990	Sub6 n41(38) / 30 MHz [30 kHz]	PI/2 BPSK	-21.31	15.40	11.00	2.55	H	< 2.00	0.243	23.85	1	1
		QPSK	-21.48	15.23	11.00	2.55	H		0.233	23.68		
		16-QAM	-22.54	14.17	11.00	2.55	H		0.183	22.62		
		64-QAM	-24.00	12.71	11.00	2.55	H		0.131	21.16		
		256-QAM	-26.26	10.45	11.00	2.55	H		0.078	18.90		
2674.980		PI/2 BPSK	-23.52	13.77	10.85	2.62	H		0.159	22.00	1	76
		QPSK	-23.66	13.63	10.85	2.62	H		0.154	21.86		
		16-QAM	-24.71	12.58	10.85	2.62	H		0.121	20.81		
		64-QAM	-26.15	11.14	10.85	2.62	H		0.087	19.37		
		256-QAM	-28.35	8.94	10.85	2.62	H		0.052	17.17		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2516.010		PI/2 BPSK	-20.83	16.10	10.52	2.53	H		0.256	24.09	1	53
		QPSK	-20.84	16.09	10.52	2.53	H		0.256	24.08		
		16-QAM	-22.13	14.80	10.52	2.53	H		0.190	22.79		
		64-QAM	-23.31	13.62	10.52	2.53	H		0.145	21.61		
		256-QAM	-25.67	11.26	10.52	2.53	H		0.084	19.25		
2592.990	Sub6 n41(38) / 40 MHz [30 kHz]	-20.43	-21.66	15.05	11.00	2.55	H	< 2.00	0.224	23.50	1	53
		-20.50	-21.76	14.95	11.00	2.55	H		0.219	23.40		
		-21.70	-22.91	13.80	11.00	2.55	H		0.168	22.25		
		-22.96	-24.33	12.38	11.00	2.55	H		0.121	20.83		
		-25.24	-26.57	10.14	11.00	2.55	H		0.072	18.59		
2670.000		PI/2 BPSK	-23.61	13.29	10.87	2.62	H		0.143	21.54	1	1
		QPSK	-23.64	13.26	10.87	2.62	H		0.142	21.51		
		16-QAM	-24.97	11.93	10.87	2.62	H		0.104	20.18		
		64-QAM	-26.13	10.77	10.87	2.62	H		0.080	19.02		
		256-QAM	-28.39	8.51	10.87	2.62	H		0.047	16.76		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2521.020		PI/2 BPSK	-20.70	16.23	10.49	2.54	H		0.262	24.18	1	66
		QPSK	-20.80	16.13	10.49	2.54	H		0.256	24.08		
		16-QAM	-21.80	15.13	10.49	2.54	H		0.203	23.08		
		64-QAM	-23.25	13.68	10.49	2.54	H		0.146	21.63		
		256-QAM	-25.40	11.53	10.49	2.54	H		0.089	19.48		
2592.990	Sub6 n41 / 50 MHz [30 kHz]	-20.43	-21.50	15.21	11.00	2.55	H	< 2.00	0.232	23.66	1	1
		-20.50	-21.54	15.17	11.00	2.55	H		0.230	23.62		
		-21.70	-22.81	13.90	11.00	2.55	H		0.172	22.35		
		-22.96	-24.09	12.62	11.00	2.55	H		0.128	21.07		
		-25.24	-26.40	10.31	11.00	2.55	H		0.075	18.76		
2664.990		PI/2 BPSK	-23.48	13.47	10.88	2.64	H		0.148	21.71	1	1
		QPSK	-23.51	13.44	10.88	2.64	H		0.147	21.68		
		16-QAM	-24.73	12.22	10.88	2.64	H		0.111	20.46		
		64-QAM	-26.00	10.95	10.88	2.64	H		0.083	19.19		
		256-QAM	-28.23	8.72	10.88	2.64	H		0.050	16.96		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2526.000	Sub6 41/ 60 MHz [30 kHz]	PI/2 BPSK	-20.79	15.84	10.52	2.54	H		0.241	23.82	1	81
		QPSK	-20.89	15.74	10.52	2.54	H		0.236	23.72		
		16-QAM	-22.08	14.55	10.52	2.54	H		0.179	22.53		
		64-QAM	-23.31	13.32	10.52	2.54	H		0.135	21.30		
		256-QAM	-25.64	10.99	10.52	2.54	H		0.079	18.97		
2592.990		PI/2 BPSK	-21.27	15.44	11.00	2.55	H	< 2.00	0.245	23.89	1	1
		QPSK	-21.30	15.41	11.00	2.55	H		0.243	23.86		
		16-QAM	-22.63	14.08	11.00	2.55	H		0.179	22.53		
		64-QAM	-23.85	12.86	11.00	2.55	H		0.135	21.31		
		256-QAM	-26.12	10.59	11.00	2.55	H		0.080	19.04		
2659.980		PI/2 BPSK	-23.40	13.61	10.90	2.67	H		0.153	21.84	1	1
		QPSK	-23.42	13.59	10.90	2.67	H		0.152	21.82		
		16-QAM	-24.69	12.32	10.90	2.67	H		0.114	20.55		
		64-QAM	-25.93	11.08	10.90	2.67	H		0.085	19.31		
		256-QAM	-28.22	8.79	10.90	2.67	H		0.050	17.02		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2531.010	Sub6 41/ 70 MHz [30 kHz]	PI/2 BPSK	-20.89	15.44	10.56	2.54	H		0.222	23.46	1	94
		QPSK	-20.99	15.34	10.56	2.54	H		0.217	23.36		
		16-QAM	-22.14	14.19	10.56	2.54	H		0.166	22.21		
		64-QAM	-23.51	12.82	10.56	2.54	H		0.121	20.84		
		256-QAM	-25.63	10.70	10.56	2.54	H		0.075	18.72		
2592.990		PI/2 BPSK	-21.40	15.31	11.00	2.55	H	< 2.00	0.238	23.76	1	1
		QPSK	-21.41	15.30	11.00	2.55	H		0.237	23.75		
		16-QAM	-22.55	14.16	11.00	2.55	H		0.182	22.61		
		64-QAM	-23.90	12.81	11.00	2.55	H		0.134	21.26		
		256-QAM	-26.20	10.51	11.00	2.55	H		0.079	18.96		
2655.000		PI/2 BPSK	-22.80	14.11	10.91	2.68	H		0.171	22.34	1	1
		QPSK	-22.83	14.08	10.91	2.68	H		0.170	22.31		
		16-QAM	-24.02	12.89	10.91	2.68	H		0.129	21.12		
		64-QAM	-25.43	11.48	10.91	2.68	H		0.094	19.71		
		256-QAM	-27.58	9.33	10.91	2.68	H		0.057	17.56		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2536.020	Sub6 41/ 80 MHz [30 kHz]	PI/2 BPSK	-20.78	15.68	10.59	2.54	H		0.236	23.73	1	108
		QPSK	-20.87	15.59	10.59	2.54	H		0.231	23.64		
		16-QAM	-21.94	14.52	10.59	2.54	H		0.181	22.57		
		64-QAM	-23.37	13.09	10.59	2.54	H		0.130	21.14		
		256-QAM	-25.52	10.94	10.59	2.54	H		0.079	18.99		
2592.990		PI/2 BPSK	-21.30	15.41	11.00	2.55	H	< 2.00	0.243	23.86	1	1
		QPSK	-21.35	15.36	11.00	2.55	H		0.240	23.81		
		16-QAM	-22.48	14.23	11.00	2.55	H		0.185	22.68		
		64-QAM	-23.77	12.94	11.00	2.55	H		0.138	21.39		
		256-QAM	-26.04	10.67	11.00	2.55	H		0.082	19.12		
2649.990		PI/2 BPSK	-22.40	14.39	10.93	2.69	H		0.183	22.63	1	1
		QPSK	-22.48	14.31	10.93	2.69	H		0.180	22.55		
		16-QAM	-23.59	13.20	10.93	2.69	H		0.139	21.44		
		64-QAM	-25.11	11.68	10.93	2.69	H		0.098	19.92		
		256-QAM	-27.30	9.49	10.93	2.69	H		0.059	17.73		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2541.000	Sub6 41/ 90 MHz [30 kHz]	PI/2 BPSK	-20.72	15.86	10.62	2.53	H		0.248	23.95	1	122
		QPSK	-20.77	15.81	10.62	2.53	H		0.246	23.90		
		16-QAM	-22.12	14.46	10.62	2.53	H		0.180	22.55		
		64-QAM	-23.30	13.28	10.62	2.53	H		0.137	21.37		
		256-QAM	-25.61	10.97	10.62	2.53	H		0.081	19.06		
2592.990		PI/2 BPSK	-20.79	15.92	11.00	2.55	H	< 2.00	0.274	24.37	1	1
		QPSK	-20.80	15.91	11.00	2.55	H		0.273	24.36		
		16-QAM	-21.98	14.73	11.00	2.55	H		0.208	23.18		
		64-QAM	-23.28	13.43	11.00	2.55	H		0.154	21.88		
		256-QAM	-25.48	11.23	11.00	2.55	H		0.093	19.68		
2644.980		PI/2 BPSK	-22.07	15.04	10.95	2.68	H		0.214	23.31	1	1
		QPSK	-22.08	15.03	10.95	2.68	H		0.214	23.30		
		16-QAM	-23.40	13.71	10.95	2.68	H		0.158	21.98		
		64-QAM	-24.60	12.51	10.95	2.68	H		0.120	20.78		
		256-QAM	-26.88	10.23	10.95	2.68	H		0.071	18.50		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2546.010	Sub6 41/ 100 MHz [30 kHz]	PI/2 BPSK	-21.15	15.40	10.66	2.53	H		0.225	23.53	1	136
		QPSK	-21.22	15.33	10.66	2.53	H		0.222	23.46		
		16-QAM	-22.48	14.07	10.66	2.53	H		0.166	22.20		
		64-QAM	-23.64	12.91	10.66	2.53	H		0.127	21.04		
		256-QAM	-25.91	10.64	10.66	2.53	H		0.075	18.77		
2592.990		PI/2 BPSK	-20.83	15.88	11.00	2.55	H	< 2.00	0.271	24.33	1	1
		QPSK	-20.84	15.87	11.00	2.55	H		0.270	24.32		
		16-QAM	-22.07	14.64	11.00	2.55	H		0.204	23.09		
		64-QAM	-23.34	13.37	11.00	2.55	H		0.152	21.82		
		256-QAM	-25.63	11.08	11.00	2.55	H		0.090	19.53		
2640.000		PI/2 BPSK	-21.80	15.64	10.96	2.68	H		0.247	23.92	1	1
		QPSK	-21.81	15.63	10.96	2.68	H		0.246	23.91		
		16-QAM	-23.08	14.36	10.96	2.68	H		0.184	22.64		
		64-QAM	-24.35	13.09	10.96	2.68	H		0.137	21.37		
		256-QAM	-26.60	10.84	10.96	2.68	H		0.082	19.12		

8.2 RADIATED SPURIOUS EMISSIONS

NR Band:	<u>n41(38)</u>
Bandwidth:	<u>10 MHz</u>
Modulation:	<u>PI/2 BPSK</u>
Distance:	<u>1 meter</u>
SCS:	<u>30 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
500202 (2501.010)	5 002.02	-60.66	11.22	-62.37	3.71	H	-54.86	-25.00	1	22
	7 503.03	-62.53	11.54	-55.10	4.60	H	-48.16	-25.00		
	10 004.04	-61.98	11.47	-52.58	5.47	H	-46.58	-25.00		
518598 (2592.990)	5 185.98	-61.19	11.61	-62.36	3.80	H	-54.55	-25.00	1	1
	7 778.97	-63.28	11.26	-56.21	4.70	H	-49.65	-25.00		
	10 371.96	-61.40	11.68	-50.31	5.55	H	-44.18	-25.00		
537000 (2685.000)	5 370.00	-60.06	11.96	-61.69	3.92	H	-53.65	-25.00	1	22
	8 055.00	-61.07	11.24	-53.79	4.81	H	-47.36	-25.00		
	10 740.00	-61.79	11.55	-49.77	5.64	H	-43.86	-25.00		

- ▣ NR Band: n41(38)
- ▣ Bandwidth: 15 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
500700 (2503.500)	5 007.00	-60.74	11.20	-62.17	3.71	H	-54.68	-25.00	1	36
	7 510.50	-62.61	11.55	-55.07	4.60	H	-48.12	-25.00		
	10 014.00	-62.02	11.46	-52.63	5.47	H	-46.64	-25.00		
518598 (2592.990)	5 185.98	-61.20	11.61	-62.37	3.80	H	-54.56	-25.00	1	1
	7 778.97	-63.30	11.26	-56.23	4.70	H	-49.67	-25.00		
	10 371.96	-61.48	11.68	-50.39	5.55	H	-44.26	-25.00		
536496 (2682.480)	5 364.96	-60.14	11.95	-61.66	3.91	H	-53.62	-25.00	1	36
	8 047.44	-61.09	11.23	-53.87	4.81	H	-47.45	-25.00		
	10 729.92	-61.88	11.56	-49.81	5.65	H	-43.90	-25.00		

☐ NR Band: n41(38)
☐ Bandwidth: 20 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
501204 (2506.020)	5 012.04	-60.66	11.18	-61.80	3.72	H	-54.34	-25.00	1	49
	7 518.06	-62.61	11.56	-54.97	4.61	H	-48.02	-25.00		
	10 024.08	-62.06	11.46	-52.71	5.47	H	-46.72	-25.00		
518598 (2592.990)	5 185.98	-61.24	11.61	-62.41	3.80	H	-54.60	-25.00	1	25
	7 778.97	-63.36	11.26	-56.29	4.70	H	-49.73	-25.00		
	10 371.96	-61.49	11.68	-50.40	5.55	H	-44.27	-25.00		
535998 (2679.990)	5 359.98	-60.12	11.95	-61.55	3.90	H	-53.50	-25.00	1	49
	8 039.97	-61.09	11.22	-53.78	4.80	H	-47.36	-25.00		
	10 719.96	-61.86	11.56	-50.21	5.64	H	-44.29	-25.00		

☐ NR Band: n41(38)
☐ Bandwidth: 25 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
501702 (2508.510)	5 017.02	-60.71	11.17	-61.63	3.70	H	-54.16	-25.00	1	63
	7 525.53	-62.63	11.57	-54.98	4.61	H	-48.02	-25.00		
	10 034.04	-62.06	11.45	-52.82	5.48	H	-46.85	-25.00		
518598 (2592.990)	5 185.98	-61.25	11.61	-62.42	3.80	H	-54.61	-25.00	1	1
	7 778.97	-63.32	11.26	-56.25	4.70	H	-49.69	-25.00		
	10 371.96	-61.45	11.68	-50.36	5.55	H	-44.23	-25.00		
535500 (2677.500)	5 355.00	-60.09	11.94	-61.64	3.88	H	-53.58	-25.00	1	63
	8 032.50	-61.16	11.21	-53.87	4.80	H	-47.46	-25.00		
	10 710.00	-61.89	11.57	-50.17	5.65	H	-44.25	-25.00		

☐ NR Band: n41(38)
☐ Bandwidth: 30 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
502200 (2511.000)	5 022.00	-60.70	11.17	-61.40	3.69	H	-53.92	-25.00	1	76
	7 533.00	-62.60	11.57	-55.00	4.61	H	-48.04	-25.00		
	10 044.00	-62.03	11.44	-52.71	5.48	H	-46.75	-25.00		
518598 (2592.990)	5 185.98	-61.23	11.61	-62.40	3.80	H	-54.59	-25.00	1	1
	7 778.97	-63.28	11.26	-56.21	4.70	H	-49.65	-25.00		
	10 371.96	-61.49	11.68	-50.40	5.55	H	-44.27	-25.00		
534996 (2674.980)	5 349.96	-60.09	11.94	-61.78	3.85	H	-53.69	-25.00	1	76
	8 024.94	-61.12	11.20	-53.87	4.79	H	-47.46	-25.00		
	10 699.92	-61.88	11.57	-49.88	5.67	H	-43.98	-25.00		

☐ NR Band: n41(38)
☐ Bandwidth: 40 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
503202 (2516.010)	5 032.02	-60.66	11.19	-61.50	3.67	H	-53.98	-25.00	1	53
	7 548.03	-62.61	11.59	-55.24	4.63	H	-48.28	-25.00		
	10 064.04	-62.01	11.42	-52.79	5.47	H	-46.84	-25.00		
518598 (2592.990)	5 185.98	-61.24	11.61	-62.41	3.80	H	-54.60	-25.00	1	53
	7 778.97	-63.38	11.26	-56.31	4.70	H	-49.75	-25.00		
	10 371.96	-61.42	11.68	-50.33	5.55	H	-44.20	-25.00		
534000 (2670.000)	5 340.00	-60.10	11.93	-62.08	3.80	H	-53.95	-25.00	1	1
	8 010.00	-61.14	11.17	-53.82	4.77	H	-47.42	-25.00		
	10 680.00	-61.80	11.57	-49.22	5.71	H	-43.36	-25.00		

☐ NR Band: n41
☐ Bandwidth: 50 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
504204 (2521.020)	5 042.04	-60.72	11.20	-61.76	3.68	H	-54.24	-25.00	1	66
	7 563.06	-62.55	11.60	-55.02	4.64	H	-48.06	-25.00		
	10 084.08	-62.03	11.40	-52.80	5.46	H	-46.86	-25.00		
518598 (2592.990)	5 185.98	-61.29	11.61	-62.46	3.80	H	-54.65	-25.00	1	1
	7 778.97	-63.38	11.26	-56.31	4.70	H	-49.75	-25.00		
	10 371.96	-61.42	11.68	-50.33	5.55	H	-44.20	-25.00		
532998 (2664.990)	5 329.98	-60.09	11.92	-61.82	3.77	H	-53.67	-25.00	1	1
	7 994.97	-61.10	11.13	-53.55	4.77	H	-47.19	-25.00		
	10 659.96	-61.87	11.58	-49.47	5.67	H	-43.56	-25.00		

- ▣ NR Band: n41
- ▣ Bandwidth: 60 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
505200 (2526.000)	5 052.00	-60.74	11.22	-62.21	3.73	H	-54.72	-25.00	1	81
	7 578.00	-62.61	11.61	-54.95	4.65	H	-47.99	-25.00		
	10 104.00	-62.07	11.39	-52.51	5.46	H	-46.58	-25.00		
518598 (2592.990)	5 185.98	-61.25	11.61	-62.42	3.80	H	-54.61	-25.00	1	1
	7 778.97	-63.33	11.26	-56.26	4.70	H	-49.70	-25.00		
	10 371.96	-61.41	11.68	-50.32	5.55	H	-44.19	-25.00		
531996 (2659.980)	5 319.96	-60.10	11.91	-61.65	3.79	H	-53.53	-25.00	1	1
	7 979.94	-61.16	11.10	-53.46	4.79	H	-47.15	-25.00		
	10 639.92	-61.83	11.58	-49.45	5.61	H	-43.48	-25.00		

☐ NR Band: n41
☐ Bandwidth: 70 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
506202 (2531.010)	5 062.02	-60.76	11.24	-62.13	3.78	H	-54.67	-25.00	1	94
	7 593.03	-62.57	11.62	-55.29	4.64	H	-48.31	-25.00		
	10 124.04	-61.99	11.37	-52.30	5.47	H	-46.40	-25.00		
518598 (2592.990)	5 185.98	-61.20	11.61	-62.37	3.80	H	-54.56	-25.00	1	1
	7 778.97	-63.30	11.26	-56.23	4.70	H	-49.67	-25.00		
	10 371.96	-61.45	11.68	-50.36	5.55	H	-44.23	-25.00		
531000 (2655.000)	5 310.00	-60.12	11.91	-61.23	3.82	H	-53.14	-25.00	1	1
	7 965.00	-61.07	11.07	-53.25	4.80	H	-46.98	-25.00		
	10 620.00	-61.85	11.58	-49.81	5.65	H	-43.88	-25.00		

- ▣ NR Band: n41
- ▣ Bandwidth: 80 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
507204 (2536.020)	5 072.04	-60.74	11.25	-61.90	3.80	H	-54.45	-25.00	1	108
	7 608.06	-62.61	11.60	-55.73	4.64	H	-48.77	-25.00		
	10 144.08	-62.05	11.36	-52.44	5.48	H	-46.56	-25.00		
518598 (2592.990)	5 185.98	-61.27	11.61	-62.44	3.80	H	-54.63	-25.00	1	1
	7 778.97	-63.34	11.26	-56.27	4.70	H	-49.71	-25.00		
	10 371.96	-61.48	11.68	-50.39	5.55	H	-44.26	-25.00		
529998 (2649.990)	5 299.98	-60.11	11.90	-61.61	3.83	H	-53.54	-25.00	1	1
	7 949.97	-61.09	11.03	-53.44	4.78	H	-47.19	-25.00		
	10 599.96	-61.81	11.58	-50.52	5.67	H	-44.61	-25.00		

☐ NR Band: n41
☐ Bandwidth: 90 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
508200 (2541.000)	5 082.00	-60.67	11.27	-61.47	3.81	H	-54.01	-25.00	1	122
	7 623.00	-62.58	11.57	-55.64	4.65	H	-48.72	-25.00		
	10 164.00	-62.00	11.34	-52.14	5.50	H	-46.30	-25.00		
518598 (2592.990)	5 185.98	-61.25	11.61	-62.42	3.80	H	-54.61	-25.00	1	1
	7 778.97	-63.37	11.26	-56.30	4.70	H	-49.74	-25.00		
	10 371.96	-61.49	11.68	-50.40	5.55	H	-44.27	-25.00		
528996 (2644.980)	5 289.96	-60.12	11.89	-61.70	3.83	H	-53.64	-25.00	1	1
	7 934.94	-61.14	11.01	-53.76	4.77	H	-47.52	-25.00		
	10 579.92	-61.81	11.62	-50.66	5.65	H	-44.69	-25.00		

■ NR Band:	<u>n41</u>
■ Bandwidth:	<u>100 MHz</u>
■ Modulation:	<u>PI/2 BPSK</u>
■ Distance:	<u>1 meter</u>
■ SCS:	<u>30 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
509202 (2546.010)	5 092.02	-60.70	11.29	-61.58	3.78	H	-54.07	-25.00	1	136
	7 638.03	-62.54	11.54	-55.57	4.68	H	-48.71	-25.00		
	10 184.04	-61.99	11.35	-51.95	5.52	H	-46.12	-25.00		
518598 (2592.990)	5 185.98	-61.20	11.61	-62.37	3.80	H	-54.56	-25.00	1	1
	7 778.97	-63.29	11.26	-56.22	4.70	H	-49.66	-25.00		
	10 371.96	-61.42	11.68	-50.33	5.55	H	-44.20	-25.00		
528000 (2640.000)	5 280.00	-60.12	11.88	-62.14	3.80	H	-54.06	-25.00	1	1
	7 920.00	-61.09	11.02	-53.67	4.77	H	-47.42	-25.00		
	10 560.00	-61.82	11.65	-50.88	5.63	H	-44.86	-25.00		

8.3 PEAK-TO-AVERAGE RATIO

Band / BandWidth	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n41(38) / 10 MHz	2592.990	BPSK	24	0	3.80
		QPSK			4.44
		16-QAM			5.49
		64-QAM			5.95
		256-QAM			6.40
Sub6 n41(38) / 15 MHz		BPSK	36		3.69
		QPSK			4.39
		16-QAM			5.32
		64-QAM			5.88
		256-QAM			6.90
Sub6 n41(38) / 20 MHz		BPSK	50		3.82
		QPSK			4.40
		16-QAM			5.44
		64-QAM			5.88
		256-QAM			6.59
Sub6 n41(38) / 25 MHz		BPSK	64		4.03
		QPSK			4.60
		16-QAM			5.80
		64-QAM			6.09
		256-QAM			7.00
Sub6 n41(38) / 30 MHz		BPSK	75		3.81
		QPSK			4.41
		16-QAM			5.41
		64-QAM			5.94
		256-QAM			6.71
Sub6 n41(38) / 40 MHz	BPSK	100	3.86		
	QPSK		4.42		
	16-QAM		5.42		
	64-QAM		5.93		
	256-QAM		6.74		

Sub6 n41 / 50 MHz	BPSK	128	4.03
	QPSK		4.52
	16-QAM		5.54
	64-QAM		5.93
	256-QAM		6.73
Sub6 n41 / 60 MHz	BPSK	162	4.01
	QPSK		4.54
	16-QAM		5.54
	64-QAM		5.95
	256-QAM		6.74
Sub6 n41 / 70 MHz	BPSK	180	4.15
	QPSK		4.58
	16-QAM		5.60
	64-QAM		5.98
	256-QAM		6.44
Sub6 n41 / 80 MHz	BPSK	216	4.06
	QPSK		4.55
	16-QAM		5.50
	64-QAM		5.98
	256-QAM		6.43
Sub6 n41 / 90 MHz	BPSK	243	4.09
	QPSK		4.45
	16-QAM		5.36
	64-QAM		5.86
	256-QAM		6.49
Sub6 n41 / 100 MHz	BPSK	270	4.22
	QPSK		4.69
	16-QAM		5.67
	64-QAM		6.02
	256-QAM		6.75

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 122 ~ 181.

8.4 OCCUPIED BANDWIDTH

Band / BandWidth	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n41(38) / 10 MHz	2592.990	BPSK	24	0	8.6181
		QPSK			8.6476
		16-QAM			8.7142
		64-QAM			8.6226
		256-QAM			8.6711
Sub6 n41(38) / 15 MHz		BPSK	36		12.984
		QPSK			12.966
		16-QAM			12.928
		64-QAM			12.984
		256-QAM			12.928
Sub6 n41(38) / 20 MHz		BPSK	50		17.909
		QPSK			17.977
		16-QAM			17.915
		64-QAM			17.971
		256-QAM			17.894
Sub6 n41(38) / 25 MHz		BPSK	64		23.024
		QPSK			23.008
		16-QAM			22.976
		64-QAM			23.047
		256-QAM			22.905
Sub6 n41(38) / 30 MHz		BPSK	75		26.959
		QPSK			26.933
		16-QAM			26.975
		64-QAM			27.033
		256-QAM			26.868
Sub6 n41(38) / 40 MHz	BPSK	100	35.870		
	QPSK		35.899		
	16-QAM		35.783		
	64-QAM		35.867		
	256-QAM		35.911		

Sub6 n41 / 50 MHz	BPSK	128	45.964
	QPSK		45.685
	16-QAM		45.712
	64-QAM		45.774
	256-QAM		45.858
Sub6 n41 / 60 MHz	BPSK	162	58.129
	QPSK		57.802
	16-QAM		58.109
	64-QAM		58.000
	256-QAM		57.942
Sub6 n41 / 70 MHz	BPSK	180	64.544
	QPSK		64.516
	16-QAM		64.398
	64-QAM		64.403
	256-QAM		64.765
Sub6 n41 / 80 MHz	BPSK	216	77.177
	QPSK		77.383
	16-QAM		77.258
	64-QAM		76.950
	256-QAM		77.282
Sub6 n41 / 90 MHz	BPSK	243	86.895
	QPSK		86.786
	16-QAM		86.846
	64-QAM		86.799
	256-QAM		86.846
Sub6 n41 / 100 MHz	BPSK	270	96.545
	QPSK		96.802
	16-QAM		96.685
	64-QAM		96.480
	256-QAM		96.465

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 182 ~ 241.

8.5 CONDUCTED SPURIOUS EMISSIONS

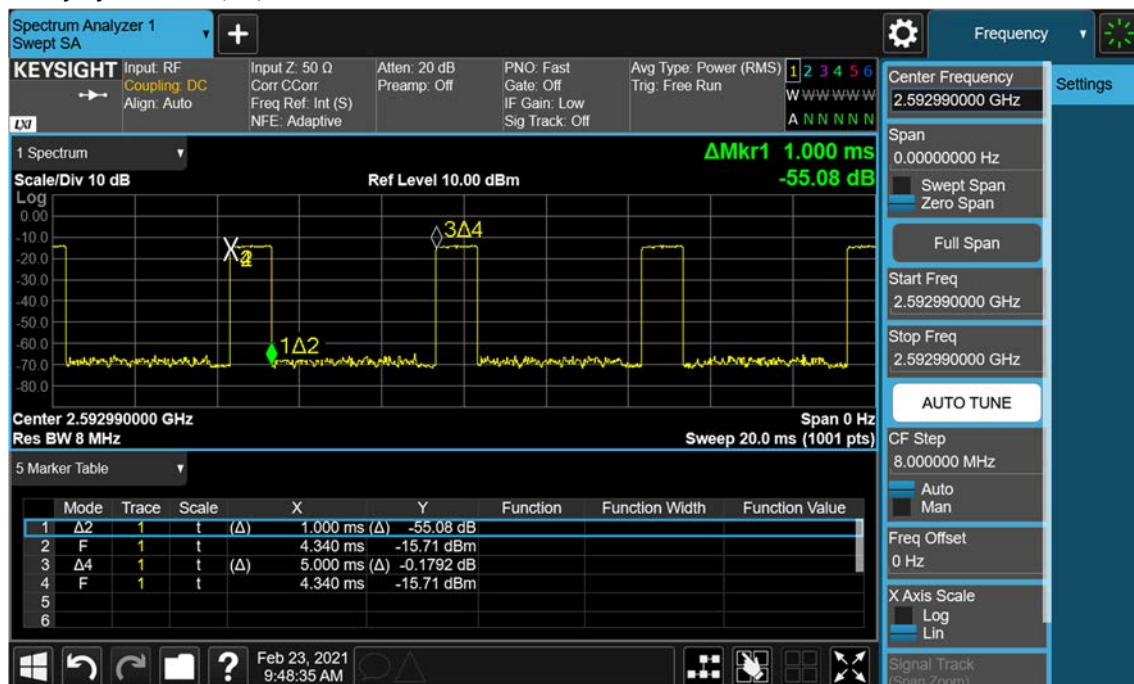
Band / Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub 6 n41(38) / 10	2501.010	9.7428	37.805	-74.220	-36.415	-25.00
	2592.990	3.7832	37.190	-74.186	-36.996	
	2685.000	4.9148	37.190	-74.193	-37.003	
Sub 6 n41(38) / 15	2503.500	5.2099	37.805	-74.823	-37.018	
	2592.990	8.5733	37.805	-74.433	-36.628	
	2682.480	3.7742	37.190	-74.163	-36.973	
Sub 6 n41(38) / 20	2506.020	9.4462	37.805	-74.724	-36.919	
	2592.990	4.9023	37.190	-74.603	-37.413	
	2679.990	8.6590	37.805	-74.659	-36.854	
Sub 6 n41(38) / 25	2508.510	8.2707	37.805	-74.521	-36.716	
	2592.990	8.8839	37.805	-74.643	-36.838	
	2677.500	4.0310	37.190	-74.771	-37.581	
Sub 6 n41(38) / 30	2511.000	6.0344	37.805	-74.942	-37.137	
	2592.990	9.9581	37.805	-74.722	-36.917	
	2674.980	9.9367	37.805	-74.063	-36.258	
Sub 6 n41(38) / 40	2516.010	9.6670	37.805	-74.448	-36.643	
	2592.990	9.4148	37.805	-74.997	-37.192	
	2670.000	5.2149	37.805	-75.010	-37.205	
Sub 6 n41 / 50	2521.020	4.0778	37.190	-74.686	-37.496	
	2592.990	9.3634	37.805	-74.325	-36.520	
	2664.990	5.2204	37.805	-73.489	-35.684	
Sub 6 n41 / 60	2526.000	4.0793	37.190	-74.527	-37.337	
	2592.990	9.6780	37.805	-73.933	-36.128	
	2659.980	8.8535	37.805	-74.677	-36.872	
Sub 6 n41 / 70	2531.010	9.1441	37.805	-74.645	-36.840	
	2592.990	3.7817	37.190	-74.801	-37.611	
	2655.000	8.2752	37.805	-74.098	-36.293	
Sub 6 n41 / 80	2536.020	4.0773	37.190	-74.281	-37.091	
	2592.990	9.9561	37.805	-73.191	-35.386	
	2649.990	9.7353	37.805	-73.734	-35.929	
Sub 6 n41 / 90	2541.000	6.0070	37.805	-74.373	-36.568	
	2592.990	8.2921	37.805	-74.987	-37.182	
	2644.980	8.6032	37.805	-74.285	-36.480	
Sub 6 n41 / 100	2546.010	3.7892	37.190	-74.278	-37.088	
	2592.990	8.2712	37.805	-74.475	-36.670	
	2640.000	4.0275	37.190	-74.401	-37.211	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 242 ~ 313.

2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.99



- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter

- Result(dBm) = Reading + Factor

3. Factor(dB)

Frequency Range (GHz)	Factor [dB]
0.03 – 1	34.484
1 – 5	37.190
5 – 10	37.805
10 – 15	38.330
15 – 20	38.703
Above 20	39.345

8.6 CHANNEL EDGE

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	2 495 MHz ~ 2 496 MHz	C.E ~ (C.E +1MHz)	2 490.5 MHz ~ 2 495 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
10	2501.010	BPSK	Full RB	-20.51	-21.13	-26.36	-24.83	-31.11	-28.71	-28.55
15	2503.500	BPSK	Full RB	-22.17	-31.85	-29.69	-32.68	-31.49	-31.78	-32.97
20	2506.020	BPSK	Full RB	-24.34	-27.87	-31.59	-30.24	-36.09	-30.29	-35.01
25	2508.510	BPSK	Full RB	-24.74	-26.31	-31.52	-28.64	-32.46	-30.37	-34.38
30	2511.000	BPSK	Full RB	-25.55	-32.02	-32.64	-32.51	-36.93	-32.12	-35.33
40	2516.010	BPSK	Full RB	-24.55	-28.48	-30.86	-29.51	-30.59	-30.88	-35.01
50	2521.020	BPSK	Full RB	-23.91	-29.74	-33.27	-30.70	-32.94	-31.96	-35.79
60	2526.000	BPSK	Full RB	-16.46	-17.12	-32.63	-28.53	-34.69	-30.17	-38.19
70	2531.010	BPSK	Full RB	-21.49	-31.55	-26.11	-31.45	-26.42	-29.79	-32.14
80	2536.020	BPSK	Full RB	-22.56	-28.22	-25.77	-32.33	-27.38	-31.02	-33.49
90	2541.000	BPSK	Full RB	-21.79	-29.82	-26.21	-31.63	-26.94	-30.84	-31.90
100	2546.010	BPSK	Full RB	-19.02	-31.40	-26.52	-31.61	-27.86	-30.21	-35.26
Limit (dBm)				-13.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	C.E ~ (C.E $\pm$ 1 MHz)		(C.E $\pm$ 1 MHz) ~ (C.E $\pm$ 5 MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-22.49	-22.98	-28.93	-29.98
	2685.000	BPSK	Full RB	0	-20.70	-24.32	-27.21	-29.74
15 MHz	2592.990	BPSK	Full RB	0	-22.16	-32.53	-29.75	-32.90
	2682.480	BPSK	Full RB	0	-22.01	-32.22	-26.66	-34.58
20 MHz	2592.990	BPSK	Full RB	0	-24.65	-30.18	-29.88	-35.35
	2679.990	BPSK	Full RB	0	-22.81	-29.75	-27.04	-32.92
25 MHz	2592.990	BPSK	Full RB	0	-23.69	-27.22	-30.98	-33.56
	2677.500	BPSK	Full RB	0	-23.86	-26.91	-27.68	-31.96
30 MHz	2592.990	BPSK	Full RB	0	-25.05	-36.41	-35.24	-37.98
	2674.980	BPSK	Full RB	0	-24.52	-31.96	-28.19	-32.17
40 MHz	2592.990	BPSK	Full RB	0	-23.11	-35.99	-34.22	-37.18
	2670.000	BPSK	Full RB	0	-24.96	-30.03	-30.40	-30.94
50 MHz	2592.990	BPSK	Full RB	0	-25.75	-33.27	-33.78	-34.63
	2664.990	BPSK	Full RB	0	-23.84	-28.42	-29.87	-31.75
60 MHz	2592.990	BPSK	Full RB	0	-17.05	-18.81	-31.03	-32.92
	2659.980	BPSK	Full RB	0	-14.88	-19.31	-26.90	-28.47
70 MHz	2592.990	BPSK	Full RB	0	-24.44	-31.90	-34.98	-34.30
	2655.000	BPSK	Full RB	0	-20.42	-30.70	-25.79	-31.76
80 MHz	2592.990	BPSK	Full RB	0	-23.28	-31.18	-35.08	-32.30
	2649.990	BPSK	Full RB	0	-19.05	-28.98	-25.73	-29.25
90 MHz	2592.990	BPSK	Full RB	0	-21.80	-30.94	-33.89	-32.41
	2644.980	BPSK	Full RB	0	-20.85	-26.78	-29.21	-28.03
100 MHz	2592.990	BPSK	Full RB	0	-20.22	-31.97	-35.14	-32.15
	2640.000	BPSK	Full RB	0	-17.61	-27.50	-27.39	-27.87
Limit (dBm)					-10.0		-10.0	

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	(C.E $\pm$ 5 MHz) ~ (C.E $\pm$ X MHz)		Above (C.E $\pm$ X MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-34.81	-37.35	-34.20	-32.86
	2685.000	BPSK	Full RB	0	-33.19	-35.34	-35.12	-35.66
15 MHz	2592.990	BPSK	Full RB	0	-32.47	-36.44	-34.93	-34.26
	2682.480	BPSK	Full RB	0	-26.49	-35.17	-38.31	-39.96
20 MHz	2592.990	BPSK	Full RB	0	-30.20	-35.70	-35.91	-35.37
	2679.990	BPSK	Full RB	0	-27.55	-34.96	-37.56	-38.86
25 MHz	2592.990	BPSK	Full RB	0	-33.80	-34.62	-37.43	-34.78
	2677.500	BPSK	Full RB	0	-28.45	-33.97	-38.10	-43.33
30 MHz	2592.990	BPSK	Full RB	0	-35.26	-35.66	-39.54	-35.60
	2674.980	BPSK	Full RB	0	-28.30	-33.18	-37.72	-43.64
40 MHz	2592.990	BPSK	Full RB	0	-33.06	-36.73	-41.99	-37.27
	2670.000	BPSK	Full RB	0	-32.98	-33.63	-39.76	-50.04
50 MHz	2592.990	BPSK	Full RB	0	-34.32	-34.28	-37.27	-34.14
	2664.990	BPSK	Full RB	0	-29.16	-34.25	-35.69	-51.31
60 MHz	2592.990	BPSK	Full RB	0	-28.74	-31.98	-38.45	-35.26
	2659.980	BPSK	Full RB	0	-28.77	-35.21	-36.50	-52.20
70 MHz	2592.990	BPSK	Full RB	0	-37.09	-32.21	-41.64	-35.19
	2655.000	BPSK	Full RB	0	-26.13	-33.46	-39.13	-52.43
80 MHz	2592.990	BPSK	Full RB	0	-33.58	-31.78	-51.45	-36.99
	2649.990	BPSK	Full RB	0	-25.04	-26.93	-41.22	-52.40
90 MHz	2592.990	BPSK	Full RB	0	-33.80	-33.17	-52.73	-39.97
	2644.980	BPSK	Full RB	0	-29.40	-28.95	-39.27	-52.73
100 MHz	2592.990	BPSK	Full RB	0	-33.26	-31.10	-52.79	-43.20
	2640.000	BPSK	Full RB	0	-26.31	-28.04	-36.66	-52.75
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. Duty Cycle factor already applied on the factor.
 - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
 - Result(dBm) = Reading + Factor
 - Duty Cycle Factor(dB) = 6.99
4. Plots of the EUT's Channel Edge are shown Page 314 ~ 397. (1RB & Full RB)

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

BandWidth:	10 MHz
Voltage(100 %):	3.880 VDC
Batt. Endpoint:	3.300 VDC
LIMIT:	Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2501.010	100 %	+20(Ref)	2501 009 995	0.0	0.000 000	0.000
	100 %	-30	2501 009 991	-4.5	0.000 000	-0.002
	100 %	-20	2501 009 990	-5.4	0.000 000	-0.002
	100 %	-10	2501 009 991	-4.8	0.000 000	-0.002
	100 %	0	2501 009 992	-3.3	0.000 000	-0.001
	100 %	+10	2501 009 993	-2.2	0.000 000	-0.001
	100 %	+30	2501 009 992	-3.5	0.000 000	-0.001
	100 %	+40	2501 009 992	-3.6	0.000 000	-0.001
	100 %	+50	2501 009 993	-2.9	0.000 000	-0.001
	Batt. Endpoint	+20	2501 009 994	-1.7	0.000 000	-0.001
2685.000	100 %	+20(Ref)	2685 000 000	0.0	0.000 000	0.000
	100 %	-30	2685 000 000	-0.7	0.000 000	0.000
	100 %	-20	2684 999 997	-3.2	0.000 000	-0.001
	100 %	-10	2685 000 002	2.1	0.000 000	0.001
	100 %	0	2684 999 998	-2.5	0.000 000	-0.001
	100 %	+10	2684 999 998	-2.8	0.000 000	-0.001
	100 %	+30	2684 999 998	-2.8	0.000 000	-0.001
	100 %	+40	2685 000 002	1.7	0.000 000	0.001
	100 %	+50	2685 000 005	4.2	0.000 000	0.002
	Batt. Endpoint	+20	2685 000 001	0.4	0.000 000	0.000

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2503.500	100 %	+20(Ref)	2503 499 996	0.0	0.000 000	0.000
	100 %	-30	2503 499 994	-2.9	0.000 000	-0.001
	100 %	-20	2503 499 990	-6.1	0.000 000	-0.002
	100 %	-10	2503 499 997	0.3	0.000 000	0.000
	100 %	0	2503 499 993	-3.0	0.000 000	-0.001
	100 %	+10	2503 499 990	-6.7	0.000 000	-0.003
	100 %	+30	2503 499 992	-4.3	0.000 000	-0.002
	100 %	+40	2503 499 993	-3.0	0.000 000	-0.001
	100 %	+50	2503 499 985	-11.0	0.000 000	-0.004
	Batt. Endpoint	+20	2503 499 990	-6.9	0.000 000	-0.003
2682.480	100 %	+20(Ref)	2682 479 996	0.0	0.000 000	0.000
	100 %	-30	2682 479 994	-2.5	0.000 000	-0.001
	100 %	-20	2682 479 993	-3.5	0.000 000	-0.001
	100 %	-10	2682 479 994	-2.5	0.000 000	-0.001
	100 %	0	2682 479 992	-4.5	0.000 000	-0.002
	100 %	+10	2682 479 990	-6.2	0.000 000	-0.002
	100 %	+30	2682 479 994	-2.2	0.000 000	-0.001
	100 %	+40	2682 479 996	0.0	0.000 000	0.000
	100 %	+50	2682 479 991	-5.3	0.000 000	-0.002
	Batt. Endpoint	+20	2682 479 993	-3.2	0.000 000	-0.001

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2506.020	100 %	+20(Ref)	2506 019 995	0.0	0.000 000	0.000
	100 %	-30	2506 019 993	-2.0	0.000 000	-0.001
	100 %	-20	2506 019 994	-0.9	0.000 000	0.000
	100 %	-10	2506 019 992	-3.0	0.000 000	-0.001
	100 %	0	2506 019 992	-3.2	0.000 000	-0.001
	100 %	+10	2506 019 992	-3.7	0.000 000	-0.001
	100 %	+30	2506 019 993	-1.9	0.000 000	-0.001
	100 %	+40	2506 019 993	-2.5	0.000 000	-0.001
	100 %	+50	2506 019 991	-4.0	0.000 000	-0.002
	Batt. Endpoint	+20	2506 019 991	-4.8	0.000 000	-0.002
2679.990	100 %	+20(Ref)	2679 989 996	0.0	0.000 000	0.000
	100 %	-30	2679 989 995	-1.7	0.000 000	-0.001
	100 %	-20	2679 989 994	-1.9	0.000 000	-0.001
	100 %	-10	2679 989 996	-0.8	0.000 000	0.000
	100 %	0	2679 989 994	-2.5	0.000 000	-0.001
	100 %	+10	2679 989 996	-0.2	0.000 000	0.000
	100 %	+30	2679 989 994	-2.2	0.000 000	-0.001
	100 %	+40	2679 989 993	-3.7	0.000 000	-0.001
	100 %	+50	2679 989 993	-3.5	0.000 000	-0.001
	Batt. Endpoint	+20	2679 989 994	-2.7	0.000 000	-0.001

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2508.510	100 %	+20(Ref)	2508 509 996	0.0	0.000 000	0.000
	100 %	-30	2508 509 996	-0.3	0.000 000	0.000
	100 %	-20	2508 509 995	-1.8	0.000 000	-0.001
	100 %	-10	2508 509 993	-3.8	0.000 000	-0.002
	100 %	0	2508 509 996	-0.8	0.000 000	0.000
	100 %	+10	2508 509 995	-1.5	0.000 000	-0.001
	100 %	+30	2508 509 995	-1.7	0.000 000	-0.001
	100 %	+40	2508 509 996	-0.4	0.000 000	0.000
	100 %	+50	2508 509 994	-2.2	0.000 000	-0.001
	Batt. Endpoint	+20	2508 509 995	-1.2	0.000 000	0.000
2677.500	100 %	+20(Ref)	2677 499 996	0.0	0.000 000	0.000
	100 %	-30	2677 499 995	-0.9	0.000 000	0.000
	100 %	-20	2677 499 996	-0.4	0.000 000	0.000
	100 %	-10	2677 499 998	1.8	0.000 000	0.001
	100 %	0	2677 499 997	0.9	0.000 000	0.000
	100 %	+10	2677 499 995	-1.0	0.000 000	0.000
	100 %	+30	2677 499 996	-0.2	0.000 000	0.000
	100 %	+40	2677 499 996	-0.2	0.000 000	0.000
	100 %	+50	2677 499 993	-2.9	0.000 000	-0.001
	Batt. Endpoint	+20	2677 499 998	1.8	0.000 000	0.001

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2511.000	100 %	+20(Ref)	2510 999 996	0.0	0.000 000	0.000
	100 %	-30	2510 999 993	-3.7	0.000 000	-0.001
	100 %	-20	2510 999 997	1.2	0.000 000	0.000
	100 %	-10	2510 999 994	-2.6	0.000 000	-0.001
	100 %	0	2510 999 995	-0.9	0.000 000	0.000
	100 %	+10	2510 999 996	-0.6	0.000 000	0.000
	100 %	+30	2510 999 995	-1.5	0.000 000	-0.001
	100 %	+40	2510 999 994	-2.6	0.000 000	-0.001
	100 %	+50	2510 999 993	-2.8	0.000 000	-0.001
	Batt. Endpoint	+20	2510 999 995	-1.0	0.000 000	0.000
2674.980	100 %	+20(Ref)	2674 979 996	0.0	0.000 000	0.000
	100 %	-30	2674 979 992	-4.3	0.000 000	-0.002
	100 %	-20	2674 979 990	-6.0	0.000 000	-0.002
	100 %	-10	2674 979 996	-0.7	0.000 000	0.000
	100 %	0	2674 979 991	-5.1	0.000 000	-0.002
	100 %	+10	2674 979 991	-5.0	0.000 000	-0.002
	100 %	+30	2674 979 992	-4.3	0.000 000	-0.002
	100 %	+40	2674 979 993	-3.7	0.000 000	-0.001
	100 %	+50	2674 979 995	-1.5	0.000 000	-0.001
	Batt. Endpoint	+20	2674 979 992	-3.9	0.000 000	-0.001

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2516.010	100 %	+20(Ref)	2516 009 998	0.0	0.000 000	0.000
	100 %	-30	2516 009 996	-1.3	0.000 000	-0.001
	100 %	-20	2516 009 996	-1.4	0.000 000	-0.001
	100 %	-10	2516 009 995	-2.9	0.000 000	-0.001
	100 %	0	2516 009 996	-1.6	0.000 000	-0.001
	100 %	+10	2516 010 000	2.5	0.000 000	0.001
	100 %	+30	2516 009 993	-4.9	0.000 000	-0.002
	100 %	+40	2516 009 993	-4.9	0.000 000	-0.002
	100 %	+50	2516 009 994	-3.6	0.000 000	-0.001
	Batt. Endpoint	+20	2516 009 992	-6.0	0.000 000	-0.002
2670.000	100 %	+20(Ref)	2670 000 001	0.0	0.000 000	0.000
	100 %	-30	2669 999 997	-3.5	0.000 000	-0.001
	100 %	-20	2669 999 997	-4.0	0.000 000	-0.001
	100 %	-10	2669 999 999	-1.9	0.000 000	-0.001
	100 %	0	2670 000 001	0.5	0.000 000	0.000
	100 %	+10	2670 000 005	3.6	0.000 000	0.001
	100 %	+30	2669 999 999	-1.4	0.000 000	-0.001
	100 %	+40	2670 000 000	-1.0	0.000 000	0.000
	100 %	+50	2670 000 000	-0.9	0.000 000	0.000
	Batt. Endpoint	+20	2670 000 000	-0.9	0.000 000	0.000

- ▣ BandWidth: 50 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2521.020	100 %	+20(Ref)	2521 019 998	0.0	0.000 000	0.000
	100 %	-30	2521 019 997	-1.0	0.000 000	0.000
	100 %	-20	2521 019 998	0.3	0.000 000	0.000
	100 %	-10	2521 019 998	0.0	0.000 000	0.000
	100 %	0	2521 019 998	-0.1	0.000 000	0.000
	100 %	+10	2521 019 997	-1.3	0.000 000	-0.001
	100 %	+30	2521 019 995	-3.3	0.000 000	-0.001
	100 %	+40	2521 019 997	-0.9	0.000 000	0.000
	100 %	+50	2521 019 996	-2.3	0.000 000	-0.001
	Batt. Endpoint	+20	2521 019 994	-4.3	0.000 000	-0.002
2664.990	100 %	+20(Ref)	2664 989 997	0.0	0.000 000	0.000
	100 %	-30	2664 989 994	-3.5	0.000 000	-0.001
	100 %	-20	2664 989 992	-5.1	0.000 000	-0.002
	100 %	-10	2664 989 997	0.1	0.000 000	0.000
	100 %	0	2664 989 996	-1.3	0.000 000	0.000
	100 %	+10	2664 989 997	-0.5	0.000 000	0.000
	100 %	+30	2664 989 996	-1.4	0.000 000	-0.001
	100 %	+40	2664 989 992	-4.7	0.000 000	-0.002
	100 %	+50	2664 989 999	2.0	0.000 000	0.001
	Batt. Endpoint	+20	2664 989 995	-2.1	0.000 000	-0.001

- ▣ BandWidth: 60 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2526.000	100 %	+20(Ref)	2525 999 995	0.0	0.000 000	0.000
	100 %	-30	2525 999 989	-5.9	0.000 000	-0.002
	100 %	-20	2525 999 992	-3.3	0.000 000	-0.001
	100 %	-10	2525 999 993	-2.6	0.000 000	-0.001
	100 %	0	2525 999 992	-3.7	0.000 000	-0.001
	100 %	+10	2525 999 989	-6.1	0.000 000	-0.002
	100 %	+30	2525 999 997	1.3	0.000 000	0.001
	100 %	+40	2525 999 990	-5.1	0.000 000	-0.002
	100 %	+50	2525 999 993	-2.4	0.000 000	-0.001
	Batt. Endpoint	+20	2525 999 993	-2.6	0.000 000	-0.001
2659.980	100 %	+20(Ref)	2659 980 000	0.0	0.000 000	0.000
	100 %	-30	2659 980 002	1.2	0.000 000	0.000
	100 %	-20	2659 980 001	0.4	0.000 000	0.000
	100 %	-10	2659 980 000	-0.7	0.000 000	0.000
	100 %	0	2659 979 999	-1.9	0.000 000	-0.001
	100 %	+10	2659 979 996	-4.8	0.000 000	-0.002
	100 %	+30	2659 980 002	1.9	0.000 000	0.001
	100 %	+40	2659 979 998	-2.2	0.000 000	-0.001
	100 %	+50	2659 979 997	-3.2	0.000 000	-0.001
	Batt. Endpoint	+20	2659 979 996	-4.0	0.000 000	-0.001

- ▣ BandWidth: 70 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2531.010	100 %	+20(Ref)	2531 009 999	0.0	0.000 000	0.000
	100 %	-30	2531 009 998	-0.9	0.000 000	0.000
	100 %	-20	2531 009 998	-0.9	0.000 000	0.000
	100 %	-10	2531 009 999	0.0	0.000 000	0.000
	100 %	0	2531 009 995	-4.3	0.000 000	-0.002
	100 %	+10	2531 009 997	-1.7	0.000 000	-0.001
	100 %	+30	2531 009 997	-2.2	0.000 000	-0.001
	100 %	+40	2531 009 999	0.0	0.000 000	0.000
	100 %	+50	2531 009 995	-4.3	0.000 000	-0.002
	Batt. Endpoint	+20	2531 009 999	0.2	0.000 000	0.000
2655.000	100 %	+20(Ref)	2654 999 998	0.0	0.000 000	0.000
	100 %	-30	2654 999 999	0.6	0.000 000	0.000
	100 %	-20	2654 999 995	-3.4	0.000 000	-0.001
	100 %	-10	2654 999 999	0.4	0.000 000	0.000
	100 %	0	2654 999 999	1.2	0.000 000	0.000
	100 %	+10	2654 999 997	-1.1	0.000 000	0.000
	100 %	+30	2654 999 997	-1.6	0.000 000	-0.001
	100 %	+40	2654 999 998	-0.1	0.000 000	0.000
	100 %	+50	2655 000 000	2.1	0.000 000	0.001
	Batt. Endpoint	+20	2654 999 995	-3.6	0.000 000	-0.001

- ▣ BandWidth: 80 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2536.020	100 %	+20(Ref)	2536 020 001	0.0	0.000 000	0.000
	100 %	-30	2536 020 000	-0.4	0.000 000	0.000
	100 %	-20	2536 020 003	2.1	0.000 000	0.001
	100 %	-10	2536 020 002	1.7	0.000 000	0.001
	100 %	0	2536 020 002	1.6	0.000 000	0.001
	100 %	+10	2536 020 002	1.6	0.000 000	0.001
	100 %	+30	2536 020 002	1.4	0.000 000	0.001
	100 %	+40	2536 020 002	1.4	0.000 000	0.001
	100 %	+50	2536 019 999	-1.8	0.000 000	-0.001
	Batt. Endpoint	+20	2536 020 004	3.7	0.000 000	0.001
2649.990	100 %	+20(Ref)	2649 989 994	0.0	0.000 000	0.000
	100 %	-30	2649 989 992	-2.4	0.000 000	-0.001
	100 %	-20	2649 989 992	-2.4	0.000 000	-0.001
	100 %	-10	2649 989 988	-5.9	0.000 000	-0.002
	100 %	0	2649 989 990	-3.9	0.000 000	-0.001
	100 %	+10	2649 989 989	-4.9	0.000 000	-0.002
	100 %	+30	2649 989 988	-5.7	0.000 000	-0.002
	100 %	+40	2649 989 988	-6.1	0.000 000	-0.002
	100 %	+50	2649 989 986	-7.8	0.000 000	-0.003
	Batt. Endpoint	+20	2649 989 990	-4.2	0.000 000	-0.002

▣ BandWidth:	<u>90 MHz</u>
▣ Voltage(100 %):	<u>3.880 VDC</u>
▣ Batt. Endpoint:	<u>3.300 VDC</u>
▣ LIMIT:	<u>Emission must remain in band</u>

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2541.000	100 %	+20(Ref)	2540 999 997	0.0	0.000 000	0.000
	100 %	-30	2540 999 995	-2.7	0.000 000	-0.001
	100 %	-20	2540 999 994	-2.8	0.000 000	-0.001
	100 %	-10	2540 999 997	-0.2	0.000 000	0.000
	100 %	0	2540 999 994	-3.4	0.000 000	-0.001
	100 %	+10	2540 999 997	-0.3	0.000 000	0.000
	100 %	+30	2540 999 993	-4.1	0.000 000	-0.002
	100 %	+40	2540 999 994	-3.4	0.000 000	-0.001
	100 %	+50	2540 999 995	-2.5	0.000 000	-0.001
	Batt. Endpoint	+20	2540 999 996	-1.4	0.000 000	-0.001
2644.980	100 %	+20(Ref)	2644 979 994	0.0	0.000 000	0.000
	100 %	-30	2644 979 989	-4.4	0.000 000	-0.002
	100 %	-20	2644 979 991	-2.9	0.000 000	-0.001
	100 %	-10	2644 979 988	-5.8	0.000 000	-0.002
	100 %	0	2644 979 988	-5.7	0.000 000	-0.002
	100 %	+10	2644 979 988	-5.4	0.000 000	-0.002
	100 %	+30	2644 979 991	-2.6	0.000 000	-0.001
	100 %	+40	2644 979 988	-5.4	0.000 000	-0.002
	100 %	+50	2644 979 989	-4.4	0.000 000	-0.002
	Batt. Endpoint	+20	2644 979 991	-3.2	0.000 000	-0.001

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2546.010	100 %	+20(Ref)	2546 010 002	0.0	0.000 000	0.000
	100 %	-30	2546 010 002	0.6	0.000 000	0.000
	100 %	-20	2546 010 001	-1.0	0.000 000	0.000
	100 %	-10	2546 010 000	-1.7	0.000 000	-0.001
	100 %	0	2546 010 005	3.6	0.000 000	0.001
	100 %	+10	2546 010 002	0.4	0.000 000	0.000
	100 %	+30	2546 010 003	1.1	0.000 000	0.000
	100 %	+40	2546 010 002	0.1	0.000 000	0.000
	100 %	+50	2546 010 002	0.1	0.000 000	0.000
	Batt. Endpoint	+20	2546 010 002	0.3	0.000 000	0.000
2640.000	100 %	+20(Ref)	2640 000 000	0.0	0.000 000	0.000
	100 %	-30	2640 000 003	2.4	0.000 000	0.001
	100 %	-20	2640 000 006	5.4	0.000 000	0.002
	100 %	-10	2640 000 000	-0.6	0.000 000	0.000
	100 %	0	2640 000 001	0.5	0.000 000	0.000
	100 %	+10	2640 000 002	1.5	0.000 000	0.001
	100 %	+30	2640 000 002	1.5	0.000 000	0.001
	100 %	+40	2639 999 999	-0.9	0.000 000	0.000
	100 %	+50	2640 000 000	-0.4	0.000 000	0.000
	Batt. Endpoint	+20	2640 000 000	-0.3	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	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2501.010	Sub6 n41(38) / 10 MHz [30 kHz]	PI/2 BPSK	-21.80	15.00	10.61	2.50	H	< 2.00	0.205	23.11	1	12
		QPSK	-21.81	14.99	10.61	2.50	H		0.204	23.10		
		16-QAM	-23.01	13.79	10.61	2.50	H		0.155	21.90		
		64-QAM	-24.29	12.51	10.61	2.50	H		0.115	20.62		
		256-QAM	-26.71	10.09	10.61	2.50	H		0.066	18.20		
2592.990		PI/2 BPSK	-21.40	15.31	11.00	2.55	H		0.238	23.76	1	1
		QPSK	-28.62	8.09	11.00	2.55	H		0.045	16.54		
		16-QAM	-22.69	14.02	11.00	2.55	H		0.177	22.47		
		64-QAM	-24.23	12.48	11.00	2.55	H		0.124	20.93		
		256-QAM	-26.43	10.28	11.00	2.55	H		0.075	18.73		
2685.000		PI/2 BPSK	-22.61	14.95	10.82	2.61	H		0.207	23.16	1	12
		QPSK	-22.64	14.92	10.82	2.61	H		0.206	23.13		
		16-QAM	-23.82	13.74	10.82	2.61	H		0.157	21.95		
		64-QAM	-25.21	12.35	10.82	2.61	H		0.114	20.56		
		256-QAM	-27.41	10.15	10.82	2.61	H		0.069	18.36		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2503.500		PI/2 BPSK	-21.75	15.11	10.58	2.51	H		0.208	23.18	1	36
		QPSK	-21.76	15.10	10.58	2.51	H		0.208	23.17		
		16-QAM	-22.91	13.95	10.58	2.51	H		0.159	22.02		
		64-QAM	-24.36	12.50	10.58	2.51	H		0.114	20.57		
		256-QAM	-26.57	10.29	10.58	2.51	H		0.069	18.36		
2592.990	Sub6 n41(38) / 15 MHz [30 kHz]	PI/2 BPSK	-21.56	15.15	11.00	2.55	H	< 2.00	0.229	23.60	1	1
		QPSK	-21.64	15.07	11.00	2.55	H		0.225	23.52		
		16-QAM	-22.92	13.79	11.00	2.55	H		0.168	22.24		
		64-QAM	-24.16	12.55	11.00	2.55	H		0.126	21.00		
		256-QAM	-26.52	10.19	11.00	2.55	H		0.073	18.64		
2682.480		PI/2 BPSK	-22.55	15.12	10.84	2.61	H		0.216	23.35	1	1
		QPSK	-22.63	15.04	10.84	2.61	H		0.212	23.27		
		16-QAM	-23.84	13.83	10.84	2.61	H		0.161	22.06		
		64-QAM	-25.09	12.58	10.84	2.61	H		0.121	20.81		
		256-QAM	-27.43	10.24	10.84	2.61	H		0.070	18.47		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2506.020		PI/2 BPSK	-21.56	15.30	10.58	2.51	H		0.217	23.37	1	49
		QPSK	-21.66	15.20	10.58	2.51	H		0.212	23.27		
		16-QAM	-22.83	14.03	10.58	2.51	H		0.162	22.10		
		64-QAM	-24.25	12.61	10.58	2.51	H		0.117	20.68		
		256-QAM	-26.52	10.34	10.58	2.51	H		0.069	18.41		
2592.990	Sub6 n41(38) / 20 MHz [30 kHz]	PI/2 BPSK	-21.77	14.94	11.00	2.55	H	< 2.00	0.218	23.39	1	25
		QPSK	-21.81	14.90	11.00	2.55	H		0.216	23.35		
		16-QAM	-23.01	13.70	11.00	2.55	H		0.164	22.15		
		64-QAM	-24.31	12.40	11.00	2.55	H		0.122	20.85		
		256-QAM	-26.63	10.08	11.00	2.55	H		0.071	18.53		
2679.990		PI/2 BPSK	-22.80	14.87	10.84	2.61	H		0.204	23.10	1	1
		QPSK	-22.85	14.82	10.84	2.61	H		0.202	23.05		
		16-QAM	-23.93	13.74	10.84	2.61	H		0.157	21.97		
		64-QAM	-25.23	12.44	10.84	2.61	H		0.117	20.67		
		256-QAM	-27.64	10.03	10.84	2.61	H		0.067	18.26		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2508.510		PI/2 BPSK	-21.66	15.26	10.55	2.51	H		0.214	23.30	1	63
		QPSK	-21.76	15.16	10.55	2.51	H		0.209	23.20		
		16-QAM	-22.99	13.93	10.55	2.51	H		0.157	21.97		
		64-QAM	-24.42	12.50	10.55	2.51	H		0.113	20.54		
		256-QAM	-26.51	10.41	10.55	2.51	H		0.070	18.45		
2592.990	Sub6 n41(38) / 25 MHz [30 kHz]	PI/2 BPSK	-21.71	15.00	11.00	2.55	H	< 2.00	0.221	23.45	1	32
		QPSK	-21.74	14.97	11.00	2.55	H		0.220	23.42		
		16-QAM	-22.96	13.75	11.00	2.55	H		0.166	22.20		
		64-QAM	-24.32	12.39	11.00	2.55	H		0.121	20.84		
		256-QAM	-26.45	10.26	11.00	2.55	H		0.074	18.71		
2677.500		PI/2 BPSK	-22.64	15.03	10.84	2.61	H		0.212	23.26	1	1
		QPSK	-22.65	15.02	10.84	2.61	H		0.211	23.25		
		16-QAM	-23.89	13.78	10.84	2.61	H		0.159	22.01		
		64-QAM	-25.16	12.51	10.84	2.61	H		0.119	20.74		
		256-QAM	-27.41	10.26	10.84	2.61	H		0.071	18.49		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2511.000		PI/2 BPSK	-21.86	15.06	10.55	2.51	H		0.204	23.10	1	76
		QPSK	-21.85	15.07	10.55	2.51	H		0.205	23.11		
		16-QAM	-22.97	13.95	10.55	2.51	H		0.158	21.99		
		64-QAM	-24.35	12.57	10.55	2.51	H		0.115	20.61		
		256-QAM	-26.67	10.25	10.55	2.51	H		0.068	18.29		
2592.990	Sub6 n41(38) / 30 MHz [30 kHz]	PI/2 BPSK	-21.61	15.10	11.00	2.55	H	< 2.00	0.227	23.55	1	39
		QPSK	-21.75	14.96	11.00	2.55	H		0.219	23.41		
		16-QAM	-22.83	13.88	11.00	2.55	H		0.171	22.33		
		64-QAM	-24.29	12.42	11.00	2.55	H		0.122	20.87		
		256-QAM	-26.50	10.21	11.00	2.55	H		0.074	18.66		
2674.980		PI/2 BPSK	-22.41	14.88	10.85	2.62	H		0.205	23.11	1	1
		QPSK	-22.43	14.86	10.85	2.62	H		0.204	23.09		
		16-QAM	-23.57	13.72	10.85	2.62	H		0.157	21.95		
		64-QAM	-24.91	12.38	10.85	2.62	H		0.115	20.61		
		256-QAM	-27.25	10.04	10.85	2.62	H		0.067	18.27		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2516.010		PI/2 BPSK	-22.03	14.90	10.52	2.53	H		0.195	22.89	1	104
		QPSK	-22.04	14.89	10.52	2.53	H		0.194	22.88		
		16-QAM	-23.27	13.66	10.52	2.53	H		0.146	21.65		
		64-QAM	-24.51	12.42	10.52	2.53	H		0.110	20.41		
		256-QAM	-26.82	10.11	10.52	2.53	H		0.065	18.10		
2592.990	Sub6 n41(38) / 40 MHz [30 kHz]	-20.43	-21.70	15.01	11.00	2.55	H	< 2.00	0.222	23.46	1	53
		-20.50	-21.78	14.93	11.00	2.55	H		0.218	23.38		
		-21.70	-22.80	13.91	11.00	2.55	H		0.172	22.36		
		-22.96	-24.26	12.45	11.00	2.55	H		0.123	20.90		
		-25.24	-26.52	10.19	11.00	2.55	H		0.073	18.64		
2670.000		PI/2 BPSK	-22.12	14.78	10.87	2.62	H		0.201	23.03	1	1
		QPSK	-22.14	14.76	10.87	2.62	H		0.200	23.01		
		16-QAM	-23.38	13.52	10.87	2.62	H		0.150	21.77		
		64-QAM	-24.81	12.09	10.87	2.62	H		0.108	20.34		
		256-QAM	-26.94	9.96	10.87	2.62	H		0.066	18.21		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2521.020	Sub6 n41 / 50 MHz [30 kHz]	PI/2 BPSK	-22.09	14.84	10.49	2.54	H		0.190	22.79	1	131
		QPSK	-22.11	14.82	10.49	2.54	H		0.189	22.77		
		16-QAM	-23.28	13.65	10.49	2.54	H		0.145	21.60		
		64-QAM	-24.72	12.21	10.49	2.54	H		0.104	20.16		
		256-QAM	-26.93	10.00	10.49	2.54	H		0.062	17.95		
2592.990		-20.43	-21.65	15.06	11.00	2.55	H	< 2.00	0.224	23.51	1	66
		-20.50	-21.67	15.04	11.00	2.55	H		0.223	23.49		
		-21.70	-22.76	13.95	11.00	2.55	H		0.174	22.40		
		-22.96	-24.18	12.53	11.00	2.55	H		0.125	20.98		
		-25.24	-26.35	10.36	11.00	2.55	H		0.076	18.81		
2664.990		PI/2 BPSK	-21.99	14.96	10.88	2.64	H		0.209	23.20	1	1
		QPSK	-22.09	14.86	10.88	2.64	H		0.204	23.10		
		16-QAM	-23.30	13.65	10.88	2.64	H		0.155	21.89		
		64-QAM	-24.59	12.36	10.88	2.64	H		0.115	20.60		
		256-QAM	-26.83	10.12	10.88	2.64	H		0.069	18.36		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2526.000	Sub6 41/ 60 MHz [30 kHz]	PI/2 BPSK	-22.10	14.53	10.52	2.54	H		0.178	22.51	1	81
		QPSK	-22.20	14.43	10.52	2.54	H		0.174	22.41		
		16-QAM	-23.21	13.42	10.52	2.54	H		0.138	21.40		
		64-QAM	-24.59	12.04	10.52	2.54	H		0.101	20.02		
		256-QAM	-26.90	9.73	10.52	2.54	H		0.059	17.71		
2592.990		PI/2 BPSK	-21.94	14.77	11.00	2.55	H	< 2.00	0.210	23.22	1	81
		QPSK	-22.01	14.70	11.00	2.55	H		0.207	23.15		
		16-QAM	-23.01	13.70	11.00	2.55	H		0.164	22.15		
		64-QAM	-24.44	12.27	11.00	2.55	H		0.118	20.72		
		256-QAM	-26.65	10.06	11.00	2.55	H		0.071	18.51		
2659.980		PI/2 BPSK	-22.00	15.01	10.90	2.67	H		0.211	23.24	1	1
		QPSK	-22.01	15.00	10.90	2.67	H		0.210	23.23		
		16-QAM	-23.20	13.81	10.90	2.67	H		0.160	22.04		
		64-QAM	-24.47	12.54	10.90	2.67	H		0.119	20.77		
		256-QAM	-26.76	10.25	10.90	2.67	H		0.071	18.48		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2531.010	Sub6 41/ 70 MHz [30 kHz]	PI/2 BPSK	-21.98	14.35	10.56	2.54	H		0.173	22.37	1	187
		QPSK	-22.01	14.32	10.56	2.54	H		0.171	22.34		
		16-QAM	-23.08	13.25	10.56	2.54	H		0.134	21.27		
		64-QAM	-24.50	11.83	10.56	2.54	H		0.097	19.85		
		256-QAM	-26.71	9.62	10.56	2.54	H		0.058	17.64		
2592.990		PI/2 BPSK	-21.81	14.90	11.00	2.55	H	< 2.00	0.216	23.35	1	94
		QPSK	-21.82	14.89	11.00	2.55	H		0.216	23.34		
		16-QAM	-23.07	13.64	11.00	2.55	H		0.162	22.09		
		64-QAM	-24.45	12.26	11.00	2.55	H		0.118	20.71		
		256-QAM	-26.63	10.08	11.00	2.55	H		0.071	18.53		
2655.000		PI/2 BPSK	-21.74	15.17	10.91	2.68	H		0.219	23.40	1	1
		QPSK	-21.75	15.16	10.91	2.68	H		0.218	23.39		
		16-QAM	-22.84	14.07	10.91	2.68	H		0.170	22.30		
		64-QAM	-24.08	12.83	10.91	2.68	H		0.128	21.06		
		256-QAM	-26.35	10.56	10.91	2.68	H		0.076	18.79		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2536.020	Sub6 41/ 80 MHz [30 kHz]	PI/2 BPSK	-21.83	14.63	10.59	2.54	H		0.185	22.68	1	215
		QPSK	-21.92	14.54	10.59	2.54	H		0.182	22.59		
		16-QAM	-23.07	13.39	10.59	2.54	H		0.139	21.44		
		64-QAM	-24.46	12.00	10.59	2.54	H		0.101	20.05		
		256-QAM	-26.64	9.82	10.59	2.54	H		0.061	17.87		
2592.990		PI/2 BPSK	-21.84	14.87	11.00	2.55	H	< 2.00	0.215	23.32	1	108
		QPSK	-21.86	14.85	11.00	2.55	H		0.214	23.30		
		16-QAM	-23.00	13.71	11.00	2.55	H		0.164	22.16		
		64-QAM	-24.35	12.36	11.00	2.55	H		0.121	20.81		
		256-QAM	-26.49	10.22	11.00	2.55	H		0.074	18.67		
2649.990		PI/2 BPSK	-21.81	14.98	10.93	2.69	H		0.210	23.22	1	108
		QPSK	-21.83	14.96	10.93	2.69	H		0.209	23.20		
		16-QAM	-22.92	13.87	10.93	2.69	H		0.163	22.11		
		64-QAM	-24.31	12.48	10.93	2.69	H		0.118	20.72		
		256-QAM	-26.51	10.28	10.93	2.69	H		0.071	18.52		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2541.000	Sub6 41/ 90 MHz [30 kHz]	PI/2 BPSK	-21.58	15.00	10.62	2.53	H		0.204	23.09	1	243
		QPSK	-21.61	14.97	10.62	2.53	H		0.202	23.06		
		16-QAM	-22.70	13.88	10.62	2.53	H		0.157	21.97		
		64-QAM	-24.23	12.35	10.62	2.53	H		0.111	20.44		
		256-QAM	-26.56	10.02	10.62	2.53	H		0.065	18.11		
2592.990		PI/2 BPSK	-21.69	15.02	11.00	2.55	H	< 2.00	0.222	23.47	1	122
		QPSK	-21.75	14.96	11.00	2.55	H		0.219	23.41		
		16-QAM	-22.93	13.78	11.00	2.55	H		0.167	22.23		
		64-QAM	-24.32	12.39	11.00	2.55	H		0.121	20.84		
		256-QAM	-26.47	10.24	11.00	2.55	H		0.074	18.69		
2644.980		PI/2 BPSK	-21.65	15.46	10.95	2.68	H		0.236	23.73	1	1
		QPSK	-21.73	15.38	10.95	2.68	H		0.232	23.65		
		16-QAM	-22.85	14.26	10.95	2.68	H		0.179	22.53		
		64-QAM	-24.23	12.88	10.95	2.68	H		0.130	21.15		
		256-QAM	-26.43	10.68	10.95	2.68	H		0.079	18.95		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2546.010	Sub6 41/ 100 MHz [30 kHz]	PI/2 BPSK	-21.59	14.96	10.66	2.53	H		0.204	23.09	1	271
		QPSK	-21.66	14.89	10.66	2.53	H		0.200	23.02		
		16-QAM	-22.79	13.76	10.66	2.53	H		0.155	21.89		
		64-QAM	-24.03	12.52	10.66	2.53	H		0.116	20.65		
		256-QAM	-26.31	10.24	10.66	2.53	H		0.069	18.37		
2592.990		PI/2 BPSK	-21.70	15.01	11.00	2.55	H	< 2.00	0.222	23.46	1	136
		QPSK	-21.71	15.00	11.00	2.55	H		0.221	23.45		
		16-QAM	-22.93	13.78	11.00	2.55	H		0.167	22.23		
		64-QAM	-24.19	12.52	11.00	2.55	H		0.125	20.97		
		256-QAM	-26.51	10.20	11.00	2.55	H		0.073	18.65		
2640.000		PI/2 BPSK	-21.64	15.80	10.96	2.68	H		0.256	24.08	1	1
		QPSK	-21.69	15.75	10.96	2.68	H		0.253	24.03		
		16-QAM	-22.69	14.75	10.96	2.68	H		0.201	23.03		
		64-QAM	-24.16	13.28	10.96	2.68	H		0.143	21.56		
		256-QAM	-26.43	11.01	10.96	2.68	H		0.085	19.29		

9.2 RADIATED SPURIOUS EMISSIONS

NR Band:	<u>n41(38)</u>
Bandwidth:	<u>10 MHz</u>
Modulation:	<u>PI/2 BPSK</u>
Distance:	<u>1 meter</u>
SCS:	<u>30 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
500202 (2501.010)	5 002.02	-61.75	11.22	-63.46	3.71	V	-55.95	-25.00	1	12
	7 503.03	-62.94	11.54	-55.51	4.60	V	-48.57	-25.00		
	10 004.04	-56.96	11.47	-47.56	5.47	H	-41.56	-25.00		
518598 (2592.990)	5 185.98	-61.87	11.61	-63.04	3.80	V	-55.23	-25.00	1	1
	7 778.97	-63.50	11.26	-56.43	4.70	V	-49.87	-25.00		
	10 371.96	-63.50	11.68	-52.41	5.55	V	-46.28	-25.00		
537000 (2685.000)	5 370.00	-63.32	11.96	-64.95	3.92	V	-56.91	-25.00	1	12
	8 055.00	-62.53	11.24	-55.25	4.81	V	-48.82	-25.00		
	10 740.00	-63.05	11.55	-51.03	5.64	V	-45.12	-25.00		

☐ NR Band: n41(38)
☐ Bandwidth: 15 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
500700 (2503.500)	5 007.00	-62.20	11.20	-63.63	3.71	H	-56.14	-25.00	1	36
	7 510.50	-63.43	11.55	-55.89	4.60	H	-48.94	-25.00		
	10 014.00	-59.59	11.46	-50.20	5.47	H	-44.21	-25.00		
518598 (2592.990)	5 185.98	-62.00	11.61	-63.17	3.80	H	-55.36	-25.00	1	1
	7 778.97	-63.40	11.26	-56.33	4.70	H	-49.77	-25.00		
	10 371.96	-63.44	11.68	-52.35	5.55	H	-46.22	-25.00		
536496 (2682.480)	5 364.96	-64.54	11.95	-66.06	3.91	H	-58.02	-25.00	1	1
	8 047.44	-63.58	11.23	-56.36	4.81	H	-49.94	-25.00		
	10 729.92	-63.24	11.56	-51.17	5.65	H	-45.26	-25.00		

☐ NR Band: n41(38)
☐ Bandwidth: 20 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
501204 (2506.020)	5 012.04	-61.79	11.18	-62.93	3.72	H	-55.47	-25.00	1	49
	7 518.06	-63.04	11.56	-55.40	4.61	H	-48.45	-25.00		
	10 024.08	-58.93	11.46	-49.58	5.47	H	-43.59	-25.00		
518598 (2592.990)	5 185.98	-62.50	11.61	-63.67	3.80	H	-55.86	-25.00	1	25
	7 778.97	-63.44	11.26	-56.37	4.70	H	-49.81	-25.00		
	10 371.96	-63.51	11.68	-52.42	5.55	H	-46.29	-25.00		
535998 (2679.990)	5 359.98	-62.79	11.95	-64.22	3.90	H	-56.17	-25.00	1	1
	8 039.97	-62.44	11.22	-55.13	4.80	H	-48.71	-25.00		
	10 719.96	-63.81	11.56	-52.16	5.64	H	-46.24	-25.00		

- ▣ NR Band: n41(38)
- ▣ Bandwidth: 25 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
501702 (2508.510)	5 017.02	-62.20	11.17	-63.12	3.70	H	-55.65	-25.00	1	63
	7 525.53	-63.57	11.57	-55.92	4.61	H	-48.96	-25.00		
	10 034.04	-57.85	11.45	-48.61	5.48	H	-42.64	-25.00		
518598 (2592.990)	5 185.98	-63.18	11.61	-64.35	3.80	H	-56.54	-25.00	1	32
	7 778.97	-62.94	11.26	-55.87	4.70	H	-49.31	-25.00		
	10 371.96	-64.55	11.68	-53.46	5.55	H	-47.33	-25.00		
535500 (2677.500)	5 355.00	-64.51	11.94	-66.06	3.88	H	-58.00	-25.00	1	1
	8 032.50	-63.67	11.21	-56.38	4.80	H	-49.97	-25.00		
	10 710.00	-62.78	11.57	-51.06	5.65	H	-45.14	-25.00		

- ▣ NR Band: n41(38)
- ▣ Bandwidth: 30 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
502200 (2511.000)	5 022.00	-63.40	11.17	-64.10	3.69	H	-56.62	-25.00	1	76
	7 533.00	-62.78	11.57	-55.18	4.61	H	-48.22	-25.00		
	10 044.00	-60.40	11.44	-51.08	5.48	H	-45.12	-25.00		
518598 (2592.990)	5 185.98	-64.12	11.61	-65.29	3.80	H	-57.48	-25.00	1	39
	7 778.97	-64.57	11.26	-57.50	4.70	H	-50.94	-25.00		
	10 371.96	-62.93	11.68	-51.84	5.55	H	-45.71	-25.00		
534996 (2674.980)	5 349.96	-63.64	11.94	-65.33	3.85	H	-57.24	-25.00	1	1
	8 024.94	-63.48	11.20	-56.23	4.79	H	-49.82	-25.00		
	10 699.92	-63.55	11.57	-51.55	5.67	H	-45.65	-25.00		

- ▣ NR Band: n41(38)
- ▣ Bandwidth: 40 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
503202 (2516.010)	5 032.02	-63.42	11.19	-64.26	3.67	H	-56.74	-25.00	1	104
	7 548.03	-62.99	11.59	-55.62	4.63	H	-48.66	-25.00		
	10 064.04	-60.37	11.42	-51.15	5.47	H	-45.20	-25.00		
518598 (2592.990)	5 185.98	-63.48	11.61	-64.65	3.80	H	-56.84	-25.00	1	53
	7 778.97	-64.02	11.26	-56.95	4.70	H	-50.39	-25.00		
	10 371.96	-63.91	11.68	-52.82	5.55	H	-46.69	-25.00		
534000 (2670.000)	5 340.00	-62.58	11.93	-64.56	3.80	H	-56.43	-25.00	1	1
	8 010.00	-64.25	11.17	-56.93	4.77	H	-50.53	-25.00		
	10 680.00	-62.64	11.57	-50.06	5.71	H	-44.20	-25.00		

☐ NR Band: n41
☐ Bandwidth: 50 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
504204 (2521.020)	5 042.04	-62.60	11.20	-63.64	3.68	H	-56.12	-25.00	1	131
	7 563.06	-61.95	11.60	-54.42	4.64	H	-47.46	-25.00		
	10 084.08	-60.83	11.40	-51.60	5.46	H	-45.66	-25.00		
518598 (2592.990)	5 185.98	-62.43	11.61	-63.60	3.80	H	-55.79	-25.00	1	66
	7 778.97	-62.58	11.26	-55.51	4.70	H	-48.95	-25.00		
	10 371.96	-63.31	11.68	-52.22	5.55	H	-46.09	-25.00		
532998 (2664.990)	5 329.98	-63.91	11.92	-65.64	3.77	H	-57.49	-25.00	1	1
	7 994.97	-63.50	11.13	-55.95	4.77	H	-49.59	-25.00		
	10 659.96	-64.25	11.58	-51.85	5.67	H	-45.94	-25.00		

- ▣ NR Band: n41
- ▣ Bandwidth: 60 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
505200 (2526.000)	5 052.00	-63.06	11.22	-64.53	3.73	H	-57.04	-25.00	1	81
	7 578.00	-62.74	11.61	-55.08	4.65	H	-48.12	-25.00		
	10 104.00	-58.44	11.39	-48.88	5.46	H	-42.95	-25.00		
518598 (2592.990)	5 185.98	-64.00	11.61	-65.17	3.80	H	-57.36	-25.00	1	81
	7 778.97	-63.50	11.26	-56.43	4.70	H	-49.87	-25.00		
	10 371.96	-63.81	11.68	-52.72	5.55	H	-46.59	-25.00		
531996 (2659.980)	5 319.96	-63.27	11.91	-64.82	3.79	H	-56.70	-25.00	1	1
	7 979.94	-63.05	11.10	-55.35	4.79	H	-49.04	-25.00		
	10 639.92	-62.89	11.58	-50.51	5.61	H	-44.54	-25.00		

☐ NR Band: n41
☐ Bandwidth: 70 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meter
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
506202 (2531.010)	5 062.02	-64.17	11.24	-65.54	3.78	H	-58.08	-25.00	1	187
	7 593.03	-63.59	11.62	-56.31	4.64	H	-49.33	-25.00		
	10 124.04	-63.00	11.37	-53.31	5.47	H	-47.41	-25.00		
518598 (2592.990)	5 185.98	-63.18	11.61	-64.35	3.80	H	-56.54	-25.00	1	94
	7 778.97	-63.05	11.26	-55.98	4.70	H	-49.42	-25.00		
	10 371.96	-64.19	11.68	-53.10	5.55	H	-46.97	-25.00		
531000 (2655.000)	5 310.00	-64.10	11.91	-65.21	3.82	H	-57.12	-25.00	1	1
	7 965.00	-62.76	11.07	-54.94	4.80	H	-48.67	-25.00		
	10 620.00	-63.15	11.58	-51.11	5.65	H	-45.18	-25.00		

- ▣ NR Band: n41
- ▣ Bandwidth: 80 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
507204 (2536.020)	5 072.04	-63.65	11.25	-64.81	3.80	H	-57.36	-25.00	1	215
	7 608.06	-63.48	11.60	-56.60	4.64	H	-49.64	-25.00		
	10 144.08	-60.34	11.36	-50.73	5.48	H	-44.85	-25.00		
518598 (2592.990)	5 185.98	-62.64	11.61	-63.81	3.80	H	-56.00	-25.00	1	108
	7 778.97	-63.28	11.26	-56.21	4.70	H	-49.65	-25.00		
	10 371.96	-63.27	11.68	-52.18	5.55	H	-46.05	-25.00		
529998 (2649.990)	5 299.98	-63.50	11.90	-65.00	3.83	H	-56.93	-25.00	1	108
	7 949.97	-63.10	11.03	-55.45	4.78	H	-49.20	-25.00		
	10 599.96	-62.49	11.58	-51.20	5.67	H	-45.29	-25.00		

- ▣ NR Band: n41
- ▣ Bandwidth: 90 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meter
- ▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
508200 (2541.000)	5 082.00	-63.88	11.27	-64.68	3.81	H	-57.22	-25.00	1	243
	7 623.00	-64.89	11.57	-57.95	4.65	H	-51.03	-25.00		
	10 164.00	-58.00	11.34	-48.14	5.50	H	-42.30	-25.00		
518598 (2592.990)	5 185.98	-63.60	11.61	-64.77	3.80	H	-56.96	-25.00	1	122
	7 778.97	-65.15	11.26	-58.08	4.70	H	-51.52	-25.00		
	10 371.96	-64.31	11.68	-53.22	5.55	H	-47.09	-25.00		
528996 (2644.980)	5 289.96	-63.18	11.89	-64.76	3.83	H	-56.70	-25.00	1	1
	7 934.94	-62.48	11.01	-55.10	4.77	H	-48.86	-25.00		
	10 579.92	-63.50	11.62	-52.35	5.65	H	-46.38	-25.00		

■ NR Band: n41
 ■ Bandwidth: 100 MHz
 ■ Modulation: PI/2 BPSK
 ■ Distance: 1 meter
 ■ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
509202 (2546.010)	5 092.02	-62.41	11.29	-63.29	3.78	V	-55.78	-25.00	1	271
	7 638.03	-63.92	11.54	-56.95	4.68	V	-50.09	-25.00		
	10 184.04	-62.86	11.35	-52.82	5.52	V	-46.99	-25.00		
518598 (2592.990)	5 185.98	-62.30	11.61	-63.47	3.80	V	-55.66	-25.00	1	136
	7 778.97	-62.80	11.26	-55.73	4.70	V	-49.17	-25.00		
	10 371.96	-64.43	11.68	-53.34	5.55	V	-47.21	-25.00		
528000 (2640.000)	5 280.00	-62.68	11.88	-64.70	3.80	V	-56.62	-25.00	1	1
	7 920.00	-62.98	11.02	-55.56	4.77	V	-49.31	-25.00		
	10 560.00	-63.33	11.65	-52.39	5.63	V	-46.37	-25.00		

9.3 PEAK-TO-AVERAGE RATIO

Band / BandWidth	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n41(38) / 10 MHz	2592.990	BPSK	24	0	3.74
		QPSK			4.87
		16-QAM			5.70
		64-QAM			5.84
		256-QAM			6.46
Sub6 n41(38) / 15 MHz		BPSK	36		3.82
		QPSK			4.89
		16-QAM			5.66
		64-QAM			5.86
		256-QAM			6.36
Sub6 n41(38) / 20 MHz		BPSK	50		3.69
		QPSK			4.79
		16-QAM			5.63
		64-QAM			6.01
		256-QAM			6.54
Sub6 n41(38) / 25 MHz		BPSK	64		3.97
		QPSK			4.99
		16-QAM			5.64
		64-QAM			5.95
		256-QAM			6.53
Sub6 n41(38) / 30 MHz		BPSK	75		3.85
		QPSK			4.79
		16-QAM			5.62
		64-QAM			5.94
		256-QAM			6.42
Sub6 n41(38) / 40 MHz	BPSK	100	3.59		
	QPSK		4.92		
	16-QAM		5.56		
	64-QAM		5.89		
	256-QAM		6.34		

Sub6 n41 / 50 MHz	BPSK	128	3.79
	QPSK		4.91
	16-QAM		5.64
	64-QAM		5.87
	256-QAM		6.36
Sub6 n41 / 60 MHz	BPSK	162	4.24
	QPSK		5.11
	16-QAM		5.79
	64-QAM		6.09
	256-QAM		6.42
Sub6 n41 / 70 MHz	BPSK	180	3.85
	QPSK		4.94
	16-QAM		5.70
	64-QAM		5.99
	256-QAM		6.43
Sub6 n41 / 80 MHz	BPSK	216	3.81
	QPSK		4.94
	16-QAM		5.78
	64-QAM		6.01
	256-QAM		6.43
Sub6 n41 / 90 MHz	BPSK	243	3.81
	QPSK		4.91
	16-QAM		5.74
	64-QAM		6.02
	256-QAM		6.36
Sub6 n41 / 100 MHz	BPSK	270	3.94
	QPSK		5.02
	16-QAM		5.79
	64-QAM		6.04
	256-QAM		6.43

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 309 ~ 458.

9.4 OCCUPIED BANDWIDTH

Band / BandWidth	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n41(38) / 10 MHz	2592.990	BPSK	24	0	8.6554
		QPSK			8.7035
		16-QAM			8.7081
		64-QAM			8.7210
		256-QAM			8.6924
Sub6 n41(38) / 15 MHz		BPSK	36		12.989
		QPSK			13.045
		16-QAM			12.921
		64-QAM			12.962
		256-QAM			12.962
Sub6 n41(38) / 20 MHz		BPSK	50		17.973
		QPSK			17.963
		16-QAM			17.965
		64-QAM			18.016
		256-QAM			18.030
Sub6 n41(38) / 25 MHz		BPSK	64		22.985
		QPSK			23.007
		16-QAM			22.970
		64-QAM			23.039
		256-QAM			22.923
Sub6 n41(38) / 30 MHz		BPSK	75		26.936
		QPSK			26.897
		16-QAM			26.984
		64-QAM			26.899
		256-QAM			26.894
Sub6 n41(38) / 40 MHz	BPSK	100	35.877		
	QPSK		35.874		
	16-QAM		35.803		
	64-QAM		35.803		
	256-QAM		35.741		

Sub6 n41 / 50 MHz		BPSK	128		45.936
		QPSK			45.703
		16-QAM			45.810
		64-QAM			45.704
		256-QAM			45.804
Sub6 n41 / 60 MHz		BPSK	162		57.877
		QPSK			57.884
		16-QAM			57.876
		64-QAM			57.843
		256-QAM			57.986
Sub6 n41 / 70 MHz		BPSK	180		64.449
		QPSK			64.311
		16-QAM			64.357
		64-QAM			64.223
		256-QAM			64.476
Sub6 n41 / 80 MHz		BPSK	216		77.419
		QPSK			77.090
		16-QAM			77.182
		64-QAM			77.007
		256-QAM			77.249
Sub6 n41 / 90 MHz		BPSK	243		86.692
		QPSK			86.798
		16-QAM			86.624
		64-QAM			86.788
		256-QAM			86.744
Sub6 n41 / 100 MHz		BPSK	270		96.423
		QPSK			96.306
		16-QAM			96.580
		64-QAM			96.519
		256-QAM			96.359

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 459 ~ 518.

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)
Sub 6 n41(38) / 10	2501.010	8.8714	37.805	-73.305	-35.500	-25.00
	2592.990	9.7074	37.805	-74.629	-36.824	
	2685.000	3.9861	37.190	-73.716	-36.526	
Sub 6 n41(38) / 15	2503.500	9.3505	37.805	-74.236	-36.431	
	2592.990	8.8913	37.805	-74.430	-36.625	
	2682.480	9.9621	37.805	-74.784	-36.979	
Sub 6 n41(38) / 20	2506.020	8.9188	37.805	-74.603	-36.798	
	2592.990	8.2966	37.805	-74.647	-36.842	
	2679.990	9.1446	37.805	-74.560	-36.755	
Sub 6 n41(38) / 25	2508.510	3.8211	37.190	-74.246	-37.056	
	2592.990	9.3639	37.805	-74.717	-36.912	
	2677.500	8.8864	37.805	-74.152	-36.347	
Sub 6 n41(38) / 30	2511.000	9.4512	37.805	-74.034	-36.229	
	2592.990	4.0519	37.190	-74.435	-37.245	
	2674.980	9.1560	37.805	-74.402	-36.597	
Sub 6 n41(38) / 40	2516.010	8.8559	37.805	-74.844	-37.039	
	2592.990	4.0369	37.190	-74.382	-37.192	
	2670.000	9.1879	37.805	-74.416	-36.611	
Sub 6 n41 / 50	2521.020	4.9666	37.190	-74.848	-37.658	
	2592.990	4.0290	37.190	-73.682	-36.492	
	2664.990	4.0484	37.190	-74.907	-37.717	
Sub 6 n41 / 60	2526.000	8.2403	37.805	-74.679	-36.874	
	2592.990	9.1381	37.805	-74.624	-36.819	
	2659.980	9.9945	37.805	-74.632	-36.827	
Sub 6 n41 / 70	2531.010	9.1231	37.805	-74.398	-36.593	
	2592.990	7.7523	37.805	-74.360	-36.555	
	2655.000	7.4238	37.805	-74.521	-36.716	
Sub 6 n41 / 80	2536.020	9.6919	37.805	-74.421	-36.616	
	2592.990	4.9018	37.190	-74.326	-37.136	
	2649.990	8.2981	37.805	-74.934	-37.129	
Sub 6 n41 / 90	2541.000	8.0175	37.805	-74.190	-36.385	
	2592.990	8.8554	37.805	-74.709	-36.904	
	2644.980	6.0180	37.805	-74.885	-37.080	
Sub 6 n41 / 100	2546.010	8.8275	37.805	-74.911	-37.106	
	2592.990	3.7867	37.190	-74.744	-37.554	
	2640.000	7.9876	37.805	-74.634	-36.829	

9.6 CHANNEL EDGE

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	2 495 MHz ~ 2 496 MHz	C.E ~ (C.E +1MHz)	2 490.5 MHz ~ 2 495 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
10	2501.010	BPSK	Full RB	-22.59	-21.68	-22.78	-21.49	-26.24	-20.20	-35.44
15	2503.500	BPSK	Full RB	-22.58	-24.45	-23.88	-19.14	-26.35	-19.88	-35.20
20	2506.020	BPSK	Full RB	-23.29	-22.72	-24.09	-22.31	-26.78	-22.63	-38.04
25	2508.510	BPSK	Full RB	-21.14	-20.71	-21.41	-19.72	-26.03	-21.22	-37.48
30	2511.000	BPSK	Full RB	-24.37	-24.52	-26.54	-24.99	-29.31	-24.63	-36.78
40	2516.010	BPSK	Full RB	-22.57	-25.38	-25.81	-23.83	-26.32	-24.05	-37.53
50	2521.020	BPSK	Full RB	-24.08	-23.55	-26.31	-22.55	-26.70	-21.74	-36.70
60	2526.000	BPSK	Full RB	-19.37	-18.42	-29.37	-27.02	-29.84	-26.12	-41.19
70	2531.010	BPSK	Full RB	-23.54	-24.65	-25.84	-24.36	-27.83	-25.86	-40.99
80	2536.020	BPSK	Full RB	-24.67	-25.01	-29.48	-26.92	-32.18	-25.99	-43.43
90	2541.000	BPSK	Full RB	-22.48	-23.09	-26.08	-23.39	-27.18	-22.82	-37.77
100	2546.010	BPSK	Full RB	-23.00	-27.69	-30.07	-28.37	-32.73	-28.27	-46.86
Limit (dBm)				-13.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	C.E ~ (C.E $\pm$ 1 MHz)		(C.E $\pm$ 1 MHz) ~ (C.E $\pm$ 5 MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-21.54	-20.61	-21.69	-22.04
	2685.000	BPSK	Full RB	0	-20.96	-22.82	-20.51	-21.46
15 MHz	2592.990	BPSK	Full RB	0	-20.16	-23.43	-19.94	-22.76
	2682.480	BPSK	Full RB	0	-20.70	-26.29	-21.43	-24.89
20 MHz	2592.990	BPSK	Full RB	0	-19.12	-21.42	-19.19	-19.76
	2679.990	BPSK	Full RB	0	-21.01	-24.24	-22.80	-24.14
25 MHz	2592.990	BPSK	Full RB	0	-25.66	-27.31	-40.92	-41.66
	2677.500	BPSK	Full RB	0	-25.48	-26.96	-41.53	-45.27
30 MHz	2592.990	BPSK	Full RB	0	-22.35	-24.19	-37.94	-39.77
	2674.980	BPSK	Full RB	0	-26.60	-27.66	-39.18	-50.52
40 MHz	2592.990	BPSK	Full RB	0	-21.70	-27.34	-24.97	-27.13
	2670.000	BPSK	Full RB	0	-20.82	-21.49	-19.38	-22.98
50 MHz	2592.990	BPSK	Full RB	0	-22.03	-23.36	-24.91	-26.20
	2664.990	BPSK	Full RB	0	-20.89	-24.43	-24.88	-25.85
60 MHz	2592.990	BPSK	Full RB	0	-17.47	-18.92	-25.19	-25.47
	2659.980	BPSK	Full RB	0	-17.05	-18.90	-24.68	-25.64
70 MHz	2592.990	BPSK	Full RB	0	-29.11	-30.01	-50.35	-45.26
	2655.000	BPSK	Full RB	0	-25.39	-29.83	-49.10	-58.28
80 MHz	2592.990	BPSK	Full RB	0	-23.21	-26.75	-27.91	-28.58
	2649.990	BPSK	Full RB	0	-19.80	-25.13	-23.64	-26.59
90 MHz	2592.990	BPSK	Full RB	0	-21.90	-25.90	-26.27	-25.25
	2644.980	BPSK	Full RB	0	-19.98	-26.31	-24.16	-27.17
100 MHz	2592.990	BPSK	Full RB	0	-20.55	-30.38	-29.86	-30.83
	2640.000	BPSK	Full RB	0	-18.08	-28.20	-25.22	-28.79
Limit (dBm)					-10.0		-10.0	

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	(C.E $\pm$ 5 MHz) ~ (C.E $\pm$ X MHz)		Above (C.E $\pm$ X MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-23.15	-24.01	-33.70	-34.99
	2685.000	BPSK	Full RB	0	-21.29	-23.82	-34.74	-36.23
15 MHz	2592.990	BPSK	Full RB	0	-23.25	-19.39	-35.47	-38.00
	2682.480	BPSK	Full RB	0	-21.68	-23.71	-37.04	-38.81
20 MHz	2592.990	BPSK	Full RB	0	-24.90	-26.41	-34.34	-36.96
	2679.990	BPSK	Full RB	0	-23.40	-25.08	-39.58	-42.51
25 MHz	2592.990	BPSK	Full RB	0	-29.12	-27.80	-52.56	-48.44
	2649.990	BPSK	Full RB	0	-24.76	-27.99	-46.50	-58.38
30 MHz	2592.990	BPSK	Full RB	0	-27.22	-29.02	-58.82	-58.76
	2644.980	BPSK	Full RB	0	-24.05	-30.49	-47.24	-58.81
40 MHz	2592.990	BPSK	Full RB	0	-26.72	-28.93	-42.97	-42.29
	2670.000	BPSK	Full RB	0	-22.52	-25.88	-40.90	-58.47
50 MHz	2592.990	BPSK	Full RB	0	-25.47	-26.94	-40.91	-41.82
	2664.990	BPSK	Full RB	0	-28.13	-28.95	-43.94	-58.56
60 MHz	2592.990	BPSK	Full RB	0	-21.13	-23.45	-41.01	-41.44
	2659.980	BPSK	Full RB	0	-24.32	-26.73	-44.53	-58.58
70 MHz	2592.990	BPSK	Full RB	0	-29.11	-30.01	-50.35	-45.26
	2655.000	BPSK	Full RB	0	-25.39	-29.83	-49.10	-58.28
80 MHz	2592.990	BPSK	Full RB	0	-29.12	-27.80	-52.56	-48.44
	2649.990	BPSK	Full RB	0	-24.76	-27.99	-46.50	-58.38
90 MHz	2592.990	BPSK	Full RB	0	-27.22	-29.02	-58.82	-58.76
	2644.980	BPSK	Full RB	0	-24.05	-30.49	-47.24	-58.81
100 MHz	2592.990	BPSK	Full RB	0	-31.05	-30.38	-59.02	-58.78
	2640.000	BPSK	Full RB	0	-25.53	-29.77	-51.83	-58.92
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. Duty Cycle factor already applied on the factor.
 - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
 - Result(dBm) = Reading + Factor
 - Duty Cycle Factor(dB) = 6.99
4. Plots of the EUT's Channel Edge are shown Page 591 ~ 674. (1RB & Full RB)

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

BandWidth:	<u>10 MHz</u>
Voltage(100 %):	<u>3.880 VDC</u>
Batt. Endpoint:	<u>3.300 VDC</u>
LIMIT:	<u>Emission must remain in band</u>

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2501.010	100 %	+20(Ref)	2501 009 997	0.0	0.000 000	0.000
	100 %	-30	2501 009 992	-5.2	0.000 000	-0.002
	100 %	-20	2501 009 993	-4.2	0.000 000	-0.002
	100 %	-10	2501 009 993	-4.0	0.000 000	-0.002
	100 %	0	2501 009 991	-6.0	0.000 000	-0.002
	100 %	+10	2501 009 996	-1.0	0.000 000	0.000
	100 %	+30	2501 009 993	-3.9	0.000 000	-0.002
	100 %	+40	2501 009 990	-6.4	0.000 000	-0.003
	100 %	+50	2501 009 993	-3.8	0.000 000	-0.002
	Batt. Endpoint	+20	2501 009 994	-3.1	0.000 000	-0.001
2685.000	100 %	+20(Ref)	2684 999 998	0.0	0.000 000	0.000
	100 %	-30	2684 999 990	-7.4	0.000 000	-0.003
	100 %	-20	2684 999 994	-3.6	0.000 000	-0.001
	100 %	-10	2684 999 990	-7.3	0.000 000	-0.003
	100 %	0	2684 999 989	-8.7	0.000 000	-0.003
	100 %	+10	2684 999 992	-6.1	0.000 000	-0.002
	100 %	+30	2684 999 993	-4.3	0.000 000	-0.002
	100 %	+40	2684 999 994	-3.8	0.000 000	-0.001
	100 %	+50	2684 999 995	-2.7	0.000 000	-0.001
	Batt. Endpoint	+20	2684 999 993	-4.4	0.000 000	-0.002

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2503.500	100 %	+20(Ref)	2503 499 991	0.0	0.000 000	0.000
	100 %	-30	2503 499 985	-6.3	0.000 000	-0.003
	100 %	-20	2503 499 985	-6.8	0.000 000	-0.003
	100 %	-10	2503 499 986	-5.1	0.000 000	-0.002
	100 %	0	2503 499 983	-8.3	0.000 000	-0.003
	100 %	+10	2503 499 985	-6.3	0.000 000	-0.003
	100 %	+30	2503 499 983	-8.4	0.000 000	-0.003
	100 %	+40	2503 499 988	-3.3	0.000 000	-0.001
	100 %	+50	2503 499 987	-4.8	0.000 000	-0.002
	Batt. Endpoint	+20	2503 499 984	-7.1	0.000 000	-0.003
2682.480	100 %	+20(Ref)	2682 479 995	0.0	0.000 000	0.000
	100 %	-30	2682 479 988	-7.0	0.000 000	-0.003
	100 %	-20	2682 479 988	-6.5	0.000 000	-0.002
	100 %	-10	2682 479 987	-8.0	0.000 000	-0.003
	100 %	0	2682 479 989	-5.6	0.000 000	-0.002
	100 %	+10	2682 479 986	-8.7	0.000 000	-0.003
	100 %	+30	2682 479 988	-6.5	0.000 000	-0.002
	100 %	+40	2682 479 987	-7.6	0.000 000	-0.003
	100 %	+50	2682 479 986	-8.9	0.000 000	-0.003
	Batt. Endpoint	+20	2682 479 985	-9.1	0.000 000	-0.003

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2506.020	100 %	+20(Ref)	2506 019 996	0.0	0.000 000	0.000
	100 %	-30	2506 019 996	-0.2	0.000 000	0.000
	100 %	-20	2506 019 994	-2.0	0.000 000	-0.001
	100 %	-10	2506 019 993	-3.6	0.000 000	-0.001
	100 %	0	2506 019 994	-2.5	0.000 000	-0.001
	100 %	+10	2506 019 991	-4.7	0.000 000	-0.002
	100 %	+30	2506 019 993	-3.4	0.000 000	-0.001
	100 %	+40	2506 019 995	-1.6	0.000 000	-0.001
	100 %	+50	2506 019 993	-3.2	0.000 000	-0.001
	Batt. Endpoint	+20	2506 019 991	-5.4	0.000 000	-0.002
2679.990	100 %	+20(Ref)	2679 989 995	0.0	0.000 000	0.000
	100 %	-30	2679 989 990	-5.2	0.000 000	-0.002
	100 %	-20	2679 989 991	-4.5	0.000 000	-0.002
	100 %	-10	2679 989 991	-4.5	0.000 000	-0.002
	100 %	0	2679 989 986	-9.2	0.000 000	-0.003
	100 %	+10	2679 989 990	-5.7	0.000 000	-0.002
	100 %	+30	2679 989 991	-4.6	0.000 000	-0.002
	100 %	+40	2679 989 991	-4.6	0.000 000	-0.002
	100 %	+50	2679 989 989	-6.8	0.000 000	-0.003
	Batt. Endpoint	+20	2679 989 988	-6.9	0.000 000	-0.003

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2508.510	100 %	+20(Ref)	2508 509 996	0.0	0.000 000	0.000
	100 %	-30	2508 509 994	-2.9	0.000 000	-0.001
	100 %	-20	2508 509 991	-5.5	0.000 000	-0.002
	100 %	-10	2508 509 994	-2.3	0.000 000	-0.001
	100 %	0	2508 509 993	-3.7	0.000 000	-0.001
	100 %	+10	2508 509 992	-4.0	0.000 000	-0.002
	100 %	+30	2508 509 991	-5.7	0.000 000	-0.002
	100 %	+40	2508 509 994	-2.8	0.000 000	-0.001
	100 %	+50	2508 509 993	-3.3	0.000 000	-0.001
	Batt. Endpoint	+20	2508 509 990	-6.1	0.000 000	-0.002
2677.500	100 %	+20(Ref)	2677 499 992	0.0	0.000 000	0.000
	100 %	-30	2677 499 984	-8.3	0.000 000	-0.003
	100 %	-20	2677 499 987	-5.3	0.000 000	-0.002
	100 %	-10	2677 499 986	-6.1	0.000 000	-0.002
	100 %	0	2677 499 987	-5.4	0.000 000	-0.002
	100 %	+10	2677 499 986	-5.8	0.000 000	-0.002
	100 %	+30	2677 499 980	-12.7	0.000 000	-0.005
	100 %	+40	2677 499 987	-5.1	0.000 000	-0.002
	100 %	+50	2677 499 986	-6.7	0.000 000	-0.002
	Batt. Endpoint	+20	2677 499 986	-6.4	0.000 000	-0.002

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2511.000	100 %	+20(Ref)	2510 999 996	0.0	0.000 000	0.000
	100 %	-30	2510 999 993	-3.2	0.000 000	-0.001
	100 %	-20	2510 999 990	-6.8	0.000 000	-0.003
	100 %	-10	2510 999 990	-6.0	0.000 000	-0.002
	100 %	0	2510 999 990	-6.9	0.000 000	-0.003
	100 %	+10	2510 999 991	-5.6	0.000 000	-0.002
	100 %	+30	2510 999 991	-5.1	0.000 000	-0.002
	100 %	+40	2510 999 990	-6.7	0.000 000	-0.003
	100 %	+50	2510 999 991	-5.5	0.000 000	-0.002
	Batt. Endpoint	+20	2510 999 991	-5.6	0.000 000	-0.002
2674.980	100 %	+20(Ref)	2674 979 994	0.0	0.000 000	0.000
	100 %	-30	2674 979 987	-7.0	0.000 000	-0.003
	100 %	-20	2674 979 987	-7.0	0.000 000	-0.003
	100 %	-10	2674 979 989	-5.4	0.000 000	-0.002
	100 %	0	2674 979 988	-6.3	0.000 000	-0.002
	100 %	+10	2674 979 989	-5.2	0.000 000	-0.002
	100 %	+30	2674 979 986	-8.1	0.000 000	-0.003
	100 %	+40	2674 979 989	-5.2	0.000 000	-0.002
	100 %	+50	2674 979 987	-7.3	0.000 000	-0.003
	Batt. Endpoint	+20	2674 979 986	-8.3	0.000 000	-0.003

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2516.010	100 %	+20(Ref)	2516 009 997	0.0	0.000 000	0.000
	100 %	-30	2516 009 993	-3.2	0.000 000	-0.001
	100 %	-20	2516 009 994	-2.7	0.000 000	-0.001
	100 %	-10	2516 009 994	-3.2	0.000 000	-0.001
	100 %	0	2516 009 994	-2.4	0.000 000	-0.001
	100 %	+10	2516 009 992	-5.0	0.000 000	-0.002
	100 %	+30	2516 009 991	-5.4	0.000 000	-0.002
	100 %	+40	2516 009 996	-1.0	0.000 000	0.000
	100 %	+50	2516 009 994	-2.7	0.000 000	-0.001
	Batt. Endpoint	+20	2516 009 993	-3.8	0.000 000	-0.002
2670.000	100 %	+20(Ref)	2669 999 993	0.0	0.000 000	0.000
	100 %	-30	2669 999 992	-1.0	0.000 000	0.000
	100 %	-20	2669 999 989	-4.6	0.000 000	-0.002
	100 %	-10	2669 999 992	-1.2	0.000 000	0.000
	100 %	0	2669 999 988	-5.0	0.000 000	-0.002
	100 %	+10	2669 999 991	-2.7	0.000 000	-0.001
	100 %	+30	2669 999 986	-7.7	0.000 000	-0.003
	100 %	+40	2669 999 988	-5.5	0.000 000	-0.002
	100 %	+50	2669 999 989	-4.1	0.000 000	-0.002
	Batt. Endpoint	+20	2669 999 990	-2.8	0.000 000	-0.001

☐ BandWidth: 50 MHz
☐ Voltage(100 %): 3.880 VDC
☐ Batt. Endpoint: 3.300 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2521.020	100 %	+20(Ref)	2521 019 996	0.0	0.000 000	0.000
	100 %	-30	2521 019 994	-1.6	0.000 000	-0.001
	100 %	-20	2521 019 990	-5.4	0.000 000	-0.002
	100 %	-10	2521 019 994	-2.0	0.000 000	-0.001
	100 %	0	2521 019 996	0.3	0.000 000	0.000
	100 %	+10	2521 019 991	-4.9	0.000 000	-0.002
	100 %	+30	2521 019 993	-2.3	0.000 000	-0.001
	100 %	+40	2521 019 992	-4.1	0.000 000	-0.002
	100 %	+50	2521 019 993	-2.2	0.000 000	-0.001
	Batt. Endpoint	+20	2521 019 994	-1.3	0.000 000	-0.001
2664.990	100 %	+20(Ref)	2664 989 996	0.0	0.000 000	0.000
	100 %	-30	2664 989 989	-6.5	0.000 000	-0.002
	100 %	-20	2664 989 991	-5.1	0.000 000	-0.002
	100 %	-10	2664 989 989	-6.9	0.000 000	-0.003
	100 %	0	2664 989 993	-3.2	0.000 000	-0.001
	100 %	+10	2664 989 989	-6.4	0.000 000	-0.002
	100 %	+30	2664 989 991	-5.2	0.000 000	-0.002
	100 %	+40	2664 989 991	-4.6	0.000 000	-0.002
	100 %	+50	2664 989 992	-4.2	0.000 000	-0.002
	Batt. Endpoint	+20	2664 989 992	-4.3	0.000 000	-0.002

- ▣ BandWidth: 60 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2526.000	100 %	+20(Ref)	2525 999 996	0.0	0.000 000	0.000
	100 %	-30	2525 999 993	-2.7	0.000 000	-0.001
	100 %	-20	2525 999 993	-2.6	0.000 000	-0.001
	100 %	-10	2525 999 995	-0.7	0.000 000	0.000
	100 %	0	2525 999 992	-4.2	0.000 000	-0.002
	100 %	+10	2525 999 994	-2.5	0.000 000	-0.001
	100 %	+30	2525 999 992	-3.6	0.000 000	-0.001
	100 %	+40	2525 999 996	0.3	0.000 000	0.000
	100 %	+50	2525 999 992	-4.0	0.000 000	-0.002
	Batt. Endpoint	+20	2525 999 989	-6.6	0.000 000	-0.003
2659.980	100 %	+20(Ref)	2659 979 993	0.0	0.000 000	0.000
	100 %	-30	2659 979 989	-4.2	0.000 000	-0.002
	100 %	-20	2659 979 987	-6.6	0.000 000	-0.002
	100 %	-10	2659 979 986	-7.5	0.000 000	-0.003
	100 %	0	2659 979 986	-6.8	0.000 000	-0.003
	100 %	+10	2659 979 985	-8.5	0.000 000	-0.003
	100 %	+30	2659 979 987	-6.3	0.000 000	-0.002
	100 %	+40	2659 979 989	-4.6	0.000 000	-0.002
	100 %	+50	2659 979 986	-7.3	0.000 000	-0.003
	Batt. Endpoint	+20	2659 979 983	-10.1	0.000 000	-0.004

- ▣ BandWidth: 70 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2531.010	100 %	+20(Ref)	2531 010 000	0.0	0.000 000	0.000
	100 %	-30	2531 009 997	-2.1	0.000 000	-0.001
	100 %	-20	2531 009 997	-2.1	0.000 000	-0.001
	100 %	-10	2531 010 000	0.7	0.000 000	0.000
	100 %	0	2531 009 996	-3.9	0.000 000	-0.002
	100 %	+10	2531 009 998	-2.0	0.000 000	-0.001
	100 %	+30	2531 010 000	0.9	0.000 000	0.000
	100 %	+40	2531 009 997	-2.5	0.000 000	-0.001
	100 %	+50	2531 010 000	0.5	0.000 000	0.000
	Batt. Endpoint	+20	2531 009 997	-2.3	0.000 000	-0.001
2655.000	100 %	+20(Ref)	2654 999 993	0.0	0.000 000	0.000
	100 %	-30	2654 999 990	-3.2	0.000 000	-0.001
	100 %	-20	2654 999 988	-4.6	0.000 000	-0.002
	100 %	-10	2654 999 987	-5.6	0.000 000	-0.002
	100 %	0	2654 999 986	-6.7	0.000 000	-0.003
	100 %	+10	2654 999 985	-8.1	0.000 000	-0.003
	100 %	+30	2654 999 991	-2.1	0.000 000	-0.001
	100 %	+40	2654 999 990	-3.0	0.000 000	-0.001
	100 %	+50	2654 999 990	-3.1	0.000 000	-0.001
	Batt. Endpoint	+20	2654 999 991	-2.0	0.000 000	-0.001

- ▣ BandWidth: 80 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2536.020	100 %	+20(Ref)	2536 019 998	0.0	0.000 000	0.000
	100 %	-30	2536 019 997	-1.0	0.000 000	0.000
	100 %	-20	2536 019 996	-2.2	0.000 000	-0.001
	100 %	-10	2536 019 995	-3.3	0.000 000	-0.001
	100 %	0	2536 019 993	-4.6	0.000 000	-0.002
	100 %	+10	2536 019 993	-5.0	0.000 000	-0.002
	100 %	+30	2536 019 993	-5.3	0.000 000	-0.002
	100 %	+40	2536 019 995	-2.6	0.000 000	-0.001
	100 %	+50	2536 019 995	-3.2	0.000 000	-0.001
	Batt. Endpoint	+20	2536 019 996	-2.3	0.000 000	-0.001
2649.990	100 %	+20(Ref)	2649 989 993	0.0	0.000 000	0.000
	100 %	-30	2649 989 989	-4.3	0.000 000	-0.002
	100 %	-20	2649 989 985	-8.6	0.000 000	-0.003
	100 %	-10	2649 989 989	-4.5	0.000 000	-0.002
	100 %	0	2649 989 986	-7.4	0.000 000	-0.003
	100 %	+10	2649 989 987	-6.4	0.000 000	-0.002
	100 %	+30	2649 989 986	-7.2	0.000 000	-0.003
	100 %	+40	2649 989 985	-8.5	0.000 000	-0.003
	100 %	+50	2649 989 987	-6.6	0.000 000	-0.002
	Batt. Endpoint	+20	2649 989 985	-8.2	0.000 000	-0.003

- ▣ BandWidth: 90 MHz
- ▣ Voltage(100 %): 3.880 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2541.000	100 %	+20(Ref)	2540 999 993	0.0	0.000 000	0.000
	100 %	-30	2540 999 986	-7.4	0.000 000	-0.003
	100 %	-20	2540 999 985	-8.7	0.000 000	-0.003
	100 %	-10	2540 999 990	-3.5	0.000 000	-0.001
	100 %	0	2540 999 990	-3.5	0.000 000	-0.001
	100 %	+10	2540 999 989	-4.2	0.000 000	-0.002
	100 %	+30	2540 999 990	-3.7	0.000 000	-0.001
	100 %	+40	2540 999 991	-1.8	0.000 000	-0.001
	100 %	+50	2540 999 986	-7.3	0.000 000	-0.003
	Batt. Endpoint	+20	2540 999 987	-5.9	0.000 000	-0.002
2644.980	100 %	+20(Ref)	2644 979 997	0.0	0.000 000	0.000
	100 %	-30	2644 979 994	-3.0	0.000 000	-0.001
	100 %	-20	2644 979 992	-5.1	0.000 000	-0.002
	100 %	-10	2644 979 989	-7.6	0.000 000	-0.003
	100 %	0	2644 979 991	-6.0	0.000 000	-0.002
	100 %	+10	2644 979 991	-6.0	0.000 000	-0.002
	100 %	+30	2644 979 989	-7.7	0.000 000	-0.003
	100 %	+40	2644 979 992	-5.2	0.000 000	-0.002
	100 %	+50	2644 979 993	-4.2	0.000 000	-0.002
	Batt. Endpoint	+20	2644 979 990	-7.1	0.000 000	-0.003

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

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
2546.010	100 %	+20(Ref)	2546 009 998	0.0	0.000 000	0.000
	100 %	-30	2546 009 994	-3.7	0.000 000	-0.001
	100 %	-20	2546 009 996	-1.8	0.000 000	-0.001
	100 %	-10	2546 009 996	-1.8	0.000 000	-0.001
	100 %	0	2546 009 993	-5.6	0.000 000	-0.002
	100 %	+10	2546 009 997	-1.6	0.000 000	-0.001
	100 %	+30	2546 009 996	-2.6	0.000 000	-0.001
	100 %	+40	2546 009 997	-1.4	0.000 000	-0.001
	100 %	+50	2546 009 998	-0.3	0.000 000	0.000
	Batt. Endpoint	+20	2546 009 997	-1.1	0.000 000	0.000
2640.000	100 %	+20(Ref)	2639 999 995	0.0	0.000 000	0.000
	100 %	-30	2639 999 990	-4.7	0.000 000	-0.002
	100 %	-20	2639 999 990	-4.7	0.000 000	-0.002
	100 %	-10	2639 999 992	-3.5	0.000 000	-0.001
	100 %	0	2639 999 990	-4.7	0.000 000	-0.002
	100 %	+10	2639 999 989	-5.9	0.000 000	-0.002
	100 %	+30	2639 999 990	-5.5	0.000 000	-0.002
	100 %	+40	2639 999 991	-3.9	0.000 000	-0.001
	100 %	+50	2639 999 987	-8.0	0.000 000	-0.003
	Batt. Endpoint	+20	2639 999 987	-7.7	0.000 000	-0.003

9.8 UPLINK CARRIER AGGREGATION

Test Note

- All tests were evaluated for the two bands using various combinations of RB size, RB offset, modulation, and channel bandwidth.
- All modes of operation were investigated and the worst case configuration results are reported in this section. Please refer to the table below.
- The worst case is reported with the modulations, RB sizes and offsets.
 - N5A (Sub 1)-N41A (Sub 2)
 - (PCC - Modulation: BPSK, RB: 1, RB Offset: 1, SCC - Modulation: BPSK, RB: 1, RB Offset: 1)

Radiated Spurious Emissions

PCC	SCC	PCC		SCC	
		BW(MHz)	Channel	BW(MHz)	Channel
N5A (Sub 1)	N41A (Sub 2)	5	169300	100	52800

9.8.1 RADIATED SPURIOUS EMISSIONS

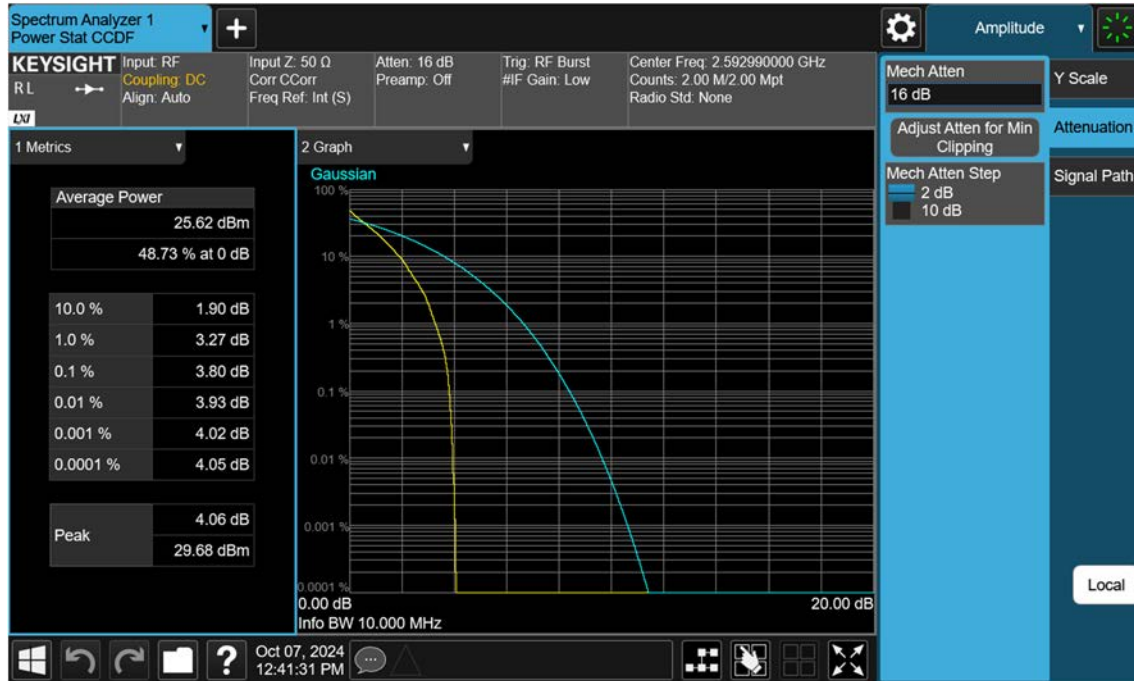
N5A (Sub 1) (PCC)- N41A (Sub 2) (SCC)

Freq.(MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit (dBm)
1 693.00	-58.09	9.91	-66.88	2.07	H	-59.04	-13.00
2 539.50	-59.68	10.62	-64.31	2.53	H	-56.22	-13.00
3 386.00	-61.23	11.50	-63.26	2.99	H	-54.75	-13.00

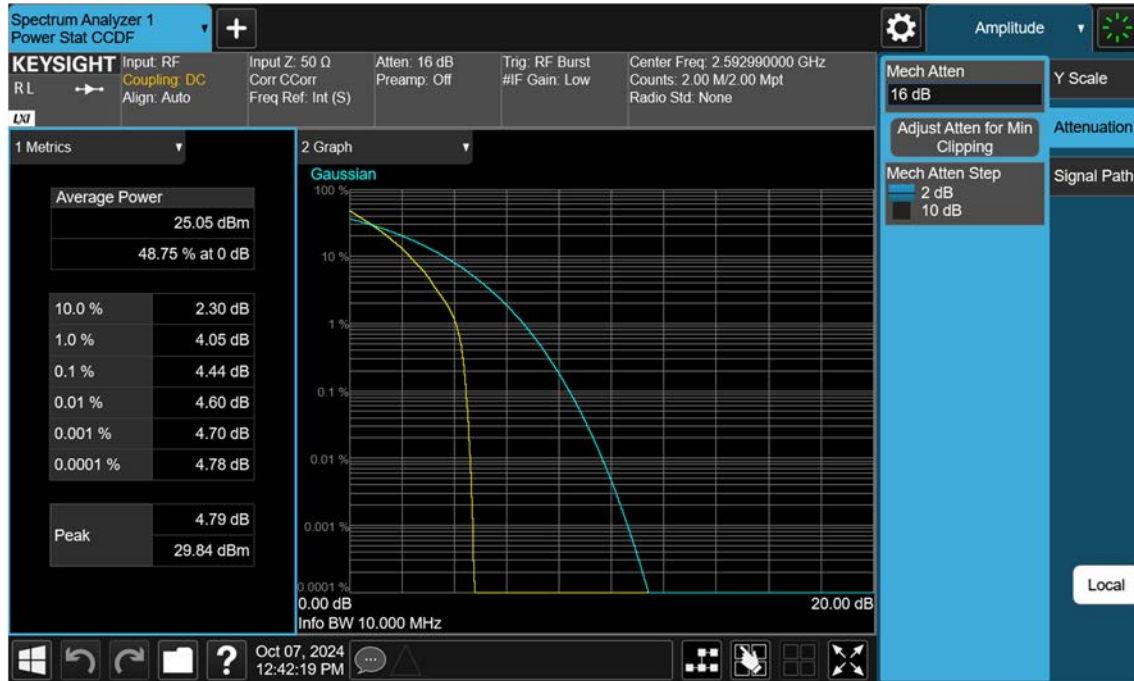
Freq.(MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit (dBm)
5 280.00	-64.13	11.88	-66.15	3.80	H	-58.07	-25.00
7 920.00	-62.83	11.02	-55.41	4.77	H	-49.16	-25.00
10 560.00	-64.10	11.65	-53.16	5.63	H	-47.14	-25.00

10. TEST PLOTS(Main 2 ANT)

NR41_10 M_PAR_Mid_BPSK_FullRB



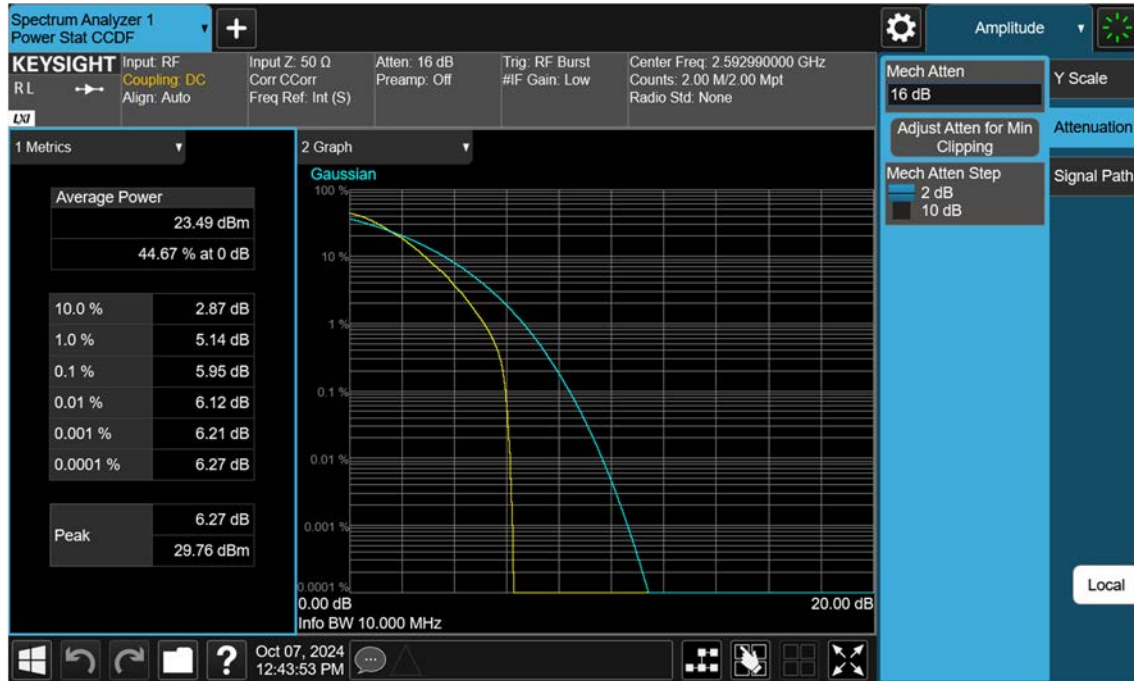
NR41_10 M_PAR_Mid_QPSK_FullRB



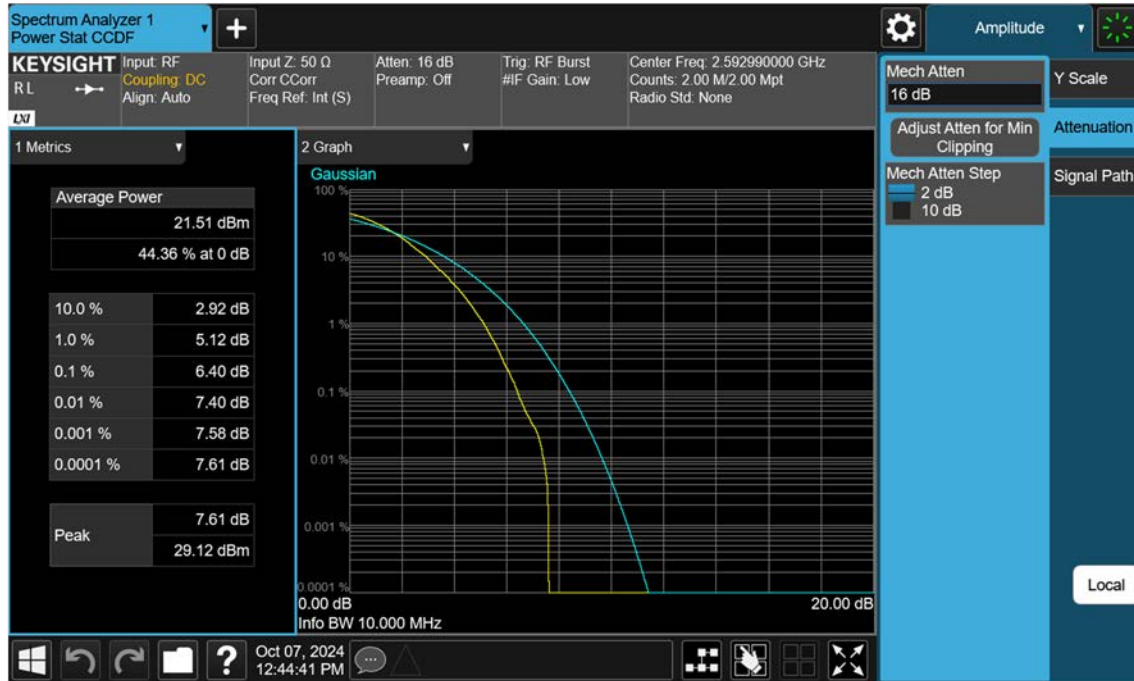
NR41_10 M_PAR_Mid_16QAM_FullRB



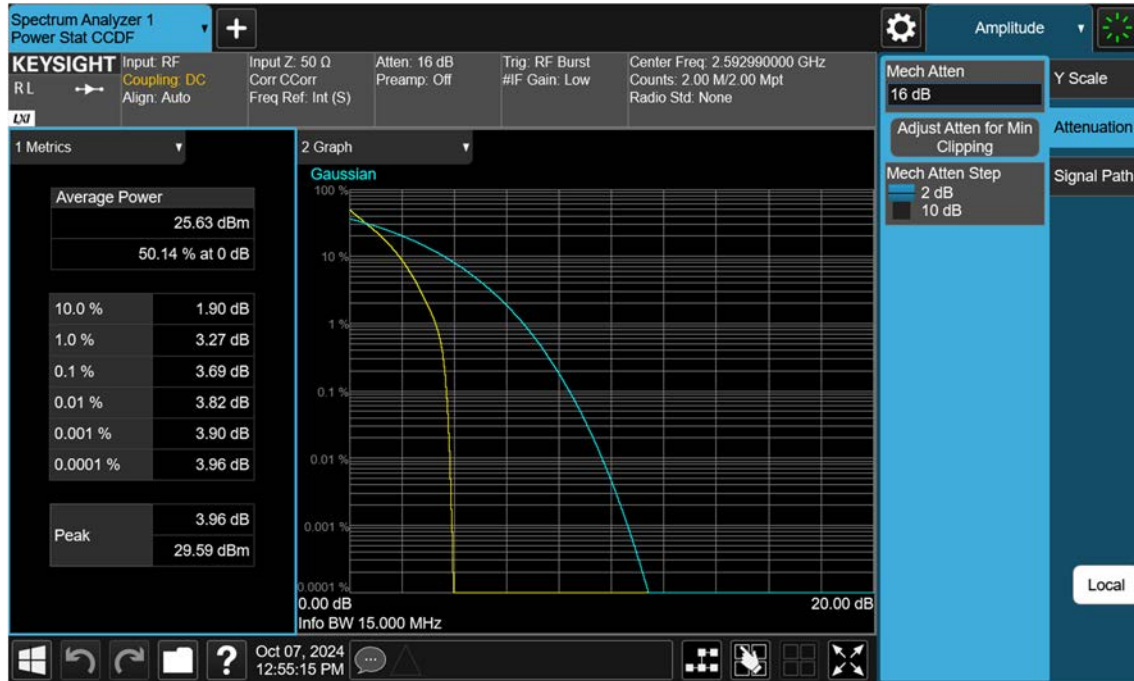
NR41_10 M_PAR_Mid_64QAM_FullRB



NR41_10 M_PAR_Mid_256QAM_FullRB



NR41_15 M_PAR_Mid_BPSK_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input: RF
R L → Coupling: DC
Align: Auto

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

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#F Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

1 Metrics

Average Power	
	25.15 dBm
	49.05 % at 0 dB

10.0 %	2.28 dB
1.0 %	4.08 dB
0.1 %	4.39 dB
0.01 %	4.48 dB
0.001 %	4.57 dB
0.0001 %	4.63 dB

Peak	
	4.64 dB
	29.79 dBm

2 Graph

Gaussian

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

0.00 dB
20.00 dB

Info BW 15.000 MHz

Mech Atten
16 dB

Adjust Atten for Min Clipping

Mech Atten Step
2 dB
10 dB

Y Scale

Attenuation

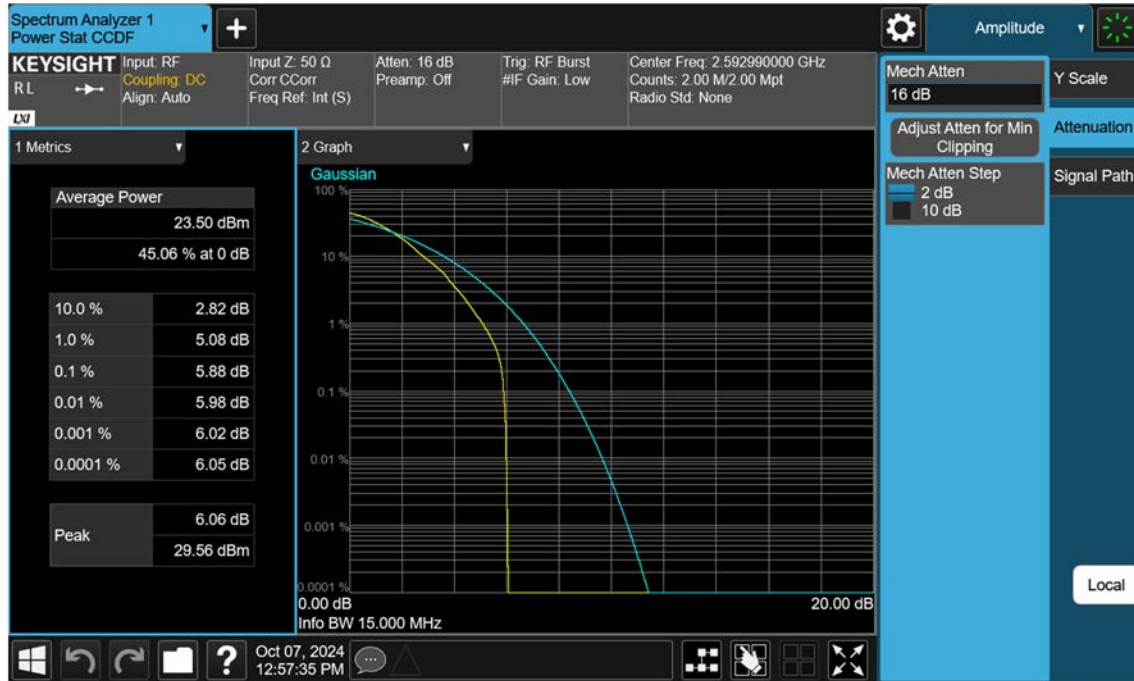
Signal Path

Local

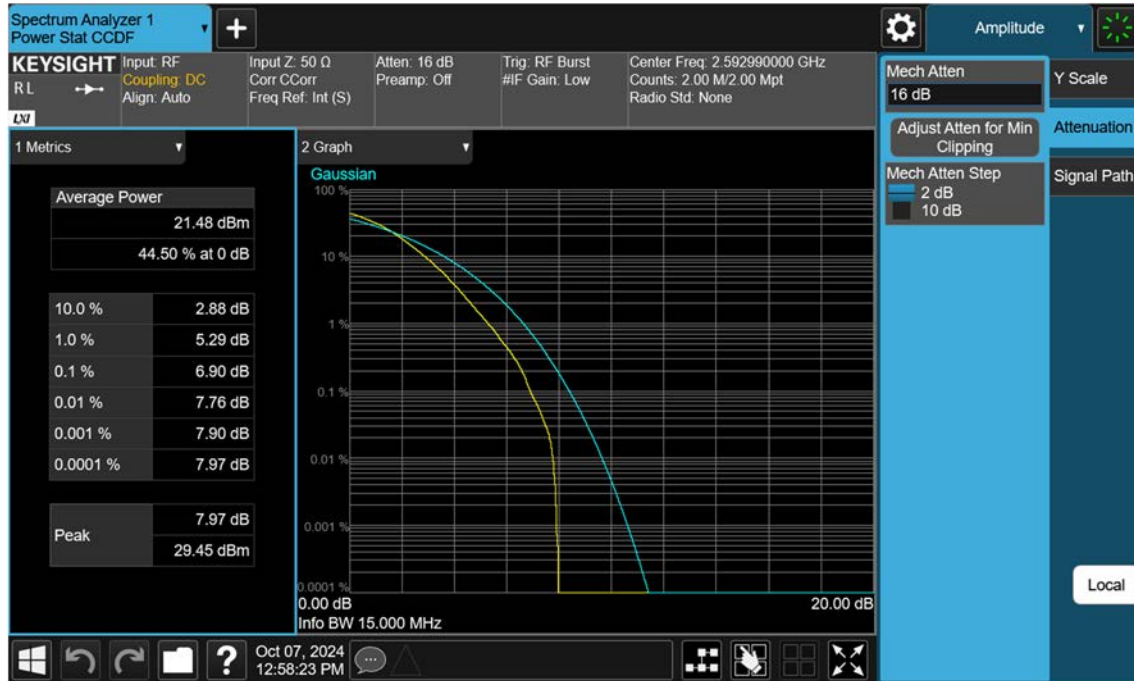
Oct 07, 2024
12:56:02 PM

[illegible]

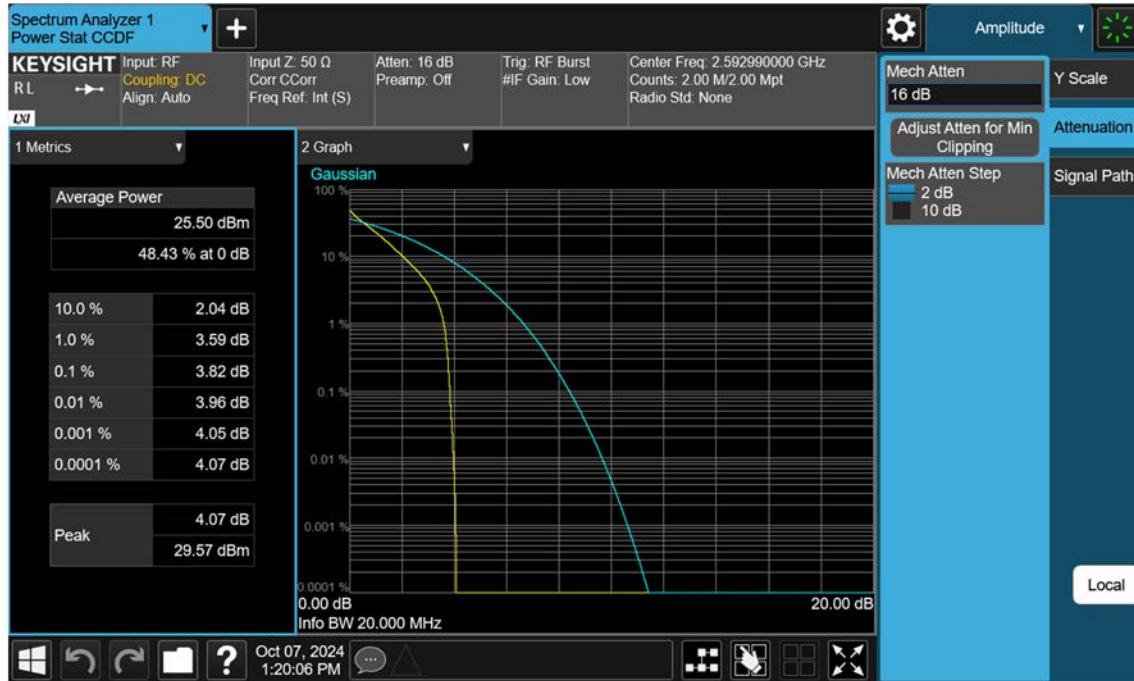
NR41_15 M_PAR_Mid_64QAM_FullRB



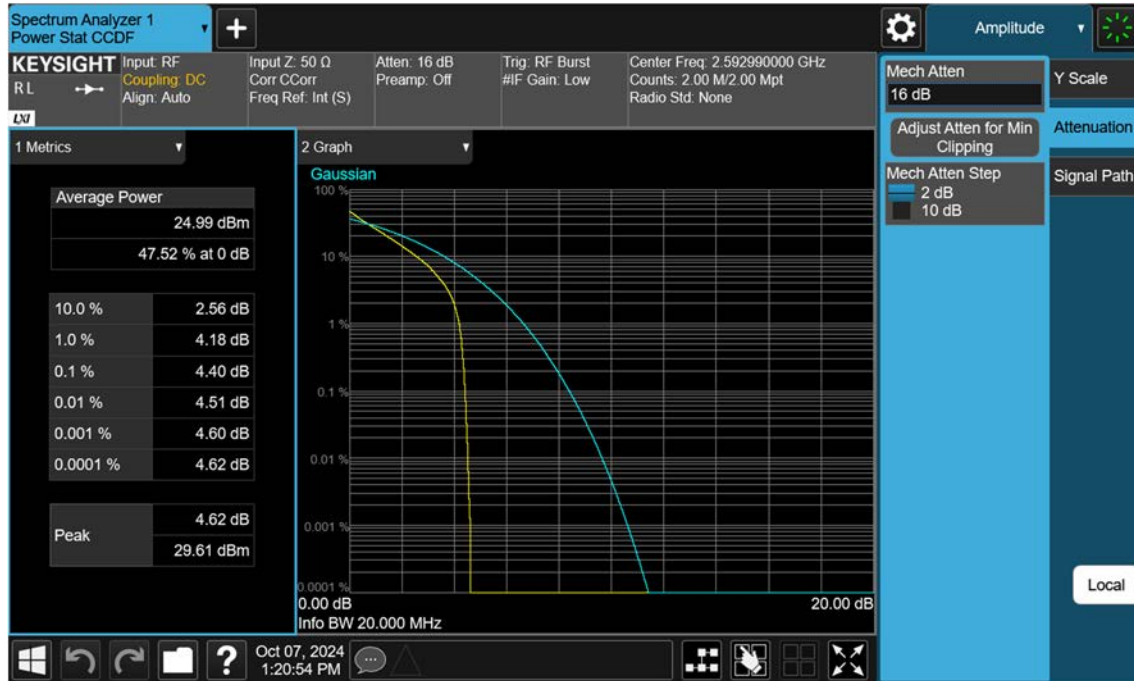
NR41_15 M_PAR_Mid_256QAM_FullRB



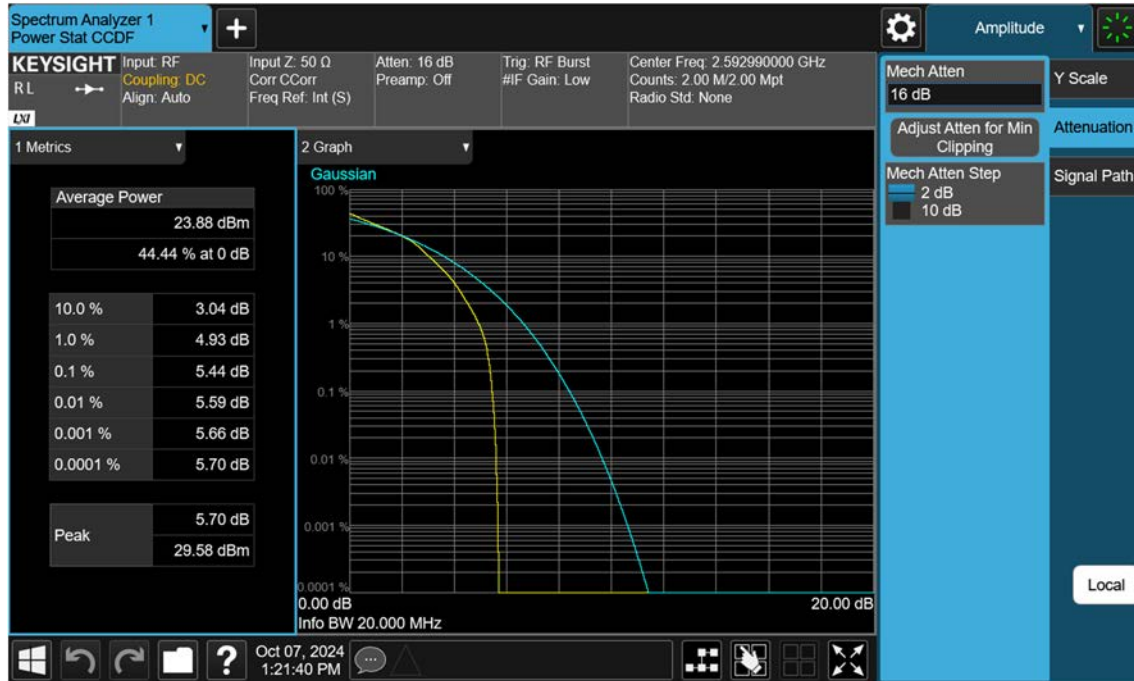
NR41_20 M_PAR_Mid_BPSK_FullRB



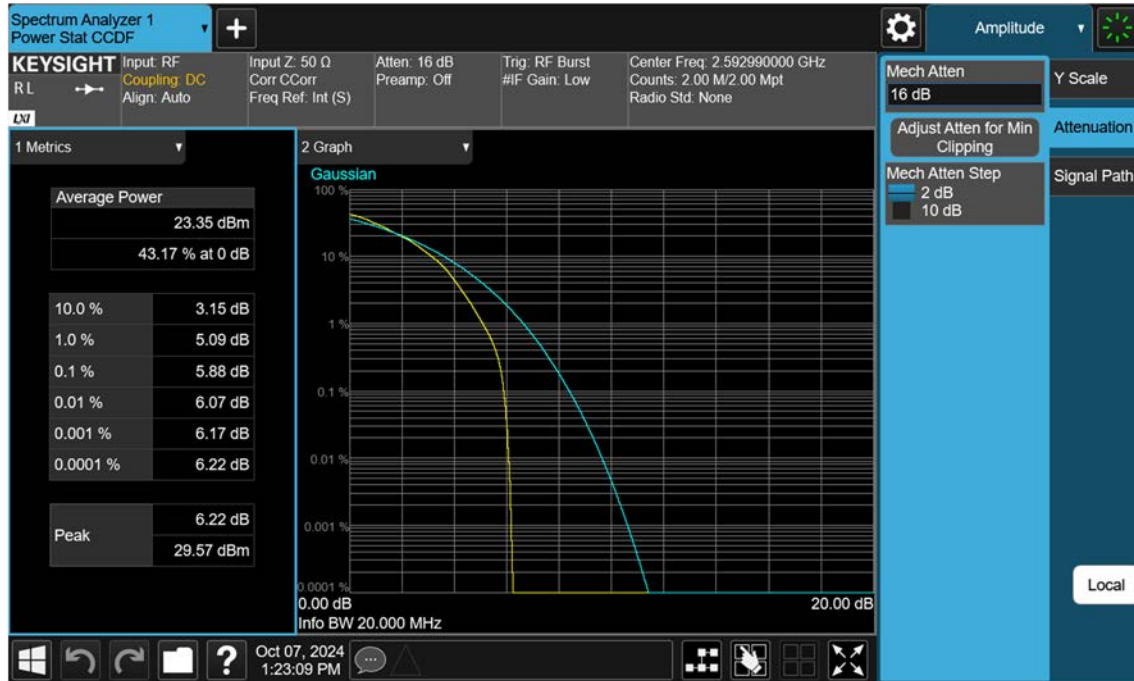
NR41_20 M_PAR_Mid_QPSK_FullRB



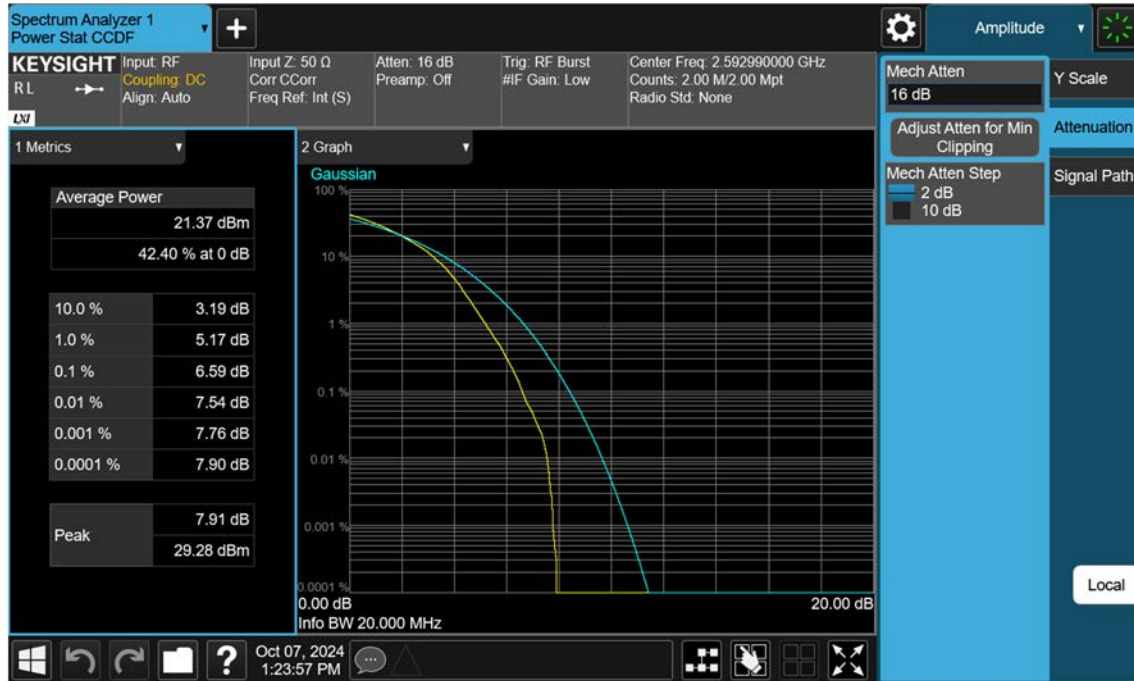
NR41_20 M_PAR_Mid_16QAM_FullRB



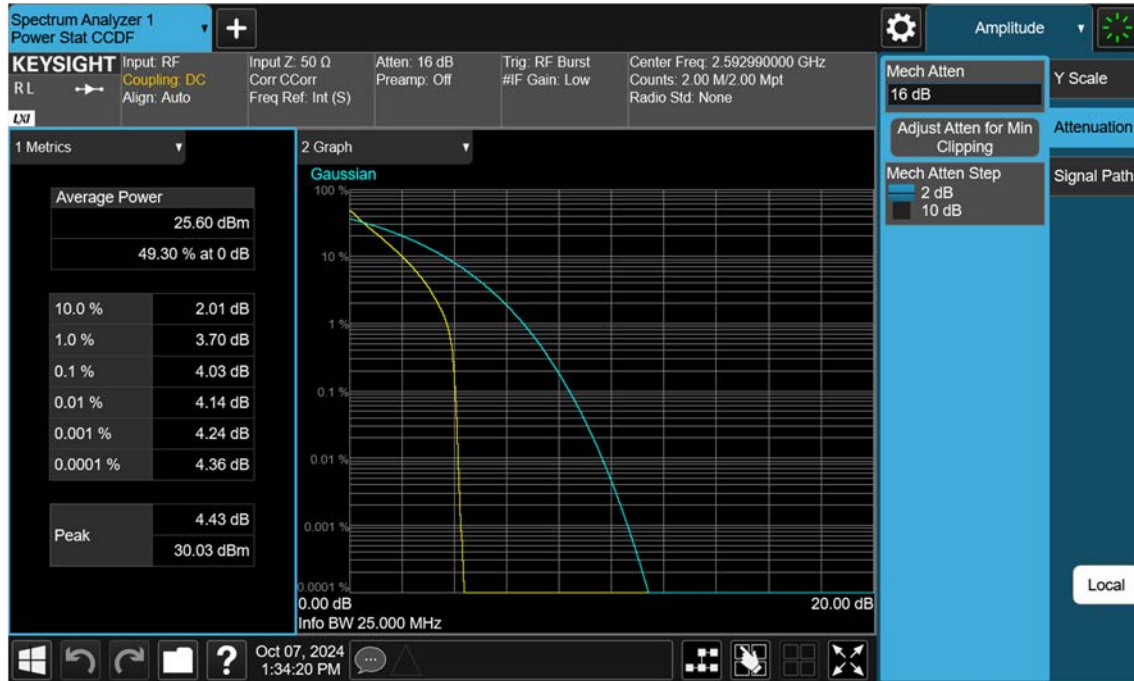
NR41_20 M_PAR_Mid_64QAM_FullRB



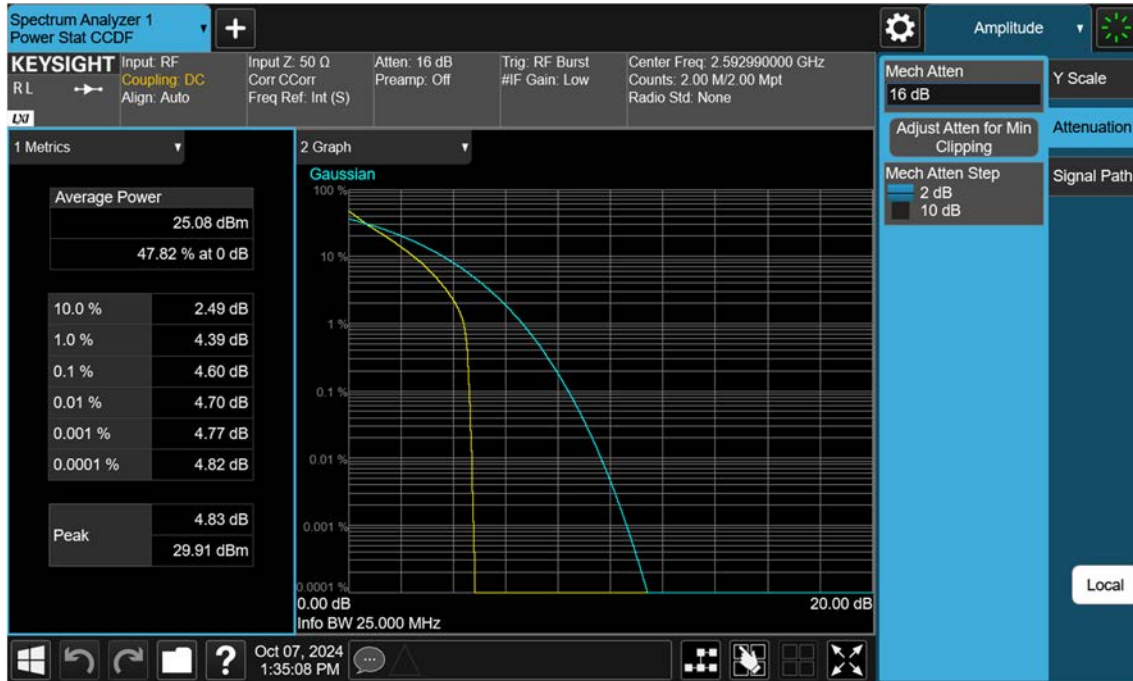
NR41_20 M_PAR_Mid_256QAM_FullRB



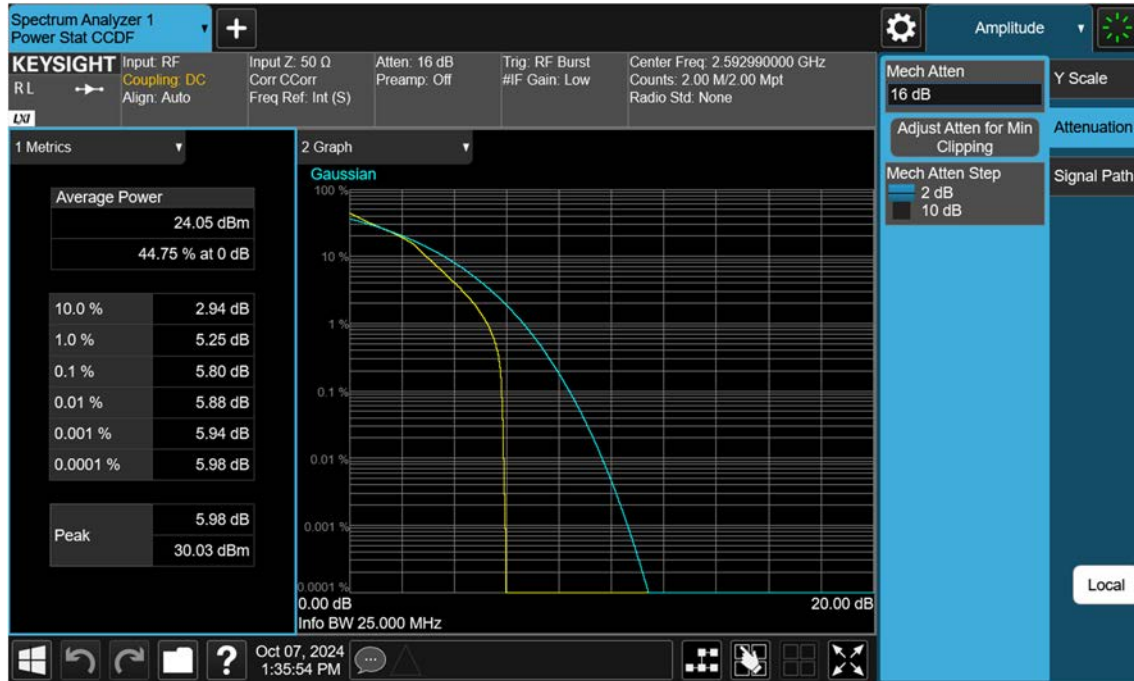
NR41_25 M_PAR_Mid_BPSK_FullRB



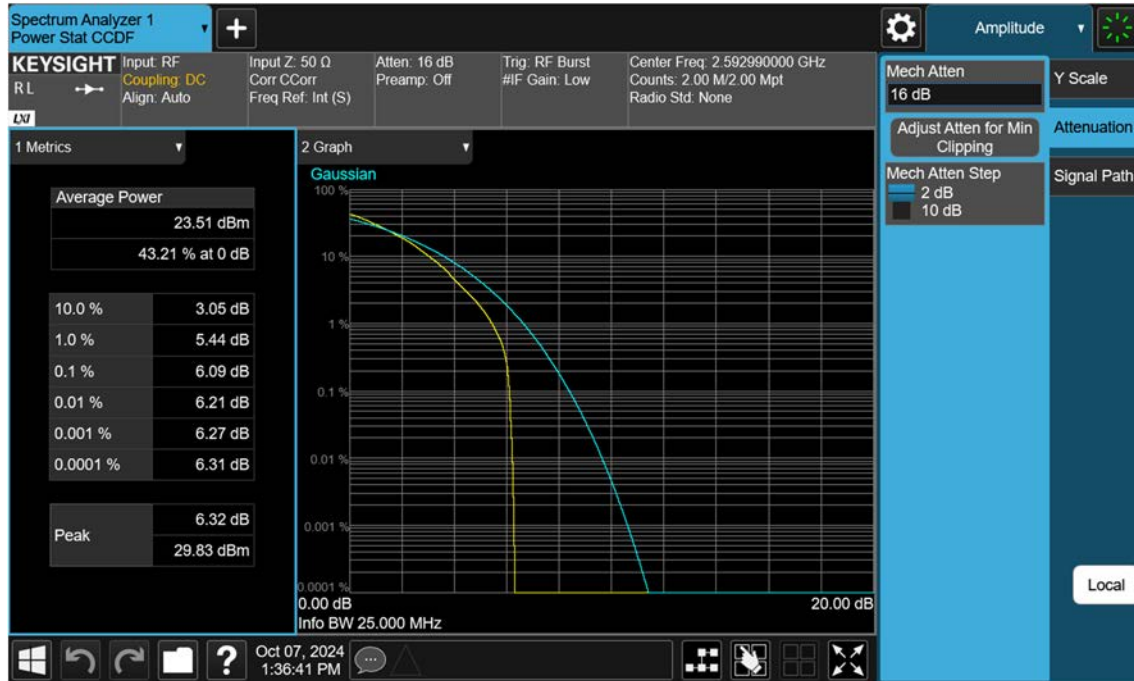
NR41_25 M_PAR_Mid_QPSK_FullRB



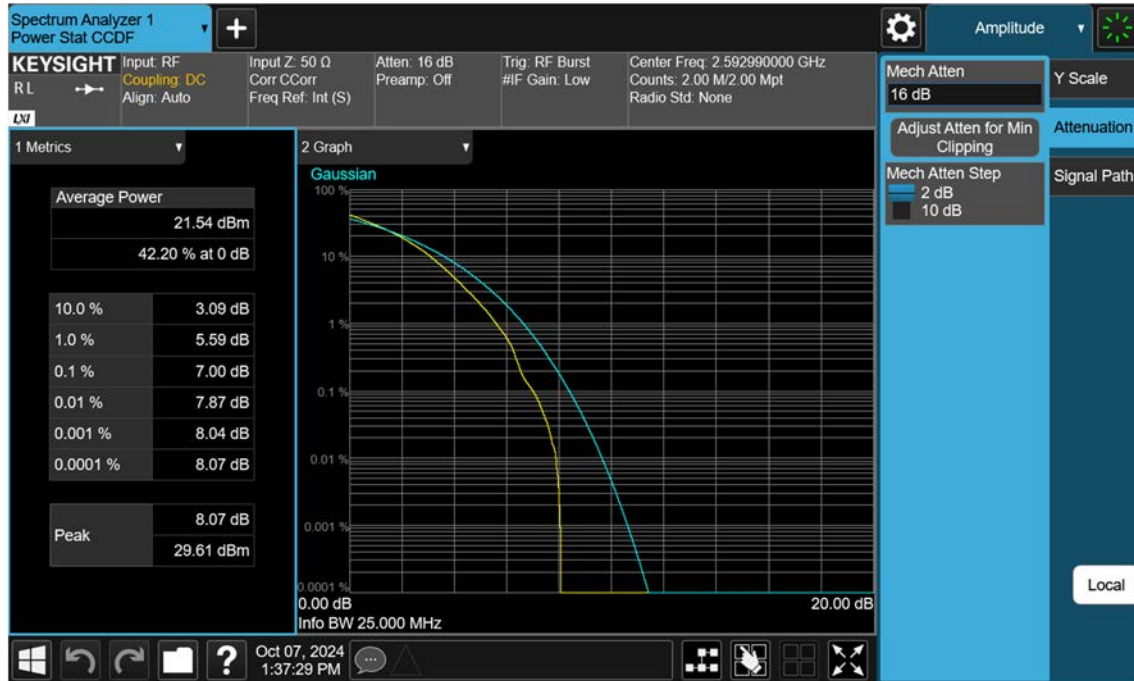
NR41_25 M_PAR_Mid_16QAM_FullRB



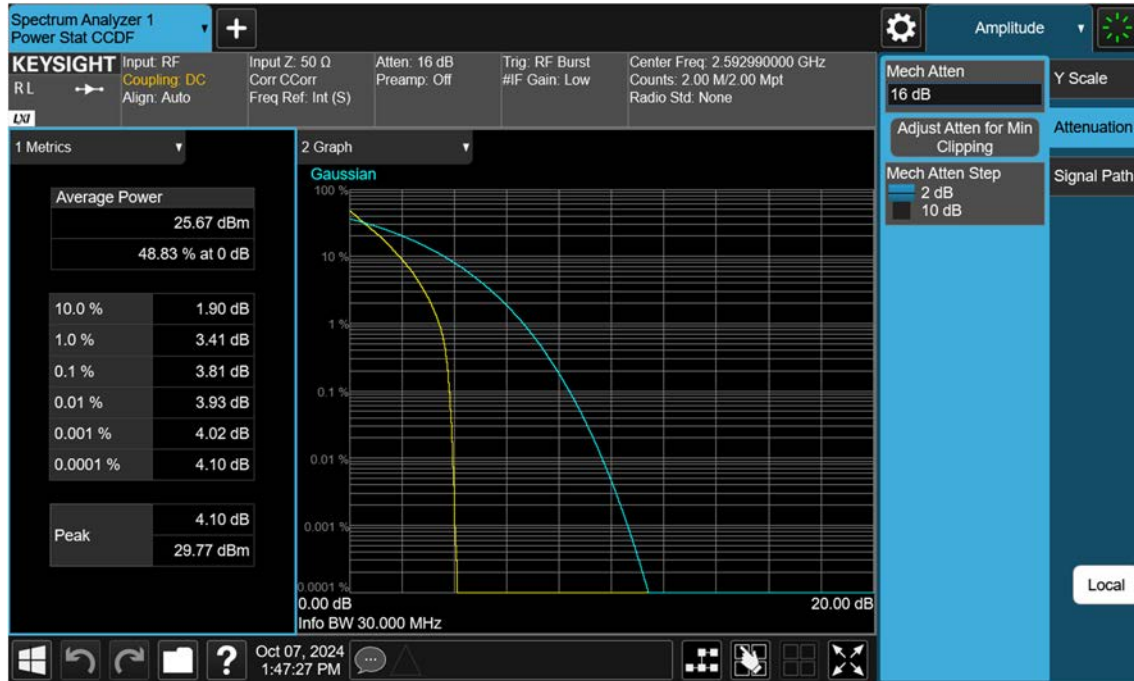
NR41_25 M_PAR_Mid_64QAM_FullRB



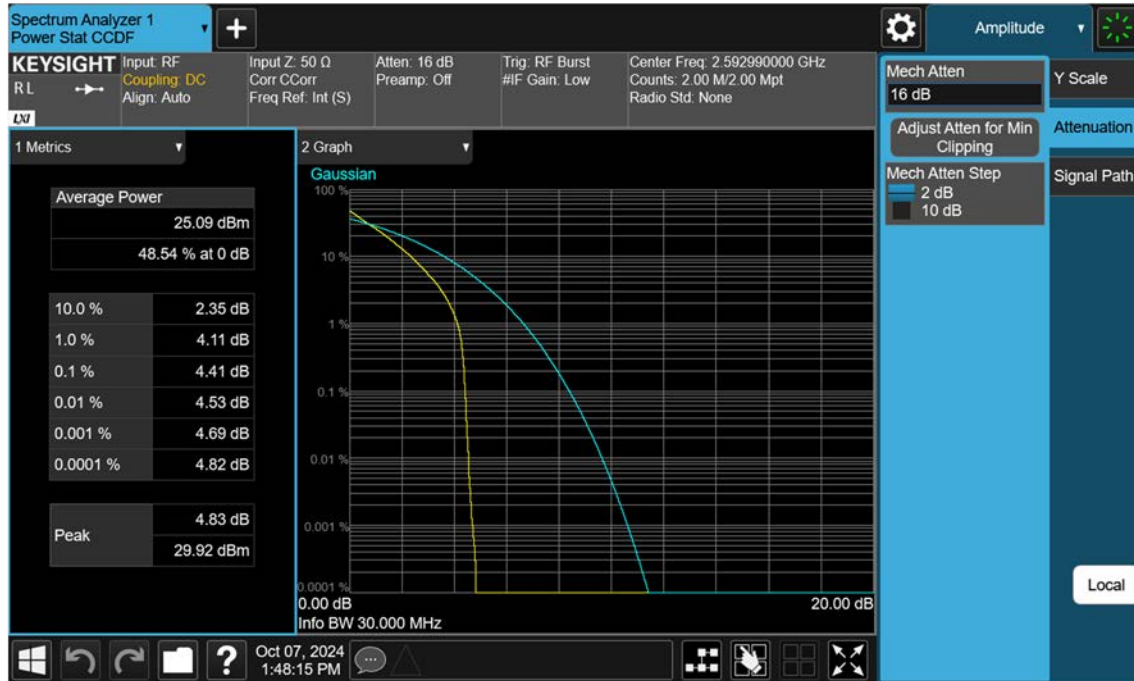
NR41_25 M_PAR_Mid_256QAM_FullRB



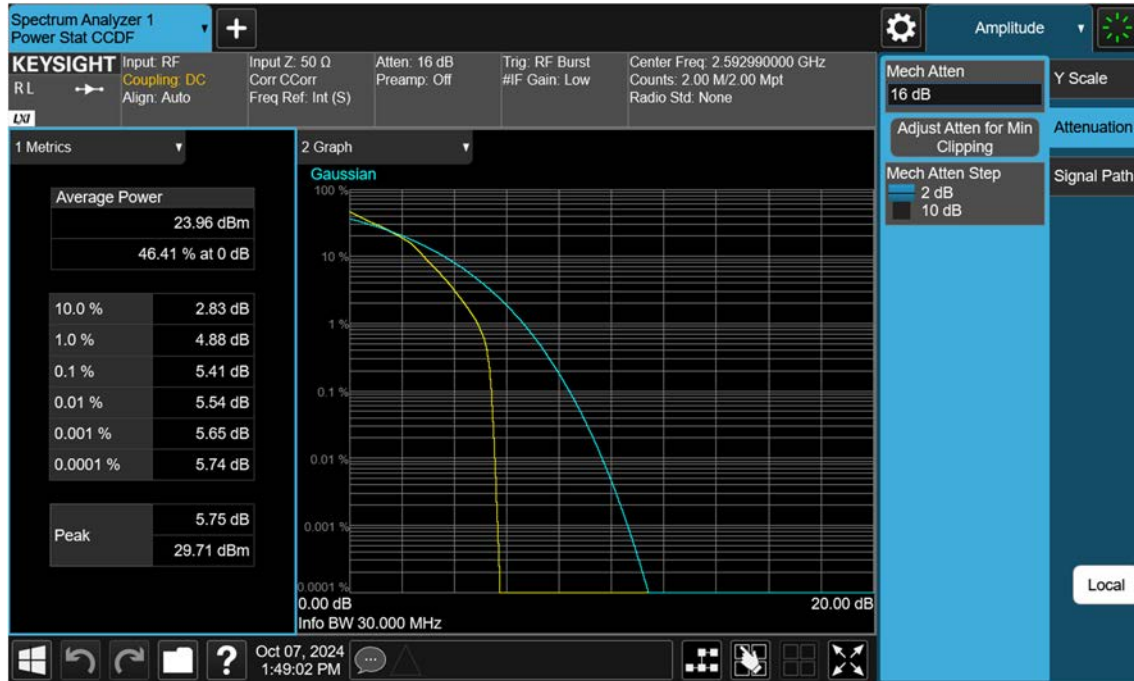
NR41_30 M_PAR_Mid_BPSK_FullRB



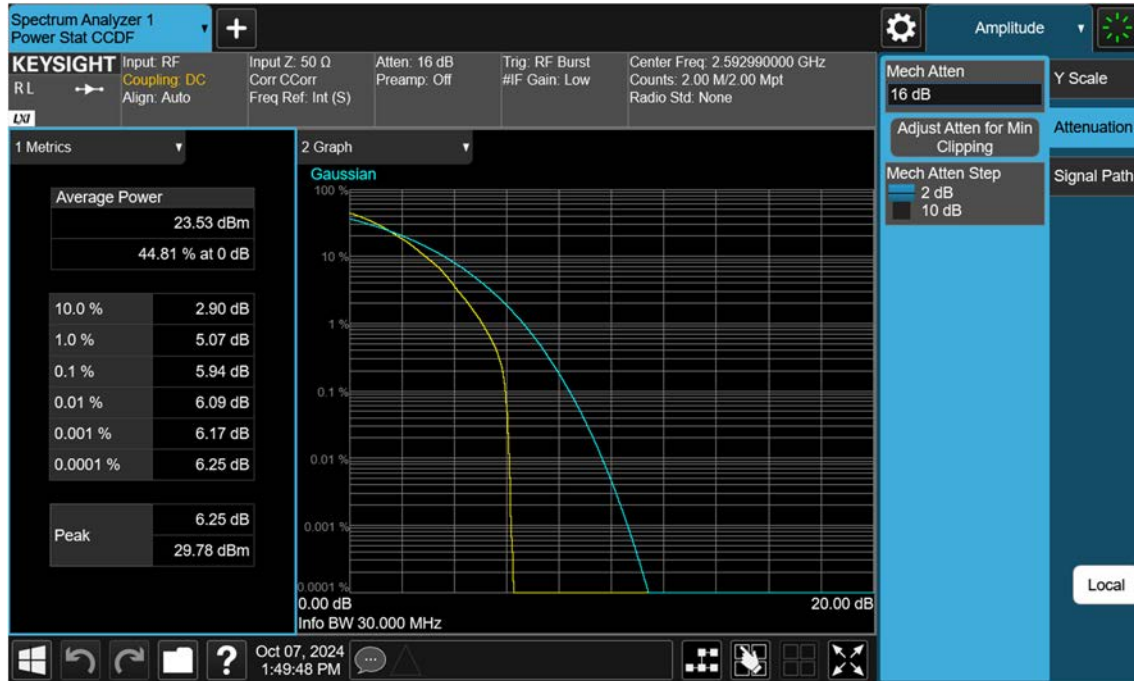
NR41_30 M_PAR_Mid_QPSK_FullRB



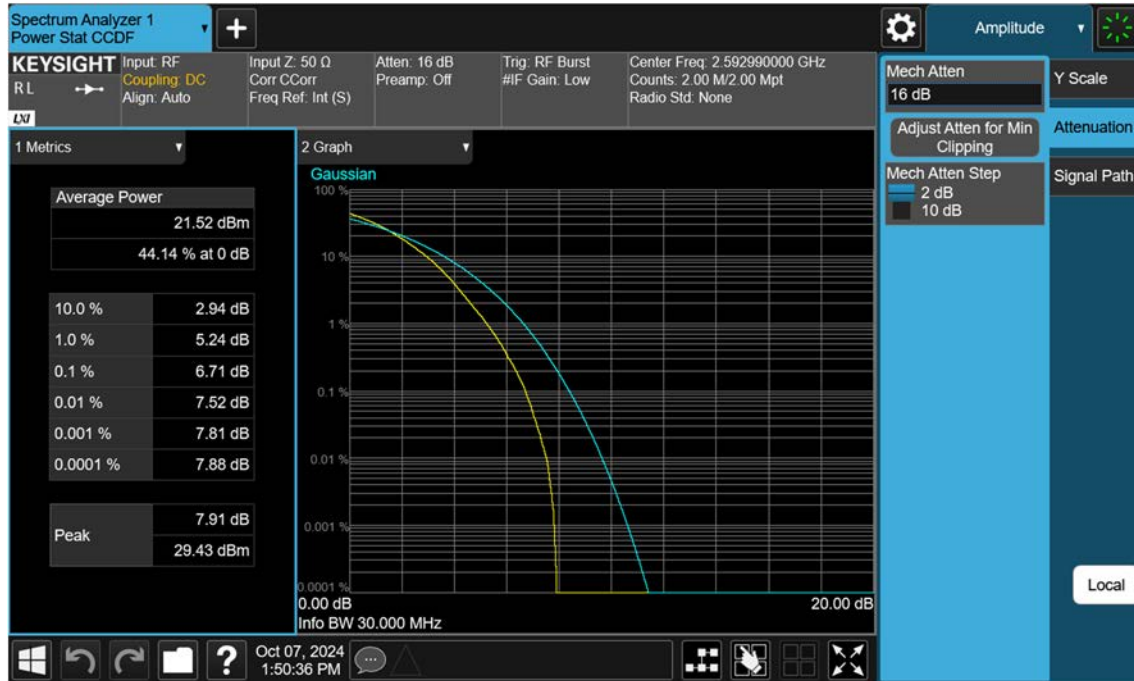
NR41_30 M_PAR_Mid_16QAM_FullRB



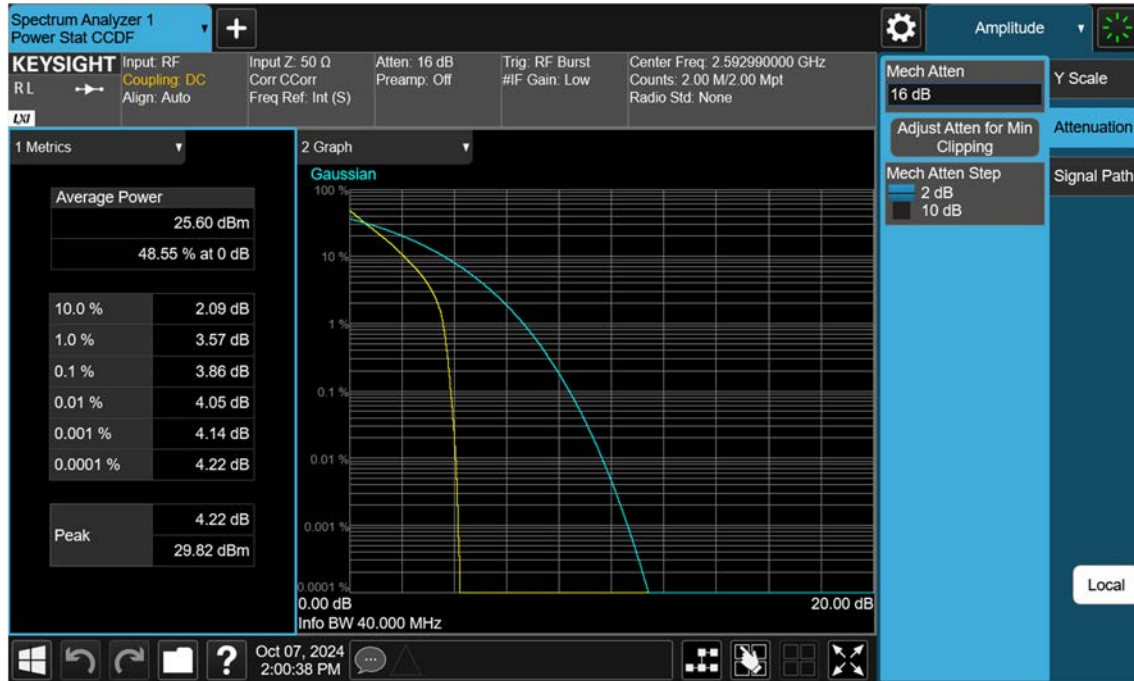
NR41_30 M_PAR_Mid_64QAM_FullRB



NR41_30 M_PAR_Mid_256QAM_FullRB



NR41_40 M_PAR_Mid_BPSK_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT
R L → Coupling: DC
Align: Auto

Input RF: 50 Ω
Corr CCorr
Freq Ref: Int (S)

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#F Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

Mech Atten: 16 dB

Adjust Atten for Min Clipping

Mech Atten Step: 2 dB, 10 dB

1 Metrics

Average Power	
	25.05 dBm
	47.09 % at 0 dB

10.0 %	2.60 dB
1.0 %	4.16 dB
0.1 %	4.42 dB
0.01 %	4.55 dB
0.001 %	4.63 dB
0.0001 %	4.69 dB

Peak	
	4.69 dB
	29.74 dBm

2 Graph

Gaussian

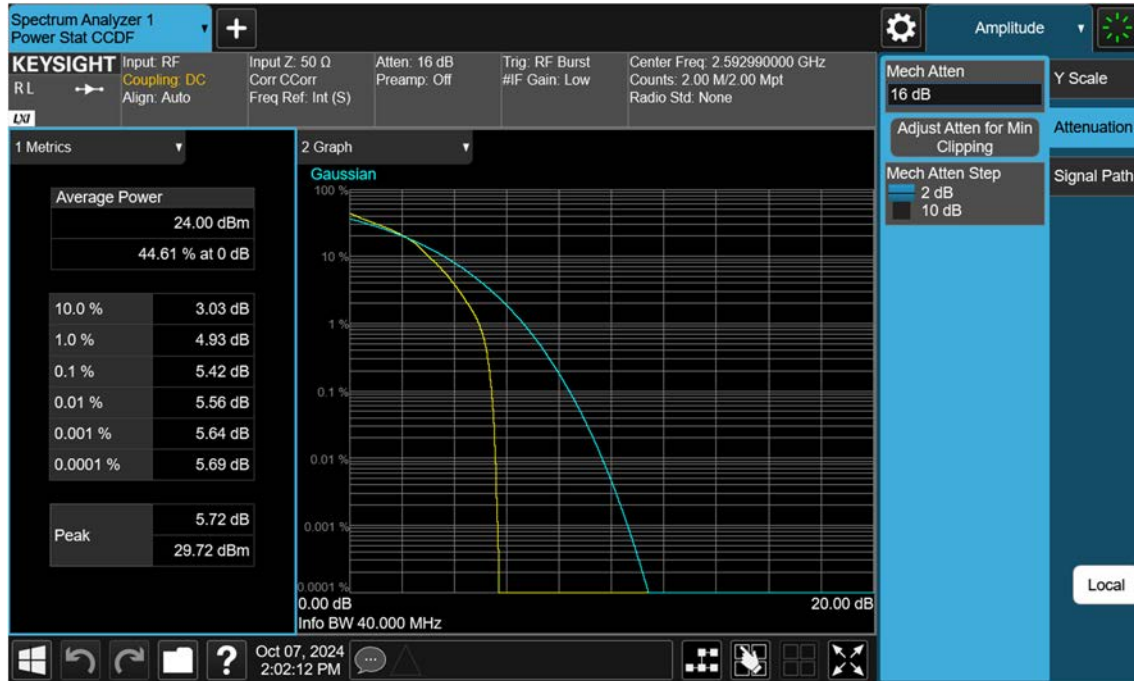
0.0001 %
0.001 %
0.01 %
0.1 %
1 %
10 %
100 %

0.00 dB
20.00 dB

Info BW 40.000 MHz

Oct 07, 2024
2:01:25 PM

NR41_40 M_PAR_Mid_16QAM_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input: RF
R L → Coupling: DC
Align: Auto

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

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#IF Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

Mech Atten: 16 dB

Adjust Atten for Min Clipping

Mech Atten Step: 2 dB, 10 dB

Y Scale: Attenuation

Signal Path: Local

1 Metrics

Average Power: 23.50 dBm
43.47 % at 0 dB

10.0 %: 3.14 dB
1.0 %: 5.16 dB
0.1 %: 5.93 dB
0.01 %: 6.12 dB
0.001 %: 6.21 dB
0.0001 %: 6.24 dB

Peak: 6.24 dB
29.74 dBm

2 Graph

Gaussian

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

0.00 dB
20.00 dB

Info BW 40.000 MHz

Oct 07, 2024 2:03:01 PM

Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input: RF
R L → Coupling: DC
Align: Auto

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

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#F Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

Mech Atten: 16 dB

Adjust Atten for Min Clipping

Mech Atten Step: 2 dB, 10 dB

Y Scale: Attenuation

Signal Path

Local

1 Metrics

Average Power

21.50 dBm

43.27 % at 0 dB

10.0 %: 3.12 dB

1.0 %: 5.17 dB

0.1 %: 6.74 dB

0.01 %: 7.51 dB

0.001 %: 7.69 dB

0.0001 %: 7.76 dB

Peak

7.76 dB

29.26 dBm

2 Graph

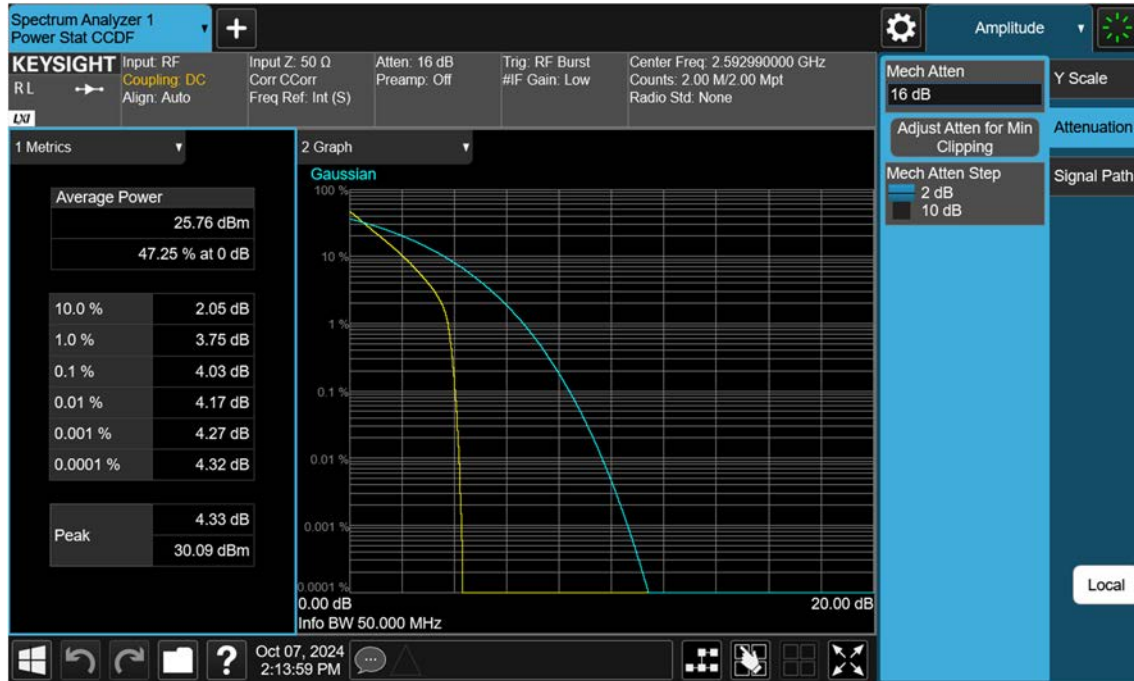
Gaussian

0.00 dB

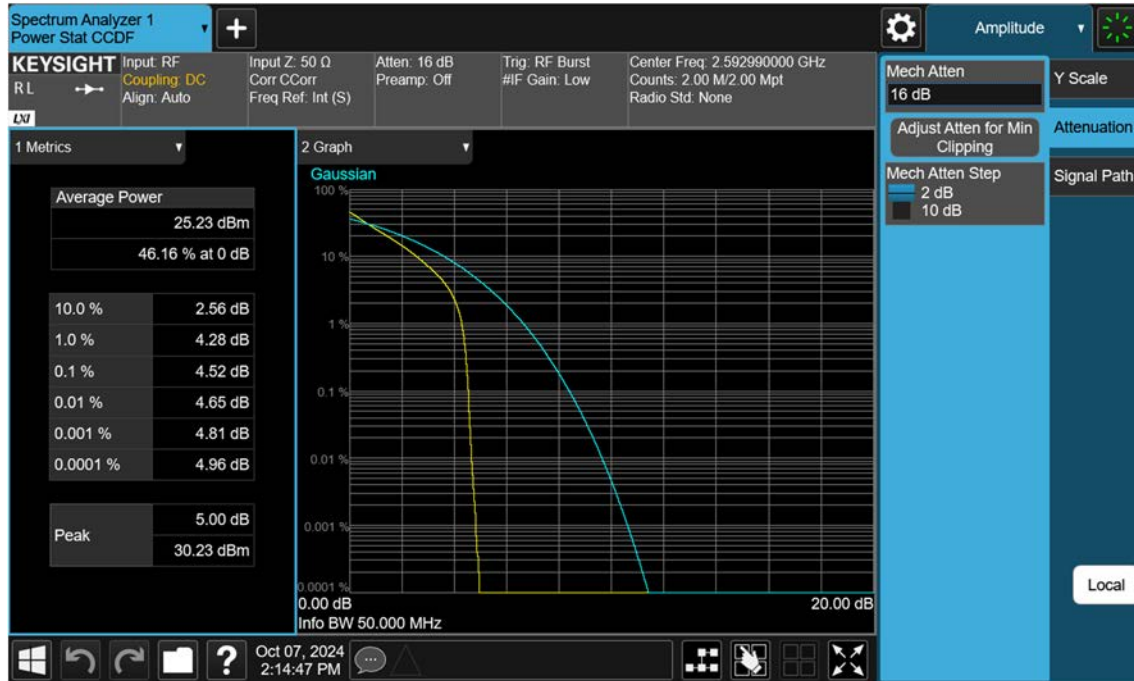
20.00 dB

Info BW 40.000 MHz

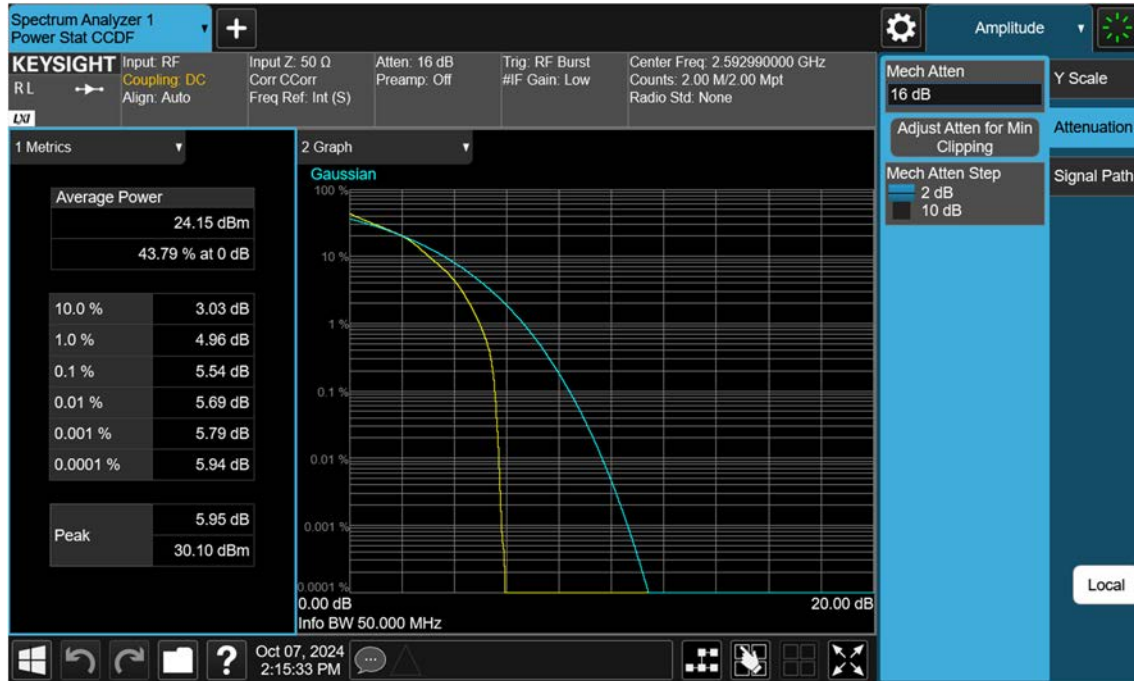
NR41_50 M_PAR_Mid_BPSK_FullRB



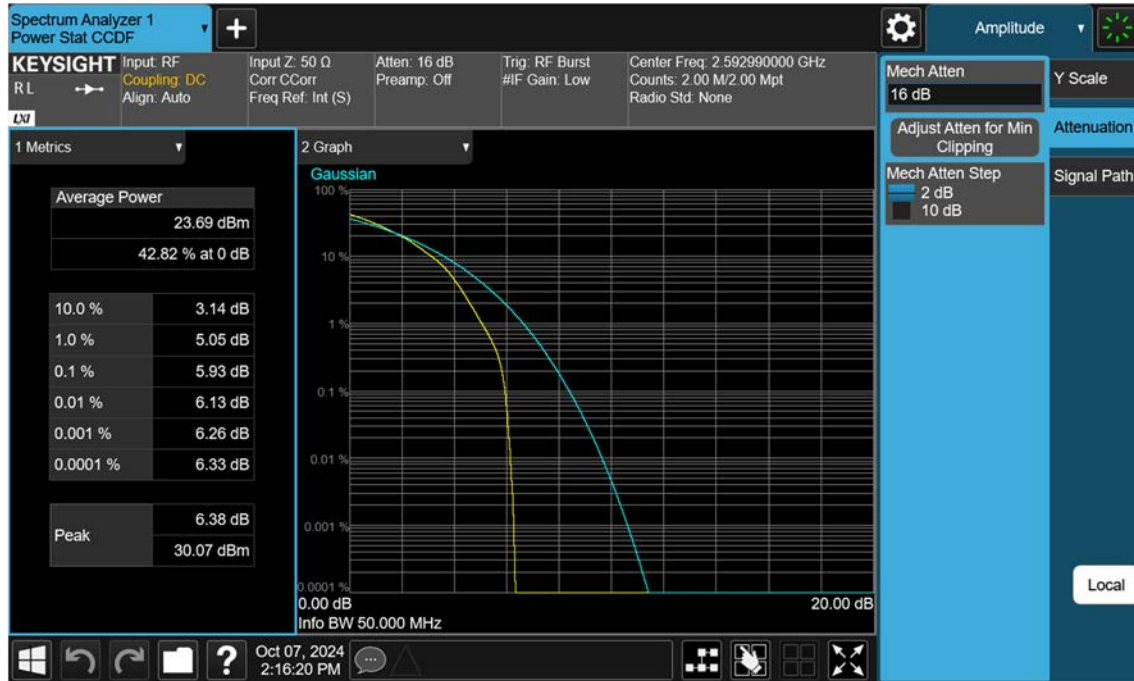
NR41_50 M_PAR_Mid_QPSK_FullRB



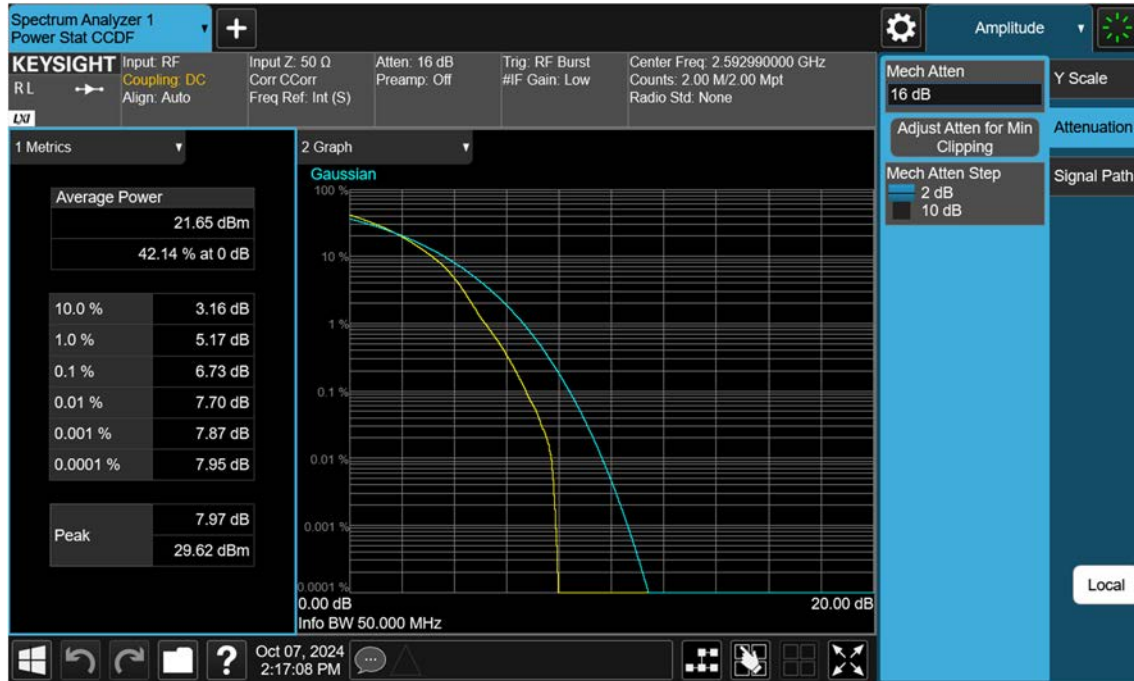
NR41_50 M_PAR_Mid_16QAM_FullRB



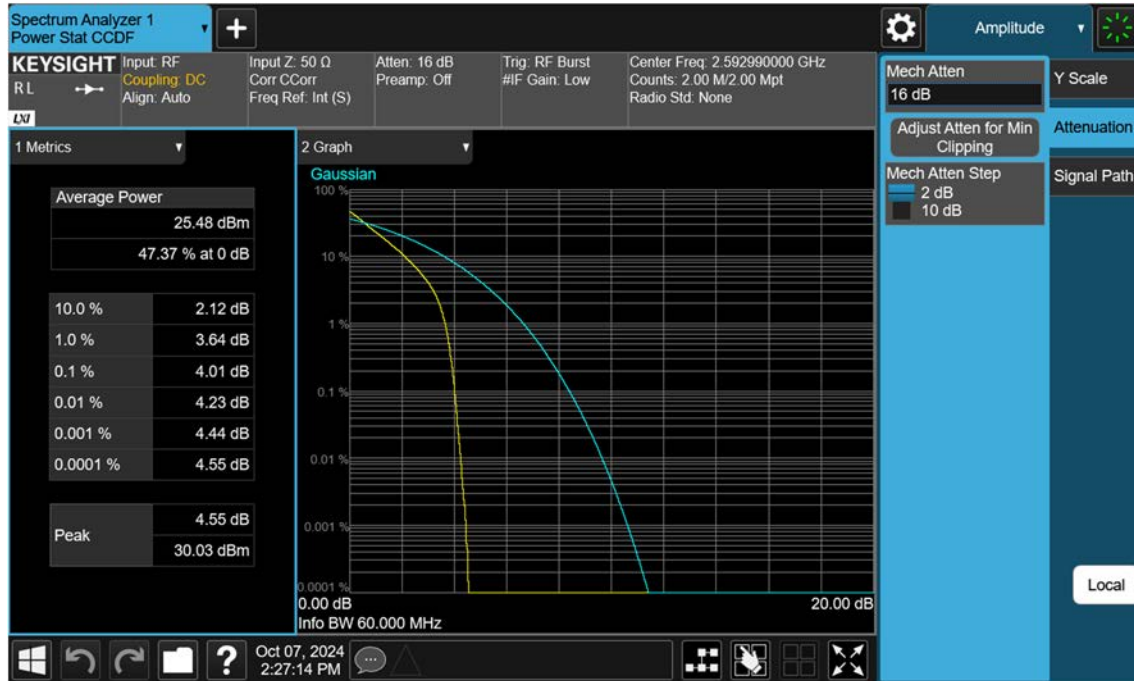
NR41_50 M_PAR_Mid_64QAM_FullRB



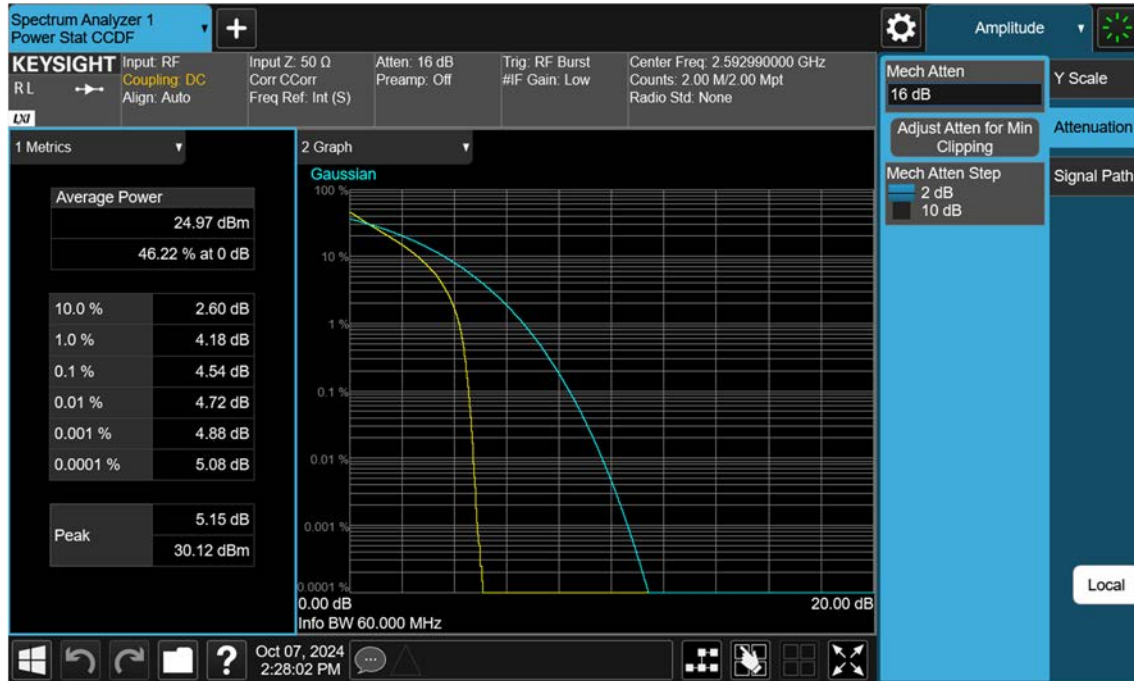
NR41_50 M_PAR_Mid_256QAM_FullRB



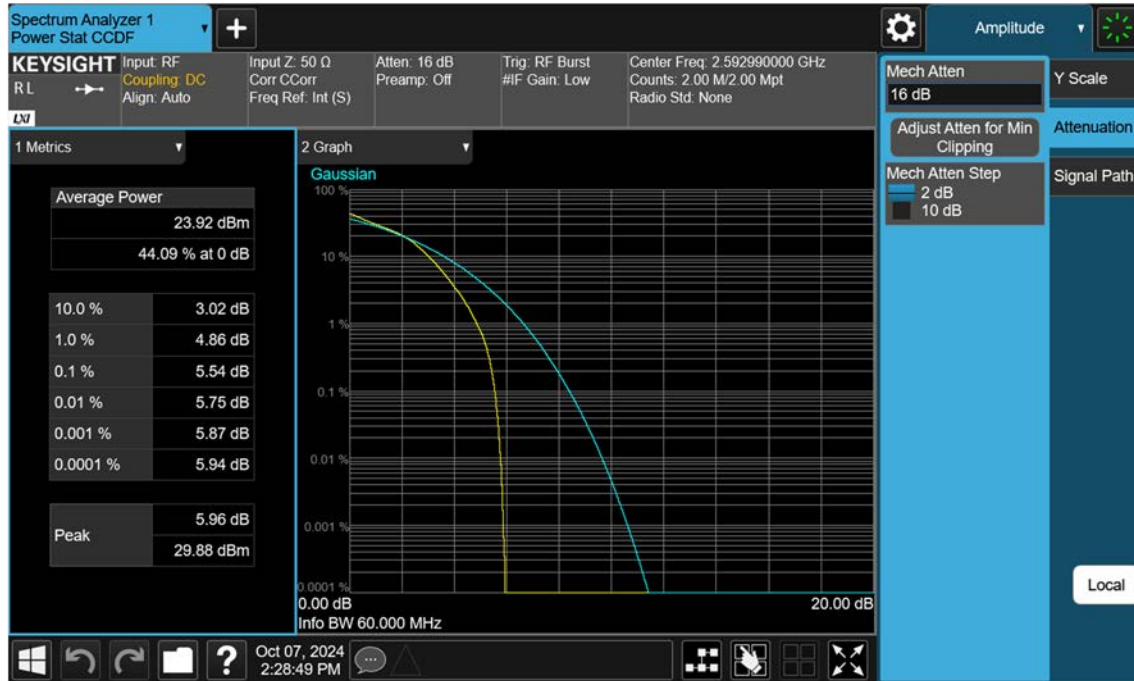
NR41_60 M_PAR_Mid_BPSK_FullRB



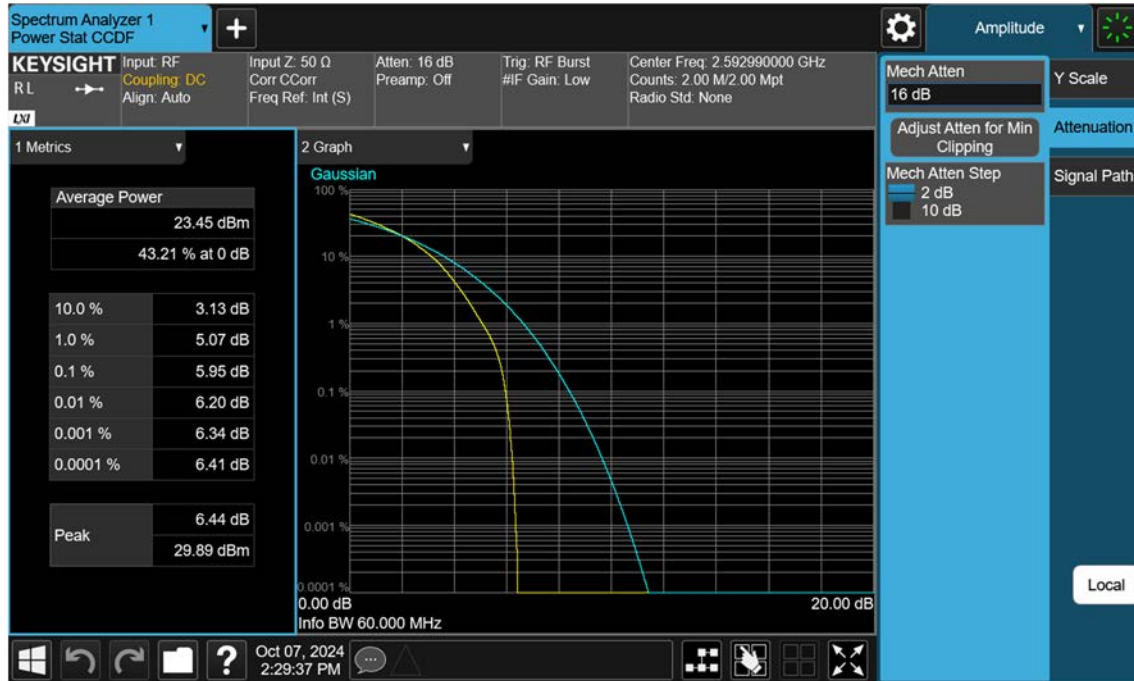
NR41_60 M_PAR_Mid_QPSK_FullRB



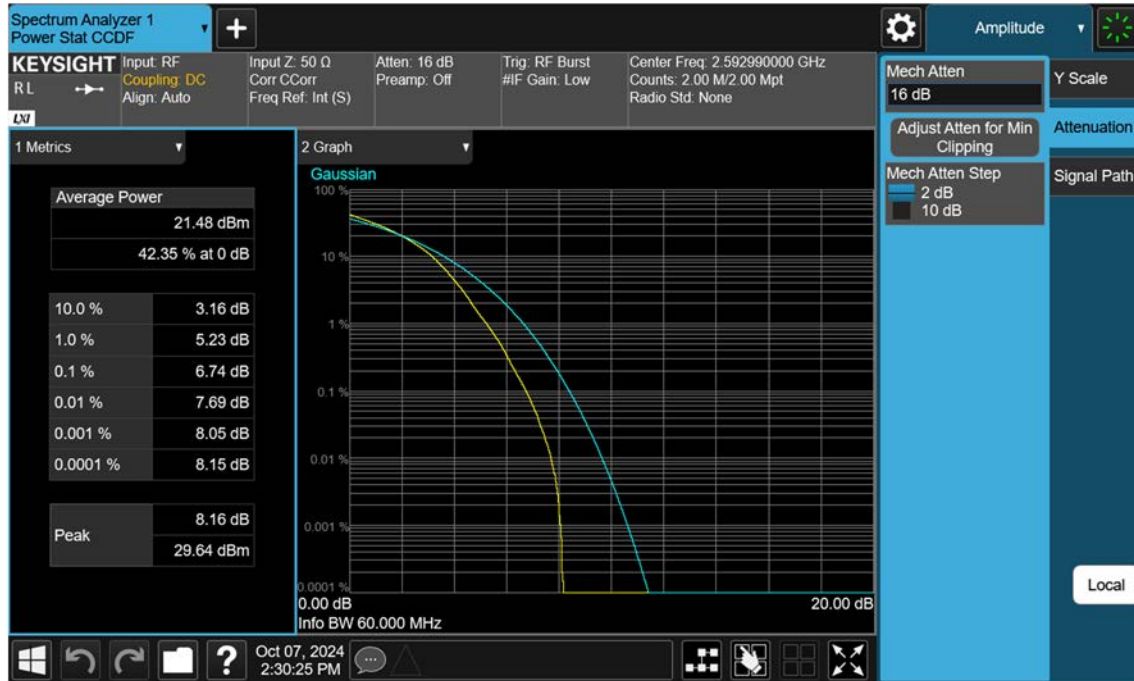
NR41_60 M_PAR_Mid_16QAM_FullRB



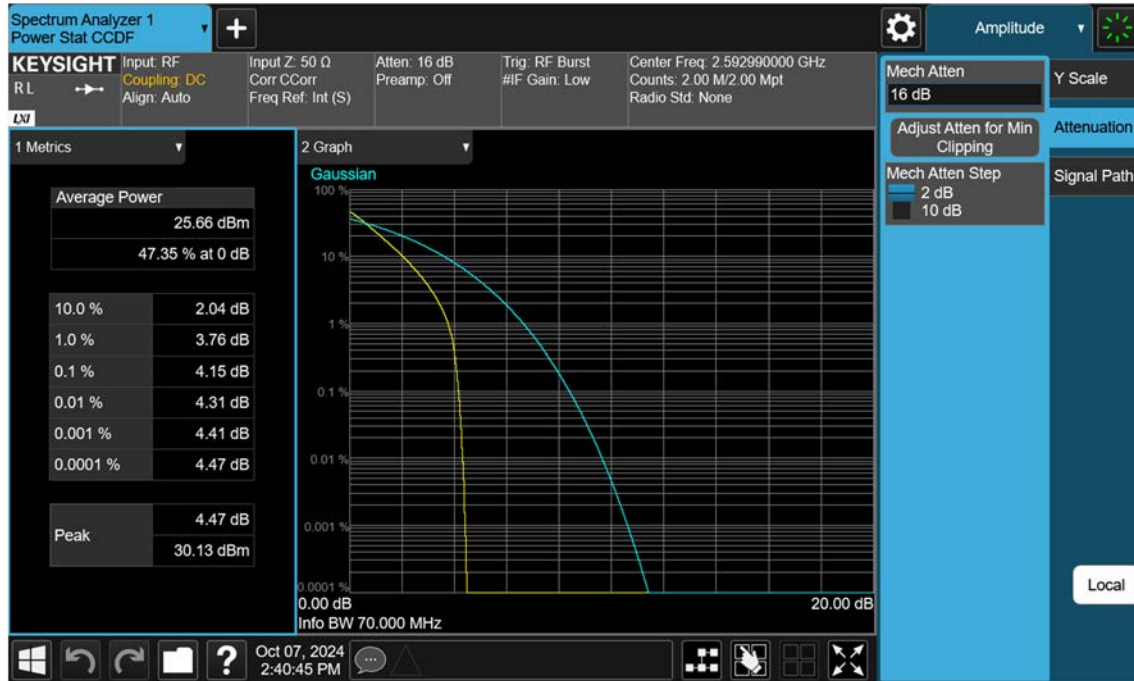
NR41_60 M_PAR_Mid_64QAM_FullRB



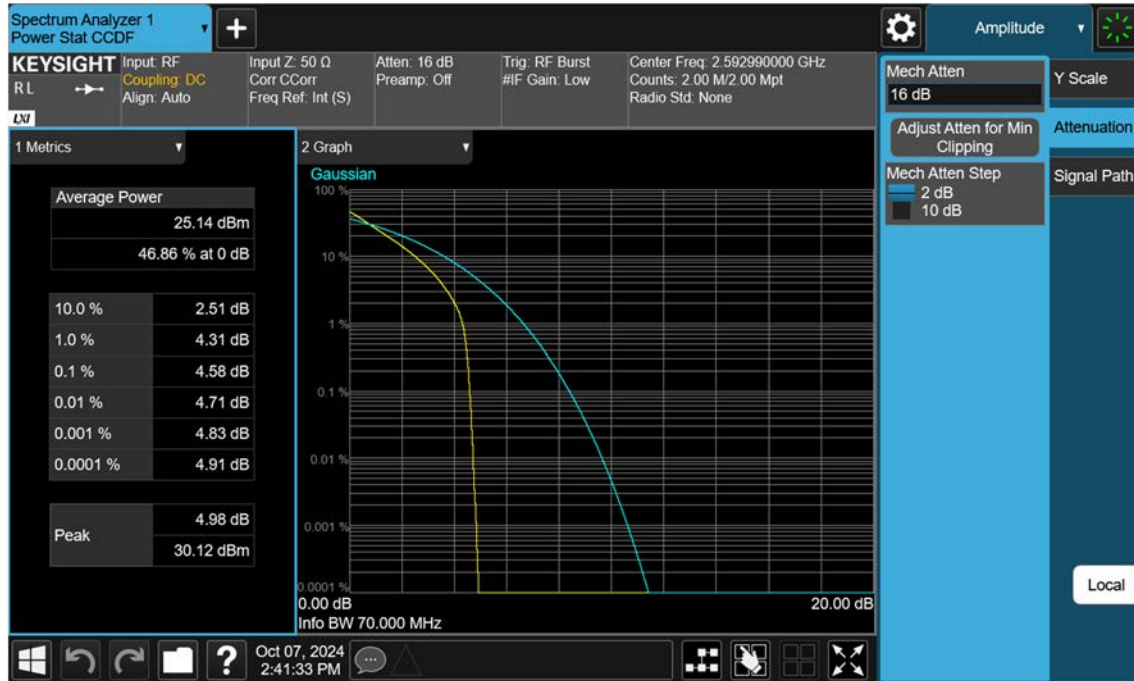
NR41_60 M_PAR_Mid_256QAM_FullRB



NR41_70 M_PAR_Mid_BPSK_FullRB



NR41_70 M_PAR_Mid_QPSK_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT
R L → Coupling: DC
Align: Auto

Input RF: 50 Ω
Corr CCorr
Freq Ref: Int (S)

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#F Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

Mech Atten: 16 dB

Adjust Atten for Min Clipping

Mech Atten Step: 2 dB, 10 dB

1 Metrics

Average Power	
	24.08 dBm
	43.87 % at 0 dB

10.0 %	3.00 dB
1.0 %	5.04 dB
0.1 %	5.60 dB
0.01 %	5.74 dB
0.001 %	5.82 dB
0.0001 %	5.89 dB

Peak	
	5.91 dB
	29.99 dBm

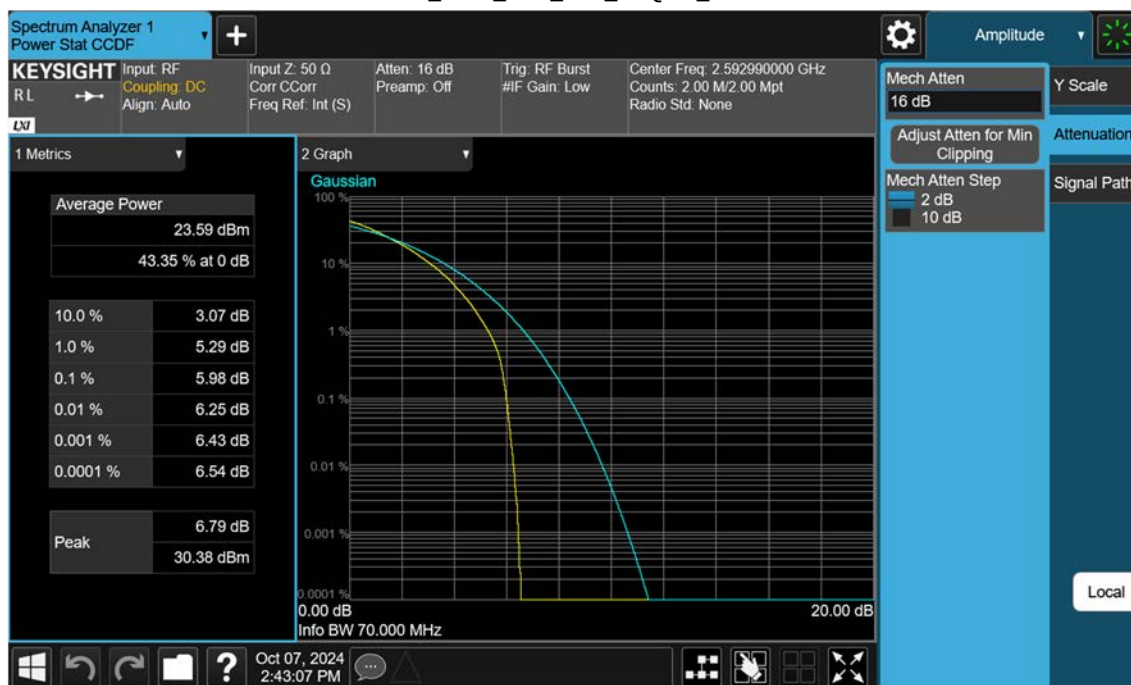
2 Graph

Gaussian

0.0001 %
0.00 dB
Info BW 70.000 MHz
20.00 dB

Oct 07, 2024
2:42:20 PM

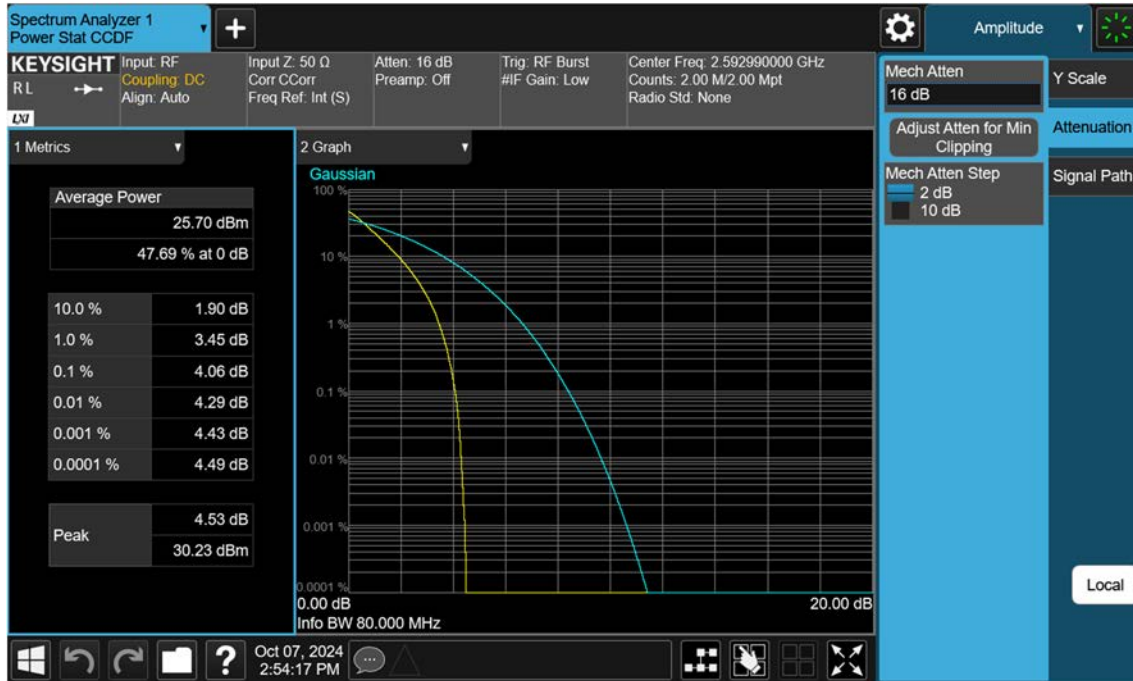
NR41_70 M_PAR_Mid_64QAM_FullRB



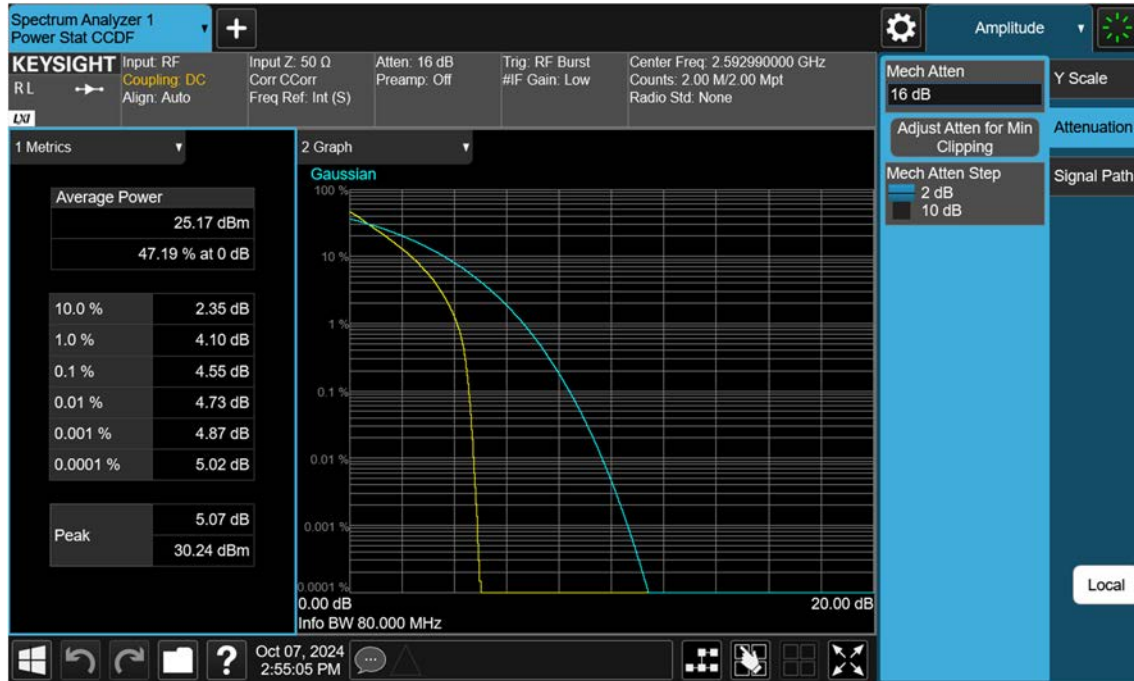
NR41_70 M_PAR_Mid_256QAM_FullRB



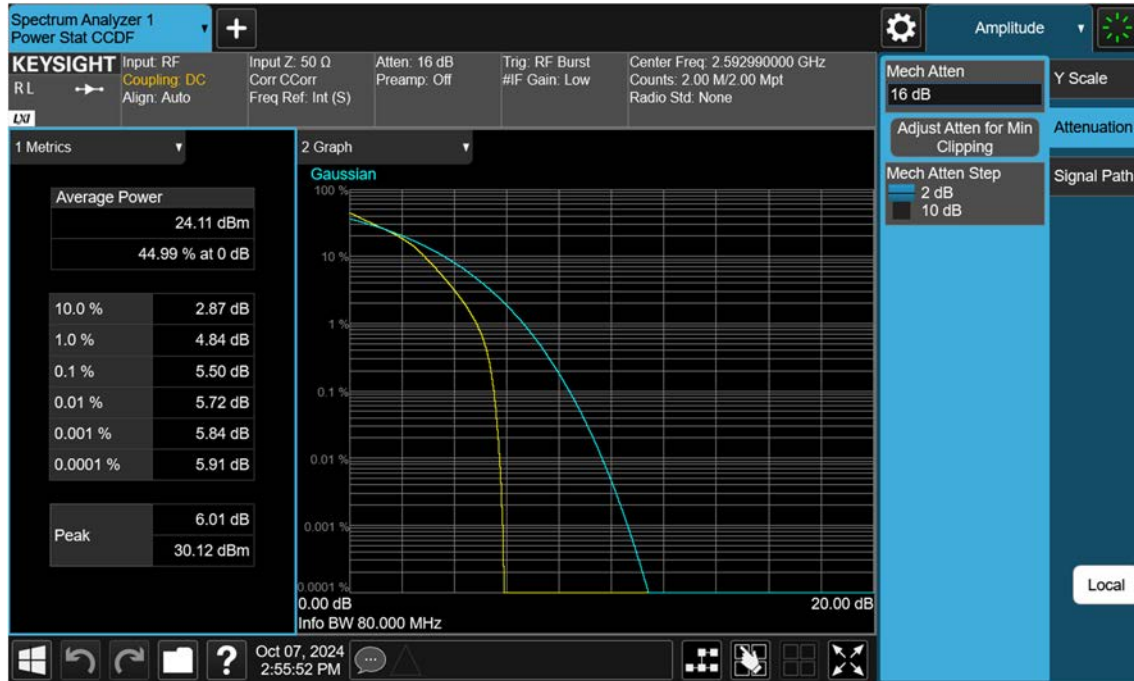
NR41_80 M_PAR_Mid_BPSK_FullRB



NR41_80 M_PAR_Mid_QPSK_FullRB



NR41_80 M_PAR_Mid_16QAM_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input: RF
R L → Coupling: DC
Align: Auto

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

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#F Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

Mech Atten
16 dB

Adjust Atten for Min Clipping

Mech Atten Step
2 dB
10 dB

Y Scale

Attenuation

Signal Path

Local

1 Metrics

Average Power

23.63 dBm

44.32 % at 0 dB

10.0 % 2.91 dB

1.0 % 5.07 dB

0.1 % 5.98 dB

0.01 % 6.26 dB

0.001 % 6.39 dB

0.0001 % 6.46 dB

Peak

6.46 dB

30.09 dBm

2 Graph

Gaussian

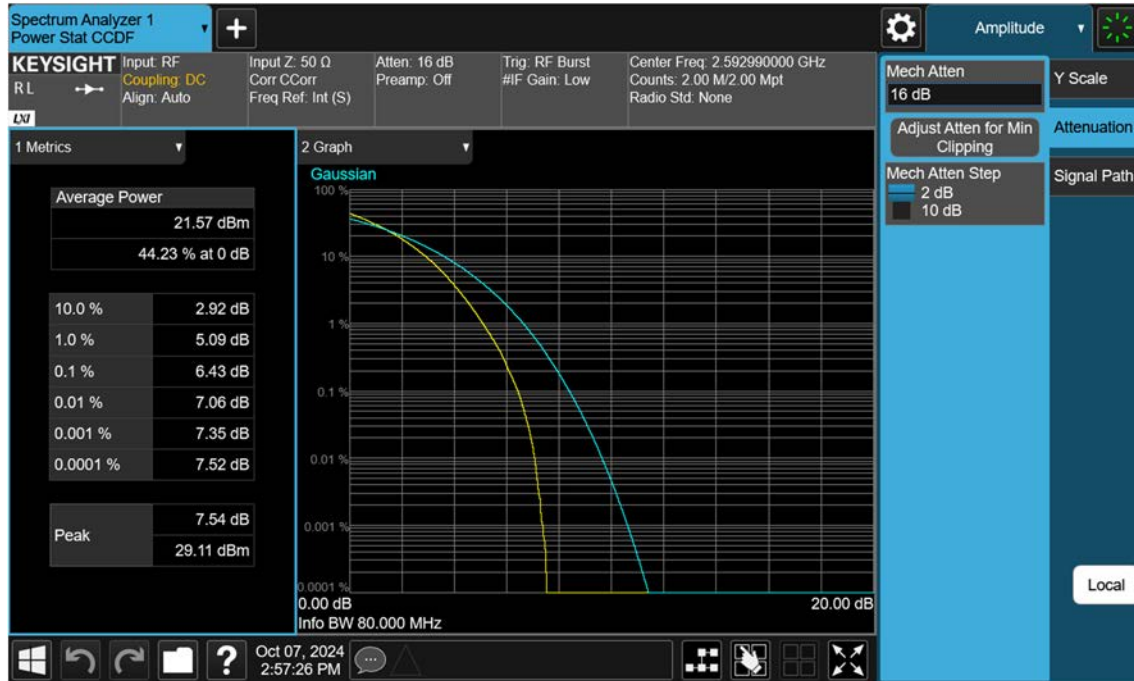
0.0001 %
0.001 %
0.01 %
0.1 %
1 %
10 %
100 %

0.00 dB
20.00 dB

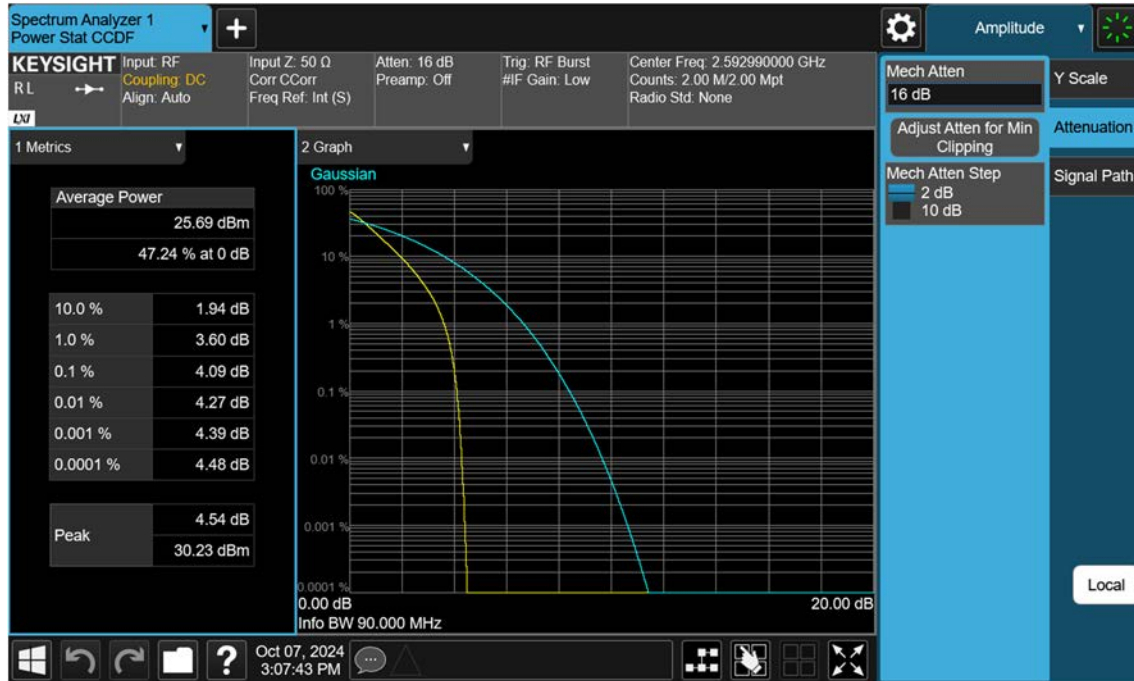
Info BW 80.000 MHz

Oct 07, 2024
2:56:39 PM

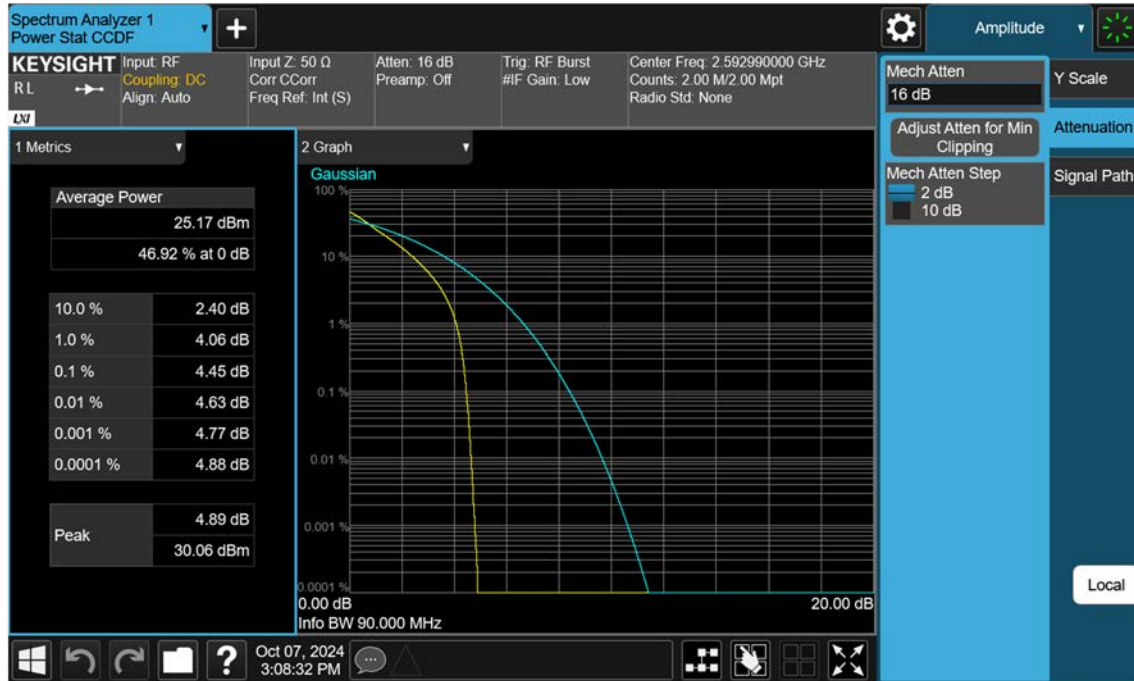
NR41_80 M_PAR_Mid_256QAM_FullRB



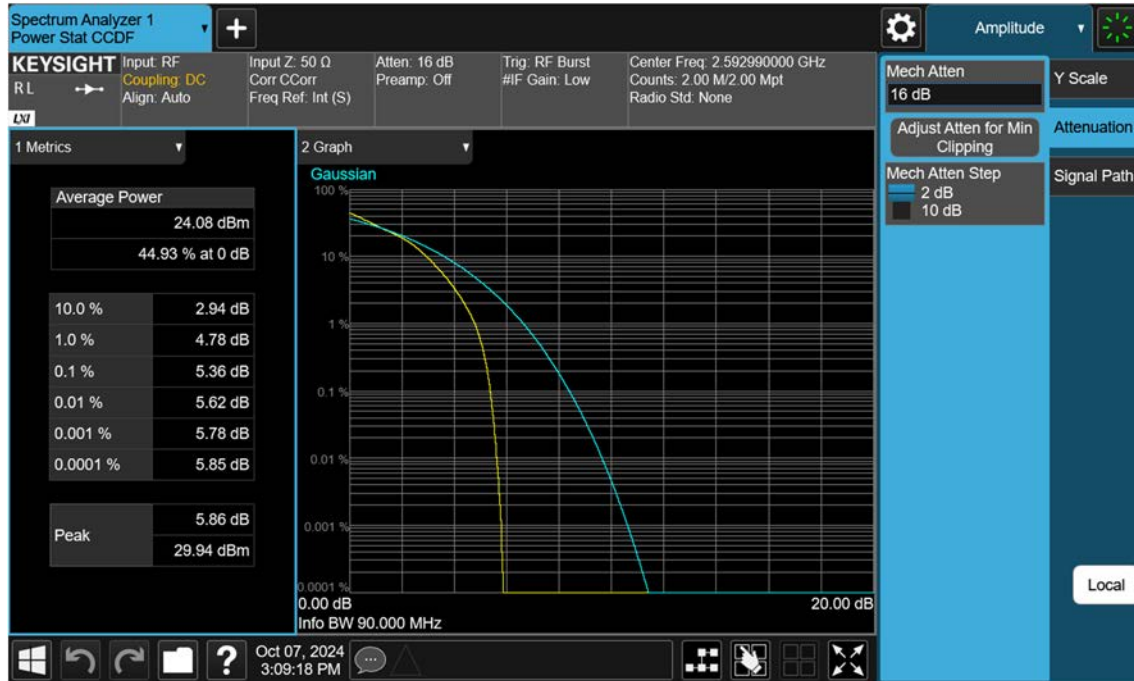
NR41_90 M_PAR_Mid_BPSK_FullRB



NR41_90 M_PAR_Mid_QPSK_FullRB



NR41_90 M_PAR_Mid_16QAM_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input: RF
R L → Coupling: DC
Align: Auto

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

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#F Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

Mech Atten
16 dB

Adjust Atten for Min Clipping

Mech Atten Step
2 dB
10 dB

Y Scale

Attenuation

Signal Path

Local

1 Metrics

Average Power

23.58 dBm

44.05 % at 0 dB

10.0 % 3.00 dB

1.0 % 5.04 dB

0.1 % 5.86 dB

0.01 % 6.14 dB

0.001 % 6.27 dB

0.0001 % 6.40 dB

Peak 6.45 dB

30.03 dBm

2 Graph

Gaussian

100 %

10 %

1 %

0.1 %

0.01 %

0.001 %

0.0001 %

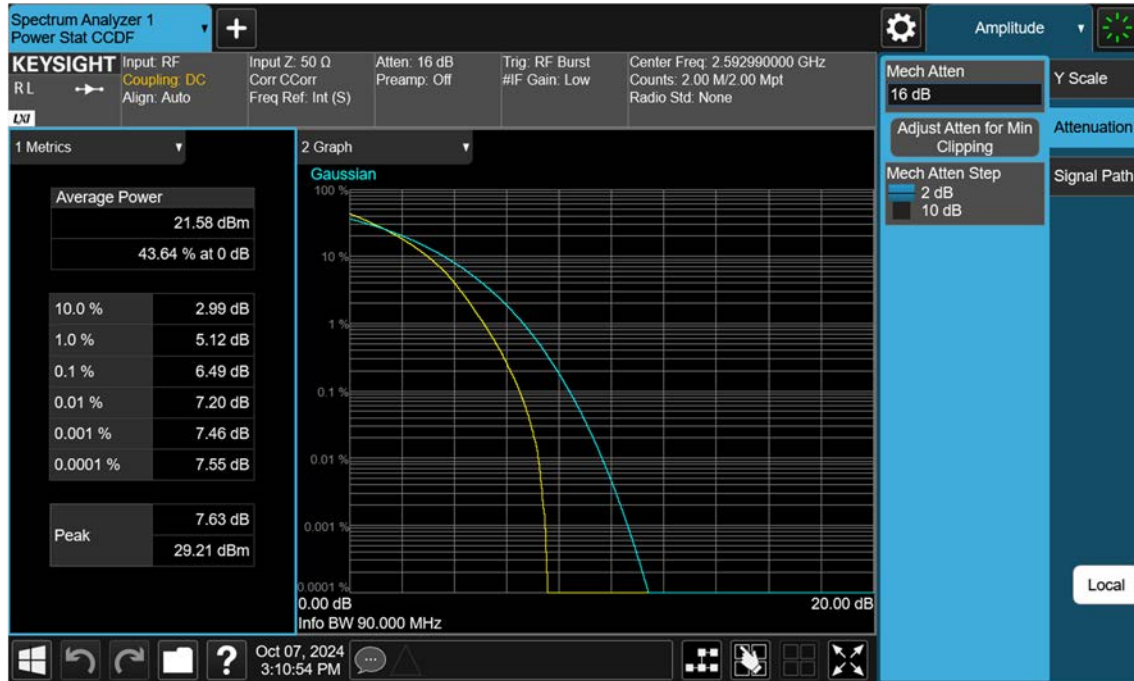
0.00 dB

20.00 dB

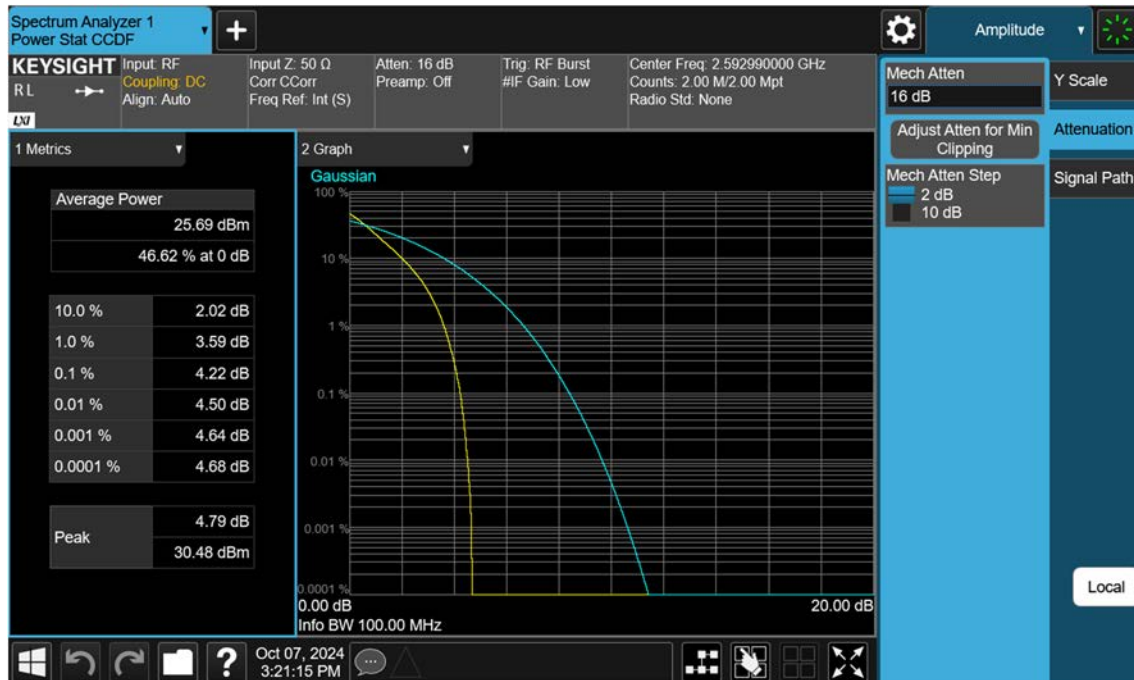
Info BW 90.000 MHz

Oct 07, 2024
3:10:05 PM

NR41_90 M_PAR_Mid_256QAM_FullRB



NR41_100 M_PAR_Mid_BPSK_FullRB



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT
R L → Coupling: DC
Align: Auto

Input RF: 50 Ω
Corr CCorr: Freq Ref. Int (S)

Atten: 16 dB
Preamp: Off

Trig: RF Burst
#F Gain: Low

Center Freq: 2.592990000 GHz
Counts: 2.00 M/2.00 Mpt
Radio Std: None

Mech Atten: 16 dB

Adjust Atten for Min Clipping

Mech Atten Step: 2 dB, 10 dB

1 Metrics

Average Power	
	25.21 dBm
	46.22 % at 0 dB

10.0 %	2.49 dB
1.0 %	4.18 dB
0.1 %	4.69 dB
0.01 %	4.91 dB
0.001 %	5.06 dB
0.0001 %	5.18 dB

Peak	
	5.20 dB
	30.41 dBm

2 Graph

Gaussian

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

0.00 dB
20.00 dB

Info BW 100.00 MHz

Oct 07, 2024
3:22:03 PM

NR41_100 M_PAR_Mid_16QAM_FullRB

