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FCC Sub6 REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

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

Date of Issue:
October 17, 2023

Location:
HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

Report No.: HCT-RF-2310-FC073

FCC ID:	**A3LSMS926B**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s):	SM-S926B/DS
Additional Model(s):	SM-S926B
EUT Type:	Mobile Phone
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27

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)

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n41 (10)	2501.010 – 2685.000	8M70G7D	PI/2 BPSK	0.211	23.24
		8M70G7D	QPSK	0.208	23.19
		8M70W7D	16QAM	0.164	22.14
		8M73W7D	64QAM	0.121	20.82
		8M68W7D	256QAM	0.076	18.79
Sub6 n41 (15)	2503.500 – 2682.480	13M0G7D	PI/2 BPSK	0.214	23.31
		13M0G7D	QPSK	0.211	23.24
		13M0W7D	16QAM	0.173	22.38
		13M0W7D	64QAM	0.118	20.71
		13M0W7D	256QAM	0.076	18.82
Sub6 n41 (20)	2506.020 – 2679.990	18M0G7D	PI/2 BPSK	0.213	23.29
		18M0G7D	QPSK	0.208	23.18
		18M0W7D	16QAM	0.167	22.23
		18M0W7D	64QAM	0.116	20.66
		17M9W7D	256QAM	0.075	18.73
Sub6 n41 (30)	2511.000 – 2674.980	27M0G7D	PI/2 BPSK	0.217	23.36
		27M0G7D	QPSK	0.212	23.26
		27M1W7D	16QAM	0.178	22.50
		27M0W7D	64QAM	0.121	20.81
		26M9W7D	256QAM	0.076	18.78
Sub6 n41 (40)	2516.010 – 2670.000	36M0G7D	PI/2 BPSK	0.222	23.46
		36M0G7D	QPSK	0.220	23.43
		35M9W7D	16QAM	0.173	22.37
		35M9W7D	64QAM	0.124	20.93
		35M9W7D	256QAM	0.079	18.96
Sub6 n41 (50)	2521.020 – 2664.990	46M1G7D	PI/2 BPSK	0.210	23.23
		46M0G7D	QPSK	0.208	23.18
		46M0W7D	16QAM	0.166	22.20
		46M0W7D	64QAM	0.115	20.62
		46M0W7D	256QAM	0.076	18.78
Sub6 n41 (60)	2526.000 – 2659.980	58M2G7D	PI/2 BPSK	0.216	23.34
		58M4G7D	QPSK	0.209	23.21
		58M4W7D	16QAM	0.167	22.24
		58M4W7D	64QAM	0.122	20.86
		58M4W7D	256QAM	0.075	18.74
Sub6 n41 (70)	2531.010 – 2655.000	64M9G7D	PI/2 BPSK	0.216	23.35
		65M1G7D	QPSK	0.212	23.27
		64M8W7D	16QAM	0.168	22.25
		64M9W7D	64QAM	0.122	20.85
		64M9W7D	256QAM	0.076	18.78
Sub6 n41 (80)	2536.020 – 2649.990	77M6G7D	PI/2 BPSK	0.222	23.46
		77M9G7D	QPSK	0.216	23.35
		77M6W7D	16QAM	0.176	22.46
		77M6W7D	64QAM	0.126	21.02
		77M9W7D	256QAM	0.079	18.99
Sub6 n41 (90)	2541.000 – 2644.980	87M4G7D	PI/2 BPSK	0.234	23.70
		87M3G7D	QPSK	0.233	23.67
		87M3W7D	16QAM	0.186	22.69
		87M1W7D	64QAM	0.133	21.24
		87M1W7D	256QAM	0.084	19.26
Sub6 n41 (100)	2546.010 – 2640.000	97M2G7D	PI/2 BPSK	0.237	23.74
		96M9G7D	QPSK	0.234	23.69
		96M9W7D	16QAM	0.187	22.73
		96M8W7D	64QAM	0.133	21.24
		96M6W7D	256QAM	0.084	19.25

REVIEWED BY

Report prepared by : Jae Ryang Do
Engineer of Telecommunication Testing Center

Report approved by : Jong Seok Lee
Manager of Telecommunication Testing Center

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

Test Report Statement:
The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2310-FC073	October 17, 2023	- First Approval Report

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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:	A3LSMS926B
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27
EUT Type:	Mobile Phone
Model(s):	SM-S926B/DS
Additional Model(s):	SM-S926B
SCS(kHz):	30
Bandwidth(MHz):	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
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(SCS 30kHz):	2501.010 – 2685.000 : 10 MHz 2503.500 – 2682.480 : 15 MHz 2506.020 – 2679.990 : 20 MHz 2511.000 – 2674.980 : 30 MHz 2516.010 – 2670.000 : 40 MHz 2521.020 – 2664.990 : 50 MHz 2526.000 – 2659.980 : 60 MHz 2531.010 – 2655.000 : 70 MHz 2536.020 – 2649.990 : 80 MHz 2541.000 – 2644.980 : 90 MHz 2546.010 – 2640.000 : 100 MHz
Date(s) of Tests:	August 31, 2023 ~ October 10, 2023
Serial number:	Radiated: R3CW70NE1JK Conducted: R3CW70NDTRM

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE, Sub6.

It also supports IEEE 802.11 a/b/g/n/ac/ax (20/40/80/160 MHz), WIFI 6E, Bluetooth, BT LE, NFC, UWB, WPT.

2.2. MEASURING INSTRUMENT CALIBRATION

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

2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.**

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
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 ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Note

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

   The power is calculated by the following formula;

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

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

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to 10^{th} harmonics from 9 kHz.

Test Note

1. Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data
3. For spurious emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.
   The spurious emissions is calculated by the following formula;

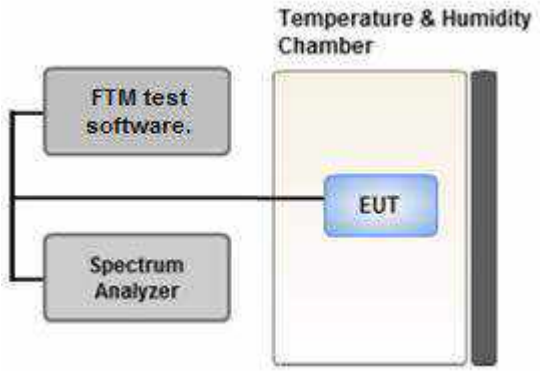
$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

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

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① CCDF Procedure for PAPR

Test Settings

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

② Alternate Procedure for PAPR

Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as P_{Pk}.
Use one of the applicable procedures presented 5.2(ANSI C63.26-2015) to measure the total average power and record as P_{Avg}. Determine the P.A.R. from:

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

Test Settings(Peak Power)

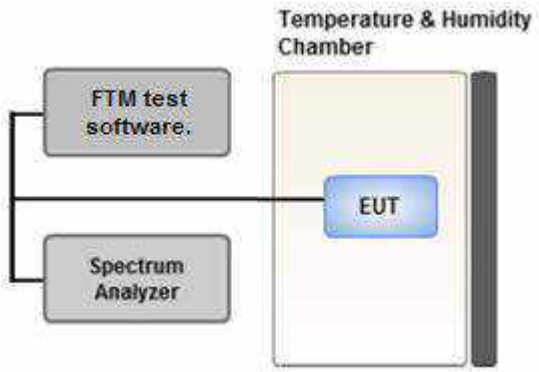
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

1. Set the RBW ≥ OBW.
2. Set VBW ≥ 3 × RBW.
3. Set span ≥ 2 × OBW.
4. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period).
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the peak amplitude level.

Test Settings(Average Power)

1. Set span to 2 × to 3 × the OBW.
2. Set RBW ≥ OBW.
3. Set VBW ≥ 3 × RBW.
4. Set number of measurement points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   Set ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep (automation-compatible) measurement. The transmission period is the (on + off) time.
6. Detector = power averaging (rms).
7. Set sweep trigger to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. (To accurately determine the average power over the on and off period of the transmitter, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.)
9. Use the peak marker function to determine the maximum amplitude level.
10. Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25 %.

3.5 OCCUPIED BANDWIDTH.



Test setup

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

The EUT makes a call to the communication simulator.

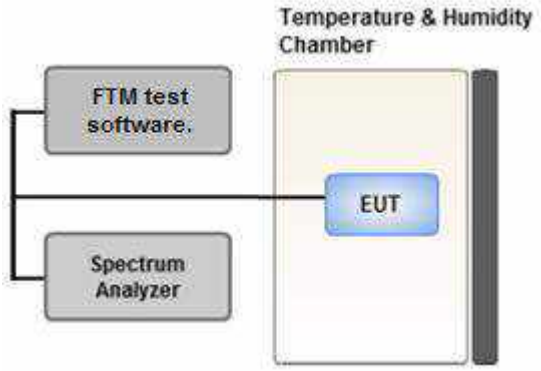
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

Test Settings

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

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

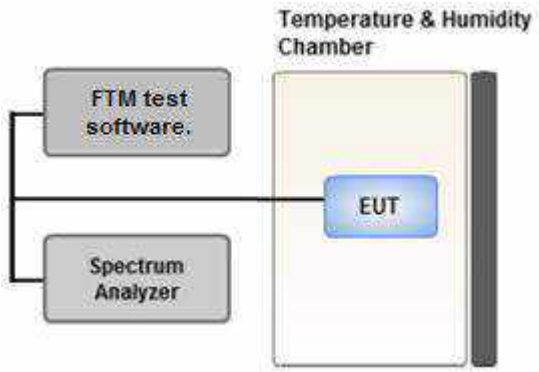
Test Overview

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

Test Settings

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

3.7 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

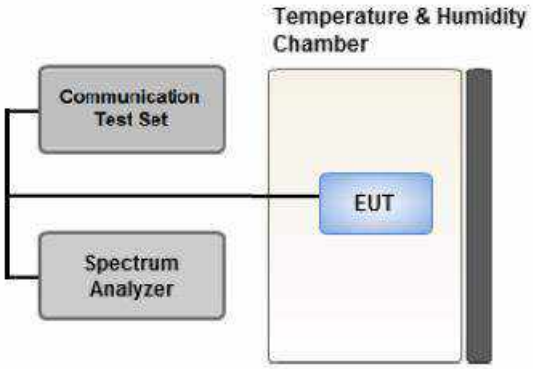
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. Within 1 MHz of the channel edge the RBW should be 2 % of EBW, then 1 MHz after that.
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/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 that 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 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: SA, NSA, SRS
  Worst case: SA
  Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
  Worst case : Stand alone
- We were performed the RSE test in condition of co-location.
  Mode : Stand alone, Simultaneous transmission scenarios
  Worst case : Stand alone
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
  All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
  The test results which are attenuated more than 20 dB below the permissible value, so it were not reported.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- SM-S926B/DS & additional models were tested and the worst case results are reported.
  (Worst case : SM-S926B/DS)

[Worst case]

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

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
  (Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: SA, NSA, 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-S926B/DS & additional models were tested and the worst case results are reported.
  (Worst case : SM-S926B/DS)

[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, 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
		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, 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, 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	03/27/2024	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	03/27/2024	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	02289	03/21/2024	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	04/27/2025	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/16/2025	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/09/2025	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/24/2025	Biennial
RF Switching System	FBSR-06B (1G HPF + LNA)	T&M SYSTEM	F3L1	05/22/2024	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/22/2024	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/22/2024	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/22/2024	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/02/2024	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/25/2024	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	03/02/2024	Annual
Chamber	SU-642	ESPEC	93008124	02/22/2024	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/11/2024	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/19/2024	Annual
Spectrum Analyzer(10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/22/2024	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/10/2024	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/22/2024	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/23/2024	Annual
SIGNAL GENERATOR (100 kHz~40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	06/22/2024	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/24/2024	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/19/2024	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

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

5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.90 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.14 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.16 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.57 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.76 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.52 (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 + 10log10 (P[Watts]) at Channel edges ■ < 43 + 10log10 (P[Watts]) between 5 and X MHz from Channel edges ■ < 55 + 10log10 (P[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	See Note1
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 + 10log10 (P[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

ERP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.

2) During the test, the turn table is rotated until the maximum signal is found.

3) Record the field strength meter's level.

4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.

5) Increase the signal generator output till the field strength meter's level is equal to the item (3).

6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Level(dBm)	Substitute Level(dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
518598	2593.0	-15.75	18.45	9.90	1.76	H	0.456	26.59

EIRP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.

2) During the test, the turn table is rotated until the maximum signal is found.

3) Record the field strength meter's level.

4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.

5) Increase the signal generator output till the field strength meter's level is equal to the item (3).

6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.

7.3. Emission Designator

GSM Emission Designator

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

EDGE Emission Designator

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

WCDMA Emission Designator

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

QPSK Modulation

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

QAM Modulation

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

8. TEST DATA

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2501.010	Sub6 41/ 10 MHz [30 kHz]	PI/2 BPSK	-21.99	14.65	10.30	2.47	H	< 2.00	0.177	22.48	1	22
		QPSK	-22.03	14.61	10.30	2.47	H		0.175	22.44		
		16-QAM	-22.93	13.71	10.30	2.47	H		0.143	21.54		
		64-QAM	-24.42	12.22	10.30	2.47	H		0.101	20.05		
		256-QAM	-26.61	10.03	10.30	2.47	H		0.061	17.86		
2592.990		PI/2 BPSK	-20.61	15.69	10.05	2.50	H		0.211	23.24	1	22
		QPSK	-20.66	15.64	10.05	2.50	H		0.208	23.19		
		16-QAM	-21.71	14.59	10.05	2.50	H		0.164	22.14		
		64-QAM	-23.03	13.27	10.05	2.50	H		0.121	20.82		
		256-QAM	-25.06	11.24	10.05	2.50	H		0.076	18.79		
2685.000		PI/2 BPSK	-22.94	14.52	10.10	2.58	H		0.160	22.04	1	12
		QPSK	-23.03	14.43	10.10	2.58	H		0.157	21.95		
		16-QAM	-24.04	13.42	10.10	2.58	H		0.124	20.94		
		64-QAM	-25.46	12.00	10.10	2.58	H		0.090	19.52		
		256-QAM	-27.50	9.96	10.10	2.58	H		0.056	17.48		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2503.500	Sub6 41/ 15 MHz [30 kHz]	PI/2 BPSK	-21.76	14.87	10.30	2.48	H	< 2.00	0.186	22.69	1	36
		QPSK	-21.81	14.82	10.30	2.48	H		0.184	22.64		
		16-QAM	-22.75	13.88	10.30	2.48	H		0.148	21.70		
		64-QAM	-24.42	12.21	10.30	2.48	H		0.101	20.03		
		256-QAM	-26.14	10.49	10.30	2.48	H		0.068	18.31		
2592.990		PI/2 BPSK	-20.54	15.76	10.05	2.50	H		0.214	23.31	1	1
		QPSK	-20.61	15.69	10.05	2.50	H		0.211	23.24		
		16-QAM	-21.47	14.83	10.05	2.50	H		0.173	22.38		
		64-QAM	-23.14	13.16	10.05	2.50	H		0.118	20.71		
		256-QAM	-25.03	11.27	10.05	2.50	H		0.076	18.82		
2682.480		PI/2 BPSK	-23.03	14.68	10.10	2.58	H		0.166	22.20	1	1
		QPSK	-23.06	14.65	10.10	2.58	H		0.165	22.17		
		16-QAM	-24.00	13.71	10.10	2.58	H		0.133	21.23		
		64-QAM	-25.57	12.14	10.10	2.58	H		0.092	19.66		
		256-QAM	-27.45	10.26	10.10	2.58	H		0.060	17.78		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2506.020	Sub6 41/ 20 MHz [30 kHz]	PI/2 BPSK	-21.30	15.33	10.30	2.48	H	< 2.00	0.207	23.15	1	49
		QPSK	-21.35	15.28	10.30	2.48	H		0.204	23.10		
		16-QAM	-22.31	14.32	10.30	2.48	H		0.164	22.14		
		64-QAM	-23.79	12.84	10.30	2.48	H		0.116	20.66		
		256-QAM	-25.76	10.87	10.30	2.48	H		0.074	18.69		
2592.990		PI/2 BPSK	-20.56	15.74	10.05	2.50	H		0.213	23.29	1	25
		QPSK	-20.67	15.63	10.05	2.50	H		0.208	23.18		
		16-QAM	-21.62	14.68	10.05	2.50	H		0.167	22.23		
		64-QAM	-23.22	13.08	10.05	2.50	H		0.116	20.63		
		256-QAM	-25.12	11.18	10.05	2.50	H		0.075	18.73		
2679.990		PI/2 BPSK	-22.89	14.82	10.10	2.58	H		0.171	22.34	1	1
		QPSK	-22.93	14.78	10.10	2.58	H		0.170	22.30		
		16-QAM	-23.76	13.95	10.10	2.58	H		0.140	21.47		
		64-QAM	-25.39	12.32	10.10	2.58	H		0.096	19.84		
		256-QAM	-27.40	10.31	10.10	2.58	H		0.061	17.83		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2511.000	Sub6 41/ 30 MHz [30 kHz]	PI/2 BPSK	-21.11	15.51	10.30	2.50	H	< 2.00	0.214	23.31	1	76
		QPSK	-21.19	15.43	10.30	2.50	H		0.210	23.23		
		16-QAM	-21.92	14.70	10.30	2.50	H		0.178	22.50		
		64-QAM	-23.78	12.84	10.30	2.50	H		0.116	20.64		
		256-QAM	-25.64	10.98	10.30	2.50	H		0.076	18.78		
2592.990		PI/2 BPSK	-20.49	15.81	10.05	2.50	H		0.217	23.36	1	39
		QPSK	-20.59	15.71	10.05	2.50	H		0.212	23.26		
		16-QAM	-21.65	14.65	10.05	2.50	H		0.166	22.20		
		64-QAM	-23.04	13.26	10.05	2.50	H		0.121	20.81		
		256-QAM	-25.09	11.21	10.05	2.50	H		0.075	18.76		
2674.980		PI/2 BPSK	-22.58	14.83	10.10	2.58	H		0.172	22.35	1	1
		QPSK	-22.62	14.79	10.10	2.58	H		0.170	22.31		
		16-QAM	-23.55	13.86	10.10	2.58	H		0.137	21.38		
		64-QAM	-25.18	12.23	10.10	2.58	H		0.094	19.75		
		256-QAM	-27.11	10.30	10.10	2.58	H		0.061	17.82		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2516.010	Sub6 41/ 40 MHz [30 kHz]	PI/2 BPSK	-20.82	15.67	10.30	2.51	H	< 2.00	0.222	23.46	1	104
		QPSK	-20.85	15.64	10.30	2.51	H		0.220	23.43		
		16-QAM	-21.91	14.58	10.30	2.51	H		0.173	22.37		
		64-QAM	-23.35	13.14	10.30	2.51	H		0.124	20.93		
		256-QAM	-25.32	11.17	10.30	2.51	H		0.079	18.96		
2592.990		PI/2 BPSK	-20.50	15.80	10.05	2.50	H		0.216	23.35	1	53
		QPSK	-20.59	15.71	10.05	2.50	H		0.212	23.26		
		16-QAM	-21.55	14.75	10.05	2.50	H		0.170	22.30		
		64-QAM	-23.07	13.23	10.05	2.50	H		0.120	20.78		
		256-QAM	-25.07	11.23	10.05	2.50	H		0.076	18.78		
2670.000		PI/2 BPSK	-22.28	14.84	10.10	2.58	H		0.172	22.36	1	1
		QPSK	-22.31	14.81	10.10	2.58	H		0.171	22.33		
		16-QAM	-23.25	13.87	10.10	2.58	H		0.138	21.39		
		64-QAM	-24.89	12.23	10.10	2.58	H		0.094	19.75		
		256-QAM	-26.76	10.36	10.10	2.58	H		0.061	17.88		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2521.020	Sub6 41/ 50 MHz [30 kHz]	PI/2 BPSK	-21.08	15.59	10.00	2.53	H	< 2.00	0.202	23.06	1	131
		QPSK	-21.14	15.53	10.00	2.53	H		0.200	23.00		
		16-QAM	-22.11	14.56	10.00	2.53	H		0.160	22.03		
		64-QAM	-23.63	13.04	10.00	2.53	H		0.112	20.51		
		256-QAM	-25.50	11.17	10.00	2.53	H		0.073	18.64		
2592.990		PI/2 BPSK	-20.62	15.68	10.05	2.50	H		0.210	23.23	1	66
		QPSK	-20.67	15.63	10.05	2.50	H		0.208	23.18		
		16-QAM	-21.65	14.65	10.05	2.50	H		0.166	22.20		
		64-QAM	-23.23	13.07	10.05	2.50	H		0.115	20.62		
		256-QAM	-25.07	11.23	10.05	2.50	H		0.076	18.78		
2664.990		PI/2 BPSK	-22.23	14.86	10.10	2.60	H		0.172	22.36	1	1
		QPSK	-22.24	14.85	10.10	2.60	H		0.172	22.35		
		16-QAM	-23.30	13.79	10.10	2.60	H		0.135	21.29		
		64-QAM	-24.70	12.39	10.10	2.60	H		0.097	19.89		
		256-QAM	-26.69	10.40	10.10	2.60	H		0.062	17.90		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2526.000	Sub6 41/ 60 MHz [30 kHz]	PI/2 BPSK	-20.97	15.29	10.30	2.53	H	< 2.00	0.202	23.06	1	81
		QPSK	-21.11	15.15	10.30	2.53	H		0.196	22.92		
		16-QAM	-22.10	14.16	10.30	2.53	H		0.156	21.93		
		64-QAM	-23.51	12.75	10.30	2.53	H		0.113	20.52		
		256-QAM	-25.40	10.86	10.30	2.53	H		0.073	18.63		
2592.990		PI/2 BPSK	-20.51	15.79	10.05	2.50	H		0.216	23.34	1	81
		QPSK	-20.64	15.66	10.05	2.50	H		0.209	23.21		
		16-QAM	-21.61	14.69	10.05	2.50	H		0.167	22.24		
		64-QAM	-22.99	13.31	10.05	2.50	H		0.122	20.86		
		256-QAM	-25.11	11.19	10.05	2.50	H		0.075	18.74		
2659.980		PI/2 BPSK	-21.77	15.08	10.10	2.61	H		0.181	22.57	1	81
		QPSK	-21.79	15.06	10.10	2.61	H		0.180	22.55		
		16-QAM	-22.75	14.10	10.10	2.61	H		0.144	21.59		
		64-QAM	-24.35	12.50	10.10	2.61	H		0.100	19.99		
		256-QAM	-26.18	10.67	10.10	2.61	H		0.065	18.16		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2531.010	Sub6 41/ 70 MHz [30 kHz]	PI/2 BPSK	-20.72	15.40	10.30	2.52	H	< 2.00	0.208	23.18	1	187
		QPSK	-20.78	15.34	10.30	2.52	H		0.205	23.12		
		16-QAM	-21.79	14.33	10.30	2.52	H		0.163	22.11		
		64-QAM	-23.43	12.69	10.30	2.52	H		0.111	20.47		
		256-QAM	-25.19	10.93	10.30	2.52	H		0.074	18.71		
2592.990		PI/2 BPSK	-20.50	15.80	10.05	2.50	H		0.216	23.35	1	94
		QPSK	-20.58	15.72	10.05	2.50	H		0.212	23.27		
		16-QAM	-21.60	14.70	10.05	2.50	H		0.168	22.25		
		64-QAM	-23.00	13.30	10.05	2.50	H		0.122	20.85		
		256-QAM	-25.09	11.21	10.05	2.50	H		0.075	18.76		
2655.000		PI/2 BPSK	-21.06	15.70	10.10	2.63	H		0.207	23.17	1	1
		QPSK	-21.10	15.66	10.10	2.63	H		0.206	23.13		
		16-QAM	-22.06	14.70	10.10	2.63	H		0.165	22.17		
		64-QAM	-23.70	13.06	10.10	2.63	H		0.113	20.53		
		256-QAM	-25.45	11.31	10.10	2.63	H		0.076	18.78		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2536.020	Sub6 41/ 80 MHz [30 kHz]	PI/2 BPSK	-20.86	15.38	10.30	2.52	H	< 2.00	0.207	23.16	1	215
		QPSK	-20.90	15.34	10.30	2.52	H		0.205	23.12		
		16-QAM	-21.81	14.43	10.30	2.52	H		0.166	22.21		
		64-QAM	-23.24	13.00	10.30	2.52	H		0.120	20.78		
		256-QAM	-25.35	10.89	10.30	2.52	H		0.074	18.67		
2592.990		PI/2 BPSK	-20.50	15.80	10.05	2.50	H		0.216	23.35	1	108
		QPSK	-20.59	15.71	10.05	2.50	H		0.212	23.26		
		16-QAM	-21.56	14.74	10.05	2.50	H		0.169	22.29		
		64-QAM	-23.06	13.24	10.05	2.50	H		0.120	20.79		
		256-QAM	-25.05	11.25	10.05	2.50	H		0.076	18.80		
2649.990		PI/2 BPSK	-20.66	16.01	10.10	2.65	H		0.222	23.46	1	1
		QPSK	-20.77	15.90	10.10	2.65	H		0.216	23.35		
		16-QAM	-21.66	15.01	10.10	2.65	H		0.176	22.46		
		64-QAM	-23.10	13.57	10.10	2.65	H		0.126	21.02		
		256-QAM	-25.13	11.54	10.10	2.65	H		0.079	18.99		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2541.000	Sub6 41/ 90 MHz [30 kHz]	PI/2 BPSK	-20.54	15.82	10.30	2.52	H	< 2.00	0.229	23.60	1	243
		QPSK	-20.60	15.76	10.30	2.52	H		0.226	23.54		
		16-QAM	-21.45	14.91	10.30	2.52	H		0.186	22.69		
		64-QAM	-23.18	13.18	10.30	2.52	H		0.125	20.96		
		256-QAM	-25.04	11.32	10.30	2.52	H		0.081	19.10		
2592.990		PI/2 BPSK	-20.52	15.78	10.05	2.50	H		0.215	23.33	1	122
		QPSK	-20.62	15.68	10.05	2.50	H		0.210	23.23		
		16-QAM	-21.63	14.67	10.05	2.50	H		0.167	22.22		
		64-QAM	-23.06	13.24	10.05	2.50	H		0.120	20.79		
		256-QAM	-25.12	11.18	10.05	2.50	H		0.075	18.73		
2644.980		PI/2 BPSK	-20.45	16.36	10.00	2.66	H		0.234	23.70	1	1
		QPSK	-20.48	16.33	10.00	2.66	H		0.233	23.67		
		16-QAM	-21.47	15.34	10.00	2.66	H		0.185	22.68		
		64-QAM	-22.91	13.90	10.00	2.66	H		0.133	21.24		
		256-QAM	-24.89	11.92	10.00	2.66	H		0.084	19.26		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2546.010	Sub6 41/ 100 MHz [30 kHz]	PI/2 BPSK	-20.35	16.02	10.25	2.54	H	< 2.00	0.236	23.73	1	271
		QPSK	-20.39	15.98	10.25	2.54	H		0.234	23.69		
		16-QAM	-21.46	14.91	10.25	2.54	H		0.183	22.62		
		64-QAM	-22.84	13.53	10.25	2.54	H		0.133	21.24		
		256-QAM	-24.83	11.54	10.25	2.54	H		0.084	19.25		
2592.990		PI/2 BPSK	-20.51	15.79	10.05	2.50	H		0.216	23.34	1	136
		QPSK	-20.61	15.69	10.05	2.50	H		0.211	23.24		
		16-QAM	-21.49	14.81	10.05	2.50	H		0.172	22.36		
		64-QAM	-23.15	13.15	10.05	2.50	H		0.117	20.70		
		256-QAM	-25.12	11.18	10.05	2.50	H		0.075	18.73		
2640.000		PI/2 BPSK	-20.44	16.51	9.90	2.67	H		0.237	23.74	1	1
		QPSK	-20.53	16.42	9.90	2.67	H		0.232	23.65		
		16-QAM	-21.45	15.50	9.90	2.67	H		0.187	22.73		
		64-QAM	-22.96	13.99	9.90	2.67	H		0.132	21.22		
		256-QAM	-24.93	12.02	9.90	2.67	H		0.084	19.25		

8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N41

▣ Bandwidth: 10 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)	Detector	RB	
										Size	Offset
500202 (2501.010)	5 002.02	-61.03	10.70	-62.38	3.63	V	-55.31	-25.00	Peak	1	22
	7 503.03	-55.83	11.10	-48.82	4.50	V	-42.22	-25.00	Peak		
	10 004.04	-45.61	11.20	-37.15	5.26	V	-31.21	-25.00	Average		
	12 505.05	-62.89	12.10	-53.55	6.04	V	-47.49	-25.00	Peak		
	15 006.06	-60.48	13.80	-53.88	6.65	V	-46.73	-25.00	Peak		
518598 (2592.990)	5 185.98	-58.21	11.00	-59.71	3.70	V	-52.41	-25.00	Peak	1	22
	7 778.97	-58.51	10.90	-51.13	4.61	H	-44.84	-25.00	Peak		
	10 371.96	-47.29	11.20	-36.59	5.41	V	-30.80	-25.00	Peak		
	12 964.95	-61.43	12.00	-51.50	6.11	H	-45.61	-25.00	Peak		
	15 557.94	-60.67	15.40	-55.34	6.77	H	-46.71	-25.00	Peak		
537000 (2685.000)	5 370.00	-55.49	11.50	-58.01	3.74	H	-50.25	-25.00	Peak	1	12
	8 055.00	-59.38	10.90	-52.17	4.71	V	-45.98	-25.00	Peak		
	10 740.00	-49.80	11.10	-39.20	5.50	V	-33.60	-25.00	Peak		
	13 425.00	-62.85	11.80	-52.00	6.22	V	-46.42	-25.00	Peak		
	16 110.00	-64.09	15.70	-54.95	6.91	V	-46.16	-25.00	Peak		

▣ NR Band: N41

▣ 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)	Detector	RB	
										Size	Offset
500700 (2503.500)	5 007.00	-60.62	10.70	-61.90	3.61	V	-54.81	-25.00	Peak	1	36
	7 510.50	-59.05	11.10	-51.98	4.50	V	-45.38	-25.00	Peak		
	10 014.00	-45.86	11.20	-37.25	5.27	V	-31.32	-25.00	Average		
	12 517.50	-62.46	12.10	-52.83	6.04	V	-46.77	-25.00	Peak		
	15 021.00	-57.51	13.80	-51.03	6.65	V	-43.88	-25.00	Peak		
518598 (2592.990)	5 185.98	-59.35	11.00	-60.85	3.70	V	-53.55	-25.00	Peak	1	1
	7 778.97	-58.41	10.90	-51.03	4.61	V	-44.74	-25.00	Peak		
	10 371.96	-48.57	11.20	-37.87	5.41	V	-32.08	-25.00	Peak		
	12 964.95	-62.58	12.00	-52.65	6.11	V	-46.76	-25.00	Peak		
	15 557.94	-60.88	15.40	-55.55	6.77	V	-46.92	-25.00	Peak		
536496 (2682.480)	5 364.96	-56.51	11.50	-58.80	3.75	V	-51.05	-25.00	Peak	1	1
	8 047.44	-57.83	10.85	-50.65	4.69	V	-44.49	-25.00	Peak		
	10 729.92	-53.06	11.10	-41.83	5.47	V	-36.20	-25.00	Peak		
	13 412.40	-61.95	11.80	-51.28	6.21	V	-45.69	-25.00	Peak		
	16 094.88	-62.46	15.60	-53.00	6.91	V	-44.31	-25.00	Peak		

▣ NR Band: N41

▣ 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)	Detector	RB	
										Size	Offset
501204 (2506.020)	5 012.04	-58.99	10.70	-60.20	3.59	V	-53.09	-25.00	Peak	1	49
	7 518.06	-59.36	11.10	-52.25	4.51	V	-45.66	-25.00	Peak		
	10 024.08	-46.71	11.20	-37.89	5.27	V	-31.96	-25.00	Average		
	12 530.10	-61.63	12.10	-51.81	6.01	V	-45.72	-25.00	Peak		
	15 036.12	-57.12	13.80	-50.88	6.65	V	-43.73	-25.00	Peak		
518598 (2592.990)	5 185.98	-55.75	11.00	-57.25	3.70	V	-49.95	-25.00	Peak	1	25
	7 778.97	-58.87	10.90	-51.49	4.61	V	-45.20	-25.00	Peak		
	10 371.96	-53.57	11.20	-42.87	5.41	V	-37.08	-25.00	Peak		
	12 964.95	-61.00	12.00	-51.07	6.11	V	-45.18	-25.00	Peak		
	15 557.94	-61.41	15.40	-56.08	6.77	V	-47.45	-25.00	Peak		
535998 (2679.990)	5 359.98	-52.72	11.50	-54.78	3.76	V	-47.04	-25.00	Peak	1	1
	8 039.97	-58.01	10.80	-50.84	4.68	V	-44.72	-25.00	Peak		
	10 719.96	-48.51	11.10	-36.88	5.46	V	-31.24	-25.00	Peak		
	13 399.95	-62.48	11.80	-52.13	6.22	V	-46.55	-25.00	Peak		
	16 079.94	-62.32	15.50	-53.04	6.90	V	-44.44	-25.00	Peak		

▣ NR Band: N41

▣ 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)	Detector	RB	
										Size	Offset
502200 (2511.000)	5 022.00	-60.00	10.70	-61.53	3.55	V	-54.38	-25.00	Peak	1	76
	7 533.00	-59.40	11.10	-51.92	4.50	V	-45.32	-25.00	Peak		
	10 044.00	-43.04	11.15	-34.19	5.27	V	-28.31	-25.00	Peak		
	12 555.00	-62.13	12.10	-52.82	6.00	V	-46.72	-25.00	Peak		
	15 066.00	-57.87	14.00	-52.26	6.65	V	-44.91	-25.00	Peak		
518598 (2592.990)	5 185.98	-59.49	11.00	-60.99	3.70	V	-53.69	-25.00	Peak	1	39
	7 778.97	-59.30	10.90	-51.92	4.61	V	-45.63	-25.00	Peak		
	10 371.96	-49.53	11.20	-38.83	5.41	V	-33.04	-25.00	Peak		
	12 964.95	-63.02	12.00	-53.09	6.11	V	-47.20	-25.00	Peak		
	15 557.94	-61.18	15.40	-55.85	6.77	V	-47.22	-25.00	Peak		
534996 (2674.980)	5 349.96	-54.03	11.50	-55.68	3.75	V	-47.93	-25.00	Peak	1	1
	8 024.94	-60.93	10.80	-54.22	4.62	V	-48.04	-25.00	Peak		
	10 699.92	-50.35	11.10	-38.67	5.48	V	-33.05	-25.00	Peak		
	13 374.90	-62.98	11.90	-52.92	6.23	V	-47.25	-25.00	Peak		
	16 049.88	-64.32	15.50	-55.47	6.90	V	-46.87	-25.00	Peak		

▣ NR Band: N41

▣ 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)	Detector	RB	
										Size	Offset
503202 (2516.010)	5 032.02	-61.78	10.70	-63.88	3.56	V	-56.74	-25.00	Peak	1	104
	7 548.03	-57.81	11.10	-50.47	4.50	V	-43.87	-25.00	Peak		
	10 064.04	-46.29	11.10	-37.48	5.28	V	-31.66	-25.00	Peak		
	12 580.05	-63.03	12.10	-53.40	6.06	V	-47.36	-25.00	Peak		
	15 096.06	-59.05	14.05	-53.72	6.67	V	-46.34	-25.00	Peak		
518598 (2592.990)	5 185.98	-57.37	11.00	-58.87	3.70	V	-51.57	-25.00	Peak	1	53
	7 778.97	-60.11	10.90	-52.73	4.61	V	-46.44	-25.00	Peak		
	10 371.96	-47.63	11.20	-36.93	5.41	V	-31.14	-25.00	Peak		
	12 964.95	-62.48	12.00	-52.55	6.11	V	-46.66	-25.00	Peak		
	15 557.94	-60.84	15.40	-55.51	6.77	V	-46.88	-25.00	Peak		
534000 (2670.000)	5 340.00	-51.33	11.40	-53.03	3.75	V	-45.38	-25.00	Peak	1	1
	8 010.00	-59.82	10.80	-52.75	4.62	V	-46.57	-25.00	Peak		
	10 680.00	-47.88	11.10	-36.42	5.46	V	-30.78	-25.00	Peak		
	13 350.00	-62.79	11.90	-52.74	6.21	V	-47.05	-25.00	Peak		
	16 020.00	-63.87	15.20	-55.52	6.68	V	-47.00	-25.00	Peak		

▣ 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)	Detector	RB	
										Size	Offset
504204 (2521.020)	5 042.04	-59.69	10.70	-61.66	3.60	V	-54.56	-25.00	Peak	1	131
	7 563.06	-58.04	11.10	-51.22	4.52	V	-44.64	-25.00	Peak		
	10 084.08	-43.42	11.10	-34.20	5.30	V	-28.40	-25.00	Peak		
	12 605.10	-60.88	12.00	-51.38	6.05	V	-45.43	-25.00	Peak		
	15 126.12	-57.59	14.10	-51.63	6.67	V	-44.20	-25.00	Peak		
518598 (2592.990)	5 185.98	-59.05	11.00	-60.55	3.70	V	-53.25	-25.00	Peak	1	66
	7 778.97	-58.55	10.90	-51.17	4.61	V	-44.88	-25.00	Peak		
	10 371.96	-50.19	11.20	-39.49	5.41	V	-33.70	-25.00	Peak		
	12 964.95	-60.55	12.00	-50.62	6.11	V	-44.73	-25.00	Peak		
	15 557.94	-59.91	15.40	-54.58	6.77	V	-45.95	-25.00	Peak		
532998 (2664.990)	5 329.98	-53.34	11.40	-55.31	3.71	V	-47.62	-25.00	Peak	1	1
	7 994.97	-61.52	10.75	-54.11	4.66	V	-48.02	-25.00	Peak		
	10 659.96	-50.80	11.10	-38.64	5.49	V	-33.03	-25.00	Peak		
	13 324.95	-62.04	12.00	-51.33	6.19	V	-45.52	-25.00	Peak		
	15 989.94	-63.60	15.10	-55.78	6.88	V	-47.56	-25.00	Peak		

▣ 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)	Detector	RB	
										Size	Offset
505200 (2526.000)	5 052.00	-61.11	10.70	-62.76	3.63	V	-55.69	-25.00	Peak	1	81
	7 578.00	-56.98	11.10	-50.19	4.54	V	-43.63	-25.00	Peak		
	10 104.00	-46.68	11.10	-37.84	5.29	V	-32.03	-25.00	Peak		
	12 630.00	-62.49	12.00	-53.26	6.02	V	-47.28	-25.00	Peak		
	15 156.00	-58.81	14.20	-53.32	6.67	V	-45.79	-25.00	Peak		
518598 (2592.990)	5 185.98	-58.95	11.00	-60.45	3.70	V	-53.15	-25.00	Peak	1	81
	7 778.97	-58.15	10.90	-50.77	4.61	V	-44.48	-25.00	Peak		
	10 371.96	-50.86	11.20	-40.16	5.41	V	-34.37	-25.00	Peak		
	12 964.95	-62.95	12.00	-53.02	6.11	V	-47.13	-25.00	Peak		
	15 557.94	-60.59	15.40	-55.26	6.77	V	-46.63	-25.00	Peak		
531996 (2659.980)	5 319.96	-50.03	11.40	-52.77	3.66	V	-45.03	-25.00	Peak	1	81
	7 979.94	-58.09	10.70	-50.84	4.67	V	-44.81	-25.00	Peak		
	10 639.92	-52.89	11.20	-41.46	5.49	V	-35.75	-25.00	Peak		
	13 299.90	-61.54	12.00	-51.39	6.19	V	-45.58	-25.00	Peak		
	15 959.88	-64.73	15.10	-56.07	6.87	V	-47.84	-25.00	Peak		

▣ 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)	Detector	RB	
										Size	Offset
506202 (2531.010)	5 062.02	-59.95	10.70	-60.93	3.65	V	-53.88	-25.00	Peak	1	187
	7 593.03	-59.43	11.15	-52.39	4.53	V	-45.77	-25.00	Peak		
	10 124.04	-45.27	11.10	-36.39	5.30	V	-30.59	-25.00	Peak		
	12 655.05	-63.34	11.90	-53.83	6.03	V	-47.96	-25.00	Peak		
	15 186.06	-60.28	14.20	-55.03	6.67	V	-47.50	-25.00	Peak		
518598 (2592.990)	5 185.98	-58.21	11.00	-59.71	3.70	V	-52.41	-25.00	Peak	1	94
	7 778.97	-61.91	10.90	-54.53	4.61	V	-48.24	-25.00	Peak		
	10 371.96	-47.88	11.20	-37.18	5.41	V	-31.39	-25.00	Peak		
	12 964.95	-61.53	12.00	-51.60	6.11	V	-45.71	-25.00	Peak		
	15 557.94	-61.03	15.40	-55.70	6.77	V	-47.07	-25.00	Peak		
531000 (2655.000)	5 310.00	-57.94	11.40	-60.18	3.65	V	-52.43	-25.00	Peak	1	1
	7 965.00	-58.60	10.70	-51.43	4.65	V	-45.38	-25.00	Peak		
	10 620.00	-54.56	11.20	-43.87	5.41	V	-38.08	-25.00	Peak		
	13 275.00	-61.75	12.10	-51.42	6.22	V	-45.54	-25.00	Peak		
	15 930.00	-62.57	15.00	-54.30	6.88	V	-46.18	-25.00	Peak		

▣ 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)	Detector	RB	
										Size	Offset
507204 (2536.020)	5 072.04	-60.05	10.70	-61.33	3.62	V	-54.25	-25.00	Peak	1	215
	7 608.06	-63.85	11.20	-56.84	4.52	V	-50.16	-25.00	Peak		
	10 144.08	-44.79	11.05	-35.32	5.32	V	-29.59	-25.00	Peak		
	12 680.10	-63.74	11.90	-53.53	6.06	V	-47.69	-25.00	Peak		
	15 216.12	-58.76	14.40	-53.80	6.69	V	-46.09	-25.00	Peak		
518598 (2592.990)	5 185.98	-59.48	11.00	-60.98	3.70	V	-53.68	-25.00	Peak	1	108
	7 778.97	-60.12	10.90	-52.74	4.61	V	-46.45	-25.00	Peak		
	10 371.96	-49.25	11.20	-38.55	5.41	V	-32.76	-25.00	Peak		
	12 964.95	-60.49	12.00	-50.56	6.11	V	-44.67	-25.00	Peak		
	15 557.94	-60.36	15.40	-55.03	6.77	V	-46.40	-25.00	Peak		
529998 (2649.990)	5 299.98	-60.53	11.40	-62.64	3.69	V	-54.93	-25.00	Peak	1	1
	7 949.97	-62.31	10.70	-55.00	4.64	V	-48.94	-25.00	Peak		
	10 599.96	-46.97	11.20	-35.78	5.41	V	-29.99	-25.00	Peak		
	13 249.95	-61.22	12.10	-51.16	6.18	V	-45.24	-25.00	Peak		
	15 899.94	-62.63	15.00	-54.80	6.87	V	-46.67	-25.00	Peak		

▣ 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)	Detector	RB	
										Size	Offset
508200 (2541.000)	5 082.00	-58.90	10.70	-60.54	3.61	V	-53.45	-25.00	Peak	1	243
	7 623.00	-59.26	11.20	-52.86	4.52	V	-46.18	-25.00	Peak		
	10 164.00	-46.25	11.00	-37.17	5.33	V	-31.50	-25.00	Peak		
	12 705.00	-62.65	11.90	-52.13	6.06	V	-46.29	-25.00	Peak		
	15 246.00	-59.71	14.50	-53.83	6.73	V	-46.06	-25.00	Peak		
518598 (2592.990)	5 185.98	-58.64	11.00	-60.14	3.70	V	-52.84	-25.00	Peak	1	122
	7 778.97	-59.86	10.90	-52.48	4.61	V	-46.19	-25.00	Peak		
	10 371.96	-47.65	11.20	-36.95	5.41	V	-31.16	-25.00	Peak		
	12 964.95	-61.77	12.00	-51.84	6.11	V	-45.95	-25.00	Peak		
	15 557.94	-62.43	15.40	-57.10	6.77	V	-48.47	-25.00	Peak		
528996 (2644.980)	5 289.96	-59.96	11.30	-61.43	3.73	V	-53.86	-25.00	Peak	1	1
	7 934.94	-61.08	10.70	-53.73	4.64	V	-47.67	-25.00	Peak		
	10 579.92	-51.38	11.20	-40.93	5.46	V	-35.19	-25.00	Peak		
	13 224.90	-62.66	12.10	-52.63	6.16	V	-46.69	-25.00	Peak		
	15 869.88	-63.51	14.90	-56.76	6.85	V	-48.71	-25.00	Peak		

▣ 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)	Detector	RB	
										Size	Offset
509202 (2546.010)	5 092.02	-61.08	10.70	-63.23	3.64	V	-56.17	-25.00	Peak	1	271
	7 638.03	-59.77	11.20	-53.38	4.53	V	-46.71	-25.00	Peak		
	10 184.04	-45.44	11.00	-35.98	5.33	V	-30.31	-25.00	Peak		
	12 730.05	-60.40	11.90	-49.95	6.02	V	-44.07	-25.00	Peak		
	15 276.06	-59.65	14.60	-53.78	6.71	V	-45.89	-25.00	Peak		
518598 (2592.990)	5 185.98	-58.73	11.00	-60.23	3.70	V	-52.93	-25.00	Peak	1	136
	7 778.97	-59.66	10.90	-52.28	4.61	V	-45.99	-25.00	Peak		
	10 371.96	-48.42	11.20	-37.72	5.41	V	-31.93	-25.00	Peak		
	12 964.95	-62.23	12.00	-52.30	6.11	V	-46.41	-25.00	Peak		
	15 557.94	-61.63	15.40	-56.30	6.77	V	-47.67	-25.00	Peak		
528000 (2640.000)	5 280.00	-56.65	11.30	-58.56	3.75	V	-51.01	-25.00	Peak	1	1
	7 920.00	-58.72	10.70	-51.54	4.63	V	-45.47	-25.00	Peak		
	10 560.00	-45.88	11.20	-35.97	5.45	V	-30.22	-25.00	Peak		
	13 200.00	-61.92	12.10	-51.48	6.19	V	-45.57	-25.00	Peak		
	15 840.00	-62.32	14.90	-55.21	6.84	V	-47.15	-25.00	Peak		

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n41	10 MHz	2592.990	BPSK	24	0	4.55
			QPSK			5.82
			16-QAM			6.56
			64-QAM			6.64
			256-QAM			6.67
	15 MHz		BPSK	36		4.49
			QPSK			5.73
			16-QAM			6.42
			64-QAM			6.72
			256-QAM			6.54
	20 MHz		BPSK	50		4.49
			QPSK			5.74
			16-QAM			6.56
			64-QAM			6.65
			256-QAM			6.59
	30 MHz		BPSK	75		4.84
			QPSK			5.85
			16-QAM			6.46
			64-QAM			6.62
			256-QAM			6.62
	40 MHz		BPSK	100		4.75
			QPSK			5.88
			16-QAM			6.59
			64-QAM			6.75
			256-QAM			6.69
	50 MHz		BPSK	128		5.02
			QPSK			5.81
			16-QAM			6.39
			64-QAM			6.42
			256-QAM			6.56
	60 MHz		BPSK	162		6.06
			QPSK			6.28
			16-QAM			6.66
			64-QAM			6.56
			256-QAM			6.74
	70 MHz		BPSK	180		4.70
			QPSK			5.86
			16-QAM			6.58
			64-QAM			6.53
			256-QAM			6.70
	80 MHz		BPSK	216		4.72
			QPSK			5.85
			16-QAM			6.48
			64-QAM			6.48
			256-QAM			6.78
	90 MHz		BPSK	243		4.61
			QPSK			5.86
			16-QAM			6.44
			64-QAM			6.51
			256-QAM			6.58
	100 MHz		BPSK	270		5.15
			QPSK			5.84
			16-QAM			6.49
			64-QAM			6.44
			256-QAM			6.64

Note:
1. Plots of the EUT's Peak- to- Average Ratio are shown Page 122 ~ 176.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n41	10 MHz	2592.990	BPSK	24	0	8.6984
			QPSK			8.6945
			16-QAM			8.7000
			64-QAM			8.7308
			256-QAM			8.6808
	15 MHz		BPSK	36		12.999
			QPSK			12.968
			16-QAM			12.948
			64-QAM			12.945
			256-QAM			12.959
	20 MHz		BPSK	50		17.961
			QPSK			17.971
			16-QAM			17.975
			64-QAM			17.965
			256-QAM			17.935
	30 MHz		BPSK	75		27.021
			QPSK			27.036
			16-QAM			27.048
			64-QAM			26.976
			256-QAM			26.897
	40 MHz		BPSK	100		35.993
			QPSK			35.991
			16-QAM			35.896
			64-QAM			35.930
			256-QAM			35.937
	50 MHz		BPSK	128		46.109
			QPSK			46.034
			16-QAM			45.945
			64-QAM			46.008
			256-QAM			45.963
	60 MHz		BPSK	162		58.191
			QPSK			58.371
			16-QAM			58.395
			64-QAM			58.400
			256-QAM			58.396
	70 MHz		BPSK	180		64.896
			QPSK			65.144
			16-QAM			64.763
			64-QAM			64.934
			256-QAM			64.941
	80 MHz		BPSK	216		77.559
			QPSK			77.930
			16-QAM			77.577
			64-QAM			77.582
			256-QAM			77.908
	90 MHz		BPSK	243		87.375
			QPSK			87.257
			16-QAM			87.265
			64-QAM			87.132
			256-QAM			87.076
	100 MHz		BPSK	270		97.151
			QPSK			96.905
			16-QAM			96.895
			64-QAM			96.840
			256-QAM			96.598

Note:
1. Plots of the EUT's Occupied Bandwidth are shown Page 67 ~ 121.

8.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n41	10	2501.010	9.9850	37.805	-70.564	-32.759	-25.00
		2592.990	8.2453	37.805	-70.765	-32.960	
		2685.000	6.0250	37.805	-71.008	-33.203	
	15	2503.500	8.2562	37.805	-70.352	-32.547	
		2592.990	4.8610	37.190	-70.531	-33.341	
		2682.480	4.0519	37.190	-69.865	-32.675	
	20	2506.020	3.7802	37.190	-70.767	-33.577	
		2592.990	8.0065	37.805	-70.121	-32.316	
		2679.990	9.1874	37.805	-70.939	-33.134	
	30	2511.000	9.0683	37.805	-71.024	-33.219	
		2592.990	4.0065	37.190	-70.101	-32.911	
		2674.980	4.0559	37.190	-70.510	-33.320	
	40	2516.010	4.9322	37.190	-70.635	-33.445	
		2592.990	8.0439	37.805	-70.778	-32.973	
		2670.000	9.7079	37.805	-70.342	-32.537	
	50	2521.020	8.0454	37.805	-70.952	-33.147	
		2592.990	3.8161	37.190	-70.447	-33.257	
		2664.990	3.7982	37.190	-69.824	-32.634	
	60	2526.000	4.0205	37.190	-69.942	-32.752	
		2592.990	4.9452	37.190	-69.931	-32.741	
		2659.980	9.9766	37.805	-70.144	-32.339	
	70	2531.010	3.9467	37.190	-70.641	-33.451	
		2592.990	4.0429	37.190	-69.999	-32.809	
		2655.000	7.1905	37.805	-70.582	-32.777	
	80	2536.020	4.0300	37.190	-70.341	-33.151	
		2592.990	5.1925	37.805	-70.681	-32.876	
		2649.990	5.1795	37.805	-70.746	-32.941	
	90	2541.000	4.9278	37.190	-70.536	-33.346	
		2592.990	4.6147	37.190	-70.374	-33.184	
		2644.980	5.2458	37.805	-70.737	-32.932	
	100	2546.010	4.0484	37.190	-70.115	-32.925	
		2592.990	5.9931	37.805	-70.699	-32.894	
		2640.000	8.2996	37.805	-70.095	-32.290	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 254 ~ 319.

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 Lower	C.E ~ (C.E +1MHz) Upper	2 490.5 MHz ~ 2 495 MHz Lower	(C.E + 1 MHz) ~ (C.E + 5 MHz) Upper	Below 2 490.5 MHz Lower	(C.E + 5 MHz) ~ (C.E + X MHz) Upper	Above (C.E + X MHz) Upper
10	2501.010	BPSK	Full RB	-24.29	-24.04	-29.29	-29.10	-37.01	-35.37	-39.54
15	2503.500	BPSK	Full RB	-23.49	-32.16	-30.53	-36.67	-37.27	-35.88	-43.07
20	2506.020	BPSK	Full RB	-25.16	-30.29	-33.15	-36.93	-38.32	-39.02	-44.15
30	2511.000	BPSK	Full RB	-26.45	-38.10	-35.40	-39.47	-38.43	-38.03	-42.76
40	2520.000	BPSK	Full RB	-25.87	-40.28	-34.88	-39.68	-38.50	-37.62	-43.28
50	2525.010	BPSK	Full RB	-24.52	-34.46	-32.13	-39.11	-41.02	-38.56	-43.13
60	2530.020	BPSK	Full RB	-18.16	-18.60	-28.90	-26.72	-40.81	-34.55	-43.12
70	2531.010	BPSK	Full RB	-23.48	-33.59	-29.24	-36.25	-41.54	-38.49	-42.93
80	2540.010	BPSK	Full RB	-23.03	-23.90	-30.50	-29.88	-41.03	-36.42	-44.59
90	2545.020	BPSK	Full RB	-22.39	-27.97	-29.93	-32.55	-41.26	-37.62	-44.48
100	2550.000	BPSK	Full RB	-22.84	-28.75	-31.55	-32.64	-41.41	-36.97	-47.09
Limit(dBm)				-13.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resoure Block Offset	C.E ~ (C.E ± 1 MHz)		(C.E ± 1 MHz) ~ (C.E ± 5 MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-22.47	-23.67	-28.07	-28.72
	2685.000	BPSK	Full RB	0	-23.28	-23.05	-27.67	-27.89
15 MHz	2592.990	BPSK	Full RB	0	-22.85	-33.05	-29.47	-36.70
	2682.480	BPSK	Full RB	0	-22.50	-32.75	-29.61	-35.46
20 MHz	2592.990	BPSK	Full RB	0	-23.95	-30.72	-32.14	-36.67
	2679.990	BPSK	Full RB	0	-23.85	-29.89	-31.04	-34.28
30 MHz	2592.990	BPSK	Full RB	0	-25.17	-38.41	-34.12	-39.54
	2679.990	BPSK	Full RB	0	-24.97	-37.74	-32.52	-36.89
40 MHz	2592.990	BPSK	Full RB	0	-24.53	-40.48	-34.79	-40.06
	2670.000	BPSK	Full RB	0	-23.29	-38.42	-30.08	-38.17
50 MHz	2592.990	BPSK	Full RB	0	-21.51	-35.51	-29.60	-39.78
	2664.990	BPSK	Full RB	0	-22.81	-34.88	-30.25	-39.20
60 MHz	2592.990	BPSK	Full RB	0	-17.17	-19.21	-27.43	-27.96
	2659.980	BPSK	Full RB	0	-16.93	-20.70	-25.40	-28.95
70 MHz	2592.990	BPSK	Full RB	0	-21.59	-33.33	-27.52	-37.09
	2655.000	BPSK	Full RB	0	-22.42	-35.07	-28.38	-37.73
80 MHz	2592.990	BPSK	Full RB	0	-21.69	-26.81	-28.98	-31.46
	2649.990	BPSK	Full RB	0	-22.01	-27.15	-29.09	-31.84
90 MHz	2592.990	BPSK	Full RB	0	-21.69	-27.53	-29.48	-31.97
	2644.980	BPSK	Full RB	0	-21.44	-27.74	-28.92	-31.52
100 MHz	2592.990	BPSK	Full RB	0	-21.17	-25.91	-29.22	-30.78
	2640.000	BPSK	Full RB	0	-19.55	-30.26	-28.47	-33.77
Limit(dBm)					-10.0		-10.0	

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resoure Block Offset	(C.E ± 5 MHz) ~ (C.E ± X MHz)		Above (C.E ± X MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-35.61	-36.19	-39.97	-39.42
	2685.000	BPSK	Full RB	0	-34.99	-34.62	-37.91	-38.68
15 MHz	2592.990	BPSK	Full RB	0	-33.85	-36.53	-41.56	-43.24
	2682.480	BPSK	Full RB	0	-34.23	-34.00	-41.62	-42.31
20 MHz	2592.990	BPSK	Full RB	0	-36.25	-38.30	-42.86	-43.56
	2679.990	BPSK	Full RB	0	-33.86	-33.58	-39.82	-41.46
30 MHz	2592.990	BPSK	Full RB	0	-37.53	-37.98	-42.27	-42.69
	2679.990	BPSK	Full RB	0	-34.85	-35.77	-41.97	-45.43
40 MHz	2592.990	BPSK	Full RB	0	-38.10	-36.99	-45.56	-45.88
	2670.000	BPSK	Full RB	0	-35.26	-36.56	-41.76	-46.87
50 MHz	2592.990	BPSK	Full RB	0	-40.04	-37.42	-43.14	-44.46
	2664.990	BPSK	Full RB	0	-37.80	-37.99	-43.12	-47.67
60 MHz	2592.990	BPSK	Full RB	0	-37.16	-34.19	-43.26	-43.26
	2659.980	BPSK	Full RB	0	-35.86	-35.37	-42.12	-47.72
70 MHz	2592.990	BPSK	Full RB	0	-38.52	-37.58	-44.57	-43.96
	2655.000	BPSK	Full RB	0	-37.06	-38.11	-41.88	-47.90
80 MHz	2592.990	BPSK	Full RB	0	-37.77	-36.04	-47.54	-45.77
	2649.990	BPSK	Full RB	0	-36.22	-37.73	-43.36	-47.82
90 MHz	2592.990	BPSK	Full RB	0	-37.86	-37.09	-47.80	-47.27
	2644.980	BPSK	Full RB	0	-36.13	-36.54	-44.45	-47.95
100 MHz	2592.990	BPSK	Full RB	0	-37.58	-37.21	-48.04	-47.83
	2640.000	BPSK	Full RB	0	-35.65	-37.85	-46.57	-48.02
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 177 ~ 253. (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. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2501.010	100 %	+20(Ref)	2501 009 996	0.0	0.000 000	0.000
	100 %	-30	2501 009 988	-7.9	0.000 000	-0.003
	100 %	-20	2501 009 986	-10.4	0.000 000	-0.004
	100 %	-10	2501 009 987	-8.6	0.000 000	-0.003
	100 %	0	2501 009 989	-6.7	0.000 000	-0.003
	100 %	+10	2501 009 991	-4.8	0.000 000	-0.002
	100 %	+30	2501 009 989	-6.5	0.000 000	-0.003
	100 %	+40	2501 009 990	-6.0	0.000 000	-0.002
	100 %	+50	2501 009 991	-4.8	0.000 000	-0.002
	Batt. Endpoint	+20	2501 009 987	-9.0	0.000 000	-0.004
2685.000	100 %	+20(Ref)	2684 999 993	0.0	0.000 000	0.000
	100 %	-30	2684 999 988	-5.8	0.000 000	-0.002
	100 %	-20	2684 999 985	-8.5	0.000 000	-0.003
	100 %	-10	2684 999 985	-8.8	0.000 000	-0.003
	100 %	0	2684 999 990	-3.9	0.000 000	-0.001
	100 %	+10	2684 999 988	-5.8	0.000 000	-0.002
	100 %	+30	2684 999 987	-6.3	0.000 000	-0.002
	100 %	+40	2684 999 992	-1.1	0.000 000	0.000
	100 %	+50	2684 999 987	-6.9	0.000 000	-0.003
	Batt. Endpoint	+20	2684 999 989	-4.7	0.000 000	-0.002

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2503.500	100 %	+20(Ref)	2503 499 994	0.0	0.000 000	0.000
	100 %	-30	2503 499 991	-3.5	0.000 000	-0.001
	100 %	-20	2503 499 986	-8.2	0.000 000	-0.003
	100 %	-10	2503 499 988	-6.4	0.000 000	-0.003
	100 %	0	2503 499 990	-4.1	0.000 000	-0.002
	100 %	+10	2503 499 987	-7.3	0.000 000	-0.003
	100 %	+30	2503 499 989	-5.2	0.000 000	-0.002
	100 %	+40	2503 499 993	-1.2	0.000 000	0.000
	100 %	+50	2503 499 984	-10.3	0.000 000	-0.004
	Batt. Endpoint	+20	2503 499 985	-8.9	0.000 000	-0.004
2682.480	100 %	+20(Ref)	2682 479 994	0.0	0.000 000	0.000
	100 %	-30	2682 479 990	-4.7	0.000 000	-0.002
	100 %	-20	2682 479 988	-6.6	0.000 000	-0.002
	100 %	-10	2682 479 990	-4.7	0.000 000	-0.002
	100 %	0	2682 479 983	-11.1	0.000 000	-0.004
	100 %	+10	2682 479 984	-10.1	0.000 000	-0.004
	100 %	+30	2682 479 989	-6.0	0.000 000	-0.002
	100 %	+40	2682 479 987	-7.6	0.000 000	-0.003
	100 %	+50	2682 479 984	-10.5	0.000 000	-0.004
	Batt. Endpoint	+20	2682 479 984	-10.9	0.000 000	-0.004

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2506.020	100 %	+20(Ref)	2506 019 993	0.0	0.000 000	0.000
	100 %	-30	2506 019 986	-6.6	0.000 000	-0.003
	100 %	-20	2506 019 985	-8.0	0.000 000	-0.003
	100 %	-10	2506 019 988	-5.2	0.000 000	-0.002
	100 %	0	2506 019 986	-6.6	0.000 000	-0.003
	100 %	+10	2506 019 986	-6.7	0.000 000	-0.003
	100 %	+30	2506 019 986	-7.1	0.000 000	-0.003
	100 %	+40	2506 019 986	-6.8	0.000 000	-0.003
	100 %	+50	2506 019 988	-4.5	0.000 000	-0.002
	Batt. Endpoint	+20	2506 019 986	-7.2	0.000 000	-0.003
2679.990	100 %	+20(Ref)	2679 989 995	0.0	0.000 000	0.000
	100 %	-30	2679 989 988	-6.3	0.000 000	-0.002
	100 %	-20	2679 989 988	-6.6	0.000 000	-0.002
	100 %	-10	2679 989 987	-7.8	0.000 000	-0.003
	100 %	0	2679 989 989	-5.6	0.000 000	-0.002
	100 %	+10	2679 989 990	-4.3	0.000 000	-0.002
	100 %	+30	2679 989 993	-1.9	0.000 000	-0.001
	100 %	+40	2679 989 986	-8.3	0.000 000	-0.003
	100 %	+50	2679 989 985	-9.5	0.000 000	-0.004
	Batt. Endpoint	+20	2679 989 988	-6.7	0.000 000	-0.003

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2511.000	100 %	+20(Ref)	2510 999 995	0.0	0.000 000	0.000
	100 %	-30	2510 999 990	-4.7	0.000 000	-0.002
	100 %	-20	2510 999 987	-7.9	0.000 000	-0.003
	100 %	-10	2510 999 989	-5.9	0.000 000	-0.002
	100 %	0	2510 999 990	-4.4	0.000 000	-0.002
	100 %	+10	2510 999 991	-3.9	0.000 000	-0.002
	100 %	+30	2510 999 990	-4.2	0.000 000	-0.002
	100 %	+40	2510 999 987	-8.1	0.000 000	-0.003
	100 %	+50	2510 999 988	-6.6	0.000 000	-0.003
	Batt. Endpoint	+20	2510 999 992	-3.1	0.000 000	-0.001
2674.980	100 %	+20(Ref)	2674 979 995	0.0	0.000 000	0.000
	100 %	-30	2674 979 990	-5.0	0.000 000	-0.002
	100 %	-20	2674 979 992	-2.7	0.000 000	-0.001
	100 %	-10	2674 979 989	-5.2	0.000 000	-0.002
	100 %	0	2674 979 988	-6.6	0.000 000	-0.002
	100 %	+10	2674 979 984	-10.4	0.000 000	-0.004
	100 %	+30	2674 979 986	-8.4	0.000 000	-0.003
	100 %	+40	2674 979 987	-7.3	0.000 000	-0.003
	100 %	+50	2674 979 987	-8.1	0.000 000	-0.003
	Batt. Endpoint	+20	2674 979 988	-6.7	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. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2516.010	100 %	+20(Ref)	2516 009 995	0.0	0.000 000	0.000
	100 %	-30	2516 009 984	-11.9	0.000 000	-0.005
	100 %	-20	2516 009 986	-9.4	0.000 000	-0.004
	100 %	-10	2516 009 988	-7.6	0.000 000	-0.003
	100 %	0	2516 009 988	-7.6	0.000 000	-0.003
	100 %	+10	2516 009 991	-4.3	0.000 000	-0.002
	100 %	+30	2516 009 990	-5.4	0.000 000	-0.002
	100 %	+40	2516 009 990	-5.6	0.000 000	-0.002
	100 %	+50	2516 009 989	-6.0	0.000 000	-0.002
	Batt. Endpoint	+20	2516 009 987	-8.1	0.000 000	-0.003
2670.000	100 %	+20(Ref)	2669 999 995	0.0	0.000 000	0.000
	100 %	-30	2669 999 987	-8.1	0.000 000	-0.003
	100 %	-20	2669 999 988	-6.6	0.000 000	-0.002
	100 %	-10	2669 999 989	-5.3	0.000 000	-0.002
	100 %	0	2669 999 988	-6.6	0.000 000	-0.002
	100 %	+10	2669 999 986	-8.9	0.000 000	-0.003
	100 %	+30	2669 999 988	-7.0	0.000 000	-0.003
	100 %	+40	2669 999 988	-7.2	0.000 000	-0.003
	100 %	+50	2669 999 989	-6.0	0.000 000	-0.002
	Batt. Endpoint	+20	2669 999 990	-4.8	0.000 000	-0.002

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2521.020	100 %	+20(Ref)	2521 019 995	0.0	0.000 000	0.000
	100 %	-30	2521 019 986	-8.6	0.000 000	-0.003
	100 %	-20	2521 019 991	-3.5	0.000 000	-0.001
	100 %	-10	2521 019 988	-7.2	0.000 000	-0.003
	100 %	0	2521 019 989	-5.5	0.000 000	-0.002
	100 %	+10	2521 019 990	-4.4	0.000 000	-0.002
	100 %	+30	2521 019 987	-7.7	0.000 000	-0.003
	100 %	+40	2521 019 990	-4.2	0.000 000	-0.002
	100 %	+50	2521 019 989	-6.0	0.000 000	-0.002
	Batt. Endpoint	+20	2521 019 986	-8.2	0.000 000	-0.003
2664.990	100 %	+20(Ref)	2664 989 991	0.0	0.000 000	0.000
	100 %	-30	2664 989 981	-9.6	0.000 000	-0.004
	100 %	-20	2664 989 984	-6.8	0.000 000	-0.003
	100 %	-10	2664 989 985	-5.8	0.000 000	-0.002
	100 %	0	2664 989 986	-5.2	0.000 000	-0.002
	100 %	+10	2664 989 983	-7.6	0.000 000	-0.003
	100 %	+30	2664 989 984	-7.3	0.000 000	-0.003
	100 %	+40	2664 989 984	-7.2	0.000 000	-0.003
	100 %	+50	2664 989 982	-8.9	0.000 000	-0.003
	Batt. Endpoint	+20	2664 989 984	-6.8	0.000 000	-0.003

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2526.000	100 %	+20(Ref)	2525 999 988	0.0	0.000 000	0.000
	100 %	-30	2525 999 982	-5.3	0.000 000	-0.002
	100 %	-20	2525 999 979	-8.9	0.000 000	-0.004
	100 %	-10	2525 999 980	-8.0	0.000 000	-0.003
	100 %	0	2525 999 985	-2.3	0.000 000	-0.001
	100 %	+10	2525 999 978	-9.3	0.000 000	-0.004
	100 %	+30	2525 999 980	-7.2	0.000 000	-0.003
	100 %	+40	2525 999 982	-6.0	0.000 000	-0.002
	100 %	+50	2525 999 978	-9.1	0.000 000	-0.004
	Batt. Endpoint	+20	2525 999 986	-1.9	0.000 000	-0.001
2659.980	100 %	+20(Ref)	2659 979 993	0.0	0.000 000	0.000
	100 %	-30	2659 979 985	-8.0	0.000 000	-0.003
	100 %	-20	2659 979 988	-5.7	0.000 000	-0.002
	100 %	-10	2659 979 988	-5.7	0.000 000	-0.002
	100 %	0	2659 979 991	-2.0	0.000 000	-0.001
	100 %	+10	2659 979 988	-5.8	0.000 000	-0.002
	100 %	+30	2659 979 984	-9.6	0.000 000	-0.004
	100 %	+40	2659 979 986	-7.7	0.000 000	-0.003
	100 %	+50	2659 979 985	-8.7	0.000 000	-0.003
	Batt. Endpoint	+20	2659 979 984	-9.5	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. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2531.010	100 %	+20(Ref)	2531 009 991	0.0	0.000 000	0.000
	100 %	-30	2531 009 983	-7.8	0.000 000	-0.003
	100 %	-20	2531 009 986	-4.6	0.000 000	-0.002
	100 %	-10	2531 009 983	-8.3	0.000 000	-0.003
	100 %	0	2531 009 983	-7.6	0.000 000	-0.003
	100 %	+10	2531 009 985	-5.7	0.000 000	-0.002
	100 %	+30	2531 009 982	-8.7	0.000 000	-0.003
	100 %	+40	2531 009 984	-6.8	0.000 000	-0.003
	100 %	+50	2531 009 987	-4.1	0.000 000	-0.002
	Batt. Endpoint	+20	2531 009 985	-5.8	0.000 000	-0.002
2655.000	100 %	+20(Ref)	2654 999 991	0.0	0.000 000	0.000
	100 %	-30	2654 999 982	-9.2	0.000 000	-0.003
	100 %	-20	2654 999 982	-9.8	0.000 000	-0.004
	100 %	-10	2654 999 982	-9.2	0.000 000	-0.003
	100 %	0	2654 999 982	-9.2	0.000 000	-0.003
	100 %	+10	2654 999 983	-8.2	0.000 000	-0.003
	100 %	+30	2654 999 985	-6.5	0.000 000	-0.002
	100 %	+40	2654 999 985	-6.3	0.000 000	-0.002
	100 %	+50	2654 999 983	-8.2	0.000 000	-0.003
	Batt. Endpoint	+20	2654 999 986	-5.4	0.000 000	-0.002

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.300 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2536.020	100 %	+20(Ref)	2536 019 995	0.0	0.000 000	0.000
	100 %	-30	2536 019 991	-3.7	0.000 000	-0.001
	100 %	-20	2536 019 990	-4.6	0.000 000	-0.002
	100 %	-10	2536 019 992	-2.5	0.000 000	-0.001
	100 %	0	2536 019 990	-4.8	0.000 000	-0.002
	100 %	+10	2536 019 990	-4.8	0.000 000	-0.002
	100 %	+30	2536 019 988	-6.7	0.000 000	-0.003
	100 %	+40	2536 019 987	-7.3	0.000 000	-0.003
	100 %	+50	2536 019 990	-4.3	0.000 000	-0.002
	Batt. Endpoint	+20	2536 019 989	-5.8	0.000 000	-0.002
2649.990	100 %	+20(Ref)	2649 989 995	0.0	0.000 000	0.000
	100 %	-30	2649 989 988	-7.2	0.000 000	-0.003
	100 %	-20	2649 989 985	-10.4	0.000 000	-0.004
	100 %	-10	2649 989 987	-7.9	0.000 000	-0.003
	100 %	0	2649 989 987	-7.9	0.000 000	-0.003
	100 %	+10	2649 989 989	-5.9	0.000 000	-0.002
	100 %	+30	2649 989 986	-9.1	0.000 000	-0.003
	100 %	+40	2649 989 985	-10.1	0.000 000	-0.004
	100 %	+50	2649 989 986	-8.9	0.000 000	-0.003
	Batt. Endpoint	+20	2649 989 986	-9.0	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. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2541.000	100 %	+20(Ref)	2540 999 995	0.0	0.000 000	0.000
	100 %	-30	2540 999 990	-5.2	0.000 000	-0.002
	100 %	-20	2540 999 988	-7.4	0.000 000	-0.003
	100 %	-10	2540 999 987	-8.3	0.000 000	-0.003
	100 %	0	2540 999 987	-7.7	0.000 000	-0.003
	100 %	+10	2540 999 984	-10.6	0.000 000	-0.004
	100 %	+30	2540 999 984	-10.6	0.000 000	-0.004
	100 %	+40	2540 999 989	-5.6	0.000 000	-0.002
	100 %	+50	2540 999 987	-8.2	0.000 000	-0.003
	Batt. Endpoint	+20	2540 999 990	-5.2	0.000 000	-0.002
2644.980	100 %	+20(Ref)	2644 979 994	0.0	0.000 000	0.000
	100 %	-30	2644 979 988	-5.7	0.000 000	-0.002
	100 %	-20	2644 979 986	-7.9	0.000 000	-0.003
	100 %	-10	2644 979 990	-3.7	0.000 000	-0.001
	100 %	0	2644 979 988	-6.2	0.000 000	-0.002
	100 %	+10	2644 979 985	-9.6	0.000 000	-0.004
	100 %	+30	2644 979 989	-5.6	0.000 000	-0.002
	100 %	+40	2644 979 989	-5.6	0.000 000	-0.002
	100 %	+50	2644 979 988	-6.3	0.000 000	-0.002
	Batt. Endpoint	+20	2644 979 987	-6.7	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. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2546.010	100 %	+20(Ref)	2546 009 991	0.0	0.000 000	0.000
	100 %	-30	2546 009 983	-7.5	0.000 000	-0.003
	100 %	-20	2546 009 982	-8.9	0.000 000	-0.004
	100 %	-10	2546 009 985	-5.9	0.000 000	-0.002
	100 %	0	2546 009 986	-4.6	0.000 000	-0.002
	100 %	+10	2546 009 983	-7.7	0.000 000	-0.003
	100 %	+30	2546 009 981	-9.1	0.000 000	-0.004
	100 %	+40	2546 009 984	-6.7	0.000 000	-0.003
	100 %	+50	2546 009 984	-6.7	0.000 000	-0.003
	Batt. Endpoint	+20	2546 009 983	-7.5	0.000 000	-0.003
2640.000	100 %	+20(Ref)	2639 999 991	0.0	0.000 000	0.000
	100 %	-30	2639 999 984	-7.4	0.000 000	-0.003
	100 %	-20	2639 999 989	-2.2	0.000 000	-0.001
	100 %	-10	2639 999 983	-8.2	0.000 000	-0.003
	100 %	0	2639 999 983	-8.2	0.000 000	-0.003
	100 %	+10	2639 999 982	-9.3	0.000 000	-0.004
	100 %	+30	2639 999 983	-7.8	0.000 000	-0.003
	100 %	+40	2639 999 989	-2.2	0.000 000	-0.001
	100 %	+50	2639 999 985	-6.5	0.000 000	-0.002
	Batt. Endpoint	+20	2639 999 988	-3.5	0.000 000	-0.001

9. TEST PLOTS

Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 BPSK)

Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 BPSK)

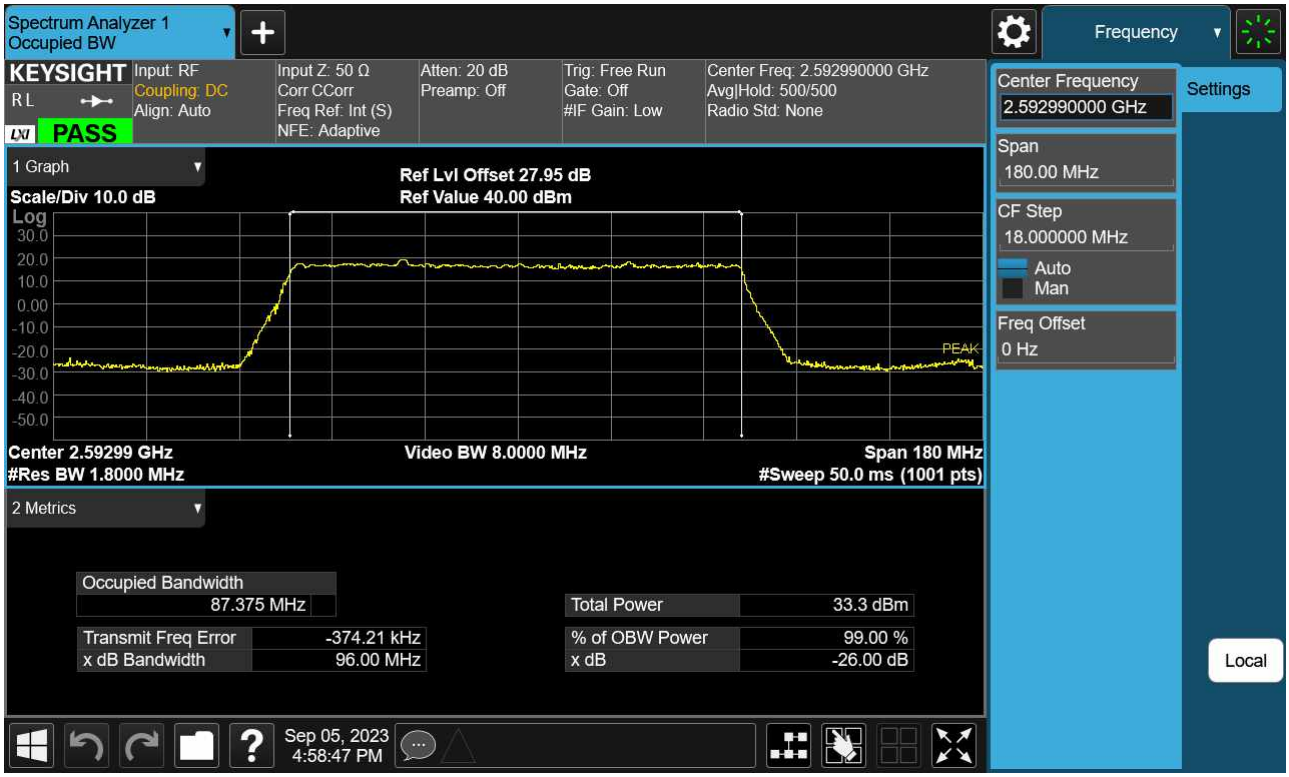
Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 BPSK)



Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 16-QAM)

Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 256-QAM)

Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 BPSK)

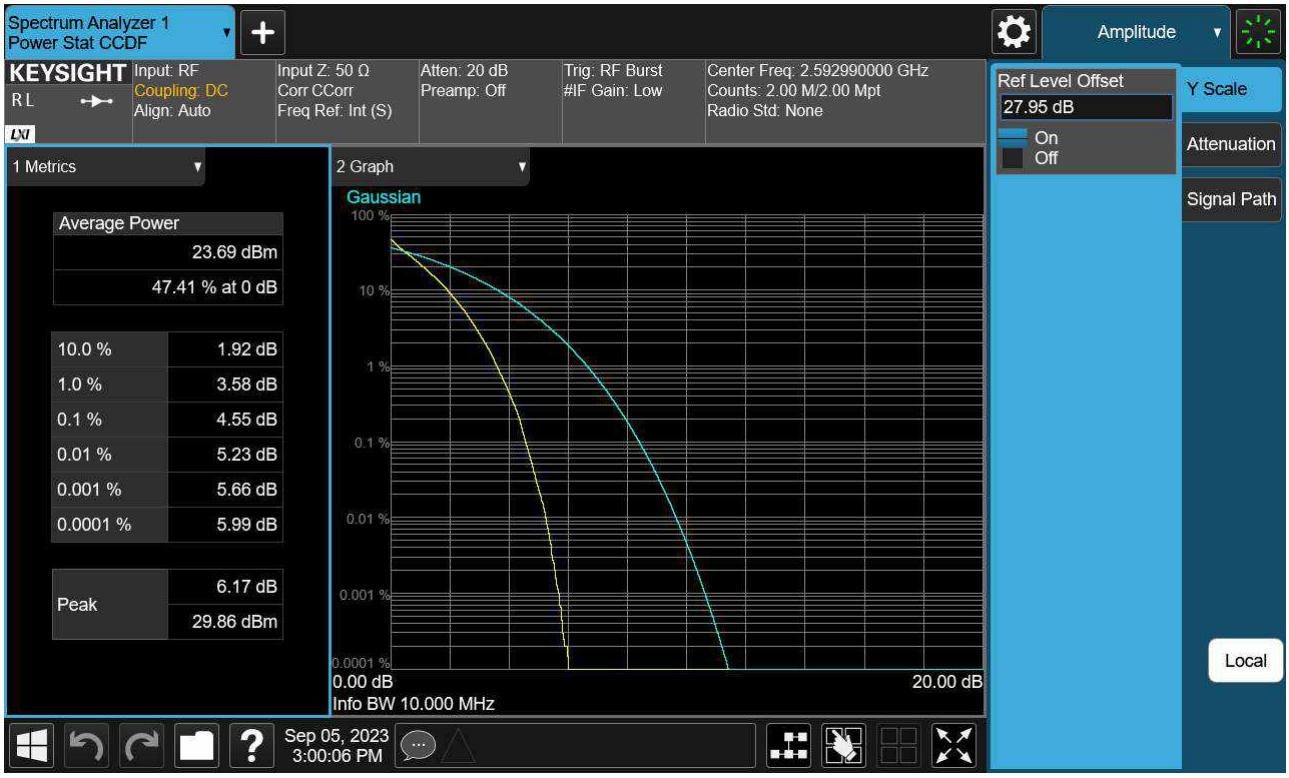
Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 QPSK)

Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 16-QAM)

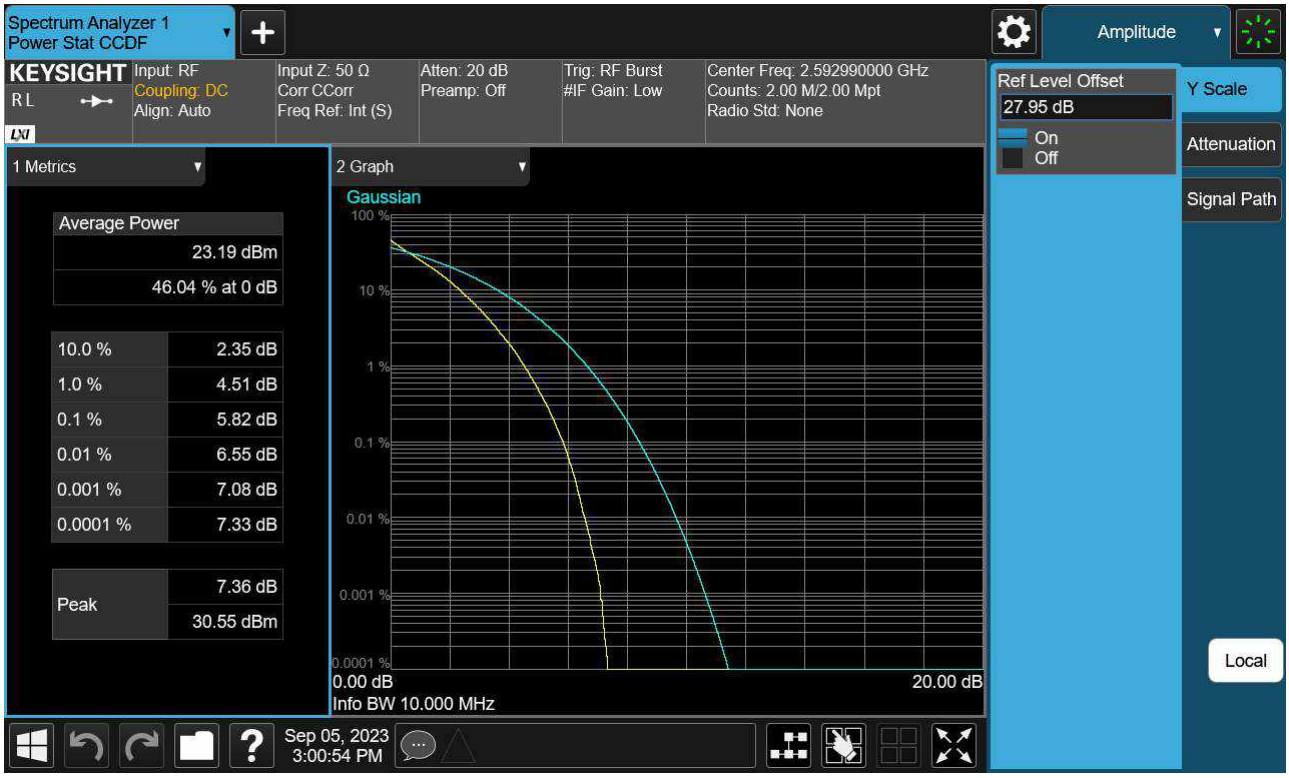
Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 64-QAM)

Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 256-QAM)

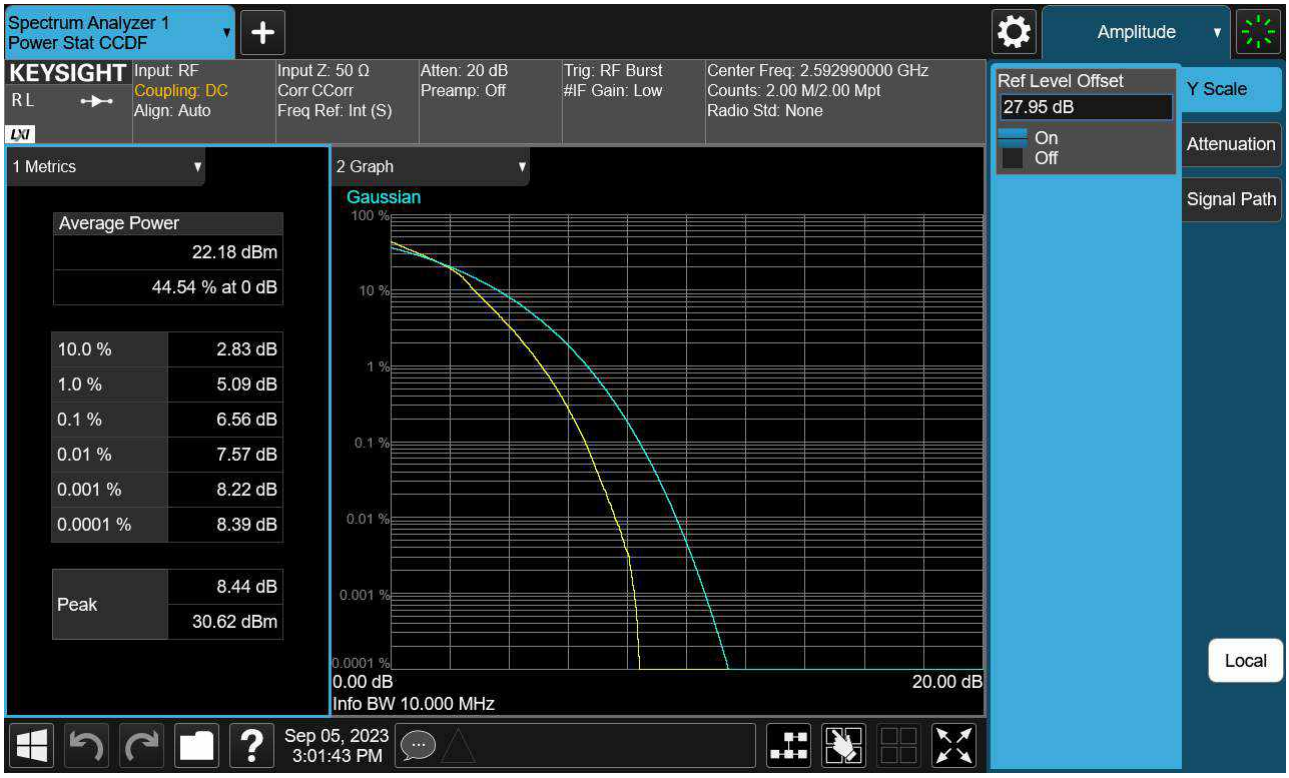
Sub6 n41. PAR Plot (10 M BW_Ch.518598_BPSK)



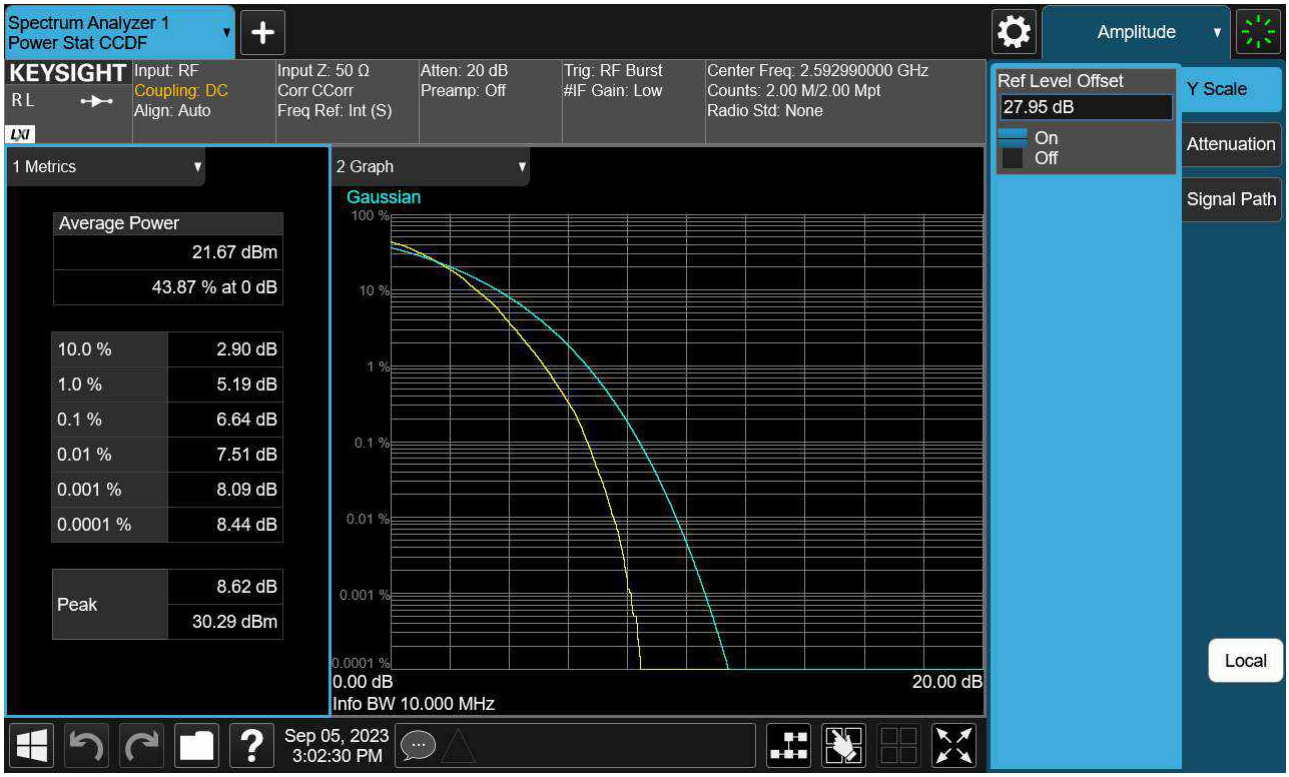
Sub6 n41. PAR Plot (10 M BW_Ch.518598_QPSK)



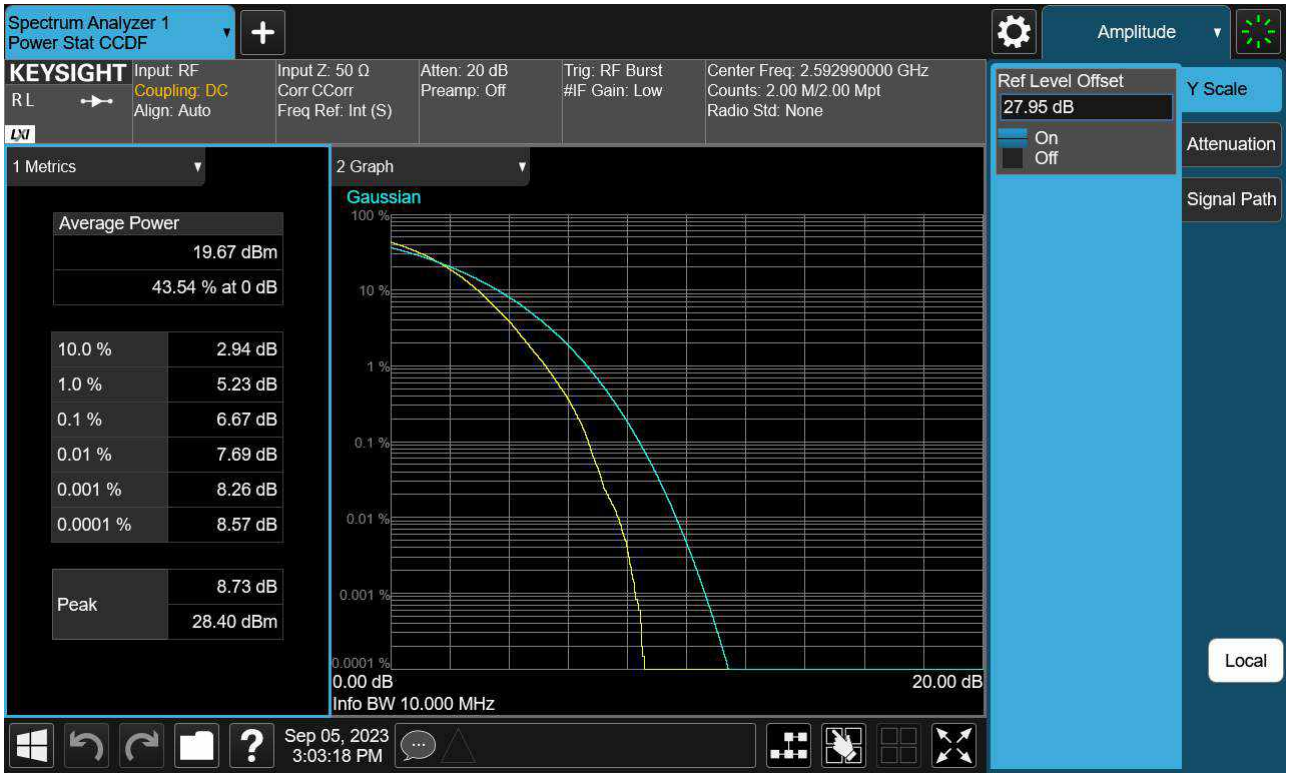
Sub6 n41. PAR Plot (10 M BW_Ch.518598_16QAM)



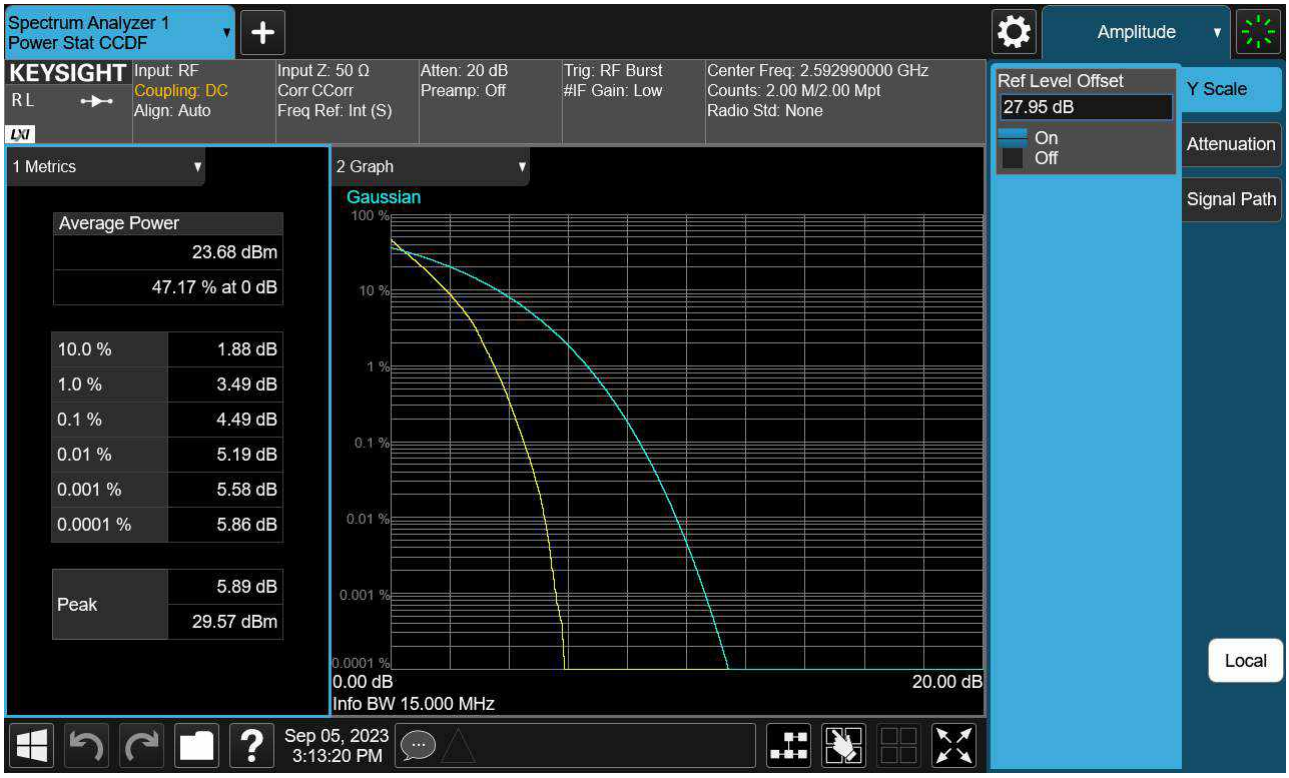
Sub6 n41. PAR Plot (10 M BW_Ch.518598_64QAM)



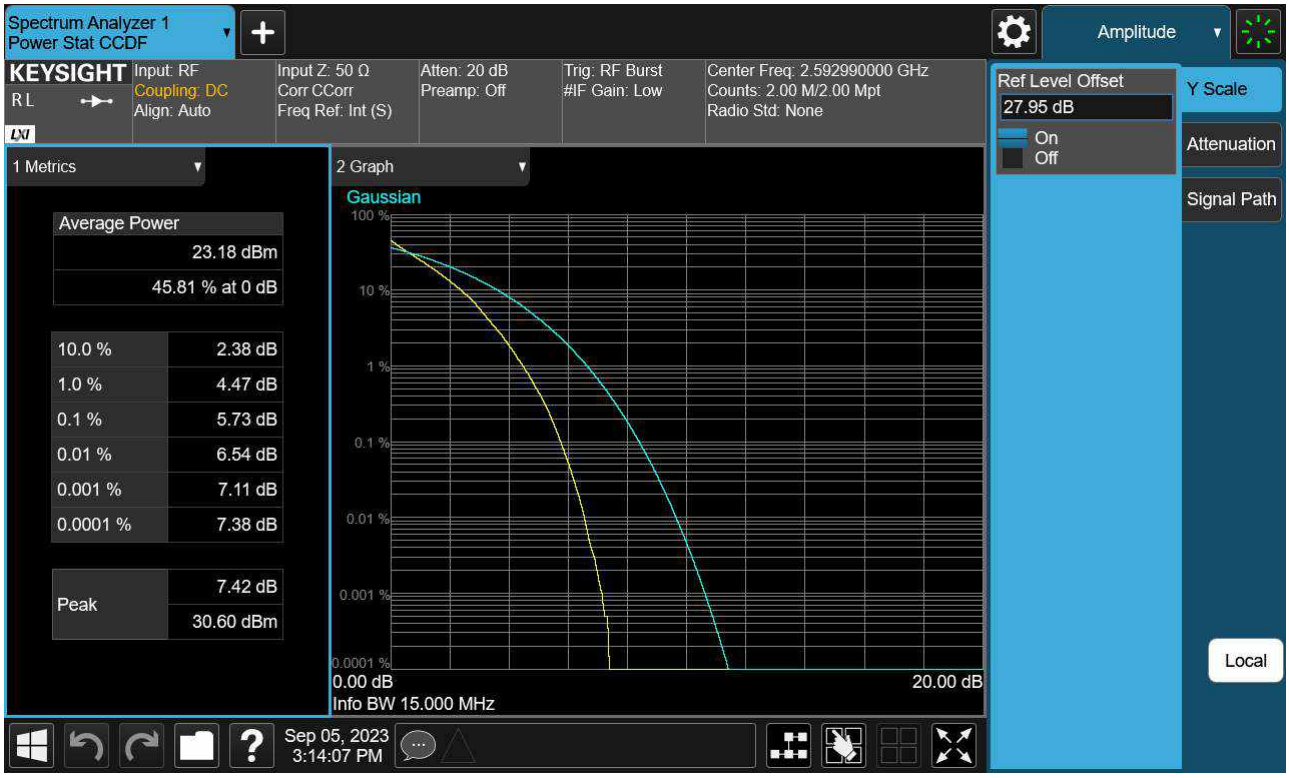
Sub6 n41. PAR Plot (10 M BW_Ch.518598_256QAM)



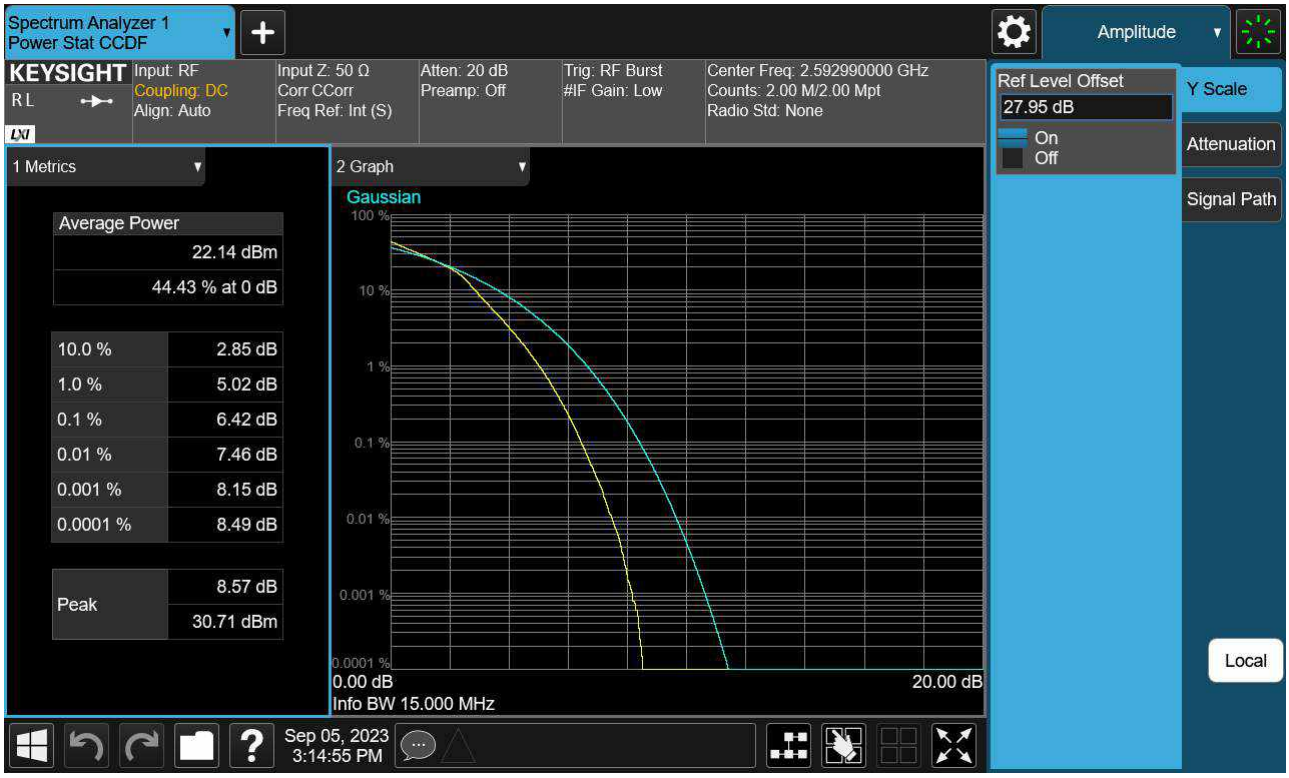
Sub6 n41. PAR Plot (15 M BW_Ch.518598_BPSK)



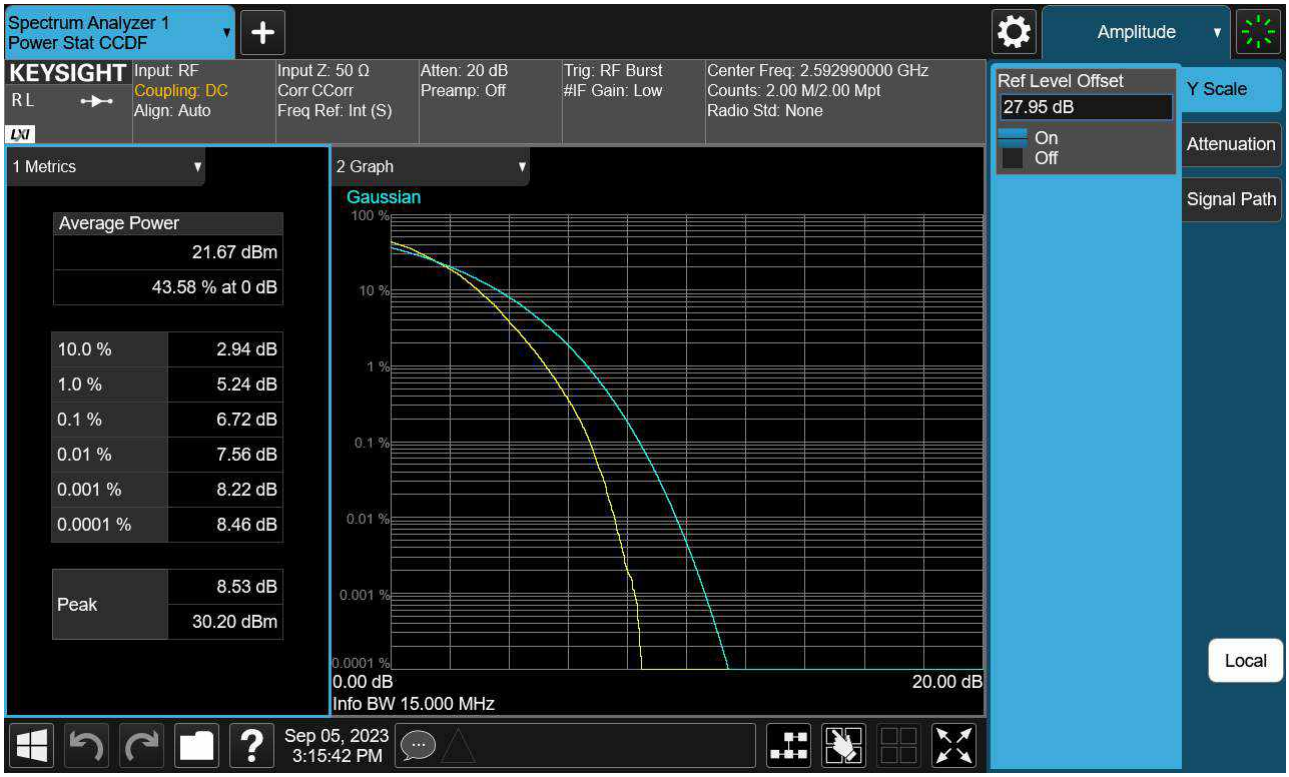
Sub6 n41. PAR Plot (15 M BW_Ch.518598_QPSK)



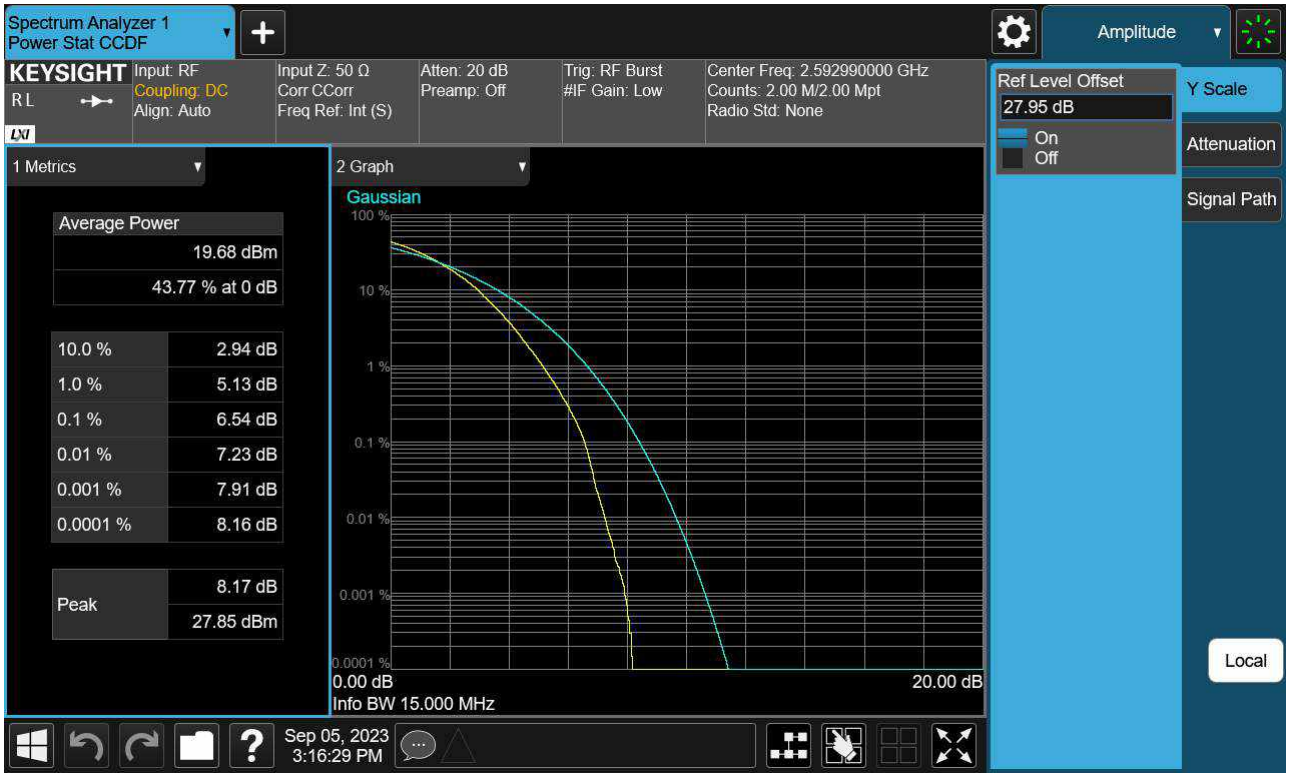
Sub6 n41. PAR Plot (15 M BW_Ch.518598_16QAM)



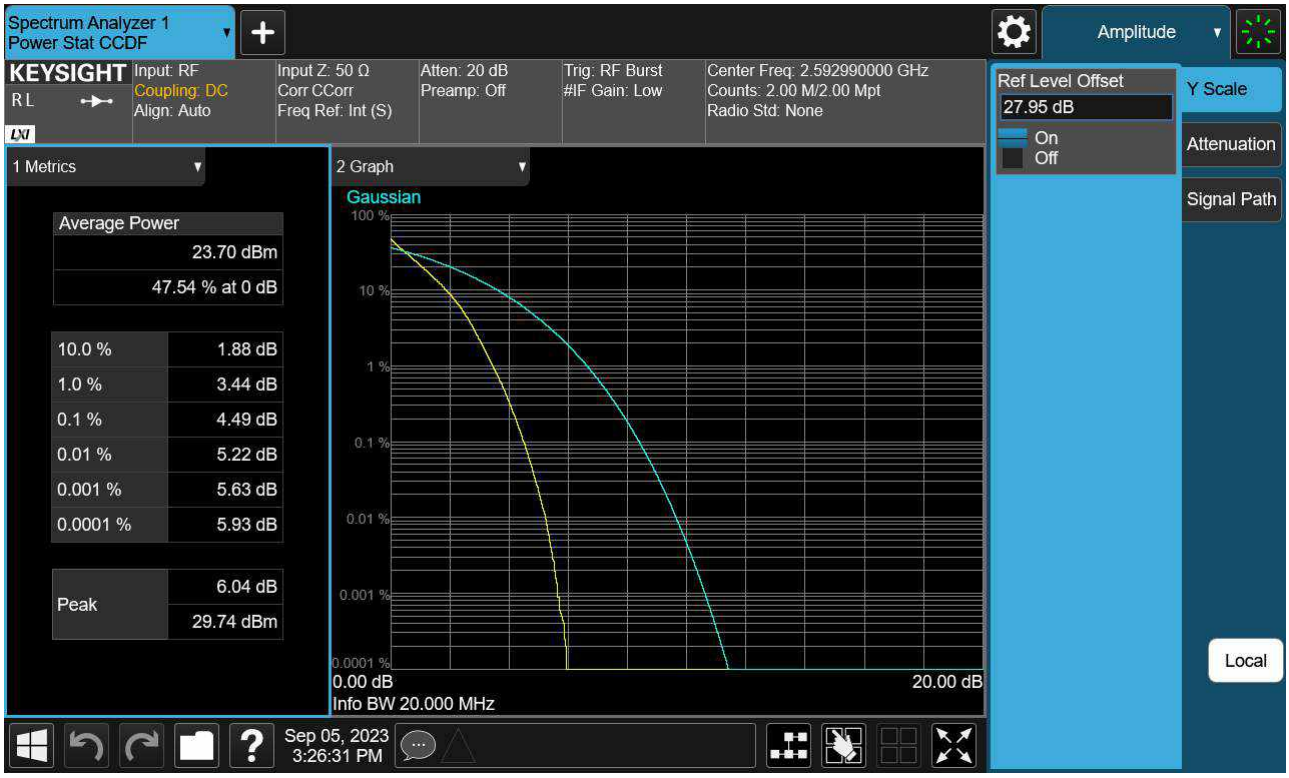
Sub6 n41. PAR Plot (15 M BW_Ch.518598_64QAM)



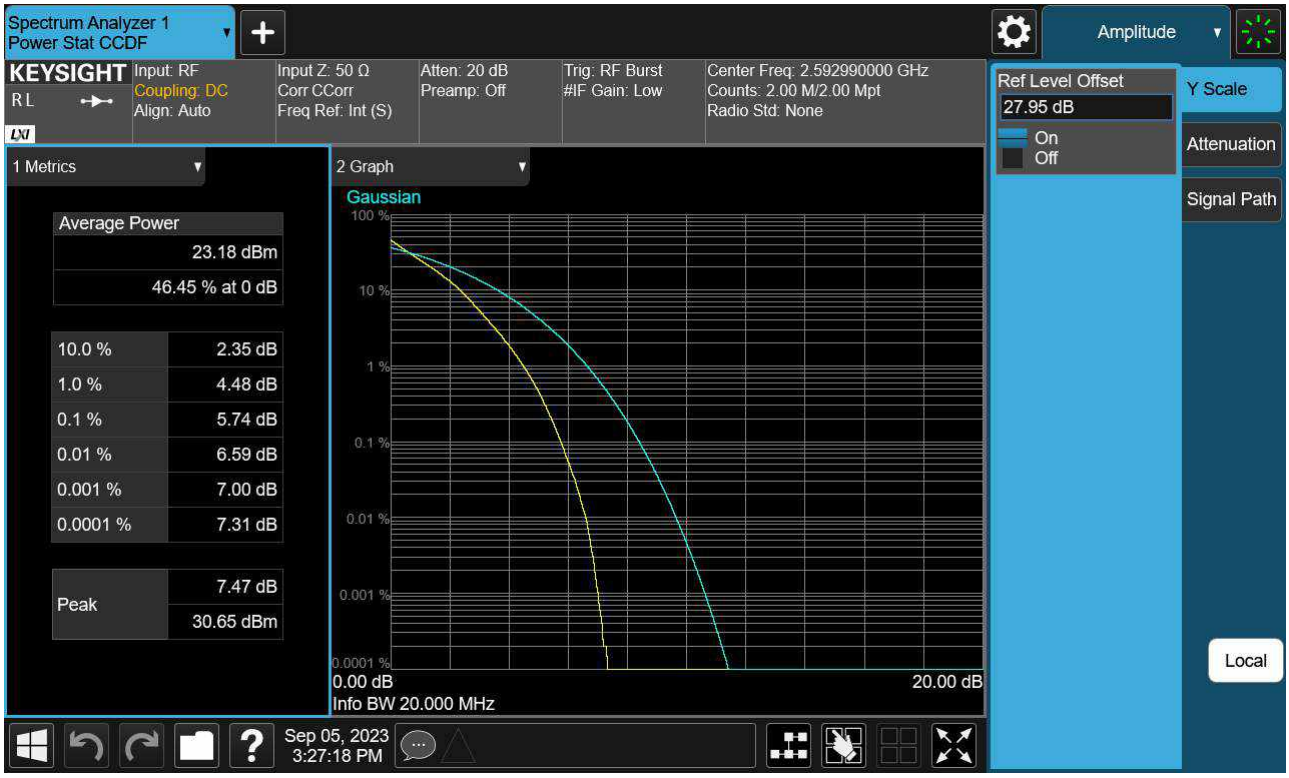
Sub6 n41. PAR Plot (15 M BW_Ch.518598_256QAM)



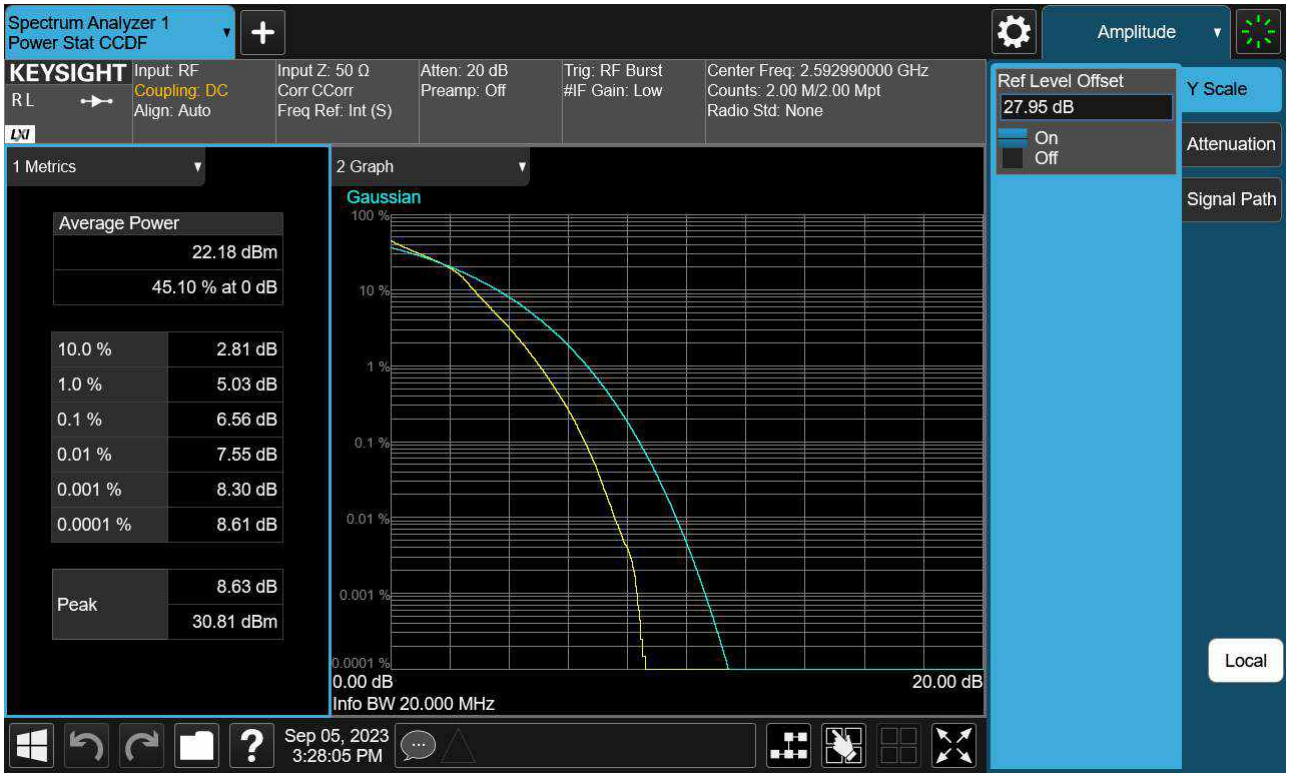
Sub6 n41. PAR Plot (20 M BW_Ch.518598_BPSK)



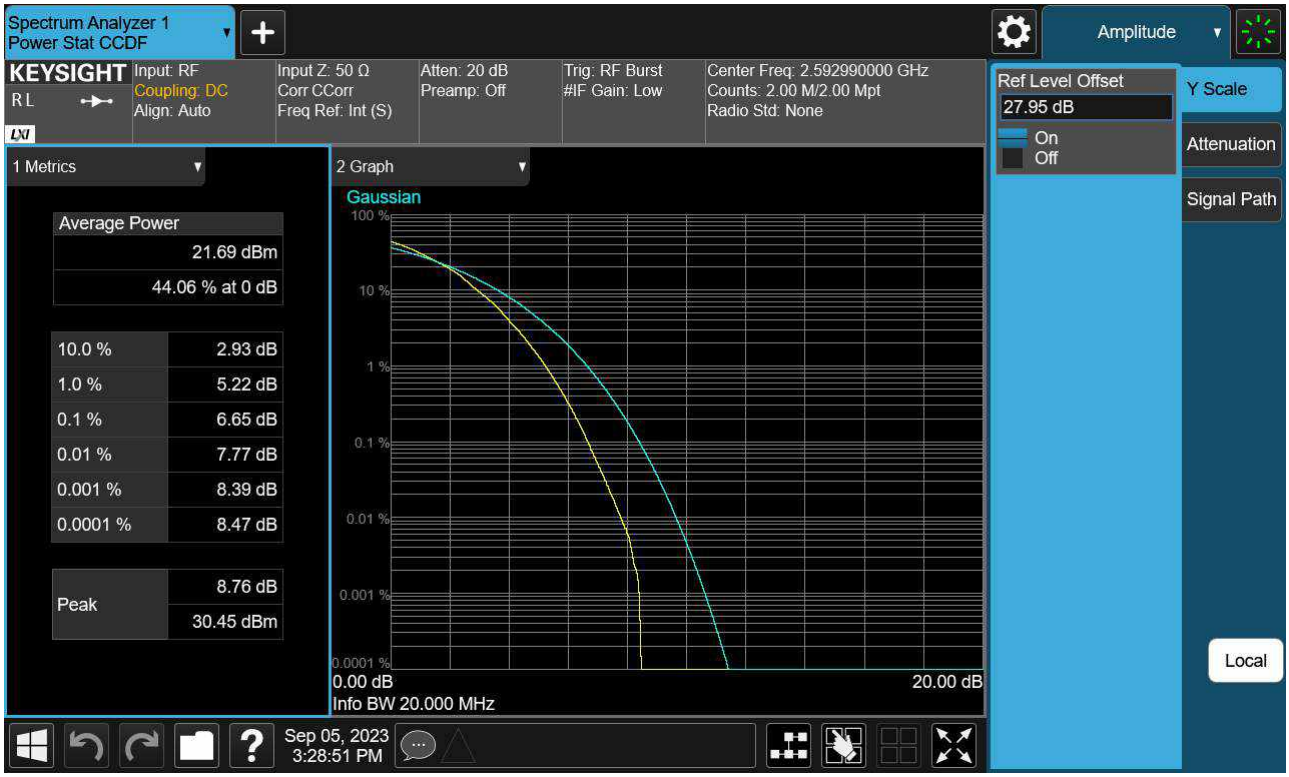
Sub6 n41. PAR Plot (20 M BW_Ch.518598_QPSK)



Sub6 n41. PAR Plot (20 M BW_Ch.518598_16QAM)



Sub6 n41. PAR Plot (20 M BW_Ch.518598_64QAM)



Sub6 n41. PAR Plot (20 M BW_Ch.518598_256QAM)