

PART 27 & RSS-130, RSS-139 RF TEST REPORT

FCC ID:	A3LSMS741B
Model (s):	SM-S741B/DS, SM-S741B
Device Type:	Portable Handset
Report Issue Date:	July 24, 2026

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

The measurement evaluations presented in this report are based on the maximum performance of the tested device(s), which has been shown to be capable of compliance with the applicable technical requirements specified herein and has been tested in accordance with the measurement procedures outlined in 47CFR §2.947, ANSI C63.26 - 2015.

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This document has been revised and replaces all previously issued versions of this document with the same Test Report S/N.



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1. DUT Specifics

1.1. Device under Test

The manufacturer has confirmed that the device is within operational tolerances expected for production units and has the same physical, mechanical, and thermal characteristics expected for production units. The serial number of the device used for each test is indicated alongside the results.

1.2. Maximum Power per Mode

Table 1-1 Antenna A Summary

Band	Band Width [MHz]	Modulation	Frequency Range [MHz]	Max E.R.P		OBW [MHz]	Emission Designator
				[dBm]	[W]		
LTE Band 13	10	QPSK	782.0 - 782.0	19.95	0.099	9.15	13M5G7D
		16QAM	782.0 - 782.0	19.05	0.080	9.13	13M5W7D
	5	QPSK	779.5 - 784.5	19.96	0.099	4.59	13M5G7D
		16QAM	779.5 - 784.5	19.18	0.083	4.58	13M5W7D

Band	Band Width [MHz]	Modulation	Frequency Range [MHz]	Max E.R.P		OBW [MHz]	Emission Designator
				[dBm]	[W]		
LTE Band 12/17	10	QPSK	704.0 - 711.0	20.24	0.106	9.11	9M11G7D
		16QAM	704.0 - 711.0	19.37	0.086	9.10	9M10W7D
	5	QPSK	701.5 - 713.5	20.28	0.107	4.60	4M60G7D
		16QAM	701.5 - 713.5	19.48	0.089	4.56	4M56W7D
	3	QPSK	700.5 - 714.5	20.28	0.107	2.76	2M76G7D
		16QAM	700.5 - 714.5	19.34	0.086	2.77	2M77W7D
	1.4	QPSK	699.7 - 715.3	20.21	0.105	1.10	1M10G7D
		16QAM	699.7 - 715.3	19.30	0.085	1.11	1M11W7D

Band	Band Width [MHz]	Modulation	Frequency Range [MHz]	Max E.I.R.P		OBW [MHz]	Emission Designator
				[dBm]	[W]		
LTE Band 66/4	20	QPSK	1720.0 - 1770.0	24.66	0.292	18.06	18M1G7D
		16QAM	1720.0 - 1770.0	23.87	0.244	18.04	18M0W7D
	15	QPSK	1717.5 - 1772.5	24.57	0.286	13.56	13M6G7D
		16QAM	1717.5 - 1772.5	23.91	0.246	13.57	13M6W7D
	10	QPSK	1715.0 - 1775.0	24.66	0.292	9.16	9M16G7D
		16QAM	1715.0 - 1775.0	24.04	0.254	9.11	9M11W7D
	5	QPSK	1712.5 - 1777.5	24.74	0.298	4.59	4M59G7D
		16QAM	1712.5 - 1777.5	24.20	0.263	4.55	4M55W7D
	3	QPSK	1711.5 - 1778.5	24.74	0.298	2.75	2M75G7D
		16QAM	1711.5 - 1778.5	24.03	0.253	2.75	2M75W7D
	1.4	QPSK	1710.7 - 1779.3	24.65	0.292	1.10	1M10G7D
		16QAM	1710.7 - 1779.3	24.08	0.256	1.10	1M10W7D

Table 1-2 Antenna E Summary

Band	Band Width [MHz]	Modulation	Frequency Range [MHz]	Max E.R.P		OBW [MHz]	Emission Designator
				[dBm]	[W]		
LTE Band 13	10	QPSK	782.0 - 782.0	20.36	0.109	9.14	13M5G7D
		16QAM	782.0 - 782.0	19.54	0.090	9.12	13M5W7D
	5	QPSK	779.5 - 784.5	20.36	0.109	4.61	13M5G7D
		16QAM	779.5 - 784.5	19.69	0.093	4.58	13M5W7D

Band	Band Width [MHz]	Modulation	Frequency Range [MHz]	Max E.R.P		OBW [MHz]	Emission Designator
				[dBm]	[W]		
LTE Band 12/17	10	QPSK	704.0 - 711.0	19.81	0.096	9.13	9M13G7D
		16QAM	704.0 - 711.0	18.94	0.078	9.08	9M08W7D
	5	QPSK	701.5 - 713.5	19.83	0.096	4.46	4M46G7D
		16QAM	701.5 - 713.5	18.97	0.079	4.54	4M54W7D
	3	QPSK	700.5 - 714.5	19.84	0.096	2.74	2M74G7D
		16QAM	700.5 - 714.5	18.93	0.078	2.76	2M76W7D
	1.4	QPSK	699.7 - 715.3	19.70	0.093	1.11	1M11G7D
		16QAM	699.7 - 715.3	18.90	0.078	1.11	1M11W7D

Table 1-3 Antenna F Summary

Band	Band Width [MHz]	Modulation	Frequency Range [MHz]	Max E.I.R.P		OBW [MHz]	Emission Designator
				[dBm]	[W]		
LTE Band 66/4	20	QPSK	1720.0 - 1770.0	22.82	0.191	18.01	18M0G7D
		16QAM	1720.0 - 1770.0	21.93	0.156	17.99	18M0W7D
	15	QPSK	1717.5 - 1772.5	22.60	0.182	13.55	13M6G7D
		16QAM	1717.5 - 1772.5	21.93	0.156	13.52	13M5W7D
	10	QPSK	1715.0 - 1775.0	22.83	0.192	9.17	9M17G7D
		16QAM	1715.0 - 1775.0	21.94	0.156	9.13	9M13W7D
	5	QPSK	1712.5 - 1777.5	22.73	0.187	4.55	4M55G7D
		16QAM	1712.5 - 1777.5	21.92	0.156	4.55	4M55W7D
	3	QPSK	1711.5 - 1778.5	22.71	0.187	2.76	2M76G7D
		16QAM	1711.5 - 1778.5	21.92	0.156	2.76	2M76W7D
	1.4	QPSK	1710.7 - 1779.3	22.74	0.188	1.10	1M10G7D
		16QAM	1710.7 - 1779.3	21.91	0.155	1.11	1M11W7D

1.3. Antenna Configuration and Operating Band

The table below details the antennas supporting the licensed bands, with the specific bands evaluated in this report clearly checked.

Table 1-4 Supported Frequency Band per Antenna

Antenna	LTE Band 12/17	LTE Band 13	LTE Band 66/4
Ant A	✓	✓	✓
Ant E	✓	✓	
Ant F			✓
Ant B			
Ant D			
Ant C			
Ant I			

The antenna names utilized throughout this report are defined as follows:

Antenna	LTE Band 12/17	LTE Band 13	LTE Band 66/4
Ant A	Ant 1	Ant 1	Ant 1
Ant E	Ant 2	Ant 2	-
Ant F	-	-	Ant 2

2. Executive Summary

2.1. Device Description

The DUT is a portable wireless handset designed to operate across multiple communication standards and frequency bands. This report covers the complete compliance testing of LTE Band 12,17,13,66,4 in accordance with the applicable standards and regulatory requirements.

2.2. Summary of Test Results

The DUT has been tested according to the following specifications. The test period was from June 17, 2026 through July 07, 2026.

Test Condition	Test Item	Applied Band	FCC Requirement	ISED Requirement	Limit	Test Result	Reference
Conducted	Occupied & Emission bandwidth	All Band	§ 2.1049(h)	RSS-Gen(6.7)	Not Applicable	PASS	Section 4.4
	Peak-to-Average Ratio	LTE B12/17 LTE B13	Not Applicable	RSS-130(4.6.1)	$PAR \leq 13 \text{ dB}$	PASS	Section 4.5
		LTE B66/4	§ 27.50(d)(5)	RSS-139(5.5)	$PAR \leq 13 \text{ dB}$	PASS	Section 4.5
	Conducted Band Edge	LTE B13	§ 27.53(c),(f) § 2.1051	RSS-Gen(6.13) RSS-130(4.7)	the transmitting power (P) by a factor of at least $43 + 10 \log(P) \text{ dB}$.	PASS	Section 4.6
		LTE B12/17	§ 27.53(g) § 2.1051	RSS-Gen(6.13) RSS-130(4.7.1)	the transmitting power (P) by a factor of at least $43 + 10 \log(P) \text{ dB}$.	PASS	Section 4.6
		LTE B66/4	§ 27.53(h) § 2.1051	RSS-Gen(6.13) RSS-139(5.6)	the transmitting power (P) by a factor of at least $43 + 10 \log(P) \text{ dB}$.	PASS	Section 4.6
	Conducted Spurious Emissions	LTE B13	§ 27.53(c),(f) § 2.1051	RSS-Gen(6.13) RSS-130(4.7)	Limit detailed in Sections 4.7	PASS	Section 4.7
		LTE B12/17	§ 27.53(g) § 2.1051	RSS-Gen(6.13) RSS-130(4.7.1)	the transmitting power (P) by a factor of at least $43 + 10 \log(P) \text{ dB}$.	PASS	Section 4.7
		LTE B66/4	§ 27.53(h) § 2.1051	RSS-Gen(6.13) RSS-139(5.6)	the transmitting power (P) by a factor of at least $43 + 10 \log(P) \text{ dB}$.	PASS	Section 4.7
	Frequency Stability	All Band	§ 2.1055(a)	RSS-Gen(6.11) RSS-130(4.5) RSS-139(5.4)	shall be sufficient to ensure that it stays within the operating frequency block	PASS	Section 4.8
Radiated	Effective (Isotropic) Radiated Power	LTE B13	§ 27.50(b)(10)	RSS-130(4.6.3)	$\leq 3 \text{ watts ERP}$	PASS	Section 5.4
		LTE B12/17	§ 27.50(c)(10)	RSS-130(4.6.2) RSS-130(4.6.3)	$\leq 3 \text{ watts ERP}$	PASS	Section 5.4
		LTE B66/4	§ 27.50(d)(4)	RSS-139(5.5)	$\leq 1 \text{ watts EIRP}$	PASS	Section 5.4
	Radiated Spurious Emissions	LTE B13	§ 27.53(c),(f) § 2.1053	RSS-Gen(6.13) RSS-130(4.7)	Limit detailed in Sections 5.5	PASS	Section 5.5
		LTE B12/17	§ 27.53(g) § 2.1053	RSS-Gen(6.13) RSS-130(4.7.1)	the transmitting power (P) by a factor of at least $43 + 10 \log(P) \text{ dB}$.	PASS	Section 5.5
		LTE B66/4	§ 27.53(h) § 2.1053	RSS-Gen(6.13) RSS-139(5.6)	the transmitting power (P) by a factor of at least $43 + 10 \log(P) \text{ dB}$.	PASS	Section 5.5

*Note : Refer to Appendix A for RF output power data as per §2.1046(a).

2.3. Test Guidance Applied

Testing was performed in accordance with the following rules, standards, and guidance:

- ANSI C63.26 -2015
- ANSI C63.4 - 2014 + C63.4a - 2017
- RSS-Gen Issue 5
- RSS-130 Issue 2
- RSS-139 Issue 4
- FCC 47 CFR Part 2
- FCC 47 CFR Part 27
- KDB 648474 D03 v01r04
- KDB 971168 D01 v03r01
- KDB 971168 D02 v02r02
- KDB 412172 D01 v01r01

2.4. NGTL Test Site Location

All measurement operations were conducted at the NGTL testing facility.

- Location: 52-7, Choha-ro, Mohyeon-eup, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea.
- Site Compliance: The measurement environments strictly adhere to the site validation requirements specified in ANSI C63.4-2014+C63.4a-2017 and FCC KDB 414788 D01.
- Accreditations: Fully accredited to ISO/IEC 17025 and designated by the National Radio Research Agency (RRA) as a Conformity Assessment Body (CAB) under the MRAs, maintaining official testing recognition from the FCC and ISED.

FCC Designation Number	FCC Test Firm Registration Number
KR0179	985720
ISED CAB identifier	ISED Company Number
KR0179	35746

3. Description of Tests

- The DUT is a handheld wireless device and was tested in accordance with ANSI C63.26-2015. For details regarding the test configuration, refer to the following sections.
- Antenna Port Conducted Test : Sections 4.1
- Radiated Emissions Test : Sections 5.1
- All tests were conducted under the environmental conditions specified below
- Ambient Temperature : 21 ~ 27 °C
- Relative Humidity : 42 ~ 51 %
- Data Referencing is applied for the following tests:

Test Condition	Test Item	Data Referencing [Applied / Full]	Referred Data and Spot-Checks
Conducted	Occupied & Emission bandwidth	Applied	Section 10
	Conducted Band Edge	Applied	Section 10
	Conducted Spurious Emissions	Applied	Section 10
	Maximum Output Power	Applied	Section 10
Radiated	Effective (Isotropic) Radiated Power	Applied	Section 10
	Radiated Spurious Emissions	Applied	Section 10

4. Conducted Test Results

4.1. Test Configuration

This section presents the results of the conducted tests performed at the antenna port in accordance with ANSI C63.26-2015. Conducted emissions were captured using automated test software 'NGTL ATE' Ver. 0.00.

4.2. Conducted Measurement Setup

Figure 4-1 Conducted Power Measurement Setup

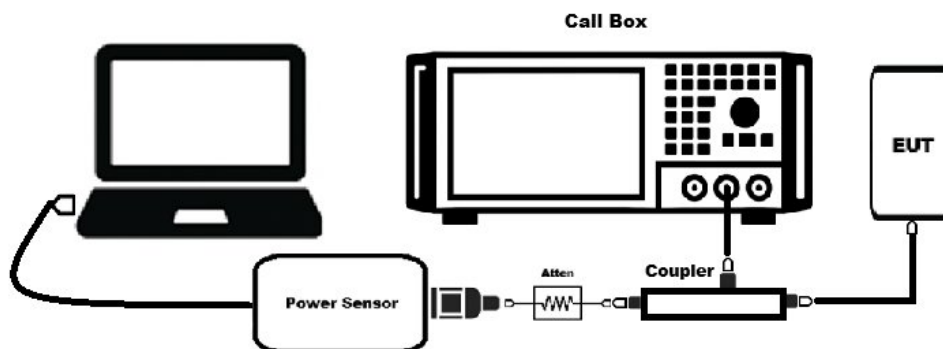
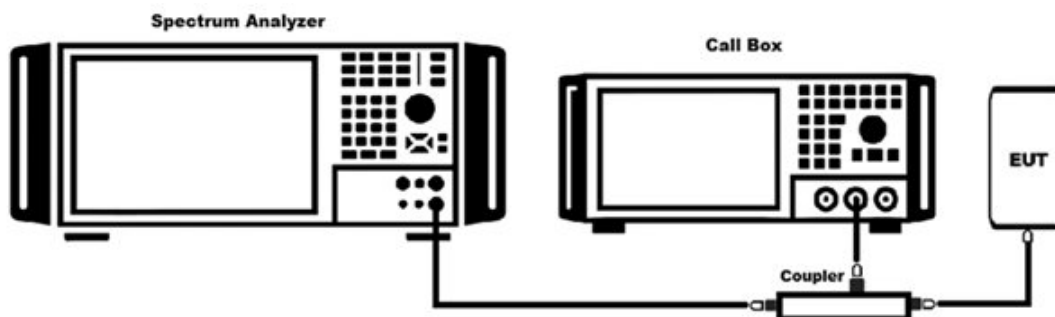


Figure 4-2 Conducted Measurement Setup



4.3. Conducted Measurement Sample

Serial Number(s) : ZDH0428M, ZEJ0893M, ZF50730M

4.4. Occupied & Emission Bandwidth

4.4.1. Regulatory Limit

The following test is for reporting purposes only.

§Part. 2.1049(h)

RSS-Gen(6.7)

4.4.2. Test Method

ANSI C63.26-2015, clause 5.4

4.4.3. Test Procedure

The automatic bandwidth measurement function of the spectrum analyzer was used.

The procedure for this method is follows:

- a) Set center frequency to the nominal EUT channel center frequency.
- b) Set SPAN ≥ 1.5 times the OBW.
- c) Set RBW = 1% to 5% of the OBW (RBW - IF 3 dB filter)
- d) Set VBW $\geq 3 \times$ RBW
- e) Detector = Peak
- f) Trace mode = max-hold
- g) Allow the trace to stabilize

Test Note

- ✓ All modulation were evaluated, and only the worst-case results are reported herein.
- ✓ The 26 dB Bandwidth data from this section were used to perform the Section 4.6 Conducted Band Edge testing.

4.4.4. Test Results

Table 4-1 OBW and 26dB Bandwidth Data LTE Band 13

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	Occupied Bandwidth [MHz]		26 dB Bandwidth [MHz]	
						Ant1	Ant2	Ant1	Ant2
LTE Band 13	10	782	23230	50/0	QPSK	9.15	9.14	10.71	10.78
					16QAM	9.13	9.12	10.57	10.77
	5	782	23230	25/0	QPSK	4.59	4.61	5.57	5.63
					16QAM	4.58	4.58	5.60	5.54

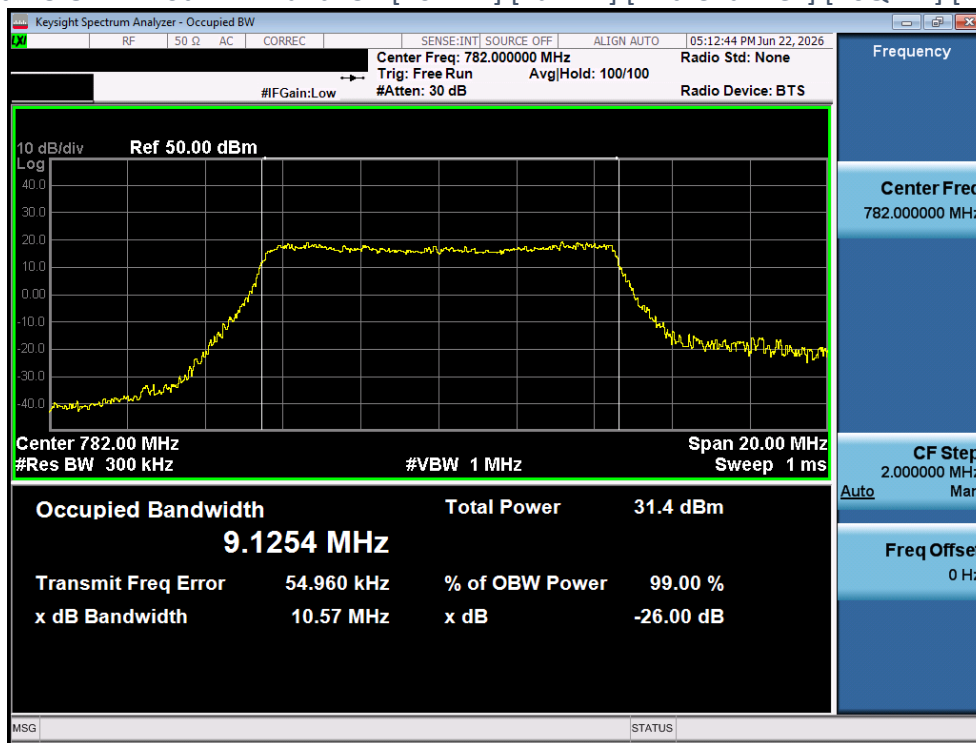
Plot 4-1 OBW Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-2 OBW Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



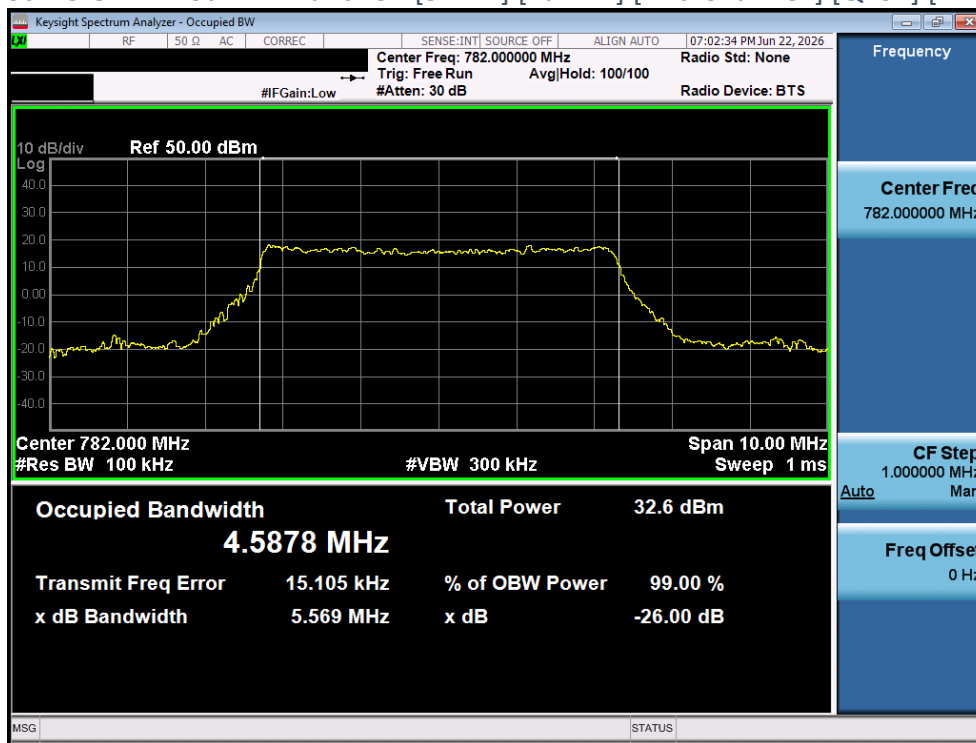
Plot 4-3 OBW Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



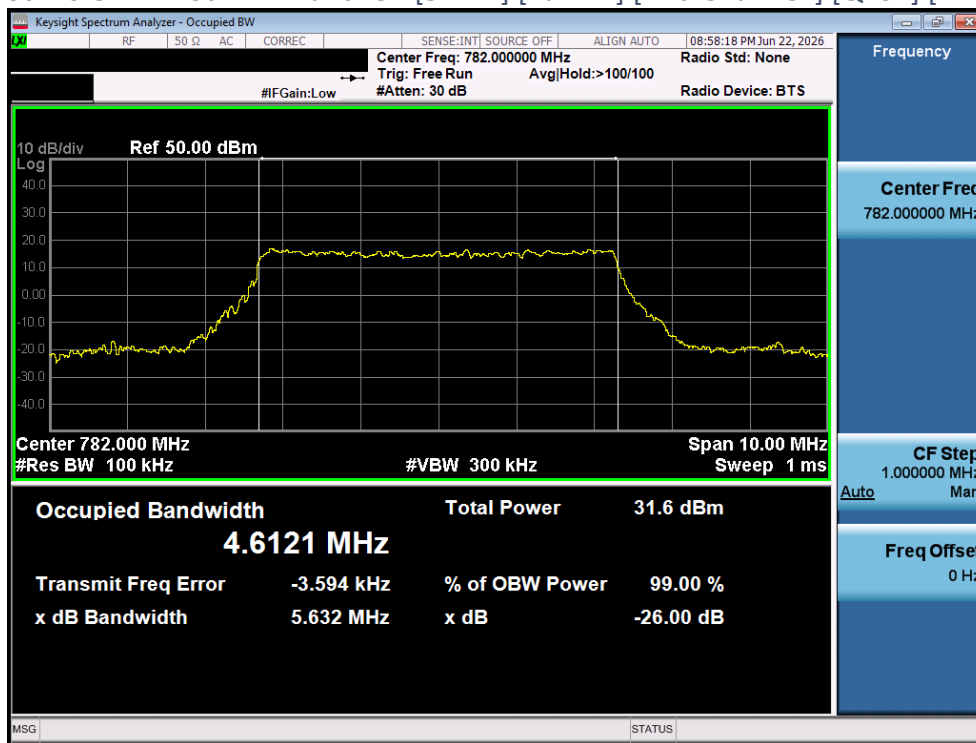
Plot 4-4 OBW Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



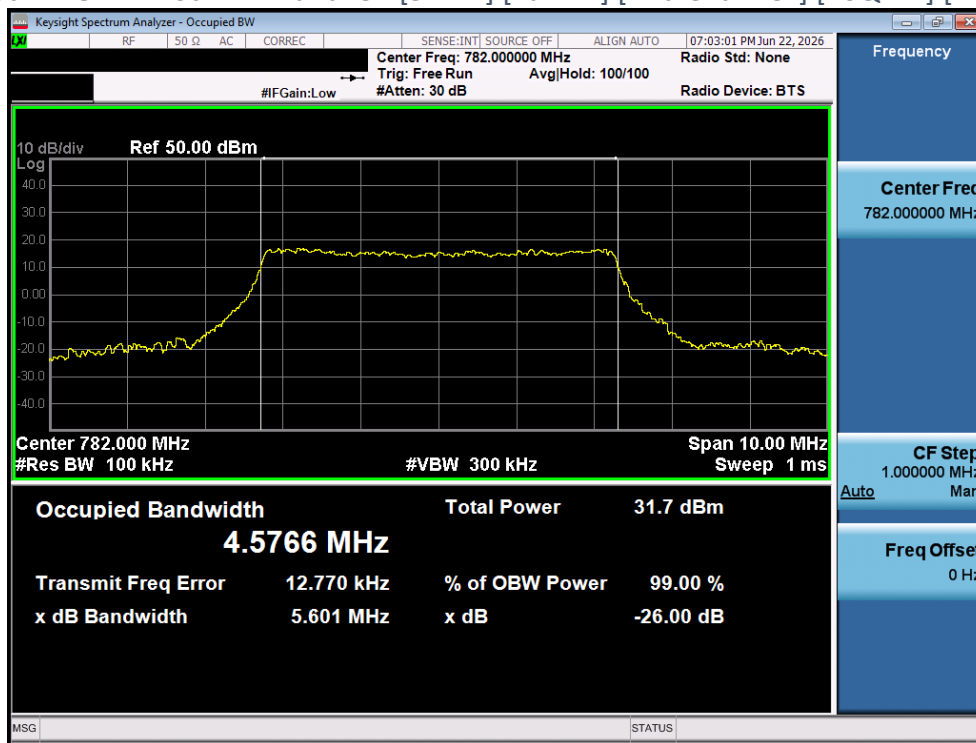
Plot 4-5 OBW Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-6 OBW Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-7 OBW Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



Plot 4-8 OBW Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]

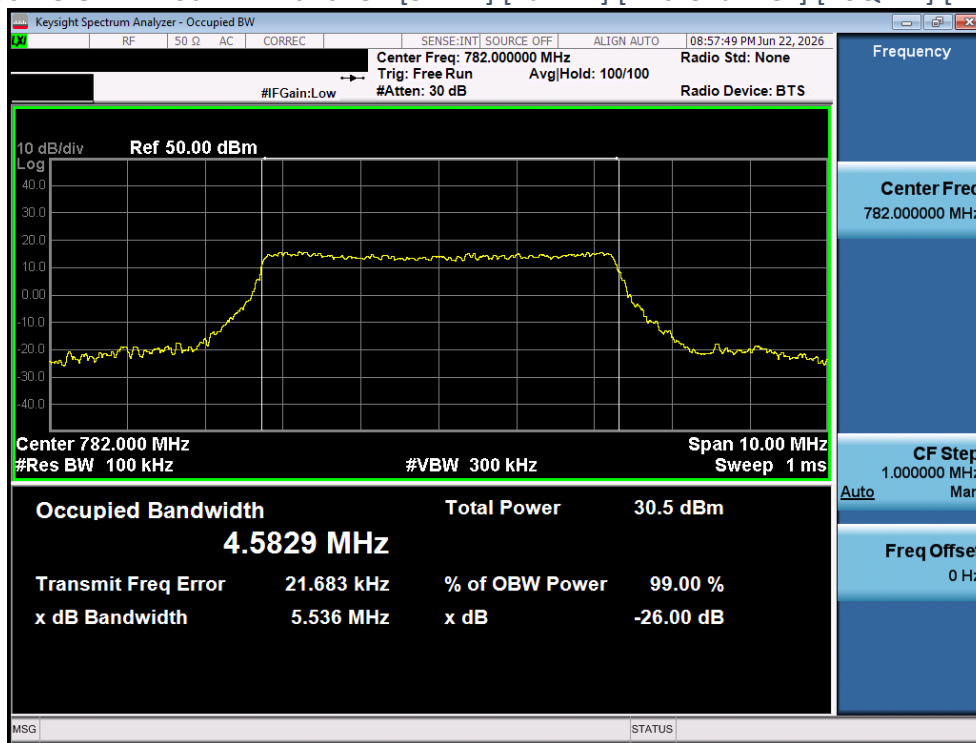
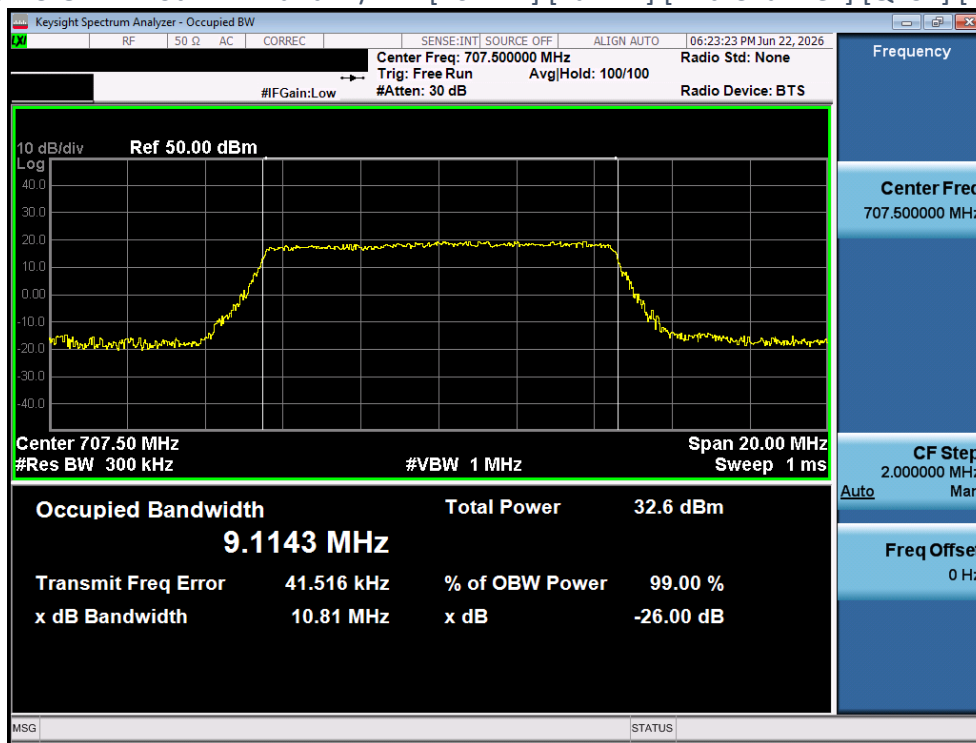


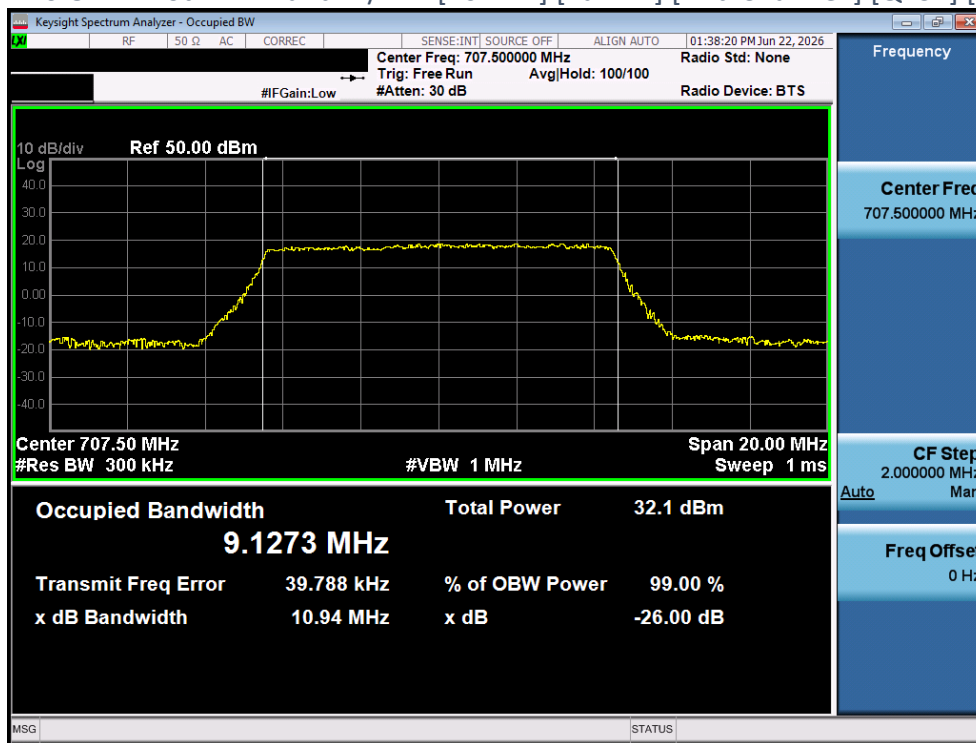
Table 4-2 OBW and 26dB Bandwidth Data LTE Band 12/17

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	Occupied Bandwidth [MHz]		26 dB Bandwidth [MHz]	
						Ant1	Ant2	Ant1	Ant2
LTE Band 12/17	10	707.5	23095	50/0	QPSK	9.11	9.13	10.81	10.94
					16QAM	9.10	9.08	10.53	10.66
	5	707.5	23095	25/0	QPSK	4.60	4.46	5.55	5.37
					16QAM	4.56	4.54	5.52	5.31
	3	707.5	23095	15/0	QPSK	2.76	2.74	3.22	3.22
					16QAM	2.77	2.76	3.21	3.22
	1.4	707.5	23095	6/0	QPSK	1.10	1.11	1.24	1.37
					16QAM	1.11	1.11	1.28	1.35

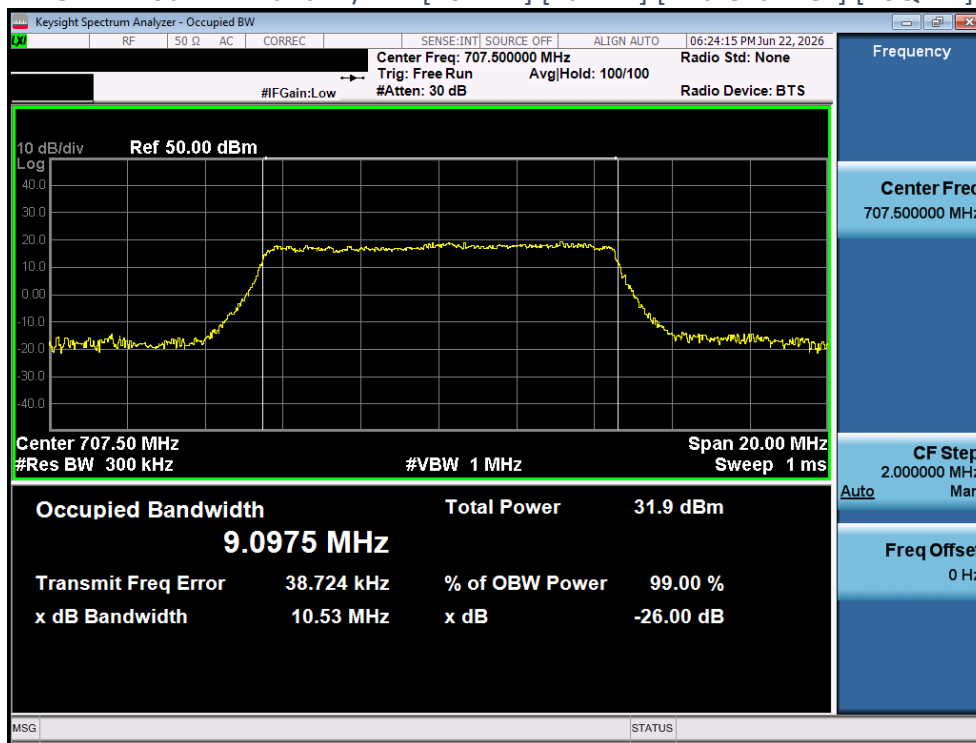
Plot 4-9 OBW Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



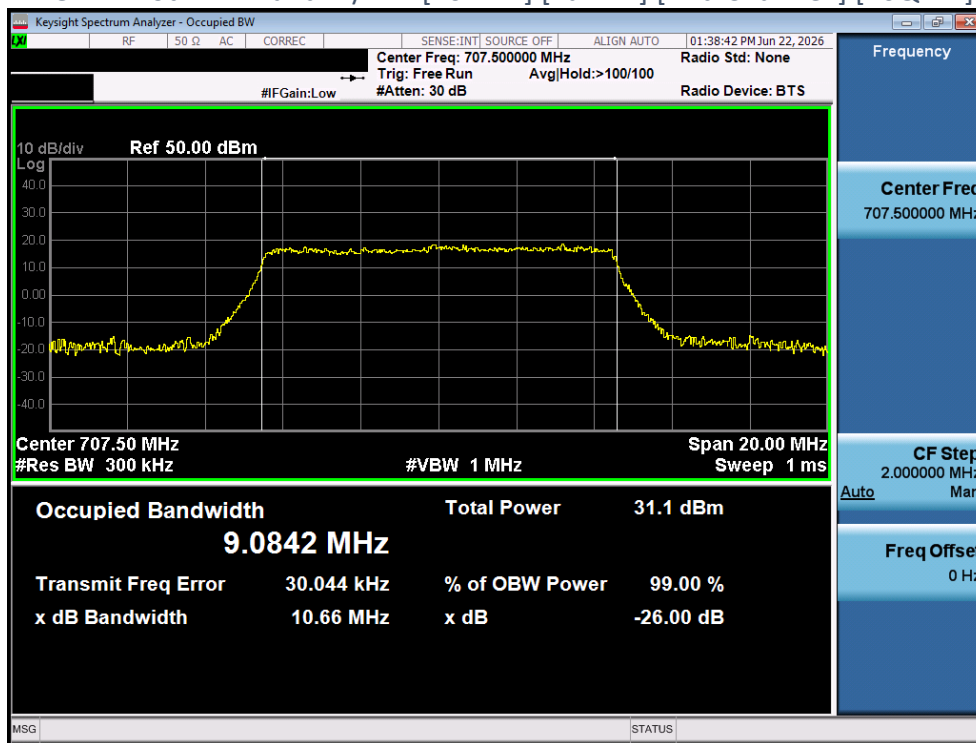
Plot 4-10 OBW Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



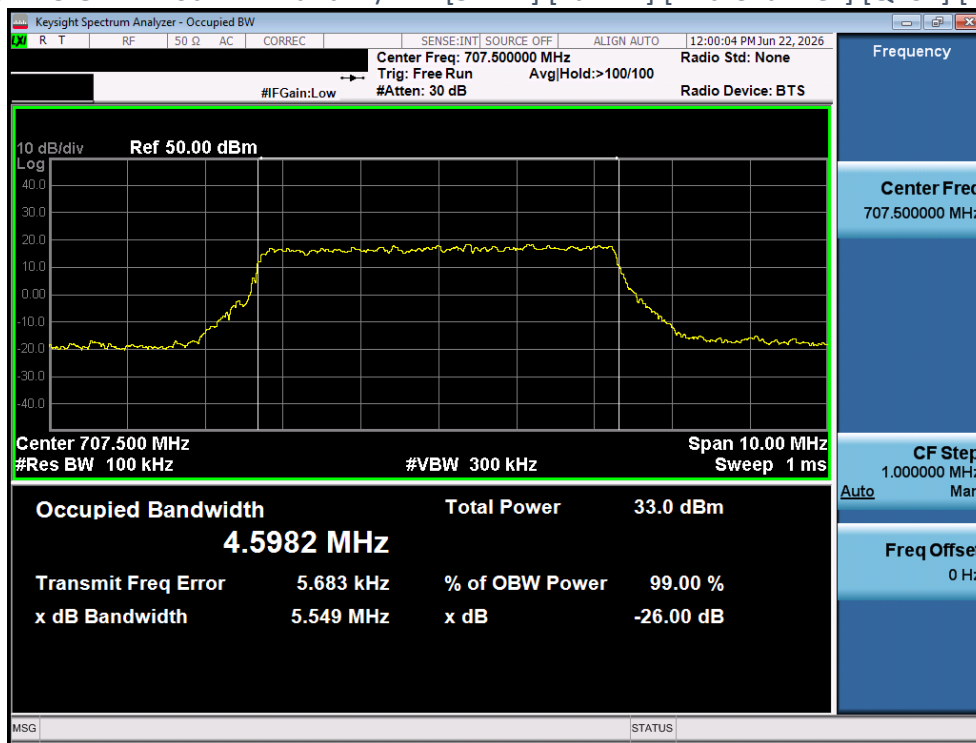
Plot 4-11 OBW Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



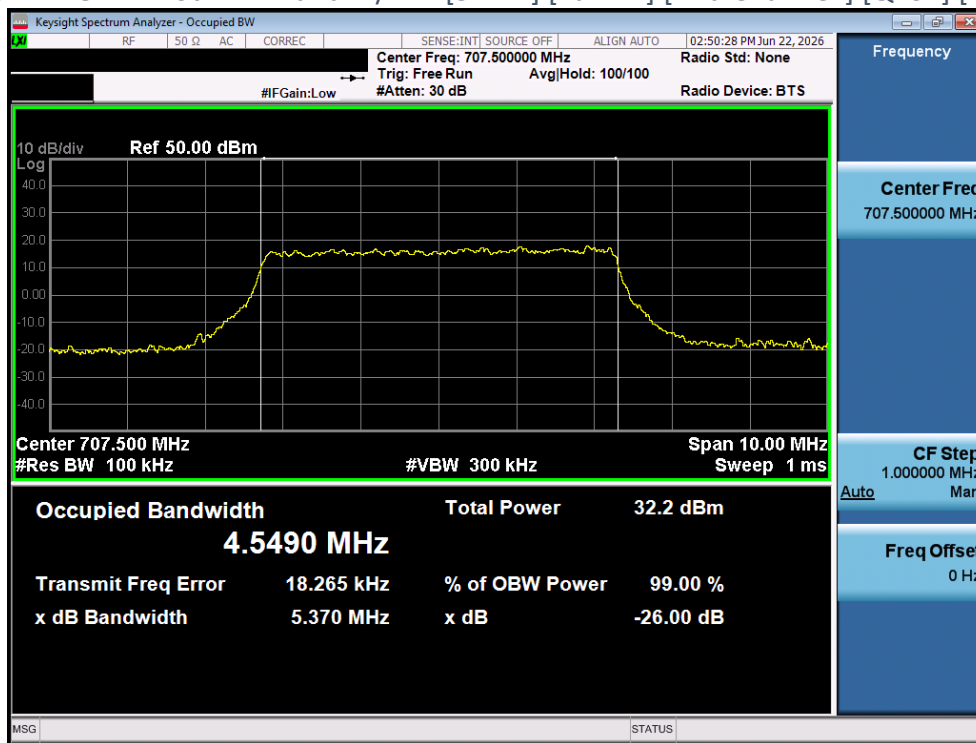
Plot 4-12 OBW Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



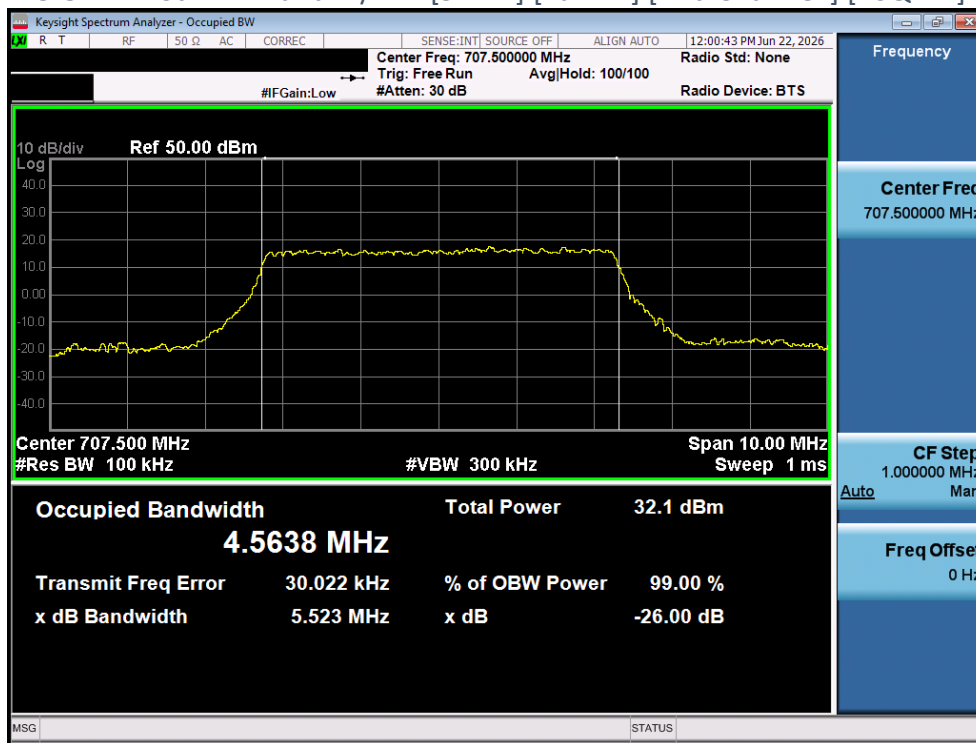
Plot 4-13 OBW Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



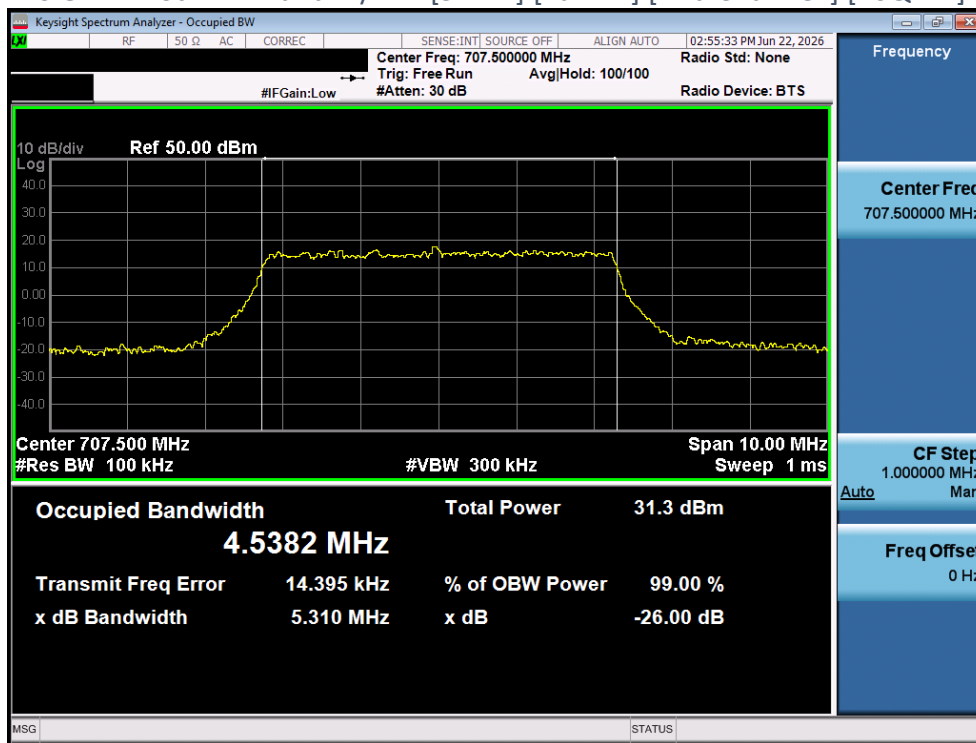
Plot 4-14 OBW Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



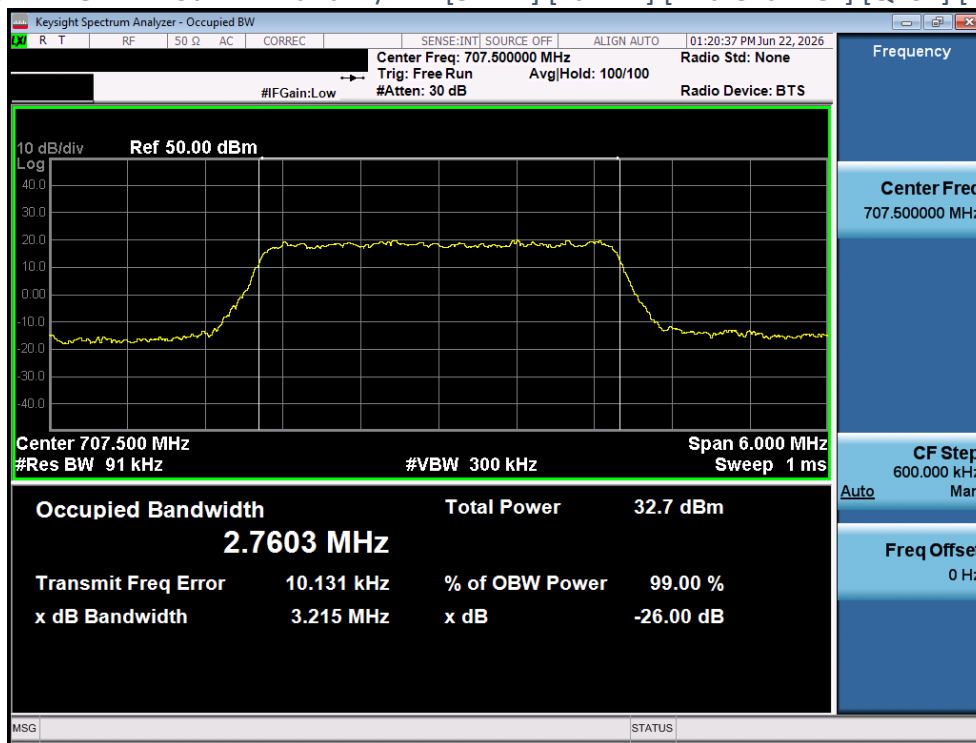
Plot 4-15 OBW Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



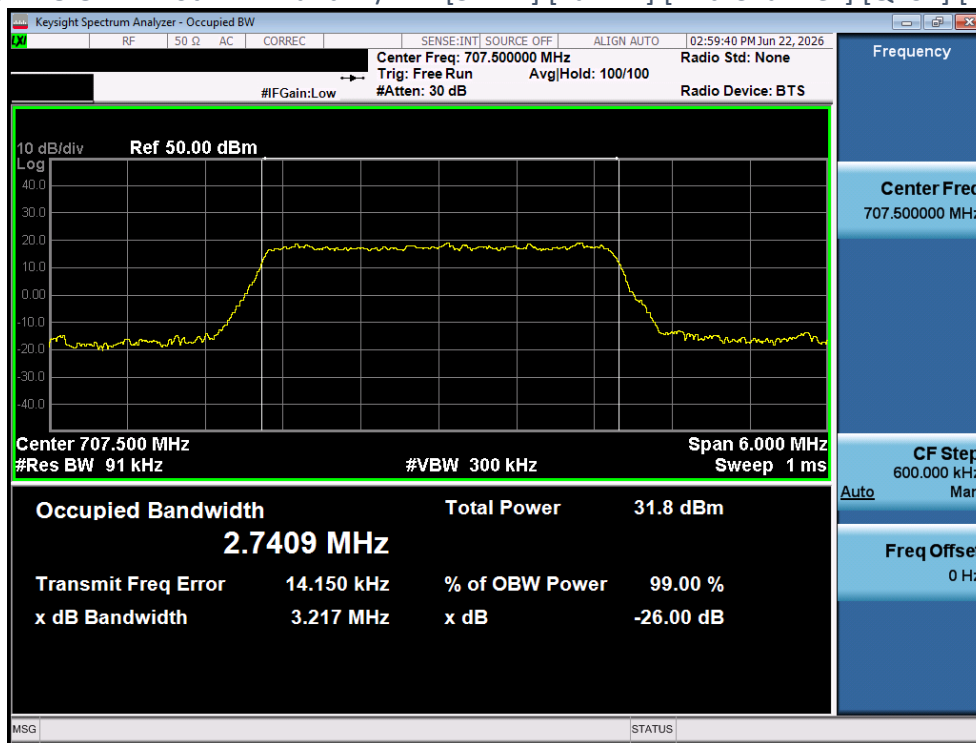
Plot 4-16 OBW Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



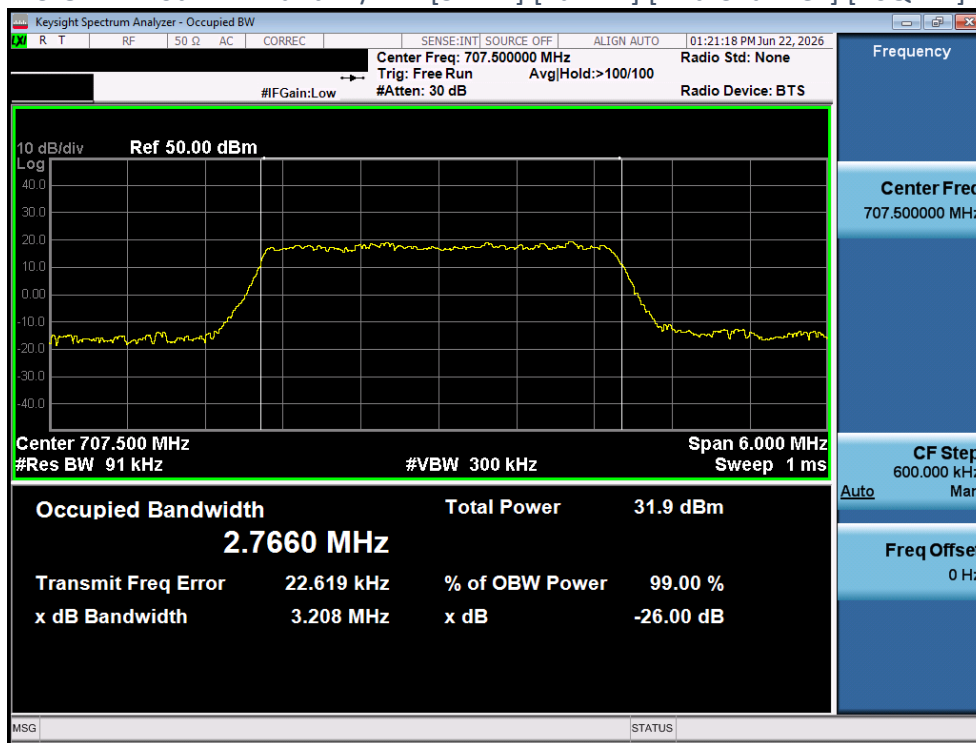
Plot 4-17 OBW Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



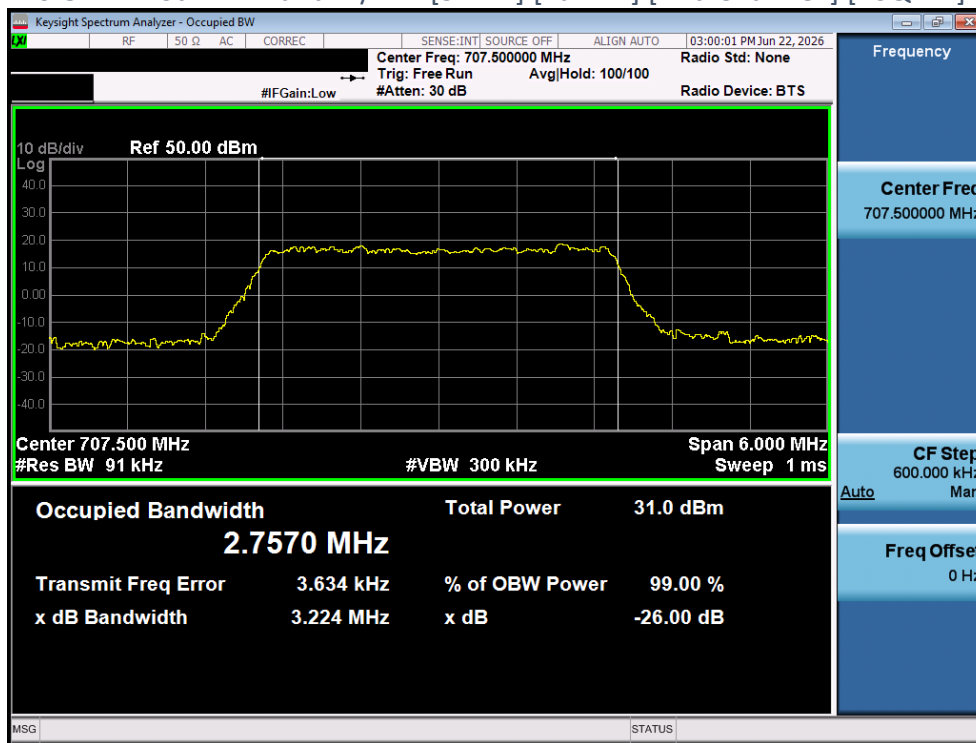
Plot 4-18 OBW Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



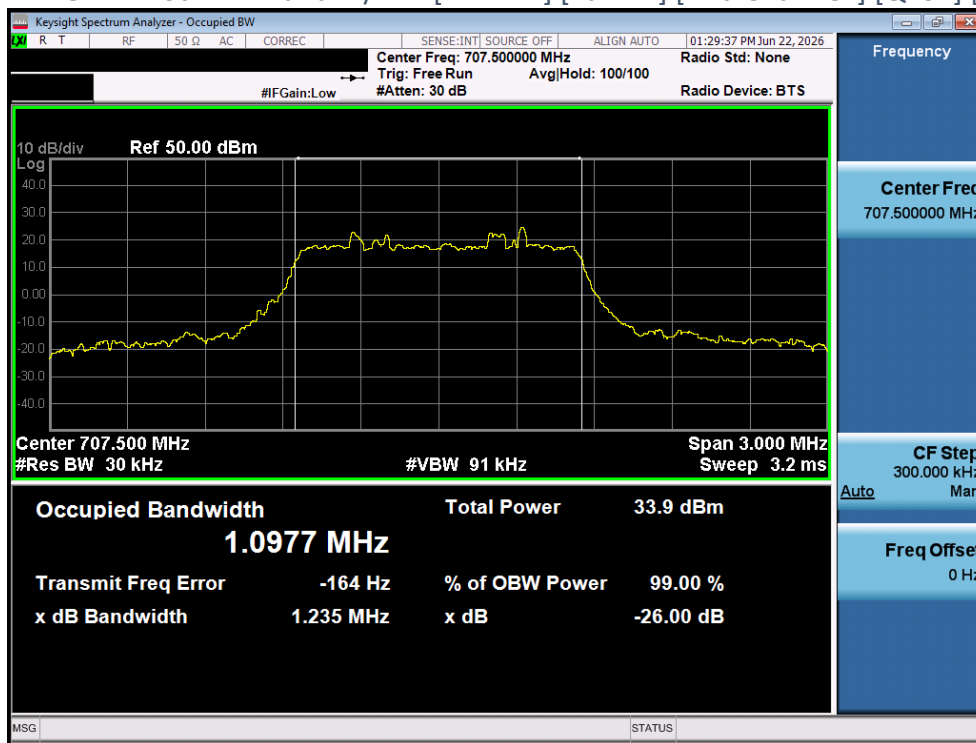
Plot 4-19 OBW Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



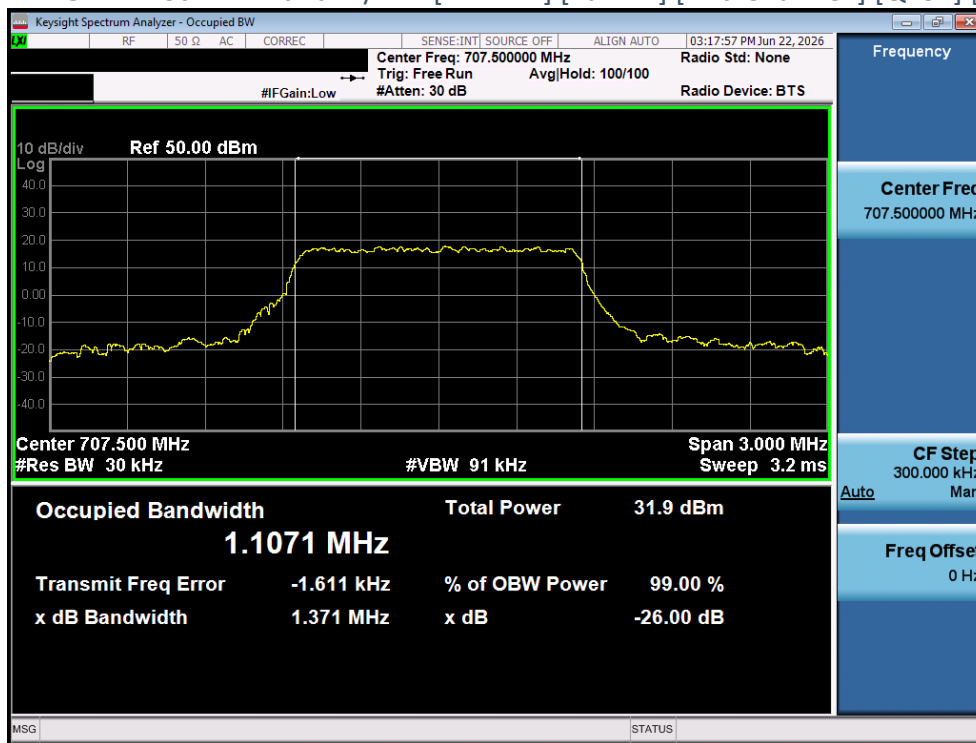
Plot 4-20 OBW Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



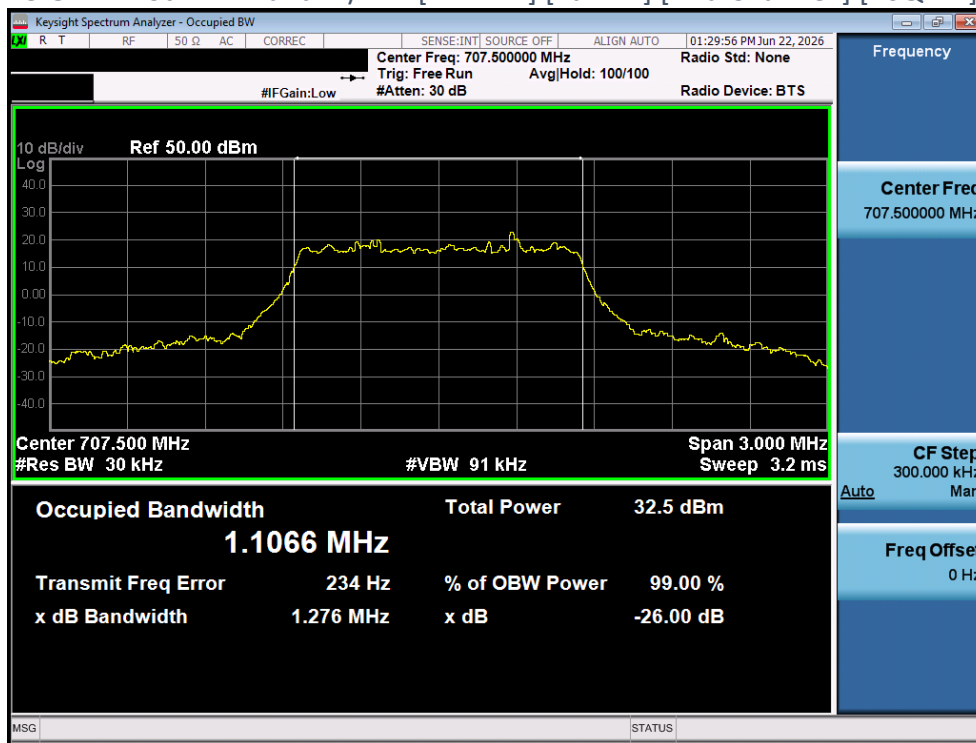
Plot 4-21 OBW Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-22 OBW Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-23 OBW Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



Plot 4-24 OBW Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]

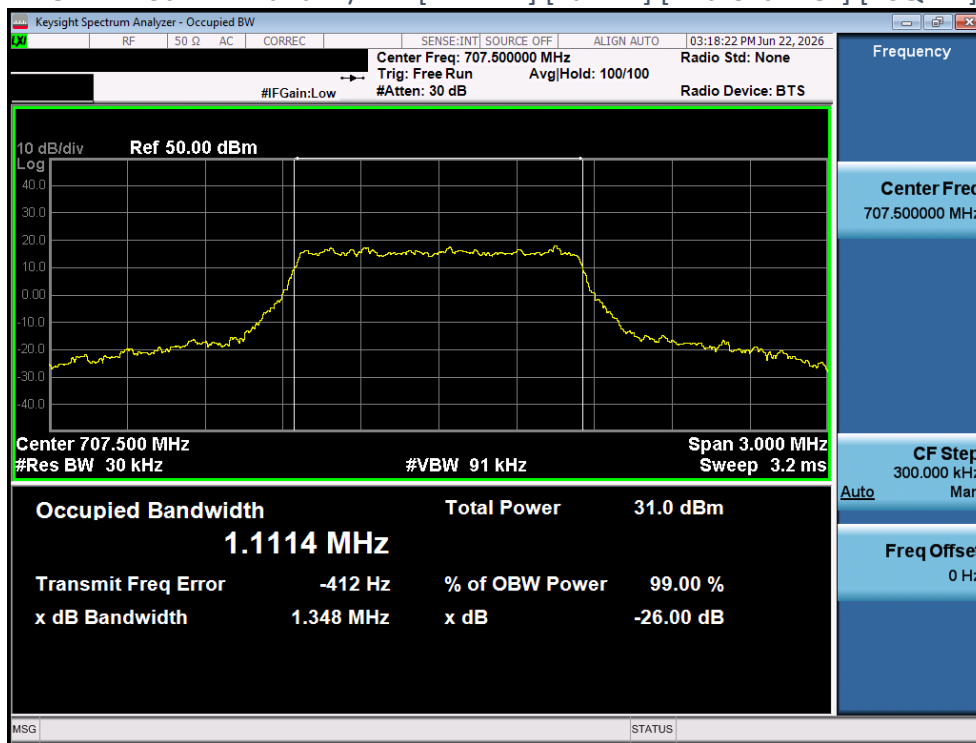
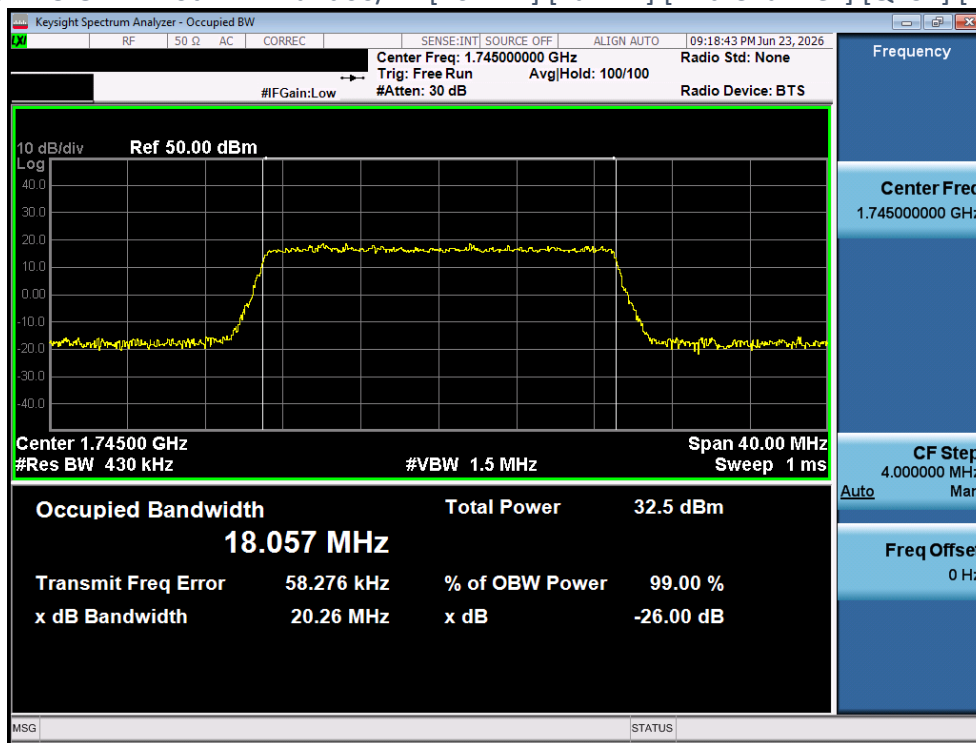


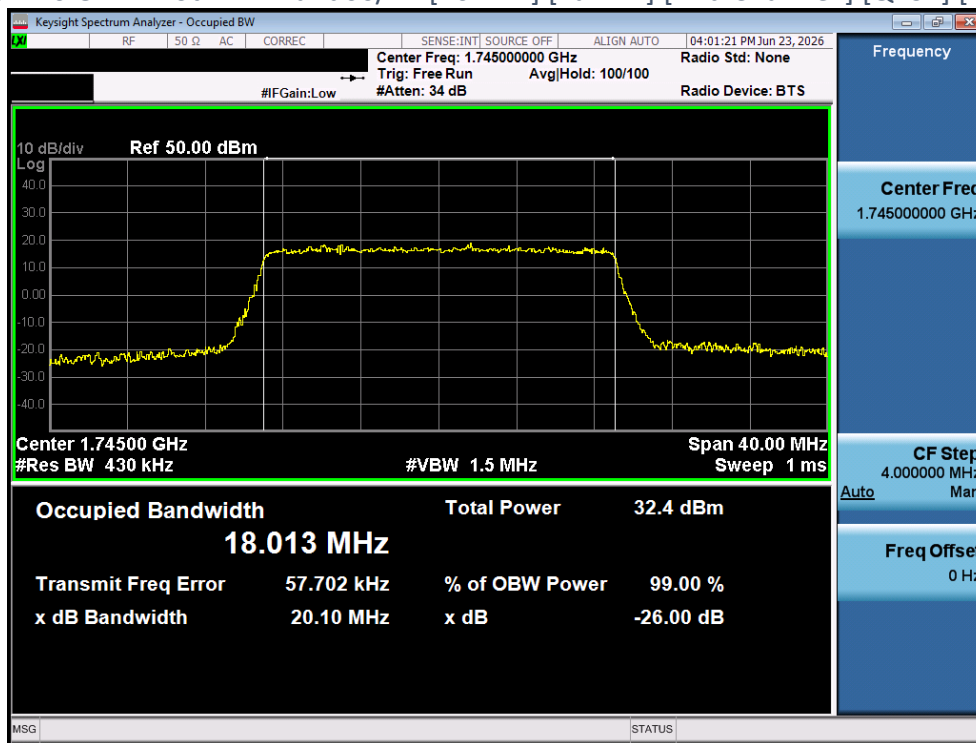
Table 4-3 OBW and 26dB Bandwidth Data LTE Band 66/4

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	Occupied Bandwidth [MHz]		26 dB Bandwidth [MHz]	
						Ant1	Ant2	Ant1	Ant2
LTE Band 66/4	20	1745	132322	100/0	QPSK	18.06	18.01	20.26	20.10
					16QAM	18.04	17.99	20.14	20.00
	15	1745	132322	75/0	QPSK	13.56	13.55	15.67	15.56
					16QAM	13.57	13.52	15.57	15.50
	10	1745	132322	50/0	QPSK	9.16	9.17	10.96	11.10
					16QAM	9.11	9.13	10.81	10.82
	5	1745	132322	25/0	QPSK	4.59	4.55	5.55	5.41
					16QAM	4.55	4.55	5.54	5.41
	3	1745	132322	15/0	QPSK	2.75	2.76	3.20	3.22
					16QAM	2.75	2.76	3.20	3.25
	1.4	1745	132322	6/0	QPSK	1.10	1.10	1.30	1.31
					16QAM	1.10	1.11	1.26	1.36

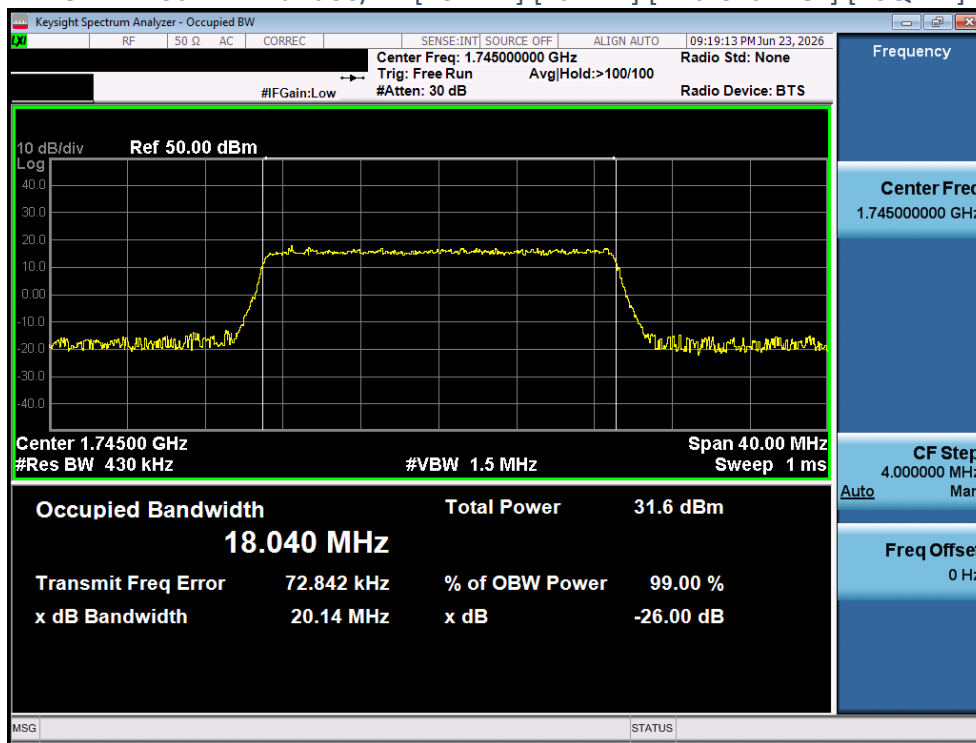
Plot 4-25 OBW Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



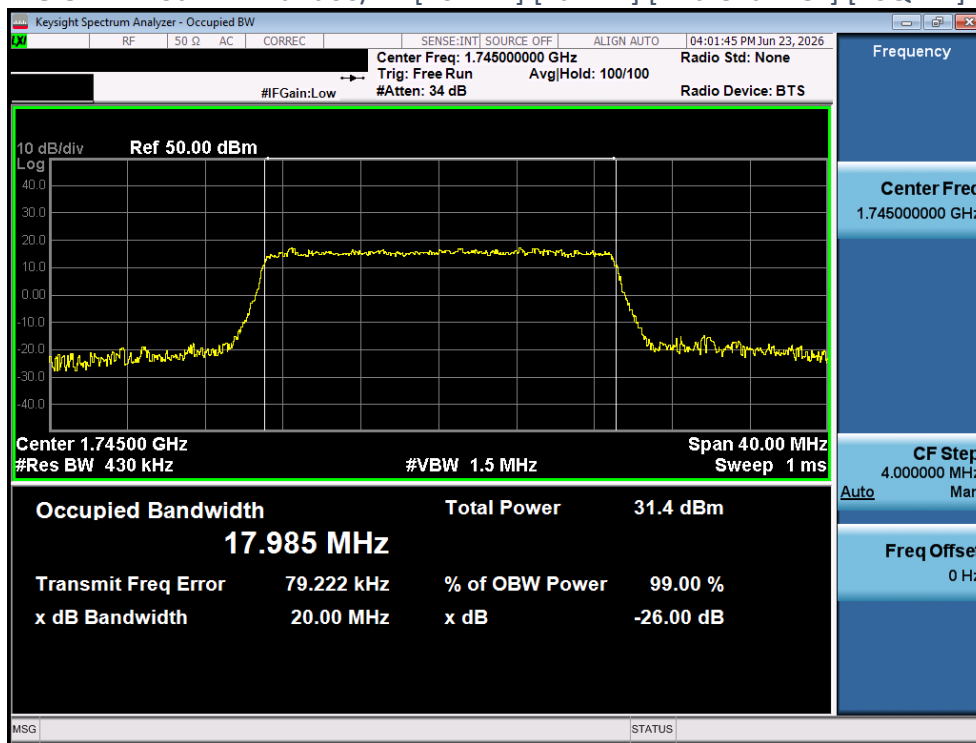
Plot 4-26 OBW Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



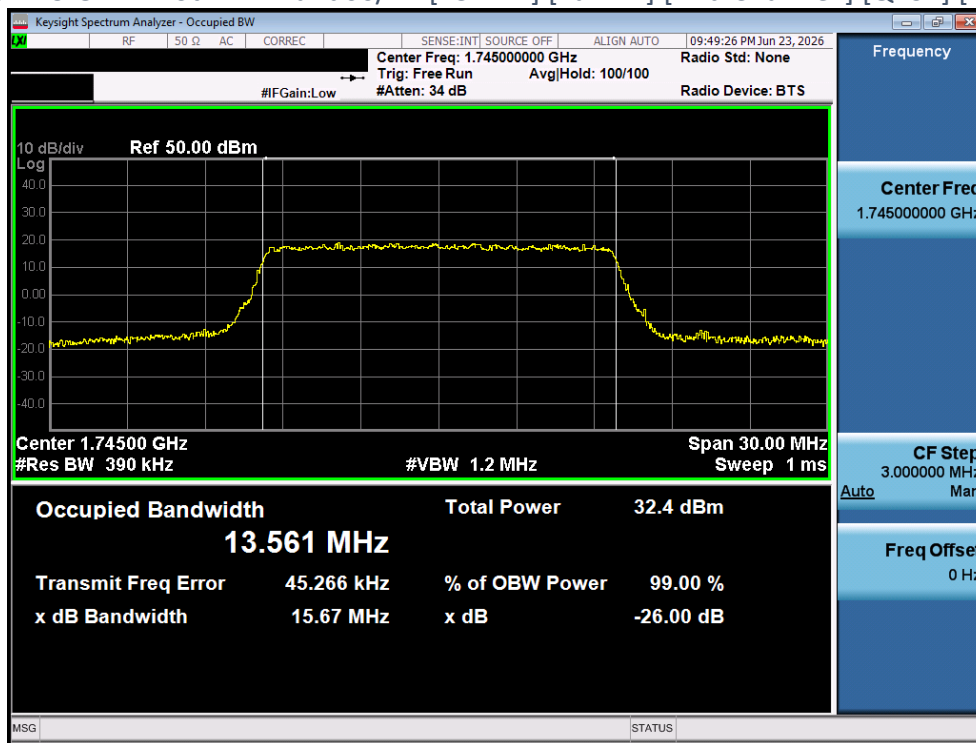
Plot 4-27 OBW Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



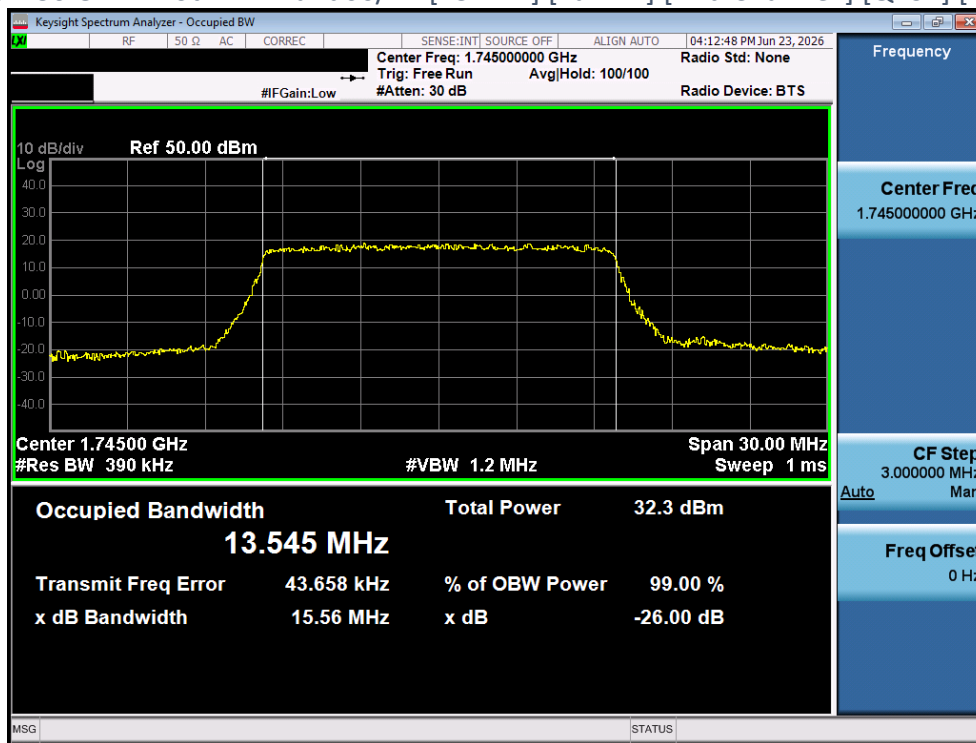
Plot 4-28 OBW Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



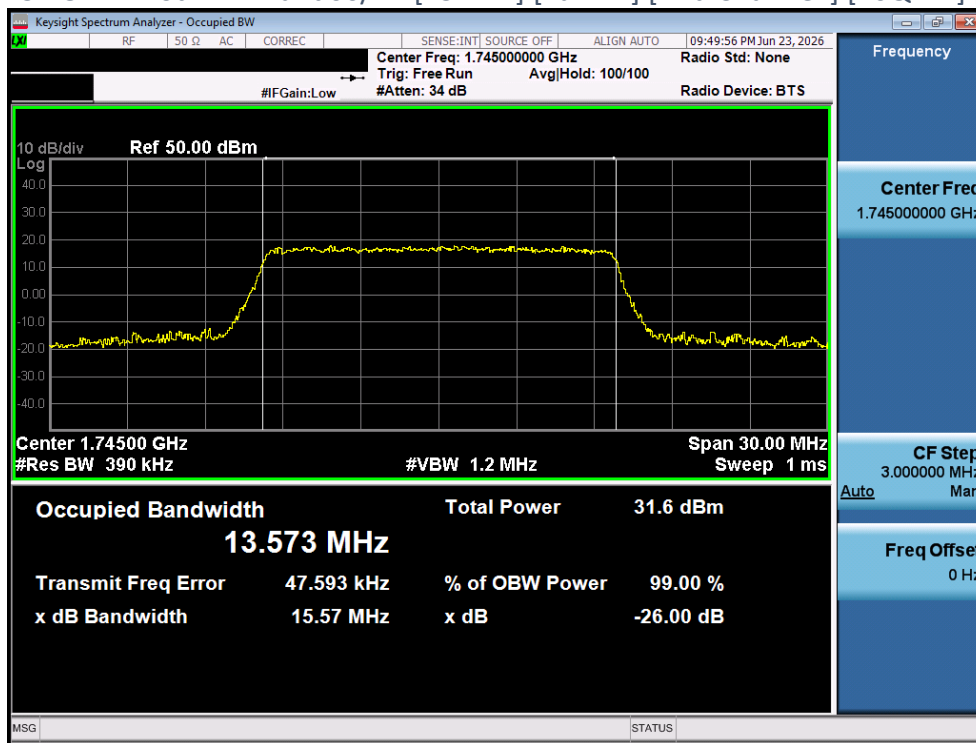
Plot 4-29 OBW Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



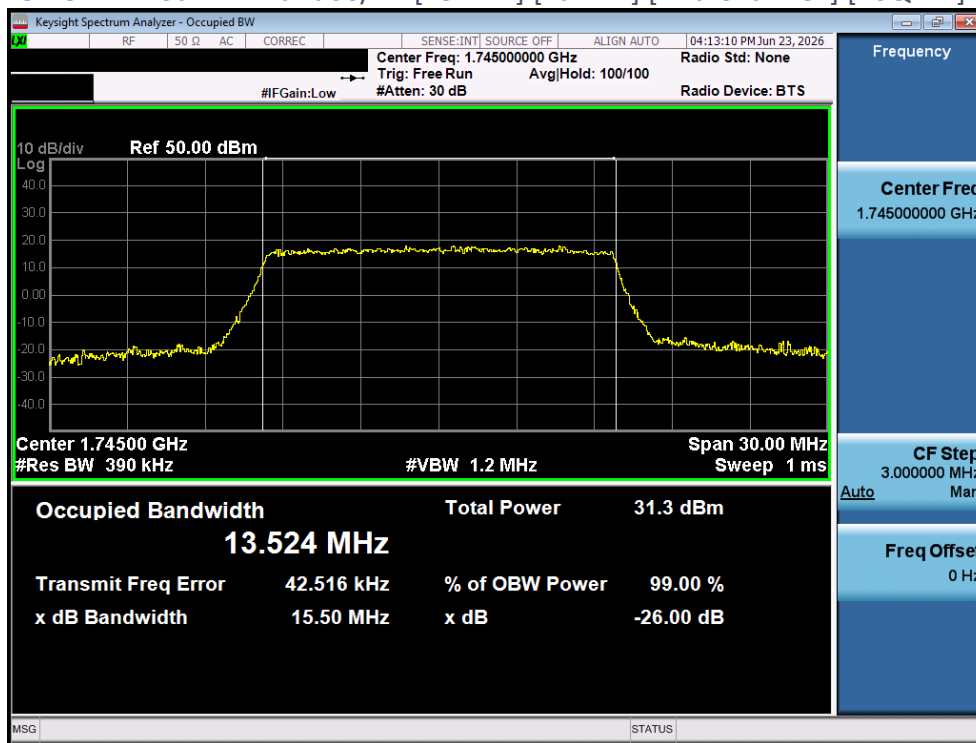
Plot 4-30 OBW Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



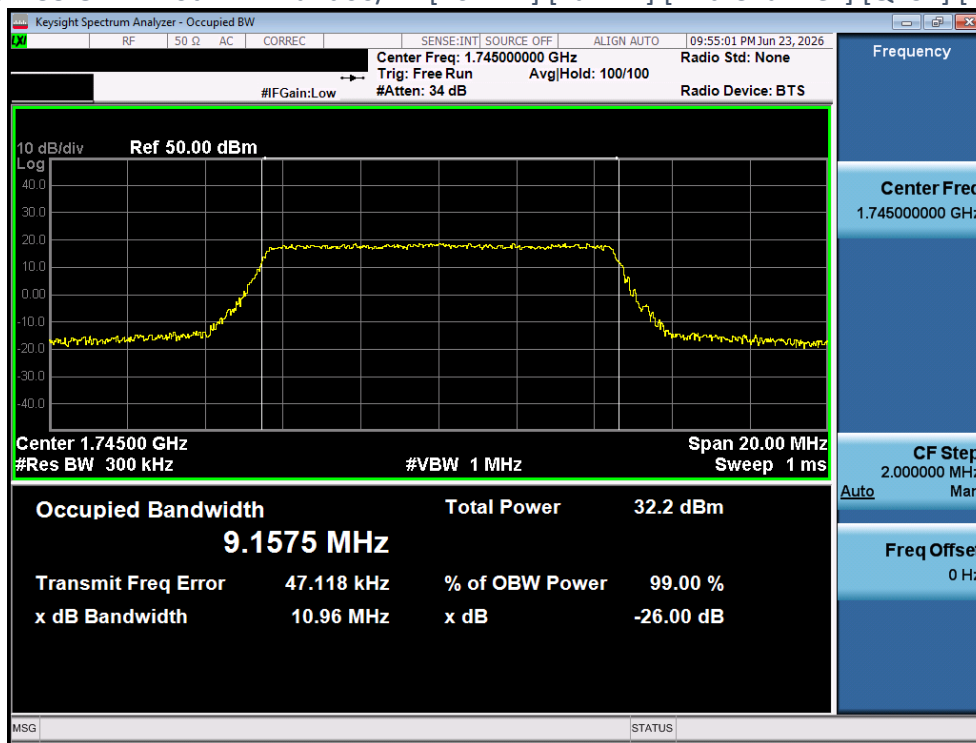
Plot 4-31 OBW Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



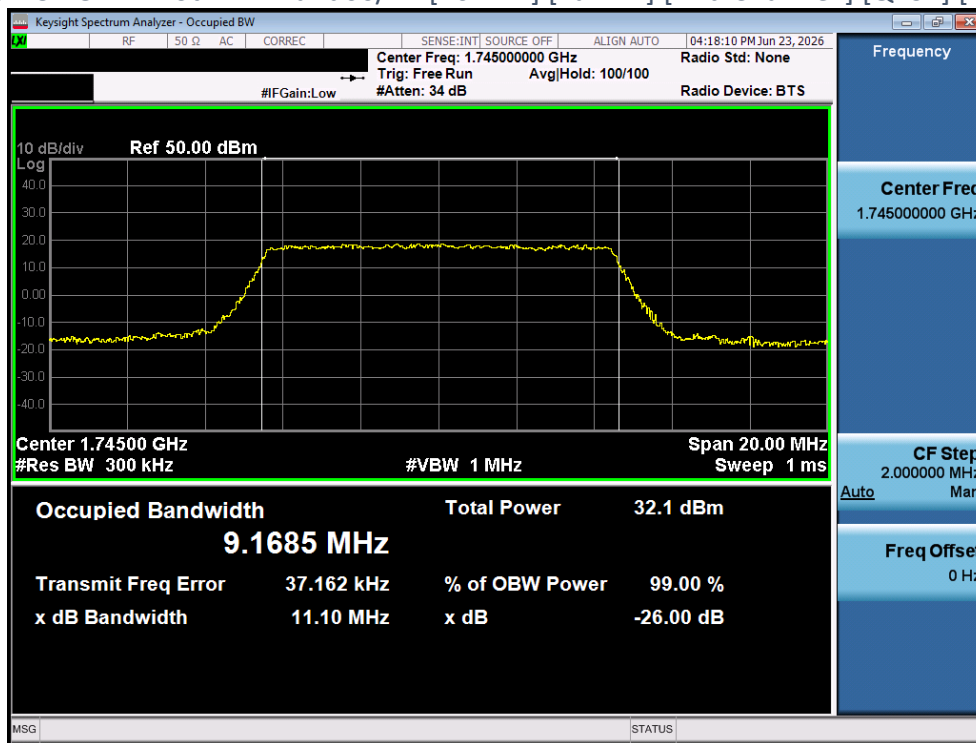
Plot 4-32 OBW Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



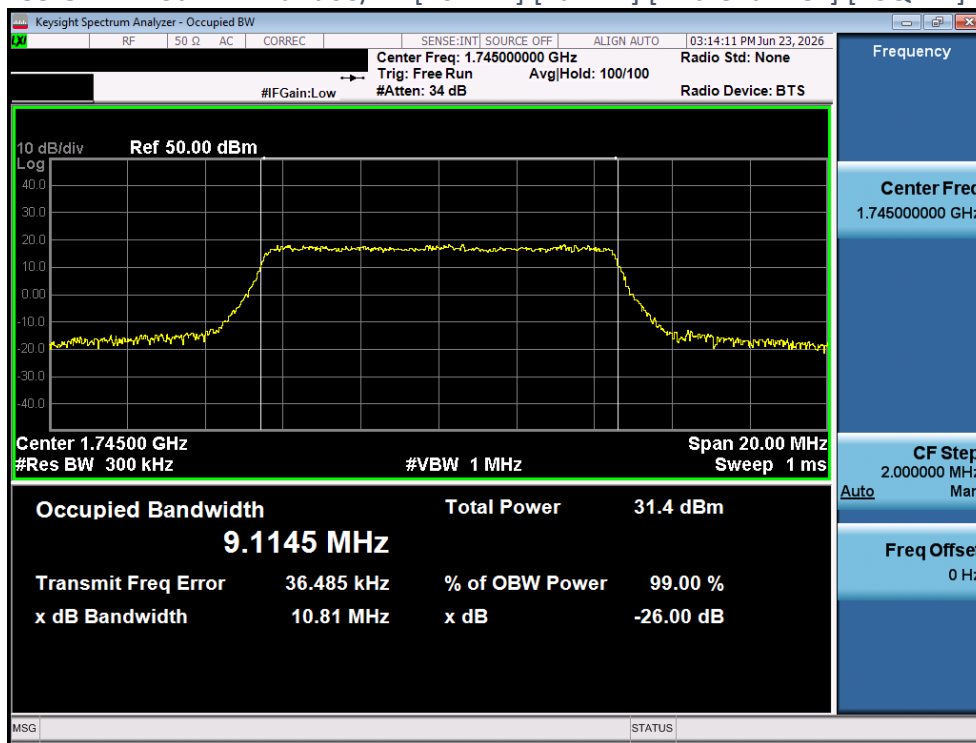
Plot 4-33 OBW Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



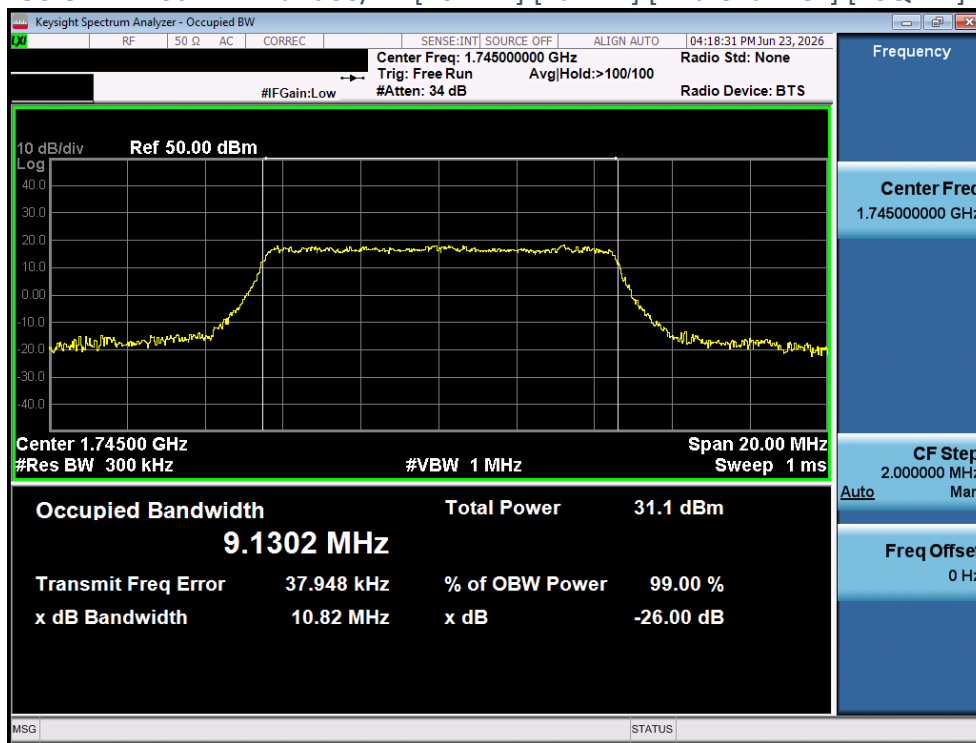
Plot 4-34 OBW Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



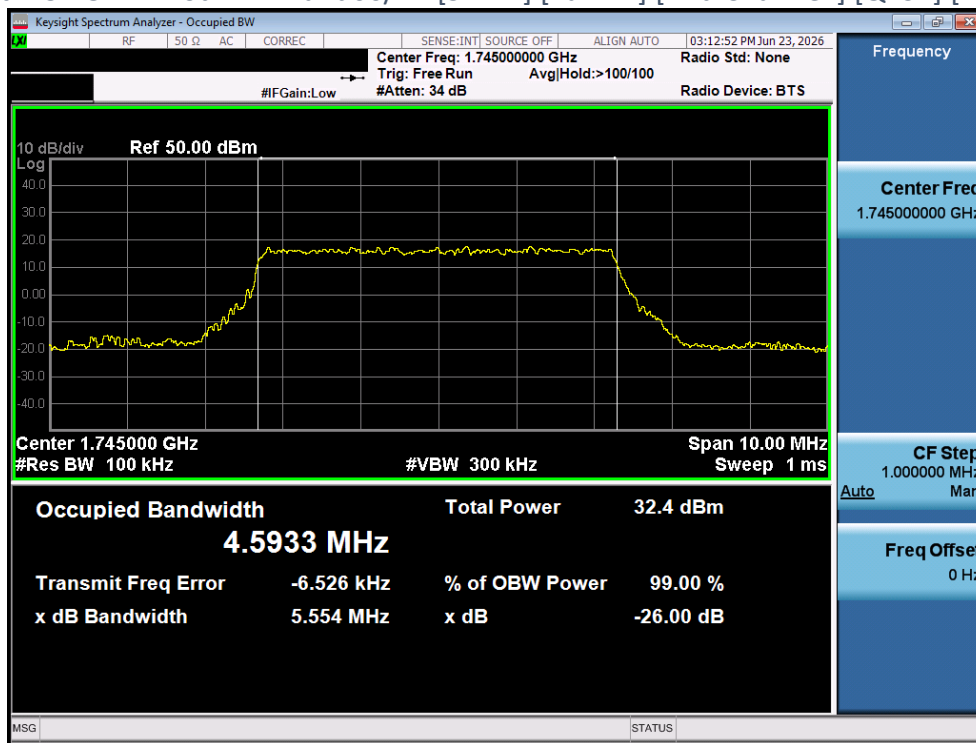
Plot 4-35 OBW Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



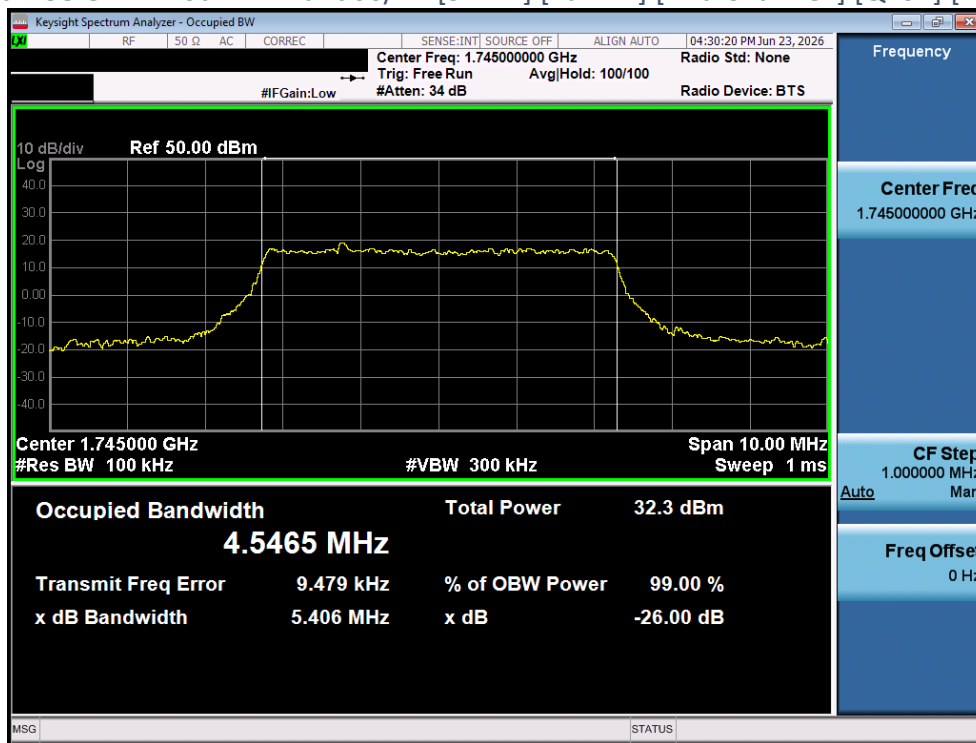
Plot 4-36 OBW Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



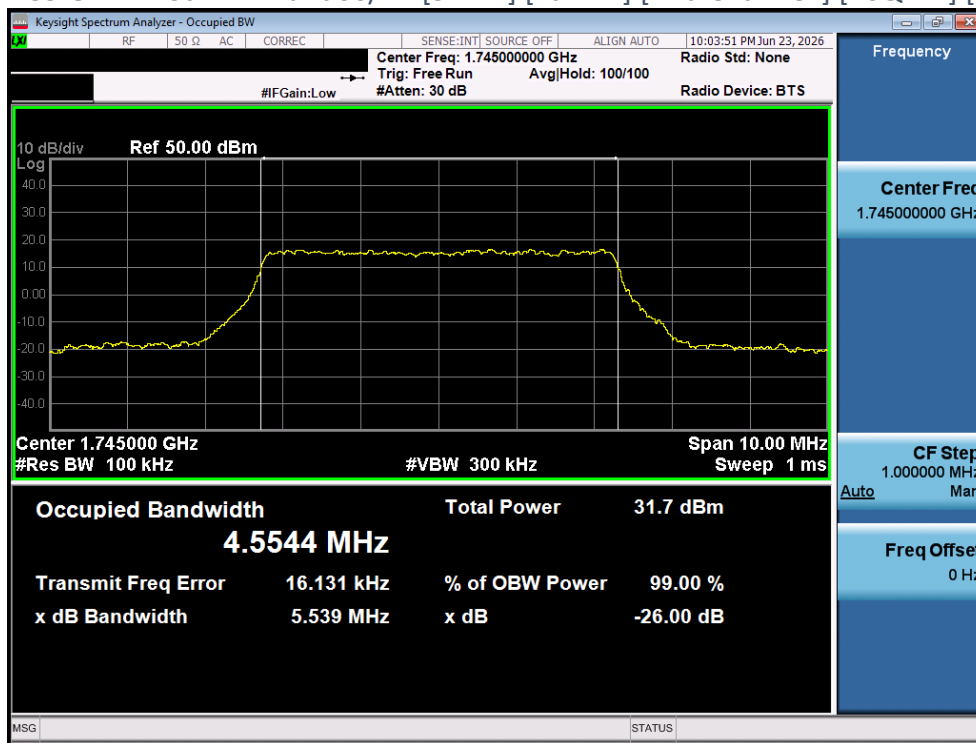
Plot 4-37 OBW Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



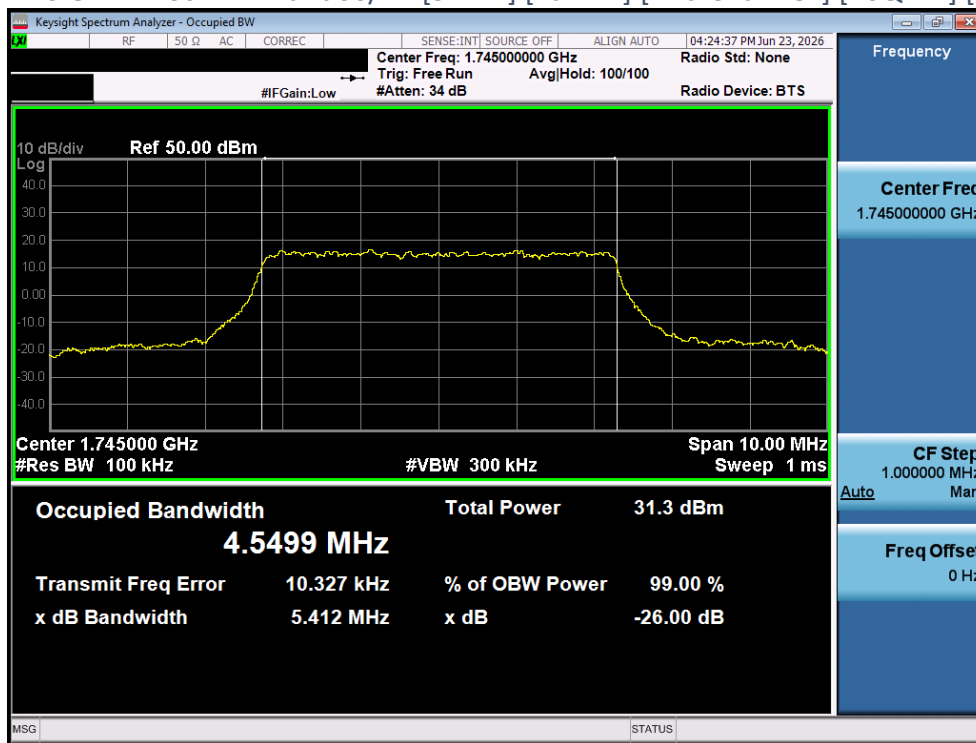
Plot 4-38 OBW Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



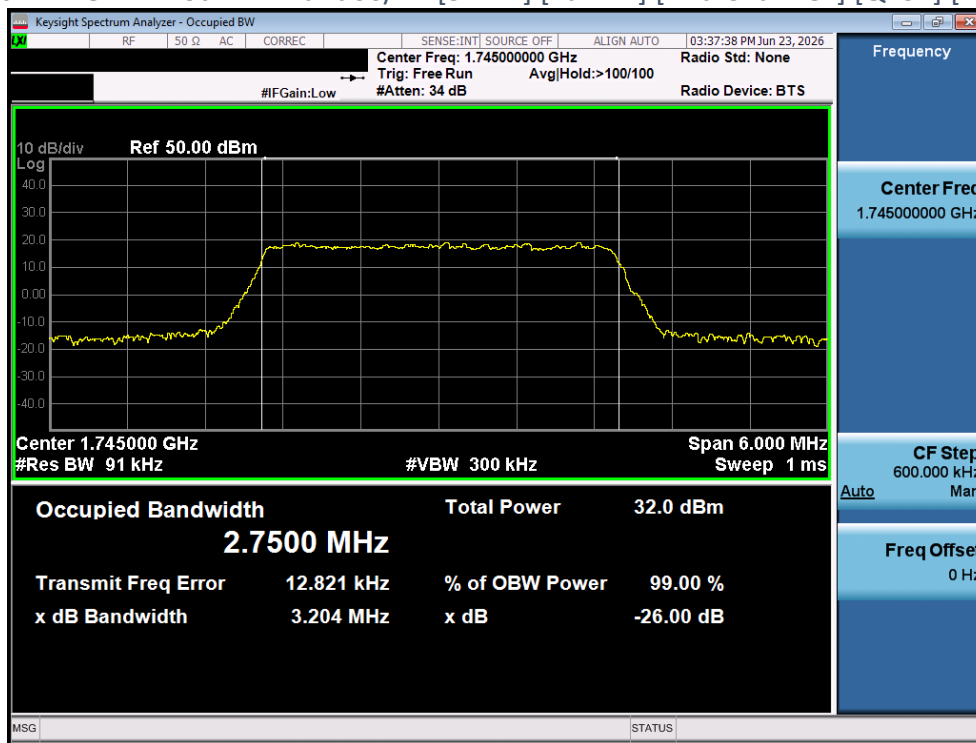
Plot 4-39 OBW Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



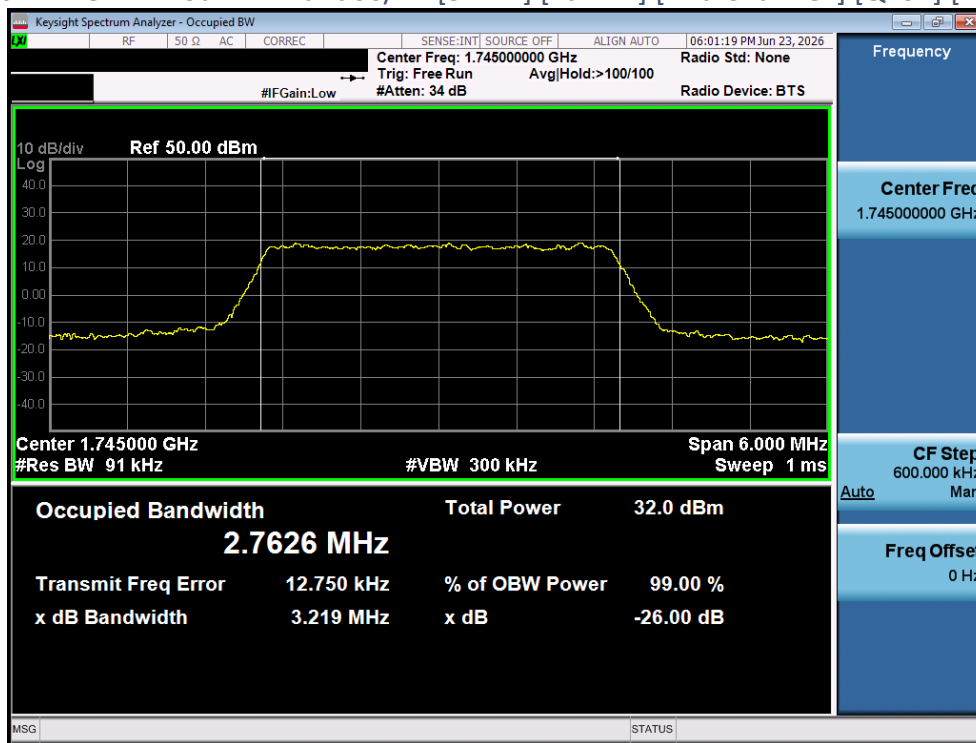
Plot 4-40 OBW Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



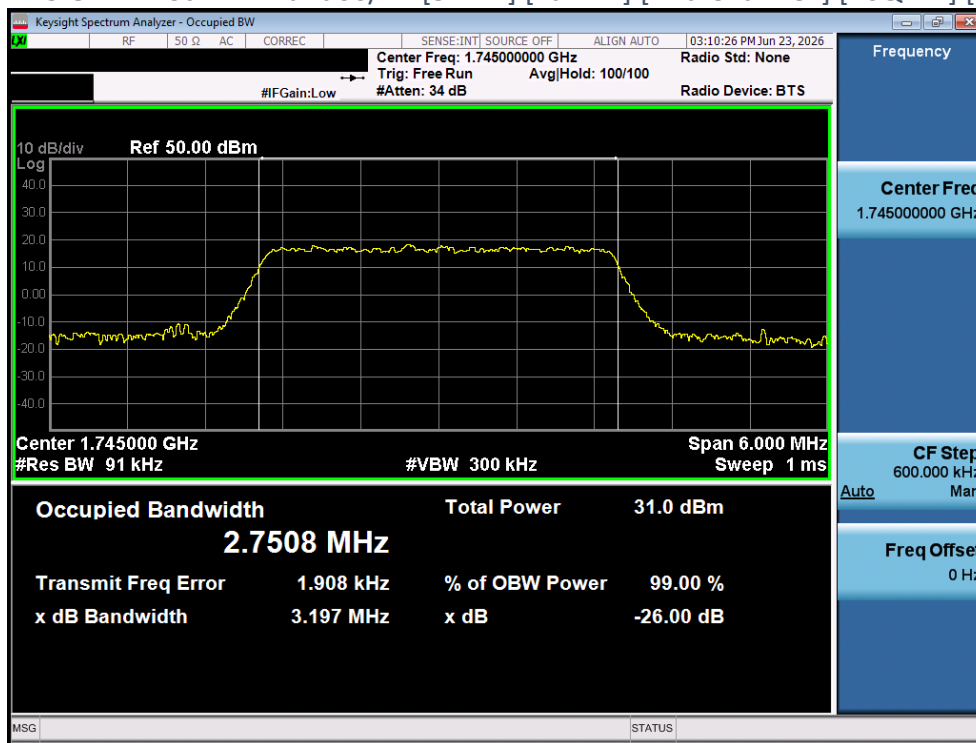
Plot 4-41 OBW Plot - LTE Band66/4 - [3MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



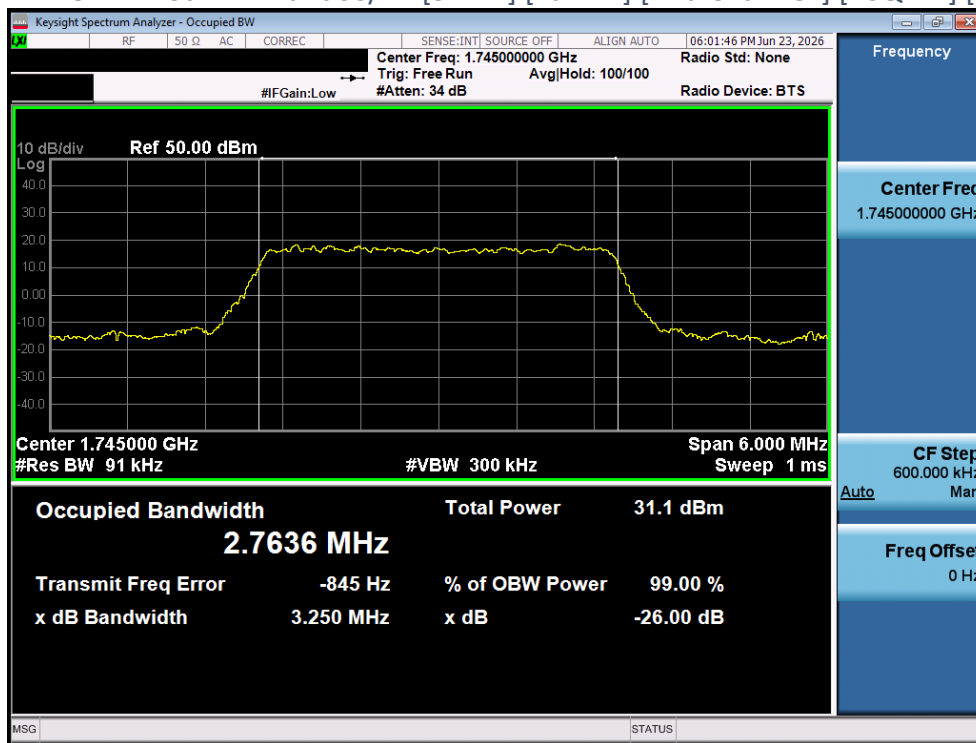
Plot 4-42 OBW Plot - LTE Band66/4 - [3MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



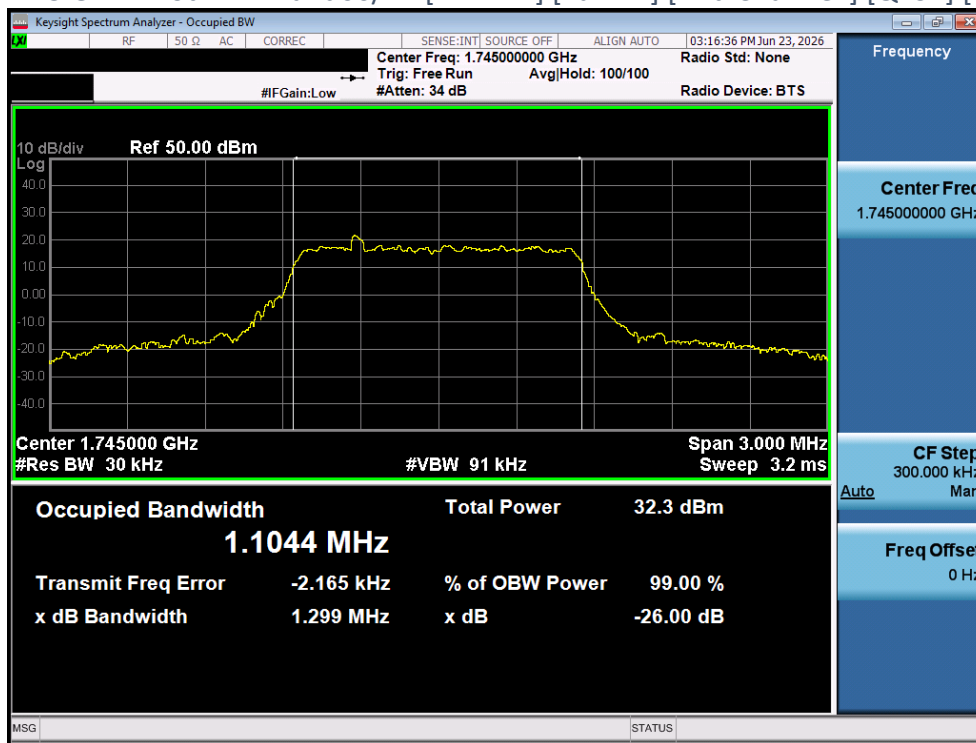
Plot 4-43 OBW Plot - LTE Band66/4 - [3MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



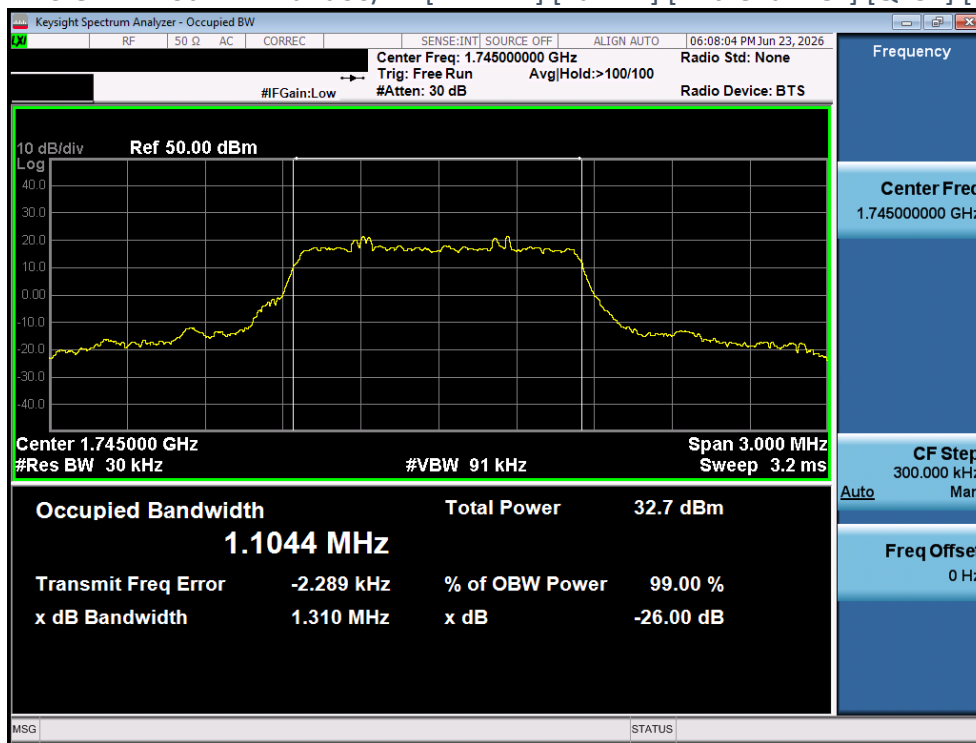
Plot 4-44 OBW Plot - LTE Band66/4 - [3MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



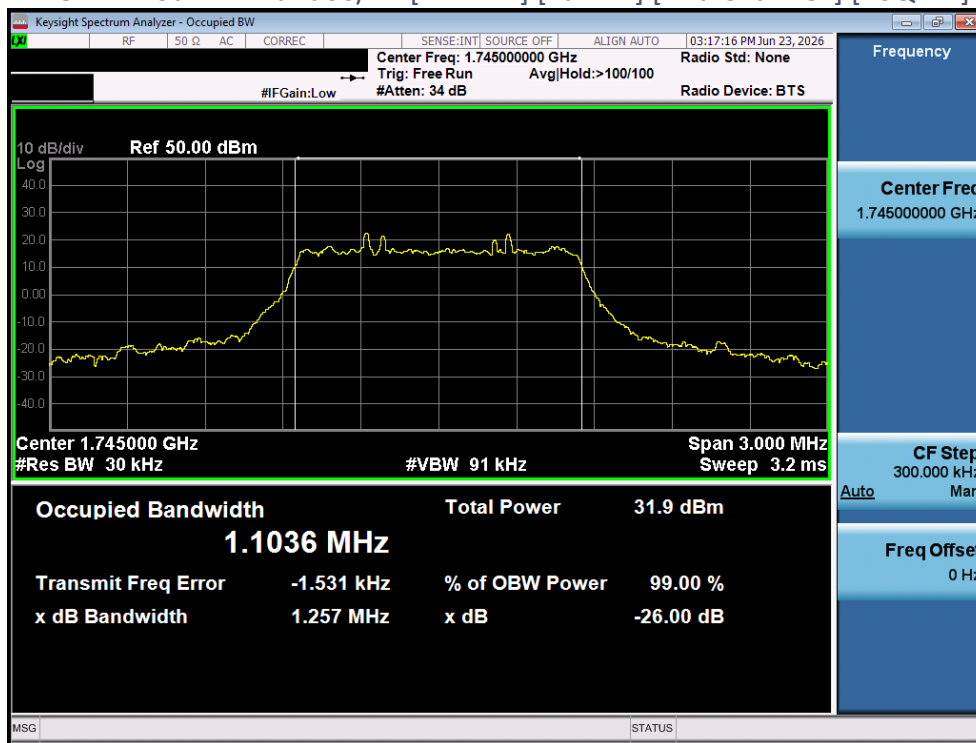
Plot 4-45 OBW Plot - LTE Band66/4 - [1.4MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



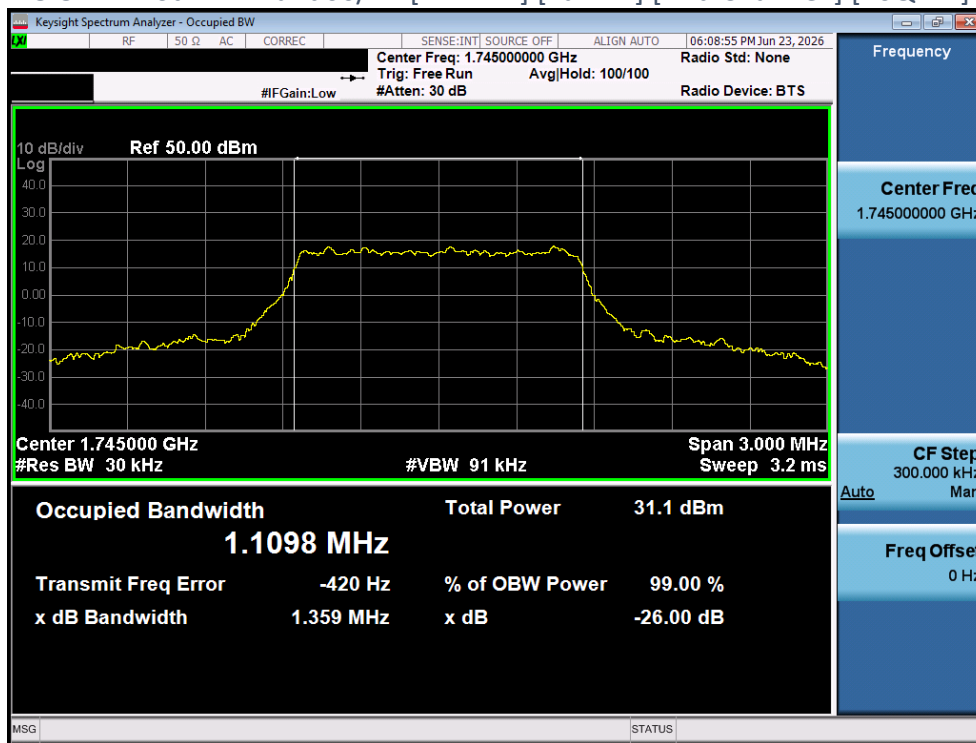
Plot 4-46 OBW Plot - LTE Band66/4 - [1.4MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-47 OBW Plot - LTE Band66/4 - [1.4MHz] [Full RB] [Mid Channel] [16QAM] [Ant 1]



Plot 4-48 OBW Plot - LTE Band66/4 - [1.4MHz] [Full RB] [Mid Channel] [16QAM] [Ant 2]



4.5. Peak to Average Ratio

4.5.1. Regulatory Limit

§Part. 27.50(d)(5)

In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

RSS-130(4.6.1) & RSS-139(5.5)

The peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

4.5.2. Test Method

ANSI C63.26-2015, clause 5.2.3.4

4.5.3. Test Procedure

The CCDF measurement function of the spectrum analyzer was used.

The procedure for this method is follows:

- a) Set center frequency to the nominal EUT channel center frequency.
- b) Set analysis Bandwidth $\geq$ OBW or specified reference bandwidth.
- c) Number of Count = stabilizes the measured CCDF curve.
- d) Set the measurement interval as follows:
For continuous transmissions, set to the greater of $[10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$ or 1 ms.
For 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. Set the measurement interval to a time that is less than or equal to the burst duration.
- e) Record the maximum PAPR level associated with a probability of 0.1%.

Test Note

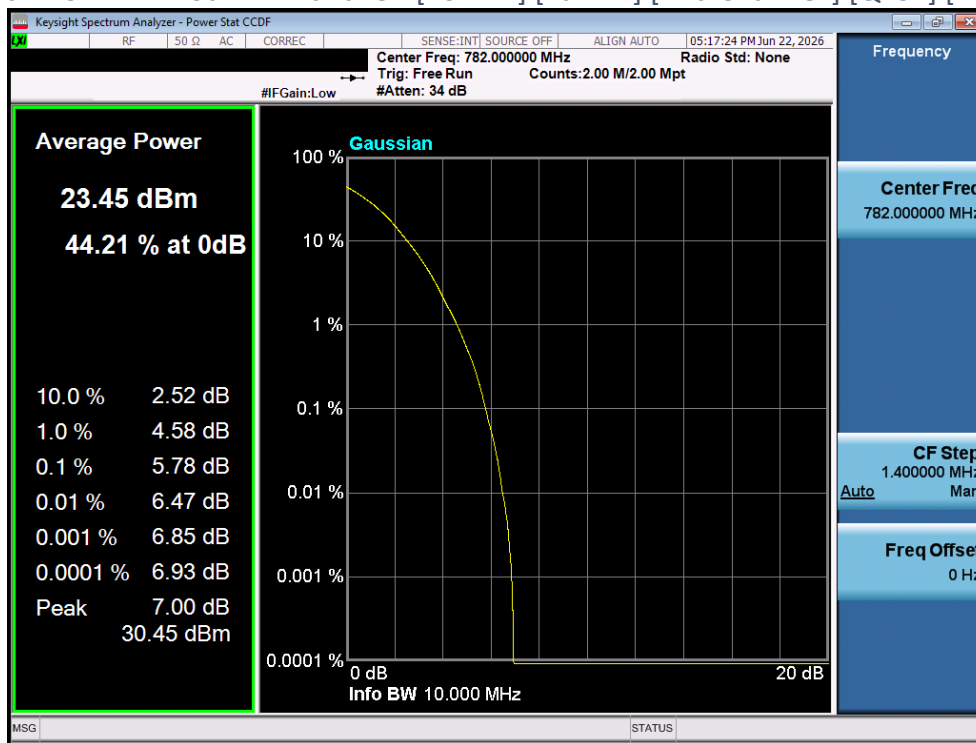
- ✓ All modulation were evaluated, and only the worst-case results are reported herein.

4.5.4. Test Results

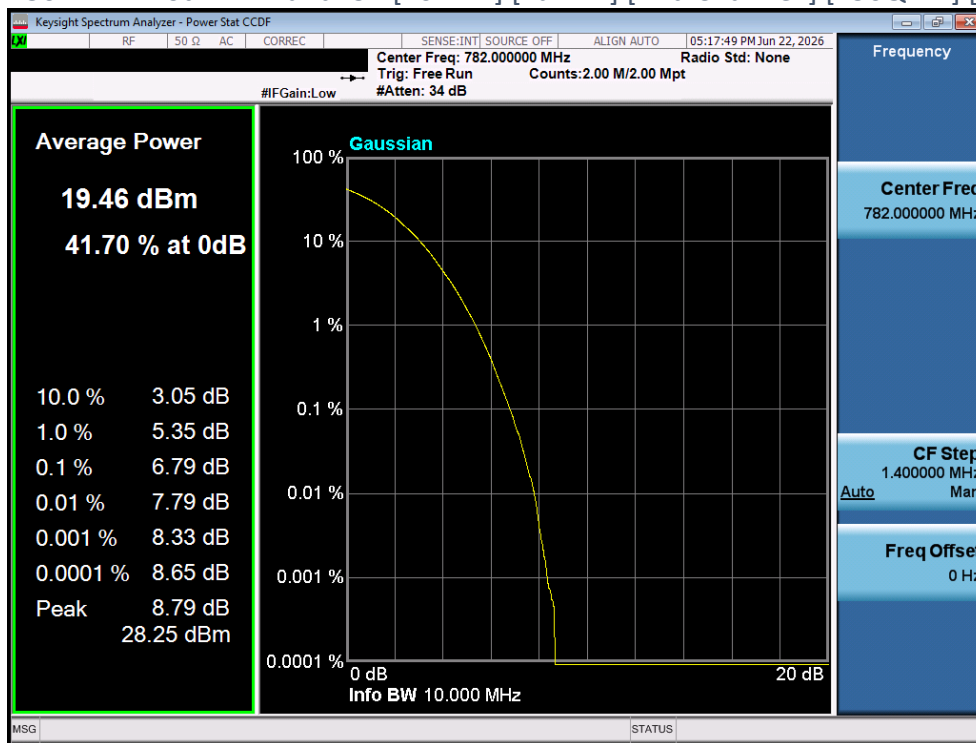
Table 4-4 PAPR Test Data LTE Band 13 Ant1

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	PAR 0.1 % [dB]	Limit [dB]	Margin [dB]
LTE Band 13	10	782	23230	50/0	QPSK	5.78	13	-7.22
					16QAM	6.45	13	-6.55
					64QAM	6.56	13	-6.44
					256QAM	6.79	13	-6.21
	5	782	23230	25/0	QPSK	5.76	13	-7.24
					16QAM	6.36	13	-6.64
					64QAM	6.38	13	-6.62
					256QAM	6.74	13	-6.26

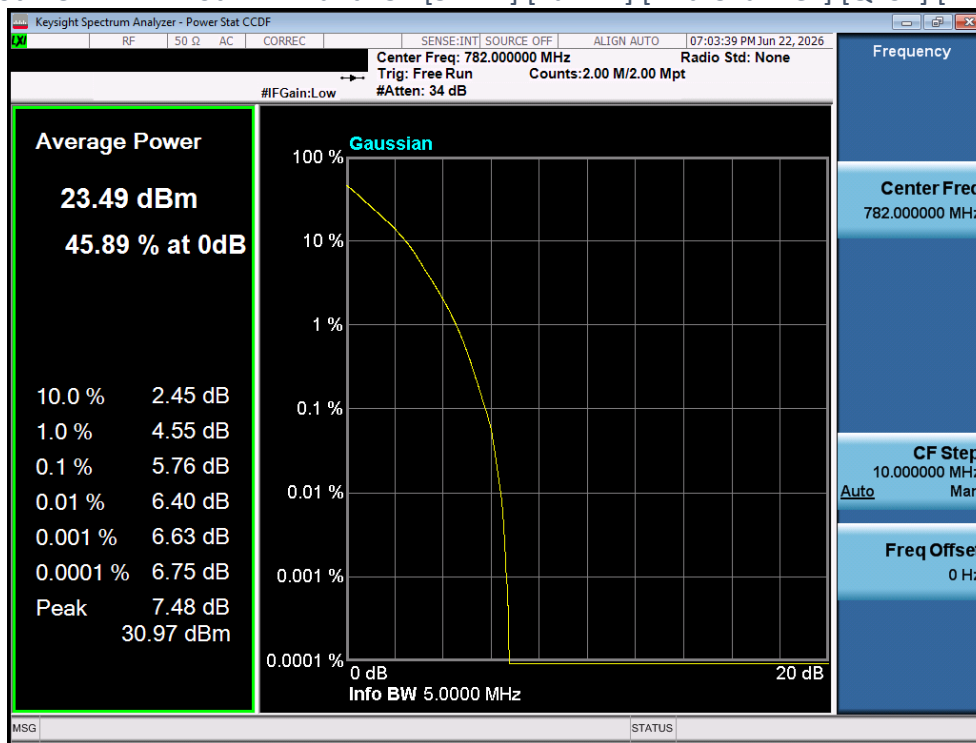
Plot 4-49 PAPR Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-50 PAPR Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



Plot 4-51 PAPR Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-52 PAPR Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]

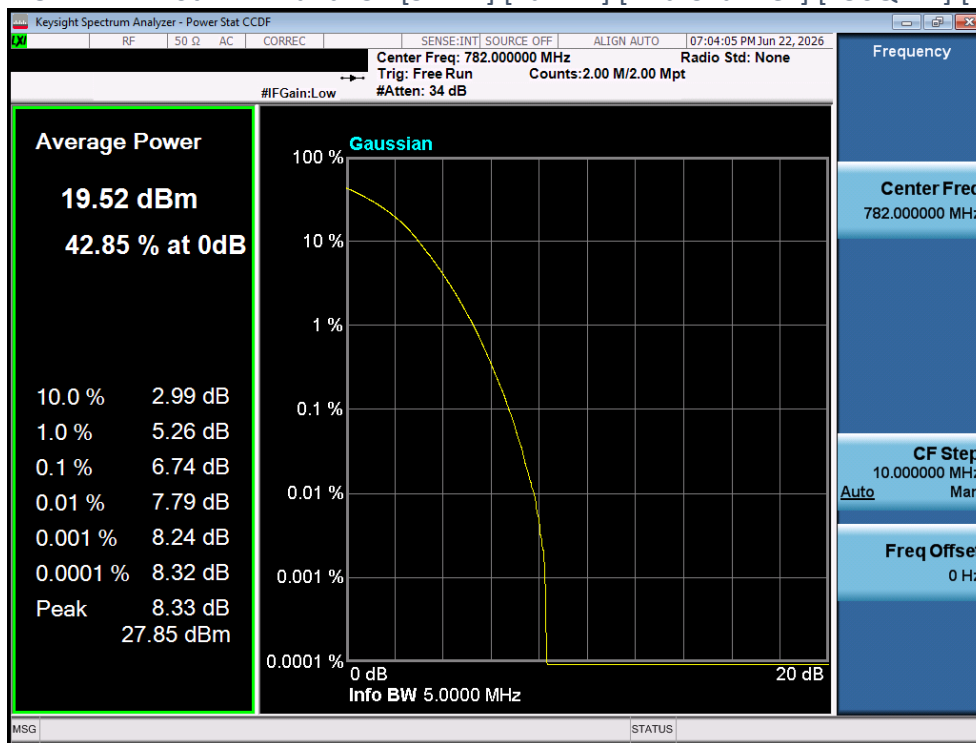
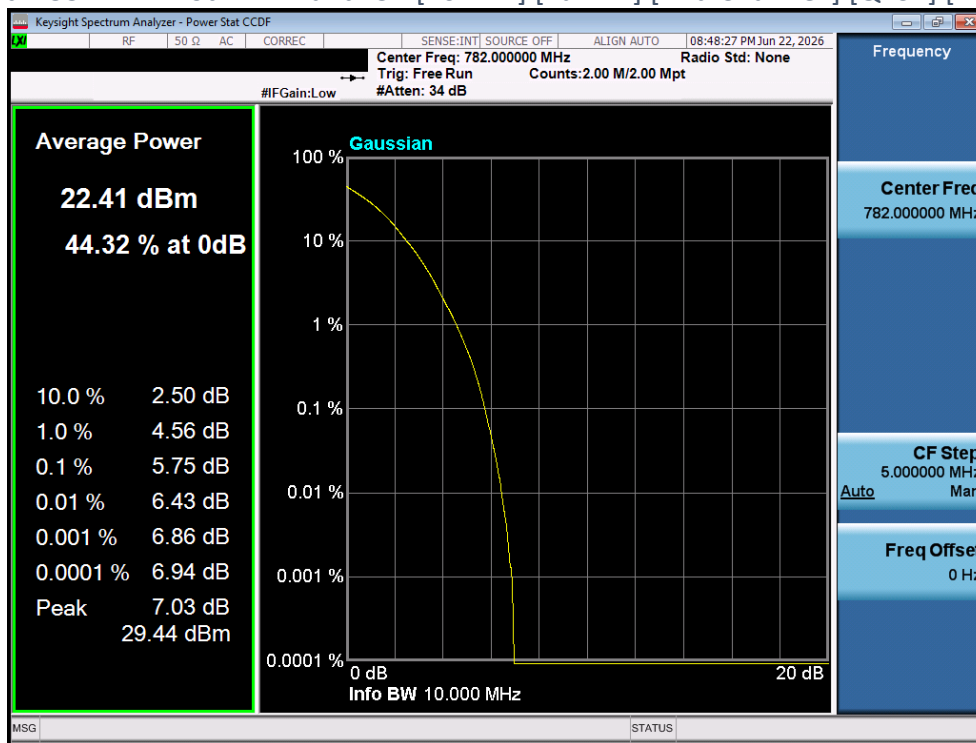


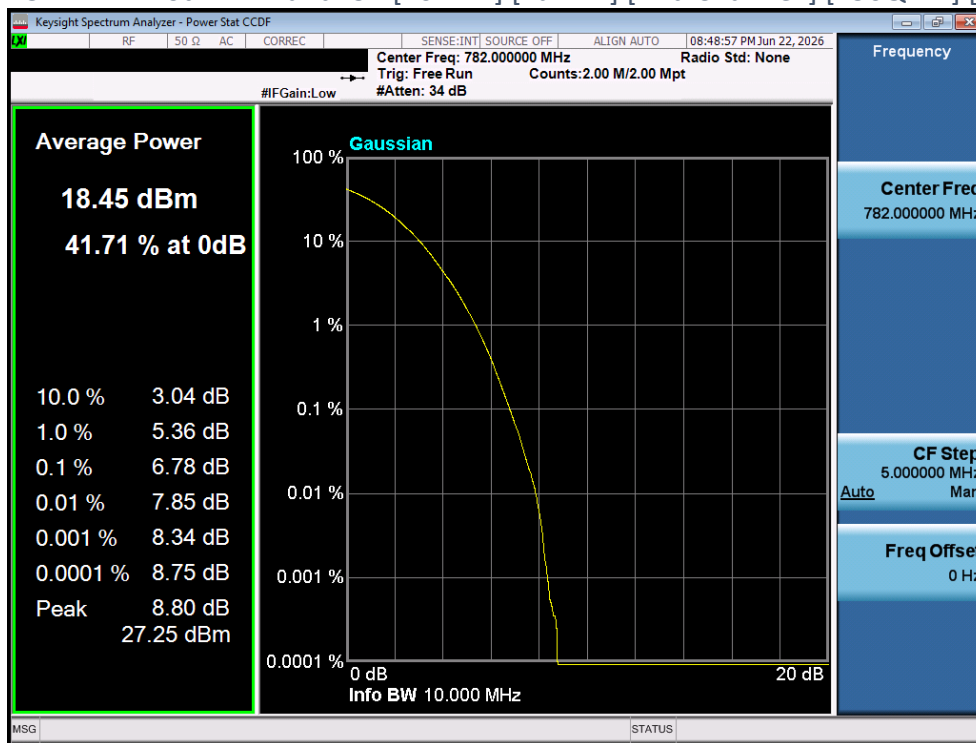
Table 4-5 PAPR Test Data LTE Band 13 Ant2

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	PAR 0.1 % [dB]	Limit [dB]	Margin [dB]
LTE Band 13	10	782	23230	50/0	QPSK	5.75	13	-7.25
					16QAM	6.46	13	-6.54
					64QAM	6.53	13	-6.47
					256QAM	6.78	13	-6.22
	5	782	23230	25/0	QPSK	5.72	13	-7.28
					16QAM	6.31	13	-6.69
					64QAM	6.36	13	-6.64
					256QAM	6.78	13	-6.22

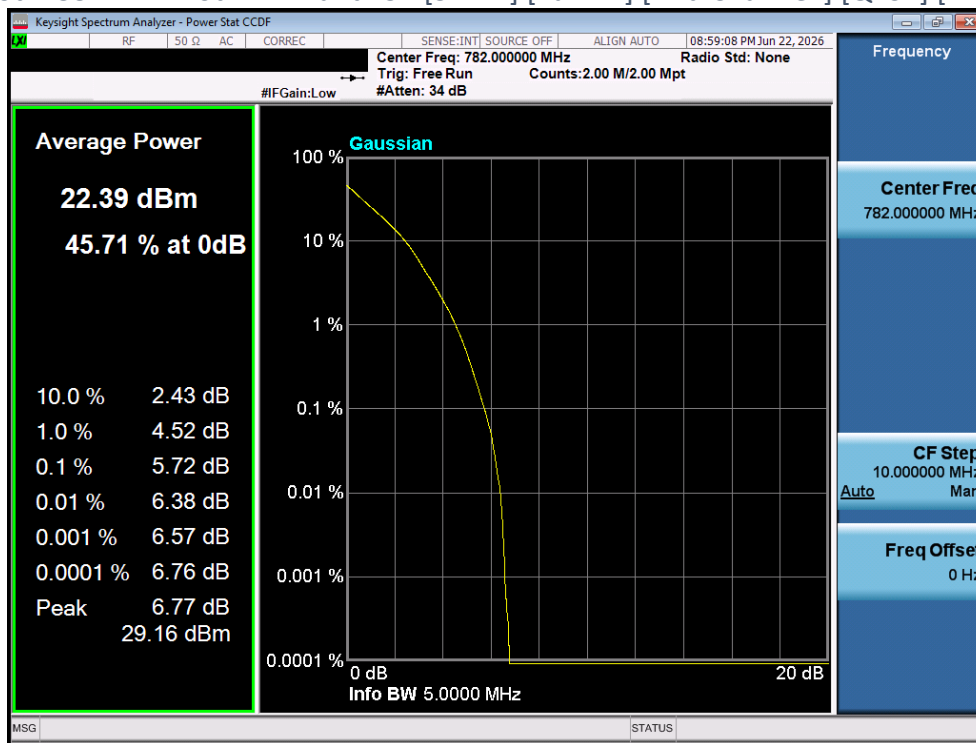
Plot 4-53 PAPR Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-54 PAPR Plot - LTE Band13 - [10MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]



Plot 4-55 PAPR Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-56 PAPR Plot - LTE Band13 - [5MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]

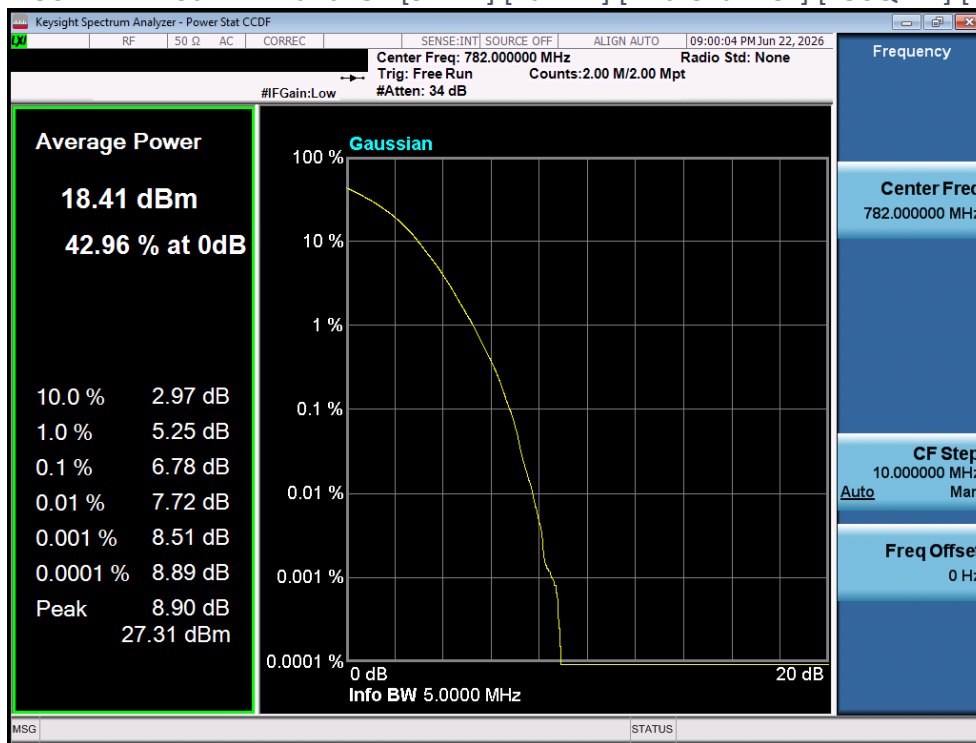
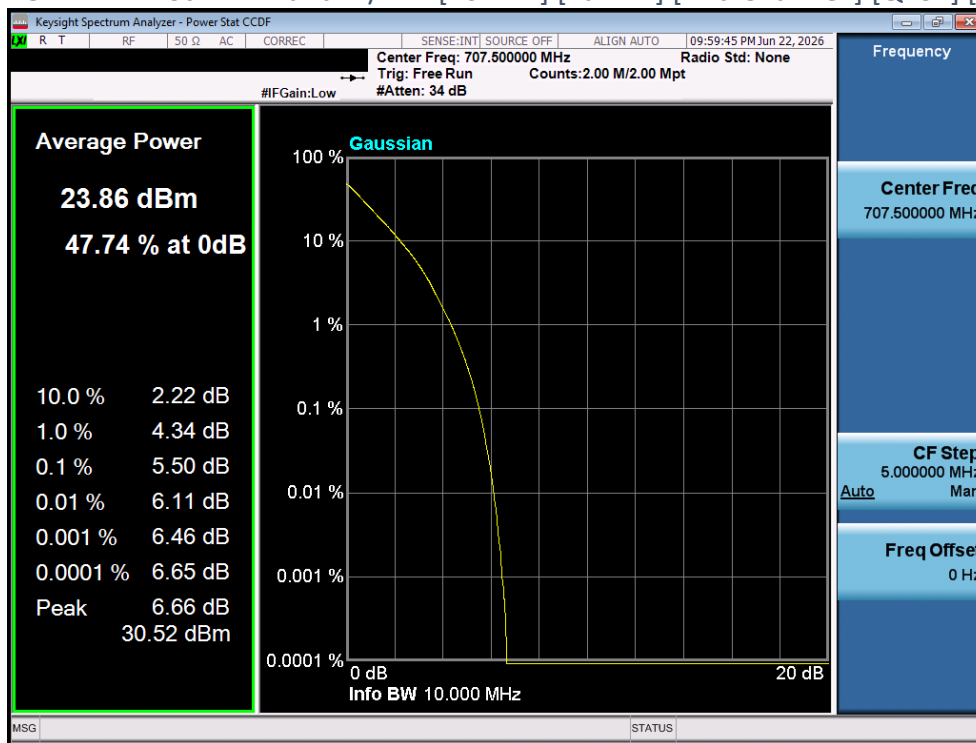


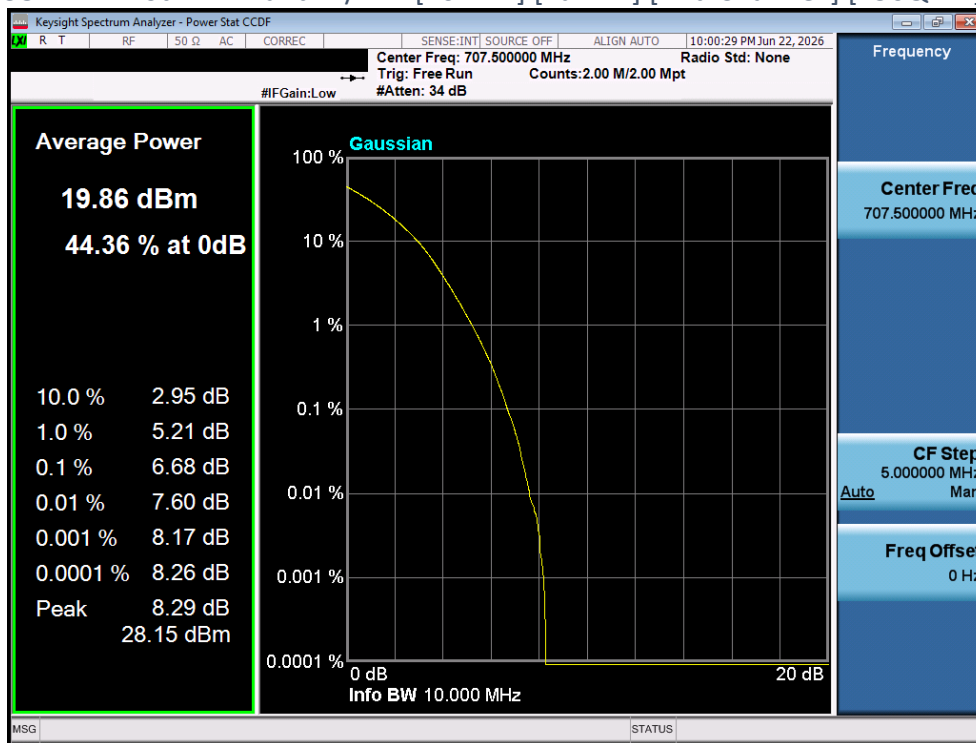
Table 4-6 PAPR Test Data LTE Band 12/17 Ant1

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	PAR 0.1 % [dB]	Limit [dB]	Margin [dB]
LTE Band 12/17	10	707.5	23095	50/0	QPSK	5.50	13	-7.50
					16QAM	6.19	13	-6.81
					64QAM	6.39	13	-6.61
					256QAM	6.68	13	-6.32
	5	707.5	23095	25/0	QPSK	5.27	13	-7.73
					16QAM	5.95	13	-7.05
					64QAM	6.01	13	-6.99
					256QAM	6.48	13	-6.52
	3	707.5	23095	15/0	QPSK	5.14	13	-7.86
					16QAM	5.91	13	-7.09
					64QAM	5.88	13	-7.12
					256QAM	6.36	13	-6.64
	1.4	707.5	23095	6/0	QPSK	5.21	13	-7.79
					16QAM	5.94	13	-7.06
					64QAM	6.01	13	-6.99
					256QAM	6.50	13	-6.50

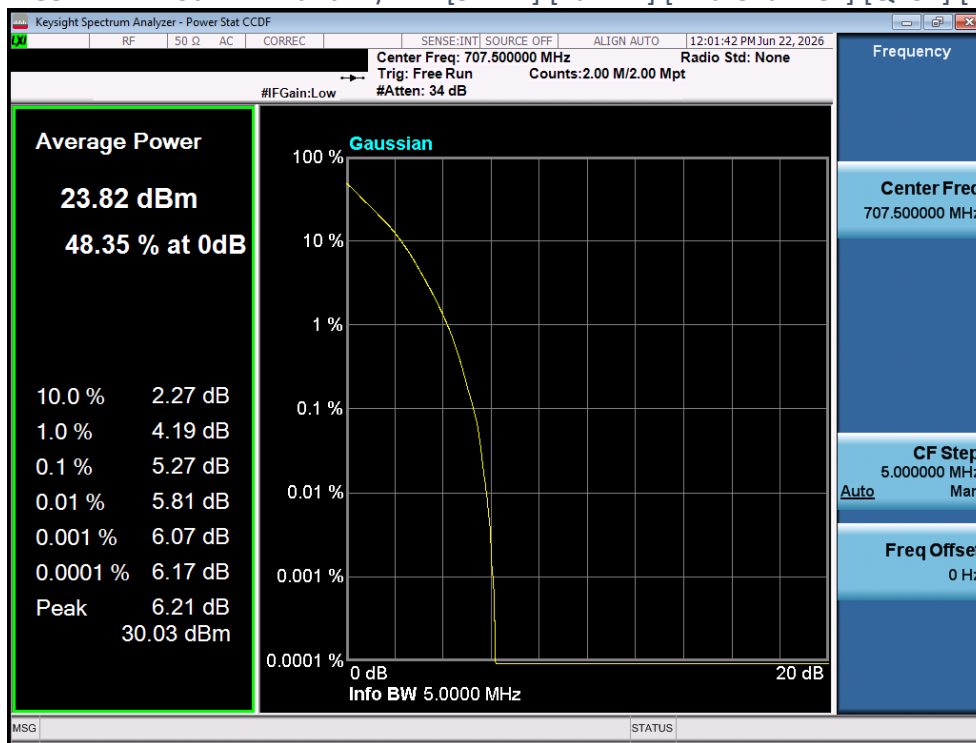
Plot 4-57 PAPR Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



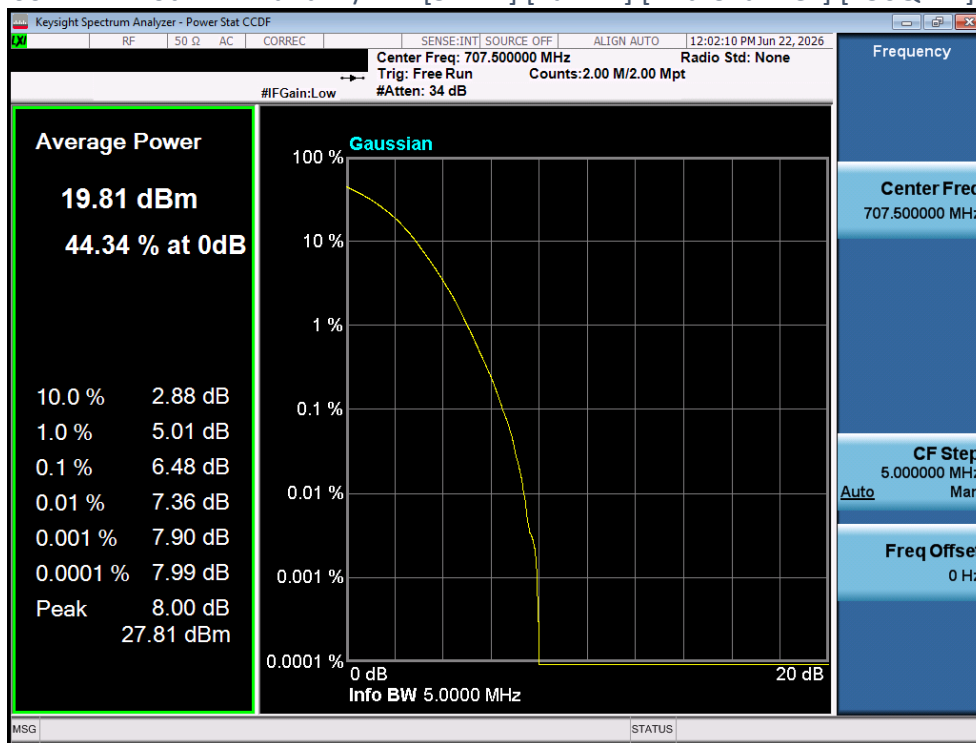
Plot 4-58 PAPR Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



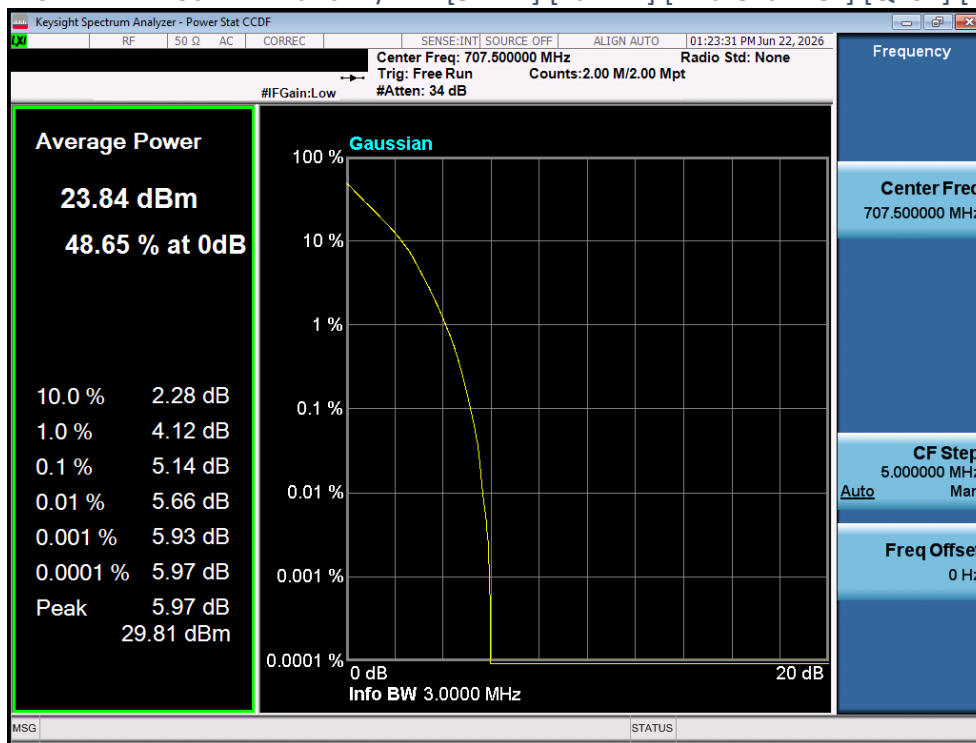
Plot 4-59 PAPR Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



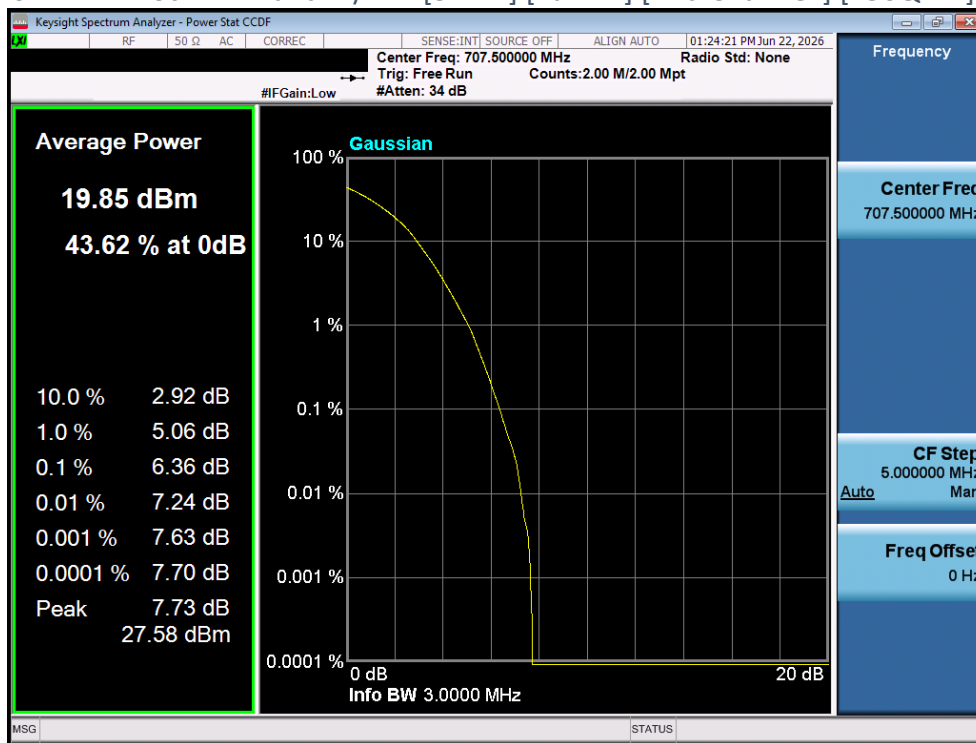
Plot 4-60 PAPR Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



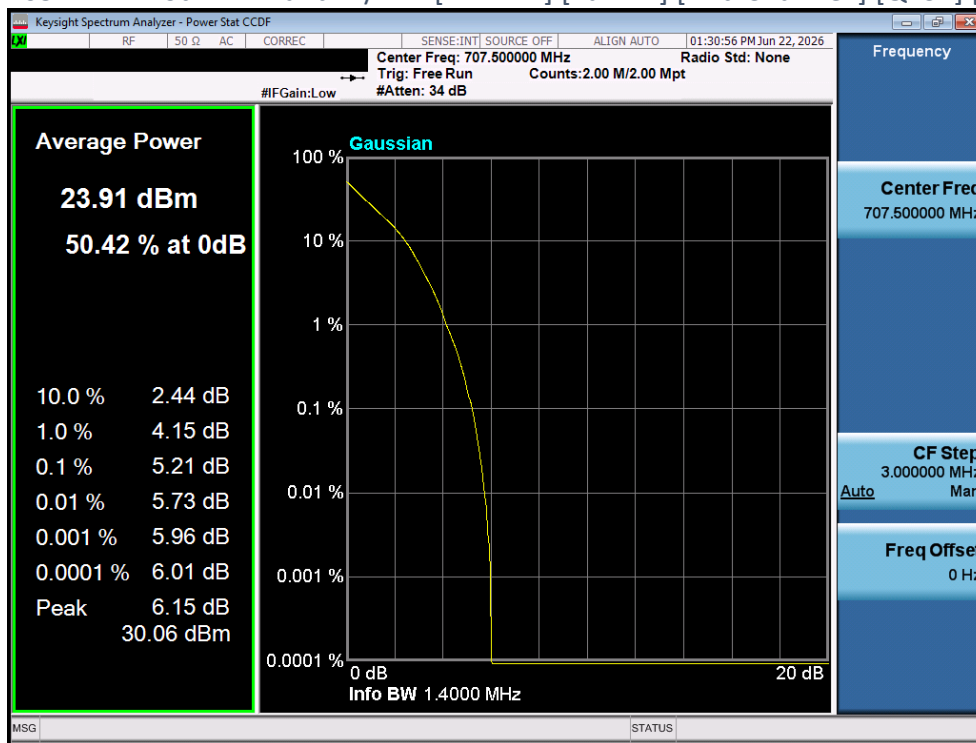
Plot 4-61 PAPR Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-62 PAPR Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



Plot 4-63 PAPR Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-64 PAPR Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]

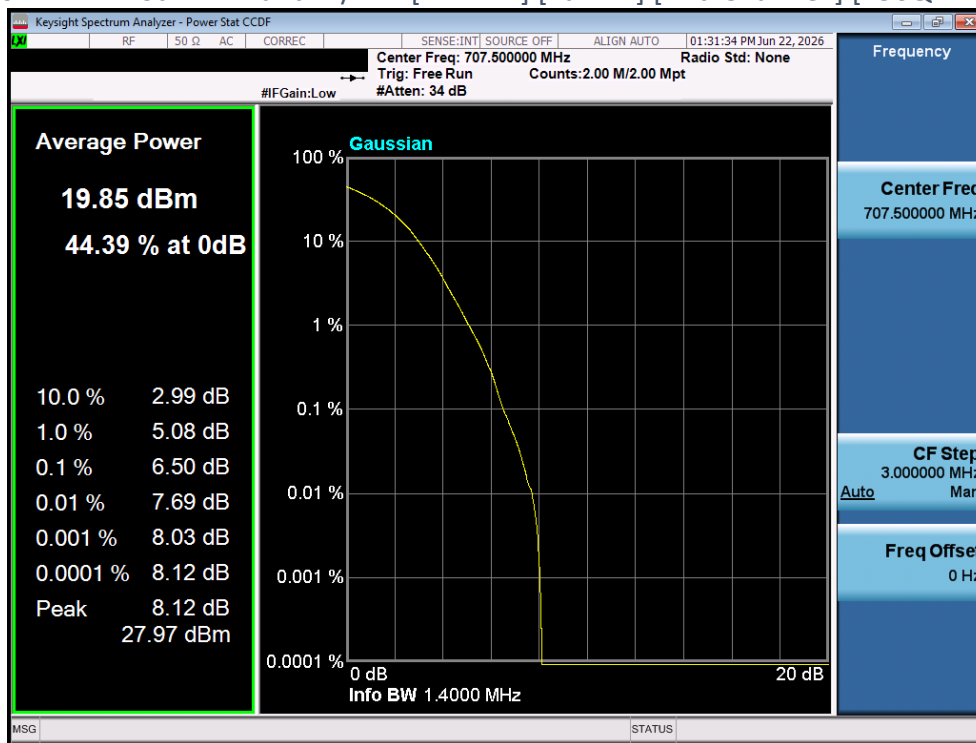
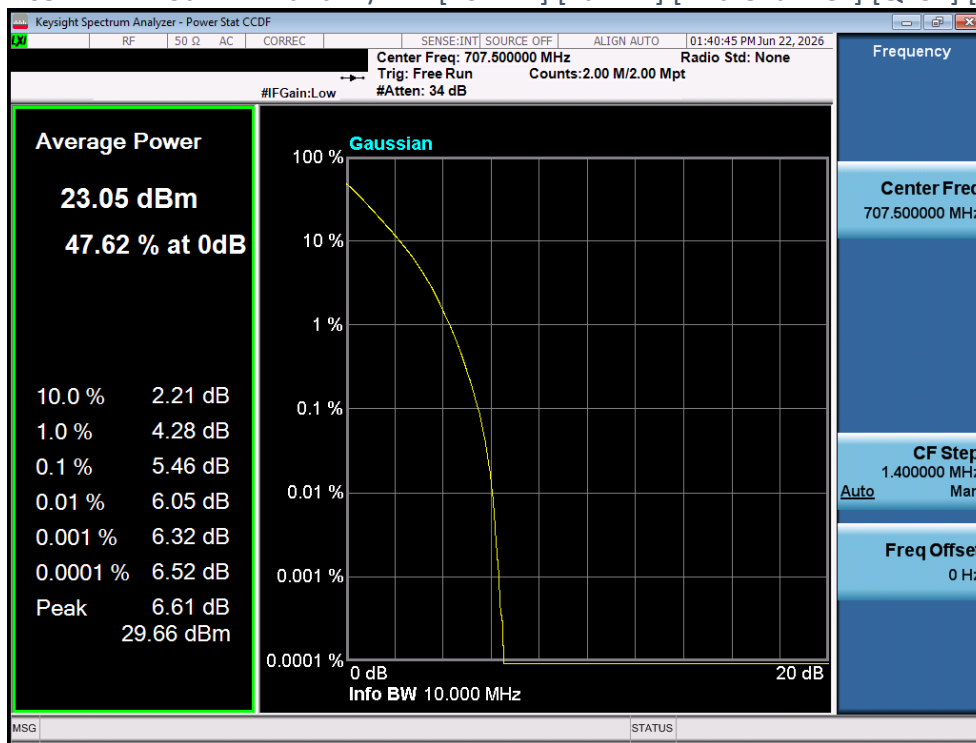


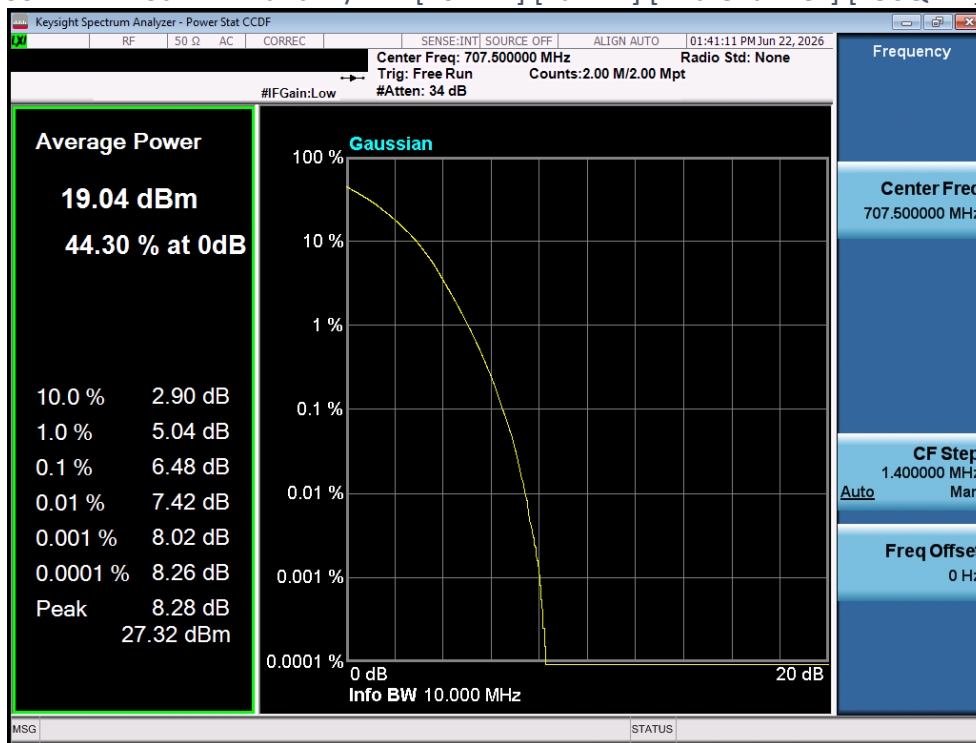
Table 4-7 PAPR Test Data LTE Band 12/17 Ant2

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	PAR 0.1 % [dB]	Limit [dB]	Margin [dB]
LTE Band 12/17	10	707.5	23095	50/0	QPSK	5.46	13	-7.54
					16QAM	6.15	13	-6.85
					64QAM	6.10	13	-6.90
					256QAM	6.48	13	-6.52
	5	707.5	23095	25/0	QPSK	5.22	13	-7.78
					16QAM	6.04	13	-6.96
					64QAM	6.11	13	-6.89
					256QAM	6.44	13	-6.56
	3	707.5	23095	15/0	QPSK	5.14	13	-7.86
					16QAM	6.16	13	-6.84
					64QAM	6.09	13	-6.91
					256QAM	6.48	13	-6.52
	1.4	707.5	23095	6/0	QPSK	5.12	13	-7.88
					16QAM	5.99	13	-7.01
					64QAM	6.46	13	-6.54
					256QAM	6.36	13	-6.64

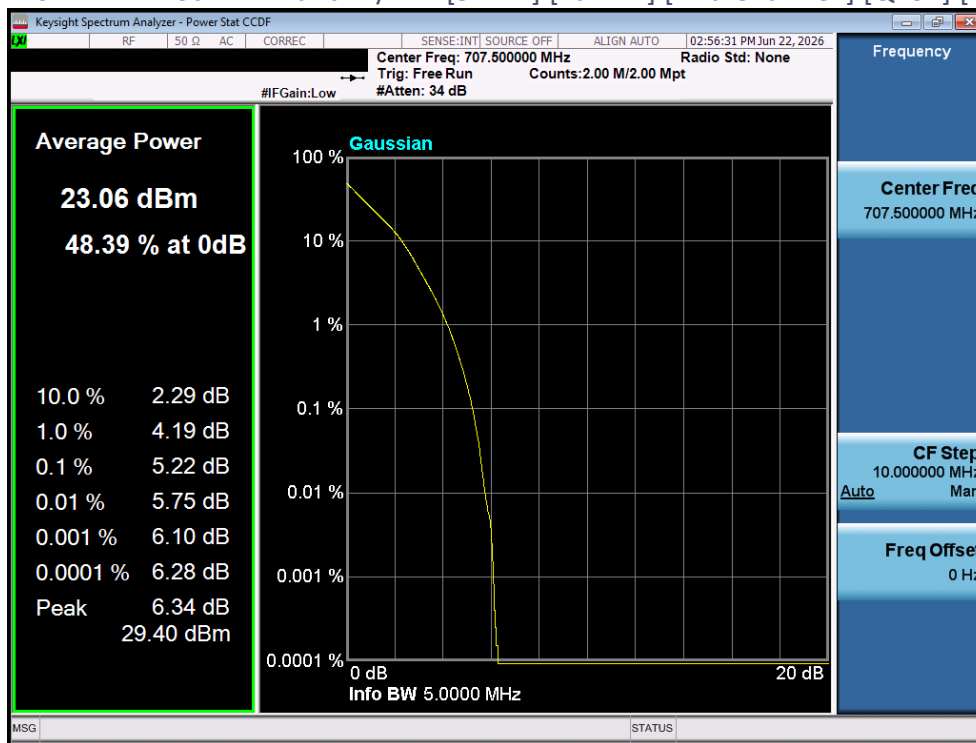
Plot 4-65 PAPR Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



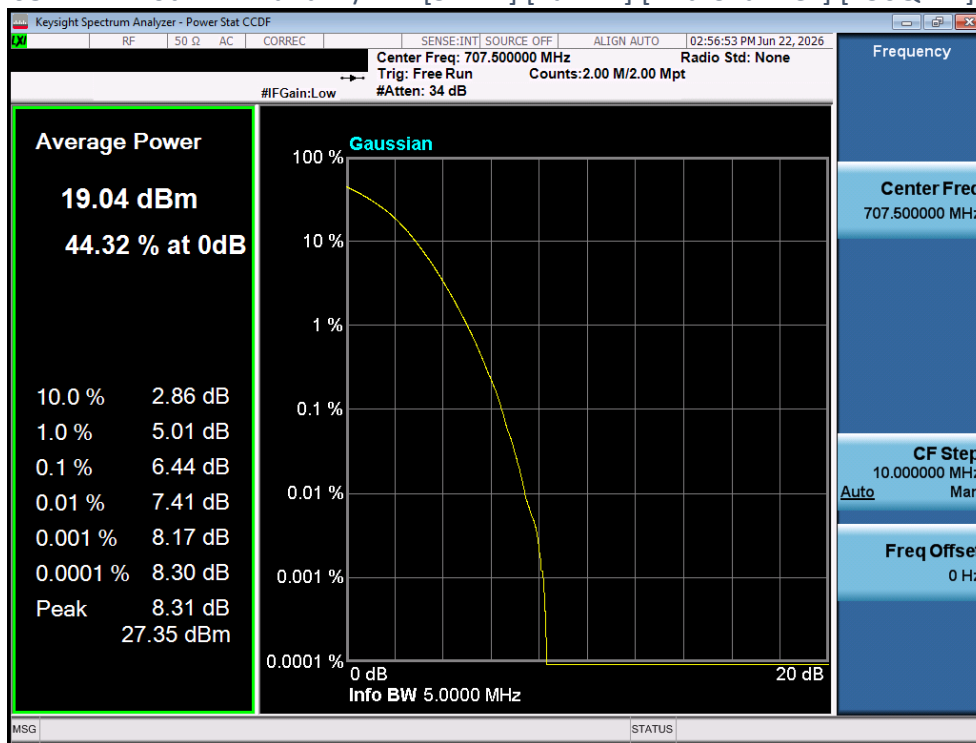
Plot 4-66 PAPR Plot - LTE Band12/17 - [10MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]



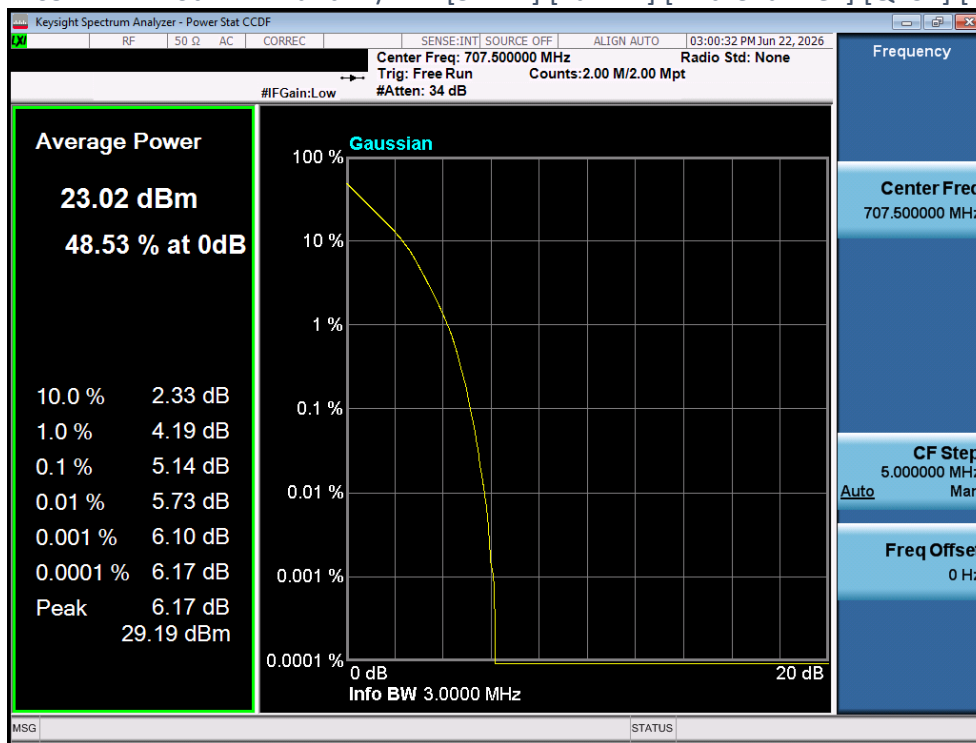
Plot 4-67 PAPR Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



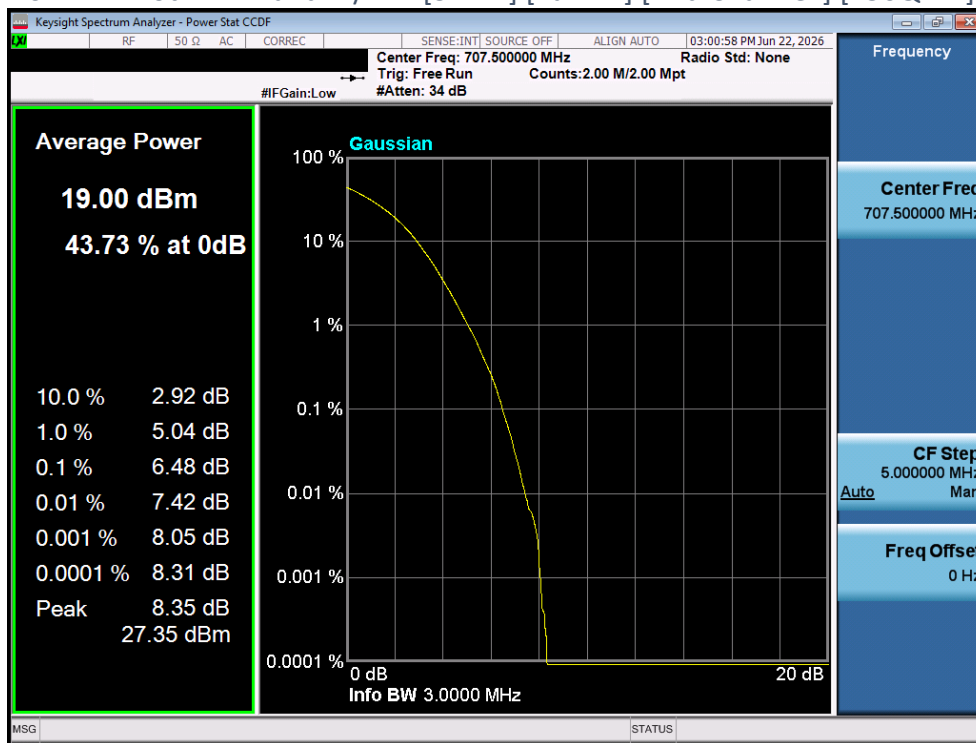
Plot 4-68 PAPR Plot - LTE Band12/17 - [5MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]



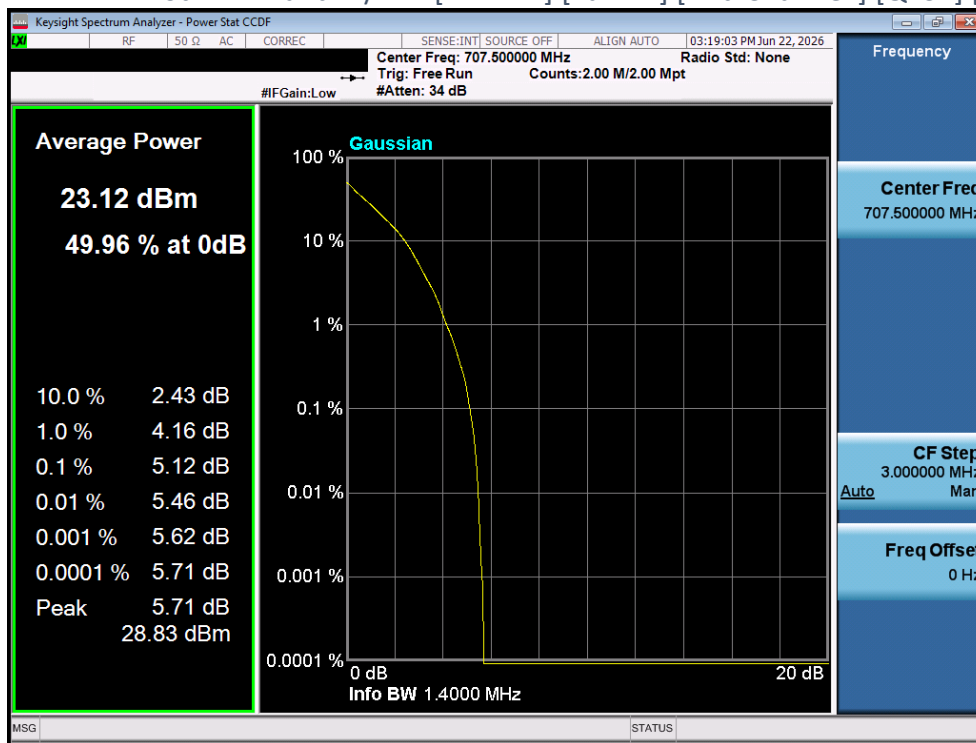
Plot 4-69 PAPR Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-70 PAPR Plot - LTE Band12/17 - [3MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]



Plot 4-71 PAPR Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-72 PAPR Plot - LTE Band12/17 - [1.4MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]

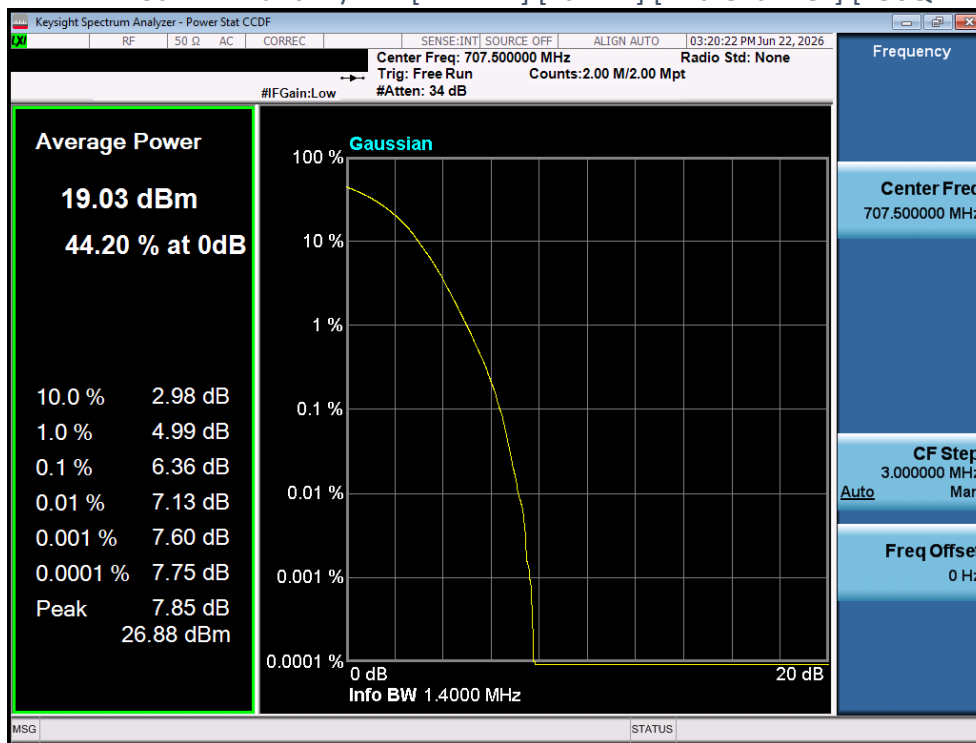
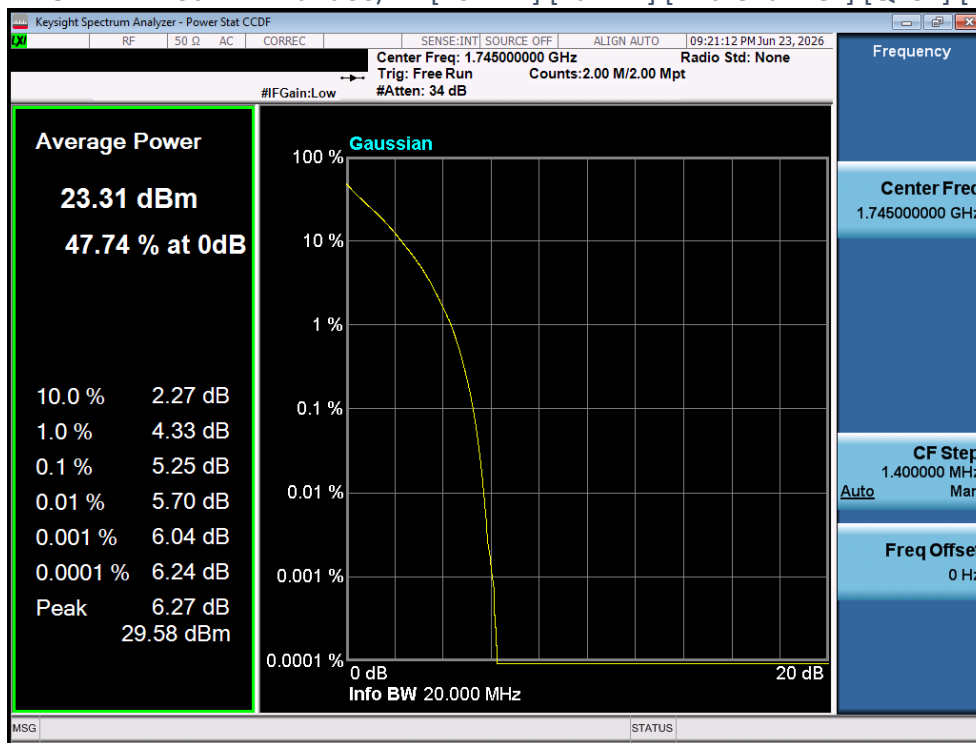


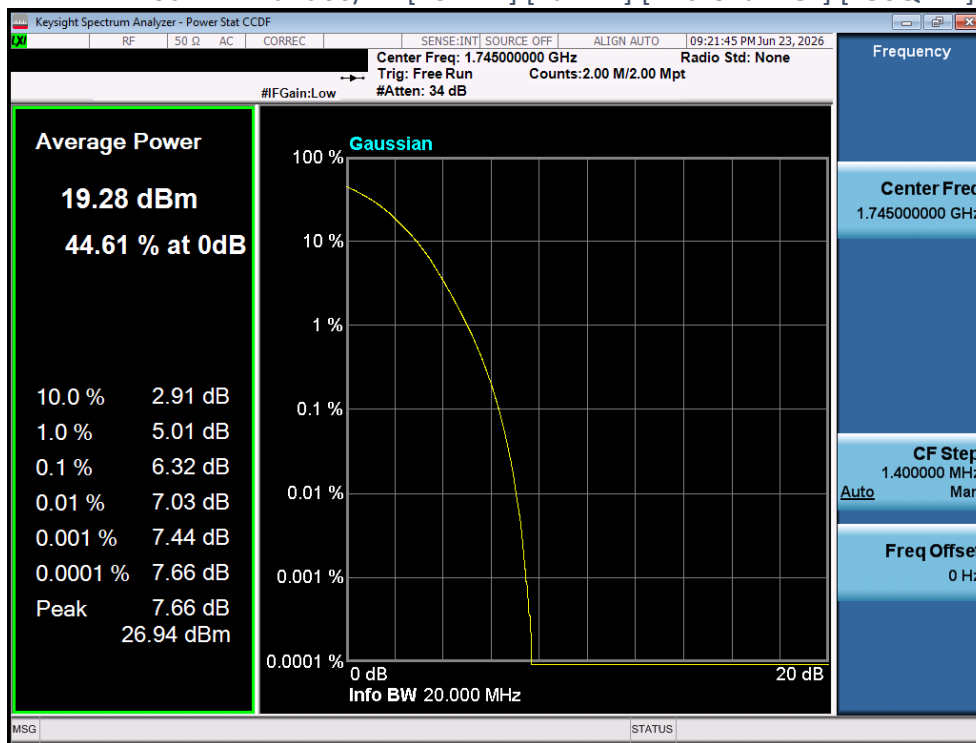
Table 4-8 PAPR Test Data LTE Band 66/4 Ant1

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	PAR 0.1 % [dB]	Limit [dB]	Margin [dB]
LTE Band 66/4	20	1745	132322	100/0	QPSK	5.25	13	-7.75
					16QAM	6.03	13	-6.97
					64QAM	6.34	13	-6.66
					256QAM	6.32	13	-6.68
	15	1745	132322	75/0	QPSK	5.28	13	-7.72
					16QAM	6.43	13	-6.57
					64QAM	6.26	13	-6.74
					256QAM	6.28	13	-6.72
	10	1745	132322	50/0	QPSK	5.28	13	-7.72
					16QAM	6.02	13	-6.98
					64QAM	6.22	13	-6.78
					256QAM	6.47	13	-6.53
	5	1745	132322	25/0	QPSK	5.11	13	-7.89
					16QAM	5.83	13	-7.17
					64QAM	6.06	13	-6.94
					256QAM	6.39	13	-6.61
	3	1745	132322	15/0	QPSK	5.02	13	-7.98
					16QAM	5.87	13	-7.13
					64QAM	6.07	13	-6.93
					256QAM	6.41	13	-6.59
	1.4	1745	132322	6/0	QPSK	4.95	13	-8.05
					16QAM	5.94	13	-7.06
					64QAM	6.41	13	-6.59
					256QAM	6.47	13	-6.53

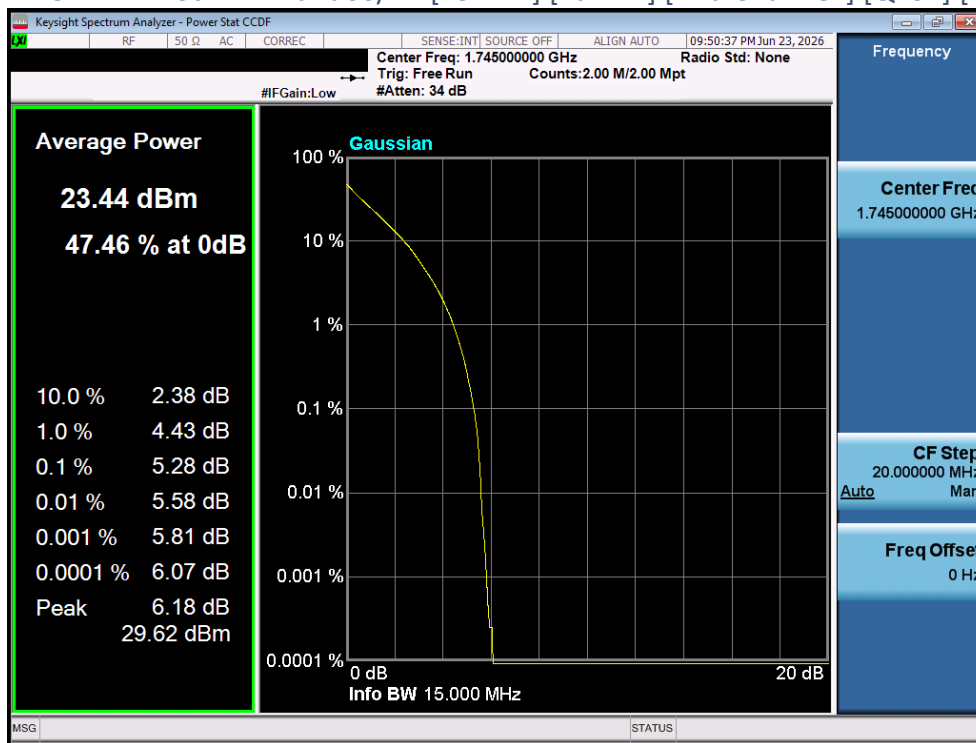
Plot 4-73 PAPR Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



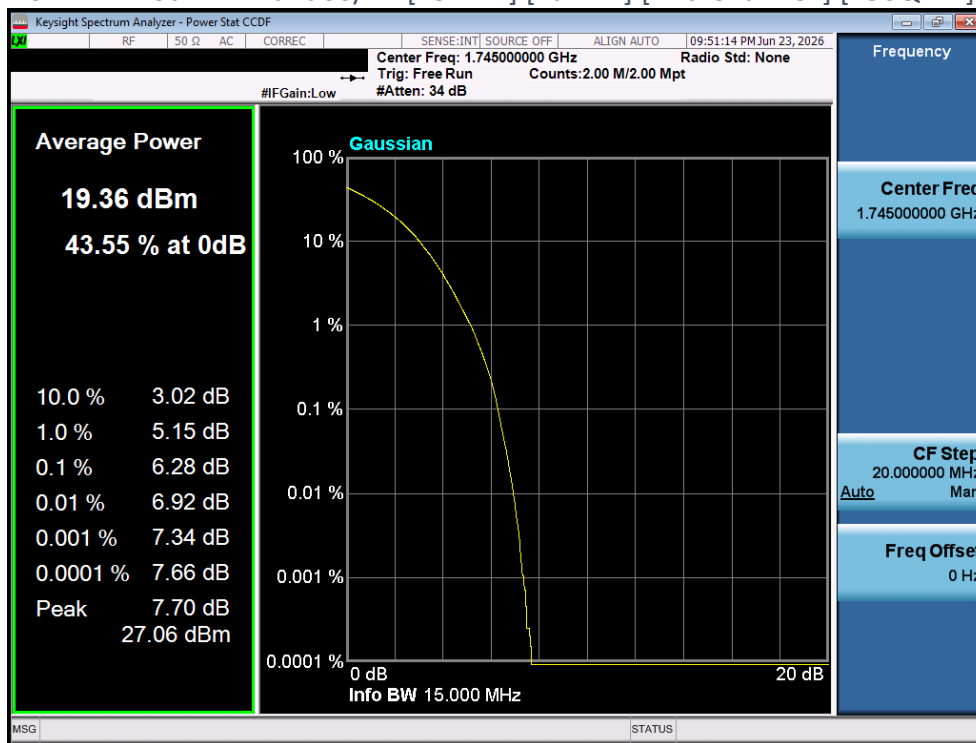
Plot 4-74 PAPR Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



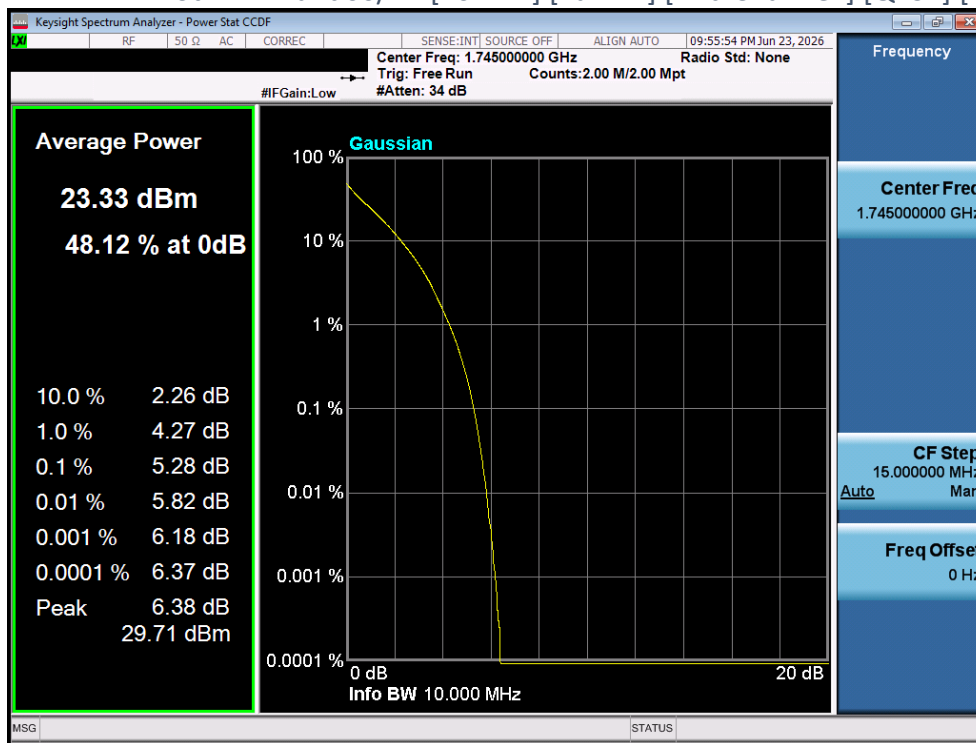
Plot 4-75 PAPR Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



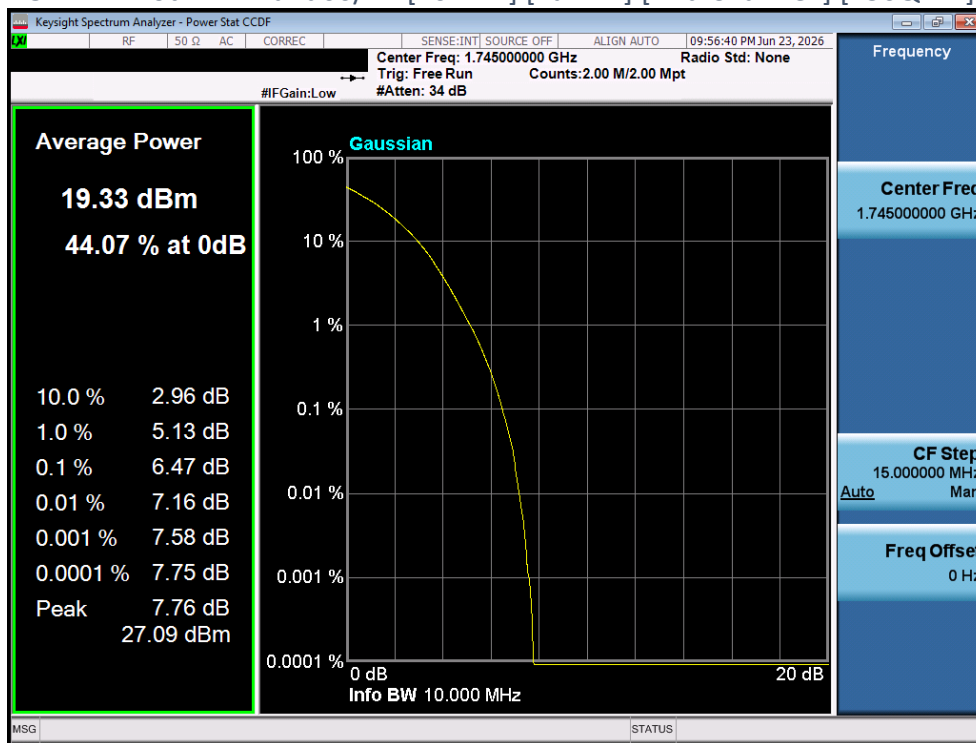
Plot 4-76 PAPR Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



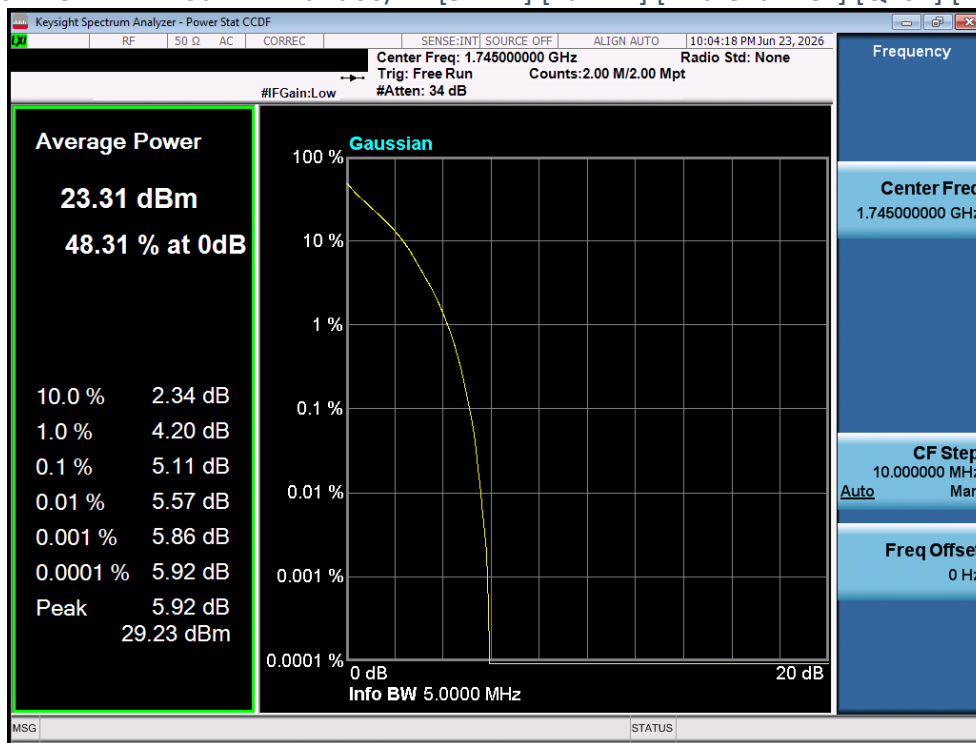
Plot 4-77 PAPR Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



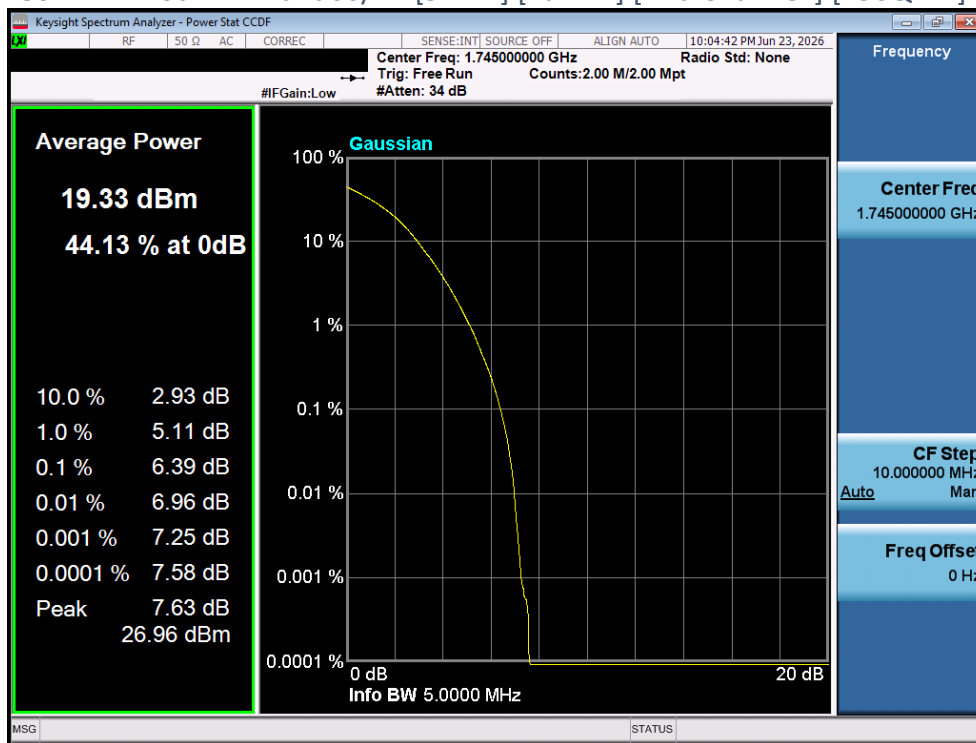
Plot 4-78 PAPR Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



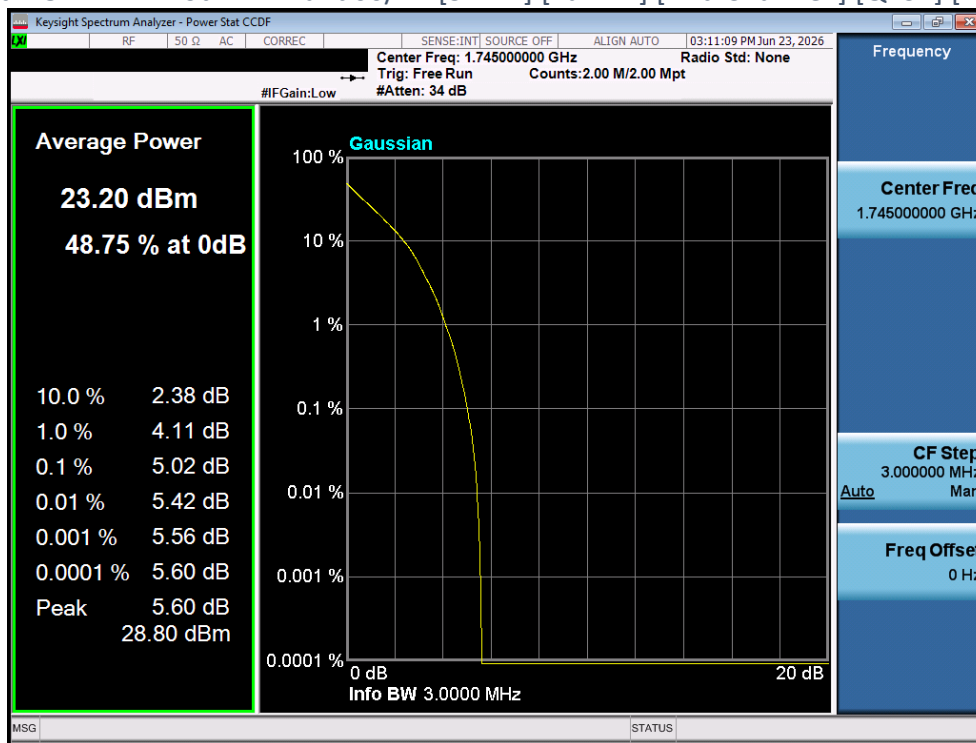
Plot 4-79 PAPR Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



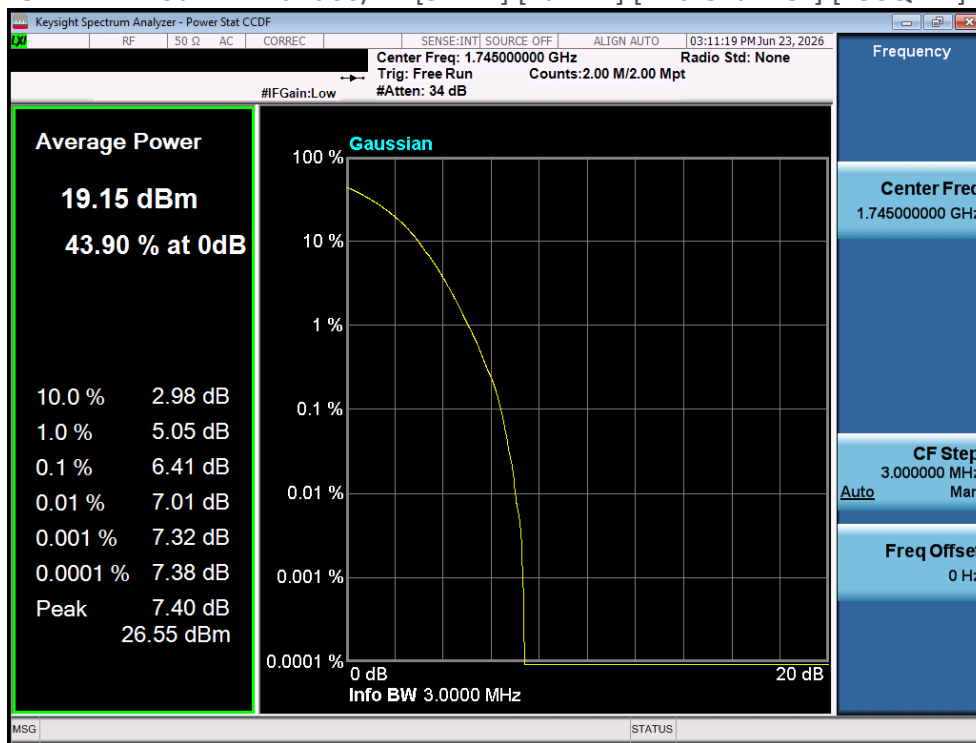
Plot 4-80 PAPR Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



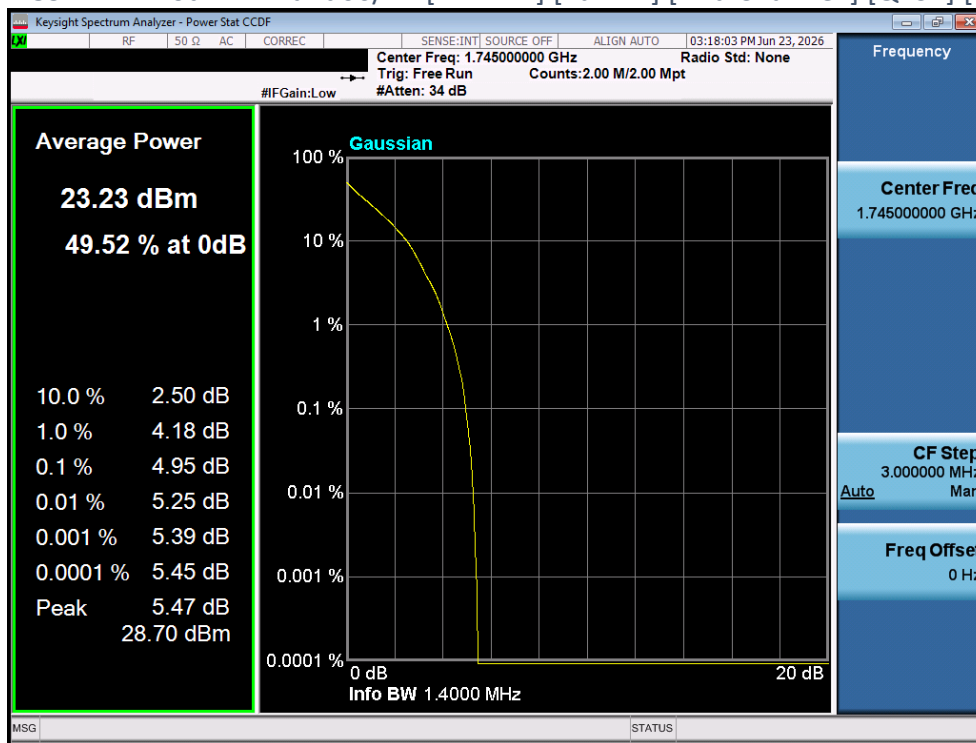
Plot 4-81 PAPR Plot - LTE Band66/4 - [3MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-82 PAPR Plot - LTE Band66/4 - [3MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]



Plot 4-83 PAPR Plot - LTE Band66/4 - [1.4MHz] [Full RB] [Mid Channel] [QPSK] [Ant 1]



Plot 4-84 PAPR Plot - LTE Band66/4 - [1.4MHz] [Full RB] [Mid Channel] [256QAM] [Ant 1]

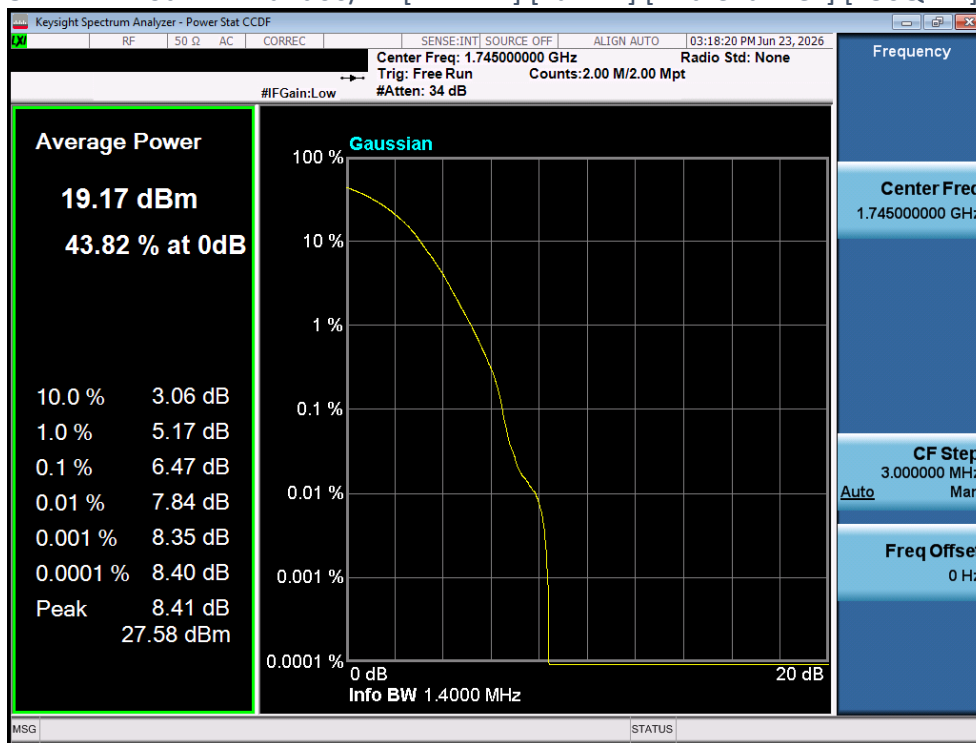
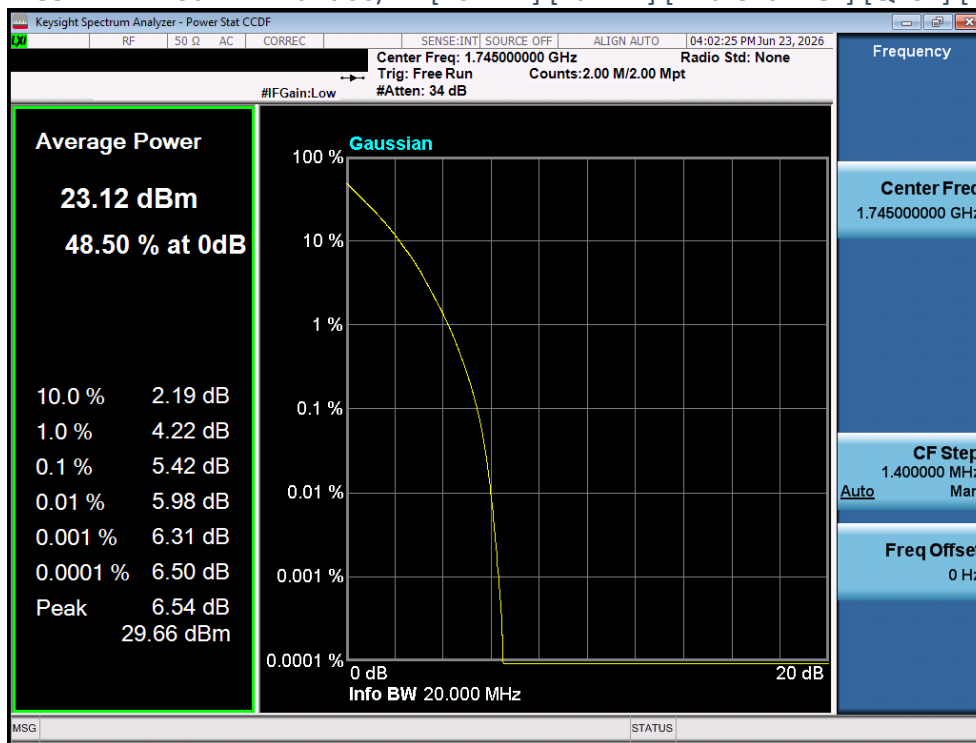


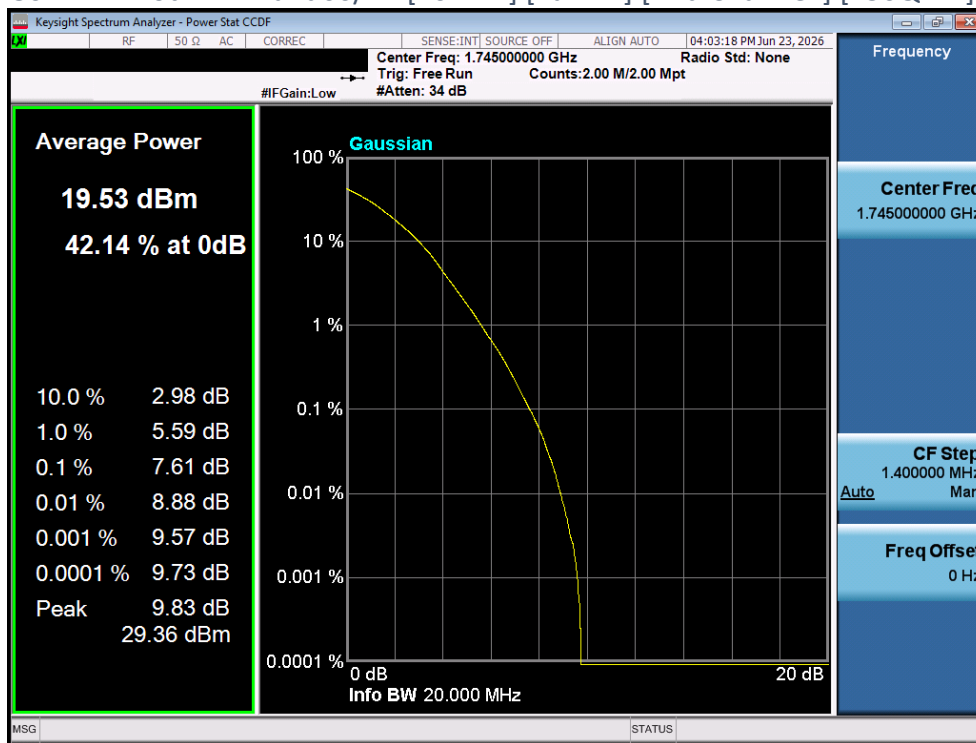
Table 4-9 PAPR Test Data LTE Band 66/4 Ant2

Band	Band Width [MHz]	Frequency [MHz]	Earfcn UL	RB Size/Offset	Modulation	PAR 0.1 % [dB]	Limit [dB]	Margin [dB]
LTE Band 66/4	20	1745	132322	100/0	QPSK	5.42	13	-7.58
					16QAM	6.10	13	-6.90
					64QAM	6.40	13	-6.60
					256QAM	7.61	13	-5.39
	15	1745	132322	75/0	QPSK	5.48	13	-7.52
					16QAM	6.08	13	-6.92
					64QAM	6.31	13	-6.69
					256QAM	6.19	13	-6.81
	10	1745	132322	50/0	QPSK	5.28	13	-7.72
					16QAM	5.92	13	-7.08
					64QAM	6.27	13	-6.73
					256QAM	6.32	13	-6.68
	5	1745	132322	25/0	QPSK	5.14	13	-7.86
					16QAM	5.85	13	-7.15
					64QAM	6.18	13	-6.82
					256QAM	6.23	13	-6.77
	3	1745	132322	15/0	QPSK	5.06	13	-7.94
					16QAM	5.96	13	-7.04
					64QAM	6.20	13	-6.80
					256QAM	6.25	13	-6.75
	1.4	1745	132322	6/0	QPSK	4.99	13	-8.01
					16QAM	5.93	13	-7.07
					64QAM	6.52	13	-6.48
					256QAM	6.88	13	-6.12

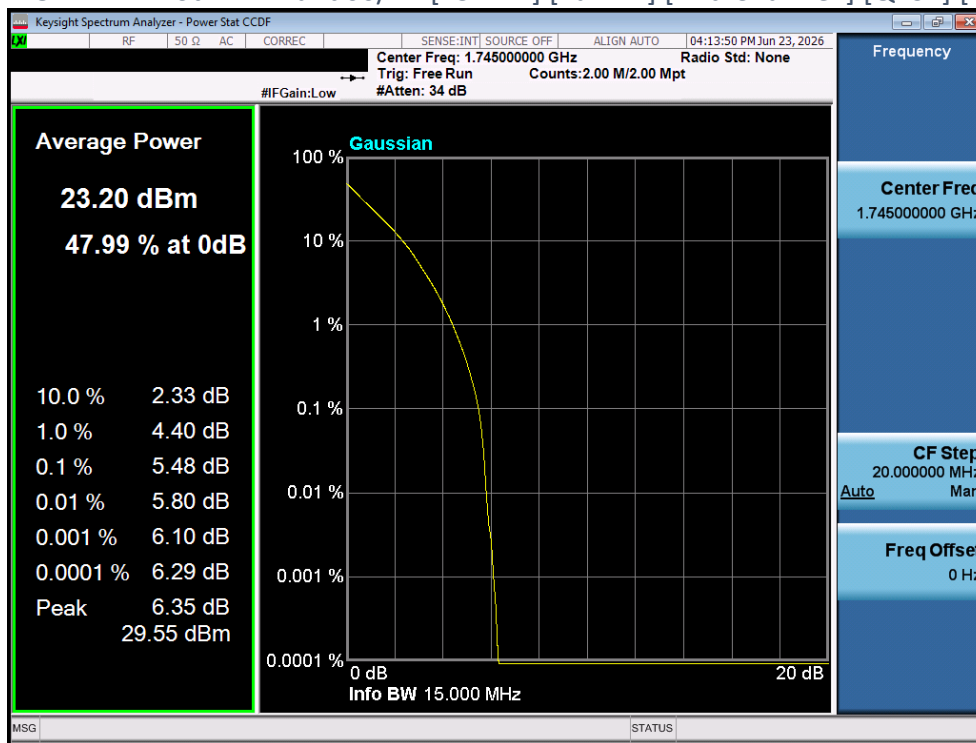
Plot 4-85 PAPR Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



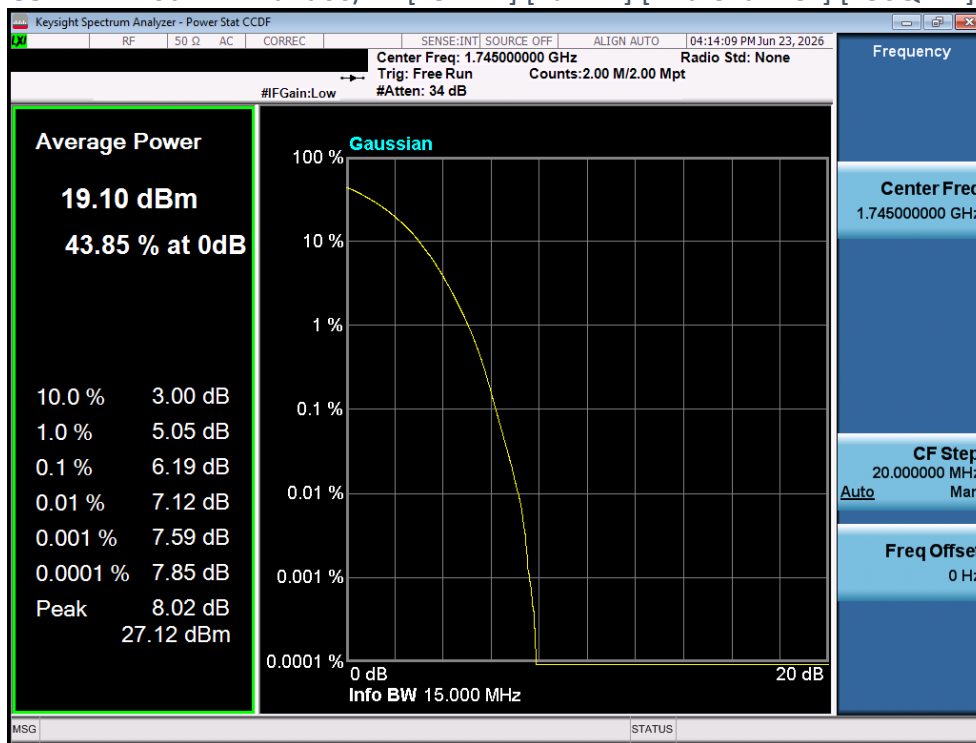
Plot 4-86 PAPR Plot - LTE Band66/4 - [20MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]



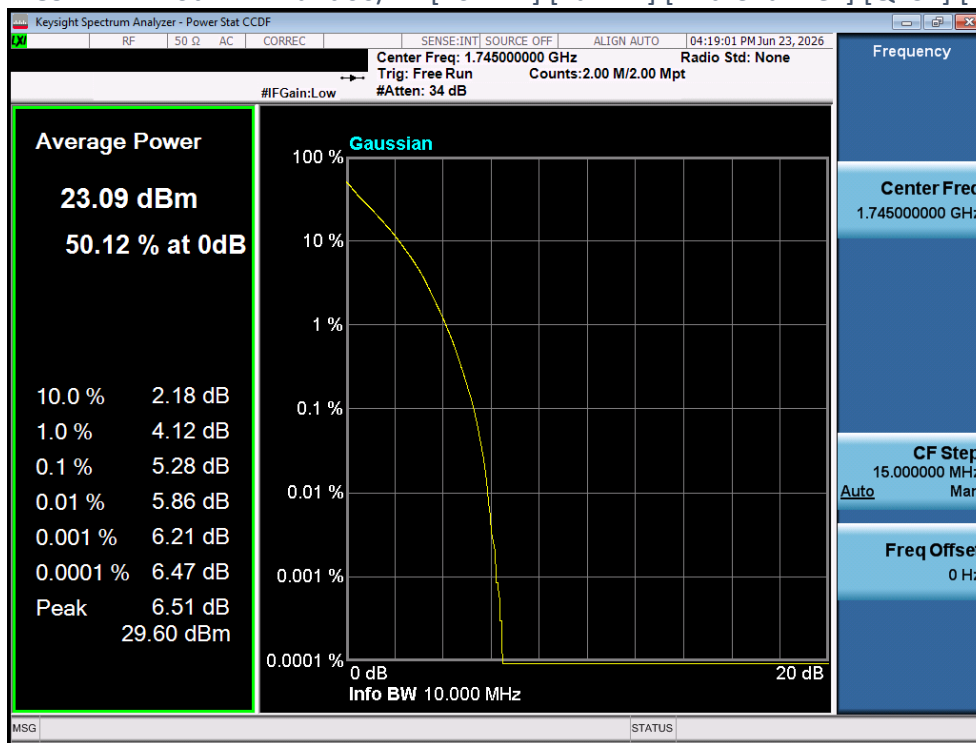
Plot 4-87 PAPR Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



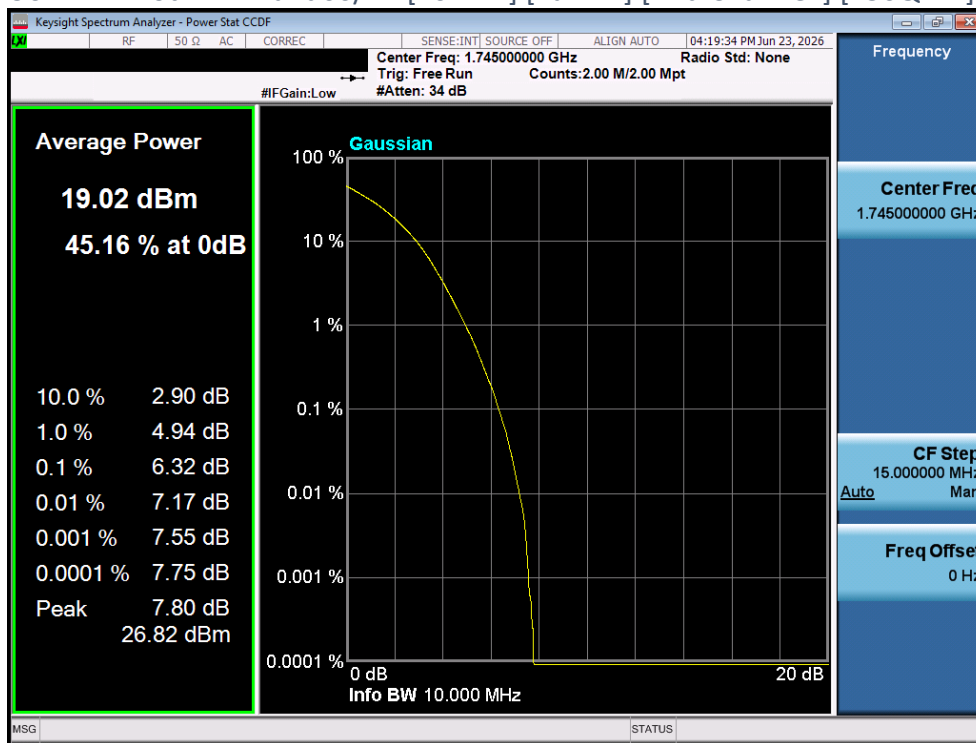
Plot 4-88 PAPR Plot - LTE Band66/4 - [15MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]



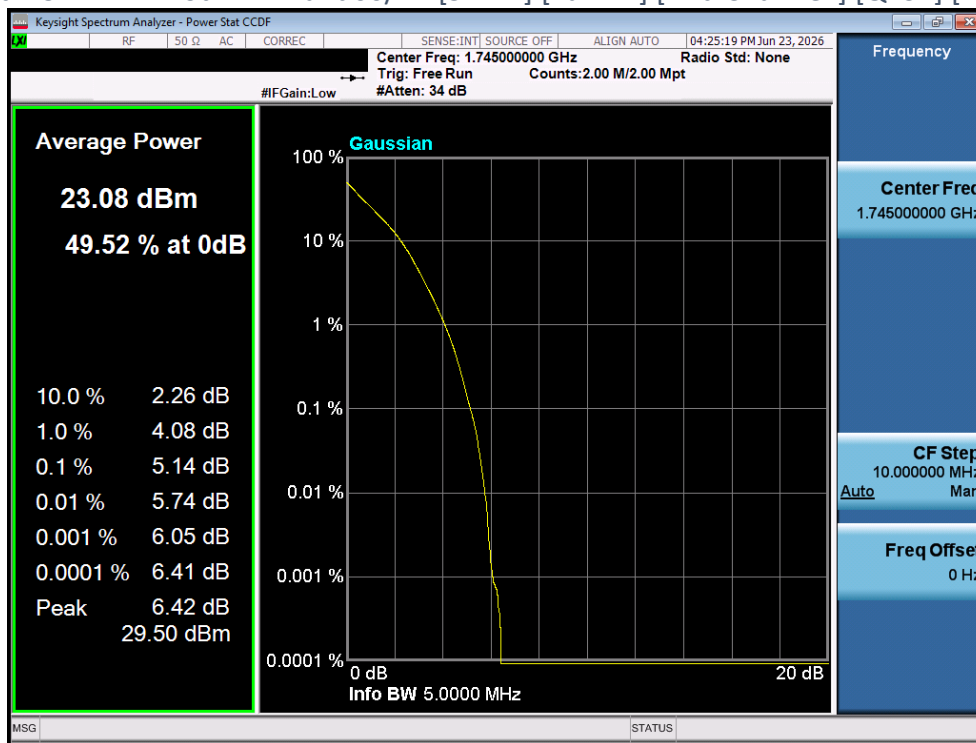
Plot 4-89 PAPR Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-90 PAPR Plot - LTE Band66/4 - [10MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]



Plot 4-91 PAPR Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [QPSK] [Ant 2]



Plot 4-92 PAPR Plot - LTE Band66/4 - [5MHz] [Full RB] [Mid Channel] [256QAM] [Ant 2]

