FCC RF Test Report

APPLICANT	:	Sonim Technologies, Inc.
EQUIPMENT	:	Smartphone
BRAND NAME	:	Sonim
MODEL NAME	:	X802
FCC ID	:	WYPS3111
STANDARD	:	47 CFR Part 96
CLASSIFICATION	:	Citizens Band End User Devices (CBE)
EQUIPMENT TYPE	:	End User Equipment
TEST DATE(S)	:	Nov. 16, 2024 ~ Feb. 21, 2025

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26 and shown compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Sporton International Inc. (ShenZhen)

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

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History of this test report

Report No.	Version	Description	Issued Date
FG4O2403I	01	Initial issue of report	May 22, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.3	§2.1046	Conducted Output Power	Reporting only	-
-	§96.41	Peak-to-Average Ratio	Not Applicable	Not applicable for End User Devices
3.4	§96.41	Maximum E.I.R.P	Pass	-
		Maximum Power Spectral Density	Not Applicable	Not applicable for End User Devices
3.5	§2.1049 §96.41	Occupied Bandwidth	Reporting only	-
3.6	§2.1051 §96.41	Conducted Band Edge Measurement Adjacent Channel Leakage Ratio	Pass	-
3.7	§2.1051 §96.41	Conducted Spurious Emission	Pass	
3.8	§2.1055	Frequency Stability for Temperature & Voltage	Pass	-
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	Under limit 0.78 dB at 14204.000 MHz

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Sonim Technologies, Inc.
4445 Eastgate Mall,Suite200,San Diego,CA92121,USA

1.2 Manufacturer

Sonim Technologies, Inc.
4445 Eastgate Mall,Suite200,San Diego,CA92121,USA

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Brand Name	Sonim
Model Name	X802
FCC ID	WYPS3111
Tx Frequency	LTE Band 42 : 3550 MHz ~ 3600 MHz LTE Band 43 : 3600 MHz ~ 3700 MHz LTE Band 48 : 3550 MHz ~ 3700 MHz
Rx Frequency	LTE Band 42 : 3550 MHz ~ 3600 MHz LTE Band 43 : 3600 MHz ~ 3700 MHz LTE Band 48 : 3550 MHz ~ 3700 MHz
Bandwidth	5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	**<Ant.3>** LTE Band 42: 24.18 dBm LTE Band 43: 23.89 dBm LTE Band 48: 24.20 dBm **<Ant.7>** LTE Band 48: 23.74 dBm
Antenna Gain	**<Ant.3>**: LTE Band 42/43/48: -2.01 dBi **<Ant.7>**: LTE Band 48: -2.01 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM
HW Version	V1.0
SW Version	X80.0-01-14.0-42.18.00
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The maximum EIRP is calculated from max output power and antenna gain, only the maximum EIRP of Ant. 3 is shown in the report.
3. The device supports two PAs for B48 (main PA and other PA), both the PAs are full tested, only the worst EIRP are shown in the report.

1.4 Maximum EIRP Power and Emission Designator

LTE Band 42		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	3552.5~3597.5	0.1644	4M50G7D	0.1265	4M50W7D
10	3555.0~3595.0	0.1607	9M07G7D	0.1250	9M07W7D
15	3557.5~3592.5	0.1626	13M5G7D	0.1250	13M5W7D
20	3560.0~3590.0	0.1648	17M9G7D	0.1268	17M9W7D

LTE Band 43		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	3602.5~3697.5	0.1531	4M50G7D	0.1225	4M50W7D
10	3605.0~3695.0	0.1514	9M07G7D	0.1197	9M07W7D
15	3607.5~3692.5	0.1528	13M5G7D	0.1169	13M5W7D
20	3610.0~3690.0	0.1542	17M9G7D	0.1225	17M9W7D

LTE Band 48		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	3552.5~3697.5	0.1596	4M50G7D	0.1315	4M50W7D
10	3555~3695	0.1611	9M07G7D	0.1309	9M07W7D
15	3557.5~3692.5	0.1574	13M5G7D	0.1306	13M5W7D
20	3560~3690	0.1656	17M9G7D	0.1334	17M9W7D

Note: All modulations have been tested, only the worst test results of PSK & QAM are shown in the report.

1.5 Testing Site

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-KS	CN1257	314309

Sporton International Inc. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH01-SZ	CN1256	421272

Test data subcontracted: Radiated Spurious Emission test case in section 4 of this report

1.6 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC LTE_Ver2.0 Auto_china_210503	2.0
2.	03CH01-SZ	AUDIX	E3	6.2009-8-24

1.7 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26-2015
- 47 CFR Part 96
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 940660 D01 Part 96 CBRS v03
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

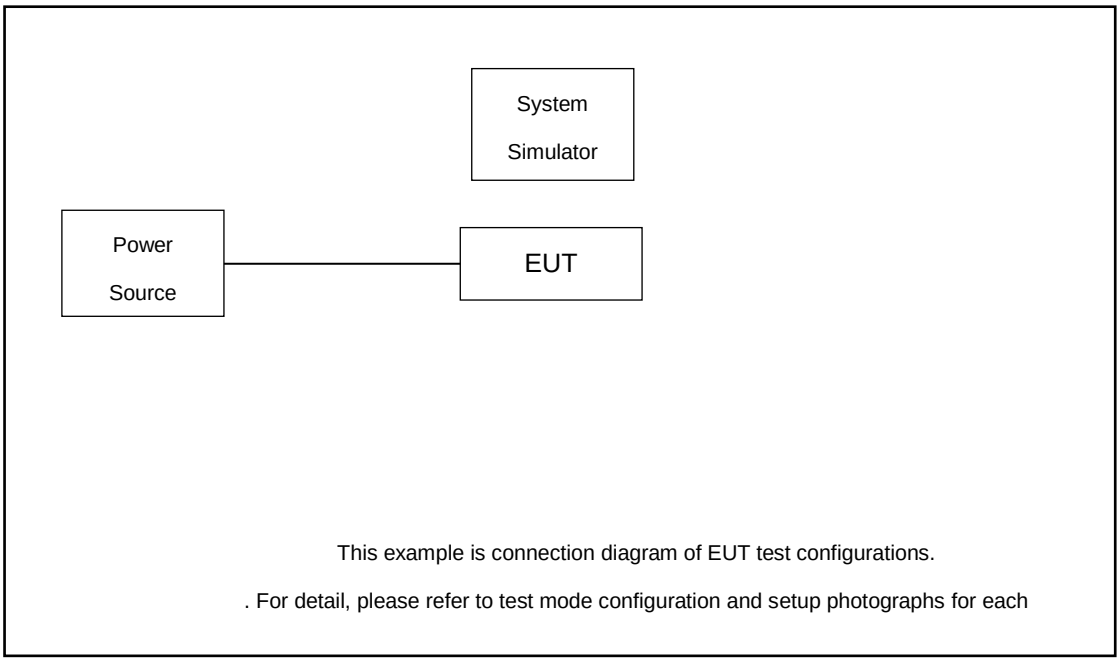
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256 QAM	1	Half	Full	L	M	H
Max. Output Power	42	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	43	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	48	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Adjacent Channel Leakage Ratio	48	-	-	v	v	v	v	v	v	v	v	v		v	v	v	v
26dB and 99% Bandwidth	48	-	-	v	v	v	v	v	v					v		v	
Conducted Band Edge	48	-	-	v	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	48	-	-	v	v	v	v	v				v		v	v	v	v
E.I.R.P	42	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	43	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	48	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Frequency Stability	48	-	-	v				v				v				v	
Radiated Spurious Emission	48	Worst Case													v	v	v
Remark	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.																

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 6.5 dB.

Example :

Offset(dB) = RF cable loss(dB).

= 6.5 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 42 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	43190	43340	43490
	Frequency	3560	3575	3590
15	Channel	43165	43340	43515
	Frequency	3557.5	3575	3592.5
10	Channel	43140	43340	43540
	Frequency	3555	3575	3595
5	Channel	43115	43340	43565
	Frequency	3552.5	3575	3597.5

LTE Band 43 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	43690	44090	44490
	Frequency	3610	3650	3690
15	Channel	43665	44090	44515
	Frequency	3607.5	3650	3692.5
10	Channel	43640	44090	44540
	Frequency	3605	3650	3695
5	Channel	43615	44090	44565
	Frequency	3602.5	3650	3697.5

LTE Band 48 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	55340	55990	56640
	Frequency	3560.0	3625.0	3690.0
15	Channel	55315	55990	56665
	Frequency	3557.5	3625.0	3692.5
10	Channel	55290	55990	56690
	Frequency	3555.0	3625.0	3695.0
5	Channel	55265	55990	56715
	Frequency	3552.5	3625.0	3697.5

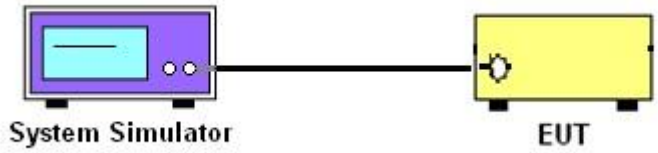
3 Conducted Test Items

3.1 Measuring Instruments

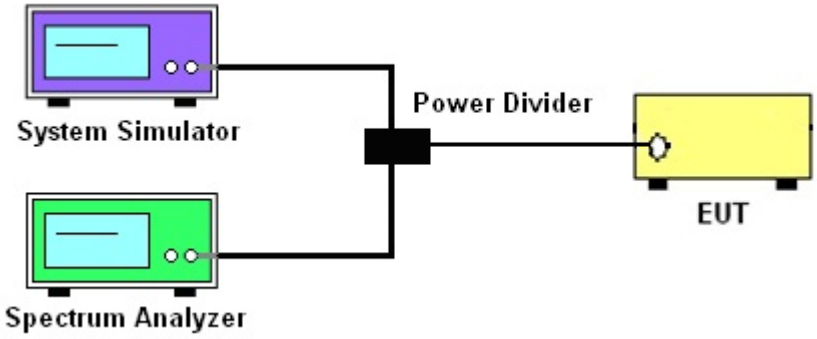
See list of measuring instruments of this test report.

3.2 Test Setup

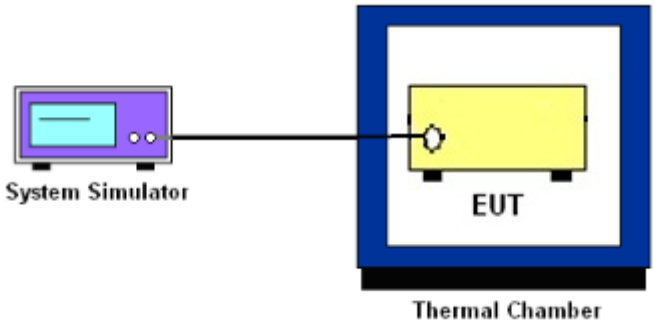
3.2.1 Conducted Output Power / ACLR



3.2.2 26dB & 99% Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.2.4 Test Result of Conducted Test

Please refer to Appendix A.

3.3 Conducted Output Power

3.3.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

3.3.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.4 EIRP

3.4.1 Description of the EIRP Measurement

EIRP limits for CBRS equipment as below table:

Device		Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
Applied	**End User Device**	23	n/a
☐	**Category A CBSD**	30	20
☐	**Category B CBSD**	47	37

Remark:

1. The worst case EIRP shown in this section is found with LTE operating only using 1RB. As such, the EIRP/10MHz and full channel EIRP values will be identical since 1RB is fully contained within all available channel bandwidths for LTE Band 48 (i.e. 5, 10, 15, 20MHz)

3.4.2 Test Procedures for EIRP

1. Establishing a communications link with the call box (Base station) to measure the Maximum conducted power, the parameters were set to force the EUT transmitting at maximum output power level. Use the average power measurement function to measure total channel power of each channel bandwidth (per ANSI C63.26-2015 Section 5.2.1)

2. Determining ERP and/or EIRP from conducted RF output power measurements (Per ANSI C63.26-2015 Section 5.2.5.5)

   $EIRP = P_T + G_T – L_C$, $ERP = EIRP - 2.15$, where

   P_T = transmitter output power in dBm

   G_T = gain of the transmitting antenna in dBi

   L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.5 Occupied Bandwidth

3.5.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is 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 transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.5.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
   (this is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.6 Conducted Band Edge

3.6.1 Description of Conducted Band Edge Measurement

Part 96.41 (e) (1) (ii)

For End User Devices the emission limits outside the fundamental are as follows:

Within 0 MHz to B MHz above and below the assigned channel ≤ −13 dBm/MHz

Greater than B MHz above and below the assigned channel ≤ −25 dBm/MHz

where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device.

Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

Part 96.41 (e) (2)

For CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed −25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used
5. Offset has included the duty factor for LTE Band 48. Duty factor =10 log (1/x), where x is the measured duty cycle.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.7 Conducted Spurious Emission

3.7.1 Description of Conducted Spurious Emission Measurement

96.41 (e)(2)

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz.

3.7.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is −40dBm/MHz.

3.8 Frequency Stability

3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

3.8.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.8.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

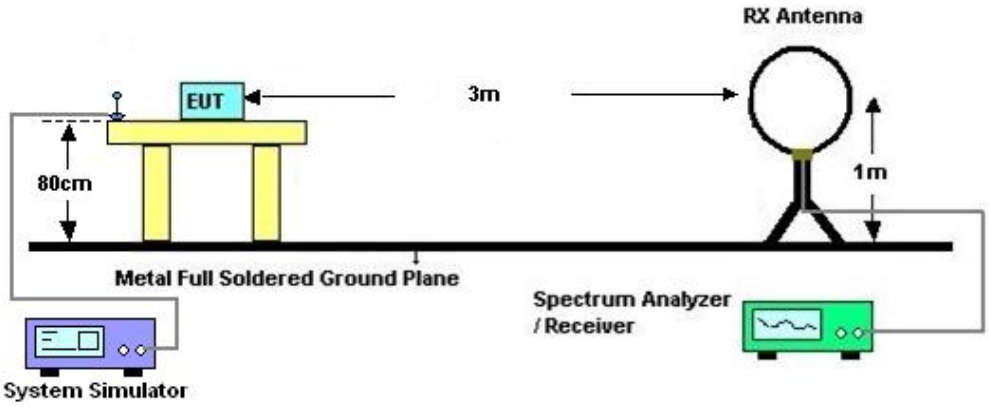
4 Radiated Test Items

4.1 Measuring Instruments

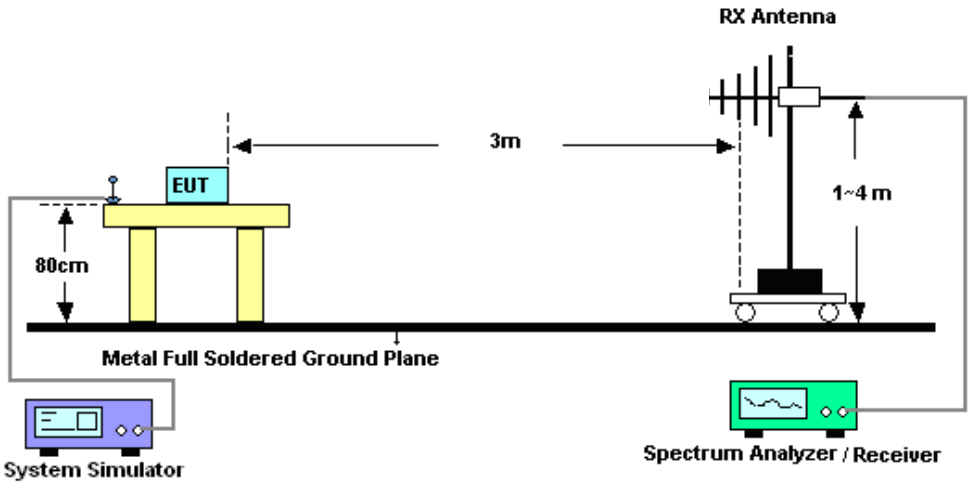
See list of measuring instruments of this test report.

4.2 Test Setup

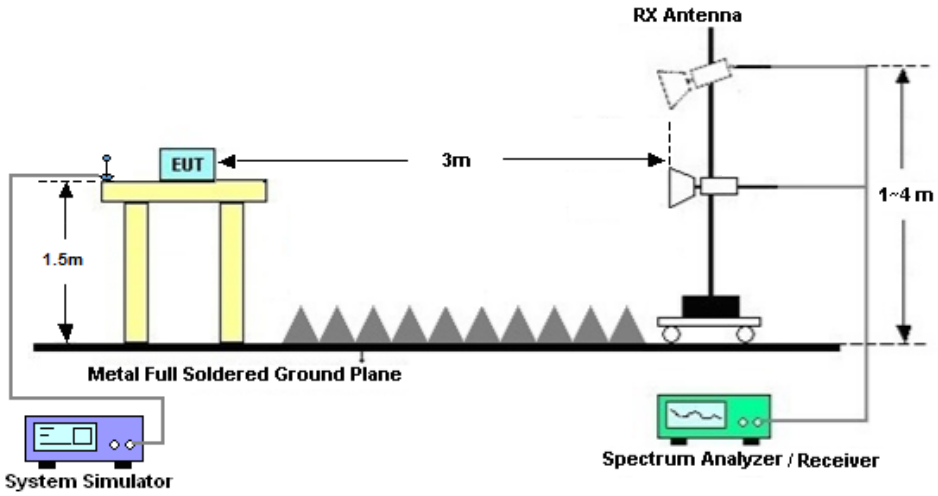
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI C63.26-2015.

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least -40dBm / MHz.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
   Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
   EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
   ERP (dBm) = EIRP - 2.15
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
   The limit line is −40dBm/MHz

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 16, 2024~ Feb. 21, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Nov. 16, 2024~ Feb. 21, 2025	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Nov. 16, 2024~ Feb. 21, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	Jan. 24, 2025	Jul. 02, 2025	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Jan. 24, 2025	Dec. 27, 2025	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 14, 2024	Jan. 24, 2025	Oct. 13, 2025	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Jan. 24, 2025	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Jan. 24, 2025	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Jan. 24, 2025	Apr. 08, 2025	Radiation (03CH01-SZ)
LF Amplifier	EM Electronics	EM330	060788	20MHz-3GHz	Dec. 25, 2024	Jan. 24, 2025	Dec. 24, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Jan. 24, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 03, 2024	Jan. 24, 2025	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 14, 2024	Jan. 24, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 24, 2025	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 24, 2025	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

6 Measurement Uncertainty

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.90 dB
Frequency Stability	±0.04ppm

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.48 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.53 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.02 dB

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Appendix A. Test Results of Conducted Test

Test Engineer :	Simle Wang	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and EIRP

LTE Band 42_ANT3:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)	EIRP(W)	EIRP(W)
Channel				43190	43340	43490	43190	43340	43490
Frequency (MHz)				3560	3575	3590	3560	3575	3590
20	QPSK	1	0	23.91	24.18	24.11	0.1549	0.1648	0.1622
20	QPSK	1	49	23.77	23.97	23.89	0.1500	0.1570	0.1542
20	QPSK	1	99	23.84	24.17	24.11	0.1524	0.1644	0.1622
20	QPSK	50	0	22.96	23.01	22.81	0.1245	0.1259	0.1202
20	QPSK	50	24	22.87	22.82	22.97	0.1219	0.1205	0.1247
20	QPSK	50	50	22.85	22.90	22.80	0.1213	0.1227	0.1199
20	QPSK	100	0	22.93	23.02	22.98	0.1236	0.1262	0.1250
20	16QAM	1	0	22.94	22.96	23.04	0.1239	0.1245	0.1268
20	16QAM	1	49	22.87	22.97	22.90	0.1219	0.1247	0.1227
20	16QAM	1	99	22.97	23.03	22.96	0.1247	0.1265	0.1245
20	16QAM	50	0	22.05	22.05	22.12	0.1009	0.1009	0.1026
20	16QAM	50	24	21.96	22.11	21.93	0.0989	0.1023	0.0982
20	16QAM	50	50	22.03	21.95	22.04	0.1005	0.0986	0.1007
20	16QAM	100	0	21.94	21.88	22.02	0.0984	0.0971	0.1002
20	64QAM	1	0	21.92	22.01	21.94	0.0979	0.1000	0.0984
20	64QAM	1	49	22.12	22.02	21.95	0.1026	0.1002	0.0986
20	64QAM	1	99	22.02	21.99	22.01	0.1002	0.0995	0.1000
20	64QAM	50	0	21.03	20.81	20.84	0.0798	0.0759	0.0764
20	64QAM	50	24	21.03	20.97	20.81	0.0798	0.0787	0.0759
20	64QAM	50	50	21.01	20.89	20.86	0.0794	0.0773	0.0767
20	64QAM	100	0	20.81	20.89	20.96	0.0759	0.0773	0.0785
20	256QAM	1	0	18.91	18.85	19.02	0.0490	0.0483	0.0502
20	256QAM	1	49	19.03	18.91	18.86	0.0504	0.0490	0.0484
20	256QAM	1	99	18.93	18.82	18.83	0.0492	0.0480	0.0481
20	256QAM	50	0	18.84	19.05	19.01	0.0482	0.0506	0.0501
20	256QAM	50	24	18.86	18.96	18.87	0.0484	0.0495	0.0485
20	256QAM	50	50	18.99	18.98	19.03	0.0499	0.0498	0.0504
20	256QAM	100	0	19.02	18.90	19.04	0.0502	0.0489	0.0505
Channel				43165	43340	43515	43165	43340	43515
Frequency (MHz)				3557.5	3575	3592.5	3557.5	3575	3592.5
15	QPSK	1	0	23.77	24.12	24.01	0.1500	0.1626	0.1585

15	QPSK	1	37	23.77	23.90	23.79	0.1500	0.1545	0.1507
15	QPSK	1	74	23.80	23.98	24.08	0.1510	0.1574	0.1611
15	QPSK	36	0	22.91	22.92	22.74	0.1230	0.1233	0.1183
15	QPSK	36	20	22.74	22.68	22.97	0.1183	0.1167	0.1247
15	QPSK	36	39	22.82	22.76	22.74	0.1205	0.1189	0.1183
15	QPSK	75	0	22.73	22.94	22.79	0.1180	0.1239	0.1197
15	16QAM	1	0	22.85	22.93	22.98	0.1213	0.1236	0.1250
15	16QAM	1	37	22.85	22.79	22.85	0.1213	0.1197	0.1213
15	16QAM	1	74	22.96	22.91	22.85	0.1245	0.1230	0.1213
15	16QAM	36	0	21.99	21.84	21.95	0.0995	0.0962	0.0986
15	16QAM	36	20	21.74	21.99	21.88	0.0940	0.0995	0.0971
15	16QAM	36	39	22.02	21.79	22.05	0.1002	0.0951	0.1009
15	16QAM	75	0	21.79	21.71	21.93	0.0951	0.0933	0.0982
15	64QAM	1	0	21.78	21.88	21.91	0.0948	0.0971	0.0977
15	64QAM	1	37	21.90	21.96	21.74	0.0975	0.0989	0.0940
15	64QAM	1	74	21.97	21.85	21.79	0.0991	0.0964	0.0951
15	64QAM	36	0	21.02	20.76	20.79	0.0796	0.0750	0.0755
15	64QAM	36	20	20.96	20.86	20.60	0.0785	0.0767	0.0723
15	64QAM	36	39	20.87	20.69	20.82	0.0769	0.0738	0.0760
15	64QAM	75	0	20.80	20.87	20.97	0.0757	0.0769	0.0787
15	256QAM	1	0	18.75	18.82	18.94	0.0472	0.0480	0.0493
15	256QAM	1	37	18.91	18.79	18.75	0.0490	0.0476	0.0472
15	256QAM	1	74	18.93	18.79	18.78	0.0492	0.0476	0.0475
15	256QAM	36	0	18.82	19.07	18.96	0.0480	0.0508	0.0495
15	256QAM	36	20	18.69	18.83	18.89	0.0466	0.0481	0.0488
15	256QAM	36	39	18.98	18.98	18.95	0.0498	0.0498	0.0494
15	256QAM	75	0	18.93	18.71	18.99	0.0492	0.0468	0.0499
Channel				43140	43340	43540	43140	43340	43540
Frequency (MHz)				3555	3575	3595	3555	3575	3595
10	QPSK	1	0	23.73	24.07	23.91	0.1486	0.1607	0.1549
10	QPSK	1	25	23.75	23.86	23.84	0.1493	0.1531	0.1524
10	QPSK	1	49	23.80	24.02	23.91	0.1510	0.1589	0.1549
10	QPSK	25	0	22.86	22.83	22.83	0.1216	0.1208	0.1208
10	QPSK	25	12	22.82	22.77	22.94	0.1205	0.1191	0.1239
10	QPSK	25	25	22.65	22.73	22.76	0.1159	0.1180	0.1189
10	QPSK	50	0	22.80	22.93	22.93	0.1199	0.1236	0.1236
10	16QAM	1	0	22.91	22.81	22.98	0.1230	0.1202	0.1250
10	16QAM	1	25	22.73	22.86	22.89	0.1180	0.1216	0.1225
10	16QAM	1	49	22.76	22.88	22.78	0.1189	0.1222	0.1194
10	16QAM	25	0	21.94	22.03	22.03	0.0984	0.1005	0.1005
10	16QAM	25	12	21.78	21.91	21.74	0.0948	0.0977	0.0940
10	16QAM	25	25	21.92	21.90	22.01	0.0979	0.0975	0.1000
10	16QAM	50	0	21.87	21.82	21.93	0.0968	0.0957	0.0982
10	64QAM	1	0	21.76	21.97	21.82	0.0944	0.0991	0.0957
10	64QAM	1	25	22.03	21.98	21.91	0.1005	0.0993	0.0977

10	64QAM	1	49	22.03	21.89	21.99	0.1005	0.0973	0.0995
10	64QAM	25	0	20.96	20.66	20.75	0.0785	0.0733	0.0748
10	64QAM	25	12	21.00	20.95	20.73	0.0793	0.0783	0.0745
10	64QAM	25	25	20.91	20.71	20.84	0.0776	0.0741	0.0764
10	64QAM	50	0	20.66	20.82	20.92	0.0733	0.0760	0.0778
10	256QAM	1	0	18.82	18.67	18.96	0.0480	0.0463	0.0495
10	256QAM	1	25	18.83	18.90	18.68	0.0481	0.0489	0.0465
10	256QAM	1	49	18.90	18.65	18.64	0.0489	0.0461	0.0460
10	256QAM	25	0	18.65	19.04	18.82	0.0461	0.0505	0.0480
10	256QAM	25	12	18.65	18.89	18.82	0.0461	0.0488	0.0480
10	256QAM	25	25	18.90	18.90	19.04	0.0489	0.0489	0.0505
10	256QAM	50	0	18.86	18.69	19.01	0.0484	0.0466	0.0501
Channel				43115	43340	43565	43115	43340	43565
Frequency (MHz)				3552.5	3575	3597.5	3552.5	3575	3597.5
5	QPSK	1	0	23.85	24.17	23.92	0.1528	0.1644	0.1552
5	QPSK	1	12	23.74	23.84	23.75	0.1489	0.1524	0.1493
5	QPSK	1	24	23.85	24.05	23.96	0.1528	0.1600	0.1567
5	QPSK	12	0	22.82	22.80	22.67	0.1205	0.1199	0.1164
5	QPSK	12	7	22.81	22.79	22.77	0.1202	0.1197	0.1191
5	QPSK	12	13	22.67	22.71	22.81	0.1164	0.1175	0.1202
5	QPSK	25	0	22.88	23.04	22.99	0.1222	0.1268	0.1253
5	16QAM	1	0	22.87	22.77	22.89	0.1219	0.1191	0.1225
5	16QAM	1	12	22.76	22.85	22.82	0.1189	0.1213	0.1205
5	16QAM	1	24	22.87	23.03	22.81	0.1219	0.1265	0.1202
5	16QAM	12	0	22.02	21.92	22.08	0.1002	0.0979	0.1016
5	16QAM	12	7	21.80	22.07	21.95	0.0953	0.1014	0.0986
5	16QAM	12	13	21.94	21.92	21.89	0.0984	0.0979	0.0973
5	16QAM	25	0	21.79	21.87	22.01	0.0951	0.0968	0.1000
5	64QAM	1	0	21.71	21.93	21.80	0.0933	0.0982	0.0953
5	64QAM	1	12	22.10	22.01	21.77	0.1021	0.1000	0.0946
5	64QAM	1	24	21.91	21.84	21.93	0.0977	0.0962	0.0982
5	64QAM	12	0	20.85	20.71	20.62	0.0766	0.0741	0.0726
5	64QAM	12	7	20.84	20.76	20.68	0.0764	0.0750	0.0736
5	64QAM	12	13	20.95	20.81	20.79	0.0783	0.0759	0.0755
5	64QAM	25	0	20.70	20.67	20.75	0.0740	0.0735	0.0748
5	256QAM	1	0	18.71	18.69	18.92	0.0468	0.0466	0.0491
5	256QAM	1	12	18.92	18.84	18.68	0.0491	0.0482	0.0465
5	256QAM	1	24	18.83	18.81	18.67	0.0481	0.0479	0.0463
5	256QAM	12	0	18.82	18.99	18.82	0.0480	0.0499	0.0480
5	256QAM	12	7	18.74	18.97	18.87	0.0471	0.0497	0.0485
5	256QAM	12	13	19.01	18.89	18.97	0.0501	0.0488	0.0497
5	256QAM	25	0	18.89	18.92	18.85	0.0488	0.0491	0.0483

LTE Band 43_ANT3:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)	EIRP(W)	EIRP(W)
Channel				43690	44090	44490	43690	44090	44490
Frequency (MHz)				3610	3650	3690	3610	3650	3690
20	QPSK	1	0	23.84	23.89	23.74	0.1524	0.1542	0.1489
20	QPSK	1	49	23.81	23.86	23.66	0.1514	0.1531	0.1462
20	QPSK	1	99	23.66	23.88	23.75	0.1462	0.1538	0.1493
20	QPSK	50	0	22.50	22.72	22.48	0.1119	0.1178	0.1114
20	QPSK	50	24	22.39	22.32	22.37	0.1091	0.1074	0.1086
20	QPSK	50	50	22.41	22.39	22.40	0.1096	0.1091	0.1094
20	QPSK	100	0	22.75	22.87	22.81	0.1186	0.1219	0.1202
20	16QAM	1	0	22.71	22.71	22.89	0.1175	0.1175	0.1225
20	16QAM	1	49	22.73	22.78	22.80	0.1180	0.1194	0.1199
20	16QAM	1	99	22.86	22.81	22.80	0.1216	0.1202	0.1199
20	16QAM	50	0	21.52	21.53	21.36	0.0893	0.0895	0.0861
20	16QAM	50	24	21.50	21.43	21.49	0.0889	0.0875	0.0887
20	16QAM	50	50	21.47	21.37	21.53	0.0883	0.0863	0.0895
20	16QAM	100	0	21.47	21.44	21.43	0.0883	0.0877	0.0875
20	64QAM	1	0	21.37	21.54	21.41	0.0863	0.0897	0.0871
20	64QAM	1	49	21.45	21.31	21.36	0.0879	0.0851	0.0861
20	64QAM	1	99	21.44	21.31	21.30	0.0877	0.0851	0.0849
20	64QAM	50	0	20.54	20.42	20.33	0.0713	0.0693	0.0679
20	64QAM	50	24	20.34	20.40	20.49	0.0681	0.0690	0.0705
20	64QAM	50	50	20.47	20.52	20.39	0.0701	0.0710	0.0689
20	64QAM	100	0	20.50	20.43	20.39	0.0706	0.0695	0.0689
20	256QAM	1	0	18.79	18.69	18.65	0.0476	0.0466	0.0461
20	256QAM	1	49	18.63	18.73	18.79	0.0459	0.0470	0.0476
20	256QAM	1	99	18.69	18.65	18.61	0.0466	0.0461	0.0457
20	256QAM	50	0	18.62	18.70	18.79	0.0458	0.0467	0.0476
20	256QAM	50	24	18.78	18.64	18.63	0.0475	0.0460	0.0459
20	256QAM	50	50	18.61	18.81	18.63	0.0457	0.0479	0.0459
20	256QAM	100	0	18.75	18.64	18.81	0.0472	0.0460	0.0479
Channel				43665	44090	44515	43665	44090	44515
Frequency (MHz)				3607.5	3650	3692.5	3607.5	3650	3692.5
15	QPSK	1	0	23.64	23.71	23.59	0.1455	0.1479	0.1439
15	QPSK	1	37	23.60	23.68	23.44	0.1442	0.1469	0.1390
15	QPSK	1	74	23.66	23.85	23.55	0.1462	0.1528	0.1426
15	QPSK	36	0	22.49	22.71	22.29	0.1117	0.1175	0.1067
15	QPSK	36	20	22.21	22.21	22.31	0.1047	0.1047	0.1072
15	QPSK	36	39	22.26	22.29	22.34	0.1059	0.1067	0.1079
15	QPSK	75	0	22.60	22.80	22.68	0.1146	0.1199	0.1167
15	16QAM	1	0	22.51	22.60	22.69	0.1122	0.1146	0.1169
15	16QAM	1	37	22.53	22.63	22.62	0.1127	0.1153	0.1151

15	16QAM	1	74	22.66	22.68	22.59	0.1161	0.1167	0.1143
15	16QAM	36	0	21.41	21.44	21.38	0.0871	0.0877	0.0865
15	16QAM	36	20	21.47	21.33	21.47	0.0883	0.0855	0.0883
15	16QAM	36	39	21.37	21.26	21.32	0.0863	0.0841	0.0853
15	16QAM	75	0	21.46	21.28	21.27	0.0881	0.0845	0.0843
15	64QAM	1	0	21.31	21.44	21.19	0.0851	0.0877	0.0828
15	64QAM	1	37	21.32	21.15	21.36	0.0853	0.0820	0.0861
15	64QAM	1	74	21.42	21.23	21.10	0.0873	0.0836	0.0811
15	64QAM	36	0	20.48	20.37	20.26	0.0703	0.0685	0.0668
15	64QAM	36	20	20.19	20.25	20.39	0.0658	0.0667	0.0689
15	64QAM	36	39	20.45	20.34	20.36	0.0698	0.0681	0.0684
15	64QAM	75	0	20.34	20.21	20.37	0.0681	0.0661	0.0685
15	256QAM	1	0	18.74	18.48	18.63	0.0471	0.0444	0.0459
15	256QAM	1	37	18.44	18.61	18.72	0.0440	0.0457	0.0469
15	256QAM	1	74	18.68	18.66	18.59	0.0465	0.0462	0.0455
15	256QAM	36	0	18.55	18.56	18.78	0.0451	0.0452	0.0475
15	256QAM	36	20	18.71	18.53	18.56	0.0468	0.0449	0.0452
15	256QAM	36	39	18.52	18.71	18.58	0.0448	0.0468	0.0454
15	256QAM	75	0	18.68	18.62	18.81	0.0465	0.0458	0.0479
Channel				43640	44090	44540	43640	44090	44540
Frequency (MHz)				3605	3650	3695	3605	3650	3695
10	QPSK	1	0	23.75	23.79	23.74	0.1493	0.1507	0.1489
10	QPSK	1	25	23.70	23.78	23.64	0.1476	0.1503	0.1455
10	QPSK	1	49	23.59	23.81	23.59	0.1439	0.1514	0.1439
10	QPSK	25	0	22.44	22.55	22.39	0.1104	0.1132	0.1091
10	QPSK	25	12	22.18	22.12	22.36	0.1040	0.1026	0.1084
10	QPSK	25	25	22.30	22.32	22.41	0.1069	0.1074	0.1096
10	QPSK	50	0	22.59	22.69	22.66	0.1143	0.1169	0.1161
10	16QAM	1	0	22.70	22.50	22.79	0.1172	0.1119	0.1197
10	16QAM	1	25	22.73	22.72	22.63	0.1180	0.1178	0.1153
10	16QAM	1	49	22.78	22.61	22.58	0.1194	0.1148	0.1140
10	16QAM	25	0	21.53	21.38	21.30	0.0895	0.0865	0.0849
10	16QAM	25	12	21.47	21.44	21.44	0.0883	0.0877	0.0877
10	16QAM	25	25	21.42	21.35	21.48	0.0873	0.0859	0.0885
10	16QAM	50	0	21.26	21.30	21.23	0.0841	0.0849	0.0836
10	64QAM	1	0	21.28	21.43	21.32	0.0845	0.0875	0.0853
10	64QAM	1	25	21.35	21.19	21.15	0.0859	0.0828	0.0820
10	64QAM	1	49	21.41	21.12	21.29	0.0871	0.0815	0.0847
10	64QAM	25	0	20.36	20.38	20.15	0.0684	0.0687	0.0652
10	64QAM	25	12	20.31	20.25	20.39	0.0676	0.0667	0.0689
10	64QAM	25	25	20.47	20.48	20.22	0.0701	0.0703	0.0662
10	64QAM	50	0	20.42	20.33	20.29	0.0693	0.0679	0.0673
10	256QAM	1	0	18.64	18.63	18.53	0.0460	0.0459	0.0449
10	256QAM	1	25	18.46	18.56	18.64	0.0442	0.0452	0.0460
10	256QAM	1	49	18.67	18.49	18.48	0.0463	0.0445	0.0444

10	256QAM	25	0	18.54	18.62	18.68	0.0450	0.0458	0.0465
10	256QAM	25	12	18.75	18.55	18.46	0.0472	0.0451	0.0442
10	256QAM	25	25	18.57	18.78	18.43	0.0453	0.0475	0.0439
10	256QAM	50	0	18.65	18.51	18.73	0.0461	0.0447	0.0470
Channel				43615	44090	44565	43615	44090	44565
Frequency (MHz)				3602.5	3650	3697.5	3602.5	3650	3697.5
5	QPSK	1	0	23.68	23.67	23.71	0.1469	0.1466	0.1479
5	QPSK	1	12	23.65	23.78	23.64	0.1459	0.1503	0.1455
5	QPSK	1	24	23.58	23.86	23.68	0.1435	0.1531	0.1469
5	QPSK	12	0	22.41	22.69	22.40	0.1096	0.1169	0.1094
5	QPSK	12	7	22.41	22.20	22.25	0.1096	0.1045	0.1057
5	QPSK	12	13	22.31	22.28	22.35	0.1072	0.1064	0.1081
5	QPSK	25	0	22.60	22.79	22.59	0.1146	0.1197	0.1143
5	16QAM	1	0	22.51	22.57	22.89	0.1122	0.1138	0.1225
5	16QAM	1	12	22.60	22.63	22.76	0.1146	0.1153	0.1189
5	16QAM	1	24	22.84	22.76	22.79	0.1211	0.1189	0.1197
5	16QAM	12	0	21.53	21.32	21.20	0.0895	0.0853	0.0830
5	16QAM	12	7	21.36	21.28	21.37	0.0861	0.0845	0.0863
5	16QAM	12	13	21.40	21.33	21.50	0.0869	0.0855	0.0889
5	16QAM	25	0	21.38	21.26	21.23	0.0865	0.0841	0.0836
5	64QAM	1	0	21.25	21.42	21.30	0.0839	0.0873	0.0849
5	64QAM	1	12	21.33	21.19	21.30	0.0855	0.0828	0.0849
5	64QAM	1	24	21.36	21.10	21.24	0.0861	0.0811	0.0838
5	64QAM	12	0	20.32	20.27	20.15	0.0678	0.0670	0.0652
5	64QAM	12	7	20.13	20.24	20.43	0.0649	0.0665	0.0695
5	64QAM	12	13	20.31	20.37	20.26	0.0676	0.0685	0.0668
5	64QAM	25	0	20.43	20.29	20.37	0.0695	0.0673	0.0685
5	256QAM	1	0	18.69	18.63	18.64	0.0466	0.0459	0.0460
5	256QAM	1	12	18.42	18.67	18.70	0.0438	0.0463	0.0467
5	256QAM	1	24	18.56	18.57	18.59	0.0452	0.0453	0.0455
5	256QAM	12	0	18.42	18.69	18.65	0.0438	0.0466	0.0461
5	256QAM	12	7	18.76	18.63	18.54	0.0473	0.0459	0.0450
5	256QAM	12	13	18.60	18.75	18.45	0.0456	0.0472	0.0441
5	256QAM	25	0	18.75	18.49	18.66	0.0472	0.0445	0.0462

LTE Band 48_ANT3:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				55340	55990	56640			
Frequency (MHz)				3560	3625	3690	L	M	H
20	QPSK	1	0	23.76	24.20	23.84	0.1496	0.1656	0.1524
20	QPSK	1	49	23.67	24.02	23.77	0.1466	0.1589	0.1500
20	QPSK	1	99	23.71	23.94	23.72	0.1479	0.1560	0.1483
20	QPSK	50	0	23.13	23.15	22.98	0.1294	0.1300	0.1250
20	QPSK	50	24	22.94	23.11	23.13	0.1239	0.1288	0.1294
20	QPSK	50	50	23.14	23.12	22.96	0.1297	0.1291	0.1245
20	QPSK	100	0	23.10	23.16	23.15	0.1285	0.1303	0.1300
20	16QAM	1	0	23.06	23.09	23.15	0.1274	0.1282	0.1300
20	16QAM	1	49	23.04	23.17	23.11	0.1268	0.1306	0.1288
20	16QAM	1	99	23.18	23.20	23.26	0.1309	0.1315	0.1334
20	16QAM	50	0	22.09	22.12	22.21	0.1019	0.1026	0.1047
20	16QAM	50	24	22.14	22.20	22.10	0.1030	0.1045	0.1021
20	16QAM	50	50	22.27	22.14	22.24	0.1062	0.1030	0.1054
20	16QAM	100	0	22.21	22.07	22.13	0.1047	0.1014	0.1028
20	64QAM	1	0	22.24	22.23	22.13	0.1054	0.1052	0.1028
20	64QAM	1	49	22.15	22.24	22.18	0.1033	0.1054	0.1040
20	64QAM	1	99	22.08	22.26	22.27	0.1016	0.1059	0.1062
20	64QAM	50	0	21.05	21.03	21.12	0.0802	0.0798	0.0815
20	64QAM	50	24	21.11	21.02	21.16	0.0813	0.0796	0.0822
20	64QAM	50	50	21.10	21.01	21.15	0.0811	0.0794	0.0820
20	64QAM	100	0	21.21	20.99	21.19	0.0832	0.0791	0.0828
20	256QAM	1	0	19.24	19.05	19.03	0.0528	0.0506	0.0504
20	256QAM	1	49	19.24	19.07	19.12	0.0528	0.0508	0.0514
20	256QAM	1	99	19.20	19.14	19.16	0.0524	0.0516	0.0519
20	256QAM	50	0	19.12	19.07	19.14	0.0514	0.0508	0.0516
20	256QAM	50	24	19.06	19.04	19.25	0.0507	0.0505	0.0530
20	256QAM	50	50	19.20	19.03	19.14	0.0524	0.0504	0.0516
20	256QAM	100	0	19.21	19.03	19.09	0.0525	0.0504	0.0511
Channel				55315	55990	56665	EIRP(W)		
Frequency (MHz)				3557.5	3625	3692.5	L	M	H
15	QPSK	1	0	23.58	23.98	23.70	0.1435	0.1574	0.1476
15	QPSK	1	37	23.69	23.82	23.64	0.1472	0.1517	0.1455
15	QPSK	1	74	23.61	23.94	23.62	0.1445	0.1560	0.1449
15	QPSK	36	0	23.11	23.12	22.82	0.1288	0.1291	0.1205
15	QPSK	36	20	22.94	22.97	23.06	0.1239	0.1247	0.1274
15	QPSK	36	39	22.99	23.01	22.81	0.1253	0.1259	0.1202
15	QPSK	75	0	22.89	23.06	23.14	0.1225	0.1274	0.1297
15	16QAM	1	0	22.87	23.00	23.17	0.1219	0.1256	0.1306
15	16QAM	1	37	22.85	23.10	23.02	0.1213	0.1285	0.1262

15	16QAM	1	74	23.05	23.11	23.12	0.1271	0.1288	0.1291
15	16QAM	36	0	21.90	22.10	22.06	0.0975	0.1021	0.1012
15	16QAM	36	20	22.13	22.03	21.94	0.1028	0.1005	0.0984
15	16QAM	36	39	22.10	22.02	22.22	0.1021	0.1002	0.1050
15	16QAM	75	0	22.14	21.92	22.01	0.1030	0.0979	0.1000
15	64QAM	1	0	22.16	22.20	22.04	0.1035	0.1045	0.1007
15	64QAM	1	37	22.01	22.20	22.11	0.1000	0.1045	0.1023
15	64QAM	1	74	21.97	22.06	22.20	0.0991	0.1012	0.1045
15	64QAM	36	0	20.96	20.82	21.03	0.0785	0.0760	0.0798
15	64QAM	36	20	21.07	20.90	21.09	0.0805	0.0774	0.0809
15	64QAM	36	39	20.88	20.82	21.07	0.0771	0.0760	0.0805
15	64QAM	75	0	21.11	20.94	21.03	0.0813	0.0782	0.0798
15	256QAM	1	0	19.12	19.04	19.05	0.0514	0.0505	0.0506
15	256QAM	1	37	19.23	18.99	19.12	0.0527	0.0499	0.0514
15	256QAM	1	74	19.03	19.15	19.07	0.0504	0.0518	0.0508
15	256QAM	36	0	18.97	19.02	19.02	0.0497	0.0502	0.0502
15	256QAM	36	20	18.88	18.91	19.12	0.0486	0.0490	0.0514
15	256QAM	36	39	19.20	18.95	18.94	0.0524	0.0494	0.0493
15	256QAM	75	0	19.00	18.98	18.98	0.0500	0.0498	0.0498
Channel				55290	55990	56690	EIRP(W)		
Frequency (MHz)				3555	3625	3695	L	M	H
10	QPSK	1	0	23.60	24.08	23.83	0.1442	0.1611	0.1521
10	QPSK	1	25	23.76	23.96	23.69	0.1496	0.1567	0.1472
10	QPSK	1	49	23.58	23.78	23.75	0.1435	0.1503	0.1493
10	QPSK	25	0	23.04	23.15	22.84	0.1268	0.1300	0.1211
10	QPSK	25	12	22.75	23.02	22.96	0.1186	0.1262	0.1245
10	QPSK	25	25	22.94	22.94	22.82	0.1239	0.1239	0.1205
10	QPSK	50	0	22.91	22.94	23.16	0.1230	0.1239	0.1303
10	16QAM	1	0	22.86	22.97	23.12	0.1216	0.1247	0.1291
10	16QAM	1	25	22.95	23.14	23.08	0.1242	0.1297	0.1279
10	16QAM	1	49	23.01	23.18	23.10	0.1259	0.1309	0.1285
10	16QAM	25	0	22.05	22.04	22.07	0.1009	0.1007	0.1014
10	16QAM	25	12	21.94	22.15	22.05	0.0984	0.1033	0.1009
10	16QAM	25	25	22.12	22.01	22.18	0.1026	0.1000	0.1040
10	16QAM	50	0	22.20	22.00	22.13	0.1045	0.0998	0.1028
10	64QAM	1	0	22.14	22.03	21.93	0.1030	0.1005	0.0982
10	64QAM	1	25	22.15	22.24	21.99	0.1033	0.1054	0.0995
10	64QAM	1	49	22.00	22.23	22.09	0.0998	0.1052	0.1019
10	64QAM	25	0	20.89	20.92	20.91	0.0773	0.0778	0.0776
10	64QAM	25	12	21.04	20.83	21.10	0.0800	0.0762	0.0811
10	64QAM	25	25	20.93	20.87	20.95	0.0780	0.0769	0.0783
10	64QAM	50	0	21.12	20.94	21.13	0.0815	0.0782	0.0817
10	256QAM	1	0	19.24	19.07	18.97	0.0528	0.0508	0.0497
10	256QAM	1	25	19.24	18.89	19.04	0.0528	0.0488	0.0505
10	256QAM	1	49	19.09	19.11	19.07	0.0511	0.0513	0.0508

10	256QAM	25	0	18.99	19.09	19.12	0.0499	0.0511	0.0514
10	256QAM	25	12	19.02	19.02	19.12	0.0502	0.0502	0.0514
10	256QAM	25	25	19.00	19.02	19.01	0.0500	0.0502	0.0501
10	256QAM	50	0	19.18	18.92	18.90	0.0521	0.0491	0.0489
Channel				55265	55990	56715	EIRP(W)		
Frequency (MHz)				3552.5	3625	3697.5	L	M	H
5	QPSK	1	0	23.60	23.98	23.75	0.1442	0.1574	0.1493
5	QPSK	1	12	23.65	24.04	23.62	0.1459	0.1596	0.1449
5	QPSK	1	24	23.66	23.85	23.67	0.1462	0.1528	0.1466
5	QPSK	12	0	22.98	23.14	22.89	0.1250	0.1297	0.1225
5	QPSK	12	7	22.90	23.00	23.00	0.1227	0.1256	0.1256
5	QPSK	12	13	23.05	22.99	22.83	0.1271	0.1253	0.1208
5	QPSK	25	0	23.03	22.96	23.15	0.1265	0.1245	0.1300
5	16QAM	1	0	22.93	23.04	23.05	0.1236	0.1268	0.1271
5	16QAM	1	12	23.01	23.16	23.04	0.1259	0.1303	0.1268
5	16QAM	1	24	23.20	23.14	23.04	0.1315	0.1297	0.1268
5	16QAM	12	0	21.99	21.94	22.21	0.0995	0.0984	0.1047
5	16QAM	12	7	21.99	22.03	22.11	0.0995	0.1005	0.1023
5	16QAM	12	13	22.21	21.96	22.16	0.1047	0.0989	0.1035
5	16QAM	25	0	22.15	21.87	22.15	0.1033	0.0968	0.1033
5	64QAM	1	0	22.08	22.11	22.01	0.1016	0.1023	0.1000
5	64QAM	1	12	22.09	22.19	21.98	0.1019	0.1042	0.0993
5	64QAM	1	24	21.91	22.24	22.15	0.0977	0.1054	0.1033
5	64QAM	12	0	21.02	20.92	21.04	0.0796	0.0778	0.0800
5	64QAM	12	7	20.94	20.80	21.05	0.0782	0.0757	0.0802
5	64QAM	12	13	20.92	20.80	21.13	0.0778	0.0757	0.0817
5	64QAM	25	0	21.20	20.99	21.00	0.0830	0.0791	0.0793
5	256QAM	1	0	19.02	18.92	18.81	0.0502	0.0491	0.0479
5	256QAM	1	12	19.23	18.92	19.03	0.0527	0.0491	0.0504
5	256QAM	1	24	19.11	19.14	19.03	0.0513	0.0516	0.0504
5	256QAM	12	0	19.09	19.04	19.04	0.0511	0.0505	0.0505
5	256QAM	12	7	19.00	18.88	19.23	0.0500	0.0486	0.0527
5	256QAM	12	13	19.13	19.04	19.12	0.0515	0.0505	0.0514
5	256QAM	25	0	19.11	18.87	18.98	0.0513	0.0485	0.0498

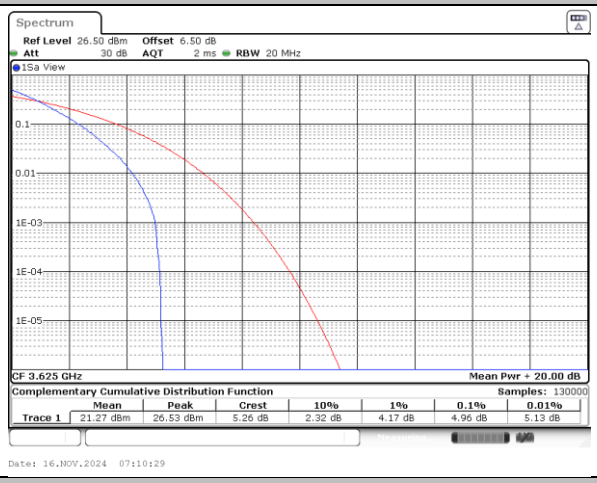
LTE Band 48

Peak-to-Average Ratio

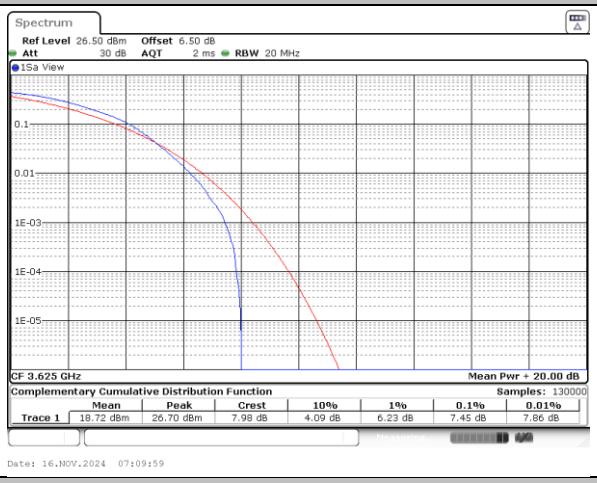
Mode	LTE Band 48 / 20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB				Result
Middle CH	4.96	7.45	6.41	6.46	PASS

LTE Band 48 / 20MHz / Full RB / Middle Channel

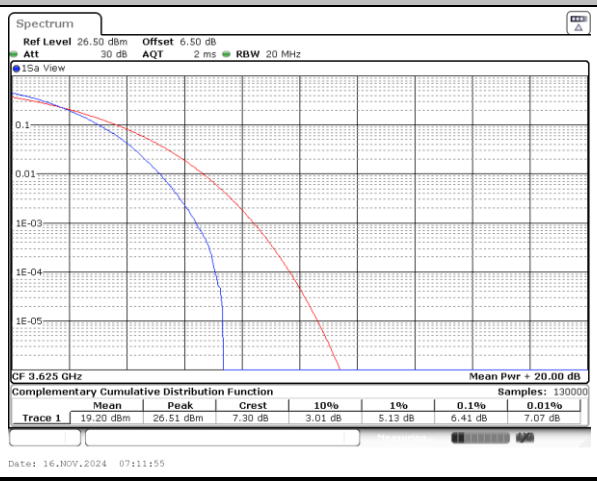
QPSK



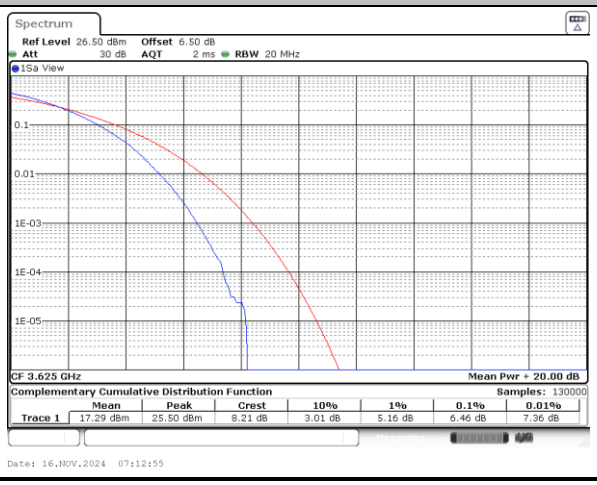
16QAM



64QAM

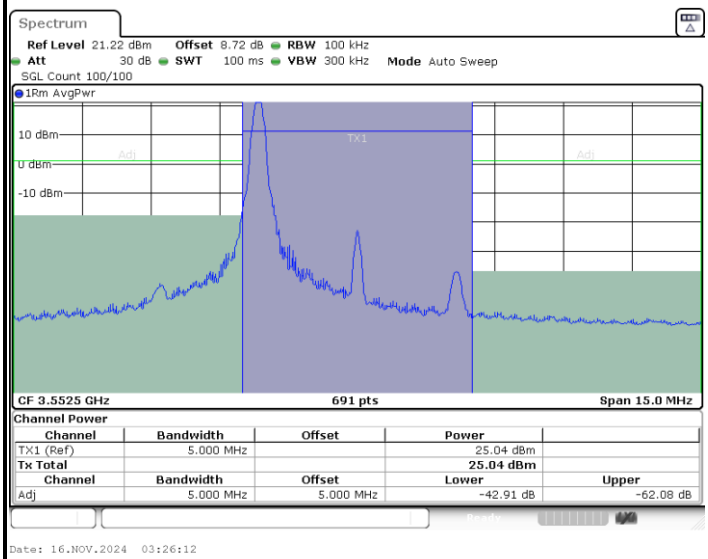


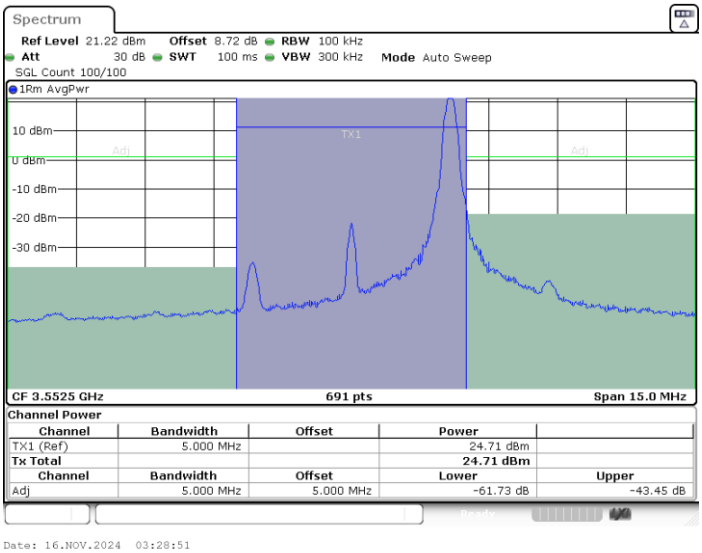
256QAM



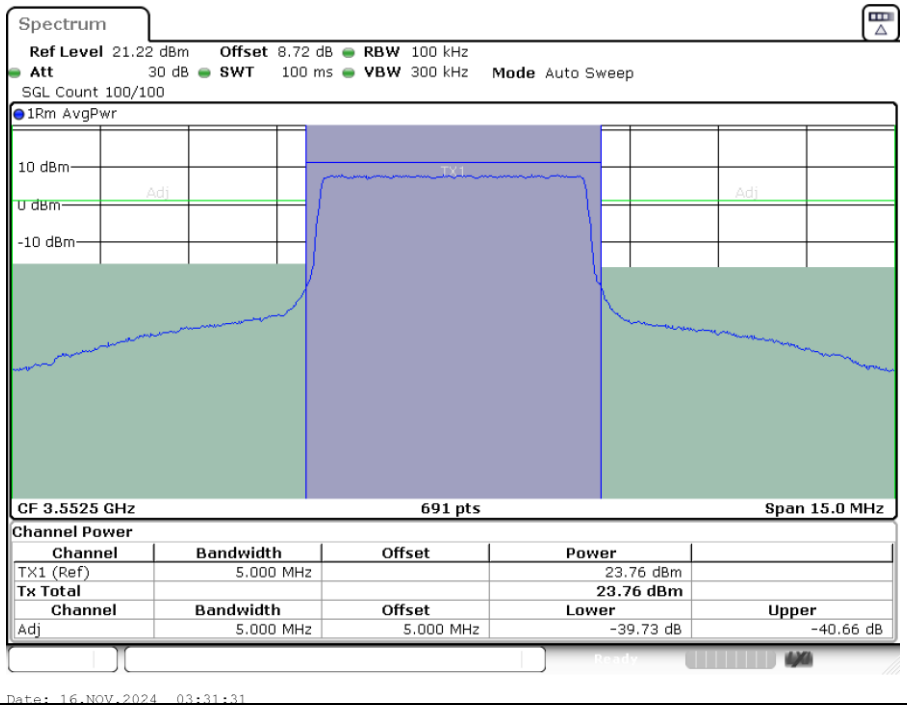
ACLR

LTE Band 48 / 5MHz	
QPSK	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

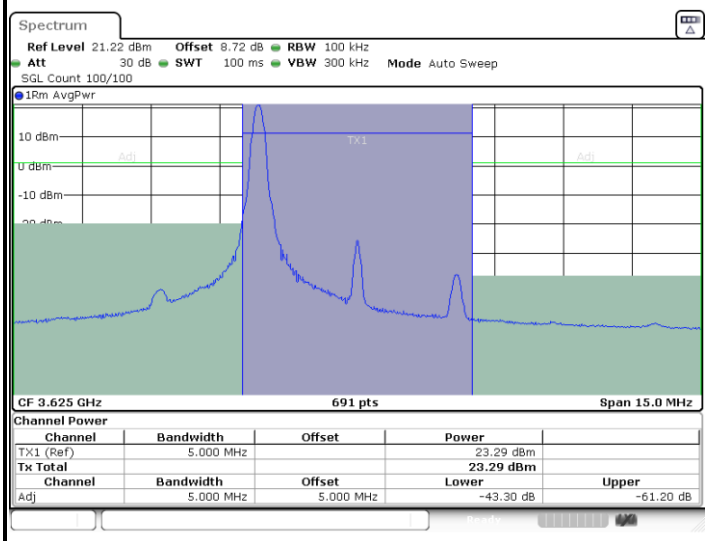


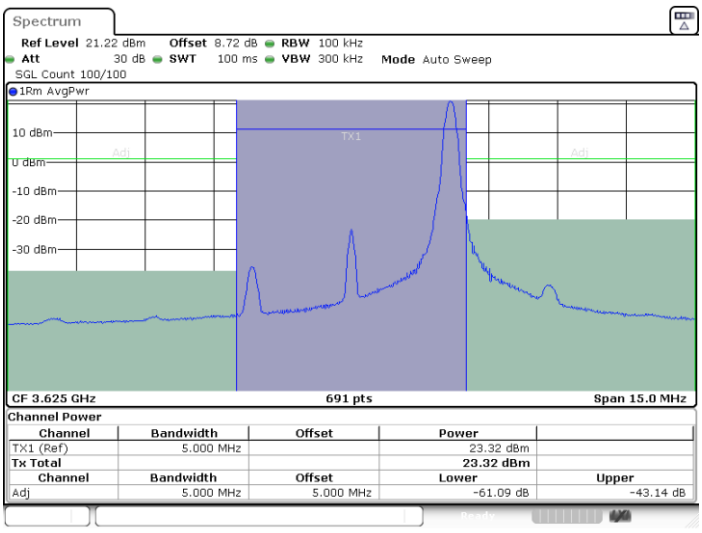


Lowest Channel / FullRB

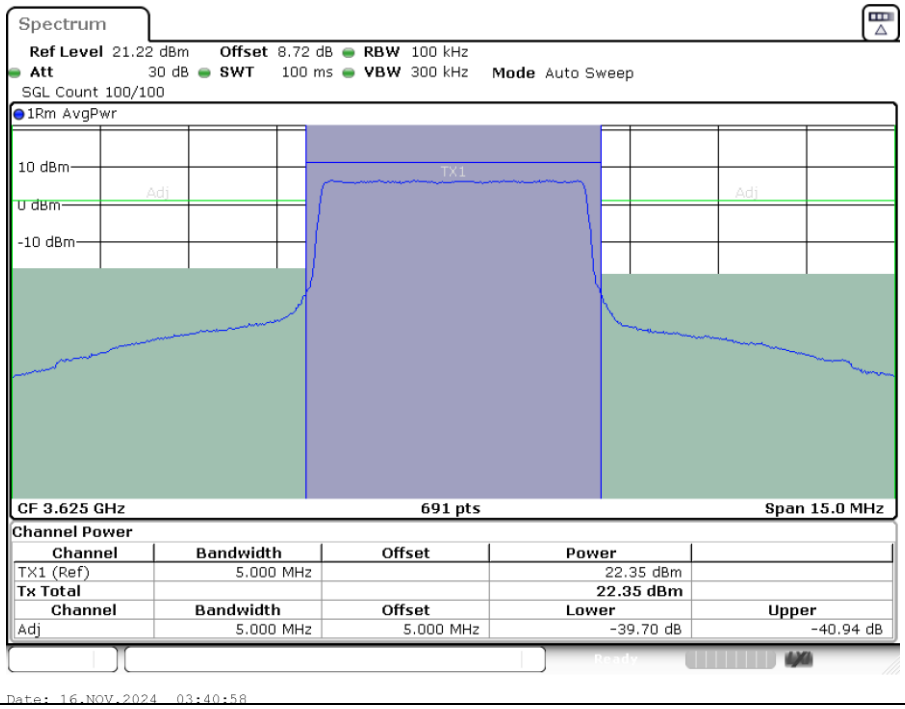


LTE Band 48 / 5MHz	
QPSK	
Middle Channel / 1RB0	Middle Channel / 1RBmax

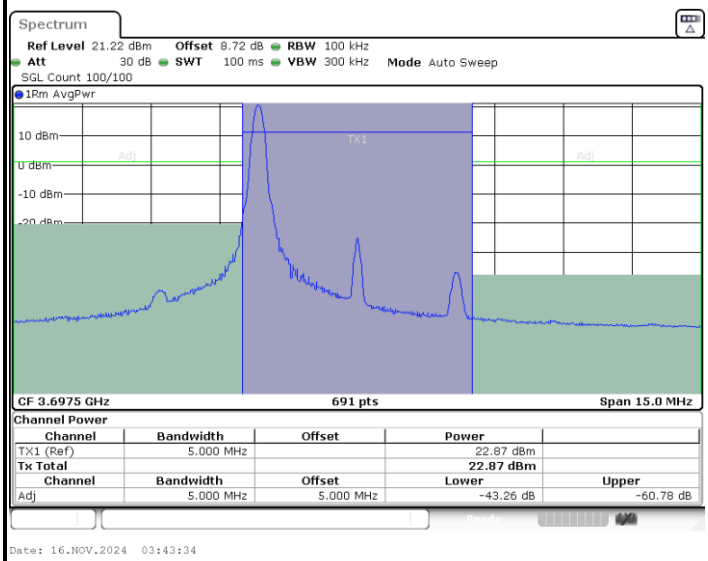


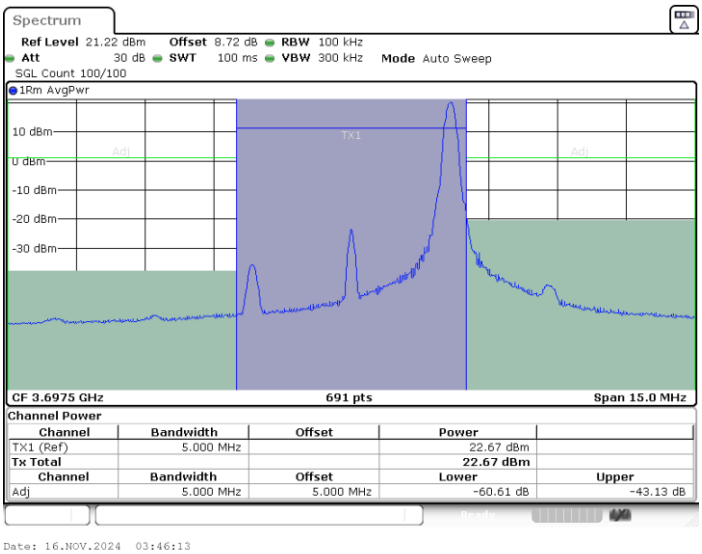


Middle Channel / FullRB

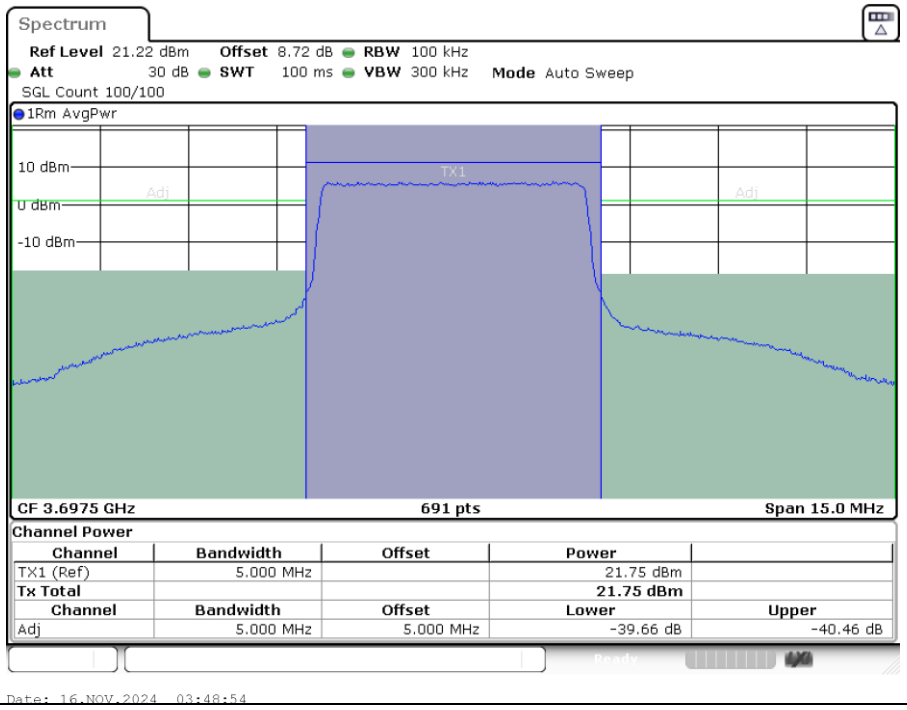


LTE Band 48 / 5MHz	
QPSK	
Highest Channel / 1RB0	Highest Channel / 1RBmax

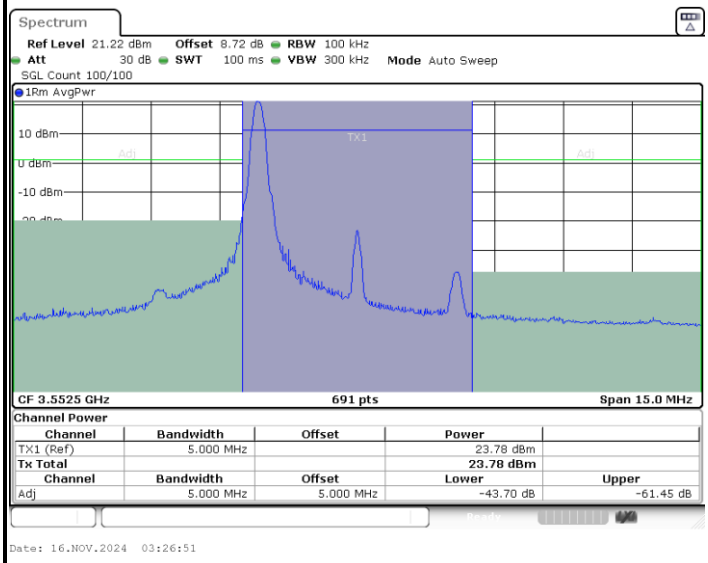


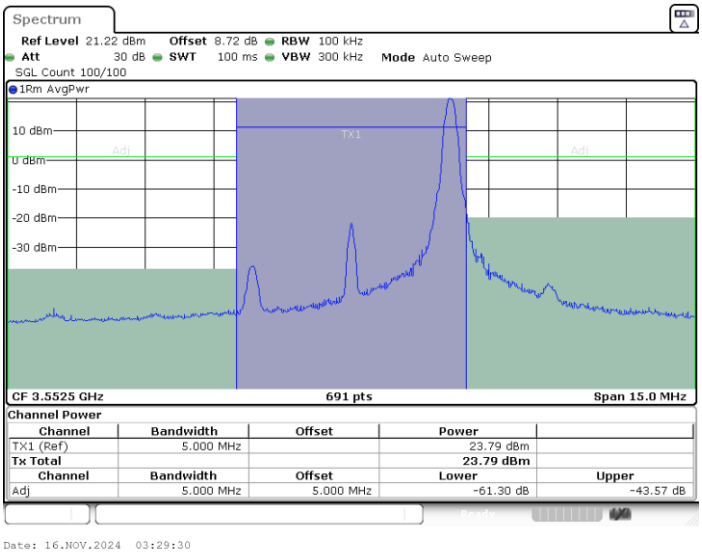


Highest Channel / FullRB

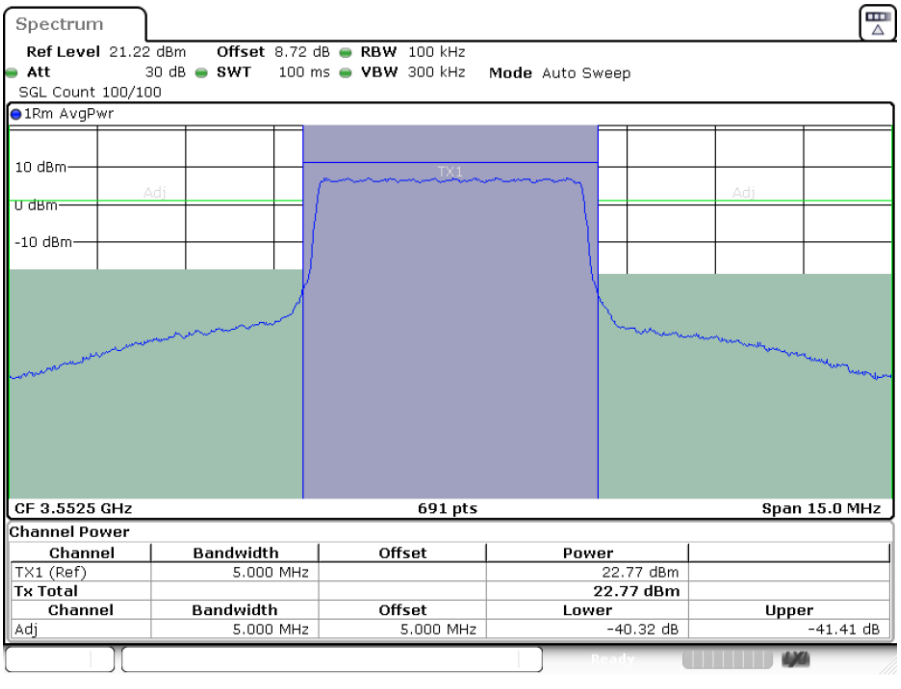


LTE Band 48 / 5MHz	
16QAM	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

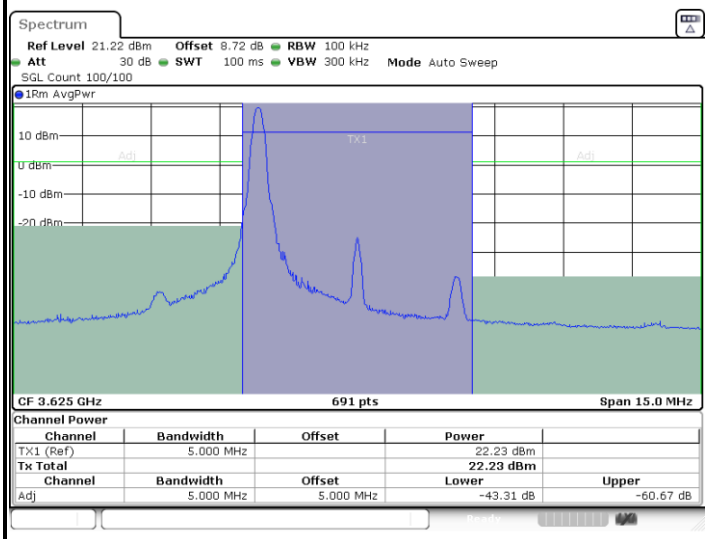


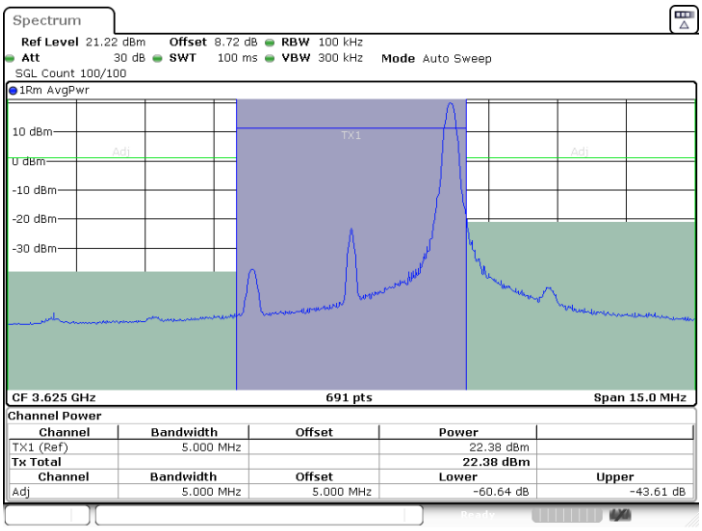


Lowest Channel / FullRB

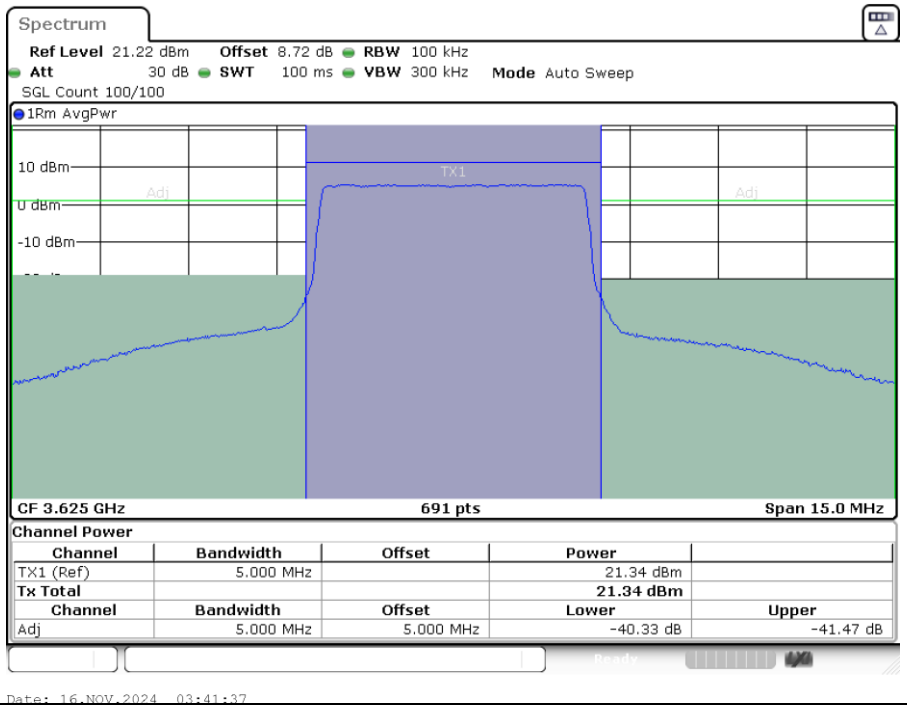


LTE Band 48 / 5MHz	
16QAM	
Middle Channel / 1RB0	Middle Channel / 1RBmax

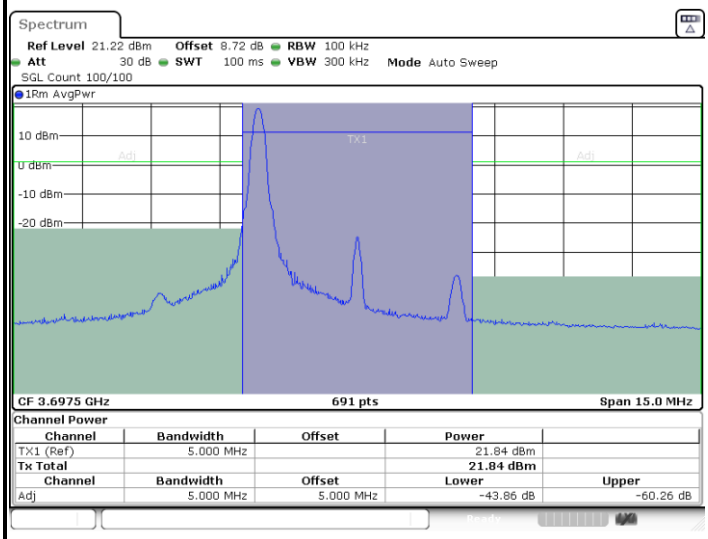


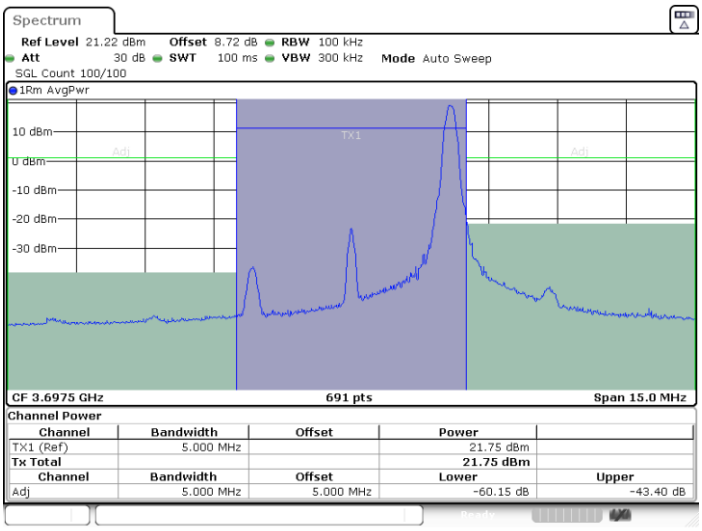


Middle Channel / FullRB

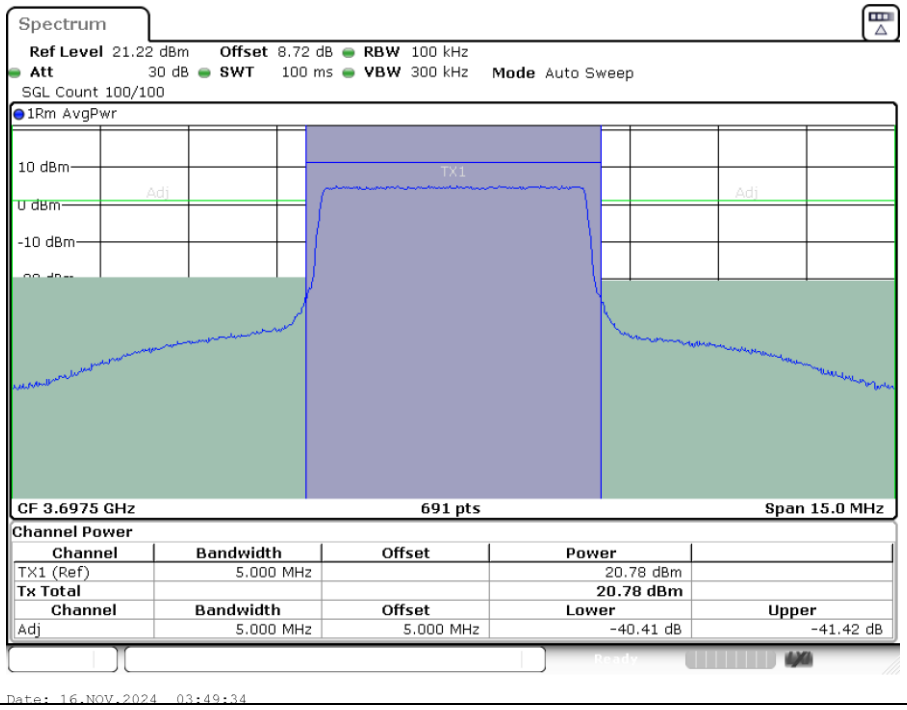


LTE Band 48 / 5MHz	
16QAM	
Highest Channel / 1RB0	Highest Channel / 1RBmax

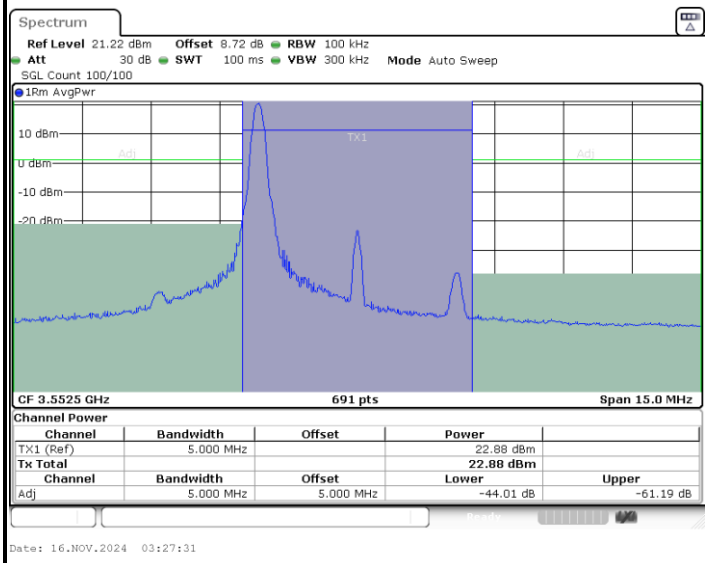


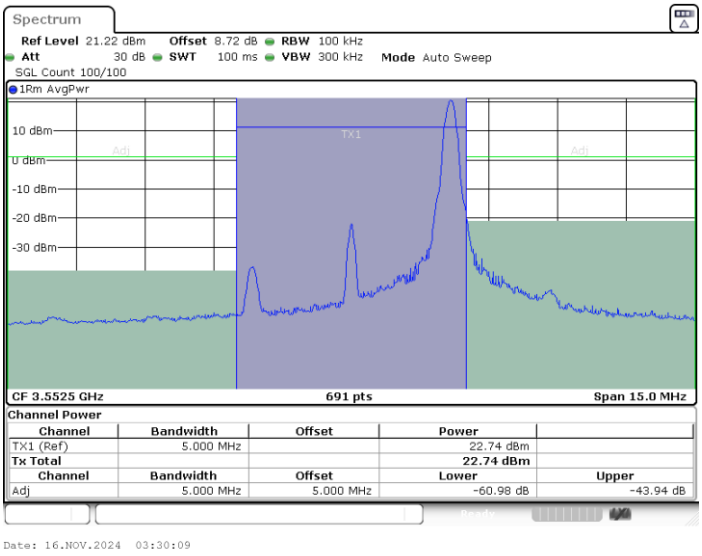


Highest Channel / FullRB

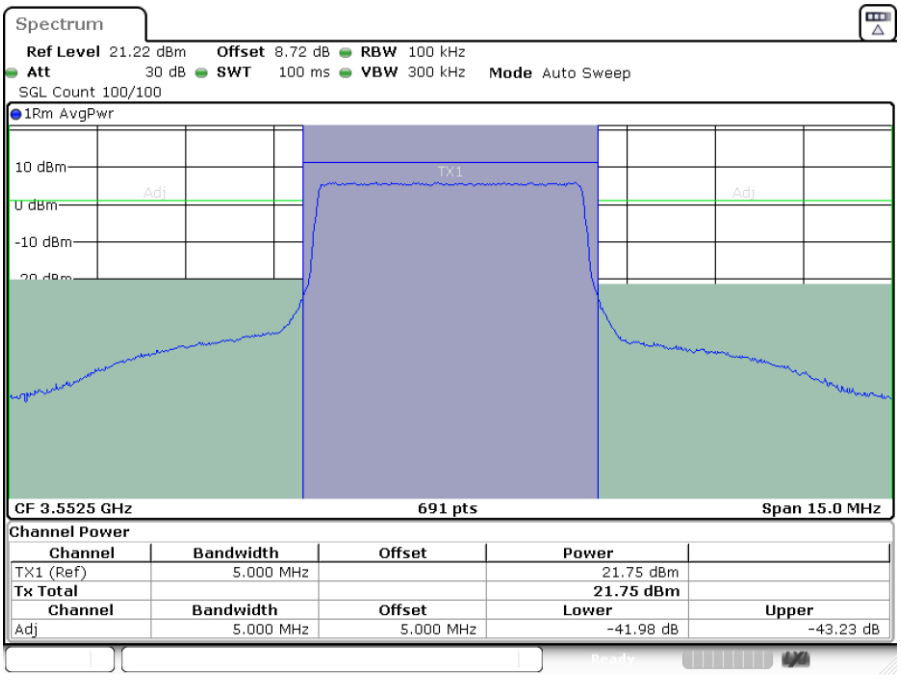


LTE Band 48 / 5MHz	
64QAM	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

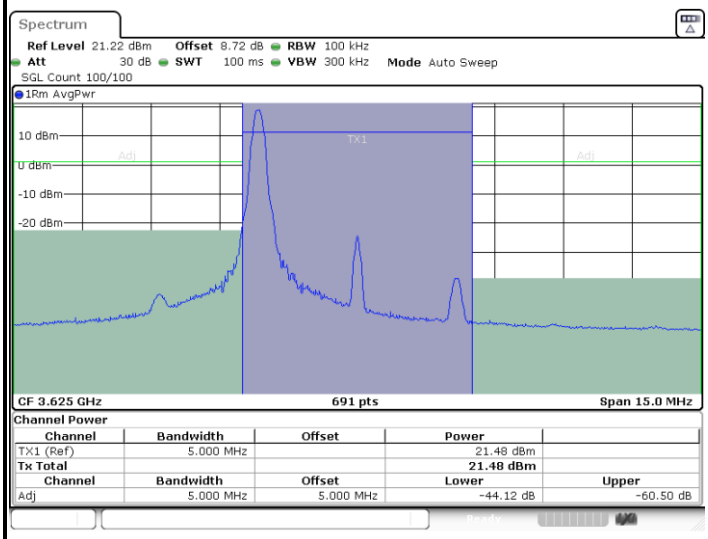


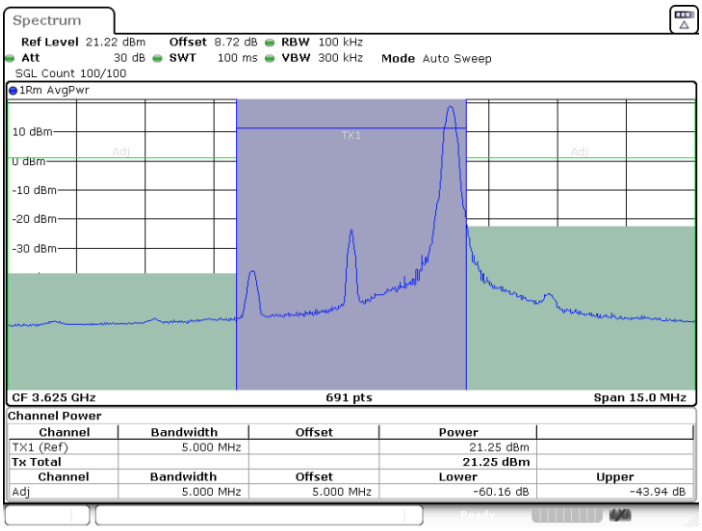


Lowest Channel / FullRB

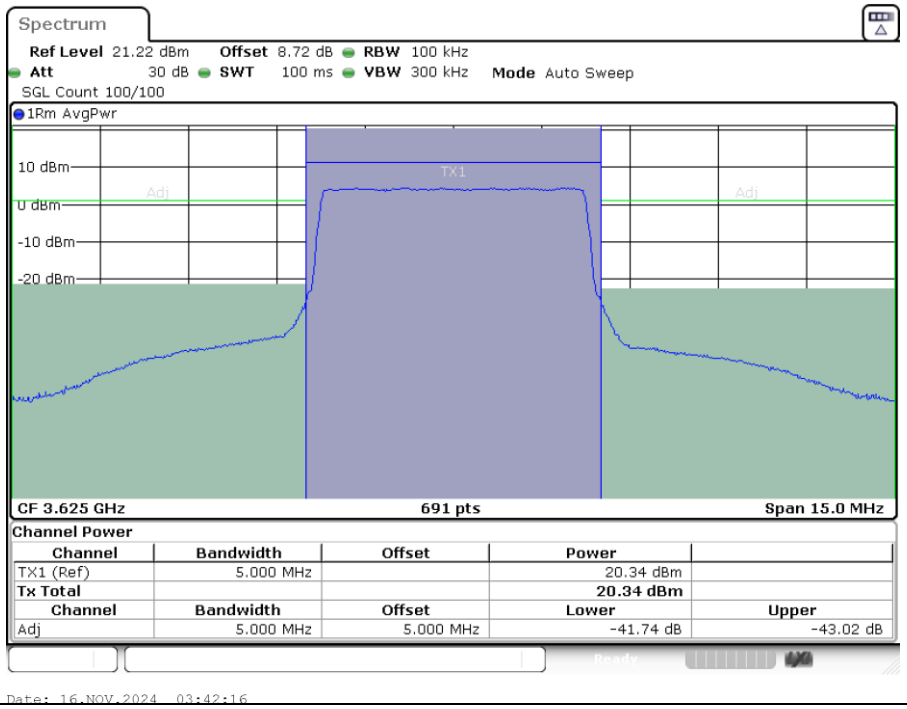


LTE Band 48 / 5MHz	
64QAM	
Middle Channel / 1RB0	Middle Channel / 1RBmax

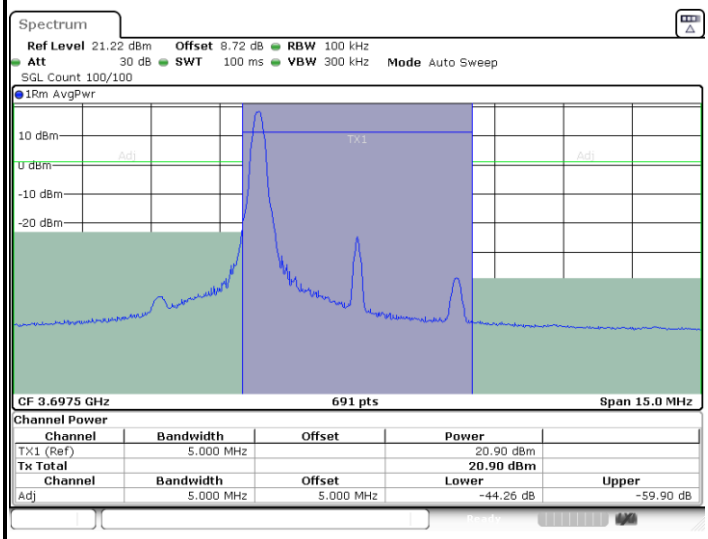


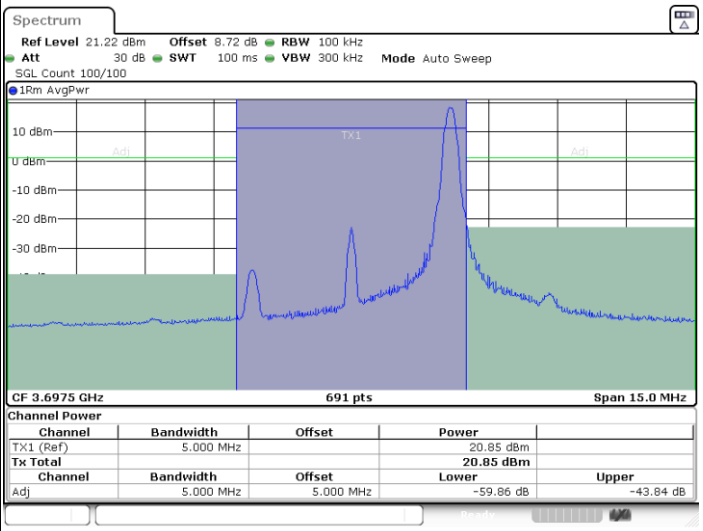


Middle Channel / FullRB

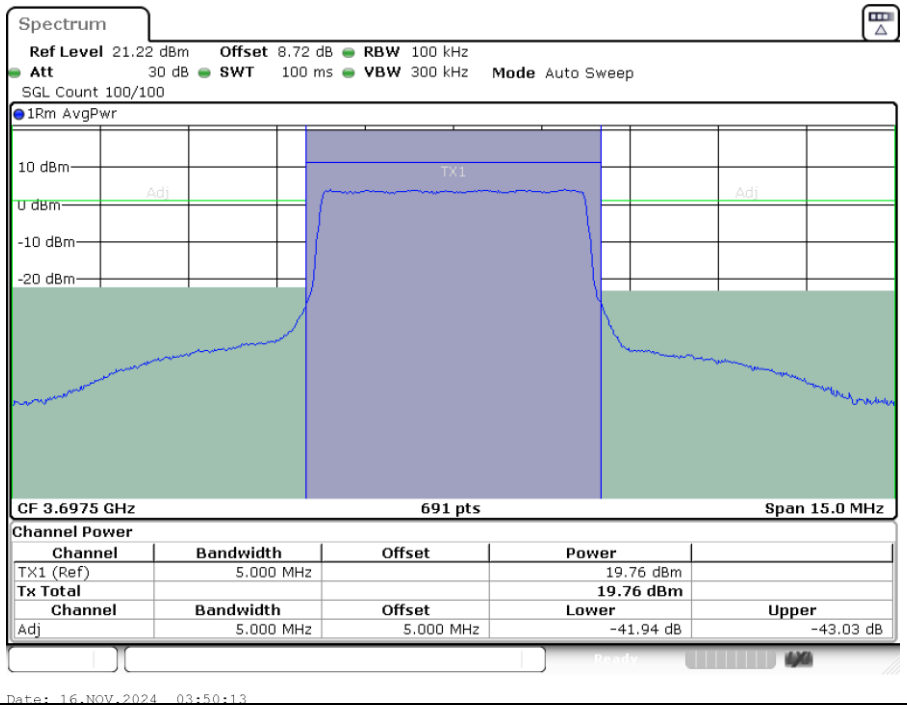


LTE Band 48 / 5MHz	
64QAM	
Highest Channel / 1RB0	Highest Channel / 1RBmax

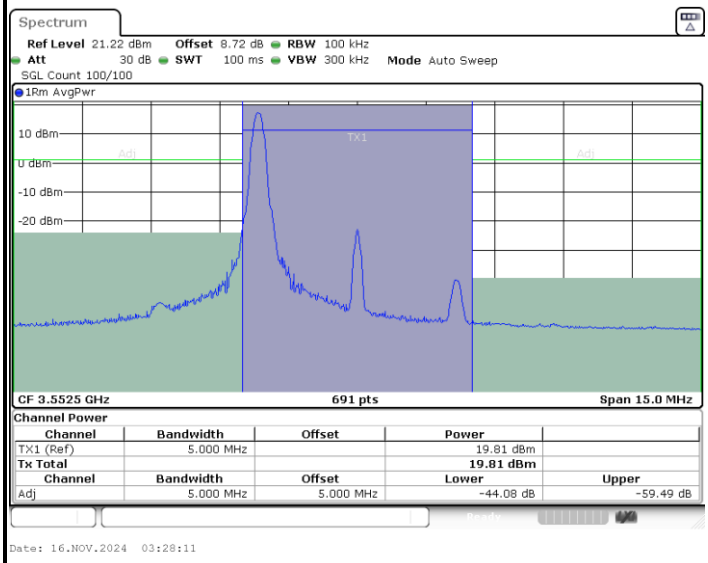


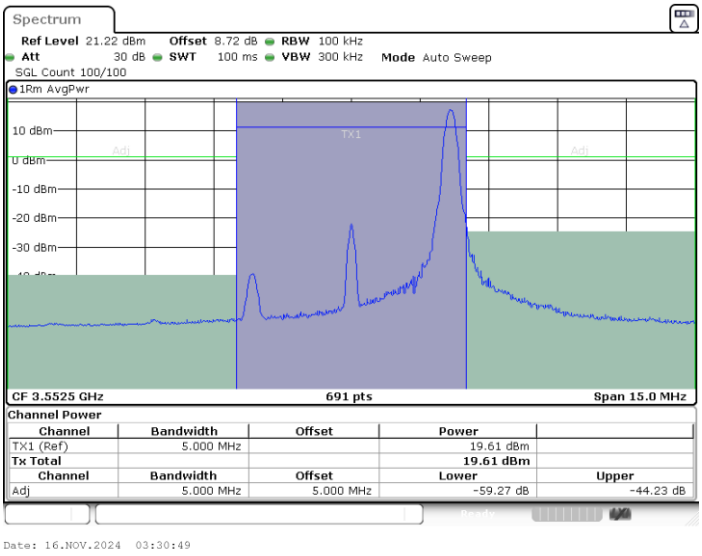


Highest Channel / FullRB

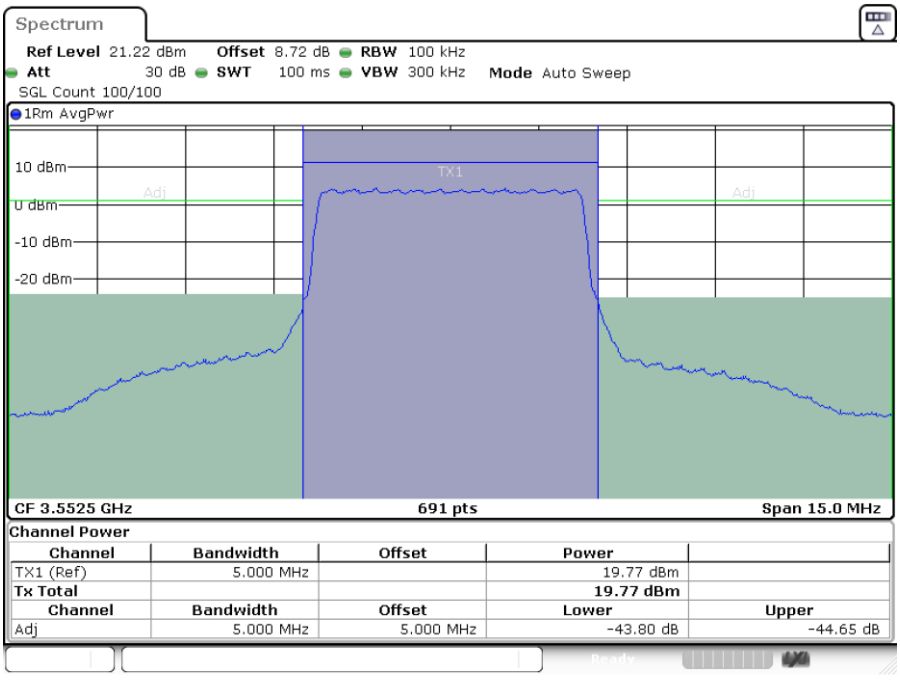


LTE Band 48 / 5MHz	
256QAM	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

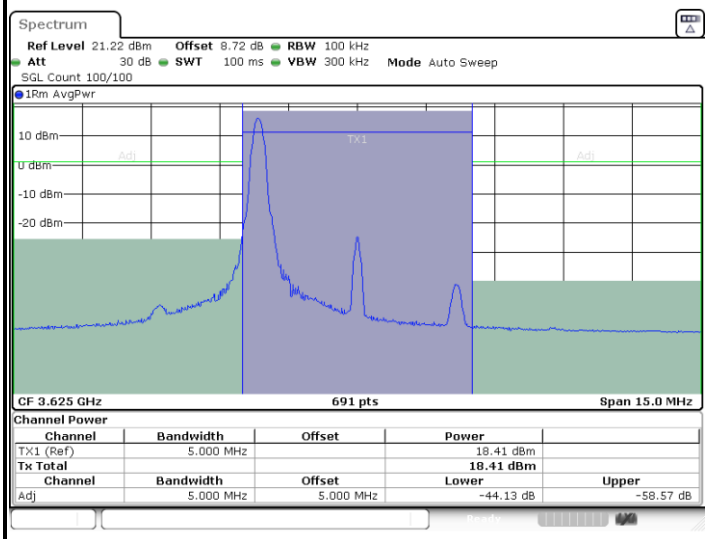


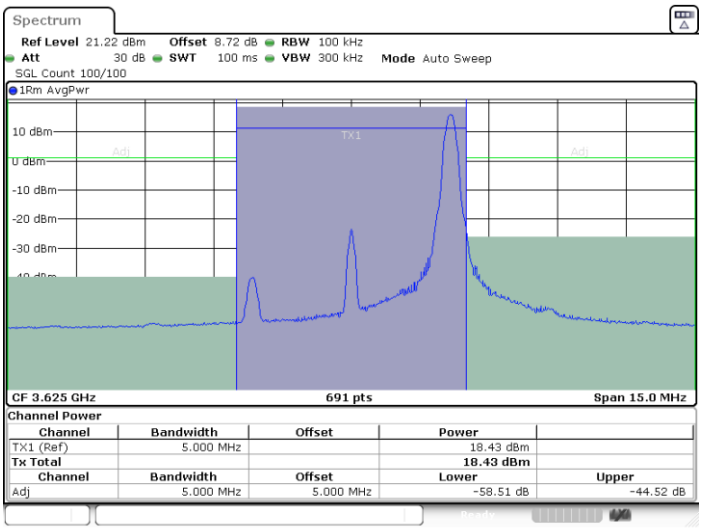


Lowest Channel / FullRB

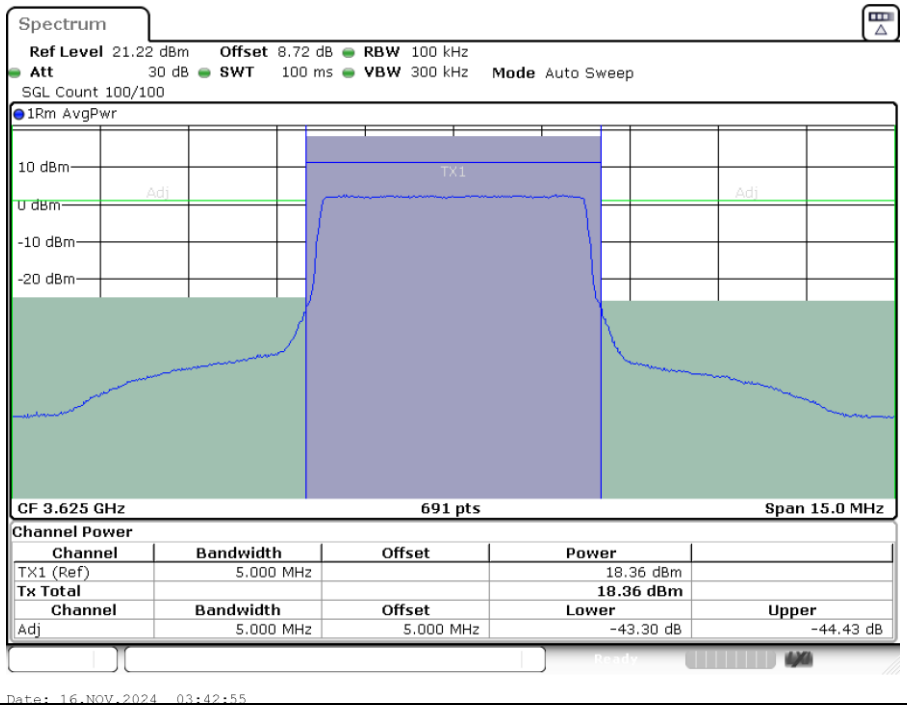


LTE Band 48 / 5MHz	
256QAM	
Middle Channel / 1RB0	Middle Channel / 1RBmax

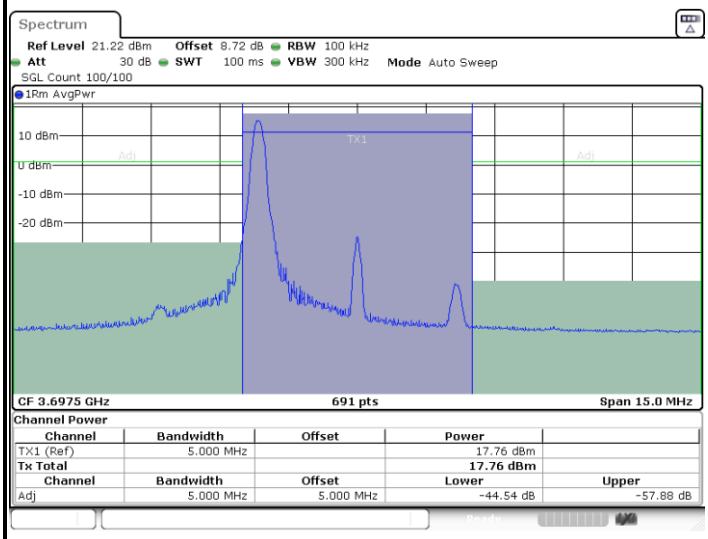


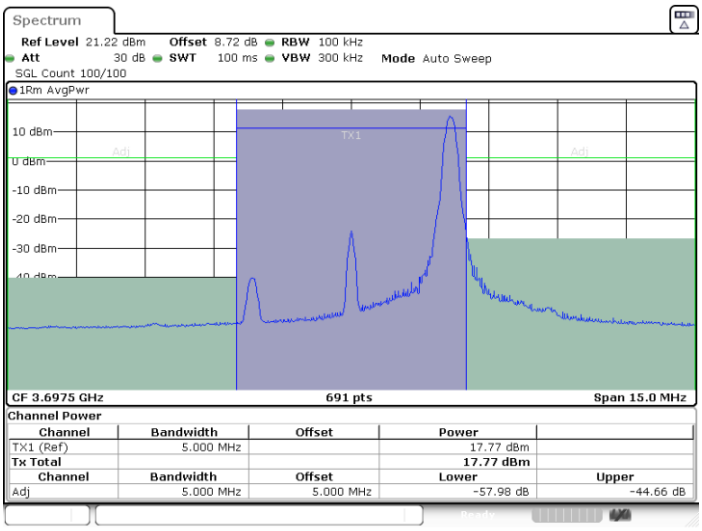


Middle Channel / FullRB

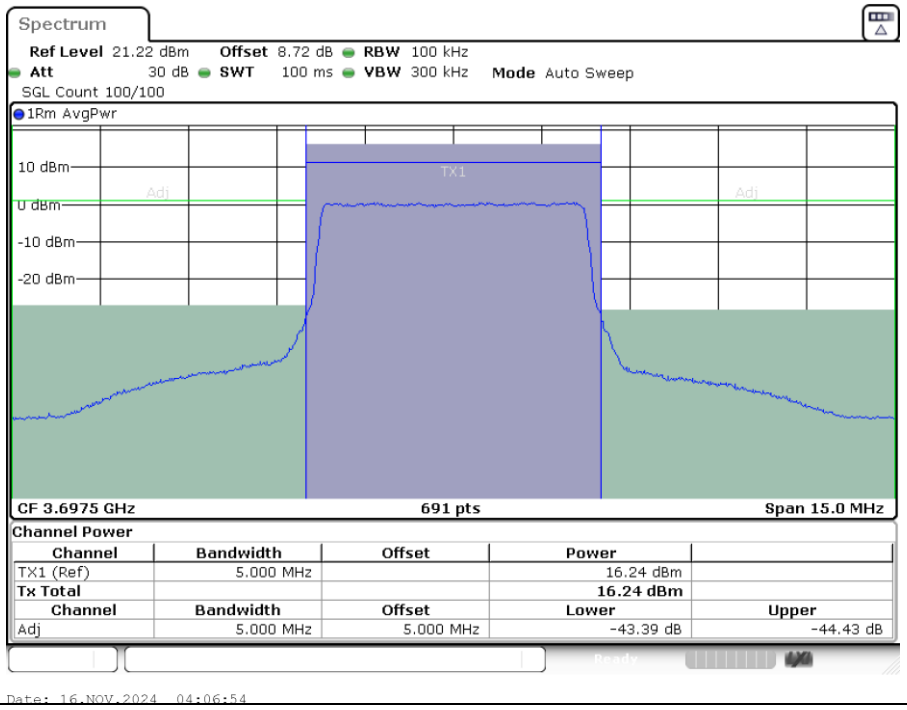


LTE Band 48 / 5MHz	
256QAM	
Highest Channel / 1RB0	Highest Channel / 1RBmax

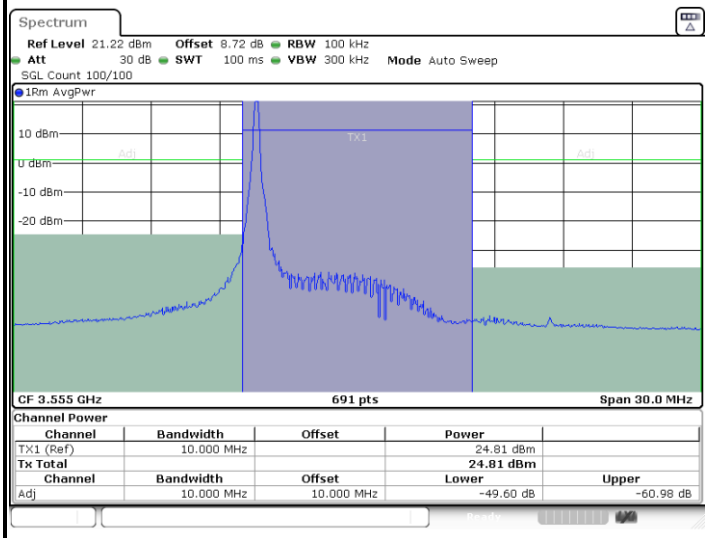


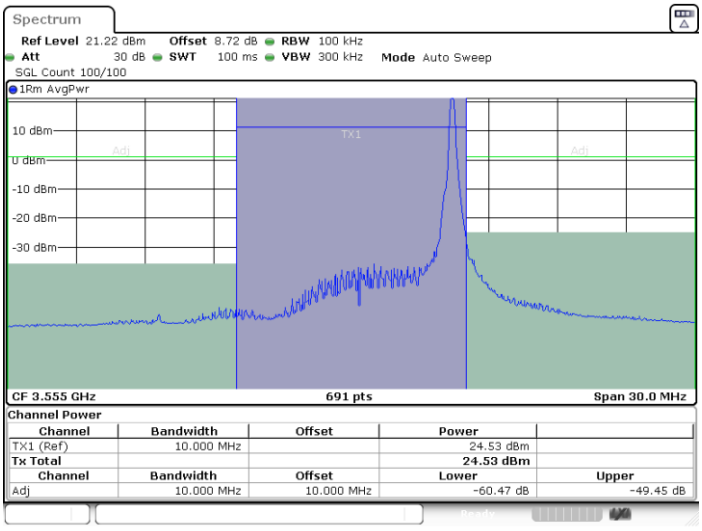


Highest Channel / FullRB

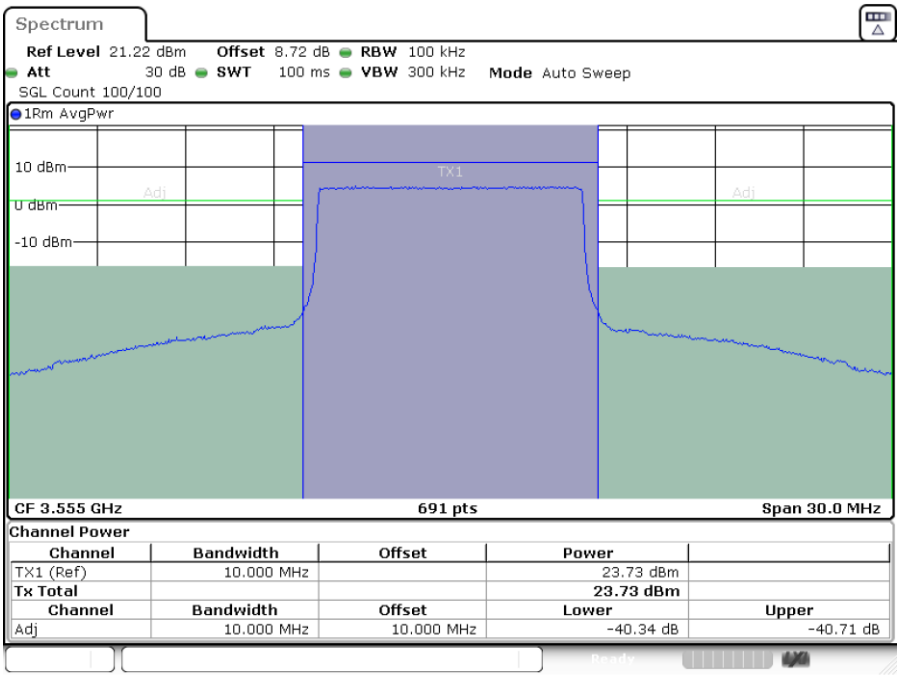


LTE Band 48 / 10MHz	
QPSK	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

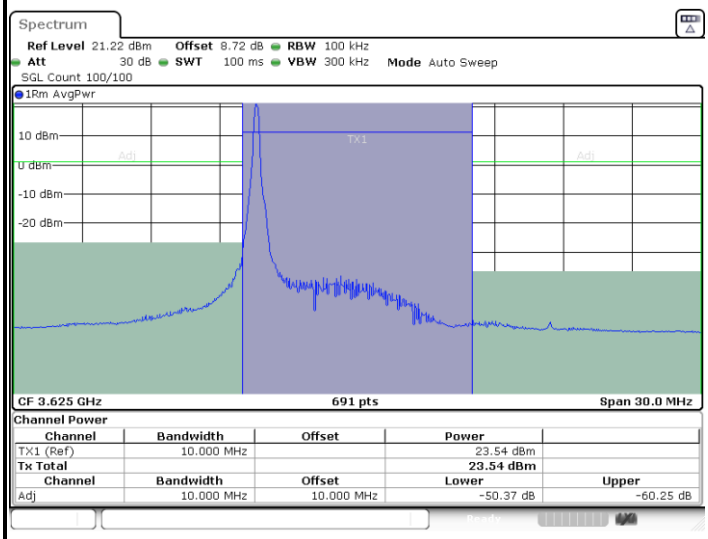


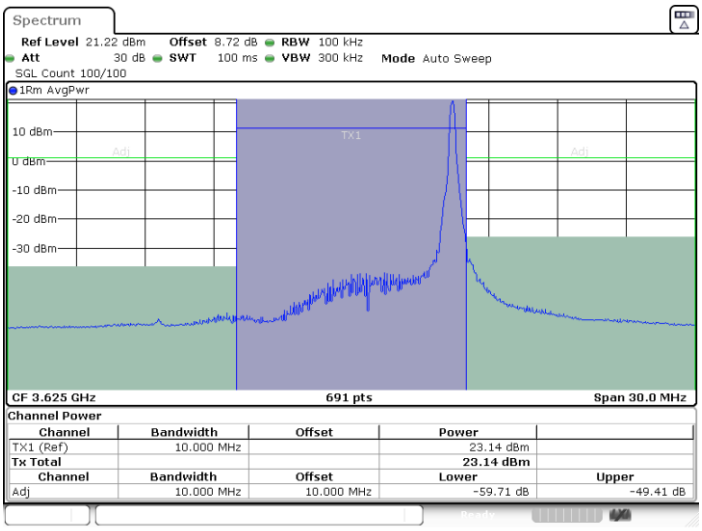


Lowest Channel / FullRB

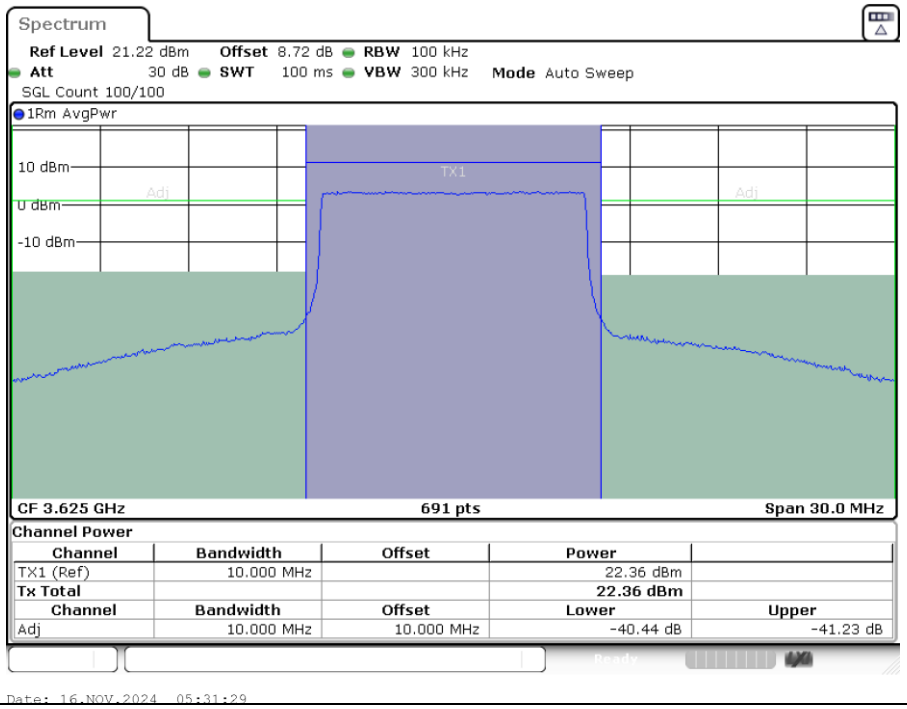


LTE Band 48 / 10MHz	
QPSK	
Middle Channel / 1RB0	Middle Channel / 1RBmax

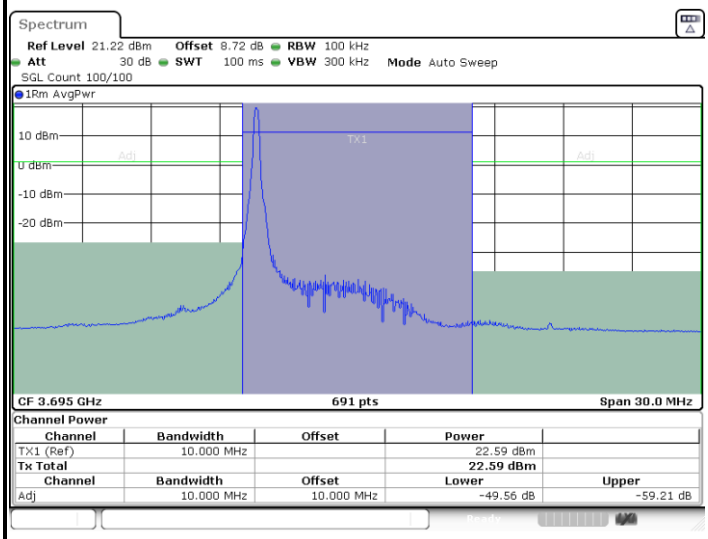


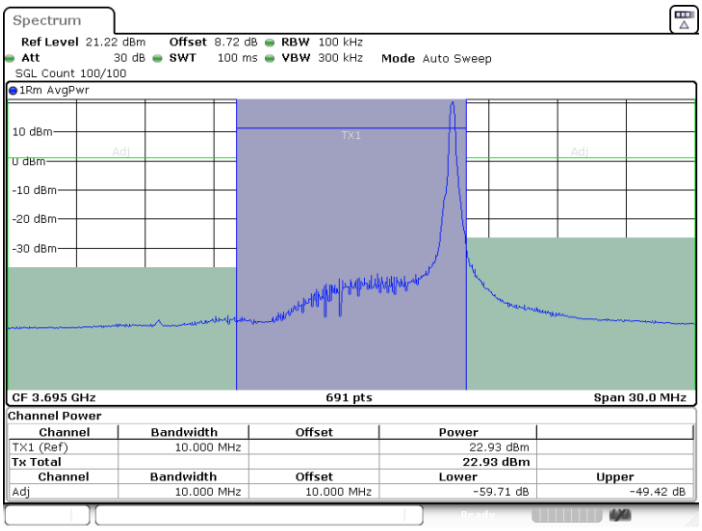


Middle Channel / FullRB

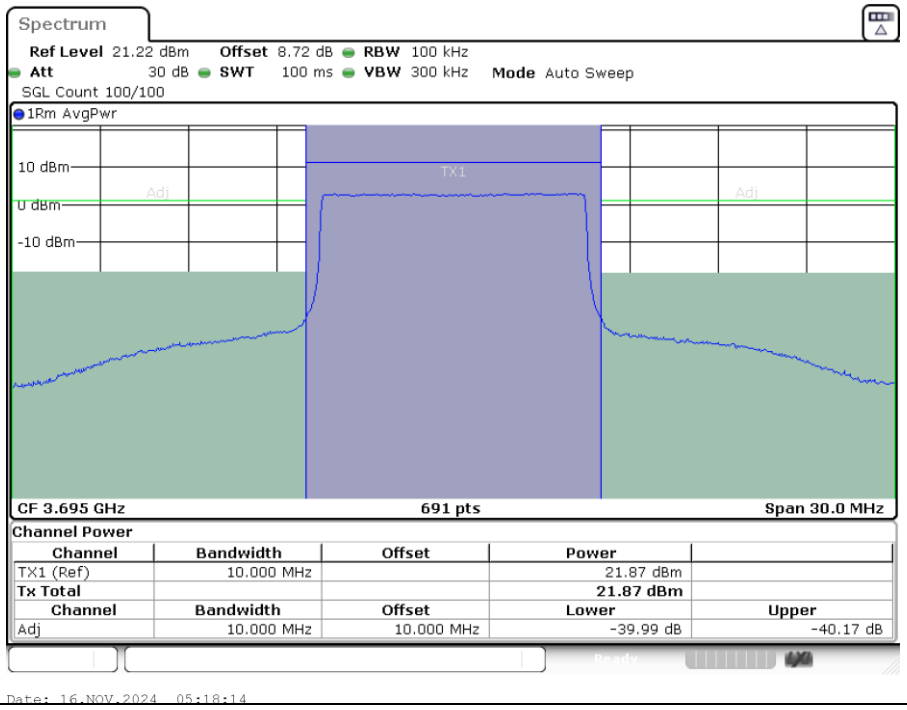


LTE Band 48 / 10MHz	
QPSK	
Highest Channel / 1RB0	Highest Channel / 1RBmax

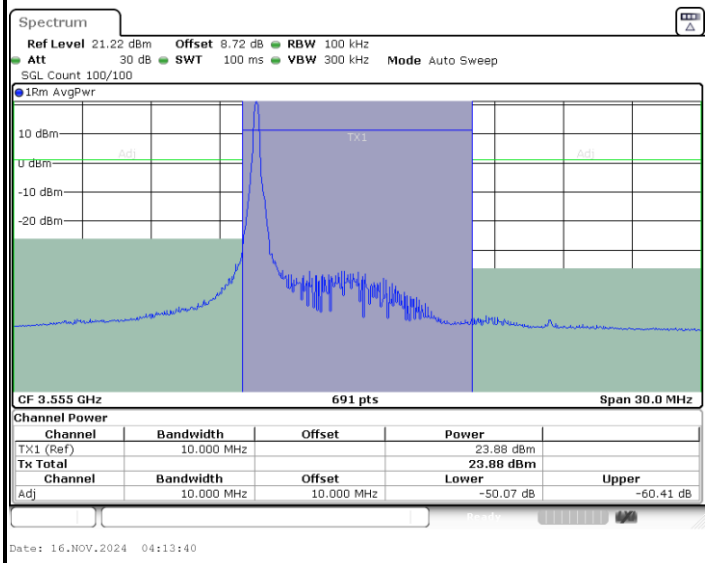


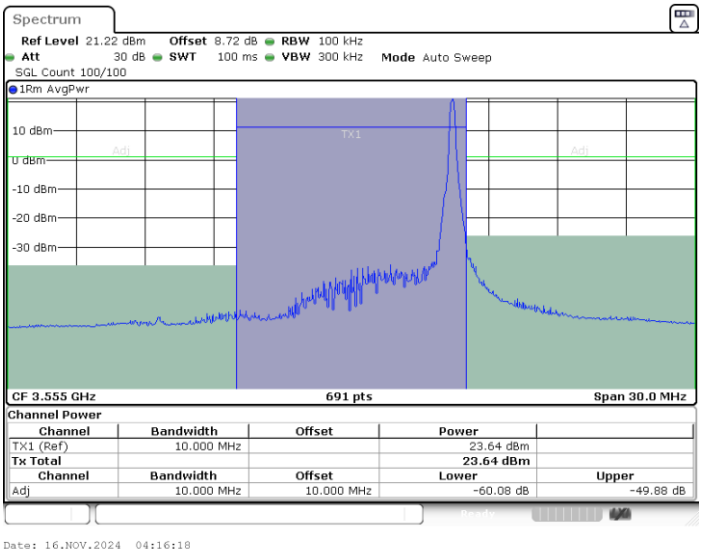


Highest Channel / FullRB

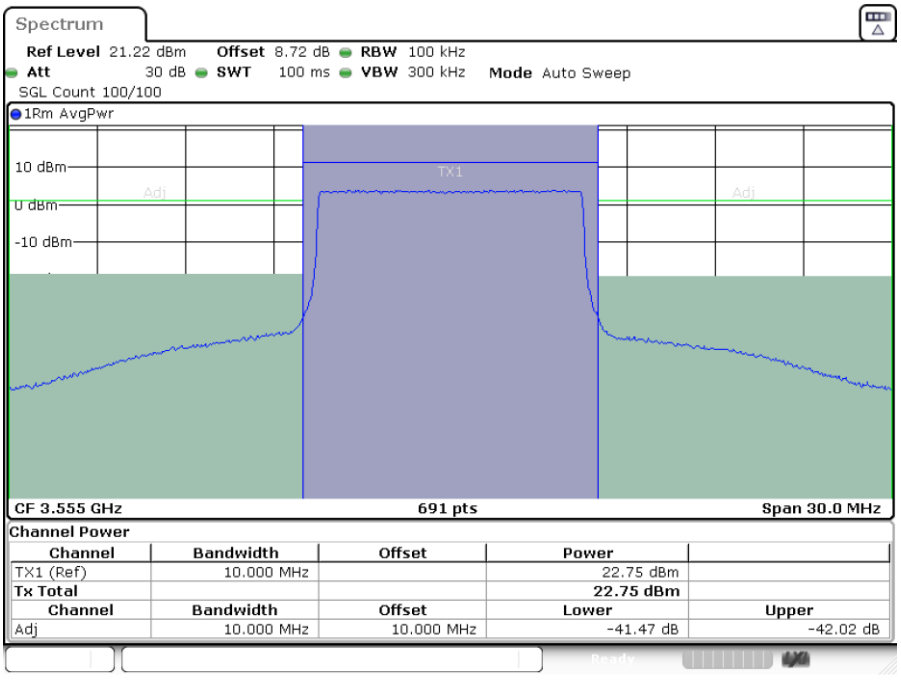


LTE Band 48 / 10MHz	
16QAM	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

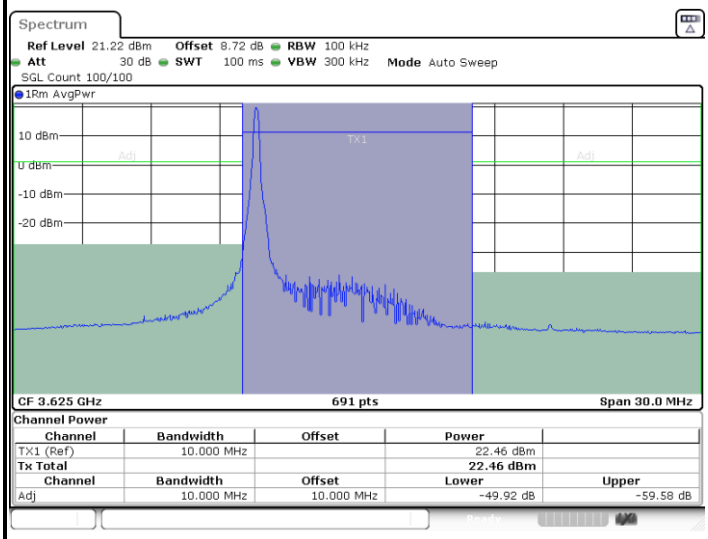


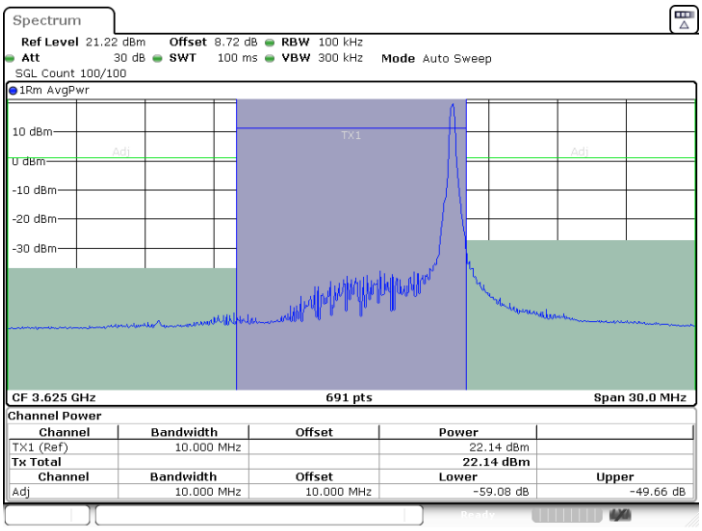


Lowest Channel / FullRB

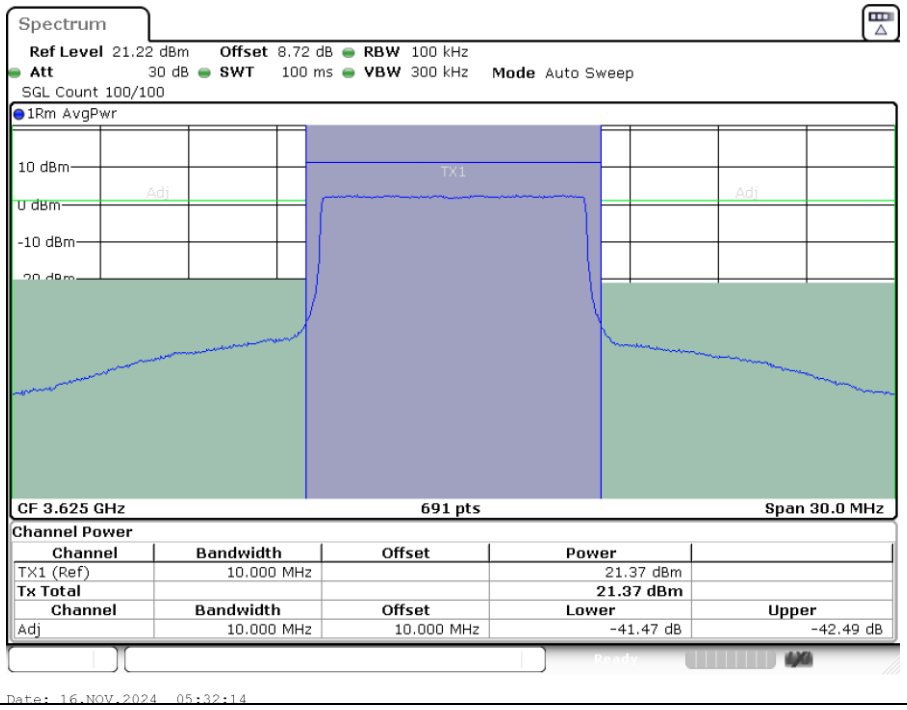


LTE Band 48 / 10MHz	
16QAM	
Middle Channel / 1RB0	Middle Channel / 1RBmax

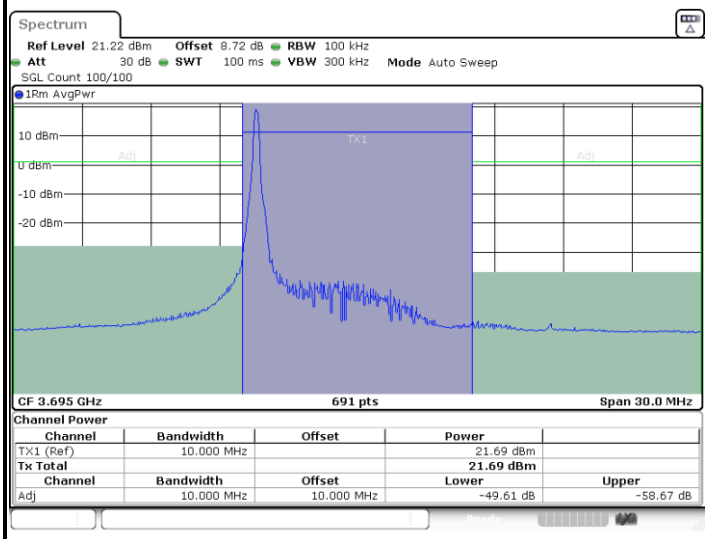


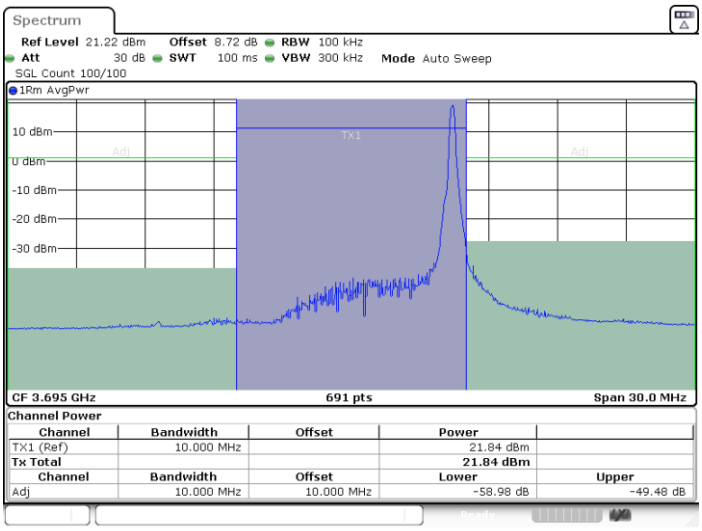


Middle Channel / FullRB

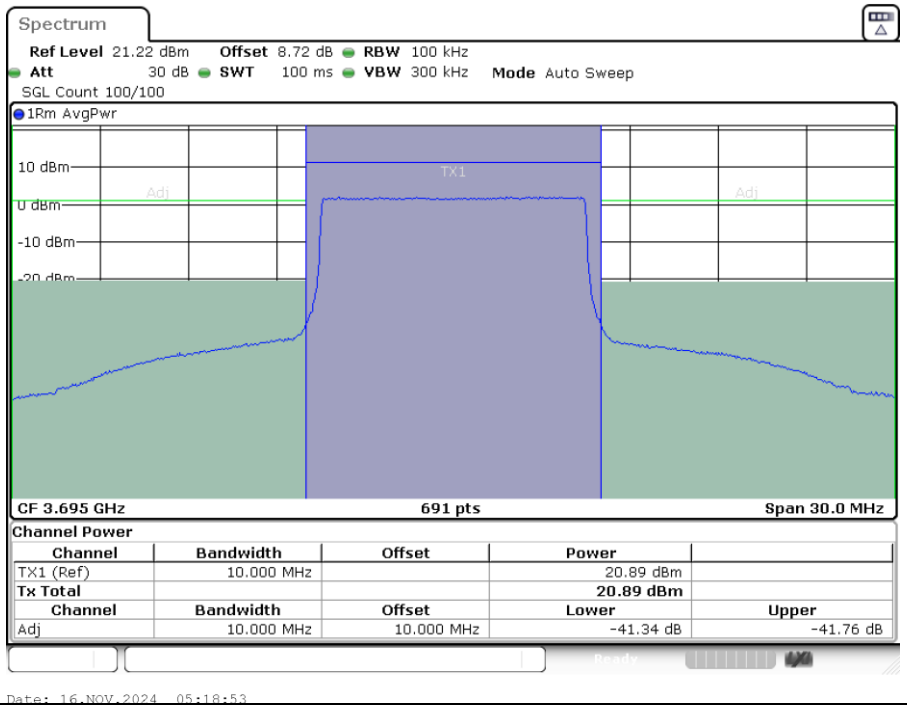


LTE Band 48 / 10MHz	
16QAM	
Highest Channel / 1RB0	Highest Channel / 1RBmax

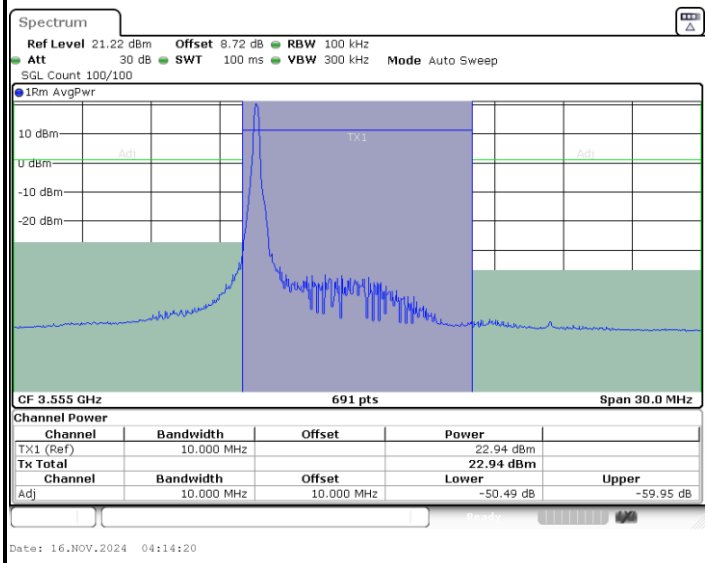


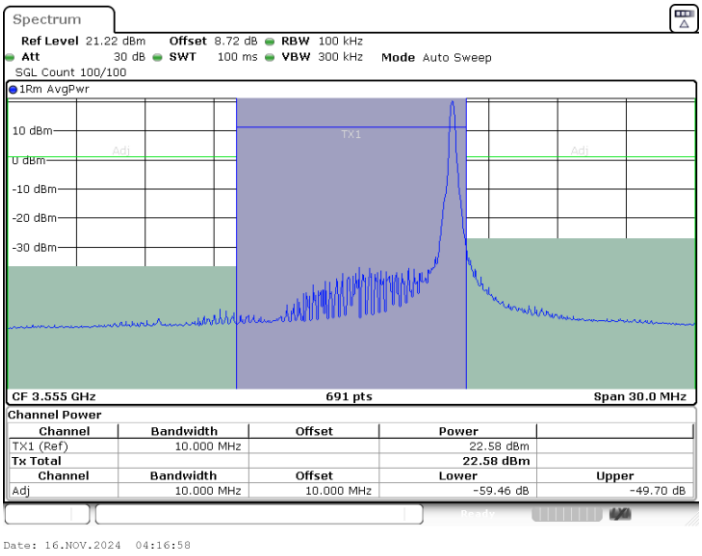


Highest Channel / FullRB

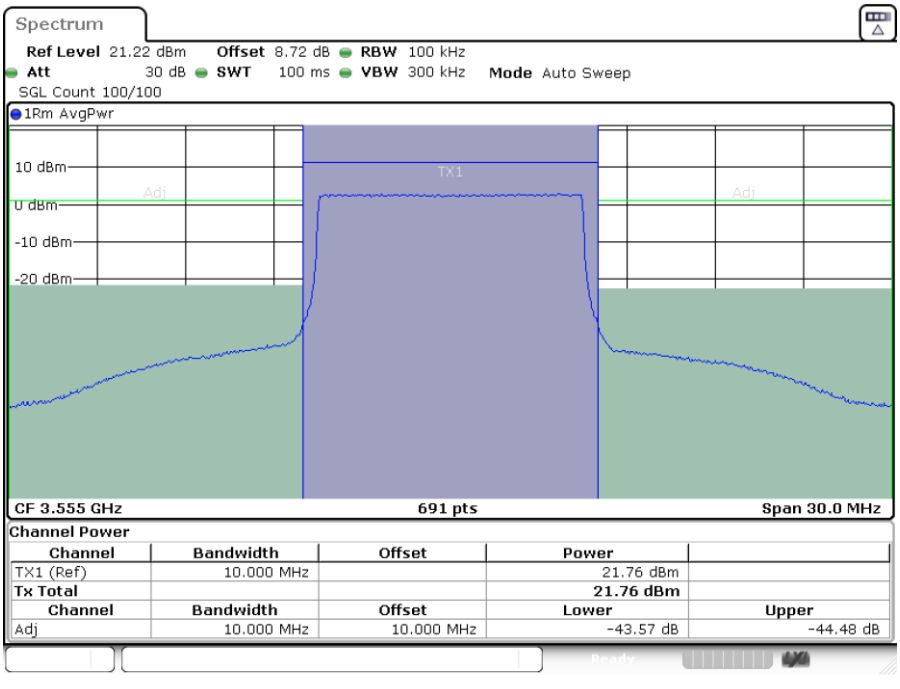


LTE Band 48 / 10MHz	
64QAM	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

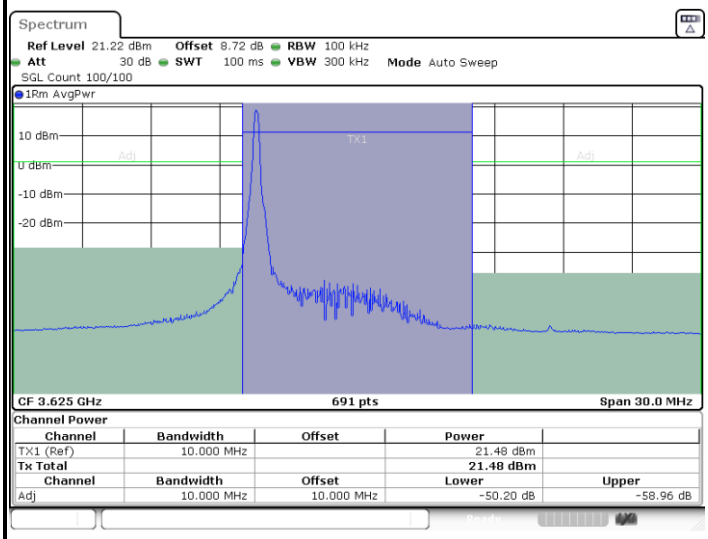


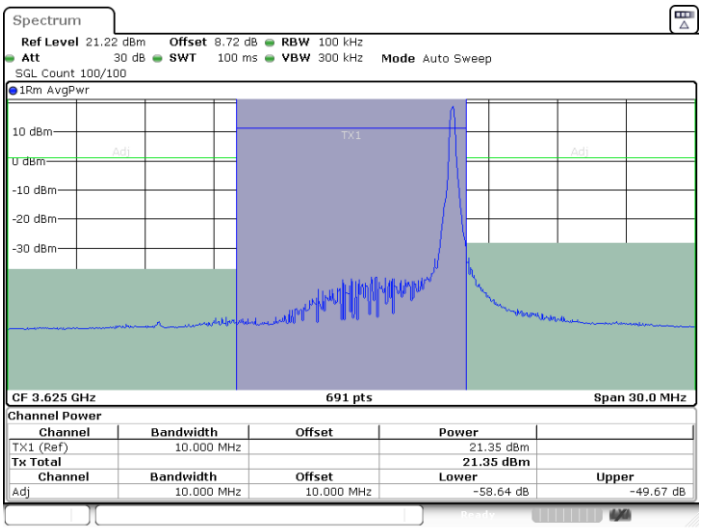


Lowest Channel / FullRB

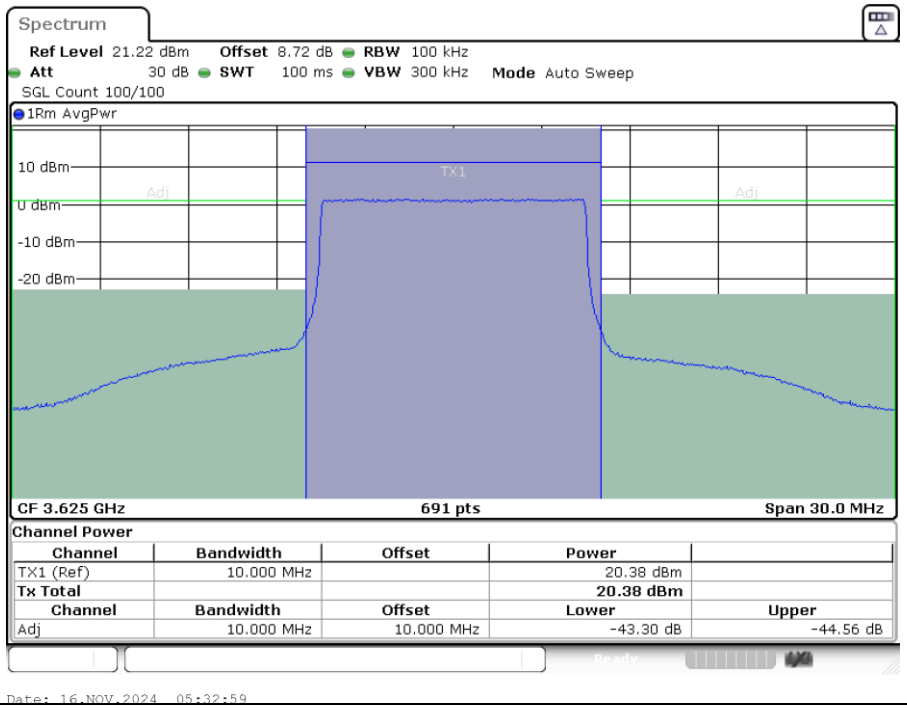


LTE Band 48 / 10MHz	
64QAM	
Middle Channel / 1RB0	Middle Channel / 1RBmax

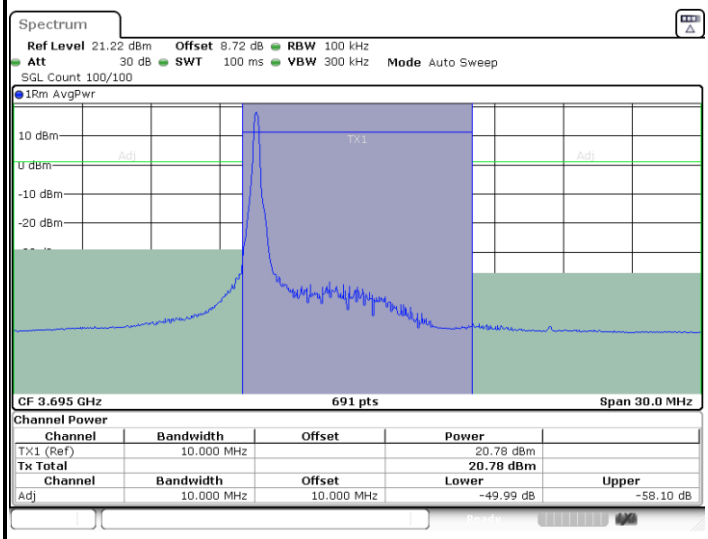


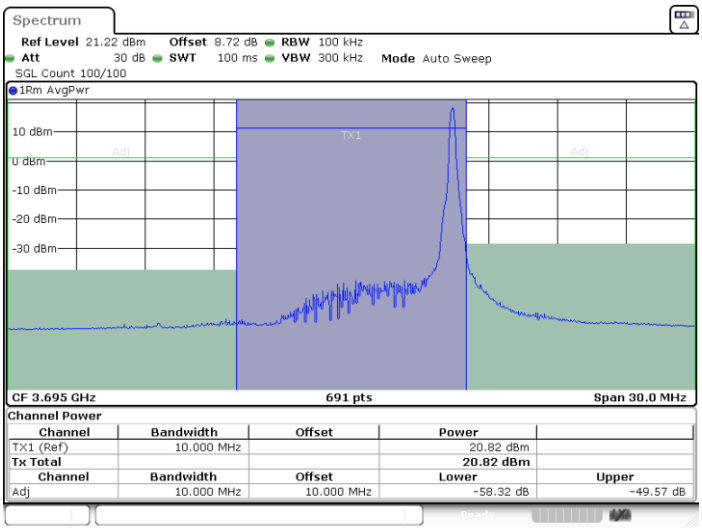


Middle Channel / FullRB

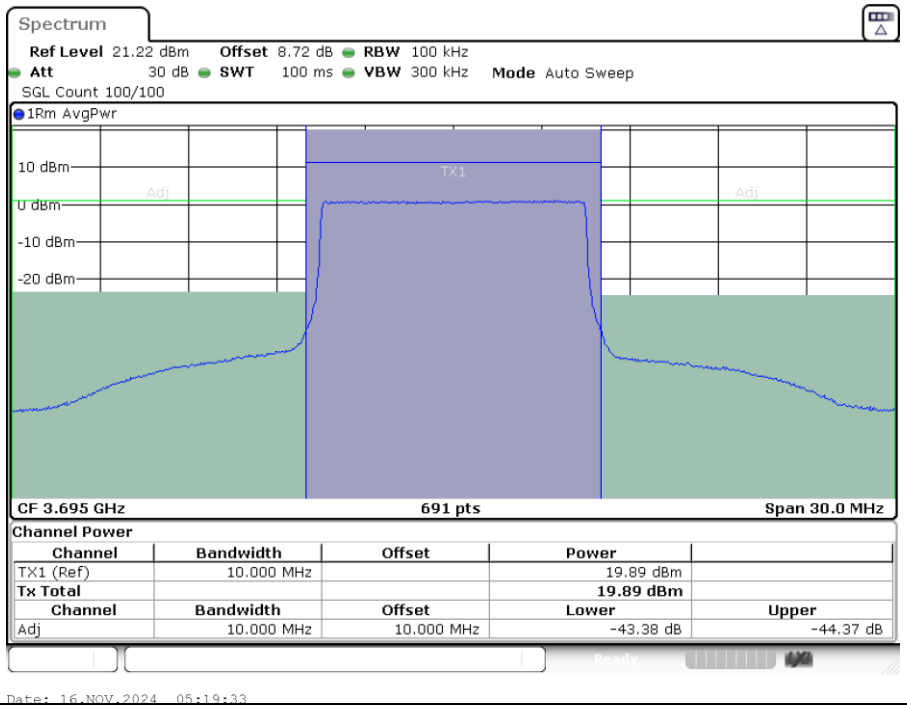


LTE Band 48 / 10MHz	
64QAM	
Highest Channel / 1RB0	Highest Channel / 1RBmax

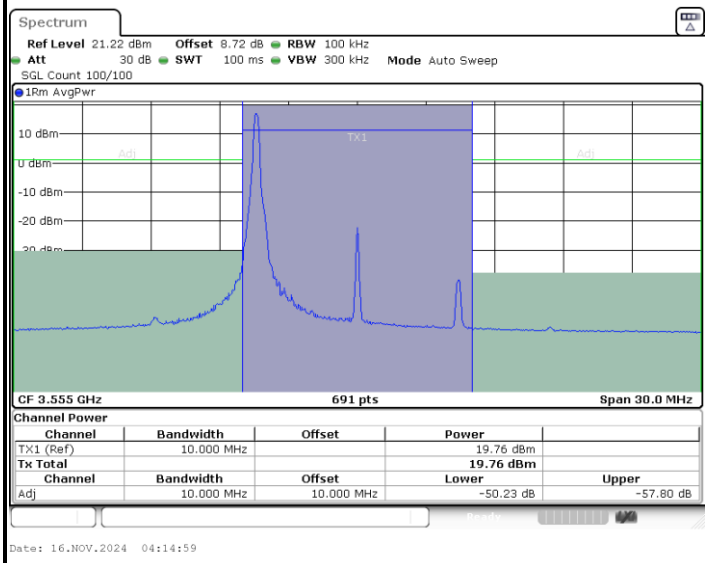


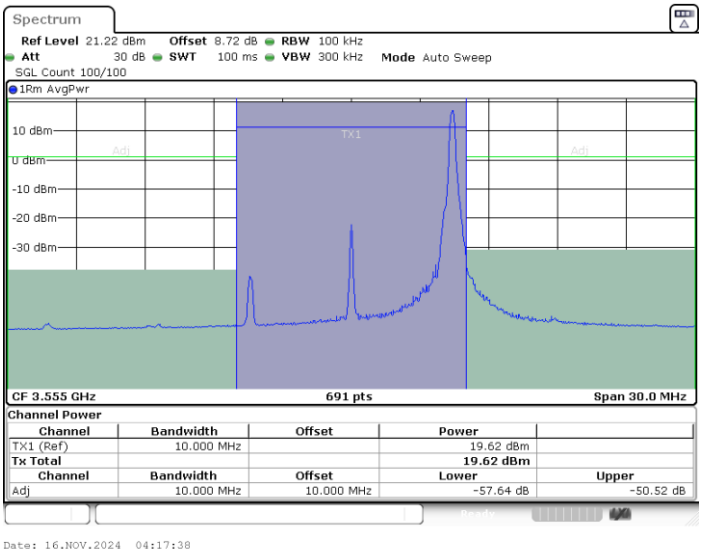


Highest Channel / FullRB

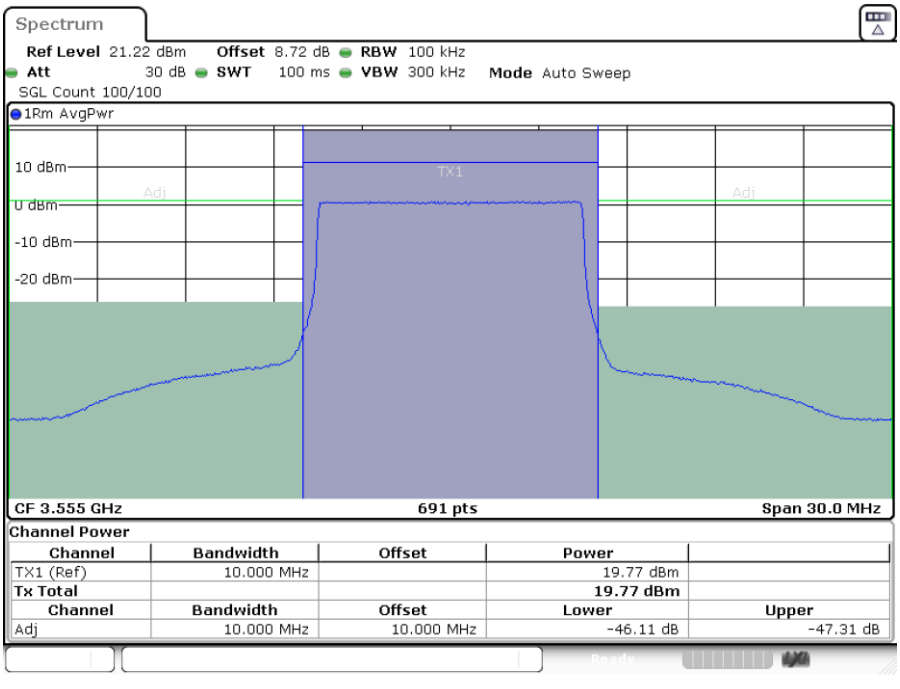


LTE Band 48 / 10MHz	
256QAM	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

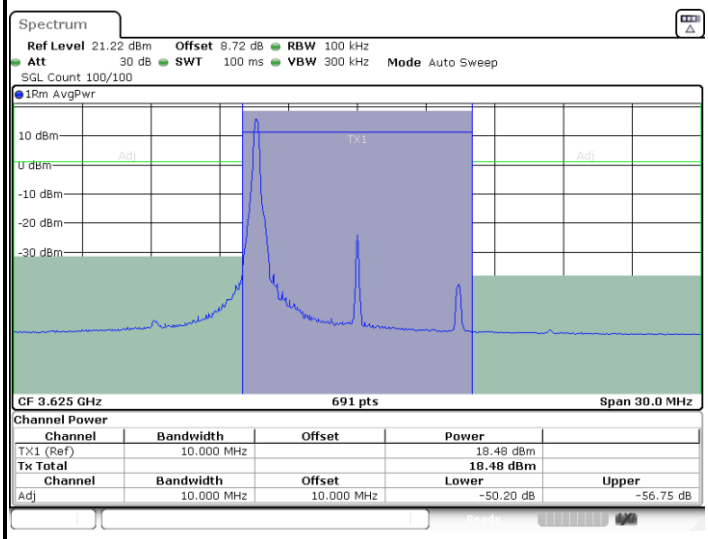


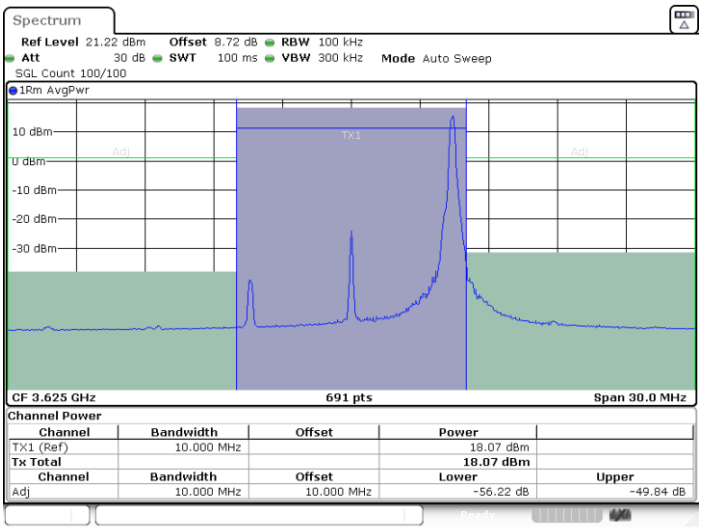


Lowest Channel / FullRB

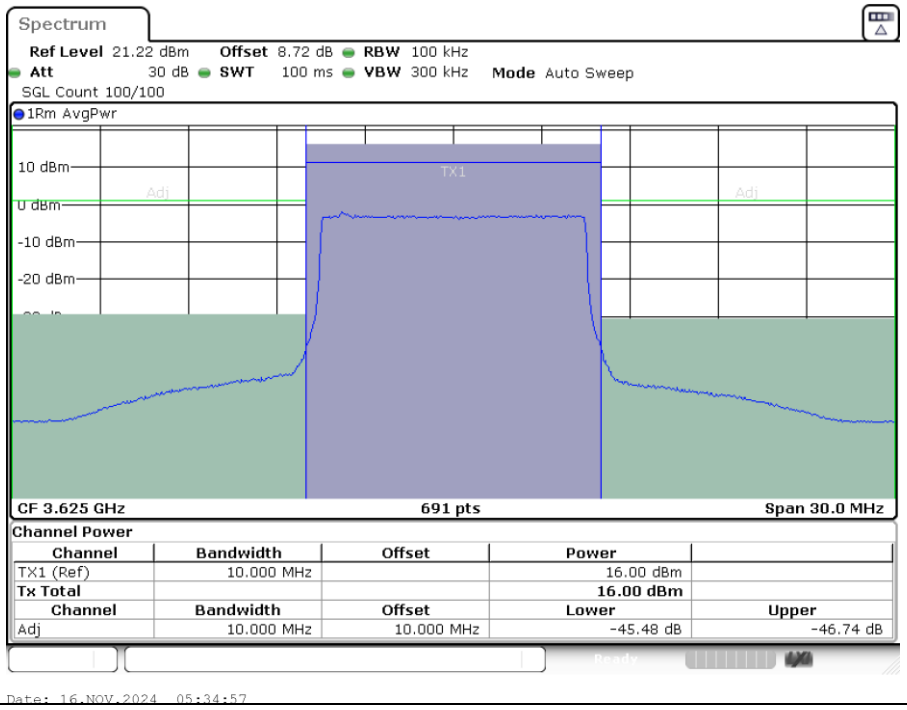


LTE Band 48 / 10MHz	
256QAM	
Middle Channel / 1RB0	Middle Channel / 1RBmax

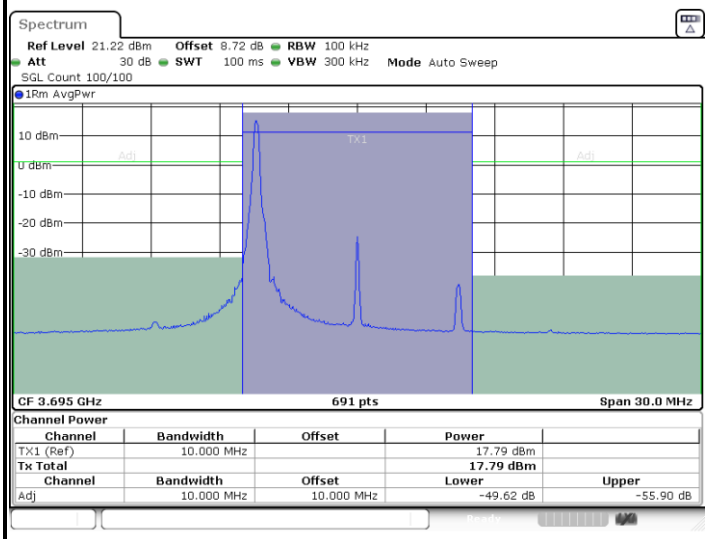


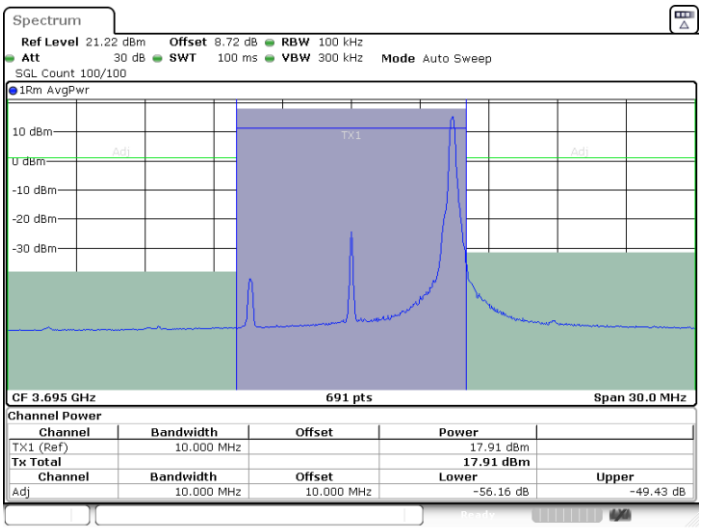


Middle Channel / FullRB

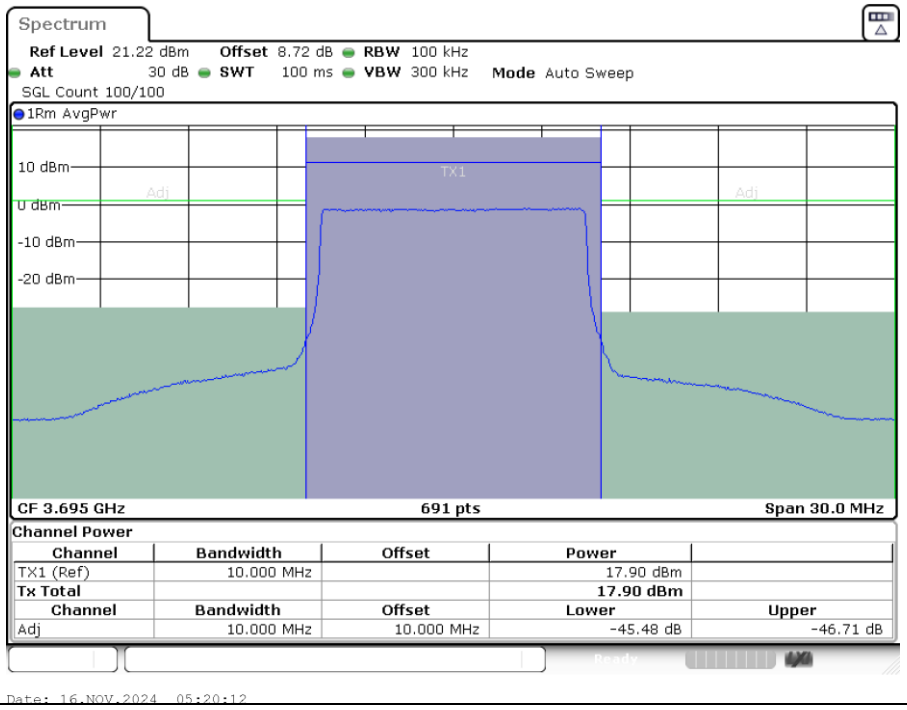


LTE Band 48 / 10MHz	
256QAM	
Highest Channel / 1RB0	Highest Channel / 1RBmax

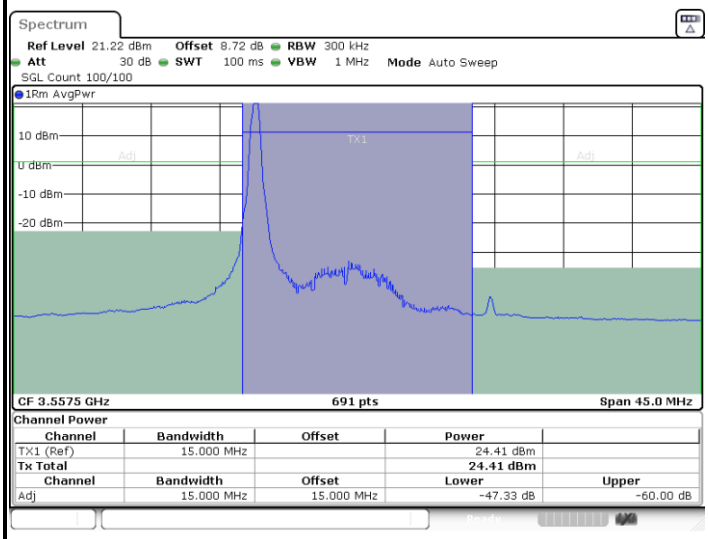


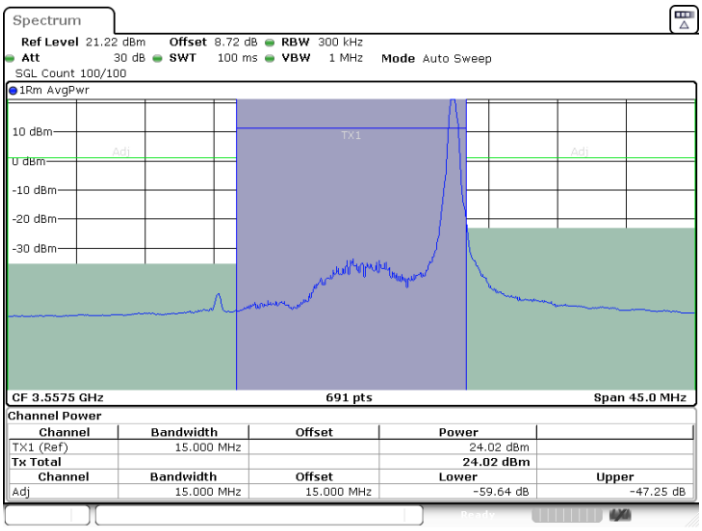


Highest Channel / FullRB

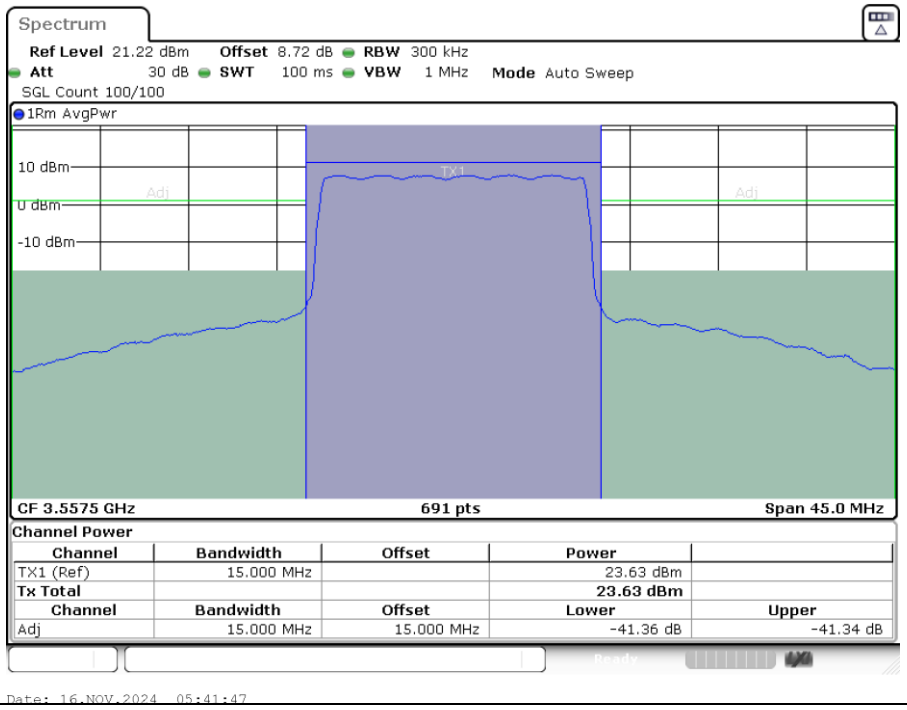


LTE Band 48 / 15MHz	
QPSK	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

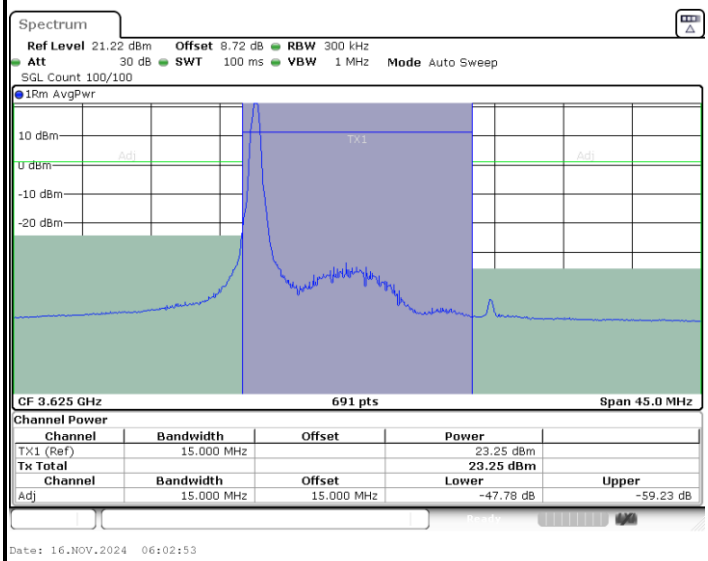


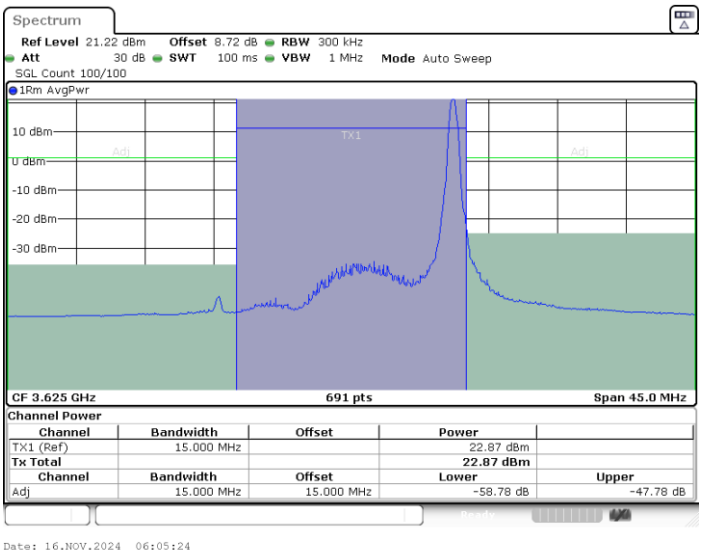


Lowest Channel / FullRB

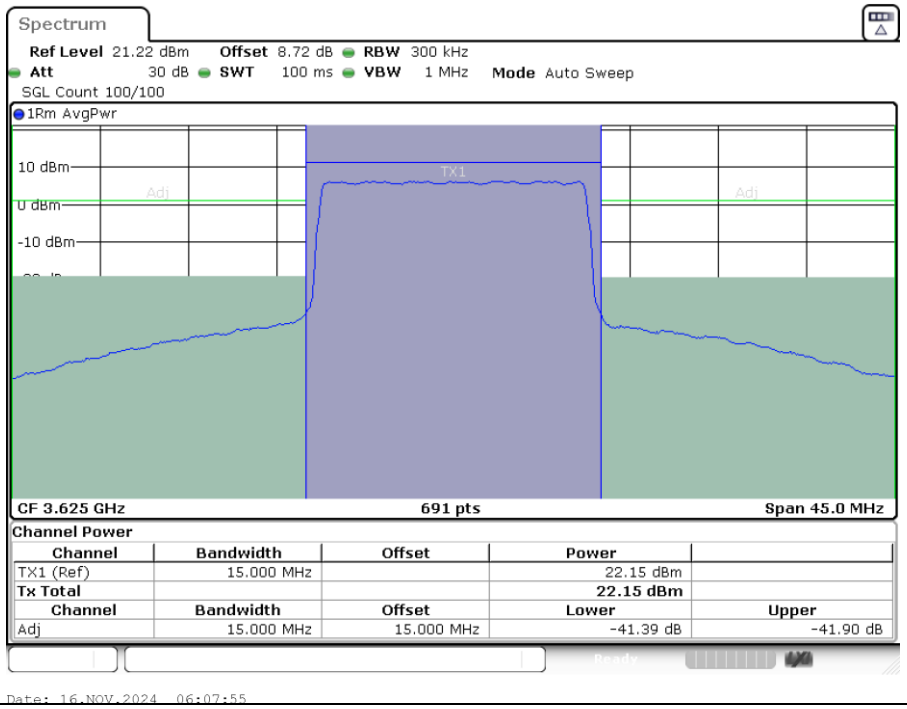


LTE Band 48 / 15MHz	
QPSK	
Middle Channel / 1RB0	Middle Channel / 1RBmax

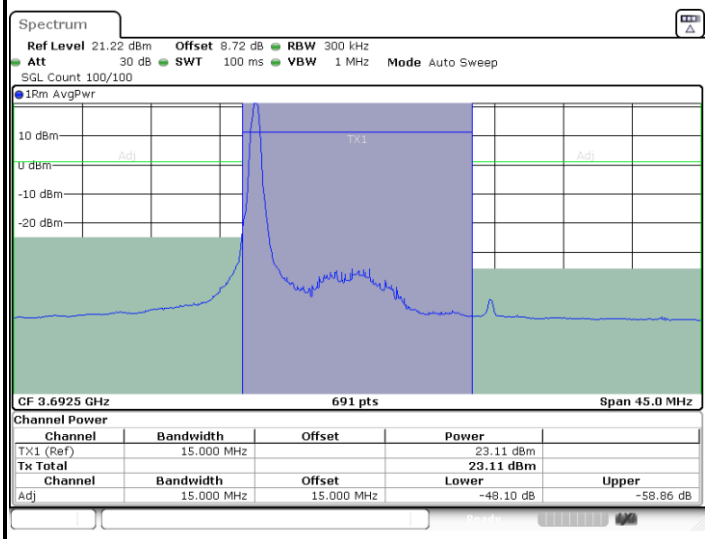


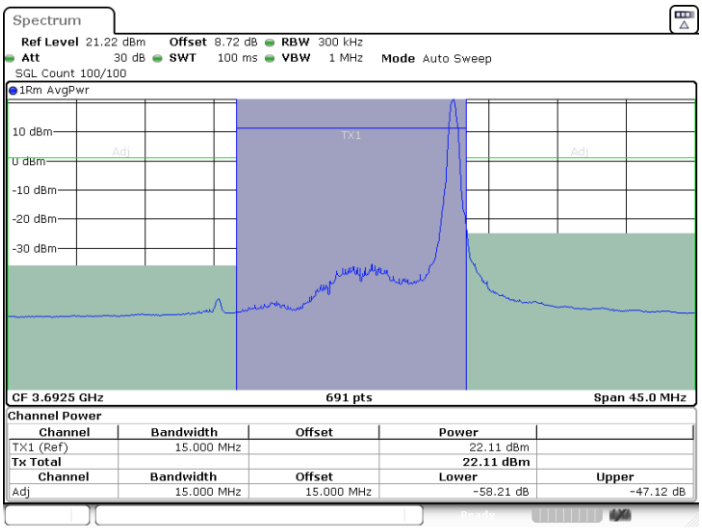


Middle Channel / FullRB

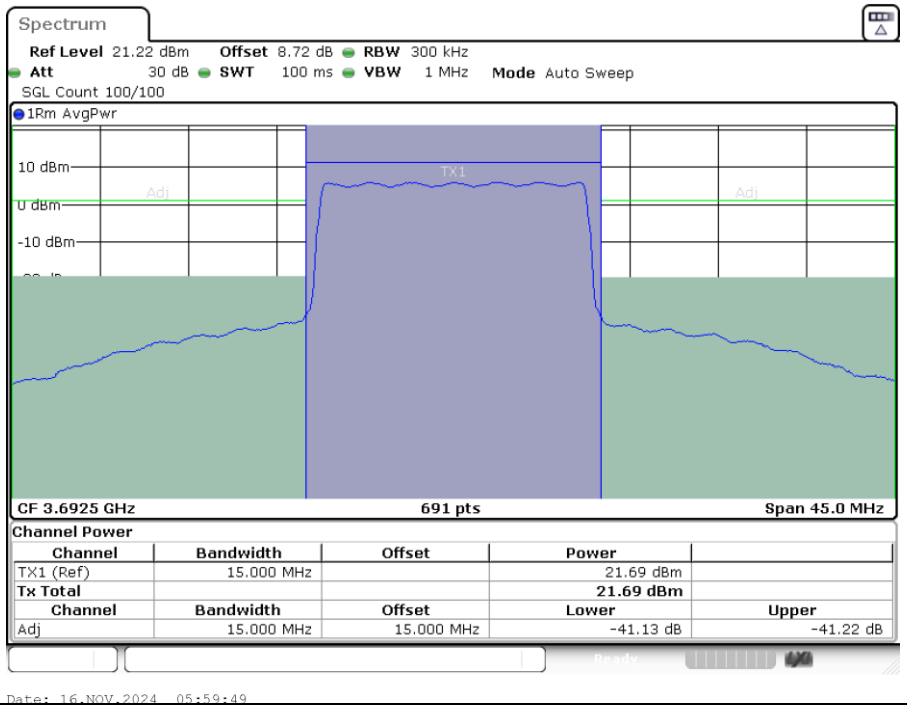


LTE Band 48 / 15MHz	
QPSK	
Highest Channel / 1RB0	Highest Channel / 1RBmax

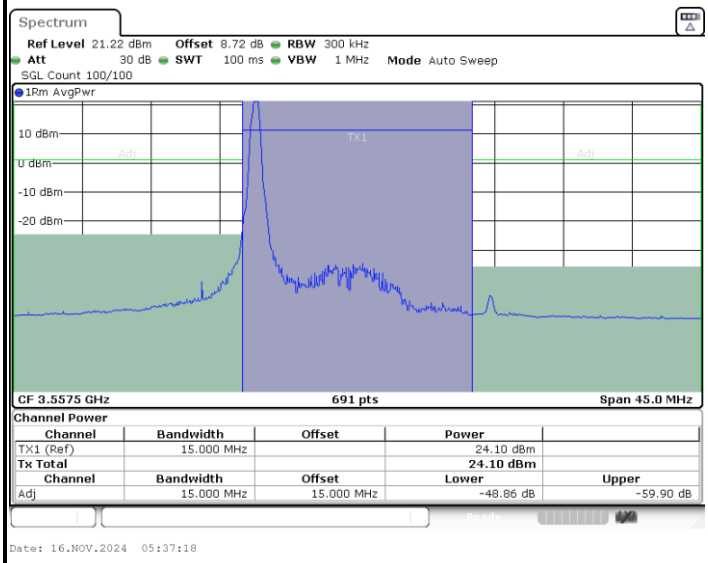


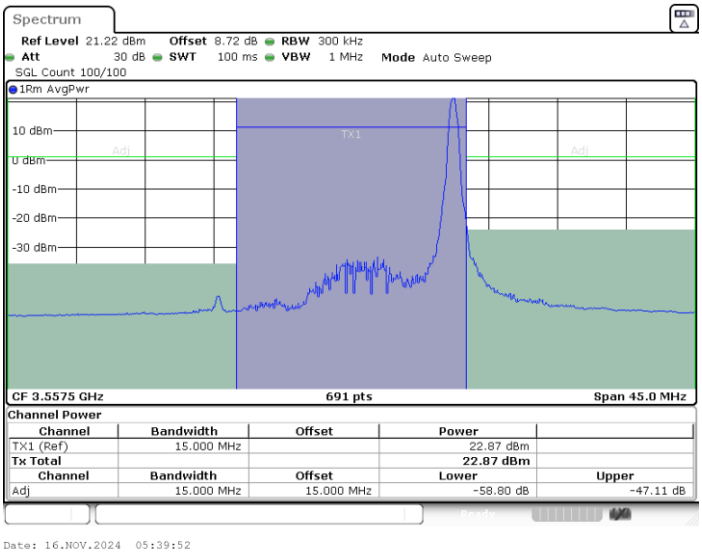


Highest Channel / FullRB

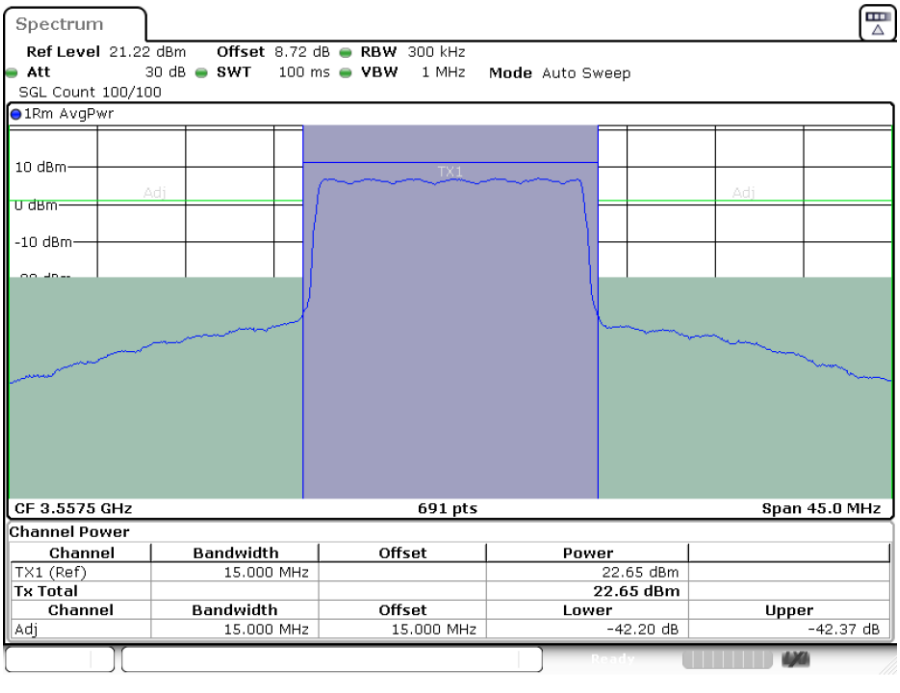


LTE Band 48 / 15MHz	
16QAM	
Lowest Channel / 1RB0	Lowest Channel / 1RBmax

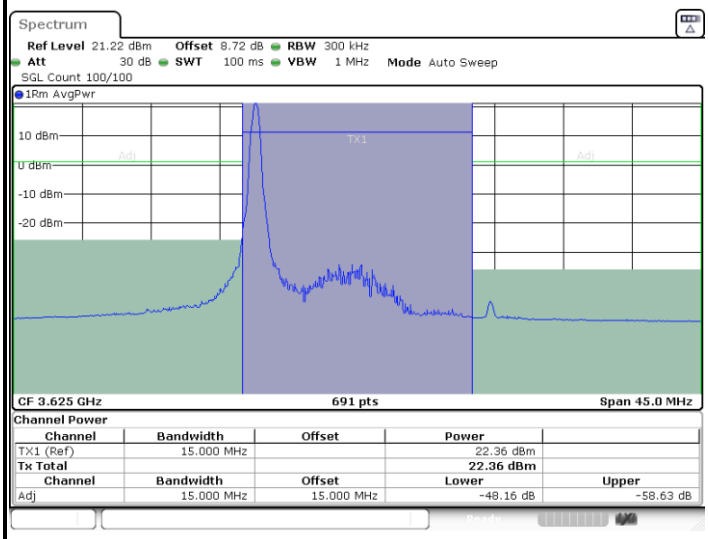


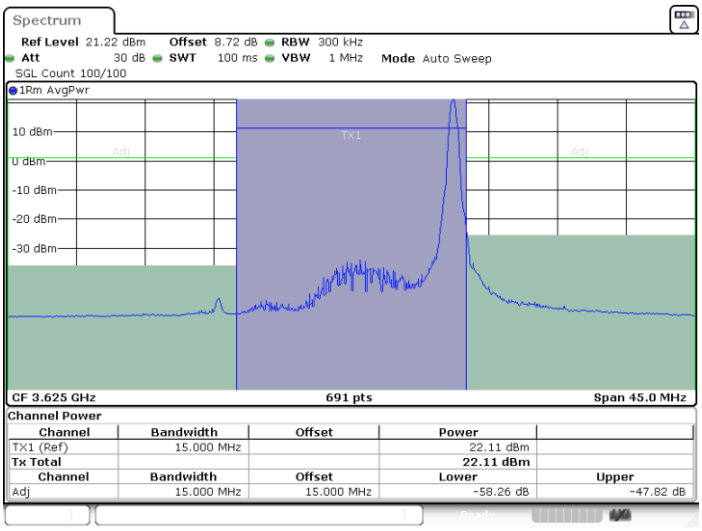


Lowest Channel / FullRB

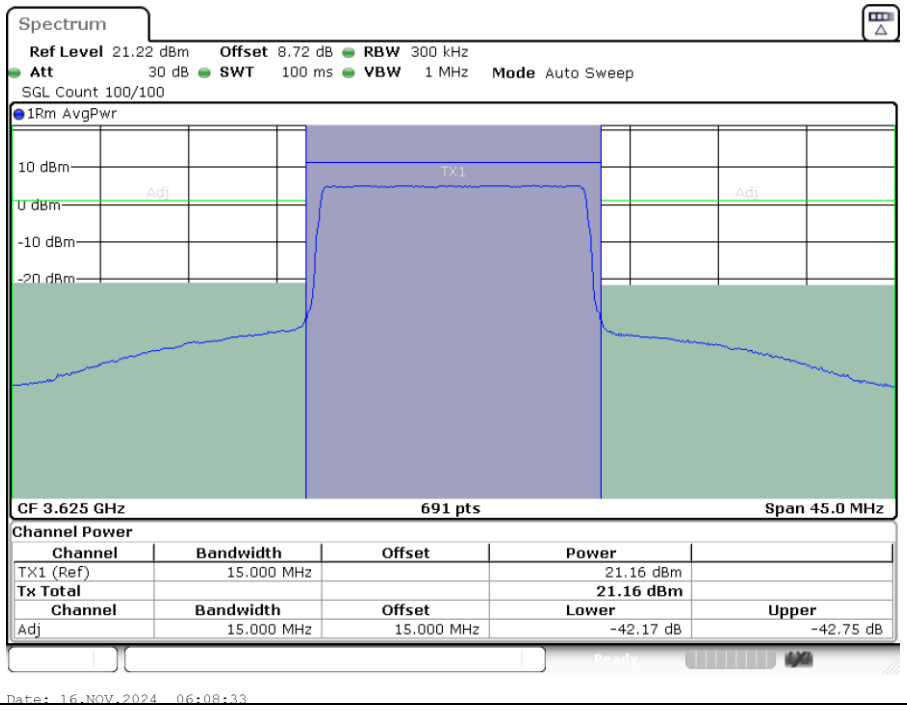


LTE Band 48 / 15MHz	
16QAM	
Middle Channel / 1RB0	Middle Channel / 1RBmax

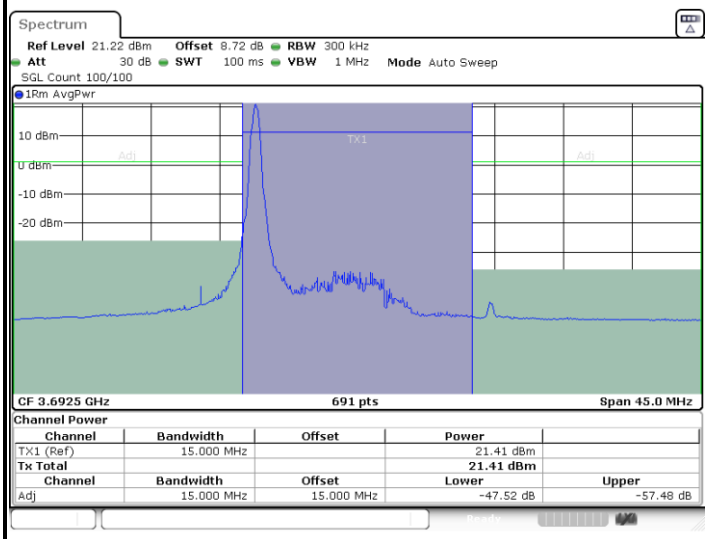


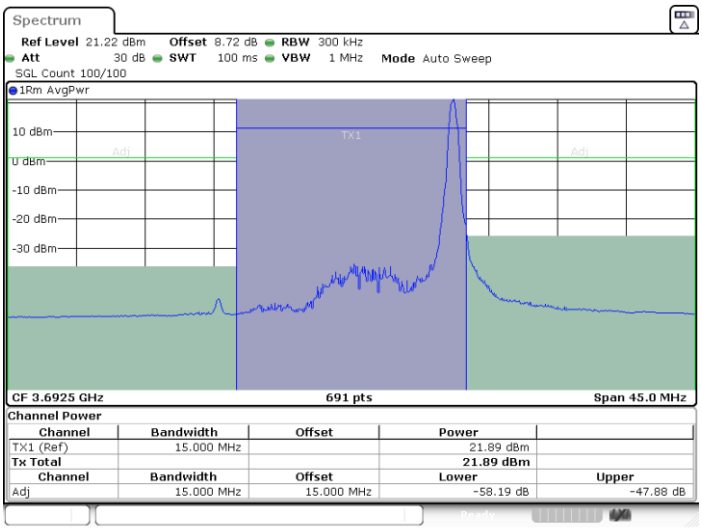


Middle Channel / FullRB



LTE Band 48 / 15MHz	
16QAM	
Highest Channel / 1RB0	Highest Channel / 1RBmax





Highest Channel / FullRB