TEST REPORT

No.B22N02633-RF LTE

for

TCL Communication Ltd.

UMTS/LTE/NR Mobile phone

Model Name: T609J

FCC ID: 2ACCJH174

with

Hardware Version: 03

Software Version: LUS7

Issued Date: 2023-01-28

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
B22N02633-RF LTE	Rev.0	1st edition	2023-01-28

CONTENTS

1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	UMTS/LTE/NR Mobile phone
Model Name	T609J
Brand Name	TCL
Applicant's name	TCL Communication Ltd.
Manufacturer's Name	TCL Communication Ltd.

1.2. Test Standards

FCC Part 2/22/24/27/90	10-1-20 Edition
ANSI C63.26	2015
KDB971168 D01	v03r01

1.3. Test Result

All test items are passed. Please refer to "6 Summary of Test Results" for detail.

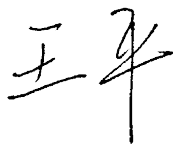
1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000

1.5. Project Data

Testing Start Date: 2022-12-29 Testing End Date: 2022-01-20

1.6. Signature



Wang Ping

(Prepared this test report)

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(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	TCL Communication Ltd.
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2.2. Manufacturer Information

Company Name:	TCL Communication Ltd.
Address /Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact：	Annie Jiang
Email：	nianxiang.jiang@tcl.com
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3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)

3.1. About EUT

Description	UMTS/LTE/NR Mobile phone
Model Name	T609J
FCC ID	2ACCJH174
Frequency Bands	LTE Bands 2/4/5/7/12/13/17/25/26/38/41/66/71
Antenna	Integrated
Extreme vol. Limits	3.60V to 4.40V (nominal: 3.85V)
Condition of EUT as received	No abnormality in appearance

Note1: Components list, please refer to documents of the manufacturer; it is also included in the original test record of SAICT.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT04aa	016388000200239	03	LUS7	2022-12-14

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description
AE1	Battery
AE2	RF cable

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

The Equipment Under Test (EUT) is a model of UMTS/LTE/NR Mobile phone with integrated antenna. It consists of normal options: lithium battery, charger. Manual and specifications of the EUT were provided to fulfil the test. Samples undergoing test were selected by the Client.

4. REFERENCE DOCUMENTS

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-20 Edition
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	10-1-20 Edition
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 90	PRIVATE LAND MOBILE RADIO SERVICES	10-1-20 Edition
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB971168 D01	MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS	v03r01

5. LABORATORY ENVIRONMENT

Shielded room did not exceed following limits along the RF testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz>60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	>2 MΩ
Ground system resistance	< 4 Ω

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	F	Fail
	NA	Not applicable
	NM	Not measured

Explanation of worst-case configuration

The worst-case scenario for all measurements is based on the conducted output power measurement investigation results. Output power was measured on QPSK, 16QAM and 64QAM modulations. It was found that QPSK was the worst case. All testing was performed using QPSK modulations to represent the worst case unless otherwise stated. The test results shown in the following sections represent the worst case emission.

LTE Band 2

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/24.232	A.1	P
2	Frequency Stability	2.1055/24.235	A.2	P
3	Occupied Bandwidth	2.1049/24.238	A.3	P
4	Emission Bandwidth	2.1049/24.238	A.4	P
5	Band Edge Compliance	2.1051/24.238	A.5	P
6	Conducted Spurious Emission	2.1051/24.238	A.6	P
7	Peak-to-Average Power Ratio	24.232/ KDB971168 D01	A.7	P

LTE Band 4

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(d)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(g)	A.3	P
4	Emission Bandwidth	2.1049/27.53(g)	A.4	P
5	Band Edge Compliance	2.1051/27.53(h)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(h)	A.6	P
7	Peak-to-Average Power Ratio	27.50(d)/ KDB971168 D01	A.7	P

LTE band 5

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/22.913	A.1	P
2	Frequency Stability	2.1055/22.355	A.2	P
3	Occupied Bandwidth	2.1049/22.917	A.3	P
4	Emission Bandwidth	2.1049/22.917	A.4	P
5	Band Edge Compliance	2.1051/22.917	A.5	P
6	Conducted Spurious Emission	2.1051/22.917	A.6	P
7	Peak-to-Average Power Ratio	KDB971168 D01	A.7	P

LTE Band 7

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(h)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(m)	A.3	P
4	Emission Bandwidth	2.1049/27.53(m)	A.4	P
5	Band Edge Compliance	2.1051/27.53(m)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(m)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.7	P

LTE Band 12

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(g)	A.3	P
4	Emission Bandwidth	2.1049/27.53(g)	A.4	P
5	Band Edge Compliance	2.1051/27.53(g)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(g)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.7	P

LTE Band 13

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(b)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(c)	A.3	P
4	Emission Bandwidth	2.1049/27.53(c)	A.4	P
5	Band Edge Compliance	2.1051/27.53(c)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(c)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.7	P

LTE Band 17

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(g)	A.3	P
4	Emission Bandwidth	2.1049/27.53(g)	A.4	P
5	Band Edge Compliance	2.1051/27.53(g)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(g)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.7	P

LTE Band 25

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/24.232	A.1	P
2	Frequency Stability	2.1055/24.235	A.2	P
3	Occupied Bandwidth	2.1049/24.238	A.3	P
4	Emission Bandwidth	2.1049/24.238	A.4	P
5	Band Edge Compliance	2.1051/24.238	A.5	P
6	Conducted Spurious Emission	2.1051/24.238	A.6	P
7	Peak-to-Average Power Ratio	24.232/ KDB971168 D01	A.7	P

LTE Band 26(814MHz-824MHz)

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/90.635	A.1	P
2	Frequency Stability	2.1055/90.213	A.2	P
3	Occupied Bandwidth	2.1049/90.1215	A.3	P
4	Emission Bandwidth	2.1049/90.1215	A.4	P
5	Band Edge Compliance	2.1051/90.691	A.5	P
6	Conducted Spurious Emission	2.1051/90.691	A.6	P
7	Peak-to-Average Power Ratio	KDB971168 D01	A.7	P

LTE band 26(824MHz-849MHz)

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/22.913	A.1	P
2	Frequency Stability	2.1055/22.355	A.2	P
3	Occupied Bandwidth	2.1049/22.917	A.3	P
4	Emission Bandwidth	2.1049/22.917	A.4	P
5	Band Edge Compliance	2.1051/22.917	A.5	P
6	Conducted Spurious Emission	2.1051/22.917	A.6	P
7	Peak-to-Average Power Ratio	KDB971168 D01	A.7	P

LTE Band 38

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(h)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(m)	A.3	P
4	Emission Bandwidth	2.1049/27.53(m)	A.4	P
5	Band Edge Compliance	2.1051/27.53(m)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(m)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.7	P

LTE Band 41

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(h)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(m)	A.3	P
4	Emission Bandwidth	2.1049/27.53(m)	A.4	P
5	Band Edge Compliance	2.1051/27.53(m)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(m)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.7	P

LTE Band 66

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(d)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(h)	A.3	P
4	Emission Bandwidth	2.1049/27.53(h)	A.4	P
5	Band Edge Compliance	2.1051/27.53(h)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(h)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.7	P

LTE Band 71

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Frequency Stability	2.1055/27.54	A.2	P
3	Occupied Bandwidth	2.1049/27.53(g)	A.3	P
4	Emission Bandwidth	2.1049/27.53(g)	A.4	P
5	Band Edge Compliance	2.1051/27.53(g)	A.5	P
6	Conducted Spurious Emission	2.1051/27.53(g)	A.6	P
7	Peak-to-Average Power Ratio	27.50(a)/ KDB971108 D01	A.7	P

7. STATEMENT

Since the information of samples in this report is provided by the client, the laboratory is not responsible for the authenticity of sample information.

This report takes measured values as criterion of test conclusion. The test conclusion meets the limit requirements.

8. TEST EQUIPMENTS UTILIZED

NO.	Description	TYPE	Manufacture	series number	Cal Due Date	Cal.Interval
1	UXM 5G Wireless Test Platform	E7515B	Keysight	MY59322022	2023-04-14	1 year
2	Universal Radio Communication Tester	MT8000A	Anritsu	6261987936	2023-03-29	1 year
3	Universal Radio Communication Tester	CMW500	R&S	129146	2023-04-24	1 year
4	Spectrum Analyzer	FSW26	R&S	102197	2023-11-24	1 year
5	Temperature Chamber	SH-241	ESPEC	92007516	2023-10-15	1 year
6	DC Power Supply	U3606A	Agilent Technologies	MY50450012	2023-11-13	1 year

ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER

A.1.1 Summary

During the process of testing, the EUT was controlled via Communication tester to ensure max power transmission and proper modulation.

In all cases, output power is within the specified limits.

A.1.2 Conducted

A.1.2.1 Method of Measurements

The EUT was set up for the max output power with pseudo random data modulation.

These measurements were done at 3 frequencies (bottom, middle and top of operational frequency range) for each bandwidth.

A.1.2.2 Measurement result

LTE Band 2

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1909.3	23.83	23.05	21.95
		1880.0	23.87	23.09	22.00
		1850.7	23.76	22.95	21.94
	1 RB low	1909.3	23.85	23.04	21.91
		1880.0	23.89	23.05	22.05
		1850.7	23.74	23.02	21.96
	50% RB mid	1909.3	23.86	22.87	21.87
		1880.0	23.88	22.96	22.01
		1850.7	23.76	22.77	21.81
	100% RB	1909.3	22.84	21.84	20.75
		1880.0	22.88	21.93	20.82
		1850.7	22.76	21.84	20.70
3MHz	1 RB high	1908.5	23.85	23.04	21.93
		1880.0	23.90	23.07	22.05
		1851.5	23.79	22.96	21.94
	1 RB low	1908.5	23.83	23.02	21.86
		1880.0	23.90	23.15	22.02
		1851.5	23.76	22.98	21.89
	50% RB mid	1908.5	22.78	21.87	20.82
		1880.0	22.85	21.90	20.83
		1851.5	22.74	21.79	20.72
	100% RB	1908.5	22.80	21.86	20.76
		1880.0	22.83	21.86	20.81
		1851.5	22.74	21.75	20.72
5MHz	1 RB high	1907.5	23.91	23.10	22.17
		1880.0	24.00	23.26	22.07

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		1852.5	23.89	23.15	21.97
	1 RB low	1907.5	23.92	22.98	22.07
		1880.0	24.02	23.17	22.09
		1852.5	23.85	23.13	21.99
	50% RB mid	1907.5	22.88	21.83	20.85
		1880.0	22.90	21.87	20.90
		1852.5	22.75	21.73	20.77
	100% RB	1907.5	22.83	21.85	20.79
		1880.0	22.87	21.91	20.88
		1852.5	22.77	21.77	20.77
10MHz	1 RB high	1905.0	23.92	23.01	21.96
		1880.0	24.01	23.17	22.09
		1855.0	23.88	23.08	22.03
	1 RB low	1905.0	23.91	23.02	22.03
		1880.0	23.96	23.09	22.02
		1855.0	23.83	23.02	21.94
	50% RB mid	1905.0	22.84	21.87	20.77
		1880.0	22.89	21.90	20.87
		1855.0	22.85	21.83	20.81
	100% RB	1905.0	22.76	21.76	20.74
		1880.0	22.89	21.90	20.85
		1855.0	22.82	21.83	20.79
15MHz	1 RB high	1902.5	23.85	23.05	21.90
		1880.0	23.92	23.10	21.97
		1857.5	23.78	23.01	21.95
	1 RB low	1902.5	23.84	23.03	21.91
		1880.0	23.91	23.12	22.07
		1857.5	23.74	22.85	21.82
	50% RB mid	1902.5	22.82	21.82	20.84
		1880.0	22.90	21.89	20.89
		1857.5	22.81	21.77	20.77
	100% RB	1902.5	22.82	21.80	20.81
		1880.0	22.88	21.85	20.79
		1857.5	22.80	21.83	20.77
20MHz	1 RB high	1900.0	23.84	23.07	21.93
		1880.0	23.90	23.15	22.04
		1860.0	23.87	23.10	22.01
	1 RB low	1900.0	23.85	23.01	21.94
		1880.0	23.90	23.08	22.03
		1860.0	23.74	22.99	21.83
	50% RB mid	1900.0	22.90	21.89	20.84

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		1880.0	22.89	21.93	20.85
		1860.0	22.83	21.81	20.77
	100% RB	1900.0	22.88	21.93	20.89
		1880.0	22.81	21.78	20.75
		1860.0	22.85	21.84	20.83

LTE Band 4

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1754.3	23.24	21.95	20.86
		1732.5	22.78	22.03	20.90
		1710.7	22.77	22.16	20.94
	1 RB low	1754.3	23.22	21.99	20.87
		1732.5	22.78	22.05	21.00
		1710.7	22.80	22.04	21.46
	50% RB mid	1754.3	23.25	22.26	21.31
		1732.5	23.32	22.27	21.39
		1710.7	23.31	22.24	21.41
	100% RB	1754.3	22.28	21.36	20.21
		1732.5	22.34	21.38	20.26
		1710.7	22.34	21.41	20.28
3MHz	1 RB high	1753.5	23.22	21.99	20.86
		1732.5	23.29	22.60	20.97
		1711.5	23.35	22.33	21.51
	1 RB low	1753.5	23.26	22.53	21.41
		1732.5	23.29	22.65	21.47
		1711.5	23.33	22.54	21.45
	50% RB mid	1753.5	22.26	21.34	20.27
		1732.5	22.25	21.31	20.31
		1711.5	22.36	21.39	20.33
	100% RB	1753.5	22.23	21.28	20.24
		1732.5	22.27	21.28	20.23
		1711.5	22.35	21.37	20.33
5MHz	1 RB high	1752.5	23.34	22.20	21.28
		1732.5	23.28	22.72	21.61
		1712.5	23.41	22.27	21.54
	1 RB low	1752.5	23.27	22.58	21.49
		1732.5	23.38	22.64	21.39
		1712.5	23.36	22.62	21.55
	50% RB mid	1752.5	22.27	21.27	20.28
		1732.5	22.33	21.32	20.32
		1712.5	22.38	21.31	20.32
	100% RB	1752.5	22.32	21.32	20.32
		1732.5	22.33	21.35	20.31
		1712.5	22.34	21.36	20.34
10MHz	1 RB high	1750.0	23.36	22.20	21.00
		1732.5	23.41	22.55	21.23
		1715.0	22.94	22.67	21.46
	1 RB low	1750.0	23.33	22.65	21.62

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		1732.5	23.37	22.17	21.47
		1715.0	23.37	22.54	21.57
	50% RB mid	1750.0	22.27	21.29	20.27
		1732.5	22.33	21.32	20.32
		1715.0	22.39	21.36	20.32
	100% RB	1750.0	22.31	21.34	20.30
		1732.5	22.36	21.34	20.31
		1715.0	22.37	21.43	20.34
15MHz	1 RB high	1747.5	23.27	22.11	21.02
		1732.5	23.35	22.68	21.50
		1717.5	23.34	22.57	21.42
	1 RB low	1747.5	23.21	22.51	20.93
		1732.5	23.26	22.60	21.37
		1717.5	23.26	22.53	21.44
	50% RB mid	1747.5	22.27	21.29	20.33
		1732.5	22.30	21.31	20.26
		1717.5	22.29	21.28	20.30
	100% RB	1747.5	22.28	21.27	20.19
		1732.5	22.32	21.30	20.27
		1717.5	22.33	21.32	20.33
20MHz	1 RB high	1745.0	23.26	22.21	21.54
		1732.5	23.36	22.15	21.04
		1720.0	22.84	22.12	21.55
	1 RB low	1745.0	23.27	22.07	20.90
		1732.5	23.28	22.07	21.45
		1720.0	22.78	22.13	21.08
	50% RB mid	1745.0	22.30	21.33	20.27
		1732.5	22.36	21.33	20.28
		1720.0	22.36	21.33	20.31
	100% RB	1745.0	22.22	21.19	20.16
		1732.5	22.33	21.30	20.28
		1720.0	22.43	21.36	20.40

LTE Band 5

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.32	22.44	21.42
		836.5	23.35	22.54	21.51
		824.7	23.39	22.60	21.57
	1 RB low	848.3	23.35	22.51	21.46
		836.5	23.37	22.48	21.51
		824.7	23.37	22.51	21.46
	50% RB mid	848.3	23.91	22.91	21.89
		836.5	23.88	22.91	21.92
		824.7	23.90	22.93	21.92
	100% RB	848.3	22.86	21.87	20.76
		836.5	22.87	21.93	20.82
		824.7	22.89	21.94	20.81
3MHz	1 RB high	847.5	23.38	22.41	21.43
		836.5	23.37	22.55	21.48
		825.5	23.35	22.59	21.61
	1 RB low	847.5	23.36	22.47	21.45
		836.5	23.44	22.65	21.46
		825.5	23.40	22.55	21.54
	50% RB mid	847.5	22.82	21.86	20.88
		836.5	22.85	21.91	20.90
		825.5	22.82	21.93	20.82
	100% RB	847.5	22.83	21.90	20.79
		836.5	22.81	21.91	20.85
		825.5	22.85	21.89	20.83
5MHz	1 RB high	846.5	23.94	22.58	21.57
		836.5	23.94	22.64	21.70
		826.5	23.44	22.79	21.59
	1 RB low	846.5	23.95	22.61	21.64
		836.5	24.01	22.66	21.61
		826.5	23.49	22.85	21.62
	50% RB mid	846.5	22.83	21.78	20.86
		836.5	22.88	21.85	20.84
		826.5	22.84	21.79	20.87
	100% RB	846.5	22.82	21.88	20.85
		836.5	22.87	21.92	20.85
		826.5	22.87	21.85	20.87
10MHz	1 RB high	844.0	23.98	23.00	22.06
		836.5	23.94	23.02	22.05
		829.0	23.89	23.12	22.09
	1 RB low	844.0	23.95	23.05	22.03

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		836.5	23.87	23.13	22.13
		829.0	24.00	23.23	22.11
	50% RB mid	844.0	22.82	21.90	20.79
		836.5	22.80	21.82	20.81
		829.0	22.86	21.85	20.82
	100% RB	844.0	22.85	21.91	20.84
		836.5	22.78	21.80	20.81
		829.0	22.92	21.95	20.91

LTE Band 7

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	22.55	21.87	20.71
		2535.0	22.74	21.99	20.87
		2502.5	22.67	21.77	20.73
	1 RB low	2567.5	22.62	21.90	20.62
		2535.0	22.83	22.01	20.99
		2502.5	22.60	21.78	20.74
	50% RB mid	2567.5	21.95	21.10	20.00
		2535.0	22.06	21.20	20.17
		2502.5	22.02	21.04	20.06
	100% RB	2567.5	21.91	21.12	19.98
		2535.0	22.16	21.32	20.28
		2502.5	21.97	21.14	20.08
10MHz	1 RB high	2565.0	23.00	21.72	20.74
		2535.0	23.13	21.98	20.81
		2505.0	22.69	21.95	20.81
	1 RB low	2565.0	23.05	21.88	20.84
		2535.0	22.75	21.92	20.91
		2505.0	22.53	21.69	20.70
	50% RB mid	2565.0	21.85	21.07	20.09
		2535.0	22.08	21.27	20.25
		2505.0	21.98	21.16	20.11
	100% RB	2565.0	21.97	21.13	20.12
		2535.0	22.09	21.25	20.24
		2505.0	22.03	21.15	20.14
15MHz	1 RB high	2562.5	22.79	21.60	20.52
		2535.0	22.51	21.77	20.68
		2507.5	22.47	21.73	21.13
	1 RB low	2562.5	22.45	21.78	20.71
		2535.0	22.56	21.76	20.83
		2507.5	22.36	21.64	20.98
	50% RB mid	2562.5	21.88	21.04	20.04
		2535.0	22.04	21.16	20.12
		2507.5	21.95	21.12	20.01
	100% RB	2562.5	21.97	21.08	20.07
		2535.0	22.10	21.18	19.99
		2507.5	21.96	21.04	20.02
20MHz	1 RB high	2560.0	22.41	21.68	20.53

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		2535.0	22.59	21.77	20.73
		2510.0	22.61	21.86	20.69
	1 RB low	2560.0	22.82	21.95	20.73
		2535.0	22.68	21.98	20.75
		2510.0	22.56	21.81	20.53
	50% RB mid	2560.0	21.96	21.10	20.12
		2535.0	22.14	21.22	20.16
		2510.0	21.99	21.12	20.09
	100% RB	2560.0	22.05	21.14	20.13
		2535.0	22.13	21.22	20.16
		2510.0	21.94	21.03	19.99

LTE Band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	23.08	22.14	21.37
		707.5	23.11	22.25	21.38
		699.7	23.09	22.34	21.33
	1 RB low	715.3	23.05	22.19	21.27
		707.5	23.17	22.34	21.38
		699.7	23.11	22.24	21.34
	50% RB mid	715.3	23.59	22.64	21.78
		707.5	23.61	22.67	21.81
		699.7	23.61	22.63	21.77
	100% RB	715.3	22.57	21.76	20.58
		707.5	22.63	21.82	20.67
		699.7	22.58	21.82	20.65
3MHz	1 RB high	714.5	23.05	22.17	21.34
		707.5	23.13	22.33	21.34
		700.5	23.12	22.37	21.37
	1 RB low	714.5	23.18	22.30	21.42
		707.5	23.18	22.29	21.34
		700.5	23.10	22.35	21.34
	50% RB mid	714.5	22.56	21.74	20.66
		707.5	22.63	21.81	20.75
		700.5	22.61	21.82	20.69
	100% RB	714.5	22.56	21.73	20.62
		707.5	22.57	21.78	20.69
		700.5	22.59	21.81	20.75
5MHz	1 RB high	713.5	23.30	22.42	21.45
		707.5	23.29	22.50	21.39
		701.5	23.33	22.52	21.43
	1 RB low	713.5	23.26	22.52	21.46
		707.5	23.33	22.63	21.48
		701.5	23.37	22.59	21.41
	50% RB mid	713.5	22.59	21.71	20.73
		707.5	22.63	21.77	20.74
		701.5	22.64	21.76	20.77
	100% RB	713.5	22.54	21.75	20.64
		707.5	22.64	21.80	20.75
		701.5	22.64	21.84	20.77
10MHz	1 RB high	711.0	23.23	22.52	21.42

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		707.5	23.35	22.53	21.39
		704.0	23.24	22.53	21.43
	1 RB low	711.0	23.31	22.48	21.48
		707.5	23.36	22.55	21.48
		704.0	23.37	22.63	21.47
	50% RB mid	711.0	22.60	21.78	20.76
		707.5	22.61	21.77	20.74
		704.0	22.65	21.78	20.74
	100% RB	711.0	22.57	21.71	20.70
		707.5	22.63	21.80	20.77
		704.0	22.71	21.82	20.81

LTE Band 13

Bandwidth	Number of RBs	Frequency(MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	784.5	22.97	22.07	20.98
		782.0	22.96	22.01	20.97
		779.5	22.99	22.16	21.09
	1RB-Low	784.5	22.91	22.12	21.01
		782.0	23.02	22.19	21.10
		779.5	22.99	22.18	21.03
	50% RB mid	784.5	22.46	21.46	20.40
		782.0	22.43	21.43	20.43
		779.5	22.47	21.43	20.44
	100% RB	784.5	22.43	21.46	20.43
		782.0	22.45	21.47	20.40
		779.5	22.45	21.44	20.40
10MHz	1RB-High	782.0	22.93	22.13	20.98
	1RB-Low	782.0	22.92	22.10	21.10
	50% RB mid	782.0	22.44	21.44	20.43
	100% RB	782.0	22.56	21.51	20.53

LTE Band 17

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	713.5	23.19	22.43	21.42
		710.0	23.32	22.63	21.36
		706.5	23.20	22.49	21.44
	1RB-Low	713.5	23.25	22.58	21.52
		710.0	23.37	22.36	21.41
		706.5	23.31	22.52	21.47
	50% RB mid	713.5	22.58	21.67	20.70
		710.0	22.64	21.71	20.73
		706.5	22.60	21.69	20.76
	100% RB	713.5	22.58	21.75	20.69
		710.0	22.58	21.76	20.70
		706.5	22.63	21.80	20.74
10MHz	1RB-High	711.0	23.23	22.52	21.45
		710.0	23.28	22.51	21.33
		709.0	23.28	22.51	21.42
	1RB-Low	711.0	23.29	22.55	21.43
		710.0	23.41	22.37	21.36
		709.0	23.37	22.59	21.47
	50% RB mid	711.0	22.60	21.77	20.70
		710.0	22.62	21.80	20.75
		709.0	22.60	21.77	20.71
	100% RB	711.0	22.57	21.70	20.71
		710.0	22.60	21.76	20.67
		709.0	22.67	21.77	20.75

LTE Band 25

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1914.3	23.82	22.99	21.37
		1882.5	23.89	22.62	21.52
		1850.7	23.76	23.04	21.44
	1RB-Low	1914.3	23.82	23.00	21.96
		1882.5	23.89	23.01	21.56
		1850.7	23.78	22.93	21.88
	50% RB mid	1914.3	23.77	22.76	21.85
		1882.5	23.89	22.93	22.00
		1850.7	23.78	22.80	21.79
	100% RB	1914.3	22.79	21.88	20.70
		1882.5	22.92	21.96	20.75
		1850.7	22.77	21.84	20.69
3MHz	1RB-High	1913.5	23.85	22.53	21.90
		1882.5	23.87	23.13	21.67
		1851.5	23.80	23.10	21.37
	1RB-Low	1913.5	23.82	23.01	21.91
		1882.5	23.91	23.07	21.79
		1851.5	23.75	22.98	21.48
	50% RB mid	1913.5	22.75	21.81	20.76
		1882.5	22.84	21.95	20.87
		1851.5	22.75	21.78	20.77
	100% RB	1913.5	22.77	21.81	20.79
		1882.5	22.85	21.85	20.84
		1851.5	22.74	21.79	20.72
5MHz	1RB-High	1912.5	23.89	22.60	21.52
		1882.5	23.97	23.07	22.14
		1852.5	23.85	23.11	21.95
	1RB-Low	1912.5	23.88	23.12	22.02
		1882.5	24.01	23.16	22.05
		1852.5	23.87	23.13	22.04
	50% RB mid	1912.5	22.84	21.81	20.81
		1882.5	22.88	21.90	20.88
		1852.5	22.77	21.77	20.75
	100% RB	1912.5	22.88	21.91	20.88
		1882.5	22.94	21.93	20.91
		1852.5	22.79	21.80	20.77
10MHz	1RB-High	1910.0	23.91	23.08	21.98
		1882.5	23.96	23.18	22.09
		1855.0	23.92	23.07	22.03
	1RB-Low	1910.0	23.92	23.05	22.07

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		1882.5	23.99	23.17	22.07
		1855.0	23.82	23.13	21.94
	50% RB mid	1910.0	22.84	21.84	20.83
		1882.5	22.93	21.94	20.93
		1855.0	22.79	21.78	20.79
	100% RB	1910.0	22.85	21.88	20.85
		1882.5	22.93	21.88	20.89
		1855.0	22.84	21.86	20.83
15MHz	1RB-High	1907.5	23.81	22.92	21.93
		1882.5	23.86	23.14	22.00
		1857.5	23.79	23.08	21.85
	1RB-Low	1907.5	23.82	23.05	21.95
		1882.5	23.85	23.13	22.05
		1857.5	23.74	22.96	21.80
	50% RB mid	1907.5	22.81	21.76	20.80
		1882.5	22.89	21.89	20.89
		1857.5	22.79	21.79	20.79
	100% RB	1907.5	22.72	21.74	20.69
		1882.5	22.84	21.84	20.81
		1857.5	22.83	21.83	20.78
20MHz	1RB-High	1905.0	23.85	22.94	21.91
		1882.5	23.92	23.03	22.02
		1860.0	23.39	23.07	22.01
	1RB-Low	1905.0	23.73	22.94	21.96
		1882.5	23.83	23.08	21.97
		1860.0	23.75	23.01	21.80
	50% RB mid	1905.0	22.86	21.83	20.81
		1882.5	22.94	21.95	20.88
		1860.0	22.84	21.84	20.82
	100% RB	1905.0	22.59	21.60	20.59
		1882.5	22.80	21.74	20.78
		1860.0	22.87	21.86	20.81

LTE Band 26(814MHz-824MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	823.3	23.79	22.37	21.80
		819.0	23.80	22.50	22.05
		814.7	23.33	23.06	21.56
	1 RB low	823.3	23.79	22.41	21.46
		819.0	23.89	22.83	22.00
		814.7	23.87	22.52	21.94
	50% RB mid	823.3	23.80	22.87	21.88
		819.0	23.84	22.85	21.94
		814.7	23.87	22.92	21.89
	100% RB	823.3	22.82	21.87	20.73
		819.0	22.87	21.86	20.75
		814.7	22.91	21.92	20.80
3MHz	1 RB high	822.5	23.80	22.86	21.94
		819.0	23.87	23.11	22.02
		815.5	23.86	23.03	21.90
	1 RB low	822.5	23.85	23.02	22.01
		819.0	23.93	23.05	21.98
		815.5	23.89	23.04	22.03
	50% RB mid	822.5	22.78	21.80	20.76
		819.0	22.79	21.86	20.83
		815.5	22.82	21.84	20.80
	100% RB	822.5	22.77	21.81	20.77
		819.0	22.86	21.88	20.85
		815.5	22.84	21.87	20.85
5MHz	1 RB high	821.5	23.34	22.53	21.58
		819.0	23.47	22.73	21.63
		816.5	23.45	22.68	21.50
	1 RB low	821.5	23.47	22.71	21.63
		819.0	23.49	22.75	21.63
		816.5	23.47	22.70	21.73
	50% RB mid	821.5	22.76	21.78	20.81
		819.0	22.84	21.84	20.82
		816.5	22.82	21.85	20.87
	100% RB	821.5	22.85	21.87	20.85
		819.0	22.89	21.87	20.91
		816.5	22.88	21.91	20.88

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
10MHz	1 RB high	819.0	23.40	22.60	21.51
		819.0	23.40	22.53	21.54
		819.0	23.46	22.54	21.59
	1 RB low	819.0	23.46	22.53	21.48
		821.5	23.42	22.69	21.52
		819.0	23.57	22.79	21.60
	50% RB mid	816.5	22.84	21.87	20.81
		821.5	22.88	21.87	20.83
		819.0	22.88	21.91	20.82
	100% RB	816.5	22.87	21.87	20.90
		821.5	22.94	21.95	20.91
		819.0	22.82	21.81	20.81

LTE Band 26(824MHz-849MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.33	22.51	21.44
		836.5	23.48	22.68	21.57
		824.7	23.45	22.67	21.57
	1 RB low	848.3	23.39	22.61	21.49
		836.5	23.42	22.59	21.55
		824.7	23.47	22.56	21.47
	50% RB mid	848.3	24.05	23.04	21.98
		836.5	23.89	23.04	22.04
		824.7	23.92	22.95	22.04
	100% RB	848.3	22.96	21.98	20.78
		836.5	22.95	21.94	20.92
		824.7	22.97	22.00	20.84
3MHz	1 RB high	847.5	23.38	22.48	21.49
		836.5	23.42	22.64	21.49
		825.5	23.46	22.69	21.69
	1 RB low	847.5	23.41	22.55	21.56
		836.5	23.47	22.76	21.48
		825.5	23.46	22.60	21.60
	50% RB mid	847.5	22.89	21.95	20.97
		836.5	22.91	22.02	20.90
		825.5	22.87	21.97	20.94
	100% RB	847.5	22.92	21.95	20.81
		836.5	22.90	21.97	20.92
		825.5	22.95	22.02	20.89
5MHz	1 RB high	846.5	23.87	22.54	21.52
		836.5	23.87	22.60	21.69
		826.5	23.38	22.70	21.51
	1 RB low	846.5	23.87	22.52	21.60
		836.5	23.97	22.59	21.55
		826.5	23.44	22.73	21.48
	50% RB mid	846.5	22.80	21.76	20.84
		836.5	22.82	21.73	20.77
		826.5	22.78	21.75	20.83
	100% RB	846.5	22.72	21.74	20.78
		836.5	22.76	21.85	20.75
		826.5	22.86	21.71	20.85
10MHz	1 RB high	844.0	23.86	22.94	22.03

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		836.5	23.86	22.97	22.01
		829.0	23.83	23.06	21.99
	1 RB low	844.0	23.82	23.04	22.02
		836.5	23.75	23.00	22.06
		829.0	23.86	23.19	22.09
	50% RB mid	844.0	22.70	21.84	20.67
		836.5	22.66	21.69	20.80
		829.0	22.74	21.77	20.76
	100% RB	844.0	22.78	21.81	20.72
		836.5	22.71	21.78	20.68
		829.0	22.79	21.83	20.79
15MHz	1 RB high	841.5	23.35	22.49	21.43
		836.5	23.32	22.48	21.40
		831.5	23.39	22.49	21.45
	1 RB low	841.5	23.33	22.50	21.46
		836.5	23.34	22.50	21.48
		831.5	23.42	22.62	21.53
	50% RB mid	841.5	22.80	21.84	20.82
		836.5	22.83	21.85	20.79
		831.5	22.85	21.81	20.87
	100% RB	841.5	22.80	21.79	20.73
		836.5	22.95	21.93	20.93
		831.5	22.82	21.76	20.80

LTE Band 38

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	2617.5	22.88	22.15	20.87
		2595.0	22.96	22.25	20.92
		2572.5	22.81	22.07	20.90
	1 RB low	2617.5	22.97	22.19	20.97
		2595.0	23.00	22.27	21.01
		2572.5	22.88	22.08	20.92
	50% RB mid	2617.5	21.72	20.90	19.94
		2595.0	21.83	20.97	20.00
		2572.5	21.71	20.86	19.92
	100% RB	2617.5	21.76	20.93	19.94
		2595.0	21.75	20.95	19.98
		2572.5	21.76	20.90	19.96
10MHz	1 RB high	2615.0	22.89	22.11	20.89
		2595.0	22.95	22.24	20.91
		2575.0	22.86	22.12	20.90
	1 RB low	2615.0	23.05	22.30	21.04
		2595.0	23.01	22.31	20.99
		2575.0	22.91	22.13	20.92
	50% RB mid	2615.0	21.78	20.99	19.98
		2595.0	21.79	20.99	19.99
		2575.0	21.74	20.89	19.93
	100% RB	2615.0	21.86	20.96	19.93
		2595.0	21.84	20.96	19.90
		2575.0	21.78	20.91	19.86
15MHz	1 RB high	2612.5	22.75	21.98	20.82
		2595.0	22.84	22.13	20.91
		2577.5	22.76	21.96	20.83
	1 RB low	2612.5	22.83	22.09	20.95
		2595.0	22.82	22.10	20.89
		2577.5	22.78	22.00	20.86
	50% RB mid	2612.5	21.80	20.93	19.93
		2595.0	21.75	20.86	19.87
		2577.5	21.73	20.85	19.87
	100% RB	2612.5	21.80	20.95	19.93
		2595.0	21.83	20.96	19.95
		2577.5	21.76	20.92	19.89

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
20MHz	1 RB high	2610.0	22.38	22.05	20.82
		2595.0	22.98	22.22	20.93
		2580.0	22.84	22.07	20.79
	1 RB low	2610.0	22.68	22.19	21.00
		2595.0	23.03	22.22	20.94
		2580.0	22.90	22.10	20.86
	50% RB mid	2610.0	21.97	21.09	20.00
		2595.0	21.89	20.97	19.90
		2580.0	21.86	21.02	19.89
	100% RB	2610.0	21.98	21.03	19.96
		2595.0	21.90	21.00	19.95
		2580.0	21.87	20.96	19.91

LTE Band 41

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	2687.5	22.42	21.62	20.37
		2593.0	22.51	21.74	20.46
		2498.5	22.44	21.69	20.41
	1 RB low	2687.5	22.41	21.58	20.32
		2593.0	22.50	21.72	20.50
		2498.5	22.44	21.66	20.44
	50% RB mid	2687.5	21.28	20.30	19.32
		2593.0	21.41	20.39	19.43
		2498.5	21.26	20.38	19.44
	100% RB	2687.5	21.32	20.34	19.38
		2593.0	21.42	20.47	19.46
		2498.5	21.29	20.46	19.46
10MHz	1 RB high	2685.0	22.33	21.57	20.30
		2593.0	22.49	21.74	20.47
		2501.0	22.47	21.76	20.43
	1 RB low	2685.0	22.31	21.58	20.30
		2593.0	22.49	21.74	20.46
		2501.0	22.48	21.70	20.41
	50% RB mid	2685.0	21.24	20.29	19.34
		2593.0	21.49	20.45	19.51
		2501.0	21.28	20.45	19.53
	100% RB	2685.0	21.29	20.33	19.29
		2593.0	21.46	20.52	19.46
		2501.0	21.34	20.47	19.34
15MHz	1 RB high	2682.5	22.12	21.51	20.20
		2593.0	22.34	21.66	20.38
		2503.5	22.32	21.56	20.36
	1 RB low	2682.5	22.09	21.45	20.18
		2593.0	22.32	21.64	20.32
		2503.5	22.29	21.54	20.31
	50% RB mid	2682.5	21.22	20.22	19.21
		2593.0	21.40	20.39	19.38
		2503.5	21.24	20.38	19.30

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
	100% RB	2682.5	21.24	20.22	19.26
		2593.0	21.39	20.42	19.38
		2503.5	21.29	20.39	19.42
20MHz	1 RB high	2680.0	22.21	21.49	20.21
		2593.0	22.39	21.61	20.32
		2506.0	22.38	21.64	20.33
	1 RB low	2680.0	22.20	21.47	20.17
		2593.0	22.41	21.67	20.38
		2506.0	22.35	21.62	20.34
	50% RB mid	2680.0	21.25	20.28	19.21
		2593.0	21.50	20.53	19.47
		2506.0	21.35	20.52	19.46
	100% RB	2680.0	21.23	20.22	19.21
		2593.0	21.45	20.45	19.41
		2506.0	21.34	20.50	19.48

LTE Band 66

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	22.79	22.13	20.95
		1745.0	22.74	21.96	20.86
		1710.7	22.77	22.11	20.94
	1 RB low	1779.3	22.77	22.04	20.96
		1745.0	23.17	22.48	21.05
		1710.7	22.76	22.15	21.36
	50% RB mid	1779.3	23.30	22.29	21.35
		1745.0	23.27	22.26	21.32
		1710.7	23.25	22.24	21.37
	100% RB	1779.3	22.28	21.36	20.23
		1745.0	22.26	21.37	20.13
		1710.7	22.26	21.36	20.25
3MHz	1 RB high	1778.5	23.29	22.08	21.41
		1745.0	23.24	22.54	21.42
		1711.5	23.32	22.61	21.47
	1 RB low	1778.5	23.31	22.62	21.49
		1745.0	22.75	22.61	21.44
		1711.5	23.28	22.60	21.48
	50% RB mid	1778.5	22.30	21.32	20.26
		1745.0	22.18	21.28	20.19
		1711.5	22.26	21.29	20.27
	100% RB	1778.5	22.27	21.31	20.25
		1745.0	22.19	21.21	20.16
		1711.5	22.27	21.31	20.30
5MHz	1 RB high	1777.5	23.39	22.10	21.06
		1745.0	23.37	22.08	21.23
		1712.5	23.40	22.75	21.61
	1 RB low	1777.5	22.87	22.68	21.48
		1745.0	23.36	22.62	21.44
		1712.5	23.08	22.59	21.53
	50% RB mid	1777.5	22.32	21.31	20.30
		1745.0	22.25	21.23	20.28
		1712.5	22.32	21.32	20.33
	100% RB	1777.5	22.37	21.29	20.34
		1745.0	22.27	21.25	20.23
		1712.5	22.34	21.32	20.32
10MHz	1 RB high	1775.0	22.88	22.27	21.10

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		1745.0	23.02	22.32	21.43
		1715.0	23.43	22.56	21.07
	1 RB low	1775.0	22.81	22.11	21.06
		1745.0	23.33	22.55	21.55
		1715.0	23.33	22.69	21.51
	50% RB mid	1775.0	22.37	21.36	20.34
		1745.0	22.31	21.28	20.30
		1715.0	22.33	21.34	20.33
	100% RB	1775.0	22.29	21.27	20.22
		1745.0	22.28	21.26	20.29
		1715.0	22.35	21.36	20.38
15MHz	1 RB high	1772.5	23.31	22.15	20.98
		1745.0	23.28	22.12	20.84
		1717.5	23.34	22.62	20.97
	1 RB low	1772.5	23.21	21.96	21.33
		1745.0	23.03	22.55	20.89
		1717.5	23.25	22.47	21.41
	50% RB mid	1772.5	22.28	21.30	20.31
		1745.0	22.27	21.25	20.24
		1717.5	22.30	21.28	20.31
	100% RB	1772.5	22.27	21.23	20.23
		1745.0	22.20	21.18	20.19
		1717.5	22.36	21.34	20.28
20MHz	1 RB high	1770.0	23.33	22.14	20.92
		1745.0	23.23	22.08	20.93
		1720.0	23.31	22.62	21.48
	1 RB low	1770.0	23.17	22.06	21.37
		1745.0	23.23	22.54	21.43
		1720.0	23.27	22.52	21.37
	50% RB mid	1770.0	22.33	21.35	20.30
		1745.0	22.30	21.27	20.24
		1720.0	22.36	21.35	20.29
	100% RB	1770.0	22.21	21.18	20.15
		1745.0	22.13	21.14	20.10
		1720.0	22.41	21.35	20.35

LTE Band 71

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	695.5	24.27	23.44	22.32
		680.5	24.22	23.44	22.36
		665.5	24.29	23.48	22.33
	1 RB low	695.5	24.23	23.40	22.24
		680.5	24.28	23.51	22.29
		665.5	24.25	23.53	22.32
	50% RB mid	695.5	22.98	22.16	21.16
		680.5	23.11	22.23	21.22
		665.5	23.01	22.05	21.17
	100% RB	695.5	23.03	22.17	21.09
		680.5	23.14	22.26	21.24
		665.5	23.09	22.14	21.23
10MHz	1 RB high	693.0	24.22	23.42	22.43
		680.5	24.20	23.43	22.35
		668.0	24.24	23.44	22.29
	1 RB low	693.0	24.15	23.46	22.38
		680.5	24.23	23.50	22.35
		668.0	24.33	23.34	22.32
	50% RB mid	693.0	23.34	22.19	21.13
		680.5	23.07	22.23	21.21
		668.0	23.03	22.19	21.18
	100% RB	693.0	23.02	22.17	21.17
		680.5	23.11	22.20	21.21
		668.0	23.15	22.27	21.22
15MHz	1 RB high	690.5	24.05	23.29	22.24
		680.5	24.06	23.27	22.25
		670.5	24.04	23.30	22.21
	1 RB low	690.5	24.07	23.19	22.23
		680.5	24.11	23.31	22.33
		670.5	24.09	23.32	22.32
	50% RB mid	690.5	23.04	22.17	21.20
		680.5	23.03	22.19	21.18
		670.5	22.98	22.17	21.17
	100% RB	690.5	23.05	22.17	21.14
		680.5	23.10	22.17	21.19
		670.5	23.04	22.19	21.17
20MHz	1 RB high	688.0	24.21	23.37	22.25

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)		
			QPSK	16QAM	64QAM
		683.0	24.09	23.35	22.19
		673.0	24.17	23.48	22.34
	1 RB low	688.0	24.16	23.40	22.27
		683.0	24.15	23.41	22.34
		673.0	24.34	23.54	22.36
	50% RB mid	688.0	23.11	22.26	21.23
		683.0	23.08	22.22	21.17
		673.0	23.11	22.20	21.21
	100% RB	688.0	23.09	22.20	21.18
		683.0	23.05	22.15	21.11
		673.0	23.05	22.15	21.16

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96

A.2 FREQUENCY STABILITY

A.2.1 Method of Measurement

Frequency stability is a measure of the frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at +20 °C and rated supply voltage. Two reference points are established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as F_L and F_H respectively.

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of CMW500

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30℃.
3. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on mid channel of each band, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10℃ increments from -30℃ to +50℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments e-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50℃.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the center channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10℃ increments from +50℃ to -30℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of the lower, higher and nominal voltage. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress.

A.2.2 Measurement results

LTE Band 2, 20MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1850.780	1909.230		
50				-2.03	0.0011
40				0.33	0.0002
30				-0.27	0.0001
10				-0.09	0.0000
0				2.09	0.0011
-10				1.72	0.0009
-20				-0.47	0.0003
-30				-2.18	0.0012

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	1850.780	1909.230	-0.12	0.0001
4.40				1.79	0.0010

Expanded measurement uncertainty is 10 Hz, k = 2

LTE Band 4, 20MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
50	3.85	1710.780	1754.210		
40				-3.91	0.0023
30				-4.68	0.0027
20				-6.48	0.0037
10				-5.35	0.0031
0				-6.90	0.0040
-10				-5.55	0.0032
-20				-4.88	0.0028
-30				-4.15	0.0024

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	1710.780	1754.210	-2.85	0.0016
4.40				-3.69	0.0021

panded measurement uncertainty is 10Hz, k = 2

LTE Band 5, 10MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
50	3.85	824.340	848.610		
40				0.21	0.0003
30				1.24	0.0015
20				0.52	0.0006
10				0.36	0.0004
0				0.49	0.0006
-10				0.73	0.0009
-20				0.57	0.0007
-30				1.27	0.0015

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	824.340	848.610	-0.09	0.0001
4.40				1.13	0.0014

Expanded measurement uncertainty is 10 Hz, k = 2

LTE Band 7, 20MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2500.520	2569.520		
50				-0.66	0.0003
40				2.15	0.0008
30				0.56	0.0002
10				-0.69	0.0003
0				-0.24	0.0001
-10				1.97	0.0008
-20				-1.36	0.0005
-30				0.40	0.0002

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	2500.520	2569.520	1.17	0.0005
4.40				0.42	0.0002

Expanded measurement uncertainty is 10 Hz, k = 2

LTE Band 12, 10MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	699.440	715.540		
50				-1.07	0.0015
40				-0.63	0.0009
30				-0.46	0.0006
10				-0.77	0.0011
0				-0.16	0.0002
-10				0.67	0.0010
-20				-0.64	0.0009
-30				0.64	0.0009

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	699.440	715.540	-0.69	0.0010
4.40				-0.39	0.0005

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 13, 10MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	777.465	786.535		
50				-0.14	0.0002
40				-0.69	0.0009
30				-0.96	0.0012
10				-1.80	0.0023
0				1.00	0.0013
-10				-0.84	0.0011
-20				0.82	0.0010
-30				-1.19	0.0015

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	777.465	786.535	-0.27	0.0003
4.40				0.19	0.0002

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 17, 10MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
50	3.85	704.380	715.620		
40				-1.30	0.0018
30				-0.69	0.0010
20				0.19	0.0003
10				-2.15	0.0030
0				-0.52	0.0007
-10				-0.46	0.0006
-20				-0.44	0.0006
-30				0.79	0.0011

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	704.380	715.620	-1.86	0.0026
4.40				-0.30	0.0004

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 25, 20MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1850.780	1914.220		
50				1.85	0.0010
40				1.42	0.0008
30				3.00	0.0016
10				-1.47	0.0008
0				0.07	0.0000
-10				1.95	0.0010
-20				0.14	0.0001
-30				0.37	0.0002

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	1850.780	1914.220	0.66	0.0003
4.40				1.27	0.0007

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 26(814MHz-824MHz), 10MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	814.360	823.630		
50				0.87	0.0011
40				0.67	0.0008
30				-0.01	0.0000
10				1.02	0.0012
0				0.16	0.0002
-10				0.86	0.0010
-20				1.62	0.0020
-30				0.14	0.0002

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	814.360	823.630	0.27	0.0003
4.40				2.68	0.0033

Expanded measurement uncertainty is 10Hz, k = 2

LTE band 26(824MHz-849MHz), 15MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	824.490	848.460		
50				-0.93	0.0011
40				-0.33	0.0004
30				-0.52	0.0006
10				0.03	0.0000
0				-1.12	0.0013
-10				-1.19	0.0014
-20				-2.42	0.0029
-30				-2.35	0.0028

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	824.490	848.460	-2.79	0.0033
4.40				-2.43	0.0029

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 38, 20MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2570.620	2619.340		
50				-0.64	0.0002
40				0.20	0.0001
30				1.35	0.0005
10				0.10	0.0000
0				-1.47	0.0006
-10				-1.03	0.0004
-20				-0.52	0.0002
-30				-0.92	0.0004

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	2570.620	2619.340	0.33	0.0001
4.40				-0.19	0.0001

Expanded measurement uncertainty is 10 Hz, *k* = 2

LTE band 41, 20MHz bandwidth QPSK(worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2496.560	2689.300		
50				-0.66	0.0003
40				-1.06	0.0004
30				-1.16	0.0004
10				-2.22	0.0009
0				-0.10	0.0000
-10				-0.52	0.0002
-20				-2.52	0.0010
-30				-1.17	0.0005

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	2496.560	2689.300	-0.49	0.0002
4.40				-0.53	0.0002

Expanded measurement uncertainty is 10 Hz, k = 2

LTE Band 66, 20MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1710.790	1779.230		
50				-2.93	0.0017
40				-1.15	0.0007
30				-2.08	0.0012
10				-3.23	0.0019
0				-0.73	0.0004
-10				-1.70	0.0010
-20				-3.73	0.0021
-30				-2.89	0.0017

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	1710.790	1779.230	-3.25	0.0019
4.40				-2.80	0.0016

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 71, 20MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	663.800	697.210		
50				-0.30	0.0004
40				0.69	0.0010
30				0.43	0.0006
10				-0.04	0.0001
0				0.04	0.0001
-10				0.97	0.0014
-20				0.26	0.0004
-30				1.89	0.0028

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	663.800	697.210	1.76	0.0026
4.40				1.12	0.0016

Expanded measurement uncertainty is 10Hz, k = 2

A.3 OCCUPIED BANDWIDTH

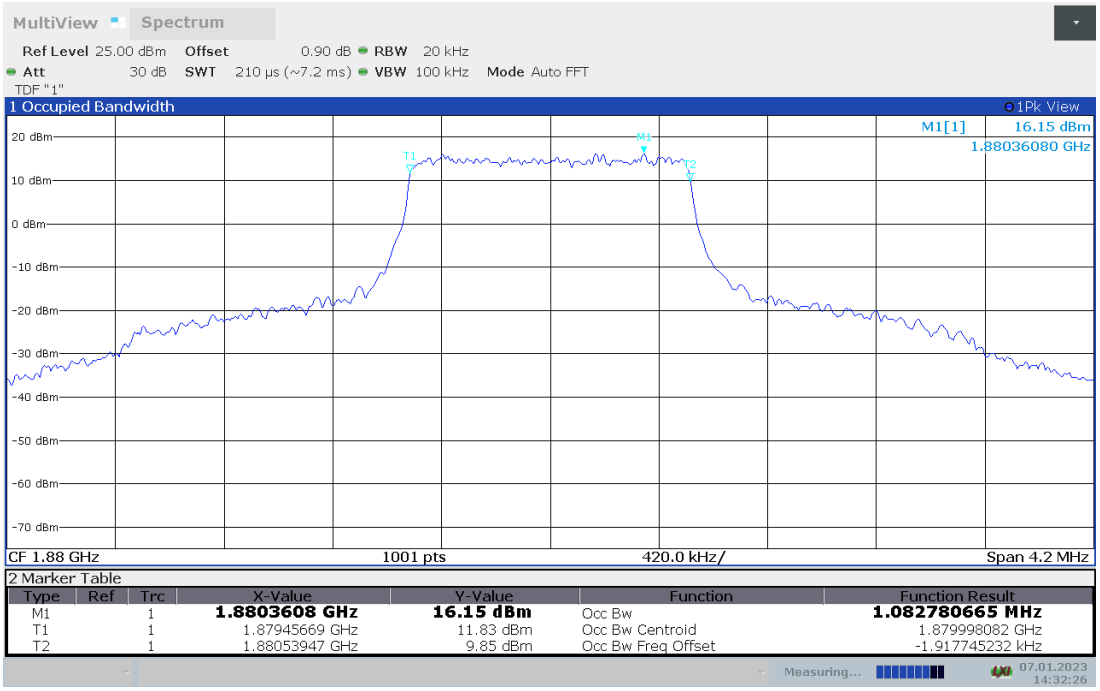
Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequency. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.
The measurement method is from ANSI C63.26:

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts.
b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
d) Set the detection mode to peak, and the trace mode to max-hold.

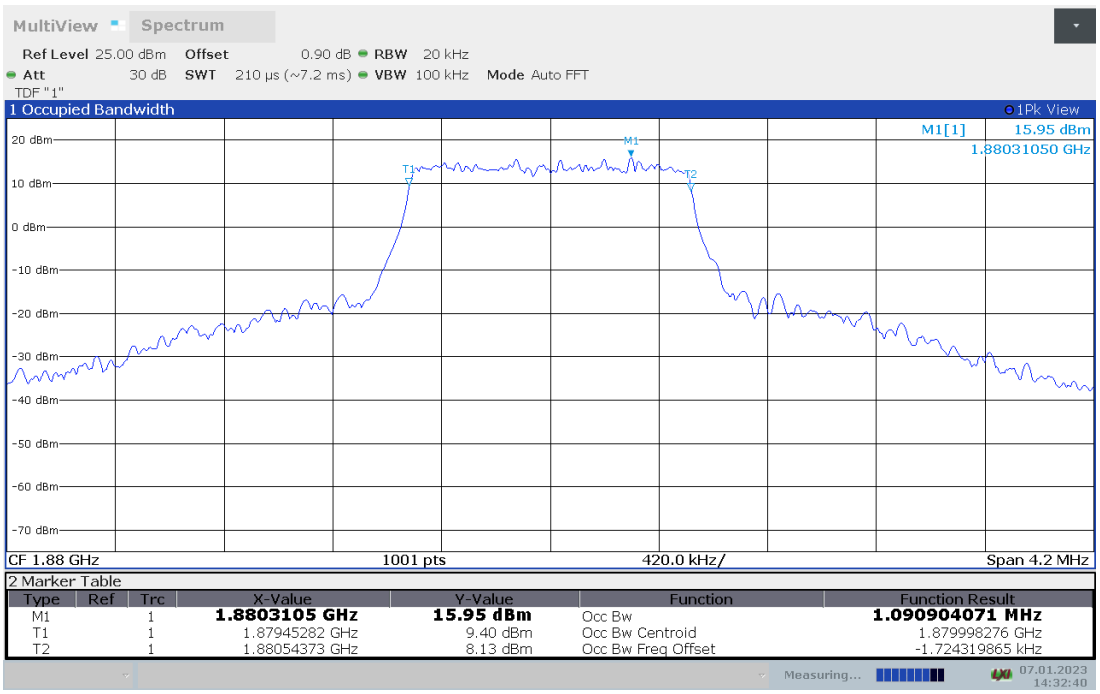
LTE band 2,1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1880	1.083	1.091

LTE band 2 , 1.4MHz Bandwidth,QPSK (99% BW)



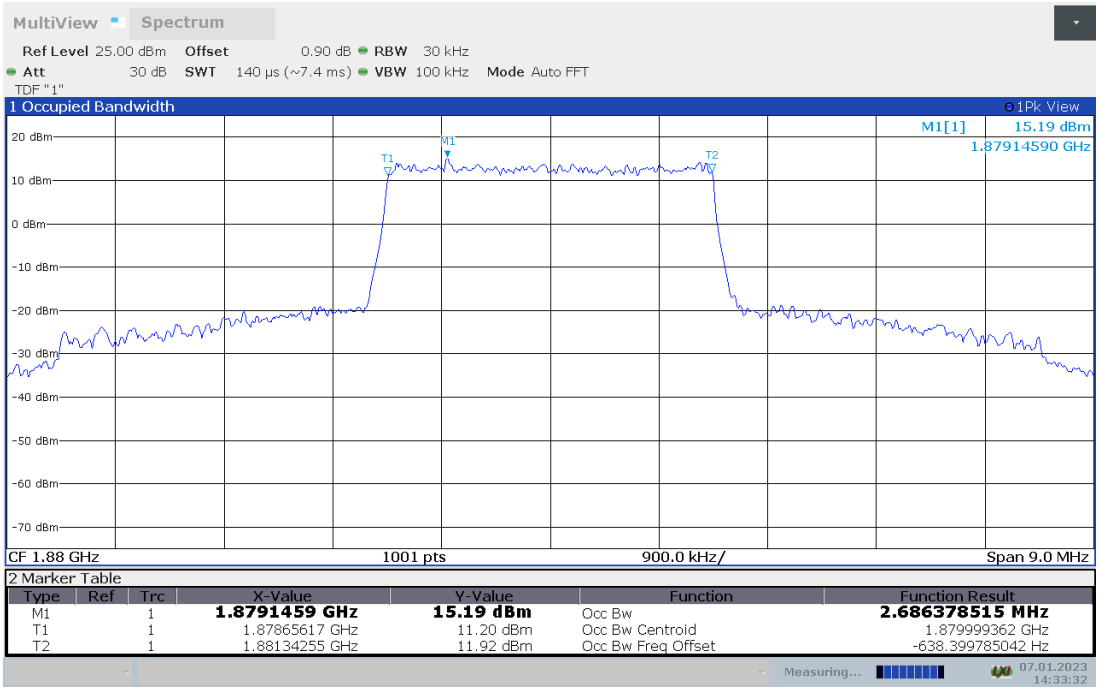
LTE band 2 , 1.4MHz Bandwidth,16QAM (99% BW)



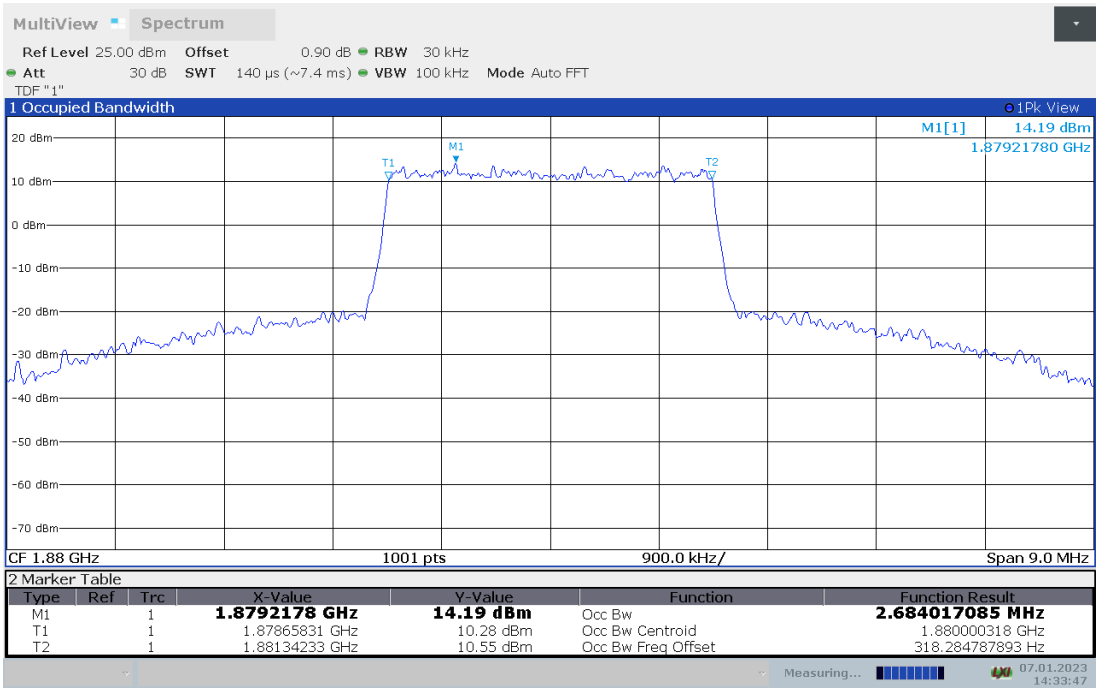
LTE band 2,3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1880	2.686	2.684

LTE band 2 , 3MHz Bandwidth,QPSK (99% BW)



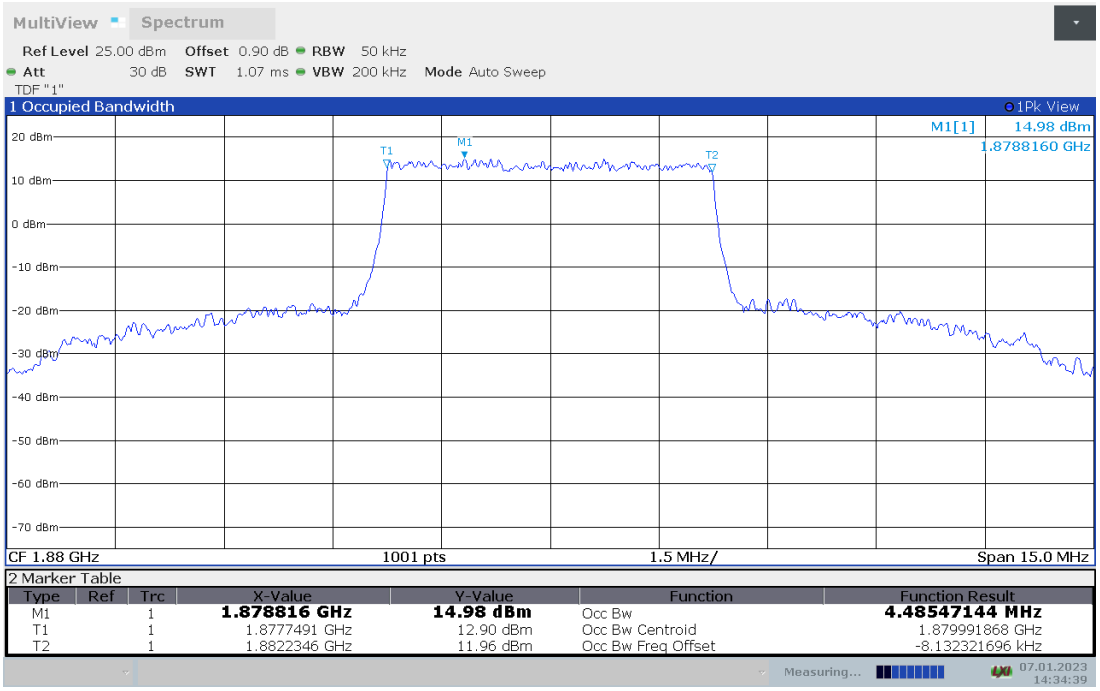
LTE band 2 , 3MHz Bandwidth,16QAM (99% BW)



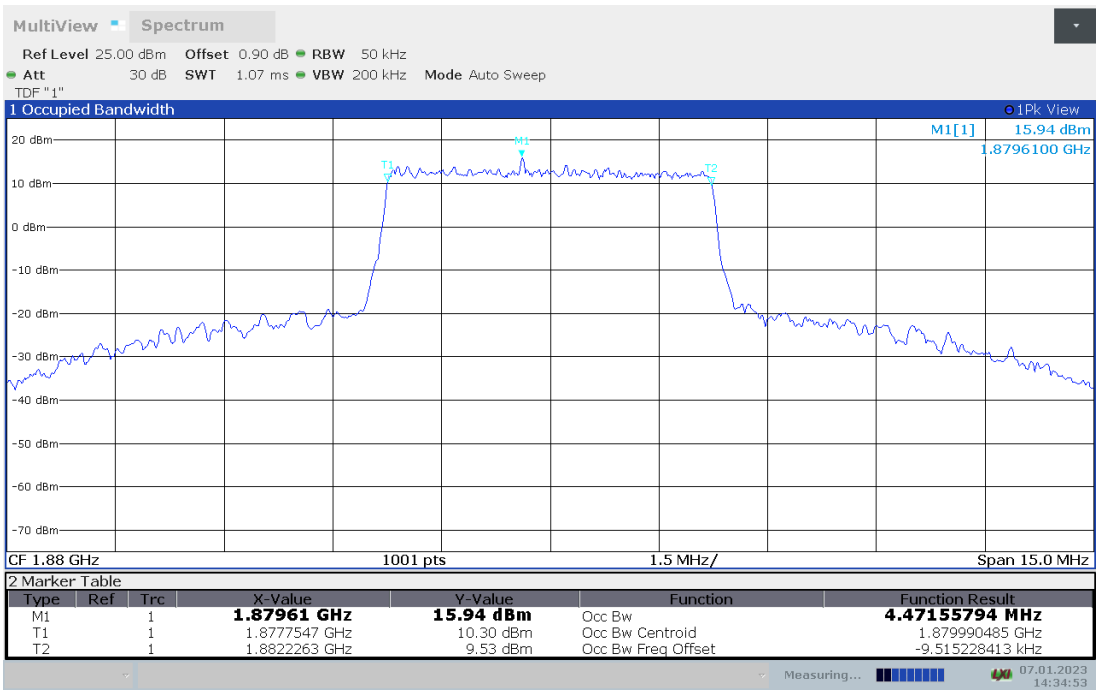
LTE band 2,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1880	4.485	4.472

LTE band 2 , 5MHz Bandwidth,QPSK (99% BW)



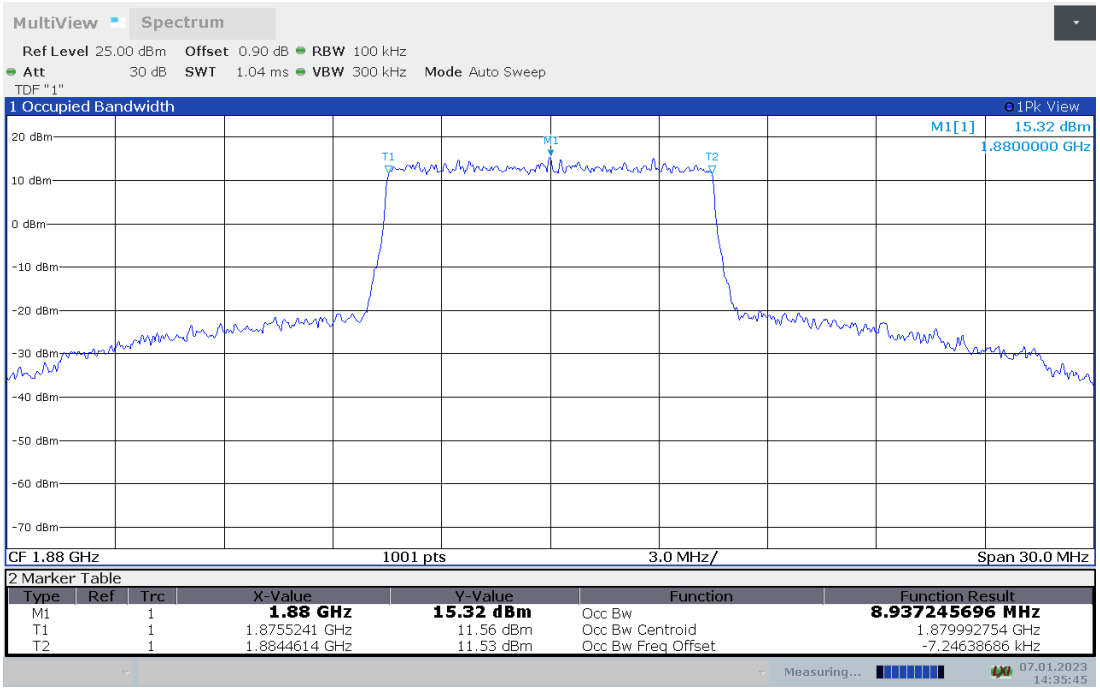
LTE band 2 , 5MHz Bandwidth,16QAM (99% BW)



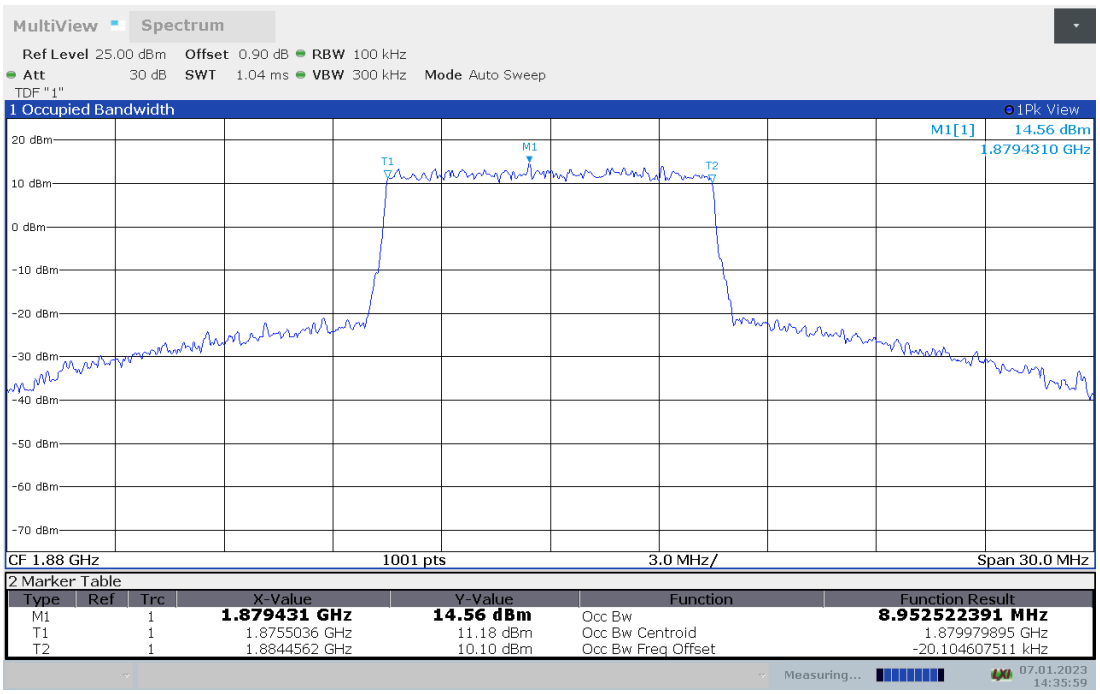
LTE band 2,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1880	8.937	8.953

LTE band 2 , 10MHz Bandwidth,QPSK (99% BW)



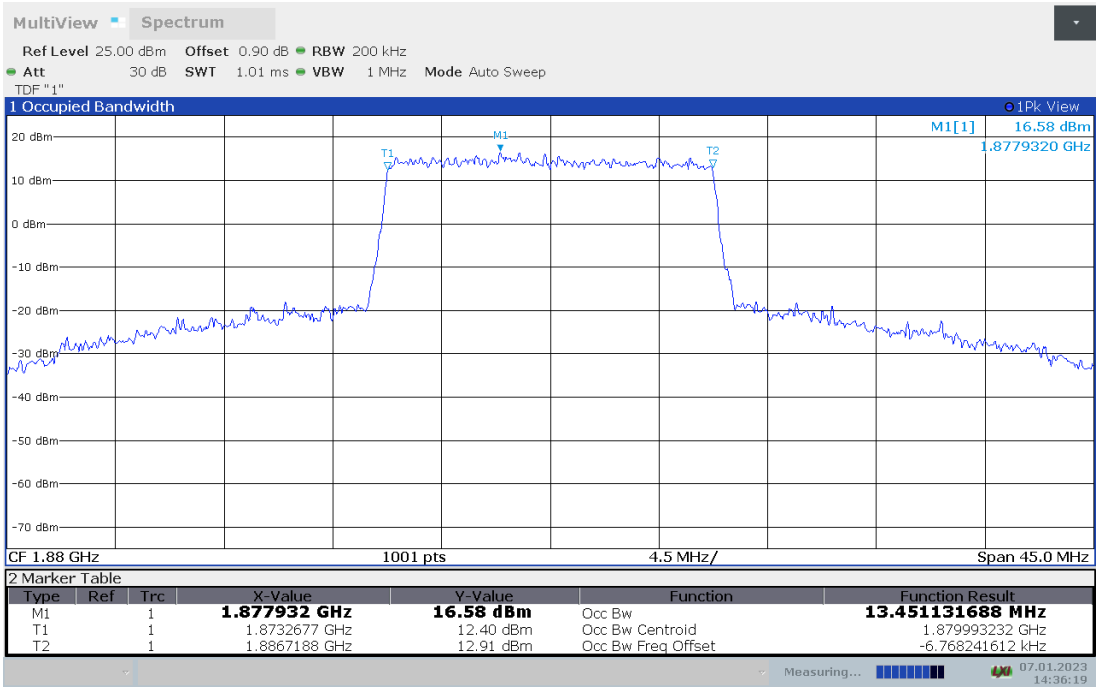
LTE band 2 , 10MHz Bandwidth,16QAM (99% BW)



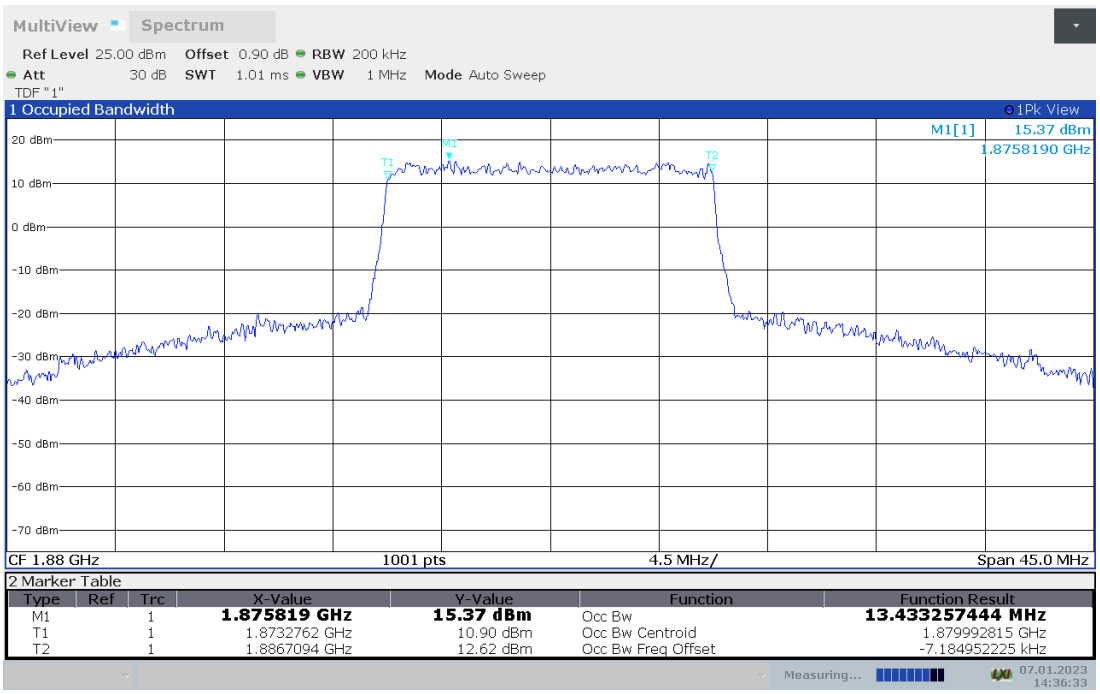
LTE band 2,15MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1880	13.451	13.433

LTE band 2 , 15MHz Bandwidth,QPSK (99% BW)



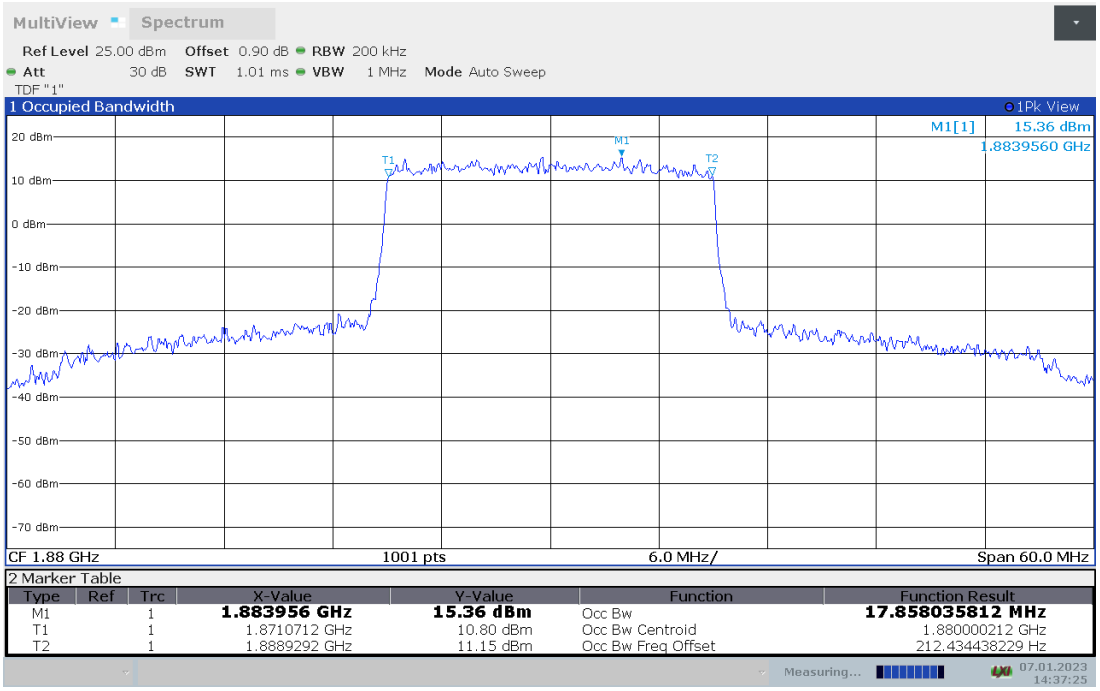
LTE band 2 , 15MHz Bandwidth,16QAM (99% BW)



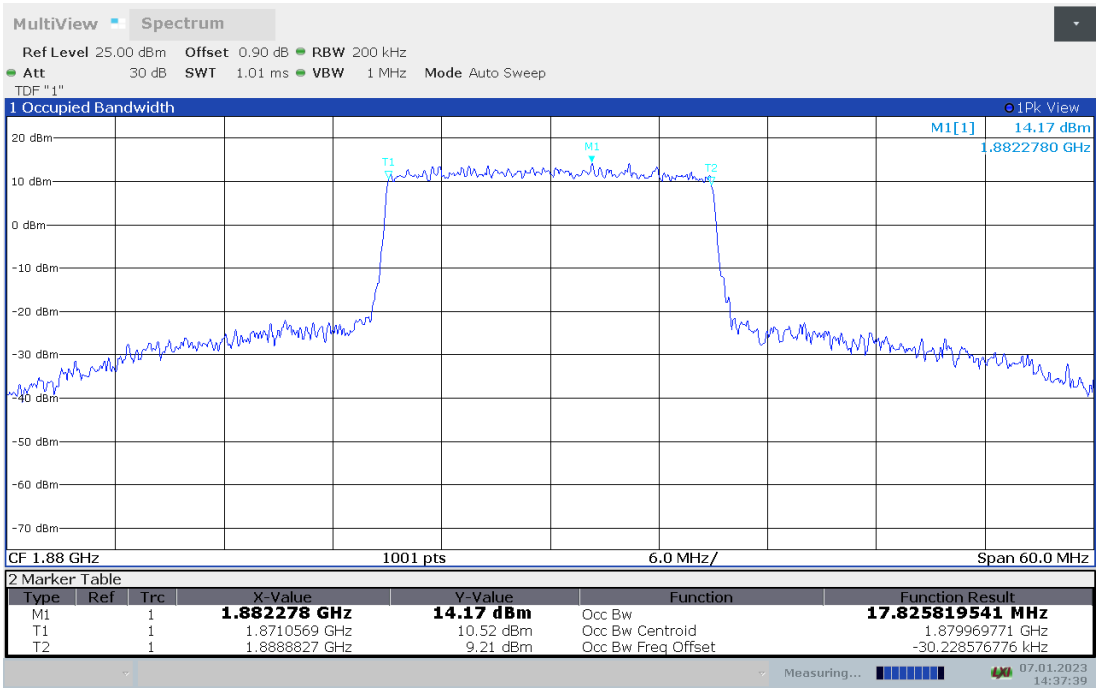
LTE band 2,20MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1880	17.858	17.826

LTE band 2 , 20MHz Bandwidth,QPSK (99% BW)



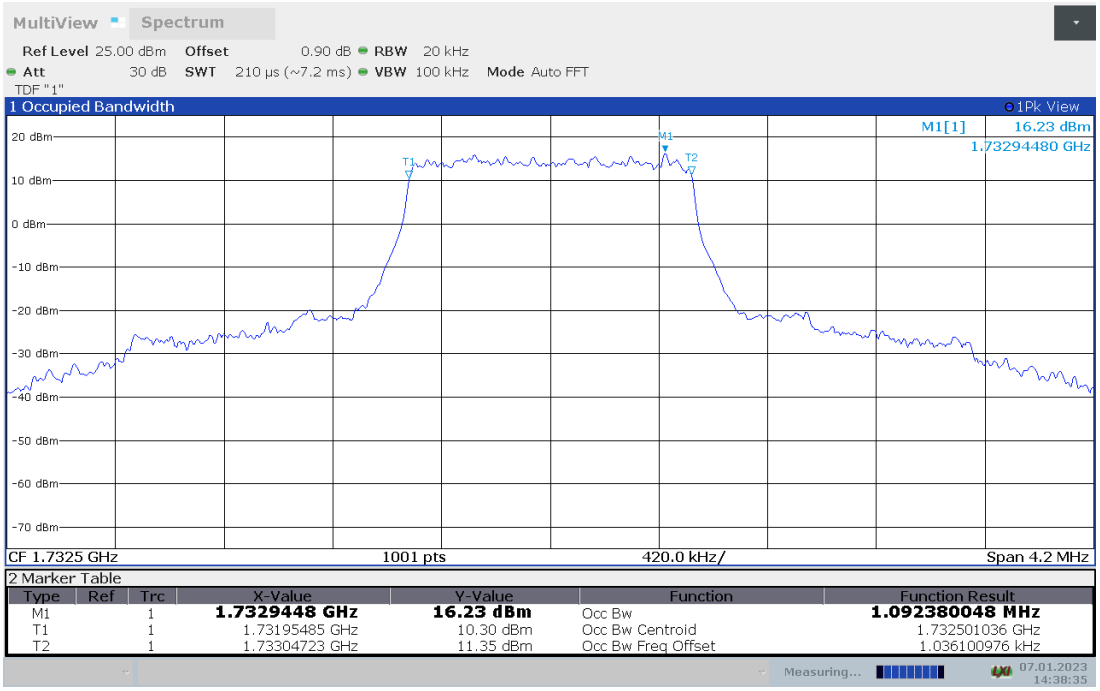
LTE band 2 , 20MHz Bandwidth,16QAM (99% BW)



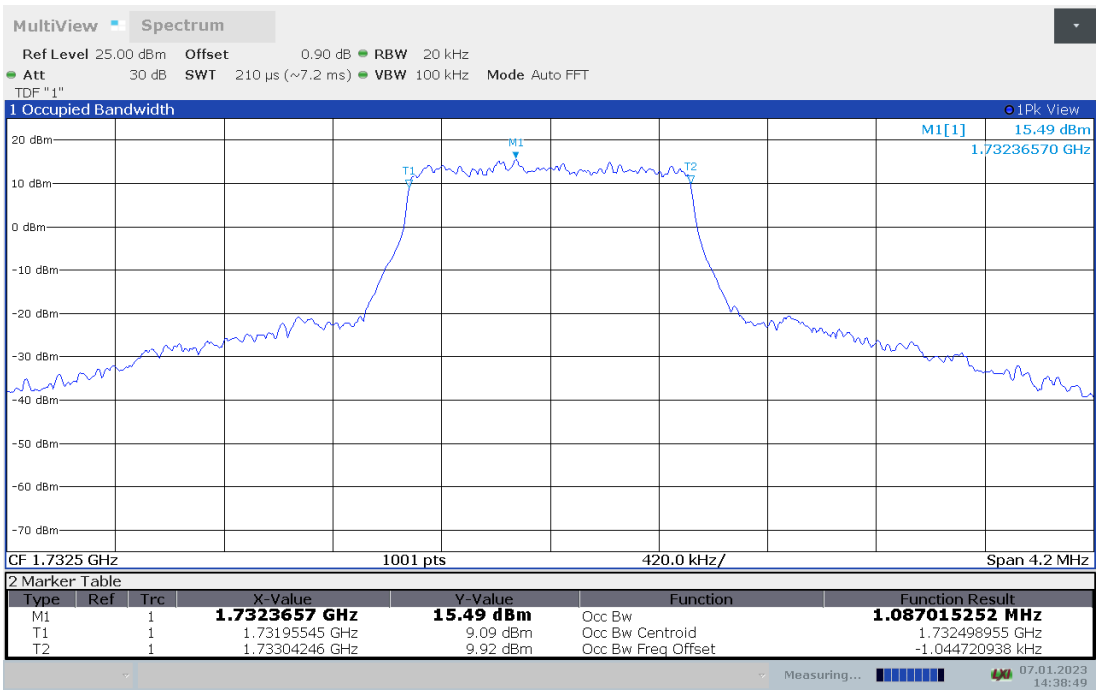
LTE band 4,1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1732.5	1.092	1.087

LTE band 4 , 1.4MHz Bandwidth,QPSK (99% BW)



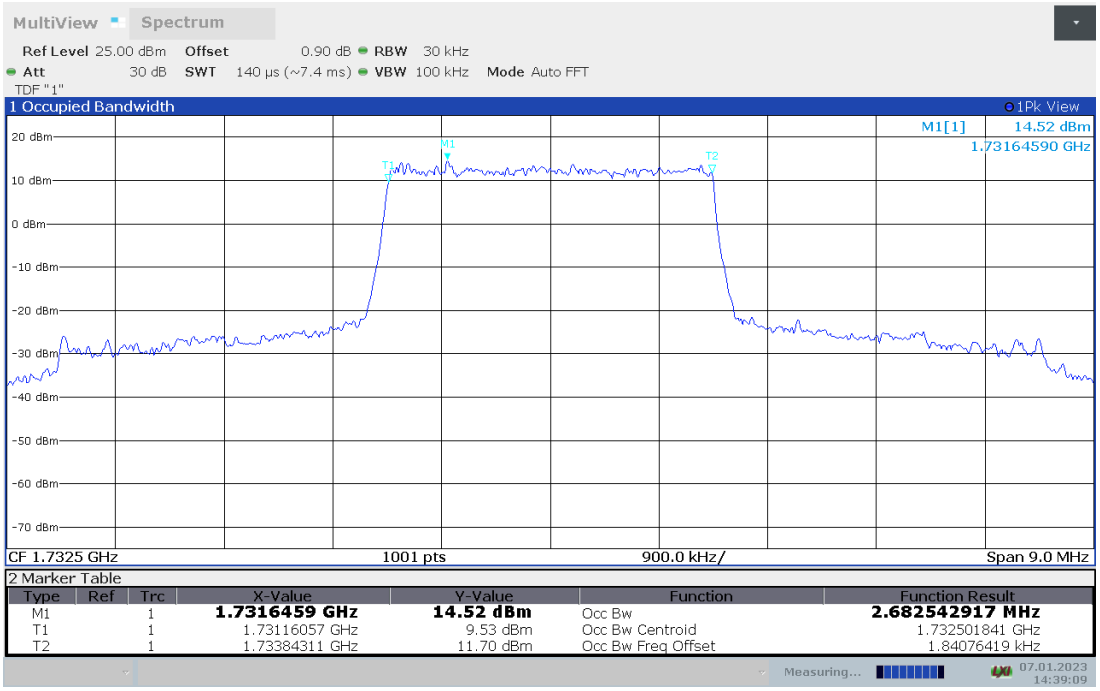
LTE band 4 , 1.4MHz Bandwidth,16QAM (99% BW)



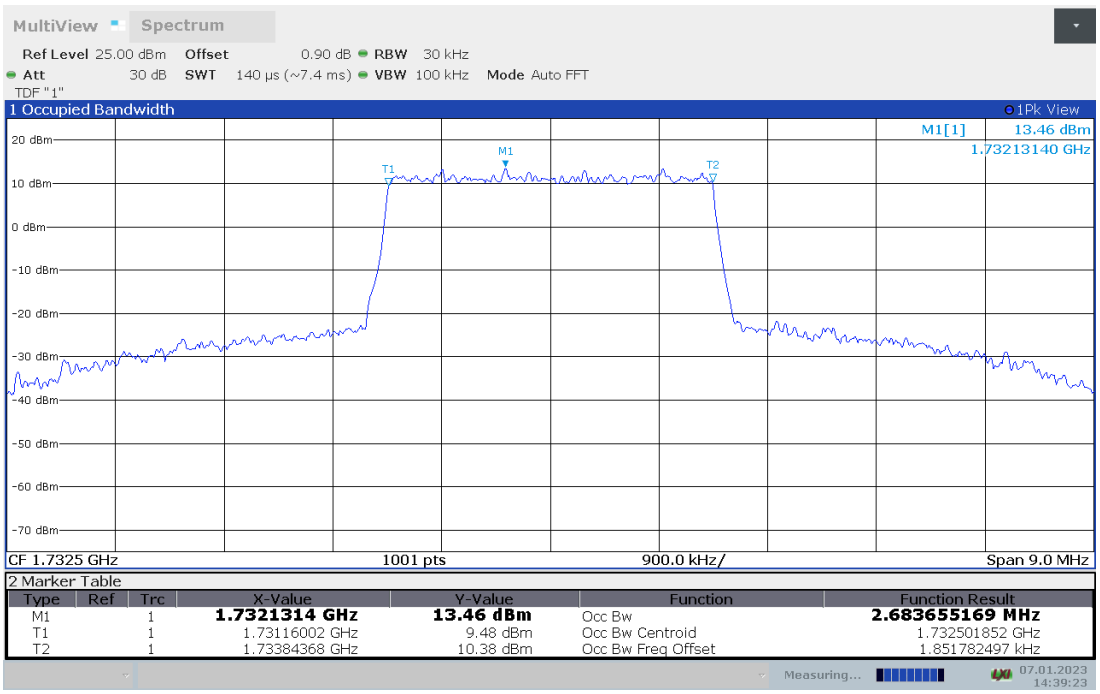
LTE band 4,3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1732.5	2.683	2.684

LTE band 4 , 3MHz Bandwidth,QPSK (99% BW)



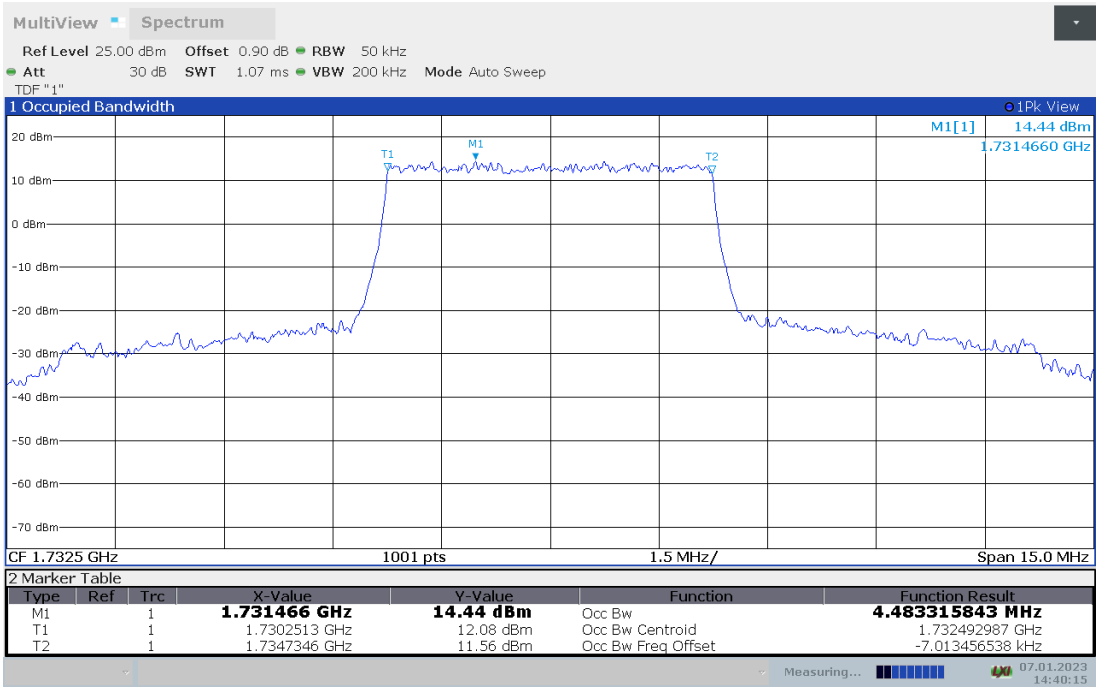
LTE band 4 , 3MHz Bandwidth,16QAM (99% BW)



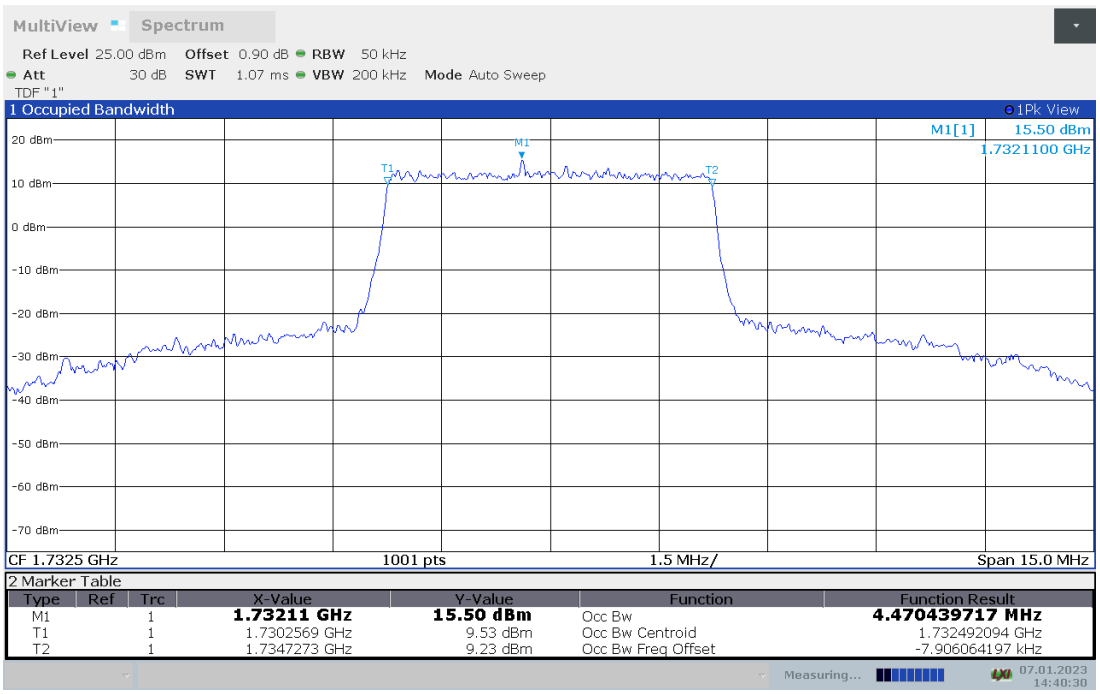
LTE band 4,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1732.5	4.483	4.470

LTE band 4 , 5MHz Bandwidth,QPSK (99% BW)



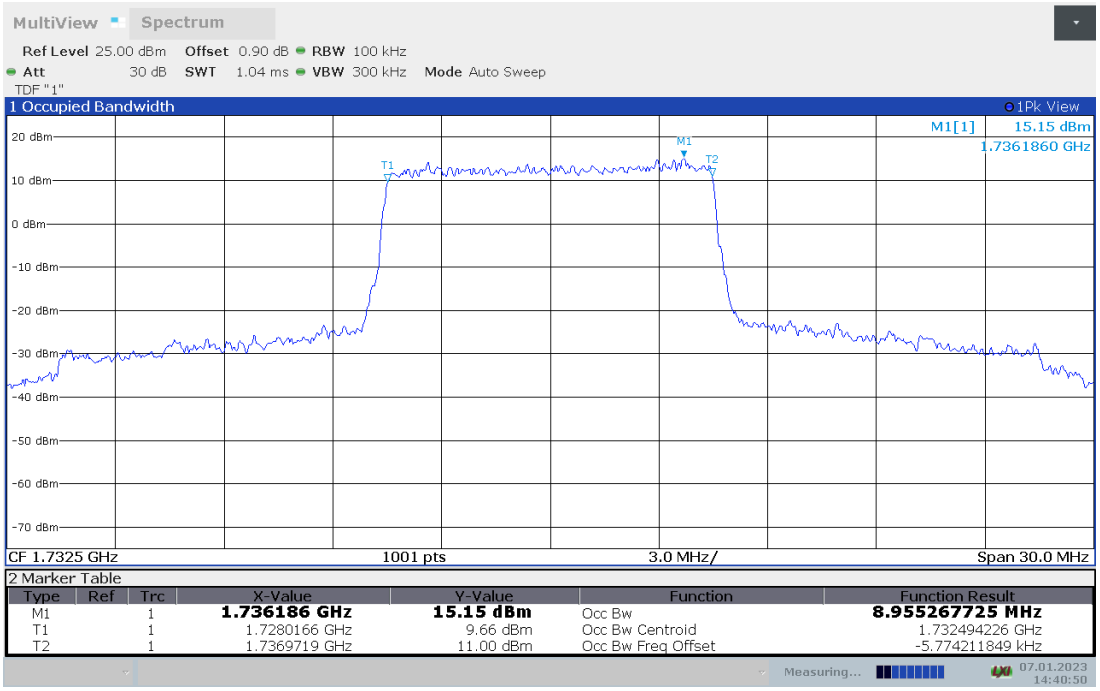
LTE band 4 , 5MHz Bandwidth,16QAM (99% BW)



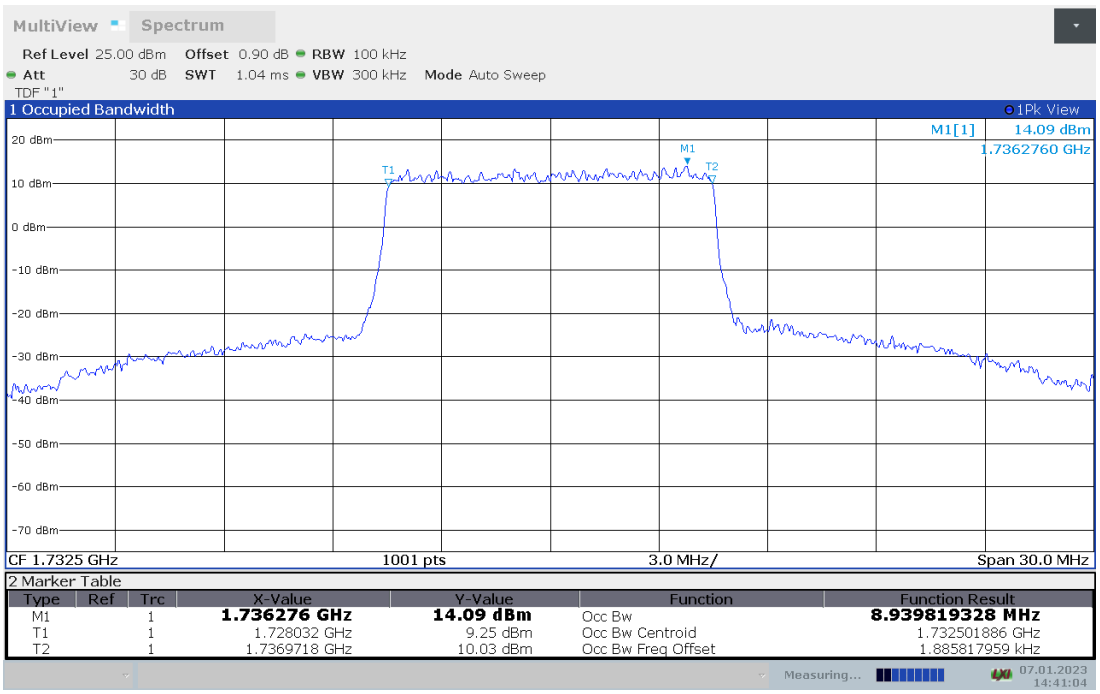
LTE band 4,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1732.5	8.955	8.940

LTE band 4 , 10MHz Bandwidth,QPSK (99% BW)



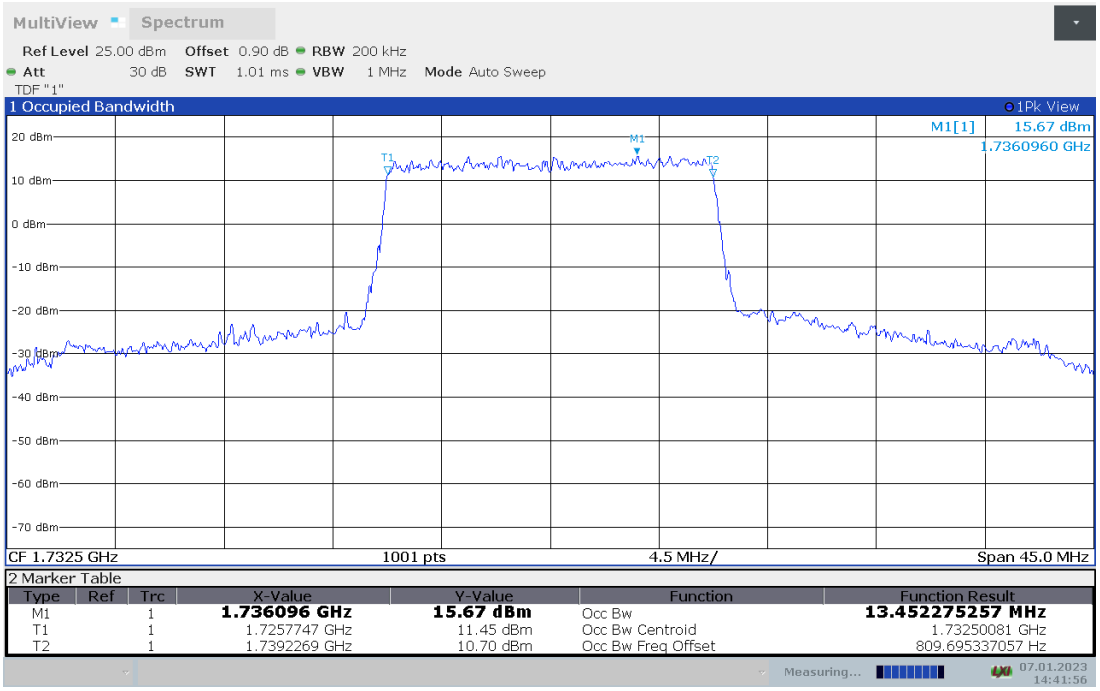
LTE band 4 , 10MHz Bandwidth,16QAM (99% BW)



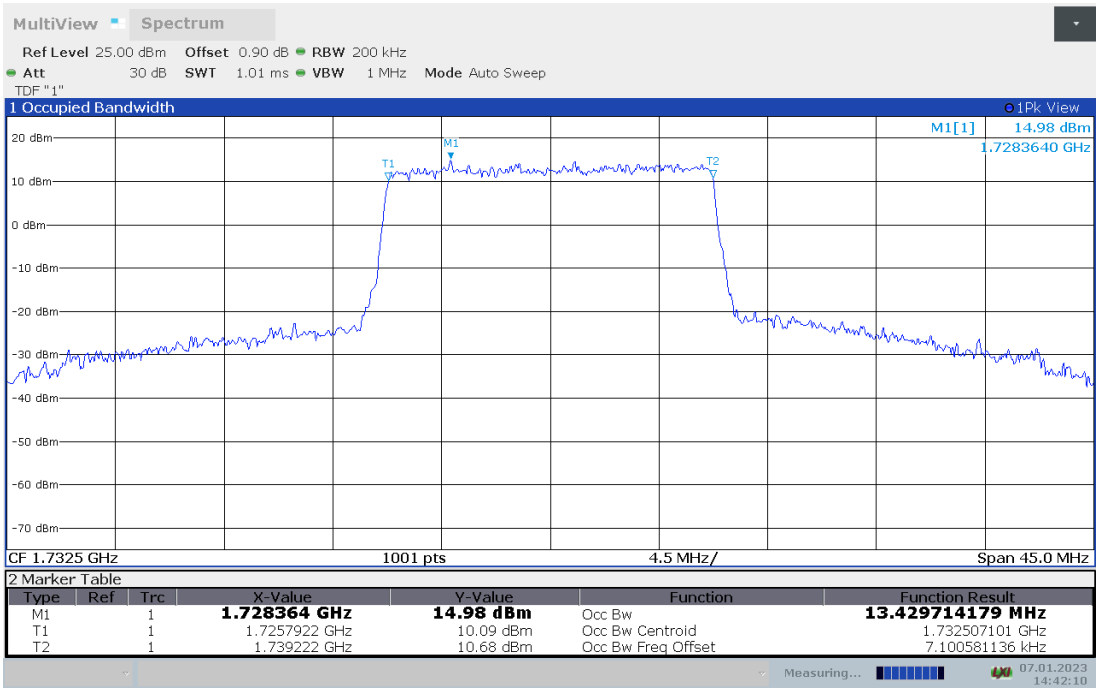
LTE band 4,15MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1732.5	13.452	13.430

LTE band 4 , 15MHz Bandwidth,QPSK (99% BW)



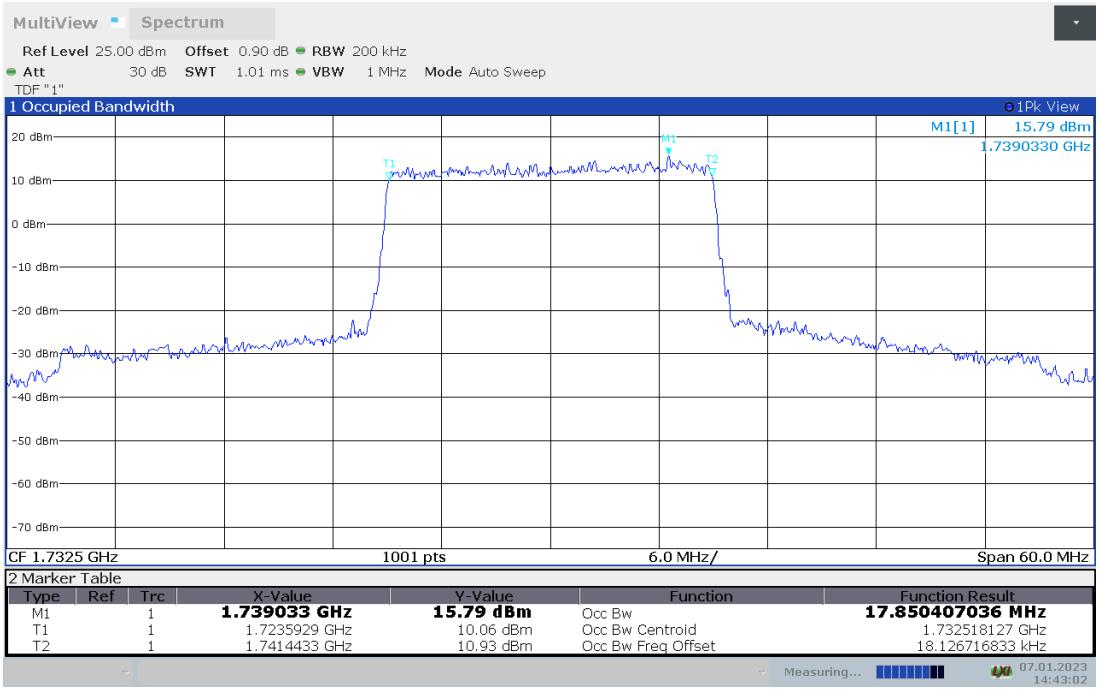
LTE band 4 , 15MHz Bandwidth,16QAM (99% BW)



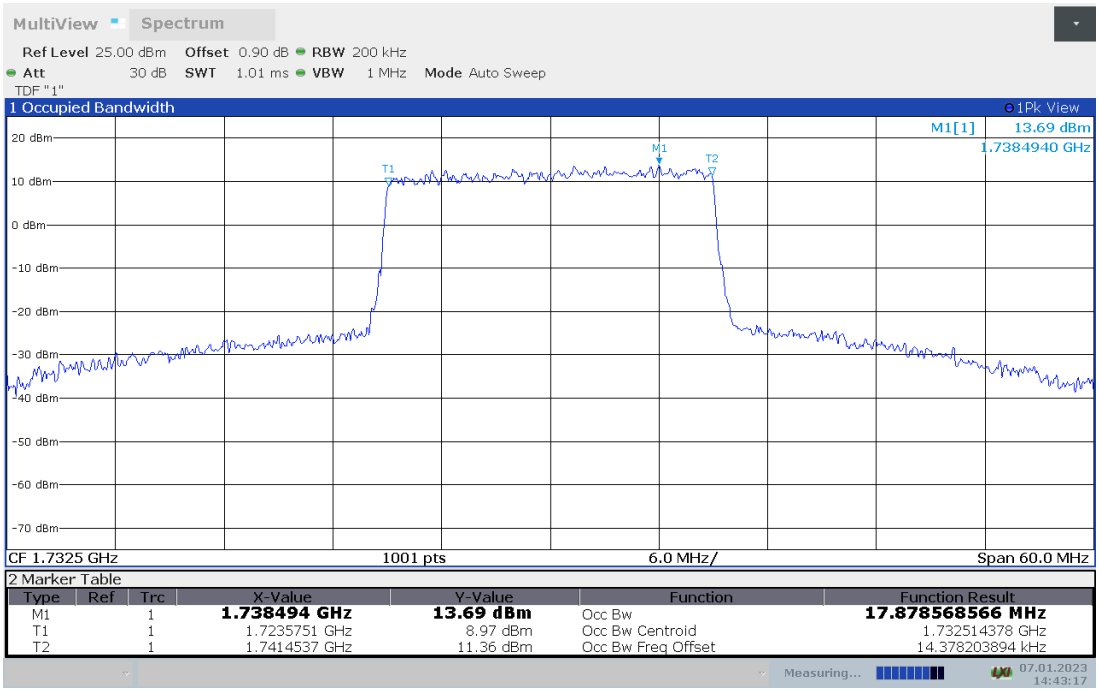
LTE band 4,20MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1732.5	17.850	17.879

LTE band 4 , 20MHz Bandwidth,QPSK (99% BW)



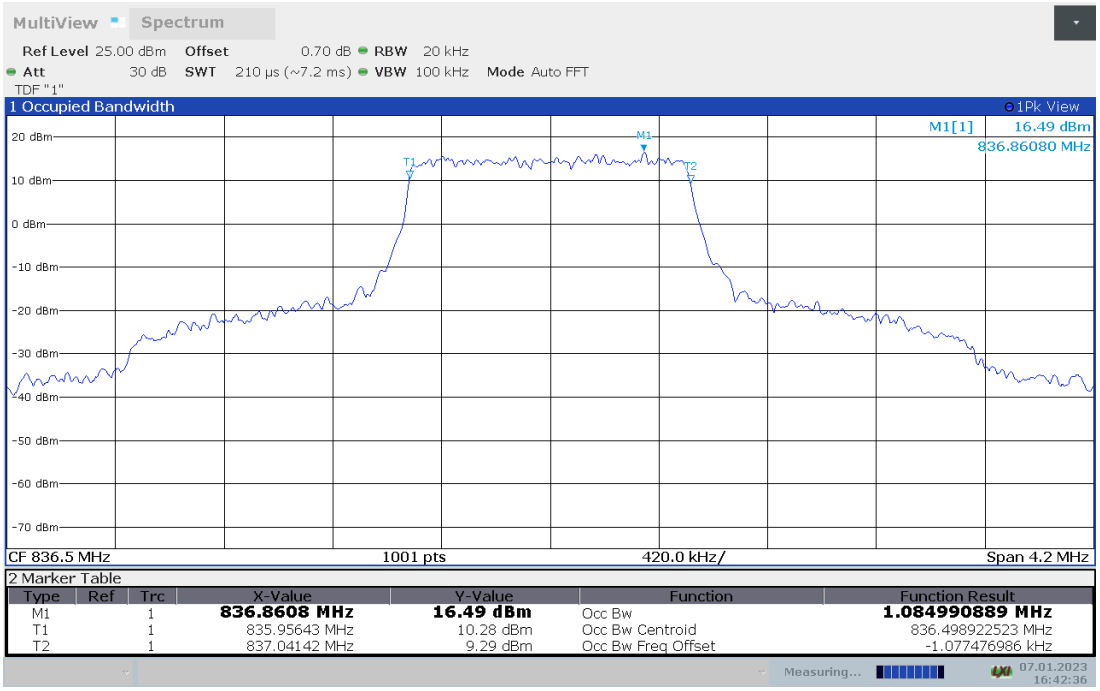
LTE band 4 , 20MHz Bandwidth,16QAM (99% BW)



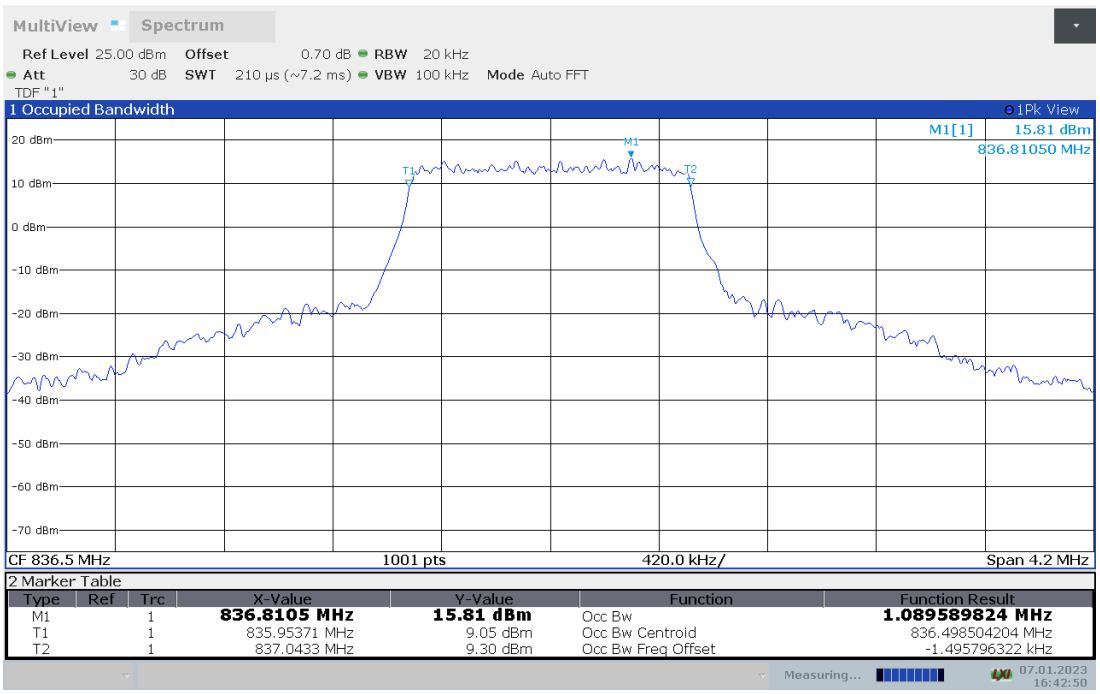
LTE band 5,1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	1.085	1.090

LTE band 5 , 1.4MHz Bandwidth,QPSK (99% BW)



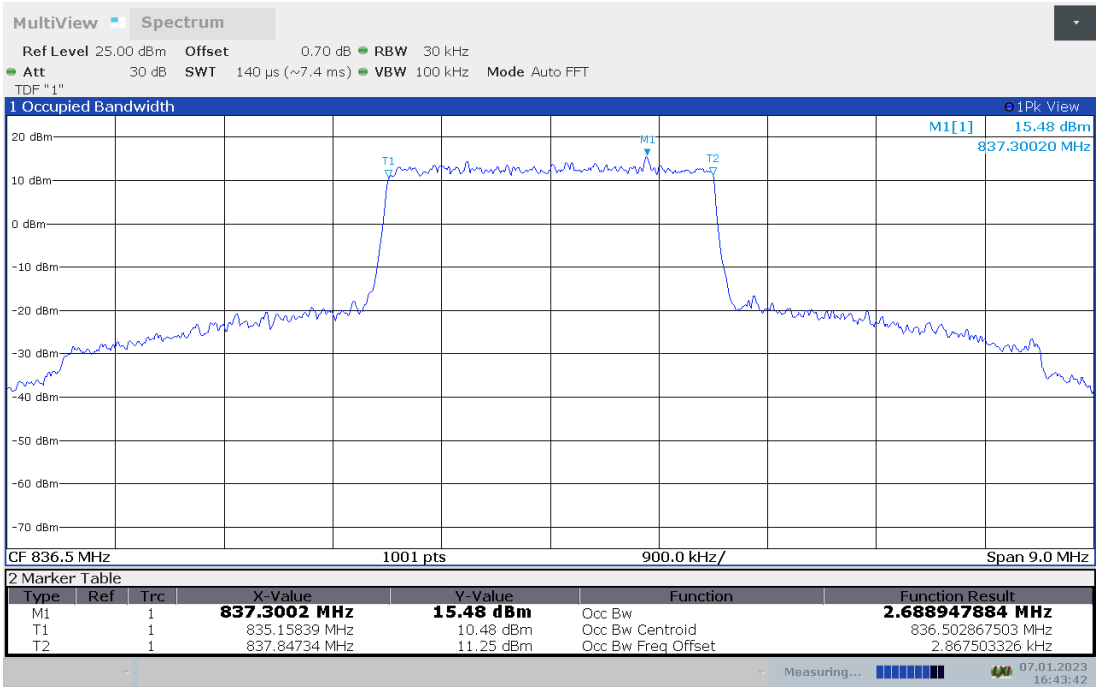
LTE band 5 , 1.4MHz Bandwidth,16QAM (99% BW)



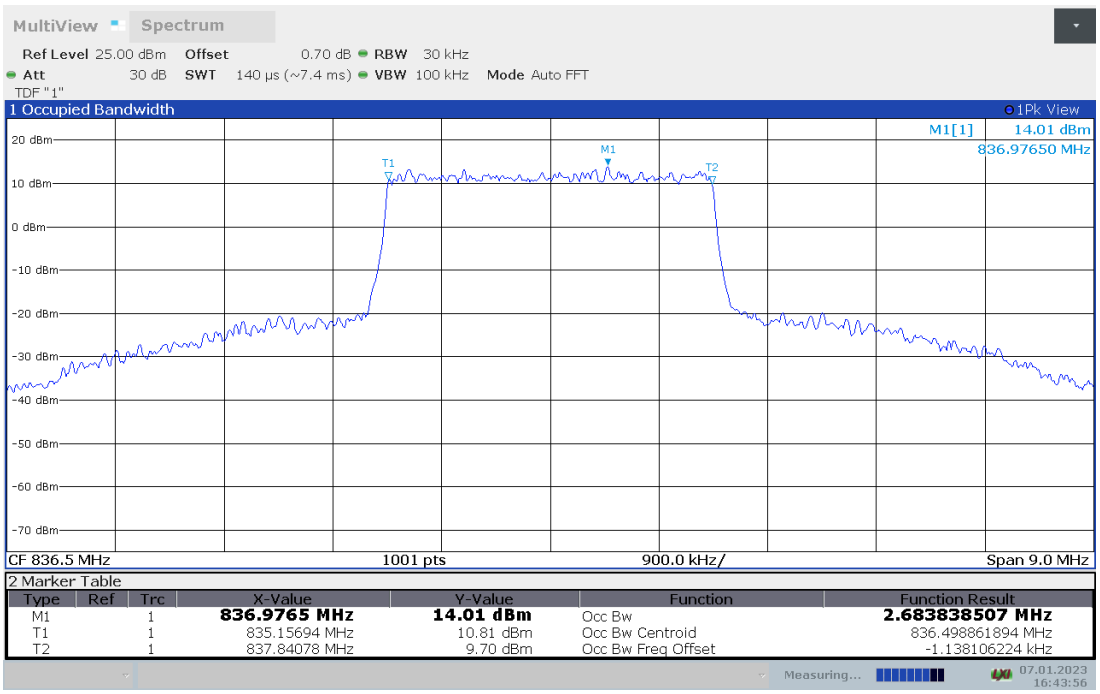
LTE band 5,3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	2.689	2.684

LTE band 5 , 3MHz Bandwidth,QPSK (99% BW)



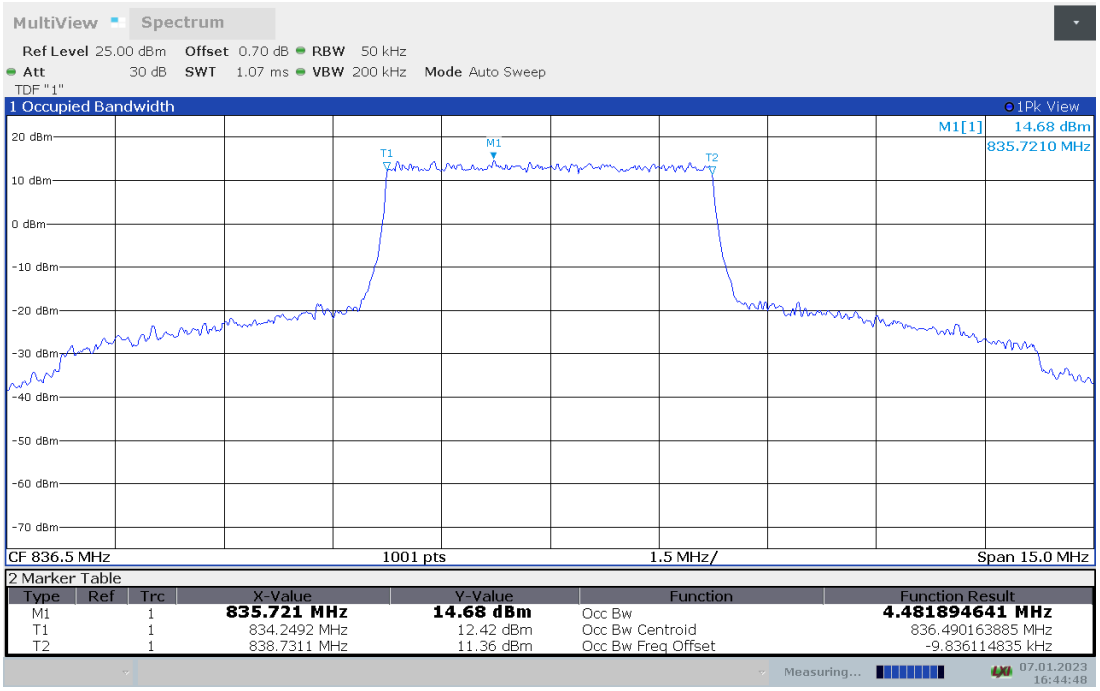
LTE band 5 , 3MHz Bandwidth,16QAM (99% BW)



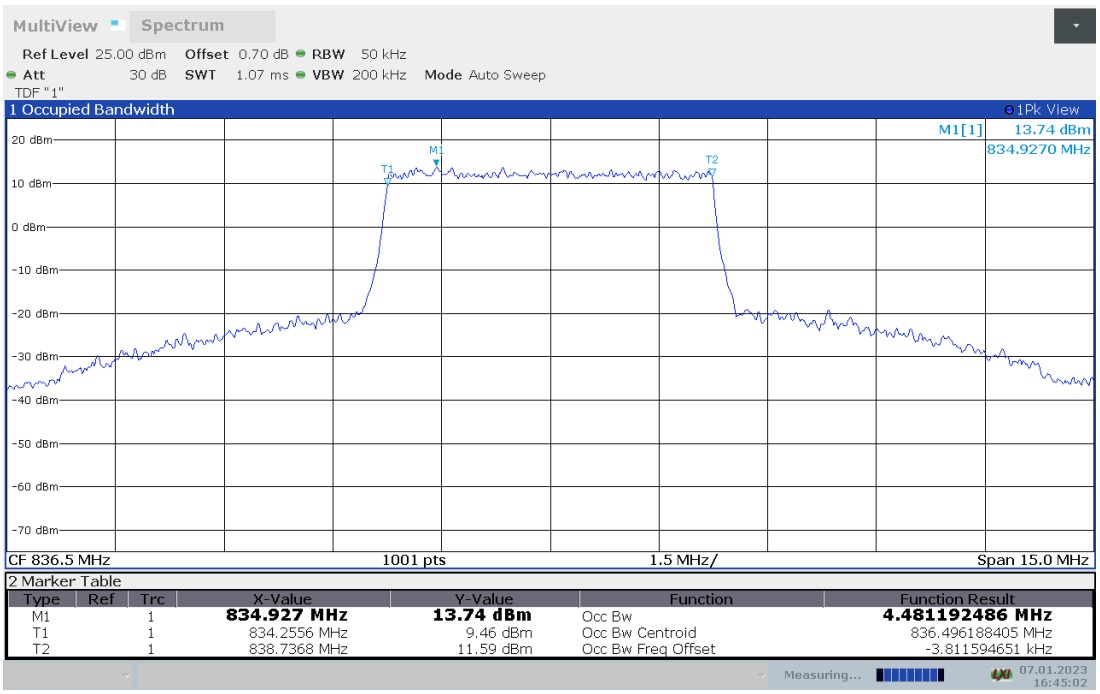
LTE band 5,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	4.482	4.481

LTE band 5 , 5MHz Bandwidth,QPSK (99% BW)



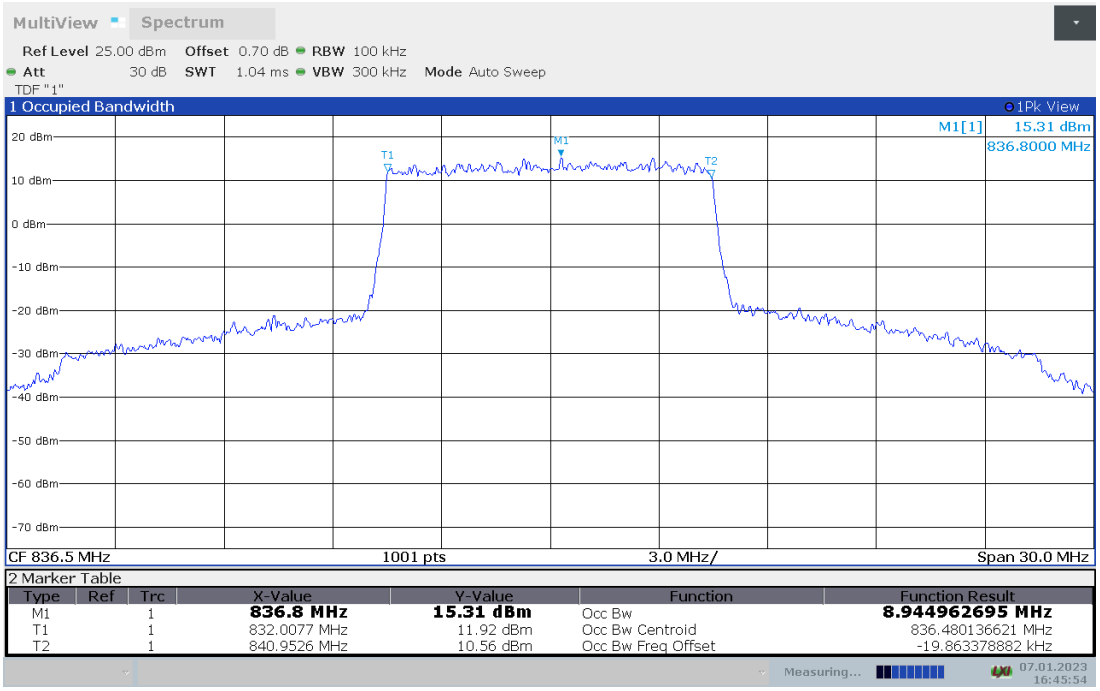
LTE band 5 , 5MHz Bandwidth,16QAM (99% BW)



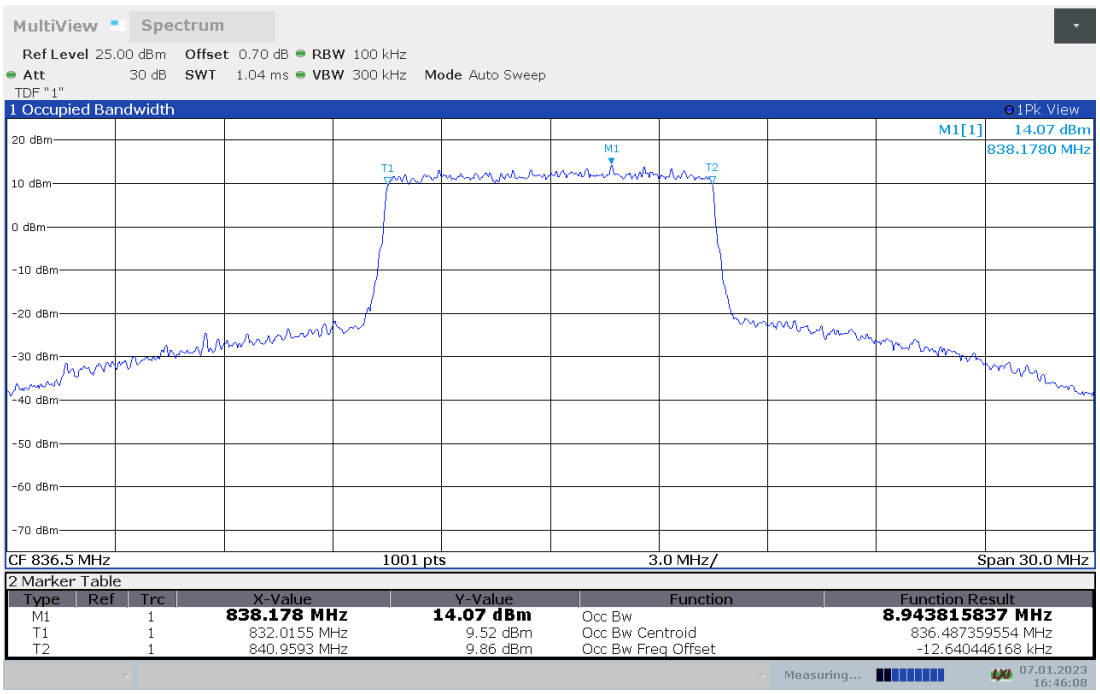
LTE band 5,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	8.945	8.944

LTE band 5 , 10MHz Bandwidth,QPSK (99% BW)



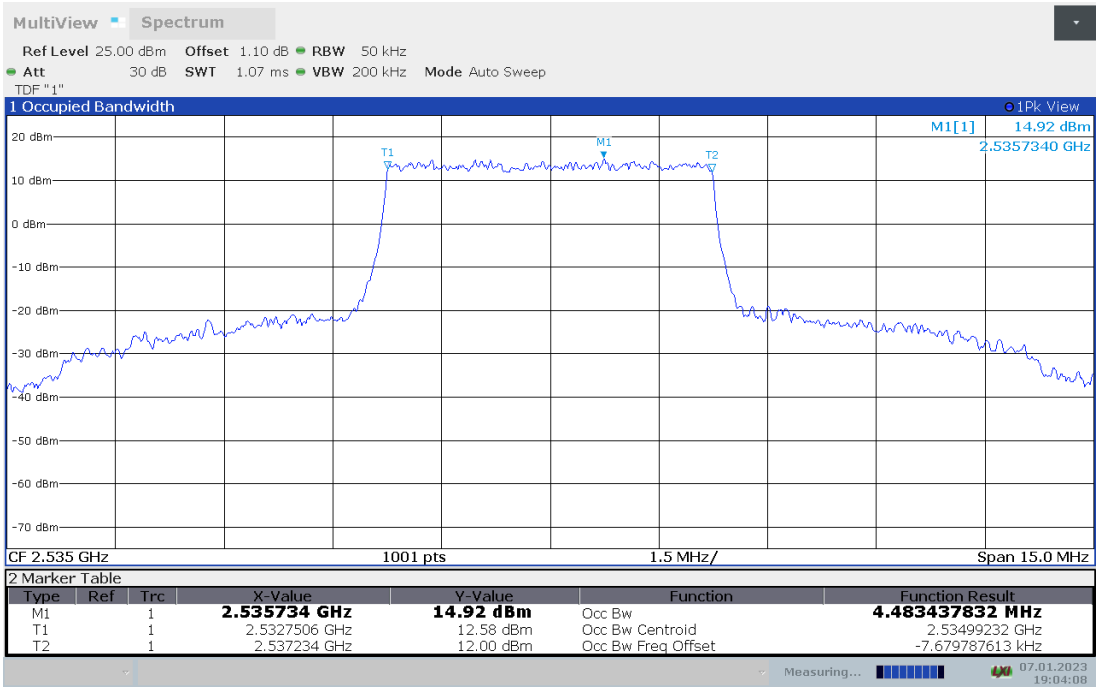
LTE band 5 , 10MHz Bandwidth,16QAM (99% BW)



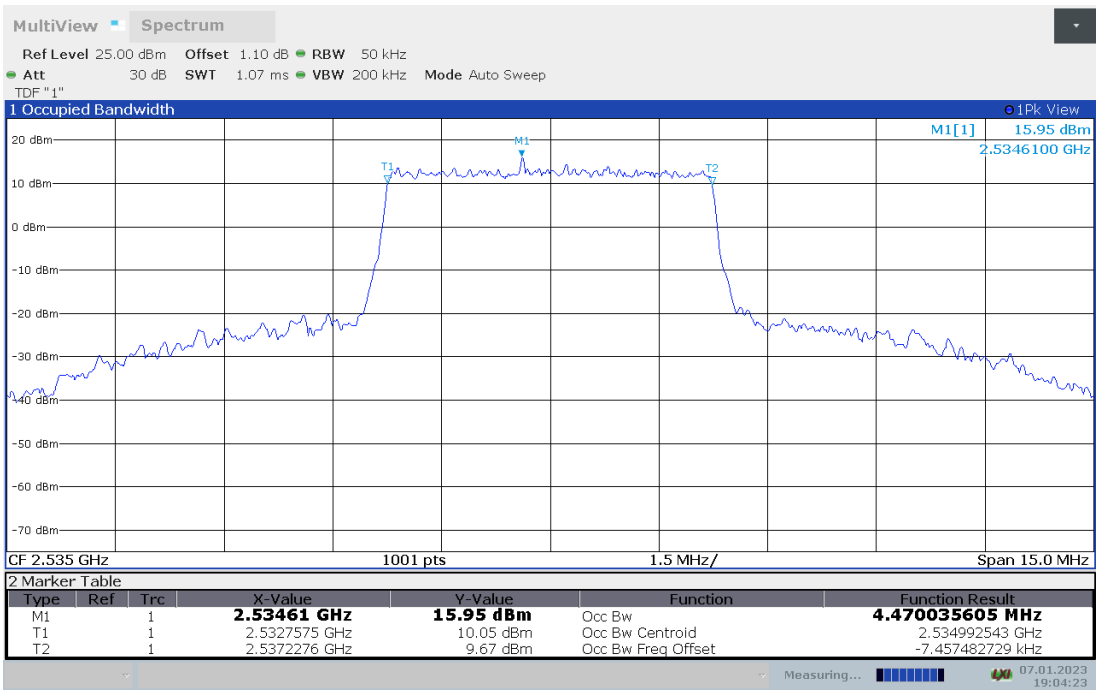
LTE band 7,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2535	4.483	4.470

LTE band 7 , 5MHz Bandwidth,QPSK (99% BW)



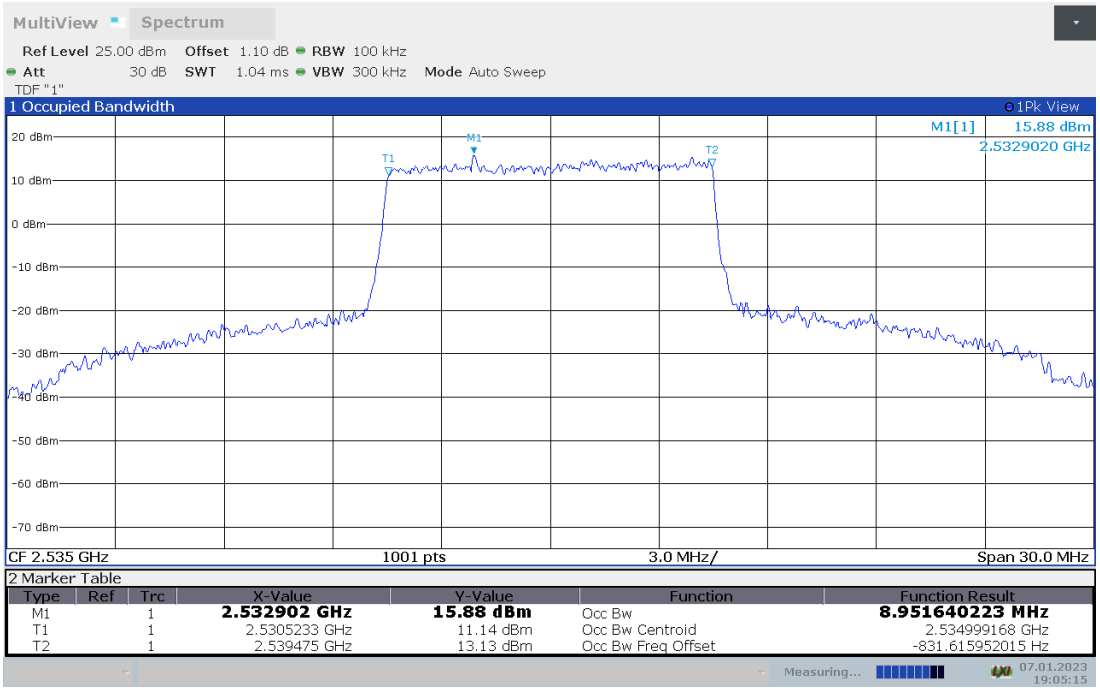
LTE band 7 , 5MHz Bandwidth,16QAM (99% BW)



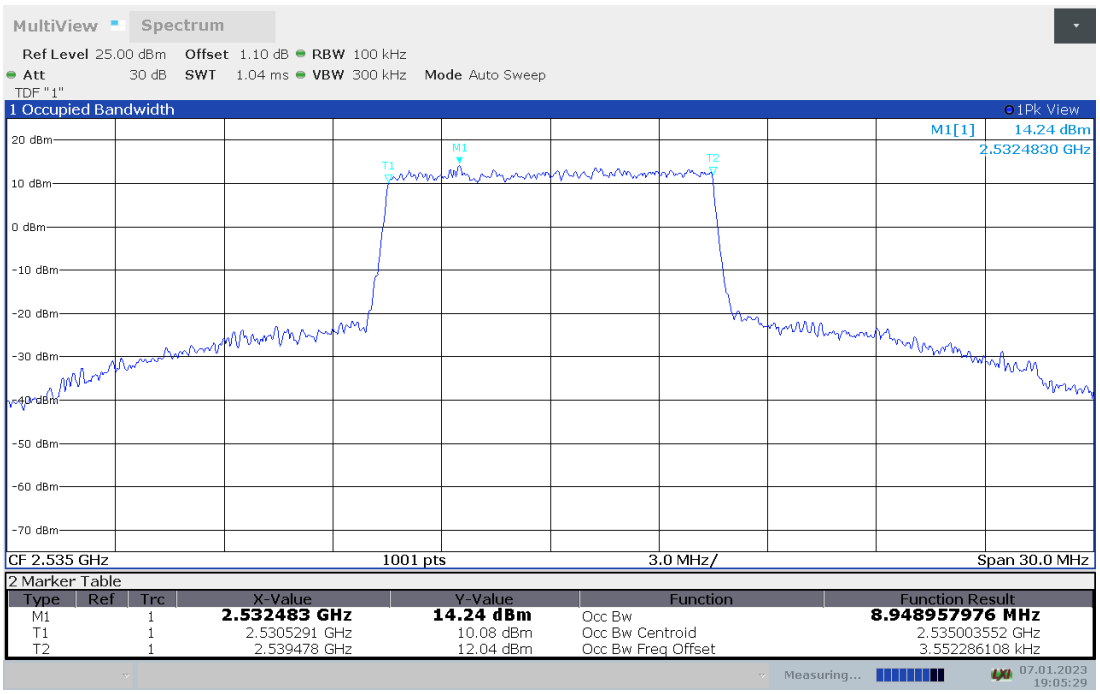
LTE band 7,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2535	8.952	8.949

LTE band 7 , 10MHz Bandwidth,QPSK (99% BW)



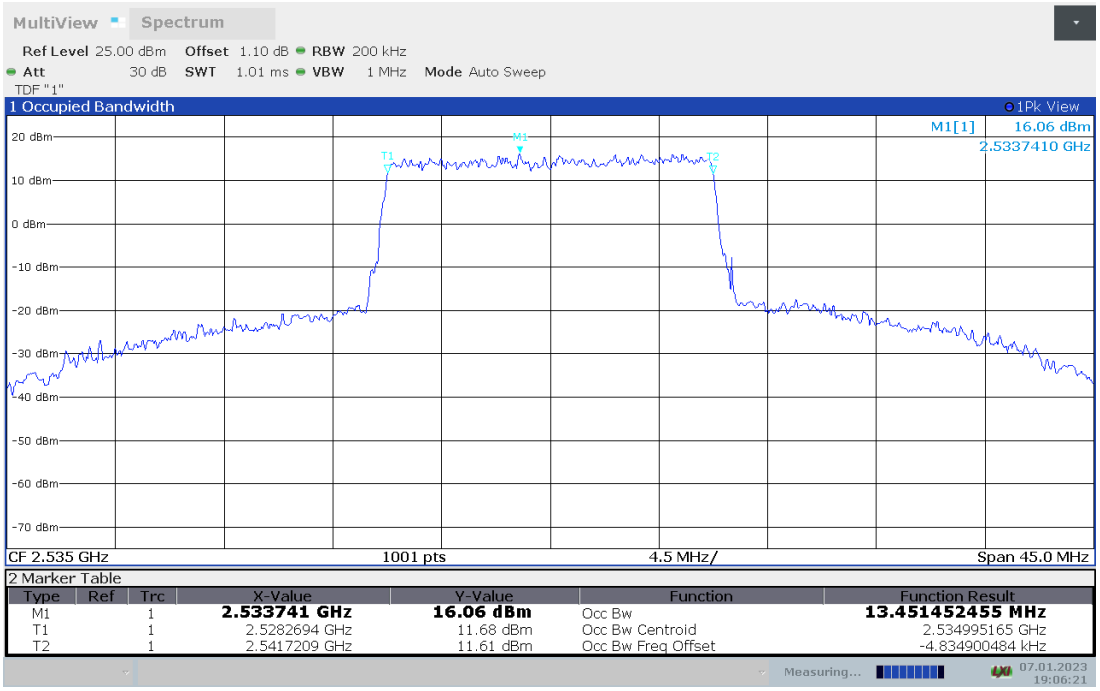
LTE band 7 , 10MHz Bandwidth,16QAM (99% BW)



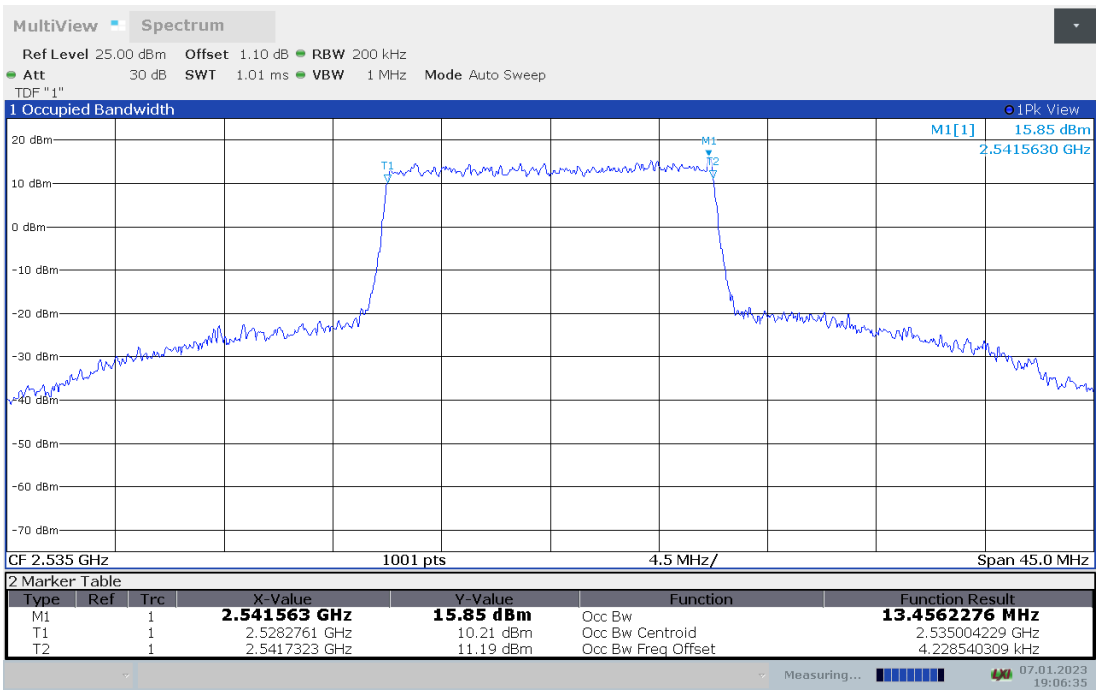
LTE band 7,15MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2535	13.451	13.456

LTE band 7 , 15MHz Bandwidth,QPSK (99% BW)



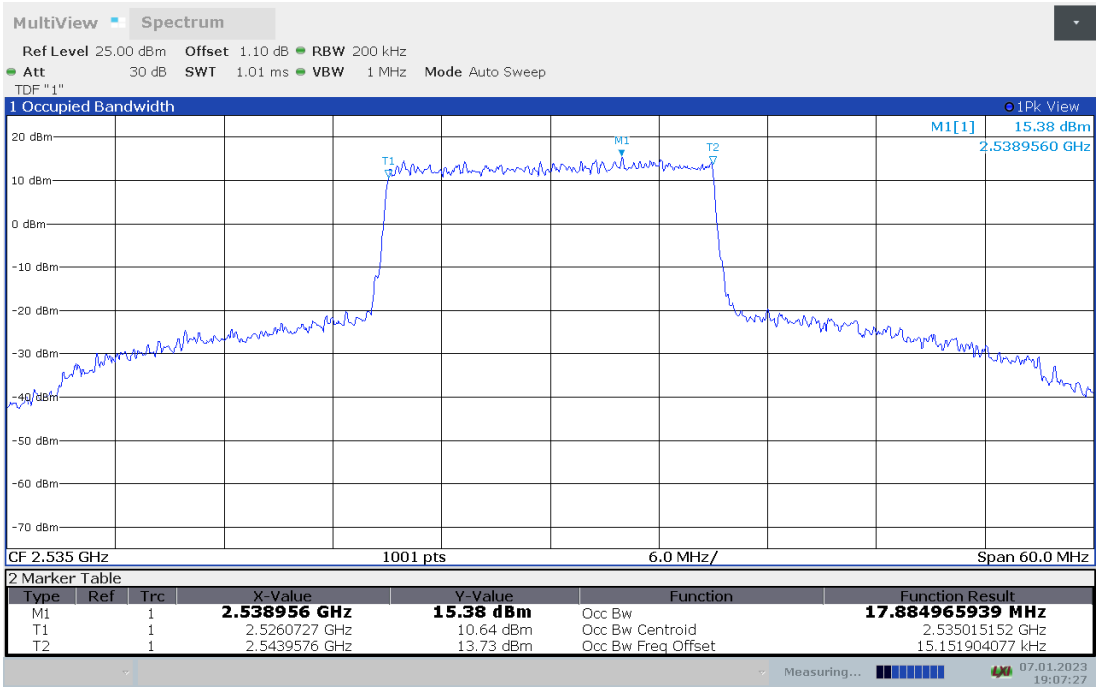
LTE band 7 , 15MHz Bandwidth,16QAM (99% BW)



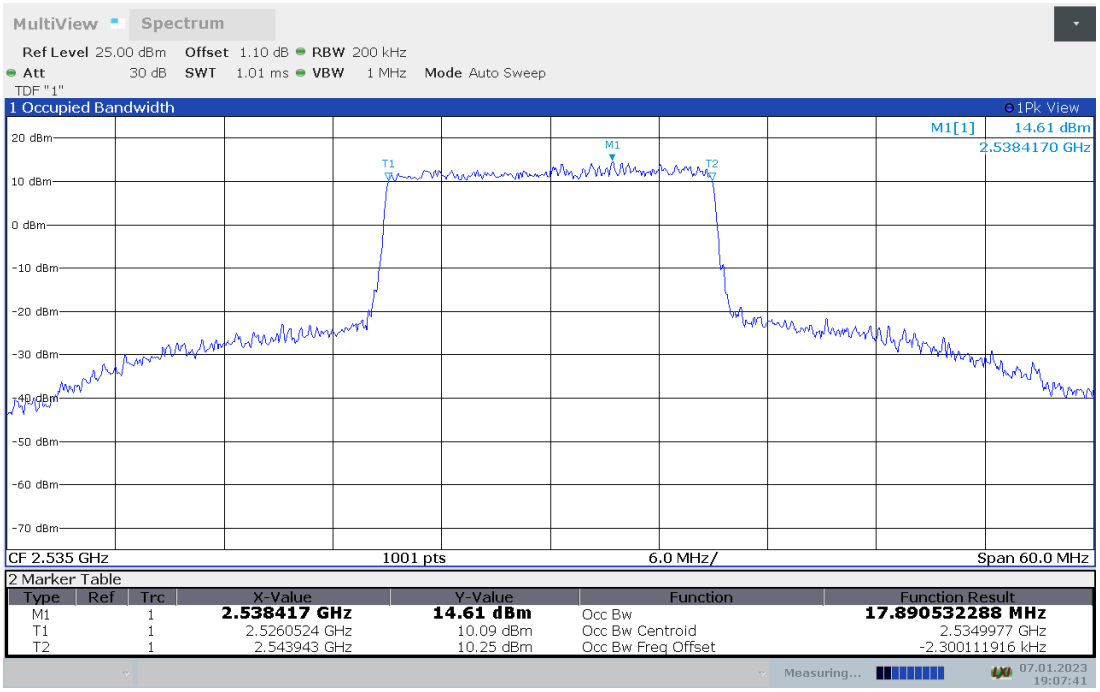
LTE band 7,20MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2535	17.885	17.891

LTE band 7 , 20MHz Bandwidth,QPSK (99% BW)



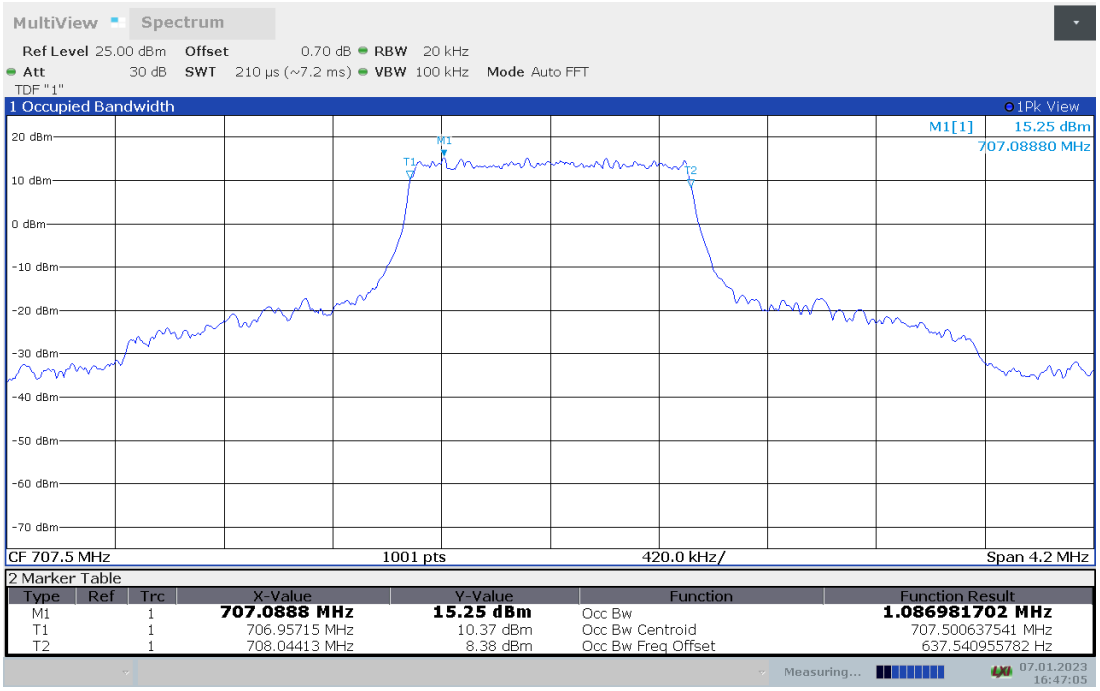
LTE band 7 , 20MHz Bandwidth,16QAM (99% BW)



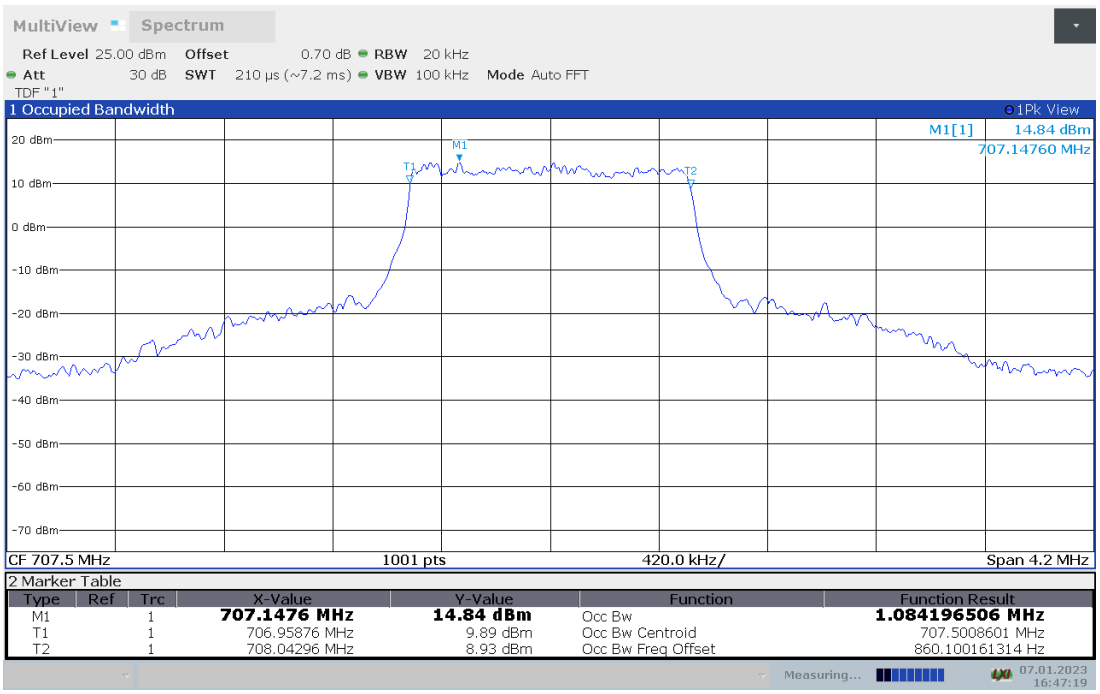
LTE band 12,1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
707.5	1.087	1.084

LTE band 12 , 1.4MHz Bandwidth,QPSK (99% BW)



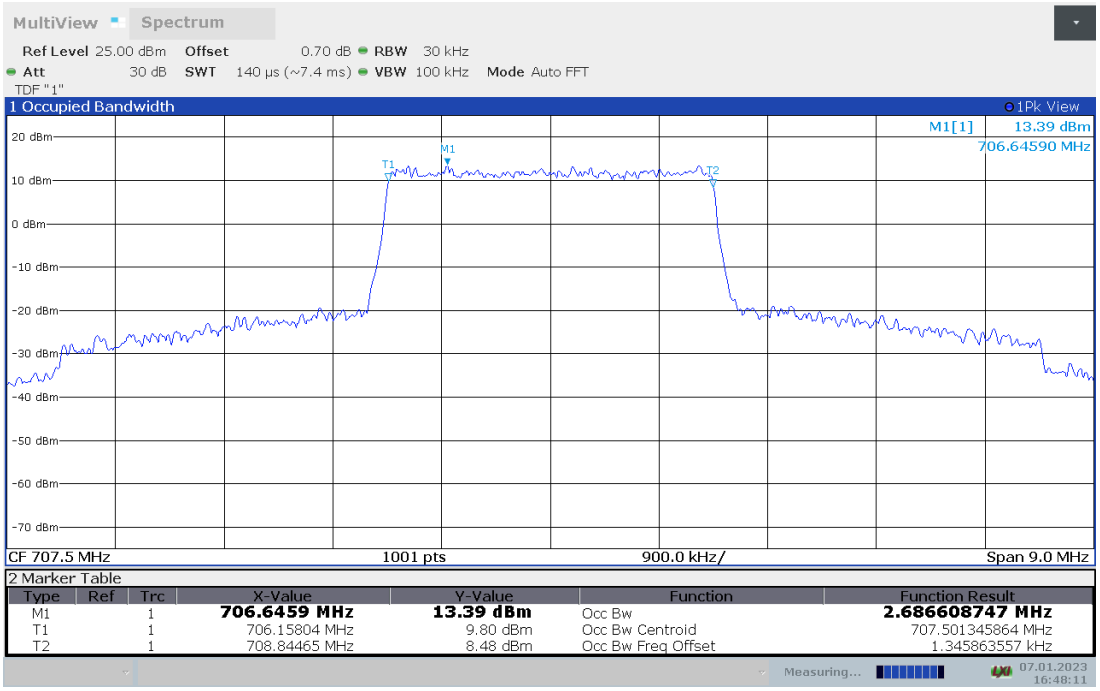
LTE band 12 , 1.4MHz Bandwidth,16QAM (99% BW)



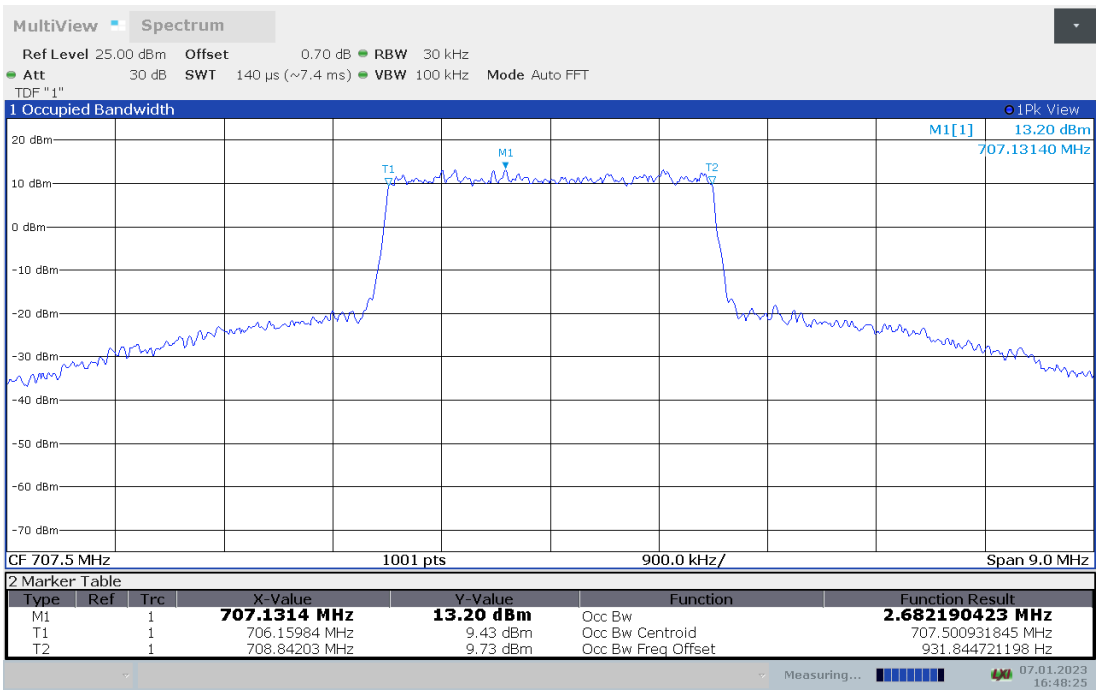
LTE band 12,3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
707.5	2.687	2.682

LTE band 12 , 3MHz Bandwidth,QPSK (99% BW)



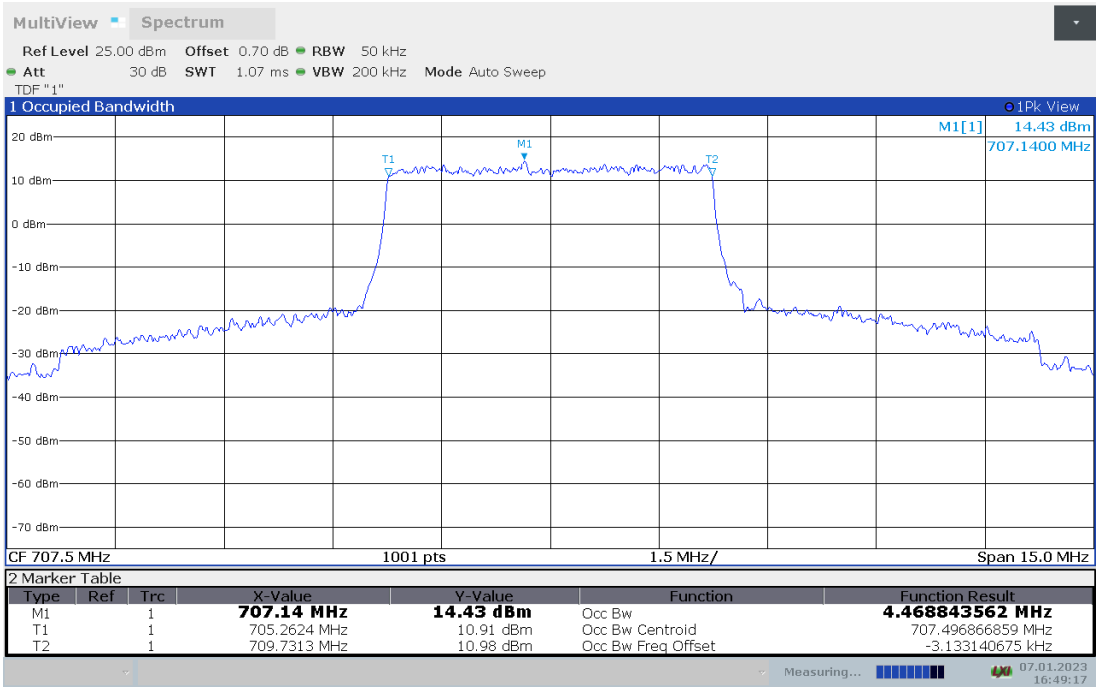
LTE band 12 , 3MHz Bandwidth,16QAM (99% BW)



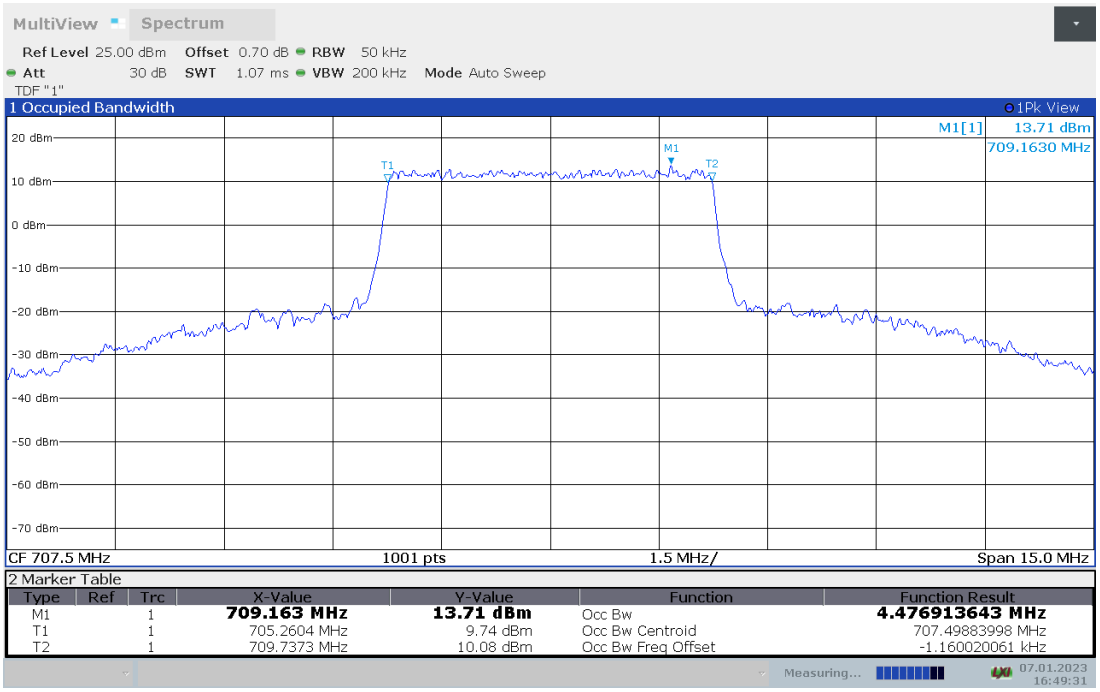
LTE band 12,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
707.5	4.469	4.477

LTE band 12 , 5MHz Bandwidth,QPSK (99% BW)



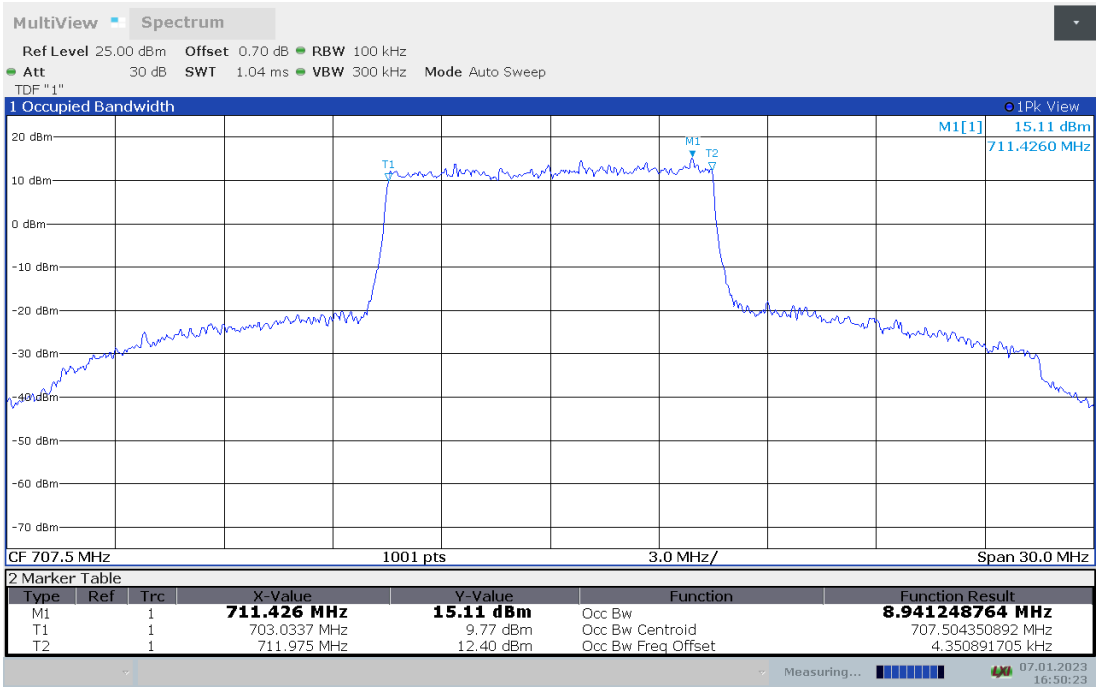
LTE band 12 , 5MHz Bandwidth,16QAM (99% BW)



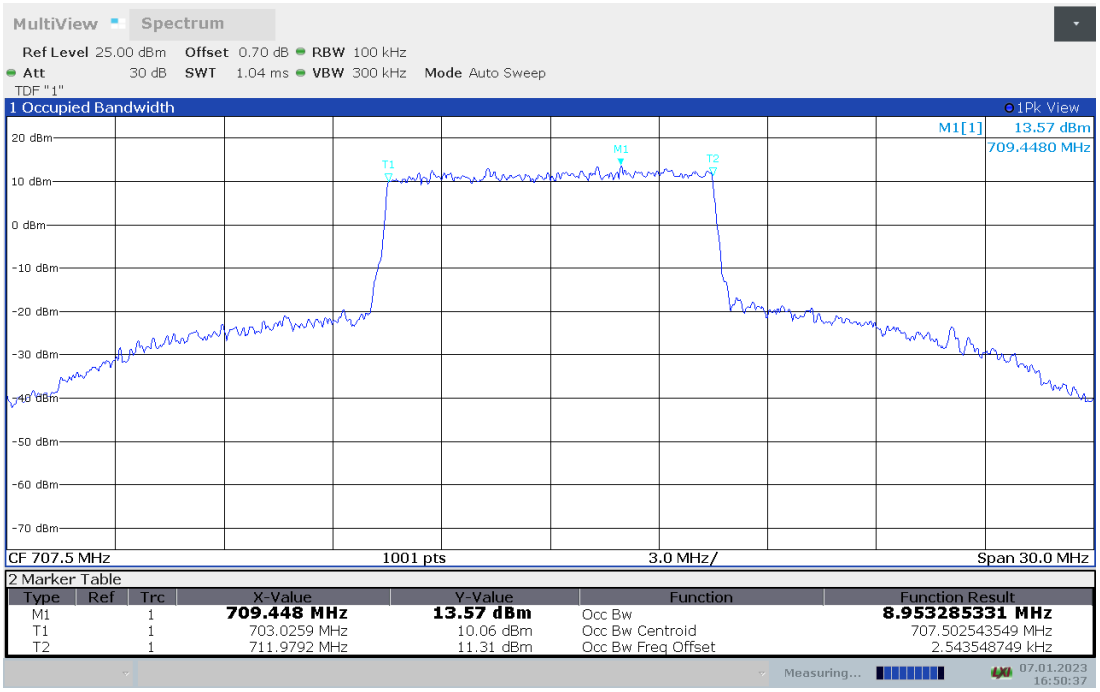
LTE band 12,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
707.5	8.941	8.953

LTE band 12 , 10MHz Bandwidth,QPSK (99% BW)



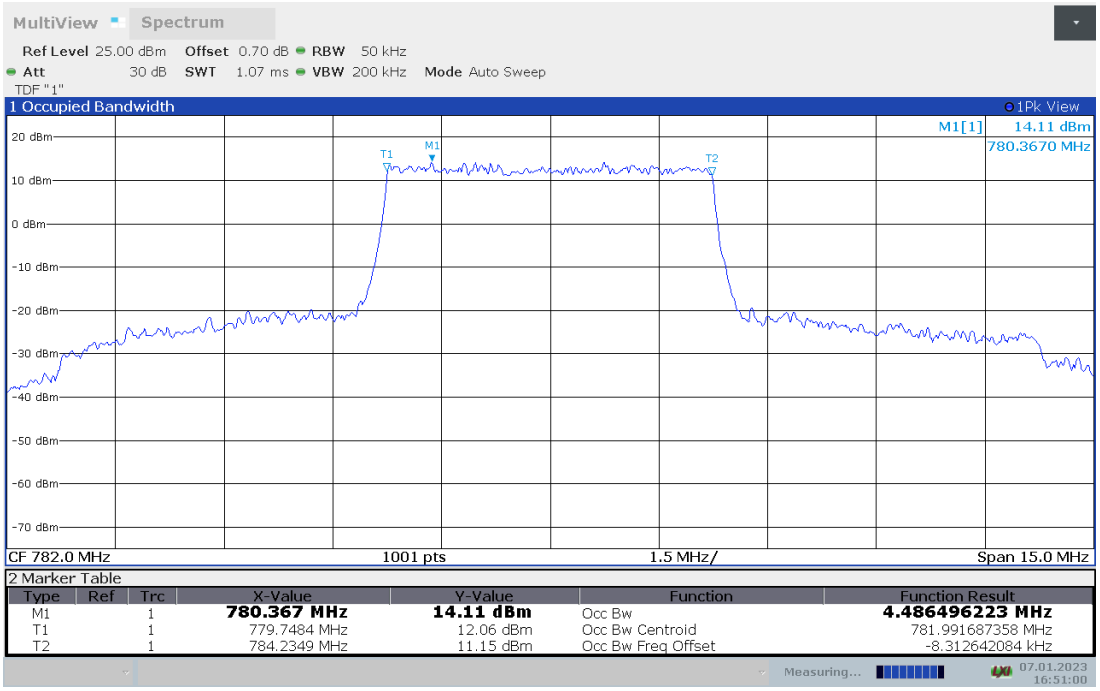
LTE band 12 , 10MHz Bandwidth,16QAM (99% BW)



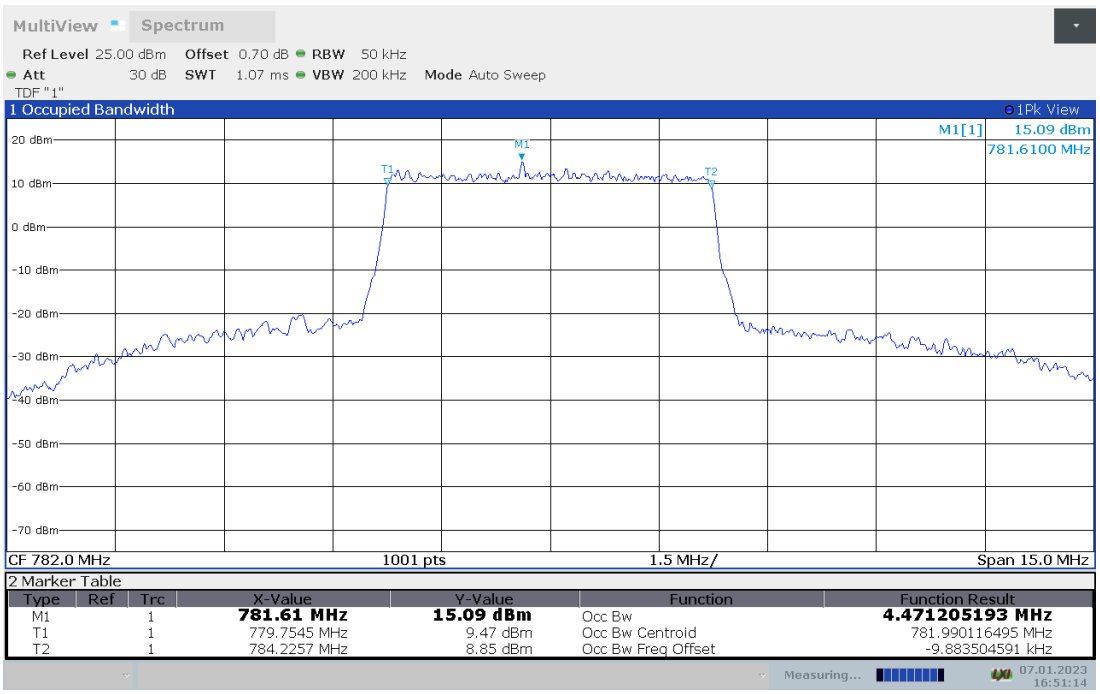
LTE band 13,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
782	4.486	4.471

LTE band 13 , 5MHz Bandwidth,QPSK (99% BW)



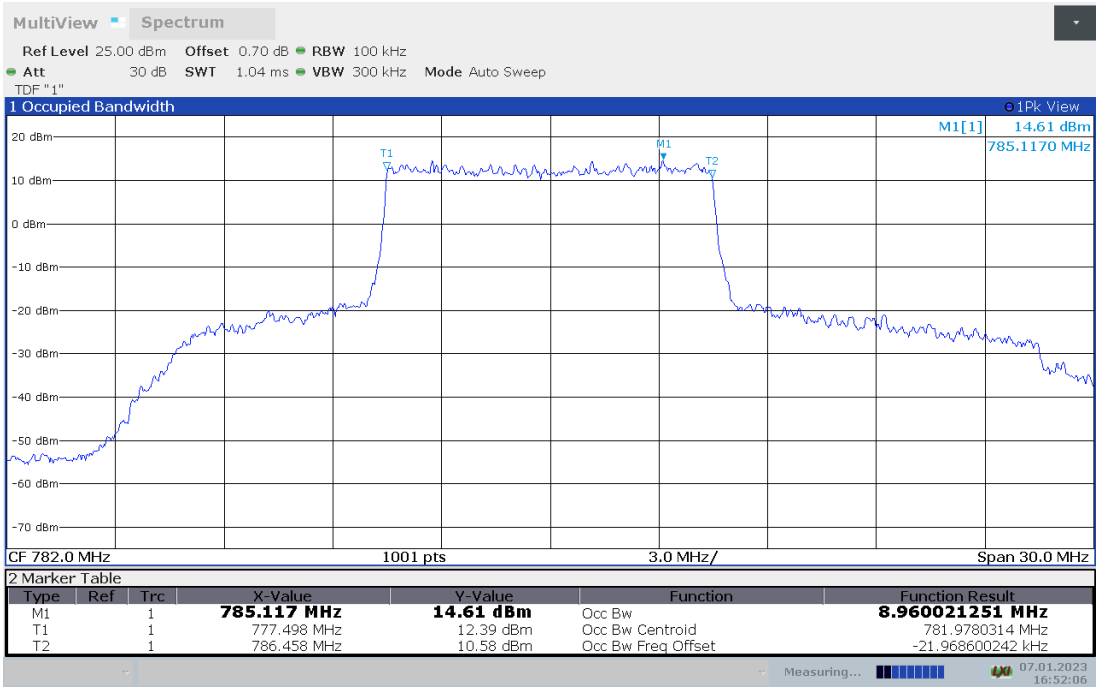
LTE band 13 , 5MHz Bandwidth,16QAM (99% BW)



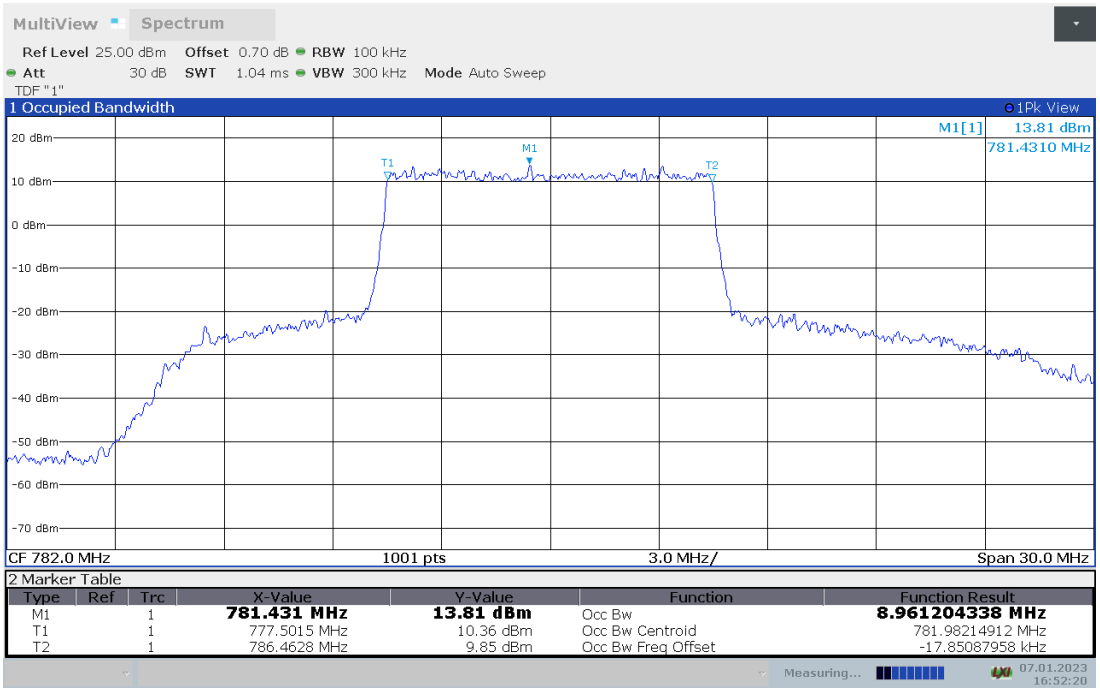
LTE band 13,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
782	8.960	8.961

LTE band 13 , 10MHz Bandwidth,QPSK (99% BW)



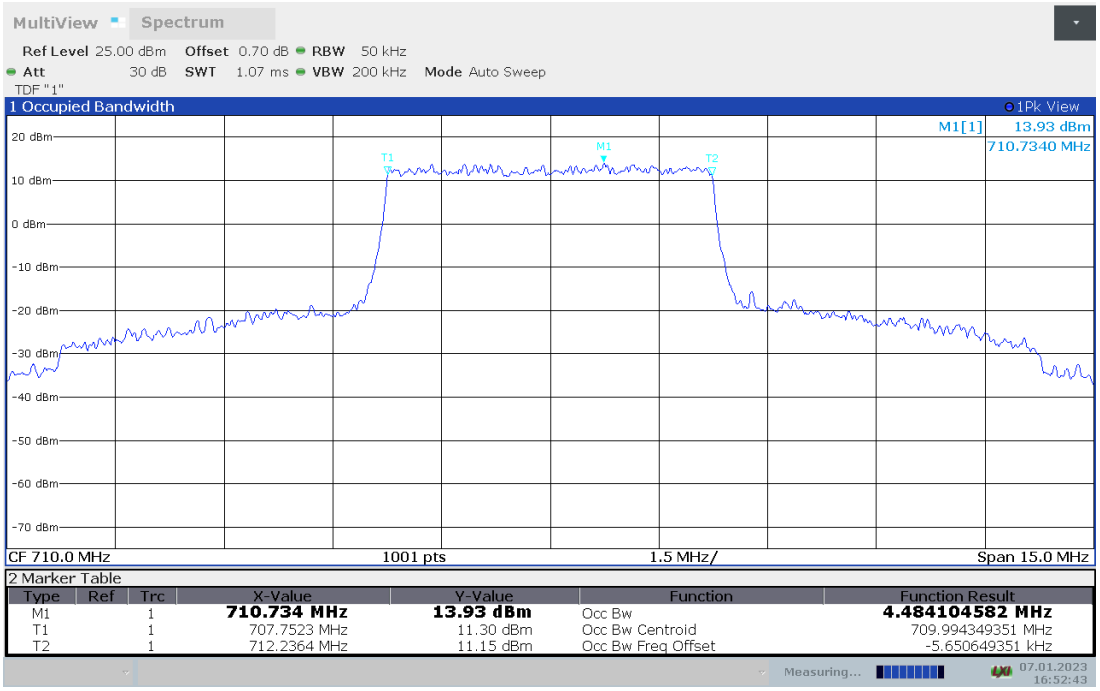
LTE band 13 , 10MHz Bandwidth,16QAM (99% BW)



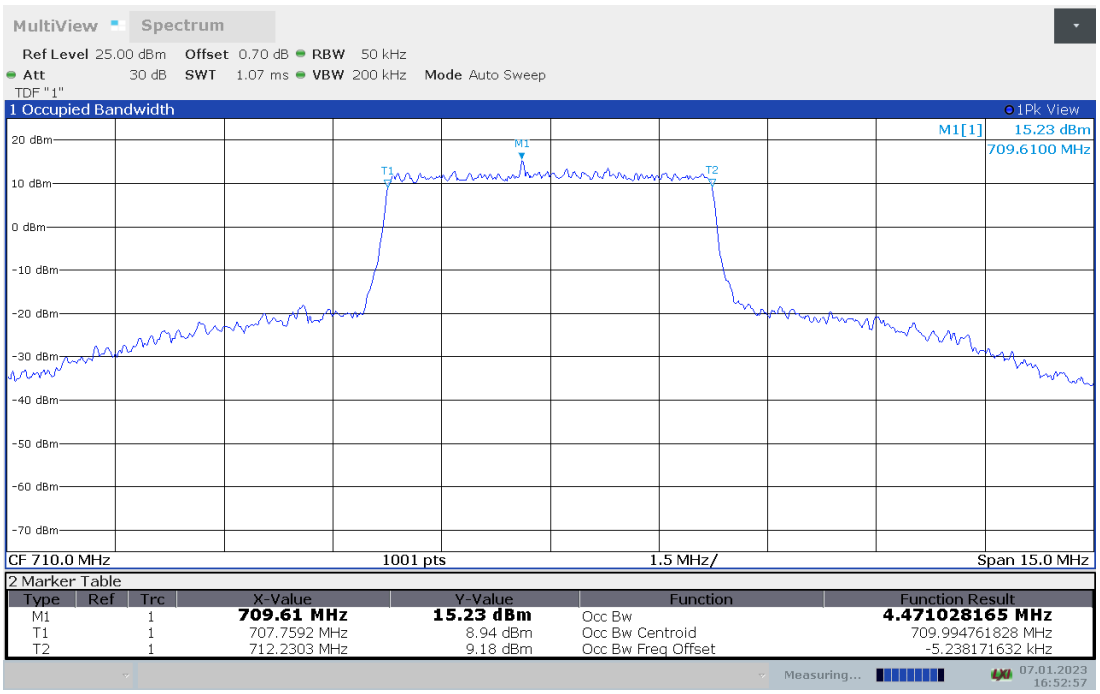
LTE band 17,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
710	4.484	4.471

LTE band 17 , 5MHz Bandwidth,QPSK (99% BW)



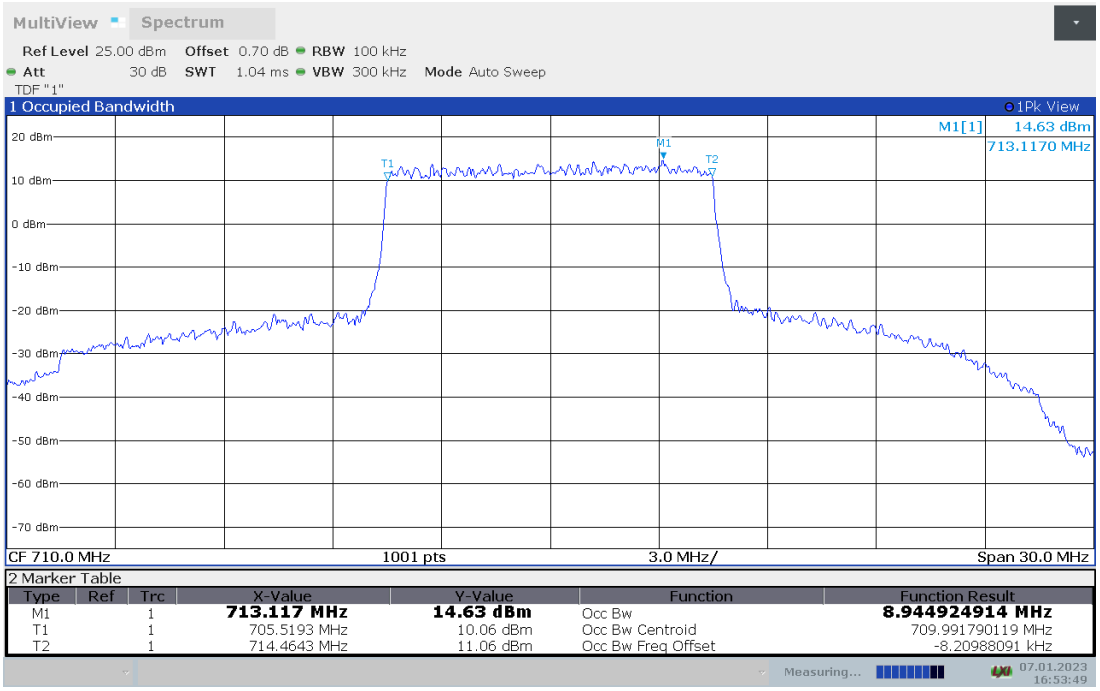
LTE band 17 , 5MHz Bandwidth,16QAM (99% BW)



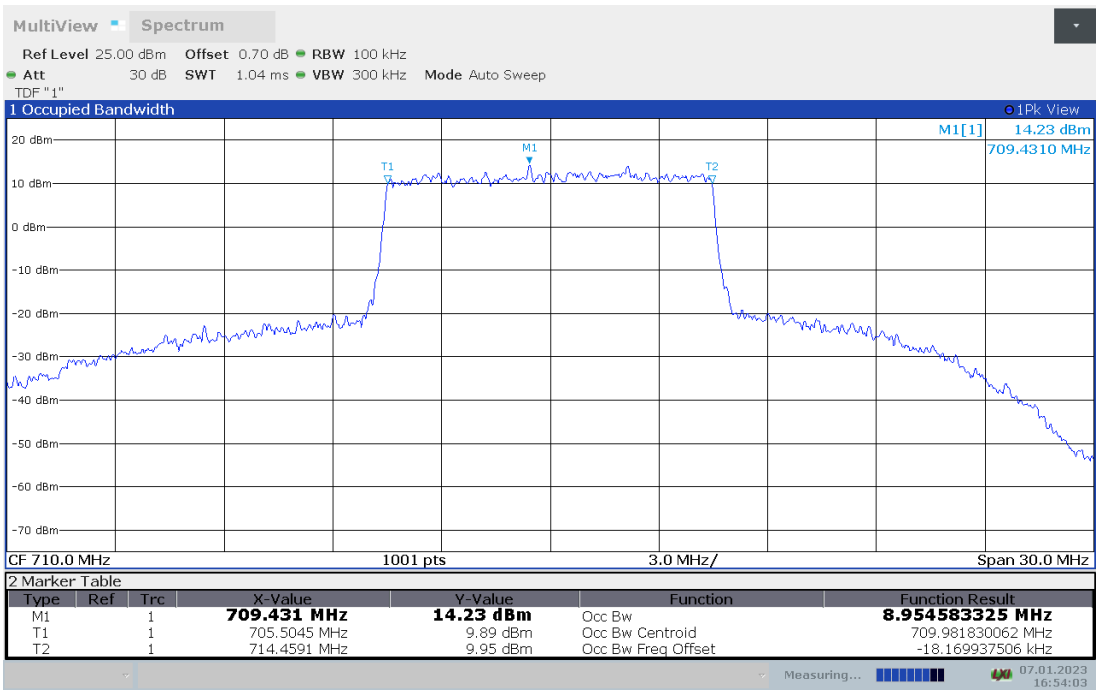
LTE band 17,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
710	8.945	8.955

LTE band 17 , 10MHz Bandwidth,QPSK (99% BW)



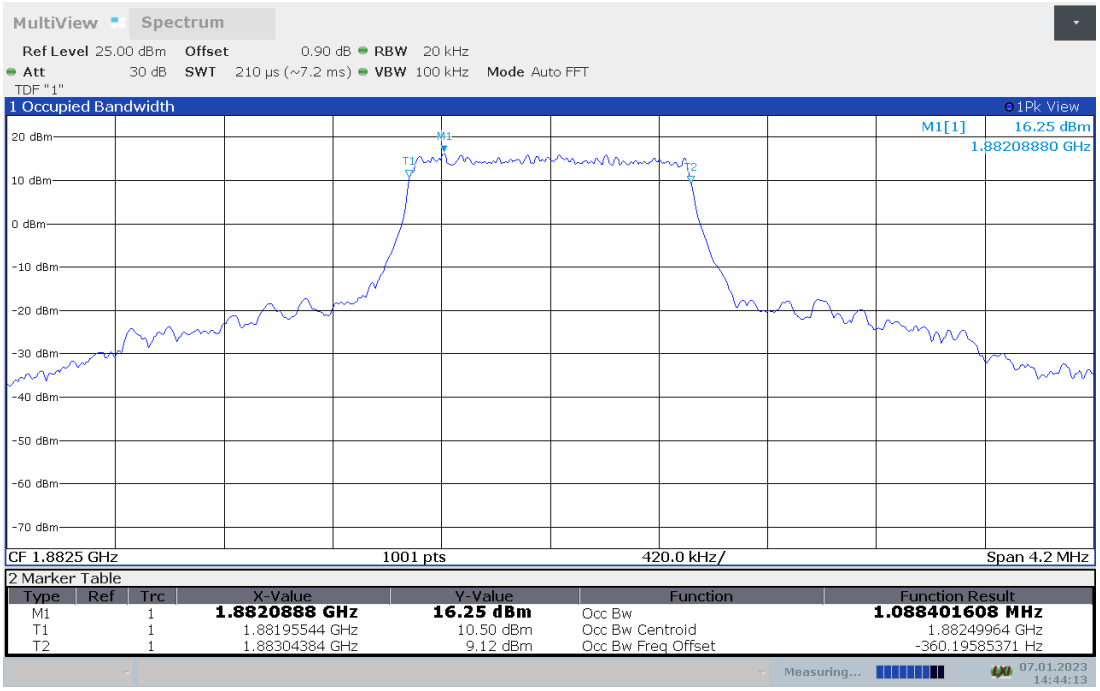
LTE band 17 , 10MHz Bandwidth,16QAM (99% BW)



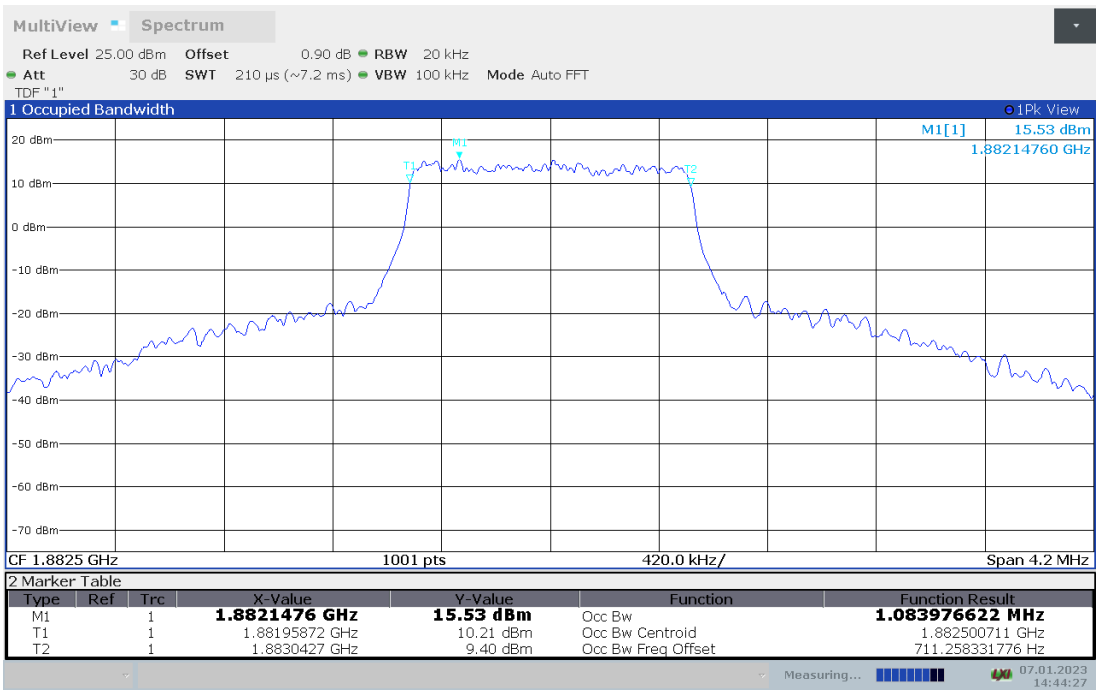
LTE band 25,1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1882.5	1.088	1.084

LTE band 25 , 1.4MHz Bandwidth,QPSK (99% BW)



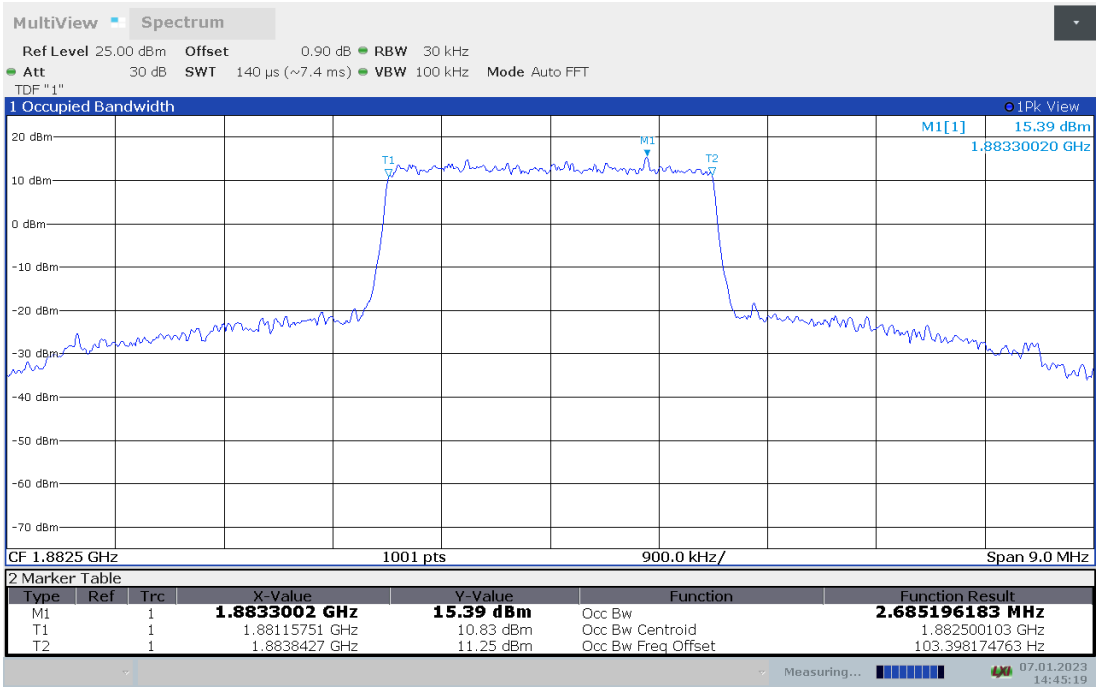
LTE band 25 , 1.4MHz Bandwidth,16QAM (99% BW)



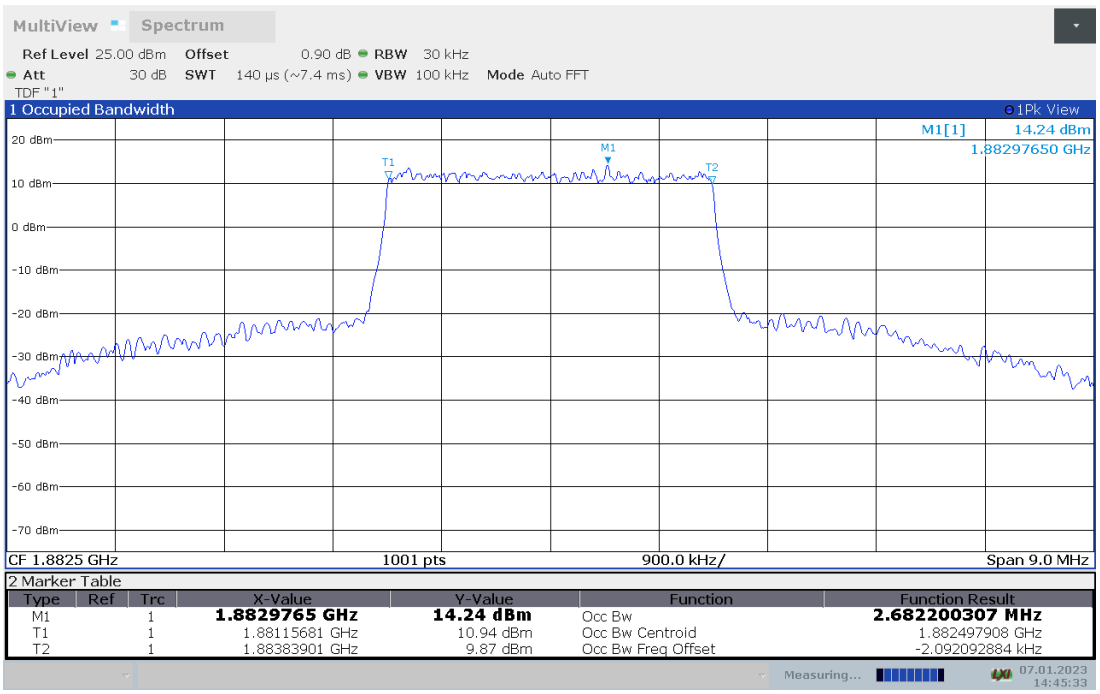
LTE band 25,3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1882.5	2.685	2.682

LTE band 25 , 3MHz Bandwidth,QPSK (99% BW)



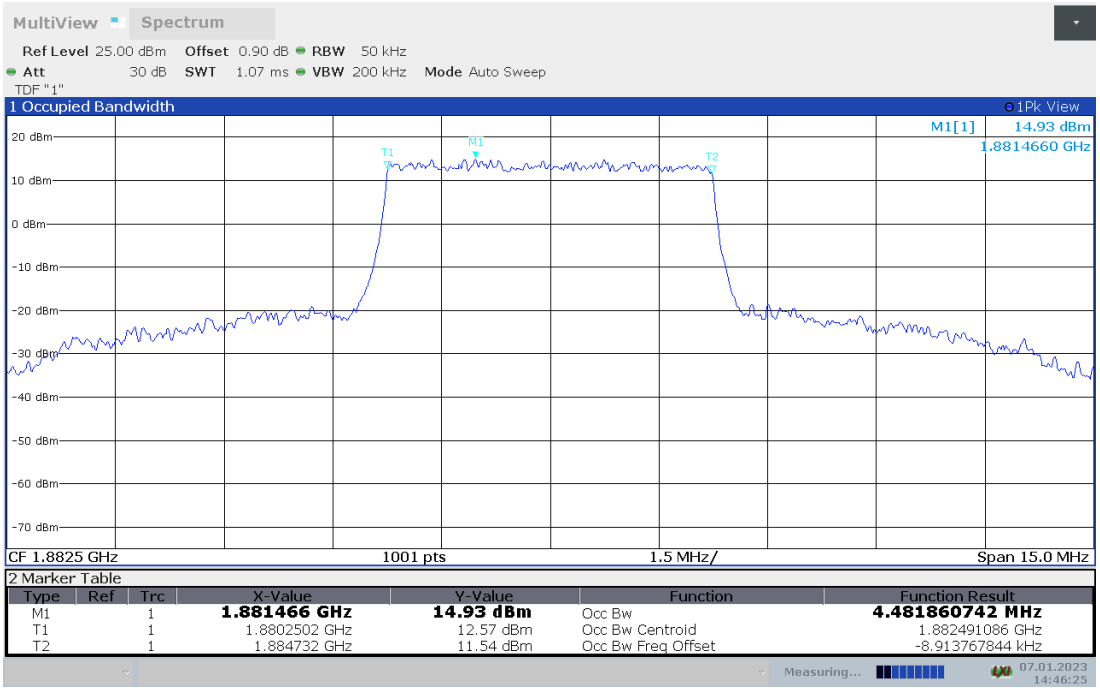
LTE band 25 , 3MHz Bandwidth,16QAM (99% BW)



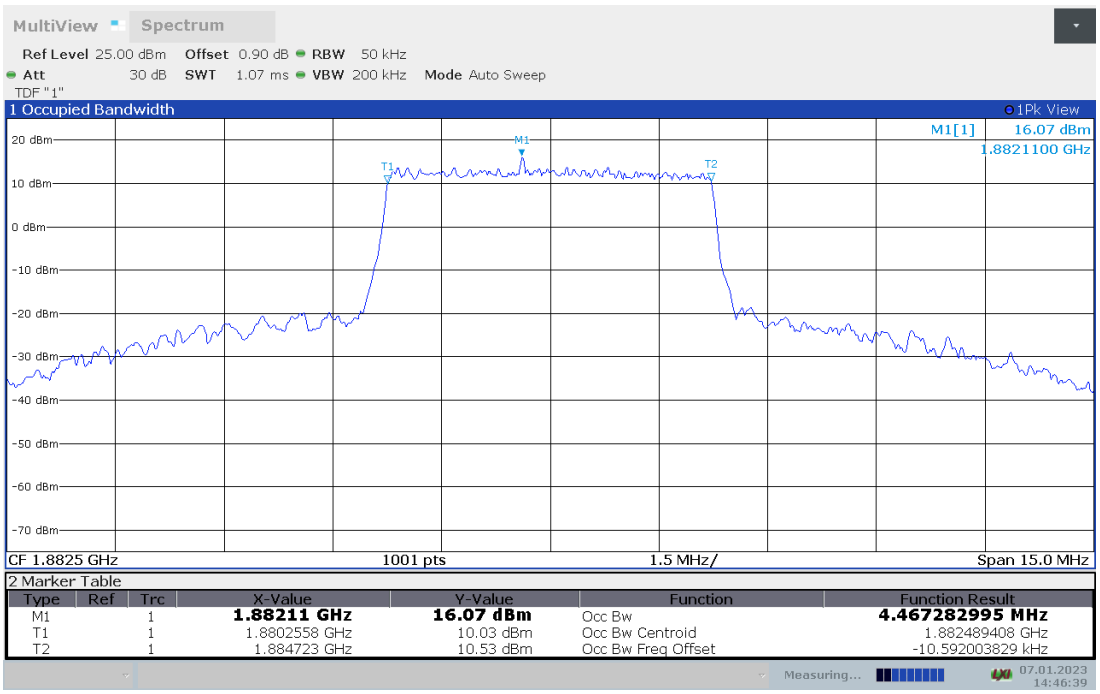
LTE band 25,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1882.5	4.482	4.467

LTE band 25 , 5MHz Bandwidth,QPSK (99% BW)



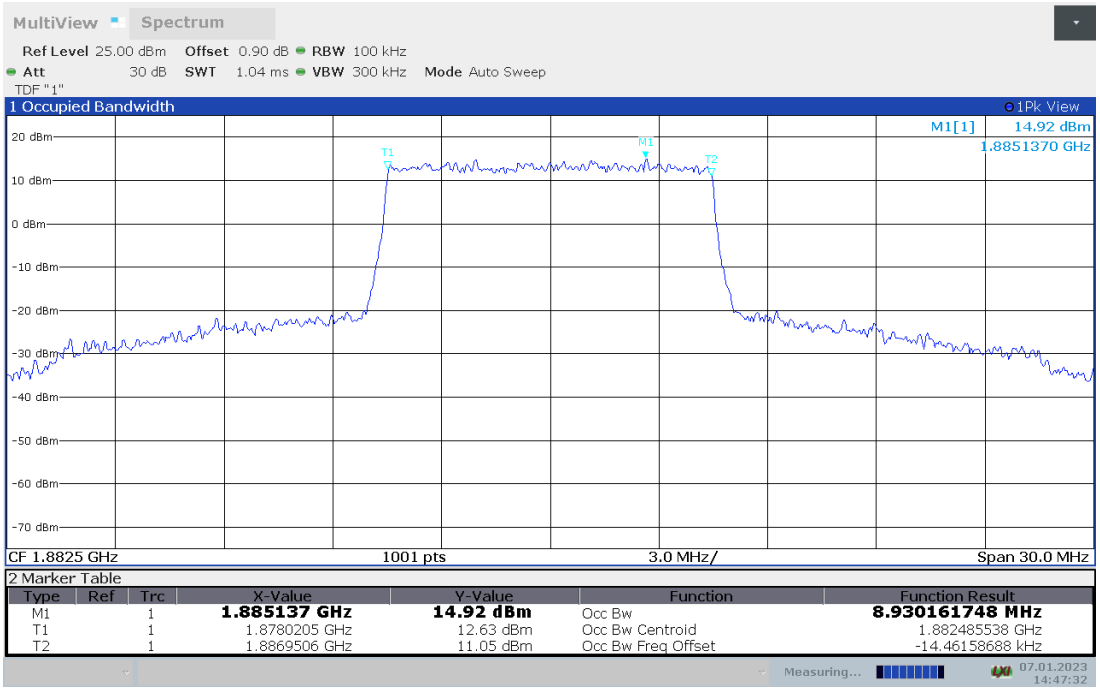
LTE band 25 , 5MHz Bandwidth,16QAM (99% BW)



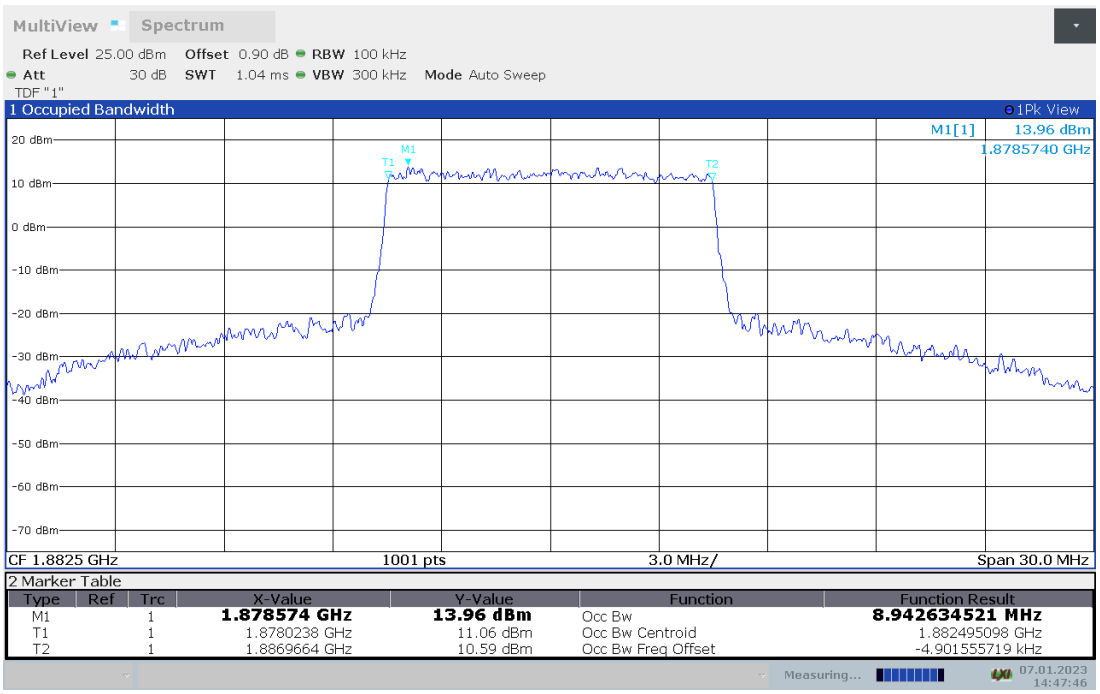
LTE band 25,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1882.5	8.930	8.943

LTE band 25 , 10MHz Bandwidth,QPSK (99% BW)



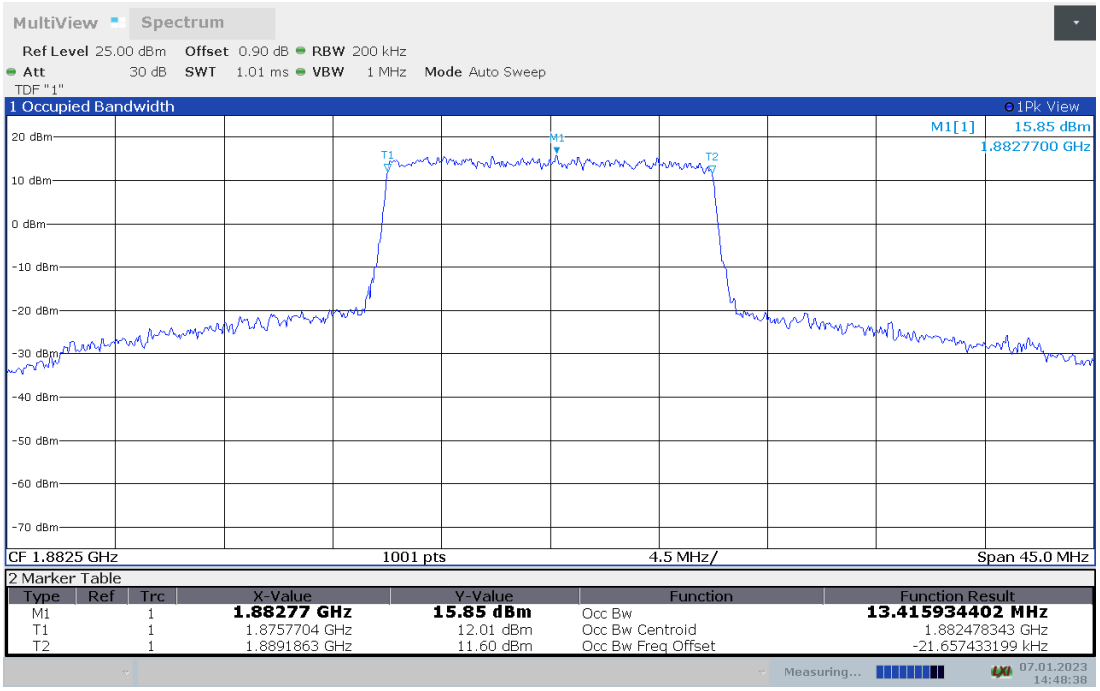
LTE band 25 , 10MHz Bandwidth,16QAM (99% BW)



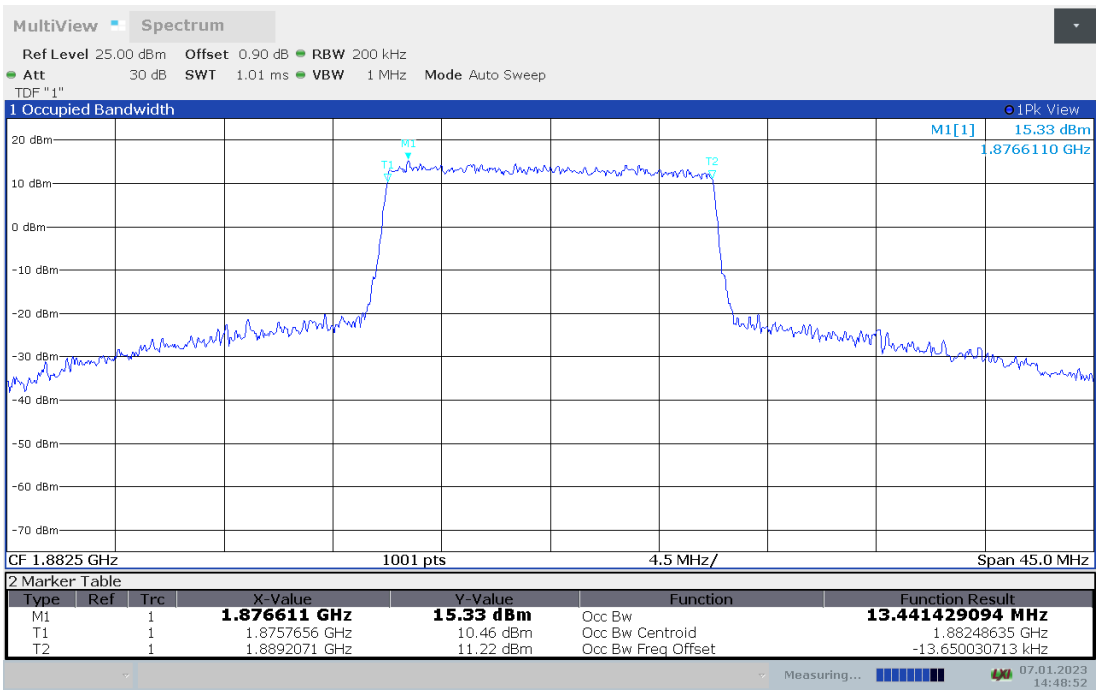
LTE band 25,15MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1882.5	13.416	13.441

LTE band 25 , 15MHz Bandwidth,QPSK (99% BW)



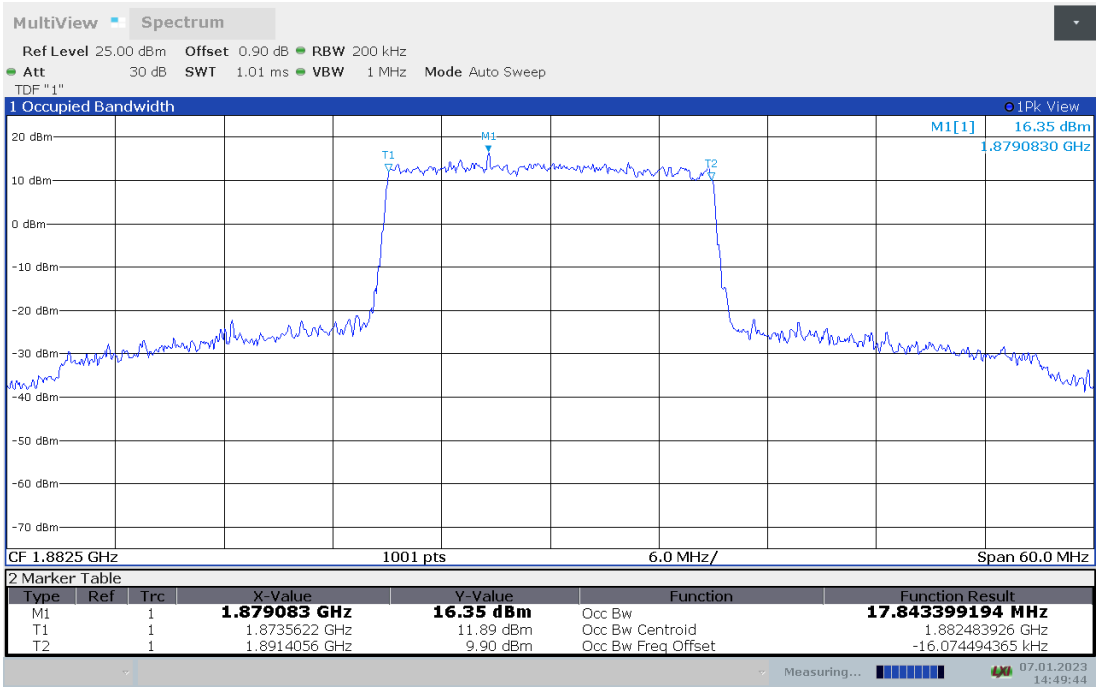
LTE band 25 , 15MHz Bandwidth,16QAM (99% BW)



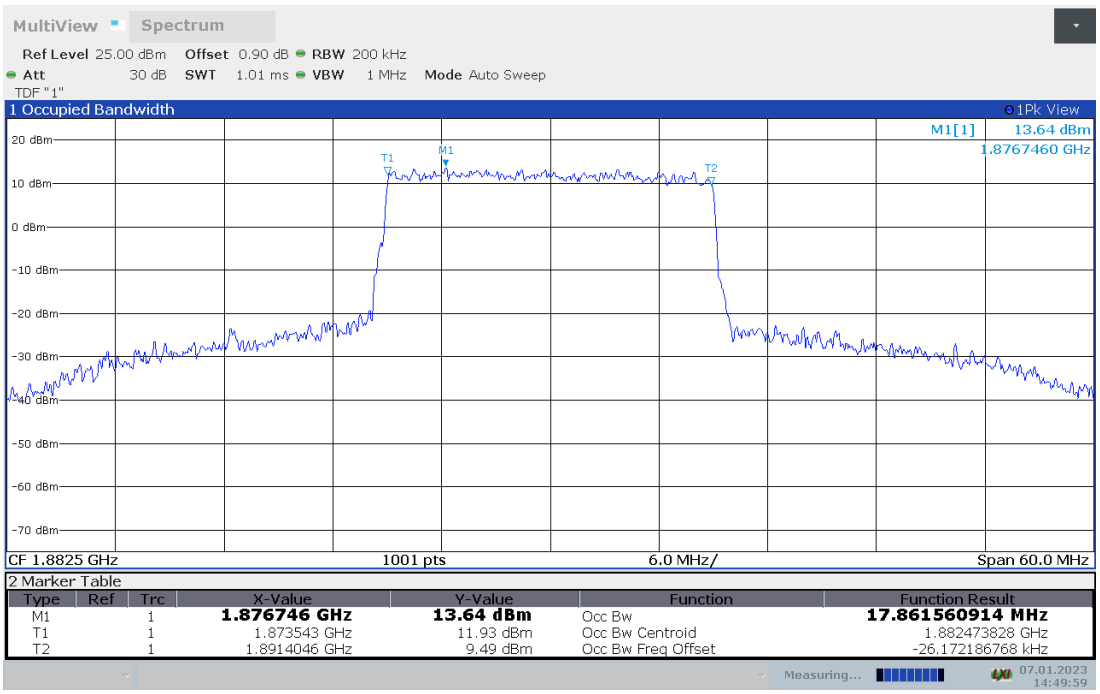
LTE band 25,20MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1882.5	17.843	17.862

LTE band 25 , 20MHz Bandwidth,QPSK (99% BW)



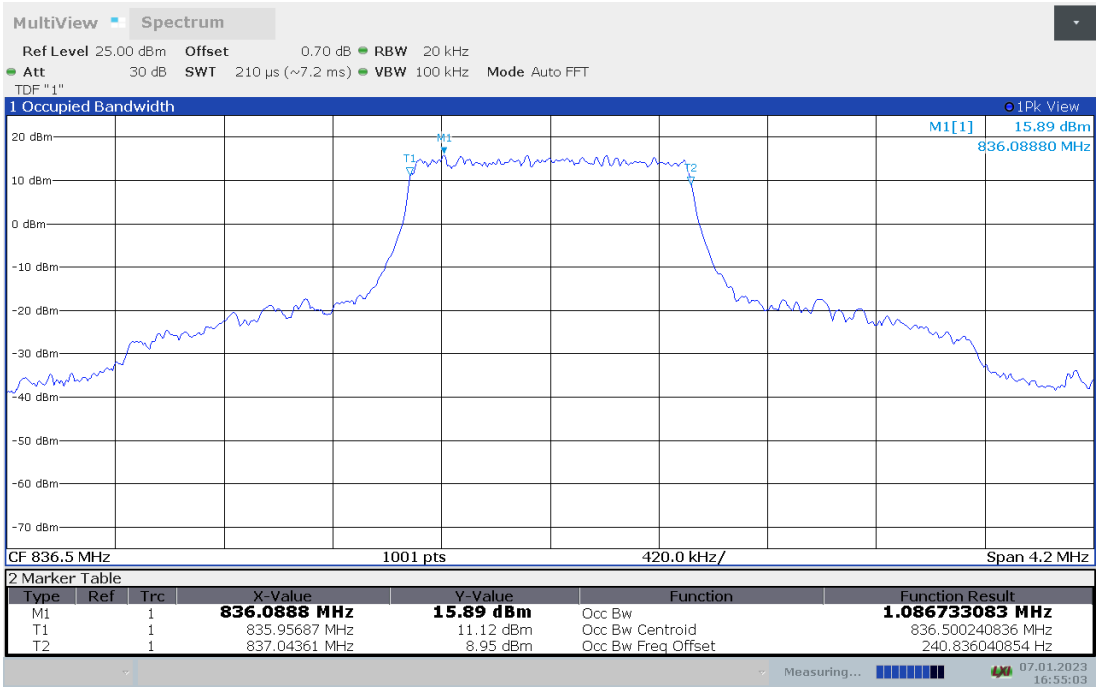
LTE band 25 , 20MHz Bandwidth,16QAM (99% BW)



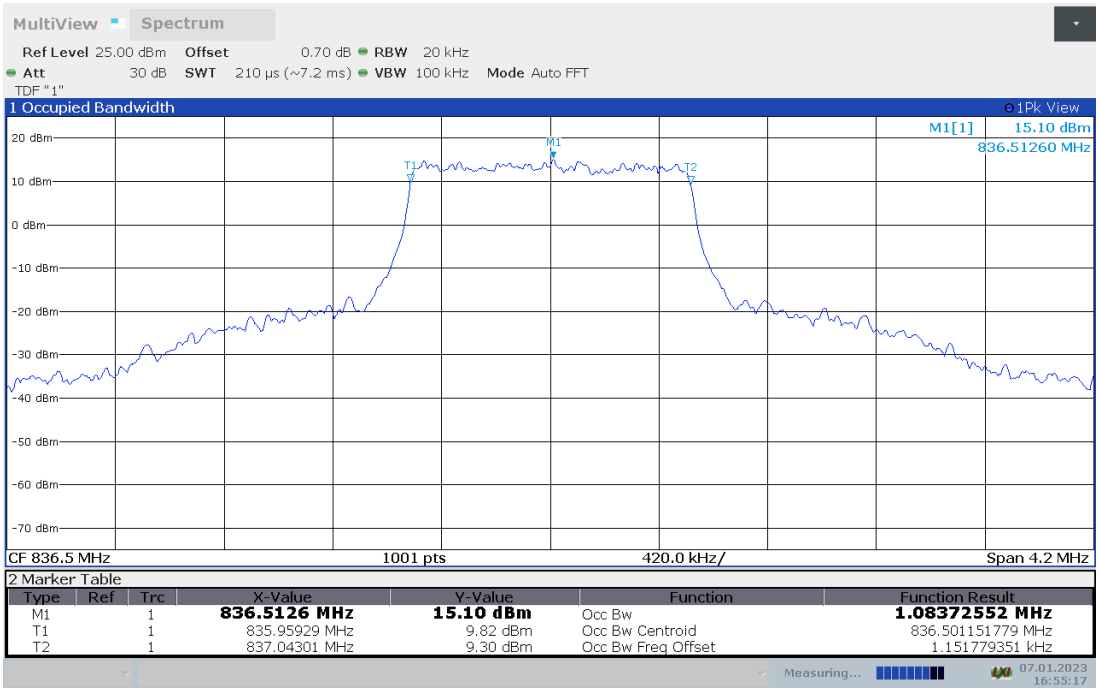
LTE band 26(824MHz-849MHz),1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	1.087	1.084

LTE band 26 , 1.4MHz Bandwidth,QPSK (99% BW)



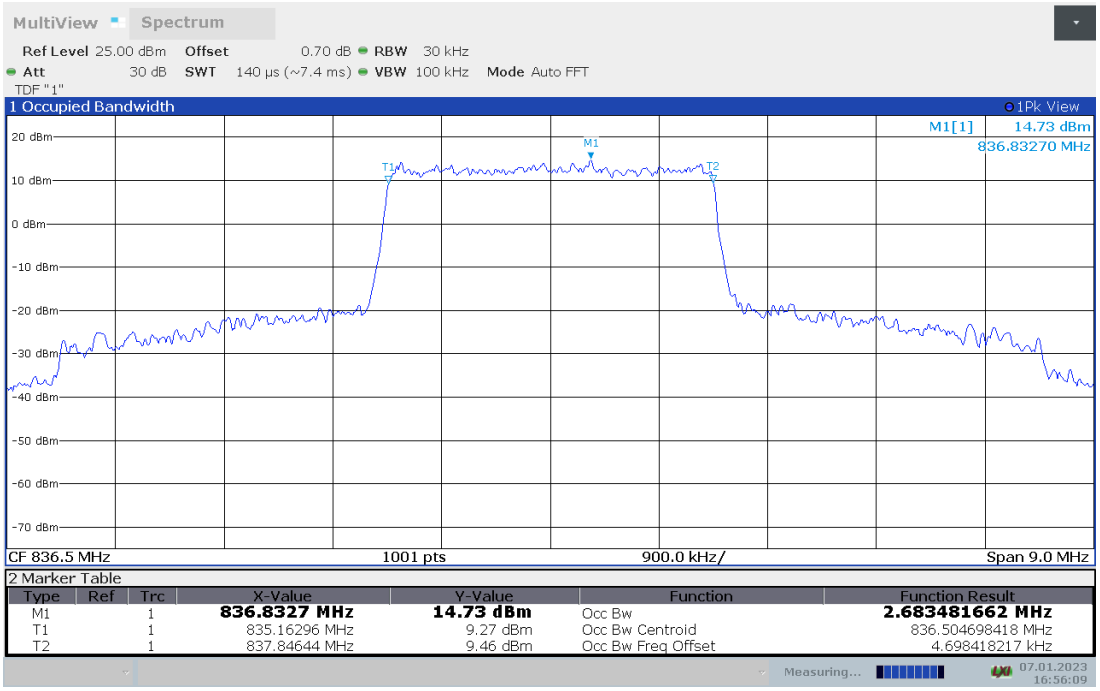
LTE band 26 , 1.4MHz Bandwidth,16QAM (99% BW)



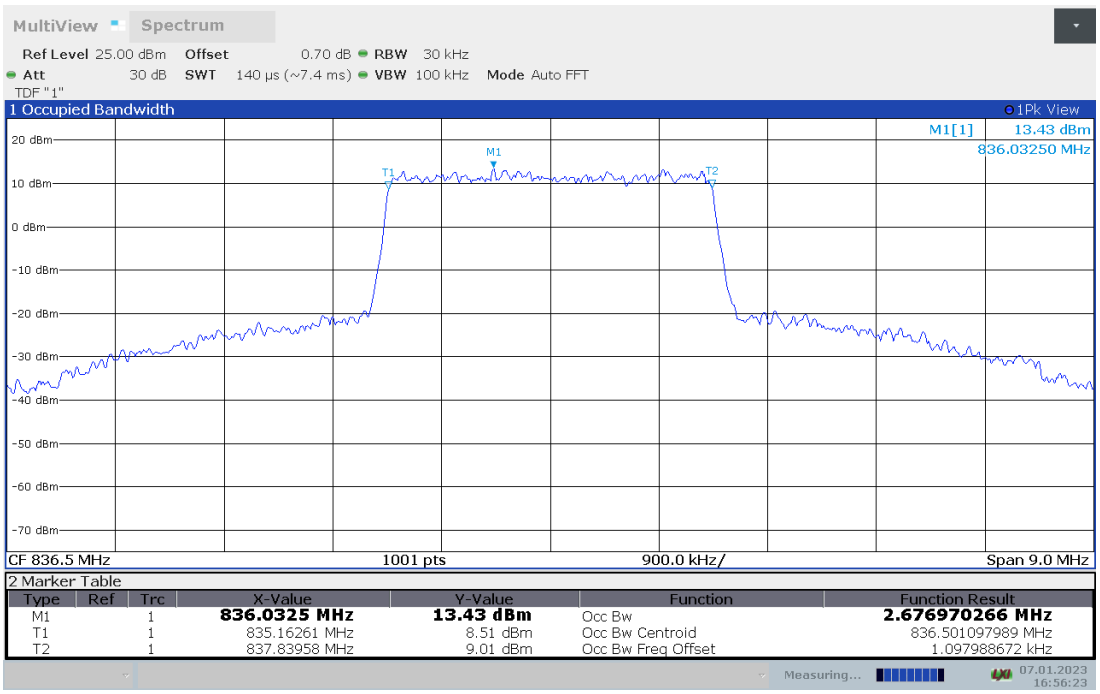
LTE band 26(824MHz-849MHz),3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	2.683	2.677

LTE band 26 , 3MHz Bandwidth,QPSK (99% BW)



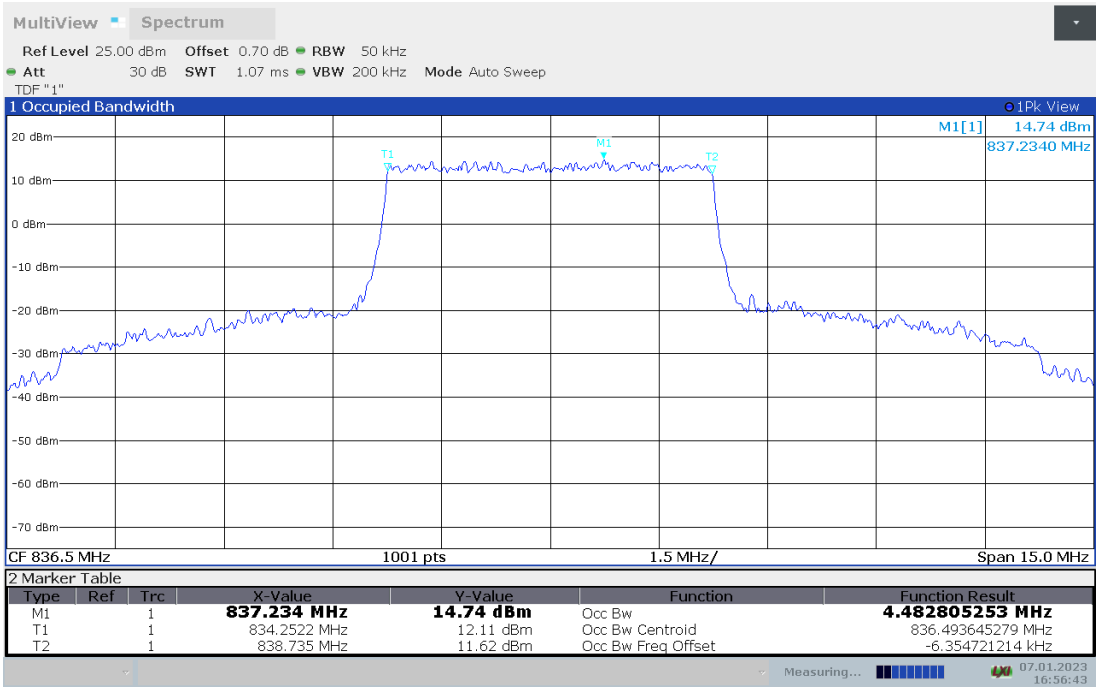
LTE band 26 , 3MHz Bandwidth,16QAM (99% BW)



LTE band 26(824MHz-849MHz),5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	4.483	4.468

LTE band 26 , 5MHz Bandwidth,QPSK (99% BW)



LTE band 26 , 5MHz Bandwidth,16QAM (99% BW)