TEST REPORT

No. I22Z60641-WMD03

for

Hytera Communications Corporation Limited

PoC mobile radio

Model Name: MNC360

FCC ID: YAMMNC360

with

Hardware Version: V1.0.01.000.01

Software Version: V1.0.06.000.01

Issued Date: 2022-05-25

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 CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel: +86(0)10-62304633-2512, Fax: +86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z60641-WMD03	Rev.0	1st edition	2022-05-25

Note: the latest revision of the test report supersedes all previous version.

CONTENTS

1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0 and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location 1: CTTL (huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191

Location 4: CTTL (BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology Development Area, Beijing, P. R. China 100176

1.3. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	20-75%

1.4. Project Data

Testing Start Date:	2022-03-28
Testing End Date:	2022-05-18

1.5. Signature

Dong Yuan

(Prepared this test report)

Zhou Yu

(Reviewed this test report)

Zhao Hui Lin

Deputy Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	Hytera Communications Corporation Limited
Address /Post:	Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, P.R.C., P 518057
Contact:	Ruifen.Huang
Email:	Ruifen.Huang@hytera.com
Telephone:	18925250460
Fax:	/

2.2. Manufacturer Information

Company Name:	Hytera Communications Corporation Limited
Address /Post:	Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, P.R.C., P 518057
Contact:	Ruifen.Huang
Email:	Ruifen.Huang@hytera.com
Telephone:	18925250460
Fax:	/

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	PoC mobile radio
Model Name	MNC360
FCC ID	YAMMNC360
Antenna	Integrated
Output power	27.82dBm maximum EIRP measured for LTE Band 7
Extreme vol. Limits	10.2V to 15.6V (nominal: 13.6V)
Extreme temp. Tolerance	-20°C to +60°C

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

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT06aa	866346040178337	V1.0.01.000.01	V1.0.06.000.01	2022-03-28
UT09aa	866346040178360	V1.0.01.000.01	V1.0.06.000.01	2022-03-28

*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	GPS Antenna
AE2	2G/3G/4G Antenna
AE3	DC power supply
AE4	Palm microphone

AE1

Model	DAMA1575AT41
Manufacturer	ZHANGJIAGANG FREE TRADE ZONE CAIQIN TECHNOLOGY CO.,LTD.

AE2

Model	AN1700W01
Manufacturer	/

AE3

Model	ZUP60-14
Manufacturer	/

AE4

Model	SM16A1
Manufacturer	Hytera Communications Corporation Limited

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

4. Reference Documents

4.1. Documents supplied by applicant

EUT parameters are supplied by the client or manufacturer, which are the bases of testing.

4.2. Reference Documents for testing

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

Reference	Title	Version
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 22	PUBLIC MOBILE SERVICES	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/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB 971168 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

Fully-anechoic chamber did not exceed following limits along the EMC 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	> 2MΩ
Ground system resistance	< 4 Ω
Voltage Standing Wave Ratio （VSWR）	≤ 6 dB, from 1 to 18 GHz，3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

6. Summary Of Test Result

LTE Band 2

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	24.232	P
2	Emission Limit	2.1051/24.238	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	24.238	P
6	Band Edge Compliance	24.238	P
7	Conducted Spurious Emission	24.238	P
8	Peak-to-Average Power Ratio	24.232	P

LTE Band 4

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	2.1051/27.53	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	27.53	P
6	Band Edge Compliance	27.53	P
7	Conducted Spurious Emission	27.53	P
8	Peak-to-Average Power Ratio	27.50	P

LTE Band 5

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	22.913	P
2	Emission Limit	2.1051/22.917	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	22.917	P
6	Band Edge Compliance	22.917	P
7	Conducted Spurious Emission	22.917	P

LTE Band 7

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	2.1051/27.53	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	27.53	P
6	Band Edge Compliance	27.53	P
7	Conducted Spurious Emission	27.53	P
8	Peak-to-Average Power Ratio	27.50	P

LTE Band 12

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	2.1051/27.53	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	27.53	P
6	Band Edge Compliance	27.53	P
7	Conducted Spurious Emission	27.53	P
8	Peak-to-Average Power Ratio	27.50	P

LTE Band 13

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	2.1051/27.53	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	27.53	P
6	Band Edge Compliance	27.53	P
7	Conducted Spurious Emission	27.53	P
8	Peak-to-Average Power Ratio	27.50	P

LTE Band 17

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	2.1051/27.53	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	27.53	P
6	Band Edge Compliance	27.53	P
7	Conducted Spurious Emission	27.53	P
8	Peak-to-Average Power Ratio	27.50	P

LTE Band 26(814MHz~824MHz)

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	90.635	P
2	Emission Limit	2.1051/90.691	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	2.1049	P
6	Band Edge Compliance	90.691	P
7	Conducted Spurious Emission	90.691	P

LTE Band 26(824MHz~849MHz)

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	22.913	P
2	Emission Limit	2.1051/22.917	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	22.917	P
6	Band Edge Compliance	22.917	P
7	Conducted Spurious Emission	22.917	P

LTE Band 38

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	2.1051/27.53	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	27.53	P
6	Band Edge Compliance	27.53	P
7	Conducted Spurious Emission	27.53	P
8	Peak-to-Average Power Ratio	27.50	P

LTE Band 41

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	2.1051/27.53	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	27.53	P
6	Band Edge Compliance	27.53	P
7	Conducted Spurious Emission	27.53	P
8	Peak-to-Average Power Ratio	27.50	P

Terms used in Verdict column

P	Pass. The EUT complies with the essential requirements in the standard.
NP	Not Performed. The test was not performed by CTTL.
NA	Not Applicable.The test was not applicable.
BR	Re-use test data from basic model report.
F	Fail. The EUT does not comply with the essential requirements in the standard.

All the test results are based on normal power.

LTE Band 41 is tested by power class 3.

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 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.

7. Test Equipment Utilized

NO.	Description	TYPE	Manufacture	series number	CAL DUE DATE
1	Test Receiver	E4440A	Agilent	MY48250642	2023-03-10
2	EMI Antenna	VULB9163	Schwarzbeck	9163-482	2022-11-16
3	EMI Antenna	LB-7180-NF	A-INFO	J203001300005	2023-02-23
4	EMI Antenna	3117	ETS-Lindgren	00058889	2022-11-07
5	Signal Generator	N5183A	Agilent	MY49060052	2022-07-11
6	Universal Radio Communication Tester	CMW500	R&S	143008	2022-12-01
7	Wideband Radio Communication Tester	CMW500	R&S	159082	2023-01-17
8	Signal&Spectrum Analyzer	FSW	R&S	104038	2022-06-24
9	Climate chamber	SH-242	ESPEC	93008556	2023-12-23

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)	Modulation	Power (dBm)
1.4MHz	1 RB low	1850.7	QPSK	23.54
1.4MHz	50% RB mid	1850.7	QPSK	23.71
1.4MHz	1 RB high	1850.7	QPSK	23.61
1.4MHz	100% RB	1850.7	QPSK	22.73
1.4MHz	1 RB low	1850.7	16QAM	22.80
1.4MHz	50% RB mid	1850.7	16QAM	22.62
1.4MHz	1 RB high	1850.7	16QAM	23.14
1.4MHz	100% RB	1850.7	16QAM	22.15
1.4MHz	1 RB low	1880.0	QPSK	23.46
1.4MHz	50% RB mid	1880.0	QPSK	23.48
1.4MHz	1 RB high	1880.0	QPSK	23.48
1.4MHz	100% RB	1880.0	QPSK	22.40
1.4MHz	1 RB low	1880.0	16QAM	22.66
1.4MHz	50% RB mid	1880.0	16QAM	22.43
1.4MHz	1 RB high	1880.0	16QAM	22.00
1.4MHz	100% RB	1880.0	16QAM	21.65
1.4MHz	1 RB low	1909.3	QPSK	23.43
1.4MHz	50% RB mid	1909.3	QPSK	23.44
1.4MHz	1 RB high	1909.3	QPSK	23.39
1.4MHz	100% RB	1909.3	QPSK	22.51
1.4MHz	1 RB low	1909.3	16QAM	22.65
1.4MHz	50% RB mid	1909.3	16QAM	22.83
1.4MHz	1 RB high	1909.3	16QAM	22.12
1.4MHz	100% RB	1909.3	16QAM	21.38
3MHz	1 RB low	1851.5	QPSK	23.83

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
3MHz	50% RB mid	1851.5	QPSK	22.64
3MHz	1 RB high	1851.5	QPSK	23.76
3MHz	100% RB	1851.5	QPSK	22.70
3MHz	1 RB low	1851.5	16QAM	22.41
3MHz	50% RB mid	1851.5	16QAM	21.64
3MHz	1 RB high	1851.5	16QAM	22.77
3MHz	100% RB	1851.5	16QAM	21.92
3MHz	1 RB low	1880.0	QPSK	23.66
3MHz	50% RB mid	1880.0	QPSK	22.47
3MHz	1 RB high	1880.0	QPSK	23.73
3MHz	100% RB	1880.0	QPSK	22.43
3MHz	1 RB low	1880.0	16QAM	22.52
3MHz	50% RB mid	1880.0	16QAM	21.47
3MHz	1 RB high	1880.0	16QAM	22.63
3MHz	100% RB	1880.0	16QAM	21.46
3MHz	1 RB low	1908.5	QPSK	23.57
3MHz	50% RB mid	1908.5	QPSK	22.40
3MHz	1 RB high	1908.5	QPSK	23.36
3MHz	100% RB	1908.5	QPSK	22.49
3MHz	1 RB low	1908.5	16QAM	22.74
3MHz	50% RB mid	1908.5	16QAM	21.46
3MHz	1 RB high	1908.5	16QAM	22.56
3MHz	100% RB	1908.5	16QAM	21.29
5MHz	1 RB low	1852.5	QPSK	23.69
5MHz	50% RB mid	1852.5	QPSK	22.77
5MHz	1 RB high	1852.5	QPSK	23.65
5MHz	100% RB	1852.5	QPSK	22.79
5MHz	1 RB low	1852.5	16QAM	22.23
5MHz	50% RB mid	1852.5	16QAM	21.71
5MHz	1 RB high	1852.5	16QAM	22.28
5MHz	100% RB	1852.5	16QAM	21.87
5MHz	1 RB low	1880.0	QPSK	23.77
5MHz	50% RB mid	1880.0	QPSK	22.51
5MHz	1 RB high	1880.0	QPSK	23.85
5MHz	100% RB	1880.0	QPSK	22.49
5MHz	1 RB low	1880.0	16QAM	22.38
5MHz	50% RB mid	1880.0	16QAM	21.37
5MHz	1 RB high	1880.0	16QAM	22.08
5MHz	100% RB	1880.0	16QAM	21.34
5MHz	1 RB low	1907.5	QPSK	23.68
5MHz	50% RB mid	1907.5	QPSK	22.44
5MHz	1 RB high	1907.5	QPSK	23.47

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
5MHz	100% RB	1907.5	QPSK	22.50
5MHz	1 RB low	1907.5	16QAM	22.83
5MHz	50% RB mid	1907.5	16QAM	21.66
5MHz	1 RB high	1907.5	16QAM	22.58
5MHz	100% RB	1907.5	16QAM	21.59
10MHz	1 RB low	1855.0	QPSK	23.73
10MHz	50% RB mid	1855.0	QPSK	22.78
10MHz	1 RB high	1855.0	QPSK	23.59
10MHz	100% RB	1855.0	QPSK	22.71
10MHz	1 RB low	1855.0	16QAM	22.55
10MHz	50% RB mid	1855.0	16QAM	21.77
10MHz	1 RB high	1855.0	16QAM	22.59
10MHz	100% RB	1855.0	16QAM	21.77
10MHz	1 RB low	1880.0	QPSK	23.51
10MHz	50% RB mid	1880.0	QPSK	22.39
10MHz	1 RB high	1880.0	QPSK	23.73
10MHz	100% RB	1880.0	QPSK	22.44
10MHz	1 RB low	1880.0	16QAM	22.31
10MHz	50% RB mid	1880.0	16QAM	21.38
10MHz	1 RB high	1880.0	16QAM	22.57
10MHz	100% RB	1880.0	16QAM	21.56
10MHz	1 RB low	1905.0	QPSK	23.62
10MHz	50% RB mid	1905.0	QPSK	22.51
10MHz	1 RB high	1905.0	QPSK	23.39
10MHz	100% RB	1905.0	QPSK	22.62
10MHz	1 RB low	1905.0	16QAM	22.22
10MHz	50% RB mid	1905.0	16QAM	21.65
10MHz	1 RB high	1905.0	16QAM	22.60
10MHz	100% RB	1905.0	16QAM	21.67
15MHz	1 RB low	1857.5	QPSK	23.89
15MHz	50% RB mid	1857.5	QPSK	22.68
15MHz	1 RB high	1857.5	QPSK	23.64
15MHz	100% RB	1857.5	QPSK	22.64
15MHz	1 RB low	1857.5	16QAM	22.59
15MHz	50% RB mid	1857.5	16QAM	21.65
15MHz	1 RB high	1857.5	16QAM	22.41
15MHz	100% RB	1857.5	16QAM	21.62
15MHz	1 RB low	1880.0	QPSK	23.66
15MHz	50% RB mid	1880.0	QPSK	22.47
15MHz	1 RB high	1880.0	QPSK	23.72
15MHz	100% RB	1880.0	QPSK	22.46
15MHz	1 RB low	1880.0	16QAM	22.75

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
15MHz	50% RB mid	1880.0	16QAM	21.54
15MHz	1 RB high	1880.0	16QAM	23.27
15MHz	100% RB	1880.0	16QAM	21.64
15MHz	1 RB low	1902.5	QPSK	23.96
15MHz	50% RB mid	1902.5	QPSK	22.61
15MHz	1 RB high	1902.5	QPSK	23.51
15MHz	100% RB	1902.5	QPSK	22.64
15MHz	1 RB low	1902.5	16QAM	23.47
15MHz	50% RB mid	1902.5	16QAM	21.72
15MHz	1 RB high	1902.5	16QAM	23.14
15MHz	100% RB	1902.5	16QAM	21.67
20MHz	1 RB low	1860.0	QPSK	24.17
20MHz	50% RB mid	1860.0	QPSK	22.60
20MHz	1 RB high	1860.0	QPSK	23.91
20MHz	100% RB	1860.0	QPSK	22.68
20MHz	1 RB low	1860.0	16QAM	22.95
20MHz	50% RB mid	1860.0	16QAM	21.55
20MHz	1 RB high	1860.0	16QAM	22.51
20MHz	100% RB	1860.0	16QAM	21.77
20MHz	1 RB low	1880.0	QPSK	23.55
20MHz	50% RB mid	1880.0	QPSK	22.46
20MHz	1 RB high	1880.0	QPSK	23.79
20MHz	100% RB	1880.0	QPSK	22.49
20MHz	1 RB low	1880.0	16QAM	22.76
20MHz	50% RB mid	1880.0	16QAM	21.47
20MHz	1 RB high	1880.0	16QAM	22.70
20MHz	100% RB	1880.0	16QAM	21.52
20MHz	1 RB low	1900.0	QPSK	23.90
20MHz	50% RB mid	1900.0	QPSK	22.62
20MHz	1 RB high	1900.0	QPSK	23.48
20MHz	100% RB	1900.0	QPSK	22.68
20MHz	1 RB low	1900.0	16QAM	22.87
20MHz	50% RB mid	1900.0	16QAM	21.70
20MHz	1 RB high	1900.0	16QAM	22.70
20MHz	100% RB	1900.0	16QAM	21.71

LTE band 4

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
1.4MHz	1 RB low	1710.7	QPSK	22.17
1.4MHz	50% RB mid	1710.7	QPSK	22.16
1.4MHz	1 RB high	1710.7	QPSK	22.33
1.4MHz	100% RB	1710.7	QPSK	22.12
1.4MHz	1 RB low	1710.7	16QAM	20.96
1.4MHz	50% RB mid	1710.7	16QAM	21.23
1.4MHz	1 RB high	1710.7	16QAM	21.17
1.4MHz	100% RB	1710.7	16QAM	21.18
1.4MHz	1 RB low	1732.5	QPSK	23.31
1.4MHz	50% RB mid	1732.5	QPSK	23.36
1.4MHz	1 RB high	1732.5	QPSK	23.28
1.4MHz	100% RB	1732.5	QPSK	22.42
1.4MHz	1 RB low	1732.5	16QAM	22.44
1.4MHz	50% RB mid	1732.5	16QAM	22.66
1.4MHz	1 RB high	1732.5	16QAM	22.45
1.4MHz	100% RB	1732.5	16QAM	21.28
1.4MHz	1 RB low	1754.3	QPSK	23.50
1.4MHz	50% RB mid	1754.3	QPSK	23.48
1.4MHz	1 RB high	1754.3	QPSK	23.41
1.4MHz	100% RB	1754.3	QPSK	22.37
1.4MHz	1 RB low	1754.3	16QAM	22.69
1.4MHz	50% RB mid	1754.3	16QAM	22.67
1.4MHz	1 RB high	1754.3	16QAM	22.70
1.4MHz	100% RB	1754.3	16QAM	21.67
3MHz	1 RB low	1711.5	QPSK	22.39
3MHz	50% RB mid	1711.5	QPSK	22.57
3MHz	1 RB high	1711.5	QPSK	22.90
3MHz	100% RB	1711.5	QPSK	22.54
3MHz	1 RB low	1711.5	16QAM	21.49
3MHz	50% RB mid	1711.5	16QAM	21.61
3MHz	1 RB high	1711.5	16QAM	22.05
3MHz	100% RB	1711.5	16QAM	21.56
3MHz	1 RB low	1732.5	QPSK	23.63
3MHz	50% RB mid	1732.5	QPSK	22.41
3MHz	1 RB high	1732.5	QPSK	23.53
3MHz	100% RB	1732.5	QPSK	22.40
3MHz	1 RB low	1732.5	16QAM	22.52
3MHz	50% RB mid	1732.5	16QAM	21.40
3MHz	1 RB high	1732.5	16QAM	23.03

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
3MHz	100% RB	1732.5	16QAM	21.69
3MHz	1 RB low	1753.5	QPSK	23.56
3MHz	50% RB mid	1753.5	QPSK	22.34
3MHz	1 RB high	1753.5	QPSK	23.40
3MHz	100% RB	1753.5	QPSK	22.37
3MHz	1 RB low	1753.5	16QAM	22.54
3MHz	50% RB mid	1753.5	16QAM	21.38
3MHz	1 RB high	1753.5	16QAM	22.06
3MHz	100% RB	1753.5	16QAM	21.22
5MHz	1 RB low	1712.5	QPSK	22.72
5MHz	50% RB mid	1712.5	QPSK	22.56
5MHz	1 RB high	1712.5	QPSK	23.33
5MHz	100% RB	1712.5	QPSK	22.33
5MHz	1 RB low	1712.5	16QAM	21.65
5MHz	50% RB mid	1712.5	16QAM	21.54
5MHz	1 RB high	1712.5	16QAM	21.89
5MHz	100% RB	1712.5	16QAM	21.32
5MHz	1 RB low	1732.5	QPSK	23.93
5MHz	50% RB mid	1732.5	QPSK	22.45
5MHz	1 RB high	1732.5	QPSK	23.49
5MHz	100% RB	1732.5	QPSK	22.33
5MHz	1 RB low	1732.5	16QAM	22.31
5MHz	50% RB mid	1732.5	16QAM	21.38
5MHz	1 RB high	1732.5	16QAM	22.12
5MHz	100% RB	1732.5	16QAM	21.60
5MHz	1 RB low	1752.5	QPSK	23.42
5MHz	50% RB mid	1752.5	QPSK	22.46
5MHz	1 RB high	1752.5	QPSK	23.26
5MHz	100% RB	1752.5	QPSK	22.38
5MHz	1 RB low	1752.5	16QAM	21.99
5MHz	50% RB mid	1752.5	16QAM	21.49
5MHz	1 RB high	1752.5	16QAM	22.01
5MHz	100% RB	1752.5	16QAM	21.21
10MHz	1 RB low	1715.0	QPSK	22.20
10MHz	50% RB mid	1715.0	QPSK	22.71
10MHz	1 RB high	1715.0	QPSK	23.78
10MHz	100% RB	1715.0	QPSK	22.75
10MHz	1 RB low	1715.0	16QAM	21.34
10MHz	50% RB mid	1715.0	16QAM	21.74
10MHz	1 RB high	1715.0	16QAM	22.75

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	1715.0	16QAM	21.59
10MHz	1 RB low	1732.5	QPSK	23.85
10MHz	50% RB mid	1732.5	QPSK	22.45
10MHz	1 RB high	1732.5	QPSK	23.42
10MHz	100% RB	1732.5	QPSK	22.44
10MHz	1 RB low	1732.5	16QAM	22.90
10MHz	50% RB mid	1732.5	16QAM	21.55
10MHz	1 RB high	1732.5	16QAM	22.49
10MHz	100% RB	1732.5	16QAM	21.67
10MHz	1 RB low	1750.0	QPSK	23.52
10MHz	50% RB mid	1750.0	QPSK	22.45
10MHz	1 RB high	1750.0	QPSK	23.37
10MHz	100% RB	1750.0	QPSK	22.41
10MHz	1 RB low	1750.0	16QAM	22.63
10MHz	50% RB mid	1750.0	16QAM	21.79
10MHz	1 RB high	1750.0	16QAM	22.20
10MHz	100% RB	1750.0	16QAM	21.35
15MHz	1 RB low	1717.5	QPSK	22.83
15MHz	50% RB mid	1717.5	QPSK	22.66
15MHz	1 RB high	1717.5	QPSK	23.70
15MHz	100% RB	1717.5	QPSK	22.58
15MHz	1 RB low	1717.5	16QAM	21.90
15MHz	50% RB mid	1717.5	16QAM	21.79
15MHz	1 RB high	1717.5	16QAM	22.63
15MHz	100% RB	1717.5	16QAM	21.45
15MHz	1 RB low	1732.5	QPSK	23.79
15MHz	50% RB mid	1732.5	QPSK	22.44
15MHz	1 RB high	1732.5	QPSK	23.39
15MHz	100% RB	1732.5	QPSK	22.45
15MHz	1 RB low	1732.5	16QAM	23.31
15MHz	50% RB mid	1732.5	16QAM	21.43
15MHz	1 RB high	1732.5	16QAM	22.67
15MHz	100% RB	1732.5	16QAM	21.50
15MHz	1 RB low	1747.5	QPSK	23.41
15MHz	50% RB mid	1747.5	QPSK	22.33
15MHz	1 RB high	1747.5	QPSK	23.28
15MHz	100% RB	1747.5	QPSK	22.33
15MHz	1 RB low	1747.5	16QAM	22.42
15MHz	50% RB mid	1747.5	16QAM	21.38
15MHz	1 RB high	1747.5	16QAM	22.47

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
15MHz	100% RB	1747.5	16QAM	21.39
20MHz	1 RB low	1720.0	QPSK	22.50
20MHz	50% RB mid	1720.0	QPSK	22.52
20MHz	1 RB high	1720.0	QPSK	23.81
20MHz	100% RB	1720.0	QPSK	22.61
20MHz	1 RB low	1720.0	16QAM	21.44
20MHz	50% RB mid	1720.0	16QAM	21.66
20MHz	1 RB high	1720.0	16QAM	21.96
20MHz	100% RB	1720.0	16QAM	21.51
20MHz	1 RB low	1732.5	QPSK	23.70
20MHz	50% RB mid	1732.5	QPSK	22.28
20MHz	1 RB high	1732.5	QPSK	23.58
20MHz	100% RB	1732.5	QPSK	22.59
20MHz	1 RB low	1732.5	16QAM	23.15
20MHz	50% RB mid	1732.5	16QAM	21.61
20MHz	1 RB high	1732.5	16QAM	21.81
20MHz	100% RB	1732.5	16QAM	21.68
20MHz	1 RB low	1745.0	QPSK	23.93
20MHz	50% RB mid	1745.0	QPSK	22.61
20MHz	1 RB high	1745.0	QPSK	23.71
20MHz	100% RB	1745.0	QPSK	22.52
20MHz	1 RB low	1745.0	16QAM	23.01
20MHz	50% RB mid	1745.0	16QAM	21.57
20MHz	1 RB high	1745.0	16QAM	22.82
20MHz	100% RB	1745.0	16QAM	21.48

LTE band 5

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
1.4MHz	1 RB low	824.7	QPSK	23.68
1.4MHz	50% RB mid	824.7	QPSK	23.56
1.4MHz	1 RB high	824.7	QPSK	23.41
1.4MHz	100% RB	824.7	QPSK	23.42
1.4MHz	1 RB low	824.7	16QAM	22.79
1.4MHz	50% RB mid	824.7	16QAM	22.68
1.4MHz	1 RB high	824.7	16QAM	22.57
1.4MHz	100% RB	824.7	16QAM	22.53
1.4MHz	1 RB low	836.5	QPSK	24.05
1.4MHz	50% RB mid	836.5	QPSK	24.18
1.4MHz	1 RB high	836.5	QPSK	24.15
1.4MHz	100% RB	836.5	QPSK	23.17
1.4MHz	1 RB low	836.5	16QAM	23.25
1.4MHz	50% RB mid	836.5	16QAM	23.37
1.4MHz	1 RB high	836.5	16QAM	23.13
1.4MHz	100% RB	836.5	16QAM	22.33
1.4MHz	1 RB low	848.3	QPSK	23.53
1.4MHz	50% RB mid	848.3	QPSK	23.42
1.4MHz	1 RB high	848.3	QPSK	23.28
1.4MHz	100% RB	848.3	QPSK	23.31
1.4MHz	1 RB low	848.3	16QAM	22.65
1.4MHz	50% RB mid	848.3	16QAM	22.48
1.4MHz	1 RB high	848.3	16QAM	22.46
1.4MHz	100% RB	848.3	16QAM	22.29
3MHz	1 RB low	825.5	QPSK	23.77
3MHz	50% RB mid	825.5	QPSK	22.97
3MHz	1 RB high	825.5	QPSK	23.29
3MHz	100% RB	825.5	QPSK	23.36
3MHz	1 RB low	825.5	16QAM	22.94
3MHz	50% RB mid	825.5	16QAM	21.93
3MHz	1 RB high	825.5	16QAM	22.45
3MHz	100% RB	825.5	16QAM	21.83
3MHz	1 RB low	836.5	QPSK	24.24
3MHz	50% RB mid	836.5	QPSK	23.18
3MHz	1 RB high	836.5	QPSK	24.15
3MHz	100% RB	836.5	QPSK	23.10
3MHz	1 RB low	836.5	16QAM	23.60
3MHz	50% RB mid	836.5	16QAM	22.18
3MHz	1 RB high	836.5	16QAM	23.51

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
3MHz	100% RB	836.5	16QAM	22.25
3MHz	1 RB low	847.5	QPSK	23.80
3MHz	50% RB mid	847.5	QPSK	23.46
3MHz	1 RB high	847.5	QPSK	23.29
3MHz	100% RB	847.5	QPSK	23.49
3MHz	1 RB low	847.5	16QAM	22.91
3MHz	50% RB mid	847.5	16QAM	22.48
3MHz	1 RB high	847.5	16QAM	22.43
3MHz	100% RB	847.5	16QAM	22.46
5MHz	1 RB low	826.5	QPSK	24.08
5MHz	50% RB mid	826.5	QPSK	22.99
5MHz	1 RB high	826.5	QPSK	23.49
5MHz	100% RB	826.5	QPSK	23.18
5MHz	1 RB low	826.5	16QAM	22.55
5MHz	50% RB mid	826.5	16QAM	21.94
5MHz	1 RB high	826.5	16QAM	22.31
5MHz	100% RB	826.5	16QAM	21.90
5MHz	1 RB low	836.5	QPSK	24.41
5MHz	50% RB mid	836.5	QPSK	23.16
5MHz	1 RB high	836.5	QPSK	24.10
5MHz	100% RB	836.5	QPSK	23.19
5MHz	1 RB low	836.5	16QAM	23.20
5MHz	50% RB mid	836.5	16QAM	22.19
5MHz	1 RB high	836.5	16QAM	22.79
5MHz	100% RB	836.5	16QAM	22.16
5MHz	1 RB low	846.5	QPSK	24.04
5MHz	50% RB mid	846.5	QPSK	23.53
5MHz	1 RB high	846.5	QPSK	23.43
5MHz	100% RB	846.5	QPSK	23.56
5MHz	1 RB low	846.5	16QAM	23.25
5MHz	50% RB mid	846.5	16QAM	22.67
5MHz	1 RB high	846.5	16QAM	22.67
5MHz	100% RB	846.5	16QAM	22.59
10MHz	1 RB low	829.0	QPSK	23.41
10MHz	50% RB mid	829.0	QPSK	23.32
10MHz	1 RB high	829.0	QPSK	23.53
10MHz	100% RB	829.0	QPSK	23.33
10MHz	1 RB low	829.0	16QAM	22.58
10MHz	50% RB mid	829.0	16QAM	22.32
10MHz	1 RB high	829.0	16QAM	22.71

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	829.0	16QAM	22.34
10MHz	1 RB low	836.5	QPSK	23.81
10MHz	50% RB mid	836.5	QPSK	23.23
10MHz	1 RB high	836.5	QPSK	23.17
10MHz	100% RB	836.5	QPSK	23.23
10MHz	1 RB low	836.5	16QAM	22.66
10MHz	50% RB mid	836.5	16QAM	22.34
10MHz	1 RB high	836.5	16QAM	22.15
10MHz	100% RB	836.5	16QAM	22.26
10MHz	1 RB low	844.0	QPSK	23.97
10MHz	50% RB mid	844.0	QPSK	23.48
10MHz	1 RB high	844.0	QPSK	22.63
10MHz	100% RB	844.0	QPSK	23.46
10MHz	1 RB low	844.0	16QAM	23.06
10MHz	50% RB mid	844.0	16QAM	22.32
10MHz	1 RB high	844.0	16QAM	21.85
10MHz	100% RB	844.0	16QAM	22.52

LTE band 7

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
5MHz	1 RB low	2502.5	QPSK	24.18
5MHz	50% RB mid	2502.5	QPSK	22.85
5MHz	1 RB high	2502.5	QPSK	23.98
5MHz	100% RB	2502.5	QPSK	22.72
5MHz	1 RB low	2502.5	16QAM	22.68
5MHz	50% RB mid	2502.5	16QAM	21.82
5MHz	1 RB high	2502.5	16QAM	22.80
5MHz	100% RB	2502.5	16QAM	21.80
5MHz	1 RB low	2535.0	QPSK	23.43
5MHz	50% RB mid	2535.0	QPSK	22.52
5MHz	1 RB high	2535.0	QPSK	23.53
5MHz	100% RB	2535.0	QPSK	22.58
5MHz	1 RB low	2535.0	16QAM	22.42
5MHz	50% RB mid	2535.0	16QAM	21.49
5MHz	1 RB high	2535.0	16QAM	22.39
5MHz	100% RB	2535.0	16QAM	21.41
5MHz	1 RB low	2567.5	QPSK	23.65
5MHz	50% RB mid	2567.5	QPSK	22.71
5MHz	1 RB high	2567.5	QPSK	23.51
5MHz	100% RB	2567.5	QPSK	22.71
5MHz	1 RB low	2567.5	16QAM	22.26
5MHz	50% RB mid	2567.5	16QAM	21.72
5MHz	1 RB high	2567.5	16QAM	22.14
5MHz	100% RB	2567.5	16QAM	21.69
10MHz	1 RB low	2505.0	QPSK	23.78
10MHz	50% RB mid	2505.0	QPSK	22.72
10MHz	1 RB high	2505.0	QPSK	23.79
10MHz	100% RB	2505.0	QPSK	22.69
10MHz	1 RB low	2505.0	16QAM	22.80
10MHz	50% RB mid	2505.0	16QAM	21.84
10MHz	1 RB high	2505.0	16QAM	22.67
10MHz	100% RB	2505.0	16QAM	21.82
10MHz	1 RB low	2535.0	QPSK	23.50
10MHz	50% RB mid	2535.0	QPSK	22.49
10MHz	1 RB high	2535.0	QPSK	23.82
10MHz	100% RB	2535.0	QPSK	22.64
10MHz	1 RB low	2535.0	16QAM	22.69
10MHz	50% RB mid	2535.0	16QAM	21.55
10MHz	1 RB high	2535.0	16QAM	23.10

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	2535.0	16QAM	21.72
10MHz	1 RB low	2565.0	QPSK	23.97
10MHz	50% RB mid	2565.0	QPSK	22.73
10MHz	1 RB high	2565.0	QPSK	23.46
10MHz	100% RB	2565.0	QPSK	22.83
10MHz	1 RB low	2565.0	16QAM	23.19
10MHz	50% RB mid	2565.0	16QAM	21.90
10MHz	1 RB high	2565.0	16QAM	22.30
10MHz	100% RB	2565.0	16QAM	21.76
15MHz	1 RB low	2507.5	QPSK	23.92
15MHz	50% RB mid	2507.5	QPSK	22.77
15MHz	1 RB high	2507.5	QPSK	23.78
15MHz	100% RB	2507.5	QPSK	22.79
15MHz	1 RB low	2507.5	16QAM	23.08
15MHz	50% RB mid	2507.5	16QAM	21.65
15MHz	1 RB high	2507.5	16QAM	22.81
15MHz	100% RB	2507.5	16QAM	21.73
15MHz	1 RB low	2535.0	QPSK	23.55
15MHz	50% RB mid	2535.0	QPSK	22.43
15MHz	1 RB high	2535.0	QPSK	23.69
15MHz	100% RB	2535.0	QPSK	22.49
15MHz	1 RB low	2535.0	16QAM	23.07
15MHz	50% RB mid	2535.0	16QAM	21.39
15MHz	1 RB high	2535.0	16QAM	23.24
15MHz	100% RB	2535.0	16QAM	21.75
15MHz	1 RB low	2562.5	QPSK	24.19
15MHz	50% RB mid	2562.5	QPSK	22.80
15MHz	1 RB high	2562.5	QPSK	23.60
15MHz	100% RB	2562.5	QPSK	22.83
15MHz	1 RB low	2562.5	16QAM	23.37
15MHz	50% RB mid	2562.5	16QAM	21.80
15MHz	1 RB high	2562.5	16QAM	22.78
15MHz	100% RB	2562.5	16QAM	21.92
20MHz	1 RB low	2510.0	QPSK	24.14
20MHz	50% RB mid	2510.0	QPSK	22.68
20MHz	1 RB high	2510.0	QPSK	23.81
20MHz	100% RB	2510.0	QPSK	22.71
20MHz	1 RB low	2510.0	16QAM	22.88
20MHz	50% RB mid	2510.0	16QAM	21.86
20MHz	1 RB high	2510.0	16QAM	22.38

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
20MHz	100% RB	2510.0	16QAM	21.66
20MHz	1 RB low	2535.0	QPSK	23.43
20MHz	50% RB mid	2535.0	QPSK	22.49
20MHz	1 RB high	2535.0	QPSK	23.73
20MHz	100% RB	2535.0	QPSK	22.57
20MHz	1 RB low	2535.0	16QAM	22.85
20MHz	50% RB mid	2535.0	16QAM	21.64
20MHz	1 RB high	2535.0	16QAM	23.11
20MHz	100% RB	2535.0	16QAM	21.66
20MHz	1 RB low	2560.0	QPSK	24.26
20MHz	50% RB mid	2560.0	QPSK	22.72
20MHz	1 RB high	2560.0	QPSK	23.56
20MHz	100% RB	2560.0	QPSK	22.86
20MHz	1 RB low	2560.0	16QAM	23.79
20MHz	50% RB mid	2560.0	16QAM	21.84
20MHz	1 RB high	2560.0	16QAM	22.84
20MHz	100% RB	2560.0	16QAM	22.03

LTE band 12

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
1.4MHz	1 RB low	699.7	QPSK	22.76
1.4MHz	50% RB mid	699.7	QPSK	22.68
1.4MHz	1 RB high	699.7	QPSK	22.73
1.4MHz	100% RB	699.7	QPSK	21.67
1.4MHz	1 RB low	699.7	16QAM	22.03
1.4MHz	50% RB mid	699.7	16QAM	21.83
1.4MHz	1 RB high	699.7	16QAM	22.02
1.4MHz	100% RB	699.7	16QAM	20.85
1.4MHz	1 RB low	707.5	QPSK	22.80
1.4MHz	50% RB mid	707.5	QPSK	22.91
1.4MHz	1 RB high	707.5	QPSK	23.02
1.4MHz	100% RB	707.5	QPSK	21.92
1.4MHz	1 RB low	707.5	16QAM	21.83
1.4MHz	50% RB mid	707.5	16QAM	21.96
1.4MHz	1 RB high	707.5	16QAM	21.95
1.4MHz	100% RB	707.5	16QAM	21.02
1.4MHz	1 RB low	715.3	QPSK	23.04
1.4MHz	50% RB mid	715.3	QPSK	23.35
1.4MHz	1 RB high	715.3	QPSK	23.18
1.4MHz	100% RB	715.3	QPSK	22.10
1.4MHz	1 RB low	715.3	16QAM	21.67
1.4MHz	50% RB mid	715.3	16QAM	22.34
1.4MHz	1 RB high	715.3	16QAM	21.82
1.4MHz	100% RB	715.3	16QAM	21.05
3MHz	1 RB low	700.5	QPSK	22.88
3MHz	50% RB mid	700.5	QPSK	21.95
3MHz	1 RB high	700.5	QPSK	22.88
3MHz	100% RB	700.5	QPSK	21.91
3MHz	1 RB low	700.5	16QAM	21.61
3MHz	50% RB mid	700.5	16QAM	20.84
3MHz	1 RB high	700.5	16QAM	21.56
3MHz	100% RB	700.5	16QAM	20.76
3MHz	1 RB low	707.5	QPSK	23.06
3MHz	50% RB mid	707.5	QPSK	22.04
3MHz	1 RB high	707.5	QPSK	23.04
3MHz	100% RB	707.5	QPSK	22.06
3MHz	1 RB low	707.5	16QAM	22.51
3MHz	50% RB mid	707.5	16QAM	21.04
3MHz	1 RB high	707.5	16QAM	22.66

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
3MHz	100% RB	707.5	16QAM	21.04
3MHz	1 RB low	714.5	QPSK	23.12
3MHz	50% RB mid	714.5	QPSK	22.25
3MHz	1 RB high	714.5	QPSK	23.24
3MHz	100% RB	714.5	QPSK	22.20
3MHz	1 RB low	714.5	16QAM	22.36
3MHz	50% RB mid	714.5	16QAM	21.17
3MHz	1 RB high	714.5	16QAM	22.47
3MHz	100% RB	714.5	16QAM	21.05
5MHz	1 RB low	701.5	QPSK	22.99
5MHz	50% RB mid	701.5	QPSK	22.13
5MHz	1 RB high	701.5	QPSK	22.97
5MHz	100% RB	701.5	QPSK	22.05
5MHz	1 RB low	701.5	16QAM	21.19
5MHz	50% RB mid	701.5	16QAM	20.96
5MHz	1 RB high	701.5	16QAM	21.50
5MHz	100% RB	701.5	16QAM	20.98
5MHz	1 RB low	707.5	QPSK	23.39
5MHz	50% RB mid	707.5	QPSK	22.23
5MHz	1 RB high	707.5	QPSK	23.41
5MHz	100% RB	707.5	QPSK	22.11
5MHz	1 RB low	707.5	16QAM	21.95
5MHz	50% RB mid	707.5	16QAM	20.99
5MHz	1 RB high	707.5	16QAM	21.94
5MHz	100% RB	707.5	16QAM	21.21
5MHz	1 RB low	713.5	QPSK	23.24
5MHz	50% RB mid	713.5	QPSK	22.34
5MHz	1 RB high	713.5	QPSK	23.32
5MHz	100% RB	713.5	QPSK	22.26
5MHz	1 RB low	713.5	16QAM	21.88
5MHz	50% RB mid	713.5	16QAM	21.15
5MHz	1 RB high	713.5	16QAM	22.06
5MHz	100% RB	713.5	16QAM	21.05
10MHz	1 RB low	704.0	QPSK	23.21
10MHz	50% RB mid	704.0	QPSK	22.21
10MHz	1 RB high	704.0	QPSK	23.29
10MHz	100% RB	704.0	QPSK	22.16
10MHz	1 RB low	704.0	16QAM	21.78
10MHz	50% RB mid	704.0	16QAM	21.01
10MHz	1 RB high	704.0	16QAM	22.02

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	704.0	16QAM	20.97
10MHz	1 RB low	707.5	QPSK	22.99
10MHz	50% RB mid	707.5	QPSK	22.17
10MHz	1 RB high	707.5	QPSK	23.28
10MHz	100% RB	707.5	QPSK	22.14
10MHz	1 RB low	707.5	16QAM	22.66
10MHz	50% RB mid	707.5	16QAM	21.09
10MHz	1 RB high	707.5	16QAM	22.79
10MHz	100% RB	707.5	16QAM	21.18
10MHz	1 RB low	711.0	QPSK	23.16
10MHz	50% RB mid	711.0	QPSK	22.36
10MHz	1 RB high	711.0	QPSK	23.42
10MHz	100% RB	711.0	QPSK	22.35
10MHz	1 RB low	711.0	16QAM	21.91
10MHz	50% RB mid	711.0	16QAM	21.40
10MHz	1 RB high	711.0	16QAM	22.66
10MHz	100% RB	711.0	16QAM	21.34

LTE band 13

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
5MHz	1 RB low	779.5	QPSK	24.21
5MHz	50% RB mid	779.5	QPSK	22.84
5MHz	1 RB high	779.5	QPSK	23.57
5MHz	100% RB	779.5	QPSK	22.86
5MHz	1 RB low	779.5	16QAM	22.95
5MHz	50% RB mid	779.5	16QAM	21.81
5MHz	1 RB high	779.5	16QAM	22.33
5MHz	100% RB	779.5	16QAM	21.87
5MHz	1 RB low	782.0	QPSK	23.95
5MHz	50% RB mid	782.0	QPSK	22.71
5MHz	1 RB high	782.0	QPSK	23.63
5MHz	100% RB	782.0	QPSK	22.80
5MHz	1 RB low	782.0	16QAM	22.75
5MHz	50% RB mid	782.0	16QAM	21.90
5MHz	1 RB high	782.0	16QAM	22.56
5MHz	100% RB	782.0	16QAM	21.87
5MHz	1 RB low	784.5	QPSK	23.74
5MHz	50% RB mid	784.5	QPSK	22.69
5MHz	1 RB high	784.5	QPSK	23.51
5MHz	100% RB	784.5	QPSK	22.72
5MHz	1 RB low	784.5	16QAM	21.98
5MHz	50% RB mid	784.5	16QAM	21.70
5MHz	1 RB high	784.5	16QAM	21.90
5MHz	100% RB	784.5	16QAM	21.62
10MHz	1 RB low	782.0	QPSK	23.98
10MHz	50% RB mid	782.0	QPSK	22.74
10MHz	1 RB high	782.0	QPSK	22.70
10MHz	100% RB	782.0	QPSK	22.90
10MHz	1 RB low	782.0	16QAM	22.88
10MHz	50% RB mid	782.0	16QAM	21.64
10MHz	1 RB high	782.0	16QAM	21.88
10MHz	100% RB	782.0	16QAM	21.82
10MHz	1 RB low	782.0	QPSK	24.03
10MHz	50% RB mid	782.0	QPSK	22.71
10MHz	1 RB high	782.0	QPSK	22.62
10MHz	100% RB	782.0	QPSK	22.82
10MHz	1 RB low	782.0	16QAM	23.66
10MHz	50% RB mid	782.0	16QAM	21.69
10MHz	1 RB high	782.0	16QAM	21.85

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	782.0	16QAM	21.95
10MHz	1 RB low	782.0	QPSK	24.00
10MHz	50% RB mid	782.0	QPSK	22.69
10MHz	1 RB high	782.0	QPSK	22.59
10MHz	100% RB	782.0	QPSK	22.79
10MHz	1 RB low	782.0	16QAM	23.64
10MHz	50% RB mid	782.0	16QAM	21.83
10MHz	1 RB high	782.0	16QAM	21.83
10MHz	100% RB	782.0	16QAM	21.86

LTE band 17

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
5MHz	1 RB low	706.5	QPSK	23.70
5MHz	50% RB mid	706.5	QPSK	22.69
5MHz	1 RB high	706.5	QPSK	24.09
5MHz	100% RB	706.5	QPSK	22.74
5MHz	1 RB low	706.5	16QAM	22.43
5MHz	50% RB mid	706.5	16QAM	21.52
5MHz	1 RB high	706.5	16QAM	22.54
5MHz	100% RB	706.5	16QAM	21.62
5MHz	1 RB low	710.0	QPSK	23.92
5MHz	50% RB mid	710.0	QPSK	22.90
5MHz	1 RB high	710.0	QPSK	23.95
5MHz	100% RB	710.0	QPSK	22.86
5MHz	1 RB low	710.0	16QAM	22.69
5MHz	50% RB mid	710.0	16QAM	21.98
5MHz	1 RB high	710.0	16QAM	22.97
5MHz	100% RB	710.0	16QAM	21.87
5MHz	1 RB low	713.5	QPSK	24.10
5MHz	50% RB mid	713.5	QPSK	22.90
5MHz	1 RB high	713.5	QPSK	23.66
5MHz	100% RB	713.5	QPSK	22.86
5MHz	1 RB low	713.5	16QAM	21.93
5MHz	50% RB mid	713.5	16QAM	21.79
5MHz	1 RB high	713.5	16QAM	22.04
5MHz	100% RB	713.5	16QAM	21.92
10MHz	1 RB low	709.0	QPSK	23.57
10MHz	50% RB mid	709.0	QPSK	22.86
10MHz	1 RB high	709.0	QPSK	24.21
10MHz	100% RB	709.0	QPSK	22.92
10MHz	1 RB low	709.0	16QAM	22.47
10MHz	50% RB mid	709.0	16QAM	21.87
10MHz	1 RB high	709.0	16QAM	22.74
10MHz	100% RB	709.0	16QAM	21.93
10MHz	1 RB low	710.0	QPSK	23.77
10MHz	50% RB mid	710.0	QPSK	22.90
10MHz	1 RB high	710.0	QPSK	23.86
10MHz	100% RB	710.0	QPSK	22.94
10MHz	1 RB low	710.0	16QAM	22.91
10MHz	50% RB mid	710.0	16QAM	21.83
10MHz	1 RB high	710.0	16QAM	23.00

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	710.0	16QAM	22.08
10MHz	1 RB low	711.0	QPSK	24.04
10MHz	50% RB mid	711.0	QPSK	22.85
10MHz	1 RB high	711.0	QPSK	23.85
10MHz	100% RB	711.0	QPSK	22.95
10MHz	1 RB low	711.0	16QAM	23.09
10MHz	50% RB mid	711.0	16QAM	21.79
10MHz	1 RB high	711.0	16QAM	23.23
10MHz	100% RB	711.0	16QAM	22.01

LTE band 26(814MHz-824MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
1.4MHz	1 RB low	814.7	QPSK	24.05
1.4MHz	50% RB mid	814.7	QPSK	24.25
1.4MHz	1 RB high	814.7	QPSK	24.20
1.4MHz	100% RB	814.7	QPSK	23.11
1.4MHz	1 RB low	814.7	16QAM	22.85
1.4MHz	50% RB mid	814.7	16QAM	23.36
1.4MHz	1 RB high	814.7	16QAM	23.53
1.4MHz	100% RB	814.7	16QAM	22.44
1.4MHz	1 RB low	819.0	QPSK	24.04
1.4MHz	50% RB mid	819.0	QPSK	24.09
1.4MHz	1 RB high	819.0	QPSK	23.91
1.4MHz	100% RB	819.0	QPSK	23.15
1.4MHz	1 RB low	819.0	16QAM	23.22
1.4MHz	50% RB mid	819.0	16QAM	23.36
1.4MHz	1 RB high	819.0	16QAM	23.21
1.4MHz	100% RB	819.0	16QAM	22.19
1.4MHz	1 RB low	823.3	QPSK	23.96
1.4MHz	50% RB mid	823.3	QPSK	23.94
1.4MHz	1 RB high	823.3	QPSK	23.69
1.4MHz	100% RB	823.3	QPSK	22.94
1.4MHz	1 RB low	823.3	16QAM	23.22
1.4MHz	50% RB mid	823.3	16QAM	22.81
1.4MHz	1 RB high	823.3	16QAM	22.53
1.4MHz	100% RB	823.3	16QAM	21.78
3MHz	1 RB low	815.5	QPSK	24.25
3MHz	50% RB mid	815.5	QPSK	23.20
3MHz	1 RB high	815.5	QPSK	24.23
3MHz	100% RB	815.5	QPSK	23.10
3MHz	1 RB low	815.5	16QAM	22.96
3MHz	50% RB mid	815.5	16QAM	22.20
3MHz	1 RB high	815.5	16QAM	23.26
3MHz	100% RB	815.5	16QAM	22.07
3MHz	1 RB low	819.0	QPSK	24.16
3MHz	50% RB mid	819.0	QPSK	23.08
3MHz	1 RB high	819.0	QPSK	23.98
3MHz	100% RB	819.0	QPSK	23.11
3MHz	1 RB low	819.0	16QAM	23.01
3MHz	50% RB mid	819.0	16QAM	22.14
3MHz	1 RB high	819.0	16QAM	23.16

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
3MHz	100% RB	819.0	16QAM	22.12
3MHz	1 RB low	822.5	QPSK	24.06
3MHz	50% RB mid	822.5	QPSK	22.94
3MHz	1 RB high	822.5	QPSK	23.82
3MHz	100% RB	822.5	QPSK	22.98
3MHz	1 RB low	822.5	16QAM	23.12
3MHz	50% RB mid	822.5	16QAM	21.90
3MHz	1 RB high	822.5	16QAM	22.61
3MHz	100% RB	822.5	16QAM	22.08
5MHz	1 RB low	816.5	QPSK	24.29
5MHz	50% RB mid	816.5	QPSK	23.13
5MHz	1 RB high	816.5	QPSK	24.31
5MHz	100% RB	816.5	QPSK	23.17
5MHz	1 RB low	816.5	16QAM	23.26
5MHz	50% RB mid	816.5	16QAM	22.19
5MHz	1 RB high	816.5	16QAM	23.03
5MHz	100% RB	816.5	16QAM	22.08
5MHz	1 RB low	819.0	QPSK	24.14
5MHz	50% RB mid	819.0	QPSK	23.13
5MHz	1 RB high	819.0	QPSK	23.81
5MHz	100% RB	819.0	QPSK	23.15
5MHz	1 RB low	819.0	16QAM	22.91
5MHz	50% RB mid	819.0	16QAM	22.22
5MHz	1 RB high	819.0	16QAM	22.73
5MHz	100% RB	819.0	16QAM	21.99
5MHz	1 RB low	821.5	QPSK	24.24
5MHz	50% RB mid	821.5	QPSK	23.03
5MHz	1 RB high	821.5	QPSK	23.95
5MHz	100% RB	821.5	QPSK	23.15
5MHz	1 RB low	821.5	16QAM	22.49
5MHz	50% RB mid	821.5	16QAM	21.97
5MHz	1 RB high	821.5	16QAM	22.16
5MHz	100% RB	821.5	16QAM	21.97
10MHz	1 RB low	819.0	QPSK	24.23
10MHz	50% RB mid	819.0	QPSK	23.20
10MHz	1 RB high	819.0	QPSK	23.67
10MHz	100% RB	819.0	QPSK	23.06
10MHz	1 RB low	819.0	16QAM	22.96
10MHz	50% RB mid	819.0	16QAM	22.24
10MHz	1 RB high	819.0	16QAM	22.57

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	819.0	16QAM	22.24
10MHz	1 RB low	819.0	QPSK	24.20
10MHz	50% RB mid	819.0	QPSK	23.17
10MHz	1 RB high	819.0	QPSK	23.83
10MHz	100% RB	819.0	QPSK	23.16
10MHz	1 RB low	819.0	16QAM	23.13
10MHz	50% RB mid	819.0	16QAM	22.23
10MHz	1 RB high	819.0	16QAM	22.92
10MHz	100% RB	819.0	16QAM	22.22
10MHz	1 RB low	819.0	QPSK	24.19
10MHz	50% RB mid	819.0	QPSK	23.17
10MHz	1 RB high	819.0	QPSK	23.83
10MHz	100% RB	819.0	QPSK	23.15
10MHz	1 RB low	819.0	16QAM	23.22
10MHz	50% RB mid	819.0	16QAM	22.10
10MHz	1 RB high	819.0	16QAM	22.92
10MHz	100% RB	819.0	16QAM	22.22

LTE band 26(824MHz-849MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
1.4MHz	1 RB low	824.7	QPSK	23.81
1.4MHz	50% RB mid	824.7	QPSK	23.84
1.4MHz	1 RB high	824.7	QPSK	23.77
1.4MHz	100% RB	824.7	QPSK	22.82
1.4MHz	1 RB low	824.7	16QAM	22.55
1.4MHz	50% RB mid	824.7	16QAM	23.07
1.4MHz	1 RB high	824.7	16QAM	22.93
1.4MHz	100% RB	824.7	16QAM	22.22
1.4MHz	1 RB low	836.5	QPSK	24.01
1.4MHz	50% RB mid	836.5	QPSK	24.25
1.4MHz	1 RB high	836.5	QPSK	24.00
1.4MHz	100% RB	836.5	QPSK	23.07
1.4MHz	1 RB low	836.5	16QAM	22.70
1.4MHz	50% RB mid	836.5	16QAM	23.08
1.4MHz	1 RB high	836.5	16QAM	23.14
1.4MHz	100% RB	836.5	16QAM	22.12
1.4MHz	1 RB low	848.3	QPSK	24.16
1.4MHz	50% RB mid	848.3	QPSK	24.25
1.4MHz	1 RB high	848.3	QPSK	24.05
1.4MHz	100% RB	848.3	QPSK	23.30
1.4MHz	1 RB low	848.3	16QAM	23.50
1.4MHz	50% RB mid	848.3	16QAM	23.45
1.4MHz	1 RB high	848.3	16QAM	23.25
1.4MHz	100% RB	848.3	16QAM	22.69
3MHz	1 RB low	825.5	QPSK	23.91
3MHz	50% RB mid	825.5	QPSK	22.87
3MHz	1 RB high	825.5	QPSK	23.64
3MHz	100% RB	825.5	QPSK	22.89
3MHz	1 RB low	825.5	16QAM	22.79
3MHz	50% RB mid	825.5	16QAM	21.90
3MHz	1 RB high	825.5	16QAM	22.63
3MHz	100% RB	825.5	16QAM	21.77
3MHz	1 RB low	836.5	QPSK	24.02
3MHz	50% RB mid	836.5	QPSK	23.06
3MHz	1 RB high	836.5	QPSK	24.10
3MHz	100% RB	836.5	QPSK	23.07
3MHz	1 RB low	836.5	16QAM	23.39
3MHz	50% RB mid	836.5	16QAM	22.06
3MHz	1 RB high	836.5	16QAM	23.12

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
3MHz	100% RB	836.5	16QAM	21.95
3MHz	1 RB low	847.5	QPSK	24.14
3MHz	50% RB mid	847.5	QPSK	23.29
3MHz	1 RB high	847.5	QPSK	24.05
3MHz	100% RB	847.5	QPSK	23.31
3MHz	1 RB low	847.5	16QAM	23.66
3MHz	50% RB mid	847.5	16QAM	22.33
3MHz	1 RB high	847.5	16QAM	22.88
3MHz	100% RB	847.5	16QAM	22.21
5MHz	1 RB low	826.5	QPSK	24.13
5MHz	50% RB mid	826.5	QPSK	22.89
5MHz	1 RB high	826.5	QPSK	23.84
5MHz	100% RB	826.5	QPSK	22.88
5MHz	1 RB low	826.5	16QAM	22.38
5MHz	50% RB mid	826.5	16QAM	21.68
5MHz	1 RB high	826.5	16QAM	22.32
5MHz	100% RB	826.5	16QAM	21.84
5MHz	1 RB low	836.5	QPSK	24.31
5MHz	50% RB mid	836.5	QPSK	23.00
5MHz	1 RB high	836.5	QPSK	24.21
5MHz	100% RB	836.5	QPSK	23.12
5MHz	1 RB low	836.5	16QAM	22.90
5MHz	50% RB mid	836.5	16QAM	22.07
5MHz	1 RB high	836.5	16QAM	22.65
5MHz	100% RB	836.5	16QAM	21.88
5MHz	1 RB low	846.5	QPSK	24.31
5MHz	50% RB mid	846.5	QPSK	23.33
5MHz	1 RB high	846.5	QPSK	24.09
5MHz	100% RB	846.5	QPSK	23.26
5MHz	1 RB low	846.5	16QAM	23.66
5MHz	50% RB mid	846.5	16QAM	22.29
5MHz	1 RB high	846.5	16QAM	23.06
5MHz	100% RB	846.5	16QAM	22.11
10MHz	1 RB low	829.0	QPSK	24.04
10MHz	50% RB mid	829.0	QPSK	22.90
10MHz	1 RB high	829.0	QPSK	24.08
10MHz	100% RB	829.0	QPSK	22.85
10MHz	1 RB low	829.0	16QAM	23.08
10MHz	50% RB mid	829.0	16QAM	21.75
10MHz	1 RB high	829.0	16QAM	23.16

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	829.0	16QAM	21.89
10MHz	1 RB low	836.5	QPSK	24.00
10MHz	50% RB mid	836.5	QPSK	23.20
10MHz	1 RB high	836.5	QPSK	23.98
10MHz	100% RB	836.5	QPSK	23.16
10MHz	1 RB low	836.5	16QAM	22.90
10MHz	50% RB mid	836.5	16QAM	22.17
10MHz	1 RB high	836.5	16QAM	22.94
10MHz	100% RB	836.5	16QAM	22.21
10MHz	1 RB low	844.0	QPSK	24.25
10MHz	50% RB mid	844.0	QPSK	23.33
10MHz	1 RB high	844.0	QPSK	23.74
10MHz	100% RB	844.0	QPSK	23.42
10MHz	1 RB low	844.0	16QAM	23.50
10MHz	50% RB mid	844.0	16QAM	22.43
10MHz	1 RB high	844.0	16QAM	22.72
10MHz	100% RB	844.0	16QAM	22.21
15MHz	1 RB low	831.5	QPSK	24.08
15MHz	50% RB mid	831.5	QPSK	22.85
15MHz	1 RB high	831.5	QPSK	24.22
15MHz	100% RB	831.5	QPSK	22.92
15MHz	1 RB low	831.5	16QAM	22.92
15MHz	50% RB mid	831.5	16QAM	21.86
15MHz	1 RB high	831.5	16QAM	23.31
15MHz	100% RB	831.5	16QAM	21.84
15MHz	1 RB low	836.5	QPSK	24.05
15MHz	50% RB mid	836.5	QPSK	23.14
15MHz	1 RB high	836.5	QPSK	24.21
15MHz	100% RB	836.5	QPSK	23.12
15MHz	1 RB low	836.5	16QAM	23.14
15MHz	50% RB mid	836.5	16QAM	22.17
15MHz	1 RB high	836.5	16QAM	23.03
15MHz	100% RB	836.5	16QAM	22.18
15MHz	1 RB low	841.5	QPSK	24.07
15MHz	50% RB mid	841.5	QPSK	23.22
15MHz	1 RB high	841.5	QPSK	24.14
15MHz	100% RB	841.5	QPSK	23.35
15MHz	1 RB low	841.5	16QAM	23.77
15MHz	50% RB mid	841.5	16QAM	22.30
15MHz	1 RB high	841.5	16QAM	23.42

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
15MHz	100% RB	841.5	16QAM	22.42

LTE band 38

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
5MHz	1 RB low	2572.5	QPSK	23.62
5MHz	50% RB mid	2572.5	QPSK	22.31
5MHz	1 RB high	2572.5	QPSK	23.45
5MHz	100% RB	2572.5	QPSK	22.32
5MHz	1 RB low	2572.5	16QAM	21.97
5MHz	50% RB mid	2572.5	16QAM	21.29
5MHz	1 RB high	2572.5	16QAM	21.91
5MHz	100% RB	2572.5	16QAM	21.38
5MHz	1 RB low	2595.0	QPSK	23.74
5MHz	50% RB mid	2595.0	QPSK	22.59
5MHz	1 RB high	2595.0	QPSK	23.56
5MHz	100% RB	2595.0	QPSK	22.73
5MHz	1 RB low	2595.0	16QAM	22.81
5MHz	50% RB mid	2595.0	16QAM	21.63
5MHz	1 RB high	2595.0	16QAM	22.75
5MHz	100% RB	2595.0	16QAM	21.71
5MHz	1 RB low	2617.5	QPSK	23.60
5MHz	50% RB mid	2617.5	QPSK	22.65
5MHz	1 RB high	2617.5	QPSK	23.67
5MHz	100% RB	2617.5	QPSK	22.43
5MHz	1 RB low	2617.5	16QAM	22.75
5MHz	50% RB mid	2617.5	16QAM	21.81
5MHz	1 RB high	2617.5	16QAM	23.14
5MHz	100% RB	2617.5	16QAM	21.68
10MHz	1 RB low	2575.0	QPSK	23.56
10MHz	50% RB mid	2575.0	QPSK	22.35
10MHz	1 RB high	2575.0	QPSK	23.44
10MHz	100% RB	2575.0	QPSK	22.31
10MHz	1 RB low	2575.0	16QAM	22.69
10MHz	50% RB mid	2575.0	16QAM	21.48
10MHz	1 RB high	2575.0	16QAM	22.55
10MHz	100% RB	2575.0	16QAM	21.41
10MHz	1 RB low	2595.0	QPSK	24.05
10MHz	50% RB mid	2595.0	QPSK	22.72
10MHz	1 RB high	2595.0	QPSK	24.04
10MHz	100% RB	2595.0	QPSK	22.91
10MHz	1 RB low	2595.0	16QAM	22.85
10MHz	50% RB mid	2595.0	16QAM	21.70
10MHz	1 RB high	2595.0	16QAM	22.95

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	2595.0	16QAM	21.76
10MHz	1 RB low	2615.0	QPSK	23.93
10MHz	50% RB mid	2615.0	QPSK	22.60
10MHz	1 RB high	2615.0	QPSK	23.75
10MHz	100% RB	2615.0	QPSK	22.75
10MHz	1 RB low	2615.0	16QAM	22.86
10MHz	50% RB mid	2615.0	16QAM	21.53
10MHz	1 RB high	2615.0	16QAM	22.80
10MHz	100% RB	2615.0	16QAM	21.85
15MHz	1 RB low	2577.5	QPSK	24.16
15MHz	50% RB mid	2577.5	QPSK	22.46
15MHz	1 RB high	2577.5	QPSK	24.00
15MHz	100% RB	2577.5	QPSK	22.51
15MHz	1 RB low	2577.5	16QAM	22.98
15MHz	50% RB mid	2577.5	16QAM	21.46
15MHz	1 RB high	2577.5	16QAM	22.76
15MHz	100% RB	2577.5	16QAM	21.72
15MHz	1 RB low	2595.0	QPSK	24.17
15MHz	50% RB mid	2595.0	QPSK	22.77
15MHz	1 RB high	2595.0	QPSK	24.04
15MHz	100% RB	2595.0	QPSK	22.83
15MHz	1 RB low	2595.0	16QAM	23.44
15MHz	50% RB mid	2595.0	16QAM	21.78
15MHz	1 RB high	2595.0	16QAM	22.89
15MHz	100% RB	2595.0	16QAM	21.86
15MHz	1 RB low	2612.5	QPSK	23.81
15MHz	50% RB mid	2612.5	QPSK	22.62
15MHz	1 RB high	2612.5	QPSK	24.18
15MHz	100% RB	2612.5	QPSK	22.86
15MHz	1 RB low	2612.5	16QAM	23.33
15MHz	50% RB mid	2612.5	16QAM	21.60
15MHz	1 RB high	2612.5	16QAM	23.16
15MHz	100% RB	2612.5	16QAM	21.76
20MHz	1 RB low	2580.0	QPSK	23.87
20MHz	50% RB mid	2580.0	QPSK	22.44
20MHz	1 RB high	2580.0	QPSK	23.94
20MHz	100% RB	2580.0	QPSK	22.55
20MHz	1 RB low	2580.0	16QAM	22.94
20MHz	50% RB mid	2580.0	16QAM	21.53
20MHz	1 RB high	2580.0	16QAM	22.93

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
20MHz	100% RB	2580.0	16QAM	21.66
20MHz	1 RB low	2595.0	QPSK	24.10
20MHz	50% RB mid	2595.0	QPSK	22.76
20MHz	1 RB high	2595.0	QPSK	23.98
20MHz	100% RB	2595.0	QPSK	22.69
20MHz	1 RB low	2595.0	16QAM	23.00
20MHz	50% RB mid	2595.0	16QAM	21.89
20MHz	1 RB high	2595.0	16QAM	23.13
20MHz	100% RB	2595.0	16QAM	21.70
20MHz	1 RB low	2610.0	QPSK	24.13
20MHz	50% RB mid	2610.0	QPSK	22.69
20MHz	1 RB high	2610.0	QPSK	23.84
20MHz	100% RB	2610.0	QPSK	22.60
20MHz	1 RB low	2610.0	16QAM	23.55
20MHz	50% RB mid	2610.0	16QAM	21.76
20MHz	1 RB high	2610.0	16QAM	23.30
20MHz	100% RB	2610.0	16QAM	21.73

LTE band 41

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
5MHz	1 RB low	2498.5	QPSK	24.39
5MHz	50% RB mid	2498.5	QPSK	23.49
5MHz	1 RB high	2498.5	QPSK	24.63
5MHz	100% RB	2498.5	QPSK	23.49
5MHz	1 RB low	2498.5	16QAM	23.50
5MHz	50% RB mid	2498.5	16QAM	22.53
5MHz	1 RB high	2498.5	16QAM	23.75
5MHz	100% RB	2498.5	16QAM	22.59
5MHz	1 RB low	2593.0	QPSK	24.52
5MHz	50% RB mid	2593.0	QPSK	23.57
5MHz	1 RB high	2593.0	QPSK	24.68
5MHz	100% RB	2593.0	QPSK	23.47
5MHz	1 RB low	2593.0	16QAM	24.11
5MHz	50% RB mid	2593.0	16QAM	22.62
5MHz	1 RB high	2593.0	16QAM	24.16
5MHz	100% RB	2593.0	16QAM	22.56
5MHz	1 RB low	2687.5	QPSK	24.81
5MHz	50% RB mid	2687.5	QPSK	23.53
5MHz	1 RB high	2687.5	QPSK	24.70
5MHz	100% RB	2687.5	QPSK	23.66
5MHz	1 RB low	2687.5	16QAM	23.30
5MHz	50% RB mid	2687.5	16QAM	22.63
5MHz	1 RB high	2687.5	16QAM	23.10
5MHz	100% RB	2687.5	16QAM	22.81
10MHz	1 RB low	2501.0	QPSK	24.46
10MHz	50% RB mid	2501.0	QPSK	23.54
10MHz	1 RB high	2501.0	QPSK	24.62
10MHz	100% RB	2501.0	QPSK	23.60
10MHz	1 RB low	2501.0	16QAM	23.55
10MHz	50% RB mid	2501.0	16QAM	22.91
10MHz	1 RB high	2501.0	16QAM	23.96
10MHz	100% RB	2501.0	16QAM	22.72
10MHz	1 RB low	2593.0	QPSK	24.82
10MHz	50% RB mid	2593.0	QPSK	23.88
10MHz	1 RB high	2593.0	QPSK	24.81
10MHz	100% RB	2593.0	QPSK	23.83
10MHz	1 RB low	2593.0	16QAM	23.80
10MHz	50% RB mid	2593.0	16QAM	22.70
10MHz	1 RB high	2593.0	16QAM	23.70

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
10MHz	100% RB	2593.0	16QAM	22.83
10MHz	1 RB low	2685.0	QPSK	24.82
10MHz	50% RB mid	2685.0	QPSK	23.66
10MHz	1 RB high	2685.0	QPSK	24.63
10MHz	100% RB	2685.0	QPSK	23.71
10MHz	1 RB low	2685.0	16QAM	23.94
10MHz	50% RB mid	2685.0	16QAM	22.74
10MHz	1 RB high	2685.0	16QAM	23.51
10MHz	100% RB	2685.0	16QAM	22.75
15MHz	1 RB low	2503.5	QPSK	24.58
15MHz	50% RB mid	2503.5	QPSK	23.61
15MHz	1 RB high	2503.5	QPSK	24.54
15MHz	100% RB	2503.5	QPSK	23.63
15MHz	1 RB low	2503.5	16QAM	23.62
15MHz	50% RB mid	2503.5	16QAM	22.71
15MHz	1 RB high	2503.5	16QAM	23.62
15MHz	100% RB	2503.5	16QAM	22.74
15MHz	1 RB low	2593.0	QPSK	24.81
15MHz	50% RB mid	2593.0	QPSK	23.82
15MHz	1 RB high	2593.0	QPSK	24.76
15MHz	100% RB	2593.0	QPSK	23.55
15MHz	1 RB low	2593.0	16QAM	24.13
15MHz	50% RB mid	2593.0	16QAM	22.74
15MHz	1 RB high	2593.0	16QAM	23.92
15MHz	100% RB	2593.0	16QAM	22.60
15MHz	1 RB low	2682.5	QPSK	24.82
15MHz	50% RB mid	2682.5	QPSK	23.67
15MHz	1 RB high	2682.5	QPSK	24.67
15MHz	100% RB	2682.5	QPSK	23.70
15MHz	1 RB low	2682.5	16QAM	24.28
15MHz	50% RB mid	2682.5	16QAM	22.71
15MHz	1 RB high	2682.5	16QAM	24.00
15MHz	100% RB	2682.5	16QAM	22.83
20MHz	1 RB low	2506.0	QPSK	24.57
20MHz	50% RB mid	2506.0	QPSK	23.65
20MHz	1 RB high	2506.0	QPSK	24.62
20MHz	100% RB	2506.0	QPSK	23.66
20MHz	1 RB low	2506.0	16QAM	23.75
20MHz	50% RB mid	2506.0	16QAM	23.26
20MHz	1 RB high	2506.0	16QAM	23.53

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)
20MHz	100% RB	2506.0	16QAM	22.79
20MHz	1 RB low	2593.0	QPSK	24.81
20MHz	50% RB mid	2593.0	QPSK	23.60
20MHz	1 RB high	2593.0	QPSK	24.81
20MHz	100% RB	2593.0	QPSK	23.54
20MHz	1 RB low	2593.0	16QAM	24.24
20MHz	50% RB mid	2593.0	16QAM	22.71
20MHz	1 RB high	2593.0	16QAM	24.09
20MHz	100% RB	2593.0	16QAM	22.69
20MHz	1 RB low	2680.0	QPSK	24.81
20MHz	50% RB mid	2680.0	QPSK	23.74
20MHz	1 RB high	2680.0	QPSK	24.77
20MHz	100% RB	2680.0	QPSK	23.70
20MHz	1 RB low	2680.0	16QAM	23.97
20MHz	50% RB mid	2680.0	16QAM	22.82
20MHz	1 RB high	2680.0	16QAM	24.12
20MHz	100% RB	2680.0	16QAM	22.81

A.1.3 Radiated

A.1.3.1 Description

This is the test for the maximum radiated power from the EUT.

Rule Part 24.232(b) specifies, "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power" and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

Rule Part 27.50(d) specifies “Fixed, mobile, and portable (handheld) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP”.

Rule Part 27.50(h)(2) specifies “Mobile stations are limited to 2.0 watts EIRP.”.

Rule Part 27.50(c) specifies “Portable stations (hand-held de-vices) are limited to 3 watts ERP.”.

Rule Part 27.50(a)(3) specifies “For mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth.” Rule Part 90.635(b) specifies "The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).”

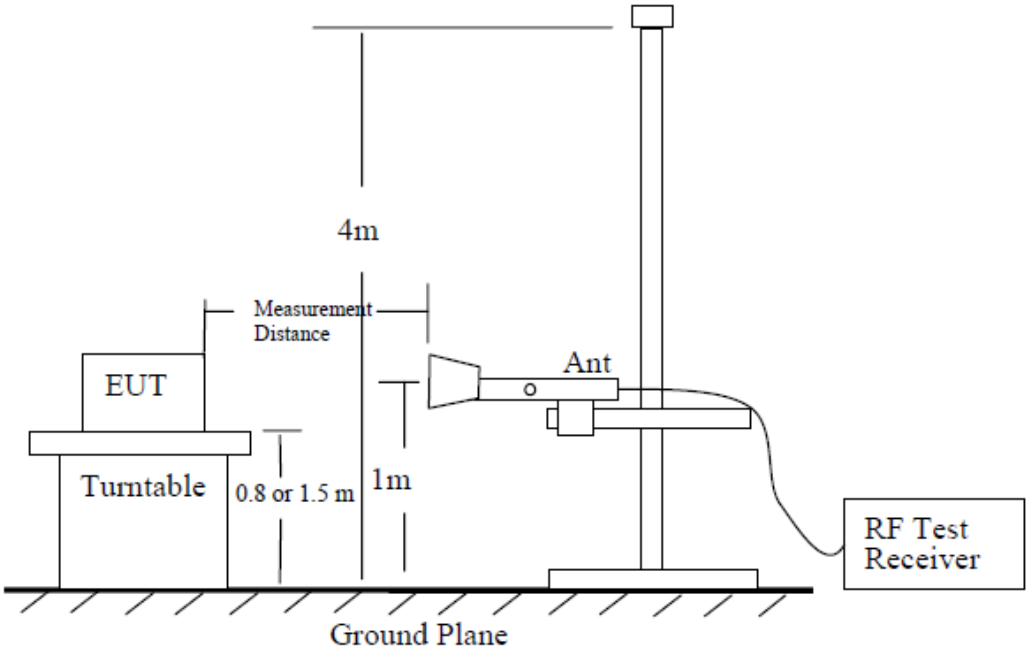
A.1.3.2 Method of Measurement

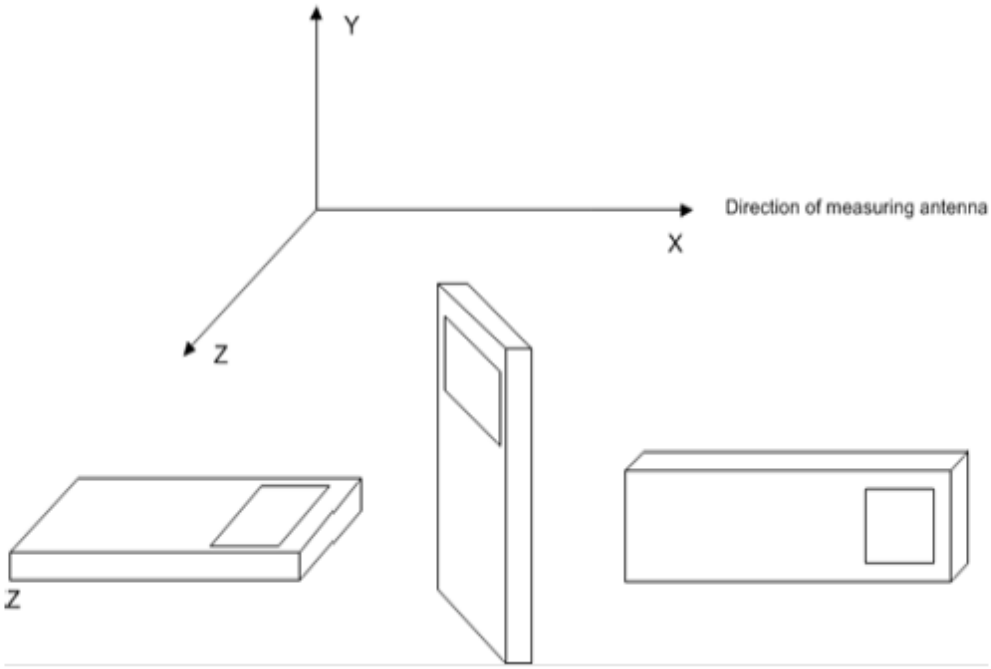
For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80 cm above the reference ground plane.

For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table or support at a nominal height of 1.5 m above the ground plane.

Radiated measurements shall be made with the measurement antenna positioned in both horizontal and vertical polarization. The measurement antenna shall be varied from 1 m to 4 m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level (i.e., field strength or received power). When orienting the measurement antenna in vertical polarization, the minimum height of the lowest element of the antenna shall clear the site reference ground plane by at least 25 cm.

The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.





A step-by-step procedure is as follows.

a) Place the EUT in the center of the turntable. The EUT shall be configured to transmit into the standard non-radiating load (for measuring radiated spurious emissions), connected with cables of minimal length unless specified otherwise. If the EUT uses an adjustable antenna, the antenna shall be positioned to the length that produces the worst case emission at the fundamental operating frequency.

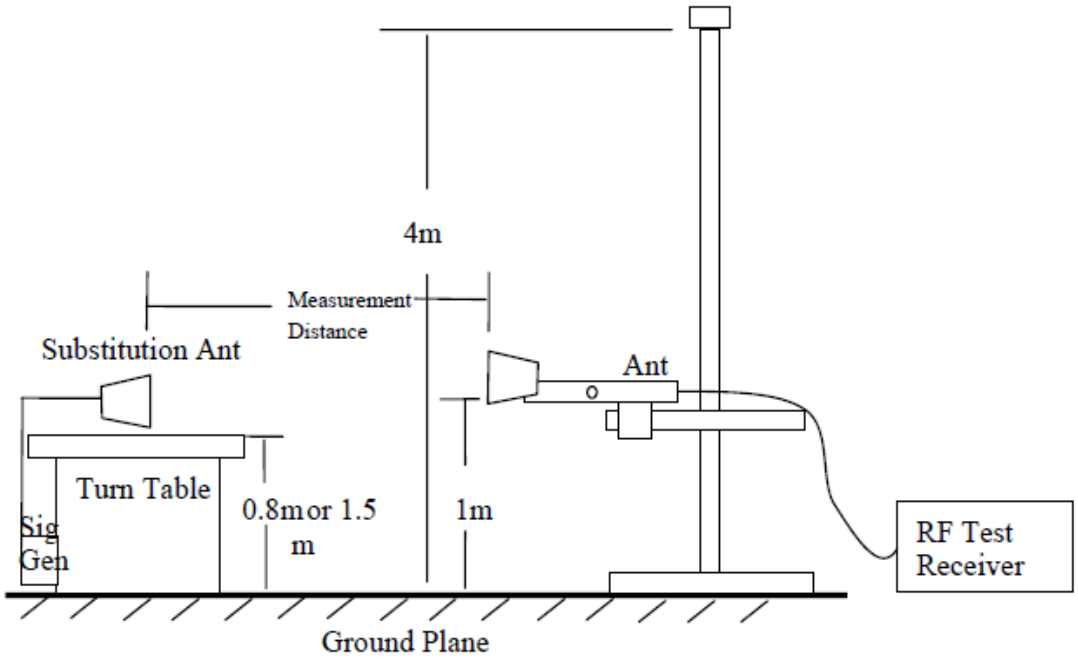
b) Each emission under consideration shall be evaluated:

   1) Raise and lower the measurement antenna, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.

   2) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.

3) Return the turntable to the azimuth where the highest emission amplitude level was observed.
4) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.
5) Record the measured emission amplitude level and frequency using the appropriate RBW.

c) Repeat step b) for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.



d) Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.

e) Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.

f) Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by the measurement instrument, with sufficient dynamic range relative to the noise floor.

g) For each emission that was detected and measured in the initial test [i.e., in step b) and step c)]:
1) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.
2) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step b) and step c).
3) Record the output power level of the signal generator when equivalence is achieved in step

2).

h) Repeat step e) through step g) with the measurement antenna oriented in the opposite polarization.

i) Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:

Pe = Ps(dBm) − cable loss (dB) + antenna gain (dBd)

where

Pe = equivalent emission power in dBm

Ps = source (signal generator) power in dBm

NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.

j) Correct the antenna gain of the substitution antenna if necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from: gain (dBd) = gain (dBi) − 2.15 dB. If necessary, the antenna gain can be calculated from calibrated antenna factor information. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.

ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.

A.1.3.3 Measurement result

LTE Band 2_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	1850.7	-10.80	-29.30	8.10	26.60	33.00	H
	1880.0	-9.98	-29.40	8.10	27.52	33.00	H
	1909.3	-10.48	-29.30	8.10	26.92	33.00	H
3	1851.5	-10.91	-29.30	8.10	26.50	33.00	H
	1880.0	-10.06	-29.40	8.10	27.44	33.00	H
	1908.5	-10.58	-29.30	8.10	26.83	33.00	H
5	1852.5	-10.88	-29.30	8.10	26.52	33.00	H
	1880.0	-10.02	-29.40	8.10	27.48	33.00	H
	1907.5	-10.56	-29.30	8.10	26.84	33.00	H
10	1855.0	-11.00	-29.30	8.10	26.40	33.00	H
	1880.0	-10.11	-29.40	8.10	27.40	33.00	H
	1905.0	-10.65	-29.30	8.10	26.75	33.00	H
15	1857.5	-10.89	-29.30	8.10	26.51	33.00	H
	1880.0	-10.15	-29.40	8.10	27.35	33.00	H
	1902.5	-10.71	-29.30	8.10	26.69	33.00	H
20	1860.0	-11.00	-29.30	8.10	26.40	33.00	H
	1880.0	-10.25	-29.40	8.10	27.26	33.00	H
	1900.0	-10.77	-29.30	8.10	26.63	33.00	H

LTE Band 2_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	1850.7	-10.90	-29.30	8.10	26.50	33.00	H
	1880.0	-10.01	-29.40	8.10	27.49	33.00	H
	1909.3	-10.63	-29.30	8.10	26.77	33.00	H
3	1851.5	-10.99	-29.30	8.10	26.41	33.00	H
	1880.0	-10.11	-29.40	8.10	27.39	33.00	H
	1908.5	-10.70	-29.30	8.10	26.70	33.00	H
5	1852.5	-10.95	-29.30	8.10	26.45	33.00	H
	1880.0	-10.05	-29.40	8.10	27.46	33.00	H
	1907.5	-10.80	-29.30	8.10	26.60	33.00	H
10	1855.0	-11.04	-29.30	8.10	26.37	33.00	H
	1880.0	-9.99	-29.40	8.10	27.51	33.00	H
	1905.0	-10.76	-29.30	8.10	26.64	33.00	H
15	1857.5	-10.98	-29.30	8.10	26.42	33.00	H
	1880.0	-10.06	-29.40	8.10	27.44	33.00	H
	1902.5	-10.70	-29.30	8.10	26.70	33.00	H
20	1860.0	-11.11	-29.30	8.10	26.29	33.00	H
	1880.0	-10.25	-29.40	8.10	27.26	33.00	H
	1900.0	-10.83	-29.30	8.10	26.58	33.00	H

LTE Band 4_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	1710.7	-9.92	-29.60	8.10	27.79	30.00	H
	1732.5	-10.17	-29.60	8.10	27.53	30.00	H
	1754.3	-10.54	-29.50	8.10	27.06	30.00	H
3	1711.5	-10.00	-29.60	8.10	27.70	30.00	H
	1732.5	-10.25	-29.60	8.10	27.45	30.00	H
	1753.5	-10.52	-29.50	8.10	27.09	30.00	H
5	1712.5	-10.10	-29.60	8.10	27.60	30.00	H
	1732.5	-10.34	-29.60	8.10	27.36	30.00	H
	1752.5	-10.62	-29.50	8.10	26.99	30.00	H
10	1715.0	-10.15	-29.60	8.10	27.55	30.00	H
	1732.5	-10.38	-29.60	8.10	27.32	30.00	H
	1750.0	-10.63	-29.50	8.10	26.98	30.00	H
15	1717.5	-10.17	-29.60	8.10	27.53	30.00	H
	1732.5	-10.43	-29.60	8.10	27.27	30.00	H
	1747.5	-10.65	-29.50	8.10	26.95	30.00	H
20	1720.0	-10.21	-29.60	8.10	27.49	30.00	H
	1732.5	-10.50	-29.60	8.10	27.20	30.00	H
	1745.0	-10.71	-29.50	8.10	26.90	30.00	H

LTE Band 4_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	1710.7	-9.97	-29.60	8.10	27.73	30.00	H
	1732.5	-10.27	-29.60	8.10	27.43	30.00	H
	1754.3	-10.57	-29.50	8.10	27.03	30.00	H
3	1711.5	-10.09	-29.60	8.10	27.61	30.00	H
	1732.5	-10.35	-29.60	8.10	27.35	30.00	H
	1753.5	-10.63	-29.50	8.10	26.97	30.00	H
5	1712.5	-10.23	-29.60	8.10	27.48	30.00	H
	1732.5	-10.44	-29.60	8.10	27.26	30.00	H
	1752.5	-10.65	-29.50	8.10	26.95	30.00	H
10	1715.0	-10.14	-29.60	8.10	27.57	30.00	H
	1732.5	-10.41	-29.60	8.10	27.29	30.00	H
	1750.0	-10.71	-29.50	8.10	26.90	30.00	H
15	1717.5	-10.20	-29.60	8.10	27.50	30.00	H
	1732.5	-10.46	-29.60	8.10	27.24	30.00	H
	1747.5	-10.64	-29.50	8.10	26.96	30.00	H
20	1720.0	-10.30	-29.60	8.10	27.40	30.00	H
	1732.5	-10.54	-29.60	8.10	27.16	30.00	H
	1745.0	-10.74	-29.50	8.10	26.86	30.00	H

LTE Band 5_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	824.7	-4.36	-33.60	-0.79	2.15	26.30	38.45	V
	836.5	-5.24	-33.50	-0.74	2.15	25.38	38.45	V
	848.3	-5.69	-33.50	-0.73	2.15	24.93	38.45	V
3	825.5	-4.19	-33.60	-0.84	2.15	26.42	38.45	V
	836.5	-5.08	-33.50	-0.74	2.15	25.54	38.45	V
	847.5	-5.47	-33.50	-0.73	2.15	25.15	38.45	V
5	826.5	-4.20	-33.60	-0.84	2.15	26.41	38.45	V
	836.5	-5.11	-33.50	-0.74	2.15	25.50	38.45	V
	846.5	-5.48	-33.50	-0.73	2.15	25.14	38.45	V
10	829.0	-4.25	-33.60	-0.84	2.15	26.36	38.45	V
	836.5	-5.22	-33.50	-0.74	2.15	25.40	38.45	V
	844.0	-5.53	-33.50	-0.78	2.15	25.04	38.45	V

LTE Band 5_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	824.7	-4.34	-33.60	-0.79	2.15	26.31	38.45	V
	836.5	-5.30	-33.50	-0.74	2.15	25.32	38.45	V
	848.3	-5.60	-33.50	-0.73	2.15	25.01	38.45	V
3	825.5	-4.21	-33.60	-0.84	2.15	26.40	38.45	V
	836.5	-5.20	-33.50	-0.74	2.15	25.41	38.45	V
	847.5	-5.57	-33.50	-0.73	2.15	25.05	38.45	V
5	826.5	-4.27	-33.60	-0.84	2.15	26.34	38.45	V
	836.5	-5.24	-33.50	-0.74	2.15	25.38	38.45	V
	846.5	-5.61	-33.50	-0.73	2.15	25.01	38.45	V
10	829.0	-4.32	-33.60	-0.84	2.15	26.29	38.45	V
	836.5	-5.31	-33.50	-0.74	2.15	25.30	38.45	V
	844.0	-5.67	-33.50	-0.78	2.15	24.90	38.45	V

LTE Band 7_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
5	2502.5	-12.02	-28.70	10.70	27.38	33.00	H
	2535.0	-11.62	-28.60	10.70	27.68	33.00	H
	2567.5	-11.48	-28.60	10.70	27.82	33.00	H
10	2505.0	-12.09	-28.70	10.70	27.31	33.00	H
	2535.0	-11.74	-28.60	10.70	27.57	33.00	H
	2565.0	-11.55	-28.60	10.70	27.75	33.00	H
15	2507.5	-12.07	-28.70	10.70	27.34	33.00	H
	2535.0	-11.72	-28.60	10.70	27.59	33.00	H
	2562.5	-11.56	-28.60	10.70	27.74	33.00	H
20	2510.0	-12.14	-28.70	10.70	27.26	33.00	H
	2535.0	-11.75	-28.60	10.70	27.55	33.00	H
	2560.0	-11.63	-28.60	10.70	27.67	33.00	H

LTE Band 7_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
5	2502.5	-12.10	-28.70	10.70	27.30	33.00	H
	2535.0	-11.74	-28.60	10.70	27.56	33.00	H
	2567.5	-11.61	-28.60	10.70	27.69	33.00	H
10	2505.0	-12.13	-28.70	10.70	27.27	33.00	H
	2535.0	-11.80	-28.60	10.70	27.50	33.00	H
	2565.0	-11.59	-28.60	10.70	27.71	33.00	H
15	2507.5	-12.15	-28.70	10.70	27.25	33.00	H
	2535.0	-11.84	-28.60	10.70	27.46	33.00	H
	2562.5	-11.66	-28.60	10.70	27.64	33.00	H
20	2510.0	-12.24	-28.70	10.70	27.16	33.00	H
	2535.0	-11.83	-28.60	10.70	27.47	33.00	H
	2560.0	-11.68	-28.60	10.70	27.62	33.00	H

LTE Band 12_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	699.7	-4.43	-34.80	-0.93	2.15	27.29	34.77	H
	707.5	-4.63	-34.70	-0.91	2.15	27.02	34.77	H
	715.3	-5.63	-34.70	-0.68	2.15	26.24	34.77	H
3	700.5	-4.58	-34.80	-0.97	2.15	27.10	34.77	H
	707.5	-4.67	-34.70	-0.91	2.15	26.97	34.77	H
	714.5	-5.80	-34.70	-0.64	2.15	26.11	34.77	H
5	701.5	-4.67	-34.80	-0.97	2.15	27.01	34.77	H
	707.5	-4.70	-34.70	-0.91	2.15	26.94	34.77	H
	713.5	-5.82	-34.70	-0.64	2.15	26.09	34.77	H
10	704.0	-4.79	-34.80	-0.97	2.15	26.89	34.77	H
	707.5	-5.00	-34.70	-0.91	2.15	26.64	34.77	H
	711.0	-5.89	-34.70	-0.64	2.15	26.01	34.77	H

LTE Band 12_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	699.7	-4.42	-34.80	-0.93	2.15	27.30	34.77	H
	707.5	-4.77	-34.70	-0.91	2.15	26.87	34.77	H
	715.3	-5.72	-34.70	-0.68	2.15	26.15	34.77	H
3	700.5	-4.54	-34.80	-0.97	2.15	27.15	34.77	H
	707.5	-4.90	-34.70	-0.91	2.15	26.75	34.77	H
	714.5	-5.87	-34.70	-0.64	2.15	26.04	34.77	H
5	701.5	-4.66	-34.80	-0.97	2.15	27.02	34.77	H
	707.5	-5.17	-34.70	-0.91	2.15	26.48	34.77	H
	713.5	-4.92	-34.70	-0.64	2.15	26.99	34.77	H
10	704.0	-4.79	-34.80	-0.97	2.15	26.90	34.77	H
	707.5	-5.29	-34.70	-0.91	2.15	26.35	34.77	H
	711.0	-5.98	-34.70	-0.64	2.15	25.93	34.77	H

LTE Band 13_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
5	779.5	-7.32	-34.00	-0.08	2.15	24.45	34.77	H
	782.0	-7.03	-34.00	-0.13	2.15	24.69	34.77	H
	784.5	-7.18	-34.00	-0.13	2.15	24.54	34.77	H
10	782.0	-7.15	-34.00	-0.13	2.15	24.57	34.77	H

LTE Band 13_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
5	779.5	-7.36	-34.00	-0.08	2.15	24.41	34.77	H
	782.0	-7.17	-34.00	-0.13	2.15	24.55	34.77	H
	784.5	-7.22	-34.00	-0.13	2.15	24.50	34.77	H
10	782.0	-7.25	-34.00	-0.13	2.15	24.48	34.77	H

LTE Band 17_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
5	706.5	-4.60	-34.70	-0.91	2.15	27.04	34.77	H
	710.0	-4.77	-34.70	-0.64	2.15	27.14	34.77	H
	713.5	-4.74	-34.70	-0.64	2.15	27.16	34.77	H
10	709.0	-4.57	-34.70	-0.91	2.15	27.07	34.77	H
	710.0	-4.81	-34.70	-0.64	2.15	27.10	34.77	H
	711.0	-4.80	-34.70	-0.64	2.15	27.11	34.77	H

LTE Band 17_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
5	706.5	-4.70	-34.70	-0.91	2.15	26.94	34.77	H
	710.0	-4.86	-34.70	-0.64	2.15	27.05	34.77	H
	713.5	-4.93	-34.70	-0.64	2.15	26.98	34.77	H
10	709.0	-4.68	-34.70	-0.91	2.15	26.96	34.77	H
	710.0	-4.91	-34.70	-0.64	2.15	27.00	34.77	H
	711.0	-4.92	-34.70	-0.64	2.15	26.99	34.77	H

LTE band 26(814MHz-824MHz)_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	814.7	-7.84	-33.70	-0.80	2.15	22.91	50.00	H
	819.0	-7.47	-33.60	-0.75	2.15	23.24	50.00	H
	823.3	-7.26	-33.60	-0.79	2.15	23.40	50.00	H
3	815.5	-7.79	-33.70	-0.80	2.15	22.96	50.00	H
	819.0	-7.56	-33.60	-0.75	2.15	23.14	50.00	H
	822.5	-7.29	-33.60	-0.79	2.15	23.37	50.00	H
5	816.5	-7.86	-33.70	-0.80	2.15	22.89	50.00	H
	819.0	-7.56	-33.60	-0.75	2.15	23.14	50.00	H
	821.5	-7.28	-33.60	-0.79	2.15	23.37	50.00	H
10	819.0	-7.81	-33.60	-0.80	2.15	22.84	50.00	H
	819.0	-7.75	-33.60	-0.75	2.15	22.95	50.00	H
	819.0	-7.35	-33.60	-0.79	2.15	23.30	50.00	H

LTE band 26(814MHz-824MHz)_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	814.7	-8.10	-33.70	-0.80	2.15	22.65	50.00	H
	819.0	-7.74	-33.60	-0.75	2.15	22.97	50.00	H
	823.3	-7.36	-33.60	-0.79	2.15	23.30	50.00	H
3	815.5	-8.00	-33.70	-0.80	2.15	22.75	50.00	H
	819.0	-7.69	-33.60	-0.75	2.15	23.01	50.00	H
	822.5	-7.26	-33.60	-0.79	2.15	23.40	50.00	H
5	816.5	-8.15	-33.70	-0.80	2.15	22.60	50.00	H
	819.0	-7.73	-33.60	-0.75	2.15	22.97	50.00	H
	821.5	-7.41	-33.60	-0.79	2.15	23.25	50.00	H
10	819.0	-8.08	-33.60	-0.80	2.15	22.57	50.00	H
	819.0	-7.86	-33.60	-0.75	2.15	22.85	50.00	H
	819.0	-7.55	-33.60	-0.79	2.15	23.10	50.00	H

LTE band 26(824MHz-849MHz)_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	824.7	-7.76	-33.60	-0.79	2.15	22.90	38.45	H
	836.5	-7.51	-33.50	-0.74	2.15	23.10	38.45	H
	848.3	-7.27	-33.50	-0.73	2.15	23.35	38.45	H
3	825.5	-7.81	-33.60	-0.79	2.15	22.85	38.45	H
	836.5	-7.59	-33.50	-0.74	2.15	23.03	38.45	H
	847.5	-7.40	-33.50	-0.73	2.15	23.22	38.45	H
5	826.5	-7.95	-33.60	-0.79	2.15	22.70	38.45	H
	836.5	-7.64	-33.50	-0.74	2.15	22.98	38.45	H
	846.5	-7.47	-33.50	-0.73	2.15	23.15	38.45	H
10	829.0	-7.92	-33.60	-0.79	2.15	22.74	38.45	H
	836.5	-7.72	-33.50	-0.74	2.15	22.90	38.45	H
	844.0	-7.52	-33.50	-0.73	2.15	23.10	38.45	H
15	831.5	-8.01	-33.60	-0.79	2.15	22.65	38.45	H
	836.5	-7.83	-33.50	-0.74	2.15	22.78	38.45	H
	841.5	-7.59	-33.50	-0.73	2.15	23.02	38.45	H

LTE band 26(824MHz-849MHz)_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	Correction (dB)	EIRP(dBm)	Limit(dBm)	Polarization
1.4	824.7	-7.91	-33.60	-0.79	2.15	22.75	38.45	H
	836.5	-7.77	-33.50	-0.74	2.15	22.84	38.45	H
	848.3	-7.37	-33.50	-0.73	2.15	23.25	38.45	H
3	825.5	-7.87	-33.60	-0.79	2.15	22.79	38.45	H
	836.5	-7.67	-33.50	-0.74	2.15	22.95	38.45	H
	847.5	-7.30	-33.50	-0.73	2.15	23.32	38.45	H
5	826.5	-7.96	-33.60	-0.79	2.15	22.70	38.45	H
	836.5	-7.77	-33.50	-0.74	2.15	22.85	38.45	H
	846.5	-7.44	-33.50	-0.73	2.15	23.18	38.45	H
10	829.0	-8.05	-33.60	-0.79	2.15	22.61	38.45	H
	836.5	-7.86	-33.50	-0.74	2.15	22.75	38.45	H
	844.0	-7.51	-33.50	-0.73	2.15	23.10	38.45	H
15	831.5	-8.08	-33.60	-0.79	2.15	22.58	38.45	H
	836.5	-7.97	-33.50	-0.74	2.15	22.65	38.45	H
	841.5	-7.60	-33.50	-0.73	2.15	23.01	38.45	H

LTE Band 38_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
5	2572.5	-11.57	-28.60	10.70	27.73	33.00	H
	2595.0	-11.69	-28.60	10.70	27.61	33.00	H
	2617.5	-11.51	-28.60	10.70	27.79	33.00	H
10	2575.0	-11.65	-28.60	10.70	27.65	33.00	H
	2595.0	-11.66	-28.60	10.70	27.64	33.00	H
	2615.0	-11.54	-28.60	10.70	27.76	33.00	H
15	2577.5	-11.74	-28.60	10.70	27.57	33.00	H
	2595.0	-11.74	-28.60	10.70	27.56	33.00	H
	2612.5	-11.56	-28.60	10.70	27.74	33.00	H
20	2580.0	-11.77	-28.60	10.70	27.53	33.00	H
	2595.0	-11.78	-28.60	10.70	27.52	33.00	H
	2610.0	-11.65	-28.60	10.70	27.65	33.00	H

LTE Band 38_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
5	2572.5	-11.75	-28.60	10.70	27.55	33.00	H
	2595.0	-11.74	-28.60	10.70	27.56	33.00	H
	2617.5	-11.62	-28.60	10.70	27.68	33.00	H
10	2575.0	-11.83	-28.60	10.70	27.47	33.00	H
	2595.0	-11.76	-28.60	10.70	27.54	33.00	H
	2615.0	-11.65	-28.60	10.70	27.65	33.00	H
15	2577.5	-11.79	-28.60	10.70	27.51	33.00	H
	2595.0	-11.74	-28.60	10.70	27.57	33.00	H
	2612.5	-11.66	-28.60	10.70	27.64	33.00	H
20	2580.0	-11.84	-28.60	10.70	27.46	33.00	H
	2595.0	-11.77	-28.60	10.70	27.53	33.00	H
	2610.0	-11.74	-28.60	10.70	27.57	33.00	H

LTE Band 41_QPSK

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
5	2498.5	-12.86	-28.70	10.70	26.54	33.00	H
	2593.0	-12.16	-28.60	10.70	27.14	33.00	H
	2687.5	-12.44	-28.50	10.70	26.77	33.00	H
10	2501.0	-13.04	-28.70	10.70	26.37	33.00	H
	2593.0	-12.27	-28.60	10.70	27.03	33.00	H
	2685.0	-12.59	-28.50	10.70	26.61	33.00	H
15	2503.5	-13.13	-28.70	10.70	26.28	33.00	H
	2593.0	-12.40	-28.60	10.70	26.90	33.00	H
	2682.5	-12.72	-28.50	10.70	26.48	33.00	H
20	2506.0	-13.15	-28.70	10.70	26.25	33.00	H
	2593.0	-12.46	-28.60	10.70	26.84	33.00	H
	2680.0	-12.79	-28.50	10.70	26.41	33.00	H

LTE Band 41_ 16QAM

BW(MHz)	frequency(MHz)	PMea(dBm)	Pcl(dB)+PAg(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
5	2498.5	-13.16	-28.70	10.70	26.24	33.00	H
	2593.0	-12.39	-28.60	10.70	26.91	33.00	H
	2687.5	-12.51	-28.50	10.70	26.69	33.00	H
10	2501.0	-13.24	-28.70	10.70	26.16	33.00	H
	2593.0	-12.50	-28.60	10.70	26.80	33.00	H
	2685.0	-12.68	-28.50	10.70	26.52	33.00	H
15	2503.5	-13.27	-28.70	10.70	26.13	33.00	H
	2593.0	-12.51	-28.60	10.70	26.79	33.00	H
	2682.5	-12.75	-28.50	10.70	26.45	33.00	H
20	2506.0	-13.29	-28.70	10.70	26.11	33.00	H
	2593.0	-12.74	-28.60	10.70	26.56	33.00	H
	2680.0	-12.84	-28.50	10.70	26.36	33.00	H

Sample: 2506.0MHz

Power(26.11dBm)=P_{Mea} (-13.29dBm)- P_{pl} (-28.70dBm)+ G_a(10.70dBm)

ANALYZER SETTINGS:

RBW = VBW = 8MHz for occupied bandwidths equal to or less than 5MHz.

RBW = VBW = 20MHz for occupied bandwidths equal to or greater than 10MHz.

Measurement Uncertainty : k=2

FrequencyRange	Uncertainty(dB) k=2
30MHz-1GHz	5.76
1GHz-18GHz	4.69
18GHz-40GHz	3.37

Note: Both of Vertical and Horizontal polarizations are evaluated, but only the worst case is recorded in this report.

A.2 Emission Limit

A.2.1 Measurement Method

This measurement is carried out in fully-anechoic chamber FAC-3.

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz as outlined in Part 22.917, 24.238, 27.53(h) and 90.691. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE Bands 2,4,5,7,12,13,17,26,38,41.

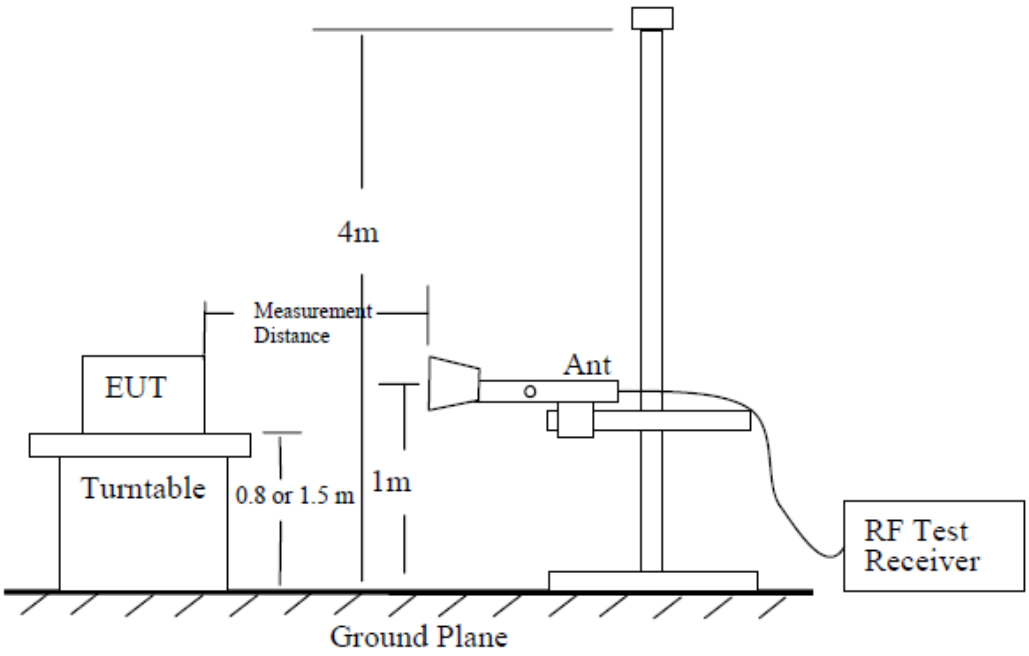
The procedure of radiated spurious emissions is as follows:

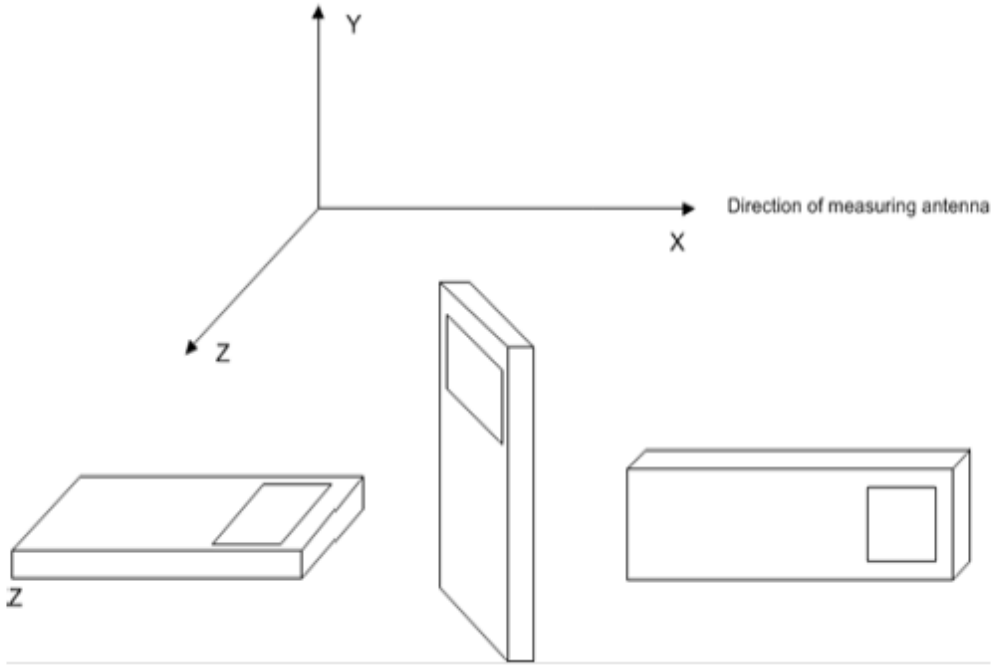
For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80 cm above the reference ground plane.

For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table or support at a nominal height of 1.5 m above the ground plane.

Radiated measurements shall be made with the measurement antenna positioned in both horizontal and vertical polarization. The measurement antenna shall be varied from 1 m to 4 m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level (i.e., field strength or received power). When orienting the measurement antenna in vertical polarization, the minimum height of the lowest element of the antenna shall clear the site reference ground plane by at least 25 cm.

The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.





A step-by-step procedure is as follows.

k) Place the EUT in the center of the turntable. The EUT shall be configured to transmit into the standard non-radiating load (for measuring radiated spurious emissions), connected with cables of minimal length unless specified otherwise. If the EUT uses an adjustable antenna, the antenna shall be positioned to the length that produces the worst case emission at the fundamental operating frequency.

l) Each emission under consideration shall be evaluated:

   6) Raise and lower the measurement antenna, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.

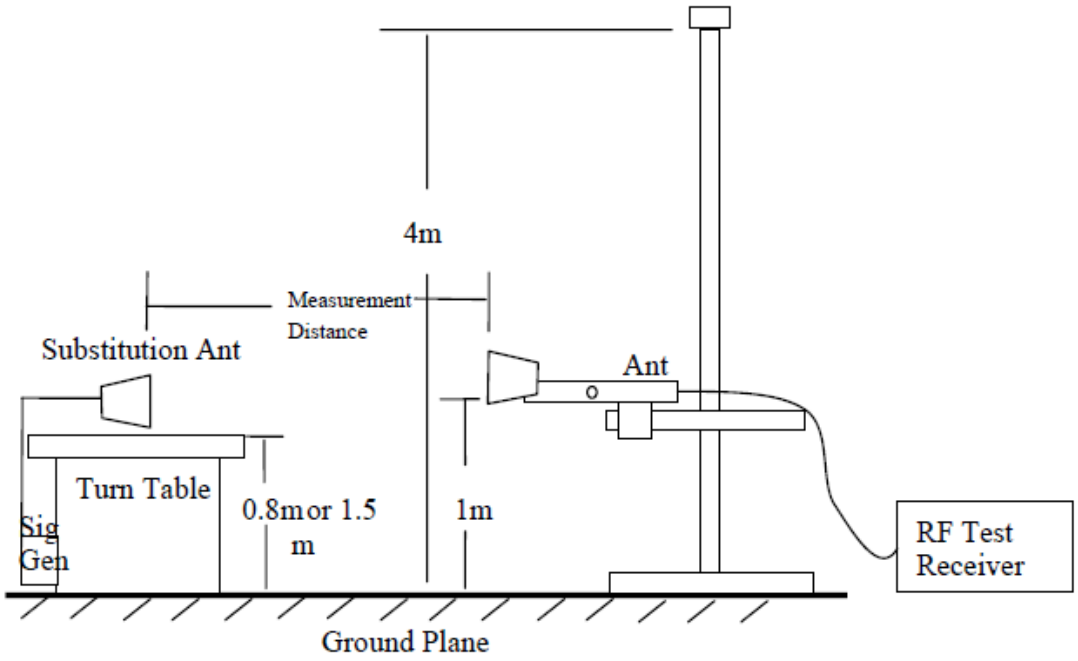
   7) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.

   8) Return the turntable to the azimuth where the highest emission amplitude level was observed.

   9) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.

   10) Record the measured emission amplitude level and frequency using the appropriate RBW.

m) Repeat step b) for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.



n) Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.

o) Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.

p) Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by the measurement instrument, with sufficient dynamic range relative to the noise floor.

q) For each emission that was detected and measured in the initial test [i.e., in step b) and step c)]:

   4) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.

   5) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step b) and step c).

   6) Record the output power level of the signal generator when equivalence is achieved in step 2).

r) Repeat step e) through step g) with the measurement antenna oriented in the opposite polarization.

s) Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:

   Pe = Ps(dBm) − cable loss (dB) + antenna gain (dBd)

   where

   Pe = equivalent emission power in dBm

   Ps = source (signal generator) power in dBm

   NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.

t) Correct the antenna gain of the substitution antenna if necessary to reference the emission

power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from: gain (dBd) = gain (dBi) − 2.15 dB.
If necessary, the antenna gain can be calculated from calibrated antenna factor information.
This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.

A.2.2 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the LTE Bands 2,4,5,7,12,13,17,26,38,41. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the LTE Bands 2,4,5,7,12,13,17,26,38,41 into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.
Only worst case result is given below.

LTE Band 2, QPSK, Channel 18607

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16939.38	-44.74	2.90	16.50	-31.14	-13.00	H
17296.25	-43.57	3.20	14.50	-32.27	-13.00	H
17413.13	-42.01	2.90	14.50	-30.41	-13.00	H
17619.38	-38.74	3.30	12.80	-29.24	-13.00	H
17691.25	-40.16	3.30	12.80	-30.66	-13.00	H
17996.25	-38.10	3.20	12.80	-28.50	-13.00	H

LTE Band 2, QPSK, Channel 18900

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16936.25	-44.89	2.90	16.50	-31.29	-13.00	H
17223.75	-43.54	3.20	14.50	-32.24	-13.00	H
17454.38	-41.62	2.90	14.50	-30.02	-13.00	H
17573.13	-40.08	3.30	12.80	-30.58	-13.00	H
17836.88	-40.08	3.60	12.80	-30.88	-13.00	H
17940.00	-38.43	3.20	12.80	-28.83	-13.00	H

LTE Band 2, QPSK, Channel 19193

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16978.75	-45.93	2.90	16.50	-32.33	-13.00	H
17358.75	-43.59	3.20	14.50	-32.29	-13.00	H
17524.38	-39.73	2.90	12.80	-29.83	-13.00	H
17597.50	-40.27	3.30	12.80	-30.77	-13.00	H
17837.50	-40.51	3.60	12.80	-31.31	-13.00	H
17958.75	-38.50	3.20	12.80	-28.90	-13.00	H

LTE Band 2, 16QAM, Channel 18607

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16933.75	-45.62	2.90	16.50	-32.02	-13.00	H
17286.25	-43.49	3.20	14.50	-32.19	-13.00	H
17470.00	-42.87	2.90	14.50	-31.27	-13.00	H
17576.88	-40.15	3.30	12.80	-30.65	-13.00	H
17831.88	-40.79	3.60	12.80	-31.59	-13.00	H
17920.00	-38.99	3.20	12.80	-29.39	-13.00	H

LTE Band 2, 16QAM, Channel 18900

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16998.75	-45.77	2.90	16.50	-32.17	-13.00	H
17352.50	-43.66	3.20	14.50	-32.36	-13.00	H
17454.38	-42.85	2.90	14.50	-31.25	-13.00	H
17599.38	-40.61	3.30	12.80	-31.11	-13.00	H
17830.00	-39.85	3.60	12.80	-30.65	-13.00	H
17969.38	-38.39	3.20	12.80	-28.79	-13.00	H

LTE Band 2, 16QAM, Channel 19193

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16931.25	-45.55	2.90	16.50	-31.95	-13.00	H
17368.13	-43.68	3.20	14.50	-32.38	-13.00	H
17518.75	-40.46	2.90	12.80	-30.56	-13.00	H
17526.25	-40.42	2.90	12.80	-30.52	-13.00	H
17835.00	-40.71	3.60	12.80	-31.51	-13.00	H
17998.75	-37.31	3.20	12.80	-27.71	-13.00	H

LTE Band 4, QPSK, Channel 19957

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16995.00	-45.70	2.90	16.50	-32.10	-13.00	H
17277.50	-43.49	3.20	14.50	-32.19	-13.00	H
17460.00	-42.62	2.90	14.50	-31.02	-13.00	H
17576.25	-38.87	3.30	12.80	-29.37	-13.00	H
17816.25	-40.00	3.60	12.80	-30.80	-13.00	H
17980.63	-37.69	3.20	12.80	-28.09	-13.00	H

LTE Band 4, QPSK, Channel 20175

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16955.00	-45.65	2.90	16.50	-32.05	-13.00	H
17263.75	-43.28	3.20	14.50	-31.98	-13.00	H
17525.00	-40.77	2.90	12.80	-30.87	-13.00	H
17561.88	-39.78	3.30	12.80	-30.28	-13.00	H
17827.50	-40.44	3.60	12.80	-31.24	-13.00	H
18000.00	-31.16	3.20	6.20	-28.16	-13.00	H

LTE Band 4, QPSK, Channel 20393

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16973.13	-45.48	2.90	16.50	-31.88	-13.00	H
17280.00	-43.74	3.20	14.50	-32.44	-13.00	H
17480.63	-42.49	2.90	14.50	-30.89	-13.00	H
17623.13	-40.29	3.30	12.80	-30.79	-13.00	H
17756.88	-40.82	3.60	12.80	-31.62	-13.00	H
17995.00	-38.33	3.20	12.80	-28.73	-13.00	H

LTE Band 4, 16QAM, Channel 19957

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16994.38	-45.06	2.90	16.50	-31.46	-13.00	H
17368.75	-43.24	3.20	14.50	-31.94	-13.00	H
17450.63	-42.53	2.90	14.50	-30.93	-13.00	H
17626.88	-40.29	3.30	12.80	-30.79	-13.00	H
17835.63	-39.98	3.60	12.80	-30.78	-13.00	H
17991.25	-39.05	3.20	12.80	-29.45	-13.00	H

LTE Band 4, 16QAM, Channel 20175

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16976.25	-45.89	2.90	16.50	-32.29	-13.00	H
17290.00	-44.03	3.20	14.50	-32.73	-13.00	H
17506.25	-40.71	2.90	12.80	-30.81	-13.00	H
17616.25	-40.36	3.30	12.80	-30.86	-13.00	H
17836.88	-39.93	3.60	12.80	-30.73	-13.00	H
17963.75	-37.87	3.20	12.80	-28.27	-13.00	H

LTE Band 4, 16QAM, Channel 20393

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16937.50	-45.71	2.90	16.50	-32.11	-13.00	H
17281.88	-43.43	3.20	14.50	-32.13	-13.00	H
17463.75	-41.78	2.90	14.50	-30.18	-13.00	H
17640.00	-39.78	3.30	12.80	-30.28	-13.00	H
17818.13	-40.79	3.60	12.80	-31.59	-13.00	H
17944.38	-37.78	3.20	12.80	-28.18	-13.00	H

LTE Band 5, QPSK, Channel 20407

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2472.50	-50.12	0.90	9.80	-43.37	-13.00	H
8502.75	-51.81	2.10	12.00	-44.06	-13.00	H
9098.00	-51.22	2.20	11.60	-43.97	-13.00	H
9301.25	-50.78	2.00	11.60	-43.33	-13.00	H
9476.13	-50.46	2.10	11.60	-43.11	-13.00	V
9781.75	-50.29	2.30	11.20	-43.54	-13.00	H

LTE Band 5, QPSK, Channel 20525

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8467.13	-51.62	1.80	11.30	-44.27	-13.00	H
8700.00	-52.34	2.00	12.00	-44.49	-13.00	H
9308.88	-50.32	2.00	11.60	-42.87	-13.00	H
9474.38	-50.28	2.10	11.60	-42.93	-13.00	V
9738.38	-51.06	2.20	11.20	-44.21	-13.00	H
9783.00	-50.49	2.30	11.20	-43.74	-13.00	H

LTE Band 5, QPSK, Channel 20643

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2543.50	-45.44	0.90	10.70	-37.79	-13.00	H
7201.88	-52.58	1.80	12.00	-44.53	-13.00	V
9100.50	-51.71	2.20	11.60	-44.46	-13.00	H
9310.25	-50.76	2.00	11.60	-43.31	-13.00	H
9474.88	-51.71	2.10	11.60	-44.36	-13.00	V
9745.25	-50.82	2.20	11.20	-43.97	-13.00	H

LTE Band 5, 16QAM, Channel 20407

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2472.50	-49.78	0.90	9.80	-43.03	-13.00	H
9097.13	-51.74	2.20	11.60	-44.49	-13.00	H
9301.88	-50.86	2.00	11.60	-43.41	-13.00	H
9422.75	-51.08	2.10	11.60	-43.73	-13.00	H
9745.88	-50.90	2.20	11.20	-44.05	-13.00	H
9784.25	-50.68	2.30	11.20	-43.93	-13.00	H

LTE Band 5, 16QAM, Channel 20525

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7221.38	-52.59	1.80	12.00	-44.54	-13.00	H
9100.75	-51.57	2.20	11.60	-44.32	-13.00	H
9295.00	-50.71	2.00	11.60	-43.26	-13.00	H
9475.00	-50.74	2.10	11.60	-43.39	-13.00	V
9763.50	-50.81	2.30	11.20	-44.06	-13.00	H
9793.63	-50.43	2.30	11.20	-43.68	-13.00	H

LTE Band 5, 16QAM, Channel 20643

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2544.00	-47.60	0.90	10.70	-39.95	-13.00	V
9099.88	-52.02	2.20	11.60	-44.77	-13.00	H
9303.63	-50.59	2.00	11.60	-43.14	-13.00	H
9425.13	-50.57	2.10	11.60	-43.22	-13.00	H
9722.88	-51.12	2.20	11.20	-44.27	-13.00	H
9805.00	-51.54	2.30	11.20	-44.79	-13.00	H

LTE Band 7, QPSK, Channel 20775

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16982.50	-56.26	2.90	16.50	-42.66	-25.00	H
17364.38	-54.27	3.20	14.50	-42.97	-25.00	H
17524.38	-51.11	2.90	12.80	-41.21	-25.00	H
17617.50	-50.67	3.30	12.80	-41.17	-25.00	H
17840.00	-50.70	3.60	12.80	-41.50	-25.00	H
17983.75	-48.88	3.20	12.80	-39.28	-25.00	H

LTE Band 7, QPSK, Channel 21100

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16980.00	-56.28	2.90	16.50	-42.68	-25.00	H
17365.63	-54.21	3.20	14.50	-42.91	-25.00	H
17525.00	-51.05	2.90	12.80	-41.15	-25.00	H
17617.50	-50.67	3.30	12.80	-41.17	-25.00	H
17838.75	-50.79	3.60	12.80	-41.59	-25.00	H
18000.00	-42.25	3.20	6.20	-39.25	-25.00	H

LTE Band 7, QPSK, Channel 21425

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16936.88	-56.31	2.90	16.50	-42.71	-25.00	H
17299.38	-54.25	3.20	14.50	-42.95	-25.00	H
17524.38	-51.16	2.90	12.80	-41.26	-25.00	H
17616.25	-50.73	3.30	12.80	-41.23	-25.00	H
17840.00	-50.85	3.60	12.80	-41.65	-25.00	H
17983.75	-48.94	3.20	12.80	-39.34	-25.00	H

LTE Band 7, 16QAM, Channel 20775

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16983.13	-56.30	2.90	16.50	-42.70	-25.00	H
17368.13	-54.28	3.20	14.50	-42.98	-25.00	H
17524.38	-51.19	2.90	12.80	-41.29	-25.00	H
17591.25	-50.69	3.30	12.80	-41.19	-25.00	H
17839.38	-50.76	3.60	12.80	-41.56	-25.00	H
17980.63	-48.99	3.20	12.80	-39.39	-25.00	H

LTE Band 7, 16QAM, Channel 21100

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16986.25	-56.22	2.90	16.50	-42.62	-25.00	H
17297.50	-54.33	3.20	14.50	-43.03	-25.00	H
17522.50	-51.17	2.90	12.80	-41.27	-25.00	H
17625.00	-50.75	3.30	12.80	-41.25	-25.00	H
17838.75	-50.78	3.60	12.80	-41.58	-25.00	H
17981.25	-48.99	3.20	12.80	-39.39	-25.00	H

LTE Band 7, 16QAM, Channel 21425

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16983.75	-56.31	2.90	16.50	-42.71	-25.00	H
17280.00	-54.29	3.20	14.50	-42.99	-25.00	H
17455.63	-52.94	2.90	14.50	-41.34	-25.00	H
17589.38	-50.71	3.30	12.80	-41.21	-25.00	H
17840.00	-50.85	3.60	12.80	-41.65	-25.00	H
17986.25	-48.97	3.20	12.80	-39.37	-25.00	H

LTE Band 12, QPSK, Channel 23017

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8470.50	-52.11	1.80	11.30	-44.76	-13.00	H
9099.38	-51.52	2.20	11.60	-44.27	-13.00	H
9224.13	-49.75	2.10	11.60	-42.40	-13.00	H
9474.88	-50.20	2.10	11.60	-42.85	-13.00	V
9741.00	-51.08	2.20	11.20	-44.23	-13.00	H
9788.25	-51.47	2.30	11.20	-44.72	-13.00	H

LTE Band 12, QPSK, Channel 23095

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7410.75	-52.92	1.90	12.00	-44.97	-13.00	H
9101.25	-52.33	2.20	11.60	-45.08	-13.00	H
9296.88	-50.81	2.00	11.60	-43.36	-13.00	H
9475.38	-50.37	2.10	11.60	-43.02	-13.00	V
9728.00	-51.34	2.20	11.20	-44.49	-13.00	H
9786.88	-51.42	2.30	11.20	-44.67	-13.00	H

LTE Band 12, QPSK, Channel 23173

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8715.75	-52.37	2.00	12.00	-44.52	-13.00	V
9093.13	-51.70	2.20	11.60	-44.45	-13.00	H
9299.25	-50.94	2.00	11.60	-43.49	-13.00	H
9472.00	-51.27	2.10	11.60	-43.92	-13.00	V
9740.38	-50.67	2.20	11.20	-43.82	-13.00	H
9791.25	-50.99	2.30	11.20	-44.24	-13.00	H

LTE Band 12, 16QAM, Channel 23017

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8445.00	-51.98	1.80	11.30	-44.63	-13.00	H
9099.88	-51.47	2.20	11.60	-44.22	-13.00	H
9223.75	-50.95	2.10	11.60	-43.60	-13.00	H
9469.50	-51.41	2.10	11.60	-44.06	-13.00	V
9750.13	-51.01	2.20	11.20	-44.16	-13.00	H
9787.88	-51.15	2.30	11.20	-44.40	-13.00	H

LTE Band 12, 16QAM, Channel 23095

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7242.38	-52.05	1.80	12.00	-44.00	-13.00	H
9101.38	-51.39	2.20	11.60	-44.14	-13.00	H
9224.50	-50.25	2.10	11.60	-42.90	-13.00	H
9475.63	-51.19	2.10	11.60	-43.84	-13.00	V
9748.25	-51.02	2.20	11.20	-44.17	-13.00	H
9879.38	-51.16	2.20	11.20	-44.31	-13.00	H

LTE Band 12, 16QAM, Channel 23173

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2144.50	-49.07	0.90	9.80	-42.32	-13.00	H
8425.50	-52.19	1.80	11.30	-44.84	-13.00	H
9100.75	-51.96	2.20	11.60	-44.71	-13.00	H
9227.75	-49.72	2.10	11.60	-42.37	-13.00	H
9474.50	-51.23	2.10	11.60	-43.88	-13.00	V
9754.13	-50.58	2.20	11.20	-43.73	-13.00	H

LTE Band 13, QPSK, Channel 23205

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
1560.00	-58.63	0.70	8.10	-53.38	-40.00	V
2332.00	-46.95	0.90	9.80	-40.20	-13.00	H
9094.50	-51.41	2.20	11.60	-44.16	-13.00	H
9300.25	-50.42	2.00	11.60	-42.97	-13.00	H
9477.88	-50.91	2.10	11.60	-43.56	-13.00	V
9722.00	-50.69	2.20	11.20	-43.84	-13.00	H

LTE Band 13, QPSK, Channel 23230

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
1560.00	-56.82	0.70	8.10	-51.57	-40.00	V
9096.00	-51.53	2.20	11.60	-44.28	-13.00	H
9225.50	-50.44	2.10	11.60	-43.09	-13.00	H
9474.13	-51.03	2.10	11.60	-43.68	-13.00	V
9740.13	-51.55	2.20	11.20	-44.70	-13.00	H
9787.88	-51.30	2.30	11.20	-44.55	-13.00	H

LTE Band 13, QPSK, Channel 23255

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
1564.50	-58.79	0.70	8.10	-53.54	-40.00	V
9096.50	-51.44	2.20	11.60	-44.19	-13.00	H
9299.63	-51.23	2.00	11.60	-43.78	-13.00	H
9475.13	-51.21	2.10	11.60	-43.86	-13.00	V
9733.63	-51.39	2.20	11.20	-44.54	-13.00	H
9794.88	-51.47	2.30	11.20	-44.72	-13.00	H

LTE Band 13, 16QAM, Channel 23205

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
1573.50	-59.18	0.70	8.10	-53.93	-40.00	V
7387.88	-52.92	1.70	12.00	-44.77	-13.00	H
9101.25	-51.54	2.20	11.60	-44.29	-13.00	H
9295.75	-50.67	2.00	11.60	-43.22	-13.00	H
9476.75	-50.97	2.10	11.60	-43.62	-13.00	V
9742.38	-51.28	2.20	11.20	-44.43	-13.00	H

LTE Band 13, 16QAM, Channel 23230

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
1559.50	-57.34	0.70	8.10	-52.09	-40.00	V
9105.75	-51.90	2.20	11.60	-44.65	-13.00	H
9300.25	-50.41	2.00	11.60	-42.96	-13.00	H
9475.75	-51.14	2.10	11.60	-43.79	-13.00	V
9738.38	-50.72	2.20	11.20	-43.87	-13.00	H
9793.13	-51.45	2.30	11.20	-44.70	-13.00	H

LTE Band 13, 16QAM, Channel 23255

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
1564.50	-58.09	0.70	8.10	-52.84	-40.00	H
9097.50	-51.36	2.20	11.60	-44.11	-13.00	H
9301.75	-50.11	2.00	11.60	-42.66	-13.00	H
9477.75	-51.53	2.10	11.60	-44.18	-13.00	V
9742.25	-50.81	2.20	11.20	-43.96	-13.00	H
9803.25	-51.33	2.30	11.20	-44.58	-13.00	H

LTE Band 17, QPSK, Channel 23755

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8475.00	-52.42	1.80	11.30	-45.07	-13.00	H
8985.75	-52.61	2.00	12.00	-44.76	-13.00	H
9301.25	-50.57	2.00	11.60	-43.12	-13.00	H
9475.13	-50.40	2.10	11.60	-43.05	-13.00	V
9728.13	-51.07	2.20	11.20	-44.22	-13.00	H
9798.25	-51.10	2.30	11.20	-44.35	-13.00	H

LTE Band 17, QPSK, Channel 23790

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7262.63	-53.14	1.90	12.00	-45.19	-13.00	H
9097.88	-52.03	2.20	11.60	-44.78	-13.00	H
9299.38	-50.61	2.00	11.60	-43.16	-13.00	H
9472.63	-51.18	2.10	11.60	-43.83	-13.00	V
9754.88	-50.43	2.20	11.20	-43.58	-13.00	H
9798.75	-51.21	2.30	11.20	-44.46	-13.00	H

LTE Band 17, QPSK, Channel 23825

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8725.13	-52.63	2.00	12.00	-44.78	-13.00	H
9095.00	-51.62	2.20	11.60	-44.37	-13.00	H
9298.75	-50.65	2.00	11.60	-43.20	-13.00	H
9475.13	-50.42	2.10	11.60	-43.07	-13.00	V
9741.75	-51.50	2.20	11.20	-44.65	-13.00	H
9800.00	-51.34	2.30	11.20	-44.59	-13.00	H

LTE Band 17, 16QAM, Channel 23755

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7992.75	-52.07	1.90	11.30	-44.82	-13.00	V
9103.13	-51.16	2.20	11.60	-43.91	-13.00	H
9302.25	-50.44	2.00	11.60	-42.99	-13.00	H
9463.75	-51.36	2.10	11.60	-44.01	-13.00	V
9740.88	-50.88	2.20	11.20	-44.03	-13.00	H
9787.75	-50.74	2.30	11.20	-43.99	-13.00	H

LTE Band 17, 16QAM, Channel 23790

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8476.13	-51.86	1.80	11.30	-44.51	-13.00	H
9098.00	-51.24	2.20	11.60	-43.99	-13.00	H
9220.25	-50.42	2.10	11.60	-43.07	-13.00	H
9476.75	-51.17	2.10	11.60	-43.82	-13.00	V
9726.50	-51.07	2.20	11.20	-44.22	-13.00	H
9795.38	-51.33	2.30	11.20	-44.58	-13.00	H

LTE Band 17, 16QAM, Channel 23825

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8371.88	-51.99	1.80	11.30	-44.64	-13.00	H
9097.88	-51.40	2.20	11.60	-44.15	-13.00	H
9226.13	-50.38	2.10	11.60	-43.03	-13.00	H
9472.88	-50.79	2.10	11.60	-43.44	-13.00	V
9717.75	-50.82	2.20	11.20	-43.97	-13.00	H
9787.88	-51.45	2.30	11.20	-44.70	-13.00	H

LTE band 26(814MHz-824MHz), QPSK, Channel 26783

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8429.25	-51.61	1.80	11.30	-44.26	-13.00	H
9103.00	-51.53	2.20	11.60	-44.28	-13.00	H
9298.00	-50.60	2.00	11.60	-43.15	-13.00	H
9473.50	-51.36	2.10	11.60	-44.01	-13.00	V
9730.50	-50.85	2.20	11.20	-44.00	-13.00	H
9791.13	-51.14	2.30	11.20	-44.39	-13.00	H

LTE band 26(814MHz-824MHz), QPSK, Channel 26740

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7275.38	-52.84	1.90	12.00	-44.89	-13.00	H
9097.75	-51.39	2.20	11.60	-44.14	-13.00	H
9300.38	-49.97	2.00	11.60	-42.52	-13.00	H
9473.38	-50.46	2.10	11.60	-43.11	-13.00	V
9725.25	-51.35	2.20	11.20	-44.50	-13.00	H
9793.75	-51.14	2.30	11.20	-44.39	-13.00	H

LTE band 26(814MHz-824MHz), QPSK, Channel 26697

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2443.00	-50.44	0.90	9.80	-43.69	-13.00	H
9082.13	-51.01	2.20	11.60	-43.76	-13.00	H
9299.00	-50.88	2.00	11.60	-43.43	-13.00	H
9477.13	-50.76	2.10	11.60	-43.41	-13.00	V
9729.75	-50.71	2.20	11.20	-43.86	-13.00	H
9791.50	-51.11	2.30	11.20	-44.36	-13.00	H

LTE band 26(814MHz-824MHz), 16QAM, Channel 26783

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8405.25	-52.09	1.80	11.30	-44.74	-13.00	V
9101.00	-51.31	2.20	11.60	-44.06	-13.00	H
9297.75	-50.45	2.00	11.60	-43.00	-13.00	H
9473.63	-50.76	2.10	11.60	-43.41	-13.00	V
9746.88	-50.57	2.20	11.20	-43.72	-13.00	H
9922.88	-51.05	2.20	11.20	-44.20	-13.00	H

LTE band 26(814MHz-824MHz), 16QAM, Channel 26740

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8452.13	-51.85	1.80	11.30	-44.50	-13.00	H
9099.75	-51.92	2.20	11.60	-44.67	-13.00	H
9303.63	-50.00	2.00	11.60	-42.55	-13.00	H
9469.50	-50.60	2.10	11.60	-43.25	-13.00	V
9738.13	-50.54	2.20	11.20	-43.69	-13.00	H
9800.38	-50.97	2.30	11.20	-44.22	-13.00	H

LTE band 26(814MHz-824MHz), 16QAM, Channel 26697

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7214.25	-52.40	1.80	12.00	-44.35	-13.00	H
9094.88	-51.40	2.20	11.60	-44.15	-13.00	H
9296.50	-50.35	2.00	11.60	-42.90	-13.00	H
9476.13	-50.73	2.10	11.60	-43.38	-13.00	V
9756.50	-50.28	2.20	11.20	-43.43	-13.00	H
9801.38	-51.32	2.30	11.20	-44.57	-13.00	H

LTE band 26(824MHz-849MHz), QPSK, Channel 27033

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7189.88	-52.72	1.80	12.00	-44.67	-13.00	V
9102.75	-51.24	2.20	11.60	-43.99	-13.00	H
9298.50	-50.87	2.00	11.60	-43.42	-13.00	H
9475.00	-51.39	2.10	11.60	-44.04	-13.00	V
9736.00	-51.41	2.20	11.20	-44.56	-13.00	H
9797.13	-51.23	2.30	11.20	-44.48	-13.00	H

LTE band 26(824MHz-849MHz), QPSK, Channel 26915

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
7275.75	-53.09	1.90	12.00	-45.14	-13.00	H
9106.50	-51.79	2.10	11.60	-44.44	-13.00	H
9219.38	-50.83	2.10	11.60	-43.48	-13.00	H
9468.13	-51.42	2.10	11.60	-44.07	-13.00	V
9755.13	-50.70	2.20	11.20	-43.85	-13.00	H
9798.25	-50.99	2.30	11.20	-44.24	-13.00	H

LTE band 26(824MHz-849MHz), QPSK, Channel 26797

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8419.50	-52.15	1.80	11.30	-44.80	-13.00	V
9102.63	-51.80	2.20	11.60	-44.55	-13.00	H
9302.38	-50.32	2.00	11.60	-42.87	-13.00	H
9478.13	-50.77	2.10	11.60	-43.42	-13.00	V
9733.25	-50.87	2.20	11.20	-44.02	-13.00	H
9795.75	-51.19	2.30	11.20	-44.44	-13.00	H

LTE band 26(824MHz-849MHz), 16QAM, Channel 27033

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8482.13	-51.52	1.80	11.30	-44.17	-13.00	H
9100.75	-51.00	2.20	11.60	-43.75	-13.00	H
9301.13	-49.90	2.00	11.60	-42.45	-13.00	H
9419.75	-51.02	2.10	11.60	-43.67	-13.00	H
9747.13	-50.49	2.20	11.20	-43.64	-13.00	H
9803.00	-49.85	2.30	11.20	-43.10	-13.00	H

LTE band 26(824MHz-849MHz), 16QAM, Channel 26915

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8431.88	-51.64	1.80	11.30	-44.29	-13.00	H
9091.50	-50.95	2.20	11.60	-43.70	-13.00	H
9225.38	-50.11	2.10	11.60	-42.76	-13.00	H
9474.63	-51.03	2.10	11.60	-43.68	-13.00	V
9732.75	-50.68	2.20	11.20	-43.83	-13.00	H
9785.25	-51.19	2.30	11.20	-44.44	-13.00	H

LTE band 26(824MHz-849MHz), 16QAM, Channel 26797

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
8439.75	-52.42	1.80	11.30	-45.07	-13.00	H
9103.00	-52.24	2.20	11.60	-44.99	-13.00	H
9299.75	-50.83	2.00	11.60	-43.38	-13.00	H
9425.63	-50.86	2.10	11.60	-43.51	-13.00	H
9722.00	-50.60	2.20	11.20	-43.75	-13.00	H
9781.63	-51.12	2.30	11.20	-44.37	-13.00	H

LTE Band 38, QPSK, Channel 37775

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16983.13	-55.88	2.90	16.50	-42.28	-25.00	H
17298.13	-53.96	3.20	14.50	-42.66	-25.00	H
17523.75	-50.96	2.90	12.80	-41.06	-25.00	H
17593.75	-50.52	3.30	12.80	-41.02	-25.00	H
17840.00	-50.48	3.60	12.80	-41.28	-25.00	H
17981.25	-48.64	3.20	12.80	-39.04	-25.00	H

LTE Band 38 QPSK, Channel 38000

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16961.25	-55.85	2.90	16.50	-42.25	-25.00	H
17363.75	-53.92	3.20	14.50	-42.62	-25.00	H
17454.38	-52.65	2.90	14.50	-41.05	-25.00	H
17574.38	-50.52	3.30	12.80	-41.02	-25.00	H
17840.00	-50.44	3.60	12.80	-41.24	-25.00	H
17982.50	-48.63	3.20	12.80	-39.03	-25.00	H

LTE Band 38, QPSK, Channel 38225

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16986.88	-55.87	2.90	16.50	-42.27	-25.00	H
17296.25	-53.88	3.20	14.50	-42.58	-25.00	H
17456.25	-52.54	2.90	14.50	-40.94	-25.00	H
17617.50	-50.51	3.30	12.80	-41.01	-25.00	H
17839.38	-50.45	3.60	12.80	-41.25	-25.00	H
17980.00	-48.55	3.20	12.80	-38.95	-25.00	H

LTE Band 38, 16QAM, Channel 37775

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16982.50	-55.91	2.90	16.50	-42.31	-25.00	H
17367.50	-53.94	3.20	14.50	-42.64	-25.00	H
17460.00	-52.64	2.90	14.50	-41.04	-25.00	H
17618.75	-50.54	3.30	12.80	-41.04	-25.00	H
17839.38	-50.57	3.60	12.80	-41.37	-25.00	H
17981.25	-48.66	3.20	12.80	-39.06	-25.00	H

LTE Band 38, 16QAM, Channel 38000

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16983.75	-55.92	2.90	16.50	-42.32	-25.00	H
17297.50	-53.89	3.20	14.50	-42.59	-25.00	H
17458.75	-52.59	2.90	14.50	-40.99	-25.00	H
17527.50	-51.00	2.90	12.80	-41.10	-25.00	H
17838.13	-50.52	3.60	12.80	-41.32	-25.00	H
17980.00	-48.57	3.20	12.80	-38.97	-25.00	H

LTE Band 38, 16QAM, Channel 38225

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16985.00	-55.93	2.90	16.50	-42.33	-25.00	H
17298.13	-53.91	3.20	14.50	-42.61	-25.00	H
17456.88	-52.57	2.90	14.50	-40.97	-25.00	H
17618.13	-50.55	3.30	12.80	-41.05	-25.00	H
17840.00	-50.60	3.60	12.80	-41.40	-25.00	H
17933.13	-48.57	3.20	12.80	-38.97	-25.00	H

LTE Band 41, QPSK, Channel 39675

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16964.38	-56.26	2.90	16.50	-42.66	-25.00	H
17369.38	-54.27	3.20	14.50	-42.97	-25.00	H
17525.00	-51.13	2.90	12.80	-41.23	-25.00	H
17591.88	-50.74	3.30	12.80	-41.24	-25.00	H
17839.38	-50.79	3.60	12.80	-41.59	-25.00	H
17998.75	-48.91	3.20	12.80	-39.31	-25.00	H

LTE Band 41, QPSK, Channel 40620

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16981.25	-56.25	2.90	16.50	-42.65	-25.00	H
17298.75	-53.98	3.20	14.50	-42.68	-25.00	H
17454.38	-52.69	2.90	14.50	-41.09	-25.00	H
17616.88	-50.50	3.30	12.80	-41.00	-25.00	H
17840.00	-50.72	3.60	12.80	-41.52	-25.00	H
17983.13	-48.65	3.20	12.80	-39.05	-25.00	H

LTE Band 41, QPSK, Channel 41565

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16985.63	-56.23	2.90	16.50	-42.63	-25.00	H
17368.13	-54.25	3.20	14.50	-42.95	-25.00	H
17524.38	-51.10	2.90	12.80	-41.20	-25.00	H
17525.63	-51.12	2.90	12.80	-41.22	-25.00	H
17839.38	-50.75	3.60	12.80	-41.55	-25.00	H
17980.63	-48.97	3.20	12.80	-39.37	-25.00	H

LTE Band 41, 16QAM, Channel 39675

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16981.88	-56.15	2.90	16.50	-42.55	-25.00	H
17365.63	-54.26	3.20	14.50	-42.96	-25.00	H
17525.00	-51.06	2.90	12.80	-41.16	-25.00	H
17526.25	-51.10	2.90	12.80	-41.20	-25.00	H
17839.38	-50.70	3.60	12.80	-41.50	-25.00	H
17982.50	-48.89	3.20	12.80	-39.29	-25.00	H

LTE Band 41, 16QAM, Channel 40620

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16981.25	-56.20	2.90	16.50	-42.60	-25.00	H
17366.25	-54.23	3.20	14.50	-42.93	-25.00	H
17524.38	-50.98	2.90	12.80	-41.08	-25.00	H
17525.63	-51.08	2.90	12.80	-41.18	-25.00	H
17840.00	-50.70	3.60	12.80	-41.50	-25.00	H
17999.38	-48.86	3.20	12.80	-39.26	-25.00	H

LTE Band 41, 16QAM, Channel 41565

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16959.38	-56.16	2.90	16.50	-42.56	-25.00	H
17278.75	-54.29	3.20	14.50	-42.99	-25.00	H
17523.13	-51.18	2.90	12.80	-41.28	-25.00	H
17526.25	-51.08	2.90	12.80	-41.18	-25.00	H
17840.00	-50.64	3.60	12.80	-41.44	-25.00	H
17980.00	-48.91	3.20	12.80	-39.31	-25.00	H

Sample: 16959.38MHz

Power(-42.56dBm)=P_{Mea} (-56.16dBm)- P_{pl} (2.90dBm)+ G_a(16.50dBm)

Measurement Uncertainty : k=2

FrequencyRange	Uncertainty(dB) k=2
30MHz-1GHz	5.76
1GHz-18GHz	4.69
18GHz-40GHz	3.37

A.3 Frequency Stability

A.3.1 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 middle channel for each LTE 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 re-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.3.2 Measurement results

LTE band 2, 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	13.6	1850.560	1908.480		
50				1.04	0.0006
40				7.43	0.0039
30				1.48	0.0008
10				2.69	0.0014
0				4.06	0.0022
-10				6.14	0.0033
-20				5.78	0.0031
-30				2.47	0.0013

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	1850.560	1908.480	6.81	0.0036
25.0				1.58	0.0008

LTE band 4, 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	13.6	1710.420	1754.580		
50				0.04	0.0000
40				0.36	0.0002
30				-0.17	0.0001
10				0.22	0.0001
0				-0.04	0.0000
-10				-0.39	0.0002
-20				-0.23	0.0001
-30				0.01	0.0000

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	1710.420	1754.580	0.03	0.0000
25.0				0.16	0.0001

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	13.6	824.260	848.760		
50				-0.63	0.0008
40				-1.06	0.0013
30				-1.85	0.0022
10				-2.59	0.0031
0				-2.43	0.0029
-10				-2.70	0.0032
-20				-2.53	0.0030
-30				-1.79	0.0021

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	824.260	848.760	-2.49	0.0030
25.0				-2.46	0.0029

LTE band 7, 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	13.6	2500.720	2569.260		
50				-3.75	0.0015
40				-3.25	0.0013
30				-3.62	0.0014
10				-3.79	0.0015
0				-2.35	0.0009
-10				-4.52	0.0018
-20				-3.59	0.0014
-30				-2.43	0.0010

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	2500.720	2569.260	-2.38	0.0009
25.0				-3.51	0.0014

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	13.6	699.520	715.280		
50				-2.09	0.0030
40				-1.56	0.0022
30				-1.67	0.0024
10				-1.77	0.0025
0				-1.76	0.0025
-10				-0.54	0.0008
-20				-0.40	0.0006
-30				-0.80	0.0011

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	699.520	715.280	-0.44	0.0006
25.0				-0.92	0.0013

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	13.6	777.480	786.660		
50				-1.12	0.0014
40				-0.96	0.0012
30				-1.25	0.0016
10				-2.02	0.0026
0				-0.76	0.0010
-10				-1.67	0.0021
-20				-1.20	0.0015
-30				-1.27	0.0016

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	777.480	786.660	-1.20	0.0015
25.0				-1.49	0.0019

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	13.6	704.740	715.830		
50				-0.77	0.0011
40				-0.14	0.0002
30				-0.30	0.0004
10				-0.06	0.0001
0				-0.60	0.0008
-10				-0.60	0.0008
-20				-0.14	0.0002
-30				-0.37	0.0005

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	704.740	715.830	-0.16	0.0002
25.0				-0.22	0.0003

LTE band 26PART22, 15MHz bandwidth QPSK(worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	13.6	824.620	848.860		
50				-0.72	0.0009
40				-1.22	0.0015
30				-1.43	0.0017
10				-2.53	0.0030
0				-3.32	0.0040
-10				-1.95	0.0023
-20				-2.55	0.0030
-30				-0.56	0.0007

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	824.620	848.860	-0.32	0.0004
25.0				-1.32	0.0016

LTE band 26PART90, 10MHz bandwidth QPSK(worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	13.6	815.760	823.820		
50				-1.36	0.0017
40				-1.02	0.0012
30				-1.10	0.0013
10				-2.10	0.0026
0				-1.52	0.0019
-10				-1.76	0.0021
-20				-1.63	0.0020
-30				-1.42	0.0017

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	815.760	823.820	-1.36	0.0017
25.0				-2.26	0.0028

LTE band 38, 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	13.6	2570.800	2619.200		
50				-11.04	0.0043
40				-8.64	0.0033
30				-10.77	0.0042
10				-10.96	0.0042
0				-10.66	0.0041
-10				-10.56	0.0041
-20				-9.11	0.0035
-30				-11.06	0.0043

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	2570.800	2619.200	-9.91	0.0038
25.0				-9.99	0.0038

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	13.6	2496.800	2689.120	-1.26	0.0005
50				-1.77	0.0007
40				-1.93	0.0007
30				-0.09	0.0000
10				-1.20	0.0005
0				-2.03	0.0008
-10				-2.26	0.0009
-20				-0.39	0.0001
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
9.0	20	2496.800	2689.120	-2.42	0.0009
25.0				-1.16	0.0004

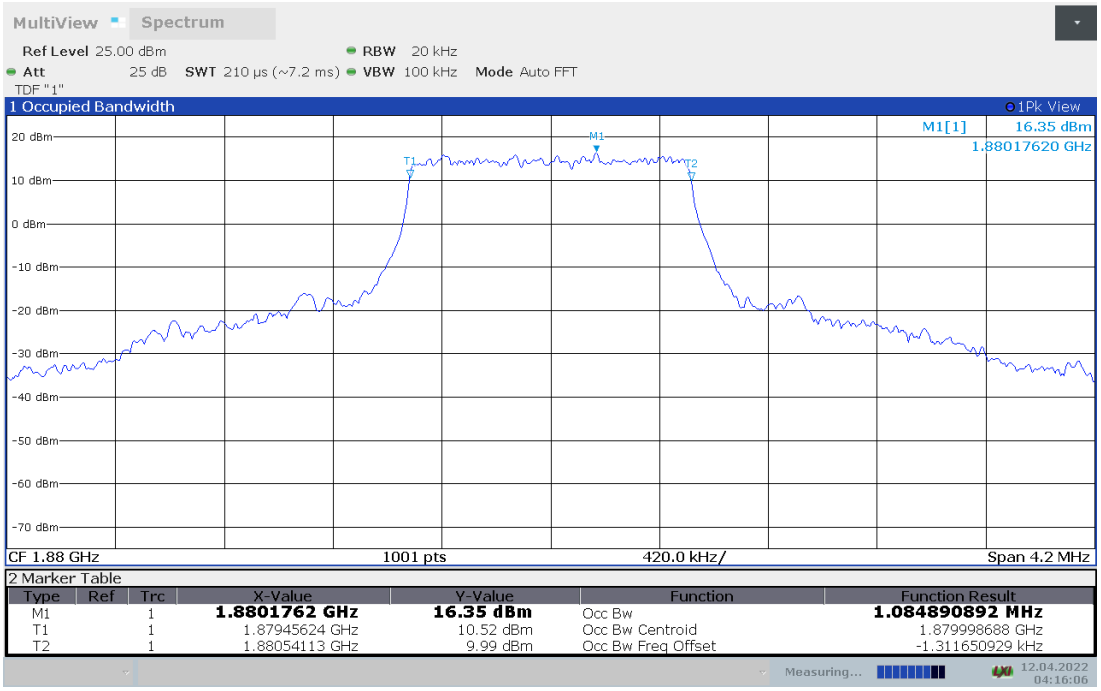
A.4 Occupied Bandwidth

Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the mid frequencies 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.

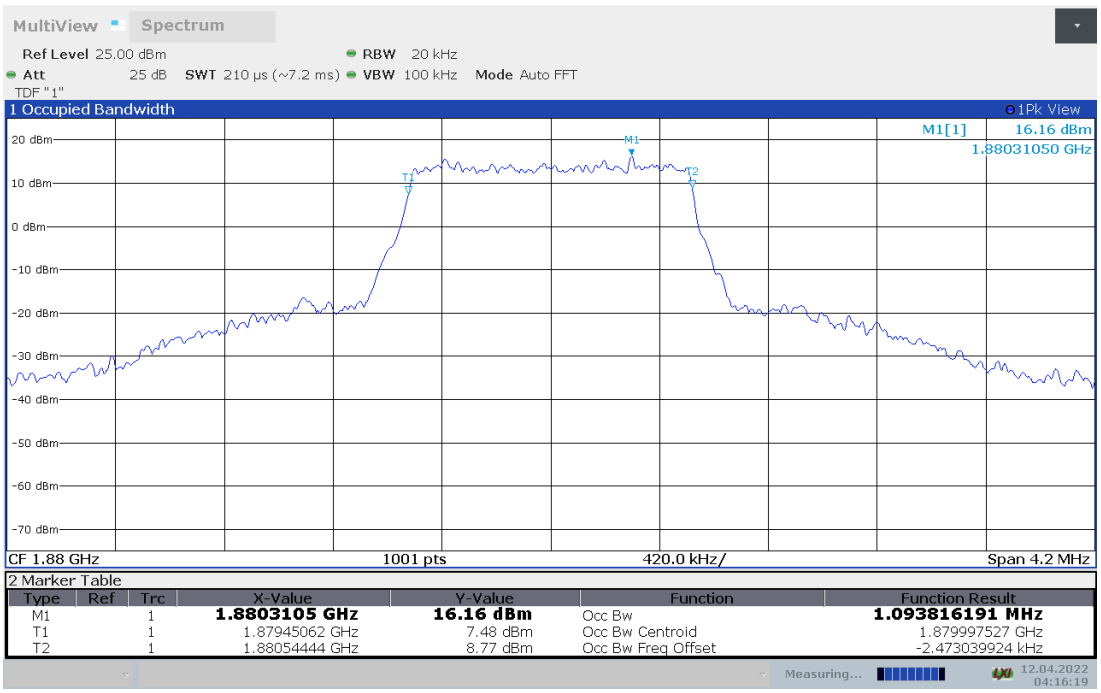
LTE band 2, 1.4MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	1.085	1.094

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



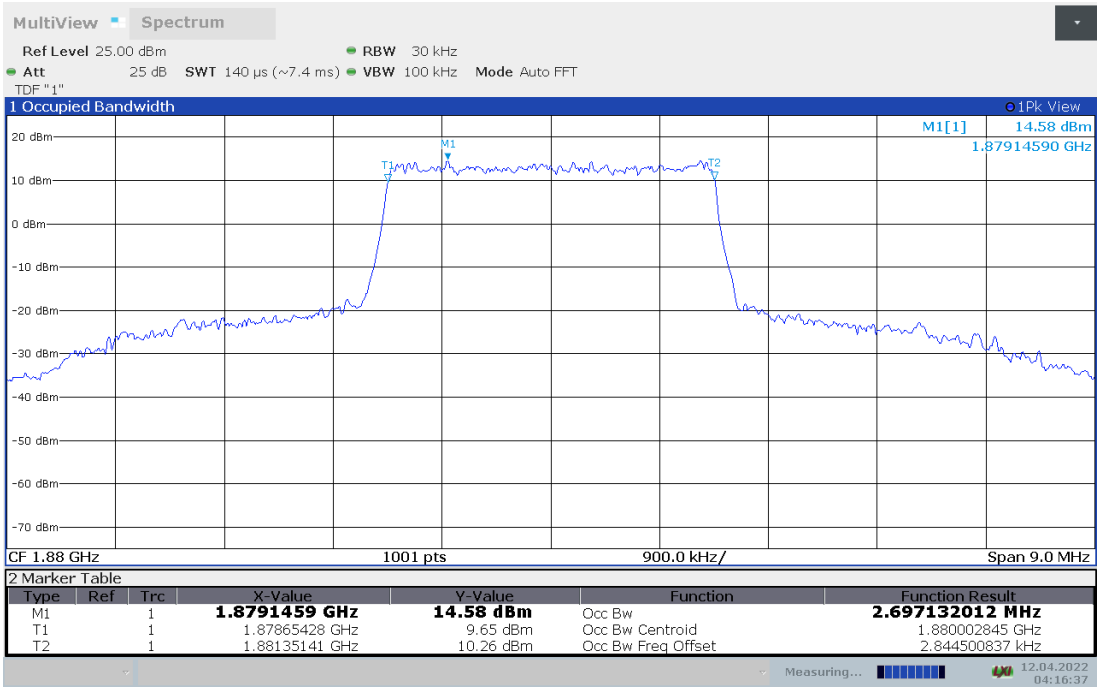
LTE band 2 , 1.4MHz Bandwidth,16QAM (99% BW)



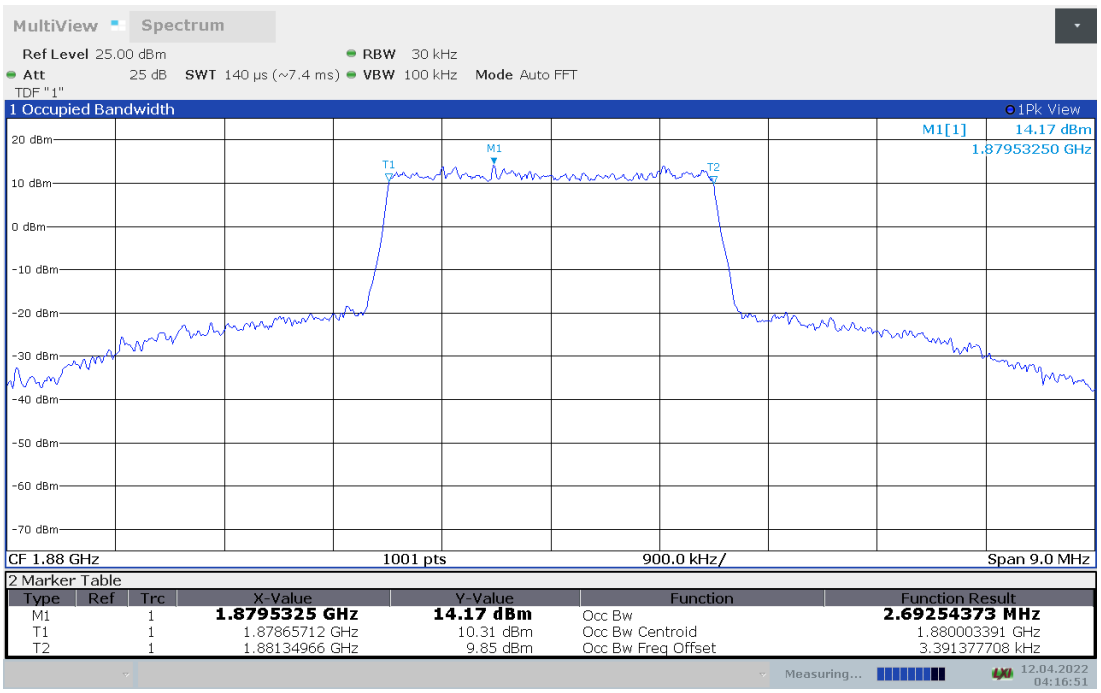
LTE band 2, 3MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	2.697	2.693

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



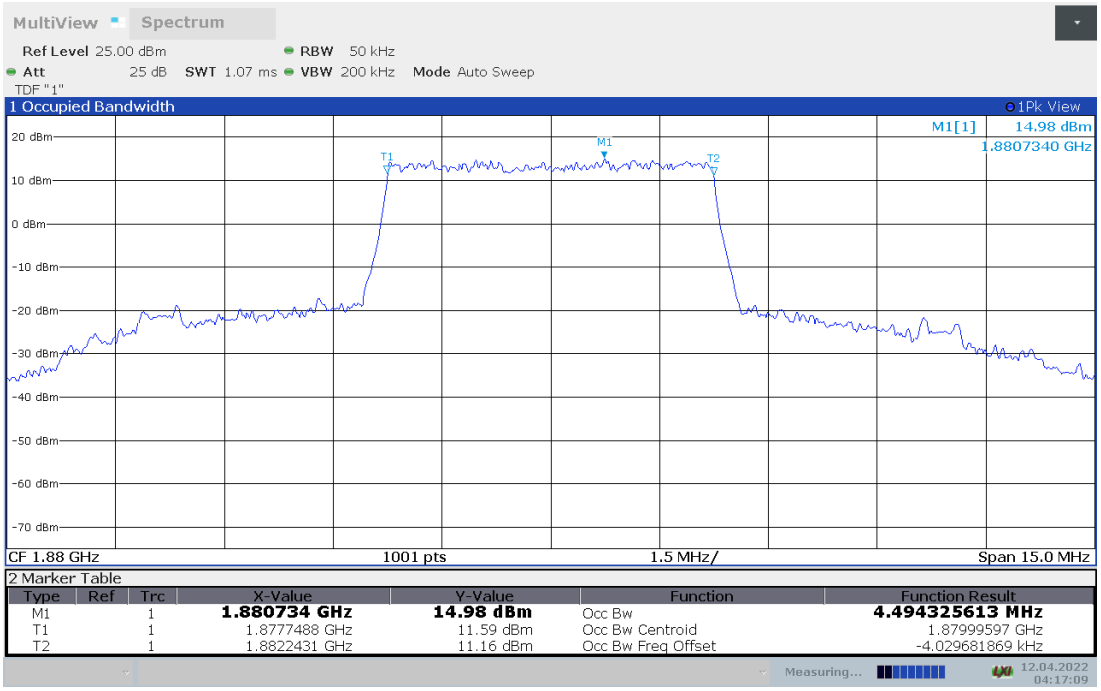
LTE band 2 , 3MHz Bandwidth,16QAM (99% BW)



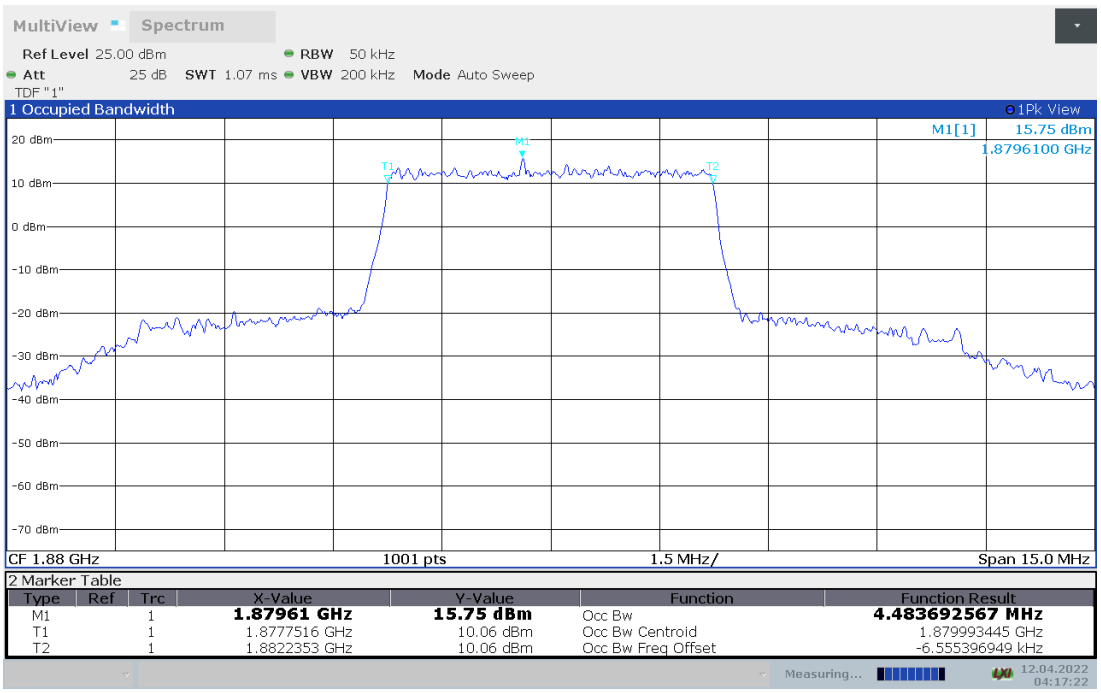
LTE band 2, 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	4.494	4.484

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



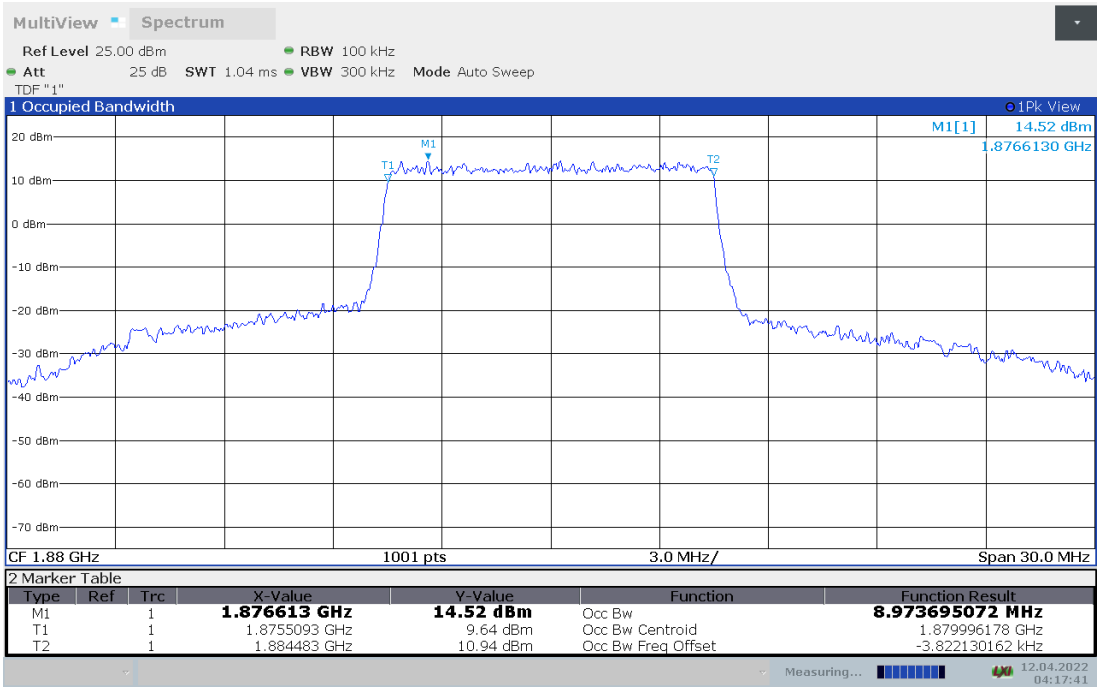
LTE band 2 , 5MHz Bandwidth,16QAM (99% BW)



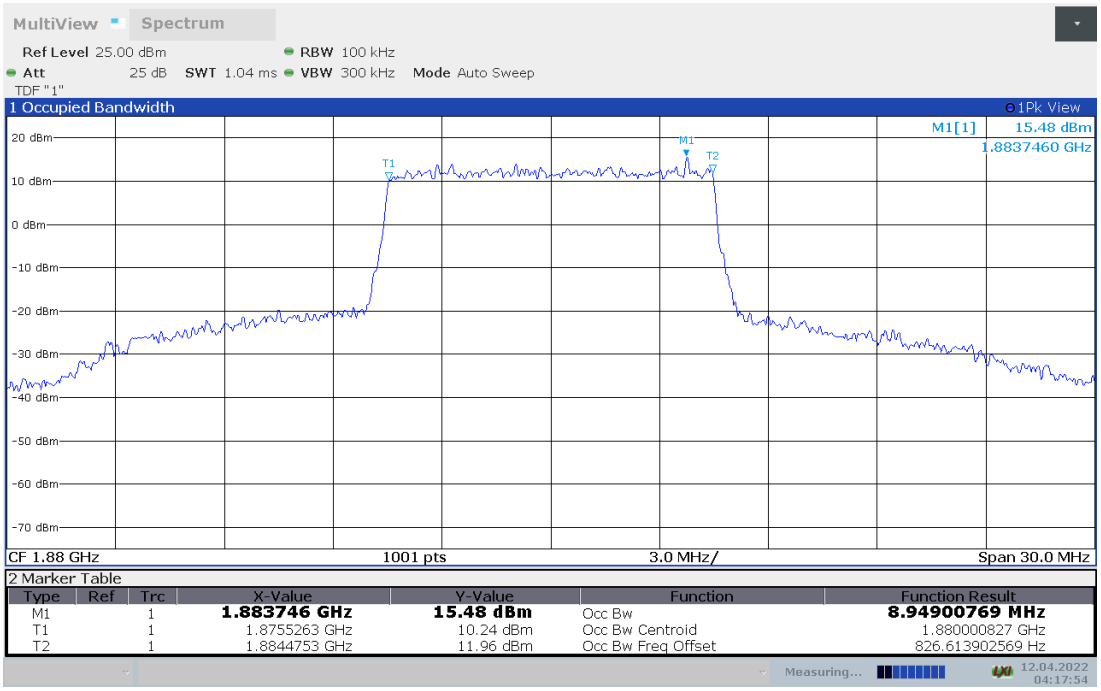
LTE band 2, 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	8.974	8.949

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



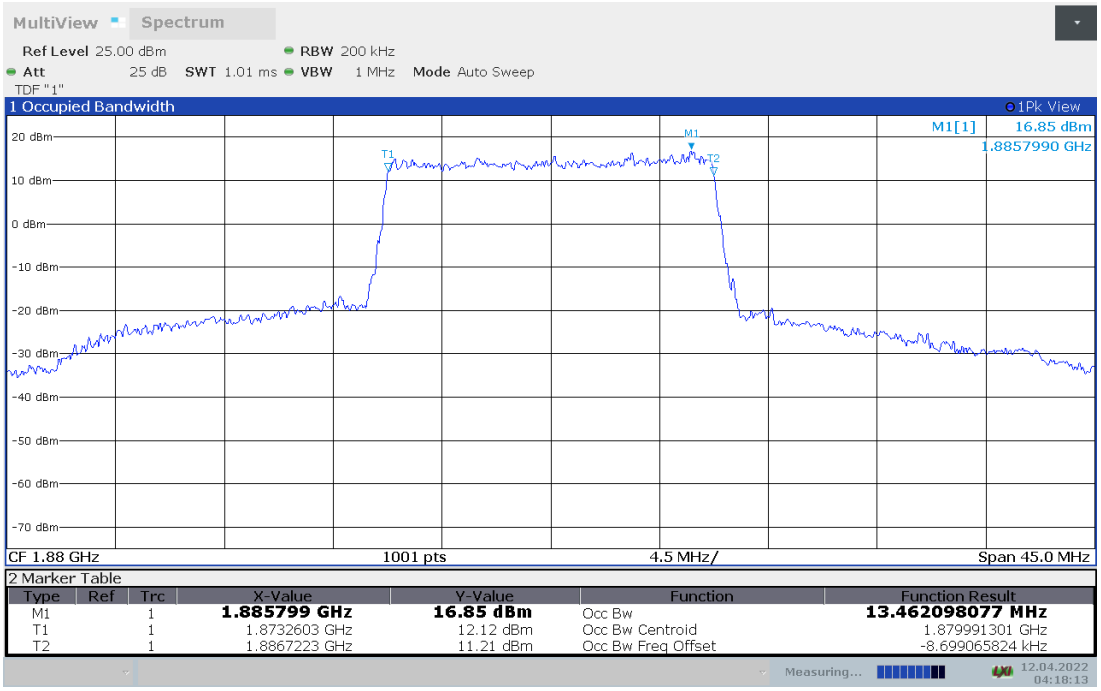
LTE band 2 , 10MHz Bandwidth,16QAM (99% BW)



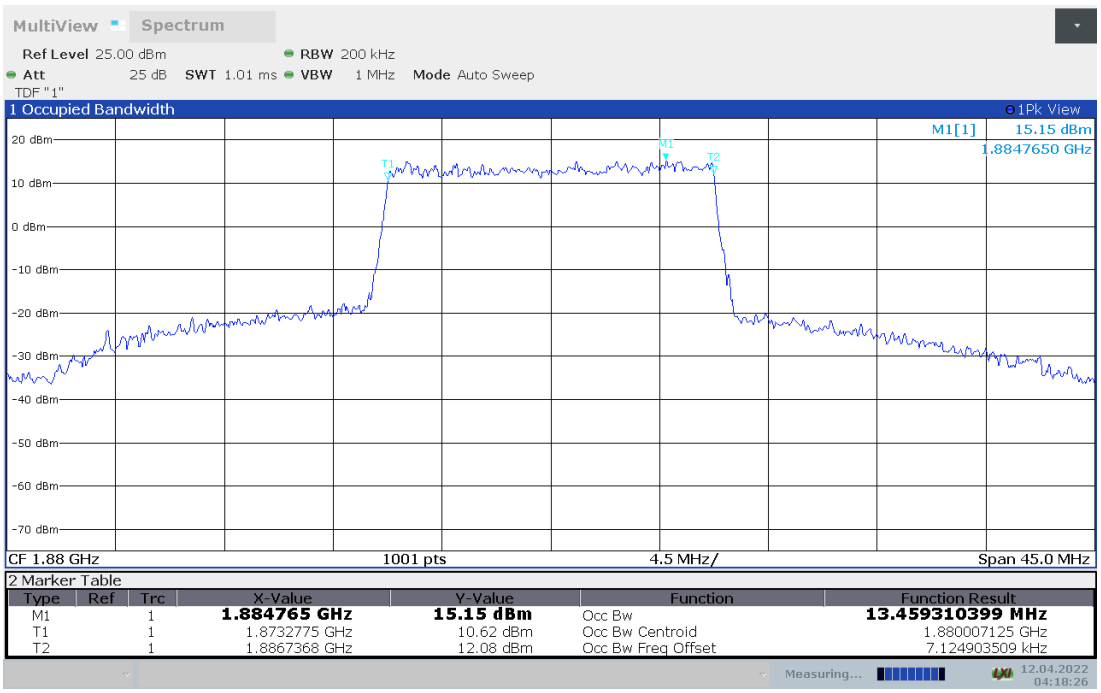
LTE band 2, 15MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	13.462	13.459

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



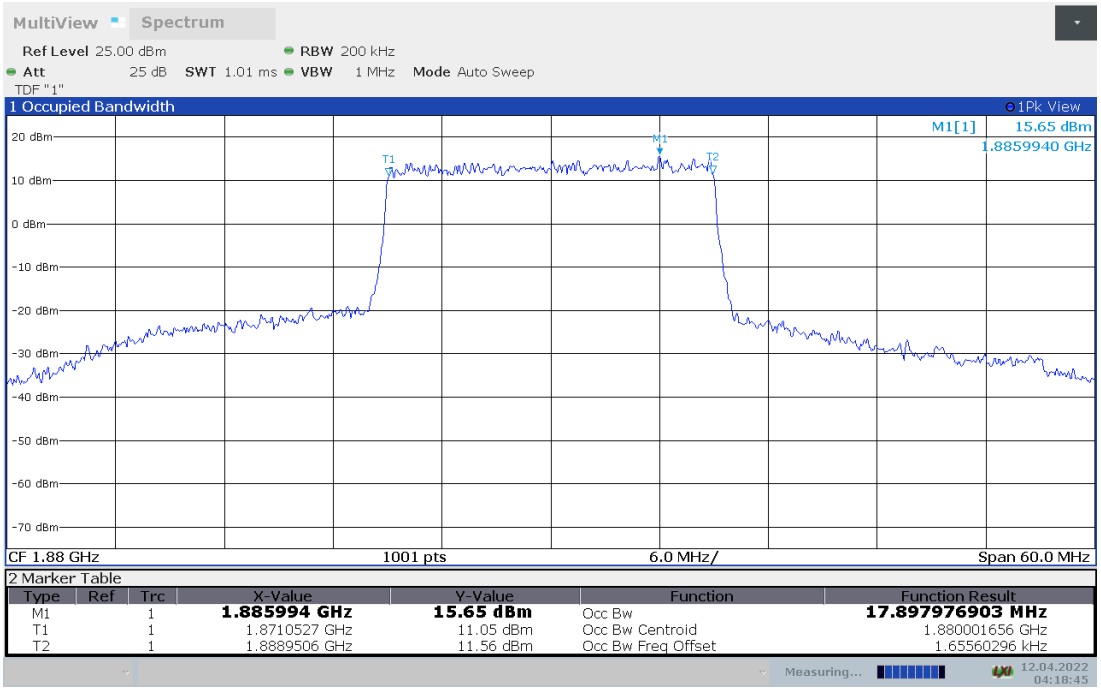
LTE band 2 , 15MHz Bandwidth,16QAM (99% BW)



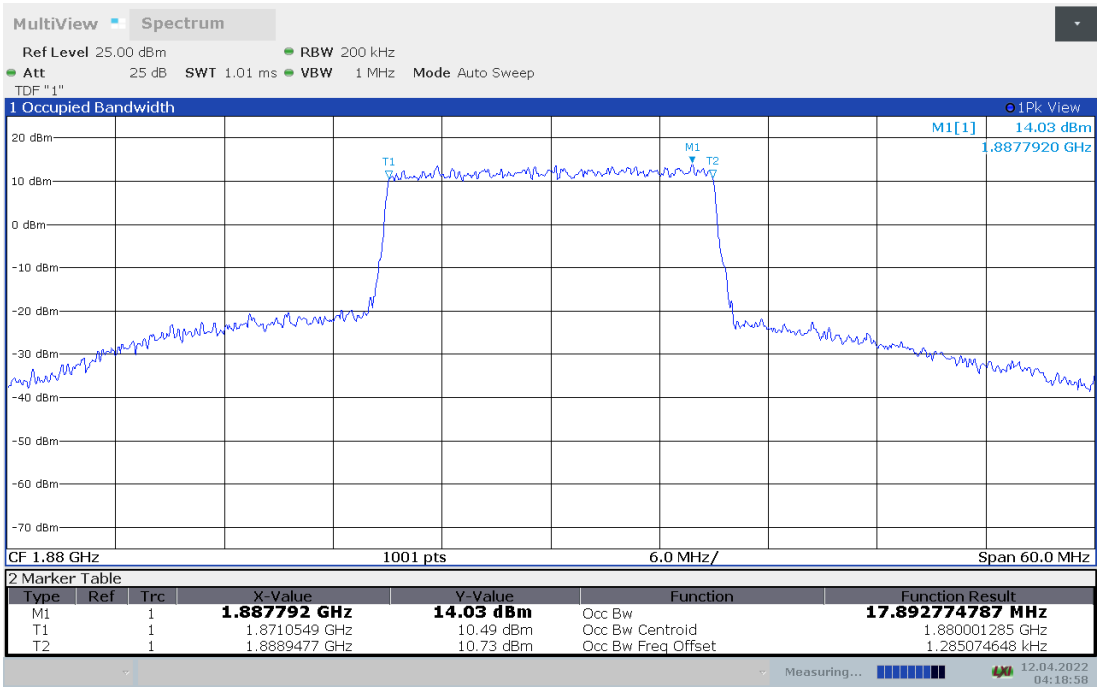
LTE band 2, 20MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	17.898	17.893

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



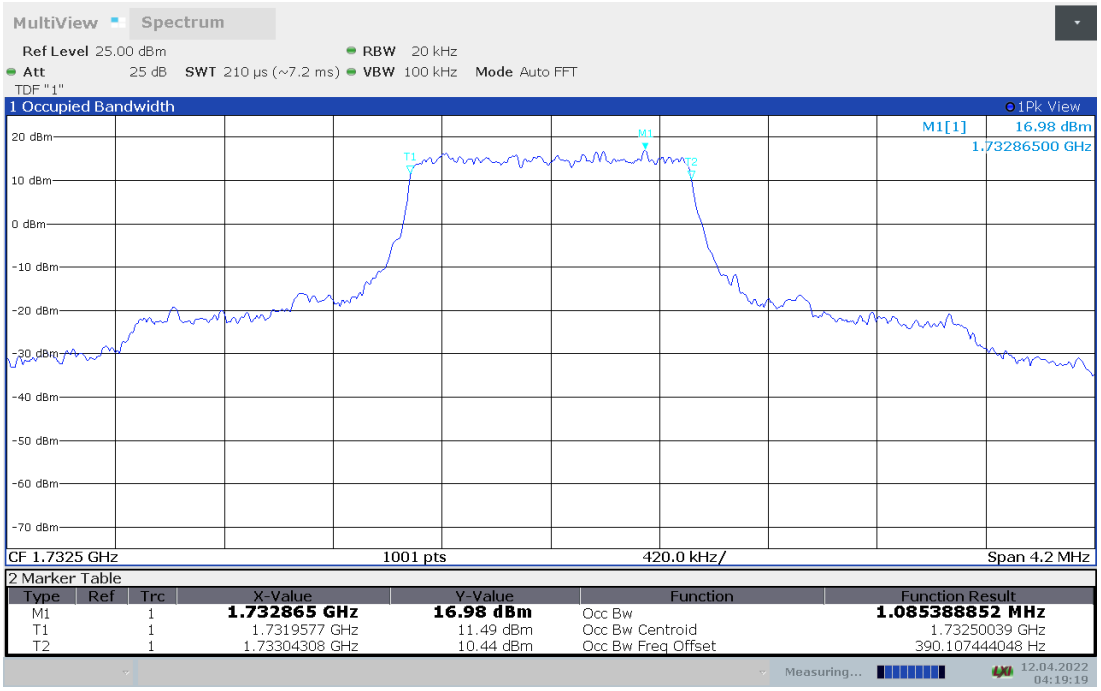
LTE band 2 , 20MHz Bandwidth,16QAM (99% BW)



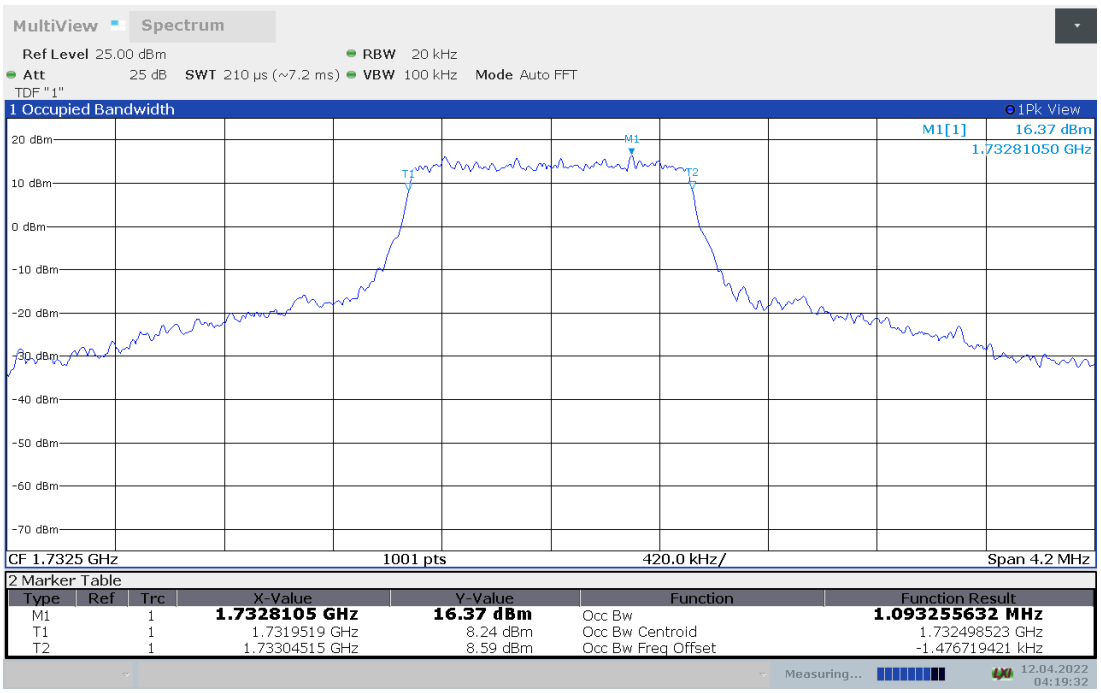
LTE band 4, 1.4MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1732.5	1.085	1.093

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



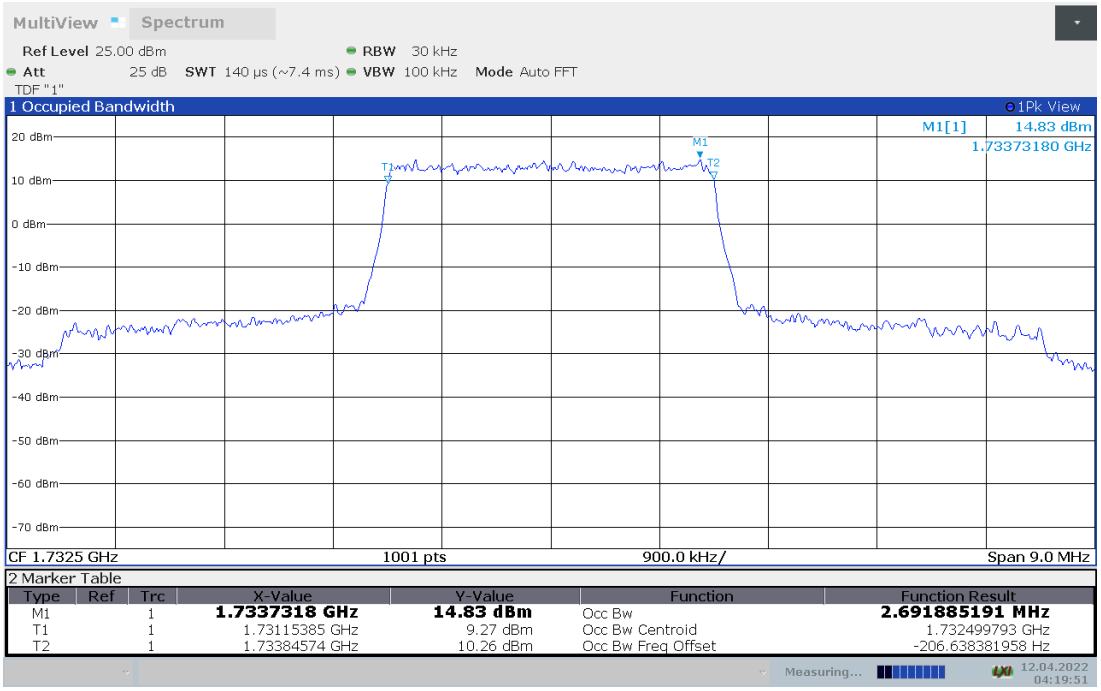
LTE band 4 , 1.4MHz Bandwidth,16QAM (99% BW)



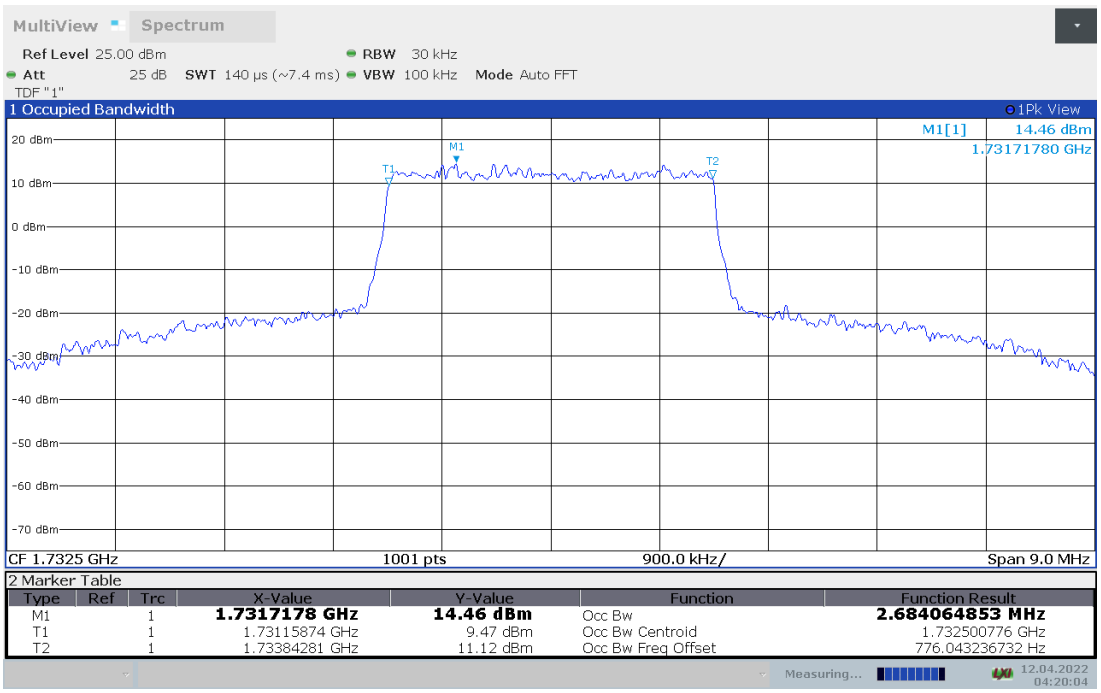
LTE band 4, 3MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1732.5	2.692	2.684

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



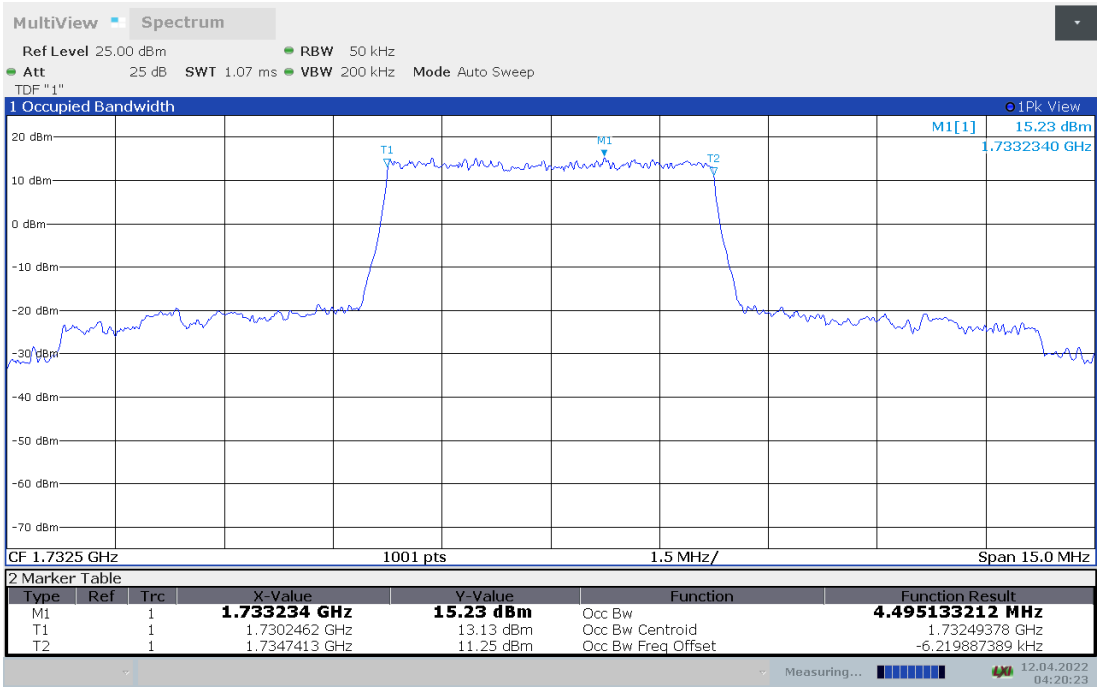
LTE band 4 , 3MHz Bandwidth,16QAM (99% BW)



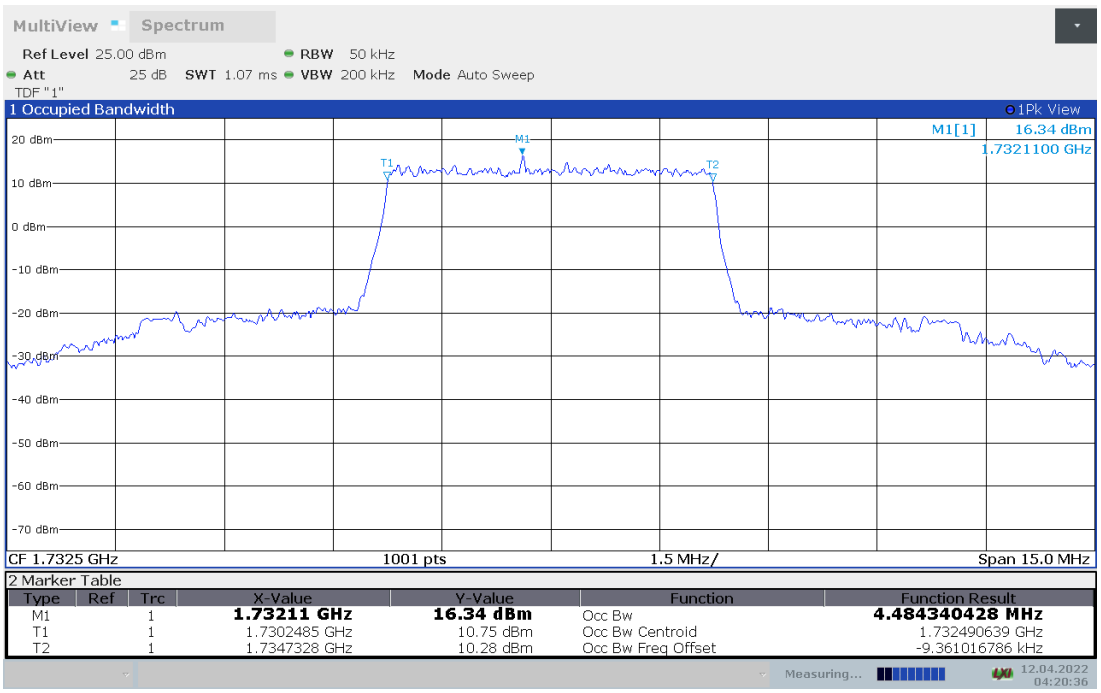
LTE band 4, 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1732.5	4.495	4.484

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



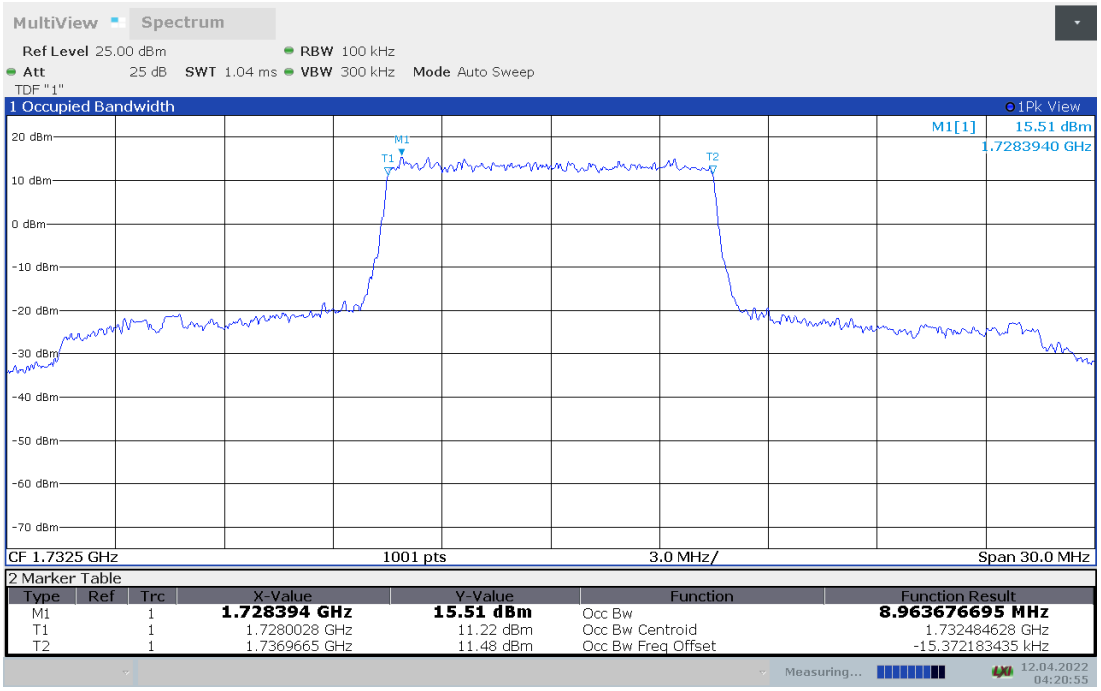
LTE band 4 , 5MHz Bandwidth,16QAM (99% BW)



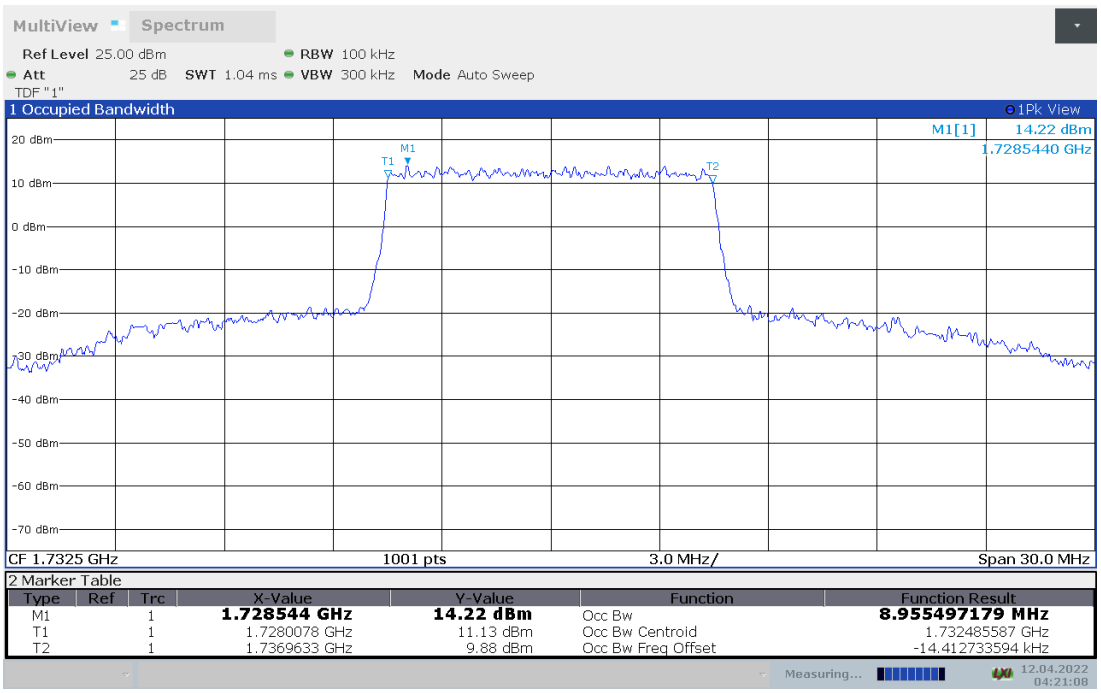
LTE band 4, 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1732.5	8.964	8.955

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



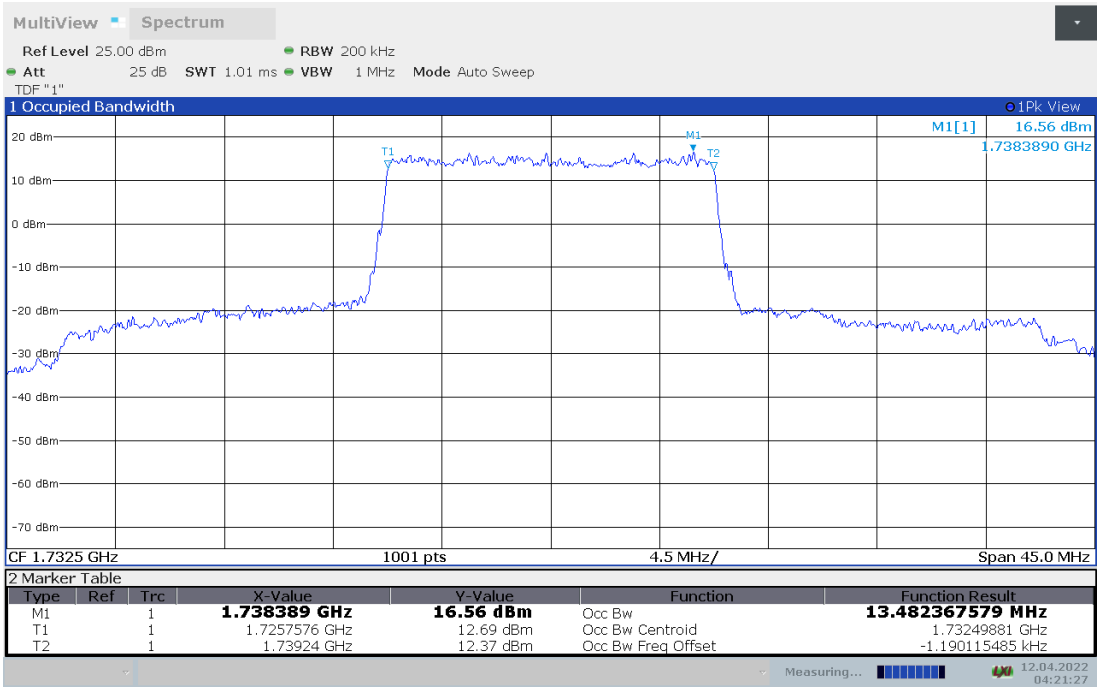
LTE band 4 , 10MHz Bandwidth,16QAM (99% BW)



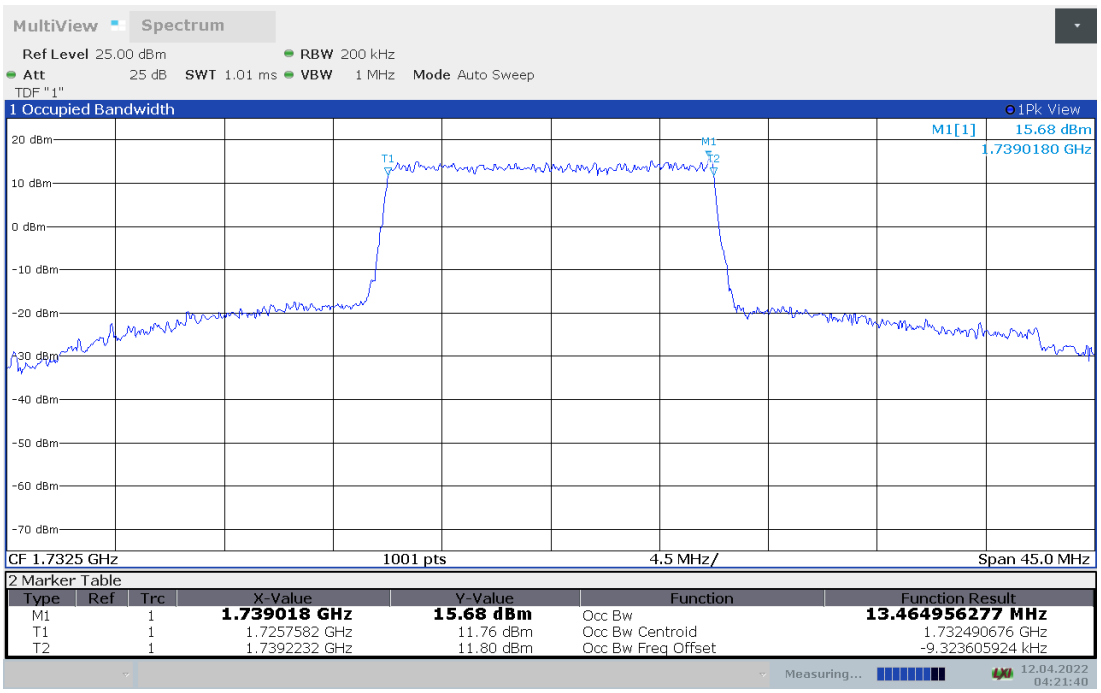
LTE band 4, 15MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1732.5	13.482	13.465

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



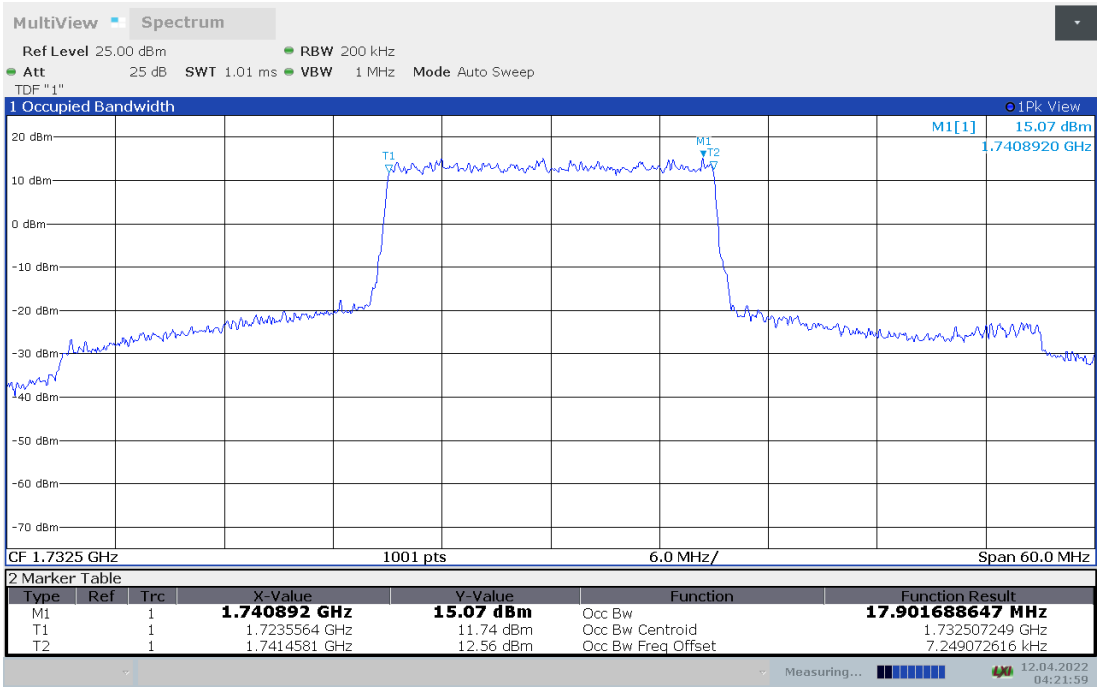
LTE band 4 , 15MHz Bandwidth,16QAM (99% BW)



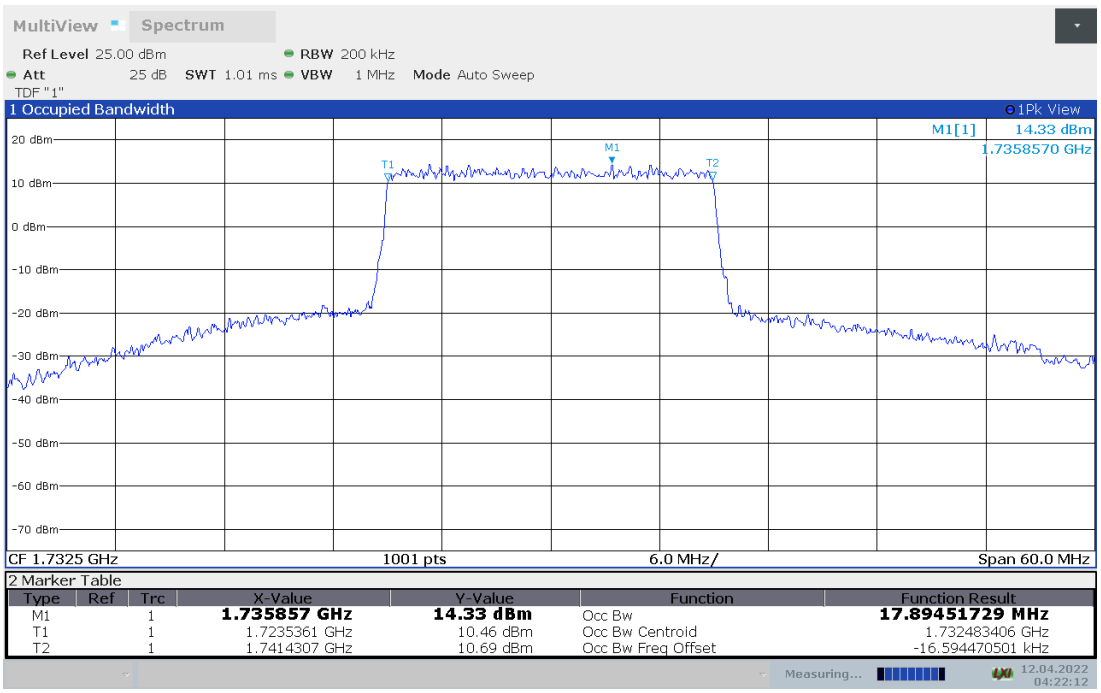
LTE band 4, 20MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1732.5	17.902	17.895

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



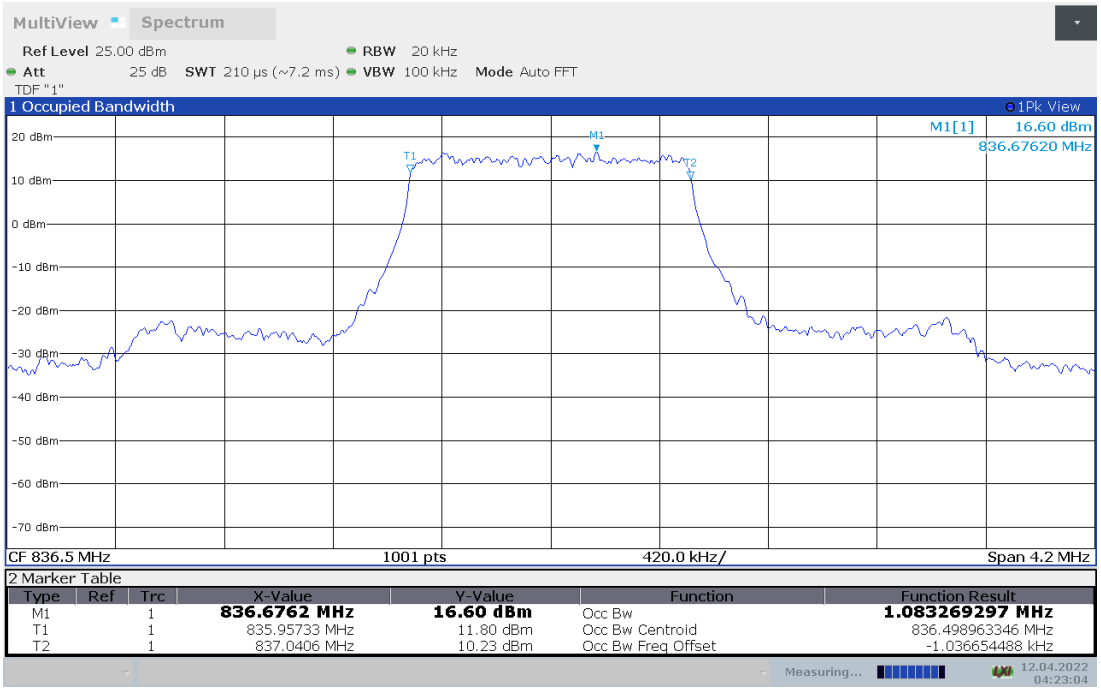
LTE band 4 , 20MHz Bandwidth,16QAM (99% BW)



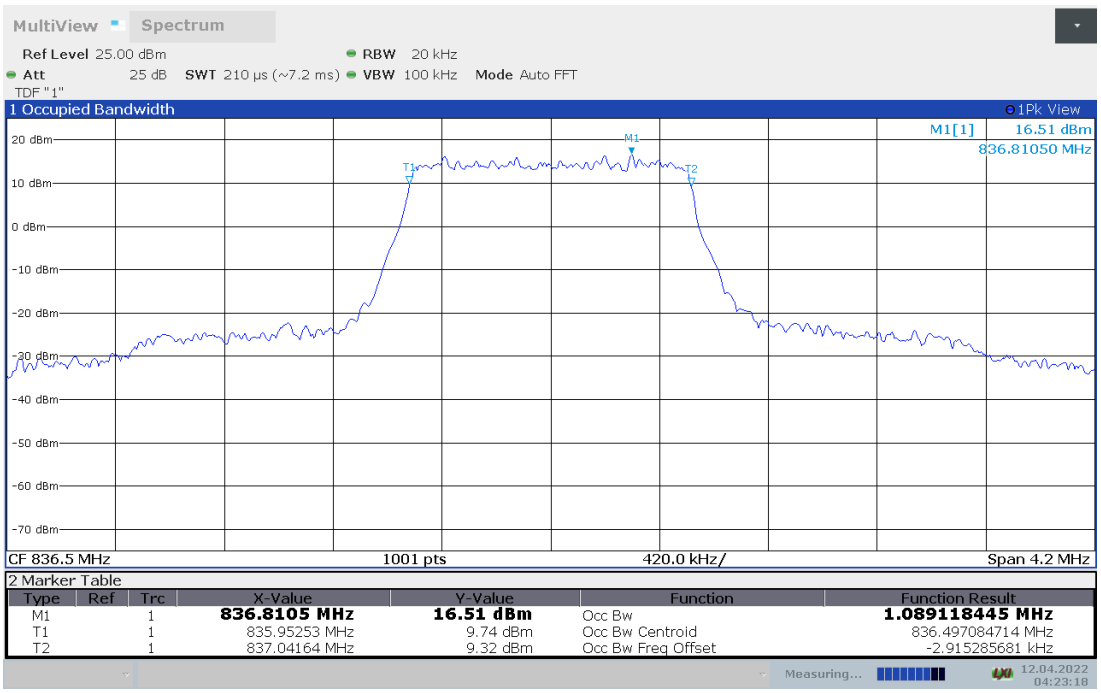
LTE band 5, 1.4MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	1.083	1.089

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



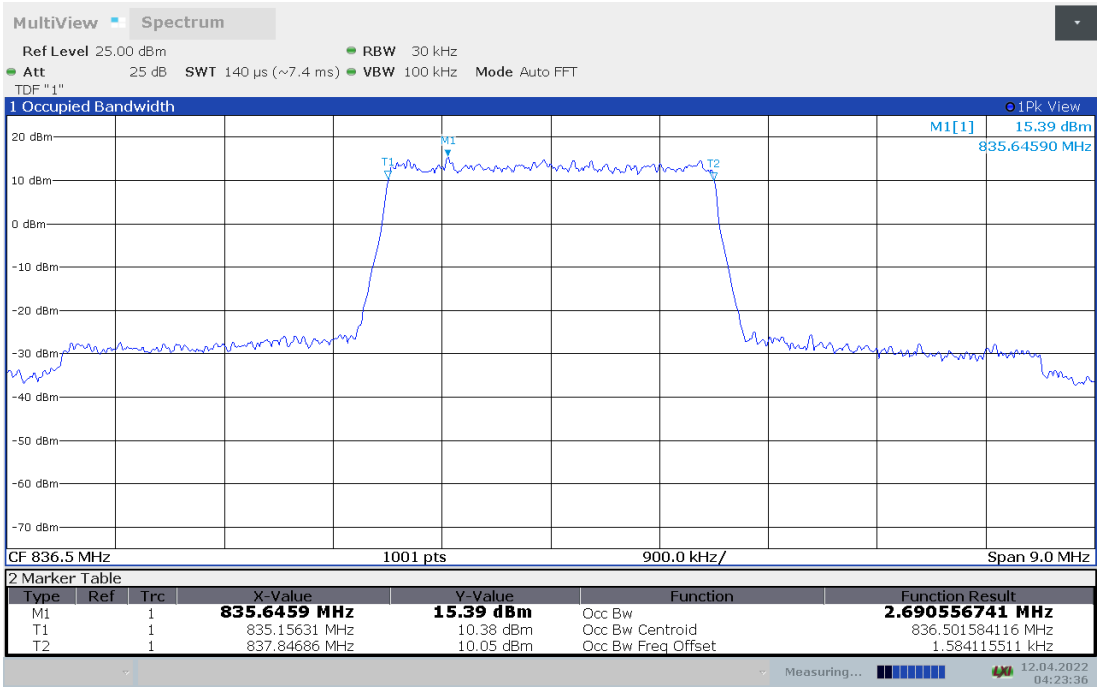
LTE band 5 , 1.4MHz Bandwidth,16QAM (99% BW)



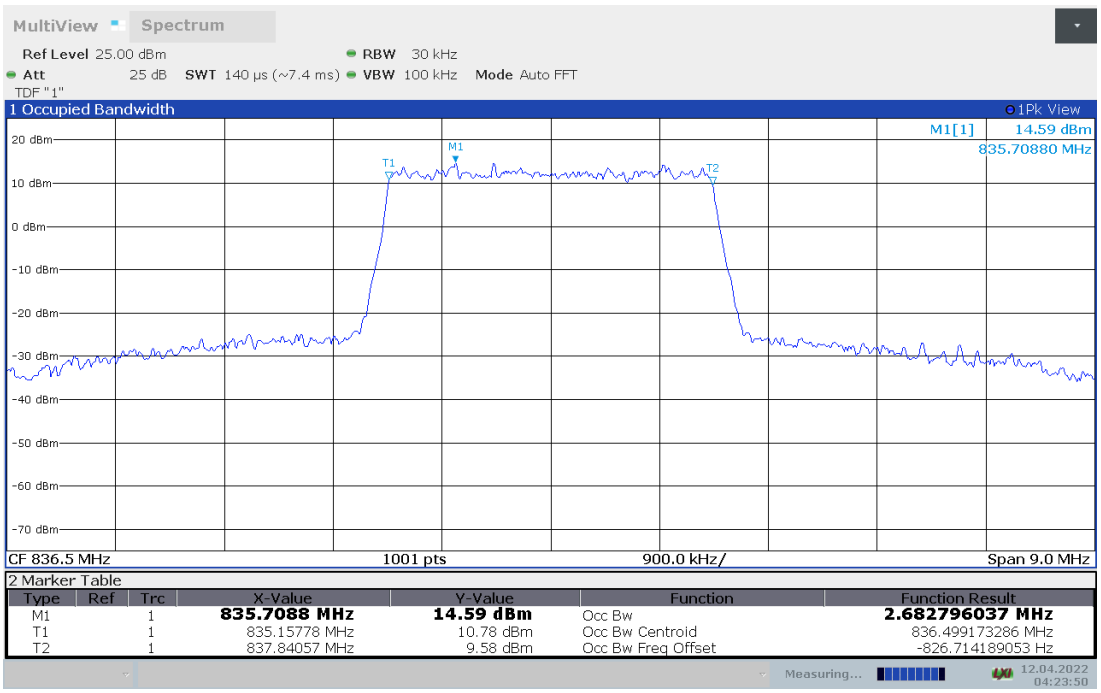
LTE band 5, 3MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	2.691	2.683

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



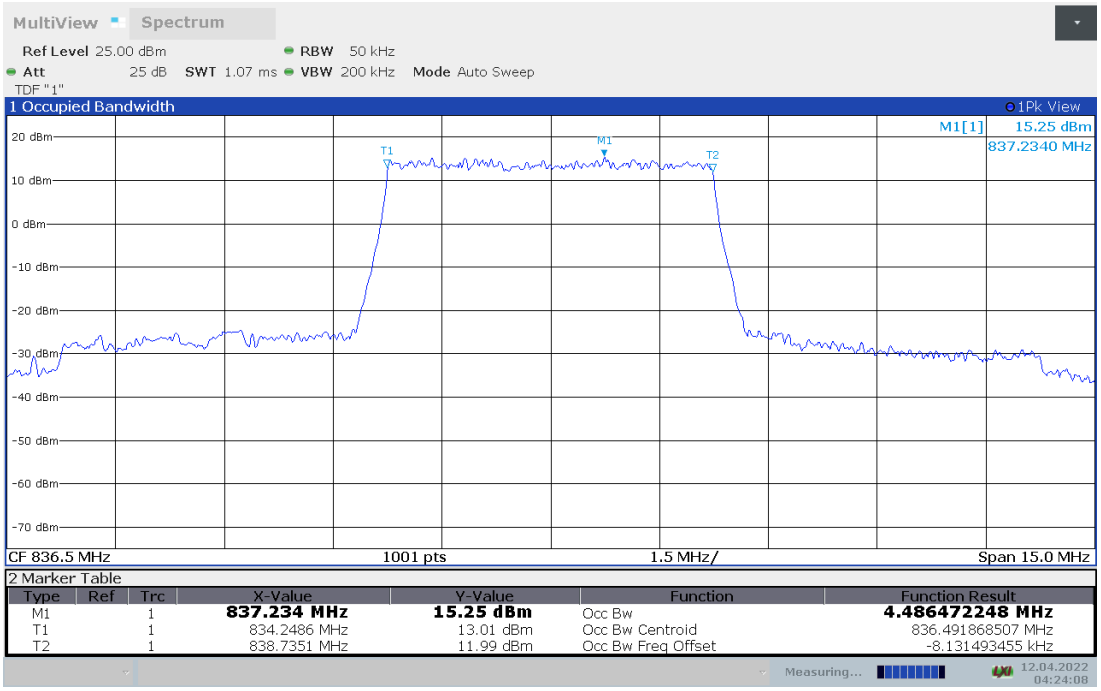
LTE band 5 , 3MHz Bandwidth,16QAM (99% BW)



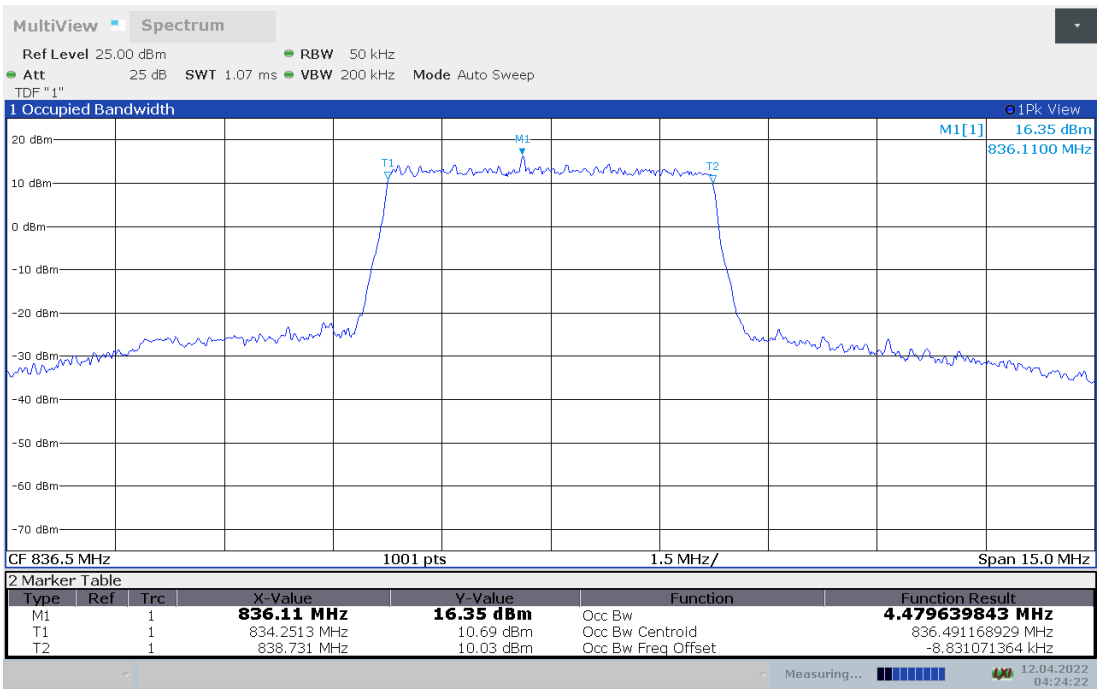
LTE band 5, 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	4.486	4.480

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



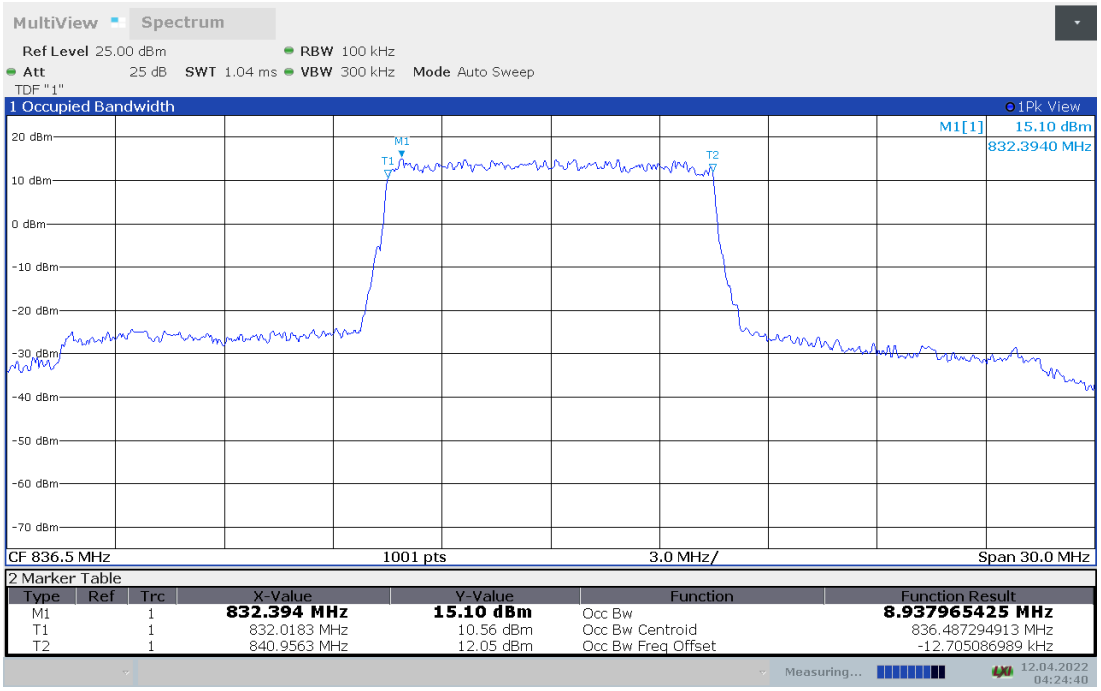
LTE band 5 , 5MHz Bandwidth,16QAM (99% BW)



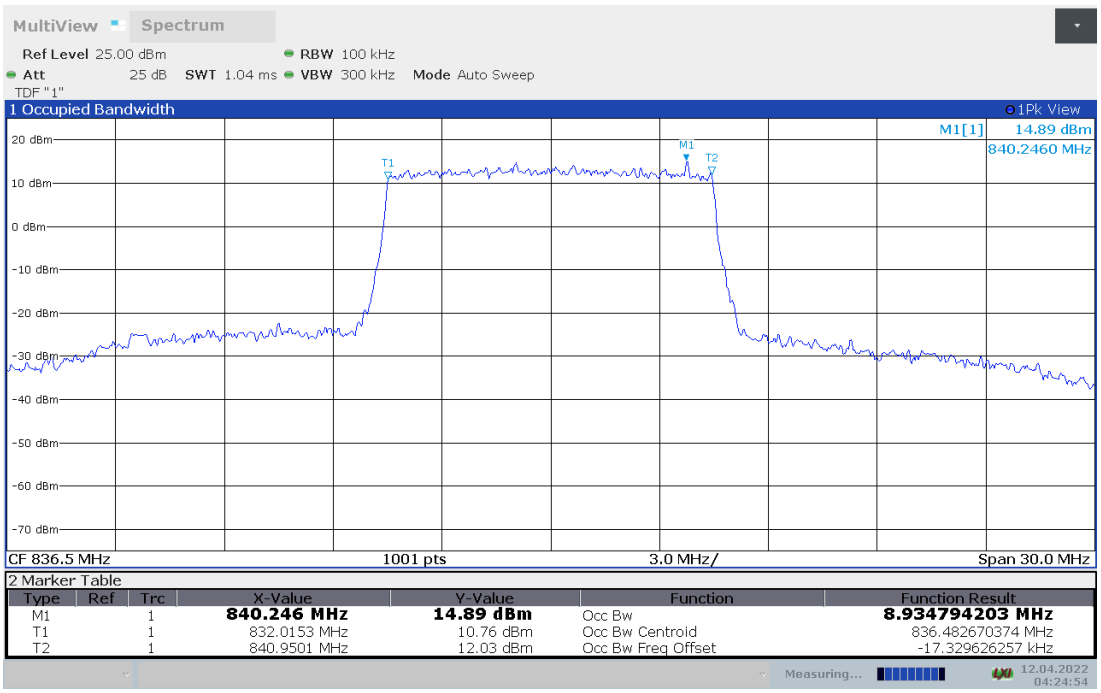
LTE band 5, 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	8.938	8.935

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



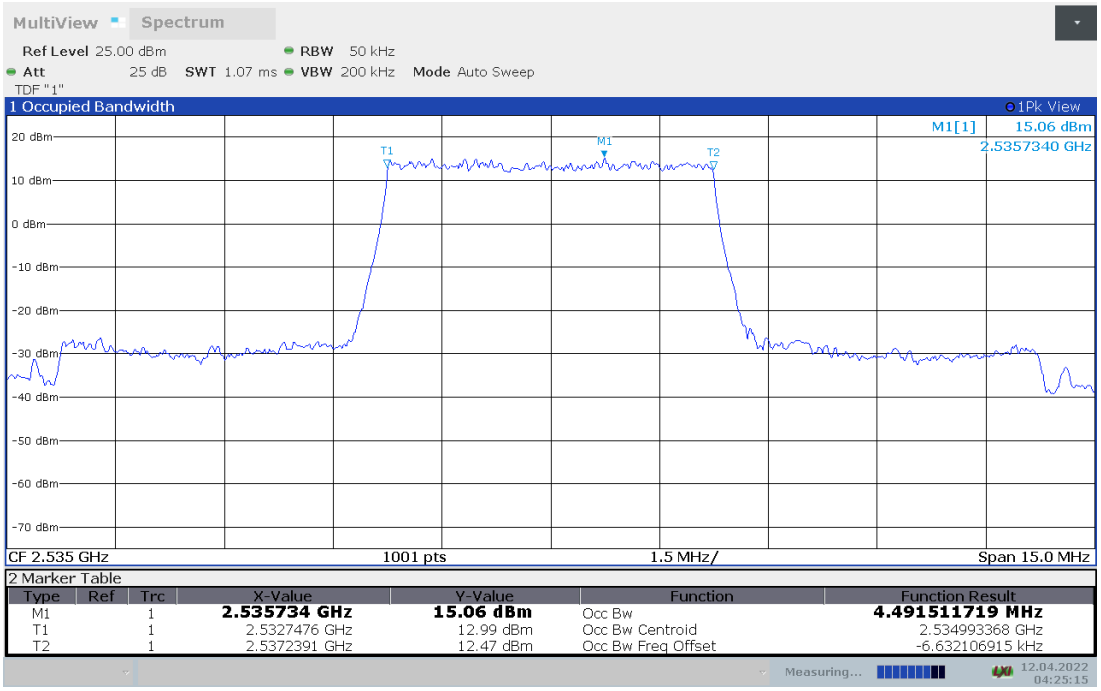
LTE band 5 , 10MHz Bandwidth,16QAM (99% BW)



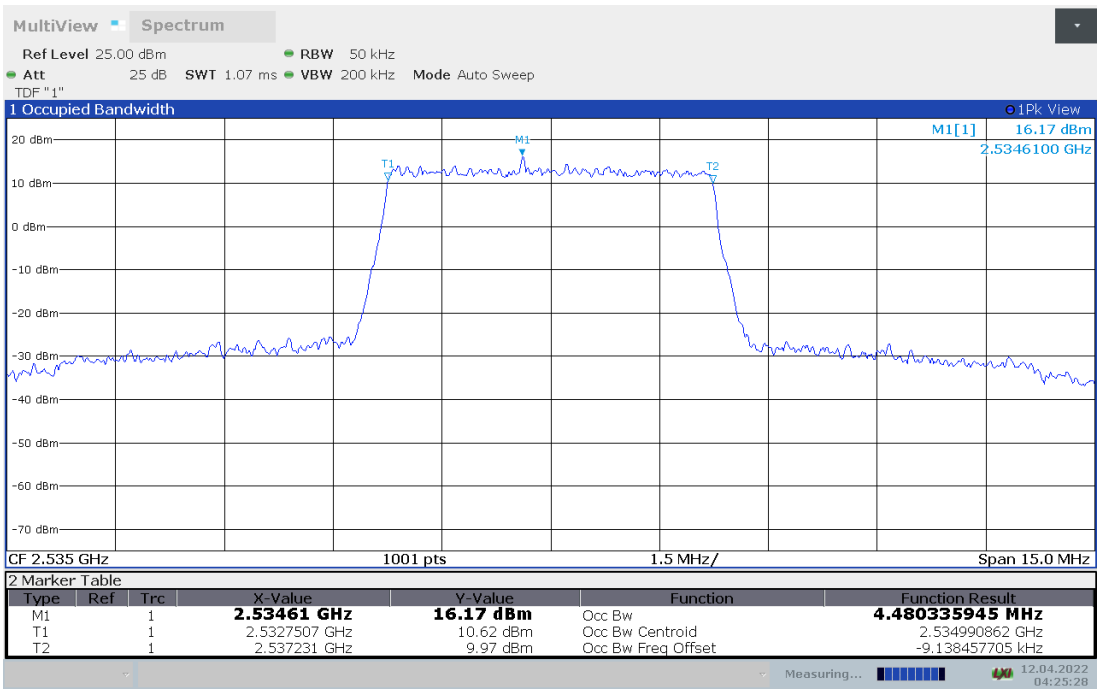
LTE band 7, 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	4.492	4.480

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



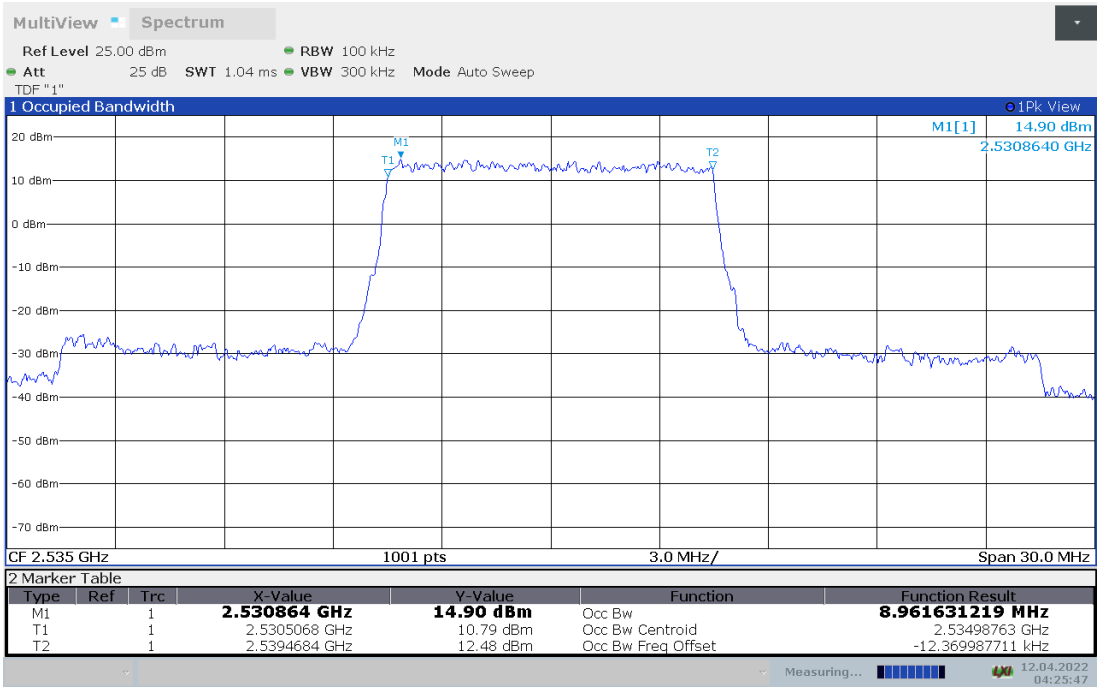
LTE band 7 , 5MHz Bandwidth,16QAM (99% BW)



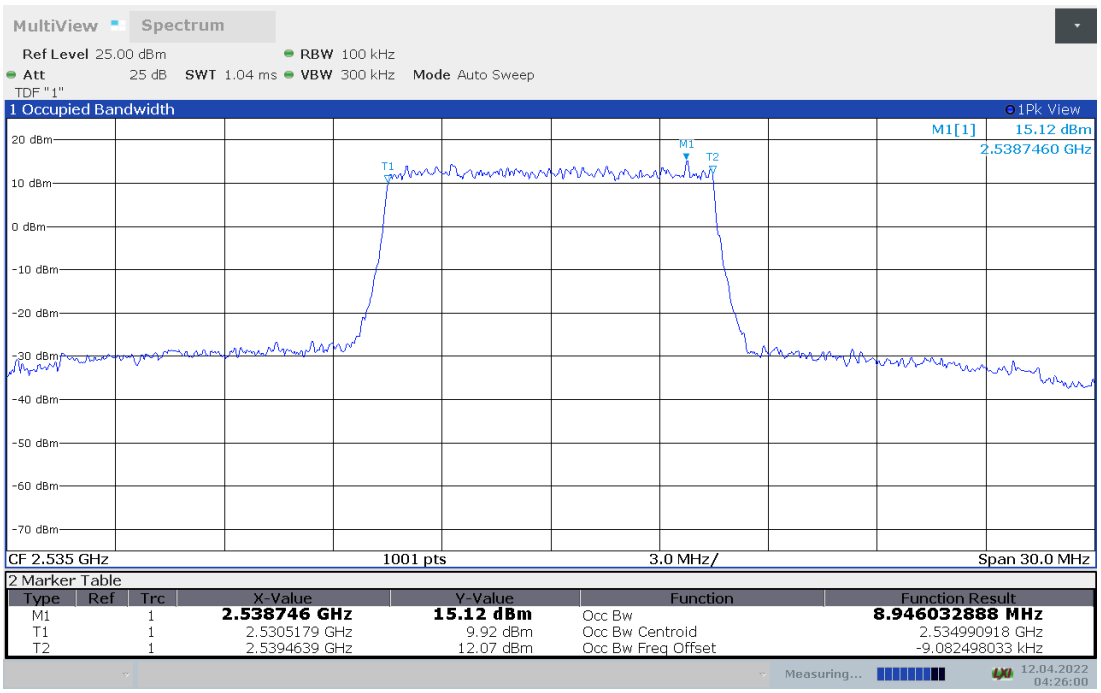
LTE band 7, 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	8.962	8.946

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



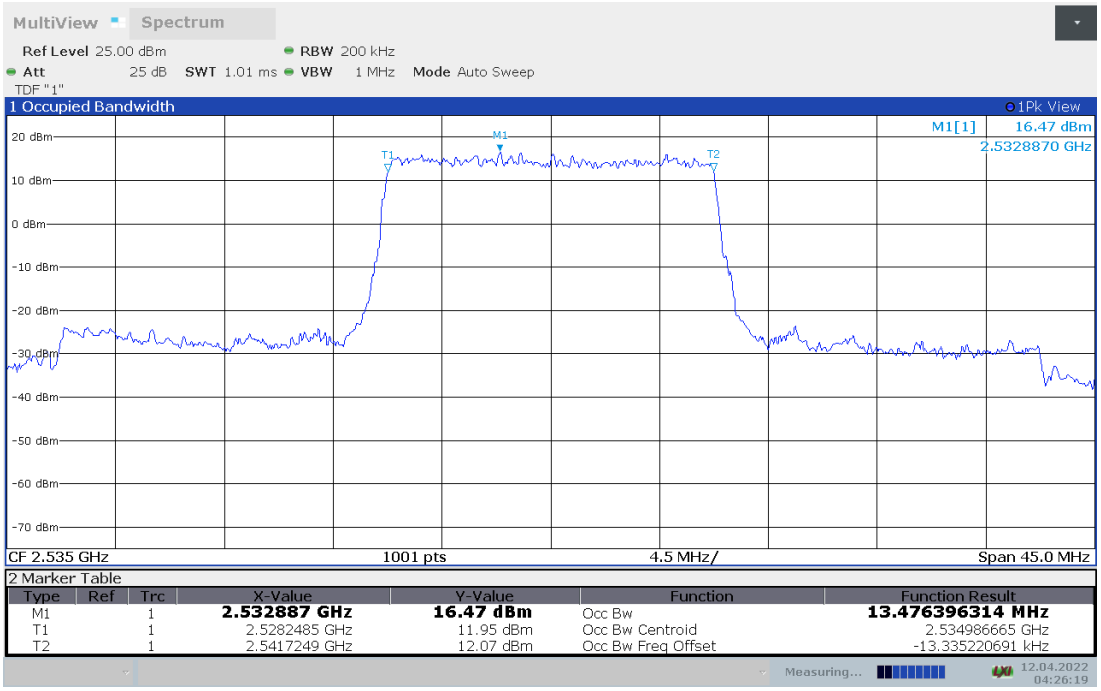
LTE band 7 , 10MHz Bandwidth,16QAM (99% BW)



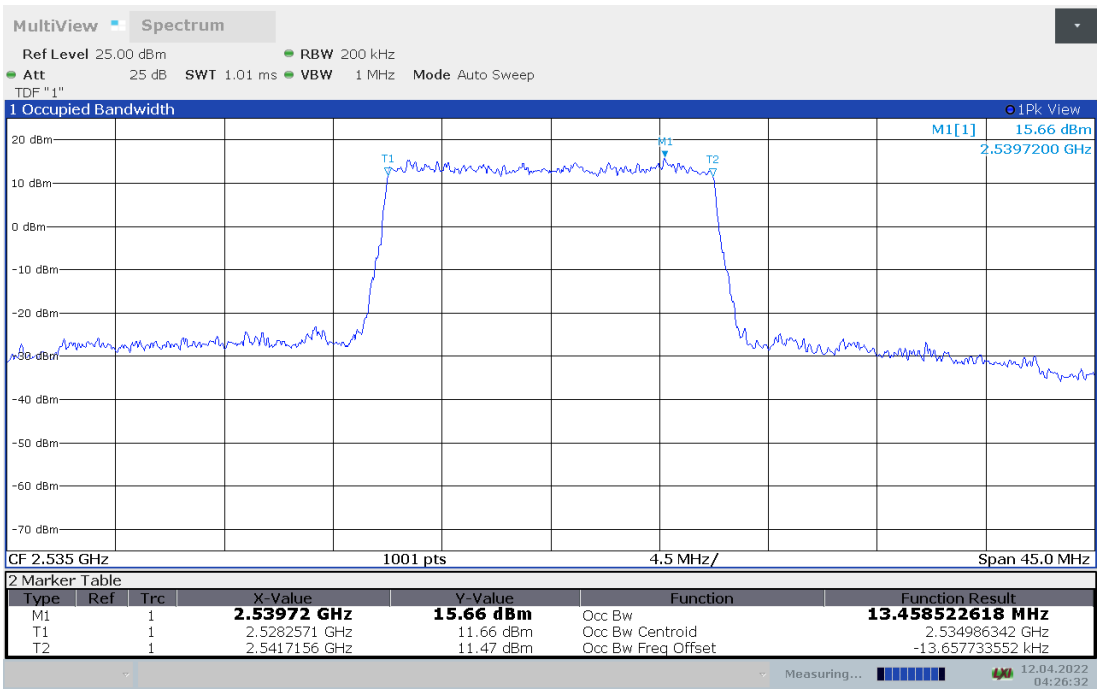
LTE band 7, 15MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	13.476	13.459

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



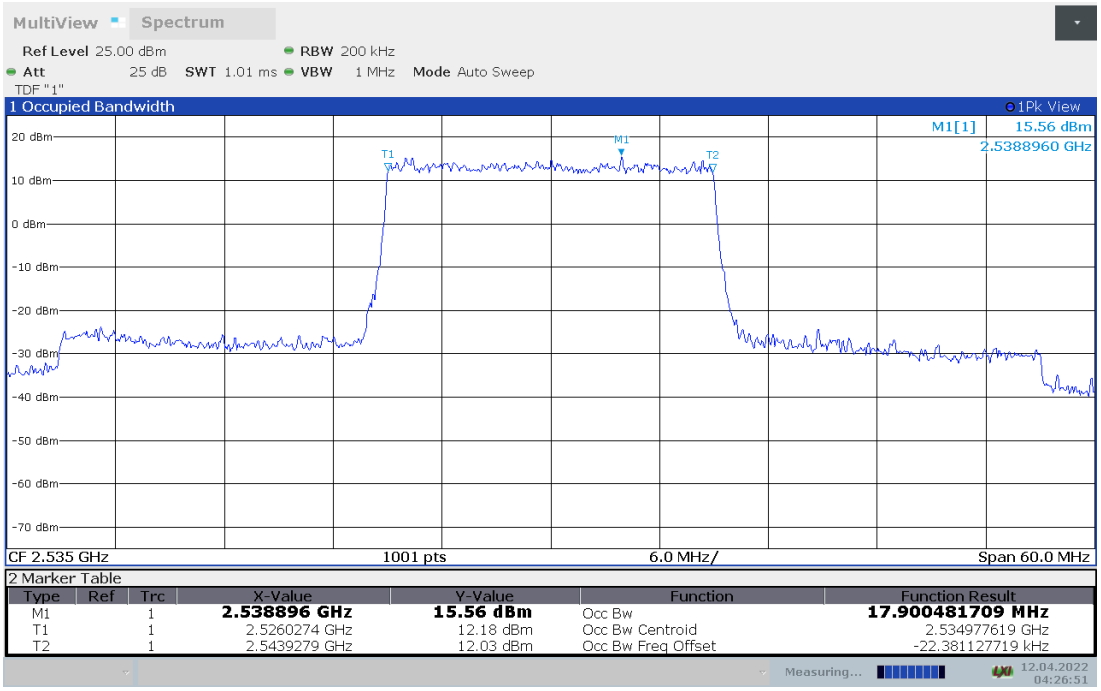
LTE band 7 , 15MHz Bandwidth,16QAM (99% BW)



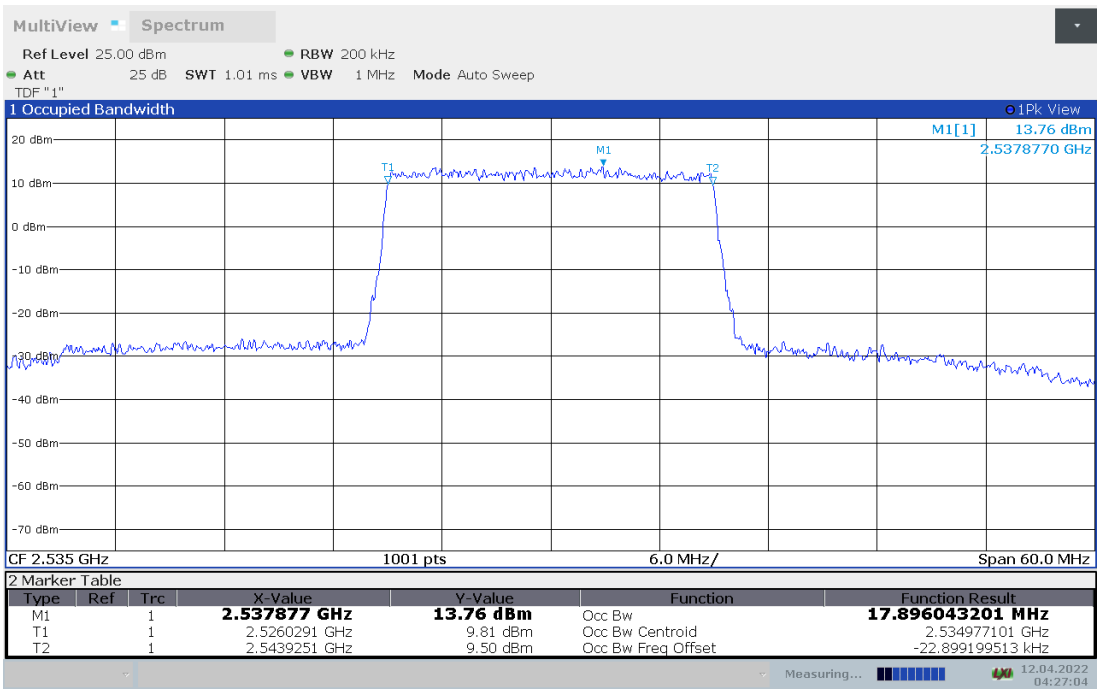
LTE band 7, 20MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	17.900	17.896

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



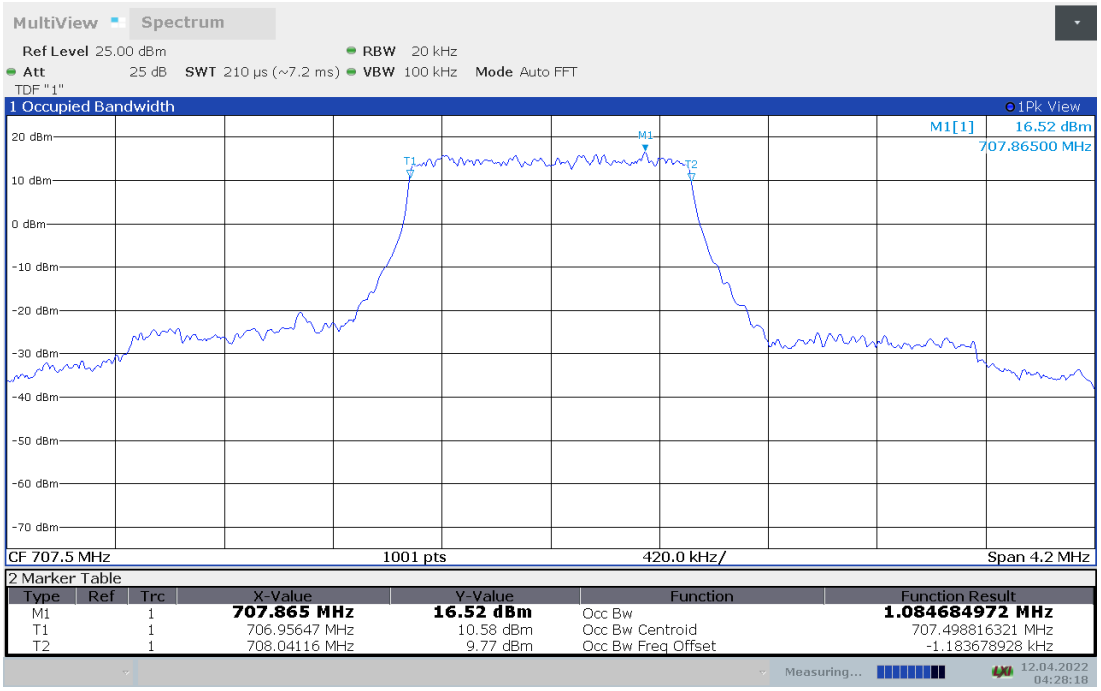
LTE band 7 , 20MHz Bandwidth,16QAM (99% BW)



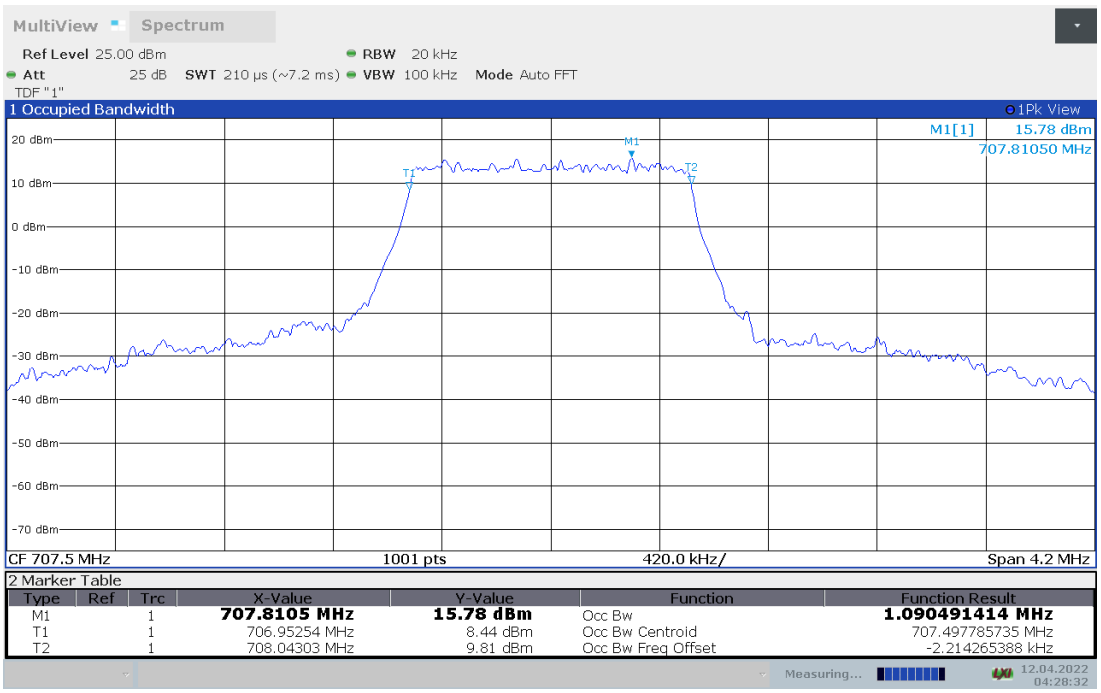
LTE band 12, 1.4MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	1.085	1.090

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



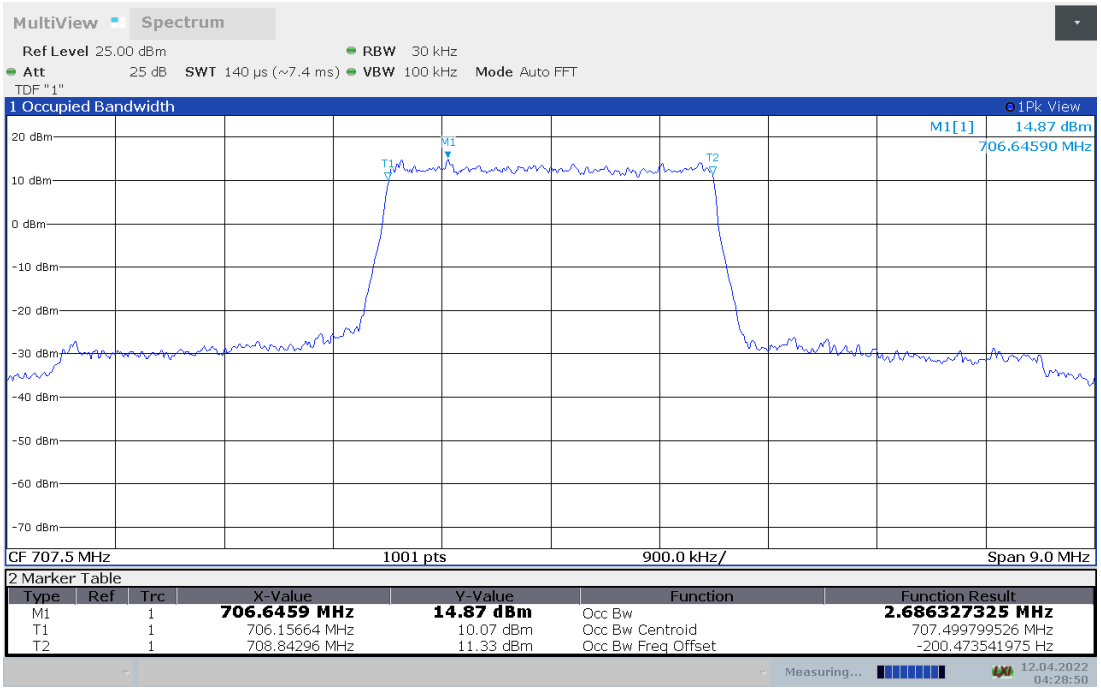
LTE band 12 , 1.4MHz Bandwidth,16QAM (99% BW)



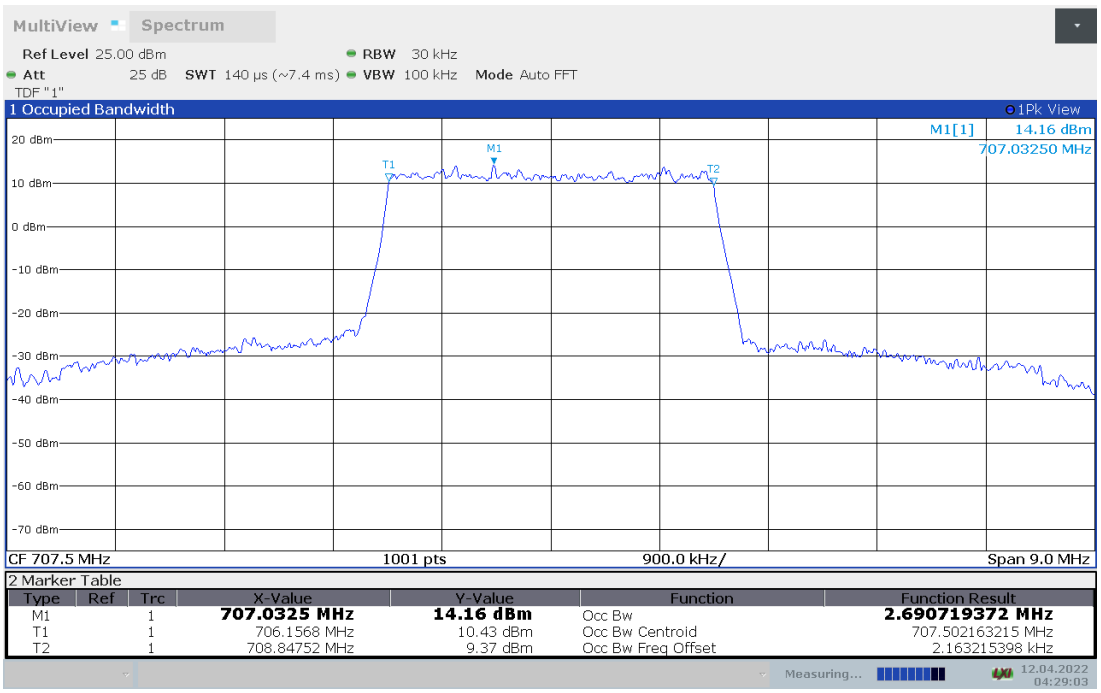
LTE band 12, 3MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	2.686	2.691

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



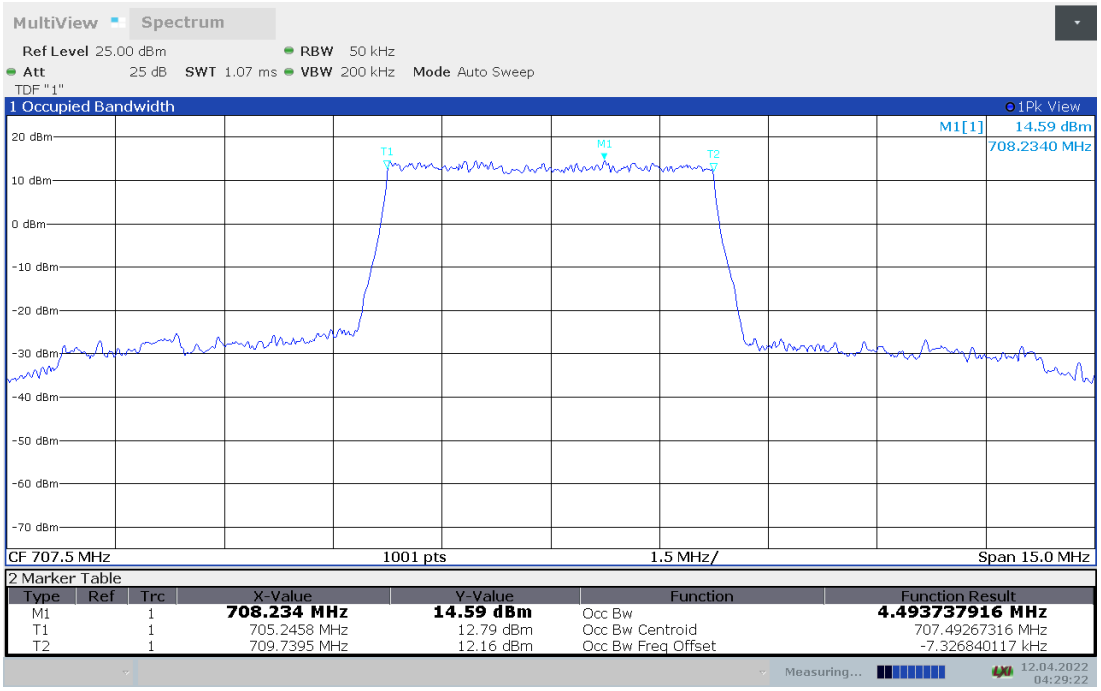
LTE band 12 , 3MHz Bandwidth,16QAM (99% BW)



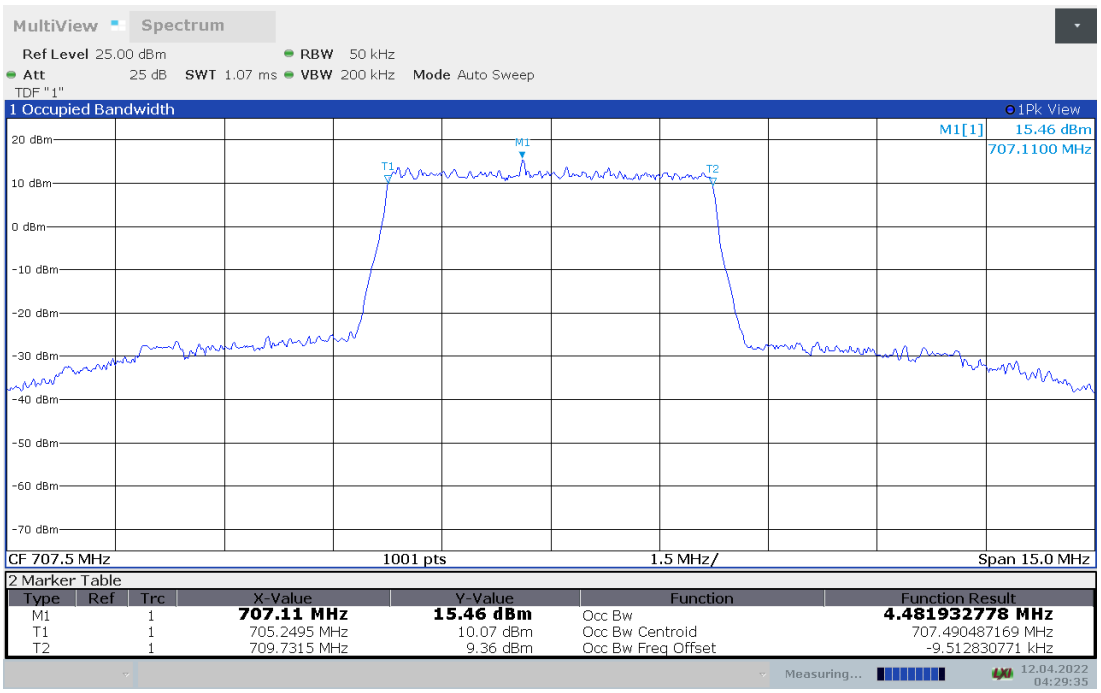
LTE band 12, 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	4.494	4.482

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



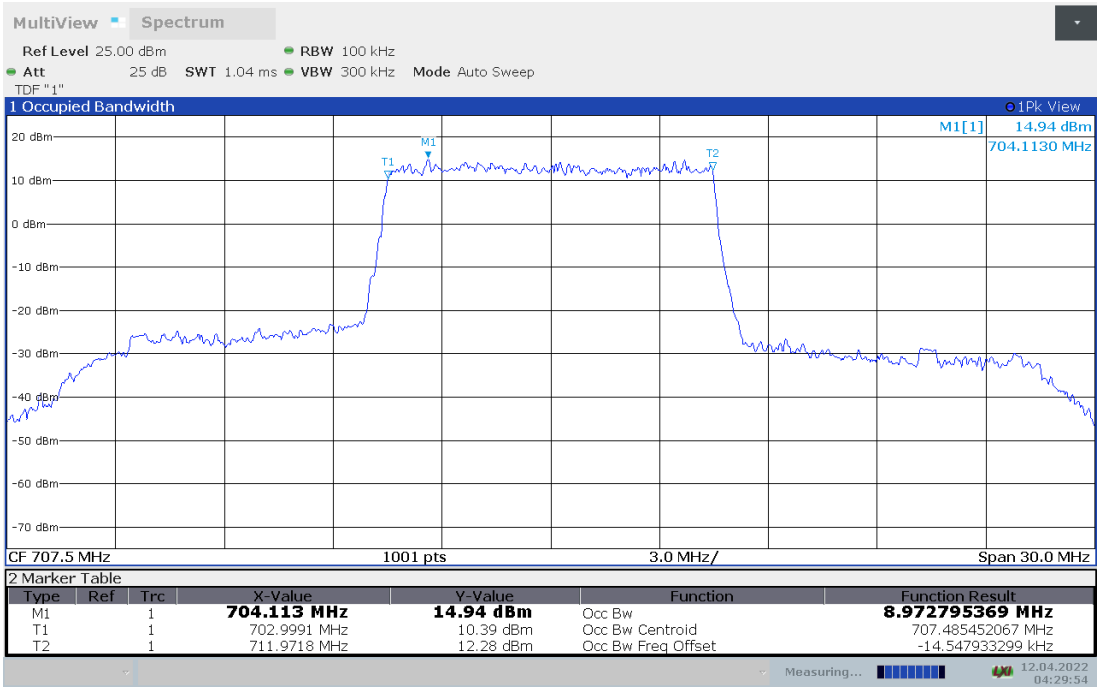
LTE band 12 , 5MHz Bandwidth,16QAM (99% BW)



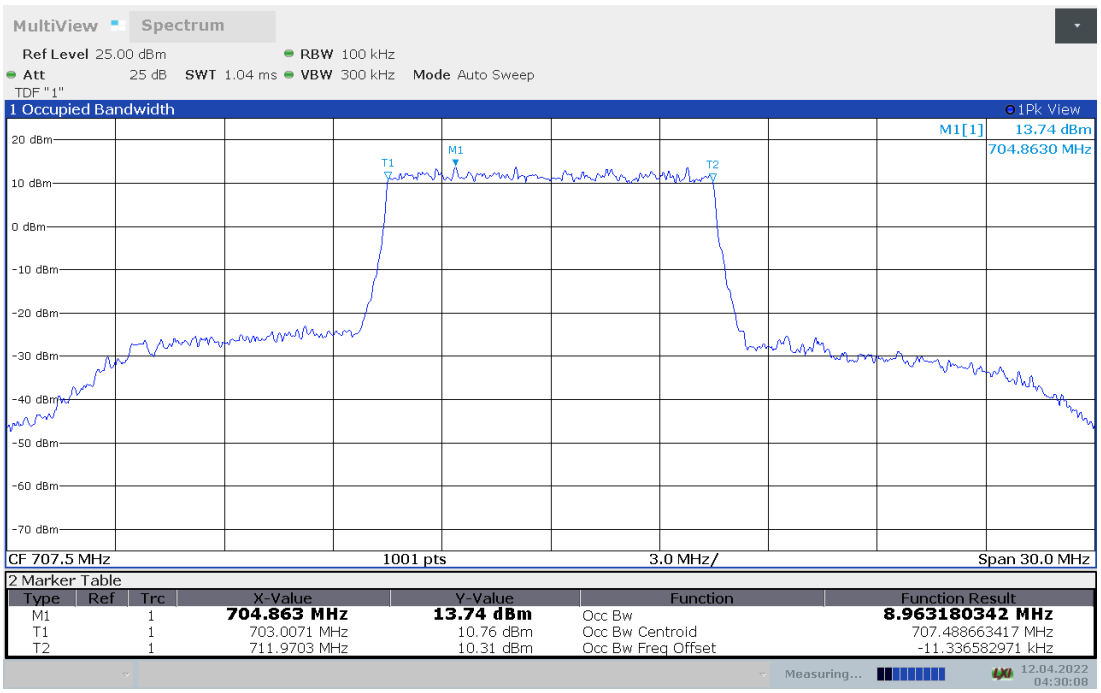
LTE band 12, 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	8.973	8.963

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



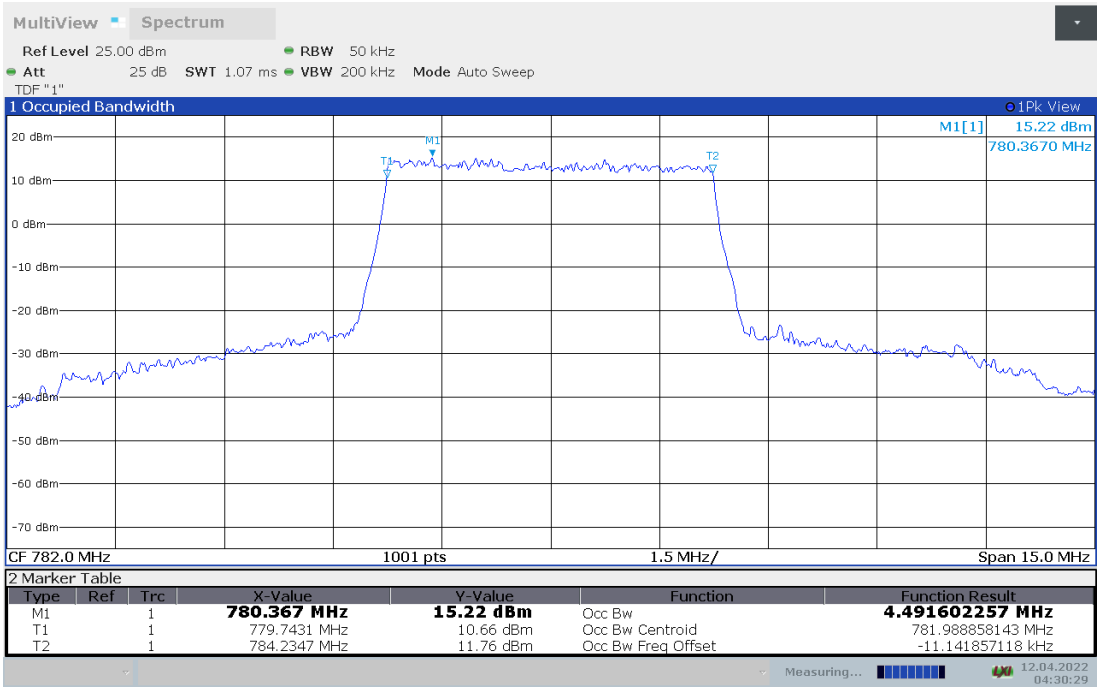
LTE band 12 , 10MHz Bandwidth,16QAM (99% BW)



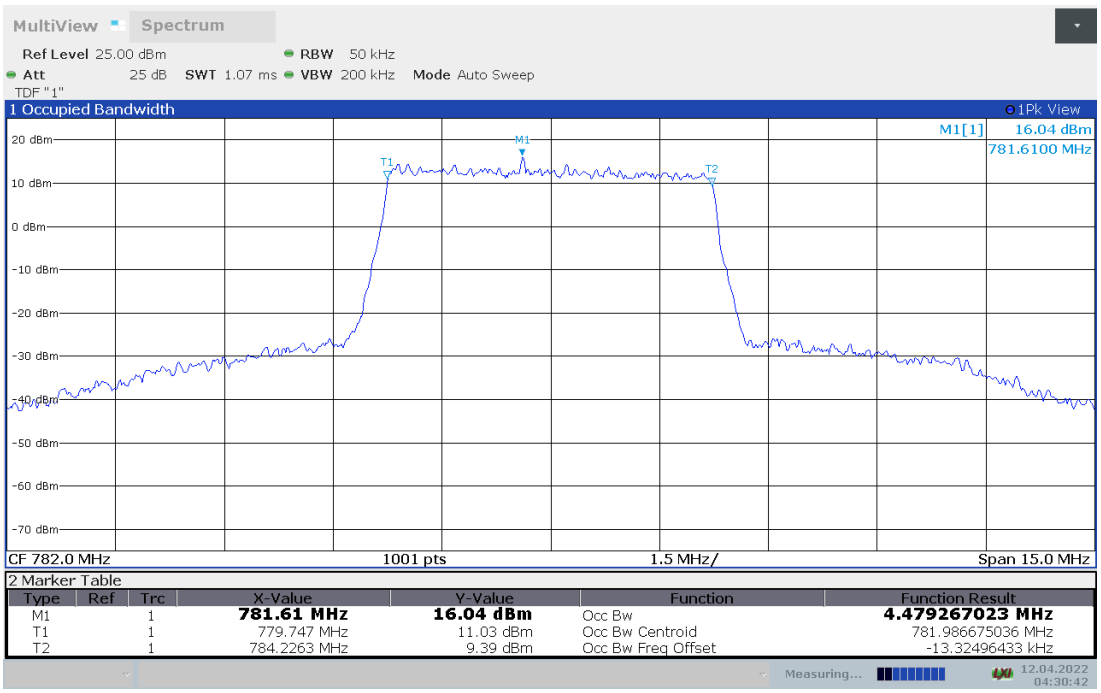
LTE band 13, 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
782	4.492	4.479

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



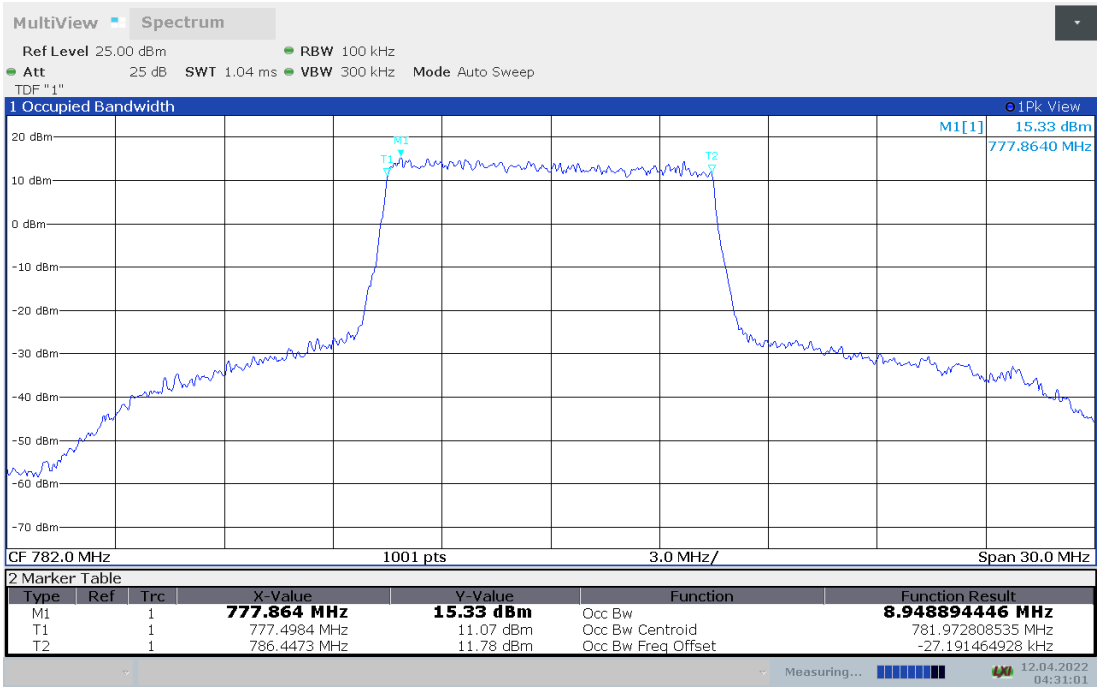
LTE band 13 , 5MHz Bandwidth,16QAM (99% BW)



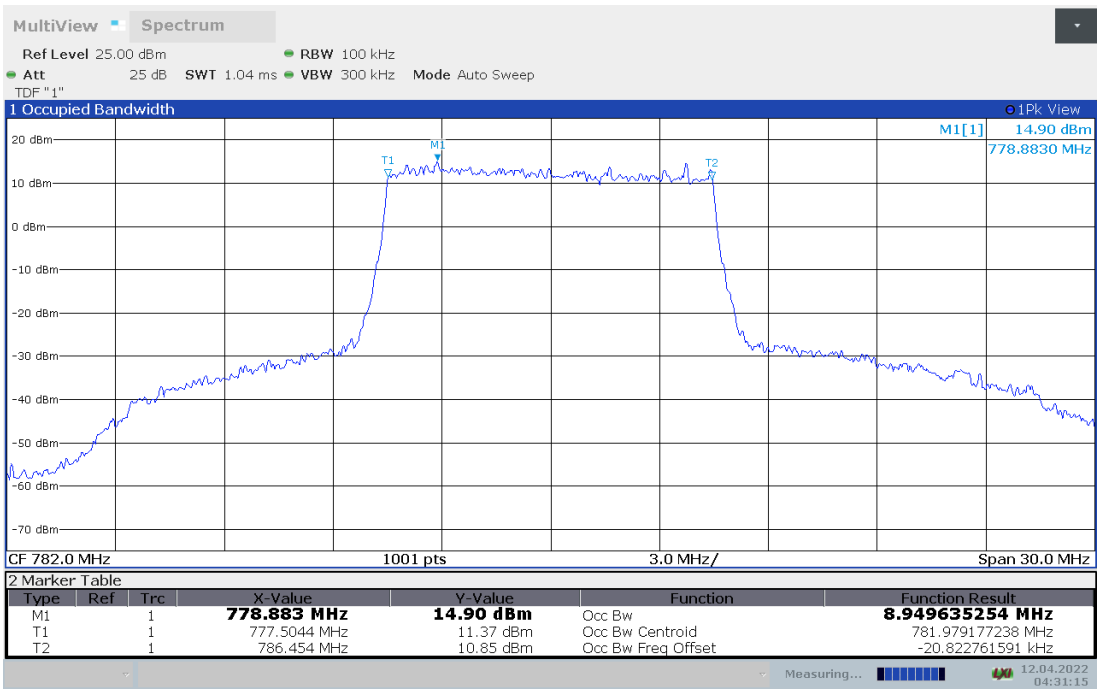
LTE band 13, 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
782	8.949	8.950

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



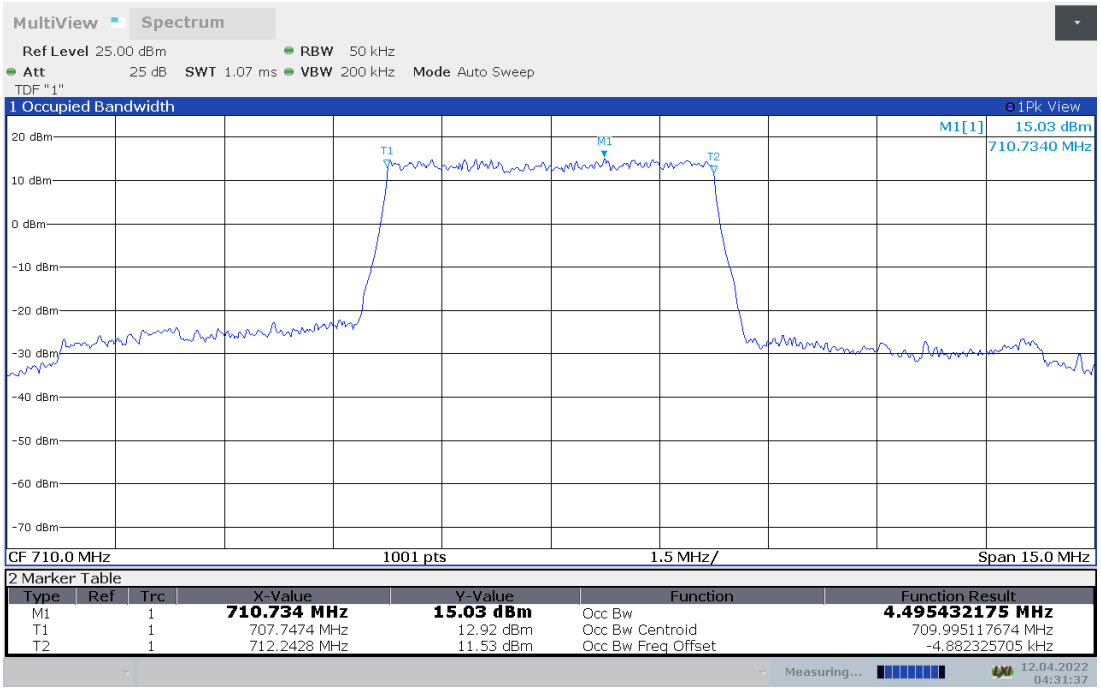
LTE band 13 , 10MHz Bandwidth,16QAM (99% BW)



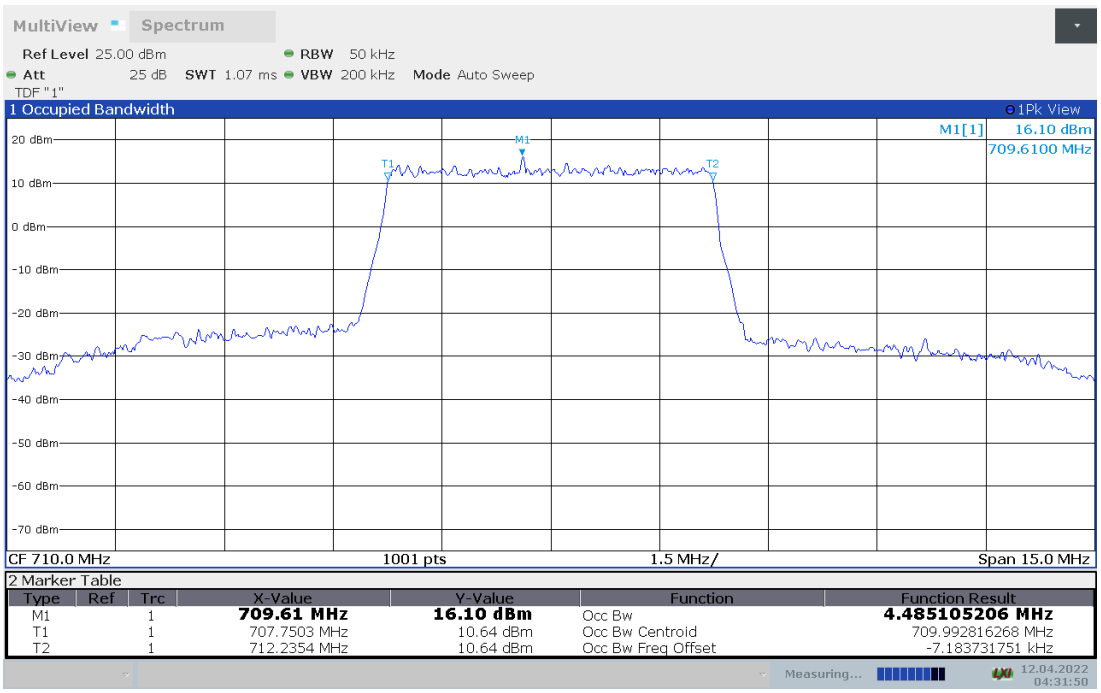
LTE band 17, 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
710	4.495	4.485

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



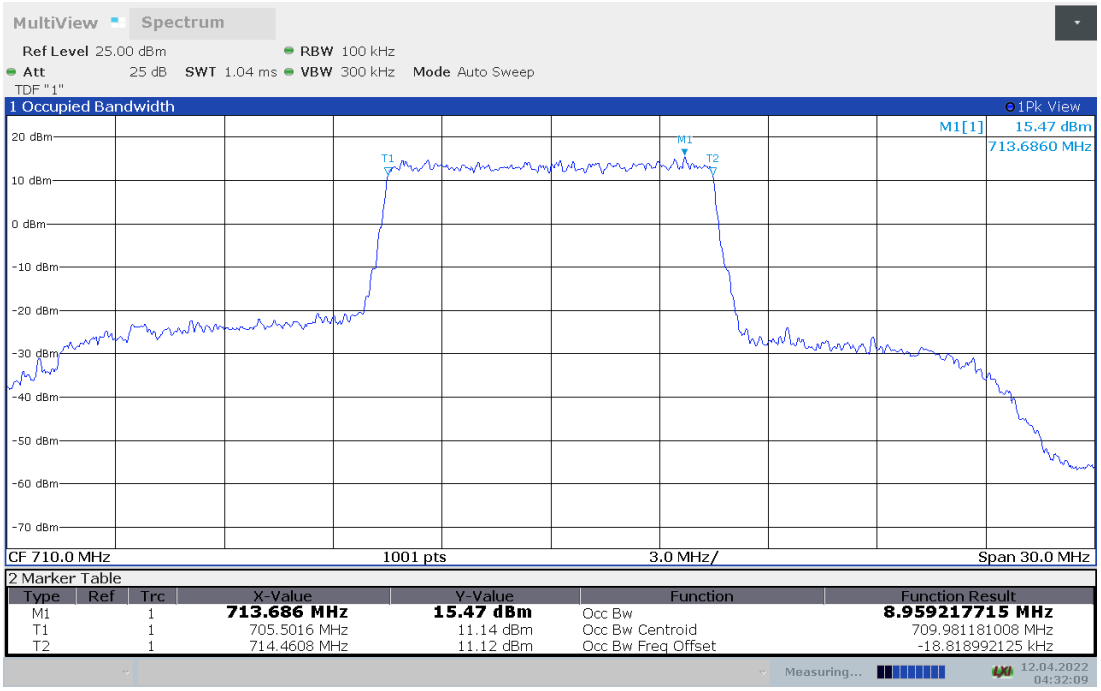
LTE band 17 , 5MHz Bandwidth,16QAM (99% BW)



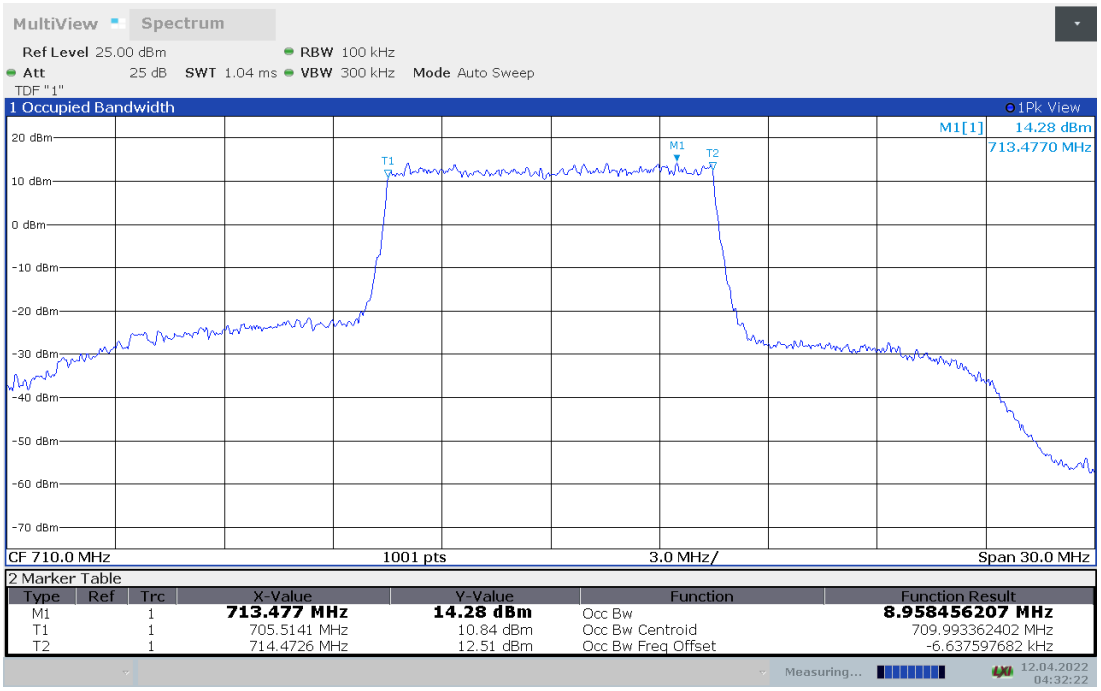
LTE band 17, 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
710	8.959	8.958

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



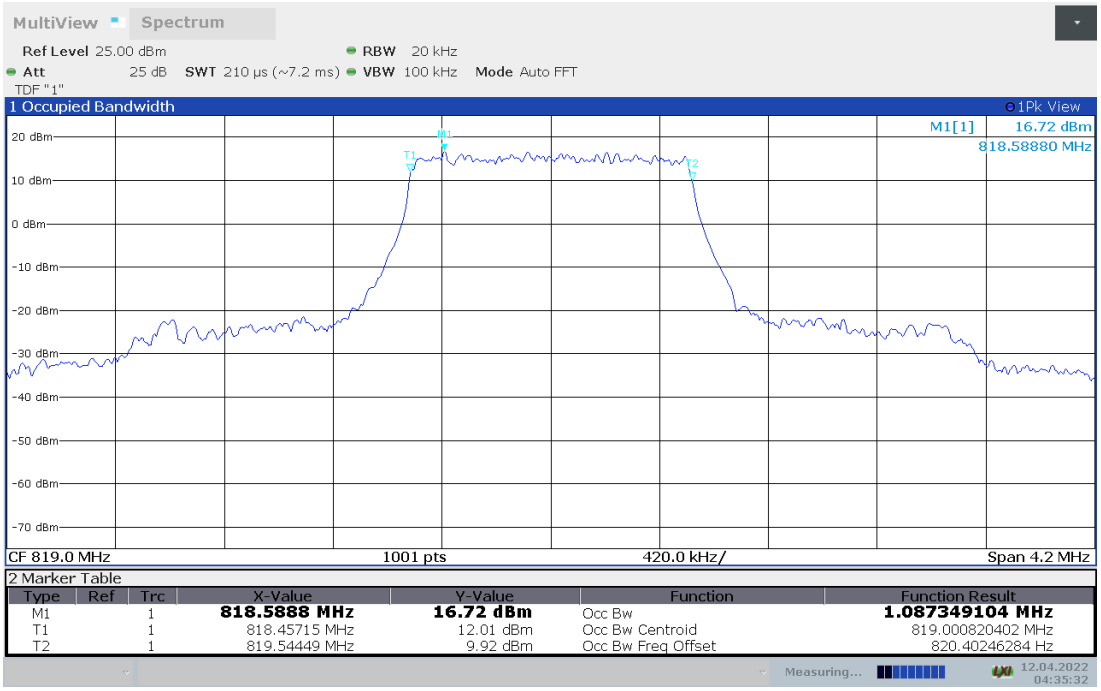
LTE band 17 , 10MHz Bandwidth,16QAM (99% BW)



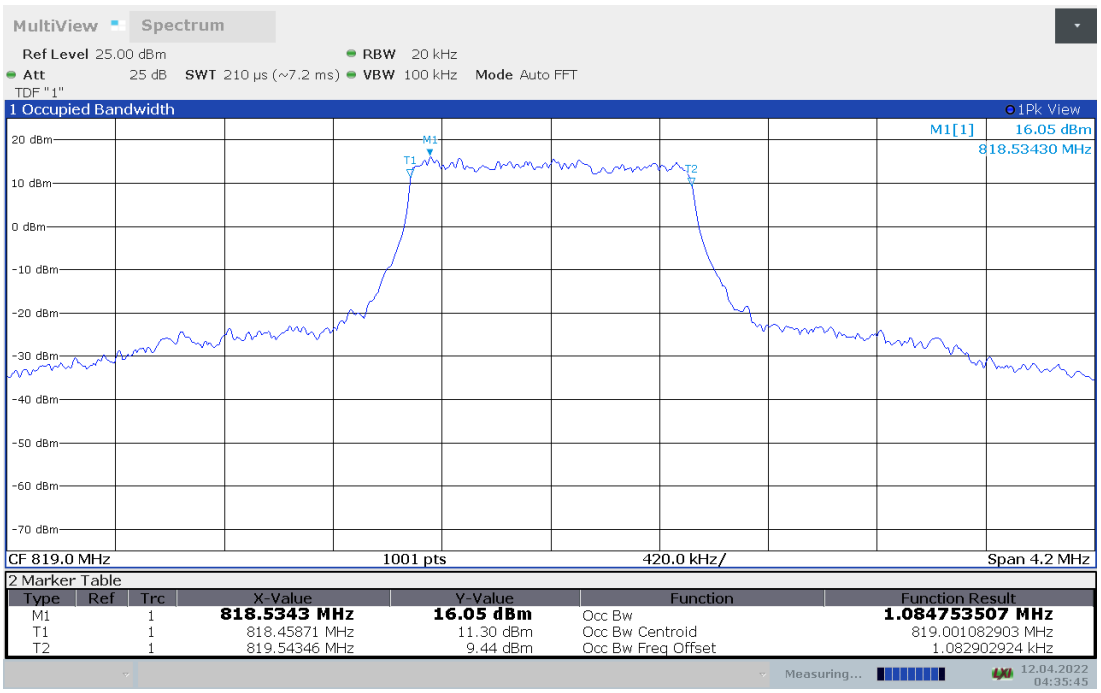
LTE band 26(814MHz-824MHz), 1.4MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
819	1.087	1.085

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



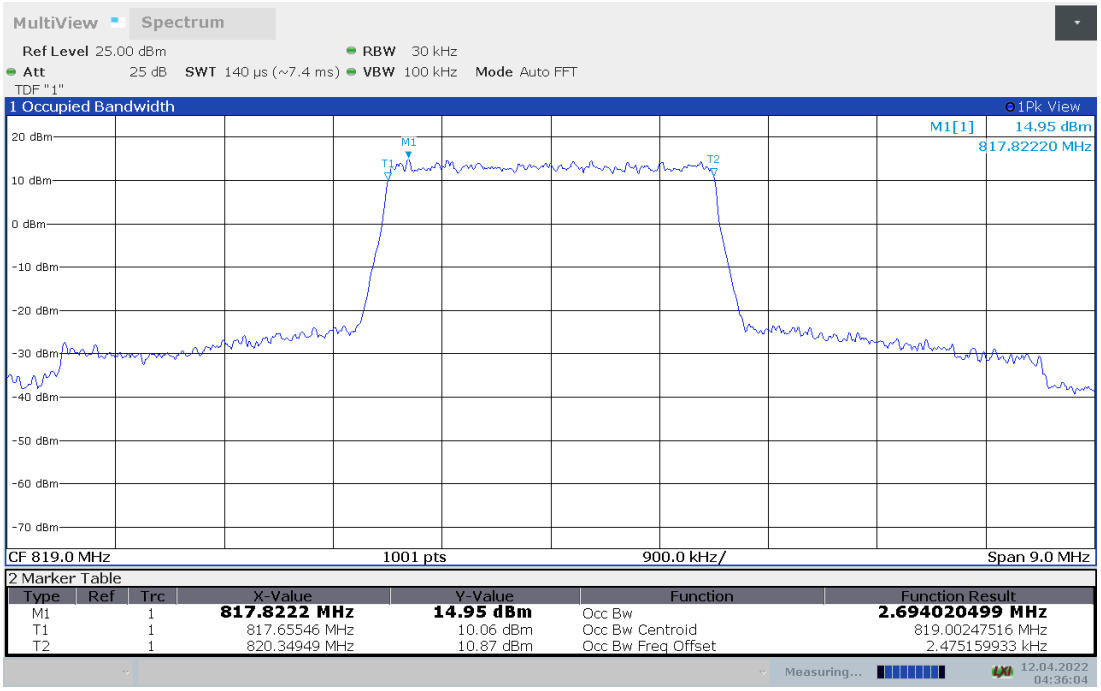
LTE band 26 , 1.4MHz Bandwidth,16QAM (99% BW)



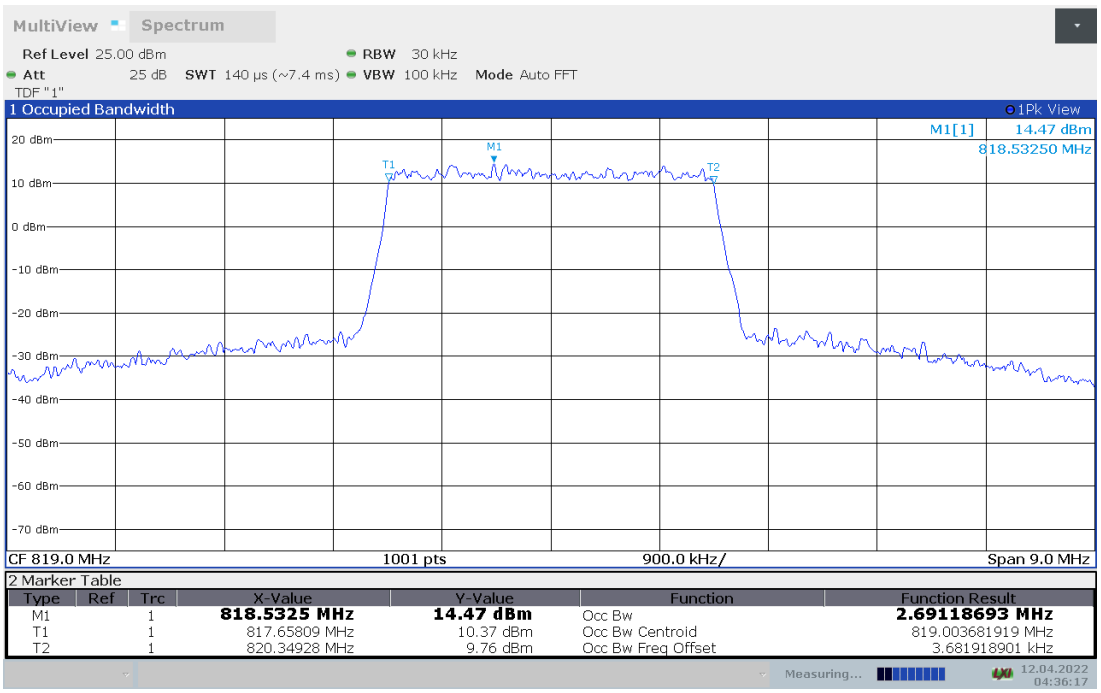
LTE band 26(814MHz-824MHz), 3MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
819	2.694	2.691

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



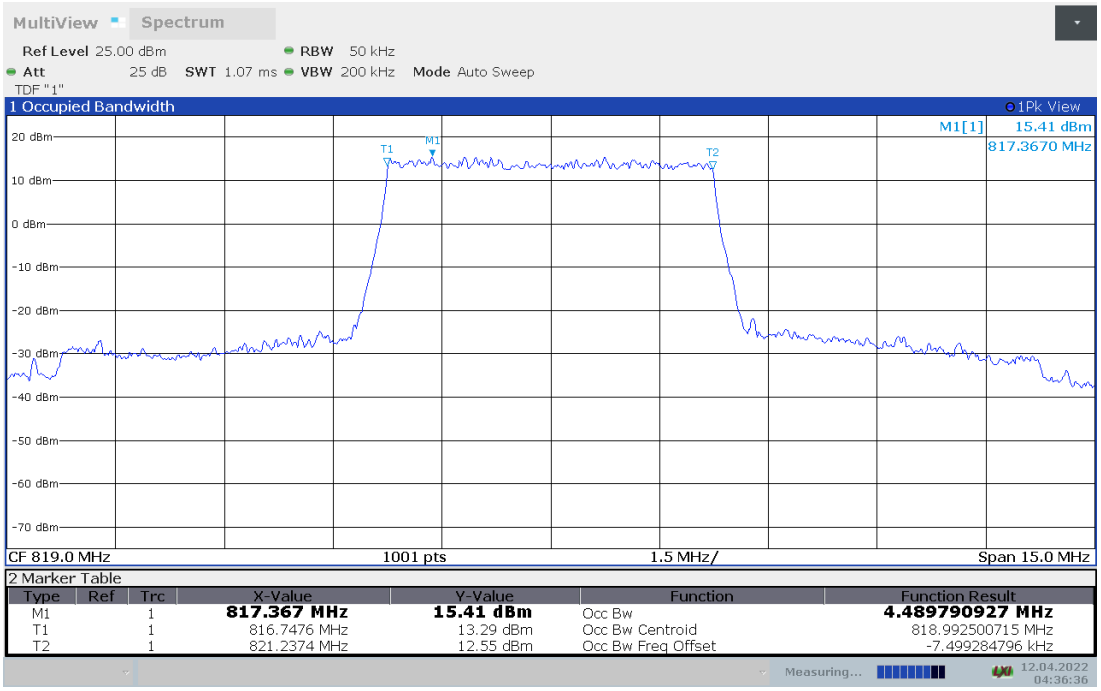
LTE band 26 , 3MHz Bandwidth,16QAM (99% BW)



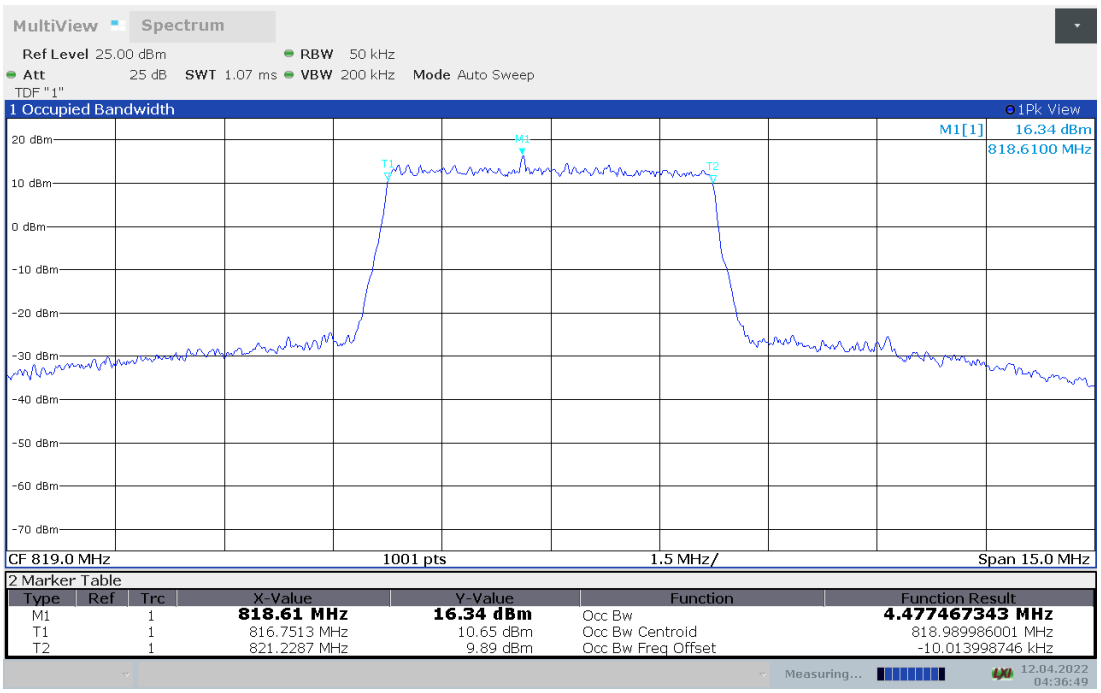
LTE band 26(814MHz-824MHz), 5MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
819	4.490	4.477

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



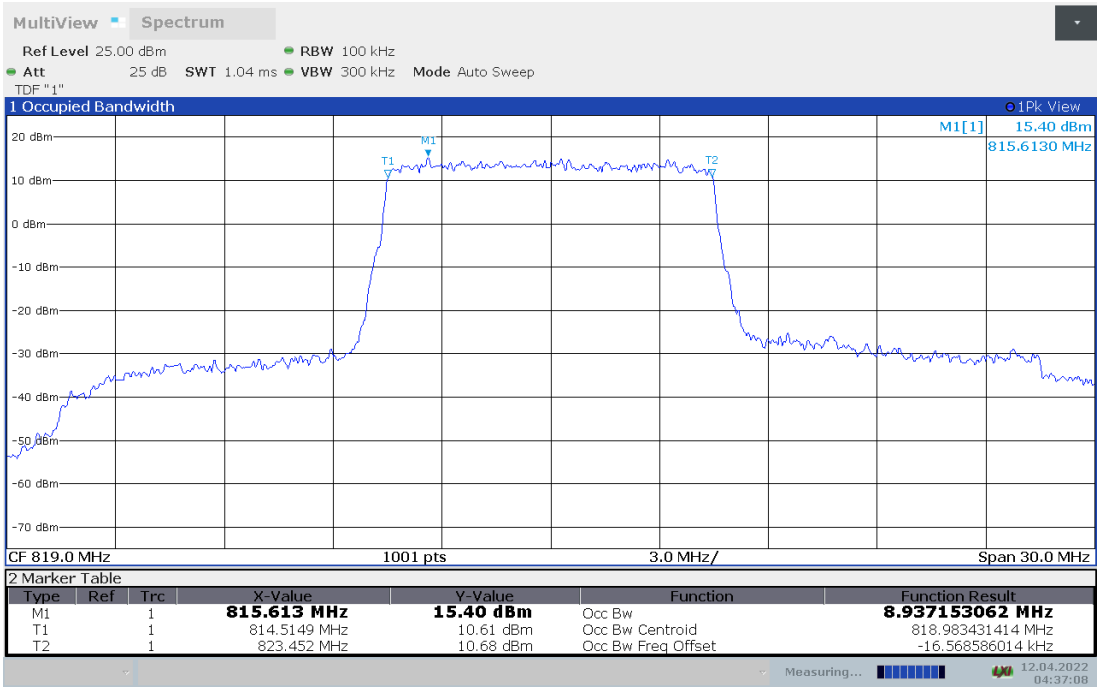
LTE band 26 , 5MHz Bandwidth,16QAM (99% BW)



LTE band 26(814MHz-824MHz), 10MHz (99% BW)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
819	8.937	8.930

LTE band 26 , 10MHz Bandwidth,QPSK (99% BW)



LTE band 26 , 10MHz Bandwidth,16QAM (99% BW)