



TEST REPORT

No. I21Z61482-WMD03

for

TCL Communication Ltd.

5G NR/ LTE/WCDMA/GSM Mobile Phone

Model Name: T781S,T781SPP

FCC ID: 2ACCJN056

with

Hardware Version: 03

Software Version: 3D4Y

Issued Date: 2021-12-13

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.

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I21Z61482-WMD03	Rev.0	1 st edition	2021-10-09
I21Z61482-WMD03	Rev.1	2 nd edition Update the description on page 13 and 36. Add the KDB 940660 on page 9.	2021-10-18
I21Z61482-WMD03	Rev.2	3 rd edition Update the results for Band 48 and 48C in A.1.3.	2021-12-13

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



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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 2: CTTL(Shouxiang)

Address: Shouxiang Building, No.51 Xueyan Road, Haidian
District, Beijing 100191, P.R. China

1.3. Testing Environment

Normal Temperature: 15-35°C
Relative Humidity: 20-75%

1.4. Project Data

Testing Start Date: 2021-08-02
Testing End Date: 2021-09-27

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: TCL Communication Ltd.
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Telephone: 0086-755-36611722
Fax: 0086-755-36612000-81722

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
Contact: Gong Zhizhou
Email: zhizhou.gong@tcl.com
Telephone: 0086-755-36611722
Fax: 0086-755-36612000-81722

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

3.1. About EUT

Description	5G NR/ LTE/WCDMA/GSM Mobile Phone
Model Name	T781S,T781SPP
FCC ID	2ACCJN056
Antenna	Embedded
Output power	24.65dBm maximum EIRP measured for LTE Band 2
Extreme vol. Limits	3.6VDC to 4.4VDC (nominal: 3.8VDC)
Extreme temp. Tolerance	-10°C to +55°C
LTE DL 2CA Frequency Band	CA_13A-4A, CA_13A-66A, CA_13A-2A, CA_2A[4X4]-2A[4X4], CA_2A[4X4]-4A,2A-4A[4X4], CA_2A[4X4]-66A, CA_2A-66A[4X4], CA_2A-5A, CA_4A-5A, CA_5A-66A, CA_4A[4X4]-4A[4X4], CA_5B, CA_5A_5A, CA_66A[4X4]-66A[4X4], CA_66B[4X4], CA_66C[4X4], CA_2A[4X4]-48A,2A-48A[4X4], CA_4A[4X4]-48A,4A-48A[4X4], CA_13A-48A[4X4], CA_48A-66A[4X4], CA_48A[4X4]-66A, CA_48C[4X4], CA_2A[4X4]-46A, CA_4A[4X4]-46A, CA_13A-46A, CA_5A-46A, CA_46A-66A[4X4]
LTE DL 3CA Frequency Band	CA_2A-2A-4A, CA_2A-2A-5A, CA_2A-2A-13A, CA_2A-2A-66A, CA_2A-4A-4A, CA_2A-4A-5A, CA_2A-4A-13A, CA_2A-5A-66A, CA_2A-5B, CA_2A-13A-66A, CA_2A-66A-66A, CA_2A-66B, CA_2A-66C, CA_4A-4A-5A, CA_4A-4A-13A, CA_4A-5B, CA_5A-5A-66A, CA_5A-66A-66A, CA_5A-66B, CA_5A-66C, CA_5B-66A, CA_13A-66A-66A, CA_13A-66B, CA_13A-66C, CA_66A-66C, CA_66A-66A-66A, CA_2A-46A-46A, CA_2A-46C, CA_4A-46A-46A, CA_4A-46C, CA_5A-46C, CA_13A-46C, CA_46A-46A-66A, CA_46C-66A, CA_2A-5A-46A, CA_2A-13A-46A, CA_2A-46A-66A, CA_5A-46A-66A, CA_5B-46A, CA_13A-46A-66A, CA_2A-48A-48A, CA_2A-48C, CA_4A-48C, CA_13A-48A-48A, CA_13A-48A-66A, CA_13A-48C, CA_48A-48A-66A, CA_48A-66A-66A, CA_48A-66B, CA_48A-66C, CA_48C-66A, CA_48D
LTE DL 4CA Frequency Band	CA_2A-2A-66B, CA_2A-2A-66C, CA_2A-4A-5B, CA_2A-5A-66B, CA_2A-5A-66C, CA_2A-5B-66A, CA_2A-13A-66B, CA_2A-13A-66C, CA_4A-4A-5B, CA_5A-5A-66B, CA_5A-5A-66C, CA_5B-66A-66A, CA_5B-66B, CA_5B-66C, CA_2A-46A-46C, CA_2A-2A-46C, CA_5B-46C, CA_2A-46D, CA_4A-46A-46C, CA_4A-46D, CA_5A-46D, CA_13A-46D, CA_46A-46C-66A, CA_46D-66A, CA_2A-5A-46C, CA_2A-13A-46C, CA_2A-46C-66A, CA_5A-46C-66A, CA_13A-46C-66A, CA_2A-13A-48C, CA_2A-48A-48C, CA_4A-48D, CA_2A-48D, CA_13A-48C-66A, CA_13A-48A-66B, CA_13A-48A-66C, CA_13A-48A-48C, CA_13A-48D, CA_48A-48A-66B, CA_48A-48A-66C,



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CA_48A-48C-66A, CA_48C-66A-66A, CA_48D-66A, CA_48E,
 CA_48C-66B,CA_48C-66C
 LTE UL CA Frequency Band CA_5B, CA_66B, CA_48C
 LTE Frequency Band LTE FDD2/FDD3/FDD4/FDD5/FDD7/FDD12/FDD13/FDD20/FDD28/
 TDD46/TDD48/FDD66

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*	IMEI	HW Version	SW Version	Date of receipt
UT09a	016048000212374	03	3D4Y	2021-08-02
UT91a	016048000218041	03	3D4Y	2021-09-13
UT52a	016048000215922	03	3D4Y	2021-08-23
UT92a	016048000218090	03	3D4Y	2021-09-14

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

3.3. Internal Identification of AE used during the test

AE ID*	Description
AE1	Battery
AE1	
Model	TLp043F1
Manufacturer	BYD
Capacitance	4360mAh

*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 96	CITIZENS BROADBAND RADIO SERVICE	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
KDB 940660 D01	CERTIFICATION AND TEST PROCEDURES FOR CITIZENS BROADBAND RADIO SERVICE DEVICES AUTHORIZED UNDER PART 96	v03

5. Laboratory Environment

Semi-anechoic chamber 2 / Fully-anechoic chamber 3 (10 meters×6.7 meters×6.15 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	>2 M
Ground system resistance	< 0.5
Normalised site attenuation (NSA)	<±3.5 dB, 3 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
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 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 48

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	96.41	P
2	Emission Limit	96.41	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	96.41	P
6	Band Edge Compliance	96.41	P
7	Conducted Spurious Emission	96.41	P
8	Peak-to-Average Power Ratio	96.41	P
9	End User Device Additional Requirements (CBSD Protocol)	96.47	P

LTE Band 66(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

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.

Band 66 overlaps the entire frequency range of LTE Band 4. Therefore, test data provided in this report covers Band 4 as well as Band 66.

Band 2 and 66(except CA) support antenna ports of ANT2 and ANT3, both of which are tested.

Band 48 supports antenna port of ANT4.

Explanation of worst-case configuration

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

7. Test Equipment Utilized

Description	Type	Series Number	Manufacture	Cal Due Date	Calibration Interval
Wideband Radio Communication Tester	CMW500	159082	R&S	2021-12-17	1 year
Spectrum Analyzer	FSU	200030	R&S	2022-06-02	1 year
Radio Communication Analyzer	MT8821C	6201763159	Anritsu	2022-08-09	1 year
Signal&Spectrum Analyzer	FSW	104038	R&S	2022-06-24	1 year
Climate Chamber	SH-242	93008556	ESPEC	2023-12-23	3 years
Test Receiver	E4440A	MY48250642	Agilent	2022-03-04	1 year
Universal Radio Communication Tester	CMW500	143008	R&S	2021-12-01	1 year
EMI Antenna	VULB9163	9163-235	Schwarzbeck	2022-04-07	1 year
Signal Generator	N5183A	MY49060052	R&S	2022-07-11	1 year
EMI Antenna	3117	00058888	ETS-Lindgren	2021-11-30	1 year
EMI Antenna	9117	167	Schwarzbeck	2022-08-19	1 year
Universal Radio Communication Tester	CMW500	168471	R&S	2022-06-09	1 year

Annex A: Measurement Results

A.1 Output Power

A.1.1 Summary

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

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

A.1.2 Conducted

A.1.2.1 Method of Measurements

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

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

A.1.2.2 Measurement Result

LTE Band 2-ANT2

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1909.3	24.12	23.33	23.30
		1880.0	24.17	23.50	23.43
		1850.7	24.15	23.47	23.42
	1 RB low	1909.3	24.08	23.36	23.25
		1880.0	24.29	23.57	23.50
		1850.7	24.23	23.47	23.51
	50% RB mid	1909.3	24.07	23.21	23.30
		1880.0	24.32	23.04	23.51
		1850.7	24.40	22.91	23.47
	100% RB	1909.3	23.27	22.30	22.20
		1880.0	23.32	22.28	22.32
		1850.7	23.29	22.34	22.17
3MHz	1 RB high	1908.5	24.26	23.54	23.17
		1880.0	24.30	23.55	23.42
		1851.5	24.26	23.41	23.43
	1 RB low	1908.5	24.35	23.50	23.43
		1880.0	24.40	23.76	23.55
		1851.5	24.45	23.64	23.55
	50% RB mid	1908.5	23.25	22.38	22.36
		1880.0	23.47	22.54	22.51
		1851.5	23.41	22.46	22.31
	100% RB	1908.5	23.29	22.37	22.41

		1880.0	23.38	22.34	22.41
		1851.5	23.31	22.33	22.28
5MHz	1 RB high	1907.5	24.21	23.37	23.29
		1880.0	24.25	23.52	23.39
		1852.5	24.38	23.53	23.45
	1 RB low	1907.5	24.18	23.64	23.42
		1880.0	24.44	23.72	23.59
		1852.5	24.27	23.70	23.50
	50% RB mid	1907.5	23.33	22.37	22.48
		1880.0	23.35	22.38	22.37
		1852.5	23.37	22.44	22.36
	100% RB	1907.5	23.28	22.32	22.34
		1880.0	23.38	22.34	22.42
		1852.5	23.39	22.39	22.30
10MHz	1 RB high	1905.0	24.12	23.80	23.36
		1880.0	24.28	23.54	23.42
		1855.0	24.22	23.46	23.41
	1 RB low	1905.0	24.27	23.78	23.49
		1880.0	24.42	23.72	23.45
		1855.0	24.33	23.59	23.47
	50% RB mid	1905.0	23.40	22.47	22.45
		1880.0	23.44	22.42	22.49
		1855.0	23.44	22.39	22.46
	100% RB	1905.0	23.37	22.36	22.39
		1880.0	23.49	22.49	22.43
		1855.0	23.34	22.40	22.36
15MHz	1 RB high	1902.5	24.15	23.60	23.48
		1880.0	24.18	23.52	23.38
		1857.5	24.15	23.64	23.37
	1 RB low	1902.5	24.13	23.44	23.23
		1880.0	24.24	23.66	23.47
		1857.5	24.16	23.57	23.34
	50% RB mid	1902.5	23.29	22.28	22.32
		1880.0	23.29	22.22	22.39
		1857.5	23.35	22.30	22.32
	100% RB	1902.5	23.26	22.24	22.23
		1880.0	23.27	22.31	22.38
		1857.5	23.35	22.30	22.36
20MHz	1 RB high	1900.0	24.00	23.41	23.37
		1880.0	24.14	23.48	23.24
		1860.0	24.14	23.57	23.43
	1 RB low	1900.0	24.11	23.44	23.09



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		1880.0	24.15	23.64	23.41
		1860.0	24.18	23.43	23.20
	50% RB mid	1900.0	23.21	22.16	22.15
		1880.0	23.22	22.22	22.20
		1860.0	23.30	22.36	22.36
	100% RB	1900.0	23.17	22.17	22.23
		1880.0	23.17	22.36	22.31
		1860.0	23.31	22.32	22.24

LTE Band 2-ANT3

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1909.3	23.94	23.29	23.21
		1880.0	24.00	23.27	23.34
		1850.7	24.00	23.37	23.36
	1 RB low	1909.3	24.00	23.40	23.34
		1880.0	24.03	23.29	23.18
		1850.7	24.08	23.43	23.34
	50% RB mid	1909.3	24.18	23.39	23.20
		1880.0	24.27	23.36	23.27
		1850.7	24.19	23.32	23.18
	100% RB	1909.3	23.25	22.16	22.09
		1880.0	23.11	22.26	22.17
		1850.7	23.17	22.15	22.17
3MHz	1 RB high	1908.5	24.14	23.60	23.19
		1880.0	24.07	23.42	23.24
		1851.5	24.15	23.53	23.34
	1 RB low	1908.5	24.37	23.55	23.39
		1880.0	24.37	23.57	23.30
		1851.5	24.34	23.60	23.43
	50% RB mid	1908.5	23.32	22.35	22.21
		1880.0	23.33	22.32	22.29
		1851.5	23.26	22.33	22.29
	100% RB	1908.5	23.22	22.40	22.37
		1880.0	23.33	22.24	22.27
		1851.5	23.23	22.31	22.26
5MHz	1 RB high	1907.5	24.13	23.47	23.13
		1880.0	24.09	23.57	23.37
		1852.5	24.21	23.44	23.28
	1 RB low	1907.5	24.20	23.68	23.36
		1880.0	24.19	23.60	23.29
		1852.5	24.27	23.68	23.36
	50% RB mid	1907.5	23.37	22.34	22.30
		1880.0	23.29	22.35	22.24
		1852.5	23.31	22.35	22.41
	100% RB	1907.5	23.25	22.23	22.32
		1880.0	23.17	22.21	22.20
		1852.5	23.32	22.28	22.30
10MHz	1 RB high	1905.0	24.21	23.62	23.40
		1880.0	24.21	23.56	23.40
		1855.0	24.23	22.74	23.23

	1 RB low	1905.0	24.28	23.87	23.57
		1880.0	24.25	23.72	23.48
		1855.0	24.28	23.70	23.46
	50% RB mid	1905.0	23.29	22.35	22.40
		1880.0	23.34	22.38	22.34
		1855.0	23.41	22.41	22.33
	100% RB	1905.0	23.30	22.25	22.29
		1880.0	23.30	22.32	22.21
		1855.0	23.31	22.39	22.25
15MHz	1 RB high	1902.5	24.29	23.71	22.57
		1880.0	24.33	23.61	22.43
		1857.5	24.27	23.58	22.68
	1 RB low	1902.5	24.25	23.72	22.51
		1880.0	24.20	23.60	22.35
		1857.5	24.28	23.58	22.59
	50% RB mid	1902.5	23.40	22.30	21.35
		1880.0	23.31	22.21	21.32
		1857.5	23.44	22.33	21.29
	100% RB	1902.5	23.40	22.33	21.19
		1880.0	23.33	22.39	21.30
		1857.5	23.32	22.43	21.29
20MHz	1 RB high	1900.0	23.80	23.26	23.18
		1880.0	23.92	23.22	23.17
		1860.0	23.85	23.42	23.28
	1 RB low	1900.0	23.94	23.22	23.24
		1880.0	23.87	23.35	23.43
		1860.0	23.87	23.27	23.29
	50% RB mid	1900.0	23.05	22.10	21.98
		1880.0	22.98	21.88	21.95
		1860.0	23.02	22.05	21.96
	100% RB	1900.0	23.03	22.07	22.10
		1880.0	22.91	21.99	21.97
		1860.0	23.03	21.98	22.08

LTE band 5

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.89	23.42	22.18
		836.5	23.91	23.14	22.15
		824.7	23.94	23.19	22.26
	1 RB low	848.3	23.81	23.16	22.23
		836.5	23.90	23.08	22.13
		824.7	23.99	23.30	22.17
	50% RB mid	848.3	24.08	23.19	22.22
		836.5	24.07	23.02	22.11
		824.7	24.15	23.02	22.24
	100% RB	848.3	23.06	22.22	21.12
		836.5	22.95	21.95	21.03
		824.7	23.10	22.11	21.12
3MHz	1 RB high	847.5	24.29	23.45	23.28
		836.5	24.26	23.48	23.08
		825.5	24.06	23.44	23.24
	1 RB low	847.5	24.00	23.47	23.19
		836.5	24.04	23.47	23.16
		825.5	24.27	23.45	23.34
	50% RB mid	847.5	23.26	22.25	22.27
		836.5	23.16	22.21	22.09
		825.5	23.32	22.32	22.25
	100% RB	847.5	23.24	22.28	22.31
		836.5	23.16	22.19	22.17
		825.5	23.20	22.41	22.32
5MHz	1 RB high	846.5	24.21	23.43	23.14
		836.5	24.06	23.47	23.33
		826.5	24.03	23.45	23.18
	1 RB low	846.5	24.08	23.46	23.20
		836.5	24.19	23.48	23.18
		826.5	24.27	23.43	23.47
	50% RB mid	846.5	23.15	22.24	22.19
		836.5	23.18	22.18	22.10
		826.5	23.24	22.29	22.29
	100% RB	846.5	23.18	22.21	22.17
		836.5	23.14	22.15	22.27
		826.5	23.23	22.32	22.28
10MHz	1 RB high	844.0	24.15	23.42	22.26



		836.5	24.16	23.43	22.34
		829.0	24.17	23.47	22.32
	1 RB low	844.0	24.06	23.50	22.36
		836.5	24.15	23.42	22.19
		829.0	24.07	23.45	22.30
	50% RB mid	844.0	23.27	22.16	21.21
		836.5	23.31	22.26	21.35
		829.0	23.32	22.27	21.24
	100% RB	844.0	23.16	22.23	21.21
		836.5	23.16	22.29	21.21
		829.0	23.26	22.29	21.35

CA_5B

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)
				Size	Offset	Size	Offset	
3MHz/ 5MHz	834.1	838.0	QPSK	1	14	1	0	24.76
				15	0	25	0	24.83
			16QAM	1	14	1	0	24.25
				15	0	25	0	24.42
			64QAM	1	14	1	0	23.73
				15	0	25	0	23.72
5MHz/ 3MHz	835.0	838.9	QPSK	1	24	1	0	24.58
				25	0	15	0	24.68
			16QAM	1	24	1	0	24.16
				25	0	15	0	24.35
			64QAM	1	24	1	0	23.35
				25	0	15	0	23.64
5MHz/ 10MHz	831.8	839.0	QPSK	1	24	1	0	24.51
				25	0	50	0	22.62
			16QAM	1	24	1	0	23.94
				25	0	50	0	21.62
			64QAM	1	24	1	0	22.95
				25	0	50	0	21.65
10MHz/ 5MHz	834.0	841.2	QPSK	1	49	1	0	24.46
				50	0	25	0	22.55
			16QAM	1	49	1	0	23.95
				50	0	25	0	21.61
			64QAM	1	49	1	0	22.82
				50	0	25	0	21.59
10MHz/ 10MHz	831.6	841.5	QPSK	1	49	1	0	24.59
				50	0	50	0	22.53
			16QAM	1	49	1	0	24.06
				50	0	50	0	21.68
			64QAM	1	49	1	0	22.74
				50	0	50	0	21.57

LTE Band 7

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	24.15	23.24	23.18
		2535.0	24.05	23.28	23.06
		2502.5	23.65	23.23	23.15
	1 RB low	2567.5	24.12	23.23	23.21
		2535.0	23.95	23.16	23.11
		2502.5	23.56	23.07	22.83
	50% RB mid	2567.5	23.20	22.31	22.09
		2535.0	23.15	22.22	21.97
		2502.5	22.74	21.91	21.72
	100% RB	2567.5	23.21	22.21	21.99
		2535.0	23.14	22.17	22.11
		2502.5	22.70	21.79	21.52
10MHz	1 RB high	2565.0	24.31	23.14	23.08
		2535.0	24.24	23.25	23.24
		2505.0	23.90	23.28	23.27
	1 RB low	2565.0	23.76	23.10	23.10
		2535.0	23.49	23.02	22.96
		2505.0	23.63	23.02	22.94
	50% RB mid	2565.0	23.14	22.26	22.06
		2535.0	23.28	22.24	22.10
		2505.0	22.78	21.89	21.80
	100% RB	2565.0	23.14	22.19	22.11
		2535.0	23.26	22.14	22.08
		2505.0	22.78	21.80	21.53
15MHz	1 RB high	2562.5	24.01	23.37	23.37
		2535.0	23.81	22.96	22.80
		2507.5	23.69	23.00	22.78
	1 RB low	2562.5	23.92	23.30	23.18
		2535.0	23.70	22.72	22.51
		2507.5	23.50	22.79	22.76
	50% RB mid	2562.5	23.10	22.08	21.85
		2535.0	23.00	22.00	21.84
		2507.5	22.65	21.71	21.50
	100% RB	2562.5	23.10	22.12	21.83
		2535.0	22.99	21.98	21.90
		2507.5	22.68	21.70	21.68
20MHz	1 RB high	2560.0	23.93	23.61	22.80
		2535.0	23.93	23.35	22.46
		2510.0	23.56	23.23	22.42



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	1 RB low	2560.0	23.84	23.45	22.52
		2535.0	23.62	23.11	22.29
		2510.0	23.37	22.97	22.12
	50% RB mid	2560.0	23.05	22.10	21.16
		2535.0	23.03	22.00	21.08
		2510.0	22.72	21.71	20.81
	100% RB	2560.0	23.09	22.07	21.23
		2535.0	23.03	21.98	21.09
		2510.0	22.71	21.74	20.81

LTE Band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	23.84	23.12	23.20
		707.5	23.95	23.13	23.31
		699.7	24.00	23.32	23.17
	1 RB low	715.3	24.02	23.32	23.25
		707.5	24.01	23.21	23.20
		699.7	24.16	23.44	23.29
	50% RB mid	715.3	24.02	23.33	23.00
		707.5	24.03	23.09	23.18
		699.7	24.23	23.15	23.17
	100% RB	715.3	23.01	22.06	22.04
		707.5	22.25	22.05	22.04
		699.7	23.20	22.20	22.13
3MHz	1 RB high	714.5	24.07	23.33	23.22
		707.5	24.02	23.41	23.20
		700.5	24.17	23.42	23.17
	1 RB low	714.5	24.03	23.43	23.26
		707.5	24.16	23.36	23.33
		700.5	24.32	23.45	23.33
	50% RB mid	714.5	23.17	22.19	22.09
		707.5	23.30	22.25	22.19
		700.5	23.24	22.25	22.20
	100% RB	714.5	23.05	22.04	22.12
		707.5	23.01	22.12	22.10
		700.5	23.25	22.24	22.24
5MHz	1 RB high	713.5	24.02	23.40	23.18
		707.5	24.00	23.36	23.16
		701.5	24.11	23.38	23.35
	1 RB low	713.5	24.10	23.43	23.15
		707.5	24.08	23.45	23.37
		701.5	24.17	23.46	23.41
	50% RB mid	713.5	22.51	22.09	22.09
		707.5	23.18	22.18	22.11
		701.5	23.26	22.29	22.27
	100% RB	713.5	22.33	22.08	22.08
		707.5	23.10	22.05	22.08
		701.5	23.30	22.22	22.23
10MHz	1 RB high	711.0	24.05	23.38	22.01
		707.5	24.03	23.43	22.33
		704.0	24.07	23.47	22.14

	1 RB low	711.0	24.12	23.45	22.47
		707.5	24.12	23.46	22.47
		704.0	24.16	23.46	22.51
	50% RB mid	711.0	23.10	22.27	21.23
		707.5	23.09	22.22	21.23
		704.0	23.24	22.36	21.28
	100% RB	711.0	23.21	22.23	21.23
		707.5	23.10	22.15	21.24
		704.0	23.27	22.29	21.32

LTE band 13

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	784.5	24.20	23.45	23.39
		782.0	24.06	23.48	23.35
		779.5	24.15	23.47	23.56
	1 RB low	784.5	24.27	23.42	23.48
		782.0	24.13	23.47	23.38
		779.5	24.12	23.41	23.35
	50% RB mid	784.5	23.32	22.31	22.20
		782.0	23.26	22.27	22.27
		779.5	23.39	22.41	22.26
	100% RB	784.5	23.17	22.23	22.28
		782.0	23.14	22.20	22.19
		779.5	23.41	22.33	22.31
10MHz	1 RB high	782.0	24.20	23.49	22.32
	1 RB low	782.0	24.07	23.47	22.36
	50% RB mid	782.0	23.31	22.25	21.26
	100% RB	782.0	23.35	22.34	21.23

LTE band 48

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	3697.5	23.37	22.42	22.23
		3625.0	23.58	22.67	22.41
		3552.5	23.45	22.53	22.28
	1 RB low	3697.5	23.26	22.46	22.15
		3625.0	23.46	22.57	22.36
		3552.5	23.33	22.50	22.24
	50% RB mid	3697.5	22.35	21.35	21.33
		3625.0	22.57	21.51	21.49
		3552.5	22.46	21.40	21.41
	100% RB	3697.5	22.35	21.33	21.28
		3625.0	22.49	21.48	21.45
		3552.5	22.42	21.44	21.35
10MHz	1 RB high	3695.0	23.33	22.48	22.20
		3625.0	23.51	22.62	22.47
		3555.0	23.41	22.54	22.30
	1 RB low	3695.0	23.33	22.44	22.21
		3625.0	23.48	22.60	22.40
		3555.0	23.40	22.58	22.29
	50% RB mid	3695.0	22.39	21.43	21.41
		3625.0	22.52	21.46	21.50
		3555.0	22.52	21.52	21.45
	100% RB	3695.0	22.26	21.40	21.24
		3625.0	22.45	21.47	21.41
		3555.0	22.49	21.48	21.44
15MHz	1 RB high	3692.5	23.17	22.34	20.86
		3625.0	23.39	22.52	21.05
		3557.5	23.24	22.40	20.90
	1 RB low	3692.5	23.18	22.30	20.83
		3625.0	23.28	22.40	20.94
		3557.5	23.20	22.31	20.84
	50% RB mid	3692.5	22.22	21.20	20.23
		3625.0	22.44	21.37	20.40
		3557.5	22.36	21.33	20.38
	100% RB	3692.5	22.22	21.28	20.24
		3625.0	22.39	21.45	20.40
		3557.5	22.34	21.41	20.43
20MHz	1 RB high	3690.0	23.83	23.02	22.70



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		3625.0	24.02	23.20	22.85
		3560.0	23.91	23.02	22.78
	1 RB low	3690.0	23.83	22.98	22.74
		3625.0	23.91	23.03	22.77
		3560.0	23.91	23.05	22.82
	50% RB mid	3690.0	22.99	22.03	21.98
		3625.0	23.04	22.07	22.02
		3560.0	23.05	22.11	22.04
	100% RB	3690.0	22.98	22.08	22.05
		3625.0	23.02	22.06	22.08
		3560.0	23.08	22.10	22.12

B48C

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)
				Size	Offset	Size	Offset	
5MHz/ 20MHz	3615.8	3627.5	QPSK	1	24	1	0	23.64
				25	0	100	0	21.87
			16QAM	1	24	1	0	23.21
				25	0	100	0	20.92
			64QAM	1	24	1	0	21.95
				25	0	100	0	20.93
20MHz/ 5MHz	3622.5	3634.2	QPSK	1	99	1	0	23.72
				100	0	25	0	21.87
			16QAM	1	99	1	0	23.28
				100	0	25	0	20.90
			64QAM	1	99	1	0	22.02
				100	0	25	0	20.88
10MHz/ 20MHz	3615.6	3630.0	QPSK	1	49	1	0	23.71
				50	0	100	0	21.91
			16QAM	1	49	1	0	23.28
				50	0	100	0	20.96
			64QAM	1	49	1	0	22.02
				50	0	100	0	20.93
20MHz/ 10MHz	3620.1	3634.5	QPSK	1	99	1	0	23.68
				100	0	50	0	21.92
			16QAM	1	99	1	0	23.26
				100	0	50	0	20.89
			64QAM	1	99	1	0	22.01
				100	0	50	0	20.91
15MHz/ 20MHz	3615.3	3632.4	QPSK	1	74	1	0	23.67
				75	0	100	0	21.86
			16QAM	1	74	1	0	23.24
				75	0	100	0	20.97
			64QAM	1	74	1	0	21.95
				75	0	100	0	20.88
20MHz/ 15MHz	3617.6	3634.7	QPSK	1	99	1	0	23.67
				100	0	75	0	21.93
			16QAM	1	99	1	0	23.21
				100	0	75	0	20.88
			64QAM	1	99	1	0	21.94
				100	0	75	0	20.89
20MHz/ 20MHz	3615.1	3634.9	QPSK	1	99	1	0	23.56
				100	0	100	0	21.71
			16QAM	1	99	1	0	23.08



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				100	0	100	0	20.72
			64QAM	1	99	1	0	21.83
				100	0	100	0	20.78

LTE Band 66-ANT2

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	24.18	23.42	23.33
		1745.0	24.31	23.54	23.59
		1710.7	24.13	23.45	23.62
	1 RB low	1779.3	24.08	23.57	23.35
		1745.0	24.26	23.61	23.42
		1710.7	24.32	23.52	23.47
	50% RB mid	1779.3	24.16	23.37	23.35
		1745.0	24.34	23.31	23.28
		1710.7	24.23	23.11	23.37
	100% RB	1779.3	23.21	22.18	22.32
		1745.0	22.51	22.43	22.34
		1710.7	23.27	22.35	22.26
3MHz	1 RB high	1778.5	24.26	23.74	23.46
		1745.0	24.38	23.62	23.62
		1711.5	24.25	23.49	23.55
	1 RB low	1778.5	24.34	23.76	23.60
		1745.0	24.34	23.52	23.43
		1711.5	24.37	23.58	23.38
	50% RB mid	1778.5	23.31	22.44	22.30
		1745.0	23.35	22.53	22.46
		1711.5	23.36	22.42	22.48
	100% RB	1778.5	23.31	22.43	22.30
		1745.0	23.33	22.40	22.24
		1711.5	23.34	22.26	22.34
5MHz	1 RB high	1777.5	24.27	23.49	23.55
		1745.0	24.28	23.71	23.53
		1712.5	24.11	23.58	23.62
	1 RB low	1777.5	24.37	23.57	23.68
		1745.0	24.35	23.63	23.67
		1712.5	24.36	23.51	23.56
	50% RB mid	1777.5	23.36	22.36	22.36
		1745.0	23.40	22.50	22.37
		1712.5	23.34	22.31	22.28
	100% RB	1777.5	23.37	22.36	22.34
		1745.0	23.34	22.45	22.45
		1712.5	23.40	22.38	22.28
10MHz	1 RB high	1775.0	24.28	23.59	23.49
		1745.0	24.32	23.63	23.57
		1715.0	24.24	23.67	23.41

	1 RB low	1775.0	24.22	23.55	23.27
		1745.0	24.24	23.61	23.43
		1715.0	24.28	23.53	23.42
	50% RB mid	1775.0	23.35	22.39	22.43
		1745.0	23.30	22.42	22.42
		1715.0	23.44	22.35	22.32
	100% RB	1775.0	23.38	22.37	22.35
		1745.0	23.33	22.41	22.30
		1715.0	23.38	22.41	22.28
15MHz	1 RB high	1772.5	24.14	23.49	23.38
		1745.0	24.21	23.51	23.45
		1717.5	24.08	23.28	23.32
	1 RB low	1772.5	24.07	23.47	23.28
		1745.0	24.11	23.30	23.25
		1717.5	24.09	23.44	23.22
	50% RB mid	1772.5	23.37	22.32	22.31
		1745.0	23.26	22.29	22.33
		1717.5	23.29	22.25	22.22
	100% RB	1772.5	23.34	22.23	22.30
		1745.0	23.20	22.31	22.29
		1717.5	23.18	22.34	22.31
20MHz	1 RB high	1770.0	24.16	23.50	22.40
		1745.0	24.22	23.61	22.40
		1720.0	24.13	23.34	22.46
	1 RB low	1770.0	24.11	23.56	22.44
		1745.0	24.23	23.64	22.59
		1720.0	24.20	23.50	22.28
	50% RB mid	1770.0	23.18	22.19	21.35
		1745.0	23.26	22.24	21.39
		1720.0	23.20	22.30	21.35
	100% RB	1770.0	23.15	22.26	21.23
		1745.0	23.37	22.25	21.29
		1720.0	23.24	22.29	21.27

LTE Band 66-ANT3

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	23.80	23.17	23.19
		1745.0	23.68	23.13	22.94
		1710.7	23.85	23.26	23.07
	1 RB low	1779.3	23.83	23.15	23.01
		1745.0	23.80	23.12	23.13
		1710.7	23.87	23.24	23.13
	50% RB mid	1779.3	23.96	23.16	23.03
		1745.0	23.91	23.04	23.03
		1710.7	24.07	23.16	23.11
	100% RB	1779.3	23.00	21.95	21.93
		1745.0	22.97	22.05	21.95
		1710.7	22.99	22.09	22.02
3MHz	1 RB high	1778.5	23.99	23.28	23.12
		1745.0	23.90	23.21	23.23
		1711.5	24.00	23.26	23.09
	1 RB low	1778.5	23.99	23.23	23.05
		1745.0	23.99	23.24	23.08
		1711.5	24.03	23.25	23.20
	50% RB mid	1778.5	23.01	22.15	21.96
		1745.0	22.98	22.02	22.00
		1711.5	23.05	22.16	22.07
	100% RB	1778.5	23.03	21.96	22.01
		1745.0	22.91	22.04	21.89
		1711.5	23.07	22.10	22.12
5MHz	1 RB high	1777.5	24.00	23.35	23.17
		1745.0	23.98	23.18	23.15
		1712.5	24.03	23.29	23.20
	1 RB low	1777.5	24.00	23.31	23.20
		1745.0	23.87	23.20	23.09
		1712.5	23.99	23.42	23.25
	50% RB mid	1777.5	23.09	22.11	22.14
		1745.0	23.09	22.06	22.02
		1712.5	23.15	22.20	22.20
	100% RB	1777.5	23.05	22.11	22.06
		1745.0	23.03	22.01	21.98
		1712.5	23.09	22.04	22.12
10MHz	1 RB high	1775.0	23.91	23.50	23.11
		1745.0	23.86	23.19	23.14
		1715.0	23.98	23.33	23.17

	1 RB low	1775.0	23.83	23.45	23.10
		1745.0	23.83	23.44	23.06
		1715.0	23.97	23.44	23.16
	50% RB mid	1775.0	23.02	22.05	22.03
		1745.0	23.01	22.09	22.05
		1715.0	23.09	22.18	22.16
	100% RB	1775.0	22.98	22.12	22.04
		1745.0	23.00	22.07	22.01
		1715.0	23.08	22.15	22.06
15MHz	1 RB high	1772.5	23.89	23.44	23.23
		1745.0	23.80	23.17	23.08
		1717.5	23.80	23.20	23.08
	1 RB low	1772.5	23.91	23.33	23.21
		1745.0	23.78	23.20	23.12
		1717.5	23.89	23.18	23.26
	50% RB mid	1772.5	22.96	21.95	21.97
		1745.0	22.99	21.90	21.93
		1717.5	23.00	21.97	21.99
	100% RB	1772.5	22.86	21.87	21.91
		1745.0	22.90	21.93	21.97
		1717.5	22.93	21.91	22.04
20MHz	1 RB high	1770.0	23.55	22.97	22.97
		1745.0	23.61	23.04	22.83
		1720.0	23.64	23.00	23.02
	1 RB low	1770.0	23.65	23.03	23.04
		1745.0	23.68	23.15	23.00
		1720.0	23.72	23.07	23.18
	50% RB mid	1770.0	22.79	21.80	21.87
		1745.0	22.75	21.78	21.75
		1720.0	22.81	21.87	21.77
	100% RB	1770.0	22.71	21.75	21.80
		1745.0	22.75	21.78	21.81
		1720.0	22.83	21.88	21.82

CA66B

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)
				Size	Offset	Size	Offset	
5MHz/ 5MHz	1752.6	1757.4	QPSK	1	24	1	0	24.59
				25	0	25	0	22.63
			16QAM	1	24	1	0	24.03
				25	0	25	0	21.68
			64QAM	1	24	1	0	22.76
				25	0	25	0	21.67
5MHz/ 10MHz	1750.3	1757.5	QPSK	1	24	1	0	24.42
				25	0	50	0	22.45
			16QAM	1	24	1	0	23.87
				25	0	50	0	21.47
			64QAM	1	24	1	0	22.68
				25	0	50	0	21.45
10MHz/ 5MHz	1752.5	1759.7	QPSK	1	49	1	0	24.34
				50	0	25	0	22.52
			16QAM	1	49	1	0	24.04
				50	0	25	0	21.50
			64QAM	1	49	1	0	22.86
				50	0	25	0	21.47
5MHz/ 15MHz	1748.1	1757.4	QPSK	1	24	1	0	24.54
				25	0	75	0	22.51
			16QAM	1	24	1	0	23.92
				25	0	75	0	21.53
			64QAM	1	24	1	0	22.78
				25	0	75	0	21.47
15MHz/ 5MHz	1752.6	1761.9	QPSK	1	74	1	0	24.48
				75	0	25	0	22.55
			16QAM	1	74	1	0	23.88
				75	0	25	0	21.49
			64QAM	1	74	1	0	22.87
				75	0	25	0	21.48
10MHz/ 10MHz	1750.1	1760.0	QPSK	1	49	1	0	24.67
				50	0	50	0	22.72
			16QAM	1	49	1	0	24.26
				50	0	50	0	21.77
			64QAM	1	49	1	0	23.03
				50	0	50	0	21.69

A.1.3 Radiated

A.1.3.1 Description

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

FDD Band 2/25: Part 24.232(c) specifies "Mobile and portable stations are limited to 2 watts EIRP".

FDD Band 5/26(824MHz~849MHz): Part 22.913(a) specifies "The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts".

FDD Band 7/TDD Band 38/41: Part 27.50(h)(2) specifies "Mobile stations are limited to 2.0 watts EIRP".

FDD Band 12/71: Part 27.50(c)(10) specifies "Portable stations(hand-held devices) in the 600 MHz uplink band and the 698–746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP".

FDD Band 13: Part 27.50(b) specifies "Portable stations(hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP".

Part 27.50(d)(4) specifies "Fixed, mobile, and portable(handheld) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695–1710 MHz and 1755–1780 MHz bands are limited to 1 watt EIRP".

T DD Band 48: Part 96.41(b)"End User Device must comply with the limits are limited to 23dBm/10 megahertz EIRP".

A.1.3.2 Method of Measurement

According to KDB 412172 D01 and ANSI C63.26the relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$ERP \text{ or } EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

$ERP \text{ or } EIRP$ effective radiated power or equivalent isotropically radiated power,
 respectively
 (expressed in the same units as P_{Mea} , e.g., dBm or dBW)

P_T = transmitter output power in dBm;

G_T = gain of the transmitting antenna, in dBd(ERP) or dBi(EIRP);

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

A.1.3.3 Measurement result

LTE Band 2 - ANT2

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			EIRP(dBm)(Gt-Lc =0.2)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1909.3	24.12	23.33	23.30	24.32	23.53	23.50
		1880.0	24.17	23.50	23.43	24.37	23.70	23.63
		1850.7	24.15	23.47	23.42	24.35	23.67	23.62
	1 RB low	1909.3	24.08	23.36	23.25	24.28	23.56	23.45
		1880.0	24.29	23.57	23.50	24.49	23.77	23.70
		1850.7	24.23	23.47	23.51	24.43	23.67	23.71
	50% RB mid	1909.3	24.07	23.21	23.30	24.27	23.41	23.50
		1880.0	24.32	23.04	23.51	24.52	23.24	23.71
		1850.7	24.40	22.91	23.47	24.60	23.11	23.67
	100% RB	1909.3	23.27	22.30	22.20	23.47	22.50	22.40
		1880.0	23.32	22.28	22.32	23.52	22.48	22.52
		1850.7	23.29	22.34	22.17	23.49	22.54	22.37
3MHz	1 RB high	1908.5	24.26	23.54	23.17	24.46	23.74	23.37
		1880.0	24.30	23.55	23.42	24.50	23.75	23.62
		1851.5	24.26	23.41	23.43	24.46	23.61	23.63
	1 RB low	1908.5	24.35	23.50	23.43	24.55	23.70	23.63
		1880.0	24.40	23.76	23.55	24.60	23.96	23.75
		1851.5	24.45	23.64	23.55	24.65	23.84	23.75
	50% RB mid	1908.5	23.25	22.38	22.36	23.45	22.58	22.56
		1880.0	23.47	22.54	22.51	23.67	22.74	22.71
		1851.5	23.41	22.46	22.31	23.61	22.66	22.51
	100% RB	1908.5	23.29	22.37	22.41	23.49	22.57	22.61
		1880.0	23.38	22.34	22.41	23.58	22.54	22.61
		1851.5	23.31	22.33	22.28	23.51	22.53	22.48
5MHz	1 RB high	1907.5	24.21	23.37	23.29	24.41	23.57	23.49
		1880.0	24.25	23.52	23.39	24.45	23.72	23.59
		1852.5	24.38	23.53	23.45	24.58	23.73	23.65
	1 RB low	1907.5	24.18	23.64	23.42	24.38	23.84	23.62
		1880.0	24.44	23.72	23.59	24.64	23.92	23.79
		1852.5	24.27	23.70	23.50	24.47	23.90	23.70
	50% RB mid	1907.5	23.33	22.37	22.48	23.53	22.57	22.68
		1880.0	23.35	22.38	22.37	23.55	22.58	22.57
		1852.5	23.37	22.44	22.36	23.57	22.64	22.56
	100% RB	1907.5	23.28	22.32	22.34	23.48	22.52	22.54
		1880.0	23.38	22.34	22.42	23.58	22.54	22.62
		1852.5	23.39	22.39	22.30	23.59	22.59	22.50
10MHz	1 RB high	1905.0	24.12	23.80	23.36	24.32	24.00	23.56
		1880.0	24.28	23.54	23.42	24.48	23.74	23.62
		1855.0	24.22	23.46	23.41	24.42	23.66	23.61

	1 RB low	1905.0	24.27	23.78	23.49	24.47	23.98	23.69
		1880.0	24.42	23.72	23.45	24.62	23.92	23.65
		1855.0	24.33	23.59	23.47	24.53	23.79	23.67
	50% RB mid	1905.0	23.40	22.47	22.45	23.60	22.67	22.65
		1880.0	23.44	22.42	22.49	23.64	22.62	22.69
		1855.0	23.44	22.39	22.46	23.64	22.59	22.66
	100% RB	1905.0	23.37	22.36	22.39	23.57	22.56	22.59
		1880.0	23.49	22.49	22.43	23.69	22.69	22.63
		1855.0	23.34	22.40	22.36	23.54	22.60	22.56
15MHz	1 RB high	1902.5	24.15	23.60	23.48	24.35	23.80	23.68
		1880.0	24.18	23.52	23.38	24.38	23.72	23.58
		1857.5	24.15	23.64	23.37	24.35	23.84	23.57
	1 RB low	1902.5	24.13	23.44	23.23	24.33	23.64	23.43
		1880.0	24.24	23.66	23.47	24.44	23.86	23.67
		1857.5	24.16	23.57	23.34	24.36	23.77	23.54
	50% RB mid	1902.5	23.29	22.28	22.32	23.49	22.48	22.52
		1880.0	23.29	22.22	22.39	23.49	22.42	22.59
		1857.5	23.35	22.30	22.32	23.55	22.50	22.52
	100% RB	1902.5	23.26	22.24	22.23	23.46	22.44	22.43
		1880.0	23.27	22.31	22.38	23.47	22.51	22.58
		1857.5	23.35	22.30	22.36	23.55	22.50	22.56
20MHz	1 RB high	1900.0	24.00	23.41	23.37	24.20	23.61	23.57
		1880.0	24.14	23.48	23.24	24.34	23.68	23.44
		1860.0	24.14	23.57	23.43	24.34	23.77	23.63
	1 RB low	1900.0	24.11	23.44	23.09	24.31	23.64	23.29
		1880.0	24.15	23.64	23.41	24.35	23.84	23.61
		1860.0	24.18	23.43	23.20	24.38	23.63	23.40
	50% RB mid	1900.0	23.21	22.16	22.15	23.41	22.36	22.35
		1880.0	23.22	22.22	22.20	23.42	22.42	22.40
		1860.0	23.30	22.36	22.36	23.50	22.56	22.56
	100% RB	1900.0	23.17	22.17	22.23	23.37	22.37	22.43
		1880.0	23.17	22.36	22.31	23.37	22.56	22.51
		1860.0	23.31	22.32	22.24	23.51	22.52	22.44

LTE Band 2 -ANT 3

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			EIRP(dBm)(Gt-Lc =-2.3)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1909.3	23.94	23.29	23.21	21.64	20.99	20.91
		1880.0	24.00	23.27	23.34	21.70	20.97	21.04
		1850.7	24.00	23.37	23.36	21.70	21.07	21.06
	1 RB low	1909.3	24.00	23.40	23.34	21.70	21.10	21.04
		1880.0	24.03	23.29	23.18	21.73	20.99	20.88
		1850.7	24.08	23.43	23.34	21.78	21.13	21.04
	50% RB mid	1909.3	24.18	23.39	23.20	21.88	21.09	20.90
		1880.0	24.27	23.36	23.27	21.97	21.06	20.97
		1850.7	24.19	23.32	23.18	21.89	21.02	20.88
	100% RB	1909.3	23.25	22.16	22.09	20.95	19.86	19.79
		1880.0	23.11	22.26	22.17	20.81	19.96	19.87
		1850.7	23.17	22.15	22.17	20.87	19.85	19.87
3MHz	1 RB high	1908.5	24.14	23.60	23.19	21.84	21.30	20.89
		1880.0	24.07	23.42	23.24	21.77	21.12	20.94
		1851.5	24.15	23.53	23.34	21.85	21.23	21.04
	1 RB low	1908.5	24.37	23.55	23.39	22.07	21.25	21.09
		1880.0	24.37	23.57	23.30	22.07	21.27	21.00
		1851.5	24.34	23.60	23.43	22.04	21.30	21.13
	50% RB mid	1908.5	23.32	22.35	22.21	21.02	20.05	19.91
		1880.0	23.33	22.32	22.29	21.03	20.02	19.99
		1851.5	23.26	22.33	22.29	20.96	20.03	19.99
	100% RB	1908.5	23.22	22.40	22.37	20.92	20.10	20.07
		1880.0	23.33	22.24	22.27	21.03	19.94	19.97
		1851.5	23.23	22.31	22.26	20.93	20.01	19.96
5MHz	1 RB high	1907.5	24.13	23.47	23.13	21.83	21.17	20.83
		1880.0	24.09	23.57	23.37	21.79	21.27	21.07
		1852.5	24.21	23.44	23.28	21.91	21.14	20.98
	1 RB low	1907.5	24.20	23.68	23.36	21.90	21.38	21.06
		1880.0	24.19	23.60	23.29	21.89	21.30	20.99
		1852.5	24.27	23.68	23.36	21.97	21.38	21.06
	50% RB mid	1907.5	23.37	22.34	22.30	21.07	20.04	20.00
		1880.0	23.29	22.35	22.24	20.99	20.05	19.94
		1852.5	23.31	22.35	22.41	21.01	20.05	20.11
	100% RB	1907.5	23.25	22.23	22.32	20.95	19.93	20.02
		1880.0	23.17	22.21	22.20	20.87	19.91	19.90
		1852.5	23.32	22.28	22.30	21.02	19.98	20.00
10MHz	1 RB high	1905.0	24.21	23.62	23.40	21.91	21.32	21.10
		1880.0	24.21	23.56	23.40	21.91	21.26	21.10

	1 RB low	1855.0	24.23	22.74	23.23	21.93	20.44	20.93
		1905.0	24.28	23.87	23.57	21.98	21.57	21.27
		1880.0	24.25	23.72	23.48	21.95	21.42	21.18
		1855.0	24.28	23.70	23.46	21.98	21.40	21.16
	50% RB mid	1905.0	23.29	22.35	22.40	20.99	20.05	20.10
		1880.0	23.34	22.38	22.34	21.04	20.08	20.04
		1855.0	23.41	22.41	22.33	21.11	20.11	20.03
	100% RB	1905.0	23.30	22.25	22.29	21.00	19.95	19.99
		1880.0	23.30	22.32	22.21	21.00	20.02	19.91
1855.0		23.31	22.39	22.25	21.01	20.09	19.95	
15MHz	1 RB high	1902.5	24.29	23.71	22.57	21.99	21.41	20.27
		1880.0	24.33	23.61	22.43	22.03	21.31	20.13
		1857.5	24.27	23.58	22.68	21.97	21.28	20.38
	1 RB low	1902.5	24.25	23.72	22.51	21.95	21.42	20.21
		1880.0	24.20	23.60	22.35	21.90	21.30	20.05
		1857.5	24.28	23.58	22.59	21.98	21.28	20.29
	50% RB mid	1902.5	23.40	22.30	21.35	21.10	20.00	19.05
		1880.0	23.31	22.21	21.32	21.01	19.91	19.02
		1857.5	23.44	22.33	21.29	21.14	20.03	18.99
	100% RB	1902.5	23.40	22.33	21.19	21.10	20.03	18.89
		1880.0	23.33	22.39	21.30	21.03	20.09	19.00
		1857.5	23.32	22.43	21.29	21.02	20.13	18.99
20MHz	1 RB high	1900.0	23.80	23.26	23.18	21.50	20.96	20.88
		1880.0	23.92	23.22	23.17	21.62	20.92	20.87
		1860.0	23.85	23.42	23.28	21.55	21.12	20.98
	1 RB low	1900.0	23.94	23.22	23.24	21.64	20.92	20.94
		1880.0	23.87	23.35	23.43	21.57	21.05	21.13
		1860.0	23.87	23.27	23.29	21.57	20.97	20.99
	50% RB mid	1900.0	23.05	22.10	21.98	20.75	19.80	19.68
		1880.0	22.98	21.88	21.95	20.68	19.58	19.65
		1860.0	23.02	22.05	21.96	20.72	19.75	19.66
	100% RB	1900.0	23.03	22.07	22.10	20.73	19.77	19.80
		1880.0	22.91	21.99	21.97	20.61	19.69	19.67
		1860.0	23.03	21.98	22.08	20.73	19.68	19.78

LTE Band 5

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			ERP(dBm)(Gt-Lc =-5.2)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.89	23.42	22.18	16.54	16.07	14.83
		836.5	23.91	23.14	22.15	16.56	15.79	14.80
		824.7	23.94	23.19	22.26	16.59	15.84	14.91
	1 RB low	848.3	23.81	23.16	22.23	16.46	15.81	14.88
		836.5	23.90	23.08	22.13	16.55	15.73	14.78
		824.7	23.99	23.30	22.17	16.64	15.95	14.82
	50% RB mid	848.3	24.08	23.19	22.22	16.73	15.84	14.87
		836.5	24.07	23.02	22.11	16.72	15.67	14.76
		824.7	24.15	23.02	22.24	16.80	15.67	14.89
	100% RB	848.3	23.06	22.22	21.12	15.71	14.87	13.77
		836.5	22.95	21.95	21.03	15.60	14.60	13.68
		824.7	23.10	22.11	21.12	15.75	14.76	13.77
3MHz	1 RB high	847.5	24.29	23.45	23.28	16.94	16.10	15.93
		836.5	24.26	23.48	23.08	16.91	16.13	15.73
		825.5	24.06	23.44	23.24	16.71	16.09	15.89
	1 RB low	847.5	24.00	23.47	23.19	16.65	16.12	15.84
		836.5	24.04	23.47	23.16	16.69	16.12	15.81
		825.5	24.27	23.45	23.34	16.92	16.10	15.99
	50% RB mid	847.5	23.26	22.25	22.27	15.91	14.90	14.92
		836.5	23.16	22.21	22.09	15.81	14.86	14.74
		825.5	23.32	22.32	22.25	15.97	14.97	14.90
	100% RB	847.5	23.24	22.28	22.31	15.89	14.93	14.96
		836.5	23.16	22.19	22.17	15.81	14.84	14.82
		825.5	23.20	22.41	22.32	15.85	15.06	14.97
5MHz	1 RB high	846.5	24.21	23.43	23.14	16.86	16.08	15.79
		836.5	24.06	23.47	23.33	16.71	16.12	15.98
		826.5	24.03	23.45	23.18	16.68	16.10	15.83
	1 RB low	846.5	24.08	23.46	23.20	16.73	16.11	15.85
		836.5	24.19	23.48	23.18	16.84	16.13	15.83
		826.5	24.27	23.43	23.47	16.92	16.08	16.12
	50% RB mid	846.5	23.15	22.24	22.19	15.80	14.89	14.84
		836.5	23.18	22.18	22.10	15.83	14.83	14.75
		826.5	23.24	22.29	22.29	15.89	14.94	14.94
	100% RB	846.5	23.18	22.21	22.17	15.83	14.86	14.82
		836.5	23.14	22.15	22.27	15.79	14.80	14.92
		826.5	23.23	22.32	22.28	15.88	14.97	14.93
10MHz	1 RB high	844.0	24.15	23.42	22.26	16.80	16.07	14.91
		836.5	24.16	23.43	22.34	16.81	16.08	14.99



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		829.0	24.17	23.47	22.32	16.82	16.12	14.97
1 RB low		844.0	24.06	23.50	22.36	16.71	16.15	15.01
		836.5	24.15	23.42	22.19	16.80	16.07	14.84
		829.0	24.07	23.45	22.30	16.72	16.10	14.95
50% RB mid		844.0	23.27	22.16	21.21	15.92	14.81	13.86
		836.5	23.31	22.26	21.35	15.96	14.91	14.00
		829.0	23.32	22.27	21.24	15.97	14.92	13.89
100% RB		844.0	23.16	22.23	21.21	15.81	14.88	13.86
		836.5	23.16	22.29	21.21	15.81	14.94	13.86
		829.0	23.26	22.29	21.35	15.91	14.94	14.00

CA_5B

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)	ERP(dBm)(GT – LC=-5.2)
				Size	Offset	Size	Offset		
3MHz/ 5MHz	834.1	838.0	QPSK	1	14	1	0	24.76	17.41
				15	0	25	0	24.83	17.48
			16QAM	1	14	1	0	24.25	16.90
				15	0	25	0	24.42	17.07
			64QAM	1	14	1	0	23.73	16.38
				15	0	25	0	23.72	16.37
5MHz/ 3MHz	835.0	838.9	QPSK	1	24	1	0	24.58	17.23
				25	0	15	0	24.68	17.33
			16QAM	1	24	1	0	24.16	16.81
				25	0	15	0	24.35	17.00
			64QAM	1	24	1	0	23.35	16.00
				25	0	15	0	23.64	16.29
5MHz/ 10MHz	831.8	839.0	QPSK	1	24	1	0	24.51	17.16
				25	0	50	0	22.62	15.27
			16QAM	1	24	1	0	23.94	16.59
				25	0	50	0	21.62	14.27
			64QAM	1	24	1	0	22.95	15.60
				25	0	50	0	21.65	14.30
10MHz/ 5MHz	834.0	841.2	QPSK	1	49	1	0	24.46	17.11
				50	0	25	0	22.55	15.20
			16QAM	1	49	1	0	23.95	16.60
				50	0	25	0	21.61	14.26
			64QAM	1	49	1	0	22.82	15.47
				50	0	25	0	21.59	14.24
10MHz/ 10MHz	831.6	841.5	QPSK	1	49	1	0	24.59	17.24
				50	0	50	0	22.53	15.18
			16QAM	1	49	1	0	24.06	16.71
				50	0	50	0	21.68	14.33
			64QAM	1	49	1	0	22.74	15.39
				50	0	50	0	21.57	14.22

LTE Band 7

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			EIRP(dBm)(Gt-Lc =-4)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	24.15	23.24	23.18	20.15	19.24	19.18
		2535.0	24.05	23.28	23.06	20.05	19.28	19.06
		2502.5	23.65	23.23	23.15	19.65	19.23	19.15
	1 RB low	2567.5	24.12	23.23	23.21	20.12	19.23	19.21
		2535.0	23.95	23.16	23.11	19.95	19.16	19.11
		2502.5	23.56	23.07	22.83	19.56	19.07	18.83
	50% RB mid	2567.5	23.20	22.31	22.09	19.20	18.31	18.09
		2535.0	23.15	22.22	21.97	19.15	18.22	17.97
		2502.5	22.74	21.91	21.72	18.74	17.91	17.72
	100% RB	2567.5	23.21	22.21	21.99	19.21	18.21	17.99
		2535.0	23.14	22.17	22.11	19.14	18.17	18.11
		2502.5	22.70	21.79	21.52	18.70	17.79	17.52
10MHz	1 RB high	2565.0	24.31	23.14	23.08	20.31	19.14	19.08
		2535.0	24.24	23.25	23.24	20.24	19.25	19.24
		2505.0	23.90	23.28	23.27	19.90	19.28	19.27
	1 RB low	2565.0	23.76	23.10	23.10	19.76	19.10	19.10
		2535.0	23.49	23.02	22.96	19.49	19.02	18.96
		2505.0	23.63	23.02	22.94	19.63	19.02	18.94
	50% RB mid	2565.0	23.14	22.26	22.06	19.14	18.26	18.06
		2535.0	23.28	22.24	22.10	19.28	18.24	18.10
		2505.0	22.78	21.89	21.80	18.78	17.89	17.80
	100% RB	2565.0	23.14	22.19	22.11	19.14	18.19	18.11
		2535.0	23.26	22.14	22.08	19.26	18.14	18.08
		2505.0	22.78	21.80	21.53	18.78	17.80	17.53
15MHz	1 RB high	2562.5	24.01	23.37	23.37	20.01	19.37	19.37
		2535.0	23.81	22.96	22.80	19.81	18.96	18.80
		2507.5	23.69	23.00	22.78	19.69	19.00	18.78
	1 RB low	2562.5	23.92	23.30	23.18	19.92	19.30	19.18
		2535.0	23.70	22.72	22.51	19.70	18.72	18.51
		2507.5	23.50	22.79	22.76	19.50	18.79	18.76
	50% RB mid	2562.5	23.10	22.08	21.85	19.10	18.08	17.85
		2535.0	23.00	22.00	21.84	19.00	18.00	17.84
		2507.5	22.65	21.71	21.50	18.65	17.71	17.50
	100% RB	2562.5	23.10	22.12	21.83	19.10	18.12	17.83
		2535.0	22.99	21.98	21.90	18.99	17.98	17.90
		2507.5	22.68	21.70	21.68	18.68	17.70	17.68
20MHz	1 RB high	2560.0	23.93	23.61	22.80	19.93	19.61	18.80
		2535.0	23.93	23.35	22.46	19.93	19.35	18.46



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		2510.0	23.56	23.23	22.42	19.56	19.23	18.42
1 RB low		2560.0	23.84	23.45	22.52	19.84	19.45	18.52
		2535.0	23.62	23.11	22.29	19.62	19.11	18.29
		2510.0	23.37	22.97	22.12	19.37	18.97	18.12
50% RB mid		2560.0	23.05	22.10	21.16	19.05	18.10	17.16
		2535.0	23.03	22.00	21.08	19.03	18.00	17.08
		2510.0	22.72	21.71	20.81	18.72	17.71	16.81
100% RB		2560.0	23.09	22.07	21.23	19.09	18.07	17.23
		2535.0	23.03	21.98	21.09	19.03	17.98	17.09
		2510.0	22.71	21.74	20.81	18.71	17.74	16.81

LTE Band 12

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			ERP(dBm)(Gt-Lc =-4.8)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	23.84	23.12	23.20	16.89	16.17	16.25
		707.5	23.95	23.13	23.31	17.00	16.18	16.36
		699.7	24.00	23.32	23.17	17.05	16.37	16.22
	1 RB low	715.3	24.02	23.32	23.25	17.07	16.37	16.30
		707.5	24.01	23.21	23.20	17.06	16.26	16.25
		699.7	24.16	23.44	23.29	17.21	16.49	16.34
	50% RB mid	715.3	24.02	23.33	23.00	17.07	16.38	16.05
		707.5	24.03	23.09	23.18	17.08	16.14	16.23
		699.7	24.23	23.15	23.17	17.28	16.20	16.22
	100% RB	715.3	23.01	22.06	22.04	16.06	15.11	15.09
		707.5	22.25	22.05	22.04	15.30	15.10	15.09
		699.7	23.20	22.20	22.13	16.25	15.25	15.18
3MHz	1 RB high	714.5	24.07	23.33	23.22	17.12	16.38	16.27
		707.5	24.02	23.41	23.20	17.07	16.46	16.25
		700.5	24.17	23.42	23.17	17.22	16.47	16.22
	1 RB low	714.5	24.03	23.43	23.26	17.08	16.48	16.31
		707.5	24.16	23.36	23.33	17.21	16.41	16.38
		700.5	24.32	23.45	23.33	17.37	16.50	16.38
	50% RB mid	714.5	23.17	22.19	22.09	16.22	15.24	15.14
		707.5	23.30	22.25	22.19	16.35	15.30	15.24
		700.5	23.24	22.25	22.20	16.29	15.30	15.25
	100% RB	714.5	23.05	22.04	22.12	16.10	15.09	15.17
		707.5	23.01	22.12	22.10	16.06	15.17	15.15
		700.5	23.25	22.24	22.24	16.30	15.29	15.29
5MHz	1 RB high	713.5	24.02	23.40	23.18	17.07	16.45	16.23
		707.5	24.00	23.36	23.16	17.05	16.41	16.21
		701.5	24.11	23.38	23.35	17.16	16.43	16.40
	1 RB low	713.5	24.10	23.43	23.15	17.15	16.48	16.20
		707.5	24.08	23.45	23.37	17.13	16.50	16.42
		701.5	24.17	23.46	23.41	17.22	16.51	16.46
	50% RB mid	713.5	22.51	22.09	22.09	15.56	15.14	15.14
		707.5	23.18	22.18	22.11	16.23	15.23	15.16
		701.5	23.26	22.29	22.27	16.31	15.34	15.32
	100% RB	713.5	22.33	22.08	22.08	15.38	15.13	15.13
		707.5	23.10	22.05	22.08	16.15	15.10	15.13
		701.5	23.30	22.22	22.23	16.35	15.27	15.28
10MHz	1 RB high	711.0	24.05	23.38	22.01	17.10	16.43	15.06
		707.5	24.03	23.43	22.33	17.08	16.48	15.38



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		704.0	24.07	23.47	22.14	17.12	16.52	15.19
1 RB low		711.0	24.12	23.45	22.47	17.17	16.50	15.52
		707.5	24.12	23.46	22.47	17.17	16.51	15.52
		704.0	24.16	23.46	22.51	17.21	16.51	15.56
50% RB mid		711.0	23.10	22.27	21.23	16.15	15.32	14.28
		707.5	23.09	22.22	21.23	16.14	15.27	14.28
		704.0	23.24	22.36	21.28	16.29	15.41	14.33
100% RB		711.0	23.21	22.23	21.23	16.26	15.28	14.28
		707.5	23.10	22.15	21.24	16.15	15.20	14.29
		704.0	23.27	22.29	21.32	16.32	15.34	14.37

LTE Band 13

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			ERP(dBm)(Gt-Lc =-4)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	784.5	24.20	23.45	23.39	18.05	17.30	17.24
		782.0	24.06	23.48	23.35	17.91	17.33	17.20
		779.5	24.15	23.47	23.56	18.00	17.32	17.41
	1 RB low	784.5	24.27	23.42	23.48	18.12	17.27	17.33
		782.0	24.13	23.47	23.38	17.98	17.32	17.23
		779.5	24.12	23.41	23.35	17.97	17.26	17.20
	50% RB mid	784.5	23.32	22.31	22.20	17.17	16.16	16.05
		782.0	23.26	22.27	22.27	17.11	16.12	16.12
		779.5	23.39	22.41	22.26	17.24	16.26	16.11
	100% RB	784.5	23.17	22.23	22.28	17.02	16.08	16.13
		782.0	23.14	22.20	22.19	16.99	16.05	16.04
		779.5	23.41	22.33	22.31	17.26	16.18	16.16
10MHz	1 RB high	782.0	24.20	23.49	22.32	18.05	17.34	16.17
	1 RB low	782.0	24.07	23.47	22.36	17.92	17.32	16.21
	50% RB mid	782.0	23.31	22.25	21.26	17.16	16.10	15.11
	100% RB	782.0	23.35	22.34	21.23	17.20	16.19	15.08

LTE Band 48

With the result of the Conducted Output Power(A1.2), the worst state was selected for EIRP testing. The 1 RB high and MID channel were chosen.

According to KDB 412172 D01 and ANSI C63.26 the relevant equation for determining the maximum EIRP from the measured RF output power is given in Equation as follows:

$$EIRP = P_T + G_T - L_C$$

EIRP: equivalent isotropically radiated power

P_T = transmitter output power in dBm/10MHz;

G_T = gain of the transmitting antenna, in dBi(EIRP);

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

The setting of P_T follows :

- a) Set span to 2 times the OBW.
- b) Set the RBW to the specified reference bandwidth
- c) Set VBW $\geq 3 \times$ RBW.
- d) Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
- e) Detector = power averaging (rms).
- f) Set sweep time to 2s.
- g) Employ trace averaging mode at least 100 traces.
- h) Use the peak marker function to determine the maximum amplitude level.
- i) Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission.

Measurement result

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power (dBm/10MHz)			EIRP(dBm/10MHz) ($G_T - L_C = 0.16$)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	3625.0	22.19	21.59	20.75	22.35	21.75	20.91
10MHz	1 RB high	3625.0	22.11	21.05	20.60	22.27	21.21	20.76
15MHz	1 RB high	3625.0	22.16	21.32	20.32	22.32	21.48	20.48
20MHz	1 RB high	3625.0	21.33	21.02	20.23	21.49	21.18	20.39

B48C

With the result of the Conducted Output Power(A1.2), the worst state was selected for EIRP testing. The 1 RB and MID channel were chosen

According to KDB 412172 D01 and ANSI C63.26 the relevant equation for determining the maximum EIRP from the measured RF output power is given in Equation as follows:

$$EIRP = P_T + G_T - L_C$$

EIRP: equivalent isotropically radiated power

P_T = transmitter output power in dBm/10MHz;

G_T = gain of the transmitting antenna, in dBi(EIRP);

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

The setting of P_T follows :

- a) Set span to 2 times the OBW.
- b) Set the RBW to the specified reference bandwidth
- c) Set VBW $\geq 3 \times$ RBW.
- d) Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
- e) Detector = power averaging (rms).
- f) Set sweep time to 2s.
- g) Employ trace averaging mode at least 100 traces.
- h) Use the peak marker function to determine the maximum amplitude level.
- i) Add $[10 \log (1/\text{duty cycle})]$ to the measured maximum power level to compute the average power during continuous transmission.

Measurement result

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power (dBm/10MHz)			EIRP(dBm/10MHz) ($P_T - L_C=0.16$)		
				Size	Offset	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20MHz/5MHz	3622.5	3634.2	QPSK	1	99	1	0	22.66	21.47	20.69	22.82	21.63	20.85
10MHz/20MHz	3615.6	3630.0	QPSK	1	49	1	0	22.76	22.47	21.45	22.92	22.63	21.61
15MHz/20MHz	3615.3	3632.4	QPSK	1	74	1	0	22.74	22.00	21.30	22.90	22.16	21.46
20MHz/20MHz	3615.1	3634.9	QPSK	1	99	1	0	22.83	22.06	21.62	22.99	22.22	21.78

LTE Band 66 -ANT 2

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			EIRP(dBm)(Gt-Lc =-1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	24.18	23.42	23.33	23.18	22.42	22.33
		1745.0	24.31	23.54	23.59	23.31	22.54	22.59
		1710.7	24.13	23.45	23.62	23.13	22.45	22.62
	1 RB low	1779.3	24.08	23.57	23.35	23.08	22.57	22.35
		1745.0	24.26	23.61	23.42	23.26	22.61	22.42
		1710.7	24.32	23.52	23.47	23.32	22.52	22.47
	50% RB mid	1779.3	24.16	23.37	23.35	23.16	22.37	22.35
		1745.0	24.34	23.31	23.28	23.34	22.31	22.28
		1710.7	24.23	23.11	23.37	23.23	22.11	22.37
	100% RB	1779.3	23.21	22.18	22.32	22.21	21.18	21.32
		1745.0	22.51	22.43	22.34	21.51	21.43	21.34
		1710.7	23.27	22.35	22.26	22.27	21.35	21.26
3MHz	1 RB high	1778.5	24.26	23.74	23.46	23.26	22.74	22.46
		1745.0	24.38	23.62	23.62	23.38	22.62	22.62
		1711.5	24.25	23.49	23.55	23.25	22.49	22.55
	1 RB low	1778.5	24.34	23.76	23.60	23.34	22.76	22.60
		1745.0	24.34	23.52	23.43	23.34	22.52	22.43
		1711.5	24.37	23.58	23.38	23.37	22.58	22.38
	50% RB mid	1778.5	23.31	22.44	22.30	22.31	21.44	21.30
		1745.0	23.35	22.53	22.46	22.35	21.53	21.46
		1711.5	23.36	22.42	22.48	22.36	21.42	21.48
	100% RB	1778.5	23.31	22.43	22.30	22.31	21.43	21.30
		1745.0	23.33	22.40	22.24	22.33	21.40	21.24
		1711.5	23.34	22.26	22.34	22.34	21.26	21.34
5MHz	1 RB high	1777.5	24.27	23.49	23.55	23.27	22.49	22.55
		1745.0	24.28	23.71	23.53	23.28	22.71	22.53
		1712.5	24.11	23.58	23.62	23.11	22.58	22.62
	1 RB low	1777.5	24.37	23.57	23.68	23.37	22.57	22.68
		1745.0	24.35	23.63	23.67	23.35	22.63	22.67
		1712.5	24.36	23.51	23.56	23.36	22.51	22.56
	50% RB mid	1777.5	23.36	22.36	22.36	22.36	21.36	21.36
		1745.0	23.40	22.50	22.37	22.40	21.50	21.37
		1712.5	23.34	22.31	22.28	22.34	21.31	21.28
	100% RB	1777.5	23.37	22.36	22.34	22.37	21.36	21.34
		1745.0	23.34	22.45	22.45	22.34	21.45	21.45
		1712.5	23.40	22.38	22.28	22.40	21.38	21.28
10MHz	1 RB high	1775.0	24.28	23.59	23.49	23.28	22.59	22.49
		1745.0	24.32	23.63	23.57	23.32	22.63	22.57

	1 RB low	1715.0	24.24	23.67	23.41	23.24	22.67	22.41
		1775.0	24.22	23.55	23.27	23.22	22.55	22.27
		1745.0	24.24	23.61	23.43	23.24	22.61	22.43
		1715.0	24.28	23.53	23.42	23.28	22.53	22.42
	50% RB mid	1775.0	23.35	22.39	22.43	22.35	21.39	21.43
		1745.0	23.30	22.42	22.42	22.30	21.42	21.42
		1715.0	23.44	22.35	22.32	22.44	21.35	21.32
	100% RB	1775.0	23.38	22.37	22.35	22.38	21.37	21.35
		1745.0	23.33	22.41	22.30	22.33	21.41	21.30
1715.0		23.38	22.41	22.28	22.38	21.41	21.28	
15MHz	1 RB high	1772.5	24.14	23.49	23.38	23.14	22.49	22.38
		1745.0	24.21	23.51	23.45	23.21	22.51	22.45
		1717.5	24.08	23.28	23.32	23.08	22.28	22.32
	1 RB low	1772.5	24.07	23.47	23.28	23.07	22.47	22.28
		1745.0	24.11	23.30	23.25	23.11	22.30	22.25
		1717.5	24.09	23.44	23.22	23.09	22.44	22.22
	50% RB mid	1772.5	23.37	22.32	22.31	22.37	21.32	21.31
		1745.0	23.26	22.29	22.33	22.26	21.29	21.33
		1717.5	23.29	22.25	22.22	22.29	21.25	21.22
	100% RB	1772.5	23.34	22.23	22.30	22.34	21.23	21.30
		1745.0	23.20	22.31	22.29	22.20	21.31	21.29
		1717.5	23.18	22.34	22.31	22.18	21.34	21.31
20MHz	1 RB high	1770.0	24.16	23.50	22.40	23.16	22.50	21.40
		1745.0	24.22	23.61	22.40	23.22	22.61	21.40
		1720.0	24.13	23.34	22.46	23.13	22.34	21.46
	1 RB low	1770.0	24.11	23.56	22.44	23.11	22.56	21.44
		1745.0	24.23	23.64	22.59	23.23	22.64	21.59
		1720.0	24.20	23.50	22.28	23.20	22.50	21.28
	50% RB mid	1770.0	23.18	22.19	21.35	22.18	21.19	20.35
		1745.0	23.26	22.24	21.39	22.26	21.24	20.39
		1720.0	23.20	22.30	21.35	22.20	21.30	20.35
	100% RB	1770.0	23.15	22.26	21.23	22.15	21.26	20.23
		1745.0	23.37	22.25	21.29	22.37	21.25	20.29
		1720.0	23.24	22.29	21.27	22.24	21.29	20.27

LTE Band 66 -ANT 3

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			EIRP(dBm)(Gt-Lc =-1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	23.80	23.17	23.19	22.80	22.17	22.19
		1745.0	23.68	23.13	22.94	22.68	22.13	21.94
		1710.7	23.85	23.26	23.07	22.85	22.26	22.07
	1 RB low	1779.3	23.83	23.15	23.01	22.83	22.15	22.01
		1745.0	23.80	23.12	23.13	22.80	22.12	22.13
		1710.7	23.87	23.24	23.13	22.87	22.24	22.13
	50% RB mid	1779.3	23.96	23.16	23.03	22.96	22.16	22.03
		1745.0	23.91	23.04	23.03	22.91	22.04	22.03
		1710.7	24.07	23.16	23.11	23.07	22.16	22.11
	100% RB	1779.3	23.00	21.95	21.93	22.00	20.95	20.93
		1745.0	22.97	22.05	21.95	21.97	21.05	20.95
		1710.7	22.99	22.09	22.02	21.99	21.09	21.02
3MHz	1 RB high	1778.5	23.99	23.28	23.12	22.99	22.28	22.12
		1745.0	23.90	23.21	23.23	22.90	22.21	22.23
		1711.5	24.00	23.26	23.09	23.00	22.26	22.09
	1 RB low	1778.5	23.99	23.23	23.05	22.99	22.23	22.05
		1745.0	23.99	23.24	23.08	22.99	22.24	22.08
		1711.5	24.03	23.25	23.20	23.03	22.25	22.20
	50% RB mid	1778.5	23.01	22.15	21.96	22.01	21.15	20.96
		1745.0	22.98	22.02	22.00	21.98	21.02	21.00
		1711.5	23.05	22.16	22.07	22.05	21.16	21.07
	100% RB	1778.5	23.03	21.96	22.01	22.03	20.96	21.01
		1745.0	22.91	22.04	21.89	21.91	21.04	20.89
		1711.5	23.07	22.10	22.12	22.07	21.10	21.12
5MHz	1 RB high	1777.5	24.00	23.35	23.17	23.00	22.35	22.17
		1745.0	23.98	23.18	23.15	22.98	22.18	22.15
		1712.5	24.03	23.29	23.20	23.03	22.29	22.20
	1 RB low	1777.5	24.00	23.31	23.20	23.00	22.31	22.20
		1745.0	23.87	23.20	23.09	22.87	22.20	22.09
		1712.5	23.99	23.42	23.25	22.99	22.42	22.25
	50% RB mid	1777.5	23.09	22.11	22.14	22.09	21.11	21.14
		1745.0	23.09	22.06	22.02	22.09	21.06	21.02
		1712.5	23.15	22.20	22.20	22.15	21.20	21.20
	100% RB	1777.5	23.05	22.11	22.06	22.05	21.11	21.06
		1745.0	23.03	22.01	21.98	22.03	21.01	20.98
		1712.5	23.09	22.04	22.12	22.09	21.04	21.12
10MHz	1 RB high	1775.0	23.91	23.50	23.11	22.91	22.50	22.11
		1745.0	23.86	23.19	23.14	22.86	22.19	22.14
		1715.0	23.98	23.33	23.17	22.98	22.33	22.17



	1 RB low	1775.0	23.83	23.45	23.10	22.83	22.45	22.10
		1745.0	23.83	23.44	23.06	22.83	22.44	22.06
		1715.0	23.97	23.44	23.16	22.97	22.44	22.16
	50% RB mid	1775.0	23.02	22.05	22.03	22.02	21.05	21.03
		1745.0	23.01	22.09	22.05	22.01	21.09	21.05
		1715.0	23.09	22.18	22.16	22.09	21.18	21.16
	100% RB	1775.0	22.98	22.12	22.04	21.98	21.12	21.04
		1745.0	23.00	22.07	22.01	22.00	21.07	21.01
		1715.0	23.08	22.15	22.06	22.08	21.15	21.06
15MHz	1 RB high	1772.5	23.89	23.44	23.23	22.89	22.44	22.23
		1745.0	23.80	23.17	23.08	22.80	22.17	22.08
		1717.5	23.80	23.20	23.08	22.80	22.20	22.08
	1 RB low	1772.5	23.91	23.33	23.21	22.91	22.33	22.21
		1745.0	23.78	23.20	23.12	22.78	22.20	22.12
		1717.5	23.89	23.18	23.26	22.89	22.18	22.26
	50% RB mid	1772.5	22.96	21.95	21.97	21.96	20.95	20.97
		1745.0	22.99	21.90	21.93	21.99	20.90	20.93
		1717.5	23.00	21.97	21.99	22.00	20.97	20.99
	100% RB	1772.5	22.86	21.87	21.91	21.86	20.87	20.91
		1745.0	22.90	21.93	21.97	21.90	20.93	20.97
		1717.5	22.93	21.91	22.04	21.93	20.91	21.04
20MHz	1 RB high	1770.0	23.55	22.97	22.97	22.55	21.97	21.97
		1745.0	23.61	23.04	22.83	22.61	22.04	21.83
		1720.0	23.64	23.00	23.02	22.64	22.00	22.02
	1 RB low	1770.0	23.65	23.03	23.04	22.65	22.03	22.04
		1745.0	23.68	23.15	23.00	22.68	22.15	22.00
		1720.0	23.72	23.07	23.18	22.72	22.07	22.18
	50% RB mid	1770.0	22.79	21.80	21.87	21.79	20.80	20.87
		1745.0	22.75	21.78	21.75	21.75	20.78	20.75
		1720.0	22.81	21.87	21.77	21.81	20.87	20.77
	100% RB	1770.0	22.71	21.75	21.80	21.71	20.75	20.80
		1745.0	22.75	21.78	21.81	21.75	20.78	20.81
		1720.0	22.83	21.88	21.82	21.83	20.88	20.82

CA66B

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)	EIRP(dBm)(GT – LC=-2)
				Size	Offset	Size	Offset		
5MHz/ 5MHz	1752.6	1757.4	QPSK	1	24	1	0	24.59	22.59
				25	0	25	0	22.63	20.63
			16QAM	1	24	1	0	24.03	22.03
				25	0	25	0	21.68	19.68
			64QAM	1	24	1	0	22.76	20.76
				25	0	25	0	21.67	19.67
5MHz/ 10MHz	1750.3	1757.5	QPSK	1	24	1	0	24.42	22.42
				25	0	50	0	22.45	20.45
			16QAM	1	24	1	0	23.87	21.87
				25	0	50	0	21.47	19.47
			64QAM	1	24	1	0	22.68	20.68
				25	0	50	0	21.45	19.45
10MHz/ 5MHz	1752.5	1759.7	QPSK	1	49	1	0	24.34	22.34
				50	0	25	0	22.52	20.52
			16QAM	1	49	1	0	24.04	22.04
				50	0	25	0	21.50	19.50
			64QAM	1	49	1	0	22.86	20.86
				50	0	25	0	21.47	19.47
5MHz/ 15MHz	1748.1	1757.4	QPSK	1	24	1	0	24.54	22.54
				25	0	75	0	22.51	20.51
			16QAM	1	24	1	0	23.92	21.92
				25	0	75	0	21.53	19.53
			64QAM	1	24	1	0	22.78	20.78
				25	0	75	0	21.47	19.47
15MHz/ 5MHz	1752.6	1761.9	QPSK	1	74	1	0	24.48	22.48
				75	0	25	0	22.55	20.55
			16QAM	1	74	1	0	23.88	21.88
				75	0	25	0	21.49	19.49
			64QAM	1	74	1	0	22.87	20.87
				75	0	25	0	21.48	19.48
10MHz/ 10MHz	1750.1	1760.0	QPSK	1	49	1	0	24.67	22.67
				50	0	50	0	22.72	20.72
			16QAM	1	49	1	0	24.26	22.26
				50	0	50	0	21.77	19.77
			64QAM	1	49	1	0	23.03	21.03
				50	0	50	0	21.69	19.69

A.2 Emission Limit

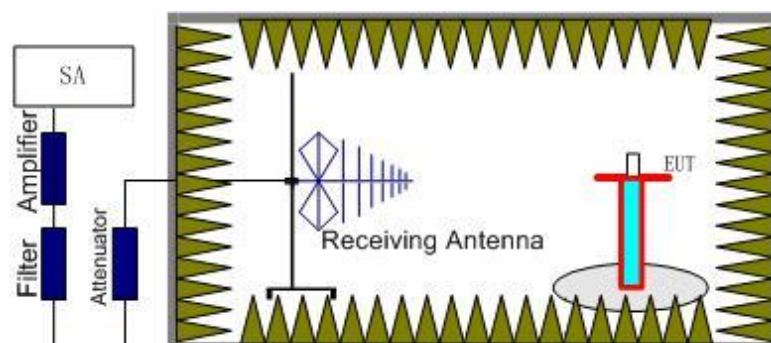
A.2.1 Measurement Method

The measurements procedures in TIA-603E-2016 are used. This measurement is carried out in fullyanechoic chamber FAC-3.

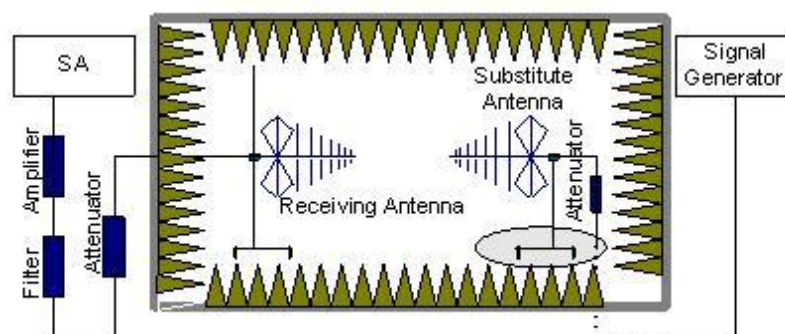
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of each LTE Band.

The procedure of radiated spurious emissions is as follows:

1. EUT was placed on a 1.5-meter-high non-conductive stand at a 3-meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360 and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. The Path loss (P_{pl}) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain (G_a) should be recorded after test.

An amplifier should be connected in for the test.

The Path loss (P_{pl}) is the summation of the cable loss and the gain of the amplifier.

The measurement results are obtained as described below:

$$\text{Power (EIRP)} = P_{Mea} - P_{pl} + G_a$$

5. This value is EIRP since the measurement is calibrated using an antenna of known gain (unit: dBi) and known input power.
6. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dB}$.

A.2.2 Measurement Limit

Part 24.238 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Part 22.917 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Part 27.53(m) specifies for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and



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adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Part 96.41 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of each LTE Band. 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 each LTE Band 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. The range of evaluated frequency is from 30MHz to 26GHz.

LTE Band 2-ANT2, 1.4MHz, QPSK, Channel 18607

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3702.02	-52.99	6.42	8.48	-50.93	-13.00	37.93	V
5555.02	-32.60	7.19	10.59	-29.20	-13.00	16.20	V
7407.01	-53.17	8.14	12.09	-49.22	-13.00	36.22	H
9234.01	-53.11	9.00	13.24	-48.87	-13.00	35.87	V
11095.01	-49.64	9.85	13.18	-46.31	-13.00	33.31	V
12929.01	-48.80	10.50	13.46	-45.84	-13.00	32.84	H

LTE Band 2-ANT2, 1.4MHz, QPSK, Channel 18900

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.02	-49.93	6.26	8.56	-47.63	-13.00	34.63	V
5643.02	-35.08	7.27	10.57	-31.78	-13.00	18.78	V
7526.01	-53.55	8.28	12.22	-49.61	-13.00	36.61	H
9431.01	-52.61	9.19	13.36	-48.44	-13.00	35.44	V
11314.01	-50.24	10.00	13.14	-47.10	-13.00	34.10	V
13131.01	-47.55	10.80	13.68	-44.67	-13.00	31.67	H

LTE Band 2-ANT2, 1.4MHz, QPSK, Channel 19193

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3819.02	-48.57	6.08	8.65	-46.00	-13.00	33.00	V
5731.02	-33.63	7.29	10.55	-30.37	-13.00	17.37	V
7651.01	-53.44	8.20	12.32	-49.32	-13.00	36.32	V
9545.01	-52.63	9.38	13.35	-48.66	-13.00	35.66	V
11468.01	-50.08	9.89	13.11	-46.86	-13.00	33.86	V
13374.01	-48.38	10.57	14.02	-44.93	-13.00	31.93	H

LTE Band 2-ANT3, 1.4MHz, QPSK, Channel 18607

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3702.02	-49.70	6.42	8.48	-47.64	-13.00	34.64	V
5553.02	-41.97	7.18	10.59	-38.56	-13.00	25.56	V
7407.01	-51.92	8.14	12.09	-47.97	-13.00	34.97	H
9229.01	-53.04	8.99	13.24	-48.79	-13.00	35.79	V
11094.01	-50.02	9.85	13.18	-46.69	-13.00	33.69	H
12943.01	-47.88	10.49	13.47	-44.90	-13.00	31.90	V

LTE Band 2-ANT3, 1.4MHz, QPSK, Channel 18900

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3761.02	-51.97	6.26	8.57	-49.66	-13.00	36.66	V
5643.02	-42.62	7.27	10.57	-39.32	-13.00	26.32	V
7488.01	-53.26	8.36	12.19	-49.43	-13.00	36.43	H
9446.01	-53.39	9.27	13.37	-49.29	-13.00	36.29	V
11253.01	-50.37	9.72	13.15	-46.94	-13.00	33.94	V
13123.01	-47.27	10.84	13.67	-44.44	-13.00	31.44	H

LTE Band 2-ANT3, 1.4MHz, QPSK, Channel 19193

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3819.02	-49.53	6.08	8.65	-46.96	-13.00	33.96	H
5733.02	-46.16	7.29	10.55	-42.90	-13.00	29.90	H
7642.01	-51.29	8.16	12.31	-47.14	-13.00	34.14	V
9549.01	-52.68	9.36	13.35	-48.69	-13.00	35.69	V
11459.01	-50.20	9.92	13.11	-47.01	-13.00	34.01	V
13411.01	-46.26	10.58	14.08	-42.76	-13.00	29.76	H

LTE Band 5, 1.4MHz, QPSK, Channel 20407

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1650.01	-50.43	3.57	5.23	2.15	-50.92	-13.00	37.92	V
2474.00	-35.31	4.60	6.02	2.15	-36.04	-13.00	23.04	V
3311.02	-54.85	5.29	7.75	2.15	-54.54	-13.00	41.54	H
4128.02	-49.27	6.04	9.03	2.15	-48.43	-13.00	35.43	V
4963.01	-54.24	6.67	9.86	2.15	-53.20	-13.00	40.20	V
5784.01	-53.58	7.21	10.54	2.15	-52.40	-13.00	39.40	H

LTE Band 5, 1.4MHz, QPSK, Channel 20525

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.01	-50.79	3.58	5.19	2.15	-51.33	-13.00	38.33	V
2510.00	-37.43	4.63	6.12	2.15	-38.09	-13.00	25.09	V
3350.02	-53.14	5.32	7.84	2.15	-52.77	-13.00	39.77	H
4184.02	-49.78	6.17	9.08	2.15	-49.02	-13.00	36.02	V
5004.01	-54.26	6.60	9.91	2.15	-53.10	-13.00	40.10	V
5858.01	-52.66	7.26	10.53	2.15	-51.54	-13.00	38.54	V

LTE Band 5, 1.4MHz, QPSK, Channel 20643

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1697.01	-53.46	3.60	5.15	2.15	-54.06	-13.00	41.06	V
2545.00	-37.20	4.66	6.18	2.15	-37.83	-13.00	24.83	V
3393.02	-55.79	5.36	7.94	2.15	-55.36	-13.00	42.36	H
4247.02	-50.64	6.24	9.15	2.15	-49.88	-13.00	36.88	H
5088.01	-53.40	6.74	10.02	2.15	-52.27	-13.00	39.27	V
5931.01	-53.31	7.47	10.51	2.15	-52.42	-13.00	39.42	V

LTE CA5B, 3MHz+5MHz, QPSK, Channel 20416+20455

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1654.01	-49.57	3.57	5.22	2.15	-50.07	-13.00	37.07	H
2481.00	-39.62	4.60	6.04	2.15	-40.33	-13.00	27.33	H
3323.02	-54.28	5.30	7.78	2.15	-53.95	-13.00	40.95	H
4139.02	-52.21	6.07	9.04	2.15	-51.39	-13.00	38.39	V
4953.01	-54.58	6.68	9.85	2.15	-53.56	-13.00	40.56	H
5787.01	-53.57	7.21	10.54	2.15	-52.39	-13.00	39.39	V

LTE CA5B, 3MHz+5MHz, QPSK, Channel 20501+20540

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1671.01	-50.97	3.58	5.19	2.15	-51.51	-13.00	38.51	H
2507.00	-42.40	4.63	6.11	2.15	-43.07	-13.00	30.07	V
3343.02	-53.99	5.31	7.82	2.15	-53.63	-13.00	40.63	V
4181.02	-52.78	6.16	9.08	2.15	-52.01	-13.00	39.01	V
5024.01	-54.08	6.56	9.93	2.15	-52.86	-13.00	39.86	H
5851.01	-52.67	7.24	10.53	2.15	-51.53	-13.00	38.53	V

LTE CA5B, 3MHz+5MHz, QPSK, Channel 20586+20625

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1688.01	-53.12	3.59	5.16	2.15	-53.70	-13.00	40.70	H
2532.00	-41.07	4.65	6.16	2.15	-41.71	-13.00	28.71	H
3365.02	-54.37	5.33	7.88	2.15	-53.97	-13.00	40.97	V
4223.02	-52.58	6.26	9.12	2.15	-51.87	-13.00	38.87	H
5036.01	-54.29	6.59	9.95	2.15	-53.08	-13.00	40.08	V
5882.01	-52.74	7.34	10.52	2.15	-51.71	-13.00	38.71	H

LTE Band 7, 5 MHz, QPSK, Channel 20775

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5011.02	-46.69	6.58	9.92	-43.35	-25.00	18.35	H
7498.01	-54.18	8.39	12.20	-50.37	-25.00	25.37	H
9991.01	-52.53	9.17	12.91	-48.79	-25.00	23.79	V
12514.01	-48.62	10.21	13.21	-45.62	-25.00	20.62	V
15019.00	-45.61	11.24	13.99	-42.86	-25.00	17.86	V
17533.00	-43.83	12.85	14.95	-41.73	-25.00	16.73	V

LTE Band 7, 5 MHz, QPSK, Channel 21100

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5077.02	-51.18	6.71	10.01	-47.88	-25.00	22.88	H
7586.01	-54.27	8.03	12.27	-50.03	-25.00	25.03	V
10149.01	-51.95	9.38	12.96	-48.37	-25.00	23.37	V
12660.01	-48.03	10.37	13.30	-45.10	-25.00	20.10	V
15212.00	-45.55	11.38	13.87	-43.06	-25.00	18.06	H
17750.00	-43.90	12.46	15.25	-41.11	-25.00	16.11	H

LTE Band 7, 5 MHz, QPSK, Channel 21425

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5141.02	-54.51	6.87	10.10	-51.28	-25.00	26.28	H
7722.01	-53.77	8.40	12.38	-49.79	-25.00	24.79	H
10267.01	-51.44	9.53	13.01	-47.96	-25.00	22.96	V
12818.01	-47.44	10.72	13.39	-44.77	-25.00	19.77	H
15415.00	-45.00	11.41	13.75	-42.66	-25.00	17.66	H
17987.00	-44.24	12.90	15.58	-41.56	-25.00	16.56	V

LTE Band 12, 1.4MHz, QPSK, Channel 23017

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1399.01	-52.94	3.23	4.97	2.15	-53.35	-13.00	40.35	H
2099.00	-39.98	4.19	4.90	2.15	-41.42	-13.00	28.42	H
2799.00	-46.10	4.91	6.64	2.15	-46.52	-13.00	33.52	H
3499.02	-53.71	5.52	8.20	2.15	-53.18	-13.00	40.18	V
4200.02	-54.02	6.21	9.10	2.15	-53.28	-13.00	40.28	V
4891.01	-53.97	6.73	9.79	2.15	-53.06	-13.00	40.06	H

LTE Band 12, 1.4MHz, QPSK, Channel 23095

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1401.01	-48.37	3.24	4.99	2.15	-48.77	-13.00	35.77	V
2123.00	-38.41	4.21	4.97	2.15	-39.80	-13.00	26.80	H
2821.00	-53.05	4.94	6.68	2.15	-53.46	-13.00	40.46	V
3538.02	-49.94	5.70	8.25	2.15	-49.54	-13.00	36.54	H
4246.02	-55.03	6.24	9.15	2.15	-54.27	-13.00	41.27	H
4960.01	-54.36	6.67	9.86	2.15	-53.32	-13.00	40.32	H

LTE Band 12, 1.4MHz, QPSK, Channel 23173

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1431.01	-48.22	3.28	5.14	2.15	-48.51	-13.00	35.51	H
2146.00	-39.16	4.24	5.04	2.15	-40.51	-13.00	27.51	H
2874.00	-52.86	4.97	6.77	2.15	-53.21	-13.00	40.21	V
3577.02	-47.16	6.10	8.31	2.15	-47.10	-13.00	34.10	H
4286.02	-54.21	6.21	9.19	2.15	-53.38	-13.00	40.38	H
5011.01	-53.72	6.58	9.92	2.15	-52.53	-13.00	39.53	V

LTE Band 13, 5MHz, QPSK, Channel 23205

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1559.39	-44.97	3.47	5.39	0.00	-45.20	-40.00	5.20	H
2338.98	-43.31	4.44	5.62	2.15	-44.28	-13.00	31.28	H
3119.02	-52.74	5.38	7.29	2.15	-52.98	-13.00	39.98	V
3898.52	-51.39	6.11	8.76	2.15	-50.89	-13.00	37.89	H
4681.52	-53.96	6.49	9.58	2.15	-53.02	-13.00	40.02	V
5460.01	-53.53	6.91	10.54	2.15	-52.05	-13.00	39.05	H

LTE Band 13, 5MHz, QPSK, Channel 23230

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.46	-44.72	3.48	5.38	0.00	-44.97	-40.00	4.97	V
2346.70	-44.96	4.45	5.64	2.15	-45.92	-13.00	32.92	V
3123.02	-51.75	5.40	7.30	2.15	-52.00	-13.00	39.00	H
3911.02	-51.46	6.12	8.78	2.15	-50.95	-13.00	37.95	V
4689.02	-54.15	6.50	9.59	2.15	-53.21	-13.00	40.21	V
5477.01	-53.80	6.97	10.57	2.15	-52.35	-13.00	39.35	V

LTE Band 13, 5MHz, QPSK, Channel 23255

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1569.40	-45.68	3.48	5.38	0.00	-45.93	-40.00	5.93	H
2354.16	-44.27	4.46	5.66	2.15	-45.22	-13.00	32.22	V
3139.02	-52.19	5.38	7.33	2.15	-52.39	-13.00	39.39	V
3923.52	-52.06	6.12	8.79	2.15	-51.54	-13.00	38.54	V
4719.02	-53.91	6.52	9.62	2.15	-52.96	-13.00	39.96	V
5504.51	-44.05	7.08	10.60	2.15	-42.68	-13.00	29.68	H

LTE Band 48, 5MHz, QPSK, Channel 55265

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7106.00	-64.49	8.16	11.73	-60.92	-40.00	20.92	V
8894.00	-64.28	8.83	13.08	-60.03	-40.00	20.03	V
10658.00	-60.42	9.29	13.13	-56.58	-40.00	16.58	H
12445.00	-59.36	10.32	13.18	-56.50	-40.00	16.50	V
14211.00	-53.43	10.89	14.46	-49.86	-40.00	9.86	H
15970.00	-53.98	11.76	13.70	-52.04	-40.00	12.04	H

LTE Band 48, 5MHz, QPSK, Channel 55990

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7251.00	-64.57	8.15	11.90	-60.82	-40.00	20.82	H
9073.00	-63.57	9.01	13.14	-59.44	-40.00	19.44	V
10876.00	-59.10	9.61	13.18	-55.53	-40.00	15.53	V
12686.00	-58.62	10.32	13.31	-55.63	-40.00	15.63	V
14501.00	-55.11	10.93	14.40	-51.64	-40.00	11.64	H
16329.00	-53.89	11.82	13.63	-52.08	-40.00	12.08	H

LTE Band 48, 5MHz, QPSK, Channel 56715

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7376.00	-64.83	8.11	12.05	-60.89	-40.00	20.89	V
9249.00	-63.67	9.04	13.25	-59.46	-40.00	19.46	V
11093.00	-58.75	9.85	13.18	-55.42	-40.00	15.42	H
12934.00	-59.13	10.49	13.46	-56.16	-40.00	16.16	V
14791.00	-55.60	11.13	14.17	-52.56	-40.00	12.56	H
16625.00	-53.17	11.95	13.65	-51.47	-40.00	11.47	H

LTE CA48C, 20MHz+5MHz, QPSK, Channel 55340+55457

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7140.00	-64.52	8.17	11.77	-60.92	-40.00	20.92	V
8906.00	-63.84	8.87	13.08	-59.63	-40.00	19.63	V
10699.00	-61.25	9.30	13.14	-57.41	-40.00	17.41	V
12459.00	-59.31	10.28	13.18	-56.41	-40.00	16.41	V
14221.00	-57.41	10.90	14.46	-53.85	-40.00	13.85	H
16031.00	-54.21	11.83	13.69	-52.35	-40.00	12.35	H

LTE CA48C, 20MHz+5MHz, QPSK, Channel 55965+56082

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7245.00	-64.39	8.15	11.89	-60.65	-40.00	20.65	H
9057.00	-63.66	9.05	13.13	-59.58	-40.00	19.58	V
10868.00	-58.06	9.60	13.17	-54.49	-40.00	14.49	V
12660.00	-58.71	10.37	13.30	-55.78	-40.00	15.78	V
14491.00	-55.42	10.94	14.40	-51.96	-40.00	11.96	H
16282.00	-53.85	11.82	13.64	-52.03	-40.00	12.03	H

LTE CA48C, 20MHz+5MHz, QPSK, Channel 56590+56707

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7370.00	-64.35	8.11	12.04	-60.42	-40.00	20.42	V
9231.00	-63.83	9.00	13.24	-59.59	-40.00	19.59	V
11056.00	-59.88	9.92	13.19	-56.61	-40.00	16.61	H
12895.00	-59.13	10.52	13.44	-56.21	-40.00	16.21	V
14741.00	-56.05	11.18	14.21	-53.02	-40.00	13.02	H
16594.00	-53.24	12.02	13.64	-51.62	-40.00	11.62	H

LTE Band 66-ANT 2, 1.4MHz QPSK, Channel 131979

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3422.02	-58.40	5.38	8.01	-55.77	-13.00	42.77	V
5136.02	-59.03	6.86	10.09	-55.80	-13.00	42.80	V
6807.01	-64.60	7.88	11.37	-61.11	-13.00	48.11	V
8557.01	-62.26	8.57	13.01	-57.82	-13.00	44.82	H
10319.01	-61.99	9.67	13.03	-58.63	-13.00	45.63	V
12025.01	-59.90	10.13	13.01	-57.02	-13.00	44.02	V

LTE Band 66-ANT 2, 1.4MHz, QPSK, Channel 132322

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.02	-57.38	5.50	8.18	-54.70	-13.00	41.70	V
5240.02	-57.56	7.00	10.24	-54.32	-13.00	41.32	H
6984.01	-64.35	8.17	11.58	-60.94	-13.00	47.94	V
8729.01	-62.75	8.45	13.05	-58.15	-13.00	45.15	H
10501.01	-61.78	9.65	13.10	-58.33	-13.00	45.33	V
12199.01	-59.70	10.06	13.08	-56.68	-13.00	43.68	V

LTE Band 66-ANT 2, 1.4MHz, QPSK, Channel 132665

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3559.02	-55.07	5.92	8.28	-52.71	-13.00	39.71	V
5342.02	-58.04	6.95	10.38	-54.61	-13.00	41.61	H
7152.01	-64.62	8.18	11.78	-61.02	-13.00	48.02	V
8900.01	-63.56	8.85	13.08	-59.33	-13.00	46.33	V
10686.01	-61.63	9.30	13.14	-57.79	-13.00	44.79	V
12503.01	-59.52	10.18	13.20	-56.50	-13.00	43.50	V

LTE Band 66-ANT 3, 1.4MHz QPSK, Channel 131979

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3422.02	-63.57	5.38	8.01	-60.94	-13.00	47.94	V
5138.02	-54.41	6.86	10.09	-51.18	-13.00	38.18	H
6846.01	-64.16	7.83	11.42	-60.57	-13.00	47.57	V
8578.01	-64.31	8.53	13.02	-59.82	-13.00	46.82	V
10319.01	-61.80	9.67	13.03	-58.44	-13.00	45.44	V
12026.01	-59.82	10.13	13.01	-56.94	-13.00	43.94	V

LTE Band 66-ANT 3, 1.4MHz, QPSK, Channel 132322

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.02	-61.96	5.50	8.18	-59.28	-13.00	46.28	H
5235.02	-56.25	7.00	10.23	-53.02	-13.00	40.02	V
6985.01	-63.92	8.18	11.58	-60.52	-13.00	47.52	H
8744.01	-64.34	8.49	13.05	-59.78	-13.00	46.78	V
10503.01	-61.61	9.64	13.10	-58.15	-13.00	45.15	V
12184.01	-59.49	10.11	13.07	-56.53	-13.00	43.53	V

LTE Band 66-ANT 3, 1.4MHz, QPSK, Channel 132665

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3559.02	-59.65	5.92	8.28	-57.29	-13.00	44.29	H
5343.02	-55.24	6.95	10.38	-51.81	-13.00	38.81	H
7121.01	-63.47	8.16	11.75	-59.88	-13.00	46.88	V
8951.01	-63.51	9.03	13.09	-59.45	-13.00	46.45	V
10668.01	-61.39	9.30	13.13	-57.56	-13.00	44.56	V
12501.01	-59.43	10.18	13.20	-56.41	-13.00	43.41	V

LTE CA66B, 10MHz+10MHz, QPSK, CH132022+132121

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3479.02	-67.12	5.48	8.15	-64.45	-13.00	51.45	H
5151.02	-66.13	6.88	10.11	-62.90	-13.00	49.90	V
6880.01	-64.69	7.78	11.46	-61.01	-13.00	48.01	V
8621.01	-64.30	8.46	13.02	-59.74	-13.00	46.74	V
10339.01	-61.71	9.70	13.04	-58.37	-13.00	45.37	V
12051.01	-59.59	10.20	13.02	-56.77	-13.00	43.77	V

LTE CA66B, 10MHz+10MHz, QPSK, CH132373+132472

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3485.02	-67.08	5.49	8.16	-64.41	-13.00	51.41	H
5278.02	-66.29	6.99	10.29	-62.99	-13.00	49.99	V
6982.01	-64.44	8.16	11.58	-61.02	-13.00	48.02	V
8763.01	-64.34	8.55	13.05	-59.84	-13.00	46.84	V
10497.01	-61.55	9.66	13.10	-58.11	-13.00	45.11	V
12263.01	-59.66	10.02	13.11	-56.57	-13.00	43.57	V

LTE CA66B, 10MHz+10MHz, QPSK, CH132523+132622

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3578.02	-66.53	6.11	8.31	-64.33	-13.00	51.33	V
5273.02	-66.30	6.99	10.28	-63.01	-13.00	50.01	H
7074.01	-64.73	8.19	11.69	-61.23	-13.00	48.23	V
8873.01	-64.07	8.80	13.07	-59.80	-13.00	46.80	V
10643.01	-61.63	9.29	13.13	-57.79	-13.00	44.79	V
12334.01	-59.73	10.15	13.13	-56.75	-13.00	43.75	V

Note: The maximum value of expanded measurement uncertainty for this test item is $U = 5.16$ dB, $k = 2$.

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°C.
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°C increments from -30°C to +50°C. 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°C.
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 °C increments from +50°C to -30°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5°C 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-ANT2, 20MHz bandwidth QPSK (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1850.833	1909.199		
50				0.34	0.0002
40				-0.69	0.0004
30				-2.79	0.0015
10				0.30	0.0002
0				1.02	0.0005
-10				-0.94	0.0005
-20				-1.86	0.0010
-30				0.67	0.0004

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1850.833	1909.199	-1.89	0.0010
4.4				1.49	0.0008

LTE Band 2-ANT3, 20MHz bandwidth QPSK (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1850.833	1909.199		
50				-0.35	0.0002
40				-0.25	0.0001
30				-8.34	0.0044
10				-10.06	0.0054
0				-8.30	0.0044
-10				-8.50	0.0045
-20				-8.93	0.0048
-30				-10.07	0.0054

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1850.833	1909.199	-0.80	0.0004
4.4				-7.89	0.0042

LTE Band 5, 10MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	824.417	848.583		
50				-4.62	0.0055
40				-5.39	0.0064
30				-0.30	0.0004
10				0.40	0.0005
0				0.67	0.0008
-10				-5.55	0.0066
-20				1.40	0.0017
-30				-5.34	0.0064

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.417	848.583	2.23	0.0027
4.4				0.82	0.0010

LTE band 5_CA, 10MHz+10MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	824.417	848.583		
50				1.8	0.0022
40				-0.2	0.0002
30				1.2	0.0014
10				1.7	0.0020
0				2.9	0.0035
-10				1.6	0.0019
-20				1.3	0.0016
-30				6.3	0.0075

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.417	848.583	-1.2	0.0014
4.4				1.9	0.0023

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

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	2500.897	2569.103		
50				13.50	0.0053
40				11.89	0.0047
30				1.13	0.0004
10				-2.33	0.0009
0				11.36	0.0045
-10				1.97	0.0008
-20				11.83	0.0047
-30				12.40	0.0049

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2500.897	2569.103	11.39	0.0045
4.4				-0.23	0.0001

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

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	699.465	715.519		
50				-4.49	0.0063
40				-0.87	0.0012
30				-5.41	0.0076
10				-5.75	0.0081
0				0.07	0.0001
-10				-4.91	0.0069
-20				-5.72	0.0081
-30				-0.20	0.0003

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	699.465	715.519	-5.18	0.0073
4.4				-0.11	0.0002

LTE Band 13, 10MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	777.465	786.535		
50				-5.79	0.0074
40				-6.42	0.0082
30				0.82	0.0010
10				-5.61	0.0072
0				-0.03	0.0000
-10				1.07	0.0014
-20				0.23	0.0003
-30				0.00	0.0000

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	777.465	786.535	0.37	0.0005
4.4				0.57	0.0007

LTE Band 48, 20MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	3550.634	3699.211		
50				3.0	0.0008
40				3.3	0.0009
30				-1.7	0.0005
10				0.8	0.0002
0				2.7	0.0007
-10				-0.3	0.0001
-20				5.1	0.0014
-30				2.9	0.0008

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3550.634	3699.211	3.6	0.0010
4.4				2.0	0.0006

LTE band 48_CA, 20MHz+20MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	3550.400	3699.473		
50				-4.1	0.0011
40				-3.4	0.0009
30				-2.7	0.0007
10				1.2	0.0003
0				-3.4	0.0009
-10				-2.8	0.0008
-20				-2.0	0.0006
-30				-3.8	0.0010

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3550.400	3699.473	0.5	0.0001
4.4				-0.2	0.0001

LTE Band 66-ANT2, 20MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1710.833	1779.199		
50				-8.68	0.0050
40				-8.14	0.0047
30				-8.41	0.0048
10				-7.90	0.0045
0				0.21	0.0001
-10				-7.72	0.0044
-20				-8.14	0.0047
-30				-8.45	0.0048

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.833	1779.199	-9.11	0.0052
4.4				-8.77	0.0050

LTE Band 66-ANT3, 20MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1710.833	1779.199		
50				1.29	0.0007
40				1.53	0.0009
30				0.74	0.0004
10				0.83	0.0005
0				1.54	0.0009
-10				1.66	0.0010
-20				8.39	0.0048
-30				7.93	0.0045

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.833	1779.199	2.08	0.0012
4.4				1.70	0.0010

LTE band 66_CA, 10MHz+10MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.8	1710.288	1779.615		
50				-1.8	0.0010
40				-1.5	0.0009
30				-3.6	0.0021
10				-2.5	0.0014
0				-0.7	0.0004
-10				-1.5	0.0009
-20				-2.3	0.0013
-30				-1.4	0.0008

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.288	1779.615	-2.7	0.0015
4.4				-2.4	0.0014

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.

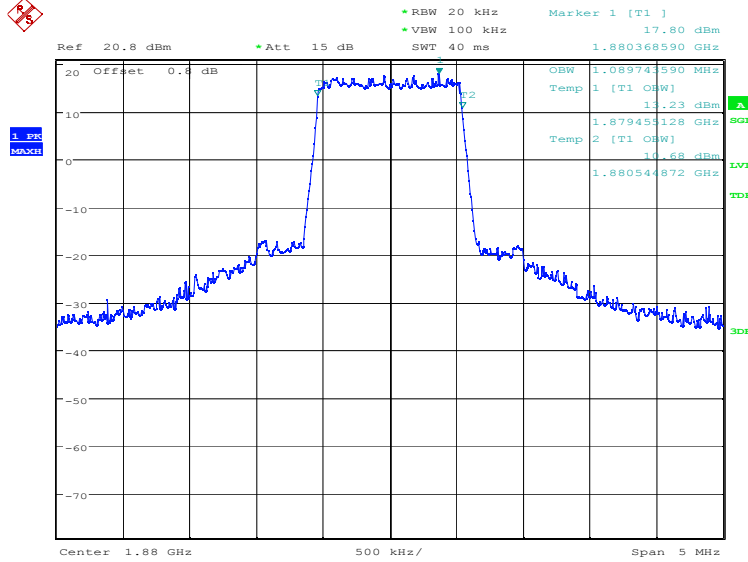
The measurement method is from ANSI C63.26:

- 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 $\geq 3 \times$ 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-ANT2, 1.4MHz (99%)

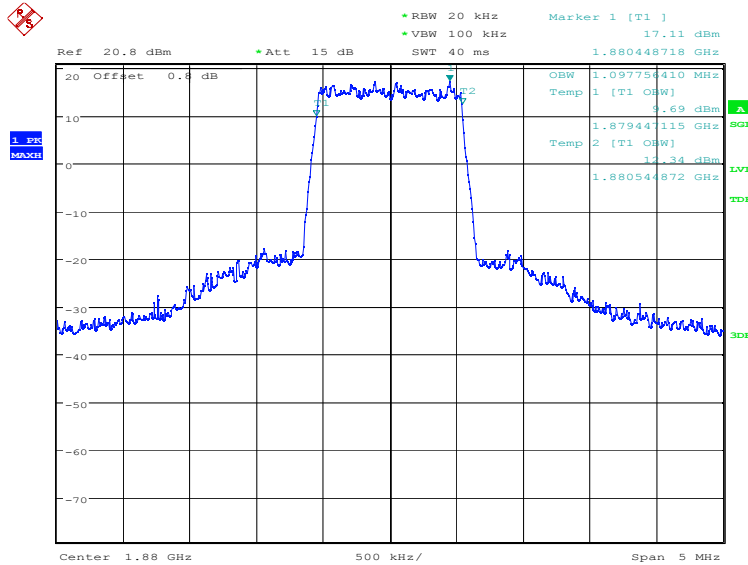
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	1089.74	1097.76

LTE band 2-ANT2, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:20:19

LTE band 2-ANT2, 1.4MHz Bandwidth, 16QAM (99% BW)

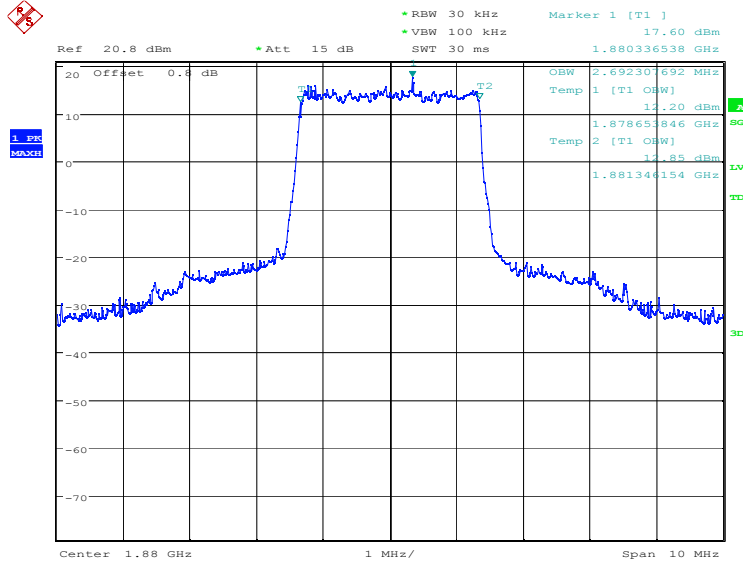


Date: 6.AUG.2021 07:20:58

LTE band 2-ANT2, 3MHz (99%)

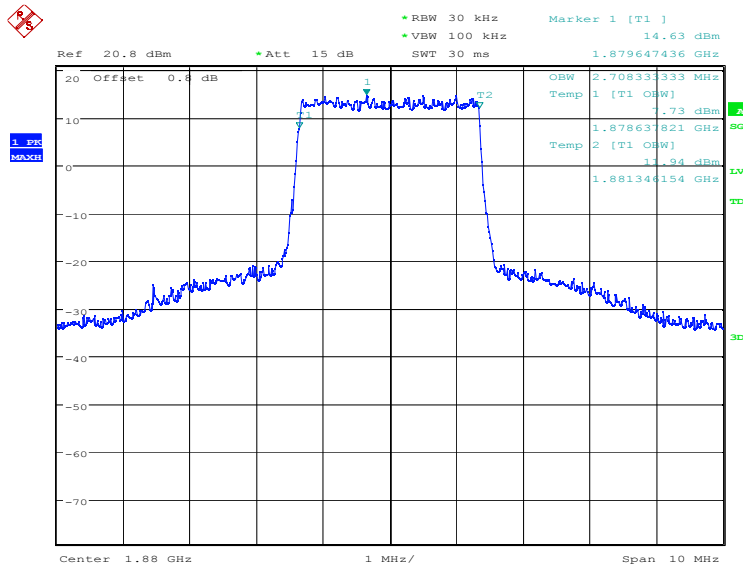
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	2692.31	2708.33

LTE band 2-ANT2, 3MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:21:40

LTE band 2-ANT2, 3MHz Bandwidth, 16QAM (99% BW)

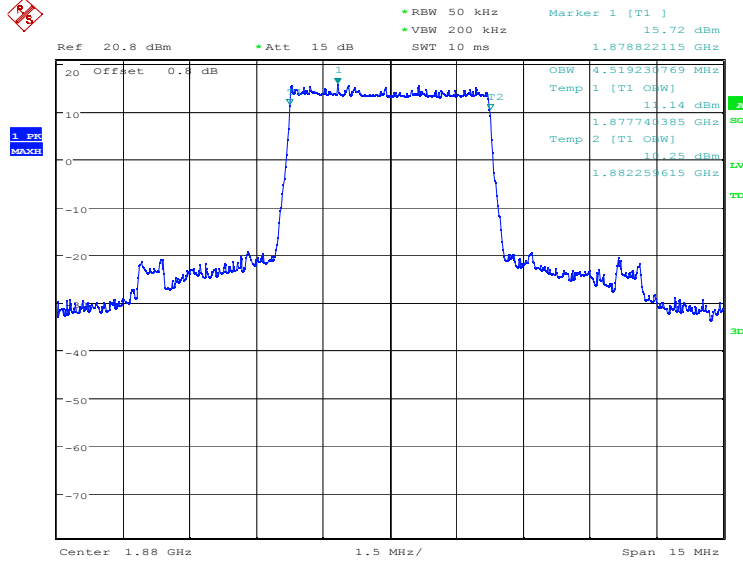


Date: 6.AUG.2021 07:22:19

LTE band 2-ANT2, 5MHz (99%)

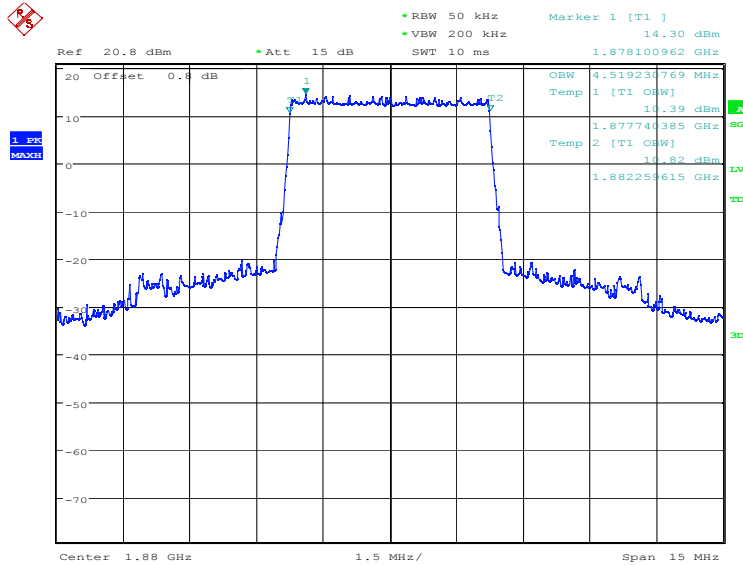
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	4519.23	4519.23

LTE band 2-ANT2, 5MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:23:00

LTE band 2-ANT2, 5MHz Bandwidth, 16QAM (99% BW)

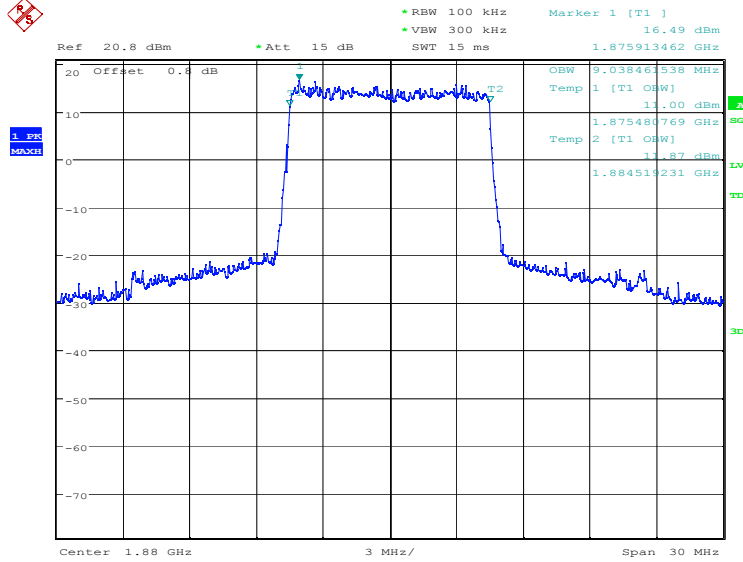


Date: 6.AUG.2021 07:23:39

LTE band 2-ANT2, 10MHz (99%)

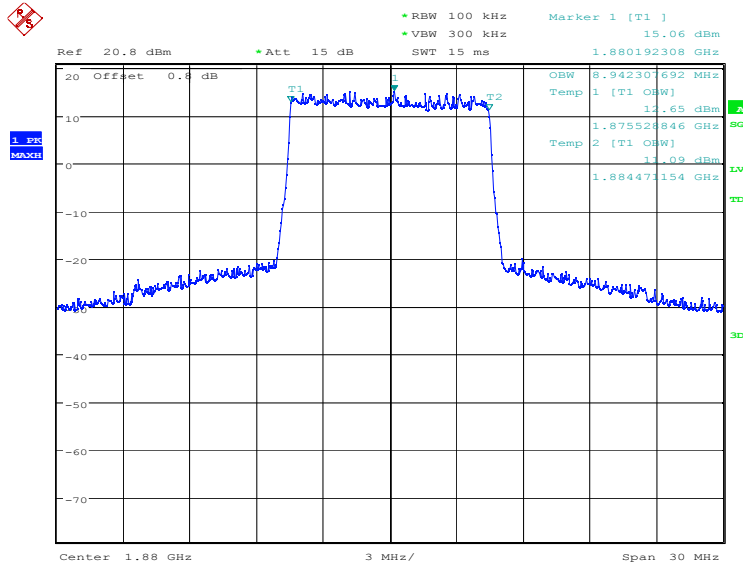
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	9038.46	8942.31

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



Date: 6.AUG.2021 07:24:21

LTE band 2-ANT2, 10MHz Bandwidth, 16QAM (99% BW)

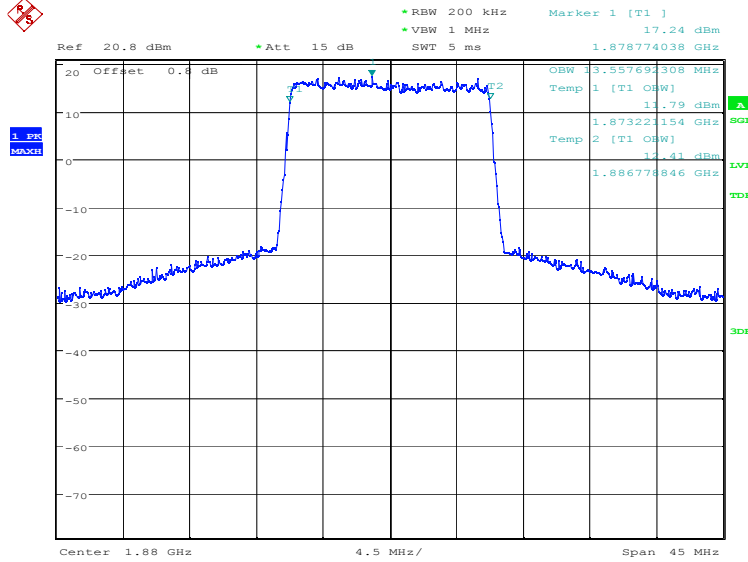


Date: 6.AUG.2021 07:25:00

LTE band 2-ANT2, 15MHz (99%)

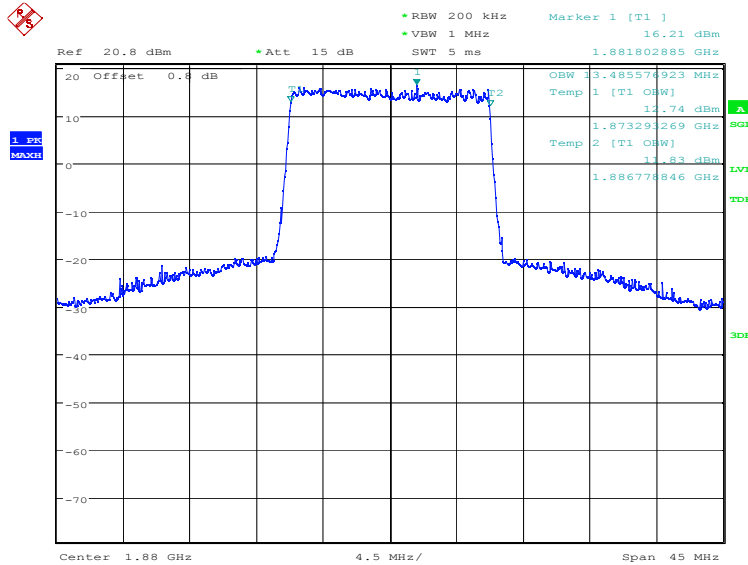
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	13557.69	13485.58

LTE band 2-ANT2, 15MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:25:42

LTE band 2-ANT2, 15MHz Bandwidth, 16QAM (99% BW)

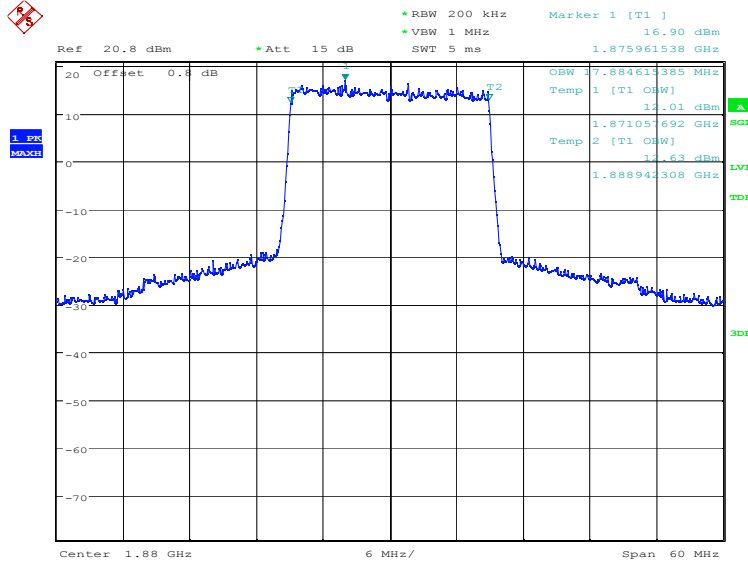


Date: 6.AUG.2021 07:26:21

LTE band 2-ANT2, 20MHz (99%)

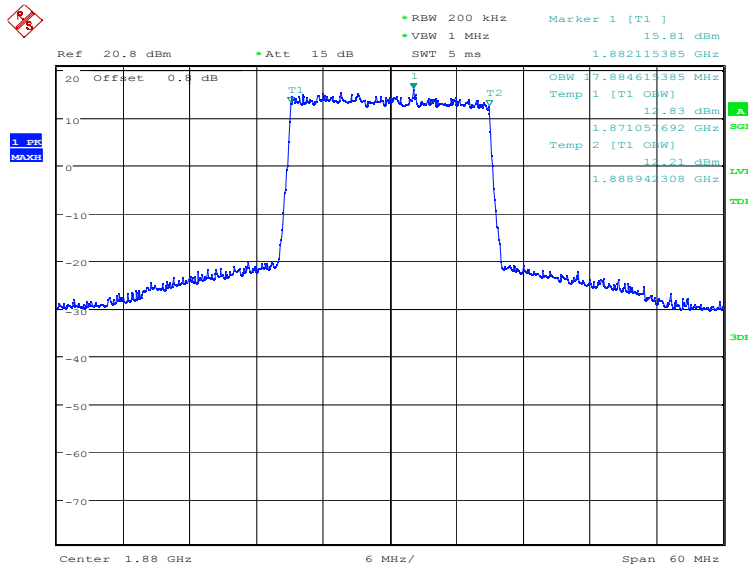
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	17884.62	17884.62

LTE band 2-ANT2, 20MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:27:03

LTE band 2-ANT2, 20MHz Bandwidth, 16QAM (99% BW)

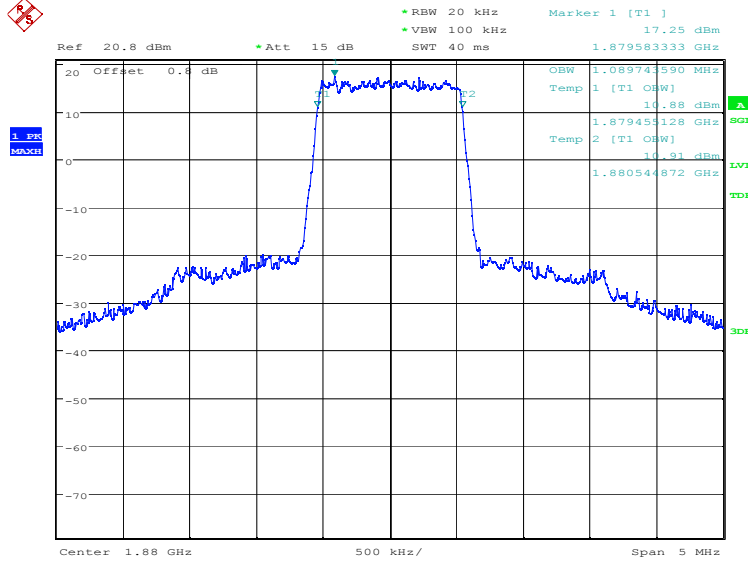


Date: 6.AUG.2021 07:27:42

LTE band 2-ANT3, 1.4MHz (99%)

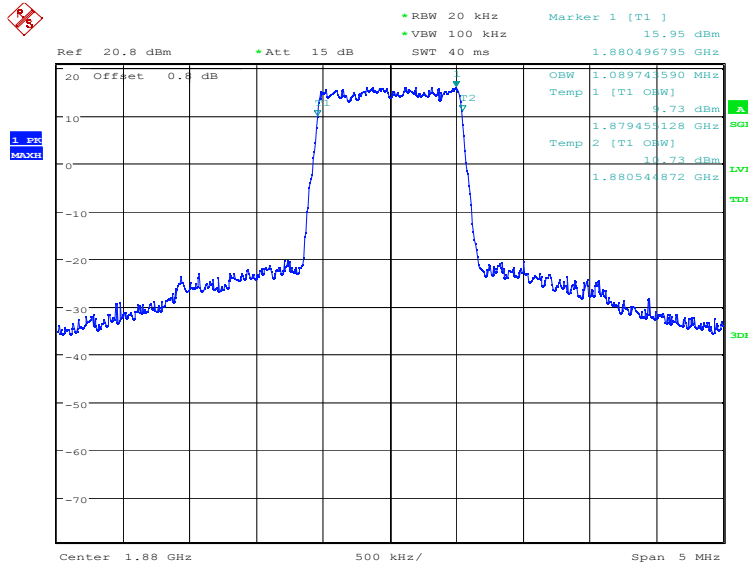
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	1089.74	1089.74

LTE band 2-ANT3, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 16.SEP.2021 17:11:20

LTE band 2-ANT3, 1.4MHz Bandwidth, 16QAM (99% BW)

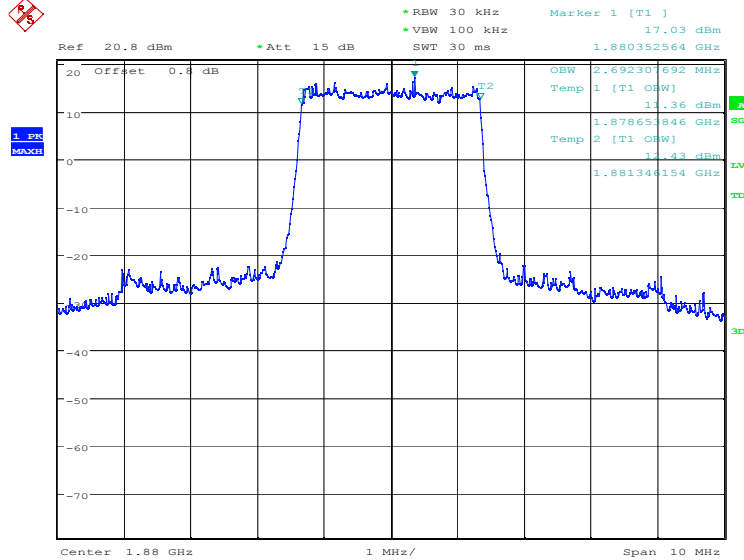


Date: 16.SEP.2021 17:12:00

LTE band 2-ANT3, 3MHz (99%)

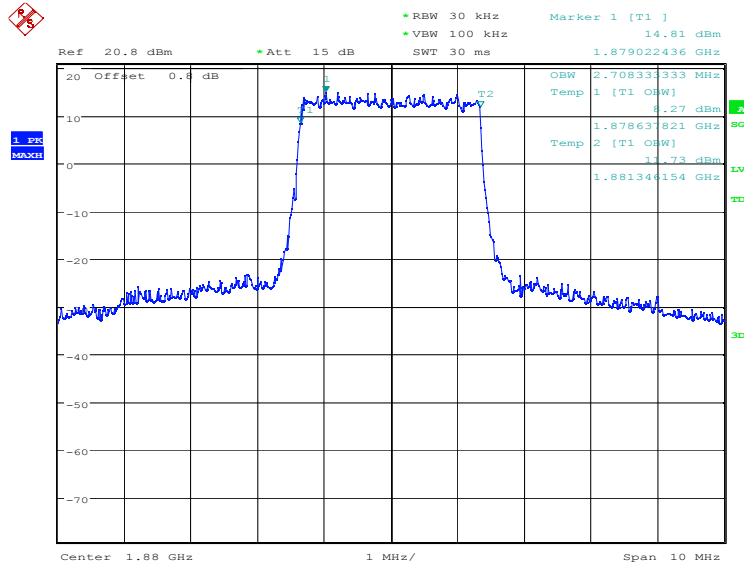
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	2692.31	2708.33

LTE band 2-ANT3, 3MHz Bandwidth, QPSK (99% BW)



Date: 16.SEP.2021 17:12:42

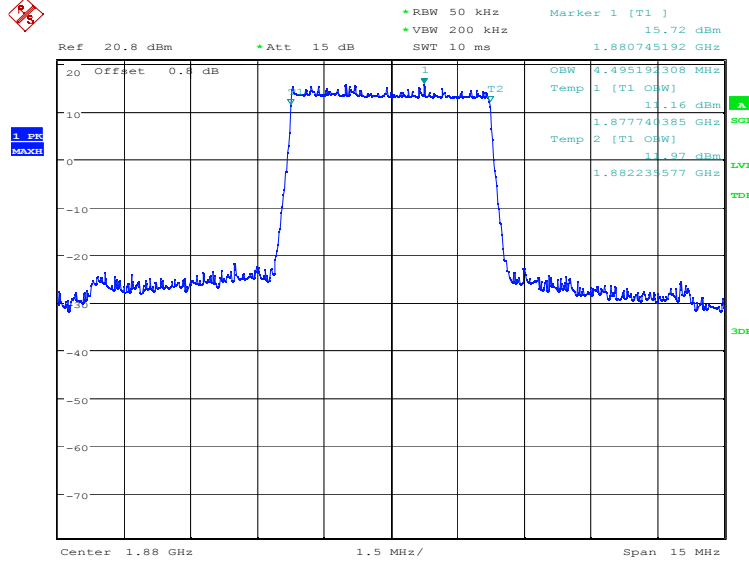
LTE band 2-ANT3, 3MHz Bandwidth, 16QAM (99% BW)



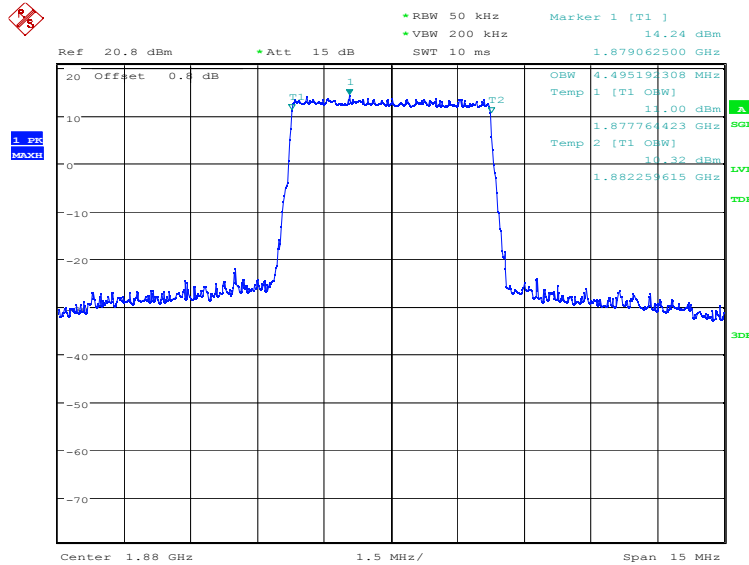
Date: 16.SEP.2021 17:13:22

LTE band 2-ANT3, 5MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	4495.19	4495.19

LTE band 2-ANT3, 5MHz Bandwidth, QPSK (99% BW)


Date: 16.SEP.2021 17:14:05

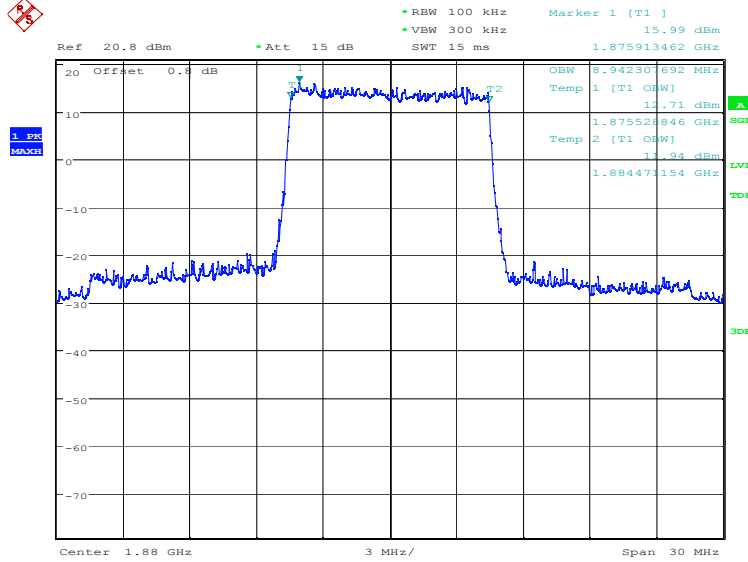
LTE band 2-ANT3, 5MHz Bandwidth, 16QAM (99% BW)


Date: 16.SEP.2021 17:14:44

LTE band 2-ANT3, 10MHz (99%)

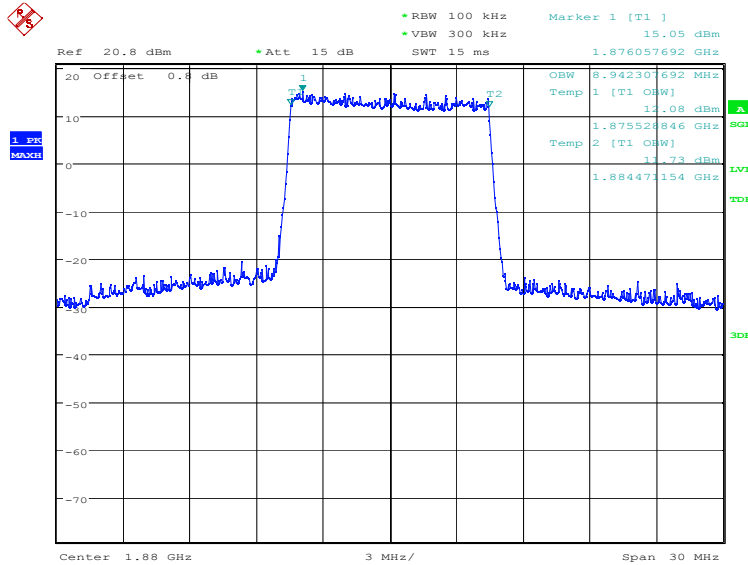
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	8942.31	8942.31

LTE band 2-ANT3, 10MHz Bandwidth, QPSK (99% BW)



Date: 16.SEP.2021 17:15:27

LTE band 2-ANT3, 10MHz Bandwidth, 16QAM (99% BW)

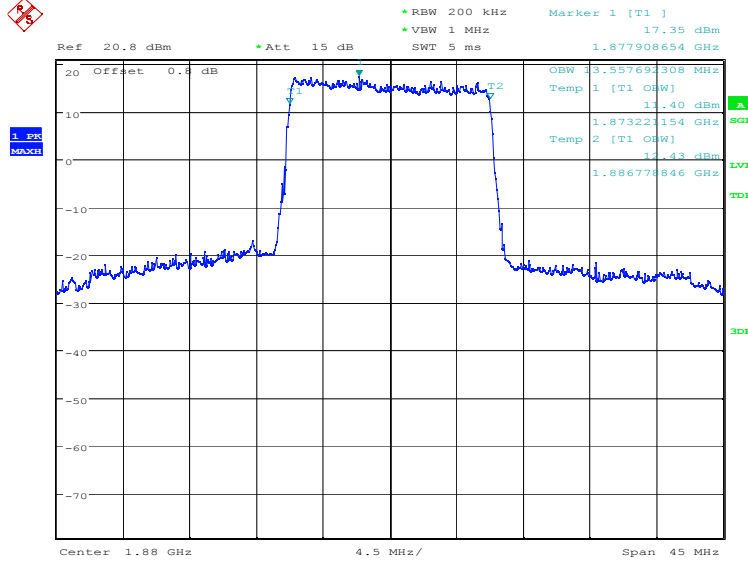


Date: 16.SEP.2021 17:16:06

LTE band 2-ANT3, 15MHz (99%)

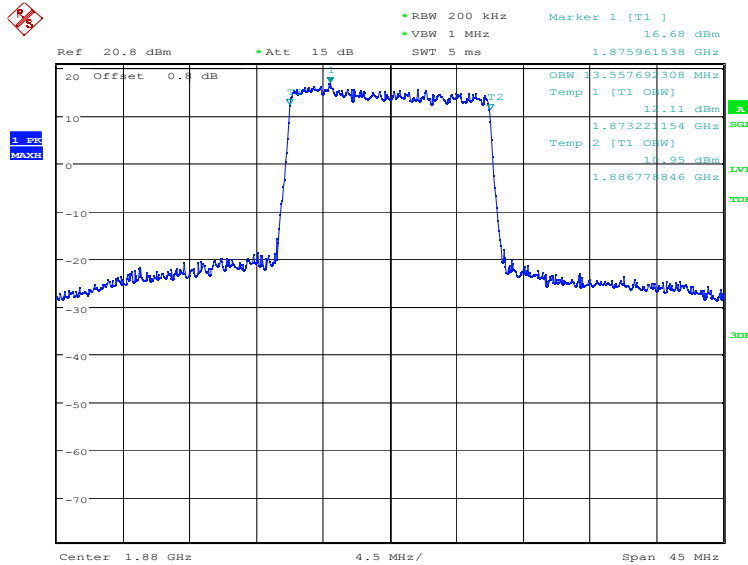
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	13557.69	13557.69

LTE band 2-ANT3, 15MHz Bandwidth, QPSK (99% BW)



Date: 16.SEP.2021 17:16:49

LTE band 2-ANT3, 15MHz Bandwidth, 16QAM (99% BW)

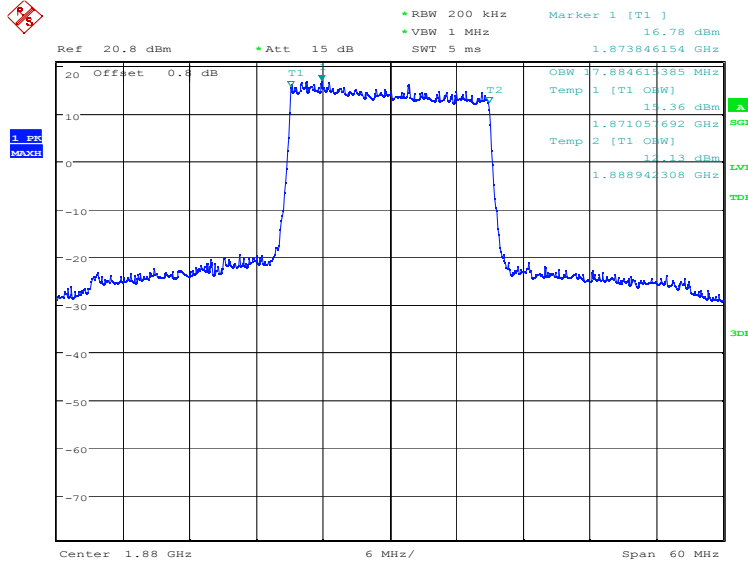


Date: 16.SEP.2021 17:17:29

LTE band 2-ANT3, 20MHz (99%)

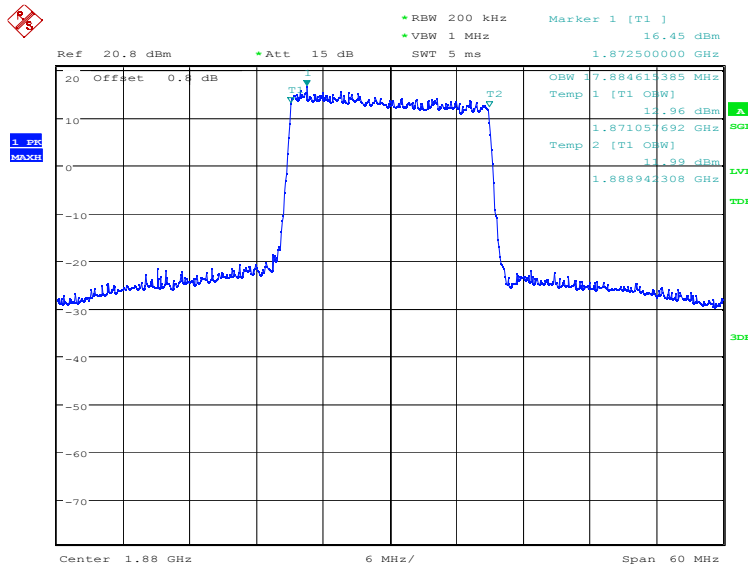
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	17884.62	17884.62

LTE band 2-ANT3, 20MHz Bandwidth, QPSK (99% BW)



Date: 16.SEP.2021 17:18:12

LTE band 2-ANT3, 20MHz Bandwidth, 16QAM (99% BW)

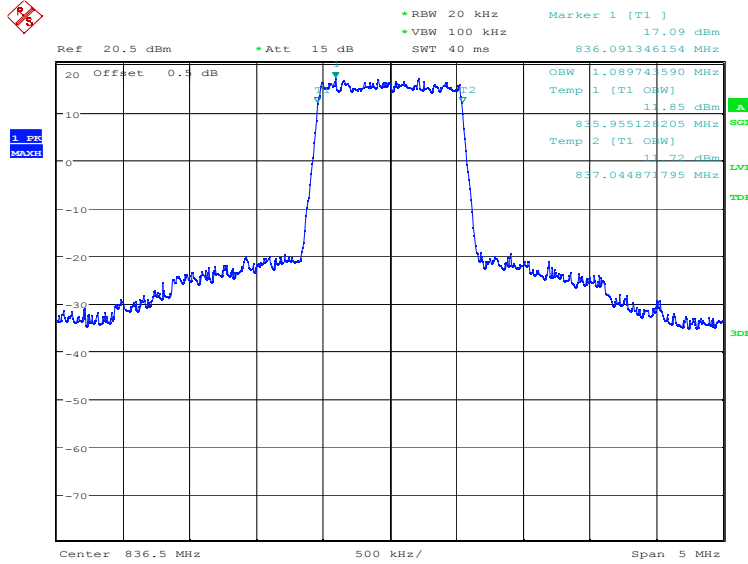


Date: 16.SEP.2021 17:18:51

LTE band 5, 1.4MHz (99%)

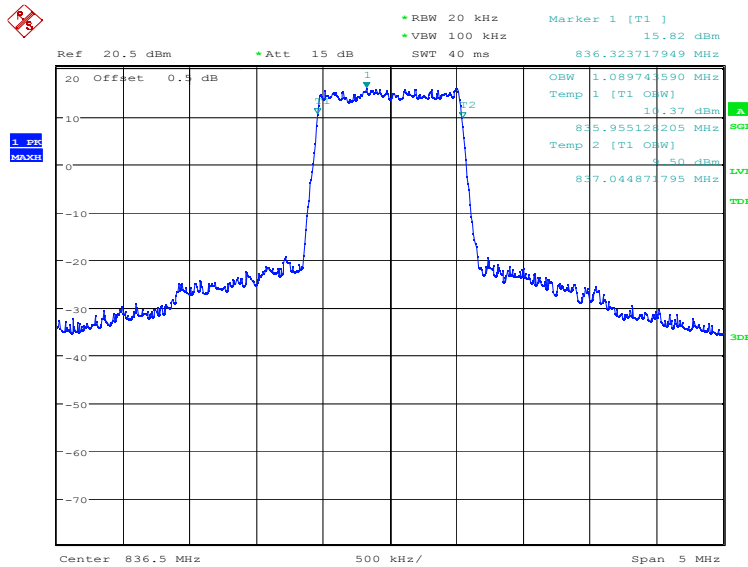
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	1089.74	1089.74

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



Date: 5.AUG.2021 16:07:41

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

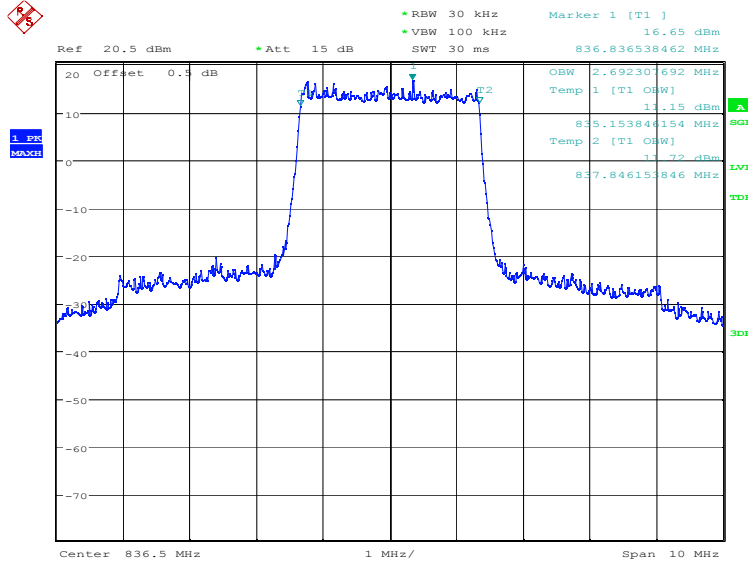


Date: 5.AUG.2021 16:08:21

LTE band 5, 3MHz (99%)

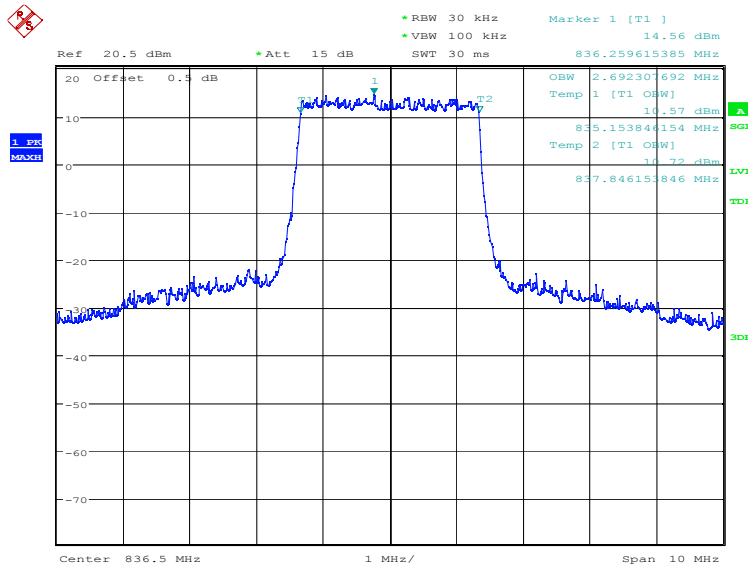
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 5.AUG.2021 16:09:02

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

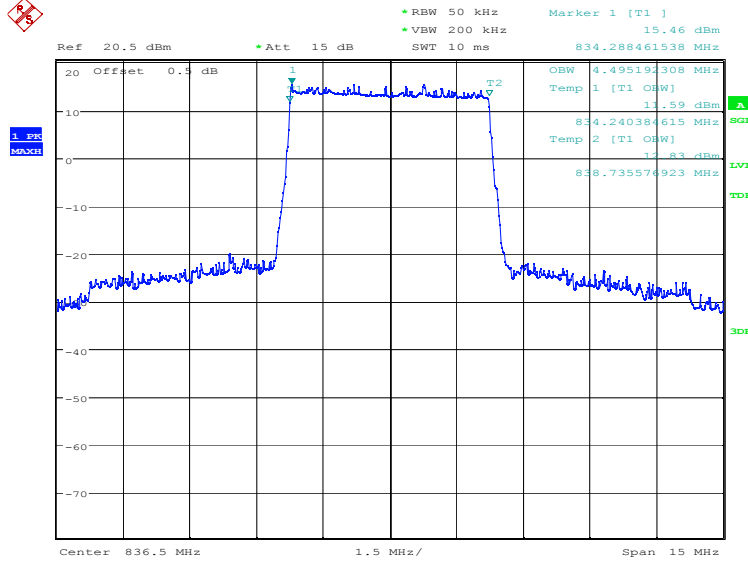


Date: 5.AUG.2021 16:09:42

LTE band 5, 5MHz (99%)

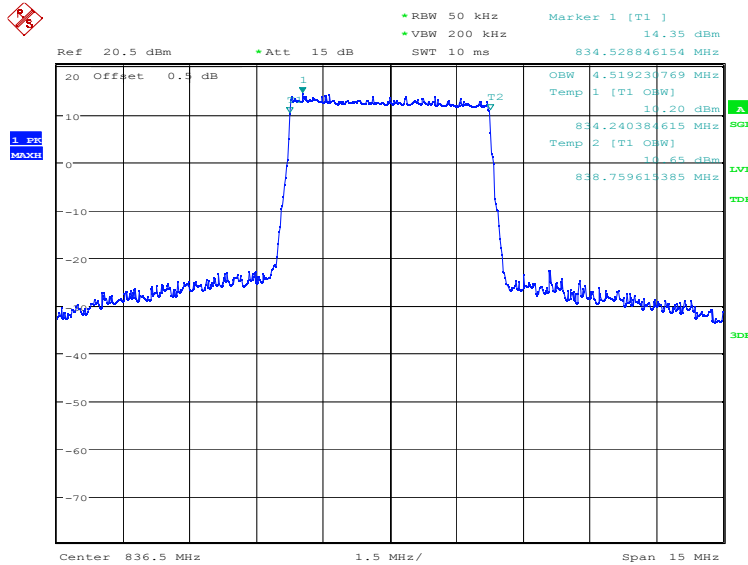
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	4495.19	4519.23

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



Date: 5.AUG.2021 16:10:24

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

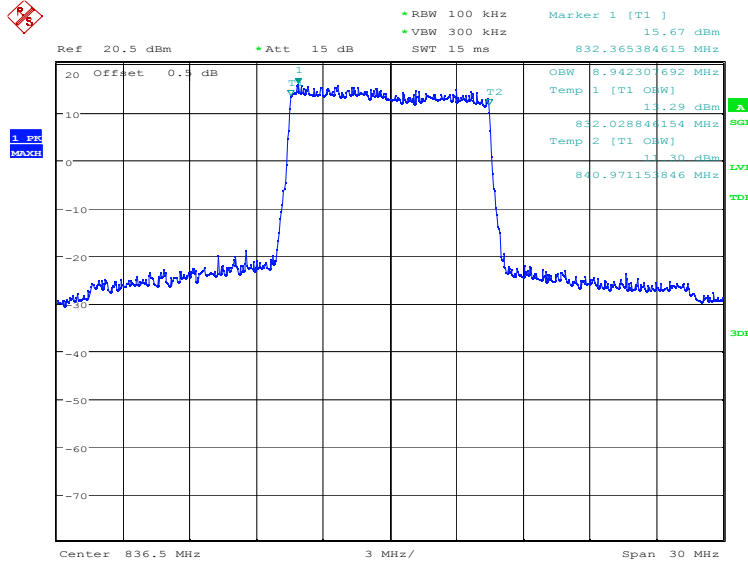


Date: 5.AUG.2021 16:11:03

LTE band 5, 10MHz (99%)

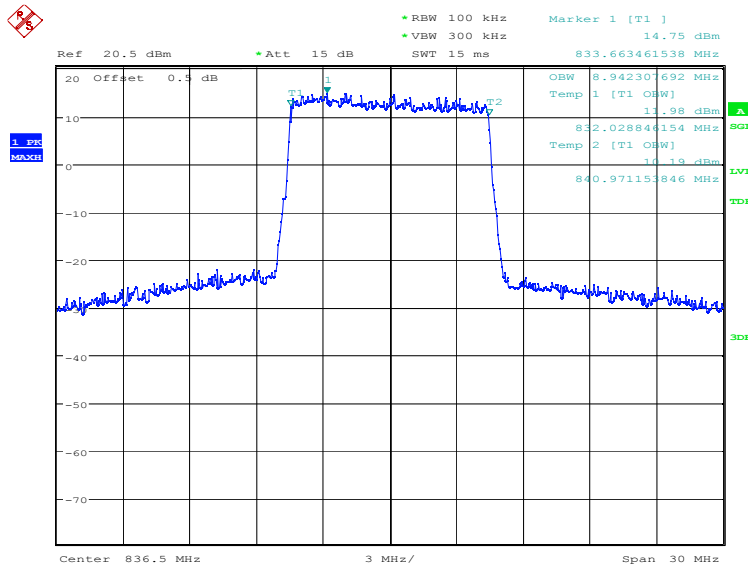
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	8942.31	8942.31

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



Date: 5.AUG.2021 16:11:45

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

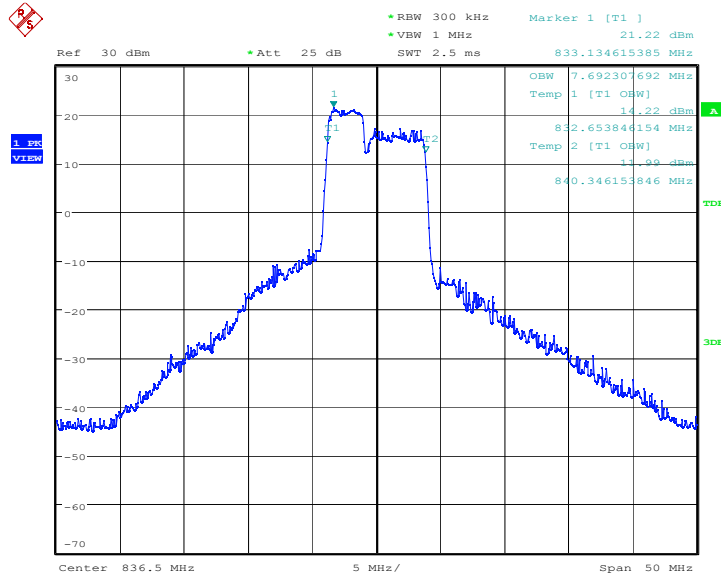


Date: 5.AUG.2021 16:12:24

LTE CA band 5 , 3MHz+5MHz (99%)

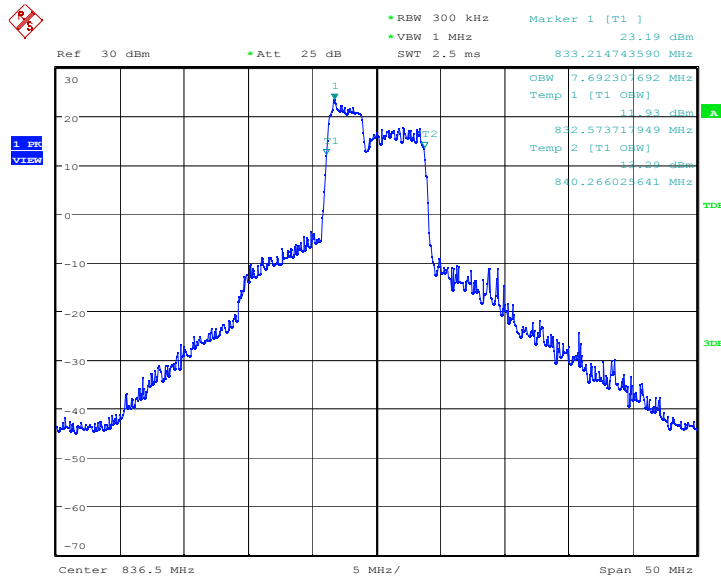
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
836.5	QPSK	16QAM
	7692.31	7692.31

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



Date: 25.AUG.2021 09:06:51

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

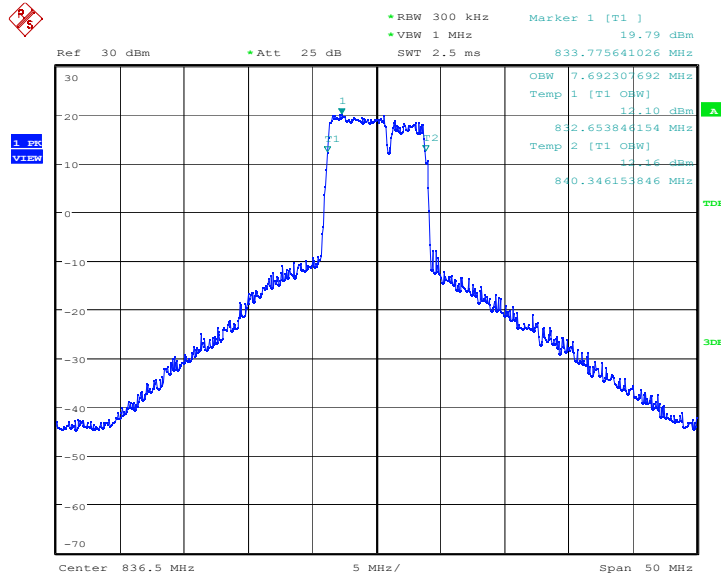


Date: 25.AUG.2021 09:06:02

LTE CA band 5 , 5MHz+3MHz (99%)

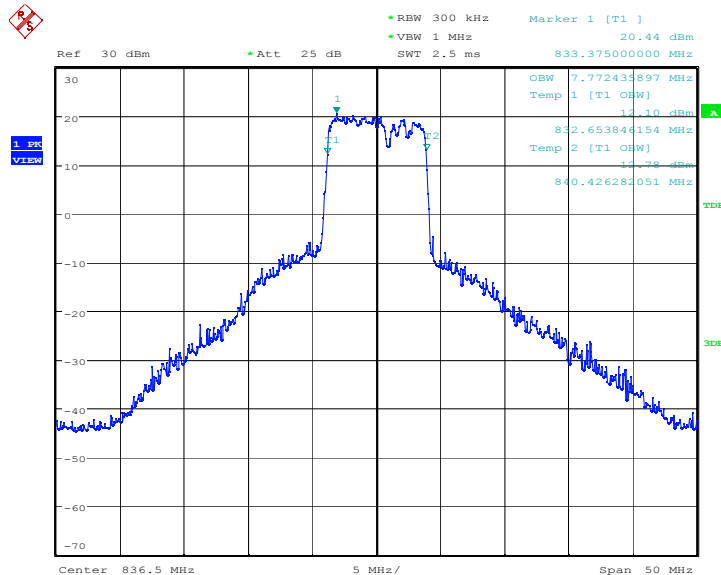
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
836.5	QPSK	16QAM
	7692.31	7772.44

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



Date: 25.AUG.2021 09:07:58

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

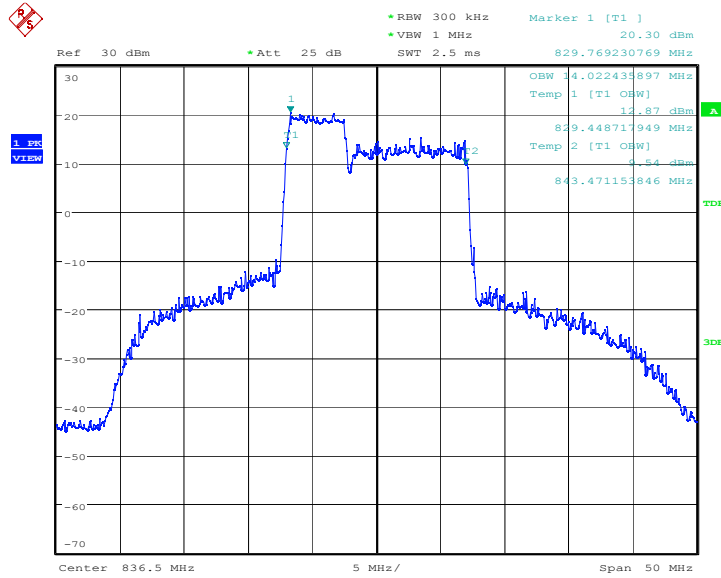


Date: 25.AUG.2021 09:08:20

LTE CA band 5 , 5MHz+10MHz (99%)

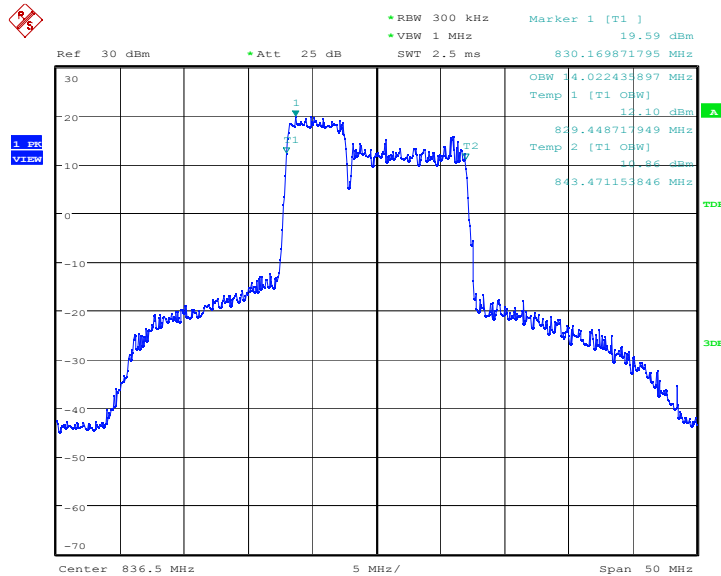
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	QPSK	16QAM
836.5	14022.44	14022.44

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



Date: 7.AUG.2021 17:38:44

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

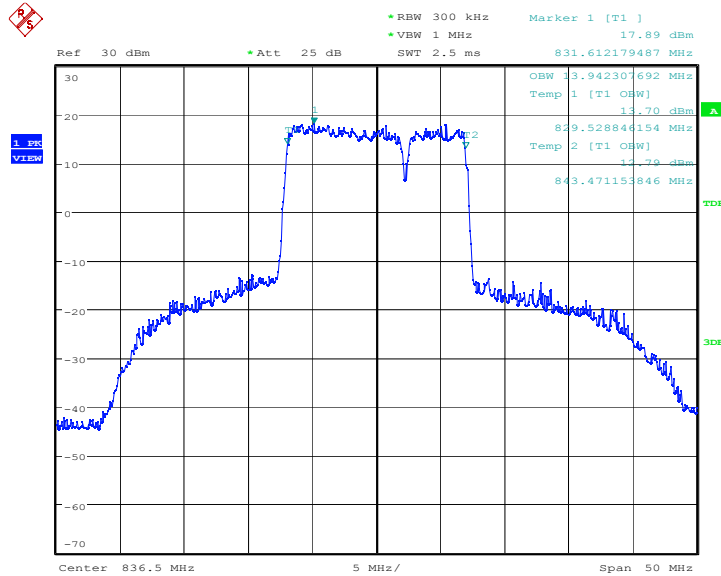


Date: 7.AUG.2021 17:40:02

LTE CA band 5 , 10MHz+5MHz (99%)

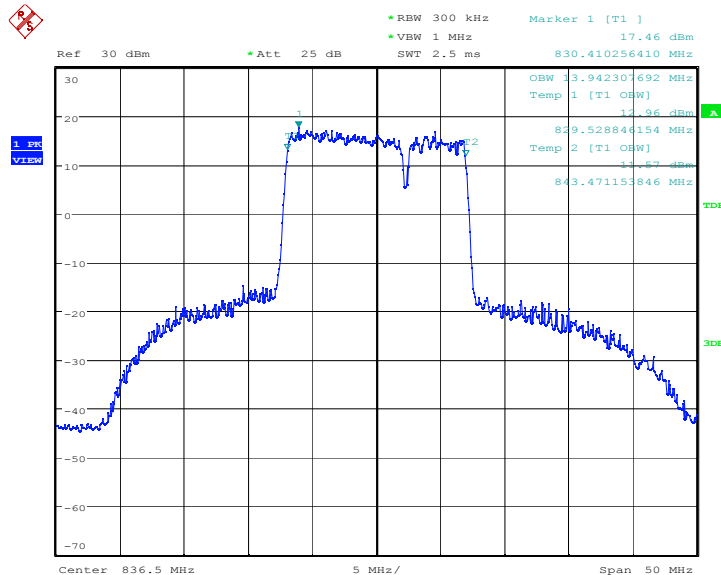
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
836.5	QPSK	16QAM
	13942.31	13942.31

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



Date: 7.AUG.2021 17:42:15

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

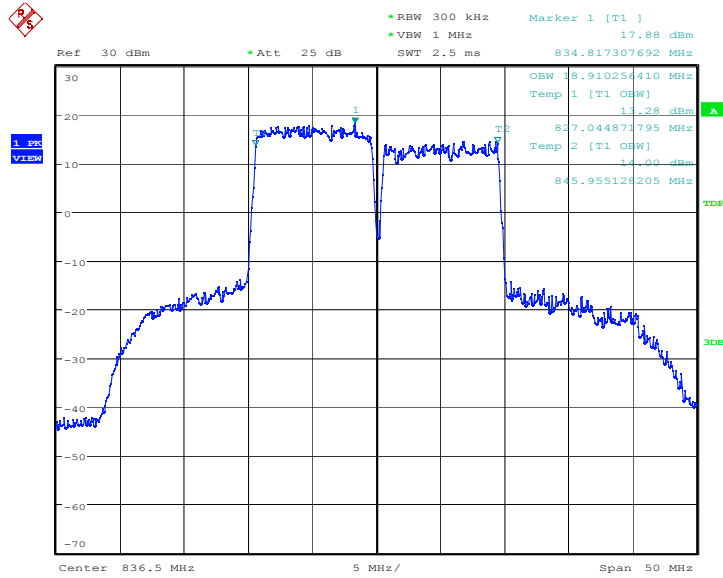


Date: 7.AUG.2021 17:43:40

LTE CA band 5 , 10MHz+10MHz (99%)

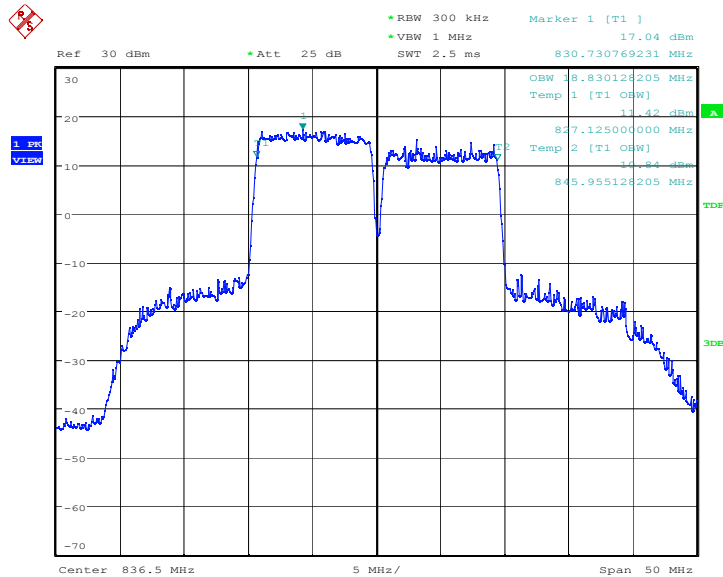
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	QPSK	16QAM
836.5	18910.26	18830.13

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



Date: 7.AUG.2021 17:47:39

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

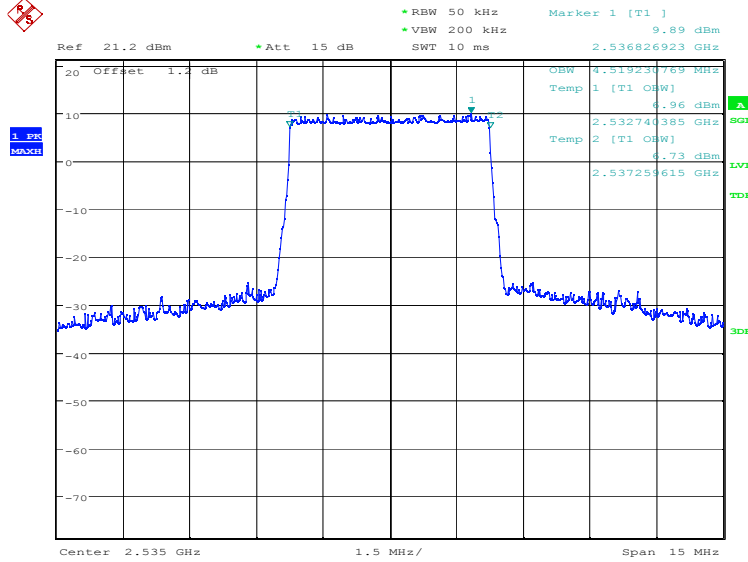


Date: 7.AUG.2021 17:50:51

LTE band 7, 5MHz (99%)

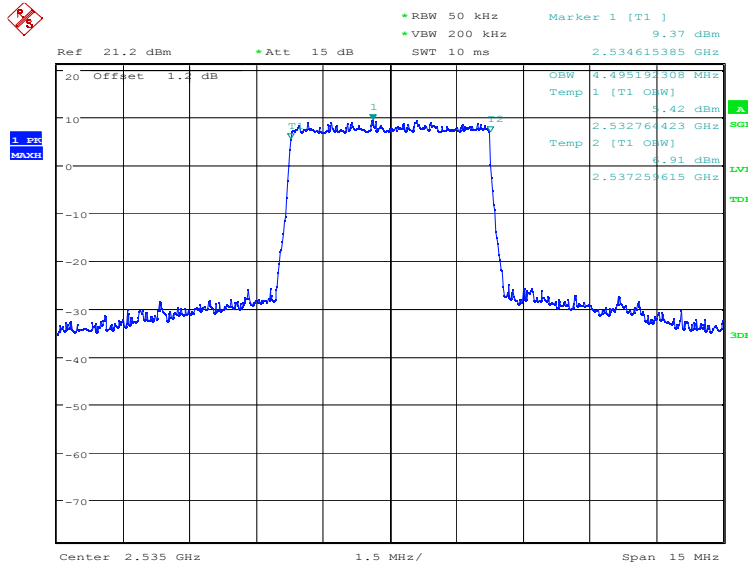
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	4519.23	4495.19

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



Date: 6.AUG.2021 08:17:05

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

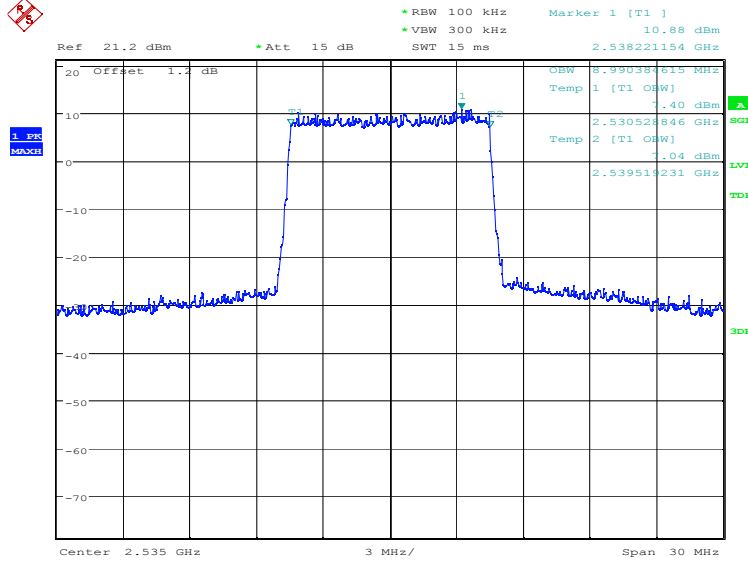


Date: 6.AUG.2021 08:17:45

LTE band 7, 10MHz (99%)

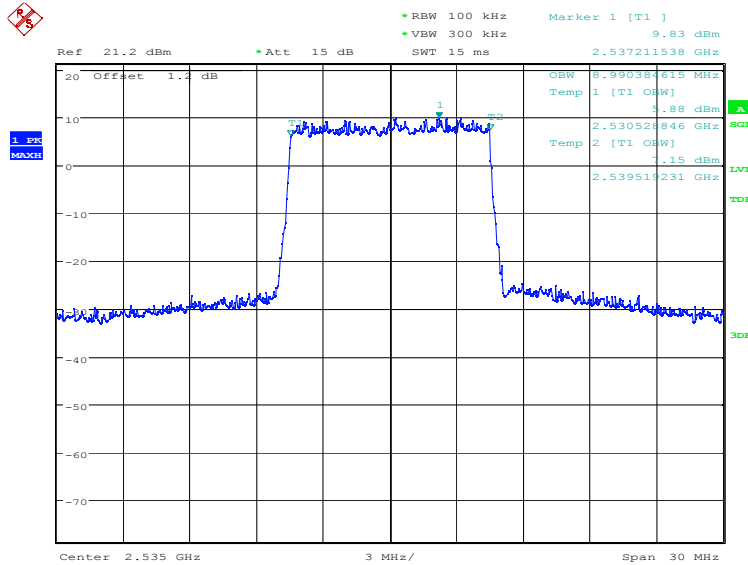
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	8990.38	8990.38

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



Date: 6.AUG.2021 08:18:26

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

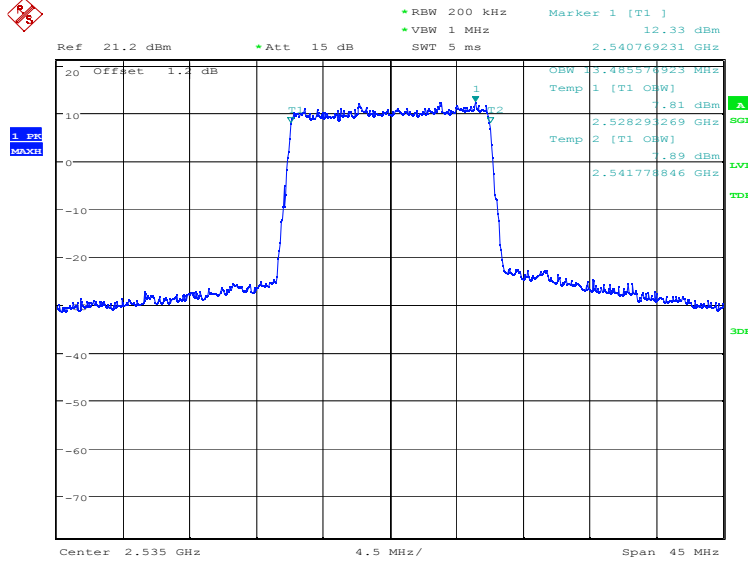


Date: 6.AUG.2021 08:19:05

LTE band 7, 15MHz (99%)

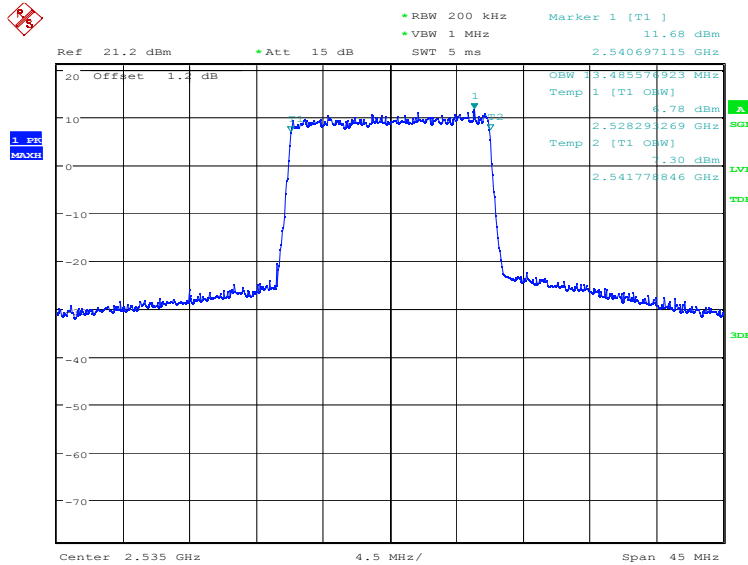
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 6.AUG.2021 08:19:47

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

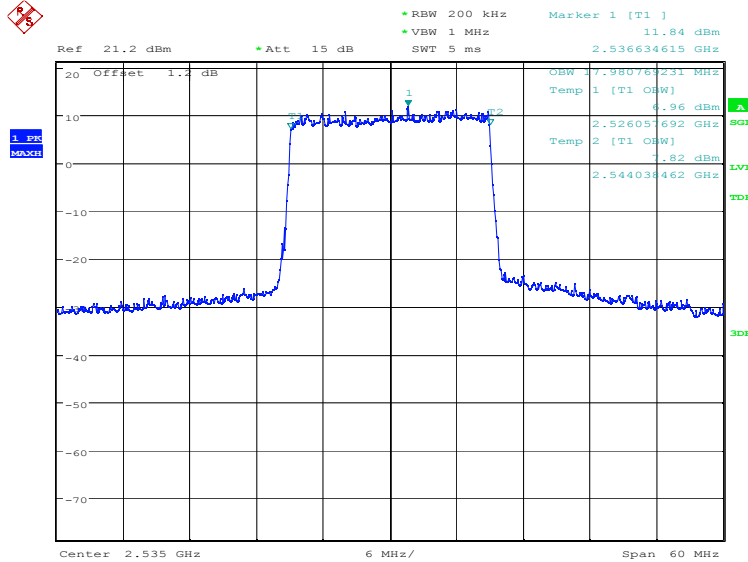


Date: 6.AUG.2021 08:20:26

LTE band 7, 20MHz (99%)

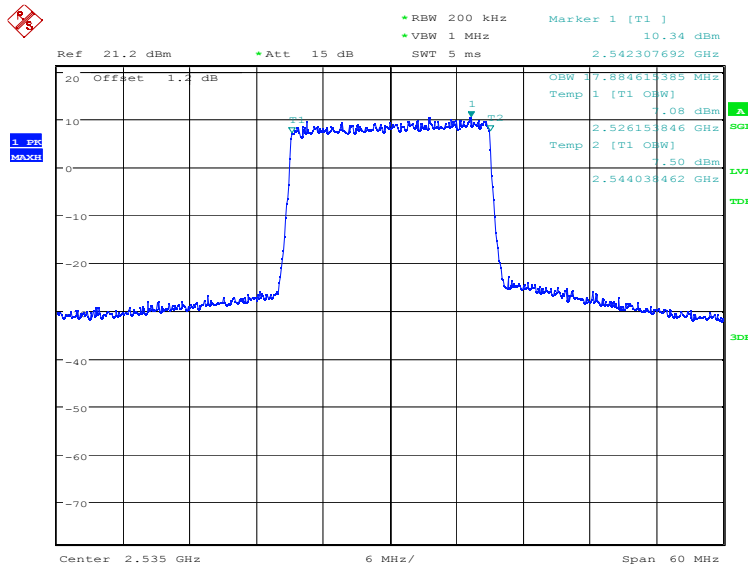
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	17980.77	17884.62

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



Date: 6.AUG.2021 08:21:08

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

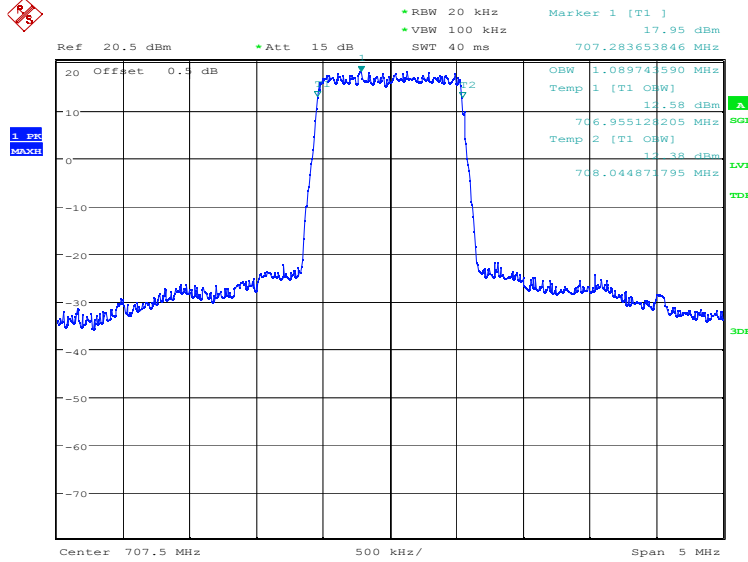


Date: 6.AUG.2021 08:21:47

LTE band 12, 1.4MHz (99%)

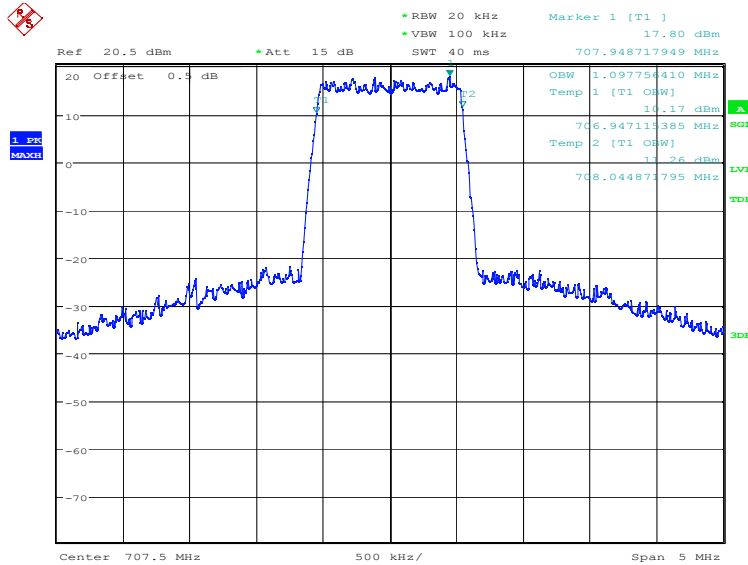
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	1089.74	1097.76

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



Date: 5.AUG.2021 16:13:12

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

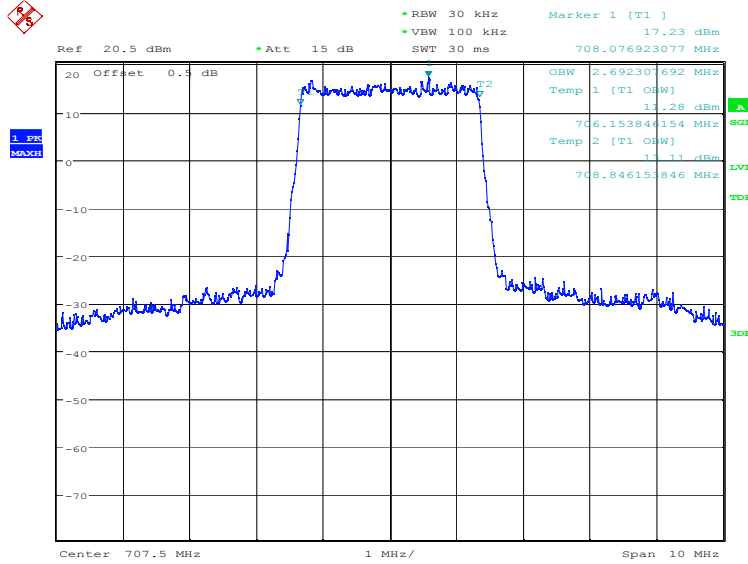


Date: 5.AUG.2021 16:13:51

LTE band 12, 3MHz (99%)

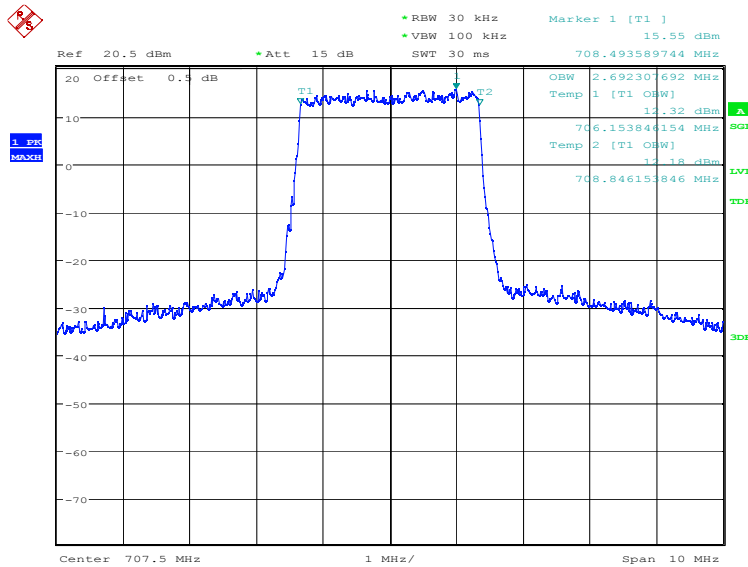
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 5.AUG.2021 16:14:33

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

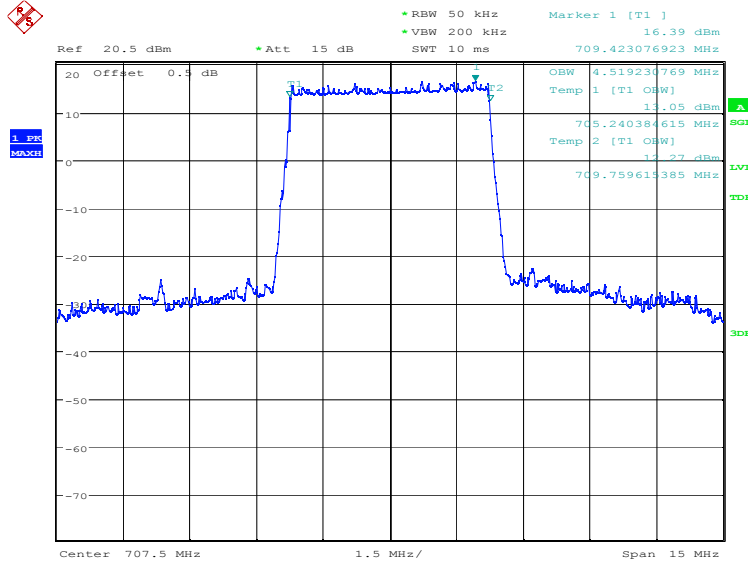


Date: 5.AUG.2021 16:15:13

LTE band 12, 5MHz (99%)

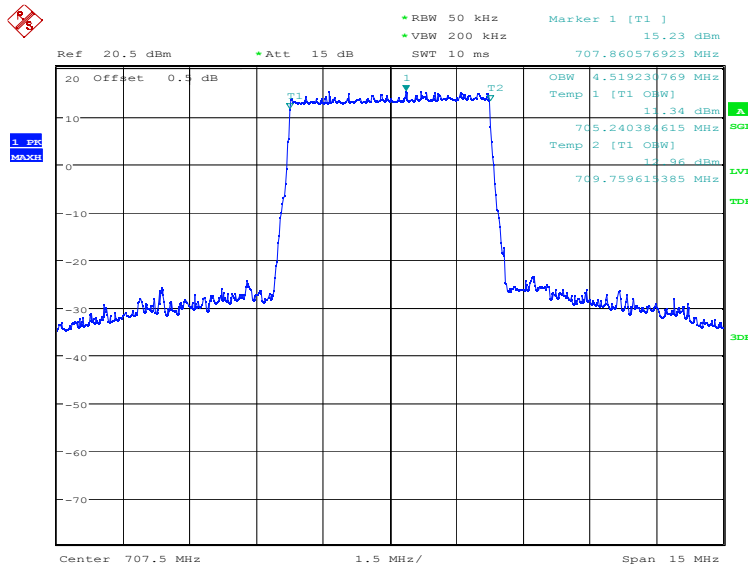
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	4519.23	4519.23

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



Date: 5.AUG.2021 16:15:54

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

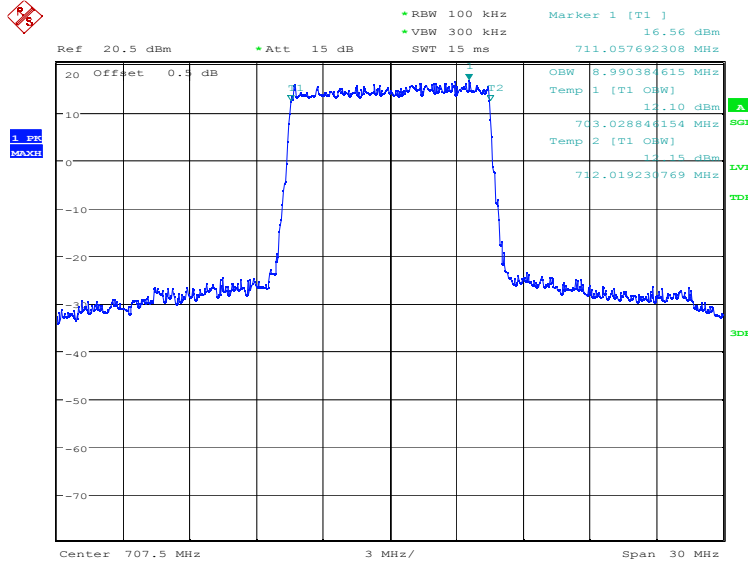


Date: 5.AUG.2021 16:16:34

LTE band 12, 10MHz (99%)

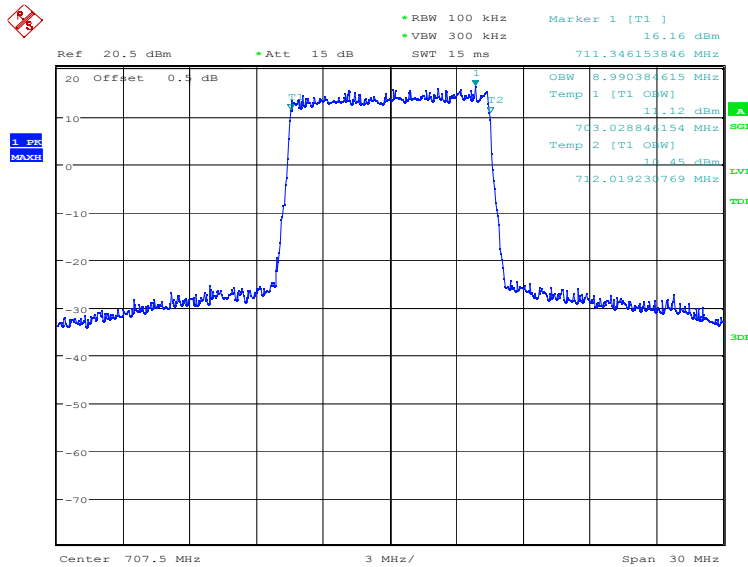
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	8990.38	8990.38

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



Date: 5.AUG.2021 16:17:16

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

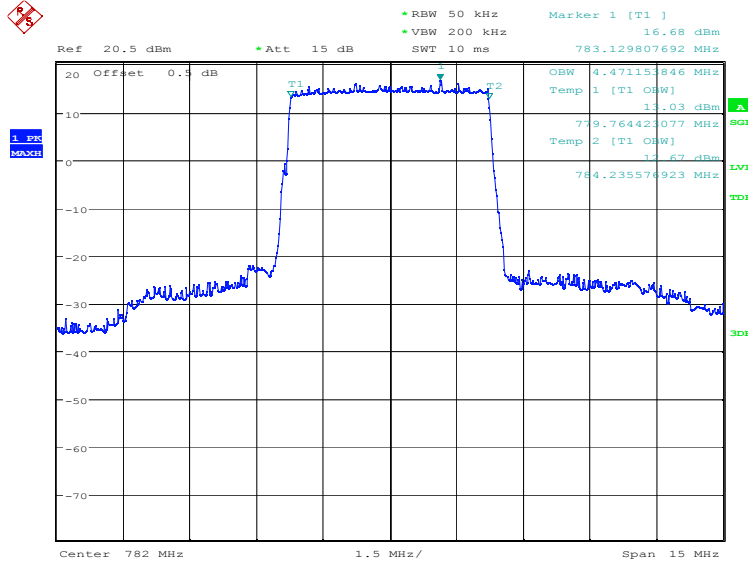


Date: 5.AUG.2021 16:17:55

LTE band 13, 5MHz (99%)

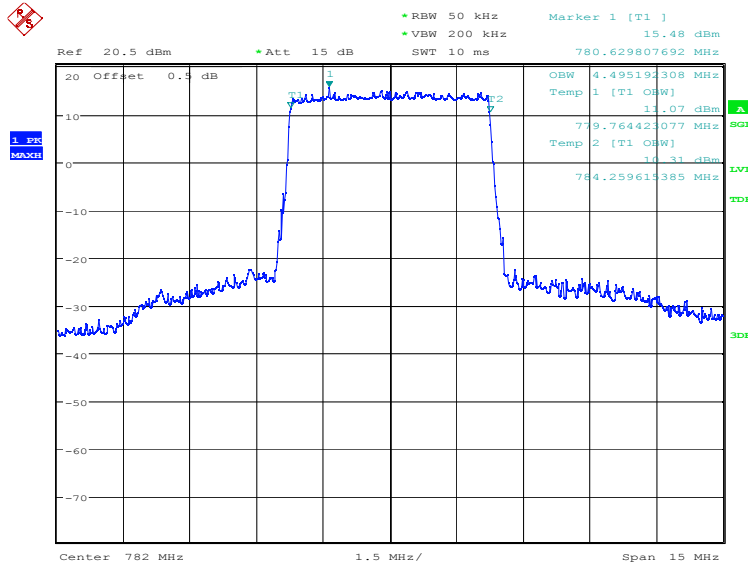
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	4471.15	4495.19

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



Date: 5.AUG.2021 16:18:39

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

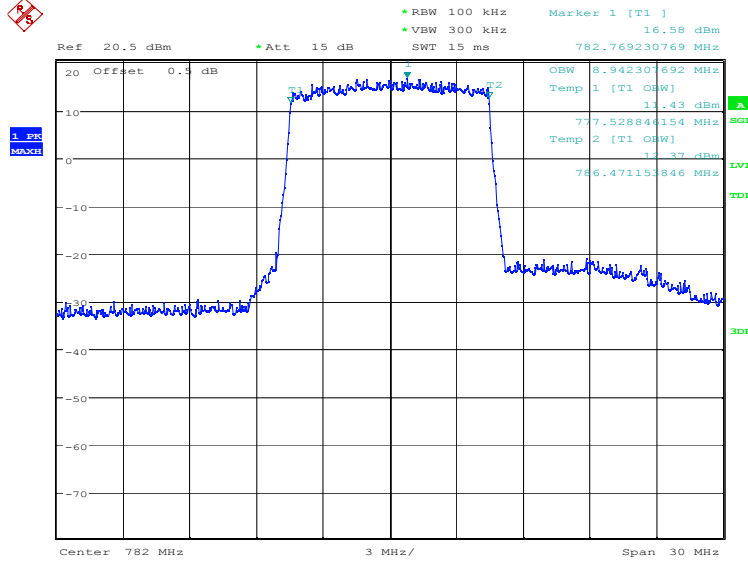


Date: 5.AUG.2021 16:19:18

LTE band 13, 10MHz (99%)

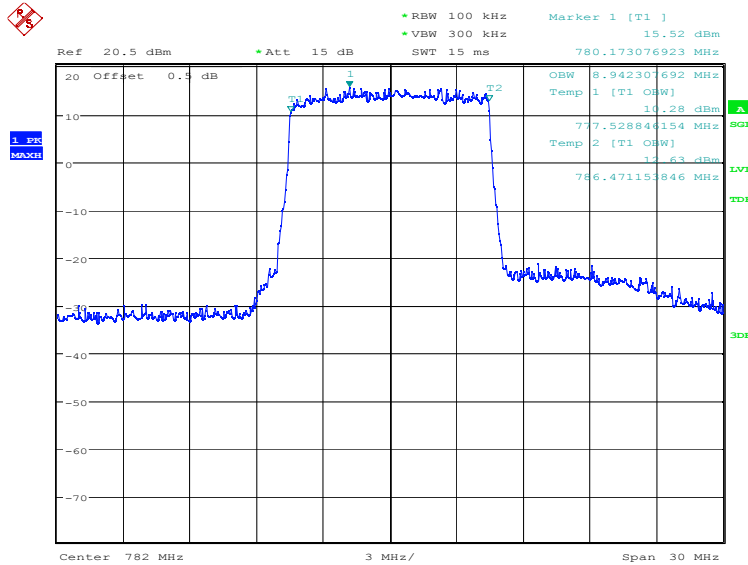
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 5.AUG.2021 16:20:00

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

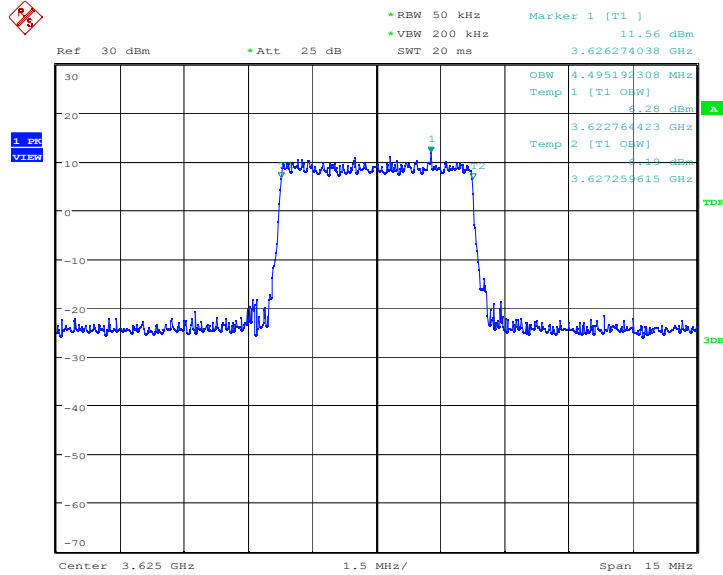


Date: 5.AUG.2021 16:20:39

LTE band 48, 5MHz (99%)

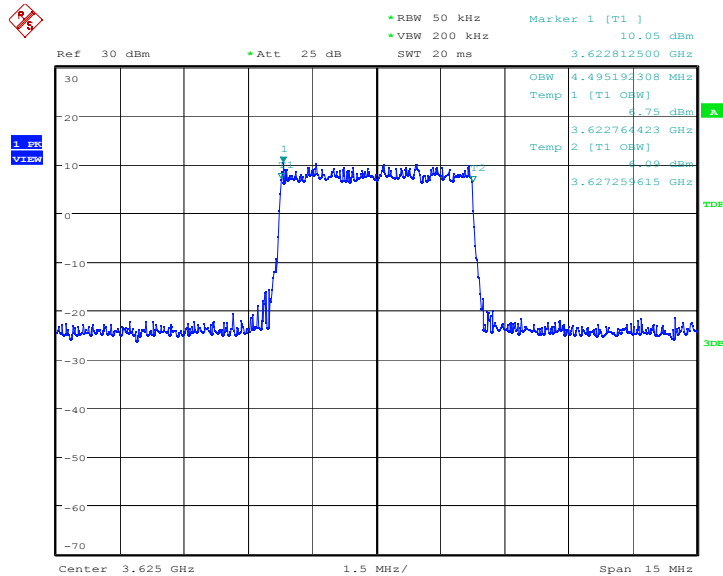
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
3625.0	QPSK	16QAM
	4495.19	4495.19

LTE band 48, 5MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 15:47:38

LTE band 48, 5MHz Bandwidth, 16QAM (99% BW)

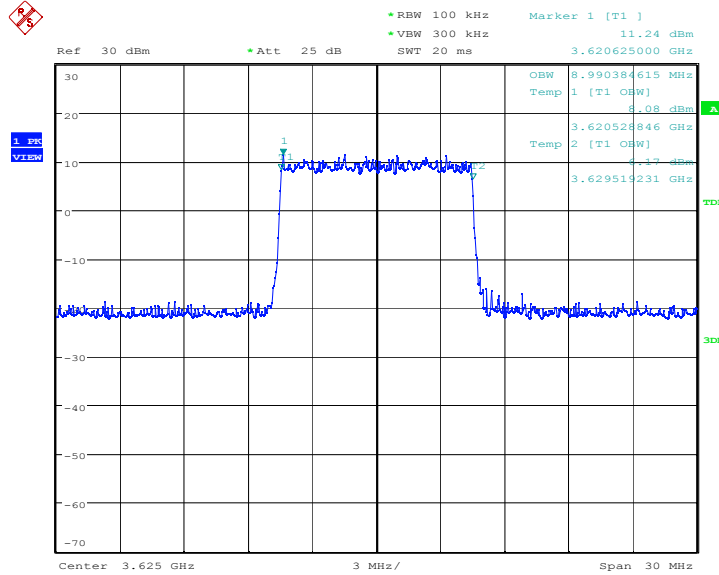


Date: 6.AUG.2021 15:49:29

LTE band 48, 10MHz (99%)

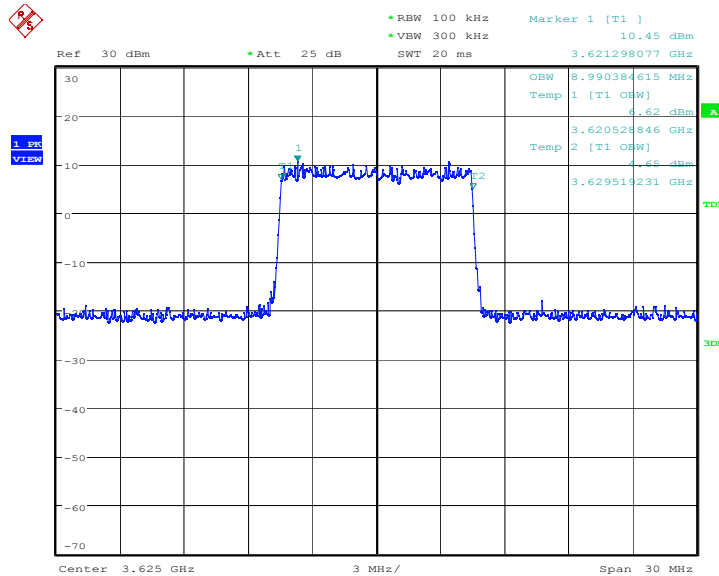
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
3625.0	QPSK	16QAM
	8990.38	8990.38

LTE band 48, 10MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 15:55:12

LTE band 48, 10MHz Bandwidth,16QAM (99% BW)

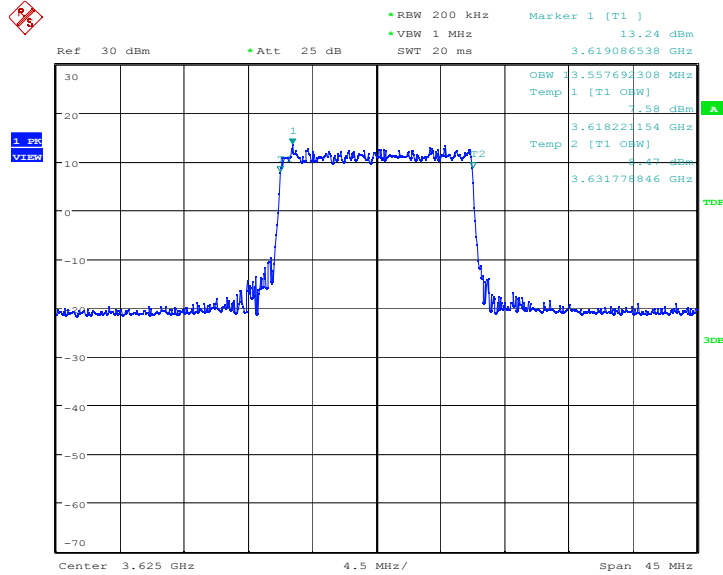


Date: 6.AUG.2021 15:53:20

LTE band 48, 15MHz (99%)

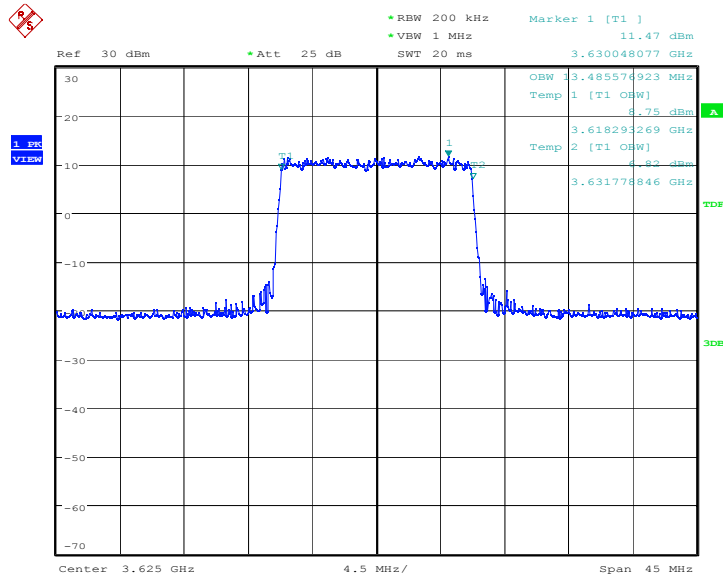
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
3625.0	QPSK	16QAM
	13557.69	13485.58

LTE band 48, 15MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 15:57:59

LTE band 48, 15MHz Bandwidth,16QAM (99% BW)

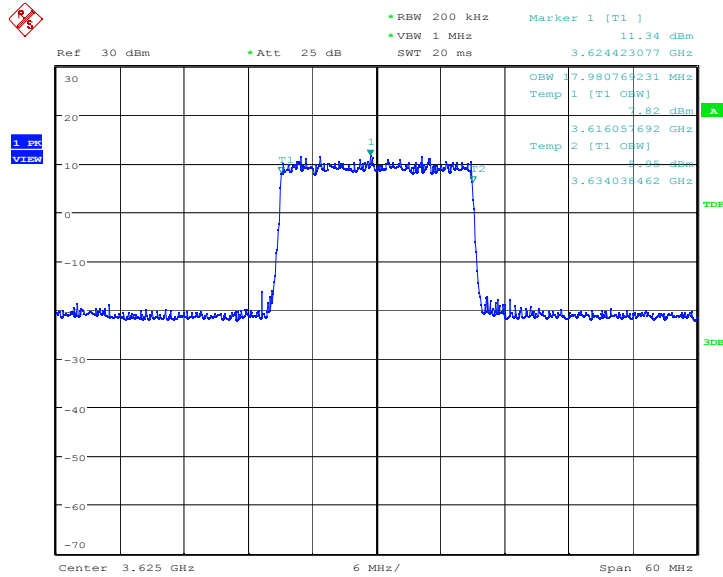


Date: 6.AUG.2021 15:59:33

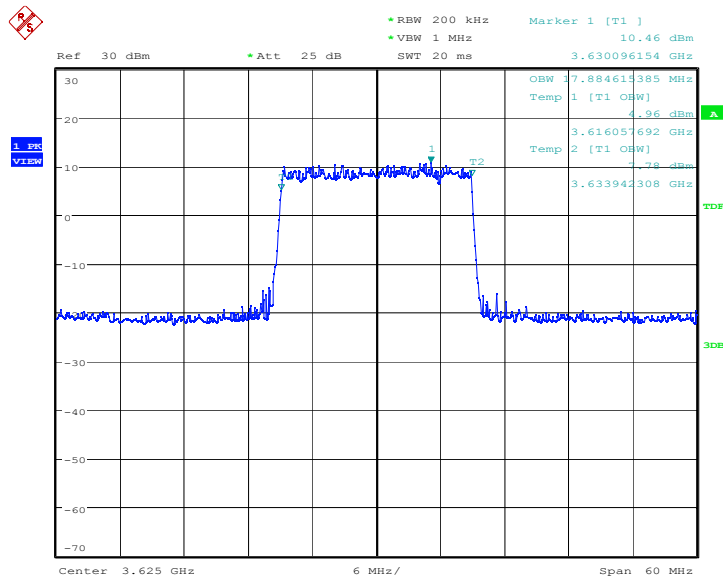
LTE band 48, 20MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
3625.0	QPSK	16QAM
	17980.77	17884.62

LTE band 48, 20MHz Bandwidth, QPSK (99% BW)



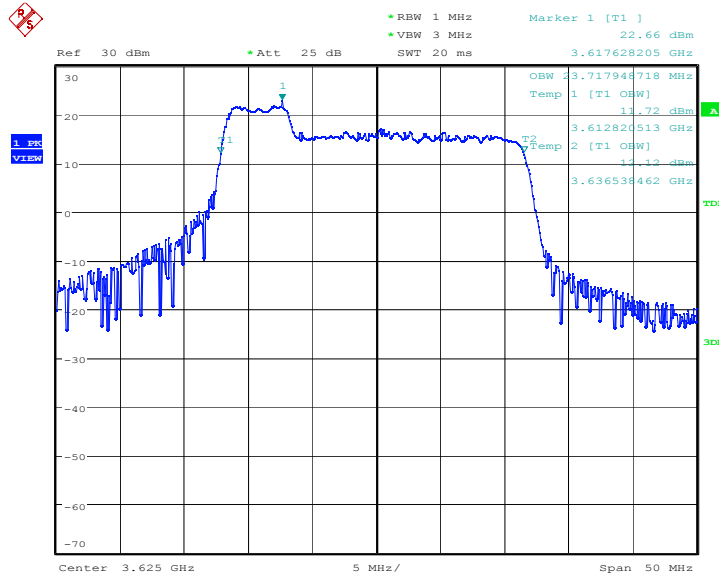
LTE band 48, 20MHz Bandwidth,16QAM (99% BW)



LTE CA band 48 , 5MHz+20MHz (99%)

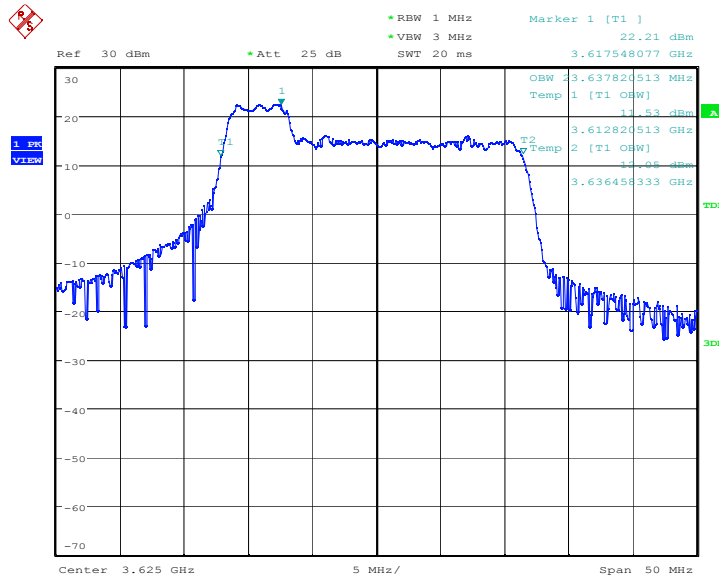
Frequency(MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
3625.0	23717.95	23637.82

LTE CA band 48 , 5MHz+20MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 15:18:11

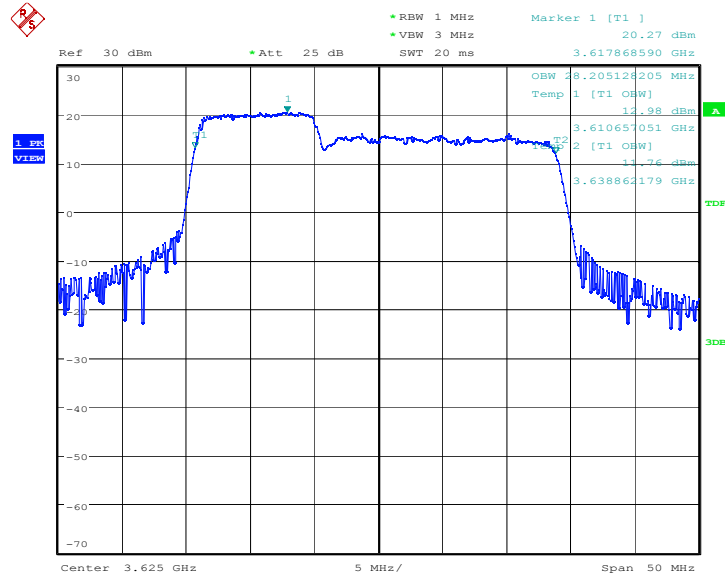
LTE CA band 48 , 5MHz+20MHz Bandwidth,16QAM (99% BW)



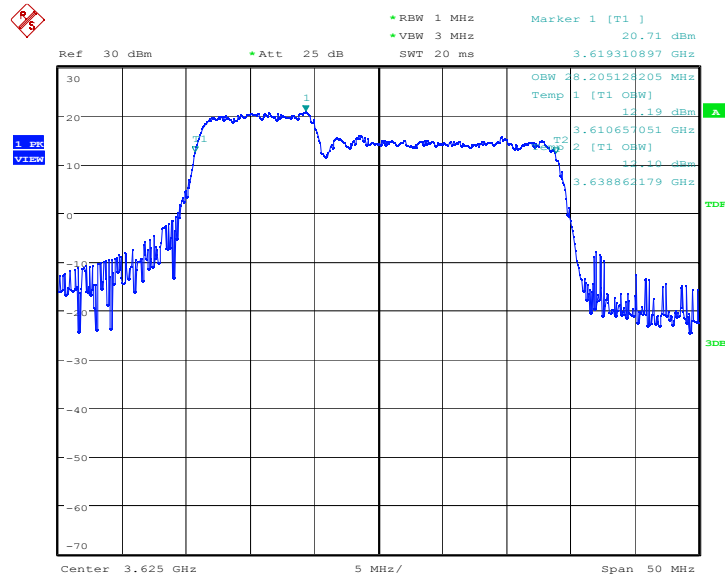
Date: 7.AUG.2021 15:19:20

LTE CA band 48 , 10MHz+20MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
3625.0	QPSK	16QAM
	28205.13	28205.13

LTE CA band 48 , 10MHz+20MHz Bandwidth, QPSK (99% BW)


Date: 7.AUG.2021 15:46:43

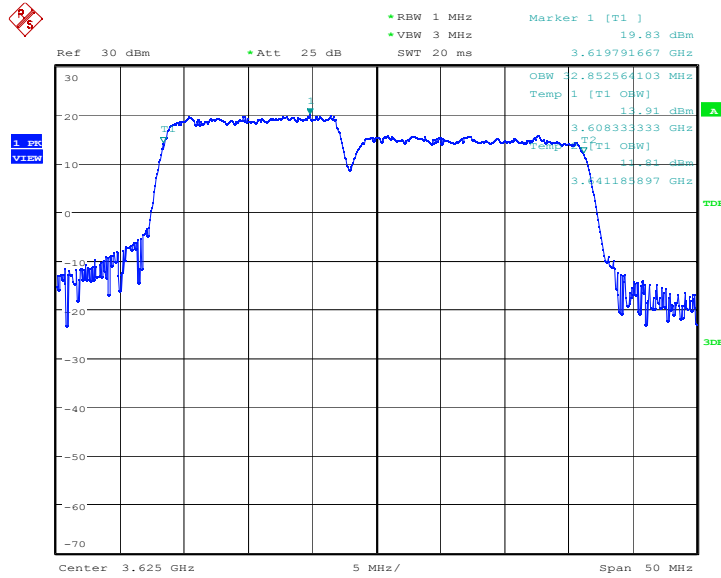
LTE CA band 48 , 10MHz+20MHz Bandwidth,16QAM (99% BW)


Date: 7.AUG.2021 15:47:55

LTE CA band 48 , 15MHz+20MHz (99%)

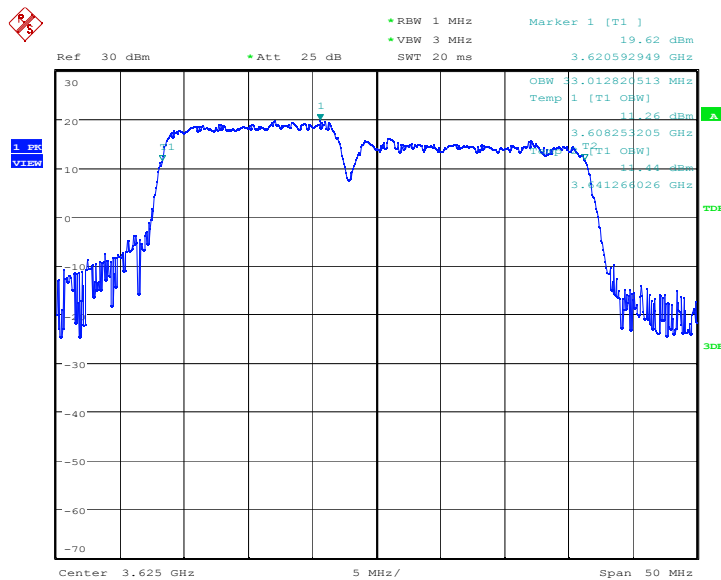
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
3625.0	QPSK	16QAM
	32852.56	33012.82

LTE CA band 48 , 15MHz+20MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 15:57:13

LTE CA band 48 , 15MHz+20MHz Bandwidth,16QAM (99% BW)

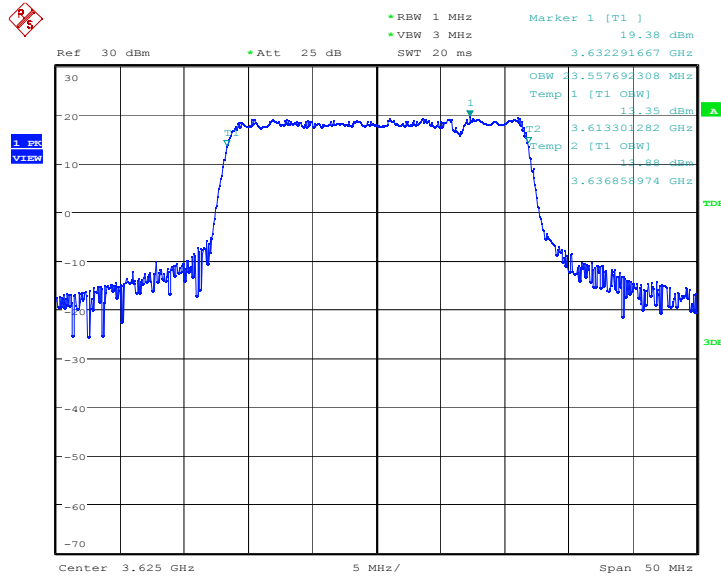


Date: 7.AUG.2021 15:58:21

LTE CA band 48 , 20MHz+5MHz (99%)

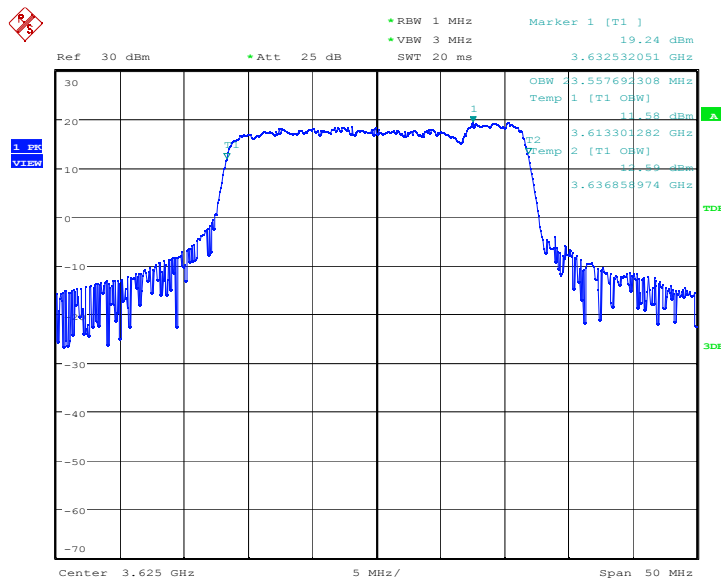
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	3625.0	QPSK
23557.69		23557.69

LTE CA band 48 , 20MHz+5MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 15:42:13

LTE CA band 48 , 20MHz+5MHz Bandwidth,16QAM (99% BW)

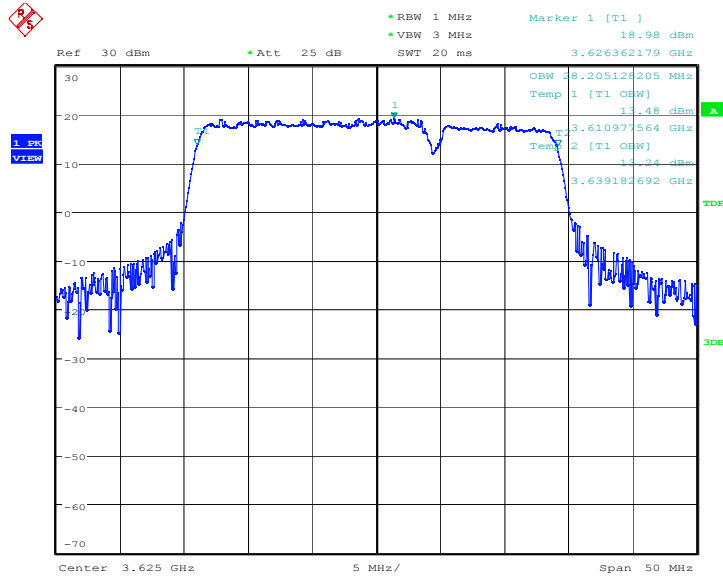


Date: 7.AUG.2021 15:43:32

LTE CA band 48 , 20MHz+10MHz (99%)

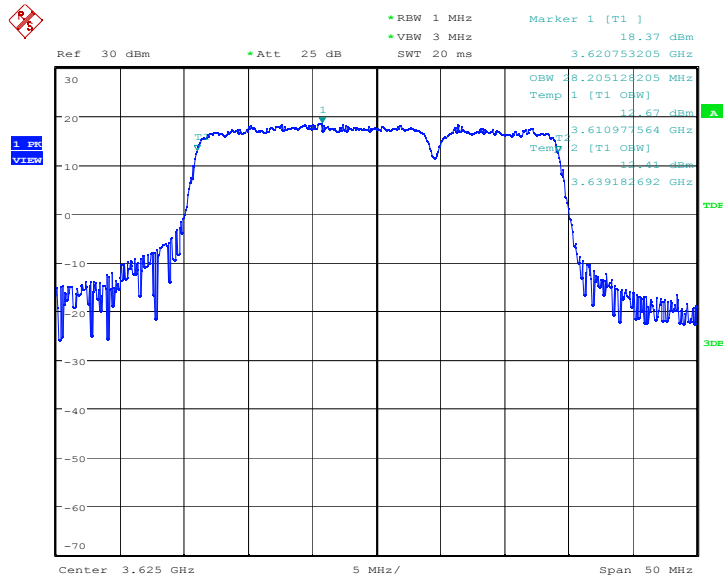
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	3625.0	QPSK
28205.13		28205.13

LTE CA band 48 , 20MHz+10MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 15:51:22

LTE CA band 48 , 20MHz+10MHz Bandwidth,16QAM (99% BW)

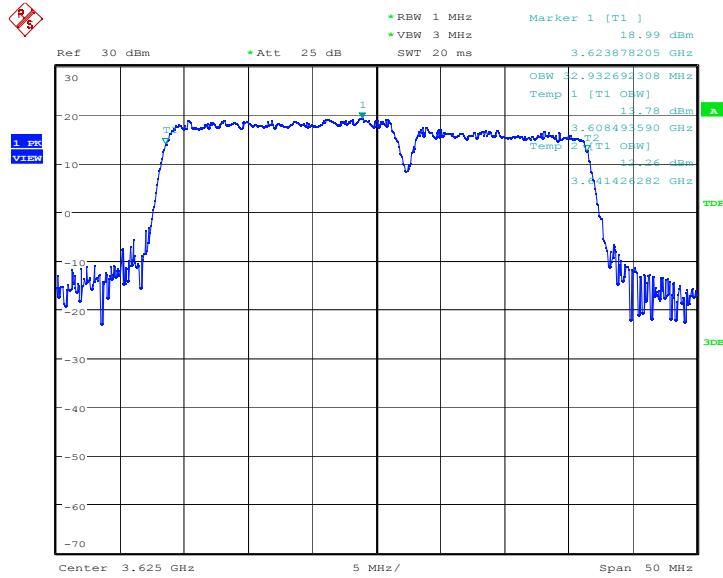


Date: 7.AUG.2021 15:52:36

LTE CA band 48 , 20MHz+15MHz (99%)

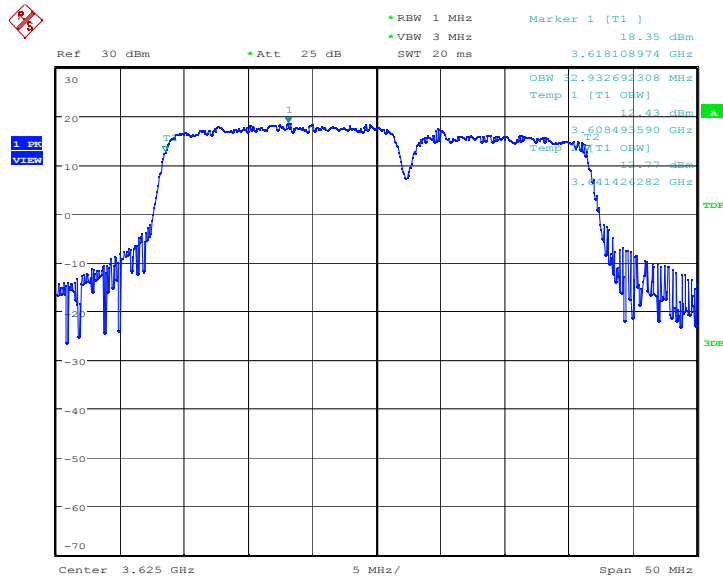
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	QPSK	16QAM
3625.0	32932.69	32932.69

LTE CA band 48 , 20MHz+15MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 16:04:16

LTE CA band 48 , 20MHz+15MHz Bandwidth,16QAM (99% BW)

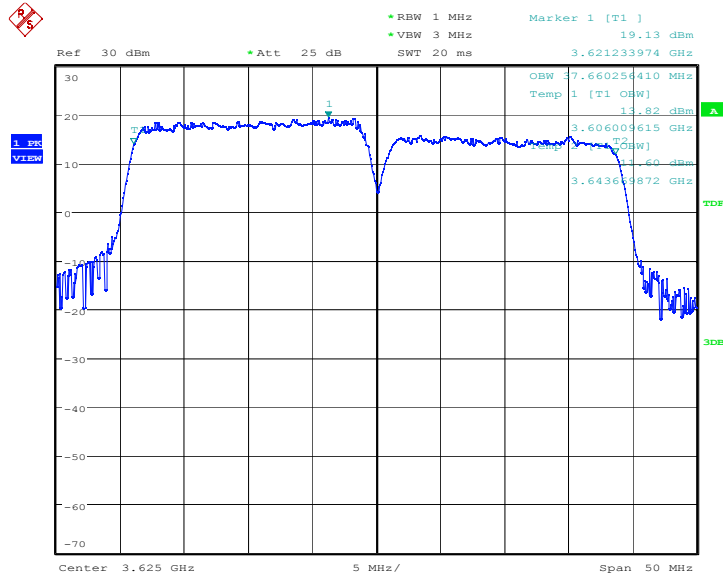


Date: 7.AUG.2021 16:05:31

LTE CA band 48 , 20MHz+20MHz (99%)

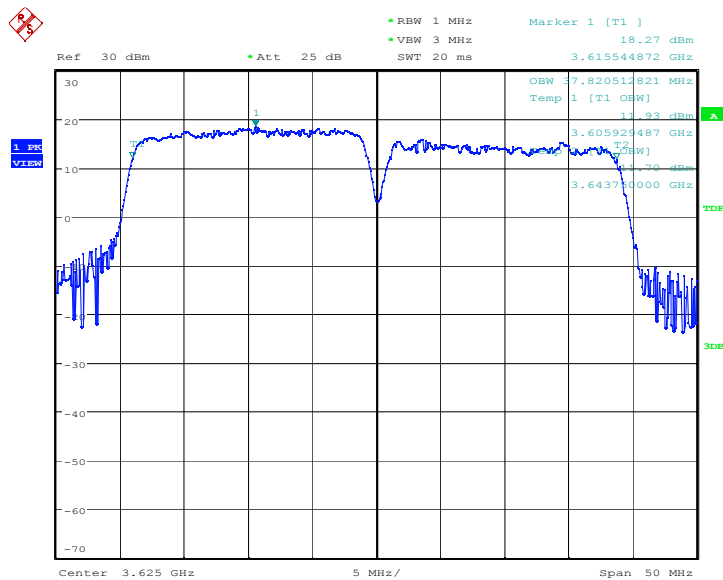
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
3625.0	QPSK	16QAM
	37660.26	37820.51

LTE CA band 48 , 20MHz+20MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 16:08:59

LTE CA band 48 , 20MHz+20MHz Bandwidth,16QAM (99% BW)

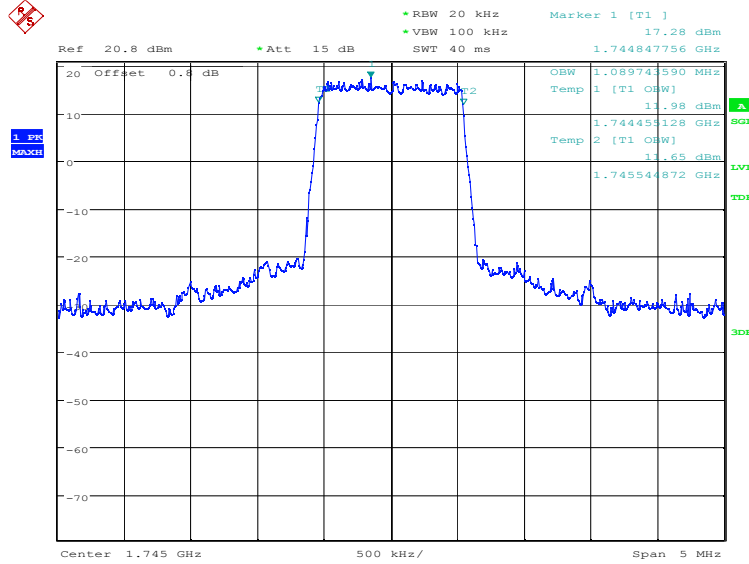


Date: 7.AUG.2021 16:16:44

LTE band 66-ANT2, 1.4MHz (99%)

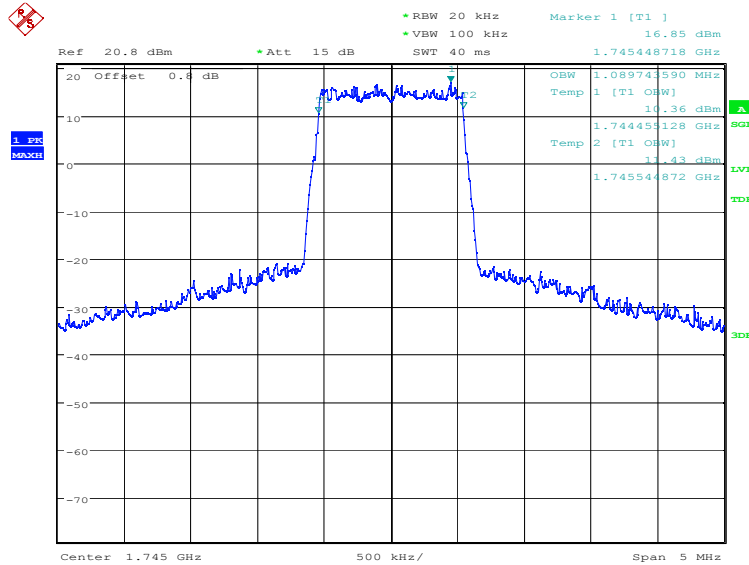
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
	1745.0	QPSK
1089.74		1089.74

LTE band 66-ANT2, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:28:28

LTE band 66-ANT2, 1.4MHz Bandwidth, 16QAM (99% BW)

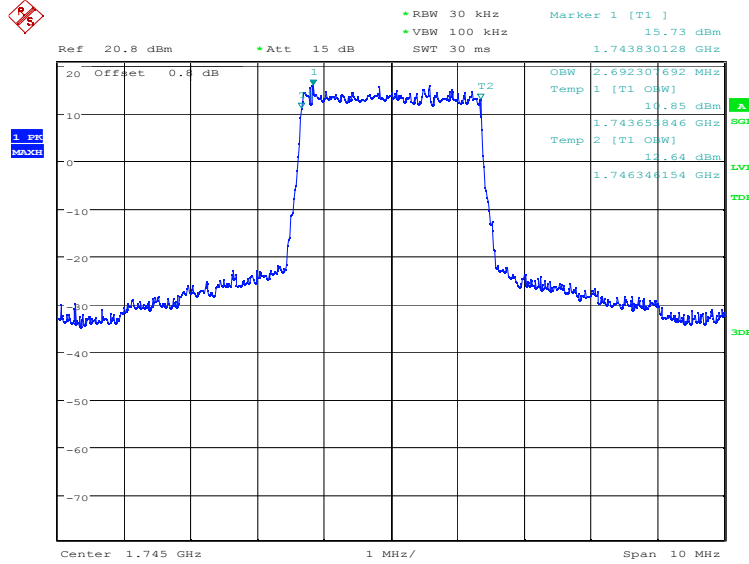


Date: 6.AUG.2021 07:29:07

LTE band 66-ANT2, 3MHz (99%)

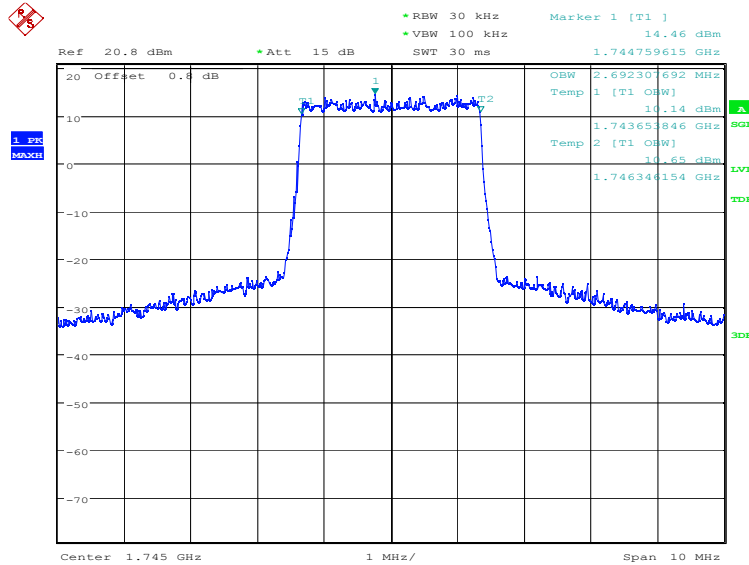
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	2692.31	2692.31

LTE band 66-ANT2, 3MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:29:48

LTE band 66-ANT2, 3MHz Bandwidth, 16QAM (99% BW)

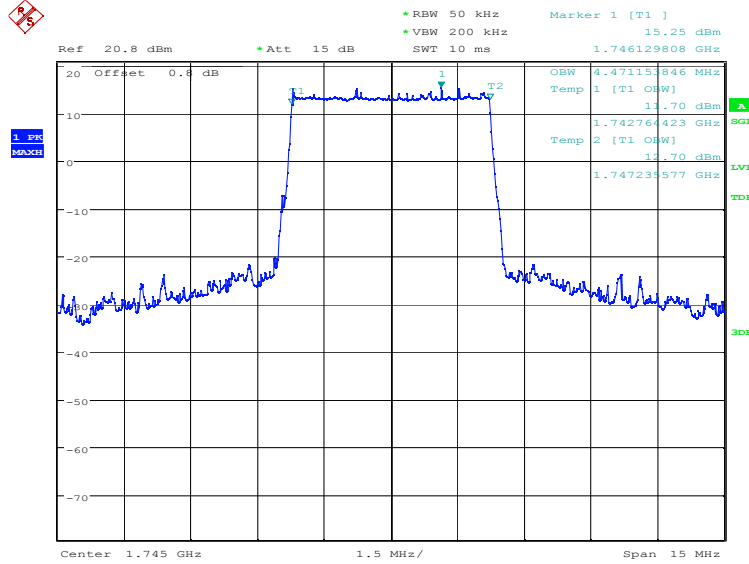


Date: 6.AUG.2021 07:30:27

LTE band 66-ANT2, 5MHz (99%)

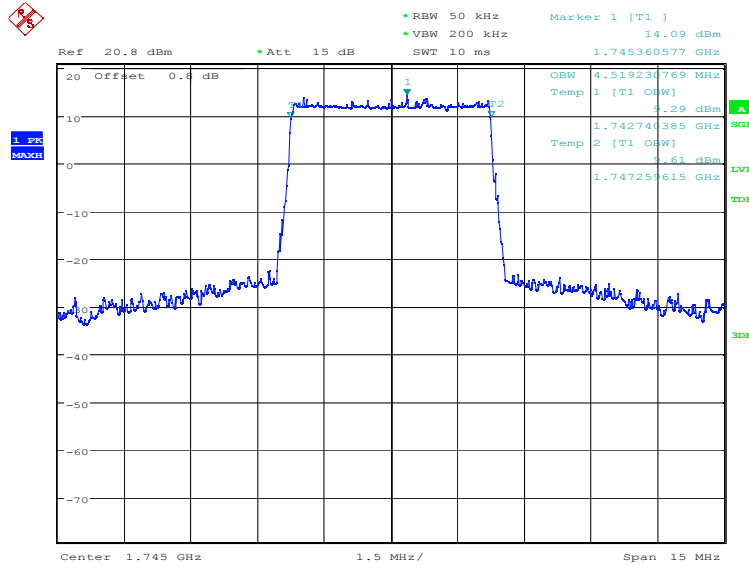
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	4471.15	4519.23

LTE band 66-ANT2, 5MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:31:09

LTE band 66-ANT2, 5MHz Bandwidth, 16QAM (99% BW)

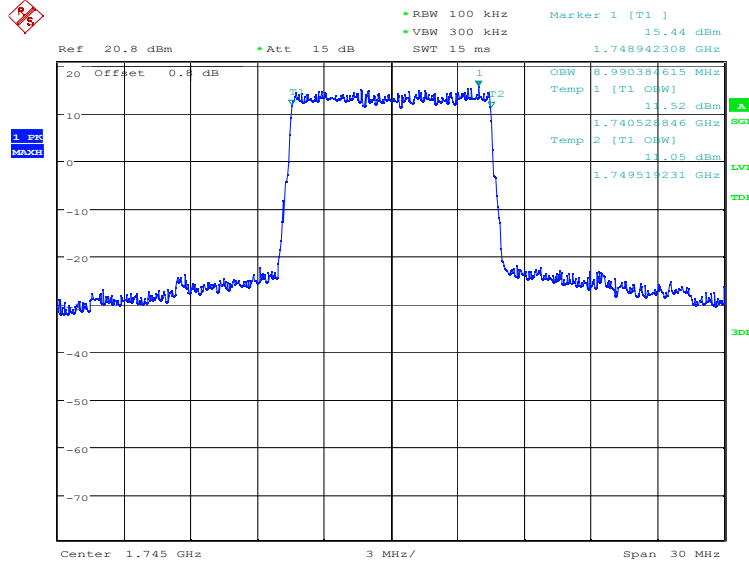


Date: 6.AUG.2021 07:31:48

LTE band 66-ANT2, 10MHz (99%)

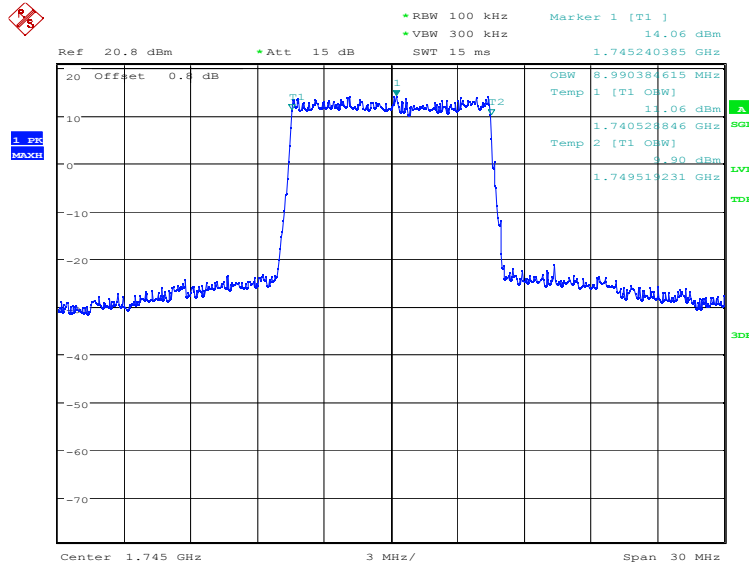
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	8990.38	8990.38

LTE band 66-ANT2, 10MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:32:29

LTE band 66-ANT2, 10MHz Bandwidth, 16QAM (99% BW)

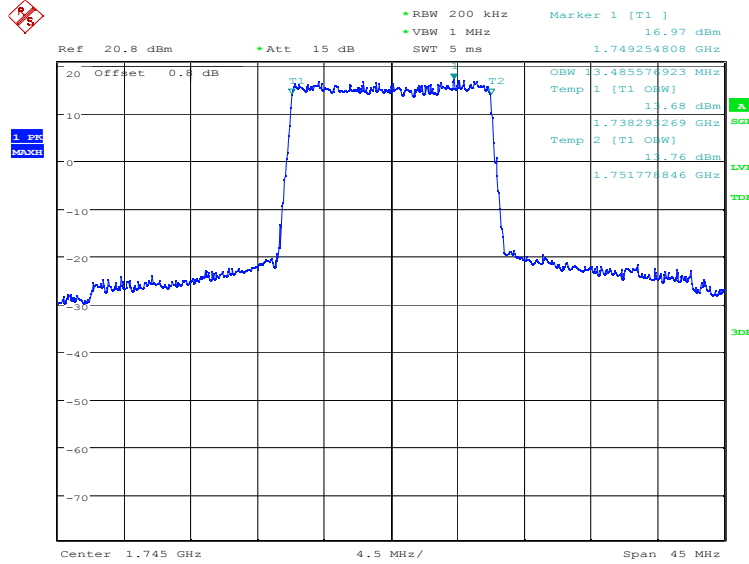


Date: 6.AUG.2021 07:33:09

LTE band 66-ANT2, 15MHz (99%)

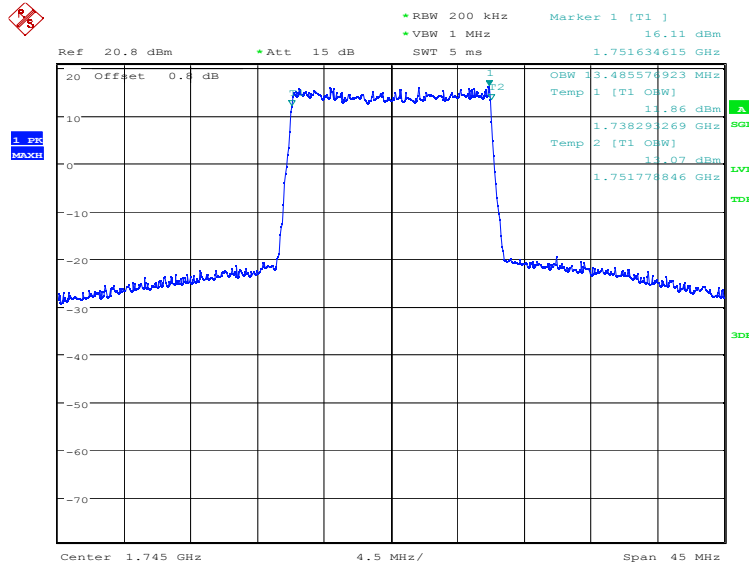
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	13485.58	13485.58

LTE band 66-ANT2, 15MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:33:50

LTE band 66-ANT2, 15MHz Bandwidth, 16QAM (99% BW)

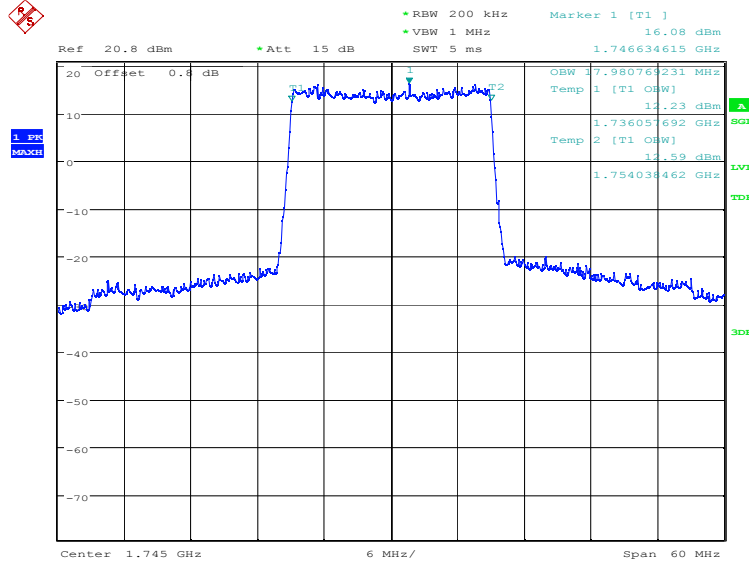


Date: 6.AUG.2021 07:34:30

LTE band 66-ANT2, 20MHz (99%)

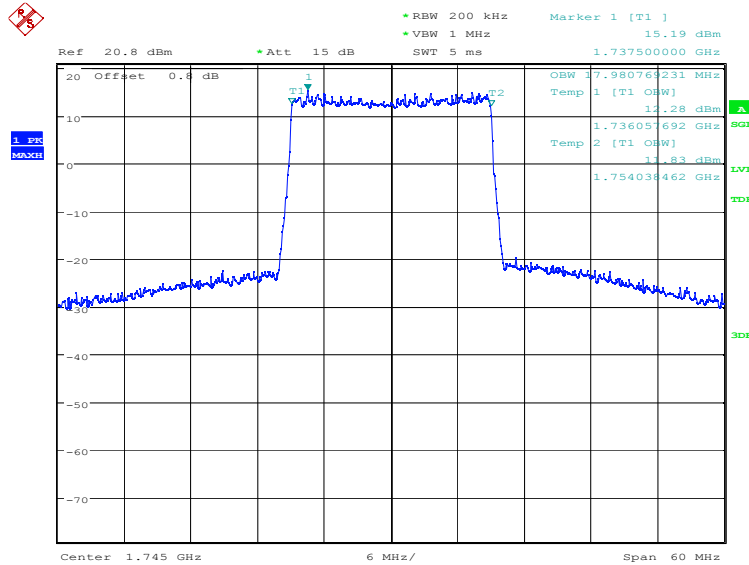
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
	1745.0	QPSK
17980.77		17980.77

LTE band 66-ANT2, 20MHz Bandwidth, QPSK (99% BW)



Date: 6.AUG.2021 07:35:11

LTE band 66-ANT2, 20MHz Bandwidth, 16QAM (99% BW)

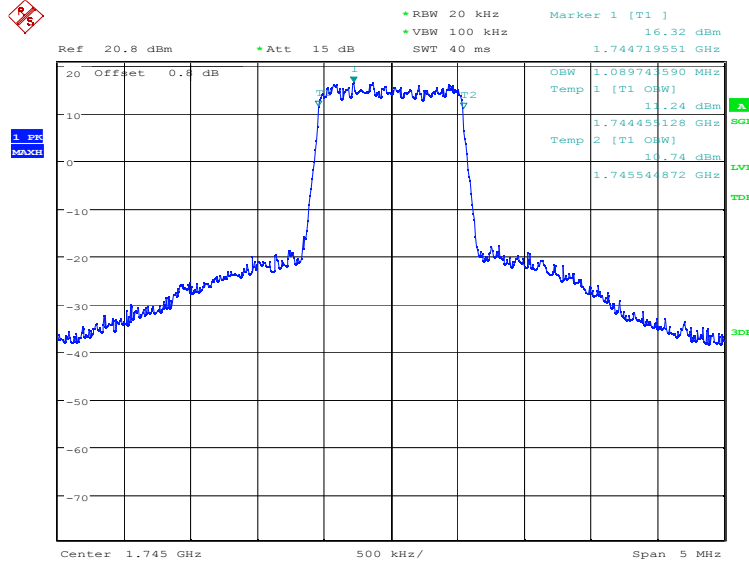


Date: 6.AUG.2021 07:35:50

LTE band 66-ANT3, 1.4MHz (99%)

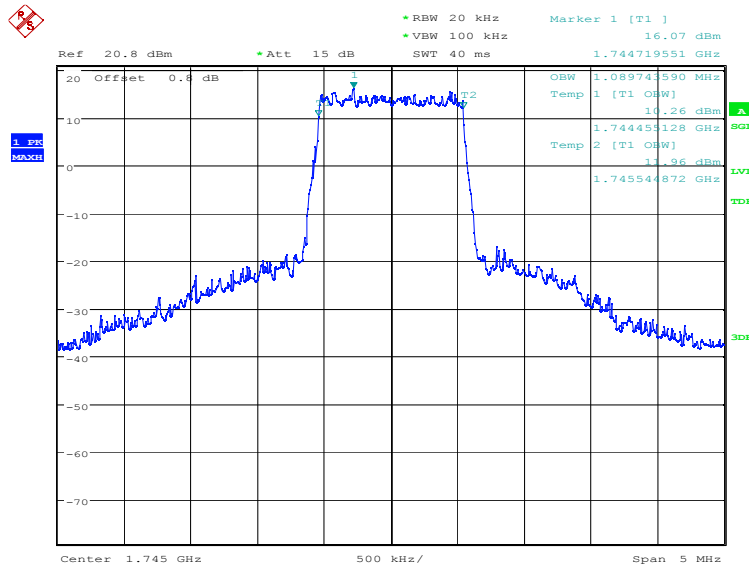
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
	1745.0	QPSK
	1089.74	1089.74

LTE band 66-ANT3, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 17.SEP.2021 08:56:38

LTE band 66-ANT3, 1.4MHz Bandwidth, 16QAM (99% BW)

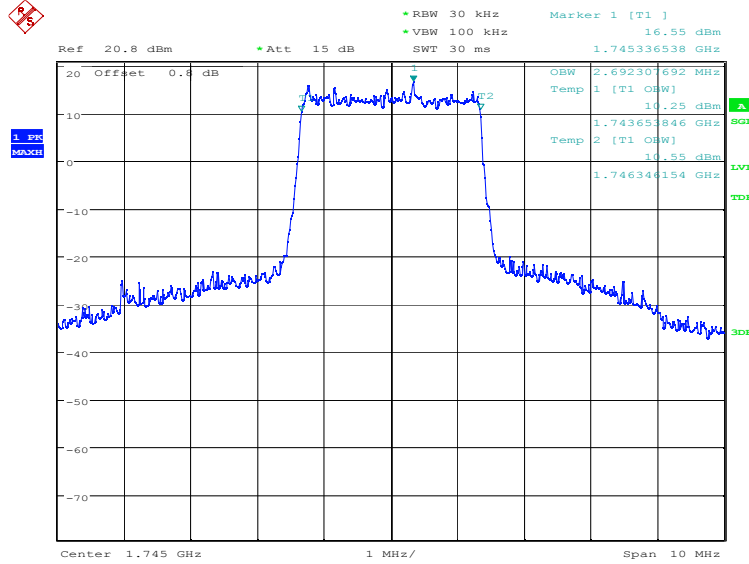


Date: 17.SEP.2021 08:57:17

LTE band 66-ANT3, 3MHz (99%)

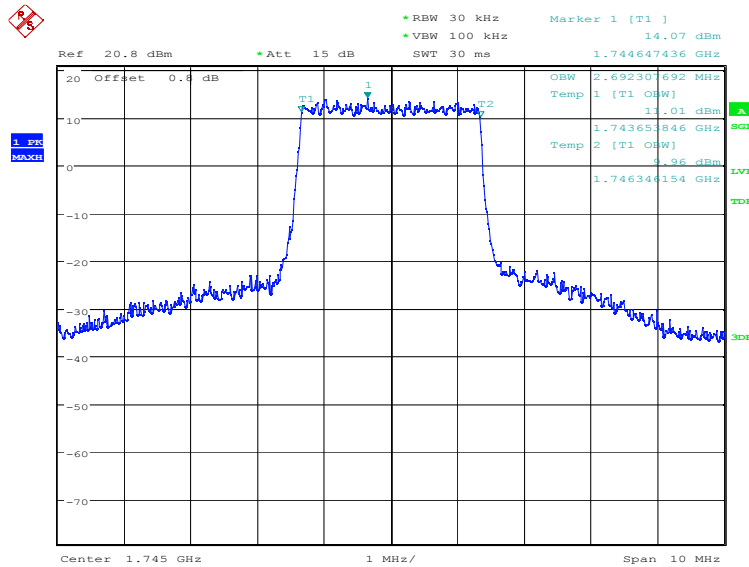
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
	1745.0	QPSK
2692.31		2692.31

LTE band 66-ANT3, 3MHz Bandwidth, QPSK (99% BW)



Date: 17.SEP.2021 08:58:35

LTE band 66-ANT3, 3MHz Bandwidth, 16QAM (99% BW)

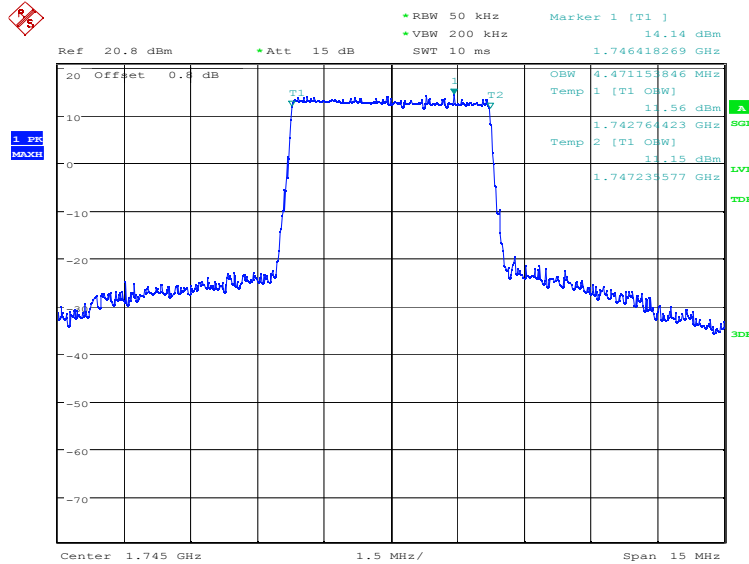


Date: 17.SEP.2021 08:59:14

LTE band 66-ANT3, 5MHz (99%)

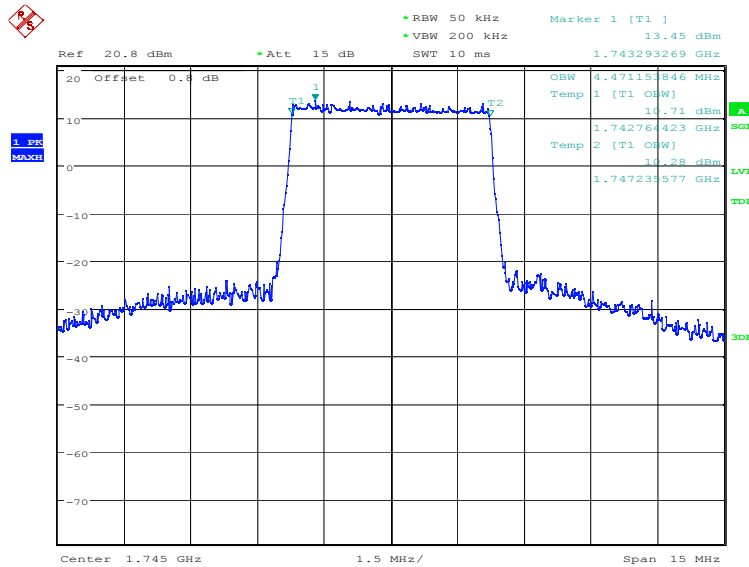
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	4471.15	4471.15

LTE band 66-ANT3, 5MHz Bandwidth, QPSK (99% BW)



Date: 17.SEP.2021 08:59:57

LTE band 66-ANT3, 5MHz Bandwidth, 16QAM (99% BW)

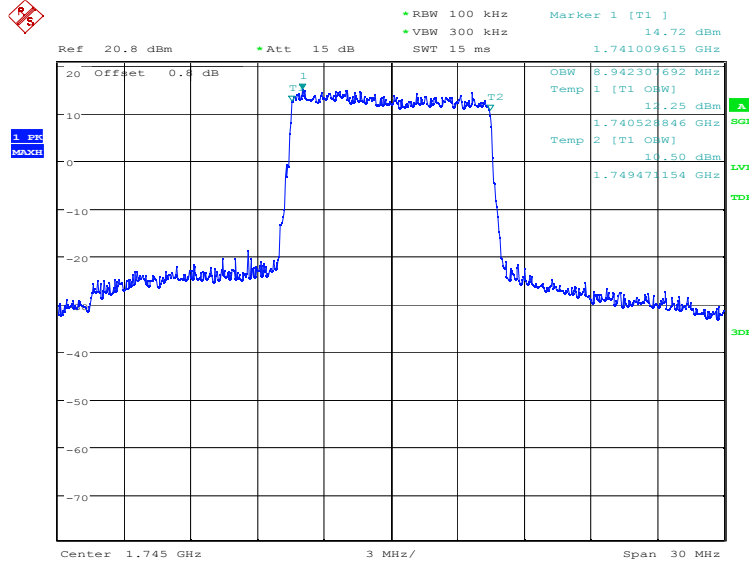


Date: 17.SEP.2021 09:00:37

LTE band 66-ANT3, 10MHz (99%)

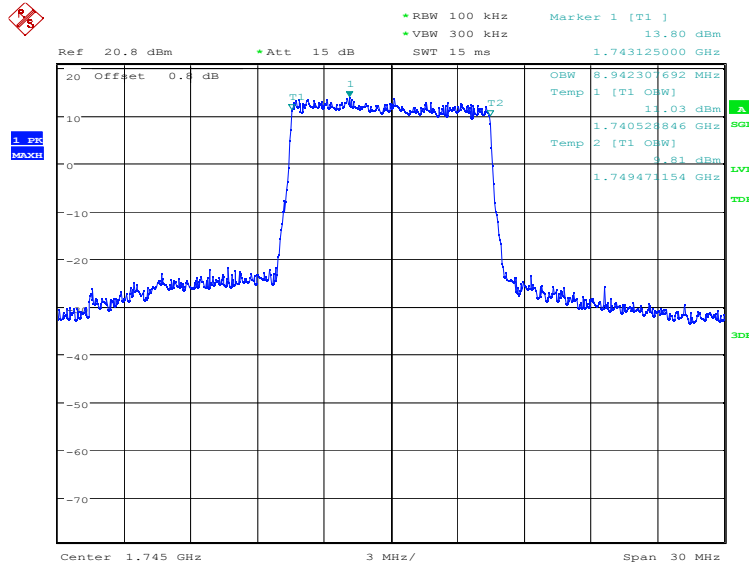
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	8942.31	8942.31

LTE band 66-ANT3, 10MHz Bandwidth, QPSK (99% BW)



Date: 17.SEP.2021 09:02:07

LTE band 66-ANT3, 10MHz Bandwidth, 16QAM (99% BW)

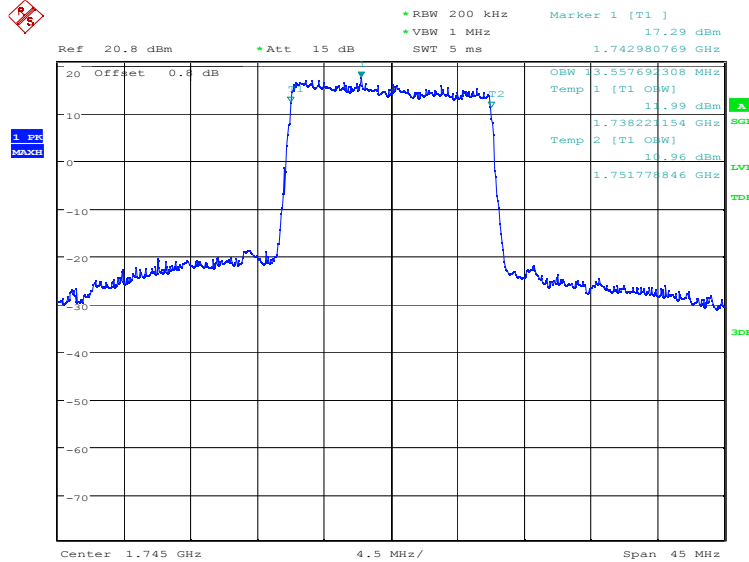


Date: 17.SEP.2021 09:02:47

LTE band 66-ANT3, 15MHz (99%)

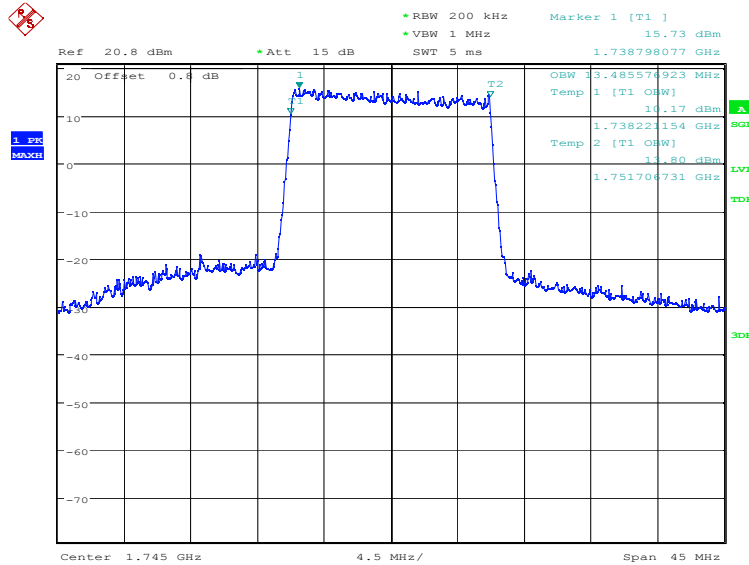
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	13557.69	13485.58

LTE band 66-ANT3, 15MHz Bandwidth, QPSK (99% BW)



Date: 17.SEP.2021 09:04:06

LTE band 66-ANT3, 15MHz Bandwidth, 16QAM (99% BW)

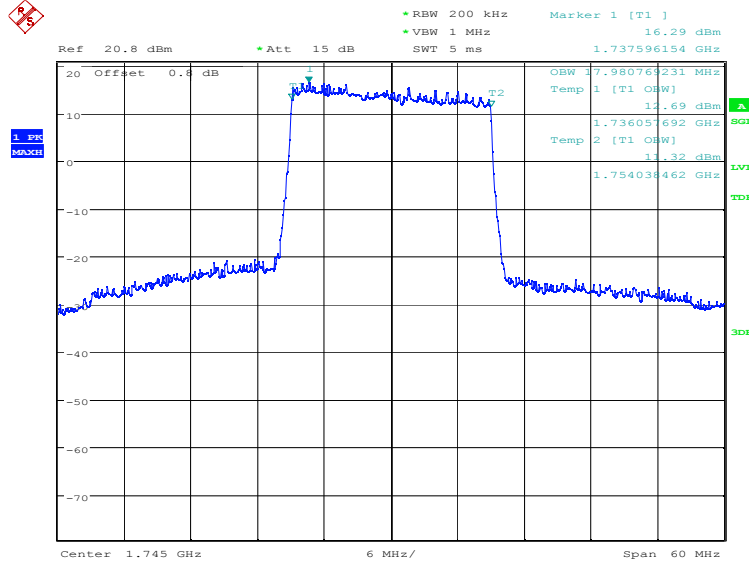


Date: 17.SEP.2021 09:04:46

LTE band 66-ANT3, 20MHz (99%)

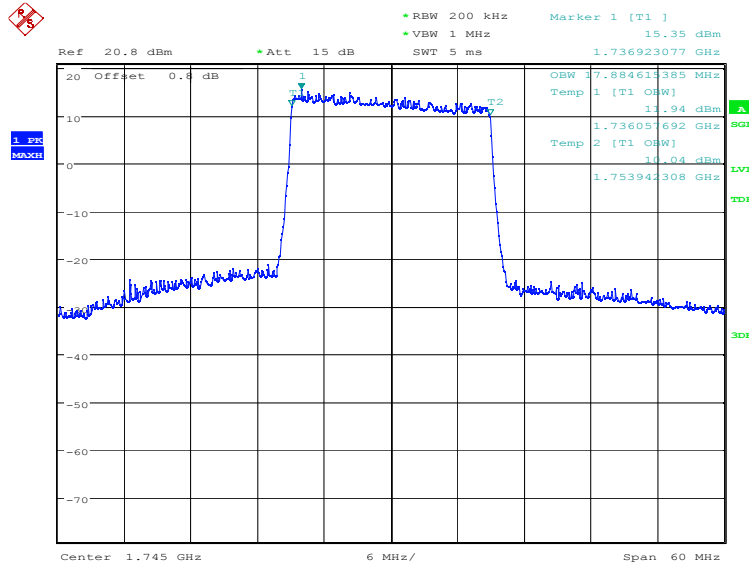
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
	1745.0	QPSK
	17980.77	17884.62

LTE band 66-ANT3, 20MHz Bandwidth, QPSK (99% BW)



Date: 17.SEP.2021 09:07:26

LTE band 66-ANT3, 20MHz Bandwidth, 16QAM (99% BW)

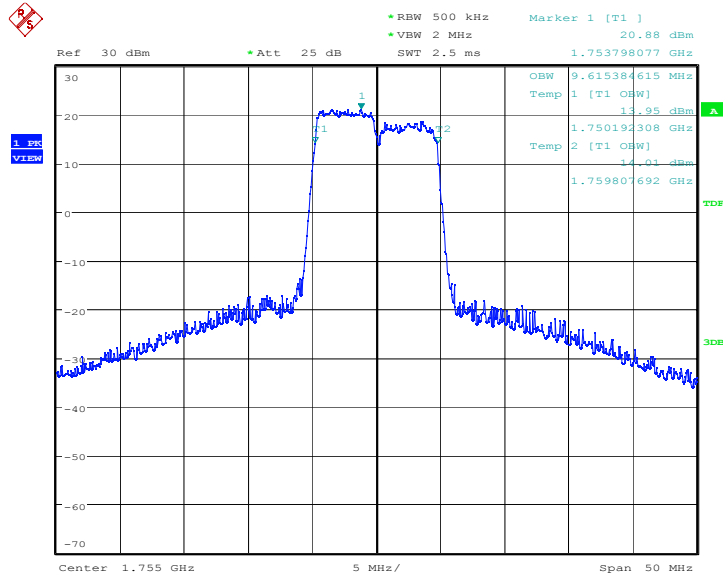


Date: 17.SEP.2021 09:08:06

LTE CA band 66 , 5MHz+5MHz (99%)

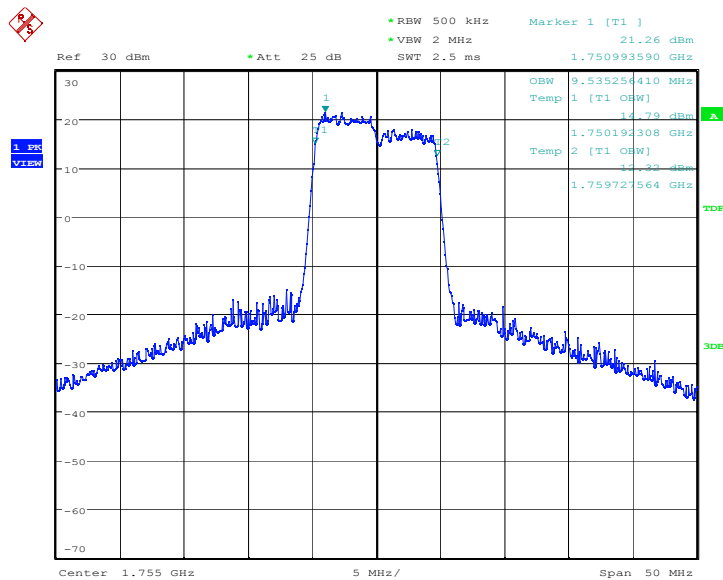
Frequency(MHz)	Occupied Bandwidth (99%)(MHz)	
1755.0	QPSK	16QAM
	9615.38	9535.26

LTE CA band 66 , 5MHz+5MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 16:36:41

LTE CA band 66 , 5MHz+5MHz Bandwidth,16QAM (99% BW)

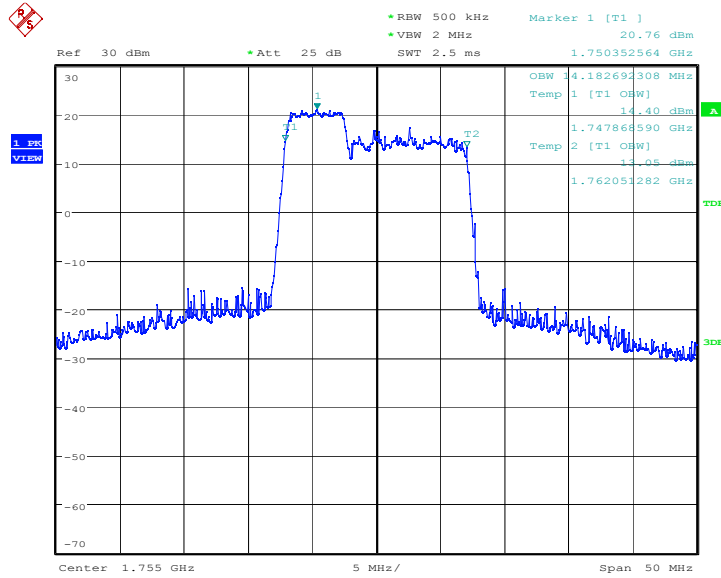


Date: 7.AUG.2021 16:37:52

LTE CA band 66 , 5MHz+10MHz (99%)

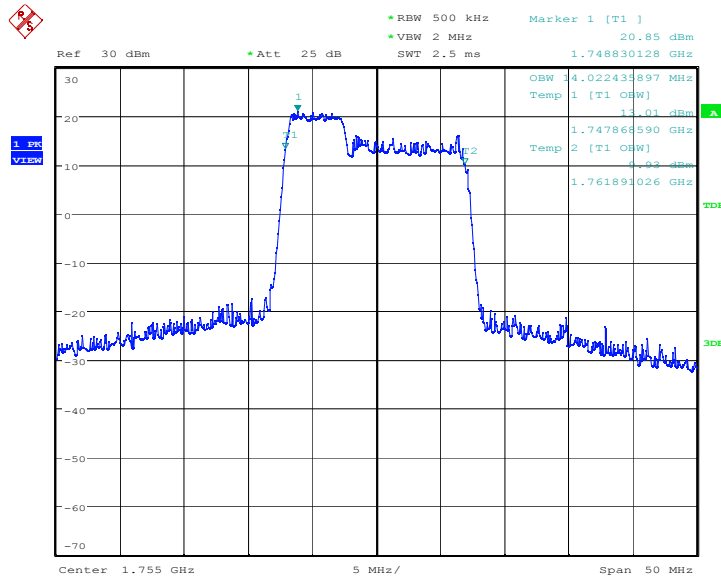
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
1755.0	QPSK	16QAM
	14182.69	14022.44

LTE CA band 66 , 5MHz+10MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 16:39:58

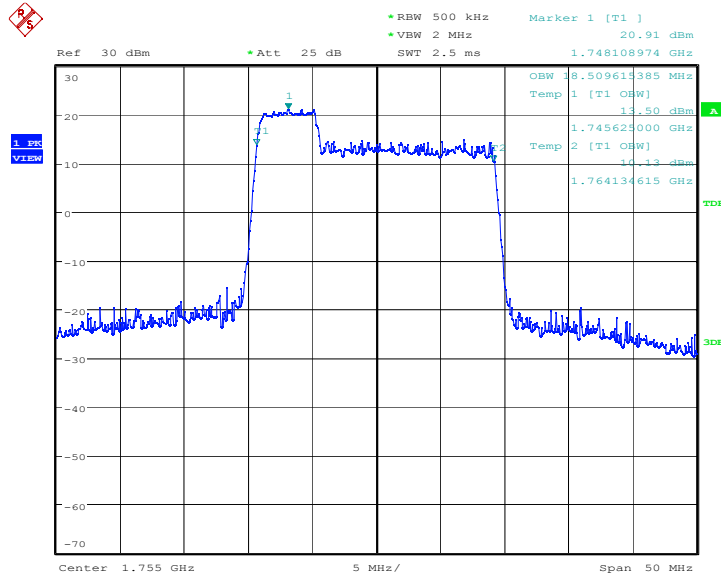
LTE CA band 66 , 5MHz+10MHz Bandwidth,16QAM (99% BW)



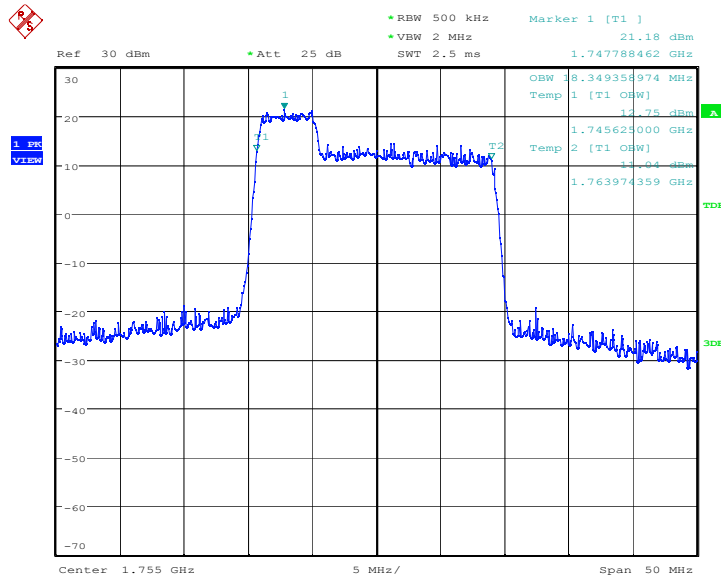
Date: 7.AUG.2021 16:41:05

LTE CA band 66 , 5MHz+15MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
1755.0	QPSK	16QAM
	18509.62	18349.36

LTE CA band 66 , 5MHz+15MHz Bandwidth, QPSK (99% BW)


Date: 7.AUG.2021 16:46:43

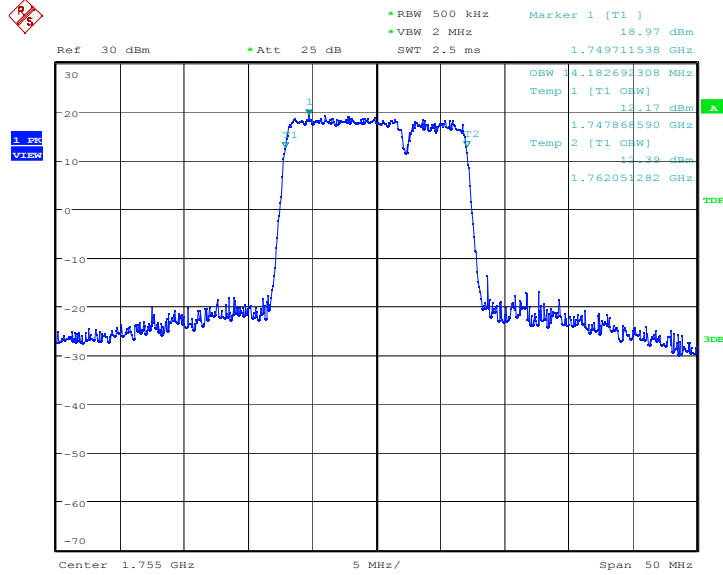
LTE CA band 66 , 5MHz+15MHz Bandwidth, 16QAM (99% BW)


Date: 7.AUG.2021 16:47:50

LTE CA band 66 , 10MHz+5MHz (99%)

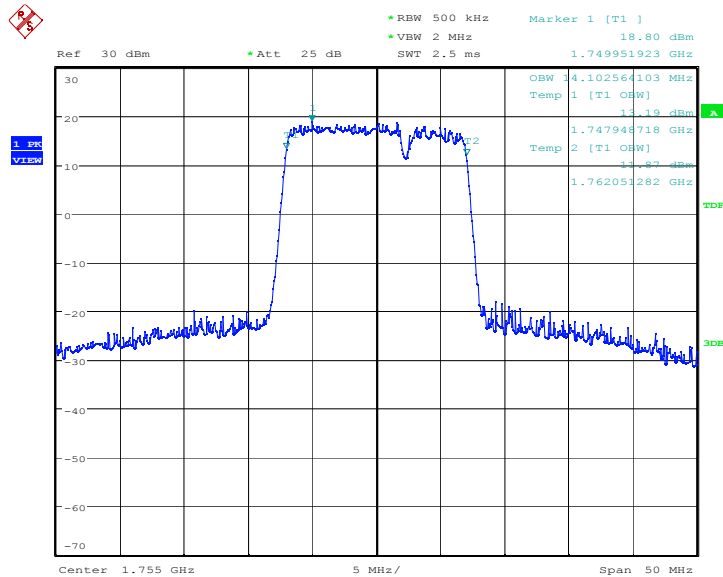
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	QPSK	16QAM
1755.0	14182.69	14102.56

LTE CA band 66 , 10MHz+5MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 16:43:13

LTE CA band 66 , 10MHz+5MHz Bandwidth, 16QAM (99% BW)

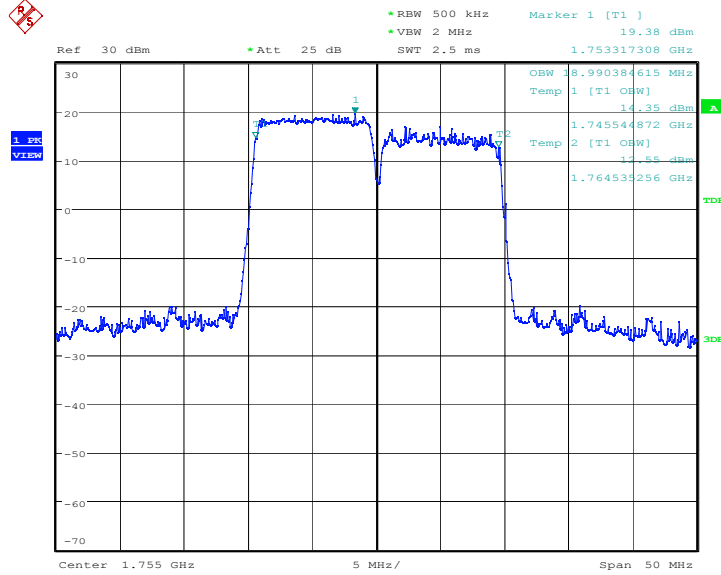


Date: 7.AUG.2021 16:44:20

LTE CA band 66 , 10MHz+10MHz (99%)

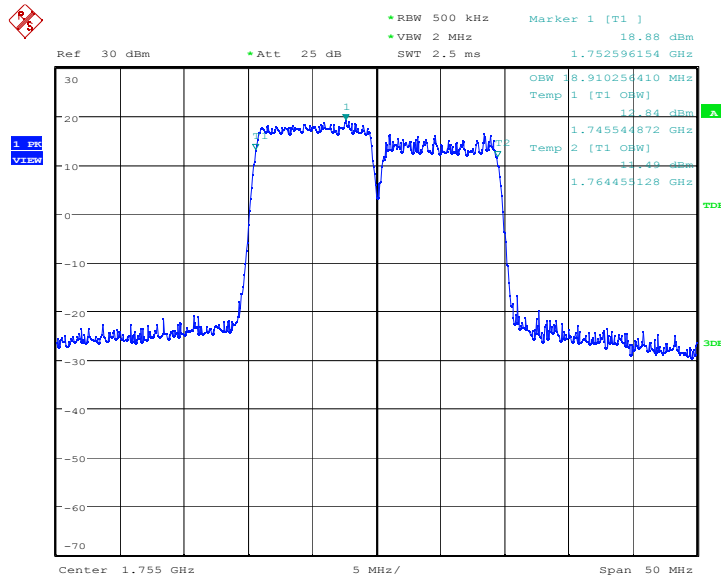
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	QPSK	16QAM
1755.0	18990.38	18910.26

LTE CA band 66 , 10MHz+10MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 16:58:18

LTE CA band 66 , 10MHz+10MHz Bandwidth,16QAM (99% BW)

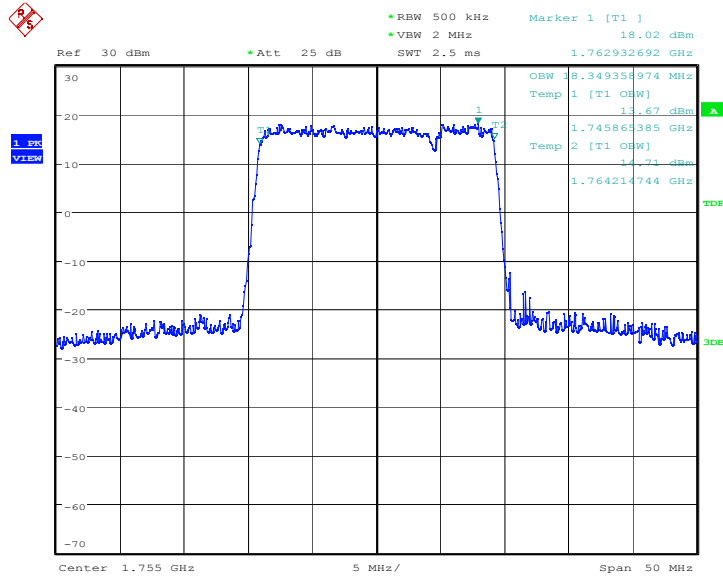


Date: 7.AUG.2021 17:01:24

LTE CA band 66 , 15MHz+5MHz (99%)

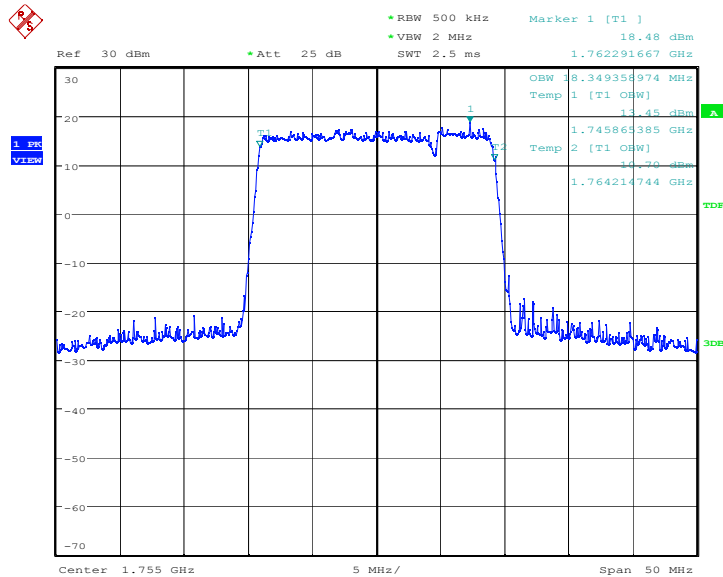
Frequency(MHz)	Occupied Bandwidth (99%)(KHz)	
	1755.0	QPSK
18349.36		18349.36

LTE CA band 66 , 15MHz+5MHz Bandwidth, QPSK (99% BW)



Date: 7.AUG.2021 16:49:35

LTE CA band 66 , 15MHz+5MHz Bandwidth,16QAM (99% BW)



Date: 7.AUG.2021 16:50:48

A.5 Emission Bandwidth

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Table below lists the measured -26dBc BW. Spectrum analyzer plots are included on the following pages.

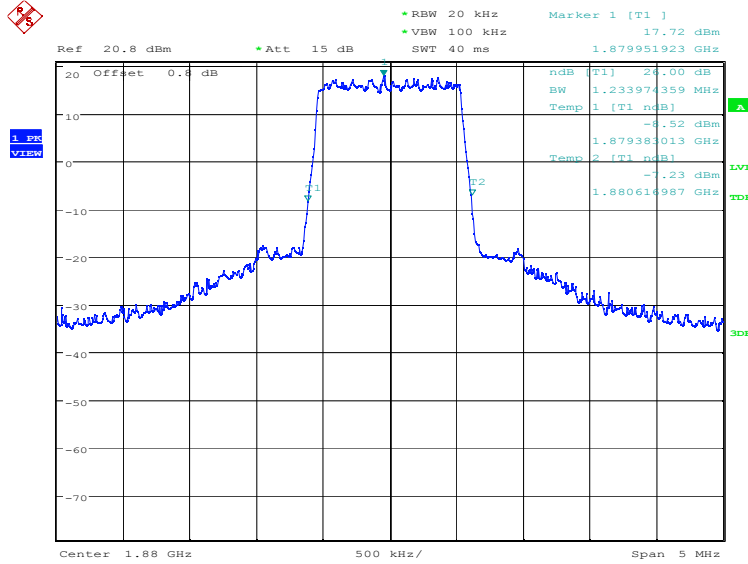
The measurement method is from ANSI C63.26:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b) The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ 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) The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e) Set spectrum analyzer detection mode to peak, and the trace mode to max hold.

LTE band 2-ANT2, 1.4MHz (-26dBc)

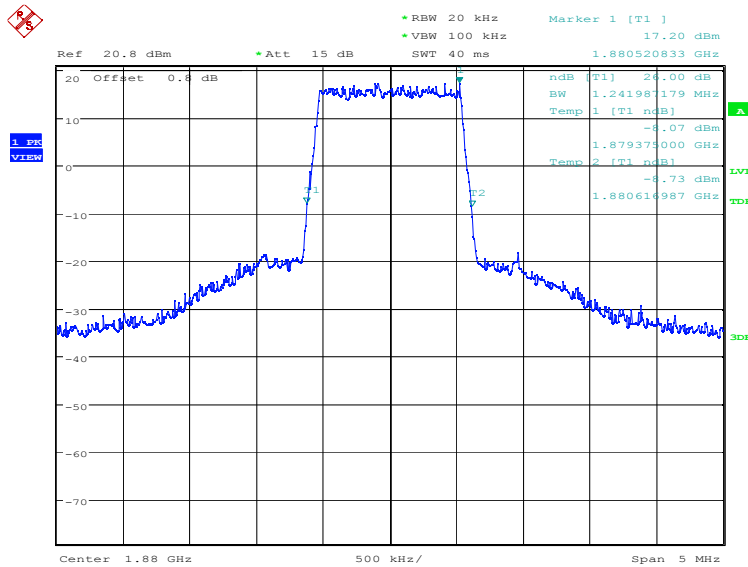
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	1233.97	1241.99

LTE band 2-ANT2, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:37:06

LTE band 2-ANT2, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

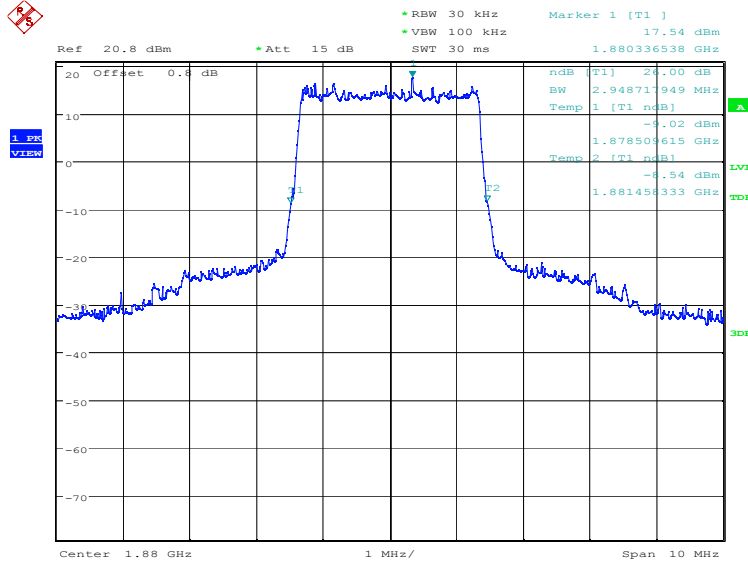


Date: 6.AUG.2021 07:37:45

LTE band 2-ANT2, 3MHz (-26dBc)

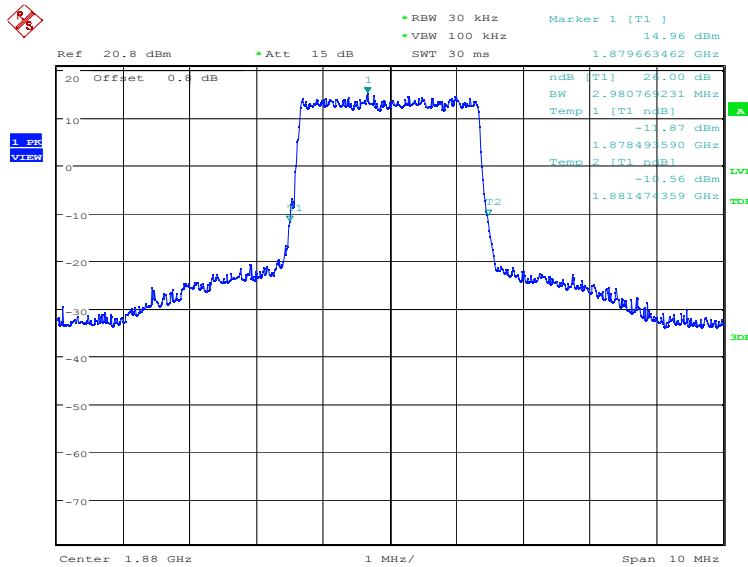
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1880.0	QPSK
	2948.72	2980.77

LTE band 2-ANT2, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:38:27

LTE band 2-ANT2, 3MHz Bandwidth, 16QAM (-26dBc BW)

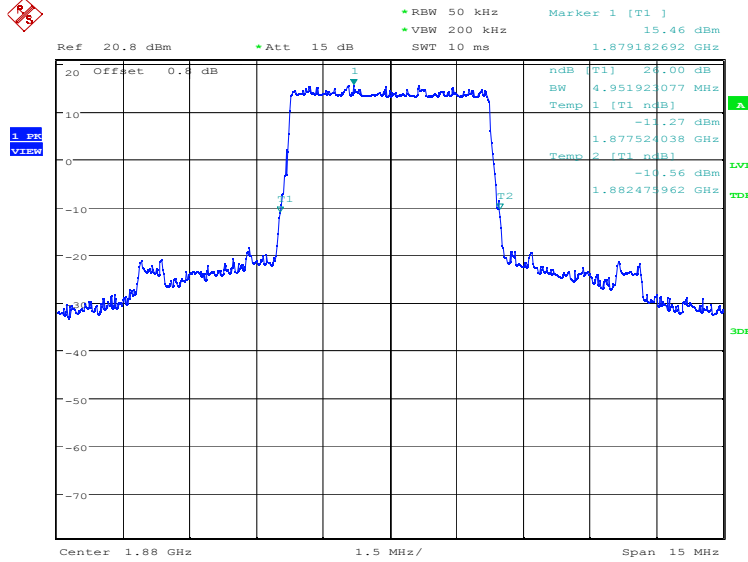


Date: 6.AUG.2021 07:39:07

LTE band 2-ANT2, 5MHz (-26dBc)

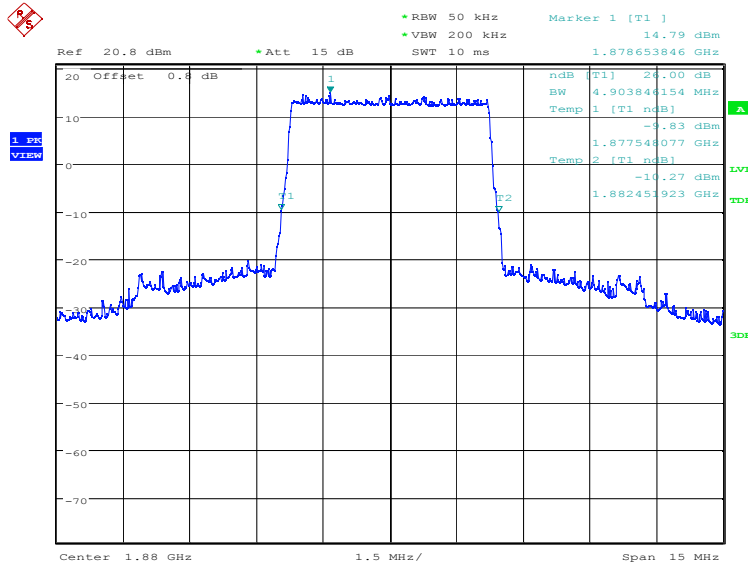
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	4951.92	4903.85

LTE band 2-ANT2, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:39:49

LTE band 2-ANT2, 5MHz Bandwidth, 16QAM (-26dBc BW)

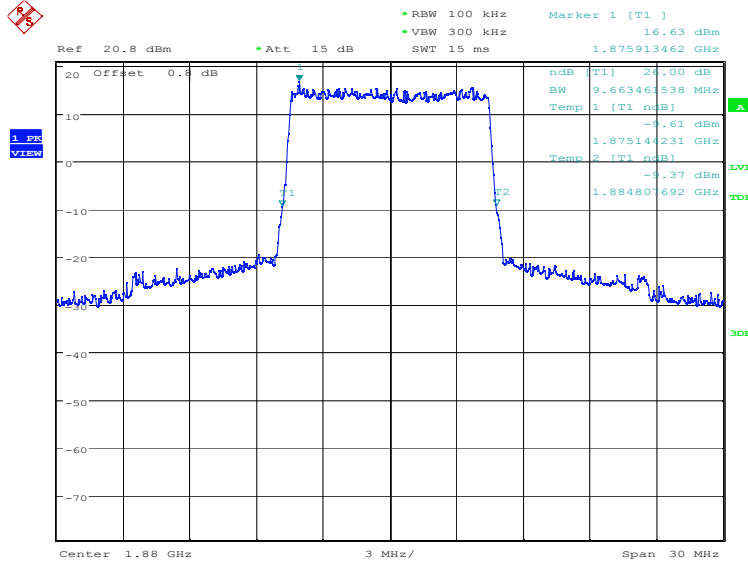


Date: 6.AUG.2021 07:40:29

LTE band 2-ANT2, 10MHz (-26dBc)

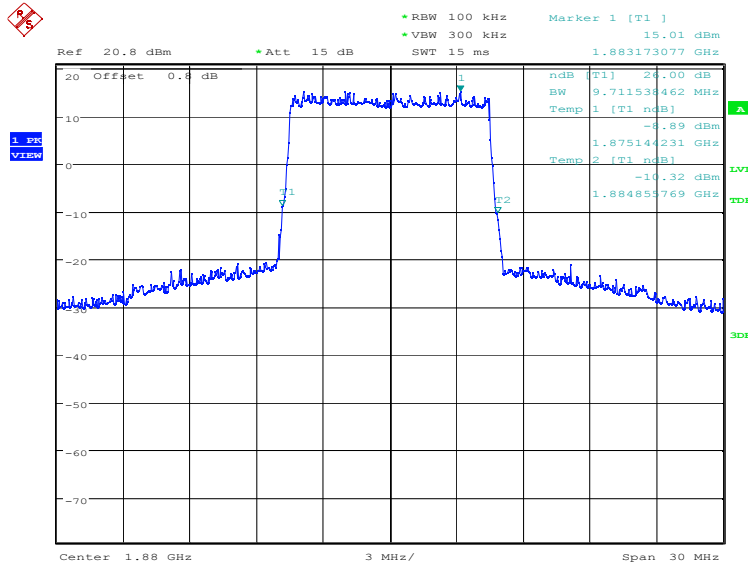
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	9663.46	9711.54

LTE band 2-ANT2, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:41:11

LTE band 2-ANT2, 10MHz Bandwidth, 16QAM (-26dBc BW)

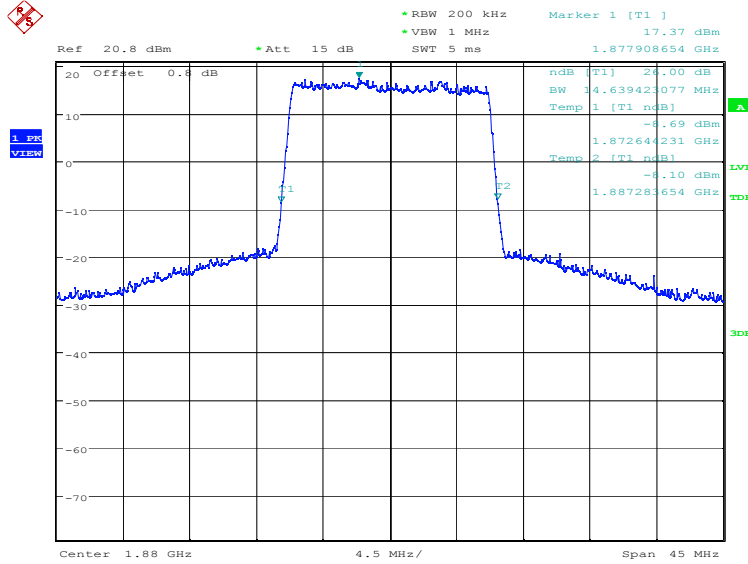


Date: 6.AUG.2021 07:41:50

LTE band 2-ANT2, 15MHz (-26dBc)

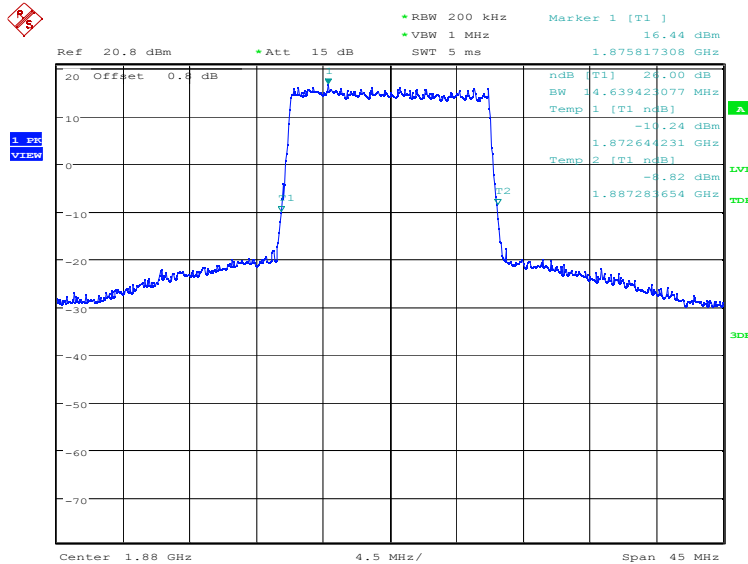
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	14639.42	14639.42

LTE band 2-ANT2, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:42:32

LTE band 2-ANT2, 15MHz Bandwidth, 16QAM (-26dBc BW)

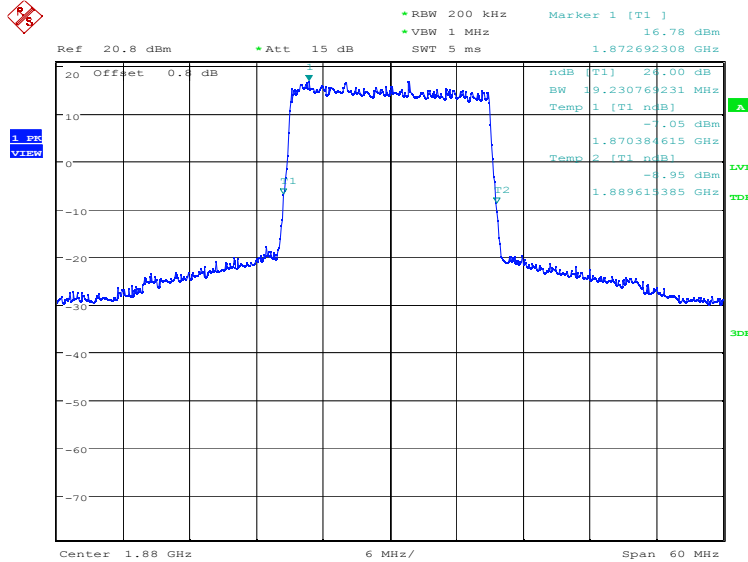


Date: 6.AUG.2021 07:43:12

LTE band 2-ANT2, 20MHz (-26dBc)

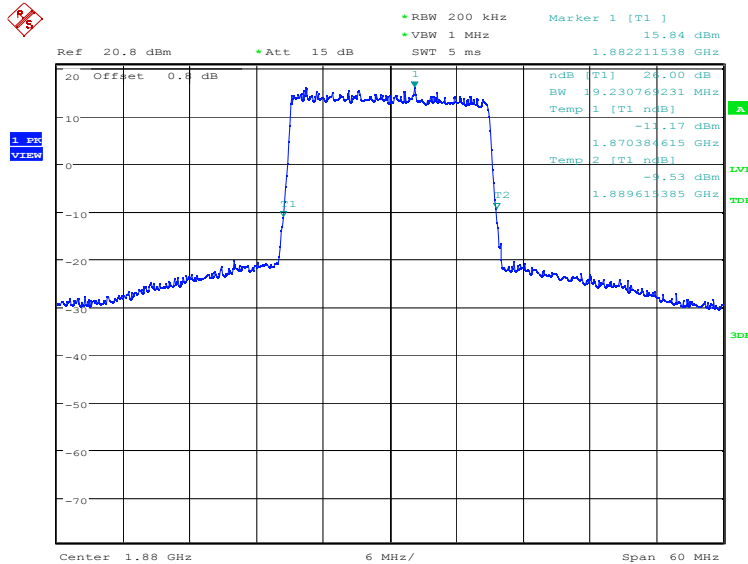
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1880.0	QPSK
	19230.77	19230.77

LTE band 2-ANT2, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:43:54

LTE band 2-ANT2, 20MHz Bandwidth, 16QAM (-26dBc BW)

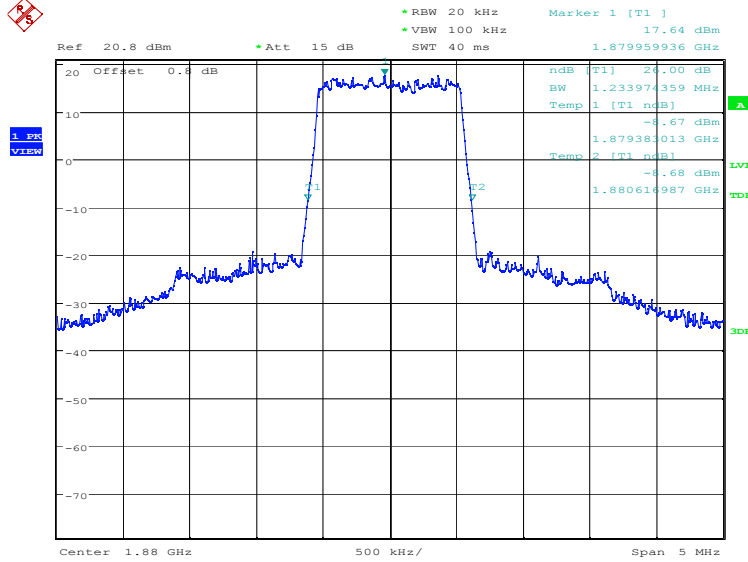


Date: 6.AUG.2021 07:44:34

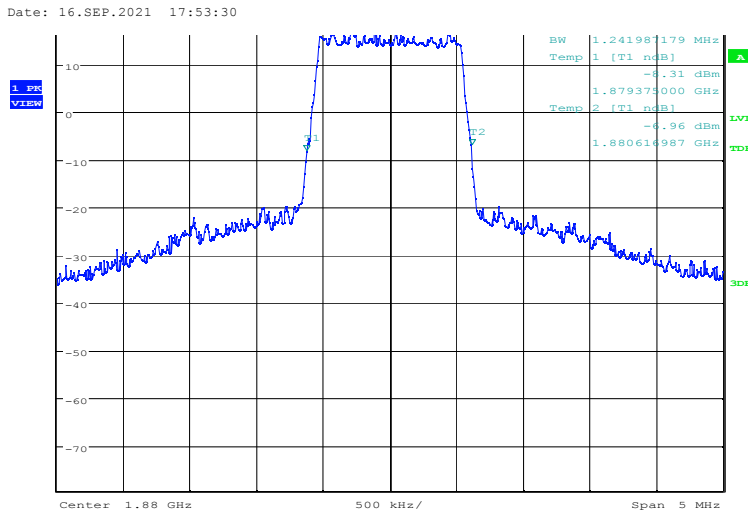
LTE band 2-ANT3, 1.4MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	1233.97	1241.99

LTE band 2-ANT3, 1.4MHz Bandwidth, QPSK (-26dBc BW)



LTE band

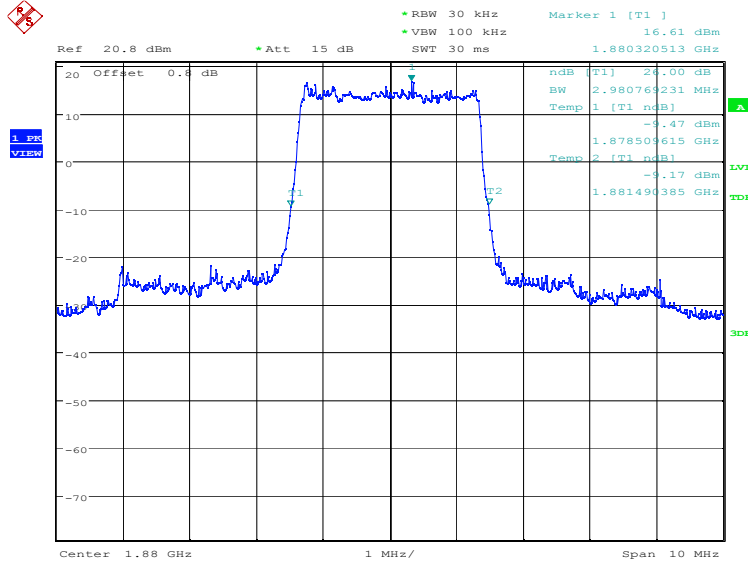


Date: 16.SEP.2021 17:54:10

LTE band 2-ANT3, 3MHz (-26dBc)

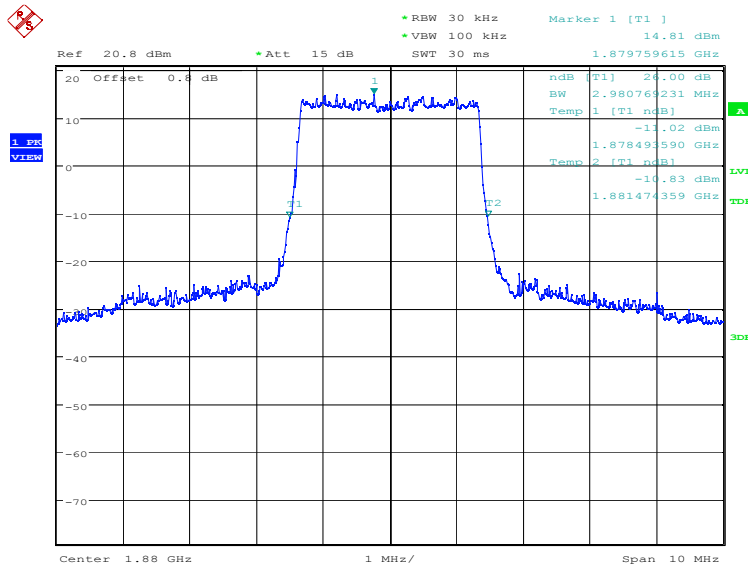
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1880.0	QPSK
	2980.77	2980.77

LTE band 2-ANT3, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 16.SEP.2021 17:54:53

LTE band 2-ANT3, 3MHz Bandwidth, 16QAM (-26dBc BW)

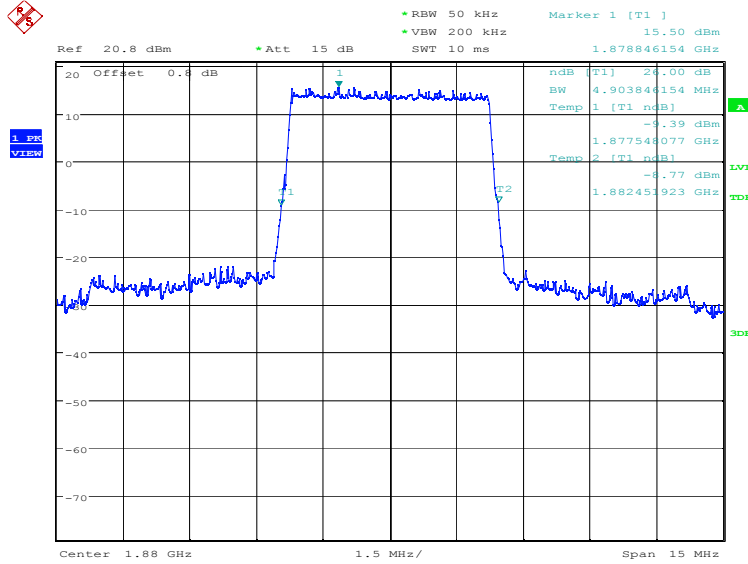


Date: 16.SEP.2021 17:55:32

LTE band 2-ANT3, 5MHz (-26dBc)

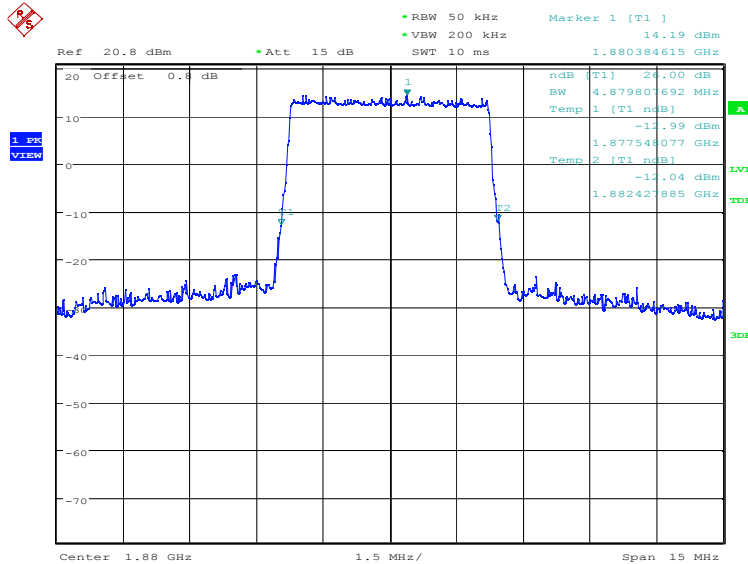
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	4903.85	4879.81

LTE band 2-ANT3, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 16.SEP.2021 17:56:16

LTE band 2-ANT3, 5MHz Bandwidth, 16QAM (-26dBc BW)

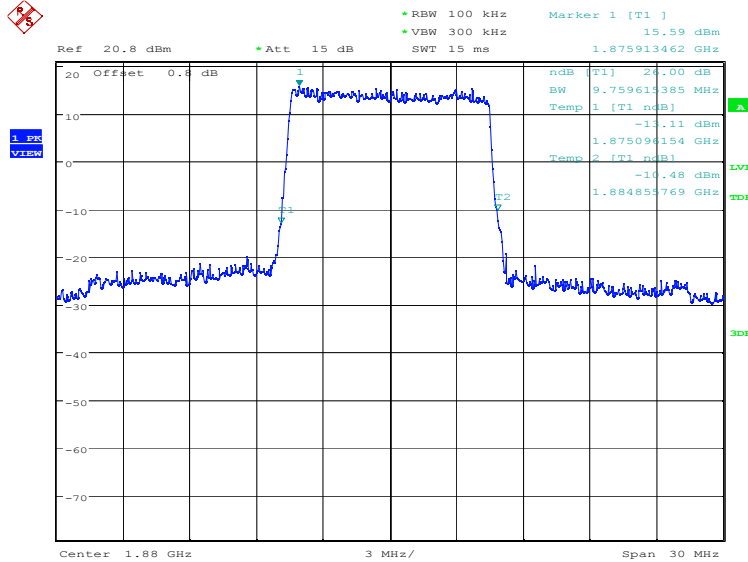


Date: 16.SEP.2021 17:56:55

LTE band 2-ANT3, 10MHz (-26dBc)

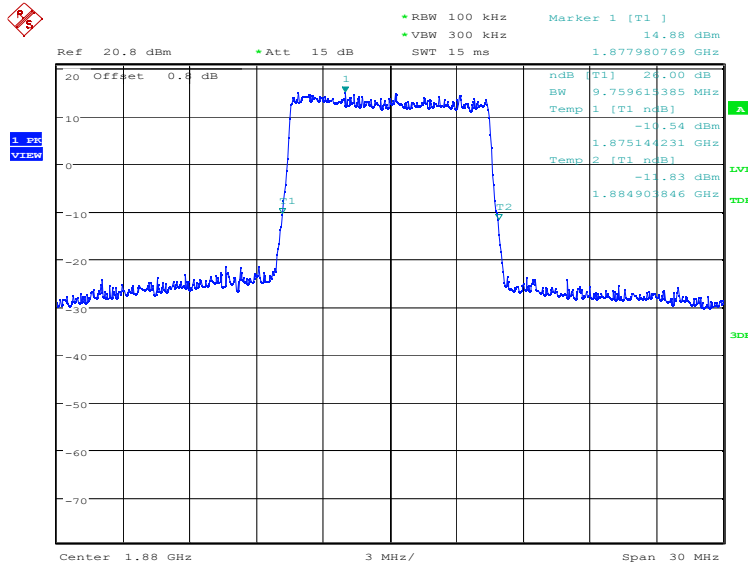
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1880.0	QPSK
	9759.62	9759.62

LTE band 2-ANT3, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 16.SEP.2021 17:57:39

LTE band 2-ANT3, 10MHz Bandwidth, 16QAM (-26dBc BW)

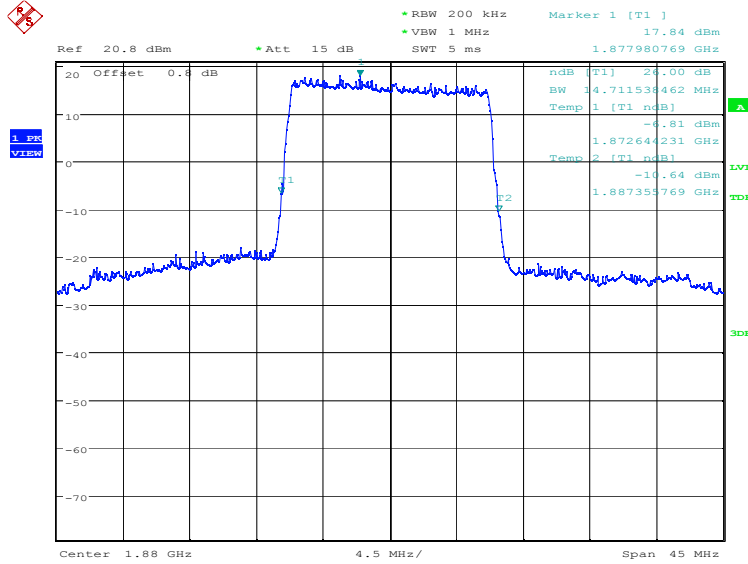


Date: 16.SEP.2021 17:58:18

LTE band 2-ANT3, 15MHz (-26dBc)

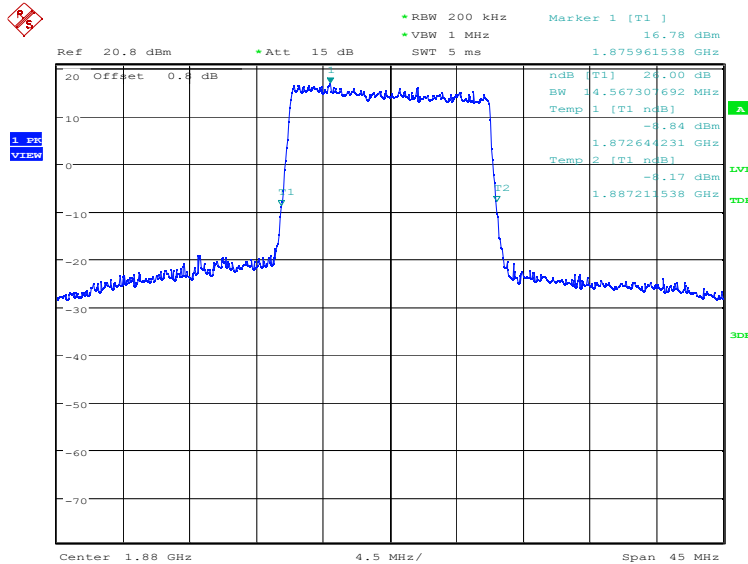
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	14711.54	14567.31

LTE band 2-ANT3, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 16.SEP.2021 17:59:02

LTE band 2-ANT3, 15MHz Bandwidth, 16QAM (-26dBc BW)

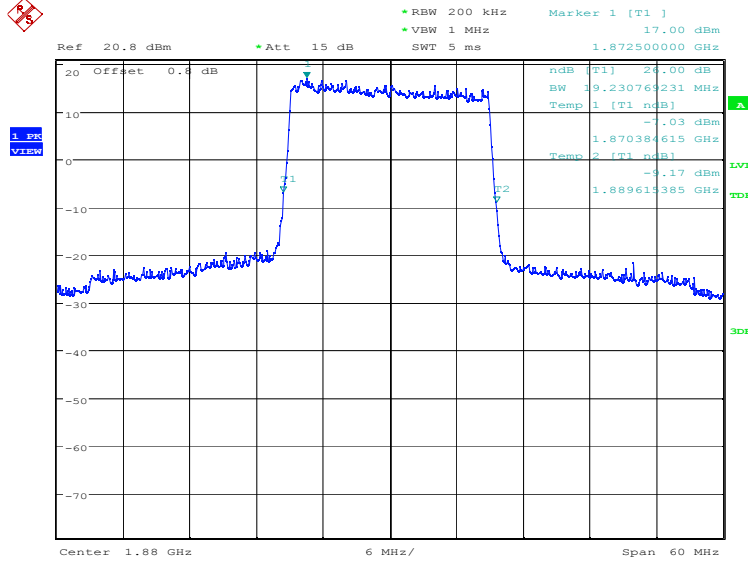


Date: 16.SEP.2021 17:59:41

LTE band 2-ANT3, 20MHz (-26dBc)

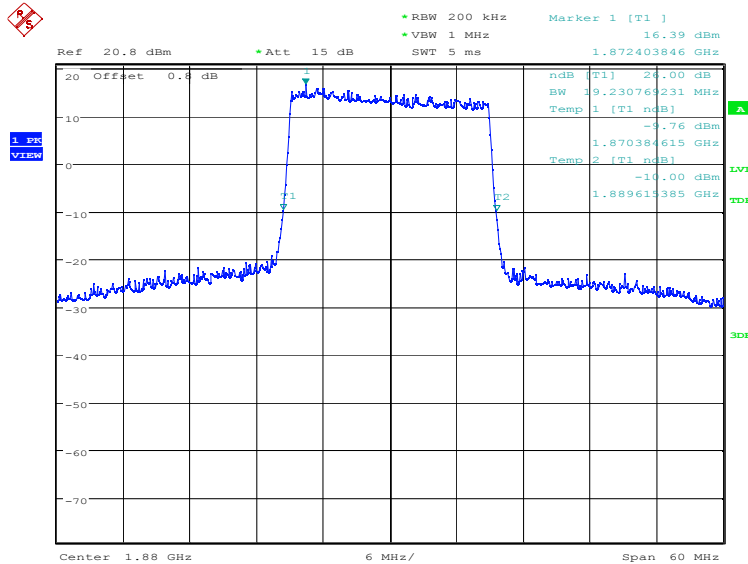
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1880.0	QPSK
	19230.77	19230.77

LTE band 2-ANT3, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 16.SEP.2021 18:00:24

LTE band 2-ANT3, 20MHz Bandwidth, 16QAM (-26dBc BW)

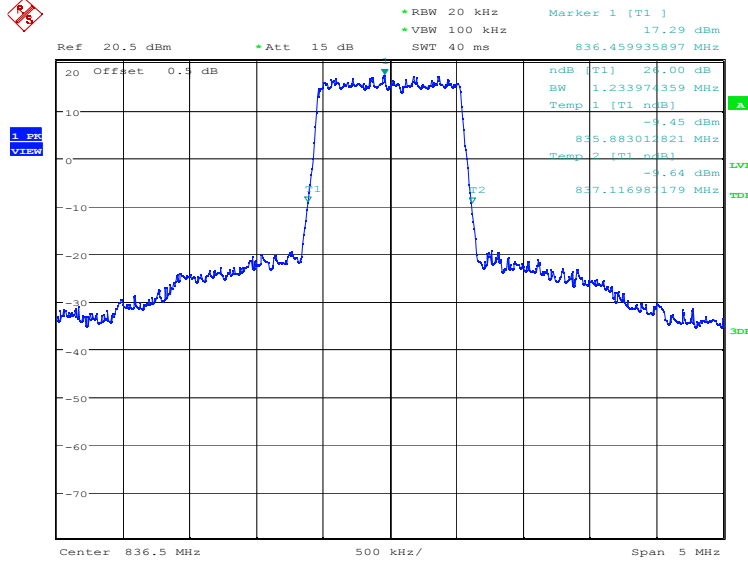


Date: 16.SEP.2021 18:01:04

LTE band 5, 1.4MHz (-26dBc)

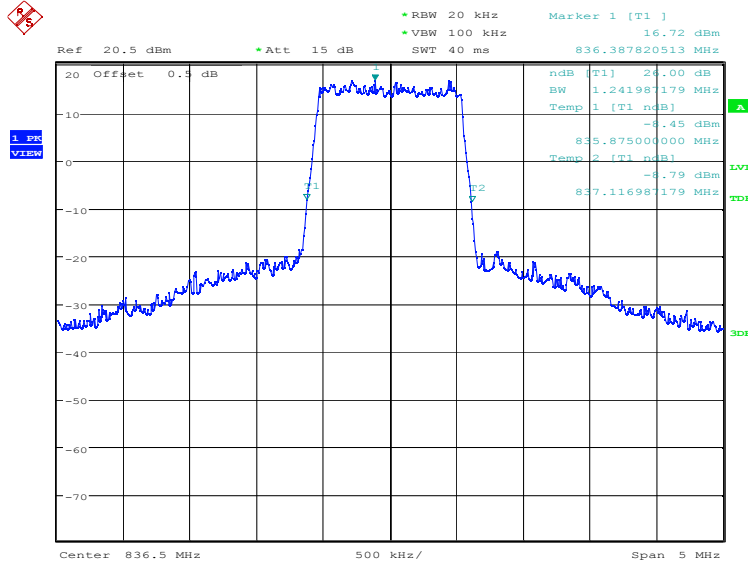
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	836.5	QPSK
	1233.97	1241.99

LTE band 5, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:21:55

LTE band 5, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

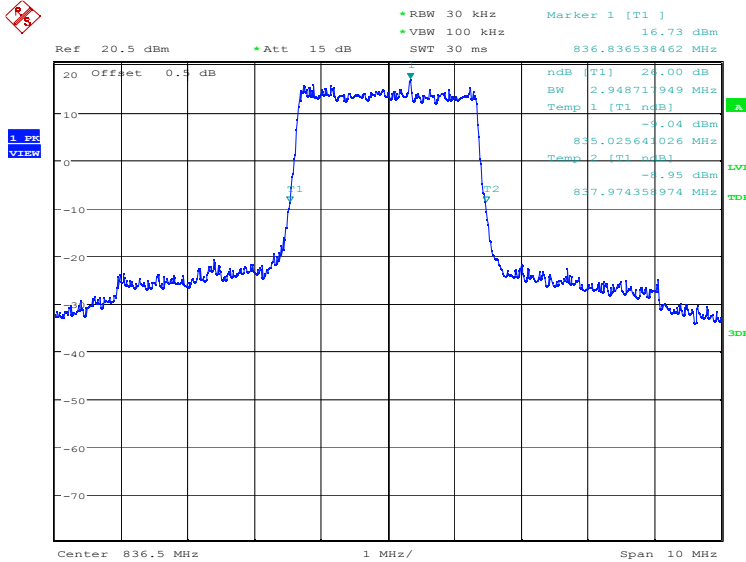


Date: 5.AUG.2021 16:22:34

LTE band 5, 3MHz (-26dBc)

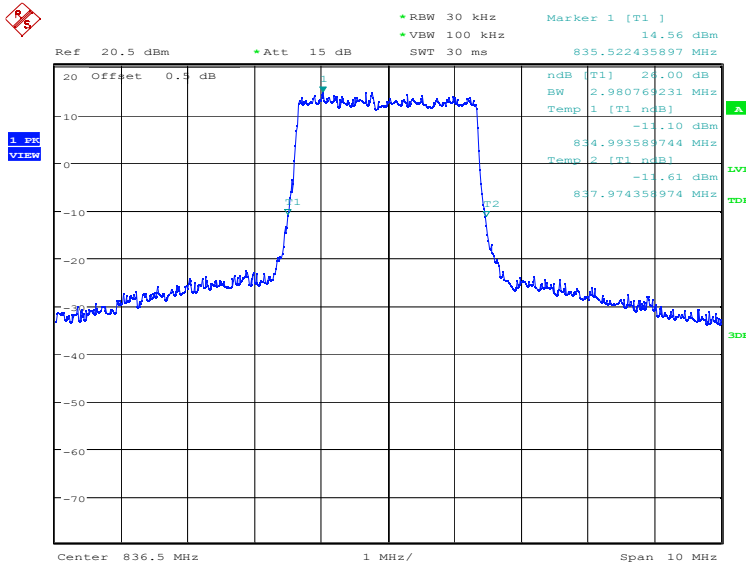
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	836.5	QPSK
	2948.72	2980.77

LTE band 5, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:23:16

LTE band 5, 3MHz Bandwidth, 16QAM (-26dBc BW)

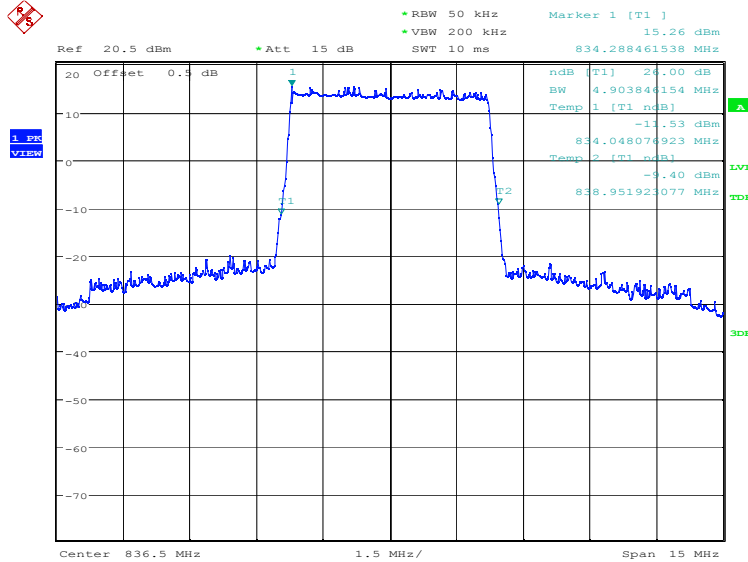


Date: 5.AUG.2021 16:23:55

LTE band 5, 5MHz (-26dBc)

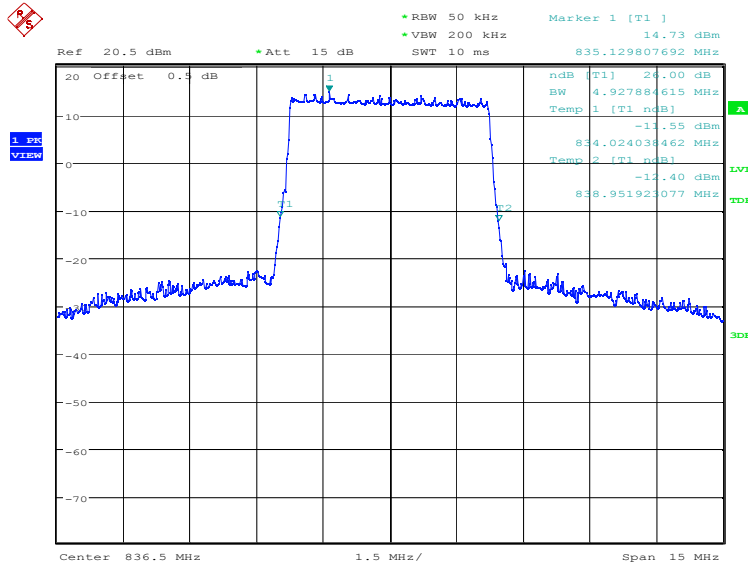
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	836.5	QPSK
	4903.85	4927.88

LTE band 5, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:24:36

LTE band 5, 5MHz Bandwidth, 16QAM (-26dBc BW)

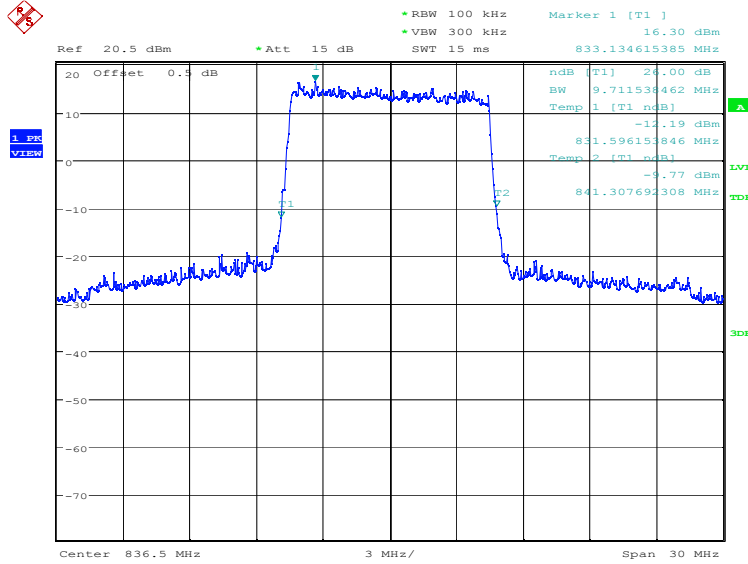


Date: 5.AUG.2021 16:25:16

LTE band 5, 10MHz (-26dBc)

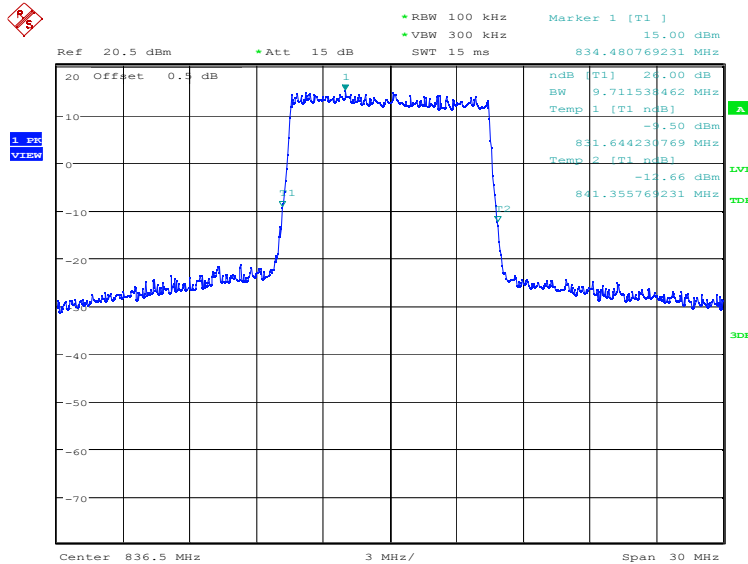
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	9711.54	9711.54

LTE band 5, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:25:57

LTE band 5, 10MHz Bandwidth, 16QAM (-26dBc BW)

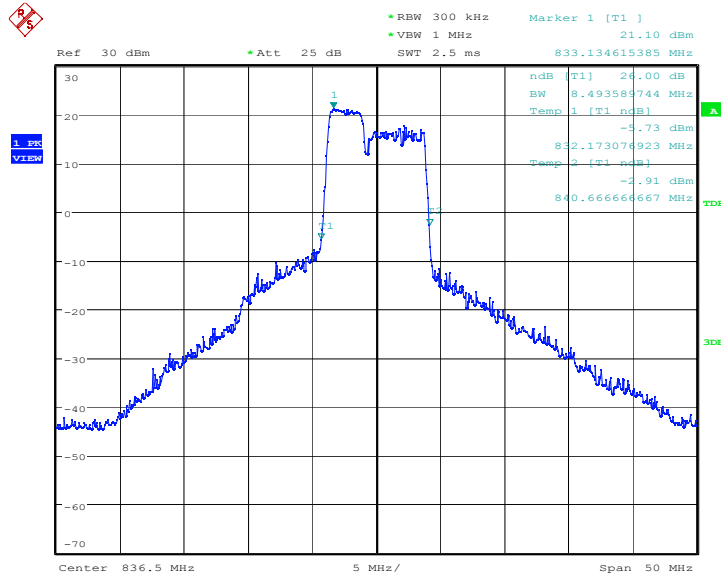


Date: 5.AUG.2021 16:26:37

LTE CA band 5 , 3MHz+5MHz (-26dBc)

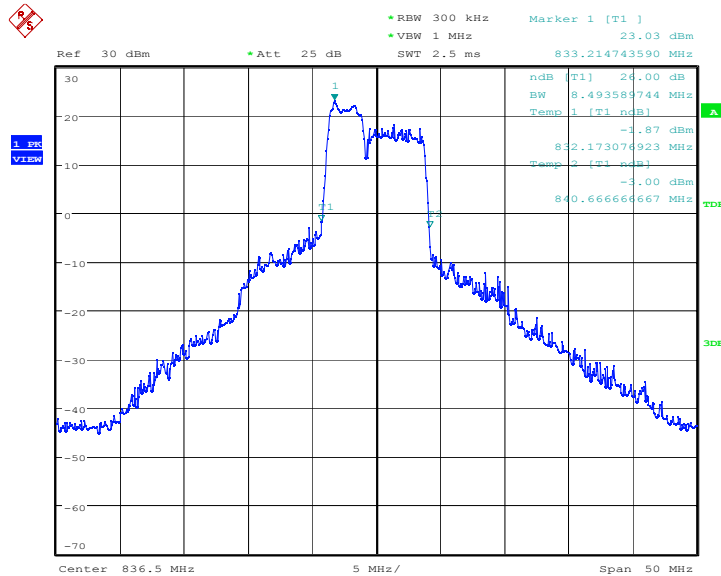
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
836.5	QPSK	16QAM
	8493.59	8493.59

LTE CA band 5 , 3MHz+5MHz Bandwidth, QPSK (-26dBc BW)



Date: 25.AUG.2021 09:04:02

LTE CA band 5, 3MHz+5MHz Bandwidth, 16QAM (-26dBc BW)

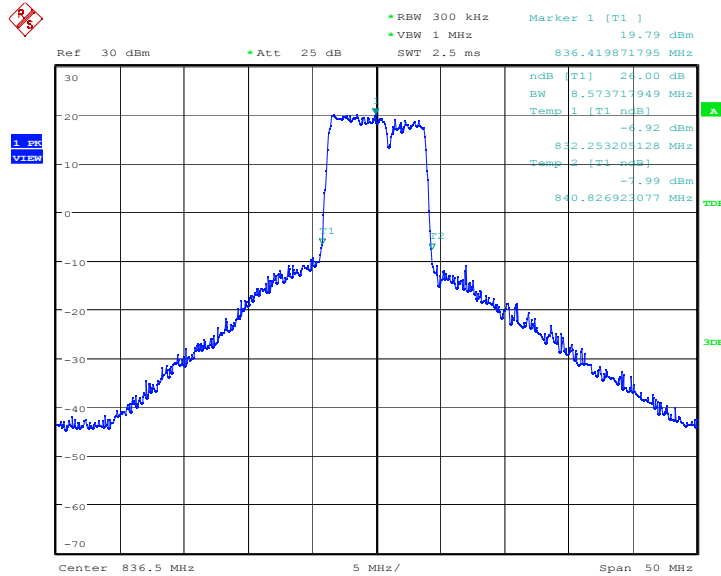


Date: 25.AUG.2021 09:04:45

LTE CA band 5 , 5MHz+3MHz (-26dBc)

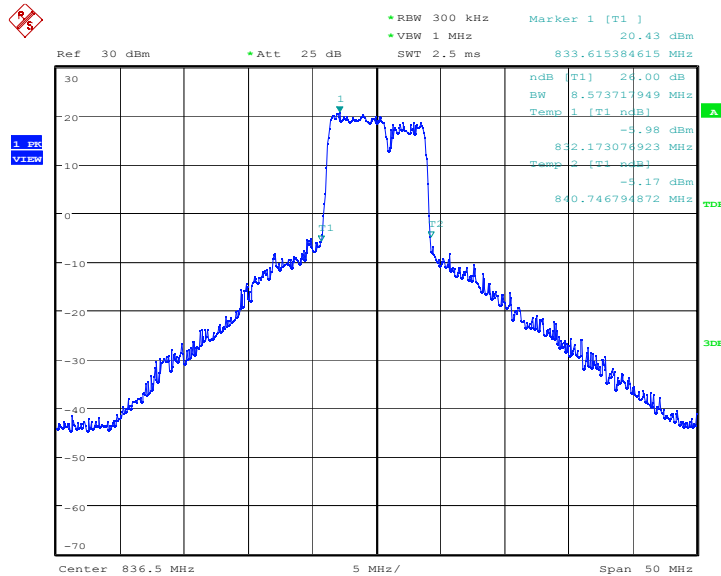
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
836.5	QPSK	16QAM
	8573.72	8573.72

LTE CA band 5 , 5MHz+3MHz Bandwidth, QPSK (-26dBc BW)



Date: 25.AUG.2021 09:08:54

LTE CA band 5 , 5MHz+3MHz Bandwidth, 16QAM (-26dBc BW)

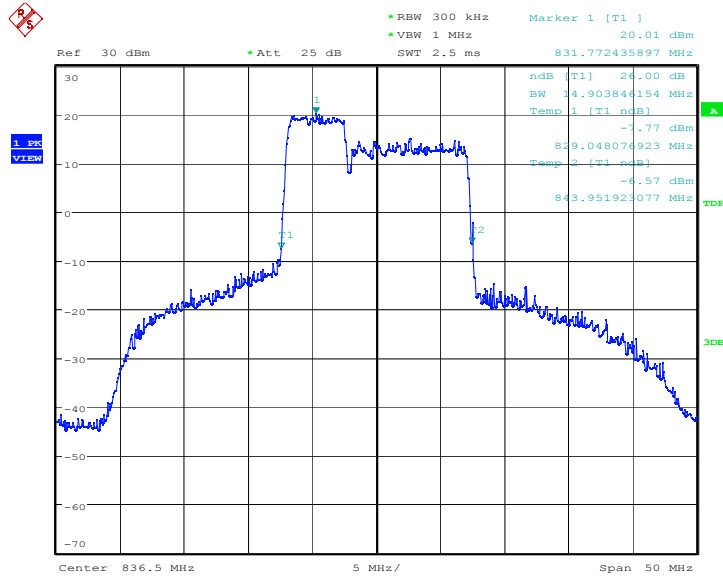


Date: 25.AUG.2021 09:09:20

LTE CA band 5 , 5MHz+10MHz (-26dBc)

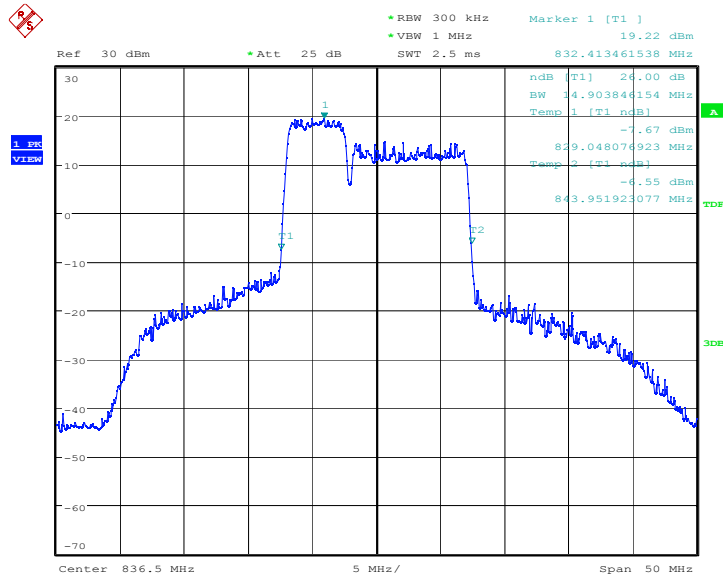
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
836.5	QPSK	16QAM
	14903.85	14903.85

LTE CA band 5 , 5MHz+10MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 17:39:08

LTE CA band 5 , 5MHz+10MHz Bandwidth,16QAM (-26dBc BW)

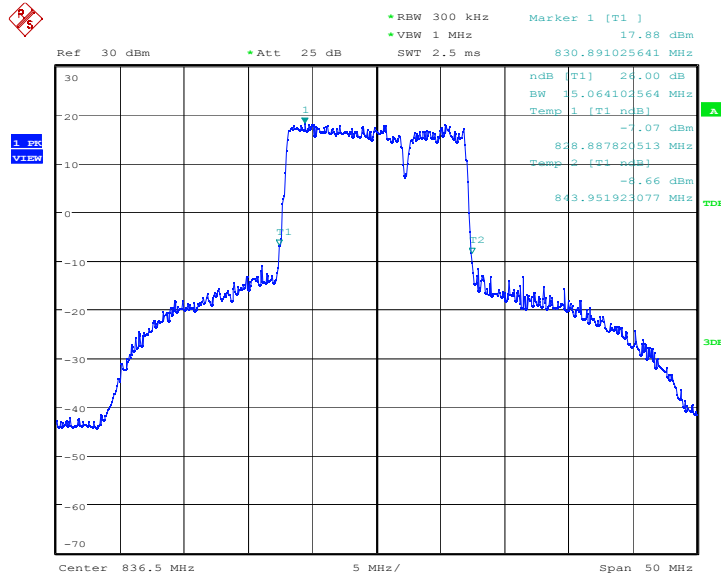


Date: 7.AUG.2021 17:40:18

LTE CA band 5 , 10MHz+5MHz (-26dBc)

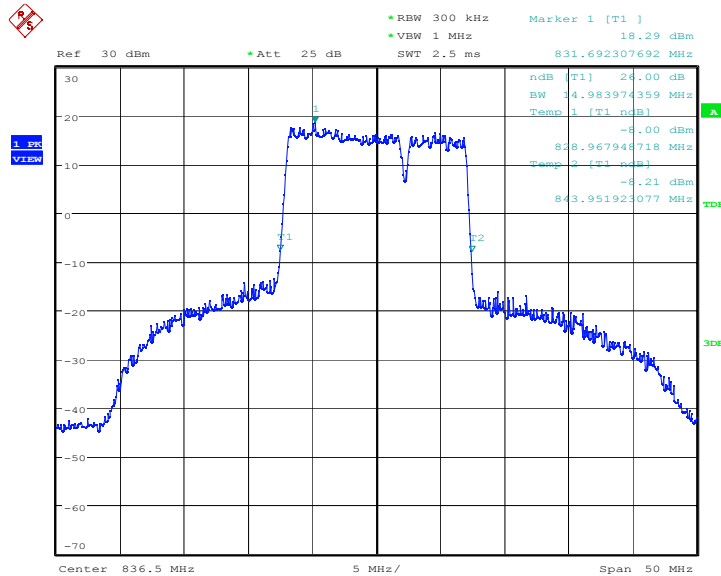
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
836.5	QPSK	16QAM
	15064.10	14983.97

LTE CA band 5 , 10MHz+5MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 17:42:33

LTE CA band 5 , 10MHz+5MHz Bandwidth, 16QAM (-26dBc BW)

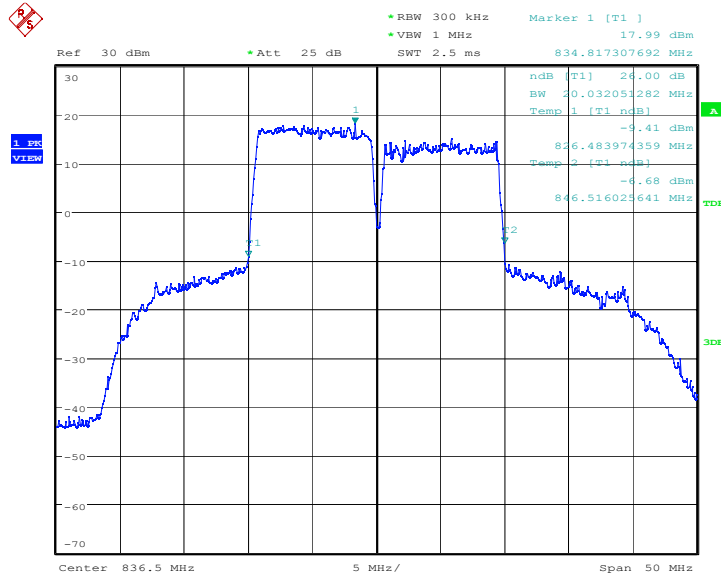


Date: 7.AUG.2021 17:43:58

LTE CA band 5 , 10MHz+10MHz (-26dBc)

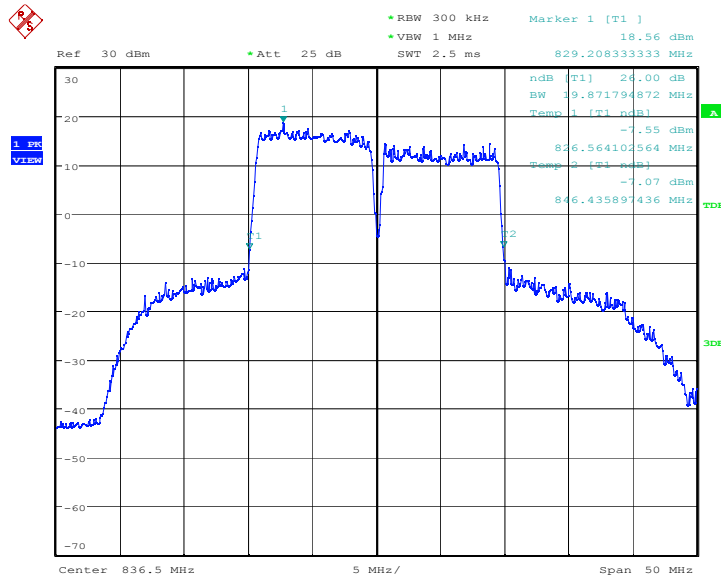
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
836.5	QPSK	16QAM
	20032.05	19871.79

LTE CA band 5 , 10MHz+10MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 17:49:58

LTE CA band 5 , 10MHz+10MHz Bandwidth,16QAM (-26dBc BW)

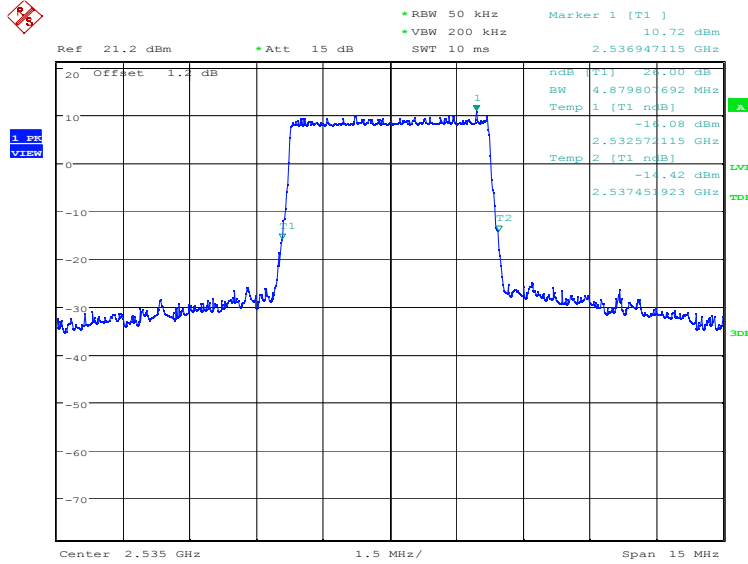


Date: 7.AUG.2021 17:51:10

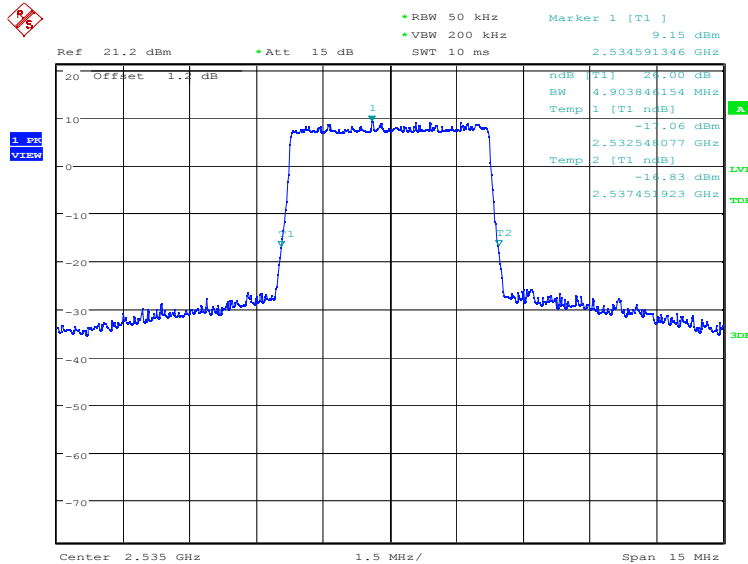
LTE band 7, 5MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	4879.81	4903.85

LTE band 7, 5MHz Bandwidth, QPSK (-26dBc BW)



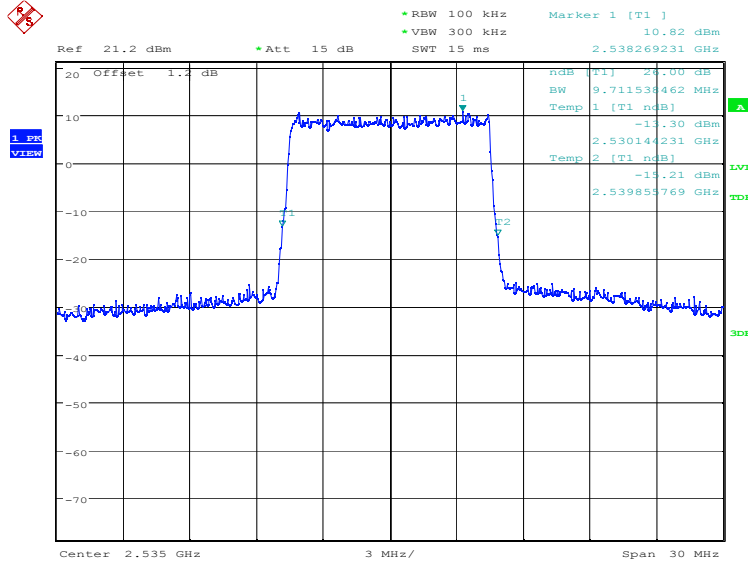
LTE band 7, 5MHz Bandwidth, 16QAM (-26dBc BW)



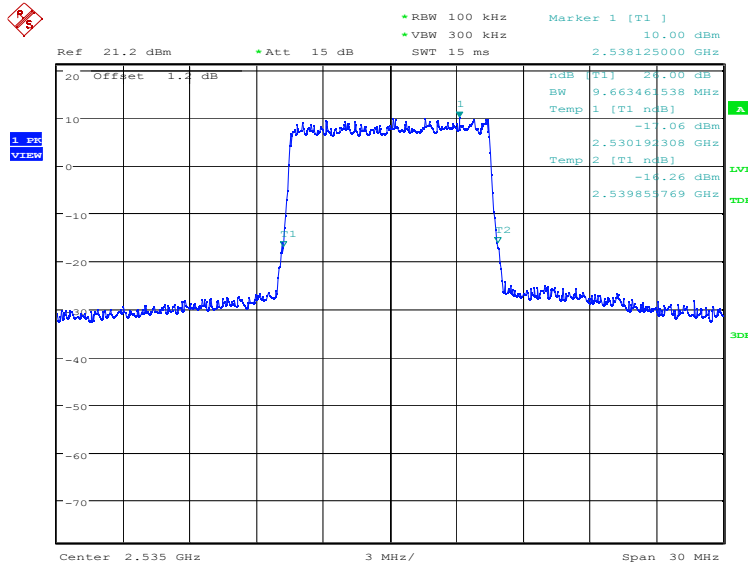
LTE band 7, 10MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	9711.54	9663.46

LTE band 7, 10MHz Bandwidth, QPSK (-26dBc BW)



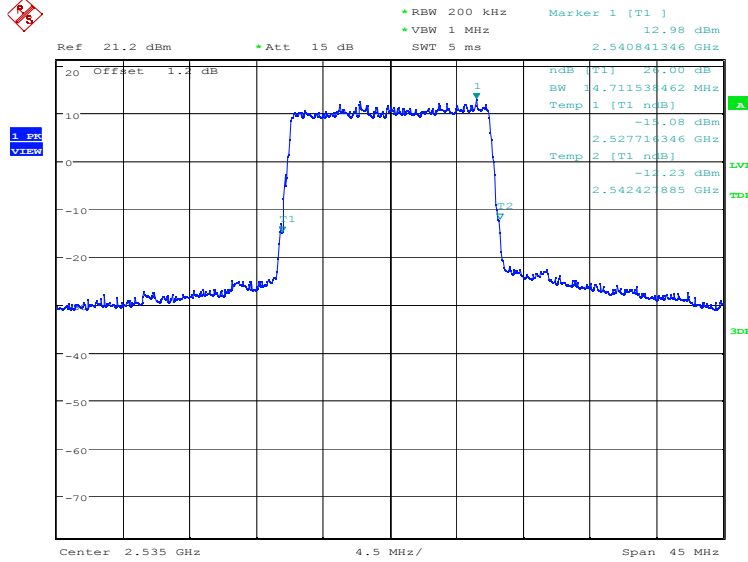
LTE band 7, 10MHz Bandwidth, 16QAM (-26dBc BW)



LTE band 7, 15MHz (-26dBc)

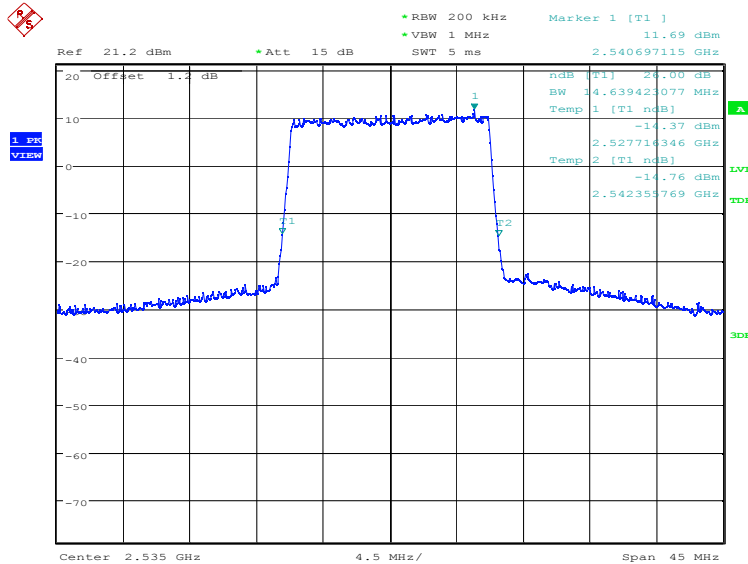
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	2535.0	QPSK
	14711.54	14639.42

LTE band 7, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 08:25:46

LTE band 7, 15MHz Bandwidth, 16QAM (-26dBc BW)

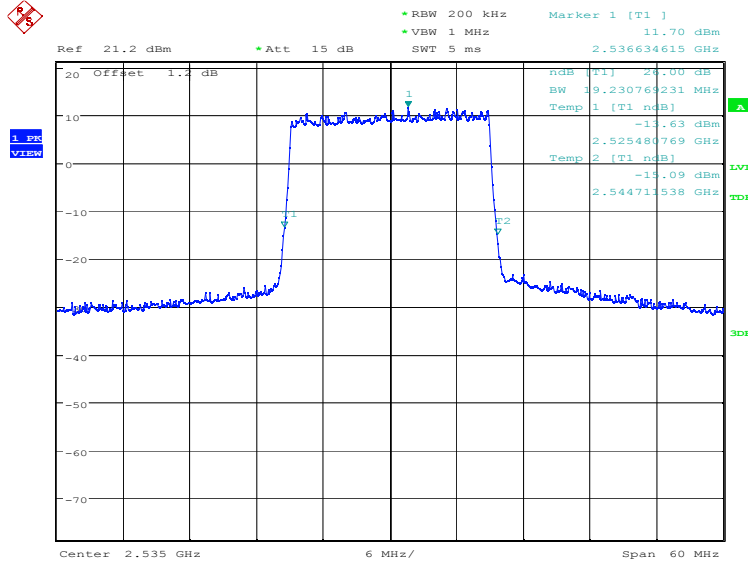


Date: 6.AUG.2021 08:26:25

LTE band 7, 20MHz (-26dBc)

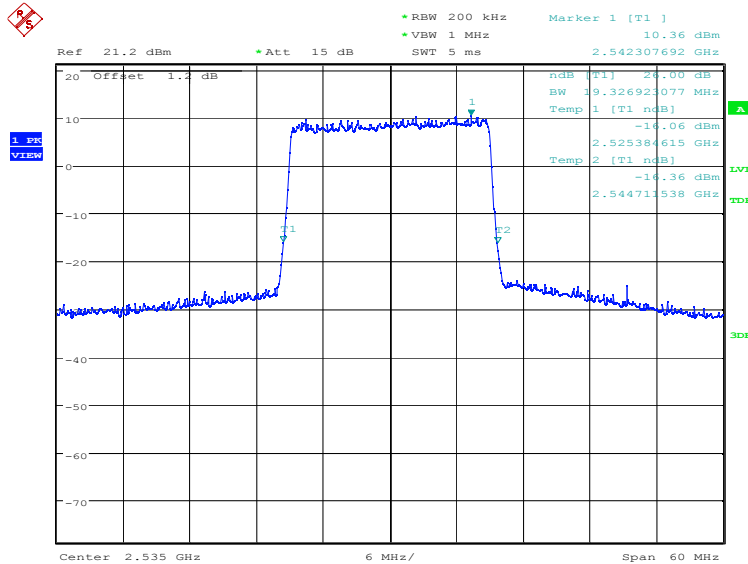
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	19230.77	19326.92

LTE band 7, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 08:27:07

LTE band 7, 20MHz Bandwidth, 16QAM (-26dBc BW)

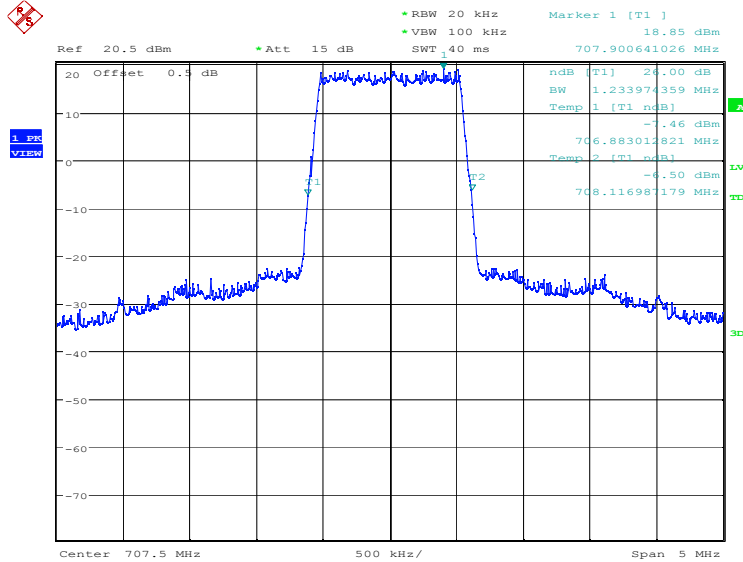


Date: 6.AUG.2021 08:27:47

LTE band 12, 1.4MHz (-26dBc)

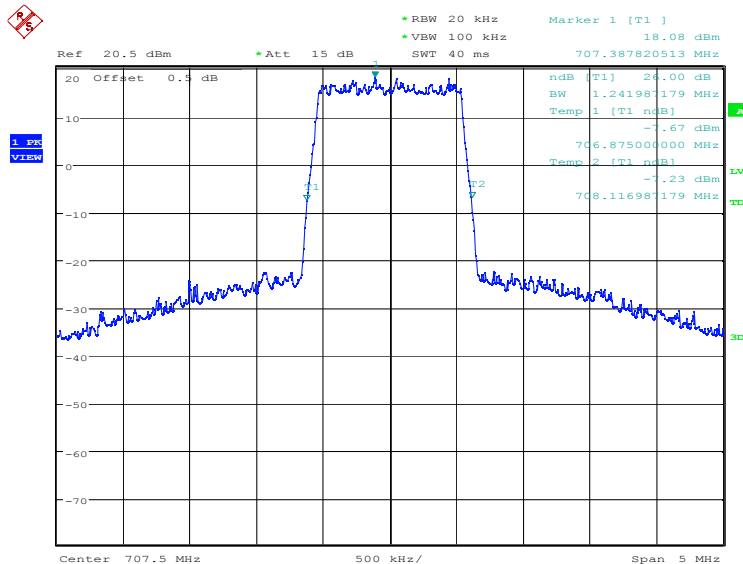
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	707.5	QPSK
	1233.97	1241.99

LTE band 12, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:27:22

LTE band 12, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

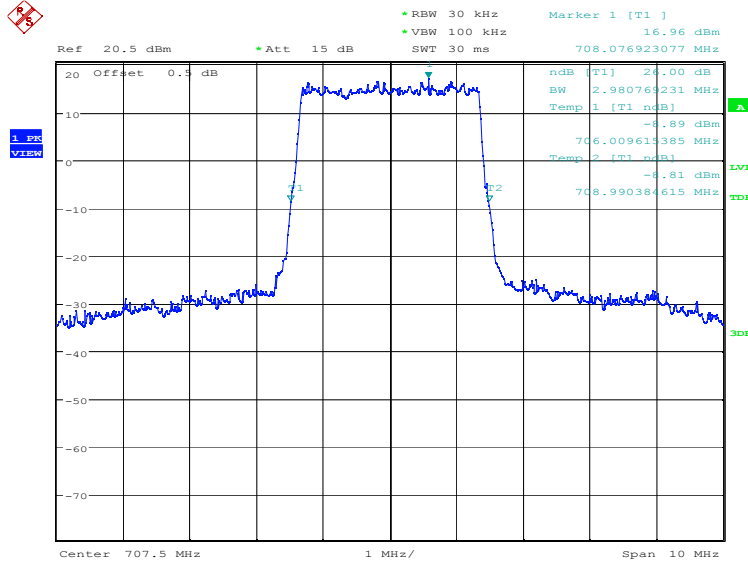


Date: 5.AUG.2021 16:28:01

LTE band 12, 3MHz (-26dBc)

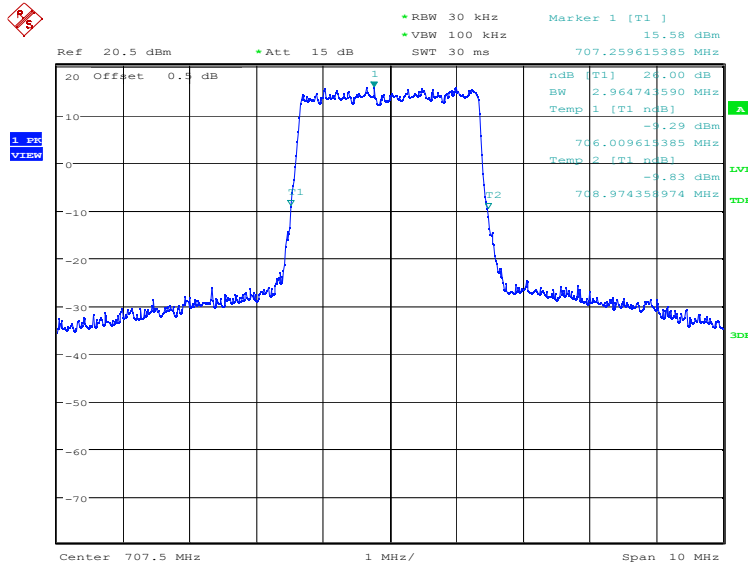
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	2980.77	2964.74

LTE band 12, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:28:42

LTE band 12, 3MHz Bandwidth, 16QAM (-26dBc BW)

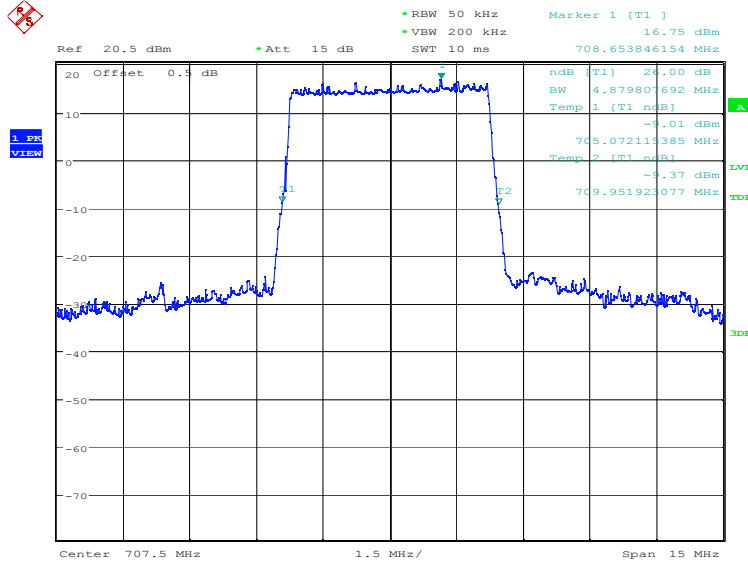


Date: 5.AUG.2021 16:29:22

LTE band 12, 5MHz (-26dBc)

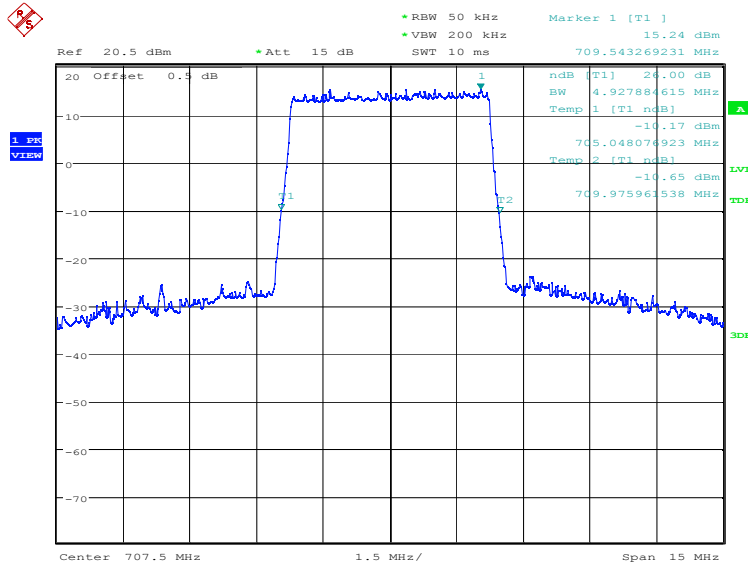
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	4879.81	4927.88

LTE band 12, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:30:03

LTE band 12, 5MHz Bandwidth, 16QAM (-26dBc BW)

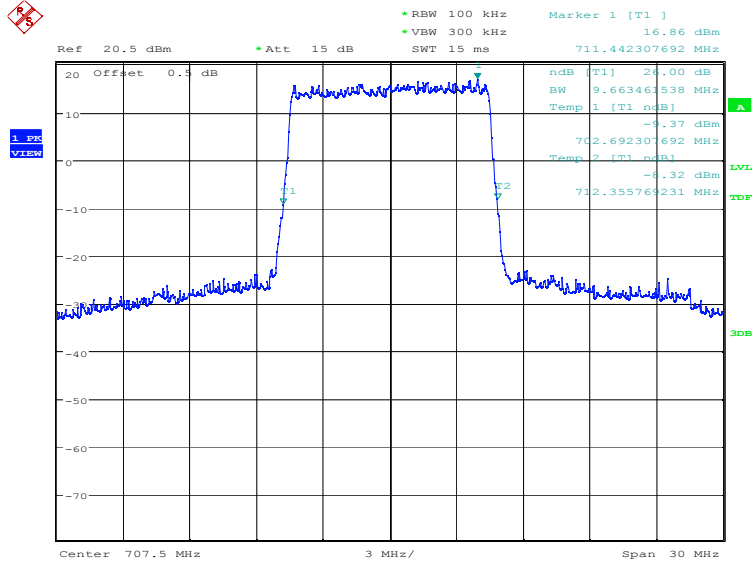


Date: 5.AUG.2021 16:30:42

LTE band 12, 10MHz (-26dBc)

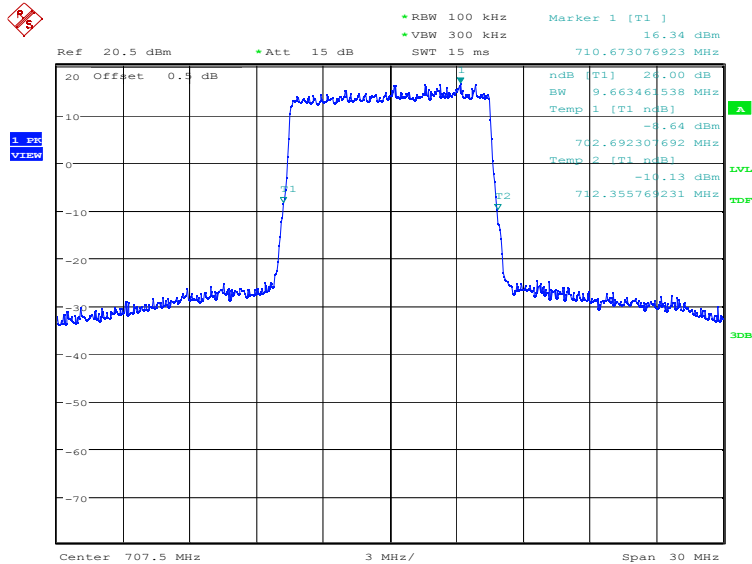
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	9663.46	9663.46

LTE band 12, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:31:24

LTE band 12, 10MHz Bandwidth, 16QAM (-26dBc BW)

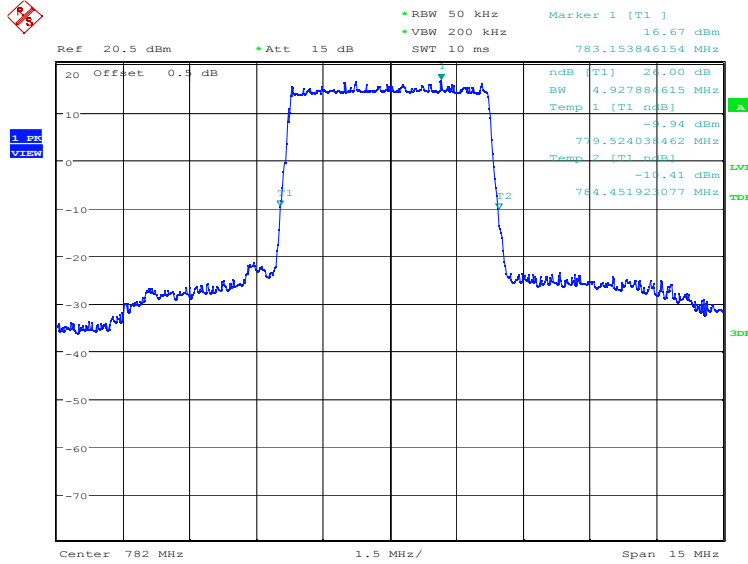


Date: 5.AUG.2021 16:32:03

LTE band 13, 5MHz (-26dBc)

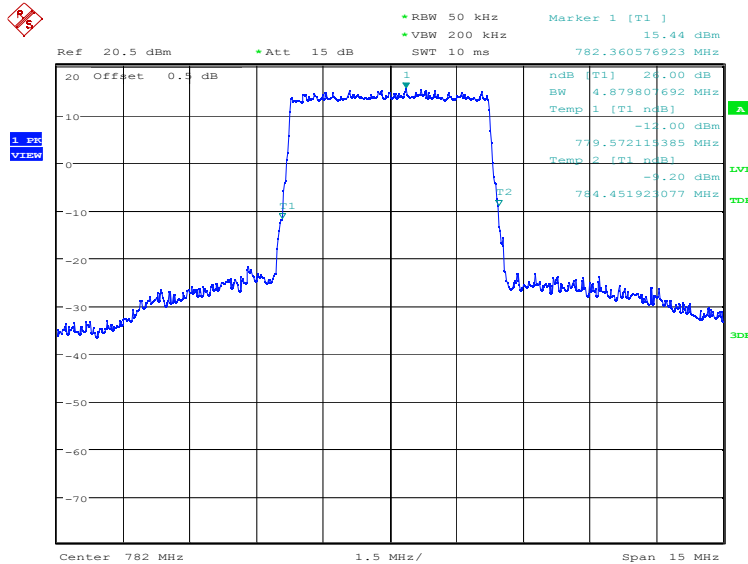
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	4927.88	4879.81

LTE band 13, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:32:47

LTE band 13, 5MHz Bandwidth, 16QAM (-26dBc BW)

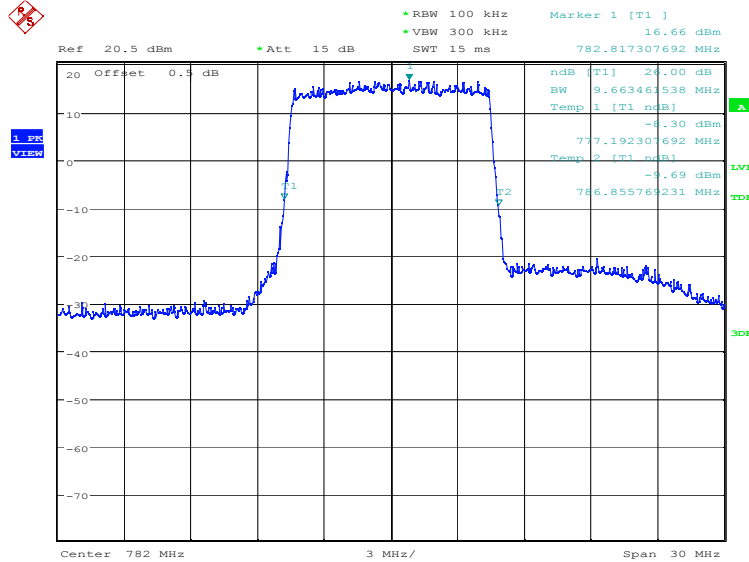


Date: 5.AUG.2021 16:33:26

LTE band 13, 10MHz (-26dBc)

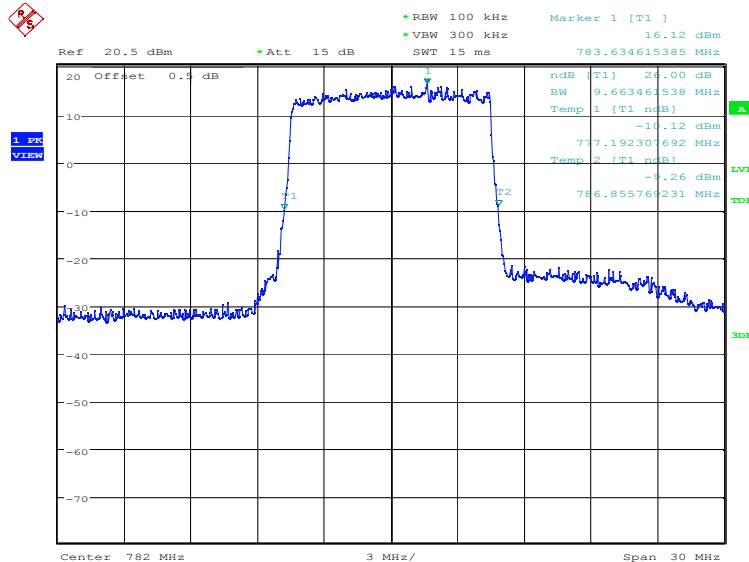
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	9663.46	9663.46

LTE band 13, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.AUG.2021 16:34:08

LTE band 13, 10MHz Bandwidth,16QAM (-26dBc BW)

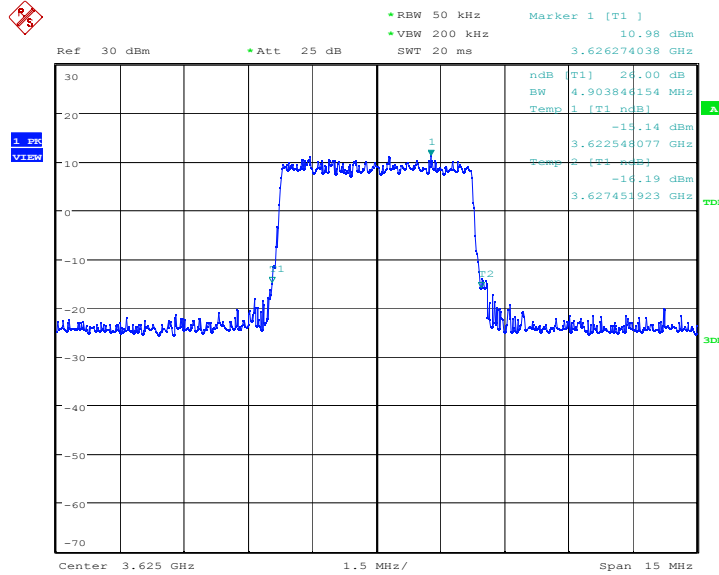


Date: 5.AUG.2021 16:34:47

LTE band 48, 5MHz (-26dBc)

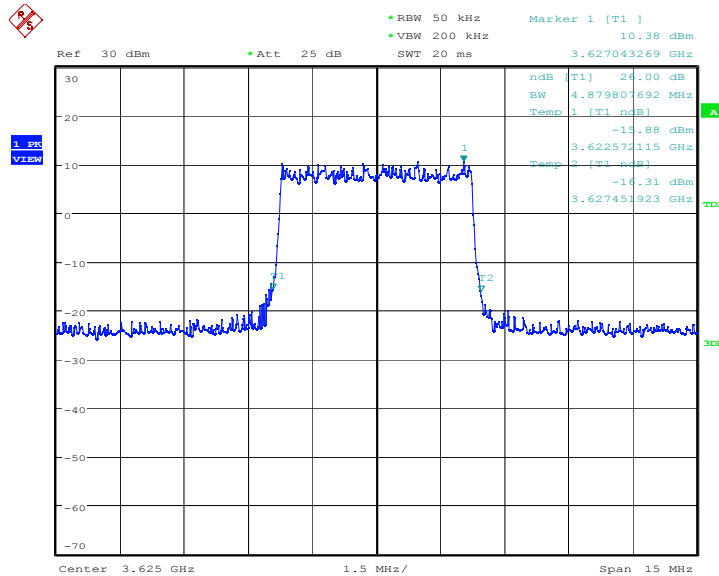
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
3625.0	QPSK	16QAM
	4903.85	4879.81

LTE band 48, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 15:48:37

LTE band 48, 5MHz Bandwidth, 16QAM (-26dBc BW)

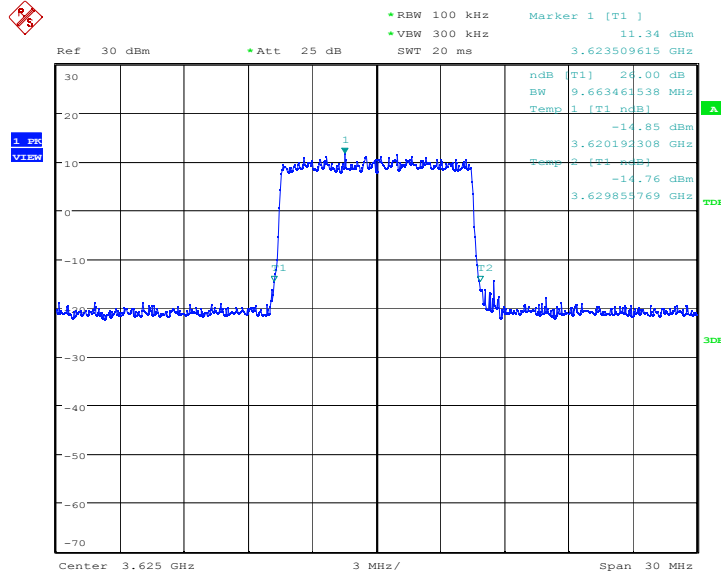


Date: 6.AUG.2021 15:50:12

LTE band 48, 10MHz (-26dBc)

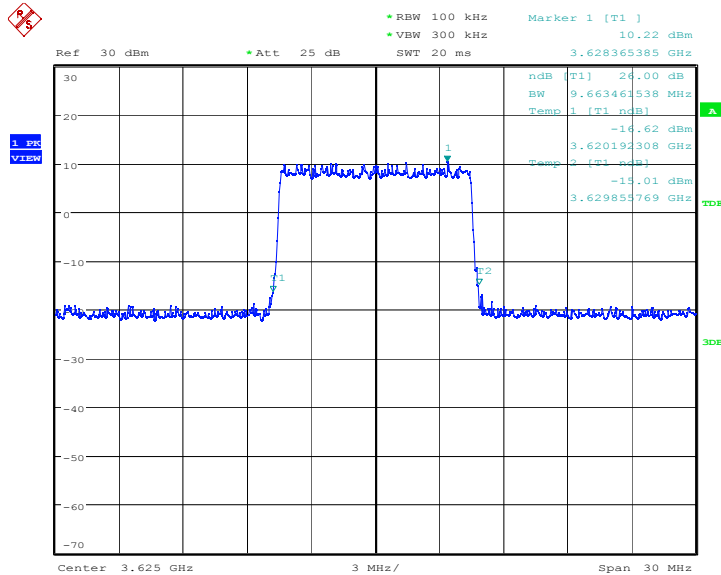
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
	3625.0	QPSK
9663.46		9663.46

LTE band 48, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 15:55:57

LTE band 48, 10MHz Bandwidth, 16QAM (-26dBc BW)

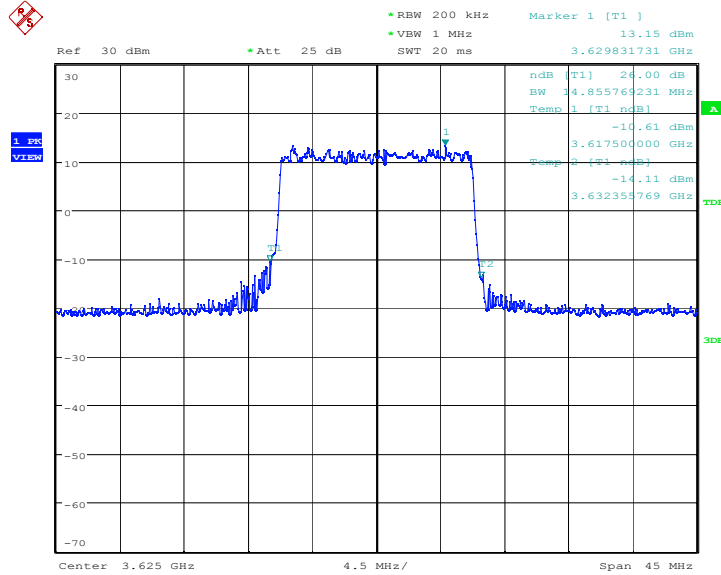


Date: 6.AUG.2021 15:53:44

LTE band 48, 15MHz (-26dBc)

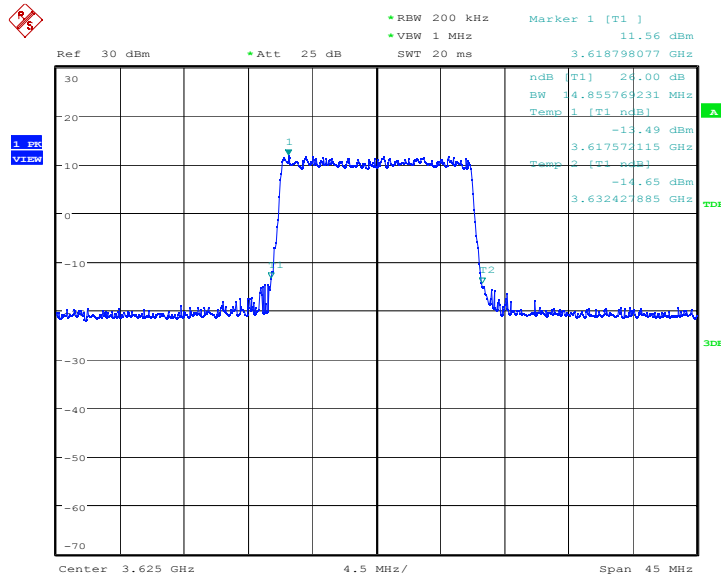
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
	3625.0	QPSK
14855.77		14855.77

LTE band 48, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 15:58:25

LTE band 48, 15MHz Bandwidth, 16QAM (-26dBc BW)

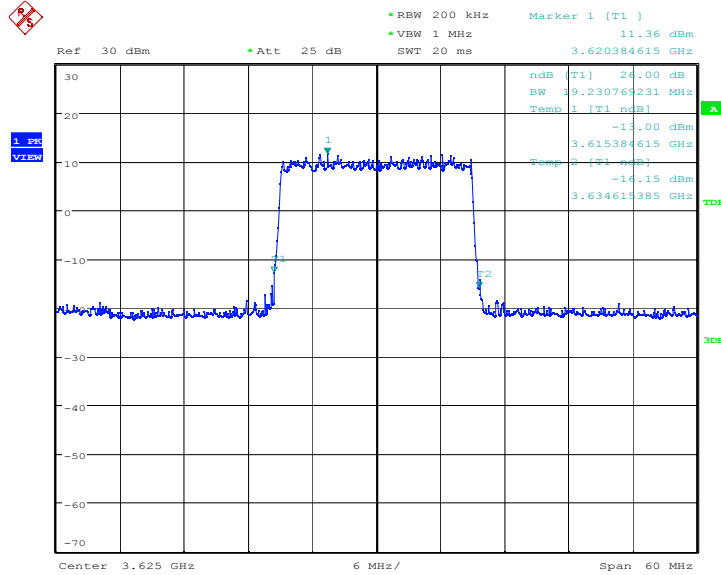


Date: 6.AUG.2021 15:59:59

LTE band 48, 20MHz (-26dBc)

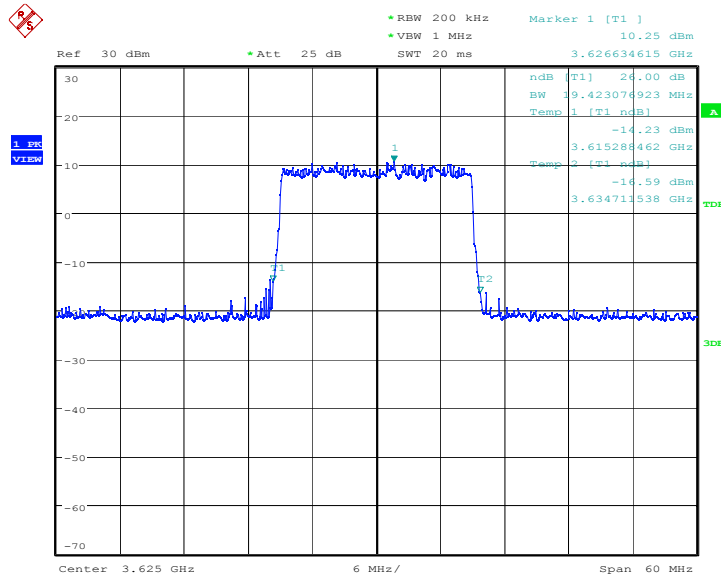
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
	3625.0	QPSK
19230.77		19423.08

LTE band 48, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 16:03:15

LTE band 48, 20MHz Bandwidth, 16QAM (-26dBc BW)

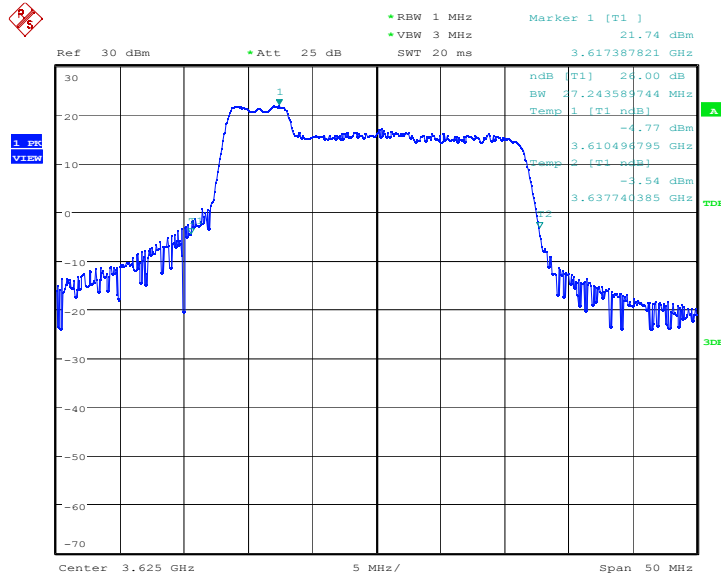


Date: 6.AUG.2021 16:01:37

LTE CA band 48 , 5MHz+20MHz (-26dBc)

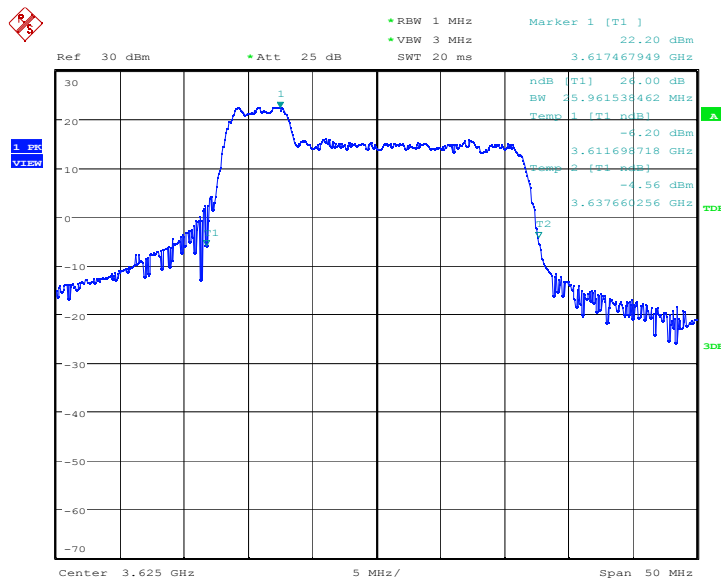
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
3625.0	QPSK	16QAM
	27243.59	25961.54

LTE CA band 48 , 5MHz+20MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 15:18:27

LTE CA band 48 , 5MHz+20MHz Bandwidth,16QAM (-26dBc BW)

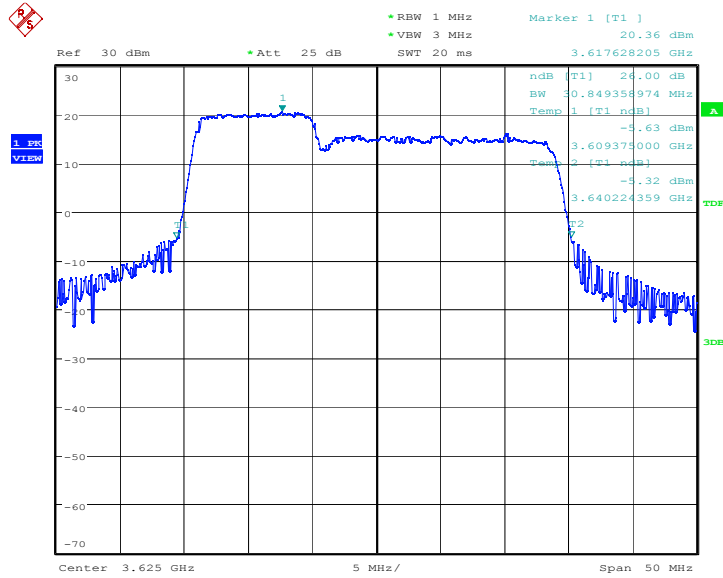


Date: 7.AUG.2021 15:19:38

LTE CA band 48 , 10MHz+20MHz (-26dBc)

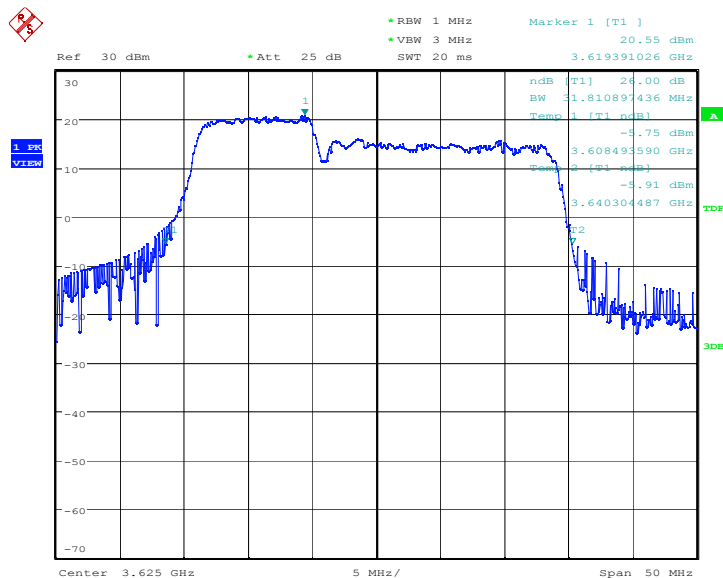
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
3625.0	30849.36	31810.90

LTE CA band 48 , 10MHz+20MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 15:47:03

LTE CA band 48 , 10MHz+20MHz Bandwidth,16QAM (-26dBc BW)

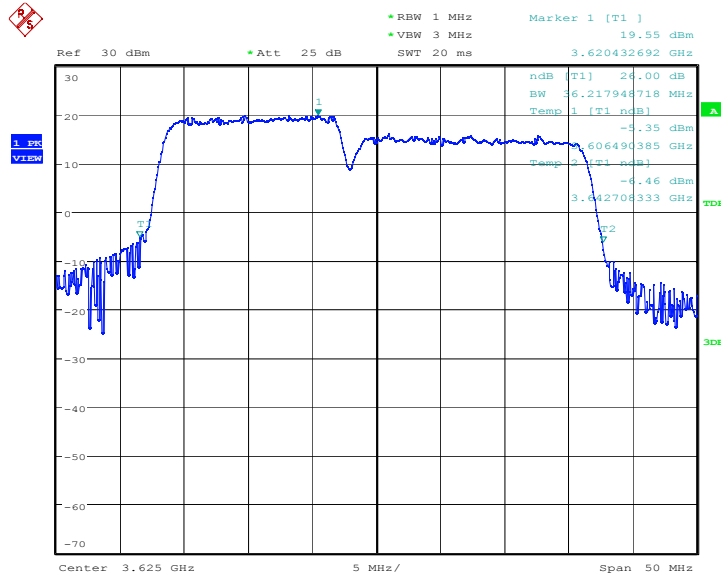


Date: 7.AUG.2021 15:48:11

LTE CA band 48 , 15MHz+20MHz (-26dBc)

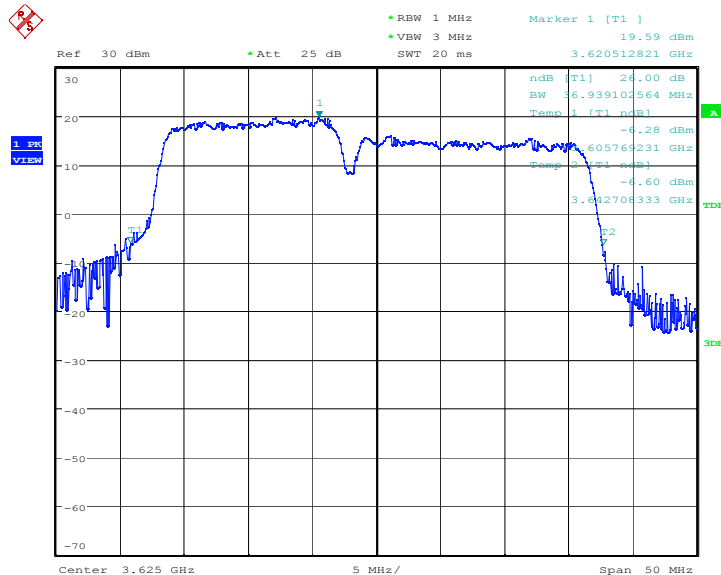
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
3625.0	QPSK	16QAM
	36217.95	36939.10

LTE CA band 48 , 15MHz+20MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 15:57:31

LTE CA band 48 , 15MHz+20MHz Bandwidth,16QAM (-26dBc BW)

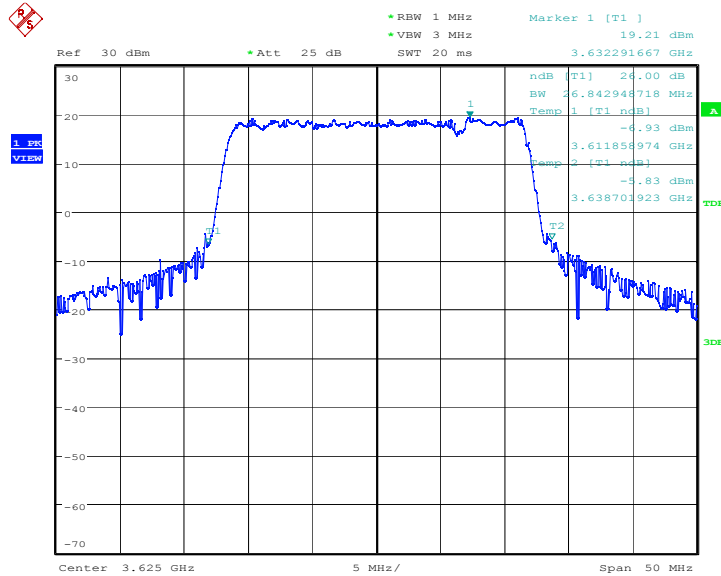


Date: 7.AUG.2021 15:58:36

LTE CA band 48 , 20MHz+5MHz (-26dBc)

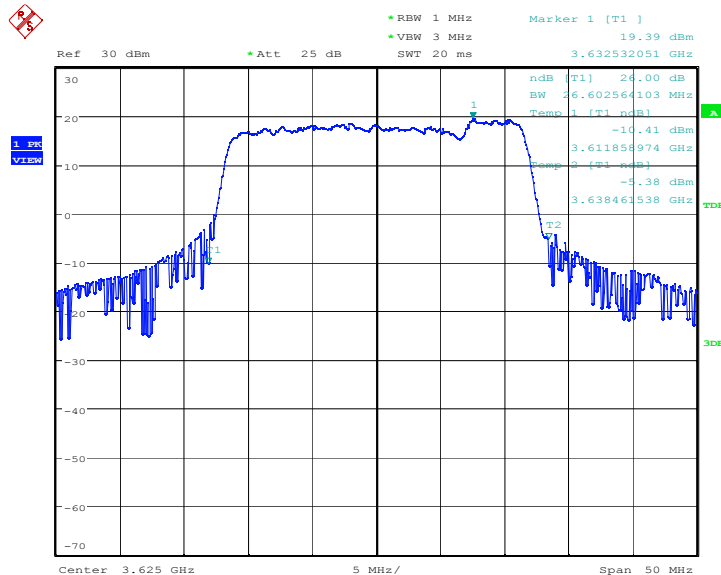
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
3625.0	QPSK	16QAM
	26842.95	26602.56

LTE CA band 48 , 20MHz+5MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 15:42:31

LTE CA band 48 , 20MHz+5MHz Bandwidth, 16QAM (-26dBc BW)

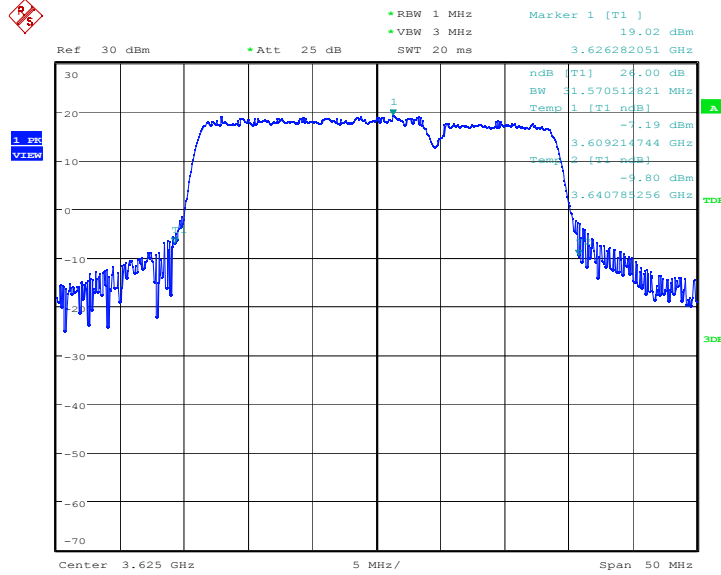


Date: 7.AUG.2021 15:43:52

LTE CA band 48 , 20MHz+10MHz (-26dBc)

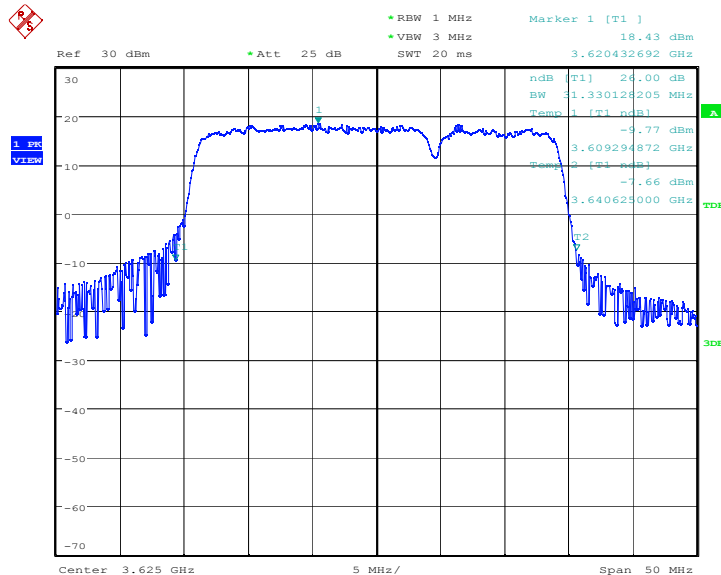
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	3625.0	QPSK
31570.51		31330.13

LTE CA band 48 , 20MHz+10MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 15:51:41

LTE CA band 48 , 20MHz+10MHz Bandwidth,16QAM (-26dBc BW)

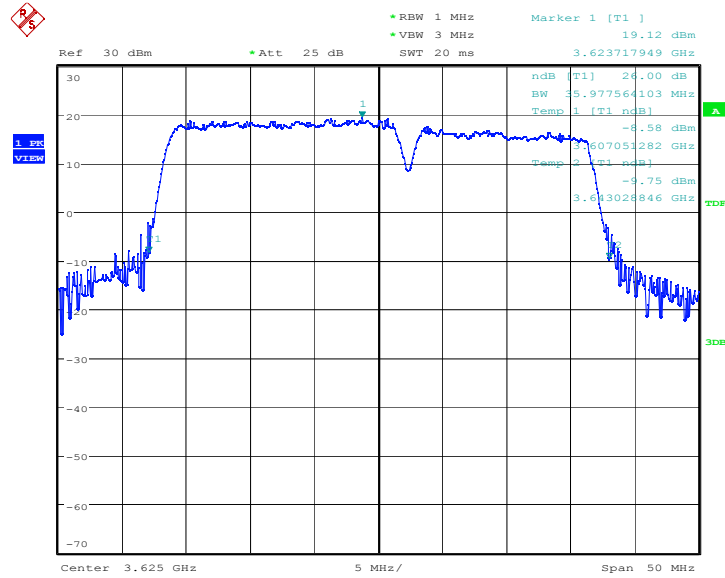


Date: 7.AUG.2021 15:52:52

LTE CA band 48 , 20MHz+15MHz (-26dBc)

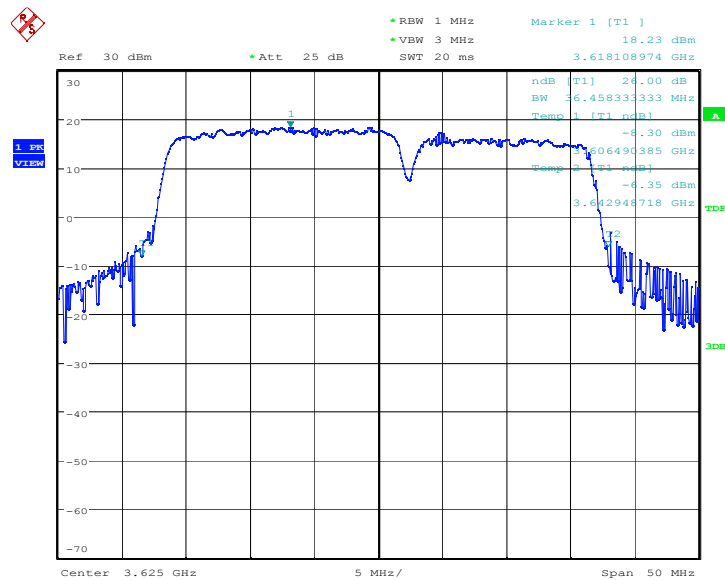
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	3625.0	QPSK
35977.56		36458.33

LTE CA band 48 , 20MHz+15MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:04:34

LTE CA band 48 , 20MHz+15MHz Bandwidth,16QAM (-26dBc BW)

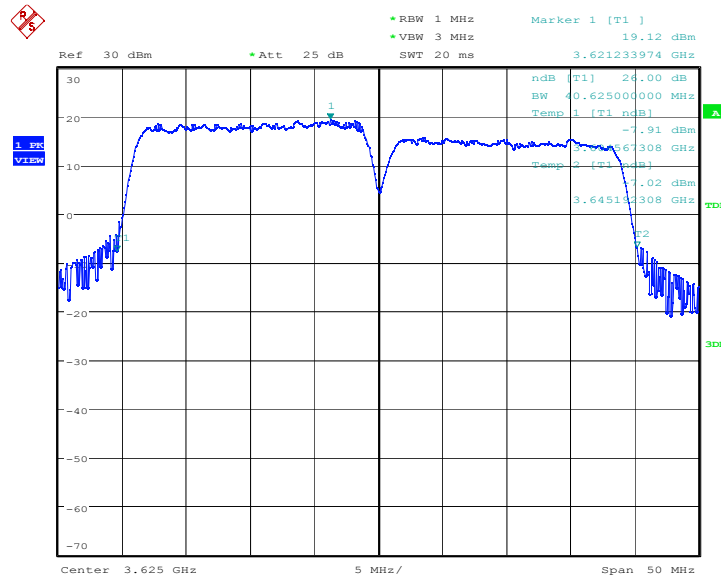


Date: 7.AUG.2021 16:05:46

LTE CA band 48 , 20MHz+20MHz (-26dBc)

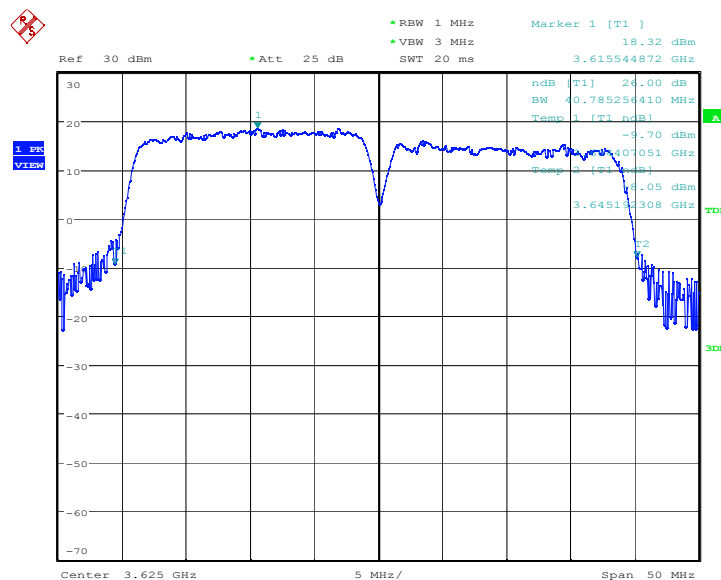
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
3625.0	QPSK	16QAM
	40625.00	40785.26

LTE CA band 48 , 20MHz+20MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:15:55

LTE CA band 48 , 20MHz+20MHz Bandwidth,16QAM (-26dBc BW)

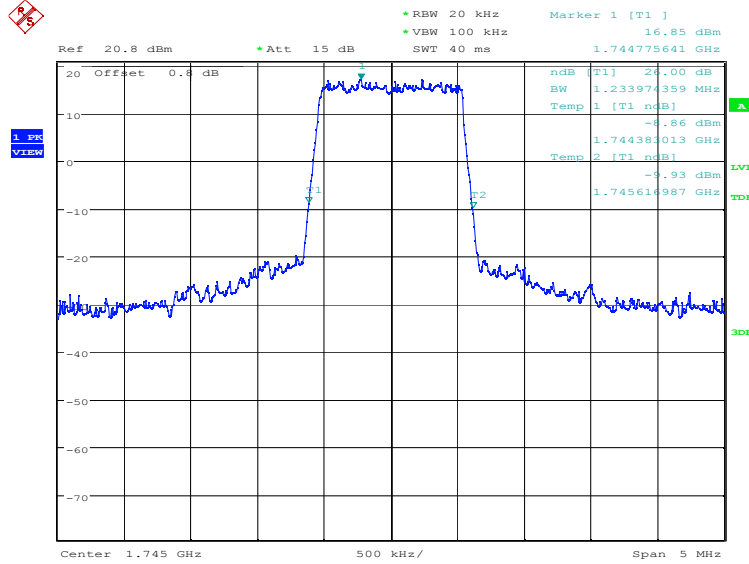


Date: 7.AUG.2021 16:17:02

LTE band 66-ANT2, 1.4MHz (-26dBc)

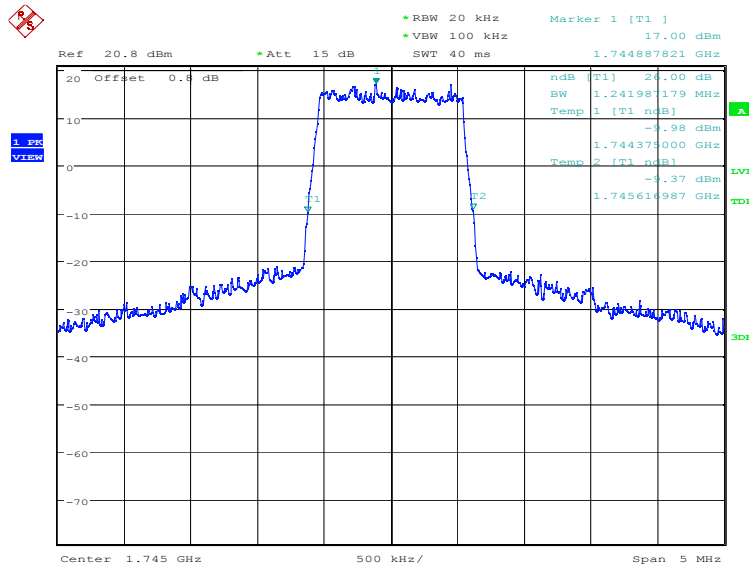
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
1233.97		1241.99

LTE band 66-ANT2, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:45:21

LTE band 66-ANT2, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

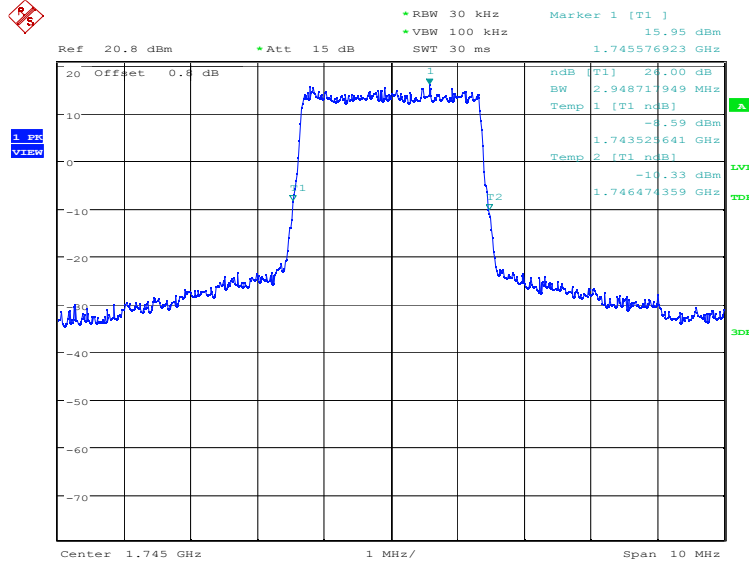


Date: 6.AUG.2021 07:46:01

LTE band 66-ANT2, 3MHz (-26dBc)

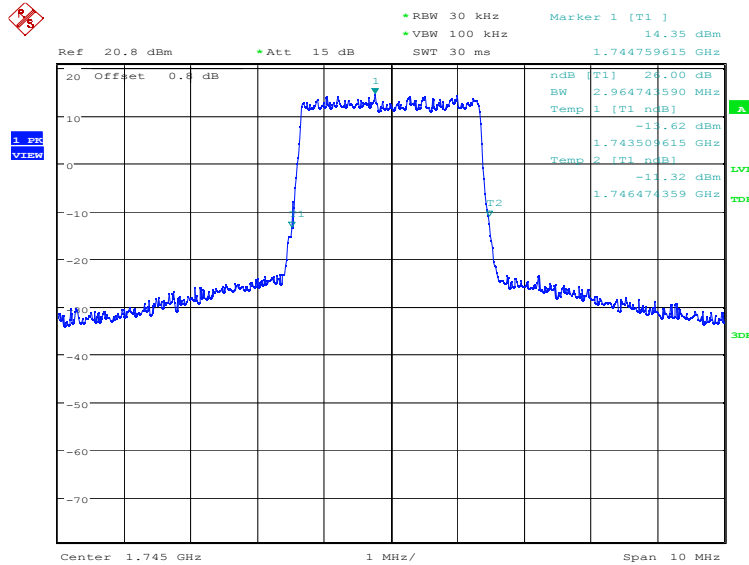
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
	2948.72	2964.74

LTE band 66-ANT2, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:46:43

LTE band 66-ANT2, 3MHz Bandwidth, 16QAM (-26dBc BW)

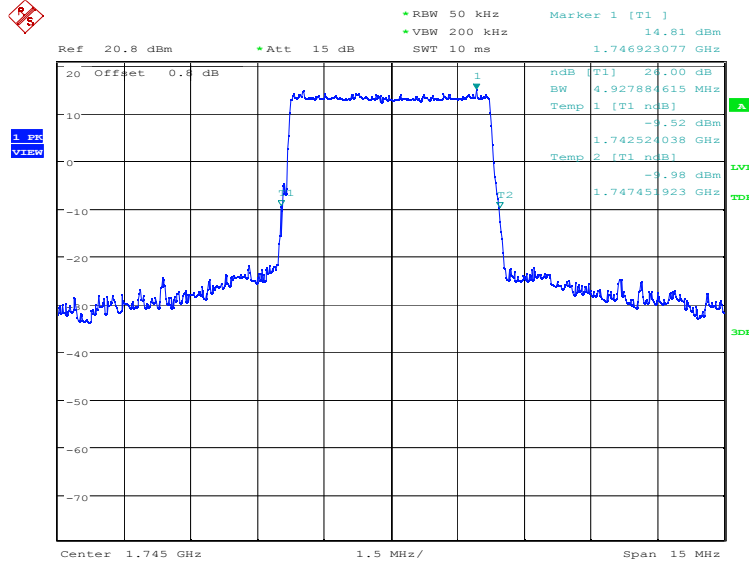


Date: 6.AUG.2021 07:47:23

LTE band 66-ANT2, 5MHz (-26dBc)

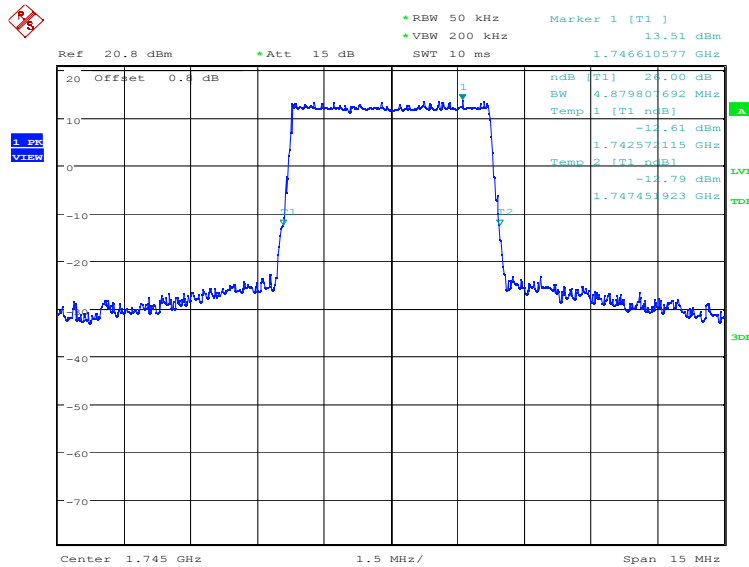
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
	4927.88	4879.81

LTE band 66-ANT2, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:48:05

LTE band 66-ANT2, 5MHz Bandwidth, 16QAM (-26dBc BW)

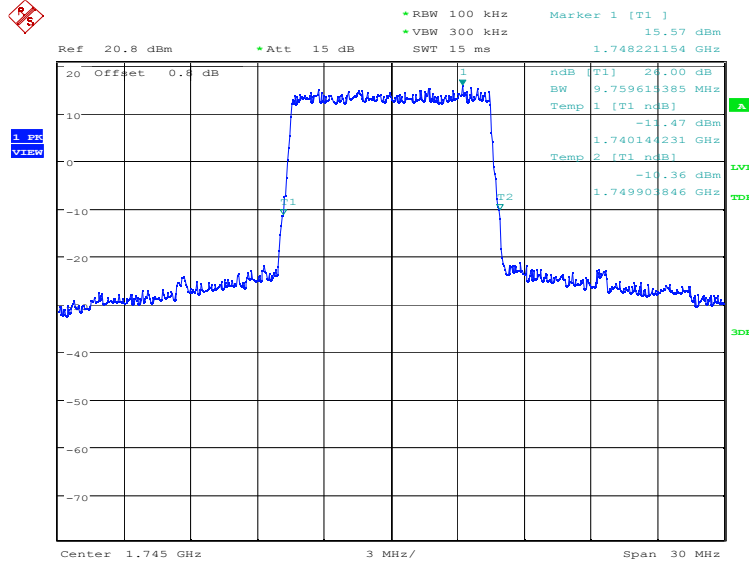


Date: 6.AUG.2021 07:48:44

LTE band 66-ANT2, 10MHz (-26dBc)

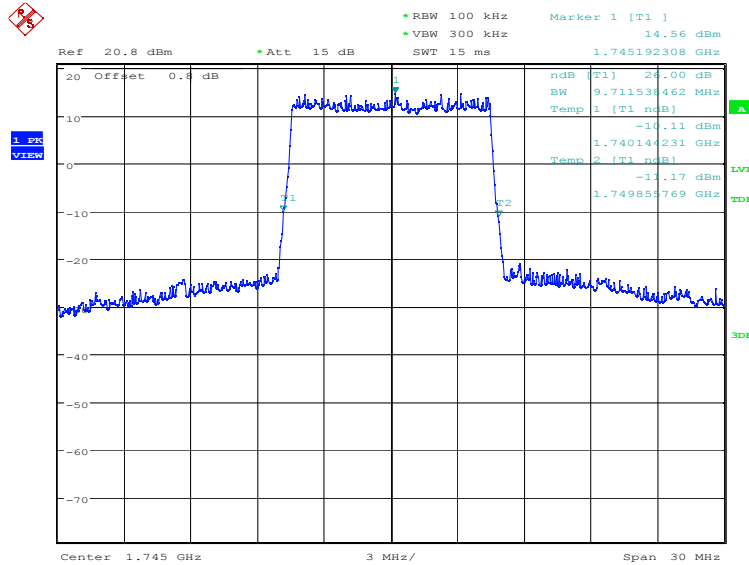
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
9759.62		9711.54

LTE band 66-ANT2, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:49:26

LTE band 66-ANT2, 10MHz Bandwidth, 16QAM (-26dBc BW)

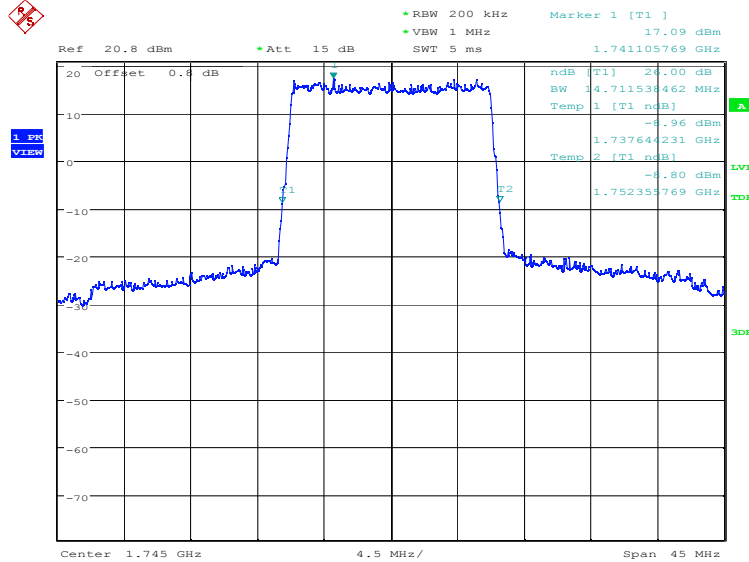


Date: 6.AUG.2021 07:50:06

LTE band 66-ANT2, 15MHz (-26dBc)

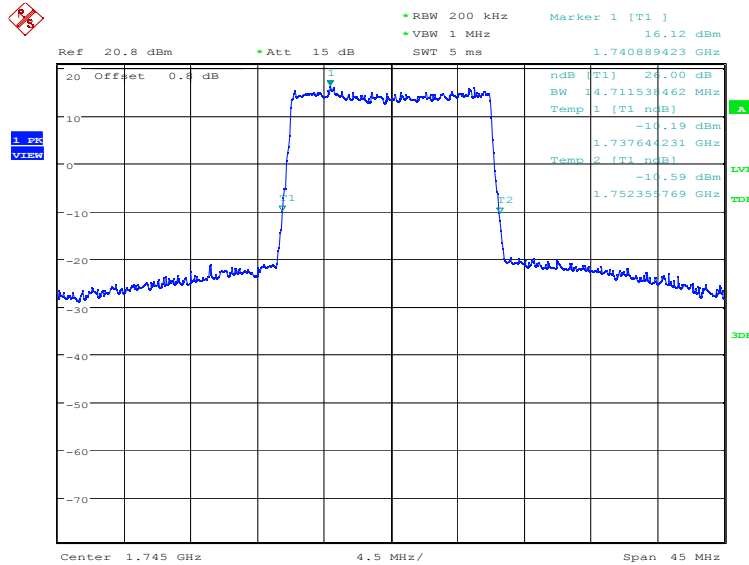
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
14711.54		14711.54

LTE band 66-ANT2, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 6.AUG.2021 07:50:48

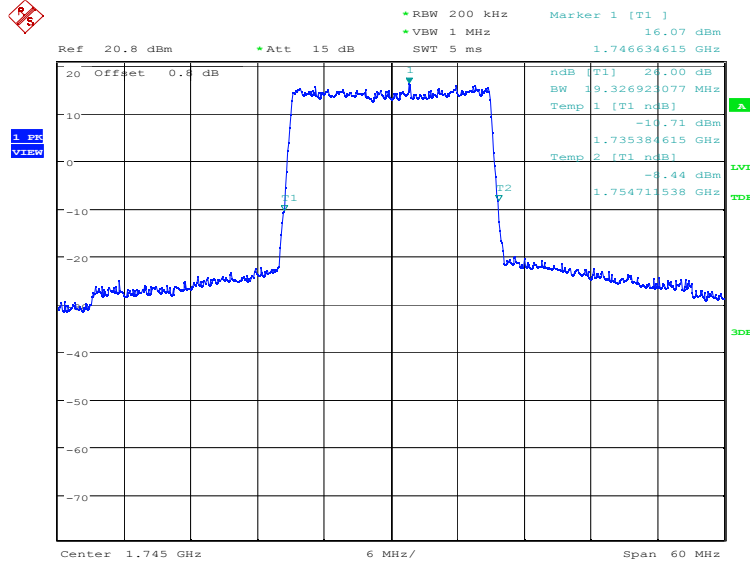
LTE band 66-ANT2, 15MHz Bandwidth, 16QAM (-26dBc BW)



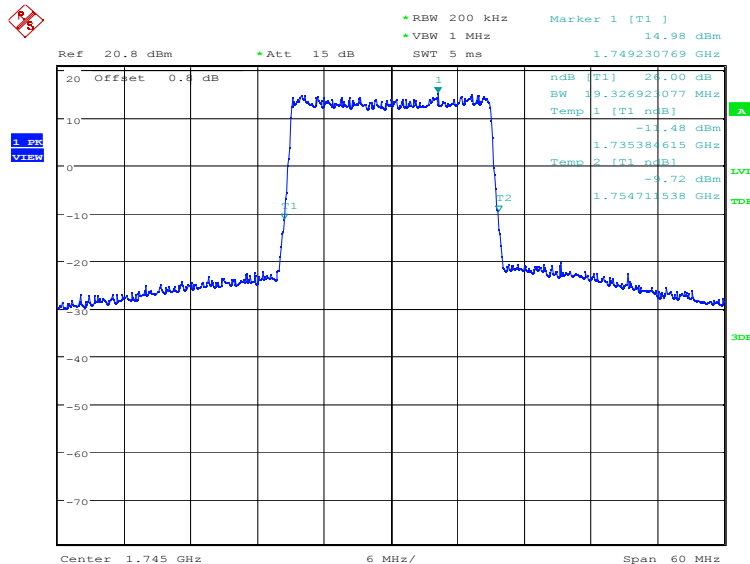
Date: 6.AUG.2021 07:51:28

LTE band 66-ANT2, 20MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	19326.92	19326.92

LTE band 66-ANT2, 20MHz Bandwidth, QPSK (-26dBc BW)


Date: 6.AUG.2021 07:52:10

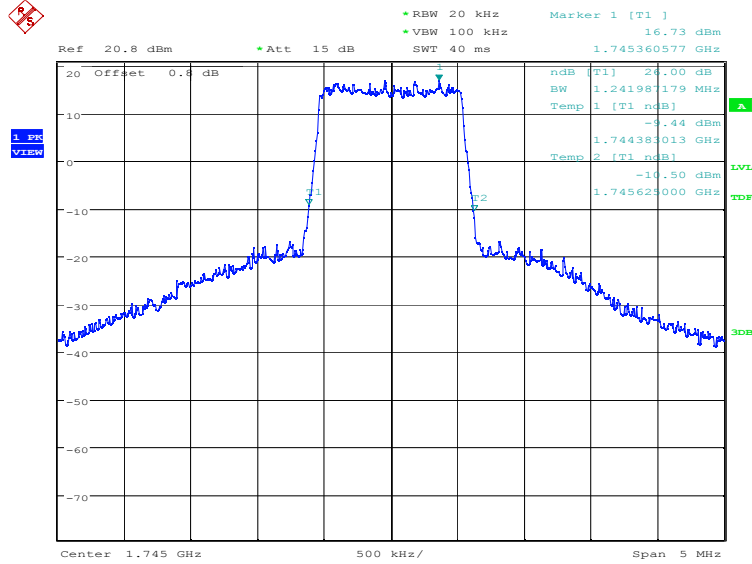
LTE band 66-ANT2, 20MHz Bandwidth, 16QAM (-26dBc BW)


Date: 6.AUG.2021 07:52:50

LTE band 66-ANT3, 1.4MHz (-26dBc)

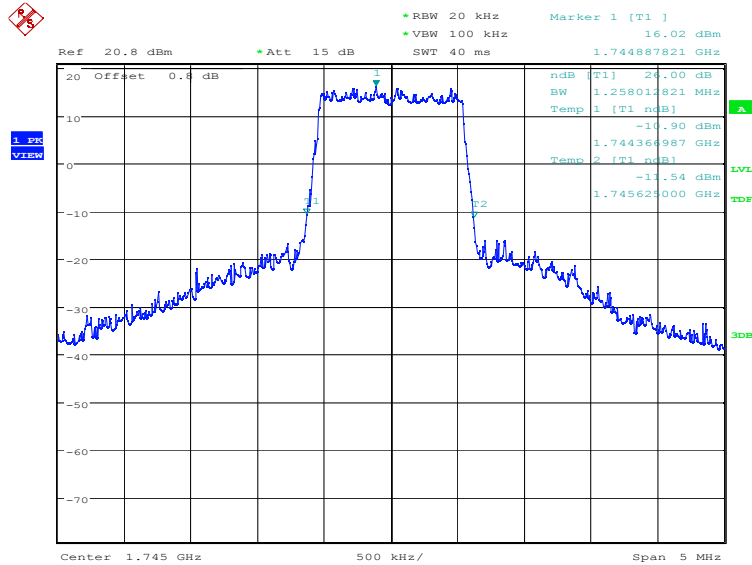
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
1241.99		1258.01

LTE band 66-ANT3, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 17.SEP.2021 07:57:01

LTE band 66-ANT3, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

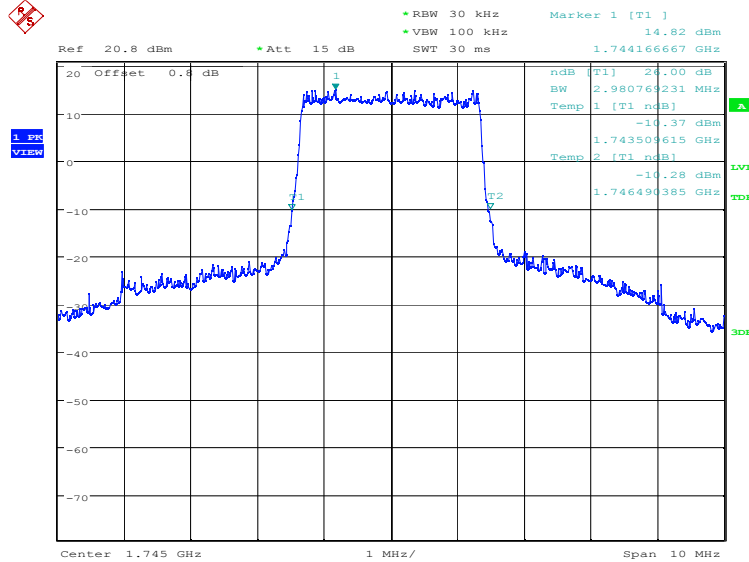


Date: 17.SEP.2021 07:57:40

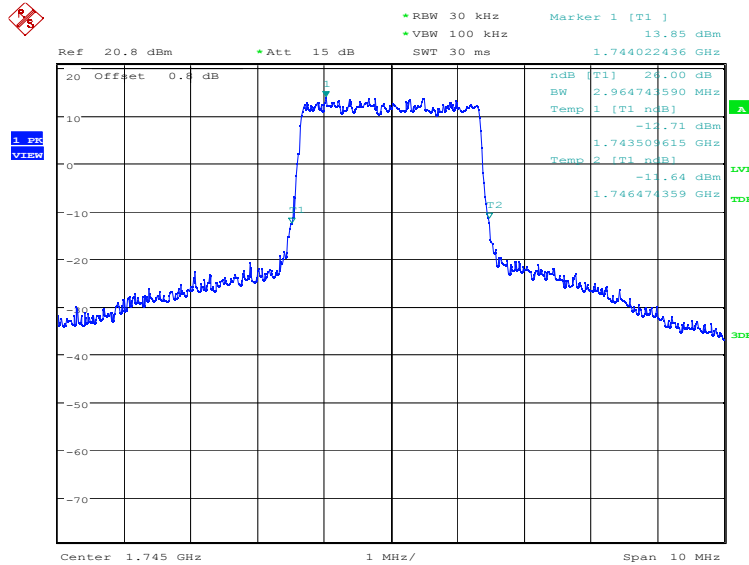
LTE band 66-ANT3, 3MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
2980.77		2964.74

LTE band 66-ANT3, 3MHz Bandwidth, QPSK (-26dBc BW)



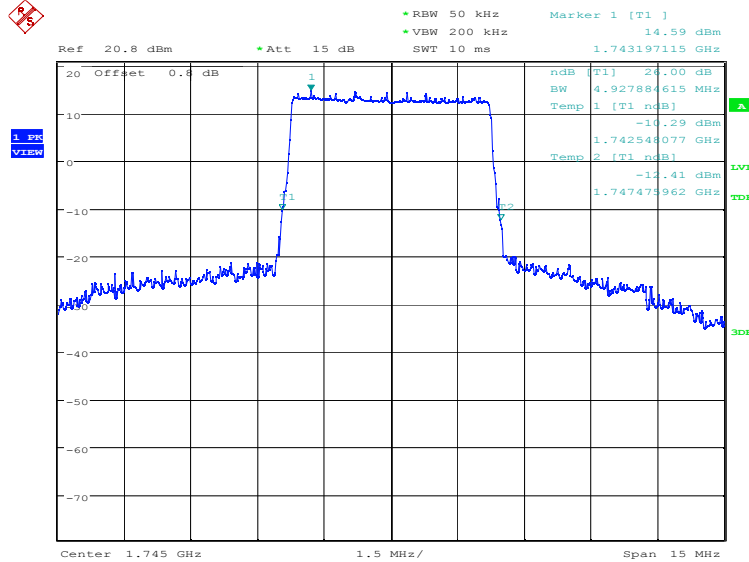
LTE band 66-ANT3, 3MHz Bandwidth, 16QAM (-26dBc BW)



LTE band 66-ANT3, 5MHz (-26dBc)

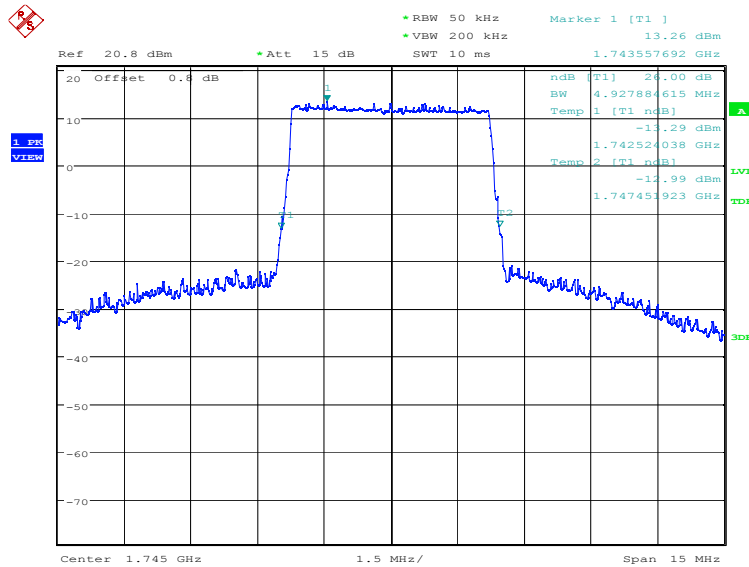
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
	4927.88	4927.88

LTE band 66-ANT3, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 17.SEP.2021 08:35:59

LTE band 66-ANT3, 5MHz Bandwidth, 16QAM (-26dBc BW)

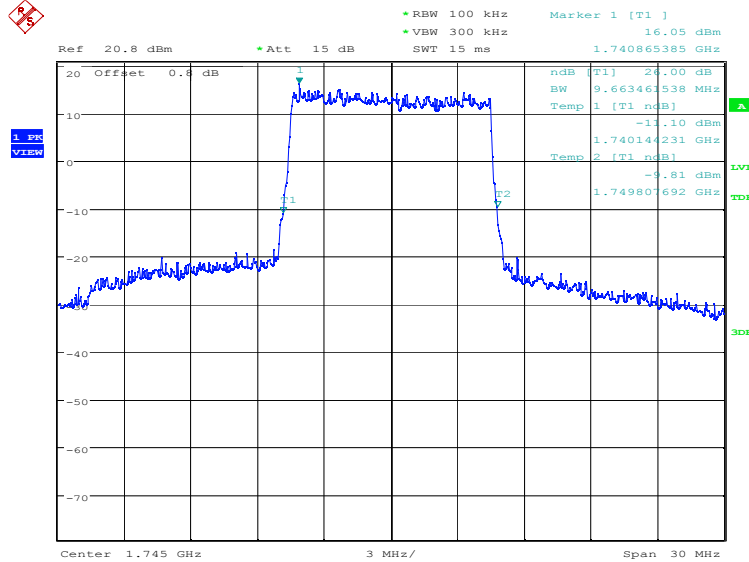


Date: 17.SEP.2021 08:36:39

LTE band 66-ANT3, 10MHz (-26dBc)

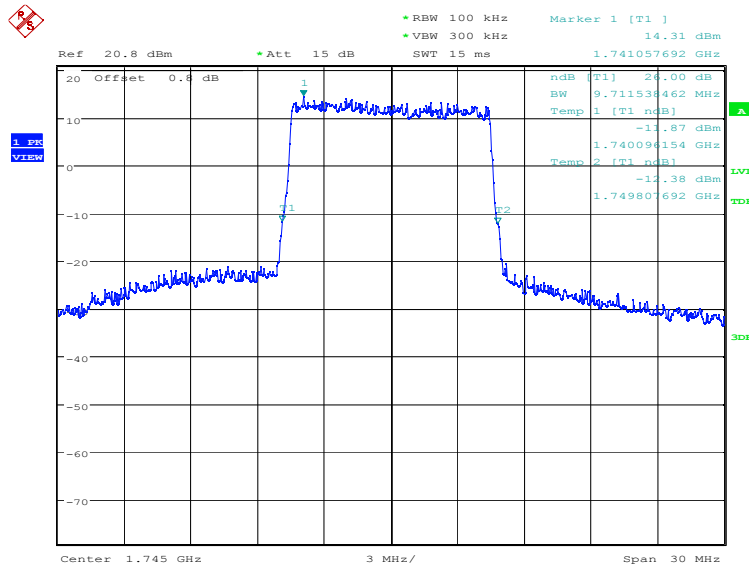
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
	9663.46	9711.54

LTE band 66-ANT3, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 17.SEP.2021 08:39:36

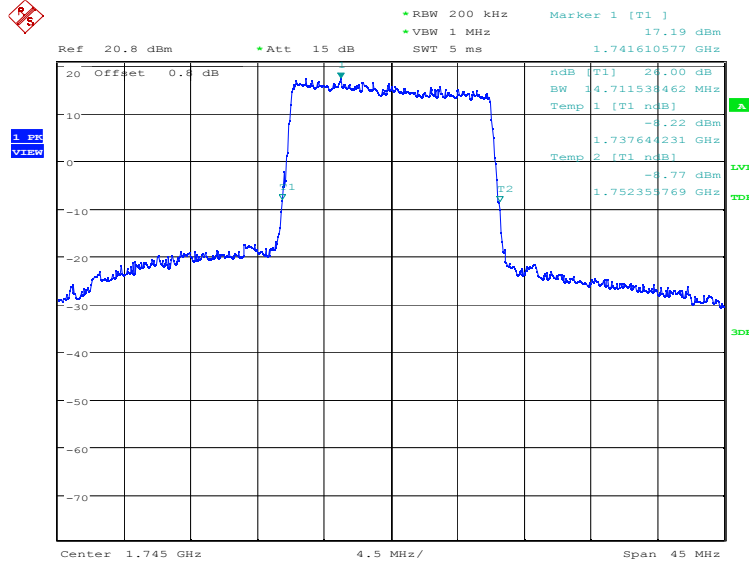
LTE band 66-ANT3, 10MHz Bandwidth, 16QAM (-26dBc BW)



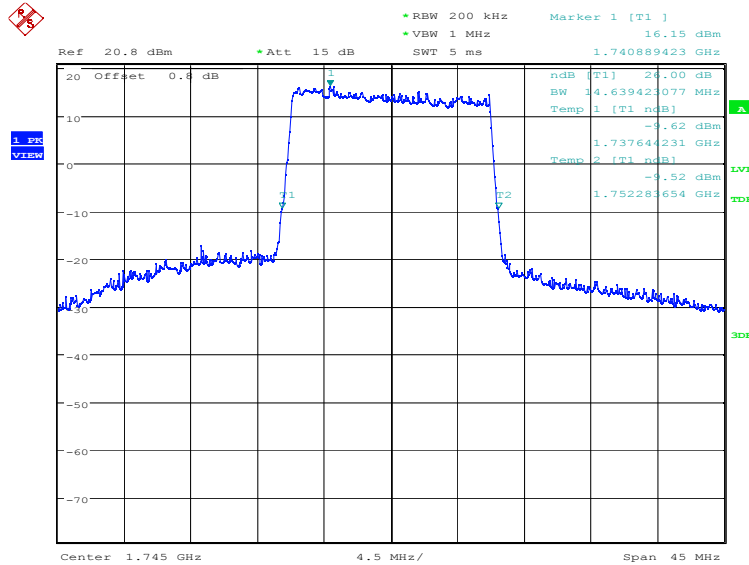
Date: 17.SEP.2021 08:40:15

LTE band 66-ANT3, 15MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
14711.54		14639.42

LTE band 66-ANT3, 15MHz Bandwidth, QPSK (-26dBc BW)


Date: 17.SEP.2021 08:42:29

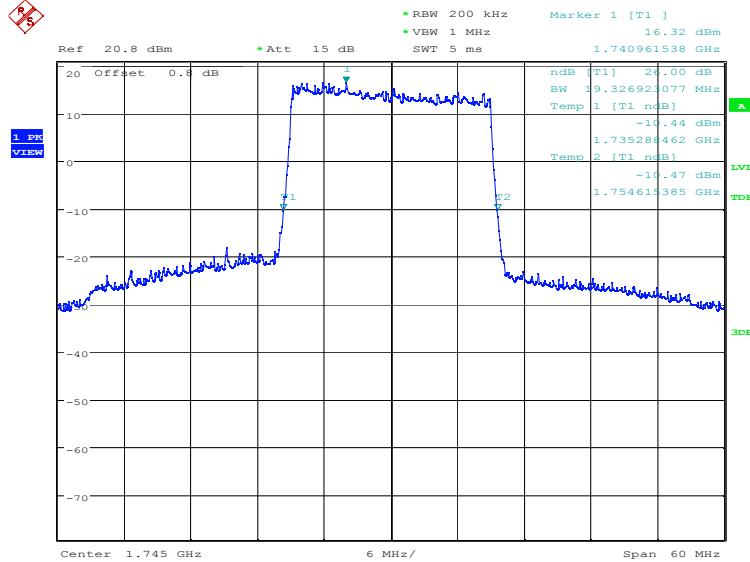
LTE band 66-ANT3, 15MHz Bandwidth, 16QAM (-26dBc BW)


Date: 17.SEP.2021 08:43:08

LTE band 66-ANT3, 20MHz (-26dBc)

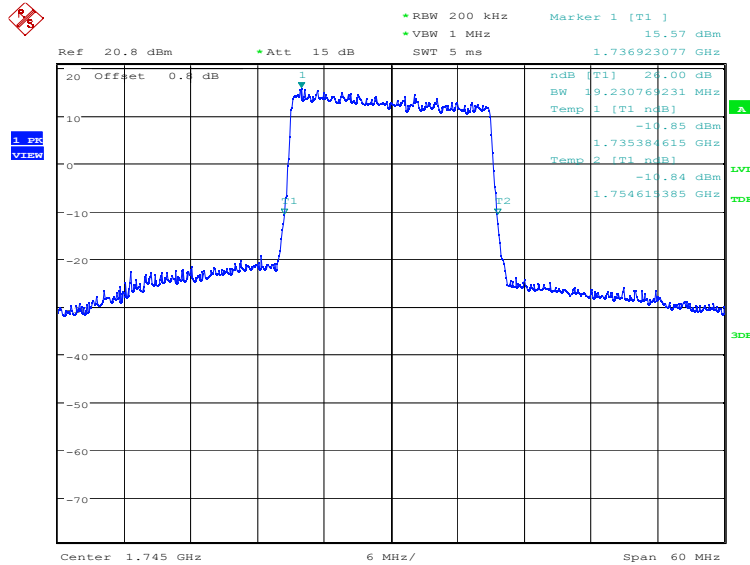
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	1745.0	QPSK
19326.92		19230.77

LTE band 66-ANT3, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 17.SEP.2021 08:46:28

LTE band 66-ANT3, 20MHz Bandwidth, 16QAM (-26dBc BW)

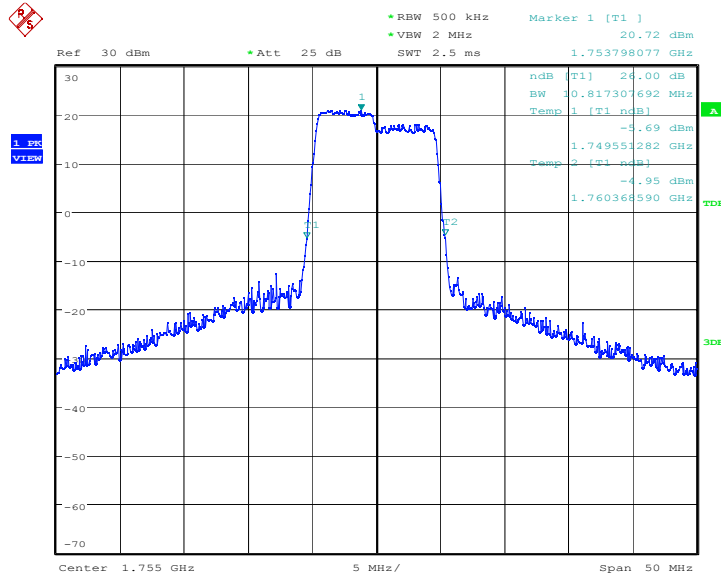


Date: 17.SEP.2021 08:47:08

LTE CA band 66 , 5MHz+5MHz (-26dBc)

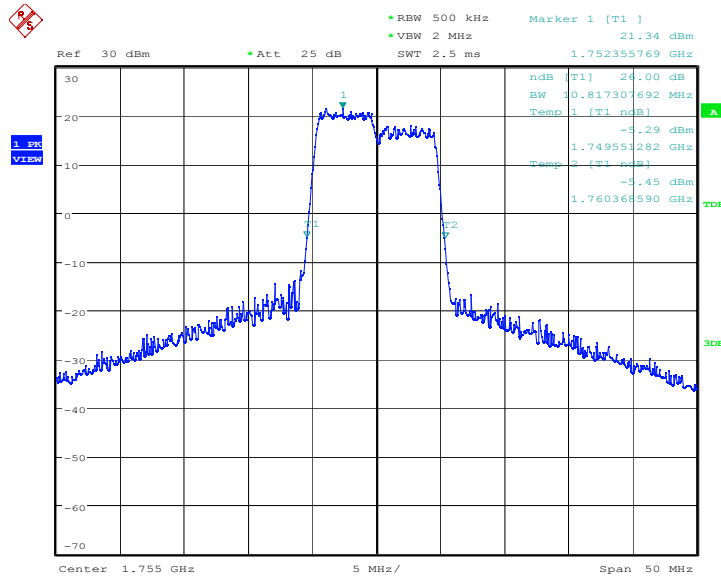
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
1755.0	QPSK	16QAM
	10817.31	10817.31

LTE CA band 66 , 5MHz+5MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:36:59

LTE CA band 66 , 5MHz+5MHz Bandwidth, 16QAM (-26dBc BW)

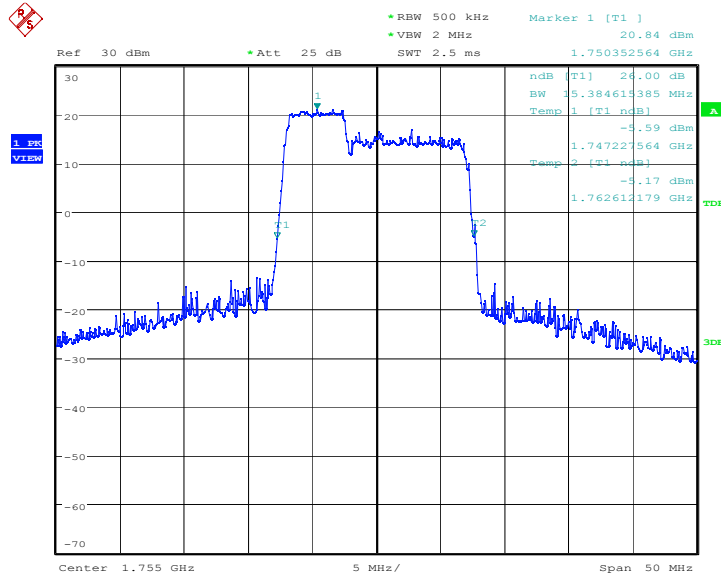


Date: 7.AUG.2021 16:38:09

LTE CA band 66 , 5MHz+10MHz (-26dBc)

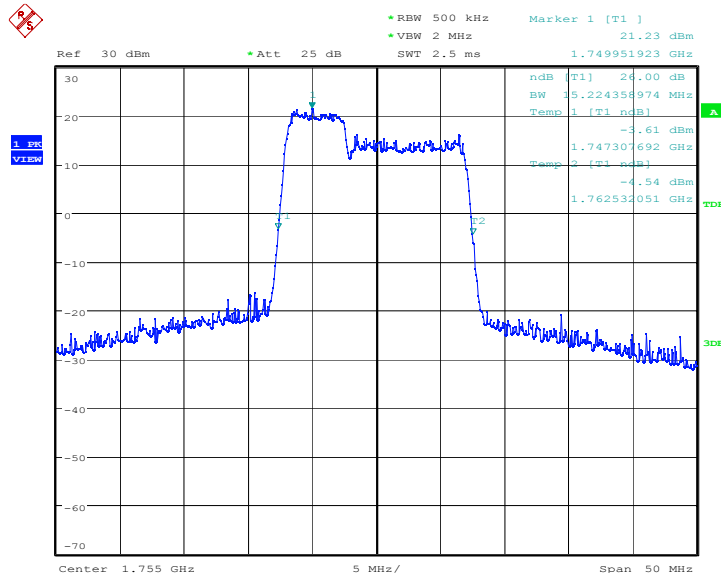
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
1755.0	QPSK	16QAM
	15384.62	15224.36

LTE CA band 66 , 5MHz+10MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:40:14

LTE CA band 66 , 5MHz+10MHz Bandwidth, 16QAM (-26dBc BW)

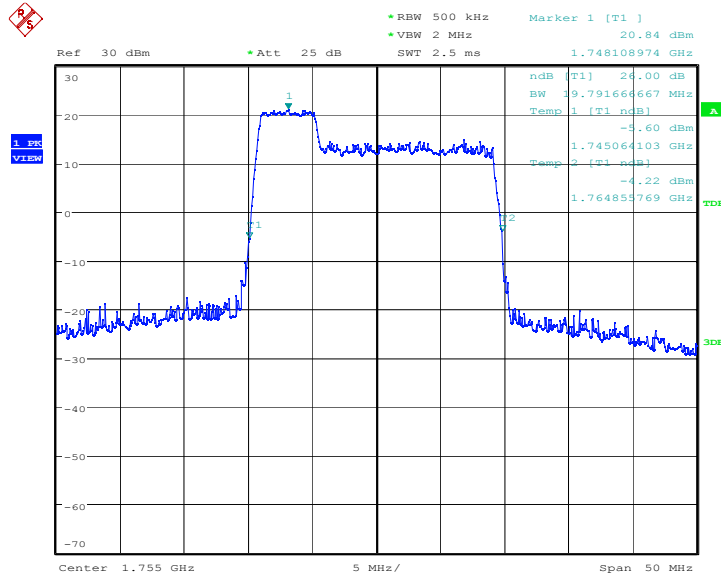


Date: 7.AUG.2021 16:41:20

LTE CA band 66 , 5MHz+15MHz (-26dBc)

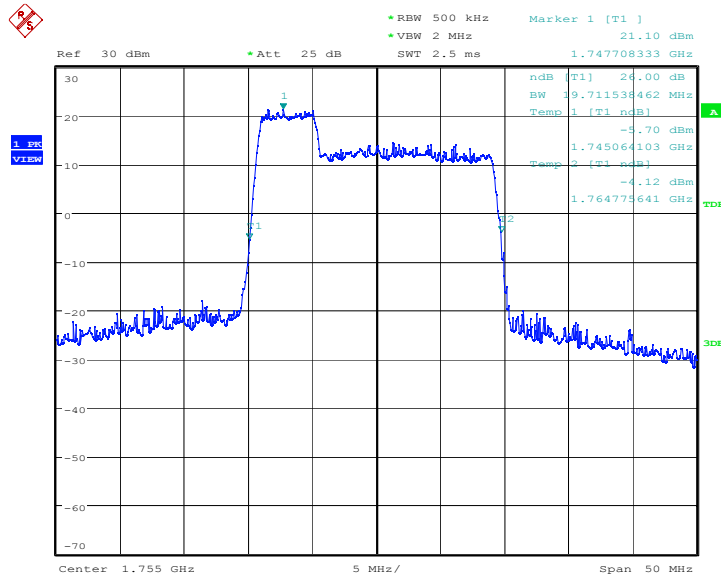
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
1755.0	QPSK	16QAM
	19791.67	19711.54

LTE CA band 66 , 5MHz+15MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:47:01

LTE CA band 66 , 5MHz+15MHz Bandwidth,16QAM (-26dBc BW)

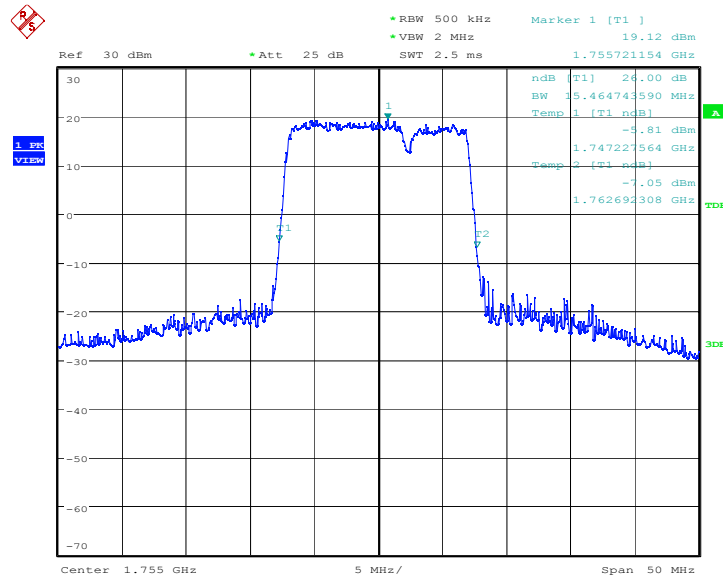


Date: 7.AUG.2021 16:48:05

LTE CA band 66 , 10MHz+5MHz (-26dBc)

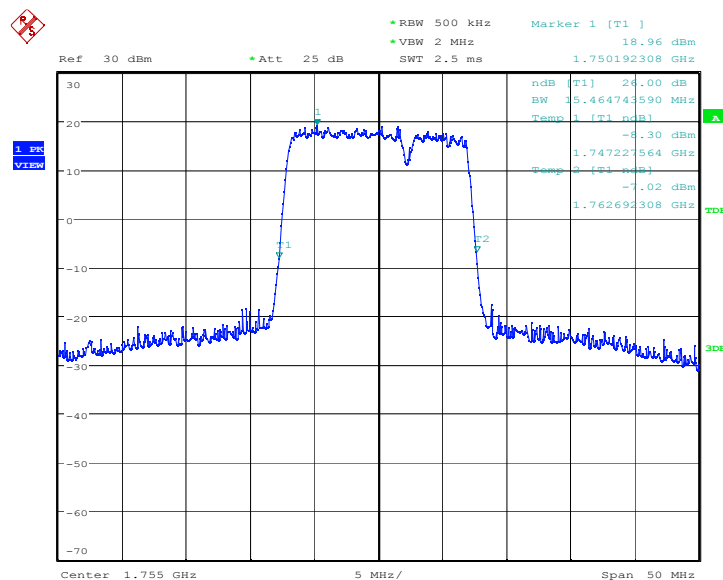
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
1755.0	QPSK	16QAM
	15464.74	15464.74

LTE CA band 66 , 10MHz+5MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:43:30

LTE CA band 66 , 10MHz+5MHz Bandwidth, 16QAM (-26dBc BW)

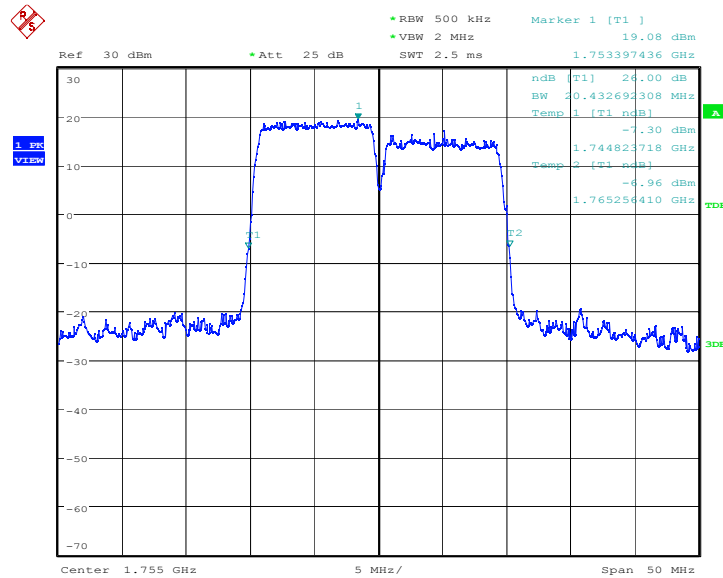


Date: 7.AUG.2021 16:44:36

LTE CA band 66 , 10MHz+10MHz (-26dBc)

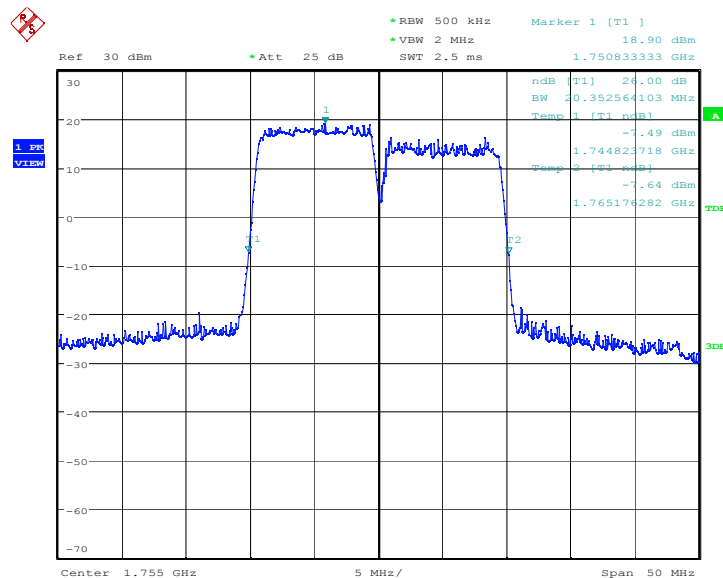
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
1755.0	QPSK	16QAM
	20432.69	20352.56

LTE CA band 66 , 10MHz+10MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:58:36

LTE CA band 66 , 10MHz+10MHz Bandwidth,16QAM (-26dBc BW)

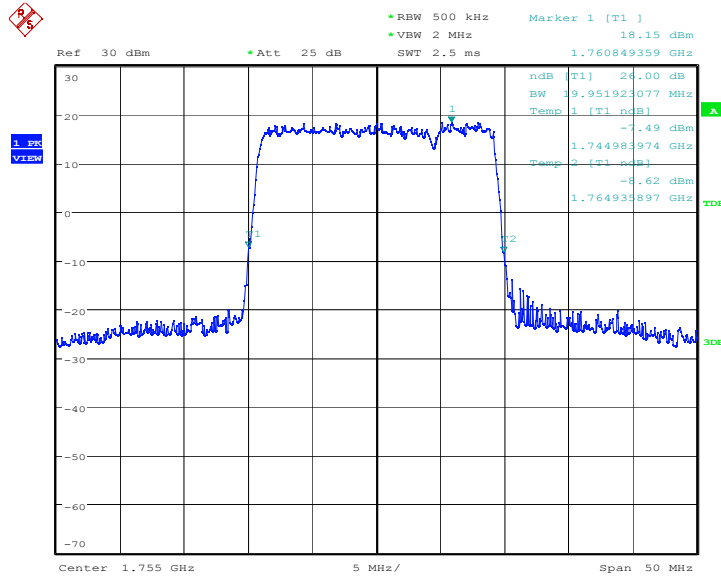


Date: 7.AUG.2021 17:01:40

LTE CA band 66 , 15MHz+5MHz (-26dBc)

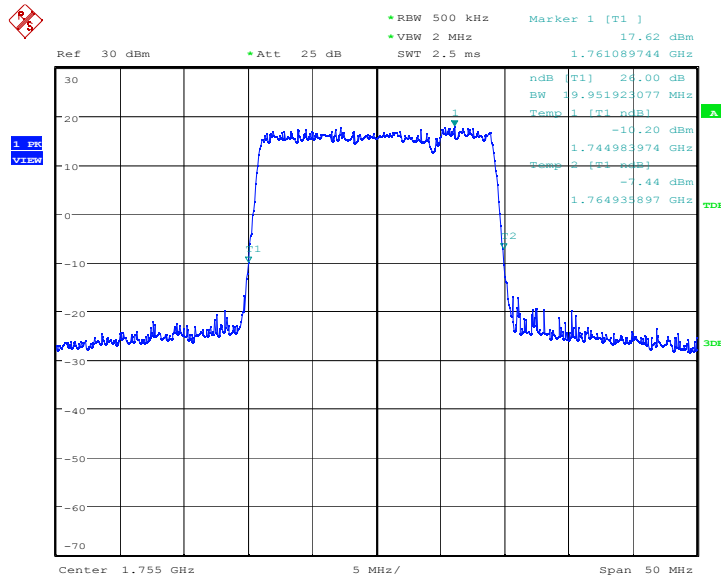
Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
1755.0	QPSK	16QAM
	19951.92	19951.92

LTE CA band 66 , 15MHz+5MHz Bandwidth, QPSK (-26dBc BW)



Date: 7.AUG.2021 16:49:55

LTE CA band 66 , 15MHz+5MHz Bandwidth, 16QAM (-26dBc BW)



Date: 7.AUG.2021 16:51:04

A.6 Band Edge Compliance

A.6.1 Measurement limit

Part 22.917, Part 24.238 and Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Part 27.53(m) specifies for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Part 27.53(c) states for operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

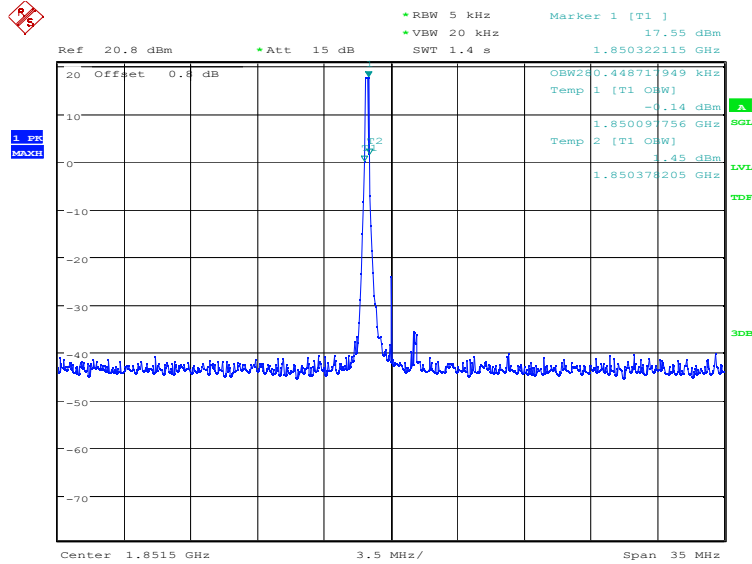
Part 96.41(e) states that the conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B MHz (where B is the bandwidth in MHz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B MHz below the lower CBSD-assigned channel edge. At all frequencies greater than B MHz above the upper CBSD assigned channel edge and less than B MHz below the lower CBSD-assigned channel edge, the conducted power of any end user device emission shall not exceed -25 dBm/MHz. the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz. Compliance with this provision is based on the use of measurement



instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's authorized frequency channel, a resolution bandwidth of no less than one percent of the fundamental emission bandwidth may be employed.

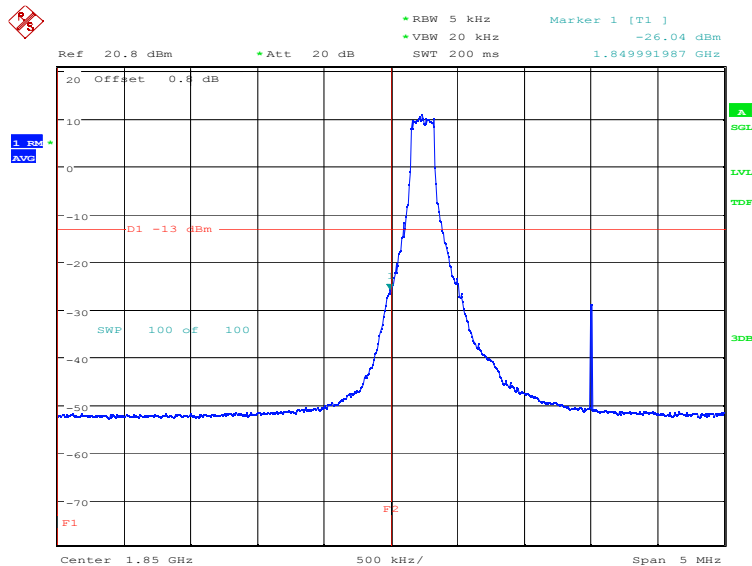
The spectrum analyzer readings are corrected by $[10 \log (1/\text{duty cycle})]$ for the non-continuous transmitting scenario.

A.6.2 Measurement result
Only the worst case result is given below
LTE band 2-ANT2
OBW: 1RB-low_offset



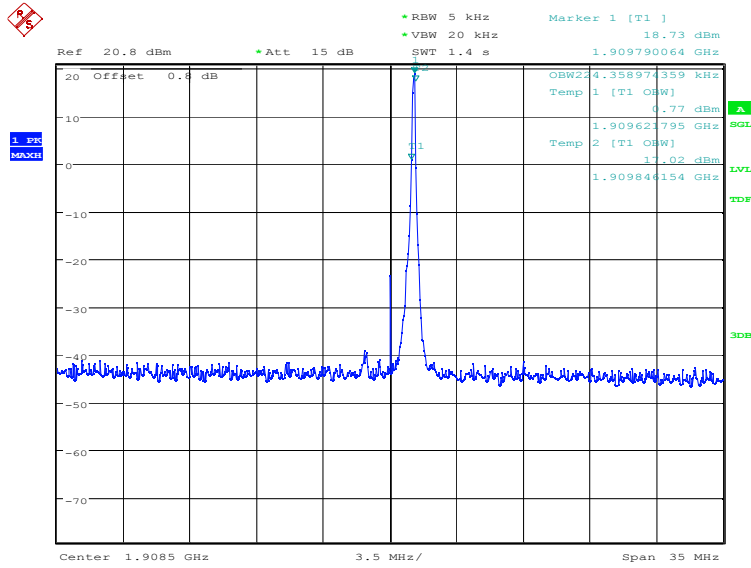
Date: 19.AUG.2021 17:00:57

LOW BAND EDGE BLOCK-1RB-low_offset



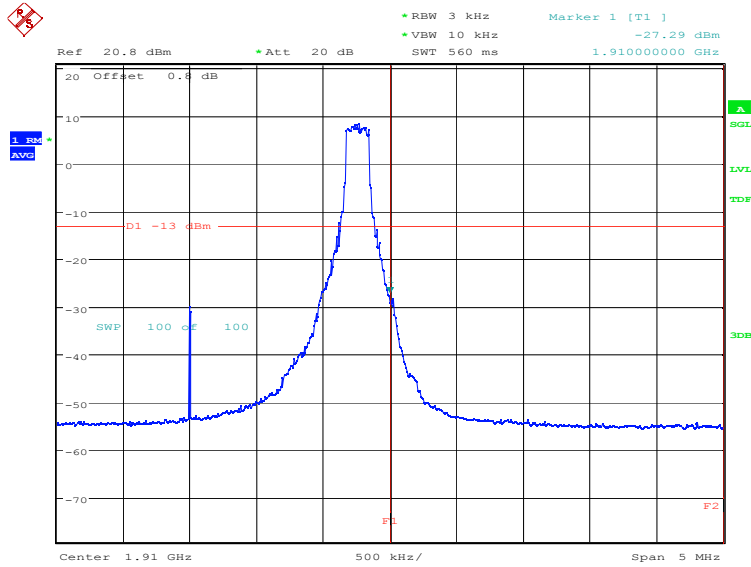
Date: 19.AUG.2021 17:02:10

OBW: 1RB-high_offset



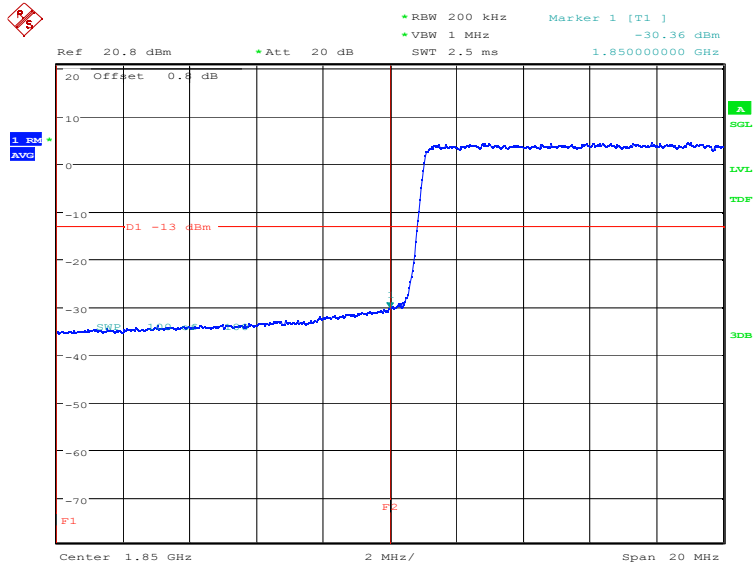
Date: 20.AUG.2021 08:48:40

HIGH BAND EDGE BLOCK-1RB-high_offset



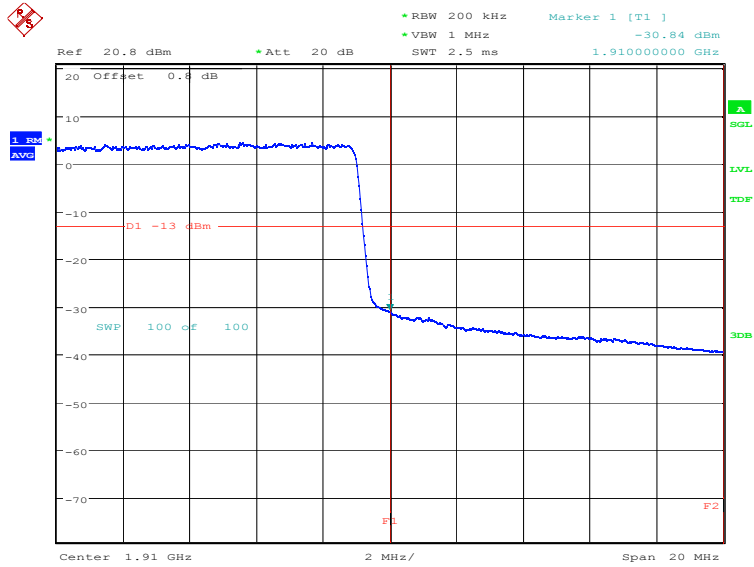
Date: 20.AUG.2021 08:49:54

LOW BAND EDGE BLOCK-20MHz-100%RB



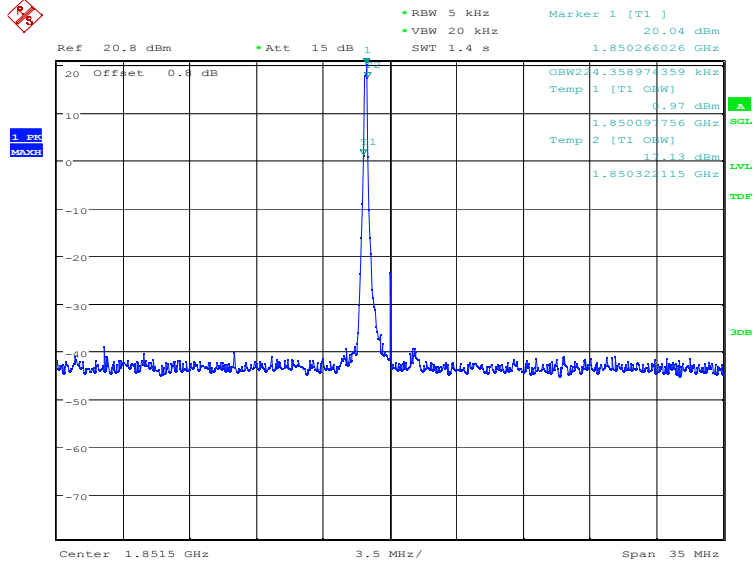
Date: 6.AUG.2021 07:53:58

HIGH BAND EDGE BLOCK-20MHz-100%RB



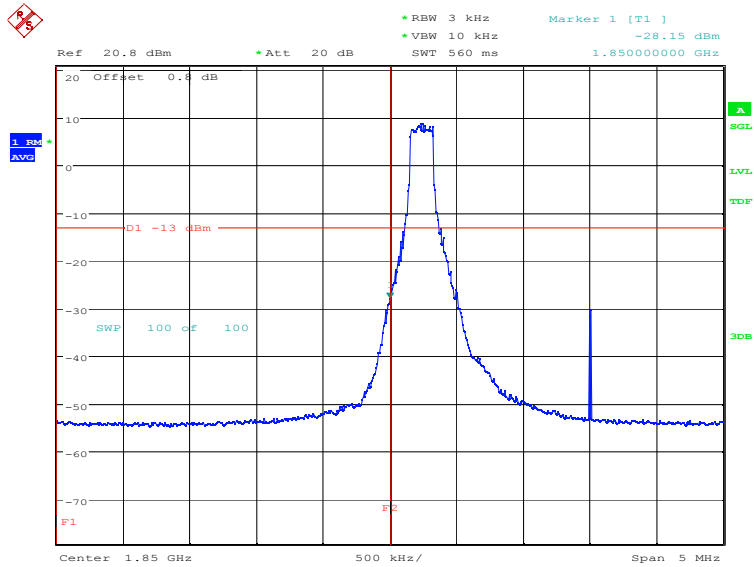
Date: 6.AUG.2021 07:55:28

LTE band 2-ANT3
OBW: 1RB-low_offset



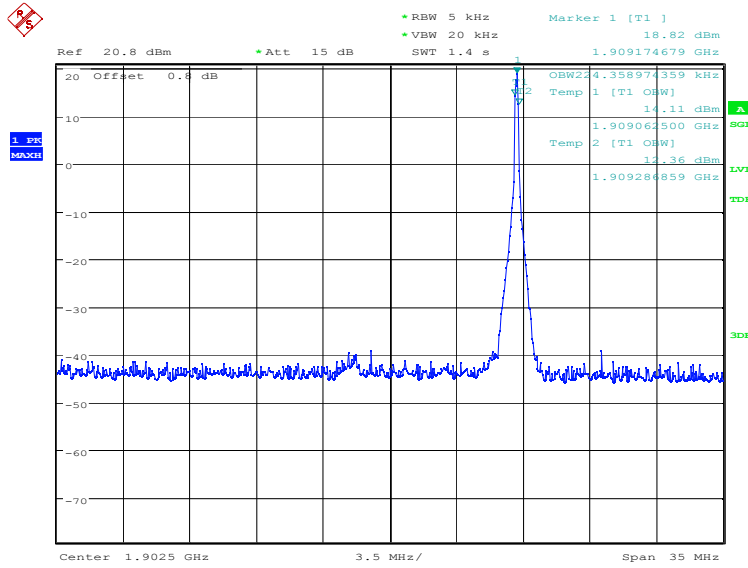
Date: 17.SEP.2021 15:59:49

LOW BAND EDGE BLOCK-1RB-low_offset



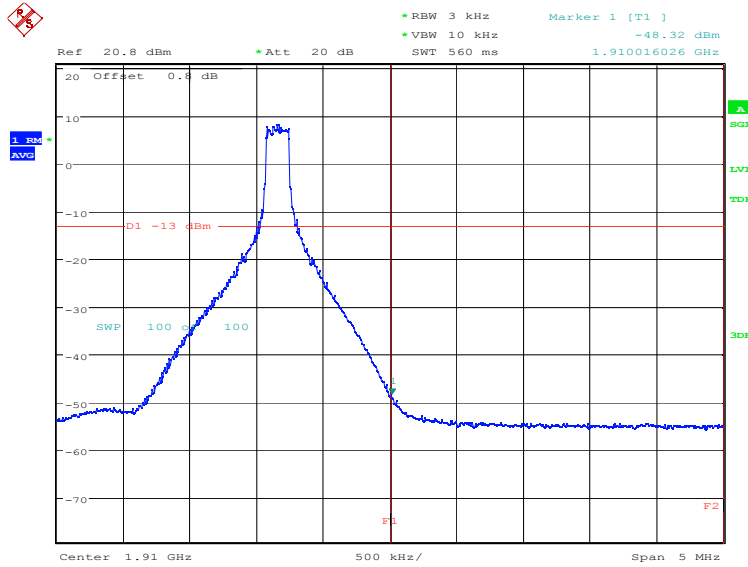
Date: 17.SEP.2021 16:01:03

OBW: 1RB-high_offset



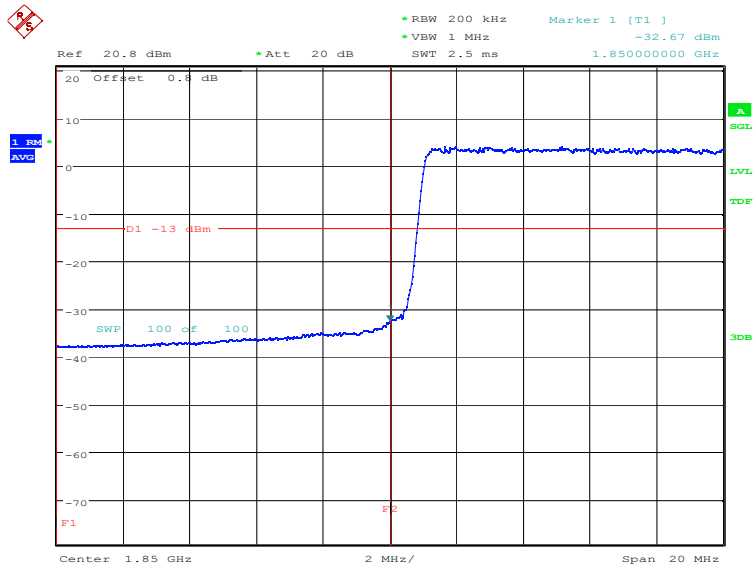
Date: 17.SEP.2021 16:01:41

HIGH BAND EDGE BLOCK-1RB-high_offset



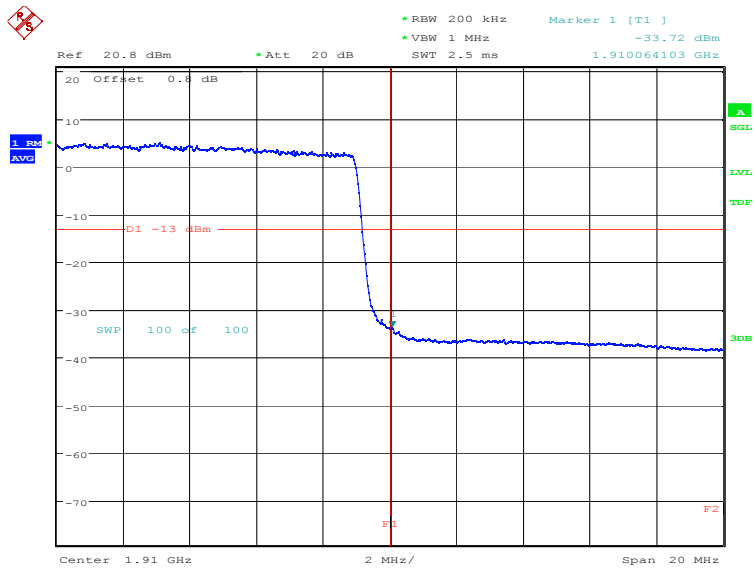
Date: 17.SEP.2021 16:02:55

LOW BAND EDGE BLOCK-20MHz-100%RB



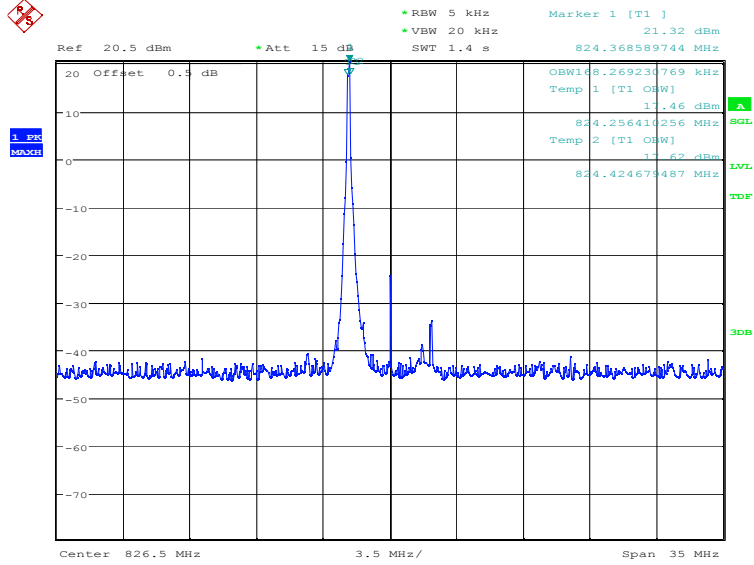
Date: 17.SEP.2021 09:38:36

HIGH BAND EDGE BLOCK-20MHz-100%RB



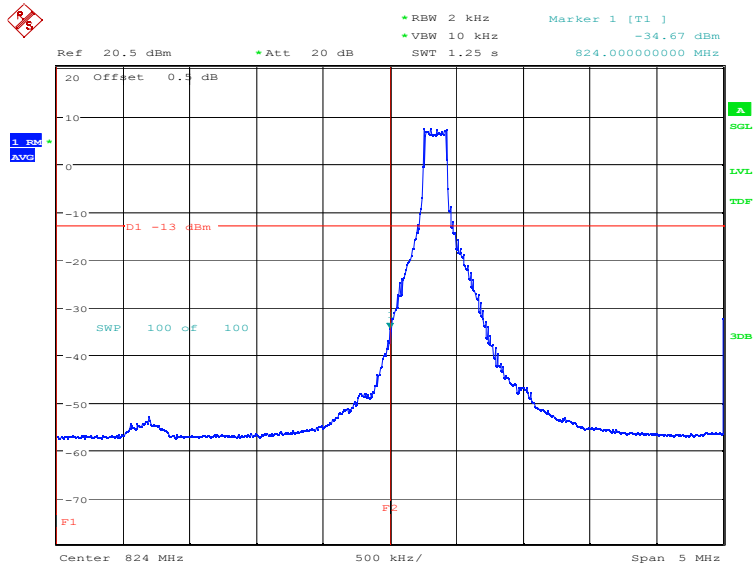
Date: 17.SEP.2021 09:40:05

LTE band 5
OBW: 1RB-low_offset



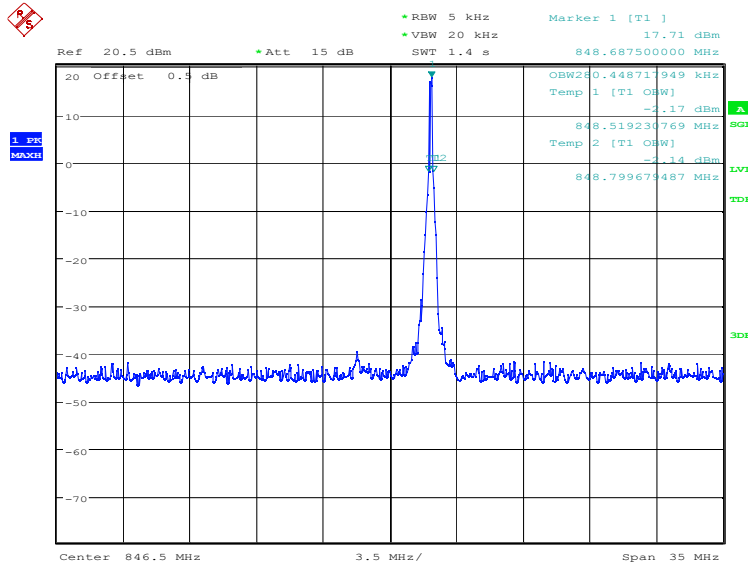
Date: 19.AUG.2021 16:23:52

LOW BAND EDGE BLOCK-1RB-low_offset



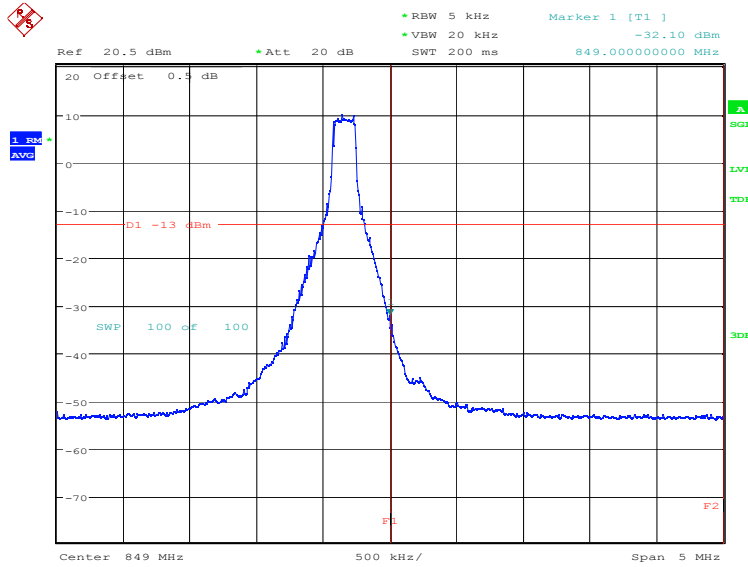
Date: 19.AUG.2021 16:26:23

OBW: 1RB-high_offset



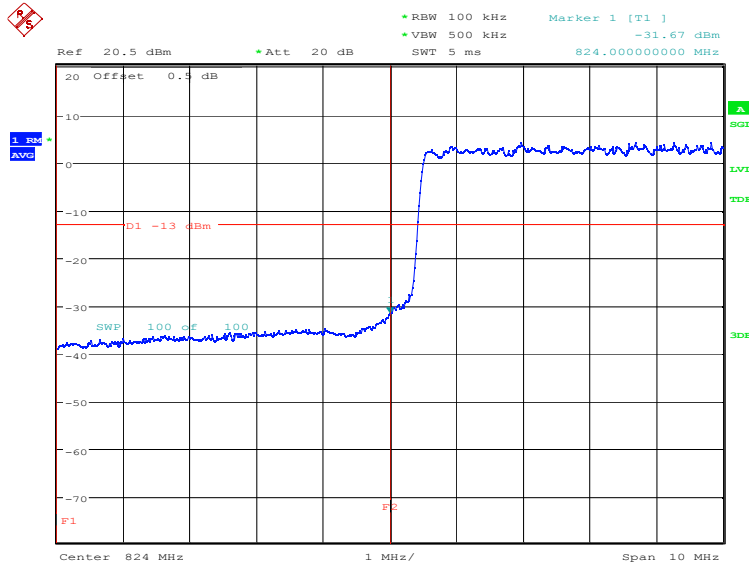
Date: 19.AUG.2021 16:26:58

HIGH BAND EDGE BLOCK-1RB-high_offset



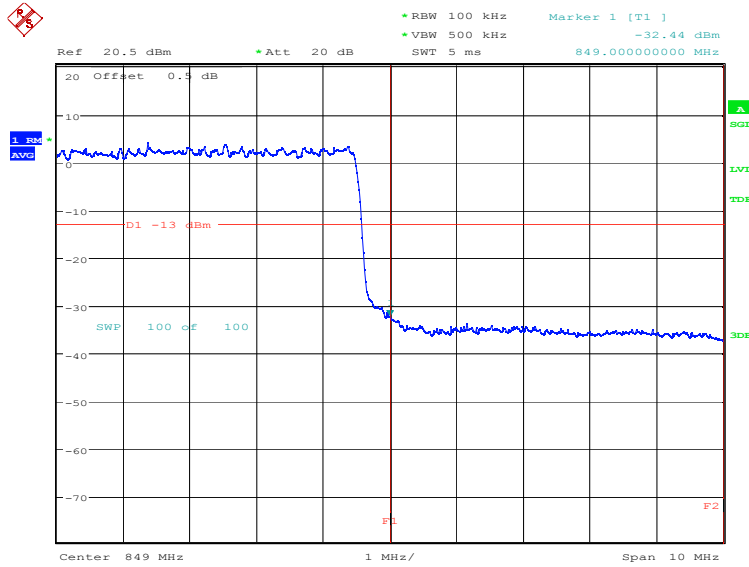
Date: 19.AUG.2021 16:28:12

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 5.AUG.2021 16:35:54

HIGH BAND EDGE BLOCK-10MHz-100%RB

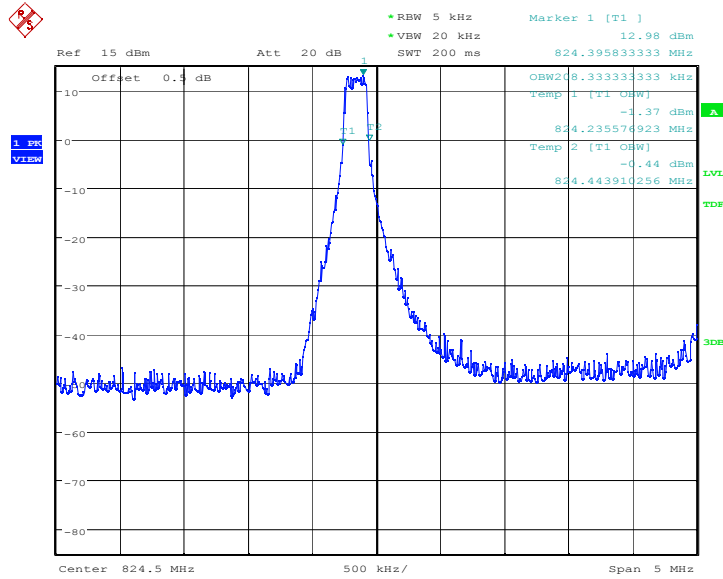


Date: 5.AUG.2021 16:37:23

LTE band 5_CA

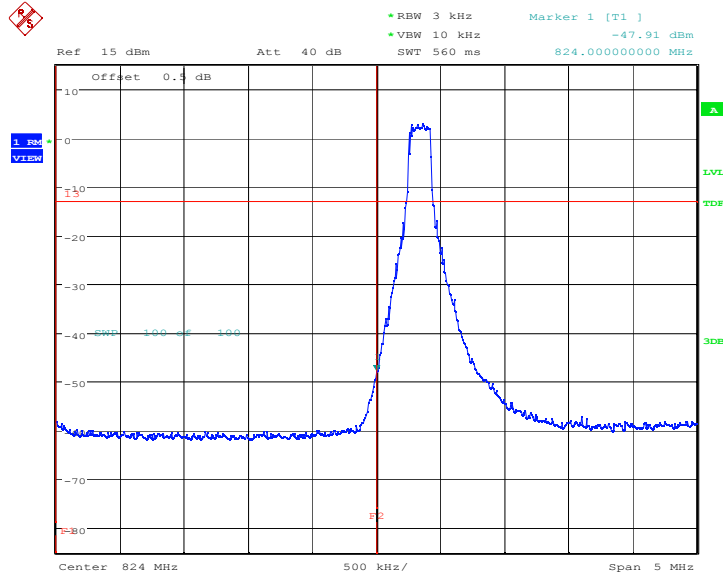
Only the worst case result is given below

OBW: 1RB-low_offset



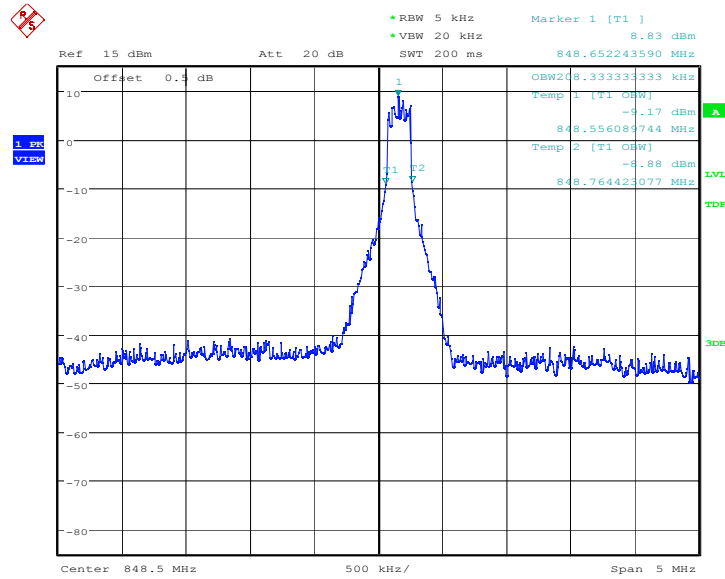
Date: 18.AUG.2021 09:43:29

LOW BAND EDGE BLOCK-1RB-low_offset



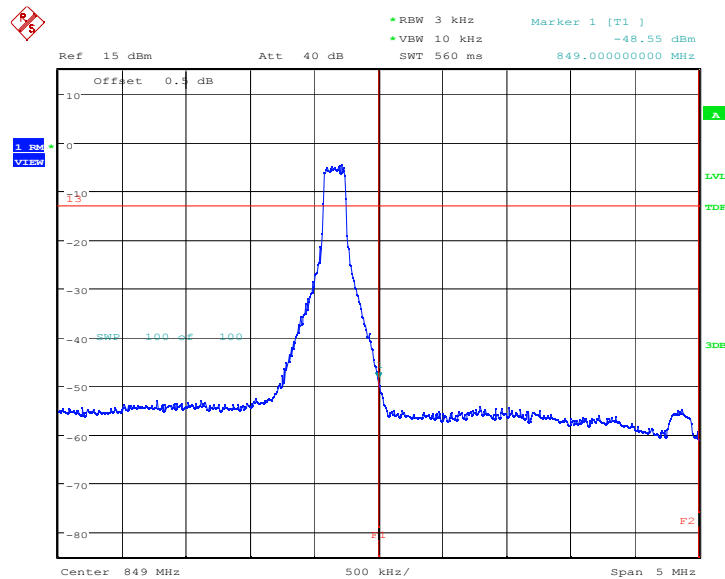
Date: 18.AUG.2021 09:44:32

OBW: 1RB-high_offset



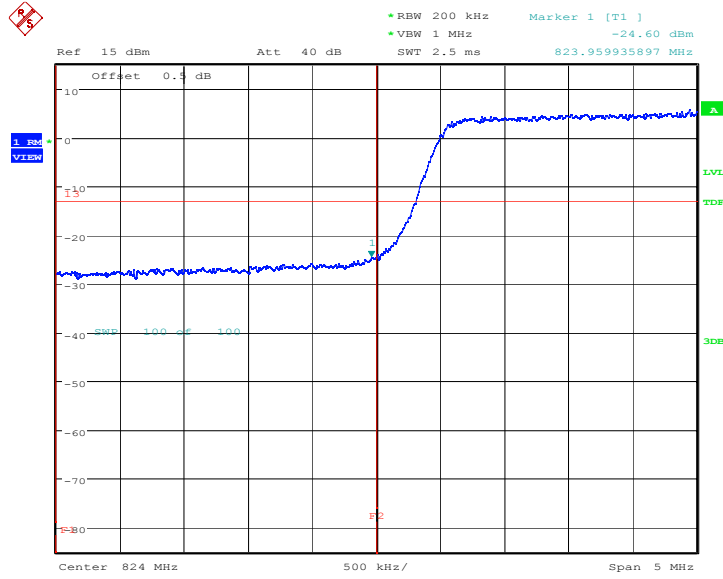
Date: 18.AUG.2021 09:46:22

HIGH BAND EDGE BLOCK-1RB-high_offset



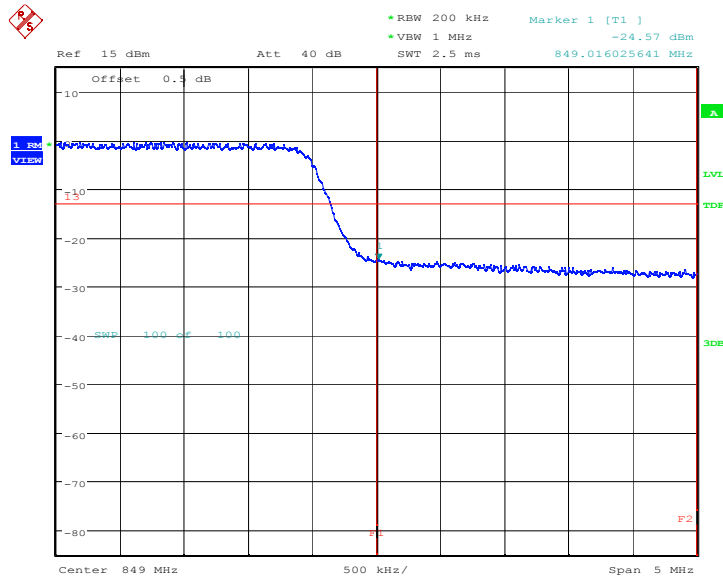
Date: 18.AUG.2021 09:47:24

LOW BAND EDGE BLOCK-10MHz+10MHz-100%RB



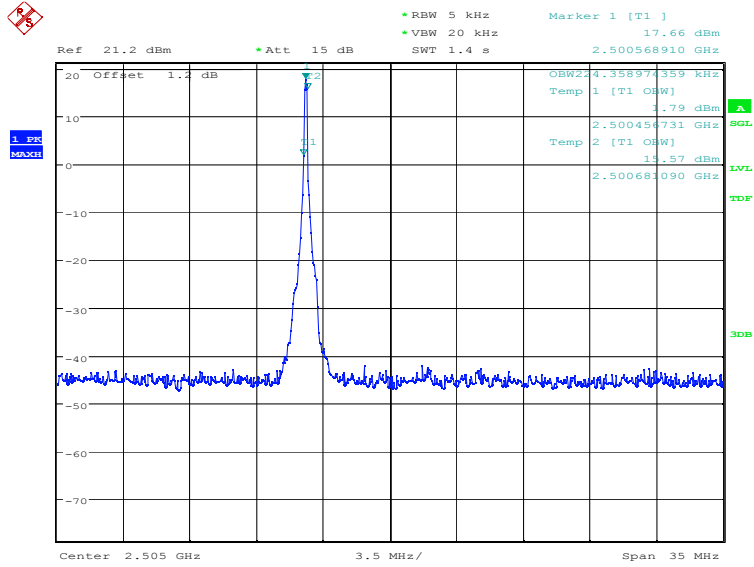
Date: 7.AUG.2021 17:55:01

HIGH BAND EDGE BLOCK-10MHz+10MHz-100%RB



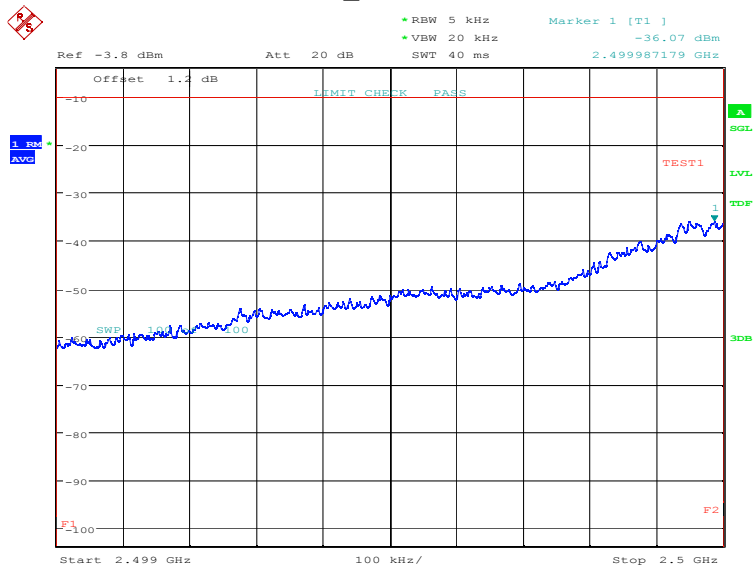
Date: 7.AUG.2021 17:57:24

LTE band 7
OBW: 1RB-low_offset

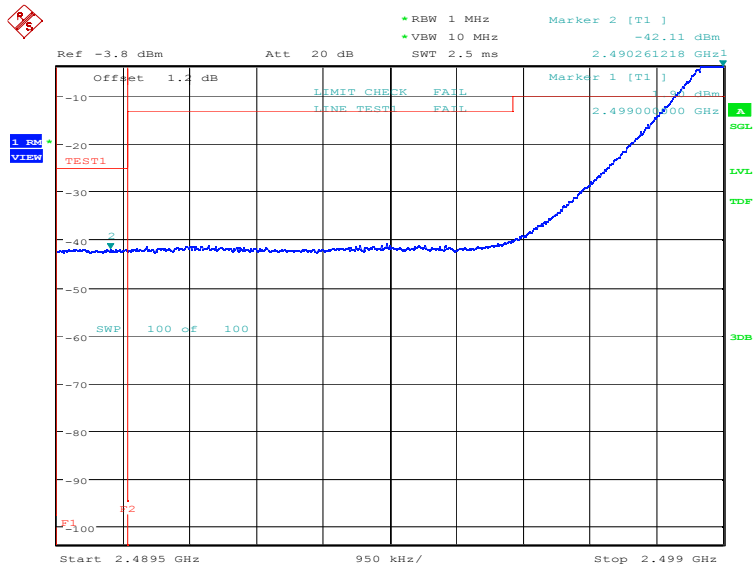


Date: 20.AUG.2021 09:21:29

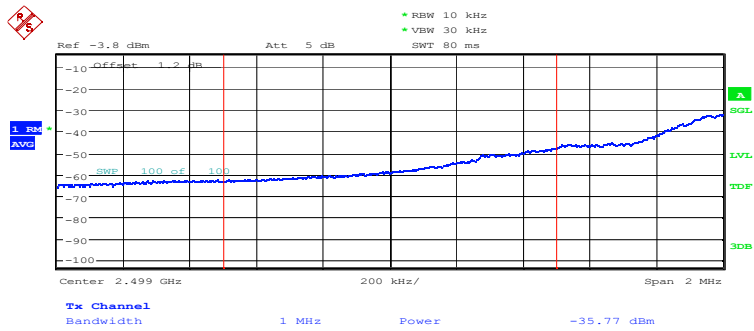
LOW BAND EDGE BLOCK-1RB-low_offset



Date: 20.AUG.2021 09:22:50

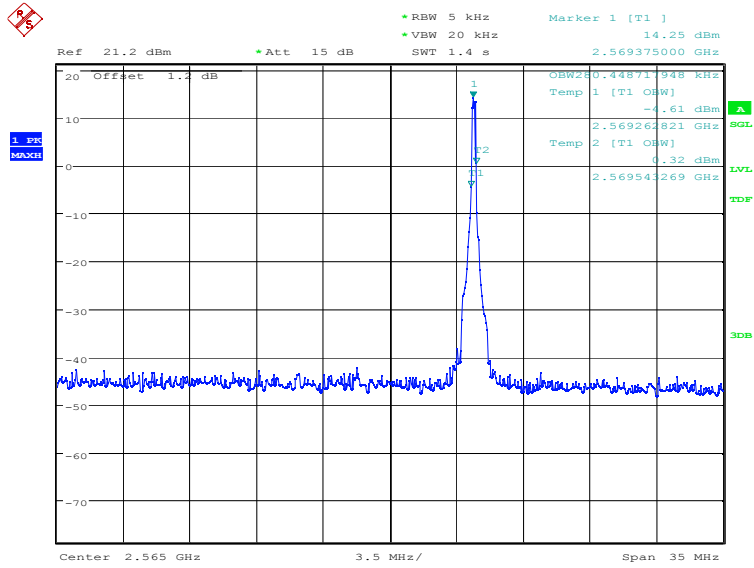


Date: 20.AUG.2021 09:24:38



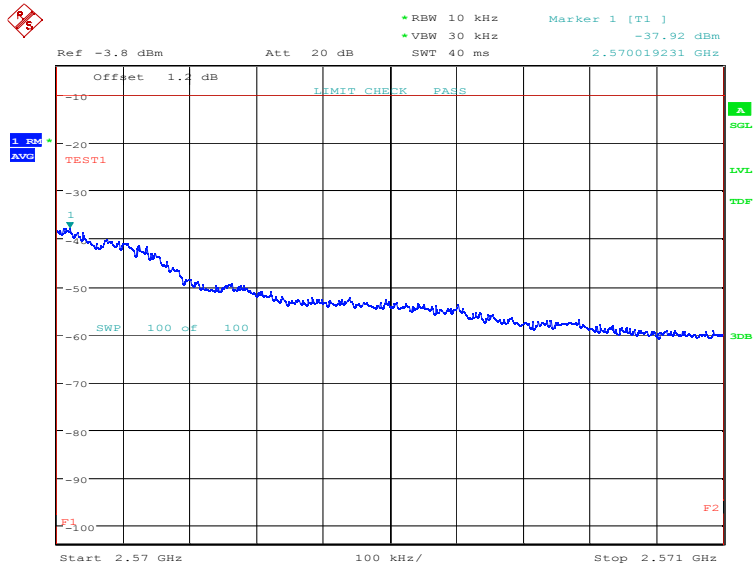
Date: 20.AUG.2021 09:25:05

OBW: 1RB-high_offset

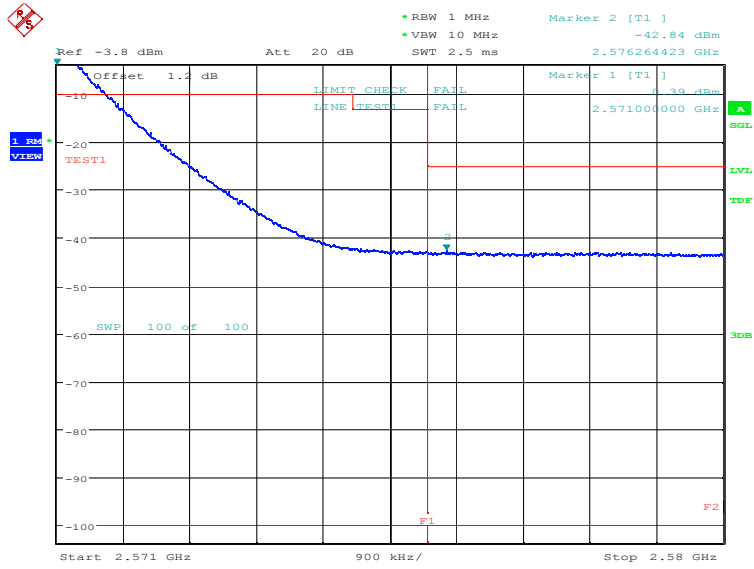


Date: 20.AUG.2021 09:25:40

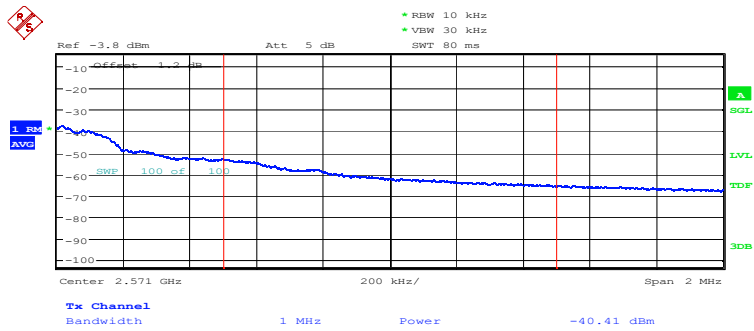
HIGH BAND EDGE BLOCK-1RB-high_offset



Date: 20.AUG.2021 09:27:00

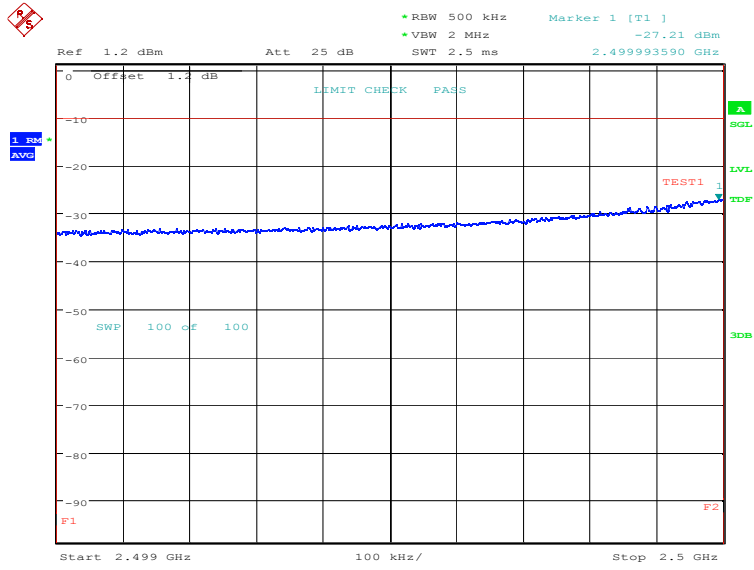


Date: 20.AUG.2021 09:28:49

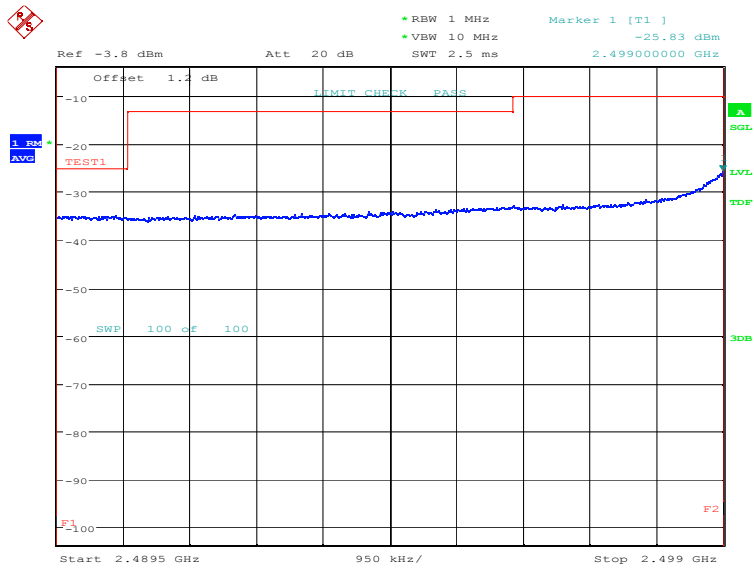


Date: 20.AUG.2021 09:29:16

LOW BAND EDGE BLOCK-20MHz-100%RB

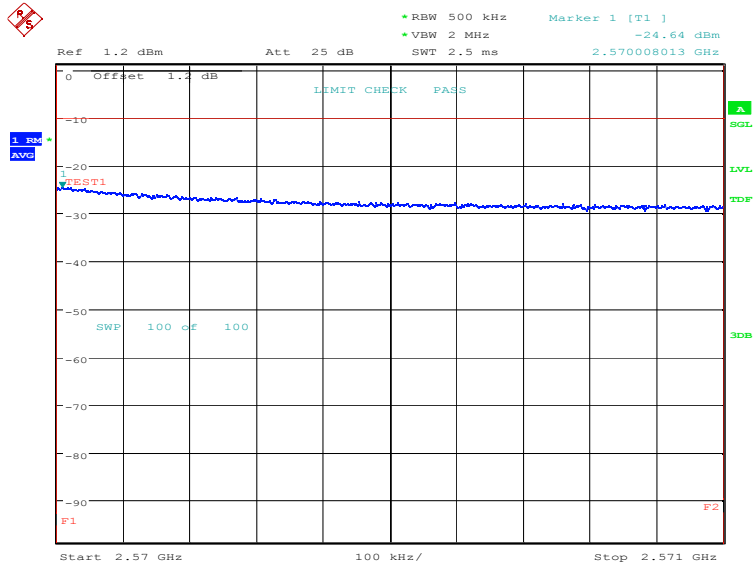


Date: 6.AUG.2021 08:30:19

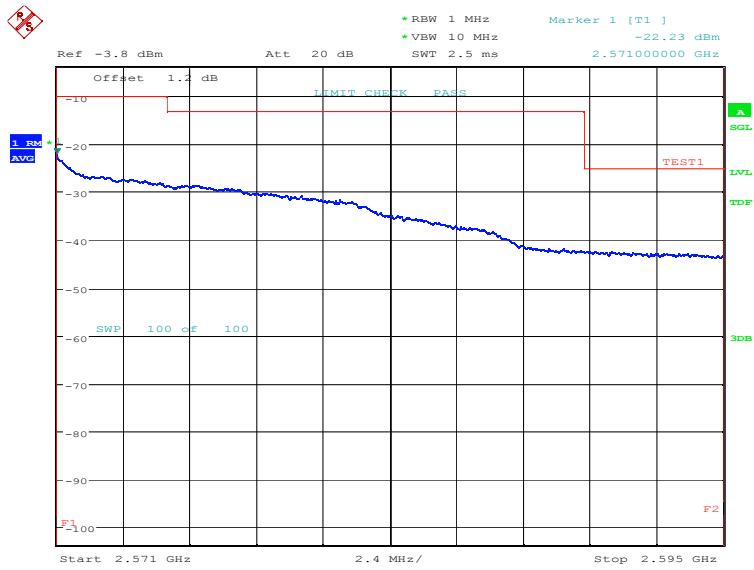


Date: 6.AUG.2021 08:31:59

HIGH BAND EDGE BLOCK-20MHz-100%RB

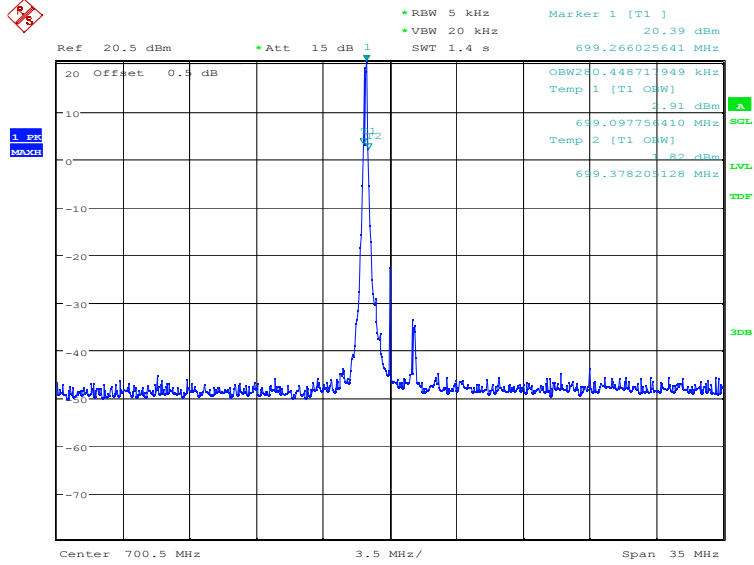


Date: 6.AUG.2021 08:34:55



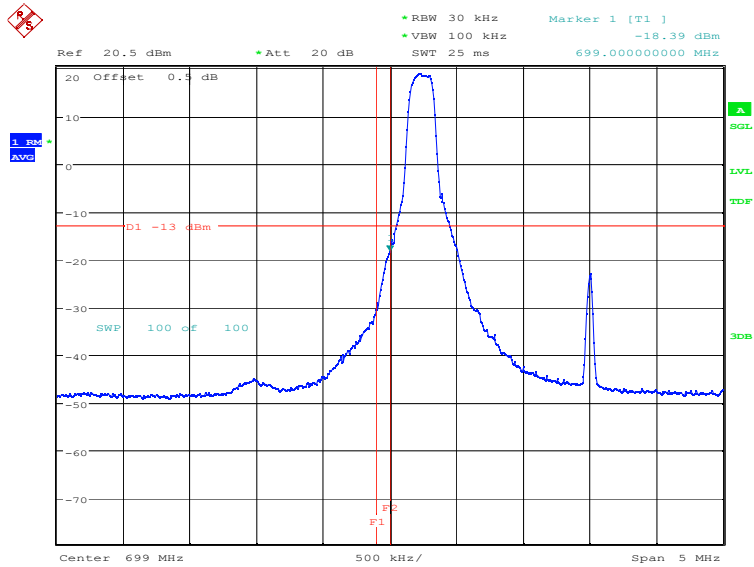
Date: 6.AUG.2021 08:36:35

LTE band 12
OBW: 1RB-low_offset



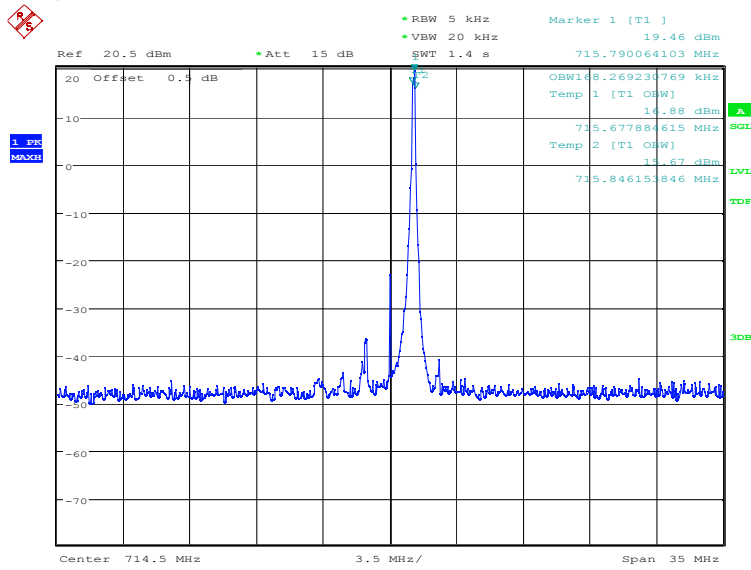
Date: 19.AUG.2021 16:29:30

LOW BAND EDGE BLOCK-1RB-low_offset



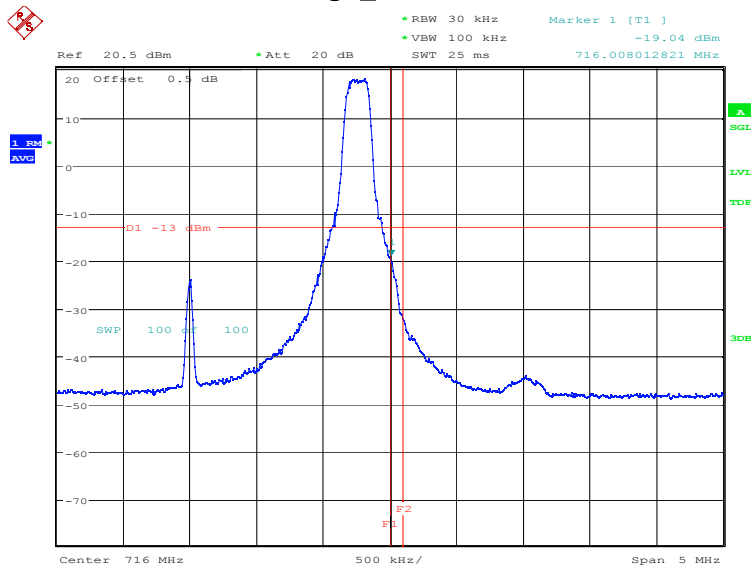
Date: 19.AUG.2021 16:30:43

OBW: 1RB-high_offset



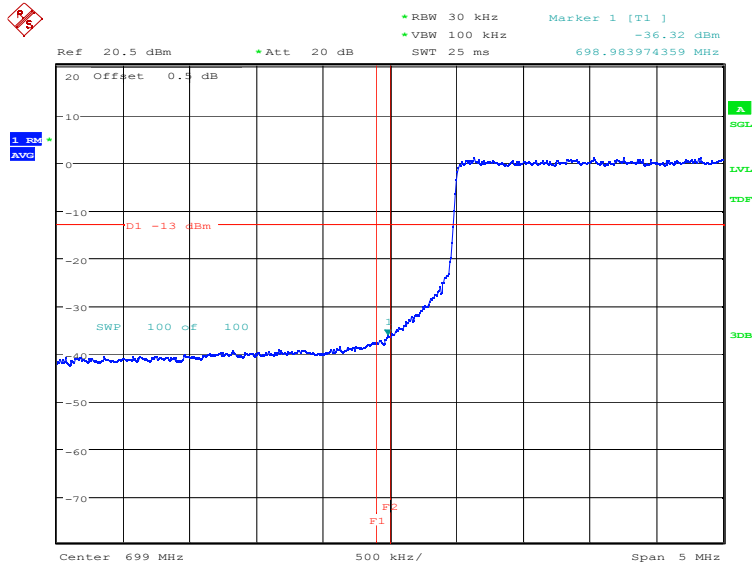
Date: 19.AUG.2021 16:31:19

HIGH BAND EDGE BLOCK-1RB-high_offset



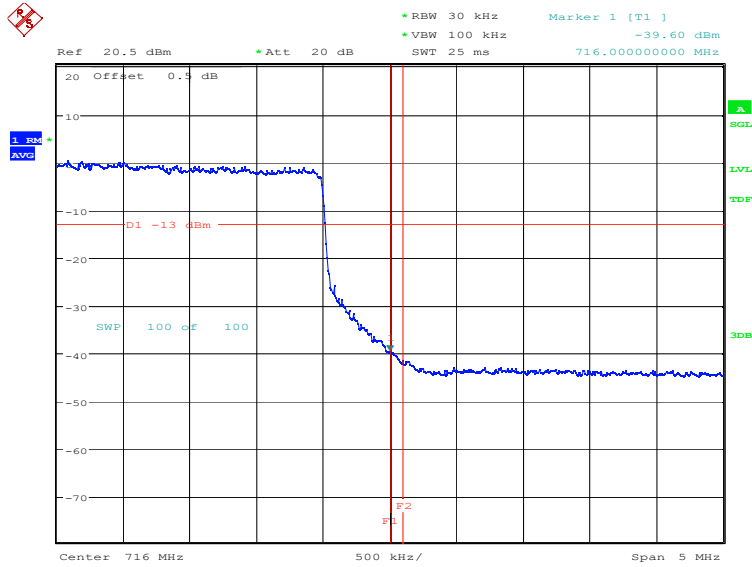
Date: 19.AUG.2021 16:31:37

LOW BAND EDGE BLOCK-10MHz-100%RB



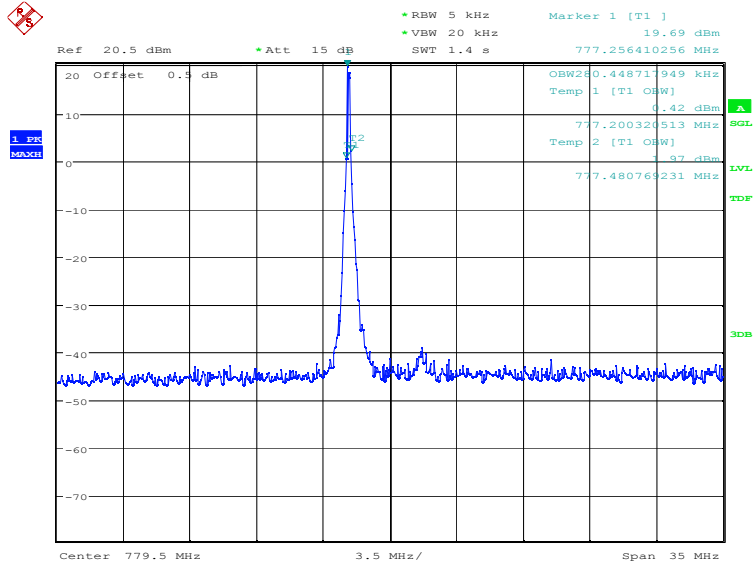
Date: 5.AUG.2021 16:38:54

HIGH BAND EDGE BLOCK-10MHz-100%RB



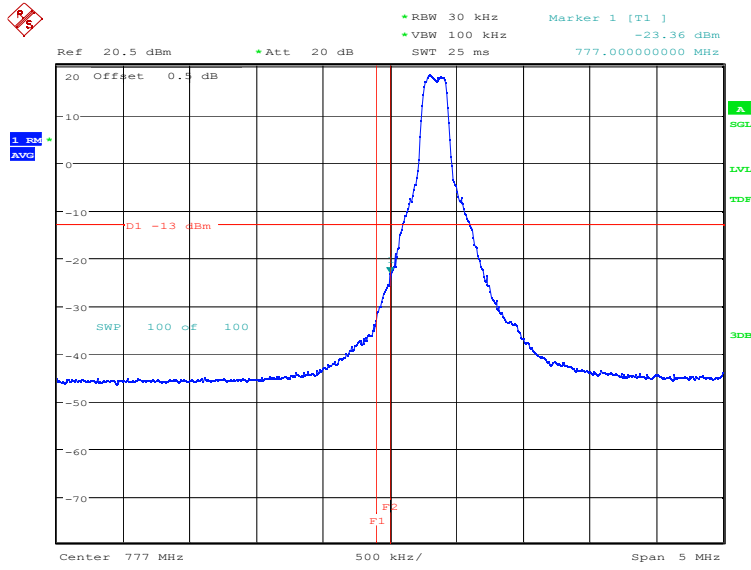
Date: 5.AUG.2021 16:40:23

LTE band 13
OBW: 1RB-low_offset

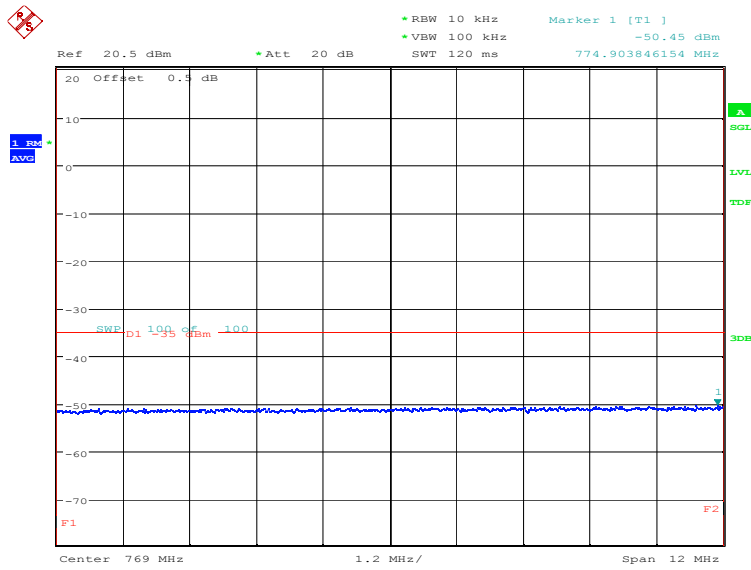


Date: 19.AUG.2021 16:33:08

LOW BAND EDGE BLOCK-1RB-low_offset

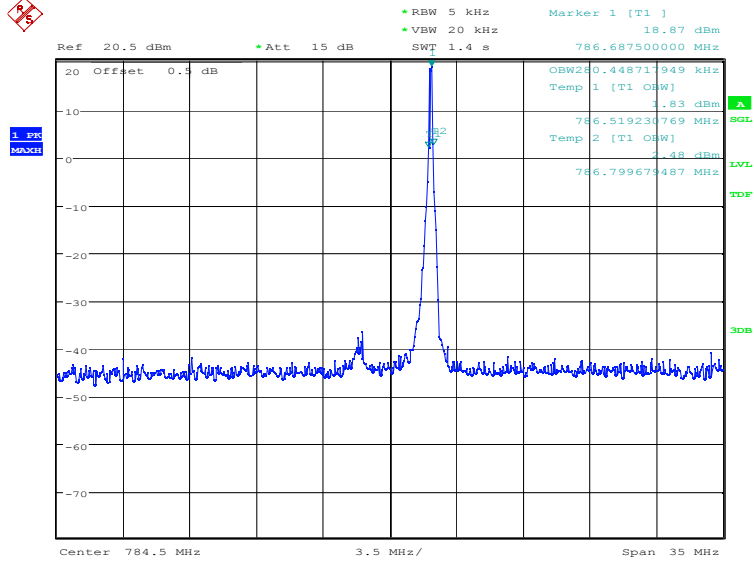


Date: 19.AUG.2021 16:33:27



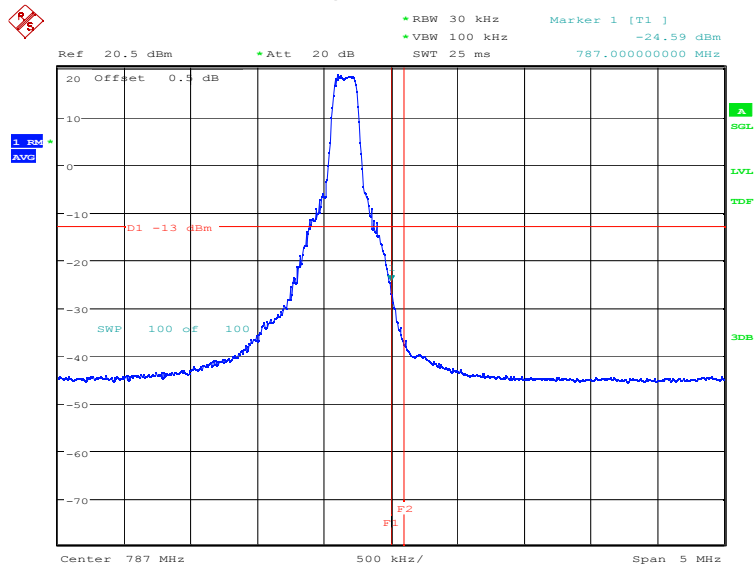
Date: 19.AUG.2021 16:36:07

OBW: 1RB-high_offset

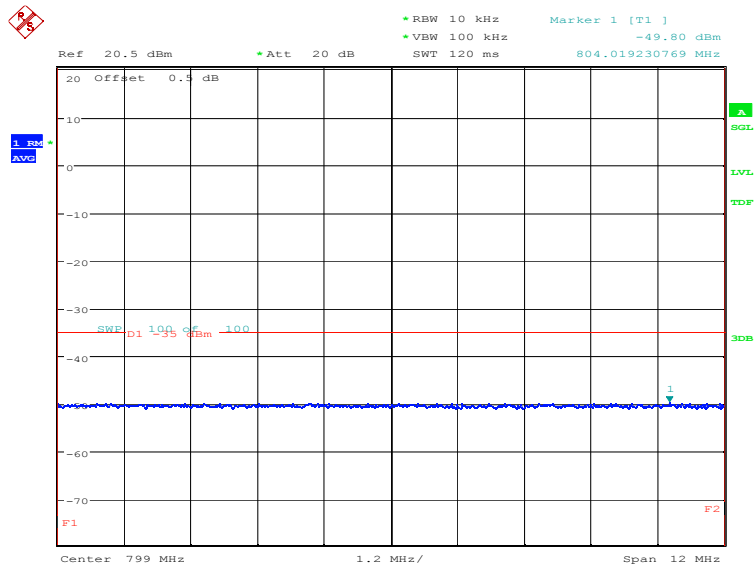


Date: 19.AUG.2021 16:40:25

HIGH BAND EDGE BLOCK-1RB-high_offset

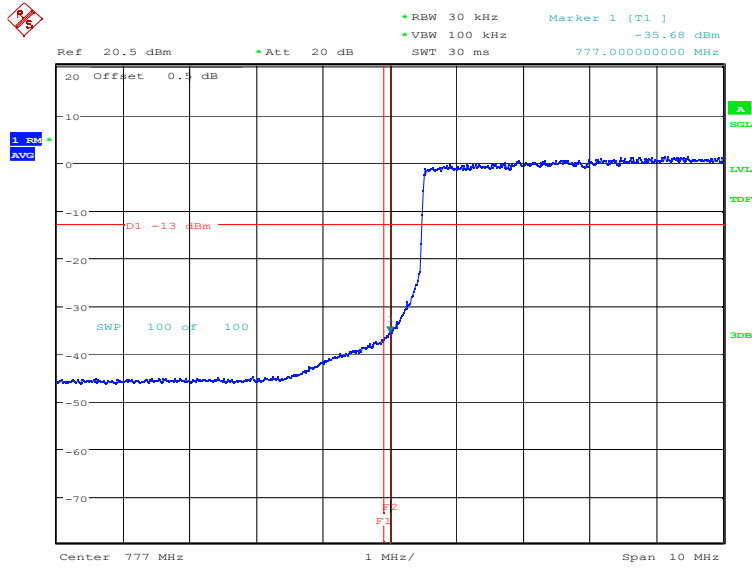


Date: 19.AUG.2021 16:40:44

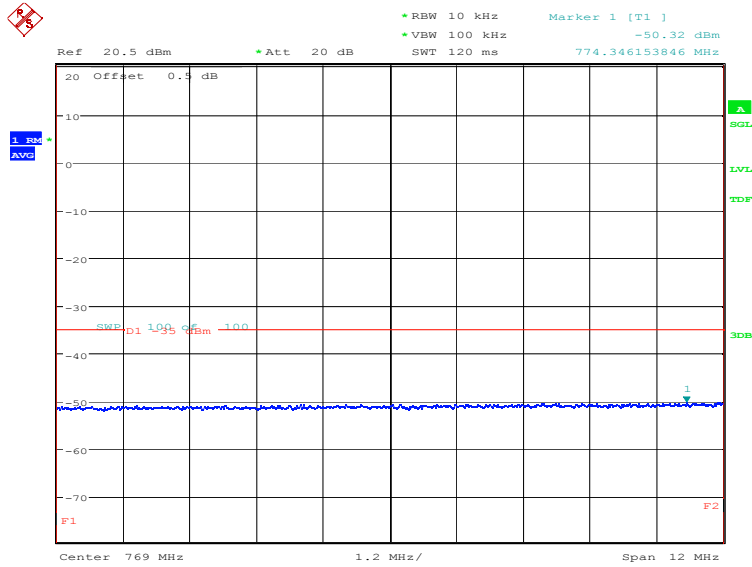


Date: 19.AUG.2021 16:42:02

LOW BAND EDGE BLOCK-10MHz-100%RB

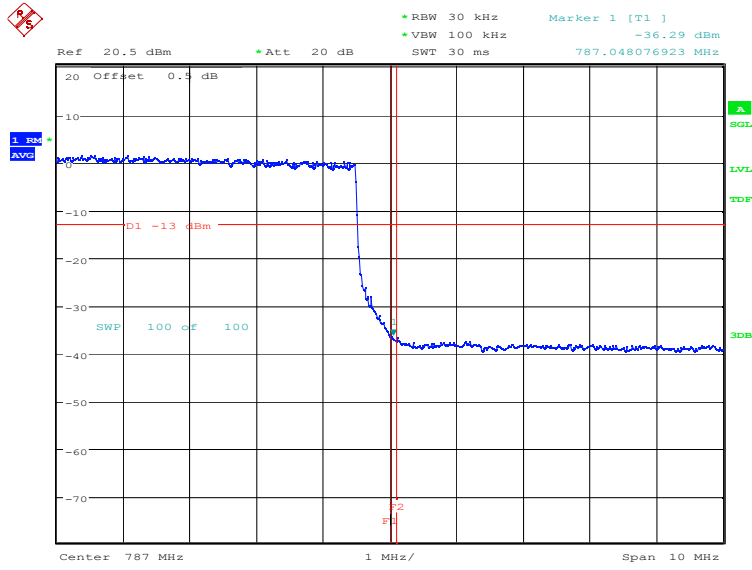


Date: 19.AUG.2021 16:36:43

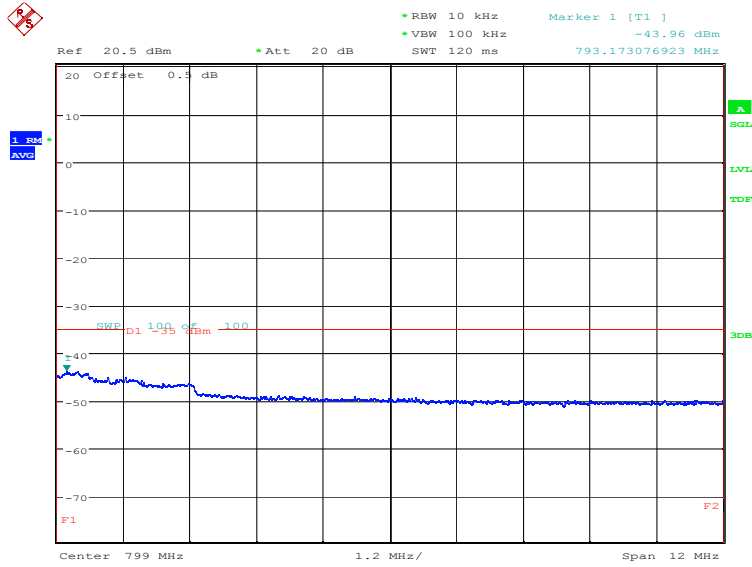


Date: 19.AUG.2021 16:38:14

HIGH BAND EDGE BLOCK-10MHz-100%RB

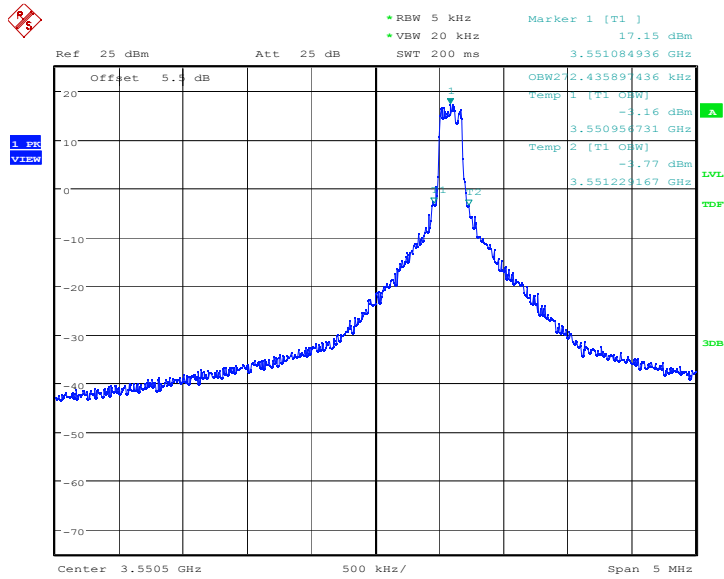


Date: 19.AUG.2021 16:42:49



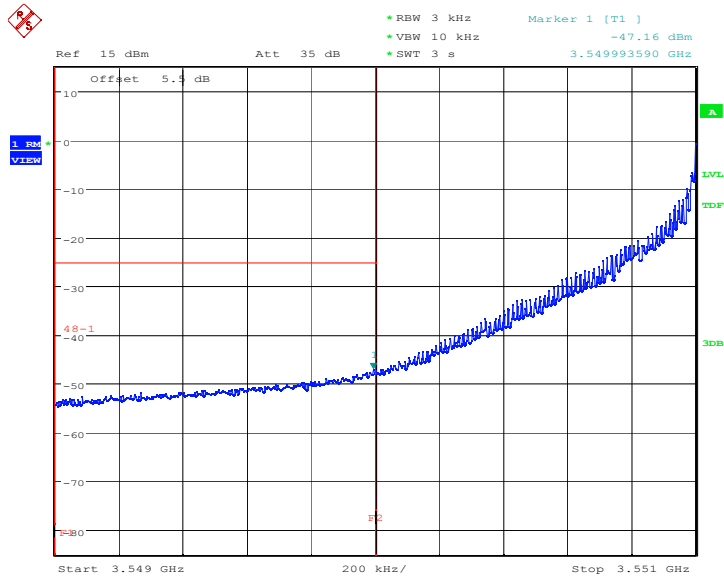
Date: 19.AUG.2021 16:44:55

LTE band 48
OBW: 1RB-low_offset

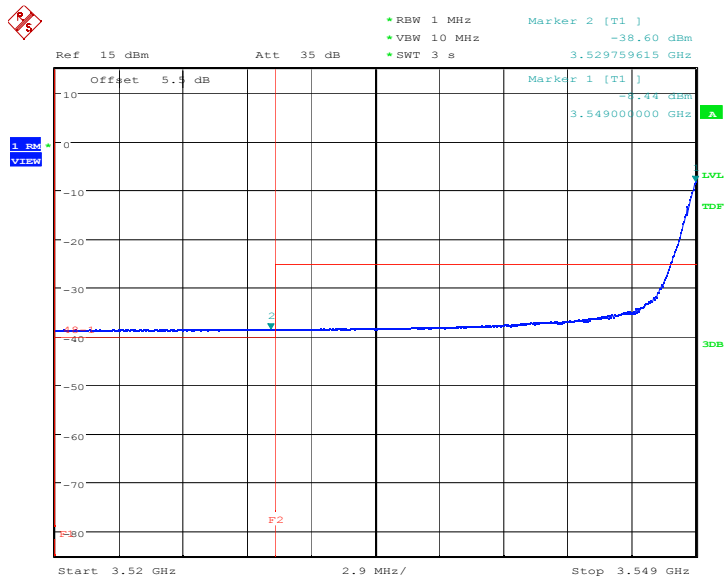


Date: 23.AUG.2021 10:45:44

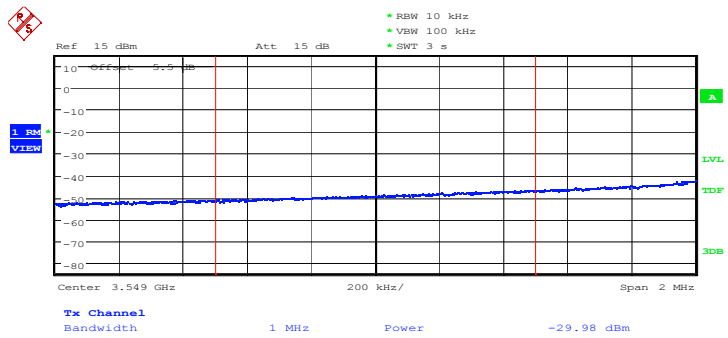
LOW BAND EDGE BLOCK-1RB-low_offset



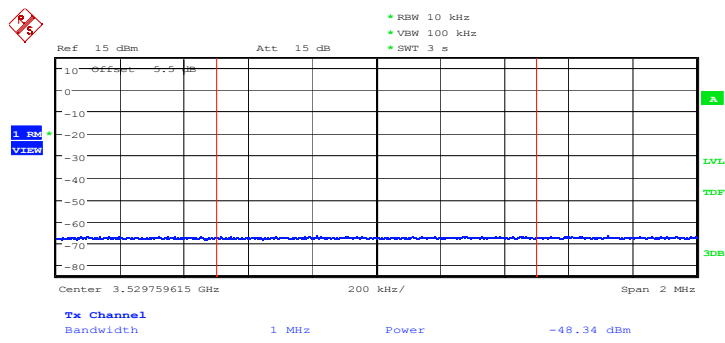
Date: 23.AUG.2021 10:46:17



Date: 23.AUG.2021 10:46:34

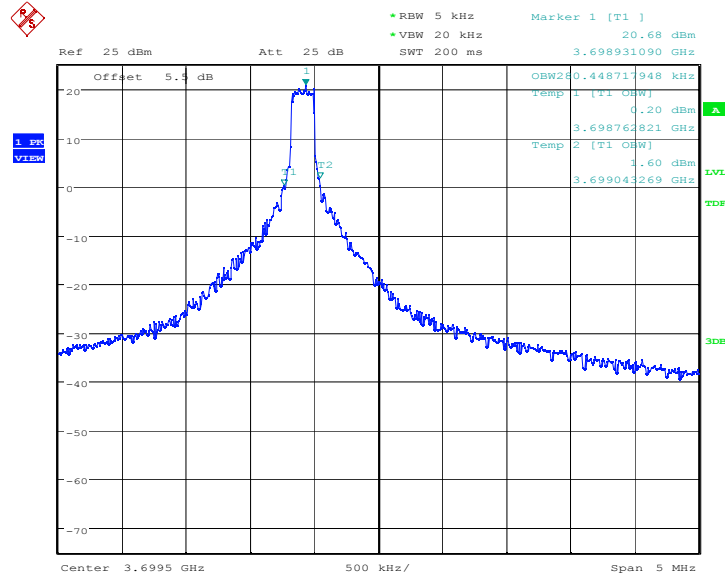


Date: 23.AUG.2021 10:47:06



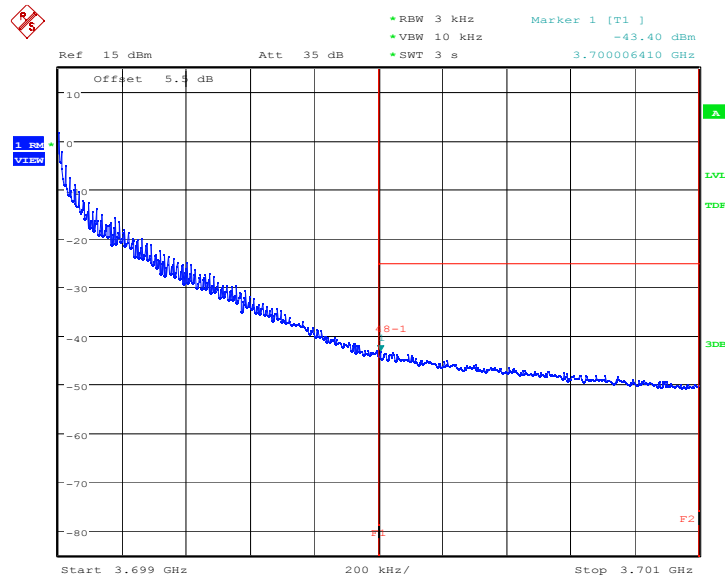
Date: 23.AUG.2021 10:47:38

OBW: 1RB-high_offset

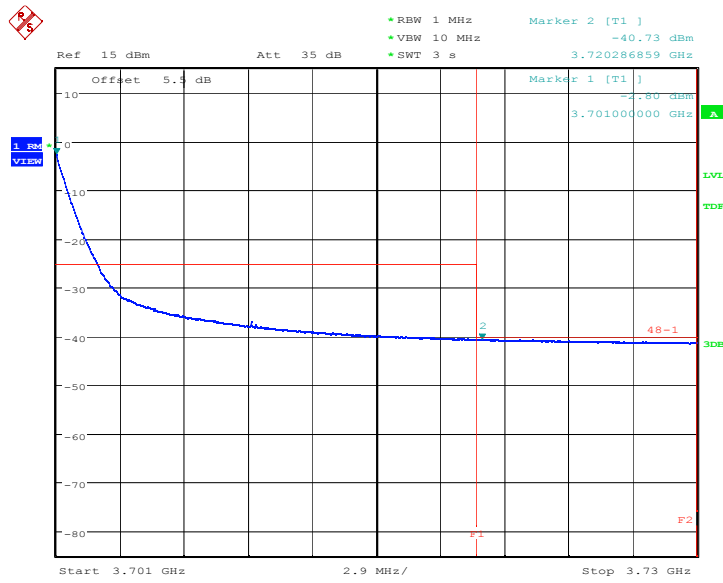


Date: 19.AUG.2021 13:27:22

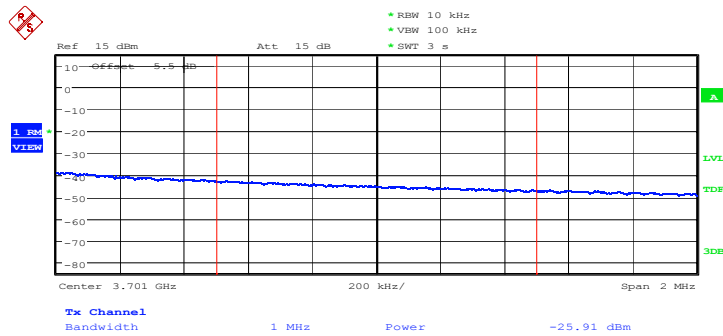
HIGH BAND EDGE BLOCK-1RB-high_offset



Date: 19.AUG.2021 13:27:55

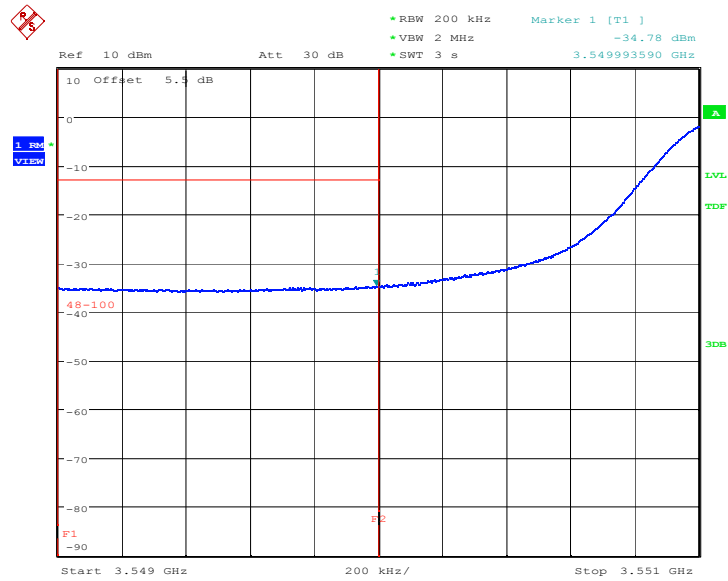


Date: 19.AUG.2021 13:28:27

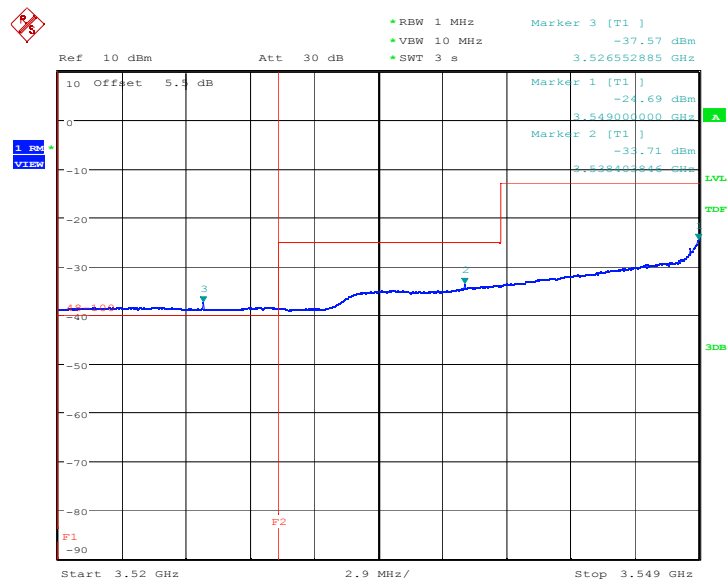


Date: 19.AUG.2021 13:28:59

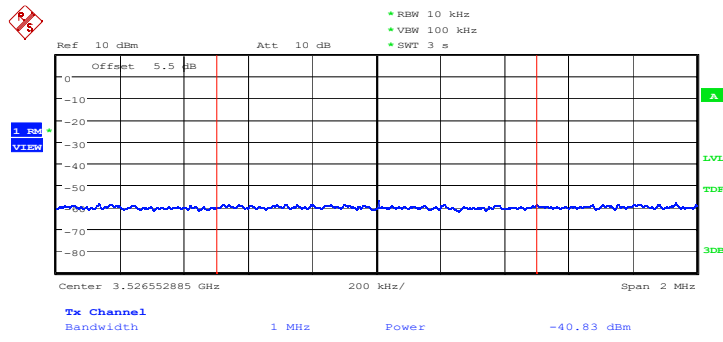
LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 23.AUG.2021 10:44:17



Date: 23.AUG.2021 10:44:34



Date: 23.AUG.2021 10:45:06