TEST REPORT

No. I22Z60821-WMD02

for

COOSEA GROUP (HK) COMPANY LIMITED

Smart Phone

Model Name: SN304AE

FCC ID: 2A28USN304AE

with

Hardware Version: 1.0

Software Version: SN304AEC10102

Issued Date: 2022-06-23

Note:

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

Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z60821-WMD02	Rev.0	1st edition	2022-06-23

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 (BDA)

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

1.3. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

1.4. Project Data

Testing Start Date: 2022-04-20

Testing End Date: 2022-06-21

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:	COOSEA GROUP (HK) COMPANY LIMITED
Address /Post:	UNIT 5-6 16/F MULTIFIELD PLAZA 3-7A PRAT AVENUE TSIM SHA TSUI KL
Contact:	/
Email:	zhaojiandong@cooseagroup.com
Telephone:	13759849661

2.2. Manufacturer Information

Company Name:	COOSEA GROUP (HK) COMPANY LIMITED
Address /Post:	UNIT 5-6 16/F MULTIFIELD PLAZA 3-7A PRAT AVENUE TSIM SHA TSUI KL
Contact:	/
Email:	zhaojiandong@cooseagroup.com
Telephone:	13759849661

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

3.1. About EUT

Description	Smart Phone
Model Name	SN304AE
FCC ID	2A28USN304AE
Antenna	Embedded
Output power	26.14dBm maximum EIRP measured for LTE Band 2
Extreme vol. Limits	3.6VDC to 4.4VDC (nominal: 3.85VDC)
Extreme temp. Tolerance	-10°C to +55°C

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

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version	Date of receipt
UT29a	354266480006781	1.0	SN304AEC10102	2022-04-20
UT05a	354266480006328	1.0	SN304AEC10102	2022-04-20

*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	BL-A40CT
Manufacturer	Shenzhen Aerospace Electronic Co.,Ltd.
Capacitance	4000mAh

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

4. Reference Documents

4.1. Documents supplied by applicant

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

4.2. Reference Documents for testing

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

Reference	Title	Version
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-20 Edition
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 90	PRIVATE LAND MOBILE RADIO SERVICES	10-1-20 Edition
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

Control room / conducted chamber did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. =20 %, Max. = 80 %
Shielding effectiveness	> 110 dB
Electrical insulation	>2 M
Ground system resistance	< 0.5

Fully-anechoic chamber 2 (8.6 meters×6.1 meters×3.85 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	> 110 dB
Electrical insulation	>2 M
Ground system resistance	< 1
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

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	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	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 12

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	P
2	Emission Limit	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 14

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	90.542	P
2	Emission Limit	90.543	P
3	Frequency Stability	2.1055	P
4	Occupied Bandwidth	2.1049	P
5	Emission Bandwidth	2.1049	P
6	Band Edge Compliance	90.543	P
7	Conducted Spurious Emission	90.543	P

LTE Band 30

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

Terms used in Verdict column

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

All the test results are based on normal power.

LTE Band 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.

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	2023-01-17	25 months
Spectrum Analyzer	FSU	200030	R&S	2022-06-02	1 year
Spectrum Analyzer	FSU	200030	R&S	2023-05-25	1 year
Signal&Spectrum Analyzer	FSW	104038	R&S	2022-06-24	1 year
Radio Communication Analyzer	MT8821C	6201763159	Anritsu	2022-08-09	1 year
Climate Chamber	SH-242	93008556	ESPEC	2023-12-23	3 years
EMI Antenna	3117	00058889	ETS-Lindgren	2022-11-07	1 year
EMI Antenna	LB-7180-NF	J203001300005	A-INFO	2023-02-23	1 year
Test Receiver	FSV30	101525	R&S	2023-01-24	1 year
Universal Radio Communication Tester	CMW500	143008	R&S	2022-12-01	1 year
EMI Antenna	VULB9163	9163-482	Schwarzbeck	2022-11-07	1 year
Signal Generator	N5183A	MY49060052	Agilent	2022-07-11	1 year

Annex A: Measurement Results

A.1 Output Power

A.1.1 Summary

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

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

A.1.2 Conducted

A.1.2.1 Method of Measurements

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

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

A.1.2.2 Measurement Result

LTE band 2

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1909.3	24.24	23.38	22.49
		1880.0	24.26	23.45	22.56
		1850.7	24.33	23.40	22.60
	1 RB low	1909.3	24.22	23.38	22.52
		1880.0	24.24	23.40	22.48
		1850.7	24.32	23.43	22.54
	50% RB mid	1909.3	24.26	23.33	22.45
		1880.0	24.28	23.35	22.53
		1850.7	24.31	23.30	22.53
	100% RB	1909.3	23.27	22.42	21.36
		1880.0	23.27	22.48	21.38
		1850.7	23.31	22.54	21.45
3MHz	1 RB high	1908.5	24.28	23.33	22.54
		1880.0	24.26	23.39	22.55
		1851.5	24.27	23.49	22.59
	1 RB low	1908.5	24.30	23.46	22.53
		1880.0	24.25	23.47	22.54
		1851.5	24.32	23.50	22.52
	50% RB mid	1908.5	23.21	22.38	21.42
		1880.0	23.18	22.42	21.39
		1851.5	23.27	22.46	21.44
	100% RB	1908.5	23.16	22.40	21.36
		1880.0	23.18	22.41	21.35

		1851.5	23.28	22.45	21.43
5MHz	1 RB high	1907.5	24.30	23.37	22.53
		1880.0	24.30	23.41	22.57
		1852.5	24.33	23.47	22.57
	1 RB low	1907.5	24.27	23.46	22.51
		1880.0	24.28	23.56	22.50
		1852.5	24.39	23.46	22.63
	50% RB mid	1907.5	23.18	22.36	21.39
		1880.0	23.26	22.42	21.45
		1852.5	23.27	22.42	21.43
	100% RB	1907.5	23.22	22.44	21.38
		1880.0	23.25	22.46	21.45
		1852.5	23.26	22.45	21.44
10MHz	1 RB high	1905.0	24.29	23.41	22.49
		1880.0	24.31	23.47	22.54
		1855.0	24.31	23.41	22.53
	1 RB low	1905.0	24.26	23.53	22.50
		1880.0	24.32	23.42	22.52
		1855.0	24.33	23.55	22.54
	50% RB mid	1905.0	23.20	22.43	21.44
		1880.0	23.25	22.45	21.41
		1855.0	23.25	22.45	21.46
	100% RB	1905.0	23.32	22.45	21.45
		1880.0	23.28	22.45	21.45
		1855.0	23.31	22.43	21.44
15MHz	1 RB high	1902.5	24.18	23.31	22.52
		1880.0	24.17	23.38	22.46
		1857.5	24.21	23.37	22.47
	1 RB low	1902.5	24.17	23.31	22.45
		1880.0	24.22	23.38	22.49
		1857.5	24.24	23.50	22.46
	50% RB mid	1902.5	23.20	22.36	21.35
		1880.0	23.22	22.37	21.41
		1857.5	23.20	22.37	21.42
	100% RB	1902.5	23.24	22.44	21.42
		1880.0	23.24	22.39	21.37
		1857.5	23.26	22.39	21.38
20MHz	1 RB high	1900.0	24.38	23.59	22.63
		1880.0	24.40	23.51	22.50
		1860.0	24.44	23.66	22.61
	1 RB low	1900.0	24.42	23.63	22.61
		1880.0	24.37	23.60	22.56

		1860.0	24.39	23.54	22.62
	50% RB mid	1900.0	23.43	22.61	21.56
		1880.0	23.40	22.54	21.49
		1860.0	23.37	22.48	21.50
	100% RB	1900.0	23.45	22.56	21.57
		1880.0	23.40	22.53	21.49
		1860.0	23.25	22.39	21.43

LTE band 5

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.88	23.11	22.15
		836.5	23.90	23.15	22.17
		824.7	24.01	23.22	22.28
	1 RB low	848.3	23.87	22.95	22.10
		836.5	23.95	23.13	22.18
		824.7	24.00	23.12	22.28
	50% RB mid	848.3	23.90	22.91	22.11
		836.5	23.92	22.91	22.10
		824.7	24.02	22.93	22.25
	100% RB	848.3	22.87	22.12	20.96
		836.5	22.93	22.14	20.99
		824.7	23.00	22.27	21.03
3MHz	1 RB high	847.5	23.87	23.02	22.17
		836.5	23.85	23.06	22.15
		825.5	23.92	23.15	22.26
	1 RB low	847.5	23.77	22.98	22.10
		836.5	23.88	23.05	22.25
		825.5	23.97	23.23	22.24
	50% RB mid	847.5	22.82	22.03	21.01
		836.5	22.87	22.13	21.09
		825.5	22.96	22.19	21.15
	100% RB	847.5	22.80	22.05	20.93
		836.5	22.85	22.07	21.03
		825.5	22.97	22.17	21.09
5MHz	1 RB high	846.5	23.87	22.98	22.10
		836.5	23.84	23.01	22.09
		826.5	23.99	23.16	22.21
	1 RB low	846.5	23.82	23.03	22.15
		836.5	23.96	23.16	22.24
		826.5	23.99	23.10	22.30
	50% RB mid	846.5	22.86	21.97	21.02
		836.5	22.90	22.04	21.05
		826.5	22.99	22.09	21.13
	100% RB	846.5	22.85	22.01	21.00
		836.5	22.84	22.07	21.06
		826.5	22.97	22.16	21.12
10MHz	1 RB high	844.0	24.26	23.42	22.55
		836.5	24.41	23.49	22.63
		829.0	24.43	23.45	22.56

	1 RB low	844.0	24.48	23.68	22.66
		836.5	24.62	23.70	22.78
		829.0	24.63	23.92	22.85
	50% RB mid	844.0	23.39	22.41	21.52
		836.5	23.42	22.59	21.58
		829.0	23.49	22.66	21.62
	100% RB	844.0	23.36	22.34	21.49
		836.5	23.41	22.57	21.56
		829.0	23.57	22.66	21.64

LTE band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	23.99	23.35	22.29
		707.5	24.16	23.50	22.38
		699.7	24.10	23.44	22.40
	1 RB low	715.3	24.02	23.34	22.33
		707.5	24.15	23.40	22.42
		699.7	24.11	23.46	22.41
	50% RB mid	715.3	24.02	23.23	22.27
		707.5	24.10	23.28	22.31
		699.7	24.18	23.29	22.38
	100% RB	715.3	23.21	22.26	21.16
		707.5	23.29	22.28	21.24
		699.7	23.28	22.38	21.22
3MHz	1 RB high	714.5	23.97	23.33	22.27
		707.5	24.14	23.55	22.37
		700.5	24.07	23.44	22.49
	1 RB low	714.5	24.06	23.46	22.32
		707.5	24.09	23.52	22.41
		700.5	24.10	23.40	22.43
	50% RB mid	714.5	23.17	22.26	21.17
		707.5	23.28	22.36	21.27
		700.5	23.29	22.34	21.29
	100% RB	714.5	23.17	22.21	21.14
		707.5	23.20	22.28	21.23
		700.5	23.27	22.29	21.28
5MHz	1 RB high	713.5	24.03	23.35	22.24
		707.5	24.13	23.55	22.39
		701.5	24.18	23.60	22.44
	1 RB low	713.5	24.14	23.53	22.42
		707.5	24.18	23.45	22.39
		701.5	24.19	23.60	22.44
	50% RB mid	713.5	23.22	22.23	21.24
		707.5	23.28	22.29	21.29
		701.5	23.33	22.29	21.29
	100% RB	713.5	23.26	22.27	21.23
		707.5	23.27	22.31	21.26
		701.5	23.31	22.34	21.30
10MHz	1 RB high	711.0	24.17	23.42	22.36
		707.5	24.23	23.54	22.38
		704.0	24.23	23.52	22.49

	1 RB low	711.0	24.25	23.53	22.47
		707.5	24.29	23.57	22.48
		704.0	24.33	23.60	22.45
	50% RB mid	711.0	23.36	22.34	21.35
		707.5	23.34	22.37	21.40
		704.0	23.36	22.35	21.26
	100% RB	711.0	23.34	22.30	21.37
		707.5	23.39	22.36	21.38
		704.0	23.43	22.41	21.43

LTE band 14

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	795.5	24.03	23.16	22.27
		793.0	24.04	23.18	22.32
		790.5	24.12	23.23	22.44
	1 RB low	795.5	24.10	23.33	22.39
		793.0	24.21	23.40	22.55
		790.5	24.16	23.25	22.44
	50% RB mid	795.5	23.08	22.26	21.22
		793.0	23.11	22.27	21.24
		790.5	23.13	22.28	21.32
	100% RB	795.5	23.05	22.26	21.20
		793.0	23.09	22.29	21.25
		790.5	23.17	22.30	21.30
10MHz	1 RB high	793.0	24.64	23.73	22.88
	1 RB low	793.0	24.80	24.00	22.97
	50% RB mid	793.0	23.72	22.85	21.87
	100% RB	793.0	23.71	22.85	21.86

LTE band 30

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	2312.5	23.29	22.42	21.38
		2310.0	23.28	22.43	21.44
		2307.5	23.35	22.51	21.42
	1 RB low	2312.5	23.34	22.57	21.46
		2310.0	23.41	22.59	21.54
		2307.5	23.42	22.70	21.56
	50% RB mid	2312.5	22.20	21.21	20.18
		2310.0	22.25	21.28	20.29
		2307.5	22.25	21.27	20.30
	100% RB	2312.5	22.20	21.22	20.21
		2310.0	22.23	21.25	20.27
		2307.5	22.28	21.32	20.29
10MHz	1 RB high	2310.0	23.14	22.47	21.35
	1 RB low	2310.0	23.37	22.62	21.46
	50% RB mid	2310.0	22.14	21.22	20.27
	100% RB	2310.0	22.07	21.07	20.09

LTE band 48

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	3697.5	23.04	22.26	21.23
		3625.0	23.63	22.64	21.19
		3552.5	23.09	22.11	21.27
	1 RB low	3697.5	23.35	22.17	21.12
		3625.0	23.70	22.70	21.26
		3552.5	23.31	22.27	21.05
	50% RB mid	3697.5	22.41	21.29	20.59
		3625.0	22.57	21.83	20.64
		3552.5	22.30	21.55	20.69
	100% RB	3697.5	22.20	21.37	20.30
		3625.0	22.74	21.78	20.76
		3552.5	22.18	21.57	20.42
10MHz	1 RB high	3695.0	23.21	22.16	21.05
		3625.0	23.57	22.60	21.21
		3555.0	23.10	22.06	21.33
	1 RB low	3695.0	23.19	22.32	21.05
		3625.0	23.63	22.69	21.35
		3555.0	23.07	22.23	21.17
	50% RB mid	3695.0	22.44	21.33	20.38
		3625.0	22.79	21.72	20.64
		3555.0	22.33	21.76	20.49
	100% RB	3695.0	22.17	21.18	20.40
		3625.0	22.60	21.64	20.55
		3555.0	22.07	21.47	20.62
15MHz	1 RB high	3692.5	23.22	22.19	21.05
		3625.0	23.71	22.52	21.18
		3557.5	23.05	22.11	21.34
	1 RB low	3692.5	23.11	22.29	21.15
		3625.0	23.75	22.63	21.31
		3557.5	23.14	22.27	21.24
	50% RB mid	3692.5	22.32	21.34	20.39
		3625.0	22.69	21.62	20.61
		3557.5	22.32	21.66	20.64
	100% RB	3692.5	22.21	21.20	20.50
		3625.0	22.79	21.59	20.65
		3557.5	22.24	21.60	20.46
20MHz	1 RB high	3690.0	23.19	22.26	21.20

		3625.0	23.66	22.63	21.23
		3560.0	23.12	22.03	21.32
	1 RB low	3690.0	23.31	22.34	21.12
		3625.0	23.76	22.76	21.34
		3560.0	23.27	22.35	21.19
	50% RB mid	3690.0	22.40	21.44	20.56
		3625.0	22.77	21.80	20.76
		3560.0	22.35	21.71	20.68
	100% RB	3690.0	22.34	21.36	20.48
		3625.0	22.74	21.76	20.71
		3560.0	22.24	21.64	20.61

LTE band 66

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	24.19	23.38	22.52
		1745.0	24.24	23.42	22.50
		1710.7	24.27	23.39	22.37
	1 RB low	1779.3	24.21	23.30	22.49
		1745.0	24.24	23.34	22.50
		1710.7	24.27	23.46	22.42
	50% RB mid	1779.3	24.23	23.24	22.48
		1745.0	24.26	23.28	22.43
		1710.7	24.29	23.27	22.34
	100% RB	1779.3	23.24	22.43	21.35
		1745.0	23.22	22.49	21.34
		1710.7	23.29	22.32	21.32
3MHz	1 RB high	1778.5	24.18	23.30	22.48
		1745.0	24.19	23.41	22.48
		1711.5	24.24	23.44	22.36
	1 RB low	1778.5	24.26	23.30	22.45
		1745.0	24.24	23.42	22.50
		1711.5	24.24	23.39	22.32
	50% RB mid	1778.5	23.16	22.41	21.38
		1745.0	23.15	22.39	21.31
		1711.5	23.24	22.27	21.46
	100% RB	1778.5	23.15	22.39	21.35
		1745.0	23.17	22.32	21.30
		1711.5	23.27	22.23	21.39
5MHz	1 RB high	1777.5	24.24	23.38	22.46
		1745.0	24.22	23.36	22.46
		1712.5	24.27	23.39	22.35
	1 RB low	1777.5	24.25	23.45	22.59
		1745.0	24.27	23.35	22.48
		1712.5	24.27	23.36	22.32
	50% RB mid	1777.5	23.20	22.36	21.44
		1745.0	23.20	22.42	21.40
		1712.5	23.28	22.26	21.46
	100% RB	1777.5	23.22	22.46	21.39
		1745.0	23.16	22.37	21.38
		1712.5	23.24	22.29	21.45
10MHz	1 RB high	1775.0	24.17	23.21	22.44
		1745.0	24.18	23.37	22.44
		1715.0	24.24	23.29	22.45

	1 RB low	1775.0	24.19	23.37	22.41
		1745.0	24.27	23.48	22.51
		1715.0	24.24	23.44	22.30
	50% RB mid	1775.0	23.18	22.36	21.35
		1745.0	23.23	22.41	21.36
		1715.0	23.26	22.28	21.44
	100% RB	1775.0	23.24	22.42	21.44
		1745.0	23.23	22.43	21.43
		1715.0	23.31	22.30	21.44
15MHz	1 RB high	1772.5	24.16	23.35	22.46
		1745.0	24.14	23.25	22.43
		1717.5	24.18	23.29	22.44
	1 RB low	1772.5	24.14	23.35	22.39
		1745.0	24.20	23.40	22.39
		1717.5	24.25	23.38	22.31
	50% RB mid	1772.5	23.19	22.37	21.37
		1745.0	23.21	22.38	21.38
		1717.5	23.26	22.46	21.43
	100% RB	1772.5	23.24	22.41	21.38
		1745.0	23.22	22.39	21.38
		1717.5	23.29	22.45	21.42
20MHz	1 RB high	1770.0	24.49	23.64	22.58
		1745.0	24.42	23.60	22.61
		1720.0	24.39	23.65	22.58
	1 RB low	1770.0	24.49	23.61	22.60
		1745.0	24.48	23.56	22.57
		1720.0	24.46	23.68	22.55
	50% RB mid	1770.0	23.47	22.50	21.60
		1745.0	23.47	22.49	21.57
		1720.0	23.44	22.44	21.54
	100% RB	1770.0	23.39	22.40	21.51
		1745.0	23.45	22.42	21.54
		1720.0	23.43	22.43	21.57

LTE CA Band 5B

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)
				Size	Offset	Size	Offset	
3MHz/ 5MHz	834.1	838	QPSK	1	14	1	0	24.06
				15	0	25	0	24.18
			16QAM	1	14	1	0	24.04
				15	0	25	0	24.20
			64QAM	1	14	1	0	23.92
				15	0	25	0	24.22
5MHz/ 3MHz	835	838.9	QPSK	1	24	1	0	24.00
				25	0	15	0	24.16
			16QAM	1	24	1	0	23.92
				25	0	15	0	24.14
			64QAM	1	24	1	0	24.04
				25	0	15	0	24.26
5MHz/ 10MHz	831.8	839	QPSK	1	24	1	0	23.79
				25	0	50	0	22.28
			16QAM	1	24	1	0	22.86
				25	0	50	0	21.29
			64QAM	1	24	1	0	20.96
				25	0	50	0	21.32
10MHz/ 5MHz	834	841.2	QPSK	1	49	1	0	23.90
				50	0	25	0	22.20
			16QAM	1	49	1	0	22.94
				50	0	25	0	21.19
			64QAM	1	49	1	0	20.78
				50	0	25	0	21.24
10MHz/ 10MHz	831.6	841.5	QPSK	1	49	1	0	23.98
				50	0	50	0	22.20
			16QAM	1	49	1	0	23.03
				50	0	50	0	21.24
			64QAM	1	49	1	0	20.86
				50	0	50	0	21.25

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 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 14: Part 90.542(a) specifies "Portable stations(hand-held devices) transmitting in the 758–768 MHz band and the 788–798 MHz band are limited to 3 watts ERP".

FDD Band 30: Part 27.50(a) specifies "For mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth".FDD Band 4/66: 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".

A.1.3.2 Method of Measurement

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

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

ERP 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 transimitting 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-EIRP

Limits: ⩽33dBm(2W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			EIRP(dBm)(Gt-Lc =1.7)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1909.3	24.24	23.38	22.49	25.94	25.08	24.19
		1880.0	24.26	23.45	22.56	25.96	25.15	24.26
		1850.7	24.33	23.40	22.60	26.03	25.10	24.30
	1 RB low	1909.3	24.22	23.38	22.52	25.92	25.08	24.22
		1880.0	24.24	23.40	22.48	25.94	25.10	24.18
		1850.7	24.32	23.43	22.54	26.02	25.13	24.24
	50% RB mid	1909.3	24.26	23.33	22.45	25.96	25.03	24.15
		1880.0	24.28	23.35	22.53	25.98	25.05	24.23
		1850.7	24.31	23.30	22.53	26.01	25.00	24.23
	100% RB	1909.3	23.27	22.42	21.36	24.97	24.12	23.06
		1880.0	23.27	22.48	21.38	24.97	24.18	23.08
		1850.7	23.31	22.54	21.45	25.01	24.24	23.15
3MHz	1 RB high	1908.5	24.28	23.33	22.54	25.98	25.03	24.24
		1880.0	24.26	23.39	22.55	25.96	25.09	24.25
		1851.5	24.27	23.49	22.59	25.97	25.19	24.29
	1 RB low	1908.5	24.30	23.46	22.53	26.00	25.16	24.23
		1880.0	24.25	23.47	22.54	25.95	25.17	24.24
		1851.5	24.32	23.50	22.52	26.02	25.20	24.22
	50% RB mid	1908.5	23.21	22.38	21.42	24.91	24.08	23.12
		1880.0	23.18	22.42	21.39	24.88	24.12	23.09
		1851.5	23.27	22.46	21.44	24.97	24.16	23.14
	100% RB	1908.5	23.16	22.40	21.36	24.86	24.10	23.06
		1880.0	23.18	22.41	21.35	24.88	24.11	23.05
		1851.5	23.28	22.45	21.43	24.98	24.15	23.13
5MHz	1 RB high	1907.5	24.30	23.37	22.53	26.00	25.07	24.23
		1880.0	24.30	23.41	22.57	26.00	25.11	24.27
		1852.5	24.33	23.47	22.57	26.03	25.17	24.27
	1 RB low	1907.5	24.27	23.46	22.51	25.97	25.16	24.21
		1880.0	24.28	23.56	22.50	25.98	25.26	24.20
		1852.5	24.39	23.46	22.63	26.09	25.16	24.33
	50% RB mid	1907.5	23.18	22.36	21.39	24.88	24.06	23.09
		1880.0	23.26	22.42	21.45	24.96	24.12	23.15
		1852.5	23.27	22.42	21.43	24.97	24.12	23.13
	100% RB	1907.5	23.22	22.44	21.38	24.92	24.14	23.08
		1880.0	23.25	22.46	21.45	24.95	24.16	23.15
		1852.5	23.26	22.45	21.44	24.96	24.15	23.14

10MHz	1 RB high	1905.0	24.29	23.41	22.49	25.99	25.11	24.19
		1880.0	24.31	23.47	22.54	26.01	25.17	24.24
		1855.0	24.31	23.41	22.53	26.01	25.11	24.23
	1 RB low	1905.0	24.26	23.53	22.50	25.96	25.23	24.20
		1880.0	24.32	23.42	22.52	26.02	25.12	24.22
		1855.0	24.33	23.55	22.54	26.03	25.25	24.24
	50% RB mid	1905.0	23.20	22.43	21.44	24.90	24.13	23.14
		1880.0	23.25	22.45	21.41	24.95	24.15	23.11
		1855.0	23.25	22.45	21.46	24.95	24.15	23.16
	100% RB	1905.0	23.32	22.45	21.45	25.02	24.15	23.15
		1880.0	23.28	22.45	21.45	24.98	24.15	23.15
		1855.0	23.31	22.43	21.44	25.01	24.13	23.14
15MHz	1 RB high	1902.5	24.18	23.31	22.52	25.88	25.01	24.22
		1880.0	24.17	23.38	22.46	25.87	25.08	24.16
		1857.5	24.21	23.37	22.47	25.91	25.07	24.17
	1 RB low	1902.5	24.17	23.31	22.45	25.87	25.01	24.15
		1880.0	24.22	23.38	22.49	25.92	25.08	24.19
		1857.5	24.24	23.50	22.46	25.94	25.20	24.16
	50% RB mid	1902.5	23.20	22.36	21.35	24.90	24.06	23.05
		1880.0	23.22	22.37	21.41	24.92	24.07	23.11
		1857.5	23.20	22.37	21.42	24.90	24.07	23.12
	100% RB	1902.5	23.24	22.44	21.42	24.94	24.14	23.12
		1880.0	23.24	22.39	21.37	24.94	24.09	23.07
		1857.5	23.26	22.39	21.38	24.96	24.09	23.08
20MHz	1 RB high	1900.0	24.38	23.59	22.63	26.08	25.29	24.33
		1880.0	24.40	23.51	22.50	26.10	25.21	24.20
		1860.0	24.44	23.66	22.61	26.14	25.36	24.31
	1 RB low	1900.0	24.42	23.63	22.61	26.12	25.33	24.31
		1880.0	24.37	23.60	22.56	26.07	25.30	24.26
		1860.0	24.39	23.54	22.62	26.09	25.24	24.32
	50% RB mid	1900.0	23.43	22.61	21.56	25.13	24.31	23.26
		1880.0	23.40	22.54	21.49	25.10	24.24	23.19
		1860.0	23.37	22.48	21.50	25.07	24.18	23.20
	100% RB	1900.0	23.45	22.56	21.57	25.15	24.26	23.27
		1880.0	23.40	22.53	21.49	25.10	24.23	23.19
		1860.0	23.25	22.39	21.43	24.95	24.09	23.13

LTE Band 5-ERP

Limits: ⩽38.45dBm(7W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			ERP(dBm)(Gt-Lc =-2)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.88	23.11	22.15	19.73	18.96	18.00
		836.5	23.90	23.15	22.17	19.75	19.00	18.02
		824.7	24.01	23.22	22.28	19.86	19.07	18.13
	1 RB low	848.3	23.87	22.95	22.10	19.72	18.80	17.95
		836.5	23.95	23.13	22.18	19.80	18.98	18.03
		824.7	24.00	23.12	22.28	19.85	18.97	18.13
	50% RB mid	848.3	23.90	22.91	22.11	19.75	18.76	17.96
		836.5	23.92	22.91	22.10	19.77	18.76	17.95
		824.7	24.02	22.93	22.25	19.87	18.78	18.10
	100% RB	848.3	22.87	22.12	20.96	18.72	17.97	16.81
		836.5	22.93	22.14	20.99	18.78	17.99	16.84
		824.7	23.00	22.27	21.03	18.85	18.12	16.88
3MHz	1 RB high	847.5	23.87	23.02	22.17	19.72	18.87	18.02
		836.5	23.85	23.06	22.15	19.70	18.91	18.00
		825.5	23.92	23.15	22.26	19.77	19.00	18.11
	1 RB low	847.5	23.77	22.98	22.10	19.62	18.83	17.95
		836.5	23.88	23.05	22.25	19.73	18.90	18.10
		825.5	23.97	23.23	22.24	19.82	19.08	18.09
	50% RB mid	847.5	22.82	22.03	21.01	18.67	17.88	16.86
		836.5	22.87	22.13	21.09	18.72	17.98	16.94
		825.5	22.96	22.19	21.15	18.81	18.04	17.00
	100% RB	847.5	22.80	22.05	20.93	18.65	17.90	16.78
		836.5	22.85	22.07	21.03	18.70	17.92	16.88
		825.5	22.97	22.17	21.09	18.82	18.02	16.94
5MHz	1 RB high	846.5	23.87	22.98	22.10	19.72	18.83	17.95
		836.5	23.84	23.01	22.09	19.69	18.86	17.94
		826.5	23.99	23.16	22.21	19.84	19.01	18.06
	1 RB low	846.5	23.82	23.03	22.15	19.67	18.88	18.00
		836.5	23.96	23.16	22.24	19.81	19.01	18.09
		826.5	23.99	23.10	22.30	19.84	18.95	18.15
	50% RB mid	846.5	22.86	21.97	21.02	18.71	17.82	16.87
		836.5	22.90	22.04	21.05	18.75	17.89	16.90
		826.5	22.99	22.09	21.13	18.84	17.94	16.98
	100% RB	846.5	22.85	22.01	21.00	18.70	17.86	16.85
		836.5	22.84	22.07	21.06	18.69	17.92	16.91
		826.5	22.97	22.16	21.12	18.82	18.01	16.97
10MHz	1 RB high	844.0	24.26	23.42	22.55	20.11	19.27	18.40
		836.5	24.41	23.49	22.63	20.26	19.34	18.48

		829.0	24.43	23.45	22.56	20.28	19.30	18.41
	1 RB low	844.0	24.48	23.68	22.66	20.33	19.53	18.51
		836.5	24.62	23.70	22.78	20.47	19.55	18.63
		829.0	24.63	23.92	22.85	20.48	19.77	18.70
	50% RB mid	844.0	23.39	22.41	21.52	19.24	18.26	17.37
		836.5	23.42	22.59	21.58	19.27	18.44	17.43
		829.0	23.49	22.66	21.62	19.34	18.51	17.47
	100% RB	844.0	23.36	22.34	21.49	19.21	18.19	17.34
		836.5	23.41	22.57	21.56	19.26	18.42	17.41
		829.0	23.57	22.66	21.64	19.42	18.51	17.49

LTE Band 12-ERP

Limits: ⩽34.77dBm(3W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			ERP(dBm)(Gt-Lc =-2.7)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	23.99	23.35	22.29	19.14	18.50	17.44
		707.5	24.16	23.50	22.38	19.31	18.65	17.53
		699.7	24.10	23.44	22.40	19.25	18.59	17.55
	1 RB low	715.3	24.02	23.34	22.33	19.17	18.49	17.48
		707.5	24.15	23.40	22.42	19.30	18.55	17.57
		699.7	24.11	23.46	22.41	19.26	18.61	17.56
	50% RB mid	715.3	24.02	23.23	22.27	19.17	18.38	17.42
		707.5	24.10	23.28	22.31	19.25	18.43	17.46
		699.7	24.18	23.29	22.38	19.33	18.44	17.53
	100% RB	715.3	23.21	22.26	21.16	18.36	17.41	16.31
		707.5	23.29	22.28	21.24	18.44	17.43	16.39
		699.7	23.28	22.38	21.22	18.43	17.53	16.37
3MHz	1 RB high	714.5	23.97	23.33	22.27	19.12	18.48	17.42
		707.5	24.14	23.55	22.37	19.29	18.70	17.52
		700.5	24.07	23.44	22.49	19.22	18.59	17.64
	1 RB low	714.5	24.06	23.46	22.32	19.21	18.61	17.47
		707.5	24.09	23.52	22.41	19.24	18.67	17.56
		700.5	24.10	23.40	22.43	19.25	18.55	17.58
	50% RB mid	714.5	23.17	22.26	21.17	18.32	17.41	16.32
		707.5	23.28	22.36	21.27	18.43	17.51	16.42
		700.5	23.29	22.34	21.29	18.44	17.49	16.44
	100% RB	714.5	23.17	22.21	21.14	18.32	17.36	16.29
		707.5	23.20	22.28	21.23	18.35	17.43	16.38
		700.5	23.27	22.29	21.28	18.42	17.44	16.43
5MHz	1 RB high	713.5	24.03	23.35	22.24	19.18	18.50	17.39
		707.5	24.13	23.55	22.39	19.28	18.70	17.54
		701.5	24.18	23.60	22.44	19.33	18.75	17.59
	1 RB low	713.5	24.14	23.53	22.42	19.29	18.68	17.57
		707.5	24.18	23.45	22.39	19.33	18.60	17.54
		701.5	24.19	23.60	22.44	19.34	18.75	17.59
	50% RB mid	713.5	23.22	22.23	21.24	18.37	17.38	16.39
		707.5	23.28	22.29	21.29	18.43	17.44	16.44
		701.5	23.33	22.29	21.29	18.48	17.44	16.44
	100% RB	713.5	23.26	22.27	21.23	18.41	17.42	16.38
		707.5	23.27	22.31	21.26	18.42	17.46	16.41
		701.5	23.31	22.34	21.30	18.46	17.49	16.45
10MHz	1 RB high	711.0	24.17	23.42	22.36	19.32	18.57	17.51
		707.5	24.23	23.54	22.38	19.38	18.69	17.53

		704.0	24.23	23.52	22.49	19.38	18.67	17.64
	1 RB low	711.0	24.25	23.53	22.47	19.40	18.68	17.62
		707.5	24.29	23.57	22.48	19.44	18.72	17.63
		704.0	24.33	23.60	22.45	19.48	18.75	17.60
	50% RB mid	711.0	23.36	22.34	21.35	18.51	17.49	16.50
		707.5	23.34	22.37	21.40	18.49	17.52	16.55
		704.0	23.36	22.35	21.26	18.51	17.50	16.41
	100% RB	711.0	23.34	22.30	21.37	18.49	17.45	16.52
		707.5	23.39	22.36	21.38	18.54	17.51	16.53
		704.0	23.43	22.41	21.43	18.58	17.56	16.58

LTE Band 14-ERP

Limits: ⩽34.77dBm(3W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			ERP(dBm)(Gt-Lc =-2.4)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	795.5	24.03	23.16	22.27	19.48	18.61	17.72
		793.0	24.04	23.18	22.32	19.49	18.63	17.77
		790.5	24.12	23.23	22.44	19.57	18.68	17.89
	1 RB low	795.5	24.10	23.33	22.39	19.55	18.78	17.84
		793.0	24.21	23.40	22.55	19.66	18.85	18.00
		790.5	24.16	23.25	22.44	19.61	18.70	17.89
	50% RB mid	795.5	23.08	22.26	21.22	18.53	17.71	16.67
		793.0	23.11	22.27	21.24	18.56	17.72	16.69
		790.5	23.13	22.28	21.32	18.58	17.73	16.77
	100% RB	795.5	23.05	22.26	21.20	18.50	17.71	16.65
		793.0	23.09	22.29	21.25	18.54	17.74	16.70
		790.5	23.17	22.30	21.30	18.62	17.75	16.75
10MHz	1 RB high	793.0	24.64	23.73	22.88	20.09	19.18	18.33
	1 RB low	793.0	24.80	24.00	22.97	20.25	19.45	18.42
	50% RB mid	793.0	23.72	22.85	21.87	19.17	18.30	17.32
	100% RB	793.0	23.71	22.85	21.86	19.16	18.30	17.31

LTE Band30

Limits: ⩽ 24dBm/5MHz

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm/5MHz)			EIRP(dBm/5MHz) (GT – LC = -1.02)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2312.5	22.18	21.56	20.49	21.16	20.54	19.47
		2310.0	22.27	21.61	20.50	21.25	20.59	19.48
		2307.5	22.31	21.68	20.53	21.29	20.66	19.51
	1 RB low	2312.5	22.26	21.75	20.57	21.24	20.73	19.55
		2310.0	22.42	21.88	20.70	21.40	20.86	19.68
		2307.5	22.58	22.06	20.89	21.56	21.04	19.87
	100% RB	2312.5	20.41	19.45	18.42	19.39	18.43	17.40
		2310.0	20.52	19.49	18.52	19.50	18.47	17.50
		2307.5	20.65	19.72	18.63	19.63	18.70	17.61
10MHz	1 RB high	2310.0	22.19	21.69	20.63	21.17	20.67	19.61
	1 RB low	2310.0	22.59	21.93	20.85	21.57	20.91	19.83
	100% RB	2310.0	18.90	17.91	16.86	17.88	16.89	15.84

LTE Band48

Limits:≤ 23dBm/10MHz

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm/10MHz)			EIRP(dBm/10MHz) (GT – LC = -1.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	3697.5	23.60	22.64	21.79	22.10	21.14	20.29
		3625	24.19	23.25	22.35	22.69	21.75	20.85
		3552.5	24.45	23.49	22.66	22.95	21.99	21.16
	1 RB low	3697.5	23.56	22.67	21.73	22.06	21.17	20.23
		3625	24.43	23.38	22.50	22.93	21.88	21.00
		3552.5	24.34	23.41	22.62	22.84	21.91	21.12
	100% RB	3697.5	22.29	21.36	20.51	20.79	19.86	19.01
		3625	22.98	22.05	20.99	21.48	20.55	19.49
		3552.5	23.12	22.27	21.18	21.62	20.77	19.68
10MHz	1 RB high	3695	23.53	22.57	21.73	22.03	21.07	20.23
		3625	24.01	23.08	22.20	22.51	21.58	20.70
		3555	24.39	23.53	22.57	22.89	22.03	21.07
	1 RB low	3695	23.46	22.60	21.61	21.96	21.10	20.11
		3625	24.22	23.36	22.41	22.72	21.86	20.91
		3555	24.32	23.47	22.53	22.82	21.97	21.03
	100% RB	3695	21.77	20.79	19.93	20.27	19.29	18.43
		3625	22.49	21.41	20.38	20.99	19.91	18.88
		3555	22.66	21.71	20.69	21.16	20.21	19.19
15MHz	1 RB high	3692.5	23.42	22.61	21.71	21.92	21.11	20.21
		3625	23.81	22.84	22.01	22.31	21.34	20.51
		3557.5	24.21	23.39	22.42	22.71	21.89	20.92
	1 RB low	3692.5	23.38	22.53	21.57	21.88	21.03	20.07
		3625	24.14	23.23	22.31	22.64	21.73	20.81
		3557.5	24.34	23.46	22.49	22.84	21.96	20.99
	100% RB	3692.5	20.89	19.89	19.08	19.39	18.39	17.58
		3625	21.57	20.55	19.52	20.07	19.05	18.02
		3557.5	21.83	20.88	19.83	20.33	19.38	18.33
20MHz	1 RB high	3690	23.43	22.48	21.62	21.93	20.98	20.12
		3625	23.63	22.75	21.84	22.13	21.25	20.34
		3560	24.02	23.16	22.19	22.52	21.66	20.69
	1 RB low	3690	23.22	22.39	21.36	21.72	20.89	19.86
		3625	23.99	22.89	21.74	22.49	21.39	20.24
		3560	24.32	23.47	22.49	22.82	21.97	20.99
	100% RB	3690	19.96	18.94	18.12	18.46	17.44	16.62
		3625	20.71	19.64	18.58	19.21	18.14	17.08
		3560	20.97	19.94	18.91	19.47	18.44	17.41

LTE Band 66-EIRP

Limits: ≤30dBm(1W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power(dBm)			EIRP(dBm)(Gt-Lc =1.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	24.19	23.38	22.52	25.69	24.88	24.02
		1745.0	24.24	23.42	22.50	25.74	24.92	24.00
		1710.7	24.27	23.39	22.37	25.77	24.89	23.87
	1 RB low	1779.3	24.21	23.30	22.49	25.71	24.80	23.99
		1745.0	24.24	23.34	22.50	25.74	24.84	24.00
		1710.7	24.27	23.46	22.42	25.77	24.96	23.92
	50% RB mid	1779.3	24.23	23.24	22.48	25.73	24.74	23.98
		1745.0	24.26	23.28	22.43	25.76	24.78	23.93
		1710.7	24.29	23.27	22.34	25.79	24.77	23.84
	100% RB	1779.3	23.24	22.43	21.35	24.74	23.93	22.85
		1745.0	23.22	22.49	21.34	24.72	23.99	22.84
		1710.7	23.29	22.32	21.32	24.79	23.82	22.82
3MHz	1 RB high	1778.5	24.18	23.30	22.48	25.68	24.80	23.98
		1745.0	24.19	23.41	22.48	25.69	24.91	23.98
		1711.5	24.24	23.44	22.36	25.74	24.94	23.86
	1 RB low	1778.5	24.26	23.30	22.45	25.76	24.80	23.95
		1745.0	24.24	23.42	22.50	25.74	24.92	24.00
		1711.5	24.24	23.39	22.32	25.74	24.89	23.82
	50% RB mid	1778.5	23.16	22.41	21.38	24.66	23.91	22.88
		1745.0	23.15	22.39	21.31	24.65	23.89	22.81
		1711.5	23.24	22.27	21.46	24.74	23.77	22.96
	100% RB	1778.5	23.15	22.39	21.35	24.65	23.89	22.85
		1745.0	23.17	22.32	21.30	24.67	23.82	22.80
		1711.5	23.27	22.23	21.39	24.77	23.73	22.89
5MHz	1 RB high	1777.5	24.24	23.38	22.46	25.74	24.88	23.96
		1745.0	24.22	23.36	22.46	25.72	24.86	23.96
		1712.5	24.27	23.39	22.35	25.77	24.89	23.85
	1 RB low	1777.5	24.25	23.45	22.59	25.75	24.95	24.09
		1745.0	24.27	23.35	22.48	25.77	24.85	23.98
		1712.5	24.27	23.36	22.32	25.77	24.86	23.82
	50% RB mid	1777.5	23.20	22.36	21.44	24.70	23.86	22.94
		1745.0	23.20	22.42	21.40	24.70	23.92	22.90
		1712.5	23.28	22.26	21.46	24.78	23.76	22.96
	100% RB	1777.5	23.22	22.46	21.39	24.72	23.96	22.89
		1745.0	23.16	22.37	21.38	24.66	23.87	22.88
		1712.5	23.24	22.29	21.45	24.74	23.79	22.95
10MHz	1 RB high	1775.0	24.17	23.21	22.44	25.67	24.71	23.94
		1745.0	24.18	23.37	22.44	25.68	24.87	23.94

		1715.0	24.24	23.29	22.45	25.74	24.79	23.95
	1 RB low	1775.0	24.19	23.37	22.41	25.69	24.87	23.91
		1745.0	24.27	23.48	22.51	25.77	24.98	24.01
		1715.0	24.24	23.44	22.30	25.74	24.94	23.80
	50% RB mid	1775.0	23.18	22.36	21.35	24.68	23.86	22.85
		1745.0	23.23	22.41	21.36	24.73	23.91	22.86
		1715.0	23.26	22.28	21.44	24.76	23.78	22.94
	100% RB	1775.0	23.24	22.42	21.44	24.74	23.92	22.94
		1745.0	23.23	22.43	21.43	24.73	23.93	22.93
		1715.0	23.31	22.30	21.44	24.81	23.80	22.94
15MHz	1 RB high	1772.5	24.16	23.35	22.46	25.66	24.85	23.96
		1745.0	24.14	23.25	22.43	25.64	24.75	23.93
		1717.5	24.18	23.29	22.44	25.68	24.79	23.94
	1 RB low	1772.5	24.14	23.35	22.39	25.64	24.85	23.89
		1745.0	24.20	23.40	22.39	25.70	24.90	23.89
		1717.5	24.25	23.38	22.31	25.75	24.88	23.81
	50% RB mid	1772.5	23.19	22.37	21.37	24.69	23.87	22.87
		1745.0	23.21	22.38	21.38	24.71	23.88	22.88
		1717.5	23.26	22.46	21.43	24.76	23.96	22.93
	100% RB	1772.5	23.24	22.41	21.38	24.74	23.91	22.88
		1745.0	23.22	22.39	21.38	24.72	23.89	22.88
		1717.5	23.29	22.45	21.42	24.79	23.95	22.92
20MHz	1 RB high	1770.0	24.49	23.64	22.58	25.99	25.14	24.08
		1745.0	24.42	23.60	22.61	25.92	25.10	24.11
		1720.0	24.39	23.65	22.58	25.89	25.15	24.08
	1 RB low	1770.0	24.49	23.61	22.60	25.99	25.11	24.10
		1745.0	24.48	23.56	22.57	25.98	25.06	24.07
		1720.0	24.46	23.68	22.55	25.96	25.18	24.05
	50% RB mid	1770.0	23.47	22.50	21.60	24.97	24.00	23.10
		1745.0	23.47	22.49	21.57	24.97	23.99	23.07
		1720.0	23.44	22.44	21.54	24.94	23.94	23.04
	100% RB	1770.0	23.39	22.40	21.51	24.89	23.90	23.01
		1745.0	23.45	22.42	21.54	24.95	23.92	23.04
		1720.0	23.43	22.43	21.57	24.93	23.93	23.07

LTE CA Band 5B-ERP

Limits: ⩽38.45dBm(7W)

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)	ERP(dBm) (Gt-Lc =-2)
				Size	Offset	Size	Offset		
3MHz/ 5MHz	834.1	838	QPSK	1	14	1	0	24.06	19.91
				15	0	25	0	24.18	20.03
			16QAM	1	14	1	0	24.04	19.89
				15	0	25	0	24.20	20.05
			64QAM	1	14	1	0	23.92	19.77
				15	0	25	0	24.22	20.07
5MHz/ 3MHz	835	838.9	QPSK	1	24	1	0	24.00	19.85
				25	0	15	0	24.16	20.01
			16QAM	1	24	1	0	23.92	19.77
				25	0	15	0	24.14	19.99
			64QAM	1	24	1	0	24.04	19.89
				25	0	15	0	24.26	20.11
5MHz/ 10MHz	831.8	839	QPSK	1	24	1	0	23.79	19.64
				25	0	50	0	22.28	18.13
			16QAM	1	24	1	0	22.86	18.71
				25	0	50	0	21.29	17.14
			64QAM	1	24	1	0	20.96	16.81
				25	0	50	0	21.32	17.17
10MHz/ 5MHz	834	841.2	QPSK	1	49	1	0	23.90	19.75
				50	0	25	0	22.20	18.05
			16QAM	1	49	1	0	22.94	18.79
				50	0	25	0	21.19	17.04
			64QAM	1	49	1	0	20.78	16.63
				50	0	25	0	21.24	17.09
10MHz/ 10MHz	831.6	841.5	QPSK	1	49	1	0	23.98	19.83
				50	0	50	0	22.20	18.05
			16QAM	1	49	1	0	23.03	18.88
				50	0	50	0	21.24	17.09
			64QAM	1	49	1	0	20.86	16.71
				50	0	50	0	21.25	17.10

A.2 Emission Limit

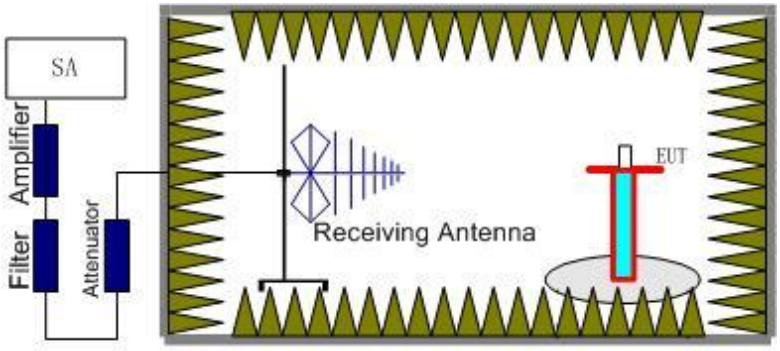
A.2.1 Measurement Method

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

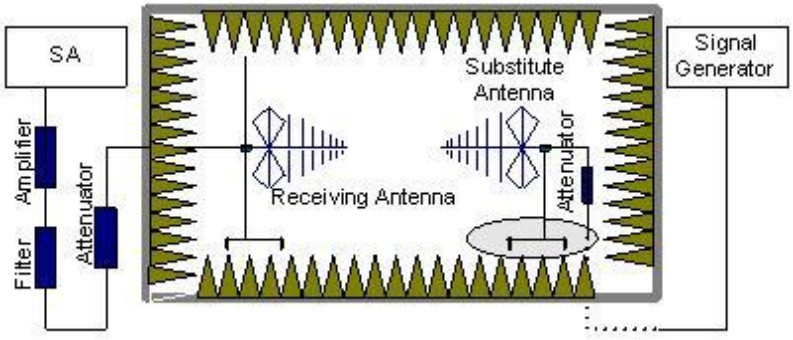
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and 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:
   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 - 2.15dB.

A.2.2 Measurement Limit

FDD Band 2/25: 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.

FDD Band 5/26(824MHz~849MHz): 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.

FDD Band 12/71: 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.

FDD Band 14: Part 90.543 states that for operations in the 758–768 MHz and the 788–798 MHz bands, 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 all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations. (2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations. (3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB. (4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment. (5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

LTE Band 30/LTE Band 40(2300 MHz-2400 MHz): Part 27.53(a) states for mobile and portable

stations operating in the 2305–2315 MHz and 2350–2360 MHz bands: By a factor of not less than: 43 +10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.FDD Band 4/66: 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.

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.

Note: All LTE bands and their ULCA combination are investigated. Only the worst-case emissions have been reported.

LTE Band 2, 1.4MHz, QPSK, Channel 18607

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3702.02	-46.88	6.42	8.48	-44.82	-13.00	31.82	V
5552.02	-43.90	7.18	10.59	-40.49	-13.00	27.49	H
7403.01	-45.16	8.13	12.08	-41.21	-13.00	28.21	H
9256.01	-44.23	9.05	13.25	-40.03	-13.00	27.03	H
11110.01	-47.76	9.79	13.18	-44.37	-13.00	31.37	H
13003.01	-46.60	10.48	13.50	-43.58	-13.00	30.58	H

LTE Band 2, 1.4MHz, QPSK, Channel 18900

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3760.02	-46.44	6.26	8.56	-44.14	-13.00	31.14	H
5640.02	-41.37	7.27	10.57	-38.07	-13.00	25.07	H
7521.01	-45.98	8.31	12.22	-42.07	-13.00	29.07	V
9401.01	-46.00	9.04	13.34	-41.70	-13.00	28.70	V
11284.01	-47.52	9.90	13.14	-44.28	-13.00	31.28	V
13145.01	-43.31	10.74	13.70	-40.35	-13.00	27.35	V

LTE Band 2, 1.4MHz, QPSK, Channel 19193

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3819.02	-49.51	6.08	8.65	-46.94	-13.00	33.94	V
5728.02	-41.36	7.30	10.55	-38.11	-13.00	25.11	H
7638.01	-42.98	8.15	12.31	-38.82	-13.00	25.82	H
9551.01	-39.87	9.36	13.35	-35.88	-13.00	22.88	H
11477.01	-48.57	9.87	13.10	-45.34	-13.00	32.34	V
13378.01	-43.45	10.57	14.03	-39.99	-13.00	26.99	H

LTE Band 4, 1.4MHz, QPSK, Channel 19957

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3422.02	-54.66	5.38	8.01	-52.03	-13.00	39.03	H
5133.02	-62.53	6.86	10.09	-59.30	-13.00	46.30	H
6842.01	-60.03	7.84	11.41	-56.46	-13.00	43.46	V
8553.01	-60.64	8.58	13.01	-56.21	-13.00	43.21	V
10265.01	-54.79	9.52	13.01	-51.30	-13.00	38.30	H
11999.01	-58.21	10.06	13.00	-55.27	-13.00	42.27	V

LTE Band 4, 1.4MHz, QPSK, Channel 20175

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3465.02	-53.70	5.46	8.12	-51.04	-13.00	38.04	H
5198.02	-60.38	6.96	10.18	-57.16	-13.00	44.16	H
6930.01	-58.02	7.76	11.52	-54.26	-13.00	41.26	H
8663.01	-56.64	8.41	13.03	-52.02	-13.00	39.02	H
10397.01	-48.91	9.80	13.06	-45.65	-13.00	32.65	V
12175.01	-58.79	10.13	13.07	-55.85	-13.00	42.85	V

LTE Band 4, 1.4MHz, QPSK, Channel 20393

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3509.02	-50.84	5.54	8.21	-48.17	-13.00	35.17	H
5264.02	-59.51	6.99	10.27	-56.23	-13.00	43.23	H
7019.01	-59.65	8.27	11.62	-56.30	-13.00	43.30	H
8773.01	-52.80	8.58	13.05	-48.33	-13.00	35.33	H
10526.01	-47.09	9.56	13.11	-43.54	-13.00	30.54	V
12246.01	-58.49	10.03	13.10	-55.42	-13.00	42.42	V

LTE Band 5, 1.4MHz, QPSK, Channel 20407

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1649.01	-50.01	3.56	5.23	2.15	-50.49	-13.00	37.49	H
2474.00	-45.04	4.60	6.02	2.15	-45.77	-13.00	32.77	H
3299.02	-57.70	5.29	7.72	2.15	-57.42	-13.00	44.42	H
4124.02	-54.96	6.04	9.02	2.15	-54.13	-13.00	41.13	V
4952.01	-56.67	6.69	9.85	2.15	-55.66	-13.00	42.66	H
5773.01	-56.45	7.23	10.55	2.15	-55.28	-13.00	42.28	H

LTE Band 5, 1.4MHz, QPSK, Channel 20525

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1673.01	-49.80	3.58	5.19	2.15	-50.34	-13.00	37.34	V
2510.00	-41.76	4.63	6.12	2.15	-42.42	-13.00	29.42	V
3346.02	-54.96	5.31	7.83	2.15	-54.59	-13.00	41.59	H
4170.02	-57.41	6.14	9.07	2.15	-56.63	-13.00	43.63	V
5013.01	-57.33	6.58	9.92	2.15	-56.14	-13.00	43.14	H
5842.01	-56.69	7.21	10.53	2.15	-55.52	-13.00	42.52	V

LTE Band 5, 1.4MHz, QPSK, Channel 20643

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1697.01	-45.42	3.60	5.15	2.15	-46.02	-13.00	33.02	V
2545.00	-43.06	4.66	6.18	2.15	-43.69	-13.00	30.69	V
3393.02	-56.47	5.36	7.94	2.15	-56.04	-13.00	43.04	H
4243.02	-56.45	6.25	9.14	2.15	-55.71	-13.00	42.71	V
5099.01	-56.54	6.77	10.04	2.15	-55.42	-13.00	42.42	V
5929.01	-55.48	7.47	10.51	2.15	-54.59	-13.00	41.59	V

LTE Band 12, 1.4MHz, QPSK, Channel 23017

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1351.01	-56.17	3.18	4.73	2.15	-56.77	-13.00	43.77	H
2000.01	-49.69	4.05	4.60	2.15	-51.29	-13.00	38.29	H
2682.00	-45.39	4.77	6.43	2.15	-45.88	-13.00	32.88	H
3352.02	-59.81	5.32	7.84	2.15	-59.44	-13.00	46.44	V
4014.02	-58.43	6.06	8.91	2.15	-57.73	-13.00	44.73	H
4683.02	-58.05	6.49	9.58	2.15	-57.11	-13.00	44.11	V

LTE Band 12, 1.4MHz, QPSK, Channel 23095

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1415.01	-50.73	3.25	5.06	2.15	-51.07	-13.00	38.07	H
2123.00	-47.87	4.21	4.97	2.15	-49.26	-13.00	36.26	V
2822.00	-45.16	4.94	6.68	2.15	-45.57	-13.00	32.57	H
3538.02	-51.92	5.70	8.25	2.15	-51.52	-13.00	38.52	H
4245.02	-56.97	6.24	9.15	2.15	-56.21	-13.00	43.21	H
4946.01	-56.32	6.70	9.85	2.15	-55.32	-13.00	42.32	V

LTE Band 12, 1.4MHz, QPSK, Channel 23173

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1431.01	-45.78	3.28	5.14	2.15	-46.07	-13.00	33.07	H
2146.00	-47.88	4.24	5.04	2.15	-49.23	-13.00	36.23	H
2871.00	-44.86	4.97	6.77	2.15	-45.21	-13.00	32.21	H
3577.02	-50.26	6.10	8.31	2.15	-50.20	-13.00	37.20	H
4294.02	-53.22	6.20	9.19	2.15	-52.38	-13.00	39.38	H
5012.01	-56.90	6.58	9.92	2.15	-55.71	-13.00	42.71	V

LTE Band 14, 5MHz, QPSK, Channel 23305

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1581.29	-49.28	3.50	5.35	0.00	-49.58	-40.00	9.58	H
2372.42	-44.94	4.48	5.72	2.15	-45.85	-13.00	32.85	V
3163.02	-50.80	5.35	7.39	2.15	-50.91	-13.00	37.91	V
3953.52	-51.70	6.10	8.83	2.15	-51.12	-13.00	38.12	V
4745.02	-57.90	6.56	9.65	2.15	-56.96	-13.00	43.96	V
5537.51	-57.22	7.17	10.59	2.15	-55.95	-13.00	42.95	V

LTE Band 14, 5MHz, QPSK, Channel 23330

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1586.39	-52.30	3.50	5.34	0.00	-52.61	-40.00	12.61	H
2380.76	-48.06	4.49	5.74	2.15	-48.96	-13.00	35.96	H
3173.02	-53.89	5.34	7.42	2.15	-53.96	-13.00	40.96	V
3966.02	-49.84	6.09	8.85	2.15	-49.23	-13.00	36.23	V
4756.01	-58.23	6.58	9.66	2.15	-57.30	-13.00	44.30	V
5552.51	-56.95	7.18	10.59	2.15	-55.69	-13.00	42.69	V

LTE Band 14, 5MHz, QPSK, Channel 23355

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1591.33	-55.23	3.51	5.34	0.00	-55.55	-40.00	15.55	H
2387.01	-45.53	4.50	5.76	2.15	-46.42	-13.00	33.42	V
3183.02	-51.56	5.32	7.44	2.15	-51.59	-13.00	38.59	V
3978.52	-46.42	6.08	8.87	2.15	-45.78	-13.00	32.78	V
4769.01	-57.21	6.61	9.67	2.15	-56.30	-13.00	43.30	V
5571.01	-56.54	7.20	10.59	2.15	-55.30	-13.00	42.30	H

LTE Band 30, 5MHz, QPSK, Channel 27685

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
4631.02	-71.30	6.45	9.53	-68.22	-40.00	28.22	V
6917.01	-65.49	7.73	11.50	-61.72	-40.00	21.72	V
9246.01	-62.85	9.03	13.25	-58.63	-40.00	18.63	V
11521.01	-59.50	9.81	13.10	-56.21	-40.00	16.21	V
13862.01	-54.86	10.73	14.42	-51.17	-40.00	11.17	H
16145.00	-52.69	11.80	13.67	-50.82	-40.00	10.82	H

LTE Band 30, 5MHz, QPSK, Channel 27710

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
4625.02	-64.39	6.44	9.53	-61.30	-40.00	21.30	H
6935.01	-59.96	7.80	11.52	-56.24	-40.00	16.24	V
9251.01	-62.67	9.04	13.25	-58.46	-40.00	18.46	V
11536.01	-59.35	9.81	13.09	-56.07	-40.00	16.07	V
13877.01	-54.44	10.76	14.43	-50.77	-40.00	10.77	H
16186.00	-52.64	11.75	13.66	-50.73	-40.00	10.73	H

LTE Band 30, 5MHz, QPSK, Channel 27735

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
4629.02	-71.21	6.45	9.53	-68.13	-40.00	28.13	V
6945.01	-65.45	7.87	11.53	-61.79	-40.00	21.79	V
9252.01	-62.77	9.04	13.25	-58.56	-40.00	18.56	V
11551.01	-59.59	9.81	13.09	-56.31	-40.00	16.31	V
13880.01	-54.54	10.76	14.43	-50.87	-40.00	10.87	H
16184.00	-52.75	11.75	13.66	-50.84	-40.00	10.84	H

LTE Band 66, 1.4MHz QPSK, Channel 131979

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3422.02	-54.59	5.38	8.01	-51.96	-13.00	38.96	H
5133.02	-62.70	6.86	10.09	-59.47	-13.00	46.47	H
6845.01	-59.89	7.83	11.41	-56.31	-13.00	43.31	V
8556.01	-59.81	8.57	13.01	-55.37	-13.00	42.37	V
10270.01	-54.92	9.54	13.01	-51.45	-13.00	38.45	H
11998.01	-58.12	10.06	13.00	-55.18	-13.00	42.18	V

LTE Band 66, 1.4MHz, QPSK, Channel 132322

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3490.02	-52.97	5.50	8.18	-50.29	-13.00	37.29	H
5237.02	-61.21	7.00	10.23	-57.98	-13.00	44.98	H
6982.01	-59.77	8.16	11.58	-56.35	-13.00	43.35	H
8726.01	-56.46	8.44	13.05	-51.85	-13.00	38.85	H
10475.01	-51.14	9.69	13.09	-47.74	-13.00	34.74	V
12246.01	-58.31	10.03	13.10	-55.24	-13.00	42.24	V

LTE Band 66, 1.4MHz, QPSK, Channel 132665

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3559.02	-49.72	5.92	8.28	-47.36	-13.00	34.36	H
5340.02	-51.62	6.96	10.38	-48.20	-13.00	35.20	H
7120.01	-59.10	8.16	11.74	-55.52	-13.00	42.52	V
8898.01	-48.24	8.84	13.08	-44.00	-13.00	31.00	H
10678.01	-47.69	9.30	13.14	-43.85	-13.00	30.85	V
12403.01	-58.12	10.43	13.16	-55.39	-13.00	42.39	V

CA 5B, QPSK, CH20428+20500

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1664.01	-54.04	3.57	5.20	2.15	-54.56	-13.00	41.56	H
2484.00	-47.11	4.61	6.05	2.15	-47.82	-13.00	34.82	H
3328.04	-60.91	5.30	7.79	2.15	-60.57	-13.00	47.57	V
4156.09	-56.79	6.11	9.06	2.15	-55.99	-13.00	42.99	V
4983.44	-57.10	6.63	9.88	2.15	-56.00	-13.00	43.00	H
5810.80	-57.33	7.18	10.54	2.15	-56.12	-13.00	43.12	V

CA 5B, QPSK, CH20478+20550

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1643.01	-54.11	3.56	5.24	2.15	-54.58	-13.00	41.58	H
2471.50	-47.68	4.59	6.01	2.15	-48.41	-13.00	35.41	V
3314.11	-61.66	5.29	7.75	2.15	-61.35	-13.00	48.35	V
4119.87	-55.63	6.04	9.02	2.15	-54.80	-13.00	41.80	V
4958.37	-56.93	6.68	9.86	2.15	-55.90	-13.00	42.90	V
5796.17	-57.03	7.20	10.54	2.15	-55.84	-13.00	42.84	H

CA 5B, QPSK, CH20528+20600

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1678.01	-54.54	3.58	5.18	2.15	-55.09	-13.00	42.09	V
2515.00	-45.55	4.64	6.13	2.15	-46.21	-13.00	33.21	H
3355.89	-59.53	5.32	7.85	2.15	-59.15	-13.00	46.15	V
4190.21	-57.83	6.18	9.09	2.15	-57.07	-13.00	44.07	V
5038.46	-57.29	6.60	9.95	2.15	-56.09	-13.00	43.09	V
5849.80	-57.18	7.23	10.53	2.15	-56.03	-13.00	43.03	V

CA 2A_5A_QPSK_CH18625+20425

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1653.51	-49.40	3.57	5.22	2.15	-49.90	-13.00	36.90	H
3307.14	-54.49	5.29	7.74	2.15	-54.19	-13.00	41.19	V
5558.00	-42.84	7.19	10.59	2.15	-41.59	-13.00	28.59	V
7410.49	-45.91	8.15	12.09	2.15	-44.12	-13.00	31.12	H
9263.69	-48.74	9.07	13.26	2.15	-46.70	-13.00	33.70	H
11116.18	-45.19	9.77	13.18	2.15	-43.93	-13.00	30.93	H

CA 2A_5A_QPSK_CH18900+20525

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
2510.00	-45.09	4.63	6.12	2.15	-45.75	-13.00	32.75	H
3346.84	-57.41	5.32	7.83	2.15	-57.05	-13.00	44.05	H
3760.52	-55.21	6.26	8.56	2.15	-55.06	-13.00	42.06	V
4703.48	-58.47	6.51	9.60	2.15	-57.53	-13.00	44.53	V
5640.18	-42.40	7.27	10.57	2.15	-41.25	-13.00	28.25	V
6587.32	-54.39	7.75	11.10	2.15	-53.19	-13.00	40.19	V

CA 2A_5A_QPSK_CH19175+20625

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1693.01	-51.90	3.59	5.15	2.15	-52.49	-13.00	39.49	V
2560.00	-46.00	4.67	6.21	2.15	-46.61	-13.00	33.61	H
3815.54	-57.19	6.09	8.64	2.15	-56.79	-13.00	43.79	H
5723.05	-46.17	7.30	10.56	2.15	-45.06	-13.00	32.06	V
7630.56	-46.39	8.11	12.30	2.15	-44.35	-13.00	31.35	H
9538.08	-48.92	9.40	13.36	2.15	-47.11	-13.00	34.11	H

CA 2A_12A, QPSK, CH18625+23035

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1412.51	-56.38	3.25	5.05	2.15	-56.73	-13.00	43.73	H
2102.50	-49.88	4.19	4.91	2.15	-51.31	-13.00	38.31	V
3705.50	-54.85	6.41	8.49	2.15	-54.92	-13.00	41.92	V
5558.00	-45.76	7.19	10.59	2.15	-44.51	-13.00	31.51	V
7410.49	-46.76	8.15	12.09	2.15	-44.97	-13.00	31.97	H
9263.69	-48.68	9.07	13.26	2.15	-46.64	-13.00	33.64	H

CA 2A_12A, QPSK, CH18900+23095

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3760.52	-52.73	6.26	8.56	2.15	-52.58	-13.00	39.58	V
4392.87	-51.36	6.41	9.29	2.15	-50.63	-13.00	37.63	V
5640.18	-47.40	7.27	10.57	2.15	-46.25	-13.00	33.25	V
7520.53	-46.98	8.31	12.22	2.15	-45.22	-13.00	32.22	H
9400.88	-48.46	9.04	13.34	2.15	-46.31	-13.00	33.31	H
11257.56	-46.63	9.74	13.15	2.15	-45.37	-13.00	32.37	V

CA 2A_12A, QPSK, CH19175+23155

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3815.54	-53.57	6.09	8.64	2.15	-53.17	-13.00	40.17	V
4392.87	-43.77	6.41	9.29	2.15	-43.04	-13.00	45.63	V
5723.05	-42.51	7.30	10.56	2.15	-41.40	-13.00	28.40	H
7630.56	-46.86	8.11	12.30	2.15	-44.82	-13.00	31.82	H
9538.08	-46.75	9.40	13.36	2.15	-44.94	-13.00	31.94	V
11427.48	-47.38	10.00	13.11	2.15	-46.42	-13.00	33.42	V

CA 2A_14A, QPSK, CH18625+23305

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1581.34	-56.00	3.50	5.35	0.00	-56.30	-40.00	16.30	V
3705.02	-56.22	6.42	8.49	2.15	-56.30	-13.00	43.30	V
4496.27	-52.90	6.54	9.40	2.15	-52.19	-13.00	39.19	V
5557.52	-43.43	7.19	10.59	2.15	-42.18	-13.00	29.18	H
7410.01	-48.89	8.14	12.09	2.15	-47.09	-13.00	34.09	H
9262.51	-49.76	9.07	13.26	2.15	-47.72	-13.00	34.72	V

CA 2A_14A, QPSK, CH18900+23330

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1586.44	-57.22	3.50	5.34	0.00	-57.53	-40.00	17.53	V
3761.27	-53.71	6.26	8.57	2.15	-53.55	-13.00	40.55	V
5640.02	-44.43	7.27	10.57	2.15	-43.28	-13.00	30.28	H
7522.51	-46.99	8.30	12.22	2.15	-45.22	-13.00	32.22	H
9401.26	-47.95	9.04	13.34	2.15	-45.80	-13.00	32.80	V
11280.01	-46.70	9.88	13.14	2.15	-45.59	-13.00	32.59	V

CA 2A_14A, QPSK, CH19175+23355

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1591.18	-59.29	3.51	5.34	0.00	-59.61	-40.00	19.61	H
3183.77	-53.06	5.32	7.44	2.15	-53.09	-13.00	40.09	V
3978.77	-50.54	6.08	8.87	2.15	-49.90	-13.00	36.90	V
4612.52	-50.36	6.46	9.51	2.15	-49.46	-13.00	36.46	H
5722.52	-44.23	7.30	10.56	2.15	-43.12	-13.00	30.12	H
7631.26	-49.32	8.11	12.31	2.15	-47.27	-13.00	34.27	H

CA 14A_30A, QPSK, CH23305+27685

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1581.39	-52.53	3.50	5.35	0.00	-52.83	-40.00	12.83	H
2384.23	-48.36	4.50	5.75	2.15	-49.26	-13.00	36.26	H
3161.27	-51.96	5.35	7.39	2.15	-52.07	-13.00	39.07	V
3952.52	-49.61	6.10	8.83	2.15	-49.03	-13.00	36.03	V
5538.77	-57.94	7.17	10.59	2.15	-56.67	-13.00	43.67	V
6318.77	-54.00	7.55	10.82	2.15	-52.88	-13.00	39.88	V

CA 14A_30A, QPSK, CH23330+27710

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1586.39	-53.80	3.50	5.34	0.00	-54.11	-40.00	14.11	V
2389.10	-47.32	4.50	5.77	2.15	-48.20	-13.00	35.20	H
3172.52	-52.05	5.34	7.41	2.15	-52.13	-13.00	39.13	V
3967.52	-48.77	6.09	8.85	2.15	-48.16	-13.00	35.16	V
5572.52	-57.82	7.21	10.59	2.15	-56.59	-13.00	43.59	V
6360.02	-56.63	7.56	10.86	2.15	-55.48	-13.00	42.48	V

CA 14A_30A, QPSK, CH23355+27735

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1591.33	-55.90	3.51	5.34	0.00	-56.22	-40.00	16.22	H
2387.01	-47.61	4.50	5.76	2.15	-48.50	-13.00	35.50	V
3183.77	-48.99	5.32	7.44	2.15	-49.02	-13.00	36.02	V
3978.77	-47.77	6.08	8.87	2.15	-47.13	-13.00	34.13	V
5572.52	-57.73	7.21	10.59	2.15	-56.50	-13.00	43.50	H
6363.77	-57.21	7.56	10.86	2.15	-56.06	-13.00	43.06	V

CA 14A_66A, QPSK, CH23305+132022

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1581.34	-53.14	3.50	5.35	0.00	-53.44	-40.00	13.44	V
2372.42	-48.73	4.48	5.72	2.15	-49.64	-13.00	36.64	H
3161.27	-52.05	5.35	7.39	2.15	-52.16	-13.00	39.16	V
3952.52	-51.10	6.10	8.83	2.15	-50.52	-13.00	37.52	V
5535.02	-58.06	7.17	10.59	2.15	-56.79	-13.00	43.79	V
6326.27	-55.86	7.56	10.83	2.15	-54.74	-13.00	41.74	V

CA 14A_66A, QPSK, CH23330+132322

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1586.39	-53.20	3.50	5.34	0.00	-53.51	-40.00	13.51	V
2399.52	-48.81	4.52	5.80	2.15	-49.68	-13.00	36.68	H
3172.52	-53.83	5.34	7.41	2.15	-53.91	-13.00	40.91	V
3967.52	-48.49	6.09	8.85	2.15	-47.88	-13.00	34.88	V
5553.77	-57.82	7.19	10.59	2.15	-56.57	-13.00	43.57	V
6371.27	-54.91	7.56	10.87	2.15	-53.75	-13.00	40.75	V

CA 14A_66A, QPSK, CH23355+132622

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1591.38	-56.00	3.51	5.34	0.00	-56.32	-40.00	16.32	H
2387.01	-47.34	4.50	5.76	2.15	-48.23	-13.00	35.23	V
3183.77	-51.88	5.32	7.44	2.15	-51.91	-13.00	38.91	V
3978.77	-45.61	6.08	8.87	2.15	-44.97	-13.00	31.97	V
5568.77	-56.46	7.20	10.59	2.15	-55.22	-13.00	42.22	H
6360.02	-56.84	7.56	10.86	2.15	-55.69	-13.00	42.69	H

Note: The maximum value of expanded measurement uncertainty for this test item is U = 5.58 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℃.
3. With the EUT, powered via nominal voltage, connected to the CMW500, and in a simulated call on middle channel for each LTE band, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10℃ increments from -30℃ to +50℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50℃.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the center channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 ℃increments from +50℃ to -30℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

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

A.3.2 Measurement results

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1850.833	1909.199		
50				-1.72	0.0009
40				-1.59	0.0008
30				-3.81	0.0020
10				-16.62	0.0088
0				0.07	0.0000
-10				14.02	0.0075
-20				-2.29	0.0012
-30				-3.15	0.0017

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1850.833	1909.199	-0.10	0.0001
4.4				-4.22	0.0022

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	824.417	848.583		
50				-10.51	0.0126
40				-9.34	0.0112
30				-7.37	0.0088
10				-10.31	0.0123
0				-8.00	0.0096
-10				4.26	0.0051
-20				-7.10	0.0085
-30				-8.44	0.0101

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.417	848.583	-7.34	0.0088
4.4				-7.78	0.0093

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	699.465	715.519	-0.90	0.0013
50				-0.94	0.0013
40				-7.95	0.0112
30				-8.13	0.0115
10				-9.57	0.0135
0				-9.06	0.0128
-10				-9.74	0.0138
-20				-8.47	0.0120
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	699.465	715.519	-1.44	0.0020
4.4				-0.23	0.0003

LTE Band 14, 10MHz bandwidth QPSK (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	788.476	797.519	-1.43	0.0018
50				-0.82	0.0010
40				-1.27	0.0016
30				-0.27	0.0003
10				-1.72	0.0022
0				-0.94	0.0012
-10				-2.42	0.0031
-20				-0.74	0.0009
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	788.476	797.519	-2.76	0.0035
4.4				0.06	0.0001

LTE Band 30, 10MHz bandwidth QPSK (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2305.433	2314.583	-0.53	0.0002
50				-2.23	0.0010
40				-1.42	0.0006
30				14.45	0.0063
10				-2.99	0.0013
0				1.42	0.0006
-10				16.38	0.0071
-20				-1.19	0.0005
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2305.433	2314.583	0.47	0.0002
4.4				1.20	0.0005

LTE Band 48, 20MHz bandwidth QPSK (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	3550.801	3699.167	-4.18	0.0012
50				-2.47	0.0007
40				2.22	0.0006
30				-1.06	0.0003
10				0.74	0.0002
0				0.57	0.0002
-10				-0.67	0.0002
-20				2.49	0.0007
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3550.801	3699.167	1.65	0.0005
4.4				0.77	0.0002

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

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1710.833	1779.199		
50				1.72	0.0010
40				0.47	0.0003
30				0.03	0.0000
10				0.94	0.0005
0				3.30	0.0019
-10				4.84	0.0028
-20				3.79	0.0022
-30				4.89	0.0028

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.833	1779.199	-10.89	0.0062
4.4				0.50	0.0003

LTE CA Band 5B, 10MHz+10MHz bandwidth QPSK(worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(℃)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	824.307	848.686		
50				-0.37	0.0004
40				-1.26	0.0015
30				0.19	0.0002
10				-0.72	0.0009
0				-0.70	0.0008
-10				1.23	0.0015
-20				-0.27	0.0003
-30				-0.66	0.0008

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.307	848.686	1.35	0.0016
4.4				1.26	0.0015

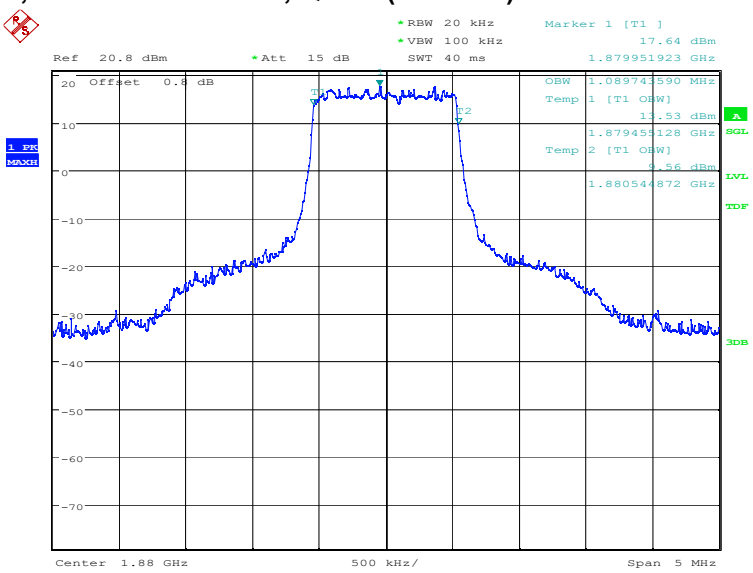
A.4 Occupied Bandwidth

Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the mid frequencies frequency. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.
The measurement method is from ANSI C63.26:
a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts.
b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
d) Set the detection mode to peak, and the trace mode to max-hold.

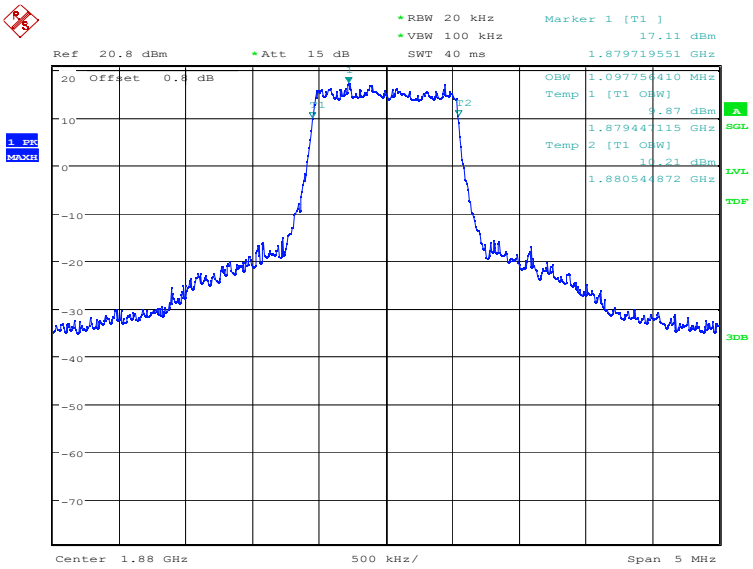
LTE band 2, 1.4MHz (99%)

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

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



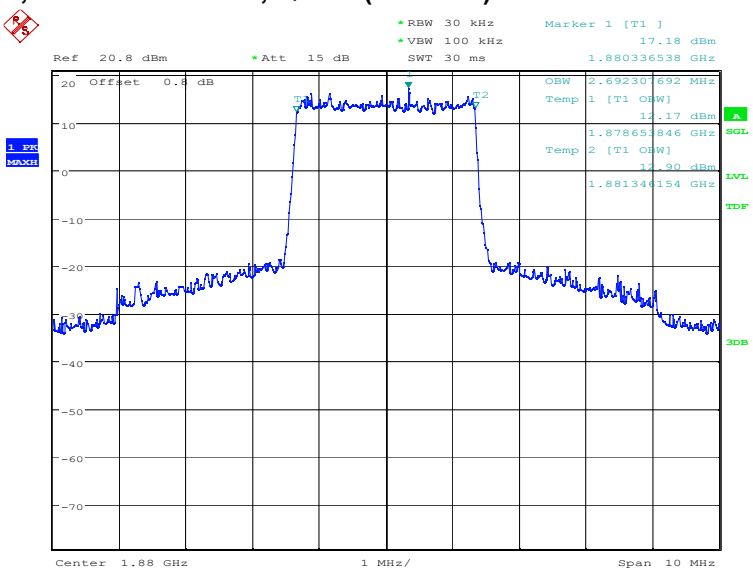
LTE band 2, 1.4MHz Bandwidth, 16QAM (99% BW)



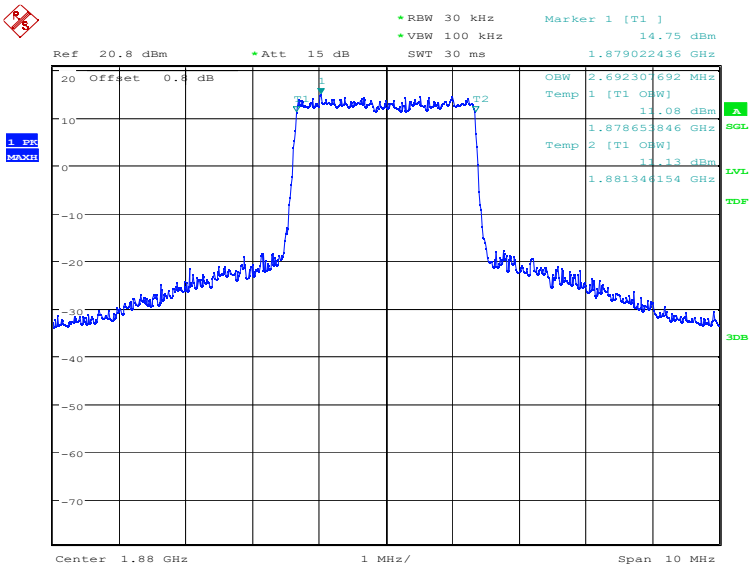
LTE band 2, 3MHz (99%)

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

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



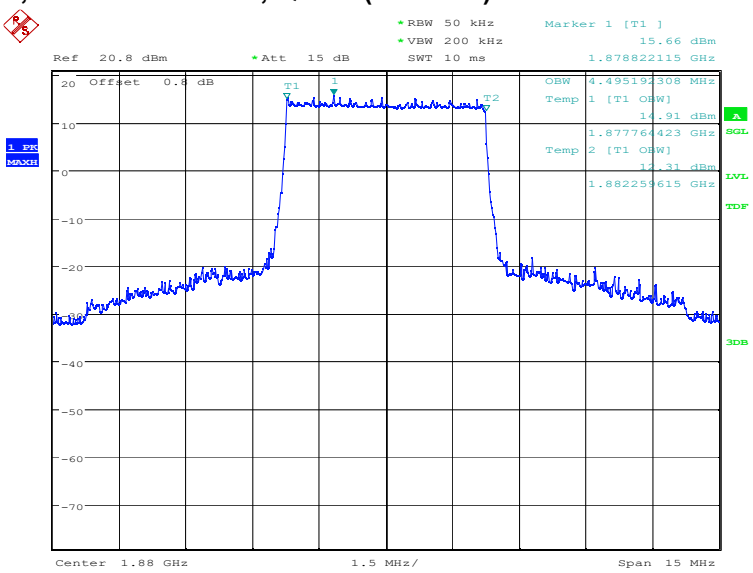
LTE band 2, 3MHz Bandwidth, 16QAM (99% BW)



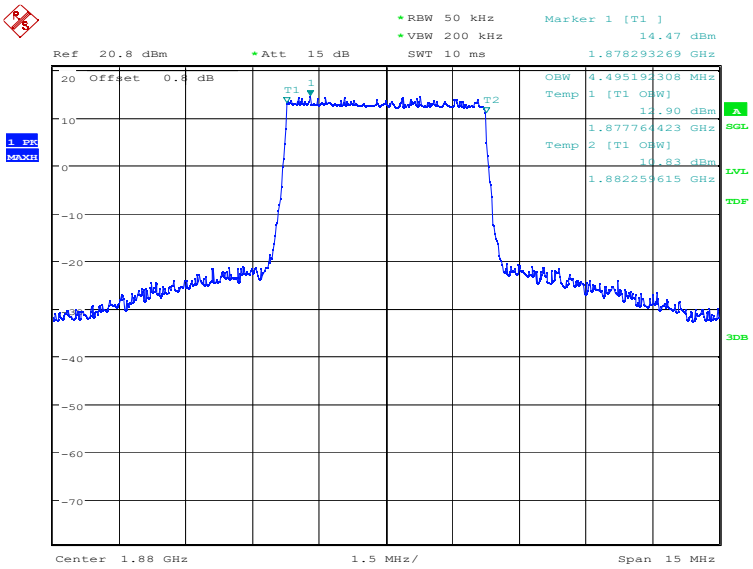
LTE band 2, 5MHz (99%)

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

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



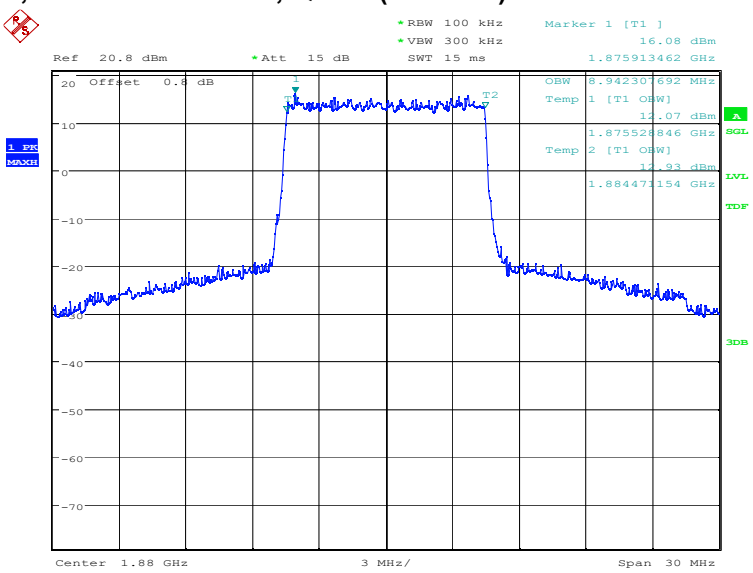
LTE band 2, 5MHz Bandwidth, 16QAM (99% BW)



LTE band 2, 10MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	8942.31	8990.38

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



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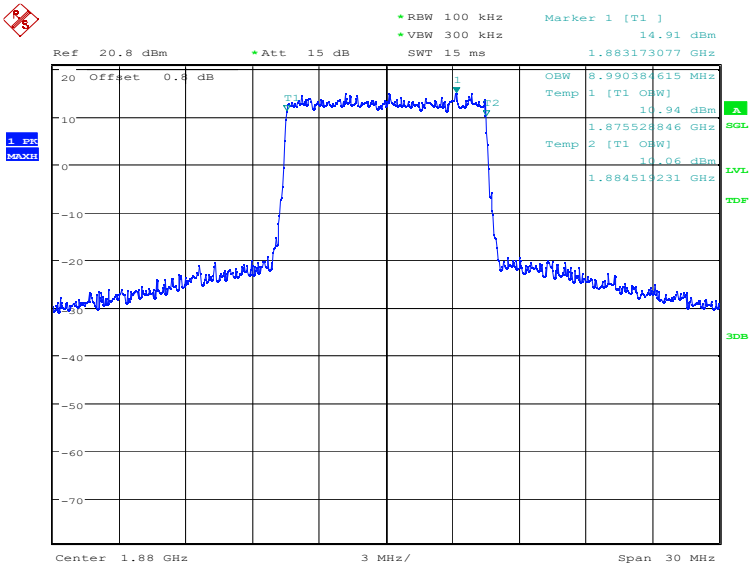
LTE band 2, 10MHz Bandwidth, 16QAM (99% BW)



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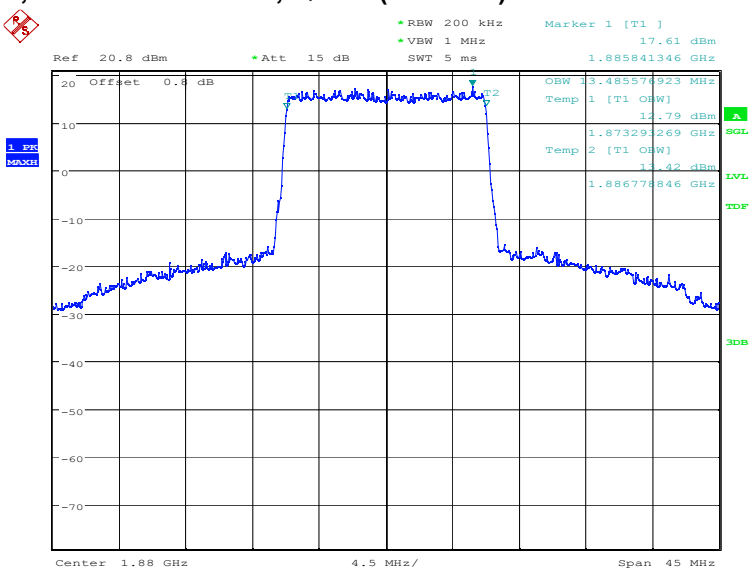
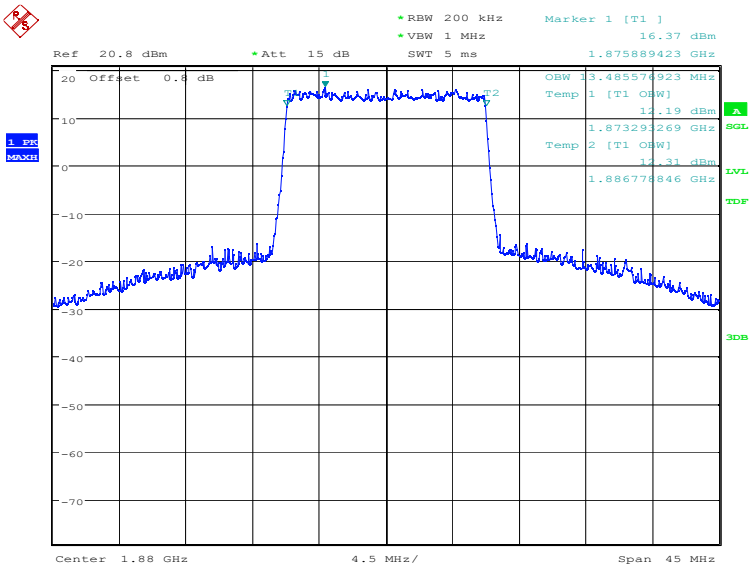
LTE band 2, 15MHz (99%)

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

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



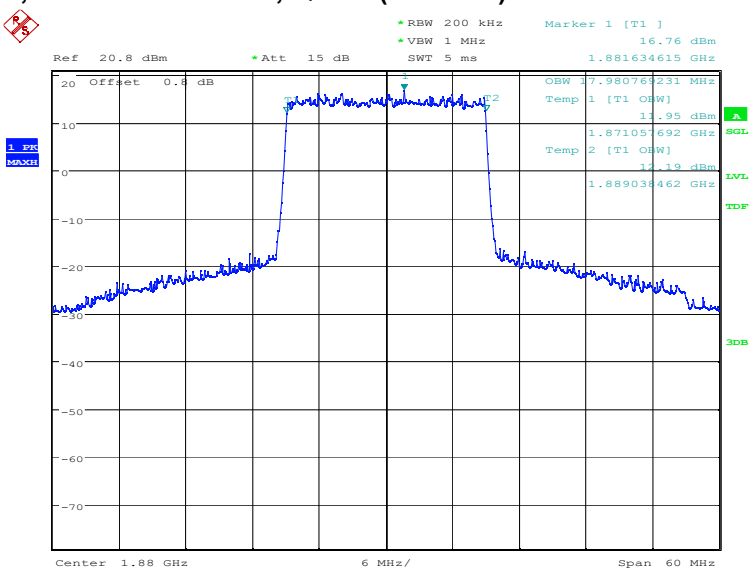
LTE band 2, 15MHz Bandwidth, 16QAM (99% BW)



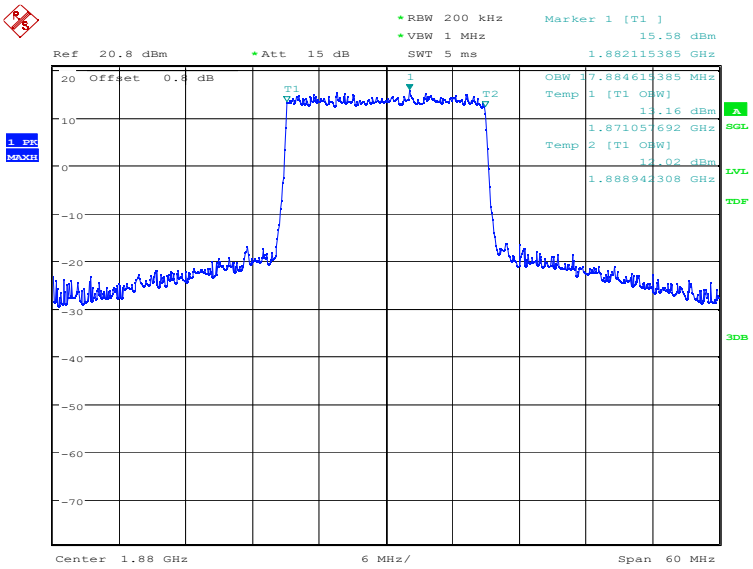
LTE band 2, 20MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	17980.77	17884.62

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



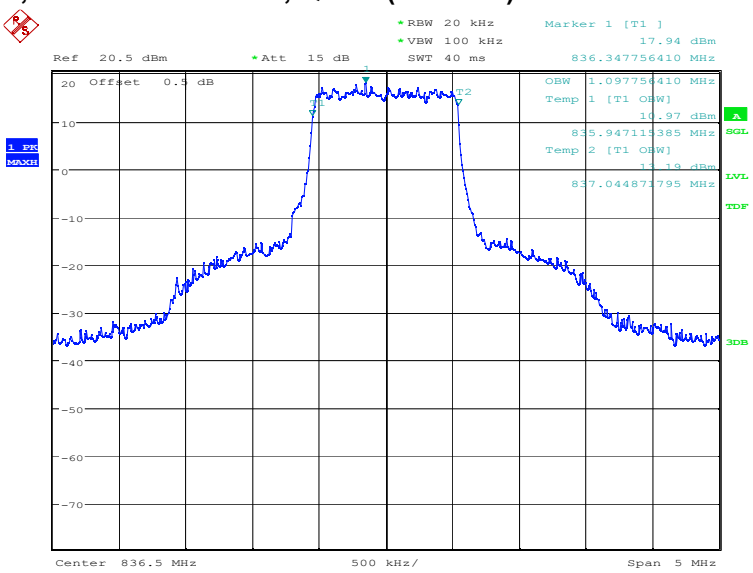
LTE band 2, 20MHz Bandwidth, 16QAM (99% BW)



LTE band 5, 1.4MHz (99%)

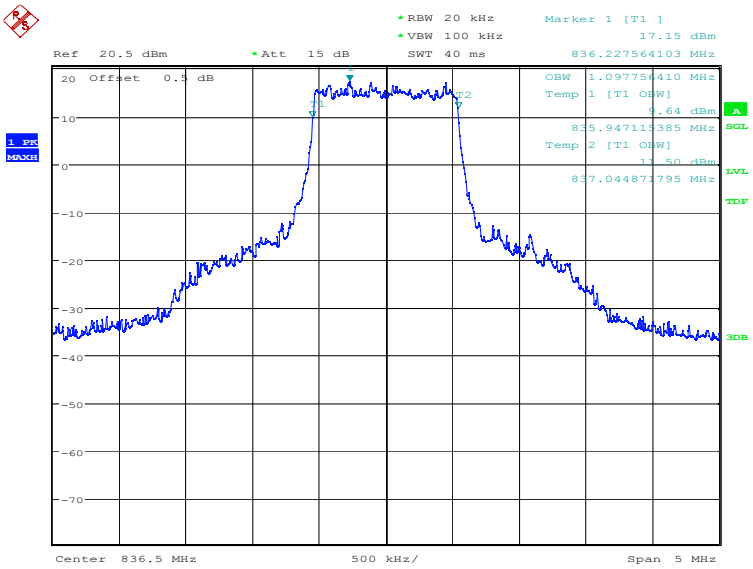
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	1097.76	1097.76

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



Date: 25.APR.2022 09:26:36

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

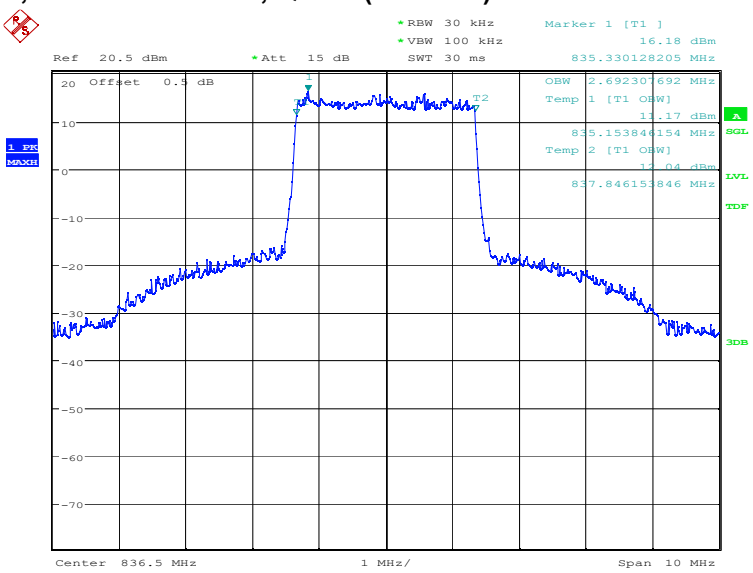


Date: 25.APR.2022 09:27:15

LTE band 5, 3MHz (99%)

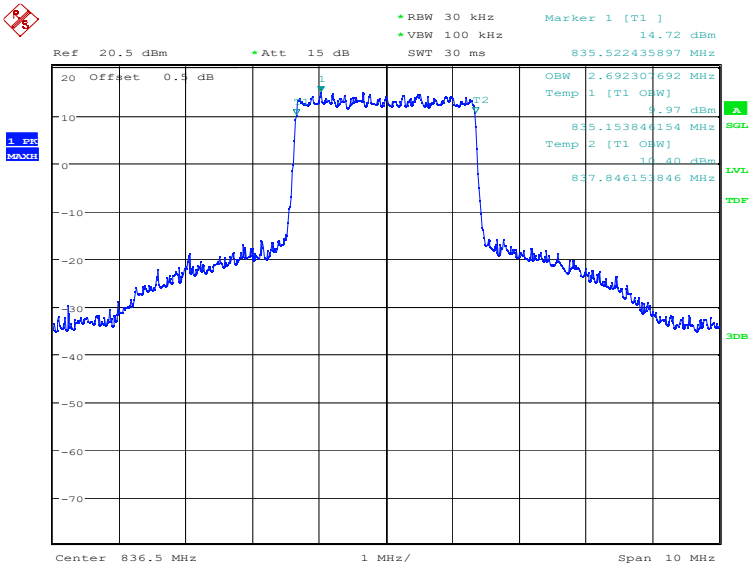
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 25.APR.2022 09:27:56

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

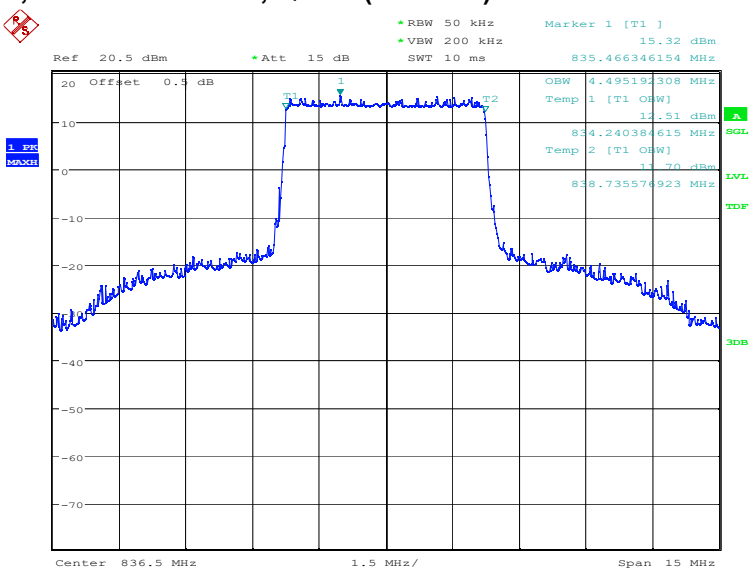


Date: 25.APR.2022 09:28:34

LTE band 5, 5MHz (99%)

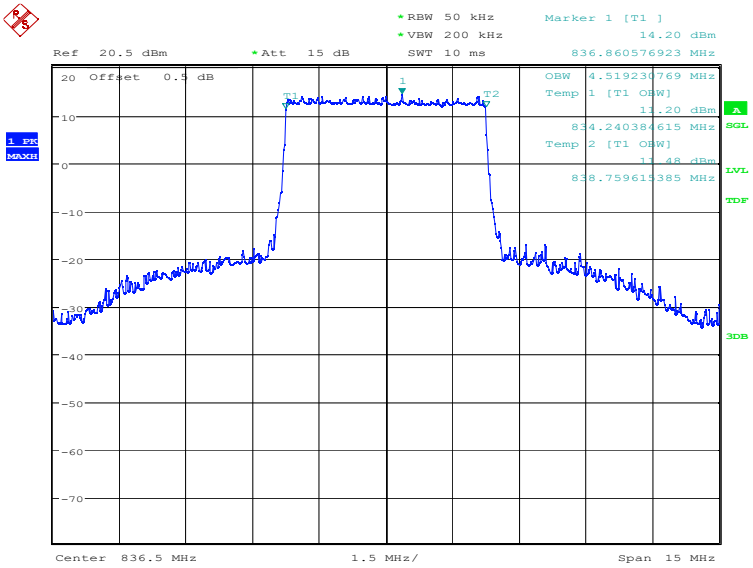
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	4495.19	4519.23

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



Date: 25.APR.2022 09:29:15

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

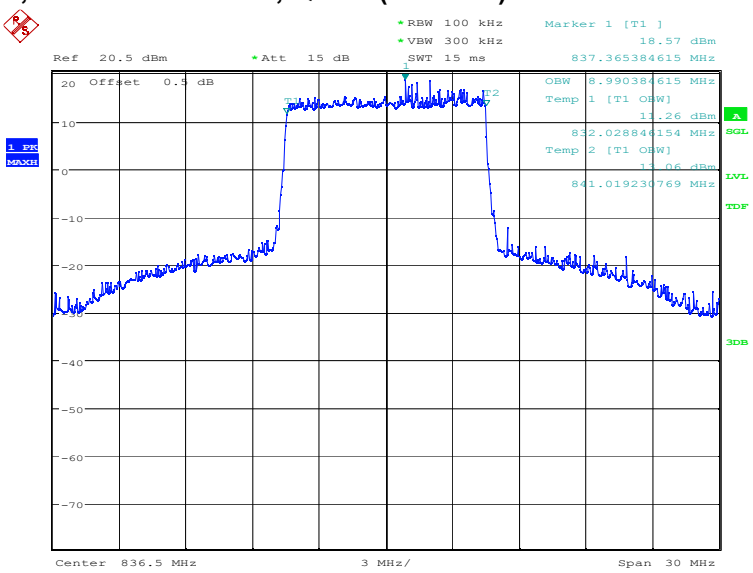


Date: 25.APR.2022 09:29:54

LTE band 5, 10MHz (99%)

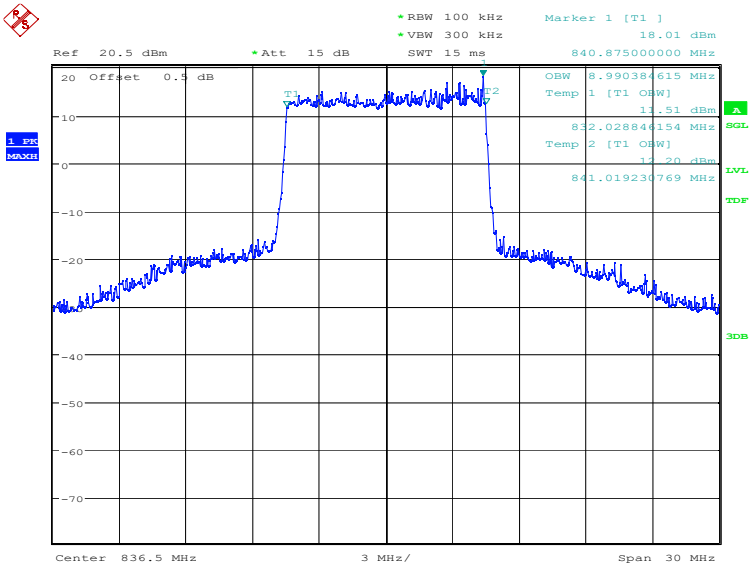
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	8990.38	8990.38

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



Date: 25.APR.2022 09:30:35

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

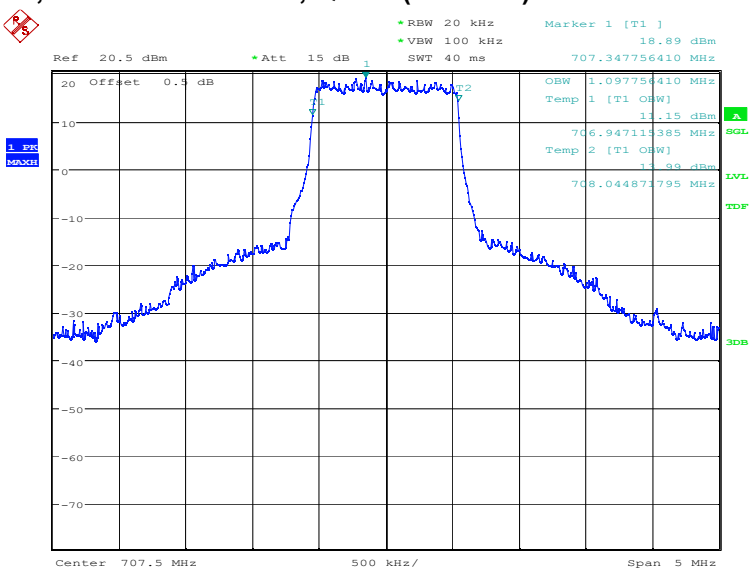


Date: 25.APR.2022 09:31:14

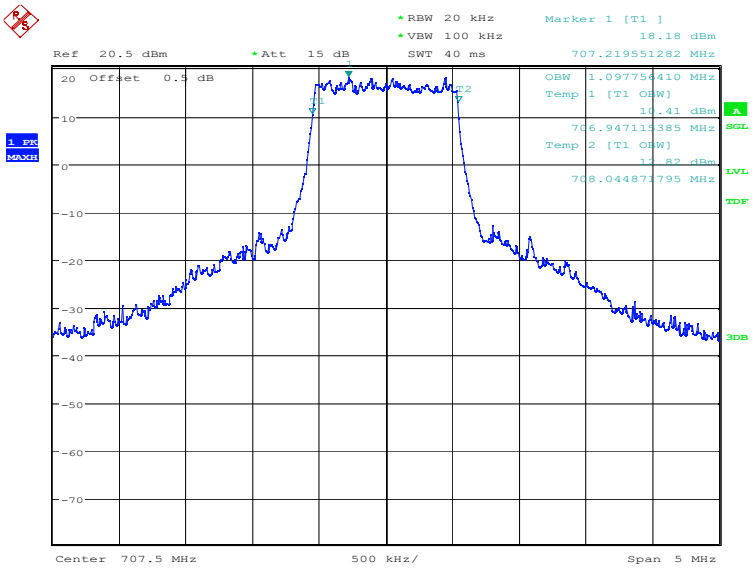
LTE band 12, 1.4MHz (99%)

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

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



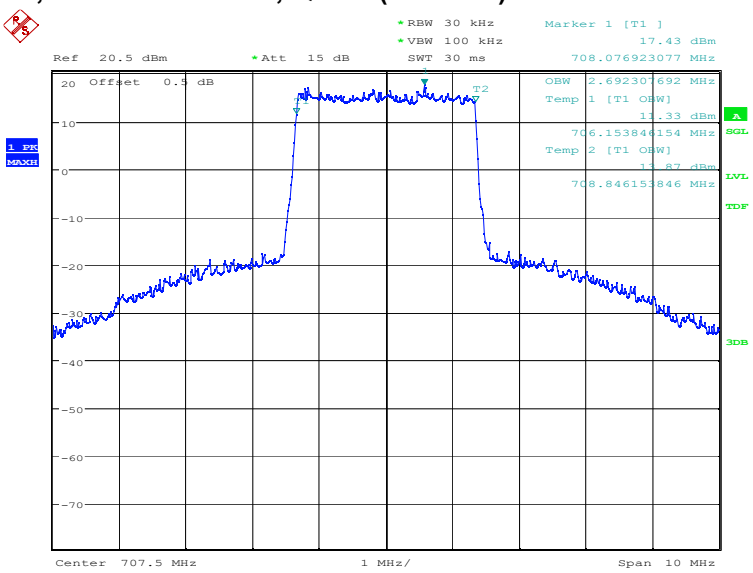
LTE band 12, 1.4MHz Bandwidth, 16QAM (99% BW)



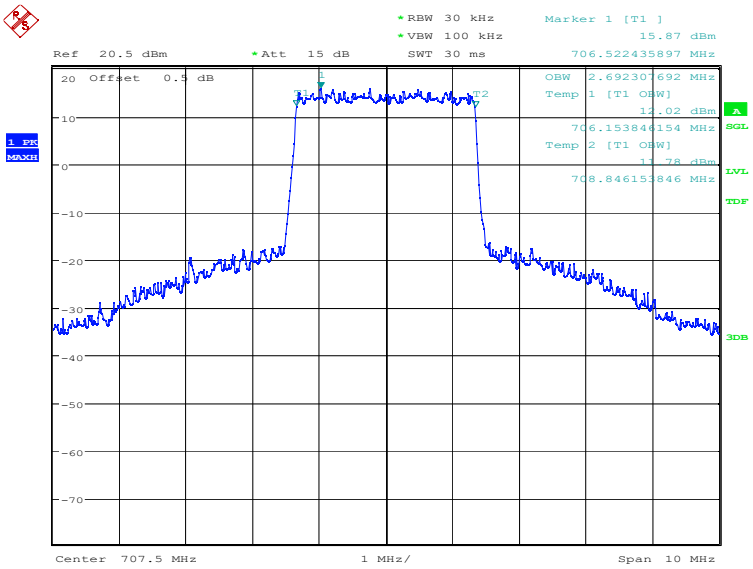
LTE band 12, 3MHz (99%)

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

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



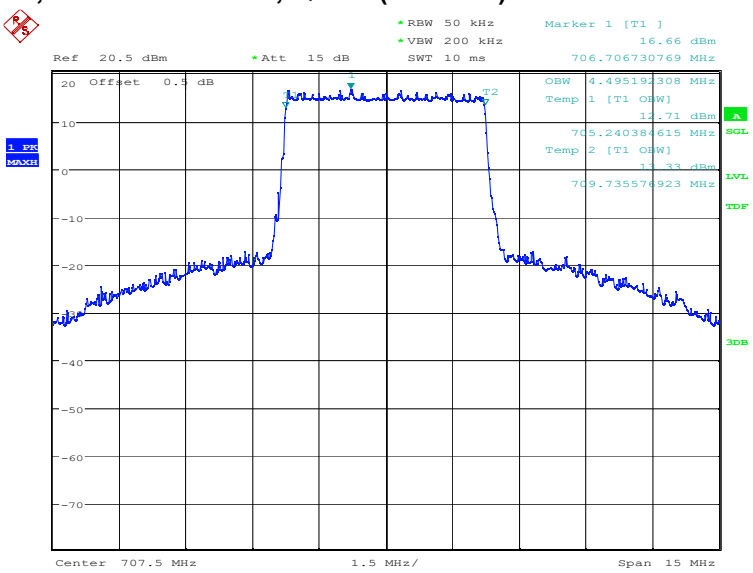
LTE band 12, 3MHz Bandwidth, 16QAM (99% BW)



LTE band 12, 5MHz (99%)

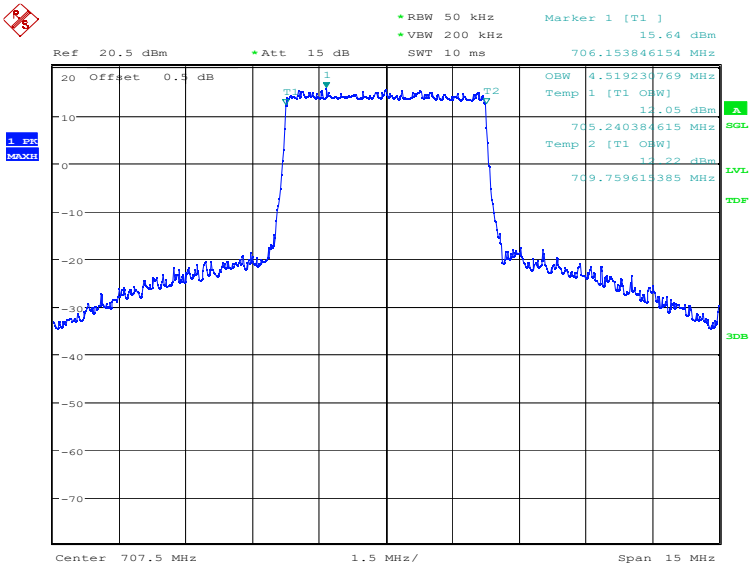
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	4495.19	4519.23

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



Date: 25.APR.2022 09:34:35

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

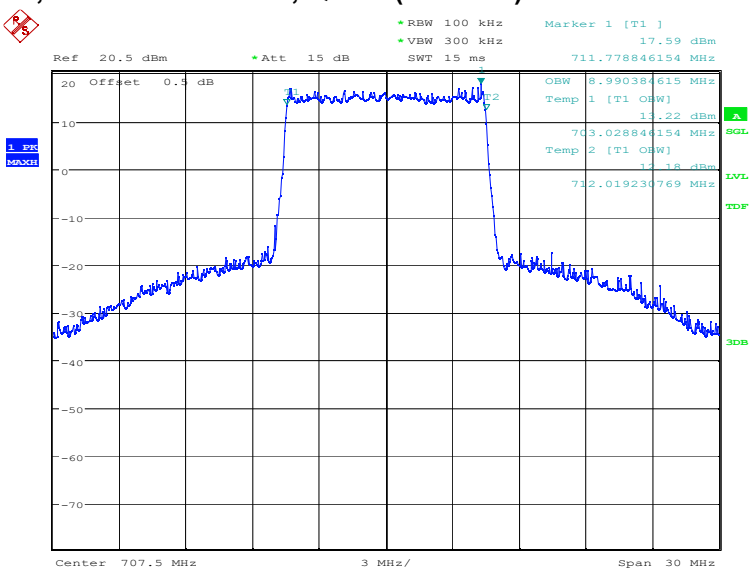


Date: 25.APR.2022 09:35:14

LTE band 12, 10MHz (99%)

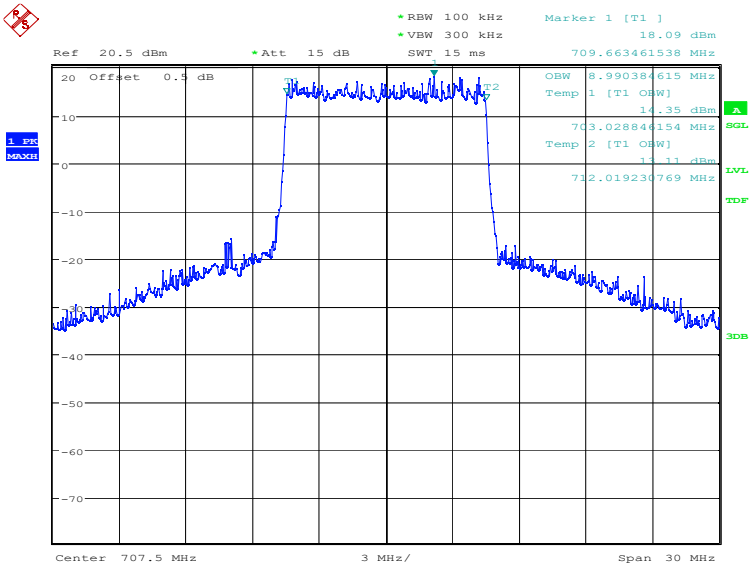
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	8990.38	8990.38

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



Date: 25.APR.2022 09:35:55

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

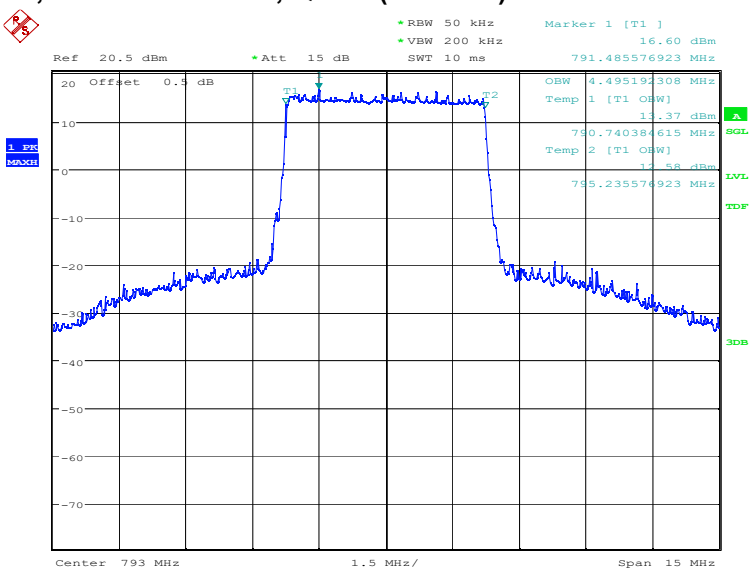


Date: 25.APR.2022 09:36:34

LTE band 14, 5MHz (99%)

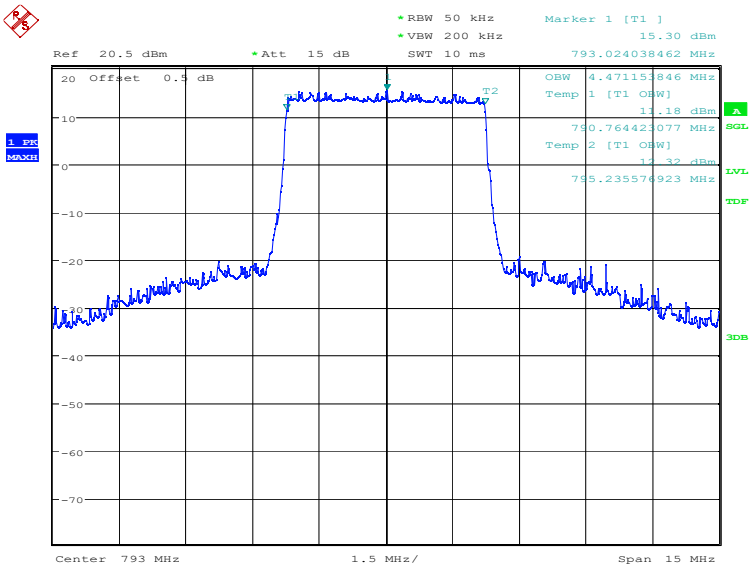
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
793.0	QPSK	16QAM
	4495.19	4471.15

LTE band 14, 5MHz Bandwidth, QPSK (99% BW)



Date: 25.APR.2022 09:37:16

LTE band 14, 5MHz Bandwidth,16QAM (99% BW)

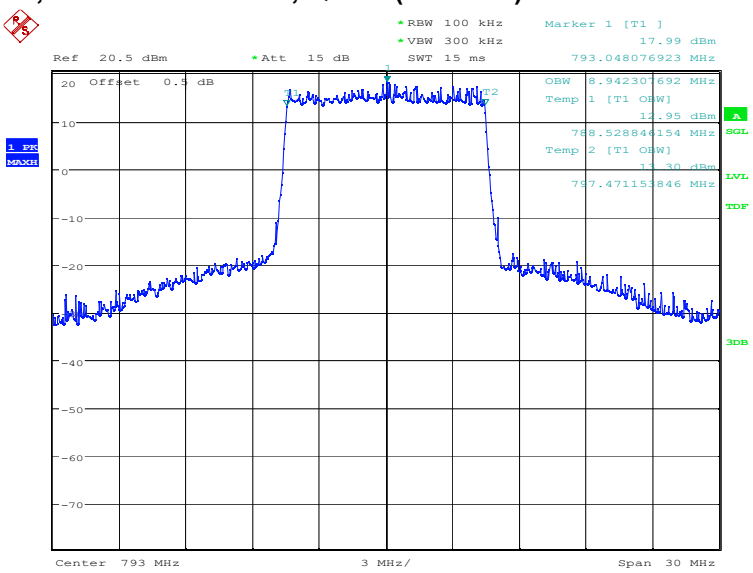


Date: 25.APR.2022 09:37:55

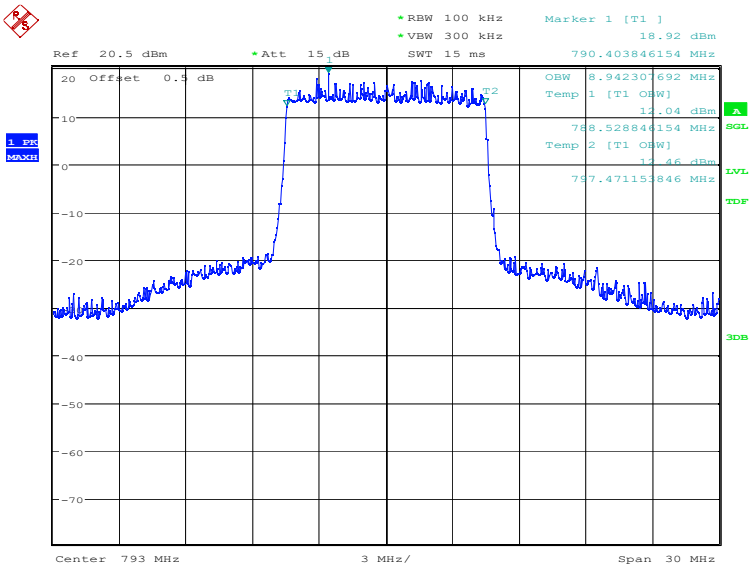
LTE band 14, 10MHz (99%)

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

LTE band 14, 10MHz Bandwidth, QPSK (99% BW)



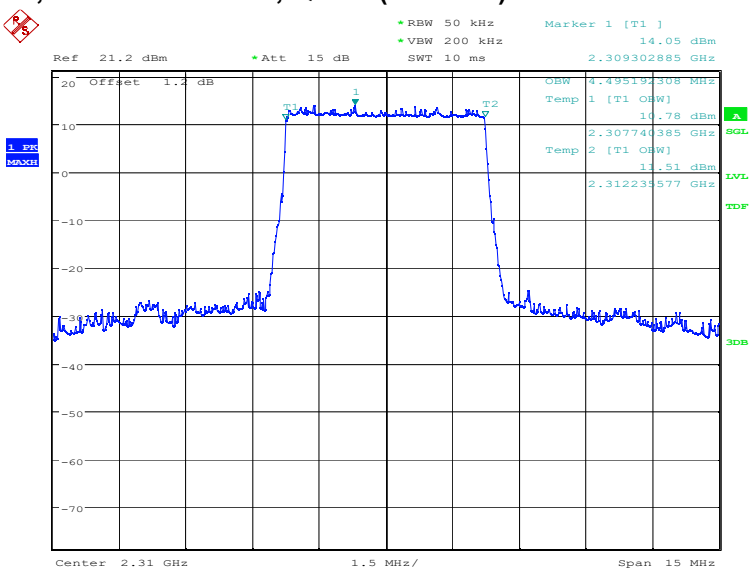
LTE band 14, 10MHz Bandwidth,16QAM (99% BW)



LTE band 30, 5MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2310.0	QPSK	16QAM
	4495.19	4519.23

LTE band 30, 5MHz Bandwidth, QPSK (99% BW)



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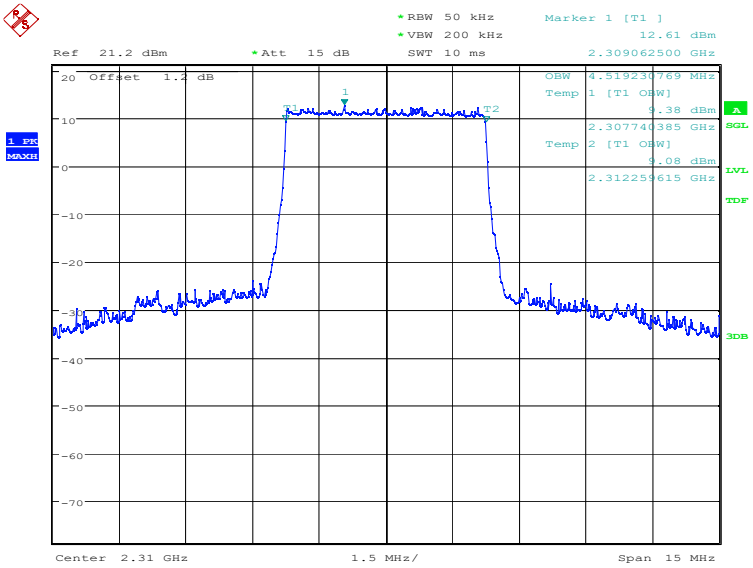
LTE band 30, 5MHz Bandwidth,16QAM (99% BW)

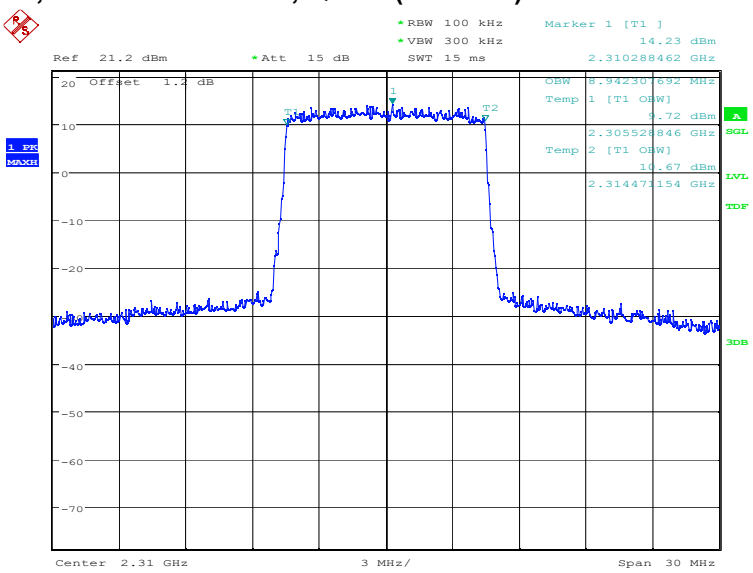


Date: 25.APR.2022 11:16:31

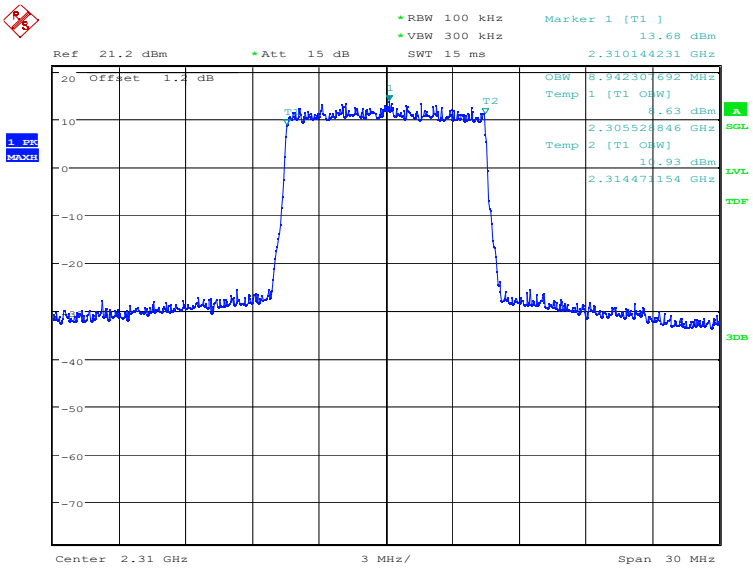
LTE band 30, 10MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2310.0	QPSK	16QAM
	8942.31	8942.31

LTE band 30, 10MHz Bandwidth, QPSK (99% BW)



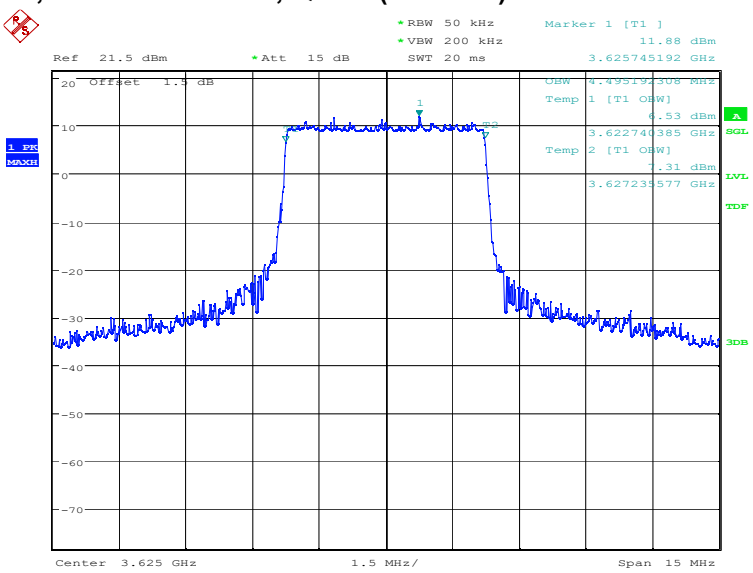
LTE band 30, 10MHz Bandwidth,16QAM (99% BW)



LTE band 48, 5MHz (99%)

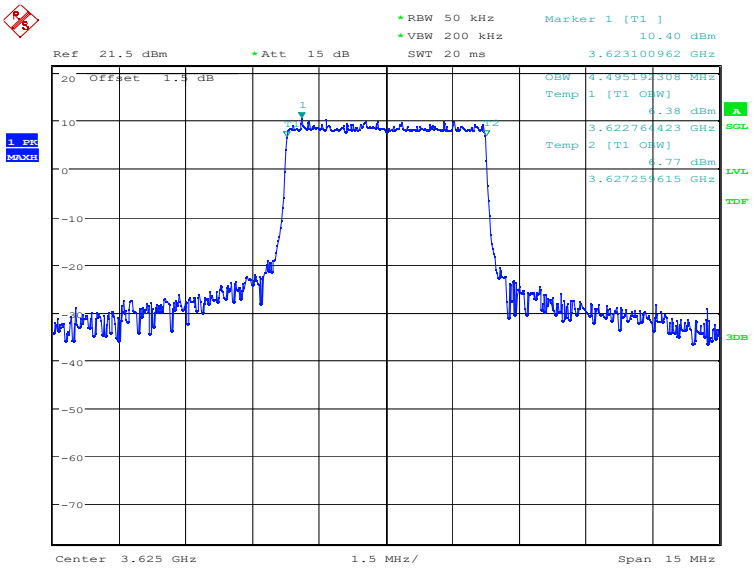
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 25.APR.2022 15:00:14

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

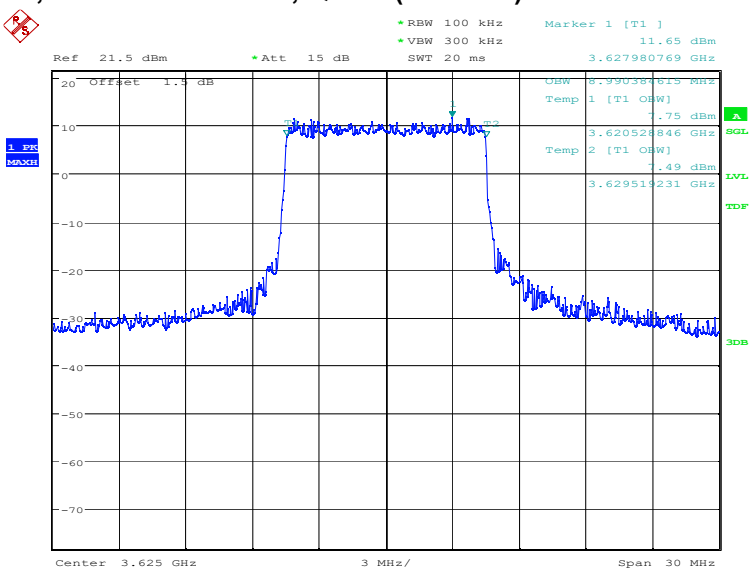


Date: 25.APR.2022 15:00:53

LTE band 48, 10MHz (99%)

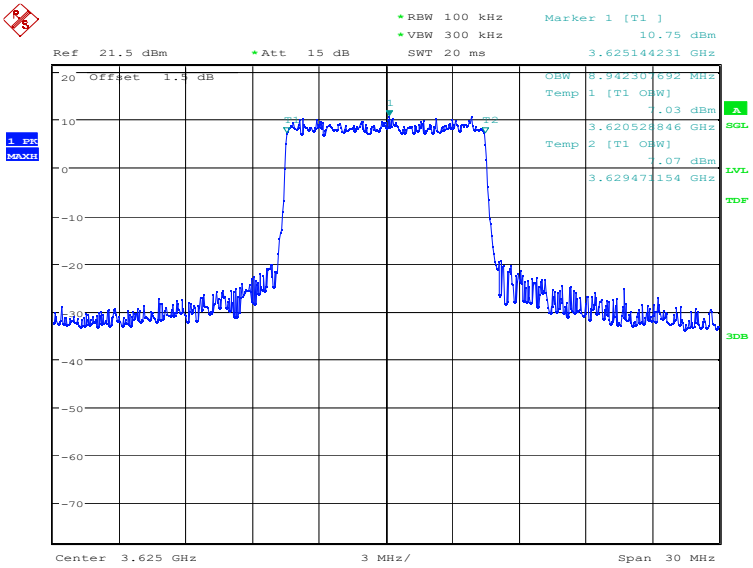
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	8990.38	8942.31

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



Date: 25.APR.2022 15:01:35

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

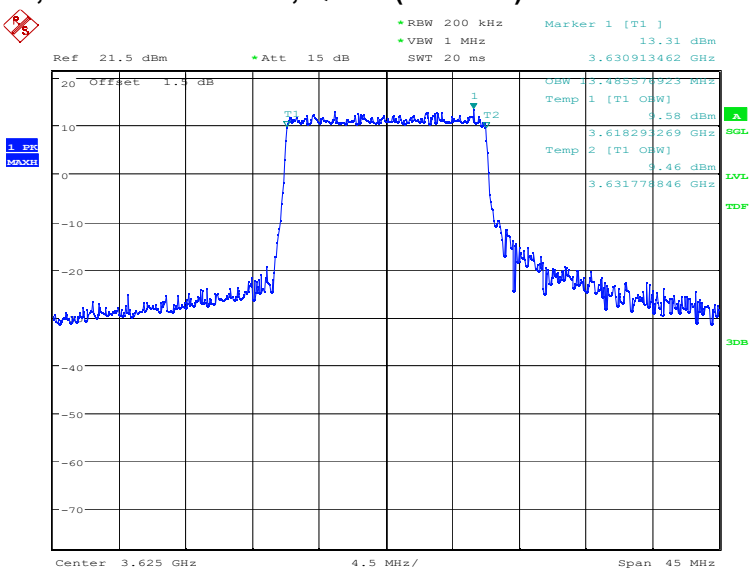


Date: 25.APR.2022 15:02:14

LTE band 48, 15MHz (99%)

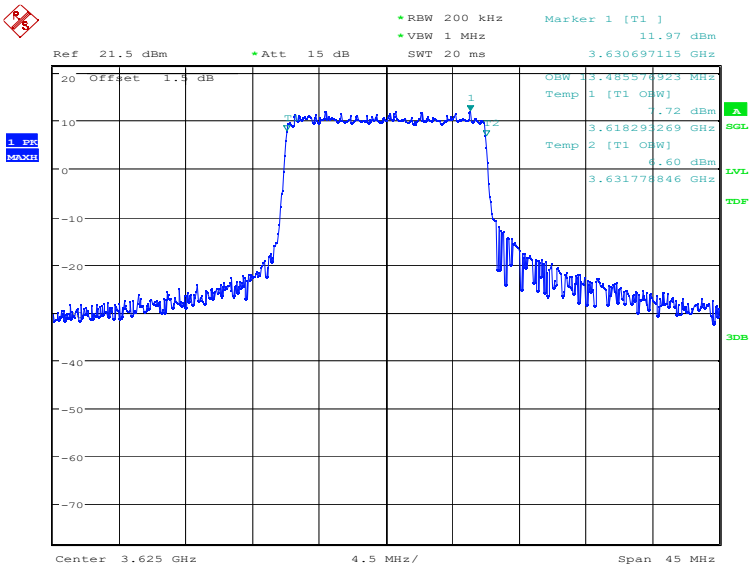
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 25.APR.2022 15:02:55

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

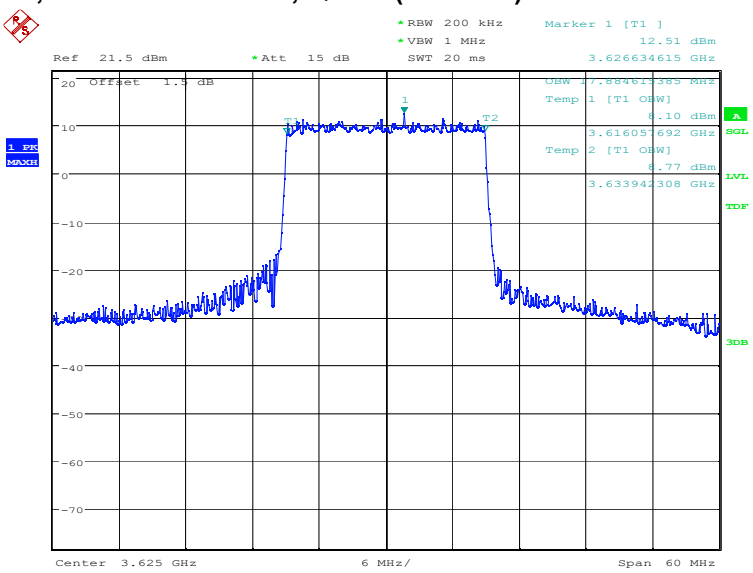


Date: 25.APR.2022 15:03:35

LTE band 48, 20MHz (99%)

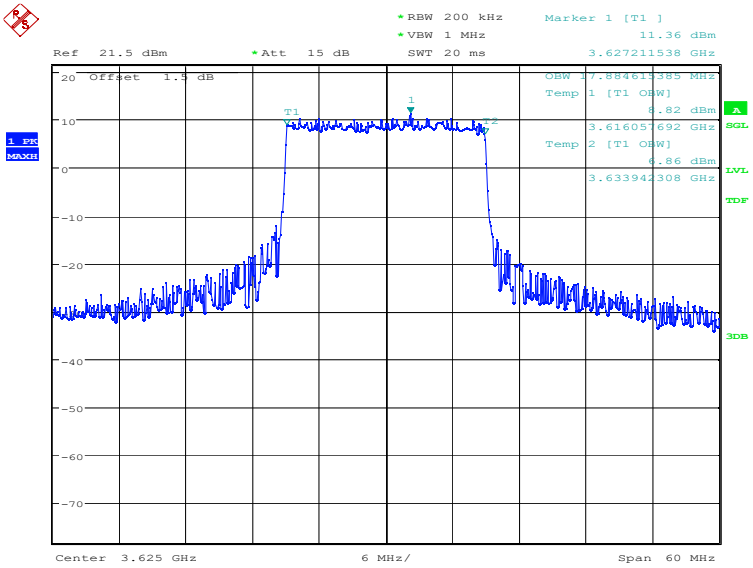
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	17884.62	17884.62

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



Date: 25.APR.2022 15:04:16

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

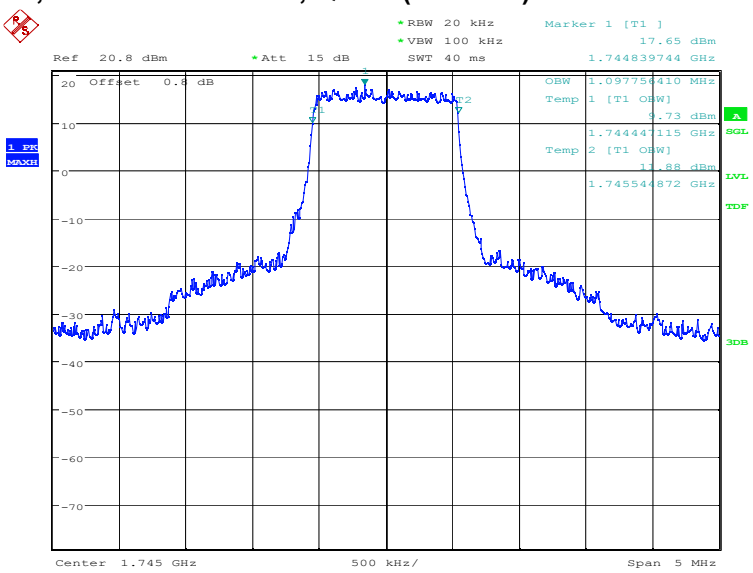


Date: 25.APR.2022 15:04:55

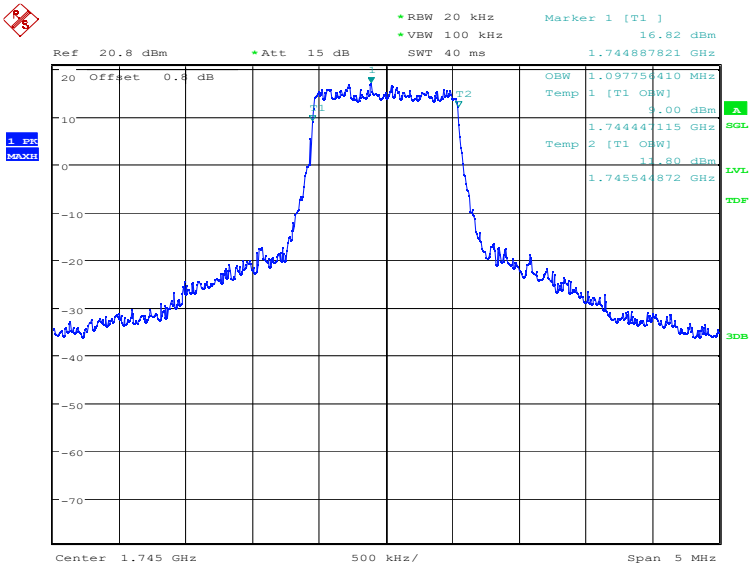
LTE band 66, 1.4MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	1097.76	1097.76

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



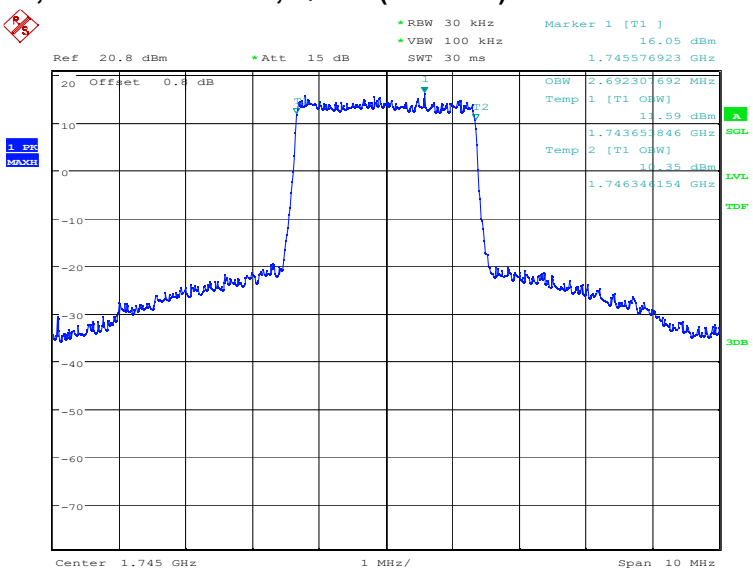
LTE band 66, 1.4MHz Bandwidth, 16QAM (99% BW)



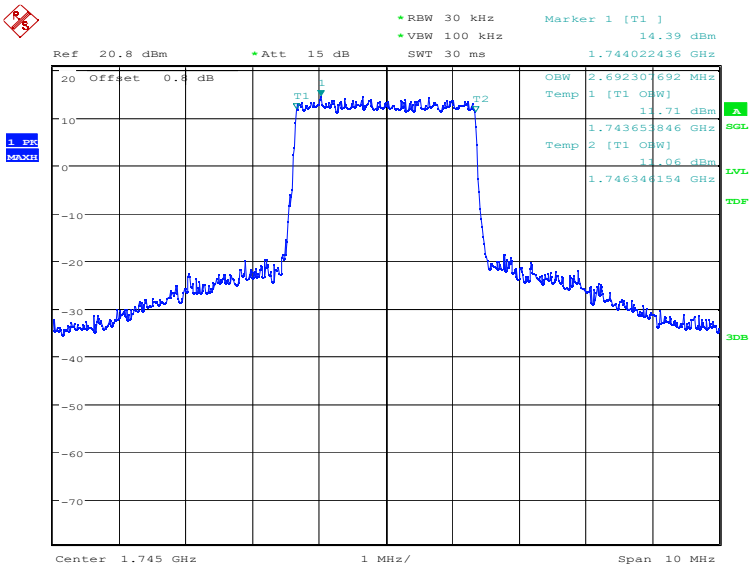
LTE band 66, 3MHz (99%)

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

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



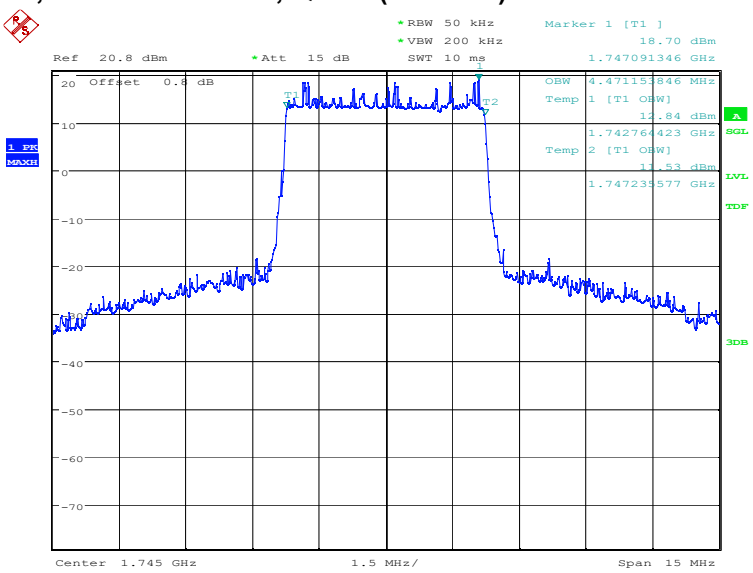
LTE band 66, 3MHz Bandwidth, 16QAM (99% BW)



LTE band 66, 5MHz (99%)

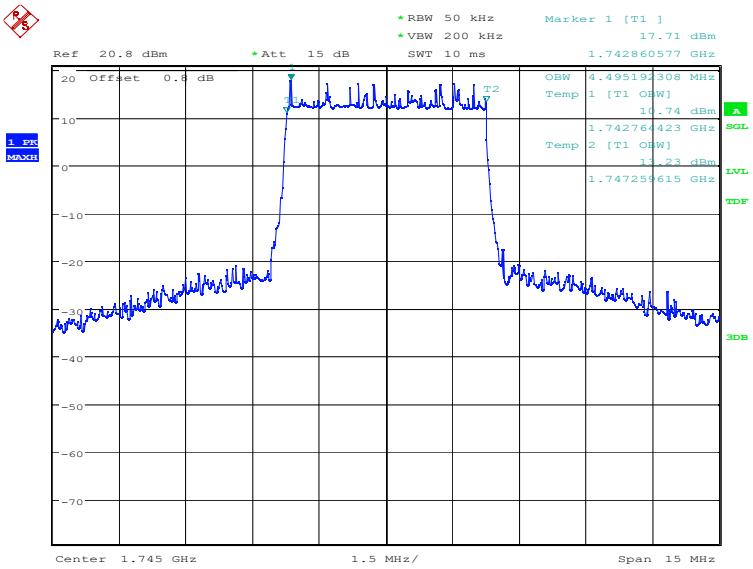
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	4471.15	4495.19

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



Date: 25.APR.2022 09:42:36

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

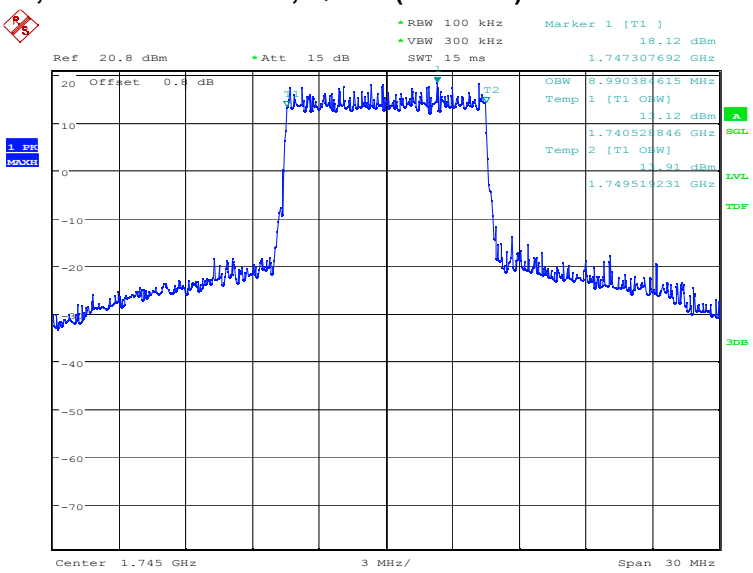


Date: 25.APR.2022 09:43:15

LTE band 66, 10MHz (99%)

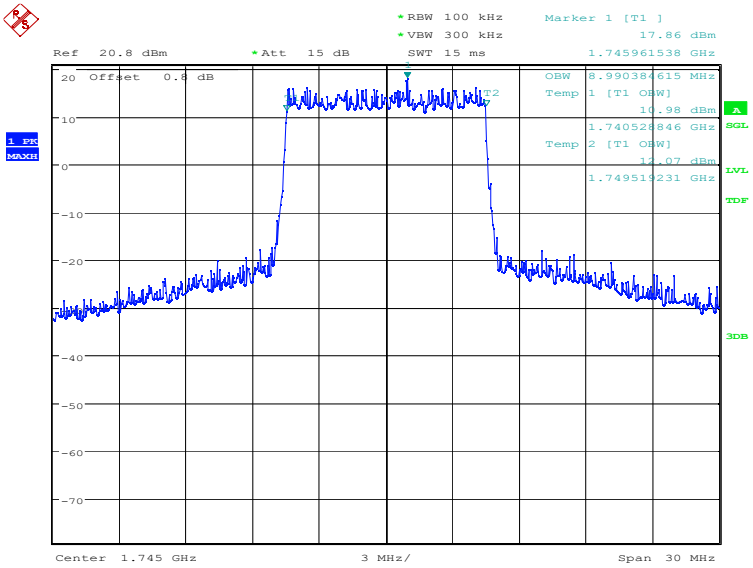
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	8990.38	8990.38

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



Date: 25.APR.2022 09:43:55

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

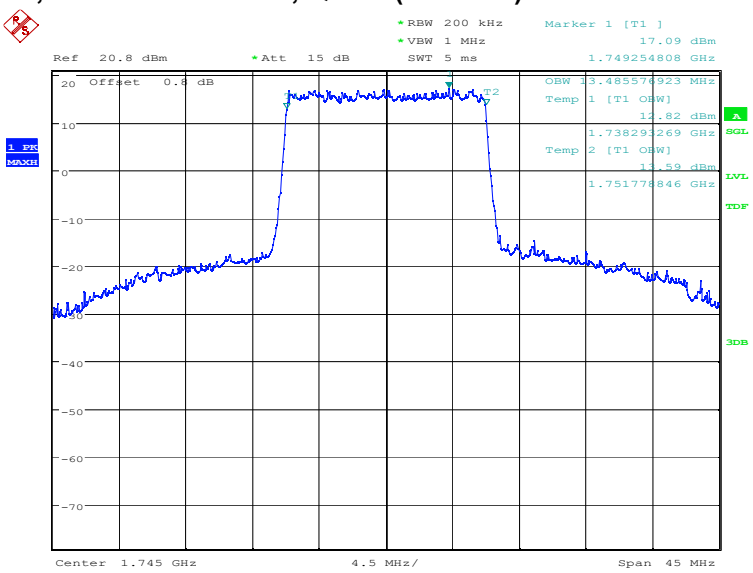


Date: 25.APR.2022 09:44:34

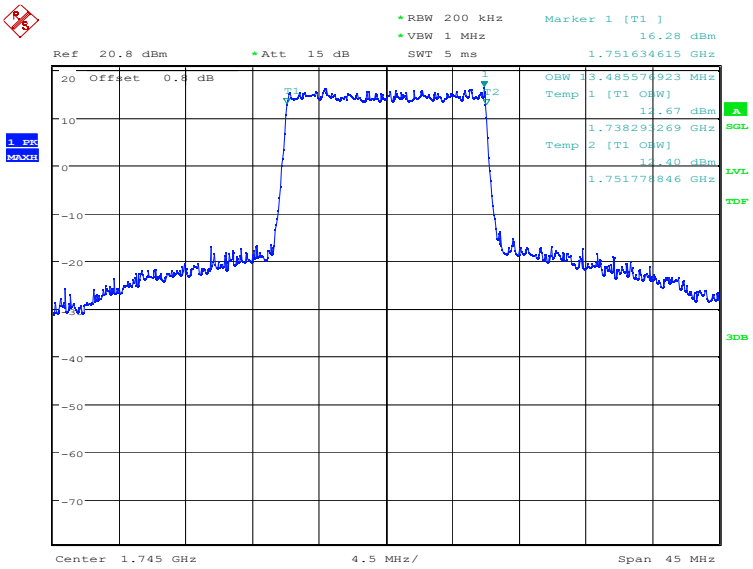
LTE band 66, 15MHz (99%)

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

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



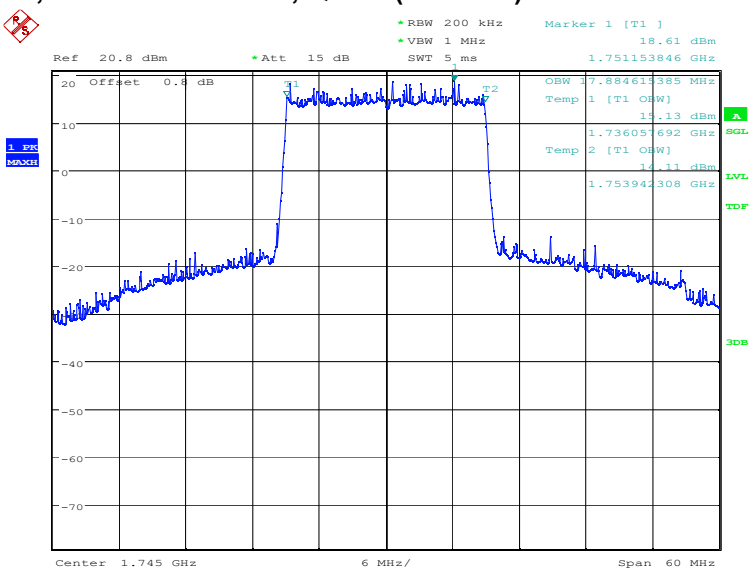
LTE band 66, 15MHz Bandwidth, 16QAM (99% BW)



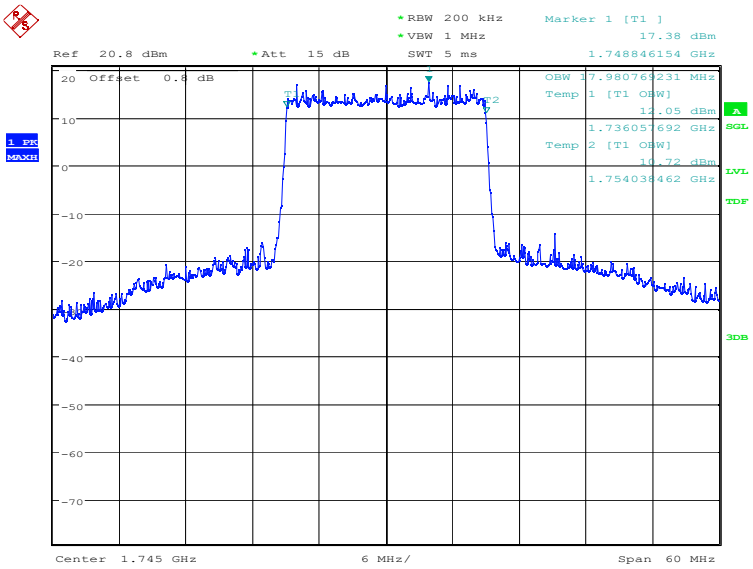
LTE band 66, 20MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	17884.62	17980.77

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



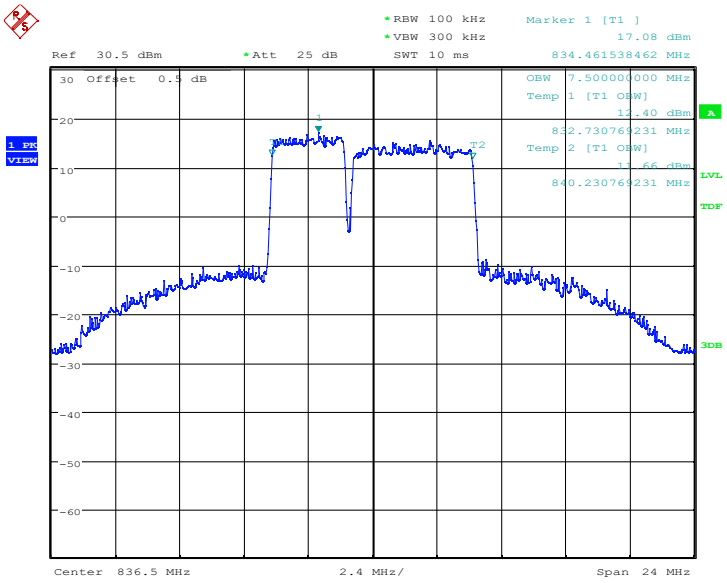
LTE band 66, 20MHz Bandwidth, 16QAM (99% BW)



LTE CA Band 5B , 3MHz+5MHz (99%)

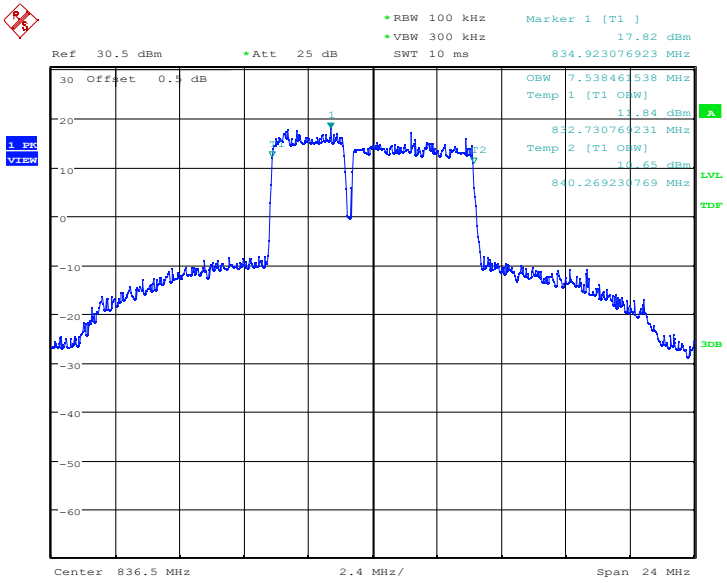
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
834.1	7.500	7.538

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



Date: 1.MAY.2022 07:27:11

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

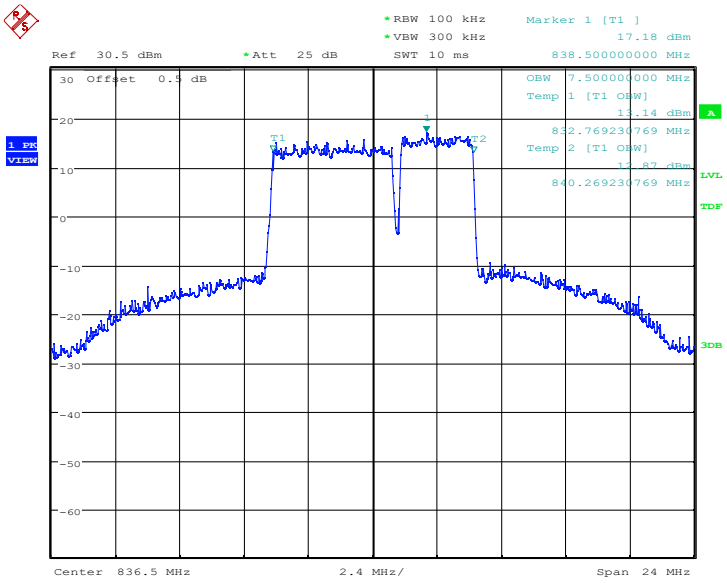


Date: 1.MAY.2022 07:27:33

LTE CA Band 5B , 5MHz+3MHz (99%)

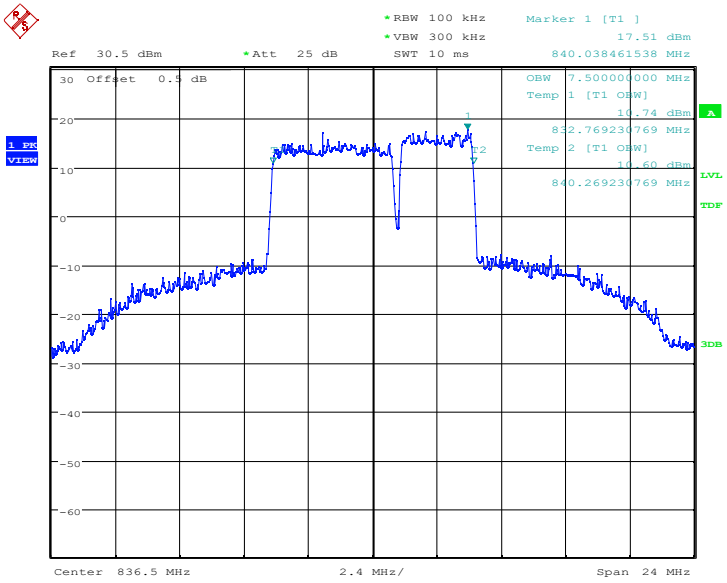
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
835	7.500	7.500

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



Date: 1.MAY.2022 07:28:28

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

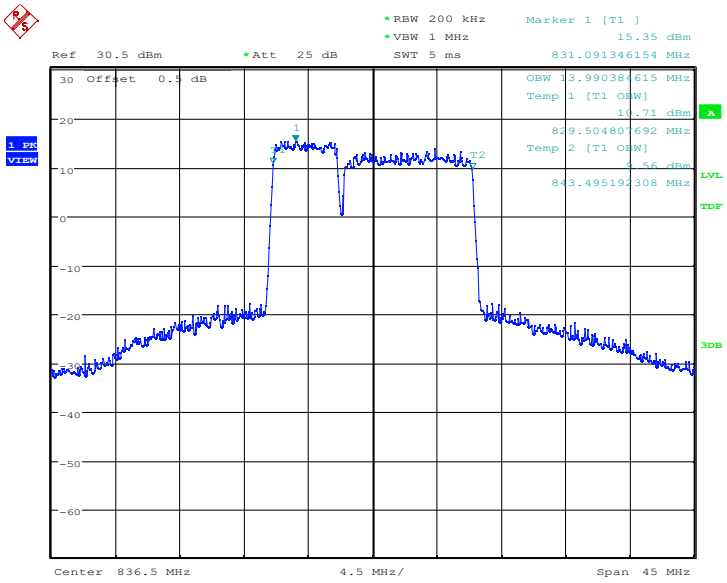


Date: 1.MAY.2022 07:28:50

LTE CA Band 5B , 5MHz+10MHz (99%)

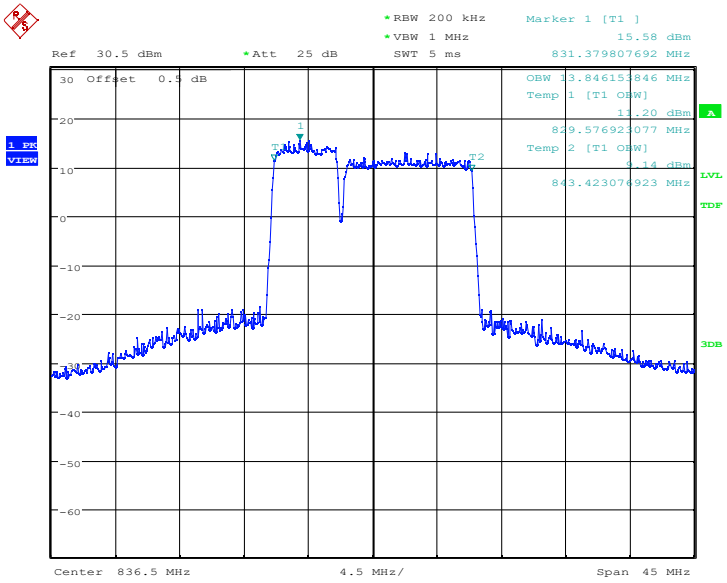
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
831.8	13.990	13.846

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



Date: 1.MAY.2022 07:29:43

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

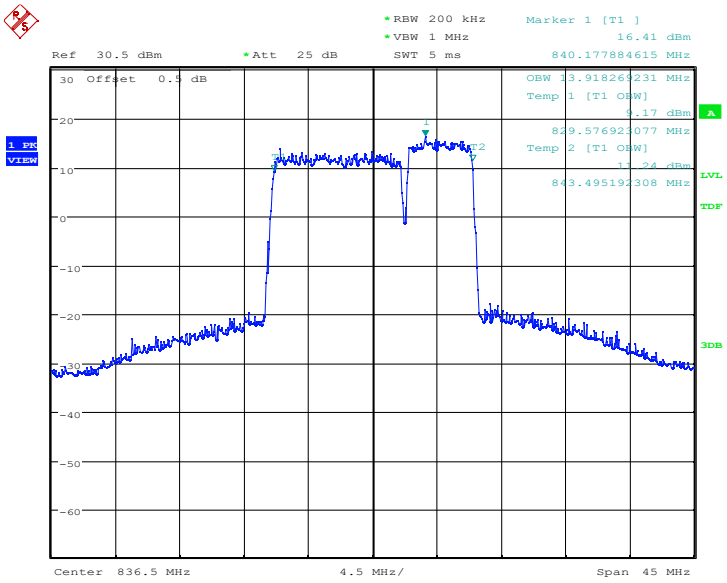


Date: 1.MAY.2022 07:30:05

LTE CA Band 5B , 10MHz+5MHz (99%)

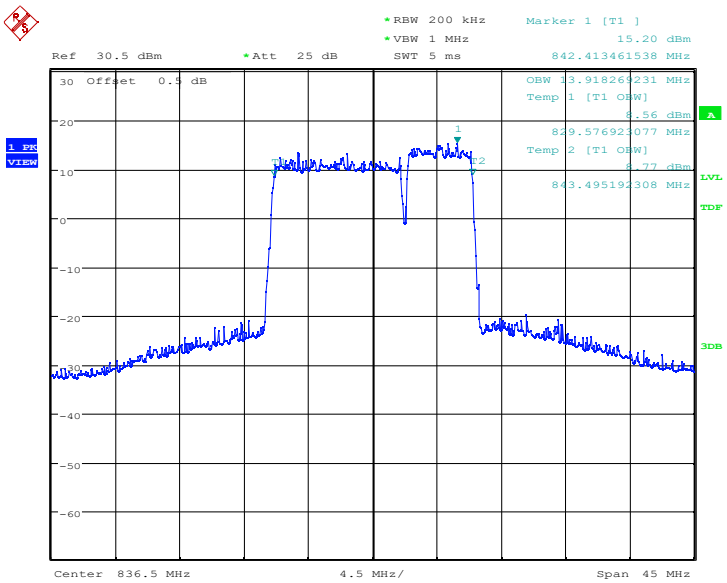
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
834	13.918	13.918

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



Date: 1.MAY.2022 07:31:00

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

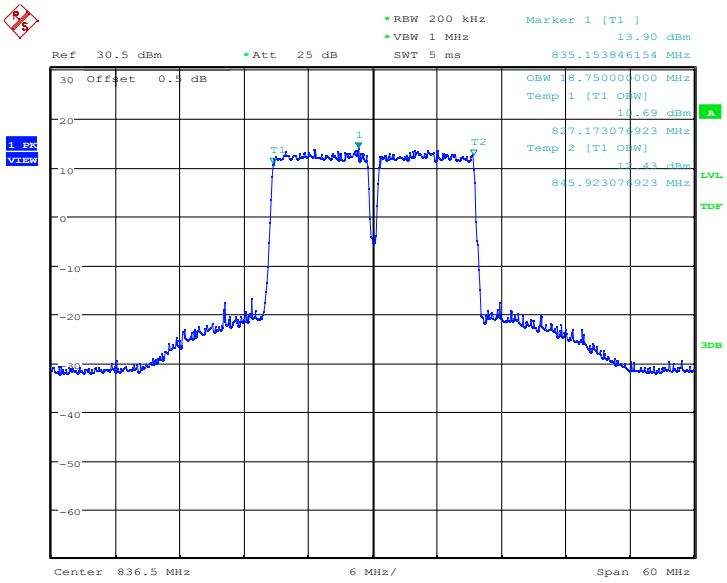


Date: 1.MAY.2022 07:31:22

LTE CA Band 5B , 10MHz+10MHz (99%)

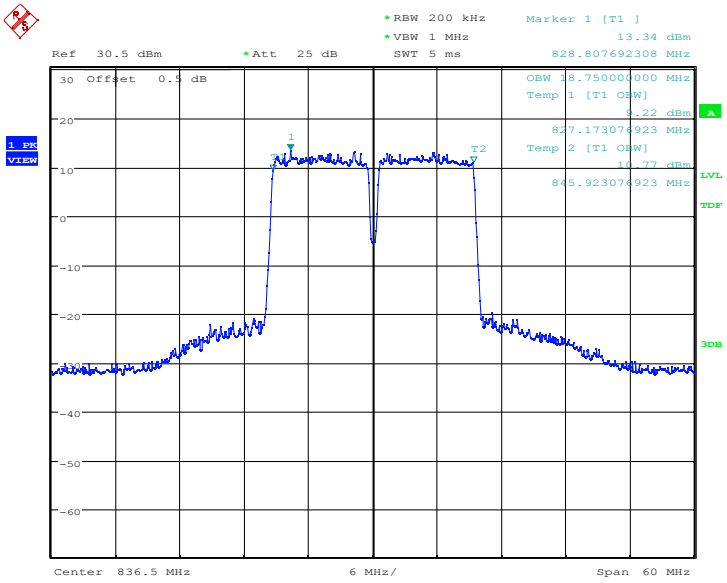
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
831.6	18.750	18.750

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



Date: 1.MAY.2022 07:32:16

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



Date: 1.MAY.2022 07:32:38

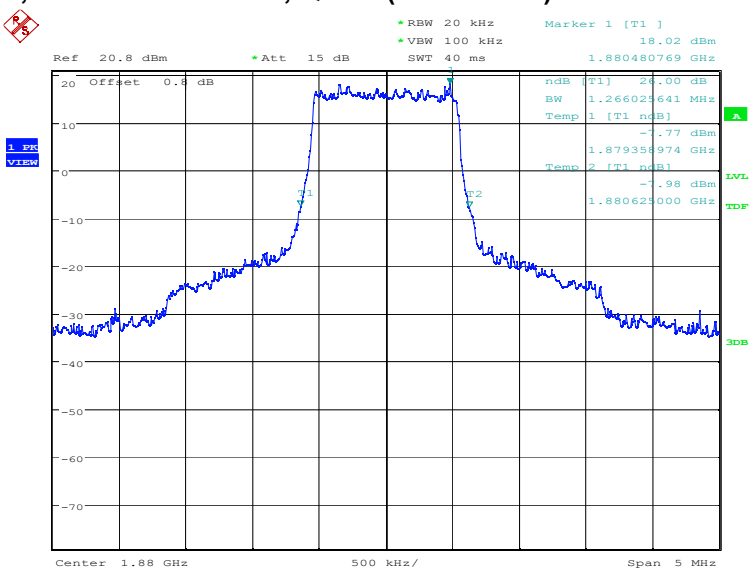
A.5 Emission Bandwidth

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 ≥ 3 × RBW.
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
d) 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, 1.4MHz (-26dBc)

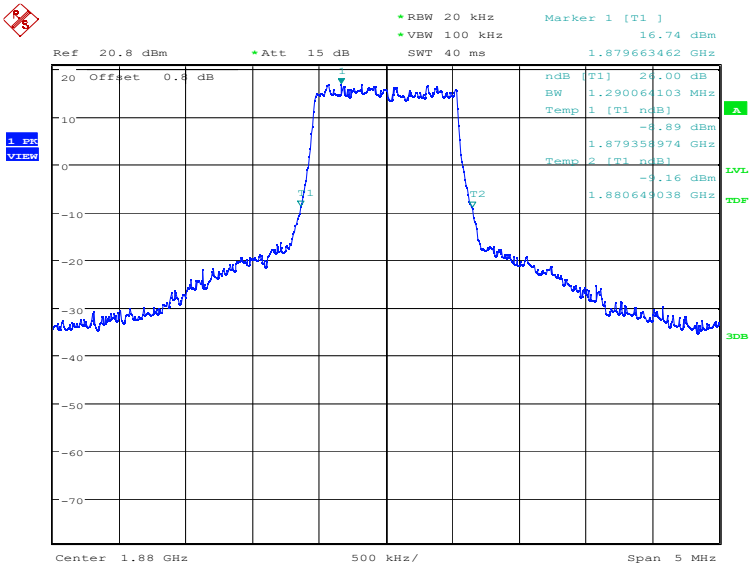
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	1266.03	1290.06

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



Date: 25.APR.2022 09:48:31

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

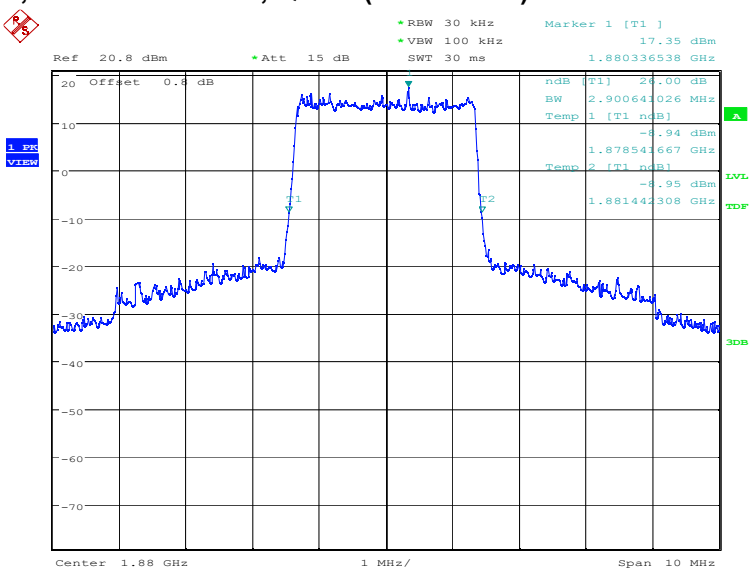


Date: 25.APR.2022 09:49:10

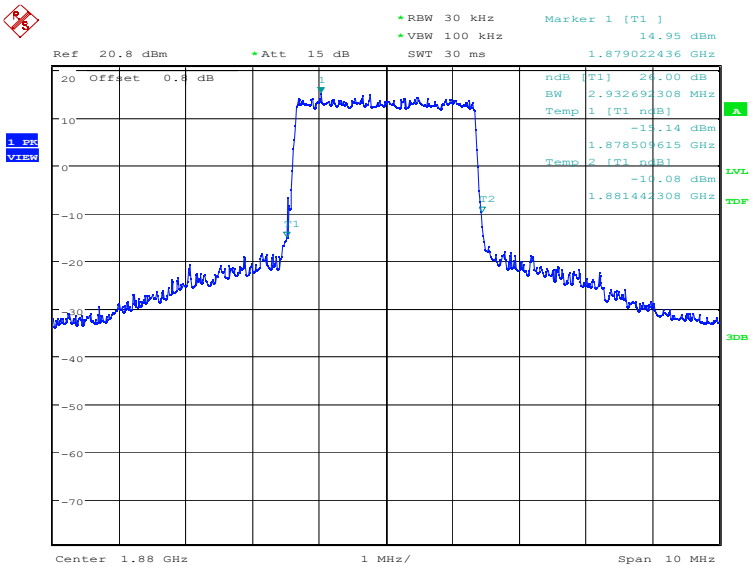
LTE band 2, 3MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	2900.64	2932.69

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



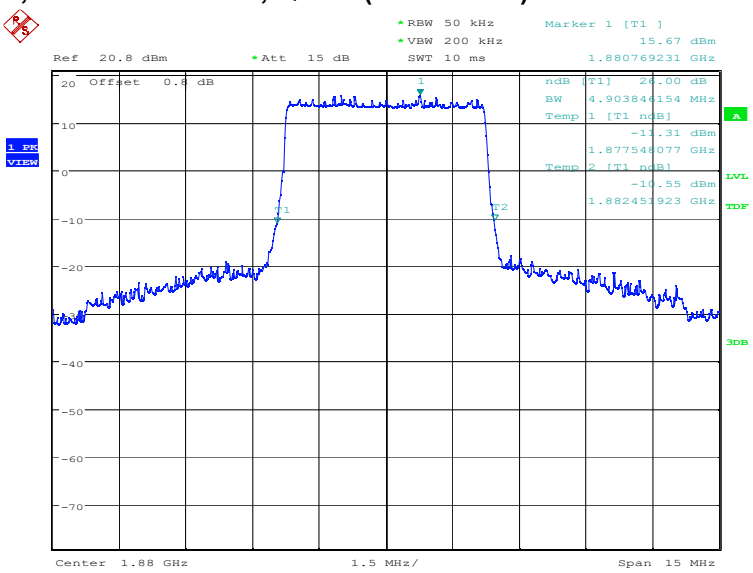
LTE band 2, 3MHz Bandwidth, 16QAM (-26dBc BW)



LTE band 2, 5MHz (-26dBc)

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

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



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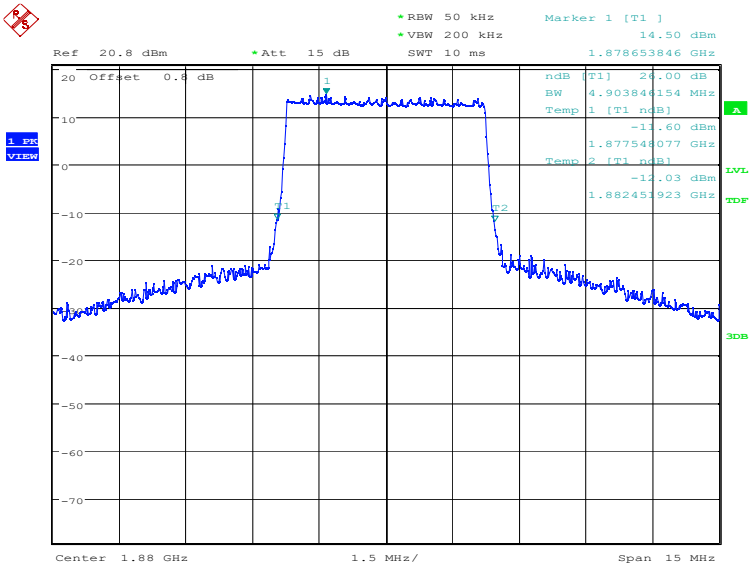
LTE band 2, 5MHz Bandwidth, 16QAM (-26dBc BW)

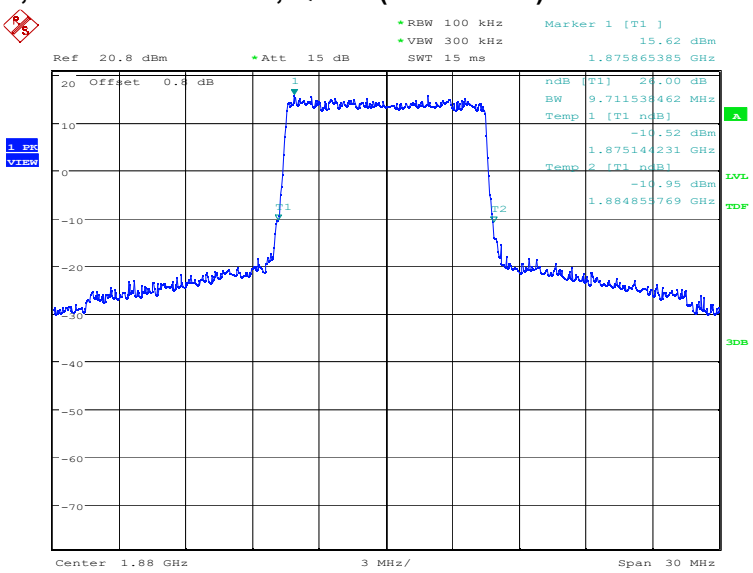


Date: 25.APR.2022 09:51:52

LTE band 2, 10MHz (-26dBc)

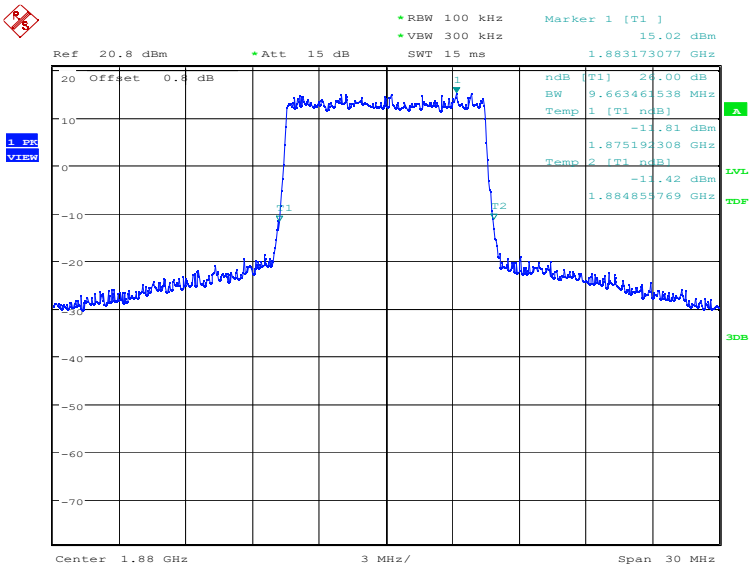
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	9711.54	9663.46

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



Date: 25.APR.2022 09:52:34

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

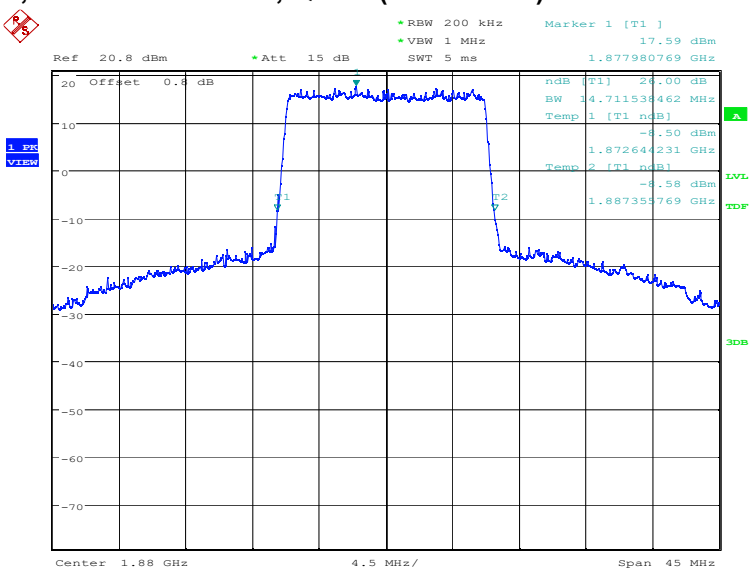


Date: 25.APR.2022 09:53:13

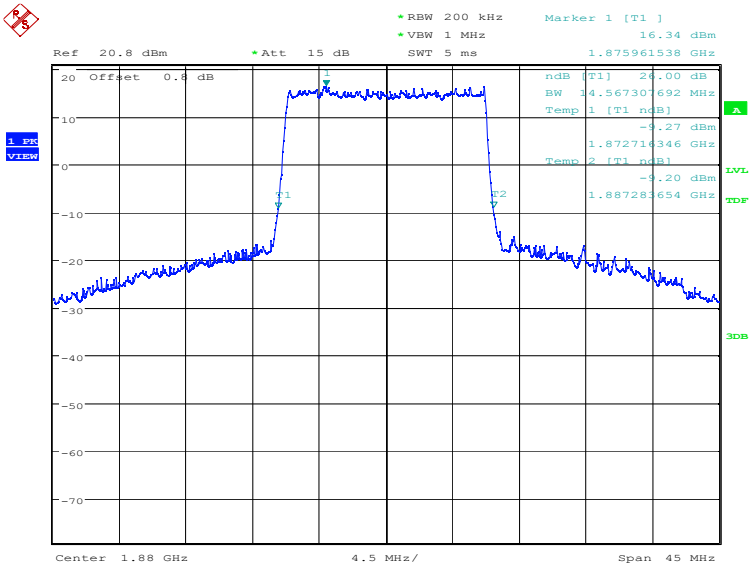
LTE band 2, 15MHz (-26dBc)

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

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



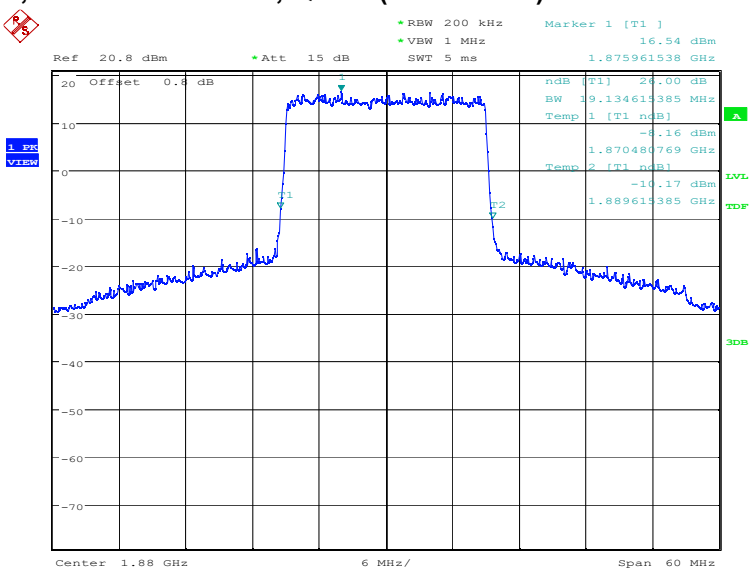
LTE band 2, 15MHz Bandwidth, 16QAM (-26dBc BW)



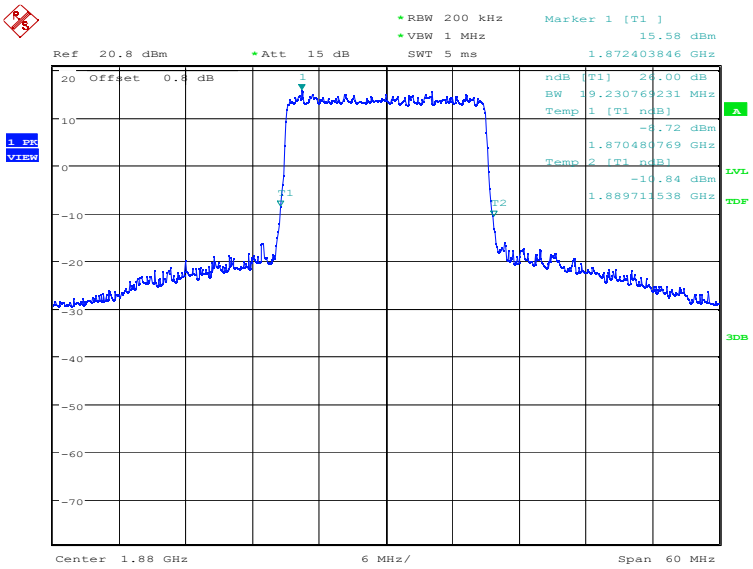
LTE band 2, 20MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	19134.62	19230.77

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



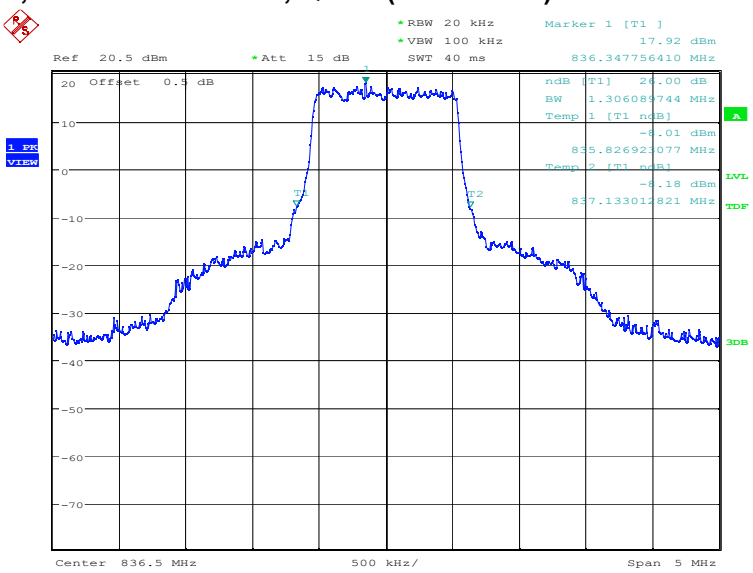
LTE band 2, 20MHz Bandwidth, 16QAM (-26dBc BW)



LTE band 5, 1.4MHz (-26dBc)

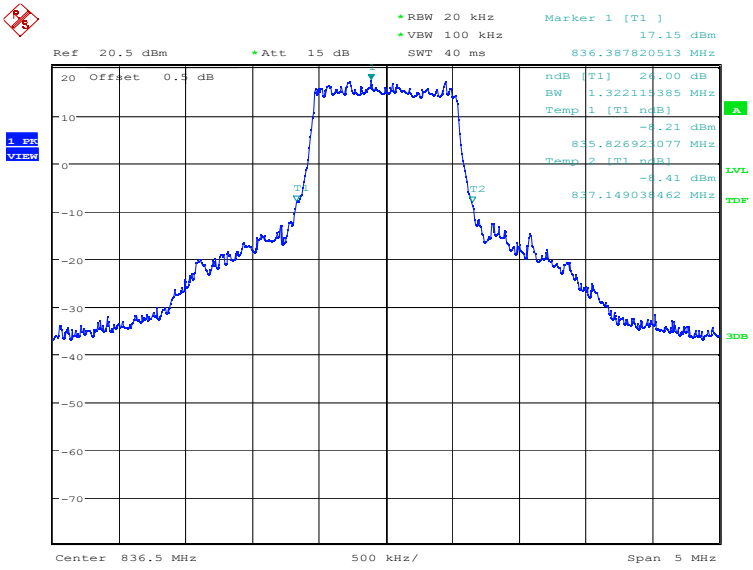
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	1306.09	1322.12

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



Date: 25.APR.2022 09:56:37

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

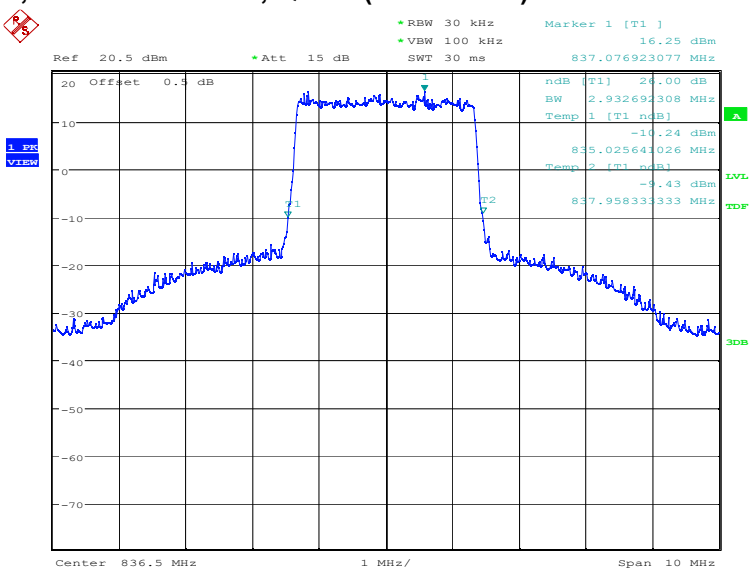


Date: 25.APR.2022 09:57:16

LTE band 5, 3MHz (-26dBc)

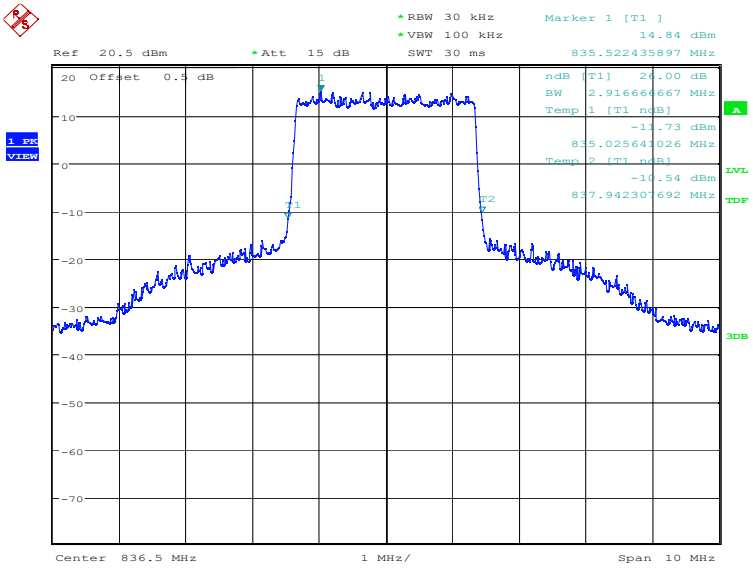
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	2932.69	2916.67

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



Date: 25.APR.2022 09:57:58

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

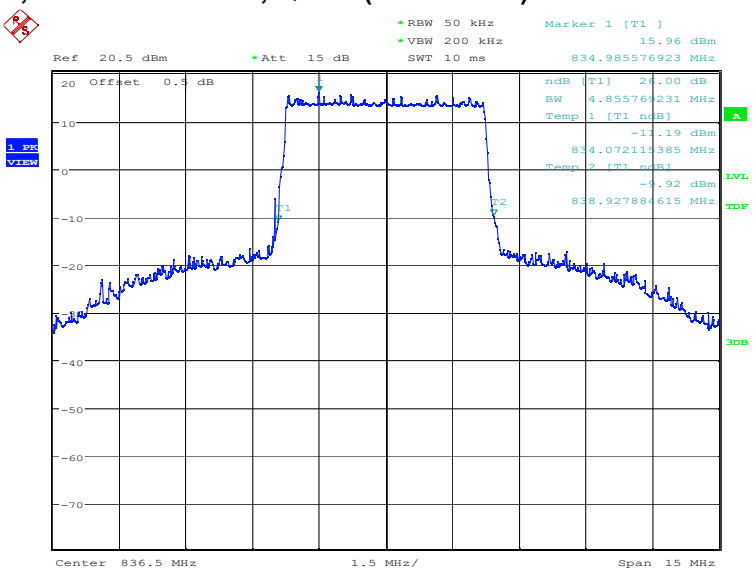


Date: 25.APR.2022 09:58:37

LTE band 5, 5MHz (-26dBc)

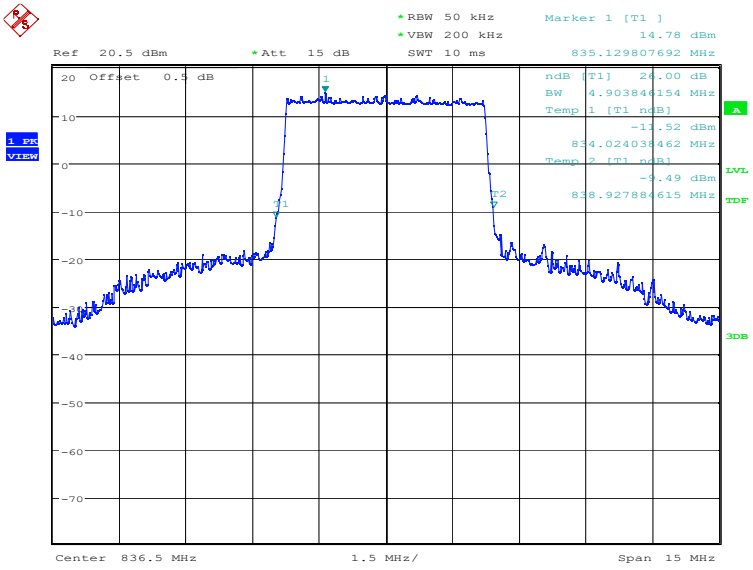
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	4855.77	4903.85

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



Date: 25.APR.2022 09:59:18

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

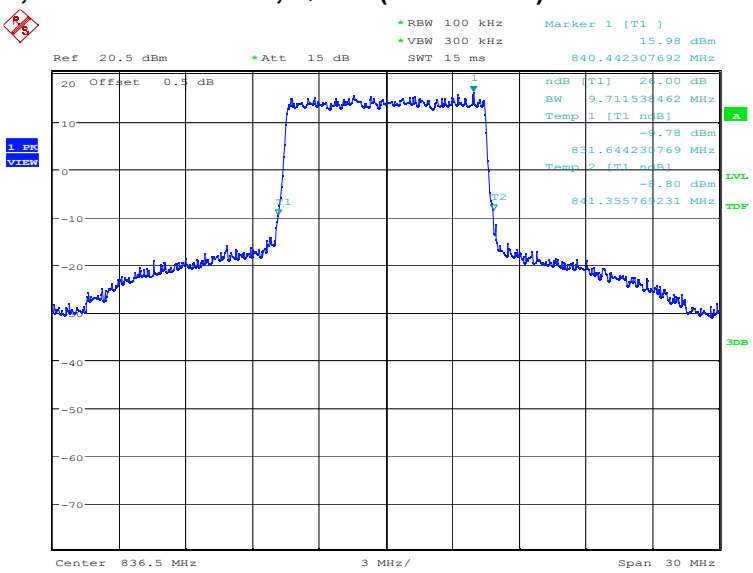


Date: 25.APR.2022 09:59:58

LTE band 5, 10MHz (-26dBc)

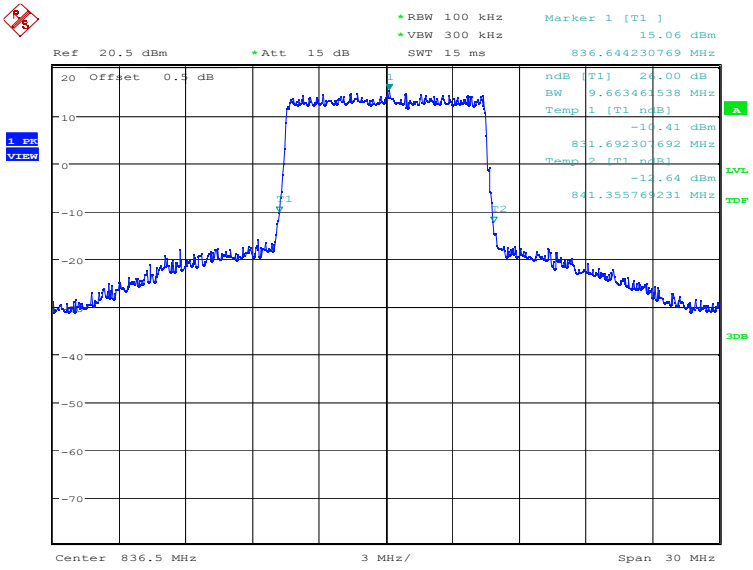
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	9711.54	9663.46

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



Date: 25.APR.2022 10:00:39

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

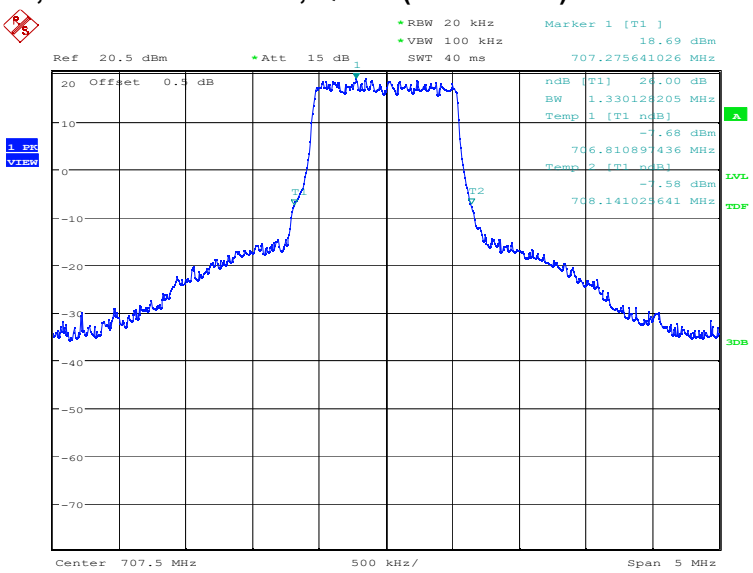


Date: 25.APR.2022 10:01:19

LTE band 12, 1.4MHz (-26dBc)

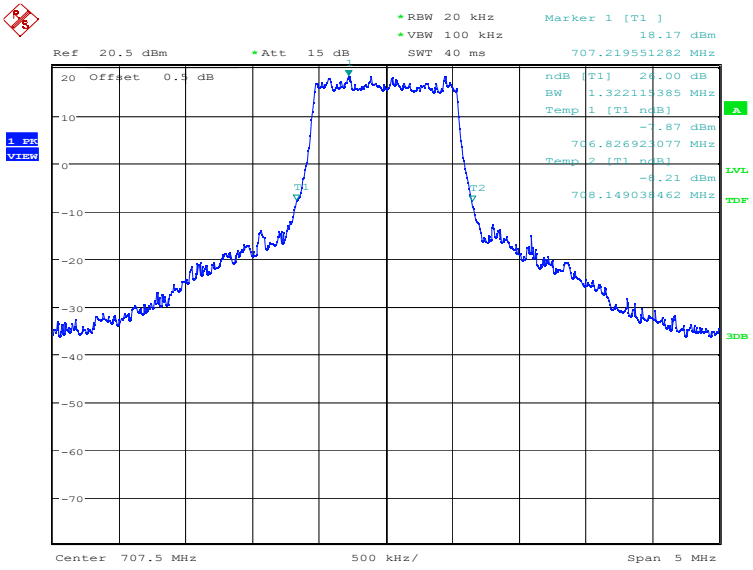
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	1330.13	1322.12

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



Date: 25.APR.2022 10:02:02

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

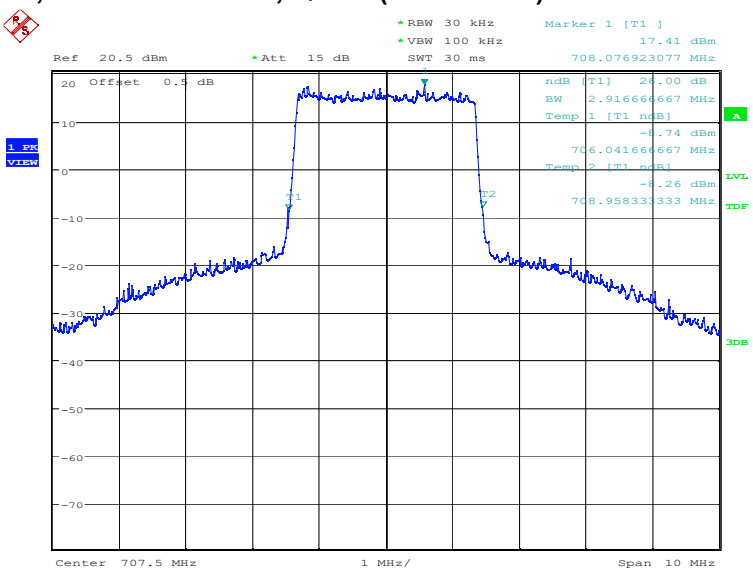


Date: 25.APR.2022 10:02:42

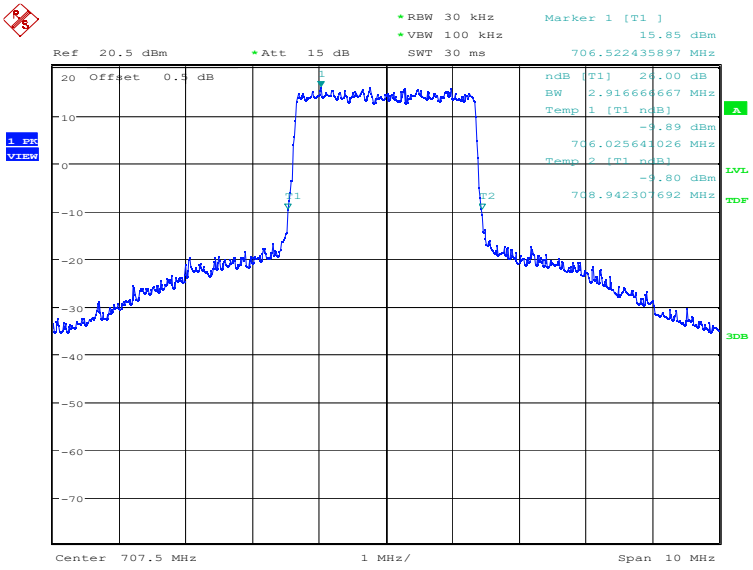
LTE band 12, 3MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	2916.67	2916.67

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



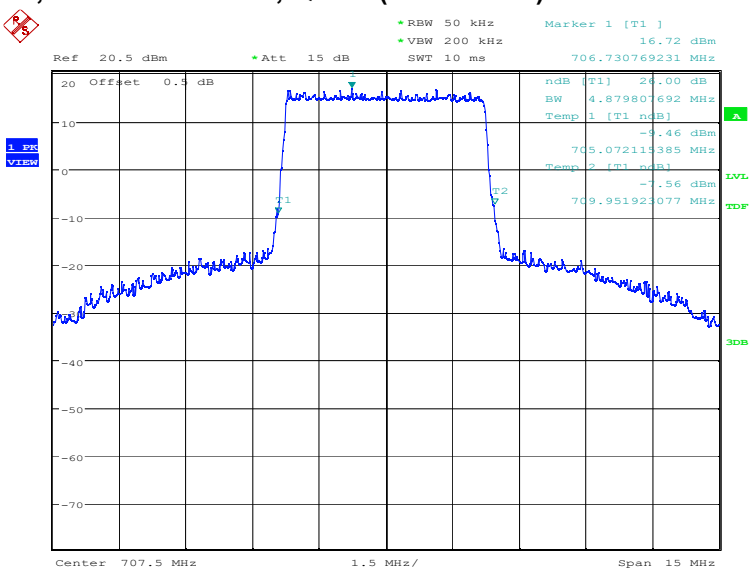
LTE band 12, 3MHz Bandwidth, 16QAM (-26dBc BW)



LTE band 12, 5MHz (-26dBc)

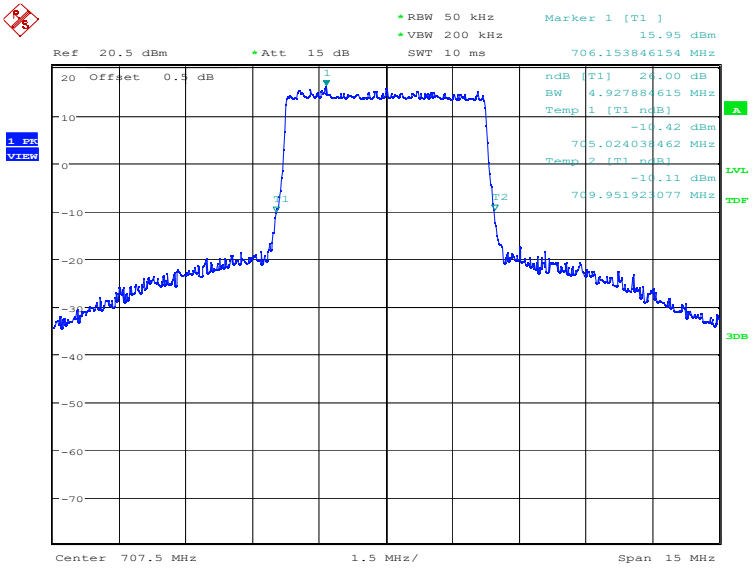
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	4879.81	4927.88

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



Date: 25.APR.2022 10:04:44

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

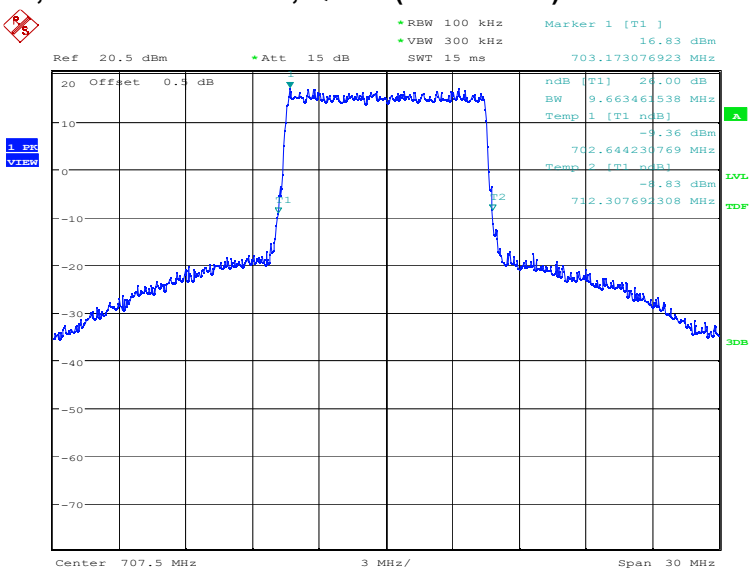


Date: 25.APR.2022 10:05:24

LTE band 12, 10MHz (-26dBc)

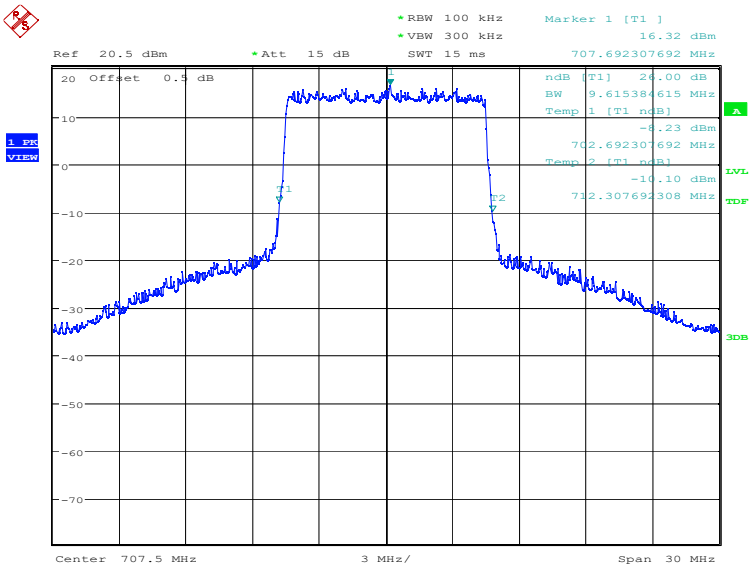
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	9663.46	9615.38

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



Date: 25.APR.2022 10:06:05

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

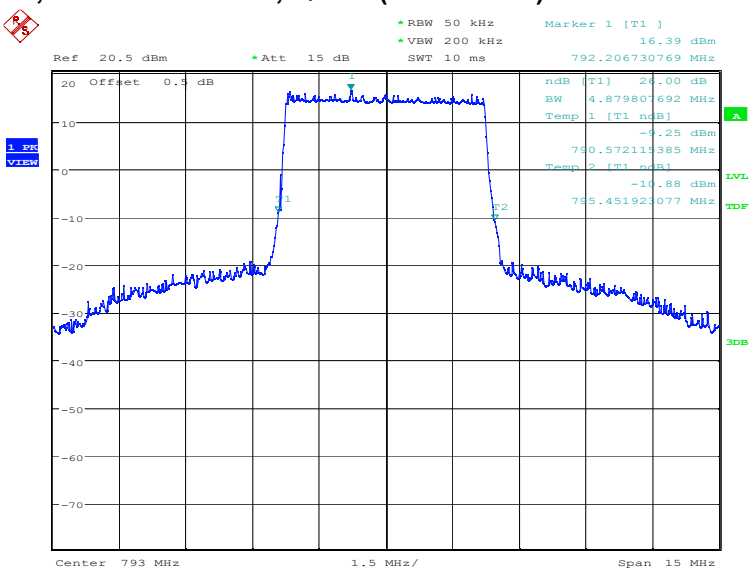


Date: 25.APR.2022 10:06:45

LTE band 14, 5MHz (-26dBc)

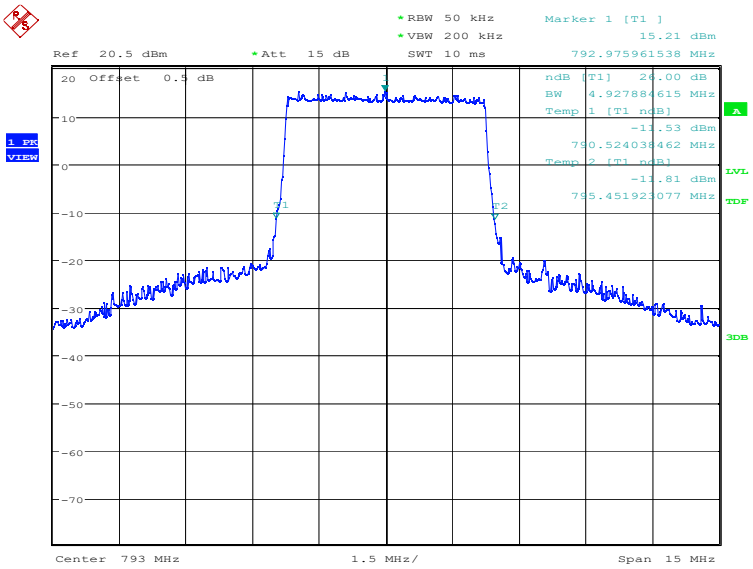
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
793.0	QPSK	16QAM
	4879.81	4927.88

LTE band 14, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 25.APR.2022 10:07:28

LTE band 14, 5MHz Bandwidth,16QAM (-26dBc BW)

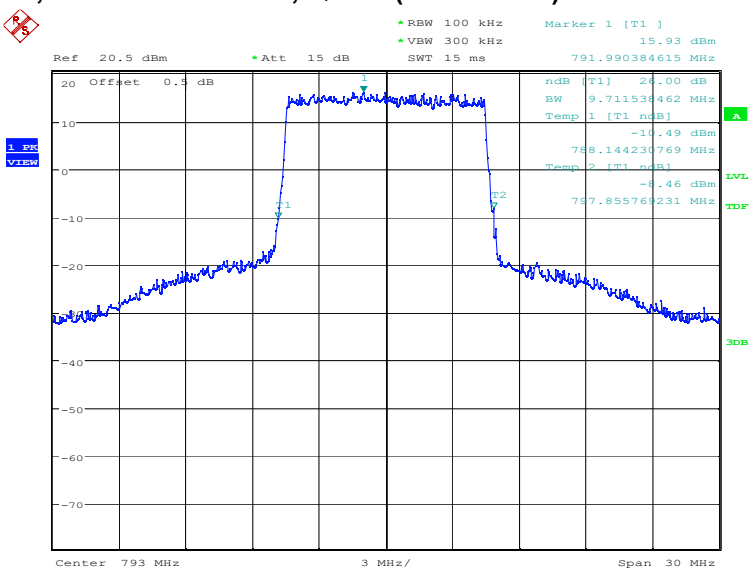


Date: 25.APR.2022 10:08:07

LTE band 14, 10MHz (-26dBc)

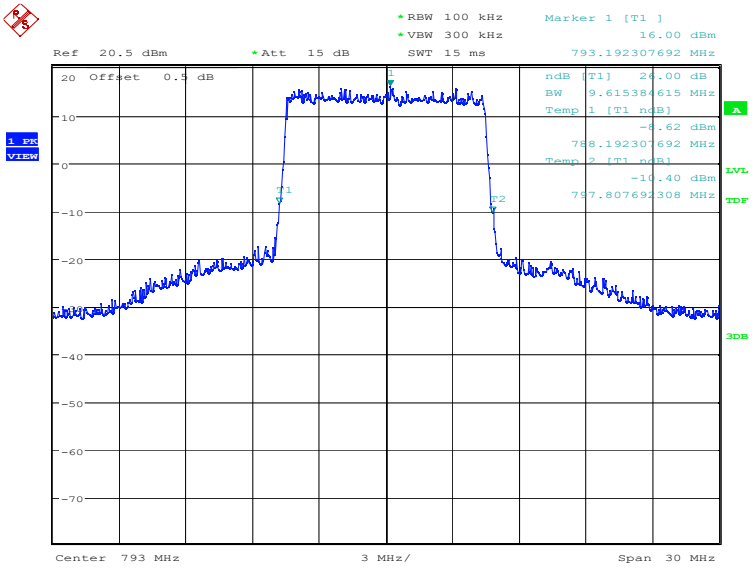
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
793.0	QPSK	16QAM
	9711.54	9615.38

LTE band 14, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 25.APR.2022 10:08:49

LTE band 14, 10MHz Bandwidth,16QAM (-26dBc BW)

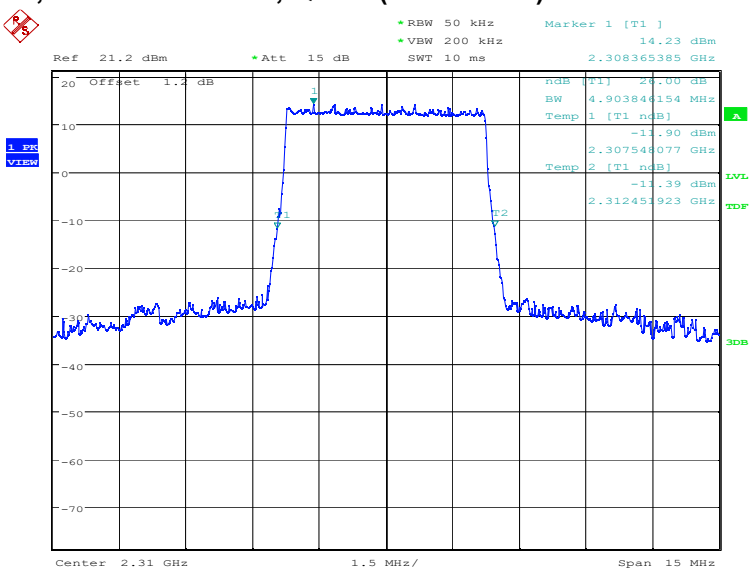


Date: 25.APR.2022 10:09:28

LTE band 30, 5MHz (-26dBc)

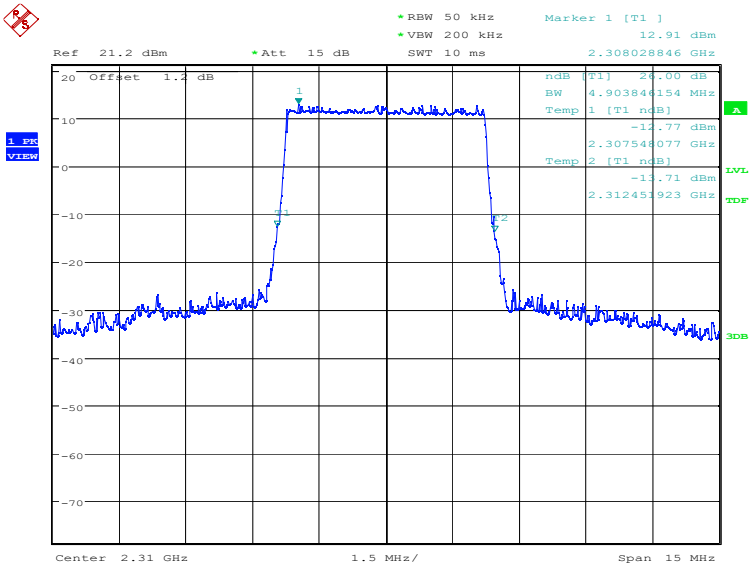
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2310.0	QPSK	16QAM
	4903.85	4903.85

LTE band 30, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 25.APR.2022 11:19:10

LTE band 30, 5MHz Bandwidth,16QAM (-26dBc BW)

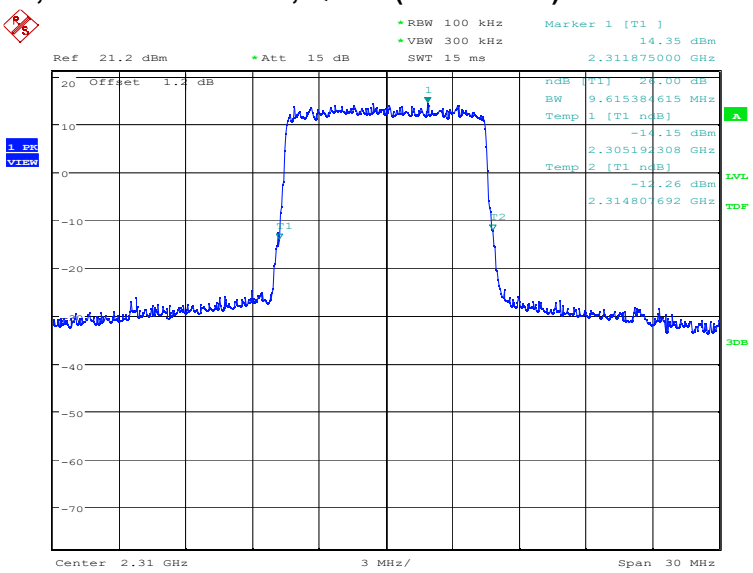


Date: 25.APR.2022 11:19:50

LTE band 30, 10MHz (-26dBc)

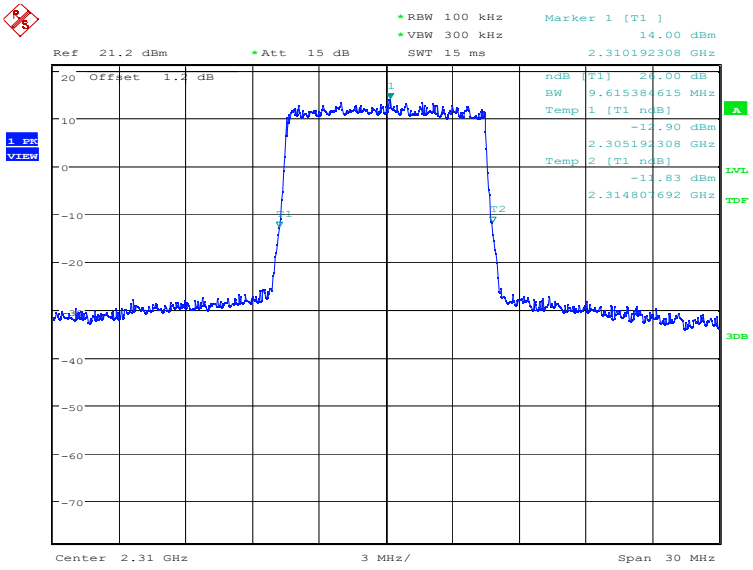
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2310.0	QPSK	16QAM
	9615.38	9615.38

LTE band 30, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 25.APR.2022 11:20:31

LTE band 30, 10MHz Bandwidth,16QAM (-26dBc BW)

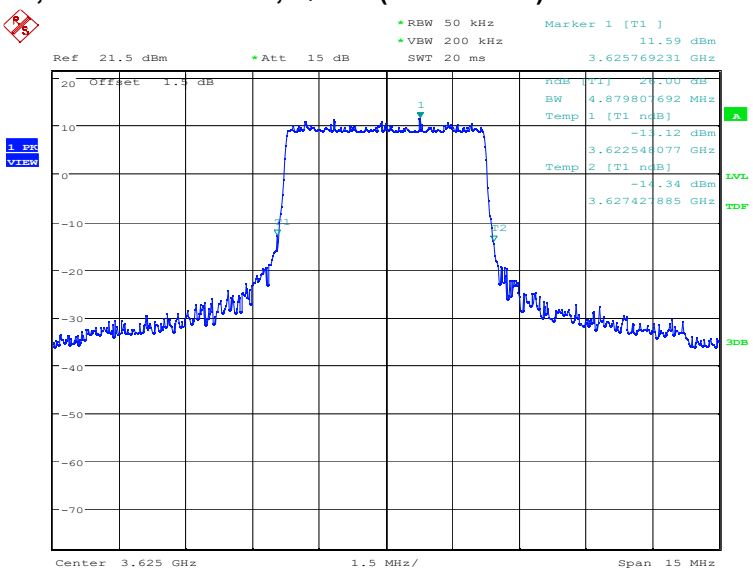


Date: 25.APR.2022 11:21:11

LTE band 48, 5MHz (-26dBc)

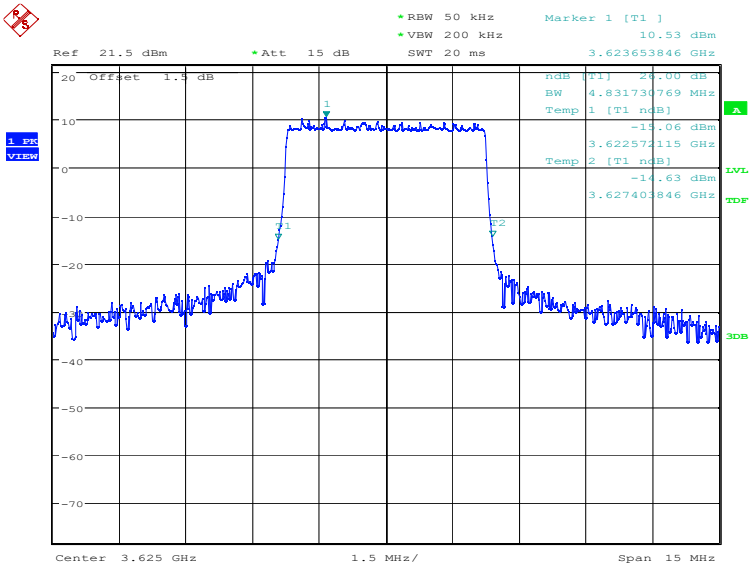
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	QPSK	16QAM
3625.0	4879.81	4831.73

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



Date: 25.APR.2022 15:06:30

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

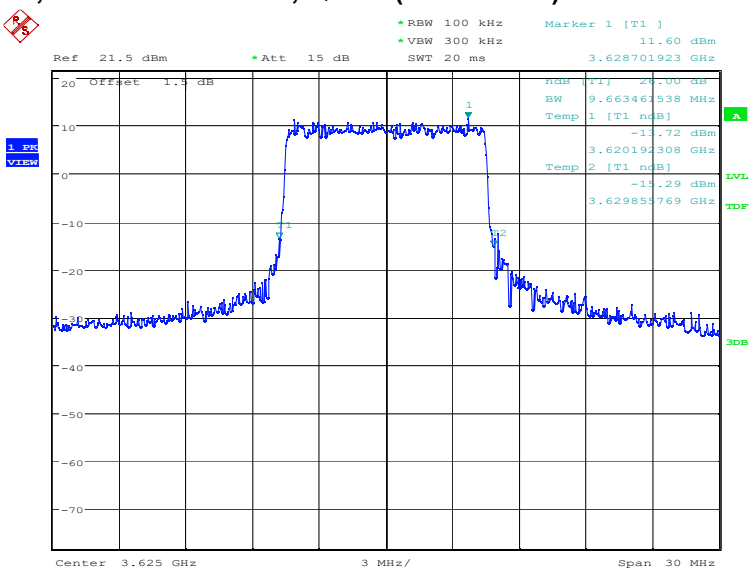


Date: 25.APR.2022 15:07:10

LTE band 48, 10MHz (-26dBc)

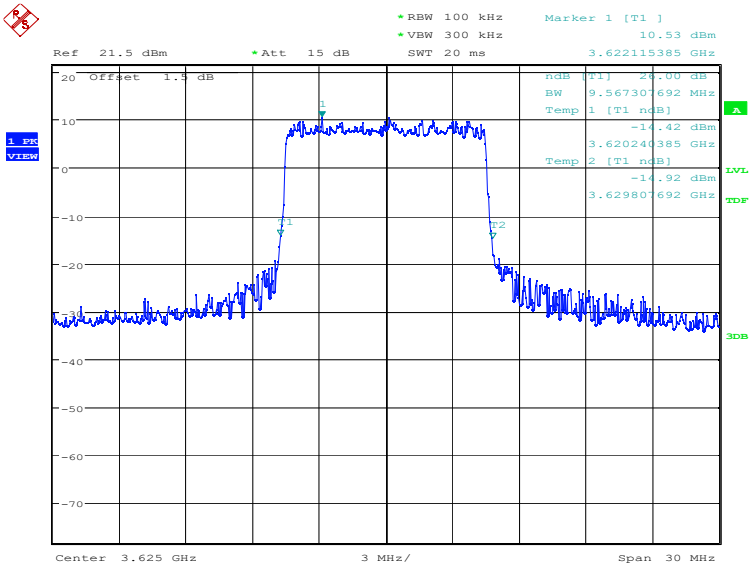
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	QPSK	16QAM
3625.0	9663.46	9567.31

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



Date: 25.APR.2022 15:07:51

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

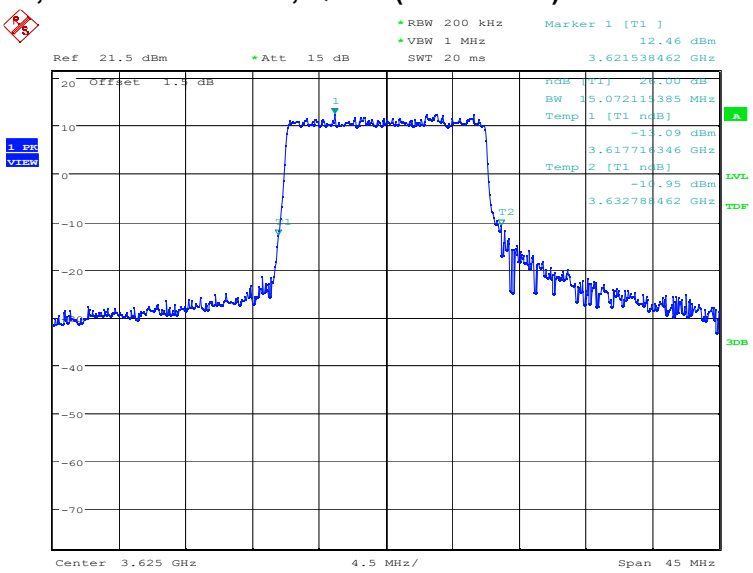


Date: 25.APR.2022 15:08:31

LTE band 48, 15MHz (-26dBc)

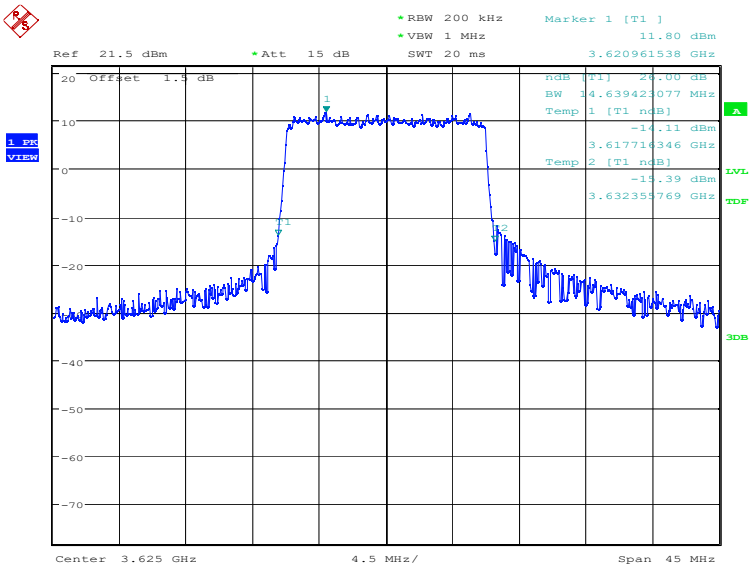
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
3625.0	QPSK	16QAM
	15072.12	14639.42

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



Date: 25.APR.2022 15:09:13

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

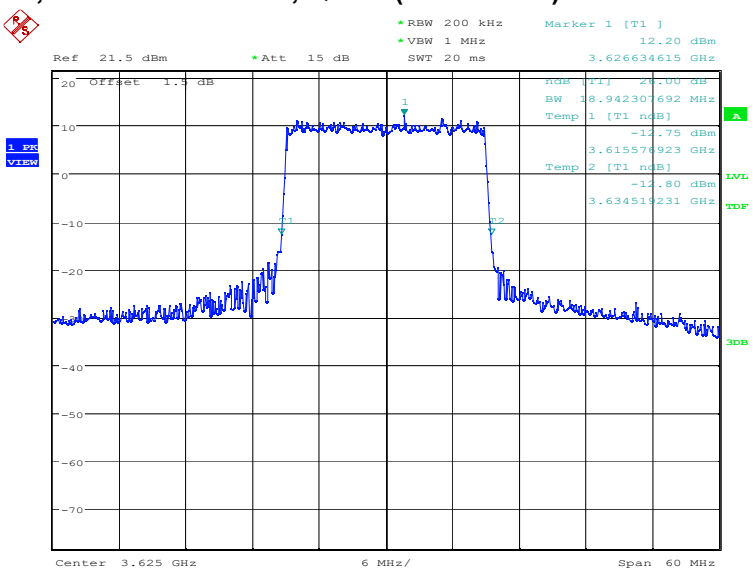


Date: 25.APR.2022 15:09:52

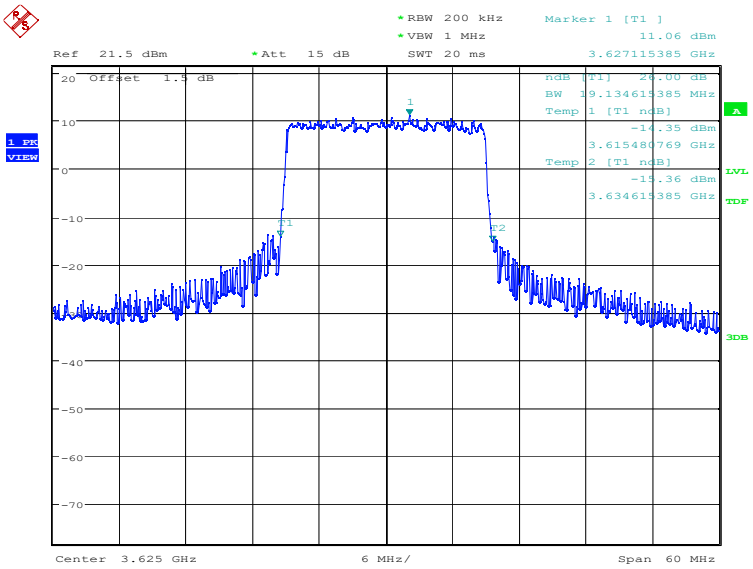
LTE band 48, 20MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
3625.0	QPSK	16QAM
	18942.31	19134.62

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



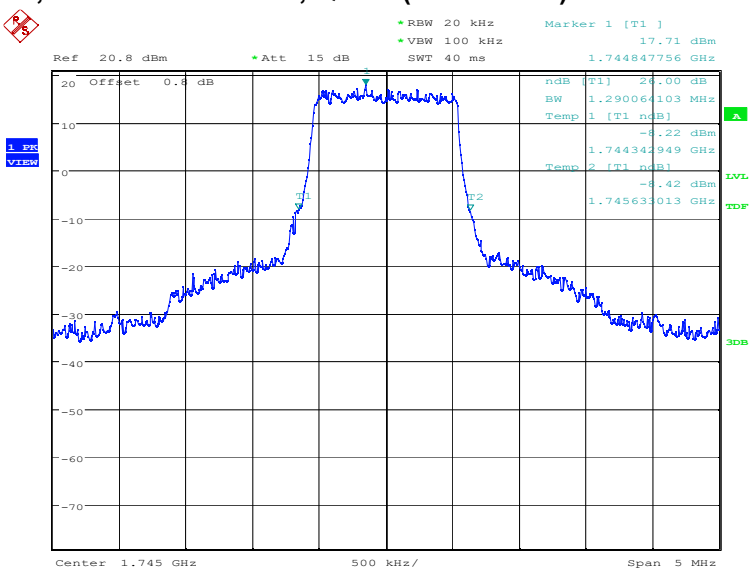
LTE band 48, 20MHz Bandwidth,16QAM (-26dBc BW)



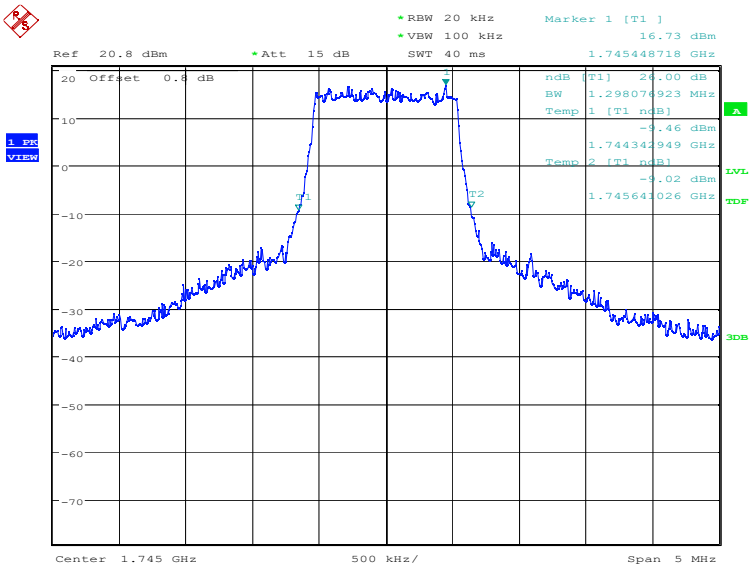
LTE band 66, 1.4MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	1290.06	1298.08

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



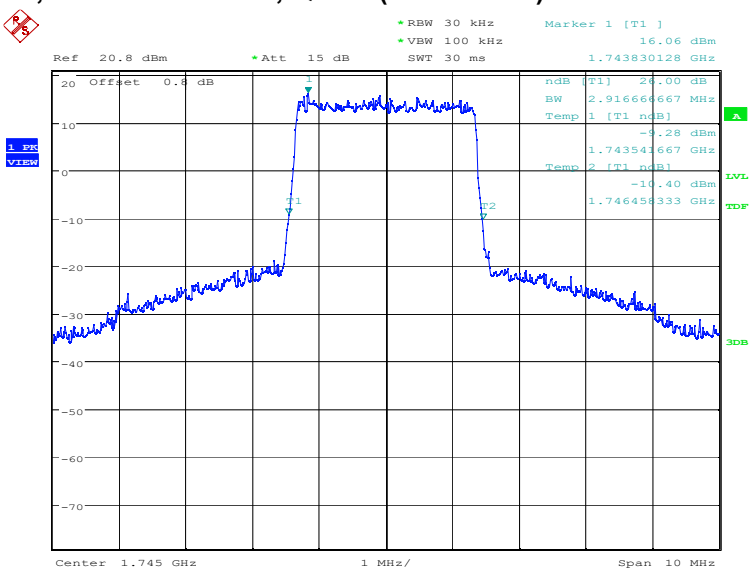
LTE band 66, 1.4MHz Bandwidth, 16QAM (-26dBc BW)



LTE band 66, 3MHz (-26dBc)

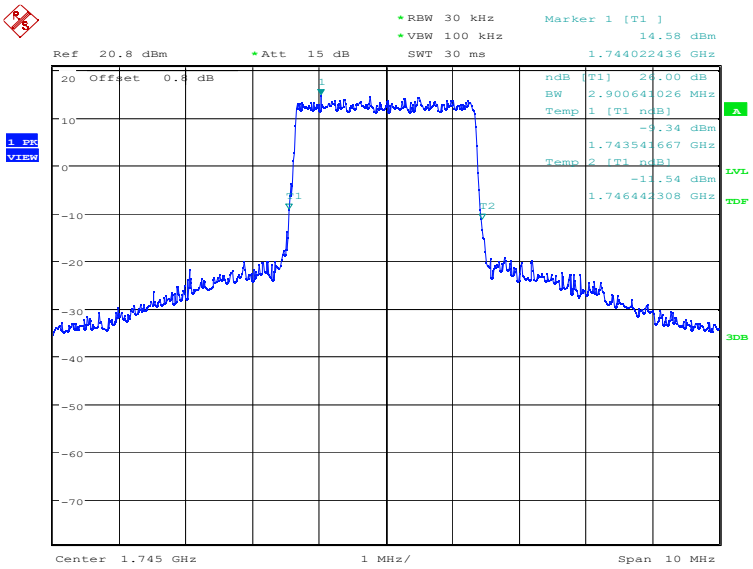
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	QPSK	16QAM
1745.0	2916.67	2900.64

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



Date: 25.APR.2022 10:11:32

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

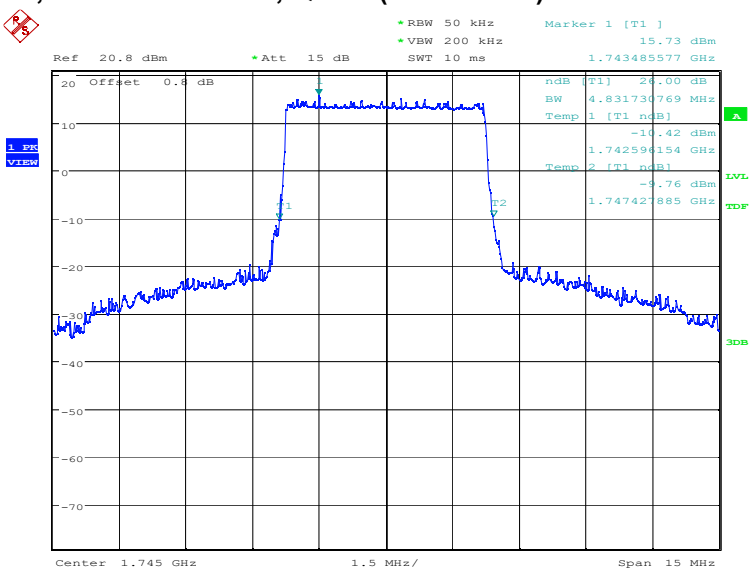


Date: 25.APR.2022 10:12:12

LTE band 66, 5MHz (-26dBc)

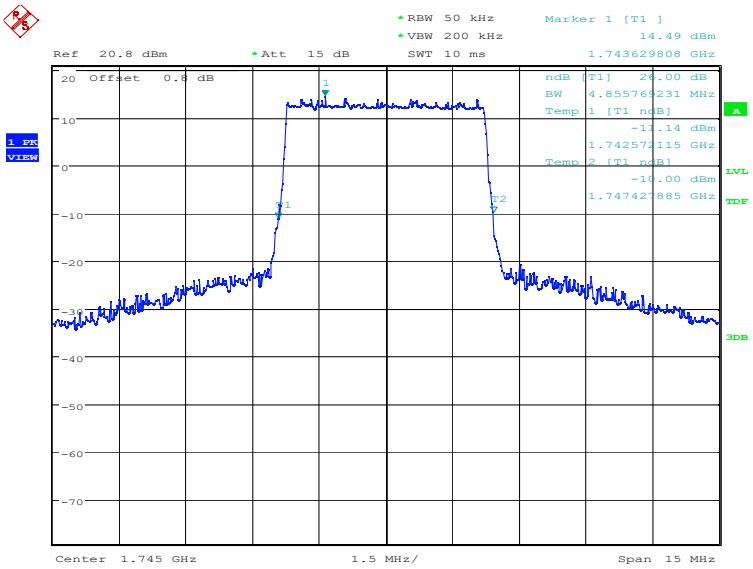
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
	QPSK	16QAM
1745.0	4831.73	4855.77

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



Date: 25.APR.2022 10:12:53

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

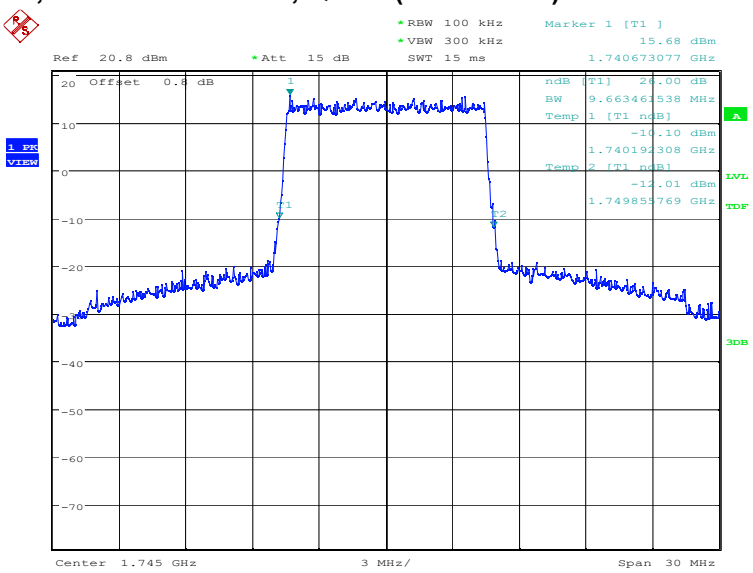


Date: 25.APR.2022 10:13:33

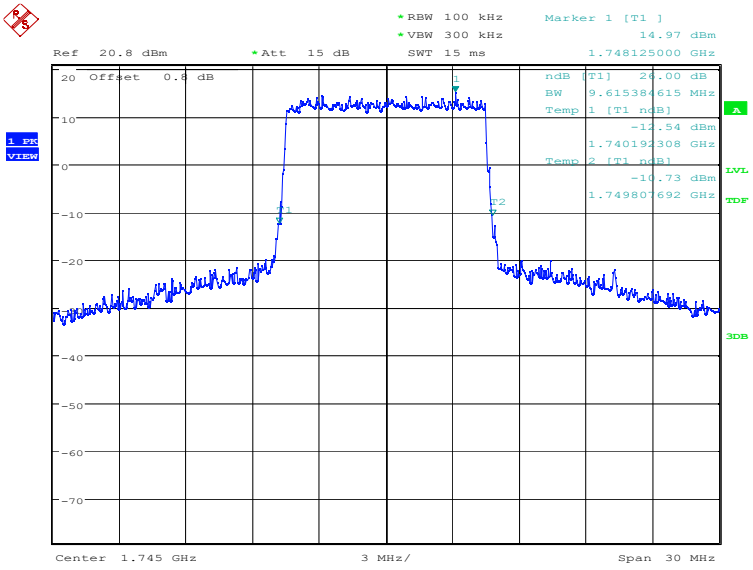
LTE band 66, 10MHz (-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	9663.46	9615.38

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



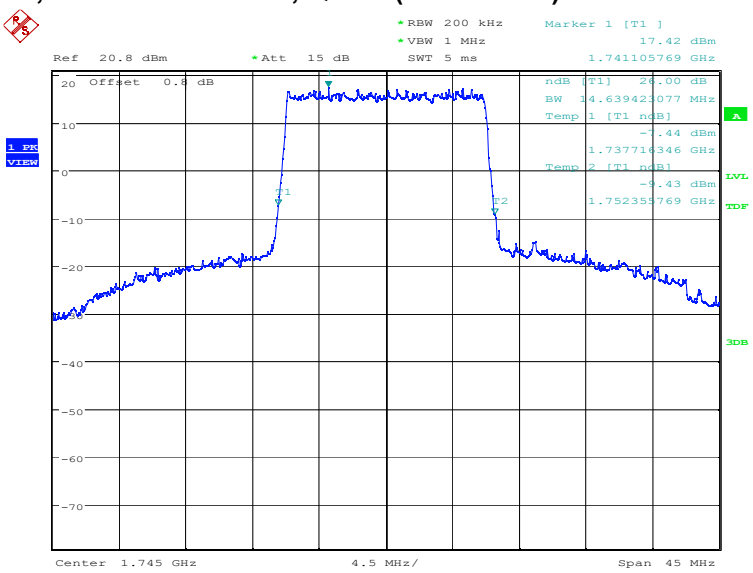
LTE band 66, 10MHz Bandwidth, 16QAM (-26dBc BW)



LTE band 66, 15MHz (-26dBc)

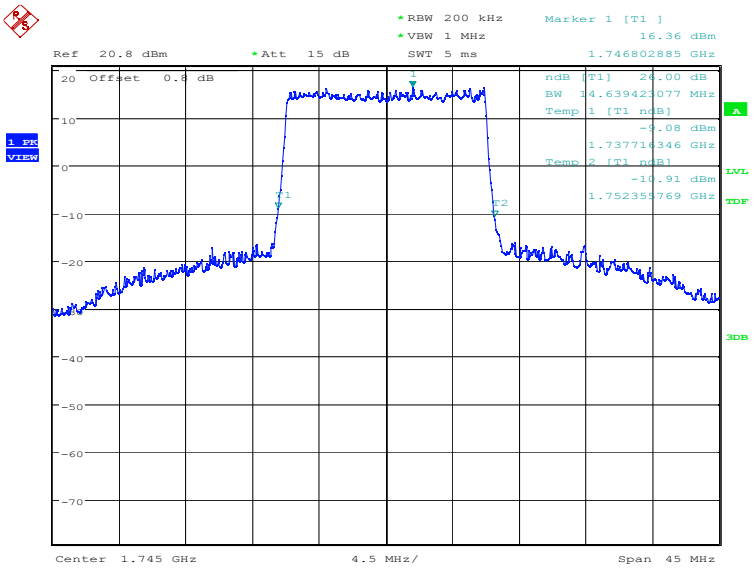
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	14639.42	14639.42

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



Date: 25.APR.2022 10:15:35

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

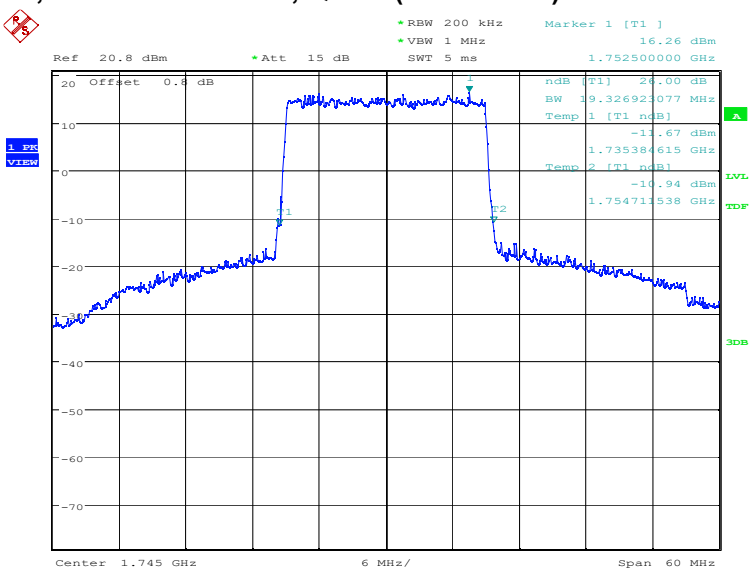


Date: 25.APR.2022 10:16:15

LTE band 66, 20MHz (-26dBc)

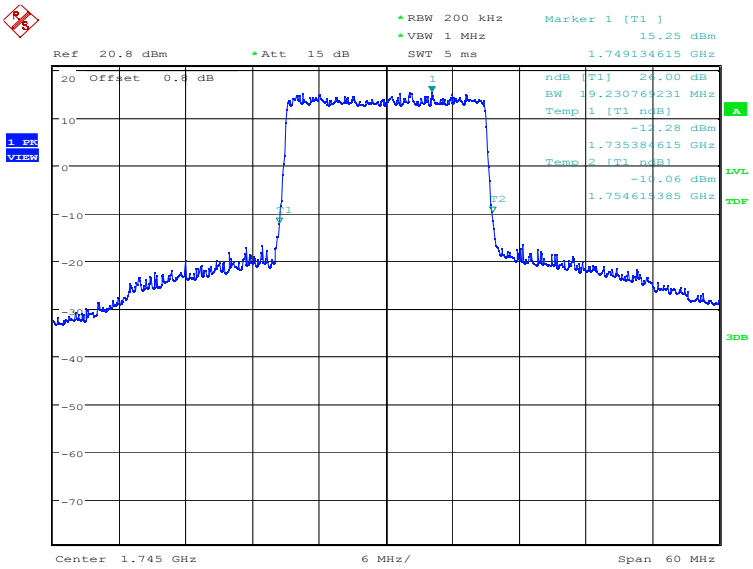
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	19326.92	19230.77

LTE band 66, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 25.APR.2022 10:16:56

LTE band 66, 20MHz Bandwidth, 16QAM (-26dBc BW)

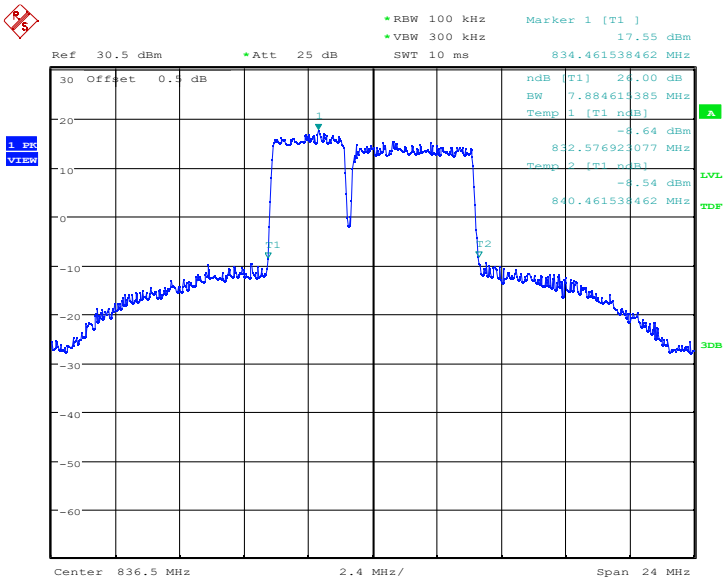


Date: 25.APR.2022 10:17:36

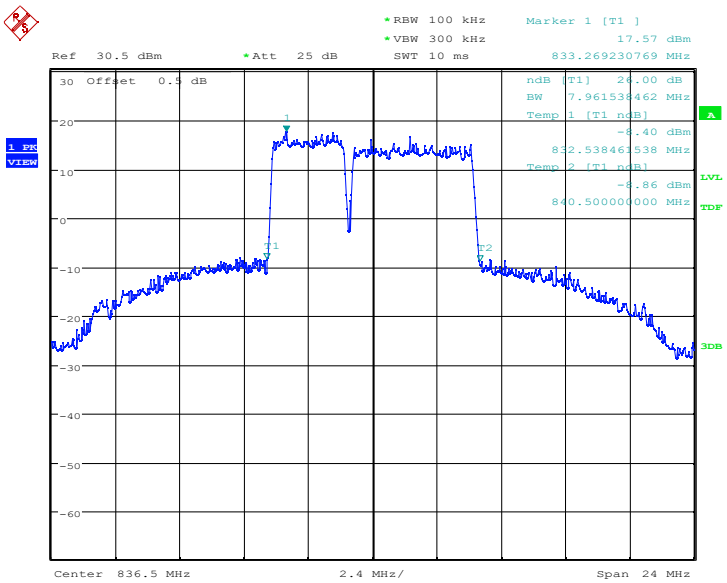
LTE CA Band 5B , 3MHz+5MHz (-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
834.1	7.885	7.962

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



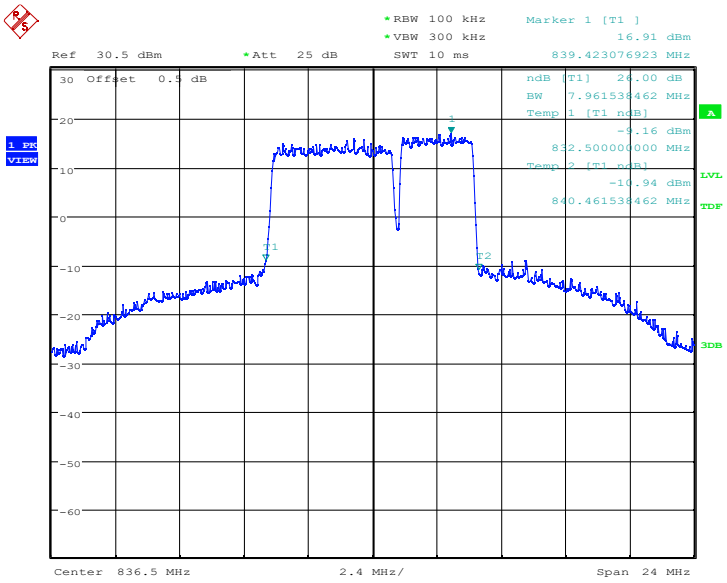
LTE CA Band 5B , 3MHz+5MHz Bandwidth, 16QAM (-26dBc BW)



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

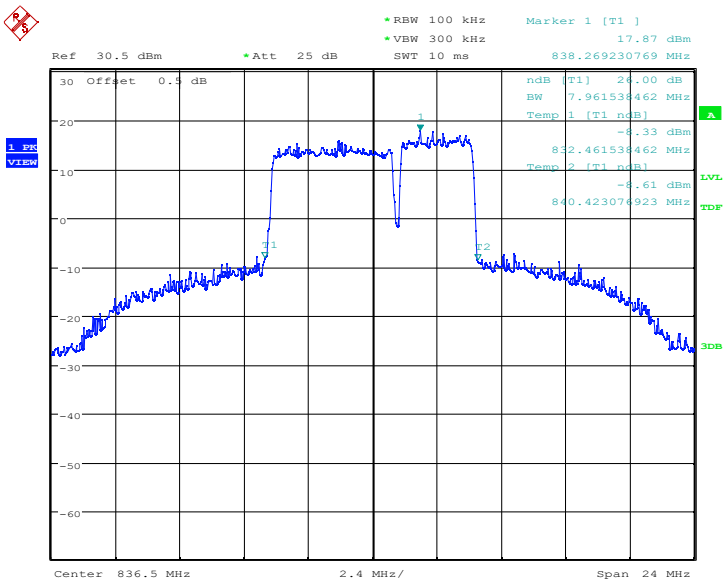
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
835	7.962	7.962

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



Date: 1.MAY.2022 07:35:23

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

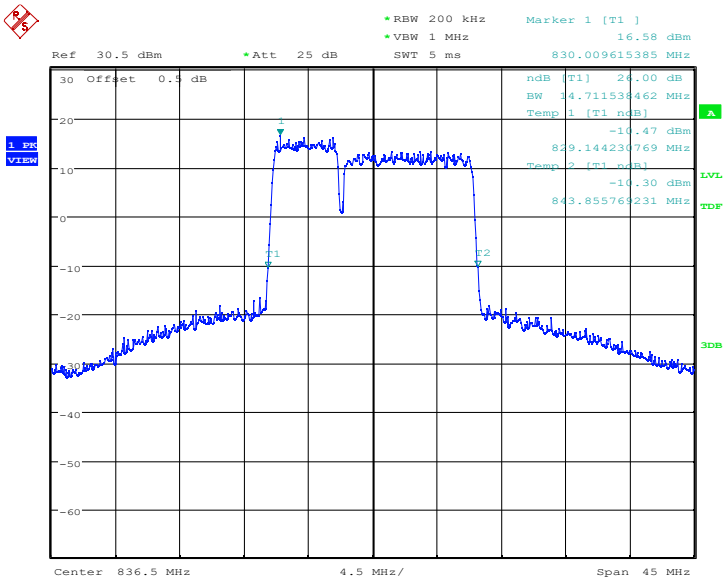


Date: 1.MAY.2022 07:35:45

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

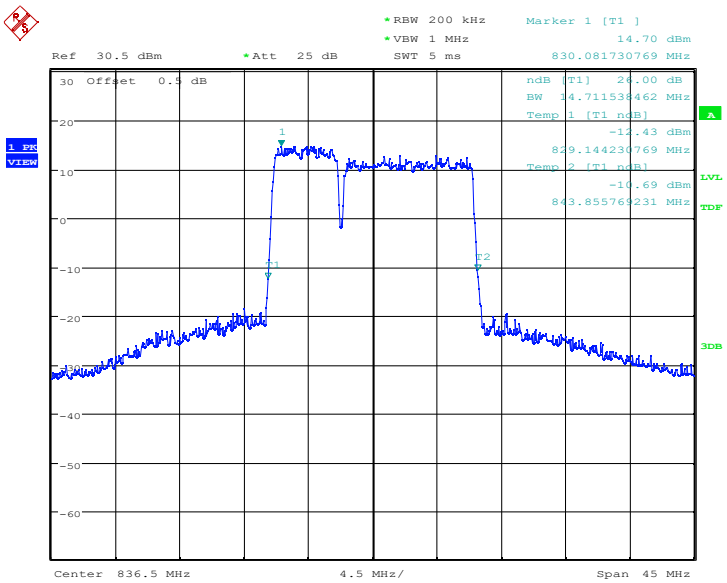
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
831.8	14.712	14.712

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



Date: 1.MAY.2022 07:36:38

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

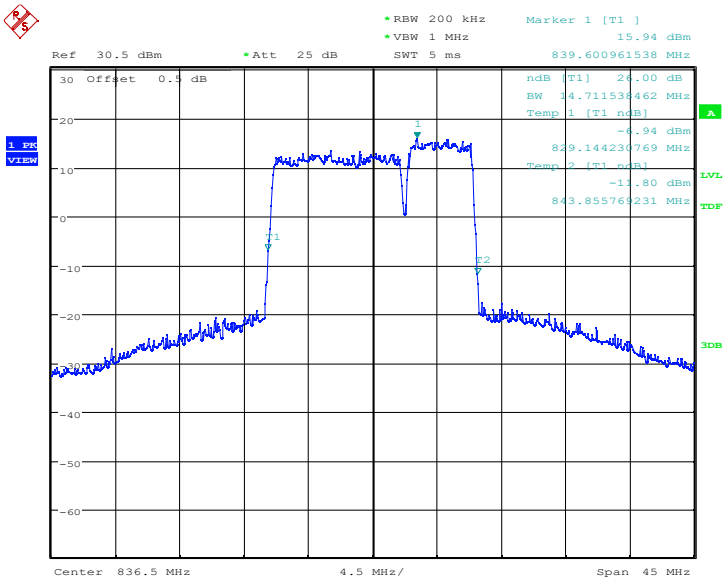


Date: 1.MAY.2022 07:37:00

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

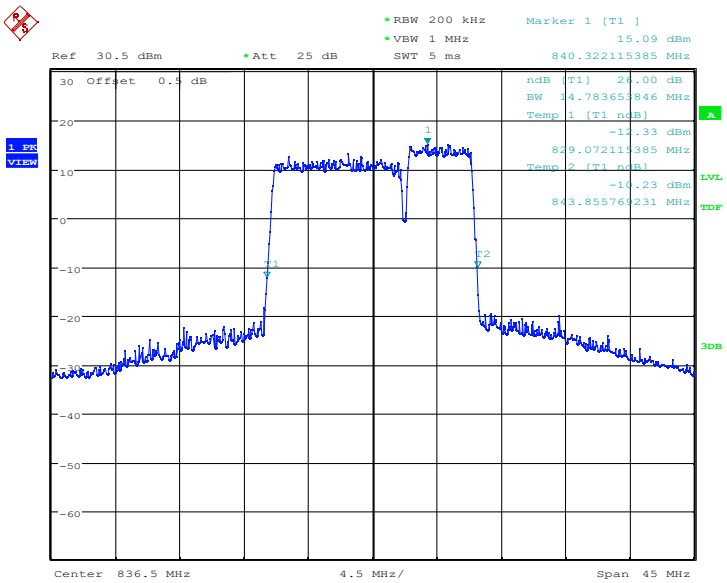
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
834	14.712	14.784

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



Date: 1.MAY.2022 07:37:55

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

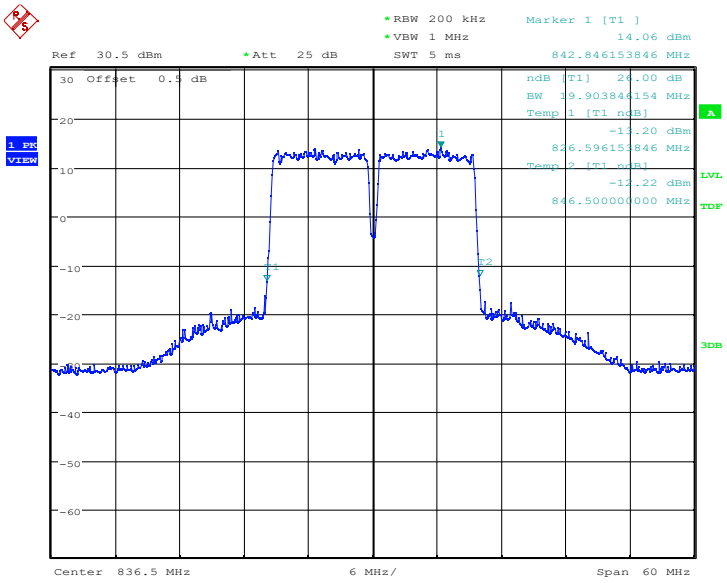


Date: 1.MAY.2022 07:38:17

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

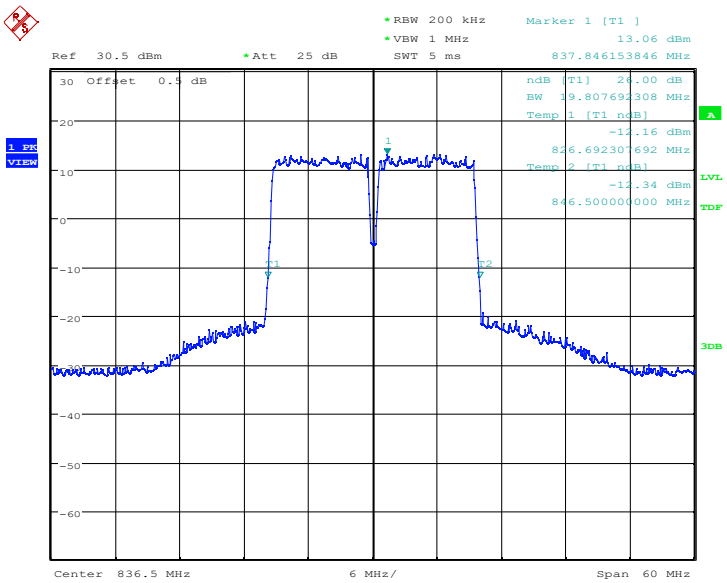
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
831.6	19.904	19.808

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



Date: 1.MAY.2022 07:39:10

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



Date: 1.MAY.2022 07:39:32

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(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 27.53(a) states for mobile and portable stations operating in the 2305–2315 MHz and 2350–2360 MHz bands: By a factor of not less than: 43 +10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

Part 90.543 states that for operations in the 758–768 MHz and the 788–798 MHz bands, 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 all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations. (2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations. (3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB. (4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment. (5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

Part 96.41(e) states for channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental

emission (whether in or outside of the authorized band) shall not exceed −13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz 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 megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed −25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

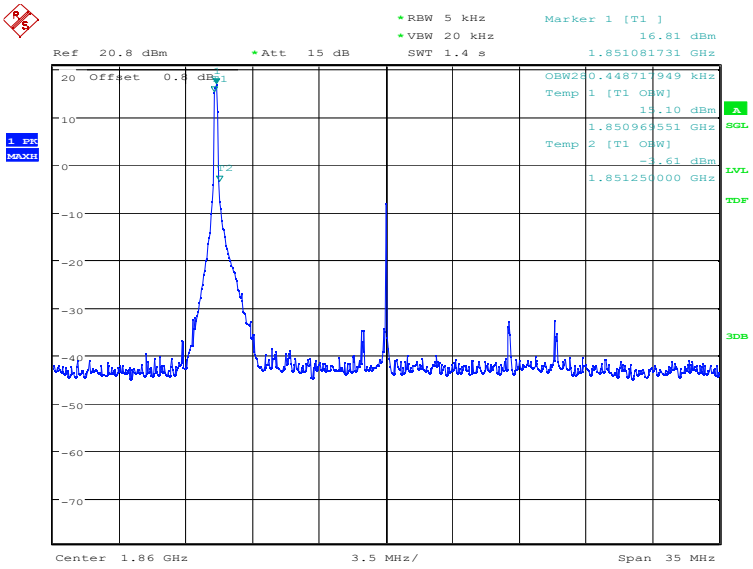
The spectrum analyzer readings are corrected by [10 log (1/duty cycle)] for the non-continuous transmitting scenario.

A.6.2 Measurement result

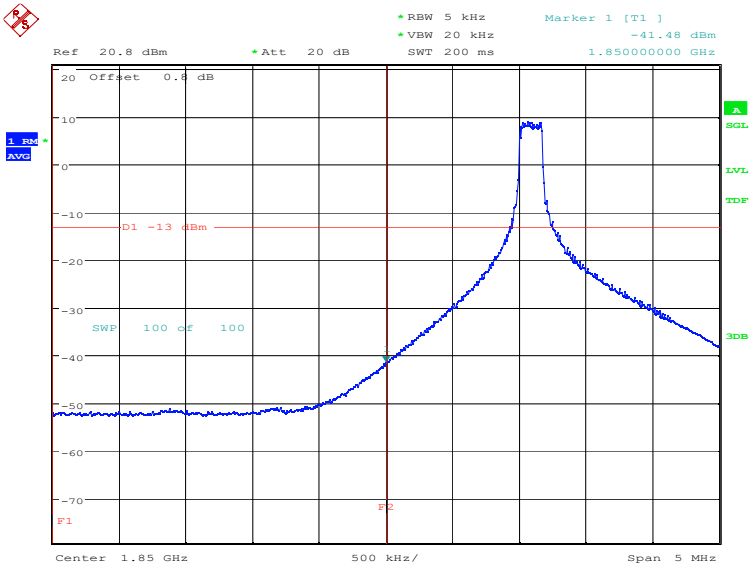
Only the worst case result is given below

LTE band 2

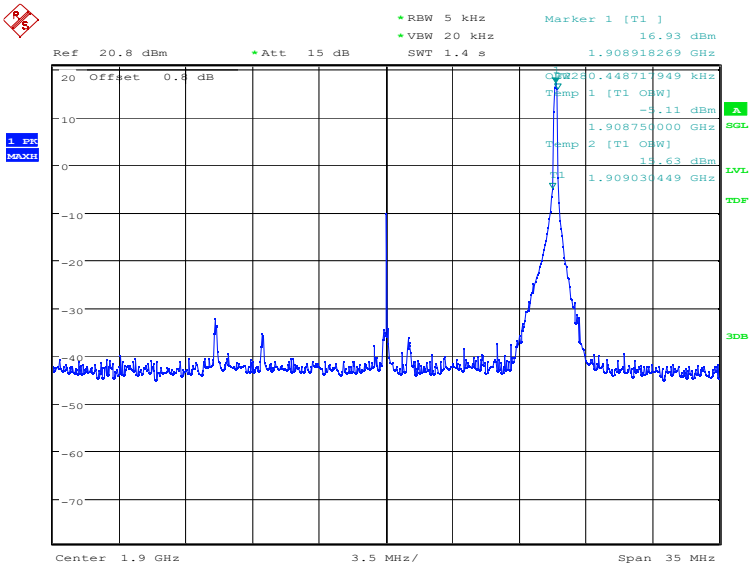
OBW: 1RB-low_offset



LOW BAND EDGE BLOCK-1RB-low_offset

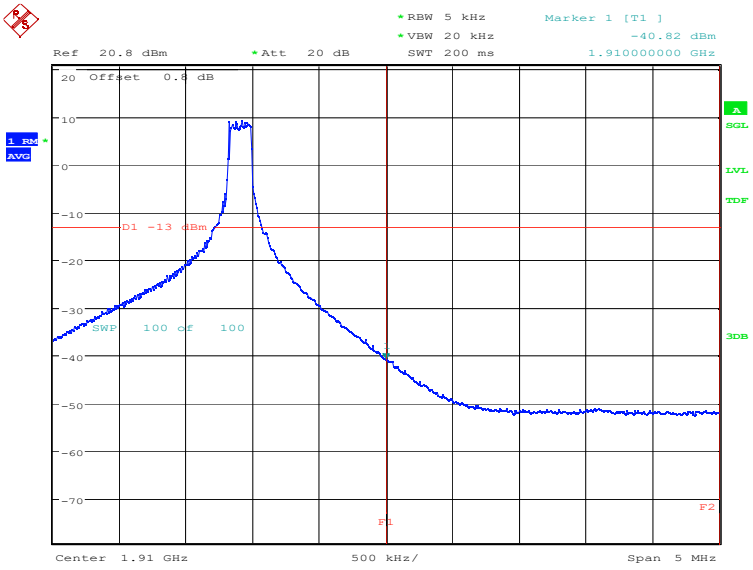


OBW: 1RB-high_offset



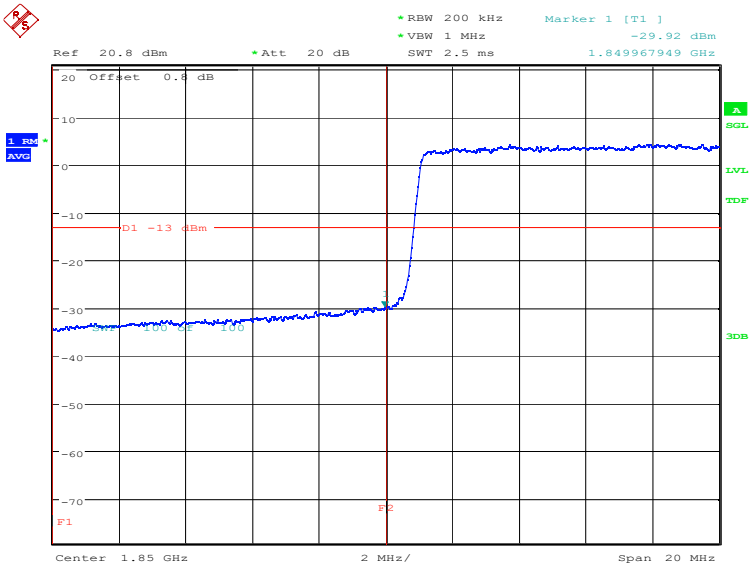
Date: 17.JUN.2022 08:31:06

HIGH BAND EDGE BLOCK-1RB-high_offset



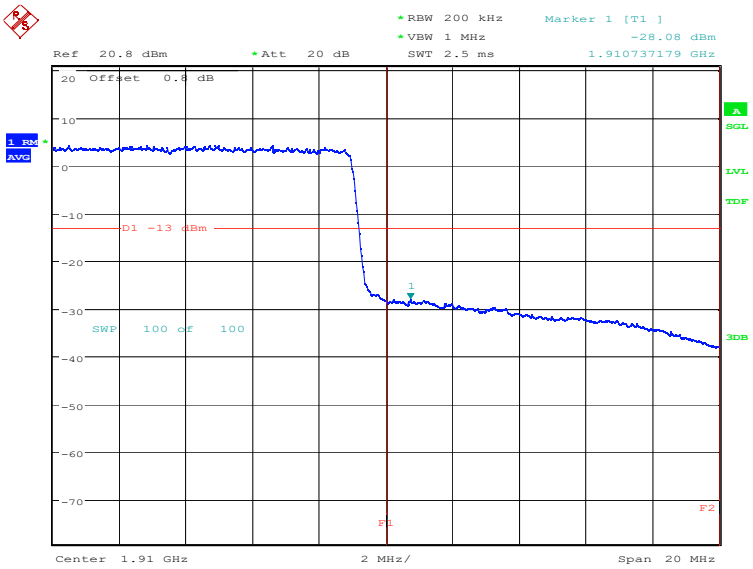
Date: 17.JUN.2022 08:32:19

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 25.APR.2022 10:19:10

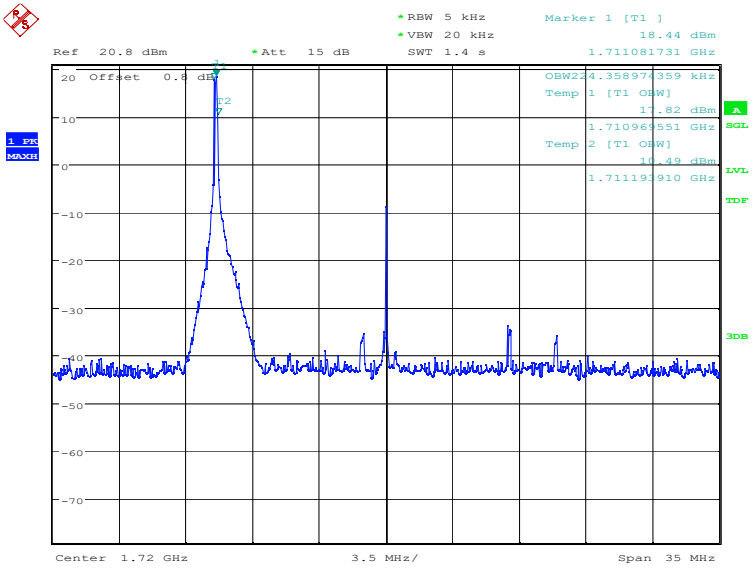
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 25.APR.2022 10:20:40

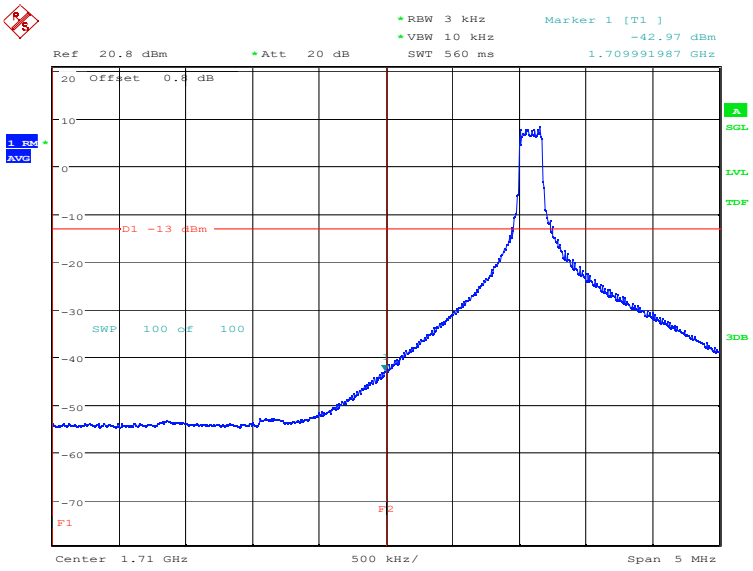
LTE band 4

OBW: 1RB-low_offset



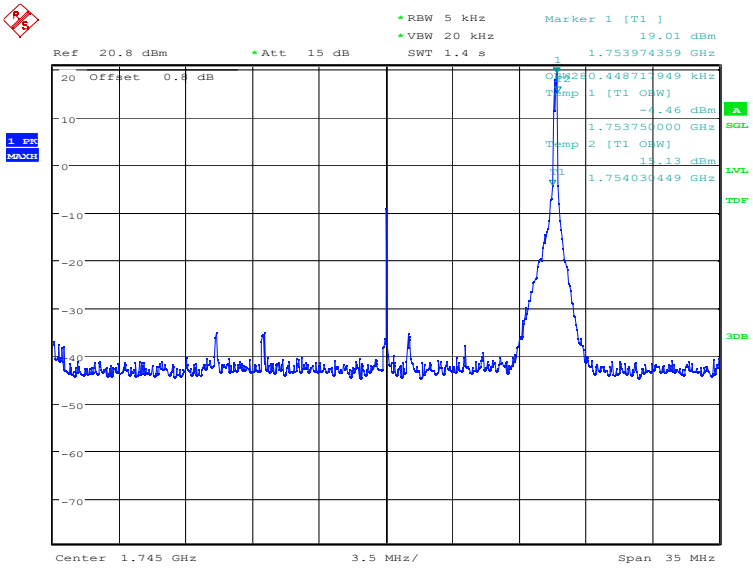
Date: 17.JUN.2022 08:33:32

LOW BAND EDGE BLOCK-1RB-low_offset



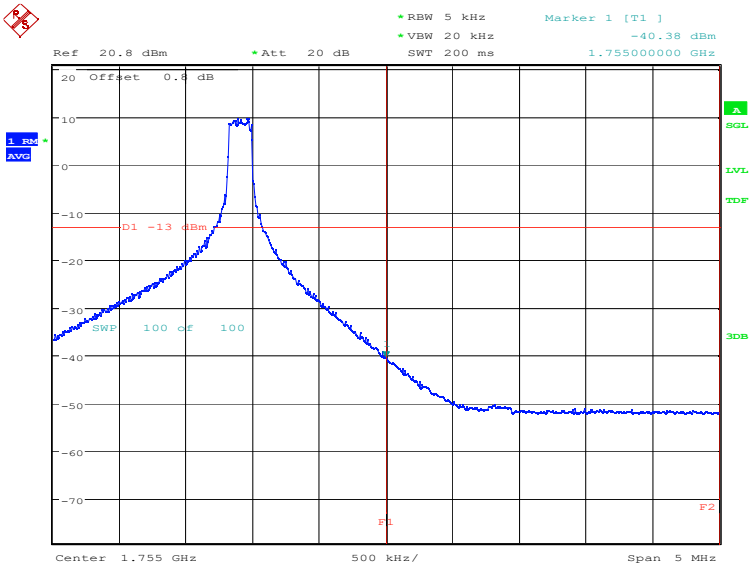
Date: 17.JUN.2022 08:34:46

OBW: 1RB-high_offset



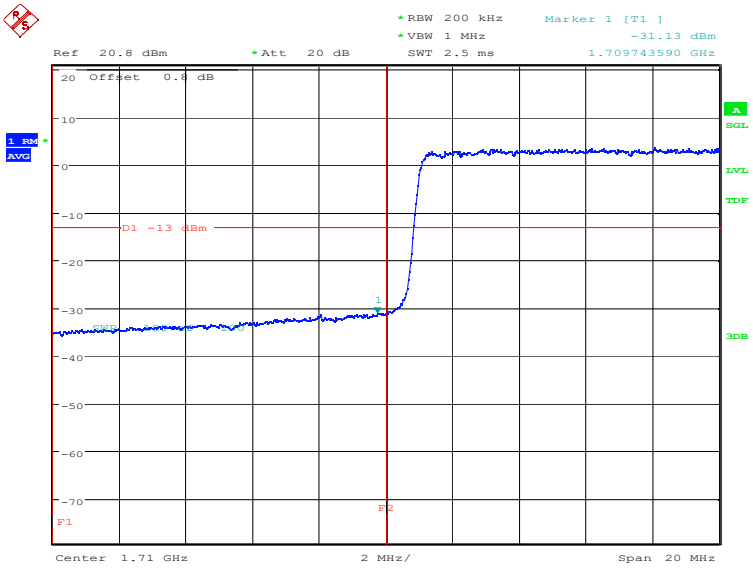
Date: 17.JUN.2022 08:36:42

HIGH BAND EDGE BLOCK-1RB-high_offset



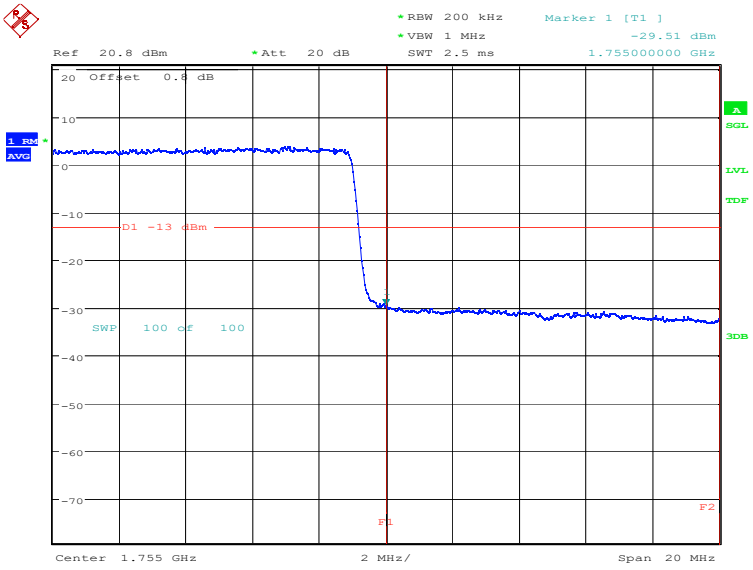
Date: 17.JUN.2022 08:37:55

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 17.JUN.2022 08:35:18

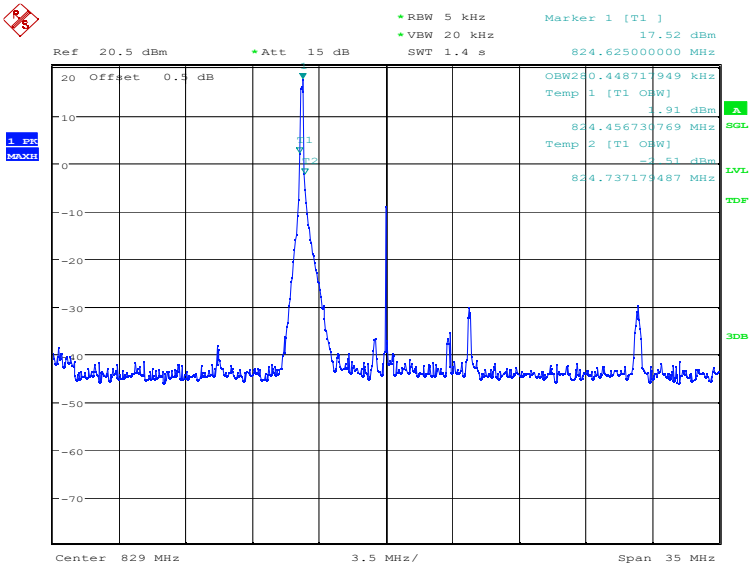
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 17.JUN.2022 08:38:27

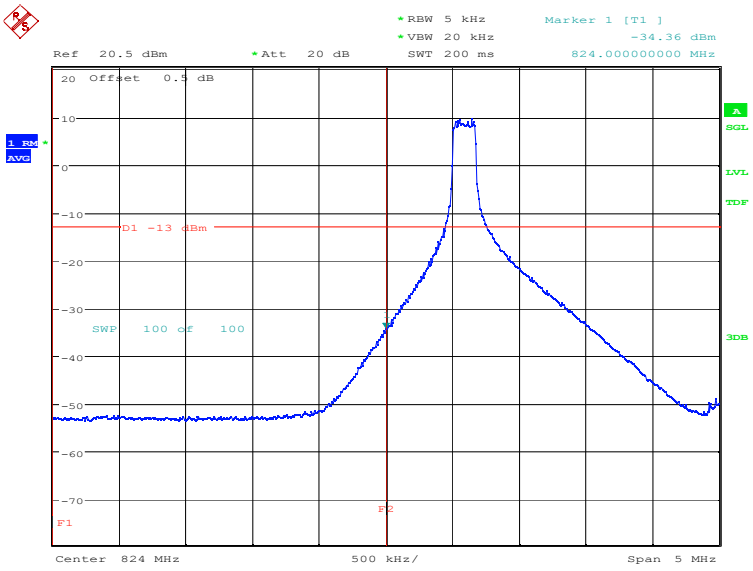
LTE band 5

OBW: 1RB-low_offset



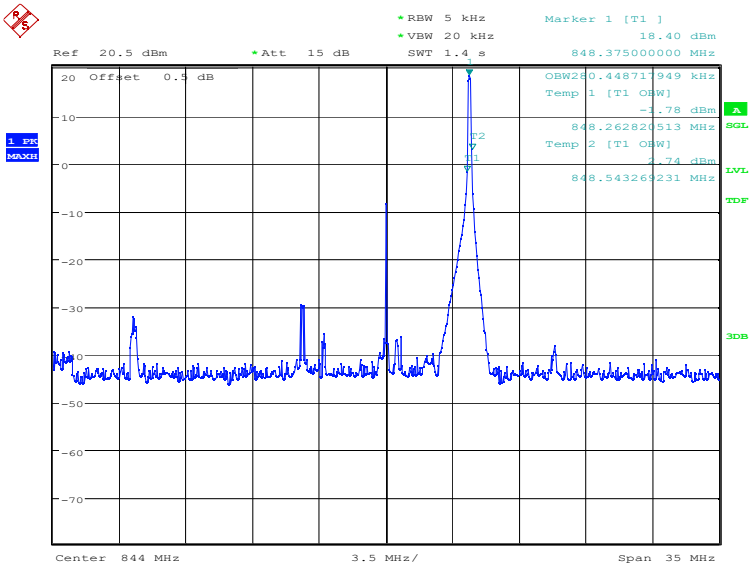
Date: 17.JUN.2022 08:40:35

LOW BAND EDGE BLOCK-1RB-low_offset



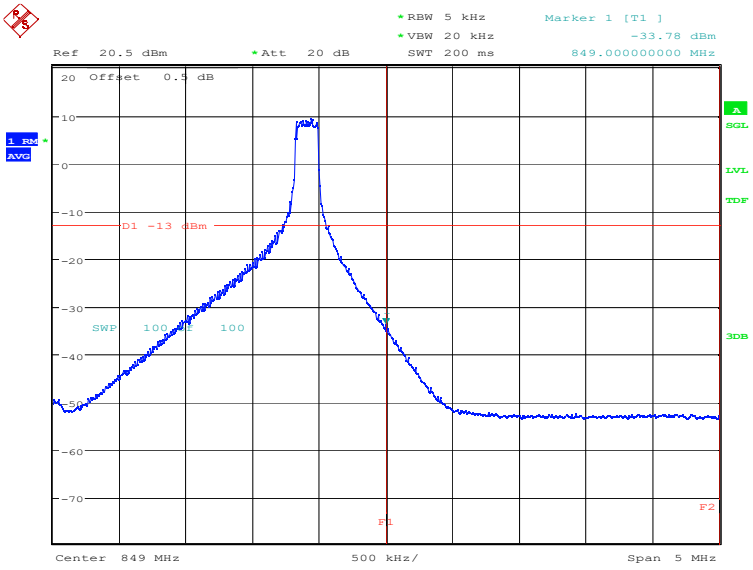
Date: 17.JUN.2022 08:41:47

OBW: 1RB-high_offset



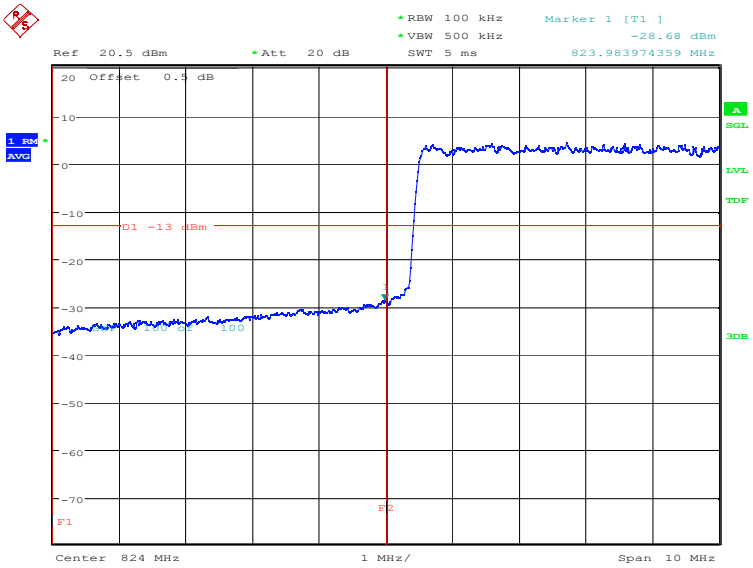
Date: 17.JUN.2022 08:42:22

HIGH BAND EDGE BLOCK-1RB-high_offset



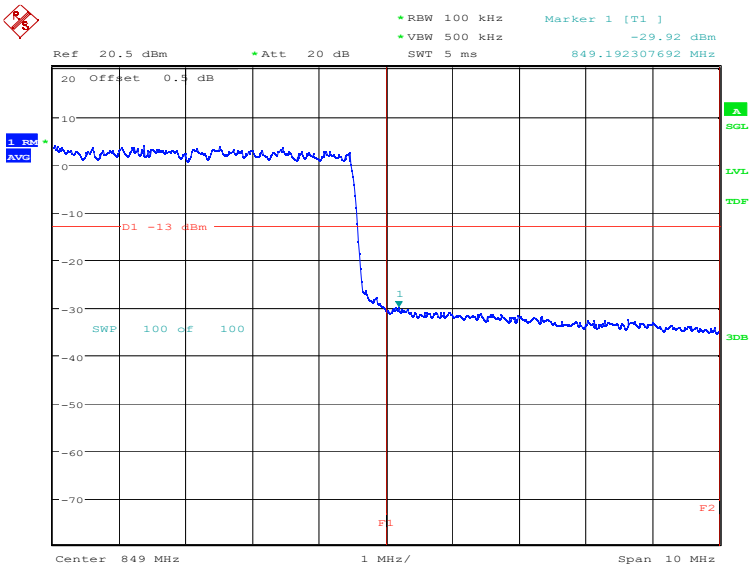
Date: 17.JUN.2022 08:43:35

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2022 10:22:55

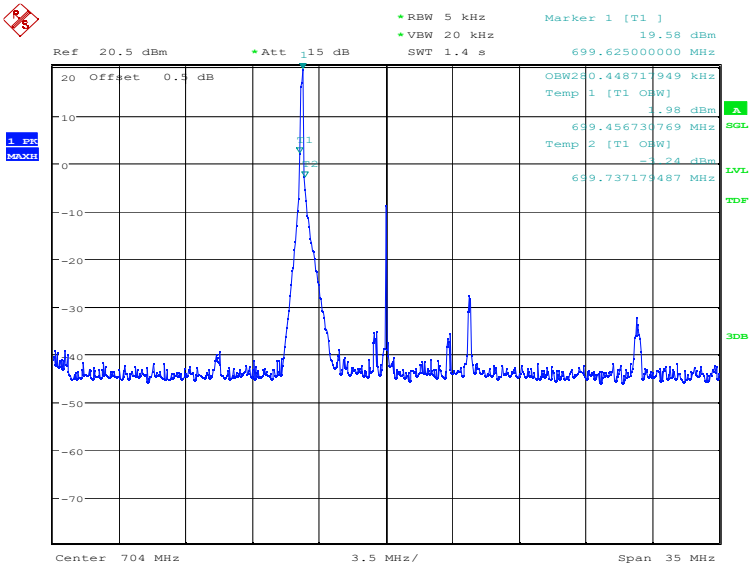
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2022 10:25:08

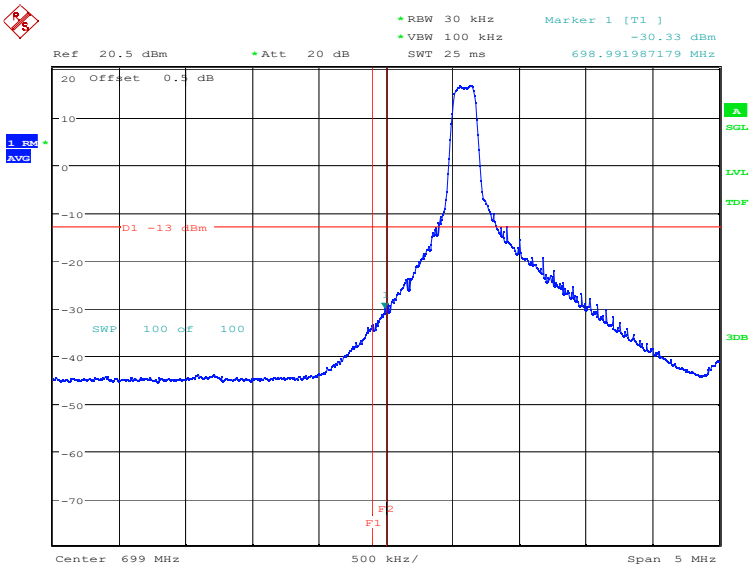
LTE band 12

OBW: 1RB-low_offset



Date: 17.JUN.2022 08:45:06

LOW BAND EDGE BLOCK-1RB-low_offset



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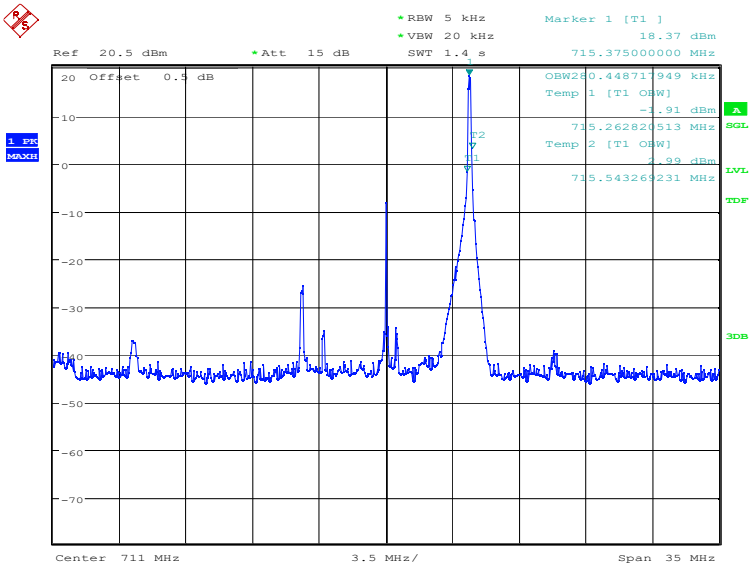
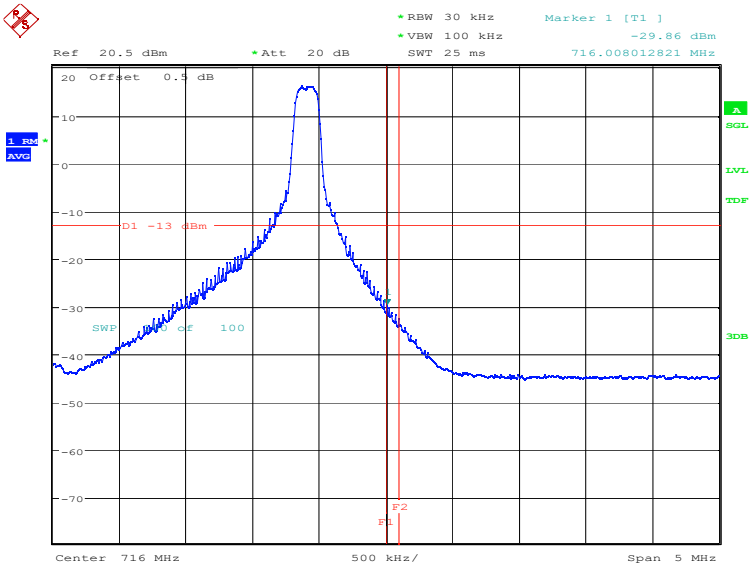
OBW: 1RB-high_offset



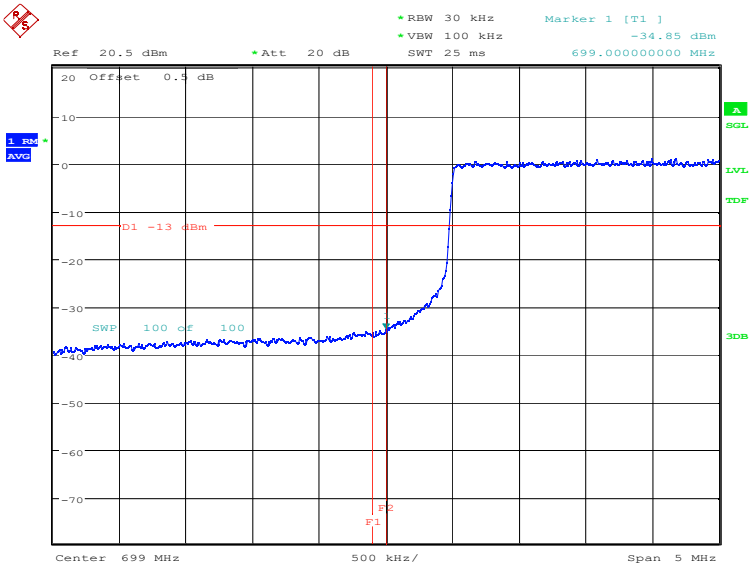
Date: 17.JUN.2022 08:45:58

HIGH BAND EDGE BLOCK-1RB-high_offset



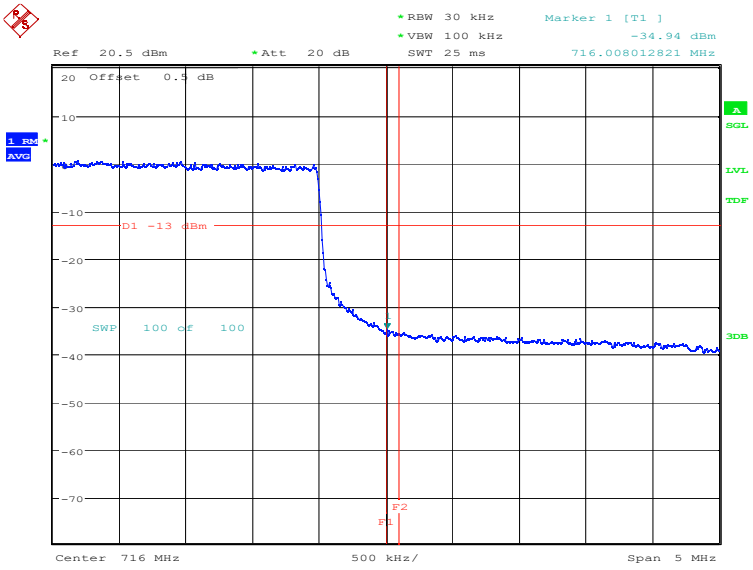
Date: 17.JUN.2022 08:46:16

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2022 10:26:39

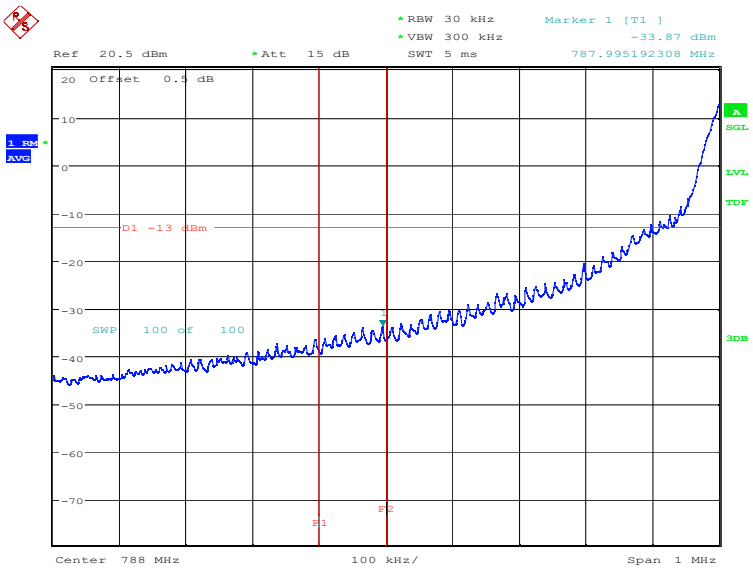
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2022 10:28:09

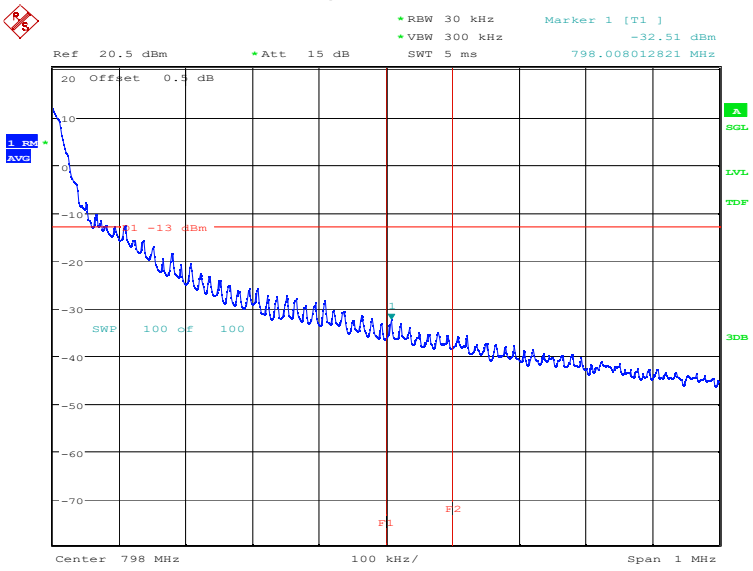
LTE band 14

LOW BAND EDGE BLOCK-1RB-low_offset



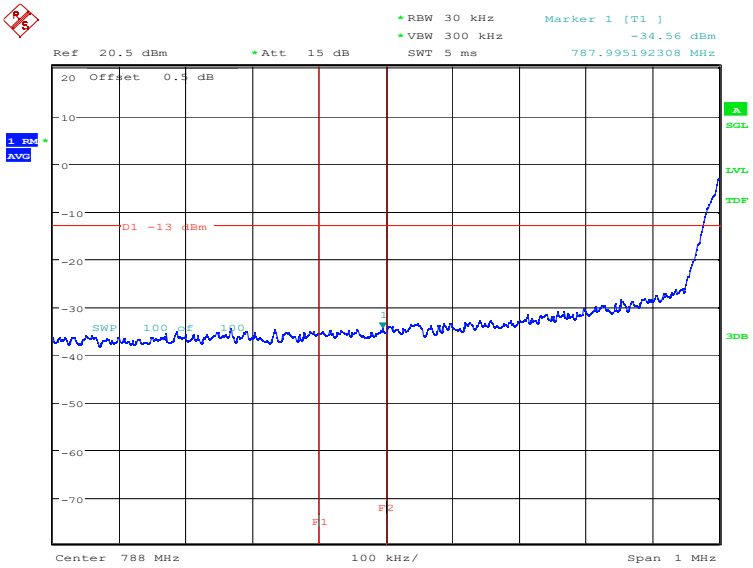
Date: 17.JUN.2022 08:59:44

HIGH BAND EDGE BLOCK-1RB-high_offset



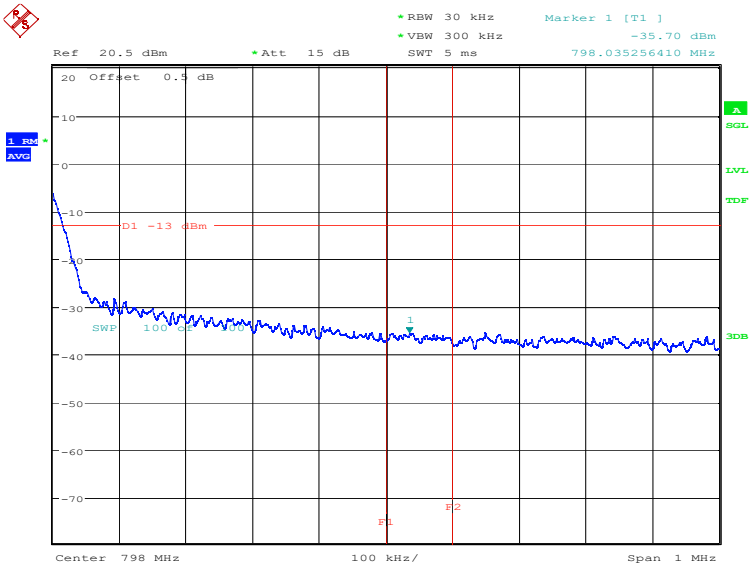
Date: 17.JUN.2022 09:00:20

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2022 10:38:10

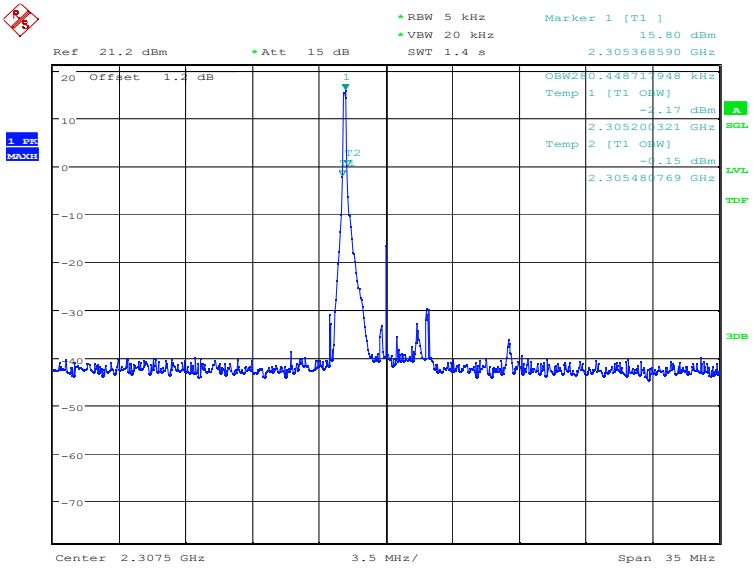
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2022 10:39:42

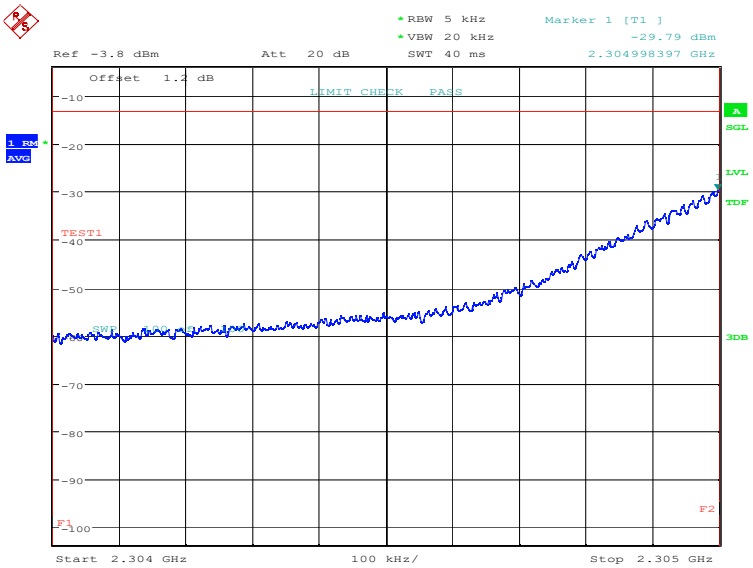
LTE band 30

OBW: 1RB-low_offset

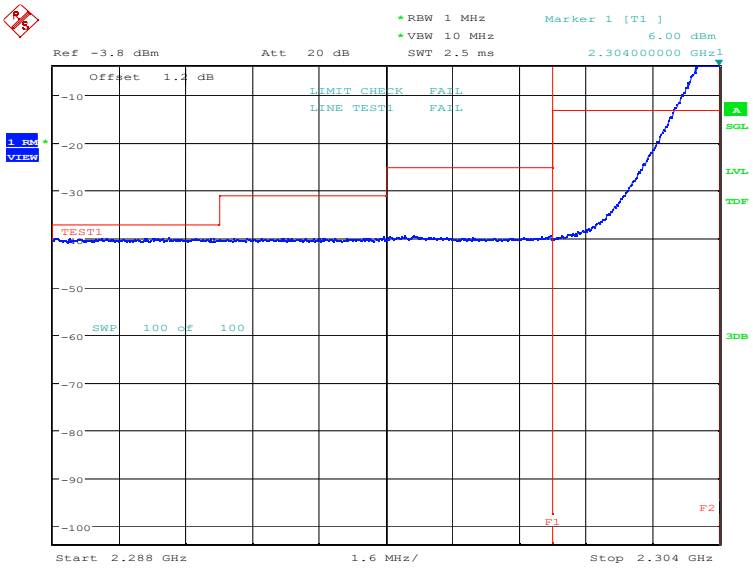


Date: 17.JUN.2022 09:13:52

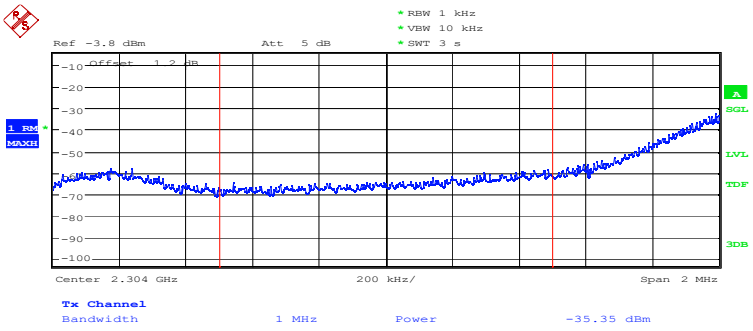
LOW BAND EDGE BLOCK-1RB-low_offset



Date: 17.JUN.2022 09:15:12

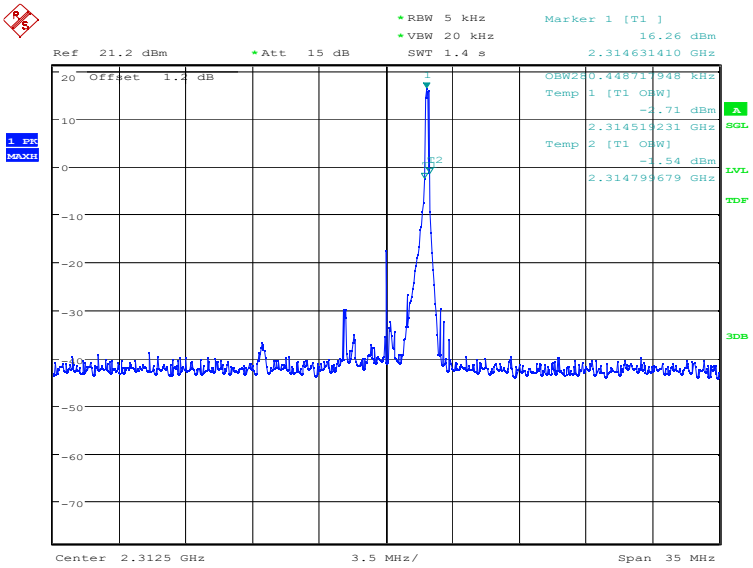


Date: 17.JUN.2022 09:17:02



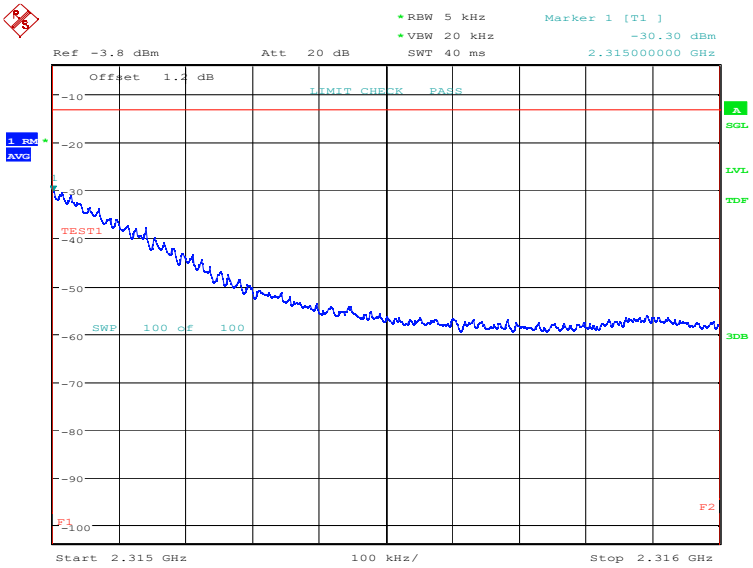
Date: 17.JUN.2022 09:17:18

OBW: 1RB-high_offset



Date: 17.JUN.2022 09:17:53

HIGH BAND EDGE BLOCK-1RB-high_offset



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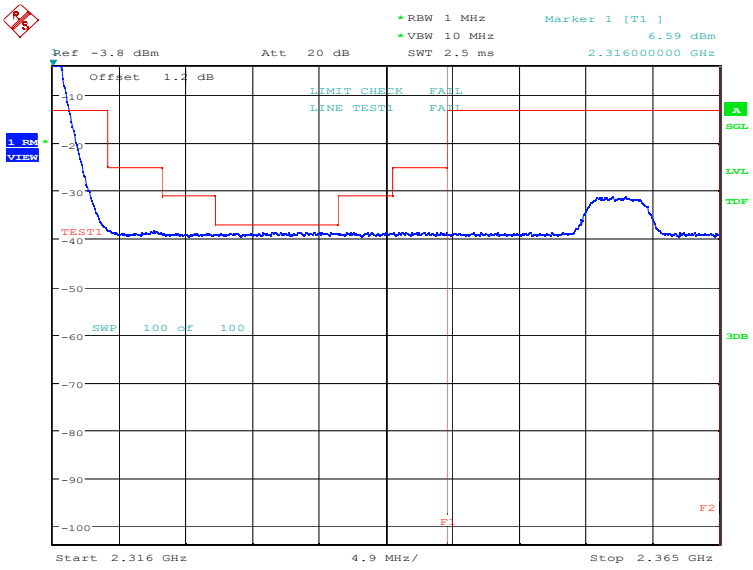
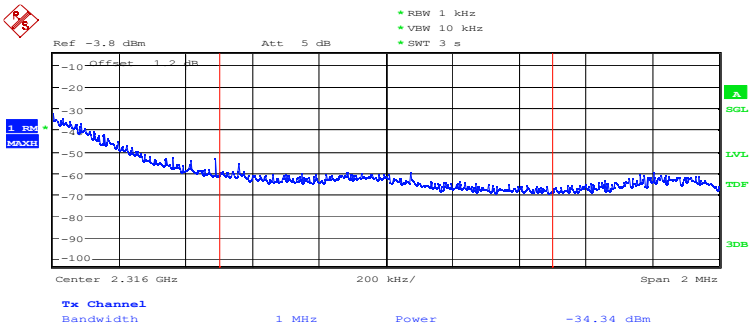
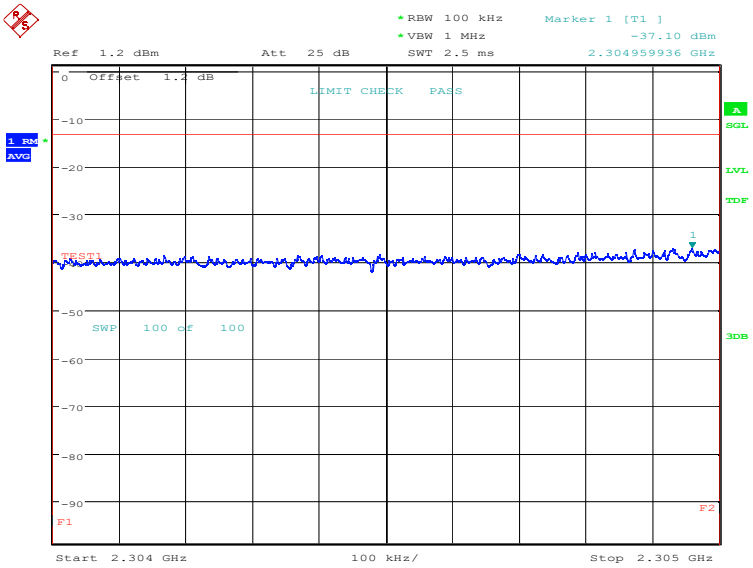


Date: 17.JUN.2022 09:21:11

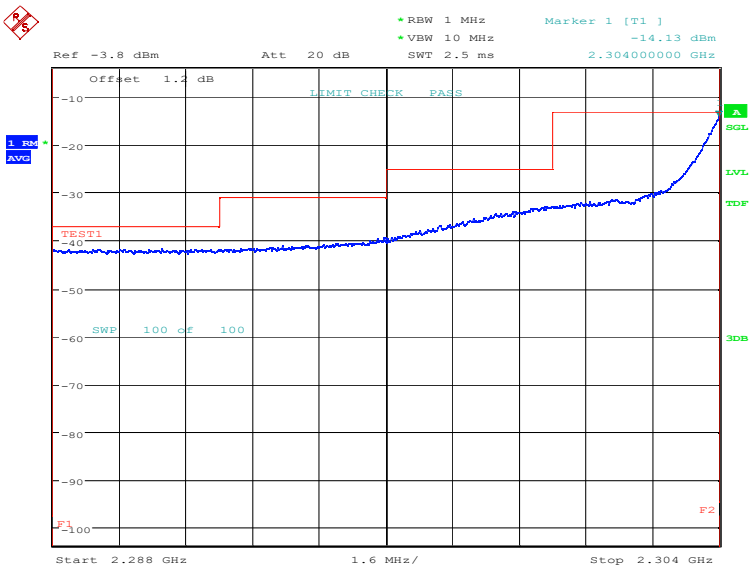


Date: 17.JUN.2022 09:21:28

LOW BAND EDGE BLOCK-10MHz-100%RB

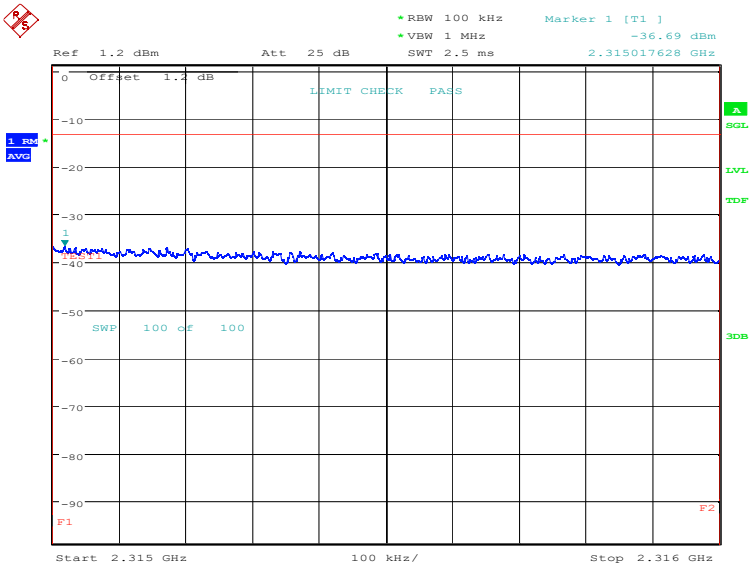


Date: 25.APR.2022 11:23:46

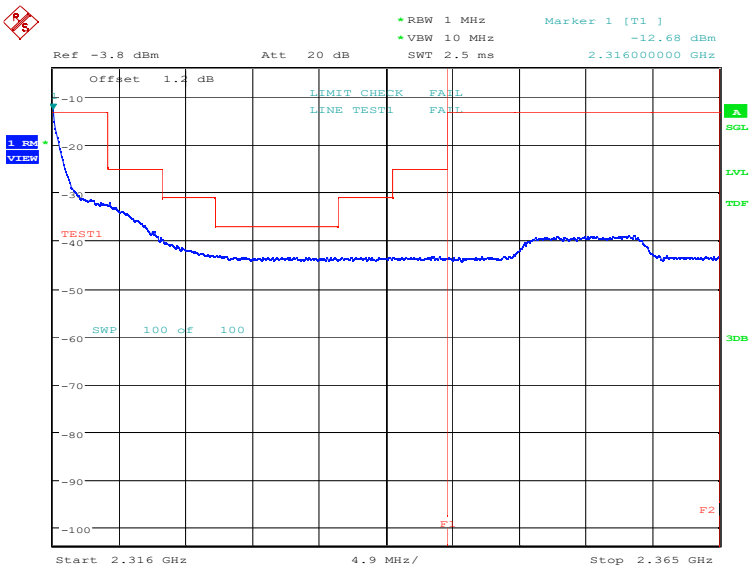


Date: 25.APR.2022 11:25:27

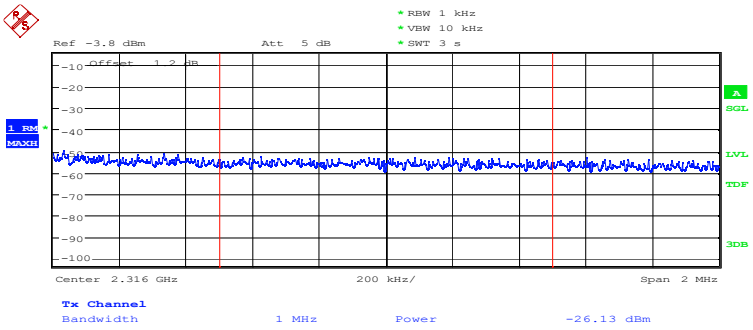
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2022 11:28:22



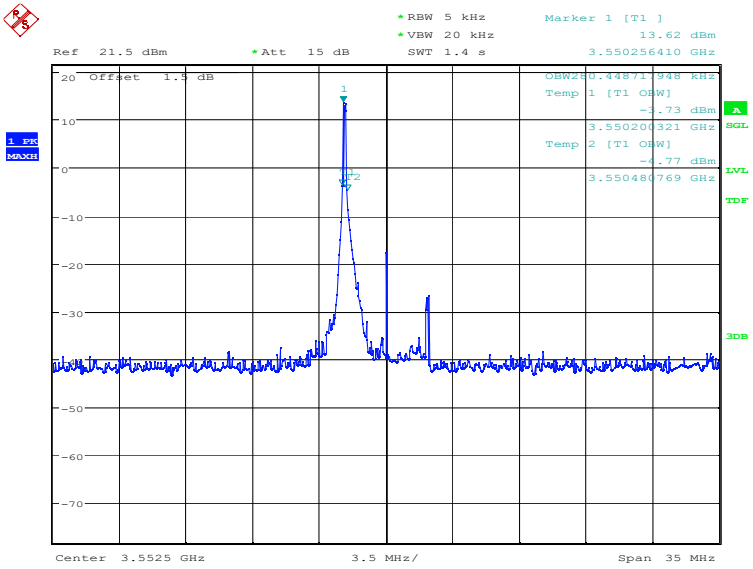
Date: 25.APR.2022 11:30:20



Date: 25.APR.2022 11:30:37

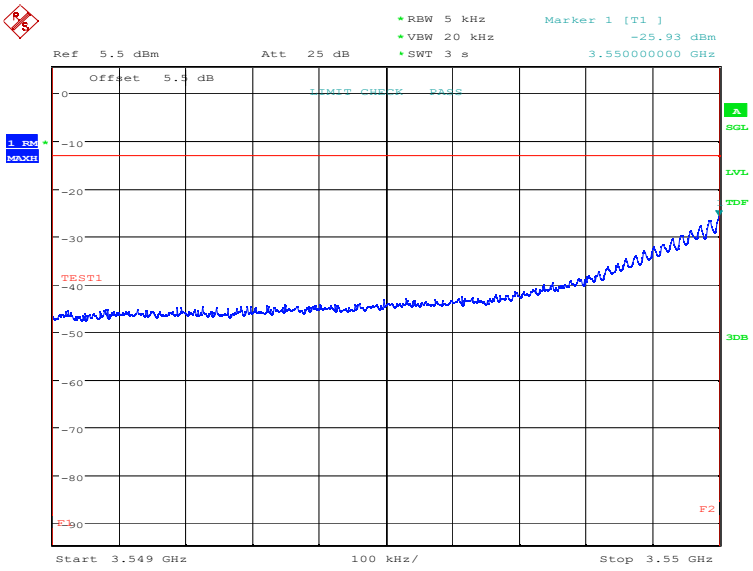
LTE band 48

OBW: 1RB-low_offset

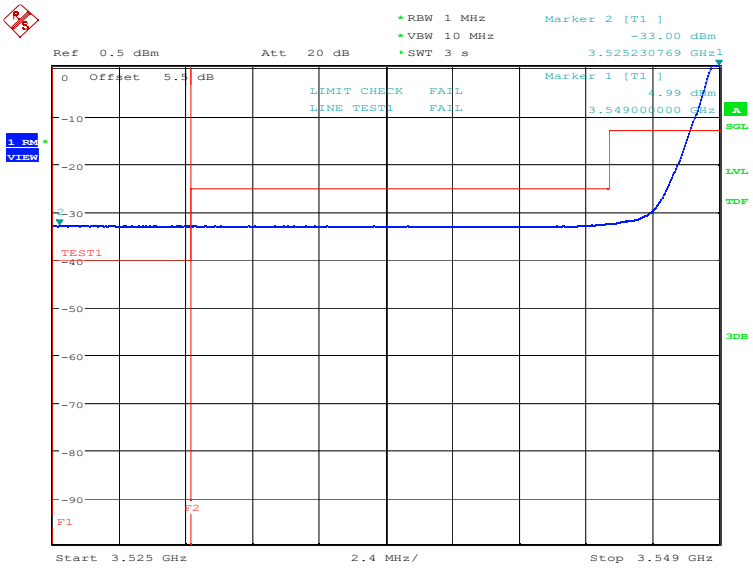


Date: 17.JUN.2022 09:22:48

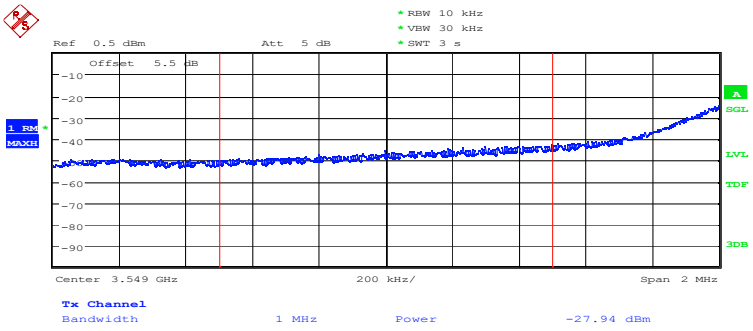
LOW BAND EDGE BLOCK-1RB-low_offset



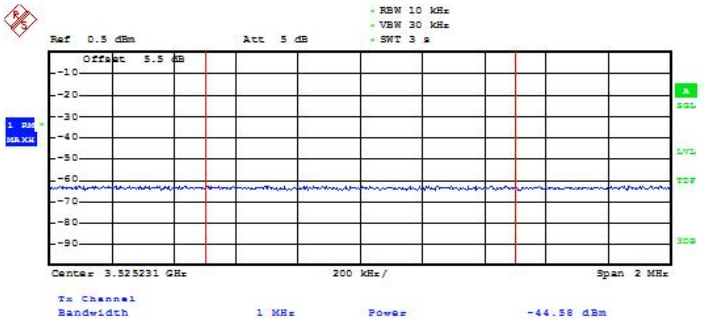
Date: 17.JUN.2022 09:23:29



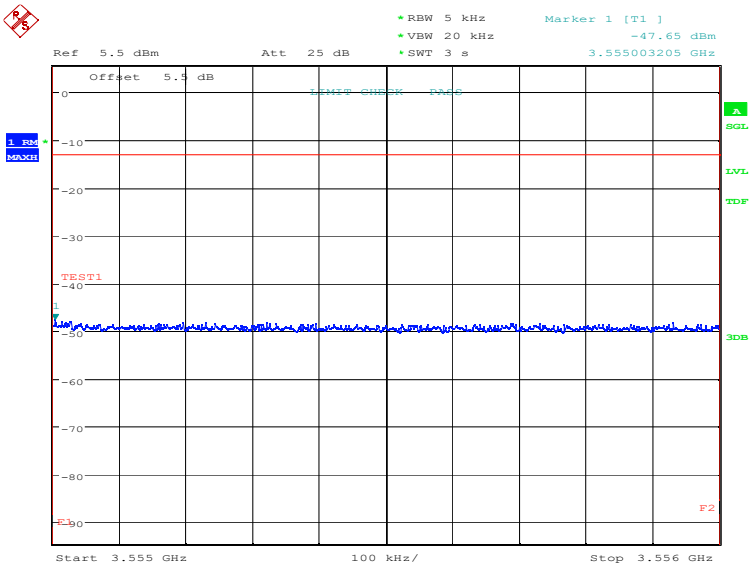
Date: 17.JUN.2022 09:24:55



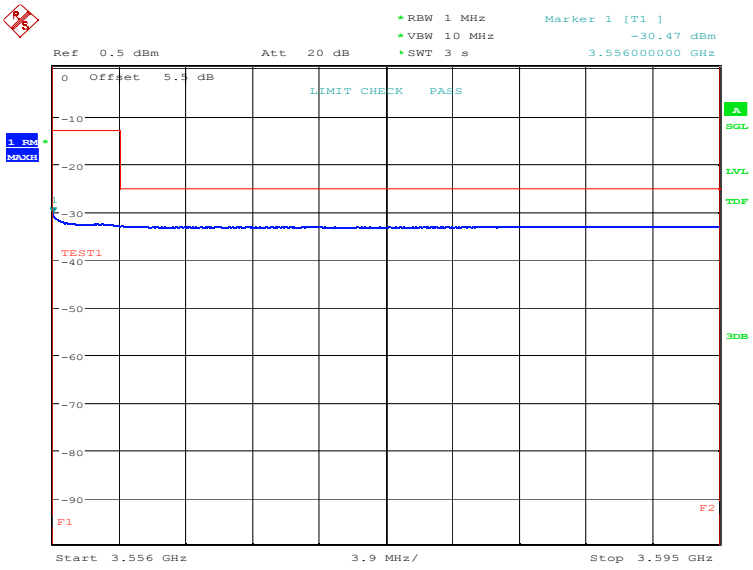
Date: 17.JUN.2022 09:25:12



Date: 17.JUN.2022 09:25:26

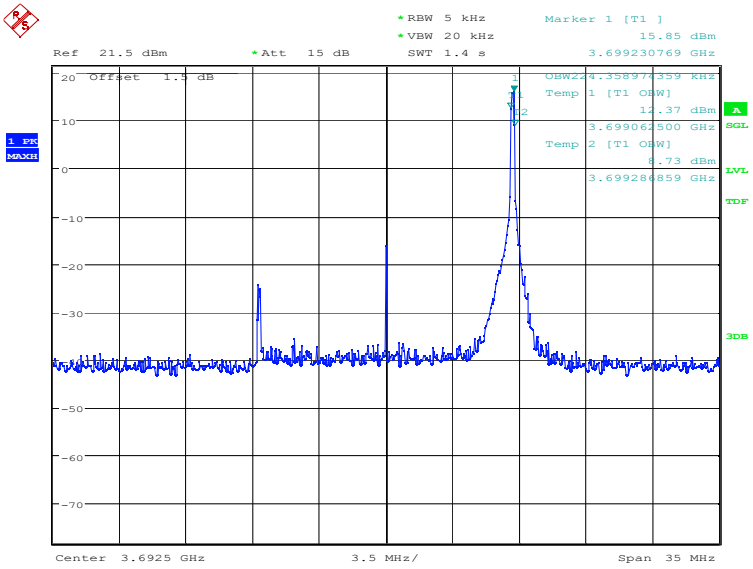


Date: 17.JUN.2022 09:24:09



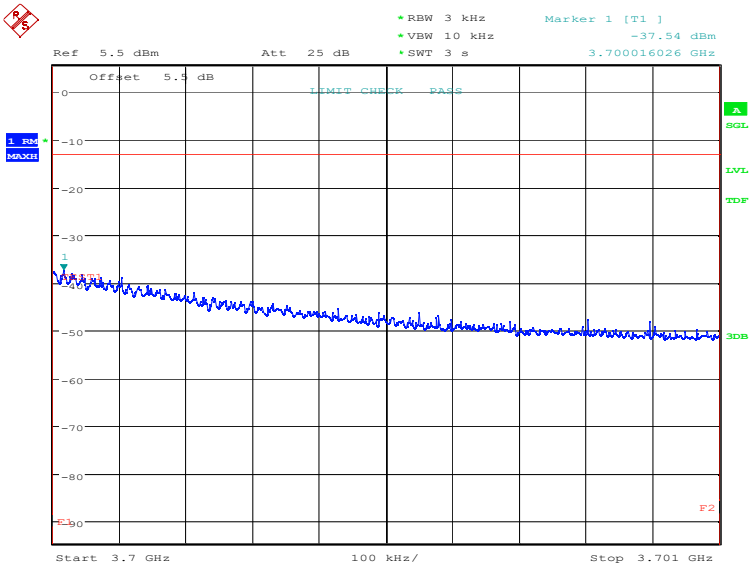
Date: 17.JUN.2022 09:26:04

OBW: 1RB-high_offset

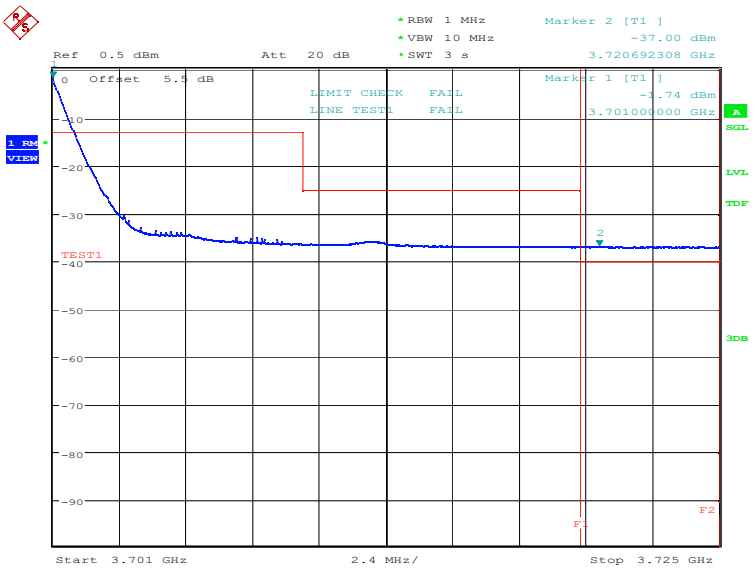


Date: 17.JUN.2022 09:26:43

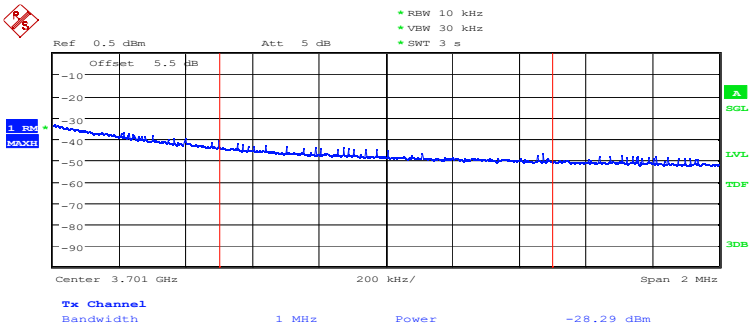
HIGH BAND EDGE BLOCK-1RB-high_offset



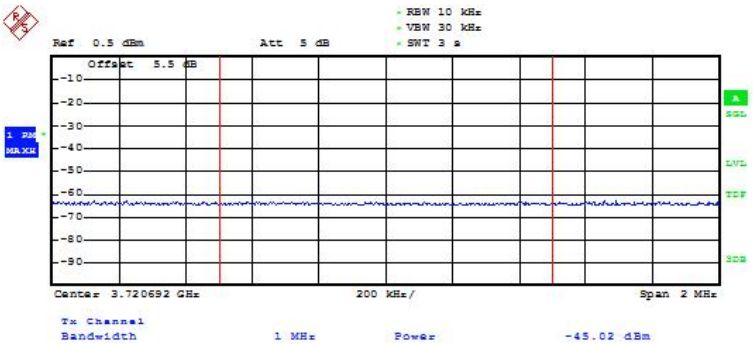
Date: 17.JUN.2022 09:27:23



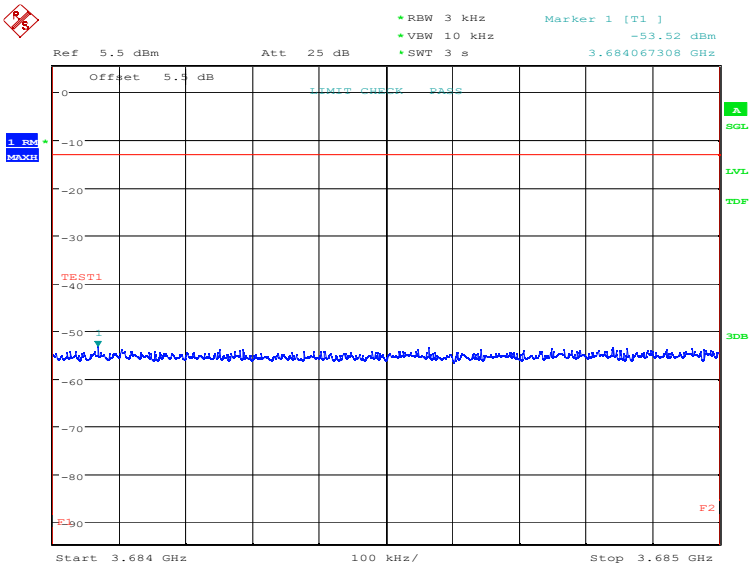
Date: 17.JUN.2022 09:28:49



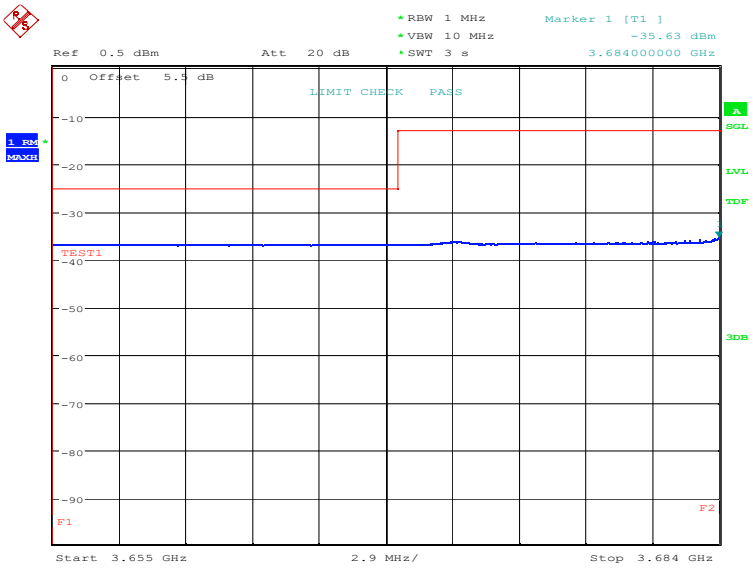
Date: 17.JUN.2022 09:29:05



Date: 17.JUN.2022 09:29:20

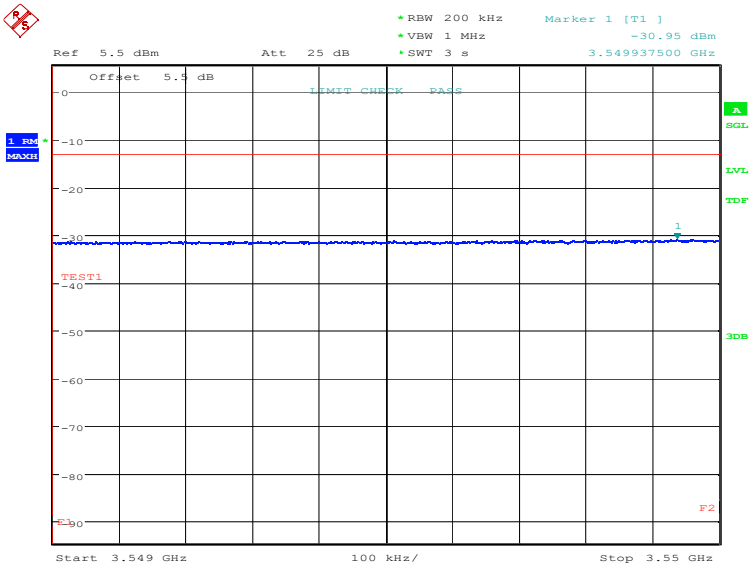


Date: 17.JUN.2022 09:28:03

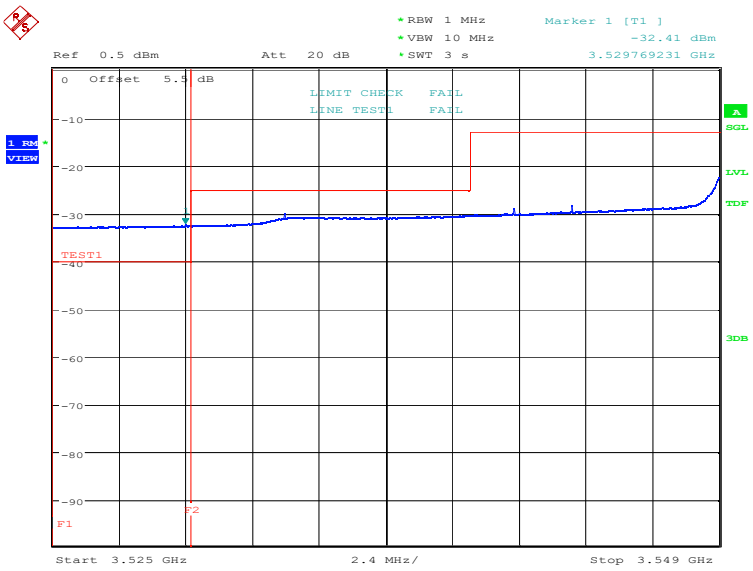


Date: 17.JUN.2022 09:29:58

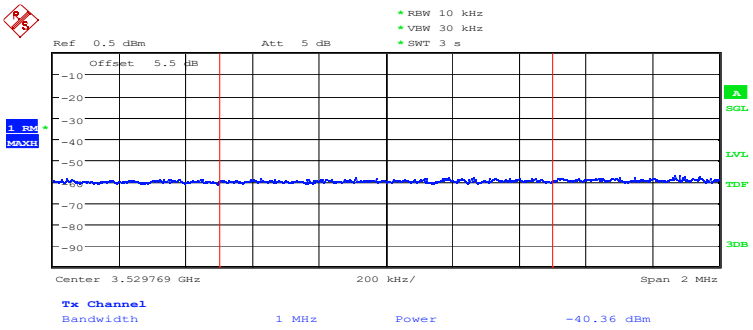
LOW BAND EDGE BLOCK-20MHz-100%RB



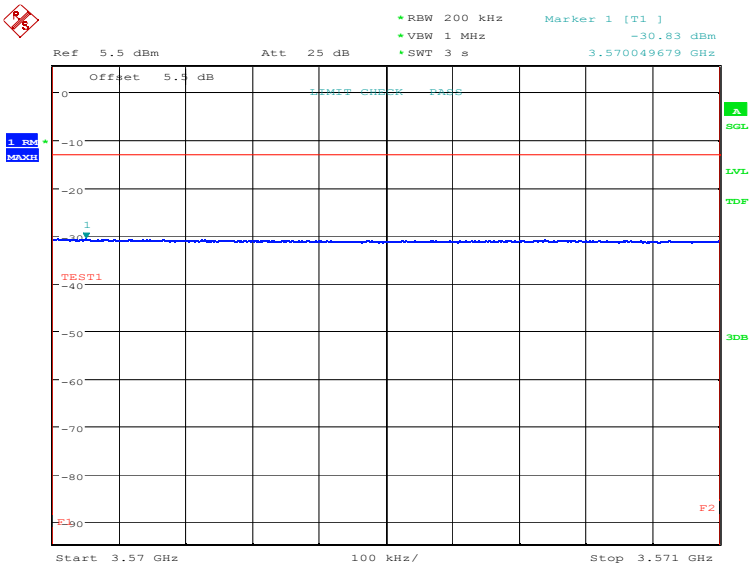
Date: 13.JUN.2022 14:23:32



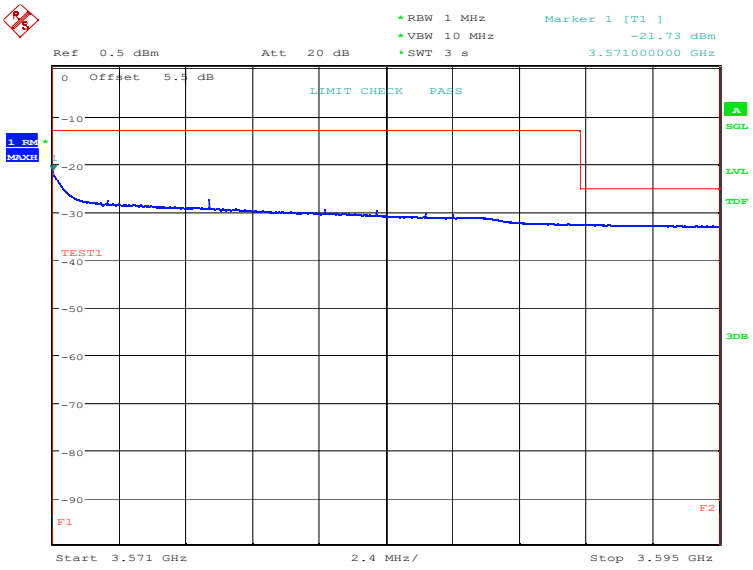
Date: 13.JUN.2022 14:24:57



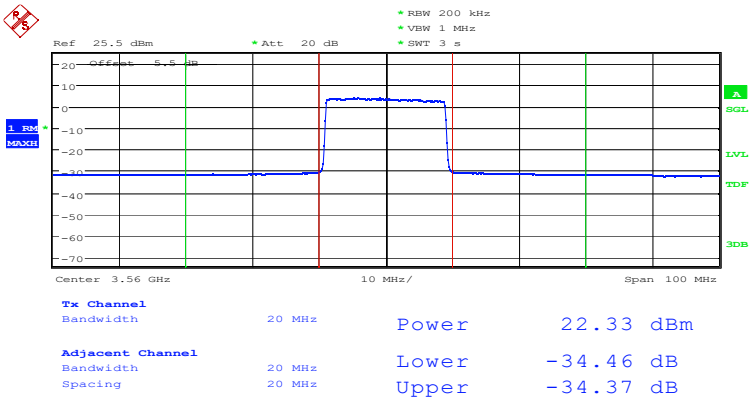
Date: 13.JUN.2022 14:25:13



Date: 13.JUN.2022 14:24:12

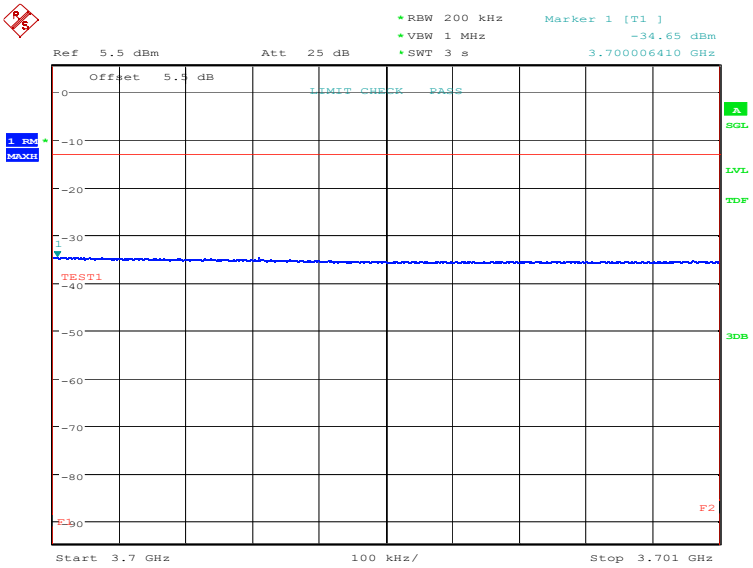


Date: 13.JUN.2022 14:25:51

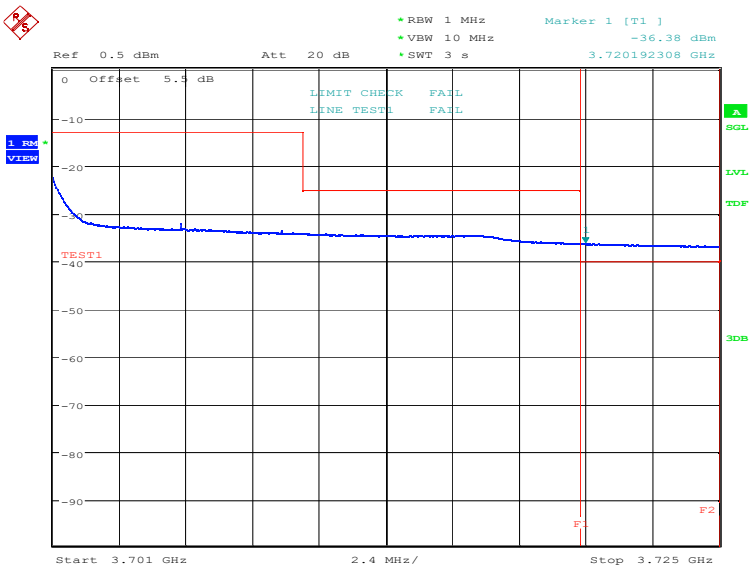


Date: 13.JUN.2022 14:27:01

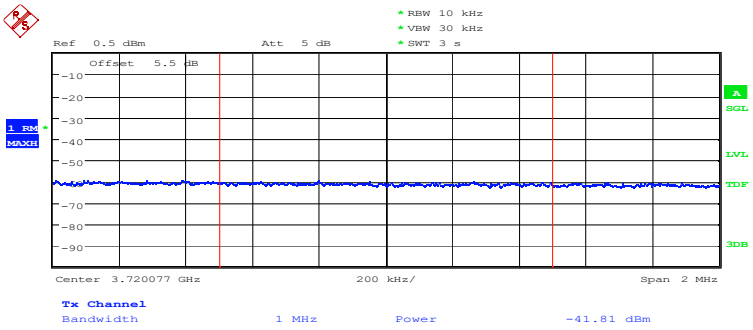
HIGH BAND EDGE BLOCK-20MHz-100%RB



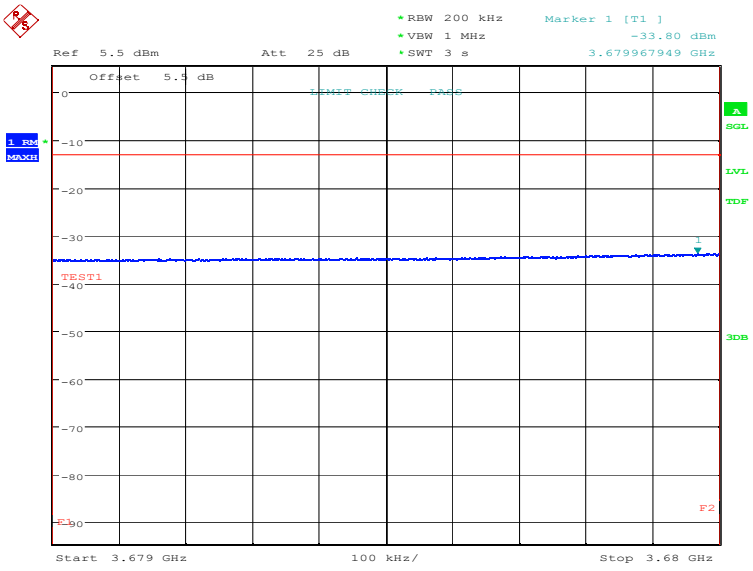
Date: 13.JUN.2022 14:30:14



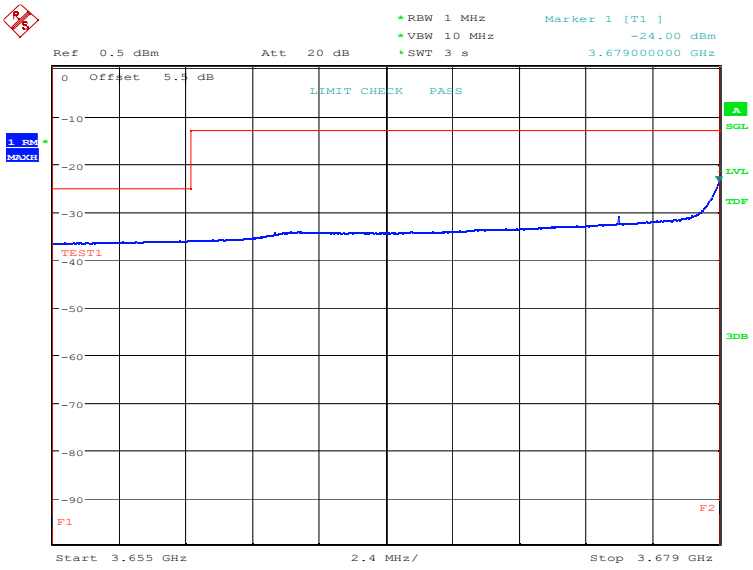
Date: 13.JUN.2022 14:31:39



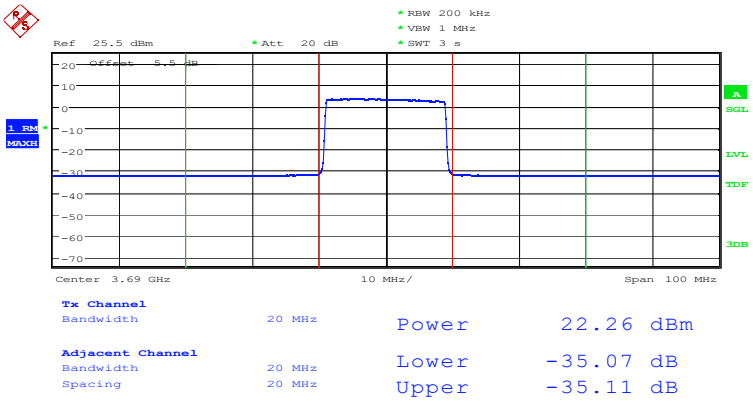
Date: 8.JUN.2022 10:53:12



Date: 13.JUN.2022 14:30:54



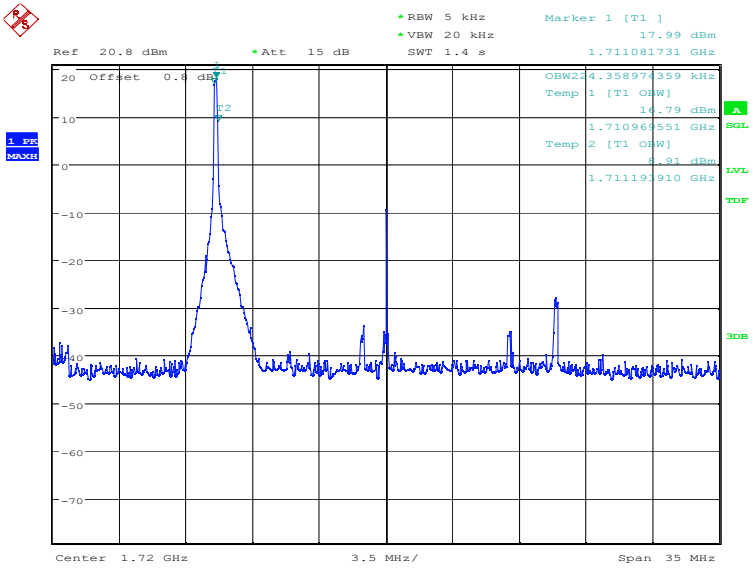
Date: 13.JUN.2022 14:32:34



Date: 13.JUN.2022 14:33:43

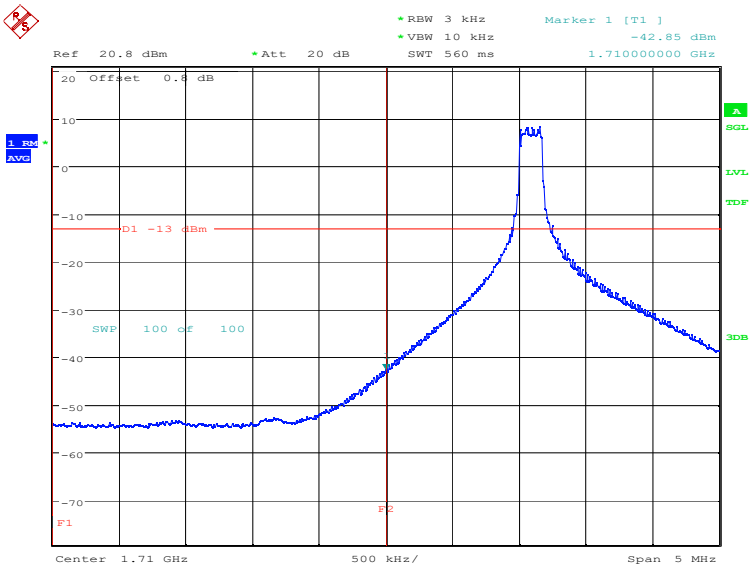
LTE band 66

OBW: 1RB-low_offset



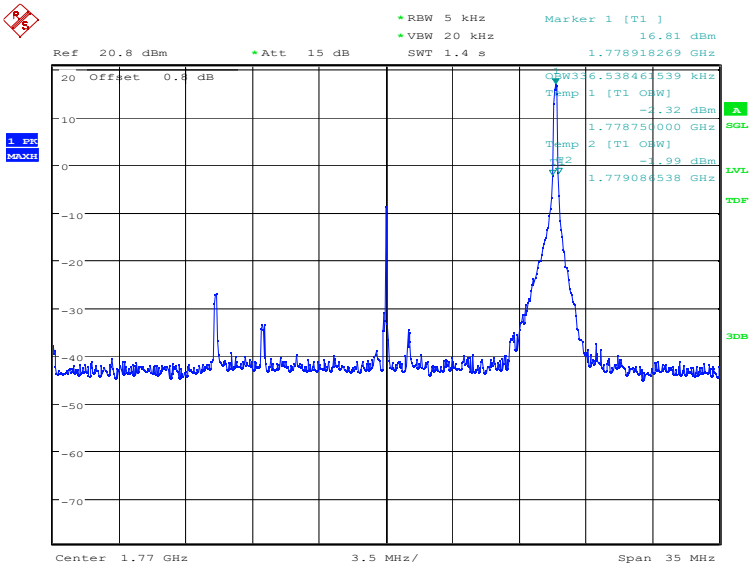
Date: 17.JUN.2022 08:47:31

LOW BAND EDGE BLOCK-1RB-low_offset



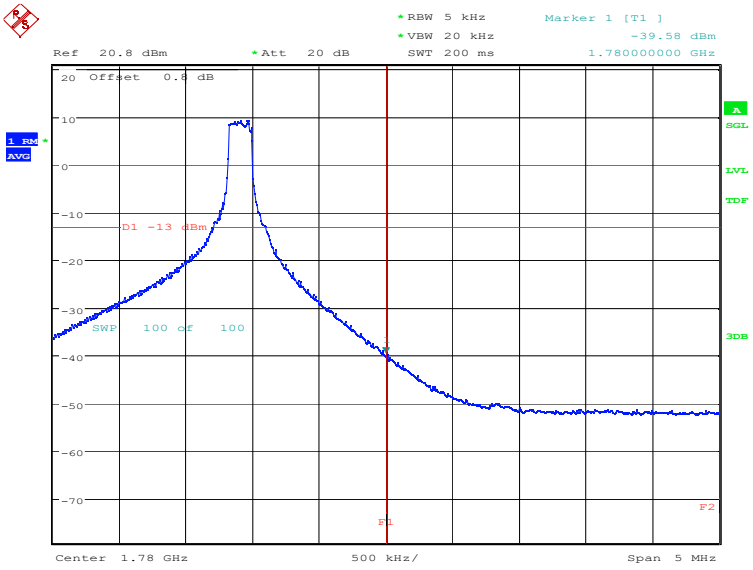
Date: 17.JUN.2022 08:48:44

OBW: 1RB-high_offset



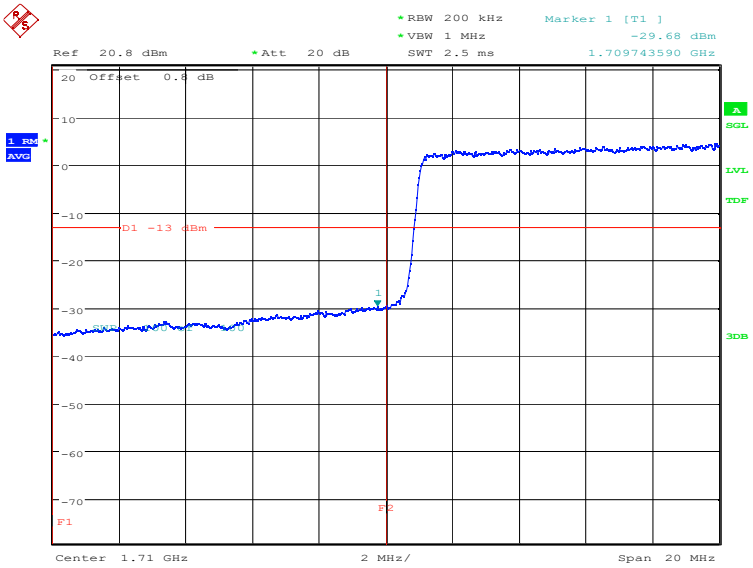
Date: 17.JUN.2022 08:49:18

HIGH BAND EDGE BLOCK-1RB-high_offset



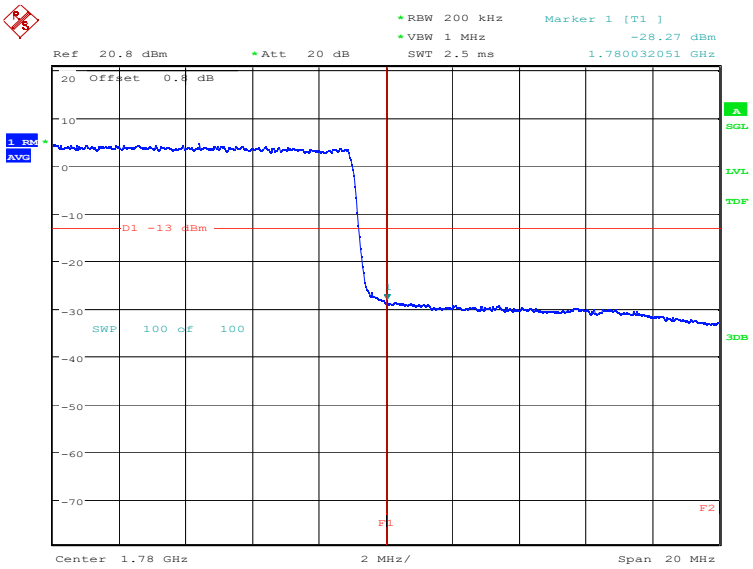
Date: 17.JUN.2022 08:50:31

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 25.APR.2022 10:29:44

HIGH BAND EDGE BLOCK-20MHz-100%RB

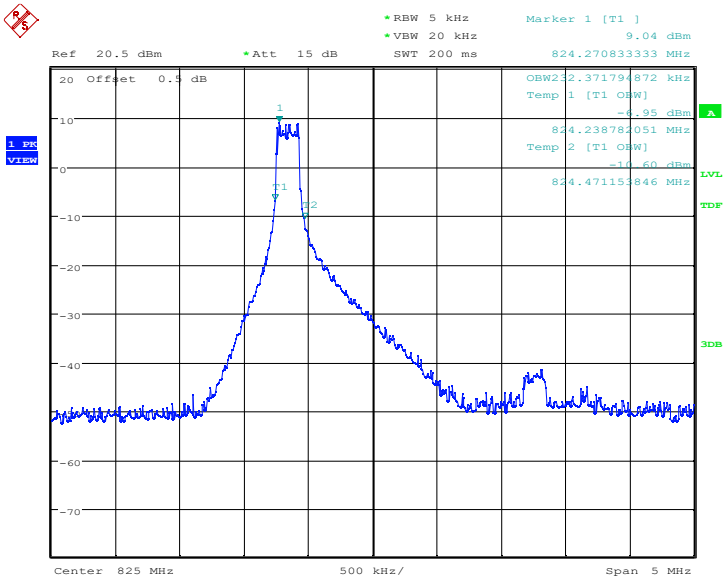


Date: 25.APR.2022 10:31:14

LTE CA Band 5B

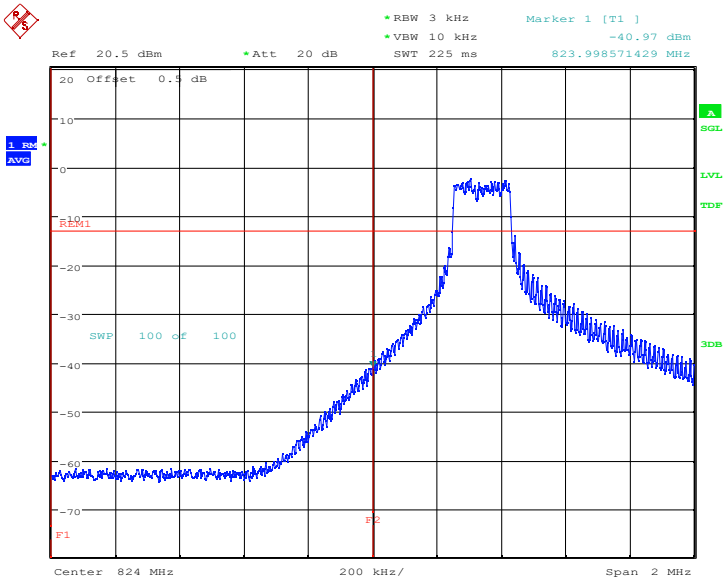
Only the worst case result is given below

OBW: 1RB-low_offset



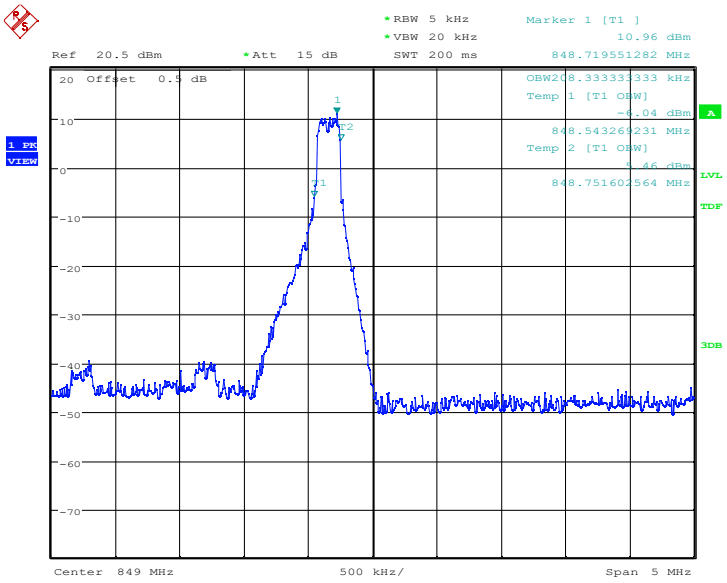
Date: 18.MAY.2022 14:50:56

LOW BAND EDGE BLOCK-5MHz+3MHz-1RB



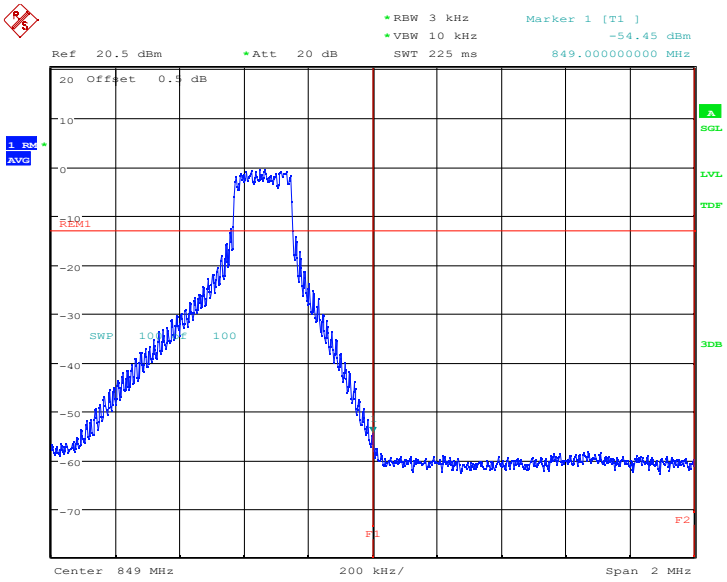
Date: 18.MAY.2022 14:51:58

OBW: 1RB-high_offset



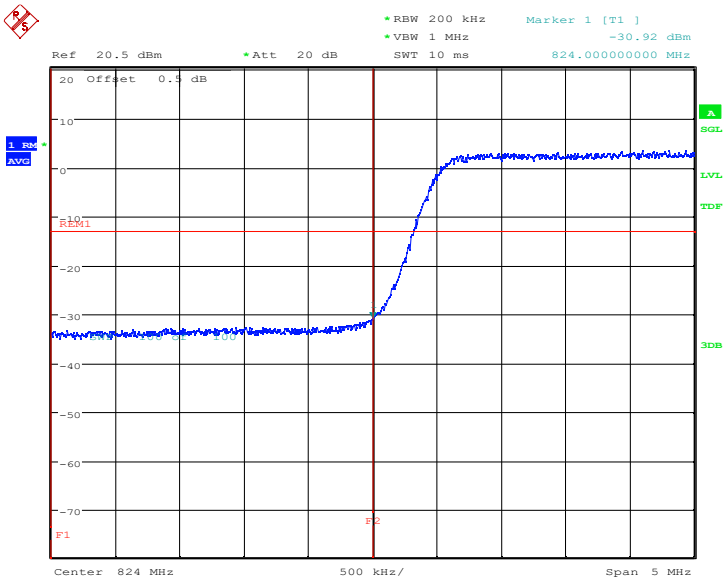
Date: 18.MAY.2022 14:54:49

HIGH BAND EDGE BLOCK-5MHz+3MHz-1RB



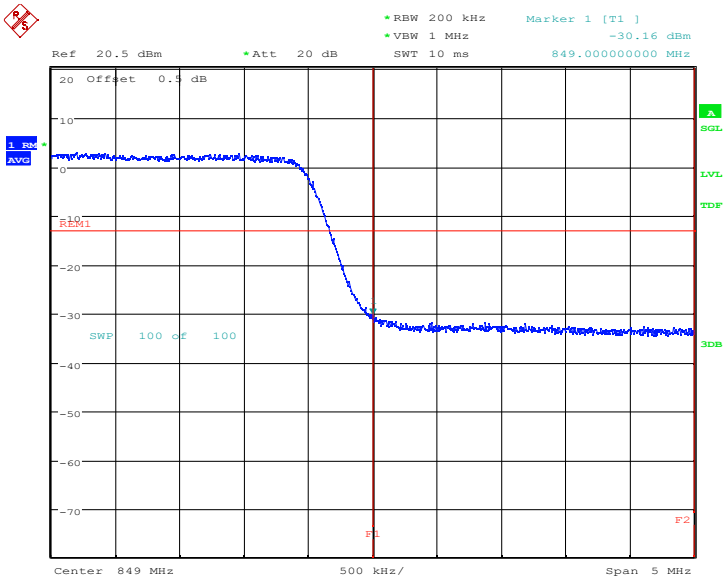
Date: 18.MAY.2022 14:55:52

LOW BAND EDGE BLOCK-10MHz+10MHz-100%RB



Date: 1.MAY.2022 07:41:19

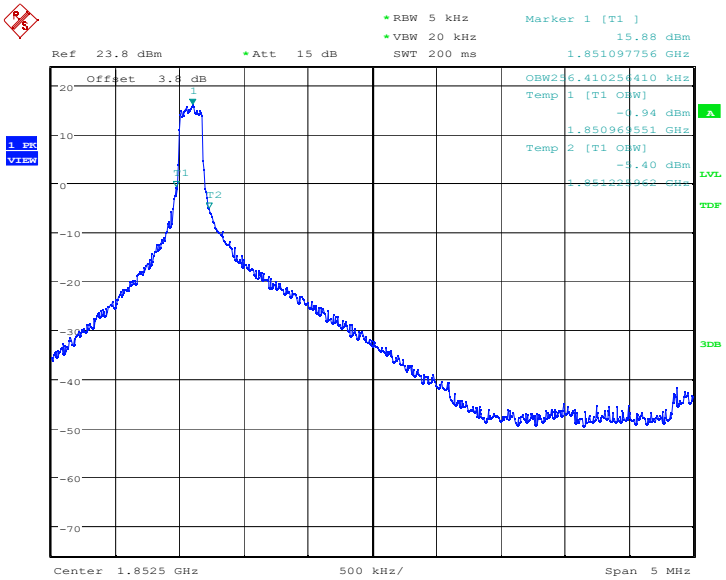
HIGH BAND EDGE BLOCK-10MHz+10MHz-100%RB



Date: 1.MAY.2022 07:42:32

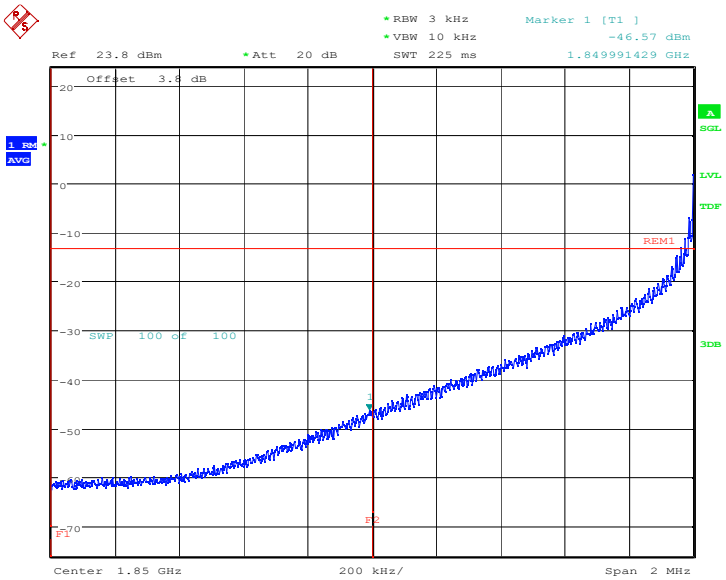
LTE band 2@CA_2A-5A

OBW: 1RB-LOW_offset



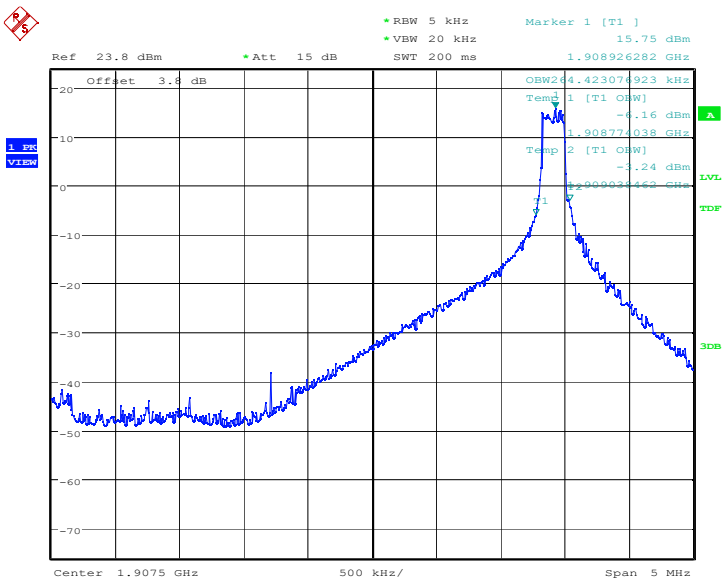
Date: 20.JUN.2022 18:05:43

LOW BAND EDGE BLOCK-1RB-LOW_offset



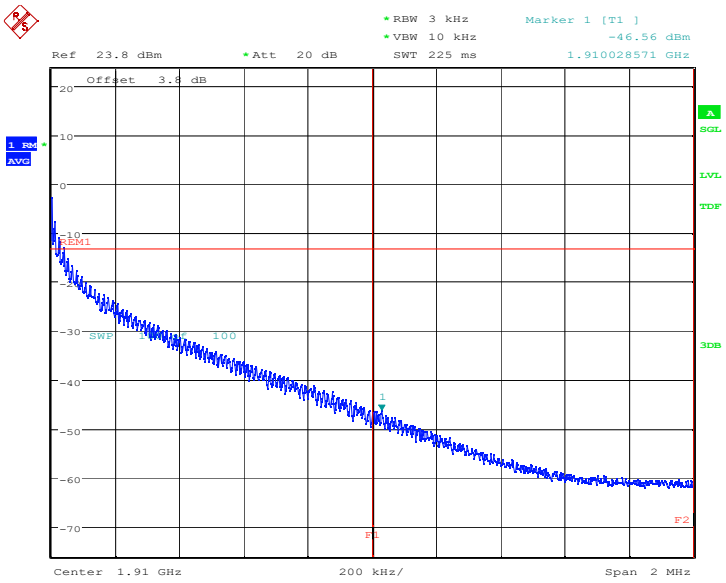
Date: 20.JUN.2022 18:06:47

OBW: 1RB-HIGH_offset



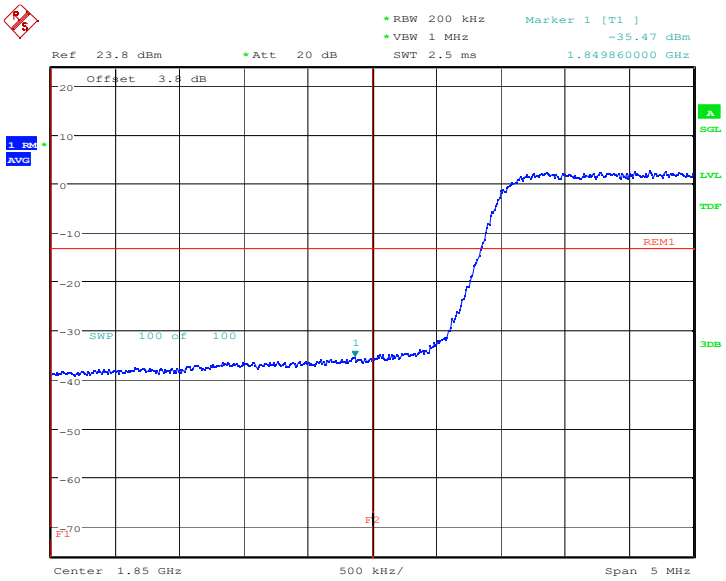
Date: 20.JUN.2022 18:10:18

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



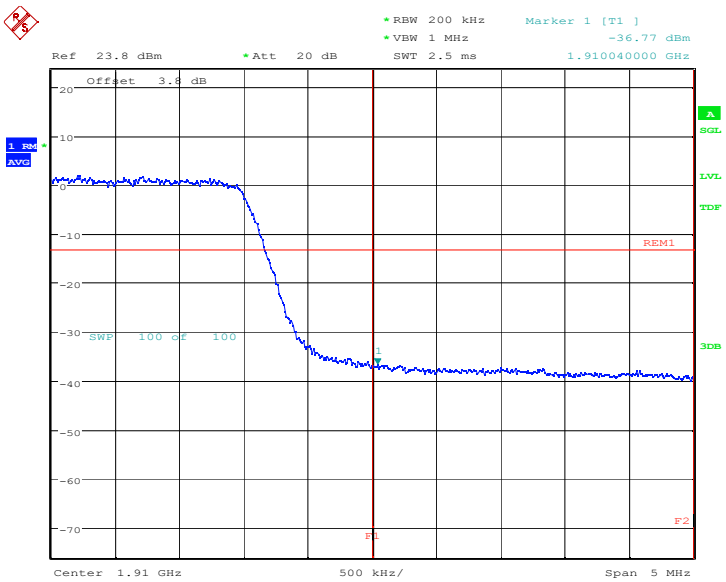
Date: 20.JUN.2022 18:11:20

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:04:39

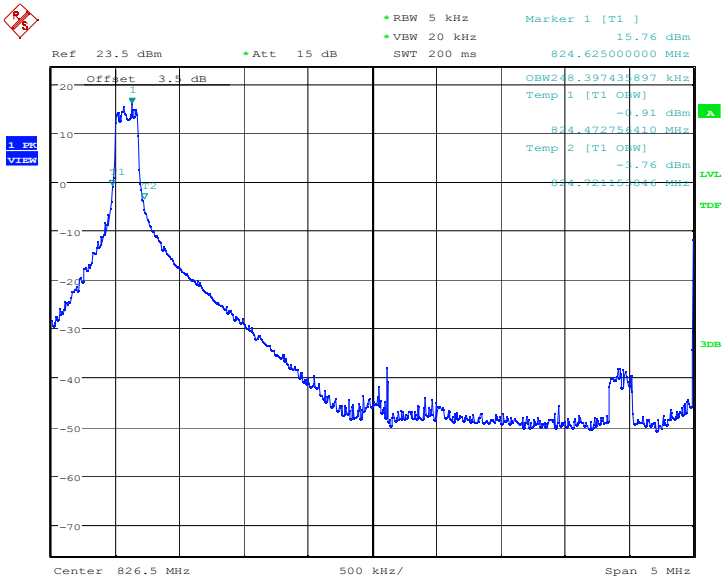
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:09:18

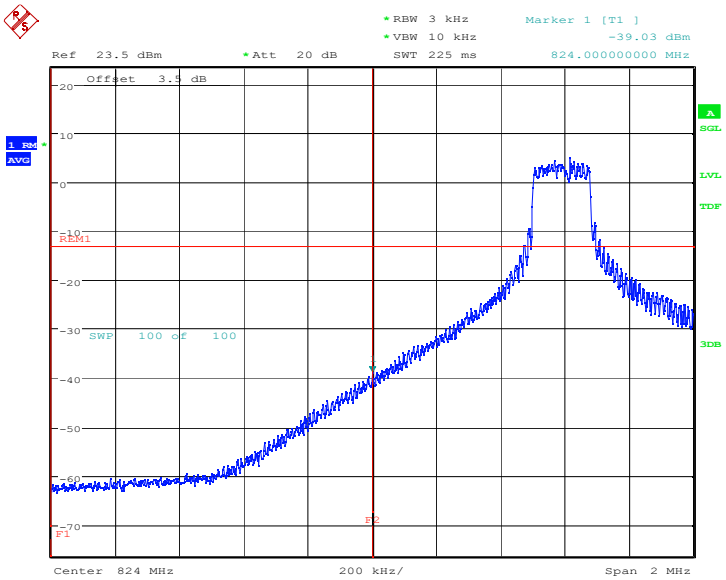
LTE band 5@CA_2A-5A

OBW: 1RB-LOW_offset



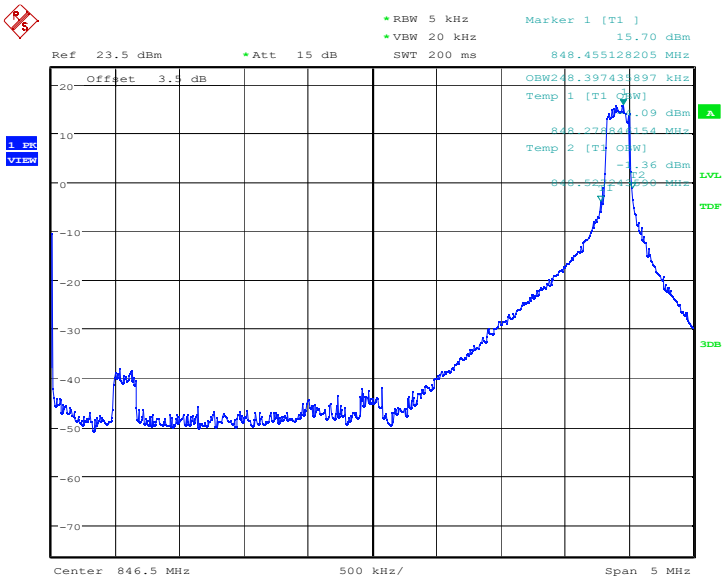
Date: 20.JUN.2022 18:07:07

LOW BAND EDGE BLOCK-1RB-LOW_offset



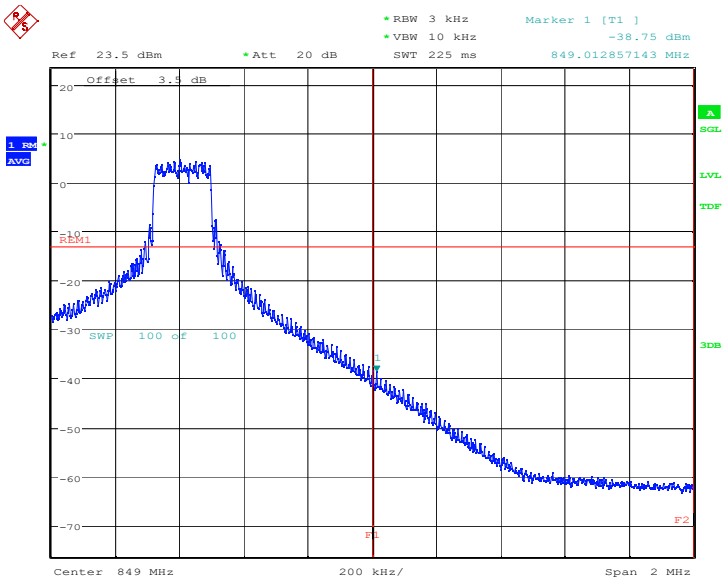
Date: 20.JUN.2022 18:08:09

OBW: 1RB-HIGH_offset



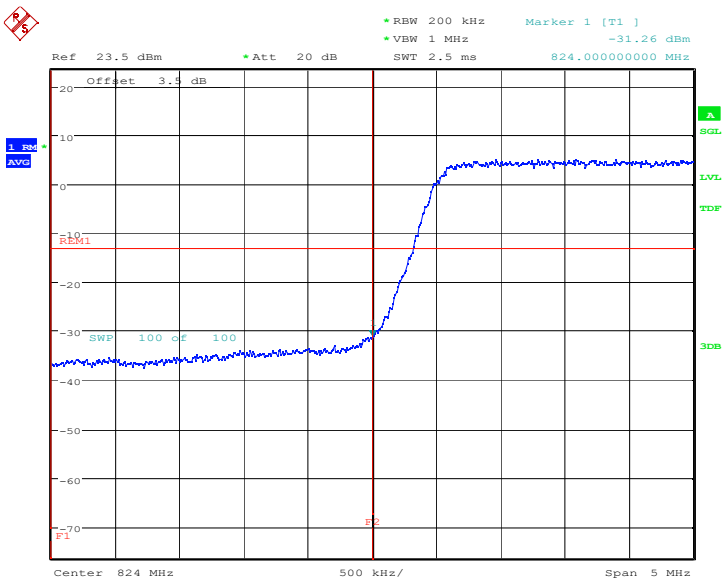
Date: 20.JUN.2022 18:11:38

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



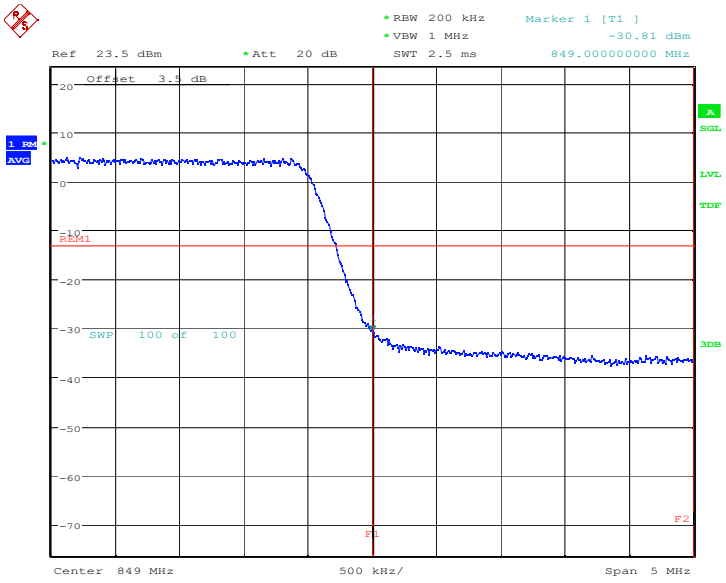
Date: 20.JUN.2022 18:12:40

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:05:20

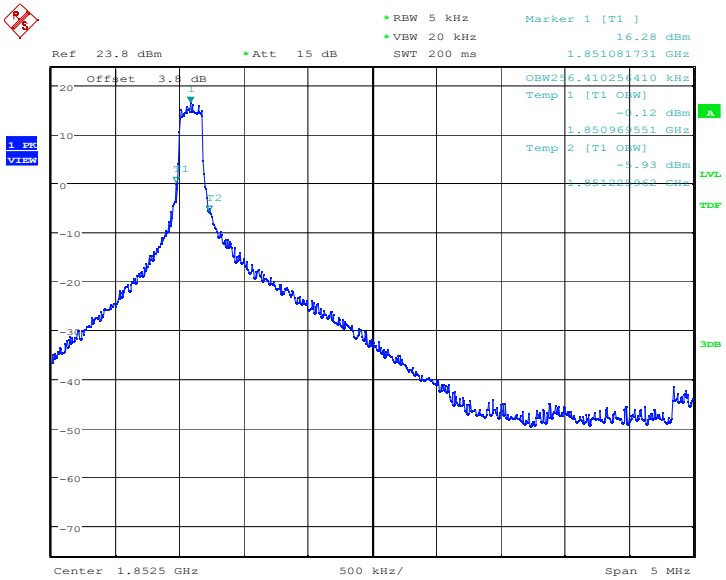
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:09:58

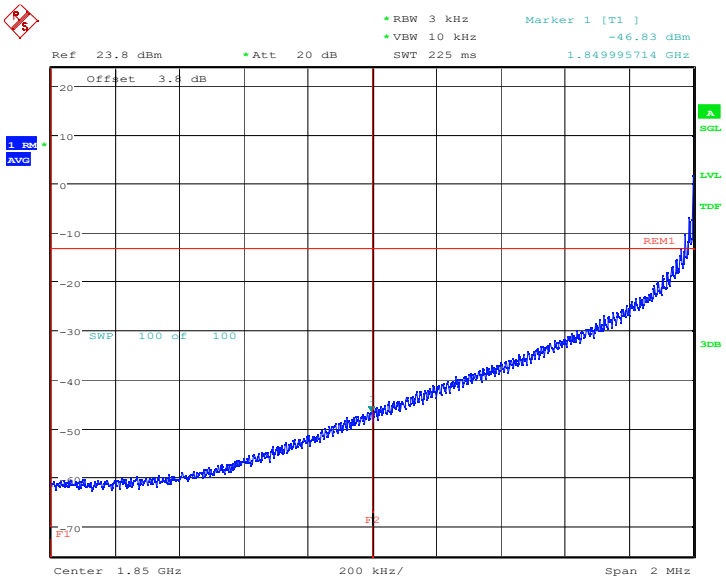
LTE band 2@CA_2A-12A

OBW: 1RB-LOW_offset



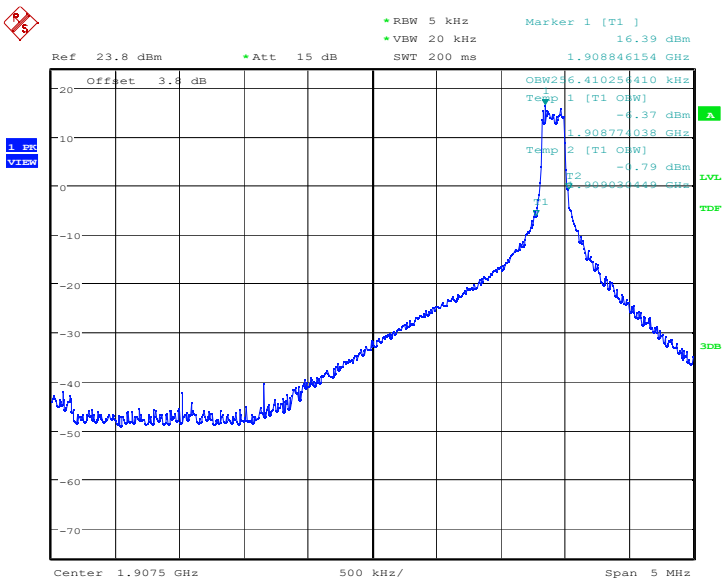
Date: 20.JUN.2022 18:14:54

LOW BAND EDGE BLOCK-1RB-20MHz+10M1RB_offset



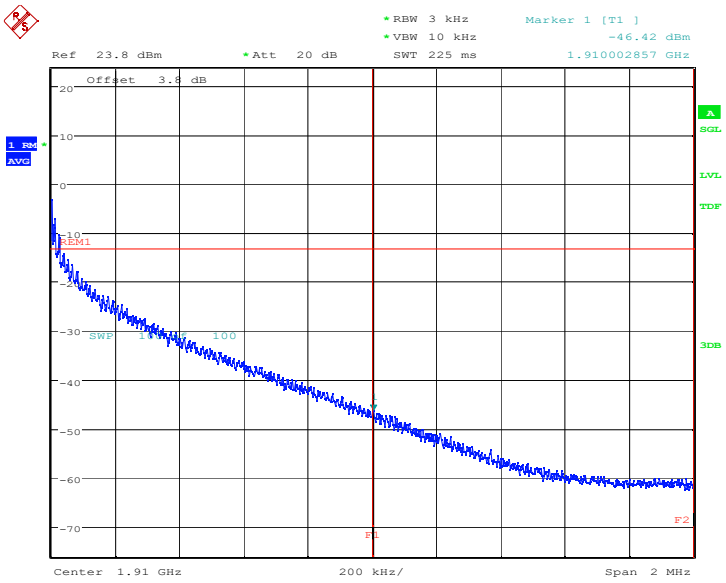
Date: 20.JUN.2022 18:15:57

OBW: 1RB-HIGH_offset



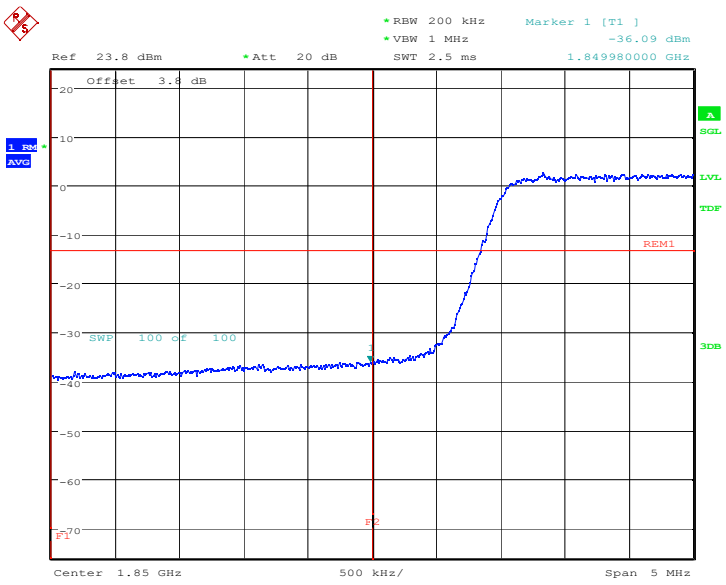
Date: 20.JUN.2022 18:19:06

HIGH BAND EDGE BLOCK-1RB-20MHz+10M1RB_offset



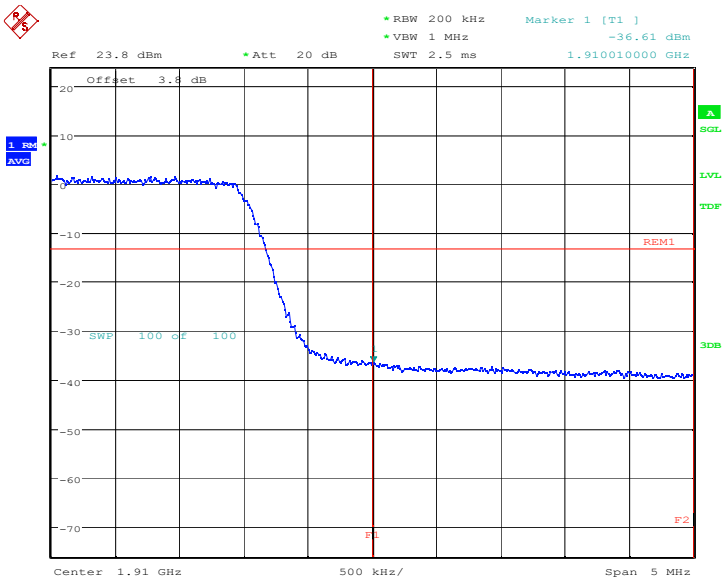
Date: 20.JUN.2022 18:20:08

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:13:52

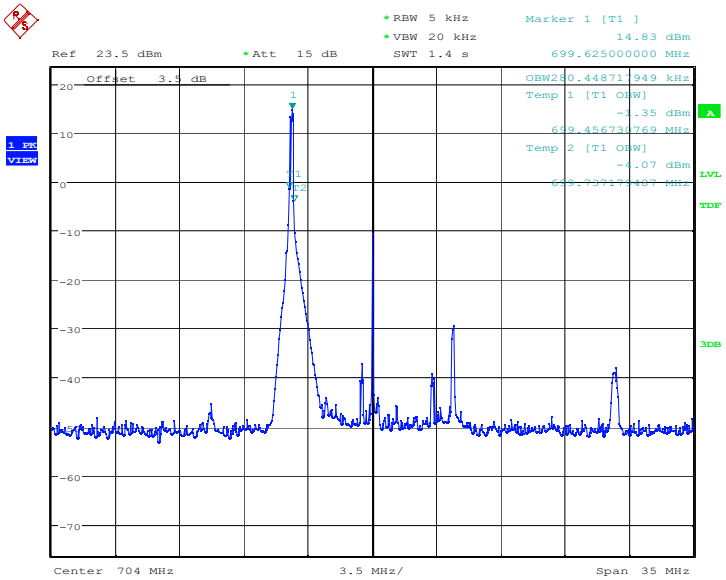
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:18:04

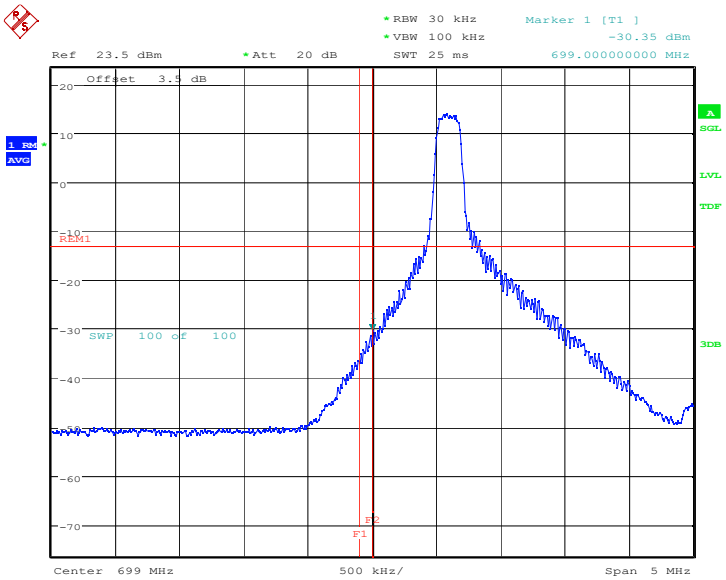
LTE band 12@CA_2A-12A

OBW: 1RB-LOW_offset



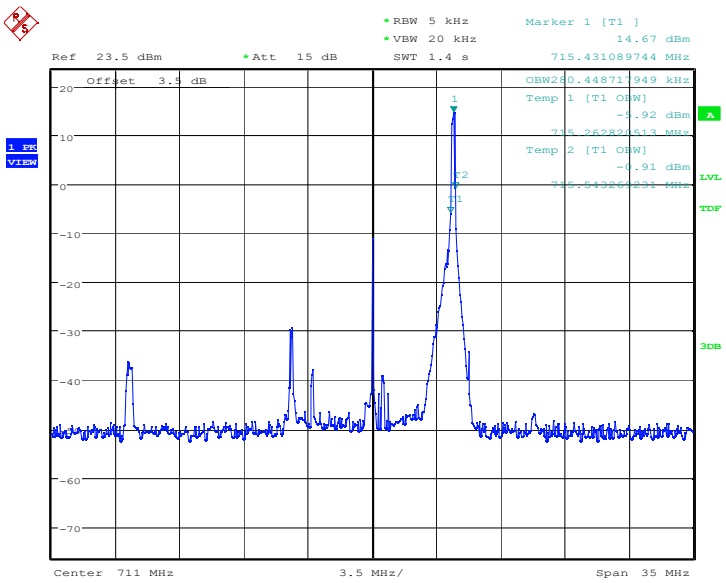
Date: 20.JUN.2022 18:16:15

LOW BAND EDGE BLOCK-1RB-LOW_offset



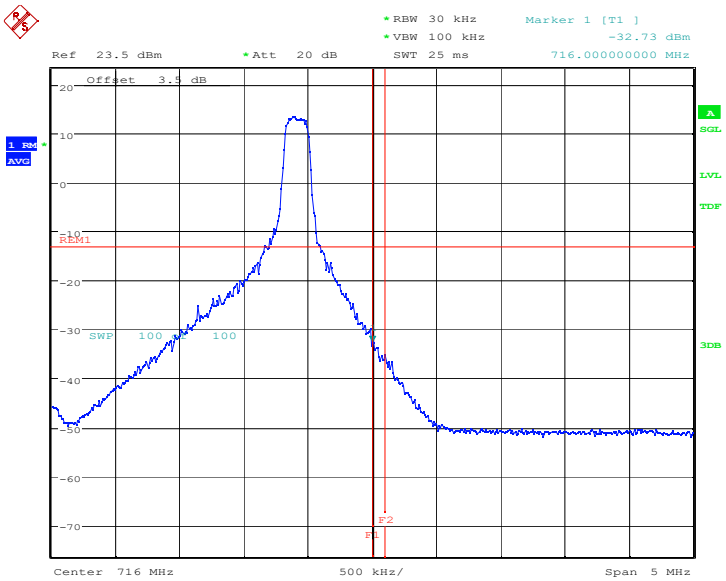
Date: 20.JUN.2022 18:16:56

OBW: 1RB-HIGH_offset



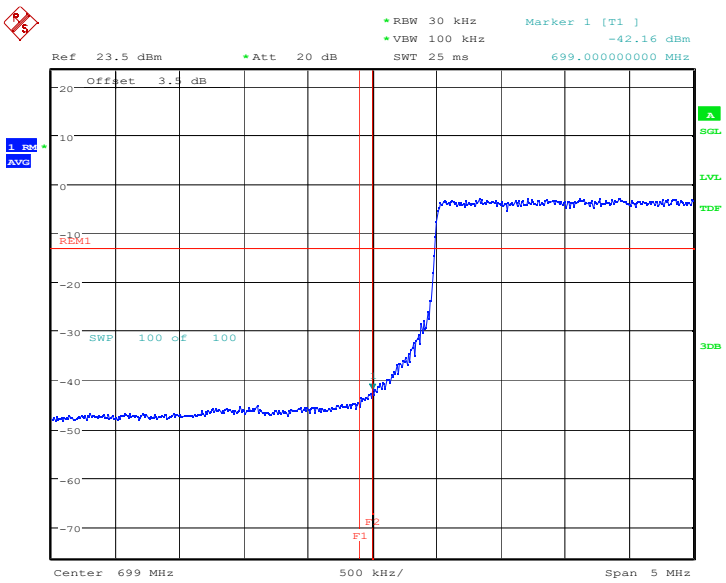
Date: 20.JUN.2022 18:20:26

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



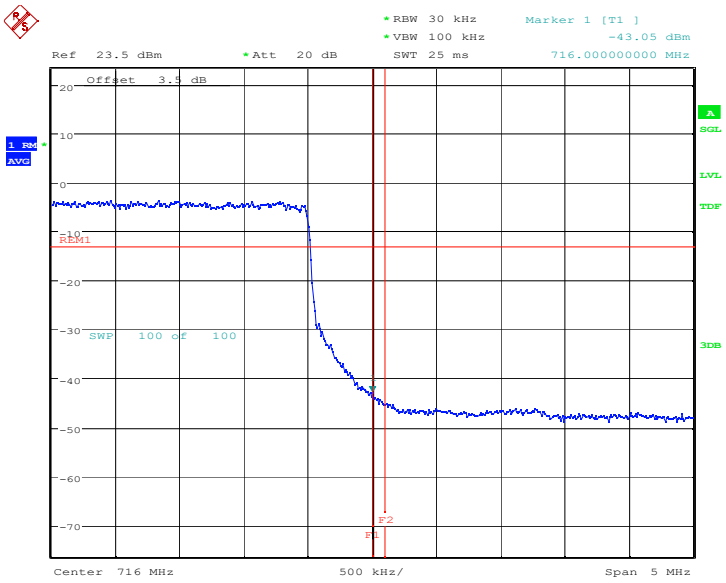
Date: 20.JUN.2022 18:21:08

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:14:33

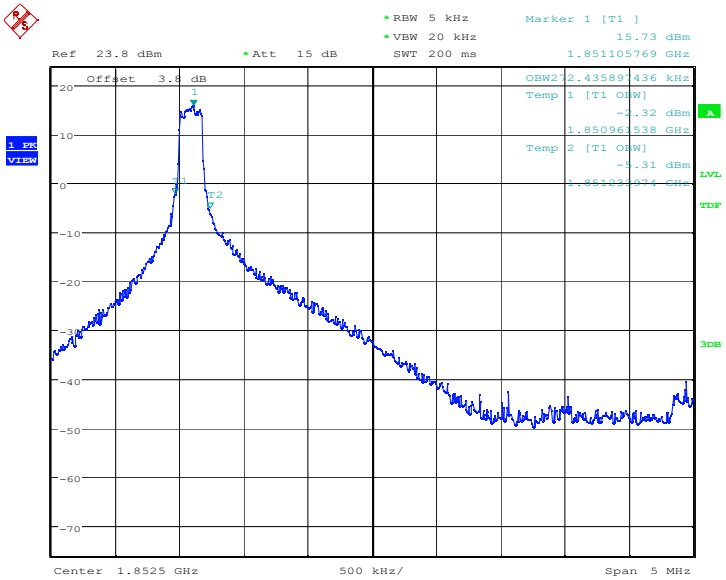
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:18:46

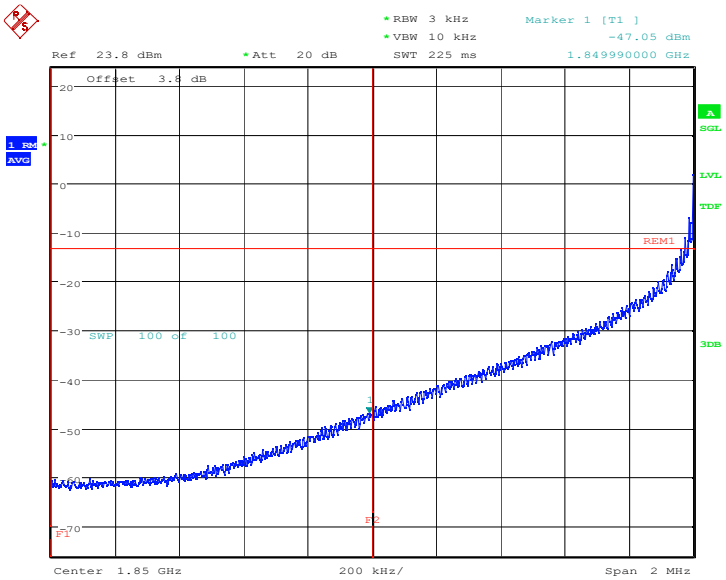
LTE band 2@CA_2A-14A

OBW: 1RB-LOW_offset



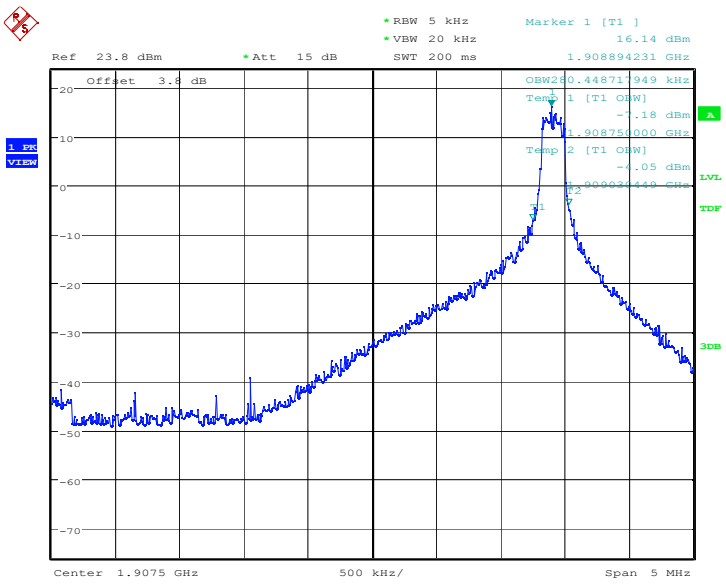
Date: 20.JUN.2022 18:23:20

LOW BAND EDGE BLOCK-1RB-LOW_offset



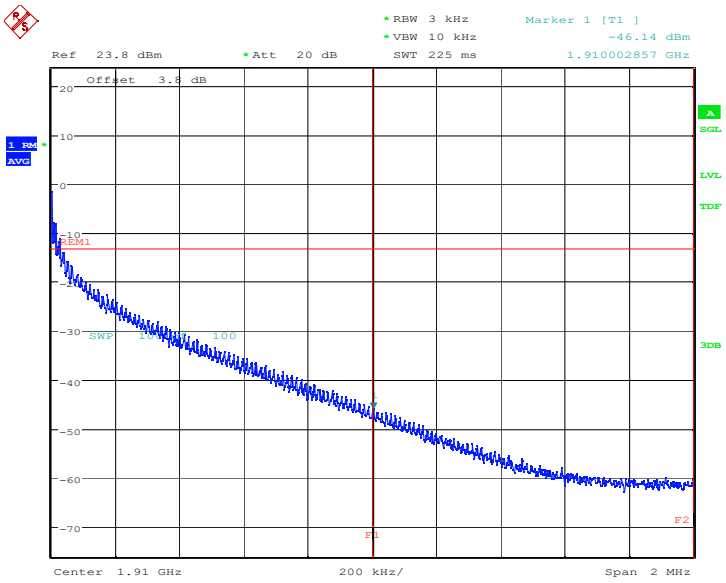
Date: 20.JUN.2022 18:24:23

OBW: 1RB-HIGH_offset



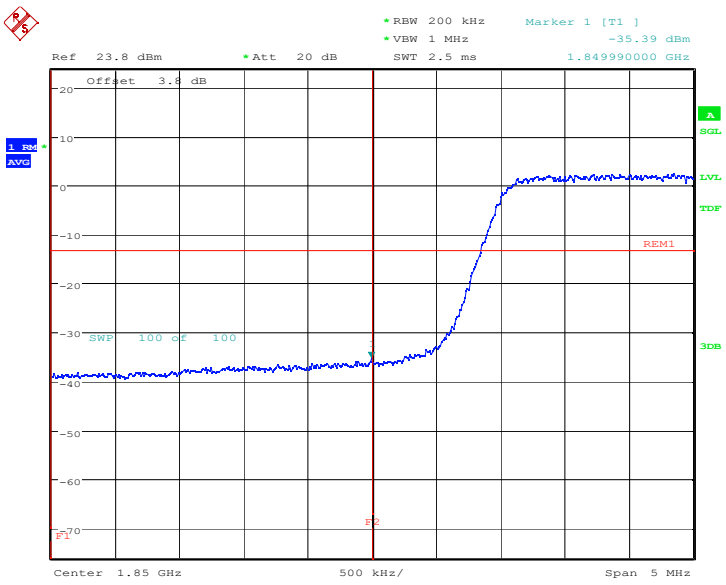
Date: 20.JUN.2022 18:27:08

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



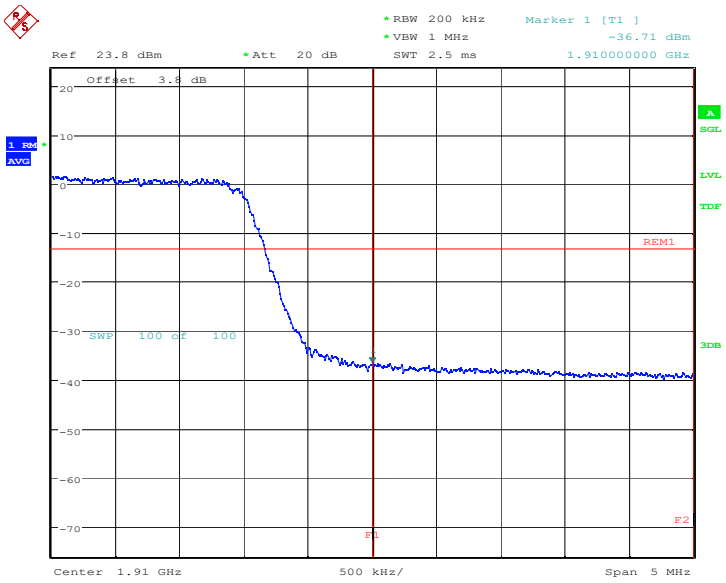
Date: 20.JUN.2022 18:28:10

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:22:20

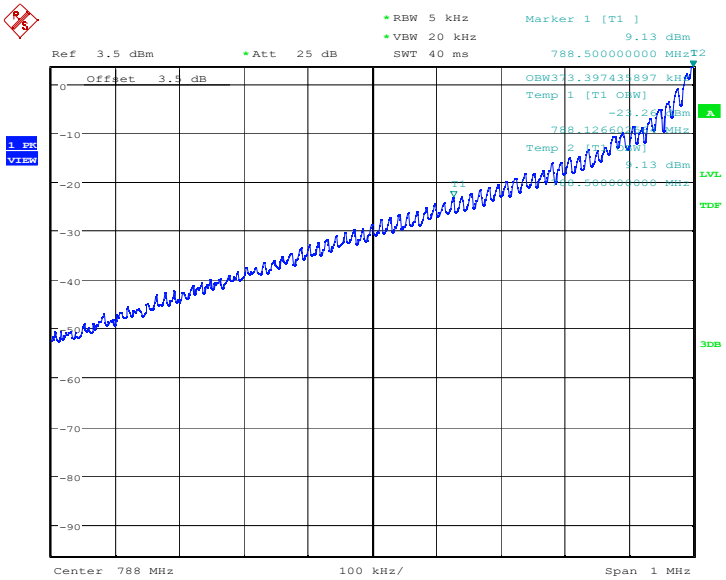
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:26:08

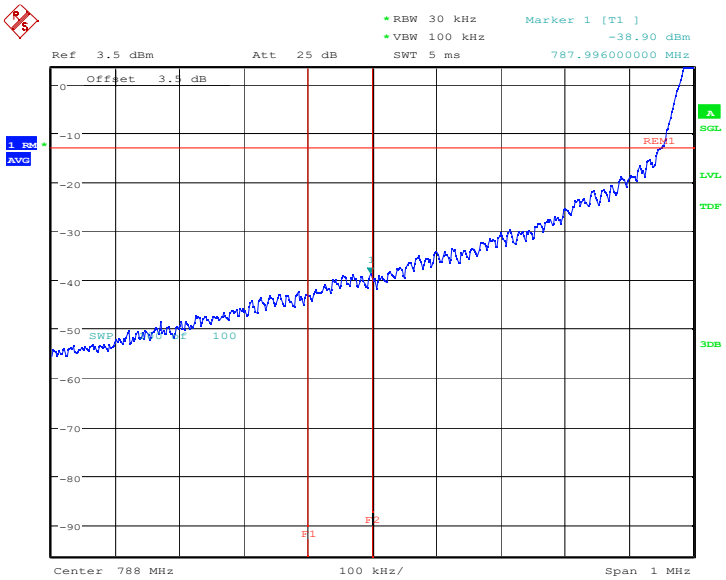
LTE band 14@CA_2A-14A

OBW: 1RB-LOW_offset



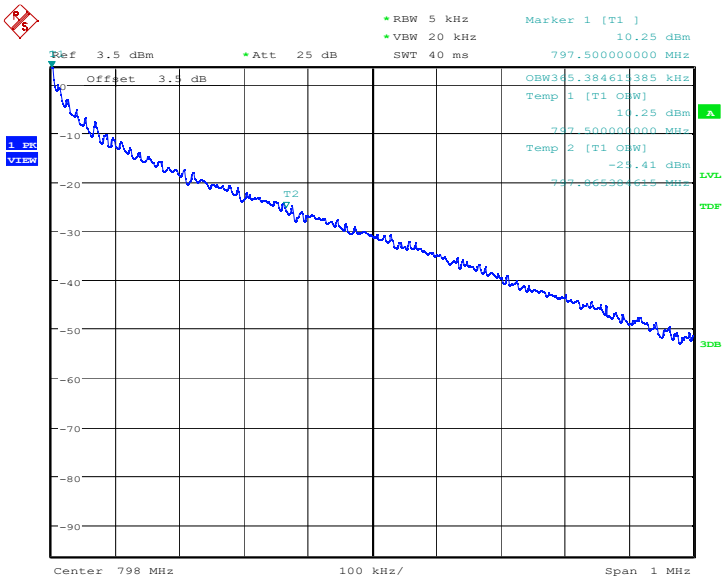
Date: 20.JUN.2022 18:24:41

LOW BAND EDGE BLOCK-1RB-LOW_offset



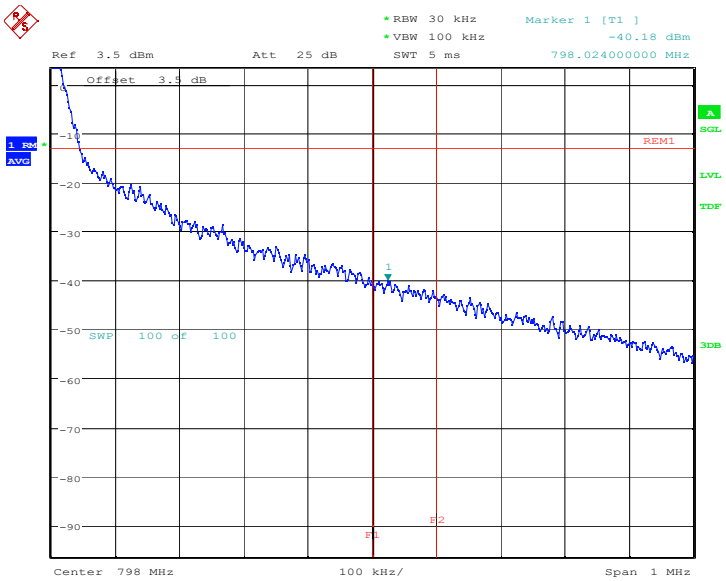
Date: 20.JUN.2022 18:25:21

OBW: 1RB-HIGH_offset



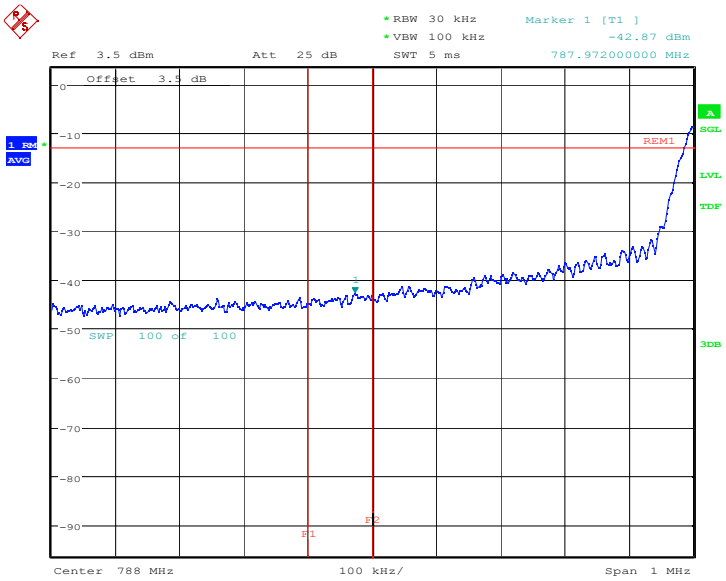
Date: 20.JUN.2022 18:28:28

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



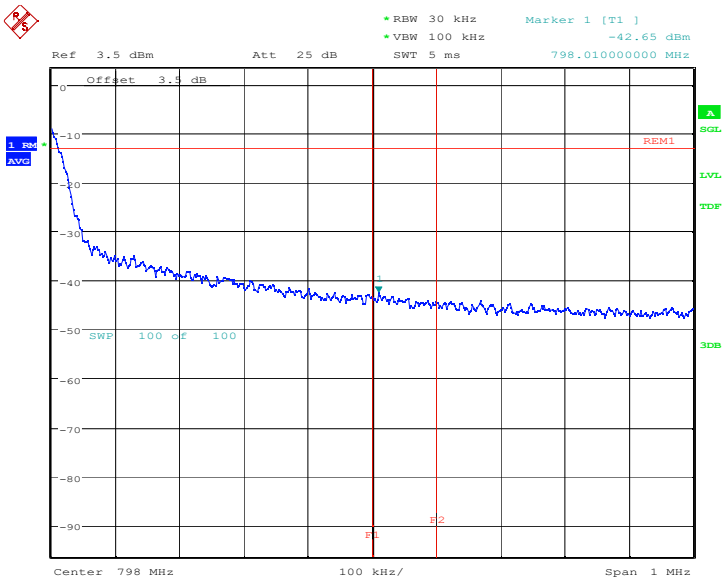
Date: 20.JUN.2022 18:29:07

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:23:00

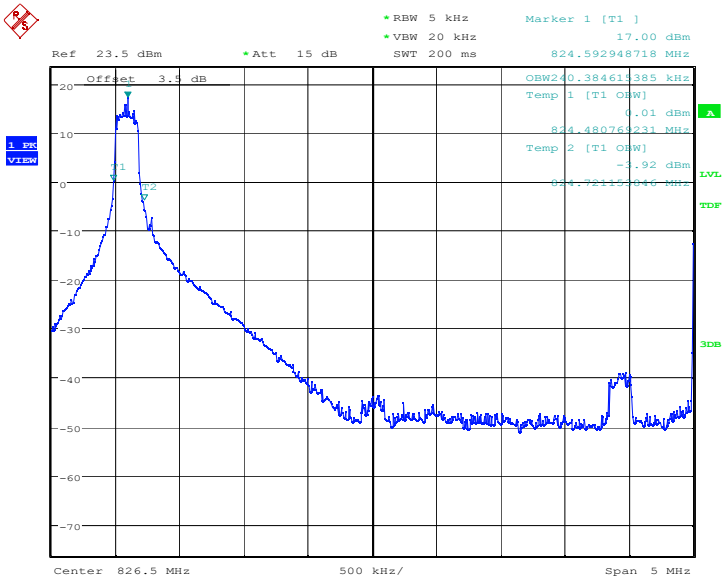
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:26:48

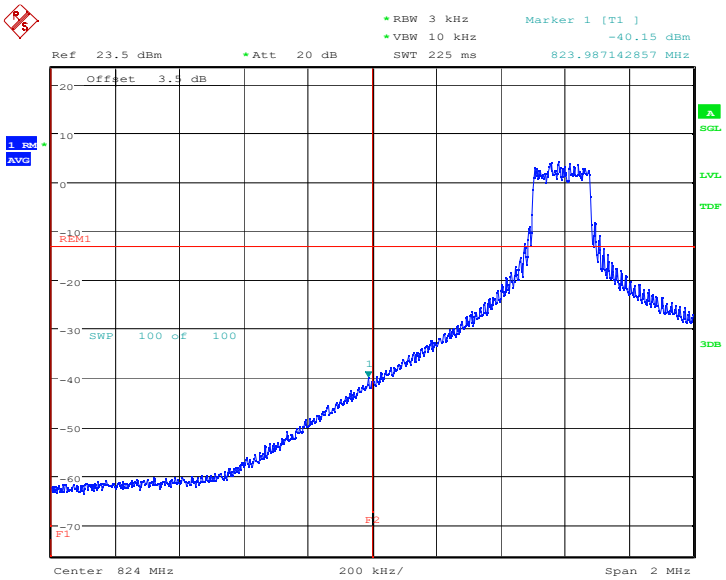
LTE band 5@CA_5A-30A

OBW: 1RB-LOW_offset



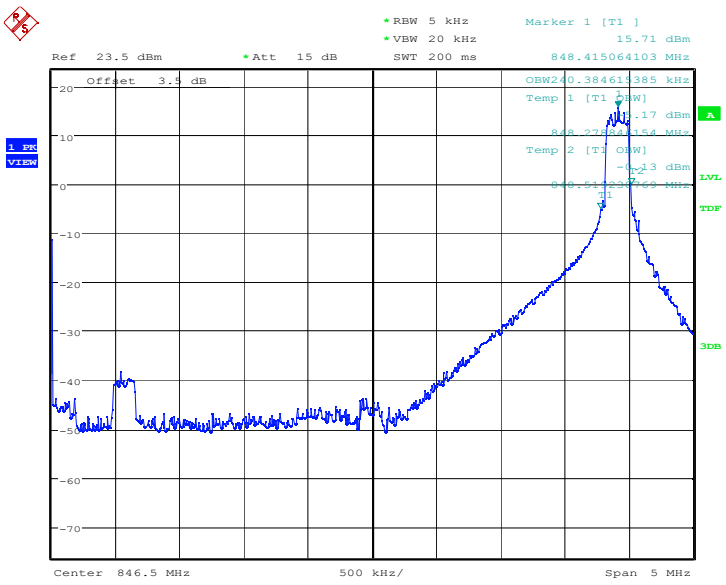
Date: 20.JUN.2022 17:02:47

LOW BAND EDGE BLOCK-1RB-LOW_offset



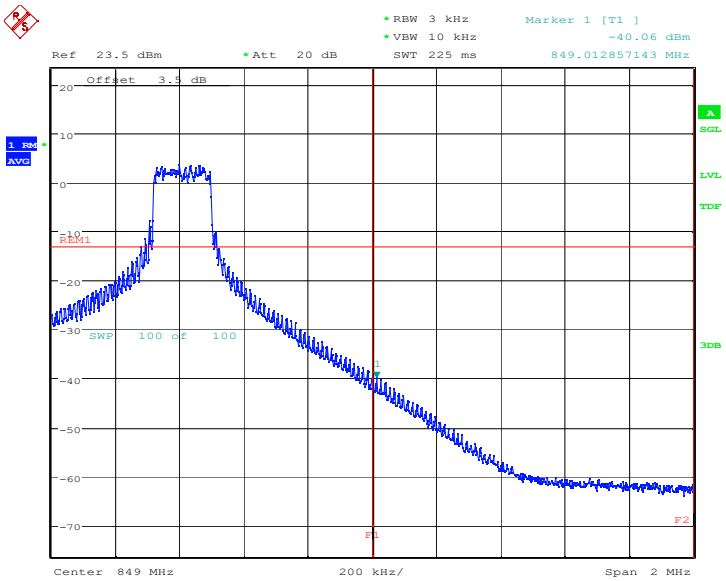
Date: 20.JUN.2022 17:03:50

OBW: 1RB-HIGH_offset



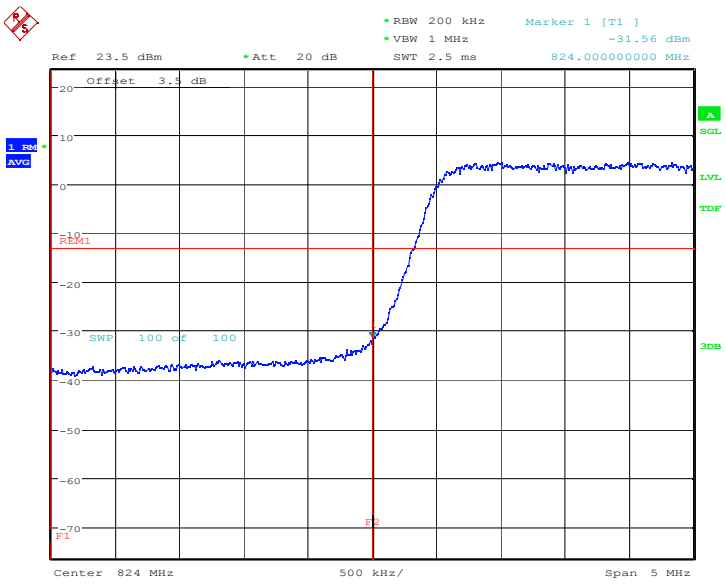
Date: 20.JUN.2022 17:07:17

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



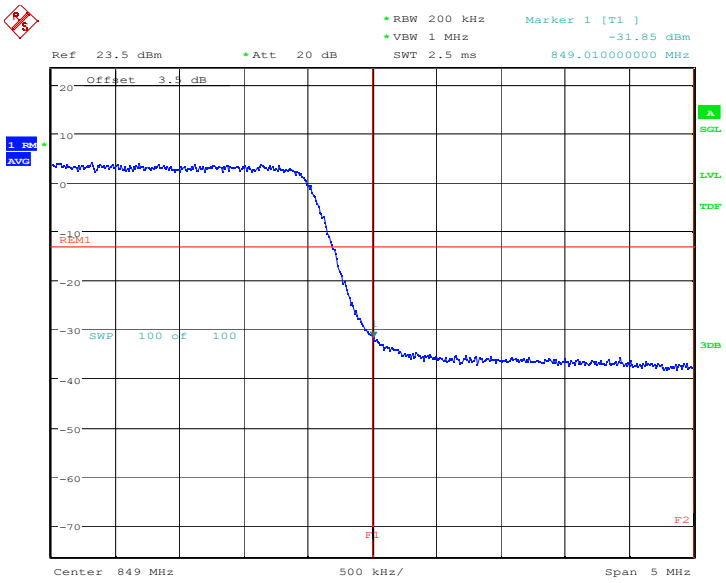
Date: 20.JUN.2022 17:08:20

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 17:34:55

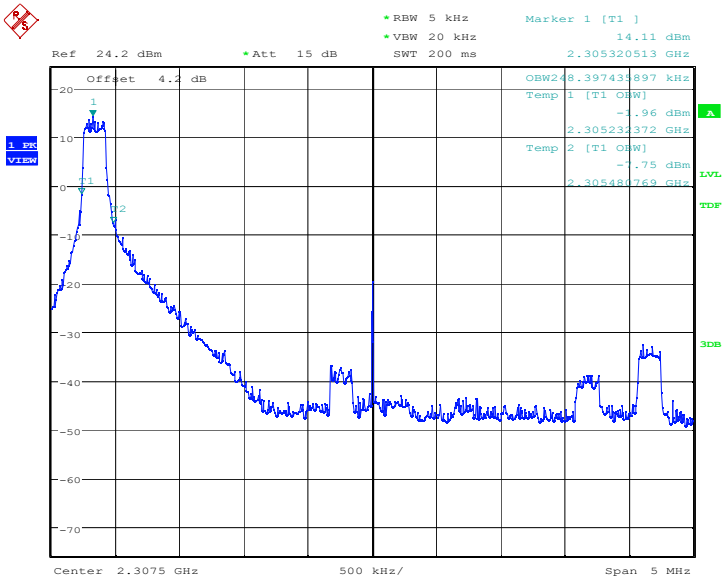
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 17:37:27

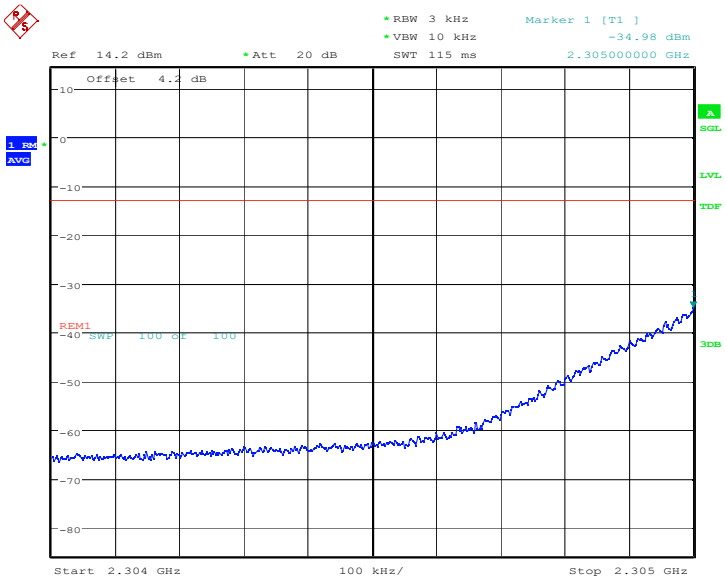
LTE band 30@CA_5A-30A

OBW: 1RB-LOW_offset

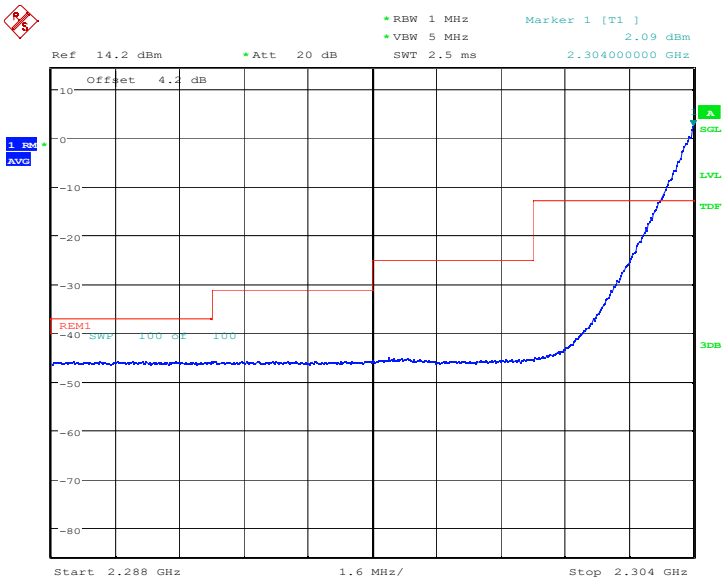


Date: 20.JUN.2022 17:04:12

LOW BAND EDGE BLOCK-1RB-LOW_offset

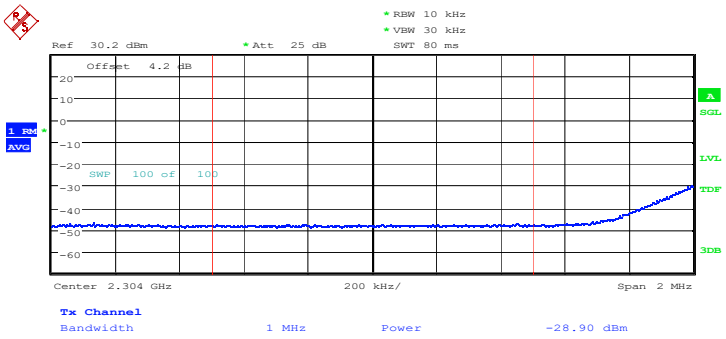


Date: 20.JUN.2022 17:05:09



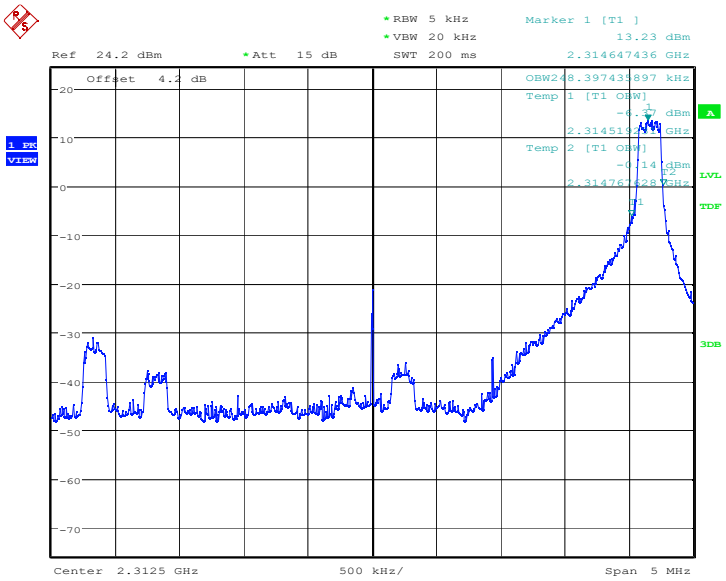
Date: 20.JUN.2022 17:05:55

Channal Power



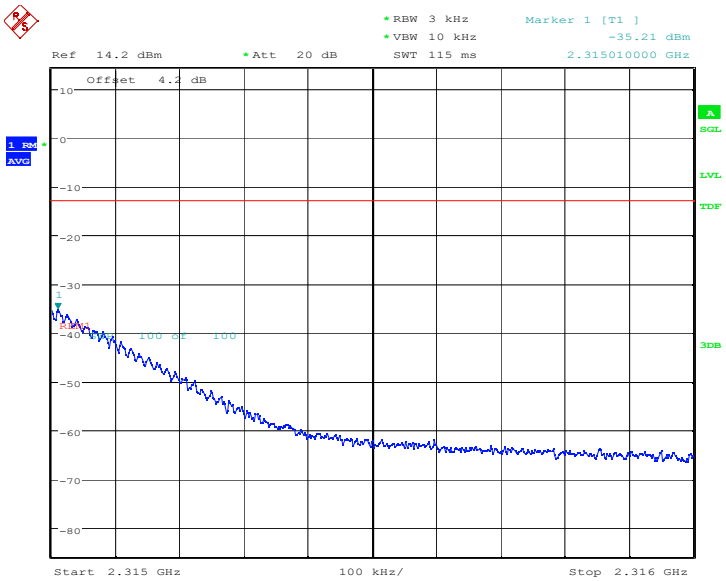
Date: 20.JUN.2022 17:06:28

OBW: 1RB-HIGH_offset

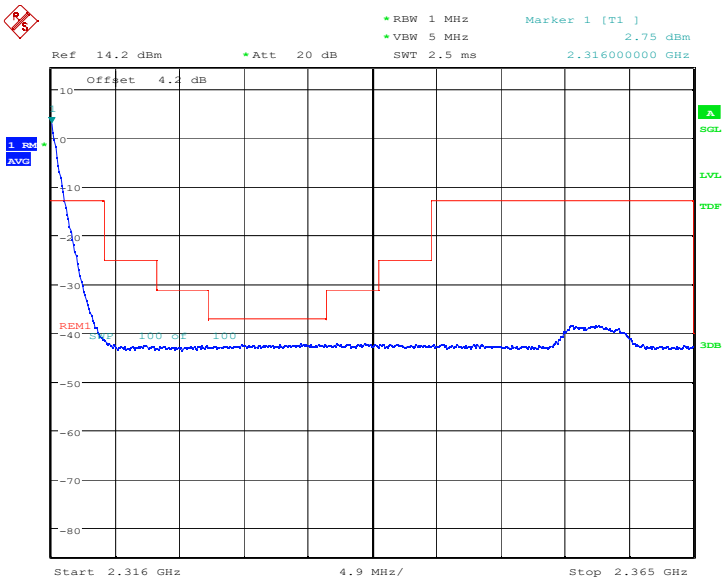


Date: 20.JUN.2022 17:08:40

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

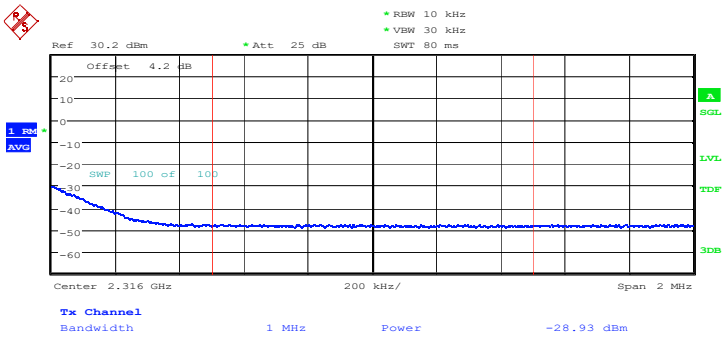


Date: 20.JUN.2022 17:09:37



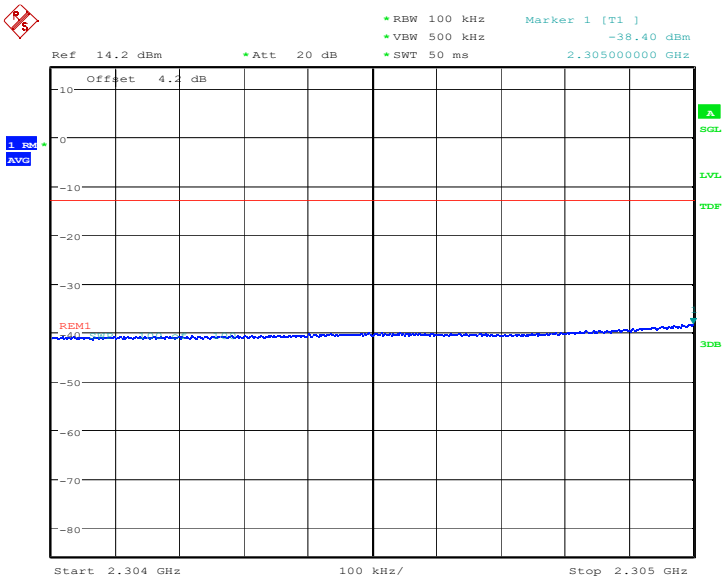
Date: 20.JUN.2022 17:10:23

Channal Power

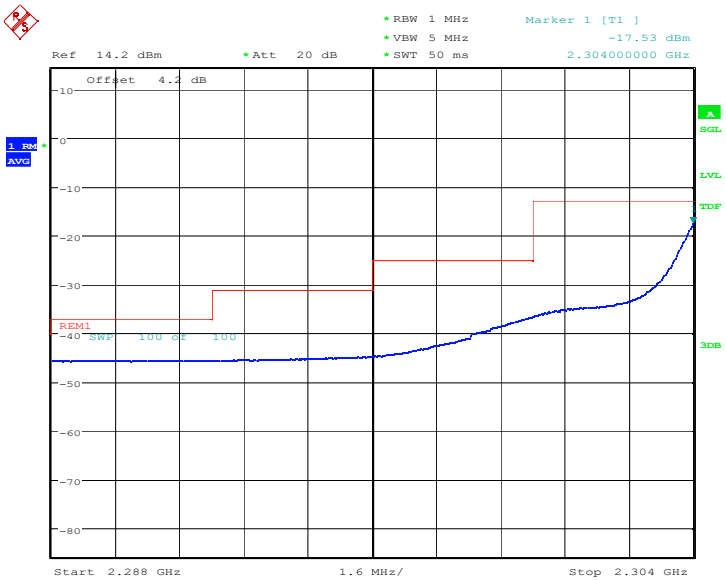


Date: 20.JUN.2022 17:10:57

LOW BAND EDGE BLOCK-10MHz-100%RB

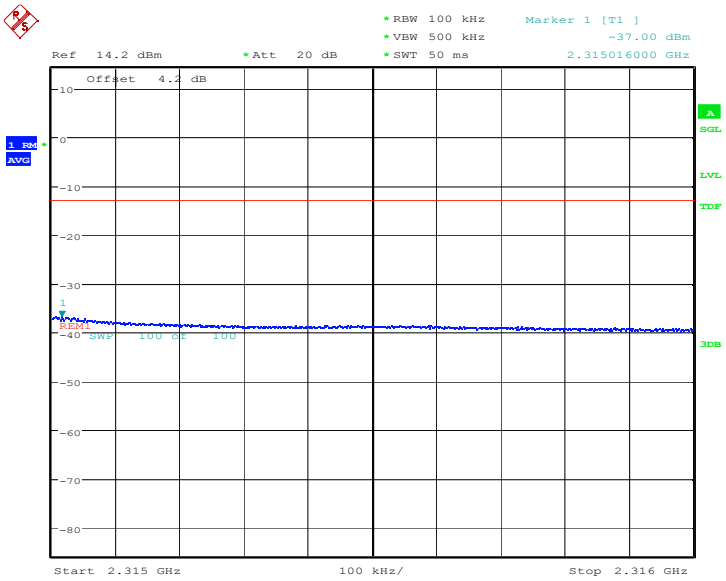


Date: 20.JUN.2022 17:35:45

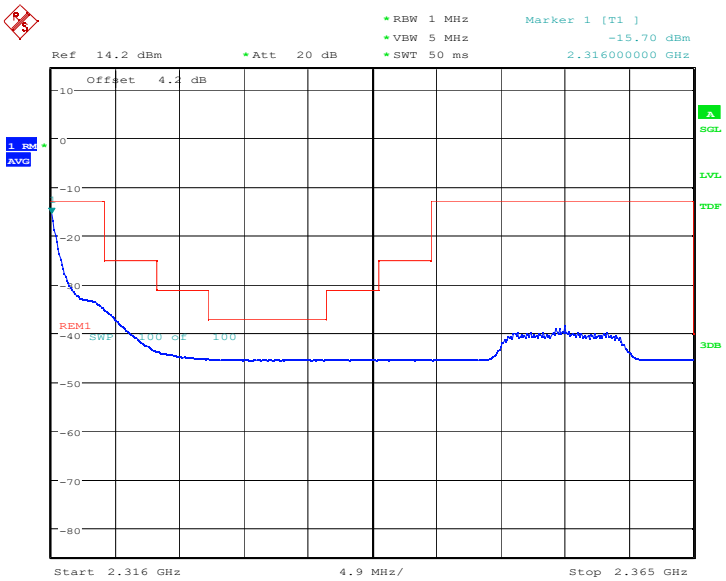


Date: 20.JUN.2022 17:36:38

HIGH BAND EDGE BLOCK-10MHz-100%RB



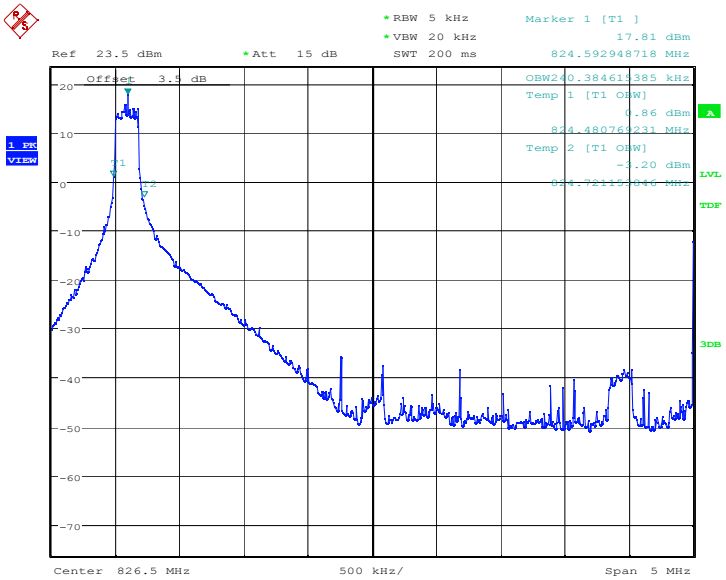
Date: 20.JUN.2022 17:38:18



Date: 20.JUN.2022 17:39:08

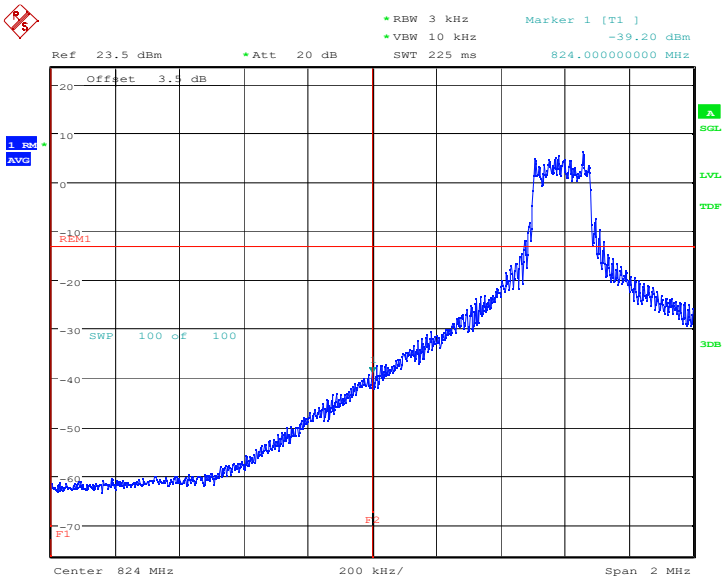
LTE band 5@CA_5A-66A

OBW: 1RB-LOW_offset



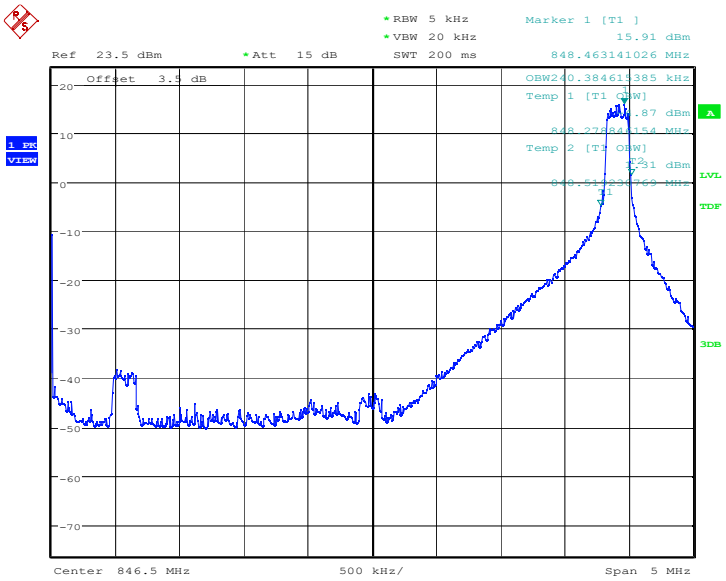
Date: 20.JUN.2022 18:31:25

LOW BAND EDGE BLOCK-1RB-LOW_offset



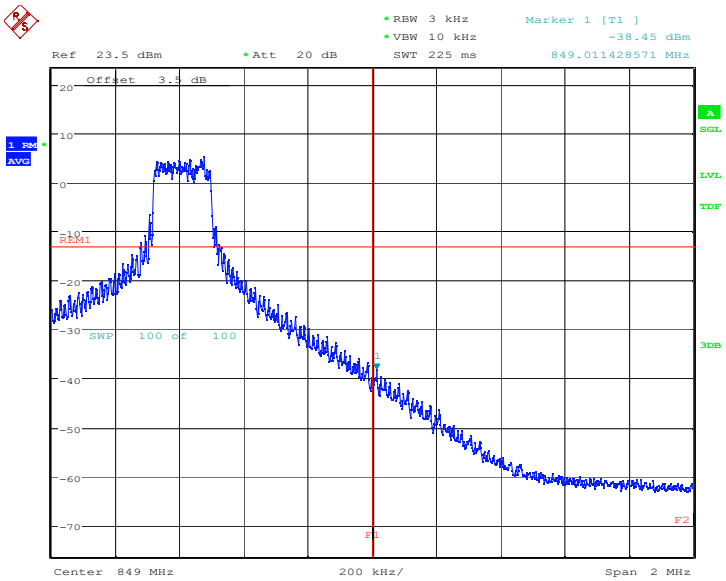
Date: 20.JUN.2022 18:32:27

OBW: 1RB-HIGH_offset



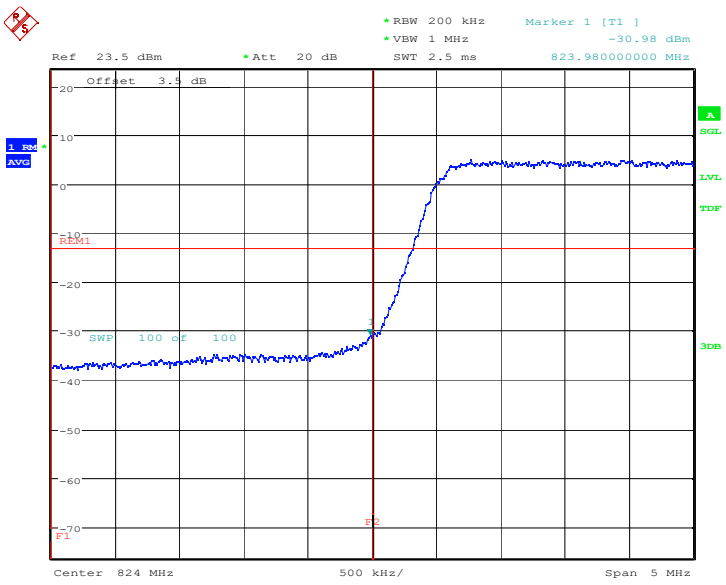
Date: 20.JUN.2022 18:35:56

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



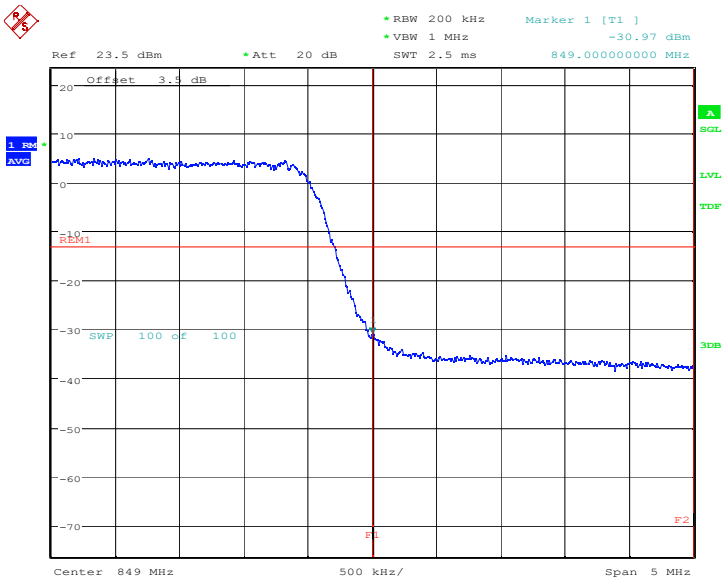
Date: 20.JUN.2022 18:36:58

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:30:26

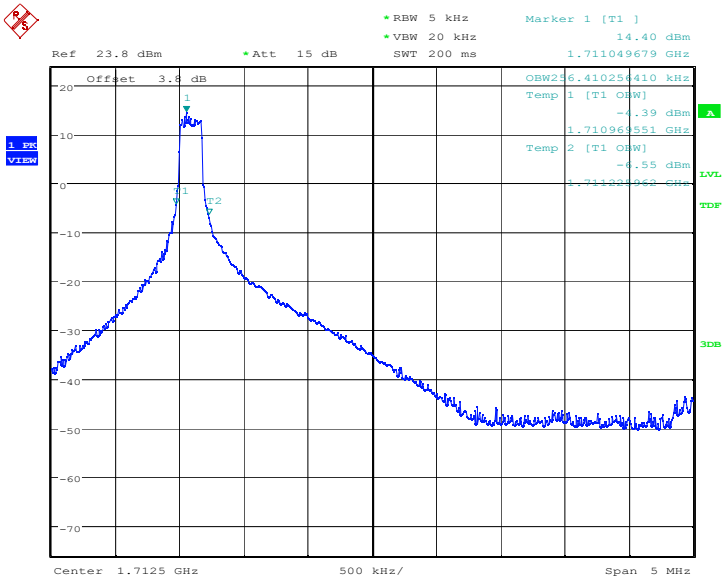
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:34:56

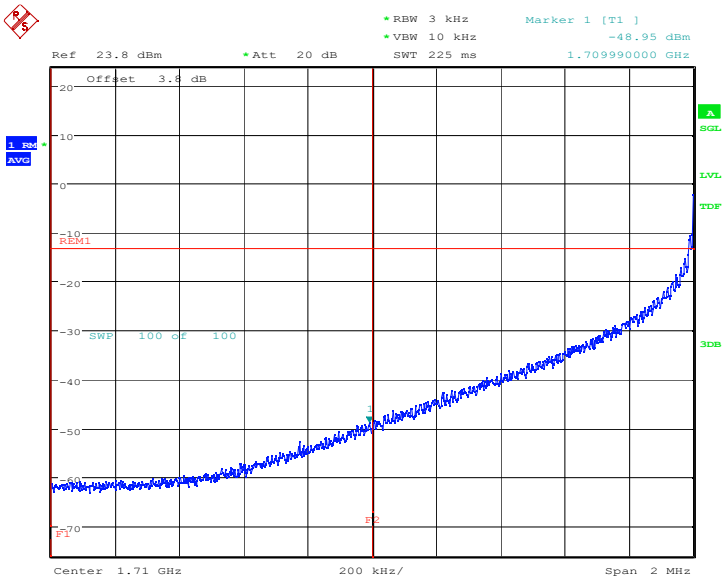
LTE band 66@CA_5A-66A

OBW: 1RB-LOW_offset



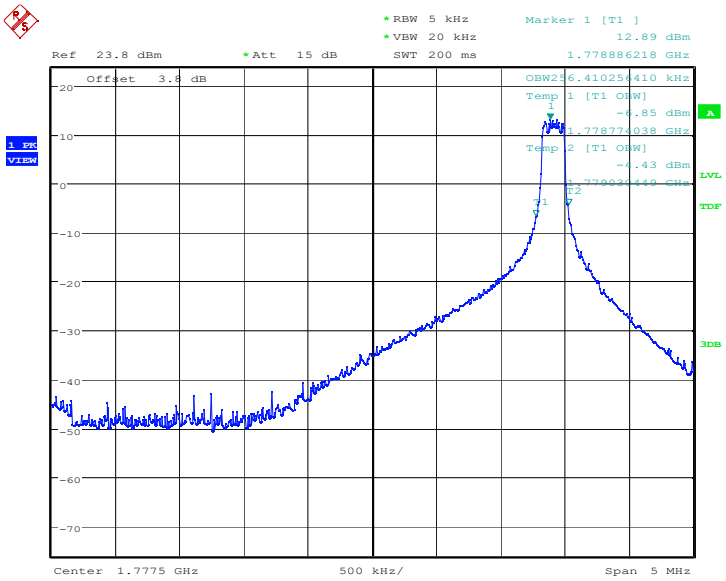
Date: 20.JUN.2022 18:32:45

LOW BAND EDGE BLOCK-1RB-LOW_offset



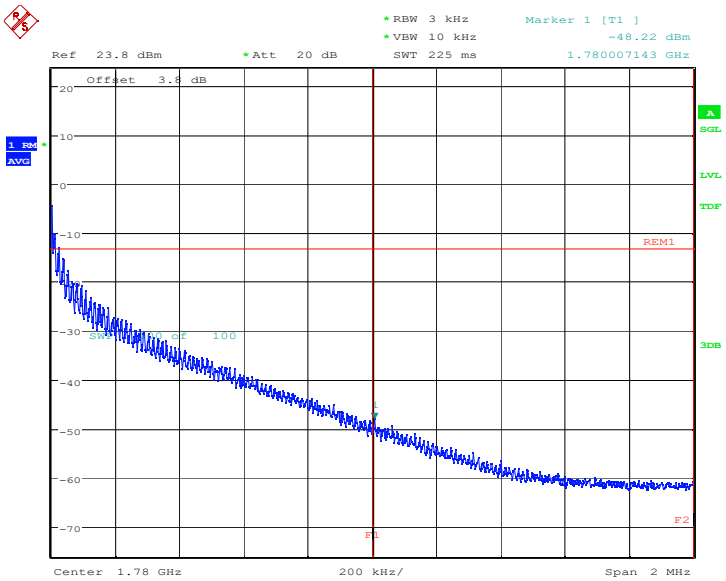
Date: 20.JUN.2022 18:33:47

OBW: 1RB-HIGH_offset



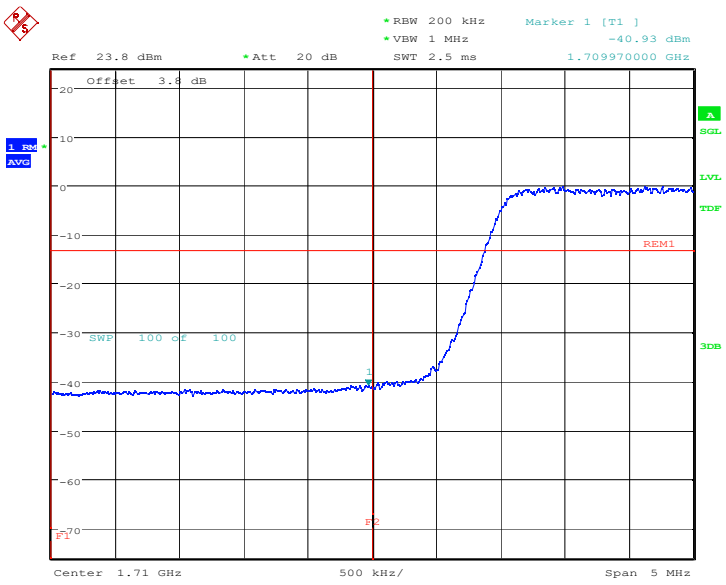
Date: 20.JUN.2022 18:37:16

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



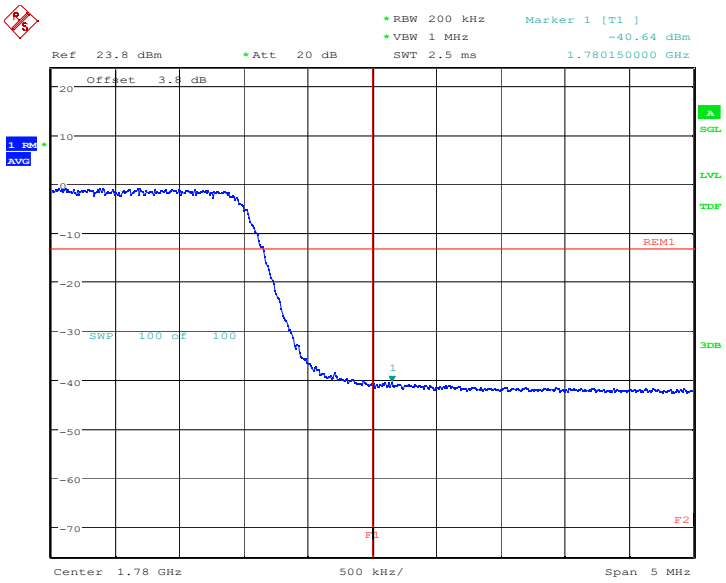
Date: 20.JUN.2022 18:38:18

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:31:05

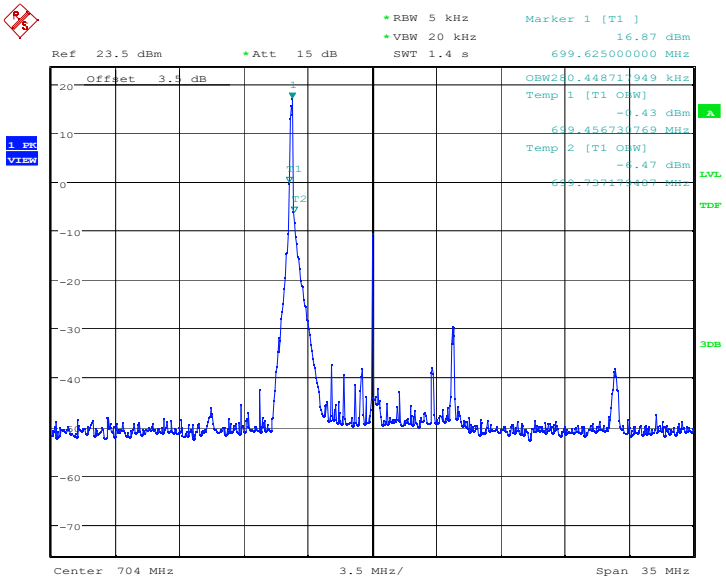
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:35:36

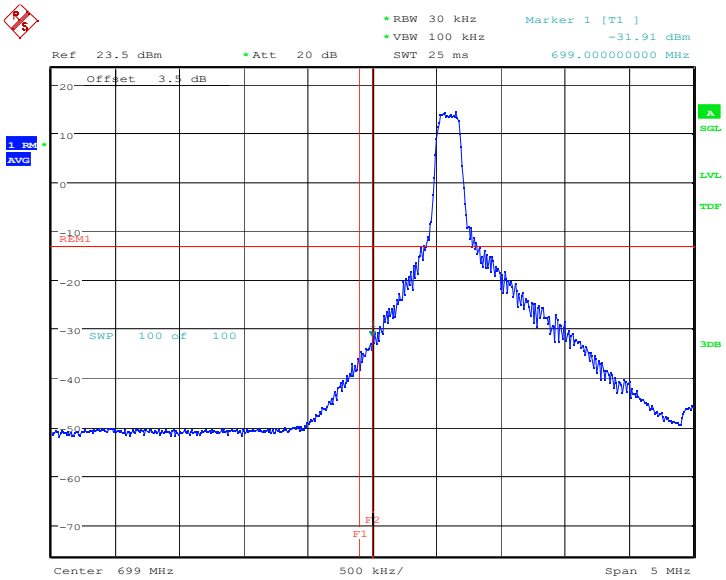
LTE band 12@CA_12A-30A

OBW: 1RB-LOW_offset



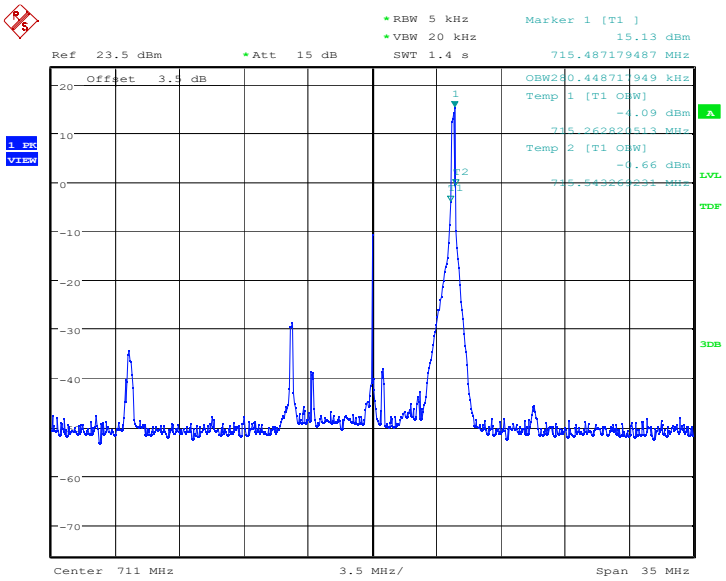
Date: 20.JUN.2022 17:11:48

LOW BAND EDGE BLOCK-1RB-LOW_offset



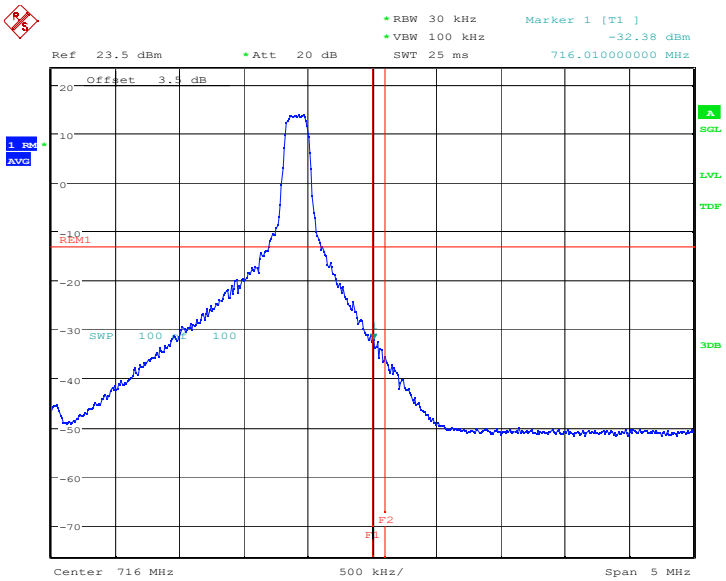
Date: 20.JUN.2022 17:12:31

OBW: 1RB-HIGH_offset



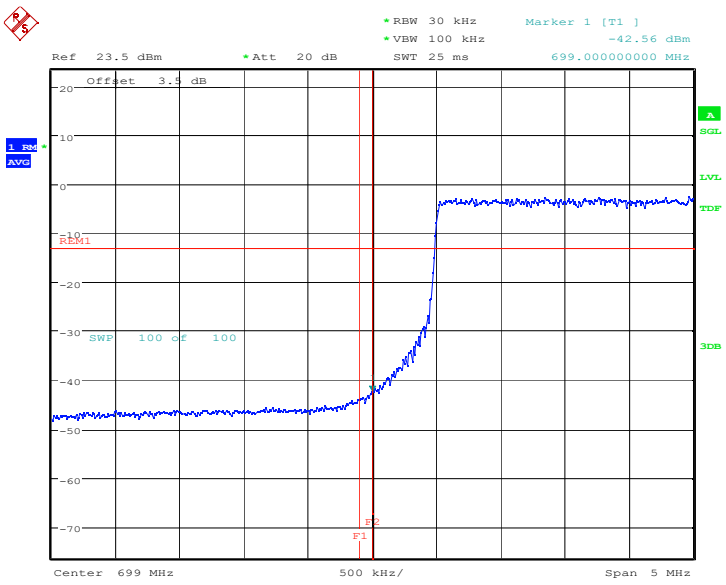
Date: 20.JUN.2022 17:15:57

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



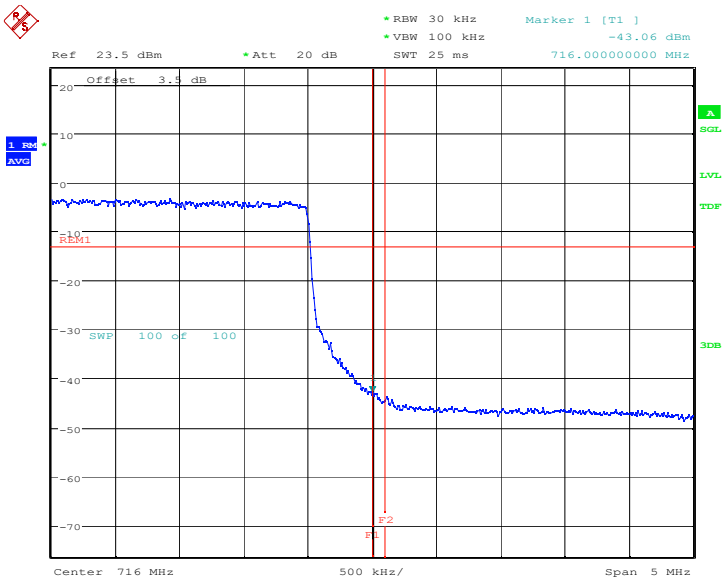
Date: 20.JUN.2022 17:16:41

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 17:40:03

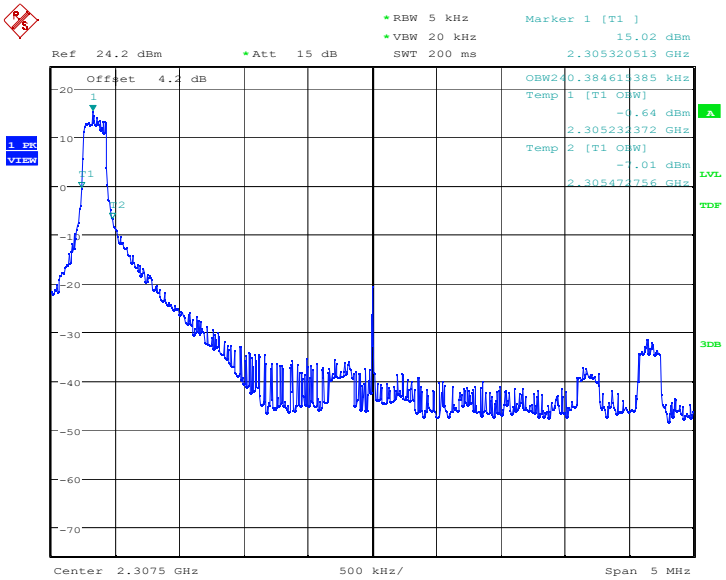
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 17:42:39

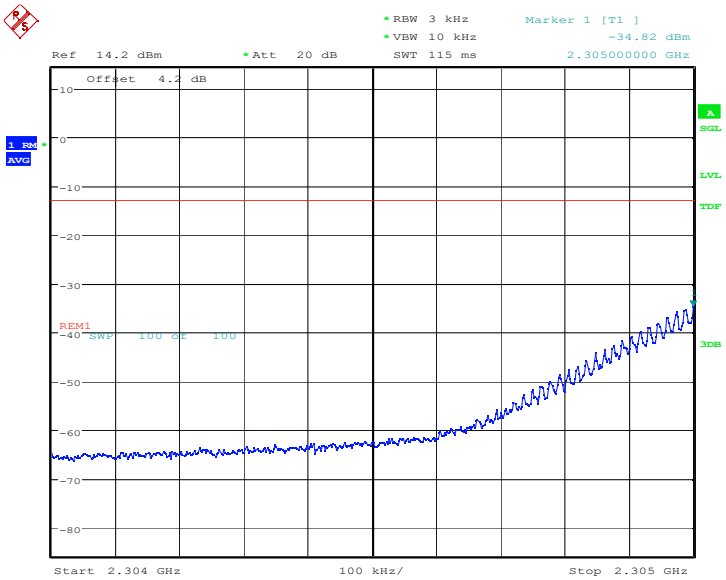
LTE band 30@CA_12A-30A

OBW: 1RB-LOW_offset

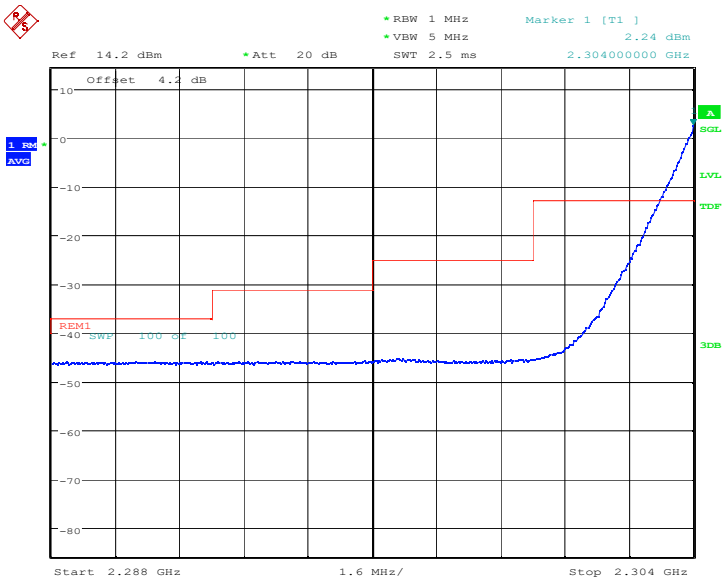


Date: 20.JUN.2022 17:12:51

LOW BAND EDGE BLOCK-1RB-LOW_offset

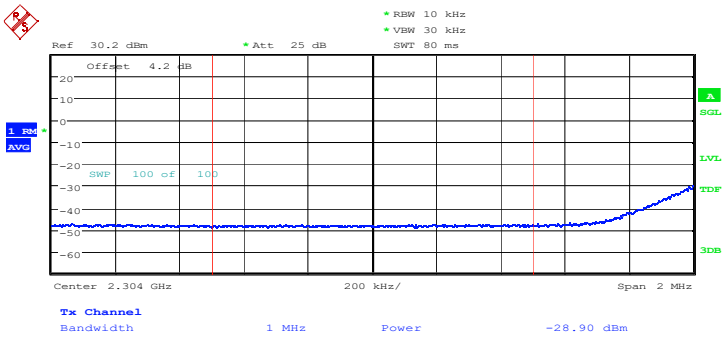


Date: 20.JUN.2022 17:13:47



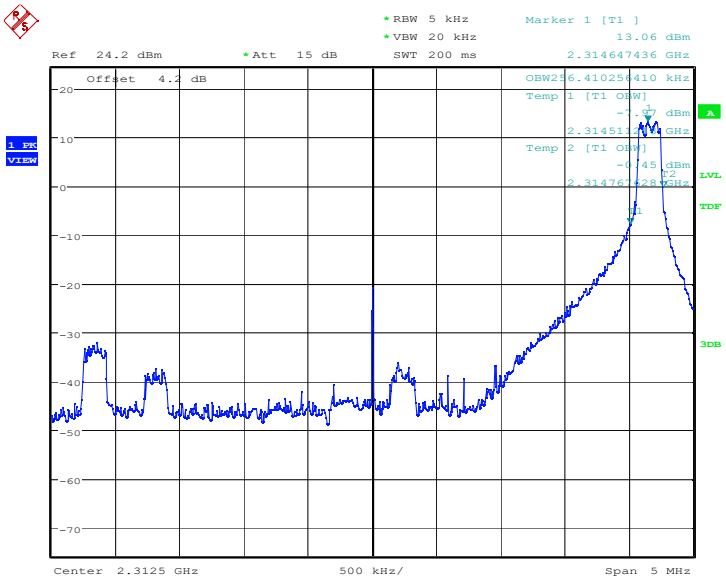
Date: 20.JUN.2022 17:14:33

Channal Power



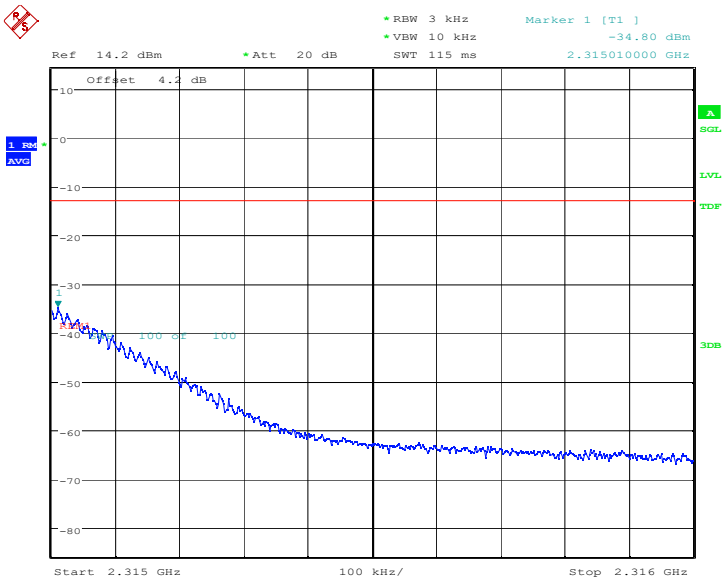
Date: 20.JUN.2022 17:15:07

OBW: 1RB-HIGH_offset

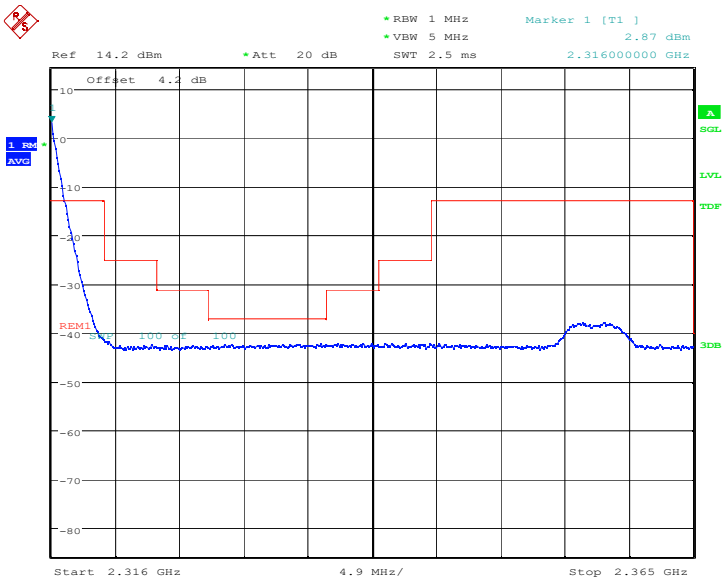


Date: 20.JUN.2022 17:17:00

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

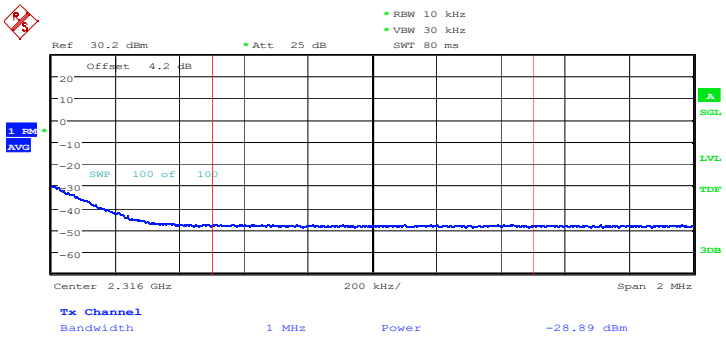


Date: 20.JUN.2022 17:17:58



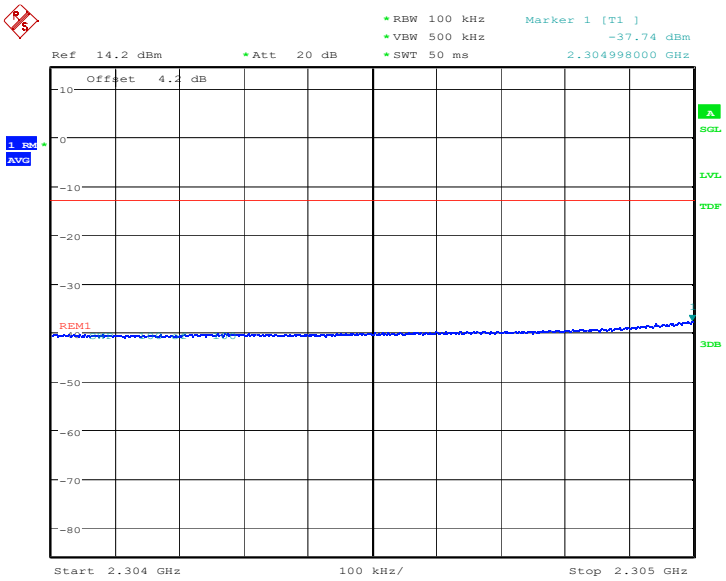
Date: 20.JUN.2022 17:18:44

Channal Power

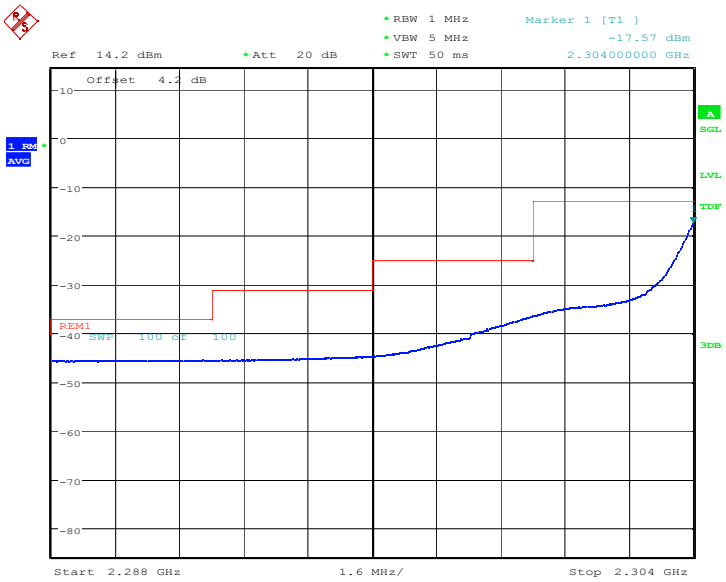


Date: 20.JUN.2022 17:19:18

LOW BAND EDGE BLOCK-10MHz-100%RB

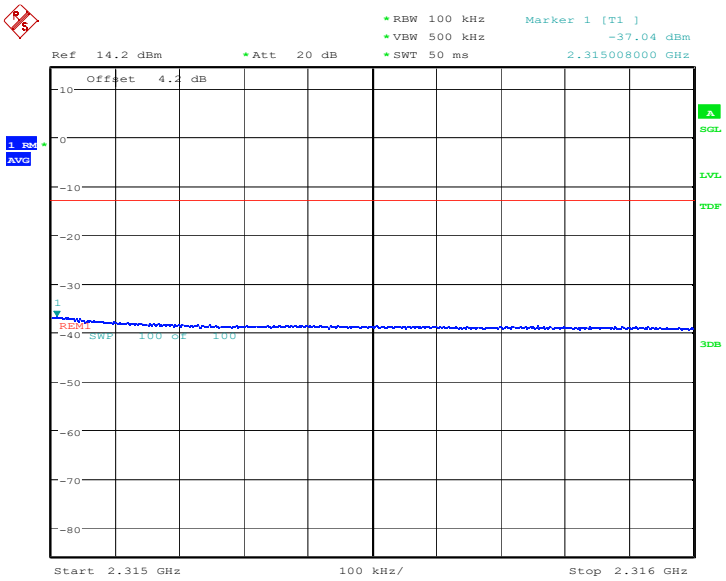


Date: 20.JUN.2022 17:40:54

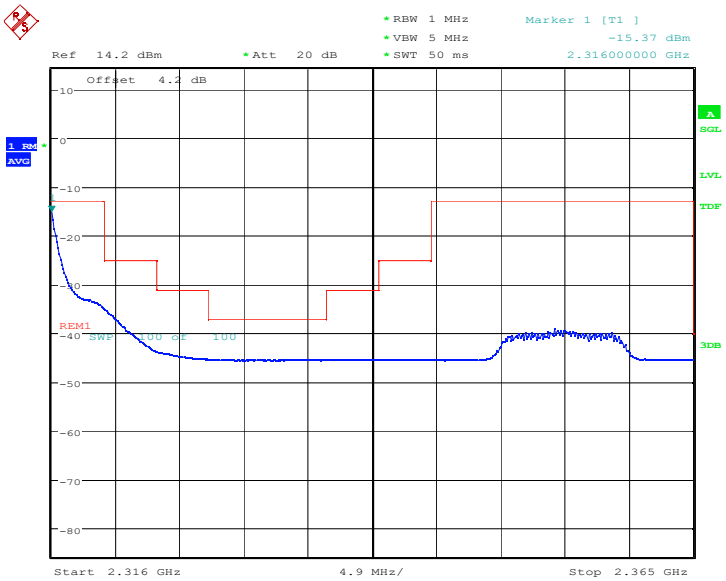


Date: 20.JUN.2022 17:41:48

HIGH BAND EDGE BLOCK-10MHz-100%RB



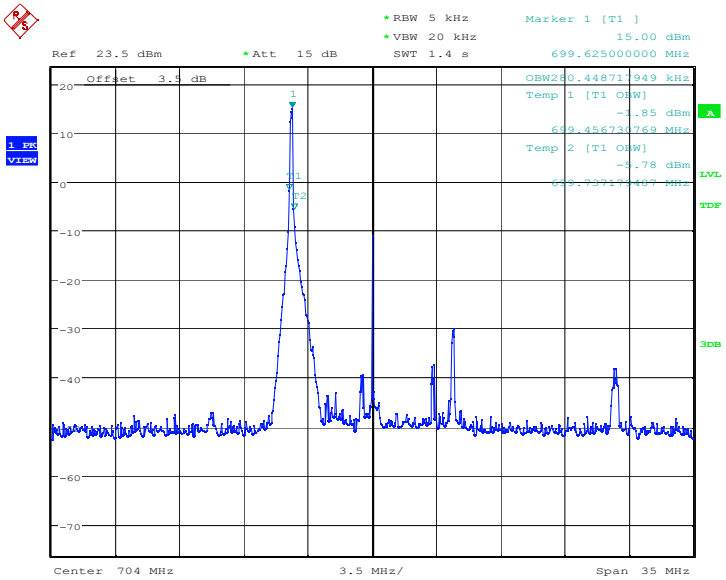
Date: 20.JUN.2022 17:43:30



Date: 20.JUN.2022 17:44:19

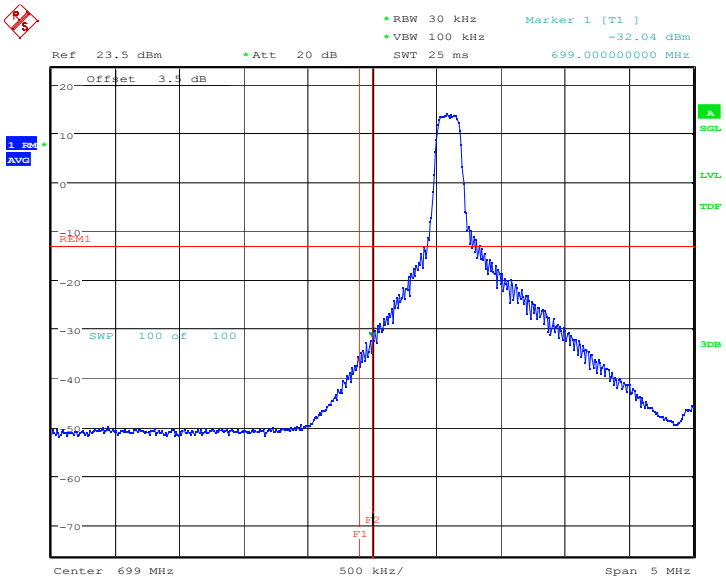
LTE band 12@CA_12A-66A

OBW: 1RB-LOW_offset



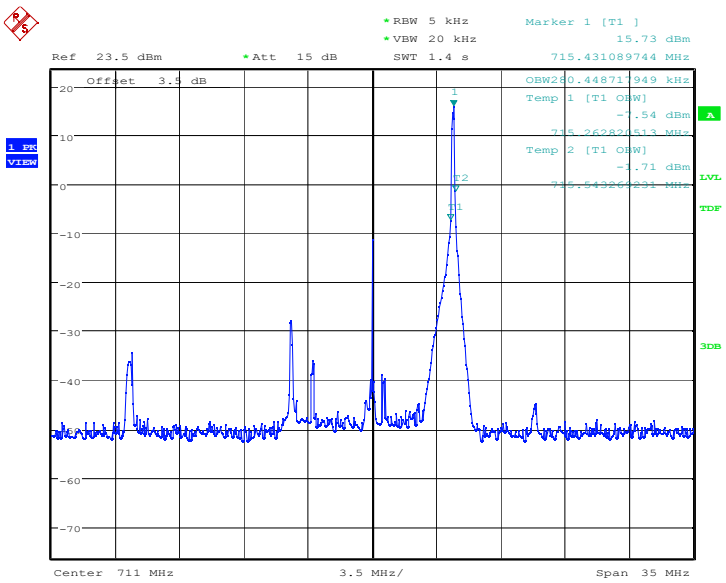
Date: 20.JUN.2022 18:40:33

LOW BAND EDGE BLOCK-1RB-LOW_offset



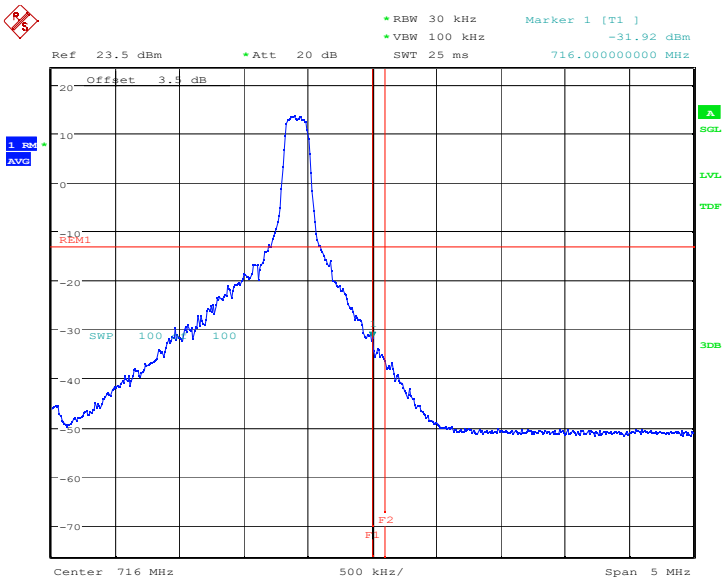
Date: 20.JUN.2022 18:41:14

OBW: 1RB-HIGH_offset



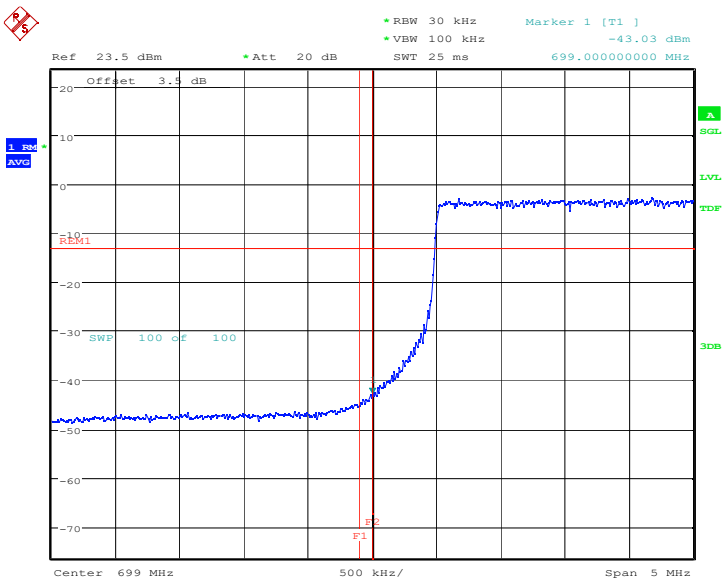
Date: 20.JUN.2022 18:44:45

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



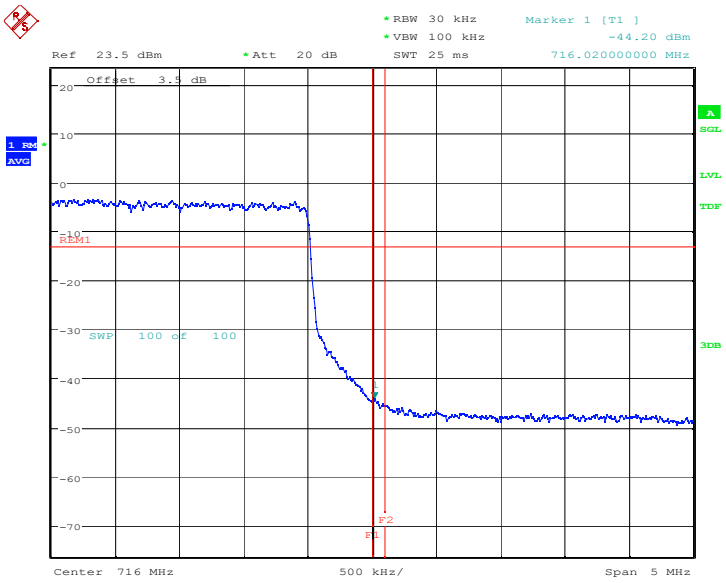
Date: 20.JUN.2022 18:45:26

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:39:33

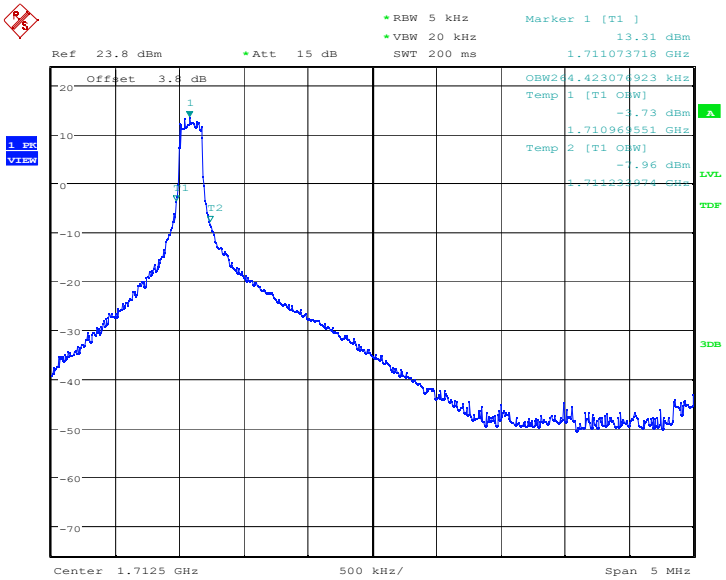
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 18:43:45

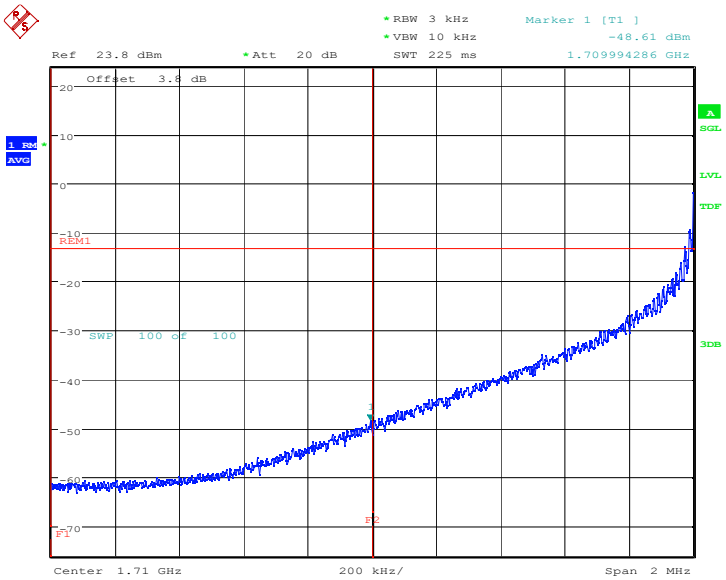
LTE band 66@CA_12A-66A

OBW: 1RB-LOW_offset



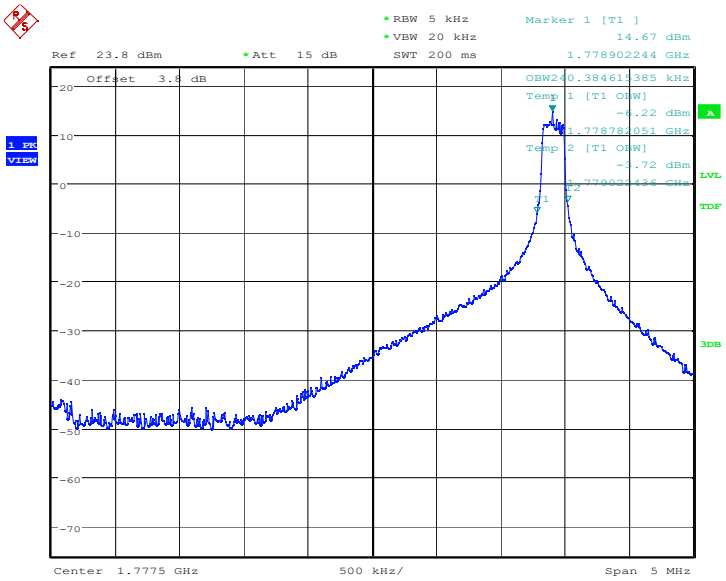
Date: 20.JUN.2022 18:41:32

LOW BAND EDGE BLOCK-1RB-LOW_offset



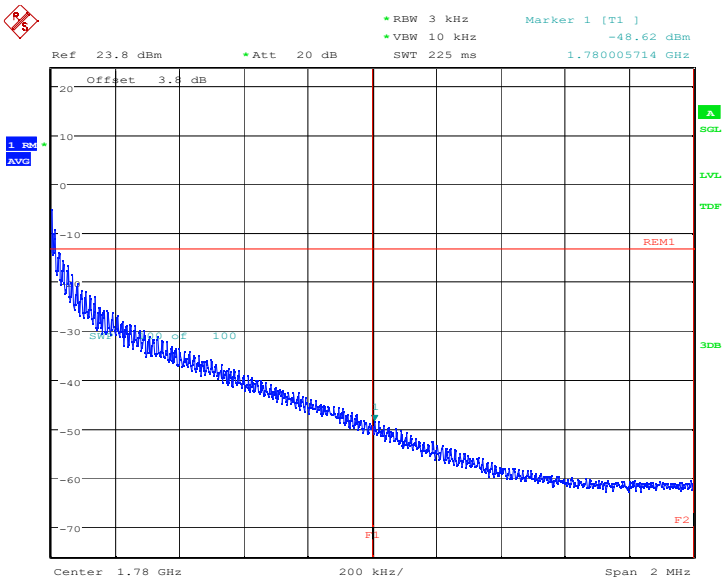
Date: 20.JUN.2022 18:42:33

OBW: 1RB-HIGH_offset



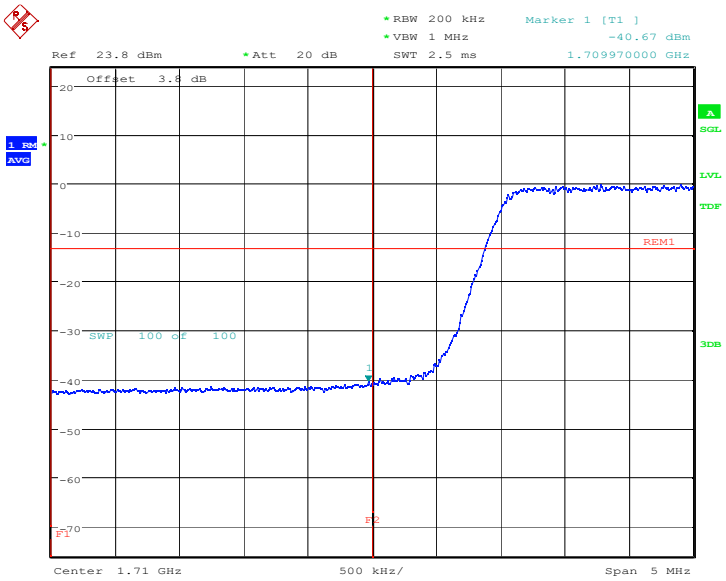
Date: 20.JUN.2022 18:45:44

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



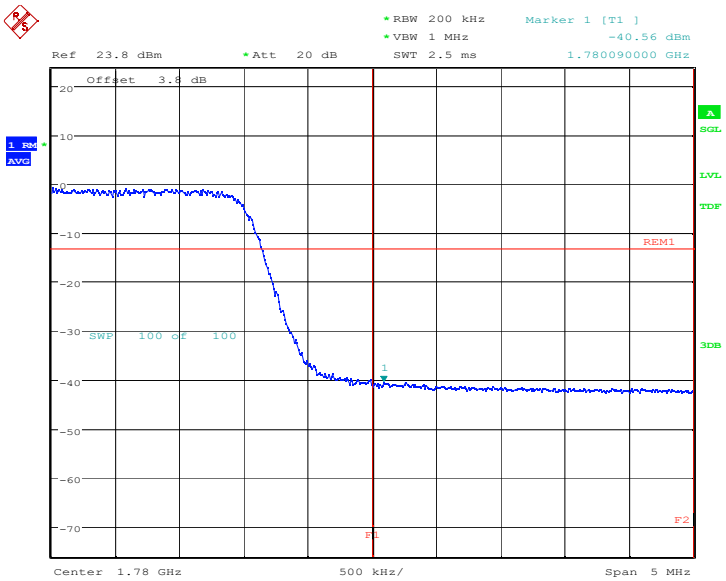
Date: 20.JUN.2022 18:46:46

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:40:13

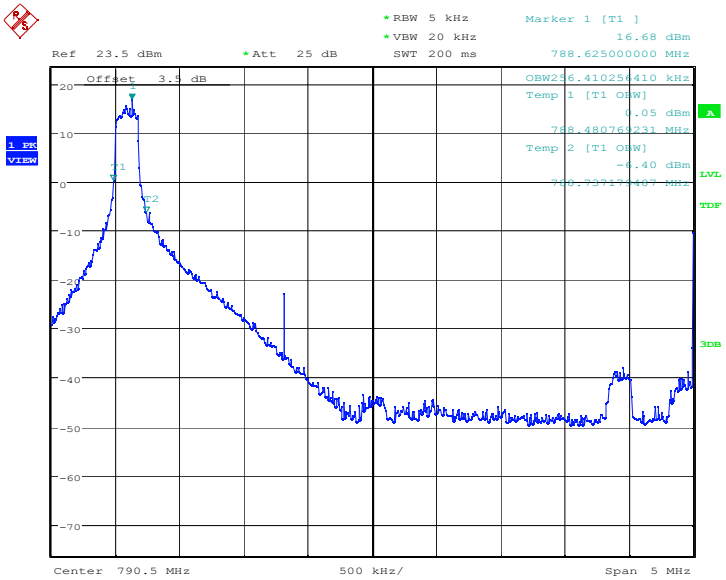
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 20.JUN.2022 18:44:25

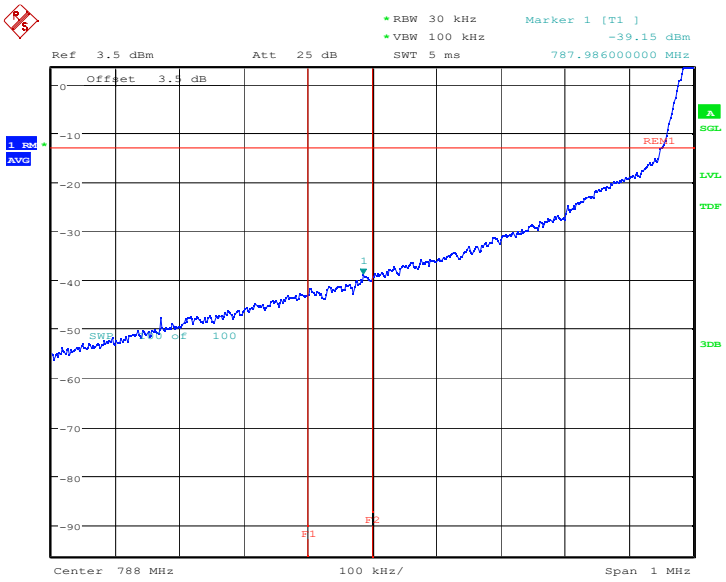
LTE band 14@CA_14A-30A

OBW: 1RB-LOW_offset



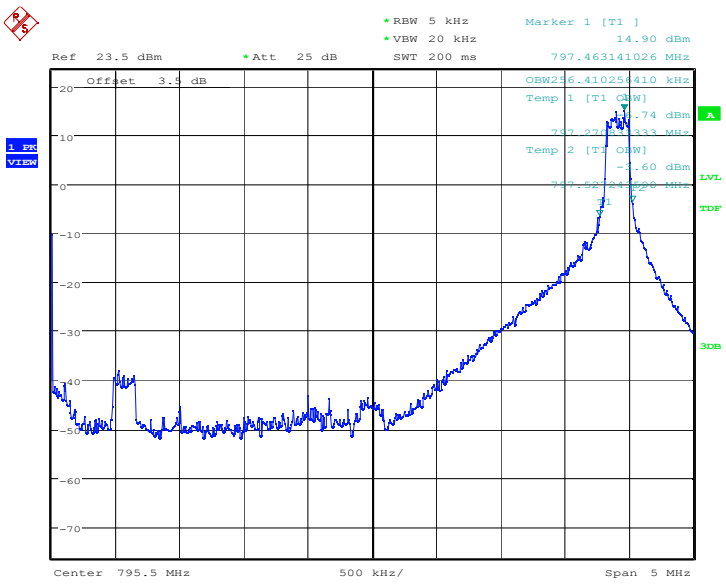
Date: 20.JUN.2022 17:21:26

LOW BAND EDGE BLOCK-1RB-LOW_offset



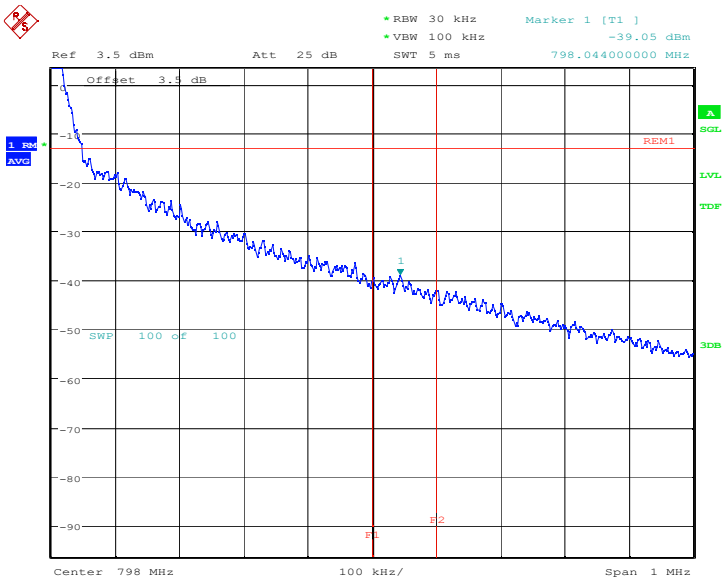
Date: 20.JUN.2022 17:22:08

OBW: 1RB-HIGH_offset



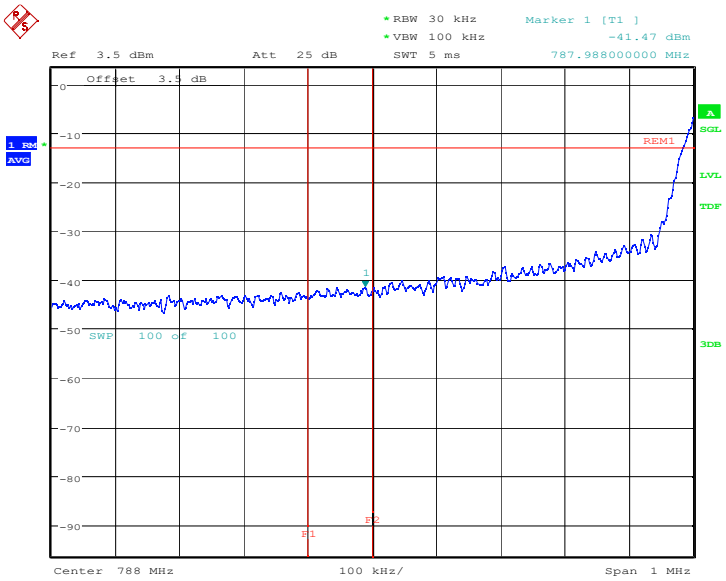
Date: 20.JUN.2022 17:28:20

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



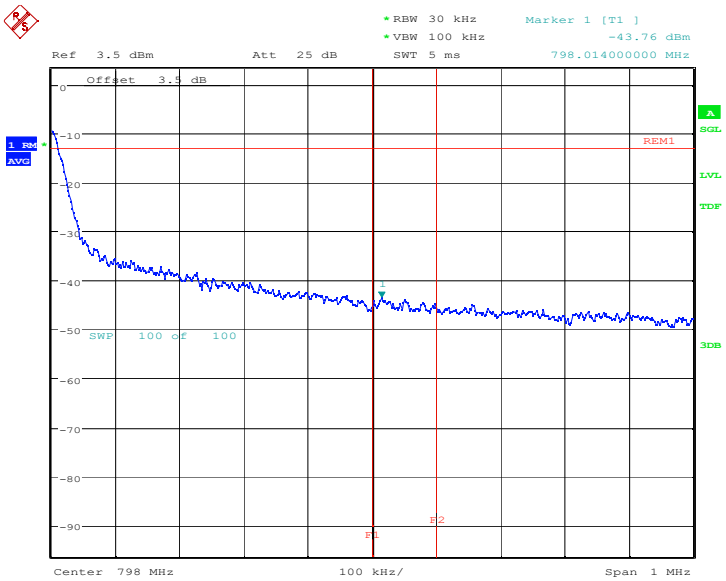
Date: 20.JUN.2022 17:29:01

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 17.JUN.2022 15:06:44

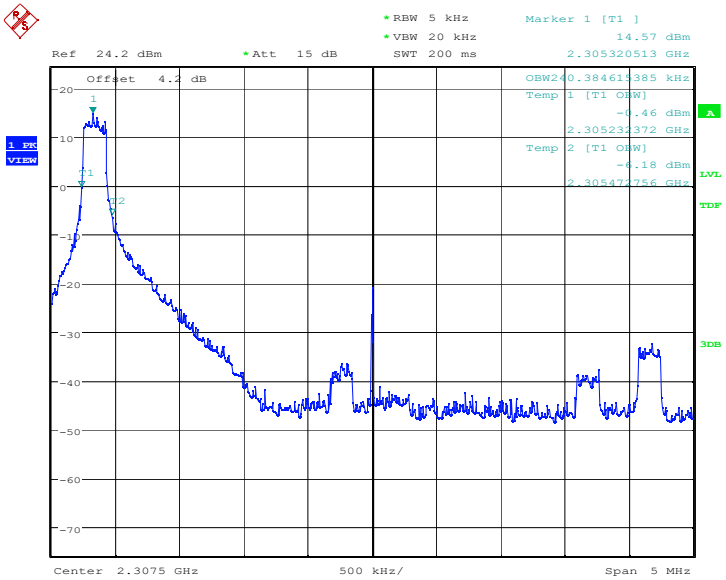
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 20.JUN.2022 17:48:52

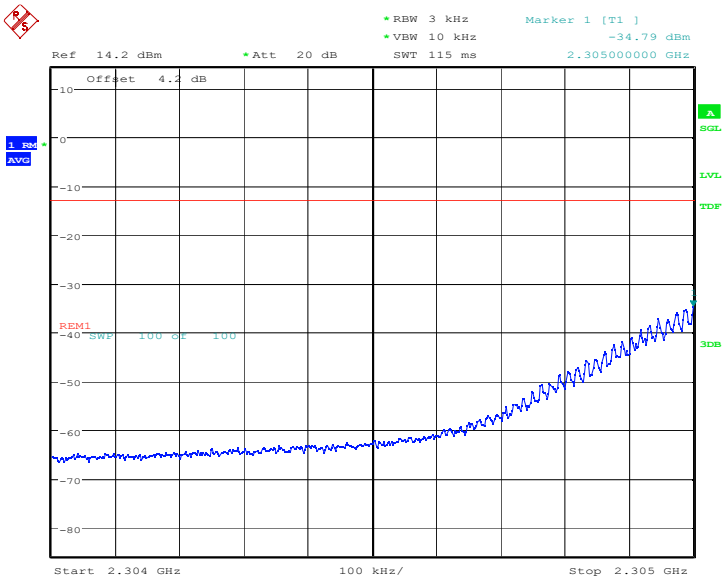
LTE band 30@CA_14A-30A

OBW: 1RB-LOW_offset

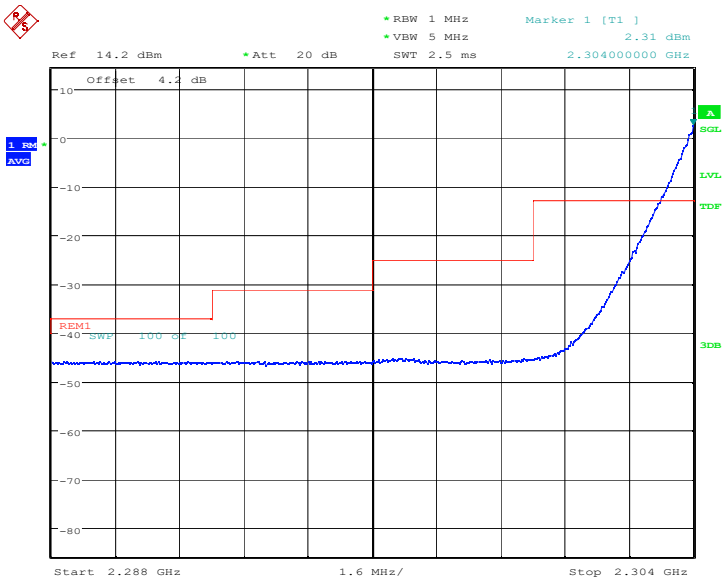


Date: 20.JUN.2022 17:22:28

LOW BAND EDGE BLOCK-1RB-LOW_offset

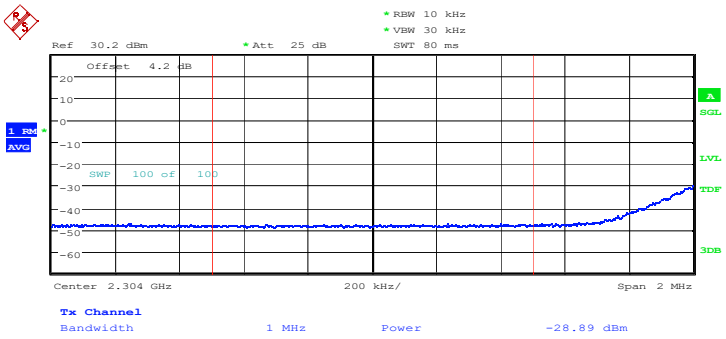


Date: 20.JUN.2022 17:23:24



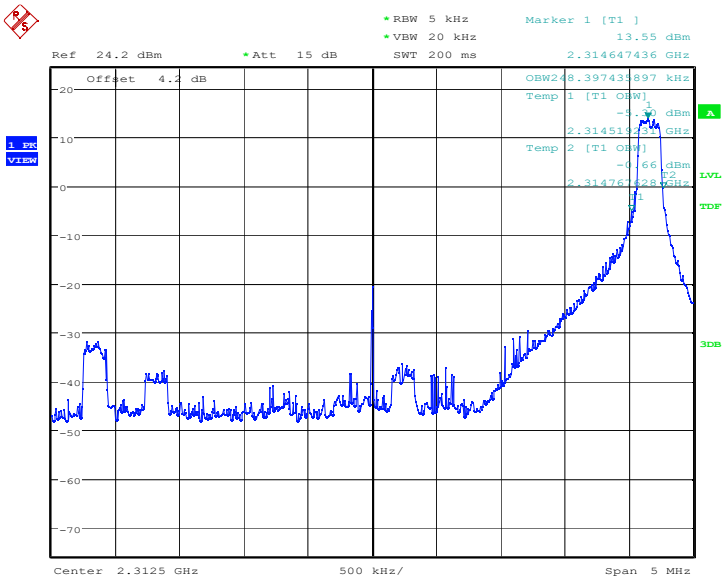
Date: 20.JUN.2022 17:24:10

Channal Power



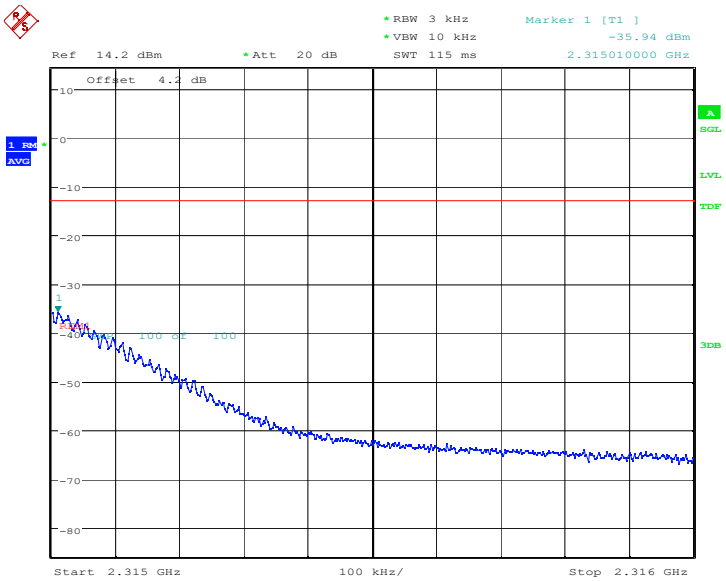
Date: 20.JUN.2022 17:24:44

OBW: 1RB-HIGH_offset



Date: 20.JUN.2022 17:29:21

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



Date: 20.JUN.2022 17:30:18