TEST REPORT

No. I20Z60553-WMD03

for

TCL Communication Ltd.

GSM/UMTS/LTE Mobile phone

Model Name: 5062W, 5062Z

FCC ID: 2ACCJH122

with

Hardware Version: 06

Software Version: 2ASC

Issued Date: 2020-07-10

Note:

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

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Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20Z60553-WMD03	Rev.0	1st edition	2020-06-05
I20Z60553-WMD03	Rev.1	2nd edition Deleted the test results for the 15MHz, 20MHz bandwidth of LTE Band 12 in A.1	2020-06-15
I20Z60553-WMD03	Rev.2	3rd edition Updated the test results of LTE Band 71 in A.1	2020-06-19
I20Z60553-WMD03	Rev.3	4th edition, Changed ERP of LTE Bands 7,25,41,66 to EIRP in A.1. Updated the test results of LTE Band 26 (814MHz~824MHz) in A.1.	2020-07-10

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

CONTENTS

1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0 and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location 1: CTTL (huayuan North Road)

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

Location 2: CTTL (Shouxiang)

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

1.3. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

1.4. Project Data

Testing Start Date: 2020-04-20

Testing End Date: 2020-06-19

1.5. Signature

Dong Yuan

(Prepared this test report)

Zhou Yu

(Reviewed this test report)

Zhao Hui Lin

Deputy Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

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

2.2. Manufacturer Information

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

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

3.1. About EUT

Description	GSM/UMTS/LTE Mobile phone
Model Name	5062W, 5062Z
FCC ID	2ACCJH122
Antenna	Embedded
Output power	29.52dBm maximum EIRP measured for LTE Band 41
Extreme vol. Limits	3.5VDC to 4.4VDC (nominal: 3.85VDC)
Extreme temp. Tolerance	-20°C to +60°C

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

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version	Date of receipt
UT19a	015702000204580	06	2ASC	2020-04-20
UT29a	015702000204598	06	2ASC	2020-04-20

*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	CAC3860024C1
Manufacturer	BYD
Capacitance	3860mAh/Typ4000mAh

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

4. Reference Documents

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

Reference	Title	Version
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-19 Edition
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-19 Edition
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-19 Edition
FCC Part 90	PRIVATE LAND MOBILE RADIO SERVICES	10-1-19 Edition
ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB 971168 D01	MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS	v03r01

5. Laboratory Environment

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 MΩ
Ground system resistance	< 0.5 Ω
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 3000 MHz

6. Summary Of Test Result

LTE Band 7

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

LTE Band 12

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

LTE Band 13

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

LTE Band 25

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

LTE Band 26(814MHz~824MHz)

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

LTE Band 26(824MHz~849MHz)

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

LTE Band 41

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

LTE Band 66

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

LTE Band 71

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

Terms used in Verdict column

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

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

NO.	Description	Type	Series Number	Manufacture	Cal Due Date	Calibration Interval
1	Wideband Radio Communication Tester	CMW500	159082	R&S	2020-12-24	1 year
2	Spectrum Analyzer	FSU	200030	R&S	2021-06-01	1 year
3	Radio Communication Analyzer	MT8821C	6201763159	Anritsu	2020-07-23	1 year
4	Climate Chamber	SH-242	93008556	ESPEC	2020-12-21	3 year
5	Universal Radio Communication Tester	E5515c	MY48353198	Agilent	2020-06-23	1 year
6	Test Receiver	E4440A	MY48250642	Agilent	2021-03-12	1 year
7	EMI Antenna	VULB9163	9163-235	Schwarzbeck	2020-11-24	1 year
8	EMI Antenna	3117	00058889	ETS-Lindgren	2020-11-18	1 year
9	EMI Antenna	3117	00119021	ETS-Lindgren	2021-01-14	1 year
10	Signal Generator	N5183A	MY49060052	Agilent	2020-06-24	1 year
11	Power Amplifier	5S1G4	0341863	AR	/	/

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 Description of ERP/EIRP Measurements

ERP and EIRP is determined from conducted RF output power measurements according to KDB 412172 D01 Power approach.

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

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.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 7, 25, 41, 66;

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, 13, 71;

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 26 (824MHz~849MHz);

The ERP of mobile transmitters must not exceed 100 Watts for LTE Band 26 (814MHz~824MHz).

A.1.2.3 Measurement result

LTE Band 7-EIRP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EIRP(dBm) (G_T – L_C = 1.12)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	22.42	21.51	21.51	23.54	22.63	22.63
		2535.0	22.33	21.50	21.65	23.45	22.62	22.77
		2502.5	22.09	21.61	21.32	23.21	22.73	22.44
	1 RB low	2567.5	22.33	21.45	21.73	23.45	22.57	22.85
		2535.0	22.08	21.59	21.41	23.20	22.71	22.53
		2502.5	21.48	20.58	20.49	22.60	21.70	21.61
	50% RB mid	2567.5	21.31	20.54	20.69	22.43	21.66	21.81
		2535.0	21.17	20.37	20.40	22.29	21.49	21.52
		2502.5	21.42	20.45	20.39	22.54	21.57	21.51
	100% RB	2567.5	21.32	20.45	20.62	22.44	21.57	21.74
		2535.0	21.18	20.30	20.33	22.30	21.42	21.45
		2502.5	22.29	21.37	21.47	23.41	22.49	22.59
10MHz	1 RB high	2565.0	22.27	21.20	21.66	23.39	22.32	22.78
		2535.0	22.20	21.51	21.42	23.32	22.63	22.54
		2505.0	22.33	21.44	21.69	23.45	22.56	22.81
	1 RB low	2565.0	22.15	21.16	21.68	23.27	22.28	22.80
		2535.0	22.05	21.41	21.27	23.17	22.53	22.39
		2505.0	21.41	20.65	20.48	22.53	21.77	21.60
	50% RB mid	2565.0	21.33	20.44	20.68	22.45	21.56	21.80
		2535.0	21.19	20.26	20.31	22.31	21.38	21.43
		2505.0	21.38	20.55	20.49	22.50	21.67	21.61
	100% RB	2565.0	21.29	20.41	20.60	22.41	21.53	21.72
		2535.0	21.19	20.32	20.38	22.31	21.44	21.50
		2505.0	22.36	21.77	21.56	23.48	22.89	22.68
15MHz	1 RB high	2562.5	22.30	21.65	21.71	23.42	22.77	22.83
		2535.0	22.13	21.09	21.39	23.25	22.21	22.51
		2507.5	22.37	21.80	21.64	23.49	22.92	22.76
	1 RB low	2562.5	22.25	21.64	21.69	23.37	22.76	22.81
		2535.0	21.99	20.96	21.45	23.11	22.08	22.57
		2507.5	21.45	20.61	20.56	22.57	21.73	21.68
	50% RB mid	2562.5	21.32	20.39	20.64	22.44	21.51	21.76
		2535.0	21.22	20.34	20.45	22.34	21.46	21.57
		2507.5	21.41	20.50	20.51	22.53	21.62	21.63
	100% RB	2562.5	21.31	20.36	20.62	22.43	21.48	21.74
		2535.0	21.22	20.27	20.31	22.34	21.39	21.43
		2507.5	22.18	21.85	21.40	23.30	22.97	22.52
20MHz	1 RB high	2560.0	22.20	21.70	21.61	23.32	22.82	22.73

		2535.0	22.11	21.54	21.49	23.23	22.66	22.61
		2510.0	22.16	21.78	21.62	23.28	22.90	22.74
	1 RB low	2560.0	22.00	21.53	21.50	23.12	22.65	22.62
		2535.0	21.89	21.34	21.29	23.01	22.46	22.41
		2510.0	21.40	20.51	20.57	22.52	21.63	21.69
	50% RB mid	2560.0	21.37	20.50	20.60	22.49	21.62	21.72
		2535.0	21.25	20.28	20.44	22.37	21.40	21.56
		2510.0	21.35	20.50	20.56	22.47	21.62	21.68
	100% RB	2560.0	21.31	20.39	20.61	22.43	21.51	21.73
		2535.0	21.15	20.21	20.35	22.27	21.33	21.47
		2510.0	22.42	21.51	21.51	23.54	22.63	22.63

LTE Band 12 -ERP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -4.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	22.77	21.67	21.02	16.12	15.02	14.37
		707.5	22.92	22.11	21.24	16.27	15.46	14.59
		699.7	22.98	21.89	21.35	16.33	15.24	14.70
	1 RB low	715.3	22.71	21.68	21.12	16.06	15.03	14.47
		707.5	22.95	22.10	21.28	16.30	15.45	14.63
		699.7	22.99	21.91	21.44	16.34	15.26	14.79
	50% RB mid	715.3	22.22	21.69	21.15	15.57	15.04	14.50
		707.5	22.27	22.00	21.29	15.62	15.35	14.64
		699.7	22.72	22.11	21.50	16.07	15.46	14.85
	100% RB	715.3	22.25	20.80	20.00	15.60	14.15	13.35
		707.5	22.28	20.76	20.13	15.63	14.11	13.48
		699.7	22.26	21.10	20.35	15.61	14.45	13.70
3MHz	1 RB high	714.5	22.85	21.57	21.15	16.20	14.92	14.50
		707.5	22.98	22.20	21.29	16.33	15.55	14.64
		700.5	23.11	21.92	21.43	16.46	15.27	14.78
	1 RB low	714.5	22.26	21.65	21.10	15.61	15.00	14.45
		707.5	22.32	22.20	21.37	15.67	15.55	14.72
		700.5	22.19	22.00	21.53	15.54	15.35	14.88
	50% RB mid	714.5	22.32	20.95	20.10	15.67	14.30	13.45
		707.5	22.19	21.04	20.29	15.54	14.39	13.64
		700.5	22.14	21.10	20.48	15.49	14.45	13.83
	100% RB	714.5	22.33	20.81	20.09	15.68	14.16	13.44
		707.5	22.10	20.97	20.26	15.45	14.32	13.61
		700.5	22.36	20.99	20.44	15.71	14.34	13.79
5MHz	1 RB high	713.5	22.63	21.77	20.98	15.98	15.12	14.33
		707.5	22.84	22.02	21.27	16.19	15.37	14.62
		701.5	23.05	22.40	21.36	16.40	15.75	14.71
	1 RB low	713.5	22.88	21.96	21.34	16.23	15.31	14.69
		707.5	22.96	22.04	21.38	16.31	15.39	14.73
		701.5	23.06	22.50	21.60	16.41	15.85	14.95
	50% RB mid	713.5	21.80	20.91	20.17	15.15	14.26	13.52
		707.5	21.94	21.05	20.32	15.29	14.40	13.67
		701.5	22.00	21.19	20.47	15.35	14.54	13.82
	100% RB	713.5	21.86	20.85	20.23	15.21	14.20	13.58
		707.5	21.89	20.98	20.26	15.24	14.33	13.61
		701.5	21.95	21.09	20.42	15.30	14.44	13.77
10MHz	1 RB high	711.0	22.74	21.95	21.02	16.09	15.30	14.37
		707.5	22.83	21.79	21.36	16.18	15.14	14.71
		704.0	22.92	21.69	21.25	16.27	15.04	14.60

	1 RB low	711.0	23.05	22.13	21.35	16.40	15.48	14.70
		707.5	23.06	21.84	21.42	16.41	15.19	14.77
		704.0	23.07	21.84	21.48	16.42	15.19	14.83
	50% RB mid	711.0	21.80	20.94	20.26	15.15	14.29	13.61
		707.5	21.84	21.02	20.30	15.19	14.37	13.65
		704.0	21.91	20.98	20.27	15.26	14.33	13.62
	100% RB	711.0	21.79	20.89	20.23	15.14	14.24	13.58
		707.5	21.87	20.93	20.31	15.22	14.28	13.66
		704.0	21.91	20.96	20.36	15.26	14.31	13.71

LTE Band 13-ERP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -4.3)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	784.5	23.10	22.03	21.60	16.65	15.58	15.15
		782.0	23.06	21.95	21.48	16.61	15.50	15.03
		779.5	22.95	22.39	21.61	16.50	15.94	15.16
	1 RB low	784.5	22.97	21.96	21.75	16.52	15.51	15.30
		782.0	22.94	21.96	21.62	16.49	15.51	15.17
		779.5	22.84	22.31	21.56	16.39	15.86	15.11
	50% RB mid	784.5	21.88	20.97	20.50	15.43	14.52	14.05
		782.0	21.90	21.04	20.65	15.45	14.59	14.20
		779.5	21.85	21.09	20.60	15.40	14.64	14.15
	100% RB	784.5	21.87	20.85	20.51	15.42	14.40	14.06
		782.0	21.93	20.95	20.54	15.48	14.50	14.09
		779.5	21.90	20.96	20.50	15.45	14.51	14.05
10MHz	1 RB high	782.0	23.25	21.84	21.54	16.80	15.39	15.09
	1 RB low	782.0	22.84	21.78	21.57	16.39	15.33	15.12
	50% RB mid	782.0	21.98	21.06	20.61	15.53	14.61	14.16
	100% RB	782.0	22.03	20.99	20.64	15.58	14.54	14.19

LTE Band 25-EIRP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EiRP(dBm) (G_T – L_C = -0.8)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1914.3	22.83	21.98	21.82	22.03	21.18	21.02
		1882.5	22.75	21.66	21.05	21.95	20.86	20.25
		1850.7	22.47	21.64	20.89	21.67	20.84	20.09
	1 RB low	1914.3	22.82	22.00	20.94	22.02	21.20	20.14
		1882.5	22.75	21.64	21.04	21.95	20.84	20.24
		1850.7	22.51	21.59	20.92	21.71	20.79	20.12
	50% RB mid	1914.3	22.56	21.79	20.86	21.76	20.99	20.06
		1882.5	22.70	21.98	20.99	21.90	21.18	20.19
		1850.7	22.60	21.69	20.98	21.80	20.89	20.18
	100% RB	1914.3	21.95	20.67	20.80	21.15	19.87	20.00
		1882.5	21.64	20.90	20.90	20.84	20.10	20.10
		1850.7	21.44	20.66	20.73	20.64	19.86	19.93
3MHz	1 RB high	1913.5	22.96	22.01	20.86	22.16	21.21	20.06
		1882.5	22.76	21.73	21.17	21.96	20.93	20.37
		1851.5	22.44	21.42	20.98	21.64	20.62	20.18
	1 RB low	1913.5	22.83	22.09	21.00	22.03	21.29	20.20
		1882.5	22.81	21.78	21.10	22.01	20.98	20.30
		1851.5	22.48	21.42	20.83	21.68	20.62	20.03
	50% RB mid	1913.5	21.92	20.95	20.88	21.12	20.15	20.08
		1882.5	21.84	20.95	21.07	21.04	20.15	20.27
		1851.5	21.58	20.77	20.86	20.78	19.97	20.06
	100% RB	1913.5	21.82	20.87	20.87	21.02	20.07	20.07
		1882.5	21.76	20.85	21.01	20.96	20.05	20.21
		1851.5	21.56	20.63	20.82	20.76	19.83	20.02
5MHz	1 RB high	1912.5	22.99	21.82	20.85	22.19	21.02	20.05
		1882.5	22.89	21.96	21.16	22.09	21.16	20.36
		1852.5	22.62	22.17	20.97	21.82	21.37	20.17
	1 RB low	1912.5	22.81	21.84	20.97	22.01	21.04	20.17
		1882.5	22.98	21.94	21.06	22.18	21.14	20.26
		1852.5	22.50	22.05	20.87	21.70	21.25	20.07
	50% RB mid	1912.5	21.91	20.94	20.93	21.11	20.14	20.13
		1882.5	21.88	21.05	21.07	21.08	20.25	20.27
		1852.5	21.60	20.82	20.85	20.80	20.02	20.05
	100% RB	1912.5	21.84	20.82	20.90	21.04	20.02	20.10
		1882.5	21.83	20.94	21.01	21.03	20.14	20.21
		1852.5	21.66	20.79	20.86	20.86	19.99	20.06
10MHz	1 RB high	1910.0	22.96	21.74	20.83	22.16	20.94	20.03
		1882.5	22.91	21.77	21.17	22.11	20.97	20.37
		1855.0	22.74	22.11	21.03	21.94	21.31	20.23

	1 RB low	1910.0	22.70	21.76	20.89	21.90	20.96	20.09
		1882.5	23.01	21.73	21.08	22.21	20.93	20.28
		1855.0	22.66	22.08	21.06	21.86	21.28	20.26
	50% RB mid	1910.0	21.86	20.98	20.87	21.06	20.18	20.07
		1882.5	21.92	20.98	21.09	21.12	20.18	20.29
		1855.0	21.69	20.81	20.97	20.89	20.01	20.17
	100% RB	1910.0	21.78	20.91	20.89	20.98	20.11	20.09
		1882.5	21.87	20.92	21.05	21.07	20.12	20.25
		1855.0	21.65	20.79	20.93	20.85	19.99	20.13
15MHz	1 RB high	1907.5	23.02	22.05	21.79	22.22	21.25	20.99
		1882.5	22.77	21.70	21.09	21.97	20.90	20.29
		1857.5	22.77	22.04	20.92	21.97	21.24	20.12
	1 RB low	1907.5	22.79	22.04	20.96	21.99	21.24	20.16
		1882.5	22.85	21.62	21.08	22.05	20.82	20.28
		1857.5	22.58	21.96	20.94	21.78	21.16	20.14
	50% RB mid	1907.5	21.84	20.88	20.92	21.04	20.08	20.12
		1882.5	21.98	21.01	21.10	21.18	20.21	20.30
		1857.5	21.72	20.86	20.92	20.92	20.06	20.12
	100% RB	1907.5	21.86	20.89	20.86	21.06	20.09	20.06
		1882.5	21.89	20.98	21.01	21.09	20.18	20.21
		1857.5	21.68	20.80	20.86	20.88	20.00	20.06
20MHz	1 RB high	1905.0	23.04	21.23	20.95	22.24	20.43	20.15
		1882.5	23.55	21.18	21.18	22.75	20.38	20.38
		1860.0	22.85	21.06	21.00	22.05	20.26	20.20
	1 RB low	1905.0	22.84	21.24	21.06	22.04	20.44	20.26
		1882.5	22.91	21.11	21.01	22.11	20.31	20.21
		1860.0	22.62	21.09	21.02	21.82	20.29	20.22
	50% RB mid	1905.0	21.92	20.98	20.91	21.12	20.18	20.11
		1882.5	21.98	21.04	21.08	21.18	20.24	20.28
		1860.0	21.88	20.92	20.96	21.08	20.12	20.16
	100% RB	1905.0	21.85	20.94	20.88	21.05	20.14	20.08
		1882.5	21.96	21.02	21.00	21.16	20.22	20.20
		1860.0	21.80	20.87	20.93	21.00	20.07	20.13

LTE Band 26(814MHz~824MHz)-ERP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -4.1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	823.3	22.84	21.91	21.24	16.59	15.66	14.99
		819.0	22.67	21.74	21.13	16.42	15.49	14.88
		814.7	22.78	21.84	21.01	16.53	15.59	14.76
	1 RB low	823.3	22.84	21.89	21.12	16.59	15.64	14.87
		819.0	22.64	21.73	21.14	16.39	15.48	14.89
		814.7	22.82	21.85	21.26	16.57	15.60	15.01
	50% RB mid	823.3	22.89	22.12	21.23	16.64	15.87	14.98
		819.0	22.72	22.01	21.29	16.47	15.76	15.04
		814.7	22.83	22.13	21.32	16.58	15.88	15.07
	100% RB	823.3	21.85	21.05	20.12	15.60	14.80	13.87
		819.0	21.65	20.93	20.04	15.40	14.68	13.79
		814.7	21.80	21.01	20.15	15.55	14.76	13.90
3MHz	1 RB high	822.5	22.88	21.91	21.24	16.63	15.66	14.99
		819.0	22.70	21.75	21.09	16.45	15.50	14.84
		815.5	22.84	21.96	21.23	16.59	15.71	14.98
	1 RB low	822.5	22.80	21.86	21.22	16.55	15.61	14.97
		819.0	22.74	21.80	21.17	16.49	15.55	14.92
		815.5	22.89	21.99	21.11	16.64	15.74	14.86
	50% RB mid	822.5	21.89	21.03	20.12	15.64	14.78	13.87
		819.0	21.75	20.84	20.04	15.50	14.59	13.79
		815.5	21.86	20.96	20.03	15.61	14.71	13.78
	100% RB	822.5	21.93	20.90	20.14	15.68	14.65	13.89
		819.0	21.74	20.75	19.94	15.49	14.50	13.69
		815.5	21.78	20.86	20.11	15.53	14.61	13.86
5MHz	1 RB high	821.5	22.90	22.01	21.23	16.65	15.76	14.98
		819.0	22.71	21.81	21.15	16.46	15.56	14.90
		816.5	22.84	22.00	21.38	16.59	15.75	15.13
	1 RB low	821.5	22.83	21.94	21.28	16.58	15.69	15.03
		819.0	22.75	21.86	20.99	16.50	15.61	14.74
		816.5	22.92	22.03	21.31	16.67	15.78	15.06
	50% RB mid	821.5	21.84	20.95	20.12	15.59	14.70	13.87
		819.0	21.79	20.88	20.08	15.54	14.63	13.83
		816.5	21.87	21.03	20.24	15.62	14.78	13.99
	100% RB	821.5	21.95	20.97	20.18	15.70	14.72	13.93
		819.0	21.78	20.79	19.98	15.53	14.54	13.73
		816.5	21.87	20.89	20.07	15.62	14.64	13.82
10MHz	1 RB high	819.0	22.82	21.86	21.15	16.57	15.61	14.90
	1 RB low	819.0	22.77	21.87	21.12	16.52	15.62	14.87
	50% RB mid	819.0	21.82	20.95	19.99	15.57	14.70	13.74

	100% RB	819.0	21.82	20.99	20.03	15.57	14.74	13.78

LTE Band 26(824MHz~849MHz)-ERP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -4.1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	22.52	21.59	20.91	16.27	15.34	14.66
		836.5	22.61	21.72	21.11	16.36	15.47	14.86
		824.7	22.70	21.78	21.29	16.45	15.53	15.04
	1 RB low	848.3	22.46	21.53	20.95	16.21	15.28	14.70
		836.5	22.59	21.71	21.26	16.34	15.46	15.01
		824.7	22.71	21.77	21.19	16.46	15.52	14.94
	50% RB mid	848.3	22.49	21.73	20.81	16.24	15.48	14.56
		836.5	22.68	21.94	20.98	16.43	15.69	14.73
		824.7	22.78	22.00	21.12	16.53	15.75	14.87
	100% RB	848.3	21.50	20.68	19.77	15.25	14.43	13.52
		836.5	21.56	20.83	19.85	15.31	14.58	13.60
		824.7	21.71	20.96	20.02	15.46	14.71	13.77
3MHz	1 RB high	847.5	22.58	21.62	20.99	16.33	15.37	14.74
		836.5	22.67	21.72	21.13	16.42	15.47	14.88
		825.5	22.79	21.83	21.28	16.54	15.58	15.03
	1 RB low	847.5	22.61	21.65	21.07	16.36	15.40	14.82
		836.5	22.68	21.80	21.13	16.43	15.55	14.88
		825.5	22.83	21.90	21.25	16.58	15.65	15.00
	50% RB mid	847.5	21.58	20.68	19.98	15.33	14.43	13.73
		836.5	21.66	20.83	20.09	15.41	14.58	13.84
		825.5	21.76	20.88	20.16	15.51	14.63	13.91
	100% RB	847.5	21.55	20.57	19.78	15.30	14.32	13.53
		836.5	21.66	20.72	19.97	15.41	14.47	13.72
		825.5	21.77	20.77	20.11	15.52	14.52	13.86
5MHz	1 RB high	846.5	22.57	21.67	21.02	16.32	15.42	14.77
		836.5	22.66	21.79	21.04	16.41	15.54	14.79
		826.5	22.75	21.90	21.11	16.50	15.65	14.86
	1 RB low	846.5	22.64	21.74	20.99	16.39	15.49	14.74
		836.5	22.70	21.85	21.25	16.45	15.60	15.00
		826.5	22.82	21.91	21.15	16.57	15.66	14.90
	50% RB mid	846.5	21.63	20.74	19.91	15.38	14.49	13.66
		836.5	21.73	20.84	19.96	15.48	14.59	13.71
		826.5	21.81	20.90	20.07	15.56	14.65	13.82
	100% RB	846.5	21.62	20.61	19.85	15.37	14.36	13.60
		836.5	21.69	20.76	19.92	15.44	14.51	13.67
		826.5	21.77	20.77	20.02	15.52	14.52	13.77
10MHz	1 RB high	844.0	22.58	21.64	20.89	16.33	15.39	14.64
		836.5	22.65	21.71	21.01	16.40	15.46	14.76
		829.0	22.68	21.79	21.13	16.43	15.54	14.88

	1 RB low	844.0	22.68	21.72	21.14	16.43	15.47	14.89
		836.5	22.75	21.78	21.24	16.50	15.53	14.99
		829.0	22.83	21.86	21.29	16.58	15.61	15.04
	50% RB mid	844.0	21.70	20.83	19.85	15.45	14.58	13.60
		836.5	21.72	20.87	19.94	15.47	14.62	13.69
		829.0	21.82	20.95	20.02	15.57	14.70	13.77
	100% RB	844.0	21.62	20.74	19.87	15.37	14.49	13.62
		836.5	21.68	20.82	19.93	15.43	14.57	13.68
		829.0	21.79	20.86	19.97	15.54	14.61	13.72
15MHz	1 RB high	841.5	22.57	21.98	21.14	16.32	15.73	14.89
		836.5	22.64	22.05	21.06	16.39	15.80	14.81
		831.5	22.65	22.06	21.11	16.40	15.81	14.86
	1 RB low	841.5	22.77	22.23	21.17	16.52	15.98	14.92
		836.5	22.79	22.24	21.29	16.54	15.99	15.04
		831.5	22.87	22.27	21.28	16.62	16.02	15.03
	50% RB mid	841.5	21.72	20.79	19.85	15.47	14.54	13.60
		836.5	21.73	20.79	19.94	15.48	14.54	13.69
		831.5	21.76	20.83	19.97	15.51	14.58	13.72
	100% RB	841.5	21.68	20.71	19.82	15.43	14.46	13.57
		836.5	21.71	20.75	19.88	15.46	14.50	13.63
		831.5	21.73	20.82	19.98	15.48	14.57	13.73

LTE Band 41-EIRP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EiRP(dBm) (G_T – L_C = 1.65)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2687.5	26.90	25.84	25.31	28.55	27.49	26.96
		2593.0	27.14	25.93	25.18	28.79	27.58	26.83
		2498.5	26.96	25.98	25.13	28.61	27.63	26.78
	1 RB low	2687.5	26.86	25.85	25.30	28.51	27.50	26.95
		2593.0	27.16	25.94	25.22	28.81	27.59	26.87
		2498.5	26.97	25.94	25.13	28.62	27.59	26.78
	50% RB mid	2687.5	25.95	24.76	24.55	27.60	26.41	26.20
		2593.0	26.12	24.93	24.49	27.77	26.58	26.14
		2498.5	25.97	24.84	24.34	27.62	26.49	25.99
	100% RB	2687.5	25.86	24.75	24.49	27.51	26.40	26.14
		2593.0	26.08	24.81	24.44	27.73	26.46	26.09
		2498.5	25.83	24.66	24.32	27.48	26.31	25.97
10MHz	1 RB high	2685.0	27.61	26.53	25.77	29.26	28.18	27.42
		2593.0	27.19	25.97	25.16	28.84	27.62	26.81
		2501.0	26.96	25.97	25.10	28.61	27.62	26.75
	1 RB low	2685.0	27.60	26.44	25.91	29.25	28.09	27.56
		2593.0	27.08	25.82	25.16	28.73	27.47	26.81
		2501.0	26.92	25.94	25.08	28.57	27.59	26.73
	50% RB mid	2685.0	26.00	24.79	24.60	27.65	26.44	26.25
		2593.0	26.10	24.85	24.45	27.75	26.50	26.10
		2501.0	25.93	24.74	24.34	27.58	26.39	25.99
	100% RB	2685.0	26.08	24.91	24.68	27.73	26.56	26.33
		2593.0	25.98	24.86	24.44	27.63	26.51	26.09
		2501.0	25.91	24.77	24.30	27.56	26.42	25.95
15MHz	1 RB high	2682.5	26.87	25.84	25.20	28.52	27.49	26.85
		2593.0	27.12	25.86	25.15	28.77	27.51	26.80
		2503.5	26.97	25.91	25.14	28.62	27.56	26.79
	1 RB low	2682.5	26.69	25.71	25.13	28.34	27.36	26.78
		2593.0	26.98	25.88	25.18	28.63	27.53	26.83
		2503.5	26.91	25.86	25.10	28.56	27.51	26.75
	50% RB mid	2682.5	25.98	24.80	24.50	27.63	26.45	26.15
		2593.0	26.16	24.98	24.39	27.81	26.63	26.04
		2503.5	26.04	24.89	24.31	27.69	26.54	25.96
	100% RB	2682.5	25.88	24.72	24.43	27.53	26.37	26.08
		2593.0	26.14	24.92	24.41	27.79	26.57	26.06
		2503.5	25.98	24.82	24.28	27.63	26.47	25.93
20MHz	1 RB high	2680.0	27.08	25.96	26.41	28.73	27.61	28.06
		2593.0	27.19	26.12	25.10	28.84	27.77	26.75
		2506.0	27.06	25.79	25.15	28.71	27.44	26.80

	1 RB low	2680.0	27.87	26.69	25.29	29.52	28.34	26.94
		2593.0	26.96	25.99	25.17	28.61	27.64	26.82
		2506.0	27.00	25.67	25.04	28.65	27.32	26.69
	50% RB mid	2680.0	25.84	24.65	24.49	27.49	26.30	26.14
		2593.0	26.04	24.84	24.44	27.69	26.49	26.09
		2506.0	25.89	24.69	24.36	27.54	26.34	26.01
	100% RB	2680.0	25.66	24.68	24.42	27.31	26.33	26.07
		2593.0	26.04	24.81	24.42	27.69	26.46	26.07
		2506.0	25.90	24.74	24.33	27.55	26.39	25.98

LTE Band 66-EIRP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EiRP(dBm) (G_T – L_C = -0.22)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	22.98	22.26	21.38	22.76	22.04	21.16
		1745.0	22.79	21.76	21.29	22.57	21.54	21.07
		1710.7	22.90	21.85	21.50	22.68	21.63	21.28
	1 RB low	1779.3	22.97	22.29	21.48	22.75	22.07	21.26
		1745.0	22.20	21.73	21.36	21.98	21.51	21.14
		1710.7	22.28	21.84	21.46	22.06	21.62	21.24
	50% RB mid	1779.3	22.97	22.23	21.51	22.75	22.01	21.29
		1745.0	22.74	21.96	21.37	22.52	21.74	21.15
		1710.7	22.89	21.95	21.50	22.67	21.73	21.28
	100% RB	1779.3	21.94	20.90	20.30	21.72	20.68	20.08
		1745.0	21.70	21.01	20.31	21.48	20.79	20.09
		1710.7	21.87	21.00	20.42	21.65	20.78	20.20
3MHz	1 RB high	1778.5	23.08	22.38	21.46	22.86	22.16	21.24
		1745.0	22.86	21.82	21.44	22.64	21.60	21.22
		1711.5	22.92	21.77	21.54	22.70	21.55	21.32
	1 RB low	1778.5	23.05	22.41	21.57	22.83	22.19	21.35
		1745.0	22.88	21.85	21.40	22.66	21.63	21.18
		1711.5	23.03	21.75	21.53	22.81	21.53	21.31
	50% RB mid	1778.5	22.05	21.16	20.47	21.83	20.94	20.25
		1745.0	21.84	20.96	20.33	21.62	20.74	20.11
		1711.5	21.95	21.08	20.54	21.73	20.86	20.32
	100% RB	1778.5	22.03	21.13	20.47	21.81	20.91	20.25
		1745.0	21.81	20.84	20.34	21.59	20.62	20.12
		1711.5	21.94	21.03	20.47	21.72	20.81	20.25
5MHz	1 RB high	1777.5	23.06	22.16	22.51	22.84	21.94	22.29
		1745.0	22.81	22.02	21.40	22.59	21.80	21.18
		1712.5	22.96	22.45	21.63	22.74	22.23	21.41
	1 RB low	1777.5	23.06	22.20	21.61	22.84	21.98	21.39
		1745.0	22.86	22.02	21.50	22.64	21.80	21.28
		1712.5	23.04	22.40	21.57	22.82	22.18	21.35
	50% RB mid	1777.5	22.07	21.20	20.48	21.85	20.98	20.26
		1745.0	21.90	21.05	20.39	21.68	20.83	20.17
		1712.5	21.99	21.16	20.53	21.77	20.94	20.31
	100% RB	1777.5	22.08	21.06	20.44	21.86	20.84	20.22
		1745.0	21.85	20.95	20.31	21.63	20.73	20.09
		1712.5	21.94	21.09	20.49	21.72	20.87	20.27
10MHz	1 RB high	1775.0	23.11	22.41	21.53	22.89	22.19	21.31
		1745.0	22.86	21.88	21.46	22.64	21.66	21.24
		1715.0	22.84	21.93	21.73	22.62	21.71	21.51

	1 RB low	1775.0	23.03	22.35	21.56	22.81	22.13	21.34
		1745.0	22.97	21.83	21.52	22.75	21.61	21.30
		1715.0	23.06	21.81	21.62	22.84	21.59	21.40
	50% RB mid	1775.0	22.33	21.18	20.48	22.11	20.96	20.26
		1745.0	22.24	21.04	20.35	22.02	20.82	20.13
		1715.0	22.26	21.10	20.56	22.04	20.88	20.34
	100% RB	1775.0	22.55	21.08	20.33	22.33	20.86	20.11
		1745.0	22.40	20.94	20.41	22.18	20.72	20.19
		1715.0	22.40	21.03	20.57	22.18	20.81	20.35
15MHz	1 RB high	1772.5	23.03	22.01	21.56	22.81	21.79	21.34
		1745.0	22.89	22.34	21.58	22.67	22.12	21.36
		1717.5	22.96	22.52	21.66	22.74	22.30	21.44
	1 RB low	1772.5	23.02	22.07	21.60	22.80	21.85	21.38
		1745.0	23.03	22.25	21.64	22.81	22.03	21.42
		1717.5	23.09	22.30	21.75	22.87	22.08	21.53
	50% RB mid	1772.5	21.98	21.08	20.39	21.76	20.86	20.17
		1745.0	21.91	21.03	20.37	21.69	20.81	20.15
		1717.5	21.96	21.05	20.60	21.74	20.83	20.38
	100% RB	1772.5	22.01	21.06	20.43	21.79	20.84	20.21
		1745.0	21.91	20.99	20.36	21.69	20.77	20.14
		1717.5	21.95	21.11	20.58	21.73	20.89	20.36
20MHz	1 RB high	1770.0	22.54	22.15	21.55	22.32	21.93	21.33
		1745.0	22.48	22.08	21.67	22.26	21.86	21.45
		1720.0	22.43	21.87	21.50	22.21	21.65	21.28
	1 RB low	1770.0	22.55	22.24	21.73	22.33	22.02	21.51
		1745.0	22.50	21.85	21.58	22.28	21.63	21.36
		1720.0	22.65	21.89	21.69	22.43	21.67	21.47
	50% RB mid	1770.0	21.57	20.66	20.47	21.35	20.44	20.25
		1745.0	21.49	20.60	20.39	21.27	20.38	20.17
		1720.0	21.58	20.73	20.56	21.36	20.51	20.34
	100% RB	1770.0	21.52	20.68	20.41	21.30	20.46	20.19
		1745.0	21.49	20.55	20.40	21.27	20.33	20.18
		1720.0	21.51	20.58	20.44	21.29	20.36	20.22

LTE Band 71-ERP

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -4.9)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	695.5	23.06	22.71	21.68	16.01	15.66	14.63
		680.5	22.78	21.97	22.43	15.73	14.92	15.38
		665.5	22.40	21.54	21.05	15.35	14.49	14.00
	1 RB low	695.5	23.06	22.61	21.67	16.01	15.56	14.62
		680.5	22.73	21.88	22.20	15.68	14.83	15.15
		665.5	22.39	21.52	20.93	15.34	14.47	13.88
	50% RB mid	695.5	22.12	21.36	20.54	15.07	14.31	13.49
		680.5	21.89	20.98	20.46	14.84	13.93	13.41
		665.5	21.64	20.79	20.11	14.59	13.74	13.06
	100% RB	695.5	22.11	21.21	20.46	15.06	14.16	13.41
		680.5	21.85	20.78	20.34	14.80	13.73	13.29
		665.5	21.57	20.68	20.03	14.52	13.63	12.98
10MHz	1 RB high	693.0	23.09	22.47	21.07	16.04	15.42	14.02
		680.5	22.81	21.87	21.44	15.76	14.82	14.39
		668.0	22.48	21.42	21.12	15.43	14.37	14.07
	1 RB low	693.0	22.95	22.24	21.11	15.90	15.19	14.06
		680.5	22.54	21.62	21.31	15.49	14.57	14.26
		668.0	22.38	21.20	20.95	15.33	14.15	13.90
	50% RB mid	693.0	22.01	21.11	20.00	14.96	14.06	12.95
		680.5	21.78	20.96	20.38	14.73	13.91	13.33
		668.0	21.55	20.59	20.08	14.50	13.54	13.03
	100% RB	693.0	21.96	21.09	19.99	14.91	14.04	12.94
		680.5	21.76	20.91	20.37	14.71	13.86	13.32
		668.0	21.50	20.55	20.05	14.45	13.50	13.00
15MHz	1 RB high	690.5	23.14	22.55	21.64	16.09	15.50	14.59
		680.5	22.89	22.31	21.45	15.84	15.26	14.40
		670.5	22.64	21.61	21.24	15.59	14.56	14.19
	1 RB low	690.5	22.97	22.38	21.57	15.92	15.33	14.52
		680.5	22.60	22.01	21.40	15.55	14.96	14.35
		670.5	22.37	21.27	21.07	15.32	14.22	14.02
	50% RB mid	690.5	21.97	21.14	20.44	14.92	14.09	13.39
		680.5	21.84	20.91	20.34	14.79	13.86	13.29
		670.5	21.58	20.66	20.08	14.53	13.61	13.03
	100% RB	690.5	21.93	21.09	20.42	14.88	14.04	13.37
		680.5	21.84	20.94	20.36	14.79	13.89	13.31
		670.5	21.56	20.61	20.07	14.51	13.56	13.02
20MHz	1 RB high	688.0	23.04	22.46	21.69	15.99	15.41	14.64
		680.5	23.01	22.18	21.54	15.96	15.13	14.49
		673.0	22.71	22.00	22.40	15.66	14.95	15.35

	1 RB low	688.0	22.64	22.05	21.42	15.59	15.00	14.37
		680.5	22.57	21.80	21.40	15.52	14.75	14.35
		673.0	22.39	21.59	22.11	15.34	14.54	15.06
	50% RB mid	688.0	21.87	21.00	20.46	14.82	13.95	13.41
		680.5	21.76	20.81	20.38	14.71	13.76	13.33
		673.0	21.59	20.72	21.15	14.54	13.67	14.10
	100% RB	688.0	21.88	20.94	20.42	14.83	13.89	13.37
		680.5	21.75	20.83	20.34	14.70	13.78	13.29
		673.0	21.61	20.67	21.13	14.56	13.62	14.08

A.2 Emission Limit

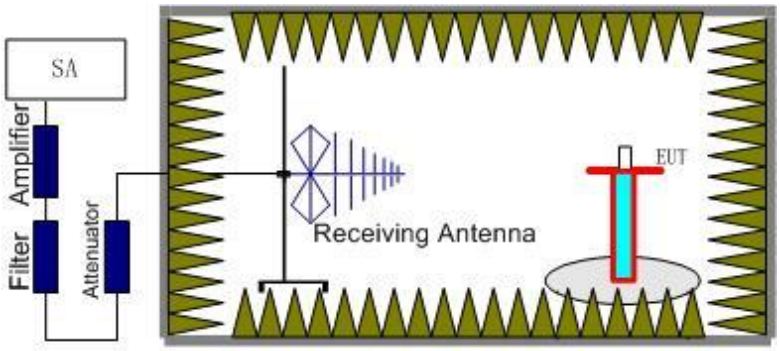
A.2.1 Measurement Method

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

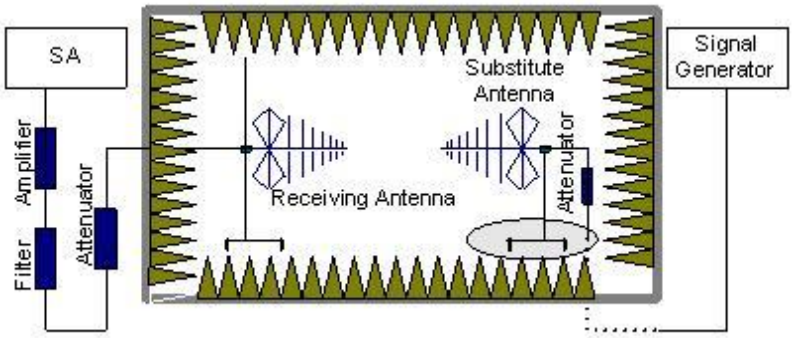
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and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

Part 22.917, Part 24.238 and Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Part 27.53(m) specifies for mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Part 27.53(c) states for operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.

Part 27.53(f) states for operations in the 746–758 MHz,775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals.

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 90.691 states that out-of-band emission requirement shall apply only to the ''outer'' channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116Log_{10}(f/6.1)$ decibels or 50 + 10 $Log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz. For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + $10Log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

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.

LB7_5MHz_CH20775_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5013.02	-56.20	6.58	9.92	-52.86	-25.00	27.86	V
7513.01	-53.79	8.34	12.21	-49.92	-25.00	24.92	V
10003.01	-52.44	9.19	12.90	-48.73	-25.00	23.73	V
12531.01	-49.01	10.26	13.22	-46.05	-25.00	21.05	V
15027.00	-45.90	11.25	13.98	-43.17	-25.00	18.17	H
17537.00	-44.84	12.87	14.95	-42.76	-25.00	17.76	V

LB7_5MHz_CH21100_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5081.02	-56.58	6.72	10.01	-53.29	-25.00	28.29	V
7609.01	-52.86	8.01	12.29	-48.58	-25.00	23.58	H
10122.01	-51.87	9.43	12.95	-48.35	-25.00	23.35	V
12667.01	-48.11	10.35	13.30	-45.16	-25.00	20.16	V
15214.00	-45.07	11.38	13.87	-42.58	-25.00	17.58	H
17756.00	-44.40	12.49	15.26	-41.63	-25.00	16.63	H

LB7_5MHz_CH21425_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5133.02	-55.86	6.86	10.09	-52.63	-25.00	27.63	V
7692.01	-54.81	8.39	12.35	-50.85	-25.00	25.85	V
10279.01	-51.79	9.57	13.01	-48.35	-25.00	23.35	V
12857.01	-47.67	10.62	13.41	-44.88	-25.00	19.88	V
15421.00	-45.01	11.42	13.75	-42.68	-25.00	17.68	H
17961.00	-44.40	12.89	15.55	-41.74	-25.00	16.74	V

LB12_1.4MHz_CH23017_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1386.01	-59.77	3.22	4.91	2.15	-60.23	-13.00	47.23	V
2099.00	-43.87	4.19	4.90	2.15	-45.31	-13.00	32.31	H
2806.00	-53.16	4.92	6.65	2.15	-53.58	-13.00	40.58	H
3484.02	-54.68	5.49	8.16	2.15	-54.16	-13.00	41.16	V
4209.02	-54.74	6.23	9.11	2.15	-54.01	-13.00	41.01	V
4892.01	-54.26	6.73	9.79	2.15	-53.35	-13.00	40.35	V

LB12_1.4MHz_CH23095_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1405.01	-60.53	3.24	5.01	2.15	-60.91	-13.00	47.91	H
2123.00	-36.56	4.21	4.97	2.15	-37.95	-13.00	24.95	H
2837.00	-52.24	4.95	6.71	2.15	-52.63	-13.00	39.63	V
3533.02	-54.38	5.65	8.25	2.15	-53.93	-13.00	40.93	H
4237.02	-54.61	6.25	9.14	2.15	-53.87	-13.00	40.87	V
4948.01	-54.42	6.69	9.85	2.15	-53.41	-13.00	40.41	V

LB12_1.4MHz_CH23173_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1426.01	-60.53	3.27	5.12	2.15	-60.83	-13.00	47.83	H
2146.00	-46.48	4.24	5.04	2.15	-47.83	-13.00	34.83	V
2871.00	-51.13	4.97	6.77	2.15	-51.48	-13.00	38.48	V
3568.02	-54.78	6.01	8.30	2.15	-54.64	-13.00	41.64	V
4281.02	-54.83	6.21	9.18	2.15	-54.01	-13.00	41.01	V
5008.01	-54.14	6.59	9.91	2.15	-52.97	-13.00	39.97	V

LB13_5MHz_CH23205_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1551.01	-60.49	3.46	5.41	2.15	-60.69	-13.00	47.69	H
2329.00	-54.36	4.43	5.59	2.15	-55.35	-13.00	42.35	V
3130.02	-53.27	5.40	7.31	2.15	-53.51	-13.00	40.51	V
3894.02	-54.12	6.11	8.75	2.15	-53.63	-13.00	40.63	V
4669.02	-54.42	6.48	9.57	2.15	-53.48	-13.00	40.48	V
5459.01	-55.15	6.90	10.54	2.15	-53.66	-13.00	40.66	H

LB13_5MHz_CH23230_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1560.01	-60.22	3.47	5.39	2.15	-60.45	-13.00	47.45	H
2350.00	-55.46	4.46	5.65	2.15	-56.42	-13.00	43.42	V
3126.02	-53.23	5.40	7.30	2.15	-53.48	-13.00	40.48	H
3917.02	-55.03	6.12	8.78	2.15	-54.52	-13.00	41.52	H
4679.02	-54.75	6.49	9.58	2.15	-53.81	-13.00	40.81	V
5466.01	-54.17	6.93	10.55	2.15	-52.70	-13.00	39.70	H

LB13_5MHz_CH23255_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1563.01	-59.93	3.48	5.39	2.15	-60.17	-13.00	47.17	H
2366.00	-54.96	4.48	5.70	2.15	-55.89	-13.00	42.89	V
3151.02	-53.05	5.37	7.36	2.15	-53.21	-13.00	40.21	H
3908.02	-55.01	6.11	8.77	2.15	-54.50	-13.00	41.50	V
4703.02	-54.18	6.51	9.60	2.15	-53.24	-13.00	40.24	H
5499.01	-54.38	7.06	10.60	2.15	-52.99	-13.00	39.99	V

LB25_1.4MHz_CH26047_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7361.01	-53.70	8.11	12.03	-49.78	-13.00	36.78	V
9067.01	-53.08	9.02	13.14	-48.96	-13.00	35.96	H
11587.01	-49.87	9.80	13.08	-46.59	-13.00	33.59	V
13068.01	-47.41	10.79	13.60	-44.60	-13.00	31.60	H
15450.00	-44.34	11.46	13.73	-42.07	-13.00	29.07	H
17006.00	-41.82	12.39	13.81	-40.40	-13.00	27.40	H

LB25_1.4MHz_CH26365_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7575.01	-54.26	8.08	12.26	-50.08	-13.00	37.08	V
9460.01	-52.95	9.34	13.38	-48.91	-13.00	35.91	V
11255.01	-50.79	9.73	13.15	-47.37	-13.00	34.37	V
13137.01	-48.18	10.77	13.69	-45.26	-13.00	32.26	V
15087.00	-45.26	11.33	13.95	-42.64	-13.00	29.64	V
16931.00	-43.41	12.11	13.77	-41.75	-13.00	28.75	H

LB25_1.4MHz_CH26683_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
7659.01	-53.32	8.24	12.33	-49.23	-13.00	36.23	V
9574.01	-51.94	9.27	13.33	-47.88	-13.00	34.88	V
11493.01	-50.55	9.83	13.10	-47.28	-13.00	34.28	V
13374.01	-47.72	10.57	14.02	-44.27	-13.00	31.27	V
15315.00	-44.25	11.30	13.81	-41.74	-13.00	28.74	V
17218.00	-43.42	12.35	14.28	-41.49	-13.00	28.49	V

LB26_1.4MHz_CH26797_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1668.01	-59.31	3.58	5.20	2.15	-59.84	-13.00	46.84	H
2472.00	-53.85	4.59	6.02	2.15	-54.57	-13.00	41.57	V
3312.02	-55.33	5.29	7.75	2.15	-55.02	-13.00	42.02	H
4113.02	-56.06	6.04	9.01	2.15	-55.24	-13.00	42.24	H
4955.01	-54.40	6.68	9.86	2.15	-53.37	-13.00	40.37	H
5767.01	-53.99	7.24	10.55	2.15	-52.83	-13.00	39.83	H

LB26_1.4MHz_CH26915_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1658.01	-59.51	3.57	5.22	2.15	-60.01	-13.00	47.01	H
2521.00	-53.58	4.65	6.14	2.15	-54.24	-13.00	41.24	H
3339.02	-54.32	5.31	7.81	2.15	-53.97	-13.00	40.97	V
4171.02	-54.97	6.14	9.07	2.15	-54.19	-13.00	41.19	V
5031.01	-54.12	6.58	9.94	2.15	-52.91	-13.00	39.91	V
5868.01	-53.59	7.29	10.53	2.15	-52.50	-13.00	39.50	V

LB26_1.4MHz_CH27033_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1680.01	-59.06	3.59	5.18	2.15	-59.62	-13.00	46.62	H
2533.00	-53.18	4.66	6.16	2.15	-53.83	-13.00	40.83	H
3405.02	-54.96	5.37	7.97	2.15	-54.51	-13.00	41.51	V
4246.02	-55.19	6.24	9.15	2.15	-54.43	-13.00	41.43	H
5095.01	-54.48	6.76	10.03	2.15	-53.36	-13.00	40.36	V
5931.01	-53.74	7.47	10.51	2.15	-52.85	-13.00	39.85	H

LB26_1.4MHz_CH26697_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5707.01	-53.58	7.29	10.56	2.15	-52.46	-13.00	39.46	H
6500.01	-52.77	7.52	11.00	2.15	-51.44	-13.00	38.44	V
7342.01	-52.62	8.11	12.01	2.15	-50.87	-13.00	37.87	V
8163.01	-52.67	8.44	12.73	2.15	-50.53	-13.00	37.53	V
8980.00	-51.31	9.13	13.10	2.15	-49.49	-13.00	36.49	V
9767.00	-51.18	8.96	13.13	2.15	-49.16	-13.00	36.16	V

LB26_1.4MHz_CH26740_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1653.01	-59.72	3.57	5.22	2.15	-60.22	-13.00	47.22	H
2452.00	-53.78	4.57	5.96	2.15	-54.54	-13.00	41.54	V
3259.02	-53.87	5.28	7.62	2.15	-53.68	-13.00	40.68	V
4106.02	-55.17	6.04	9.01	2.15	-54.35	-13.00	41.35	V
4901.01	-54.53	6.73	9.80	2.15	-53.61	-13.00	40.61	V
5740.01	-53.09	7.28	10.55	2.15	-51.97	-13.00	38.97	V

LB26_1.4MHz_CH26783_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5132.01	-52.43	6.85	10.08	2.15	-51.35	-13.00	38.35	V
6661.01	-52.13	7.93	11.19	2.15	-51.02	-13.00	38.02	H
7281.01	-51.24	8.12	11.94	2.15	-49.57	-13.00	36.57	V
8329.00	-51.75	8.66	12.86	2.15	-49.70	-13.00	36.70	V
8893.00	-51.17	8.83	13.08	2.15	-49.07	-13.00	36.07	H
9857.00	-50.90	9.07	13.04	2.15	-49.08	-13.00	36.08	V

LB41_5MHz_CH39675_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5001.02	-55.63	6.60	9.90	-52.33	-25.00	27.33	V
7494.01	-54.91	8.38	12.19	-51.10	-25.00	26.10	V
9995.01	-53.06	9.18	12.90	-49.34	-25.00	24.34	V
12491.01	-49.64	10.20	13.20	-46.64	-25.00	21.64	H
14988.00	-45.51	11.21	14.01	-42.71	-25.00	17.71	H
17490.00	-44.93	12.70	14.88	-42.75	-25.00	17.75	V

LB41_5MHz_CH40620_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
6454.02	-55.38	7.55	10.95	-51.98	-25.00	26.98	V
7767.01	-53.86	8.33	12.41	-49.78	-25.00	24.78	H
10388.01	-50.65	9.78	13.06	-47.37	-25.00	22.37	V
12947.01	-48.35	10.49	13.47	-45.37	-25.00	20.37	V
15553.00	-43.88	11.51	13.70	-41.69	-25.00	16.69	H
16883.00	-42.49	12.02	13.75	-40.76	-25.00	15.76	H

LB41_5MHz_CH41565_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5093.02	-56.08	6.75	10.03	-52.80	-25.00	27.80	H
7642.01	-54.22	8.16	12.31	-50.07	-25.00	25.07	V
10139.01	-52.12	9.40	12.96	-48.56	-25.00	23.56	V
12670.01	-48.16	10.35	13.30	-45.21	-25.00	20.21	V
15229.00	-45.73	11.36	13.86	-43.23	-25.00	18.23	H
17786.00	-44.33	12.65	15.30	-41.68	-25.00	16.68	H

LB66_1.4MHz_CH131979_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
5001.02	-55.63	6.60	9.90	-52.33	-25.00	27.33	V
7494.01	-54.91	8.38	12.19	-51.10	-25.00	26.10	V
9995.01	-53.06	9.18	12.90	-49.34	-25.00	24.34	V
12491.01	-49.64	10.20	13.20	-46.64	-25.00	21.64	H
14988.00	-45.51	11.21	14.01	-42.71	-25.00	17.71	H
17490.00	-44.93	12.70	14.88	-42.75	-25.00	17.75	V

LB66_1.4MHz_CH132322_QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3490.02	-67.28	5.50	8.18	-64.60	-13.00	51.60	H
5289.02	-66.57	6.99	10.30	-63.26	-13.00	50.26	V
6982.01	-62.26	8.16	11.58	-58.84	-13.00	45.84	V
8726.01	-60.91	8.44	13.05	-56.30	-13.00	43.30	V
10471.01	-60.11	9.70	13.09	-56.72	-13.00	43.72	V
12256.01	-59.89	10.02	13.10	-56.81	-13.00	43.81	V

LB66_1.4MHz_CH132665_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3559.02	-65.84	5.92	8.28	-63.48	-13.00	50.48	H
5283.02	-66.56	6.99	10.30	-63.25	-13.00	50.25	V
7123.01	-61.10	8.16	11.75	-57.51	-13.00	44.51	H
8900.01	-62.98	8.85	13.08	-58.75	-13.00	45.75	H
10689.01	-59.64	9.30	13.14	-55.80	-13.00	42.80	H
12484.01	-59.58	10.22	13.19	-56.61	-13.00	43.61	H

LB71_5MHz_CH133147_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1313.01	-59.02	3.13	4.53	2.15	-59.77	-13.00	46.77	V
1997.01	-49.61	4.04	4.61	2.15	-51.19	-13.00	38.19	H
2676.00	-53.16	4.76	6.42	2.15	-53.65	-13.00	40.65	V
3341.02	-53.94	5.31	7.82	2.15	-53.58	-13.00	40.58	V
3979.02	-53.78	6.08	8.87	2.15	-53.14	-13.00	40.14	H
4646.02	-53.78	6.46	9.55	2.15	-52.84	-13.00	39.84	V

LB71_5MHz_CH133297_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1347.01	-43.89	3.17	4.70	2.15	-44.51	-13.00	31.51	H
2042.00	-42.46	4.14	4.73	2.15	-44.02	-13.00	31.02	H
2711.00	-52.83	4.80	6.48	2.15	-53.30	-13.00	40.30	H
3389.02	-55.13	5.35	7.93	2.15	-54.70	-13.00	41.70	V
4091.02	-55.01	6.04	8.99	2.15	-54.21	-13.00	41.21	H
4757.01	-54.38	6.58	9.66	2.15	-53.45	-13.00	40.45	H

LB71_5MHz_CH133447_QPSK

Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1366.01	-59.80	3.19	4.80	2.15	-60.34	-13.00	47.34	H
2087.00	-39.59	4.18	4.86	2.15	-41.06	-13.00	28.06	H
2777.00	-52.67	4.88	6.60	2.15	-53.10	-13.00	40.10	V
3477.02	-54.71	5.48	8.14	2.15	-54.20	-13.00	41.20	V
4165.02	-54.46	6.13	9.07	2.15	-53.67	-13.00	40.67	H
4884.01	-54.49	6.72	9.78	2.15	-53.58	-13.00	40.58	V

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

A.3 Frequency Stability

A.3.1 Method of Measurement

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 -30℃ to +50℃. 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 7, 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	2500.897	2569.103	2.47	0.0010
50				22.13	0.0087
40				21.26	0.0084
30				24.12	0.0095
10				1.65	0.0007
0				23.22	0.0092
-10				0.39	0.0002
-20				24.69	0.0097
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	2500.897	2569.103	0.84	0.0003
4.4				0.10	0.0000

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	699.481	715.519	-0.21	0.0003
50				4.28	0.0060
40				0.24	0.0003
30				3.71	0.0052
10				-0.74	0.0010
0				2.56	0.0036
-10				3.48	0.0049
-20				-0.14	0.0002
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	699.481	715.519	0.93	0.0013
4.4				-1.44	0.0020

LTE Band 13, 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	777.401	786.583	1.50	0.0019
50				1.22	0.0016
40				-0.07	0.0001
30				0.86	0.0011
10				11.94	0.0153
0				0.31	0.0004
-10				-0.16	0.0002
-20				4.12	0.0053
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	777.401	786.583	-0.96	0.0012
4.4				0.70	0.0009

LTE Band 25, 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	1914.199	2.19	0.0012
50				1.90	0.0010
40				1.03	0.0005
30				2.62	0.0014
10				6.92	0.0037
0				2.43	0.0013
-10				0.11	0.0001
-20				3.52	0.0019
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	1850.833	1914.199	2.03	0.0011
4.4				2.98	0.0016

LTE Band 26(814MHz~824MHz), 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	814.380	823.620	1.54	0.0019
50				1.19	0.0015
40				1.04	0.0013
30				2.02	0.0025
10				6.57	0.0080
0				0.67	0.0008
-10				5.36	0.0065
-20				8.40	0.0103
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	814.380	823.620	-0.13	0.0002
4.4				4.85	0.0059

LTE Band 26(824MHz~849MHz), 15MHz 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	824.553	848.447	0.54	0.0006
50				2.50	0.0030
40				3.82	0.0046
30				-0.90	0.0011
10				0.19	0.0002
0				10.24	0.0122
-10				1.53	0.0018
-20				1.73	0.0021
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	824.553	848.447	1.04	0.0012
4.4				0.44	0.0005

LTE Band 41, 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	2496.224	2689.744		
50				-0.31	0.0001
40				0.24	0.0001
30				-2.45	0.0009
10				-5.55	0.0021
0				-1.52	0.0006
-10				-1.56	0.0006
-20				-2.32	0.0009
-30				-6.54	0.0025

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	2496.224	2689.744	-0.39	0.0002
4.4				-2.22	0.0009

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	1710.801	1779.199		
50				17.68	0.0101
40				13.88	0.0080
30				-0.76	0.0004
10				14.10	0.0081
0				-1.56	0.0009
-10				-5.26	0.0030
-20				-2.62	0.0015
-30				17.62	0.0101

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	1710.801	1779.199	12.80	0.0073
4.4				-4.38	0.0025

LTE Band 71, 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	663.994	697.006	-0.06	0.0001
50				0.14	0.0002
40				-0.63	0.0009
30				-1.46	0.0021
10				1.87	0.0027
0				1.16	0.0017
-10				0.51	0.0007
-20				2.49	0.0037
-30					

Frequency Error vs Voltage

Voltage(V)	Temperature(℃)	F_L(MHz)	F_H(MHz)	Offset(Hz)	Frequency error(ppm)
3.5	20	663.994	697.006	1.24	0.0018
4.4				0.66	0.0010

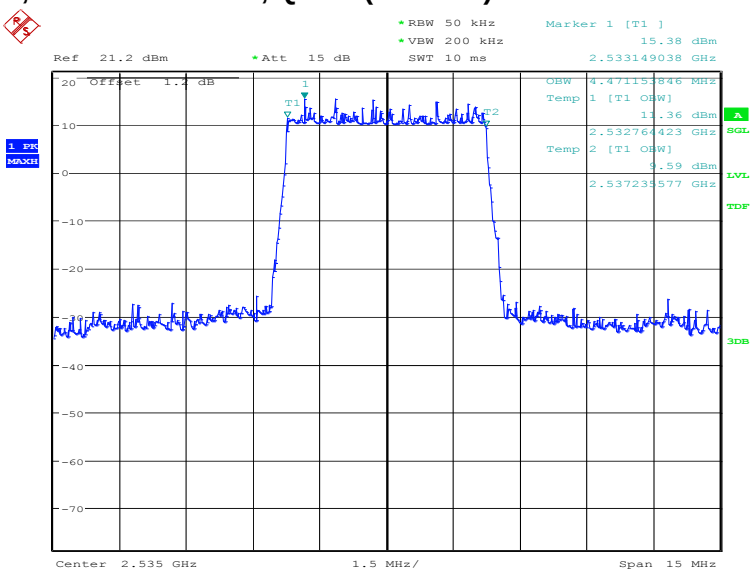
A.4 Occupied Bandwidth

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.

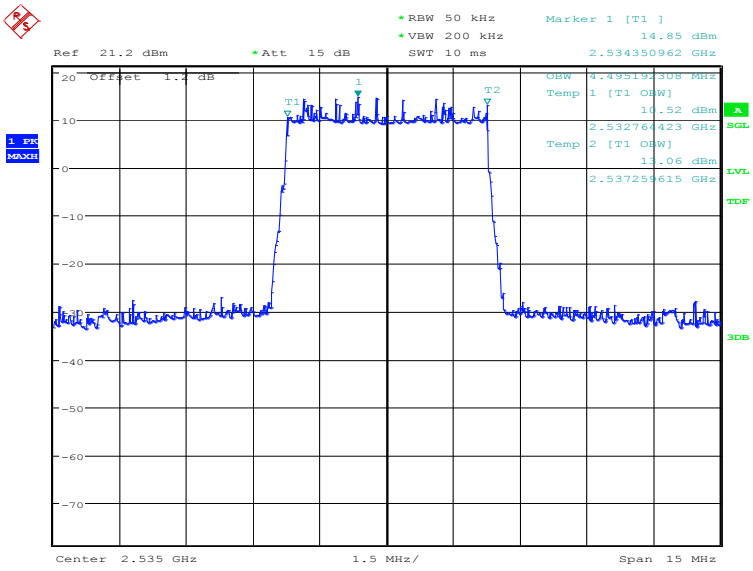
LTE band 7, 5MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	4471.15	4495.19	4495.19

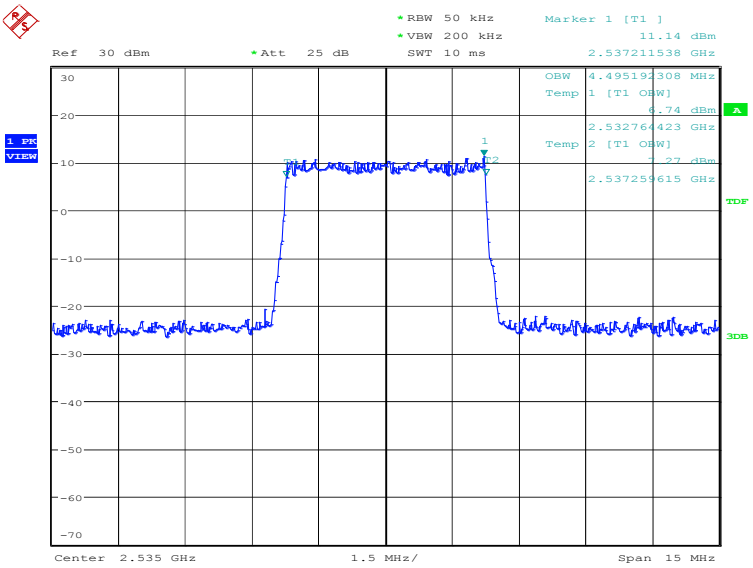
LTE band 7, 5MHz Bandwidth, QPSK (99% BW)



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



LTE band 7, 5MHz Bandwidth,64QAM (99% BW)

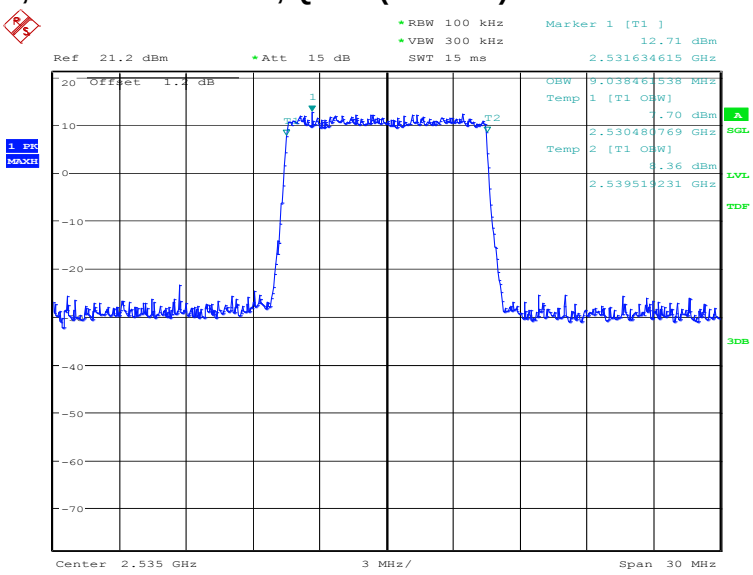


Date: 5.JUN.2020 10:56:11

LTE band 7, 10MHz (99%)

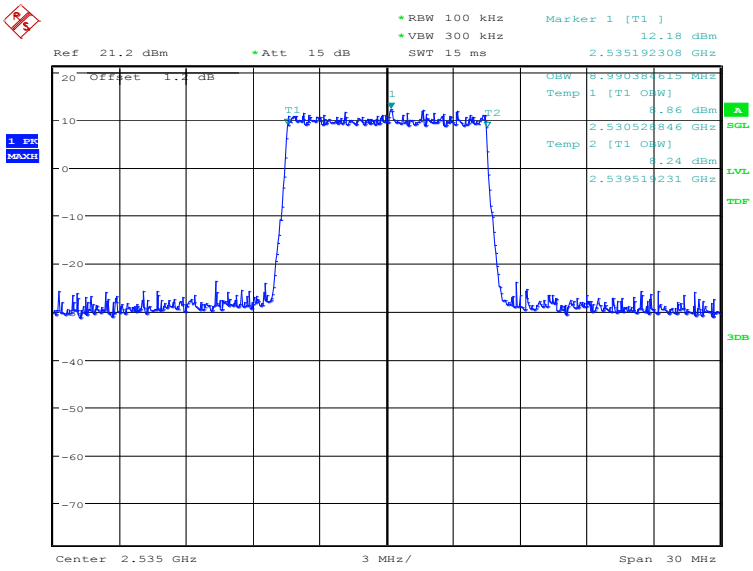
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	9038.46	8990.38	8990.38

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



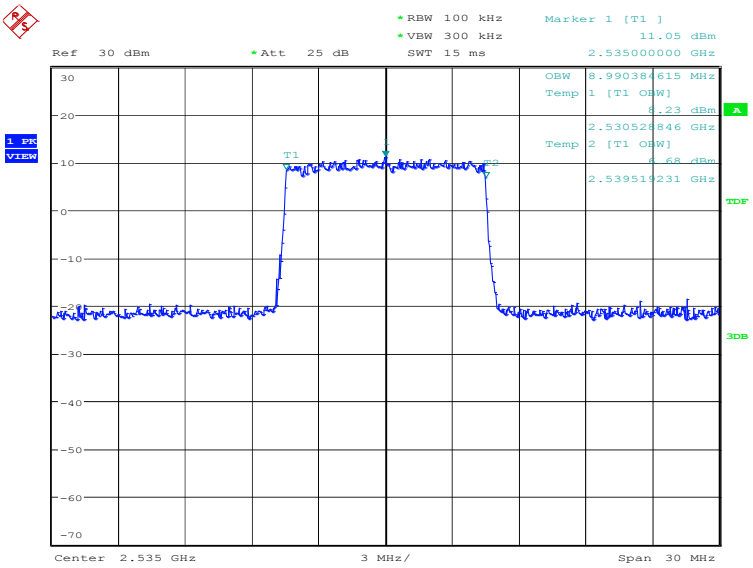
Date: 5.JUN.2020 13:33:57

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



Date: 5.JUN.2020 13:34:35

LTE band 7, 10MHz Bandwidth, 64QAM (99% BW)

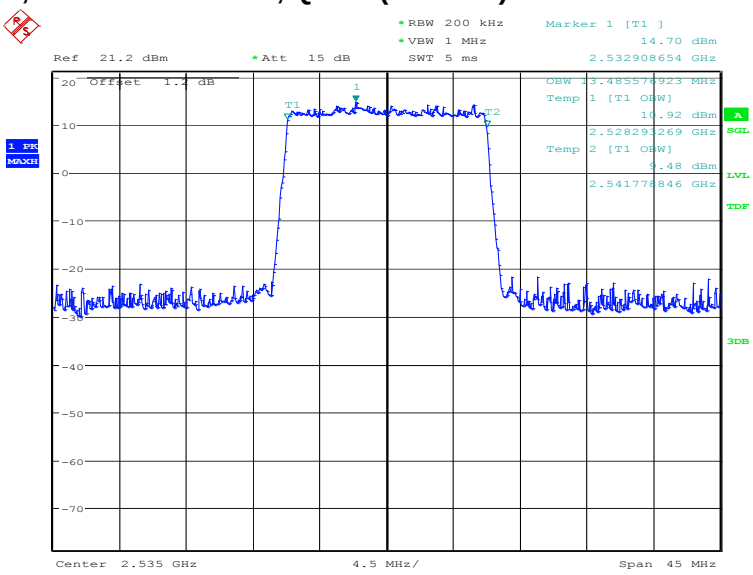


Date: 5.JUN.2020 10:57:30

LTE band 7, 15MHz (99%)

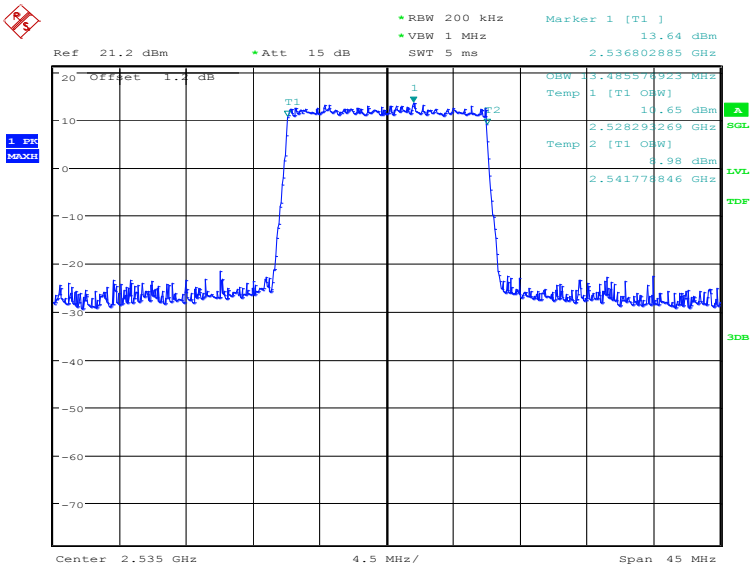
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	13485.58	13485.58	13485.58

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



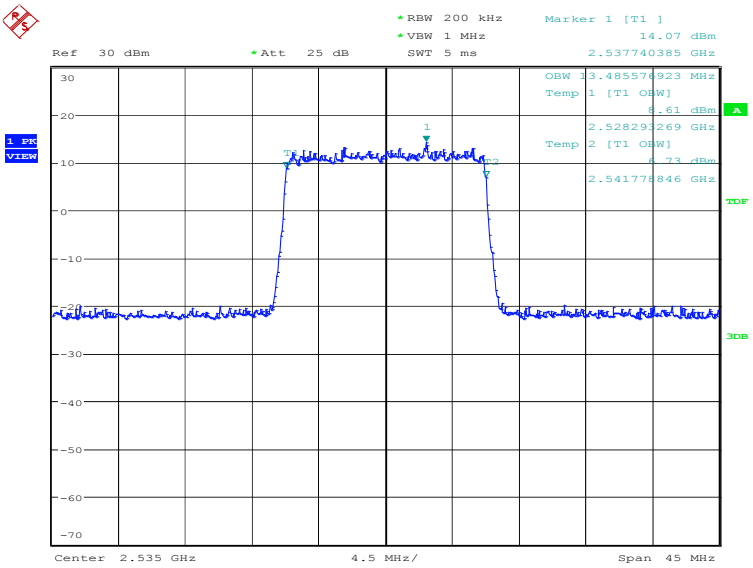
Date: 5.JUN.2020 13:35:15

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



Date: 5.JUN.2020 13:35:54

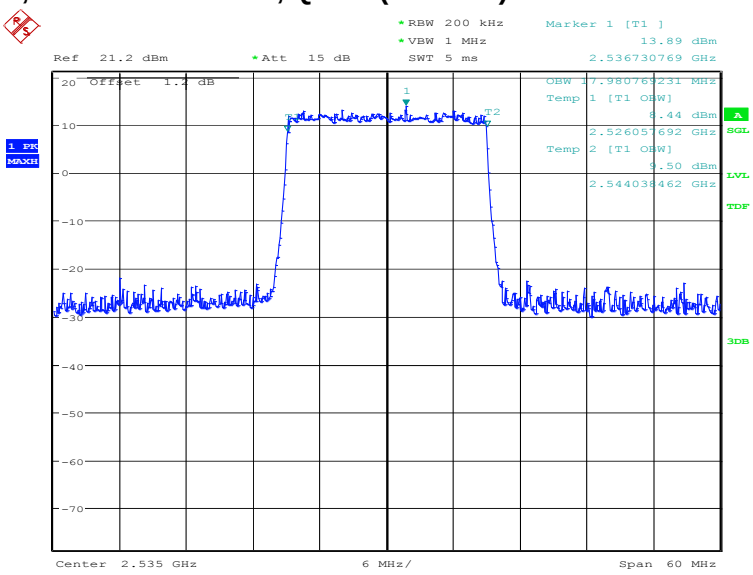
LTE band 7, 15MHz Bandwidth, 64QAM (99% BW)



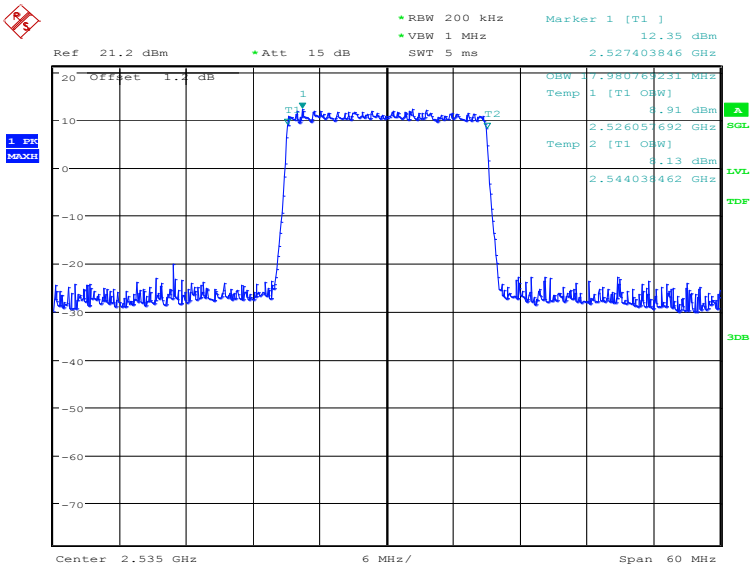
LTE band 7, 20MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	17980.77	17980.77	17980.77

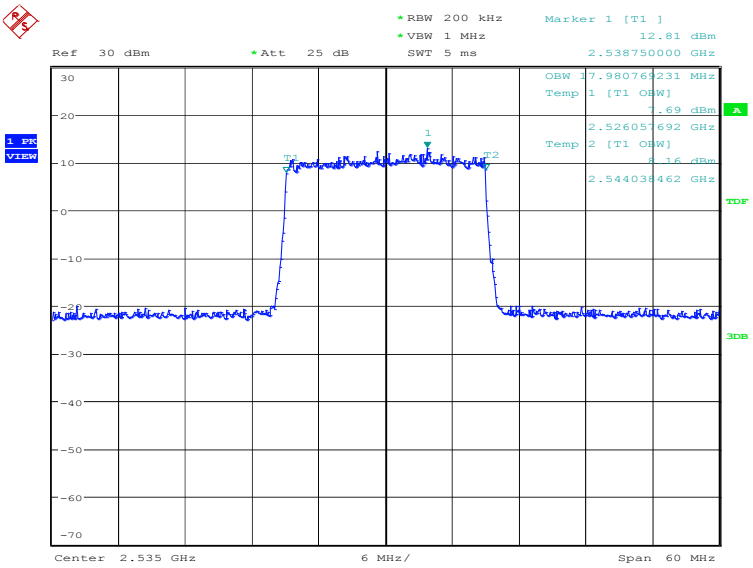
LTE band 7, 20MHz Bandwidth, QPSK (99% BW)



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



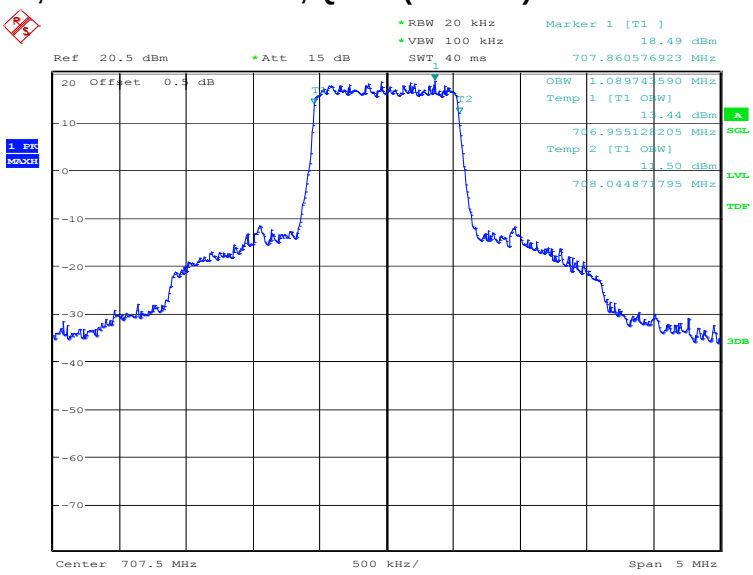
LTE band 7, 20MHz Bandwidth, 64QAM (99% BW)



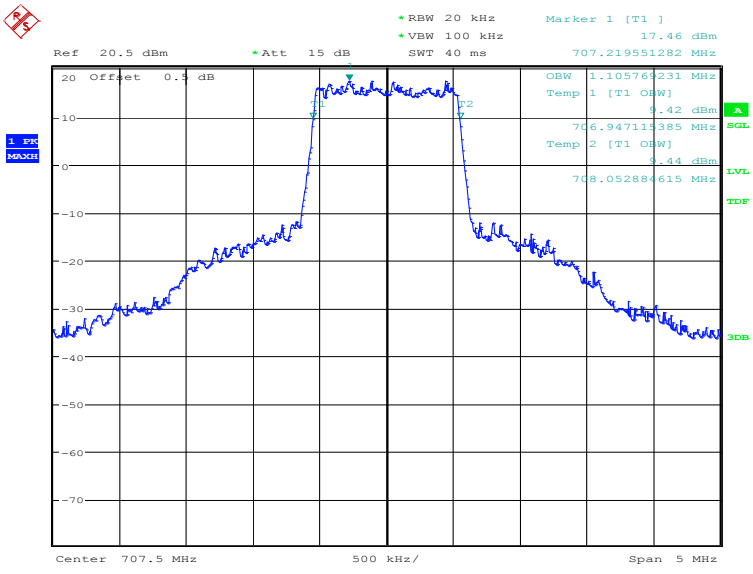
LTE band 12, 1.4MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	1089.74	1105.77	1089.74

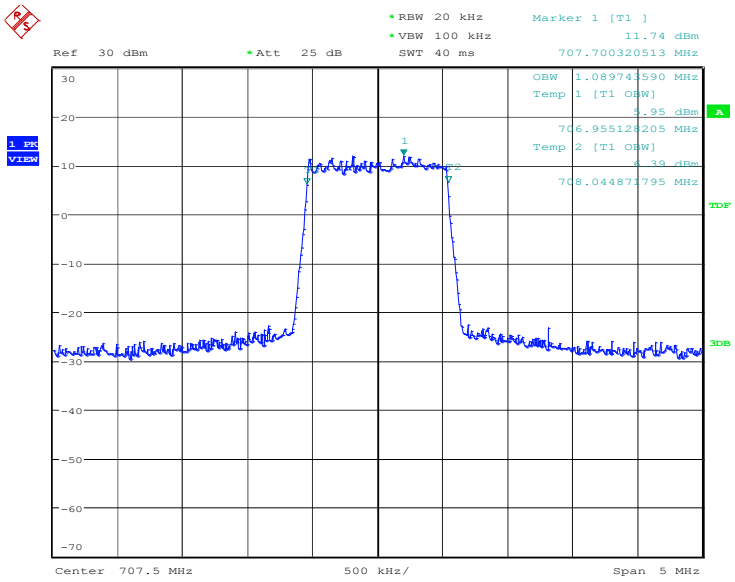
LTE band 12, 1.4MHz Bandwidth, QPSK (99% BW)



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



LTE band 12, 1.4MHz Bandwidth, 64QAM (99% BW)

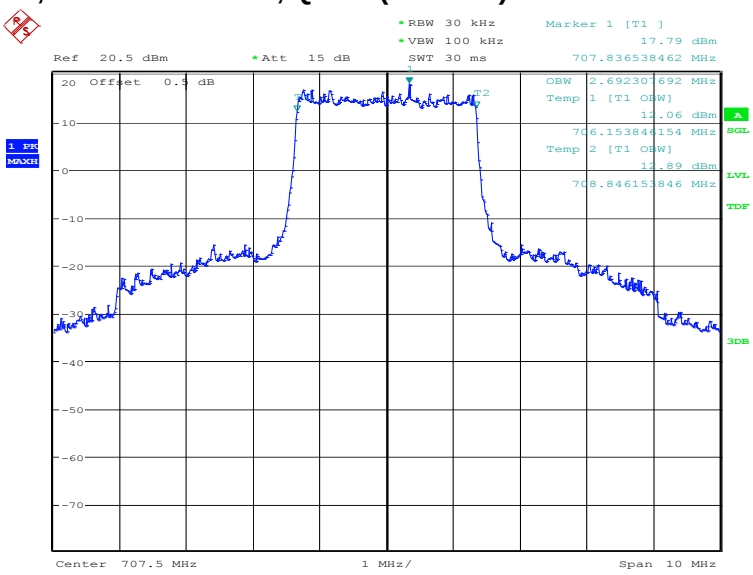


Date: 9.MAY.2020 16:12:45

LTE band 12, 3MHz (99%)

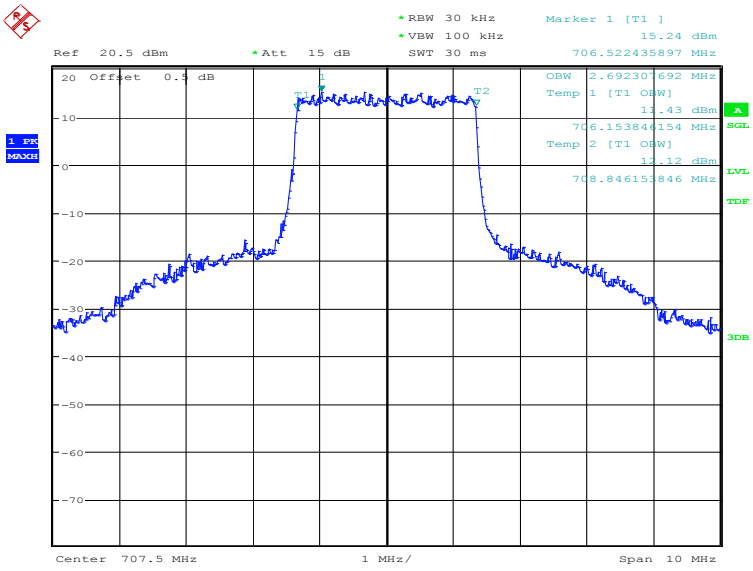
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	2692.31	2692.31	2692.31

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



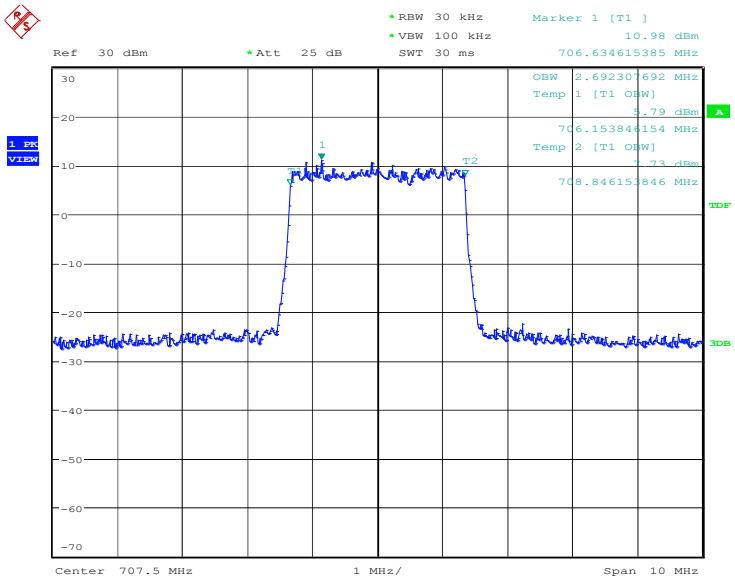
Date: 21.APR.2020 18:44:11

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



Date: 21.APR.2020 18:44:50

LTE band 12, 3MHz Bandwidth, 64QAM (99% BW)

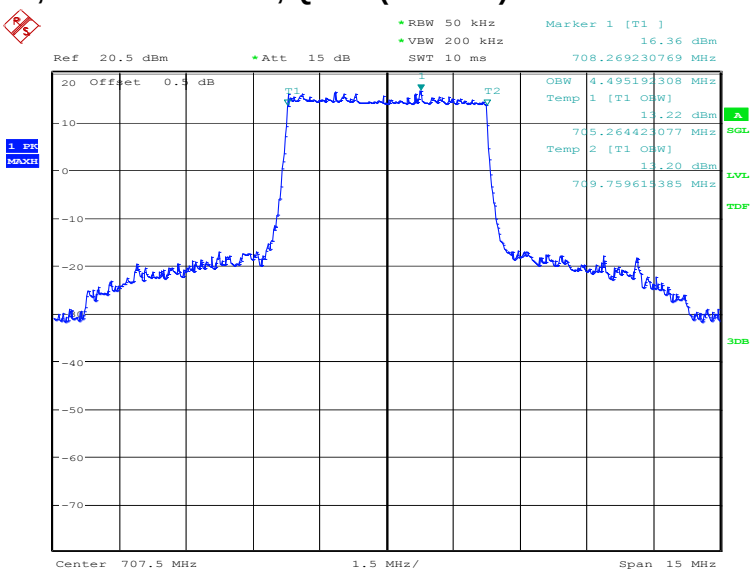


Date: 9.MAY.2020 16:13:56

LTE band 12, 5MHz (99%)

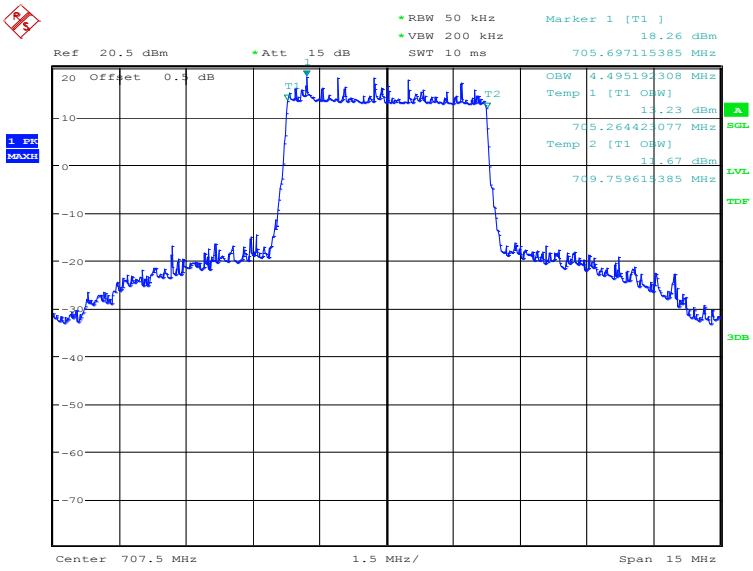
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	4495.19	4495.19	4495.19

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



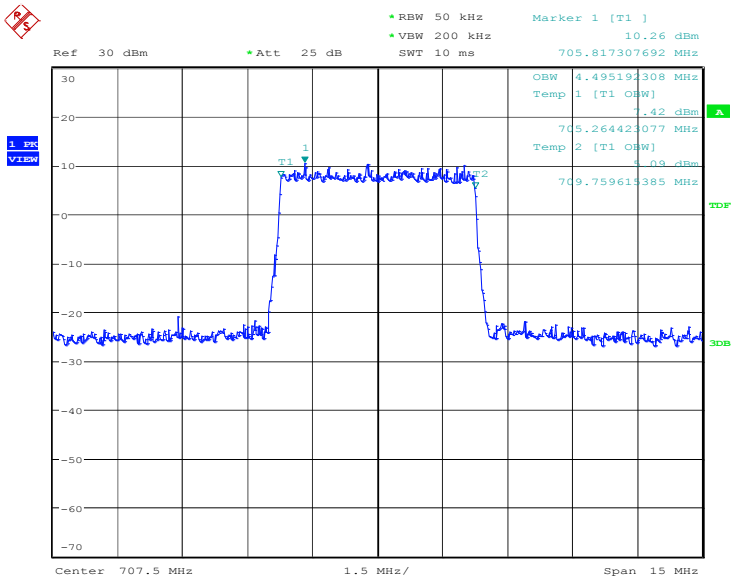
Date: 21.APR.2020 18:45:30

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



Date: 21.APR.2020 18:46:09

LTE band 12, 5MHz Bandwidth,64QAM (99% BW)

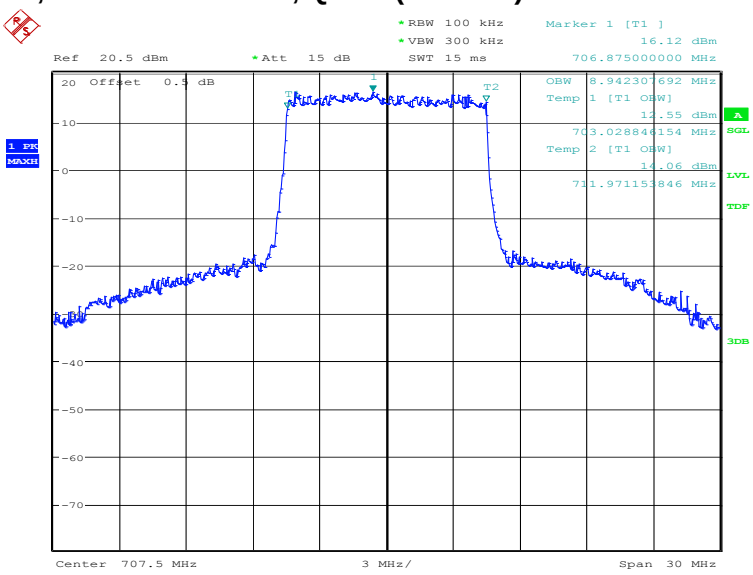


Date: 9.MAY.2020 16:14:52

LTE band 12, 10MHz (99%)

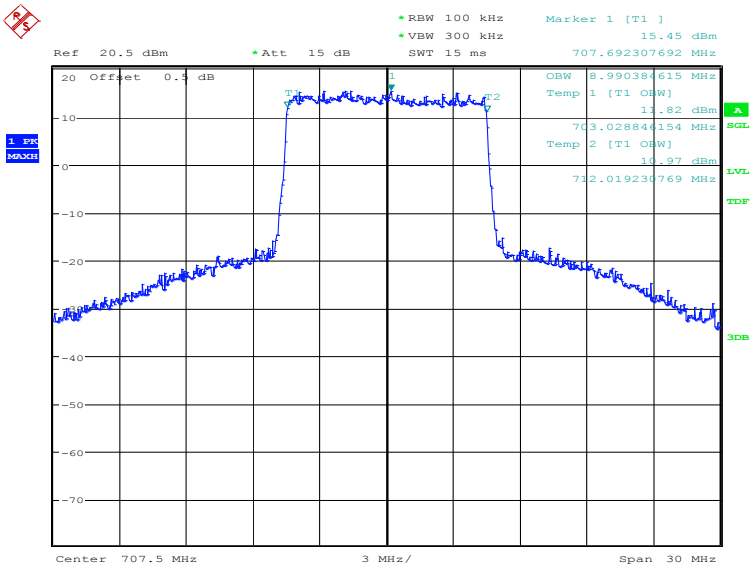
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	8942.31	8990.38	9038.46

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



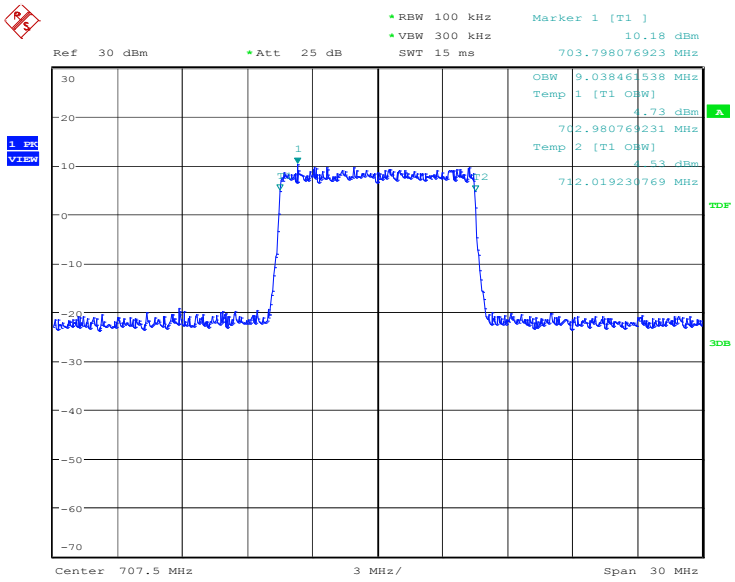
Date: 21.APR.2020 18:46:49

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



Date: 21.APR.2020 18:47:28

LTE band 12, 10MHz Bandwidth, 64QAM (99% BW)

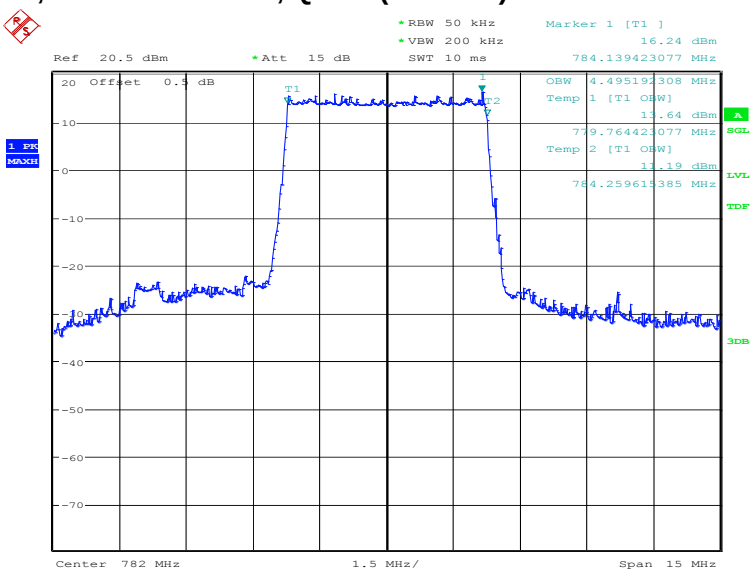


Date: 9.MAY.2020 16:15:45

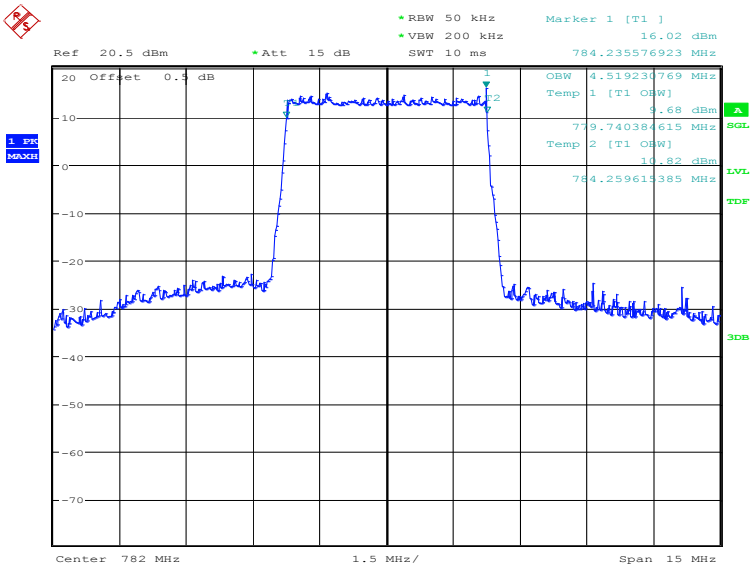
LTE band 13, 5MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
782.0	QPSK	16QAM	64QAM
	4495.19	4519.23	4495.19

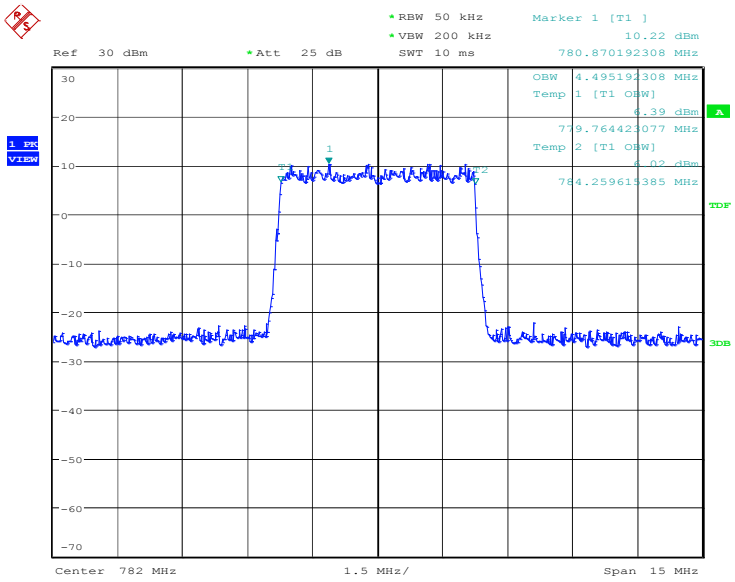
LTE band 13, 5MHz Bandwidth, QPSK (99% BW)



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



LTE band 13, 5MHz Bandwidth,64QAM (99% BW)

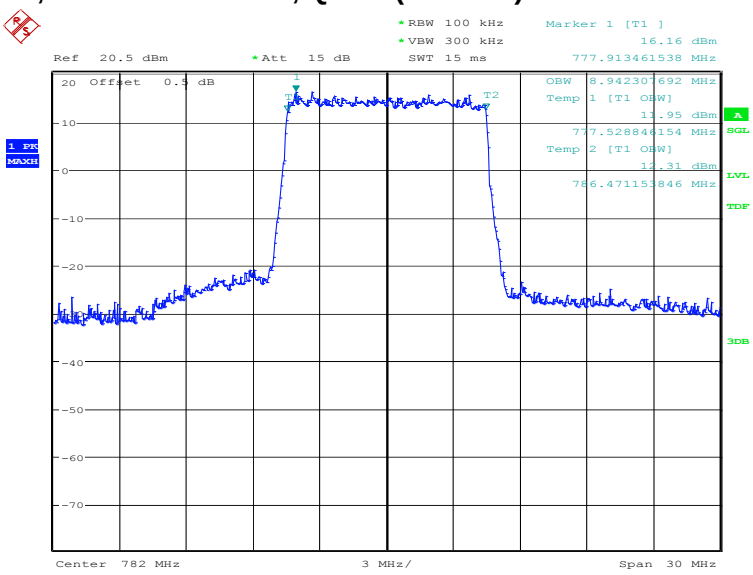


Date: 9.MAY.2020 16:23:21

LTE band 13, 10MHz (99%)

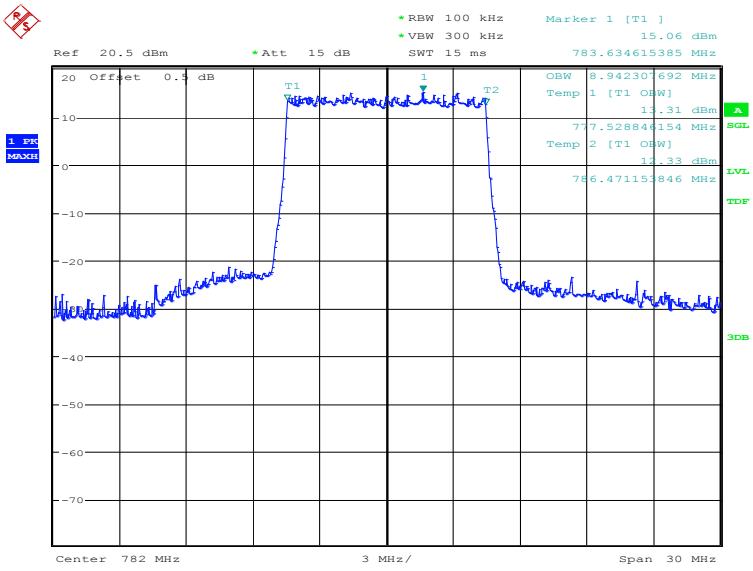
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
782.0	QPSK	16QAM	64QAM
	8942.31	8942.31	8990.38

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



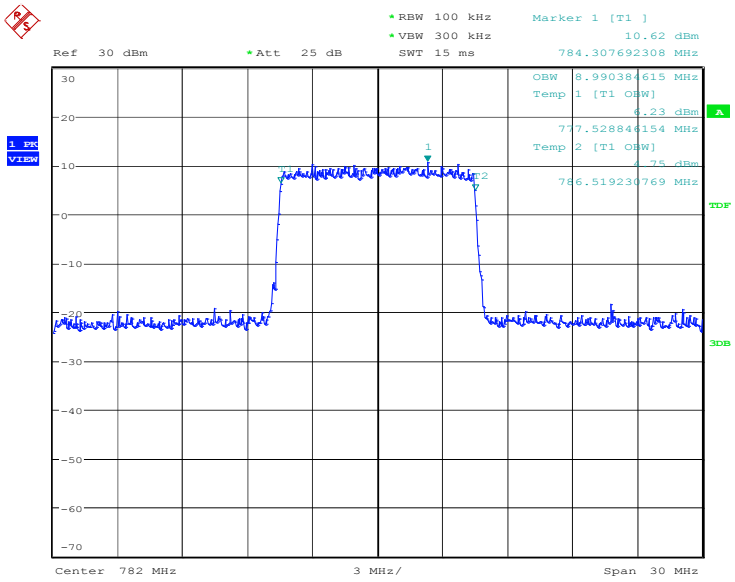
Date: 22.APR.2020 22:48:29

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



Date: 22.APR.2020 22:49:08

LTE band 13, 10MHz Bandwidth, 64QAM (99% BW)

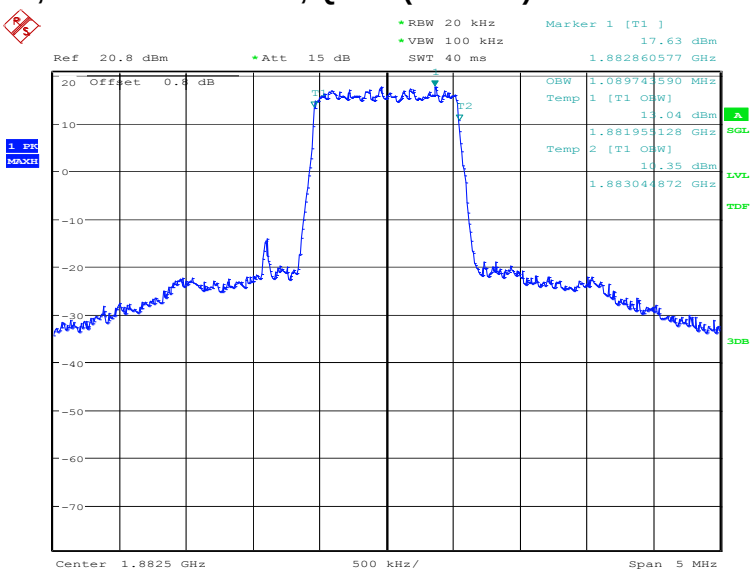


Date: 9.MAY.2020 16:24:19

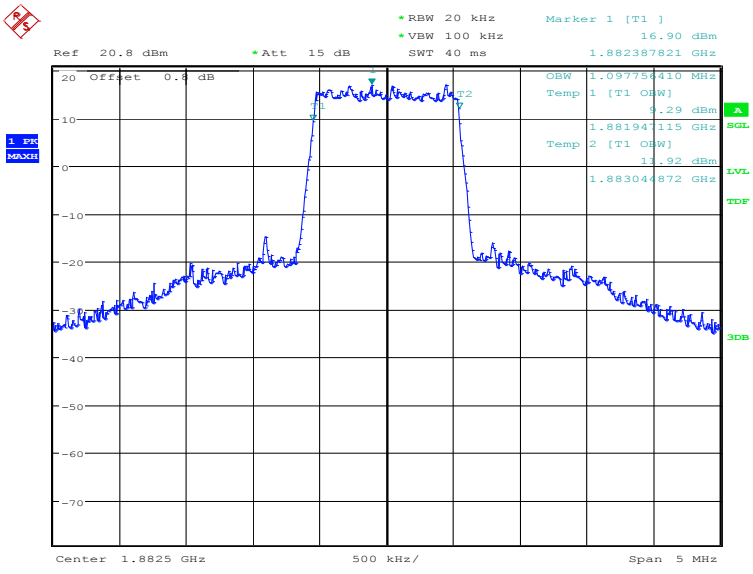
LTE band 25, 1.4MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	1089.74	1097.76	1089.74

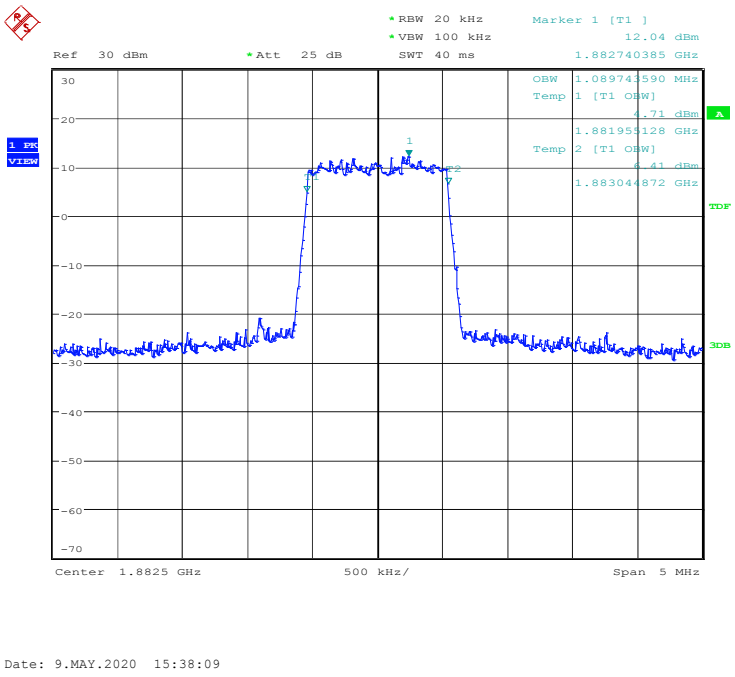
LTE band 25, 1.4MHz Bandwidth, QPSK (99% BW)



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



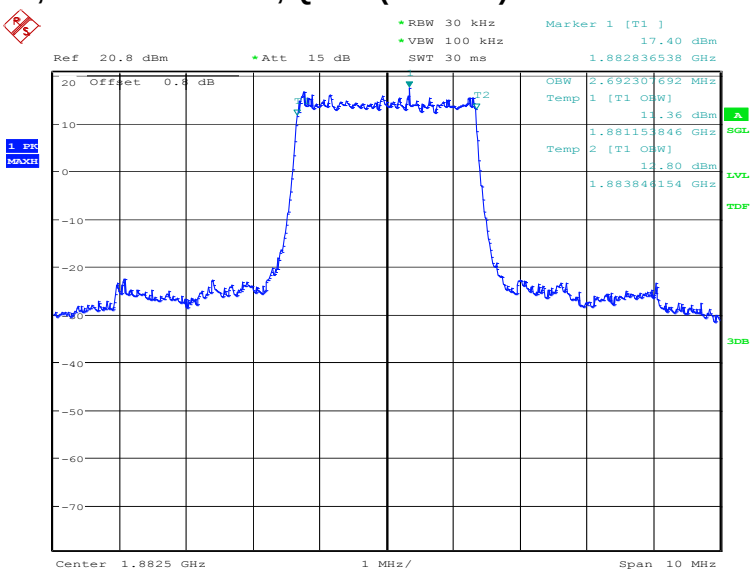
LTE band 25, 1.4MHz Bandwidth, 64QAM (99% BW)



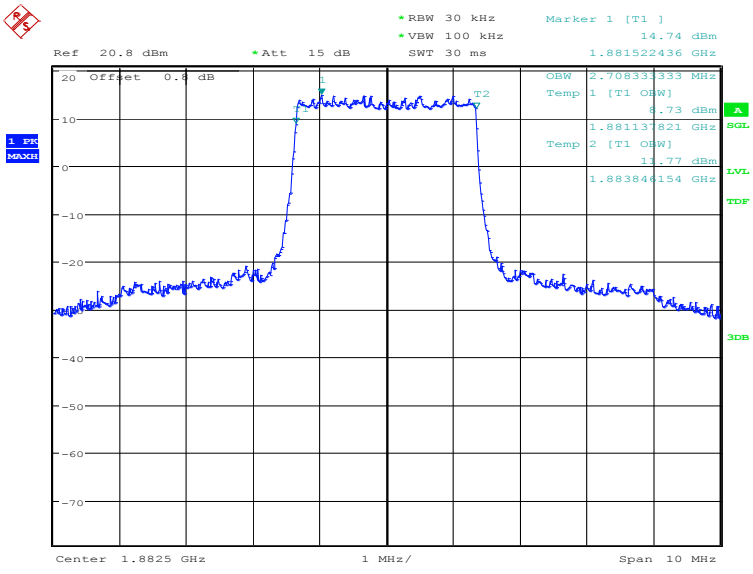
LTE band 25, 3MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	2692.31	2708.33	2692.31

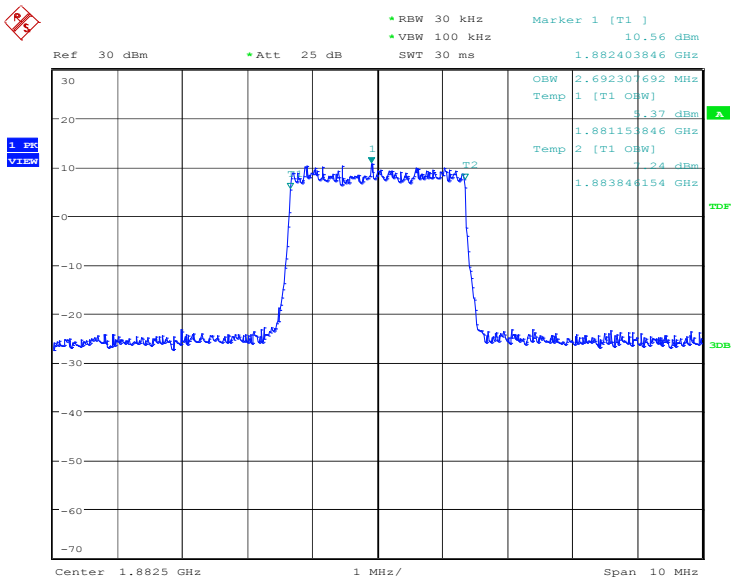
LTE band 25, 3MHz Bandwidth, QPSK (99% BW)



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



LTE band 25, 3MHz Bandwidth, 64QAM (99% BW)

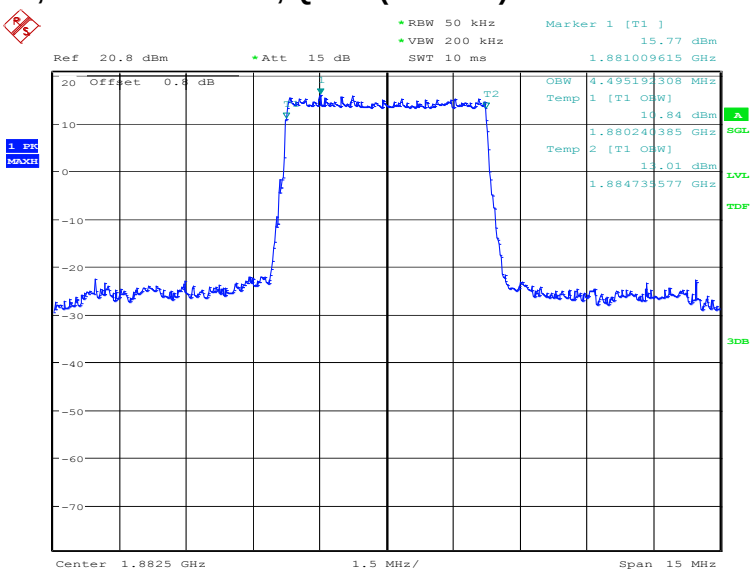


Date: 9.MAY.2020 15:41:26

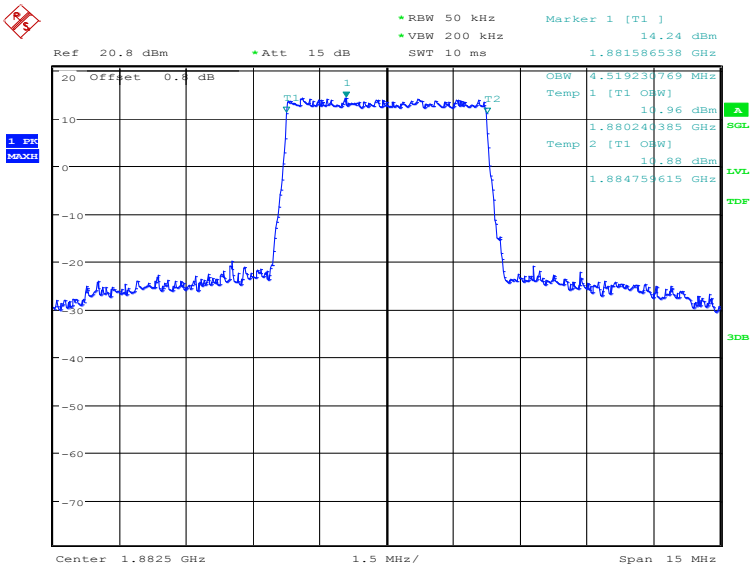
LTE band 25, 5MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	4495.19	4519.23	4495.19

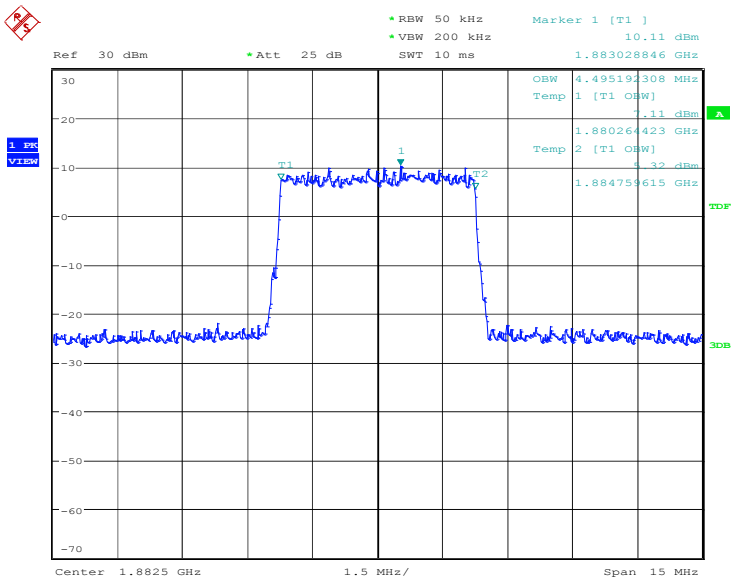
LTE band 25, 5MHz Bandwidth, QPSK (99% BW)



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



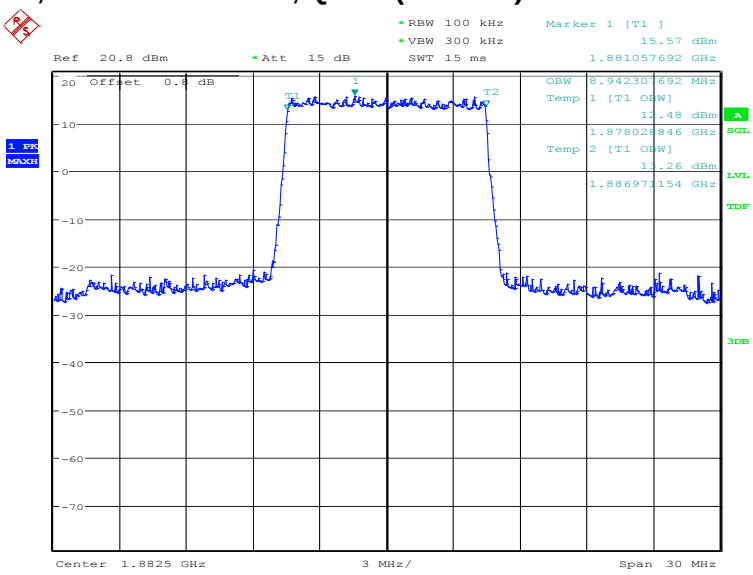
LTE band 25, 5MHz Bandwidth,64QAM (99% BW)



LTE band 25, 10MHz (99%)

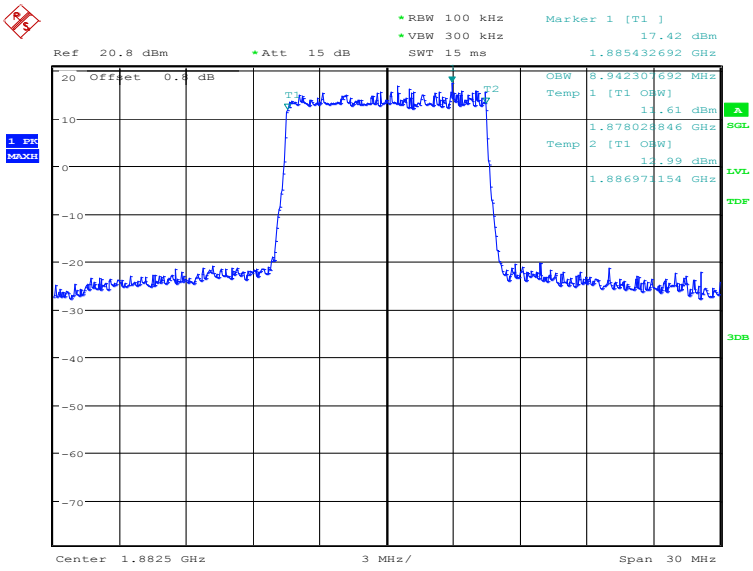
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	8942.31	8942.31	9038.46

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



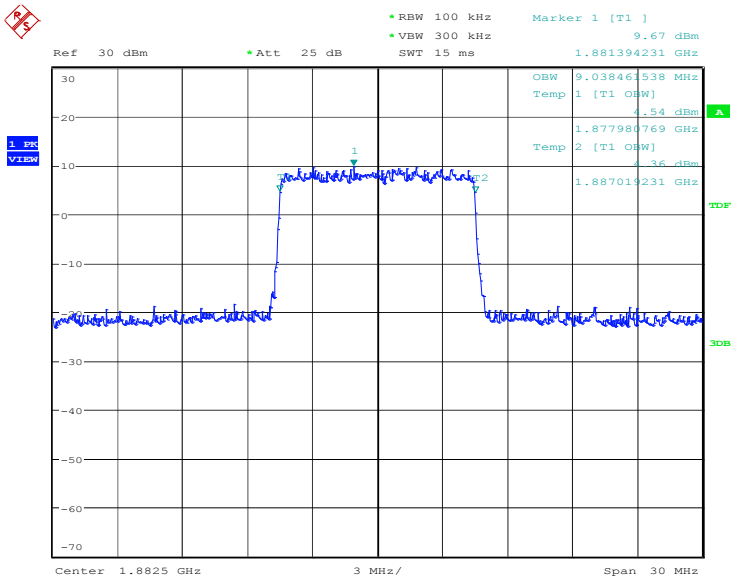
Date: 22.APR.2020 22:53:51

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



Date: 22.APR.2020 22:54:30

LTE band 25, 10MHz Bandwidth, 64QAM (99% BW)

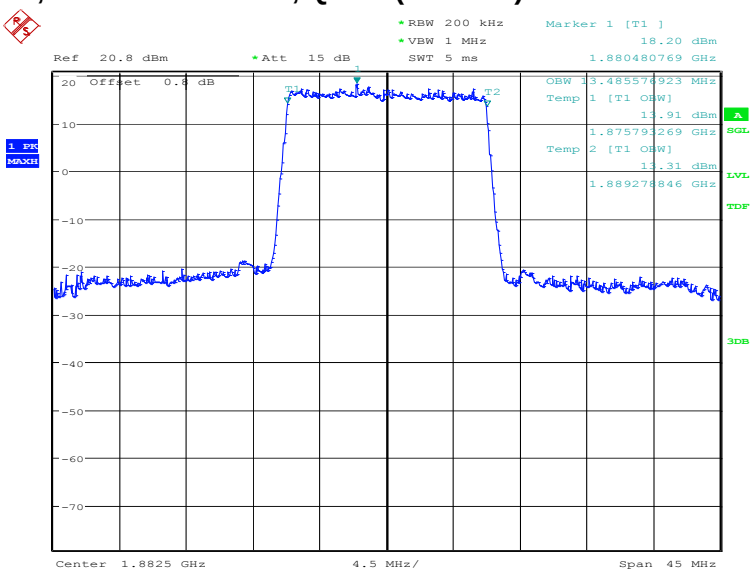


Date: 9.MAY.2020 15:44:48

LTE band 25, 15MHz (99%)

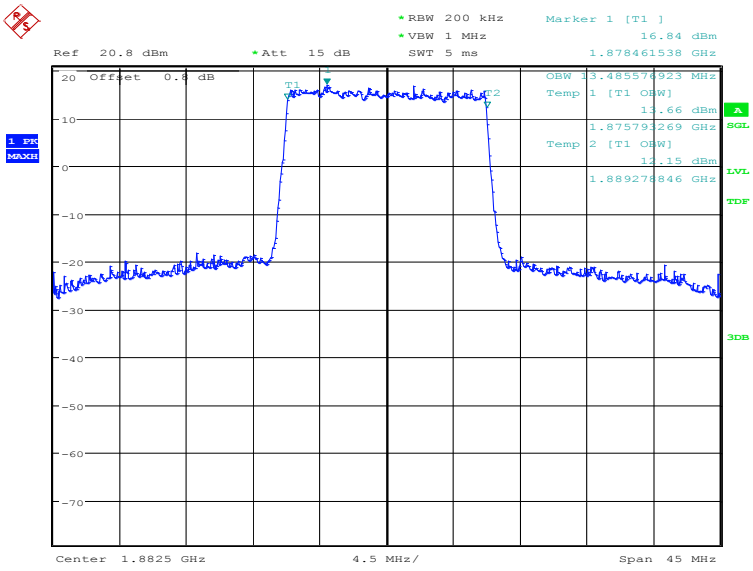
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	13485.58	13485.58	13557.69

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



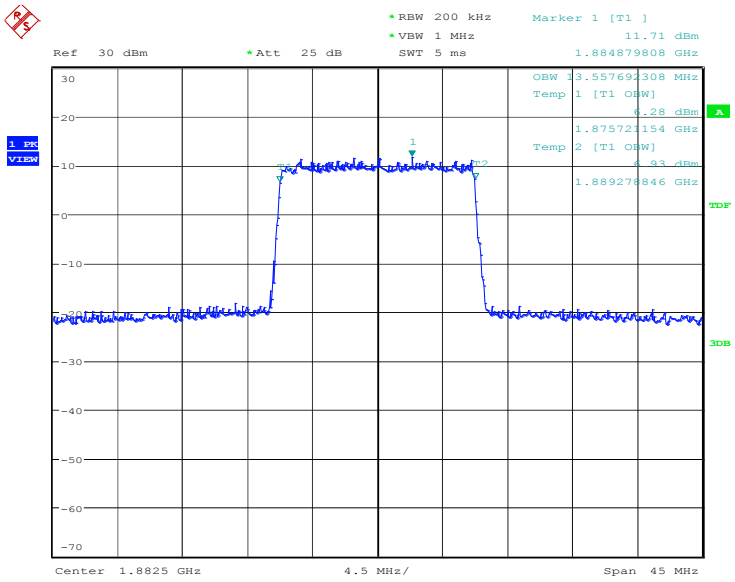
Date: 22.APR.2020 22:55:11

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



Date: 22.APR.2020 22:55:50

LTE band 25, 15MHz Bandwidth, 64QAM (99% BW)

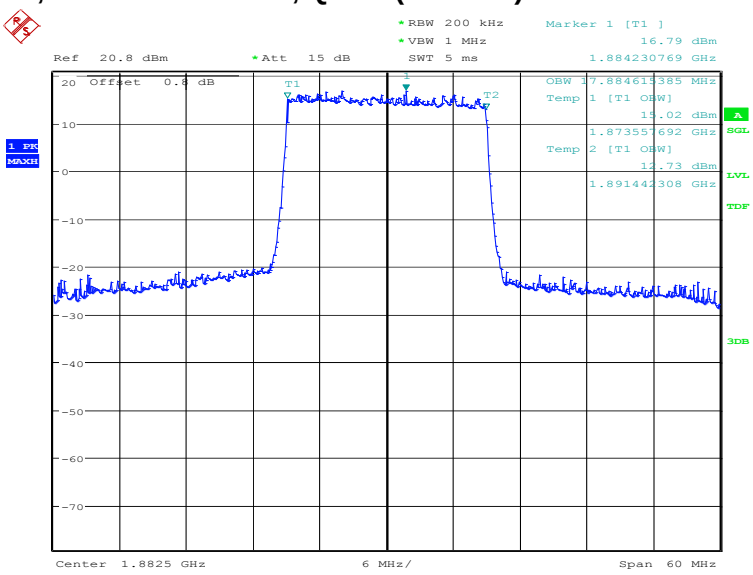


Date: 9.MAY.2020 15:47:54

LTE band 25, 20MHz (99%)

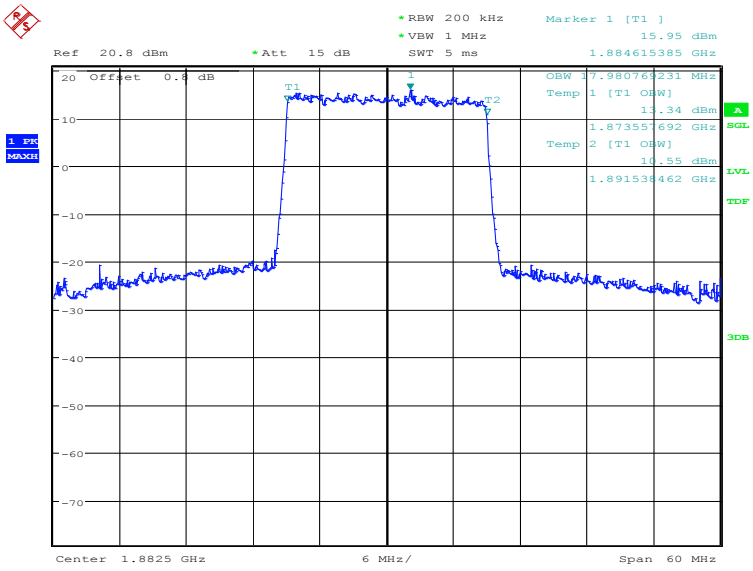
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	17884.62	17980.77	17980.77

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



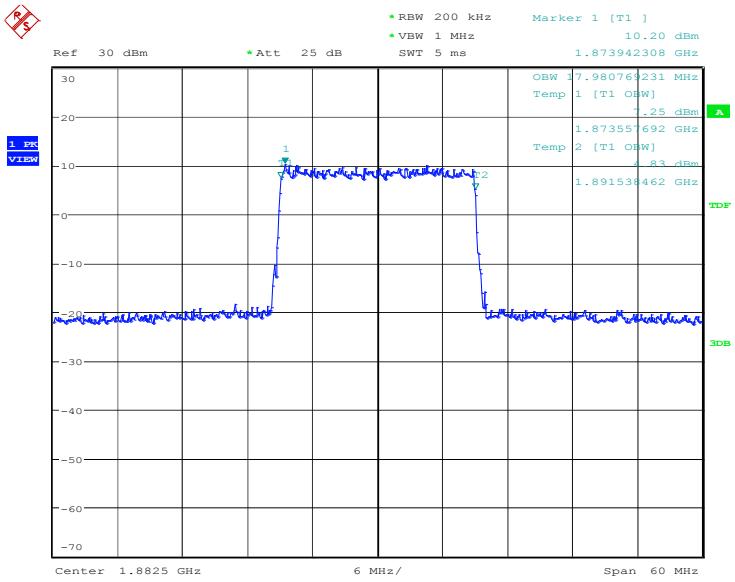
Date: 22.APR.2020 22:56:31

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



Date: 22.APR.2020 22:57:10

LTE band 25, 20MHz Bandwidth, 64QAM (99% BW)

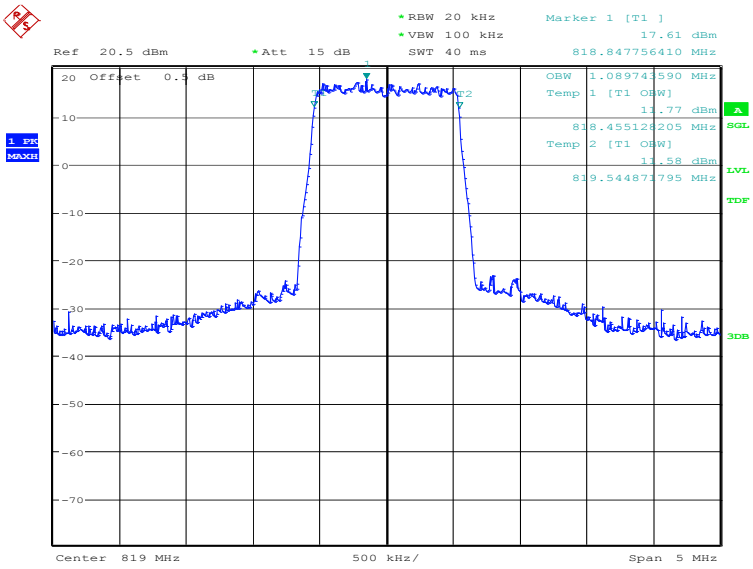


Date: 9.MAY.2020 15:48:53

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

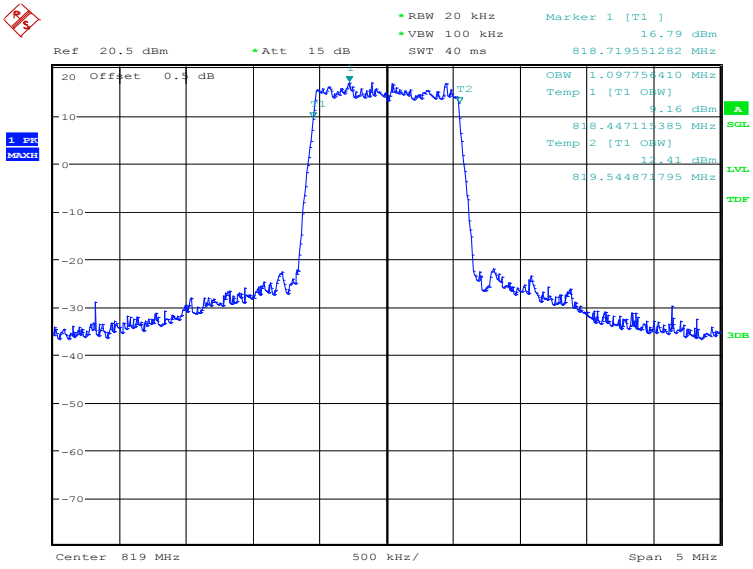
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
819.0	QPSK	16QAM	64QAM
	1089.74	1097.76	1089.74

LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, QPSK (99% BW)



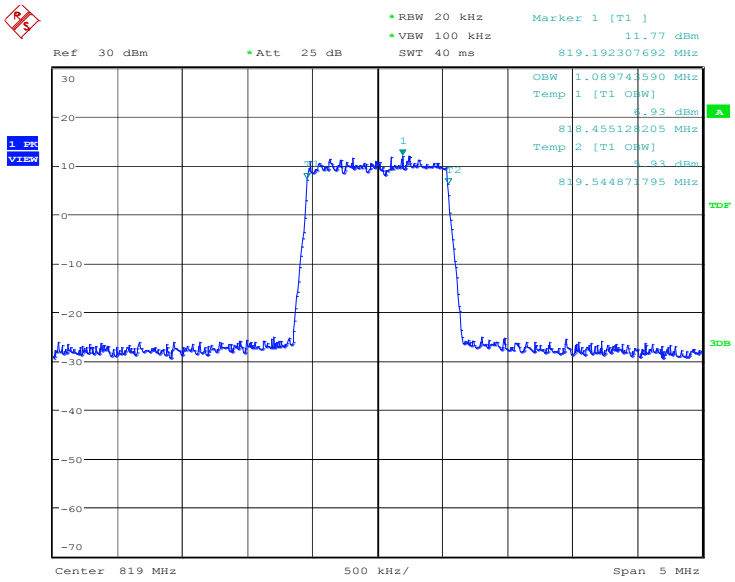
Date: 21.APR.2020 18:55:27

LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, 16QAM (99% BW)



Date: 21.APR.2020 18:56:06

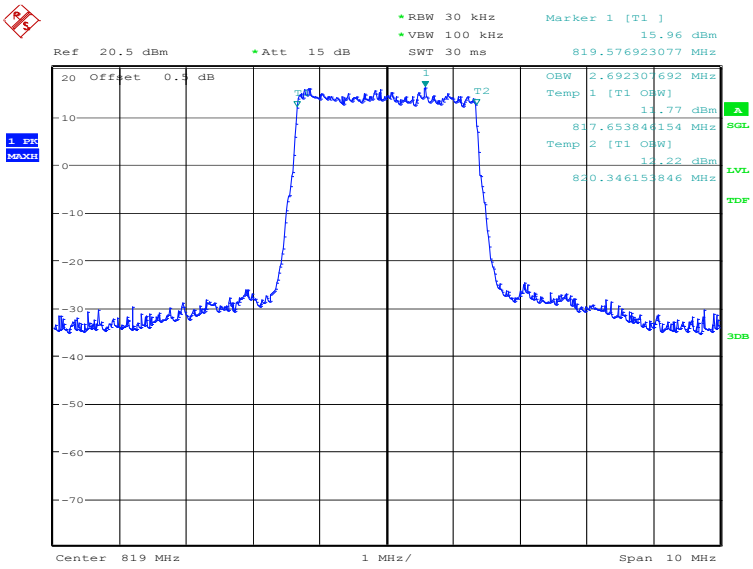
LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, 64QAM (99% BW)



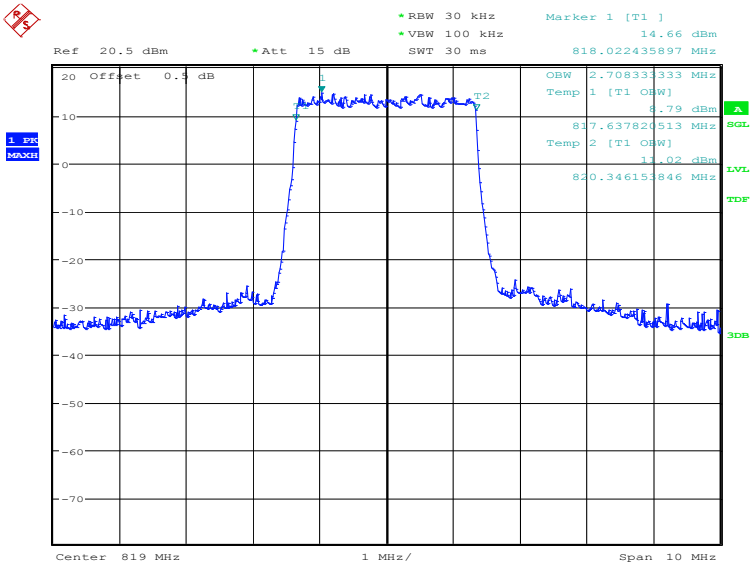
LTE band 26(814MHz~824MHz), 3MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
819.0	QPSK	16QAM	64QAM
	2692.31	2708.33	2692.31

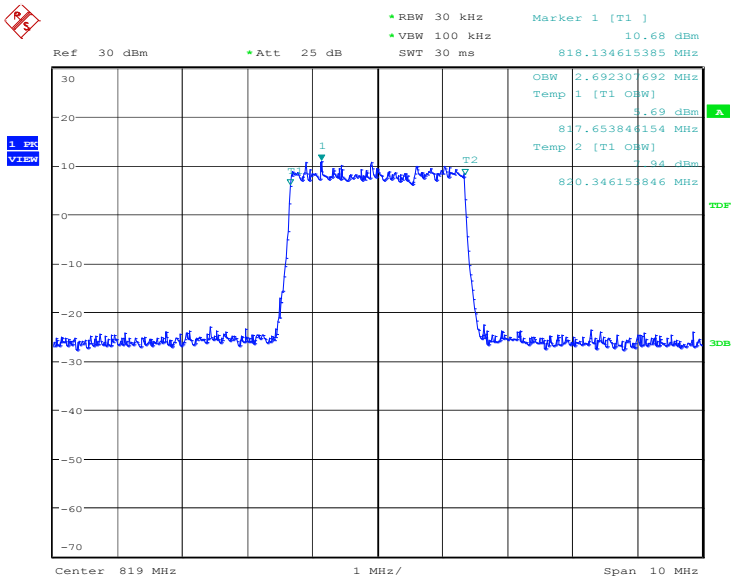
LTE band 26(814MHz~824MHz), 3MHz Bandwidth, QPSK (99% BW)



LTE band 26(814MHz~824MHz), 3MHz Bandwidth, 16QAM (99% BW)



LTE band 26(814MHz~824MHz), 3MHz Bandwidth, 64QAM (99% BW)

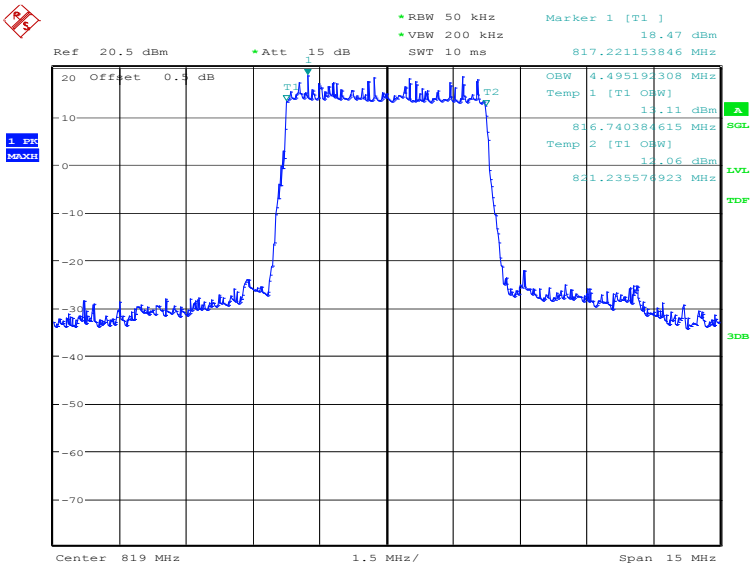


Date: 9.MAY.2020 16:08:54

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

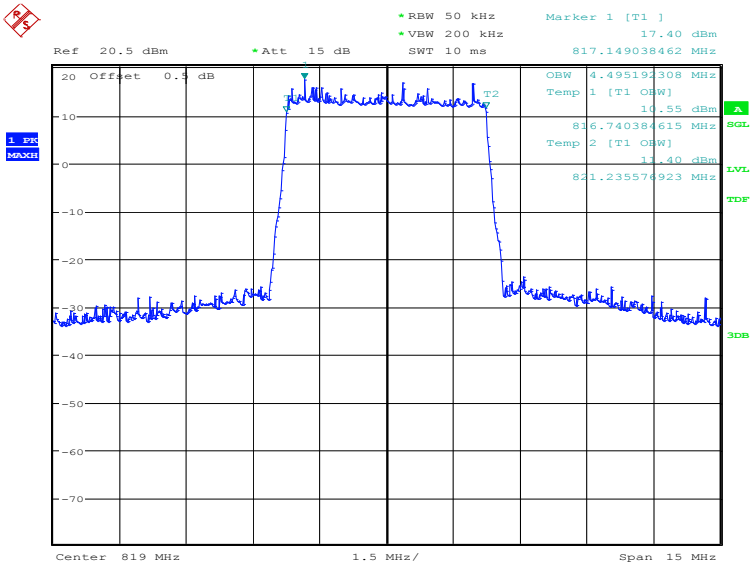
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
819.0	QPSK	16QAM	64QAM
	4495.19	4495.19	4495.19

LTE band 26(814MHz~824MHz), 5MHz Bandwidth, QPSK (99% BW)



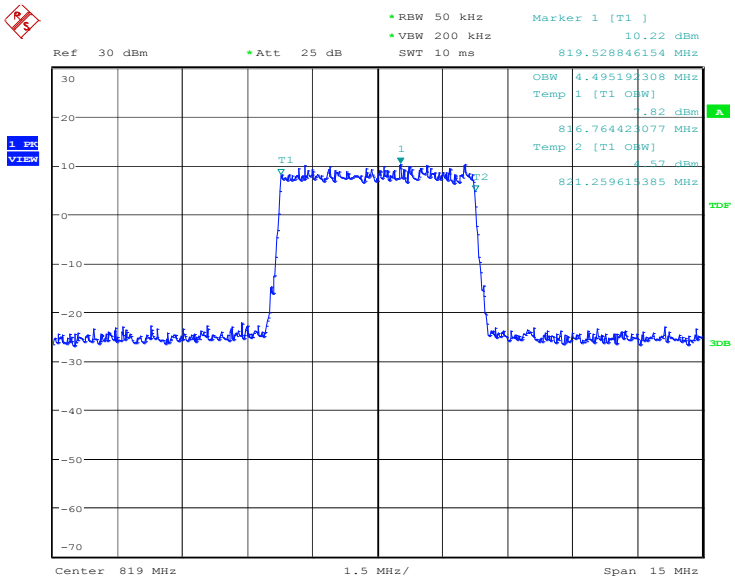
Date: 21.APR.2020 18:58:06

LTE band 26(814MHz~824MHz), 5MHz Bandwidth, 16QAM (99% BW)



Date: 21.APR.2020 18:58:45

LTE band 26(814MHz~824MHz), 5MHz Bandwidth, 64QAM (99% BW)

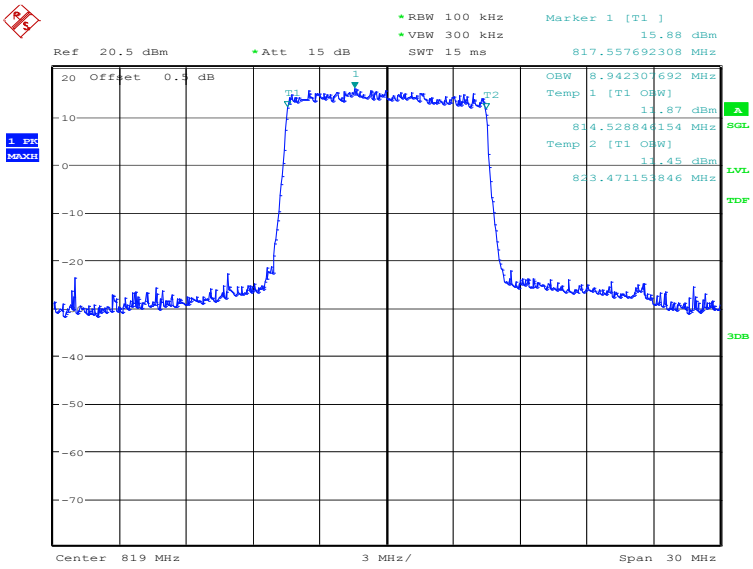


Date: 9.MAY.2020 16:10:00

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

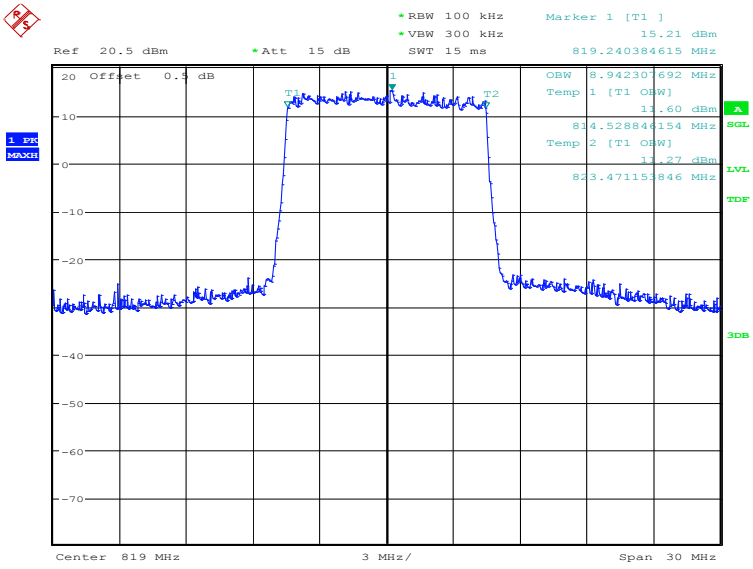
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
819.0	QPSK	16QAM	64QAM
	8942.31	8942.31	8942.31

LTE band 26(814MHz~824MHz), 10MHz Bandwidth, QPSK (99% BW)



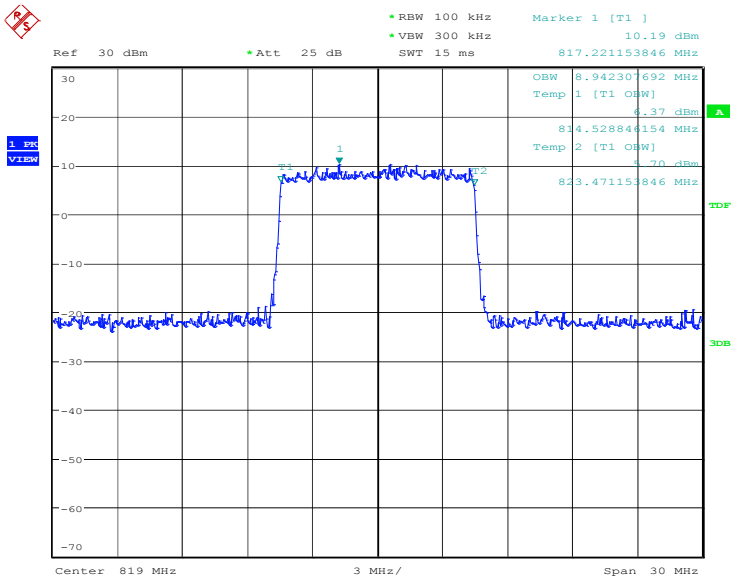
Date: 21.APR.2020 18:59:26

LTE band 26(814MHz~824MHz), 10MHz Bandwidth, 16QAM (99% BW)



Date: 21.APR.2020 19:00:04

LTE band 26(814MHz~824MHz), 10MHz Bandwidth, 64QAM (99% BW)

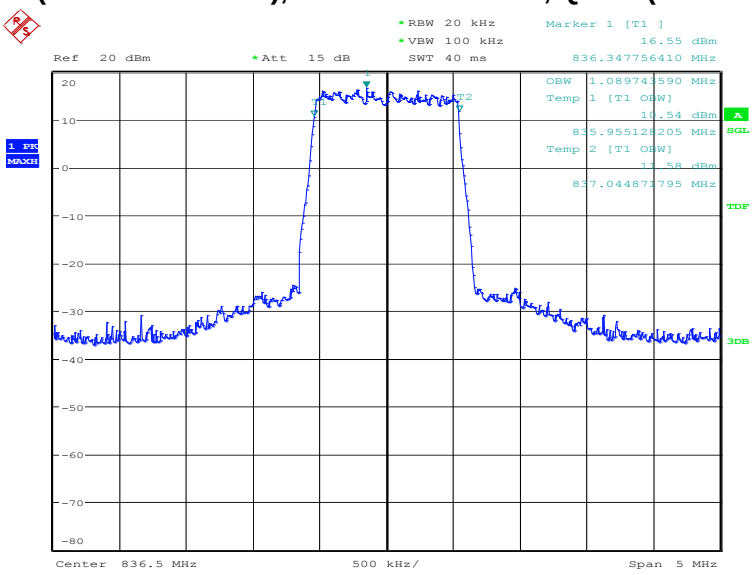


Date: 9.MAY.2020 16:10:54

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

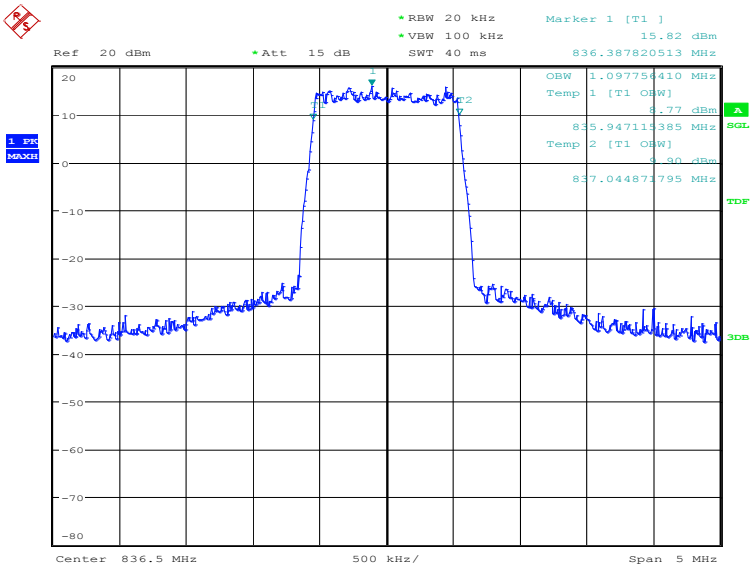
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
836.5	QPSK	16QAM	64QAM
	1089.74	1097.76	1089.74

LTE band 26(824MHz~849MHz), 1.4MHz Bandwidth, QPSK (99% BW)



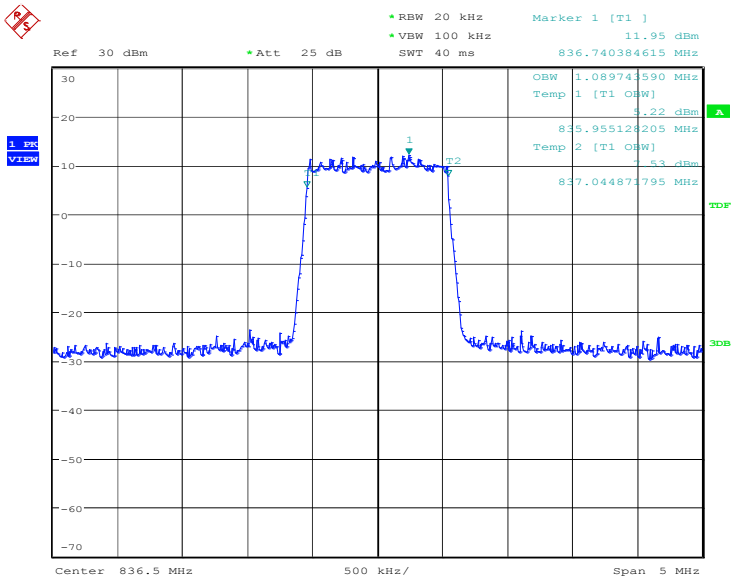
Date: 21.APR.2020 18:48:12

LTE band 26(824MHz~849MHz), 1.4MHz Bandwidth, 16QAM (99% BW)



Date: 21.APR.2020 18:48:51

LTE band 26(824MHz~849MHz), 1.4MHz Bandwidth, 64QAM (99% BW)

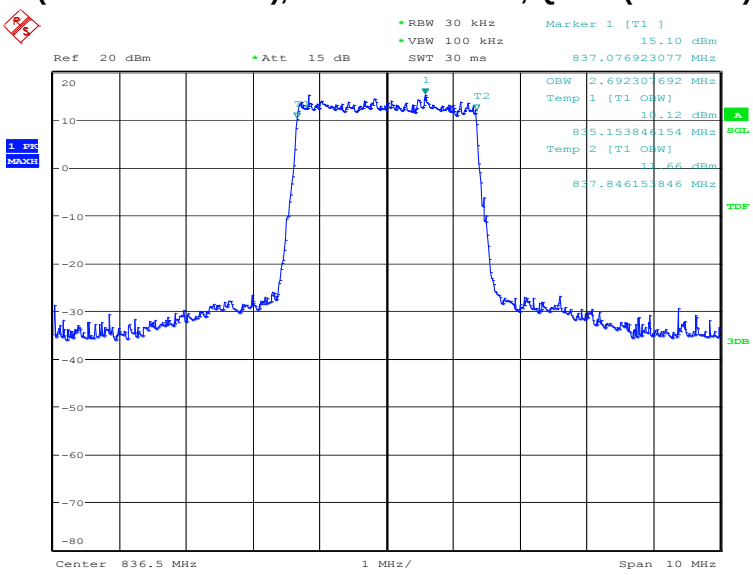


Date: 9.MAY.2020 15:56:53

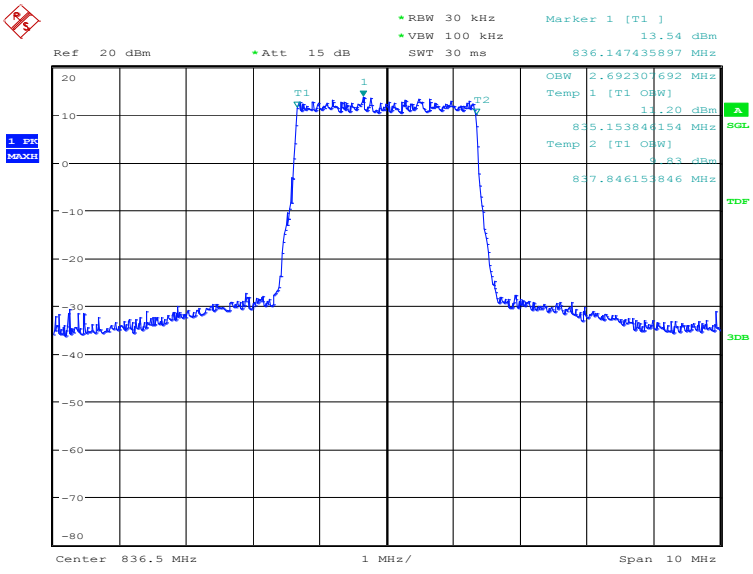
LTE band 26(824MHz~849MHz), 3MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
836.5	QPSK	16QAM	64QAM
	2692.31	2692.31	2692.31

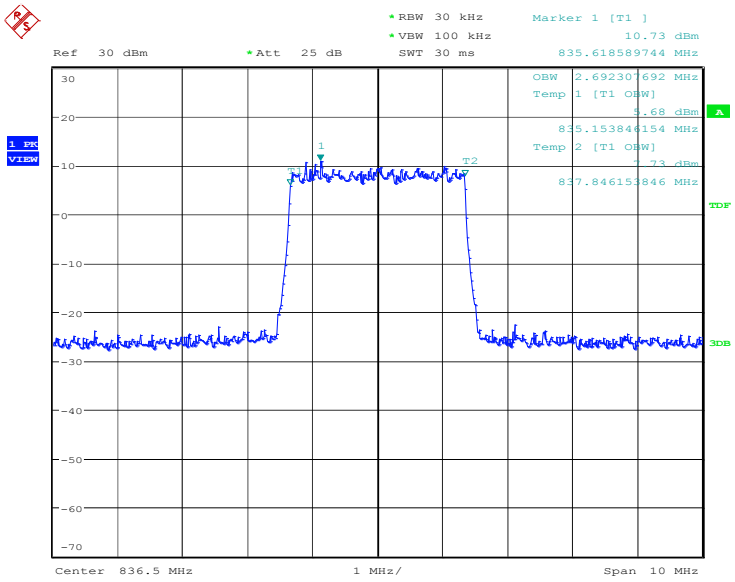
LTE band 26(824MHz~849MHz), 3MHz Bandwidth, QPSK (99% BW)



LTE band 26(824MHz~849MHz), 3MHz Bandwidth, 16QAM (99% BW)



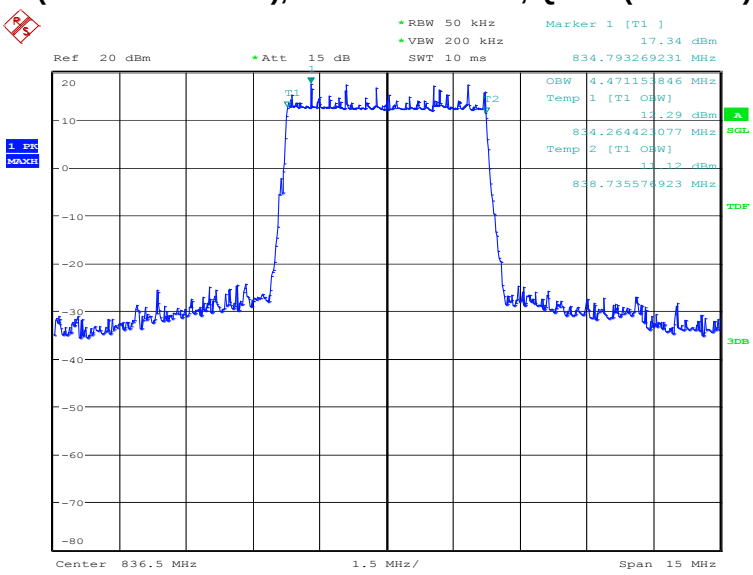
LTE band 26(824MHz~849MHz), 3MHz Bandwidth, 64QAM (99% BW)



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

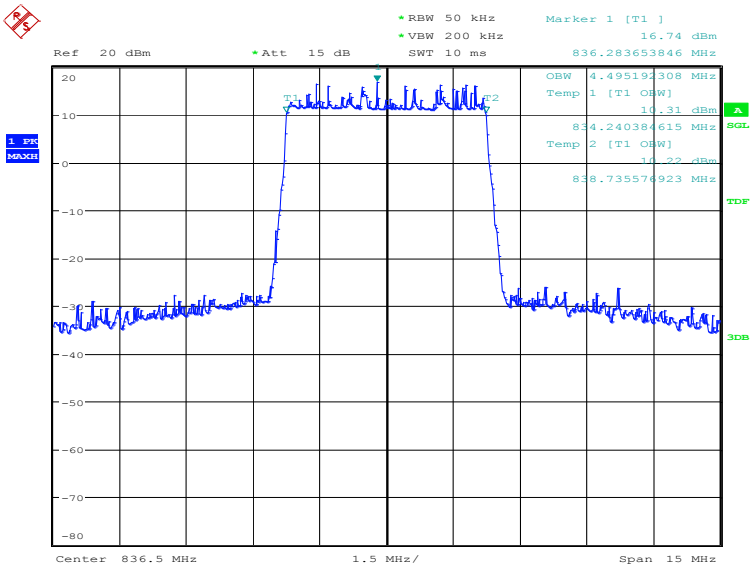
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
836.5	QPSK	16QAM	64QAM
	4471.15	4495.19	4519.23

LTE band 26(824MHz~849MHz), 5MHz Bandwidth, QPSK (99% BW)



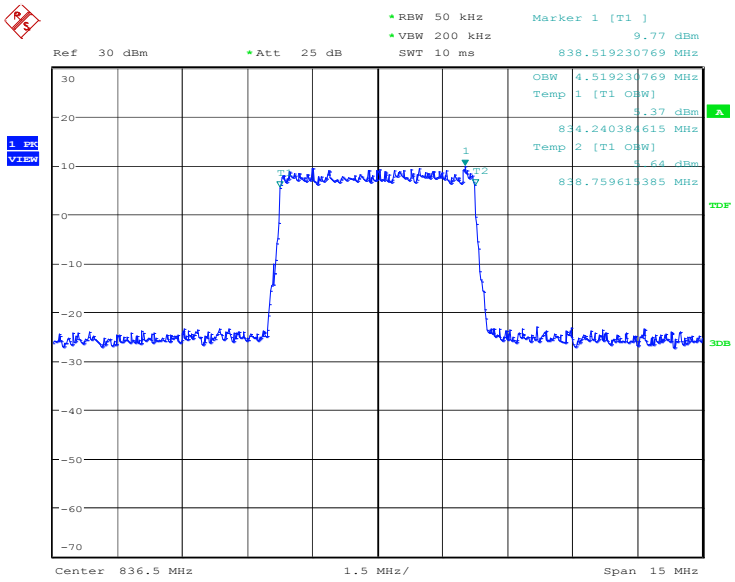
Date: 21.APR.2020 18:50:50

LTE band 26(824MHz~849MHz), 5MHz Bandwidth, 16QAM (99% BW)



Date: 21.APR.2020 18:51:29

LTE band 26(824MHz~849MHz), 5MHz Bandwidth, 64QAM (99% BW)

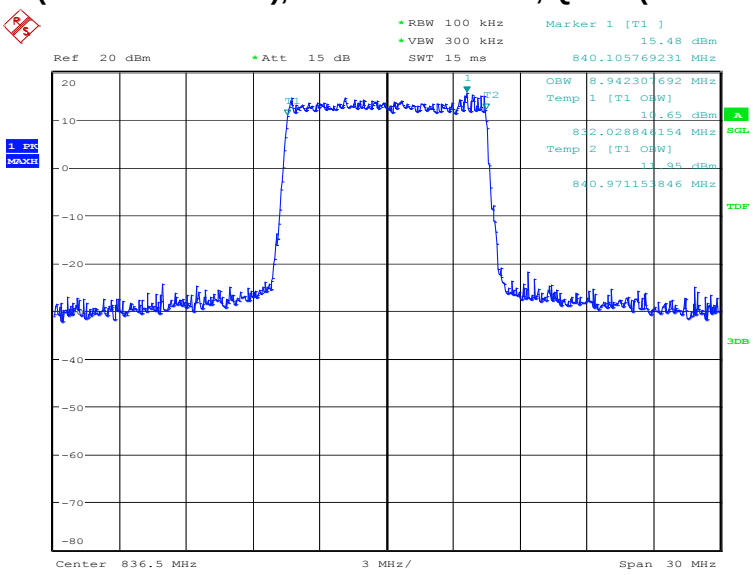


Date: 9.MAY.2020 16:04:01

LTE band 26(824MHz~849MHz), 10MHz (99%)

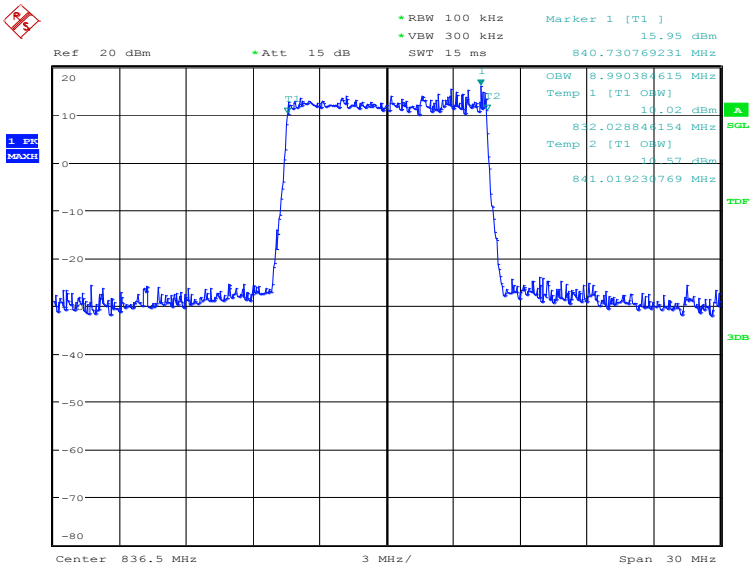
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
836.5	QPSK	16QAM	64QAM
	8942.31	8990.38	8990.38

LTE band 26(824MHz~849MHz), 10MHz Bandwidth, QPSK (99% BW)



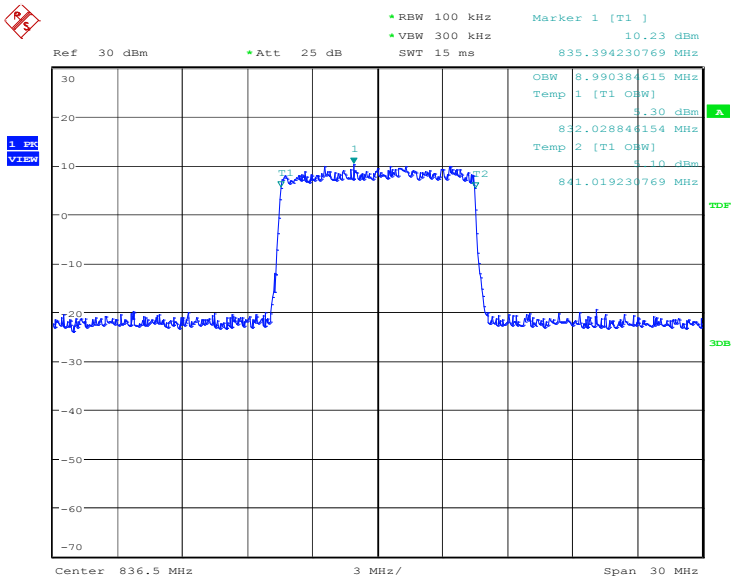
Date: 21.APR.2020 18:52:10

LTE band 26(824MHz~849MHz), 10MHz Bandwidth, 16QAM (99% BW)



Date: 21.APR.2020 18:52:49

LTE band 26(824MHz~849MHz), 10MHz Bandwidth, 64QAM (99% BW)

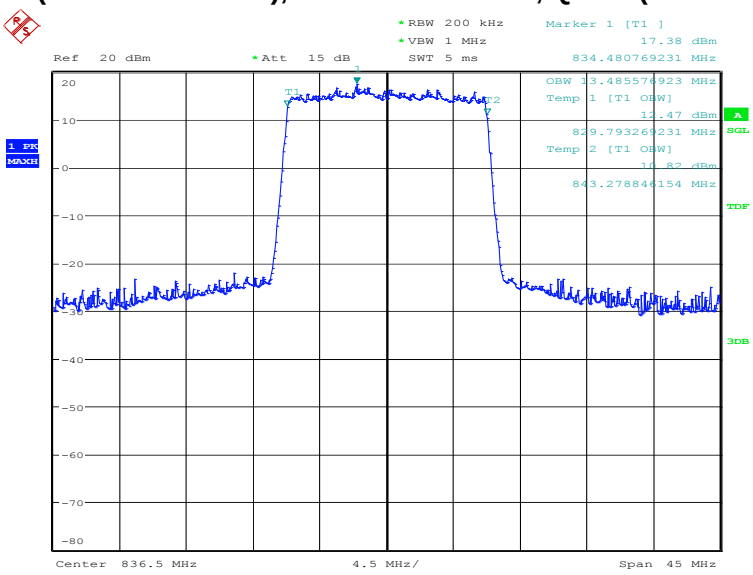


Date: 9.MAY.2020 16:05:00

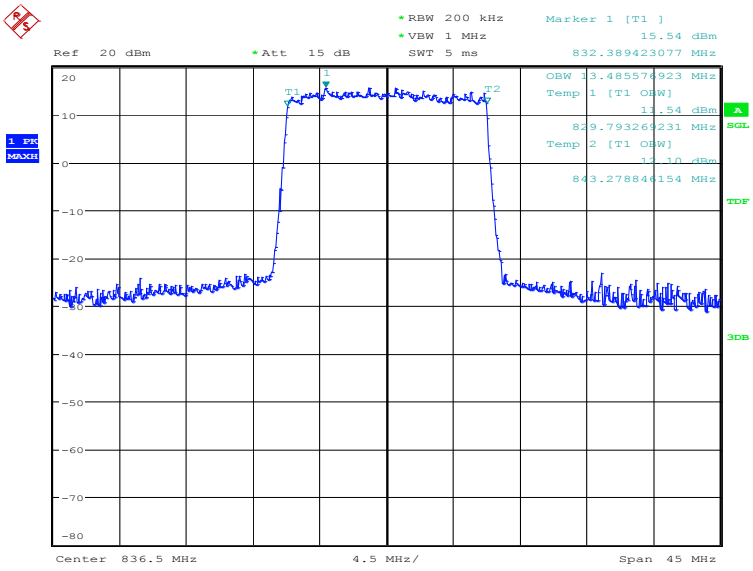
LTE band 26(824MHz~849MHz), 15MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
836.5	QPSK	16QAM	64QAM
	13485.58	13485.58	13485.58

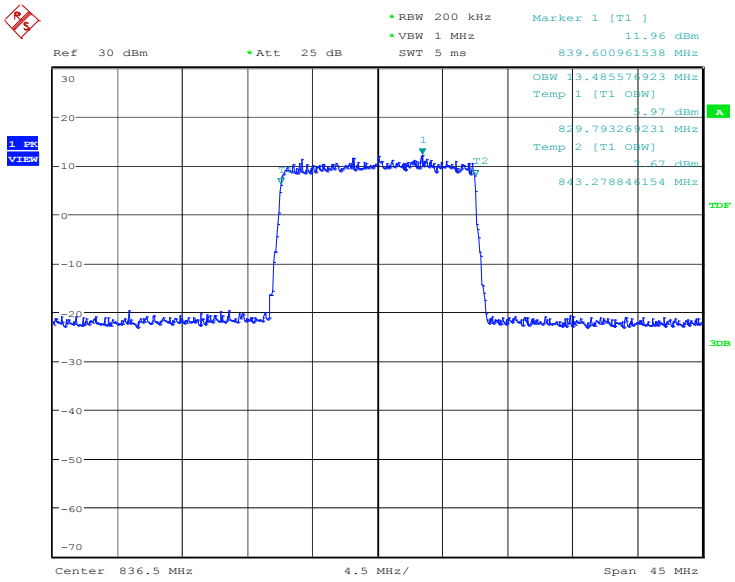
LTE band 26(824MHz~849MHz), 15MHz Bandwidth, QPSK (99% BW)



LTE band 26(824MHz~849MHz), 15MHz Bandwidth, 16QAM (99% BW)



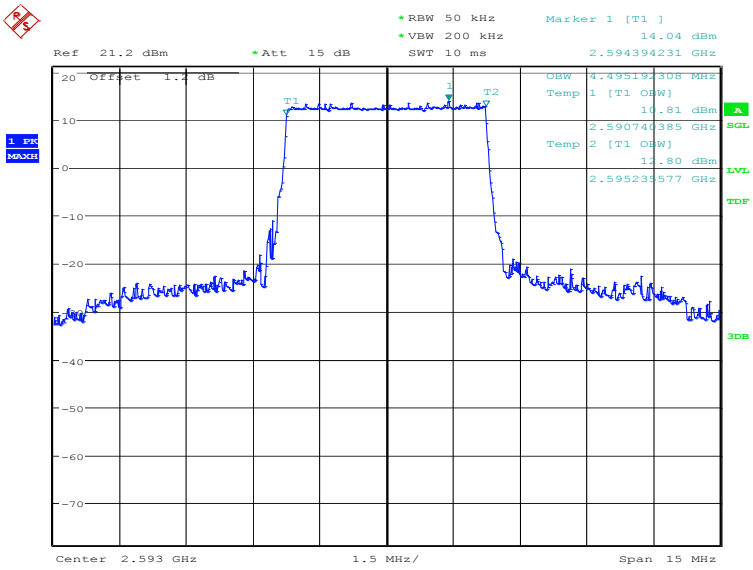
LTE band 26(824MHz~849MHz), 15MHz Bandwidth, 64QAM (99% BW)



LTE band 41, 5MHz (99%)

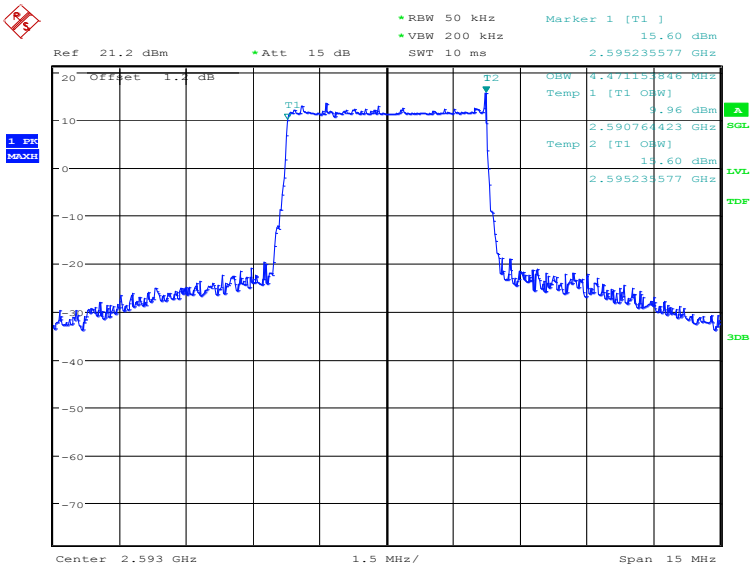
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2593.0	QPSK	16QAM	64QAM
	4495.19	4471.15	4495.19

LTE band 41, 5MHz Bandwidth, QPSK (99% BW)



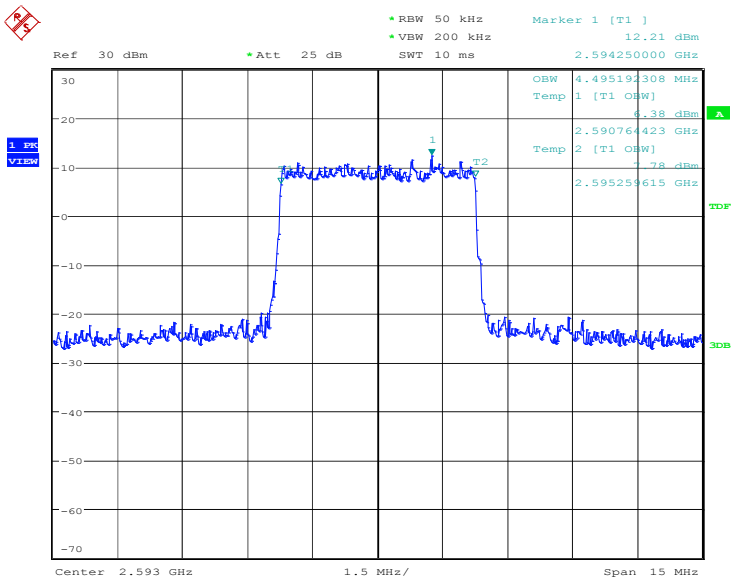
Date: 22.APR.2020 23:06:32

LTE band 41, 5MHz Bandwidth,16QAM (99% BW)



Date: 22.APR.2020 23:07:11

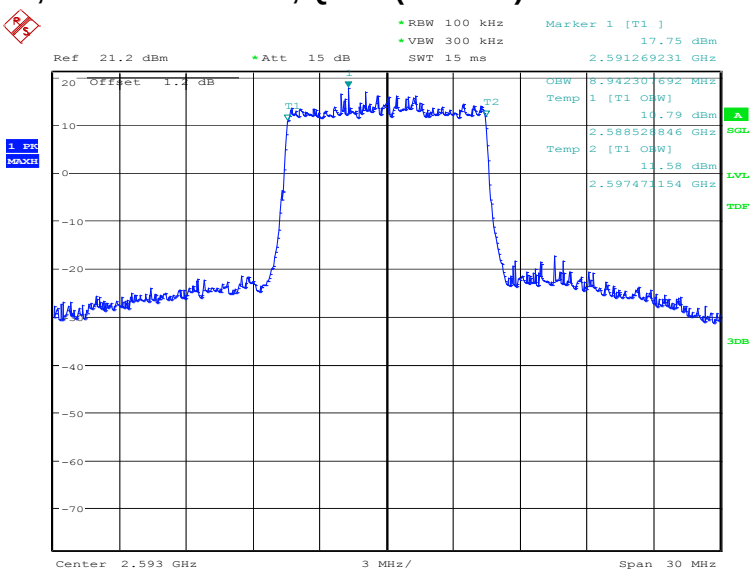
LTE band 41, 5MHz Bandwidth,64QAM (99% BW)



LTE band 41, 10MHz (99%)

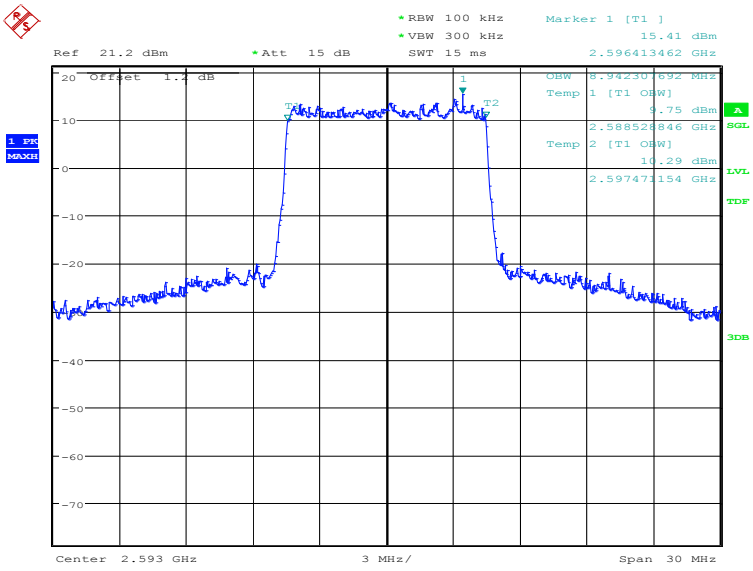
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2593.0	QPSK	16QAM	64QAM
	8942.31	8942.31	8942.31

LTE band 41, 10MHz Bandwidth, QPSK (99% BW)



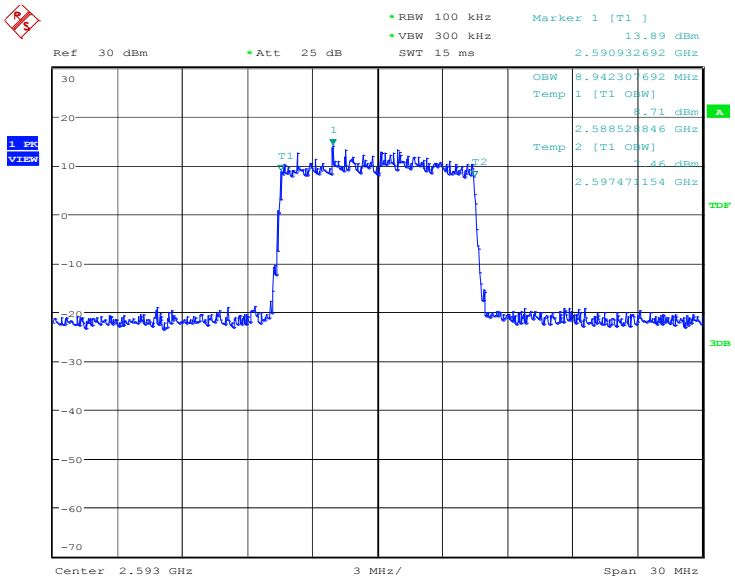
Date: 22.APR.2020 23:07:52

LTE band 41, 10MHz Bandwidth,16QAM (99% BW)



Date: 22.APR.2020 23:08:31

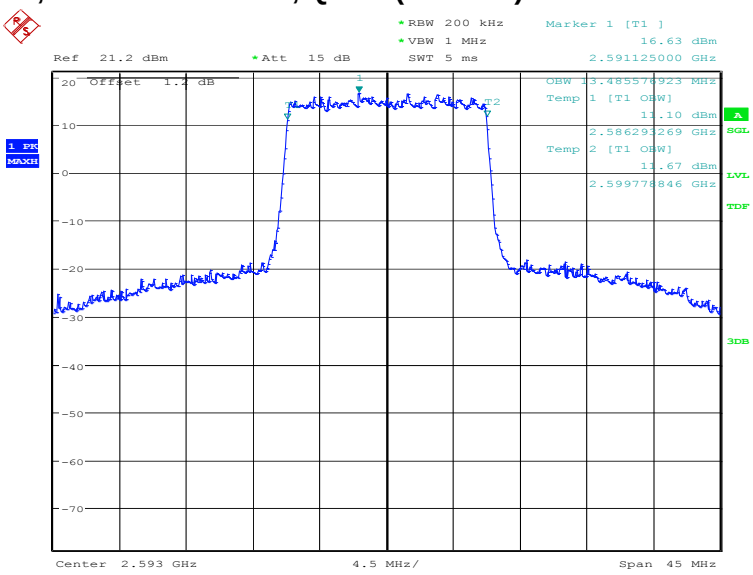
LTE band 41, 10MHz Bandwidth, 64QAM (99% BW)



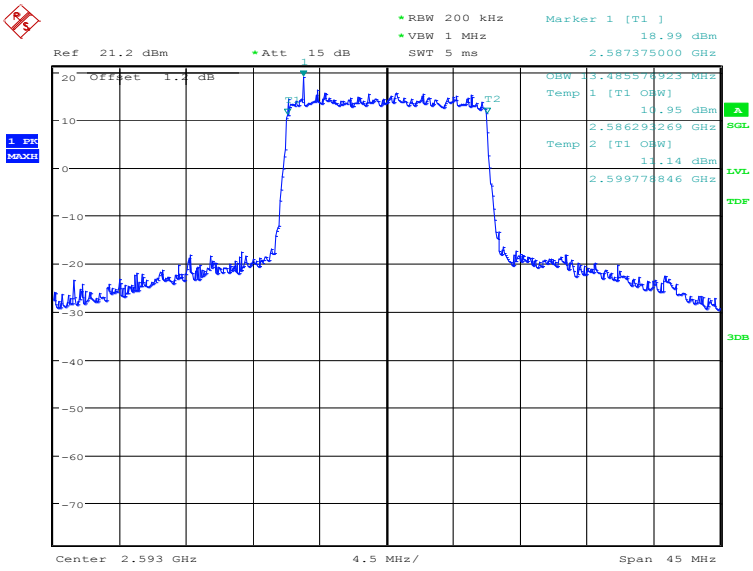
LTE band 41, 15MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2593.0	QPSK	16QAM	64QAM
	13485.58	13485.58	13485.58

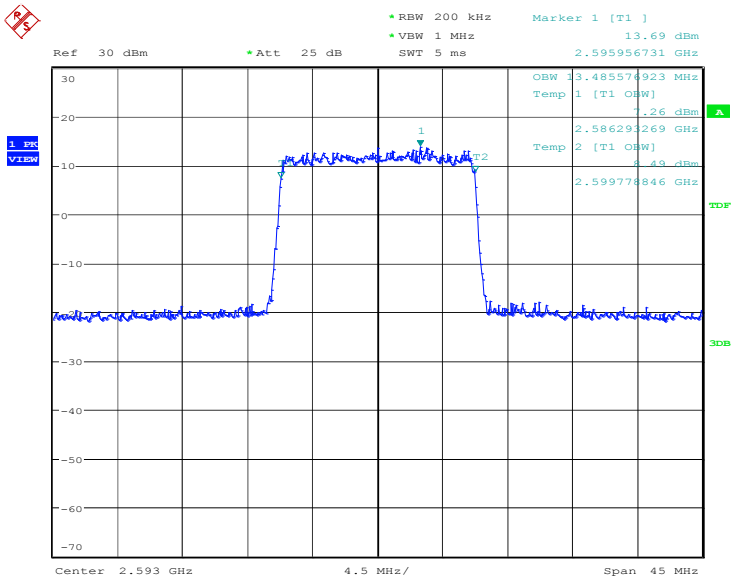
LTE band 41, 15MHz Bandwidth, QPSK (99% BW)



LTE band 41, 15MHz Bandwidth,16QAM (99% BW)



LTE band 41, 15MHz Bandwidth, 64QAM (99% BW)

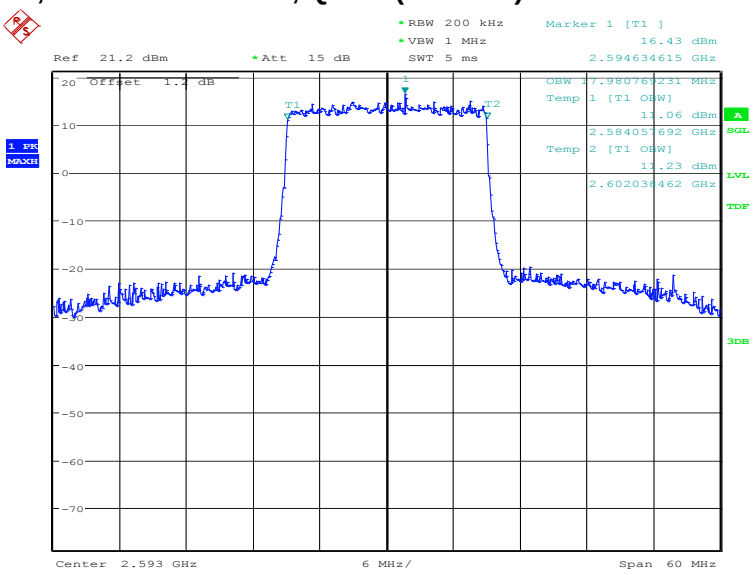


Date: 9.MAY.2020 15:33:01

LTE band 41, 20MHz (99%)

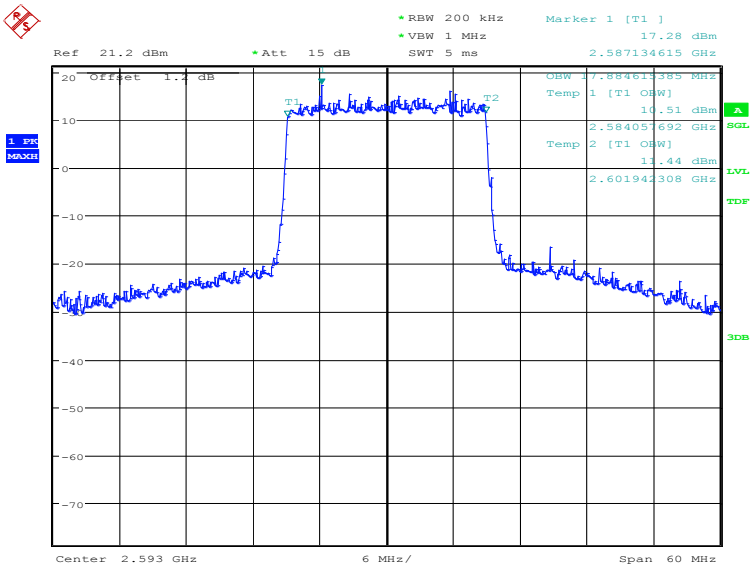
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2593.0	QPSK	16QAM	64QAM
	17980.77	17884.62	17884.62

LTE band 41, 20MHz Bandwidth, QPSK (99% BW)



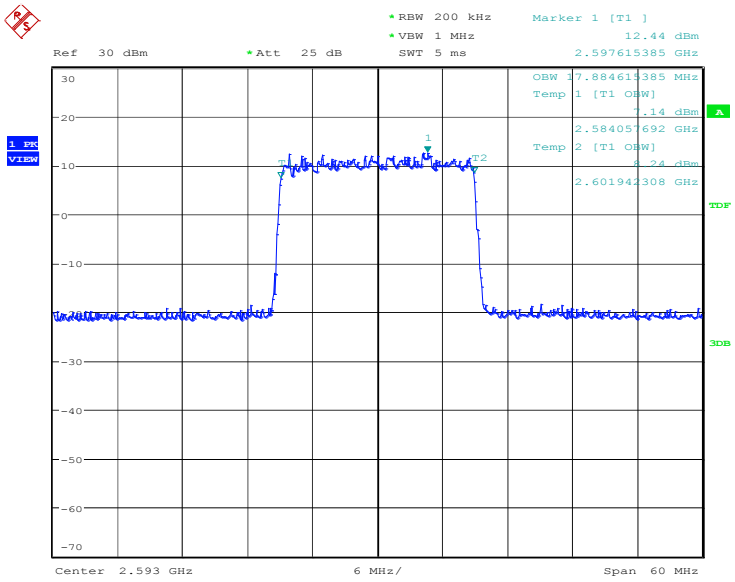
Date: 22.APR.2020 23:10:33

LTE band 41, 20MHz Bandwidth,16QAM (99% BW)



Date: 22.APR.2020 23:11:12

LTE band 41, 20MHz Bandwidth, 64QAM (99% BW)

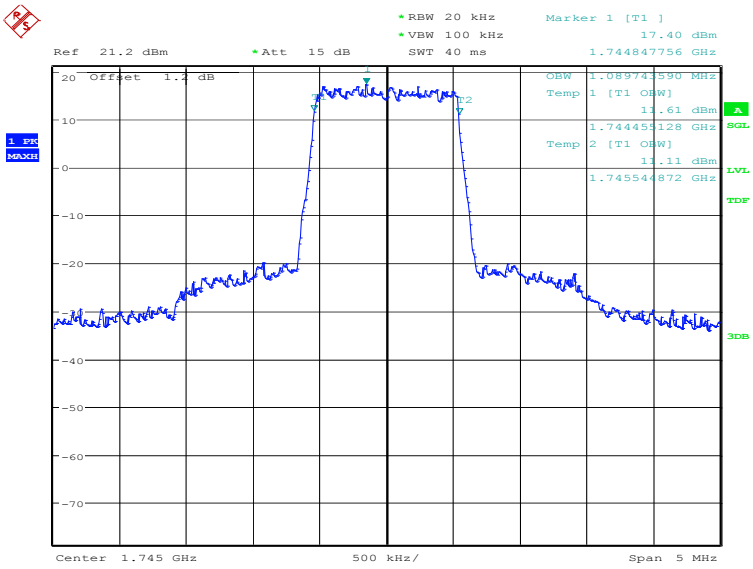


Date: 9.MAY.2020 15:34:15

LTE band 66, 1.4MHz (99%)

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1745.0	QPSK	16QAM	64QAM
	1089.74	1105.77	1089.74

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



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