TEST REPORT

No. I20N02376-RF-LTE

for

Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd

Feature phone

Model Name: CP3321AT

FCC ID: R38YLCP3321AT

with

Hardware Version: P1

Software Version: 3321AT.201014.2S

Issued Date: 2020-10-23

Note:

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

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20N02376-RF-LTE	Rev.0	1st edition	2020-10-23

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1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Feature phone
Model Name	CP3321AT
Applicant's name	Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd
Manufacturer's Name	Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd

1.2. Test Standards

FCC Part 2/22/24/27/90/95/97/101	10-1-19 Edition
ANSI C63.26	2015
KDB971168 D01	v03r01

1.3. Test Result

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

1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518026

1.5. Project Data

Testing Start Date: 2020-09-04 Testing End Date: 2020-10-21

1.6. Signature

Lai Minghua
(Prepared this test report)

Huang Qiuqin
(Reviewed this test report)

Zhang Hao
(Approved this test report)

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2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd
Address /Post:	Building B, Boton Science Park, Chaguang Road, Xili Town, Nanshan District, Shenzhen
Contact Person:	Yentl Chen
Contact Email	chenyanting@yulong.com
Telephone:	+86 15927320221
Fax:	/

2.2. Manufacturer Information

Company Name:	Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd
Address /Post:	Building B, Boton Science Park, Chaguang Road, Xili Town, Nanshan District, Shenzhen
Contact Person:	Yentl Chen
Contact Email	chenyanting@yulong.com
Telephone:	+86 15927320221
Fax:	/

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3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)

3.1. About EUT

Description	Feature phone
Model Name	CP3321AT
FCC ID	R38YLCP3321AT
Frequency Bands	LTE Bands 2,4,5,12,13,17,25,26, 41,66,71
Antenna	Integrated
Extreme vol. Limits	3.6VDC to 4.35VDC (nominal: 3.8VDC)
Extreme temp. Tolerance	-15°C to +55°C
Condition of EUT as received	No abnormality in appearance

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version	Sample Arrival Date
UT12aa	990016030008468	P1	3321AT.201014.2S	2020-09-04
UT01aa	990016030008351	P1	3321AT.201014.2S	2020-09-04

*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	Li-ion
Manufacturer	Tianjin Lishen
Capacity	1500mAh
Nominal Voltage	3.8V

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

3.4. General Description

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

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4. REFERENCE DOCUMENTS

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

Reference	Title	Version
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-19 Edition
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-19 Edition
FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	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
FCC Part 95	PERSONAL RADIO SERVICES	10-1-19 Edition
FCC Part 97	AMATEUR RADIO SERVICE	10-1-19 Edition
FCC Part 101	FIXED MICROWAVE SERVICES	10-1-19 Edition
ANSI C63.26	American National Standard of Procedures for Compliance Testing of Licensed Transmitters Used in Licensed Radio Service	2015
KDB971168 D01	Power Meas License Digital Systems	v03r01

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5. LABORATORY ENVIRONMENT

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

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

Fully-anechoic chamber did not exceed following limits along the EMC testing

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4 Ω
Voltage Standing Wave Ratio （VSWR）	≤ 6 dB, from 1 to 18 GHz，3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

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6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	F	Fail
	NA	Not applicable
	NM	Not measured
Location Column	A/B/C/D	The test is performed in test location A, B, C or D which are described in section 1.4 of this report

LTE Band 2

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/24.232	A.1	P
2	Field Strength of Spurious Radiation	2.1053/24.238	A.2	P
3	Frequency Stability	2.1055/24.235	A.3	P
4	Occupied Bandwidth	2.1049/24.238	A.4	P
5	Emission Bandwidth	2.1049/24.238	A.5	P
6	Band Edge Compliance	2.1051/24.238	A.6	P
7	Conducted Spurious Emission	2.1051/24.238	A.7	P
8	Peak-to-Average Power Ratio	24.232/ KDB971168 D01	A.8	P

LTE Band 4

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(d)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(h)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(g)	A.4	P
5	Emission Bandwidth	2.1049/27.53(g)	A.5	P
6	Band Edge Compliance	2.1051/27.53(h)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(h)	A.7	P
8	Peak-to-Average Power Ratio	27.50(d)/ KDB971168 D01	A.8	P

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LTE Band 5

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/22.913	A.1	P
2	Field Strength of Spurious Radiation	2.1053/22.917	A.2	P
3	Frequency Stability	2.1055/22.355	A.3	P
4	Occupied Bandwidth	2.1049/22.917	A.4	P
5	Emission Bandwidth	2.1049/22.917	A.5	P
6	Band Edge Compliance	2.1051/22.917	A.6	P
7	Conducted Spurious Emission	2.1051/22.917	A.7	P
8	Peak-to-Average Power Ratio	KDB971168 D01	A.8	P

LTE Band 12

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(g)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(g)	A.4	P
5	Emission Bandwidth	2.1049/27.53(g)	A.5	P
6	Band Edge Compliance	2.1051/27.53(g)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(g)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

LTE Band 13

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(b)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(c)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(c)	A.4	P
5	Emission Bandwidth	2.1049/27.53(c)	A.5	P
6	Band Edge Compliance	2.1051/27.53(c)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(c)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

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LTE Band 17

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(g)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(g)	A.4	P
5	Emission Bandwidth	2.1049/27.53(g)	A.5	P
6	Band Edge Compliance	2.1051/27.53(g)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(g)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

LTE Band 25

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/24.232	A.1	P
2	Field Strength of Spurious Radiation	2.1053/24.238	A.2	P
3	Frequency Stability	2.1055/24.235	A.3	P
4	Occupied Bandwidth	2.1049/24.238	A.4	P
5	Emission Bandwidth	2.1049/24.238	A.5	P
6	Band Edge Compliance	2.1051/24.238	A.6	P
7	Conducted Spurious Emission	2.1051/24.238	A.7	P
8	Peak-to-Average Power Ratio	24.232/ KDB971168 D01	A.8	P

LTE Band 26(814MHz-824MHz)

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/90.635	A.1	P
2	Field Strength of Spurious Radiation	2.1053/90.691	A.2	P
3	Frequency Stability	2.1055/90.213	A.3	P
4	Occupied Bandwidth	2.1049/90.1215	A.4	P
5	Emission Bandwidth	2.1049/90.1215	A.5	P
6	Band Edge Compliance	2.1051/90.691	A.6	P
7	Conducted Spurious Emission	2.1051/90.691	A.7	P
8	Peak-to-Average Power Ratio	KDB971168 D01	A.8	P

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LTE band 26(824MHz-849MHz)

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/22.913	A.1	P
2	Field Strength of Spurious Radiation	2.1053/22.917	A.2	P
3	Frequency Stability	2.1055/22.355	A.3	P
4	Occupied Bandwidth	2.1049/22.917	A.4	P
5	Emission Bandwidth	2.1049/22.917	A.5	P
6	Band Edge Compliance	2.1051/22.917	A.6	P
7	Conducted Spurious Emission	2.1051/22.917	A.7	P
8	Peak-to-Average Power Ratio	KDB971168 D01	A.8	P

LTE Band 41

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(h)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(m)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(m)	A.4	P
5	Emission Bandwidth	2.1049/27.53(m)	A.5	P
6	Band Edge Compliance	2.1051/27.53(m)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(m)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

LTE Band 66

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(d)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(h)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(h)	A.4	P
5	Emission Bandwidth	2.1049/27.53(h)	A.5	P
6	Band Edge Compliance	2.1051/27.53(h)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(h)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

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LTE Band 71

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(g)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(g)	A.4	P
5	Emission Bandwidth	2.1049/27.53(g)	A.5	P
6	Band Edge Compliance	2.1051/27.53(g)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(g)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971108 D01	A.8	P

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7. STATEMENT

Since the information of samples in this report is provided by the client, the laboratory is not respo nsible for the authenticity of sample information.
This report takes measured values as criterion of test conclusion. The test conlusion meets the li mit requirements.

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8. TEST EQUIPMENTS UTILIZED

NO.	Description	Type	Manufacture	Series Number	Cal Due Date
1	Test Receiver	ESR7	R&S	101676	2020-11-27
2	BiLog Antenna	3142E	ETS-lindgren	00224831	2021-05-17
3	Horn Antenna	3117	ETS-lindgren	00066577	2022-04-02
4	Horn Antenna	QSH-SL-18 -26-S-20	Q-par	17013	2023-01-06
5	Antenna	BBHA 9120D	Schwarzbeck	1593	2022-12-05
6	Antenna	VUBA 9117	Schwarzbeck	207	2023-07-15
7	Antenna	QWH-SL-18 -40-K-SG	Q-par	15979	2023-01-06
8	preamplifier	83017A	Agilent	MY39501110	/
9	Signal Generator	SMB100A	R&S	179725	2020-11-27
10	Fully Anechoic Chamber	FACT3-2.0	ETS-Lindgren	1285	2021-07-19
11	Spectrum Analyzer	FSV40	R&S	101192	2021-01-14
12	Universal Radio Communication Tester	CMW500	R&S	152499	2021.07.16
13	Universal Radio Communication Tester	CMW500	R&S	129146	2021-04-24
14	Spectrum Analyzer	FSU	R&S	101506	2020-12-13
15	Temperature Chamber	SH-241	ESPECs	92007516	2021-10-15
16	DC Power Supply	U3606A	Agilent Technologies	MY50450012	2020-11-13

Test software

Item	Name	Vesion
Radiated	EMC32	Version 10.01.00

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ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER

Reference

FCC: CFR Part 2.1046, 22.913, 24.232, 27.50, 90.635.

A.1.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMW500) to ensure max power transmission and proper modulation.

This result contains peak output power and ERP/EIRP measurements for the EUT.

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

A.1.2 Conducted

A.1.2.1 Method of Measurements

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

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

A.1.2.2 Measurement result

LTE band 2

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	1909.3	22.51	21.19
		1880.0	22.71	21.20
		1850.7	23.10	21.44
	1 RB low	1909.3	22.66	21.34
		1880.0	22.73	21.27
		1850.7	22.96	21.57
	50% RB mid	1909.3	22.91	21.65
		1880.0	22.86	21.97
		1850.7	23.24	21.94
	100% RB	1909.3	21.64	20.50
		1880.0	21.74	20.81
		1850.7	21.96	20.85
3MHz	1 RB high	1908.5	22.85	21.28
		1880.0	22.79	21.32
		1851.5	22.91	21.44
	1 RB low	1908.5	22.79	21.10
		1880.0	22.96	21.29
		1851.5	22.89	21.75
	50% RB mid	1908.5	21.72	20.92
		1880.0	21.72	20.83
		1851.5	21.80	21.03

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	100% RB	1908.5	21.72	20.83
		1880.0	21.88	20.79
		1851.5	21.93	20.82
5MHz	1 RB high	1907.5	22.56	21.12
		1880.0	22.69	21.28
		1852.5	22.74	22.06
	1 RB low	1907.5	22.75	21.38
		1880.0	22.83	21.30
		1852.5	22.89	22.21
	50% RB mid	1907.5	21.80	20.80
		1880.0	21.77	20.74
		1852.5	21.89	20.87
	100% RB	1907.5	21.73	20.82
		1880.0	21.83	20.71
		1852.5	21.94	20.93
10MHz	1 RB high	1905.0	22.78	21.52
		1880.0	22.84	21.42
		1855.0	22.91	21.64
	1 RB low	1905.0	22.78	21.40
		1880.0	22.92	21.64
		1855.0	23.10	21.80
	50% RB mid	1905.0	21.83	20.88
		1880.0	21.91	20.90
		1855.0	21.83	20.80
	100% RB	1905.0	21.73	20.94
		1880.0	21.80	20.97
		1855.0	21.97	20.92
15MHz	1 RB high	1902.5	22.67	21.96
		1880.0	23.05	22.27
		1857.5	22.89	21.84
	1 RB low	1902.5	22.79	21.54
		1880.0	23.03	21.58
		1857.5	23.25	21.79
	50% RB mid	1902.5	21.90	20.94
		1880.0	21.97	20.96
		1857.5	21.99	21.06
	100% RB	1902.5	21.87	20.91
		1880.0	21.94	20.99
		1857.5	22.03	21.10

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20MHz	1 RB high	1900.0	22.82	21.52
		1880.0	23.00	21.50
		1860.0	22.99	21.62
	1 RB low	1900.0	23.01	21.14
		1880.0	23.13	21.13
		1860.0	23.11	21.88
	50% RB mid	1900.0	21.98	21.05
		1880.0	22.07	21.18
		1860.0	22.10	21.21
	100% RB	1900.0	21.94	20.94
		1880.0	22.08	21.10
		1860.0	22.04	21.01

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

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LTE band 4

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	1754.3	22.81	22.14
		1732.5	23.07	22.05
		1710.7	23.12	22.14
	1 RB low	1754.3	22.75	22.23
		1732.5	22.97	21.90
		1710.7	23.05	21.97
	50% RB mid	1754.3	22.95	22.12
		1732.5	23.18	22.28
		1710.7	23.19	22.24
	100% RB	1754.3	21.81	20.91
		1732.5	21.97	20.96
		1710.7	21.97	21.01
3MHz	1 RB high	1753.5	22.94	21.55
		1732.5	23.07	21.43
		1711.5	23.07	22.24
	1 RB low	1753.5	22.84	21.36
		1732.5	22.92	21.62
		1711.5	23.11	21.73
	50% RB mid	1753.5	21.86	21.08
		1732.5	22.02	21.20
		1711.5	22.06	21.25
	100% RB	1753.5	21.91	20.94
		1732.5	22.09	21.12
		1711.5	22.12	21.05
5MHz	1 RB high	1752.5	22.99	21.64
		1732.5	22.90	21.42
		1712.5	22.84	21.59
	1 RB low	1752.5	22.82	21.40
		1732.5	22.91	22.12
		1712.5	22.95	21.76
	50% RB mid	1752.5	21.88	21.10
		1732.5	22.17	21.08
		1712.5	22.05	21.10
	100% RB	1752.5	21.93	21.13
		1732.5	22.01	21.06
		1712.5	22.02	21.10
10MHz	1 RB high	1750.0	22.83	21.71

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		1732.5	22.82	21.29
		1715.0	22.86	21.41
	1 RB low	1750.0	22.66	21.67
		1732.5	23.09	21.58
		1715.0	23.09	21.45
	50% RB mid	1750.0	21.94	21.12
		1732.5	21.90	21.23
		1715.0	21.96	21.02
	100% RB	1750.0	21.93	21.02
		1732.5	21.95	20.90
		1715.0	21.94	20.93
15MHz	1 RB high	1747.5	22.90	21.25
		1732.5	23.03	21.66
		1717.5	22.78	21.50
	1 RB low	1747.5	22.95	21.58
		1732.5	22.85	21.50
		1717.5	22.98	21.68
	50% RB mid	1747.5	22.06	21.16
		1732.5	22.01	20.97
		1717.5	21.94	20.93
	100% RB	1747.5	21.94	20.96
		1732.5	21.96	21.02
		1717.5	21.89	20.88
20MHz	1 RB high	1745.0	22.87	21.81
		1732.5	22.96	22.34
		1720.0	23.07	21.78
	1 RB low	1745.0	23.25	21.93
		1732.5	22.94	21.28
		1720.0	23.02	21.35
	50% RB mid	1745.0	22.07	21.12
		1732.5	22.10	21.16
		1720.0	21.97	21.14
	100% RB	1745.0	22.03	21.08
		1732.5	21.96	21.03
		1720.0	21.95	21.10

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

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LTE band 5

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	848.3	22.76	22.19
		836.5	22.92	21.57
		824.7	22.86	21.26
	1 RB low	848.3	22.69	21.68
		836.5	22.84	21.60
		824.7	22.74	21.27
	50% RB mid	848.3	23.05	21.75
		836.5	22.90	22.29
		824.7	22.85	21.68
	100% RB	848.3	21.83	20.57
		836.5	21.87	20.80
		824.7	21.69	20.60
3MHz	1 RB high	847.5	22.73	21.82
		836.5	22.97	22.14
		825.5	22.99	22.18
	1 RB low	847.5	22.80	21.17
		836.5	22.80	21.17
		825.5	22.79	21.47
	50% RB mid	847.5	21.98	21.25
		836.5	22.02	21.09
		825.5	22.06	21.05
	100% RB	847.5	21.93	20.82
		836.5	21.98	21.04
		825.5	22.02	21.13
5MHz	1 RB high	846.5	22.72	21.35
		836.5	22.98	22.13
		826.5	22.63	21.90
	1 RB low	846.5	22.79	21.54
		836.5	22.78	21.35
		826.5	22.67	21.34
	50% RB mid	846.5	21.93	20.95
		836.5	22.05	21.21
		826.5	22.08	21.05
	100% RB	846.5	21.95	20.98
		836.5	21.97	21.14
		826.5	22.02	21.15
10MHz	1 RB high	844.0	22.74	21.91

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		836.5	22.72	21.44
		829.0	22.82	21.45
	1 RB low	844.0	22.59	21.44
		836.5	22.62	21.88
		829.0	22.62	21.41
	50% RB mid	844.0	21.88	21.30
		836.5	22.13	21.26
		829.0	22.00	21.08
	100% RB	844.0	21.93	21.07
		836.5	22.11	21.03
		829.0	22.05	21.09

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

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LTE band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	715.3	23.09	21.27
		707.5	23.03	21.93
		699.7	22.87	21.42
	1 RB low	715.3	23.09	21.47
		707.5	22.79	21.54
		699.7	22.90	21.50
	50% RB mid	715.3	23.14	21.94
		707.5	23.06	21.93
		699.7	22.93	22.00
	100% RB	715.3	22.13	20.87
		707.5	22.05	21.13
		699.7	21.85	20.85
3MHz	1 RB high	714.5	23.09	21.53
		707.5	23.05	21.29
		700.5	22.99	21.05
	1 RB low	714.5	23.09	21.29
		707.5	23.05	21.54
		700.5	22.90	21.40
	50% RB mid	714.5	22.09	21.20
		707.5	22.16	21.12
		700.5	21.95	21.15
	100% RB	714.5	22.11	21.11
		707.5	22.15	20.85
		700.5	21.91	21.02
5MHz	1 RB high	713.5	22.88	21.36
		707.5	22.74	21.54
		701.5	22.96	21.92
	1 RB low	713.5	22.83	21.28
		707.5	22.83	21.73
		701.5	22.73	21.52
	50% RB mid	713.5	21.97	21.03
		707.5	22.03	21.13
		701.5	21.83	20.89
	100% RB	713.5	21.88	21.00
		707.5	21.93	21.01
		701.5	21.76	20.96

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10MHz	1 RB high	711.0	23.05	22.15
		707.5	22.84	22.02
		704.0	22.84	21.76
	1 RB low	711.0	22.84	21.69
		707.5	22.61	21.48
		704.0	22.91	21.39
	50% RB mid	711.0	21.92	21.13
		707.5	21.95	20.97
		704.0	22.02	21.06
	100% RB	711.0	21.97	20.90
		707.5	21.90	21.03
		704.0	21.94	20.76

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

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LTE band 13

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
5MHz	1 RB high	784.5	22.94	21.86
		782.0	23.17	21.76
		779.5	23.07	21.45
	1 RB low	784.5	23.11	21.59
		782.0	22.98	21.48
		779.5	23.09	21.67
	50% RB mid	784.5	22.48	21.20
		782.0	22.31	21.02
		779.5	22.31	21.37
	100% RB	784.5	22.25	21.10
		782.0	22.32	21.09
		779.5	22.27	21.17
10MHz	1 RB high	782.0	23.18	21.64
	1 RB low	782.0	23.23	21.75
	50% RB mid	782.0	22.27	21.37
	100% RB	782.0	22.26	21.20

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

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LTE band 17

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
5MHz	1 RB high	713.5	23.18	21.80
		710.0	23.58	21.81
		706.5	23.52	22.63
	1 RB low	713.5	23.26	21.80
		710.0	23.45	22.12
		706.5	23.42	22.22
	50% RB mid	713.5	22.53	21.28
		710.0	22.65	21.38
		706.5	22.55	21.38
	100% RB	713.5	22.47	21.46
		710.0	22.53	21.52
		706.5	22.52	21.66
10MHz	1 RB high	711.0	23.40	21.96
		710.0	23.20	22.05
		709.0	23.75	22.46
	1 RB low	711.0	23.33	21.92
		710.0	23.55	22.14
		709.0	23.77	22.30
	50% RB mid	711.0	22.47	21.58
		710.0	22.58	21.51
		709.0	22.62	21.43
	100% RB	711.0	22.56	21.59
		710.0	22.65	21.34
		709.0	22.64	21.56

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

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LTE band 25

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	1914.3	22.78	21.47
		1882.5	22.70	21.46
		1850.7	23.06	21.63
	1 RB low	1914.3	22.76	22.08
		1882.5	22.65	21.63
		1850.7	22.99	21.70
	50% RB mid	1914.3	23.09	21.83
		1882.5	22.89	21.72
		1850.7	23.21	22.05
	100% RB	1914.3	21.82	20.81
		1882.5	21.79	20.78
		1850.7	22.10	21.02
3MHz	1 RB high	1913.5	22.92	21.58
		1882.5	22.76	21.98
		1851.5	22.90	21.67
	1 RB low	1913.5	22.82	21.52
		1882.5	22.70	21.57
		1851.5	22.90	21.65
	50% RB mid	1913.5	22.14	21.17
		1882.5	21.84	21.12
		1851.5	22.10	21.35
	100% RB	1913.5	21.96	20.82
		1882.5	21.91	20.67
		1851.5	22.07	21.12
5MHz	1 RB high	1912.5	22.90	21.38
		1882.5	22.52	22.05
		1852.5	22.92	22.34
	1 RB low	1912.5	22.75	21.54
		1882.5	22.70	21.41
		1852.5	22.89	22.20
	50% RB mid	1912.5	22.00	20.89
		1882.5	21.85	20.87
		1852.5	21.99	21.02
	100% RB	1912.5	22.03	21.12
		1882.5	21.90	20.95
		1852.5	22.05	20.98
10MHz	1 RB high	1910.0	22.69	21.70

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		1882.5	22.81	21.25
		1855.0	23.07	21.29
	1 RB low	1910.0	22.69	21.53
		1882.5	22.93	21.15
		1855.0	23.07	21.66
	50% RB mid	1910.0	21.99	21.15
		1882.5	21.87	21.02
		1855.0	22.06	21.23
	100% RB	1910.0	21.96	21.05
		1882.5	21.94	20.99
		1855.0	22.05	21.09
15MHz	1 RB high	1907.5	22.67	21.67
		1882.5	22.77	21.95
		1857.5	22.99	22.11
	1 RB low	1907.5	22.51	21.34
		1882.5	22.87	21.44
		1857.5	22.92	21.35
	50% RB mid	1907.5	21.83	20.92
		1882.5	21.86	21.05
		1857.5	22.04	21.00
	100% RB	1907.5	21.86	20.97
		1882.5	21.91	20.85
		1857.5	21.96	21.01
20MHz	1 RB high	1905.0	22.15	21.49
		1882.5	22.87	21.93
		1860.0	22.73	21.28
	1 RB low	1905.0	22.82	21.72
		1882.5	22.88	21.13
		1860.0	23.14	21.76
	50% RB mid	1905.0	21.90	20.92
		1882.5	21.92	20.97
		1860.0	22.00	20.96
	100% RB	1905.0	21.88	20.91
		1882.5	21.90	20.94
		1860.0	22.02	21.08

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

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LTE band 26(814MHz-824MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	823.3	22.45	21.44
		819.0	22.53	21.59
		814.7	22.73	21.79
	1 RB low	823.3	22.49	21.58
		819.0	22.49	21.64
		814.7	22.73	21.96
	50% RB mid	823.3	22.77	21.59
		819.0	22.72	21.73
		814.7	22.61	21.60
	100% RB	823.3	21.66	20.60
		819.0	21.75	20.68
		814.7	21.48	20.72
3MHz	1 RB high	822.5	22.62	21.64
		819.0	22.52	21.87
		815.5	22.91	21.77
	1 RB low	822.5	22.49	21.55
		819.0	22.57	21.84
		815.5	22.60	21.67
	50% RB mid	822.5	21.64	20.86
		819.0	21.68	20.70
		815.5	21.75	20.85
	100% RB	822.5	21.70	20.67
		819.0	21.75	20.71
		815.5	21.66	20.73
5MHz	1 RB high	821.5	22.38	21.40
		819.0	22.42	21.94
		816.5	22.44	21.54
	1 RB low	821.5	22.55	21.65
		819.0	22.53	22.11
		816.5	22.53	21.71
	50% RB mid	821.5	21.67	20.71
		819.0	21.71	20.71
		816.5	21.69	20.68
	100% RB	821.5	21.72	20.81
		819.0	21.63	20.90
		816.5	21.68	20.77

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10MHz	1 RB high	819.0	22.46	22.10
		819.0	22.56	22.11
		819.0	22.55	21.94
	1 RB low	819.0	22.54	22.03
		821.5	22.57	22.05
		819.0	22.49	22.05
	50% RB mid	816.5	21.79	20.76
		821.5	21.79	20.86
		819.0	21.78	20.75
	100% RB	816.5	21.67	20.73
		821.5	21.67	20.81
		819.0	21.66	20.83

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

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LTE band 26(824MHz-849MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	848.3	22.75	21.64
		836.5	23.12	22.39
		824.7	23.28	21.91
	1 RB low	848.3	22.77	21.67
		836.5	23.05	21.80
		824.7	23.18	21.82
	50% RB mid	848.3	23.23	22.09
		836.5	23.52	22.37
		824.7	23.24	22.15
	100% RB	848.3	21.89	21.04
		836.5	22.14	21.08
		824.7	22.23	21.10
3MHz	1 RB high	847.5	22.71	21.62
		836.5	23.12	22.25
		825.5	22.89	21.71
	1 RB low	847.5	22.78	21.82
		836.5	23.21	22.45
		825.5	22.93	21.75
	50% RB mid	847.5	22.04	21.18
		836.5	22.19	21.23
		825.5	22.00	21.16
	100% RB	847.5	21.99	21.20
		836.5	22.14	21.30
		825.5	21.86	20.73
5MHz	1 RB high	846.5	22.69	21.44
		836.5	23.07	22.23
		826.5	23.13	21.62
	1 RB low	846.5	22.86	21.80
		836.5	23.01	22.47
		826.5	23.07	21.43
	50% RB mid	846.5	22.06	20.97
		836.5	22.19	20.98
		826.5	22.28	21.14
	100% RB	846.5	21.97	21.09
		836.5	22.11	21.14
		826.5	22.27	21.32
10MHz	1 RB high	844.0	23.03	22.13

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		836.5	22.97	22.31
		829.0	23.15	21.71
	1 RB low	844.0	23.06	21.76
		836.5	23.03	21.74
		829.0	22.93	21.72
	50% RB mid	844.0	22.20	21.38
		836.5	22.15	21.18
		829.0	22.32	21.34
	100% RB	844.0	22.12	21.22
		836.5	22.21	21.23
		829.0	22.33	21.36
15MHz	1 RB high	841.5	22.82	21.78
		836.5	22.85	21.78
		831.5	23.25	22.44
	1 RB low	841.5	23.01	21.66
		836.5	22.82	21.78
		831.5	23.02	21.93
	50% RB mid	841.5	22.16	21.17
		836.5	22.28	21.31
		831.5	22.36	21.30
	100% RB	841.5	22.16	21.18
		836.5	22.27	21.10
		831.5	22.29	21.22

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

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Normal Power
LTE band 41

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
5MHz	1 RB high	2687.5	22.76	21.68
		2593.0	22.62	21.18
		2498.5	22.80	21.99
	1 RB low	2687.5	23.05	21.72
		2593.0	22.73	21.15
		2498.5	22.71	21.94
	50% RB mid	2687.5	22.00	21.22
		2593.0	21.75	20.72
		2498.5	21.86	21.47
	100% RB	2687.5	22.29	21.31
		2593.0	21.69	20.91
		2498.5	21.68	21.44
10MHz	1 RB high	2685.0	23.09	21.68
		2593.0	22.77	21.48
		2501.0	23.15	21.81
	1 RB low	2685.0	23.04	21.63
		2593.0	22.72	21.34
		2501.0	23.08	21.78
	50% RB mid	2685.0	22.12	21.45
		2593.0	21.82	20.97
		2501.0	22.42	21.57
	100% RB	2685.0	22.31	21.24
		2593.0	21.82	20.76
		2501.0	22.37	21.65
15MHz	1 RB high	2682.5	23.26	21.73
		2593.0	22.73	21.62
		2503.5	23.08	21.75
	1 RB low	2682.5	23.21	21.87
		2593.0	22.59	21.41
		2503.5	23.05	22.04
	50% RB mid	2682.5	22.30	21.08
		2593.0	21.86	20.83
		2503.5	22.47	21.26
	100% RB	2682.5	22.29	21.29
		2593.0	21.94	20.88

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		2503.5	22.34	21.26
20MHz	1 RB high	2680.0	22.95	21.75
		2593.0	22.83	21.43
		2506.0	22.98	21.67
	1 RB low	2680.0	22.91	21.61
		2593.0	22.53	21.25
		2506.0	22.94	21.74
	50% RB mid	2680.0	22.24	21.12
		2593.0	21.80	20.95
		2506.0	22.26	21.22
	100% RB	2680.0	22.19	21.17
		2593.0	21.92	20.76
		2506.0	22.28	21.12

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

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HPUE

LTE band 41

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
5MHz	1 RB high	2687.5	26.04	24.89
		2593.0	25.93	24.87
		2498.5	26.49	25.33
	1 RB low	2687.5	26.15	24.80
		2593.0	26.03	24.76
		2498.5	26.41	25.49
	50% RB mid	2687.5	25.13	24.10
		2593.0	25.17	24.27
		2498.5	25.70	24.75
	100% RB	2687.5	25.17	24.32
		2593.0	25.11	24.48
		2498.5	25.60	24.99
10MHz	1 RB high	2685.0	25.96	24.89
		2593.0	25.98	24.92
		2501.0	26.62	25.61
	1 RB low	2685.0	26.05	24.89
		2593.0	26.10	24.87
		2501.0	26.57	25.46
	50% RB mid	2685.0	25.11	24.43
		2593.0	25.19	24.22
		2501.0	25.75	25.06
	100% RB	2685.0	25.18	24.13
		2593.0	25.22	24.09
		2501.0	25.65	24.82
15MHz	1 RB high	2682.5	25.87	25.17
		2593.0	25.99	24.87
		2503.5	26.66	25.46
	1 RB low	2682.5	26.08	25.06
		2593.0	26.02	24.95
		2503.5	26.57	25.38
	50% RB mid	2682.5	25.22	24.22
		2593.0	25.25	24.19
		2503.5	25.58	24.67
	100% RB	2682.5	25.14	24.21
		2593.0	25.28	24.22

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		2503.5	25.61	24.74
20MHz	1 RB high	2680.0	25.99	24.75
		2593.0	26.13	24.90
		2506.0	26.09	25.25
	1 RB low	2680.0	25.93	24.90
		2593.0	26.03	25.00
		2506.0	26.54	25.38
	50% RB mid	2680.0	25.23	24.29
		2593.0	25.15	24.27
		2506.0	25.70	24.76
	100% RB	2680.0	25.16	24.21
		2593.0	25.26	24.21
		2506.0	25.58	24.65

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

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LTE band 66

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
1.4MHz	1 RB high	1779.3	23.07	21.72
		1745.0	23.24	22.02
		1710.7	23.14	21.80
	1 RB low	1779.3	23.06	21.72
		1745.0	23.11	21.97
		1710.7	22.96	21.87
	50% RB mid	1779.3	23.21	22.18
		1745.0	23.46	22.63
		1710.7	23.28	21.96
	100% RB	1779.3	22.14	21.23
		1745.0	22.32	21.27
		1710.7	22.13	21.08
3MHz	1 RB high	1778.5	23.08	21.80
		1745.0	23.20	21.59
		1711.5	22.91	22.18
	1 RB low	1778.5	23.16	21.75
		1745.0	23.28	21.76
		1711.5	23.23	21.95
	50% RB mid	1778.5	22.21	21.23
		1745.0	22.40	21.38
		1711.5	22.11	21.09
	100% RB	1778.5	22.09	21.04
		1745.0	22.36	21.40
		1711.5	22.18	21.24
5MHz	1 RB high	1777.5	22.95	21.67
		1745.0	23.27	21.67
		1712.5	23.06	21.59
	1 RB low	1777.5	23.12	21.77
		1745.0	23.23	21.73
		1712.5	22.91	21.59
	50% RB mid	1777.5	22.17	21.07
		1745.0	22.31	21.35
		1712.5	22.00	20.96
	100% RB	1777.5	21.97	21.17
		1745.0	22.37	21.61
		1712.5	22.08	21.14
10MHz	1 RB high	1775.0	23.09	21.18

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		1745.0	23.41	22.49
		1715.0	23.24	22.30
	1 RB low	1775.0	23.13	21.67
		1745.0	23.41	22.02
		1715.0	23.09	21.75
	50% RB mid	1775.0	22.18	21.22
		1745.0	22.34	21.44
		1715.0	22.12	21.23
	100% RB	1775.0	22.12	21.11
		1745.0	22.31	21.42
		1715.0	22.15	21.19
15MHz	1 RB high	1772.5	23.12	21.85
		1745.0	23.39	21.90
		1717.5	23.25	21.73
	1 RB low	1772.5	22.99	21.81
		1745.0	23.24	21.98
		1717.5	23.20	21.77
	50% RB mid	1772.5	22.10	21.19
		1745.0	22.37	21.43
		1717.5	22.04	21.11
	100% RB	1772.5	22.12	21.22
		1745.0	22.39	21.43
		1717.5	22.09	21.15
20MHz	1 RB high	1770.0	22.89	21.62
		1745.0	23.34	21.79
		1720.0	23.05	21.47
	1 RB low	1770.0	22.99	21.87
		1745.0	23.42	21.86
		1720.0	23.07	21.57
	50% RB mid	1770.0	22.18	21.19
		1745.0	22.31	21.39
		1720.0	22.17	21.28
	100% RB	1770.0	22.13	21.16
		1745.0	22.40	21.39
		1720.0	22.16	21.16

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

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LTE band 71

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)	
			QPSK	16QAM
5MHz	1 RB high	695.5	22.79	21.33
		680.5	22.50	21.16
		665.5	22.64	20.98
	1 RB low	695.5	22.57	21.24
		680.5	22.82	21.05
		665.5	22.47	20.90
	50% RB mid	695.5	21.73	20.65
		680.5	21.81	20.63
		665.5	21.63	20.59
	100% RB	695.5	21.71	20.73
		680.5	21.77	20.89
		665.5	21.62	20.64
10MHz	1 RB high	693	22.55	21.16
		680.5	22.68	20.74
		668	22.50	20.95
	1 RB low	693	22.60	21.30
		680.5	22.79	20.77
		668	22.42	21.27
	50% RB mid	693	21.82	20.85
		680.5	21.86	21.07
		668	21.64	20.80
	100% RB	693	21.80	20.84
		680.5	21.88	20.77
		668	21.78	20.87
15MHz	1 RB high	690.5	22.59	21.28
		680.5	22.69	21.15
		670.5	22.70	21.16
	1 RB low	690.5	22.57	21.16
		680.5	22.72	20.59
		670.5	22.63	21.11
	50% RB mid	690.5	21.88	20.90
		680.5	21.86	20.89
		670.5	21.66	20.68
	100% RB	690.5	21.78	20.68
		680.5	21.80	20.83
		670.5	21.76	20.69

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20MHz	1 RB high	688	22.55	21.17
		683	22.60	21.35
		673	22.71	21.31
	1 RB low	688	22.58	21.16
		683	22.47	21.35
		673	22.58	20.95
	50% RB mid	688	21.81	20.86
		683	21.87	20.82
		673	21.89	20.85
	100% RB	688	21.79	20.79
		683	21.83	20.89
		673	21.81	20.79

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

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A.1.3 Radiated

A.1.3.1 Description

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

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

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

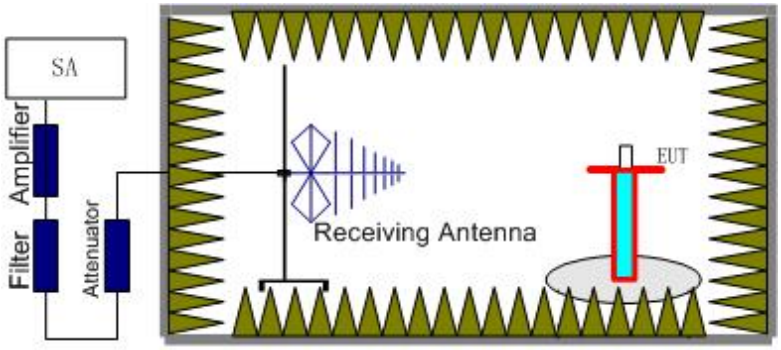
Rule Part 27.50(h)(2) specifies “Mobile stations are limited to 2.0 watts EIRP.”.

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

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

A.1.3.2 Method of Measurement

1. For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, EUT was placed on a 80 cm high non-conductive stand at a 3 meter test distance from the receive antenna. For radiated measurements performed at frequencies above 1 GHz, EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. Receiving antenna was placed on the antenna mast 3 meters from the EUT. For emission measurements. The receiving antenna shall be varied from 1 m to 4 m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level. 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 transmit frequencies in three channels (High, Middle, Low) 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.

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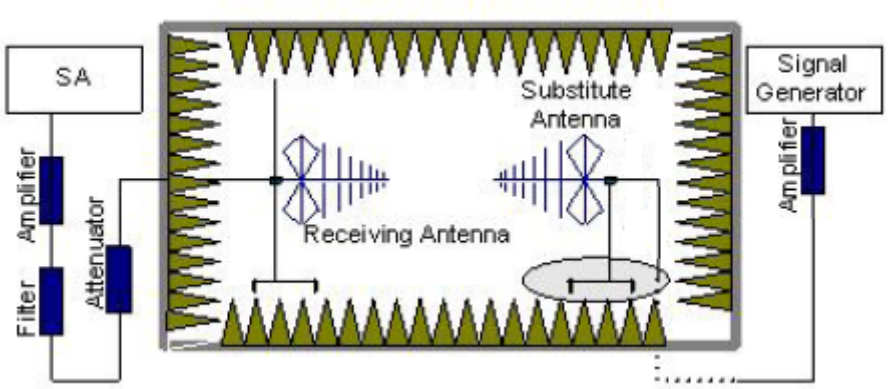

In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna and adjusts 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. An amplifier should be connected to the Signal Source output port. And the cable should be connected between the amplifier and the substitution antenna.
   The cable loss (P_{cl}), the substitution Antenna Gain(dBi) (G_a) and the amplifier Gain (P_{Ag}) should be recorded after test.
   The measurement results are obtained as described below:
   Power (EIRP) = $P_{Mea} - P_{Ag} - P_{cl} + G_a$
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.

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A.1.3.3 Measurement result

LTE Band 2- EIRP Part 24. 232(b)

Limits: ≤33dBm (2W)

LTE Band 2_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1850.70	-13.88	-29.30	8.10	23.52	33.00	V
1880.00	-13.40	-29.40	8.10	24.10	33.00	V
1909.30	**-12.83**	**-29.30**	**8.10**	**24.57**	**33.00**	**V**

LTE Band 2_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1851.50	-13.55	-29.30	8.10	23.85	33.00	V
1880.00	-14.10	-29.40	8.10	23.40	33.00	V
1908.50	-13.53	-29.30	8.10	23.87	33.00	V

LTE Band 2_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1852.50	-13.50	-29.30	8.10	23.90	33.00	V
1880.00	-13.48	-29.40	8.10	24.02	33.00	V
1907.50	-13.34	-29.30	8.10	24.06	33.00	V

LTE Band 2_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1855.00	-13.35	-29.30	8.10	24.05	33.00	V
1880.00	-13.81	-29.40	8.10	23.69	33.00	V
1905.00	-13.64	-29.30	8.10	23.76	33.00	V

LTE Band 2_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1857.50	-13.70	-29.30	8.10	23.70	33.00	V
1880.00	-14.00	-29.40	8.10	23.50	33.00	V
1902.50	-13.83	-29.30	8.10	23.57	33.00	V

LTE Band 2_20 MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1860.00	-13.86	-29.30	8.10	23.54	33.00	V
1880.00	-13.78	-29.40	8.10	23.72	33.00	V
1900.00	-13.88	-29.30	8.10	23.52	33.00	V

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LTE Band 2_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1850.70	-13.83	-29.30	8.10	23.57	33.00	V
1880.00	-14.29	-29.40	8.10	23.21	33.00	V
1909.30	-13.75	-29.30	8.10	23.65	33.00	V

LTE Band 2_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1851.50	-13.54	-29.30	8.10	23.86	33.00	V
1880.00	-13.99	-29.40	8.10	23.51	33.00	V
1908.50	-13.37	-29.30	8.10	24.04	33.00	V

LTE Band 2_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1852.50	-13.55	-29.30	8.10	23.85	33.00	V
1880.00	-13.65	-29.40	8.10	23.85	33.00	V
1907.50	-13.68	-29.30	8.10	23.72	33.00	V

LTE Band 2_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1855.00	-13.80	-29.30	8.10	23.60	33.00	V
1880.00	-14.04	-29.40	8.10	23.46	33.00	V
1905.00	-13.72	-29.30	8.10	23.68	33.00	V

LTE Band 2_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1857.50	-13.86	-29.30	8.10	23.54	33.00	V
1880.00	-14.09	-29.40	8.10	23.41	33.00	V
1902.50	-13.82	-29.30	8.10	23.58	33.00	V

LTE Band 2_20 MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1860.00	-13.82	-29.30	8.10	23.59	33.00	V
1880.00	-13.97	-29.40	8.10	23.54	33.00	V
1900.00	-13.98	-29.30	8.10	23.42	33.00	V

Peak EIRP (dBm)=P_{Mea}(-12.83dBm)-(P_{cl}+P_{Ag})(-29.30dB)+G_a(8.10dB) =24.57dBm

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LTE Band 4- EIRP Part 27.50(d)

Limits: ≤30dBm (1W)

LTE Band 4_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1710.70	-14.43	-29.60	8.10	23.27	30.00	V
1732.50	-14.16	-29.60	8.10	23.54	30.00	V
1754.30	-14.43	-29.50	8.10	23.17	30.00	V

LTE Band 4_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1711.50	-14.26	-29.60	8.10	23.44	30.00	V
1732.50	-14.32	-29.60	8.10	23.38	30.00	V
1753.50	-14.25	-29.50	8.10	23.35	30.00	V

LTE Band 4_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1712.50	-14.16	-29.60	8.10	23.54	30.00	V
1732.50	-14.07	-29.60	8.10	23.64	30.00	V
1752.50	-14.25	-29.50	8.10	23.35	30.00	V

LTE Band 4_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1715.00	-13.63	-29.60	8.10	24.07	30.00	V
1732.50	-13.44	-29.60	8.10	24.26	30.00	V
1750.00	-14.43	-29.50	8.10	23.18	30.00	V

LTE Band 4_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1717.50	-13.65	-29.60	8.10	24.05	30.00	V
1732.50	-13.58	-29.60	8.10	24.12	30.00	V
1747.50	-14.34	-29.50	8.10	23.27	30.00	V

LTE Band 4_20MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1720.00	-13.78	-29.60	8.10	23.92	30.00	V
1732.50	-13.68	-29.60	8.10	24.02	30.00	V
1745.00	-14.43	-29.50	8.10	23.18	30.00	V

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LTE Band 4_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1710.70	-14.33	-29.60	8.10	23.37	30.00	V
1732.50	-14.32	-29.60	8.10	23.38	30.00	V
1754.30	-14.17	-29.50	8.10	23.43	30.00	V

LTE Band 4_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1711.50	-14.37	-29.60	8.10	23.33	30.00	V
1732.50	-14.21	-29.60	8.10	23.49	30.00	V
1753.50	-14.33	-29.50	8.10	23.27	30.00	V

LTE Band 4_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1712.50	-14.34	-29.60	8.10	23.36	30.00	V
1732.50	-13.55	-29.60	8.10	24.15	30.00	V
1752.50	-14.15	-29.50	8.10	23.45	30.00	V

LTE Band 4_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1715.00	**-13.32**	**-29.60**	**8.10**	**24.38**	**30.00**	**V**
1732.50	-13.75	-29.60	8.10	23.95	30.00	V
1750.00	-14.34	-29.50	8.10	23.26	30.00	V

LTE Band 4_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1717.50	-13.54	-29.60	8.10	24.16	30.00	V
1732.50	-13.68	-29.60	8.10	24.02	30.00	V
1747.50	-14.44	-29.50	8.10	23.16	30.00	V

LTE Band 4_20MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1720.00	-13.55	-29.60	8.10	24.15	30.00	V
1732.50	-13.78	-29.60	8.10	23.92	30.00	V
1745.00	-14.46	-29.50	8.10	23.14	30.00	V

Peak EIRP (dBm)=P_{Mea}(-13.32dBm)-(P_{cl}+P_{Ag})(-29.60dB)+G_a(8.10dB) =24.38dBm

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LTE Band 5- ERP Part 22.913(a)

Limits: ≤38.45dBm (7W)

LTE Band 5_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
824.70	-9.13	-33.60	-0.79	2.15	21.52	38.45	V
836.50	-8.54	-33.50	-0.74	2.15	22.08	38.45	V
848.30	**-8.31**	**-33.50**	**-0.73**	**2.15**	**22.30**	**38.45**	**V**

LTE Band 5_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
825.50	-9.18	-33.60	-0.84	2.15	21.43	38.45	V
836.50	-9.74	-33.50	-0.74	2.15	20.87	38.45	V
847.50	-9.29	-33.50	-0.73	2.15	21.33	38.45	V

LTE Band 5_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
826.50	-9.40	-33.60	-0.84	2.15	21.21	38.45	V
836.50	-9.98	-33.50	-0.74	2.15	20.64	38.45	V
846.50	-9.22	-33.50	-0.73	2.15	21.40	38.45	V

LTE Band 5_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
829.00	-9.62	-33.60	-0.84	2.15	20.99	38.45	V
836.50	-10.10	-33.50	-0.74	2.15	20.51	38.45	V
844.00	-9.25	-33.50	-0.78	2.15	21.31	38.45	V

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LTE Band 5_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
824.70	-9.07	-33.60	-0.79	2.15	21.59	38.45	H
836.50	-9.25	-33.50	-0.74	2.15	21.36	38.45	H
848.30	-8.79	-33.50	-0.73	2.15	21.83	38.45	H

LTE Band 5_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
825.50	-9.62	-33.60	-0.84	2.15	20.99	38.45	H
836.50	-9.66	-33.50	-0.74	2.15	20.96	38.45	H
847.50	-9.30	-33.50	-0.73	2.15	21.32	38.45	H

LTE Band 5_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
826.50	-9.46	-33.60	-0.84	2.15	21.15	38.45	H
836.50	-10.40	-33.50	-0.74	2.15	20.21	38.45	H
846.50	-9.44	-33.50	-0.73	2.15	21.18	38.45	H

LTE Band 5_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
829.00	-9.42	-33.60	-0.84	2.15	21.19	38.45	H
836.50	-10.16	-33.50	-0.74	2.15	20.45	38.45	H
844.00	-9.41	-33.50	-0.78	2.15	21.15	38.45	H

Peak ERP (dBm)=P_{Mea}(-8.31dBm)-(P_{cl}+P_{Ag})(-33.50dB)+G_a(-0.73dB) -2.15dB =22.30dBm

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LTE Band 12 - ERP Part 27.50(c)(10)

Limits: ≤34.77dBm (3W)

LTE Band 12_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
699.70	**-10.02**	**-34.80**	**-0.93**	**2.15**	**21.70**	**34.77**	**V**
707.50	-10.66	-34.70	-0.91	2.15	20.99	34.77	V
715.30	-10.90	-34.70	-0.68	2.15	20.96	34.77	V

LTE Band 12_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
700.50	-10.04	-34.80	-0.97	2.15	21.65	34.77	V
707.50	-10.91	-34.70	-0.91	2.15	20.74	34.77	V
714.50	-10.86	-34.70	-0.64	2.15	21.04	34.77	V

LTE Band 12_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
701.50	-10.15	-34.80	-0.97	2.15	21.53	34.77	V
707.50	-11.38	-34.70	-0.91	2.15	20.27	34.77	V
713.50	-11.02	-34.70	-0.64	2.15	20.89	34.77	V

LTE Band 12_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
704.00	-10.36	-34.80	-0.97	2.15	21.32	34.77	V
707.50	-11.49	-34.70	-0.91	2.15	20.15	34.77	V
711.00	-11.30	-34.70	-0.64	2.15	20.60	34.77	V

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LTE Band 12_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
699.70	-10.05	-34.80	-0.93	2.15	21.67	34.77	V
707.50	-10.64	-34.70	-0.91	2.15	21.01	34.77	V
715.30	-10.93	-34.70	-0.68	2.15	20.94	34.77	V

LTE Band 12_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
700.50	-10.38	-34.80	-0.97	2.15	21.31	34.77	V
707.50	-11.56	-34.70	-0.91	2.15	20.08	34.77	V
714.50	-10.74	-34.70	-0.64	2.15	21.17	34.77	V

LTE Band 12_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
701.50	-10.51	-34.80	-0.97	2.15	21.17	34.77	V
707.50	-11.14	-34.70	-0.91	2.15	20.50	34.77	V
713.50	-11.06	-34.70	-0.64	2.15	20.85	34.77	V

LTE Band 12_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
704.00	-10.67	-34.80	-0.97	2.15	21.01	34.77	V
707.50	-11.18	-34.70	-0.91	2.15	20.47	34.77	V
711.00	-11.37	-34.70	-0.64	2.15	20.54	34.77	V

Peak ERP (dBm)=P_{Mea}(-10.02Bm)-(P_{cl}+P_{Ag})(-34.80dB)+G_a(-0.93dB) -2.15dB =21.70dBm

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LTE Band 13- ERP Part 27.50(b)(10)

Limits: ≤34.77dBm (3W)

LTE Band 13_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
779.50	**-14.42**	**-34.00**	**-0.08**	**2.15**	**17.34**	**34.77**	**V**
782.00	-14.51	-34.00	-0.13	2.15	17.22	34.77	V
784.50	-14.61	-34.00	-0.13	2.15	17.11	34.77	V

LTE Band 13_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
782.00	-14.57	-34.00	-0.13	2.15	17.15	34.77	V

LTE Band 13_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
779.50	-14.56	-34.00	-0.08	2.15	17.21	34.77	V
782.00	-14.52	-34.00	-0.13	2.15	17.20	34.77	V
784.50	-14.42	-34.00	-0.13	2.15	17.30	34.77	V

LTE Band 13_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
782.00	-14.71	-34.00	-0.13	2.15	17.01	34.77	V

Peak ERP (dBm)=P_{Mea}(-14.42dBm)-(P_{cl}+P_{Ag})(-34.00dB)+G_a(-0.08dB) -2.15dB =17.34dBm

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LTE Band 17 - ERP Part 27.50(c)(10)

Limits: ≤34.77dBm (3W)

LTE Band 17_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
706.50	-10.30	-34.70	-0.91	2.15	21.35	34.77	V
710.00	-10.21	-34.70	-0.64	2.15	21.69	34.77	V
713.50	**-10.01**	**-34.70**	**-0.64**	**2.15**	**21.90**	**34.77**	**V**

LTE Band 17_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
709.00	-10.30	-34.70	-0.91	2.15	21.34	34.77	V
710.00	-10.69	-34.70	-0.64	2.15	21.21	34.77	V
711.00	-10.47	-34.70	-0.64	2.15	21.44	34.77	V

LTE Band 17_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
706.50	-10.24	-34.70	-0.91	2.15	21.40	34.77	V
710.00	-10.77	-34.70	-0.64	2.15	21.14	34.77	V
713.50	-10.22	-34.70	-0.64	2.15	21.69	34.77	V

LTE Band 17_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
709.00	-10.32	-34.70	-0.91	2.15	21.32	34.77	V
710.00	-10.83	-34.70	-0.64	2.15	21.08	34.77	V
711.00	-10.56	-34.70	-0.64	2.15	21.35	34.77	V

Peak ERP (dBm)=P_{Mea}(-10.01dBm)-(P_{cl}+P_{Ag})(-34.70dB)+G_a(-0.64dB) -2.15dB =21.90dBm

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LTE Band 25- EIRP Part 24. 232(c)

Limits: ≤33dBm (2W)

LTE Band 25_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1850.70	-13.59	-29.30	8.10	23.81	33.00	V
1882.50	-13.93	-29.40	8.10	23.57	33.00	V
1914.30	-14.16	-29.30	8.10	23.24	33.00	V

LTE Band 25_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1851.50	-13.83	-29.30	8.10	23.57	33.00	V
1882.50	-13.84	-29.40	8.10	23.66	33.00	V
1913.50	-13.41	-29.30	8.10	24.00	33.00	V

LTE Band 25_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1852.50	-13.91	-29.30	8.10	23.49	33.00	V
1882.50	-13.98	-29.40	8.10	23.52	33.00	V
1912.50	-13.51	-29.30	8.10	23.89	33.00	V

LTE Band 25_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1855.00	-14.01	-29.30	8.10	23.39	33.00	V
1882.00	-13.97	-29.40	8.10	23.54	33.00	V
1910.00	-13.60	-29.30	8.10	23.80	33.00	V

LTE Band 25_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1857.50	-13.76	-29.30	8.10	23.64	33.00	V
1882.50	-14.13	-29.40	8.10	23.37	33.00	V
1907.50	-13.51	-29.30	8.10	23.89	33.00	V

LTE Band 25_20 MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1860.00	-13.81	-29.30	8.10	23.59	33.00	V
1882.50	-13.85	-29.40	8.10	23.65	33.00	V
1905.00	-13.38	-29.30	8.10	24.02	33.00	V

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LTE Band 25_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1850.70	-13.52	-29.30	8.10	23.88	33.00	V
1882.50	-13.70	-29.40	8.10	23.80	33.00	V
1914.30	-13.33	-29.30	8.10	24.07	33.00	V

LTE Band 25_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1851.50	-13.68	-29.30	8.10	23.72	33.00	V
1882.50	-14.02	-29.40	8.10	23.48	33.00	V
1913.50	**-13.26**	**-29.30**	**8.10**	**24.14**	**33.00**	**V**

LTE Band 25_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1852.50	-13.89	-29.30	8.10	23.52	33.00	V
1882.50	-14.01	-29.40	8.10	23.50	33.00	V
1912.50	-13.35	-29.30	8.10	24.05	33.00	V

LTE Band 25_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1855.00	-13.82	-29.30	8.10	23.58	33.00	V
1882.00	-13.75	-29.40	8.10	23.76	33.00	V
1910.00	-13.47	-29.30	8.10	23.93	33.00	V

LTE Band 25_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1857.50	-14.03	-29.30	8.10	23.37	33.00	V
1882.50	-14.13	-29.40	8.10	23.37	33.00	V
1907.50	-13.49	-29.30	8.10	23.91	33.00	V

LTE Band 25_20 MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1860.00	-13.98	-29.30	8.10	23.42	33.00	V
1882.50	-13.80	-29.40	8.10	23.71	33.00	V
1905.00	-13.37	-29.30	8.10	24.03	33.00	V

Peak EIRP (dBm)=P_{Mea}(-13.26dBm)-(P_{cl}+P_{Ag})(-29.30dB)+G_a(8.10dB) =24.14dBm

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LTE band 26(814MHz-824MHz)- ERP Part 90.635(b)

Limits: ≤50.00dBm (100W)

LTE band 26(814MHz-824MHz)_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
814.70	-9.63	-33.70	-0.80	2.15	21.12	50.00	H
819.00	-10.09	-33.60	-0.75	2.15	20.61	50.00	H
823.30	-9.97	-33.60	-0.79	2.15	20.68	50.00	H

LTE band 26(814MHz-824MHz)_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
815.50	**-9.40**	**-33.70**	**-0.80**	**2.15**	**21.35**	**50.00**	**H**
819.00	-10.09	-33.60	-0.75	2.15	20.61	50.00	H
822.50	-10.20	-33.60	-0.79	2.15	20.45	50.00	H

LTE band 26(814MHz-824MHz)_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
816.50	-9.61	-33.70	-0.80	2.15	21.14	50.00	H
819.00	-10.62	-33.60	-0.75	2.15	20.09	50.00	H
821.50	-10.18	-33.60	-0.79	2.15	20.48	50.00	H

LTE band 26(814MHz-824MHz)_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
819.00	-9.36	-33.60	-0.80	2.15	21.29	50.00	H
819.00	-9.41	-33.60	-0.75	2.15	21.29	50.00	H
819.00	-9.36	-33.60	-0.79	2.15	21.29	50.00	H

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LTE band 26(814MHz-824MHz)_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
814.70	-9.62	-33.70	-0.80	2.15	21.13	50.00	V
819.00	-10.07	-33.60	-0.75	2.15	20.64	50.00	V
823.30	-9.63	-33.60	-0.79	2.15	21.02	50.00	V

LTE band 26(814MHz-824MHz)_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
815.50	-9.52	-33.70	-0.80	2.15	21.23	50.00	V
819.00	-9.80	-33.60	-0.75	2.15	20.91	50.00	V
822.50	-10.11	-33.60	-0.79	2.15	20.54	50.00	V

LTE band 26(814MHz-824MHz)_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
816.50	-9.49	-33.70	-0.80	2.15	21.26	50.00	V
819.00	-10.08	-33.60	-0.75	2.15	20.62	50.00	V
821.50	-10.16	-33.60	-0.79	2.15	20.50	50.00	V

LTE band 26(814MHz-824MHz)_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
819.00	-9.86	-33.60	-0.80	2.15	20.79	50.00	V
819.00	-9.91	-33.60	-0.75	2.15	20.79	50.00	V
819.00	-9.87	-33.60	-0.79	2.15	20.79	50.00	V

Peak ERP (dBm)=P_{Mea}(-9.40dBm)-(P_{cl}+P_{Ag})(-33.70dB)+G_a(-0.80dB) -2.15 =21.35dBm

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LTE band 26(824MHz-849MHz)- ERP Part 22.913(a)

Limits: ≤38.45dBm (7W)

LTE band 26(824MHz-849MHz)_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
824.70	-9.89	-33.60	-0.79	2.15	20.77	38.45	V
836.50	-8.87	-33.50	-0.74	2.15	21.74	38.45	V
848.30	-8.60	-33.50	-0.73	2.15	22.02	38.45	V

LTE band 26(824MHz-849MHz)_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
825.50	-9.86	-33.60	-0.79	2.15	20.80	38.45	V
836.50	-9.27	-33.50	-0.74	2.15	21.35	38.45	V
847.50	-8.77	-33.50	-0.73	2.15	21.85	38.45	V

LTE band 26(824MHz-849MHz)_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
826.50	-9.85	-33.60	-0.79	2.15	20.80	38.45	V
836.50	-9.59	-33.50	-0.74	2.15	21.02	38.45	V
846.50	-8.69	-33.50	-0.73	2.15	21.93	38.45	V

LTE band 26(824MHz-849MHz)_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
829.00	-9.78	-33.60	-0.79	2.15	20.87	38.45	V
836.50	-9.82	-33.50	-0.74	2.15	20.79	38.45	V
844.00	-8.94	-33.50	-0.73	2.15	21.68	38.45	V

LTE band 26(824MHz-849MHz)_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
831.50	-10.00	-33.60	-0.79	2.15	20.66	38.45	V
836.50	-9.98	-33.50	-0.74	2.15	20.64	38.45	V
841.50	-9.47	-33.50	-0.73	2.15	21.14	38.45	V

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LTE band 26(824MHz-849MHz)_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
824.70	-9.85	-33.60	-0.79	2.15	20.81	38.45	V
836.50	-8.97	-33.50	-0.74	2.15	21.64	38.45	V
848.30	**-8.46**	**-33.50**	**-0.73**	**2.15**	**22.16**	**38.45**	**V**

LTE band 26(824MHz-849MHz)_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
825.50	-9.86	-33.60	-0.79	2.15	20.80	38.45	V
836.50	-9.06	-33.50	-0.74	2.15	21.56	38.45	V
847.50	-8.78	-33.50	-0.73	2.15	21.84	38.45	V

LTE band 26(824MHz-849MHz)_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
826.50	-10.03	-33.60	-0.79	2.15	20.63	38.45	V
836.50	-9.57	-33.50	-0.74	2.15	21.04	38.45	V
846.50	-8.98	-33.50	-0.73	2.15	21.64	38.45	V

LTE band 26(824MHz-849MHz)_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
829.00	-10.13	-33.60	-0.79	2.15	20.53	38.45	V
836.50	-9.93	-33.50	-0.74	2.15	20.68	38.45	V
844.00	-8.84	-33.50	-0.73	2.15	21.78	38.45	V

LTE band 26(824MHz-849MHz)_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
831.50	-10.02	-33.60	-0.79	2.15	20.63	38.45	V
836.50	-9.62	-33.50	-0.74	2.15	20.99	38.45	V
841.50	-9.65	-33.50	-0.73	2.15	20.96	38.45	V

Peak ERP (dBm)=P_{Mea}(-8.46dBm)-(P_{cl}+P_{Ag})(-33.50dB)+G_a(-0.73dB) -2.15=22.16dBm

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Normal Power

LTE Band 41 - EIRP Part 27.50(h)(2)

Limits: ≤33dBm (2W)

LTE Band 41_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2498.50	-15.55	-28.70	10.70	23.86	33.00	V
2593.00	**-15.24**	**-28.60**	**10.70**	**24.06**	**33.00**	**V**
2687.50	**-15.14**	**-28.50**	**10.70**	**24.06**	**33.00**	**V**

LTE Band 41_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2501.00	-16.24	-28.70	10.70	23.16	33.00	V
2593.00	-15.33	-28.60	10.70	23.97	33.00	V
2685.00	-15.62	-28.50	10.70	23.59	33.00	V

LTE Band 41_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2503.00	-16.34	-28.70	10.70	23.06	33.00	V
2593.00	-15.45	-28.60	10.70	23.85	33.00	V
2682.50	-16.06	-28.50	10.70	23.14	33.00	V

LTE Band 41_20MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2506.00	-16.80	-28.70	10.70	22.60	33.00	V
2593.00	-15.46	-28.60	10.70	23.84	33.00	V
2680.00	-16.24	-28.50	10.70	22.96	33.00	V

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LTE Band 41_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2498.50	-15.42	-28.70	10.70	23.98	33.00	V
2593.00	-15.34	-28.60	10.70	23.96	33.00	V
2687.50	-15.27	-28.50	10.70	23.93	33.00	V

LTE Band 41_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2501.00	-16.10	-28.70	10.70	23.30	33.00	V
2593.00	-15.46	-28.60	10.70	23.84	33.00	V
2685.00	-15.80	-28.50	10.70	23.40	33.00	V

LTE Band 41_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2503.00	-15.89	-28.70	10.70	23.51	33.00	V
2593.00	-15.60	-28.60	10.70	23.70	33.00	V
2682.50	-16.17	-28.50	10.70	23.03	33.00	V

LTE Band 41_20 MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2506.00	-16.11	-28.70	10.70	23.29	33.00	V
2593.00	-15.47	-28.60	10.70	23.83	33.00	V
2680.00	-16.04	-28.50	10.70	23.16	33.00	V

Peak EIRP (dBm)=P_{Mea}(-15.24dBm)-(P_{cl}+P_{Ag}) (-28.60dB)+G_a(10.70dB) =24.06dBm

Peak EIRP (dBm)=P_{Mea}(-15.14dBm)-(P_{cl}+P_{Ag}) (-28.50dB)+G_a(10.70dB) =24.06dBm

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HPUE

LTE Band 41 - EIRP Part 27.50(h)(2)

Limits: ≤33dBm (2W)

LTE Band 41_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2498.50	-14.30	-28.70	10.70	25.10	33.00	V
2593.00	**-13.28**	**-28.60**	**10.70**	**26.02**	**33.00**	**V**
2687.50	-14.41	-28.50	10.70	24.79	33.00	V

LTE Band 41_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2501.00	-14.39	-28.70	10.70	25.01	33.00	V
2593.00	-14.69	-28.60	10.70	24.61	33.00	V
2685.00	-13.65	-28.50	10.70	25.55	33.00	V

LTE Band 41_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2503.00	-14.69	-28.70	10.70	24.71	33.00	V
2593.00	-13.70	-28.60	10.70	25.60	33.00	V
2682.50	-14.79	-28.50	10.70	24.41	33.00	V

LTE Band 41_20MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2506.00	-15.86	-28.70	10.70	23.54	33.00	V
2593.00	-14.94	-28.60	10.70	24.37	33.00	V
2680.00	-14.89	-28.50	10.70	24.32	33.00	V

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LTE Band 41_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2498.50	-14.31	-28.70	10.70	25.09	33.00	V
2593.00	-13.83	-28.60	10.70	25.47	33.00	V
2687.50	-14.27	-28.50	10.70	24.93	33.00	V

LTE Band 41_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2501.00	-14.68	-28.70	10.70	24.72	33.00	V
2593.00	-13.80	-28.60	10.70	25.50	33.00	V
2685.00	-14.61	-28.50	10.70	24.59	33.00	V

LTE Band 41_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2503.00	-14.53	-28.70	10.70	24.87	33.00	V
2593.00	-14.33	-28.60	10.70	24.97	33.00	V
2682.50	-14.80	-28.50	10.70	24.40	33.00	V

LTE Band 41_20 MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
2506.00	-14.86	-28.70	10.70	24.54	33.00	V
2593.00	-14.69	-28.60	10.70	24.61	33.00	V
2680.00	-13.49	-28.50	10.70	25.71	33.00	V

Peak EIRP (dBm)=P_{Mea}(-13.28dBm)-(P_{cl}+P_{Ag}) (-28.60dB)+G_a(10.70dB) =26.02dBm

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LTE Band 66- EIRP Part 27.50(d)

Limits: ≤30dBm (1W)

LTE Band 66_1.4MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1710.70	-14.01	-29.60	8.10	23.69	30.00	V
1745.00	-13.66	-29.50	8.10	23.94	30.00	V
1779.30	-13.77	-29.50	8.10	23.83	30.00	V

LTE Band 66_3MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1711.50	-14.05	-29.60	8.10	23.65	30.00	V
1745.00	-13.97	-29.50	8.10	23.64	30.00	V
1778.50	-13.70	-29.50	8.10	23.90	30.00	V

LTE Band 66_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1712.50	-14.22	-29.60	8.10	23.48	30.00	V
1745.00	-14.01	-29.50	8.10	23.59	30.00	V
1777.50	-13.74	-29.50	8.10	23.86	30.00	V

LTE Band 66_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1715.00	-14.16	-29.60	8.10	23.54	30.00	V
1745.00	-13.34	-29.50	8.10	24.26	30.00	V
1775.00	-13.77	-29.50	8.10	23.83	30.00	V

LTE Band 66_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1717.50	-14.13	-29.60	8.10	23.57	30.00	V
1745.00	-13.55	-29.50	8.10	24.05	30.00	V
1772.53	-13.71	-29.50	8.10	23.89	30.00	V

LTE Band 66_20MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1720.00	-14.24	-29.60	8.10	23.46	30.00	V
1745.00	-13.56	-29.50	8.10	24.04	30.00	V
1770.00	-13.99	-29.50	8.10	23.61	30.00	V

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LTE Band 66_1.4MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1710.70	-13.83	-29.60	8.10	23.87	30.00	V
1745.00	-12.59	-29.50	8.10	25.02	30.00	V
1779.30	-13.55	-29.50	8.10	24.05	30.00	V

LTE Band 66_3MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1711.50	-14.17	-29.60	8.10	23.53	30.00	V
1745.00	**-12.81**	**-29.50**	**8.10**	**24.79**	**30.00**	**V**
1778.50	-13.49	-29.50	8.10	24.11	30.00	V

LTE Band 66_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1712.50	-14.35	-29.60	8.10	23.35	30.00	V
1745.00	-13.31	-29.50	8.10	24.29	30.00	V
1777.50	-13.77	-29.50	8.10	23.83	30.00	V

LTE Band 66_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1715.00	-14.09	-29.60	8.10	23.61	30.00	V
1745.00	-13.53	-29.50	8.10	24.07	30.00	V
1775.00	-14.21	-29.50	8.10	23.39	30.00	V

LTE Band 66_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1717.50	-14.33	-29.60	8.10	23.37	30.00	V
1745.00	-13.58	-29.50	8.10	24.02	30.00	V
1772.53	-14.07	-29.50	8.10	23.53	30.00	V

LTE Band 66_20MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	EIRP(dBm)	Limit(dBm)	Polarization
1720.00	-14.41	-29.60	8.10	23.29	30.00	V
1745.00	-13.67	-29.50	8.10	23.93	30.00	V
1770.00	-14.11	-29.50	8.10	23.49	30.00	V

Peak EIRP (dBm)=P_{Mea}(-12.81dBm)-(P_{cl}+P_{Ag})(-29.50dB)+G_a(8.10dB) =24.79dBm

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LTE Band 71- ERP 27.50(c)(10)

Limits: ≤34.77 dBm (3W)

LTE Band 71_5MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
665.50	-15.03	-36.70	-1.11	2.15	18.41	34.77	V
680.50	-14.31	-36.80	-0.82	2.15	19.52	34.77	V
695.50	-12.79	-34.80	-0.93	2.15	18.93	34.77	V

LTE Band 71_10MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
668.00	-15.02	-36.70	-1.11	2.15	18.42	34.77	V
680.50	-14.21	-36.80	-0.82	2.15	19.62	34.77	V
693.00	-12.62	-34.80	-0.93	2.15	19.10	34.77	V

LTE Band 71_15MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
670.50	-15.06	-36.70	-1.11	2.15	18.37	34.77	V
680.50	-14.33	-36.80	-0.82	2.15	19.50	34.77	V
690.50	-12.78	-34.80	-0.93	2.15	18.94	34.77	V

LTE Band 71_20MHz_QPSK

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
673.00	-15.24	-36.70	-1.11	2.15	18.20	34.77	V
683.00	-14.62	-36.80	-0.82	2.15	19.21	34.77	V
688.00	-12.90	-34.80	-0.93	2.15	18.82	34.77	V

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LTE Band 71_5MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
665.50	-15.22	-36.70	-1.11	2.15	18.22	34.77	V
680.50	-14.38	-36.80	-0.82	2.15	19.45	34.77	V
695.50	-13.06	-34.80	-0.93	2.15	18.66	34.77	V

LTE Band 71_10MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
668.00	-15.07	-36.70	-1.11	2.15	18.37	34.77	V
680.50	**-14.11**	**-36.80**	**-0.82**	**2.15**	**19.72**	**34.77**	**V**
693.00	-12.71	-34.80	-0.93	2.15	19.01	34.77	V

LTE Band 71_15MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
670.50	-15.19	-36.70	-1.11	2.15	18.24	34.77	V
680.50	-14.29	-36.80	-0.82	2.15	19.54	34.77	V
690.50	-12.82	-34.80	-0.93	2.15	18.90	34.77	V

LTE Band 71_20MHz_16QAM

Frequency(MHz)	P_{Mea}(dBm)	P_{cl}(dB)+ P_{Ag}(dB)	Ga Antenna Gain(dBi)	Correction (dB)	ERP(dBm)	Limit(dBm)	Polarization
673.00	-15.30	-36.70	-1.11	2.15	18.14	34.77	V
683.00	-14.40	-36.80	-0.82	2.15	19.43	34.77	V
688.00	-12.91	-34.80	-0.93	2.15	18.81	34.77	V

Peak ERP (dBm)=P_{Mea}(-14.11dBm)-(P_{cl}+P_{Ag})(-36.80dB)+G_a(-0.82dB) -2.15dB =19.72dBm

ANALYZER SETTINGS:

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

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

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz), k = 2

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

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A.2 FIELD STRENGTH OF SPURIOUS RADIATION

Reference

FCC: CFR 2.1053, 22.917, 24.238, 27.53, 90.691.

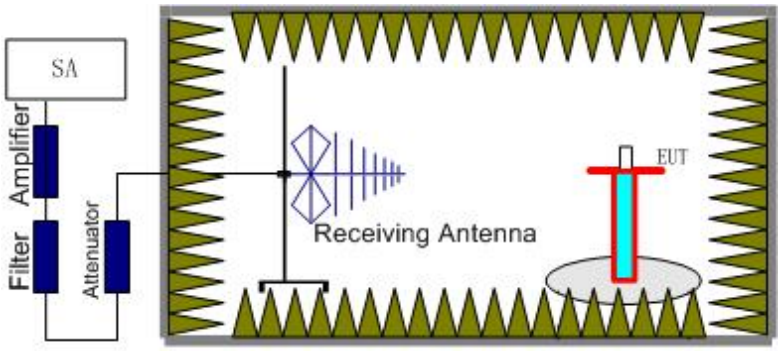
A.2.1 Measurement Method

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

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz as outlined in Part 22.917, 24.238, 27.53(h) and 90.691. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE Bands 2,4,5,12,13,17,25,26, 41,66,71.

The procedure of radiated spurious emissions is as follows:

1. For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, EUT was placed on a 80 cm high non-conductive stand at a 3 meter test distance from the receive antenna. For radiated measurements performed at frequencies above 1 GHz, EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. Receiving antenna was placed on the antenna mast 3 meters from the EUT. For emission measurements. The receiving antenna shall be varied from 1 m to 4 m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level. 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 transmit frequencies in three channels (High, Middle, Low) 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.

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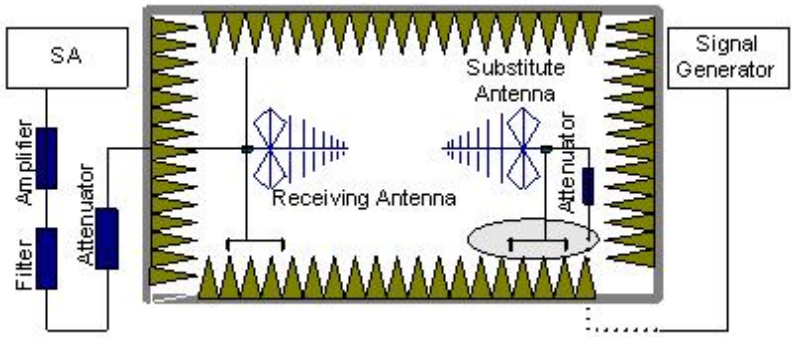

In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna and adjusts 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(dBi) (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 Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the LTE Bands 2,4,5,12,13,17,25,26, 41,66,71. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the LTE Bands 2,4,5,12,13,17,25,26, 41,66,71 into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.

Only worst case result is given below.

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LTE Band 2, 1.4MHz, QPSK, Channel 18607

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16975.50	-41.84	2.90	16.50	-28.24	-13.00	H
17142.00	-41.02	2.90	14.50	-29.42	-13.00	H
17295.00	-40.68	3.20	14.50	-29.38	-13.00	H
17596.50	-37.80	3.30	12.80	-28.30	-13.00	H
17797.50	-37.27	3.60	12.80	-28.07	-13.00	H
17970.00	-35.33	3.20	12.80	-25.73	-13.00	H

LTE Band 2, 1.4MHz, QPSK, Channel 18900

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16998.00	-42.87	2.90	16.50	-29.27	-13.00	H
17154.00	-41.54	2.90	14.50	-29.94	-13.00	H
17289.00	-40.15	3.20	14.50	-28.85	-13.00	H
17553.00	-37.55	2.90	12.80	-27.65	-13.00	H
17769.00	-36.88	3.60	12.80	-27.68	-13.00	H
17974.50	-35.52	3.20	12.80	-25.92	-13.00	H

LTE Band 2, 1.4MHz, QPSK, Channel 19193

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16953.00	-43.47	2.90	16.50	-29.87	-13.00	H
17206.50	-40.40	2.90	14.50	-28.80	-13.00	H
17295.00	-40.62	3.20	14.50	-29.32	-13.00	H
17587.50	-38.15	3.30	12.80	-28.65	-13.00	H
17805.00	-37.46	3.60	12.80	-28.26	-13.00	H
17949.00	-36.20	3.20	12.80	-26.60	-13.00	H

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LTE Band 2, 1.4MHz, 16QAM, Channel 18607

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16866.00	-43.88	2.90	16.50	-30.28	-13.00	H
16945.50	-43.67	2.90	16.50	-30.07	-13.00	H
17302.50	-40.85	3.20	14.50	-29.55	-13.00	H
17589.00	-38.51	3.30	12.80	-29.01	-13.00	H
17820.00	-37.48	3.60	12.80	-28.28	-13.00	H
17998.50	-36.06	3.20	12.80	-26.46	-13.00	H

LTE Band 2, 1.4MHz, 16QAM, Channel 18900

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16947.00	-43.37	2.90	16.50	-29.77	-13.00	H
17211.00	-42.14	2.90	14.50	-30.54	-13.00	H
17343.00	-41.15	3.20	14.50	-29.85	-13.00	H
17607.00	-38.66	3.30	12.80	-29.16	-13.00	H
17833.50	-37.53	3.60	12.80	-28.33	-13.00	H
17983.50	-35.83	3.20	12.80	-26.23	-13.00	H

LTE Band 2, 1.4MHz, 16QAM, Channel 19193

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16960.50	-44.35	2.90	16.50	-30.75	-13.00	H
17206.50	-42.45	2.90	14.50	-30.85	-13.00	H
17266.50	-40.72	3.20	14.50	-29.42	-13.00	H
17628.00	-39.31	3.30	12.80	-29.81	-13.00	H
17797.50	-38.13	3.60	12.80	-28.93	-13.00	H
17949.00	-36.54	3.20	12.80	-26.94	-13.00	H

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 4, 1.4MHz QPSK, Channel 19957

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16941.00	-43.34	2.90	16.50	-29.74	-13.00	H
17203.50	-42.10	2.90	14.50	-30.50	-13.00	H
17284.50	-40.77	3.20	14.50	-29.47	-13.00	H
17539.50	-38.52	2.90	12.80	-28.62	-13.00	H
17767.50	-38.24	3.60	12.80	-29.04	-13.00	H
17959.50	-36.36	3.20	12.80	-26.76	-13.00	H

LTE Band 4, 1.4MHz, QPSK, Channel 20175

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16975.50	-43.81	2.90	16.50	-30.21	-13.00	H
17208.00	-41.29	2.90	14.50	-29.69	-13.00	H
17299.50	-41.19	3.20	14.50	-29.89	-13.00	H
17527.50	-38.74	2.90	12.80	-28.84	-13.00	H
17800.50	-37.31	3.60	12.80	-28.11	-13.00	H
17937.00	-36.17	3.20	12.80	-26.57	-13.00	H

LTE Band 4, 1.4MHz, QPSK, Channel 20393

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16806.00	-44.14	2.90	16.50	-30.54	-13.00	H
16954.50	-43.73	2.90	16.50	-30.13	-13.00	H
17299.50	-40.77	3.20	14.50	-29.47	-13.00	H
17620.50	-39.31	3.30	12.80	-29.81	-13.00	H
17799.00	-37.14	3.60	12.80	-27.94	-13.00	H
17991.00	-35.86	3.20	12.80	-26.26	-13.00	H

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LTE Band 4, 1.4MHz, 16QAM, Channel 19957

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16945.50	-43.92	2.90	16.50	-30.32	-13.00	H
17196.00	-42.00	2.90	14.50	-30.40	-13.00	H
17289.00	-40.01	3.20	14.50	-28.71	-13.00	H
17608.50	-38.16	3.30	12.80	-28.66	-13.00	H
17767.50	-37.88	3.60	12.80	-28.68	-13.00	H
17974.50	-36.05	3.20	12.80	-26.45	-13.00	H

LTE Band 4, 1.4MHz, 16QAM, Channel 20175

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16948.50	-42.86	2.90	16.50	-29.26	-13.00	H
17203.50	-41.64	2.90	14.50	-30.04	-13.00	H
17317.50	-41.22	3.20	14.50	-29.92	-13.00	H
17529.00	-39.42	2.90	12.80	-29.52	-13.00	H
17808.00	-37.62	3.60	12.80	-28.42	-13.00	H
17931.00	-36.35	3.20	12.80	-26.75	-13.00	H

LTE Band 4, 1.4MHz, 16QAM, Channel 20393

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16854.00	-43.57	2.90	16.50	-29.97	-13.00	H
16950.00	-44.02	2.90	16.50	-30.42	-13.00	H
17368.50	-41.01	3.20	14.50	-29.71	-13.00	H
17620.50	-38.44	3.30	12.80	-28.94	-13.00	H
17772.00	-37.29	3.60	12.80	-28.09	-13.00	H
17962.50	-36.51	3.20	12.80	-26.91	-13.00	H

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 5, 1.4MHz, QPSK, Channel 20407

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
8645.00	-50.23	2.00	12.00	-42.38	-13.00	H
8739.00	-50.39	2.00	12.00	-42.54	-13.00	H
9225.50	-48.62	2.10	11.60	-41.27	-13.00	H
9424.50	-49.11	2.10	11.60	-41.76	-13.00	H
9742.00	-49.30	2.20	11.20	-42.45	-13.00	H
9785.00	-49.04	2.30	11.20	-42.29	-13.00	H

LTE Band 5, 1.4MHz, QPSK, Channel 20525

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
2943.75	-49.80	1.00	10.70	-42.25	-13.00	H
8587.00	-50.11	2.00	12.00	-42.26	-13.00	H
9067.50	-49.31	2.20	11.60	-42.06	-13.00	H
9220.50	-48.28	2.10	11.60	-40.93	-13.00	H
9426.50	-48.47	2.10	11.60	-41.12	-13.00	H
9744.00	-48.60	2.20	11.20	-41.75	-13.00	H

LTE Band 5, 1.4MHz, QPSK, Channel 20643

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
7084.00	-50.36	1.80	12.00	-42.31	-13.00	H
8742.00	-49.67	2.00	12.00	-41.82	-13.00	H
8992.00	-49.95	2.00	12.00	-42.10	-13.00	H
9229.00	-48.52	2.10	11.60	-41.17	-13.00	H
9430.50	-49.09	2.10	11.60	-41.74	-13.00	H
9731.00	-48.59	2.20	11.20	-41.74	-13.00	H

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LTE Band 5, 1.4MHz, 16QAM, Channel 20407

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
8733.00	-50.36	2.00	12.00	-42.51	-13.00	H
9104.00	-49.97	2.20	11.60	-42.72	-13.00	H
9224.00	-48.62	2.10	11.60	-41.27	-13.00	H
9425.00	-48.96	2.10	11.60	-41.61	-13.00	H
9744.00	-49.48	2.20	11.20	-42.63	-13.00	H
9794.50	-49.29	2.30	11.20	-42.54	-13.00	H

LTE Band 5, 1.4MHz, 16QAM, Channel 20525

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
8595.50	-50.62	2.00	12.00	-42.77	-13.00	H
8738.00	-50.14	2.00	12.00	-42.29	-13.00	H
9221.50	-48.51	2.10	11.60	-41.16	-13.00	H
9372.50	-49.48	2.00	11.60	-42.03	-13.00	V
9736.50	-48.97	2.20	11.20	-42.12	-13.00	H
9800.50	-49.19	2.30	11.20	-42.44	-13.00	H

LTE Band 5, 1.4MHz, 16QAM, Channel 20643

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
7050.00	-50.62	1.80	12.00	-42.57	-13.00	V
7113.00	-50.42	1.90	12.00	-42.47	-13.00	V
8723.50	-50.60	2.00	12.00	-42.75	-13.00	V
8976.00	-50.24	2.00	12.00	-42.39	-13.00	H
9306.00	-48.53	2.00	11.60	-41.08	-13.00	H
9473.00	-48.63	2.10	11.60	-41.28	-13.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 12, 1.4MHz, QPSK, Channel 23017

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1387.28	-56.74	0.70	6.00	-53.59	-13.00	V
1887.36	-54.37	0.80	8.10	-49.22	-13.00	V
2399.22	-54.19	0.90	9.80	-47.44	-13.00	V
2976.44	-51.06	1.00	10.70	-43.51	-13.00	H
5868.25	-62.80	1.40	13.10	-53.25	-13.00	V
8290.69	-58.47	1.90	11.30	-51.22	-13.00	H

LTE Band 12, 1.4MHz, QPSK, Channel 23095

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1210.58	-57.47	0.70	6.00	-54.32	-13.00	H
1847.46	-54.91	0.80	8.10	-49.76	-13.00	H
2470.28	-51.71	0.90	9.80	-44.96	-13.00	H
2965.80	-50.71	1.00	10.70	-43.16	-13.00	H
4216.69	-62.68	1.20	12.40	-53.63	-13.00	V
6883.69	-59.47	1.80	12.40	-51.02	-13.00	V

LTE Band 12, 1.4MHz, QPSK, Channel 23173

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1300.64	-56.66	0.70	6.00	-53.51	-13.00	H
1825.42	-55.61	0.80	8.10	-50.46	-13.00	H
2390.48	-53.19	0.90	9.80	-46.44	-13.00	V
2965.42	-51.47	1.00	10.70	-43.92	-13.00	H
3679.88	-63.45	1.20	12.20	-54.60	-13.00	V
7020.84	-59.23	1.80	12.00	-51.18	-13.00	H

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LTE Band 12, 1.4MHz, 16QAM, Channel 23017

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1346.24	-56.26	0.70	6.00	-53.11	-13.00	H
1540.42	-57.11	0.70	8.10	-51.86	-13.00	V
2466.86	-51.72	0.90	9.80	-44.97	-13.00	V
2954.02	-51.29	1.00	10.70	-43.74	-13.00	H
3840.44	-62.00	1.20	12.20	-53.15	-13.00	V
7013.84	-58.05	1.80	12.00	-50.00	-13.00	V

LTE Band 12, 1.4MHz 16QAM, Channel 23095

Frequency(MHz)	PMea(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1365.62	-56.84	0.70	6.00	-53.69	-13.00	H
1845.94	-54.87	0.80	8.10	-49.72	-13.00	H
2963.14	-50.29	1.00	10.70	-42.74	-13.00	H
3397.25	-61.66	1.10	11.50	-53.41	-13.00	H
4741.91	-61.83	1.30	12.50	-52.78	-13.00	H
7079.91	-58.49	1.80	12.00	-50.44	-13.00	V

LTE Band 12, 1.4MHz, 16QAM, Channel 23173

Frequency(MHz)	PMea(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1288.10	-57.03	0.70	6.00	-53.88	-13.00	V
1830.36	-55.87	0.80	8.10	-50.72	-13.00	H
2569.84	-53.33	1.00	10.70	-45.78	-13.00	V
2987.84	-51.03	1.00	10.70	-43.48	-13.00	H
4157.84	-63.19	1.20	12.40	-54.14	-13.00	V
7029.38	-59.27	1.80	12.00	-51.22	-13.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 13, 5 MHz, QPSK, Channel 23205

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1579.94	-57.74	0.70	8.10	-52.49	-40.00	V
1842.14	-54.06	0.80	8.10	-48.91	-13.00	H
2453.94	-52.08	0.90	9.80	-45.33	-13.00	H
2874.22	-49.95	1.00	10.70	-42.40	-13.00	V
3689.06	-61.20	1.20	12.20	-52.35	-13.00	H
7009.91	-57.55	1.80	12.00	-49.50	-13.00	V

LTE Band 13, 5 MHz, QPSK, Channel 23230

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1586.78	-58.01	0.70	8.10	-52.76	-40.00	V
2384.40	-52.32	0.90	9.80	-45.57	-13.00	V
2873.08	-49.59	1.00	10.70	-42.04	-13.00	H
3762.56	-61.79	1.10	12.20	-52.84	-13.00	H
6743.03	-58.24	1.70	12.40	-49.69	-13.00	V
8297.25	-57.33	1.90	11.30	-50.08	-13.00	V

LTE Band 13, 5 MHz, QPSK, Channel 23255

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1589.44	-58.09	0.70	8.10	-52.84	-40.00	V
1924.60	-52.96	0.80	8.10	-47.81	-13.00	H
2744.64	-50.56	1.00	10.70	-43.01	-13.00	V
2976.82	-49.88	1.00	10.70	-42.33	-13.00	H
3738.06	-61.46	1.10	12.20	-52.51	-13.00	H
7001.81	-58.31	1.80	12.00	-50.26	-13.00	H

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LTE Band 13, 5 MHz, 16QAM, Channel 23205

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1603.50	-57.89	0.70	8.10	-52.64	-40.00	V
2469.52	-52.20	0.90	9.80	-45.45	-13.00	V
2992.40	-50.82	1.00	10.70	-43.27	-13.00	H
3923.34	-61.71	1.30	12.20	-52.96	-13.00	H
6386.25	-60.43	1.60	13.10	-51.08	-13.00	V
8350.41	-57.82	1.80	11.30	-50.47	-13.00	H

LTE Band 13, 5 MHz, 16QAM, Channel 23230

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1595.14	-58.29	0.70	8.10	-53.04	-40.00	V
1812.50	-53.28	0.80	8.10	-48.13	-13.00	V
2471.04	-51.69	0.90	9.80	-44.94	-13.00	H
2975.30	-50.80	1.00	10.70	-43.25	-13.00	H
4344.88	-61.90	1.30	12.40	-52.95	-13.00	V
7174.84	-58.03	1.80	12.00	-49.98	-13.00	V

LTE Band 13, 5 MHz, 16QAM, Channel 23255

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1586.78	-58.65	0.70	8.10	-53.40	-40.00	H
1901.42	-53.78	0.80	8.10	-48.63	-13.00	H
2422.40	-51.94	0.90	9.80	-45.19	-13.00	H
2960.10	-50.29	1.00	10.70	-42.74	-13.00	H
3826.44	-61.02	1.20	12.20	-52.17	-13.00	V
6733.84	-57.65	1.70	12.40	-49.10	-13.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 17, 5MHz, QPSK, Channel 23755

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1324.20	-56.71	0.70	6.00	-53.56	-13.00	H
1886.98	-54.14	0.80	8.10	-48.99	-13.00	H
2598.72	-51.95	1.00	10.70	-44.40	-13.00	H
4101.41	-61.40	1.30	12.40	-52.45	-13.00	H
5493.75	-60.78	1.40	12.50	-51.83	-13.00	V
7051.47	-58.06	1.80	12.00	-50.01	-13.00	V

LTE Band 17, 5MHz, QPSK, Channel 23790

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1359.54	-56.64	0.70	6.00	-53.49	-13.00	H
1873.30	-54.40	0.80	8.10	-49.25	-13.00	H
2803.92	-51.17	1.00	10.70	-43.62	-13.00	V
3942.38	-62.62	1.30	12.20	-53.87	-13.00	V
6111.50	-60.99	1.60	13.10	-51.64	-13.00	V
7934.34	-58.64	1.90	11.30	-51.39	-13.00	V

LTE Band 17, 5MHz, QPSK, Channel 23825

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1259.98	-57.17	0.70	6.00	-54.02	-13.00	V
1877.86	-54.46	0.80	8.10	-49.31	-13.00	H
2694.10	-52.33	1.00	10.70	-44.78	-13.00	H
3735.00	-62.55	1.10	12.20	-53.60	-13.00	H
5046.41	-62.09	1.30	12.50	-53.04	-13.00	H
7064.16	-58.54	1.80	12.00	-50.49	-13.00	V

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LTE Band 17, 5MHz, 16QAM, Channel 23755

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1283.16	-56.60	0.70	6.00	-53.45	-13.00	V
1861.52	-54.16	0.80	8.10	-49.01	-13.00	V
2608.98	-52.72	0.90	10.70	-45.07	-13.00	H
2927.42	-51.63	1.00	10.70	-44.08	-13.00	V
4501.94	-61.64	1.20	12.50	-52.49	-13.00	H
7001.59	-57.75	1.80	12.00	-49.70	-13.00	V

LTE Band 17, 5MHz 16QAM, Channel 23790

Frequency(MHz)	PMea(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1329.52	-58.15	0.70	6.00	-55.00	-13.00	H
1875.96	-54.01	0.80	8.10	-48.86	-13.00	H
2656.48	-52.08	1.00	10.70	-44.53	-13.00	H
4043.66	-62.82	1.20	12.40	-53.77	-13.00	V
5768.94	-62.89	1.50	13.10	-53.44	-13.00	H
8824.22	-58.47	1.90	12.00	-50.52	-13.00	V

LTE Band 17, 5MHz, 16QAM, Channel 23825

Frequency(MHz)	PMea(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1425.66	-55.88	0.70	6.00	-52.73	-13.00	V
1920.42	-54.56	0.80	8.10	-49.41	-13.00	V
2629.12	-51.86	1.00	10.70	-44.31	-13.00	H
4564.50	-61.02	1.30	12.50	-51.97	-13.00	V
6382.97	-60.79	1.60	13.10	-51.44	-13.00	V
8721.84	-59.57	2.00	12.00	-51.72	-13.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 25, 1.4MHz, QPSK, Channel 26047

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2392.76	-52.85	0.90	9.80	-43.95	-13.00	V
2882.96	-51.47	1.00	10.70	-41.77	-13.00	V
4508.44	-63.03	1.20	12.50	-51.73	-13.00	H
6534.84	-60.99	1.70	12.40	-50.29	-13.00	V
9253.13	-50.63	2.10	11.60	-41.13	-13.00	H
16589.53	-56.16	2.60	16.50	-42.26	-13.00	H

LTE Band 25, 1.4MHz, QPSK, Channel 26365

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2720.32	-51.54	1.00	10.70	-41.84	-13.00	V
2998.86	-51.48	1.00	10.70	-41.78	-13.00	V
4743.75	-63.20	1.30	12.50	-52.00	-13.00	V
6874.22	-60.77	1.80	12.40	-50.17	-13.00	V
9412.50	-46.25	2.10	11.60	-36.75	-13.00	H
16616.72	-56.38	2.60	16.50	-42.48	-13.00	H

LTE Band 25, 1.4MHz, QPSK, Channel 26683

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2453.18	-52.69	0.90	9.80	-43.79	-13.00	V
2882.58	-51.57	1.00	10.70	-41.87	-13.00	V
3684.84	-63.71	1.20	12.20	-52.71	-13.00	H
5742.66	-55.61	1.50	13.10	-44.01	-13.00	V
9570.00	-51.82	2.10	11.20	-42.72	-13.00	H
16962.19	-55.80	2.90	16.50	-42.20	-13.00	H

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LTE Band 25, 1.4MHz, 16QAM, Channel 26047

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2307.64	-54.28	0.90	9.80	-45.38	-13.00	V
2983.28	-51.12	1.00	10.70	-41.42	-13.00	V
3710.63	-63.31	1.20	12.20	-52.31	-13.00	H
5319.38	-63.00	1.60	12.50	-52.10	-13.00	H
9253.13	-49.73	2.10	11.60	-40.23	-13.00	H
16761.09	-56.80	2.90	16.50	-43.20	-13.00	H

LTE Band 25, 1.4MHz, 16QAM, Channel 26365

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2717.66	-51.85	1.00	10.70	-42.15	-13.00	V
2984.42	-52.03	1.00	10.70	-42.33	-13.00	V
4620.94	-63.47	1.30	12.50	-52.27	-13.00	V
7007.34	-59.40	1.80	12.00	-49.20	-13.00	V
9412.97	-49.49	2.10	11.60	-39.99	-13.00	H
16602.66	-55.82	2.60	16.50	-41.92	-13.00	H

LTE Band 25, 1.4MHz, 16QAM, Channel 26683

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2631.78	-52.97	1.00	10.70	-43.27	-13.00	V
2980.62	-50.29	1.00	10.70	-40.59	-13.00	V
3828.28	-59.25	1.20	12.20	-48.25	-13.00	V
7656.09	-59.19	1.80	11.30	-49.69	-13.00	V
9571.41	-51.38	2.10	11.20	-42.28	-13.00	V
12816.09	-57.06	2.70	13.80	-45.96	-13.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 26(814MHz-824MHz), 1.4MHz, QPSK, Channel 26783

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Peak ERP(dBm)	Limit （dBm）	Polarization
2908.33	-50.07	1.00	10.70	-42.52	-13.00	V
8587.50	-50.24	2.00	12.00	-42.39	-13.00	H
9104.50	-49.83	2.20	11.60	-42.58	-13.00	H
9220.50	-48.16	2.10	11.60	-40.81	-13.00	H
9425.00	-48.82	2.10	11.60	-41.47	-13.00	H
9755.50	-49.59	2.20	11.20	-42.74	-13.00	H

LTE Band 26(814MHz-824MHz), 1.4MHz, QPSK, Channel 26740

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Peak ERP(dBm)	Limit （dBm）	Polarization
2769.17	-50.09	1.00	10.70	-42.54	-13.00	H
2865.00	-49.98	1.00	10.70	-42.43	-13.00	V
7117.50	-50.78	1.90	12.00	-42.83	-13.00	V
9222.50	-48.59	2.10	11.60	-41.24	-13.00	H
9428.50	-49.25	2.10	11.60	-41.90	-13.00	H
9741.50	-49.11	2.20	11.20	-42.26	-13.00	H

LTE Band 26(814MHz-824MHz), 1.4MHz, QPSK, Channel 26697

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Peak ERP(dBm)	Limit （dBm）	Polarization
2766.67	-50.17	1.00	10.70	-42.62	-13.00	H
7063.50	-50.58	1.80	12.00	-42.53	-13.00	V
9225.00	-48.73	2.10	11.60	-41.38	-13.00	H
9475.00	-48.93	2.10	11.60	-41.58	-13.00	V
9741.50	-49.26	2.20	11.20	-42.41	-13.00	H
9801.50	-49.19	2.30	11.20	-42.44	-13.00	H

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LTE Band 26(814MHz-824MHz), 1.4MHz, 16QAM, Channel 26783

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Peak ERP(dBm)	Limit （dBm）	Polarization
8587.00	-50.16	2.00	12.00	-42.31	-13.00	H
8737.00	-50.32	2.00	12.00	-42.47	-13.00	H
9114.00	-49.49	2.10	11.60	-42.14	-13.00	H
9223.00	-48.26	2.10	11.60	-40.91	-13.00	H
9474.00	-48.88	2.10	11.60	-41.53	-13.00	V
9733.00	-49.17	2.20	11.20	-42.32	-13.00	H

LTE Band 26(814MHz-824MHz), 1.4MHz, 16QAM, Channel 26740

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Peak ERP(dBm)	Limit （dBm）	Polarization
2896.67	-50.21	1.00	10.70	-42.66	-13.00	V
7130.50	-50.26	1.90	12.00	-42.31	-13.00	H
8577.50	-50.24	2.10	12.00	-42.49	-13.00	H
9223.00	-47.96	2.10	11.60	-40.61	-13.00	H
9473.50	-49.60	2.10	11.60	-42.25	-13.00	V
9749.50	-48.62	2.20	11.20	-41.77	-13.00	H

LTE Band 26(814MHz-824MHz), 1.4MHz, 16QAM, Channel 26697

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain	Peak ERP(dBm)	Limit （dBm）	Polarization
7105.00	-50.32	1.90	12.00	-42.37	-13.00	H
9113.50	-50.19	2.10	11.60	-42.84	-13.00	V
9298.00	-48.67	2.00	11.60	-41.22	-13.00	H
9479.00	-49.47	2.10	11.60	-42.12	-13.00	V
9734.50	-49.31	2.20	11.20	-42.46	-13.00	H
9805.00	-49.44	2.30	11.20	-42.69	-13.00	H

Note: The maximum value of expanded measurement uncertainty for this test item is U = 4.92dB(30MHz-3GHz)/4.88dB(3GHz-18GHz)/5.66dB(18GHz-40GHz), k = 2

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LTE band 26(824MHz-849MHz), 1.4MHz, QPSK, Channel 27033

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
7072.50	-50.32	1.80	12.00	-42.27	-13.00	V
8449.50	-50.08	1.80	11.30	-42.73	-13.00	H
8735.00	-49.15	2.00	12.00	-41.30	-13.00	V
9223.50	-48.28	2.10	11.60	-40.93	-13.00	H
9470.50	-49.27	2.10	11.60	-41.92	-13.00	V
9596.50	-49.56	2.10	11.20	-42.61	-13.00	V

LTE band 26(824MHz-849MHz), 1.4MHz, QPSK, Channel 26915

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
8074.50	-49.47	2.00	11.30	-42.32	-13.00	H
8746.00	-50.33	2.00	12.00	-42.48	-13.00	H
9100.50	-49.67	2.20	11.60	-42.42	-13.00	H
9296.00	-48.65	2.00	11.60	-41.20	-13.00	H
9469.00	-49.07	2.10	11.60	-41.72	-13.00	V
9754.00	-49.08	2.20	11.20	-42.23	-13.00	H

LTE band 26(824MHz-849MHz), 1.4MHz, QPSK, Channel 26797

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
2821.67	-49.94	1.00	10.70	-42.39	-13.00	H
8734.00	-50.34	2.00	12.00	-42.49	-13.00	V
9104.00	-50.05	2.20	11.60	-42.80	-13.00	H
9300.00	-48.00	2.00	11.60	-40.55	-13.00	H
9344.50	-49.06	2.00	11.60	-41.61	-13.00	V
9750.50	-49.55	2.20	11.20	-42.70	-13.00	H

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LTE band 26(824MHz-849MHz), 1.4MHz, 16QAM, Channel 27033

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
7058.00	-50.46	1.80	12.00	-42.41	-13.00	H
8732.00	-50.33	2.00	12.00	-42.48	-13.00	V
9099.00	-49.17	2.20	11.60	-41.92	-13.00	H
9296.50	-48.62	2.00	11.60	-41.17	-13.00	H
9473.50	-48.82	2.10	11.60	-41.47	-13.00	V
9743.50	-48.89	2.20	11.20	-42.04	-13.00	H

LTE band 26(824MHz-849MHz), 1.4MHz, 16QAM, Channel 26915

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
7020.50	-50.30	1.80	12.00	-42.25	-13.00	V
8645.00	-50.43	2.00	12.00	-42.58	-13.00	H
9106.00	-49.68	2.20	11.60	-42.43	-13.00	H
9222.00	-48.48	2.10	11.60	-41.13	-13.00	H
9475.50	-49.10	2.10	11.60	-41.75	-13.00	V
9740.50	-49.53	2.20	11.20	-42.68	-13.00	H

LTE band 26(824MHz-849MHz), 1.4MHz, 16QAM, Channel 26797

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
8627.50	-50.30	2.00	12.00	-42.45	-13.00	H
8739.00	-50.05	2.00	12.00	-42.20	-13.00	V
9099.00	-49.75	2.20	11.60	-42.50	-13.00	H
9300.00	-47.96	2.00	11.60	-40.51	-13.00	H
9426.50	-48.97	2.10	11.60	-41.62	-13.00	H
9743.00	-48.89	2.20	11.20	-42.04	-13.00	H

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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Normal Power

LTE Band 41, 5MHz, QPSK, Channel 40165

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2973.78	-50.57	1.00	10.70	-40.87	-25.00	V
3829.22	-62.27	1.20	12.20	-51.27	-25.00	H
4992.19	-60.81	1.30	12.50	-49.61	-25.00	V
7489.22	-57.01	1.90	12.00	-46.91	-25.00	V
11699.53	-55.78	2.60	11.00	-47.38	-25.00	V
14899.69	-54.56	2.70	11.20	-46.06	-25.00	V

LTE Band 41, 5MHz, QPSK, Channel 40690

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2974.16	-51.57	1.00	10.70	-41.87	-25.00	V
4098.75	-64.07	1.30	12.40	-52.97	-25.00	H
5181.56	-59.32	1.60	12.50	-48.42	-25.00	V
7772.34	-51.76	1.80	11.30	-42.26	-25.00	V
11222.34	-55.70	2.50	10.50	-47.70	-25.00	V
14926.41	-53.46	2.70	11.20	-44.96	-25.00	H

LTE Band 41, 5MHz, QPSK, Channel 41215

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2975.68	-52.01	1.00	10.70	-42.31	-25.00	V
3779.06	-64.04	1.10	12.20	-52.94	-25.00	V
5057.34	-64.19	1.30	12.50	-52.99	-25.00	H
6686.25	-60.76	1.80	12.40	-50.16	-25.00	V
8055.94	-51.34	2.00	11.30	-42.04	-25.00	V
12803.91	-56.47	2.70	13.80	-45.37	-25.00	V

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LTE Band 41, 5MHz, 16QAM, Channel 40165

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2978.34	-51.10	1.00	10.70	-41.40	-25.00	V
4139.06	-64.32	1.20	12.40	-53.12	-25.00	V
5667.66	-63.85	1.30	13.10	-52.05	-25.00	V
6727.03	-60.37	1.70	12.40	-49.67	-25.00	V
9623.91	-57.61	2.10	11.20	-48.51	-25.00	V
12813.28	-56.00	2.70	13.80	-44.90	-25.00	V

LTE Band 41, 5MHz, 16QAM, Channel 40690

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2966.56	-52.35	1.00	10.70	-42.65	-25.00	V
3643.13	-63.94	1.20	12.20	-52.94	-25.00	V
5422.97	-63.54	1.20	12.50	-52.24	-25.00	H
7772.81	-50.92	1.80	11.30	-41.42	-25.00	H
9551.25	-58.73	2.10	11.20	-49.63	-25.00	V
16583.44	-56.65	2.60	16.50	-42.75	-25.00	V

LTE Band 41, 5MHz, 16QAM, Channel 41215

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2928.94	-52.83	1.00	10.70	-43.13	-25.00	V
3711.09	-63.38	1.20	12.20	-52.38	-25.00	H
5370.47	-59.77	1.30	12.50	-48.57	-25.00	V
8055.94	-50.14	2.00	11.30	-40.84	-25.00	V
11203.13	-55.88	2.50	10.50	-47.88	-25.00	V
16590.47	-54.93	2.60	16.50	-41.03	-25.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 41, 5MHz, QPSK, Channel 40165

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2969.60	-50.29	1.00	10.70	-40.59	-25.00	H
4992.19	-56.53	1.30	12.50	-45.33	-25.00	H
7489.22	-54.75	1.90	12.00	-44.65	-25.00	H
9984.84	-55.35	2.20	11.20	-46.35	-25.00	H
12850.31	-56.83	2.70	13.80	-45.73	-25.00	V
16630.31	-55.57	2.60	16.50	-41.67	-25.00	V

LTE Band 41, 5MHz, QPSK, Channel 40690

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2984.04	-48.58	1.00	10.70	-38.88	-25.00	H
5181.56	-56.98	1.60	12.50	-46.08	-25.00	H
7772.34	-52.59	1.80	11.30	-43.09	-25.00	H
10363.13	-51.94	2.10	11.30	-42.74	-25.00	H
12832.03	-56.94	2.70	13.80	-45.84	-25.00	V
14935.31	-53.06	2.70	11.20	-44.56	-25.00	H

LTE Band 41, 5MHz, QPSK, Channel 41215

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2981.76	-50.01	1.00	10.70	-40.31	-25.00	H
5370.47	-48.42	1.30	12.50	-37.22	-25.00	V
8055.94	-49.13	2.00	11.30	-39.83	-25.00	H
9521.25	-57.99	2.10	11.20	-48.89	-25.00	H
12900.47	-56.99	2.50	13.80	-45.69	-25.00	H
16627.03	-55.75	2.60	16.50	-41.85	-25.00	H

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LTE Band 41, 5MHz, 16QAM, Channel 40165

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2988.60	-50.07	1.00	10.70	-40.37	-25.00	H
4992.66	-54.14	1.30	12.50	-42.94	-25.00	H
7488.75	-54.06	1.90	12.00	-43.96	-25.00	H
9985.31	-54.33	2.20	11.20	-45.33	-25.00	H
12481.88	-55.03	2.60	12.60	-45.03	-25.00	H
16657.03	-55.94	2.60	16.50	-42.04	-25.00	V

LTE Band 41, 5MHz, 16QAM, Channel 40690

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2979.48	-48.98	1.00	10.70	-39.28	-25.00	H
5181.56	-58.39	1.60	12.50	-47.49	-25.00	H
7772.81	-53.21	1.80	11.30	-43.71	-25.00	H
10363.59	-51.73	2.10	11.30	-42.53	-25.00	H
14160.00	-56.08	2.50	11.90	-46.68	-25.00	H
16793.91	-55.77	2.90	16.50	-42.17	-25.00	H

LTE Band 41, 5MHz, 16QAM, Channel 41215

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
2963.52	-51.64	1.00	10.70	-41.94	-25.00	V
4229.53	-62.88	1.20	12.40	-51.68	-25.00	V
5370.47	-48.73	1.30	12.50	-37.53	-25.00	V
8055.94	-51.11	2.00	11.30	-41.81	-25.00	V
10506.56	-57.04	2.30	10.80	-48.54	-25.00	H
12909.84	-57.65	2.50	13.80	-46.35	-25.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 66, 1.4MHz QPSK, Channel 131979

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16950.00	-42.67	2.90	16.50	-29.07	-13.00	H
17179.50	-41.42	2.90	14.50	-29.82	-13.00	H
17443.50	-39.89	2.90	14.50	-28.29	-13.00	H
17560.50	-38.07	2.90	12.80	-28.17	-13.00	H
17800.50	-37.48	3.60	12.80	-28.28	-13.00	H
17995.50	-35.20	3.20	12.80	-25.60	-13.00	H

LTE Band 66, 1.4MHz, QPSK, Channel 132322

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16935.00	-42.82	2.90	16.50	-29.22	-13.00	H
17169.00	-39.54	2.90	14.50	-27.94	-13.00	H
17304.00	-39.14	3.20	14.50	-27.84	-13.00	H
17568.00	-37.36	3.30	12.80	-27.86	-13.00	H
17776.50	-36.72	3.60	12.80	-27.52	-13.00	H
17992.50	-34.90	3.20	12.80	-25.30	-13.00	H

LTE Band 66, 1.4MHz, QPSK, Channel 132665

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16950.00	-43.96	2.90	16.50	-30.36	-13.00	H
17209.50	-41.58	2.90	14.50	-29.98	-13.00	H
17215.50	-40.70	3.20	14.50	-29.40	-13.00	H
17538.00	-38.38	2.90	12.80	-28.48	-13.00	H
17799.00	-36.89	3.60	12.80	-27.69	-13.00	H
17947.50	-35.89	3.20	12.80	-26.29	-13.00	H

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LTE Band 66, 1.4MHz, 16QAM, Channel 131979

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
17160.00	-40.77	2.90	14.50	-29.17	-13.00	H
17295.00	-39.69	3.20	14.50	-28.39	-13.00	H
17500.50	-36.93	2.90	12.80	-27.03	-13.00	H
17577.00	-35.68	3.30	12.80	-26.18	-13.00	H
17779.50	-36.94	3.60	12.80	-27.74	-13.00	H
17928.00	-34.89	3.20	12.80	-25.29	-13.00	H

LTE Band 66, 1.4MHz, 16QAM, Channel 132322

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16954.50	-42.48	2.90	16.50	-28.88	-13.00	H
17178.00	-41.31	2.90	14.50	-29.71	-13.00	H
17400.00	-38.98	2.90	14.50	-27.38	-13.00	H
17590.50	-36.89	3.30	12.80	-27.39	-13.00	H
17833.50	-35.61	3.60	12.80	-26.41	-13.00	H
17991.00	-35.26	3.20	12.80	-25.66	-13.00	H

LTE Band 66, 1.4MHz, 16QAM, Channel 132665

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak EIRP(dBm)	Limit(dBm)	Polarization
16956.00	-40.94	2.90	16.50	-27.34	-13.00	H
17349.00	-39.64	3.20	14.50	-28.34	-13.00	H
17439.00	-39.53	2.90	14.50	-27.93	-13.00	H
17584.50	-37.51	3.30	12.80	-28.01	-13.00	H
17793.00	-36.48	3.60	12.80	-27.28	-13.00	H
17980.50	-35.60	3.20	12.80	-26.00	-13.00	H

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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LTE Band 71, 5MHz QPSK, Channel 133147

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
1326.86	-45.35	0.70	6.00	-42.20	-13.00	H
1990.34	-49.64	0.80	8.10	-44.49	-13.00	H
4719.16	-63.32	1.30	12.50	-54.27	-13.00	H
5631.13	-64.15	1.30	13.10	-54.50	-13.00	H
6539.81	-60.54	1.70	12.40	-51.99	-13.00	V
7818.19	-58.50	1.80	11.30	-51.15	-13.00	V

LTE Band 71, 5MHz, QPSK, Channel 133297

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
4798.78	-62.15	1.30	12.50	-53.10	-13.00	V
5475.59	-63.07	1.30	12.50	-54.02	-13.00	V
6027.72	-62.31	1.50	13.10	-52.86	-13.00	H
6703.88	-60.28	1.70	12.40	-51.73	-13.00	V
7926.91	-59.74	1.90	11.30	-52.49	-13.00	H
9004.03	-58.39	2.00	11.60	-50.94	-13.00	H

LTE Band 71, 5MHz, QPSK, Channel 133447

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
3972.13	-63.96	1.20	12.20	-55.11	-13.00	V
4641.50	-62.74	1.30	12.50	-53.69	-13.00	V
5355.72	-63.28	1.30	12.50	-54.23	-13.00	V
6559.50	-60.35	1.70	12.40	-51.80	-13.00	V
8254.16	-57.90	1.90	11.30	-50.65	-13.00	V
9515.03	-58.20	2.10	11.20	-51.25	-13.00	V

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LTE Band 71, 5MHz, 16QAM, Channel 133147

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
4233.53	-62.27	1.20	12.40	-53.22	-13.00	V
4731.63	-63.11	1.30	12.50	-54.06	-13.00	V
5291.19	-62.99	1.60	12.50	-54.24	-13.00	V
6015.25	-63.07	1.50	13.10	-53.62	-13.00	V
7056.50	-60.26	1.80	12.00	-52.21	-13.00	V
8565.22	-60.93	2.10	12.00	-53.18	-13.00	H

LTE Band 71, 5MHz, 16QAM, Channel 133297

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
4235.72	-63.96	1.20	12.40	-54.91	-13.00	V
4833.78	-63.77	1.30	12.50	-54.72	-13.00	H
5409.53	-63.20	1.20	12.50	-54.05	-13.00	H
6369.41	-61.93	1.60	13.10	-52.58	-13.00	V
7033.09	-59.41	1.80	12.00	-51.36	-13.00	V
8244.75	-58.17	1.90	11.30	-50.92	-13.00	H

LTE Band 71, 5MHz, 16QAM, Channel 133447

Frequency(MHz)	P_{Mea}(dBm)	Path Loss	Antenna Gain(dBi)	Peak ERP(dBm)	Limit(dBm)	Polarization
4053.06	-63.93	1.20	12.40	-54.88	-13.00	H
4841.00	-62.66	1.30	12.50	-53.61	-13.00	V
5325.75	-63.93	1.30	12.50	-54.88	-13.00	V
5823.41	-63.17	1.40	13.10	-53.62	-13.00	V
6670.63	-60.58	1.80	12.40	-52.13	-13.00	V
8379.72	-59.97	1.80	11.30	-52.62	-13.00	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 2.90dB(30MHz-3GHz)/3.50dB(3GHz-18GHz)/3.90dB(18GHz-40GHz), k = 2

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A.3 FREQUENCY STABILITY

Reference

FCC: CFR Part 2.1055, 22.355, 24.235, 27.54, 90.213.

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 R&S CMW500 DIGITAL RADIO COMMUNICATION TESTER.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -15℃.
3. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on middle channel, 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 -15℃ to +55℃. 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 +55℃.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the centre 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 +55℃ to -15℃. 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.

A.3.2 Measurement Limit

According to the JTC standard the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. 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 between 3.6VDC and 4.35VDC, with a nominal voltage of 3.8VDC. 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. These voltages represent a tolerance from -5.4% to 10.8%. For the purposes of measuring frequency stability these voltage limits are to be used.

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A.3.3 Measurement results

LTE Band 2, 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	23	18	0.012	0.010
3.8	15	7	0.008	0.004
4.35	16	14	0.009	0.007

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	17	8	0.009	0.004
-5	15	5	0.008	0.003
5	26	14	0.014	0.007
15	23	12	0.012	0.006
25	18	11	0.010	0.006
35	9	19	0.005	0.010
45	14	26	0.007	0.014
55	12	22	0.006	0.012

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

LTE Band 4, 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	18	26	0.010	0.015
3.8	13	13	0.008	0.008
4.35	8	18	0.005	0.010

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	26	27	0.015	0.016
-5	14	15	0.008	0.009
5	18	18	0.010	0.010
15	5	23	0.003	0.013
25	18	32	0.010	0.018
35	14	15	0.008	0.009
45	22	7	0.013	0.004
55	27	9	0.016	0.005

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

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LTE Band 5, 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	27	9	0.032	0.011
3.8	16	8	0.019	0.010
4.35	5	11	0.006	0.013

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	19	13	0.023	0.016
-5	17	25	0.020	0.030
5	25	14	0.030	0.017
15	16	17	0.019	0.020
25	23	26	0.027	0.031
35	14	15	0.017	0.018
45	18	18	0.022	0.022
55	11	16	0.013	0.019

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

LTE Band 12, 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	26	22	0.037	0.031
3.8	15	15	0.021	0.021
4.35	17	8	0.024	0.011

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	4	7	0.006	0.010
-5	9	6	0.013	0.008
5	14	15	0.020	0.021
15	8	12	0.011	0.017
25	6	4	0.008	0.006
35	23	8	0.033	0.011
45	18	9	0.025	0.013
55	7	16	0.010	0.023

Expanded measurement uncertainty is 10Hz, k = 2

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LTE Band 13, 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	3	9	0.004	0.012
3.8	8	15	0.010	0.019
4.35	11	26	0.014	0.033

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	33	16	0.042	0.020
-5	16	29	0.020	0.037
5	25	18	0.032	0.023
15	27	23	0.035	0.029
25	18	35	0.023	0.045
35	23	27	0.029	0.035
45	15	26	0.019	0.033
55	11	8	0.014	0.010

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 17, 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	22	37	0.031	0.052
3.8	15	26	0.021	0.037
4.35	32	15	0.045	0.021

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	33	23	0.046	0.032
-5	39	18	0.055	0.025
5	18	25	0.025	0.035
15	25	37	0.035	0.052
25	19	16	0.027	0.023
35	26	18	0.037	0.025
45	27	36	0.038	0.051
55	22	31	0.031	0.044

Expanded measurement uncertainty is 10Hz, k = 2

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LTE Band 25, 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	28	9	0.015	0.005
3.8	15	15	0.008	0.008
4.35	23	11	0.012	0.006

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	19	16	0.010	0.008
-5	26	18	0.014	0.010
5	25	25	0.013	0.013
15	32	23	0.017	0.012
25	14	14	0.007	0.007
35	17	15	0.009	0.008
45	5	8	0.003	0.004
55	9	23	0.005	0.012

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 26(814MHz-824MHz), 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	23	25	0.028	0.031
3.8	14	7	0.017	0.009
4.35	18	16	0.022	0.020

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	16	32	0.020	0.039
-5	35	26	0.043	0.032
5	25	35	0.031	0.043
15	17	15	0.021	0.018
25	16	26	0.020	0.032
35	15	34	0.018	0.042
45	28	18	0.034	0.022
55	16	29	0.020	0.035

Expanded measurement uncertainty is 10Hz, k = 2

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LTE band 26(824MHz-849MHz), 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	36	26	0.043	0.031
3.8	38	24	0.045	0.029
4.35	14	18	0.017	0.022

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	9	33	0.011	0.039
-5	14	26	0.017	0.031
5	12	24	0.014	0.029
15	36	15	0.043	0.018
25	15	18	0.018	0.022
35	27	16	0.032	0.019
45	18	9	0.022	0.011
55	16	8	0.019	0.010

Expanded measurement uncertainty is 10Hz, k = 2

LTE Band 41(Normal Power), 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	26	26	0.010	0.010
3.8	18	24	0.007	0.009
4.35	14	18	0.005	0.007

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	32	11	0.012	0.004
-5	26	25	0.010	0.010
5	35	15	0.013	0.006
15	38	2	0.015	0.001
25	16	42	0.006	0.016
35	39	26	0.015	0.010
45	34	31	0.013	0.012
55	16	42	0.006	0.016

Expanded measurement uncertainty is 10 Hz, k = 2

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LTE Band 41(HPUE), 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	18	41	0.007	0.016
3.8	15	25	0.006	0.010
4.35	36	8	0.014	0.003

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	26	38	0.010	0.015
-5	34	42	0.013	0.016
5	18	43	0.007	0.017
15	42	16	0.016	0.006
25	15	445	0.006	0.172
35	18	17	0.007	0.007
45	33	29	0.013	0.011
55	26	34	0.010	0.013

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

LTE Band 66, 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	23	26	0.013	0.015
3.8	36	15	0.021	0.009
4.35	25	28	0.014	0.016

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	26	24	0.015	0.014
-5	15	17	0.009	0.010
5	35	16	0.020	0.009
15	14	28	0.008	0.016
25	16	23	0.009	0.013
35	24	35	0.014	0.020
45	29	34	0.017	0.019
55	23	19	0.013	0.011

Expanded measurement uncertainty is 10Hz, k = 2

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LTE Band 71, 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
3.6	18	15	0.026	0.022
3.8	6	25	0.009	0.037
4.35	10	18	0.015	0.026

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)		Frequency error (ppm)	
	QPSK	16QAM	QPSK	16QAM
-15	26	9	0.038	0.013
-5	14	14	0.021	0.021
5	26	2	0.038	0.003
15	17	8	0.025	0.012
25	15	7	0.022	0.010
35	9	16	0.013	0.024
45	8	18	0.012	0.026
55	5	25	0.007	0.037

Expanded measurement uncertainty is 10Hz, k = 2

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A.4 OCCUPIED BANDWIDTH

Reference

FCC: CFR Part 2.1049, 22.917, 24.238, 27.53, 90.1215.

A.4.1 Occupied Bandwidth Results

Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of the US Cellular/PCS frequency bands. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.

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 (i.e., two to five times the OBW).

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.

c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.

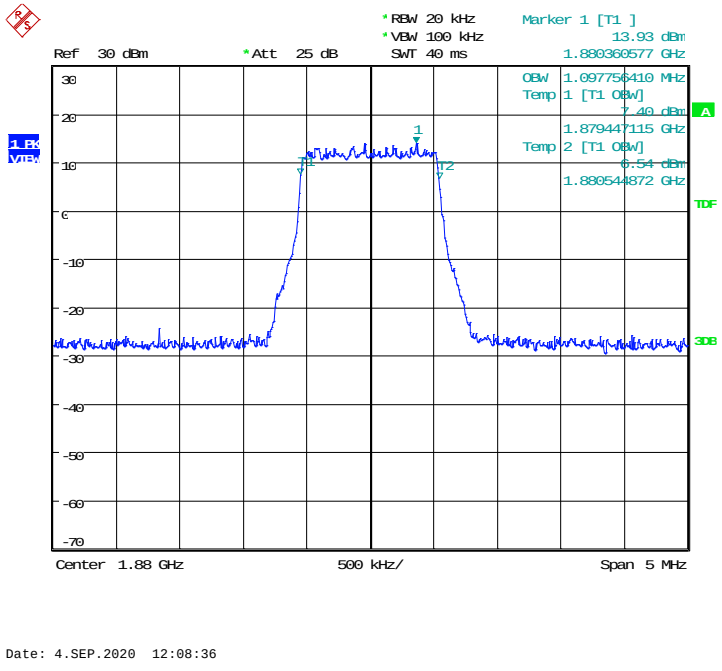
d) Set the detection mode to peak, and the trace mode to max hold.

e) Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

LTE band 2, 1.4MHz (99% BW)

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

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



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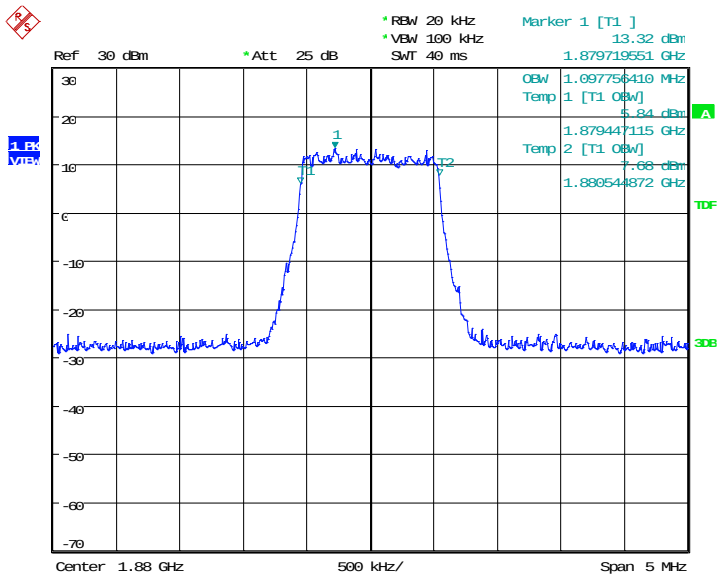
LTE band 2, 1.4MHz Bandwidth, 16QAM (99% BW)



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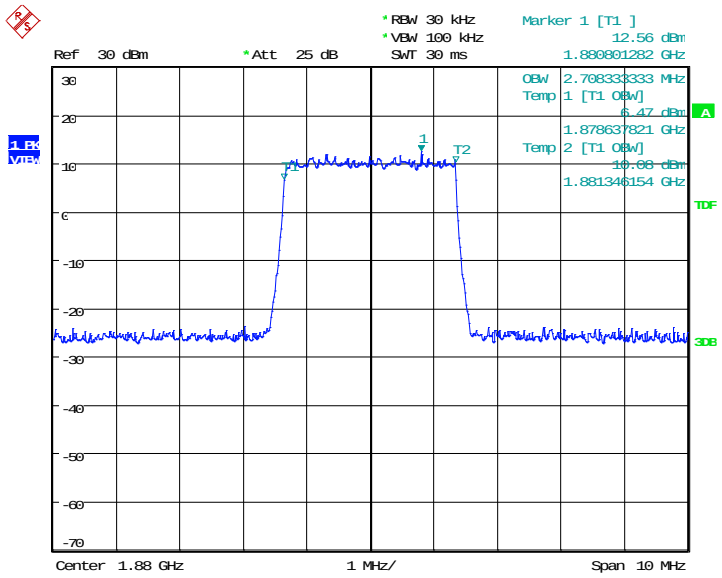
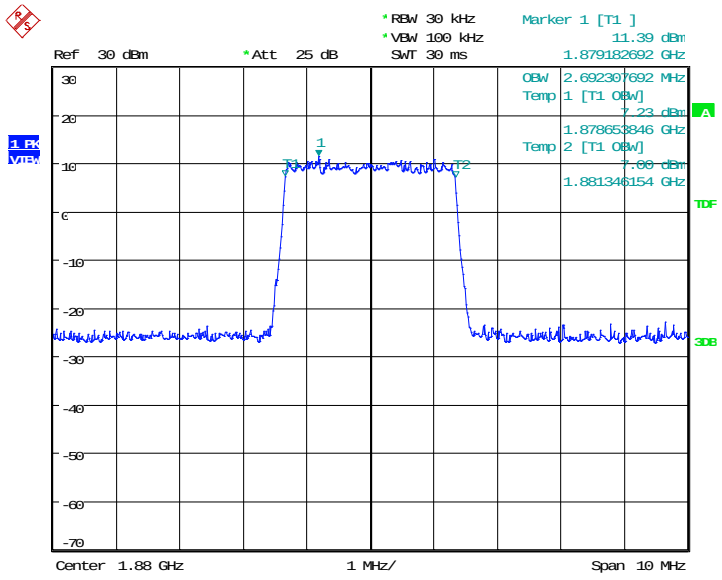
LTE band 2, 3MHz (99% BW)

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

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



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



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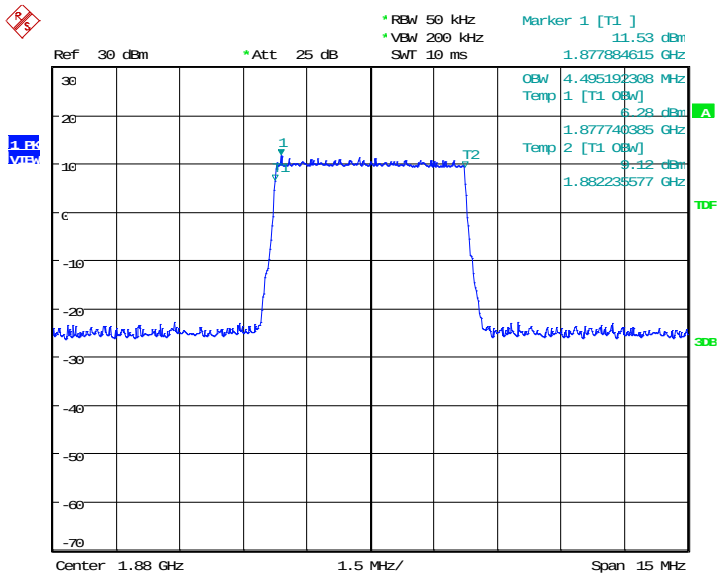
LTE band 2, 5MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1880.0	QPSK	16QAM
	4495.19	4519.23

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



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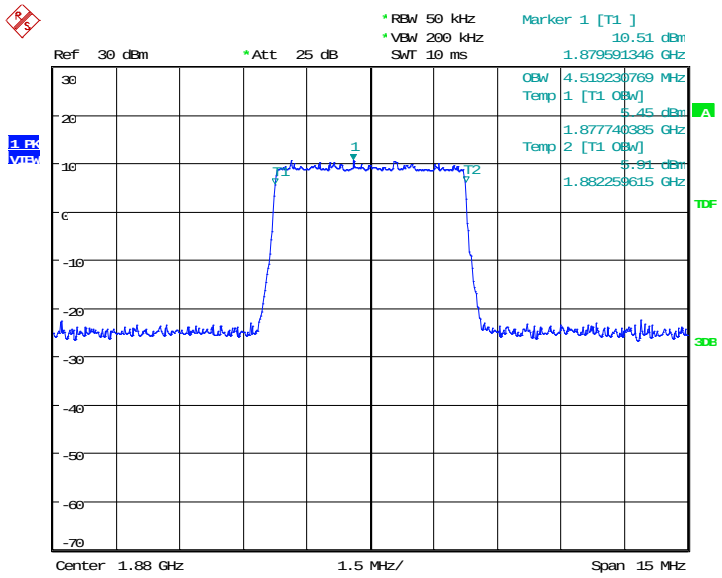
LTE band 2, 5MHz Bandwidth,16QAM (99% BW)



Date: 4.SEP.2020 12:13:25

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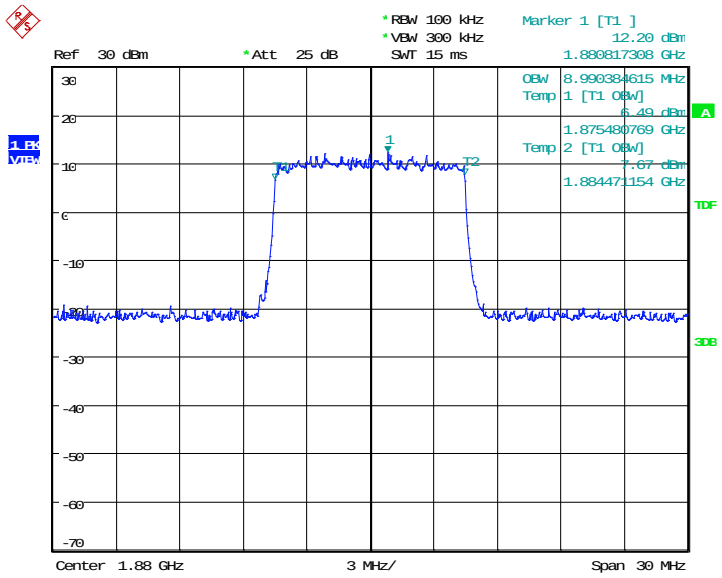
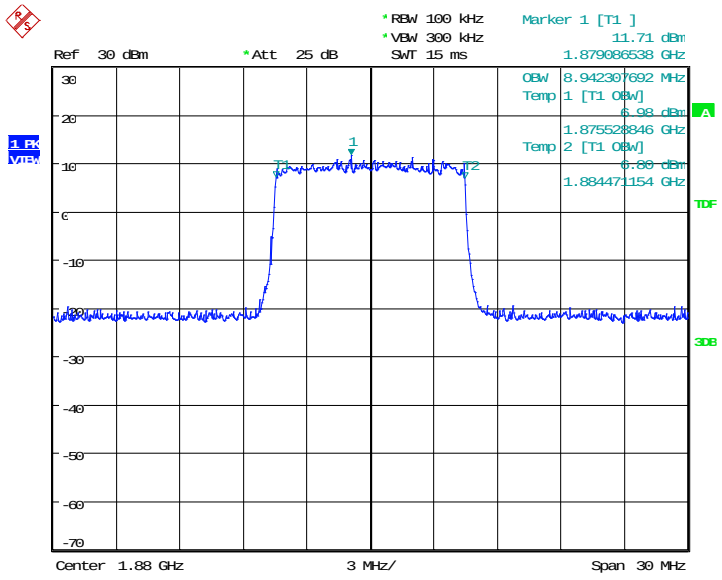
LTE band 2, 10MHz (99% BW)

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

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



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



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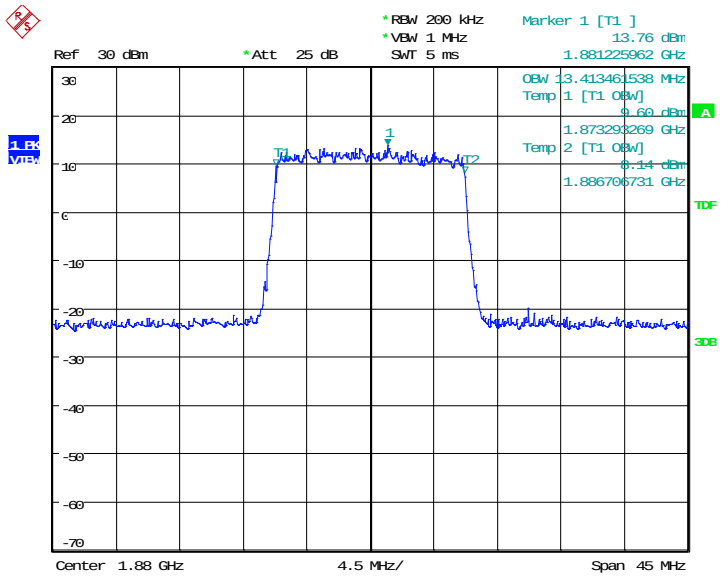
LTE band 2, 15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1880.0	QPSK	16QAM
	13413.46	13413.46

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



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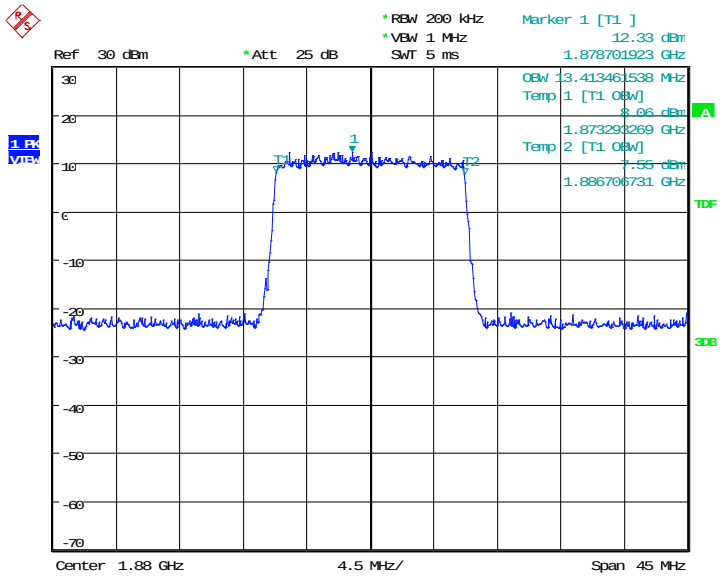
LTE band 2, 15MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 12:18:01

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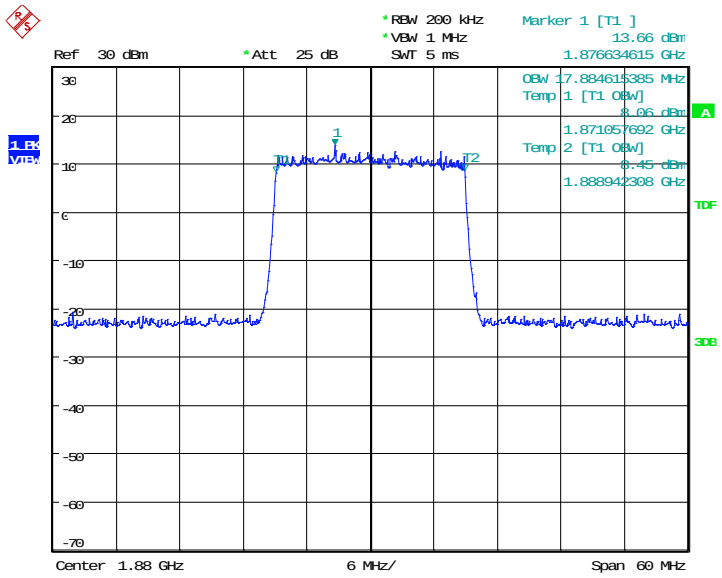
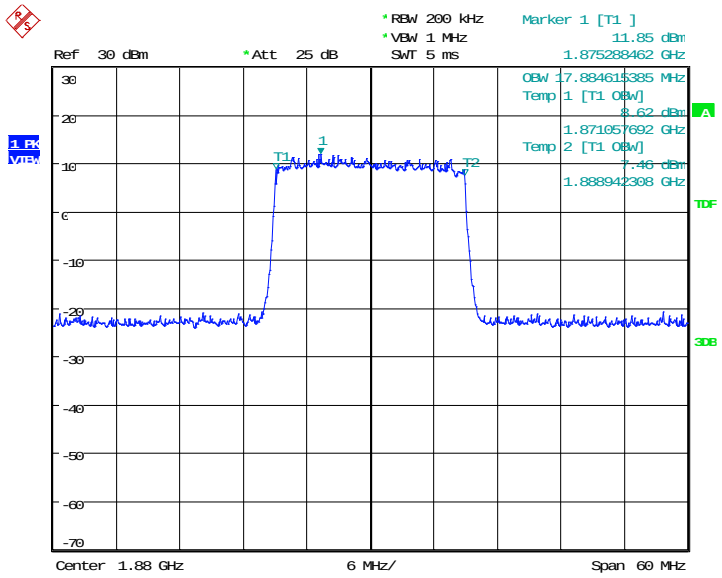
LTE band 2, 20MHz (99% BW)

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

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



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



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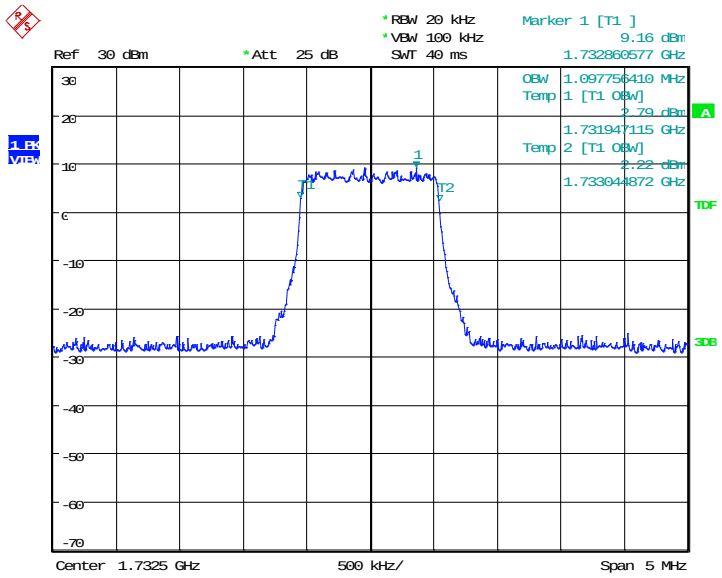
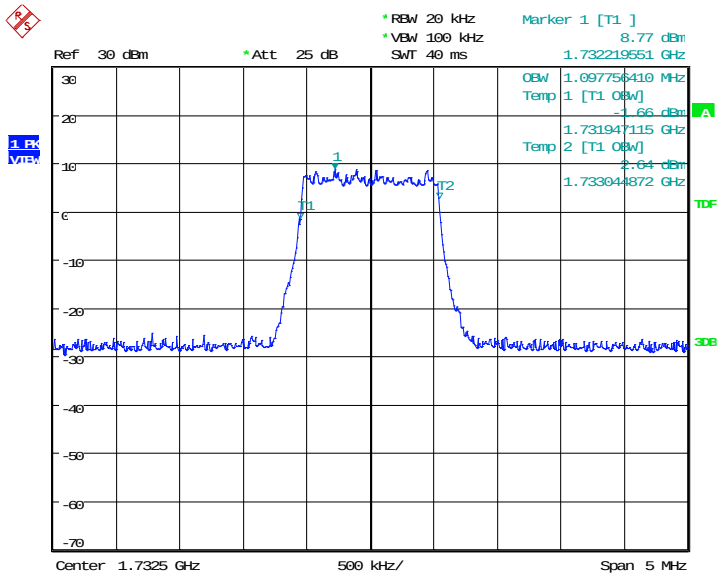
LTE band 4, 1.4MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1732.5	QPSK	16QAM
	1097.76	1097.76

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



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



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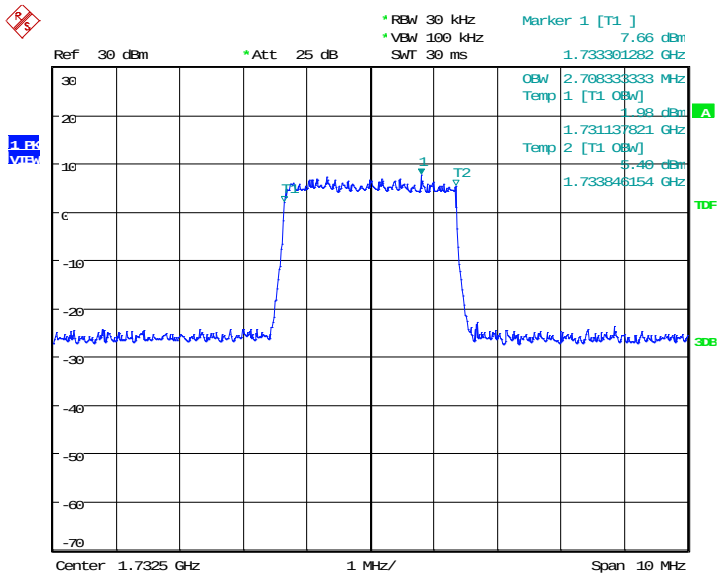
LTE band 4, 3MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1732.5	QPSK	16QAM
	2708.33	2708.33

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



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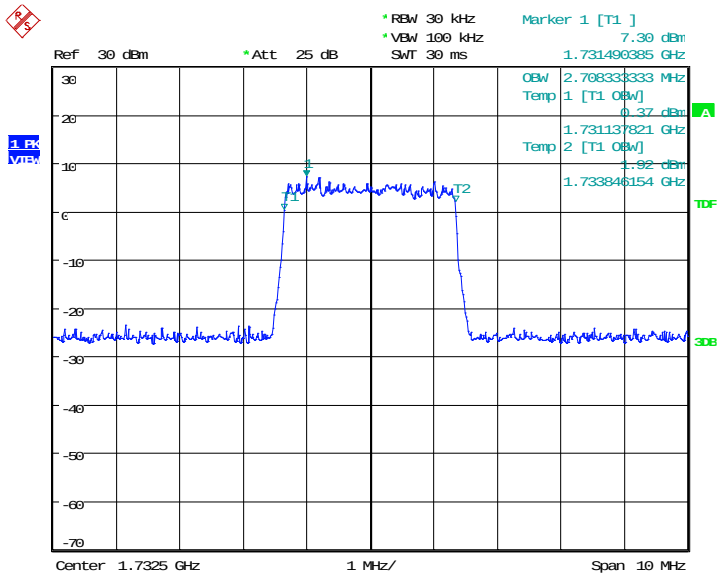
LTE band 4, 3MHz Bandwidth, 16QAM (99% BW)



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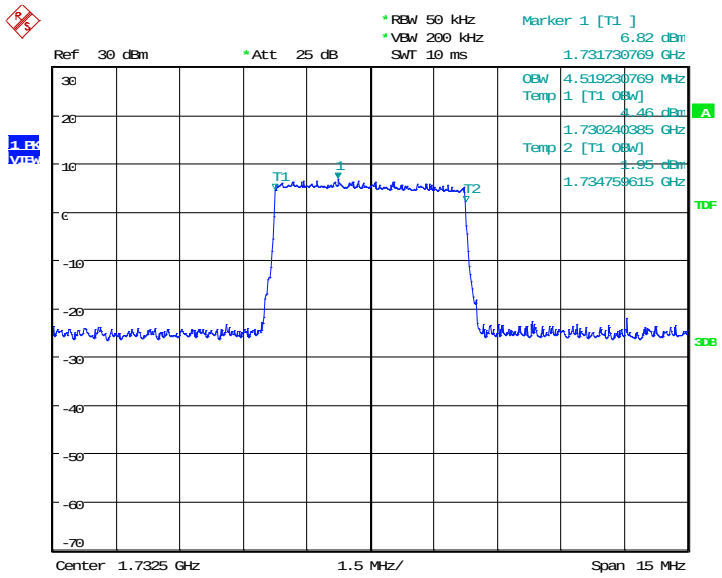
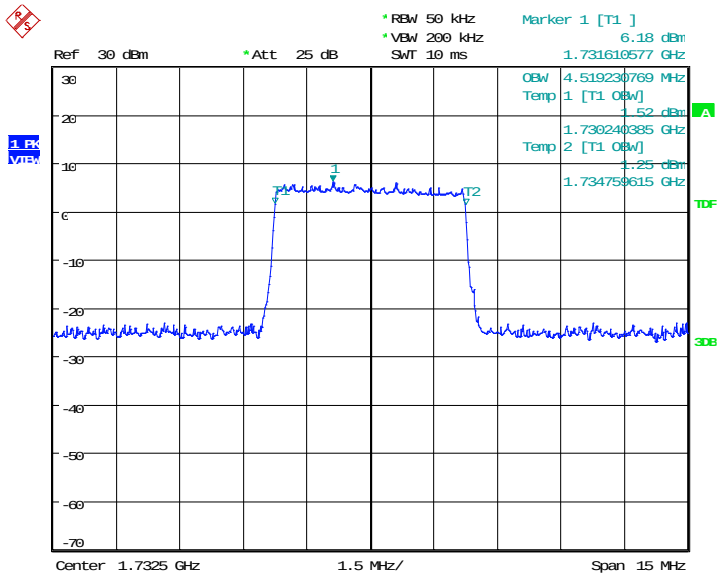
LTE band 4, 5MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1732.5	QPSK	16QAM
	4519.23	4519.23

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



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



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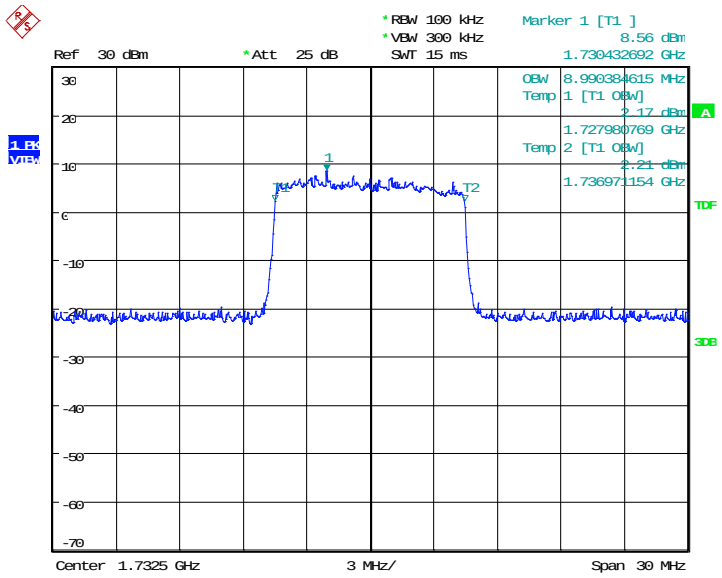
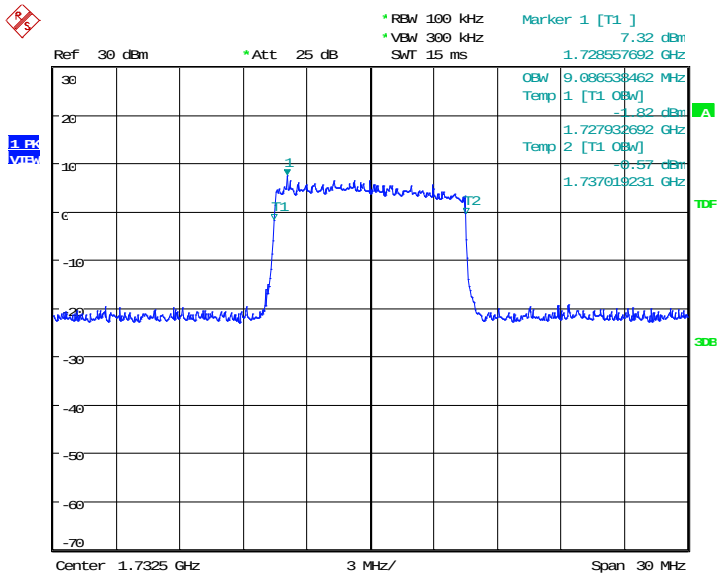
LTE band 4, 10MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1732.5	QPSK	16QAM
	8990.38	9086.54

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



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



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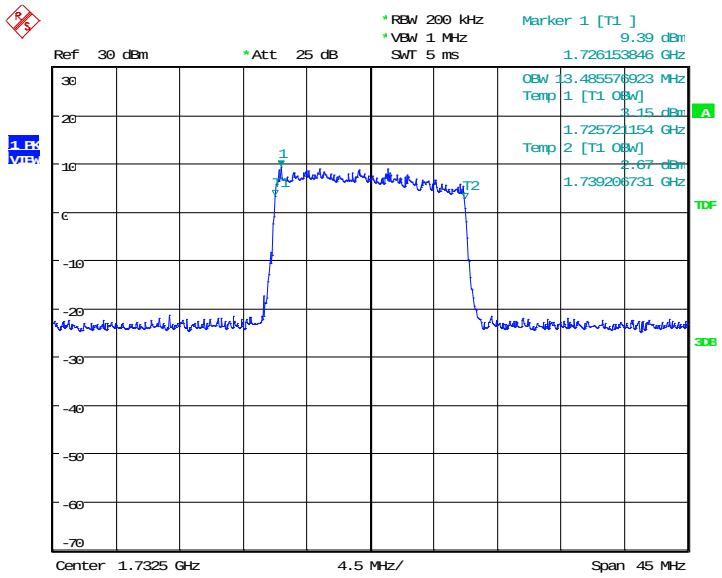
LTE band 4, 15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1732.5	QPSK	16QAM
	13485.58	13485.58

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



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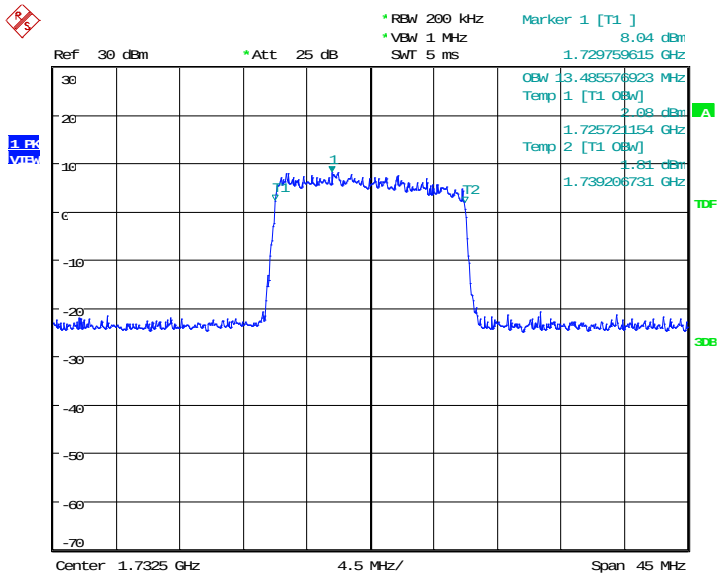
LTE band 4, 15MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 12:31:53

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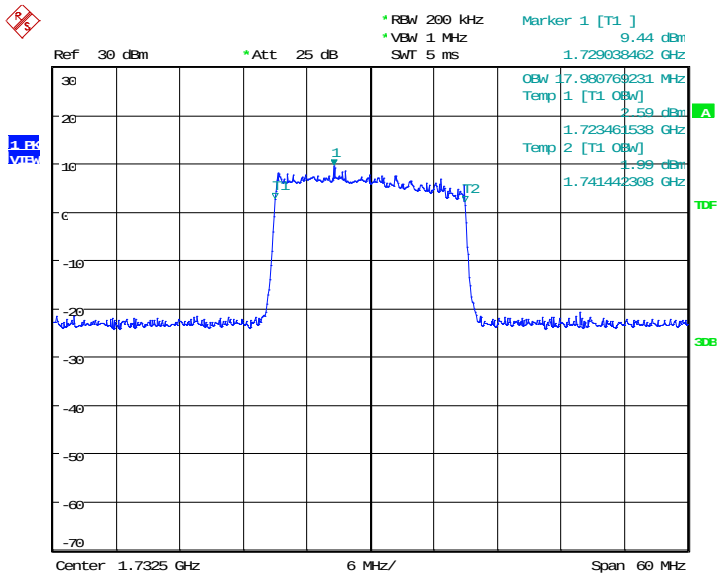
LTE band 4, 20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1732.5	QPSK	16QAM
	17980.77	17980.77

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



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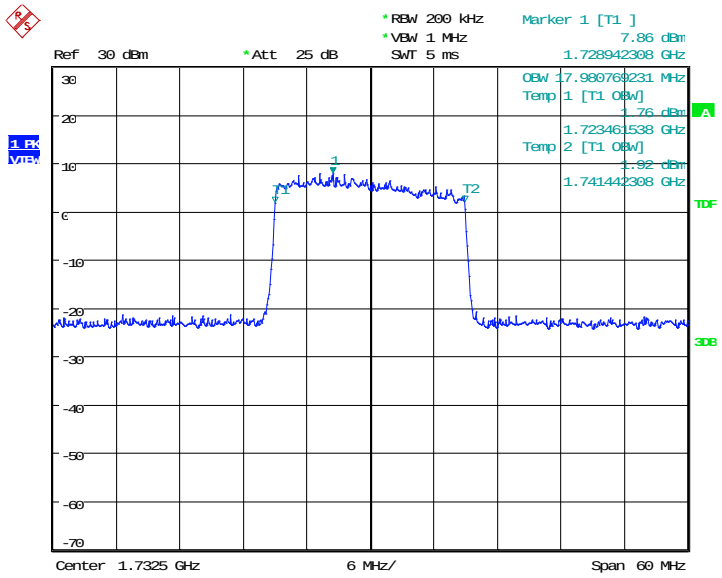
LTE band 4, 20MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 12:34:11

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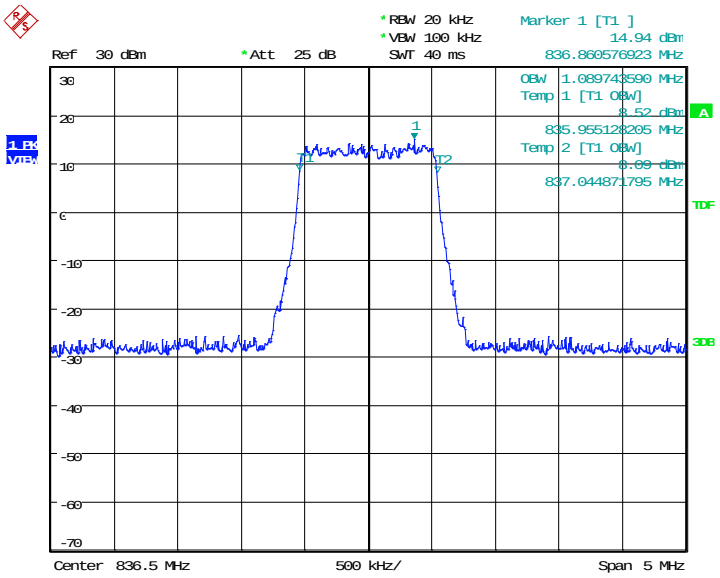
LTE band 5, 1.4MHz (99% BW)

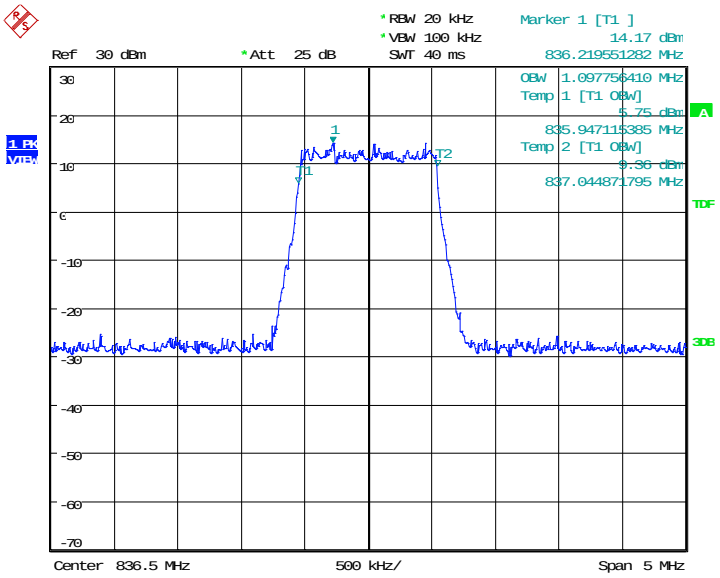
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
836.5	QPSK	16QAM
	1089.74	1097.76

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



Date: 4.SEP.2020 11:59:22

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



Date: 4.SEP.2020 11:59:35

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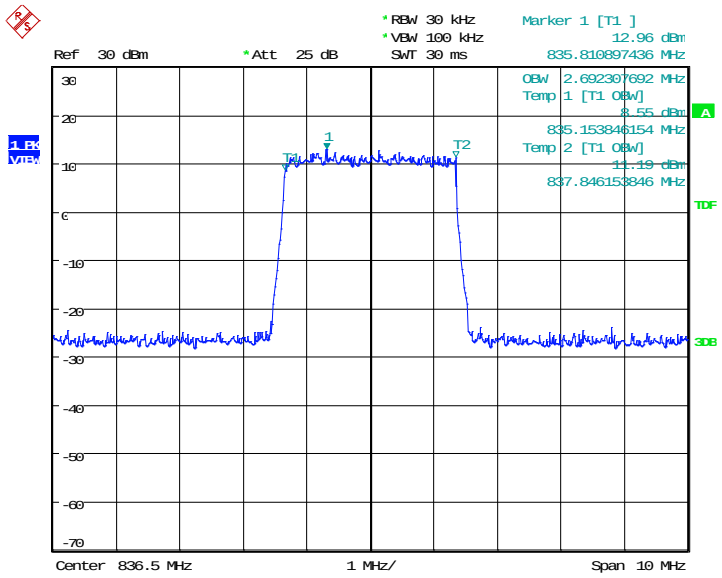
LTE band 5, 3MHz (99% BW)

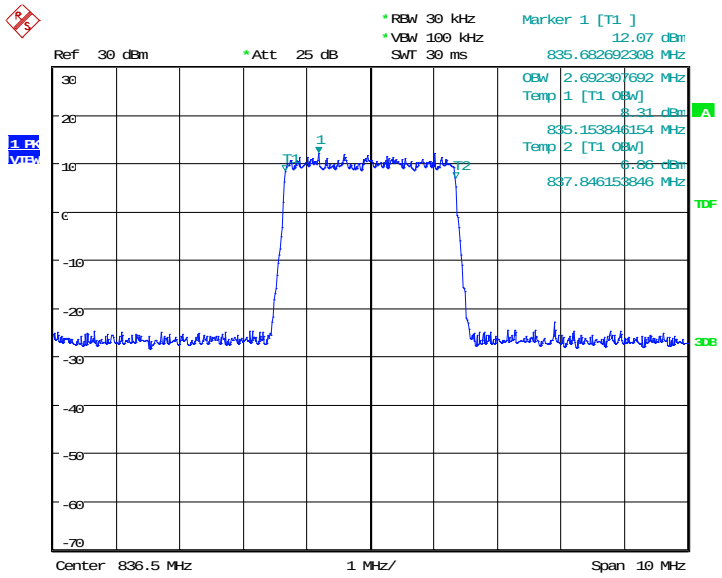
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
836.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 4.SEP.2020 12:01:39

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



Date: 4.SEP.2020 12:01:53

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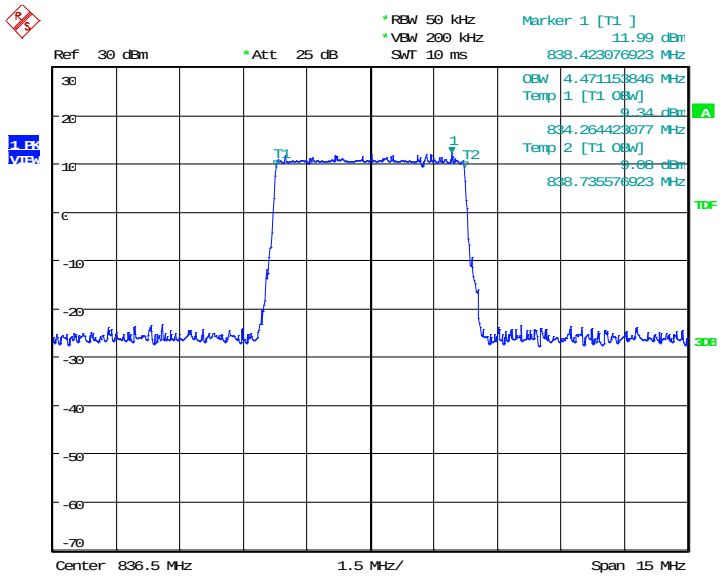
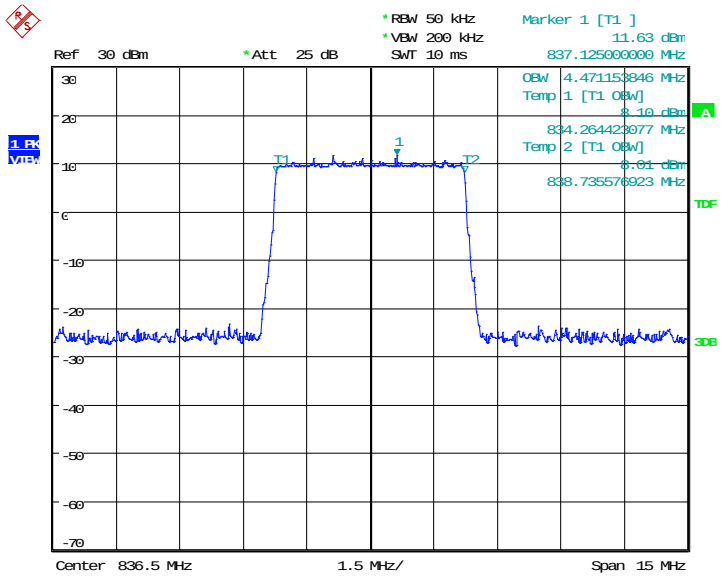
LTE band 5, 5MHz (99% BW)

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

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



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



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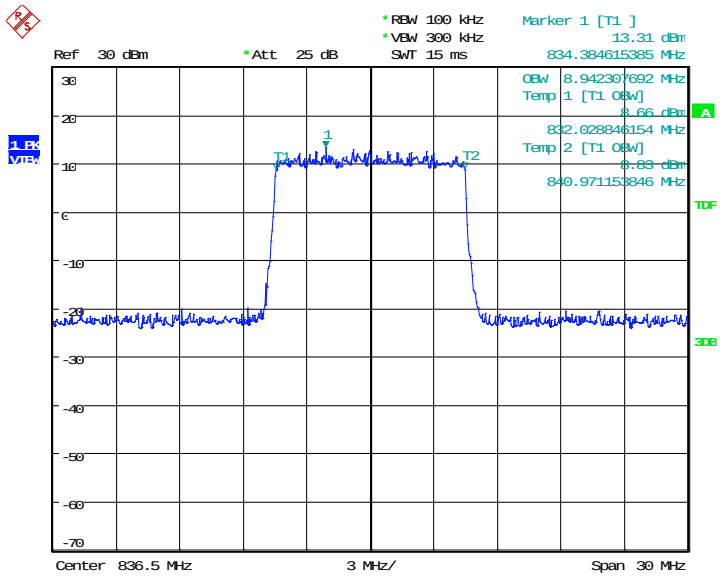
LTE band 5, 10MHz (99% BW)

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

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



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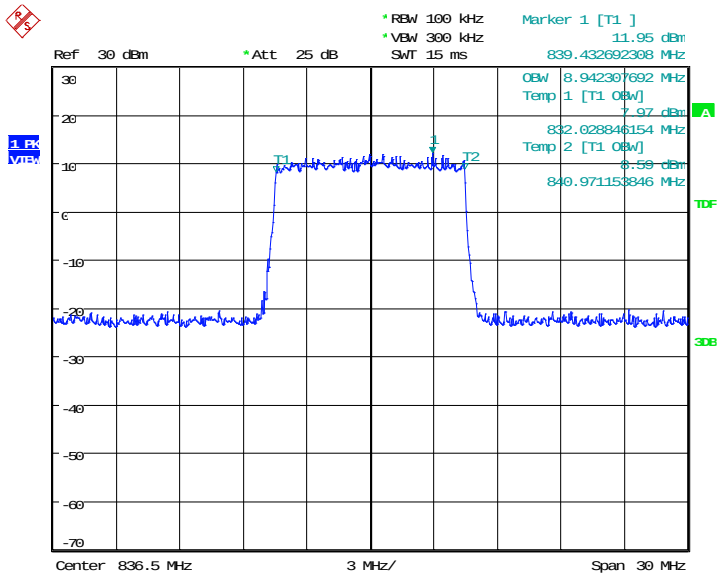
LTE band 5, 10MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 12:06:28

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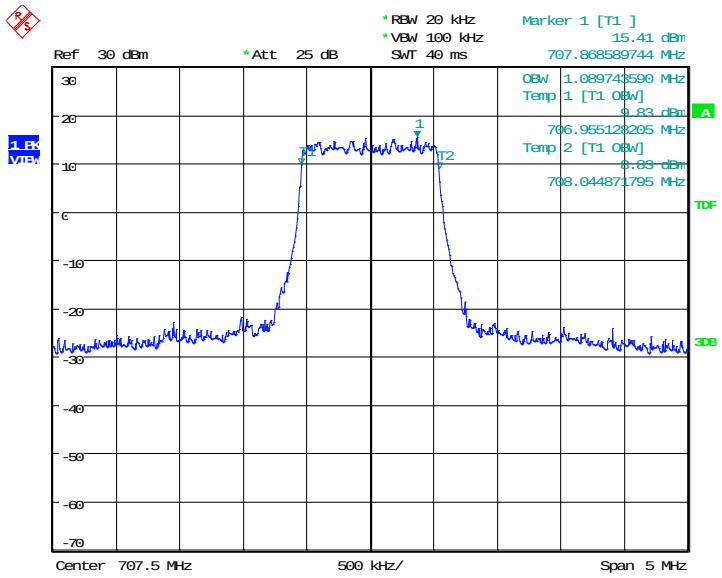
LTE band 12, 1.4MHz (99% BW)

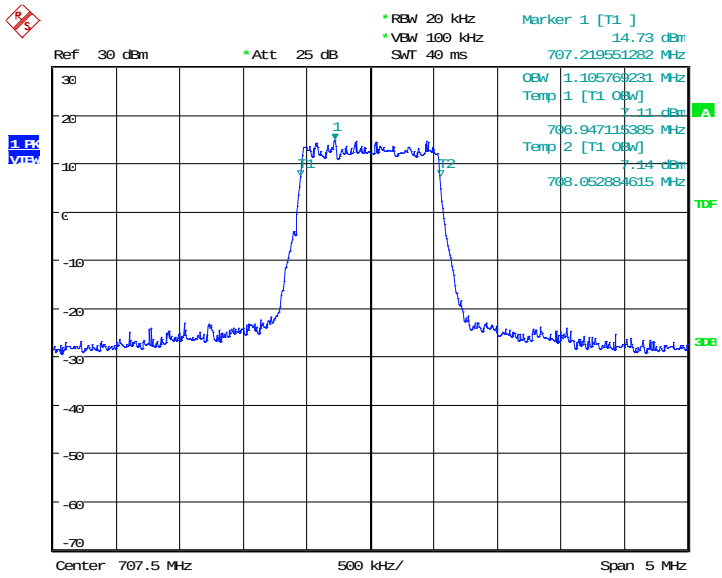
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
707.5	QPSK	16QAM
	1089.74	1105.77

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



Date: 4.SEP.2020 12:36:19

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



Date: 4.SEP.2020 12:36:33

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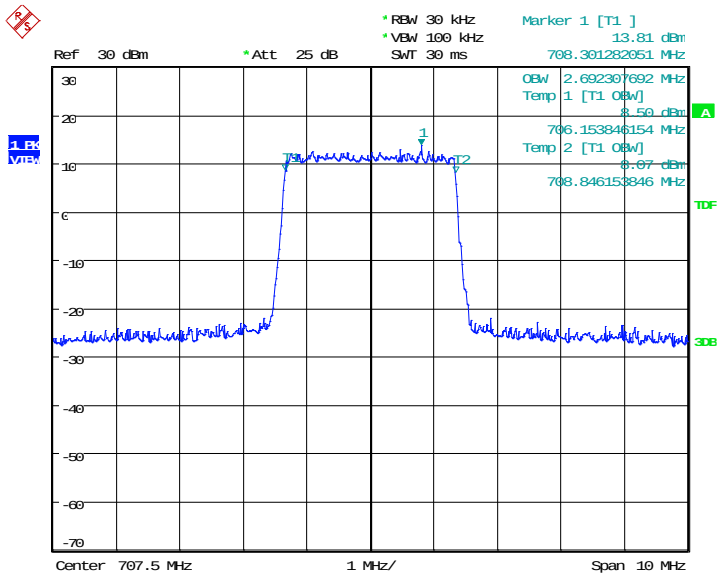
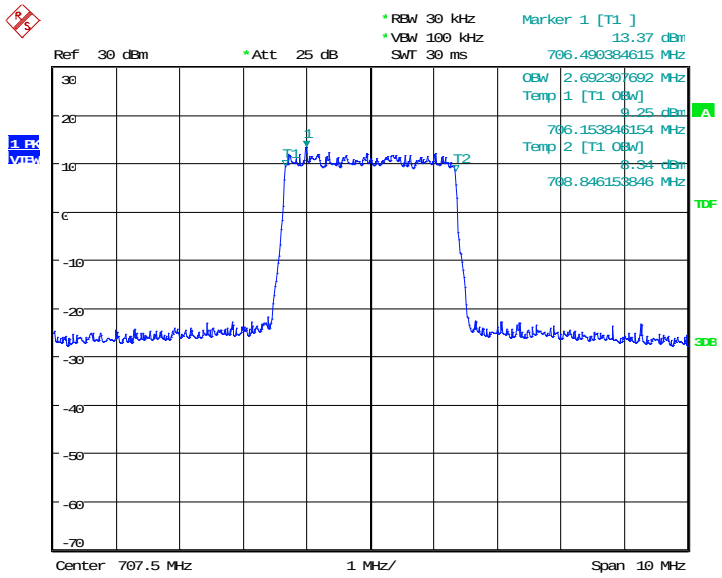
LTE band 12, 3MHz (99% BW)

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

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



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



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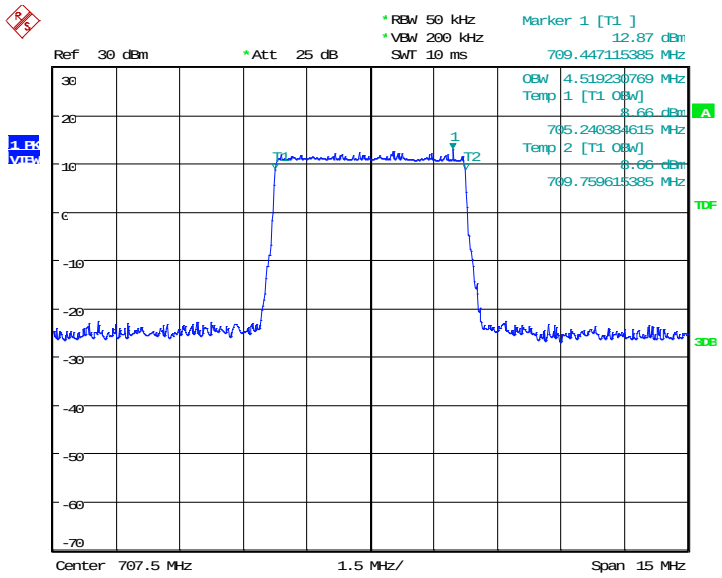
LTE band 12, 5MHz (99% BW)

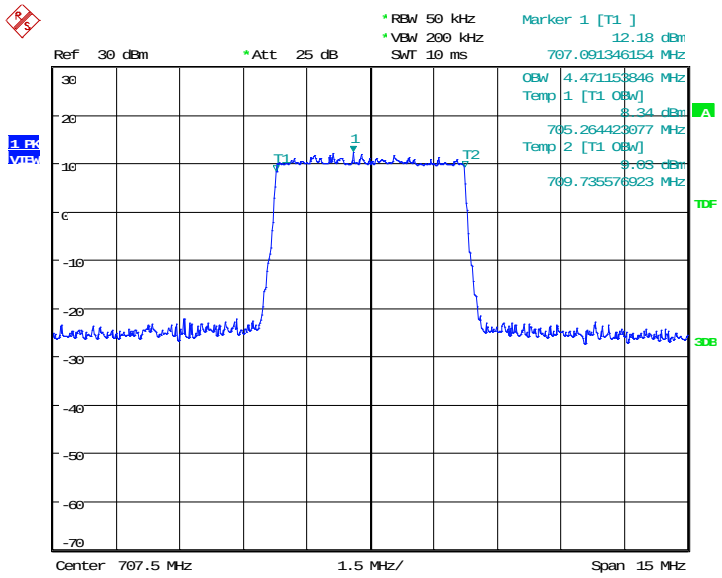
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
707.5	QPSK	16QAM
	4519.23	4471.15

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



Date: 4.SEP.2020 12:40:54

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



Date: 4.SEP.2020 12:41:08

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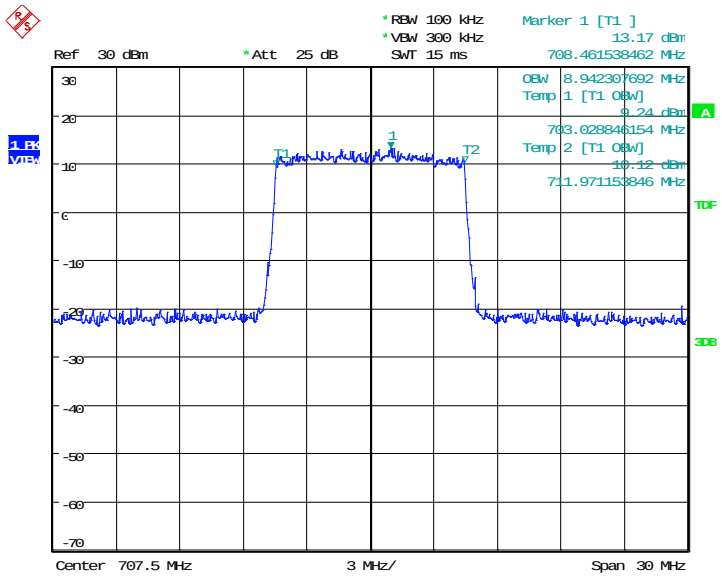
LTE band 12, 10MHz (99% BW)

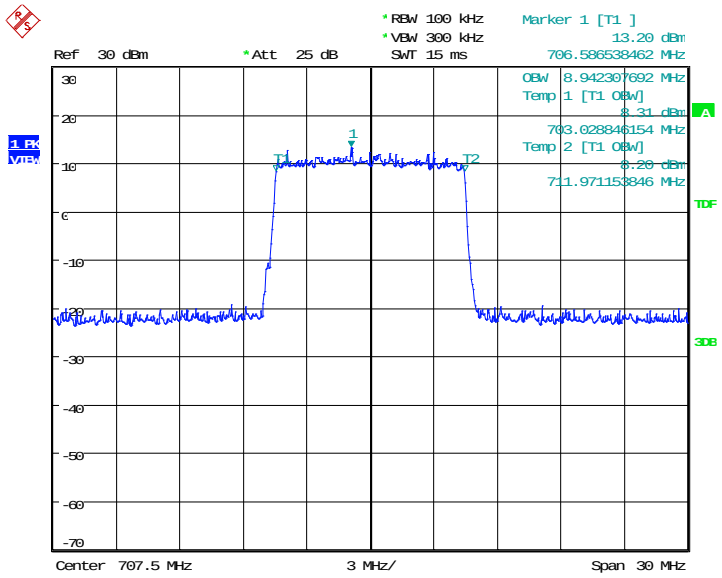
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
707.5	QPSK	16QAM
	8942.31	8942.31

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



Date: 4.SEP.2020 12:43:12

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



Date: 4.SEP.2020 12:43:26

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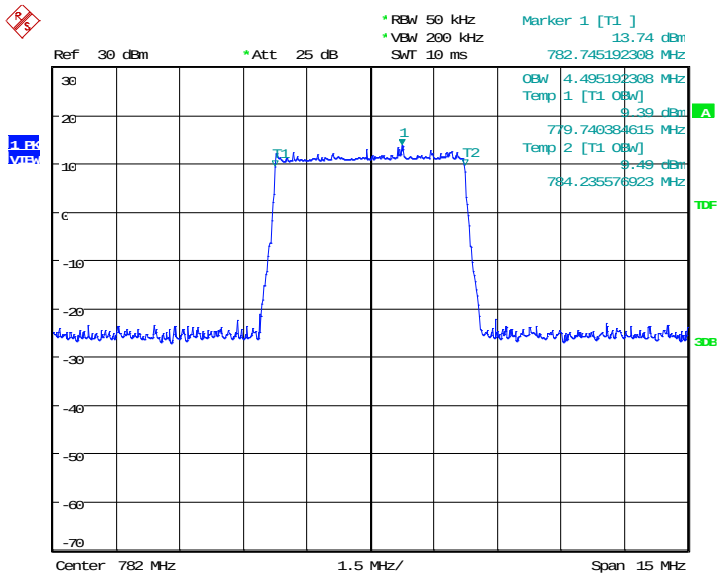
LTE band 13, 5MHz (99% BW)

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

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



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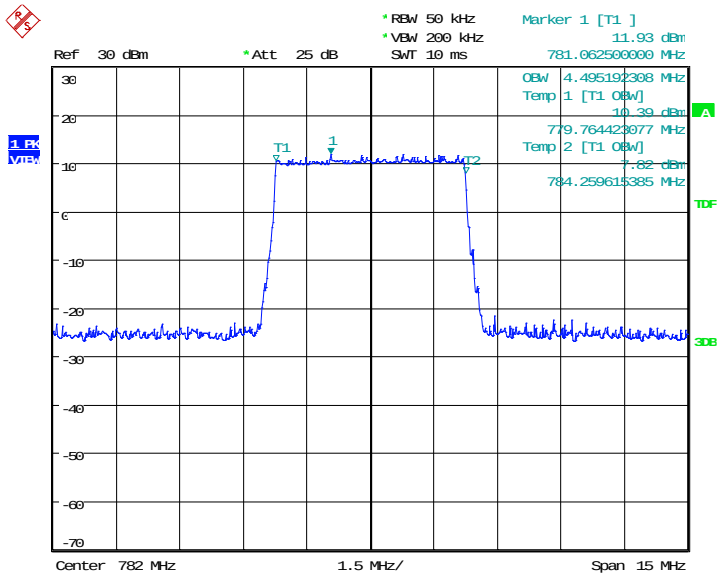
LTE band 13, 5MHz Bandwidth,16QAM (99% BW)



Date: 4.SEP.2020 11:25:03

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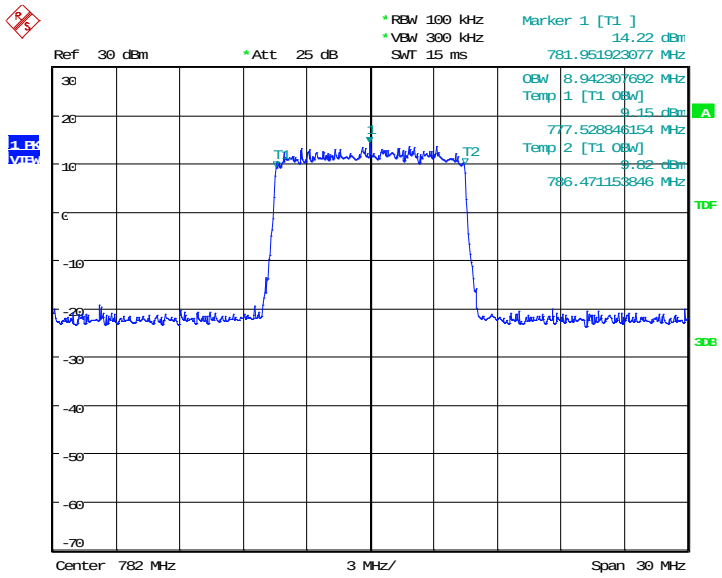
LTE band 13, 10MHz (99% BW)

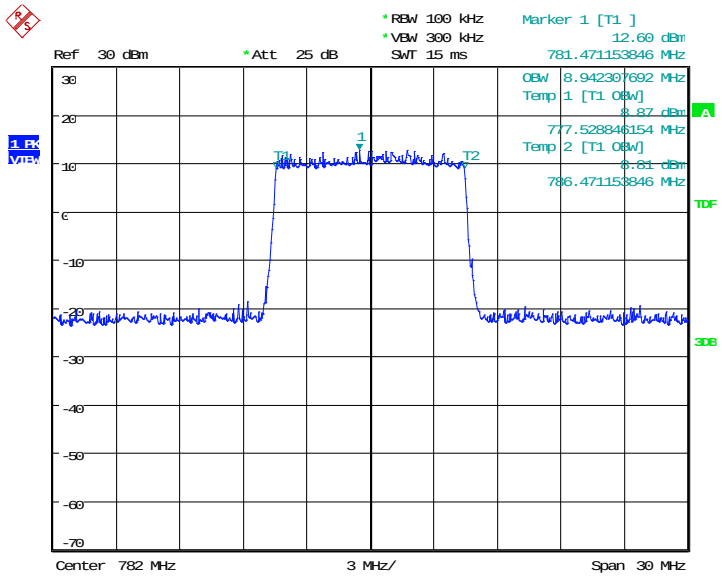
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
782.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 4.SEP.2020 11:55:36

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



Date: 4.SEP.2020 11:55:50

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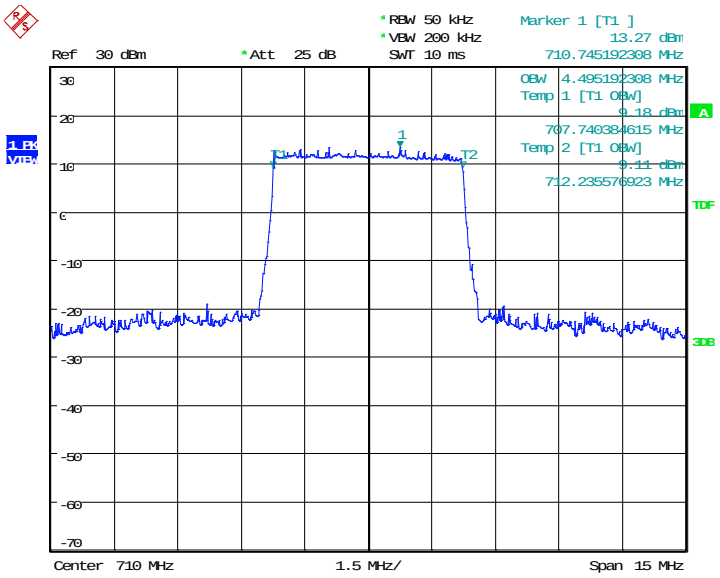
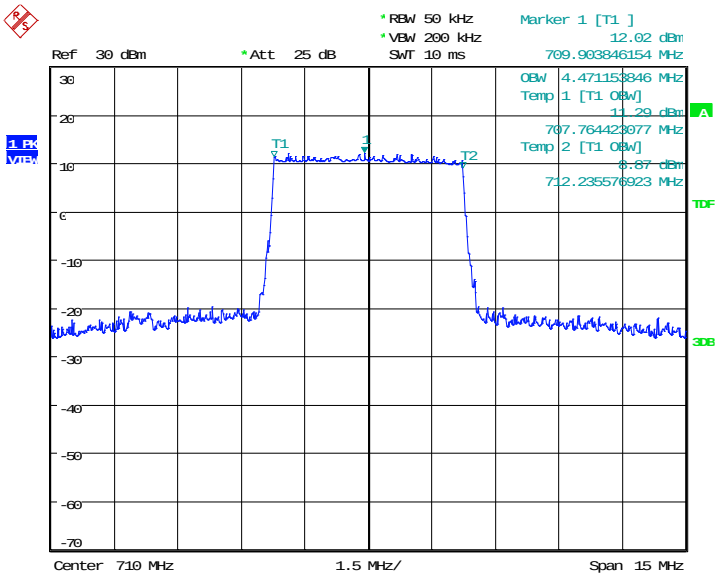
LTE band 17, 5MHz (99% BW)

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

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



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



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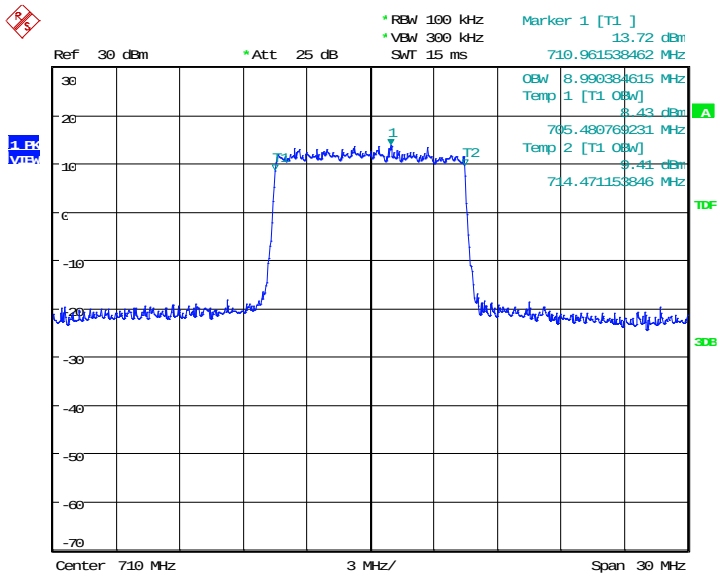
LTE band 17, 10MHz (99% BW)

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

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



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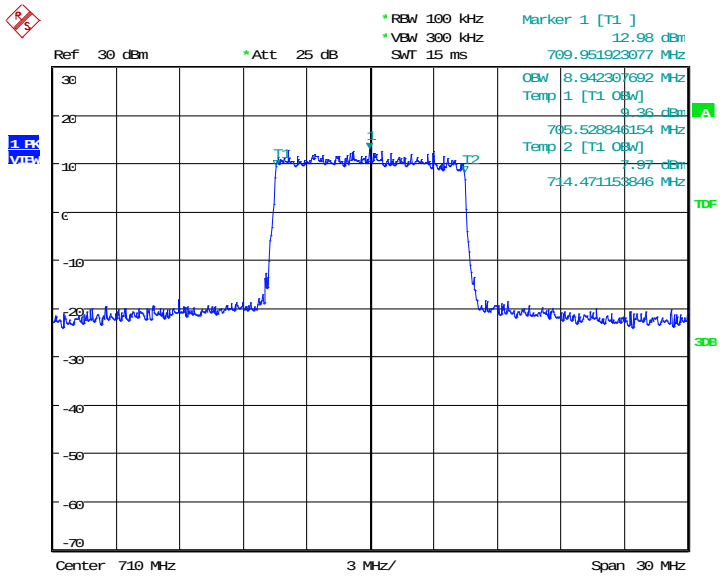
LTE band 17, 10MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 12:48:05

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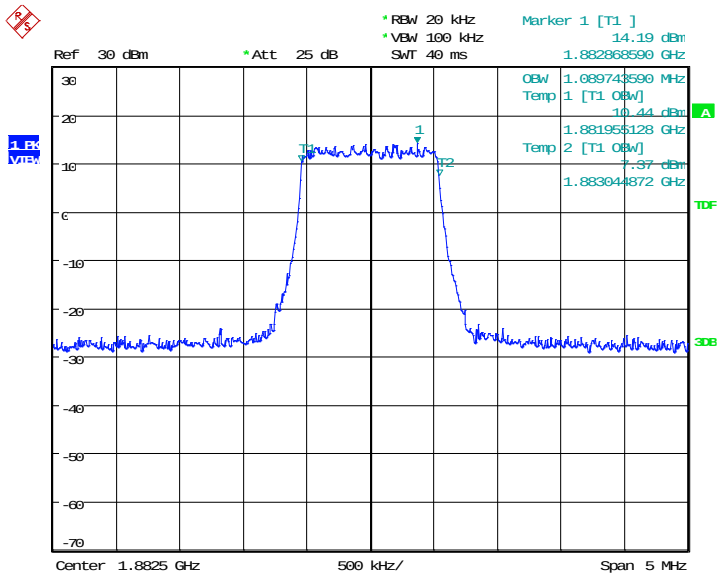
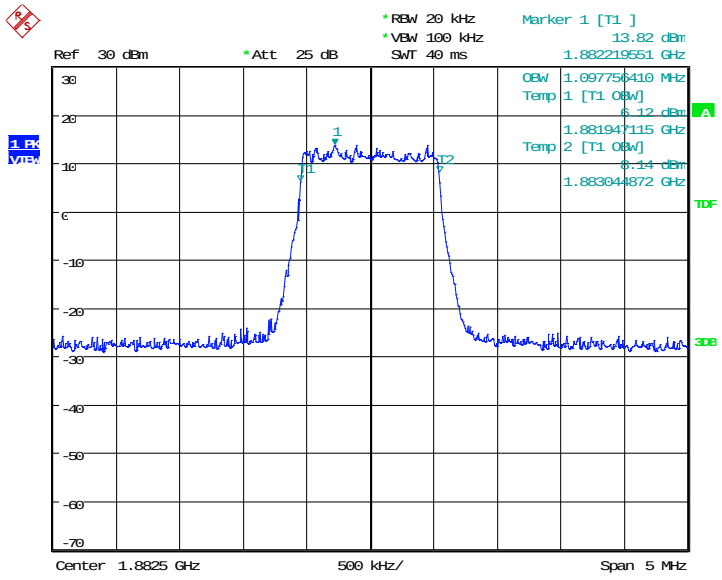
LTE band 25, 1.4MHz (99% BW)

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

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



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



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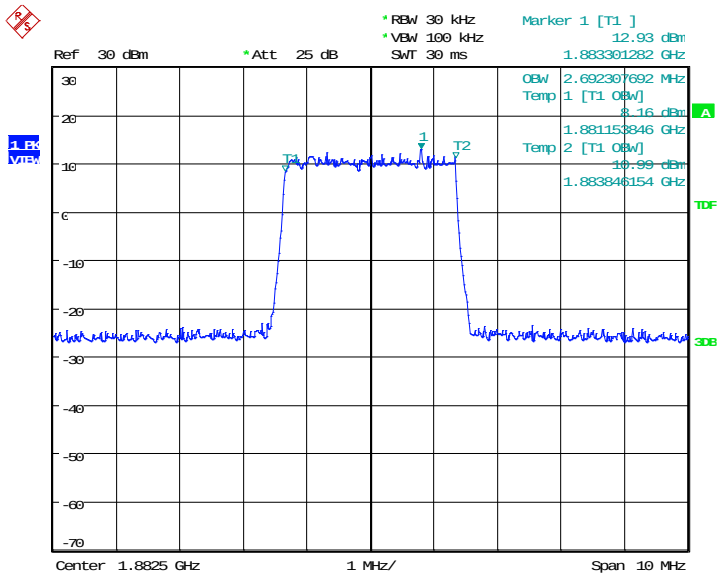
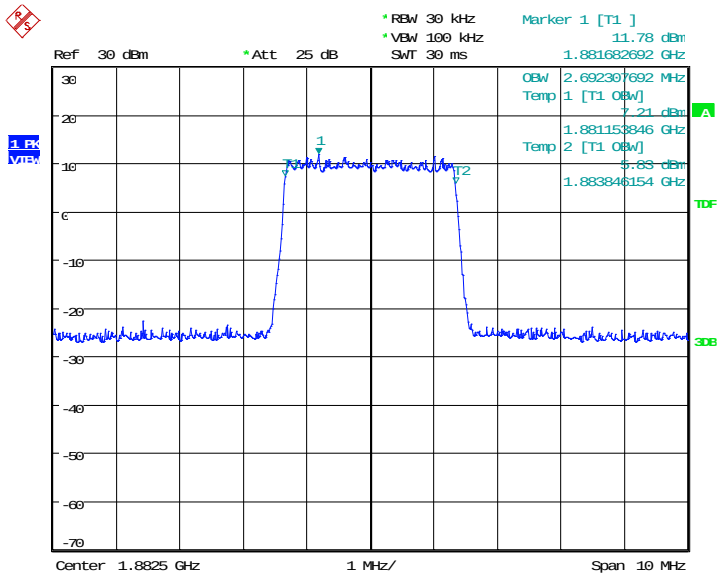
LTE band25, 3MHz (99% BW)

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

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



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



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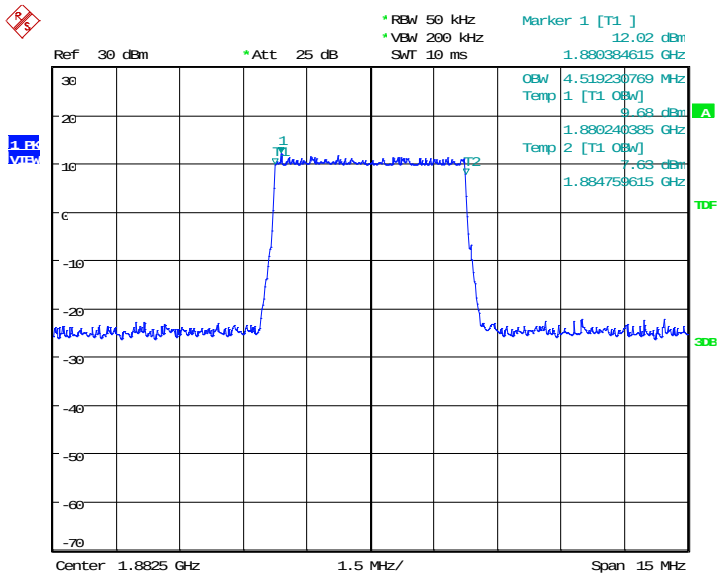
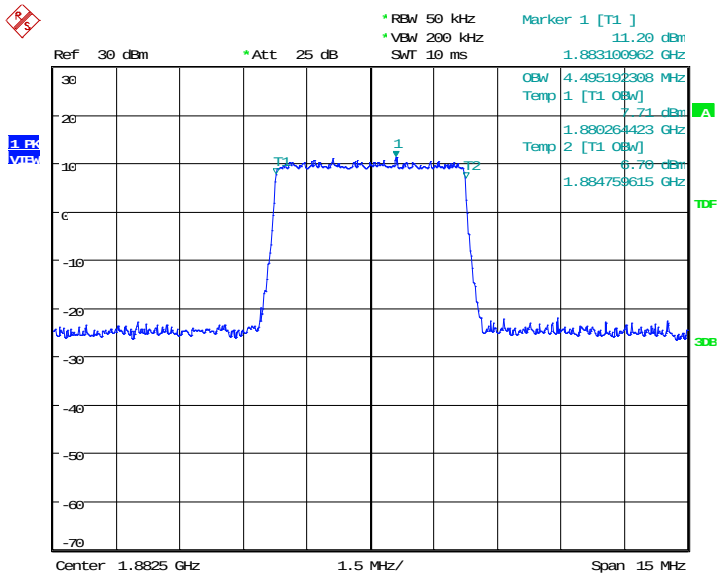
LTE band 25, 5MHz (99% BW)

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

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



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



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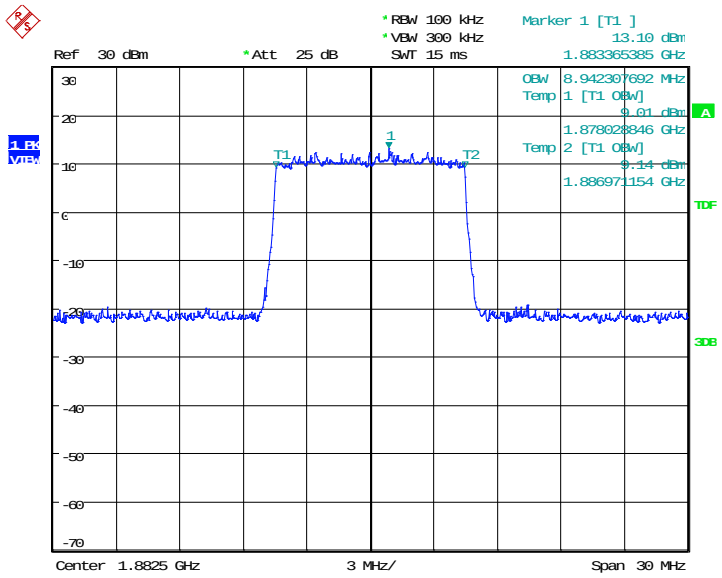
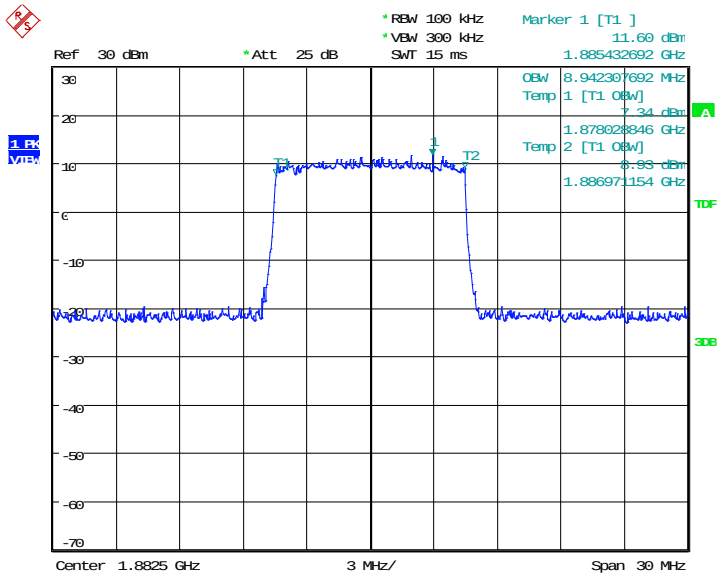
LTE band 25, 10MHz (99% BW)

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

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



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



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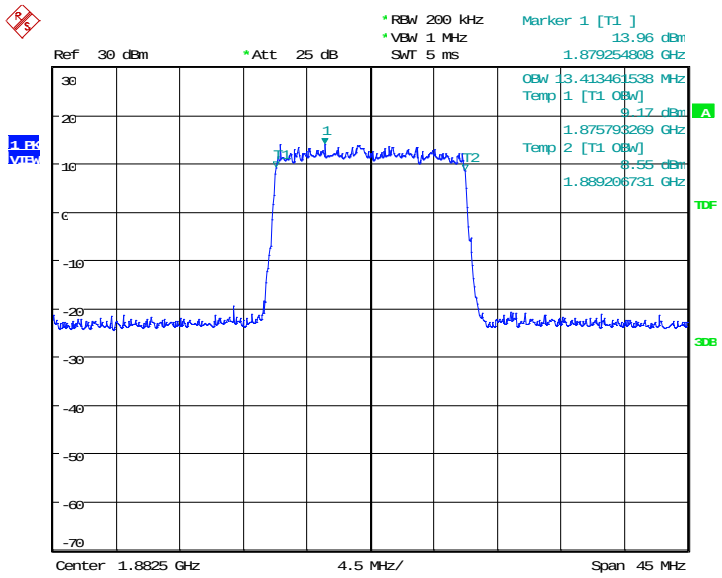
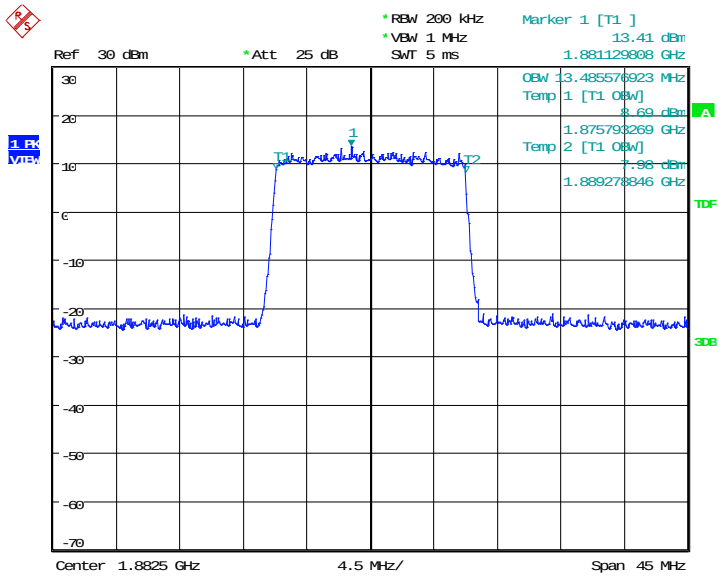
LTE band 25, 15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1882.5	QPSK	16QAM
	13413.46	13485.58

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



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



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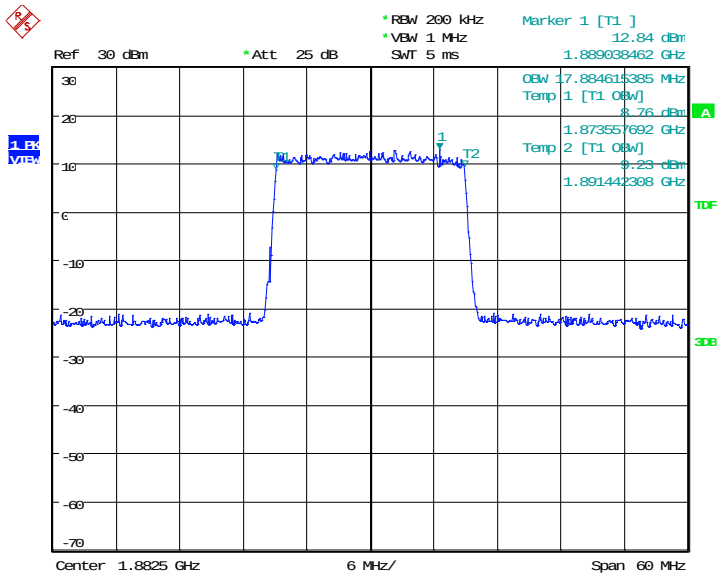
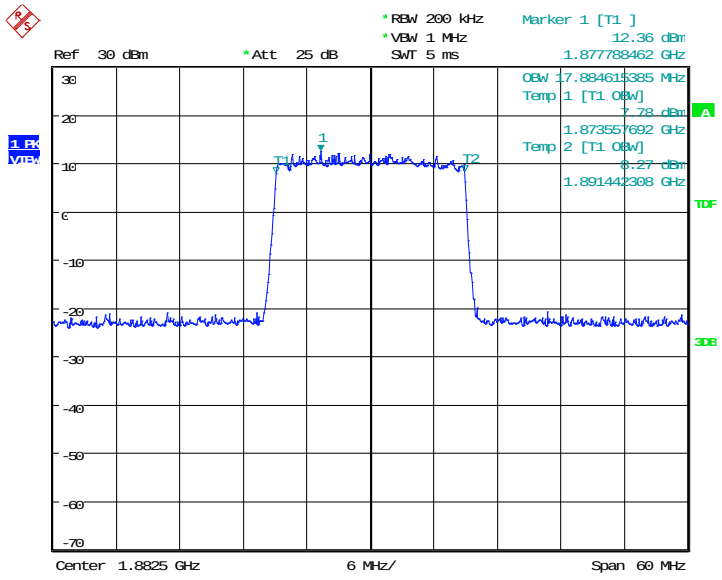
LTE band 25, 20MHz (99% BW)

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

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



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



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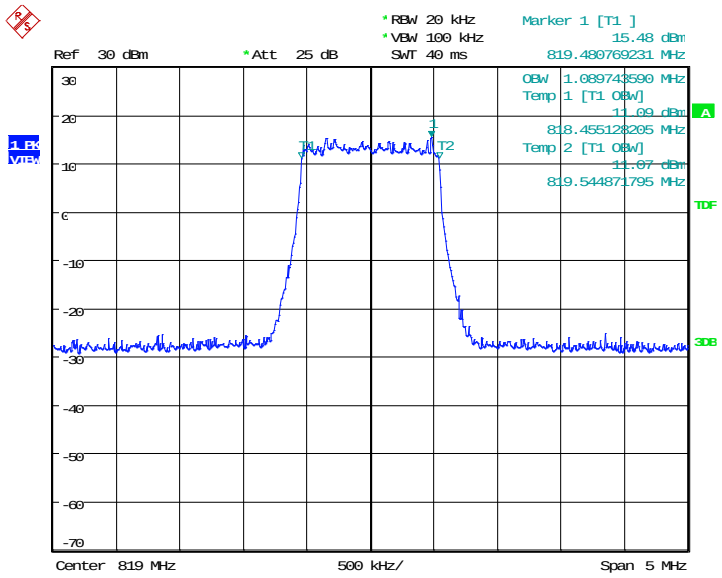
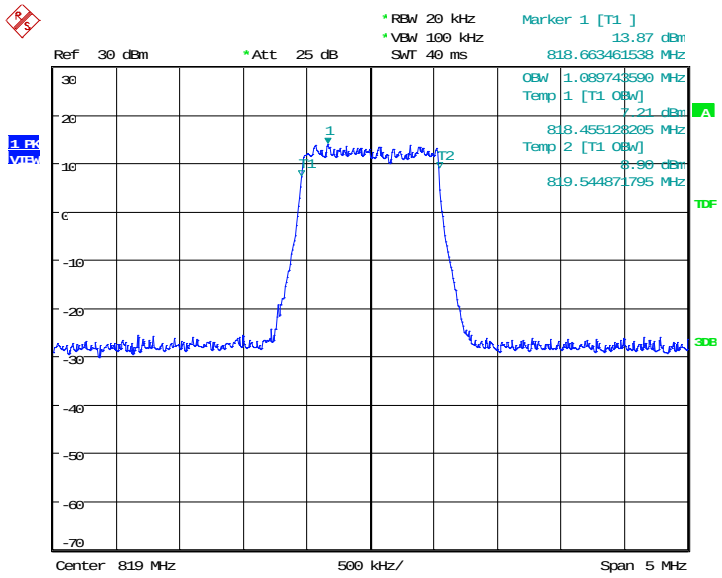
LTE band 26(814MHz-824MHz), 1.4MHz (99% BW)

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

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



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



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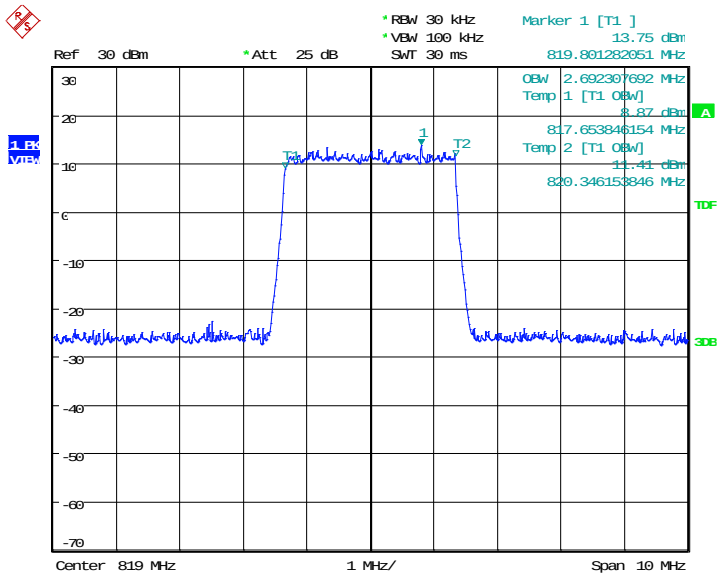
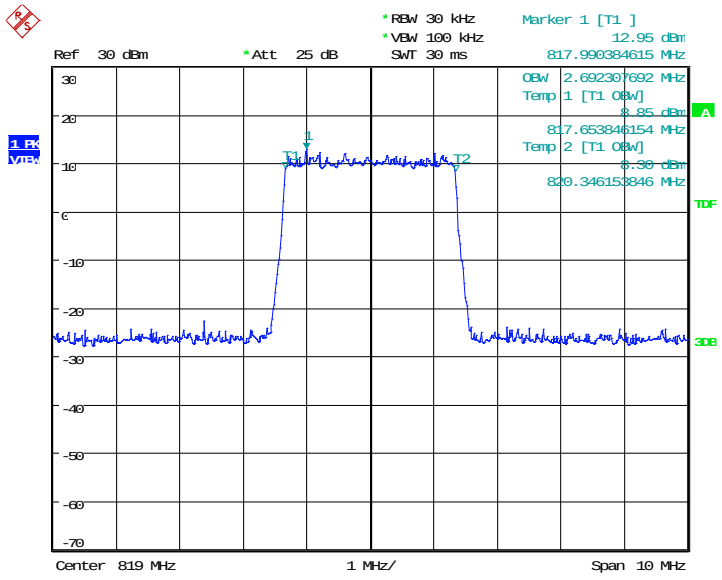
LTE band 26(814MHz-824MHz), 3MHz (99% BW)

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

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



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



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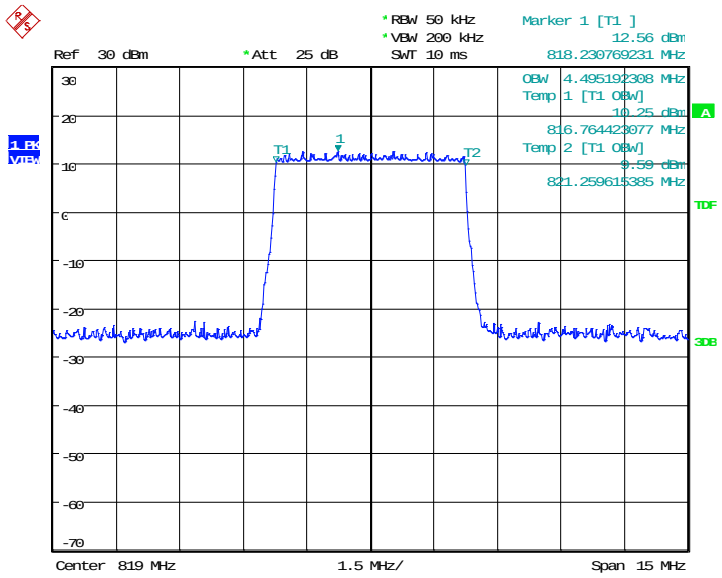
LTE band 26(814MHz-824MHz), 5MHz (99% BW)

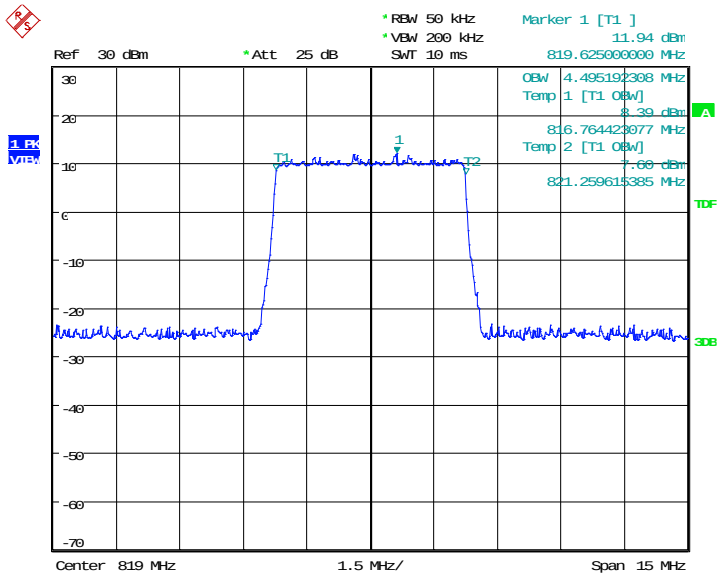
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
819.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 4.SEP.2020 13:29:24

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



Date: 4.SEP.2020 13:29:37

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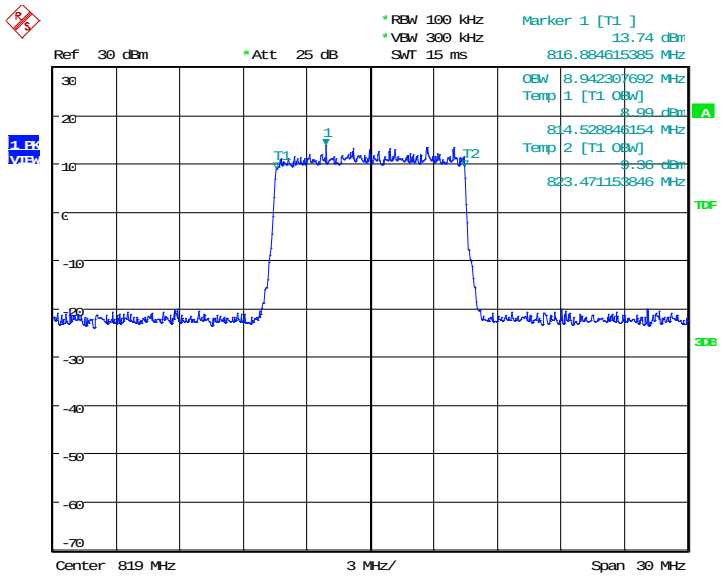
LTE band 26(814MHz-824MHz), 10MHz (99% BW)

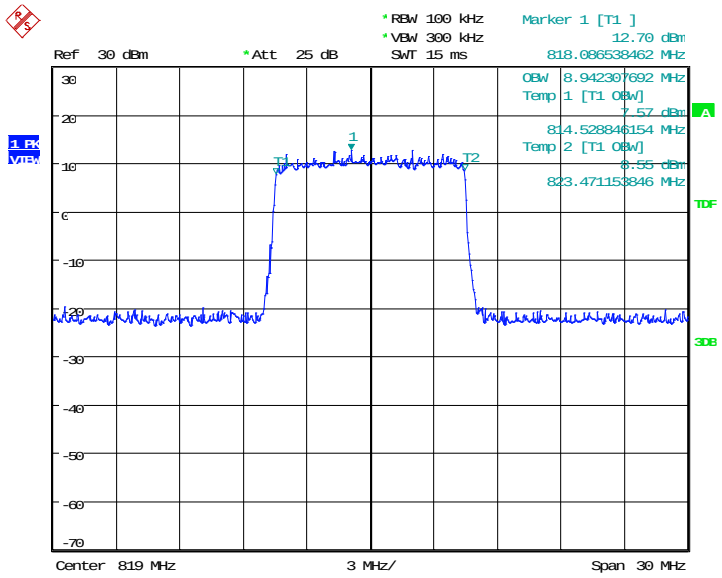
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
819.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 4.SEP.2020 13:31:41

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



Date: 4.SEP.2020 13:31:55

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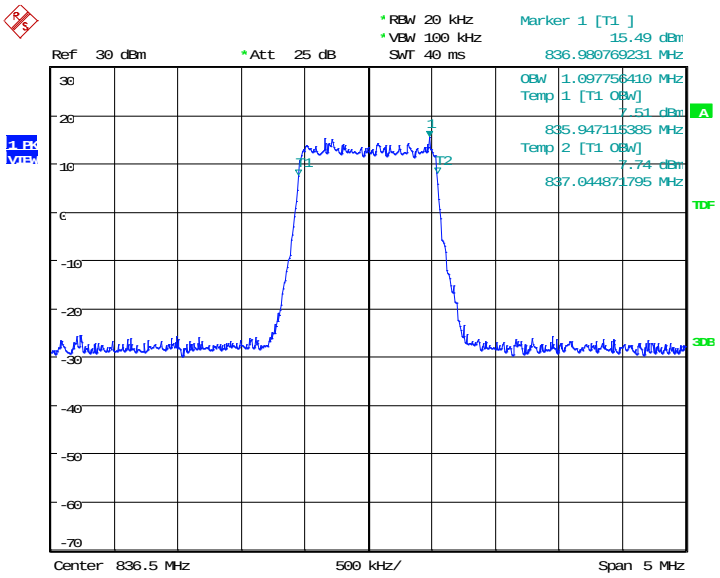
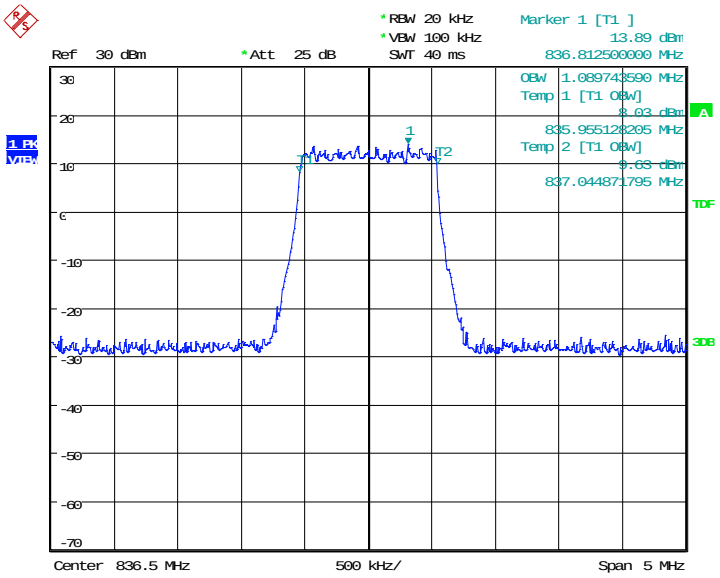
LTE band 26(824MHz-849MHz), 1.4MHz (99% BW)

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

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



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



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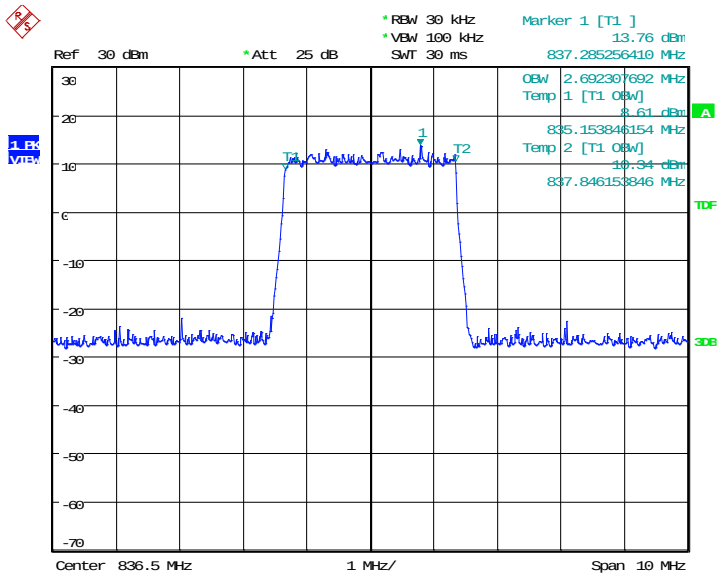
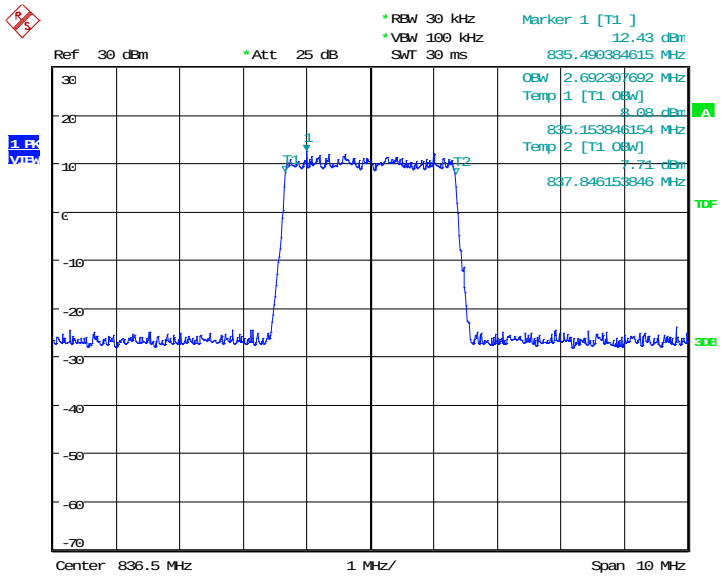
LTE band 26(824MHz-849MHz), 3MHz (99% BW)

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

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



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



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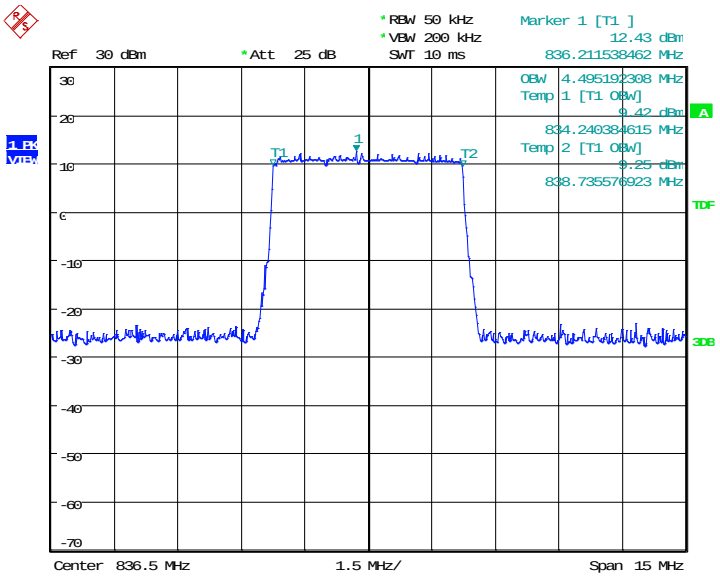
LTE band 26(824MHz-849MHz), 5MHz (99% BW)

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

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



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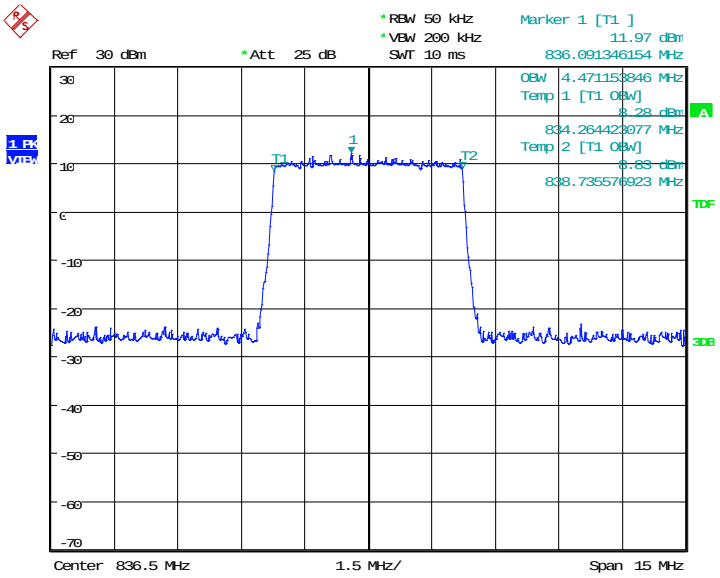
LTE band 26(824MHz-849MHz), 5MHz Bandwidth,16QAM (99% BW)



Date: 4.SEP.2020 13:18:08

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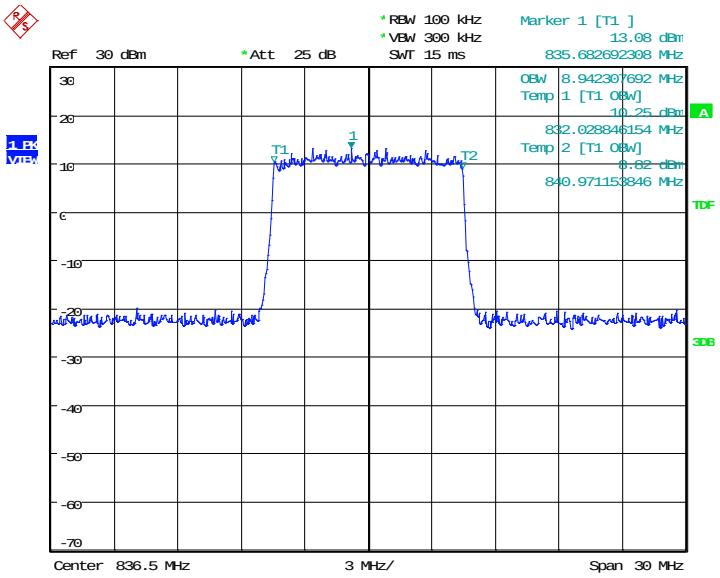
LTE band 26(824MHz-849MHz), 10MHz (99% BW)

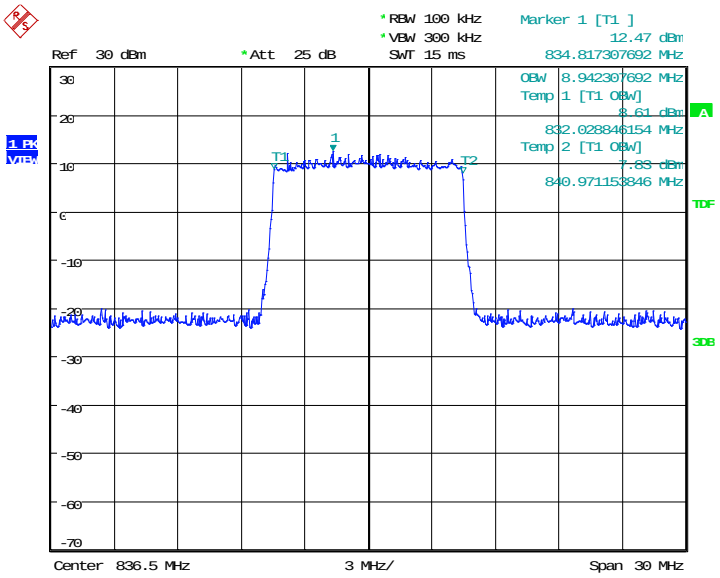
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
836.5	QPSK	16QAM
	8942.31	8942.31

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



Date: 4.SEP.2020 13:20:12

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



Date: 4.SEP.2020 13:20:26

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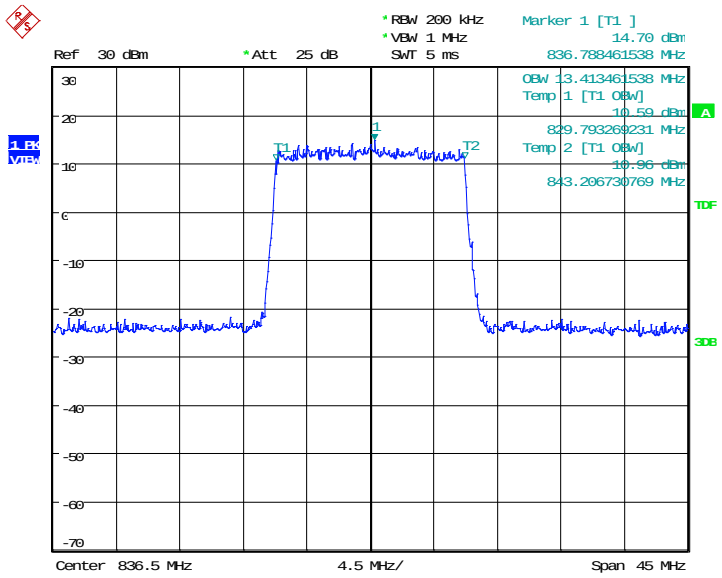
LTE band 26(824MHz-849MHz), 15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
836.5	QPSK	16QAM
	13413.46	13413.46

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



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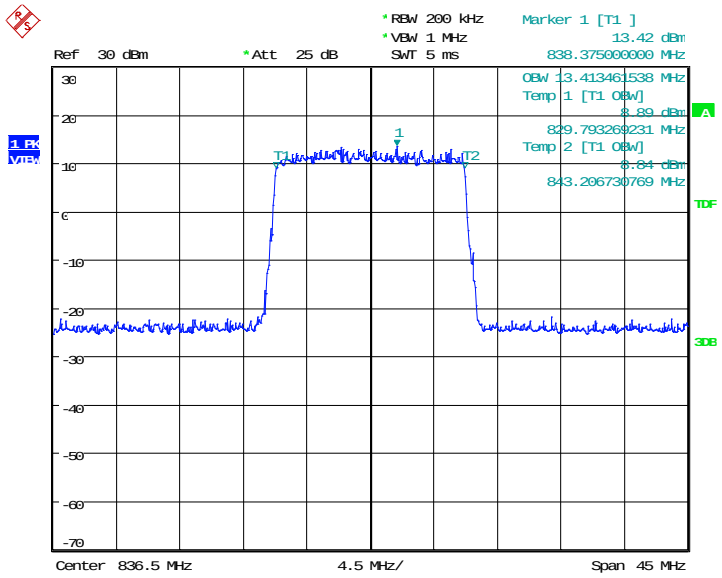
LTE band 26(824MHz-849MHz), 15MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 13:22:44

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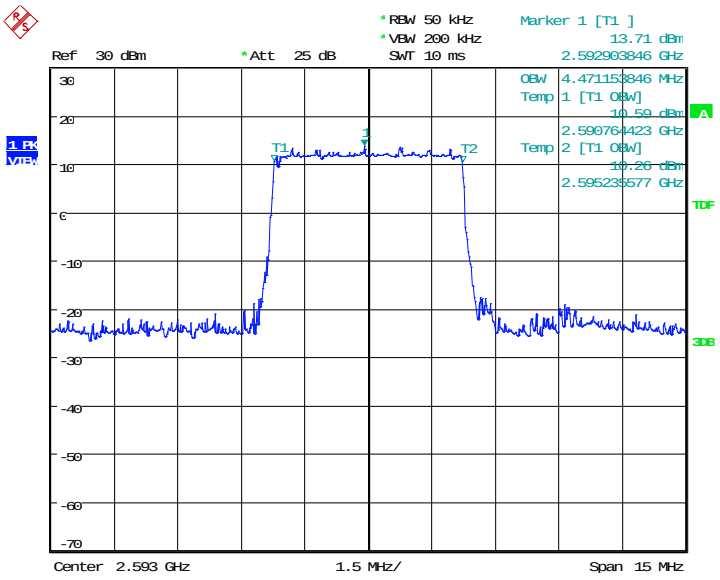
Normal Power

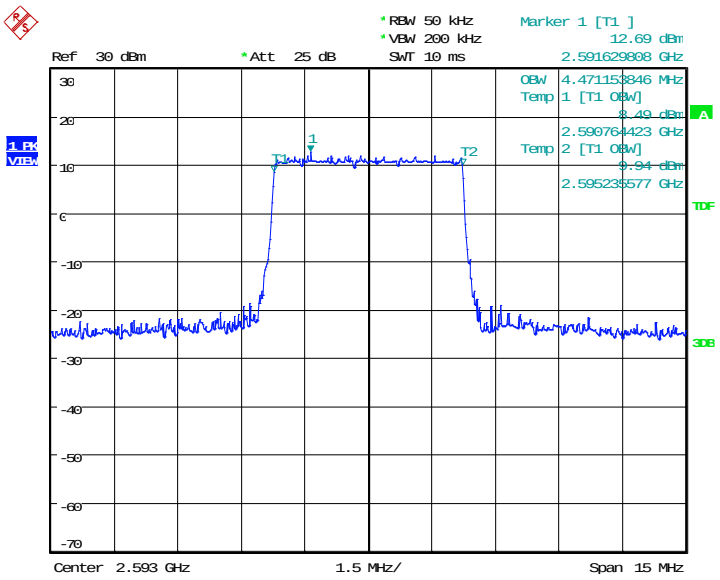
LTE band 41, 5MHz (99% BW)

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

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



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



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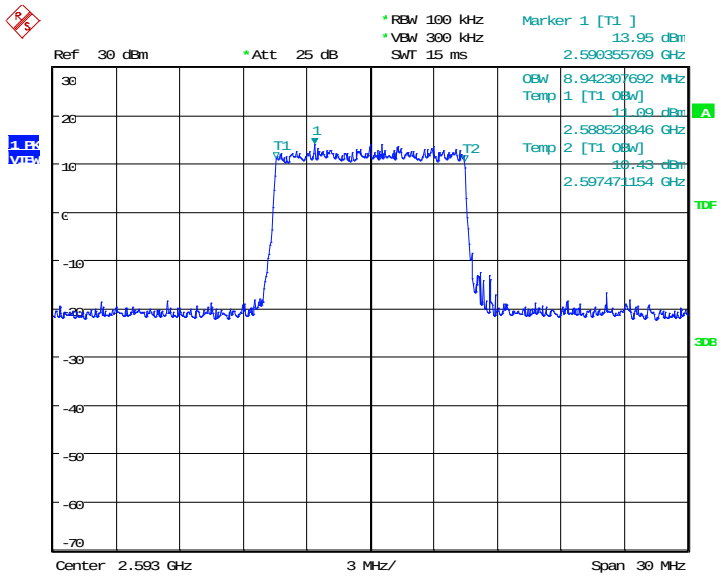
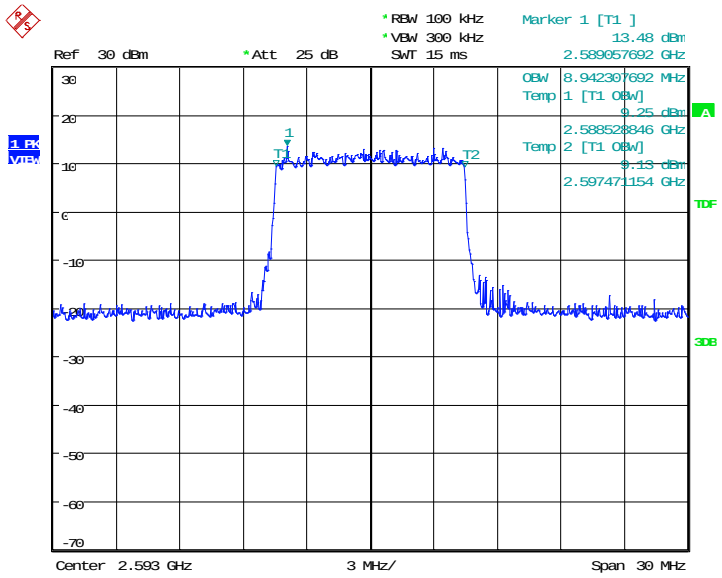
LTE band 41, 10MHz (99% BW)

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

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



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



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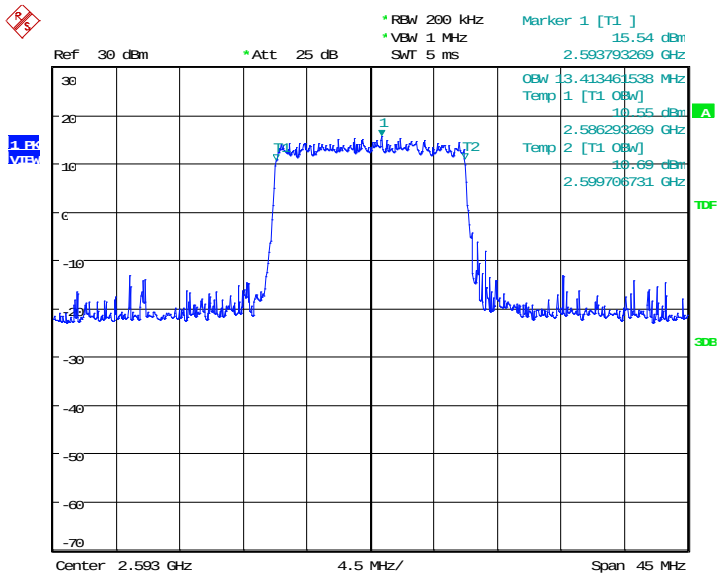
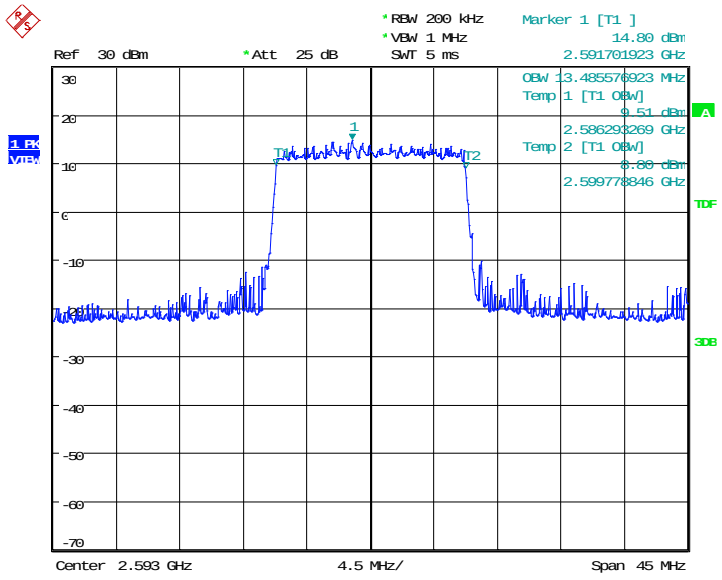
LTE band 41, 15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
2593.0	QPSK	16QAM
	13413.46	13485.58

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



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



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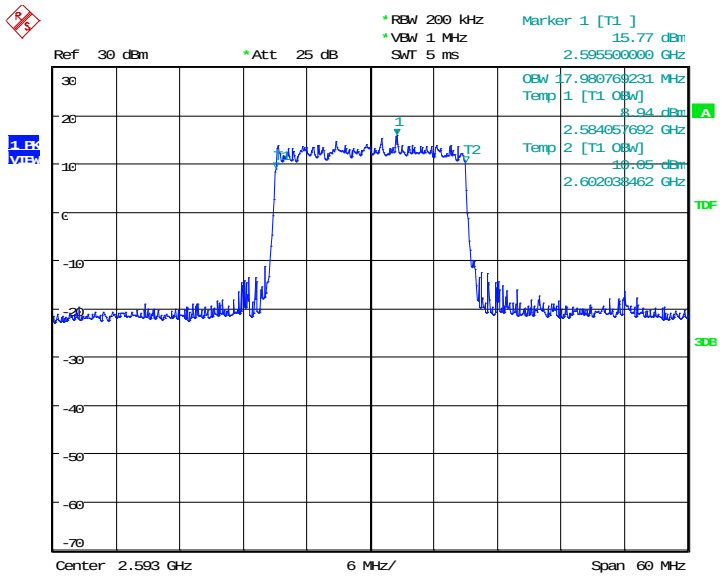
LTE band 41, 20MHz (99% BW)

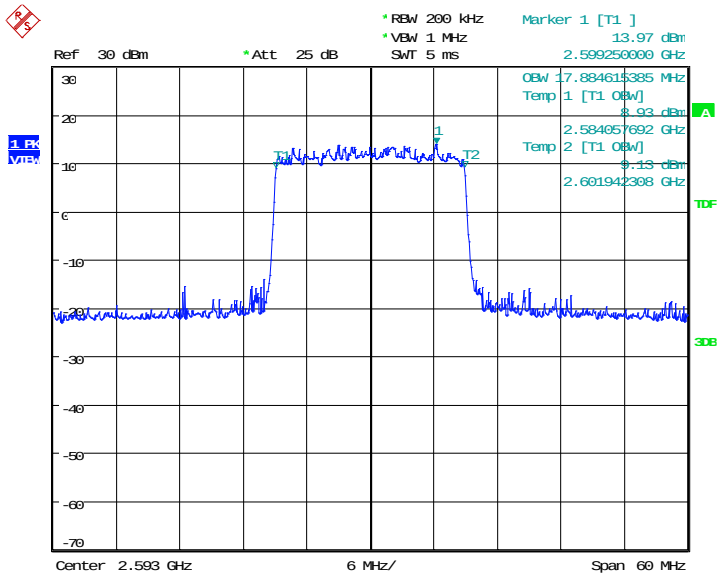
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
2593.0	QPSK	16QAM
	17980.77	17884.62

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



Date: 10.SEP.2020 06:36:44

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



Date: 10.SEP.2020 06:36:58

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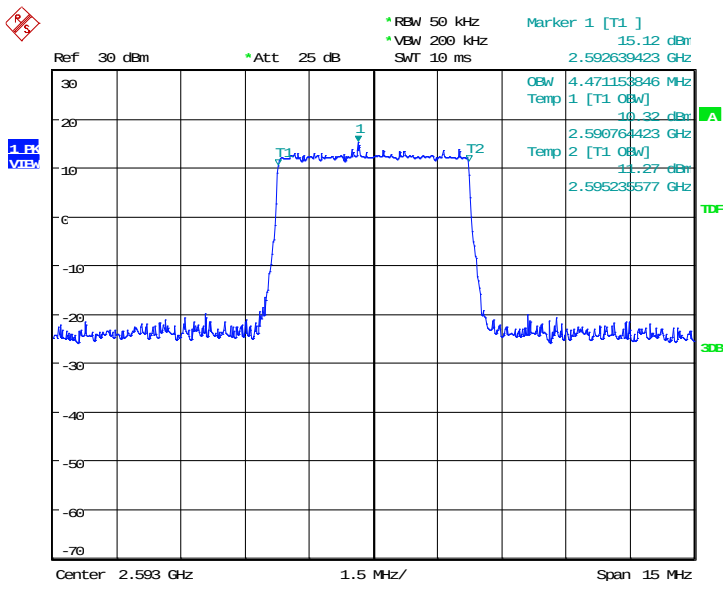
HPUE

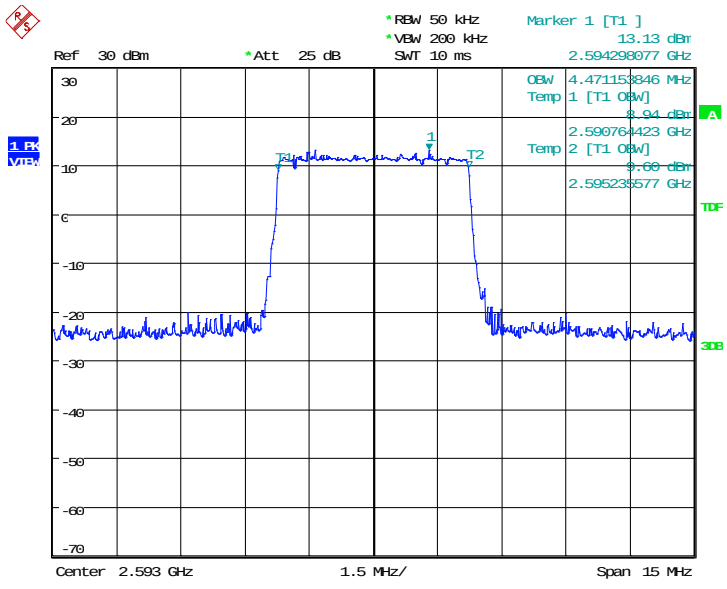
LTE band 41, 5MHz (99% BW)

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

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



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



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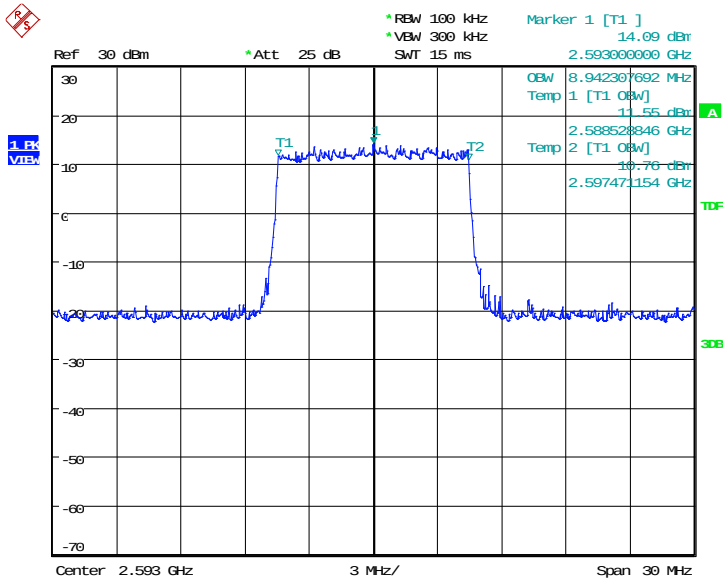
LTE band 41, 10MHz (99% BW)

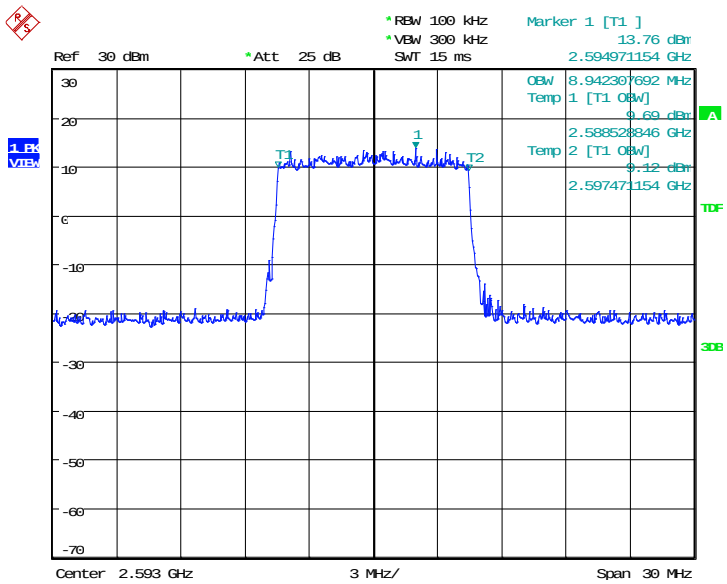
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
2593.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 4.SEP.2020 13:06:24

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



Date: 4.SEP.2020 13:06:38

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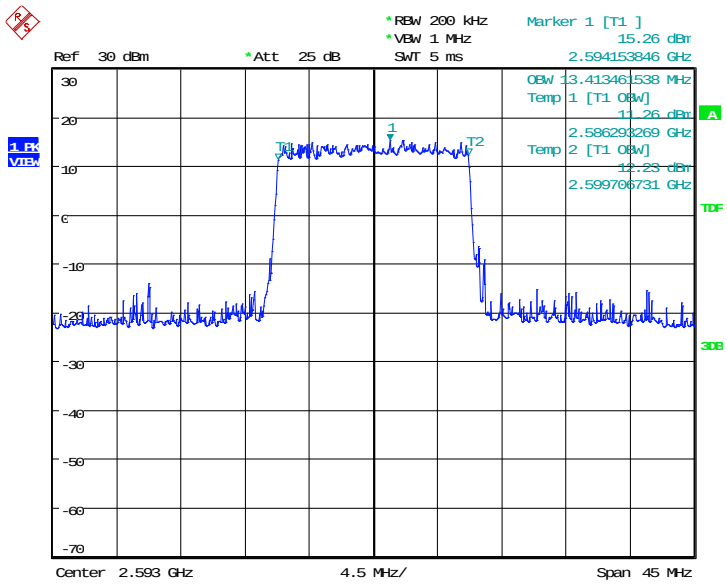
LTE band 41, 15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
2593.0	QPSK	16QAM
	13413.46	13485.58

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



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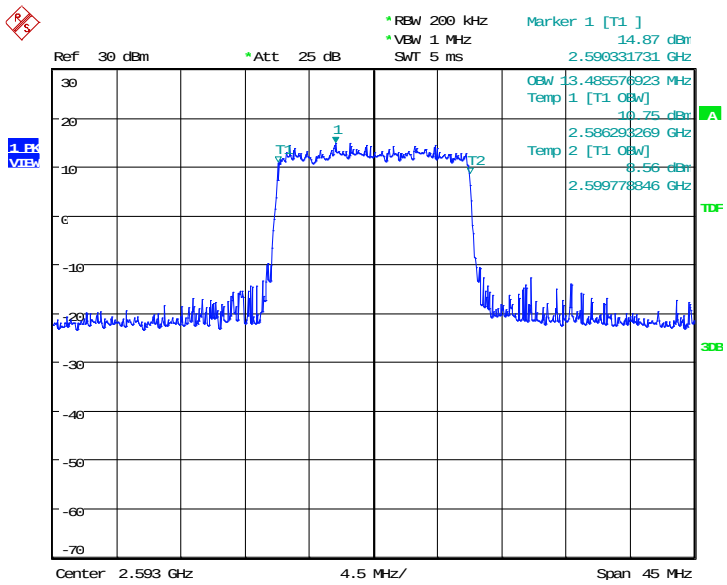
LTE band 41, 15MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 13:08:56

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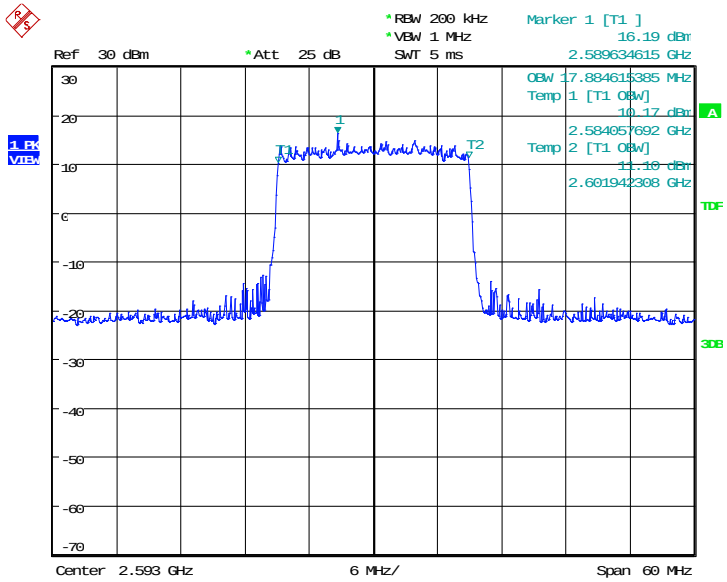
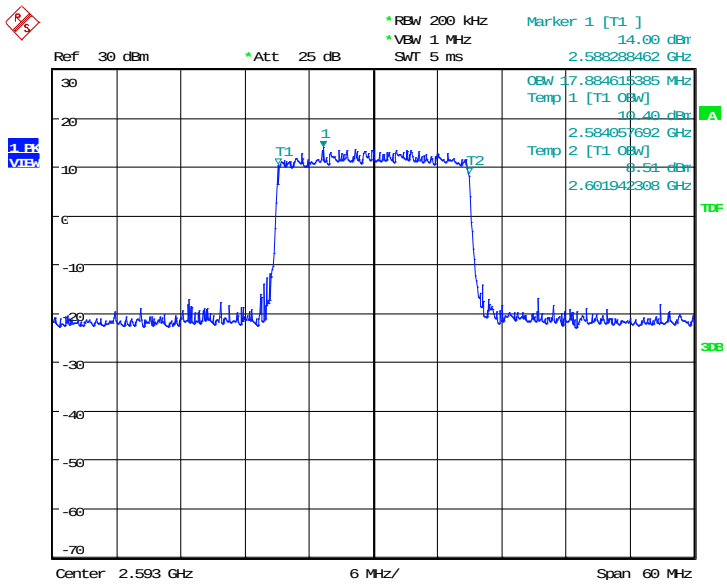
LTE band 41, 20MHz (99% BW)

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

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



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



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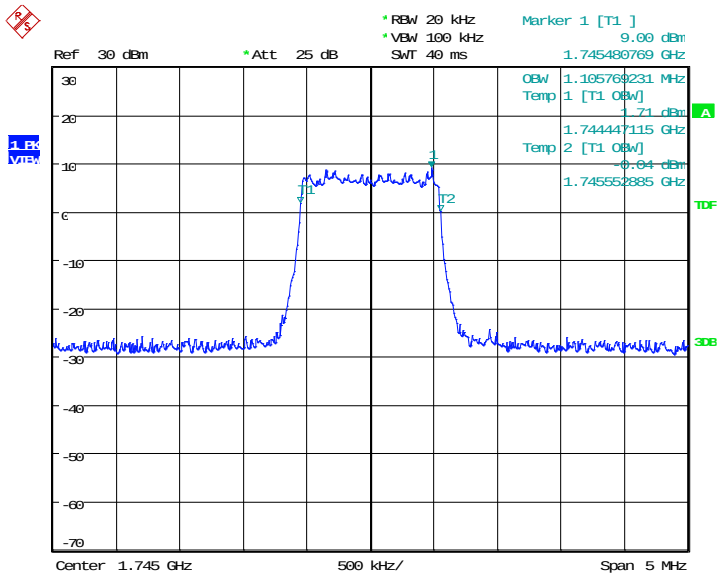
LTE band 66, 1.4MHz (99% BW)

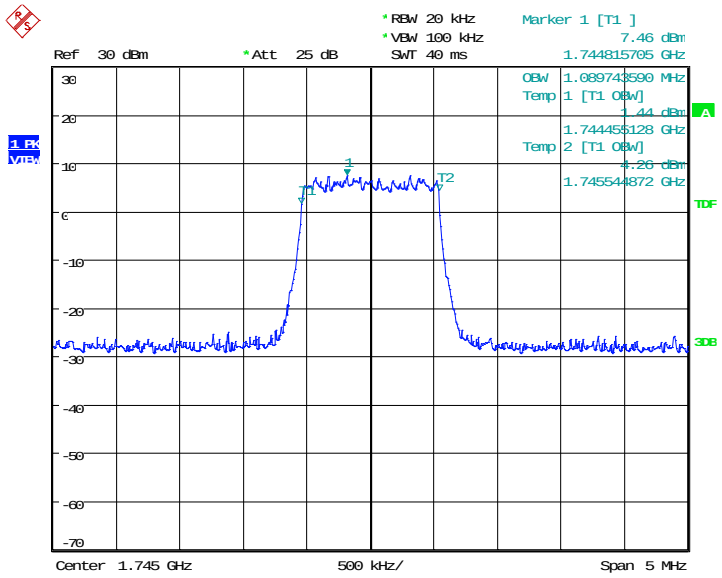
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1745.0	QPSK	16QAM
	1105.77	1089.74

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



Date: 4.SEP.2020 13:34:01

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



Date: 4.SEP.2020 13:34:14

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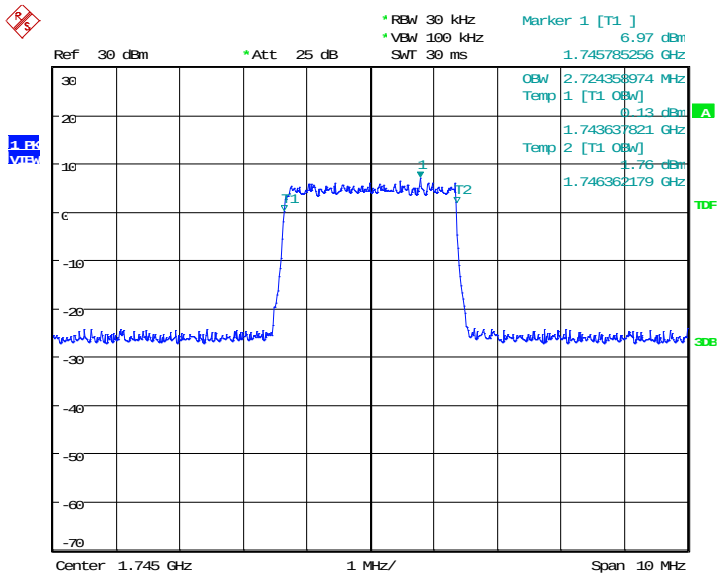
LTE band 66, 3MHz (99% BW)

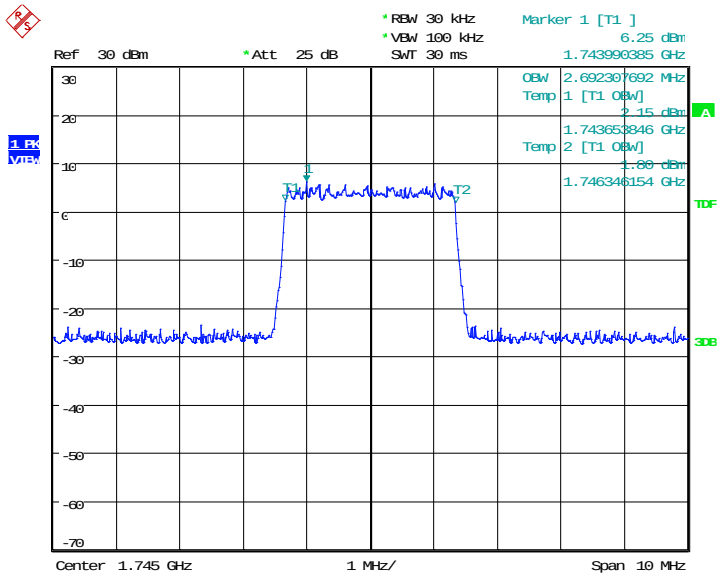
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1745.0	QPSK	16QAM
	2724.36	2692.31

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



Date: 4.SEP.2020 13:36:18

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



Date: 4.SEP.2020 13:36:32

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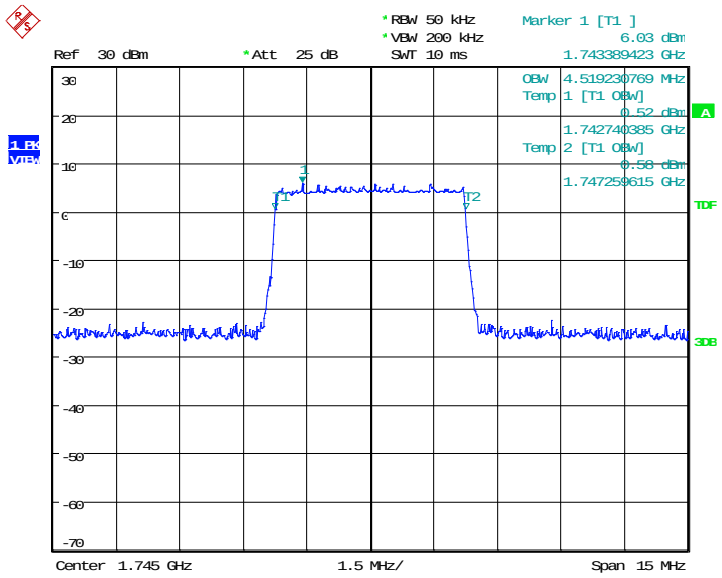
LTE band 66, 5MHz (99% BW)

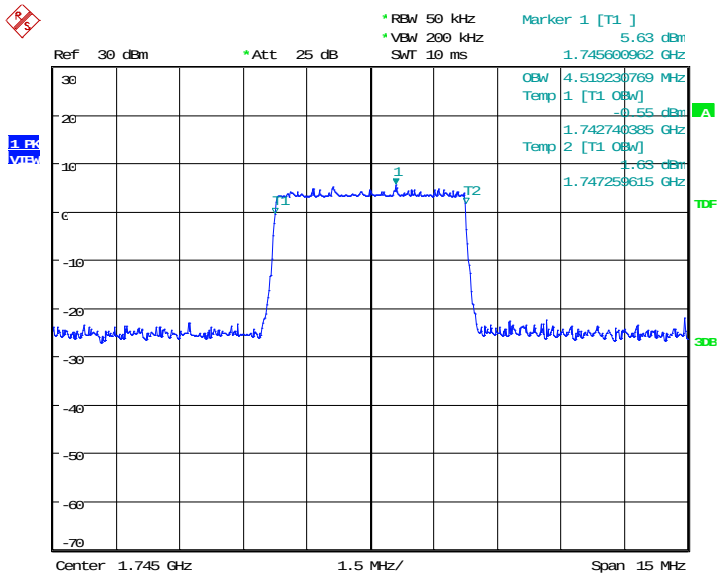
Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1745.0	QPSK	16QAM
	4519.23	4519.23

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



Date: 4.SEP.2020 13:38:36

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



Date: 4.SEP.2020 13:38:50

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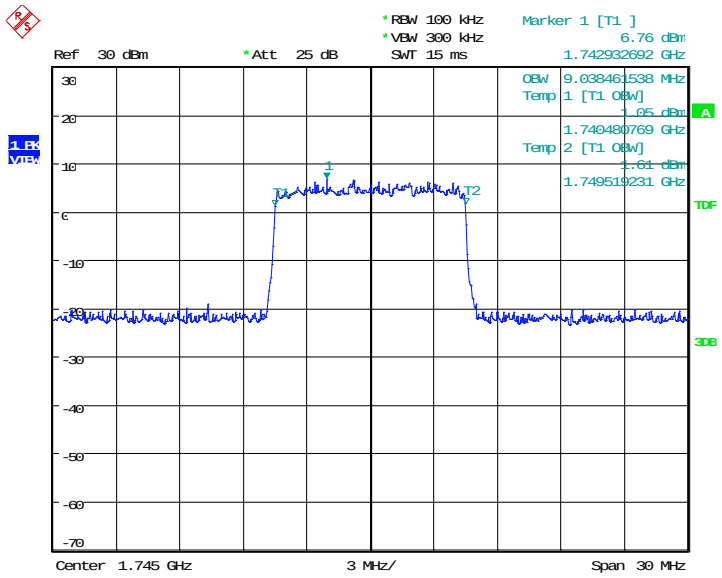
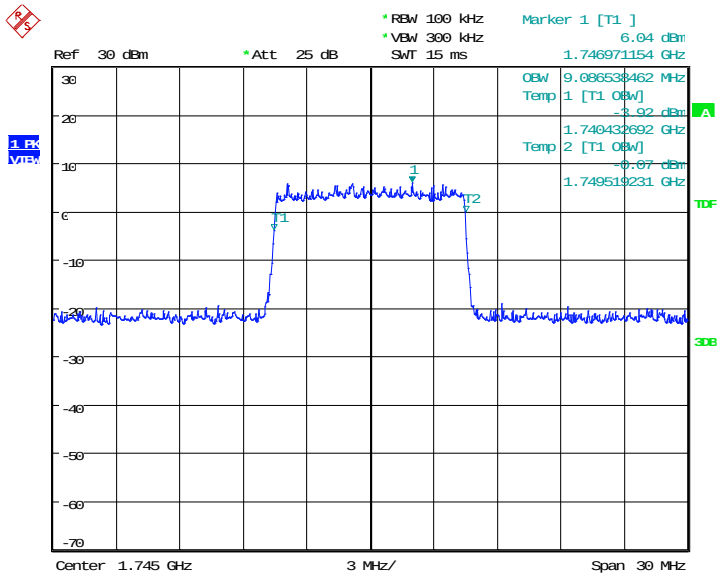
LTE band 66, 10MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1745.0	QPSK	16QAM
	9038.46	9086.54

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



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



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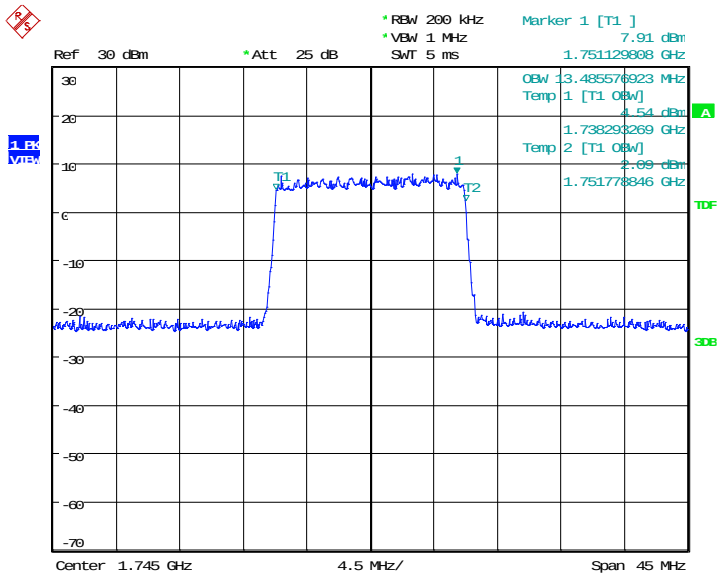
LTE band 66, 15MHz (99% BW)

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

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



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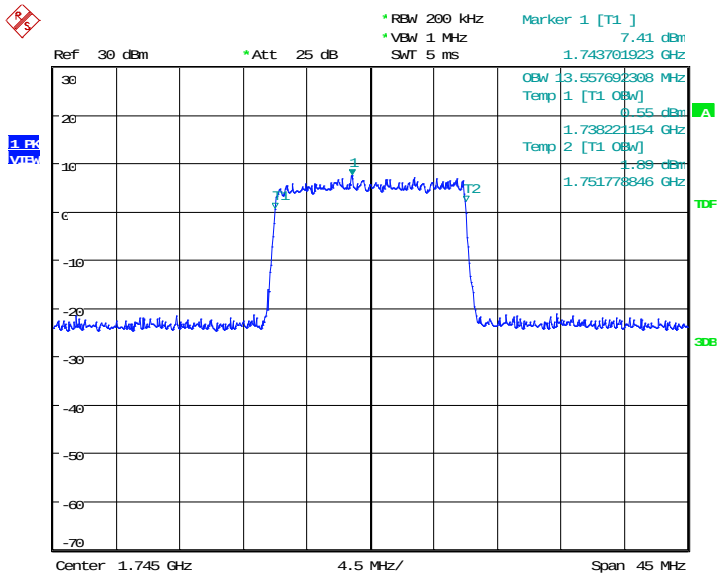
LTE band 66, 15MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 13:43:26

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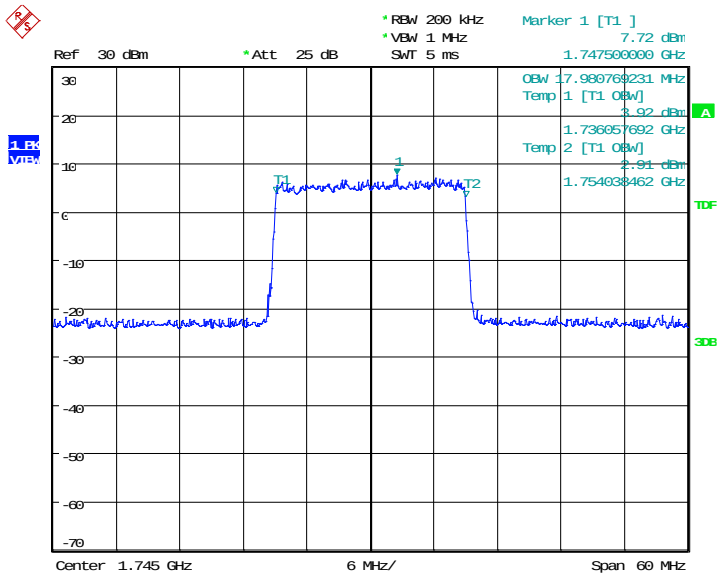
LTE band 66, 20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
1745.0	QPSK	16QAM
	17980.77	18076.92

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



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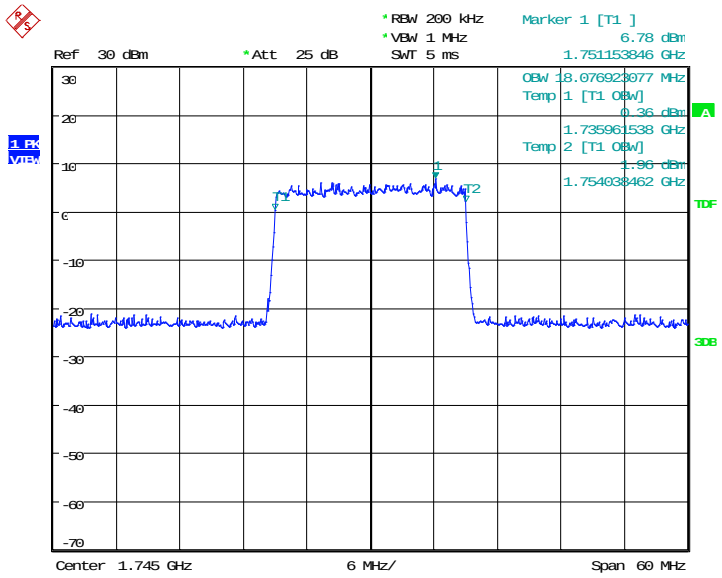
LTE band 66, 20MHz Bandwidth, 16QAM (99% BW)



Date: 4.SEP.2020 13:45:44

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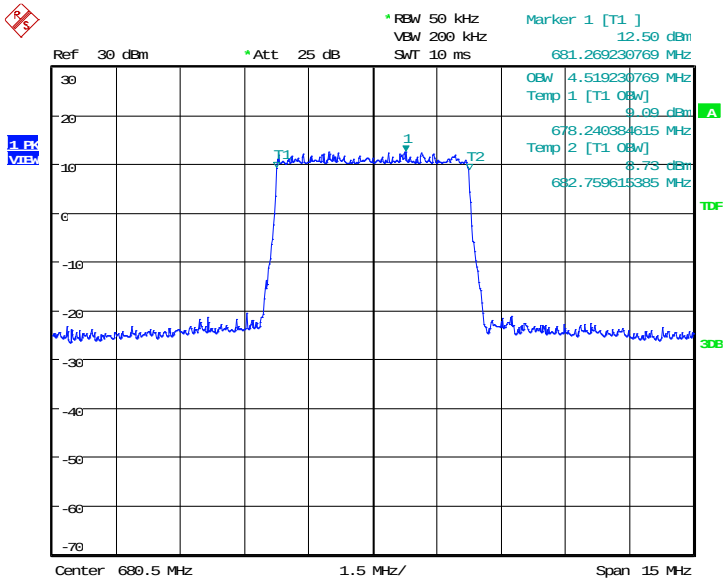
LTE band 71, 5MHz (99% BW)

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

LTE band 71, 5MHz Bandwidth, QPSK (99% BW)



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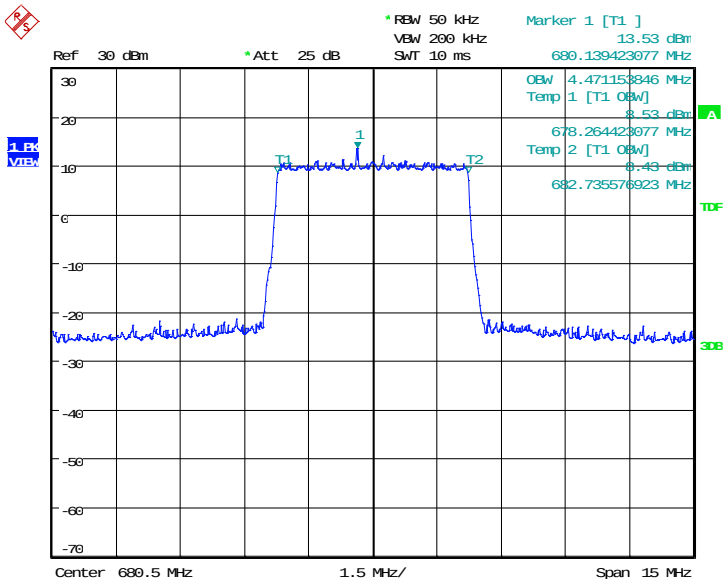
LTE band 71, 5MHz Bandwidth,16QAM (99% BW)



Date: 23.SEP.2020 07:19:08

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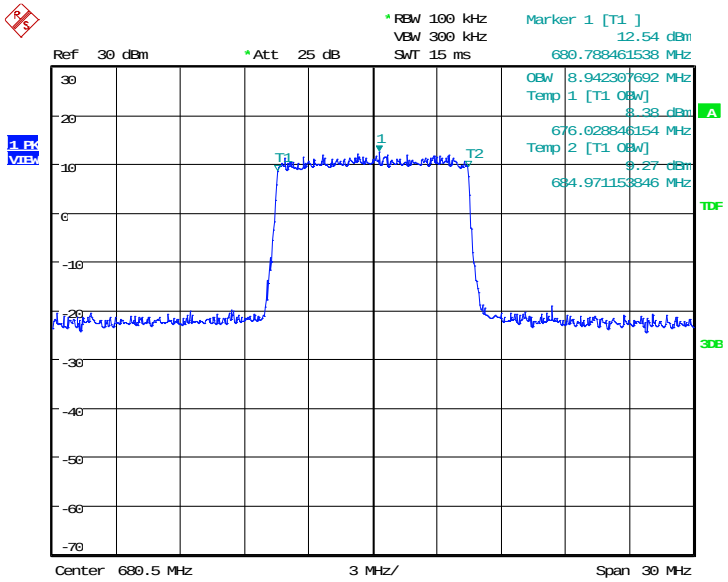
LTE band 71, 10MHz (99% BW)

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

LTE band 71, 10MHz Bandwidth, QPSK (99% BW)



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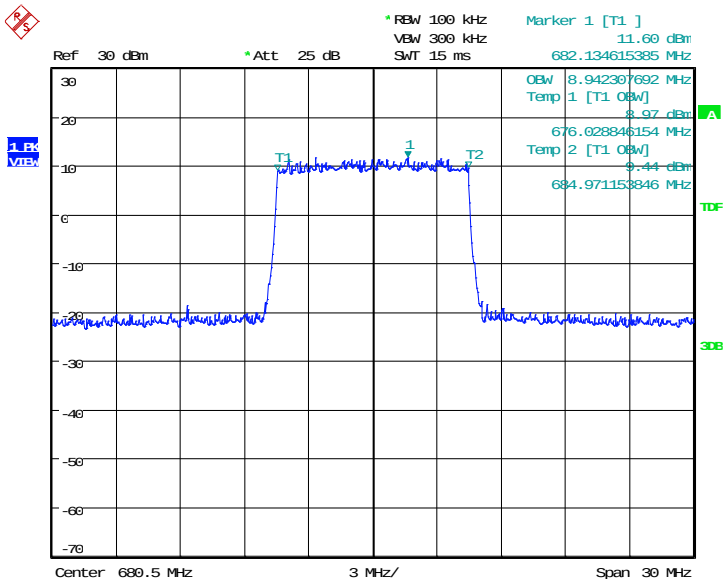
LTE band 71, 10MHz Bandwidth, 16QAM (99% BW)



Date: 23.SEP.2020 07:22:20

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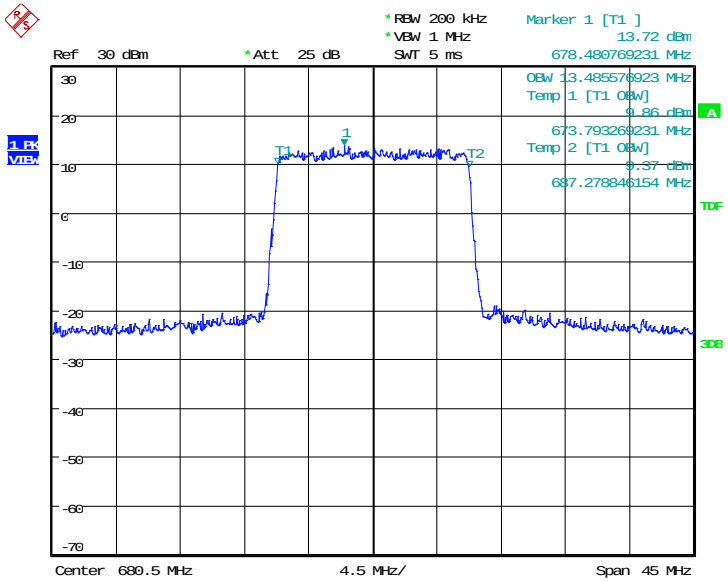
LTE band 71, 15MHz (99% BW)

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

LTE band 71, 15MHz Bandwidth, QPSK (99% BW)



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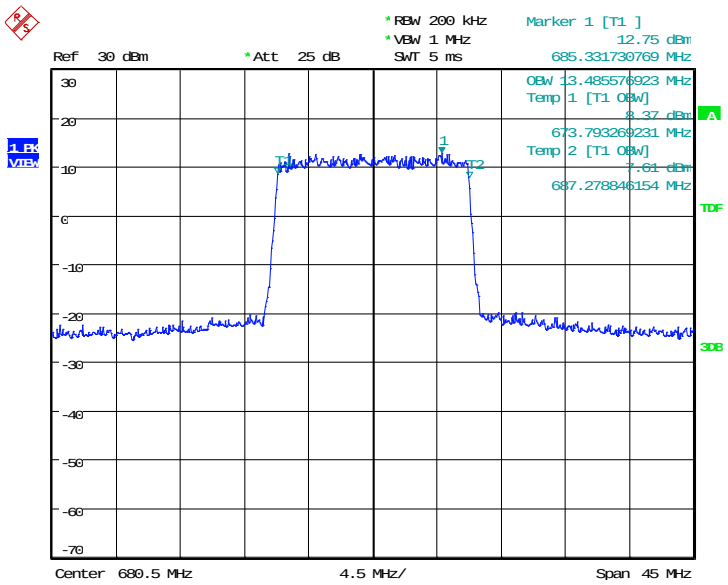
LTE band 71, 15MHz Bandwidth, 16QAM (99% BW)



Date: 23.SEP.2020 07:23:59

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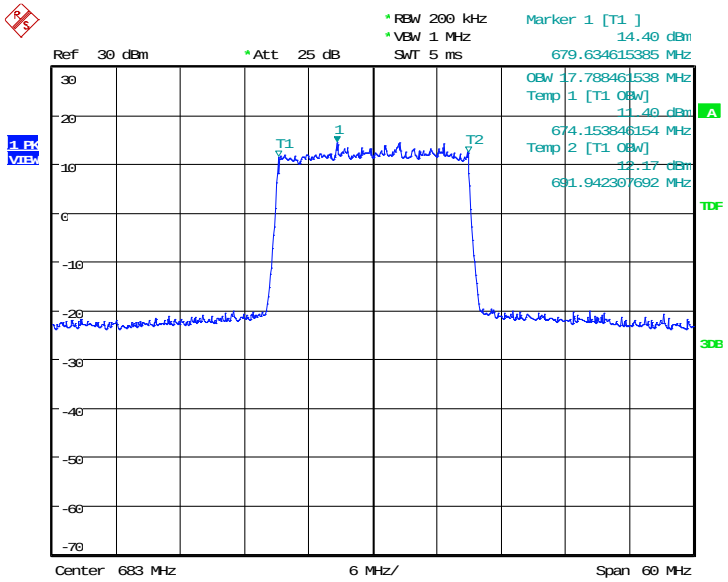
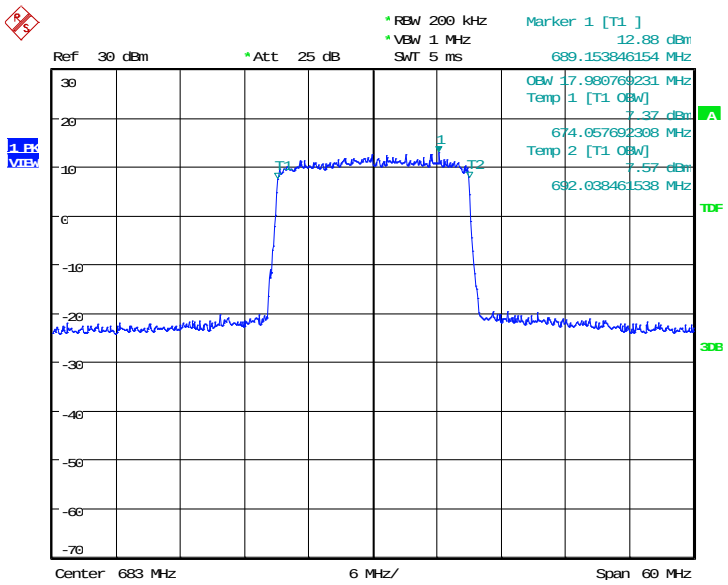
LTE band 71, 20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(kHz)	
683.0	QPSK	16QAM
	17788.46	17980.77

LTE band 71, 20MHz Bandwidth, QPSK (99% BW)



LTE band 71, 20MHz Bandwidth, 16QAM (99% BW)



Note: Expanded measurement uncertainty is U = 3428 Hz, k = 2

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A.5 EMISSION BANDWIDTH

Reference

FCC: CFR Part 2.1049, 22.917, 24.238, 27.53, 90.1215.

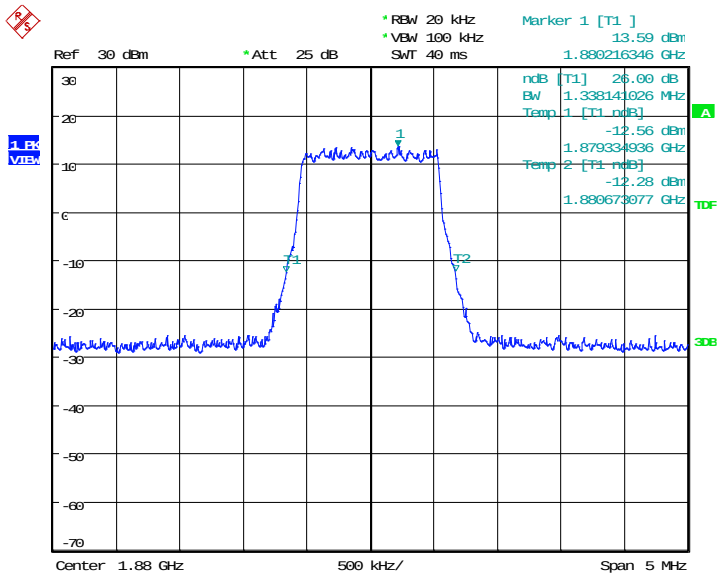
A.5.1Emission Bandwidth Results

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

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(kHz)	
1880.0	QPSK	16QAM
	1338.14	1314.10

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



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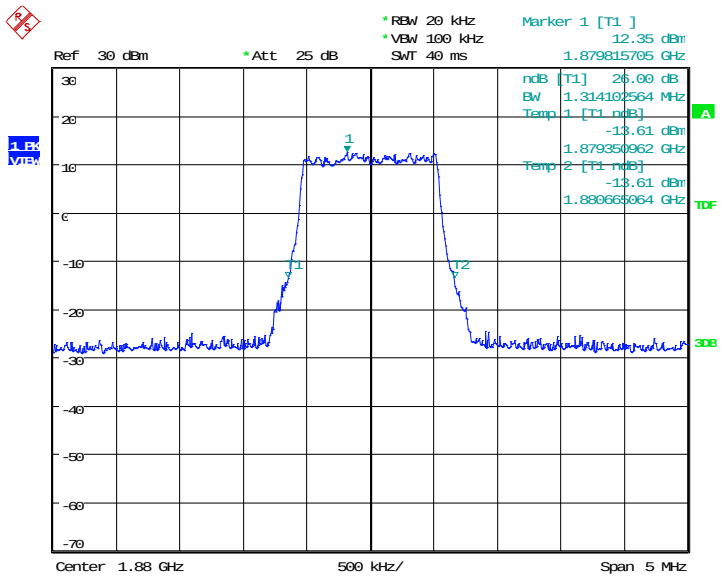
LTE band 2, 1.4MHz Bandwidth, 16QAM (-26dBc BW)



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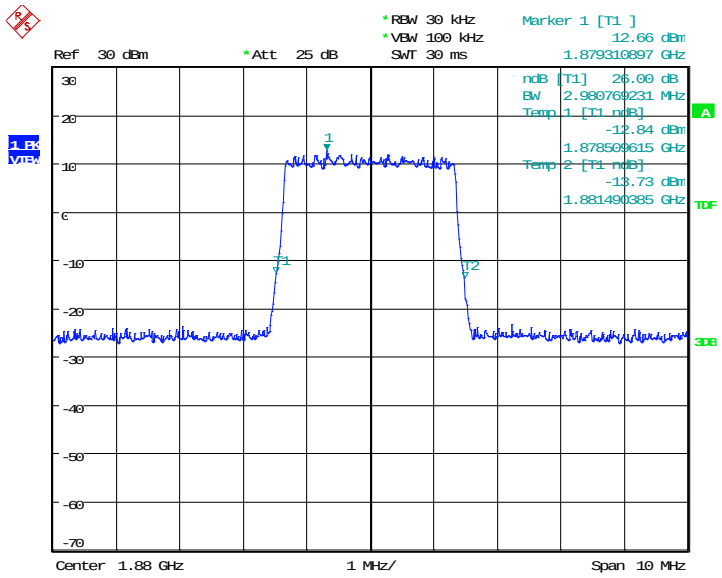
LTE band 2, 3MHz (-26dBc BW)

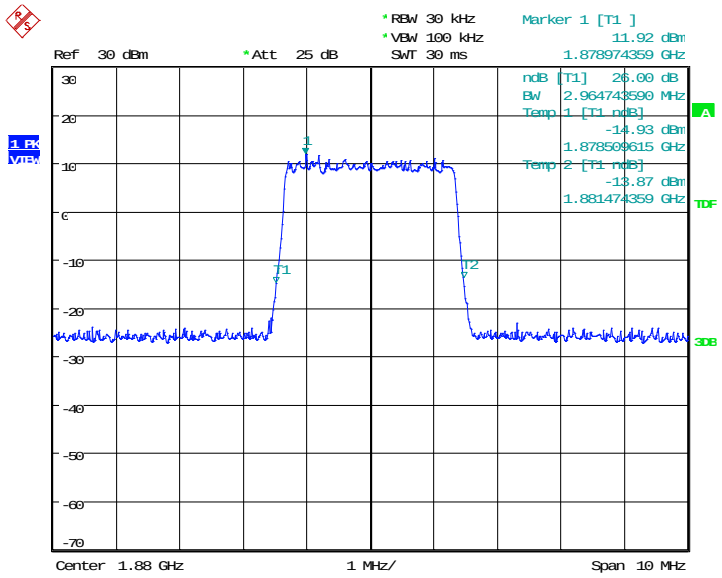
Frequency(MHz)	Emission Bandwidth (-26dBc BW)(kHz)	
1880.0	QPSK	16QAM
	2980.77	2964.74

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



Date: 4.SEP.2020 12:12:02

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



Date: 4.SEP.2020 12:12:18

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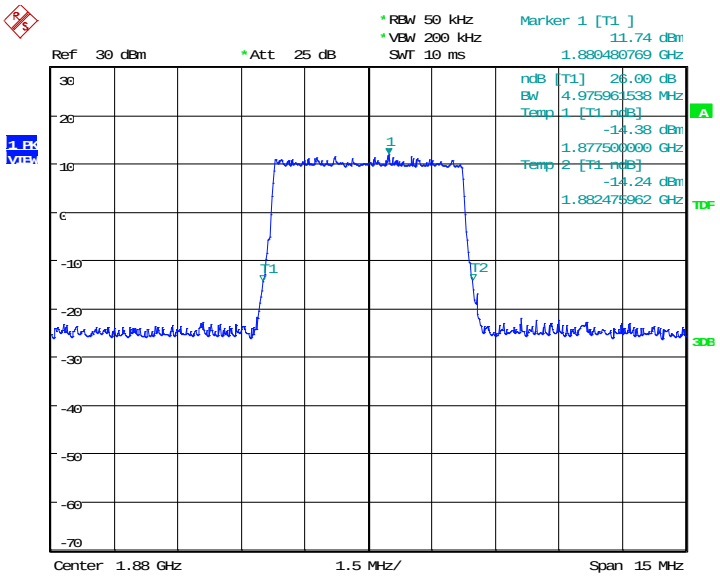
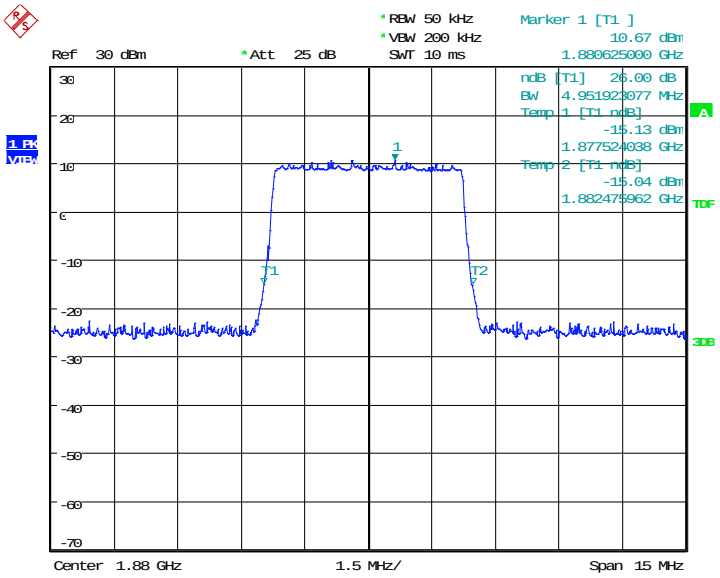
LTE band 2, 5MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(kHz)	
1880.0	QPSK	16QAM
	4975.96	4951.92

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



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



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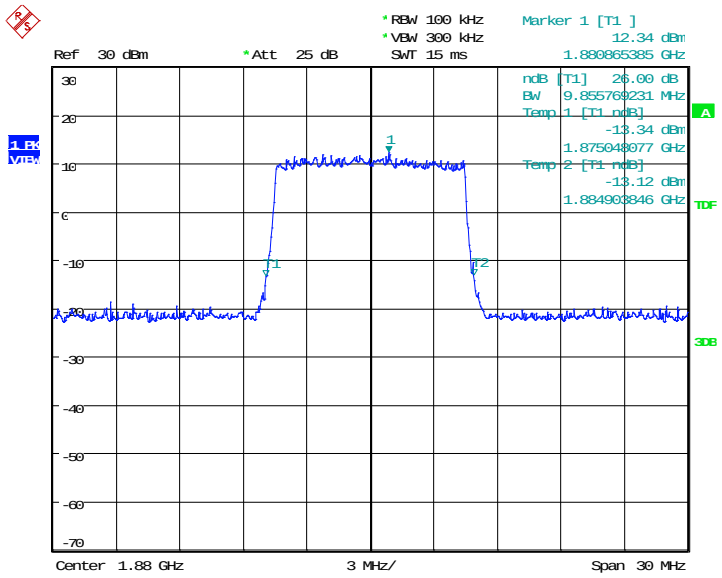
LTE band 2, 10MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(kHz)	
1880.0	QPSK	16QAM
	9855.77	9855.77

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



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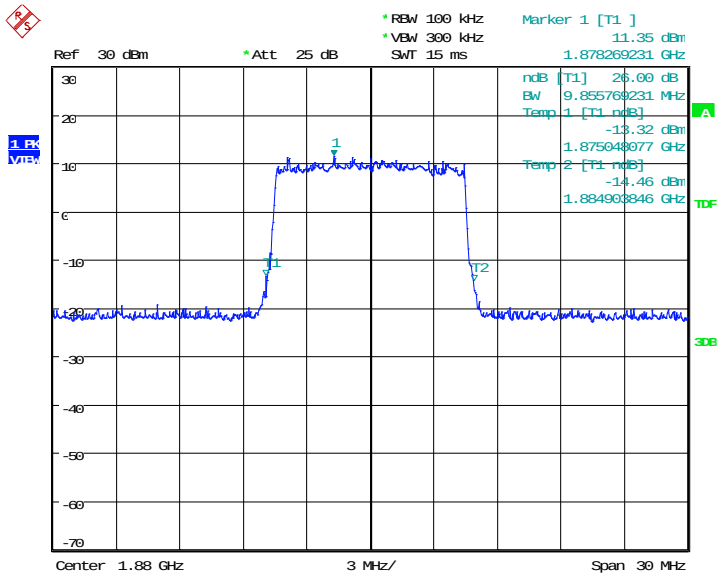
LTE band 2, 10MHz Bandwidth, 16QAM (-26dBc BW)



Date: 4.SEP.2020 12:16:53

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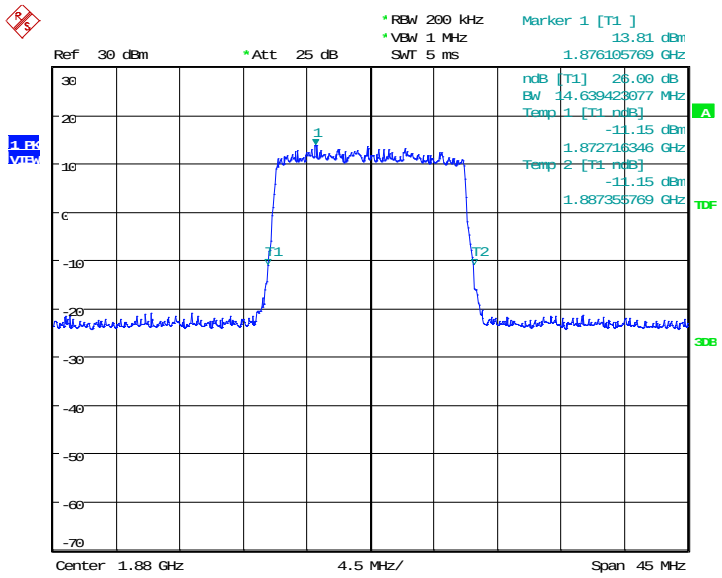
LTE band 2, 15MHz (-26dBc BW)

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

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



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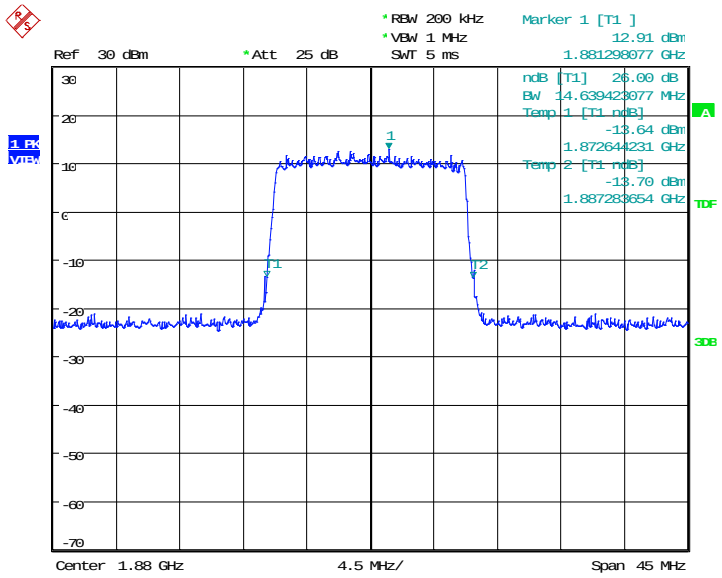
LTE band 2, 15MHz Bandwidth, 16QAM (-26dBc BW)



Date: 4.SEP.2020 12:19:11

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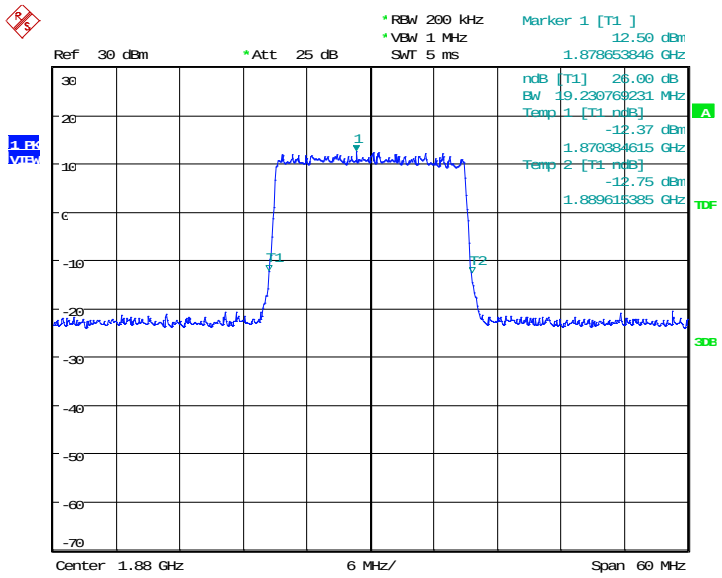
LTE band 2, 20MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(kHz)	
1880.0	QPSK	16QAM
	19230.77	19423.08

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



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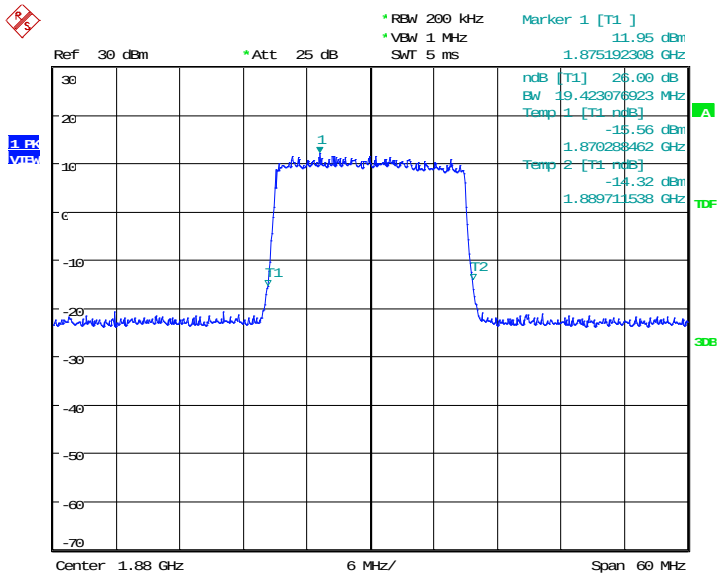
LTE band 2, 20MHz Bandwidth, 16QAM (-26dBc BW)



Date: 4.SEP.2020 12:21:30

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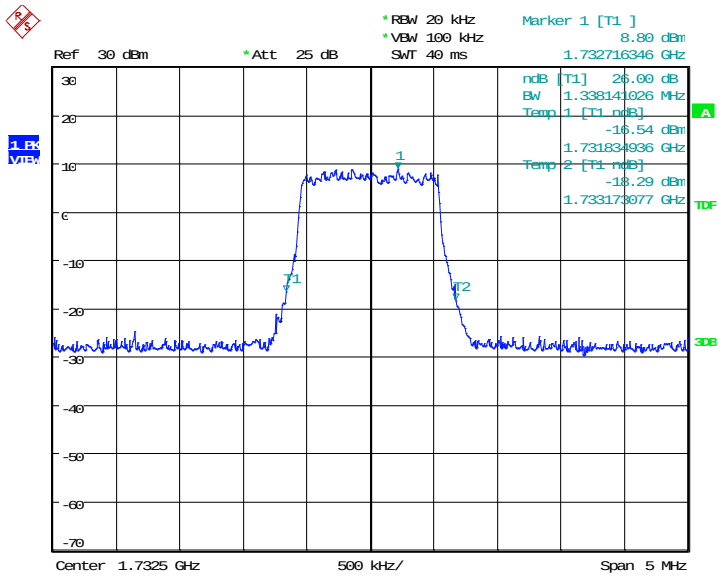
LTE band 4, 1.4MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(kHz)	
1732.5	QPSK	16QAM
	1338.14	1306.09

LTE band 4, 1.4MHz Bandwidth, QPSK (-26dBc BW)



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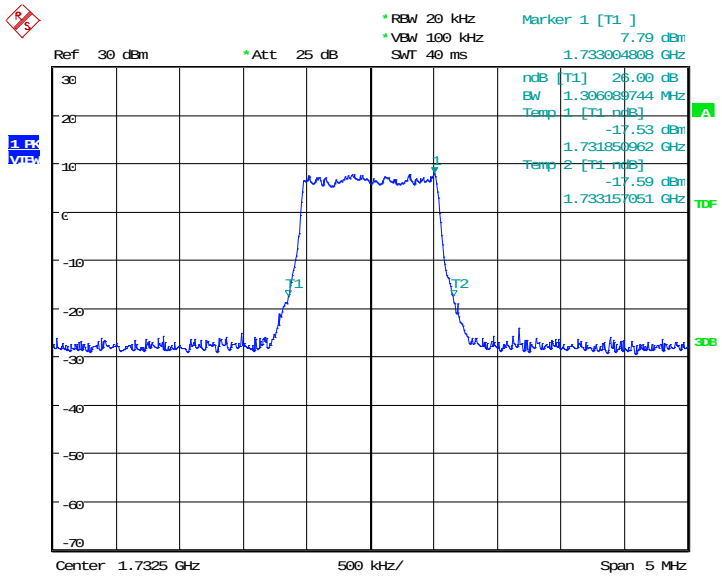
LTE band 4, 1.4MHz Bandwidth, 16QAM (-26dBc BW)



Date: 4.SEP.2020 12:23:51

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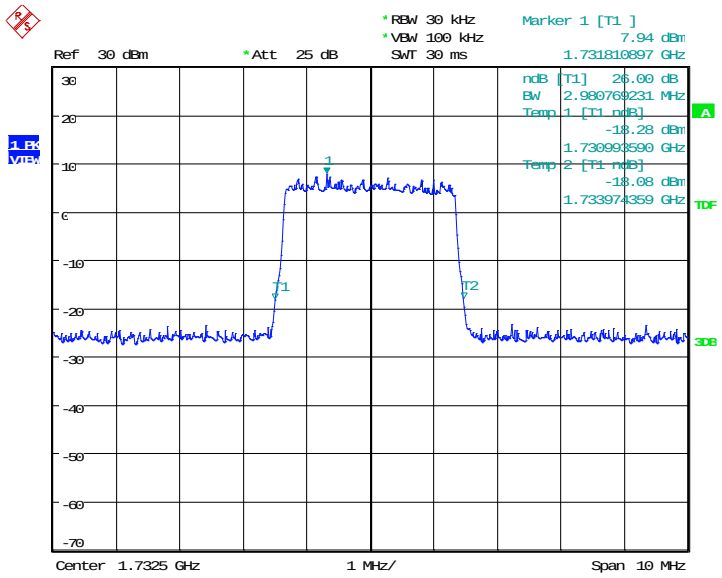
LTE band 4, 3MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(kHz)	
1732.5	QPSK	16QAM
	2980.77	2964.74

LTE band 4, 3MHz Bandwidth, QPSK (-26dBc BW)



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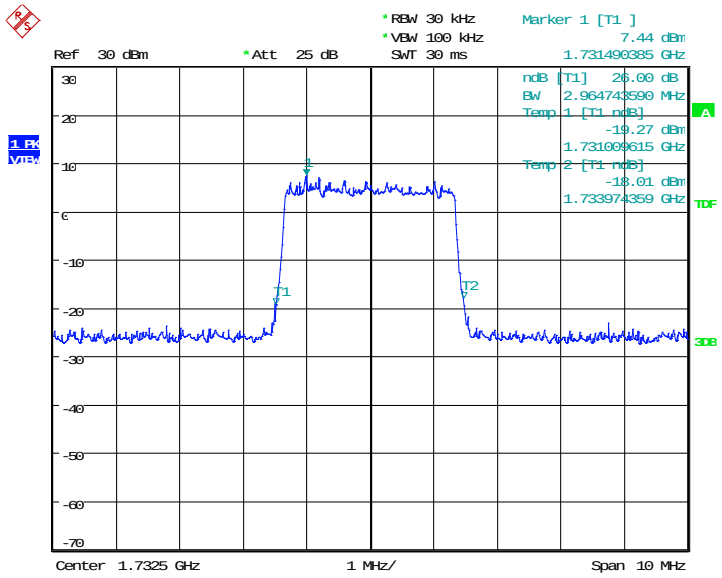
LTE band 4, 3MHz Bandwidth, 16QAM (-26dBc BW)



Date: 4.SEP.2020 12:26:09

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