TEST REPORT

No. I19Z61344-WMD03

for

OnePlus Technology (Shenzhen) Co., Ltd.

Smart phone

Model Name: HD1925

FCC ID: 2ABZ2-EE143

with

Hardware Version: 46

Software Version: Oxygen OS 10.0.HD61CB

Issued Date: 2019-11-01

Note:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I19Z61344-WMD03	Rev.0	1st edition	2019-10-25
I19Z61344-WMD03	Rev.1	Adjust some of the EPR\EIPR data. Adjust the EUT Voltage information.	2019-11-01

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

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1. Test Laboratory

1.1. Introduction & Accreditation

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

1.2. Testing Location

Location 1: CTTL (huayuan North Road)

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

Location 2: CTTL (Shouxiang)

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

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1.3. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

1.4. Project data

Testing Start Date: 2019-08-30

Testing End Date: 2019-10-25

1.5. Signature

Dong Yuan

(Prepared this test report)

Zhou Yu

(Reviewed this test report)

Zhao Hui Lin

Deputy Director of the laboratory

(Approved this test report)

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2. Client Information

2.1. Applicant Information

Company Name:	OnePlus Technology (Shenzhen) Co., Ltd.
Address /Post:	18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen
Contact:	Ariel Cheng
Email:	ariel.cheng@oneplus.com
Telephone:	13823398081

2.2. Manufacturer Information

Company Name:	OnePlus Technology (Shenzhen) Co., Ltd.
Address /Post:	18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen
Contact:	Ariel Cheng
Email:	ariel.cheng@oneplus.com
Telephone:	13823398081

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

3.1. About EUT

Description	Smart Phone
Model Name	HD1925
FCC ID	2ABZ2-EE143
Antenna	Integrated
Output power	25.35dBm maximum EIRP measured for LTE Band 41
Extreme vol. Limits	3.6VDC to 4.3VDC (nominal: 3.87VDC)
Extreme temp. Tolerance	0C to +35°C

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

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version	Date of receipt
UT05a	990013820050933	46	Oxygen OS 10.0.HD61CB	2019-08-30
UT13a	990013820050230	46	Oxygen OS 10.0.HD61CB	2019-08-30

*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	BLP745
Manufacturer	Sunwoda Electronic Co.,Ltd.
Capacitance	4010mAh

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

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4. Reference Documents

4.1. Reference Documents for testing

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

Reference	Title	Version
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-18 Edition
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-18 Edition
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-18 Edition
FCC Part 90	PRIVATE LAND MOBILE RADIO SERVICES	10-1-18 Edition
ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
ANSI/TIA-102.CAAA-E	DIGITAL C4FMCQPSK TRANSCEIVER MEASUREMENT METHODS	2016
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB 971168 D01	MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS	v03r01

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5. LABORATORY ENVIRONMENT

Fully-anechoic chamber FAC-3 (9 meters×6.5 meters×4 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 4000 MHz

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6. SUMMARY OF TEST RESULT

6.1. Summary of test results

LTE Band 7

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

LTE Band 12

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

LTE Band 13

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

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LTE Band 14

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

LTE Band 25

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

LTE Band 26(814MHz~824MHz)

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

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LTE Band 26(824MHz~849MHz)

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

LTE Band 30

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

LTE Band 41

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

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LTE Band 66

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

LTE Band 71

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

Terms used in Verdict column

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

The device supports two antennas(UAT or LAT),all the test items of UAT are tested while output power,emission limit,occupied bandwidth and emission bandwidth of LAT are tested.

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7. Test Equipment Utilized

NO.	Description	TYPE	series number	MANUFACTURE	CAL DUE DATE	Calibration interval
1	Universal Radio Communication Tester	CMW500	159082	R&S	2019-12-25	1 year
2	Spectrum Analyzer	FSU26	200030	R&S	2020-06-03	1 year
3	Climate chamber	SH-242	93008556	ESPEC	2019-12-21	2 year
4	Radio Communication Analyzer	MT8821C	6201763159	Anritsu	2020-07-23	1 year
5	EMI Antenna	VULB9163	9163-235	Schwarzbeck	2019-11-20	1 year
6	EMI Antenna	3117	00058889	ETS-Lindgren	2020-02-02	1 year
7	EMI Antenna	3117	00119024	ETS-Lindgren	2020-02-25	1 year
8	EMI Antenna	9117	167	Schwarzbeck	2020-05-27	1 year
9	Signal Generator	N5183A	MY49060052	R&S	2020-06-24	1 year
10	Test Receiver	E4440A	MY48250642	Agilent	2020-03-18	1 year
11	Universal Radio Communication Tester	CMW500	143008	R&S	2019-11-26	1 year

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ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER

A.1.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Universal Radio Communication Tester (CMW500) or Anritsu Radio Communication Analyzer (MT8821C) to ensure max power transmission and proper modulation.

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

A.1.2 Conducted

A.1.2.1 Method of Measurements

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

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

A.1.2.2 Description of ERP/EIRP Measurements

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

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

P_T = transmitter output power in dBm;

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

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

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

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, 13, 14, 71;

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

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

A.1.2.3 Measurement result

UAT Measurement Results:

LTE band 7

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) ($G_T – L_C$ = -1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	23.31	23.25	21.21	22.31	22.25	20.21
		2535	23.35	23.34	21.11	22.35	22.34	20.11
		2502.5	23.17	23.47	21.05	22.17	22.47	20.05
	1 RB low	2567.5	23.30	23.18	21.29	22.30	22.18	20.29
		2535	23.46	23.47	21.23	22.46	22.47	20.23
		2502.5	23.33	23.19	21.18	22.33	22.19	20.18
	50% RB mid	2567.5	22.48	22.66	20.18	21.48	21.66	19.18
		2535	22.63	22.62	20.29	21.63	21.62	19.29

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		2502.5	22.32	22.15	20.19	21.32	21.15	19.19
	100% RB	2567.5	22.46	22.09	20.33	21.46	21.09	19.33
		2535	22.63	22.43	20.34	21.63	21.43	19.34
		2502.5	22.06	22.29	20.10	21.06	21.29	19.10
10MHz	1 RB high	2565	23.25	23.04	21.18	22.25	22.04	20.18
		2535	23.43	23.45	21.06	22.43	22.45	20.06
		2505	23.05	23.43	21.09	22.05	22.43	20.09
	1 RB low	2565	23.10	23.37	21.32	22.10	22.37	20.32
		2535	23.20	23.11	21.19	22.20	22.11	20.19
		2505	23.10	23.44	21.08	22.10	22.44	20.08
	50% RB mid	2565	22.55	22.19	20.25	21.55	21.19	19.25
		2535	22.37	22.27	20.26	21.37	21.27	19.26
		2505	22.49	22.22	20.23	21.49	21.22	19.23
	100% RB	2565	22.61	22.47	20.29	21.61	21.47	19.29
		2535	22.04	22.40	20.14	21.04	21.40	19.14
		2505	22.40	22.29	20.29	21.40	21.29	19.29
15MHz	1 RB high	2562.5	23.41	23.35	21.35	22.41	22.35	20.35
		2535	23.03	23.04	21.43	22.03	22.04	20.43
		2507.5	23.11	23.27	21.19	22.11	22.27	20.19
	1 RB low	2562.5	23.03	23.11	21.09	22.03	22.11	20.09
		2535	23.34	23.47	21.26	22.34	22.47	20.26
		2507.5	23.41	23.19	21.39	22.41	22.19	20.39
	50% RB mid	2562.5	22.56	22.54	20.29	21.56	21.54	19.29
		2535	22.51	22.60	20.18	21.51	21.60	19.18
		2507.5	22.05	22.20	20.37	21.05	21.20	19.37
	100% RB	2562.5	22.11	22.03	20.03	21.11	21.03	19.03
		2535	22.22	22.51	20.29	21.22	21.51	19.29
		2507.5	22.44	22.11	20.27	21.44	21.11	19.27
20MHz	1 RB high	2560	23.27	23.40	21.08	22.27	22.40	20.08
		2535	23.45	23.19	21.35	22.45	22.19	20.35
		2510	23.08	23.08	21.34	22.08	22.08	20.34
	1 RB low	2560	23.35	23.37	21.11	22.35	22.37	20.11
		2535	23.60	23.17	21.21	22.60	22.17	20.21
		2510	23.13	23.13	21.33	22.13	22.13	20.33
	50% RB mid	2560	22.15	22.62	20.36	21.15	21.62	19.36
		2535	22.48	22.28	20.36	21.48	21.28	19.36
		2510	22.77	22.15	20.05	21.77	21.15	19.05
	100% RB	2560	22.03	22.26	20.12	21.03	21.26	19.12
		2535	22.57	22.21	20.04	21.57	21.21	19.04
		2510	22.03	22.36	20.19	21.03	21.36	19.19

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LTE band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -2.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	23.22	23.27	22.61	20.72	20.77	20.11
		707.5	23.19	22.86	22.19	20.69	20.36	19.69
		699.7	23.24	22.85	22.18	20.74	20.35	19.68
	1 RB low	715.3	23.36	23.25	22.67	20.86	20.75	20.17
		707.5	23.35	23.00	22.33	20.85	20.50	19.83
		699.7	23.23	22.96	22.29	20.73	20.46	19.79
	50% RB mid	715.3	22.92	22.07	21.41	20.42	19.57	18.91
		707.5	22.88	22.10	21.43	20.38	19.60	18.93
		699.7	22.91	22.05	21.38	20.41	19.55	18.88
	100% RB	715.3	22.80	21.98	21.31	20.30	19.48	18.81
		707.5	22.81	21.97	21.31	20.31	19.47	18.81
		699.7	22.82	21.92	21.26	20.32	19.42	18.76
3MHz	1 RB high	714.5	23.19	22.91	22.40	20.69	20.41	19.90
		707.5	23.16	22.49	21.98	20.66	19.99	19.48
		700.5	23.21	22.48	21.97	20.71	19.98	19.47
	1 RB low	714.5	23.33	22.96	22.45	20.83	20.46	19.95
		707.5	23.32	22.63	22.12	20.82	20.13	19.62
		700.5	23.20	22.59	22.08	20.70	20.09	19.58
	50% RB mid	714.5	22.89	21.71	21.20	20.39	19.21	18.70
		707.5	22.85	21.74	21.23	20.35	19.24	18.73
		700.5	22.88	21.69	21.18	20.38	19.19	18.68
	100% RB	714.5	22.77	21.62	21.11	20.27	19.12	18.61
		707.5	22.78	21.62	21.11	20.28	19.12	18.61
		700.5	22.79	21.57	21.06	20.29	19.07	18.56
5MHz	1 RB high	713.5	22.93	22.80	22.71	20.43	20.30	20.21
		707.5	22.90	22.39	22.29	20.40	19.89	19.79
		701.5	22.95	22.38	22.28	20.45	19.88	19.78
	1 RB low	713.5	23.07	22.86	22.77	20.57	20.36	20.27
		707.5	23.06	22.53	22.43	20.56	20.03	19.93
		701.5	22.94	22.49	22.39	20.44	19.99	19.89
	50% RB mid	713.5	22.63	21.62	21.50	20.13	19.12	19.00
		707.5	22.59	21.64	21.53	20.09	19.14	19.03
		701.5	22.62	21.59	21.48	20.12	19.09	18.98
	100% RB	713.5	22.52	21.53	21.41	20.02	19.03	18.91
		707.5	22.53	21.52	21.40	20.03	19.02	18.90
		701.5	22.53	21.47	21.35	20.03	18.97	18.85
10MHz	1 RB high	711	23.35	23.28	22.74	20.85	20.78	20.24

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		707.5	23.52	22.86	22.32	21.02	20.36	19.82
		704	23.37	22.85	22.31	20.87	20.35	19.81
	1 RB low	711	23.49	23.04	22.80	20.99	20.54	20.30
		707.5	23.48	23.00	22.46	20.98	20.50	19.96
		704	23.36	22.96	22.42	20.86	20.46	19.92
	50% RB mid	711	23.05	22.07	21.53	20.55	19.57	19.03
		707.5	23.01	22.10	21.56	20.51	19.60	19.06
		704	23.09	22.05	21.51	20.59	19.55	19.01
	100% RB	711	22.93	21.98	21.44	20.43	19.48	18.94
		707.5	22.94	21.97	21.43	20.44	19.47	18.93
		704	22.94	21.92	21.38	20.44	19.42	18.88

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LTE band 13

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -2.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	784.5	23.10	22.60	22.17	20.60	20.10	19.67
		782	23.01	22.51	22.08	20.51	20.01	19.58
		779.5	23.12	22.62	22.19	20.62	20.12	19.69
	1 RB low	784.5	23.16	22.66	22.23	20.66	20.16	19.73
		782	23.12	22.62	22.19	20.62	20.12	19.69
		779.5	23.23	22.73	22.24	20.73	20.23	19.74
	50% RB mid	784.5	22.31	21.21	20.98	19.81	18.71	18.48
		782	22.41	21.31	21.08	19.91	18.81	18.58
		779.5	22.36	21.26	21.03	19.86	18.76	18.53
	100% RB	784.5	22.34	21.24	21.01	19.84	18.74	18.51
		782	22.21	21.11	21.18	19.71	18.61	18.68
		779.5	22.34	21.24	21.01	19.84	18.74	18.51
10MHz	1 RB high	782	23.39	22.90	22.26	20.89	20.40	19.76
	1 RB low	782	23.31	22.92	22.24	20.81	20.42	19.74
	50% RB mid	782	22.85	21.90	21.12	20.35	19.40	18.62
	100% RB	782	22.80	21.87	21.08	20.30	19.37	18.58

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LTE band 14

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -2.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	795.5	23.24	22.96	22.28	20.74	20.46	19.78
		793	23.27	22.99	22.28	20.77	20.49	19.78
		790.5	23.29	23.01	22.31	20.79	20.51	19.81
	1 RB low	795.5	23.11	22.83	22.26	20.61	20.33	19.76
		793	22.93	22.65	22.08	20.43	20.15	19.58
		790.5	23.04	22.76	22.19	20.54	20.26	19.69
	50% RB mid	795.5	22.79	22.51	21.45	20.29	20.01	18.95
		793	22.83	22.56	21.49	20.33	20.06	18.99
		790.5	22.82	22.54	21.48	20.32	20.04	18.98
	100% RB	795.5	22.82	22.54	21.48	20.32	20.04	18.98
		793	22.76	22.49	21.42	20.26	19.99	18.92
		790.5	22.79	22.51	21.45	20.29	20.01	18.95
10MHz	1 RB high	793	23.36	23.32	22.25	20.86	20.82	19.75
	1 RB low	793	23.41	23.30	22.23	20.91	20.80	19.73
	50% RB mid	793	22.94	21.95	21.18	20.44	19.45	18.68
	100% RB	793	22.91	21.86	21.09	20.41	19.36	18.59

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LTE band 25

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -1.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1914.3	23.02	22.53	21.68	21.52	21.03	20.18
		1882.5	23.19	22.70	21.84	21.69	21.20	20.34
		1850.7	23.05	22.56	21.71	21.55	21.06	20.21
	1 RB low	1914.3	23.26	22.77	21.91	21.76	21.27	20.41
		1882.5	23.20	22.71	21.85	21.70	21.21	20.35
		1850.7	23.14	22.65	21.79	21.64	21.15	20.29
	50% RB mid	1914.3	22.34	21.87	21.04	20.84	20.37	19.54
		1882.5	22.18	21.71	20.89	20.68	20.21	19.39
		1850.7	22.17	21.70	20.88	20.67	20.20	19.38
	100% RB	1914.3	22.20	21.73	20.91	20.70	20.23	19.41
		1882.5	22.07	21.60	20.79	20.57	20.10	19.29
		1850.7	22.06	21.59	20.78	20.56	20.09	19.28
3MHz	1 RB high	1913.5	23.09	22.60	21.75	21.59	21.10	20.25
		1882.5	23.26	22.76	21.91	21.76	21.26	20.41
		1851.5	23.12	22.63	21.78	21.62	21.13	20.28
	1 RB low	1913.5	23.25	22.84	21.98	21.75	21.34	20.48
		1882.5	23.27	22.78	21.92	21.77	21.28	20.42
		1851.5	23.21	22.72	21.86	21.71	21.22	20.36
	50% RB mid	1913.5	22.41	21.93	21.11	20.91	20.43	19.61
		1882.5	22.25	21.78	20.96	20.75	20.28	19.46
		1851.5	22.23	21.76	20.94	20.73	20.26	19.44
	100% RB	1913.5	22.27	21.80	20.97	20.77	20.30	19.47
		1882.5	22.14	21.67	20.85	20.64	20.17	19.35
		1851.5	22.13	21.66	20.84	20.63	20.16	19.34
5MHz	1 RB high	1912.5	22.87	22.39	21.54	21.37	20.89	20.04
		1882.5	23.04	22.55	21.70	21.54	21.05	20.20
		1852.5	22.90	22.42	21.57	21.40	20.92	20.07
	1 RB low	1912.5	23.11	22.62	21.77	21.61	21.12	20.27
		1882.5	23.05	22.56	21.71	21.55	21.06	20.21
		1852.5	22.99	22.50	21.65	21.49	21.00	20.15
	50% RB mid	1912.5	22.20	21.73	20.91	20.70	20.23	19.41
		1882.5	22.04	21.57	20.76	20.54	20.07	19.26
		1852.5	22.02	21.56	20.74	20.52	20.06	19.24
	100% RB	1912.5	22.06	21.59	20.77	20.56	20.09	19.27
		1882.5	21.93	21.46	20.65	20.43	19.96	19.15
		1852.5	21.92	21.45	20.64	20.42	19.95	19.14
10MHz	1 RB high	1910	22.98	22.49	21.65	21.48	20.99	20.15

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		1882.5	23.15	22.66	21.80	21.65	21.16	20.30
		1855	23.01	22.52	21.67	21.51	21.02	20.17
	1 RB low	1910	23.22	22.73	21.87	21.72	21.23	20.37
		1882.5	23.16	22.67	21.82	21.66	21.17	20.32
		1855	23.10	22.61	21.76	21.60	21.11	20.26
	50% RB mid	1910	22.30	21.83	21.01	20.80	20.33	19.51
		1882.5	22.14	21.67	20.86	20.64	20.17	19.36
		1855	22.13	21.66	20.84	20.63	20.16	19.34
	100% RB	1910	22.16	21.69	20.87	20.66	20.19	19.37
		1882.5	22.03	21.57	20.75	20.53	20.07	19.25
		1855	22.02	21.55	20.74	20.52	20.05	19.24
15MHz	1 RB high	1907.5	23.01	22.52	21.67	21.51	21.02	20.17
		1882.5	23.18	22.69	21.83	21.68	21.19	20.33
		1857.5	23.04	22.55	21.70	21.54	21.05	20.20
	1 RB low	1907.5	23.25	22.76	21.90	21.75	21.26	20.40
		1882.5	23.19	22.70	21.84	21.69	21.20	20.34
		1857.5	23.13	22.64	21.78	21.63	21.14	20.28
	50% RB mid	1907.5	22.33	21.86	21.03	20.83	20.36	19.53
		1882.5	22.17	21.70	20.88	20.67	20.20	19.38
		1857.5	22.16	21.69	20.87	20.66	20.19	19.37
	100% RB	1907.5	22.19	21.72	20.90	20.69	20.22	19.40
		1882.5	22.06	21.59	20.78	20.56	20.09	19.28
		1857.5	22.05	21.58	20.77	20.55	20.08	19.27
20MHz	1 RB high	1905	23.05	22.30	21.11	21.55	20.80	19.61
		1882.5	23.22	22.51	21.32	21.72	21.01	19.82
		1860	23.08	22.90	21.71	21.58	21.40	20.21
	1 RB low	1905	23.29	22.94	21.75	21.79	21.44	20.25
		1882.5	23.23	22.81	21.62	21.73	21.31	20.12
		1860	23.17	22.95	21.76	21.67	21.45	20.26
	50% RB mid	1905	22.37	21.39	20.20	20.87	19.89	18.70
		1882.5	22.21	21.21	20.02	20.71	19.71	18.52
		1860	22.20	21.22	20.03	20.70	19.72	18.53
	100% RB	1905	22.23	21.23	20.04	20.73	19.73	18.54
		1882.5	22.10	21.11	19.92	20.60	19.61	18.42
		1860	22.09	21.14	19.95	20.59	19.64	18.45

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LTE band 26(814MHz~824MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -3)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	823.3	23.05	22.14	21.08	20.05	19.14	18.08
		819	23.06	22.15	21.14	20.06	19.15	18.14
		814.7	23.04	22.17	21.17	20.04	19.17	18.17
	1 RB low	823.3	23.08	22.13	21.08	20.08	19.13	18.08
		819	23.06	22.14	21.03	20.06	19.14	18.03
		814.7	23.06	22.18	21.10	20.06	19.18	18.10
	50% RB mid	823.3	23.04	22.45	21.28	20.04	19.45	18.28
		819	23.17	22.36	21.08	20.17	19.36	18.08
		814.7	23.15	22.47	21.14	20.15	19.47	18.14
	100% RB	823.3	22.15	21.31	20.05	19.15	18.31	17.05
		819	22.17	21.03	20.07	19.17	18.03	17.07
		814.7	22.19	21.36	19.94	19.19	18.36	16.94
3MHz	1 RB high	822.5	23.06	22.13	21.13	20.06	19.13	18.13
		819	23.08	22.14	21.32	20.08	19.14	18.32
		815.5	23.13	22.15	20.82	20.13	19.15	17.82
	1 RB low	822.5	23.14	22.22	21.10	20.14	19.22	18.10
		819	23.15	22.25	21.24	20.15	19.25	18.24
		815.5	23.20	22.25	21.23	20.20	19.25	18.23
	50% RB mid	822.5	22.22	21.29	1.18	19.22	18.29	1.82
		819	22.21	21.28	20.20	19.21	18.28	17.20
		815.5	22.22	21.33	20.14	19.22	18.33	17.14
	100% RB	822.5	22.18	21.20	20.11	19.18	18.20	17.11
		819	22.16	21.20	20.16	19.16	18.20	17.16
		815.5	22.19	21.24	20.12	19.19	18.24	17.12
5MHz	1 RB high	821.5	22.98	22.18	21.10	19.98	19.18	18.10
		819	23.00	22.41	21.16	20.00	19.41	18.16
		816.5	22.98	22.18	21.14	19.98	19.18	18.14
	1 RB low	821.5	23.09	22.31	21.08	20.09	19.31	18.08
		819	23.14	22.54	21.18	20.14	19.54	18.18
		816.5	23.13	22.38	21.21	20.13	19.38	18.21
	50% RB mid	821.5	22.30	21.34	20.01	19.30	18.34	17.01
		819	22.27	21.35	20.14	19.27	18.35	17.14
		816.5	22.27	21.39	20.21	19.27	18.39	17.21
	100% RB	821.5	22.19	21.14	20.04	19.19	18.14	17.04
		819	22.20	21.13	20.08	19.20	18.13	17.08
		816.5	22.24	21.30	20.07	19.24	18.30	17.07
10MHz	1 RB high	819	23.10	22.30	21.32	20.10	19.30	18.32

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	1 RB low	819	23.13	22.32	21.23	20.13	19.32	18.23
	50% RB mid	819	23.15	22.14	21.15	20.15	19.14	18.15
	100% RB	819	23.22	22.53	21.18	20.22	19.53	18.18

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LTE band 26(824MHz~849MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -3)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.00	22.11	21.19	20.00	19.11	18.19
		836.5	23.12	22.25	21.16	20.12	19.25	18.16
		824.7	23.04	22.17	21.09	20.04	19.17	18.09
	1 RB low	848.3	23.02	22.12	21.13	20.02	19.12	18.13
		836.5	23.15	22.23	21.29	20.15	19.23	18.29
		824.7	23.06	22.18	21.12	20.06	19.18	18.12
	50% RB mid	848.3	23.00	22.38	21.21	20.00	19.38	18.21
		836.5	23.12	22.52	21.25	20.12	19.52	18.25
		824.7	23.08	22.43	21.19	20.08	19.43	18.19
	100% RB	848.3	22.18	21.34	20.07	19.18	18.34	17.07
		836.5	22.22	21.40	21.11	19.22	18.40	18.11
		824.7	22.17	21.34	20.04	19.17	18.34	17.04
3MHz	1 RB high	847.5	23.05	22.12	21.24	20.05	19.12	18.24
		836.5	23.16	22.20	21.28	20.16	19.20	18.28
		825.5	23.14	22.18	21.18	20.14	19.18	18.18
	1 RB low	847.5	23.16	22.24	21.20	20.16	19.24	18.20
		836.5	23.23	22.29	21.25	20.23	19.29	18.25
		825.5	23.16	22.25	21.02	20.16	19.25	18.02
	50% RB mid	847.5	22.17	21.27	20.12	19.17	18.27	17.12
		836.5	22.29	21.39	20.24	19.29	18.39	17.24
		825.5	22.19	21.28	20.10	19.19	18.28	17.10
	100% RB	847.5	22.20	21.27	20.18	19.20	18.27	17.18
		836.5	22.27	21.34	20.24	19.27	18.34	17.24
		825.5	22.15	21.17	20.10	19.15	18.17	17.10
5MHz	1 RB high	846.5	22.95	22.15	21.18	19.95	19.15	18.18
		836.5	23.08	22.22	21.15	20.08	19.22	18.15
		826.5	22.99	22.22	21.13	19.99	19.22	18.13
	1 RB low	846.5	23.10	22.30	21.26	20.10	19.30	18.26
		836.5	23.19	22.35	21.23	20.19	19.35	18.23
		826.5	23.08	22.31	21.12	20.08	19.31	18.12
	50% RB mid	846.5	22.29	21.35	20.16	19.29	18.35	17.16
		836.5	22.27	21.39	20.28	19.27	18.39	17.28
		826.5	22.25	21.30	20.17	19.25	18.30	17.17
	100% RB	846.5	22.13	21.11	20.10	19.13	18.11	17.10
		836.5	22.30	21.34	20.21	19.30	18.34	17.21
		826.5	22.17	21.14	19.99	19.17	18.14	16.99
10MHz	1 RB high	844	23.11	22.12	21.25	20.11	19.12	18.25

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		836.5	23.22	22.51	21.45	20.22	19.51	18.45
		829	23.25	22.28	21.32	20.25	19.28	18.32
	1 RB low	844	23.25	22.28	21.23	20.25	19.28	18.23
		836.5	23.14	22.44	21.31	20.14	19.44	18.31
		829	23.26	22.28	21.40	20.26	19.28	18.40
	50% RB mid	844	22.32	21.36	20.09	19.32	18.36	17.09
		836.5	22.20	21.22	20.05	19.20	18.22	17.05
		829	22.25	21.29	20.25	19.25	18.29	17.25
	100% RB	844	22.17	21.13	20.04	19.17	18.13	17.04
		836.5	22.17	21.24	20.08	19.17	18.24	17.08
		829	22.13	21.16	20.13	19.13	18.16	17.13
15MHz	1 RB high	841.5	23.27	22.75	21.39	20.27	19.75	18.39
		836.5	23.25	22.49	21.46	20.25	19.49	18.46
		831.5	23.33	22.81	21.75	20.33	19.81	18.75
	1 RB low	841.5	23.45	22.95	21.32	20.45	19.95	18.32
		836.5	23.33	22.56	21.41	20.33	19.56	18.41
		831.5	23.38	22.84	21.35	20.38	19.84	18.35
	50% RB mid	841.5	22.40	21.42	20.48	19.40	18.42	17.48
		836.5	22.42	21.46	20.33	19.42	18.46	17.33
		831.5	22.33	21.34	20.36	19.33	18.34	17.36
	100% RB	841.5	22.33	21.33	20.24	19.33	18.33	17.24
		836.5	22.39	21.44	20.36	19.39	18.44	17.36
		831.5	22.31	21.33	20.29	19.31	18.33	17.29

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LTE band 41(PC2)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2687.5	24.78	24.61	22.98	23.78	23.61	21.98
		2593	24.77	24.81	23.00	23.77	23.81	22.00
		2498.5	24.80	24.53	22.94	23.80	23.53	21.94
	1 RB low	2687.5	24.81	24.54	22.87	23.81	23.54	21.87
		2593	24.81	24.74	22.95	23.81	23.74	21.95
		2498.5	24.80	24.93	22.90	23.80	23.93	21.90
	50% RB mid	2687.5	25.03	24.61	23.10	24.03	23.61	22.10
		2593	24.87	24.73	22.96	23.87	23.73	21.96
		2498.5	24.95	24.54	22.93	23.95	23.54	21.93
	100% RB	2687.5	25.05	24.71	22.88	24.05	23.71	21.88
		2593	25.05	24.85	23.12	24.05	23.85	22.12
		2498.5	24.95	24.61	23.06	23.95	23.61	22.06
10MHz	1 RB high	2685	25.08	24.80	23.11	24.08	23.80	22.11
		2593	25.06	24.68	23.17	24.06	23.68	22.17
		2501	24.93	24.69	23.02	23.93	23.69	22.02
	1 RB low	2685	24.83	24.56	22.87	23.83	23.56	21.87
		2593	24.81	24.74	23.07	23.81	23.74	22.07
		2501	24.90	24.89	22.91	23.90	23.89	21.91
	50% RB mid	2685	24.81	24.85	22.93	23.81	23.85	21.93
		2593	25.03	24.51	22.92	24.03	23.51	21.92
		2501	24.79	24.57	23.09	23.79	23.57	22.09
	100% RB	2685	24.91	24.90	23.11	23.91	23.90	22.11
		2593	25.05	24.63	22.93	24.05	23.63	21.93
		2501	25.05	24.89	23.01	24.05	23.89	22.01
15MHz	1 RB high	2682.5	25.06	24.86	23.04	24.06	23.86	22.04
		2593	24.75	24.63	23.11	23.75	23.63	22.11
		2503.5	24.87	24.84	23.01	23.87	23.84	22.01
	1 RB low	2682.5	24.77	24.54	22.93	23.77	23.54	21.93
		2593	24.87	24.62	23.01	23.87	23.62	22.01
		2503.5	24.74	24.86	23.15	23.74	23.86	22.15
	50% RB mid	2682.5	25.00	24.84	23.08	24.00	23.84	22.08
		2593	24.82	24.72	22.85	23.82	23.72	21.85
		2503.5	25.01	24.78	23.15	24.01	23.78	22.15
	100% RB	2682.5	24.85	24.77	23.16	23.85	23.77	22.16
		2593	25.08	24.77	23.15	24.08	23.77	22.15
		2503.5	25.06	24.55	22.95	24.06	23.55	21.95
20MHz	1 RB high	2680	24.98	24.83	23.17	23.98	23.83	22.17

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		2593	24.92	24.70	23.16	23.92	23.70	22.16
		2506	24.80	24.90	23.15	23.80	23.90	22.15
	1 RB low	2680	24.98	24.72	23.15	23.98	23.72	22.15
		2593	24.98	24.57	23.16	23.98	23.57	22.16
		2506	24.84	24.85	22.88	23.84	23.85	21.88
	50% RB mid	2680	25.01	24.73	23.16	24.01	23.73	22.16
		2593	24.77	24.83	22.97	23.77	23.83	21.97
		2506	24.99	24.76	22.91	23.99	23.76	21.91
	100% RB	2680	24.87	24.50	22.96	23.87	23.50	21.96
		2593	24.95	24.63	23.02	23.95	23.63	22.02
		2506	24.86	24.91	23.00	23.86	23.91	22.00

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LTE band 41(PC3)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2687.5	22.87	21.40	21.29	21.87	20.40	20.29
		2593	22.36	21.25	21.14	21.36	20.25	20.14
		2498.5	23.06	20.80	21.09	22.06	19.80	20.09
	1 RB low	2687.5	22.73	21.59	21.49	21.73	20.59	20.49
		2593	22.48	21.35	21.25	21.48	20.35	20.25
		2498.5	22.80	20.80	21.09	21.80	19.80	20.09
	50% RB mid	2687.5	22.18	21.07	20.97	21.18	20.07	19.97
		2593	21.94	20.84	20.74	20.94	19.84	19.74
		2498.5	22.69	21.56	21.45	21.69	20.56	20.45
	100% RB	2687.5	22.04	20.94	20.84	21.04	19.94	19.84
		2593	21.81	20.72	20.62	20.81	19.72	19.62
		2498.5	22.58	21.45	21.35	21.58	20.45	20.35
10MHz	1 RB high	2685	22.91	21.76	21.29	21.91	20.76	20.29
		2593	22.28	21.16	21.06	21.28	20.16	20.06
		2501	22.70	20.80	21.09	21.70	19.80	20.09
	1 RB low	2685	22.64	21.51	21.40	21.64	20.51	20.40
		2593	22.39	21.27	21.17	21.39	20.27	20.17
		2501	22.70	20.80	21.19	21.70	19.80	20.19
	50% RB mid	2685	22.10	20.99	20.89	21.10	19.99	19.89
		2593	21.86	20.76	20.67	20.86	19.76	19.67
		2501	22.60	21.47	21.37	21.60	20.47	20.37
	100% RB	2685	21.96	20.86	20.76	20.96	19.86	19.76
		2593	21.72	20.64	20.54	20.72	19.64	19.54
		2501	22.49	21.37	21.27	21.49	20.37	20.27
15MHz	1 RB high	2682.5	23.06	20.80	21.39	22.06	19.80	20.39
		2593	22.42	21.30	21.20	21.42	20.30	20.20
		2503.5	22.74	20.80	21.19	21.74	19.80	20.19
	1 RB low	2682.5	22.78	21.64	21.29	21.78	20.64	20.29
		2593	22.54	21.41	21.31	21.54	20.41	20.31
		2503.5	22.95	20.80	21.29	21.95	19.80	20.29
	50% RB mid	2682.5	22.24	21.13	21.03	21.24	20.13	20.03
		2593	22.00	20.90	20.80	21.00	19.90	19.80
		2503.5	22.75	21.61	21.27	21.75	20.61	20.27
	100% RB	2682.5	22.10	21.00	20.90	21.10	20.00	19.90
		2593	21.86	20.77	20.67	20.86	19.77	19.67
		2503.5	22.64	21.51	21.40	21.64	20.51	20.40
20MHz	1 RB high	2680	22.40	21.35	20.87	21.40	20.35	19.87

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		2593	21.78	20.92	20.30	20.78	19.92	19.30
		2506	23.04	20.80	21.43	22.04	19.80	20.43
	1 RB low	2680	22.03	20.99	20.63	21.03	19.99	19.63
		2593	21.95	21.12	20.40	20.95	20.12	19.40
		2506	23.06	20.80	21.45	22.06	19.80	20.45
	50% RB mid	2680	21.54	20.50	20.14	20.54	19.50	19.14
		2593	21.35	20.34	19.92	20.35	19.34	18.92
		2506	22.13	21.13	20.60	21.13	20.13	19.60
	100% RB	2680	21.42	20.41	20.01	20.42	19.41	19.01
		2593	21.23	20.17	19.79	20.23	19.17	18.79
		2506	22.04	21.05	20.49	21.04	20.05	19.49

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LTE band 66

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -1.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	22.61	23.08	21.72	21.11	21.58	20.22
		1745	22.99	22.87	21.94	21.49	21.37	20.44
		1710.7	22.99	23.10	21.90	21.49	21.60	20.40
	1 RB low	1779.3	23.06	23.16	21.84	21.56	21.66	20.34
		1745	22.95	22.91	22.12	21.45	21.41	20.62
		1710.7	22.74	23.04	22.04	21.24	21.54	20.54
	50% RB mid	1779.3	23.09	21.81	20.59	21.59	20.31	19.09
		1745	22.84	21.68	20.57	21.34	20.18	19.07
		1710.7	23.11	21.79	20.70	21.61	20.29	19.20
	100% RB	1779.3	22.91	21.64	20.66	21.41	20.14	19.16
		1745	23.11	21.74	20.51	21.61	20.24	19.01
		1710.7	22.62	21.76	20.55	21.12	20.26	19.05
3MHz	1 RB high	1778.5	22.79	23.05	22.02	21.29	21.55	20.52
		1745	22.88	22.90	21.74	21.38	21.40	20.24
		1711.5	22.99	23.14	21.62	21.49	21.64	20.12
	1 RB low	1778.5	22.70	23.00	21.82	21.20	21.50	20.32
		1745	22.82	23.01	22.09	21.32	21.51	20.59
		1711.5	22.66	22.92	21.96	21.16	21.42	20.46
	50% RB mid	1778.5	22.88	21.58	20.54	21.38	20.08	19.04
		1745	22.78	21.67	20.66	21.28	20.17	19.16
		1711.5	22.70	21.64	20.63	21.20	20.14	19.13
	100% RB	1778.5	22.65	21.62	20.58	21.15	20.12	19.08
		1745	23.17	21.74	20.56	21.67	20.24	19.06
		1711.5	22.68	21.65	20.51	21.18	20.15	19.01
5MHz	1 RB high	1777.5	22.85	23.01	21.63	21.35	21.51	20.13
		1745	22.79	23.12	21.65	21.29	21.62	20.15
		1712.5	23.02	23.13	22.04	21.52	21.63	20.54
	1 RB low	1777.5	22.67	22.91	21.82	21.17	21.41	20.32
		1745	23.12	23.07	21.81	21.62	21.57	20.31
		1712.5	22.67	22.96	21.72	21.17	21.46	20.22
	50% RB mid	1777.5	22.82	21.65	20.52	21.32	20.15	19.02
		1745	23.01	21.75	20.58	21.51	20.25	19.08
		1712.5	22.91	21.60	20.68	21.41	20.10	19.18
	100% RB	1777.5	22.82	21.63	20.64	21.32	20.13	19.14
		1745	22.89	21.79	20.52	21.39	20.29	19.02
		1712.5	22.65	21.66	20.55	21.15	20.16	19.05

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10MHz	1 RB high	1775	22.86	22.89	21.78	21.36	21.39	20.28
		1745	23.18	23.02	21.70	21.68	21.52	20.20
		1715	23.07	23.02	21.97	21.57	21.52	20.47
	1 RB low	1775	22.85	22.91	22.04	21.35	21.41	20.54
		1745	22.74	23.14	21.64	21.24	21.64	20.14
		1715	22.81	22.90	21.80	21.31	21.40	20.30
	50% RB mid	1775	23.05	21.59	20.48	21.55	20.09	18.98
		1745	22.70	21.81	20.70	21.20	20.31	19.20
		1715	22.67	21.58	20.73	21.17	20.08	19.23
	100% RB	1775	22.92	21.57	20.57	21.42	20.07	19.07
		1745	22.74	21.68	20.59	21.24	20.18	19.09
		1715	23.02	21.58	20.48	21.52	20.08	18.98
15MHz	1 RB high	1772.5	22.91	22.94	22.06	21.41	21.44	20.56
		1745	22.75	23.04	21.95	21.25	21.54	20.45
		1717.5	22.71	22.97	22.00	21.21	21.47	20.50
	1 RB low	1772.5	23.16	23.18	22.08	21.66	21.68	20.58
		1745	23.03	23.10	21.78	21.53	21.60	20.28
		1717.5	22.87	23.01	21.71	21.37	21.51	20.21
	50% RB mid	1772.5	23.10	21.78	20.65	21.60	20.28	19.15
		1745	22.82	21.78	20.73	21.32	20.28	19.23
		1717.5	22.66	21.79	20.60	21.16	20.29	19.10
	100% RB	1772.5	23.16	21.79	20.49	21.66	20.29	18.99
		1745	22.78	21.66	20.62	21.28	20.16	19.12
		1717.5	23.16	21.69	20.60	21.66	20.19	19.10
20MHz	1 RB high	1770	23.02	22.93	22.21	21.52	21.43	20.71
		1745	22.94	22.96	21.81	21.44	21.46	20.31
		1720	22.97	22.83	21.69	21.47	21.33	20.19
	1 RB low	1770	23.37	23.29	22.12	21.87	21.79	20.62
		1745	23.05	23.21	22.04	21.55	21.71	20.54
		1720	23.07	22.97	21.81	21.57	21.47	20.31
	50% RB mid	1770	22.76	21.77	20.68	21.26	20.27	19.18
		1745	22.76	21.81	20.72	21.26	20.31	19.22
		1720	22.92	21.91	20.81	21.42	20.41	19.31
	100% RB	1770	22.62	21.68	20.59	21.12	20.18	19.09
		1745	22.72	21.66	20.57	21.22	20.16	19.07
		1720	22.84	21.84	20.74	21.34	20.34	19.24

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LTE band 71

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -3)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	695.5	23.21	22.85	22.67	20.21	19.85	19.67
		680.5	23.08	22.53	22.63	20.08	19.53	19.63
		665.5	23.08	22.89	22.53	20.08	19.89	19.53
	1 RB low	695.5	23.16	22.63	22.47	20.16	19.63	19.47
		680.5	23.09	22.86	22.50	20.09	19.86	19.50
		665.5	23.22	22.75	22.40	20.22	19.75	19.40
	50% RB mid	695.5	22.18	21.05	20.91	19.18	18.05	17.91
		680.5	22.25	21.15	20.83	19.25	18.15	17.83
		665.5	22.19	21.15	20.84	19.19	18.15	17.84
	100% RB	695.5	22.22	21.22	21.02	19.22	18.22	18.02
		680.5	22.23	21.10	20.85	19.23	18.10	17.85
		665.5	22.09	21.24	20.91	19.09	18.24	17.91
10MHz	1 RB high	693	23.38	22.59	22.69	20.38	19.59	19.69
		680.5	23.05	22.74	22.50	20.05	19.74	19.50
		668	23.20	22.86	22.25	20.20	19.86	19.25
	1 RB low	693	23.29	22.72	22.46	20.29	19.72	19.46
		680.5	23.13	22.76	22.36	20.13	19.76	19.36
		668	23.07	22.52	22.45	20.07	19.52	19.45
	50% RB mid	693	22.06	21.08	21.01	19.06	18.08	18.01
		680.5	22.15	21.23	20.95	19.15	18.23	17.95
		668	22.07	21.18	21.00	19.07	18.18	18.00
	100% RB	693	22.12	21.25	20.88	19.12	18.25	17.88
		680.5	22.18	21.16	20.96	19.18	18.16	17.96
		668	22.05	21.24	20.90	19.05	18.24	17.90
15MHz	1 RB high	690.5	23.12	22.58	22.63	20.12	19.58	19.63
		680.5	23.16	22.43	22.54	20.16	19.43	19.54
		670.5	23.39	22.72	22.56	20.39	19.72	19.56
	1 RB low	690.5	23.17	22.70	22.34	20.17	19.70	19.34
		680.5	23.17	22.82	22.42	20.17	19.82	19.42
		670.5	23.18	22.81	22.57	20.18	19.81	19.57
	50% RB mid	690.5	22.22	21.19	20.91	19.22	18.19	17.91
		680.5	22.16	21.03	20.89	19.16	18.03	17.89
		670.5	22.11	21.09	21.07	19.11	18.09	18.07
	100% RB	690.5	22.05	21.15	20.92	19.05	18.15	17.92
		680.5	22.25	21.22	20.87	19.25	18.22	17.87
		670.5	22.06	21.23	20.82	19.06	18.23	17.82
20MHz	1 RB high	688	23.07	22.47	22.41	20.07	19.47	19.41

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		680.5	23.24	22.89	22.31	20.24	19.89	19.31
		673	23.45	22.94	22.38	20.45	19.94	19.38
	1 RB low	688	23.15	22.63	22.59	20.15	19.63	19.59
		680.5	23.17	22.85	22.60	20.17	19.85	19.60
		673	23.25	22.72	22.66	20.25	19.72	19.66
	50% RB mid	688	22.17	21.17	21.01	19.17	18.17	18.01
		680.5	22.22	21.26	20.93	19.22	18.26	17.93
		673	22.26	21.30	21.03	19.26	18.30	18.03
	100% RB	688	22.11	21.11	21.01	19.11	18.11	18.01
		680.5	22.15	21.18	20.97	19.15	18.18	17.97
		673	22.15	21.19	20.95	19.15	18.19	17.95

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LAT Measurement Results:

LTE band 7

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EIRP(dBm) (G_T – L_C = -1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	23.04	22.52	21.63	22.04	21.52	20.63
		2535	23.08	22.98	21.67	22.08	21.98	20.67
		2502.5	23.23	22.58	21.82	22.23	21.58	20.82
	1 RB low	2567.5	23.16	22.88	21.75	22.16	21.88	20.75
		2535	23.09	22.75	21.68	22.09	21.75	20.68
		2502.5	23.24	22.67	21.83	22.24	21.67	20.83
	50% RB mid	2567.5	22.12	21.12	20.71	21.12	20.12	19.71
		2535	22.11	21.09	20.70	21.11	20.09	19.70
		2502.5	22.15	21.08	20.74	21.15	20.08	19.74
	100% RB	2567.5	22.02	21.03	20.61	21.02	20.03	19.61
		2535	22.03	21.02	20.62	21.03	20.02	19.62
		2502.5	22.08	21.07	20.67	21.08	20.07	19.67
10MHz	1 RB high	2565	23.00	22.48	21.59	22.00	21.48	20.59
		2535	23.04	22.94	21.63	22.04	21.94	20.63
		2505	23.19	22.54	21.78	22.19	21.54	20.78
	1 RB low	2565	23.12	22.84	21.71	22.12	21.84	20.71
		2535	23.05	22.71	21.64	22.05	21.71	20.64
		2505	23.20	22.63	21.79	22.20	21.63	20.79
	50% RB mid	2565	22.08	21.08	20.67	21.08	20.08	19.67
		2535	22.07	21.05	20.66	21.07	20.05	19.66
		2505	22.11	21.04	20.70	21.11	20.04	19.70
	100% RB	2565	21.98	20.99	20.57	20.98	19.99	19.57
		2535	21.99	20.98	20.58	20.99	19.98	19.58
		2505	22.04	21.03	20.63	21.04	20.03	19.63
15MHz	1 RB high	2562.5	22.95	22.43	21.54	21.95	21.43	20.54
		2535	22.99	22.89	21.58	21.99	21.89	20.58
		2507.5	23.14	22.49	21.73	22.14	21.49	20.73
	1 RB low	2562.5	23.07	22.79	21.66	22.07	21.79	20.66
		2535	23.00	22.66	21.59	22.00	21.66	20.59
		2507.5	23.15	22.58	21.74	22.15	21.58	20.74
	50% RB mid	2562.5	22.03	21.03	20.62	21.03	20.03	19.62
		2535	22.02	21.00	20.61	21.02	20.00	19.61
		2507.5	22.06	20.99	20.65	21.06	19.99	19.65
	100% RB	2562.5	21.93	20.94	20.52	20.93	19.94	19.52
		2535	21.94	20.93	20.53	20.94	19.93	19.53
		2507.5	21.99	20.98	20.58	20.99	19.98	19.58

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20MHz	1 RB high	2560	23.15	22.63	21.74	22.15	21.63	20.74
		2535	23.19	23.09	21.78	22.19	22.09	20.78
		2510	23.34	22.69	21.93	22.34	21.69	20.93
	1 RB low	2560	23.27	22.99	21.86	22.27	21.99	20.86
		2535	23.20	22.86	21.79	22.20	21.86	20.79
		2510	23.35	22.78	21.94	22.35	21.78	20.94
	50% RB mid	2560	22.23	21.23	20.82	21.23	20.23	19.82
		2535	22.22	21.20	20.81	21.22	20.20	19.81
		2510	22.26	21.19	20.85	21.26	20.19	19.85
	100% RB	2560	22.13	21.14	20.72	21.13	20.14	19.72
		2535	22.14	21.13	20.73	21.14	20.13	19.73
		2510	22.19	21.18	20.78	21.19	20.18	19.78

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LTE band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) ($G_T - L_{C=-3}$)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	22.92	22.49	21.36	19.92	19.49	18.36
		707.5	23.06	22.59	21.50	20.06	19.59	18.50
		699.7	23.04	22.90	21.48	20.04	19.90	18.48
	1 RB low	715.3	23.01	22.59	21.45	20.01	19.59	18.45
		707.5	23.13	22.67	21.57	20.13	19.67	18.57
		699.7	23.11	23.03	21.55	20.11	20.03	18.55
	50% RB mid	715.3	22.67	21.74	21.11	19.67	18.74	18.11
		707.5	22.64	21.68	21.08	19.64	18.68	18.08
		699.7	22.64	21.72	21.08	19.64	18.72	18.08
	100% RB	715.3	22.56	21.62	21.00	19.56	18.62	18.00
		707.5	22.57	21.55	21.01	19.57	18.55	18.01
		699.7	22.57	21.65	21.01	19.57	18.65	18.01
3MHz	1 RB high	714.5	22.95	22.52	21.39	19.95	19.52	18.39
		707.5	23.09	22.62	21.53	20.09	19.62	18.53
		700.5	23.07	22.93	21.51	20.07	19.93	18.51
	1 RB low	714.5	23.04	22.62	21.48	20.04	19.62	18.48
		707.5	23.16	22.70	21.60	20.16	19.70	18.60
		700.5	23.14	23.06	21.58	20.14	20.06	18.58
	50% RB mid	714.5	22.70	21.77	21.14	19.70	18.77	18.14
		707.5	22.67	21.71	21.11	19.67	18.71	18.11
		700.5	22.67	21.75	21.11	19.67	18.75	18.11
	100% RB	714.5	22.59	21.65	21.03	19.59	18.65	18.03
		707.5	22.60	21.58	21.04	19.60	18.58	18.04
		700.5	22.60	21.68	21.04	19.60	18.68	18.04
5MHz	1 RB high	713.5	22.97	22.54	21.41	19.97	19.54	18.41
		707.5	23.11	22.64	21.55	20.11	19.64	18.55
		701.5	23.09	22.95	21.53	20.09	19.95	18.53
	1 RB low	713.5	23.06	22.64	21.50	20.06	19.64	18.50
		707.5	23.18	22.72	21.62	20.18	19.72	18.62
		701.5	23.16	23.08	21.60	20.16	20.08	18.60
	50% RB mid	713.5	22.72	21.79	21.16	19.72	18.79	18.16
		707.5	22.69	21.73	21.13	19.69	18.73	18.13
		701.5	22.69	21.77	21.13	19.69	18.77	18.13
	100% RB	713.5	22.61	21.67	21.05	19.61	18.67	18.05
		707.5	22.62	21.60	21.06	19.62	18.60	18.06
		701.5	22.62	21.70	21.06	19.62	18.70	18.06
10MHz	1 RB high	711	23.27	22.84	21.71	20.27	19.84	18.71

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		707.5	23.41	22.94	21.85	20.41	19.94	18.85
		704	23.39	23.25	21.83	20.39	20.25	18.83
	1 RB low	711	23.36	22.94	21.80	20.36	19.94	18.80
		707.5	23.48	23.02	21.92	20.48	20.02	18.92
		704	23.46	23.38	21.90	20.46	20.38	18.90
	50% RB mid	711	23.02	22.09	21.46	20.02	19.09	18.46
		707.5	22.99	22.03	21.43	19.99	19.03	18.43
		704	22.99	22.07	21.43	19.99	19.07	18.43
	100% RB	711	22.91	21.97	21.35	19.91	18.97	18.35
		707.5	22.92	21.90	21.36	19.92	18.90	18.36
		704	22.92	22.00	21.36	19.92	19.00	18.36

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LTE band 13

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) ($G_T - L_{C=-3}$)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	784.5	22.33	22.35	20.93	19.33	19.35	17.93
		782	22.49	21.99	21.09	19.49	18.99	18.09
		779.5	22.39	22.00	20.99	19.39	19.00	17.99
	1 RB low	784.5	22.42	22.41	21.02	19.42	19.41	18.02
		782	22.53	22.06	21.13	19.53	19.06	18.13
		779.5	22.48	22.11	21.08	19.48	19.11	18.08
	50% RB mid	784.5	22.08	21.14	20.68	19.08	18.14	17.68
		782	22.12	21.19	20.72	19.12	18.19	17.72
		779.5	22.11	21.14	20.71	19.11	18.14	17.71
	100% RB	784.5	22.01	21.06	20.61	19.01	18.06	17.61
		782	22.00	21.05	20.60	19.00	18.05	17.60
		779.5	22.02	20.99	20.62	19.02	17.99	17.62
10MHz	1 RB high	782	23.36	23.28	23.17	20.36	20.28	20.17
	1 RB low	782	23.28	23.21	23.09	20.28	20.21	20.09
	50% RB mid	782	22.78	21.83	22.59	19.78	18.83	19.59
	100% RB	782	22.77	21.86	22.58	19.77	18.86	19.58

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LTE band 14

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) (G_T – L_C = -3)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	795.5	23.01	22.69	21.21	20.01	19.69	18.21
		793	23.08	22.76	21.28	20.08	19.76	18.28
		790.5	22.82	22.50	21.02	19.82	19.50	18.02
	1 RB low	795.5	22.96	22.64	21.16	19.96	19.64	18.16
		793	22.98	22.65	21.18	19.98	19.65	18.18
		790.5	22.91	22.59	21.11	19.91	19.59	18.11
	50% RB mid	795.5	22.08	21.59	20.28	19.08	18.59	17.28
		793	22.30	21.80	20.50	19.30	18.80	17.50
		790.5	22.37	21.87	20.57	19.37	18.87	17.57
	100% RB	795.5	22.21	21.72	20.41	19.21	18.72	17.41
		793	22.02	21.53	20.22	19.02	18.53	17.22
		790.5	22.12	21.63	20.32	19.12	18.63	17.32
10MHz	1 RB high	793	23.43	22.92	21.63	20.43	19.92	18.63
	1 RB low	793	23.40	22.99	21.60	20.40	19.99	18.60
	50% RB mid	793	22.94	21.98	21.14	19.94	18.98	18.14
	100% RB	793	22.86	21.86	21.06	19.86	18.86	18.06

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LTE band 25

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EIRP(dBm) ($G_T - L_{C=-1}$)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1914.3	22.90	22.07	21.14	21.90	21.07	20.14
		1882.5	23.07	22.97	21.31	22.07	21.97	20.31
		1850.7	23.38	23.21	21.62	22.38	22.21	20.62
	1 RB low	1914.3	23.45	22.83	21.69	22.45	21.83	20.69
		1882.5	23.66	23.21	21.90	22.66	22.21	20.90
		1850.7	23.63	23.29	21.87	22.63	22.29	20.87
	50% RB mid	1914.3	22.37	21.36	20.61	21.37	20.36	19.61
		1882.5	22.58	21.61	20.82	21.58	20.61	19.82
		1850.7	22.59	21.63	20.83	21.59	20.63	19.83
	100% RB	1914.3	22.35	21.34	20.59	21.35	20.34	19.59
		1882.5	22.34	21.41	20.58	21.34	20.41	19.58
		1850.7	22.62	21.66	20.86	21.62	20.66	19.86
3MHz	1 RB high	1913.5	23.05	22.22	21.29	22.05	21.22	20.29
		1882.5	23.22	23.12	21.46	22.22	22.12	20.46
		1851.5	23.40	23.23	21.64	22.40	22.23	20.64
	1 RB low	1913.5	23.41	22.79	21.65	22.41	21.79	20.65
		1882.5	23.50	23.06	21.74	22.50	22.06	20.74
		1851.5	23.67	23.32	21.91	22.67	22.32	20.91
	50% RB mid	1913.5	22.47	21.47	20.71	21.47	20.47	19.71
		1882.5	22.44	21.47	20.68	21.44	20.47	19.68
		1851.5	22.57	21.60	20.81	21.57	20.60	19.81
	100% RB	1913.5	22.32	21.31	20.56	21.32	20.31	19.56
		1882.5	22.37	21.43	20.61	21.37	20.43	19.61
		1851.5	22.35	21.39	20.59	21.35	20.39	19.59
5MHz	1 RB high	1912.5	22.93	22.09	21.17	21.93	21.09	20.17
		1882.5	23.34	23.24	21.58	22.34	22.24	20.58
		1852.5	23.53	23.36	21.77	22.53	22.36	20.77
	1 RB low	1912.5	23.42	22.80	21.66	22.42	21.80	20.66
		1882.5	23.60	23.16	21.84	22.60	22.16	20.84
		1852.5	23.54	23.19	21.78	22.54	22.19	20.78
	50% RB mid	1912.5	22.32	21.32	20.56	21.32	20.32	19.56
		1882.5	22.28	21.31	20.52	21.28	20.31	19.52
		1852.5	22.61	21.64	20.85	21.61	20.64	19.85
	100% RB	1912.5	22.26	21.26	20.50	21.26	20.26	19.50
		1882.5	22.21	21.27	20.45	21.21	20.27	19.45
		1852.5	22.39	21.44	20.63	21.39	20.44	19.63
10MHz	1 RB high	1910	22.84	22.01	21.08	21.84	21.01	20.08

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		1882.5	23.28	23.18	21.52	22.28	22.18	20.52
		1855	23.27	23.10	21.51	22.27	22.10	20.51
	1 RB low	1910	23.51	22.89	21.75	22.51	21.89	20.75
		1882.5	23.46	23.01	21.70	22.46	22.01	20.70
		1855	23.43	23.09	21.67	22.43	22.09	20.67
	50% RB mid	1910	22.54	21.53	20.78	21.54	20.53	19.78
		1882.5	22.44	21.47	20.68	21.44	20.47	19.68
		1855	22.58	21.62	20.82	21.58	20.62	19.82
	100% RB	1910	22.34	21.33	20.58	21.34	20.33	19.58
		1882.5	22.40	21.46	20.64	21.40	20.46	19.64
		1855	22.49	21.54	20.73	21.49	20.54	19.73
15MHz	1 RB high	1907.5	22.87	22.04	21.11	21.87	21.04	20.11
		1882.5	23.20	23.10	21.44	22.20	22.10	20.44
		1857.5	23.47	23.30	21.71	22.47	22.30	20.71
	1 RB low	1907.5	23.50	22.88	21.74	22.50	21.88	20.74
		1882.5	23.49	23.05	21.73	22.49	22.05	20.73
		1857.5	23.66	23.32	21.90	22.66	22.32	20.90
	50% RB mid	1907.5	22.41	21.40	20.65	21.41	20.40	19.65
		1882.5	22.31	21.34	20.55	21.31	20.34	19.55
		1857.5	22.64	21.67	20.88	21.64	20.67	19.88
	100% RB	1907.5	22.38	21.37	20.62	21.38	20.37	19.62
		1882.5	22.31	21.38	20.55	21.31	20.38	19.55
		1857.5	22.34	21.39	20.58	21.34	20.39	19.58
20MHz	1 RB high	1905	23.40	22.57	21.64	22.40	21.57	20.64
		1882.5	23.75	23.65	21.99	22.75	22.65	20.99
		1860	23.92	23.75	22.16	22.92	22.75	21.16
	1 RB low	1905	23.97	23.35	22.21	22.97	22.35	21.21
		1882.5	24.01	23.57	22.25	23.01	22.57	21.25
		1860	24.06	23.71	22.30	23.06	22.71	21.30
	50% RB mid	1905	22.94	21.93	21.18	21.94	20.93	20.18
		1882.5	22.96	21.99	21.20	21.96	20.99	20.20
		1860	23.07	22.11	21.31	22.07	21.11	20.31
	100% RB	1905	22.83	21.83	21.07	21.83	20.83	20.07
		1882.5	22.82	21.89	21.06	21.82	20.89	20.06
		1860	22.96	22.01	21.20	21.96	21.01	20.20

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LTE band 26(814MHz~824MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) ($G_T - L_{C=-3}$)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	823.3	22.92	22.01	21.13	19.92	19.01	18.13
		819	22.94	22.01	21.14	19.94	19.01	18.14
		814.7	22.91	22.07	21.13	19.91	19.07	18.13
	1 RB low	823.3	22.94	21.99	21.23	19.94	18.99	18.23
		819	22.93	22.02	21.10	19.93	19.02	18.10
		814.7	22.93	22.11	21.03	19.93	19.11	18.03
	50% RB mid	823.3	22.94	22.36	20.99	19.94	19.36	17.99
		819	22.91	22.33	21.10	19.91	19.33	18.10
		814.7	23.05	22.34	21.07	20.05	19.34	18.07
	100% RB	823.3	22.02	21.23	19.87	19.02	18.23	16.87
		819	22.04	21.23	19.95	19.04	18.23	16.95
		814.7	22.08	21.25	19.91	19.08	18.25	16.91
3MHz	1 RB high	822.5	22.94	22.01	21.20	19.94	19.01	18.20
		819	22.97	22.00	21.15	19.97	19.00	18.15
		815.5	22.99	22.05	21.10	19.99	19.05	18.10
	1 RB low	822.5	23.02	22.11	21.09	20.02	19.11	18.09
		819	23.03	22.11	21.18	20.03	19.11	18.18
		815.5	23.09	22.14	21.12	20.09	19.14	18.12
	50% RB mid	822.5	22.08	21.13	20.10	19.08	18.13	17.10
		819	22.07	21.19	20.14	19.07	18.19	17.14
		815.5	22.05	21.17	20.13	19.05	18.17	17.13
	100% RB	822.5	22.06	21.05	20.05	19.06	18.05	17.05
		819	22.09	21.10	20.07	19.09	18.10	17.07
		815.5	22.08	21.14	20.16	19.08	18.14	17.16
5MHz	1 RB high	821.5	22.87	22.08	20.98	19.87	19.08	17.98
		819	22.91	22.29	21.03	19.91	19.29	18.03
		816.5	22.87	22.06	21.09	19.87	19.06	18.09
	1 RB low	821.5	22.94	22.19	21.17	19.94	19.19	18.17
		819	23.01	22.42	21.08	20.01	19.42	18.08
		816.5	22.99	22.26	21.06	19.99	19.26	18.06
	50% RB mid	821.5	22.14	21.25	20.17	19.14	18.25	17.17
		819	22.12	21.22	20.15	19.12	18.22	17.15
		816.5	22.16	21.21	20.13	19.16	18.21	17.13
	100% RB	821.5	22.08	21.18	20.11	19.08	18.18	17.11
		819	22.08	21.13	20.12	19.08	18.13	17.12
		816.5	22.06	21.01	20.03	19.06	18.01	17.03
10MHz	1 RB high	819	23.00	22.21	21.24	20.00	19.21	18.24

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	1 RB low	819	23.01	22.25	21.18	20.01	19.25	18.18
	50% RB mid	819	23.01	22.28	21.11	20.01	19.28	18.11
	100% RB	819	23.09	22.41	21.13	20.09	19.41	18.13

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LTE band 26(824MHz~849MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) ($G_T - L_{C=-3}$)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	22.87	21.98	21.02	19.87	18.98	18.02
		836.5	22.99	22.08	21.21	19.99	19.08	18.21
		824.7	22.92	22.07	21.17	19.92	19.07	18.17
	1 RB low	848.3	22.89	21.98	21.10	19.89	18.98	18.10
		836.5	23.00	22.09	21.25	20.00	19.09	18.25
		824.7	22.92	22.08	21.04	19.92	19.08	18.04
	50% RB mid	848.3	22.86	22.27	21.12	19.86	19.27	18.12
		836.5	22.93	22.37	21.12	19.93	19.37	18.12
		824.7	23.01	22.35	21.17	20.01	19.35	18.17
	100% RB	848.3	22.02	21.19	20.04	19.02	18.19	17.04
		836.5	22.14	21.27	20.11	19.14	18.27	17.11
		824.7	22.01	21.22	20.03	19.01	18.22	17.03
3MHz	1 RB high	847.5	22.92	21.98	21.15	19.92	18.98	18.15
		836.5	23.04	22.33	21.17	20.04	19.33	18.17
		825.5	23.02	22.09	21.23	20.02	19.09	18.23
	1 RB low	847.5	23.03	22.09	21.20	20.03	19.09	18.20
		836.5	23.12	22.38	21.14	20.12	19.38	18.14
		825.5	23.08	22.14	21.28	20.08	19.14	18.28
	50% RB mid	847.5	22.09	21.17	20.15	19.09	18.17	17.15
		836.5	22.15	21.28	20.11	19.15	18.28	17.11
		825.5	22.07	21.13	20.14	19.07	18.13	17.14
	100% RB	847.5	22.08	21.09	20.06	19.08	18.09	17.06
		836.5	22.17	21.20	20.09	19.17	18.20	17.09
		825.5	22.03	21.07	20.02	19.03	18.07	17.02
5MHz	1 RB high	846.5	22.85	22.27	21.04	19.85	19.27	18.04
		836.5	22.89	21.84	21.03	19.89	18.84	18.03
		826.5	22.91	22.11	21.08	19.91	19.11	18.08
	1 RB low	846.5	23.01	22.44	21.10	20.01	19.44	18.10
		836.5	23.04	21.98	21.15	20.04	18.98	18.15
		826.5	23.00	22.22	21.12	20.00	19.22	18.12
	50% RB mid	846.5	22.15	21.28	20.20	19.15	18.28	17.20
		836.5	22.12	21.21	20.21	19.12	18.21	17.21
		826.5	22.12	21.18	20.17	19.12	18.18	17.17
	100% RB	846.5	22.05	21.07	19.95	19.05	18.07	16.95
		836.5	22.19	21.18	20.08	19.19	18.18	17.08
		826.5	22.05	21.04	20.02	19.05	18.04	17.02
10MHz	1 RB high	844	22.94	22.25	21.13	19.94	19.25	18.13

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		836.5	23.12	22.69	21.40	20.12	19.69	18.40
		829	23.17	22.14	21.25	20.17	19.14	18.25
	1 RB low	844	23.15	22.41	21.16	20.15	19.41	18.16
		836.5	23.07	22.73	21.18	20.07	19.73	18.18
		829	23.15	22.13	21.16	20.15	19.13	18.16
	50% RB mid	844	22.21	21.26	20.23	19.21	18.26	17.23
		836.5	22.14	21.13	20.20	19.14	18.13	17.20
		829	22.13	21.21	19.96	19.13	18.21	16.96
	100% RB	844	22.07	21.06	20.00	19.07	18.06	17.00
		836.5	22.10	21.08	20.06	19.10	18.08	17.06
		829	22.05	21.06	20.03	19.05	18.06	17.03
15MHz	1 RB high	841.5	23.14	22.35	21.19	20.14	19.35	18.19
		836.5	23.18	22.82	21.47	20.18	19.82	18.47
		831.5	23.27	22.72	21.38	20.27	19.72	18.38
	1 RB low	841.5	23.31	22.51	21.35	20.31	19.51	18.35
		836.5	23.29	22.89	21.36	20.29	19.89	18.36
		831.5	23.31	22.75	21.28	20.31	19.75	18.28
	50% RB mid	841.5	22.34	21.32	20.35	19.34	18.32	17.35
		836.5	22.29	21.31	20.20	19.29	18.31	17.20
		831.5	22.23	21.26	20.36	19.23	18.26	17.36
	100% RB	841.5	22.20	21.31	20.17	19.20	18.31	17.17
		836.5	22.30	21.30	20.24	19.30	18.30	17.24
		831.5	22.21	21.27	20.25	19.21	18.27	17.25

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LTE band 41(PC2)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EIRP(dBm) ($G_T - L_{C=}$ -1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2687.5	25.49	25.02	23.71	24.49	24.02	22.71
		2593	26.63	25.83	24.84	25.63	24.83	23.84
		2498.5	27.48	26.75	25.69	26.48	25.75	24.69
	1 RB low	2687.5	24.84	24.39	23.06	23.84	23.39	22.06
		2593	26.73	25.89	24.95	25.73	24.89	23.95
		2498.5	27.58	26.86	25.79	26.58	25.86	24.79
	50% RB mid	2687.5	24.10	23.17	22.31	23.10	22.17	21.31
		2593	26.15	25.12	24.37	25.15	24.12	23.37
		2498.5	26.58	25.55	24.79	25.58	24.55	23.79
	100% RB	2687.5	24.18	23.19	22.39	23.18	22.19	21.39
		2593	25.99	25.01	24.21	24.99	24.01	23.21
		2498.5	26.43	25.45	24.64	25.43	24.45	23.64
10MHz	1 RB high	2685	25.44	24.96	23.65	24.44	23.96	22.65
		2593	26.66	25.86	24.87	25.66	24.86	23.87
		2501	27.45	26.72	25.66	26.45	25.72	24.66
	1 RB low	2685	24.87	24.42	23.09	23.87	23.42	22.09
		2593	26.69	25.85	24.91	25.69	24.85	23.91
		2501	27.61	26.89	25.83	26.61	25.89	24.83
	50% RB mid	2685	24.12	23.19	22.33	23.12	22.19	21.33
		2593	26.11	25.08	24.33	25.11	24.08	23.33
		2501	26.62	25.59	24.84	25.62	24.59	23.84
	100% RB	2685	24.17	23.18	22.38	23.17	22.18	21.38
		2593	25.99	25.00	24.20	24.99	24.00	23.20
		2501	26.44	25.46	24.65	25.44	24.46	23.65
15MHz	1 RB high	2682.5	25.49	25.01	23.70	24.49	24.01	22.70
		2593	26.66	25.86	24.87	25.66	24.86	23.87
		2503.5	27.41	26.68	25.62	26.41	25.68	24.62
	1 RB low	2682.5	24.91	24.46	23.13	23.91	23.46	22.13
		2593	26.75	25.91	24.96	25.75	24.91	23.96
		2503.5	27.52	26.80	25.74	26.52	25.80	24.74
	50% RB mid	2682.5	24.11	23.18	22.32	23.11	22.18	21.32
		2593	26.16	25.13	24.37	25.16	24.13	23.37
		2503.5	26.59	25.56	24.80	25.59	24.56	23.80
	100% RB	2682.5	24.18	23.19	22.40	23.18	22.19	21.40
		2593	26.08	25.10	24.29	25.08	24.10	23.29
		2503.5	26.41	25.43	24.63	25.41	24.43	23.63
20MHz	1 RB high	2680	25.70	25.22	23.91	24.70	24.22	22.91

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		2593	26.87	26.08	25.09	25.87	25.08	24.09
		2506	27.65	26.92	25.87	26.65	25.92	24.87
	1 RB low	2680	25.08	24.63	23.30	24.08	23.63	22.30
		2593	26.94	26.10	25.16	25.94	25.10	24.16
		2506	27.72	27.00	25.94	26.72	26.00	24.94
	50% RB mid	2680	24.30	23.38	22.52	23.30	22.38	21.52
		2593	26.32	25.29	24.54	25.32	24.29	23.54
		2506	26.76	25.73	24.97	25.76	24.73	23.97
	100% RB	2680	24.36	23.36	22.57	23.36	22.36	21.57
		2593	26.19	25.21	24.40	25.19	24.21	23.40
		2506	26.64	25.66	24.85	25.64	24.66	23.85

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LTE band 41(PC3)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EIRP(dBm) (G_T – L_{C} = -1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2687.5	24.43	23.66	23.37	23.43	22.66	22.37
		2593	23.56	23.12	22.50	22.56	22.12	21.50
		2498.5	24.32	23.57	23.26	23.32	22.57	22.26
	1 RB low	2687.5	23.88	23.07	22.82	22.88	22.07	21.82
		2593	23.51	22.88	22.45	22.51	21.88	21.45
		2498.5	24.20	23.36	23.14	23.20	22.36	22.14
	50% RB mid	2687.5	23.43	22.38	22.37	22.43	21.38	21.37
		2593	22.99	22.05	21.93	21.99	21.05	20.93
		2498.5	23.35	22.33	22.29	22.35	21.33	21.29
	100% RB	2687.5	23.31	22.26	22.25	22.31	21.26	21.25
		2593	22.78	21.81	21.72	21.78	20.81	20.72
		2498.5	23.30	22.28	22.24	22.30	21.28	21.24
10MHz	1 RB high	2685	24.31	23.54	23.25	23.31	22.54	22.25
		2593	23.46	23.02	22.40	22.46	22.02	21.40
		2501	24.35	23.60	23.29	23.35	22.60	22.29
	1 RB low	2685	23.92	23.10	22.86	22.92	22.10	21.86
		2593	23.46	22.83	22.40	22.46	21.83	21.40
		2501	24.28	23.45	23.22	23.28	22.45	22.22
	50% RB mid	2685	23.45	22.40	22.39	22.45	21.40	21.39
		2593	22.91	21.97	21.85	21.91	20.97	20.85
		2501	23.31	22.29	22.25	22.31	21.29	21.25
	100% RB	2685	23.33	22.28	22.27	22.33	21.28	21.27
		2593	22.80	21.83	21.74	21.80	20.83	20.74
		2501	23.27	22.25	22.21	22.27	21.25	21.21
15MHz	1 RB high	2682.5	24.39	23.63	23.33	23.39	22.63	22.33
		2593	23.50	23.06	22.44	22.50	22.06	21.44
		2503.5	24.30	23.55	23.24	23.30	22.55	22.24
	1 RB low	2682.5	24.00	23.19	22.94	23.00	22.19	21.94
		2593	23.49	22.86	22.43	22.49	21.86	21.43
		2503.5	24.27	23.44	23.21	23.27	22.44	22.21
	50% RB mid	2682.5	23.38	22.33	22.32	22.38	21.33	21.32
		2593	22.99	22.05	21.93	21.99	21.05	20.93
		2503.5	23.33	22.31	22.27	22.33	21.31	21.27
	100% RB	2682.5	23.27	22.22	22.21	22.27	21.22	21.21
		2593	22.88	21.91	21.82	21.88	20.91	20.82
		2503.5	23.23	22.21	22.17	22.23	21.21	21.17
20MHz	1 RB high	2680	24.58	23.81	23.52	23.58	22.81	22.52

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		2593	23.70	23.26	22.64	22.70	22.26	21.64
		2506	24.52	23.77	23.46	23.52	22.77	22.46
	1 RB low	2680	24.17	23.35	23.11	23.17	22.35	22.11
		2593	23.69	23.06	22.63	22.69	22.06	21.63
		2506	24.47	23.64	23.41	23.47	22.64	22.41
	50% RB mid	2680	23.58	22.53	22.52	22.58	21.53	21.52
		2593	23.12	22.18	22.06	22.12	21.18	21.06
		2506	23.57	22.55	22.51	22.57	21.55	21.51
	100% RB	2680	23.48	22.43	22.42	22.48	21.43	21.42
		2593	23.01	22.04	21.95	22.01	21.04	20.95
		2506	23.49	22.47	22.43	22.49	21.47	21.43

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LTE band 66

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			EIRP(dBm) ($G_T - L_{C=}$ -1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	23.63	23.74	22.05	22.63	22.74	21.05
		1745	23.61	23.92	22.03	22.61	22.92	21.03
		1710.7	23.63	23.53	22.05	22.63	22.53	21.05
	1 RB low	1779.3	23.75	24.04	22.17	22.75	23.04	21.17
		1745	23.53	23.58	21.95	22.53	22.58	20.95
		1710.7	23.74	23.62	22.16	22.74	22.62	21.16
	50% RB mid	1779.3	23.37	22.38	21.79	22.37	21.38	20.79
		1745	23.38	22.41	21.81	22.38	21.41	20.81
		1710.7	23.45	22.46	21.87	22.45	21.46	20.87
	100% RB	1779.3	23.33	22.34	21.75	22.33	21.34	20.75
		1745	23.32	22.30	21.74	22.32	21.30	20.74
		1710.7	23.55	22.55	21.97	22.55	21.55	20.97
3MHz	1 RB high	1778.5	23.60	23.72	22.02	22.60	22.72	21.02
		1745	23.55	23.85	21.97	22.55	22.85	20.97
		1711.5	23.57	23.47	21.99	22.57	22.47	20.99
	1 RB low	1778.5	23.75	24.05	22.17	22.75	23.05	21.17
		1745	23.49	23.55	21.91	22.49	22.55	20.91
		1711.5	23.76	23.63	22.18	22.76	22.63	21.18
	50% RB mid	1778.5	23.39	22.39	21.81	22.39	21.39	20.81
		1745	23.33	22.36	21.75	22.33	21.36	20.75
		1711.5	23.50	22.51	21.92	22.50	21.51	20.92
	100% RB	1778.5	23.26	22.27	21.68	22.26	21.27	20.68
		1745	23.19	22.18	21.61	22.19	21.18	20.61
		1711.5	23.43	22.42	21.85	22.43	21.42	20.85
5MHz	1 RB high	1777.5	23.59	23.70	22.01	22.59	22.70	21.01
		1745	23.59	23.89	22.01	22.59	22.89	21.01
		1712.5	23.67	23.57	22.09	22.67	22.57	21.09
	1 RB low	1777.5	23.81	24.10	22.23	22.81	23.10	21.23
		1745	23.53	23.59	21.95	22.53	22.59	20.95
		1712.5	23.76	23.64	22.18	22.76	22.64	21.18
	50% RB mid	1777.5	23.42	22.43	21.84	22.42	21.43	20.84
		1745	23.38	22.41	21.80	22.38	21.41	20.80
		1712.5	23.56	22.58	21.98	22.56	21.58	20.98
	100% RB	1777.5	23.31	22.32	21.74	22.31	21.32	20.74
		1745	23.29	22.28	21.71	22.29	21.28	20.71
		1712.5	23.51	22.51	21.93	22.51	21.51	20.93
10MHz	1 RB high	1775	23.63	23.75	22.06	22.63	22.75	21.06

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		1745	23.52	23.83	21.94	22.52	22.83	20.94
		1715	23.74	23.64	22.16	22.74	22.64	21.16
	1 RB low	1775	23.78	24.08	22.20	22.78	23.08	21.20
		1745	23.55	23.61	21.97	22.55	22.61	20.97
		1715	23.66	23.54	22.08	22.66	22.54	21.08
	50% RB mid	1775	23.41	22.42	21.83	22.41	21.42	20.83
		1745	23.40	22.43	21.83	22.40	21.43	20.83
		1715	23.55	22.57	21.97	22.55	21.57	20.97
	100% RB	1775	23.37	22.38	21.79	22.37	21.38	20.79
		1745	23.26	22.25	21.68	22.26	21.25	20.68
		1715	23.51	22.51	21.93	22.51	21.51	20.93
15MHz	1 RB high	1772.5	23.62	23.74	22.04	22.62	22.74	21.04
		1745	23.51	23.81	21.93	22.51	22.81	20.93
		1717.5	23.63	23.54	22.06	22.63	22.54	21.06
	1 RB low	1772.5	23.76	24.06	22.18	22.76	23.06	21.18
		1745	23.54	23.59	21.96	22.54	22.59	20.96
		1717.5	23.70	23.58	22.12	22.70	22.58	21.12
	50% RB mid	1772.5	23.36	22.37	21.78	22.36	21.37	20.78
		1745	23.45	22.48	21.87	22.45	21.48	20.87
		1717.5	23.50	22.51	21.92	22.50	21.51	20.92
	100% RB	1772.5	23.39	22.40	21.81	22.39	21.40	20.81
		1745	23.21	22.19	21.63	22.21	21.19	20.63
		1717.5	23.42	22.42	21.84	22.42	21.42	20.84
20MHz	1 RB high	1770	23.82	23.94	22.25	22.82	22.94	21.25
		1745	23.75	24.06	22.17	22.75	23.06	21.17
		1720	23.84	23.75	22.26	22.84	22.75	21.26
	1 RB low	1770	23.97	24.27	22.39	22.97	23.27	21.39
		1745	23.73	23.79	22.15	22.73	22.79	21.15
		1720	23.91	23.79	22.33	22.91	22.79	21.33
	50% RB mid	1770	23.59	22.59	22.01	22.59	21.59	21.01
		1745	23.57	22.60	21.99	22.57	21.60	20.99
		1720	23.70	22.71	22.12	22.70	21.71	21.12
	100% RB	1770	23.51	22.52	21.93	22.51	21.52	20.93
		1745	23.47	22.46	21.89	22.47	21.46	20.89
		1720	23.70	22.69	22.12	22.70	21.69	21.12

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LTE band 71

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			ERP(dBm) ($G_T - L_{C=}$ -3.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	695.5	22.92	22.41	23.03	19.42	18.91	19.53
		680.5	22.94	22.85	23.07	19.44	19.35	19.57
		665.5	23.08	22.43	23.22	19.58	18.93	19.72
	1 RB low	695.5	23.08	22.80	23.15	19.58	19.30	19.65
		680.5	23.02	22.68	23.08	19.52	19.18	19.58
		665.5	23.16	22.59	23.23	19.66	19.09	19.73
	50% RB mid	695.5	22.05	21.04	22.11	18.55	17.54	18.61
		680.5	22.03	21.01	22.10	18.53	17.51	18.60
		665.5	21.98	20.91	22.14	18.48	17.41	18.64
	100% RB	695.5	22.00	21.01	22.01	18.50	17.51	18.51
		680.5	21.96	20.95	22.02	18.46	17.45	18.52
		665.5	21.97	20.96	22.07	18.47	17.46	18.57
10MHz	1 RB high	693	22.93	22.41	23.03	19.43	18.91	19.53
		680.5	23.00	22.91	23.07	19.50	19.41	19.57
		668	23.21	22.56	23.22	19.71	19.06	19.72
	1 RB low	693	22.99	22.71	23.15	19.49	19.21	19.65
		680.5	23.00	22.66	23.08	19.50	19.16	19.58
		668	23.11	22.54	23.23	19.61	19.04	19.73
	50% RB mid	693	22.02	21.02	22.11	18.52	17.52	18.61
		680.5	22.00	20.99	22.10	18.50	17.49	18.60
		668	22.07	20.99	22.14	18.57	17.49	18.64
	100% RB	693	21.95	20.95	22.01	18.45	17.45	18.51
		680.5	21.91	20.90	22.02	18.41	17.40	18.52
		668	22.01	21.00	22.07	18.51	17.50	18.57
15MHz	1 RB high	690.5	22.94	22.43	23.03	19.44	18.93	19.53
		680.5	23.00	22.91	23.07	19.50	19.41	19.57
		670.5	23.15	22.49	23.22	19.65	18.99	19.72
	1 RB low	690.5	23.07	22.79	23.15	19.57	19.29	19.65
		680.5	22.95	22.61	23.08	19.45	19.11	19.58
		670.5	23.21	22.64	23.23	19.71	19.14	19.73
	50% RB mid	690.5	22.07	21.07	22.11	18.57	17.57	18.61
		680.5	21.95	20.93	22.10	18.45	17.43	18.60
		670.5	22.10	21.03	22.14	18.60	17.53	18.64
	100% RB	690.5	21.93	20.94	22.01	18.43	17.44	18.51
		680.5	21.94	20.93	22.02	18.44	17.43	18.52
		670.5	21.97	20.96	22.07	18.47	17.46	18.57
20MHz	1 RB high	688	23.15	22.63	23.03	19.65	19.13	19.53

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		680.5	23.19	23.09	23.07	19.69	19.59	19.57
		673	23.34	22.69	23.22	19.84	19.19	19.72
	1 RB low	688	23.27	22.99	23.15	19.77	19.49	19.65
		680.5	23.20	22.86	23.08	19.70	19.36	19.58
		673	23.35	22.78	23.23	19.85	19.28	19.73
	50% RB mid	688	22.23	21.23	22.11	18.73	17.73	18.61
		680.5	22.22	21.20	22.10	18.72	17.70	18.60
		673	22.26	21.19	22.14	18.76	17.69	18.64
	100% RB	688	22.13	21.14	22.01	18.63	17.64	18.51
		680.5	22.14	21.13	22.02	18.64	17.63	18.52
		673	22.19	21.18	22.07	18.69	17.68	18.57

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A.2 EMISSION LIMIT

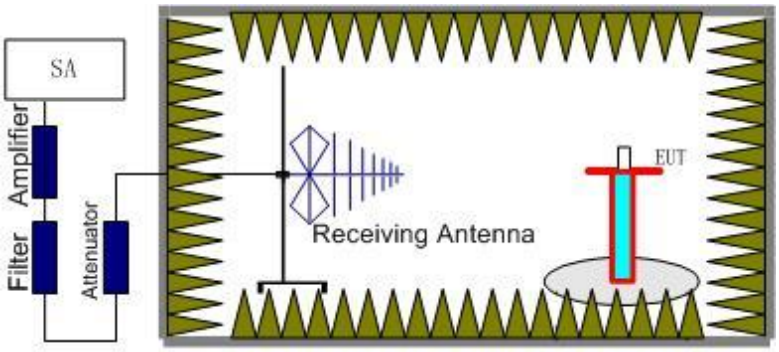
A.2.1 Measurement Method

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

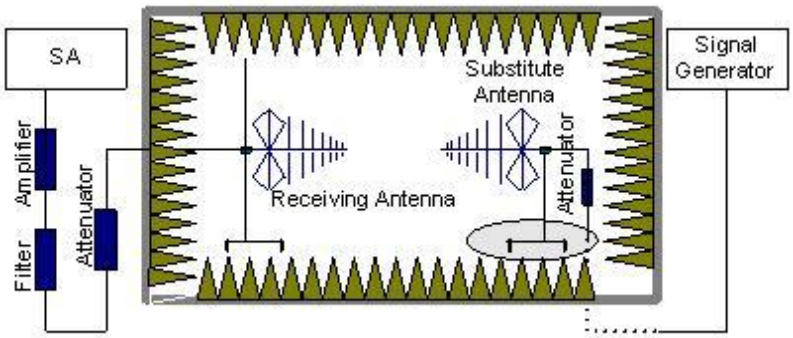
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE Bands 7 12 13 14 25 26 41 66 71.

The procedure of radiated spurious emissions is as follows:

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



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



In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere

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with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. The Path loss (P_{pl}) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain (G_a) should be recorded after test.
   An amplifier should be connected in for the test.
   The Path loss (P_{pl}) is the summation of the cable loss and the gain of the amplifier.
   The measurement results are obtained as described below:
   Power (EIRP)=P_{Mea}+ P_{pl} + G_a
5. This value is EIRP since the measurement is calibrated using an antenna of known gain (unit: dBi) and known input power.
6. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP - 2.15dB.

A.2.2 Measurement Limit

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

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

Part 27.53(m)(4) specifies for mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

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

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10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.

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

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

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A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the LTE Bands 7 12 13 14 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 7 12 13 14 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. The range of evaluated frequency is from 30MHz to 26GHz.

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UAT Measurement Results:

LTE Band 7, 5 MHz, QPSK, Channel 20775

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5011.02	-33.88	6.58	9.92	-30.54	-25.00	5.54	H
7509.01	-38.33	8.36	12.21	-34.48	-25.00	9.48	V
10017.01	-50.79	9.23	12.91	-47.11	-25.00	22.11	H
12532.01	-49.98	10.27	13.22	-47.03	-25.00	22.03	H
15031.00	-45.72	11.26	13.98	-43.00	-25.00	18.00	V
17532.00	-43.35	12.85	14.94	-41.26	-25.00	16.26	V

LTE Band 7, 5 MHz, QPSK, Channel 21100

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5076.02	-33.56	6.70	10.01	-30.25	-25.00	5.25	H
7606.01	-39.76	8.00	12.28	-35.48	-25.00	10.48	V
10158.01	-51.53	9.37	12.96	-47.94	-25.00	22.94	H
12688.01	-49.56	10.32	13.31	-46.57	-25.00	21.57	H
15218.00	-46.06	11.38	13.87	-43.57	-25.00	18.57	H
17744.00	-43.69	12.43	15.24	-40.88	-25.00	15.88	V

LTE Band 7, 5 MHz, QPSK, Channel 21425

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5142.02	-34.49	6.87	10.10	-31.26	-25.00	6.26	H
7708.01	-42.99	8.42	12.37	-39.04	-25.00	14.04	H
10287.01	-50.69	9.60	13.01	-47.28	-25.00	22.28	H
12840.01	-49.43	10.66	13.40	-46.69	-25.00	21.69	V
15400.00	-46.04	11.39	13.76	-43.67	-25.00	18.67	V
17972.00	-42.69	12.89	15.56	-40.02	-25.00	15.02	V

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LTE Band 12, 1.4MHz, QPSK, Channel 23017

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1391.01	-60.71	3.22	4.93	2.15	-61.15	-13.00	48.15	H
2105.00	-56.21	4.20	4.92	2.15	-57.64	-13.00	44.64	H
2785.00	-51.85	4.89	6.61	2.15	-52.28	-13.00	39.28	H
5587.01	-55.13	7.22	10.58	2.15	-53.92	-13.00	40.92	H
6305.01	-53.18	7.53	10.81	2.15	-52.05	-13.00	39.05	H
7010.01	-51.91	8.28	11.61	2.15	-50.73	-13.00	37.73	H

LTE Band 12, 1.4MHz, QPSK, Channel 23095

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1401.01	-61.08	3.24	4.99	2.15	-61.48	-13.00	48.48	V
2123.00	-55.12	4.21	4.97	2.15	-56.51	-13.00	43.51	H
2829.00	-52.25	4.95	6.69	2.15	-52.66	-13.00	39.66	V
3538.02	-55.57	5.70	8.25	2.15	-55.17	-13.00	42.17	H
4251.02	-55.51	6.24	9.15	2.15	-54.75	-13.00	41.75	V
4961.01	-55.05	6.67	9.86	2.15	-54.01	-13.00	41.01	H

LTE Band 12, 1.4MHz, QPSK, Channel 23173

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1420.01	-60.11	3.26	5.08	2.15	-60.44	-13.00	47.44	H
2139.00	-55.92	4.23	5.02	2.15	-57.28	-13.00	44.28	V
2853.00	-52.23	4.96	6.74	2.15	-52.60	-13.00	39.60	V
3573.02	-56.03	6.06	8.30	2.15	-55.94	-13.00	42.94	V
4300.02	-55.05	6.19	9.20	2.15	-54.19	-13.00	41.19	V
5022.01	-55.50	6.57	9.93	2.15	-54.29	-13.00	41.29	H

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LTE Band 13, 5MHz, QPSK, Channel 23205

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.01	-60.65	3.48	5.38	2.15	-60.90	-13.00	47.90	H
2353.00	-54.77	4.46	5.66	2.15	-55.72	-13.00	42.72	V
3110.02	-50.83	5.35	7.26	2.15	-51.07	-13.00	38.07	H
3904.02	-55.34	6.11	8.77	2.15	-54.83	-13.00	41.83	H
4688.02	-54.02	6.50	9.59	2.15	-53.08	-13.00	40.08	V
5465.01	-55.12	6.93	10.55	2.15	-53.65	-13.00	40.65	H

LTE Band 13, 5MHz, QPSK, Channel 23230

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1550.01	-60.51	3.46	5.41	2.15	-60.71	-13.00	47.71	V
2343.00	-54.19	4.45	5.63	2.15	-55.16	-13.00	42.16	V
3119.02	-49.65	5.38	7.29	2.15	-49.89	-13.00	36.89	V
3901.02	-55.52	6.11	8.76	2.15	-55.02	-13.00	42.02	V
4682.02	-55.55	6.49	9.58	2.15	-54.61	-13.00	41.61	V
5474.01	-55.51	6.96	10.56	2.15	-54.06	-13.00	41.06	V

LTE Band 13, 5MHz, QPSK, Channel 23255

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1565.01	-60.97	3.48	5.38	2.15	-61.22	-13.00	48.22	H
2343.00	-53.58	4.45	5.63	2.15	-54.55	-13.00	41.55	V
3130.02	-49.49	5.40	7.31	2.15	-49.73	-13.00	36.73	H
3925.02	-55.20	6.12	8.80	2.15	-54.67	-13.00	41.67	H
4703.02	-55.30	6.51	9.60	2.15	-54.36	-13.00	41.36	H
5505.01	-55.47	7.08	10.60	2.15	-54.10	-13.00	41.10	H

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LTE Band 14, 5 MHz, QPSK, Channel 23305

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1592.01	-61.10	3.51	5.33	2.15	-61.43	-13.00	48.43	H
2385.00	-53.66	4.50	5.76	2.15	-54.55	-13.00	41.55	H
3163.02	-48.61	5.35	7.39	2.15	-48.72	-13.00	35.72	H
3956.02	-55.33	6.10	8.84	2.15	-54.74	-13.00	41.74	H
4739.02	-54.90	6.55	9.64	2.15	-53.96	-13.00	40.96	H
5547.01	-54.91	7.18	10.59	2.15	-53.65	-13.00	40.65	H

LTE Band 14, 5 MHz, QPSK, Channel 23330

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1577.01	-61.76	3.49	5.36	2.15	-62.04	-13.00	49.04	H
2385.00	-53.95	4.50	5.76	2.15	-54.84	-13.00	41.84	H
3173.02	-45.97	5.34	7.42	2.15	-46.04	-13.00	33.04	H
3966.02	-53.46	6.09	8.85	2.15	-52.85	-13.00	39.85	H
4767.01	-54.37	6.60	9.67	2.15	-53.45	-13.00	40.45	H
5550.01	-55.29	7.18	10.59	2.15	-54.03	-13.00	41.03	V

LTE Band 14, 5 MHz, QPSK, Channel 23355

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1577.01	-61.64	3.49	5.36	2.15	-61.92	-13.00	48.92	H
2399.00	-52.74	4.52	5.80	2.15	-53.61	-13.00	40.61	H
3183.02	-47.16	5.32	7.44	2.15	-47.19	-13.00	34.19	V
3979.02	-55.12	6.08	8.87	2.15	-54.48	-13.00	41.48	V
4764.01	-55.12	6.60	9.66	2.15	-54.21	-13.00	41.21	H
5573.01	-55.50	7.21	10.59	2.15	-54.27	-13.00	41.27	V

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LTE Band 25, 1.4MHz, QPSK, Channel 26047

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3702.02	-47.61	6.42	8.48	-45.55	-13.00	32.55	V
5554.02	-44.84	7.19	10.59	-41.44	-13.00	28.44	V
11701.01	-50.07	9.62	13.06	-46.63	-13.00	33.63	V
13396.01	-46.66	10.57	14.05	-43.18	-13.00	30.18	V
14835.00	-45.38	11.15	14.13	-42.40	-13.00	29.40	V
16953.00	-41.49	12.20	13.78	-39.91	-13.00	26.91	H

LTE Band 25, 1.4MHz, QPSK, Channel 26365

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3765.02	-48.75	6.25	8.57	-46.43	-13.00	33.43	H
5650.02	-43.41	7.27	10.57	-40.11	-13.00	27.11	V
11249.01	-50.89	9.69	13.15	-47.43	-13.00	34.43	H
13191.01	-47.55	10.54	13.77	-44.32	-13.00	31.32	H
15038.00	-45.56	11.27	13.98	-42.85	-13.00	29.85	V
16952.00	-42.17	12.19	13.78	-40.58	-13.00	27.58	V

LTE Band 25, 1.4MHz, QPSK, Channel 26683

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3829.02	-45.87	6.06	8.66	-43.27	-13.00	30.27	H
5745.02	-44.97	7.27	10.55	-41.69	-13.00	28.69	V
11470.01	-50.20	9.89	13.11	-46.98	-13.00	33.98	V
13431.01	-47.47	10.59	14.10	-43.96	-13.00	30.96	H
15345.00	-45.12	11.33	13.79	-42.66	-13.00	29.66	V
17277.00	-37.16	12.37	14.41	-35.12	-13.00	22.12	H

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

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3259.02	-50.19	5.28	7.62	2.15	-50.00	-13.00	37.00	H
6522.01	-54.05	7.50	11.03	2.15	-52.67	-13.00	39.67	H
7341.01	-52.66	8.11	12.01	2.15	-50.91	-13.00	37.91	H
8166.01	-52.47	8.45	12.73	2.15	-50.34	-13.00	37.34	H
8955.00	-51.44	9.04	13.09	2.15	-49.54	-13.00	36.54	H
9757.00	-52.01	8.94	13.14	2.15	-49.96	-13.00	36.96	H

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

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3276.02	-49.08	5.28	7.66	2.15	-48.85	-13.00	35.85	H
6555.01	-53.49	7.62	11.07	2.15	-52.19	-13.00	39.19	H
7369.01	-53.15	8.11	12.04	2.15	-51.37	-13.00	38.37	V
8187.01	-52.25	8.49	12.75	2.15	-50.14	-13.00	37.14	H
9009.00	-51.66	9.18	13.11	2.15	-49.88	-13.00	36.88	H
9822.00	-51.66	9.05	13.08	2.15	-49.78	-13.00	36.78	H

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

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3294.02	-48.34	5.29	7.71	2.15	-48.07	-13.00	35.07	H
6720.01	-51.56	7.99	11.26	2.15	-50.44	-13.00	37.44	H
7593.01	-52.15	8.00	12.27	2.15	-50.03	-13.00	37.03	V
8250.01	-51.97	8.59	12.80	2.15	-49.91	-13.00	36.91	H
8923.00	-50.54	8.93	13.08	2.15	-48.54	-13.00	35.54	H
9973.00	-50.49	9.16	12.93	2.15	-48.87	-13.00	35.87	V

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LTE Band 26(824MHz~849MHz), 1.4MHz, QPSK, Channel 26797

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1665.01	-59.54	3.58	5.20	2.15	-60.07	-13.00	47.07	H
2468.00	-52.93	4.59	6.00	2.15	-53.67	-13.00	40.67	H
3299.02	-49.71	5.29	7.72	2.15	-49.43	-13.00	36.43	H
4129.02	-54.62	6.05	9.03	2.15	-53.79	-13.00	40.79	H
4957.01	-54.94	6.68	9.86	2.15	-53.91	-13.00	40.91	H
5789.01	-54.01	7.21	10.54	2.15	-52.83	-13.00	39.83	H

LTE Band 26(824MHz~849MHz), 1.4MHz, QPSK, Channel 26915

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1664.01	-58.94	3.57	5.20	2.15	-59.46	-13.00	46.46	H
2519.00	-53.22	4.64	6.13	2.15	-53.88	-13.00	40.88	H
3346.02	-47.91	5.31	7.83	2.15	-47.54	-13.00	34.54	V
4185.02	-53.16	6.17	9.09	2.15	-52.39	-13.00	39.39	V
5036.01	-55.74	6.59	9.95	2.15	-54.53	-13.00	41.53	V
5870.01	-53.78	7.30	10.53	2.15	-52.70	-13.00	39.70	H

LTE Band 26(824MHz~849MHz), 1.4MHz, QPSK, Channel 27033

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1701.01	-60.33	3.60	5.14	2.15	-60.94	-13.00	47.94	V
2548.00	-52.62	4.67	6.19	2.15	-53.25	-13.00	40.25	H
3394.02	-50.94	5.36	7.95	2.15	-50.50	-13.00	37.50	H
4242.02	-54.42	6.25	9.14	2.15	-53.68	-13.00	40.68	H
5082.01	-54.67	6.72	10.01	2.15	-53.53	-13.00	40.53	V
5938.01	-52.66	7.47	10.51	2.15	-51.77	-13.00	38.77	H

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LTE Band 41, 5MHz, QPSK, Channel 39675

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5001.02	-48.15	6.60	9.90	-44.85	-25.00	19.85	H
7496.01	-41.29	8.38	12.20	-37.47	-25.00	12.47	H
9996.01	-53.24	9.18	12.90	-49.52	-25.00	24.52	H
12494.01	-50.40	10.19	13.20	-47.39	-25.00	22.39	V
14987.00	-45.66	11.21	14.01	-42.86	-25.00	17.86	V
17486.00	-43.48	12.69	14.87	-41.30	-25.00	16.30	H

LTE Band 41, 5MHz, QPSK, Channel 40620

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5193.02	-38.65	6.95	10.17	-35.43	-25.00	10.43	H
7785.01	-41.93	8.31	12.43	-37.81	-25.00	12.81	H
9047.01	-53.42	9.08	13.13	-49.37	-25.00	24.37	H
10386.01	-46.28	9.78	13.05	-43.01	-25.00	18.01	H
11677.01	-50.30	9.65	13.06	-46.89	-25.00	21.89	H
12953.01	-49.60	10.49	13.47	-46.62	-25.00	21.62	H

LTE Band 41, 5MHz, QPSK, Channel 41565

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
4050.02	-57.57	6.04	8.95	-54.66	-25.00	29.66	V
5380.02	-43.53	6.87	10.43	-39.97	-25.00	14.97	H
6706.02	-54.59	7.98	11.25	-51.32	-25.00	26.32	H
8067.01	-37.01	8.32	12.65	-32.68	-25.00	7.68	H
9418.01	-55.05	9.13	13.35	-50.83	-25.00	25.83	H
10761.01	-40.63	9.45	13.15	-36.93	-25.00	11.93	H

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LTE Band 66, 1.4MHz QPSK, Channel 131979

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3422.02	-38.10	5.38	8.01	-35.47	-13.00	22.47	H
5133.02	-48.94	6.86	10.09	-45.71	-13.00	32.71	H
6845.01	-48.83	7.83	11.41	-45.25	-13.00	32.25	V
8558.01	-50.01	8.57	13.01	-45.57	-13.00	32.57	H
10261.01	-52.79	9.51	13.00	-49.30	-13.00	36.30	H
11975.01	-50.38	10.17	13.00	-47.55	-13.00	34.55	V

LTE Band 66, 1.4MHz, QPSK, Channel 132322

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.02	-37.66	5.50	8.18	-34.98	-13.00	21.98	H
5236.02	-47.68	7.00	10.23	-44.45	-13.00	31.45	H
6982.01	-45.53	8.16	11.58	-42.11	-13.00	29.11	V
8728.01	-53.18	8.44	13.05	-48.57	-13.00	35.57	H
10469.01	-51.47	9.70	13.09	-48.08	-13.00	35.08	H
12218.01	-50.01	10.05	13.09	-46.97	-13.00	33.97	V

LTE Band 66, 1.4MHz, QPSK, Channel 132665

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3559.02	-43.47	5.92	8.28	-41.11	-13.00	28.11	H
5341.02	-49.00	6.95	10.38	-45.57	-13.00	32.57	V
7120.01	-44.87	8.16	11.74	-41.29	-13.00	28.29	V
8901.01	-51.17	8.85	13.08	-46.94	-13.00	33.94	H
10672.01	-51.60	9.30	13.13	-47.77	-13.00	34.77	V
12457.01	-50.37	10.29	13.18	-47.48	-13.00	34.48	V

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LTE Band 71, 5MHz, QPSK, Channel 133147

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1304.01	-55.38	3.12	4.48	2.15	-56.17	-13.00	43.17	V
2006.00	-55.91	4.07	4.62	2.15	-57.51	-13.00	44.51	V
2643.00	-52.37	4.74	6.36	2.15	-52.90	-13.00	39.90	H
3342.02	-54.84	5.31	7.82	2.15	-54.48	-13.00	41.48	H
4021.02	-55.00	6.05	8.92	2.15	-54.28	-13.00	41.28	V
4646.02	-54.91	6.46	9.55	2.15	-53.97	-13.00	40.97	H

LTE Band 71, 5MHz, QPSK, Channel 133297

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1362.01	-60.83	3.19	4.78	2.15	-61.39	-13.00	48.39	H
2042.00	-56.67	4.14	4.73	2.15	-58.23	-13.00	45.23	V
2729.00	-52.58	4.81	6.51	2.15	-53.03	-13.00	40.03	V
3392.02	-55.67	5.35	7.94	2.15	-55.23	-13.00	42.23	V
4091.02	-55.29	6.04	8.99	2.15	-54.49	-13.00	41.49	H
4762.01	-54.72	6.59	9.66	2.15	-53.80	-13.00	40.80	V

LTE Band 71, 5MHz, QPSK, Channel 133447

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1405.01	-60.66	3.24	5.01	2.15	-61.04	-13.00	48.04	H
2106.00	-56.07	4.20	4.92	2.15	-57.50	-13.00	44.50	V
2795.00	-52.83	4.91	6.63	2.15	-53.26	-13.00	40.26	H
3465.02	-55.18	5.46	8.12	2.15	-54.67	-13.00	41.67	H
4192.02	-55.44	6.19	9.09	2.15	-54.69	-13.00	41.69	V
4843.01	-55.45	6.72	9.74	2.15	-54.58	-13.00	41.58	V

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LAT Measurement Results:

LTE Band 7, 5 MHz, QPSK, Channel 20775

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5010.02	-41.25	6.59	9.91	-37.93	-25.00	12.93	H
7511.01	-38.82	8.35	12.21	-34.96	-25.00	9.96	V
10000.01	-52.85	9.18	12.90	-49.13	-25.00	24.13	H
12524.01	-49.30	10.24	13.21	-46.33	-25.00	21.33	V
15024.00	-44.97	11.25	13.99	-42.23	-25.00	17.23	H
17516.00	-43.04	12.79	14.92	-40.91	-25.00	15.91	V

LTE Band 7, 5 MHz, QPSK, Channel 21100

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5075.02	-41.31	6.70	10.01	-38.00	-25.00	13.00	H
7608.01	-44.12	8.01	12.29	-39.84	-25.00	14.84	V
10142.01	-52.30	9.39	12.96	-48.73	-25.00	23.73	H
12676.01	-48.52	10.34	13.31	-45.55	-25.00	20.55	V
15205.00	-45.09	11.39	13.88	-42.60	-25.00	17.60	H
17746.00	-43.28	12.44	15.24	-40.48	-25.00	15.48	H

LTE Band 7, 5 MHz, QPSK, Channel 21425

Frequency (MHz)	P_{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5139.02	-37.79	6.86	10.09	-34.56	-25.00	9.56	H
7706.01	-43.34	8.42	12.36	-39.40	-25.00	14.40	H
10286.01	-51.19	9.60	13.01	-47.78	-25.00	22.78	H
12845.01	-48.73	10.65	13.41	-45.97	-25.00	20.97	V
15385.00	-44.99	11.38	13.77	-42.60	-25.00	17.60	H
17956.00	-43.80	12.89	15.54	-41.15	-25.00	16.15	H

Note1: The worst case for LAT is verified.

Note2: The maximum value of expanded measurement uncertainty for this test item is U = 5.16 dB, k = 2.

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A.3 FREQUENCY STABILITY

A.3.1 Method of Measurement

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of R&S CMW500 DIGITAL RADIO COMMUNICATION TESTER and Anritsu MT8821C Radio Communication Analyzer.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at 0℃.
3. With the EUT, powered via nominal voltage, connected to the CMW500 or MT8821C, and in a simulated call on middle channel for LTE band 7 12 13 14 25 26 41 66 71, 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 0℃ to +30℃. 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 +30℃.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the center channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 ℃increments from 0℃ to +30℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of between 3.6VDC and 4.3VDC, with a nominal voltage of 3.87VDC. 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.

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A.3.2 Measurement results

UAT Measurement Results:

LTE Band 7, 10MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3.6	13.75	-16.64	-1.80	0.0054	0.0066	0.001
3.87	-11.86	-17.24	10.40	0.0047	0.0068	0.004
4.3	-10.77	-16.24	-9.30	0.0042	0.0064	0.004

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-10.89	-16.67	-1.90	0.0043	0.0066	0.001
20	-13.19	-17.67	3.00	0.0052	0.0070	0.001
10	-13.56	-10.29	-4.30	0.0053	0.0041	0.002
0	-12.20	-16.42	8.90	0.0048	0.0065	0.004

LTE Band 12, 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3.6	4.19	-13.35	-6.40	0.0059	0.0189	0.009
3.87	4.75	-9.94	-5.90	0.0067	0.0140	0.008
4.3	-5.74	-14.23	-6.80	0.0081	0.0201	0.010

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-6.44	-15.56	1.10	0.0091	0.0220	0.002
20	-6.24	-11.53	1.60	0.0088	0.0163	0.002
10	-3.26	-16.61	-1.20	0.0046	0.0235	0.002
0	-2.63	-12.32	-1.30	0.0037	0.0174	0.002

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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	64QAM	QPSK	16QAM	64QAM
3.6	-7.80	-8.87	2.10	0.0100	0.0113	0.003
3.87	-3.02	-16.74	4.40	0.0039	0.0214	0.006
4.3	-5.58	-13.07	1.30	0.0071	0.0167	0.002

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-4.55	-10.90	-1.40	0.0058	0.0139	0.002
20	3.79	-7.97	2.80	0.0048	0.0102	0.004
10	-5.52	-10.74	1.80	0.0071	0.0137	0.002
0	-4.71	-15.21	6.70	0.0060	0.0195	0.009

LTE Band 14, 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3.6	-2.79	-9.41	-1.20	0.0035	0.0119	0.0015
3.87	3.55	-12.00	-1.80	0.0045	0.0151	0.0023
4.3	-4.25	-11.72	1.20	0.0054	0.0148	0.0015

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-1.83	-12.75	-1.50	0.0023	0.0161	0.0019
20	2.16	-11.94	-1.80	0.0027	0.0151	0.0023
10	2.25	-12.13	-1.40	0.0028	0.0153	0.0018
0	3.62	-13.13	2.00	0.0046	0.0166	0.0025

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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	64QAM	QPSK	16QAM	64QAM
3.6	-9.96	27.82	6.60	0.0053	0.0148	0.0035
3.87	-9.63	27.11	7.00	0.0051	0.0144	0.0037
4.3	-6.69	24.16	4.40	0.0036	0.0128	0.0023

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-15.09	25.63	1.90	0.0080	0.0136	0.0010
20	-13.93	26.82	-5.80	0.0074	0.0142	0.0031
10	-12.12	28.58	-11.70	0.0064	0.0152	0.0062
0	-12.04	-36.91	10.90	0.0064	0.0196	0.0058

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	64QAM	QPSK	16QAM	64QAM
3.6	11.39	-26.78	-8.10	0.0139	0.0327	0.010
3.87	6.84	-22.14	-1.10	0.0084	0.0270	0.001
4.3	-6.74	-23.78	-6.20	0.0082	0.0290	0.008

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-6.97	-23.93	-2.90	0.0085	0.0292	0.004
20	6.72	-24.52	-4.90	0.0082	0.0299	0.006
10	2.37	-25.43	-5.40	0.0029	0.0311	0.007
0	-5.95	-25.95	-1.20	0.0073	0.0317	0.001

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LTE Band 26(824MHz~849MHz), 1.4MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage	Frequency error (Hz)			Frequency error (ppm)		
(V)	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3.6	-16.67	-24.98	-3.80	0.0199	0.0299	0.005
3.87	-6.25	-29.27	2.20	0.0075	0.0350	0.003
4.3	-8.54	-22.59	1.60	0.0102	0.0270	0.002

Frequency Error vs Temperature

Temperature	Frequency error (Hz)			Frequency error (ppm)		
(℃)	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-7.68	-28.28	2.70	0.0092	0.0338	0.003
20	-3.23	-25.16	-1.90	0.0039	0.0301	0.002
10	-2.86	-29.14	-5.80	0.0034	0.0348	0.007
0	-5.28	21.96	-6.40	0.0063	0.0263	0.008

LTE Band 41(PC2), 5MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage	Frequency error (Hz)			Frequency error (ppm)		
(V)	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3.6	-20.43	11.97	-10.80	0.0079	0.0046	0.004
3.87	-10.51	15.29	-12.50	0.0041	0.0059	0.005
4.3	9.67	18.98	2.40	0.0037	0.0073	0.001

Frequency Error vs Temperature

Temperature	Frequency error (Hz)			Frequency error (ppm)		
(℃)	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	9.67	18.98	5.00	0.0037	0.0073	0.002
20	-14.25	11.89	6.80	0.0055	0.0046	0.003
10	10.00	-18.80	-14.30	0.0039	0.0073	0.006
0	-19.45	17.12	-11.60	0.0075	0.0066	0.004

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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	64QAM	QPSK	16QAM	64QAM
3.6	-8.18	-29.10	12.00	0.0047	0.0167	0.007
3.87	-8.23	24.30	-7.30	0.0047	0.0139	0.004
4.3	-9.18	-30.30	-11.40	0.0053	0.0174	0.007

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-9.18	-30.30	-4.30	0.0053	0.0174	0.002
20	-8.17	23.20	2.60	0.0047	0.0133	0.001
10	-9.23	-32.37	-5.40	0.0053	0.0186	0.003
0	-8.18	-28.25	-3.40	0.0047	0.0162	0.002

LTE Band 71, 10MHz bandwidth (worst case of all bandwidths)

Frequency Error vs Voltage

Voltage (V)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3.6	3.62	-8.63	-1.20	0.0053	0.0127	0.002
3.87	2.99	-7.85	-1.10	0.0044	0.0115	0.002
4.3	2.23	-5.14	-2.40	0.0033	0.0076	0.004

Frequency Error vs Temperature

Temperature (℃)	Frequency error (Hz)			Frequency error (ppm)		
	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
30	-3.26	-8.40	-2.80	0.0048	0.0123	0.004
20	2.32	-7.27	-2.90	0.0034	0.0107	0.004
10	3.49	-6.47	-2.50	0.0051	0.0095	0.004
0	3.25	-7.40	-3.20	0.0048	0.0109	0.005

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A.4 OCCUPIED BANDWIDTH

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.

The measurement method is from KDB 971168 4.2:

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.

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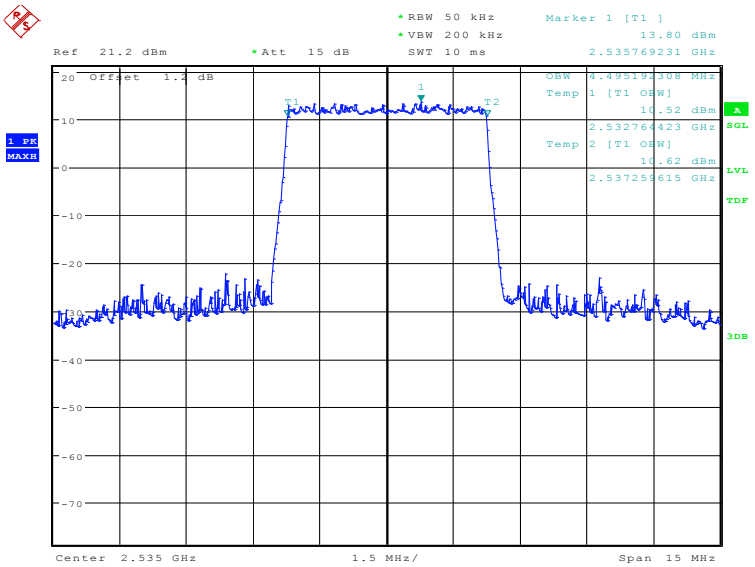
UAT Measurement Results:

LTE band 7, 5MHz (99%)

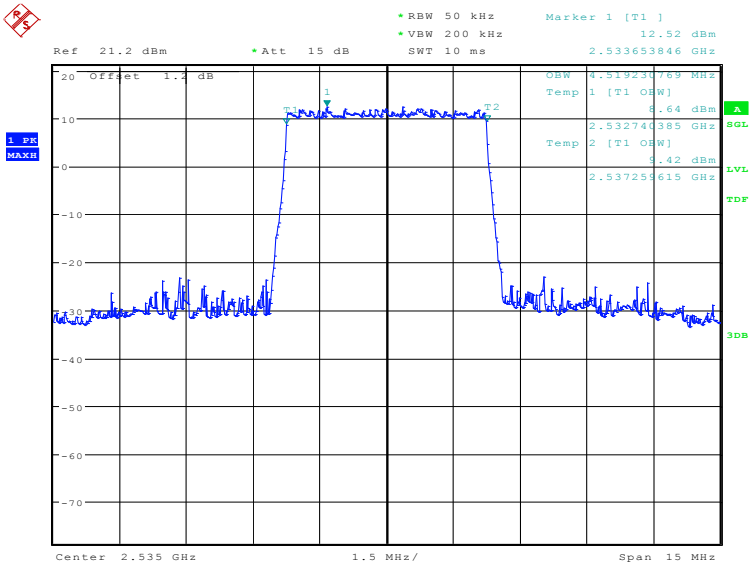
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	4495.19	4519.23	4495.19

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



Date: 9.SEP.2019 17:53:51

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



Date: 9.SEP.2019 17:55:15

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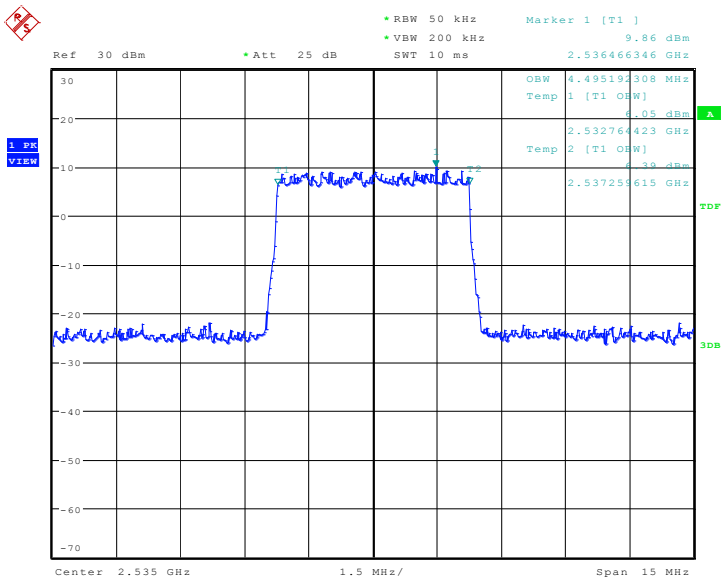
LTE band 7, 5MHz Bandwidth,64QAM (99% BW)



Date: 6.SEP.2019 14:32:02

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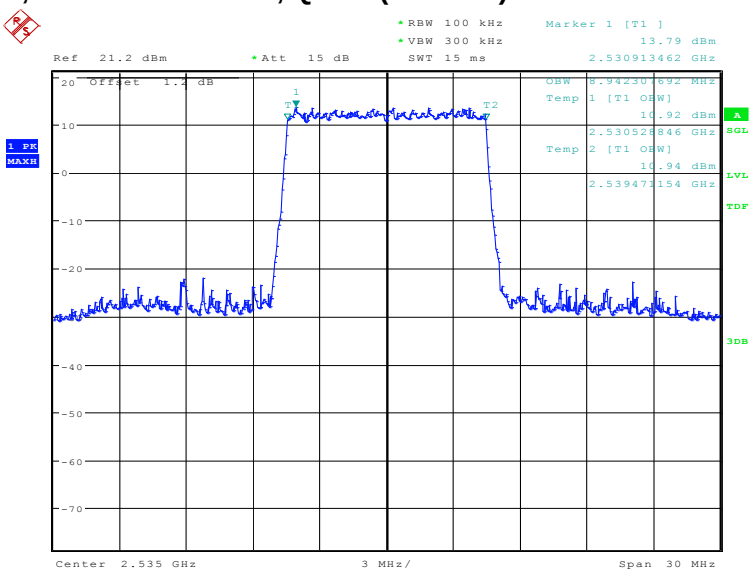
LTE band 7, 10MHz (99%)

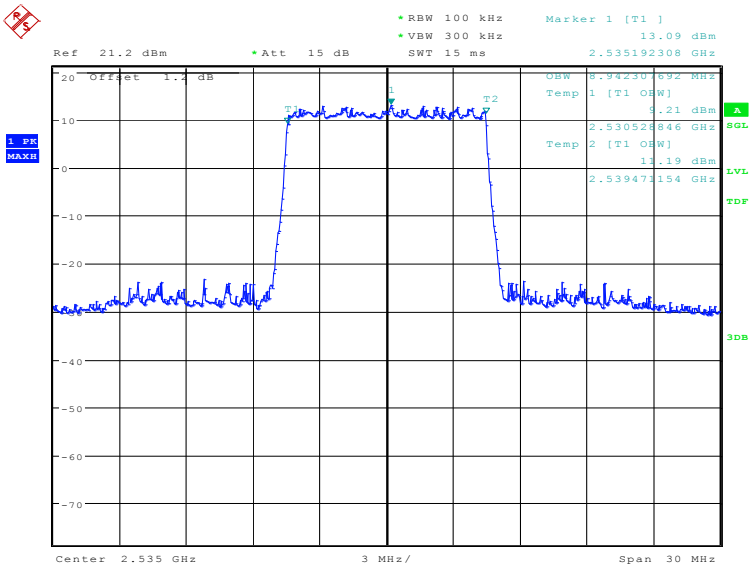
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	8942.31	8942.31	8990.38

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



Date: 9.SEP.2019 17:56:42

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



Date: 9.SEP.2019 17:58:06

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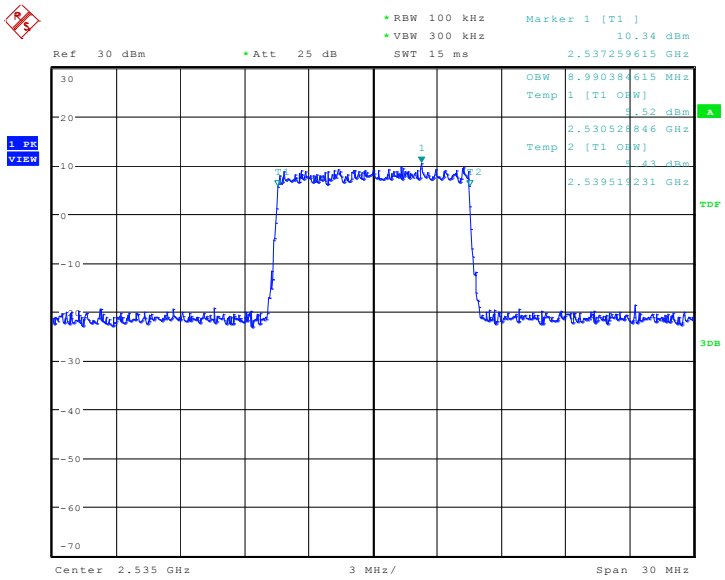
LTE band 7, 10MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:33:30

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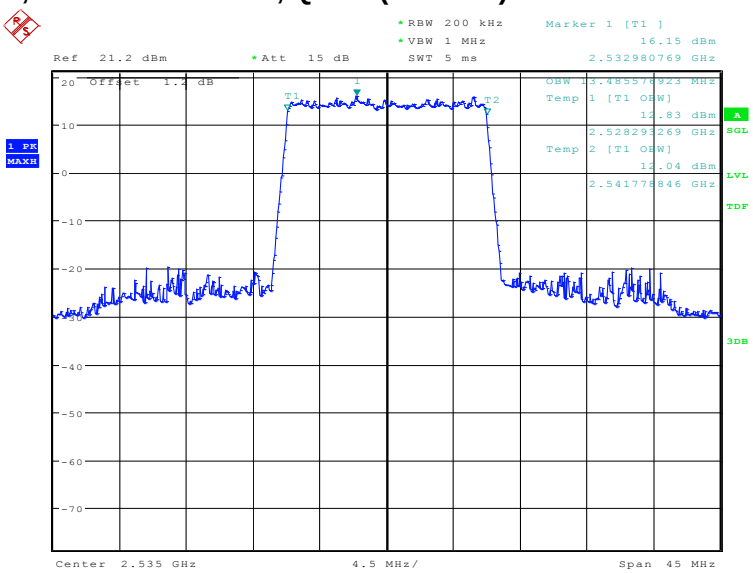
LTE band 7, 15MHz (99%)

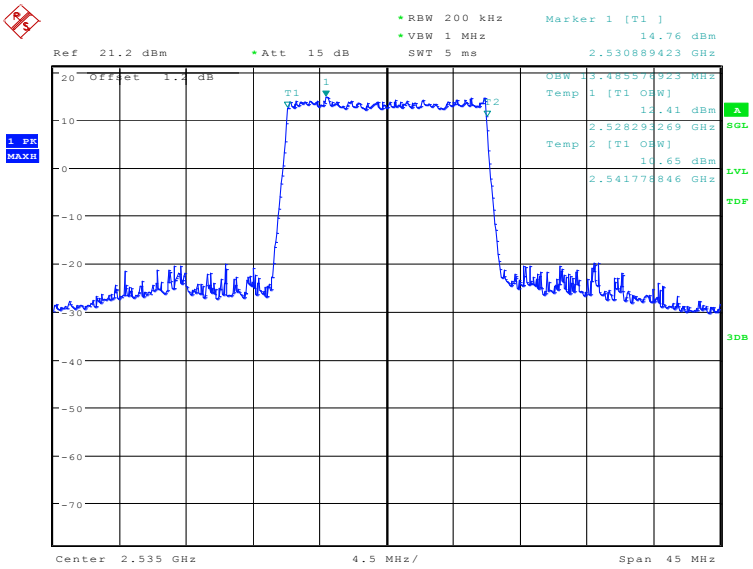
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	13485.58	13485.58	13485.58

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



Date: 9.SEP.2019 17:59:33

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



Date: 9.SEP.2019 18:00:57

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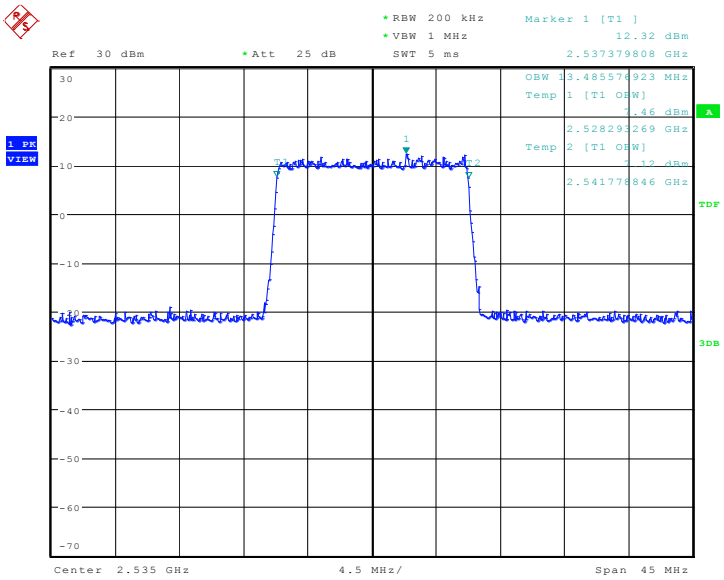
LTE band 7, 15MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:35:32

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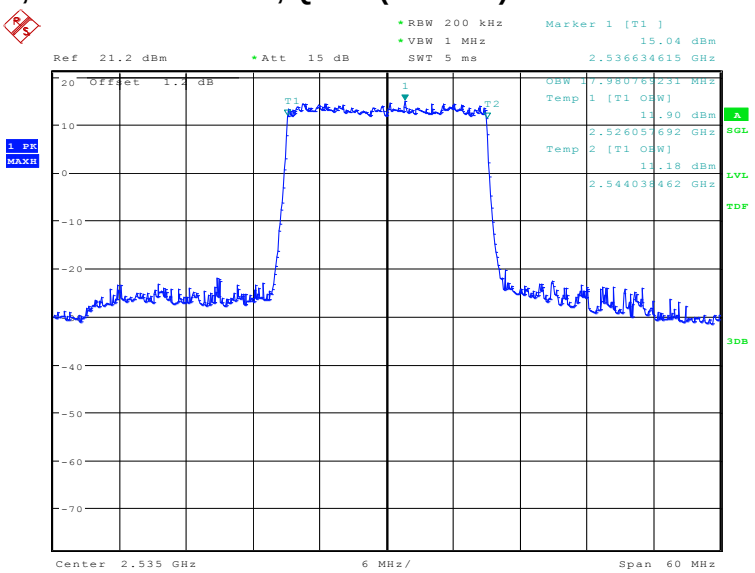
LTE band 7, 20MHz (99%)

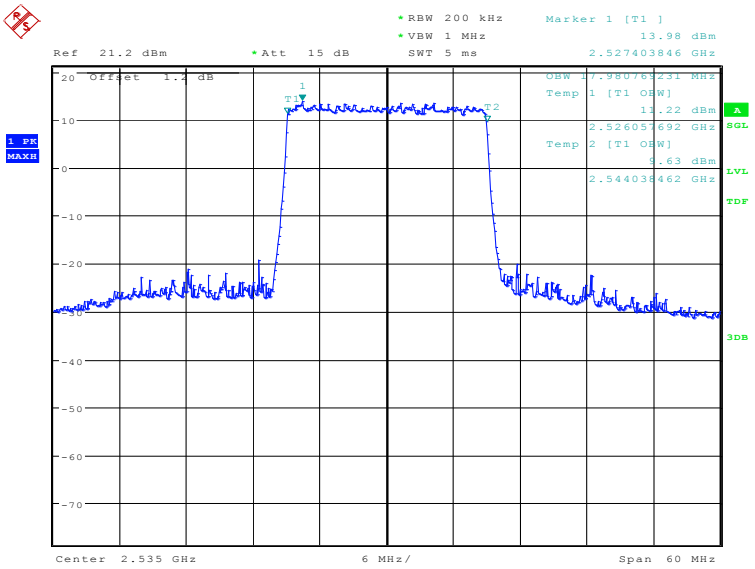
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
2535.0	QPSK	16QAM	64QAM
	17980.77	17980.77	17980.77

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



Date: 9.SEP.2019 18:02:24

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



Date: 9.SEP.2019 18:03:48

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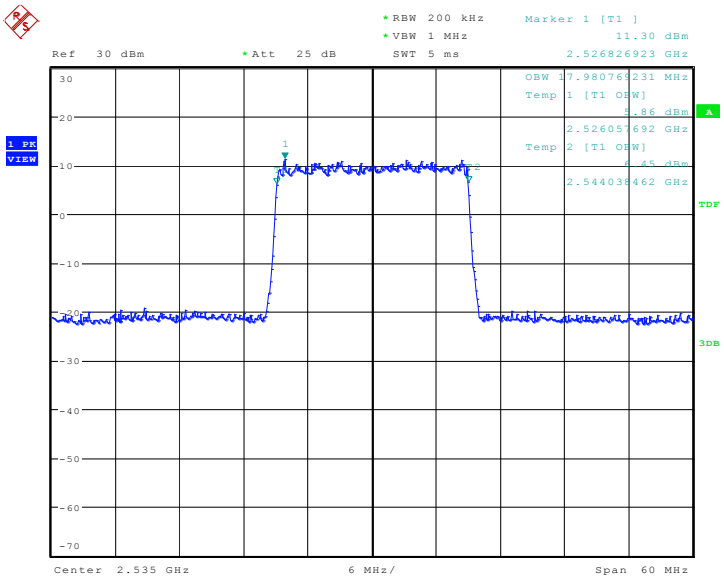
LTE band 7, 20MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:38:22

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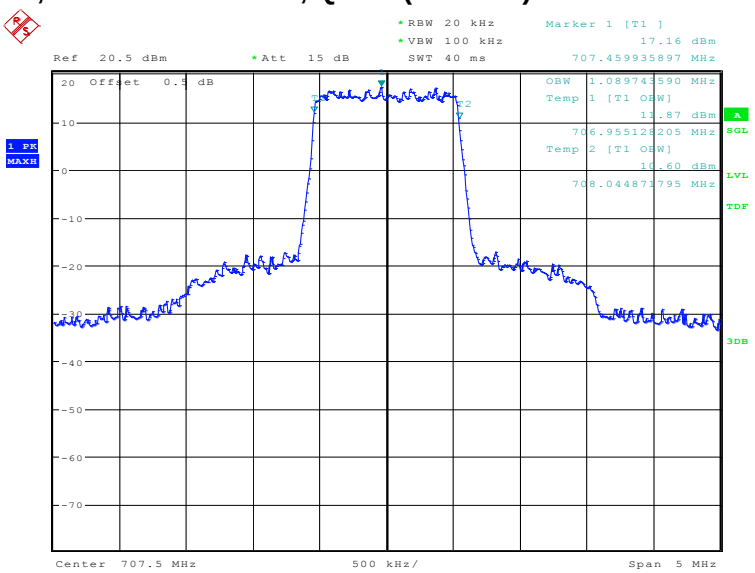
LTE band 12, 1.4MHz (99%)

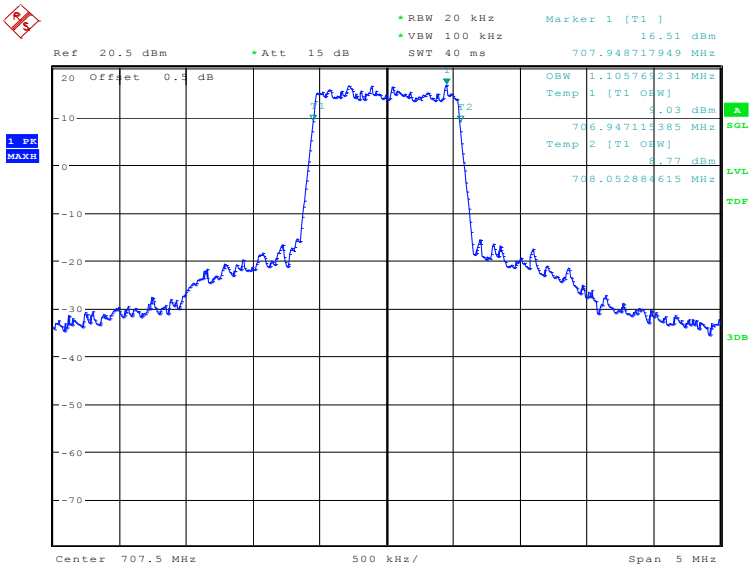
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	1089.74	1105.77	1089.74

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



Date: 5.SEP.2019 17:53:56

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



Date: 5.SEP.2019 17:55:21

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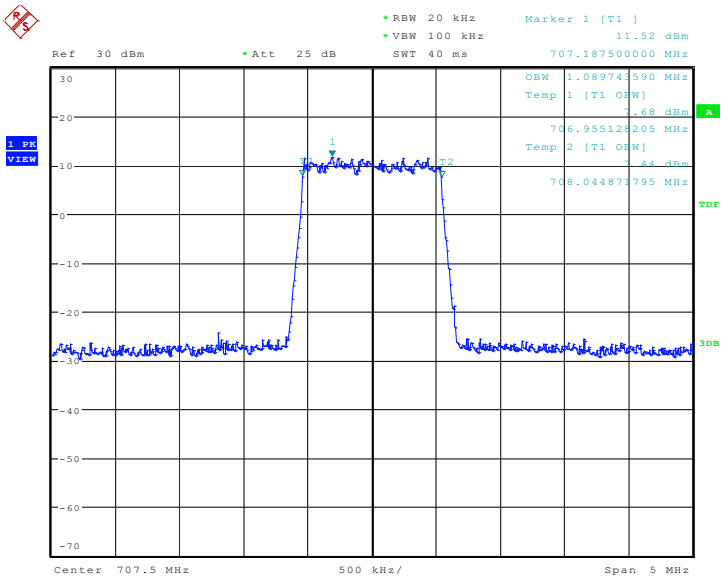
LTE band 12, 1.4MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 16:52:18

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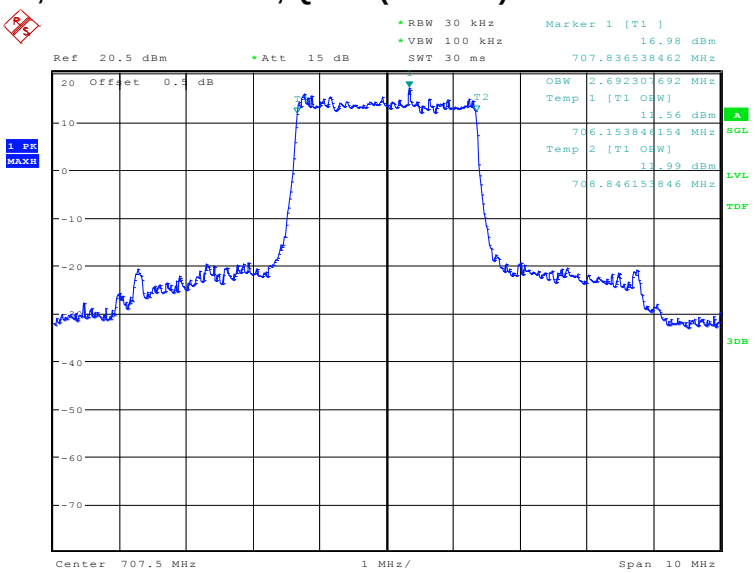
LTE band 12, 3MHz (99%)

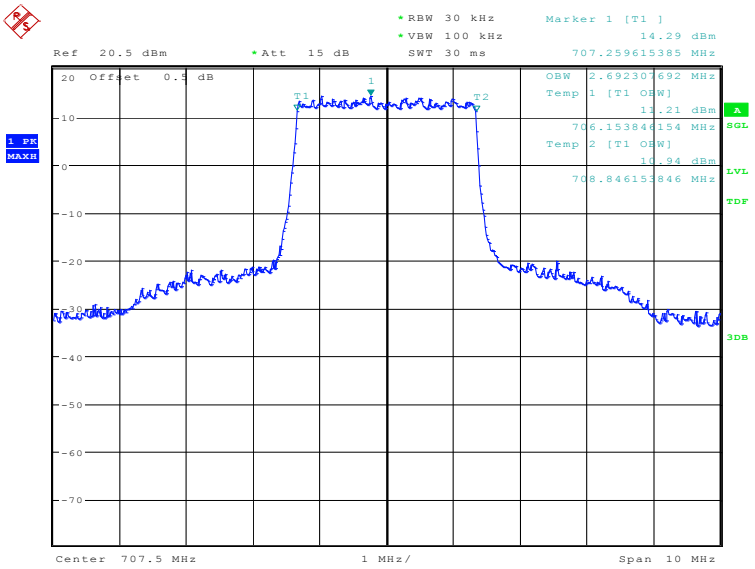
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	2692.31	2692.31	2692.31

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



Date: 5.SEP.2019 17:56:47

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



Date: 5.SEP.2019 17:58:12

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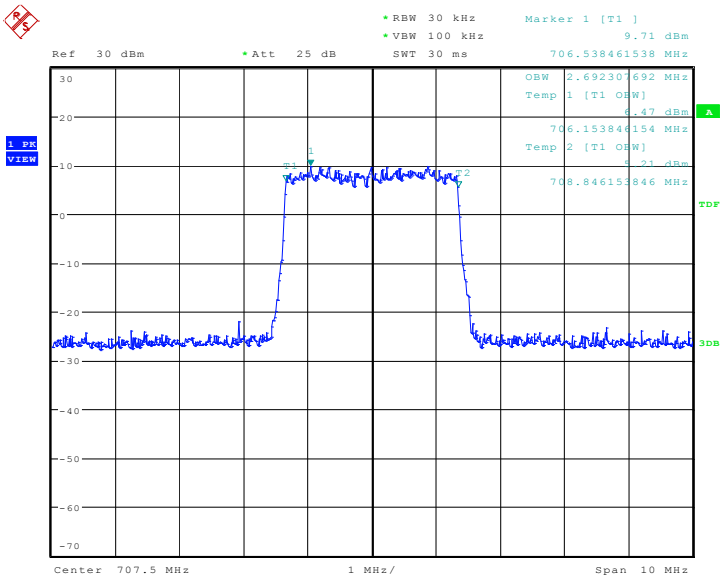
LTE band 12, 3MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:04:36

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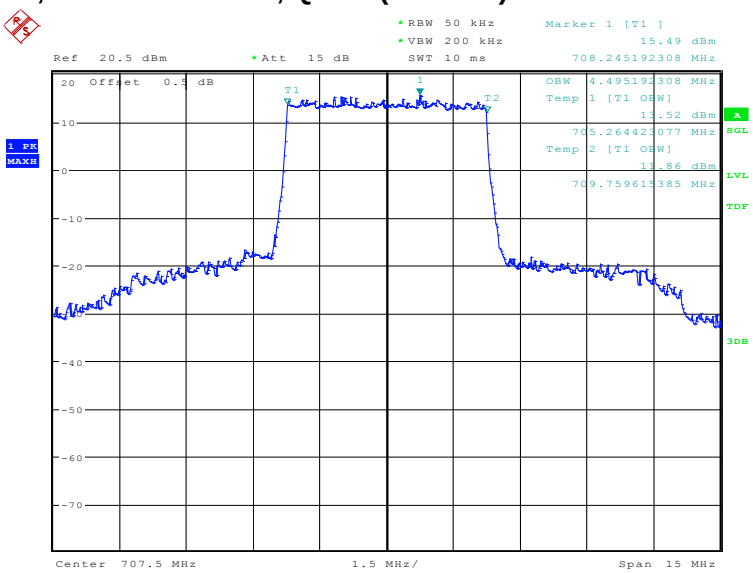
LTE band 12, 5MHz (99%)

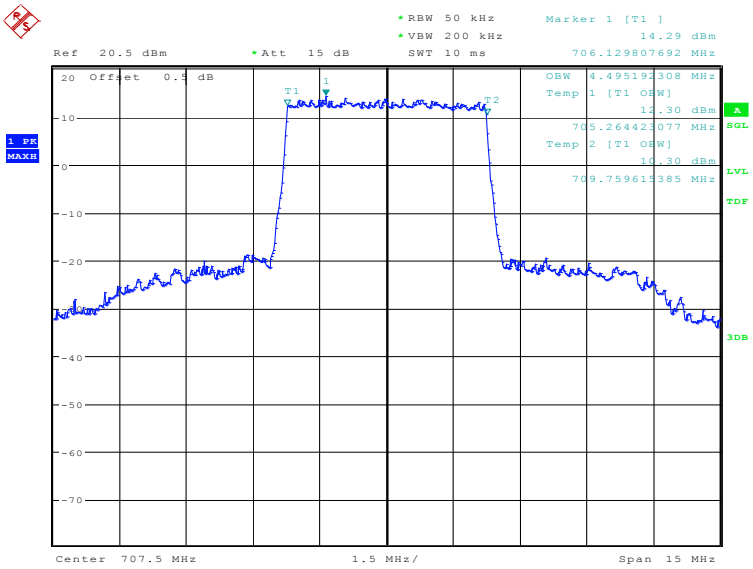
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	4495.19	4495.19	4495.19

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



Date: 5.SEP.2019 17:59:38

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



Date: 5.SEP.2019 18:01:03

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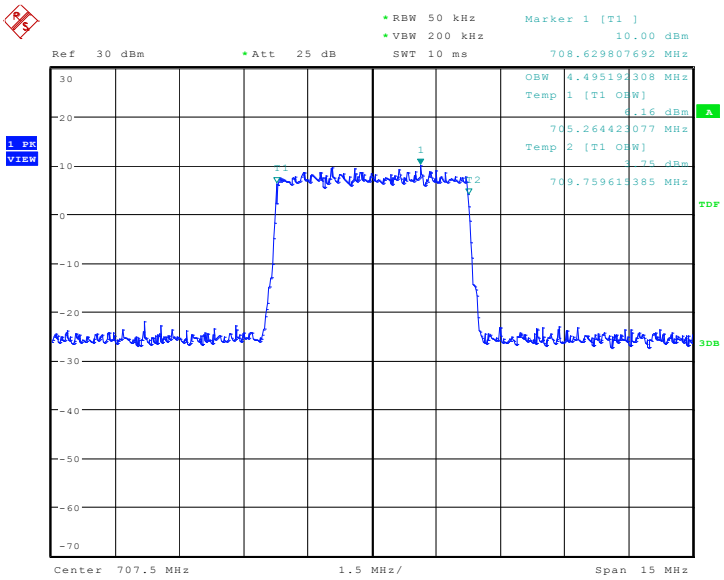
LTE band 12, 5MHz Bandwidth,64QAM (99% BW)



Date: 6.SEP.2019 10:06:10

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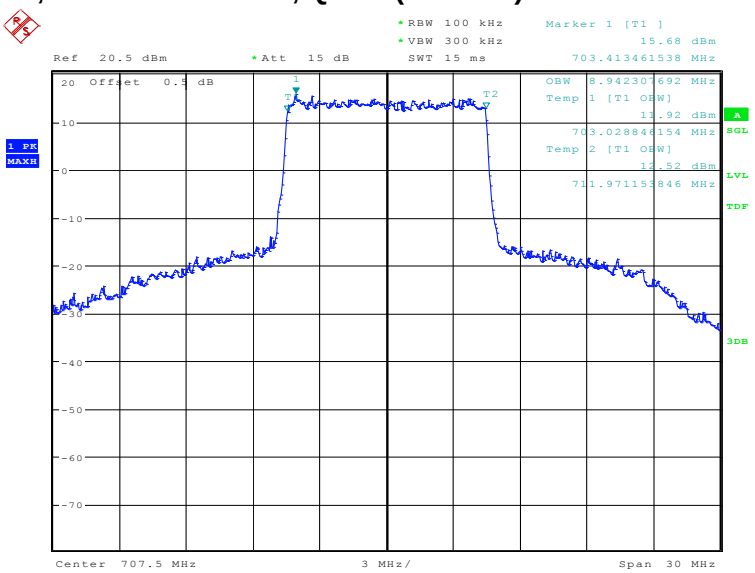
LTE band 12, 10MHz (99%)

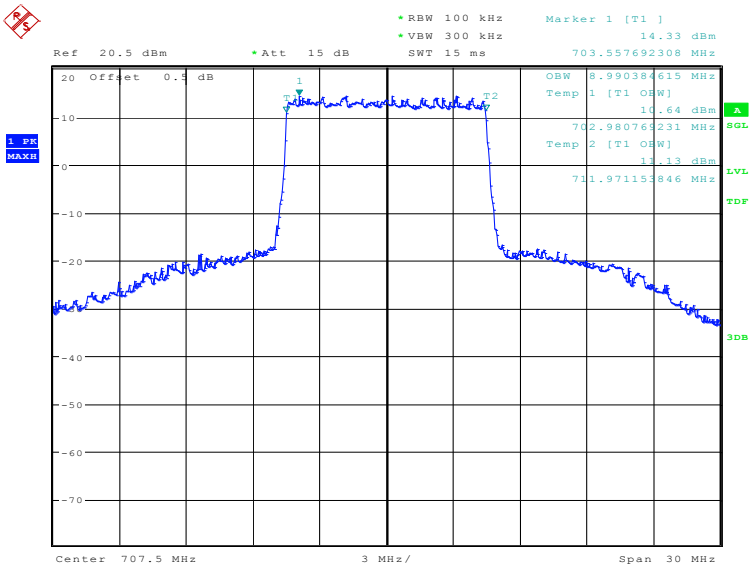
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
707.5	QPSK	16QAM	64QAM
	8942.31	8990.38	8990.38

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



Date: 5.SEP.2019 18:02:38

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



Date: 5.SEP.2019 18:04:02

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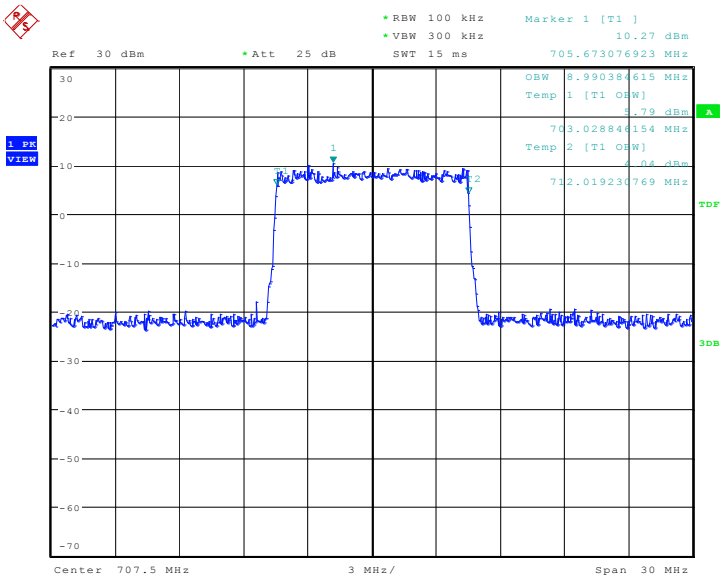
LTE band 12, 10MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:08:19

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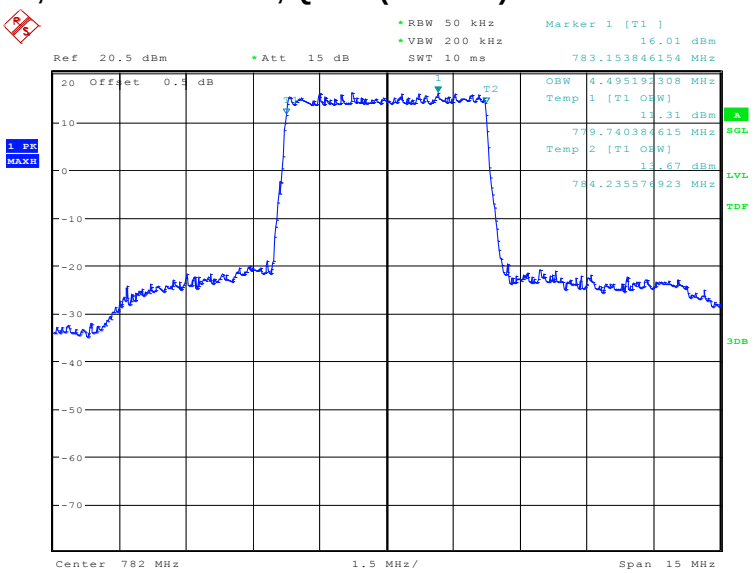
LTE band 13, 5MHz (99%)

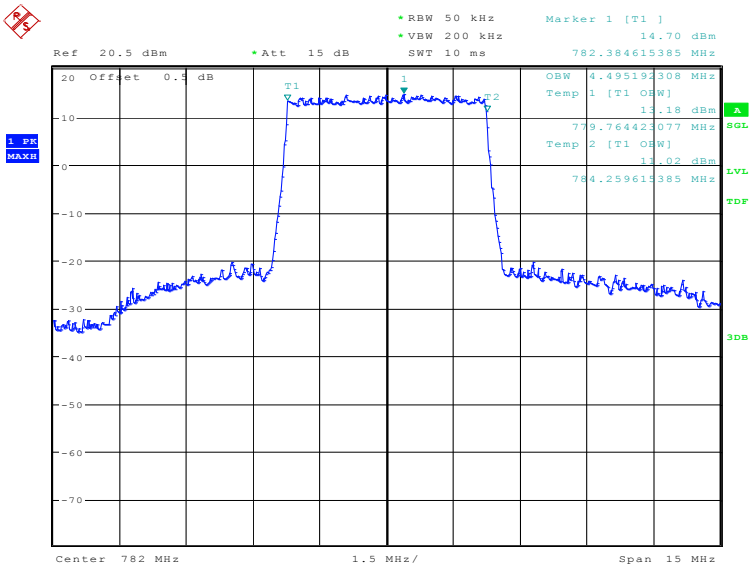
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
782.0	QPSK	16QAM	64QAM
	4495.19	4495.19	4495.19

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



Date: 5.SEP.2019 18:05:30

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



Date: 5.SEP.2019 18:06:55

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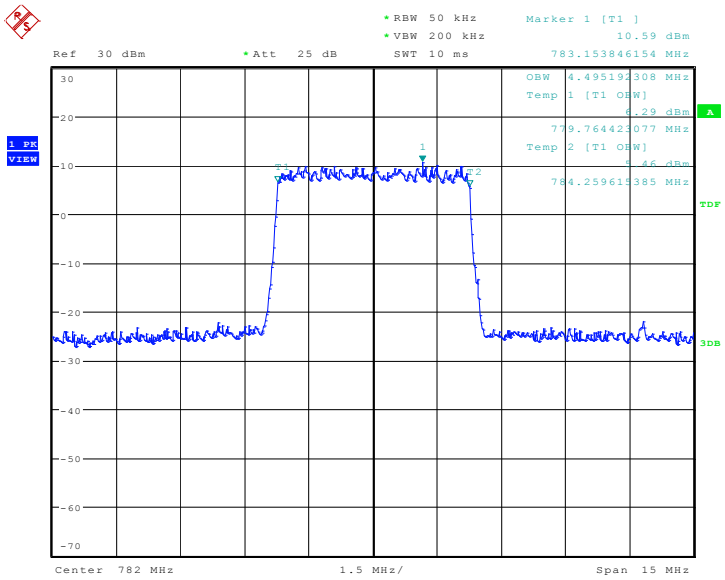
LTE band 13, 5MHz Bandwidth,64QAM (99% BW)



Date: 6.SEP.2019 09:46:55

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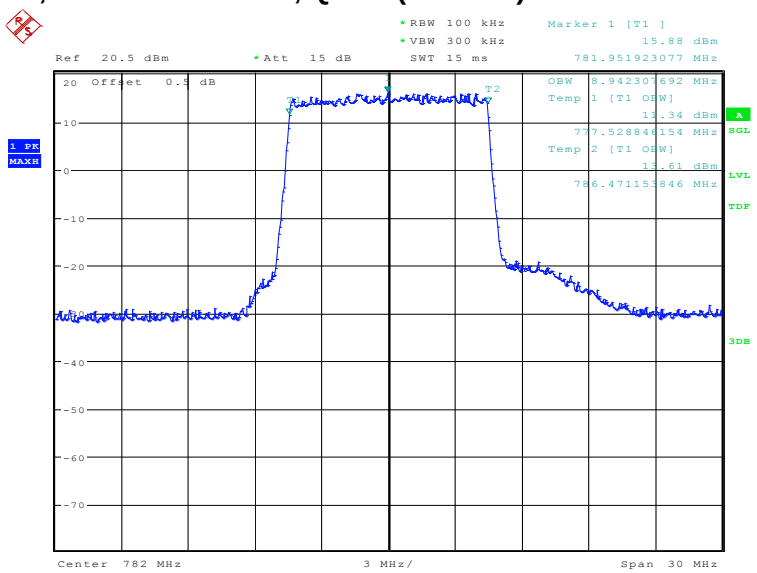
LTE band 13, 10MHz (99%)

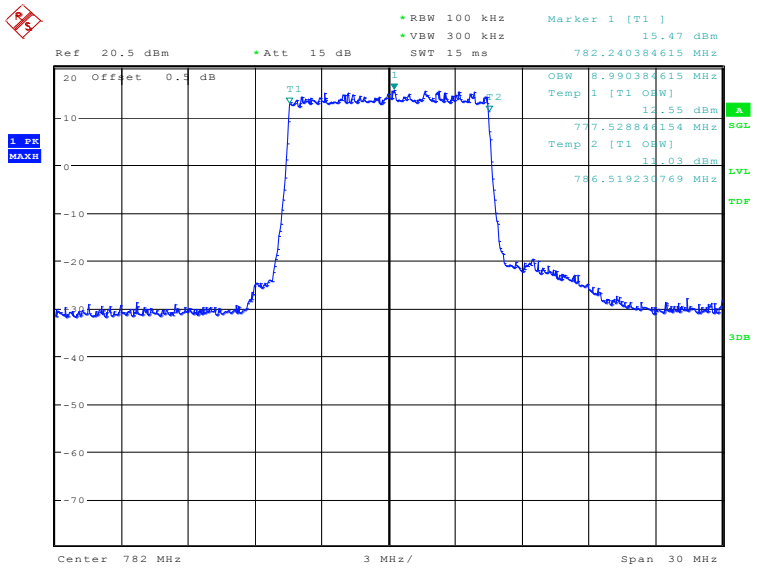
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
782.0	QPSK	16QAM	64QAM
	8942.31	8990.38	8990.38

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



Date: 5.SEP.2019 18:08:21

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



Date: 5.SEP.2019 18:09:45

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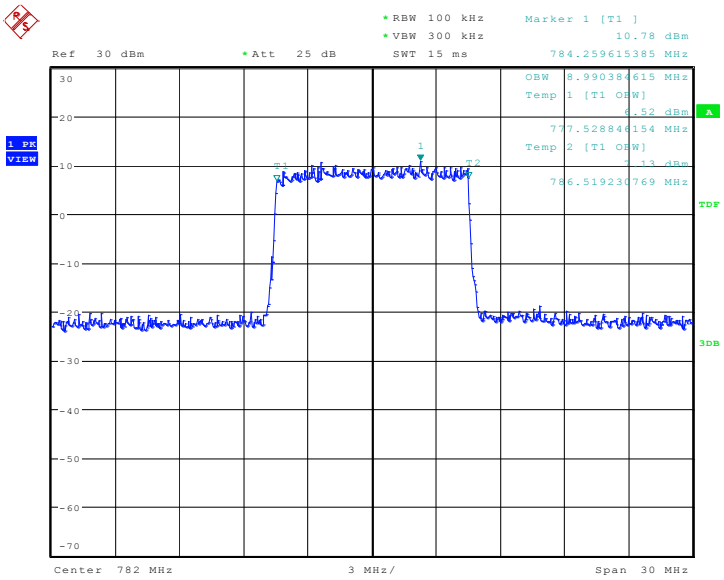
LTE band 13, 10MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 09:57:57

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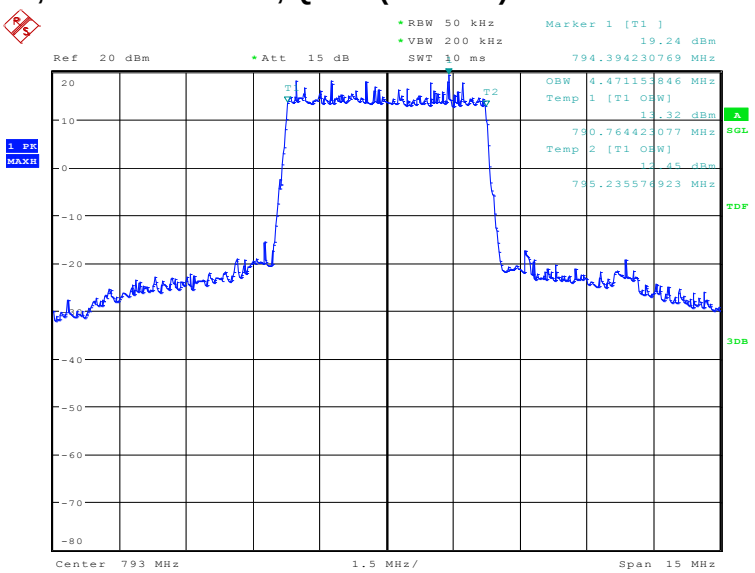
LTE band 14, 5MHz (99%)

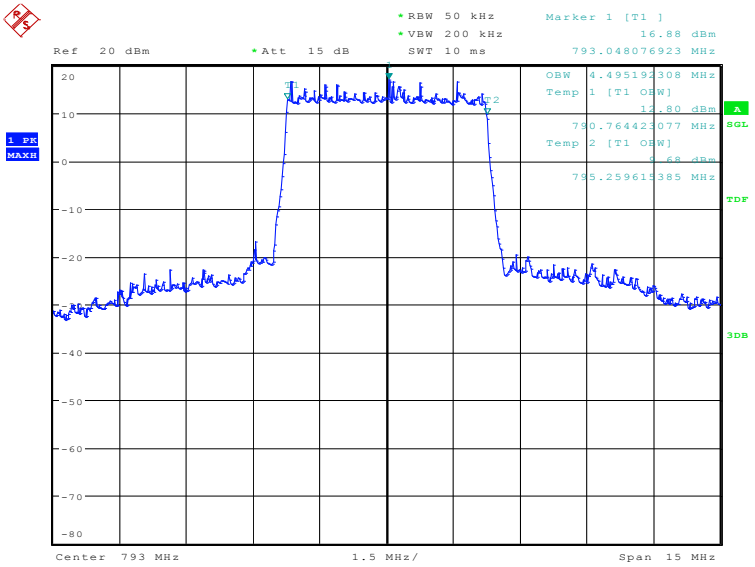
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
793.0	QPSK	16QAM	64QAM
	4471.15	4495.19	4495.19

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



Date: 5.SEP.2019 18:11:14

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



Date: 5.SEP.2019 18:12:38

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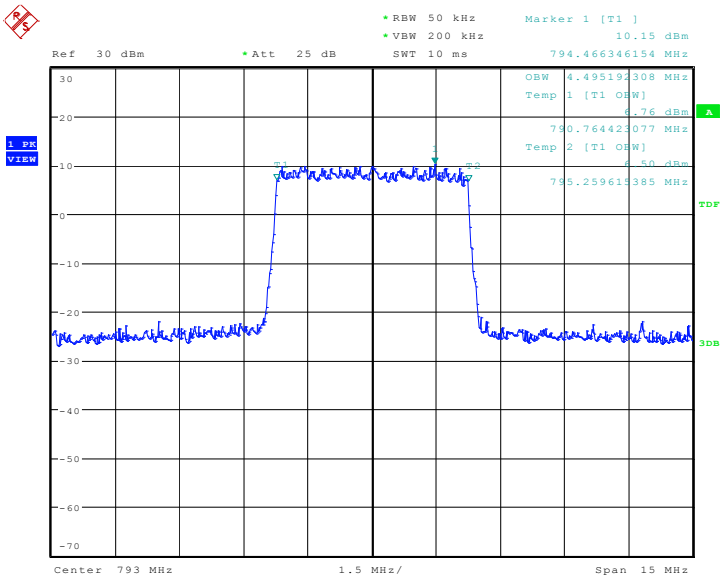
LTE band 14, 5MHz Bandwidth,64QAM (99% BW)



Date: 6.SEP.2019 10:10:51

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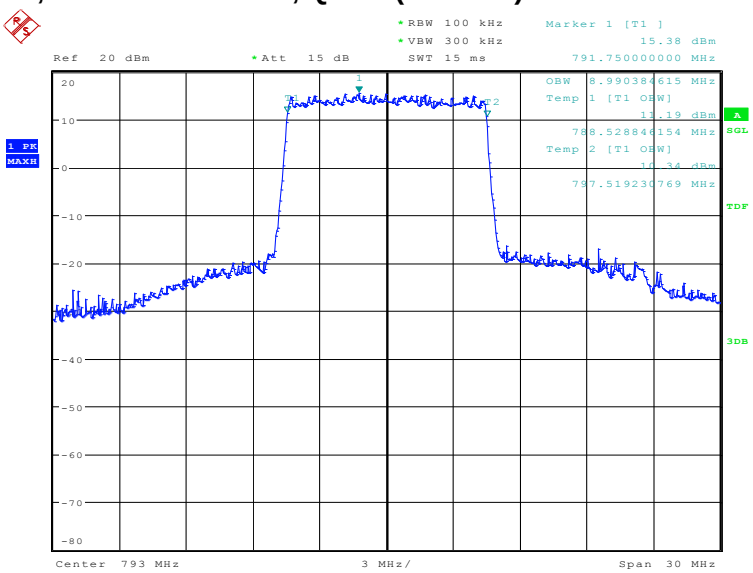
LTE band 14, 10MHz (99%)

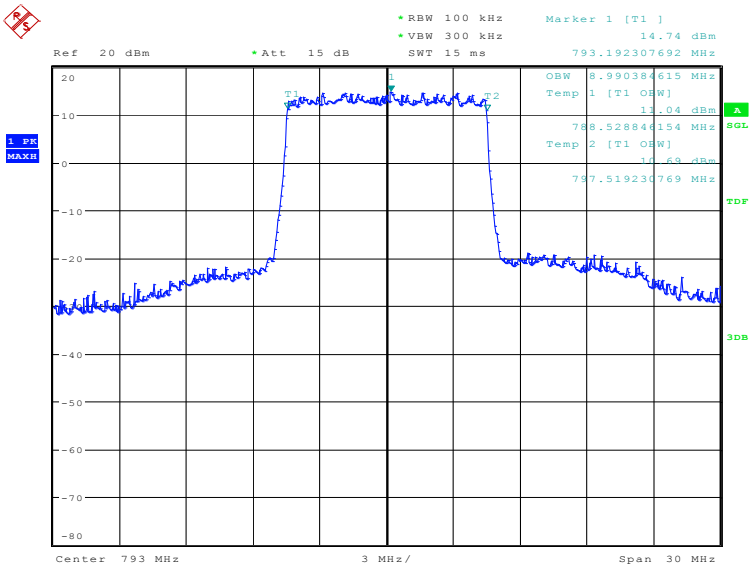
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
793.0	QPSK	16QAM	64QAM
	8990.38	8990.38	8990.38

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



Date: 5.SEP.2019 18:14:05

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



Date: 5.SEP.2019 18:15:29

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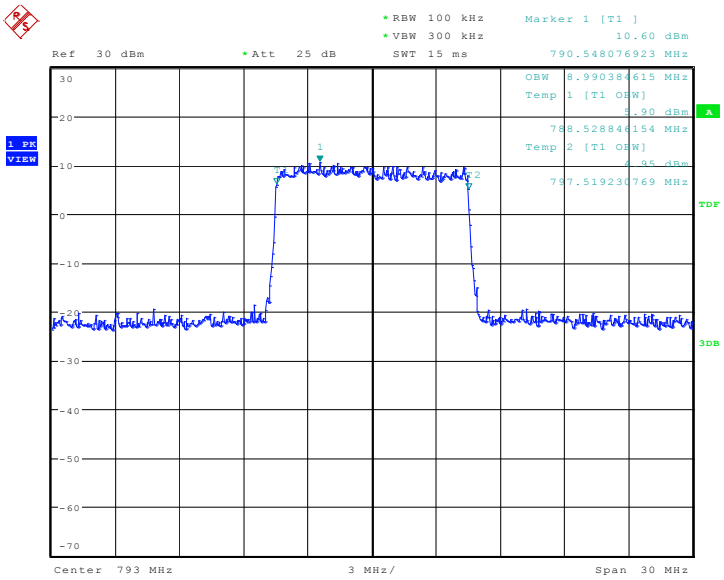
LTE band 14, 10MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:12:41

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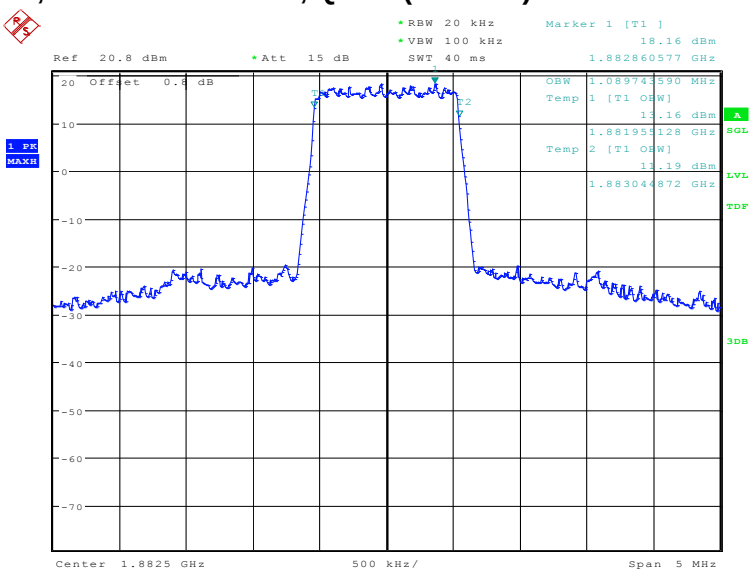
LTE band 25, 1.4MHz (99%)

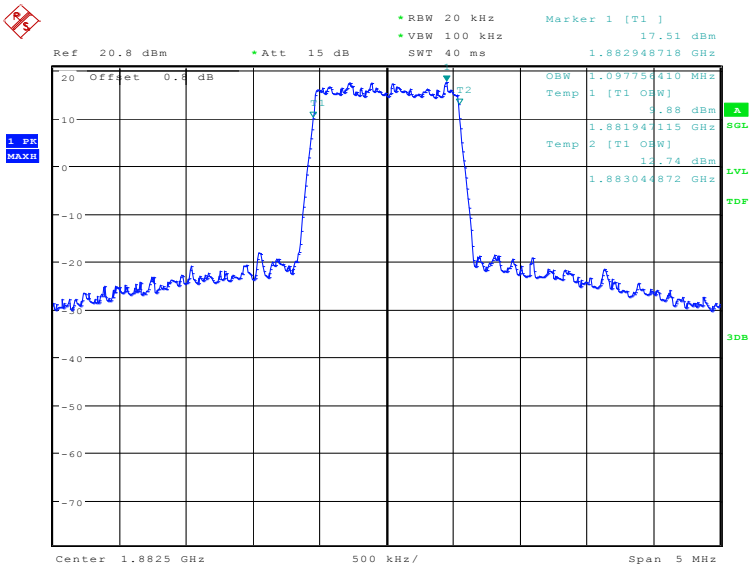
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	1089.74	1097.76	1089.74

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



Date: 9.SEP.2019 18:05:21

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



Date: 9.SEP.2019 18:06:45

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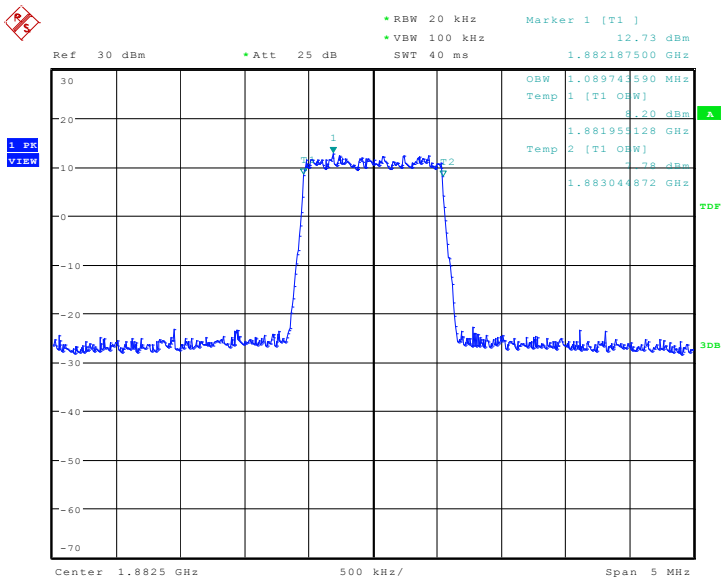
LTE band 25, 1.4MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:42:30

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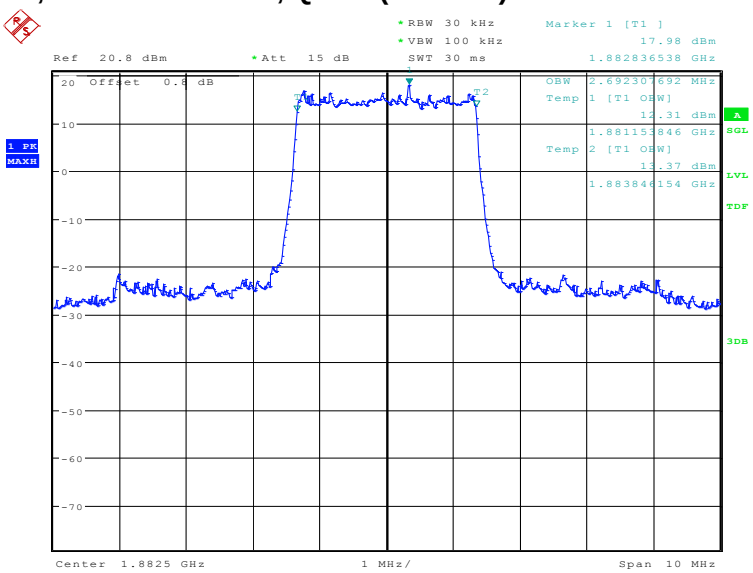
LTE band 25, 3MHz (99%)

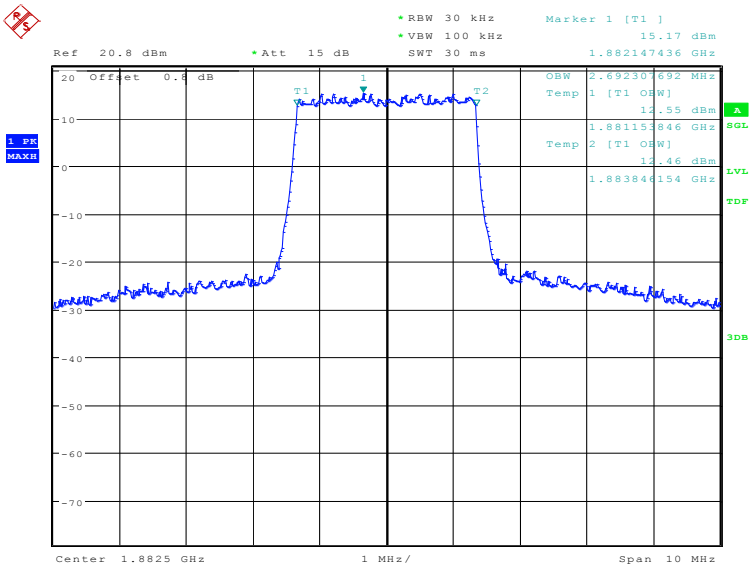
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	2692.31	2692.31	2692.31

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



Date: 9.SEP.2019 18:08:12

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



Date: 9.SEP.2019 18:09:36

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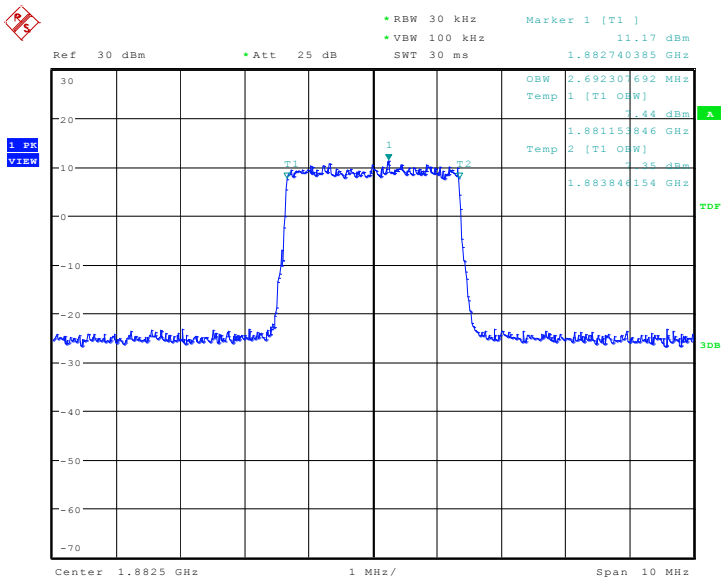
LTE band 25, 3MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:44:01

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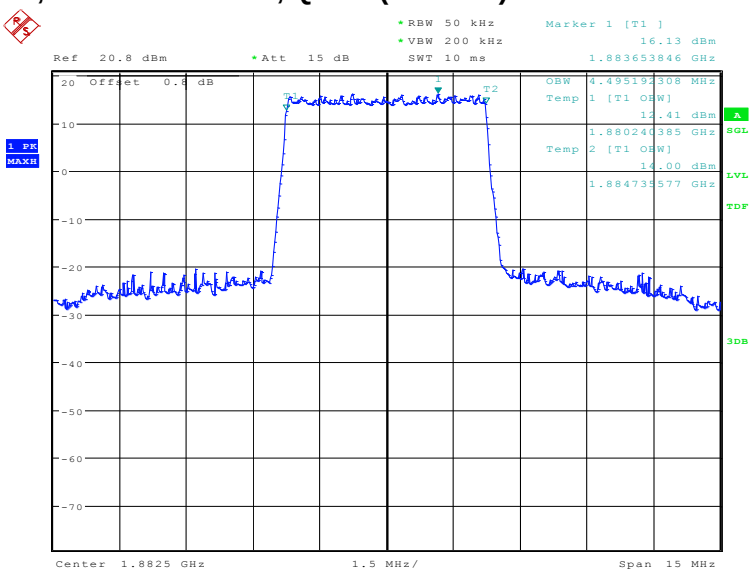
LTE band 25, 5MHz (99%)

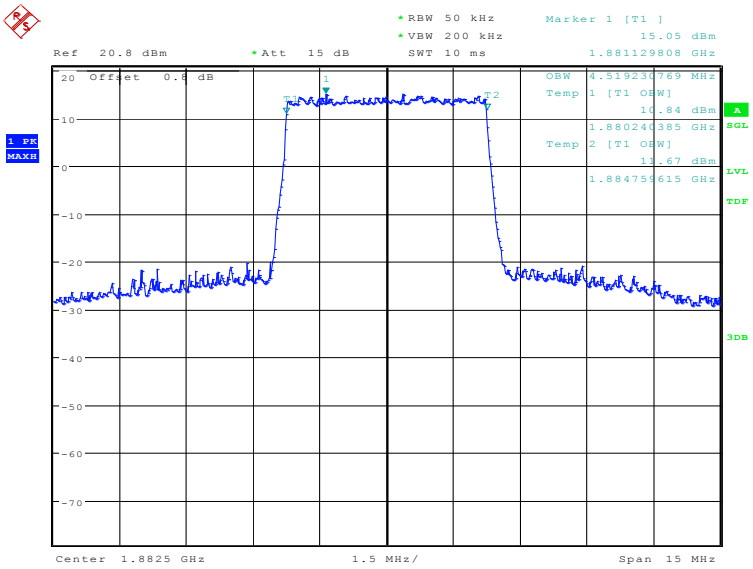
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	4495.19	4519.23	4495.19

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



Date: 9.SEP.2019 18:11:03

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



Date: 9.SEP.2019 18:12:27

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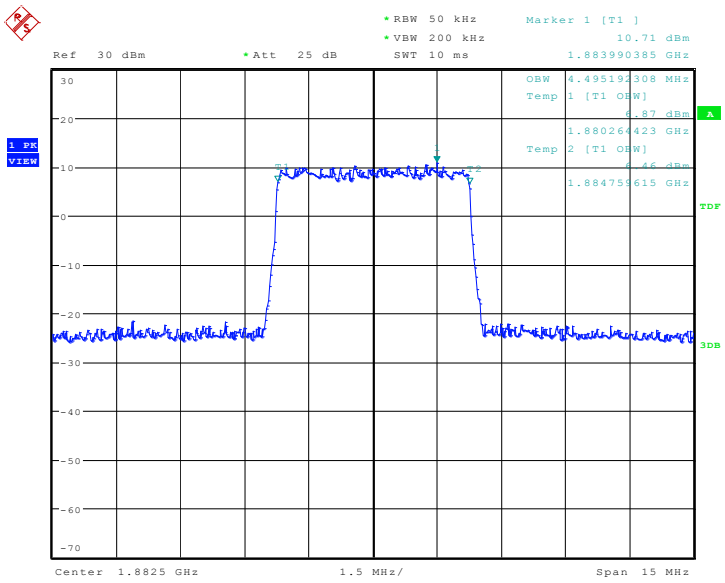
LTE band 25, 5MHz Bandwidth,64QAM (99% BW)



Date: 6.SEP.2019 14:51:32

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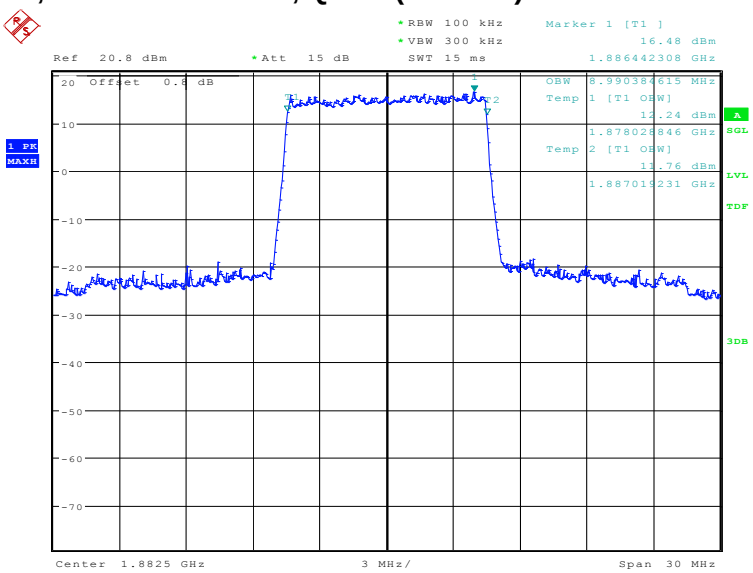
LTE band 25, 10MHz (99%)

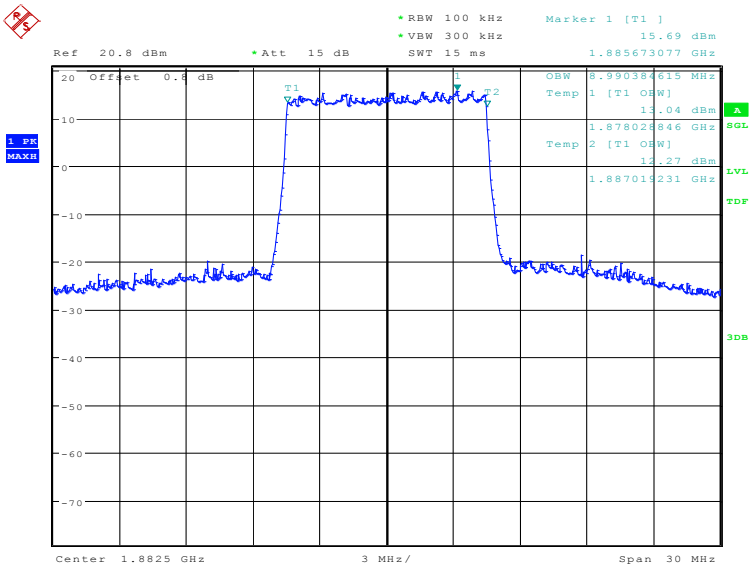
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	8990.38	8990.38	9038.46

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



Date: 9.SEP.2019 18:13:53

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



Date: 9.SEP.2019 18:15:18

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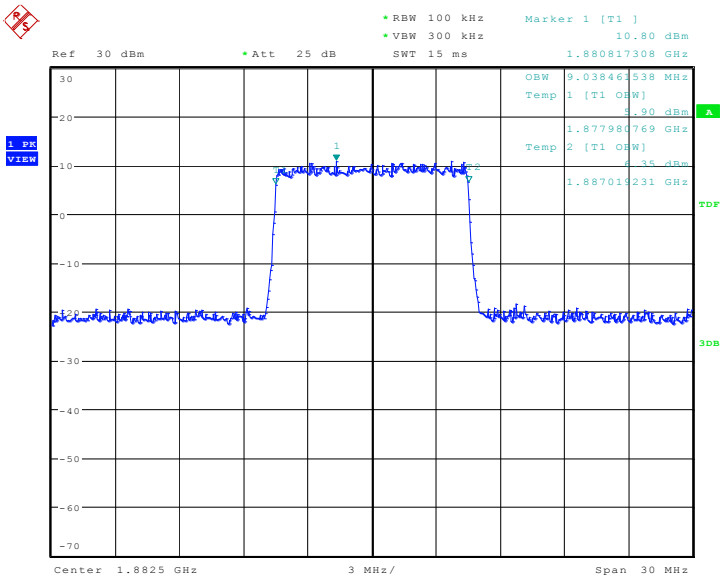
LTE band 25, 10MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:53:10

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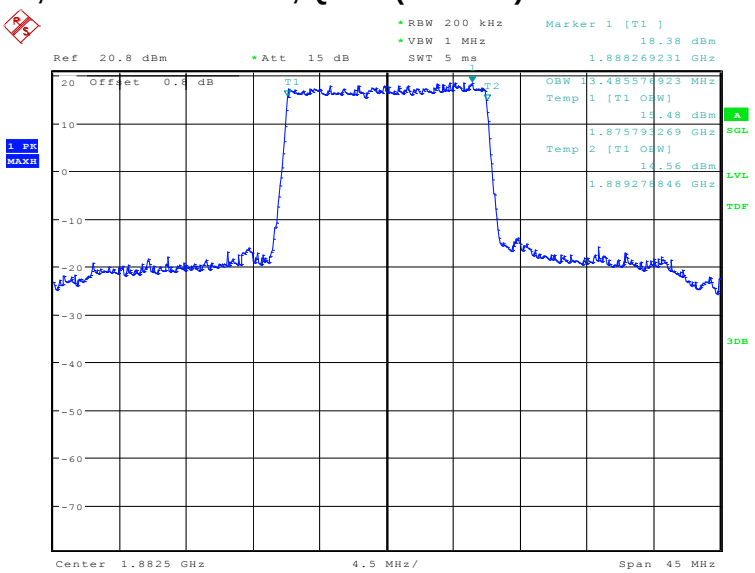
LTE band 25, 15MHz (99%)

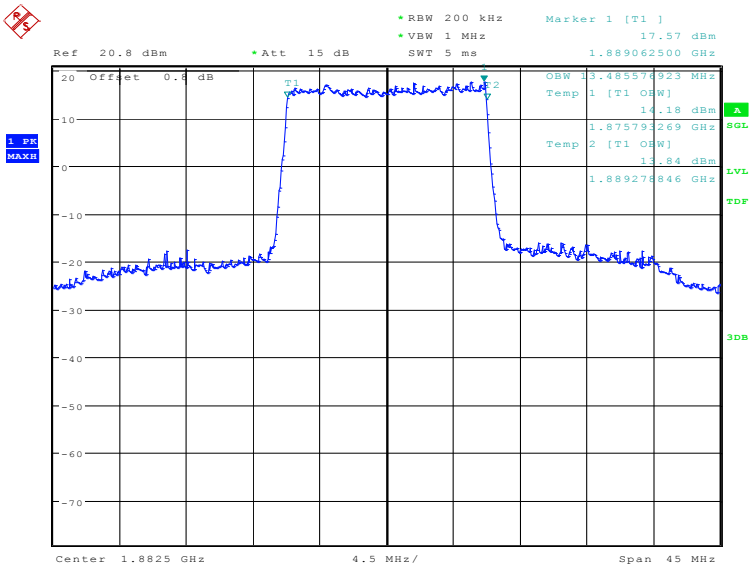
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	13485.58	13485.58	13485.58

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



Date: 9.SEP.2019 18:16:44

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



Date: 9.SEP.2019 18:18:09

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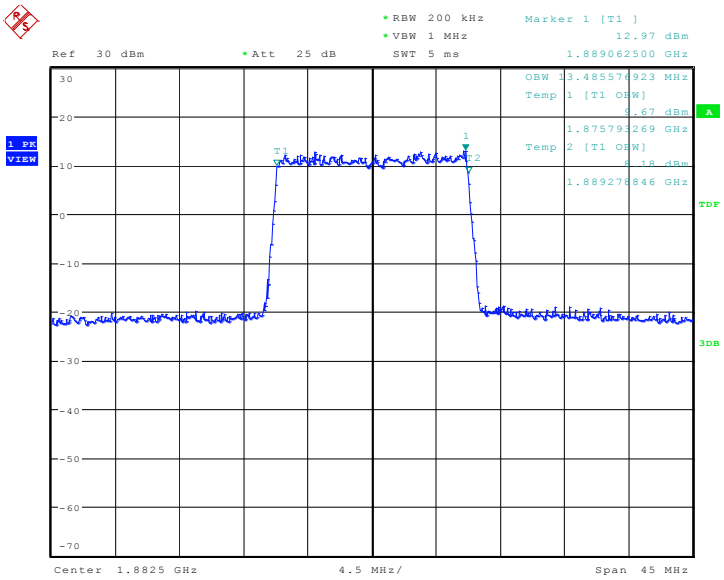
LTE band 25, 15MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:56:33

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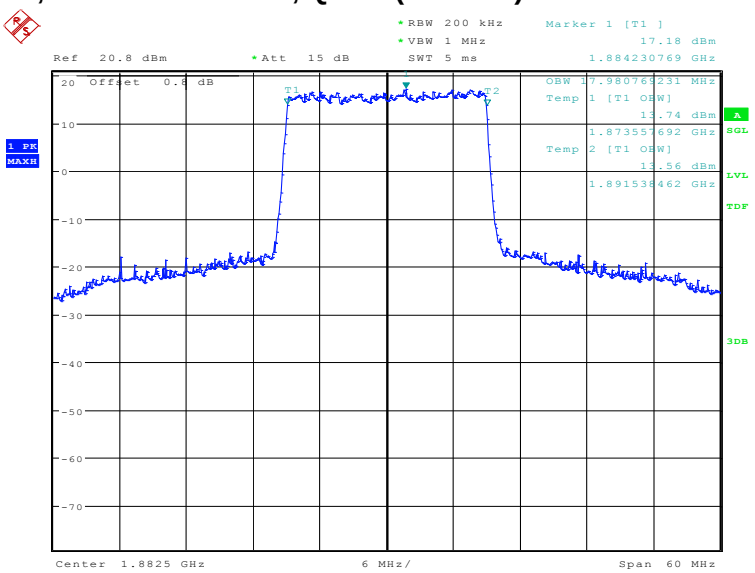
LTE band 25, 20MHz (99%)

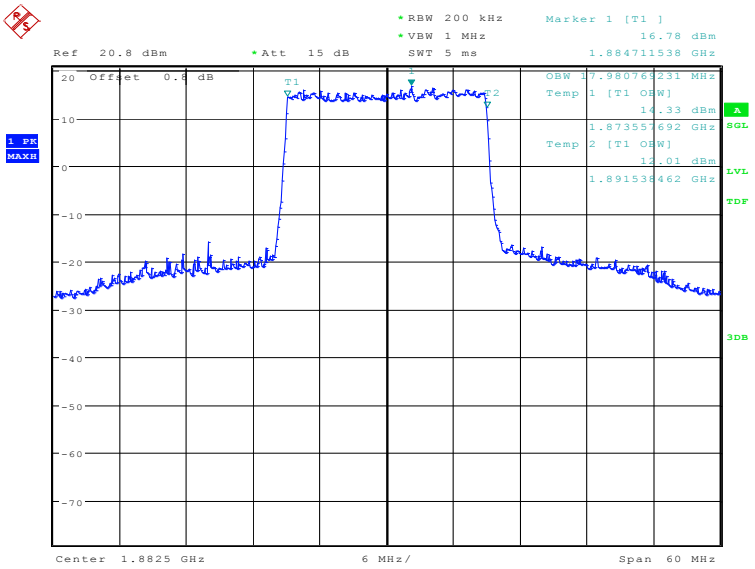
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
1882.5	QPSK	16QAM	64QAM
	17980.77	17980.77	17980.77

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



Date: 9.SEP.2019 18:19:35

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



Date: 9.SEP.2019 18:21:00

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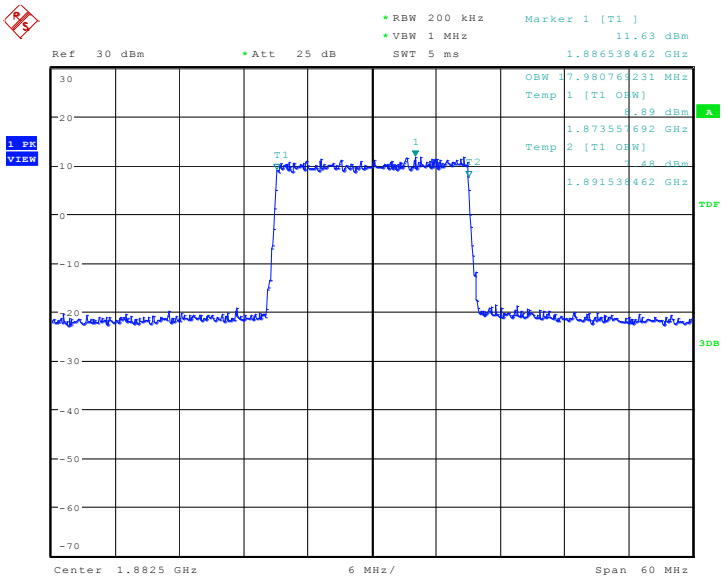
LTE band 25, 20MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 14:58:01

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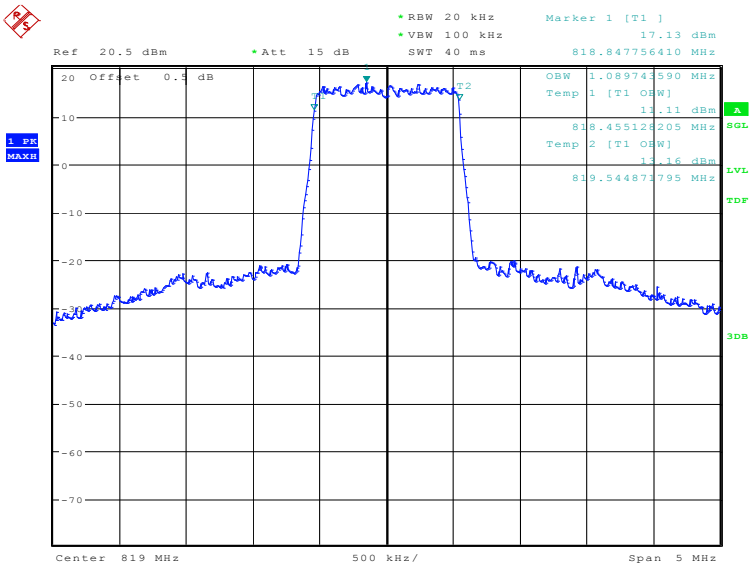
LTE band 26(814MHz~824MHz), 1.4MHz (99%)

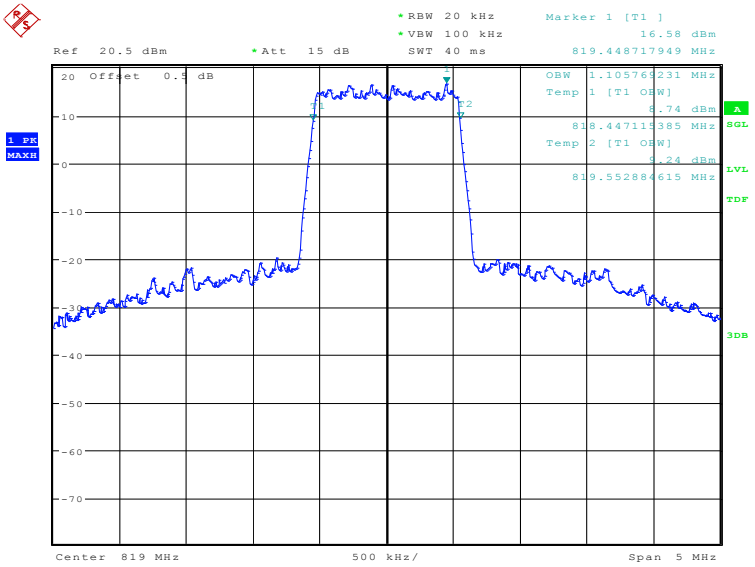
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
819.0	QPSK	16QAM	64QAM
	1089.74	1105.77	1089.74

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



Date: 5.SEP.2019 18:32:23

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



Date: 5.SEP.2019 18:33:48

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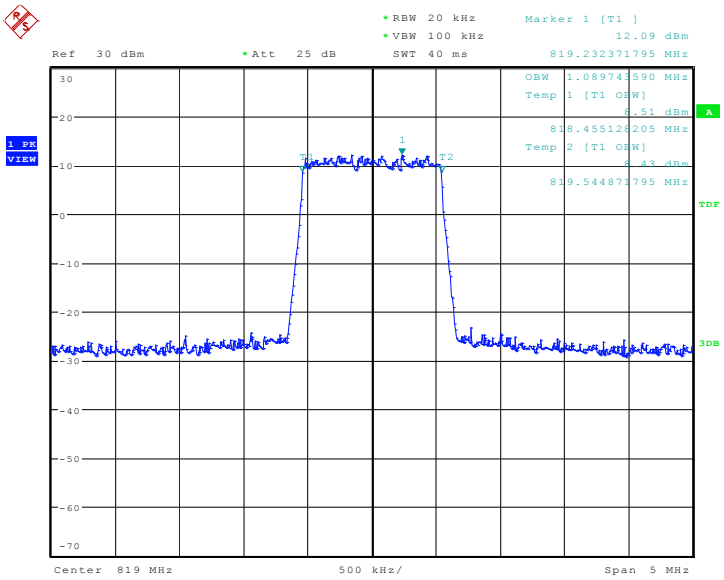
LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:46:32

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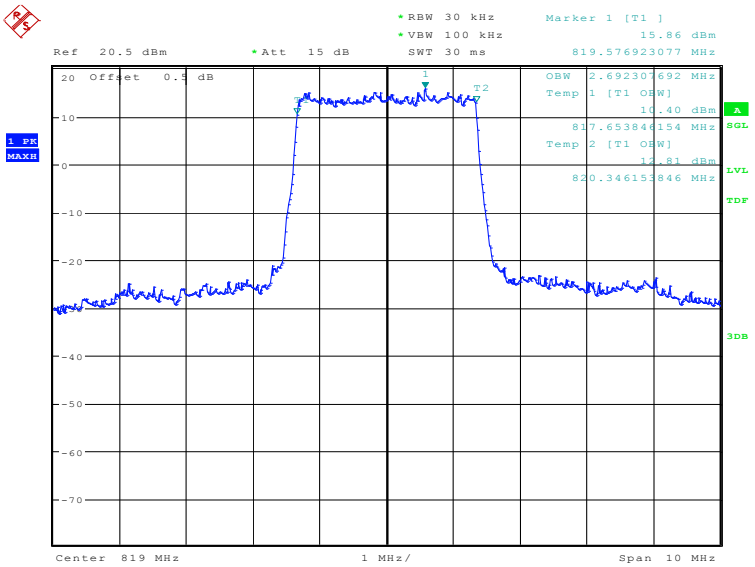
LTE band 26(814MHz~824MHz), 3MHz (99%)

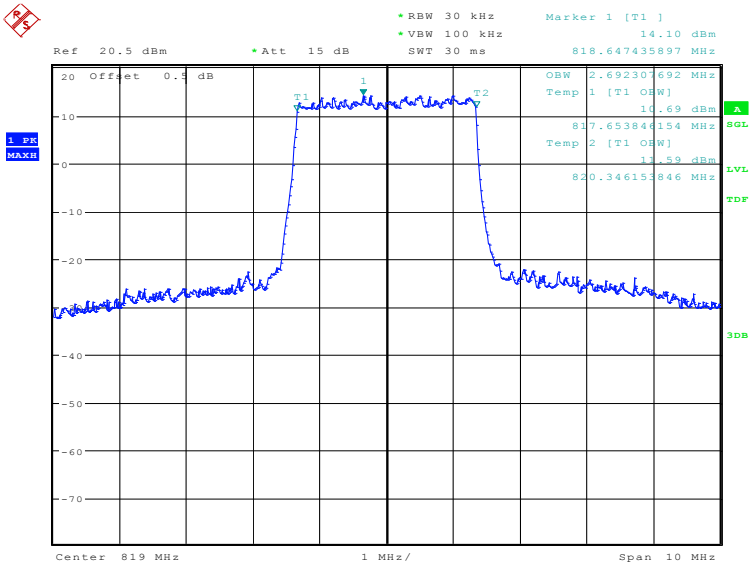
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
819.0	QPSK	16QAM	64QAM
	2692.31	2692.31	2692.31

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



Date: 5.SEP.2019 18:35:14

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



Date: 5.SEP.2019 18:36:39

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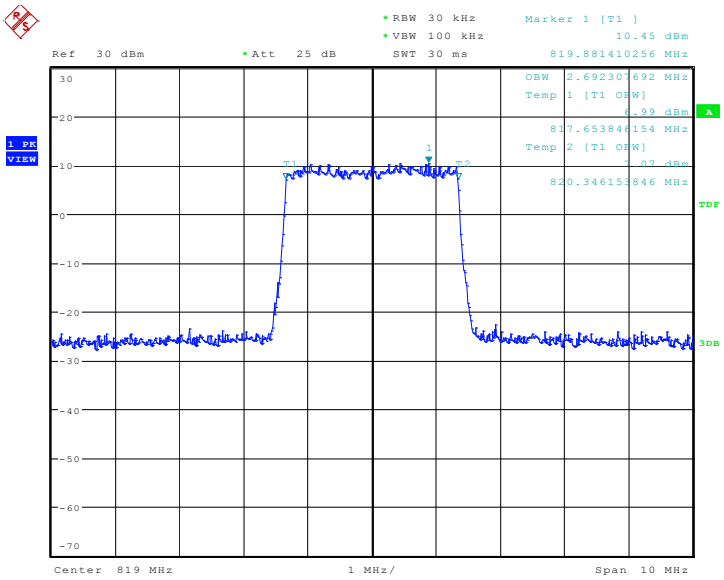
LTE band 26(814MHz~824MHz), 3MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:48:16

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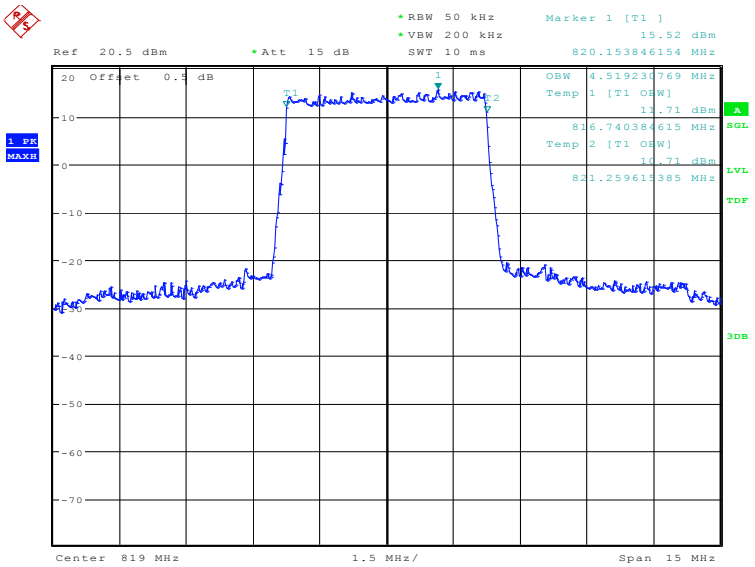
LTE band 26(814MHz~824MHz), 5MHz (99%)

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

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



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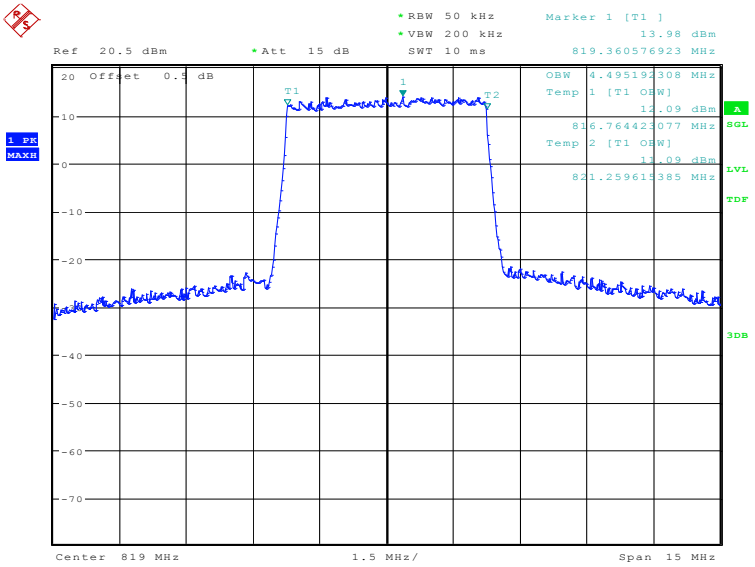
LTE band 26(814MHz~824MHz), 5MHz Bandwidth, 16QAM (99% BW)



Date: 5.SEP.2019 18:39:30

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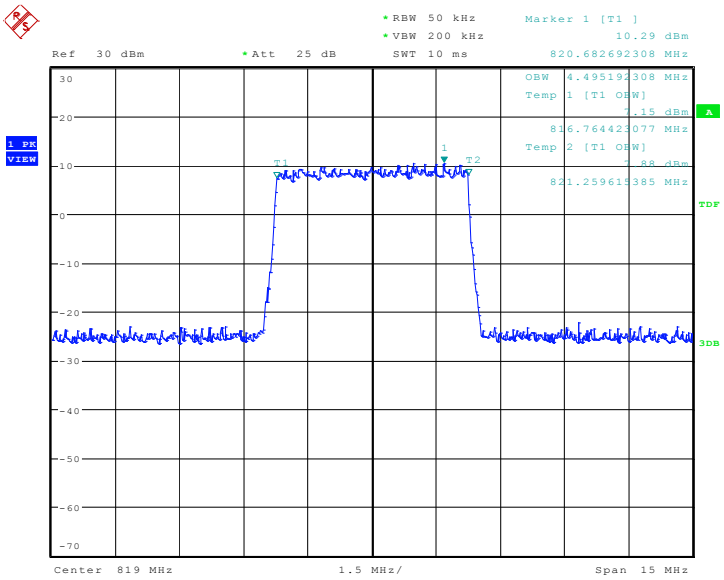
LTE band 26(814MHz~824MHz), 5MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:49:55

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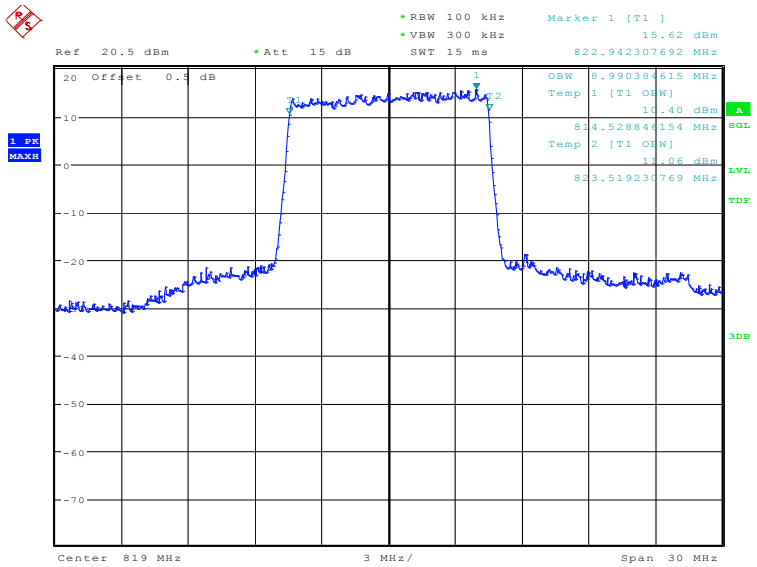
LTE band 26(814MHz~824MHz), 10MHz (99%)

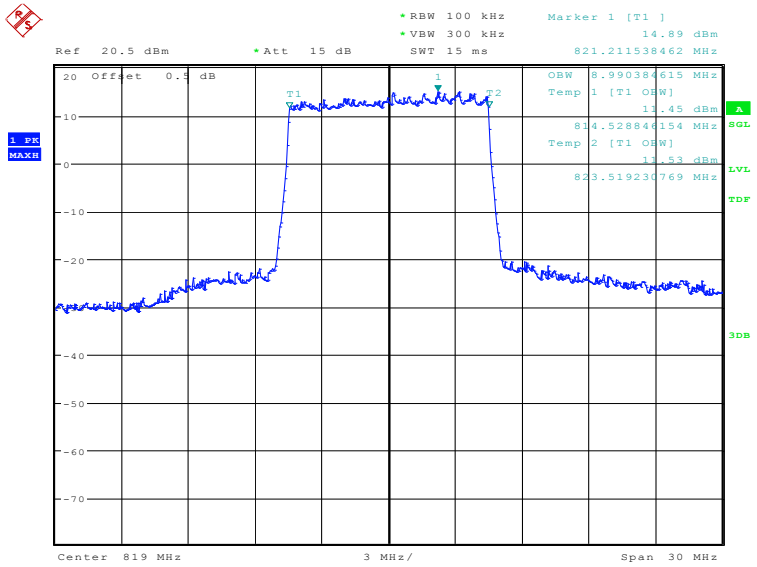
Frequency (MHz)	Occupied Bandwidth (99%)(kHz)		
819.0	QPSK	16QAM	64QAM
	8990.38	8990.38	8990.38

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



Date: 5.SEP.2019 18:40:57

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



Date: 5.SEP.2019 18:42:21

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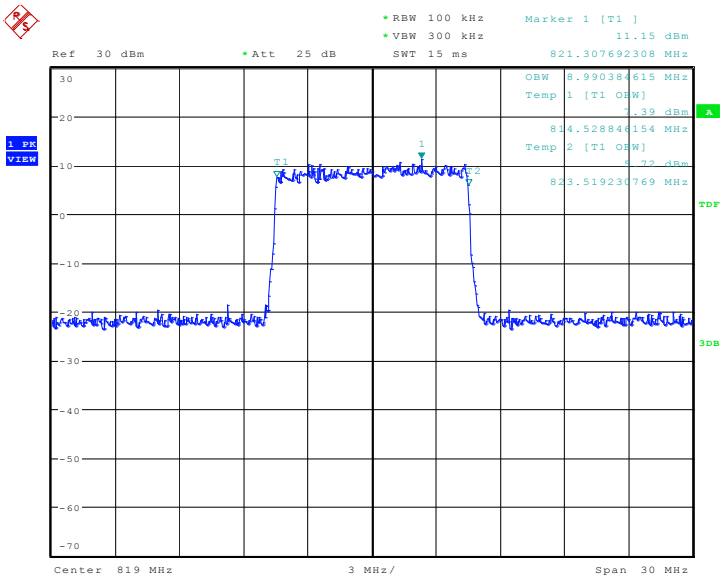
LTE band 26(814MHz~824MHz), 10MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:51:27

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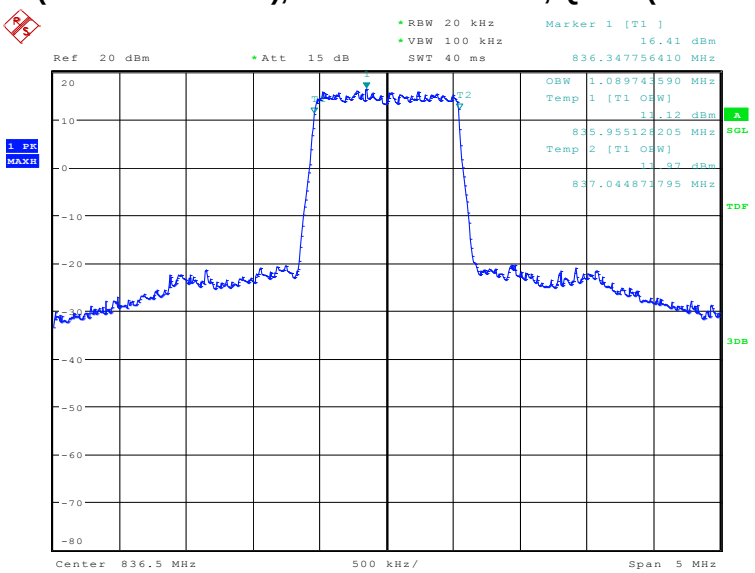
LTE band 26(824MHz~849MHz), 1.4MHz (99%)

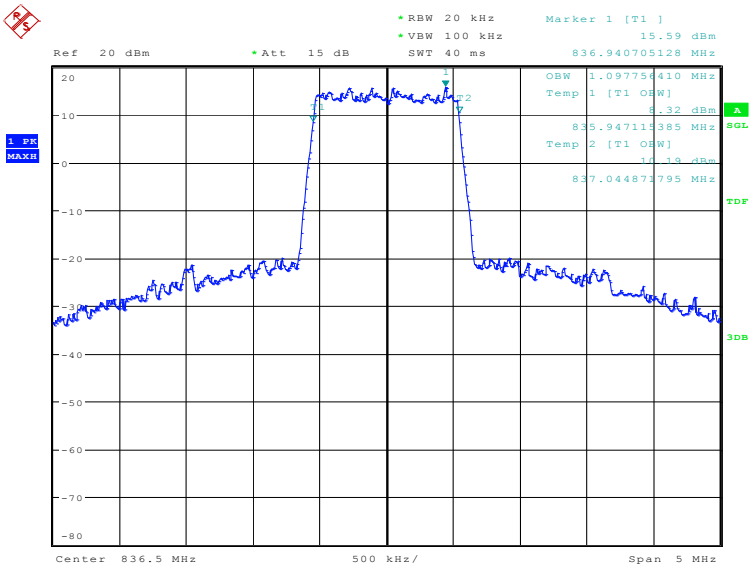
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
836.5	QPSK	16QAM	64QAM
	1089.74	1097.76	1089.74

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



Date: 5.SEP.2019 18:16:59

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



Date: 5.SEP.2019 18:18:23

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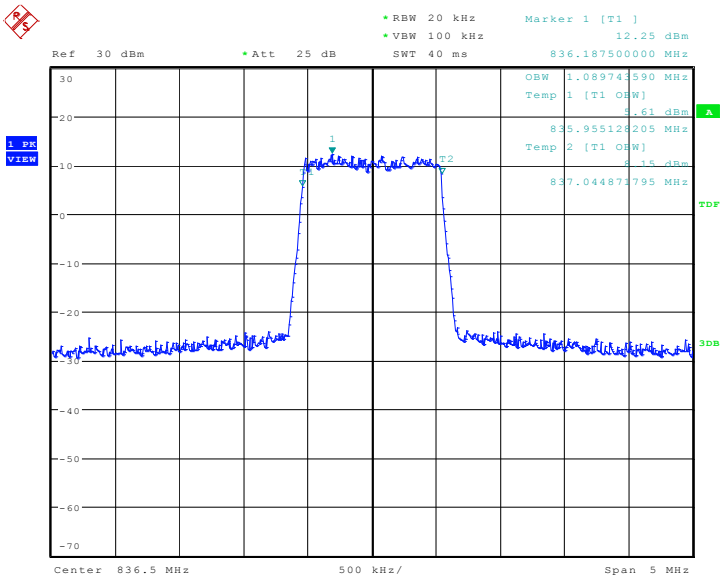
LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:17:58

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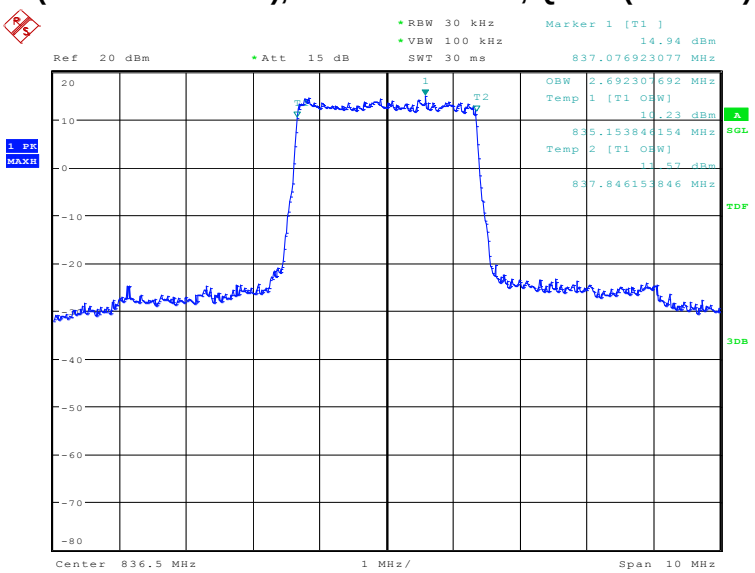
LTE band 26(824MHz~849MHz), 3MHz (99%)

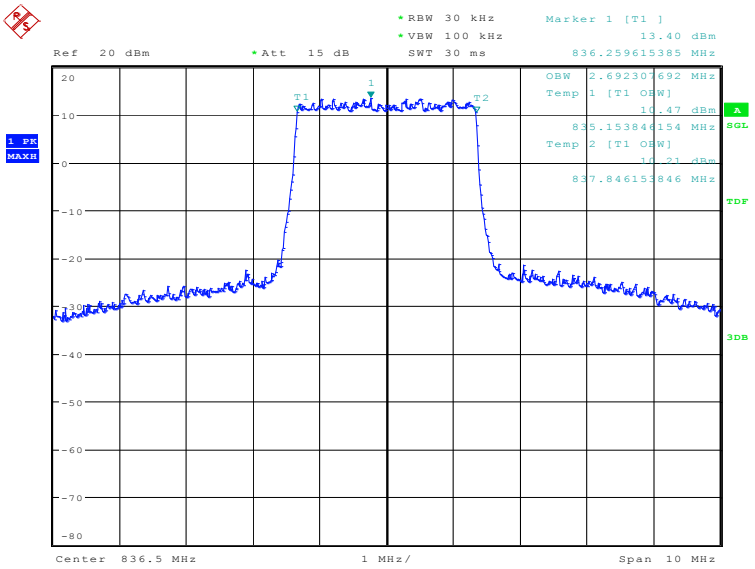
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
836.5	QPSK	16QAM	64QAM
	2692.31	2692.31	2692.31

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



Date: 5.SEP.2019 18:19:50

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



Date: 5.SEP.2019 18:21:14

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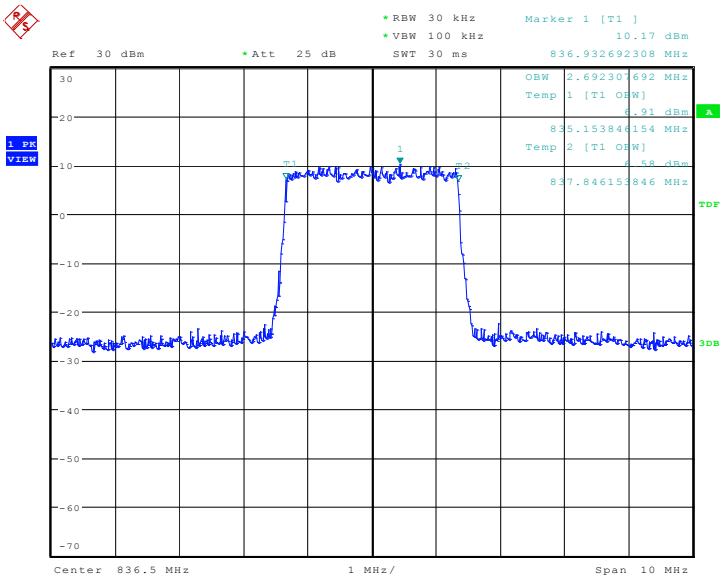
LTE band 26(814MHz~824MHz), 3MHz Bandwidth, 64QAM (99% BW)



Date: 6.SEP.2019 10:20:43

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