



# TEST REPORT

## No. I21Z60291-WMD03

for

**TCL Communication Ltd.**

**GSM/UMTS/LTE mobile phone**

**Model Name: T774B,T775B**

**FCC ID: 2ACCJN054**

with

**Hardware Version: 03**

**Software Version: v3.0.9DF2**

**Issued Date: 2021-03-16**

**Note:**

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

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

**Test Laboratory:**

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I21Z60291-WMD03	Rev.0	1 <sup>st</sup> edition	2021-03-16

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

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## **1. Test Laboratory**

### **1.1. Introduction & Accreditation**

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0 and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

### **1.2. Testing Location**

Location 1: CTTL (huayuan North Road)

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

Location 2: CTTL(Shouxiang)

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

### 1.3. Testing Environment

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

### 1.4. Project Data

Testing Start Date: 2021-02-07  
Testing End Date: 2021-03-15

### 1.5. Signature



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Dong Yuan  
(Prepared this test report)



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Zhou Yu  
(Reviewed this test report)



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Zhao Hui Lin  
Deputy Director of the laboratory  
(Approved this test report)



## **2. Client Information**

### **2.1. Applicant Information**

Company Name: TCL Communication Ltd.  
Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
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### **2.2. Manufacturer Information**

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

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

#### **3.1. About EUT**

Description	GSM/UMTS/LTE mobile phone
Model Name	T774B,T775B
FCC ID	2ACCJN054
Antenna	Embedded
Output power	24.26dBm maximum EIRP measured for LTE Band 66
Extreme vol. Limits	3.6VDC to 4.4VDC (nominal: 3.85VDC)
Extreme temp. Tolerance	0°C to +40°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**

<b>EUT ID*</b>	<b>IMEI</b>	<b>HW Version</b>	<b>SW Version</b>	<b>Date of receipt</b>
UT16a	351897970006197	03	v3.0.9DF2	2021-02-22
UT06a	351897970000075	03	v3.0.9DF2	2021-02-07

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

#### **3.3. Internal Identification of AE used during the test**

<b>AE ID*</b>	<b>Description</b>
AE1	Battery
AE2	Battery
AE1	
Model	TLp048A1
Manufacturer	BYD
Capacitance	4360mAh
AE2	
Model	TLp048A7
Manufacturer	VEKEN
Capacitance	4360mAh

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

## **4. Reference Documents**

### **4.1. Documents supplied by applicant**

EUT parameters, referring to Annex A for detailed information, is supplied by the client or manufacturer, which is the basis of testing.

### **4.2. Reference Documents for testing**

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

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



## 5. Laboratory Environment

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

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

**Fully-anechoic chamber 2** (8.6 meters X 6.1 meters X 3.85 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 1 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

**Fully-anechoic chamber FAC-3** (9 meters X 6.5 meters X 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

## 6. Summary Of Test Result

### LTE Band 7

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

**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

**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 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

**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.

LTE Band 25, Band 66, Band 26 and Band 12 overlaps the entire frequency range of LTE Band 2, Band 4, Band 5 and Band 17. Therefore, test data provided in this report covers Band 2, Band 4, Band 5 as well as Band 25, Band 66, Band 26.

LTE Band 41 is tested by power class 3.

Explanation of worst-case configuration

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

## 7. Test Equipment Utilized

Description	Type	Series Number	Manufacture	Cal Due Date	Calibration Interval
Wideband Radio Communication Tester	CMW500	159082	R&S	2021-12-17	1 year
Spectrum Analyzer	FSU	200030	R&S	2021-06-01	1 year
Radio Communication Analyzer	MT8821C	6201763159	Anritsu	2021-08-12	1 year
Climate Chamber	SH-242	93008556	ESPEC	2023-12-23	3 years
Universal Radio Communication Tester	CMW500	143008	R&S	2021-12-01	1 Year
Test Receiver	E4440A	MY48250642	Agilent	2021-03-12	1 Year
Antenna	VULB9163	9163-301	Schwarzbeck	2021-08-04	1 Year
Antenna	3117	00119024	ETS-Lindgren	2021-05-08	1 Year
Antenna	3117	00058889	ETS-Lindgren	2021-09-22	1 Year
Antenna	9117	167	Schwarzbeck	2021-08-19	1 Year
Signal Generator	N5183A	MY49060052	Agilent	2021-07-01	1 Year
Amplifier	5S1G4	341863	AR	/	

※ The Test Receiver with series number MY48250642 did not exceed the CAL. DUE DATE when used.

## Annex A: Measurement Results

### A.1 Output Power

#### A.1.1 Summary

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

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

#### A.1.2 Conducted

##### A.1.2.1 Method of Measurements

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

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

##### A.1.2.2 Measurement Result

#### LTE band 7

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	22.88	23.22	22.82
		2535.0	22.42	22.63	22.55
		2502.5	23.07	23.22	22.48
	1 RB low	2567.5	22.97	23.15	23.04
		2535.0	22.65	22.88	22.60
		2502.5	23.22	23.34	22.92
	50% RB mid	2567.5	22.80	22.36	22.27
		2535.0	22.42	21.96	21.97
		2502.5	23.02	22.60	21.53
	100% RB	2567.5	22.85	22.40	22.32
		2535.0	22.47	21.91	21.94
		2502.5	22.98	22.53	21.54
10MHz	1 RB high	2565.0	22.84	23.18	23.04
		2535.0	22.52	22.96	22.53
		2505.0	22.96	23.49	22.61
	1 RB low	2565.0	23.09	23.32	23.27
		2535.0	22.61	22.93	23.00
		2505.0	23.26	23.46	22.84
	50% RB mid	2565.0	22.88	22.32	22.34
		2535.0	22.37	21.86	21.89
		2505.0	23.08	22.58	21.61
	100% RB	2565.0	22.79	22.37	22.38

		2535.0	22.47	21.91	21.91
		2505.0	22.97	22.57	21.60
15MHz	1 RB high	2562.5	22.80	23.05	22.78
		2535.0	22.68	22.99	22.29
		2507.5	22.90	23.13	22.86
	1 RB low	2562.5	22.82	22.95	22.87
		2535.0	22.56	22.97	22.31
		2507.5	23.09	23.41	22.54
	50% RB mid	2562.5	22.86	22.30	22.25
		2535.0	22.70	22.19	21.50
		2507.5	23.17	22.69	21.57
	100% RB	2562.5	22.80	22.28	22.26
		2535.0	22.63	22.17	21.50
		2507.5	23.14	22.58	21.54
20MHz	1 RB high	2560.0	22.74	23.05	22.64
		2535.0	22.79	22.98	22.09
		2510.0	22.84	23.41	22.38
	1 RB low	2560.0	22.68	22.98	22.28
		2535.0	22.68	23.15	22.60
		2510.0	23.33	23.50	23.02
	50% RB mid	2560.0	22.90	22.46	21.53
		2535.0	22.78	22.27	21.52
		2510.0	23.12	22.67	21.67
	100% RB	2560.0	22.84	22.37	21.52
		2535.0	22.73	22.20	21.56
		2510.0	23.13	22.68	21.72



**LTE band 12**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	22.66	23.16	22.76
		707.5	22.65	23.01	22.71
		699.7	22.64	23.07	22.81
	1 RB low	715.3	22.68	23.06	23.02
		707.5	22.65	23.02	22.56
		699.7	22.61	23.02	22.92
	50% RB mid	715.3	22.77	22.46	22.77
		707.5	22.76	22.67	22.53
		699.7	22.84	22.81	22.85
	100% RB	715.3	22.69	21.72	21.72
		707.5	22.57	21.72	21.64
		699.7	22.79	21.81	21.73
3MHz	1 RB high	714.5	22.71	22.96	22.87
		707.5	22.51	22.87	21.64
		700.5	22.67	22.79	21.78
	1 RB low	714.5	22.80	23.00	22.93
		707.5	22.81	22.83	21.59
		700.5	22.68	23.07	22.02
	50% RB mid	714.5	22.70	21.85	21.77
		707.5	22.70	21.77	20.78
		700.5	22.85	21.87	20.79
	100% RB	714.5	22.69	21.74	21.49
		707.5	22.61	21.66	20.51
		700.5	22.87	21.82	20.82
5MHz	1 RB high	713.5	22.72	23.10	22.91
		707.5	22.54	22.73	23.00
		701.5	22.68	23.10	21.85
	1 RB low	713.5	22.77	23.01	22.80
		707.5	22.95	23.13	21.84
		701.5	22.73	23.20	21.95
	50% RB mid	713.5	22.78	21.67	21.71
		707.5	22.70	21.68	20.75
		701.5	22.76	21.74	20.75
	100% RB	713.5	22.71	21.78	21.70
		707.5	22.73	21.81	20.67
		701.5	22.79	21.72	20.61
10MHz	1 RB high	711.0	22.59	22.90	21.78
		707.5	22.76	23.11	21.87
		704.0	22.57	22.77	21.72
	1 RB low	711.0	22.74	23.03	21.87



		707.5	22.87	23.16	22.02
		704.0	23.04	23.49	22.53
	50% RB mid	711.0	22.68	21.58	20.57
		707.5	22.62	21.58	20.56
		704.0	22.69	21.62	20.55
	100% RB	711.0	22.61	21.78	20.62
		707.5	22.63	21.57	20.58
		704.0	22.58	21.55	20.51

**LTE band 13**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	784.5	22.73	23.42	21.81
		782.0	22.91	23.13	22.16
		779.5	22.85	23.03	21.91
	1 RB low	784.5	23.16	23.45	22.10
		782.0	23.08	23.11	22.12
		779.5	22.85	23.40	21.96
	50% RB mid	784.5	22.93	21.87	20.90
		782.0	22.93	22.02	21.03
		779.5	22.91	21.90	20.92
	100% RB	784.5	22.93	21.91	21.01
		782.0	23.02	22.01	21.00
		779.5	22.93	21.91	20.93
10MHz	1 RB high	782.0	23.06	23.07	21.65
	1 RB low	782.0	23.00	23.48	22.31
	50% RB mid	782.0	22.77	21.92	20.69
	100% RB	782.0	22.93	21.89	20.95

**LTE band 25**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1914.3	24.10	23.54	23.49
		1882.5	24.05	23.31	22.29
		1850.7	24.23	23.53	22.45
	1 RB low	1914.3	24.14	23.52	23.25
		1882.5	24.14	23.67	22.20
		1850.7	24.24	23.28	22.46
	50% RB mid	1914.3	24.30	23.28	23.29
		1882.5	24.28	23.15	22.32
		1850.7	24.23	23.20	22.31
	100% RB	1914.3	23.11	22.51	22.14
		1882.5	23.01	22.52	21.14
		1850.7	23.28	22.51	21.21
3MHz	1 RB high	1913.5	24.25	23.46	23.34
		1882.5	24.06	23.23	22.29
		1851.5	24.17	23.39	22.43
	1 RB low	1913.5	24.40	23.46	23.47
		1882.5	24.24	23.33	22.28
		1851.5	24.32	23.46	22.36
	50% RB mid	1913.5	23.28	22.30	22.27
		1882.5	23.28	22.25	21.18
		1851.5	23.37	22.33	21.23
	100% RB	1913.5	23.28	22.29	22.31
		1882.5	23.25	22.20	21.16
		1851.5	23.23	22.46	21.25
5MHz	1 RB high	1912.5	24.26	23.47	23.27
		1882.5	23.99	23.37	23.08
		1852.5	24.17	23.49	22.36
	1 RB low	1912.5	24.28	23.46	23.39
		1882.5	24.27	23.41	22.41
		1852.5	24.35	23.42	22.53
	50% RB mid	1912.5	23.32	22.28	22.32
		1882.5	23.15	22.25	21.27
		1852.5	23.35	22.25	21.29
	100% RB	1912.5	23.25	22.41	22.30
		1882.5	23.28	22.25	21.22
		1852.5	23.36	22.34	21.27
10MHz	1 RB high	1910.0	24.48	23.53	23.47
		1882.5	24.22	23.59	22.45
		1855.0	24.45	23.54	22.62
	1 RB low	1910.0	24.24	23.69	23.45

		1882.5	24.25	23.59	22.51	
		1855.0	24.51	23.53	22.53	
		1910.0	23.35	22.35	22.32	
	50% RB mid	1882.5	23.25	22.18	21.23	
		1855.0	23.29	22.37	21.25	
		1910.0	23.24	22.35	22.14	
	100% RB	1882.5	23.21	22.25	21.22	
		1855.0	23.20	22.30	21.24	
		1910.0	23.24	22.35	22.14	
15MHz	1 RB high	1907.5	24.06	23.22	22.33	
		1882.5	24.01	23.29	22.41	
		1857.5	24.15	23.32	22.37	
	1 RB low	1907.5	24.11	23.32	22.32	
		1882.5	24.11	23.31	22.28	
		1857.5	24.35	23.40	22.41	
	50% RB mid	1907.5	23.24	22.15	21.28	
		1882.5	23.29	22.25	21.26	
		1857.5	23.34	22.32	21.41	
	100% RB	1907.5	23.16	22.31	21.41	
		1882.5	23.27	22.26	21.20	
		1857.5	23.35	22.32	21.21	
	20MHz	1 RB high	1905.0	23.68	22.71	21.85
			1882.5	23.56	22.68	21.73
			1860.0	23.51	22.90	21.73
1 RB low		1905.0	23.66	23.03	22.01	
		1882.5	24.06	23.06	22.09	
		1860.0	23.85	23.08	22.12	
50% RB mid		1905.0	22.89	21.91	20.96	
		1882.5	22.92	21.96	20.91	
		1860.0	23.03	21.98	20.98	
100% RB		1905.0	22.96	21.87	20.91	
		1882.5	22.98	21.73	20.87	
		1860.0	23.07	21.92	20.92	

**LTE band 26(814MHz~824MHz)**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	823.3	23.78	22.86	21.80
		819.0	23.55	22.77	21.76
		814.7	23.46	22.47	21.61
	1 RB low	823.3	23.72	22.74	21.79
		819.0	23.70	22.77	21.80
		814.7	23.49	22.52	21.69
	50% RB mid	823.3	23.71	23.06	21.82
		819.0	23.73	22.90	21.81
		814.7	23.58	22.88	21.73
	100% RB	823.3	22.73	21.92	20.62
		819.0	22.68	21.85	20.59
		814.7	22.80	21.85	20.58
3MHz	1 RB high	822.5	23.83	22.80	21.86
		819.0	23.76	22.90	21.84
		815.5	23.66	22.70	21.76
	1 RB low	822.5	23.68	22.79	21.75
		819.0	23.72	22.81	21.79
		815.5	23.74	22.77	21.71
	50% RB mid	822.5	22.72	21.82	20.68
		819.0	22.73	21.80	20.66
		815.5	22.72	21.80	20.62
	100% RB	822.5	22.73	21.75	20.63
		819.0	22.69	21.72	20.61
		815.5	22.69	21.70	20.57
5MHz	1 RB high	821.5	23.70	22.86	21.75
		819.0	23.80	23.05	21.83
		816.5	23.71	23.02	21.74
	1 RB low	821.5	23.74	22.85	21.85
		819.0	23.64	23.07	21.77
		816.5	23.76	23.12	21.79
	50% RB mid	821.5	22.83	21.90	20.71
		819.0	22.75	21.86	20.78
		816.5	22.79	21.93	20.71
	100% RB	821.5	22.80	21.85	20.66
		819.0	22.77	21.80	20.65
		816.5	22.84	21.87	20.63
10MHz	1 RB high	819.0	24.05	23.23	22.09
	1 RB low	819.0	23.84	23.11	22.13
	50% RB mid	819.0	22.79	21.82	20.67
	100% RB	819.0	22.81	21.86	20.70

**LTE band 26(824MHz~849MHz)**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.74	22.73	21.81
		836.5	23.54	22.61	21.80
		824.7	23.62	22.66	21.74
	1 RB low	848.3	23.73	22.77	21.89
		836.5	23.57	22.65	21.68
		824.7	23.58	22.59	21.75
	50% RB mid	848.3	23.71	22.91	21.86
		836.5	23.65	22.85	21.53
		824.7	23.69	22.79	21.72
	100% RB	848.3	22.73	21.87	20.71
		836.5	22.61	21.53	20.60
		824.7	22.59	21.51	20.61
3MHz	1 RB high	847.5	23.56	22.70	21.88
		836.5	23.63	22.61	21.81
		825.5	23.70	22.68	21.72
	1 RB low	847.5	23.71	22.75	21.85
		836.5	23.64	22.70	21.80
		825.5	23.67	22.72	21.71
	50% RB mid	847.5	22.70	21.87	20.73
		836.5	22.63	21.74	20.71
		825.5	22.69	21.74	20.77
	100% RB	847.5	22.71	21.80	20.77
		836.5	22.65	21.72	20.62
		825.5	22.66	21.68	20.64
5MHz	1 RB high	846.5	23.61	22.83	21.93
		836.5	23.72	23.00	21.77
		826.5	23.44	22.66	21.77
	1 RB low	846.5	23.67	22.78	21.98
		836.5	23.65	23.03	21.88
		826.5	23.72	22.83	21.83
	50% RB mid	846.5	22.72	21.89	20.77
		836.5	22.79	21.93	20.69
		826.5	22.73	21.88	20.70
	100% RB	846.5	22.75	21.87	20.74
		836.5	22.78	21.83	20.68
		826.5	22.77	21.78	20.61
10MHz	1 RB high	844.0	24.05	23.34	22.31
		836.5	24.07	23.03	22.26
		829.0	23.92	23.27	22.25
	1 RB low	844.0	23.96	22.91	22.26

		836.5	23.95	23.20	22.18
		829.0	24.00	23.00	22.23
	50% RB mid	844.0	22.79	21.76	20.87
		836.5	22.79	21.90	20.83
		829.0	22.79	21.84	20.81
	100% RB	844.0	22.81	21.84	20.85
		836.5	22.74	21.77	20.83
829.0		22.79	21.79	20.79	
15MHz	1 RB high	841.5	24.27	23.28	22.23
		836.5	24.00	23.21	22.21
		831.5	24.07	23.22	22.19
	1 RB low	841.5	24.03	23.26	22.24
		836.5	23.79	22.97	22.02
		831.5	23.98	23.17	22.24
	50% RB mid	841.5	22.78	21.84	20.72
		836.5	22.79	21.85	20.79
		831.5	22.83	21.84	20.71
	100% RB	841.5	22.88	21.83	20.80
		836.5	22.84	21.78	20.79
		831.5	22.81	21.79	20.73



**LTE band 41**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	2652.5	23.68	22.75	22.64
		2613.5	23.68	22.84	22.70
		2575.5	24.08	23.15	22.72
		2537.5	23.73	22.72	22.50
	1RB-Low	2652.5	23.87	22.87	22.69
		2613.5	24.05	23.06	22.84
		2575.5	23.90	22.99	22.65
		2537.5	23.84	22.91	22.65
	50% RB mid	2652.5	22.72	21.71	21.73
		2613.5	22.79	21.81	21.83
		2575.5	22.95	21.83	21.86
		2537.5	22.79	21.68	21.73
	100% RB	2652.5	22.65	21.73	21.76
		2613.5	22.84	21.71	21.77
		2575.5	22.81	21.83	21.78
		2537.5	22.78	21.81	21.75
10MHz	1RB-High (49)	2650	23.92	22.97	22.84
		2612	23.74	23.10	22.62
		2576	24.09	23.32	22.87
		2540	23.74	22.88	22.55
	1RB-Low (0)	2650	23.98	23.00	22.63
		2612	24.09	23.30	22.89
		2576	24.10	23.27	22.89
		2540	24.04	23.10	22.70
	50% RB mid	2650	22.74	21.71	21.69
		2612	22.81	21.87	21.76
		2576	22.78	21.91	21.98
		2540	22.74	21.80	21.72
	100% RB	2650	22.76	21.80	21.77
		2612	22.70	21.83	21.73
		2576	22.92	21.86	21.89
		2540	22.73	21.81	21.76
15MHz	1RB-High (74)	2647.5	23.07	22.17	21.80
		2612.5	23.17	22.21	21.87
		2577.5	23.38	22.51	22.31
		2542.5	23.14	22.16	21.91
	1RB-Low (0)	2647.5	23.44	22.62	22.39
		2612.5	23.74	22.97	22.76
		2577.5	23.79	22.87	22.59
		2542.5	23.72	22.87	22.62

	50% RB mid	2647.5	23.04	21.96	22.04
		2612.5	23.01	22.01	22.01
		2577.5	23.20	22.18	22.20
		2542.5	23.08	22.02	22.03
	100% RB	2647.5	22.78	21.90	21.85
		2612.5	22.87	21.88	21.98
		2577.5	23.11	22.17	22.17
		2542.5	22.88	21.93	22.01
20MHz	1RB-High (99)	2645	23.84	23.19	22.81
		2611	23.92	23.06	23.02
		2578	24.23	23.48	23.49
		2545	24.16	23.34	23.13
	1RB-Low (0)	2645	23.98	23.28	23.10
		2611	24.22	23.56	23.48
		2578	24.34	23.69	23.47
		2545	24.31	23.65	23.42
	50% RB mid	2645	23.03	22.09	21.97
		2611	23.16	22.24	22.08
		2578	23.38	22.44	22.29
		2545	23.21	22.33	22.20
	100% RB	2645	23.06	22.10	22.17
		2611	23.09	22.16	22.24
		2578	23.47	22.39	22.48
		2545	23.18	22.23	22.28

**LTE band 66**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	24.29	23.88	22.62
		1745.0	24.23	23.84	22.63
		1710.7	24.07	24.00	22.59
	1 RB low	1779.3	24.96	24.09	22.75
		1745.0	24.17	23.49	22.54
		1710.7	24.36	23.72	22.49
	50% RB mid	1779.3	24.31	23.81	22.70
		1745.0	24.78	23.42	22.53
		1710.7	24.37	23.22	22.38
	100% RB	1779.3	23.52	22.65	21.34
		1745.0	23.31	22.52	21.49
		1710.7	23.41	22.32	21.34
3MHz	1 RB high	1778.5	24.53	23.98	22.26
		1745.0	24.35	23.81	22.42
		1711.5	24.25	23.97	22.12
	1 RB low	1778.5	24.42	23.91	22.64
		1745.0	24.29	23.59	22.96
		1711.5	24.46	23.67	22.85
	50% RB mid	1778.5	23.62	22.67	22.70
		1745.0	23.54	22.45	22.56
		1711.5	23.65	22.38	21.55
	100% RB	1778.5	23.59	22.56	22.62
		1745.0	23.45	22.41	22.50
		1711.5	23.60	22.37	21.39
5MHz	1 RB high	1777.5	24.24	23.93	23.39
		1745.0	24.49	23.74	23.65
		1712.5	24.14	23.70	22.17
	1 RB low	1777.5	24.60	23.92	23.54
		1745.0	24.38	23.69	23.54
		1712.5	24.54	23.75	22.86
	50% RB mid	1777.5	23.62	22.50	22.57
		1745.0	23.52	22.52	22.51
		1712.5	23.42	22.47	21.41
	100% RB	1777.5	23.56	22.68	22.58
		1745.0	23.45	22.50	22.49
		1712.5	23.47	22.47	21.47
10MHz	1 RB high	1775.0	24.85	23.96	23.99
		1745.0	24.76	23.85	23.02
		1715.0	24.73	23.98	23.16
	1 RB low	1775.0	23.83	22.98	22.78

		1745.0	23.89	23.07	22.01	
		1715.0	23.85	22.92	22.00	
		1775.0	23.75	22.69	22.70	
	50% RB mid	1745.0	23.48	22.55	21.55	
		1715.0	23.31	22.50	21.29	
		1775.0	23.62	22.58	22.66	
	100% RB	1745.0	23.44	22.54	21.56	
		1715.0	23.40	22.42	21.34	
		1775.0	23.40	22.42	21.34	
15MHz	1 RB high	1772.5	24.40	23.49	23.47	
		1745.0	24.35	23.66	22.47	
		1717.5	24.50	23.44	22.44	
	1 RB low	1772.5	24.37	23.57	23.59	
		1745.0	24.20	23.58	22.58	
		1717.5	24.33	23.74	22.57	
	50% RB mid	1772.5	23.31	22.32	22.35	
		1745.0	23.33	22.27	21.37	
		1717.5	23.33	22.29	21.11	
	100% RB	1772.5	23.25	22.33	22.35	
		1745.0	23.28	22.34	21.40	
		1717.5	23.26	22.29	21.26	
	20MHz	1 RB high	1770.0	24.52	23.52	22.54
			1745.0	24.36	23.61	22.53
			1720.0	24.48	23.40	22.56
1 RB low		1770.0	23.86	23.10	22.95	
		1745.0	23.90	22.89	21.89	
		1720.0	23.74	22.84	21.85	
50% RB mid		1770.0	23.20	22.10	21.18	
		1745.0	23.24	22.11	21.08	
		1720.0	23.04	21.79	20.89	
100% RB		1770.0	23.13	22.21	21.98	
		1745.0	23.12	22.20	20.96	
		1720.0	23.09	22.01	21.02	

**LTE band 71**

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1 RB high	695.5	22.78	22.94	22.79
		680.5	22.69	23.08	22.99
		665.5	22.82	23.08	22.90
	1 RB low	695.5	22.68	23.11	22.88
		680.5	22.89	22.96	22.93
		665.5	22.78	23.03	23.10
	50% RB mid	695.5	22.74	21.74	21.70
		680.5	22.88	21.93	21.88
		665.5	22.86	21.91	21.86
	100% RB	695.5	22.74	21.80	21.78
		680.5	22.86	21.86	21.85
		665.5	22.90	21.97	21.81
10MHz	1 RB high	693.0	23.14	23.49	22.46
		680.5	23.06	23.24	22.24
		668.0	23.02	23.32	22.14
	1 RB low	693.0	23.61	22.62	21.50
		680.5	22.50	22.39	21.07
		668.0	22.51	22.24	20.94
	50% RB mid	693.0	22.98	22.07	20.91
		680.5	22.93	21.84	20.90
		668.0	22.89	21.91	20.85
	100% RB	693.0	22.86	21.80	21.48
		680.5	22.85	21.84	20.77
		668.0	22.75	21.82	20.76
15MHz	1 RB high	690.5	22.50	22.68	21.59
		680.5	22.51	22.96	21.78
		670.5	22.68	22.79	21.67
	1 RB low	690.5	22.51	22.63	21.45
		680.5	22.50	22.62	21.62
		670.5	22.52	22.62	21.71
	50% RB mid	690.5	22.66	21.64	20.65
		680.5	22.68	21.67	20.73
		670.5	22.74	21.63	20.77
	100% RB	690.5	22.54	21.41	20.44
		680.5	22.62	21.54	20.48
		670.5	22.65	21.68	20.59
20MHz	1 RB high	688.0	22.51	22.67	21.45
		680.5	22.50	22.73	21.51
		673.0	22.52	22.67	21.56
	1 RB low	688.0	21.87	22.00	20.70



		680.5	21.85	22.08	20.89
		673.0	21.73	21.85	20.91
	50% RB mid	688.0	22.46	21.61	20.45
		680.5	22.69	21.65	20.74
		673.0	22.67	21.61	20.56
	100% RB	688.0	22.46	21.18	20.22
		680.5	22.43	21.27	20.40
		673.0	22.59	21.43	20.51



### A.1.3.3 Measurement result

#### LTE Band 7-EIRP

Limits:  $\leq 33$  dBm (2W)

Bandwidth	RB size/of fset	Frequency (MHz)	Conducted Power (dBm)			EIRP(dBm) ( $G_T - L_C = -1.5$ )		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2567.5	22.88	23.22	22.82	21.38	21.72	21.32
		2535	22.42	22.63	22.55	20.92	21.13	21.05
		2502.5	23.07	23.22	22.48	21.57	21.72	20.98
	1 RB low	2567.5	22.97	23.15	23.04	21.47	21.65	21.54
		2535	22.65	22.88	22.60	21.15	21.38	21.10
		2502.5	23.22	23.34	22.92	21.72	21.84	21.42
	50% RB mid	2567.5	22.80	22.36	22.27	21.30	20.86	20.77
		2535	22.42	21.96	21.97	20.92	20.46	20.47
		2502.5	23.02	22.60	21.53	21.52	21.10	20.03
	100% RB	2567.5	22.85	22.40	22.32	21.35	20.90	20.82
		2535	22.47	21.91	21.94	20.97	20.41	20.44
		2502.5	22.98	22.53	21.54	21.48	21.03	20.04
10MHz	1 RB high	2565	22.84	23.18	23.04	21.34	21.68	21.54
		2535	22.52	22.96	22.53	21.02	21.46	21.03
		2505	22.96	23.49	22.61	21.46	21.99	21.11
	1 RB low	2565	23.09	23.32	23.27	21.59	21.82	21.77
		2535	22.61	22.93	23.00	21.11	21.43	21.50
		2505	23.26	23.46	22.84	21.76	21.96	21.34
	50% RB mid	2565	22.88	22.32	22.34	21.38	20.82	20.84
		2535	22.37	21.86	21.89	20.87	20.36	20.39
		2505	23.08	22.58	21.61	21.58	21.08	20.11
	100% RB	2565	22.79	22.37	22.38	21.29	20.87	20.88
		2535	22.47	21.91	21.91	20.97	20.41	20.41
		2505	22.97	22.57	21.60	21.47	21.07	20.10
15MHz	1 RB high	2562.5	22.80	23.05	22.78	21.30	21.55	21.28
		2535	22.68	22.99	22.29	21.18	21.49	20.79
		2507.5	22.90	23.13	22.86	21.40	21.63	21.36
	1 RB low	2562.5	22.82	22.95	22.87	21.32	21.45	21.37
		2535	22.56	22.97	22.31	21.06	21.47	20.81
		2507.5	23.09	23.41	22.54	21.59	21.91	21.04
	50% RB	2562.5	22.86	22.30	22.25	21.36	20.80	20.75
		2535	22.70	22.19	21.50	21.20	20.69	20.00



	mid	2507.5	23.17	22.69	21.57	21.67	21.19	20.07
	100% RB	2562.5	22.80	22.28	22.26	21.30	20.78	20.76
		2535	22.63	22.17	21.50	21.13	20.67	20.00
		2507.5	23.14	22.58	21.54	21.64	21.08	20.04
20MHz	1 RB high	2560	22.74	23.05	22.64	21.24	21.55	21.14
		2535	22.79	22.98	22.09	21.29	21.48	20.59
		2510	22.84	23.41	22.38	21.34	21.91	20.88
	1 RB low	2560	22.68	22.98	22.28	21.18	21.48	20.78
		2535	22.68	23.15	22.60	21.18	21.65	21.10
		2510	23.33	23.50	23.02	21.83	22.00	21.52
	50% RB mid	2560	22.90	22.46	21.53	21.40	20.96	20.03
		2535	22.78	22.27	21.52	21.28	20.77	20.02
		2510	23.12	22.67	21.67	21.62	21.17	20.17
	100% RB	2560	22.84	22.37	21.52	21.34	20.87	20.02
		2535	22.73	22.20	21.56	21.23	20.70	20.06
		2510	23.13	22.68	21.72	21.63	21.18	20.22

**LTE Band 12 -ERP**
**Limits:** ≤34.77dBm (3W)

Bandwidth	RB size/of fset	Frequency (MHz)	Conducted Power (dBm)			ERP(dBm) (G <sub>T</sub> – L <sub>C</sub> = -4.1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	715.3	22.66	23.16	22.76	16.41	16.91	16.51
		707.5	22.65	23.01	22.71	16.40	16.76	16.46
		699.7	22.64	23.07	22.81	16.39	16.82	16.56
	1 RB low	715.3	22.68	23.06	23.02	16.43	16.81	16.77
		707.5	22.65	23.02	22.56	16.40	16.77	16.31
		699.7	22.61	23.02	22.92	16.36	16.77	16.67
	50% RB mid	715.3	22.77	22.46	22.77	16.52	16.21	16.52
		707.5	22.76	22.67	22.53	16.51	16.42	16.28
		699.7	22.84	22.81	22.85	16.59	16.56	16.60
	100% RB	715.3	22.69	21.72	21.72	16.44	15.47	15.47
		707.5	22.57	21.72	21.64	16.32	15.47	15.39
		699.7	22.79	21.81	21.73	16.54	15.56	15.48
3MHz	1 RB high	714.5	22.71	22.96	22.87	16.46	16.71	16.62
		707.5	22.51	22.87	21.64	16.26	16.62	15.39
		700.5	22.67	22.79	21.78	16.42	16.54	15.53
	1 RB low	714.5	22.80	23.00	22.93	16.55	16.75	16.68
		707.5	22.81	22.83	21.59	16.56	16.58	15.34
		700.5	22.68	23.07	22.02	16.43	16.82	15.77
	50% RB mid	714.5	22.70	21.85	21.77	16.45	15.60	15.52
		707.5	22.70	21.77	20.78	16.45	15.52	14.53
		700.5	22.85	21.87	20.79	16.60	15.62	14.54
	100% RB	714.5	22.69	21.74	21.49	16.44	15.49	15.24
		707.5	22.61	21.66	20.51	16.36	15.41	14.26
		700.5	22.87	21.82	20.82	16.62	15.57	14.57
5MHz	1 RB high	713.5	22.72	23.10	22.91	16.47	16.85	16.66
		707.5	22.54	22.73	23.00	16.29	16.48	16.75
		701.5	22.68	23.10	21.85	16.43	16.85	15.60
	1 RB low	713.5	22.77	23.01	22.80	16.52	16.76	16.55
		707.5	22.95	23.13	21.84	16.70	16.88	15.59
		701.5	22.73	23.20	21.95	16.48	16.95	15.70
	50% RB mid	713.5	22.78	21.67	21.71	16.53	15.42	15.46
		707.5	22.70	21.68	20.75	16.45	15.43	14.50
		701.5	22.76	21.74	20.75	16.51	15.49	14.50
	100% RB	713.5	22.71	21.78	21.70	16.46	15.53	15.45
		707.5	22.73	21.81	20.67	16.48	15.56	14.42

		701.5	22.79	21.72	20.61	16.54	15.47	14.36
10MHz	1 RB high	711	22.59	22.90	21.78	16.34	16.65	15.53
		707.5	22.76	23.11	21.87	16.51	16.86	15.62
		704	22.57	22.77	21.72	16.32	16.52	15.47
	1 RB low	711	22.74	23.03	21.87	16.49	16.78	15.62
		707.5	22.87	23.16	22.02	16.62	16.91	15.77
		704	23.04	23.49	22.53	16.79	17.24	16.28
	50% RB mid	711	22.68	21.58	20.57	16.43	15.33	14.32
		707.5	22.62	21.58	20.56	16.37	15.33	14.31
		704	22.69	21.62	20.55	16.44	15.37	14.30
	100% RB	711	22.61	21.78	20.62	16.36	15.53	14.37
		707.5	22.63	21.57	20.58	16.38	15.32	14.33
		704	22.58	21.55	20.51	16.33	15.30	14.26

**LTE Band 13-ERP**
**Limits:** ≤34.77 dBm (3W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power (dBm)			ERP(dBm) (G <sub>T</sub> – L <sub>C</sub> = -4.1)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	784.5	22.73	23.42	21.81	16.48	17.17	15.56
		782	22.91	23.13	22.16	16.66	16.88	15.91
		779.5	22.85	23.03	21.91	16.60	16.78	15.66
	1 RB low	784.5	23.16	23.45	22.10	16.91	17.20	15.85
		782	23.08	23.11	22.12	16.83	16.86	15.87
		779.5	22.85	23.40	21.96	16.60	17.15	15.71
	50% RB mid	784.5	22.93	21.87	20.90	16.68	15.62	14.65
		782	22.93	22.02	21.03	16.68	15.77	14.78
		779.5	22.91	21.90	20.92	16.66	15.65	14.67
	100% RB	784.5	22.93	21.91	21.01	16.68	15.66	14.76
		782	23.02	22.01	21.00	16.77	15.76	14.75
		779.5	22.93	21.91	20.93	16.68	15.66	14.68
10MHz	1 RB high	782	23.06	23.07	21.65	16.81	16.82	15.40
	1 RB low	782	23.00	23.48	22.31	16.75	17.23	16.06
	50% RB mid	782	22.77	21.92	20.69	16.52	15.67	14.44
	100% RB	782	22.93	21.89	20.95	16.68	15.64	14.70

**LTE Band 25-EIRP**
**Limits:** ≤33 dBm (2W)

Bandwidth	RB size/of fset	Frequency (MHz)	Conducted Power (dBm)			EIRP(dBm) (G <sub>T</sub> – L <sub>c</sub> = -1.4)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1914.3	24.10	23.54	23.49	22.70	22.14	22.09
		1882.5	24.05	23.31	22.29	22.65	21.91	20.89
		1850.7	24.23	23.53	22.45	22.83	22.13	21.05
	1 RB low	1914.3	24.14	23.52	23.25	22.74	22.12	21.85
		1882.5	24.14	23.67	22.20	22.74	22.27	20.80
		1850.7	24.24	23.28	22.46	22.84	21.88	21.06
	50% RB mid	1914.3	24.30	23.28	23.29	22.90	21.88	21.89
		1882.5	24.28	23.15	22.32	22.88	21.75	20.92
		1850.7	24.23	23.20	22.31	22.83	21.80	20.91
	100% RB	1914.3	23.11	22.51	22.14	21.71	21.11	20.74
		1882.5	23.01	22.52	21.14	21.61	21.12	19.74
		1850.7	23.28	22.51	21.21	21.88	21.11	19.81
3MHz	1 RB high	1913.5	24.25	23.46	23.34	22.85	22.06	21.94
		1882.5	24.06	23.23	22.29	22.66	21.83	20.89
		1851.5	24.17	23.39	22.43	22.77	21.99	21.03
	1 RB low	1913.5	24.40	23.46	23.47	23.00	22.06	22.07
		1882.5	24.24	23.33	22.28	22.84	21.93	20.88
		1851.5	24.32	23.46	22.36	22.92	22.06	20.96
	50% RB mid	1913.5	23.28	22.30	22.27	21.88	20.90	20.87
		1882.5	23.28	22.25	21.18	21.88	20.85	19.78
		1851.5	23.37	22.33	21.23	21.97	20.93	19.83
	100% RB	1913.5	23.28	22.29	22.31	21.88	20.89	20.91
		1882.5	23.25	22.20	21.16	21.85	20.80	19.76
		1851.5	23.23	22.46	21.25	21.83	21.06	19.85
5MHz	1 RB high	1912.5	24.26	23.47	23.27	22.86	22.07	21.87
		1882.5	23.99	23.37	23.08	22.59	21.97	21.68
		1852.5	24.17	23.49	22.36	22.77	22.09	20.96
	1 RB low	1912.5	24.28	23.46	23.39	22.88	22.06	21.99
		1882.5	24.27	23.41	22.41	22.87	22.01	21.01
		1852.5	24.35	23.42	22.53	22.95	22.02	21.13
	50% RB mid	1912.5	23.32	22.28	22.32	21.92	20.88	20.92
		1882.5	23.15	22.25	21.27	21.75	20.85	19.87
		1852.5	23.35	22.25	21.29	21.95	20.85	19.89
	100% RB	1912.5	23.25	22.41	22.30	21.85	21.01	20.90
		1882.5	23.28	22.25	21.22	21.88	20.85	19.82

		1852.5	23.36	22.34	21.27	21.96	20.94	19.87
10MHz	1 RB high	1910.0	24.48	23.53	23.47	23.08	22.13	22.07
		1882.5	24.22	23.59	22.45	22.82	22.19	21.05
		1855.0	24.45	23.54	22.62	23.05	22.14	21.22
	1 RB low	1910.0	24.24	23.69	23.45	22.84	22.29	22.05
		1882.5	24.25	23.59	22.51	22.85	22.19	21.11
		1855.0	24.51	23.53	22.53	23.11	22.13	21.13
	50% RB mid	1910.0	23.35	22.35	22.32	21.95	20.95	20.92
		1882.5	23.25	22.18	21.23	21.85	20.78	19.83
		1855.0	23.29	22.37	21.25	21.89	20.97	19.85
	100% RB	1910.0	23.24	22.35	22.14	21.84	20.95	20.74
		1882.5	23.21	22.25	21.22	21.81	20.85	19.82
		1855.0	23.20	22.30	21.24	21.80	20.90	19.84
15MHz	1 RB high	1907.5	24.06	23.22	22.33	22.66	21.82	20.93
		1882.5	24.01	23.29	22.41	22.61	21.89	21.01
		1857.5	24.15	23.32	22.37	22.75	21.92	20.97
	1 RB low	1907.5	24.11	23.32	22.32	22.71	21.92	20.92
		1882.5	24.11	23.31	22.28	22.71	21.91	20.88
		1857.5	24.35	23.40	22.41	22.95	22.00	21.01
	50% RB mid	1907.5	23.24	22.15	21.28	21.84	20.75	19.88
		1882.5	23.29	22.25	21.26	21.89	20.85	19.86
		1857.5	23.34	22.32	21.41	21.94	20.92	20.01
	100% RB	1907.5	23.16	22.31	21.41	21.76	20.91	20.01
		1882.5	23.27	22.26	21.20	21.87	20.86	19.80
		1857.5	23.35	22.32	21.21	21.95	20.92	19.81
20MHz	1 RB high	1905.0	23.68	22.71	21.85	22.28	21.31	20.45
		1882.5	23.56	22.68	21.73	22.16	21.28	20.33
		1860.0	23.51	22.90	21.73	22.11	21.50	20.33
	1 RB low	1905.0	23.66	23.03	22.01	22.26	21.63	20.61
		1882.5	24.06	23.06	22.09	22.66	21.66	20.69
		1860.0	23.85	23.08	22.12	22.45	21.68	20.72
	50% RB mid	1905.0	22.89	21.91	20.96	21.49	20.51	19.56
		1882.5	22.92	21.96	20.91	21.52	20.56	19.51
		1860.0	23.03	21.98	20.98	21.63	20.58	19.58
	100% RB	1905.0	22.96	21.87	20.91	21.56	20.47	19.51
		1882.5	22.98	21.73	20.87	21.58	20.33	19.47
		1860.0	23.07	21.92	20.92	21.67	20.52	19.52

**LTE Band 26(814MHz~824MHz)-ERP**
**Limits:** ≤50dBm (100W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power (dBm)			ERP(dBm) (G <sub>T</sub> – L <sub>C</sub> = -4.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	823.3	23.78	22.86	21.80	17.13	16.21	15.15
		819	23.55	22.77	21.76	16.90	16.12	15.11
		814.7	23.46	22.47	21.61	16.81	15.82	14.96
	1 RB low	823.3	23.72	22.74	21.79	17.07	16.09	15.14
		819	23.70	22.77	21.80	17.05	16.12	15.15
		814.7	23.49	22.52	21.69	16.84	15.87	15.04
	50% RB mid	823.3	23.71	23.06	21.82	17.06	16.41	15.17
		819	23.73	22.90	21.81	17.08	16.25	15.16
		814.7	23.58	22.88	21.73	16.93	16.23	15.08
	100% RB	823.3	22.73	21.92	20.62	16.08	15.27	13.97
		819	22.68	21.85	20.59	16.03	15.20	13.94
		814.7	22.80	21.85	20.58	16.15	15.20	13.93
3MHz	1 RB high	822.5	23.83	22.80	21.86	17.18	16.15	15.21
		819	23.76	22.90	21.84	17.11	16.25	15.19
		815.5	23.66	22.70	21.76	17.01	16.05	15.11
	1 RB low	822.5	23.68	22.79	21.75	17.03	16.14	15.10
		819	23.72	22.81	21.79	17.07	16.16	15.14
		815.5	23.74	22.77	21.71	17.09	16.12	15.06
	50% RB mid	822.5	22.72	21.82	20.68	16.07	15.17	14.03
		819	22.73	21.80	20.66	16.08	15.15	14.01
		815.5	22.72	21.80	20.62	16.07	15.15	13.97
	100% RB	822.5	22.73	21.75	20.63	16.08	15.10	13.98
		819	22.69	21.72	20.61	16.04	15.07	13.96
		815.5	22.69	21.70	20.57	16.04	15.05	13.92
5MHz	1 RB high	821.5	23.70	22.86	21.75	17.05	16.21	15.10
		819	23.80	23.05	21.83	17.15	16.40	15.18
		816.5	23.71	23.02	21.74	17.06	16.37	15.09
	1 RB low	821.5	23.74	22.85	21.85	17.09	16.20	15.20
		819	23.64	23.07	21.77	16.99	16.42	15.12
		816.5	23.76	23.12	21.79	17.11	16.47	15.14
	50% RB mid	821.5	22.83	21.90	20.71	16.18	15.25	14.06
		819	22.75	21.86	20.78	16.10	15.21	14.13
		816.5	22.79	21.93	20.71	16.14	15.28	14.06
	100% RB	821.5	22.80	21.85	20.66	16.15	15.20	14.01
		819	22.77	21.80	20.65	16.12	15.15	14.00



		816.5	22.84	21.87	20.63	16.19	15.22	13.98
10MHz	1 RB high	819	24.05	23.23	22.09	17.40	16.58	15.44
	1 RB low	819	23.84	23.11	22.13	17.19	16.46	15.48
	50% RB mid	819	22.79	21.82	20.67	16.14	15.17	14.02
	100% RB	819	22.81	21.86	20.70	16.16	15.21	14.05



**LTE Band 26(824MHz~849MHz)-ERP**
**Limits:** ≤38.45dBm (7W)

Bandwidth	RB size/off set	Frequency (MHz)	Conducted Power (dBm)			ERP(dBm) (G <sub>T</sub> – L <sub>c</sub> = -4.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	848.3	23.74	22.73	21.81	17.09	16.08	15.16
		836.5	23.54	22.61	21.80	16.89	15.96	15.15
		824.7	23.62	22.66	21.74	16.97	16.01	15.09
	1 RB low	848.3	23.73	22.77	21.89	17.08	16.12	15.24
		836.5	23.57	22.65	21.68	16.92	16.00	15.03
		824.7	23.58	22.59	21.75	16.93	15.94	15.10
	50% RB mid	848.3	23.71	22.91	21.86	17.06	16.26	15.21
		836.5	23.65	22.85	21.53	17.00	16.20	14.88
		824.7	23.69	22.79	21.72	17.04	16.14	15.07
	100% RB	848.3	22.73	21.87	20.71	16.08	15.22	14.06
		836.5	22.61	21.53	20.60	15.96	14.88	13.95
		824.7	22.59	21.51	20.61	15.94	14.86	13.96
3MHz	1 RB high	847.5	23.56	22.70	21.88	16.91	16.05	15.23
		836.5	23.63	22.61	21.81	16.98	15.96	15.16
		825.5	23.70	22.68	21.72	17.05	16.03	15.07
	1 RB low	847.5	23.71	22.75	21.85	17.06	16.10	15.20
		836.5	23.64	22.70	21.80	16.99	16.05	15.15
		825.5	23.67	22.72	21.71	17.02	16.07	15.06
	50% RB mid	847.5	22.70	21.87	20.73	16.05	15.22	14.08
		836.5	22.63	21.74	20.71	15.98	15.09	14.06
		825.5	22.69	21.74	20.77	16.04	15.09	14.12
	100% RB	847.5	22.71	21.80	20.77	16.06	15.15	14.12
		836.5	22.65	21.72	20.62	16.00	15.07	13.97
		825.5	22.66	21.68	20.64	16.01	15.03	13.99
5MHz	1 RB high	846.5	23.61	22.83	21.93	16.96	16.18	15.28
		836.5	23.72	23.00	21.77	17.07	16.35	15.12
		826.5	23.44	22.66	21.77	16.79	16.01	15.12
	1 RB low	846.5	23.67	22.78	21.98	17.02	16.13	15.33
		836.5	23.65	23.03	21.88	17.00	16.38	15.23
		826.5	23.72	22.83	21.83	17.07	16.18	15.18
	50% RB mid	846.5	22.72	21.89	20.77	16.07	15.24	14.12
		836.5	22.79	21.93	20.69	16.14	15.28	14.04
		826.5	22.73	21.88	20.70	16.08	15.23	14.05
	100% RB	846.5	22.75	21.87	20.74	16.10	15.22	14.09
		836.5	22.78	21.83	20.68	16.13	15.18	14.03

		826.5	22.77	21.78	20.61	16.12	15.13	13.96
10MHz	1 RB high	844	24.05	23.34	22.31	17.40	16.69	15.66
		836.5	24.07	23.03	22.26	17.42	16.38	15.61
		829	23.92	23.27	22.25	17.27	16.62	15.60
	1 RB low	844	23.96	22.91	22.26	17.31	16.26	15.61
		836.5	23.95	23.20	22.18	17.30	16.55	15.53
		829	24.00	23.00	22.23	17.35	16.35	15.58
	50% RB mid	844	22.79	21.76	20.87	16.14	15.11	14.22
		836.5	22.79	21.90	20.83	16.14	15.25	14.18
		829	22.79	21.84	20.81	16.14	15.19	14.16
	100% RB	844	22.81	21.84	20.85	16.16	15.19	14.20
		836.5	22.74	21.77	20.83	16.09	15.12	14.18
		829	22.79	21.79	20.79	16.14	15.14	14.14
15MHz	1 RB high	841.5	24.27	23.28	22.23	17.62	16.63	15.58
		836.5	24.00	23.21	22.21	17.35	16.56	15.56
		831.5	24.07	23.22	22.19	17.42	16.57	15.54
	1 RB low	841.5	24.03	23.26	22.24	17.38	16.61	15.59
		836.5	23.79	22.97	22.02	17.14	16.32	15.37
		831.5	23.98	23.17	22.24	17.33	16.52	15.59
	50% RB mid	841.5	22.78	21.84	20.72	16.13	15.19	14.07
		836.5	22.79	21.85	20.79	16.14	15.20	14.14
		831.5	22.83	21.84	20.71	16.18	15.19	14.06
	100% RB	841.5	22.88	21.83	20.80	16.23	15.18	14.15
		836.5	22.84	21.78	20.79	16.19	15.13	14.14
		831.5	22.81	21.79	20.73	16.16	15.14	14.08

**LTE Band 41-EIRP**
**Limits:** ≤33 dBm (2W)

Bandwidth	RB size/off set	Frequency (MHz)	Conducted Power (dBm)			EIRP (dBm) (G <sub>T</sub> – L <sub>C</sub> = -2.4)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	2652.5	23.68	22.75	22.64	21.28	20.35	20.24
		2613.5	23.68	22.84	22.70	21.28	20.44	20.30
		2575.5	24.08	23.15	22.72	21.68	20.75	20.32
		2537.5	23.73	22.72	22.50	21.33	20.32	20.10
	1 RB low	2652.5	23.87	22.87	22.69	21.47	20.47	20.29
		2613.5	24.05	23.06	22.84	21.65	20.66	20.44
		2575.5	23.90	22.99	22.65	21.50	20.59	20.25
		2537.5	23.84	22.91	22.65	21.44	20.51	20.25
	50% RB mid	2652.5	22.72	21.71	21.73	20.32	19.31	19.33
		2613.5	22.79	21.81	21.83	20.39	19.41	19.43
		2575.5	22.95	21.83	21.86	20.55	19.43	19.46
		2537.5	22.79	21.68	21.73	20.39	19.28	19.33
	100% RB	2652.5	22.65	21.73	21.76	20.25	19.33	19.36
		2613.5	22.84	21.71	21.77	20.44	19.31	19.37
		2575.5	22.81	21.83	21.78	20.41	19.43	19.38
		2537.5	22.78	21.81	21.75	20.38	19.41	19.35
10MHz	1 RB high	2650	23.92	22.97	22.84	21.52	20.57	20.44
		2612	23.74	23.10	22.62	21.34	20.70	20.22
		2576	24.09	23.32	22.87	21.69	20.92	20.47
		2540	23.74	22.88	22.55	21.34	20.48	20.15
	1 RB low	2650	23.98	23.00	22.63	21.58	20.60	20.23
		2612	24.09	23.30	22.89	21.69	20.90	20.49
		2576	24.10	23.27	22.89	21.70	20.87	20.49
		2540	24.04	23.10	22.70	21.64	20.70	20.30
	50% RB mid	2650	22.74	21.71	21.69	20.34	19.31	19.29
		2612	22.81	21.87	21.76	20.41	19.47	19.36
		2576	22.78	21.91	21.98	20.38	19.51	19.58
		2540	22.74	21.80	21.72	20.34	19.40	19.32
	100% RB	2650	22.76	21.80	21.77	20.36	19.40	19.37
		2612	22.70	21.83	21.73	20.30	19.43	19.33
		2576	22.92	21.86	21.89	20.52	19.46	19.49
		2540	22.73	21.81	21.76	20.33	19.41	19.36
15MHz	1 RB	2647.5	23.07	22.17	21.80	20.67	19.77	19.40

	high	2612.5	23.17	22.21	21.87	20.77	19.81	19.47
		2577.5	23.38	22.51	22.31	20.98	20.11	19.91
		2542.5	23.14	22.16	21.91	20.74	19.76	19.51
	1 RB low	2647.5	23.44	22.62	22.39	21.04	20.22	19.99
		2612.5	23.74	22.97	22.76	21.34	20.57	20.36
		2577.5	23.79	22.87	22.59	21.39	20.47	20.19
		2542.5	23.72	22.87	22.62	21.32	20.47	20.22
	50% RB mid	2647.5	23.04	21.96	22.04	20.64	19.56	19.64
		2612.5	23.01	22.01	22.01	20.61	19.61	19.61
		2577.5	23.20	22.18	22.20	20.80	19.78	19.80
		2542.5	23.08	22.02	22.03	20.68	19.62	19.63
	100% RB	2647.5	22.78	21.90	21.85	20.38	19.50	19.45
		2612.5	22.87	21.88	21.98	20.47	19.48	19.58
		2577.5	23.11	22.17	22.17	20.71	19.77	19.77
		2542.5	22.88	21.93	22.01	20.48	19.53	19.61
	20MHz	1 RB high	2645	23.84	23.19	22.81	21.44	20.79
2611			23.92	23.06	23.02	21.52	20.66	20.62
2578			24.23	23.48	23.49	21.83	21.08	21.09
2545			24.16	23.34	23.13	21.76	20.94	20.73
1 RB low		2645	23.98	23.28	23.10	21.58	20.88	20.70
		2611	24.22	23.56	23.48	21.82	21.16	21.08
		2578	24.34	23.69	23.47	21.94	21.29	21.07
		2545	24.31	23.65	23.42	21.91	21.25	21.02
50% RB mid		2645	23.03	22.09	21.97	20.63	19.69	19.57
		2611	23.16	22.24	22.08	20.76	19.84	19.68
		2578	23.38	22.44	22.29	20.98	20.04	19.89
		2545	23.21	22.33	22.20	20.81	19.93	19.80
100% RB		2645	23.06	22.10	22.17	20.66	19.70	19.77
		2611	23.09	22.16	22.24	20.69	19.76	19.84
		2578	23.47	22.39	22.48	21.07	19.99	20.08
		2545	23.18	22.23	22.28	20.78	19.83	19.88

**LTE Band 66-EIRP**
**Limits:** ≤30dBm (1W)

Bandwidth	RB size/offset	Frequency (MHz)	Conducted Power (dBm)			EIRP (dBm) (G <sub>T</sub> – L <sub>C</sub> = -0.7)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4MHz	1 RB high	1779.3	24.29	23.88	22.62	23.59	23.18	21.92
		1745	24.23	23.84	22.63	23.53	23.14	21.93
		1710.7	24.07	24.00	22.59	23.37	23.30	21.89
	1 RB low	1779.3	24.96	24.09	22.75	24.26	23.39	22.05
		1745	24.17	23.49	22.54	23.47	22.79	21.84
		1710.7	24.36	23.72	22.49	23.66	23.02	21.79
	50% RB mid	1779.3	24.31	23.81	22.70	23.61	23.11	22.00
		1745	24.78	23.42	22.53	24.08	22.72	21.83
		1710.7	24.37	23.22	22.38	23.67	22.52	21.68
	100% RB	1779.3	23.52	22.65	21.34	22.82	21.95	20.64
		1745	23.31	22.52	21.49	22.61	21.82	20.79
		1710.7	23.41	22.32	21.34	22.71	21.62	20.64
3MHz	1 RB high	1778.5	24.53	23.98	22.26	23.83	23.28	21.56
		1745	24.35	23.81	22.42	23.65	23.11	21.72
		1711.5	24.25	23.97	22.12	23.55	23.27	21.42
	1 RB low	1778.5	24.42	23.91	22.64	23.72	23.21	21.94
		1745	24.29	23.59	22.96	23.59	22.89	22.26
		1711.5	24.46	23.67	22.85	23.76	22.97	22.15
	50% RB mid	1778.5	23.62	22.67	22.70	22.92	21.97	22.00
		1745	23.54	22.45	22.56	22.84	21.75	21.86
		1711.5	23.65	22.38	21.55	22.95	21.68	20.85
	100% RB	1778.5	23.59	22.56	22.62	22.89	21.86	21.92
		1745	23.45	22.41	22.50	22.75	21.71	21.80
		1711.5	23.60	22.37	21.39	22.90	21.67	20.69
5MHz	1 RB high	1777.5	24.24	23.93	23.39	23.54	23.23	22.69
		1745	24.49	23.74	23.65	23.79	23.04	22.95
		1712.5	24.14	23.70	22.17	23.44	23.00	21.47
	1 RB low	1777.5	24.60	23.92	23.54	23.90	23.22	22.84
		1745	24.38	23.69	23.54	23.68	22.99	22.84
		1712.5	24.54	23.75	22.86	23.84	23.05	22.16
	50% RB mid	1777.5	23.62	22.50	22.57	22.92	21.80	21.87
		1745	23.52	22.52	22.51	22.82	21.82	21.81
		1712.5	23.42	22.47	21.41	22.72	21.77	20.71
	100% RB	1777.5	23.56	22.68	22.58	22.86	21.98	21.88
		1745	23.45	22.50	22.49	22.75	21.80	21.79

		1712.5	23.47	22.47	21.47	22.77	21.77	20.77
10MHz	1 RB high	1775	24.85	23.96	23.99	24.15	23.26	23.29
		1745	24.76	23.85	23.02	24.06	23.15	22.32
		1715	24.73	23.98	23.16	24.03	23.28	22.46
	1 RB low	1775	23.83	22.98	22.78	23.13	22.28	22.08
		1745	23.89	23.07	22.01	23.19	22.37	21.31
		1715	23.85	22.92	22.00	23.15	22.22	21.30
	50% RB mid	1775	23.75	22.69	22.70	23.05	21.99	22.00
		1745	23.48	22.55	21.55	22.78	21.85	20.85
		1715	23.31	22.50	21.29	22.61	21.80	20.59
	100% RB	1775	23.62	22.58	22.66	22.92	21.88	21.96
		1745	23.44	22.54	21.56	22.74	21.84	20.86
		1715	23.40	22.42	21.34	22.70	21.72	20.64
15MHz	1 RB high	1772.5	24.40	23.49	23.47	23.70	22.79	22.77
		1745	24.35	23.66	22.47	23.65	22.96	21.77
		1717.5	24.50	23.44	22.44	23.80	22.74	21.74
	1 RB low	1772.5	24.37	23.57	23.59	23.67	22.87	22.89
		1745	24.20	23.58	22.58	23.50	22.88	21.88
		1717.5	24.33	23.74	22.57	23.63	23.04	21.87
	50% RB mid	1772.5	23.31	22.32	22.35	22.61	21.62	21.65
		1745	23.33	22.27	21.37	22.63	21.57	20.67
		1717.5	23.33	22.29	21.11	22.63	21.59	20.41
	100% RB	1772.5	23.25	22.33	22.35	22.55	21.63	21.65
		1745	23.28	22.34	21.40	22.58	21.64	20.70
		1717.5	23.26	22.29	21.26	22.56	21.59	20.56
20MHz	1 RB high	1770	24.52	23.52	22.54	23.82	22.82	21.84
		1745	24.36	23.61	22.53	23.66	22.91	21.83
		1720	24.48	23.40	22.56	23.78	22.70	21.86
	1 RB low	1770	23.86	23.10	22.95	23.16	22.40	22.25
		1745	23.90	22.89	21.89	23.20	22.19	21.19
		1720	23.74	22.84	21.85	23.04	22.14	21.15
	50% RB mid	1770	23.20	22.10	21.18	22.50	21.40	20.48
		1745	23.24	22.11	21.08	22.54	21.41	20.38
		1720	23.04	21.79	20.89	22.34	21.09	20.19
	100% RB	1770	23.13	22.21	21.98	22.43	21.51	21.28
		1745	23.12	22.20	20.96	22.42	21.50	20.26
		1720	23.09	22.01	21.02	22.39	21.31	20.32

**LTE Band 71 -ERP**
**Limits:** ≤34.77dBm (3W)

Band width	RB size/offset	Frequency (MHz)	Conducted Power (dBm)			ERP (dBm) (G <sub>T</sub> – L <sub>C</sub> = -4.5)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5MHz	1 RB high	695.5	22.78	22.94	22.79	16.13	16.29	16.14
		680.5	22.69	23.08	22.99	16.04	16.43	16.34
		665.5	22.82	23.08	22.90	16.17	16.43	16.25
	1 RB low	695.5	22.68	23.11	22.88	16.03	16.46	16.23
		680.5	22.89	22.96	22.93	16.24	16.31	16.28
		665.5	22.78	23.03	23.10	16.13	16.38	16.45
	50% RB mid	695.5	22.74	21.74	21.70	16.09	15.09	15.05
		680.5	22.88	21.93	21.88	16.23	15.28	15.23
		665.5	22.86	21.91	21.86	16.21	15.26	15.21
	100% RB	695.5	22.74	21.80	21.78	16.09	15.15	15.13
		680.5	22.86	21.86	21.85	16.21	15.21	15.20
		665.5	22.90	21.97	21.81	16.25	15.32	15.16
10MHz	1 RB high	693	23.14	23.49	22.46	16.49	16.84	15.81
		680.5	23.06	23.24	22.24	16.41	16.59	15.59
		668	23.02	23.32	22.14	16.37	16.67	15.49
	1 RB low	693	23.61	22.62	21.50	16.96	15.97	14.85
		680.5	22.50	22.39	21.07	15.85	15.74	14.42
		668	22.51	22.24	20.94	15.86	15.59	14.29
	50% RB mid	693	22.98	22.07	20.91	16.33	15.42	14.26
		680.5	22.93	21.84	20.90	16.28	15.19	14.25
		668	22.89	21.91	20.85	16.24	15.26	14.20
	100% RB	693	22.86	21.80	21.48	16.21	15.15	14.83
		680.5	22.85	21.84	20.77	16.20	15.19	14.12
		668	22.75	21.82	20.76	16.10	15.17	14.11
15MHz	1 RB high	690.5	22.50	22.68	21.59	15.85	16.03	14.94
		680.5	22.51	22.96	21.78	15.86	16.31	15.13
		670.5	22.68	22.79	21.67	16.03	16.14	15.02
	1 RB low	690.5	22.51	22.63	21.45	15.86	15.98	14.80
		680.5	22.50	22.62	21.62	15.85	15.97	14.97
		670.5	22.52	22.62	21.71	15.87	15.97	15.06
	50% RB mid	690.5	22.66	21.64	20.65	16.01	14.99	14.00
		680.5	22.68	21.67	20.73	16.03	15.02	14.08

	100% RB	670.5	22.74	21.63	20.77	16.09	14.98	14.12
		690.5	22.54	21.41	20.44	15.89	14.76	13.79
		680.5	22.62	21.54	20.48	15.97	14.89	13.83
		670.5	22.65	21.68	20.59	16.00	15.03	13.94
20MH z	1 RB high	688	22.51	22.67	21.45	15.86	16.02	14.80
		680.5	22.50	22.73	21.51	15.85	16.08	14.86
		673	22.52	22.67	21.56	15.87	16.02	14.91
	1 RB low	688	21.87	22.00	20.70	15.22	15.35	14.05
		680.5	21.85	22.08	20.89	15.20	15.43	14.24
		673	21.73	21.85	20.91	15.08	15.20	14.26
	50% RB mid	688	22.46	21.61	20.45	15.81	14.96	13.80
		680.5	22.69	21.65	20.74	16.04	15.00	14.09
		673	22.67	21.61	20.56	16.02	14.96	13.91
	100% RB	688	22.46	21.18	20.22	15.81	14.53	13.57
		680.5	22.43	21.27	20.40	15.78	14.62	13.75
		673	22.59	21.43	20.51	15.94	14.78	13.86



## A.2 Emission Limit

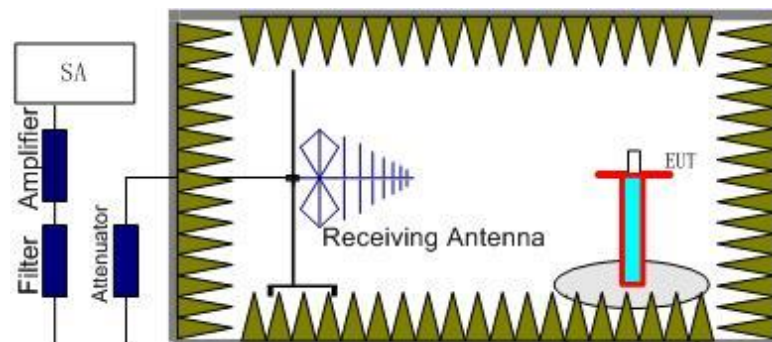
### **A.2.1 Measurement Method**

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

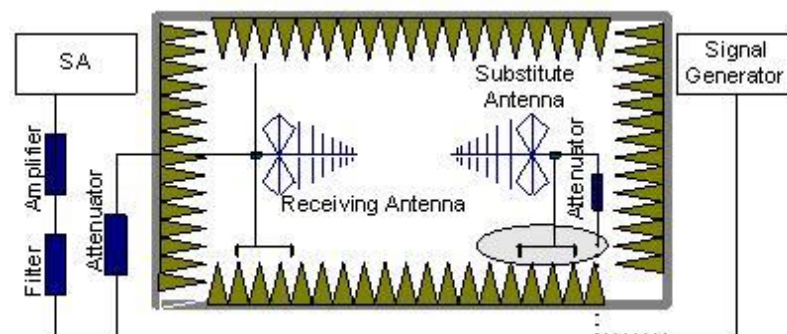
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and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

#### **The procedure of radiated spurious emissions is as follows:**

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



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



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

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

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

An amplifier should be connected in for the test.

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

The measurement results are obtained as described below:

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

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

### A.2.2 Measurement Limit

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

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

Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power ( $P$ ) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Part 90.691 states that out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows: For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power ( $P$ ) in watts by at least  $116 \log_{10}(f/6.1)$  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  $43 + 10\text{Log}_{10}(P)$  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 37.5 kHz.

### **A.2.3 Measurement Results**

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of each LTE Band. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of each LTE Band into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this. The range of evaluated frequency is from 30MHz to 26GHz.

**LTE Band 7, 5 MHz, QPSK, Channel 20775**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5008.02	-56.15	6.59	9.91	-52.83	-25.00	27.83	H
7513.01	-54.38	8.34	12.21	-50.51	-25.00	25.51	H
10026.01	-51.45	9.25	12.91	-47.79	-25.00	22.79	H
12506.01	-49.26	10.19	13.20	-46.25	-25.00	21.25	H
15031.00	-46.42	11.26	13.98	-43.70	-25.00	18.70	H
17501.00	-44.18	12.73	14.90	-42.01	-25.00	17.01	H

**LTE Band 7, 5 MHz, QPSK, Channel 21100**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5057.02	-56.07	6.65	9.98	-52.74	-25.00	27.74	V
7605.01	-55.02	8.00	12.28	-50.74	-25.00	25.74	H
10153.01	-49.92	9.38	12.96	-46.34	-25.00	21.34	H
12661.01	-48.43	10.36	13.30	-45.49	-25.00	20.49	V
15226.00	-45.32	11.37	13.86	-42.83	-25.00	17.83	H
17734.00	-44.99	12.37	15.23	-42.13	-25.00	17.13	H

**LTE Band 7, 5 MHz, QPSK, Channel 21425**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5140.02	-55.66	6.87	10.10	-52.43	-25.00	27.43	H
7706.01	-53.70	8.42	12.36	-49.76	-25.00	24.76	H
10271.01	-51.48	9.54	13.01	-48.01	-25.00	23.01	V
12842.01	-49.13	10.66	13.41	-46.38	-25.00	21.38	H
15420.00	-44.88	11.42	13.75	-42.55	-25.00	17.55	H
17982.00	-43.54	12.90	15.57	-40.87	-25.00	15.87	V

**LTE Band 12, 1.4MHz, QPSK, Channel 23017**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1397.01	-59.85	3.23	4.96	2.15	-60.27	-13.00	47.27	H
2113.00	-55.90	4.20	4.94	2.15	-57.31	-13.00	44.31	H
2804.00	-52.09	4.92	6.65	2.15	-52.51	-13.00	39.51	H
3504.02	-54.77	5.53	8.21	2.15	-54.24	-13.00	41.24	V
4201.02	-54.06	6.21	9.10	2.15	-53.32	-13.00	40.32	V
4895.01	-54.13	6.73	9.80	2.15	-53.21	-13.00	40.21	H

**LTE Band 12, 1.4MHz, QPSK, Channel 23095**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1407.01	-58.98	3.24	5.02	2.15	-59.35	-13.00	46.35	H
2132.00	-55.87	4.22	5.00	2.15	-57.24	-13.00	44.24	V
2831.00	-52.22	4.95	6.70	2.15	-52.62	-13.00	39.62	H
3532.02	-54.64	5.64	8.24	2.15	-54.19	-13.00	41.19	H
4252.02	-55.01	6.24	9.15	2.15	-54.25	-13.00	41.25	H
4963.01	-54.74	6.67	9.86	2.15	-53.70	-13.00	40.70	V

**LTE Band 12, 1.4MHz, QPSK, Channel 23173**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1427.01	-60.11	3.27	5.12	2.15	-60.41	-13.00	47.41	V
2144.00	-55.35	4.24	5.03	2.15	-56.71	-13.00	43.71	V
2868.00	-51.61	4.97	6.76	2.15	-51.97	-13.00	38.97	V
3581.02	-53.78	6.14	8.31	2.15	-53.76	-13.00	40.76	V
4301.02	-55.02	6.19	9.20	2.15	-54.16	-13.00	41.16	V
5006.01	-54.41	6.59	9.91	2.15	-53.24	-13.00	40.24	V

**LTE Band 13, 5MHz, QPSK, Channel 23205**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1550.01	-59.18	3.46	5.41	2.15	-59.38	-13.00	46.38	H
2339.00	-54.92	4.44	5.62	2.15	-55.89	-13.00	42.89	V
3125.02	-53.06	5.40	7.30	2.15	-53.31	-13.00	40.31	V
3901.02	-54.50	6.11	8.76	2.15	-54.00	-13.00	41.00	V
4680.02	-53.68	6.49	9.58	2.15	-52.74	-13.00	39.74	H
5470.01	-53.86	6.95	10.56	2.15	-52.40	-13.00	39.40	V

**LTE Band 13, 5MHz, QPSK, Channel 23230**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1568.01	-56.52	3.48	5.38	2.15	-56.77	-13.00	43.77	H
2340.00	-54.35	4.44	5.62	2.15	-55.32	-13.00	42.32	V
3140.02	-52.94	5.38	7.34	2.15	-53.13	-13.00	40.13	H
3904.02	-54.49	6.11	8.77	2.15	-53.98	-13.00	40.98	V
4687.02	-54.23	6.49	9.59	2.15	-53.28	-13.00	40.28	V
5477.01	-54.12	6.97	10.57	2.15	-52.67	-13.00	39.67	V

**LTE Band 13, 5MHz, QPSK, Channel 23255**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1557.01	-57.77	3.47	5.40	2.15	-57.99	-13.00	44.99	H
2364.00	-55.00	4.47	5.69	2.15	-55.93	-13.00	42.93	H
3130.02	-53.24	5.40	7.31	2.15	-53.48	-13.00	40.48	H
3923.02	-54.16	6.12	8.79	2.15	-53.64	-13.00	40.64	V
4719.02	-54.29	6.52	9.62	2.15	-53.34	-13.00	40.34	V
5492.01	-53.90	7.03	10.59	2.15	-52.49	-13.00	39.49	V

**LTE Band 25, 1.4MHz, QPSK, Channel 26047**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7409.01	-51.93	8.14	12.09	-47.98	-13.00	34.98	H	7409.01
9594.01	-52.83	9.20	13.31	-48.72	-13.00	35.72	V	9594.01
11652.01	-49.58	9.70	13.07	-46.21	-13.00	33.21	V	11652.01
13572.01	-47.31	10.79	14.24	-43.86	-13.00	30.86	H	13572.01
15447.00	-43.64	11.46	13.73	-41.37	-13.00	28.37	V	15447.00
16835.00	-42.29	12.07	13.73	-40.63	-13.00	27.63	H	16835.00

**LTE Band 25, 1.4MHz, QPSK, Channel 26365**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7536.01	-53.48	8.24	12.23	-49.49	-13.00	36.49	H	7536.01
9452.01	-52.91	9.30	13.37	-48.84	-13.00	35.84	V	9452.01
11310.01	-50.39	10.00	13.14	-47.25	-13.00	34.25	V	11310.01
13159.01	-47.56	10.68	13.72	-44.52	-13.00	31.52	V	13159.01
15026.00	-45.62	11.25	13.98	-42.89	-13.00	29.89	V	15026.00
16913.00	-42.51	12.05	13.77	-40.79	-13.00	27.79	V	16913.00

**LTE Band 25, 1.4MHz, QPSK, Channel 26683**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7659.01	-52.50	8.24	12.33	-48.41	-13.00	35.41	V	7659.01
9578.01	-53.22	9.26	13.32	-49.16	-13.00	36.16	V	9578.01
11522.01	-49.59	9.81	13.10	-46.30	-13.00	33.30	H	11522.01
13396.01	-48.15	10.57	14.05	-44.67	-13.00	31.67	H	13396.01
15352.00	-44.99	11.34	13.79	-42.54	-13.00	29.54	H	15352.00
17186.00	-43.58	12.39	14.21	-41.76	-13.00	28.76	V	17186.00

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5689.01	-53.11	7.29	10.56	2.15	-51.99	-13.00	38.99	V
6513.01	-52.42	7.51	11.02	2.15	-51.06	-13.00	38.06	V
7342.01	-52.68	8.11	12.01	2.15	-50.93	-13.00	37.93	V
8156.01	-52.33	8.43	12.72	2.15	-50.19	-13.00	37.19	V
8966.00	-51.92	9.08	13.09	2.15	-50.06	-13.00	37.06	V
9788.00	-51.79	9.01	13.11	2.15	-49.84	-13.00	36.84	H

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1633.01	-60.16	3.55	5.26	2.15	-60.60	-13.00	47.60	H
2470.00	-53.80	4.59	6.01	2.15	-54.53	-13.00	41.53	V
3259.02	-54.93	5.28	7.62	2.15	-54.74	-13.00	41.74	V
4077.02	-55.09	6.04	8.98	2.15	-54.30	-13.00	41.30	V
4913.01	-54.64	6.73	9.81	2.15	-53.71	-13.00	40.71	H
5751.01	-53.53	7.26	10.55	2.15	-52.39	-13.00	39.39	V

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5843.01	-52.38	7.21	10.53	2.15	-51.21	-13.00	38.21	H
6739.01	-51.41	7.98	11.29	2.15	-50.25	-13.00	37.25	H
7597.01	-52.45	7.99	12.28	2.15	-50.31	-13.00	37.31	V
8366.00	-51.72	8.65	12.89	2.15	-49.63	-13.00	36.63	V
9235.00	-51.67	9.01	13.24	2.15	-49.59	-13.00	36.59	V
9950.00	-50.46	9.14	12.95	2.15	-48.80	-13.00	35.80	V



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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1641.01	-59.76	3.56	5.25	2.15	-60.22	-13.00	47.22	H
2492.00	-52.95	4.62	6.08	2.15	-53.64	-13.00	40.64	H
3281.02	-55.12	5.28	7.67	2.15	-54.88	-13.00	41.88	V
4114.02	-55.31	6.04	9.01	2.15	-54.49	-13.00	41.49	H
4944.01	-54.86	6.70	9.84	2.15	-53.87	-13.00	40.87	H
5787.01	-53.67	7.21	10.54	2.15	-52.49	-13.00	39.49	H

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1680.01	-59.40	3.59	5.18	2.15	-59.96	-13.00	46.96	H
2526.00	-53.33	4.65	6.15	2.15	-53.98	-13.00	40.98	H
3343.02	-54.67	5.31	7.82	2.15	-54.31	-13.00	41.31	H
4163.02	-54.17	6.12	9.06	2.15	-53.38	-13.00	40.38	V
5033.01	-54.44	6.58	9.95	2.15	-53.22	-13.00	40.22	H
5839.01	-52.43	7.20	10.53	2.15	-51.25	-13.00	38.25	V

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

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1700.01	-58.28	3.60	5.14	2.15	-58.89	-13.00	45.89	H
2548.00	-52.55	4.67	6.19	2.15	-53.18	-13.00	40.18	H
3411.02	-55.43	5.37	7.99	2.15	-54.96	-13.00	41.96	H
4238.02	-54.68	6.25	9.14	2.15	-53.94	-13.00	40.94	V
5095.01	-54.01	6.76	10.03	2.15	-52.89	-13.00	39.89	H
5919.01	-53.56	7.45	10.52	2.15	-52.64	-13.00	39.64	V

**LTE Band 41, 5MHz, QPSK, Channel 40065**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5063.02	-56.74	6.67	9.99	-53.42	-25.00	28.42	H	5063.02
7595.01	-54.76	7.99	12.28	-50.47	-25.00	25.47	V	7595.01
10132.01	-52.54	9.41	12.95	-49.00	-25.00	24.00	V	10132.01
12698.01	-48.89	10.30	13.32	-45.87	-25.00	20.87	V	12698.01
15244.00	-44.98	11.35	13.85	-42.48	-25.00	17.48	V	15244.00
17782.00	-44.54	12.63	15.29	-41.88	-25.00	16.88	V	17782.00

**LTE Band 41, 5MHz, QPSK, Channel 40620**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
6510.02	-54.84	7.51	11.01	-51.34	-25.00	26.34	V	6510.02
7766.01	-54.26	8.33	12.41	-50.18	-25.00	25.18	H	7766.01
10367.01	-51.90	9.75	13.05	-48.60	-25.00	23.60	V	10367.01
12957.01	-48.70	10.48	13.47	-45.71	-25.00	20.71	V	12957.01
15558.00	-43.58	11.50	13.70	-41.38	-25.00	16.38	V	15558.00
16841.00	-42.26	12.07	13.74	-40.59	-25.00	15.59	H	16841.00

**LTE Band 41, 5MHz, QPSK, Channel 41215**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5299.02	-56.18	6.99	10.32	-52.85	-25.00	27.85	V	5299.02
7943.01	-54.78	8.38	12.55	-50.61	-25.00	25.61	V	7943.01
10626.01	-51.08	9.29	13.13	-47.24	-25.00	22.24	V	10626.01
13262.01	-48.47	10.55	13.87	-45.15	-25.00	20.15	H	13262.01
15946.00	-43.14	11.71	13.70	-41.15	-25.00	16.15	H	15946.00
17269.00	-43.49	12.37	14.39	-41.47	-25.00	16.47	H	17269.00

**LTE Band 66, 1.4MHz QPSK, Channel 131979**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3474.02	-67.79	5.47	8.14	-65.12	-13.00	52.12	H
5149.02	-66.20	6.88	10.11	-62.97	-13.00	49.97	V
6849.01	-59.50	7.83	11.42	-55.91	-13.00	42.91	H
8560.01	-64.15	8.56	13.01	-59.70	-13.00	46.70	H
10213.01	-62.73	9.35	12.99	-59.09	-13.00	46.09	V
11959.01	-60.43	10.24	13.01	-57.66	-13.00	44.66	V

**LTE Band 66, 1.4MHz, QPSK, Channel 132322**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.02	-67.17	5.50	8.18	-64.49	-13.00	51.49	V
5195.02	-66.38	6.95	10.17	-63.16	-13.00	50.16	V
6986.01	-61.07	8.19	11.58	-57.68	-13.00	44.68	H
8670.01	-65.04	8.40	13.03	-60.41	-13.00	47.41	V
10497.01	-62.16	9.66	13.10	-58.72	-13.00	45.72	V
12200.01	-60.18	10.06	13.08	-57.16	-13.00	44.16	V

**LTE Band 66, 1.4MHz, QPSK, Channel 132665**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3559.02	-61.58	5.92	8.28	-59.22	-13.00	46.22	V
5339.02	-62.13	6.96	10.37	-58.72	-13.00	45.72	V
7124.01	-62.87	8.17	11.75	-59.29	-13.00	46.29	H
8948.01	-64.55	9.02	13.09	-60.48	-13.00	47.48	V
10701.01	-62.19	9.31	13.14	-58.36	-13.00	45.36	V
12465.01	-59.80	10.27	13.19	-56.88	-13.00	43.88	V

**LTE Band 71, 5MHz, QPSK, Channel 133147**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1354.01	-59.33	3.18	4.74	2.15	-59.92	-13.00	46.92	H
1997.01	-54.83	4.04	4.61	2.15	-56.41	-13.00	43.41	V
2649.00	-52.27	4.74	6.37	2.15	-52.79	-13.00	39.79	H
3320.02	-54.27	5.29	7.77	2.15	-53.94	-13.00	40.94	H
3972.02	-55.24	6.09	8.86	2.15	-54.62	-13.00	41.62	V
4643.02	-53.93	6.46	9.54	2.15	-53.00	-13.00	40.00	V

**LTE Band 71, 5MHz, QPSK, Channel 133297**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1366.01	-57.40	3.19	4.80	2.15	-57.94	-13.00	44.94	H
2042.00	-55.43	4.14	4.73	2.15	-56.99	-13.00	43.99	V
2732.00	-52.70	4.82	6.52	2.15	-53.15	-13.00	40.15	V
3388.02	-56.07	5.35	7.93	2.15	-55.64	-13.00	42.64	H
4088.02	-54.67	6.04	8.99	2.15	-53.87	-13.00	40.87	V
4757.01	-54.32	6.58	9.66	2.15	-53.39	-13.00	40.39	H

**LTE Band 71, 5MHz, QPSK, Channel 133447**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1363.01	-54.08	3.19	4.79	2.15	-54.63	-13.00	41.63	V
2101.00	-55.27	4.19	4.90	2.15	-56.71	-13.00	43.71	V
2794.00	-51.85	4.90	6.63	2.15	-52.27	-13.00	39.27	H
3487.02	-55.16	5.50	8.17	2.15	-54.64	-13.00	41.64	H
4193.02	-54.58	6.19	9.09	2.15	-53.83	-13.00	40.83	V
4884.01	-54.50	6.72	9.78	2.15	-53.59	-13.00	40.59	V

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

## **A.3 Frequency Stability**

### **A.3.1 Method of Measurement**

Frequency stability is a measure of the frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at +20 °C and rated supply voltage. Two reference points are established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as  $F_L$  and  $F_H$  respectively.

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of CMW500.

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

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

### A.3.2 Measurement results

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

##### Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2500.897	2569.103		
50				-2.35	0.0009
40				-0.06	0.0000
30				-1.69	0.0007
10				0.43	0.0002
0				-2.02	0.0008
-10				-0.36	0.0001
-20				-1.36	0.0005
-30				-0.94	0.0004

##### Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2500.897	2569.103	-6.55	0.0026
4.4				-3.42	0.0013

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

##### Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	699.481	715.519		
50				0.76	0.0011
40				0.11	0.0002
30				0.50	0.0007
10				0.39	0.0006
0				-0.23	0.0003
-10				-0.01	0.0000
-20				1.00	0.0014
-30				0.86	0.0012

##### Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	699.481	715.519	-0.53	0.0007
4.4				-0.49	0.0007

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

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	777.417	786.567		
50				-1.77	0.0023
40				-0.31	0.0004
30				-8.47	0.0108
10				-7.20	0.0092
0				-8.94	0.0114
-10				-2.70	0.0035
-20				-2.07	0.0026
-30				-1.65	0.0021

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	777.417	786.567	-9.26	0.0118
4.4				-7.47	0.0096

**LTE Band 25, 20MHz bandwidth QPSK (worst case of all bandwidths)**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1850.865	1914.167		
50				10.49	0.0056
40				12.37	0.0066
30				10.50	0.0056
10				10.44	0.0055
0				11.46	0.0061
-10				10.40	0.0055
-20				0.10	0.0001
-30				10.61	0.0056

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1850.865	1914.167	12.29	0.0065
4.4				11.20	0.0059

**LTE Band 26(814MHz~824MHz), 10MHz bandwidth QPSK (worst case of all bandwidths)**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	814.389	823.611		
50				6.34	0.0077
40				-0.51	0.0006
30				-1.67	0.0020
10				-0.96	0.0012
0				-1.66	0.0020
-10				5.58	0.0068
-20				-1.73	0.0021
-30				0.29	0.0004

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	814.389	823.611	-0.46	0.0006
4.4				-1.82	0.0022

**LTE Band 26(824MHz~849MHz), 15MHz bandwidth QPSK (worst case of all bandwidths)**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	824.577	848.447		
50				-0.04	0.0000
40				-8.11	0.0097
30				-0.99	0.0012
10				-1.49	0.0018
0				-1.59	0.0019
-10				-0.70	0.0008
-20				-0.23	0.0003
-30				-8.57	0.0102

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.577	848.447	-8.84	0.0106
4.4				-8.75	0.0105



**LTE Band 41, 20MHz bandwidth QPSK (worst case of all bandwidths)**
**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	2535.392	2654.688		
50				-3.49	0.0013
40				1.36	0.0005
30				-1.83	0.0007
10				-3.15	0.0012
0				-0.41	0.0002
-10				-5.21	0.0020
-20				-0.46	0.0002
-30				-3.50	0.0013

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2535.392	2654.688	-4.62	0.0018
4.4				-2.92	0.0011

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

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1710.833	1779.199		
50				0.10	0.0001
40				-0.50	0.0003
30				-1.63	0.0009
10				-1.50	0.0009
0				-0.84	0.0005
-10				-1.63	0.0009
-20				0.82	0.0005
-30				-0.29	0.0002

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.833	1779.199	-0.51	0.0003
4.4				-1.37	0.0008

**LTE Band 71, 20MHz bandwidth QPSK (worst case of all bandwidths)**

**Frequency Error vs Temperature**

Temperature(°C)	Voltage(V)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	663.994	697.006		
50				-0.33	0.0005
40				-0.47	0.0007
30				0.29	0.0004
10				-0.80	0.0012
0				0.43	0.0006
-10				0.10	0.0001
-20				-0.24	0.0004
-30				-0.26	0.0004

**Frequency Error vs Voltage**

Voltage(V)	Temperature(°C)	F <sub>L</sub> (MHz)	F <sub>H</sub> (MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	663.994	697.006	-0.34	0.0005
4.4				-0.04	0.0001

#### **A.4 Occupied Bandwidth**

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

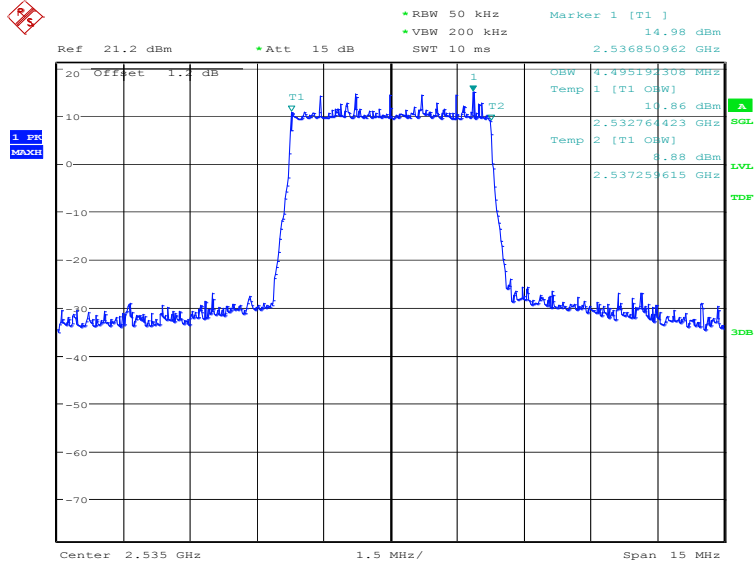
The measurement method is from ANSI C63.26:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts.
- b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set  $\geq 3 \times$  RBW.
- c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
- d) Set the detection mode to peak, and the trace mode to max-hold.

**LTE band 7, 5MHz (99%)**

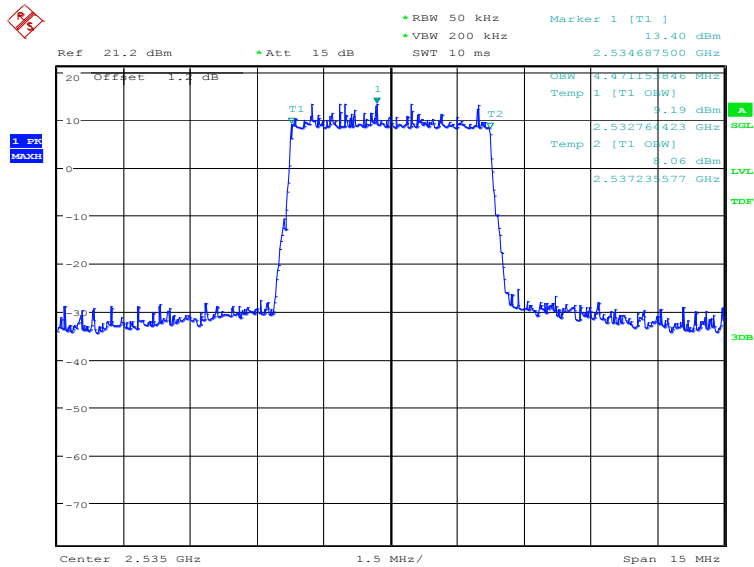
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	4495.19	4471.15

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



Date: 8.FEB.2021 08:52:50

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

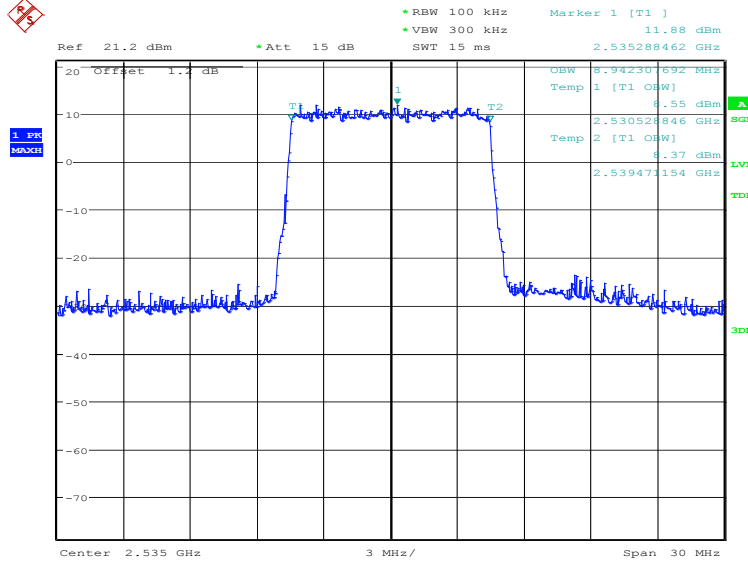


Date: 8.FEB.2021 08:53:28

**LTE band 7, 10MHz (99%)**

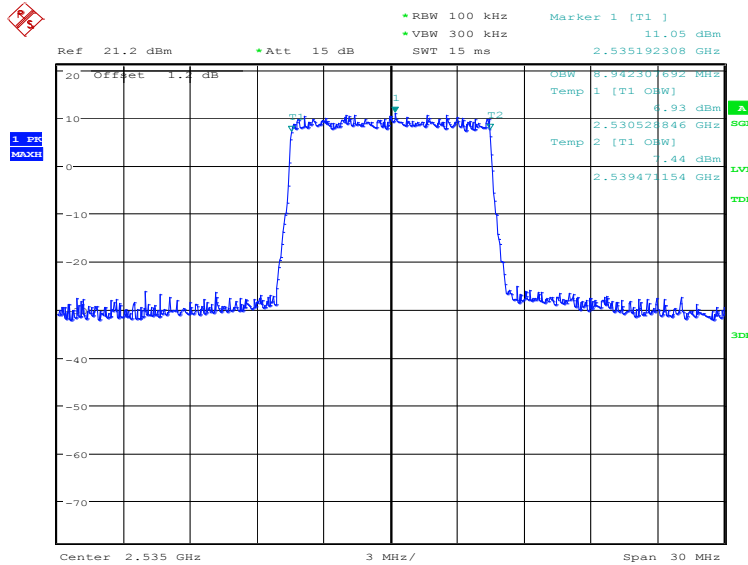
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 8.FEB.2021 08:54:08

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

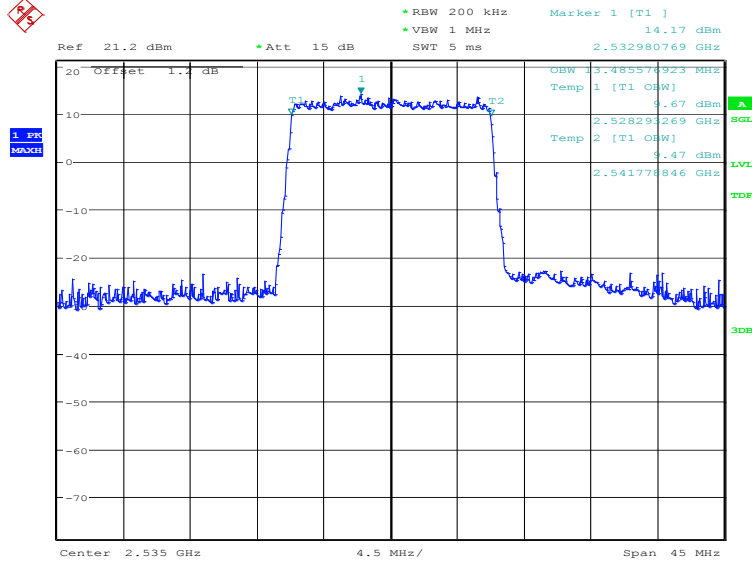


Date: 8.FEB.2021 08:54:47

**LTE band 7, 15MHz (99%)**

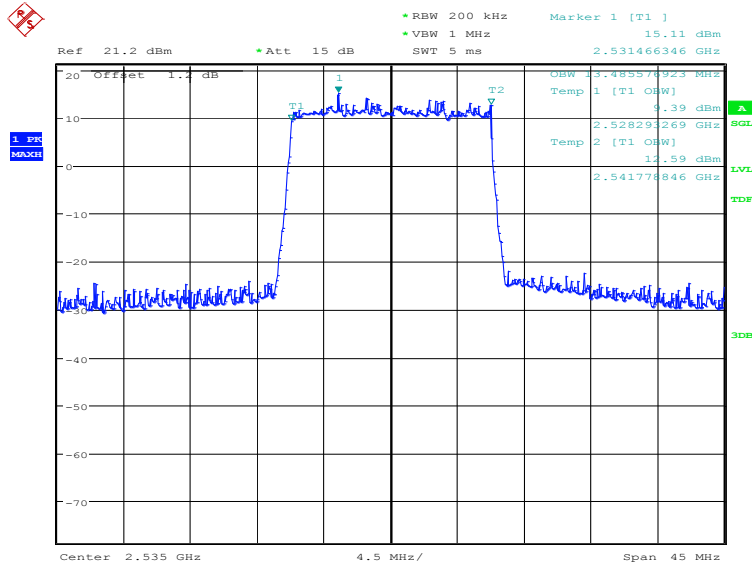
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 8.FEB.2021 08:55:27

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

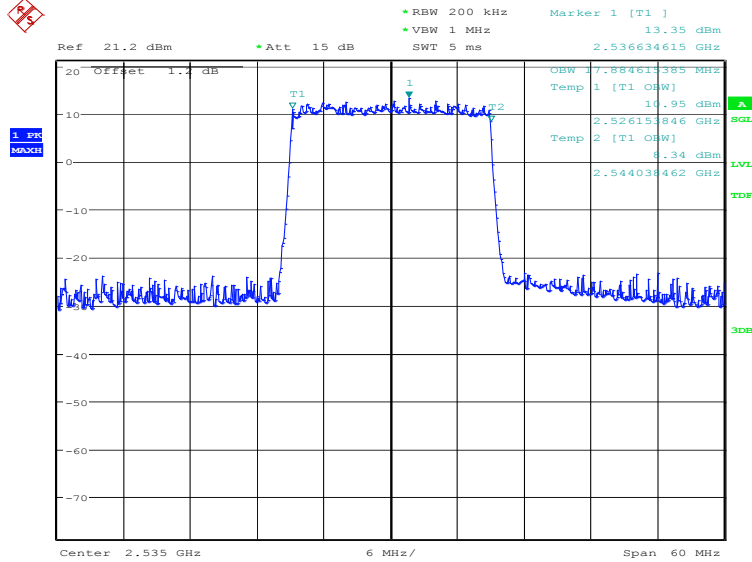


Date: 8.FEB.2021 08:56:05

**LTE band 7, 20MHz (99%)**

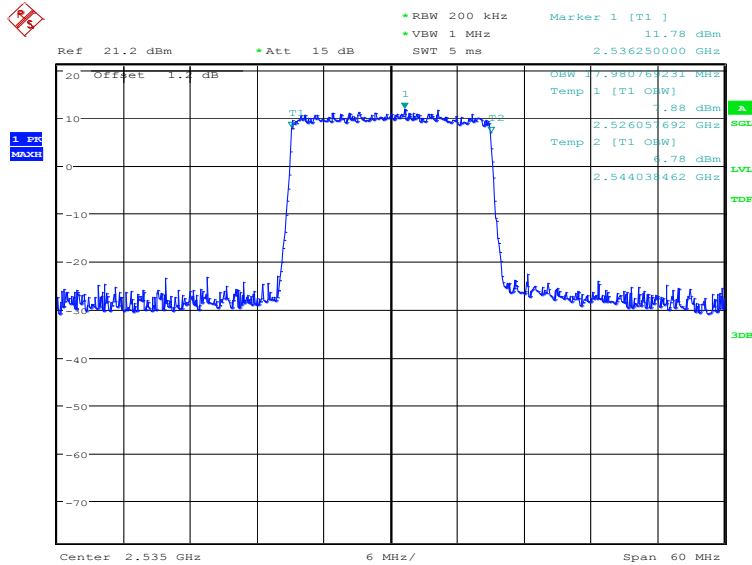
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	17884.62	17980.77

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



Date: 8.FEB.2021 08:56:46

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

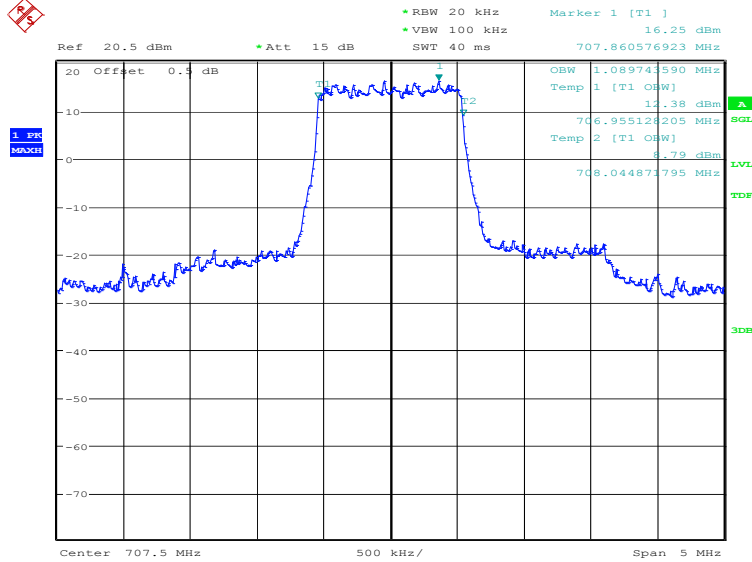


Date: 8.FEB.2021 08:57:24

**LTE band 12, 1.4MHz (99%)**

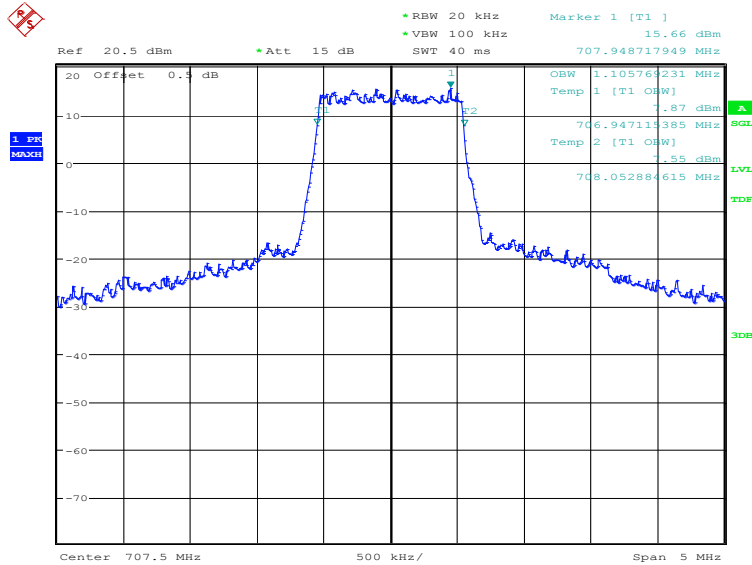
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	1089.74	1105.77

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



Date: 7.FEB.2021 17:57:46

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



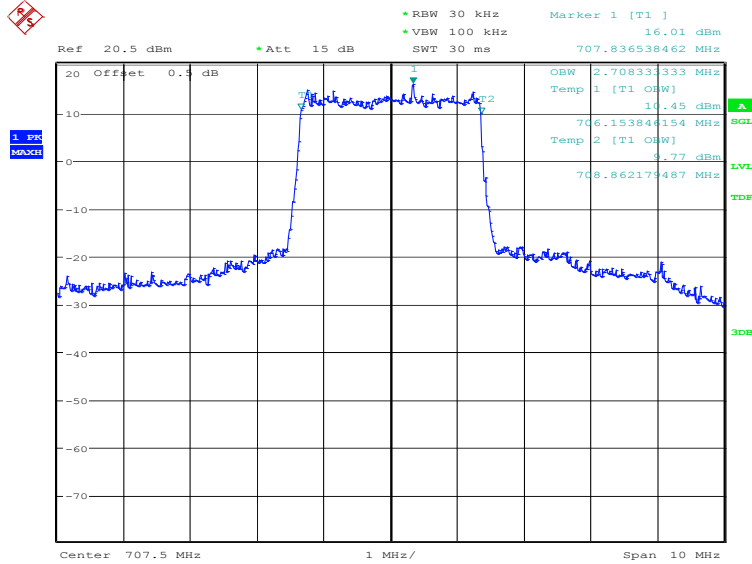
Date: 7.FEB.2021 17:58:25



**LTE band 12, 3MHz (99%)**

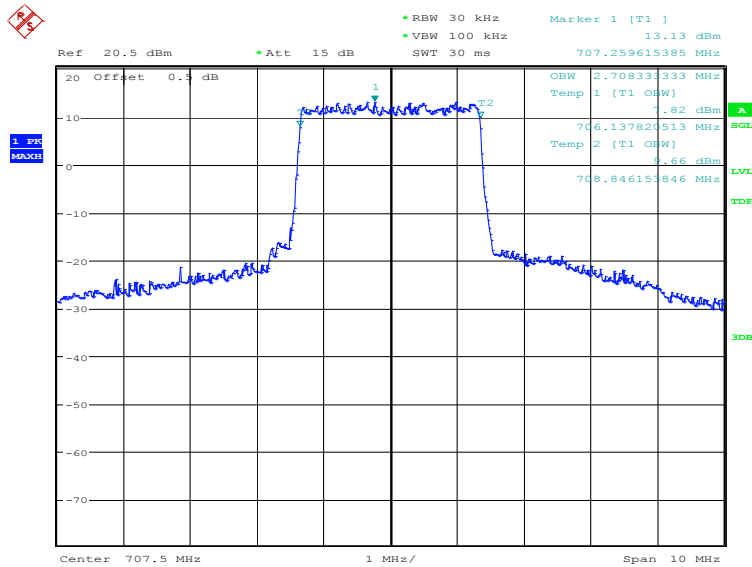
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	2708.33	2708.33

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



Date: 7.FEB.2021 17:59:05

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

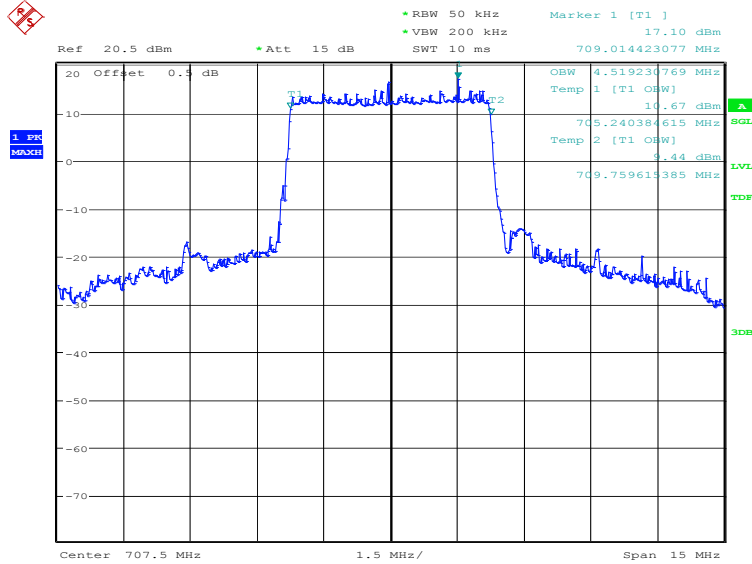


Date: 7.FEB.2021 17:59:44

**LTE band 12, 5MHz (99%)**

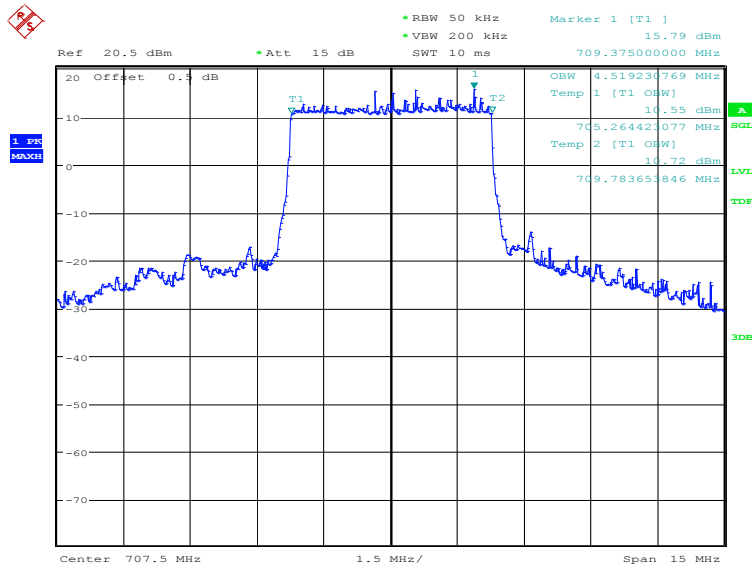
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	4519.23	4519.23

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



Date: 7.FEB.2021 18:00:24

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

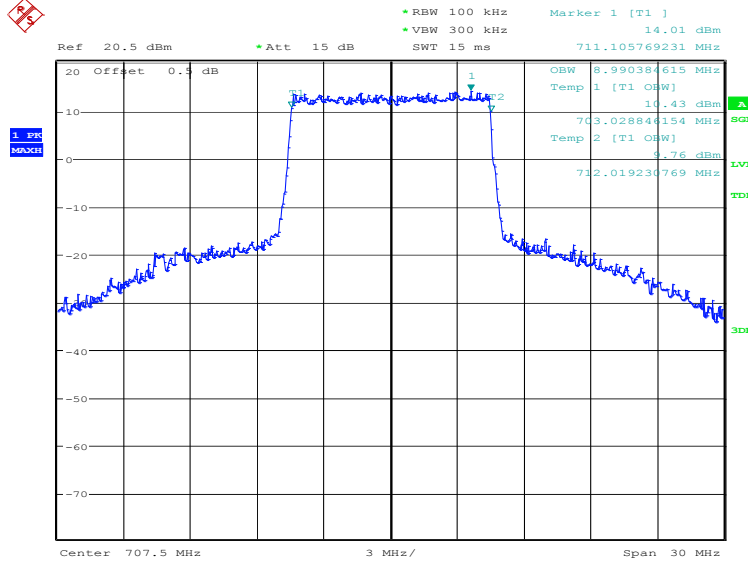


Date: 7.FEB.2021 18:01:03

**LTE band 12, 10MHz (99%)**

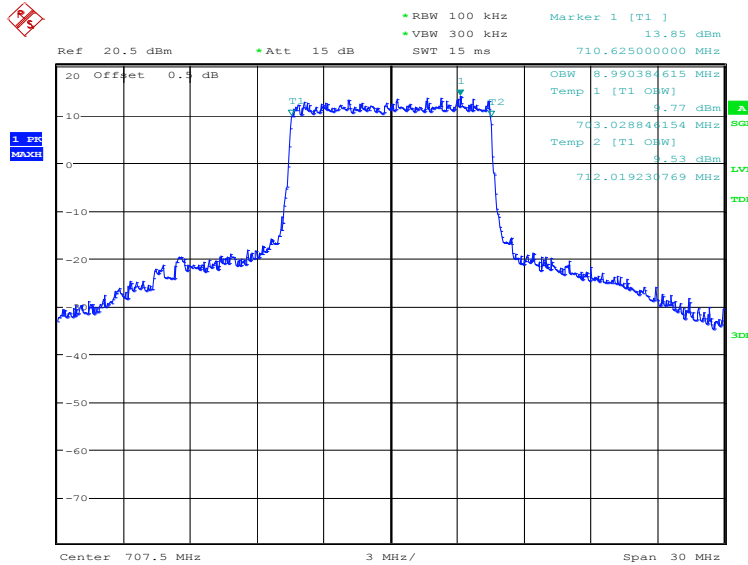
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	8990.38	8990.38

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



Date: 7.FEB.2021 18:01:43

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

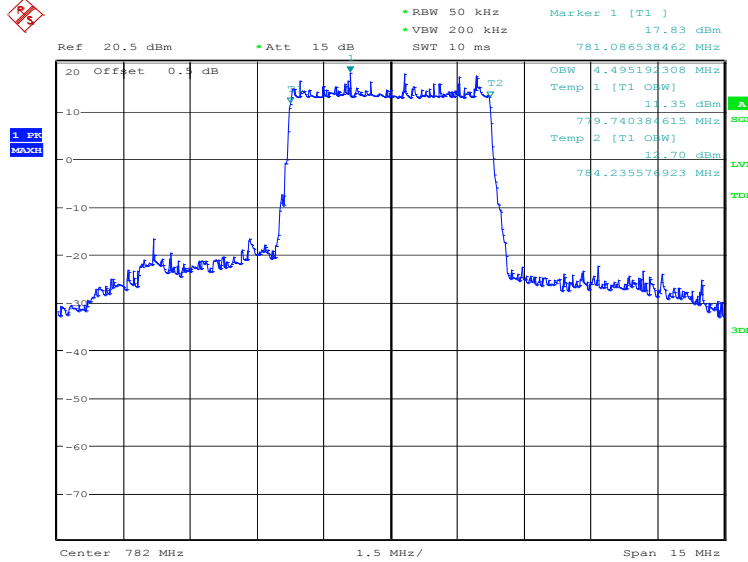


Date: 7.FEB.2021 18:02:22

**LTE band 13, 5MHz (99%)**

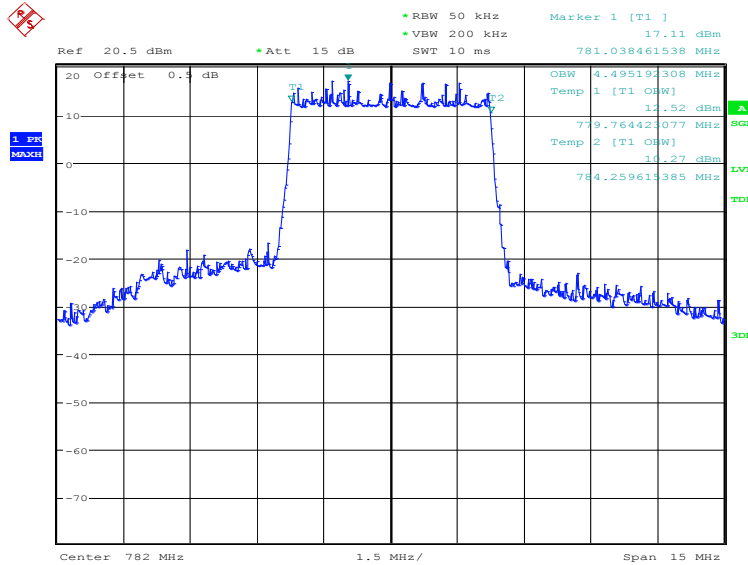
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 7.FEB.2021 18:03:04

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

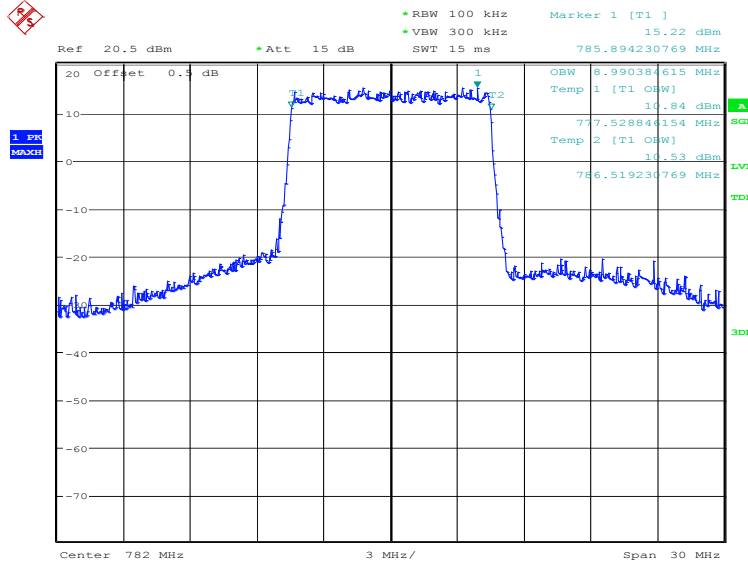


Date: 7.FEB.2021 18:03:42

**LTE band 13, 10MHz (99%)**

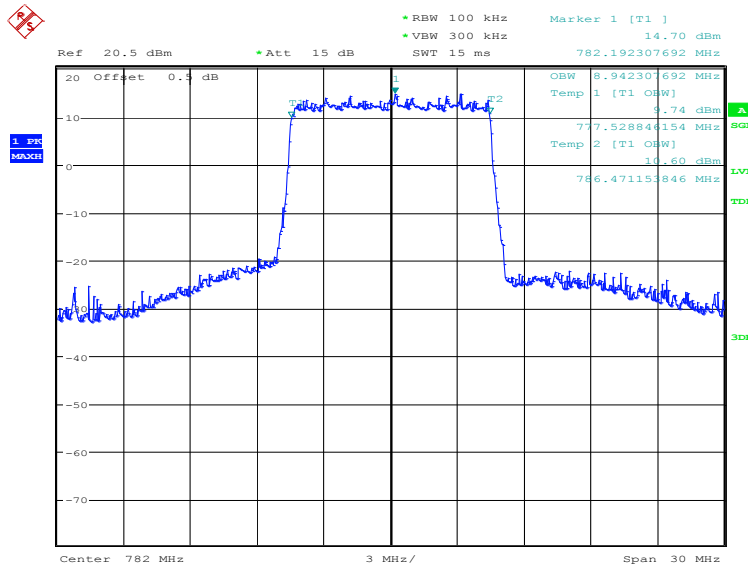
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	8990.38	8942.31

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



Date: 7.FEB.2021 18:04:23

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

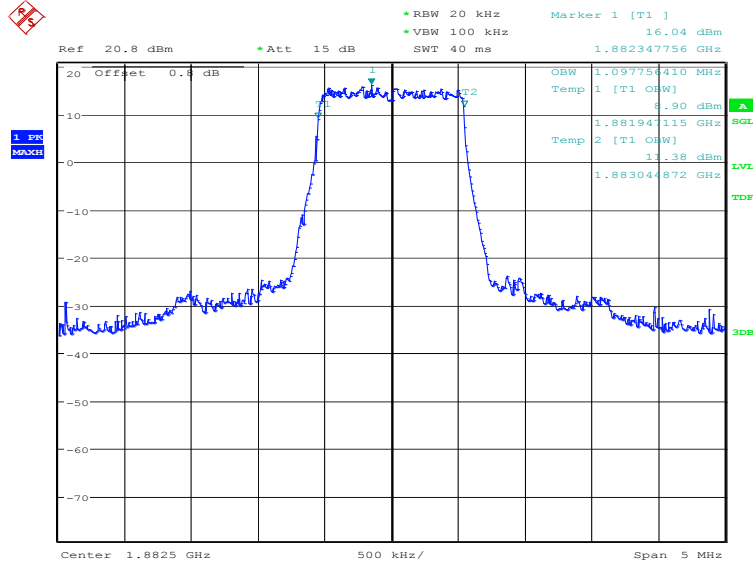


Date: 7.FEB.2021 18:05:01

**LTE band 25, 1.4MHz (99%)**

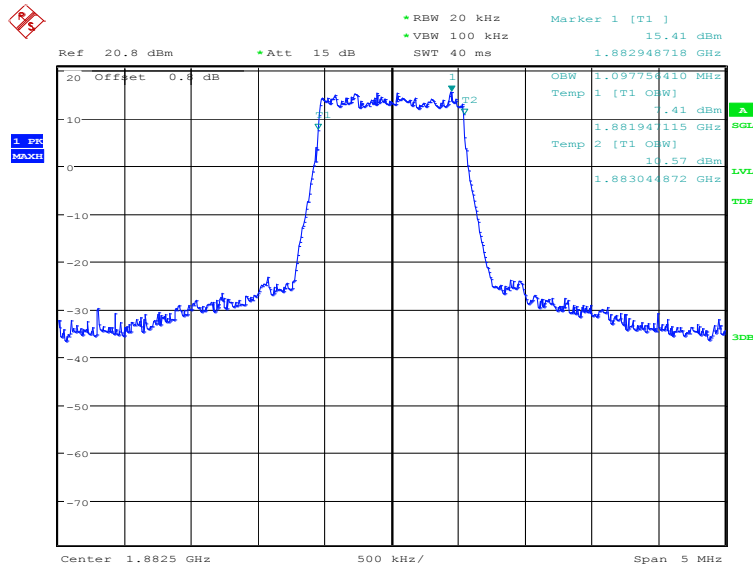
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	1097.76	1097.76

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



Date: 7.FEB.2021 18:05:47

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

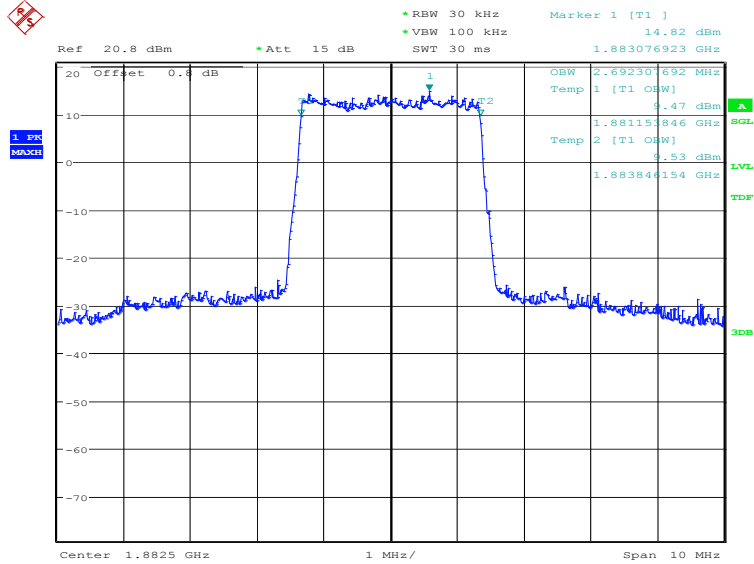


Date: 7.FEB.2021 18:06:26

**LTE band 25, 3MHz (99%)**

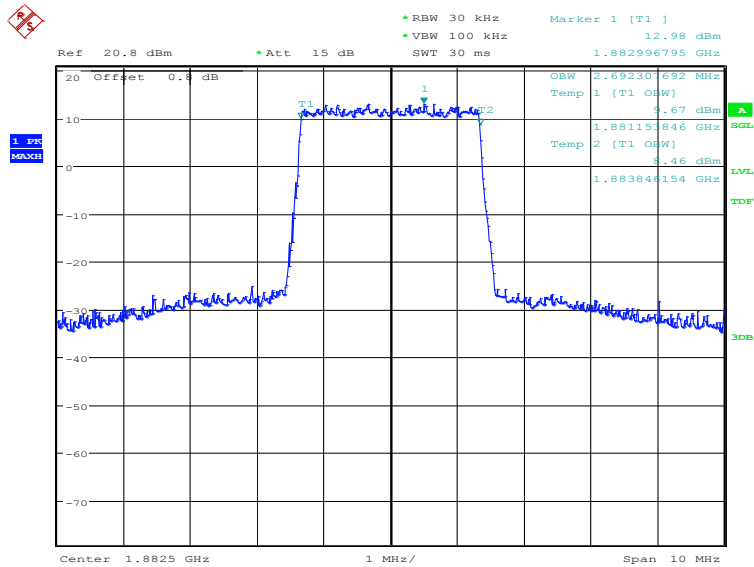
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 7.FEB.2021 18:07:06

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

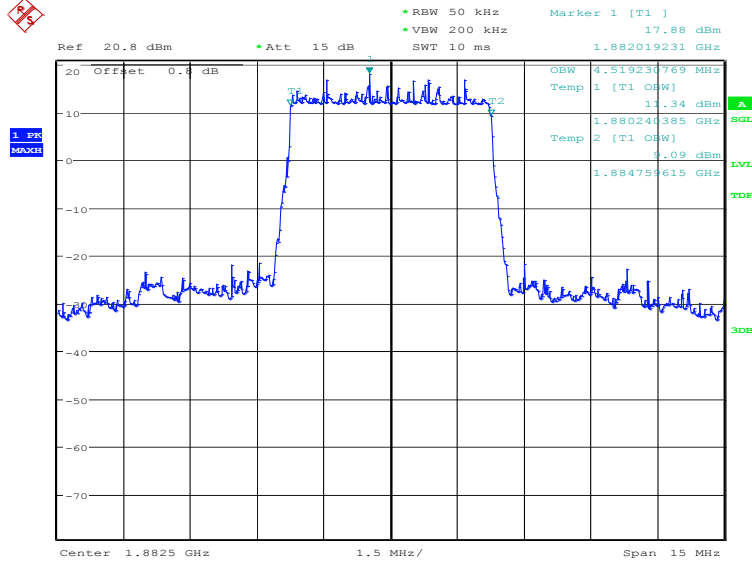


Date: 7.FEB.2021 18:07:45

**LTE band 25, 5MHz (99%)**

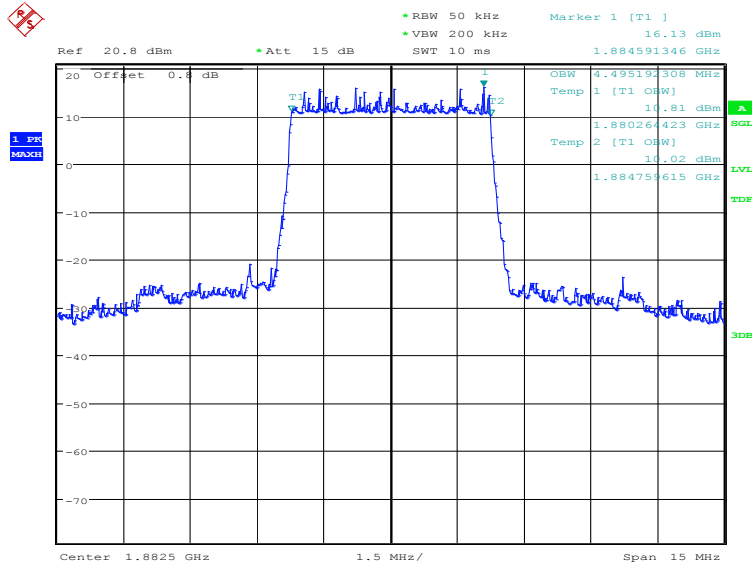
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	4519.23	4495.19

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



Date: 7.FEB.2021 18:08:26

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



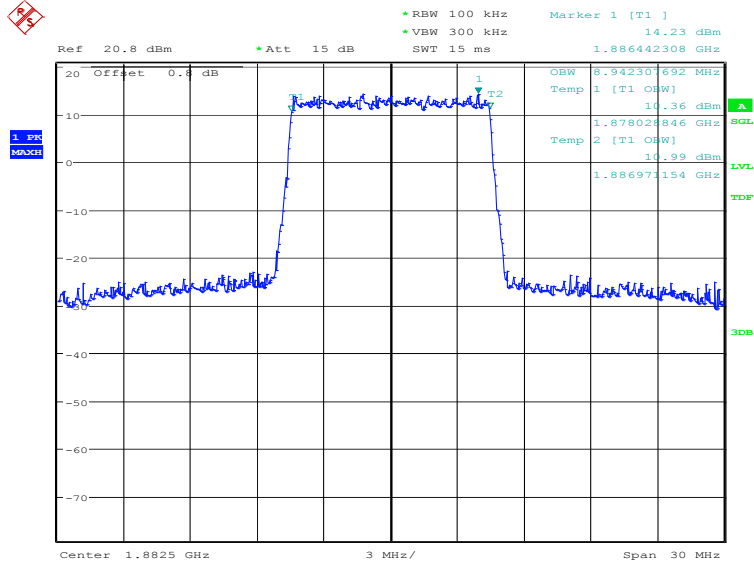
Date: 7.FEB.2021 18:09:04



**LTE band 25, 10MHz (99%)**

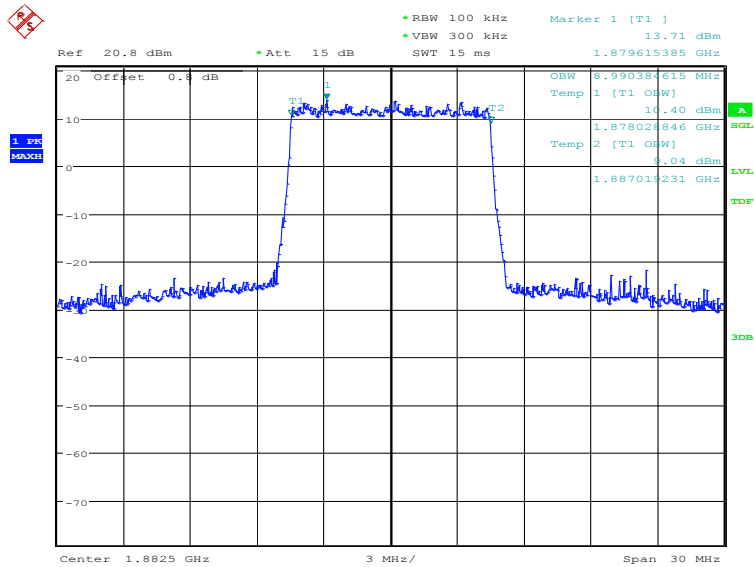
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	8942.31	8990.38

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



Date: 7.FEB.2021 18:09:45

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

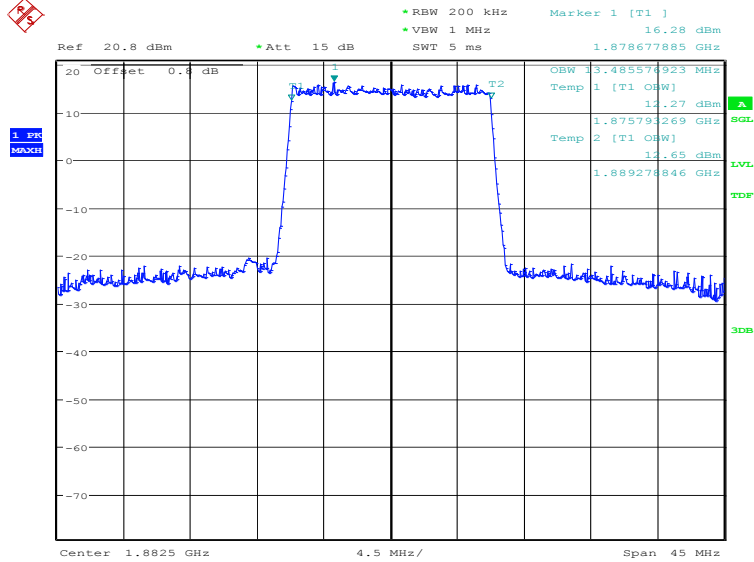


Date: 7.FEB.2021 18:10:23

**LTE band 25, 15MHz (99%)**

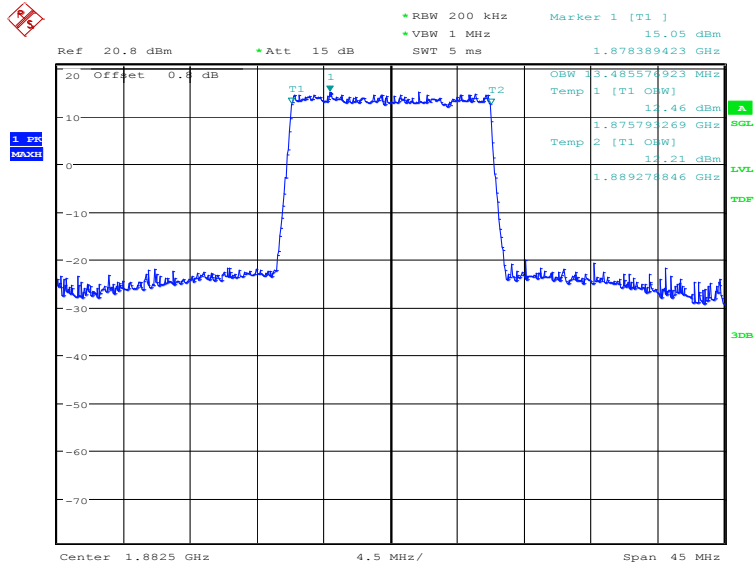
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	13485.58	13485.58

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



Date: 7.FEB.2021 18:11:04

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

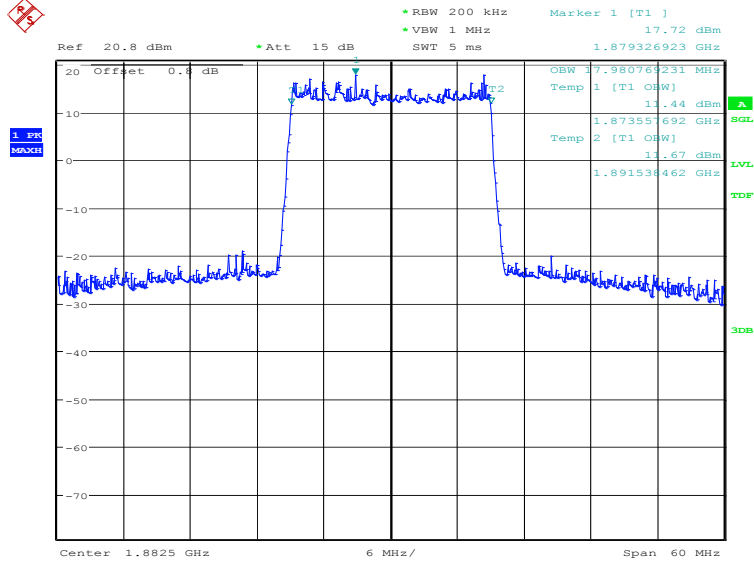


Date: 7.FEB.2021 18:11:42

**LTE band 25, 20MHz (99%)**

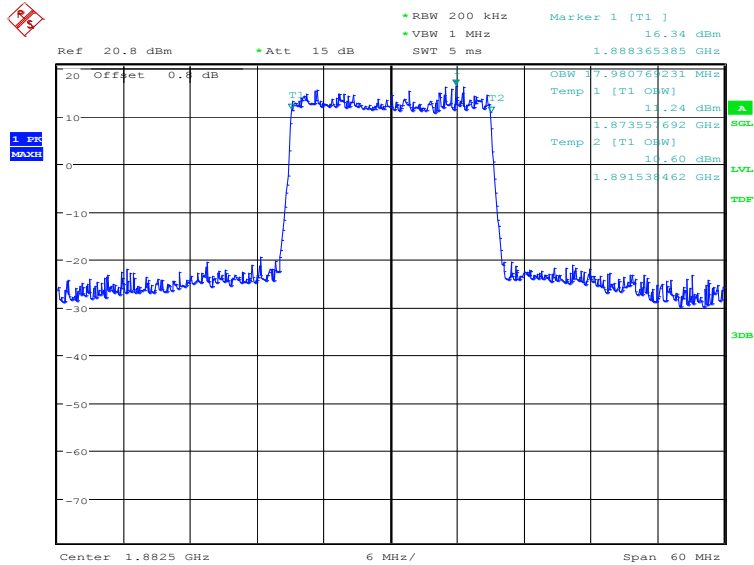
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	17980.77	17980.77

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



Date: 7.FEB.2021 18:12:23

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

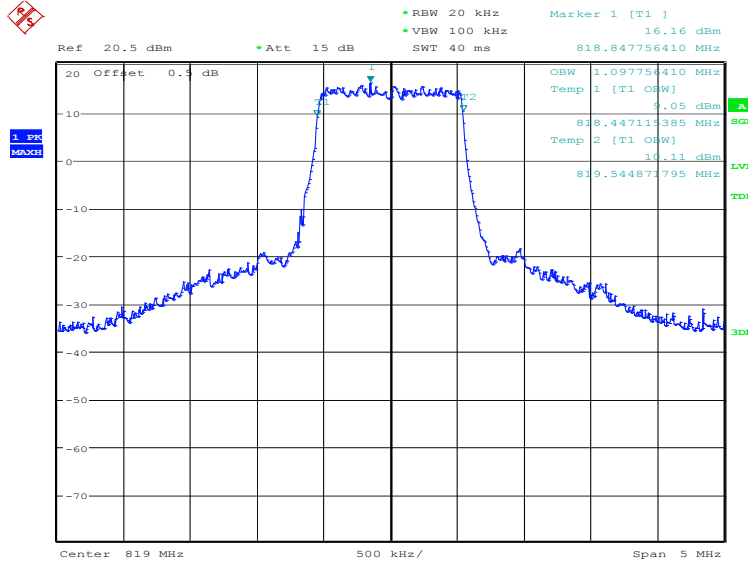


Date: 7.FEB.2021 18:13:01

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

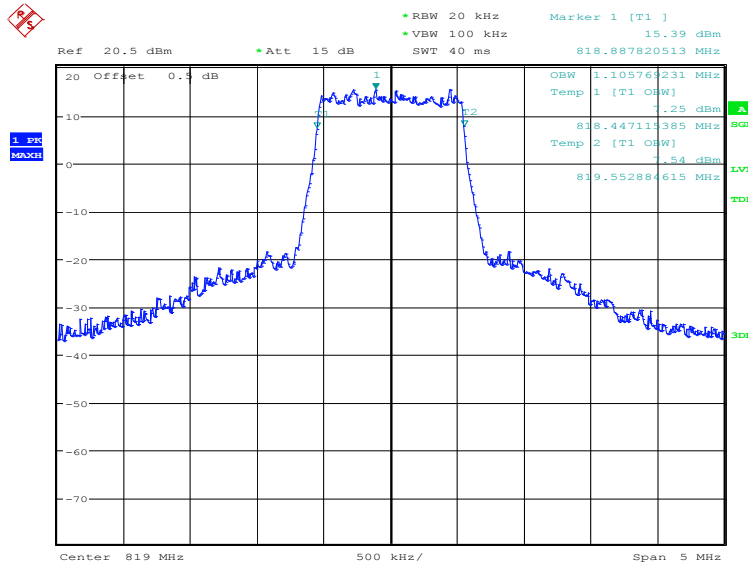
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	1097.76	1105.77

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



Date: 7.FEB.2021 18:21:43

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

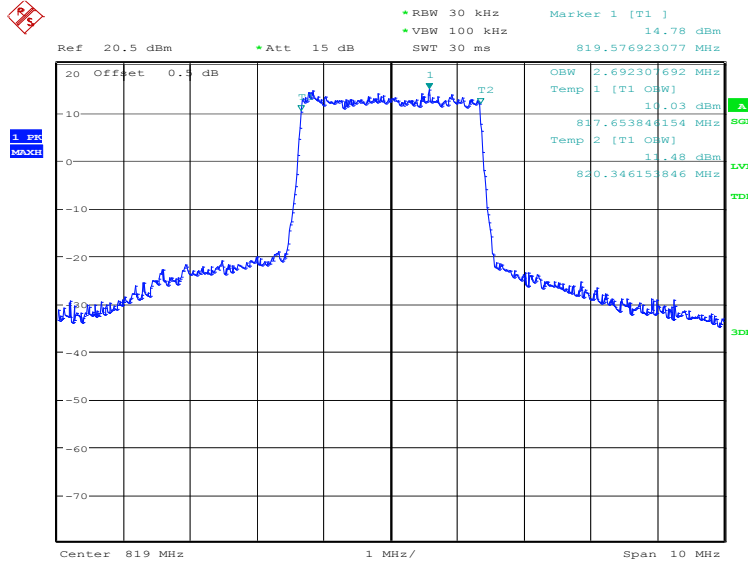


Date: 7.FEB.2021 18:22:22

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

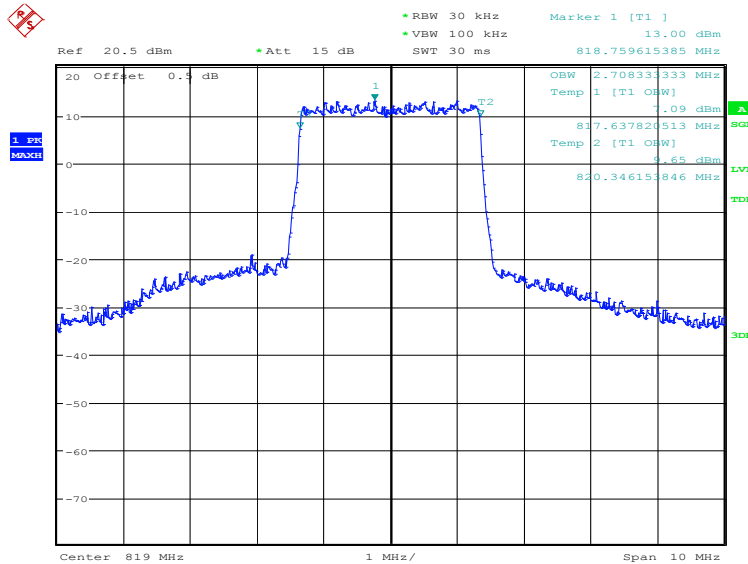
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	2692.31	2708.33

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



Date: 7.FEB.2021 18:23:02

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

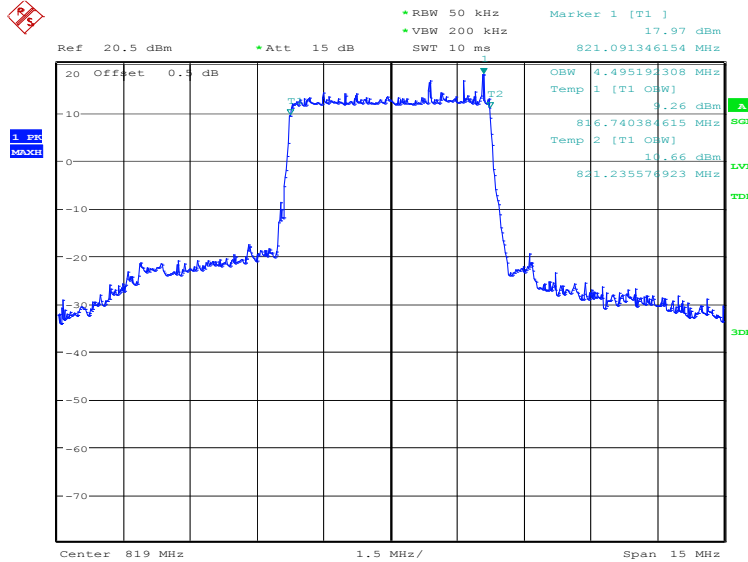


Date: 7.FEB.2021 18:23:41

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

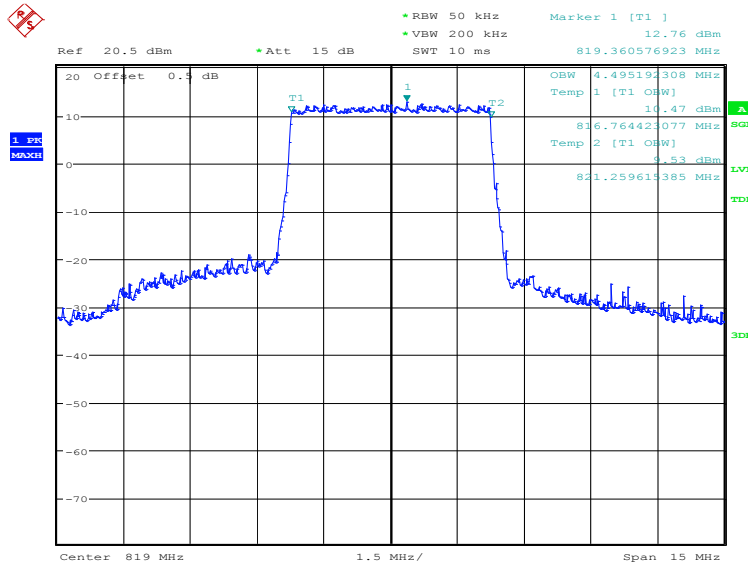
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 7.FEB.2021 18:24:22

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

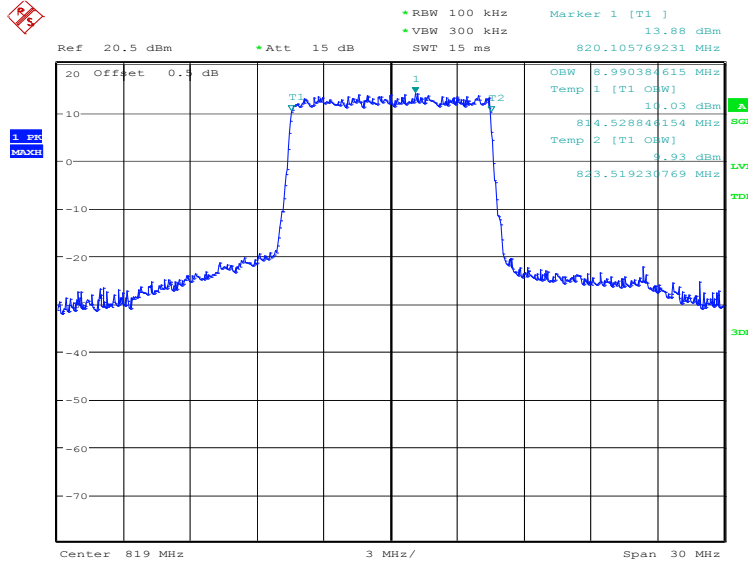


Date: 7.FEB.2021 18:25:00

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

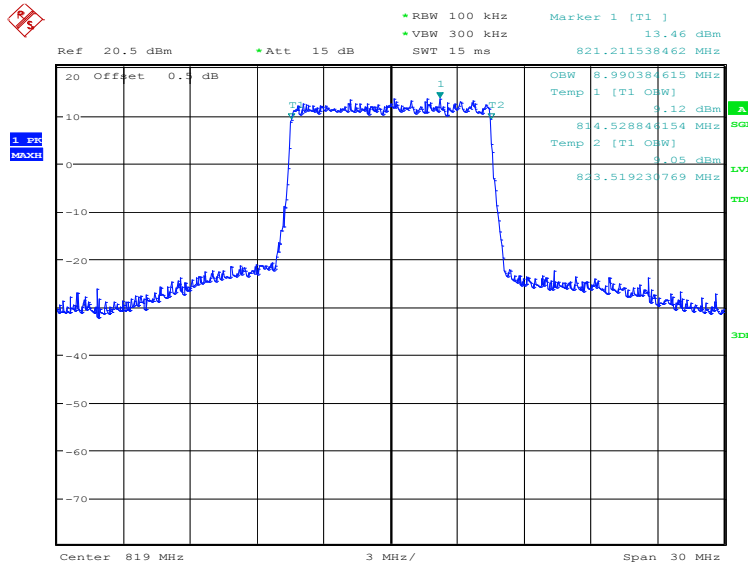
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	8990.38	8990.38

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



Date: 7.FEB.2021 18:25:41

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

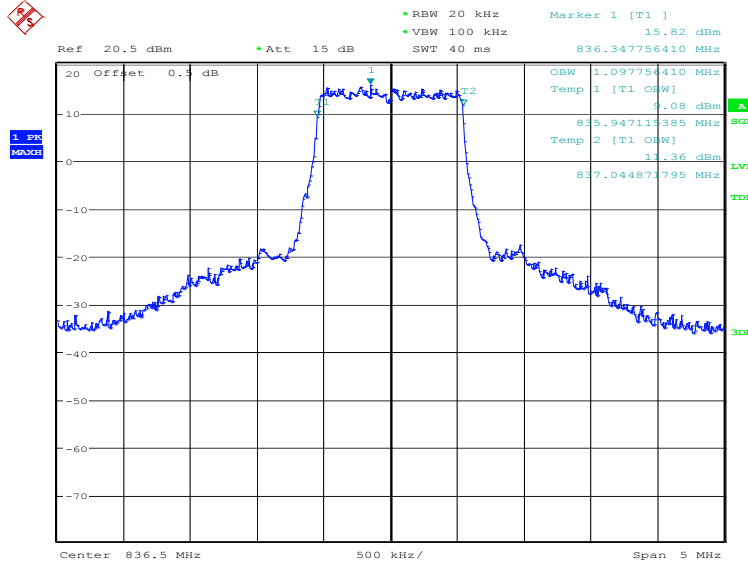


Date: 7.FEB.2021 18:26:19

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

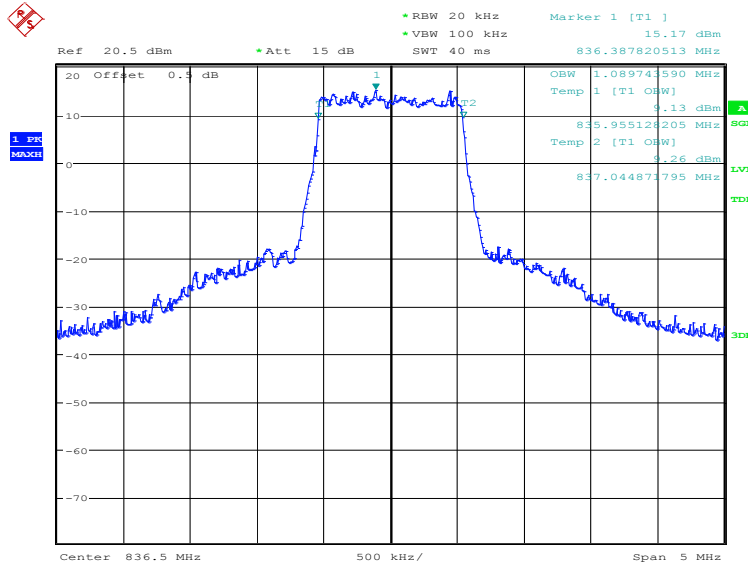
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	1097.76	1089.74

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



Date: 7.FEB.2021 18:14:30

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



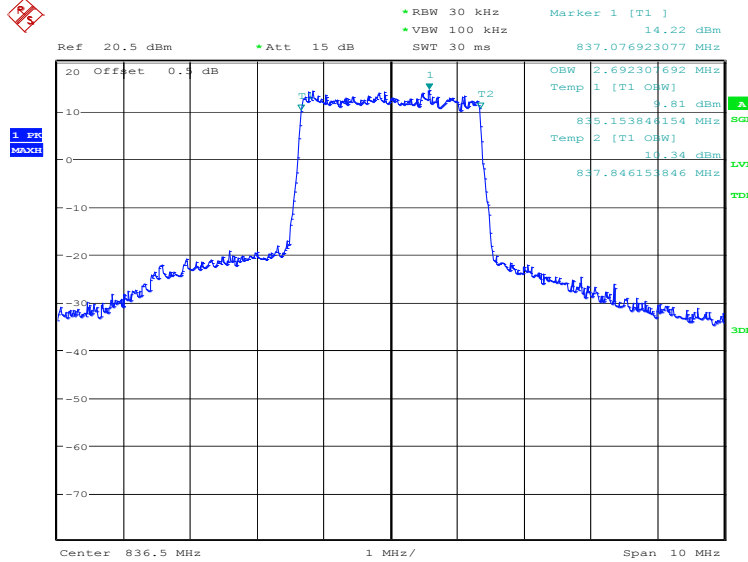
Date: 7.FEB.2021 18:15:09



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

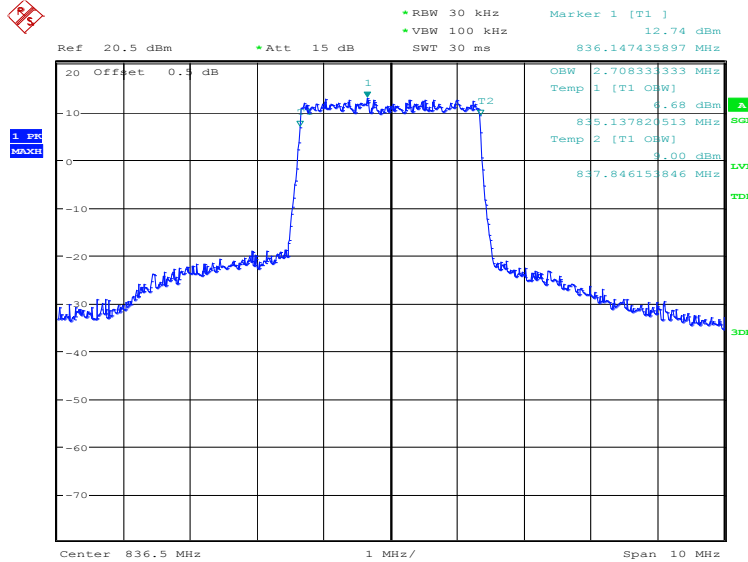
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	2692.31	2708.33

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



Date: 7.FEB.2021 18:15:49

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

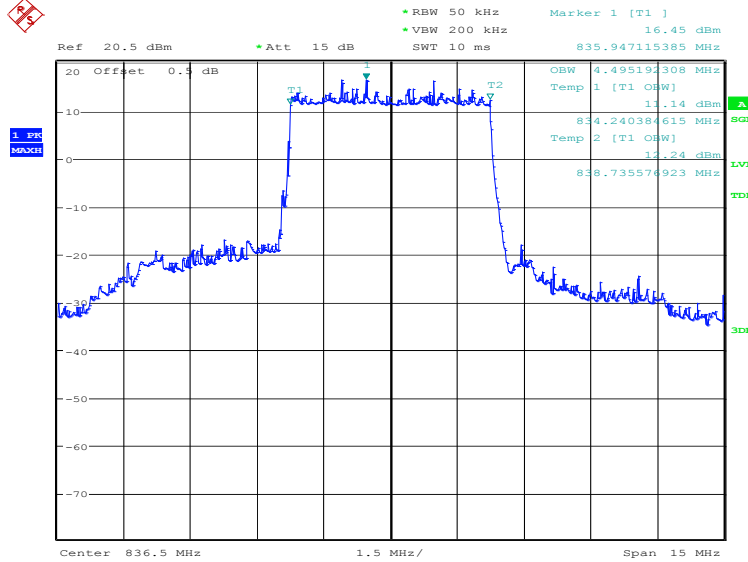


Date: 7.FEB.2021 18:16:28

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

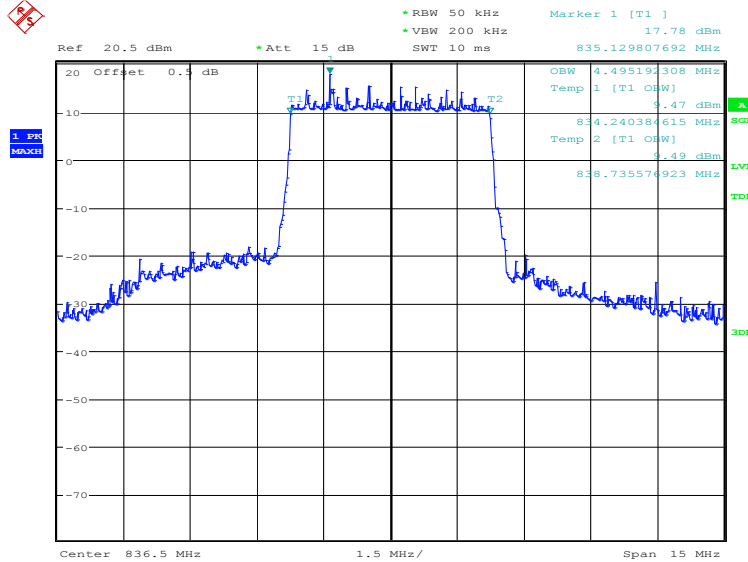
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	4495.19	4495.19

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



Date: 7.FEB.2021 18:17:08

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

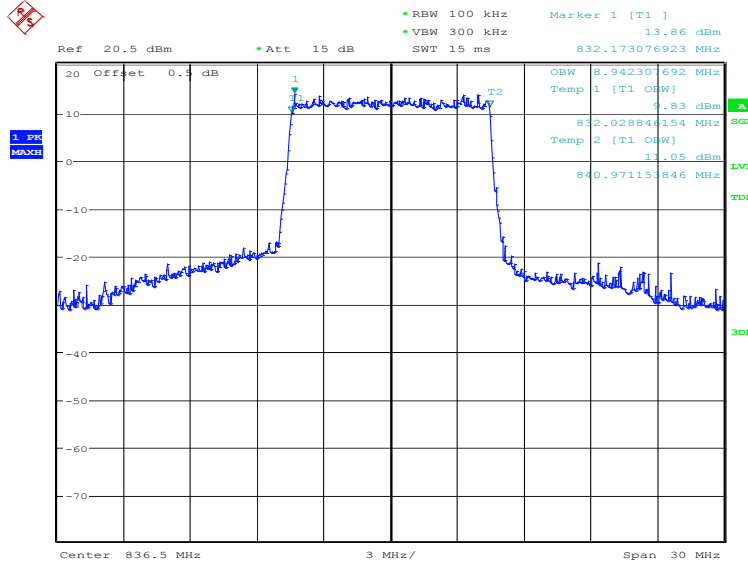


Date: 7.FEB.2021 18:17:47

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

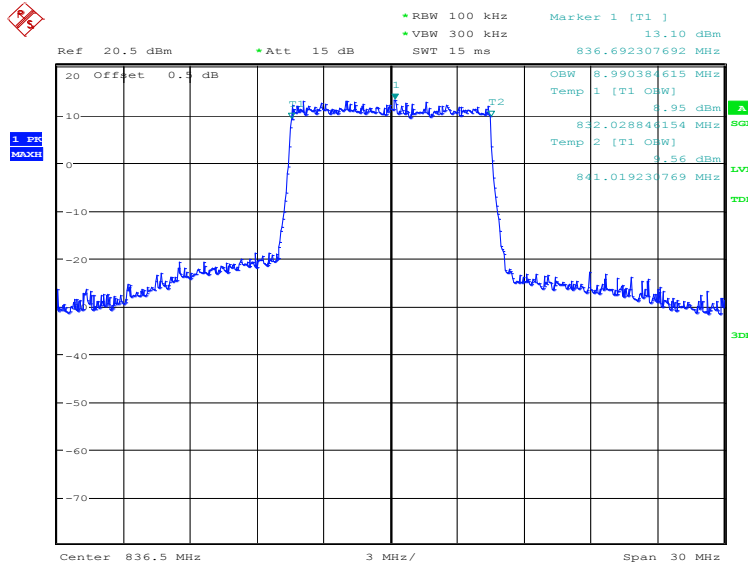
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	8942.31	8990.38

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



Date: 7.FEB.2021 18:18:27

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

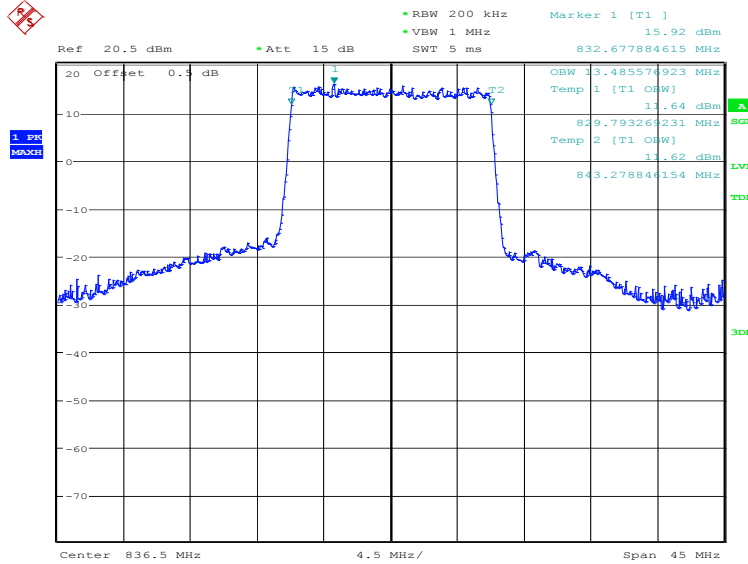


Date: 7.FEB.2021 18:19:06

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

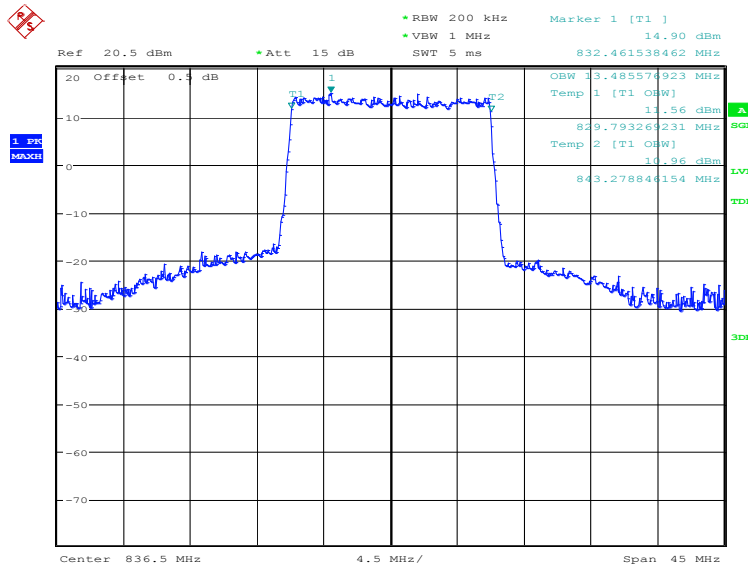
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	13485.58	13485.58

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



Date: 7.FEB.2021 18:19:46

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

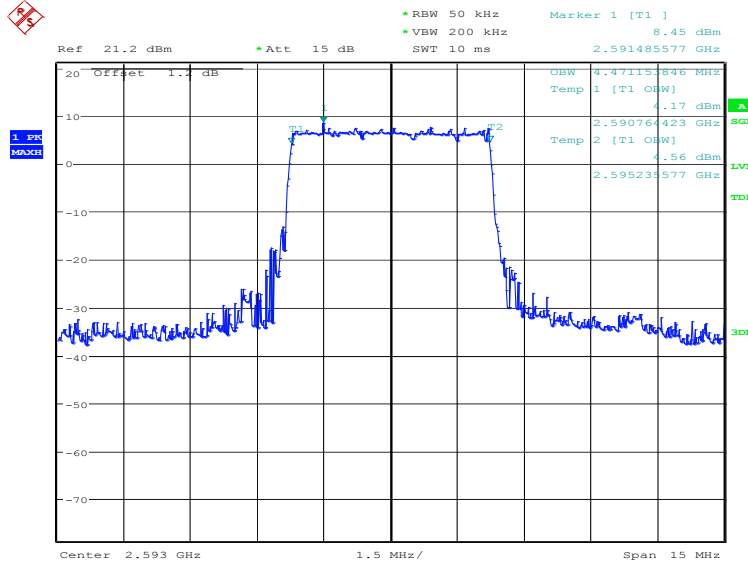


Date: 7.FEB.2021 18:20:25

**LTE band 41, 5MHz (99%)**

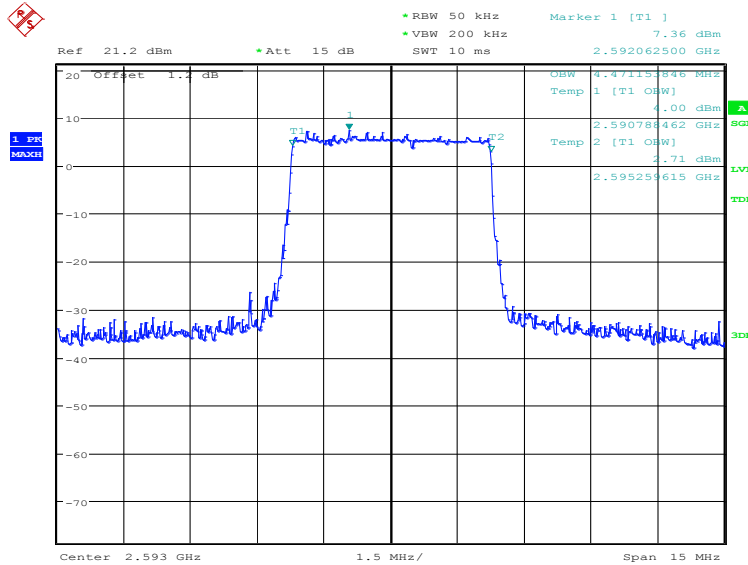
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	4471.15	4471.15

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



Date: 8.FEB.2021 08:58:43

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

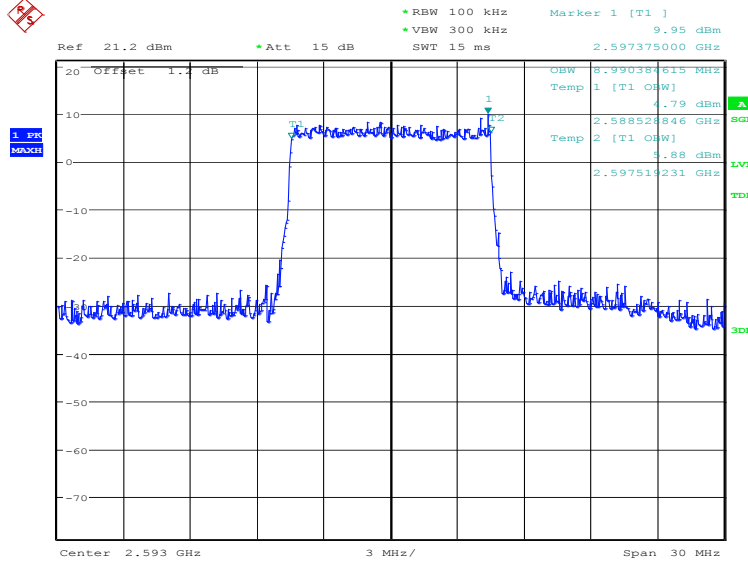


Date: 8.FEB.2021 08:59:21

**LTE band 41, 10MHz (99%)**

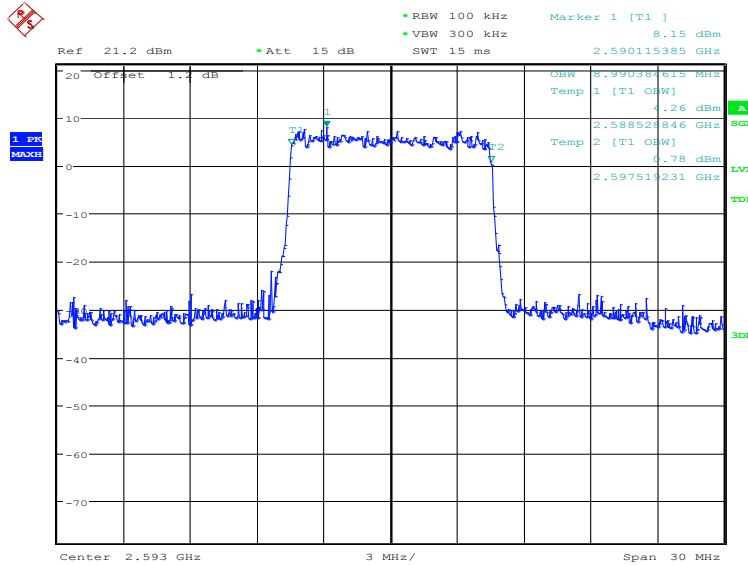
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	8990.38	8990.38

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



Date: 8.FEB.2021 09:00:02

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

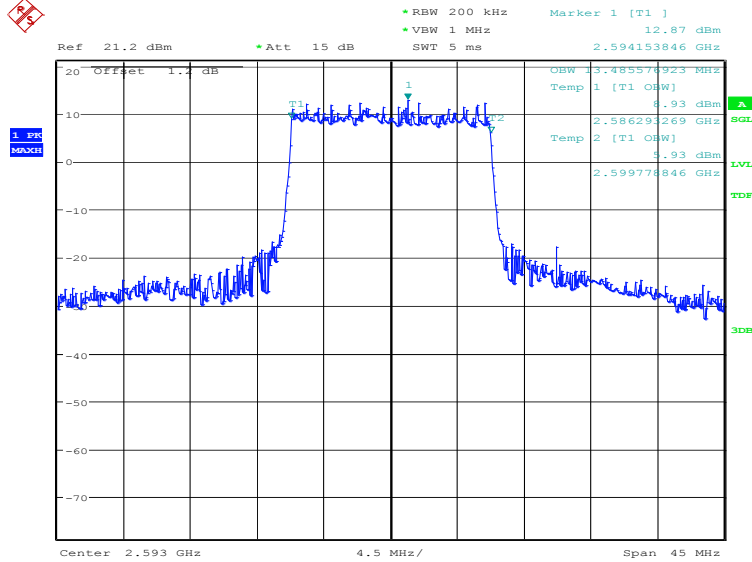


Date: 8.FEB.2021 09:00:40

**LTE band 41, 15MHz (99%)**

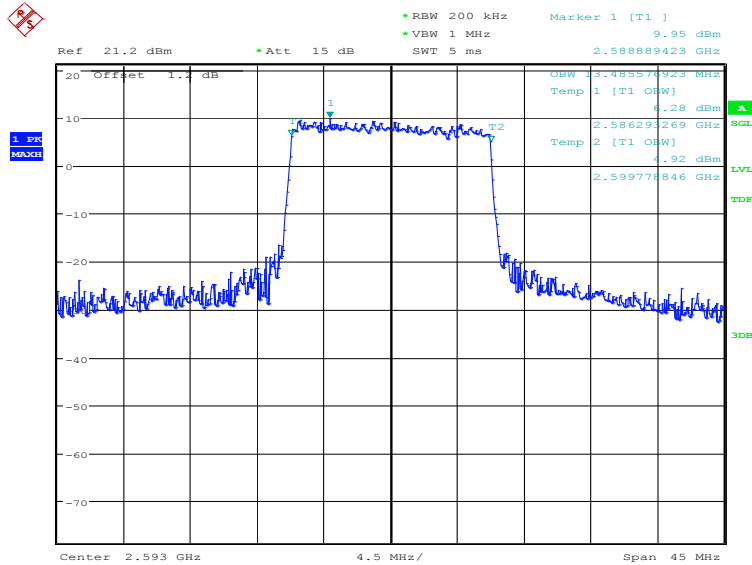
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 8.FEB.2021 09:01:20

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

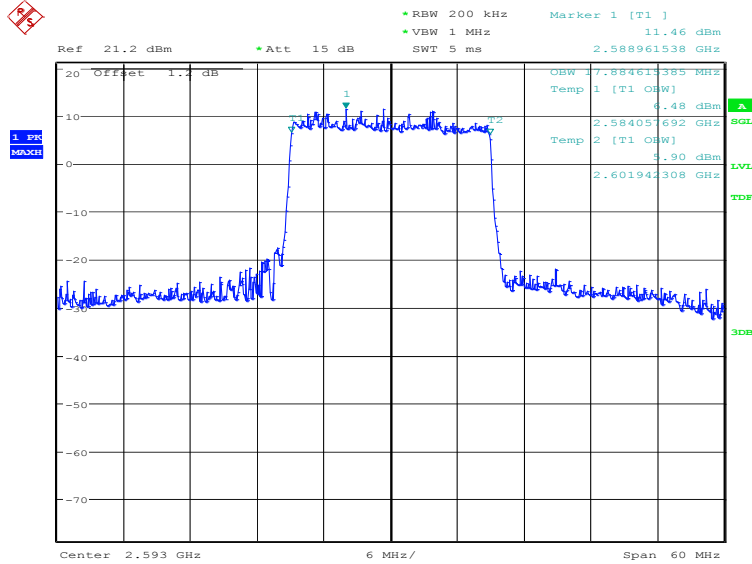


Date: 8.FEB.2021 09:01:59

**LTE band 41, 20MHz (99%)**

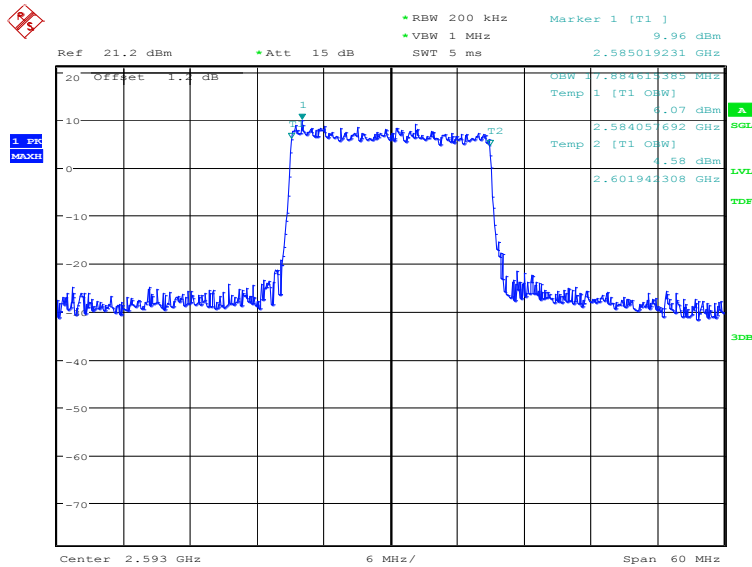
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	17884.62	17884.62

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



Date: 8.FEB.2021 09:02:39

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



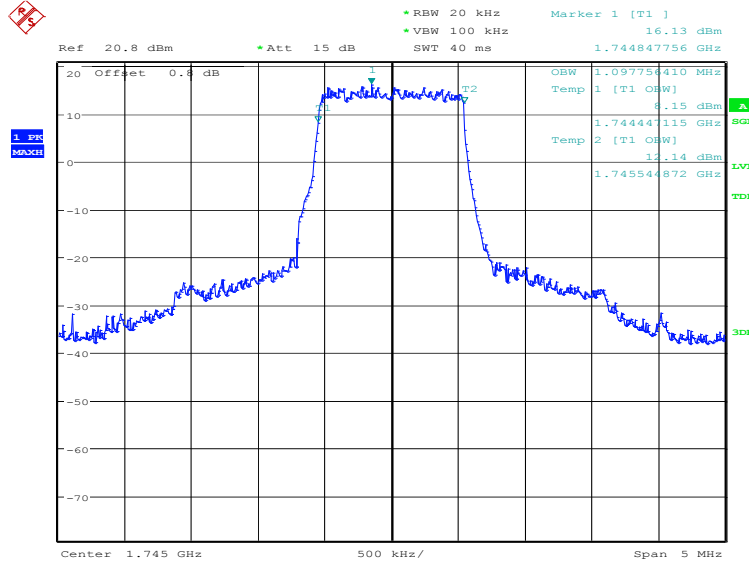
Date: 8.FEB.2021 09:03:18



### LTE band 66, 1.4MHz (99%)

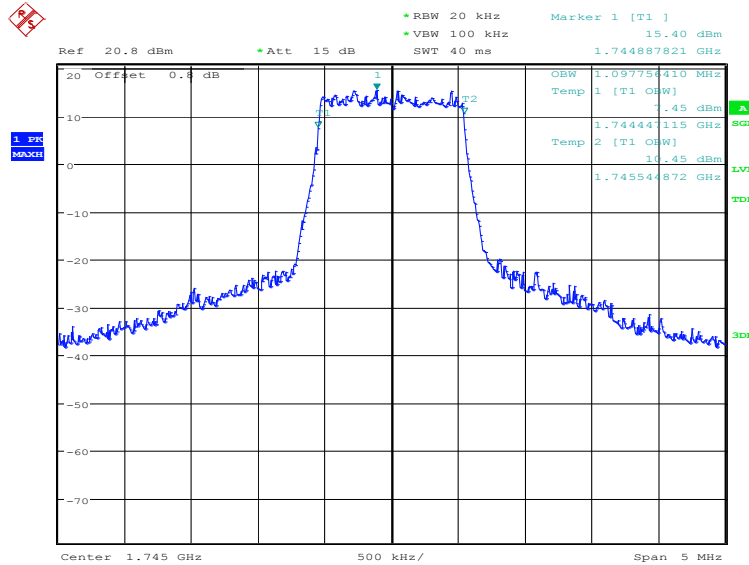
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
	1745.0	QPSK
	1097.76	1097.76

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



Date: 7.FEB.2021 18:27:02

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

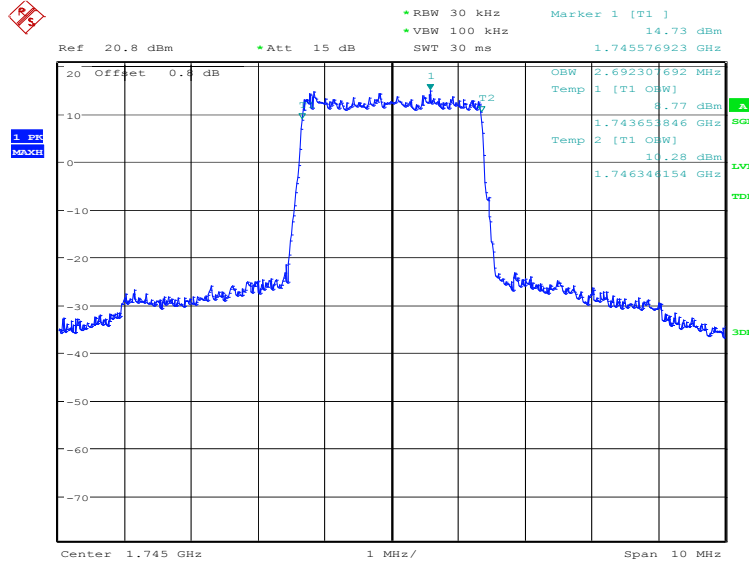


Date: 7.FEB.2021 18:27:41

### LTE band 66, 3MHz (99%)

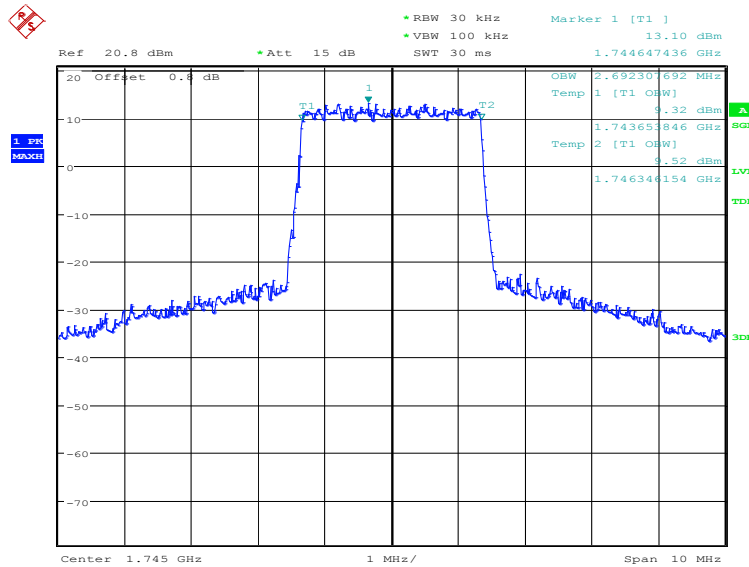
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	2692.31	2692.31

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



Date: 7.FEB.2021 18:28:22

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

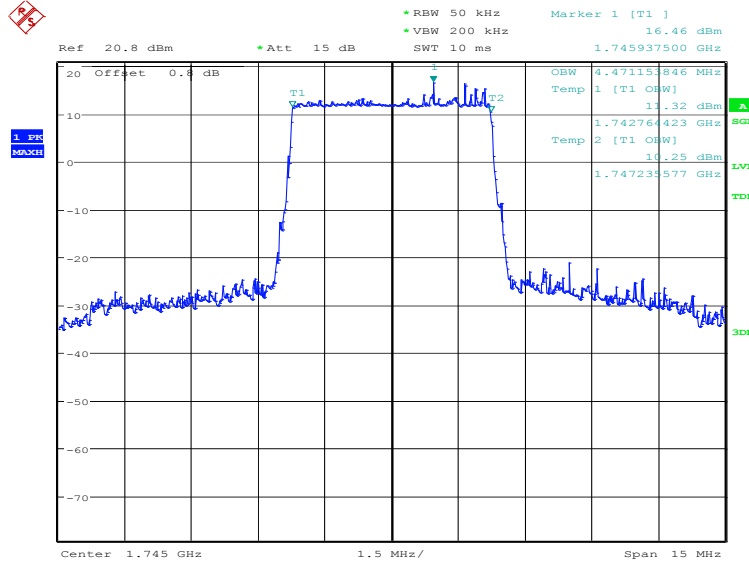


Date: 7.FEB.2021 18:29:00

**LTE band 66, 5MHz (99%)**

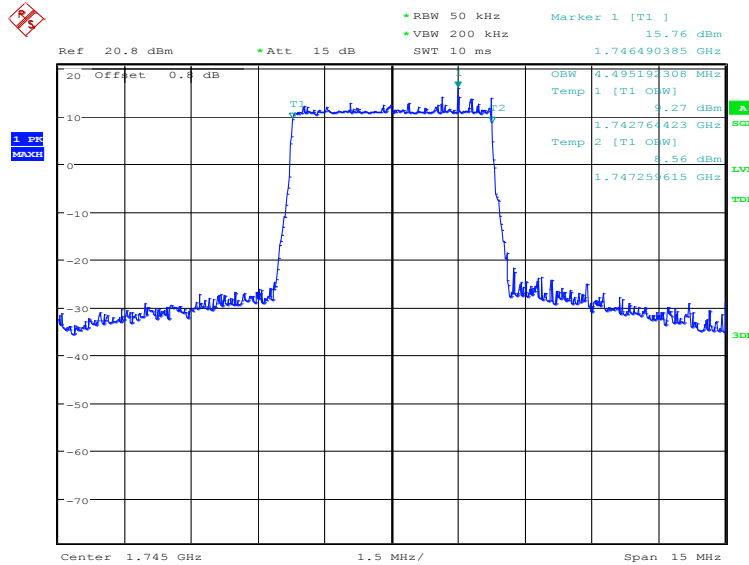
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	4471.15	4495.19

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



Date: 7.FEB.2021 18:29:41

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

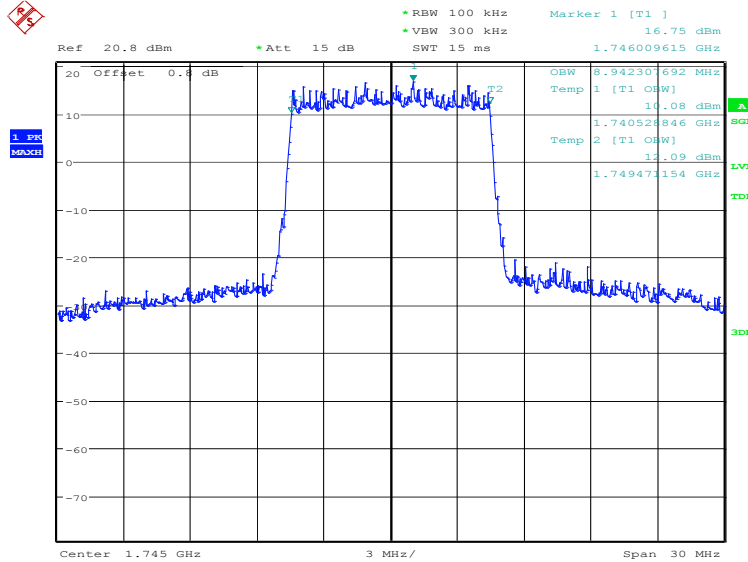


Date: 7.FEB.2021 18:30:19

**LTE band 66, 10MHz (99%)**

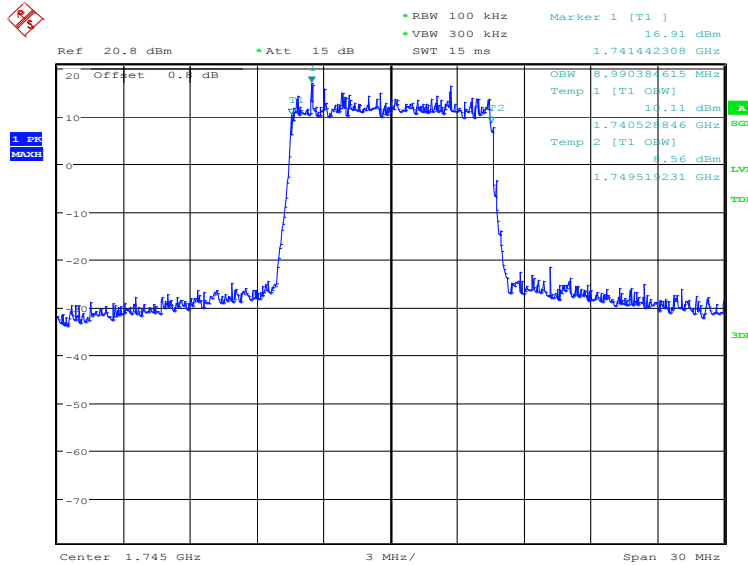
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	8942.31	8990.38

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



Date: 7.FEB.2021 18:31:00

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



Date: 7.FEB.2021 18:31:39