

LTE CA band 66C, 20MHz+20MHz bandwidth QPSK(worst case of all bandwidths)

Frequency Error vs Voltage

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.85	1710.500	1779.480		
50				-0.69	0.0004
40				0.49	0.0003
30				1.76	0.0010
10				1.20	0.0007
0				-4.15	0.0024
-10				-4.21	0.0024
-20				-1.27	0.0007
-30				-0.34	0.0002

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.500	1779.480	-1.50	0.0009
4.4				-5.05	0.0029

Note: Expanded measurement uncertainty is $U = 0.01 \text{ PPM}$, $k = 2$.

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.

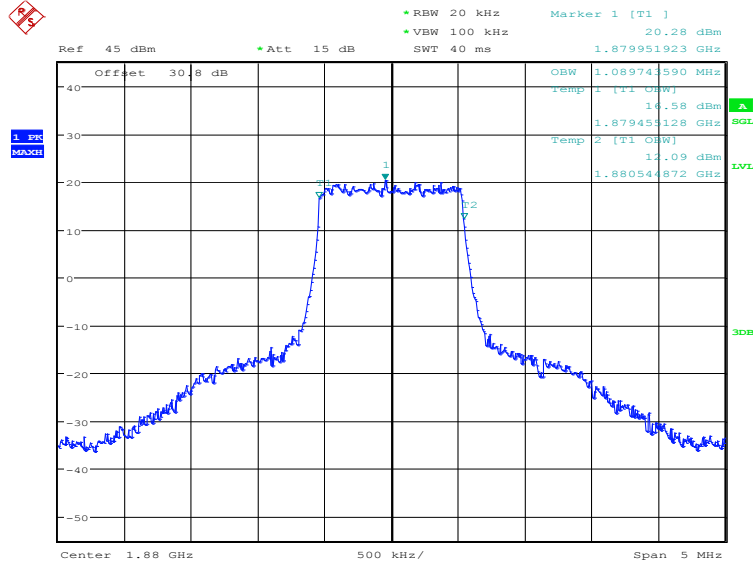
The measurement method is from ANSI C63.26:

- 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 $\geq 3 \times \text{RBW}$.
- c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
- d) Set the detection mode to peak, and the trace mode to max-hold.

LTE band 2, 1.4MHz (99%)

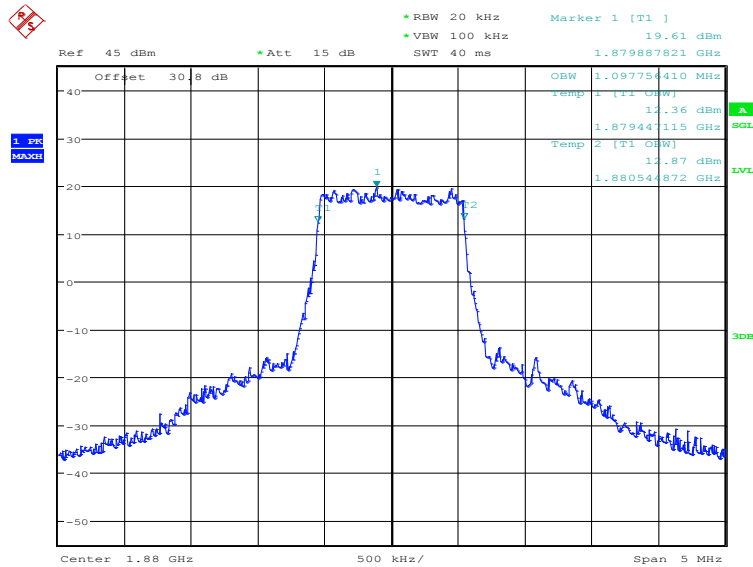
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	1089.74	1097.76

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



Date: 22.DEC.2023 07:09:22

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

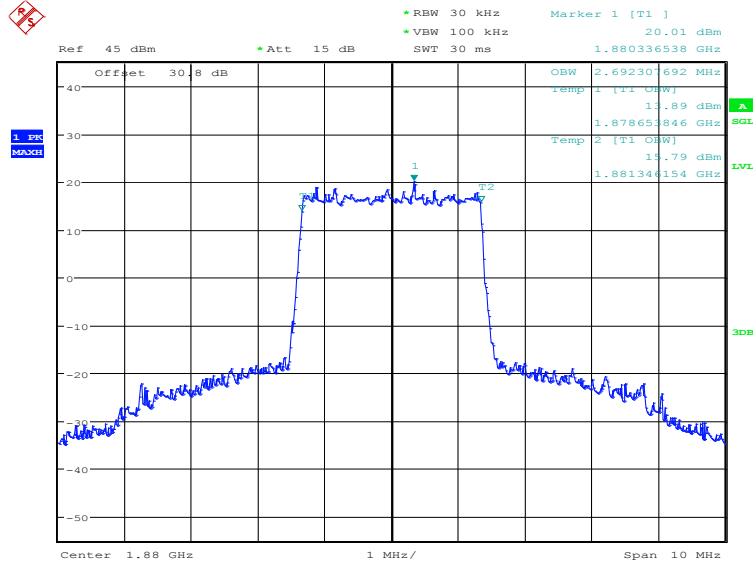


Date: 22.DEC.2023 07:10:01

LTE band 2, 3MHz (99%)

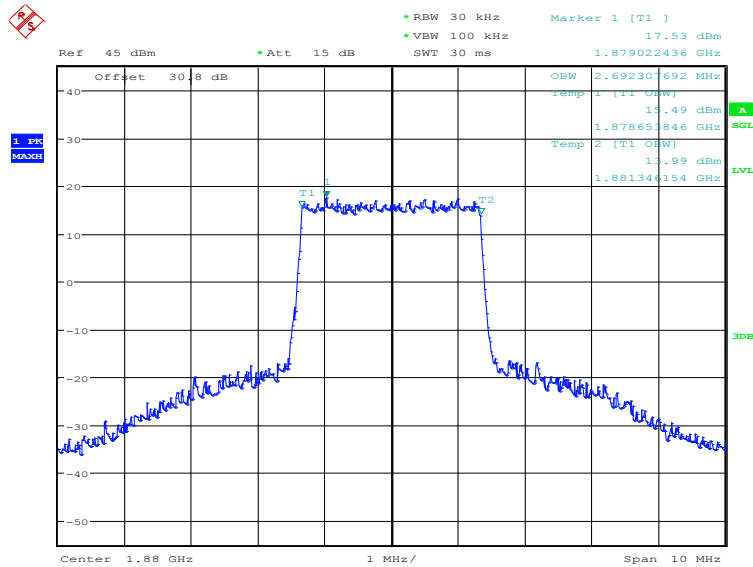
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	2692.31	2692.31

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



Date: 22.DEC.2023 07:10:43

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

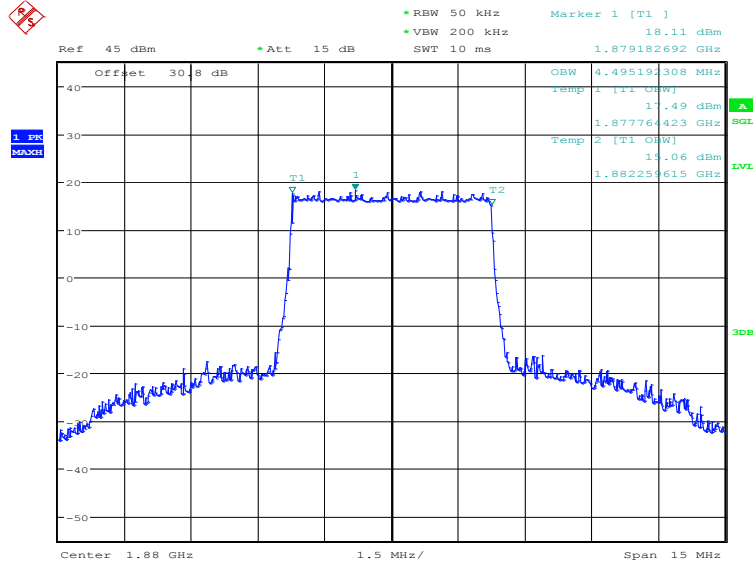


Date: 22.DEC.2023 07:11:23

LTE band 2, 5MHz (99%)

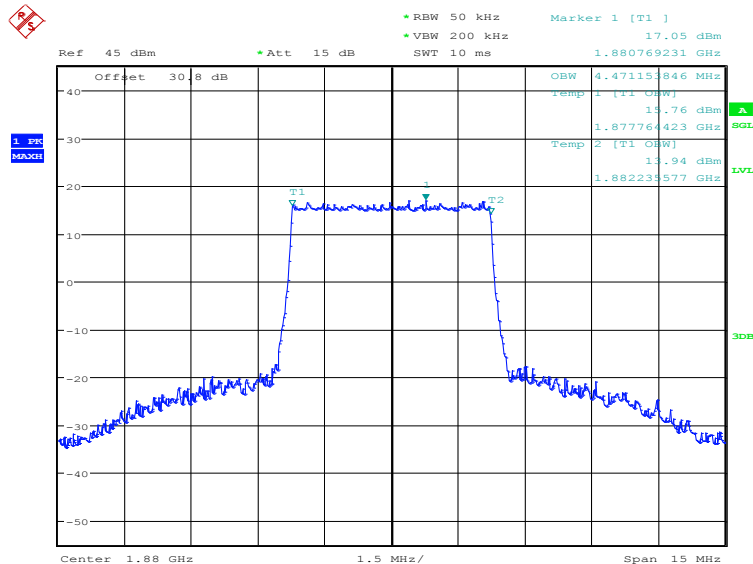
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	4495.19	4471.15

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



Date: 22.DEC.2023 07:12:05

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

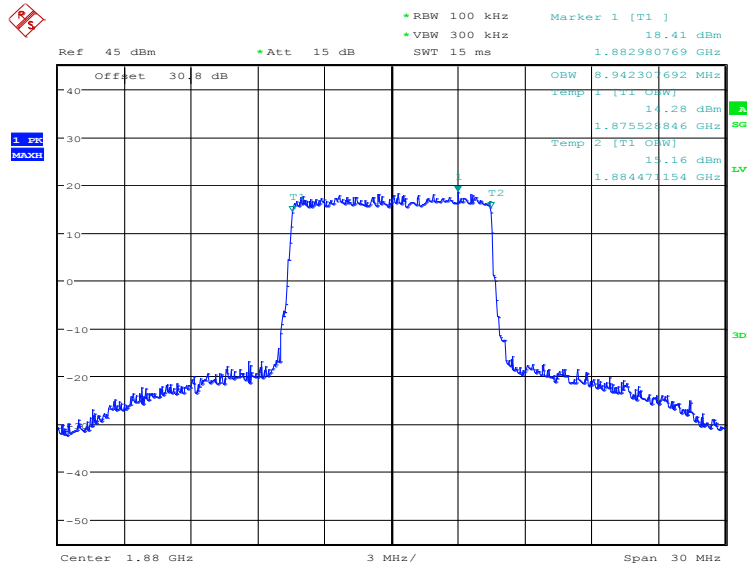


Date: 22.DEC.2023 07:12:45

LTE band 2, 10MHz (99%)

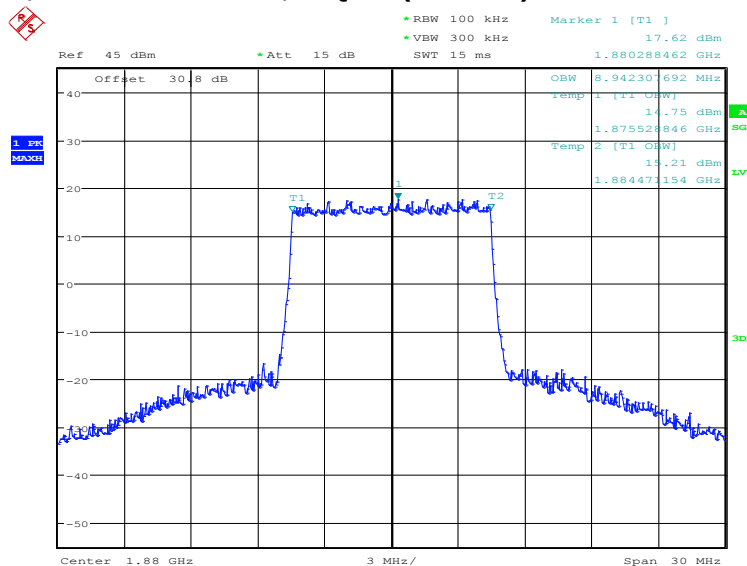
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 22.DEC.2023 07:13:27

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

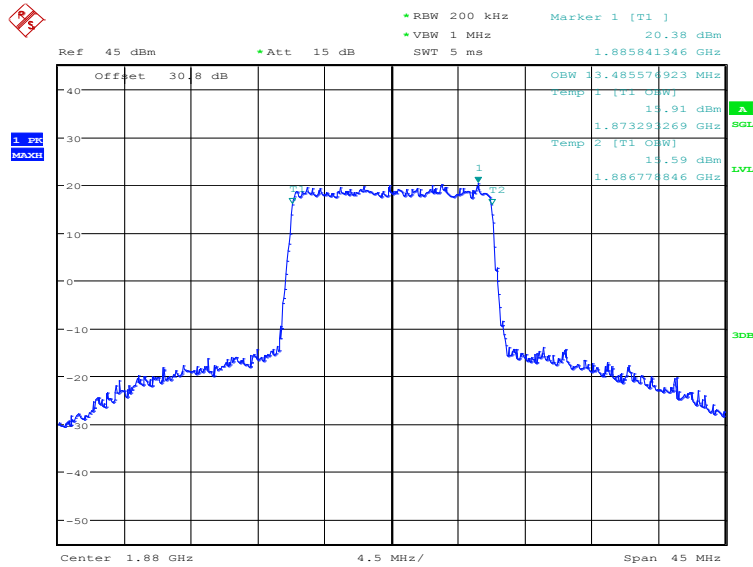


Date: 22.DEC.2023 07:14:06

LTE band 2, 15MHz (99%)

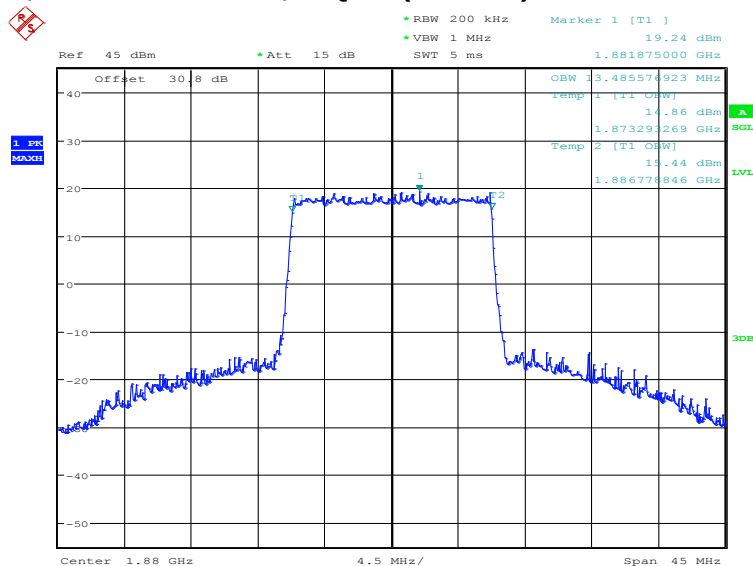
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 22.DEC.2023 07:14:48

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

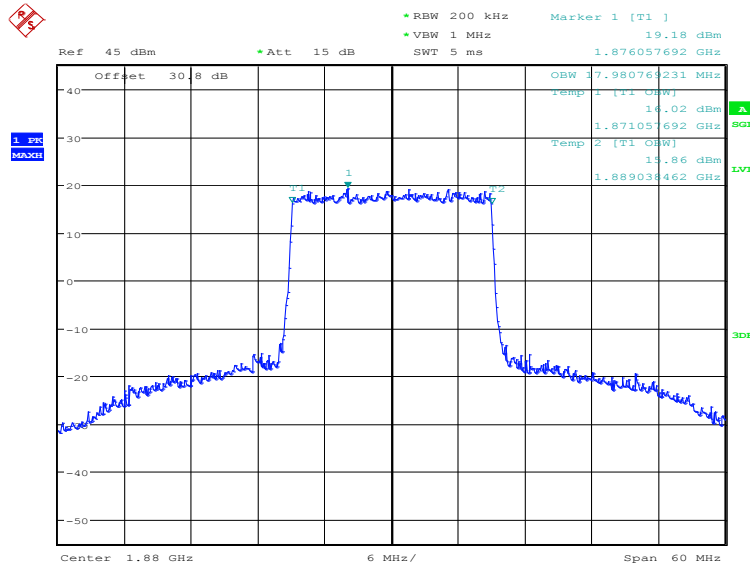


Date: 22.DEC.2023 07:15:28

LTE band 2, 20MHz (99%)

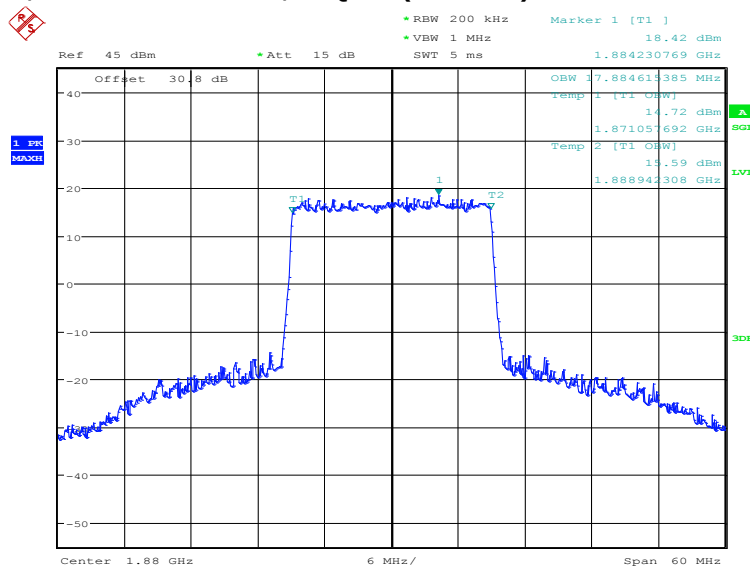
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1880.0	QPSK	16QAM
	17980.77	17884.62

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



Date: 22.DEC.2023 07:16:10

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

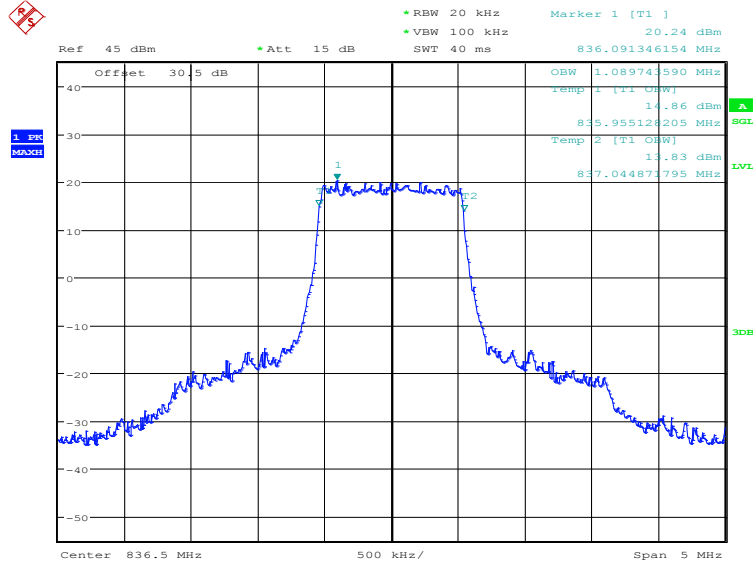


Date: 22.DEC.2023 07:16:50

LTE band 5, 1.4MHz (99%)

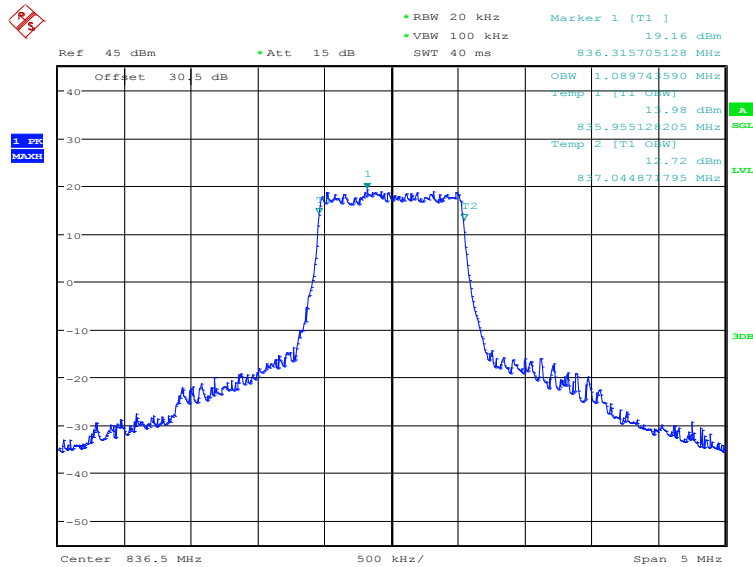
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	1089.74	1089.74

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



Date: 22.DEC.2023 08:23:26

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

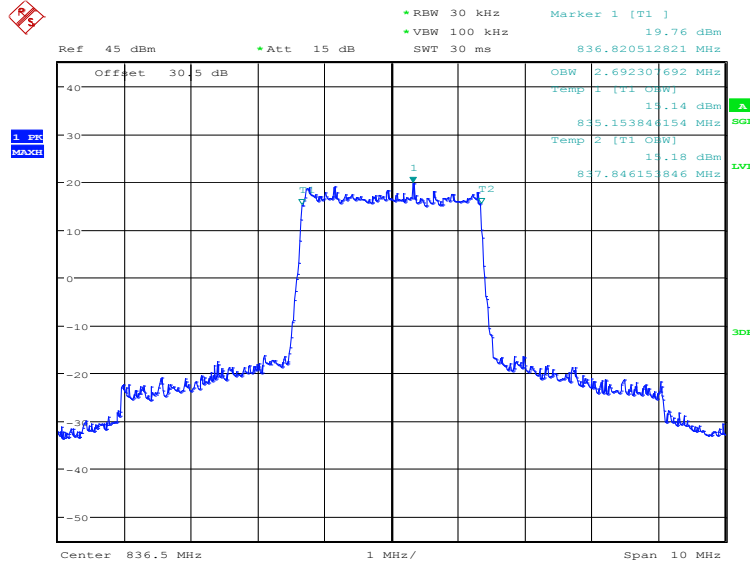


Date: 22.DEC.2023 08:24:06

LTE band 5, 3MHz (99%)

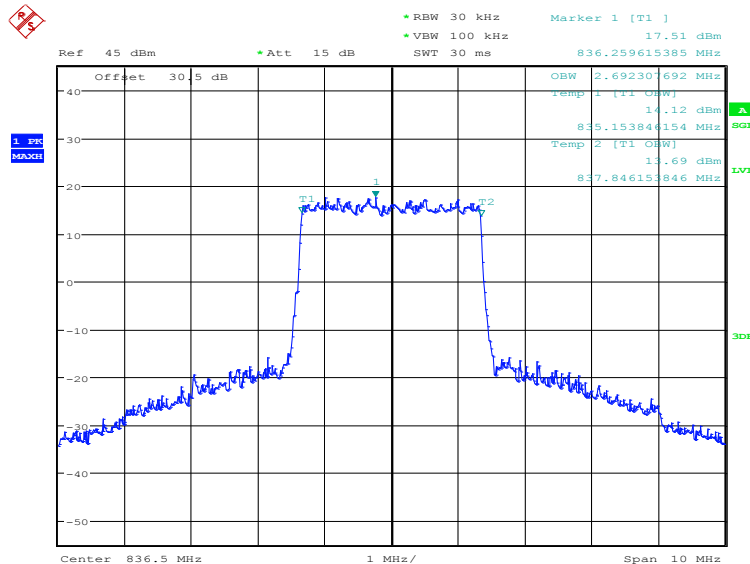
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 22.DEC.2023 08:24:48

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

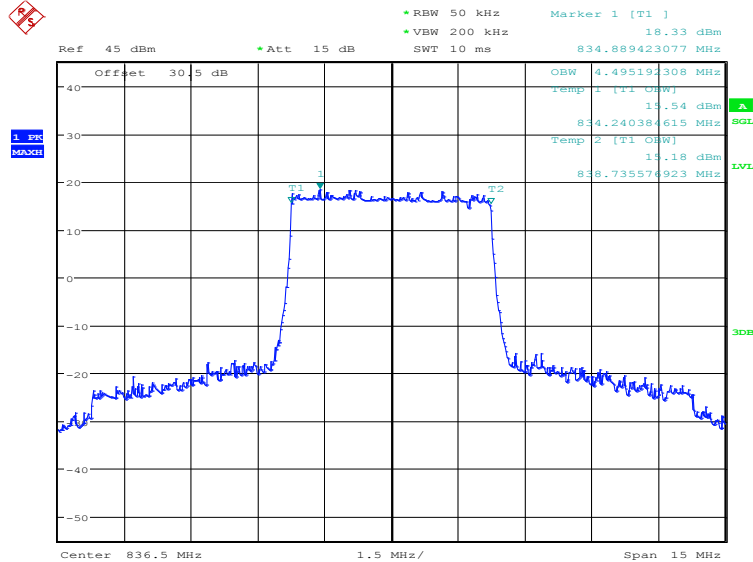


Date: 22.DEC.2023 08:25:27

LTE band 5, 5MHz (99%)

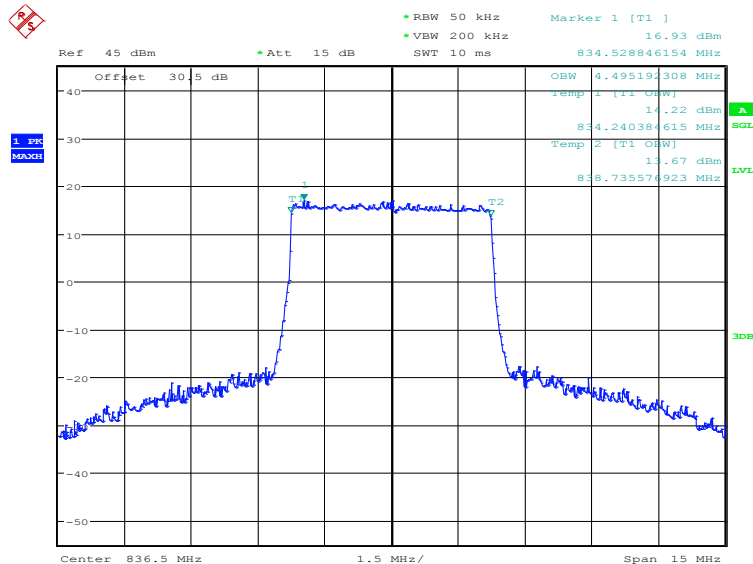
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	4495.19	4495.19

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



Date: 22.DEC.2023 08:26:09

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

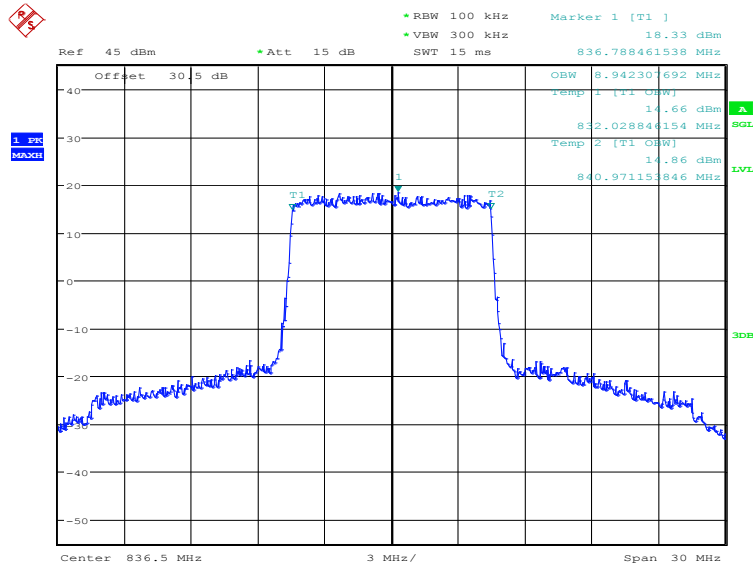


Date: 22.DEC.2023 08:26:49

LTE band 5, 10MHz (99%)

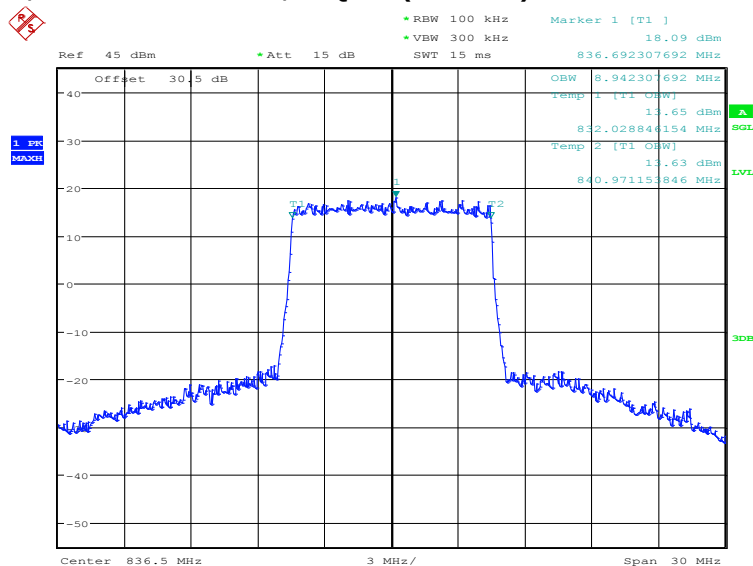
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	8942.31	8942.31

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



Date: 22.DEC.2023 08:27:31

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

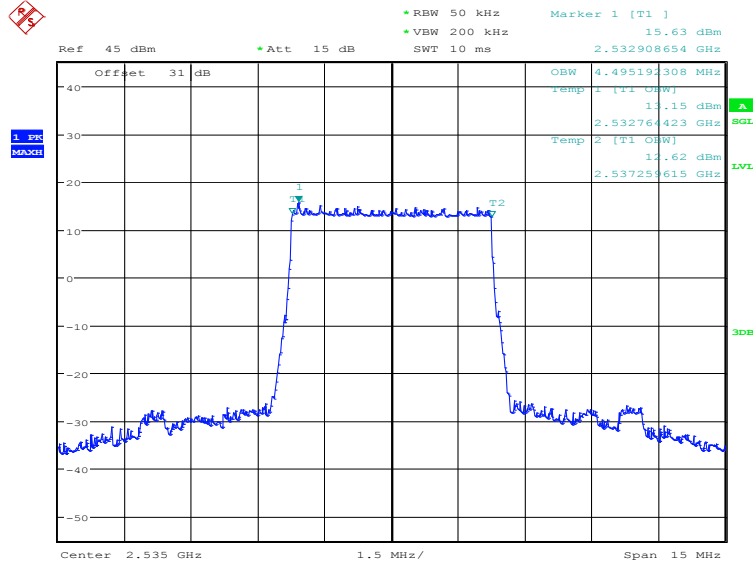


Date: 22.DEC.2023 08:28:11

LTE band 7, 5MHz (99%)

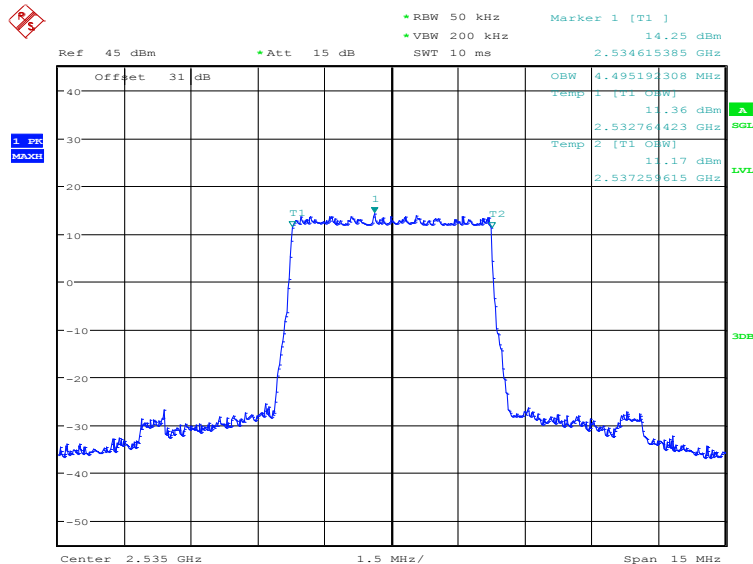
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 5.DEC.2023 13:25:19

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

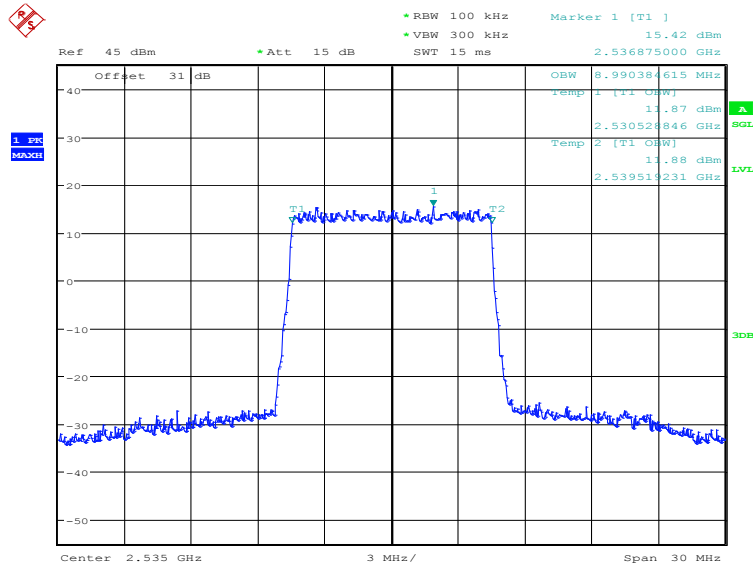


Date: 5.DEC.2023 13:25:59

LTE band 7, 10MHz (99%)

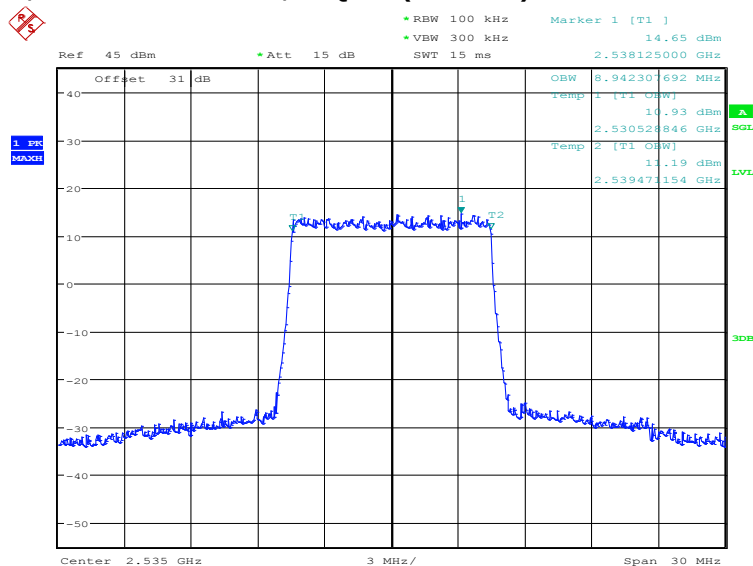
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	8990.38	8942.31

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



Date: 5.DEC.2023 13:26:41

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

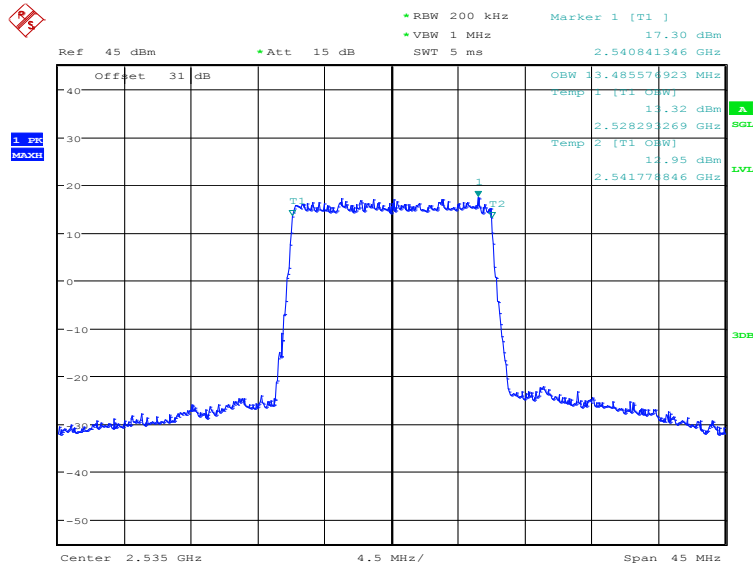


Date: 5.DEC.2023 13:27:21

LTE band 7, 15MHz (99%)

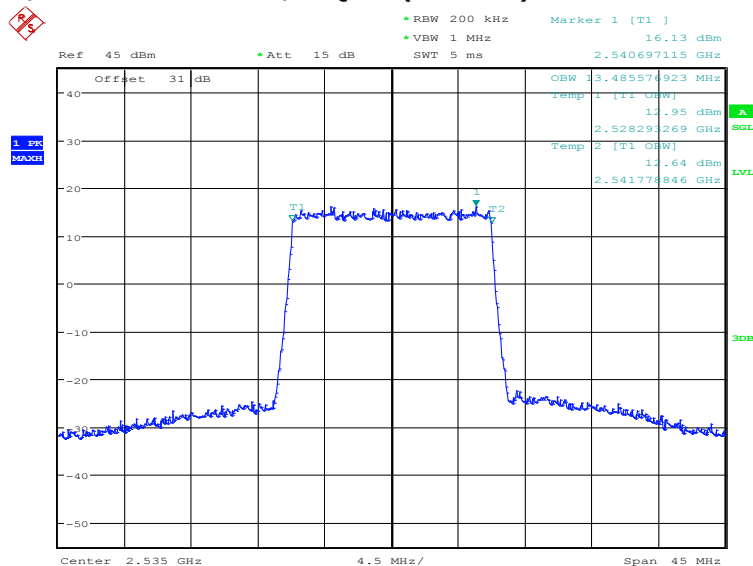
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 5.DEC.2023 13:28:03

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

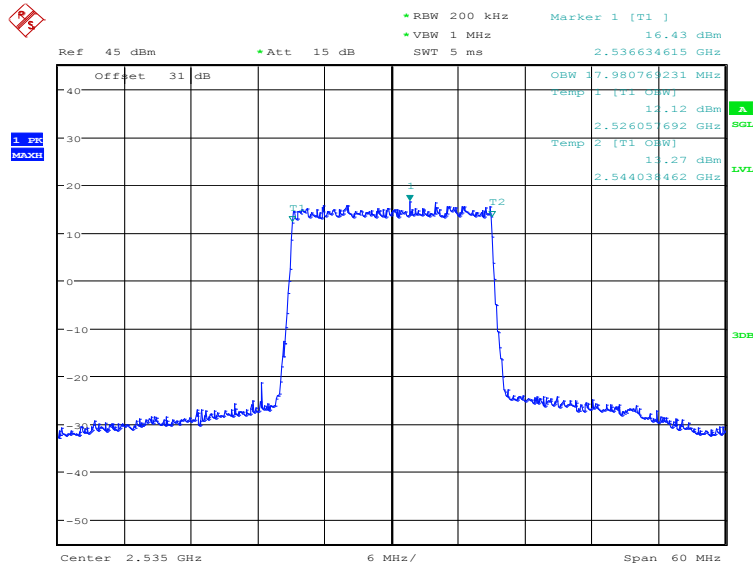


Date: 5.DEC.2023 13:28:43

LTE band 7, 20MHz (99%)

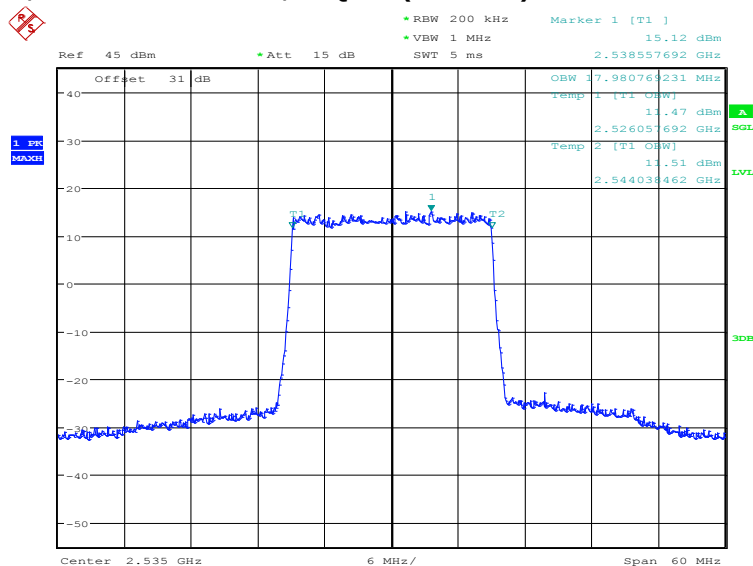
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	17980.77	17980.77

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



Date: 5.DEC.2023 13:29:25

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

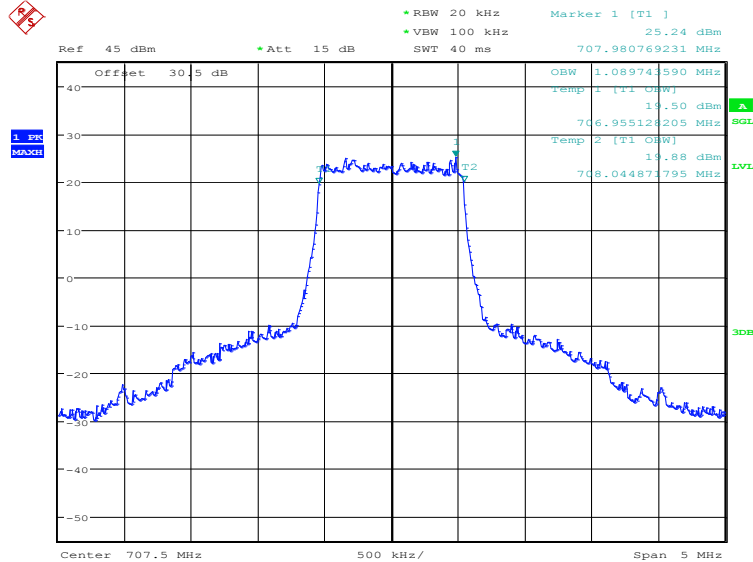


Date: 5.DEC.2023 13:30:05

LTE band 12, 1.4MHz (99%)

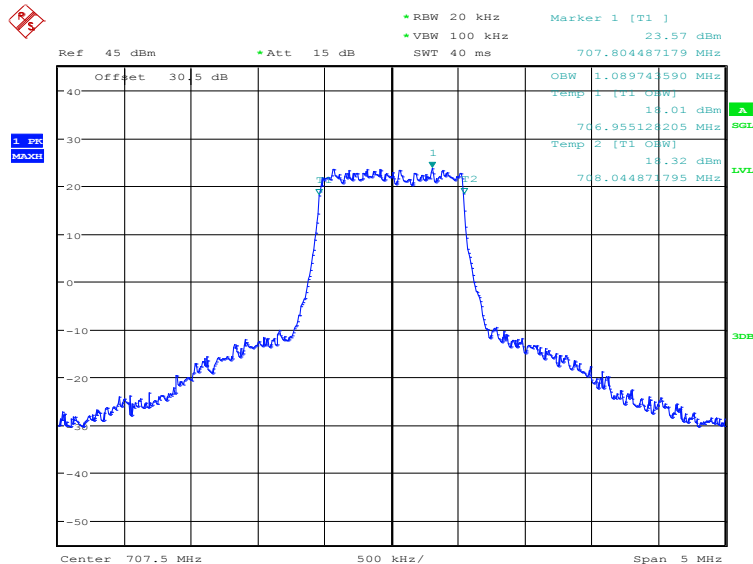
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	1089.74	1089.74

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



Date: 5.DEC.2023 12:28:05

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

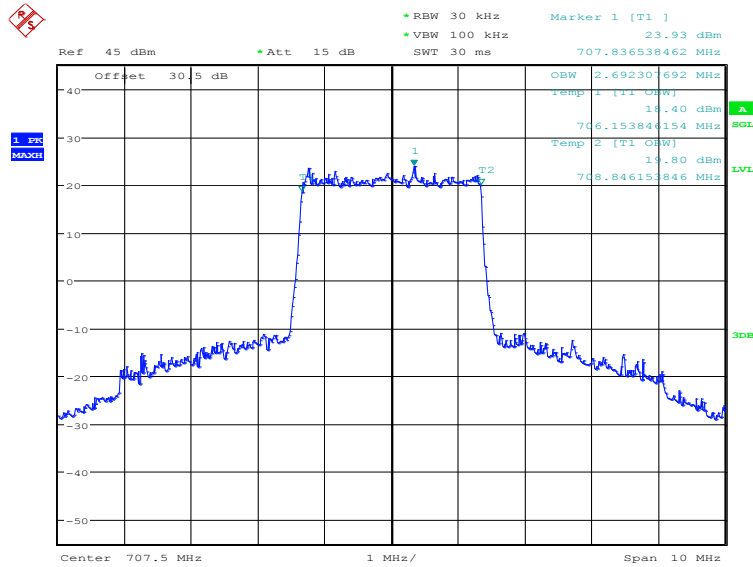


Date: 5.DEC.2023 12:28:44

LTE band 12, 3MHz (99%)

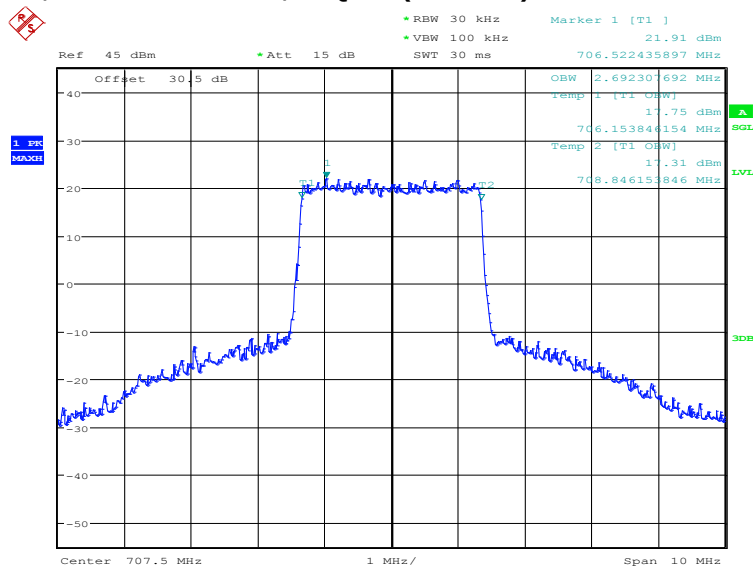
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 5.DEC.2023 12:29:26

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

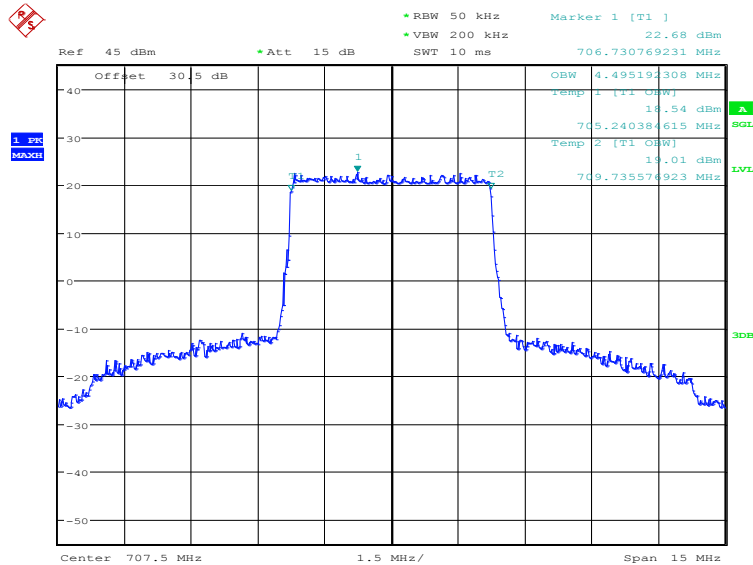


Date: 5.DEC.2023 12:30:06

LTE band 12, 5MHz (99%)

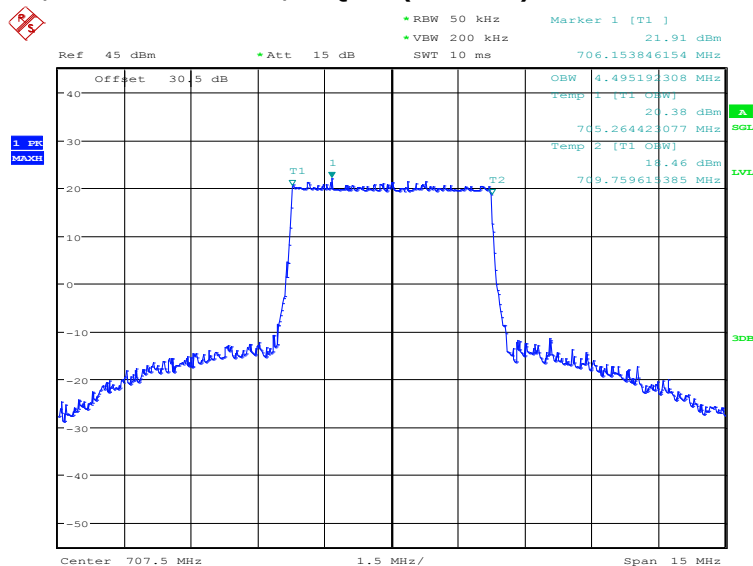
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	4495.19	4495.19

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



Date: 5.DEC.2023 12:30:48

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

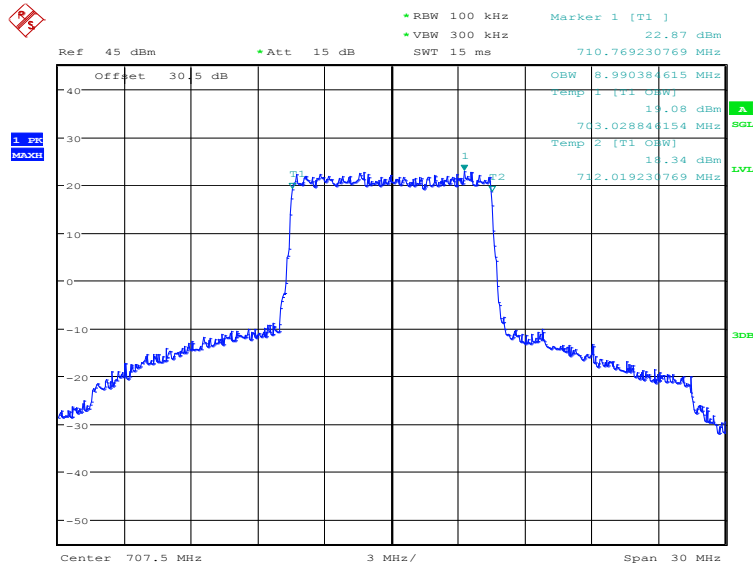


Date: 5.DEC.2023 12:31:28

LTE band 12, 10MHz (99%)

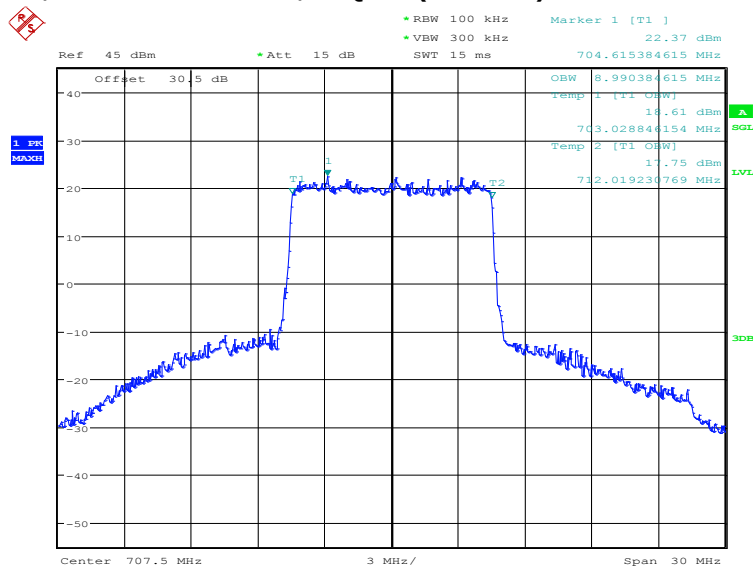
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	8990.38	8990.38

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



Date: 5.DEC.2023 12:32:09

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

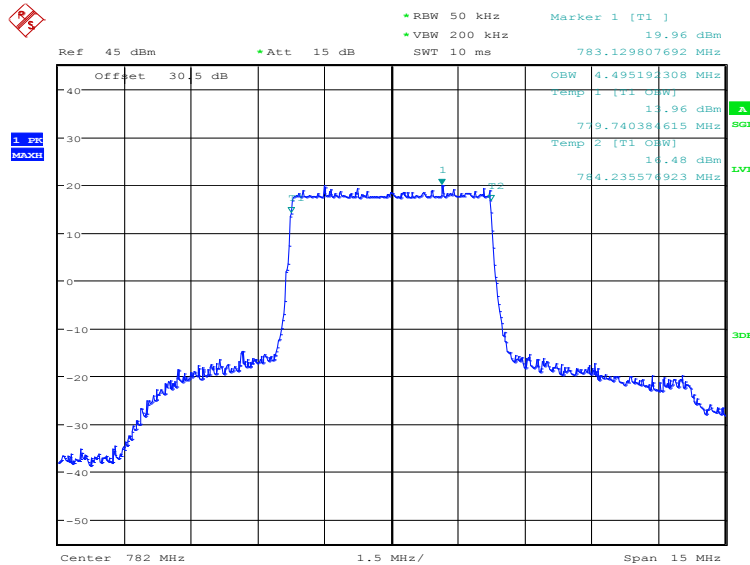


Date: 5.DEC.2023 12:32:49

LTE band 13, 5MHz (99%)

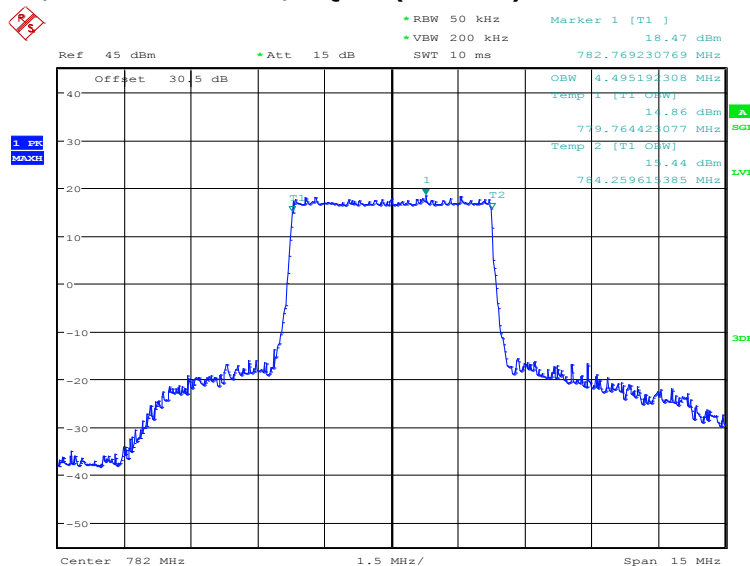
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 5.DEC.2023 12:33:33

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

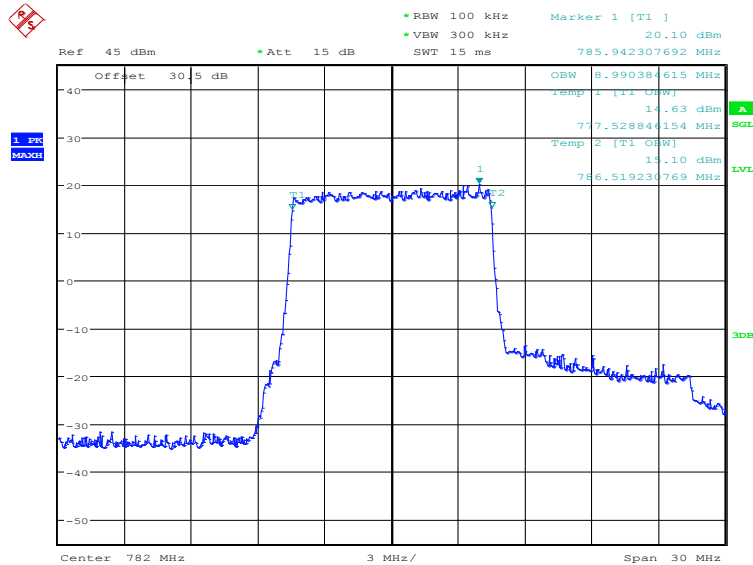


Date: 5.DEC.2023 12:34:13

LTE band 13, 10MHz (99%)

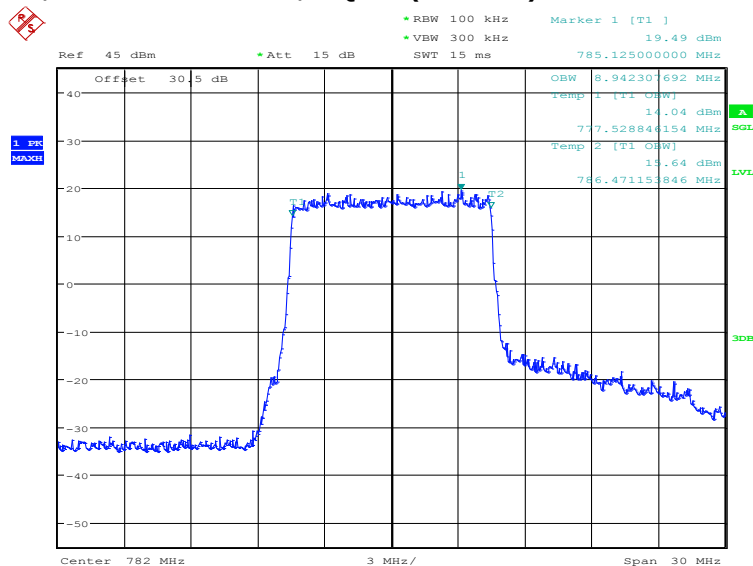
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	8990.38	8942.31

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



Date: 5.DEC.2023 12:34:55

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

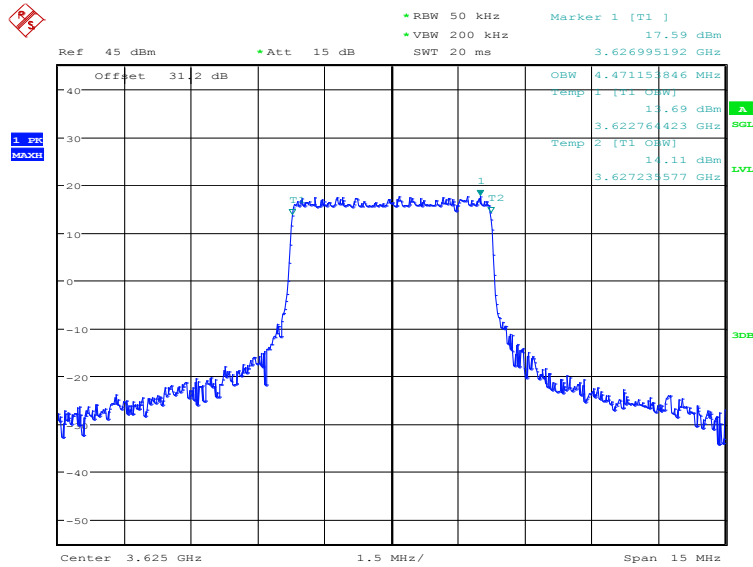


Date: 5.DEC.2023 12:35:34

LTE band 48, 5MHz (99%)

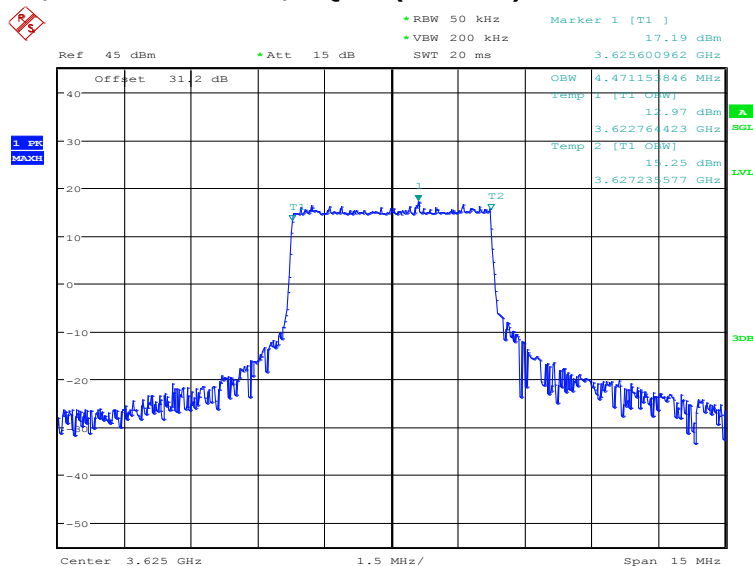
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	4471.15	4471.15

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



Date: 5.DEC.2023 11:04:43

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

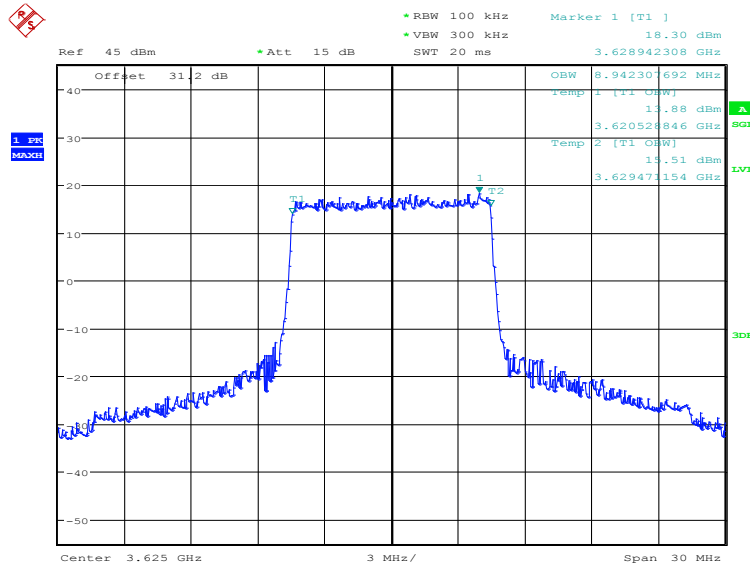


Date: 5.DEC.2023 11:05:23

LTE band 48, 10MHz (99%)

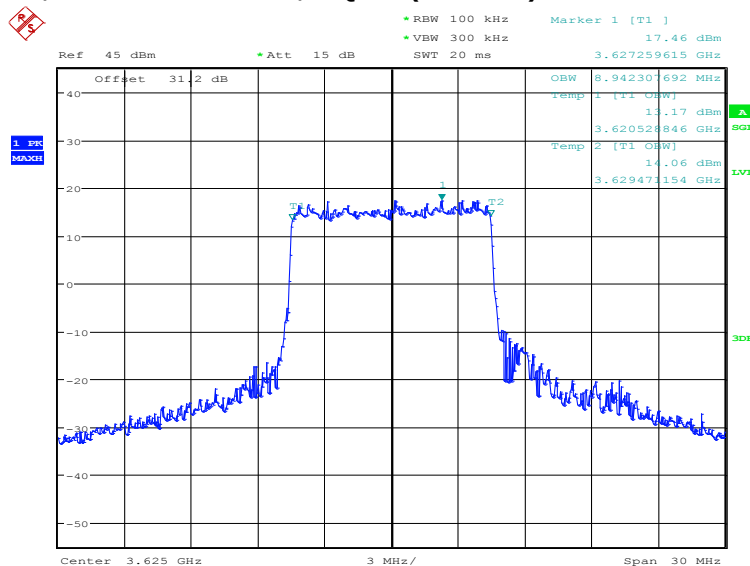
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 5.DEC.2023 11:06:05

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

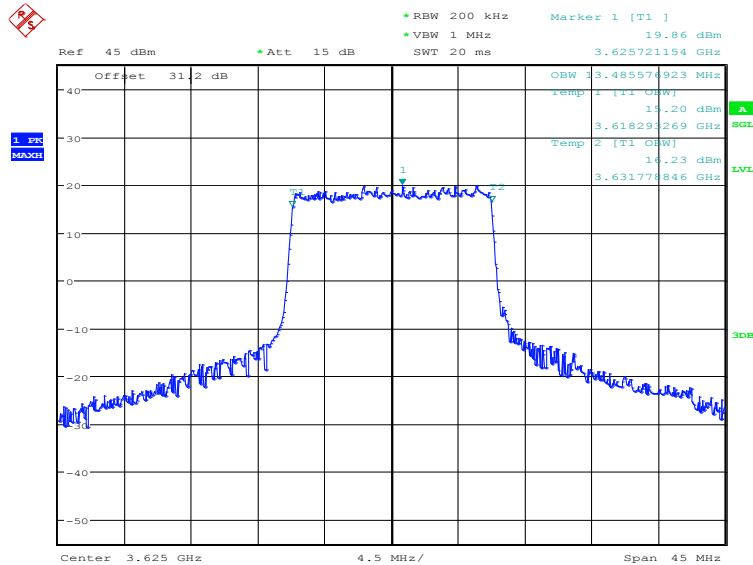


Date: 5.DEC.2023 11:06:45

LTE band 48, 15MHz (99%)

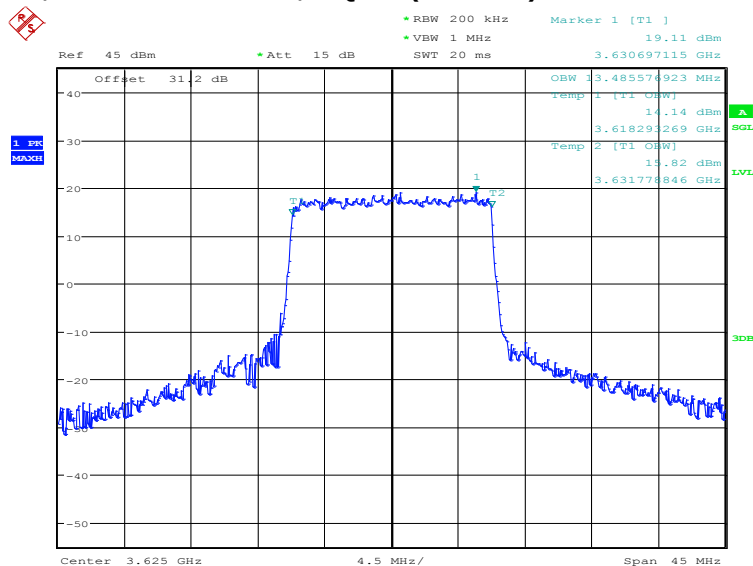
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 5.DEC.2023 11:07:27

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

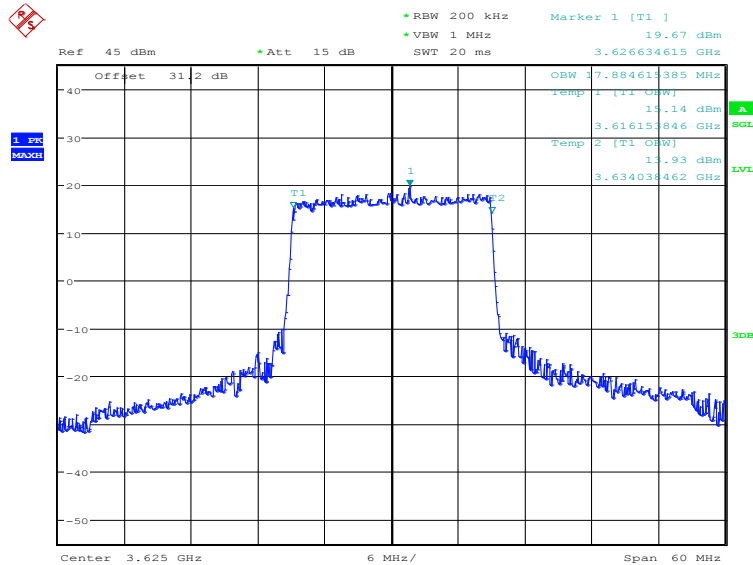


Date: 5.DEC.2023 11:08:07

LTE band 48, 20MHz (99%)

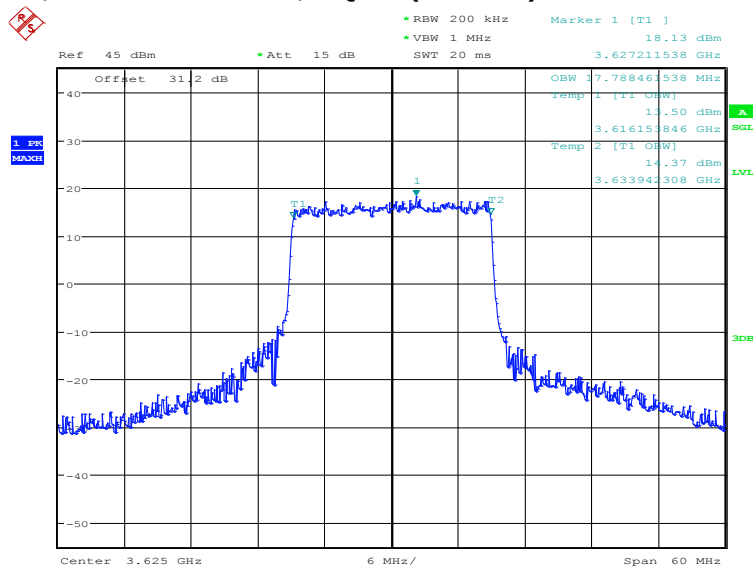
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
3625.0	QPSK	16QAM
	17884.62	17788.46

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



Date: 5.DEC.2023 11:08:49

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

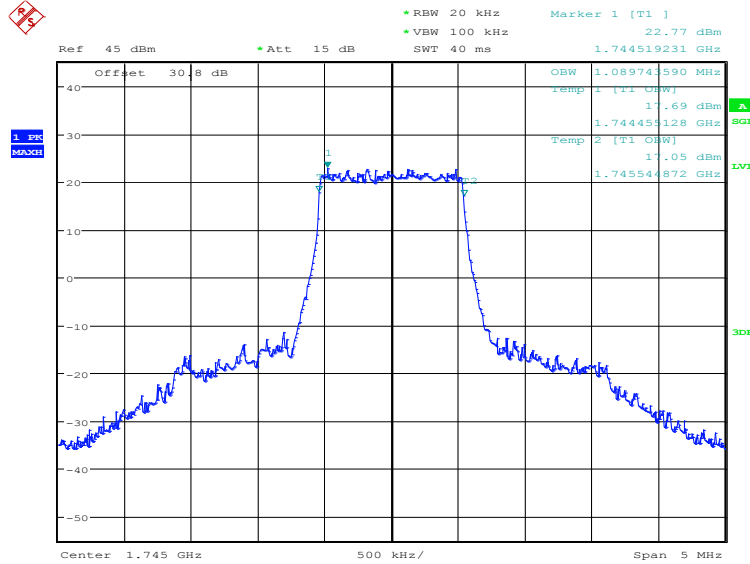


Date: 5.DEC.2023 11:09:29

LTE band 66, 1.4MHz (99%)

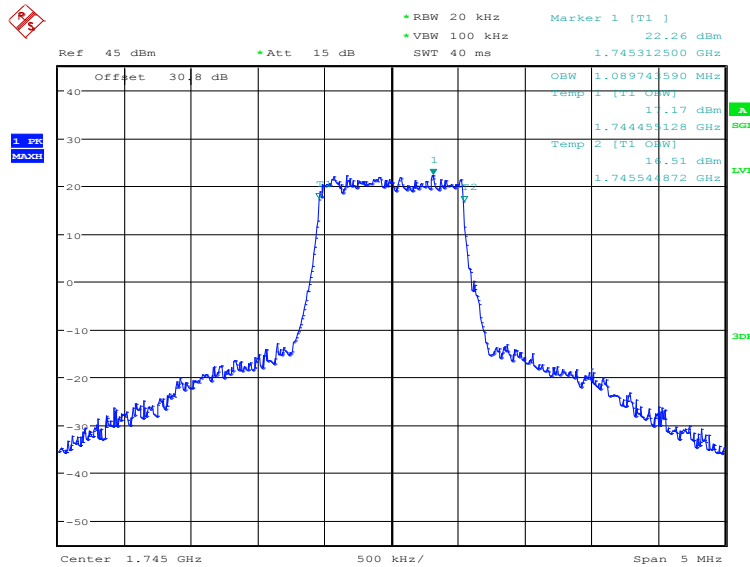
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	1089.74	1089.74

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



Date: 5.DEC.2023 10:55:48

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

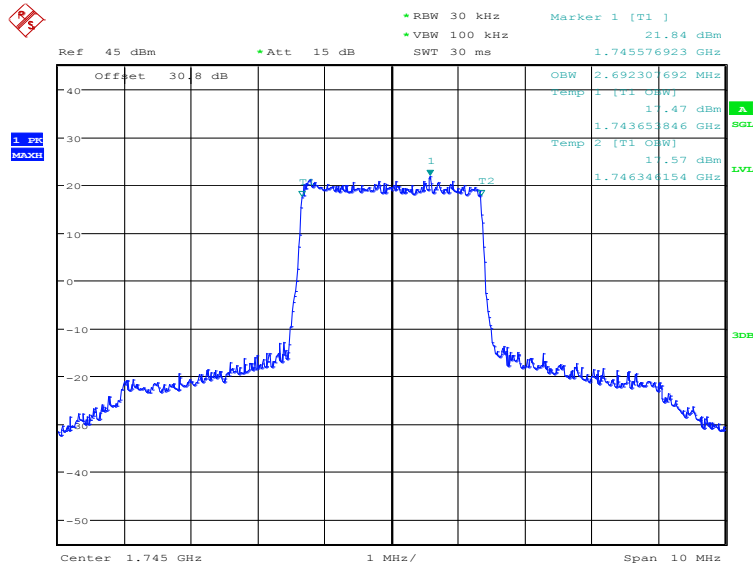


Date: 5.DEC.2023 10:56:28

LTE band 66, 3MHz (99%)

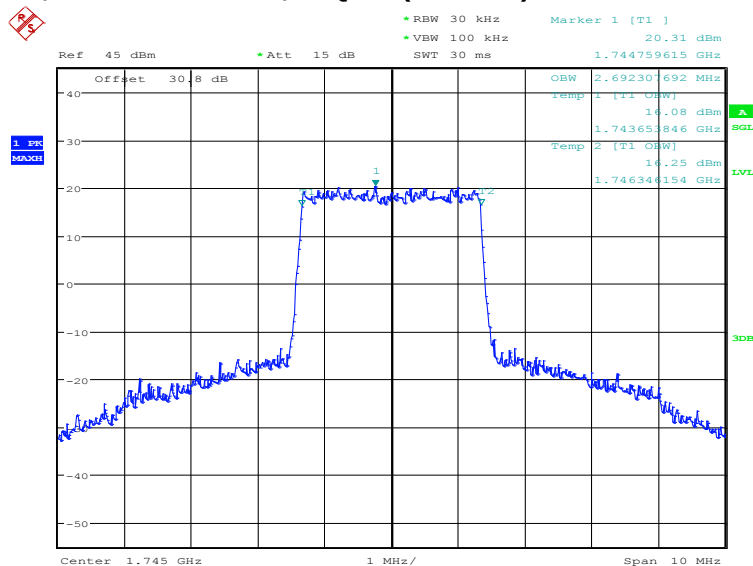
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	2692.31	2692.31

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



Date: 5.DEC.2023 10:57:10

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

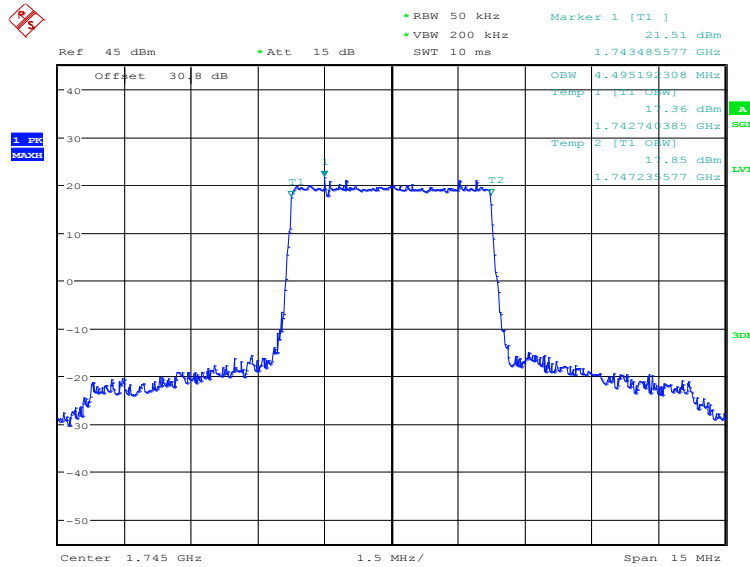


Date: 5.DEC.2023 10:57:49

LTE band 66, 5MHz (99%)

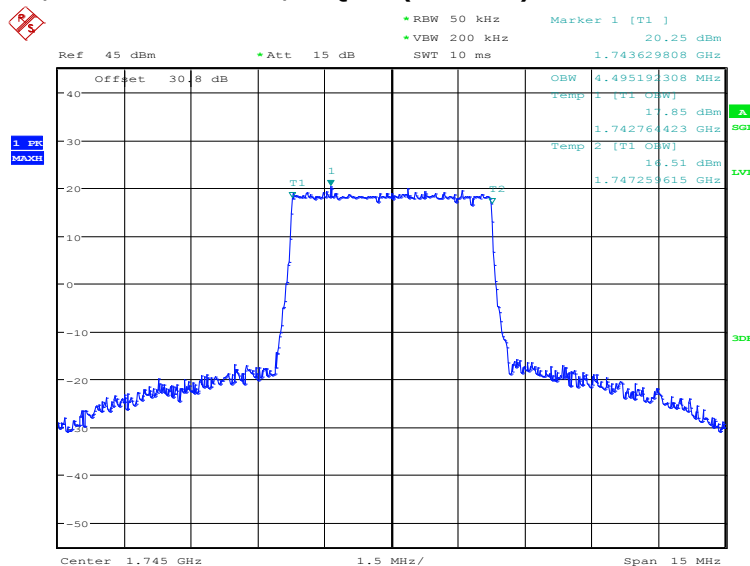
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 5.DEC.2023 10:58:32

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

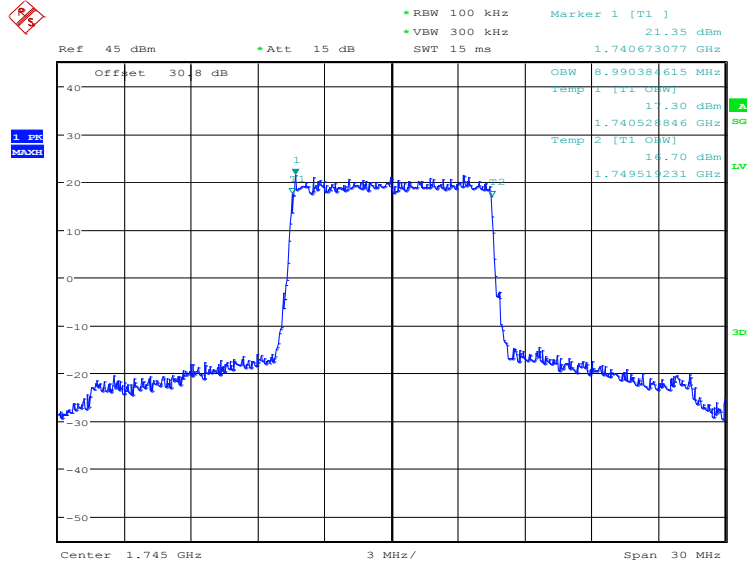


Date: 5.DEC.2023 10:59:11

LTE band 66, 10MHz (99%)

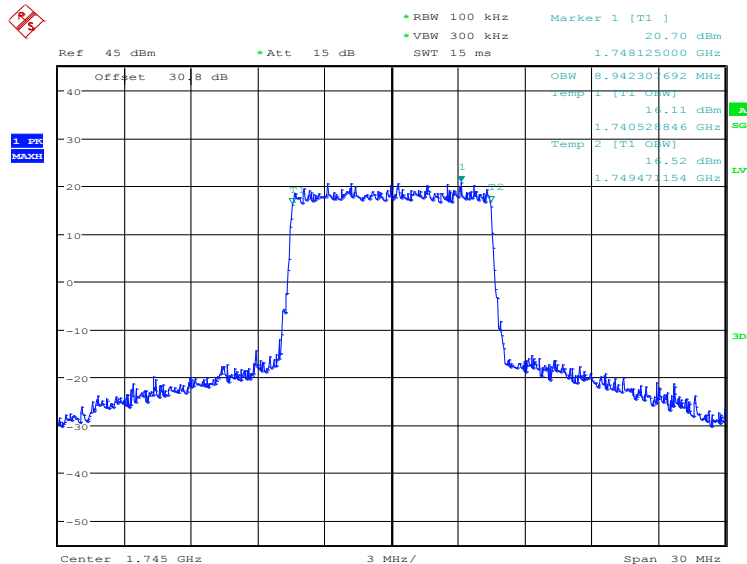
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	8990.38	8942.31

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



Date: 5.DEC.2023 10:59:53

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

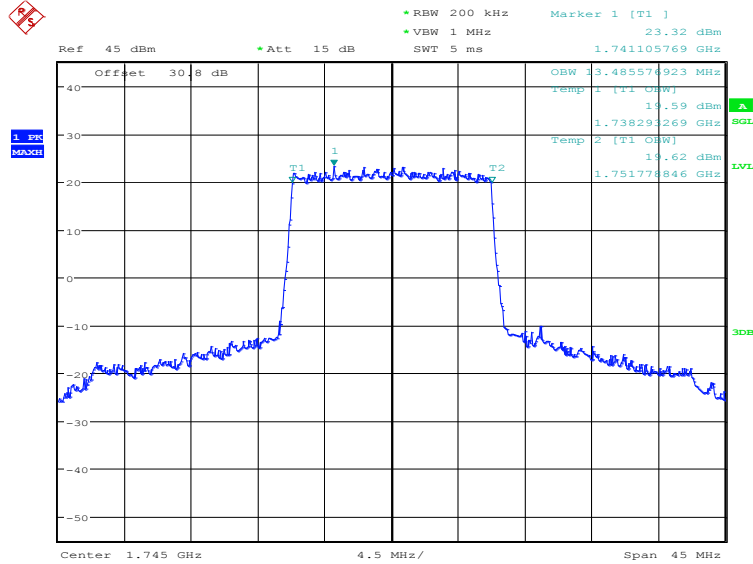


Date: 5.DEC.2023 11:00:33

LTE band 66, 15MHz (99%)

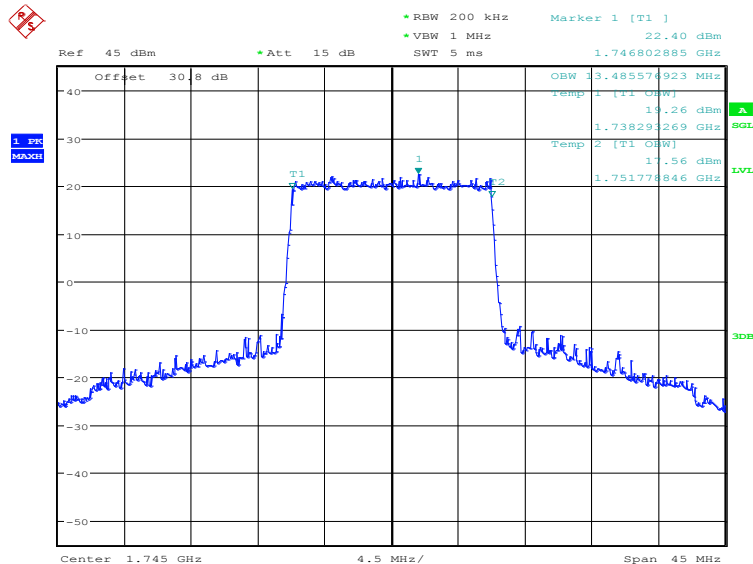
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 5.DEC.2023 11:01:15

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

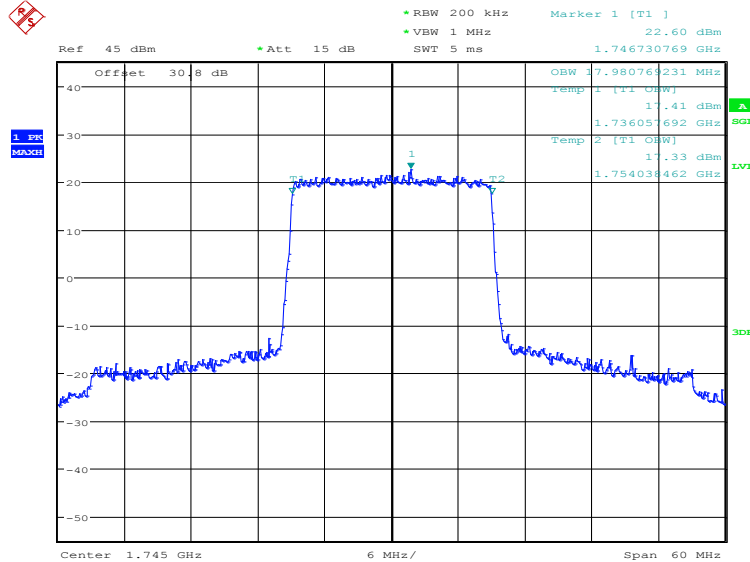


Date: 5.DEC.2023 11:01:55

LTE band 66, 20MHz (99%)

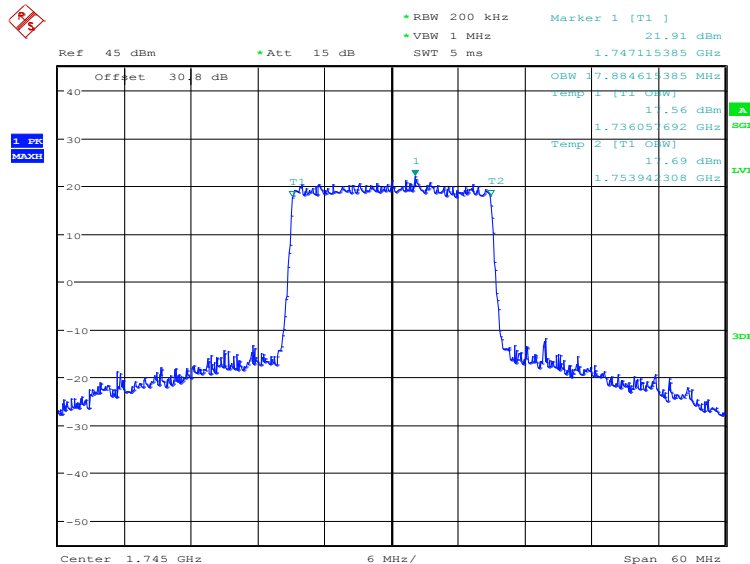
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	17980.77	17884.62

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



Date: 5.DEC.2023 11:02:37

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

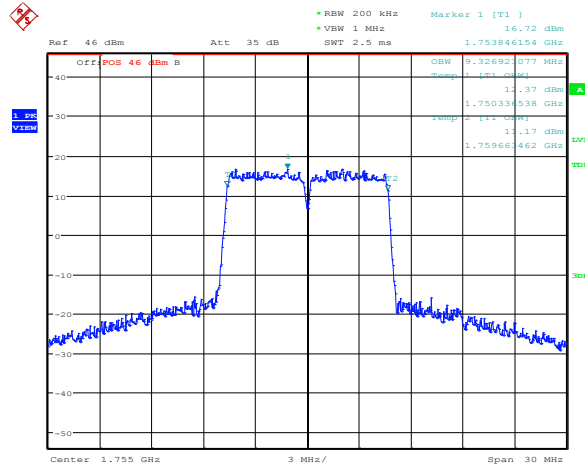


Date: 5.DEC.2023 11:03:16

LTE CA band 66B, 5MHz+5MHz(99%)

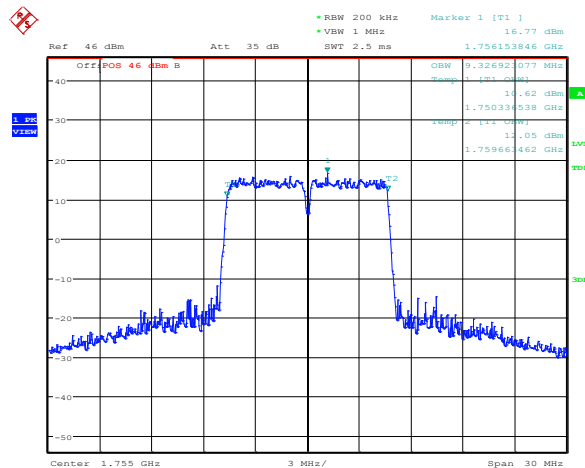
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	9.327	9.327

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



Date: 14.DEC.2023 11:52:15

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

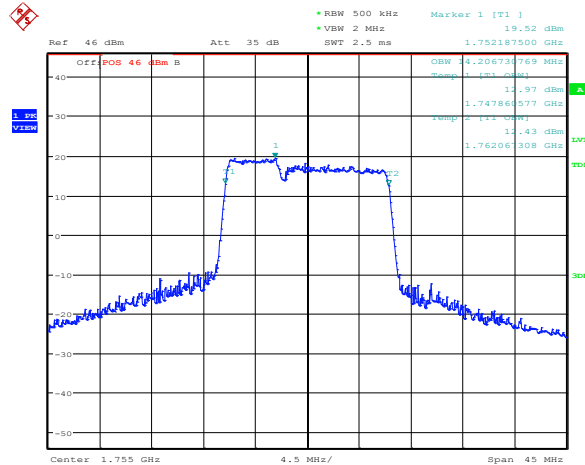


Date: 14.DEC.2023 11:52:38

LTE CA band 66B, 5MHz+10MHz(99%)

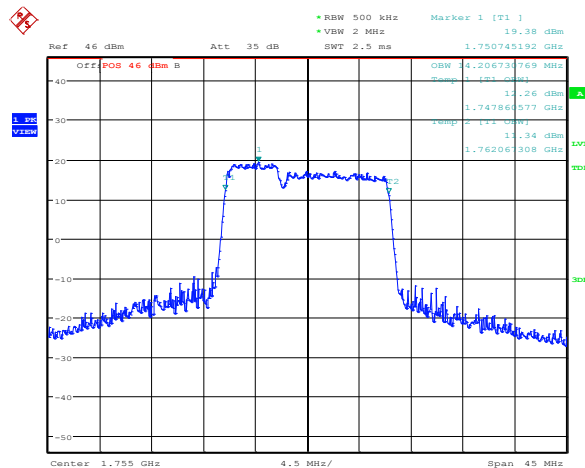
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	14.207	14.207

LTE CA band 66B , 5MHz+10MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 11:53:31

LTE CA band 66B , 5MHz+10MHz Bandwidth,16QAM (99% BW)

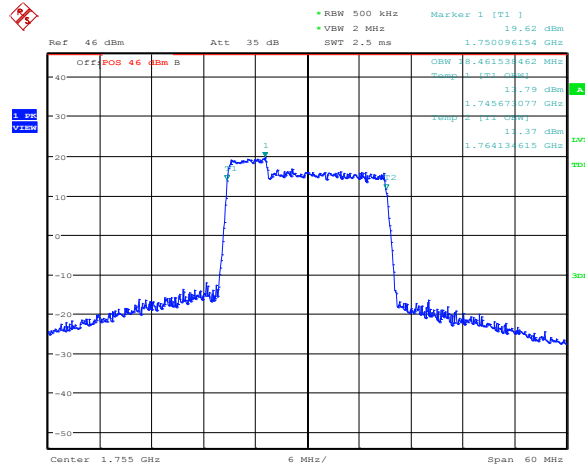


Date: 14.DEC.2023 11:53:55

LTE CA band 66B, 5MHz+15MHz(99%)

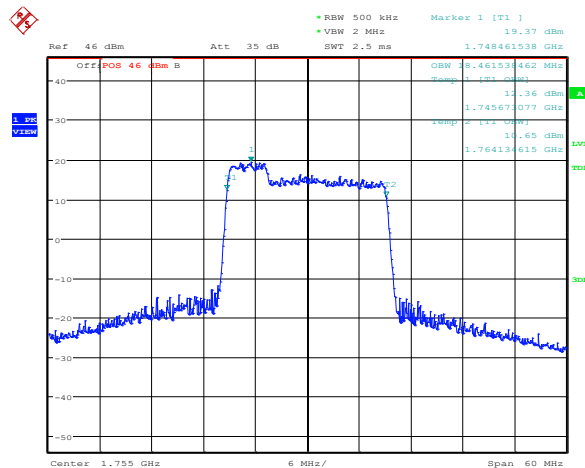
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	18.462	18.462

LTE CA band 66B , 5MHz+15MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 11:54:48

LTE CA band 66B , 5MHz+15MHz Bandwidth,16QAM (99% BW)

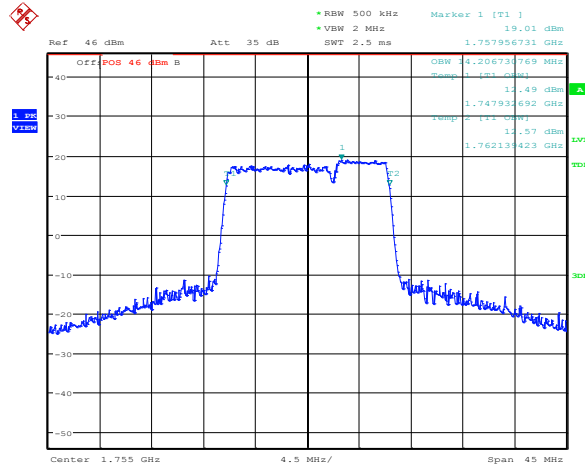


Date: 14.DEC.2023 11:55:11

LTE CA band 66B, 10MHz+5MHz(99%)

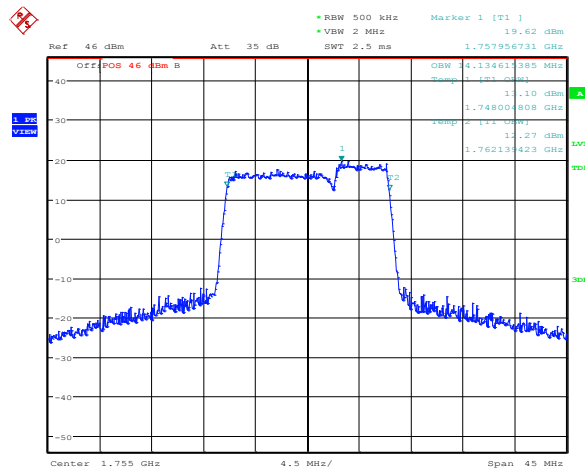
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	14.207	14.135

LTE CA band 66B , 10MHz+5MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 11:56:06

LTE CA band 66B , 10MHz+5MHz Bandwidth,16QAM (99% BW)

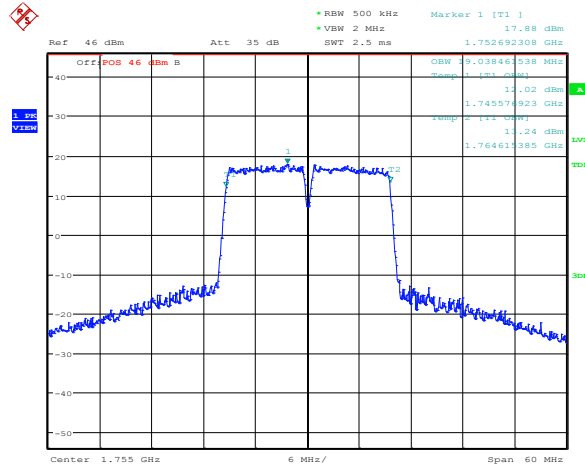


Date: 14.DEC.2023 11:56:30

LTE CA band 66B, 10MHz+10MHz(99%)

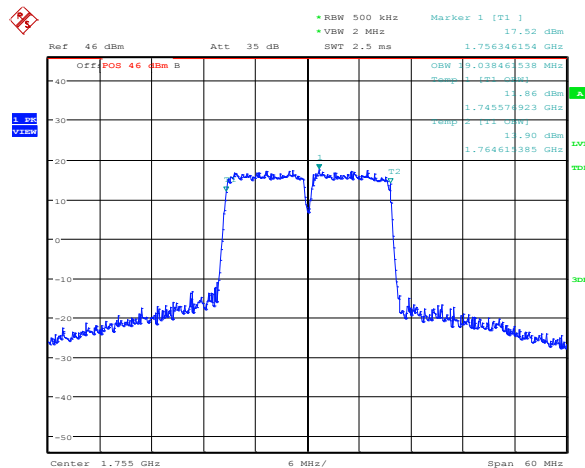
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	19.038	19.038

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



Date: 14.DEC.2023 11:57:23

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

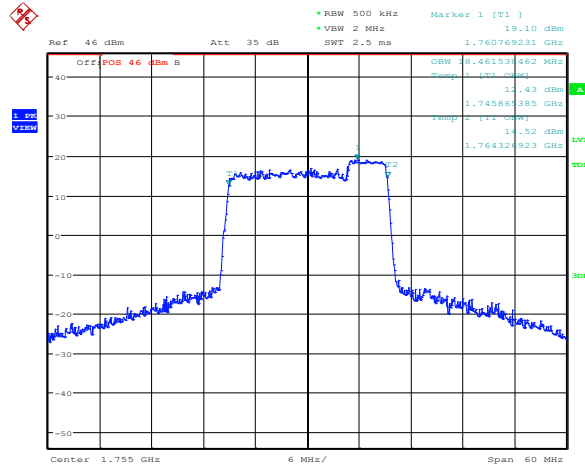


Date: 14.DEC.2023 11:57:47

LTE CA band 66B, 15MHz+5MHz(99%)

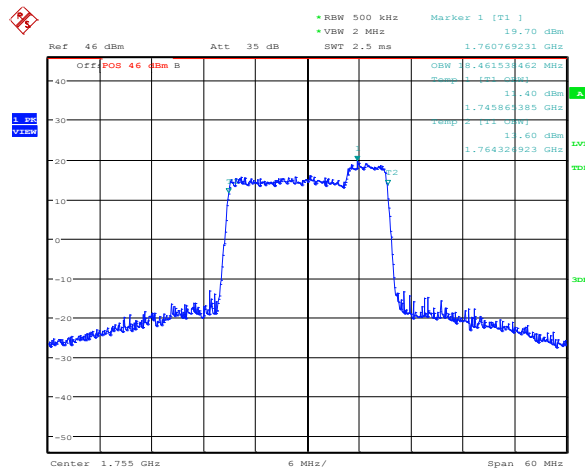
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	18.462	18.462

LTE CA band 66B , 15MHz+5MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 11:58:42

LTE CA band 66B , 15MHz+5MHz Bandwidth,16QAM (99% BW)

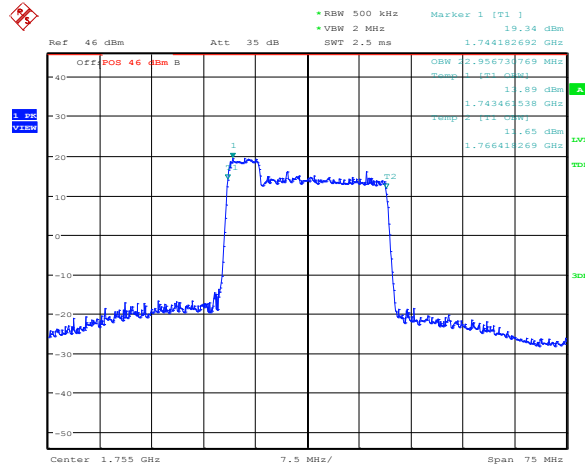


Date: 14.DEC.2023 11:59:05

LTE CA band 66C, 5MHz+20MHz(99%)

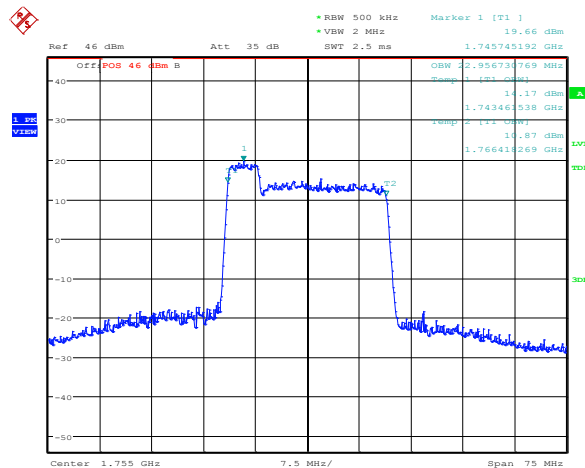
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	22.957	22.957

LTE CA band 66C , 5MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:00:00

LTE CA band 66C , 5MHz+20MHz Bandwidth,16QAM (99% BW)

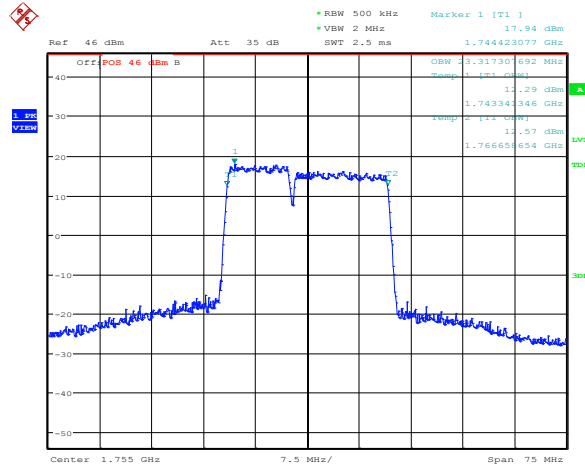


Date: 14.DEC.2023 12:00:26

LTE CA band 66C, 10MHz+15MHz(99%)

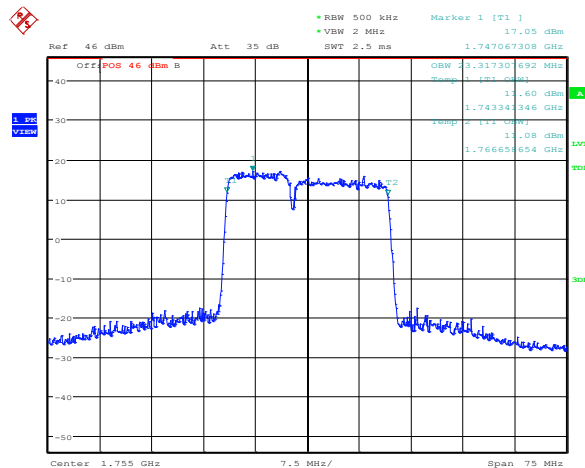
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	23.317	23.317

LTE CA band 66C , 10MHz+15MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:01:22

LTE CA band 66C , 10MHz+15MHz Bandwidth,16QAM (99% BW)

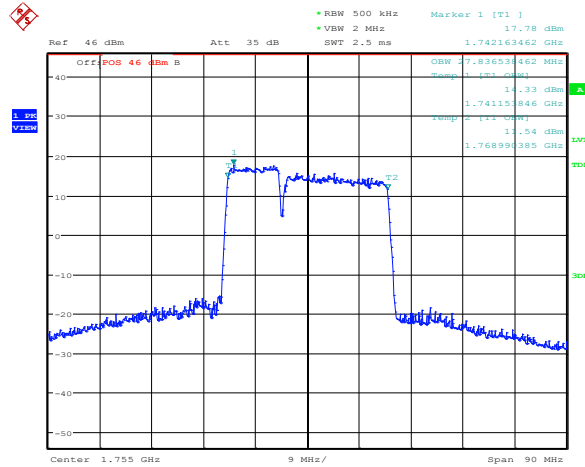


Date: 14.DEC.2023 12:01:45

LTE CA band 66C, 10MHz+20MHz(99%)

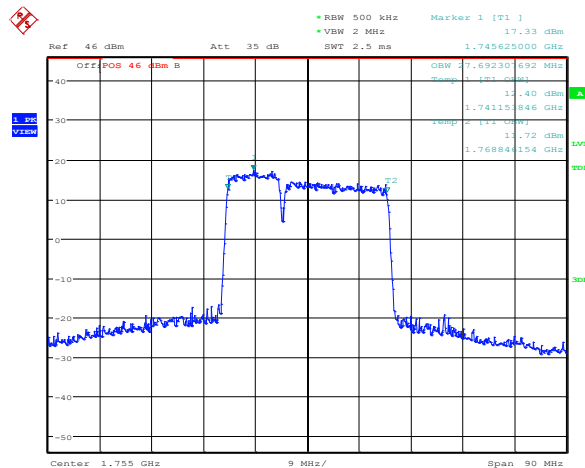
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	27.837	27.692

LTE CA band 66C , 10MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:02:38

LTE CA band 66C , 10MHz+20MHz Bandwidth,16QAM (99% BW)

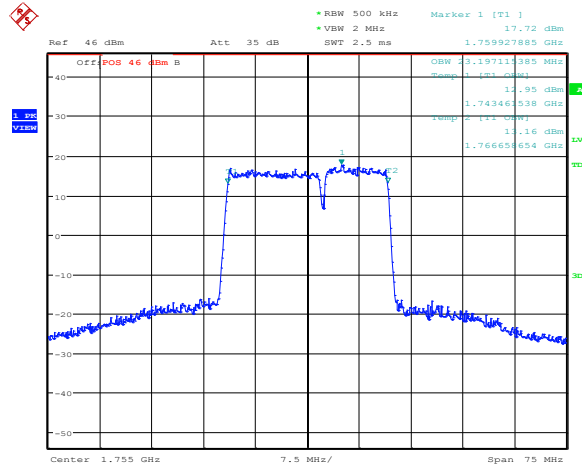


Date: 14.DEC.2023 12:03:02

LTE CA band 66C, 15MHz+10MHz(99%)

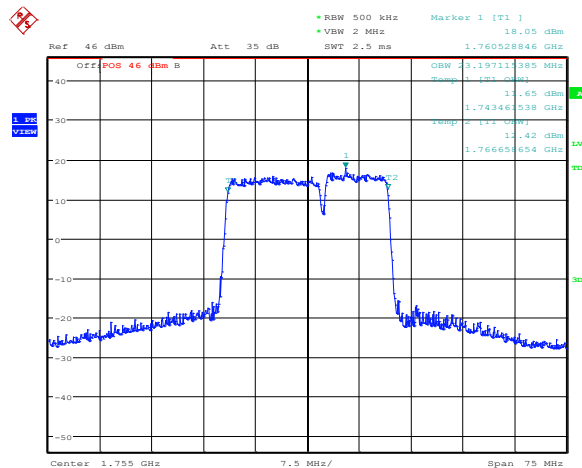
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	23.197	23.197

LTE CA band 66C , 15MHz+10MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:03:56

LTE CA band 66C , 15MHz+10MHz Bandwidth,16QAM (99% BW)

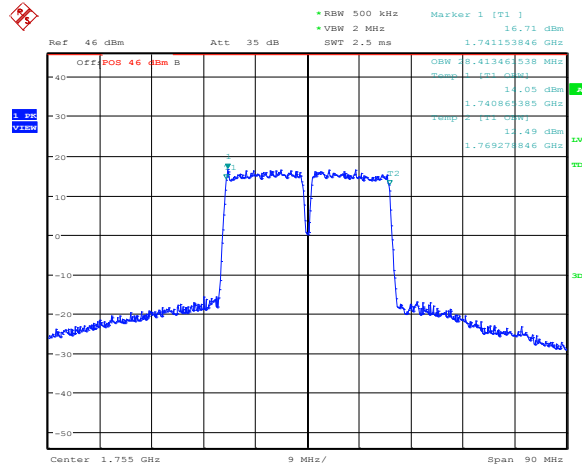


Date: 14.DEC.2023 12:04:20

LTE CA band 66C, 15MHz+15MHz(99%)

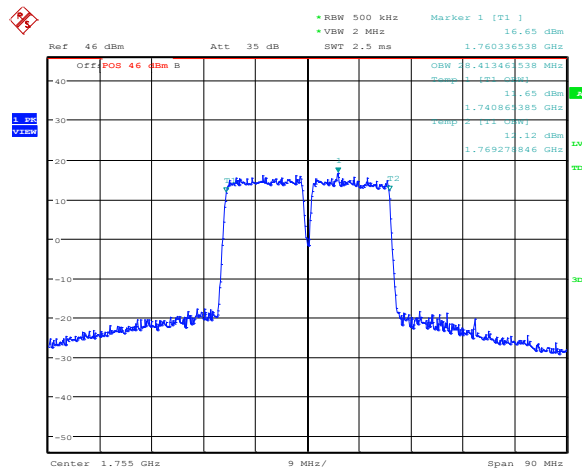
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	28.413	28.413

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



Date: 14.DEC.2023 12:05:13

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

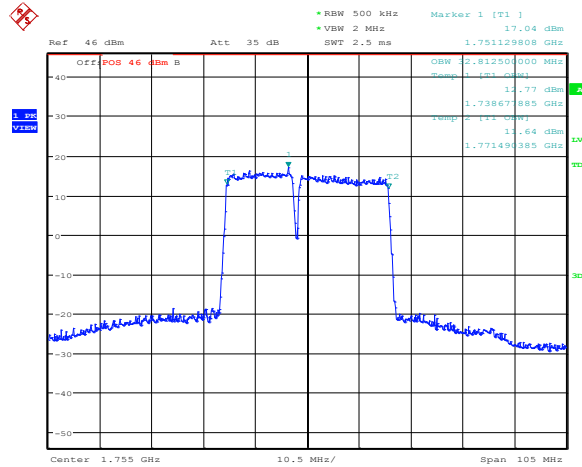


Date: 14.DEC.2023 12:05:36

LTE CA band 66C, 15MHz+20MHz(99%)

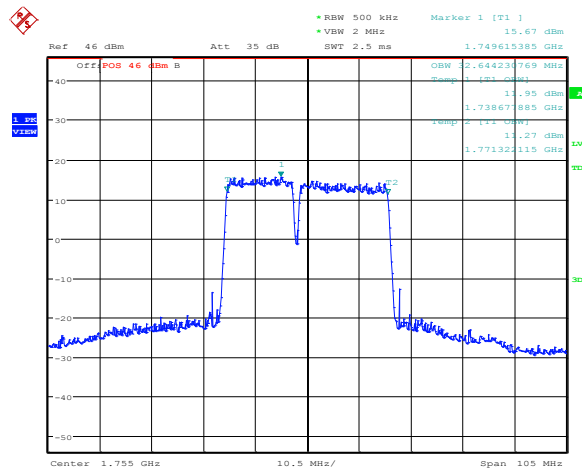
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	32.812	32.644

LTE CA band 66C , 15MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:06:30

LTE CA band 66C , 15MHz+20MHz Bandwidth,16QAM (99% BW)

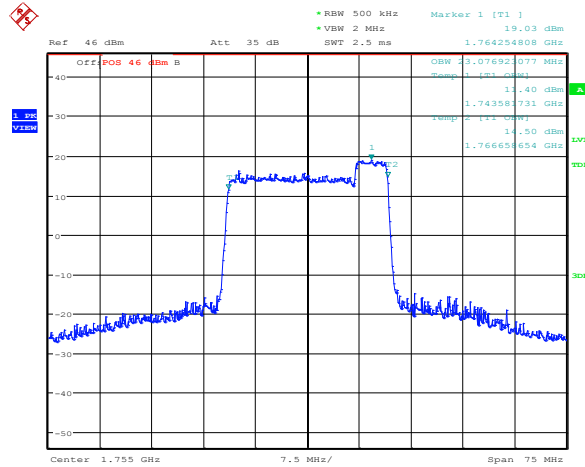


Date: 14.DEC.2023 12:06:56

LTE CA band 66C, 20MHz+5MHz(99%)

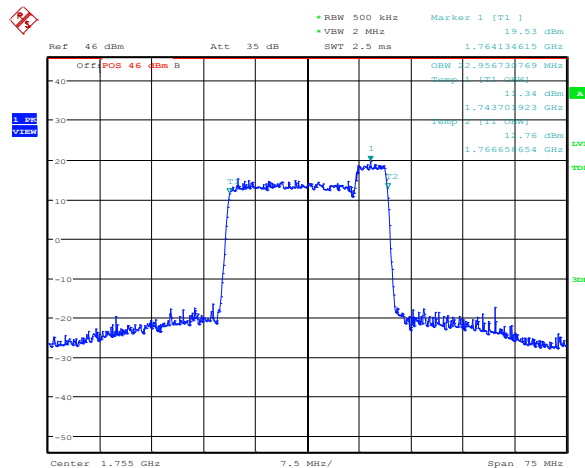
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	23.077	22.957

LTE CA band 66C , 20MHz+5MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:07:51

LTE CA band 66C , 20MHz+5MHz Bandwidth,16QAM (99% BW)

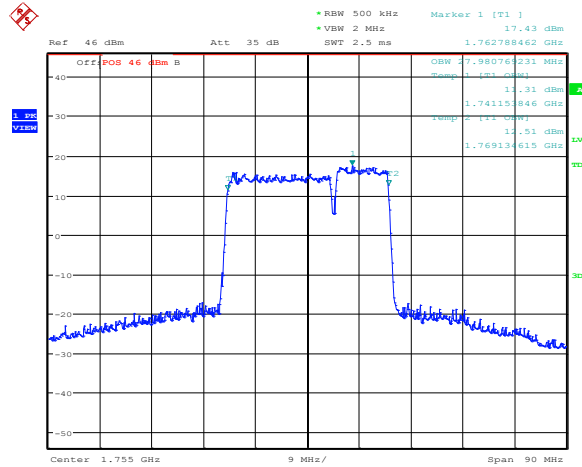


Date: 14.DEC.2023 12:08:14

LTE CA band 66C, 20MHz+10MHz(99%)

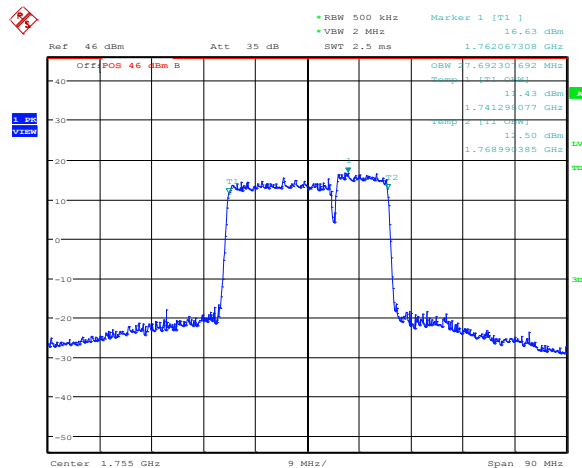
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	27.981	27.692

LTE CA band 66C , 20MHz+10MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:09:08

LTE CA band 66C , 20MHz+10MHz Bandwidth,16QAM (99% BW)

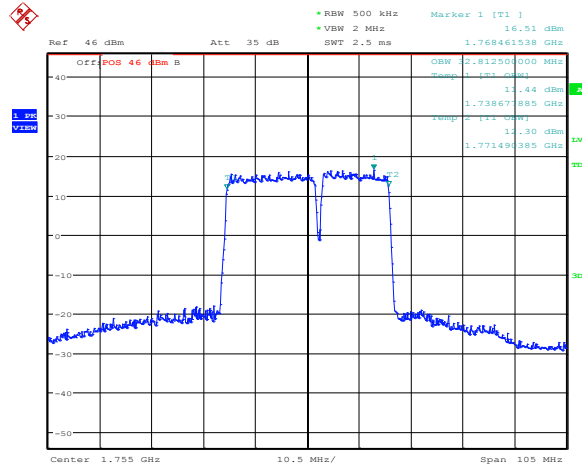


Date: 14.DEC.2023 12:09:31

LTE CA band 66C, 20MHz+15MHz(99%)

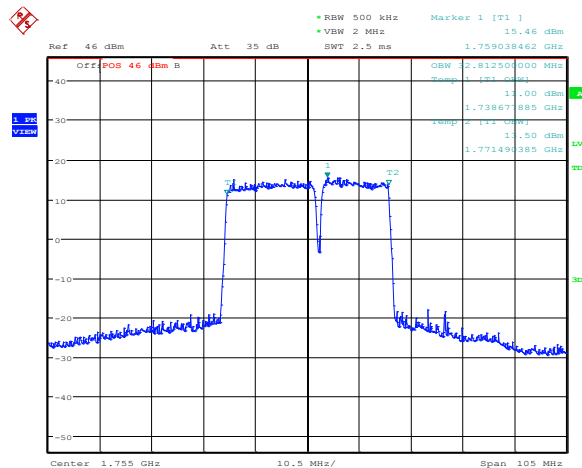
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	32.812	32.812

LTE CA band 66C , 20MHz+15MHz Bandwidth,QPSK (99% BW)



Date: 14.DEC.2023 12:10:25

LTE CA band 66C , 20MHz+15MHz Bandwidth,16QAM (99% BW)

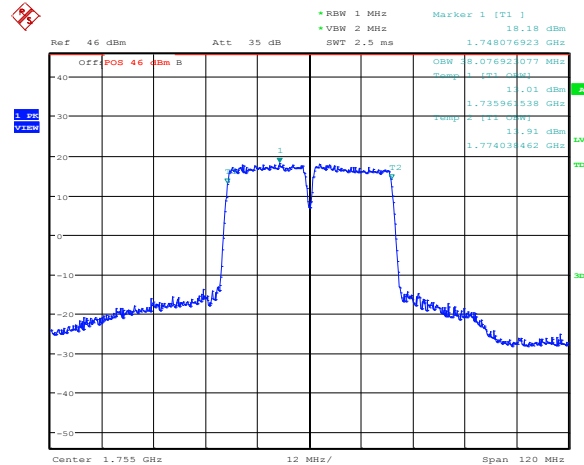


Date: 14.DEC.2023 12:10:48

LTE CA band 66C, 20MHz+20MHz(99%)

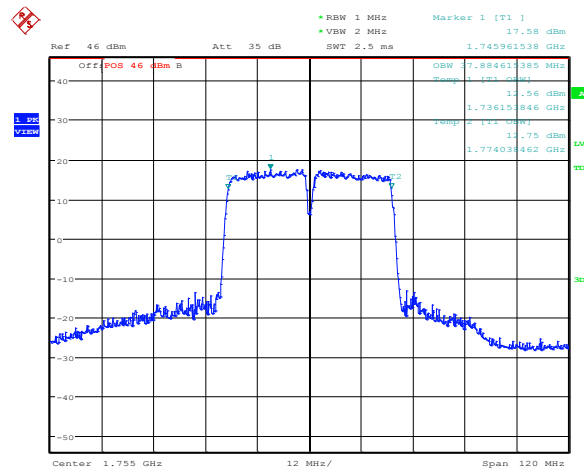
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
1755.0	38.077	37.885

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



Date: 14.DEC.2023 12:11:42

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



Date: 14.DEC.2023 12:12:05

Note: Expanded measurement uncertainty is $U = 3428 \text{ Hz}$, $k = 2$.

A.5 Emission Bandwidth

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

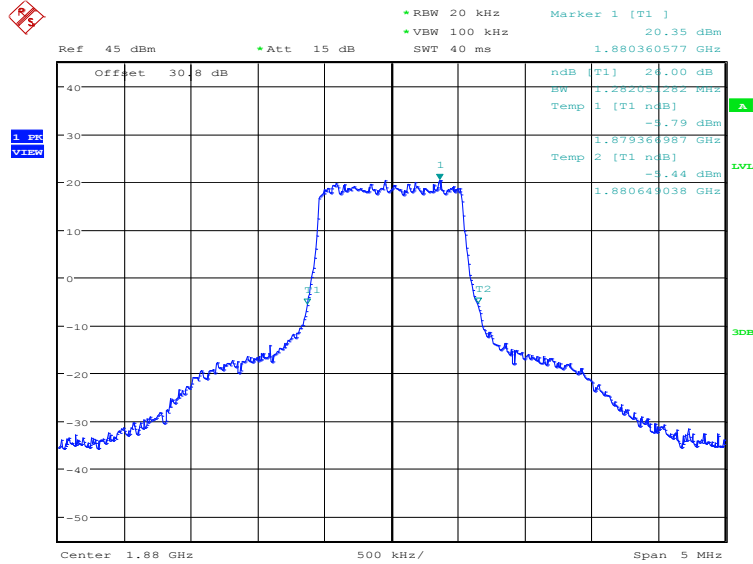
The measurement method is from ANSI C63.26:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b) The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
- d) The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e) Set spectrum analyzer detection mode to peak, and the trace mode to max hold.

LTE band 2, 1.4MHz (-26dBc)

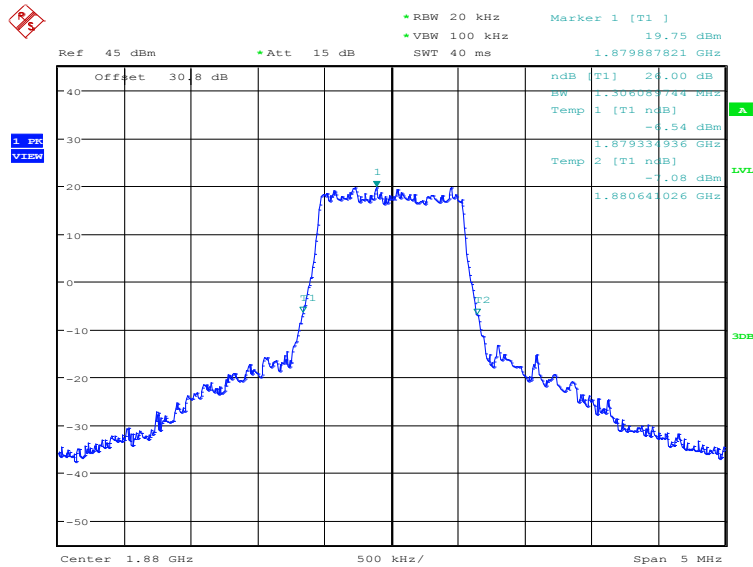
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	1282.05	1306.09

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



Date: 22.DEC.2023 07:18:12

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

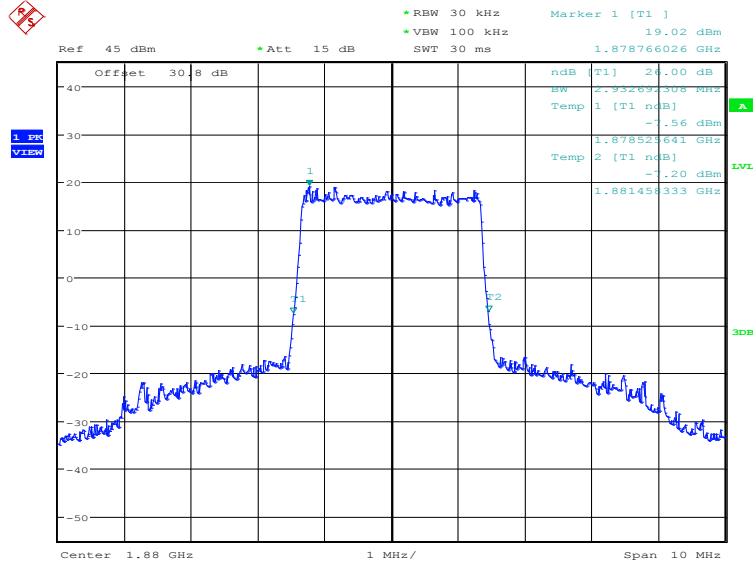


Date: 22.DEC.2023 07:18:54

LTE band 2, 3MHz (-26dBc)

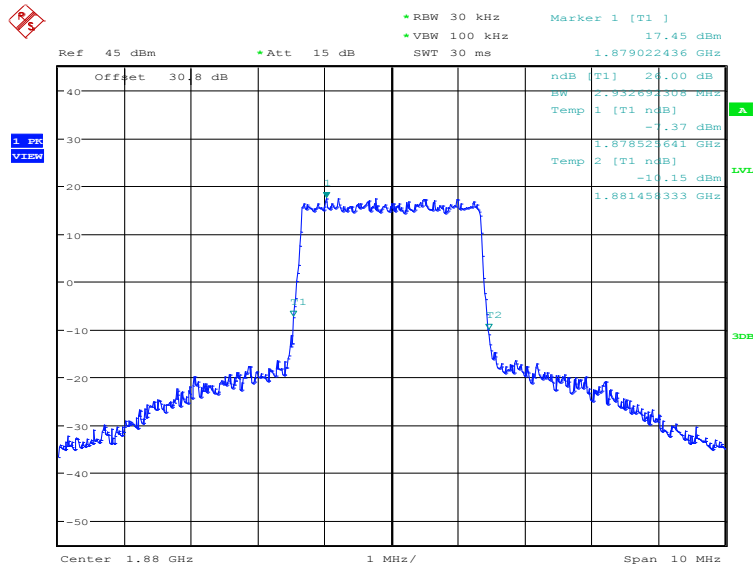
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	2932.69	2932.69

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



Date: 22.DEC.2023 07:19:36

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

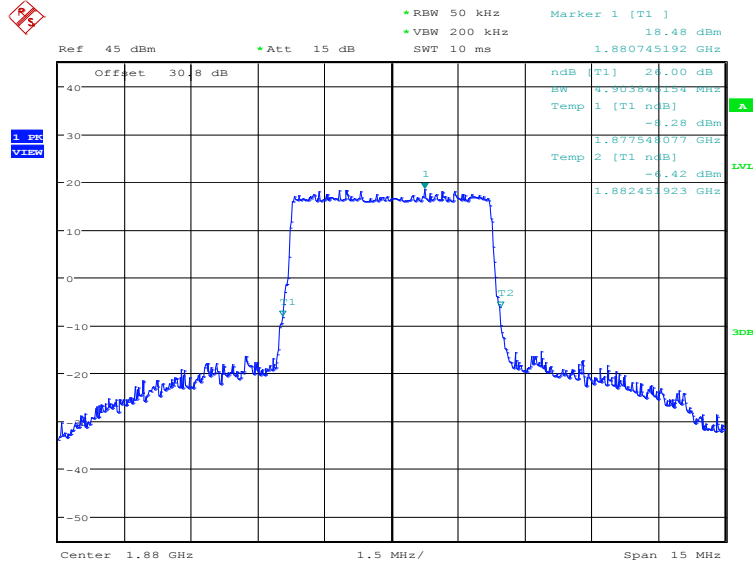


Date: 22.DEC.2023 07:20:16

LTE band 2, 5MHz (-26dBc)

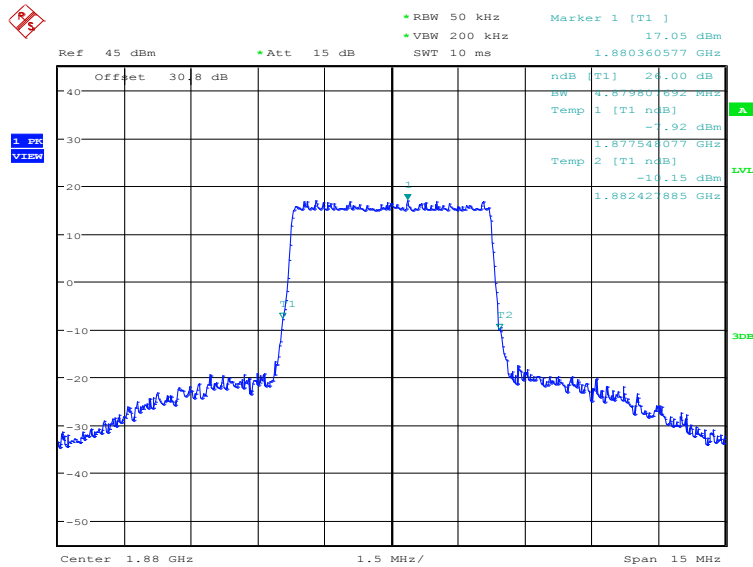
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	4903.85	4879.81

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



Date: 22.DEC.2023 07:20:58

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

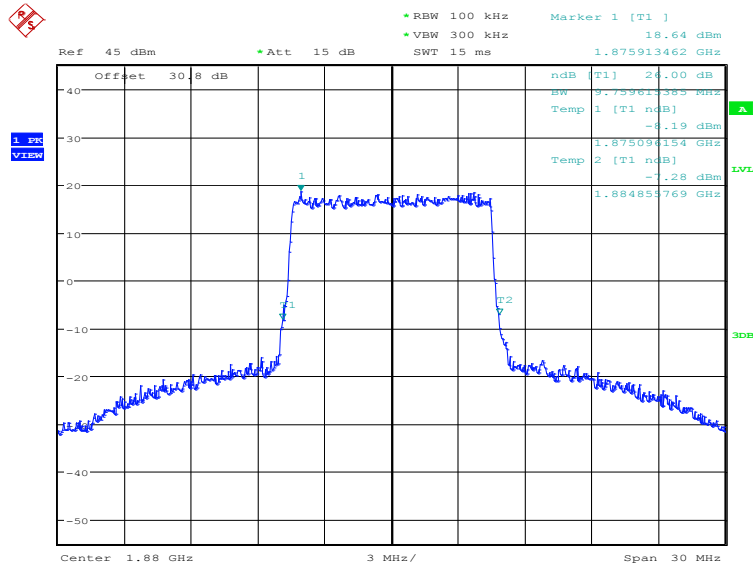


Date: 22.DEC.2023 07:21:38

LTE band 2, 10MHz (-26dBc)

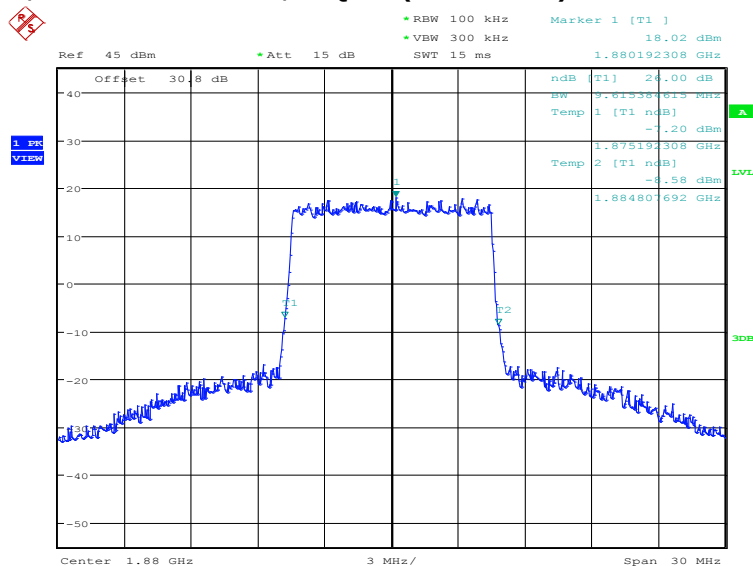
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	9759.62	9615.38

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



Date: 22.DEC.2023 07:22:20

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

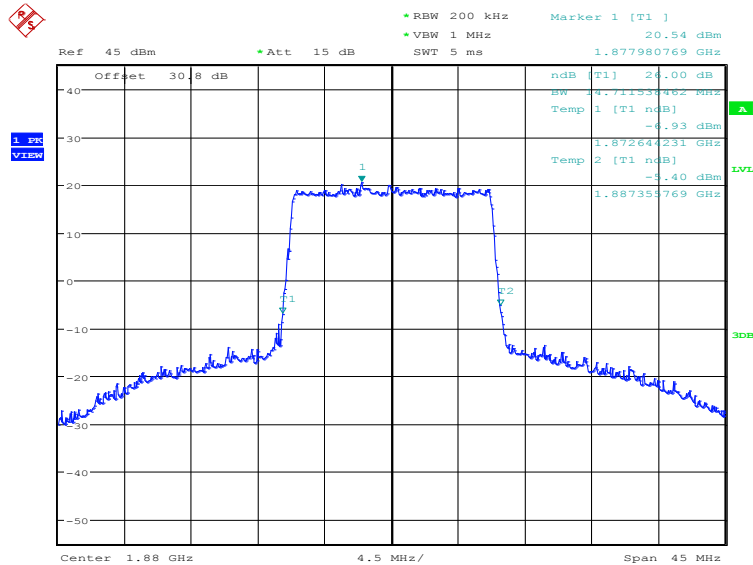


Date: 22.DEC.2023 07:23:00

LTE band 2, 15MHz (-26dBc)

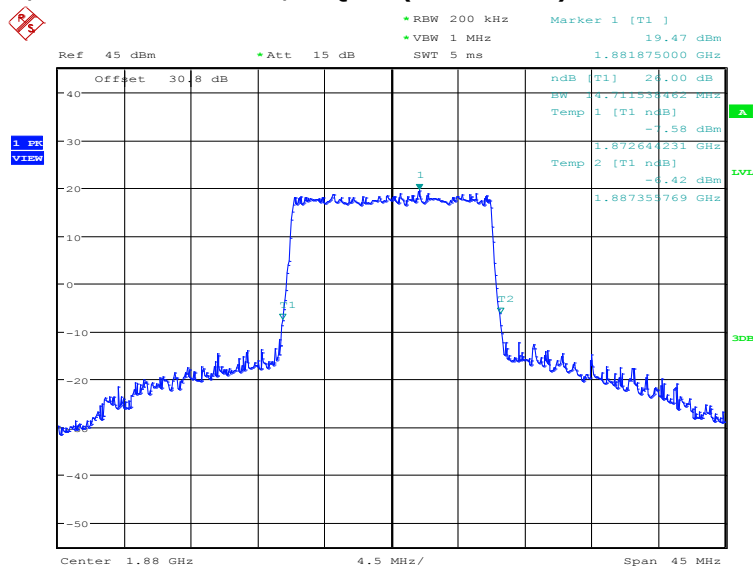
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	14711.54	14711.54

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



Date: 22.DEC.2023 07:23:42

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

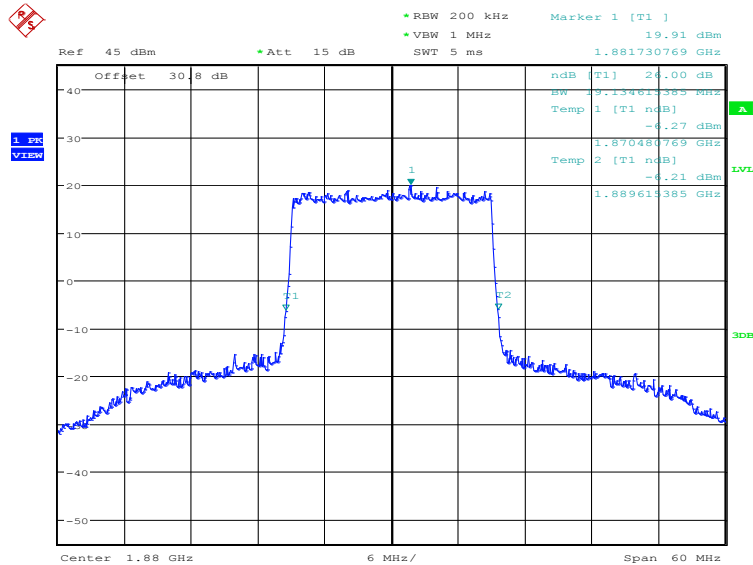


Date: 22.DEC.2023 07:24:22

LTE band 2, 20MHz (-26dBc)

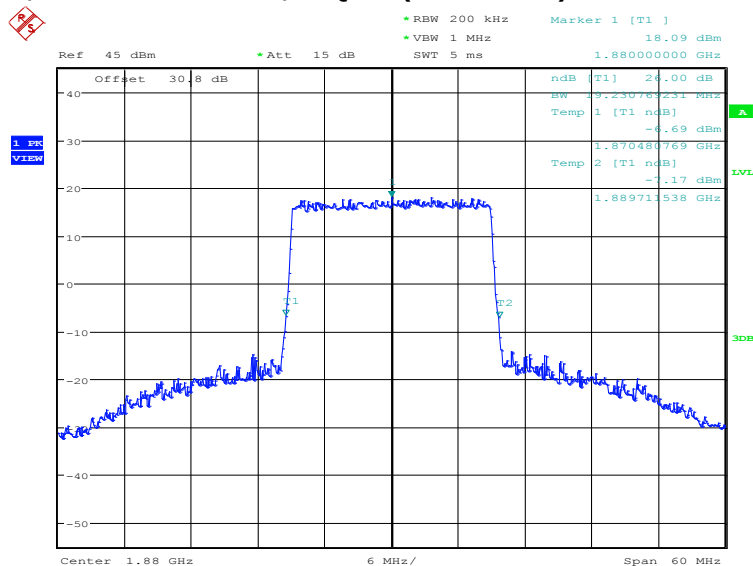
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	19134.62	19230.77

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



Date: 22.DEC.2023 07:25:05

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

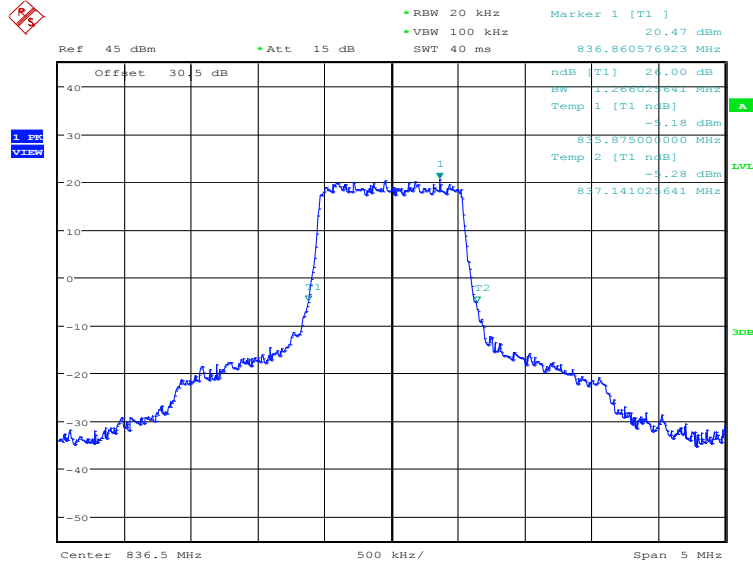


Date: 22.DEC.2023 07:25:45

LTE band 5, 1.4MHz (-26dBc)

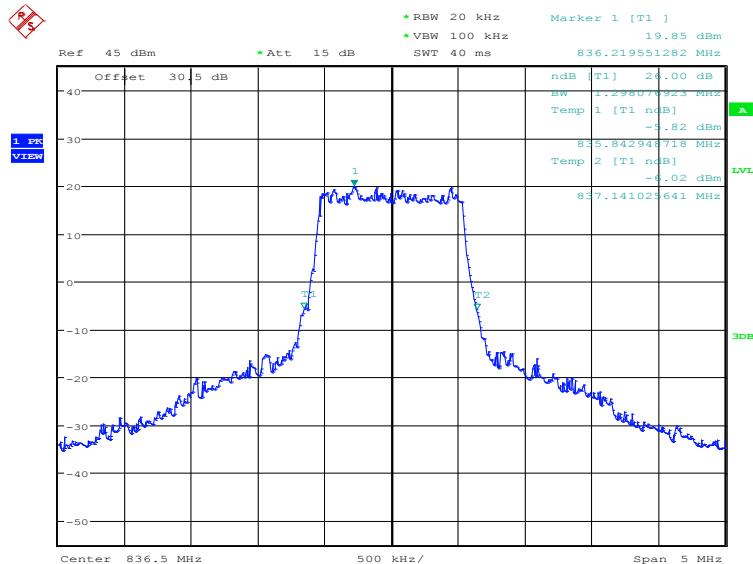
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	1266.03	1298.08

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



Date: 22.DEC.2023 08:29:30

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

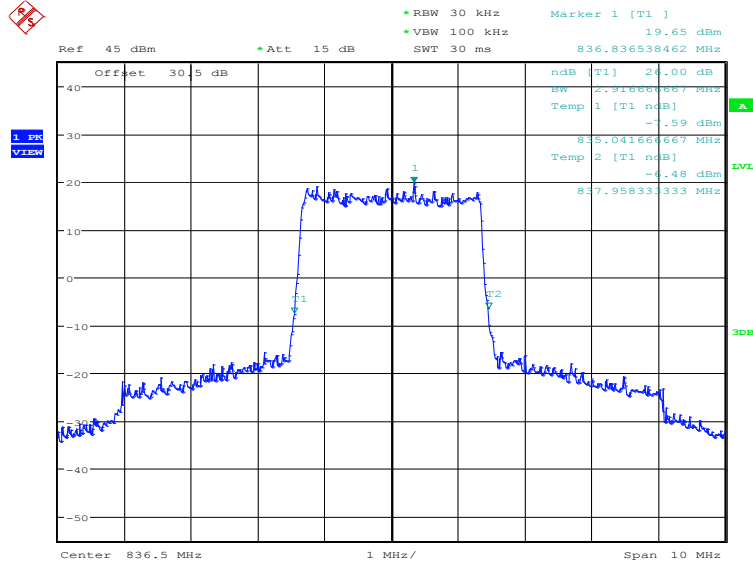


Date: 22.DEC.2023 08:30:10

LTE band 5, 3MHz (-26dBc)

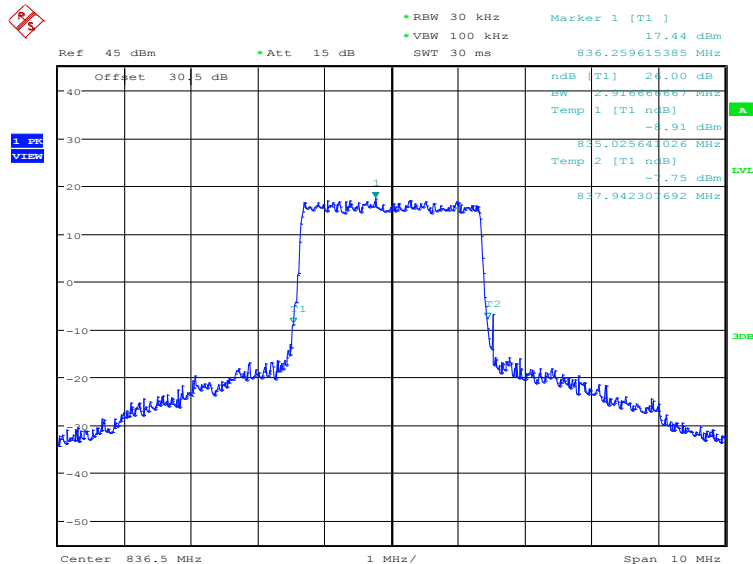
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	2916.67	2916.67

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



Date: 22.DEC.2023 08:30:52

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

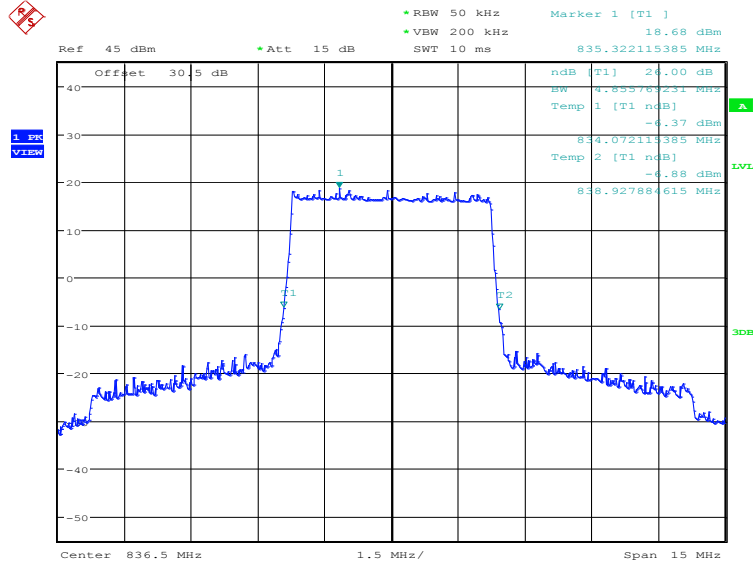


Date: 22.DEC.2023 08:31:32

LTE band 5, 5MHz (-26dBc)

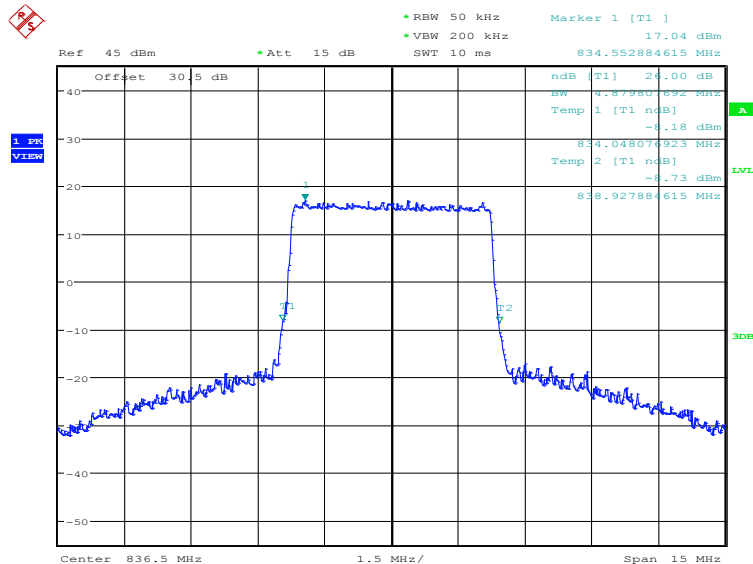
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	4855.77	4879.81

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



Date: 22.DEC.2023 08:32:14

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

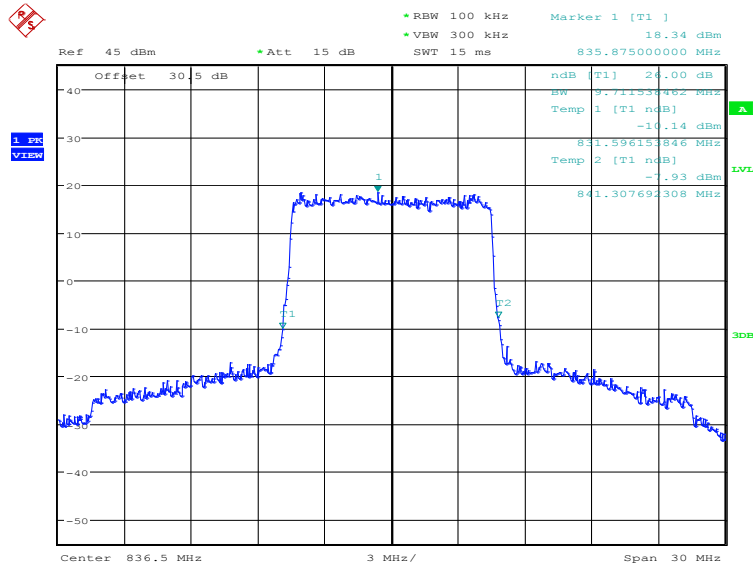


Date: 22.DEC.2023 08:32:54

LTE band 5, 10MHz (-26dBc)

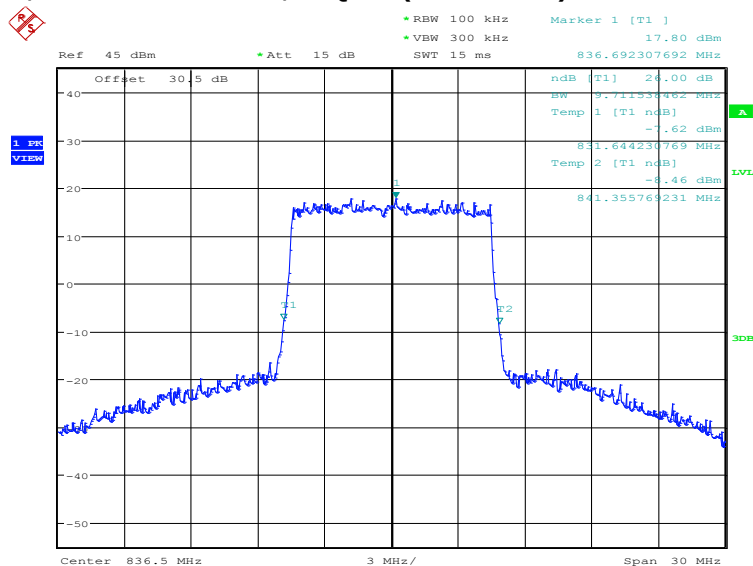
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	9711.54	9711.54

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



Date: 22.DEC.2023 08:33:36

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

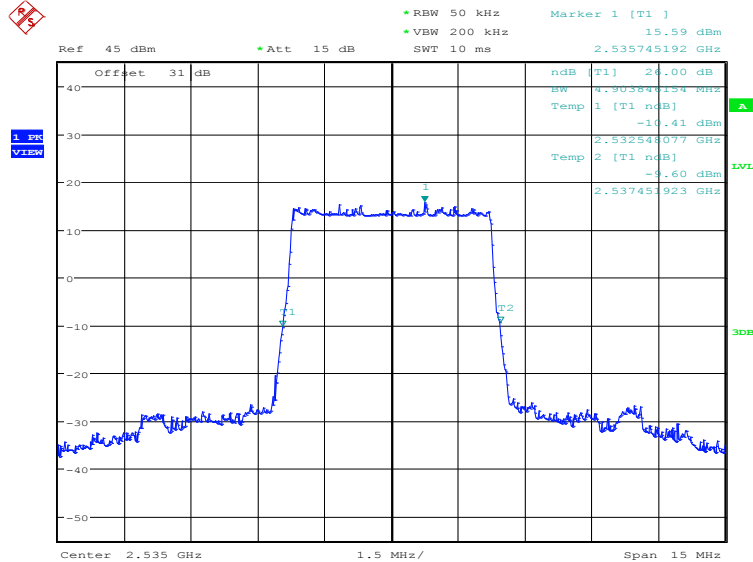


Date: 22.DEC.2023 08:34:16

LTE band 7, 5MHz (-26dBc)

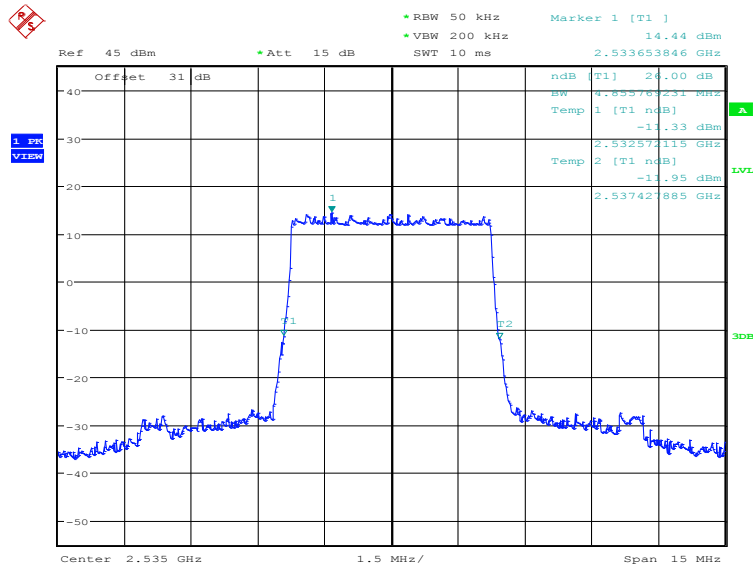
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	4903.85	4855.77

LTE band 7, 5MHz Bandwidth, QPSK (-26dB BW)



Date: 5.DEC.2023 13:37:37

LTE band 7, 5MHz Bandwidth, 16QAM (-26dB BW)

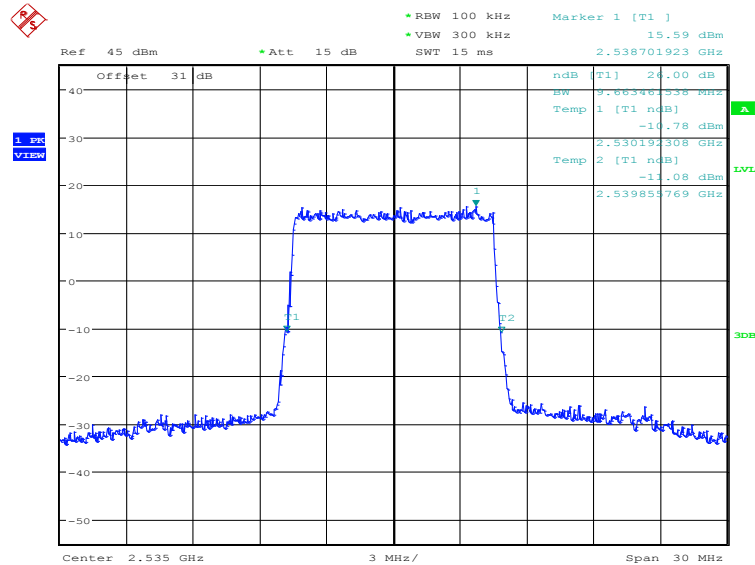


Date: 5.DEC.2023 13:38:17

LTE band 7, 10MHz (-26dBc)

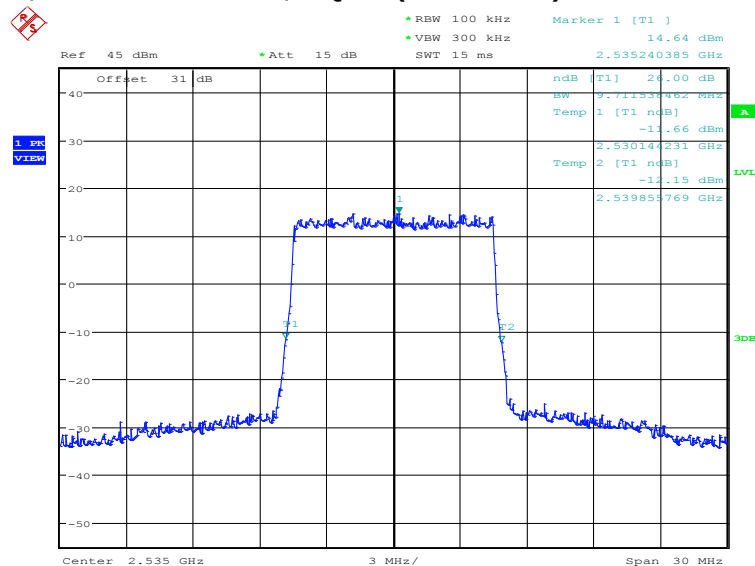
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	9663.46	9711.54

LTE band 7, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.DEC.2023 13:38:58

LTE band 7, 10MHz Bandwidth, 16QAM (-26dBc BW)

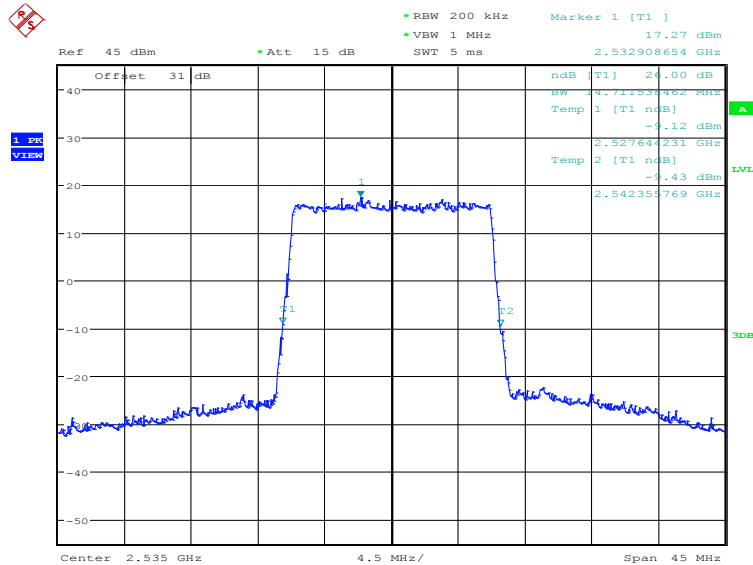


Date: 5.DEC.2023 13:39:38

LTE band 7, 15MHz (-26dBc)

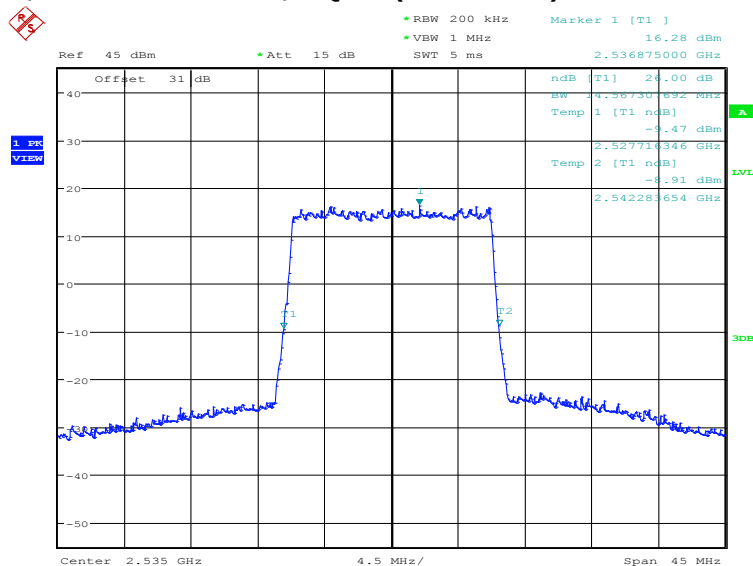
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	14711.54	14567.31

LTE band 7, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.DEC.2023 13:40:21

LTE band 7, 15MHz Bandwidth,16QAM (-26dBc BW)

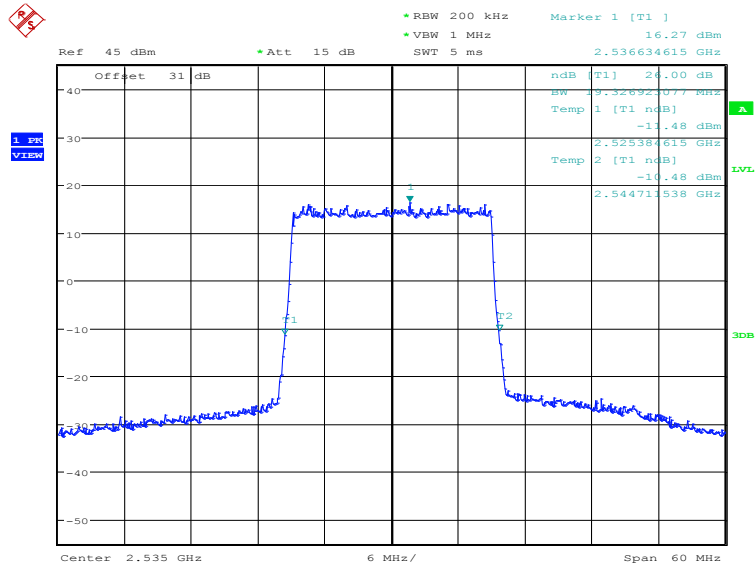


Date: 5.DEC.2023 13:41:01

LTE band 7, 20MHz (-26dBc)

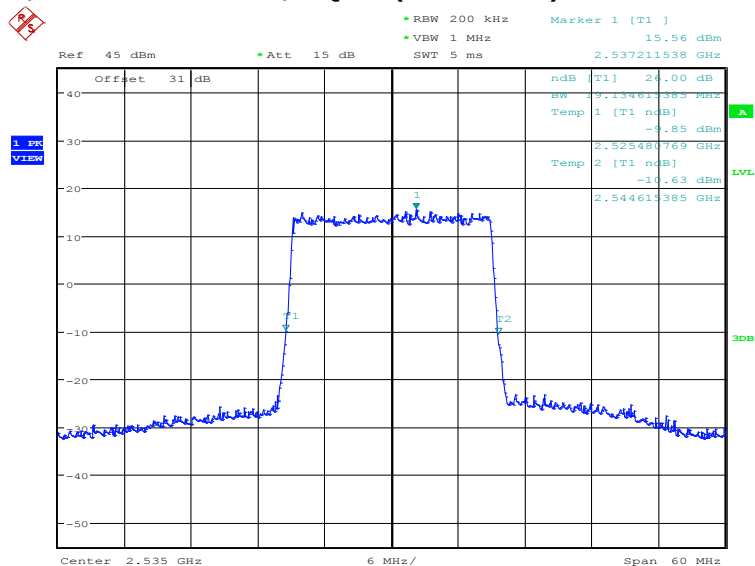
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	19326.92	19134.62

LTE band 7, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.DEC.2023 13:41:43

LTE band 7, 20MHz Bandwidth, 16QAM (-26dBc BW)

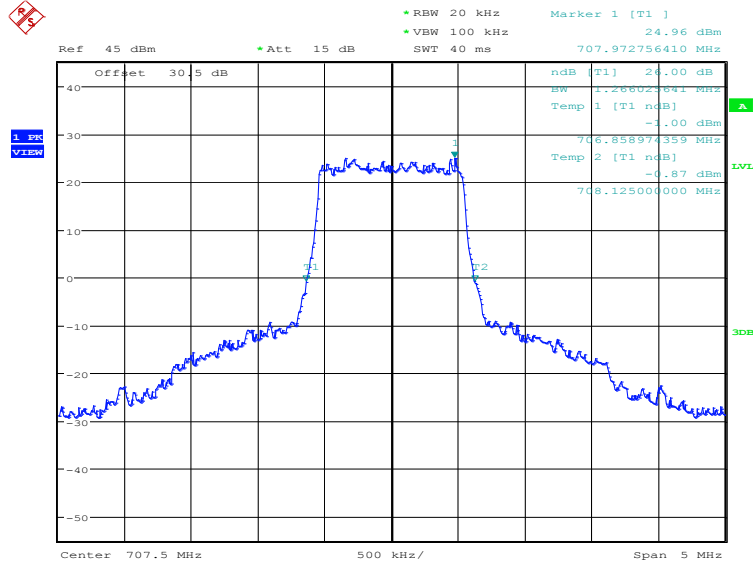


Date: 5.DEC.2023 13:42:23

LTE band 12, 1.4MHz (-26dBc)

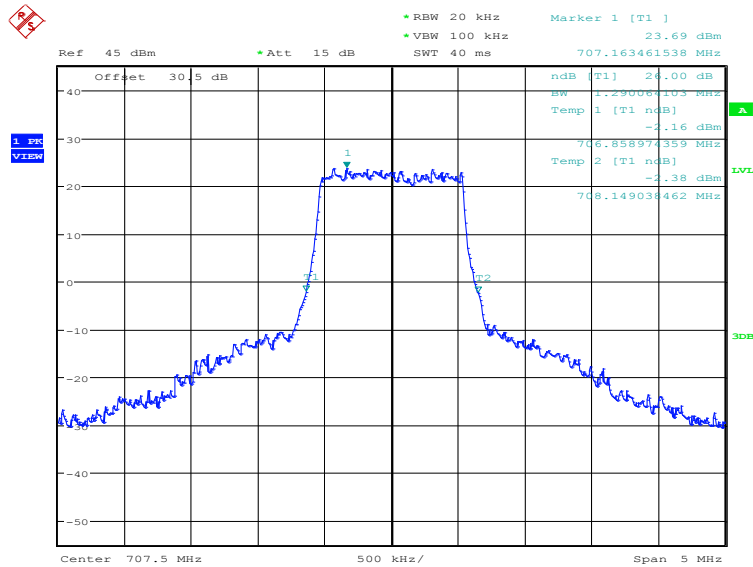
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	1266.03	1290.06

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



Date: 5.DEC.2023 12:56:46

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

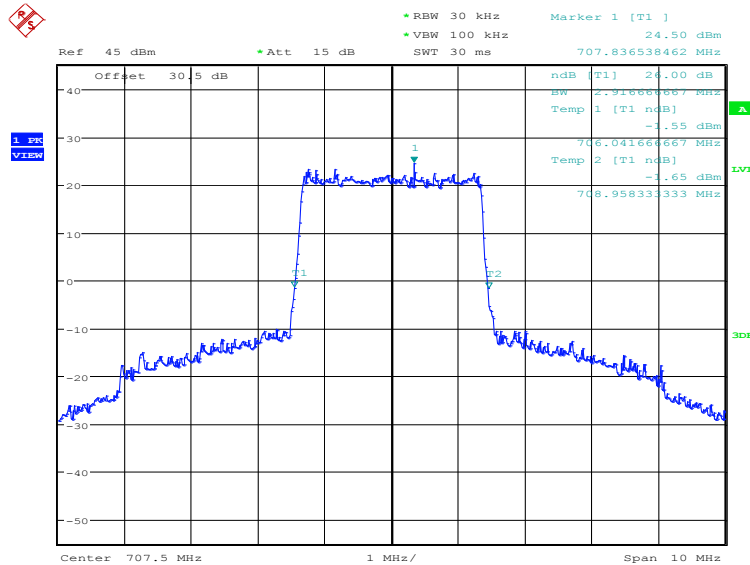


Date: 5.DEC.2023 12:57:26

LTE band 12, 3MHz (-26dBc)

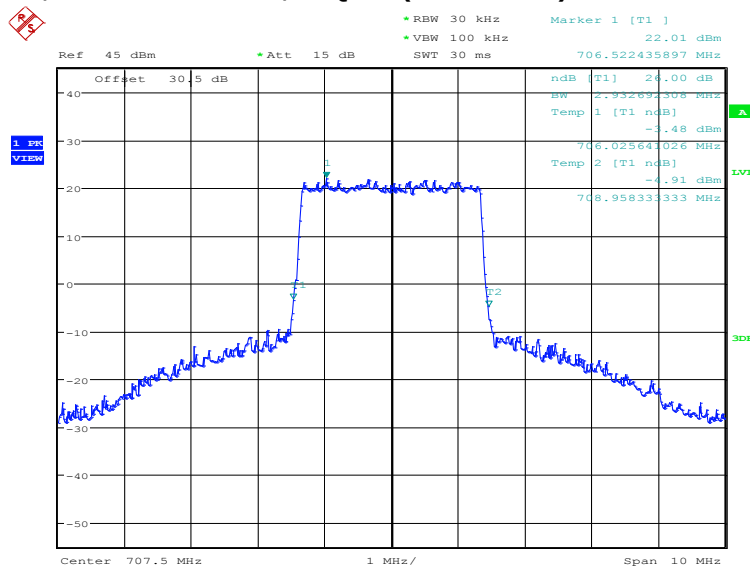
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	2916.67	2932.69

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



Date: 5.DEC.2023 12:58:09

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

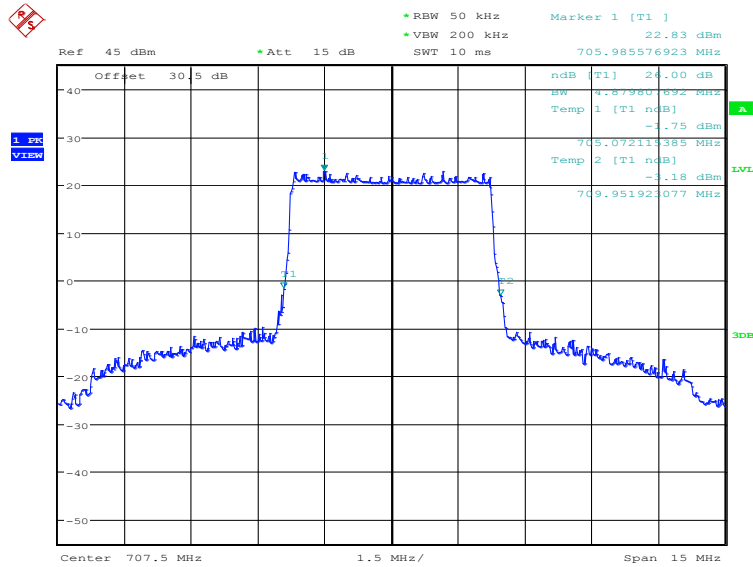


Date: 5.DEC.2023 12:58:49

LTE band 12, 5MHz (-26dBc)

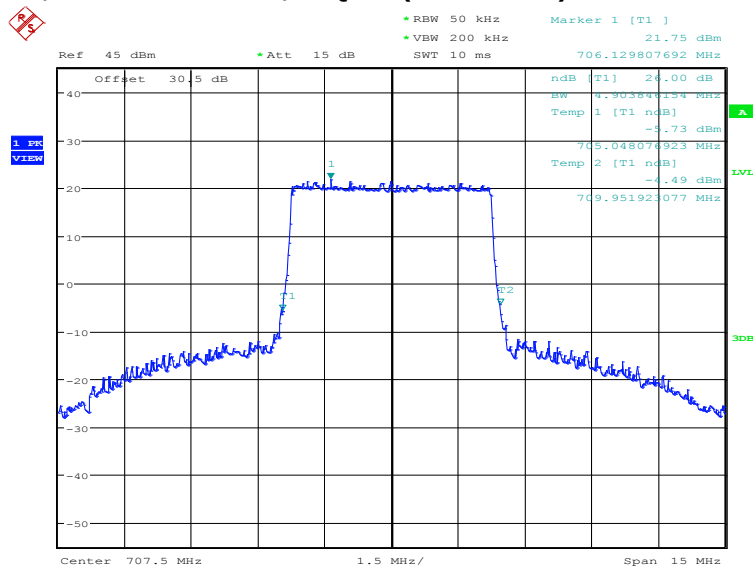
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	4879.81	4903.85

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



Date: 5.DEC.2023 12:59:31

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

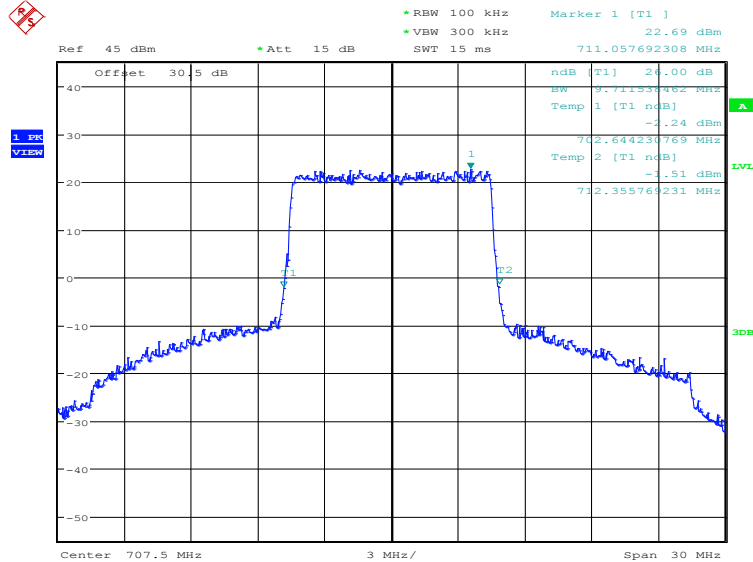


Date: 5.DEC.2023 13:00:12

LTE band 12, 10MHz (-26dBc)

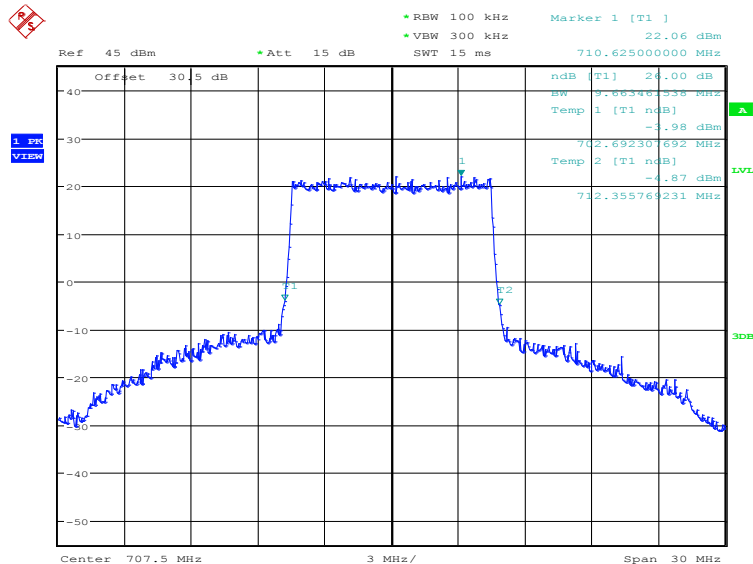
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	9711.54	9663.46

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



Date: 5.DEC.2023 13:00:54

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

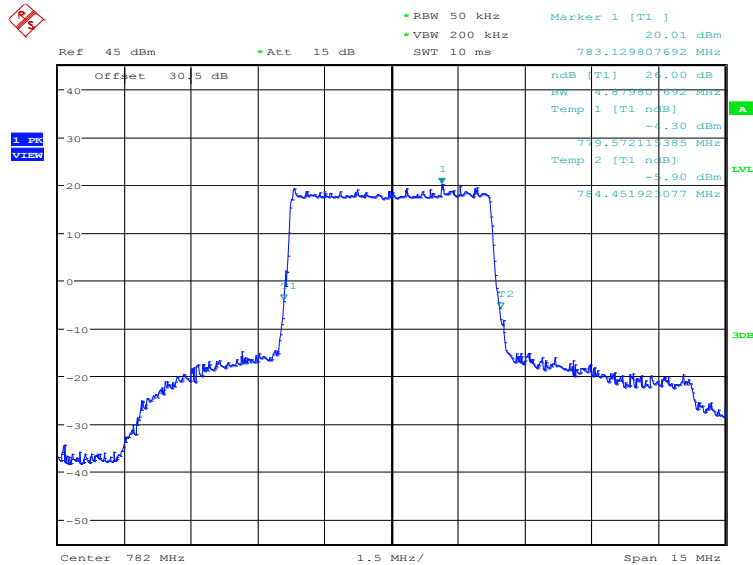


Date: 5.DEC.2023 13:01:34

LTE band 13, 5MHz (-26dBc)

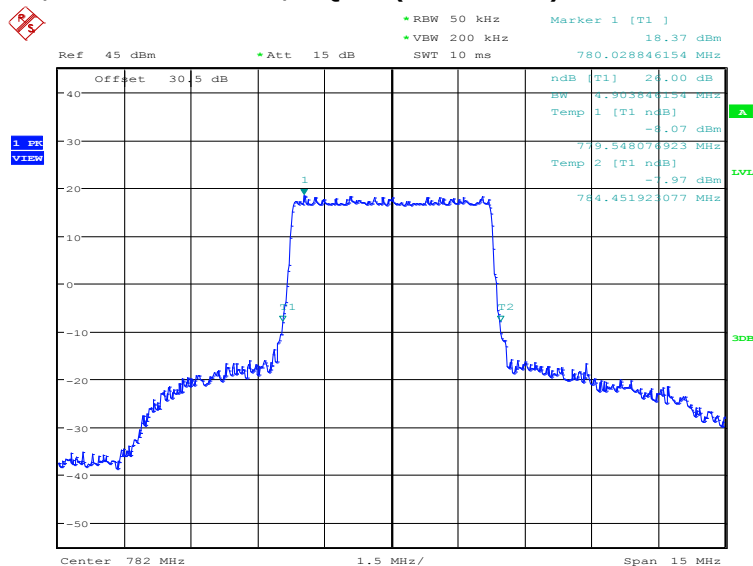
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	4879.81	4903.85

LTE band 13, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.DEC.2023 13:02:18

LTE band 13, 5MHz Bandwidth, 16QAM (-26dBc BW)

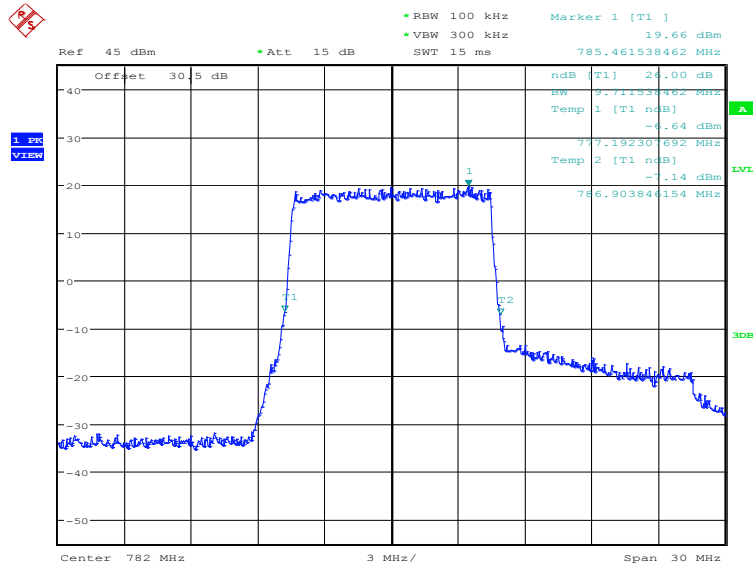


Date: 5.DEC.2023 13:02:59

LTE band 13, 10MHz (-26dBc)

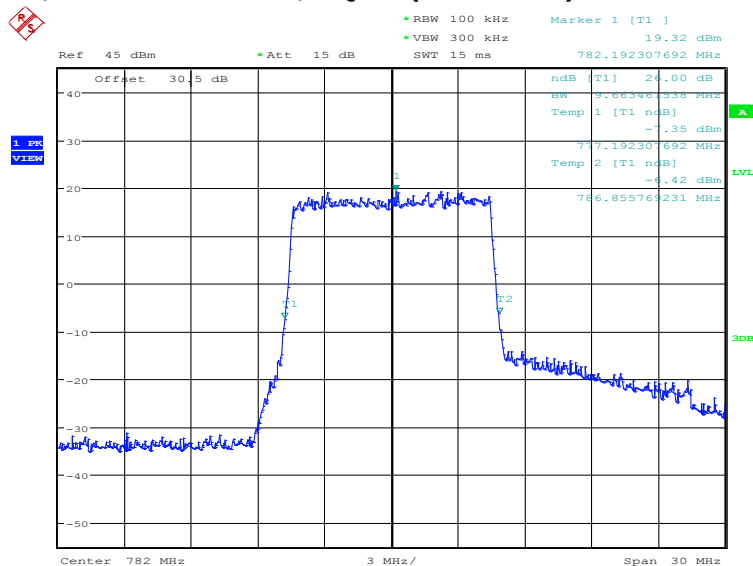
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	9711.54	9663.46

LTE band 13, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 5.DEC.2023 13:03:41

LTE band 13, 10MHz Bandwidth, 16QAM (-26dBc BW)

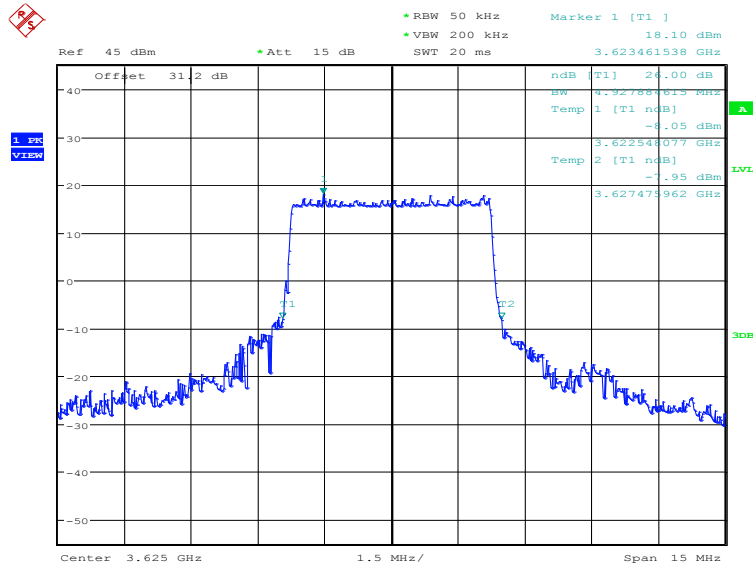


Date: 5.DEC.2023 13:04:22

LTE band 48, 5MHz (-26dBc)

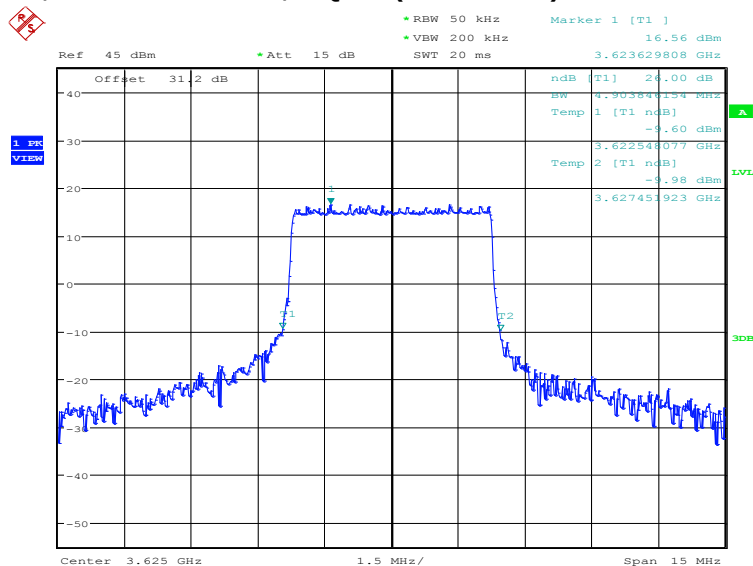
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
3625.0	QPSK	16QAM
	4927.88	4903.85

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



Date: 5.DEC.2023 11:28:04

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

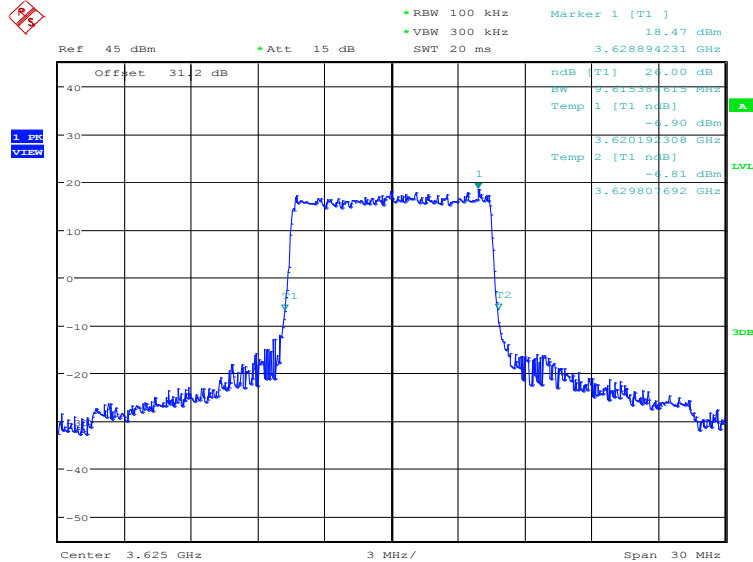


Date: 5.DEC.2023 11:28:45

LTE band 48, 10MHz (-26dBc)

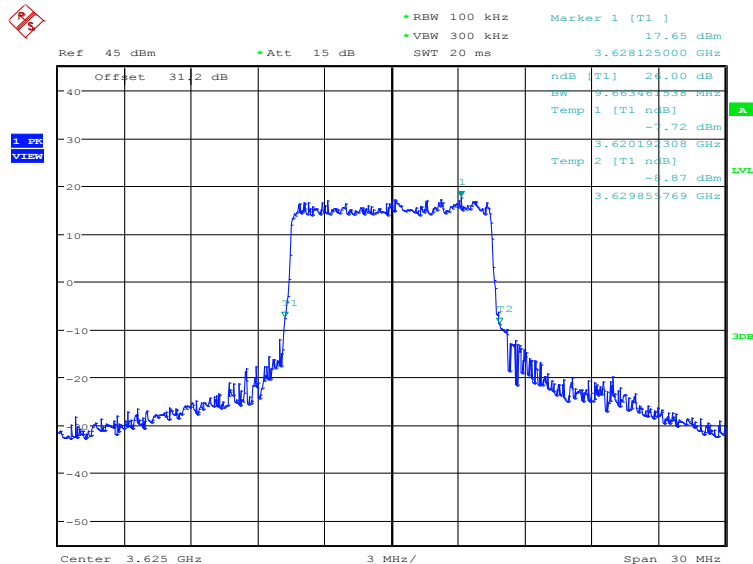
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
3625.0	QPSK	16QAM
	9615.38	9663.46

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



Date: 5.DEC.2023 11:29:27

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

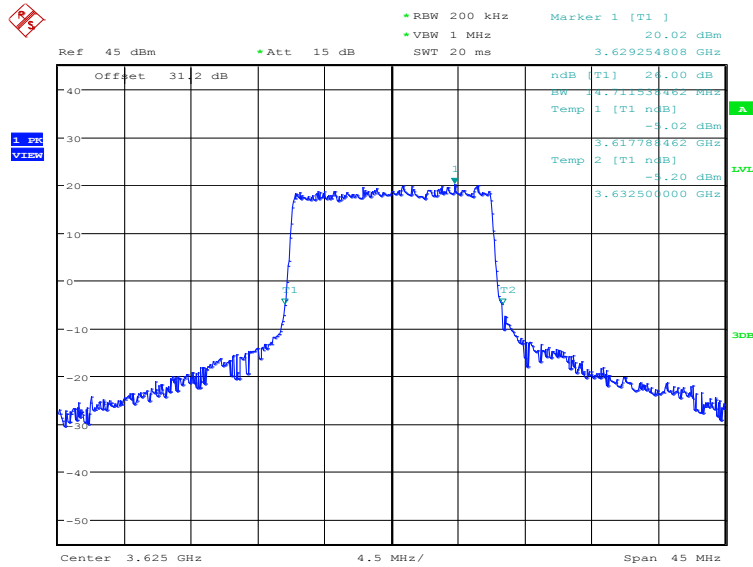


Date: 5.DEC.2023 11:30:07

LTE band 48, 15MHz (-26dBc)

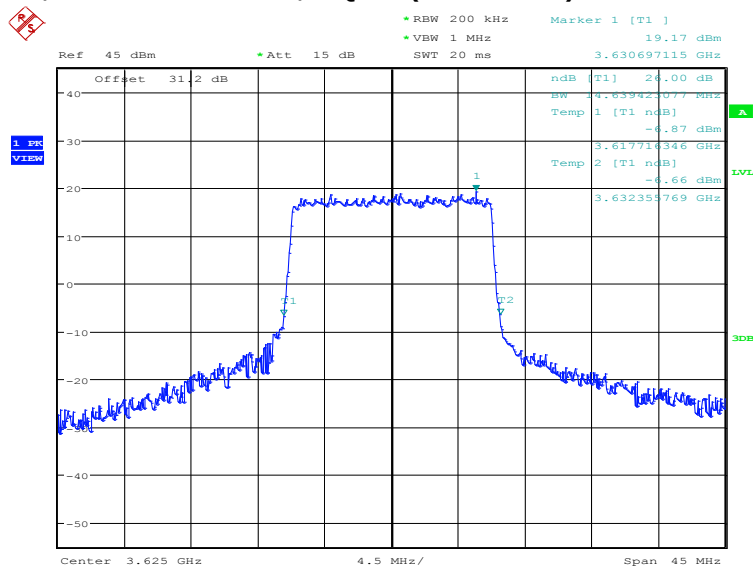
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
3625.0	QPSK	16QAM
	14711.54	14639.42

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



Date: 5.DEC.2023 11:30:50

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

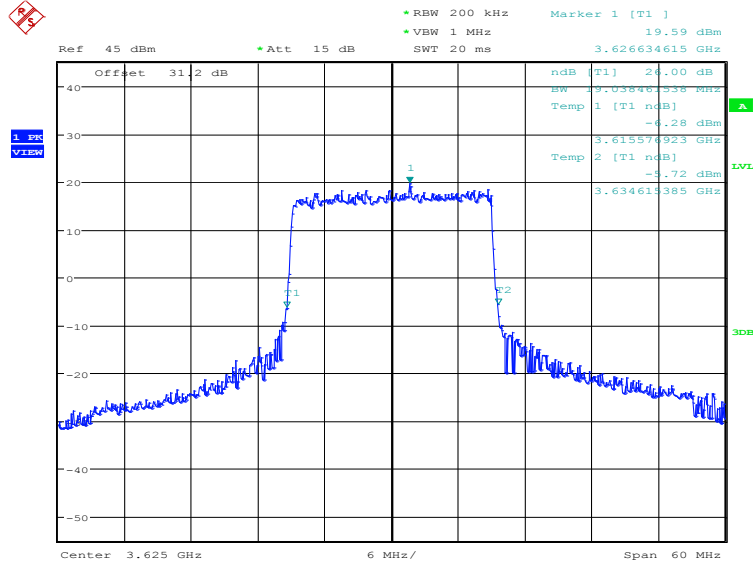


Date: 5.DEC.2023 11:31:30

LTE band 48, 20MHz (-26dBc)

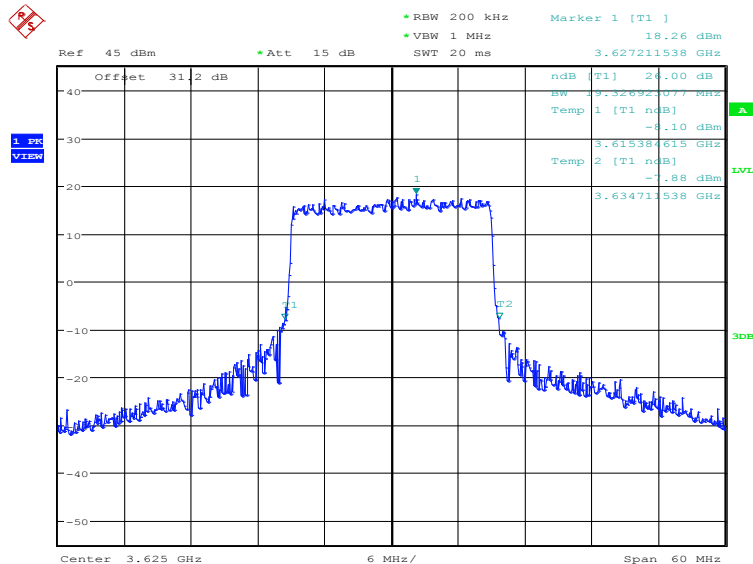
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
3625.0	QPSK	16QAM
	19038.46	19326.92

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



Date: 5.DEC.2023 11:32:13

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

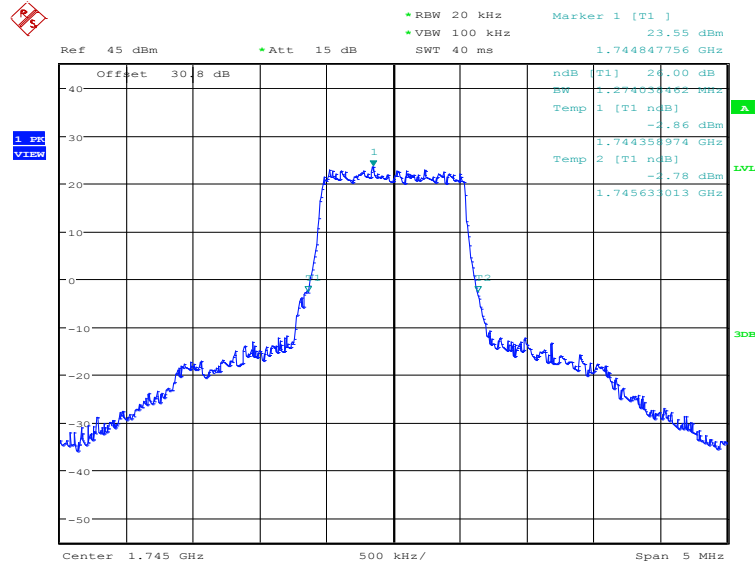


Date: 5.DEC.2023 11:32:53

LTE band 66, 1.4MHz (-26dBc)

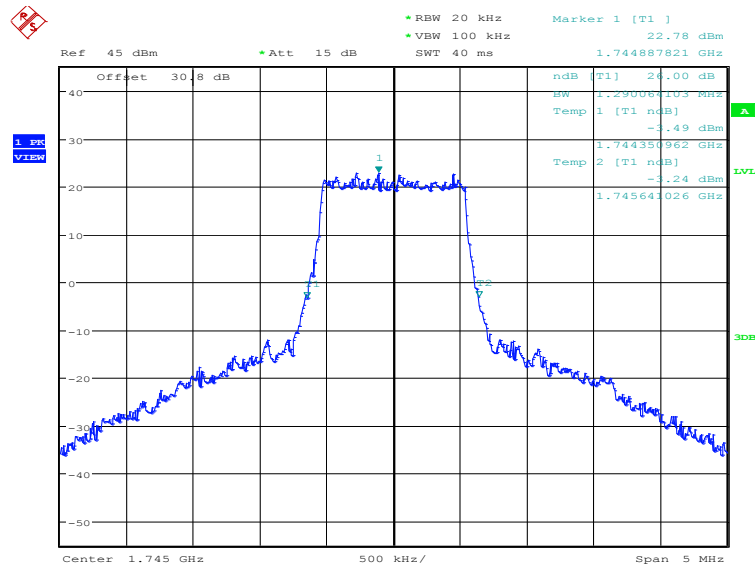
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	1274.04	1290.06

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



Date: 5.DEC.2023 11:19:05

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

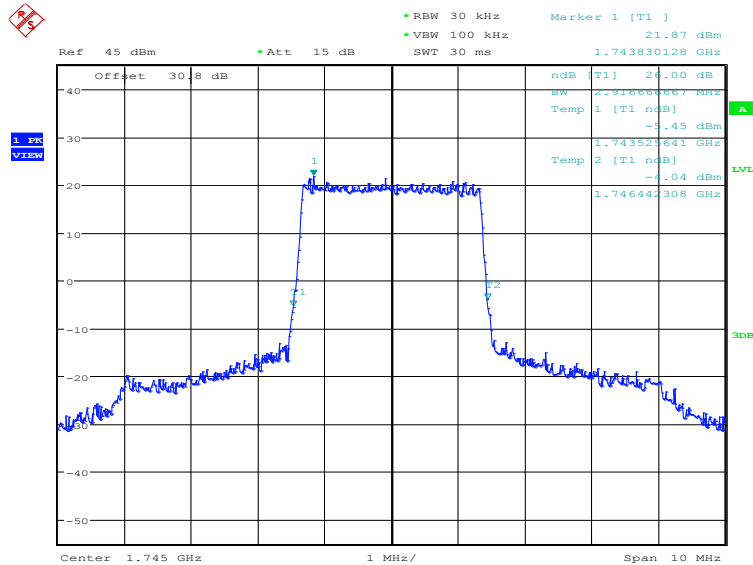


Date: 5.DEC.2023 11:19:45

LTE band 66, 3MHz (-26dBc)

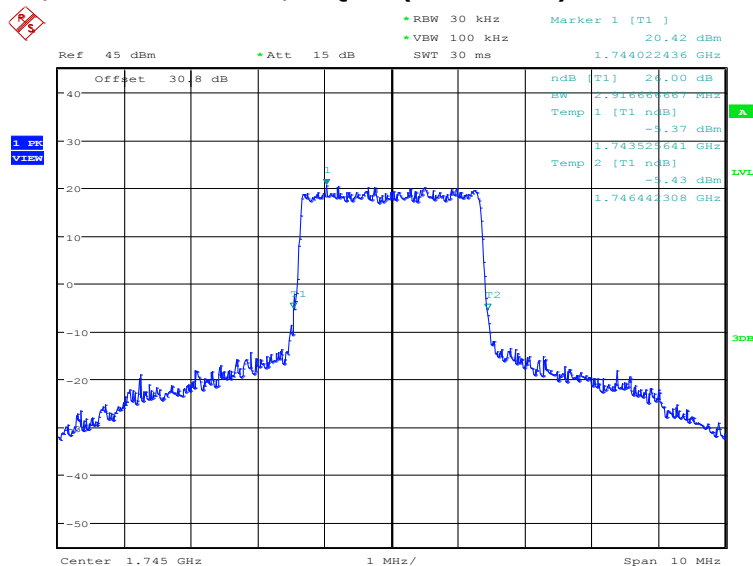
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	2916.67	2916.67

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



Date: 5.DEC.2023 11:20:27

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

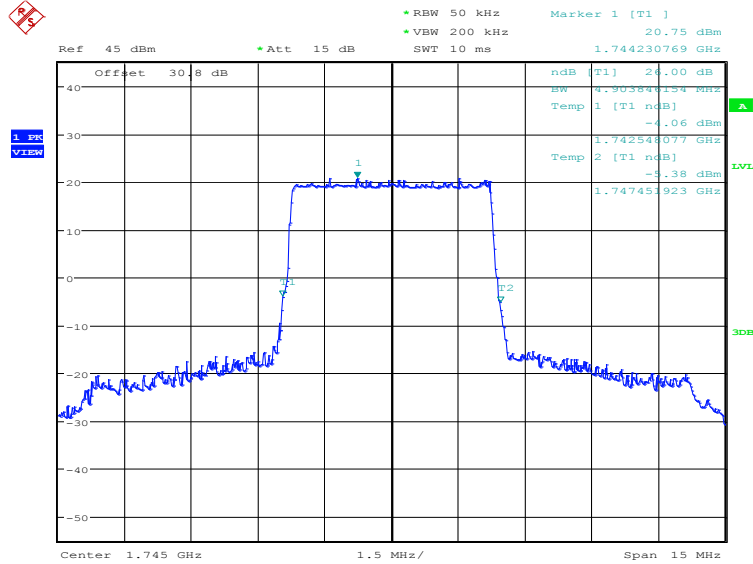


Date: 5.DEC.2023 11:21:07

LTE band 66, 5MHz (-26dBc)

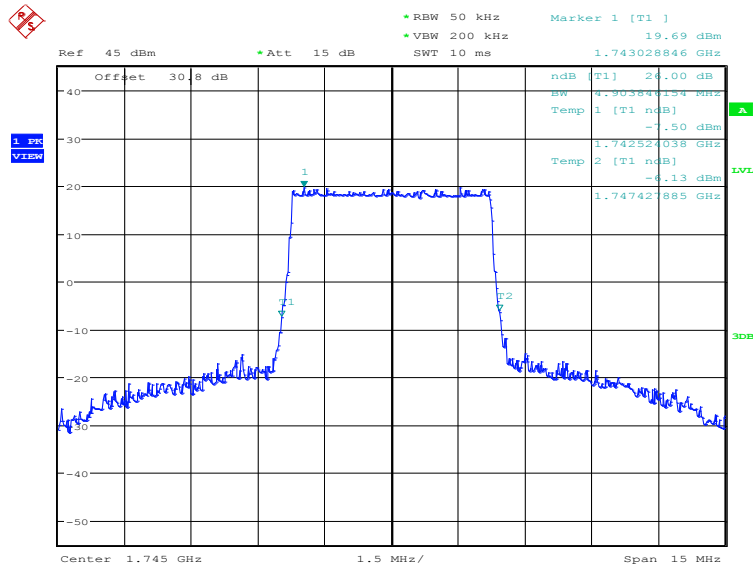
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	4903.85	4903.85

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



Date: 5.DEC.2023 11:21:49

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

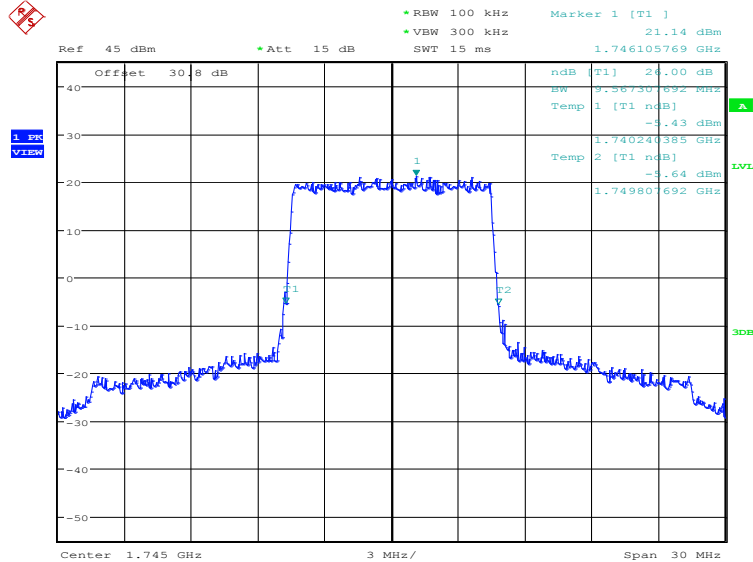


Date: 5.DEC.2023 11:22:30

LTE band 66, 10MHz (-26dBc)

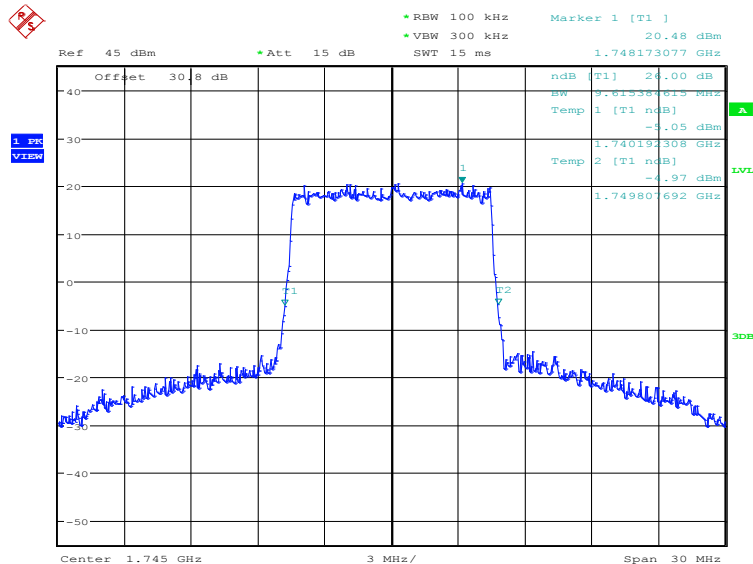
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	9567.31	9615.38

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



Date: 5.DEC.2023 11:23:12

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

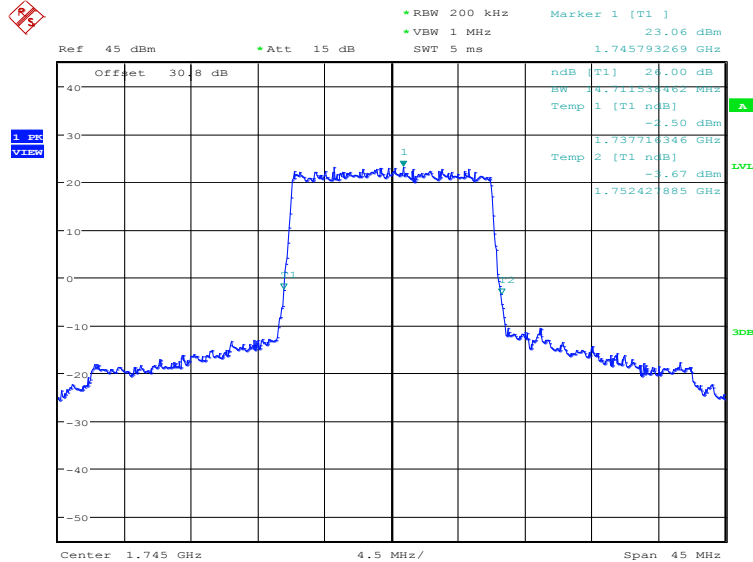


Date: 5.DEC.2023 11:23:52

LTE band 66, 15MHz (-26dBc)

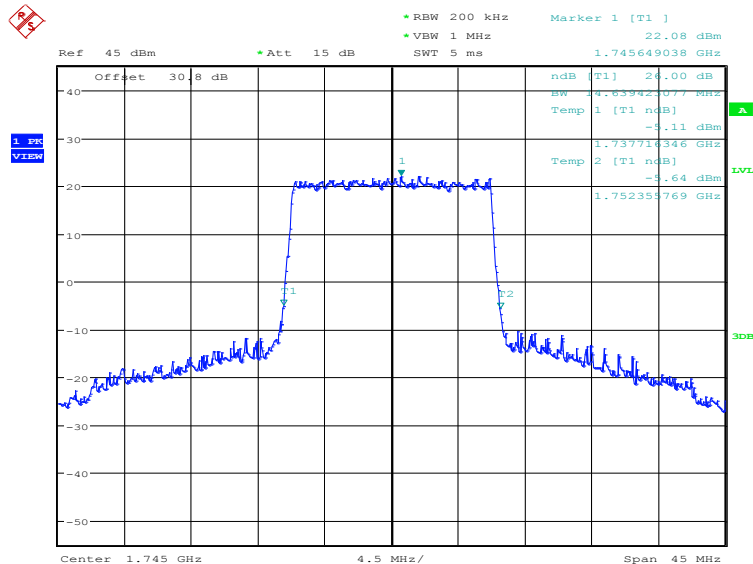
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	14711.54	14639.42

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



Date: 5.DEC.2023 11:24:34

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

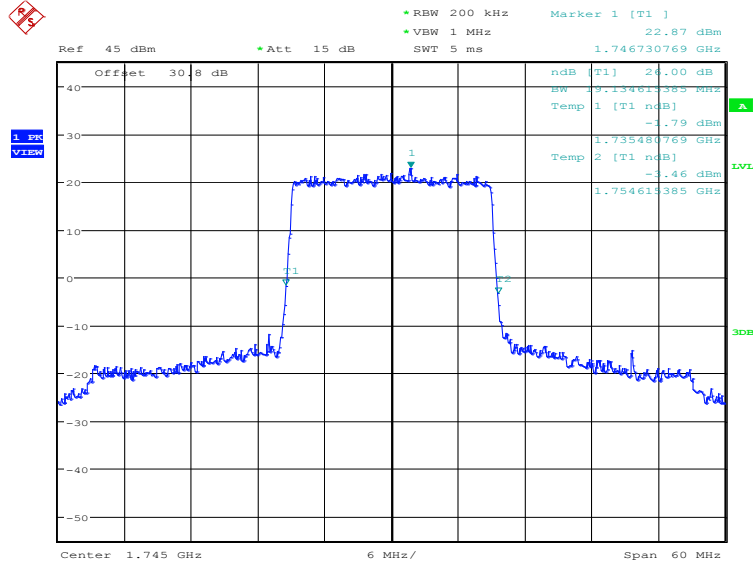


Date: 5.DEC.2023 11:25:15

LTE band 66, 20MHz (-26dBc)

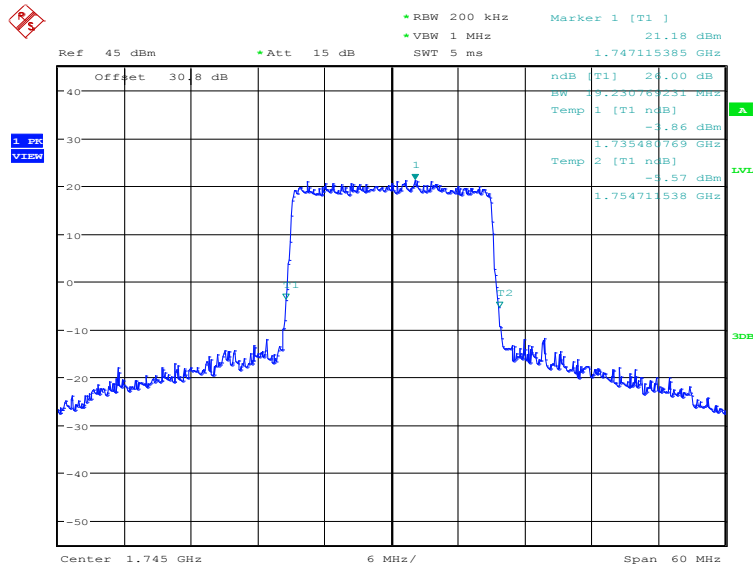
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	19134.62	19230.77

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



Date: 5.DEC.2023 11:25:57

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

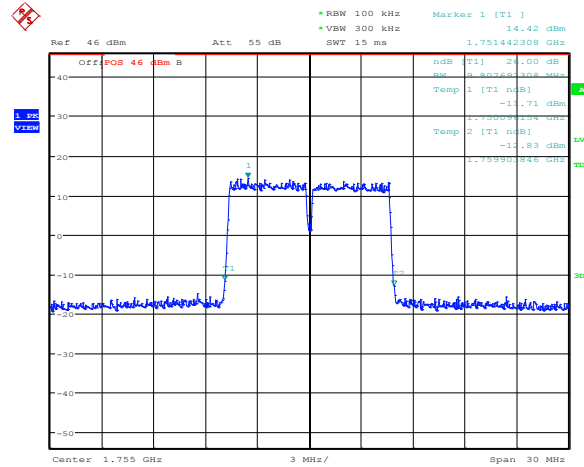


Date: 5.DEC.2023 11:26:37

LTE CA band 66B, 5MHz+5MHz(-26dBc)

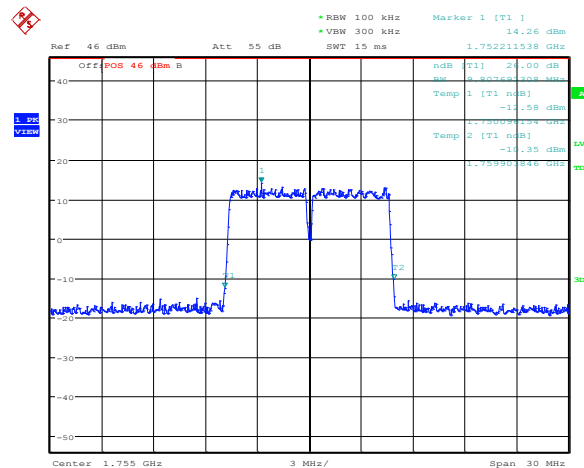
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	9.808	9.808

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



Date: 14.DEC.2023 12:13:36

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

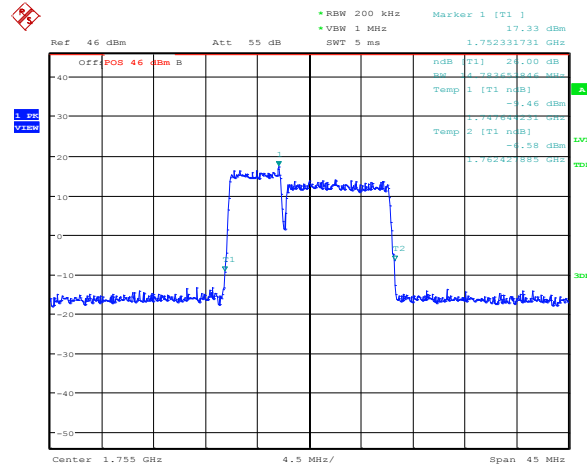


Date: 14.DEC.2023 12:13:59

LTE CA band 66B, 5MHz+10MHz(-26dBc)

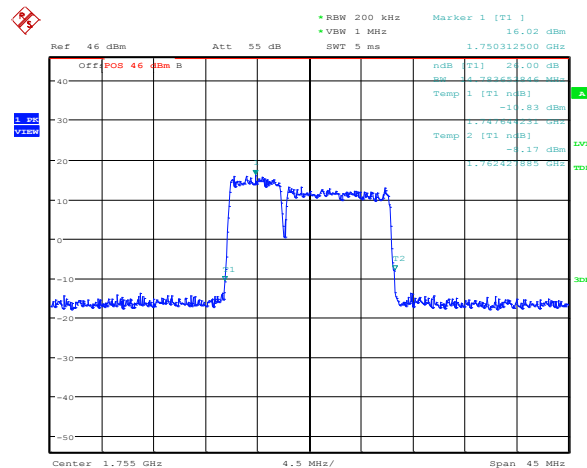
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	14.784	14.784

LTE CA band 66B , 5MHz+10MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:14:53

LTE CA band 66B , 5MHz+10MHz Bandwidth,16QAM (-26dBc BW)

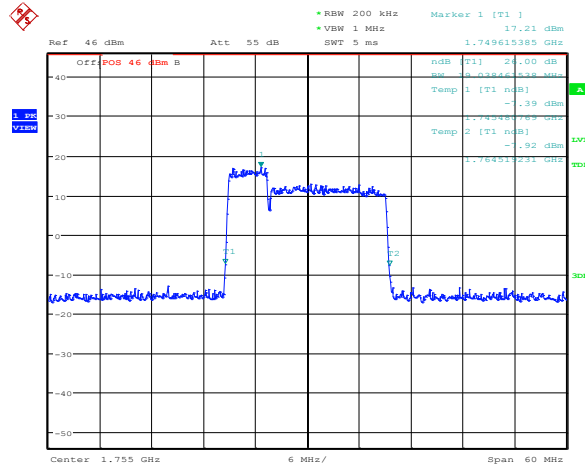


Date: 14.DEC.2023 12:15:15

LTE CA band 66B, 5MHz+15MHz(-26dBc)

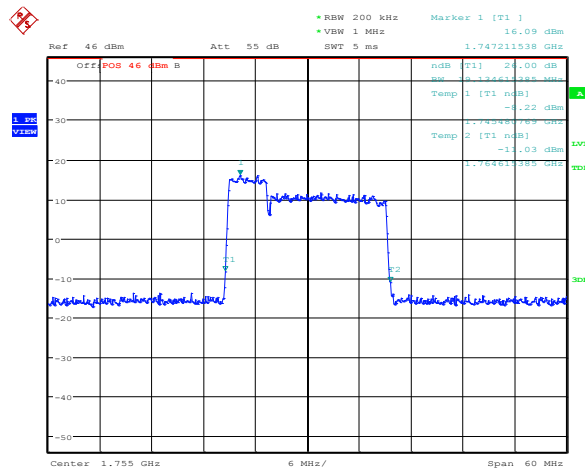
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	19.038	19.135

LTE CA band 66B , 5MHz+15MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:16:09

LTE CA band 66B , 5MHz+15MHz Bandwidth,16QAM (-26dBc BW)

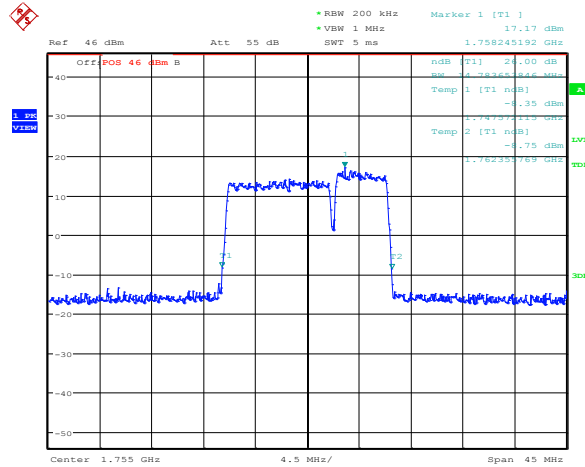


Date: 14.DEC.2023 12:16:32

LTE CA band 66B, 10MHz+5MHz(-26dBc)

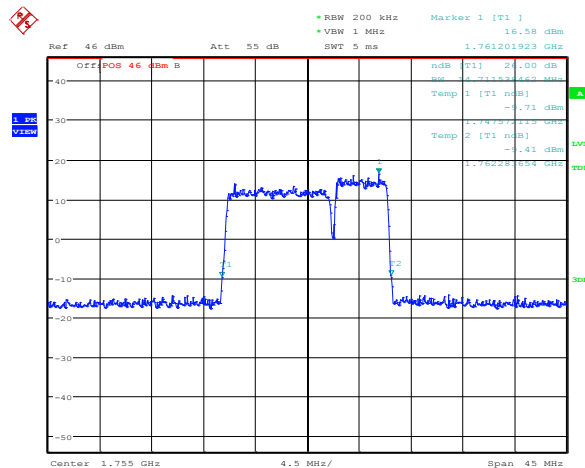
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	14.784	14.712

LTE CA band 66B , 10MHz+5MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:17:26

LTE CA band 66B , 10MHz+5MHz Bandwidth,16QAM (-26dBc BW)

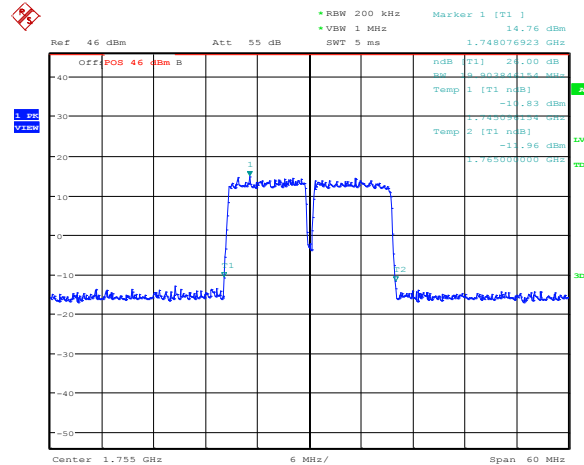


Date: 14.DEC.2023 12:17:49

LTE CA band 66B, 10MHz+10MHz(-26dBc)

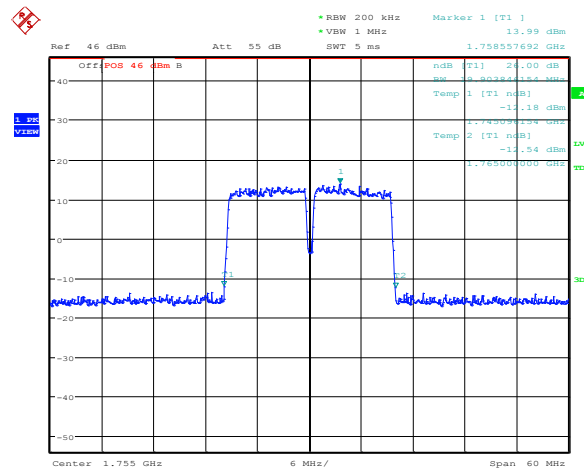
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	19.904	19.904

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



Date: 14.DEC.2023 12:18:43

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

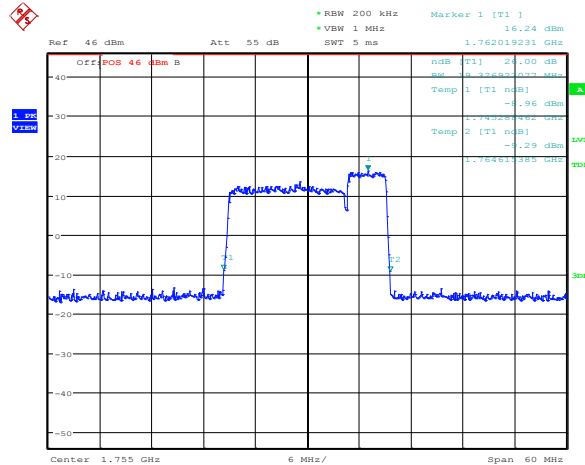


Date: 14.DEC.2023 12:19:06

LTE CA band 66B, 15MHz+5MHz(-26dBc)

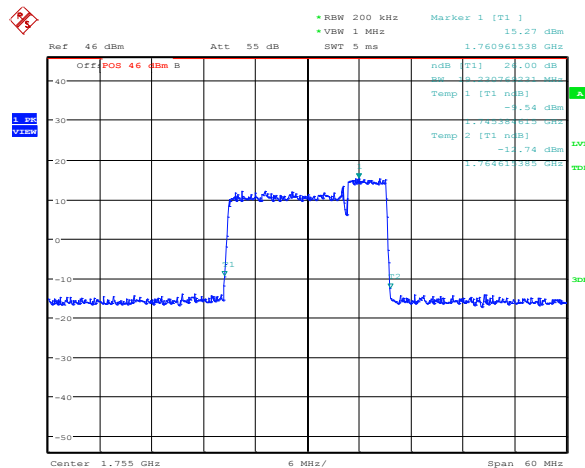
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	19.327	19.231

LTE CA band 66B , 15MHz+5MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:20:00

LTE CA band 66B , 15MHz+5MHz Bandwidth,16QAM (-26dBc BW)

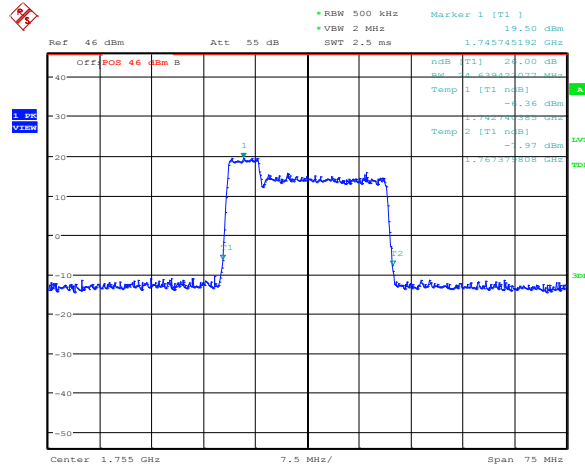


Date: 14.DEC.2023 12:20:23

LTE CA band 66C, 5MHz+20MHz(-26dBc)

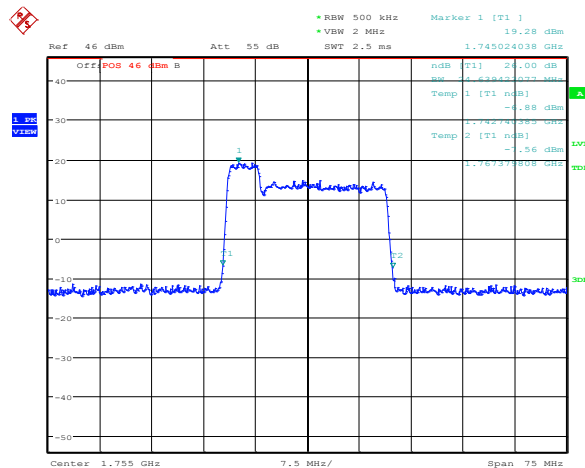
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	24.639	24.639

LTE CA band 66C , 5MHz+20MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:21:18

LTE CA band 66C , 5MHz+20MHz Bandwidth,16QAM (-26dBc BW)

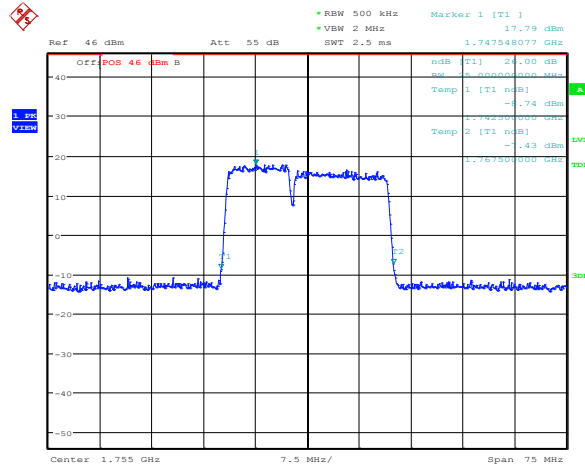


Date: 14.DEC.2023 12:21:44

LTE CA band 66C, 10MHz+15MHz(-26dBc)

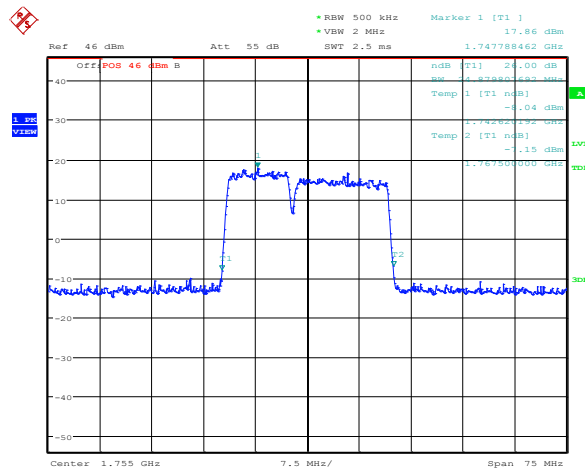
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	25.000	24.880

LTE CA band 66C , 10MHz+15MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:22:38

LTE CA band 66C , 10MHz+15MHz Bandwidth,16QAM (-26dBc BW)

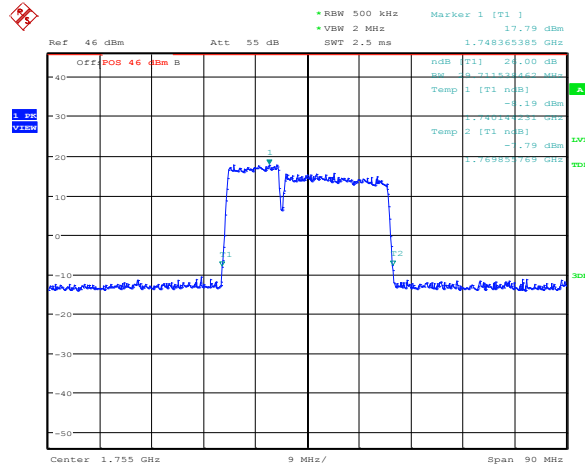


Date: 14.DEC.2023 12:23:01

LTE CA band 66C, 10MHz+20MHz(-26dBc)

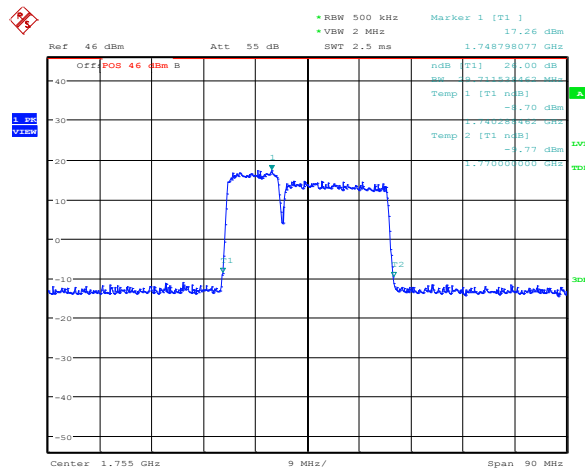
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	29.712	29.712

LTE CA band 66C , 10MHz+20MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:23:54

LTE CA band 66C , 10MHz+20MHz Bandwidth,16QAM (-26dBc BW)

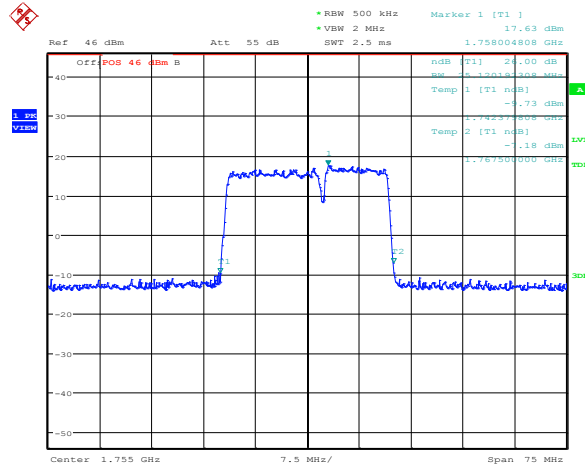


Date: 14.DEC.2023 12:24:17

LTE CA band 66C, 15MHz+10MHz(-26dBc)

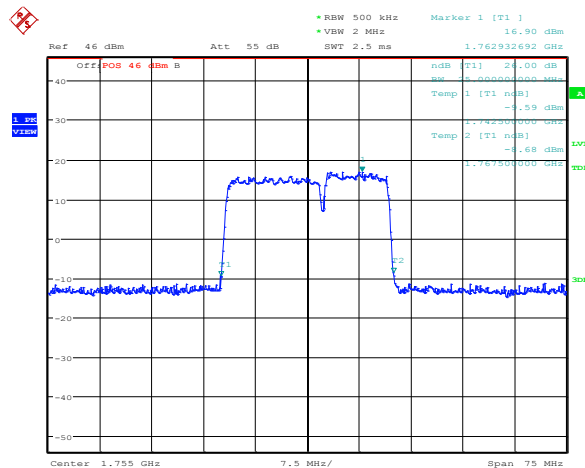
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	25.120	25.000

LTE CA band 66C , 15MHz+10MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:25:11

LTE CA band 66C , 15MHz+10MHz Bandwidth,16QAM (-26dBc BW)

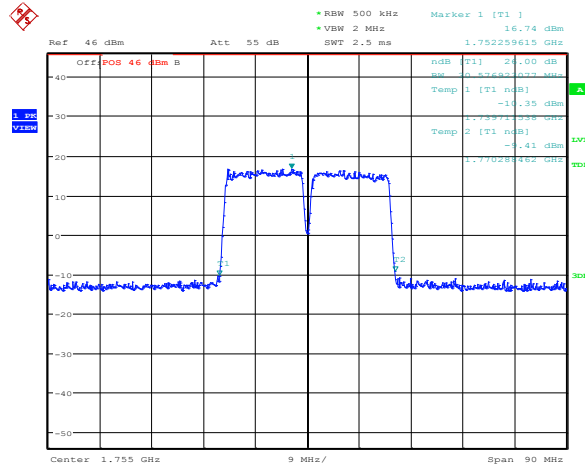


Date: 14.DEC.2023 12:25:34

LTE CA band 66C, 15MHz+15MHz(-26dBc)

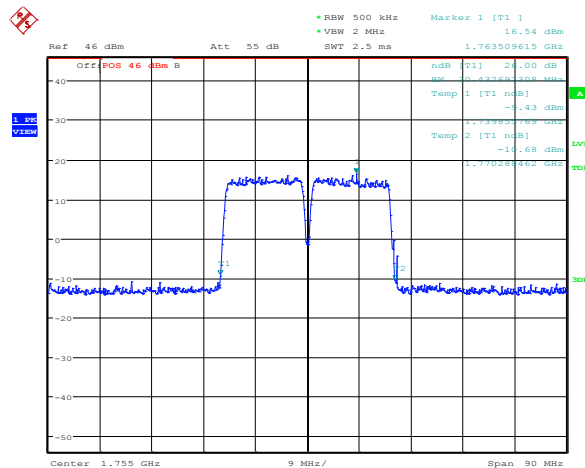
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	30.577	30.433

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



Date: 14.DEC.2023 12:26:27

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

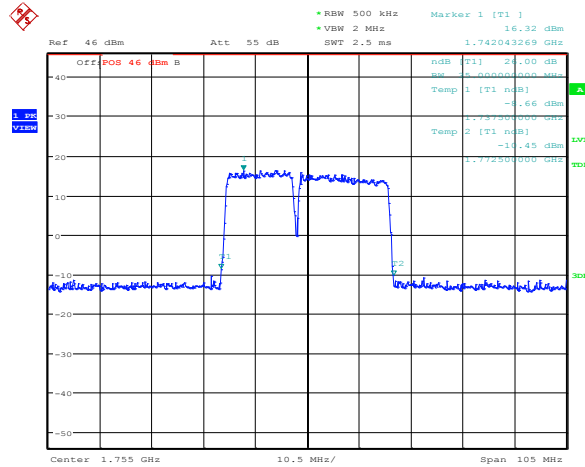


Date: 14.DEC.2023 12:26:50

LTE CA band 66C, 15MHz+20MHz(-26dBc)

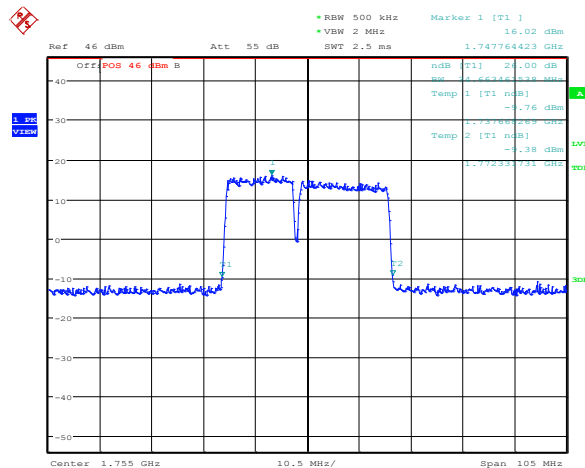
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	35.000	34.663

LTE CA band 66C , 15MHz+20MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:27:43

LTE CA band 66C , 15MHz+20MHz Bandwidth,16QAM (-26dBc BW)

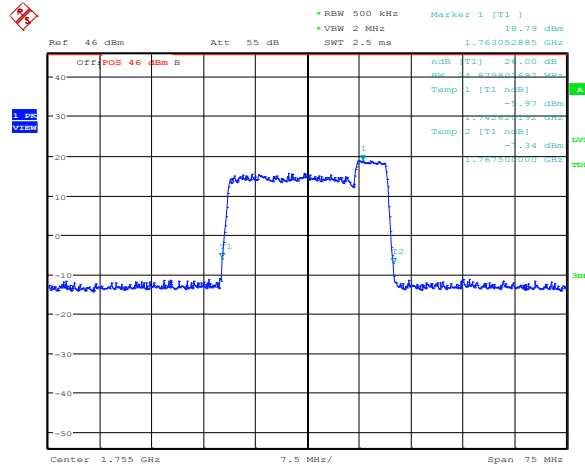


Date: 14.DEC.2023 12:28:09

LTE CA band 66C, 20MHz+5MHz(-26dBc)

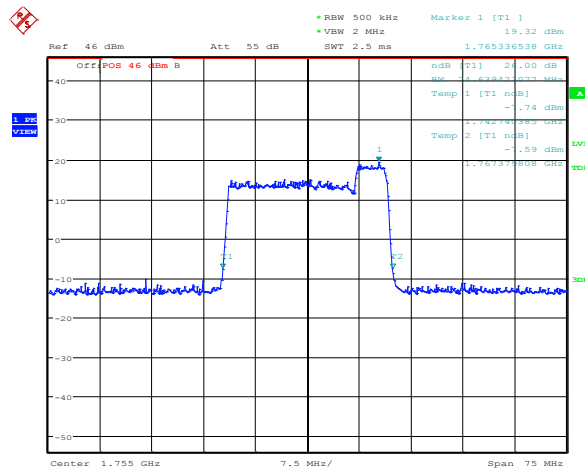
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	24.880	24.639

LTE CA band 66C , 20MHz+5MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:29:04

LTE CA band 66C , 20MHz+5MHz Bandwidth,16QAM (-26dBc BW)

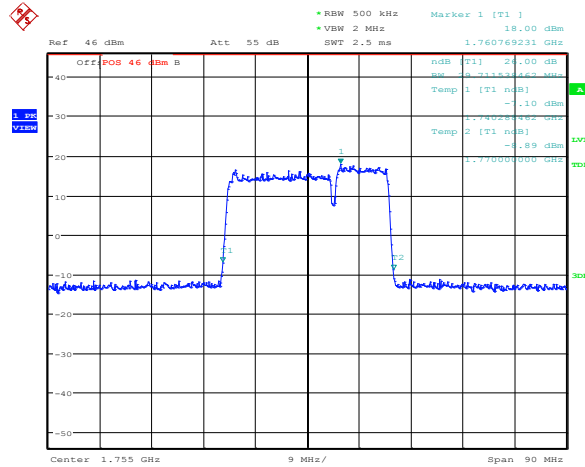


Date: 14.DEC.2023 12:29:27

LTE CA band 66C, 20MHz+10MHz(-26dBc)

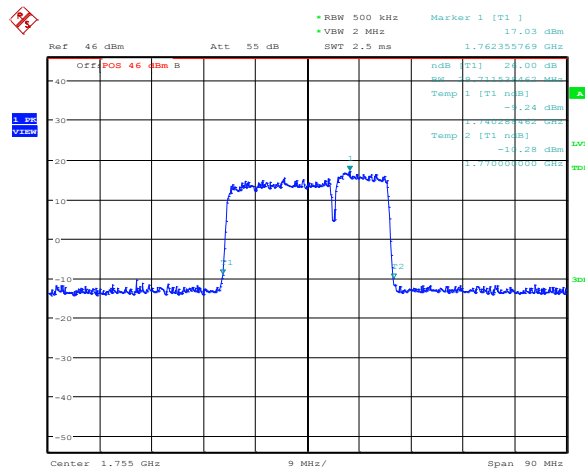
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	29.712	29.712

LTE CA band 66C , 20MHz+10MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:30:21

LTE CA band 66C , 20MHz+10MHz Bandwidth,16QAM (-26dBc BW)

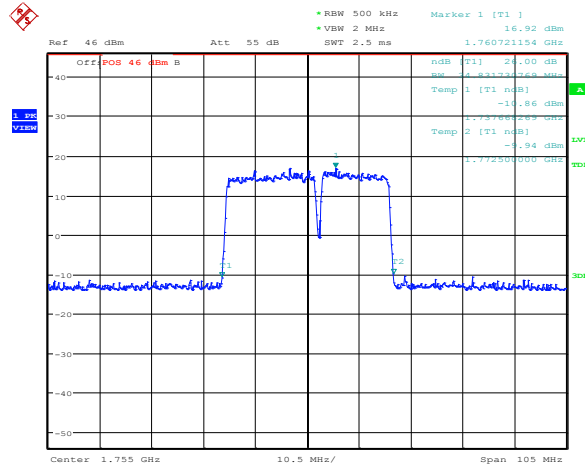


Date: 14.DEC.2023 12:30:44

LTE CA band 66C, 20MHz+15MHz(-26dBc)

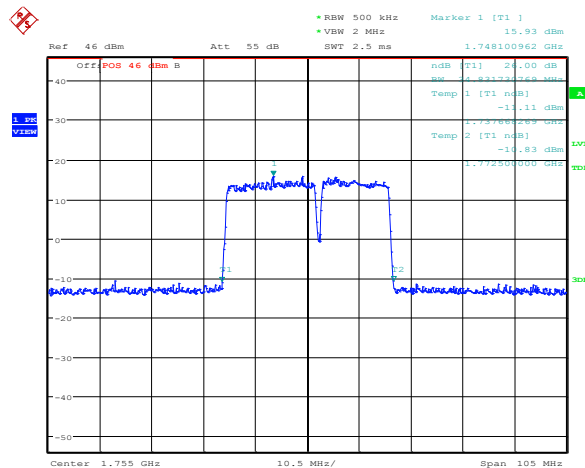
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	34.832	34.832

LTE CA band 66C , 20MHz+15MHz Bandwidth,QPSK (-26dBc BW)



Date: 14.DEC.2023 12:31:37

LTE CA band 66C , 20MHz+15MHz Bandwidth,16QAM (-26dBc BW)

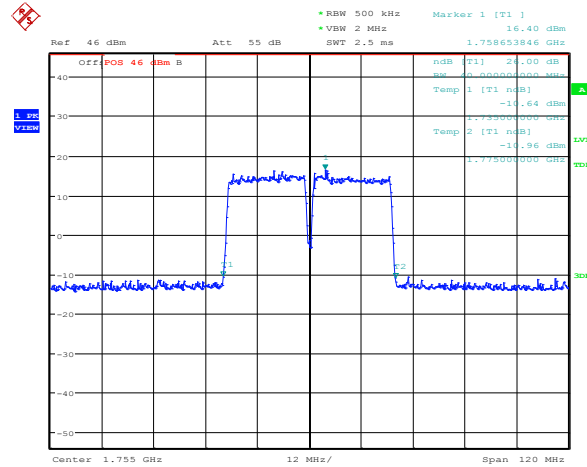


Date: 14.DEC.2023 12:32:00

LTE CA band 66C, 20MHz+20MHz(-26dBc)

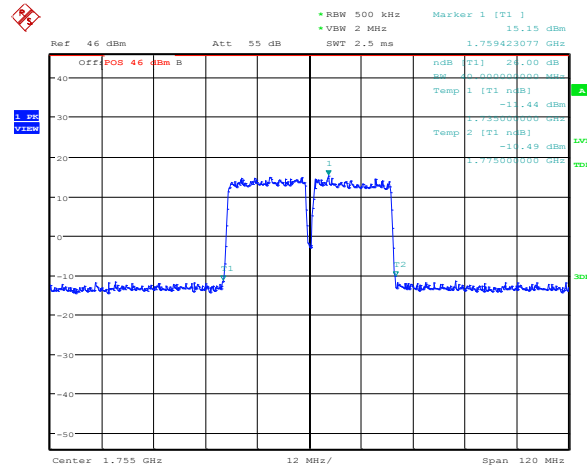
Frequency (MHz)	Occupied Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
1755.0	40.000	40.000

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



Date: 14.DEC.2023 12:32:53

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



Date: 14.DEC.2023 12:33:16

Note: Expanded measurement uncertainty is $U = 3428 \text{ Hz}$, $k = 2$.

A.6 Band Edge Compliance

A.6.1 Measurement limit

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

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

Part 27.53(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 $43 + 10 \log_{10}(P)$ 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.

Part 96.41(e) states for channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB. The conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

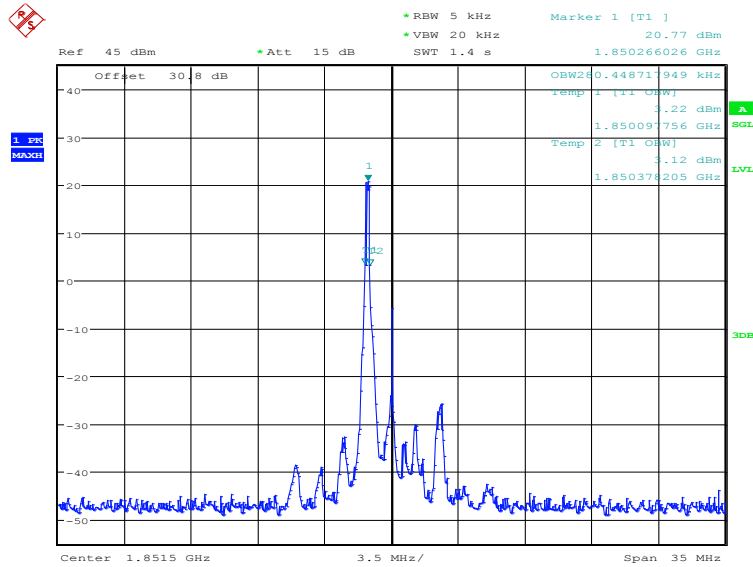
The spectrum analyzer readings are corrected by $[10 \log (1/\text{duty cycle})]$ for the non-continuous transmitting scenario.

A.6.2 Measurement result

Only the worst case result is given below

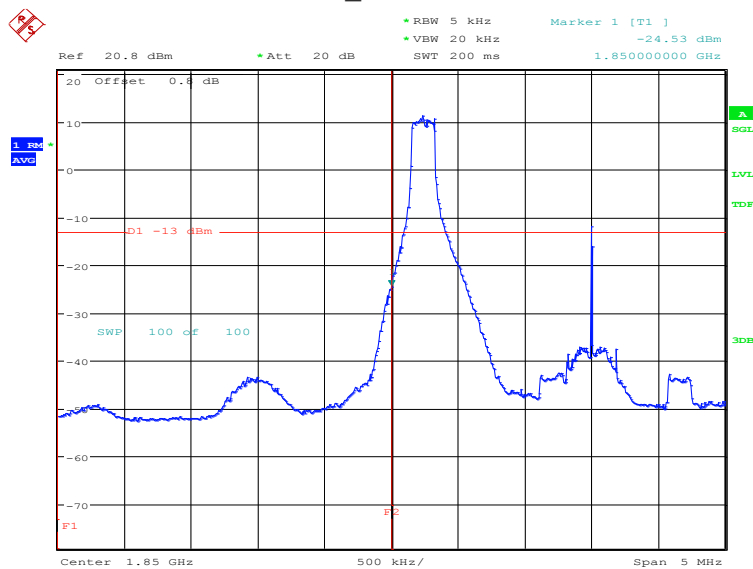
LTE band 2

OBW: 1RB-low_offset



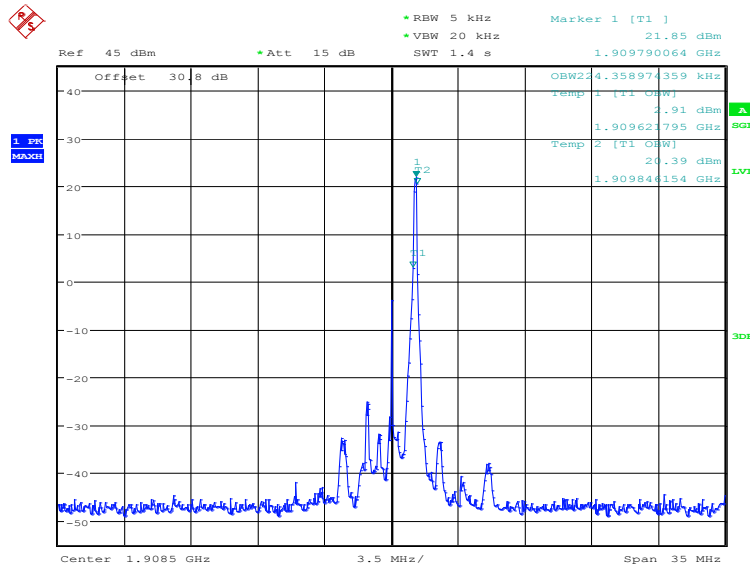
Date: 22.DEC.2023 08:01:13

LOW BAND EDGE BLOCK-1RB-low_offset



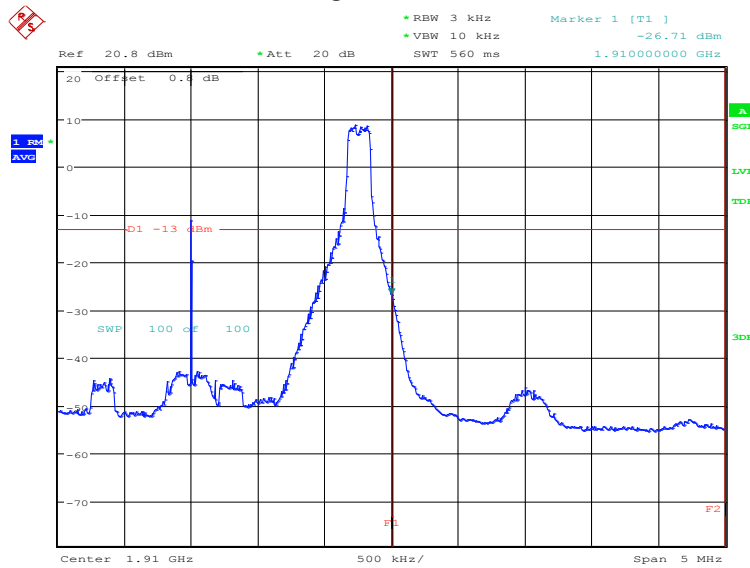
Date: 22.DEC.2023 08:02:27

OBW: 1RB-high_offset



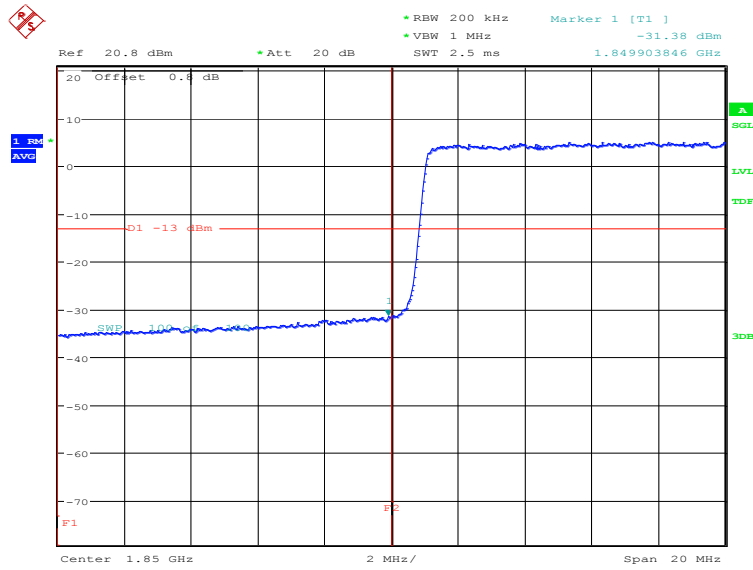
Date: 22.DEC.2023 08:03:03

HIGH BAND EDGE BLOCK-1RB-high_offset



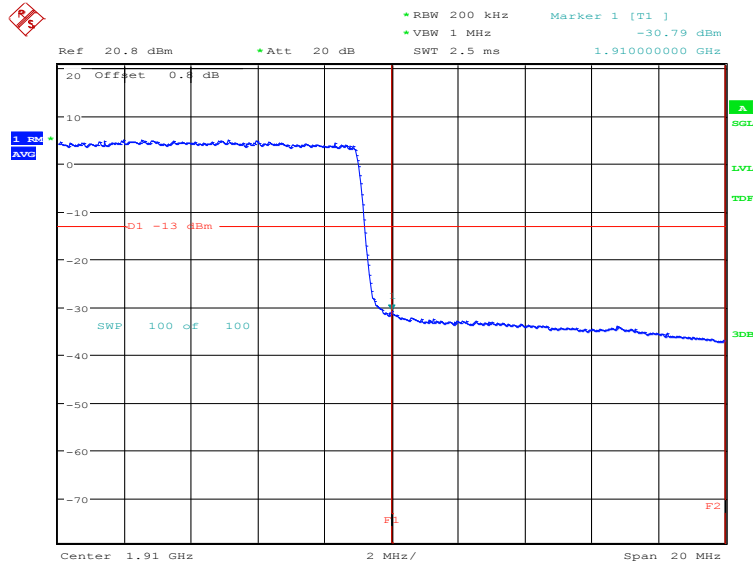
Date: 22.DEC.2023 08:04:18

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 22.DEC.2023 07:27:34

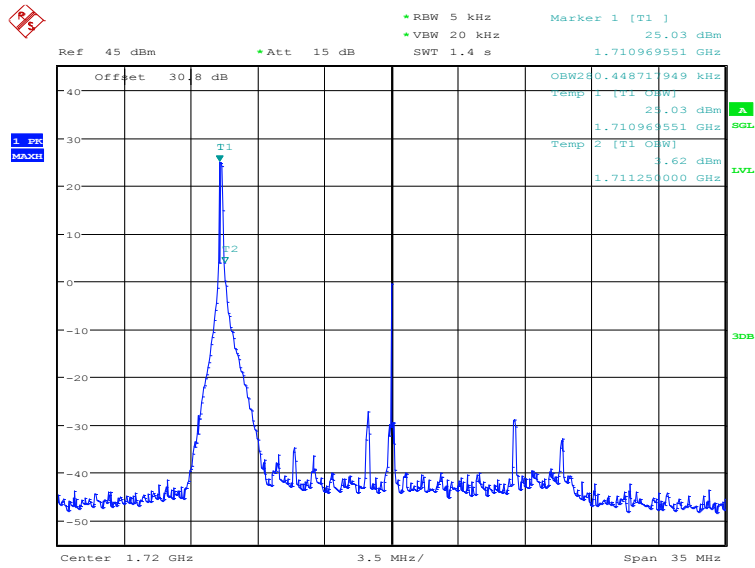
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 22.DEC.2023 07:29:06

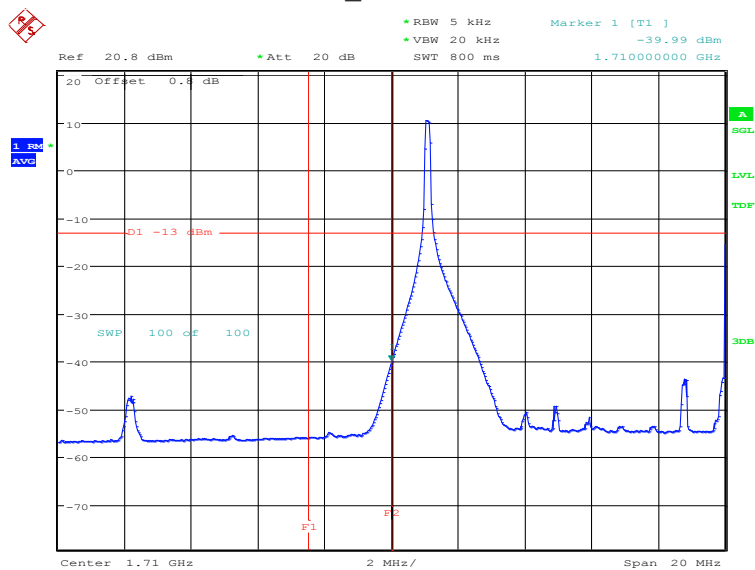
LTE band 4

OBW: 1RB-low_offset



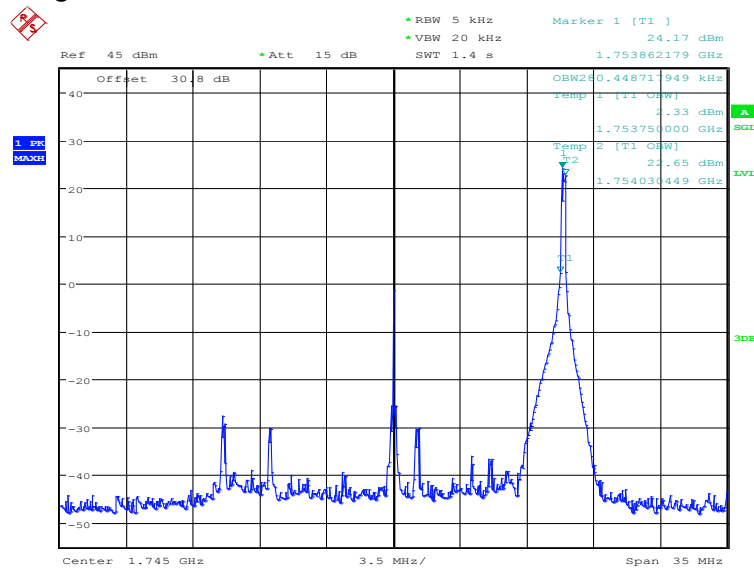
Date: 14.DEC.2023 07:47:59

LOW BAND EDGE BLOCK-1RB-low_offset



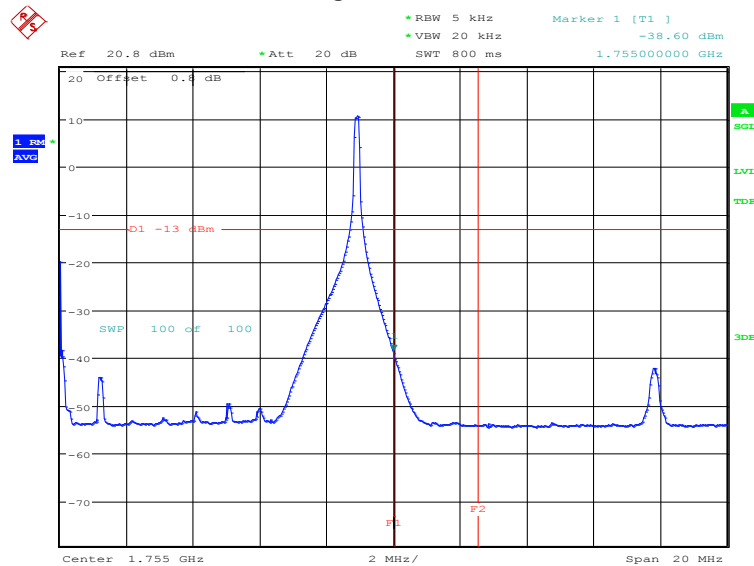
Date: 14.DEC.2023 07:51:44

OBW: 1RB-high_offset



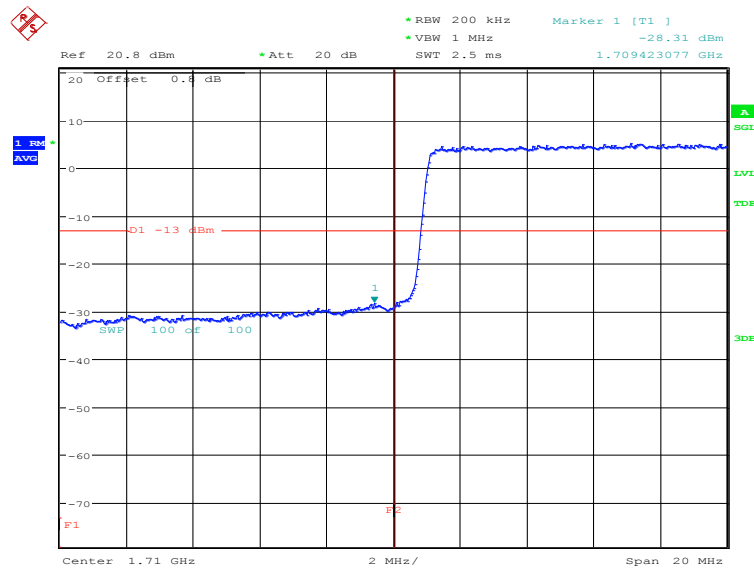
Date: 14.DEC.2023 07:52:20

HIGH BAND EDGE BLOCK-1RB-high_offset



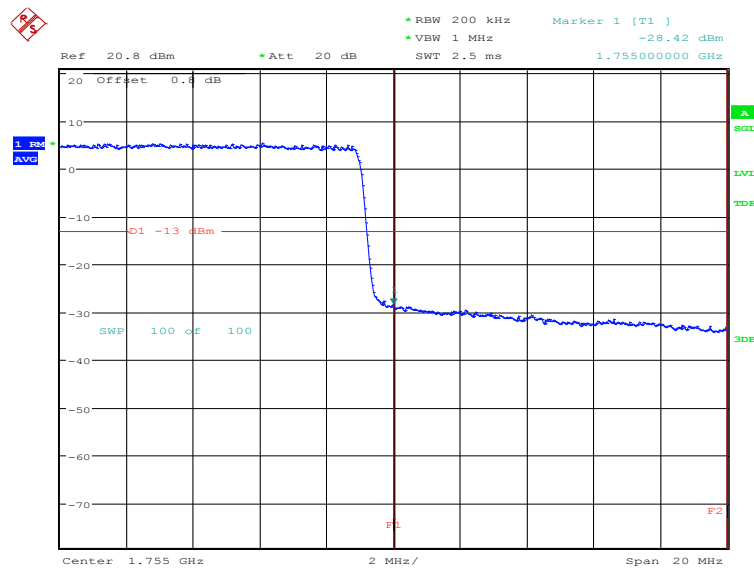
Date: 14.DEC.2023 07:54:15

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 13.DEC.2023 15:53:54

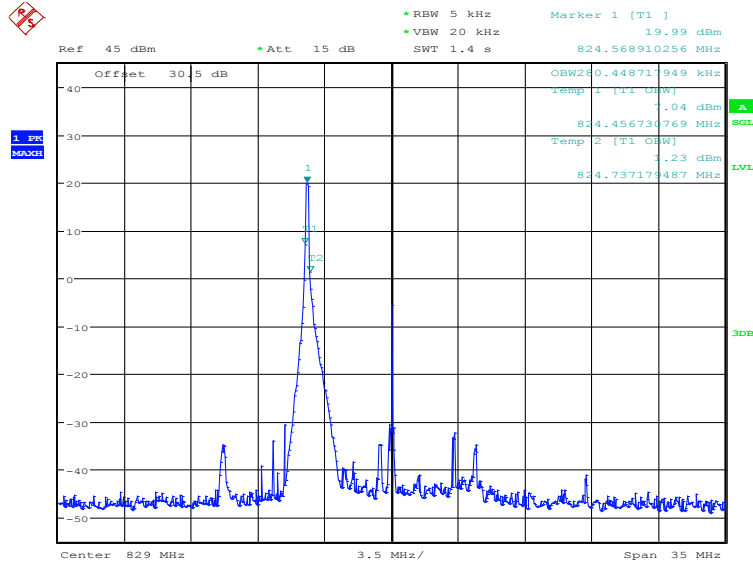
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 13.DEC.2023 15:57:16

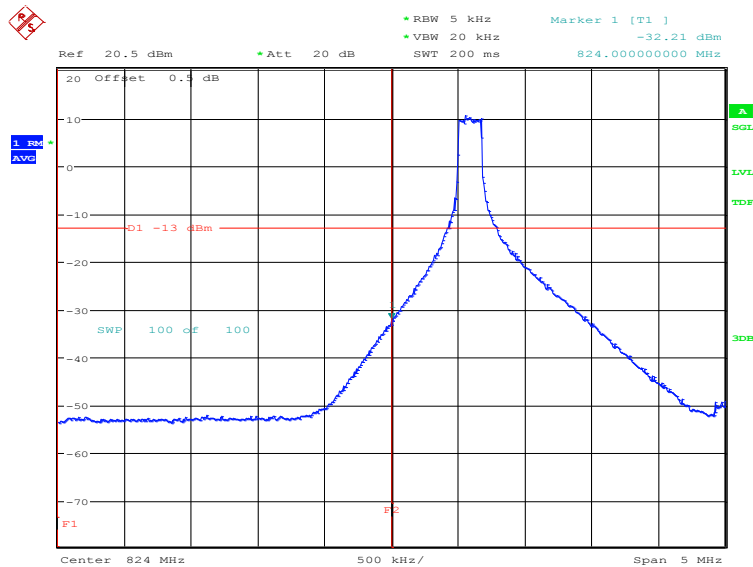
LTE band 5

OBW: 1RB-low_offset



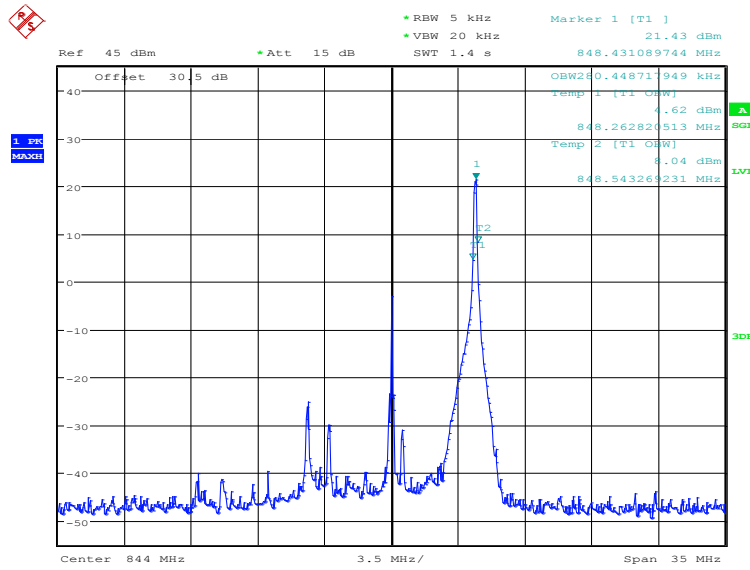
Date: 22.DEC.2023 08:08:03

LOW BAND EDGE BLOCK-1RB-low_offset



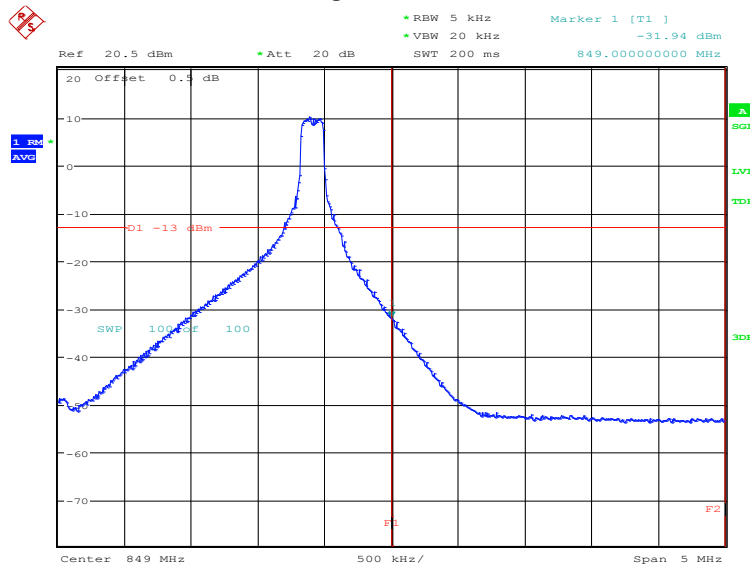
Date: 22.DEC.2023 08:09:17

OBW: 1RB-high_offset



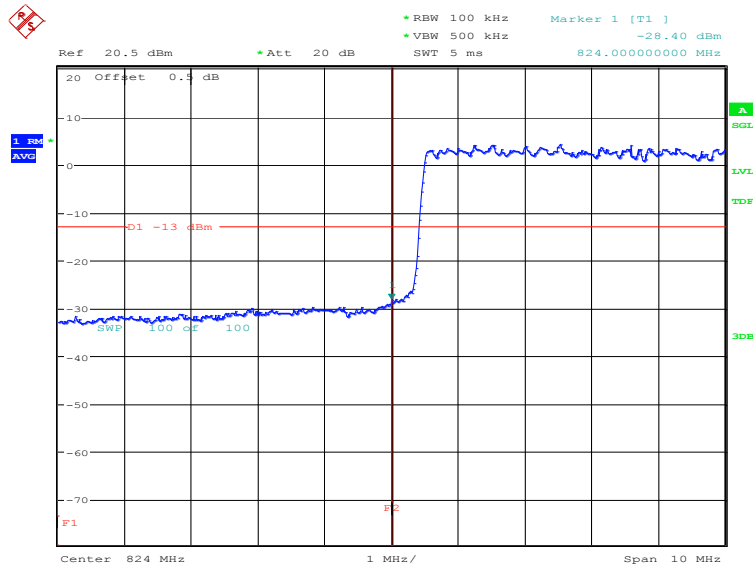
Date: 22.DEC.2023 08:09:54

HIGH BAND EDGE BLOCK-1RB-high_offset



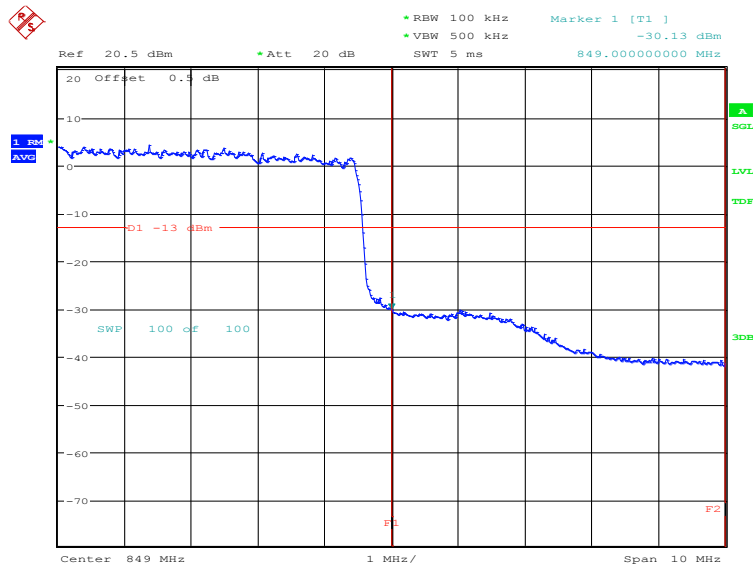
Date: 22.DEC.2023 08:11:08

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 22.DEC.2023 08:35:28

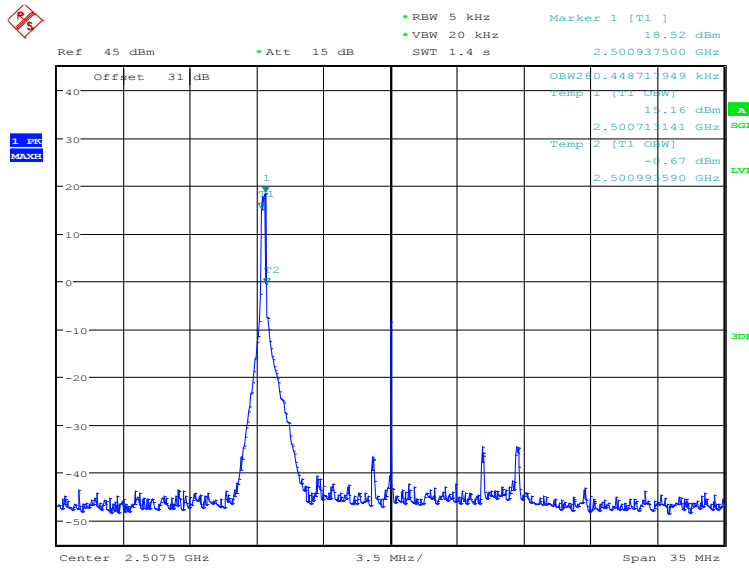
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 22.DEC.2023 08:37:00

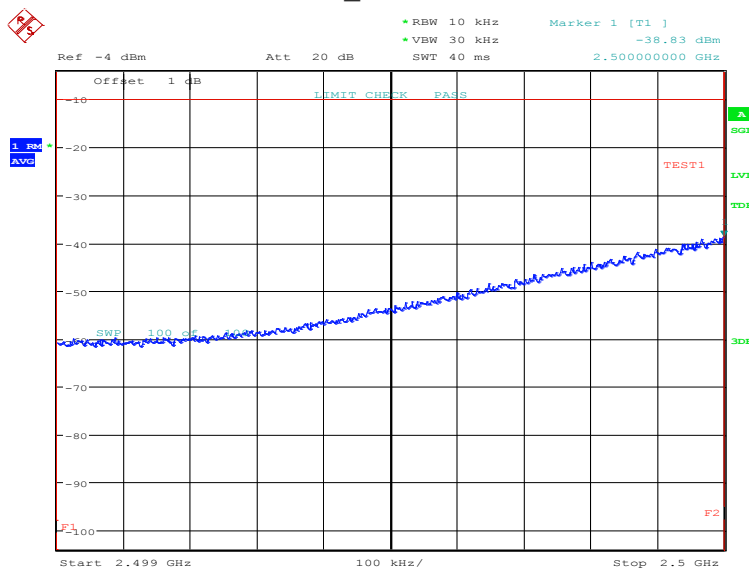
LTE band 7

OBW: 1RB-low_offset

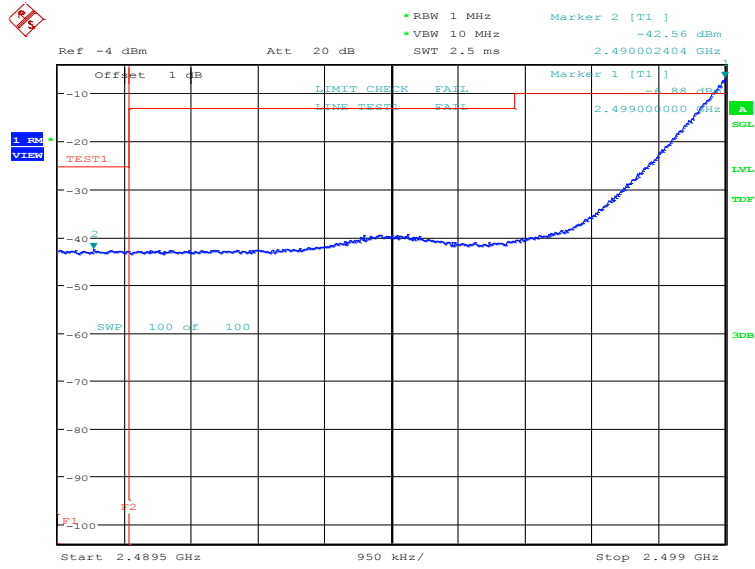


Date: 13.DEC.2023 14:57:30

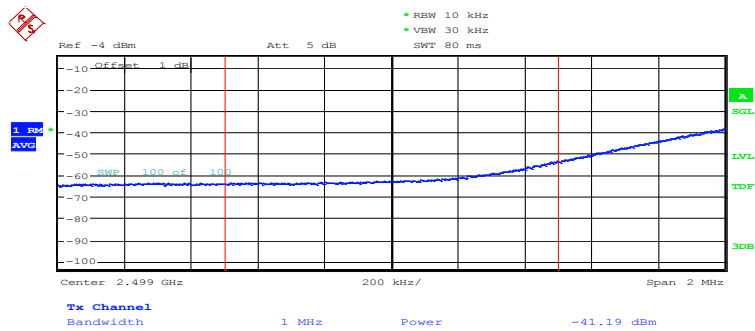
LOW BAND EDGE BLOCK-1RB-low_offset



Date: 13.DEC.2023 14:58:51

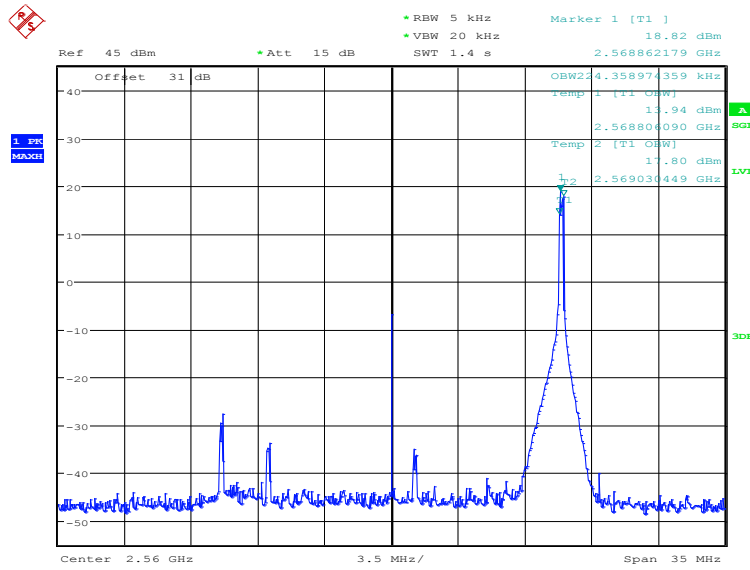


Date: 13.DEC.2023 15:00:41



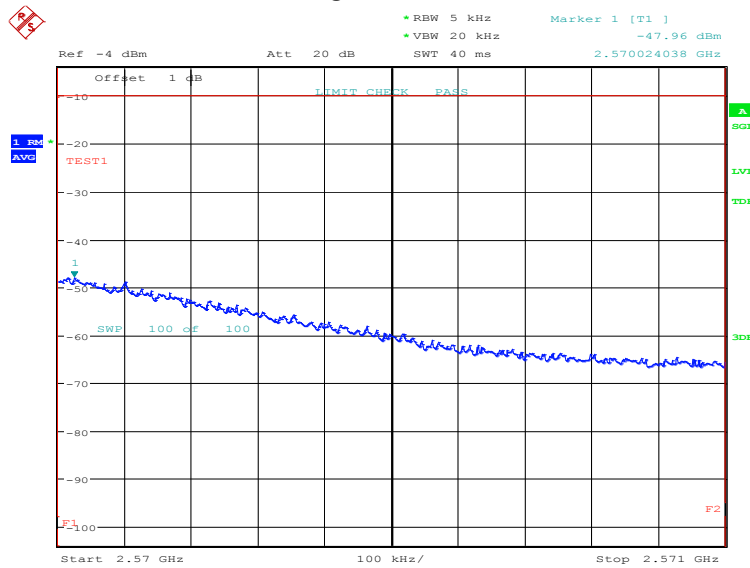
Date: 13.DEC.2023 15:01:09

OBW: 1RB-high_offset

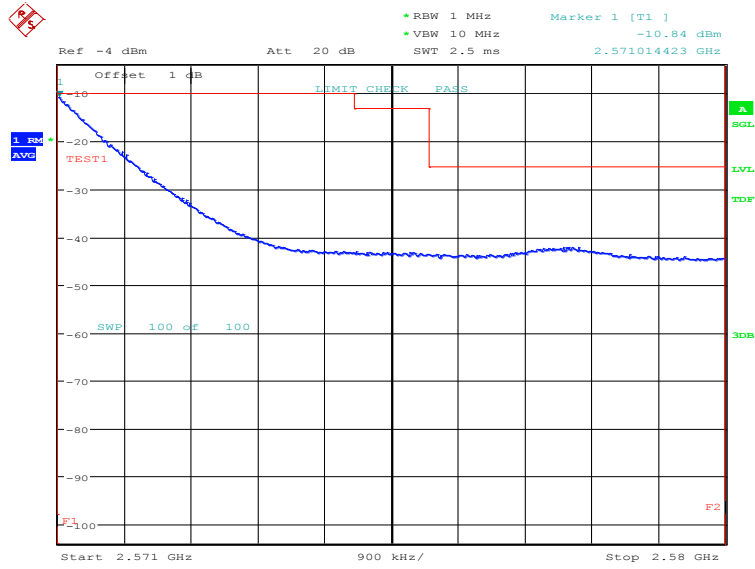


Date: 13.DEC.2023 15:01:46

HIGH BAND EDGE BLOCK-1RB-high_offset

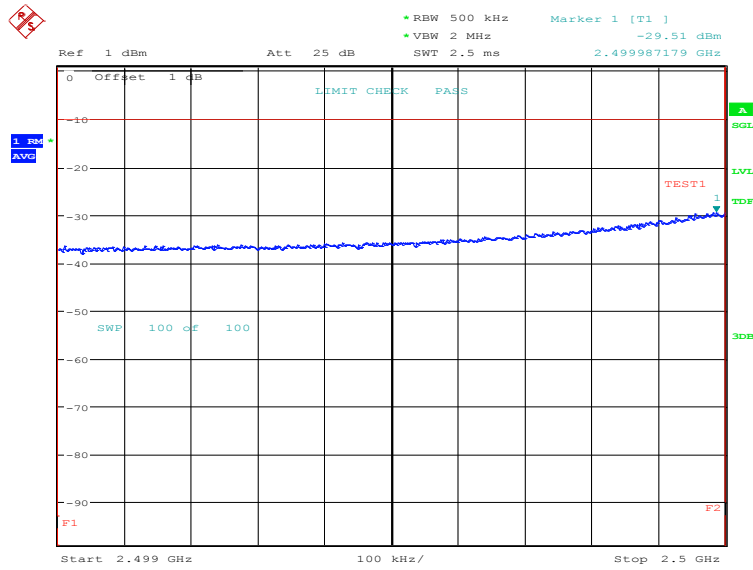


Date: 13.DEC.2023 15:03:08

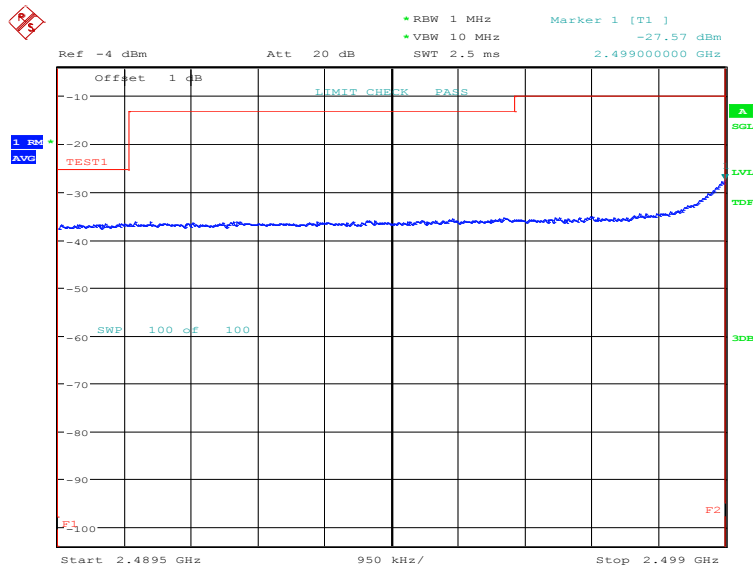


Date: 13.DEC.2023 15:04:49

LOW BAND EDGE BLOCK-20MHz-100%RB

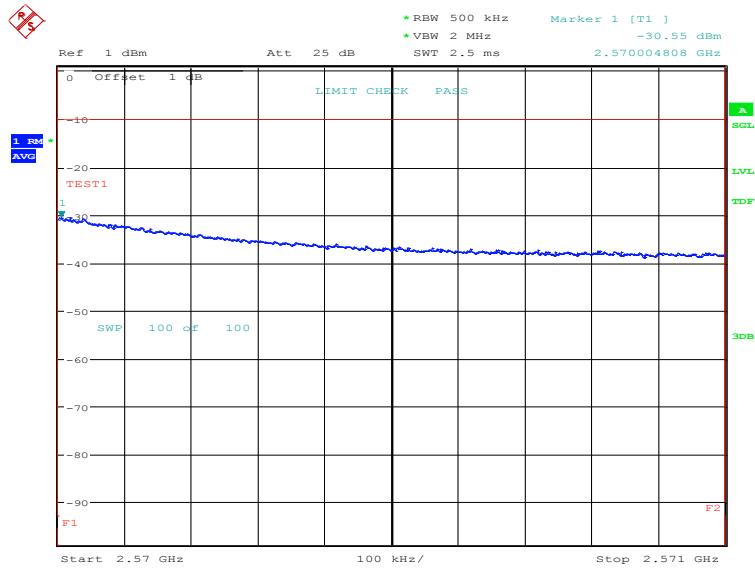


Date: 16.NOV.2023 13:29:06

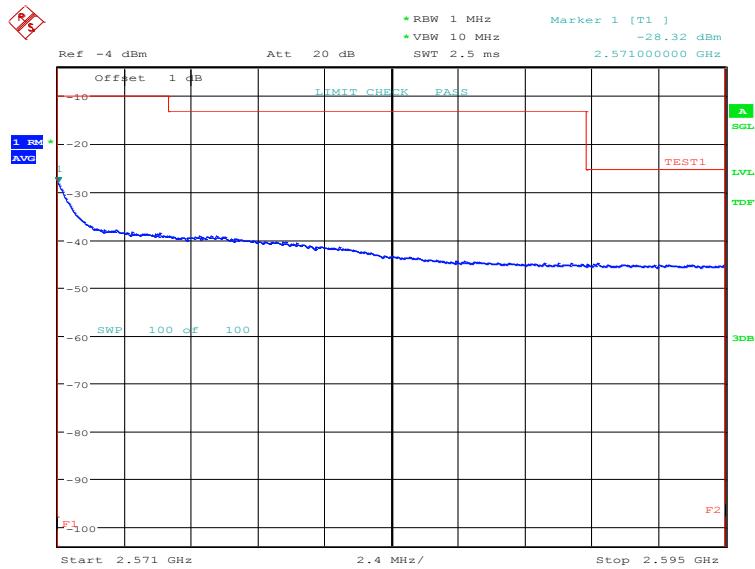


Date: 16.NOV.2023 13:30:47

HIGH BAND EDGE BLOCK-20MHz-100%RB



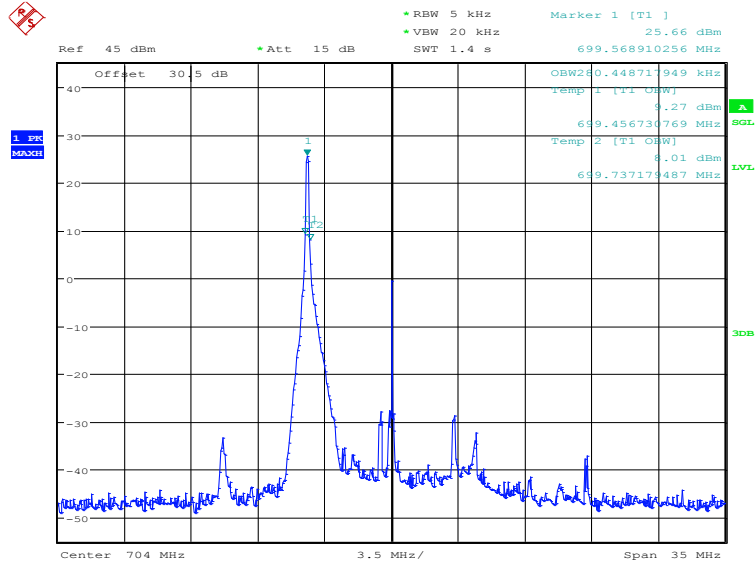
Date: 16.NOV.2023 13:33:45



Date: 16.NOV.2023 13:35:26

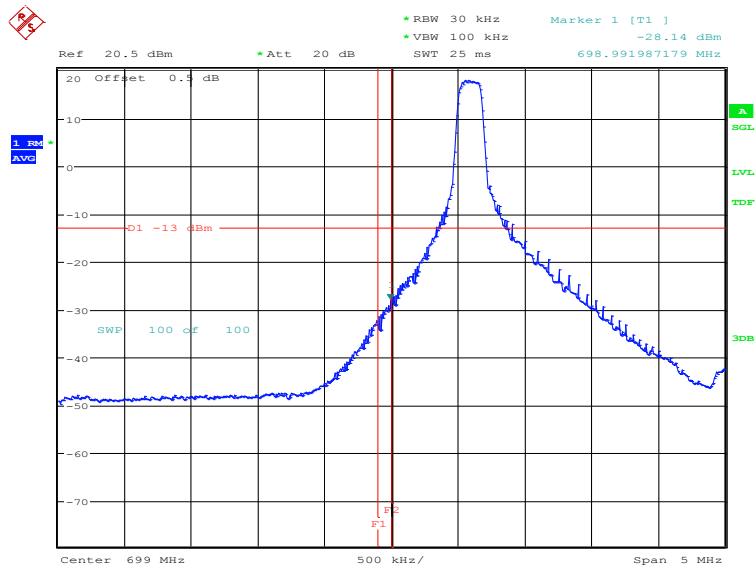
LTE band 12

OBW: 1RB-low_offset



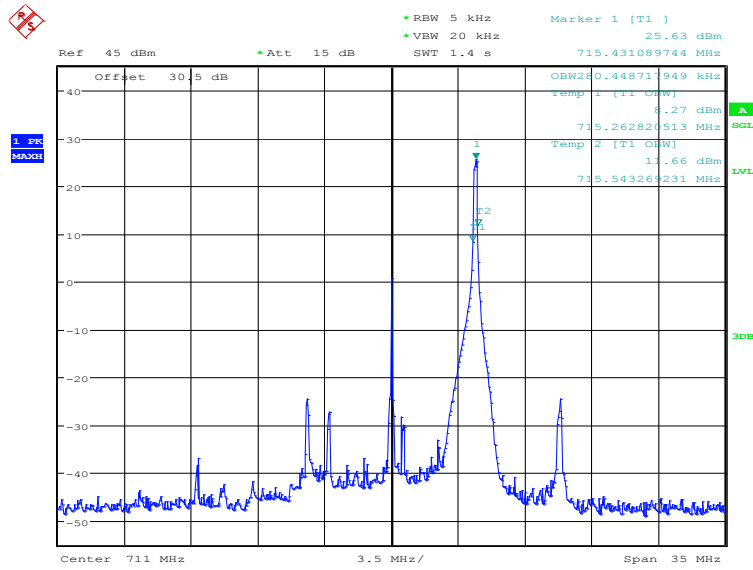
Date: 14.DEC.2023 08:25:37

LOW BAND EDGE BLOCK-1RB-low_offset



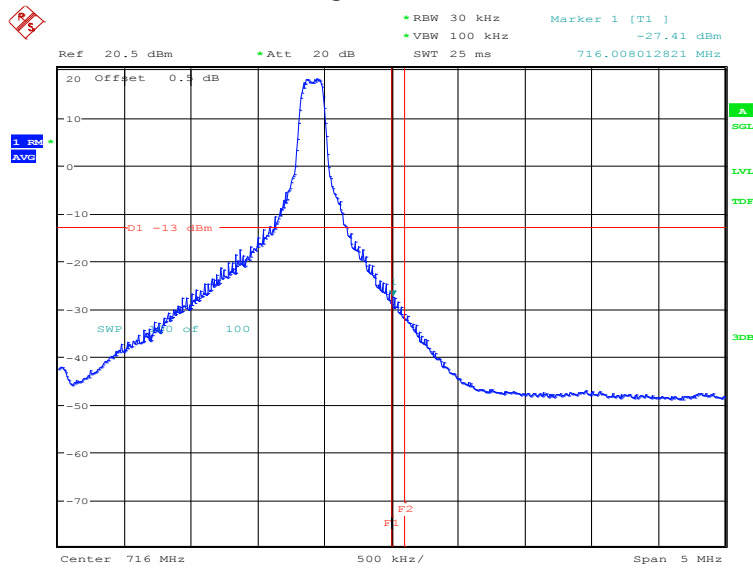
Date: 14.DEC.2023 08:25:57

OBW: 1RB-high_offset



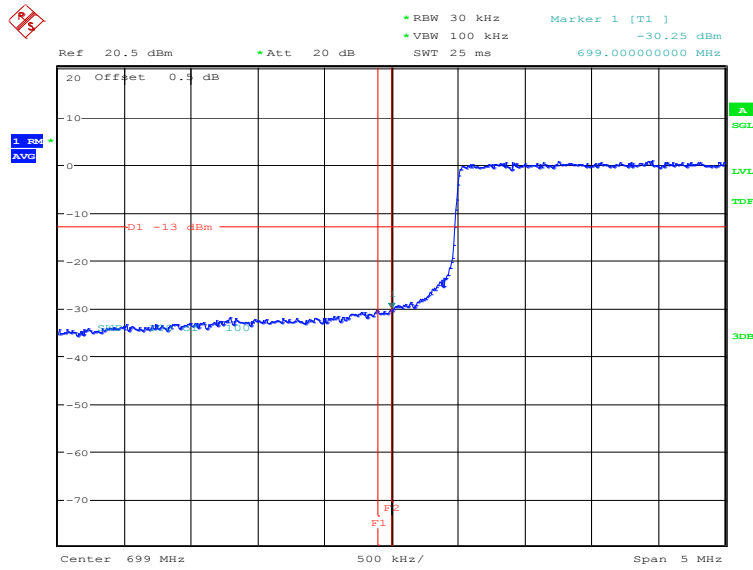
Date: 14.DEC.2023 08:26:33

HIGH BAND EDGE BLOCK-1RB-high_offset



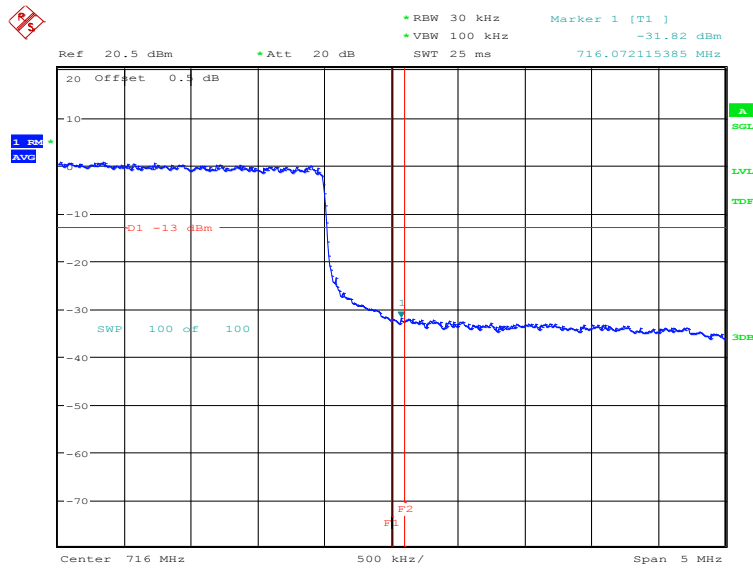
Date: 14.DEC.2023 08:26:52

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 16.NOV.2023 11:13:27

HIGH BAND EDGE BLOCK-10MHz-100%RB



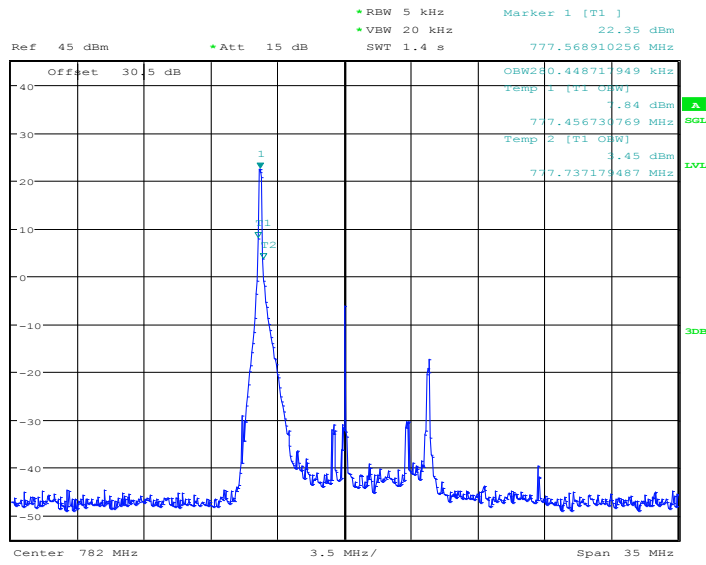
Date: 16.NOV.2023 11:15:00

LTE band 13

OBW: 1RB-low_offset

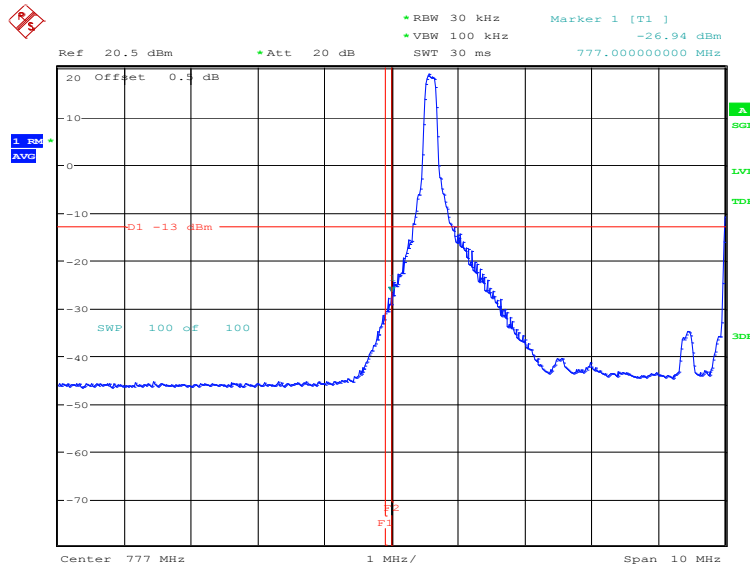


1 RB
MAX

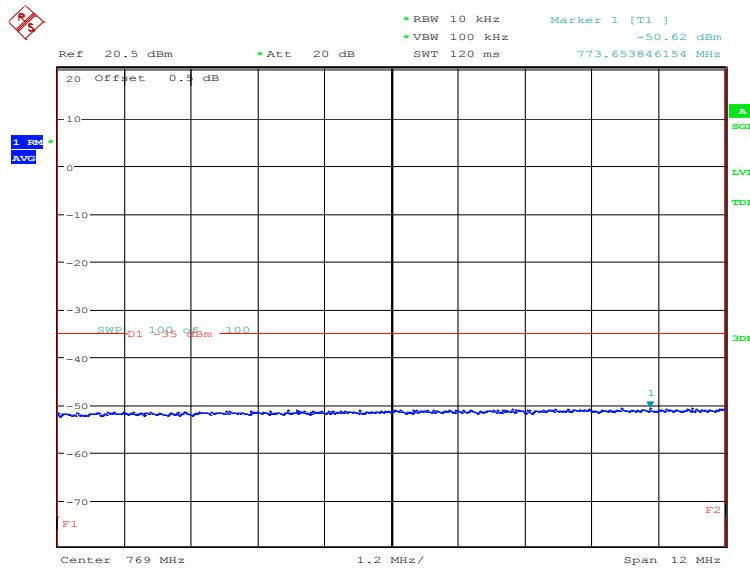


Date: 14.DEC.2023 08:28:05

LOW BAND EDGE BLOCK-1RB-low_offset

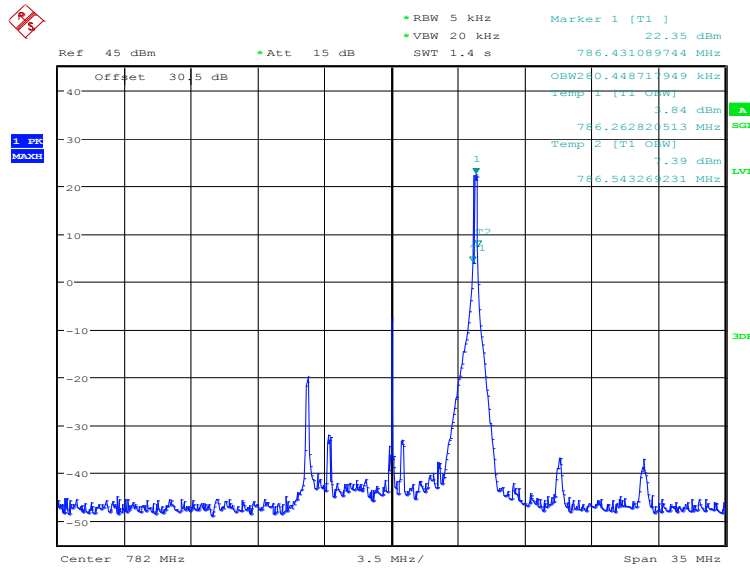


Date: 14.DEC.2023 08:28:24



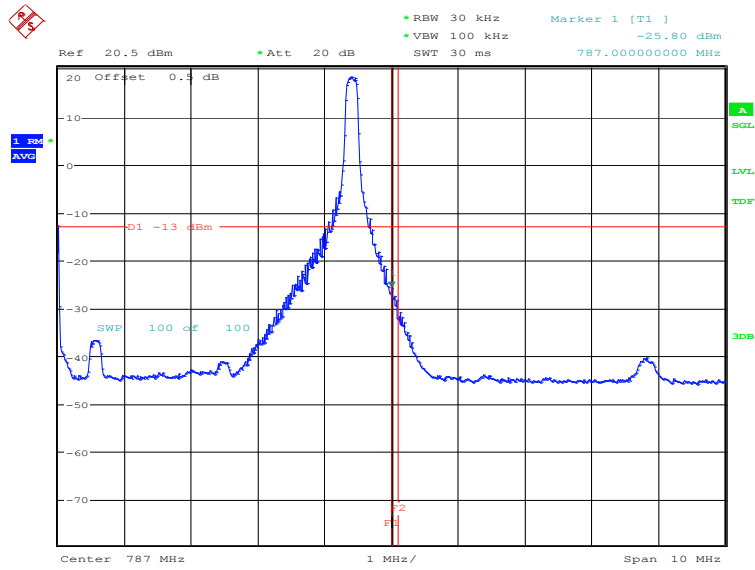
Date: 14.DEC.2023 08:29:04

OBW: 1RB-high_offset

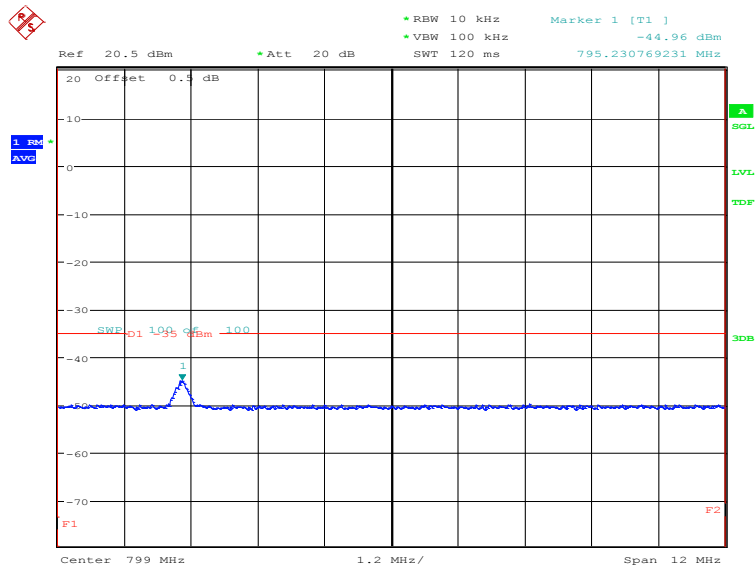


Date: 14.DEC.2023 08:29:39

HIGH BAND EDGE BLOCK-1RB-high_offset

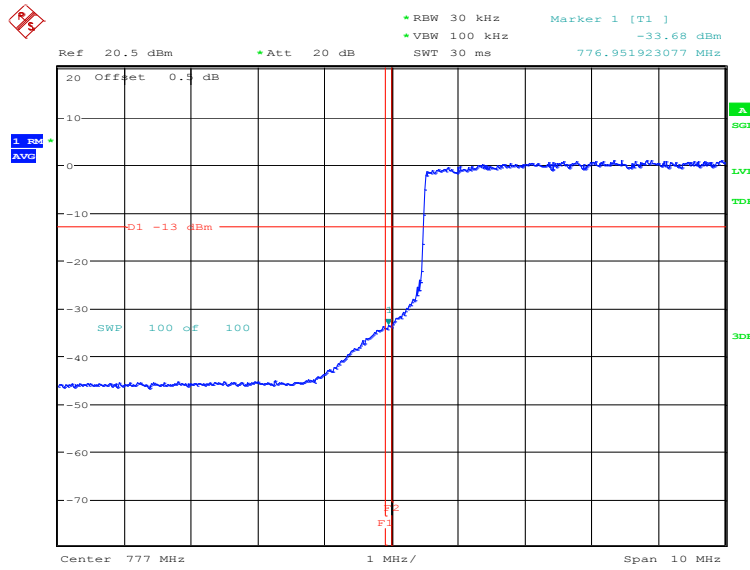


Date: 14.DEC.2023 08:29:58

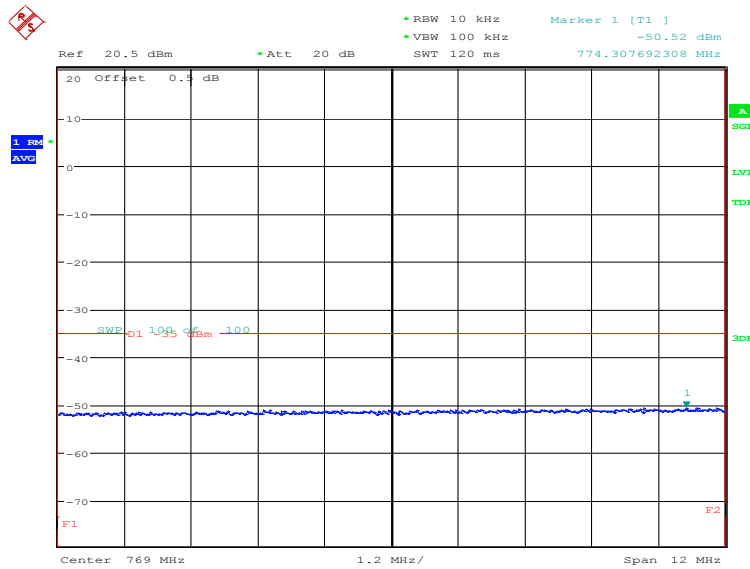


Date: 14.DEC.2023 08:30:38

LOW BAND EDGE BLOCK-10MHz-100%RB

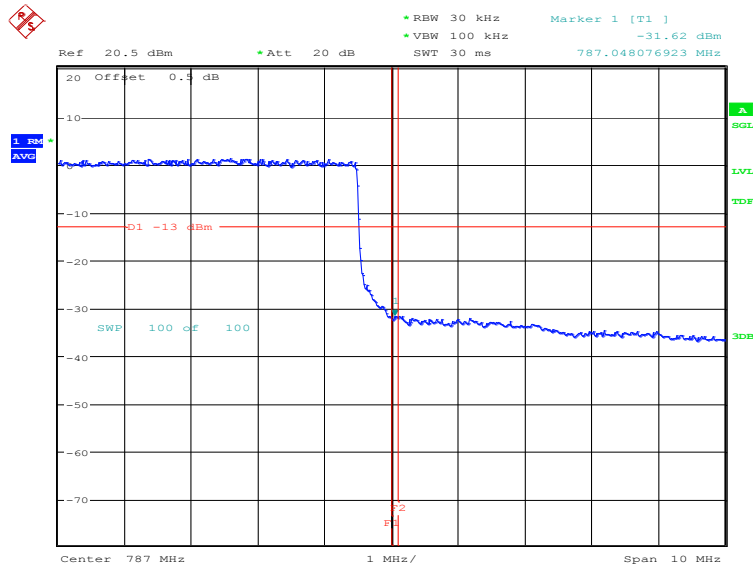


Date: 16.NOV.2023 11:16:34

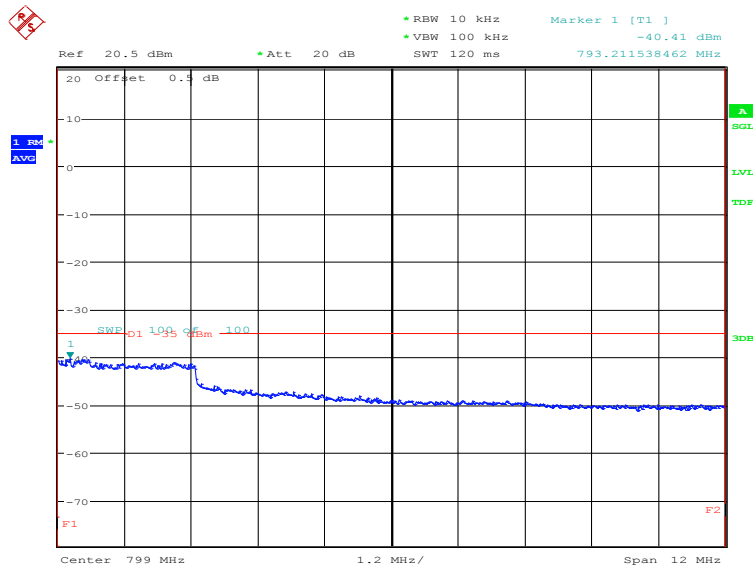


Date: 16.NOV.2023 11:17:13

HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 16.NOV.2023 11:18:45



Date: 16.NOV.2023 11:19:25