

LTE CA band 41C, 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	3.87	2496.880	2689.080		
50				-2.42	0.0009
40				-2.09	0.0008
30				-2.05	0.0008
10				-3.33	0.0013
0				-3.61	0.0014
-10				-5.35	0.0021
-20				-2.76	0.0011
-30				-2.85	0.0011

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2496.880	2689.080	-4.21	0.0016
4.5				-4.99	0.0019

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.

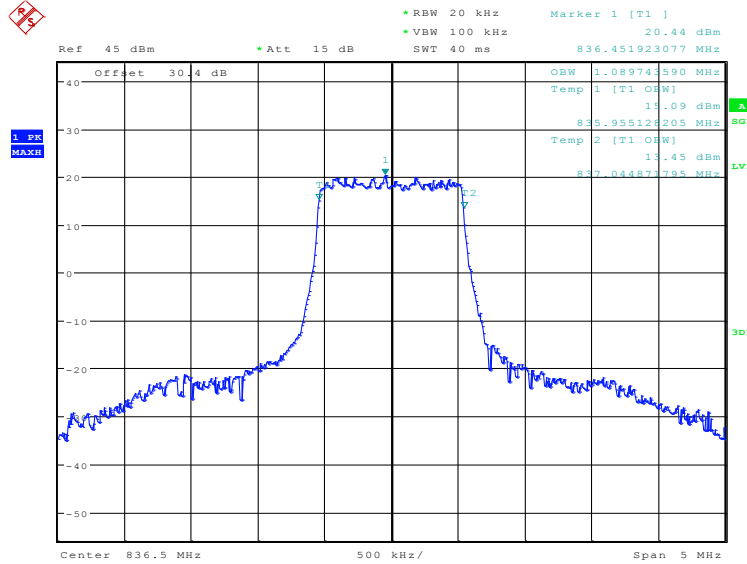
The measurement method is from ANSI C63.26:

- 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 5, 1.4MHz (99%)

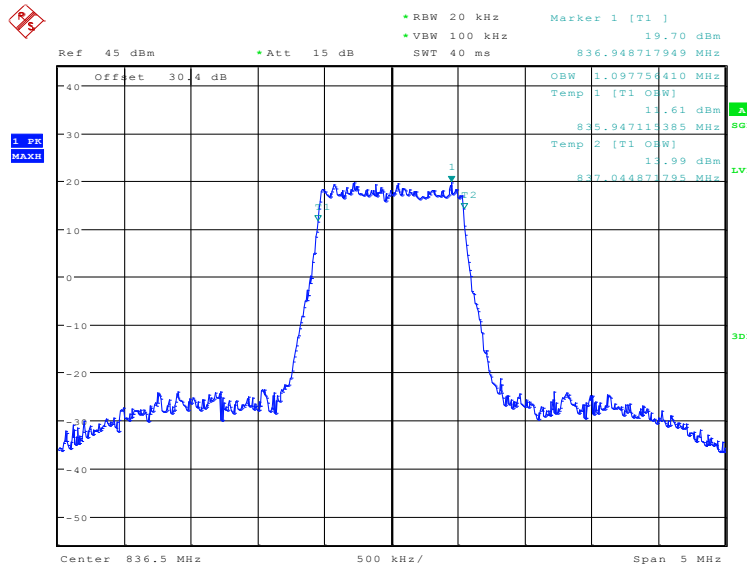
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	1089.74	1097.76

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



Date: 16.AUG.2024 08:53:27

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

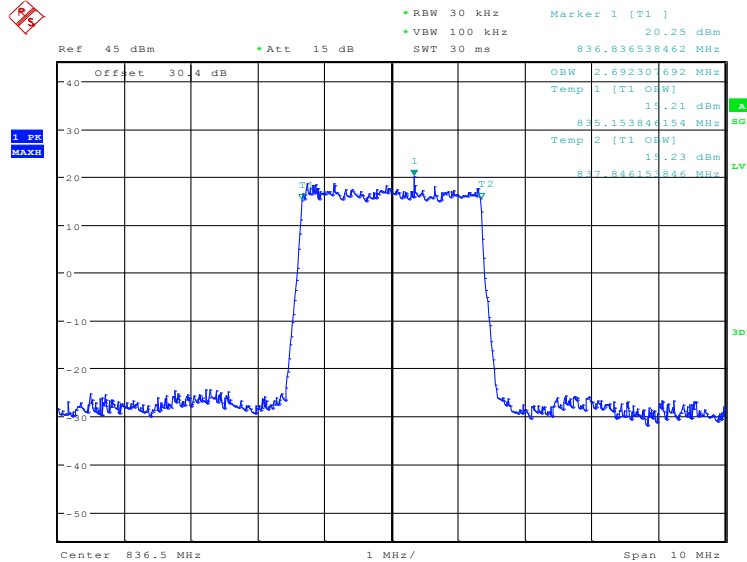


Date: 16.AUG.2024 08:54:07

LTE band 5, 3MHz (99%)

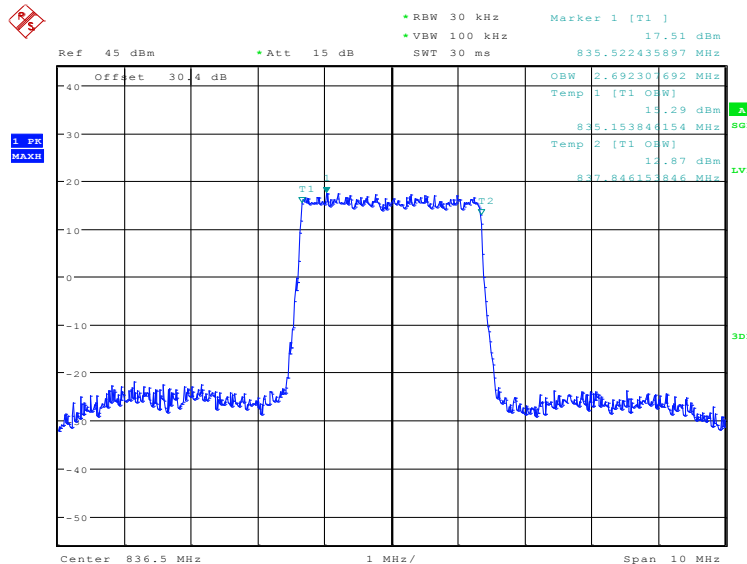
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 16.AUG.2024 08:54:49

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

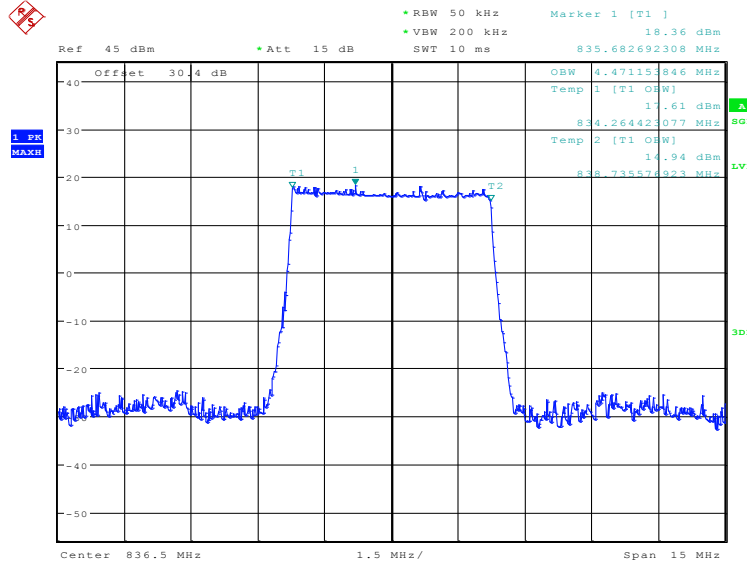


Date: 16.AUG.2024 08:55:29

LTE band 5, 5MHz (99%)

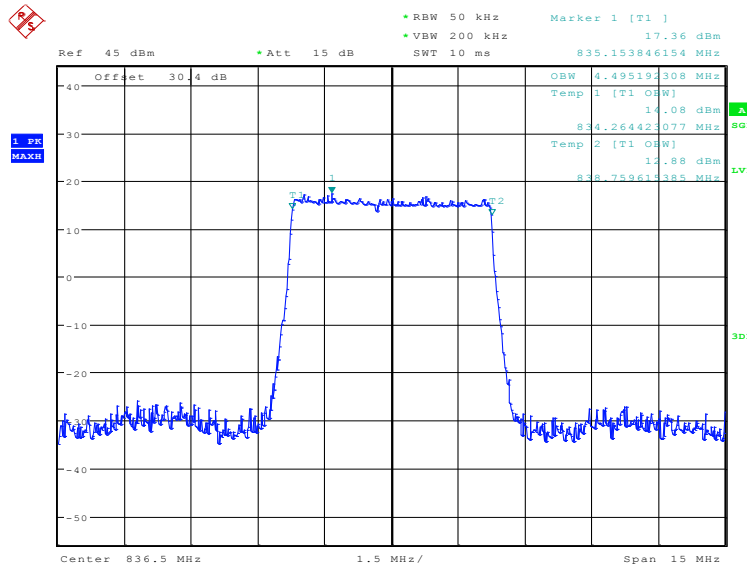
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	4471.15	4495.19

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



Date: 16.AUG.2024 08:56:11

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

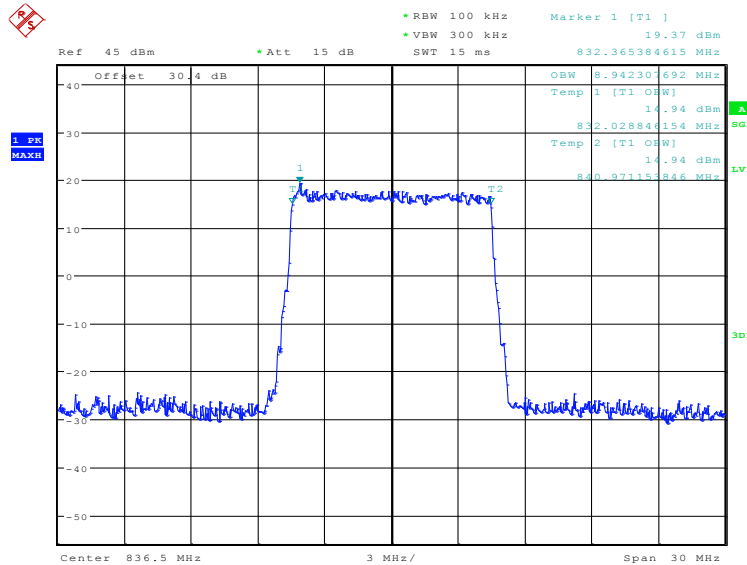


Date: 16.AUG.2024 08:56:51

LTE band 5, 10MHz (99%)

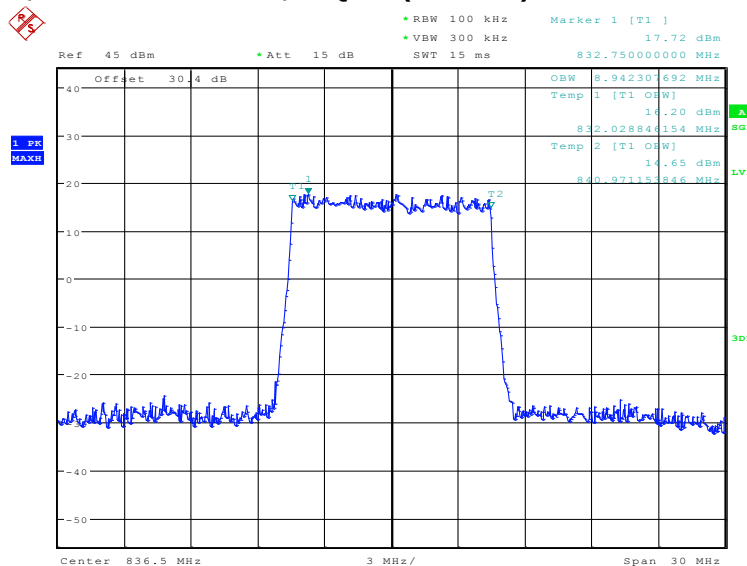
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	8942.31	8942.31

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



Date: 16.AUG.2024 08:57:33

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

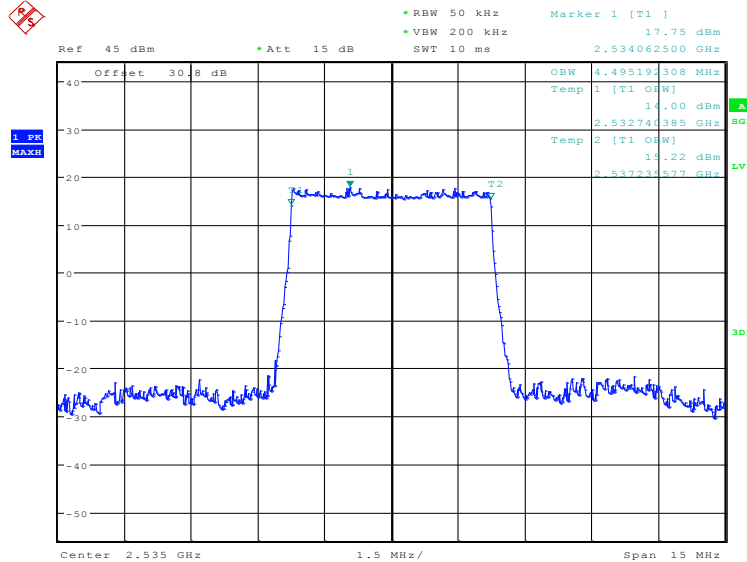


Date: 16.AUG.2024 08:58:14

LTE band 7, 5MHz (99%)

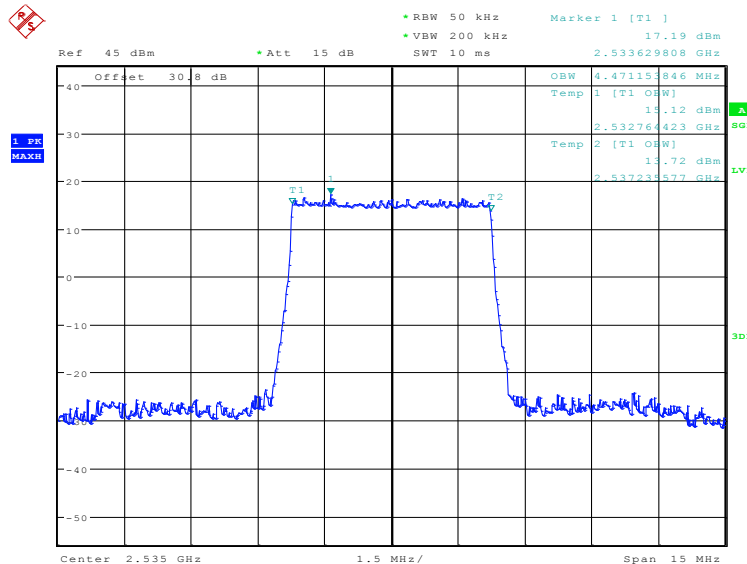
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	4495.19	4471.15

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



Date: 15.AUG.2024 13:27:44

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

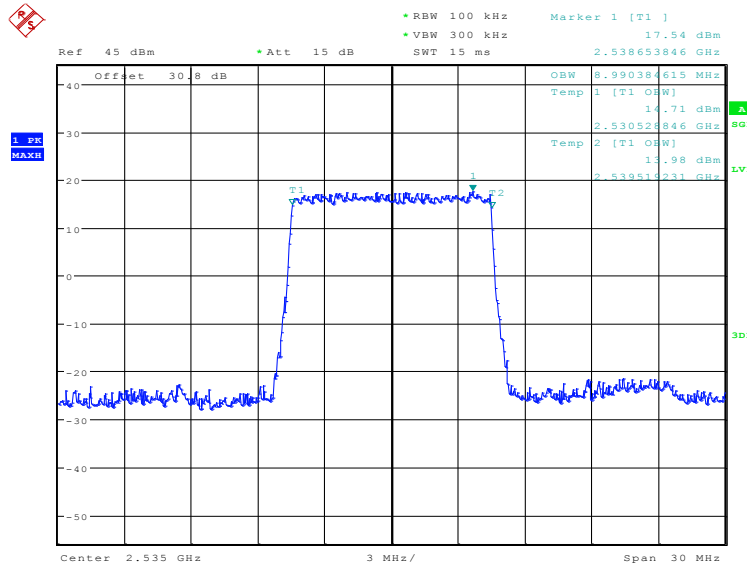


Date: 15.AUG.2024 13:28:24

LTE band 7, 10MHz (99%)

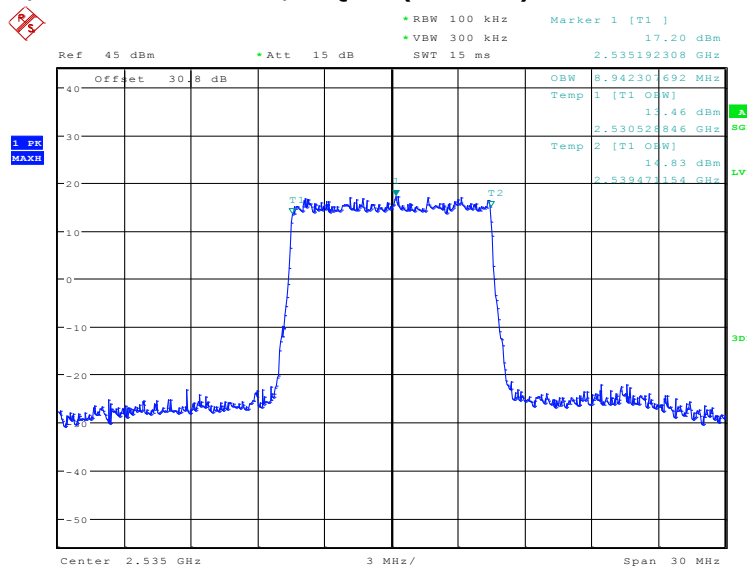
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	8990.38	8942.31

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



Date: 15.AUG.2024 13:29:06

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

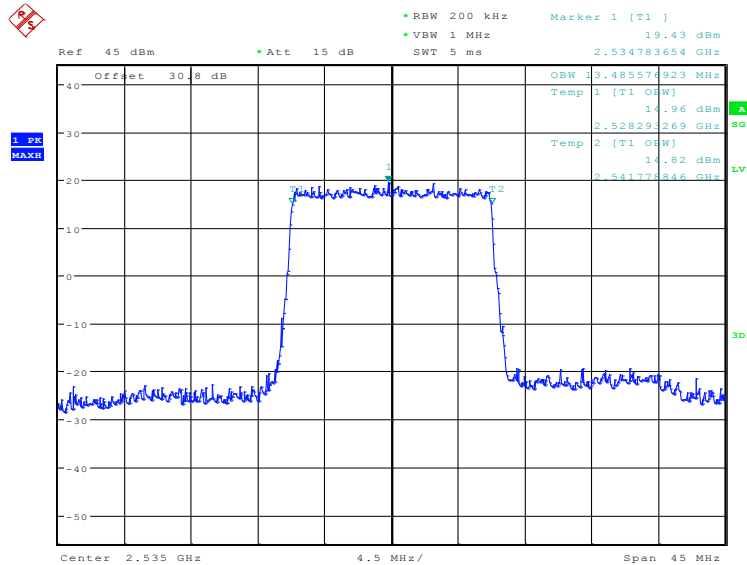


Date: 15.AUG.2024 13:29:46

LTE band 7, 15MHz (99%)

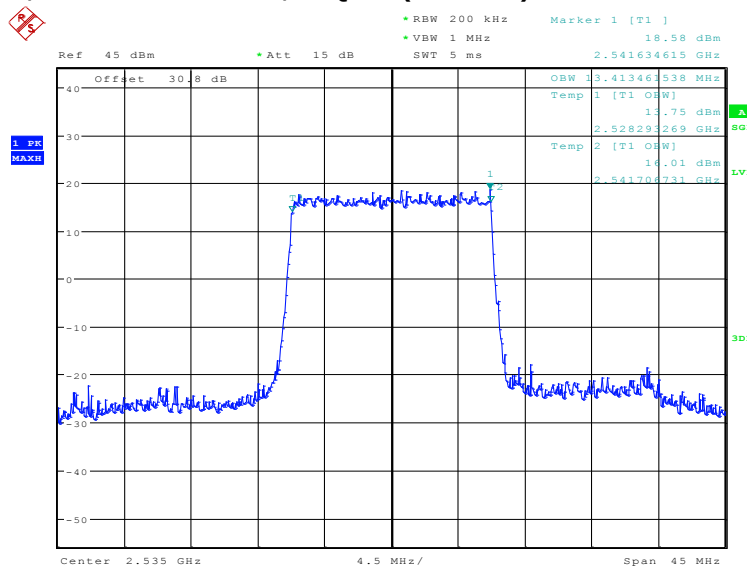
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	13485.58	13413.46

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



Date: 15.AUG.2024 13:30:28

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

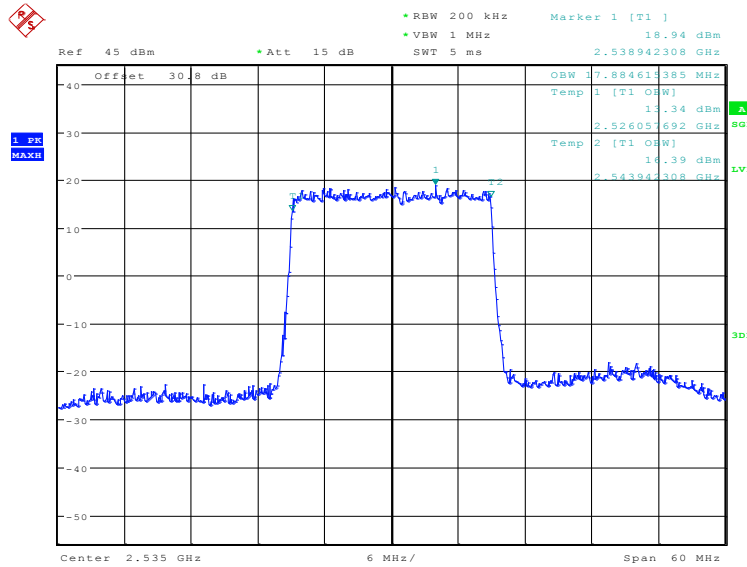


Date: 15.AUG.2024 13:31:08

LTE band 7, 20MHz (99%)

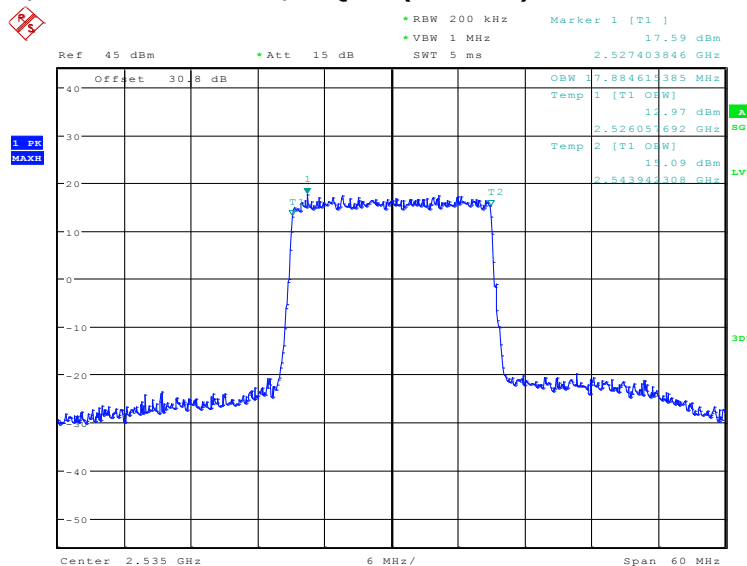
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	17884.62	17884.62

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



Date: 15.AUG.2024 13:31:51

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

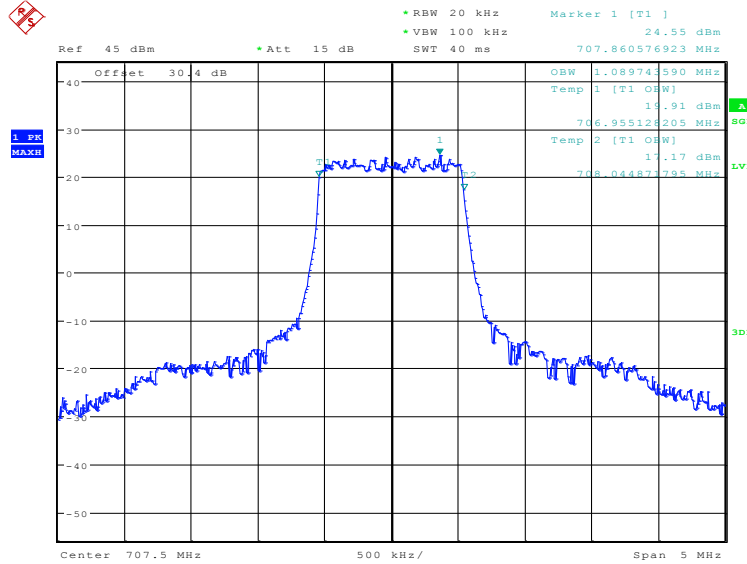


Date: 15.AUG.2024 13:32:31

LTE band 12, 1.4MHz (99%)

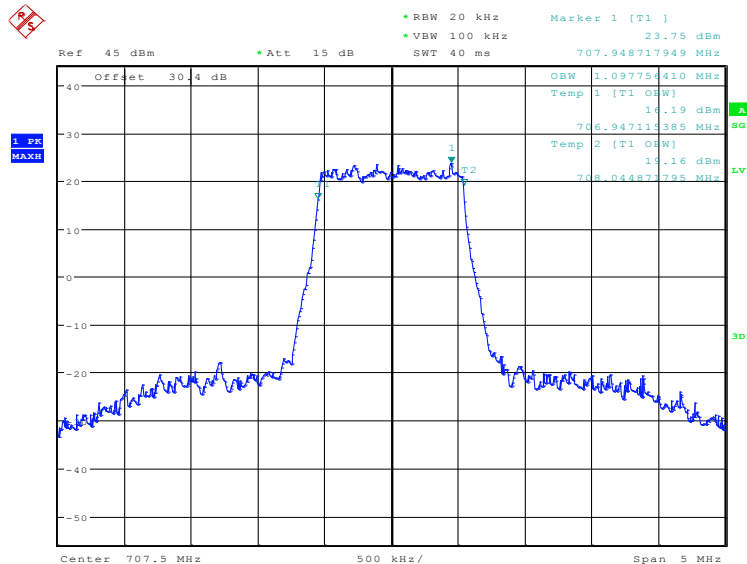
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	1089.74	1097.76

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



Date: 15.AUG.2024 16:34:13

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

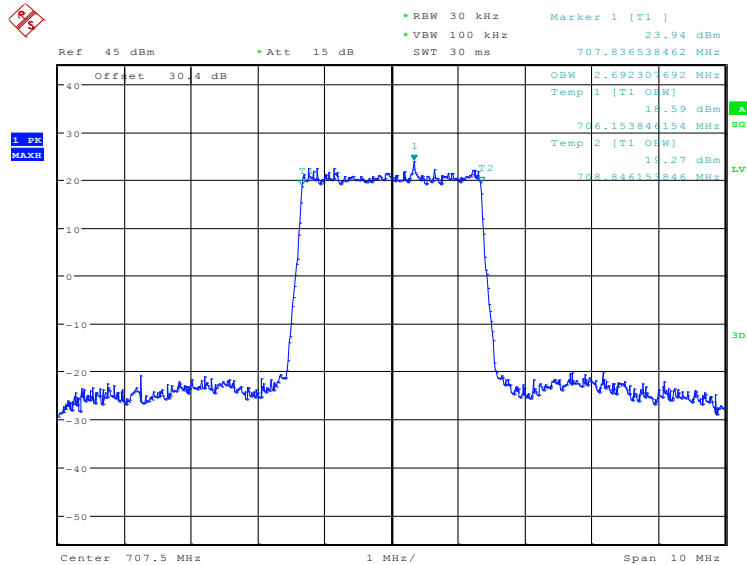


Date: 15.AUG.2024 16:34:53

LTE band 12, 3MHz (99%)

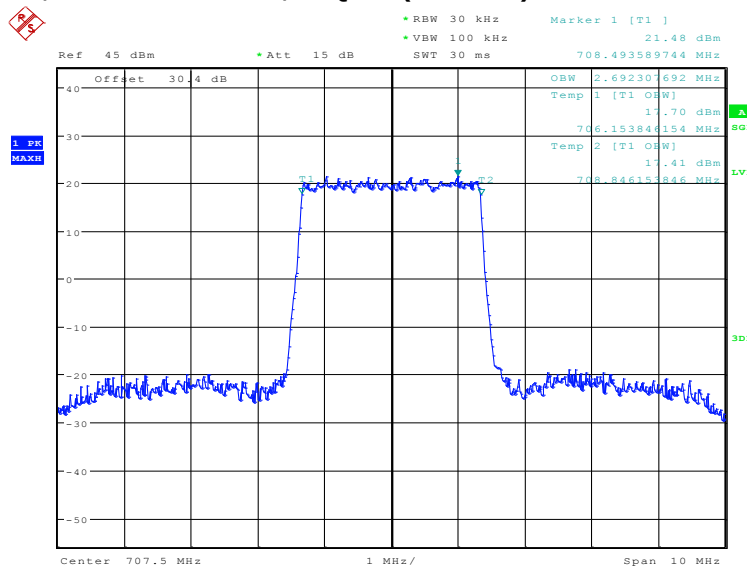
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.AUG.2024 16:35:35

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

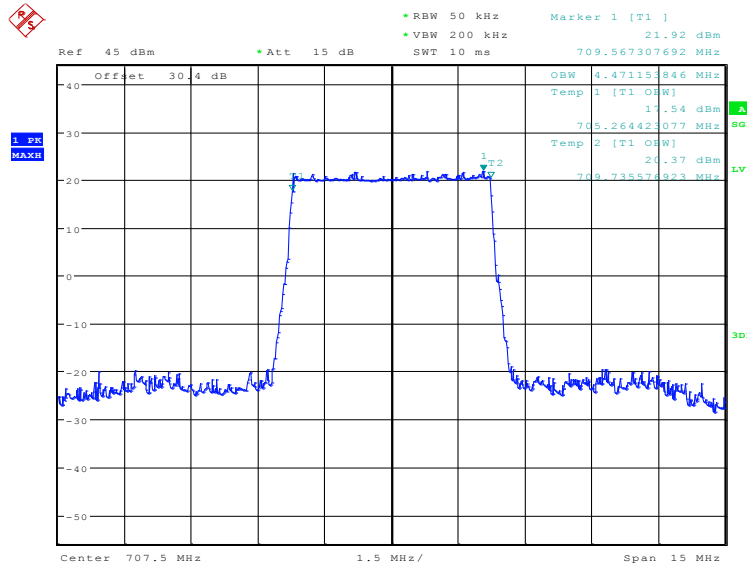


Date: 15.AUG.2024 16:36:15

LTE band 12, 5MHz (99%)

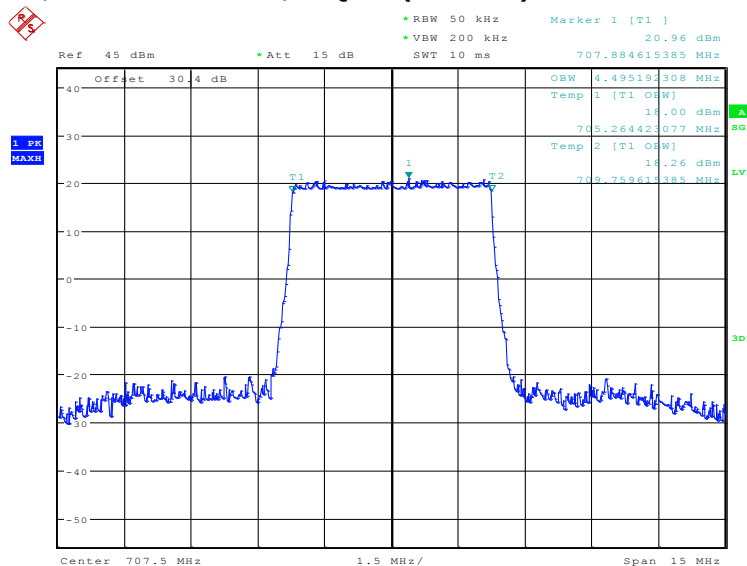
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	4471.15	4495.19

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



Date: 15.AUG.2024 16:36:57

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

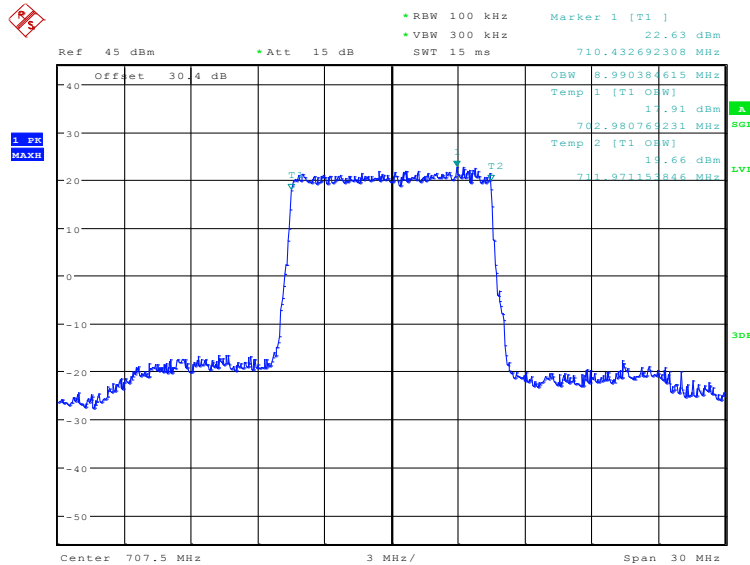


Date: 15.AUG.2024 16:37:37

LTE band 12, 10MHz (99%)

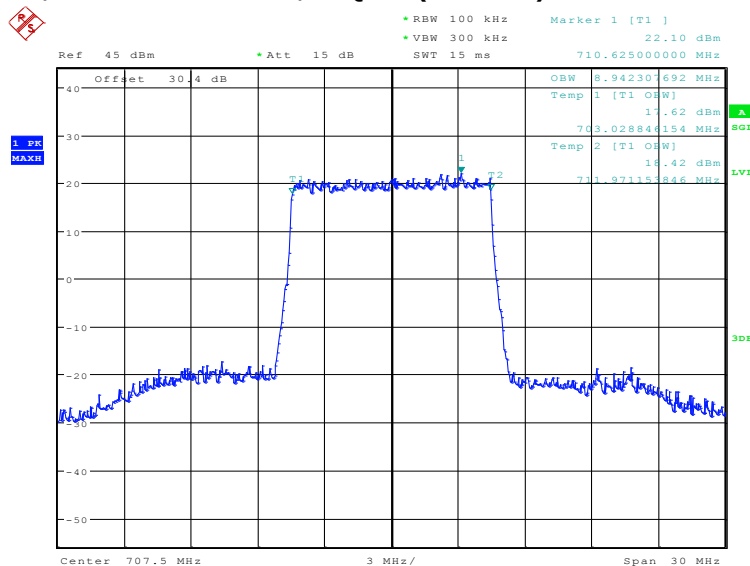
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	8990.38	8942.31

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



Date: 15.AUG.2024 16:38:20

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

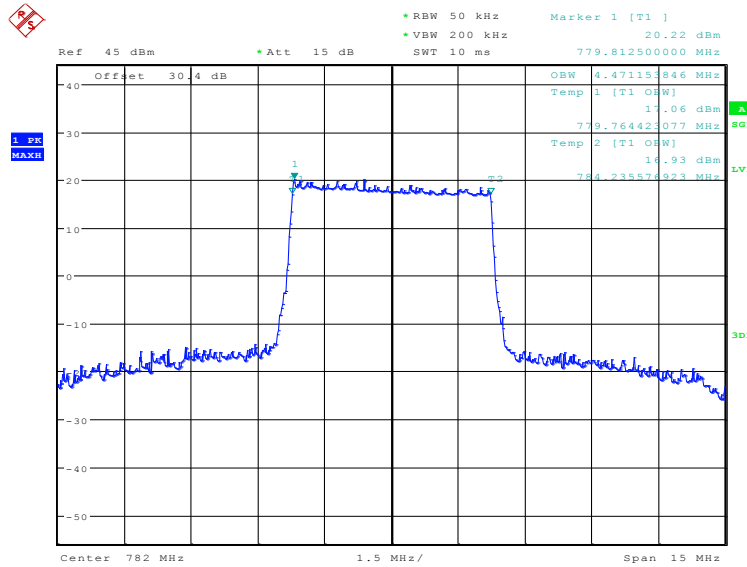


Date: 15.AUG.2024 16:39:00

LTE band 13, 5MHz (99%)

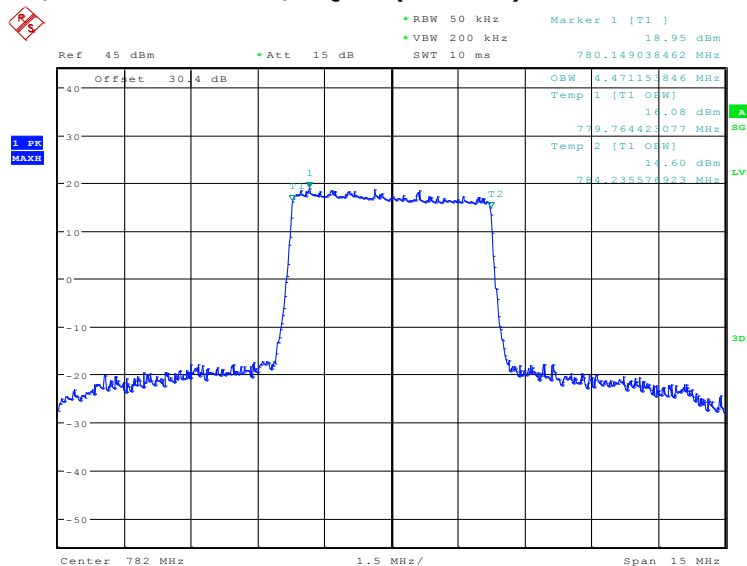
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	4471.15	4471.15

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



Date: 15.AUG.2024 16:40:38

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

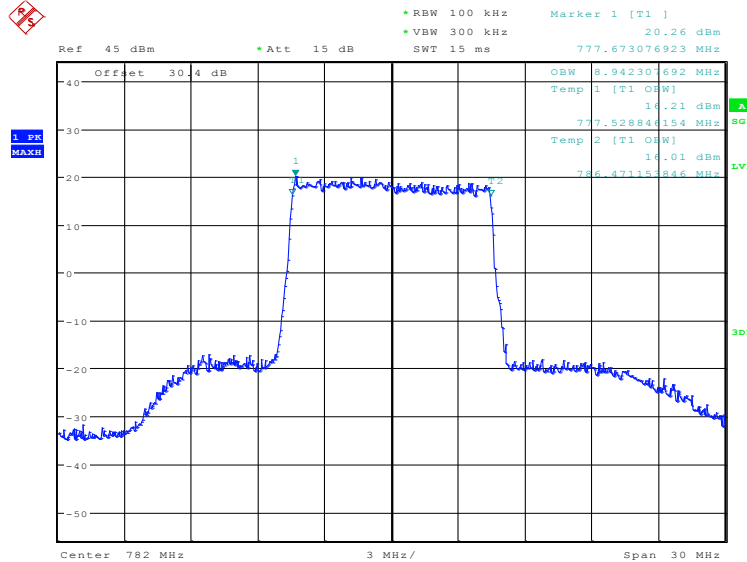


Date: 15.AUG.2024 16:41:18

LTE band 13, 10MHz (99%)

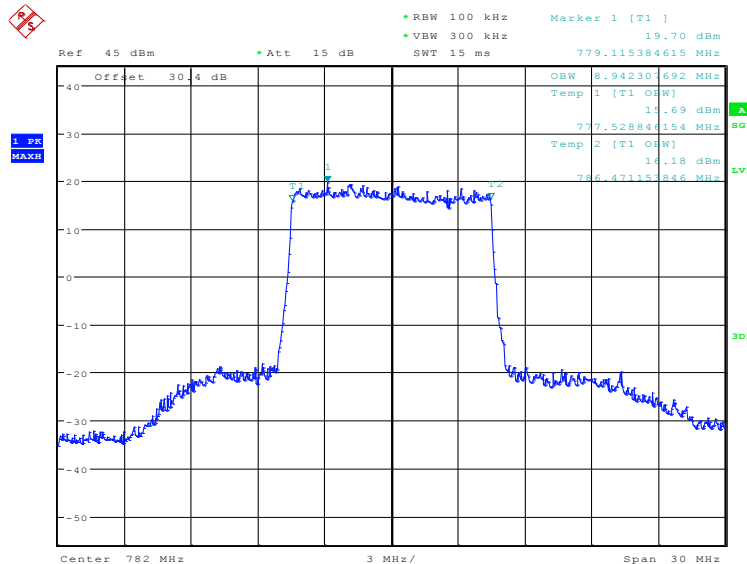
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 15.AUG.2024 16:42:00

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

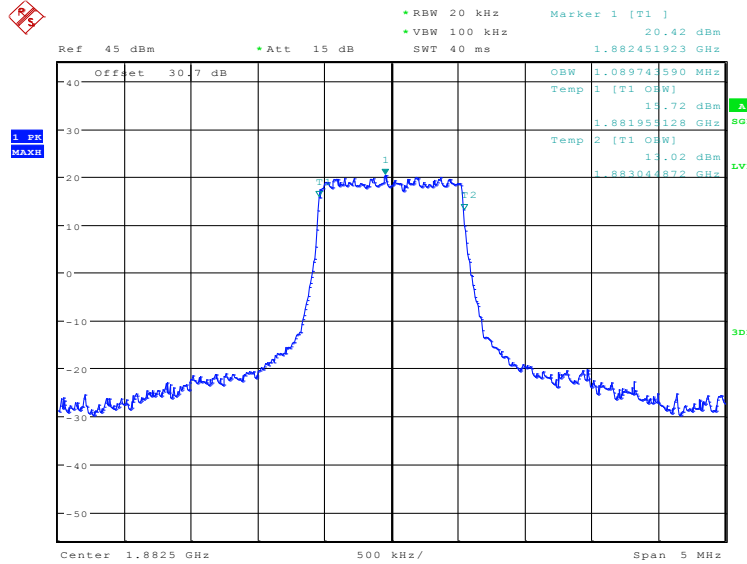


Date: 15.AUG.2024 16:42:40

LTE band 25, 1.4MHz (99%)

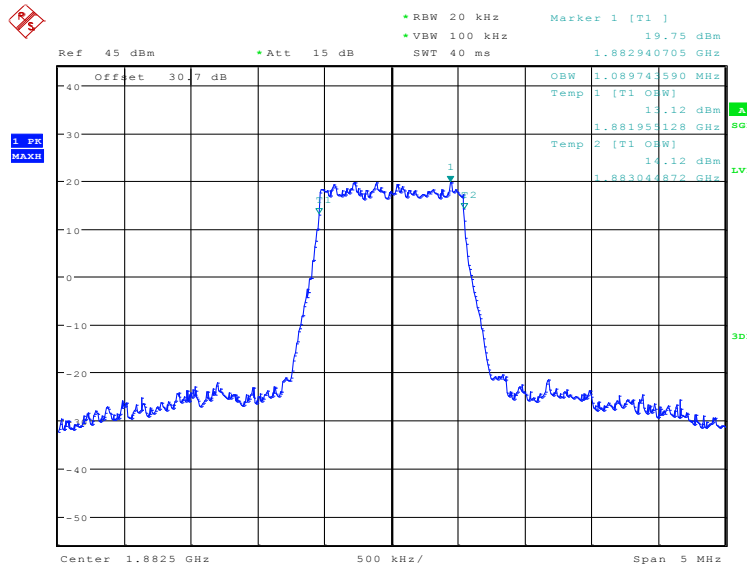
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	1089.74	1089.74

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



Date: 15.AUG.2024 13:33:14

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

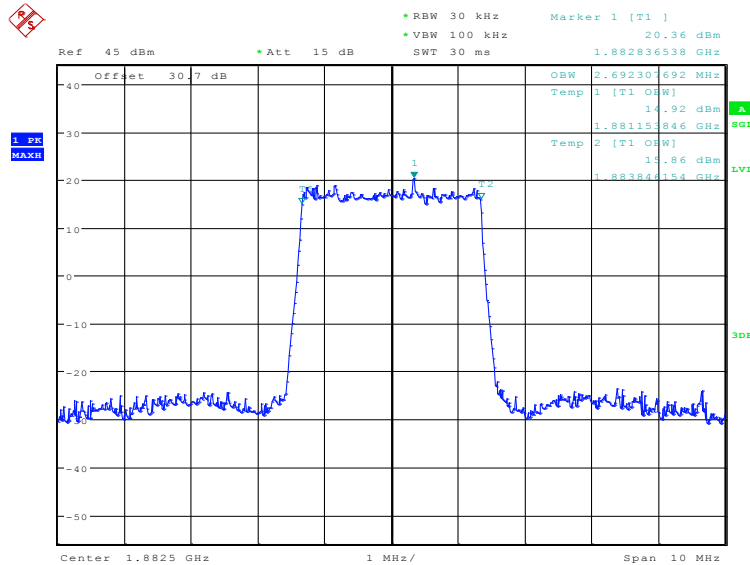


Date: 15.AUG.2024 13:33:54

LTE band 25, 3MHz (99%)

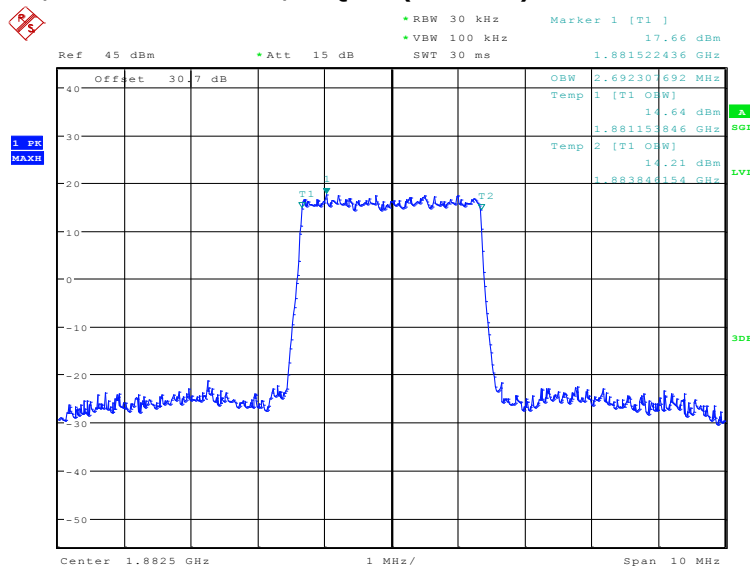
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.AUG.2024 13:34:37

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

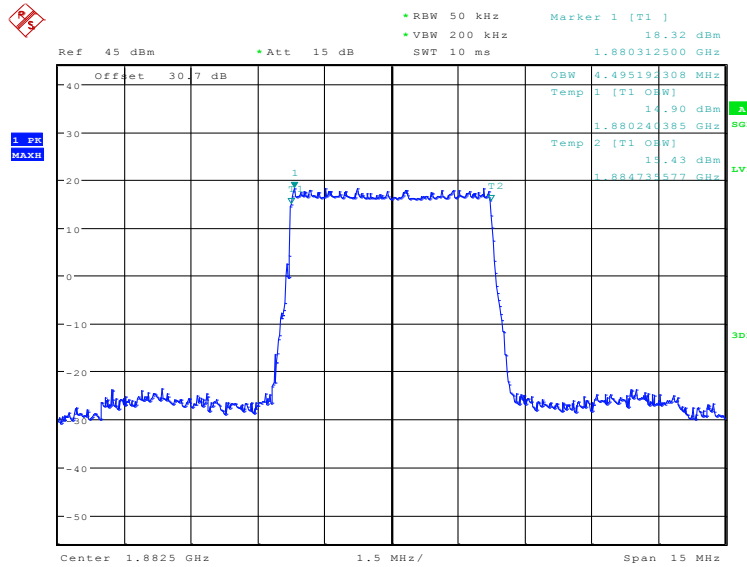


Date: 15.AUG.2024 13:35:17

LTE band 25, 5MHz (99%)

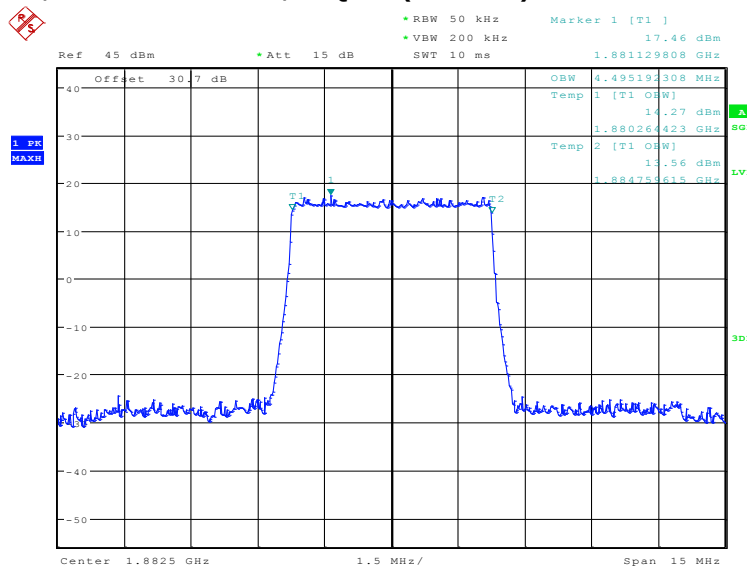
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	4495.19	4495.19

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



Date: 15.AUG.2024 13:35:59

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

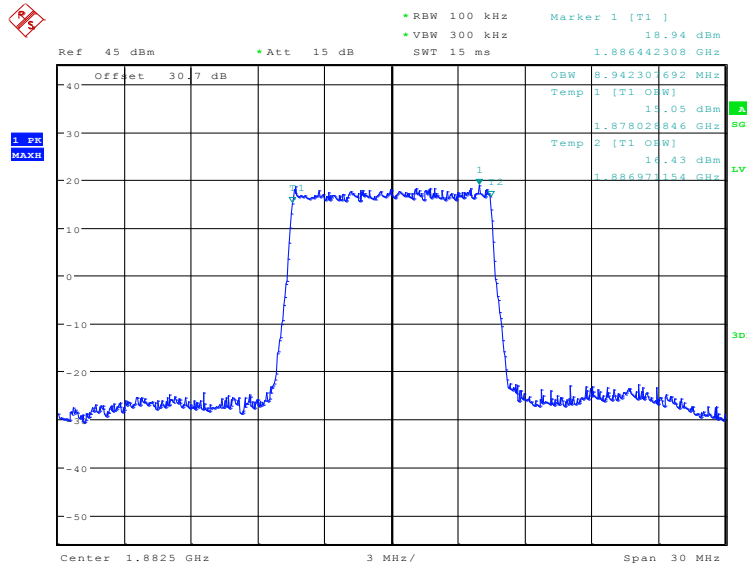


Date: 15.AUG.2024 13:36:39

LTE band 25, 10MHz (99%)

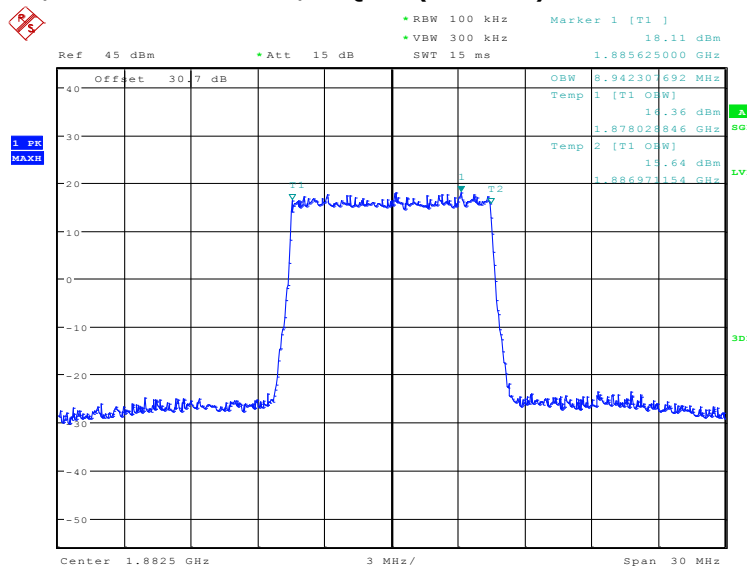
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	8942.31	8942.31

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



Date: 15.AUG.2024 13:37:21

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

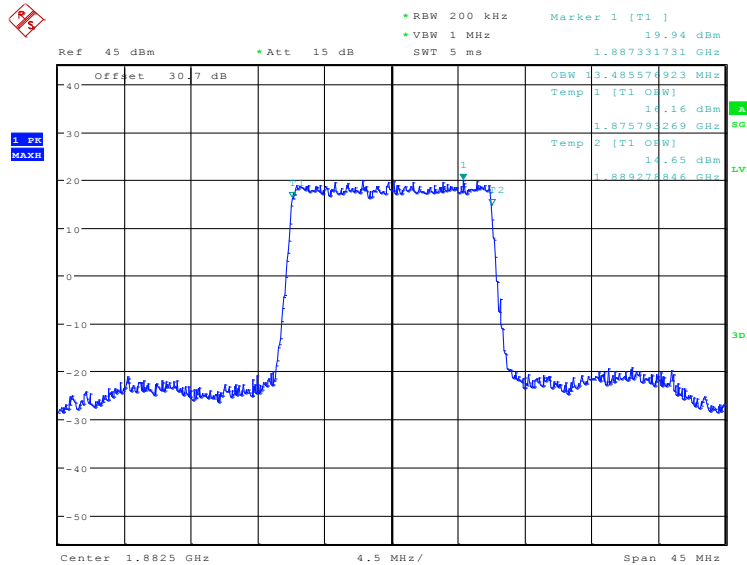


Date: 15.AUG.2024 13:38:01

LTE band 25, 15MHz (99%)

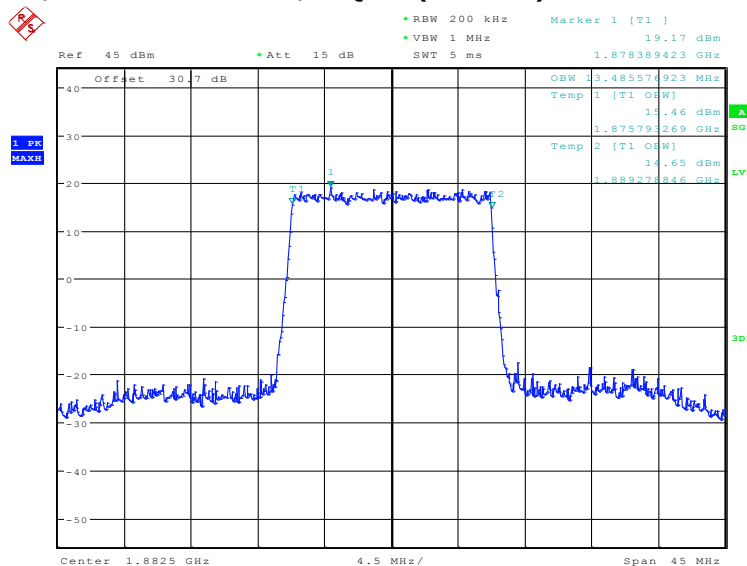
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	13485.58	13485.58

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



Date: 15.AUG.2024 13:38:43

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

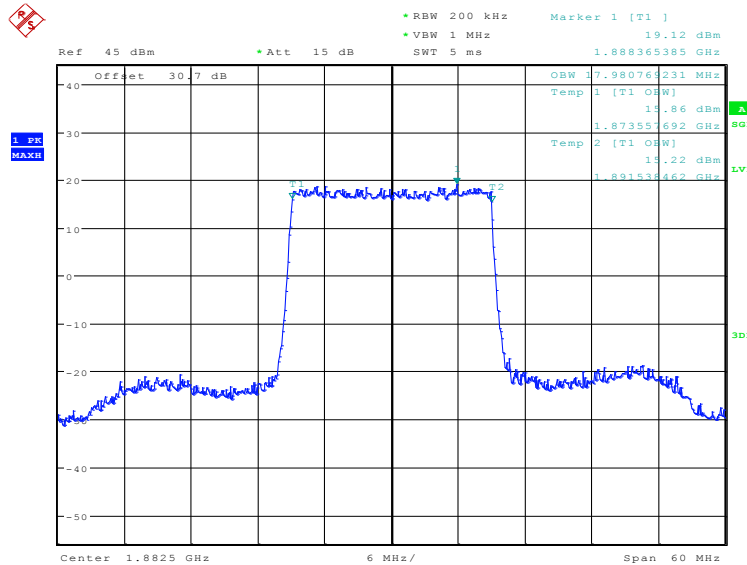


Date: 15.AUG.2024 13:39:23

LTE band 25, 20MHz (99%)

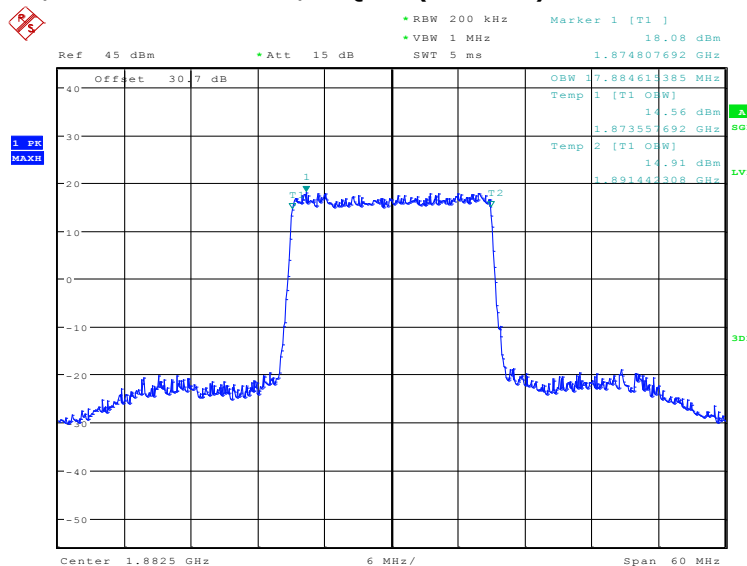
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	17980.77	17884.62

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



Date: 15.AUG.2024 13:40:06

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

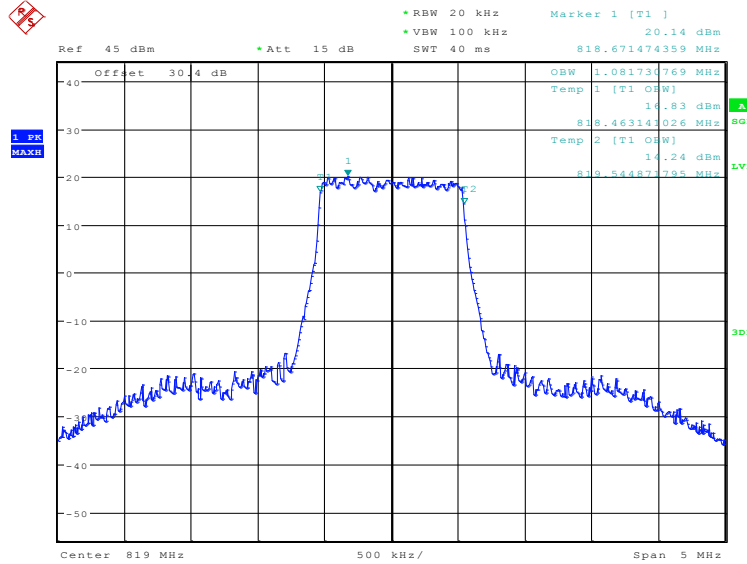


Date: 15.AUG.2024 13:40:46

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

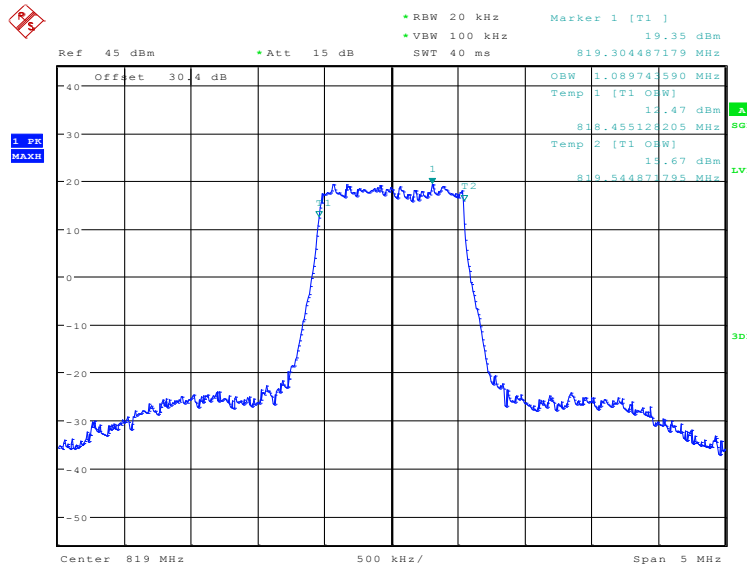
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	1081.73	1089.74

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



Date: 15.AUG.2024 16:50:57

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

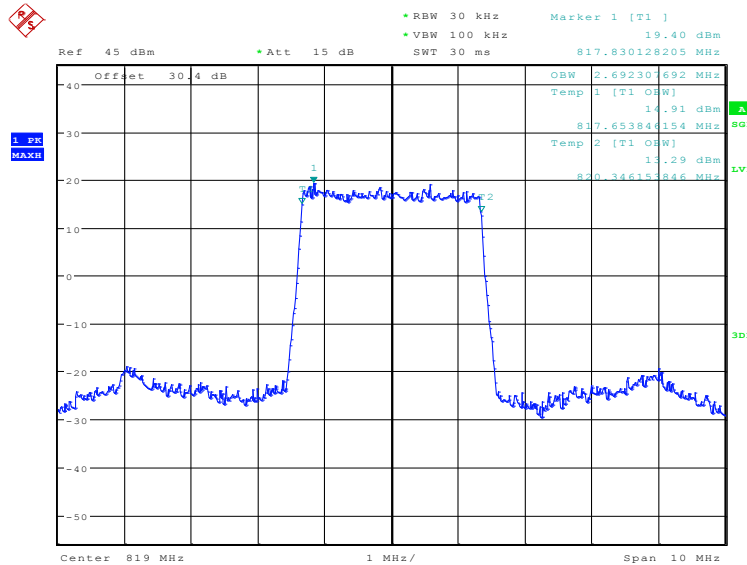


Date: 15.AUG.2024 16:51:37

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

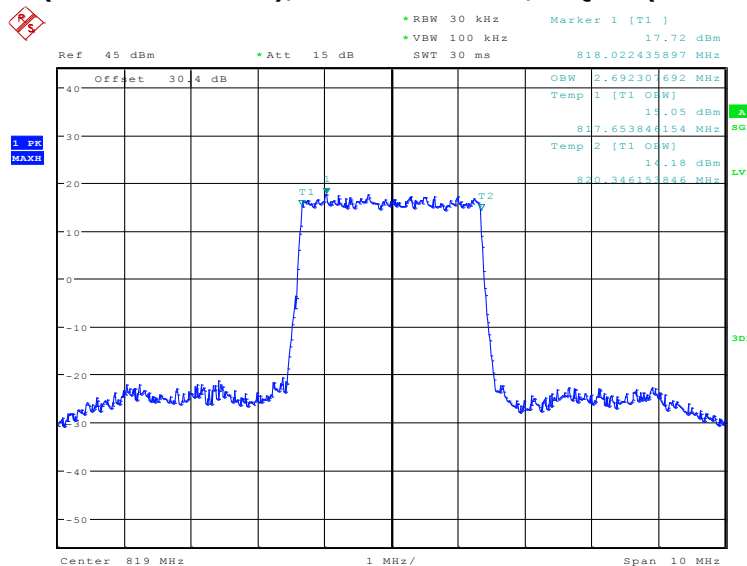
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.AUG.2024 16:52:20

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

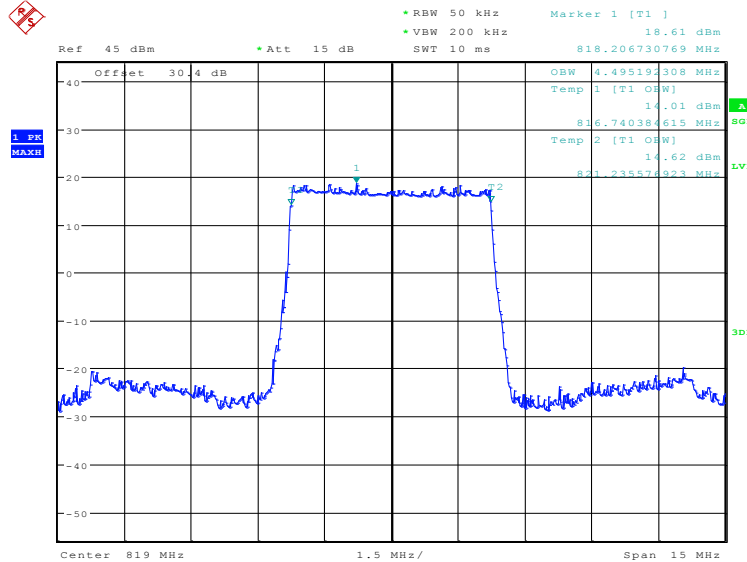


Date: 15.AUG.2024 16:53:00

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

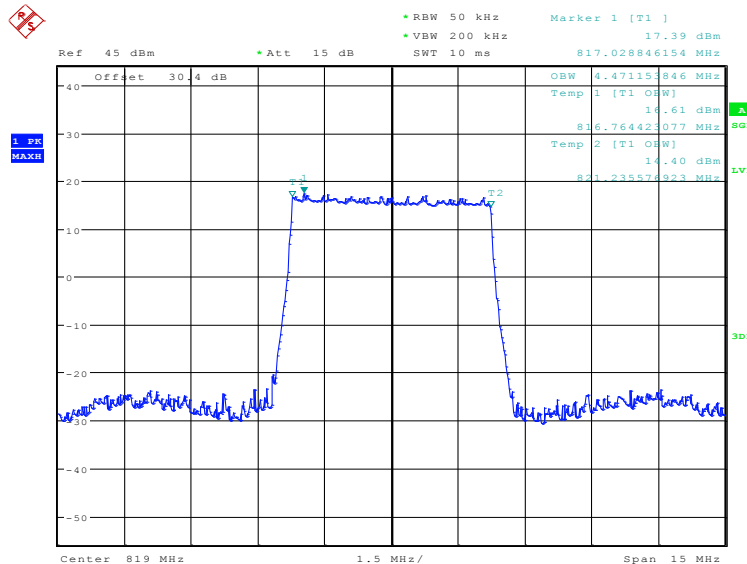
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	4495.19	4471.15

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



Date: 15.AUG.2024 16:53:42

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

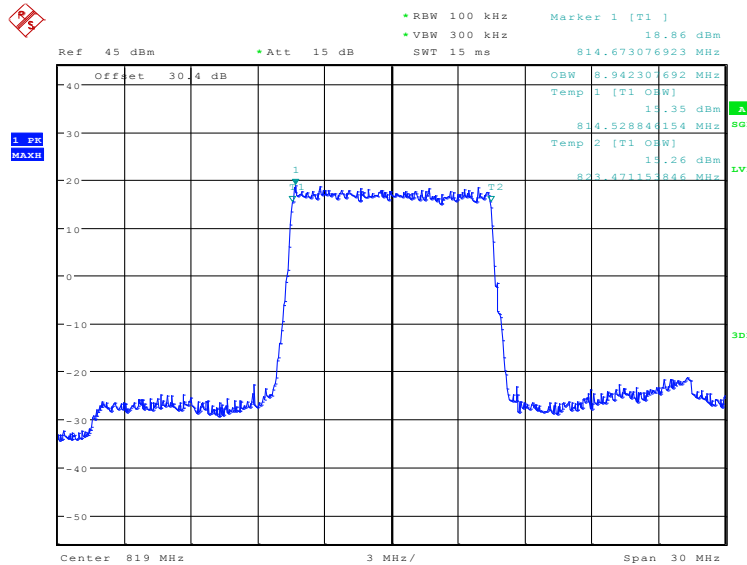


Date: 15.AUG.2024 16:54:22

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

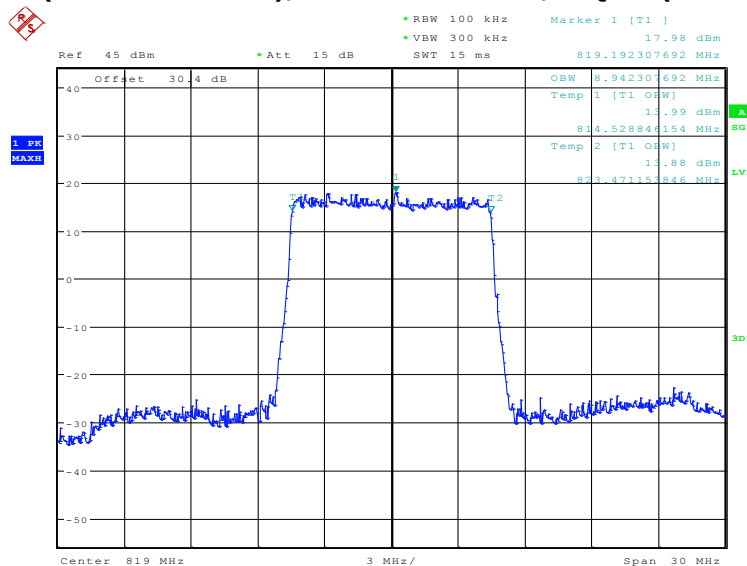
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
819.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 15.AUG.2024 16:55:04

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

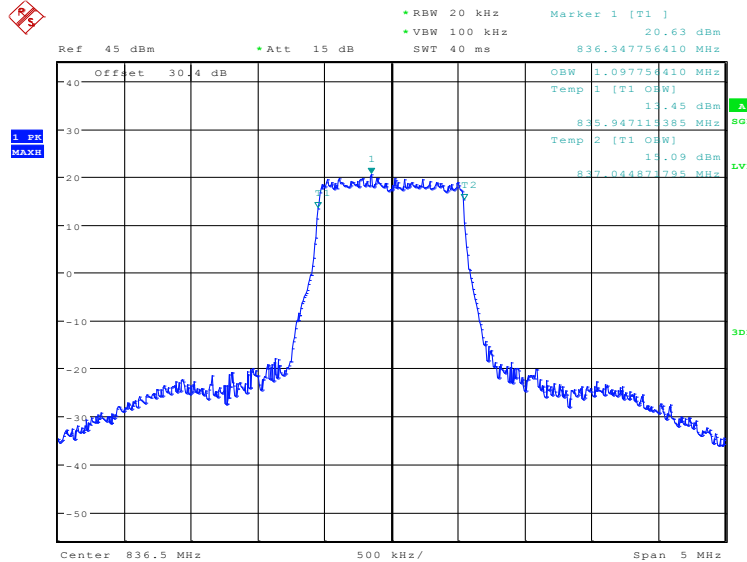


Date: 15.AUG.2024 16:55:44

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

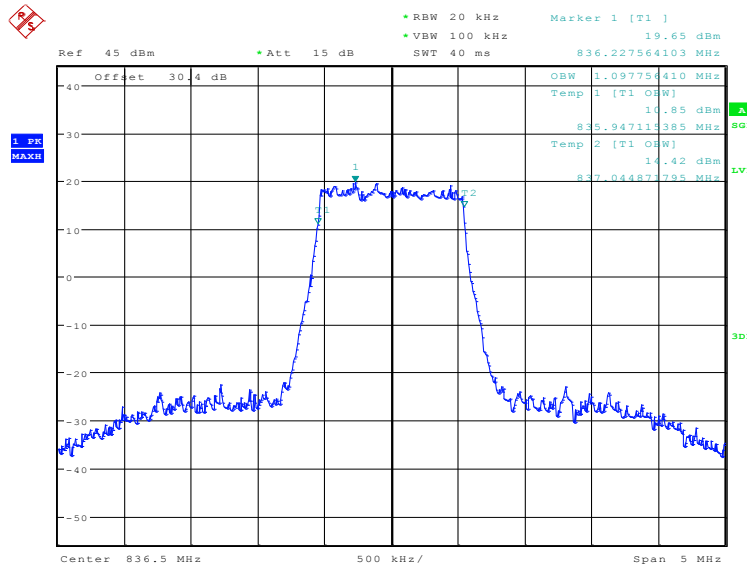
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	1097.76	1097.76

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



Date: 15.AUG.2024 16:43:25

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

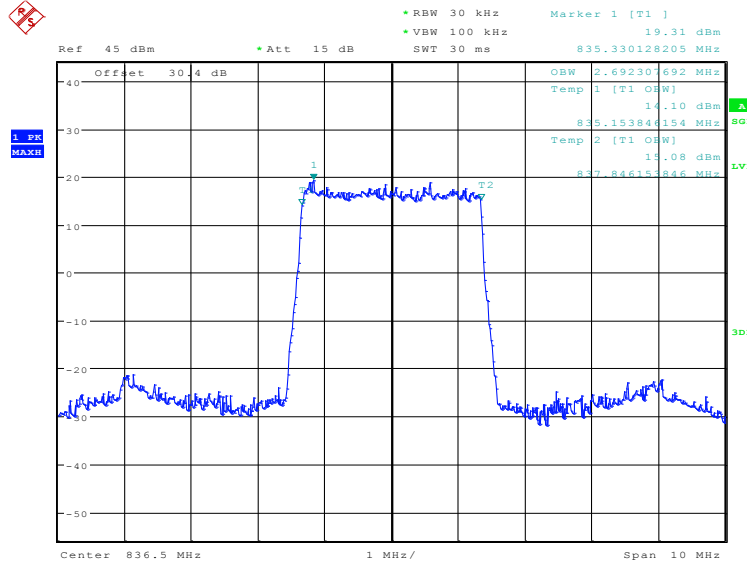


Date: 15.AUG.2024 16:44:05

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

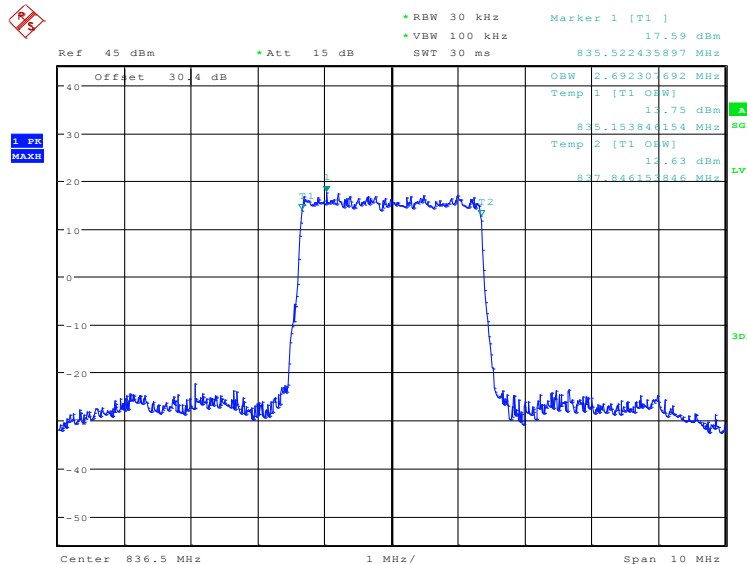
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.AUG.2024 16:44:47

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

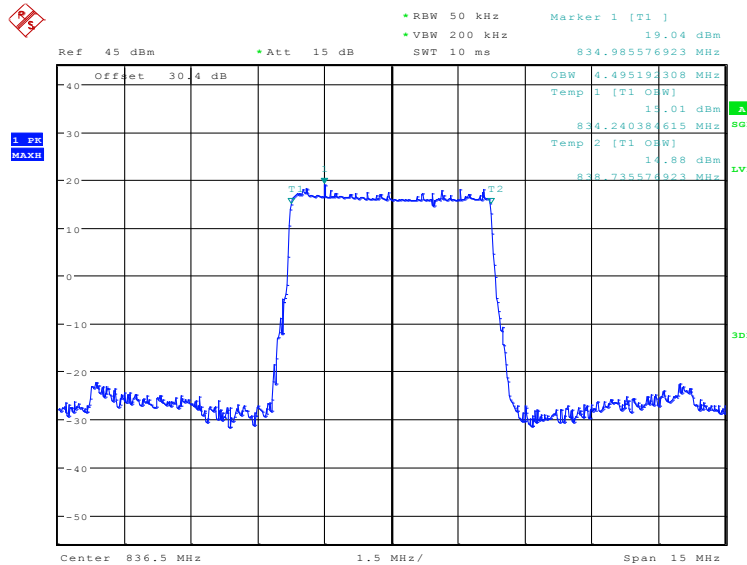


Date: 15.AUG.2024 16:45:27

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

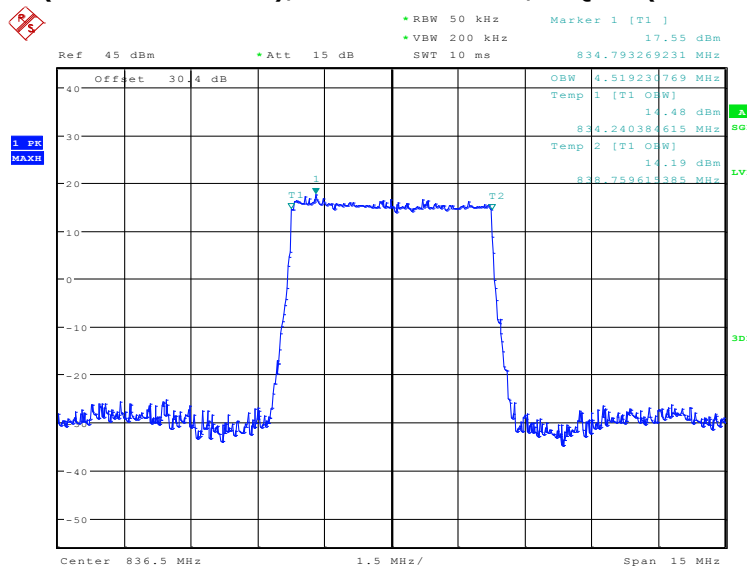
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	4495.19	4519.23

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



Date: 15.AUG.2024 16:46:09

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

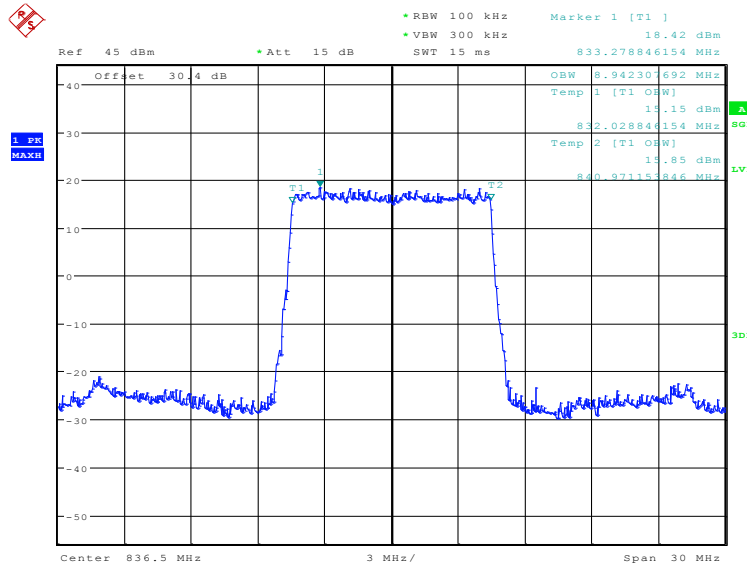


Date: 15.AUG.2024 16:46:49

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

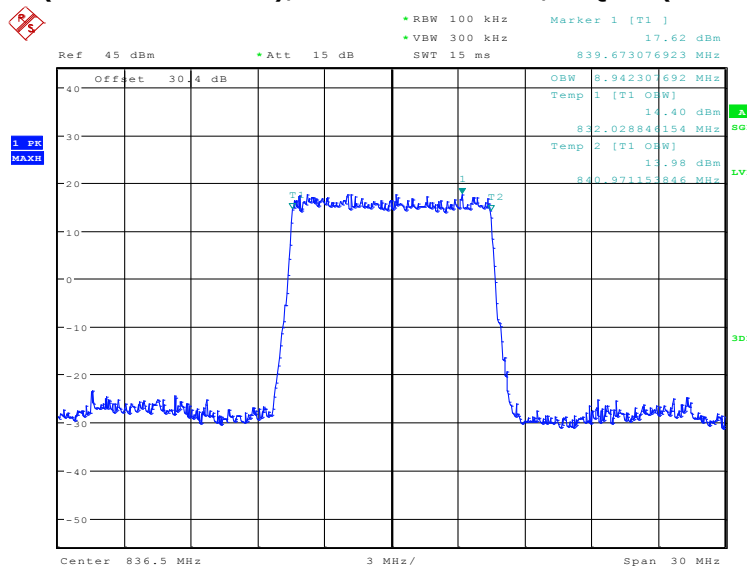
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	8942.31	8942.31

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



Date: 15.AUG.2024 16:47:32

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

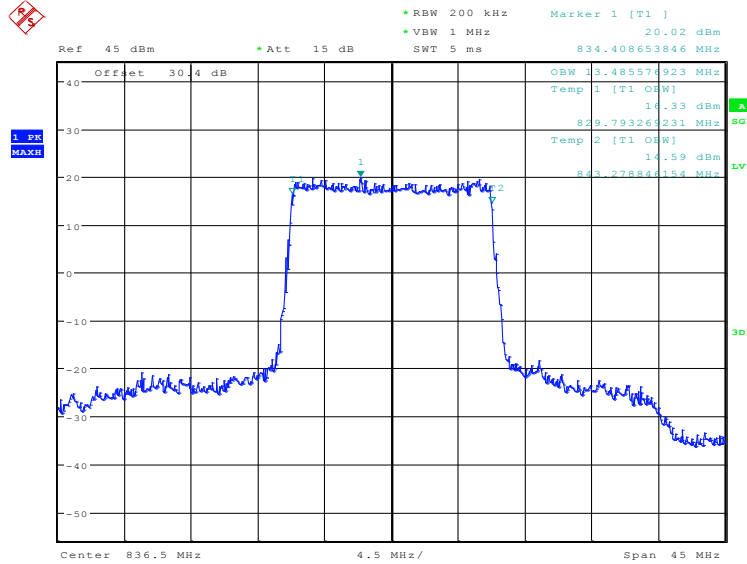


Date: 15.AUG.2024 16:48:12

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

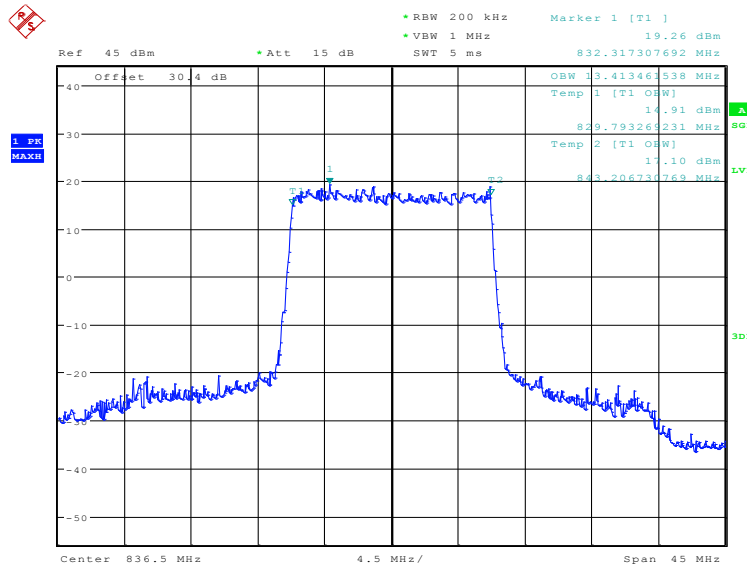
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
836.5	QPSK	16QAM
	13485.58	13413.46

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



Date: 15.AUG.2024 16:48:54

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

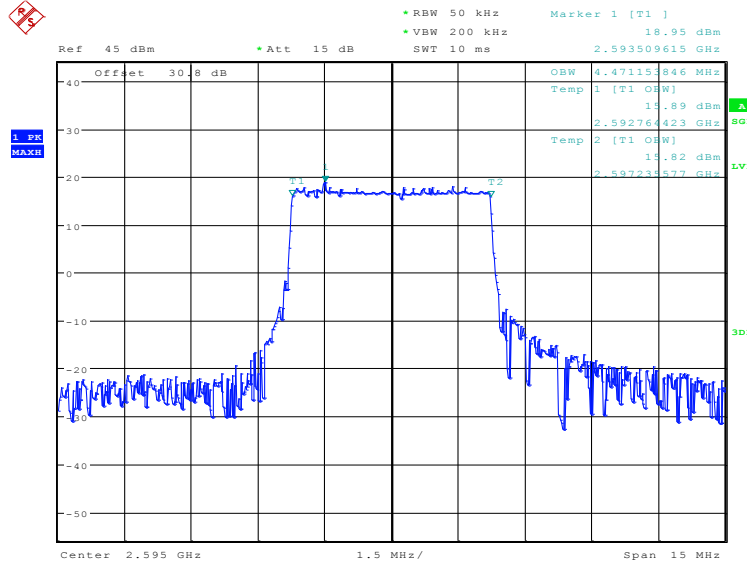


Date: 15.AUG.2024 16:49:34

LTE band 38, 5MHz (99%)

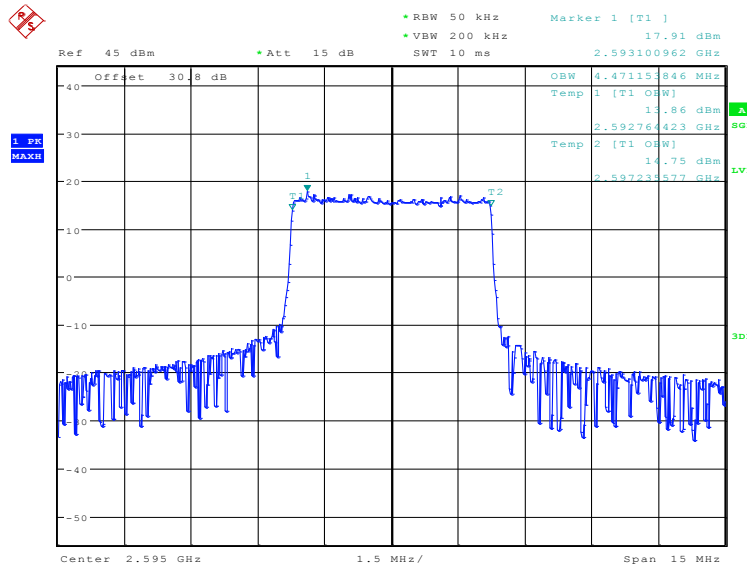
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	4471.15	4471.15

LTE band 38, 5MHz Bandwidth, QPSK (99% BW)



Date: 15.AUG.2024 13:50:27

LTE band 38, 5MHz Bandwidth,16QAM (99% BW)

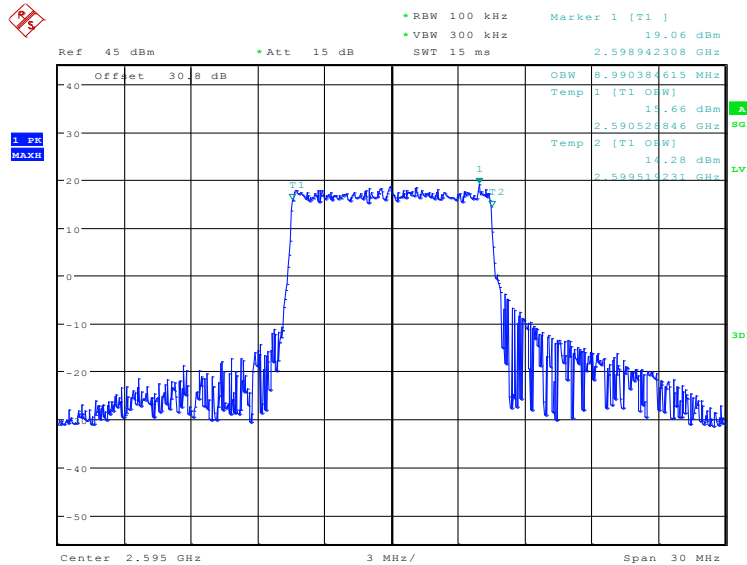


Date: 15.AUG.2024 13:51:07

LTE band 38, 10MHz (99%)

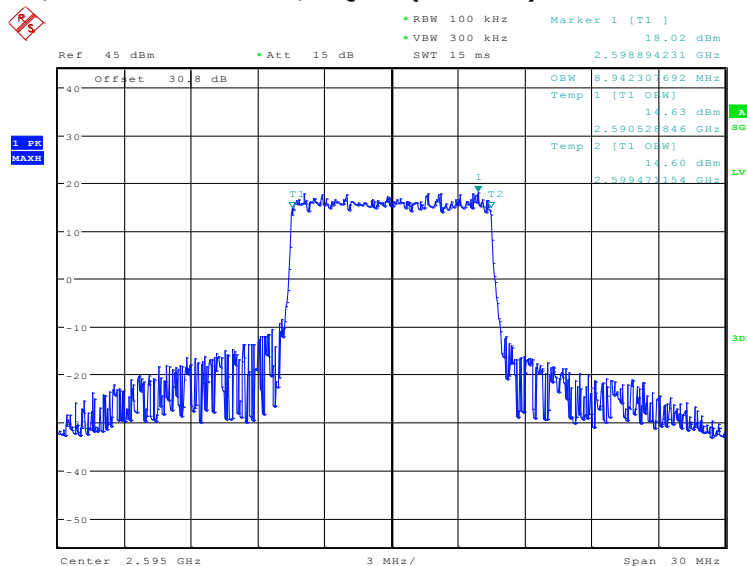
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	8990.38	8942.31

LTE band 38, 10MHz Bandwidth, QPSK (99% BW)



Date: 15.AUG.2024 13:51:50

LTE band 38, 10MHz Bandwidth, 16QAM (99% BW)

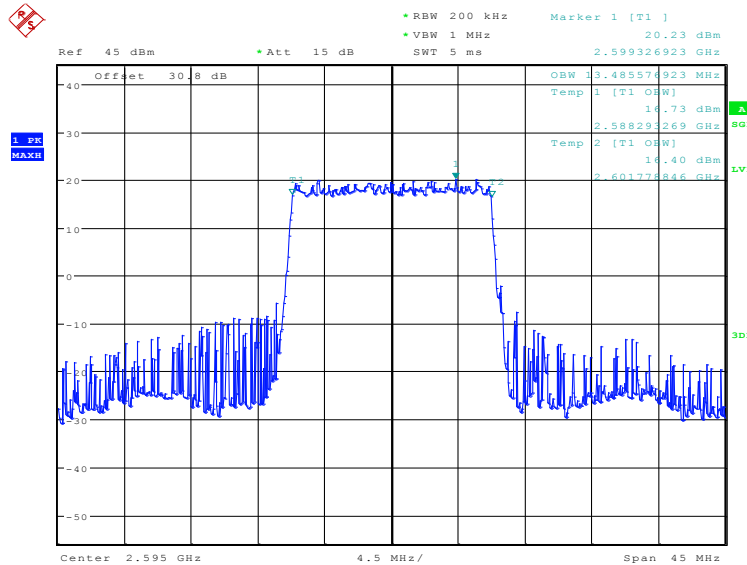


Date: 15.AUG.2024 13:52:30

LTE band 38,15MHz (99%)

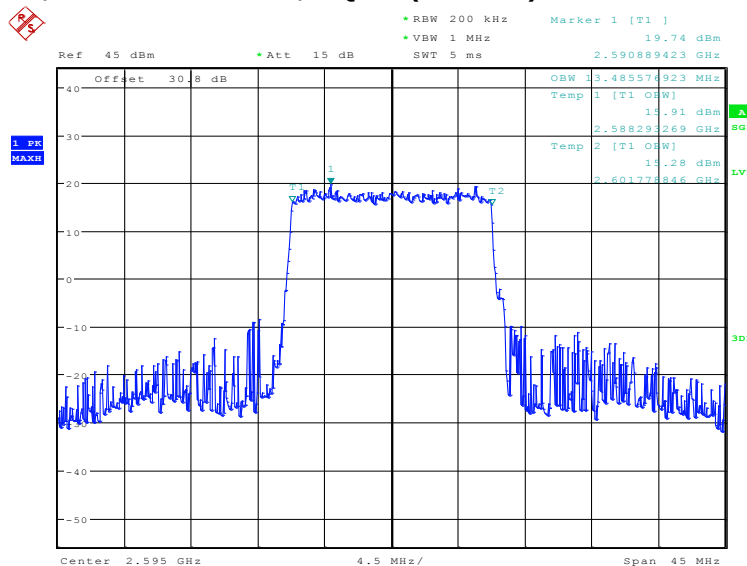
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	13485.58	13485.58

LTE band 38,15MHz Bandwidth, QPSK (99% BW)



Date: 15.AUG.2024 13:53:12

LTE band 38, 15MHz Bandwidth,16QAM (99% BW)

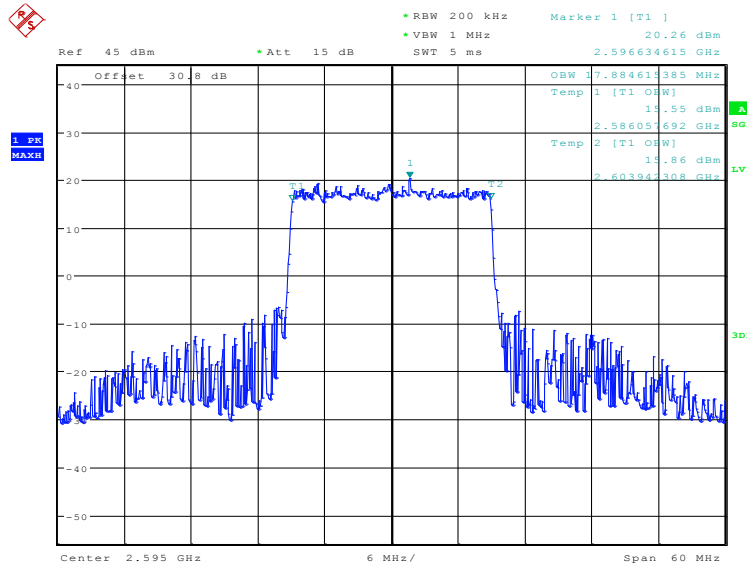


Date: 15.AUG.2024 13:53:53

LTE band 38, 20MHz (99%)

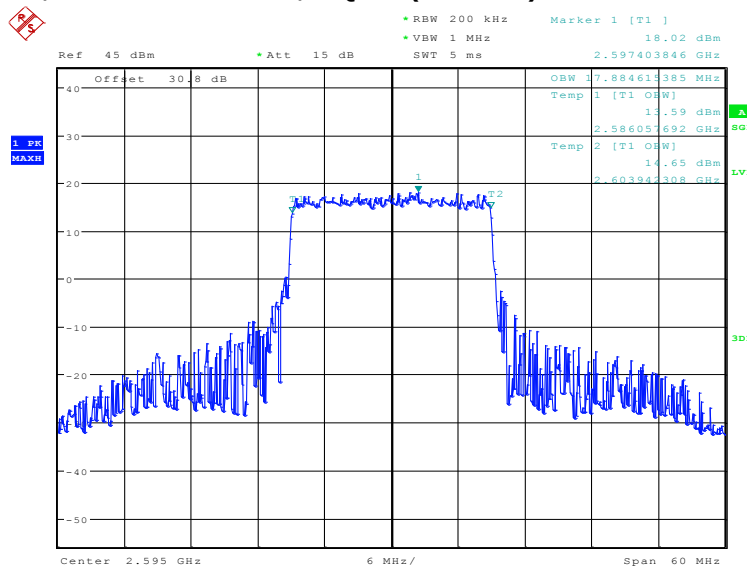
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	17884.62	17884.62

LTE band 38, 20MHz Bandwidth, QPSK (99% BW)



Date: 15.AUG.2024 13:54:35

LTE band 38, 20MHz Bandwidth,16QAM (99% BW)

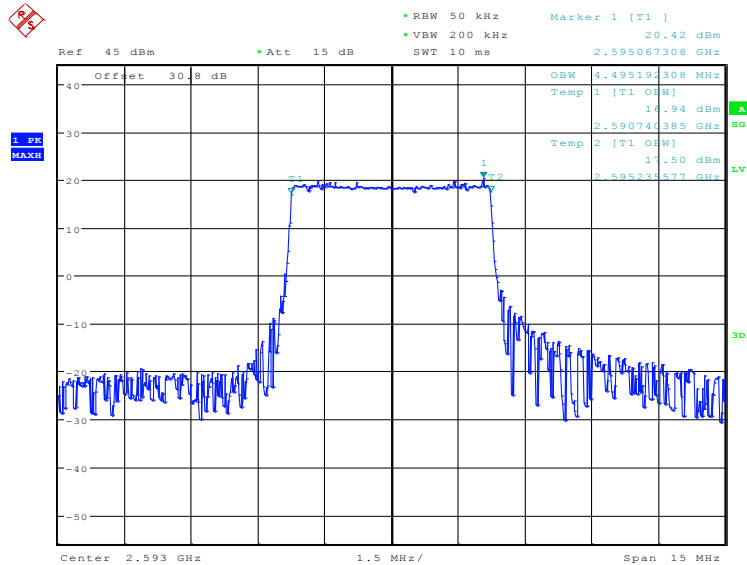


Date: 15.AUG.2024 13:55:16

LTE band 41, 5MHz (99%)

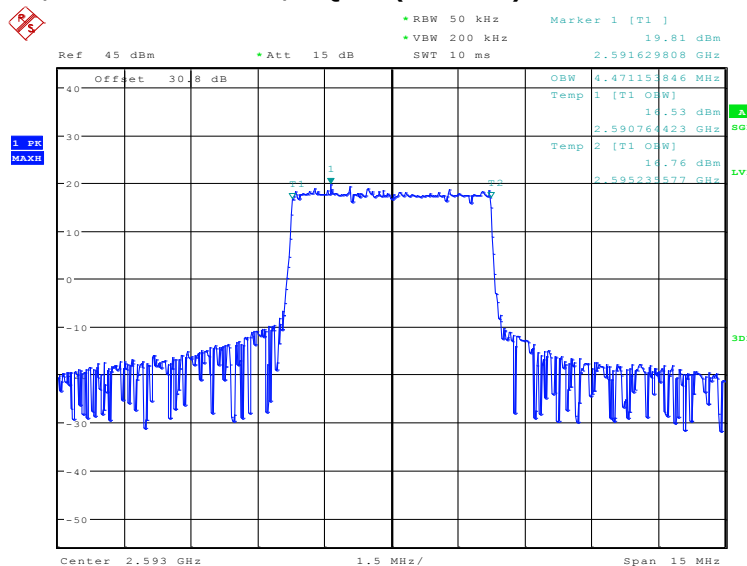
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	4495.19	4471.15

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



Date: 15.AUG.2024 13:56:00

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

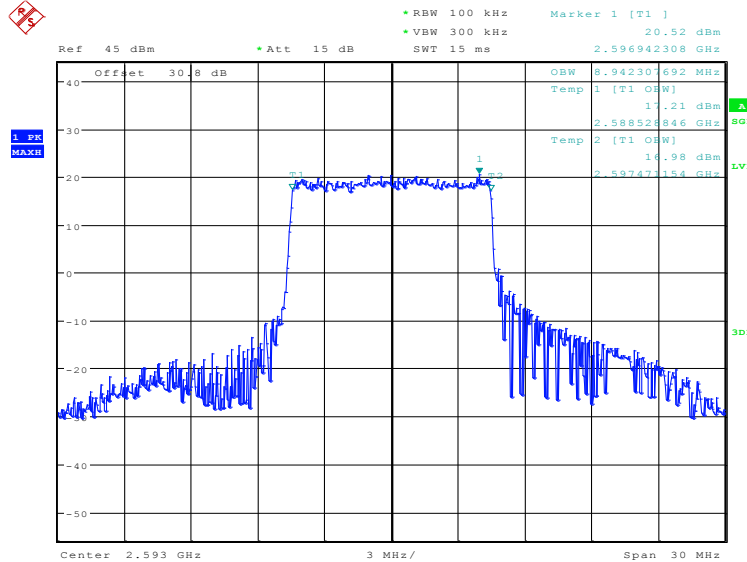


Date: 15.AUG.2024 13:56:40

LTE band 41, 10MHz (99%)

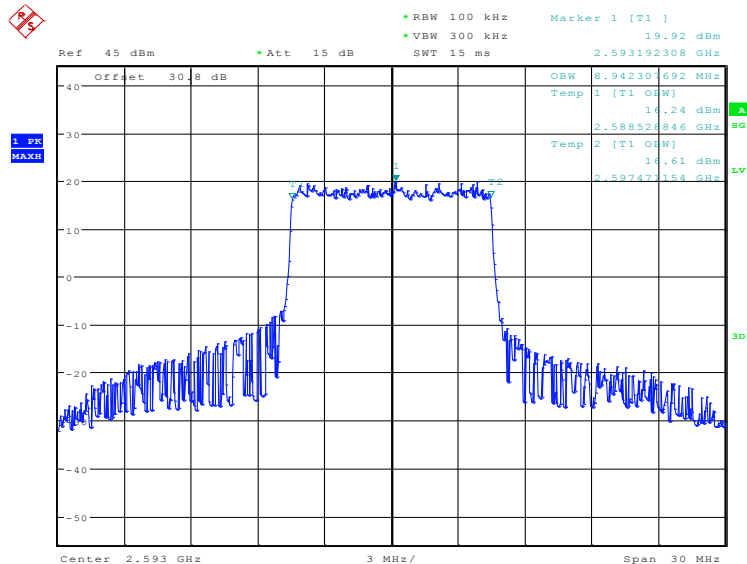
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 15.AUG.2024 13:57:22

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

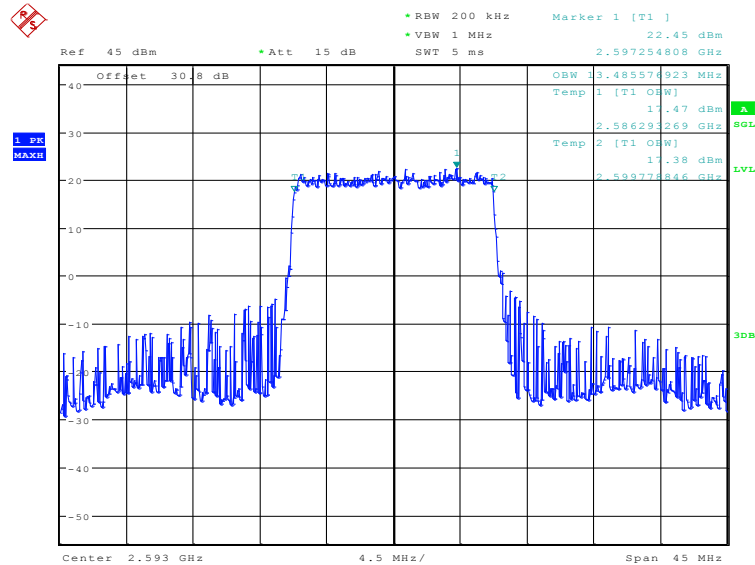


Date: 15.AUG.2024 13:58:03

LTE band 41, 15MHz (99%)

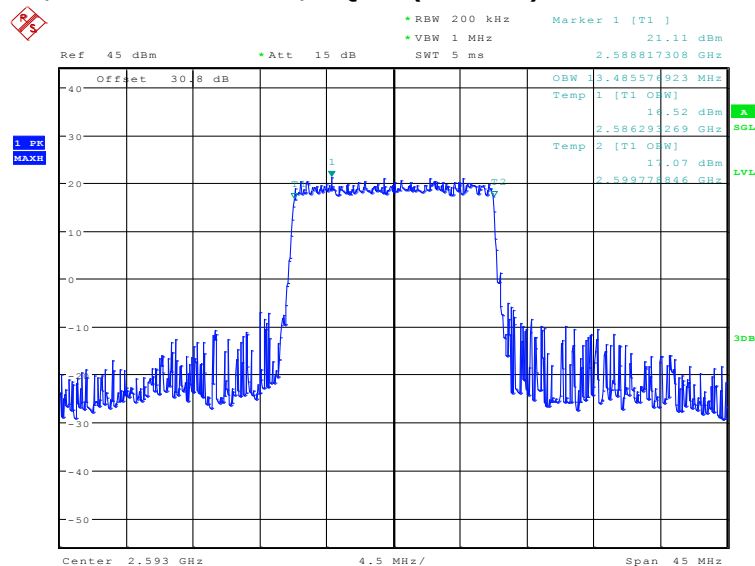
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 15.AUG.2024 13:58:45

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

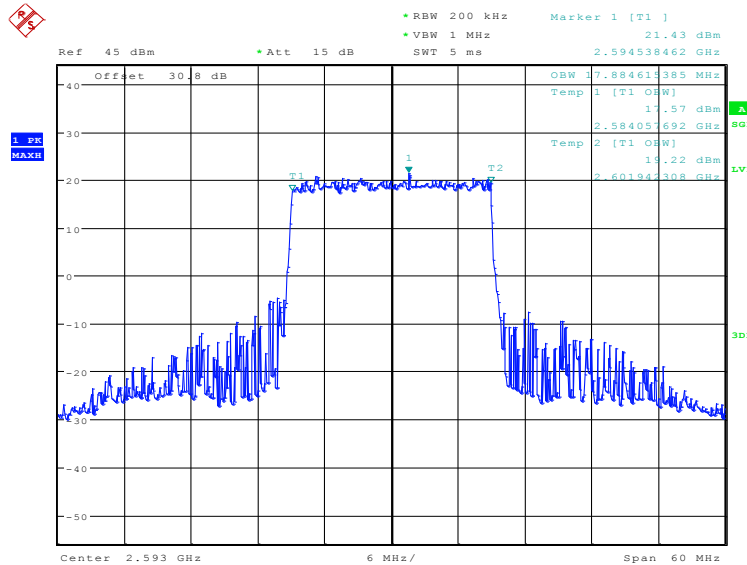


Date: 15.AUG.2024 13:59:26

LTE band 41, 20MHz (99%)

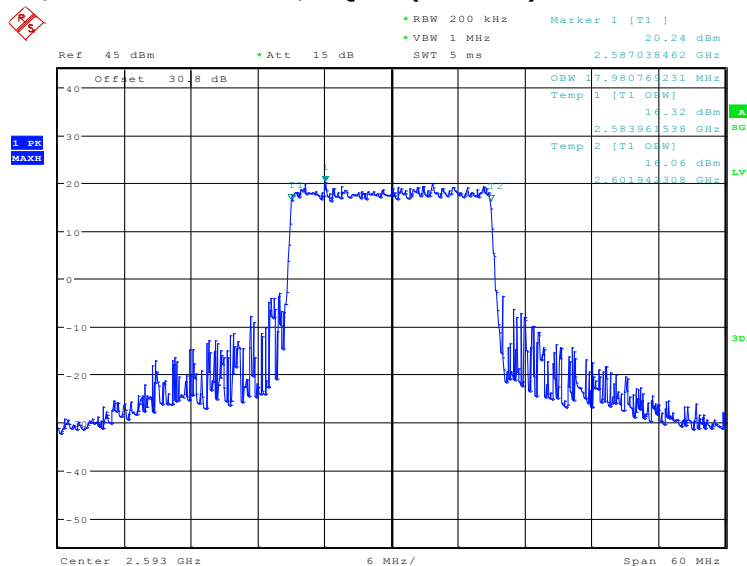
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2593.0	QPSK	16QAM
	17884.62	17980.77

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



Date: 15.AUG.2024 14:00:08

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

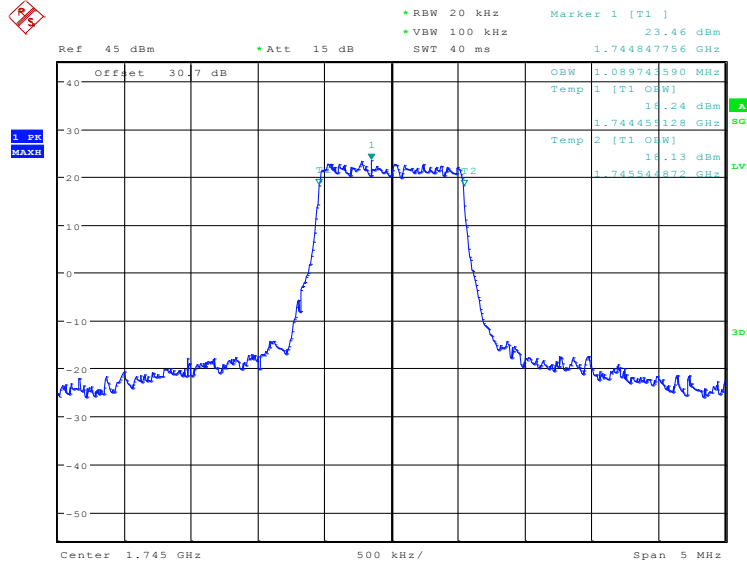


Date: 15.AUG.2024 14:00:48

LTE band 66, 1.4MHz (99%)

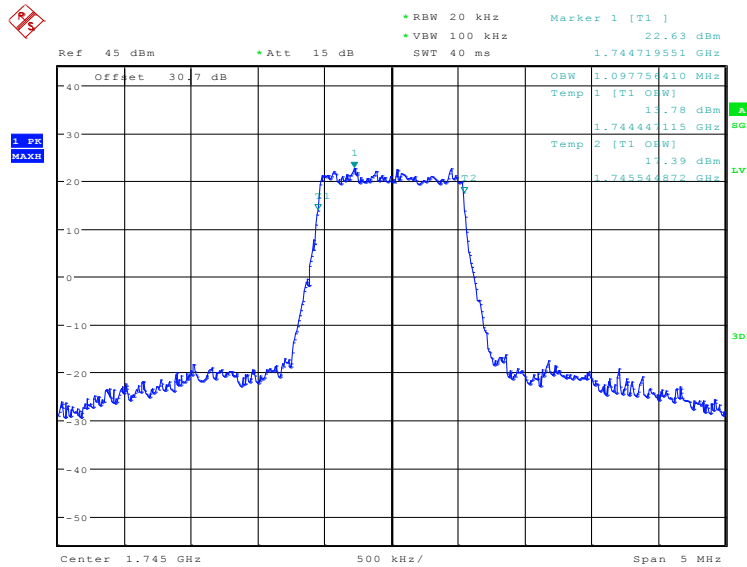
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	1089.74	1097.76

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



Date: 15.AUG.2024 13:41:30

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

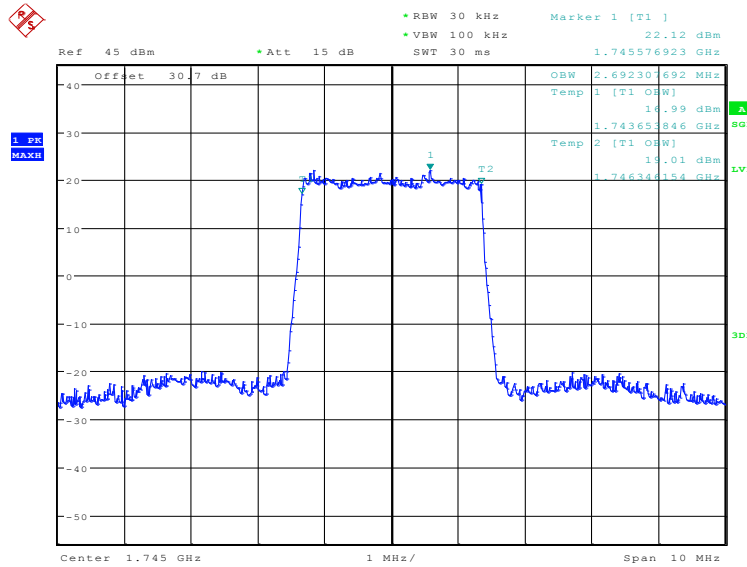


Date: 15.AUG.2024 13:42:10

LTE band 66, 3MHz (99%)

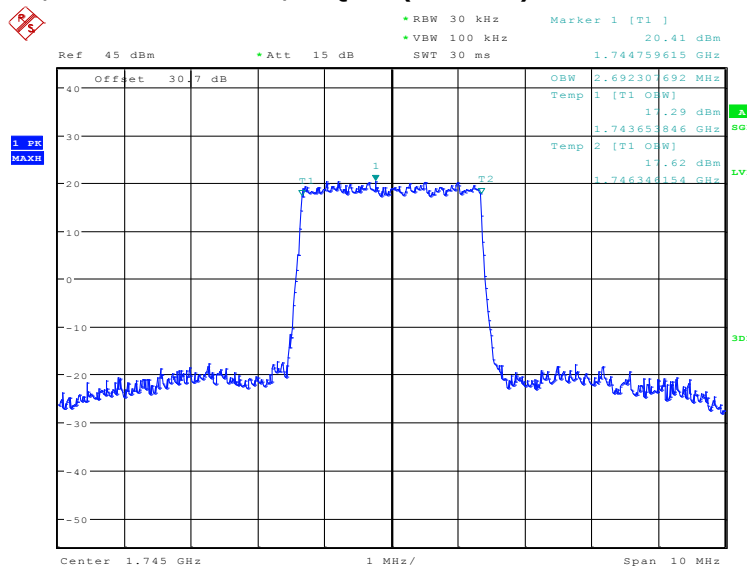
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.AUG.2024 13:42:52

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

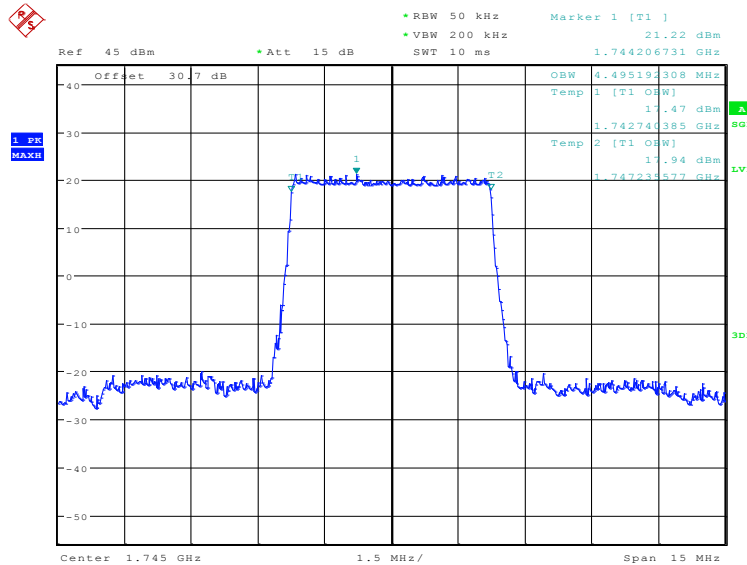


Date: 15.AUG.2024 13:43:32

LTE band 66, 5MHz (99%)

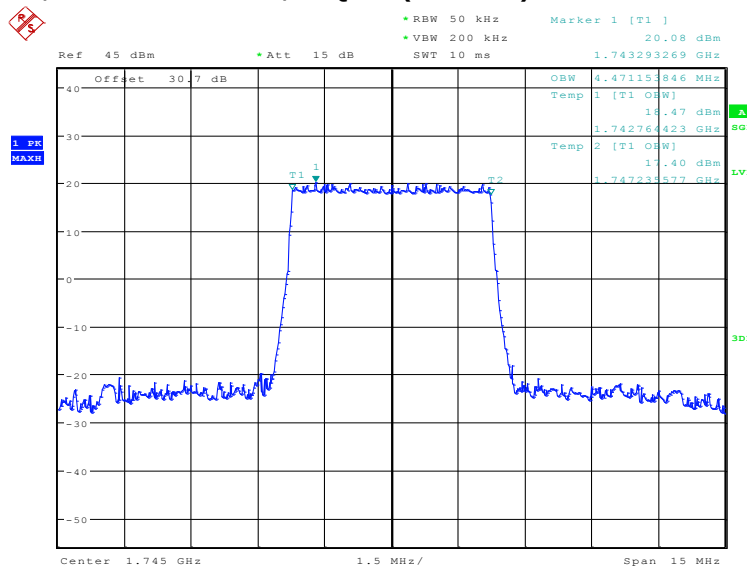
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	4495.19	4471.15

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



Date: 15.AUG.2024 13:44:14

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

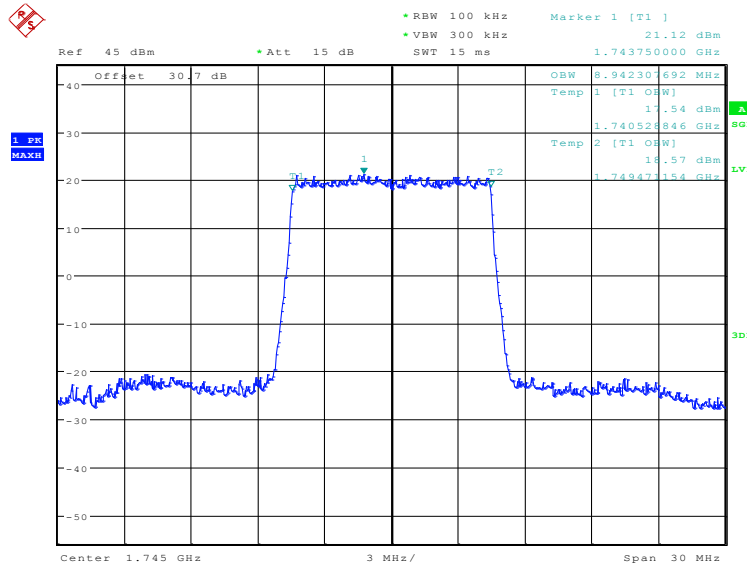


Date: 15.AUG.2024 13:44:54

LTE band 66, 10MHz (99%)

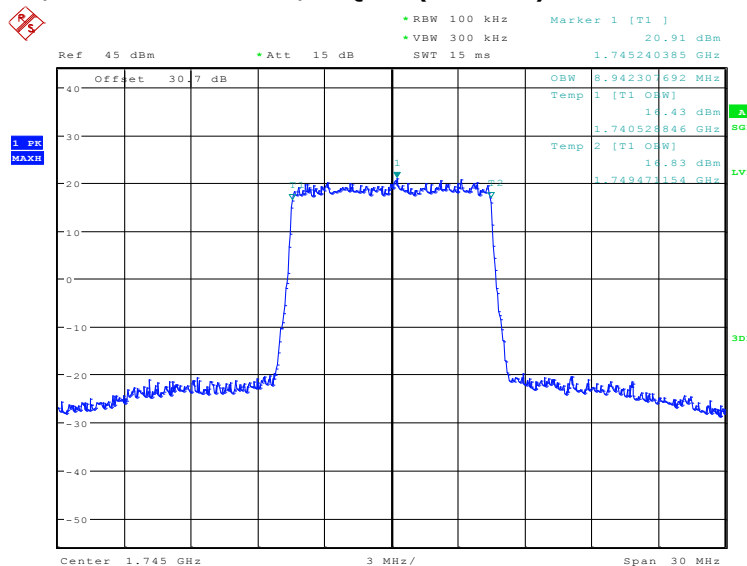
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	8942.31	8942.31

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



Date: 15.AUG.2024 13:45:36

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

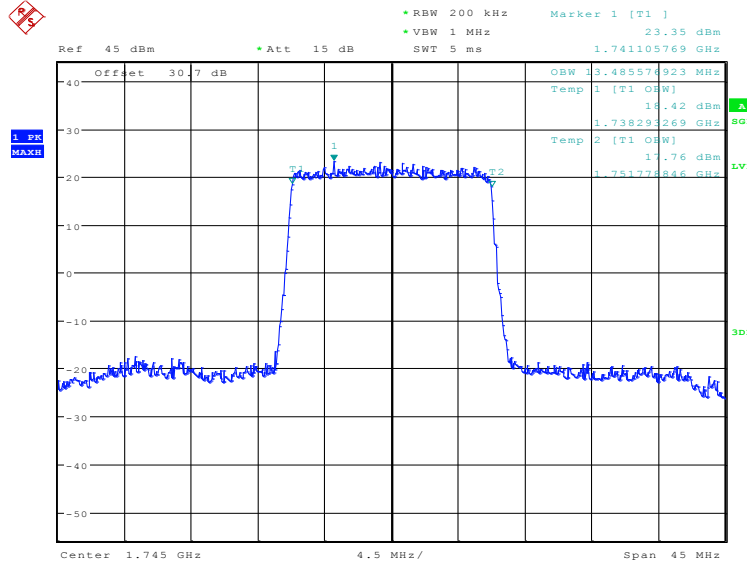


Date: 15.AUG.2024 13:46:16

LTE band 66, 15MHz (99%)

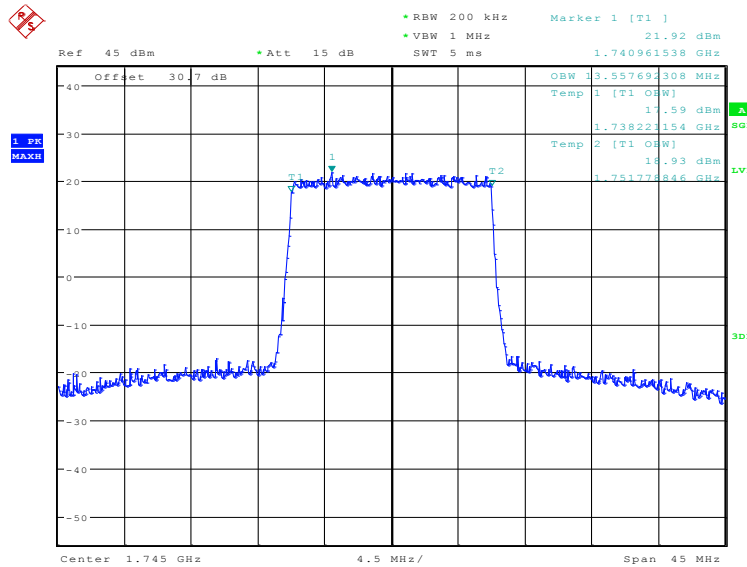
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	13485.58	13557.69

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



Date: 15.AUG.2024 13:46:59

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

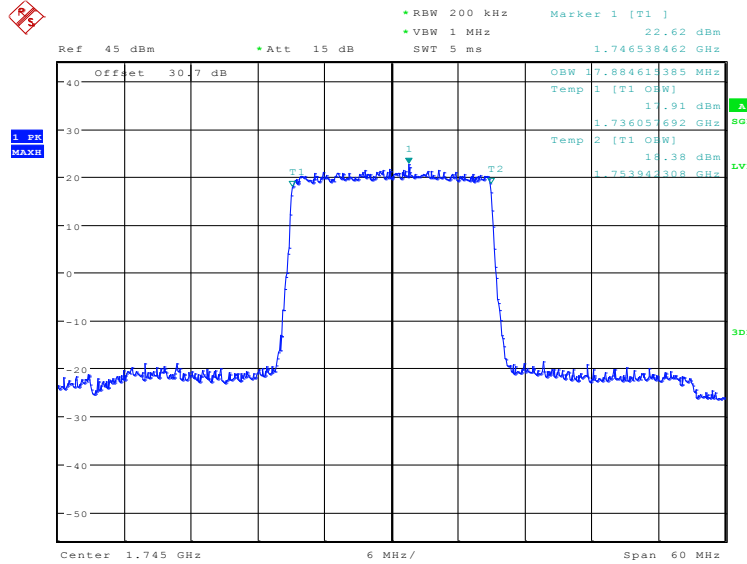


Date: 15.AUG.2024 13:47:39

LTE band 66, 20MHz (99%)

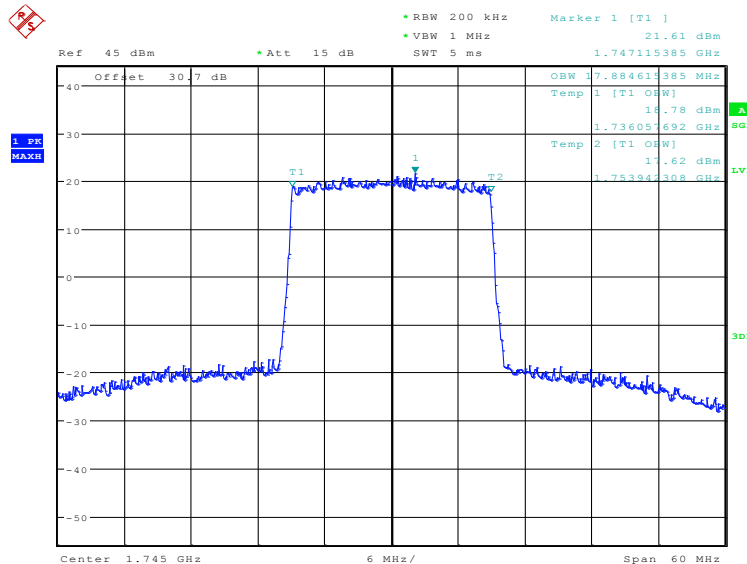
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1745.0	QPSK	16QAM
	17884.62	17884.62

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



Date: 15.AUG.2024 13:48:21

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

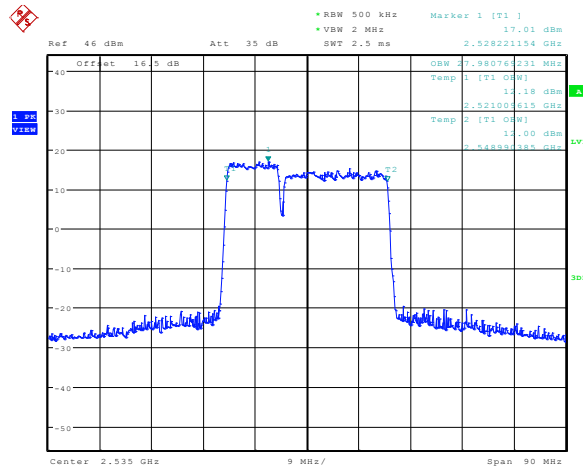


Date: 15.AUG.2024 13:49:01

LTE CA band 7C, 10MHz+20MHz(99%)

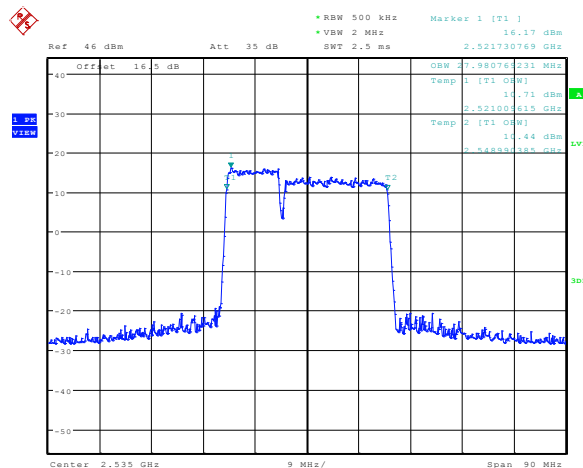
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2535.0	27.981	27.981

LTE CA band 7C , 10MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:27:03

LTE CA band 7C , 10MHz+20MHz Bandwidth,16QAM (99% BW)

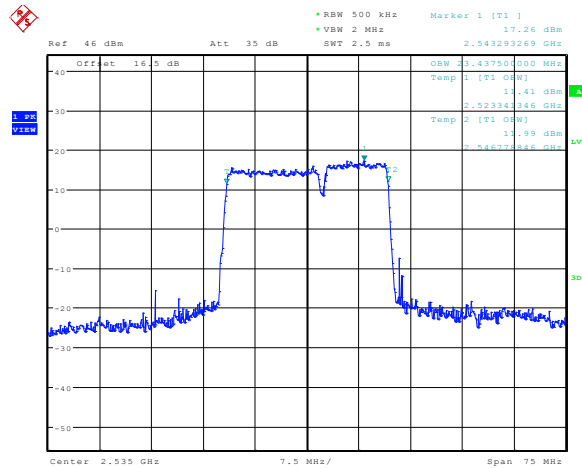


Date: 20.AUG.2024 16:27:27

LTE CA band 7C, 15MHz+10MHz(99%)

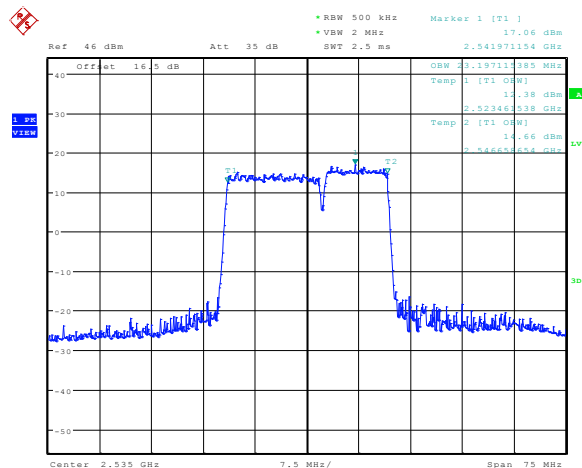
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2535.0	23.438	23.197

LTE CA band 7C , 15MHz+10MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:28:50

LTE CA band 7C , 15MHz+10MHz Bandwidth,16QAM (99% BW)

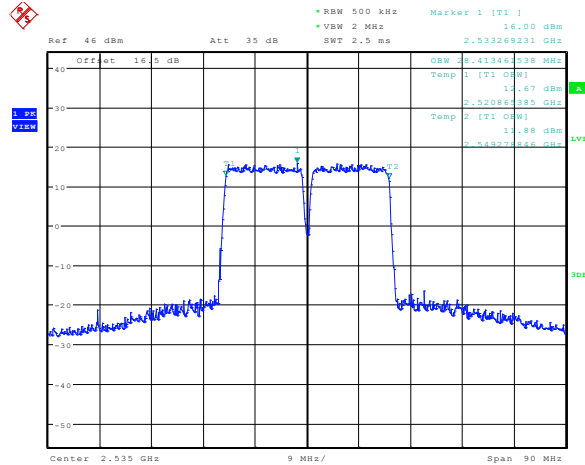


Date: 20.AUG.2024 16:29:14

LTE CA band 7C, 15MHz+15MHz(99%)

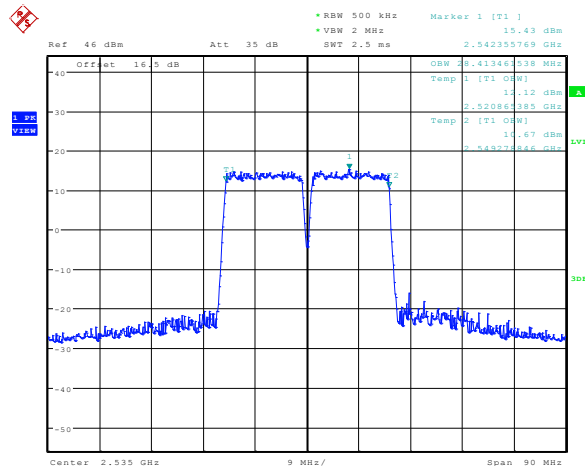
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2535.0	28.413	28.413

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



Date: 20.AUG.2024 16:30:07

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

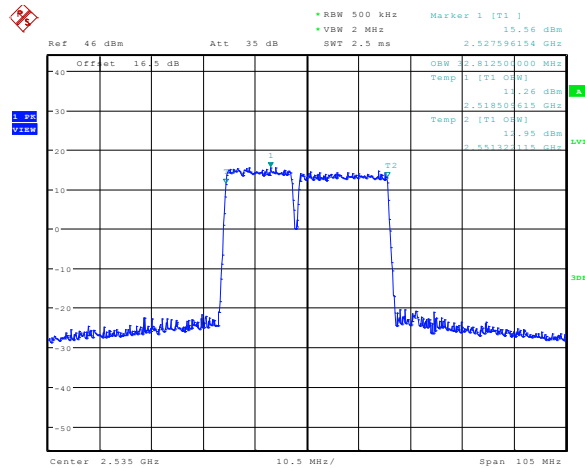


Date: 20.AUG.2024 16:30:31

LTE CA band 7C, 15MHz+20MHz(99%)

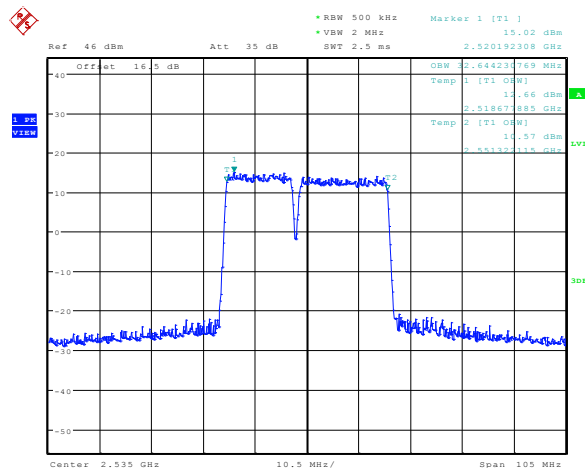
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2535.0	32.812	32.644

LTE CA band 7C , 15MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:31:24

LTE CA band 7C , 15MHz+20MHz Bandwidth,16QAM (99% BW)

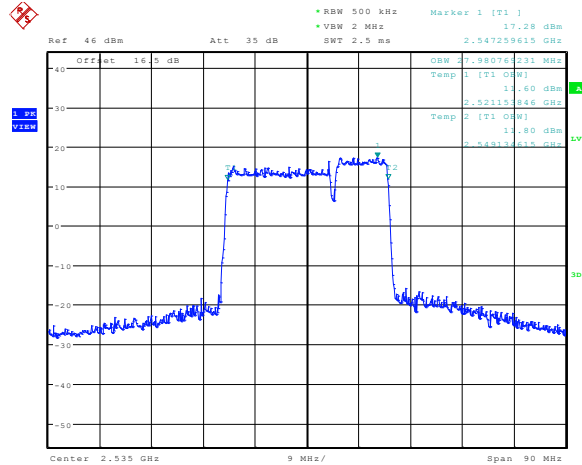


Date: 20.AUG.2024 16:31:48

LTE CA band 7C, 20MHz+10MHz(99%)

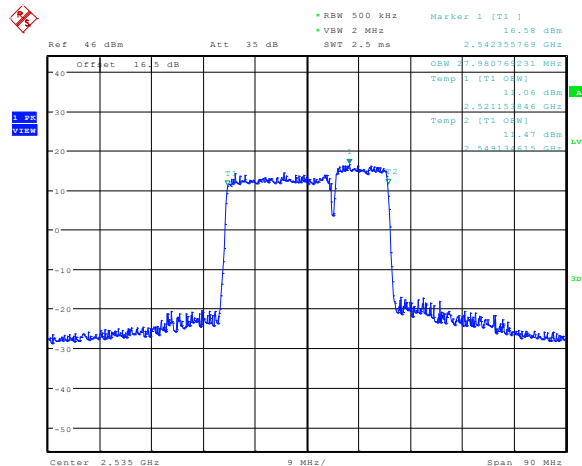
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2535.0	27.981	27.981

LTE CA band 7C , 20MHz+10MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:32:43

LTE CA band 7C , 20MHz+10MHz Bandwidth,16QAM (99% BW)

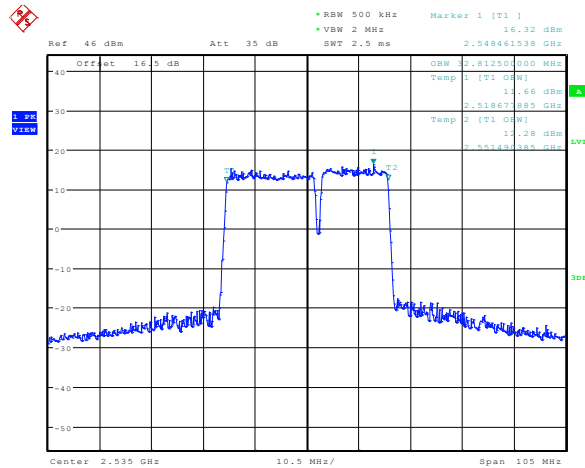


Date: 20.AUG.2024 16:33:07

LTE CA band 7C, 20MHz+15MHz(99%)

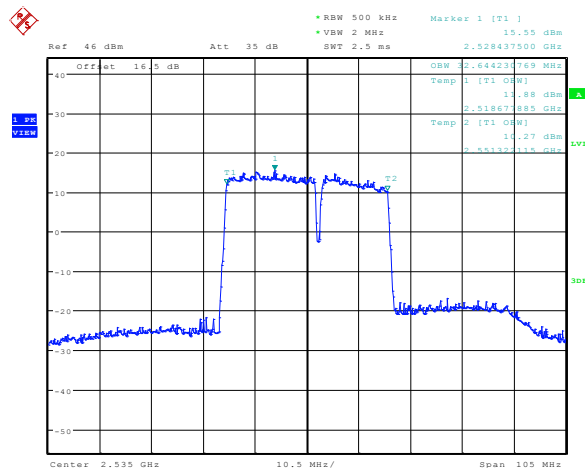
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2535.0	32.812	32.644

LTE CA band 7C , 20MHz+15MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:34:01

LTE CA band 7C , 20MHz+15MHz Bandwidth,16QAM (99% BW)

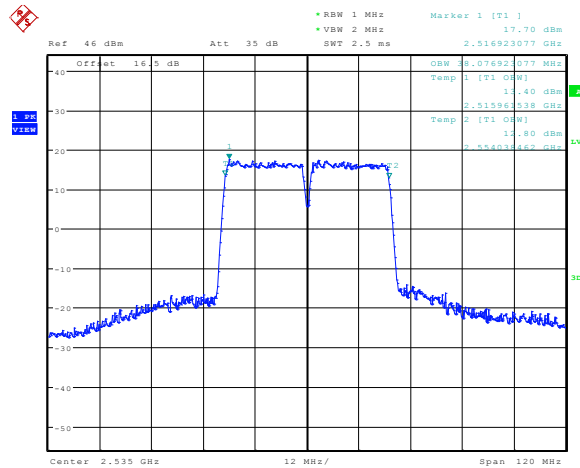


Date: 20.AUG.2024 16:34:25

LTE CA band 7C, 20MHz+20MHz(99%)

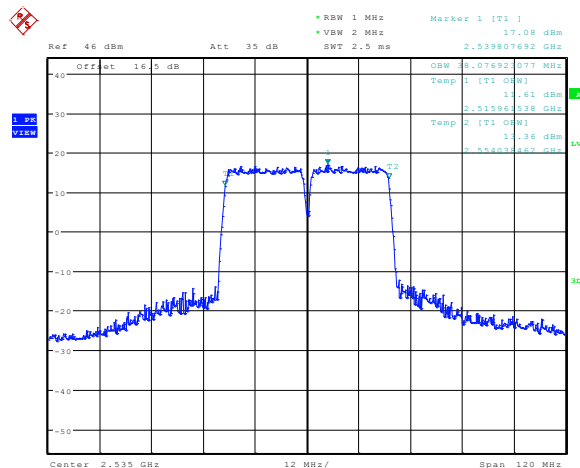
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2535.0	38.077	38.077

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



Date: 20.AUG.2024 16:35:18

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

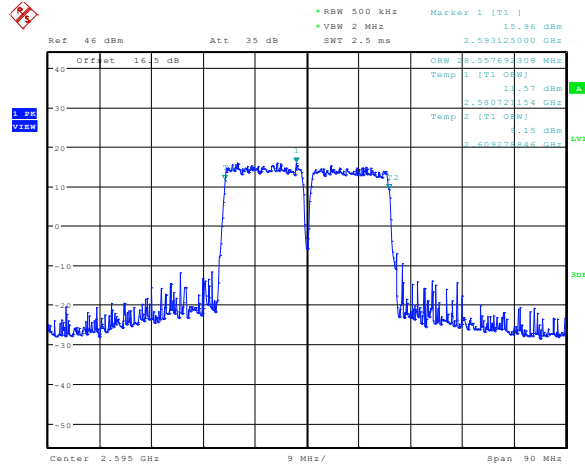


Date: 20.AUG.2024 16:35:42

LTE CA band 38C, 15MHz+15MHz(99%)

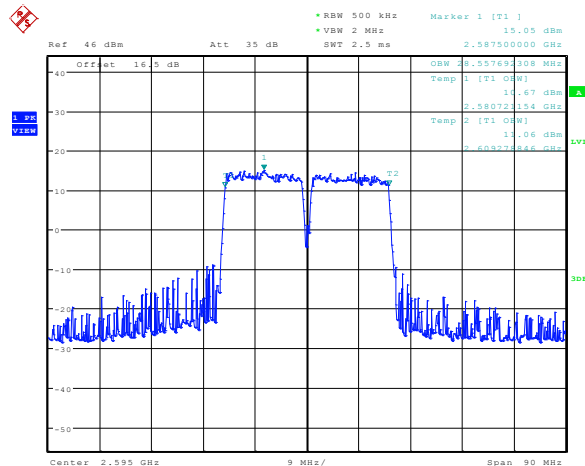
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2595.0	28.558	28.558

LTE CA band 38C , 15MHz+15MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:36:46

LTE CA band 38C , 15MHz+15MHz Bandwidth,16QAM (99% BW)

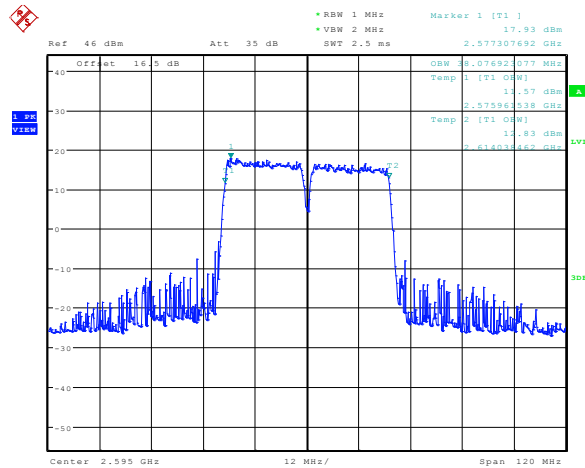


Date: 20.AUG.2024 16:37:10

LTE CA band 38C, 20MHz+20MHz(99%)

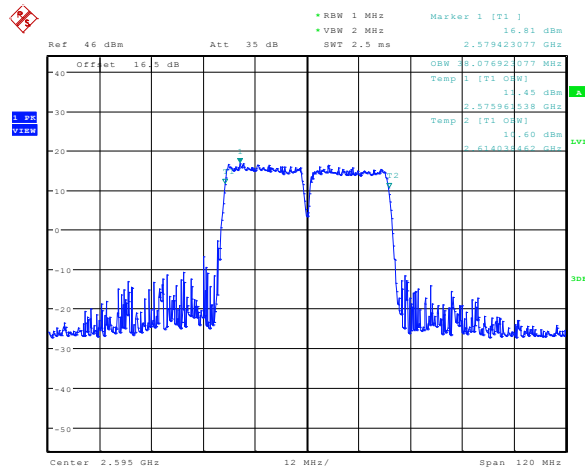
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2595.0	38.077	38.077

LTE CA band 38C , 20MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:38:05

LTE CA band 38C , 20MHz+20MHz Bandwidth,16QAM (99% BW)

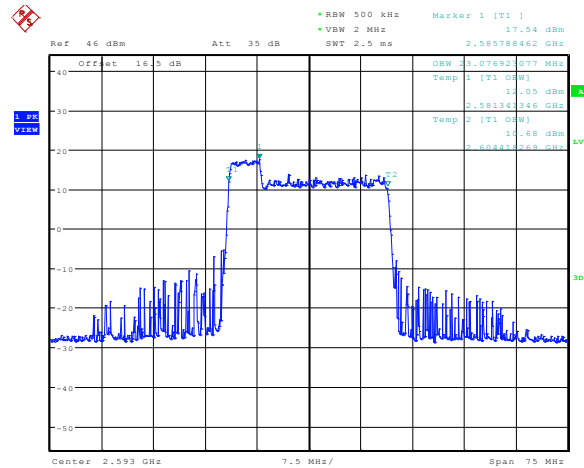


Date: 20.AUG.2024 16:38:29

LTE CA band 41C, 5MHz+20MHz(99%)

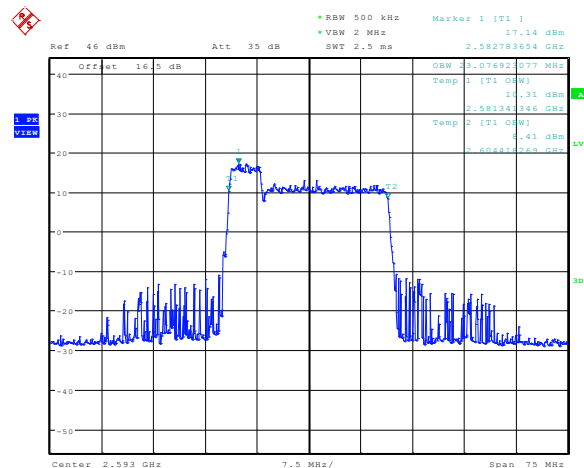
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	23.077	23.077

LTE CA band 41C , 5MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:39:37

LTE CA band 41C , 5MHz+20MHz Bandwidth,16QAM (99% BW)

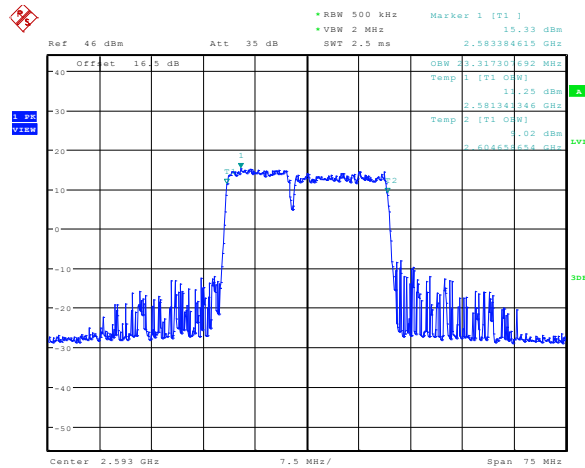


Date: 20.AUG.2024 16:40:01

LTE CA band 41C, 10MHz+15MHz(99%)

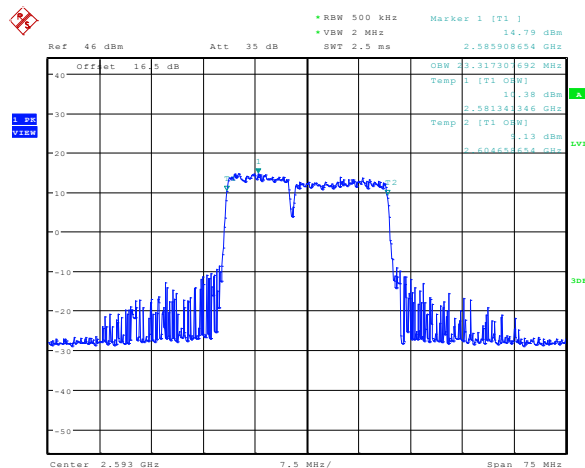
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	23.317	23.317

LTE CA band 41C , 10MHz+15MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:41:02

LTE CA band 41C , 10MHz+15MHz Bandwidth,16QAM (99% BW)

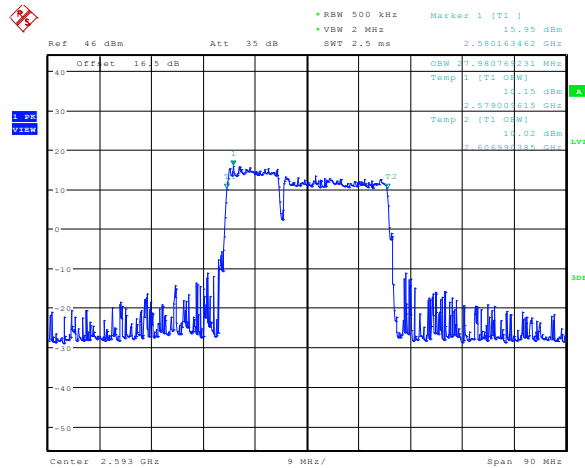


Date: 20.AUG.2024 16:41:27

LTE CA band 41C, 10MHz+20MHz(99%)

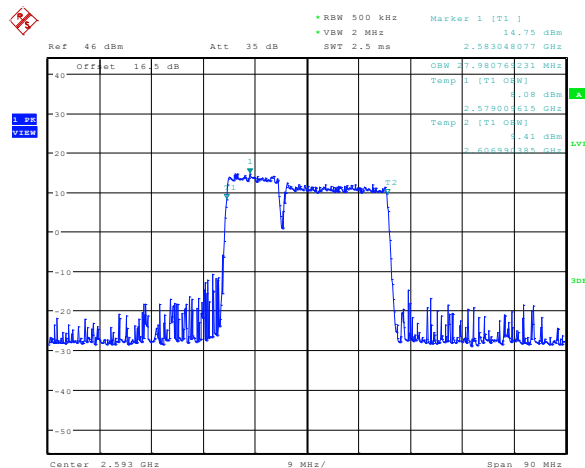
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	27.981	27.981

LTE CA band 41C , 10MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:42:27

LTE CA band 41C , 10MHz+20MHz Bandwidth,16QAM (99% BW)

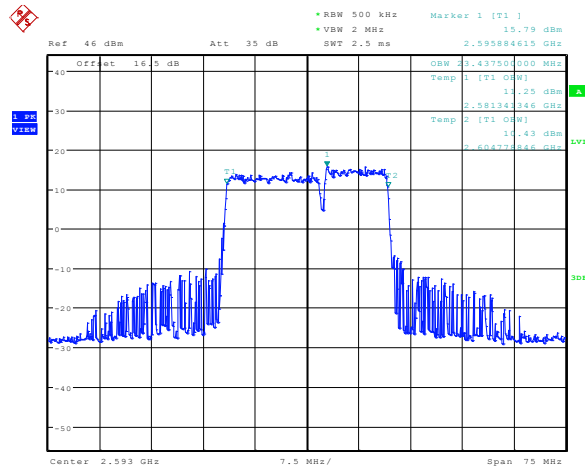


Date: 20.AUG.2024 16:42:51

LTE CA band 41C, 15MHz+10MHz(99%)

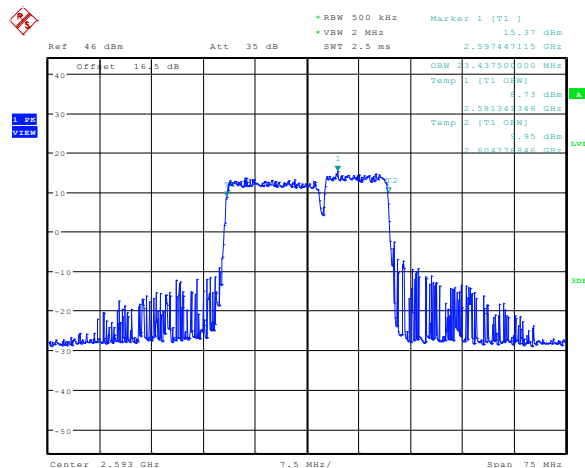
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	23.438	23.438

LTE CA band 41C , 15MHz+10MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:43:53

LTE CA band 41C , 15MHz+10MHz Bandwidth,16QAM (99% BW)

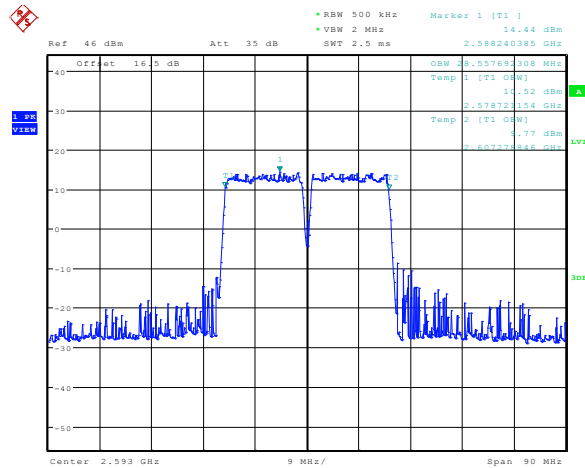


Date: 20.AUG.2024 16:44:17

LTE CA band 41C, 15MHz+15MHz(99%)

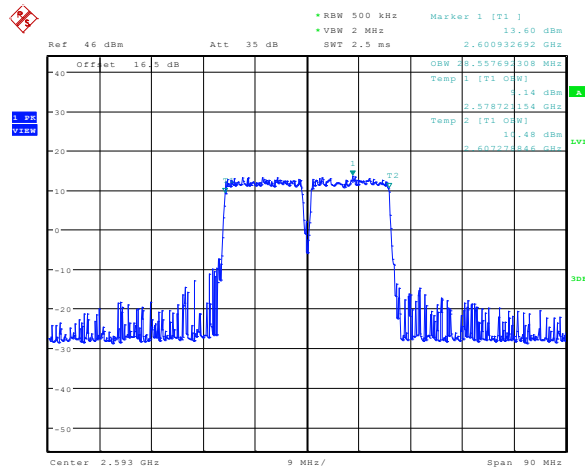
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	28.558	28.558

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



Date: 20.AUG.2024 16:45:45

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

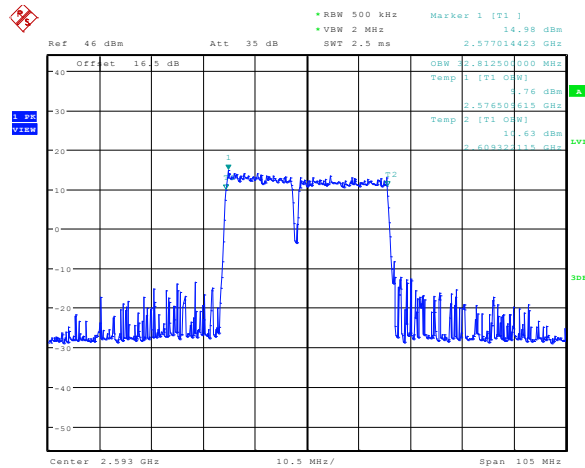


Date: 20.AUG.2024 16:46:09

LTE CA band 41C, 15MHz+20MHz(99%)

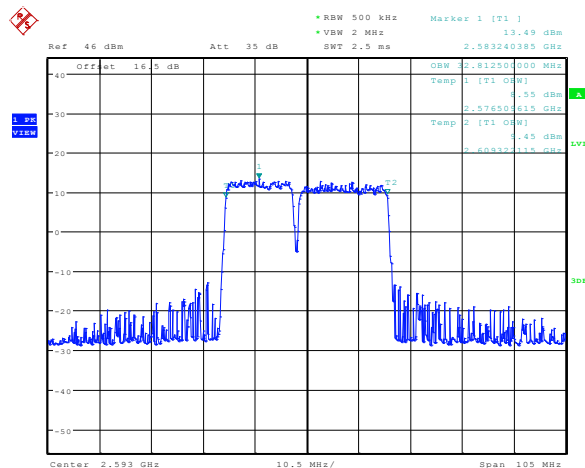
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	32.812	32.812

LTE CA band 41C , 15MHz+20MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:47:09

LTE CA band 41C , 15MHz+20MHz Bandwidth,16QAM (99% BW)

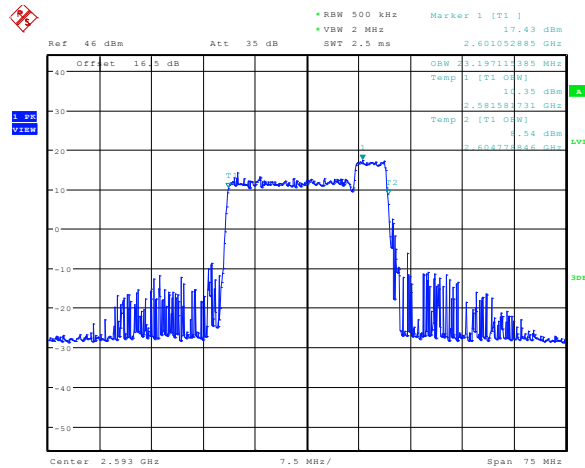


Date: 20.AUG.2024 16:47:33

LTE CA band 41C, 20MHz+5MHz(99%)

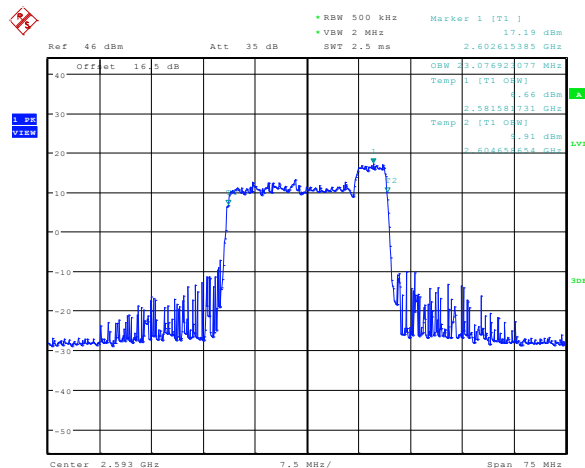
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	23.197	23.077

LTE CA band 41C , 20MHz+5MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:48:34

LTE CA band 41C , 20MHz+5MHz Bandwidth,16QAM (99% BW)

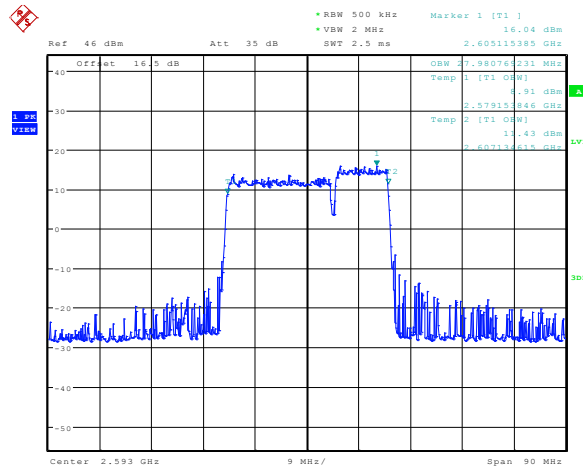


Date: 20.AUG.2024 16:48:58

LTE CA band 41C, 20MHz+10MHz(99%)

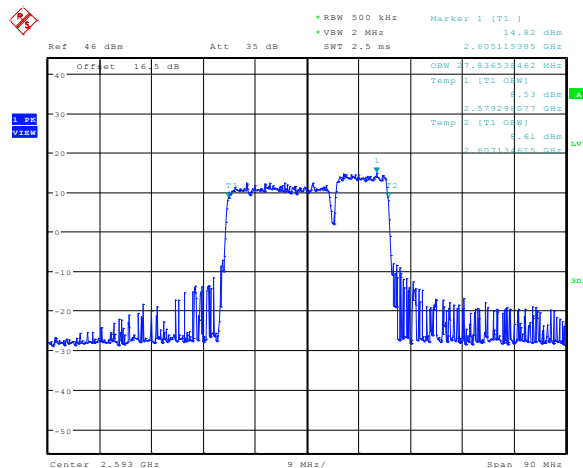
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	27.981	27.837

LTE CA band 41C , 20MHz+10MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:49:59

LTE CA band 41C , 20MHz+10MHz Bandwidth,16QAM (99% BW)

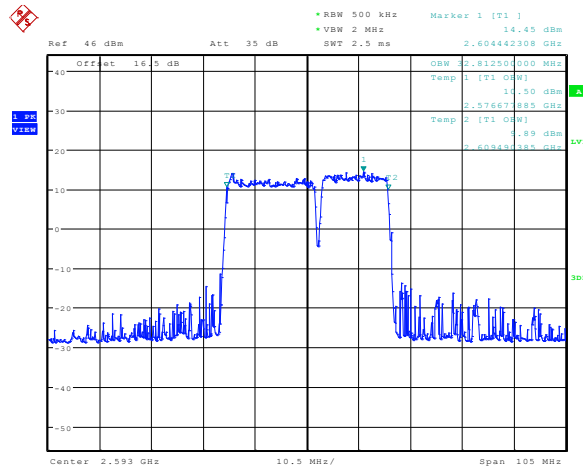


Date: 20.AUG.2024 16:50:23

LTE CA band 41C, 20MHz+15MHz(99%)

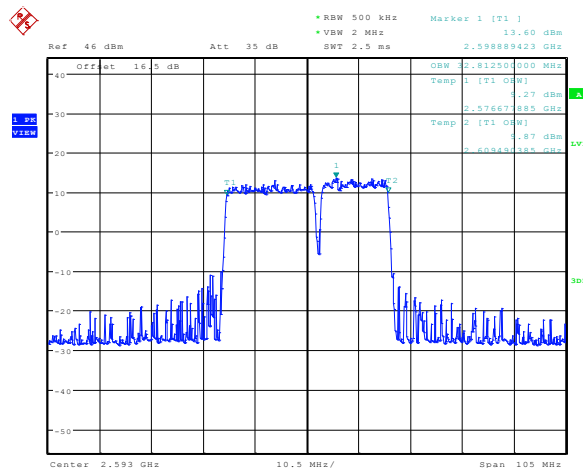
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	32.812	32.812

LTE CA band 41C , 20MHz+15MHz Bandwidth,QPSK (99% BW)



Date: 20.AUG.2024 16:51:24

LTE CA band 41C , 20MHz+15MHz Bandwidth,16QAM (99% BW)

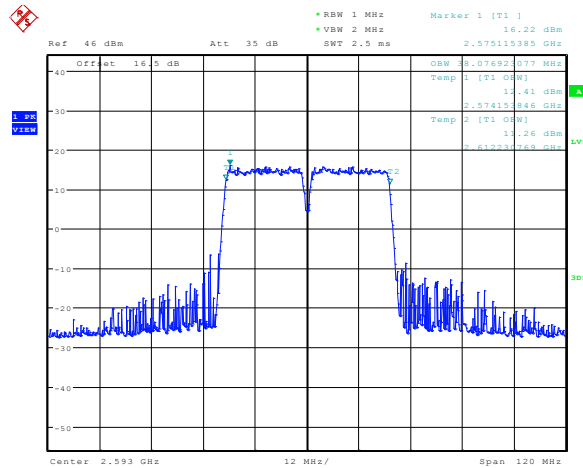


Date: 20.AUG.2024 16:51:48

LTE CA band 41C, 20MHz+20MHz(99%)

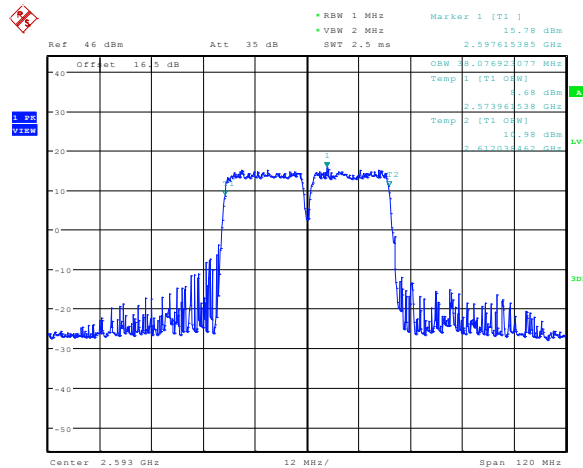
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
2593.0	38.077	38.077

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



Date: 20.AUG.2024 16:52:49

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



Date: 20.AUG.2024 16:53:13

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.

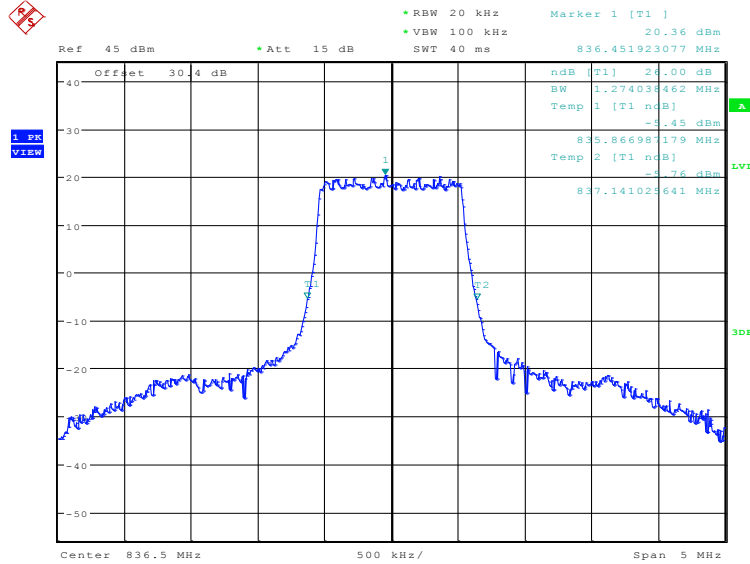
The measurement method is from ANSI C63.26:

- 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 5, 1.4MHz (-26dBc)

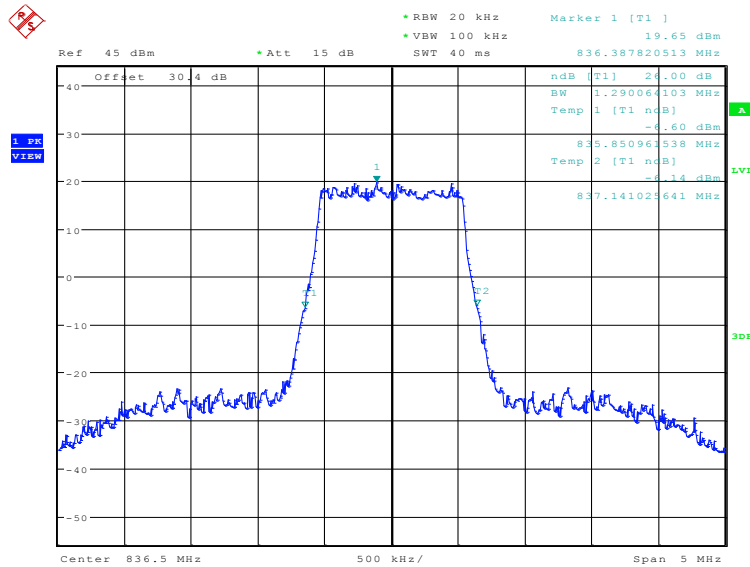
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	1274.04	1290.06

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



Date: 16.AUG.2024 08:59:33

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

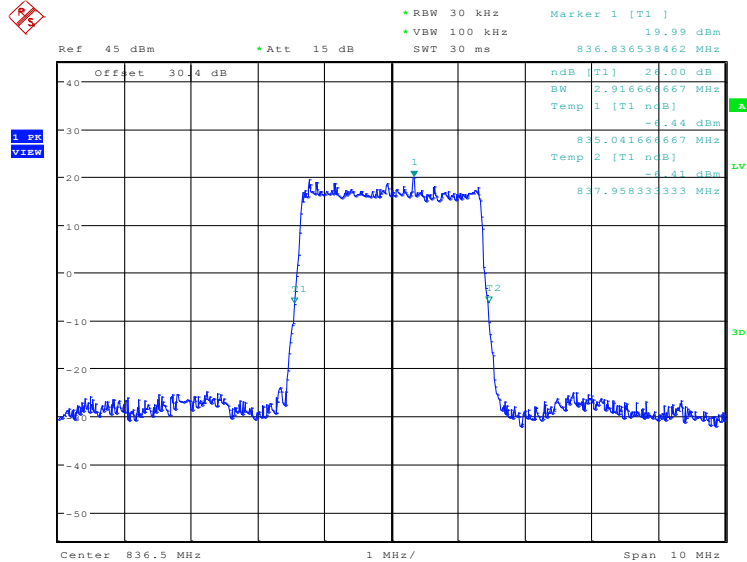


Date: 16.AUG.2024 09:00:13

LTE band 5, 3MHz (-26dBc)

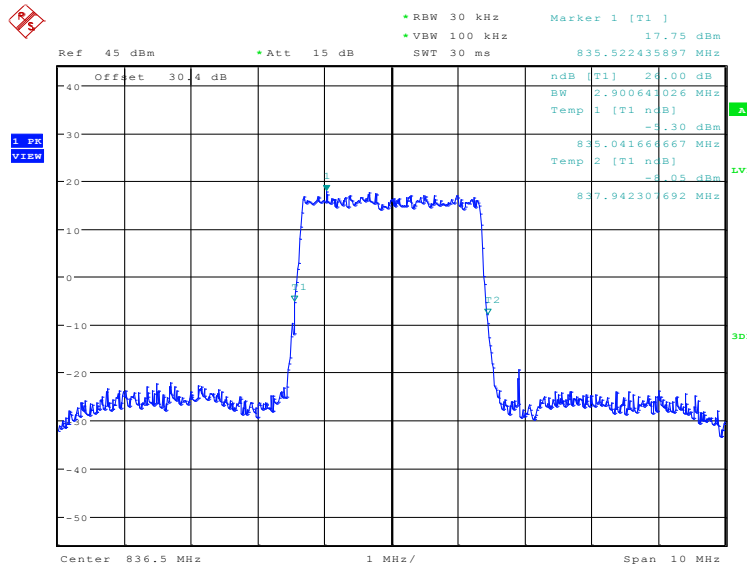
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	2916.67	2900.64

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



Date: 16.AUG.2024 09:00:55

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

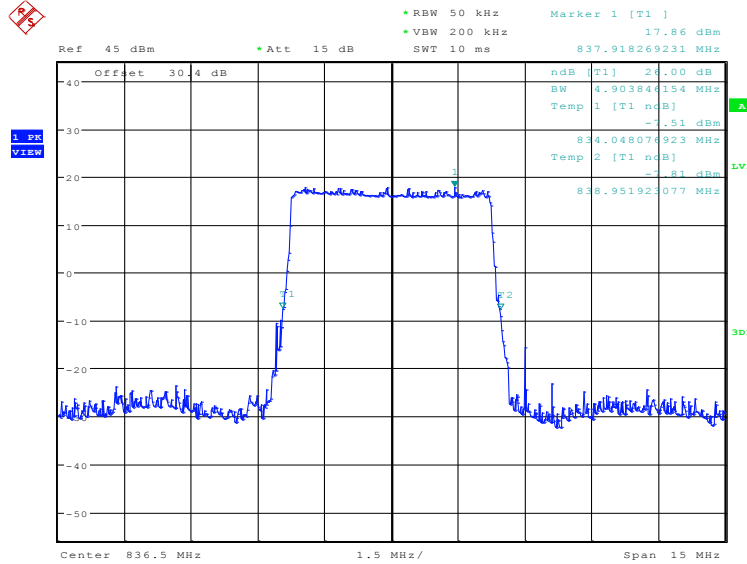


Date: 16.AUG.2024 09:01:36

LTE band 5, 5MHz (-26dBc)

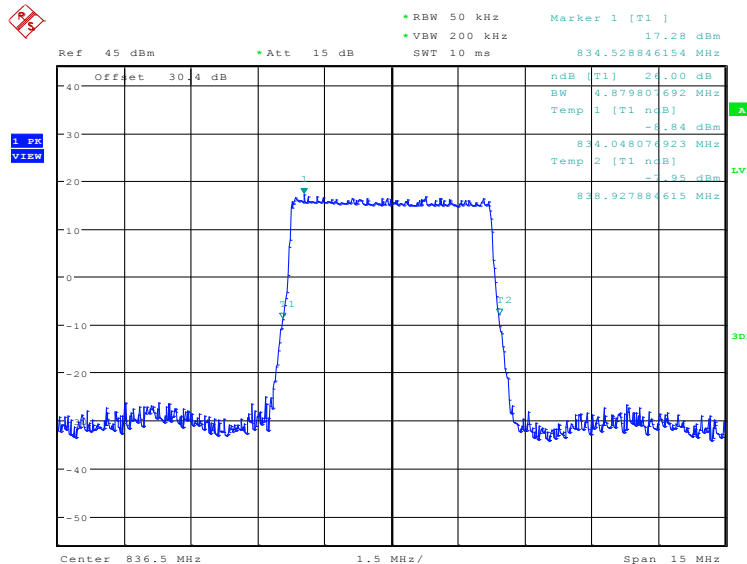
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	4903.85	4879.81

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



Date: 16.AUG.2024 09:02:18

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

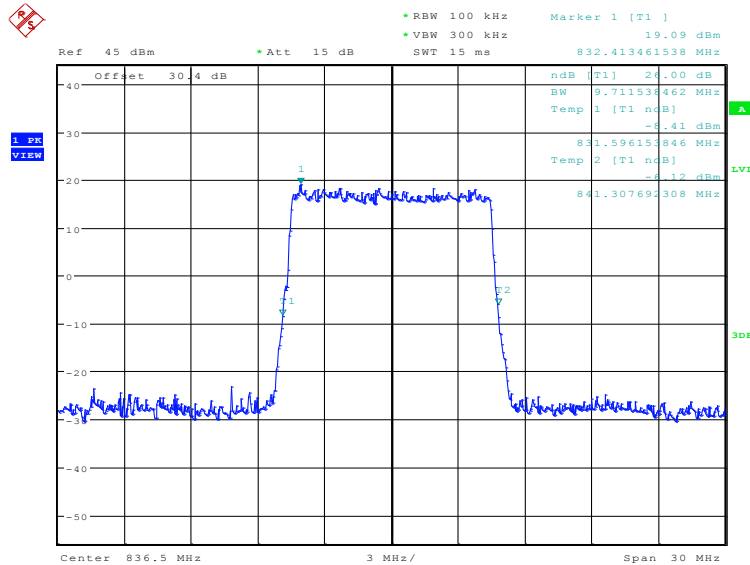


Date: 16.AUG.2024 09:02:59

LTE band 5, 10MHz (-26dBc)

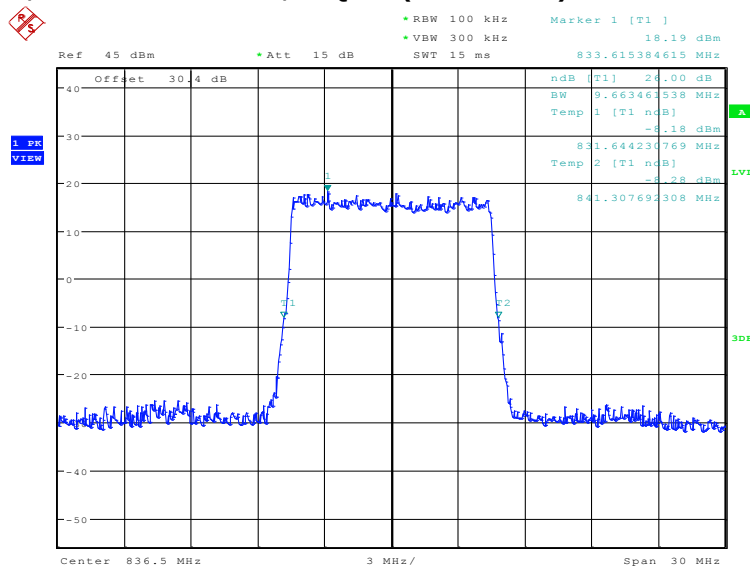
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	9711.54	9663.46

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



Date: 16.AUG.2024 09:03:41

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

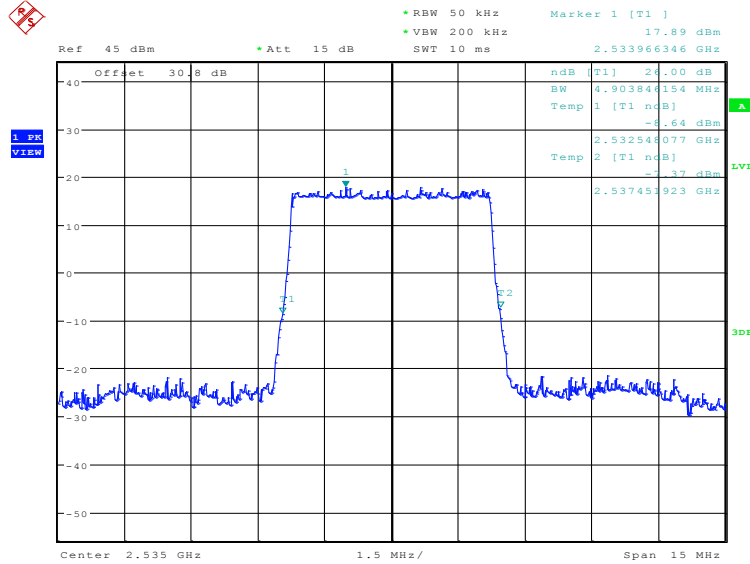


Date: 16.AUG.2024 09:04:22

LTE band 7, 5MHz (-26dBc)

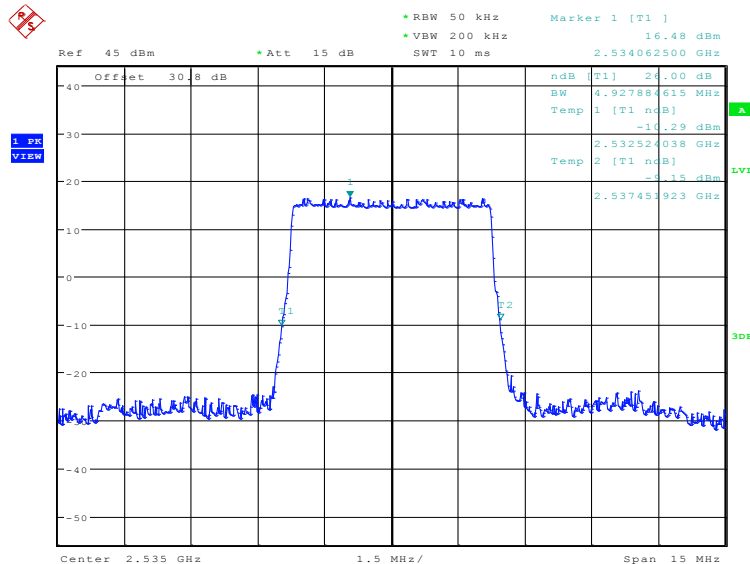
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	4903.85	4927.88

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



Date: 15.AUG.2024 14:02:08

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

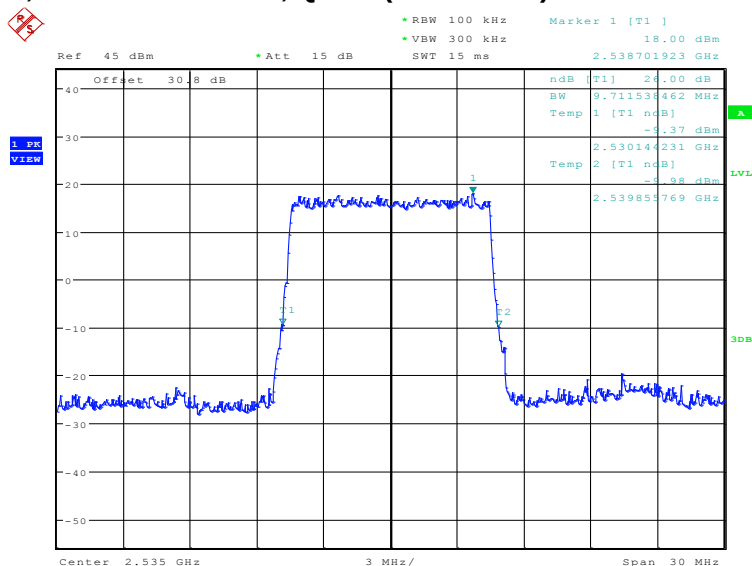


Date: 15.AUG.2024 14:02:48

LTE band 7, 10MHz (-26dBc)

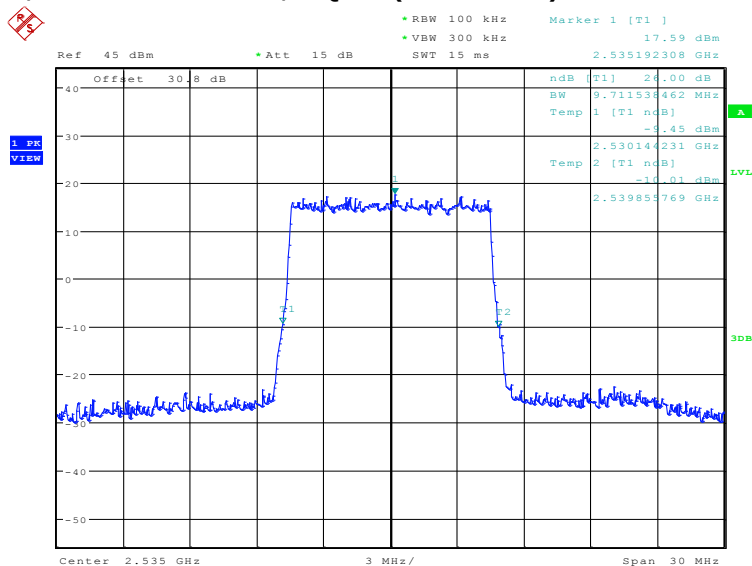
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	9711.54	9711.54

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



Date: 15.AUG.2024 14:03:31

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

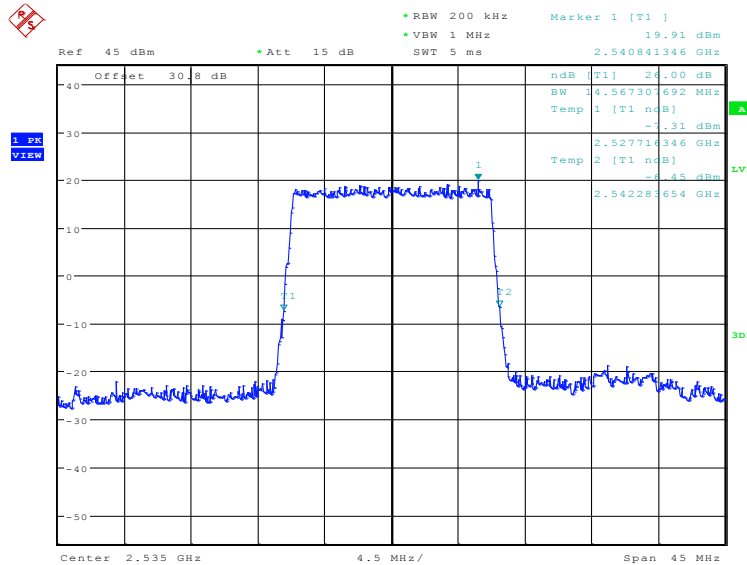


Date: 15.AUG.2024 14:04:11

LTE band 7, 15MHz (-26dBc)

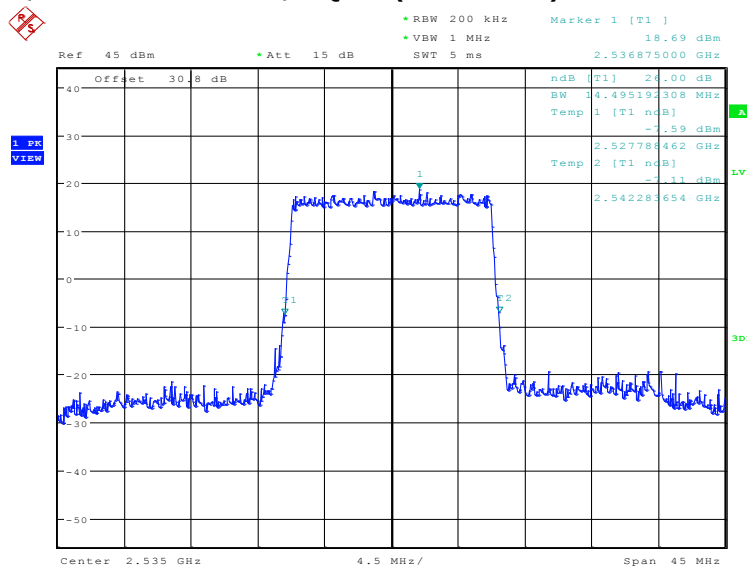
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	14567.31	14495.19

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



Date: 15.AUG.2024 14:04:54

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

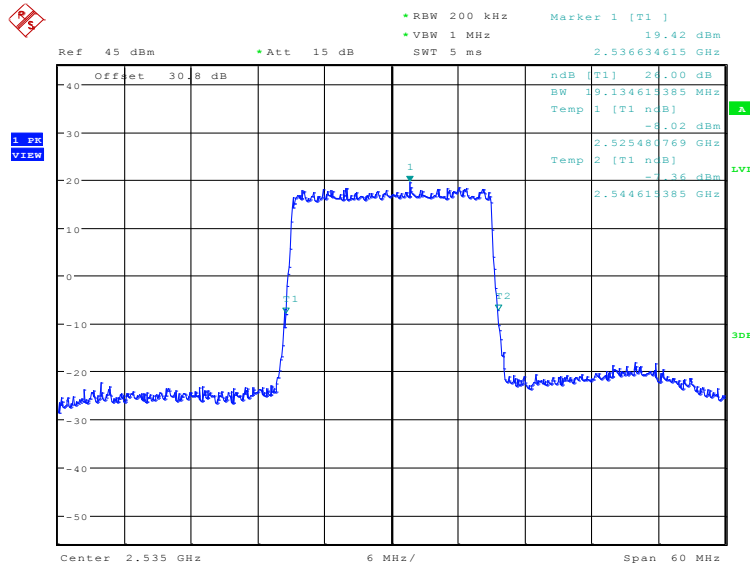


Date: 15.AUG.2024 14:05:34

LTE band 7, 20MHz (-26dBc)

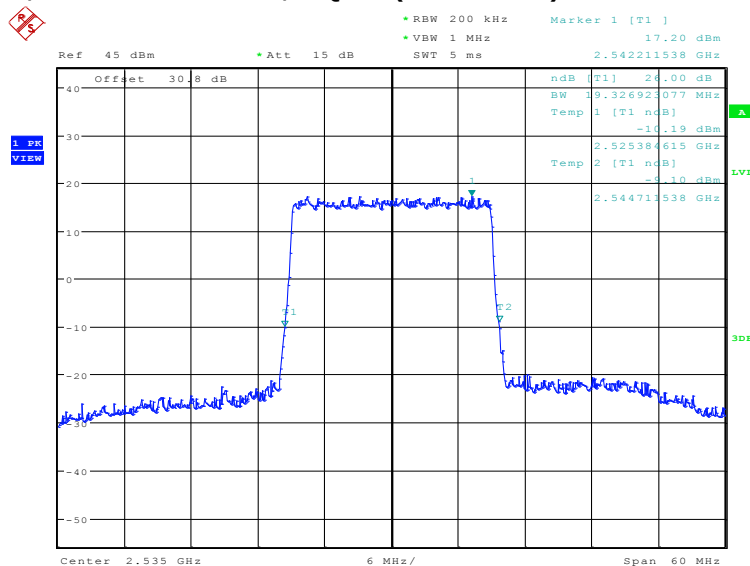
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	19134.62	19326.92

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



Date: 15.AUG.2024 14:06:17

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

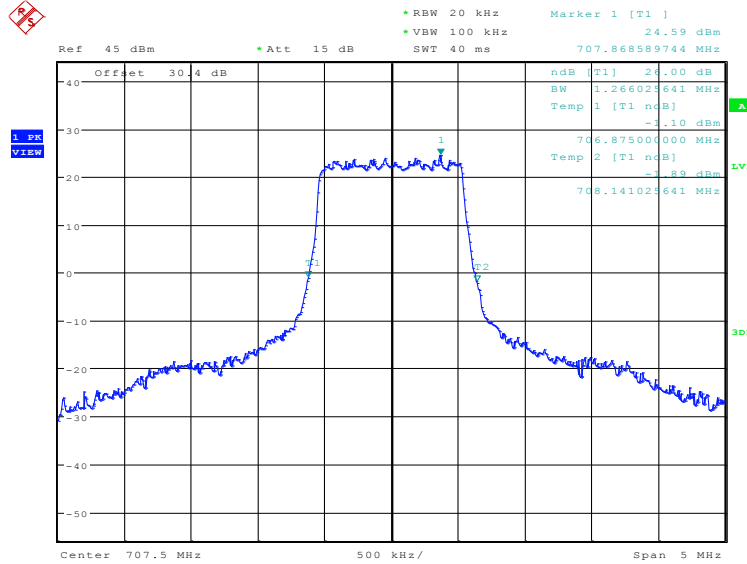


Date: 15.AUG.2024 14:06:57

LTE band 12, 1.4MHz (-26dBc)

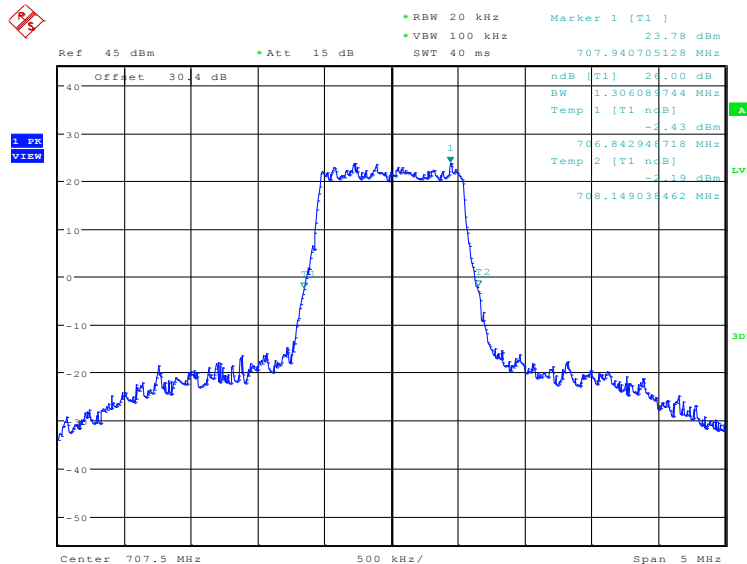
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	1266.03	1306.09

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



Date: 15.AUG.2024 16:57:17

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

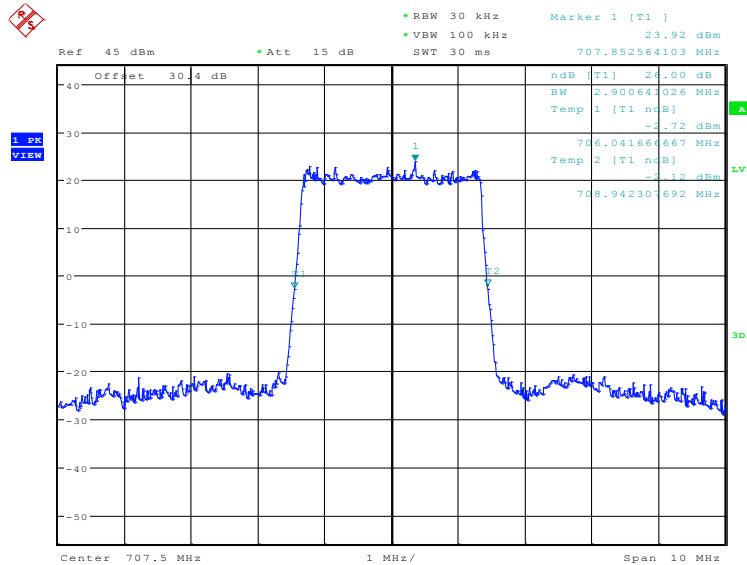


Date: 15.AUG.2024 16:57:57

LTE band 12, 3MHz (-26dBc)

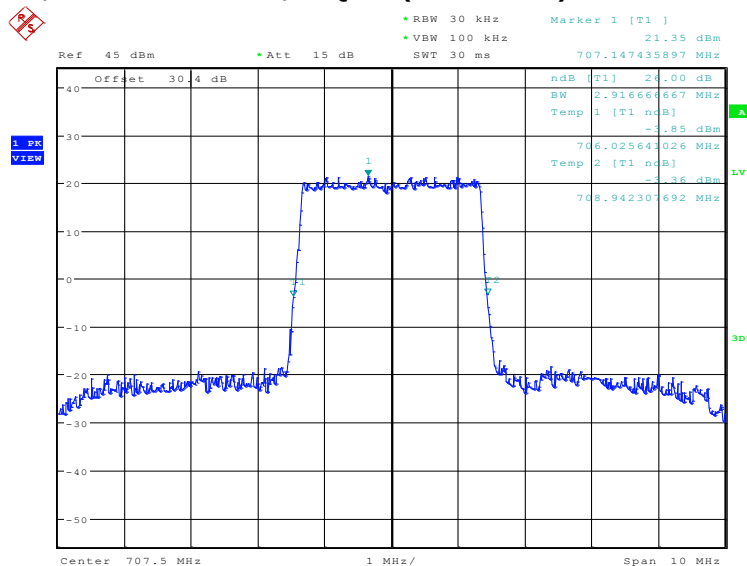
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	2900.64	2916.67

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



Date: 15.AUG.2024 16:58:40

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

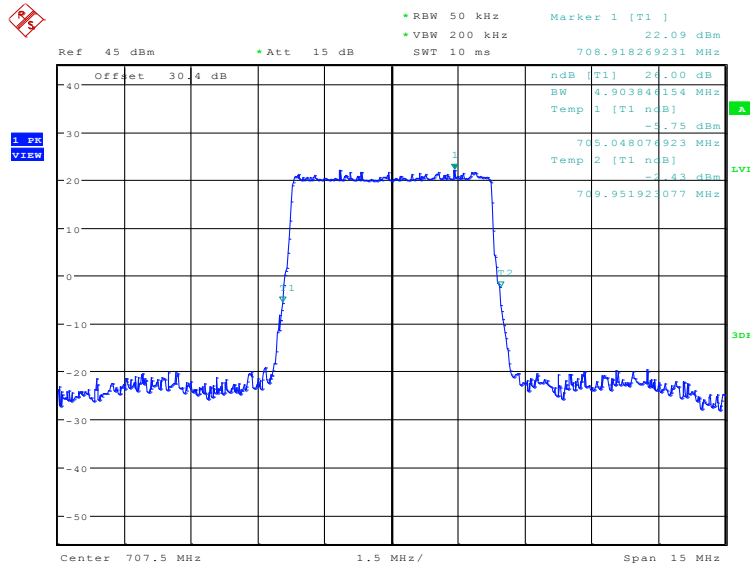


Date: 15.AUG.2024 16:59:20

LTE band 12, 5MHz (-26dBc)

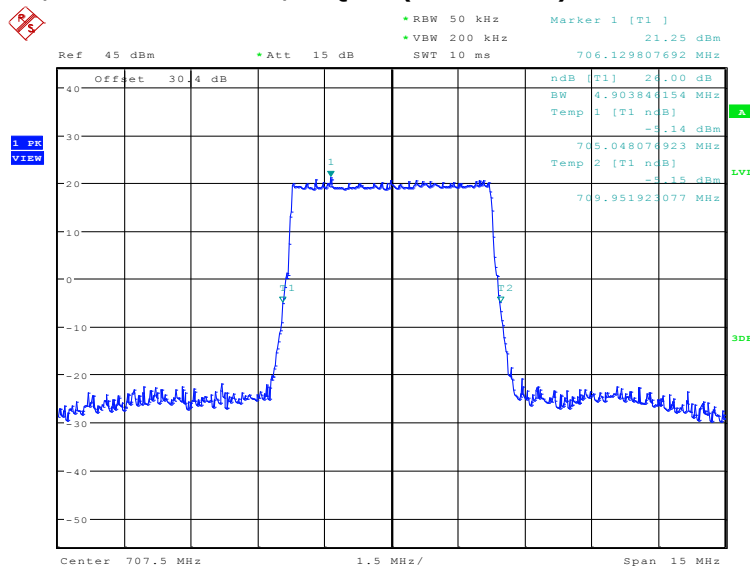
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	4903.85	4903.85

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



Date: 15.AUG.2024 17:00:03

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

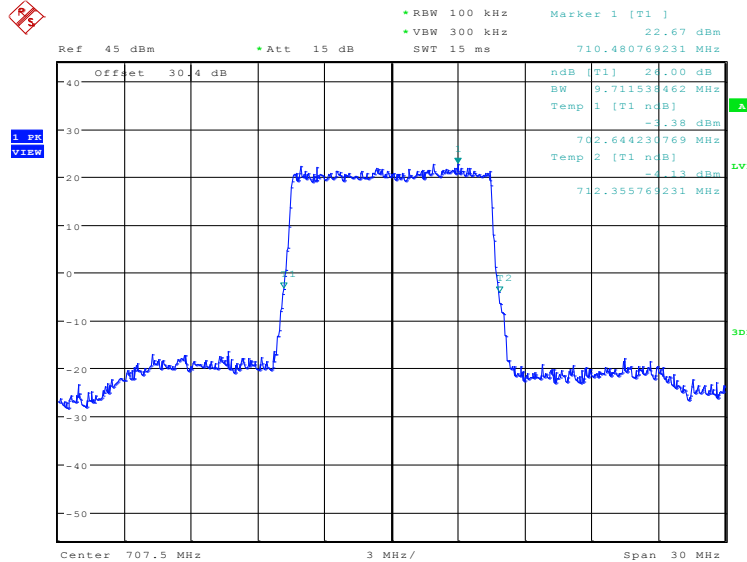


Date: 15.AUG.2024 17:00:43

LTE band 12, 10MHz (-26dBc)

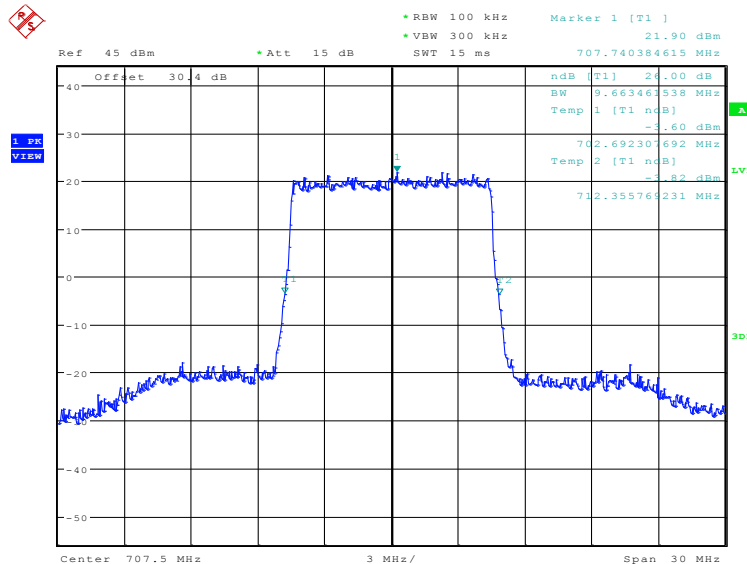
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	9711.54	9663.46

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



Date: 15.AUG.2024 17:01:26

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

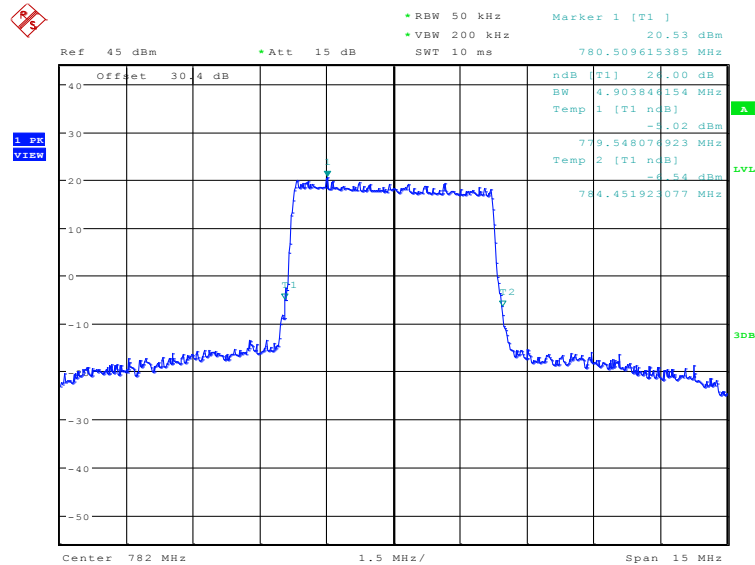


Date: 15.AUG.2024 17:02:06

LTE band 13, 5MHz (-26dBc)

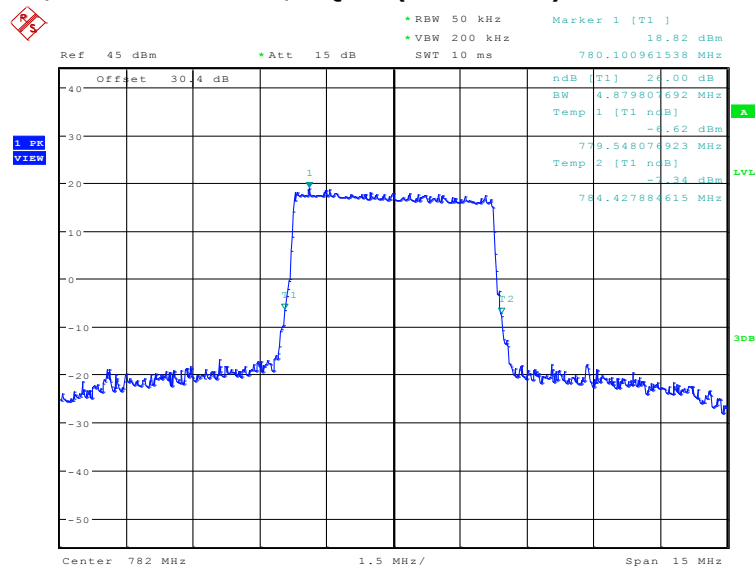
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	4903.85	4879.81

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



Date: 15.AUG.2024 17:02:50

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

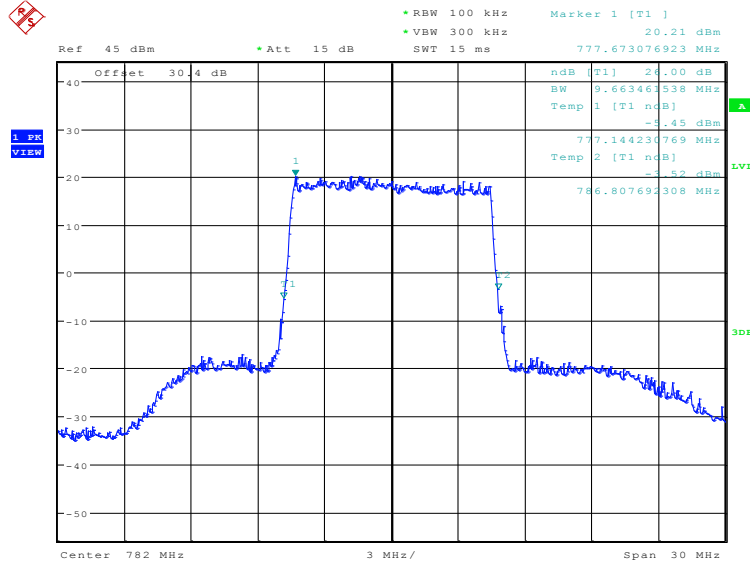


Date: 15.AUG.2024 17:03:30

LTE band 13, 10MHz (-26dBc)

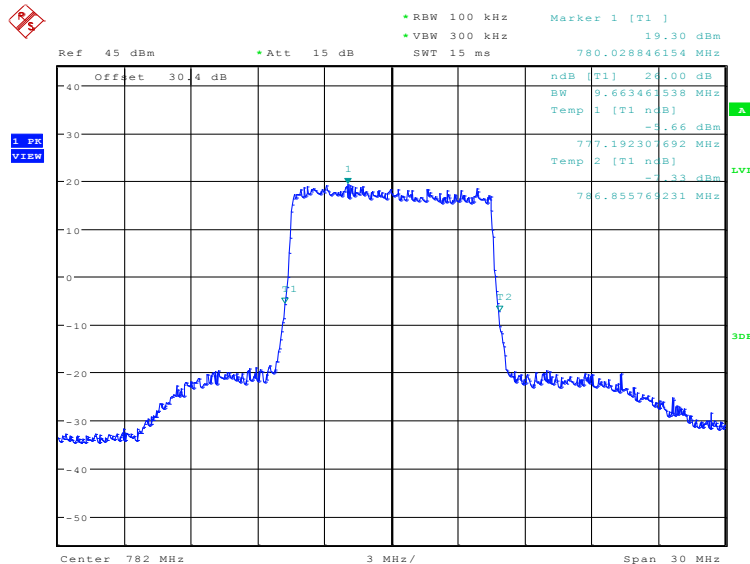
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	9663.46	9663.46

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



Date: 15.AUG.2024 17:04:13

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

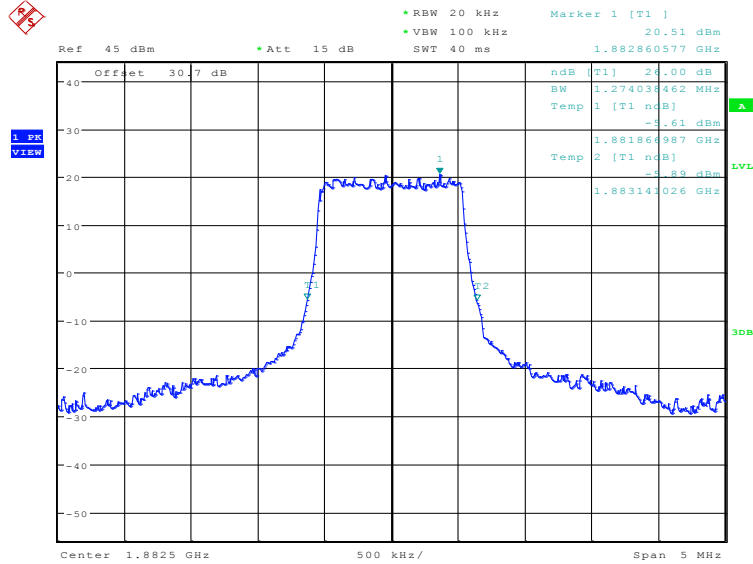


Date: 15.AUG.2024 17:04:53

LTE band 25, 1.4MHz (-26dBc)

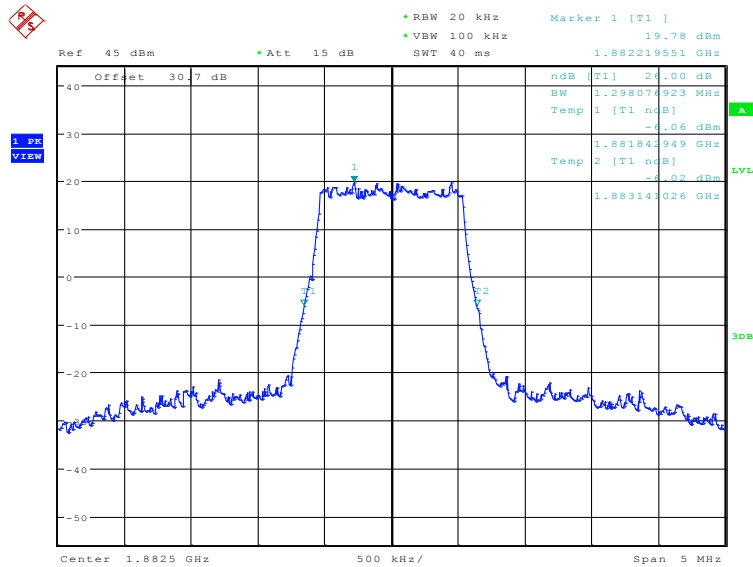
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	1274.04	1298.08

LTE band 25, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 14:07:42

LTE band 25, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

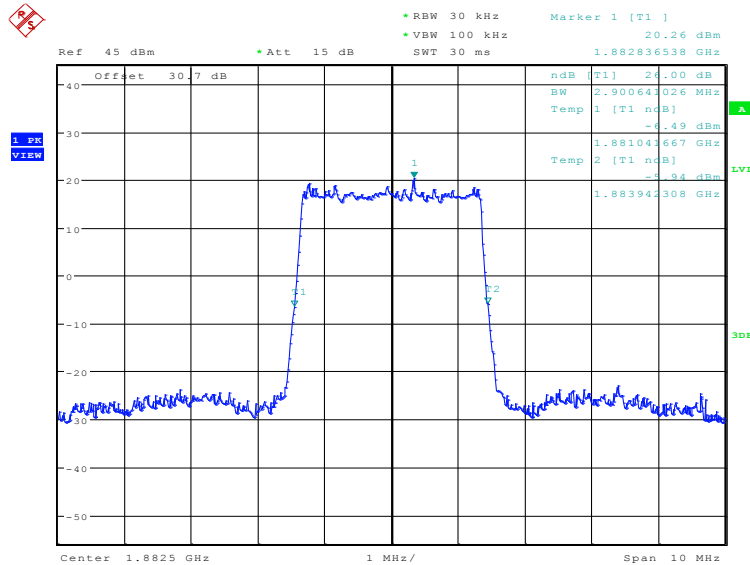


Date: 15.AUG.2024 14:08:22

LTE band 25, 3MHz (-26dBc)

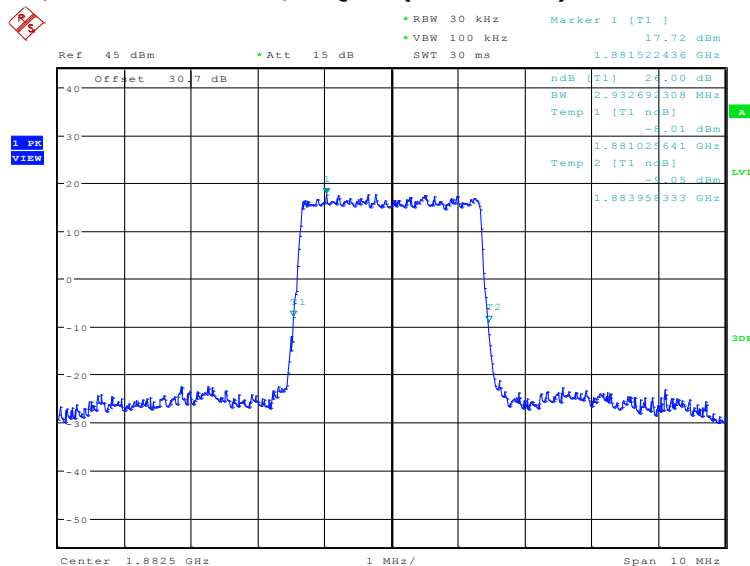
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	2900.64	2932.69

LTE band 25, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 14:09:04

LTE band 25, 3MHz Bandwidth, 16QAM (-26dBc BW)

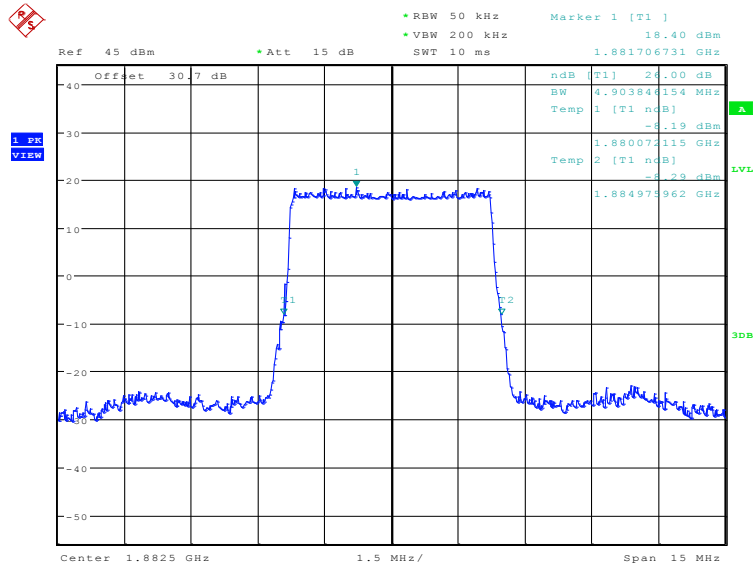


Date: 15.AUG.2024 14:09:45

LTE band 25, 5MHz (-26dBc)

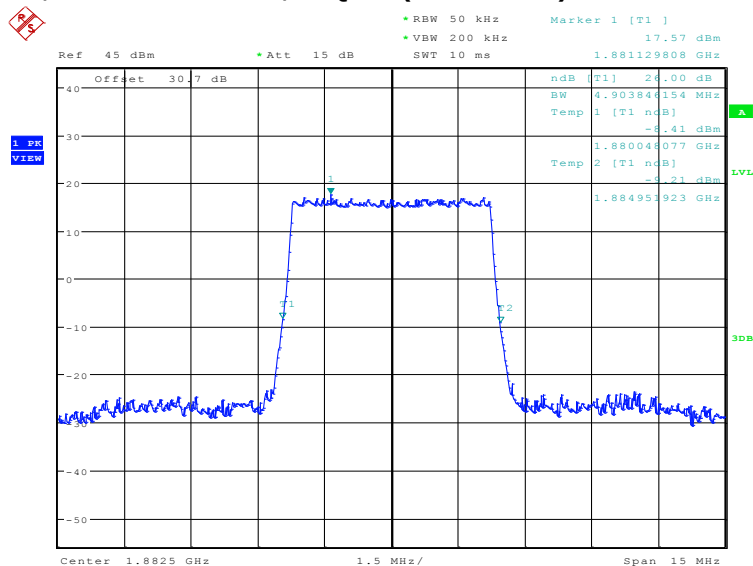
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	4903.85	4903.85

LTE band 25, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 14:10:28

LTE band 25, 5MHz Bandwidth, 16QAM (-26dBc BW)

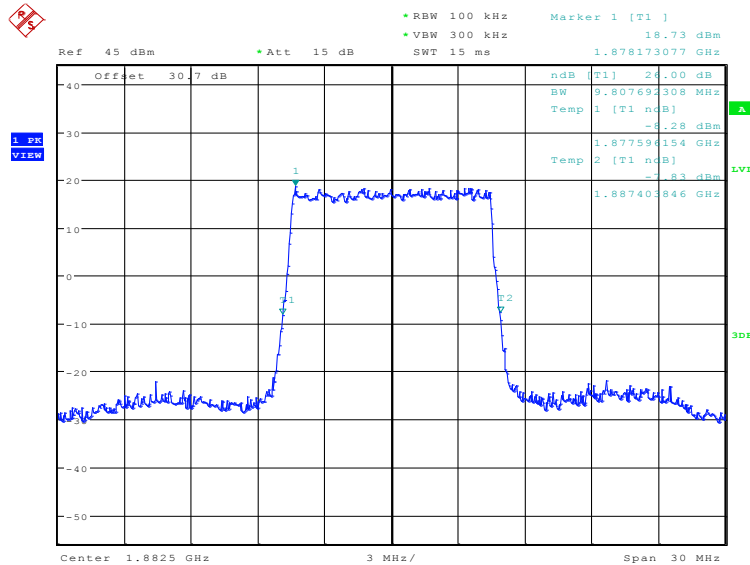


Date: 15.AUG.2024 14:11:08

LTE band 25, 10MHz (-26dBc)

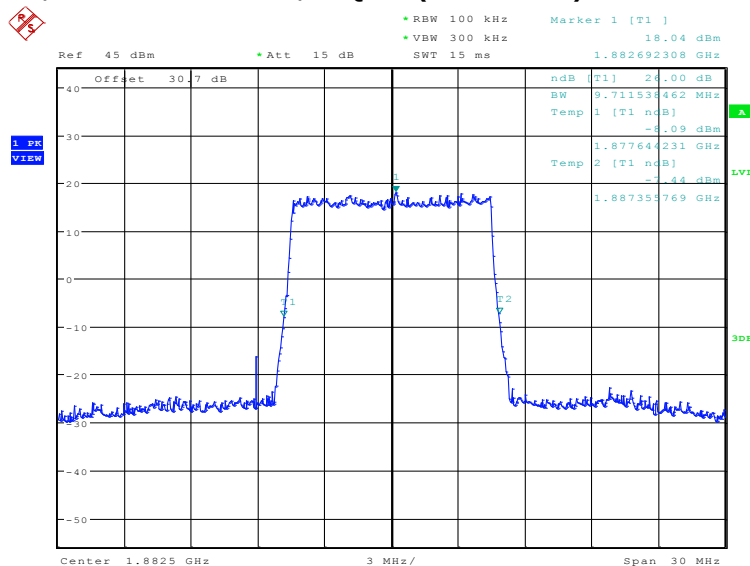
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	9807.69	9711.54

LTE band 25, 10MHz Bandwidth, QPSK (-26dBc BW)



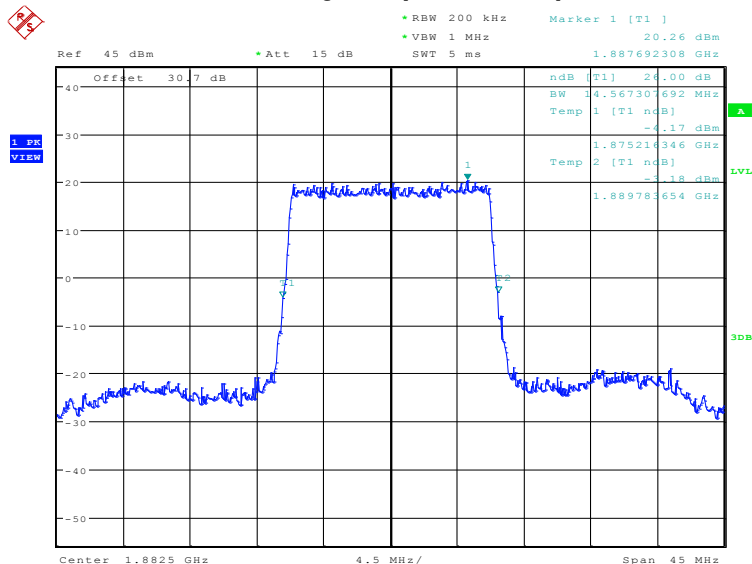
Date: 15.AUG.2024 14:11:50

LTE band 25, 10MHz Bandwidth, 16QAM (-26dBc BW)

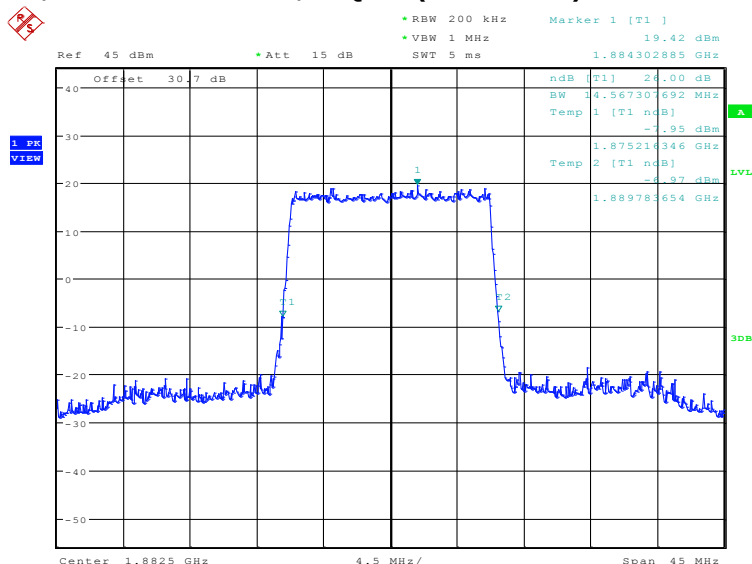


Date: 15.AUG.2024 14:12:31

Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	14567.31	14567.31



Date: 15.AUG.2024 14:13:13

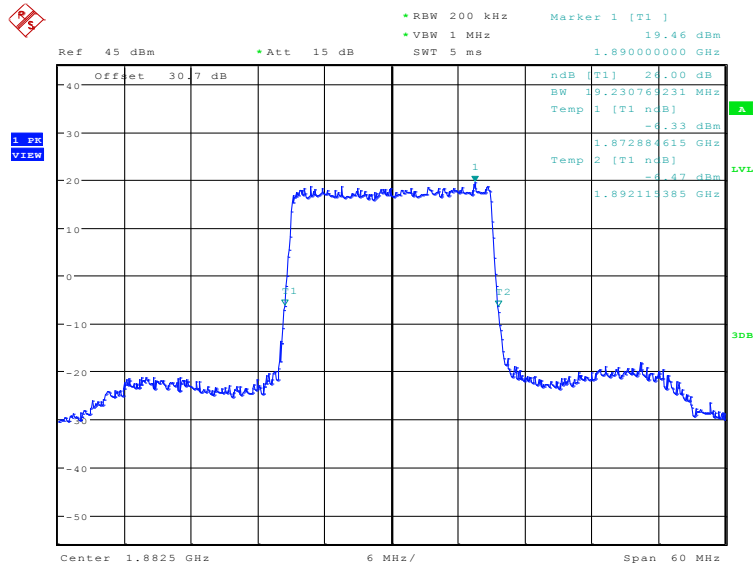


Date: 15.AUG.2024 14:13:54

LTE band 25, 20MHz (-26dBc)

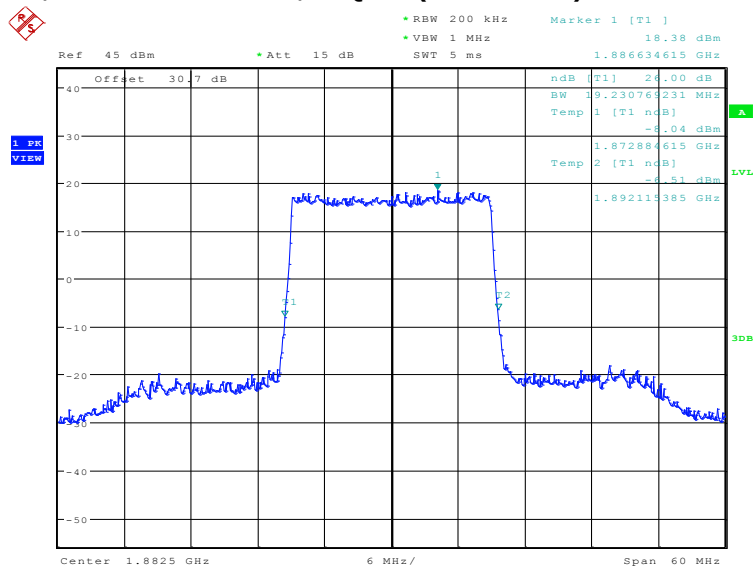
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	19230.77	19230.77

LTE band 25, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 14:14:37

LTE band 25, 20MHz Bandwidth, 16QAM (-26dBc BW)

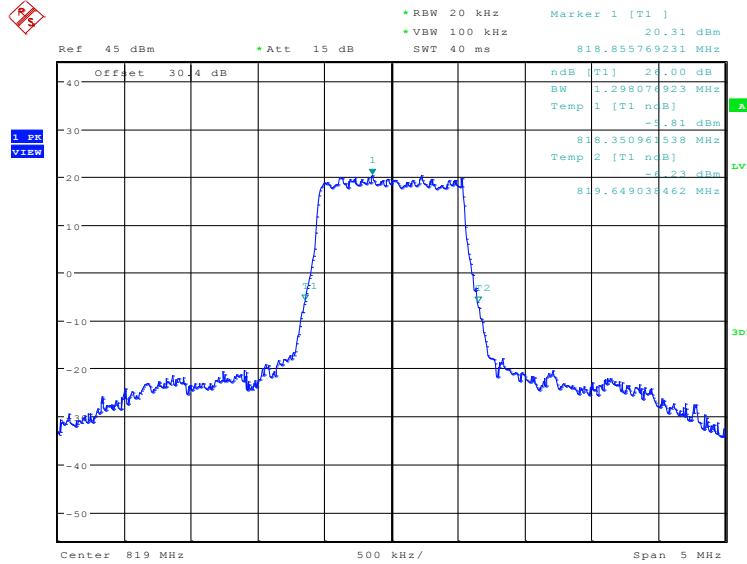


Date: 15.AUG.2024 14:15:17

LTE band 26(814MHz~824MHz), 1.4MHz (-26dBc)

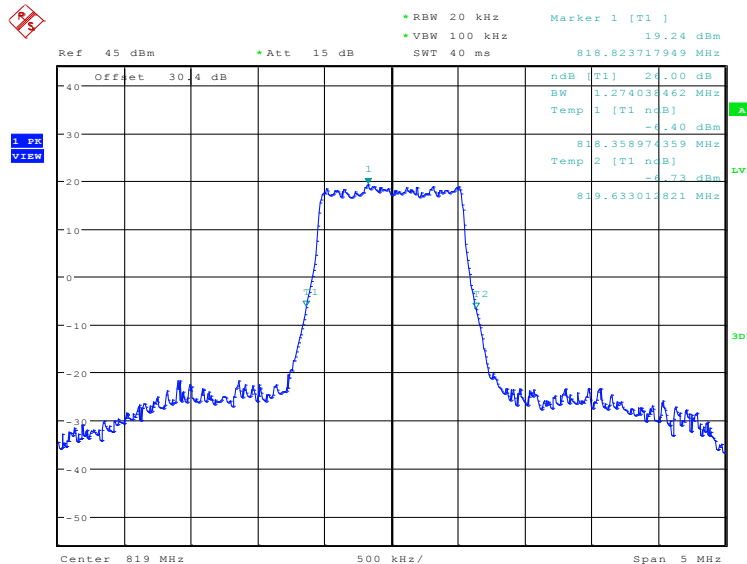
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
819.0	QPSK	16QAM
	1298.08	1274.04

LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 17:15:02

LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, 16QAM (-26dBc BW)

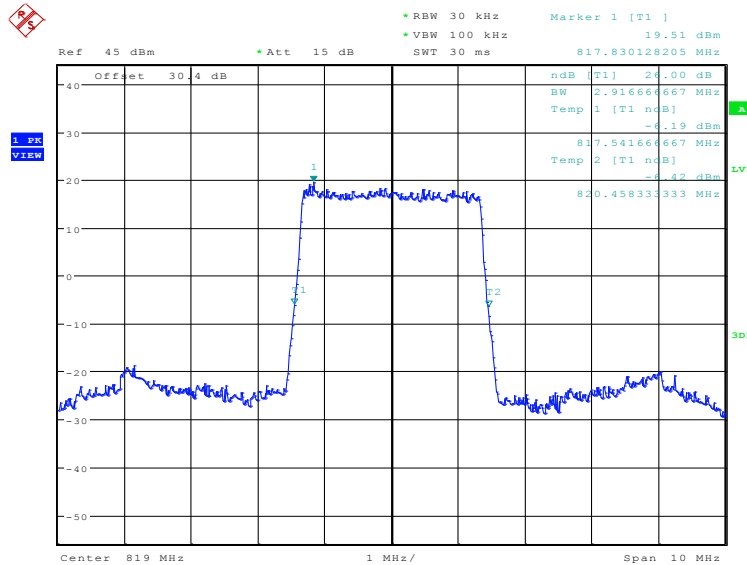


Date: 15.AUG.2024 17:15:42

LTE band 26(814MHz~824MHz), 3MHz (-26dBc)

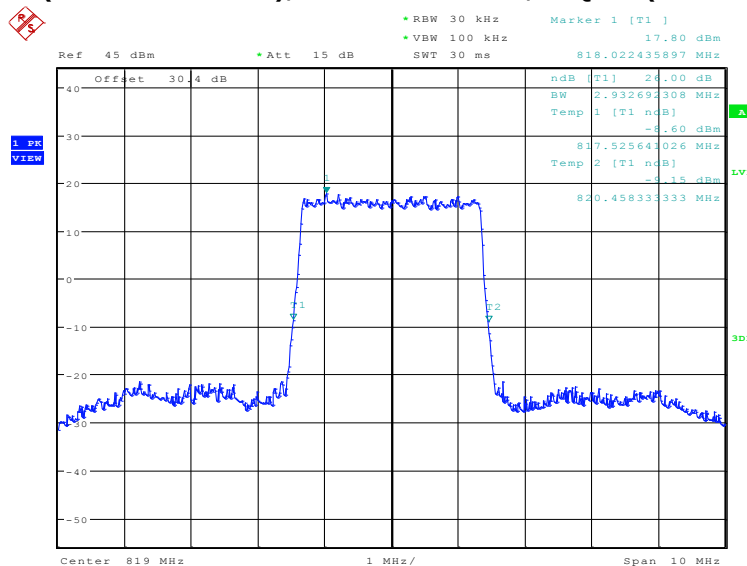
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
819.0	QPSK	16QAM
	2916.67	2932.69

LTE band 26(814MHz~824MHz), 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 17:16:25

LTE band 26(814MHz~824MHz), 3MHz Bandwidth, 16QAM (-26dBc BW)

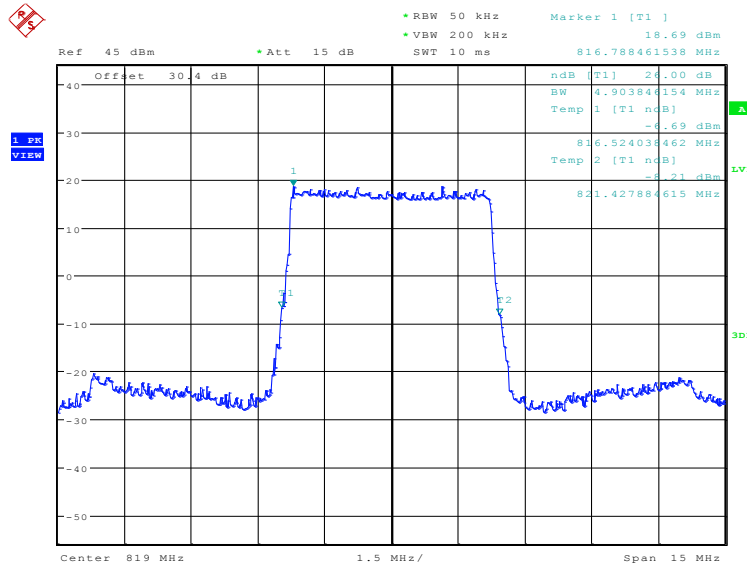


Date: 15.AUG.2024 17:17:05

LTE band 26(814MHz~824MHz), 5MHz (-26dBc)

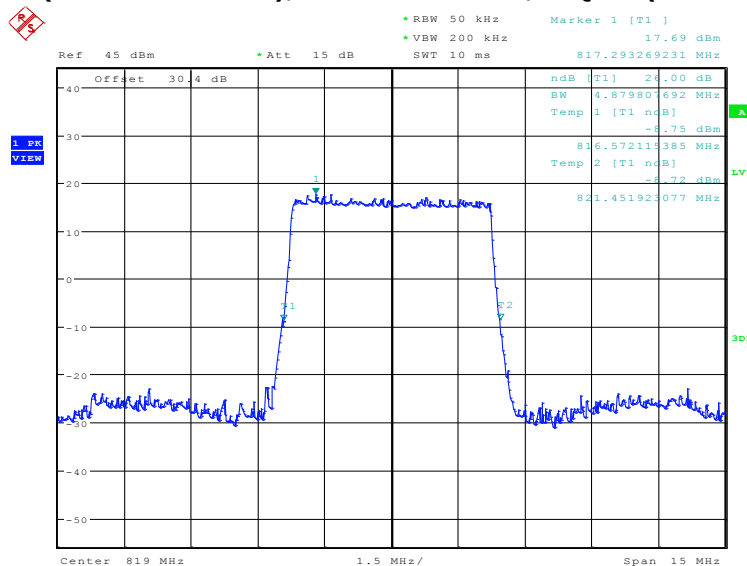
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
819.0	QPSK	16QAM
	4903.85	4879.81

LTE band 26(814MHz~824MHz), 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 17:17:48

LTE band 26(814MHz~824MHz), 5MHz Bandwidth, 16QAM (-26dBc BW)

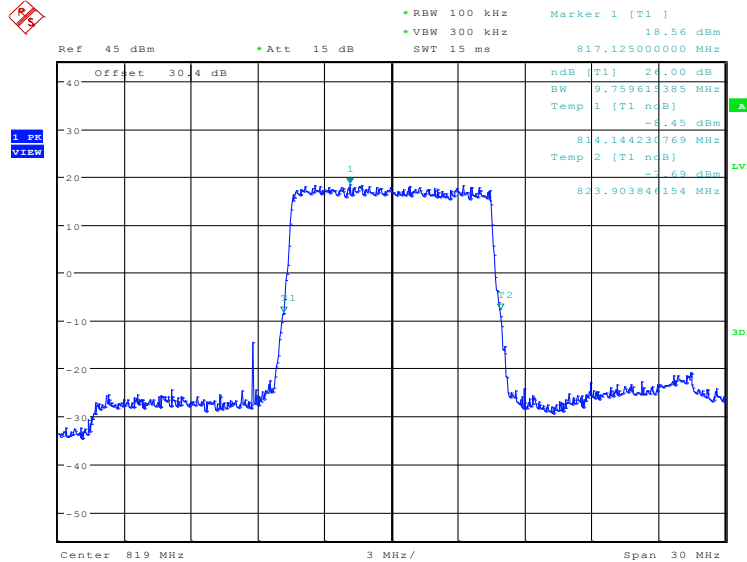


Date: 15.AUG.2024 17:18:28

LTE band 26(814MHz~824MHz), 10MHz (-26dBc)

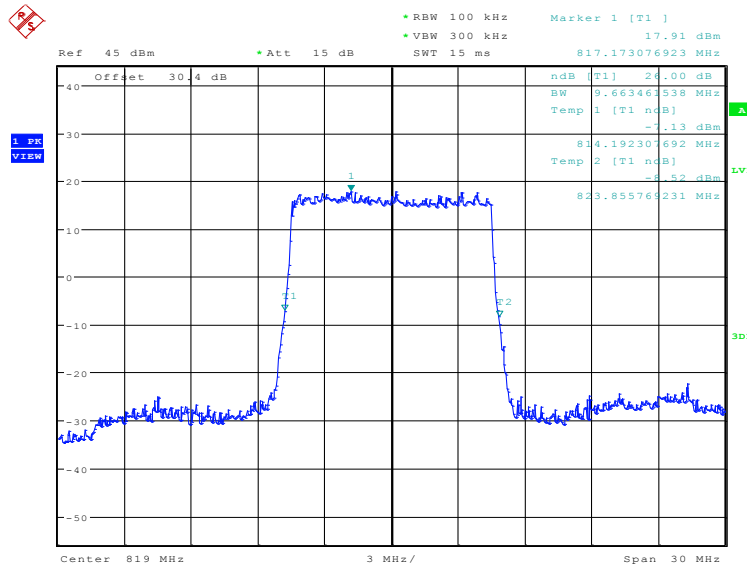
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
819.0	QPSK	16QAM
	9759.62	9663.46

LTE band 26(814MHz~824MHz), 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 17:19:11

LTE band 26(814MHz~824MHz), 10MHz Bandwidth, 16QAM (-26dBc BW)

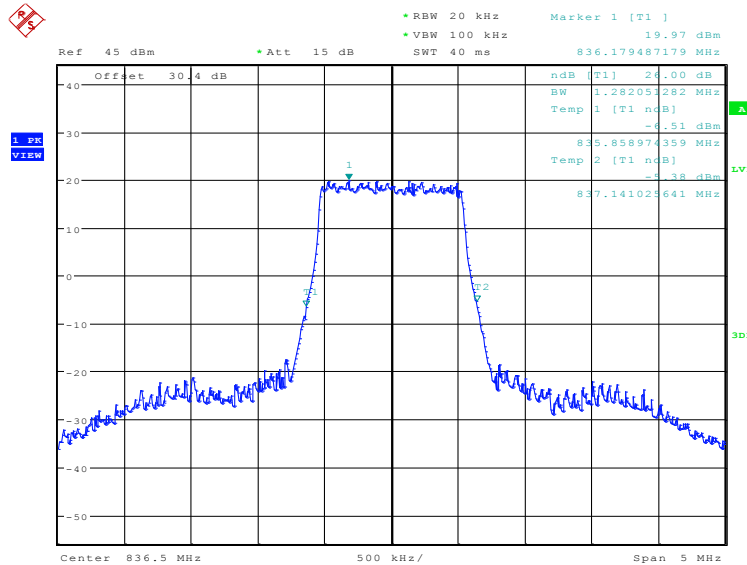


Date: 15.AUG.2024 17:19:51

LTE band 26(824MHz~849MHz), 1.4MHz (-26dBc)

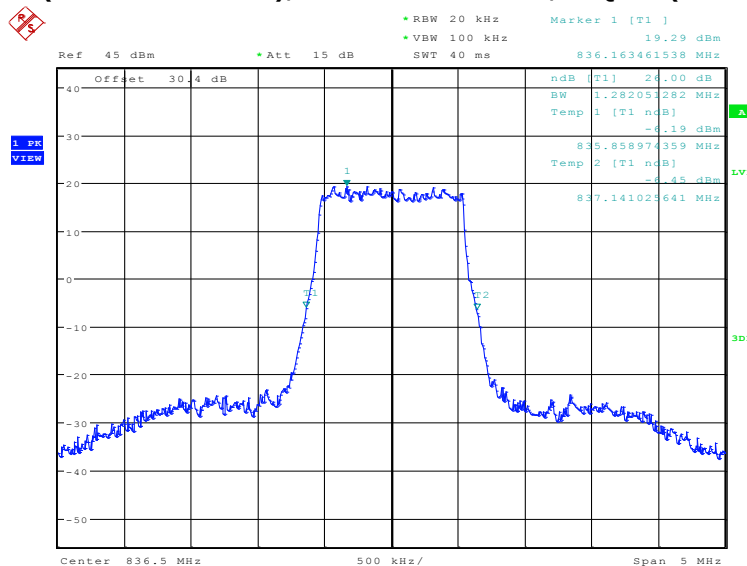
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	1282.05	1282.05

LTE band 26(824MHz~849MHz), 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.AUG.2024 17:06:18

LTE band 26(824MHz~849MHz), 1.4MHz Bandwidth, 16QAM (-26dBc BW)



Date: 15.AUG.2024 17:06:59