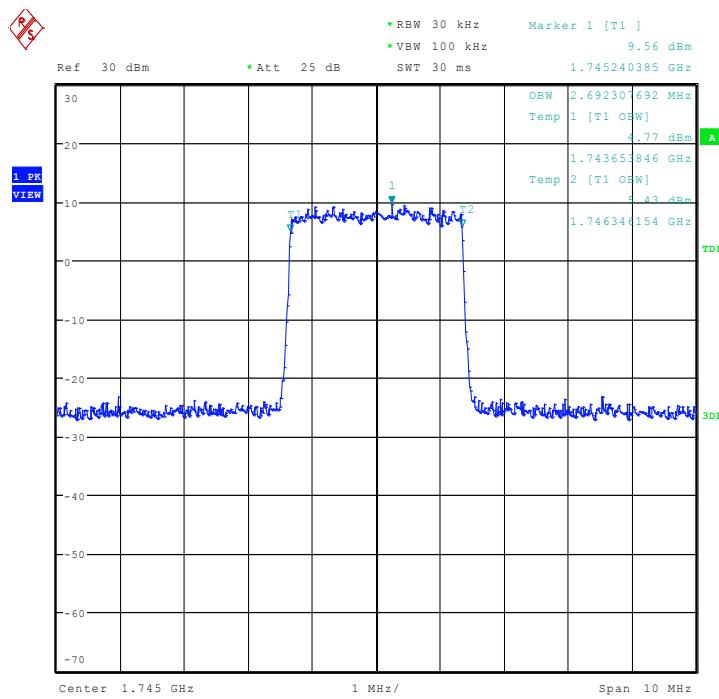


**LTE band 66, 3MHz Bandwidth, 64QAM (99%BW)**

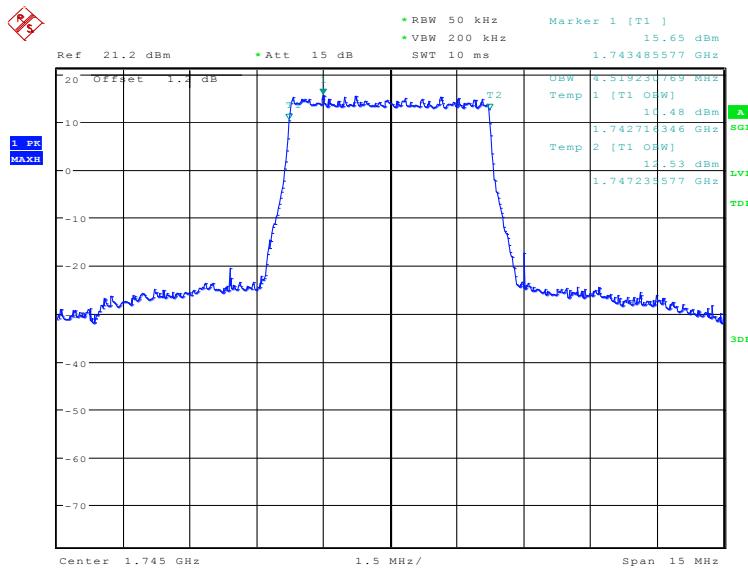


Date: 1.AUG.2019 10:25:15

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

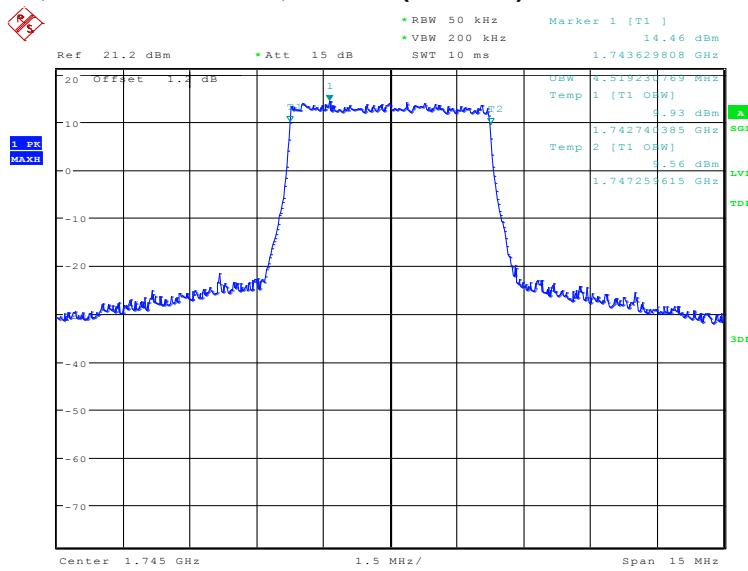
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
1745.0	4519.23	4519.23	4495.19

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



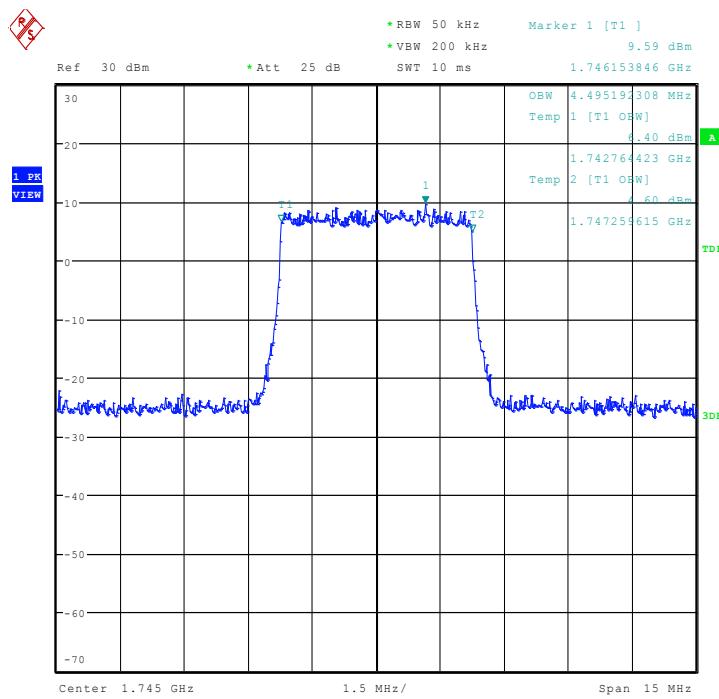
Date: 25.JUL.2019 20:58:50

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



Date: 25.JUL.2019 21:00:15

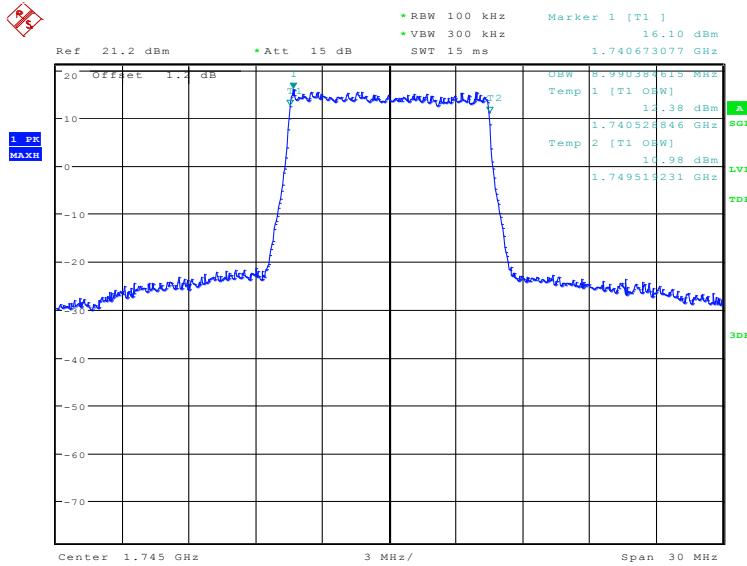
**LTE band 66, 5MHz Bandwidth,64QAM (99%BW)**



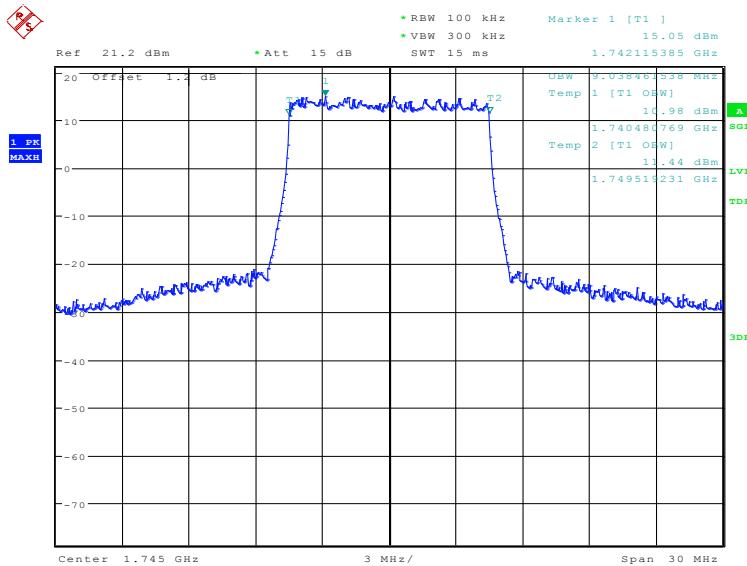
Date: 1.AUG.2019 10:26:46

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

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
1745.0	8990.38	9038.46	9038.46

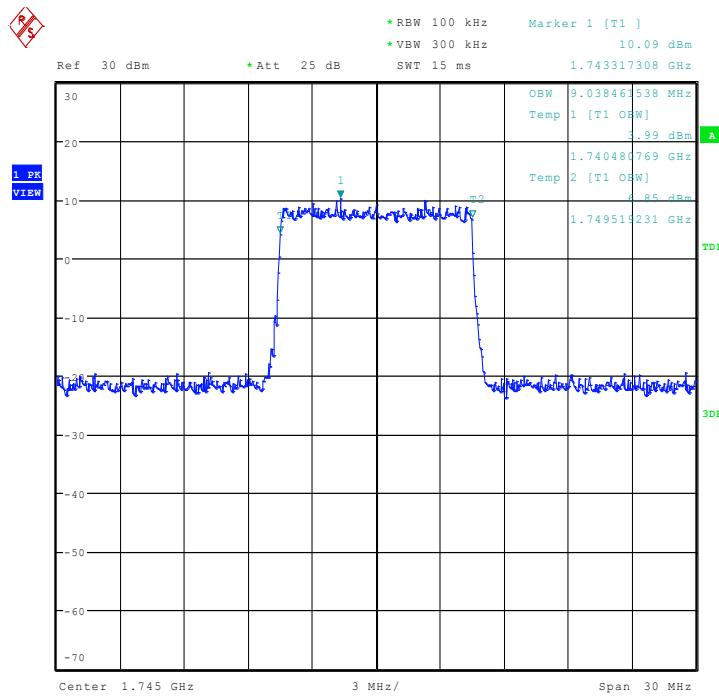
**LTE band 66, 10MHz Bandwidth, QPSK (99% BW)**


Date: 25.JUL.2019 21:02:29

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


Date: 25.JUL.2019 21:03:54

### LTE band 66, 10MHz Bandwidth, 64QAM (99% BW)

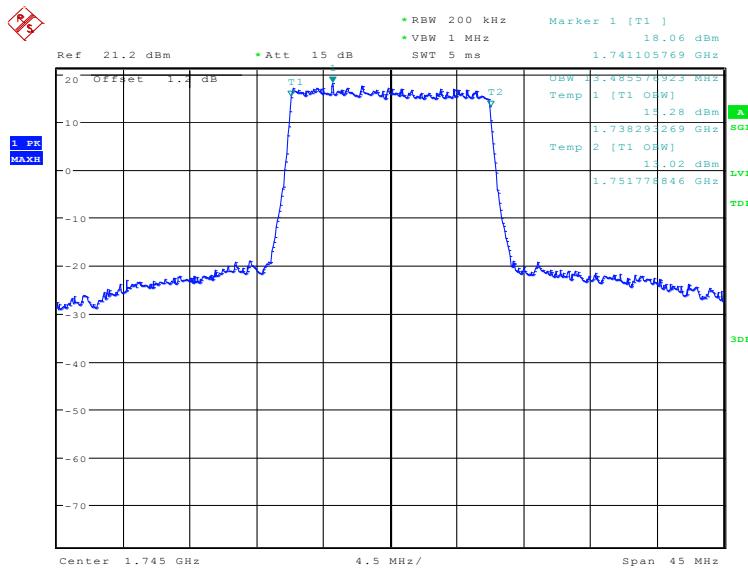


Date: 1.AUG.2019 10:27:52

### LTE band 66, 15MHz (99%)

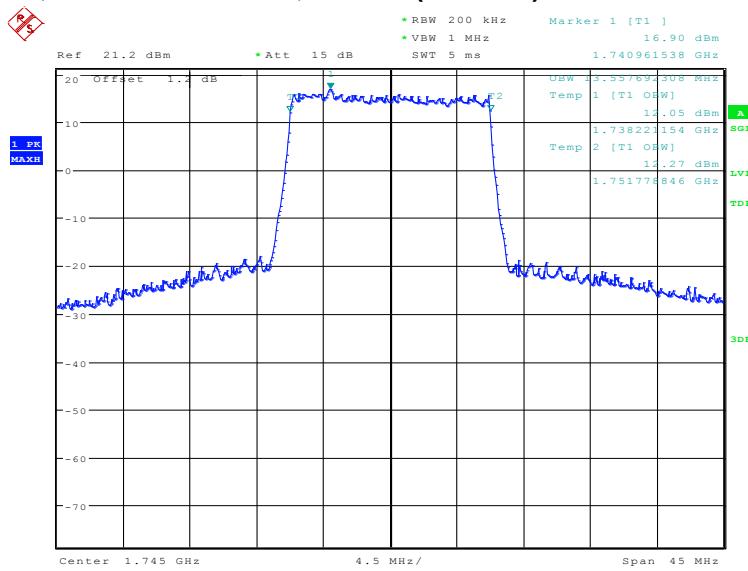
Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
1745.0	13485.58	13557.69	13485.58

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



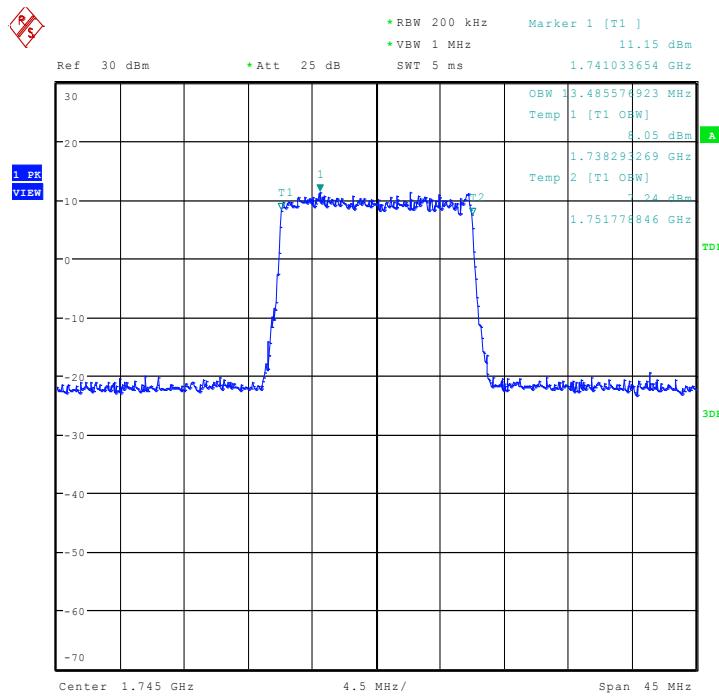
Date: 25.JUL.2019 21:06:08

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



Date: 25.JUL.2019 21:07:33

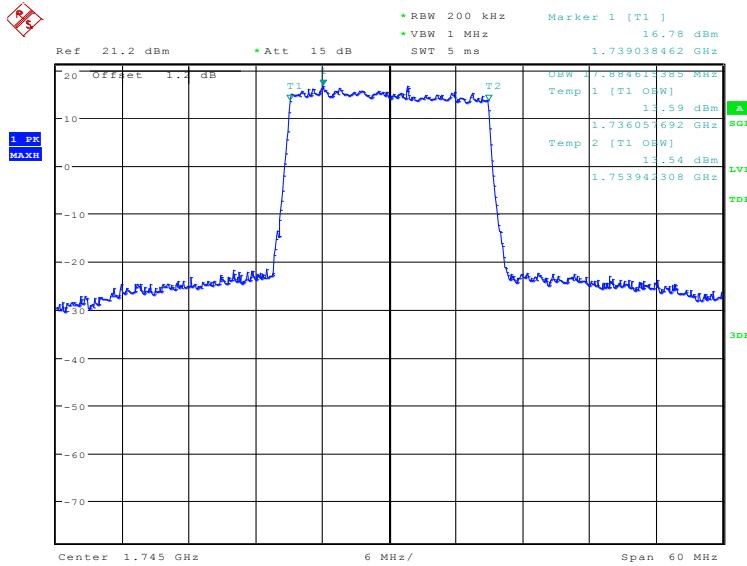
### LTE band 66, 15MHz Bandwidth, 64QAM (99%BW)



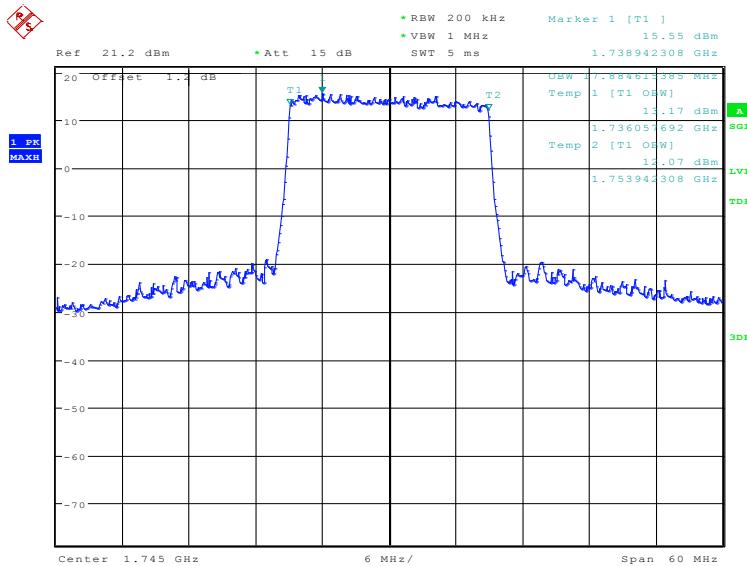
Date: 1.AUG.2019 10:29:03

**LTE band 66, 20MHz (99%)**

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
1745.0	17884.62	17884.62	17980.77

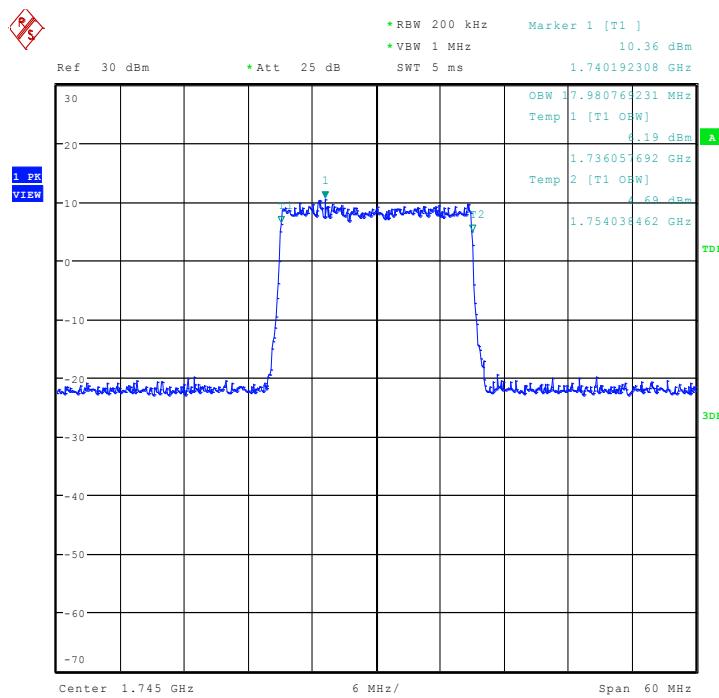
**LTE band 66, 20MHz Bandwidth, QPSK (99% BW)**


Date: 25.JUL.2019 21:09:47

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


Date: 25.JUL.2019 21:11:12

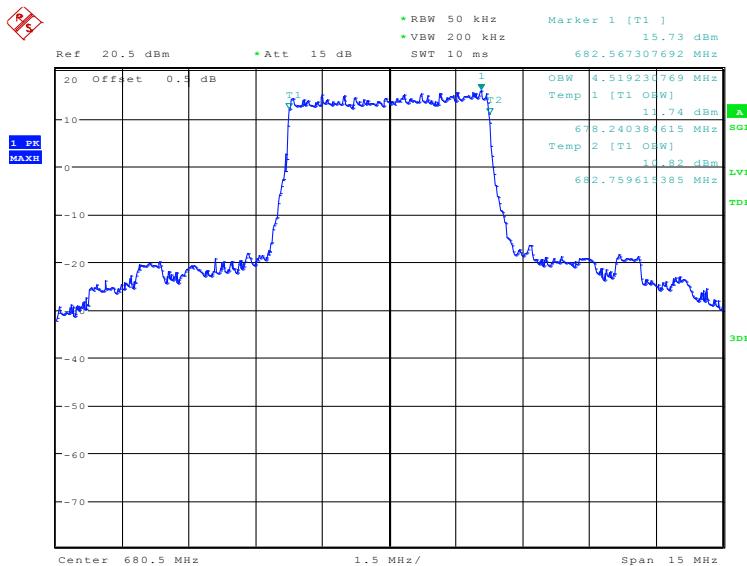
**LTE band 66, 20MHz Bandwidth, 64QAM (99%BW)**



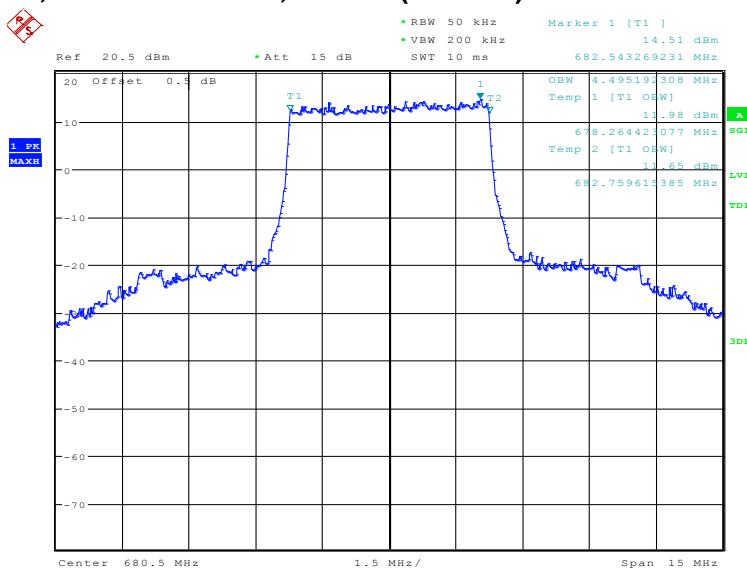
Date: 1.AUG.2019 10:30:14

**LTE band 71, 5MHz (99%)**

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
680.5	4519.23	4495.19	4495.19

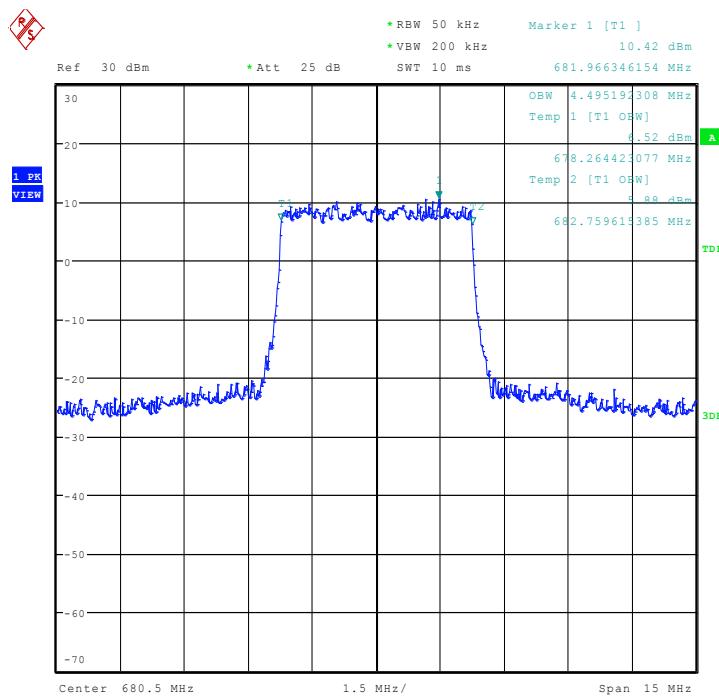
**LTE band 71, 5MHz Bandwidth, QPSK (99% BW)**


Date: 26.JUL.2019 10:59:41

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


Date: 26.JUL.2019 11:01:05

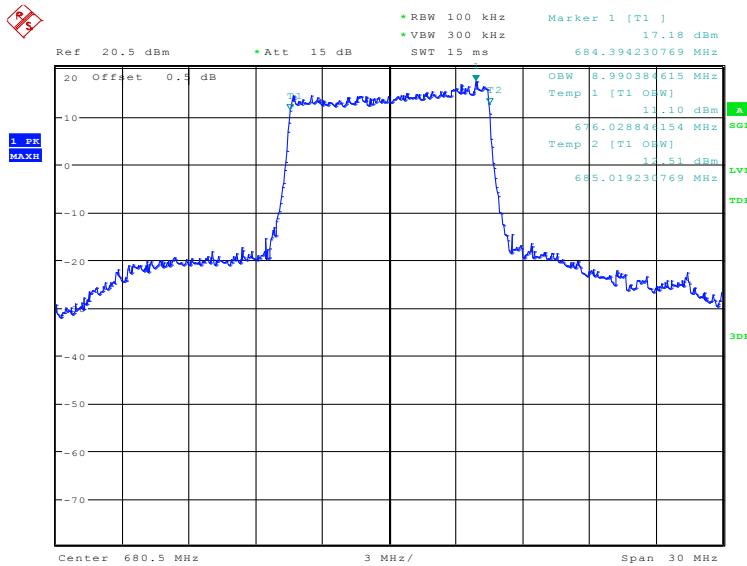
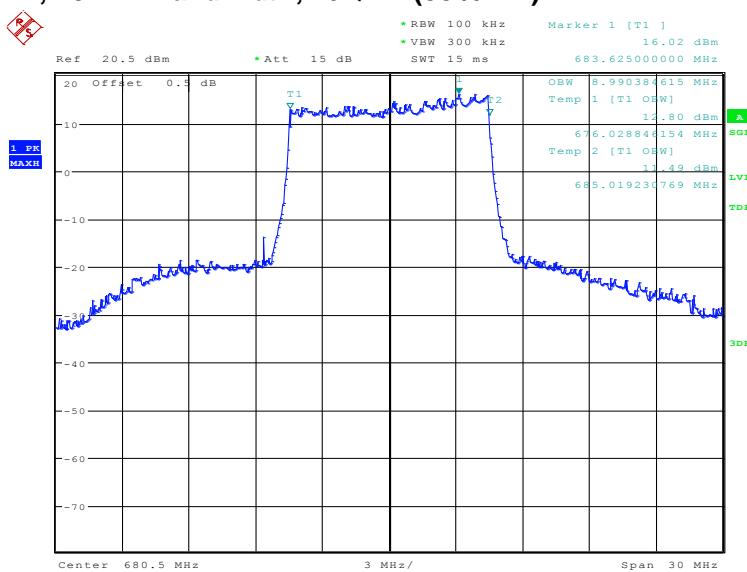
**LTE band 71, 5MHz Bandwidth,64QAM (99%BW)**



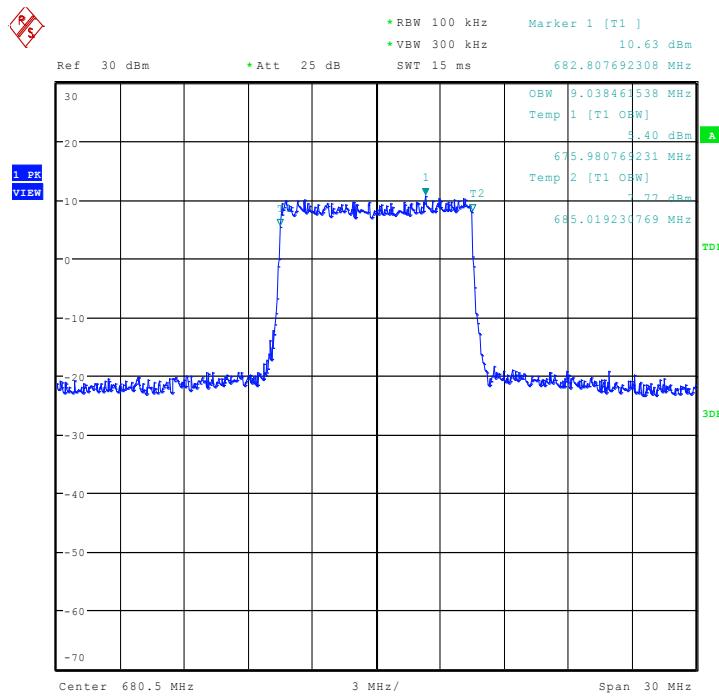
Date: 1.AUG.2019 10:43:49

**LTE band 71, 10MHz (99%)**

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
680.5	8990.38	8990.38	9038.46

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

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


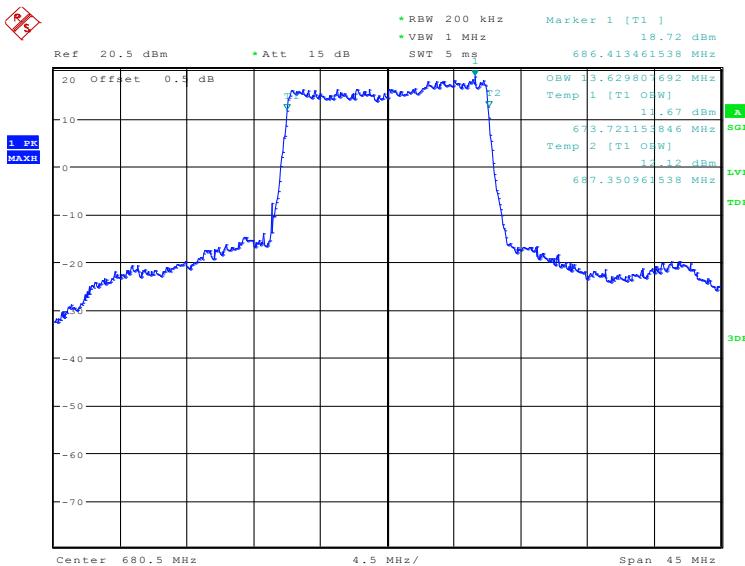
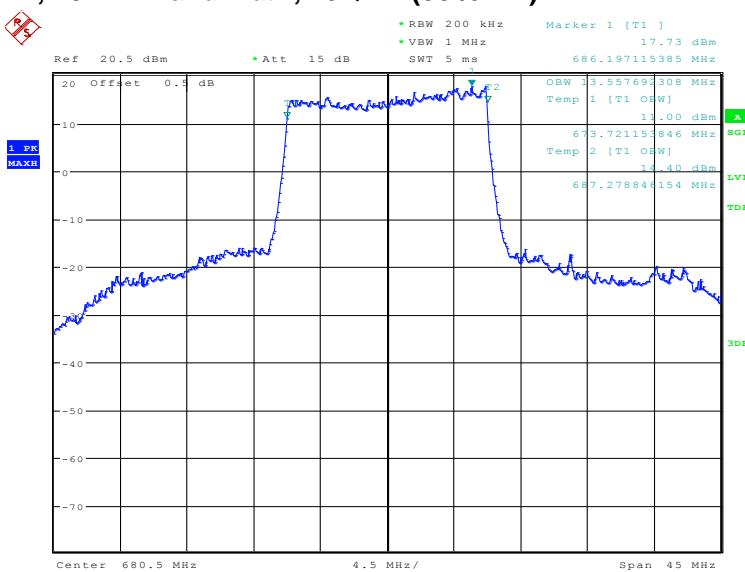
### LTE band 71, 10MHz Bandwidth, 64QAM (99%BW)



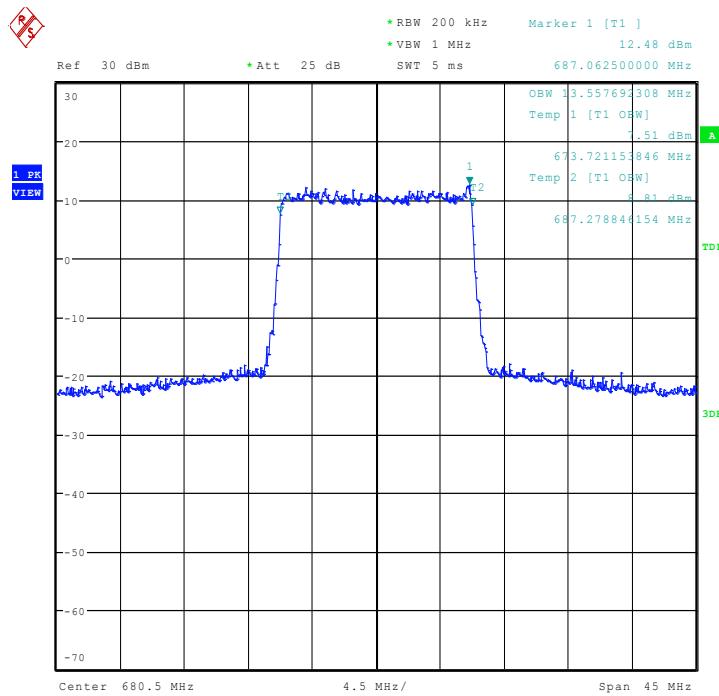
Date: 1.AUG.2019 10:40:10

**LTE band 71, 15MHz (99%)**

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
680.5	13629.81	13557.69	13557.69

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

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


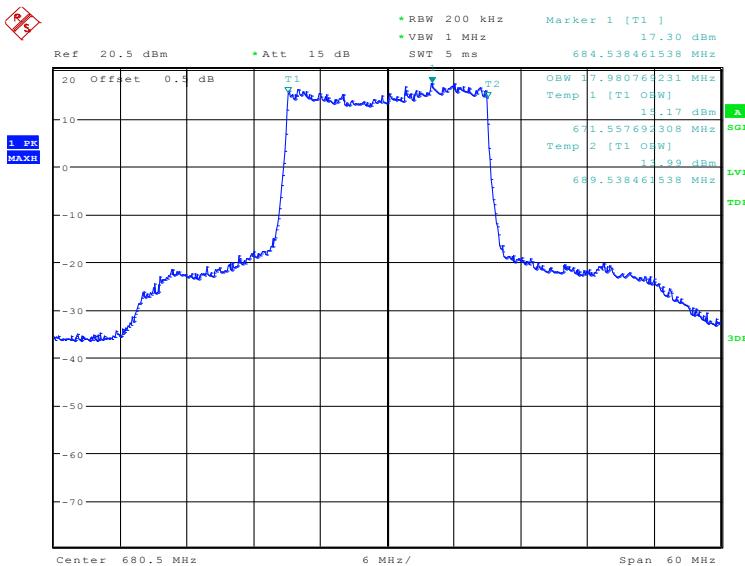
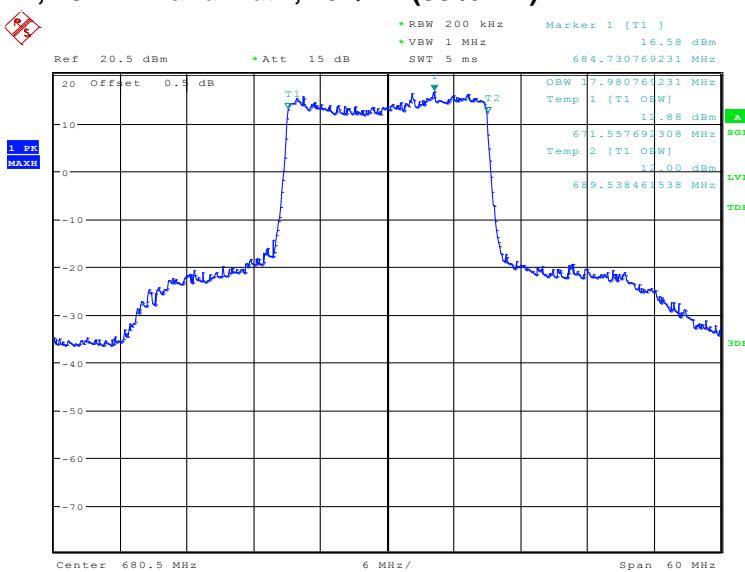
### LTE band 71, 15MHz Bandwidth, 64QAM (99% BW)



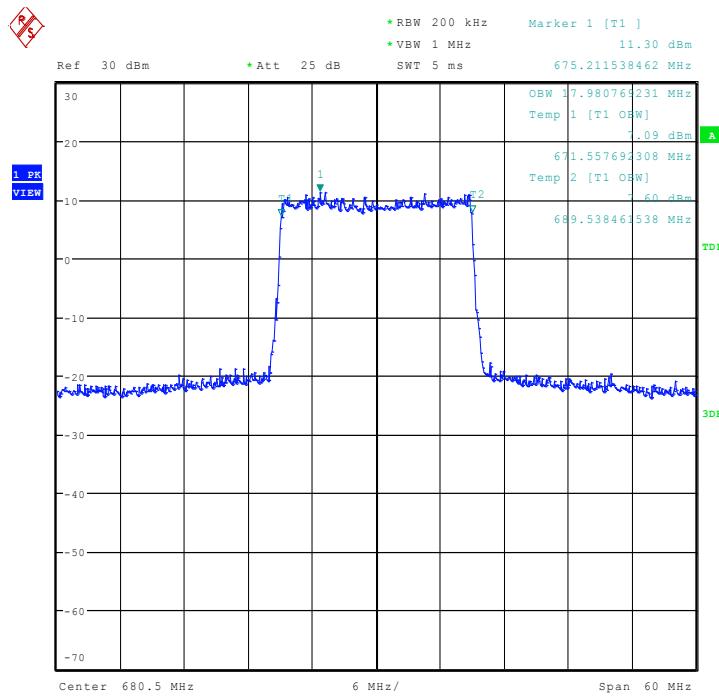
Date: 1.AUG.2019 10:44:27

**LTE band 71, 20MHz (99%)**

Frequency (MHz)	Occupied Bandwidth (99%) (kHz)		
	QPSK	16QAM	64QAM
680.5	17980.77	17980.77	17980.77

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

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


**LTE band 71, 20MHz Bandwidth, 64QAM (99% BW)**



Date: 1.AUG.2019 10:42:15

## A.5 EMISSION BANDWIDTH

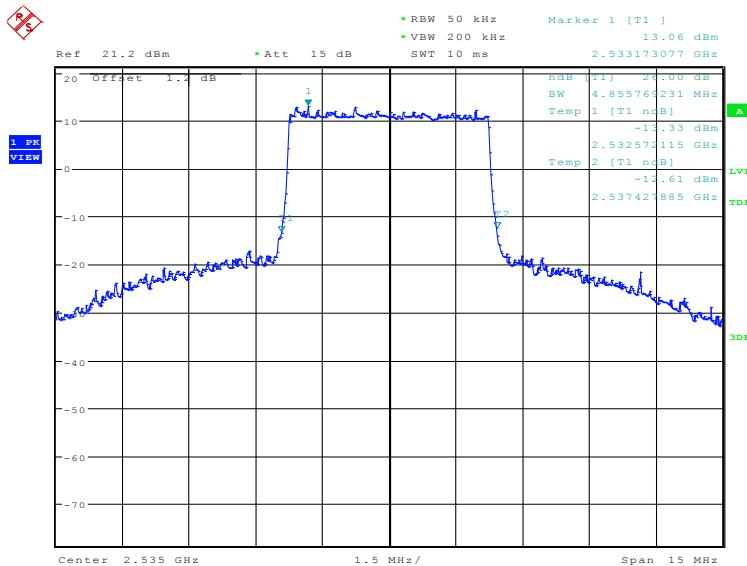
### A.5.1 Emission Bandwidth Results

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

#### LTE band 7, 5MHz (-26dBc)

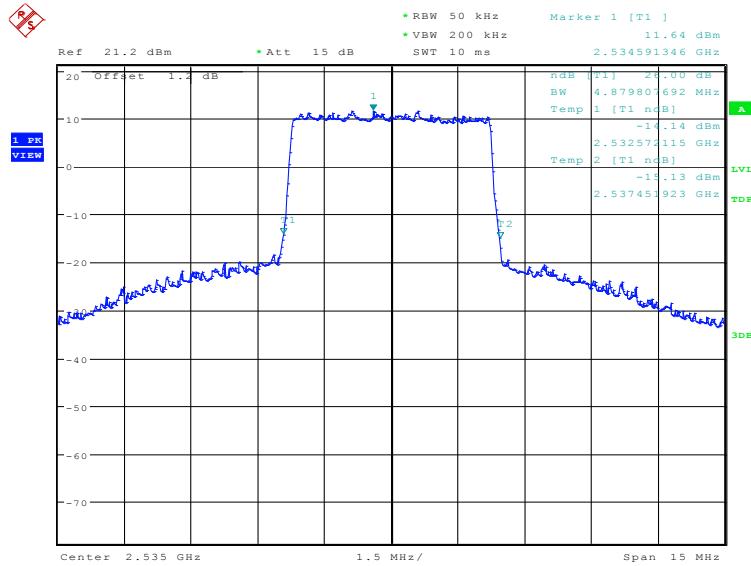
Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2535.0	4855.77	4879.81	4855.77

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



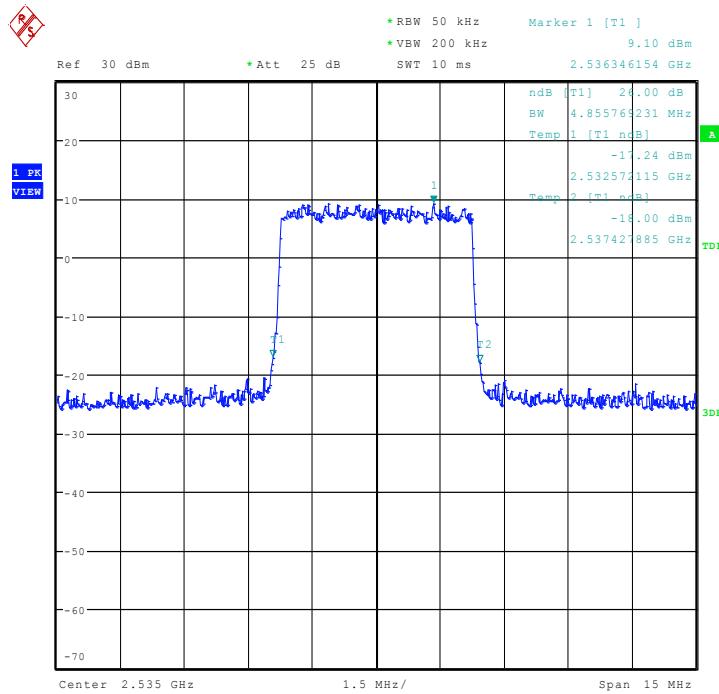
Date: 25.JUL.2019 21:26:23

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



Date: 25.JUL.2019 21:27:49

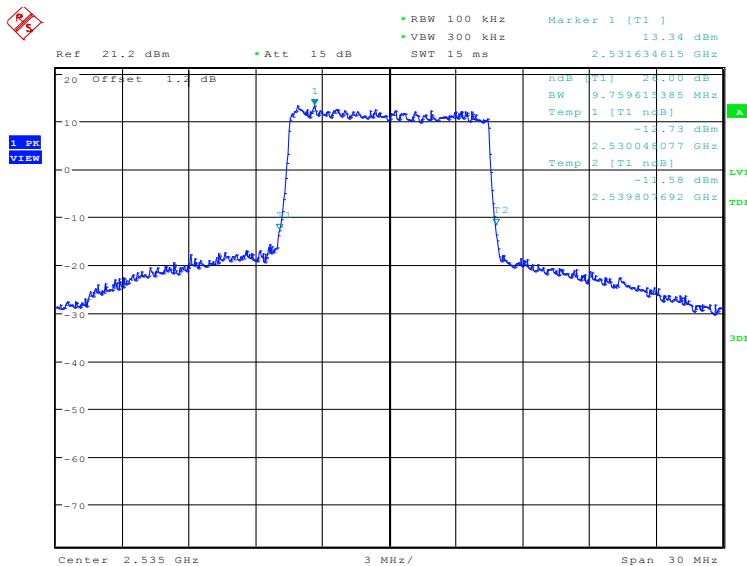
### LTE band 7, 5MHz Bandwidth,64QAM (-26dBc BW)



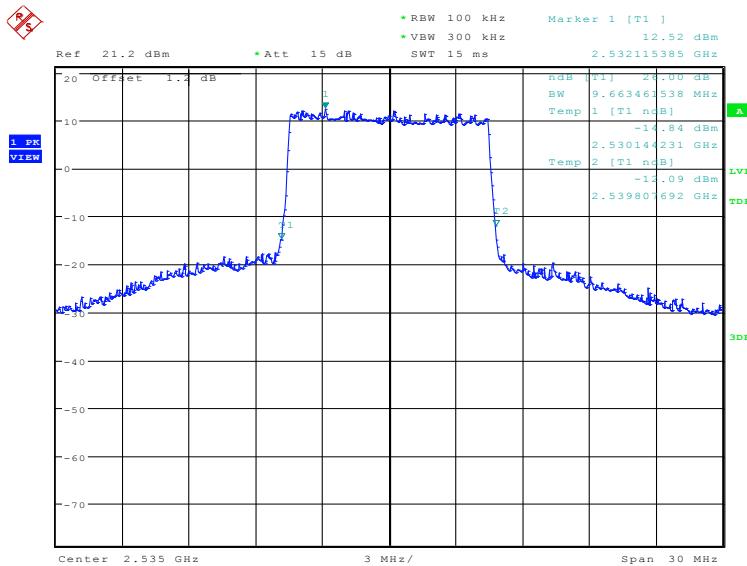
Date: 1.AUG.2019 09:51:29

**LTE band 7, 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2535.0	9759.62	9663.46	9615.38

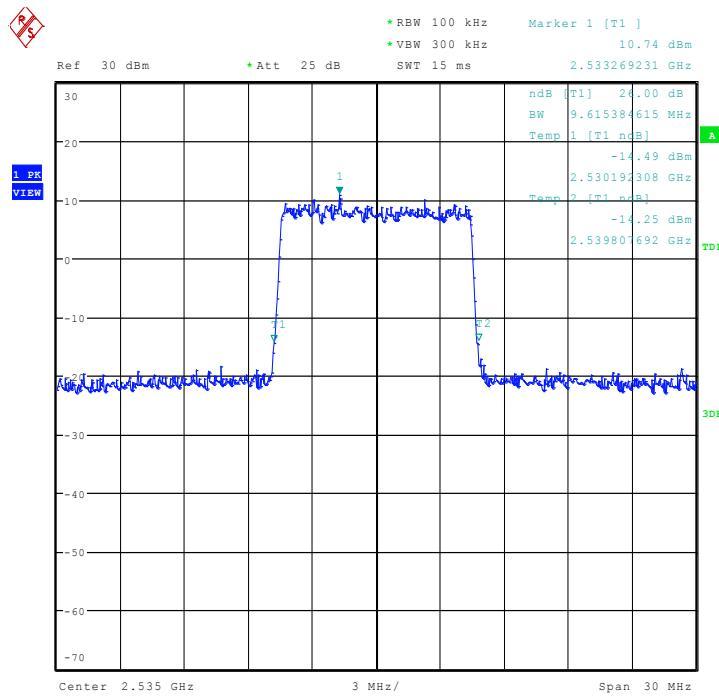
**LTE band 7, 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:30:03

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


Date: 25.JUL.2019 21:31:28

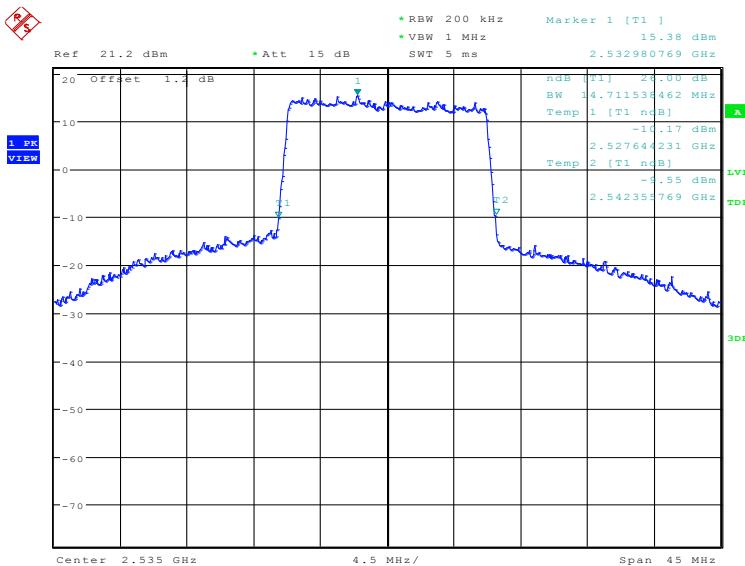
### LTE band 7, 10MHz Bandwidth, 64QAM (-26dBc BW)



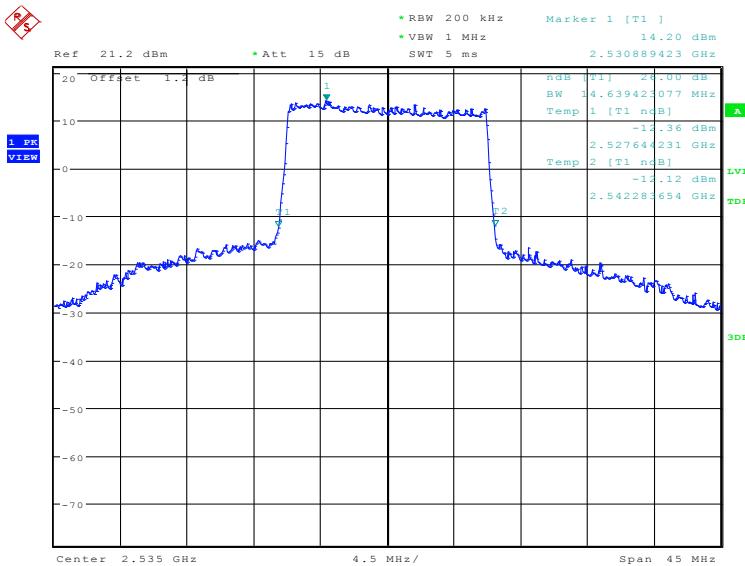
Date: 1.AUG.2019 09:52:38

**LTE band 7, 15MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2535.0	14711.54	14639.42	14639.42

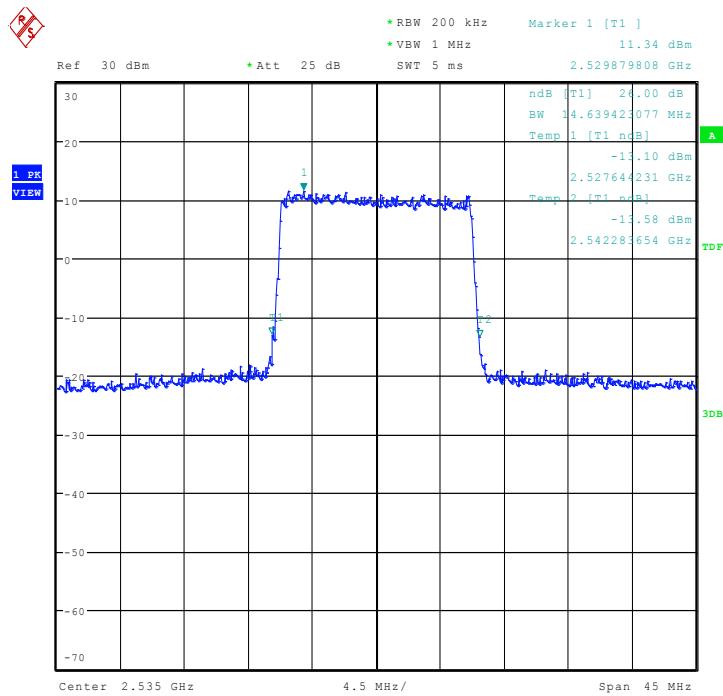
**LTE band 7, 15MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:33:43

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


Date: 25.JUL.2019 21:35:08

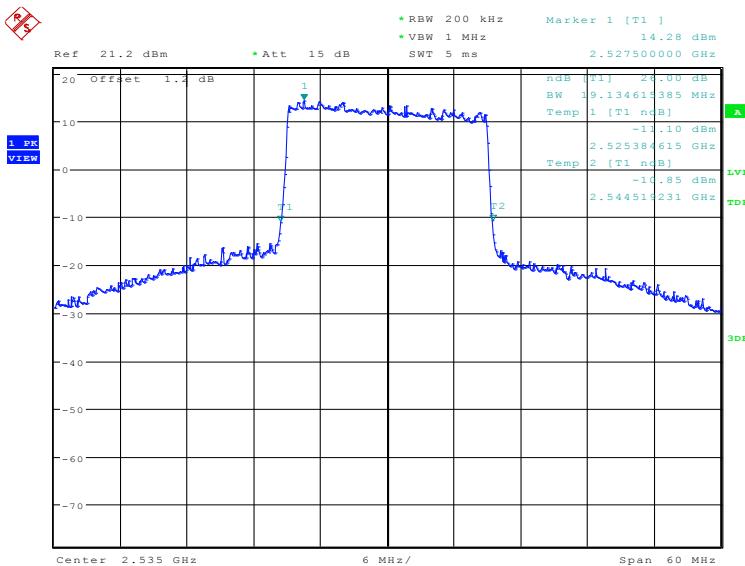
### LTE band 7, 15MHz Bandwidth, 64QAM (-26dBc BW)



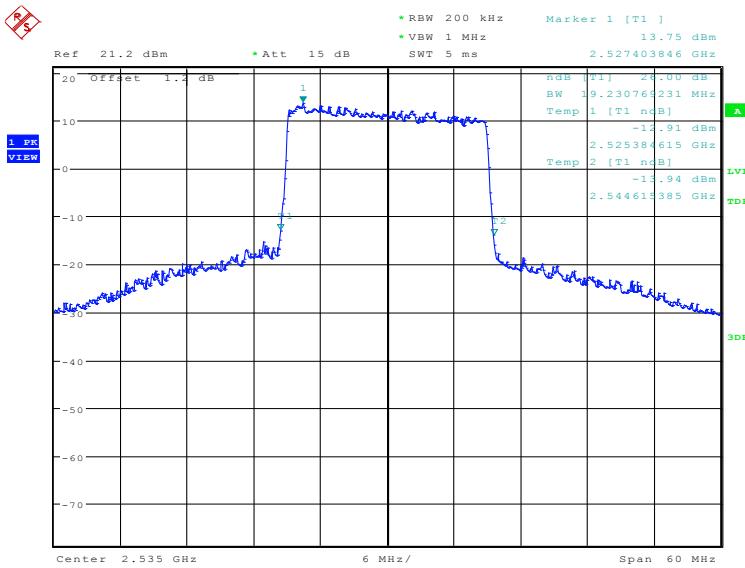
Date: 1.AUG.2019 09:53:49

**LTE band 7, 20MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2535.0	19134.62	19230.77	19230.77

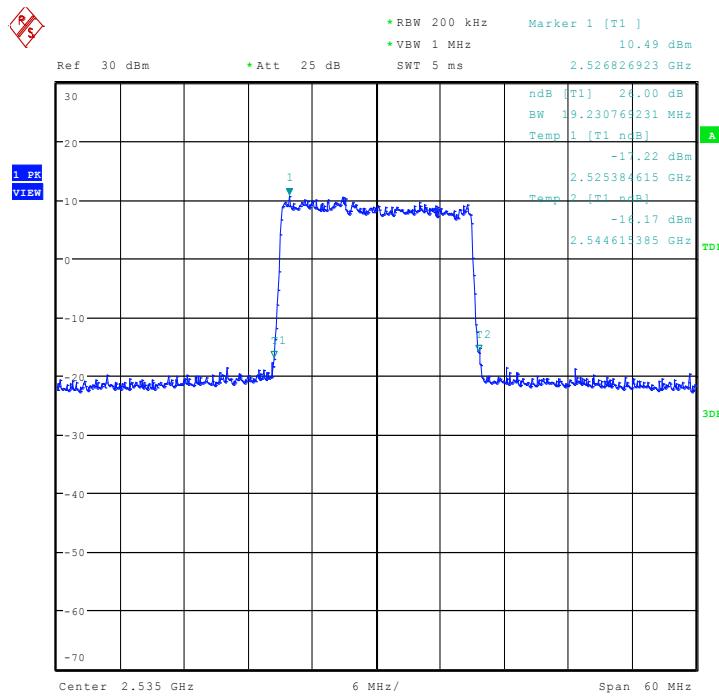
**LTE band 7, 20MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:37:23

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


Date: 25.JUL.2019 21:38:48

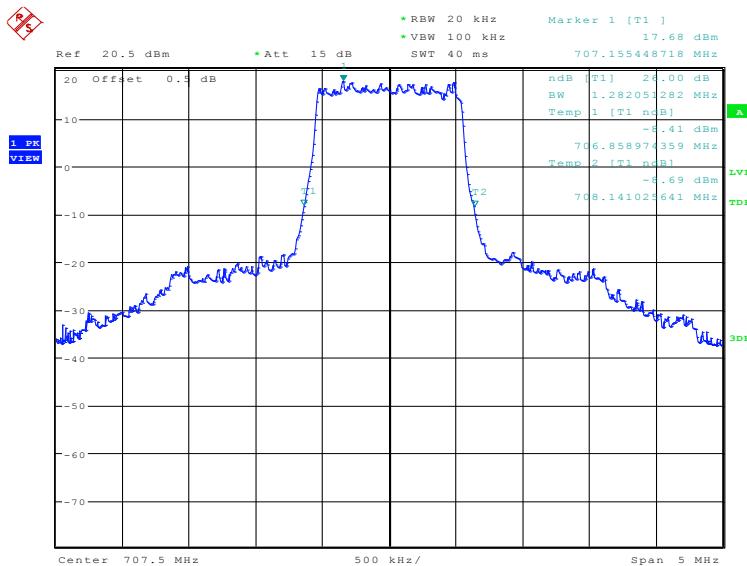
### LTE band 7, 20MHz Bandwidth, 64QAM (-26dBc BW)



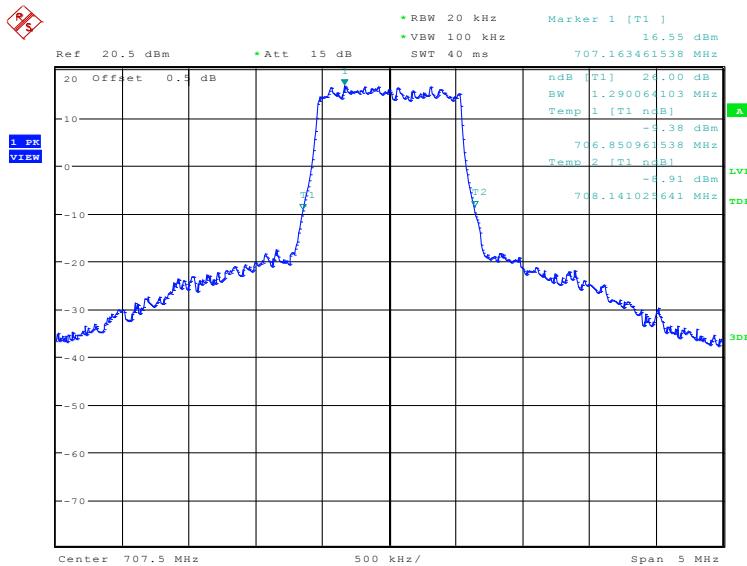
Date: 1.AUG.2019 09:55:14

**LTE band 12, 1.4MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	1282.05	1290.06	1282.05

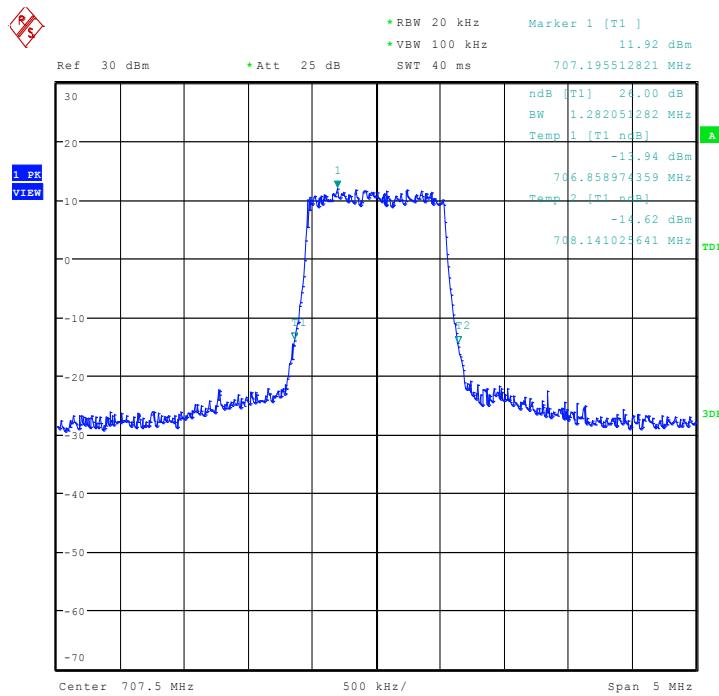
**LTE band 12, 1.4MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:13:57

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


Date: 26.JUL.2019 11:15:21

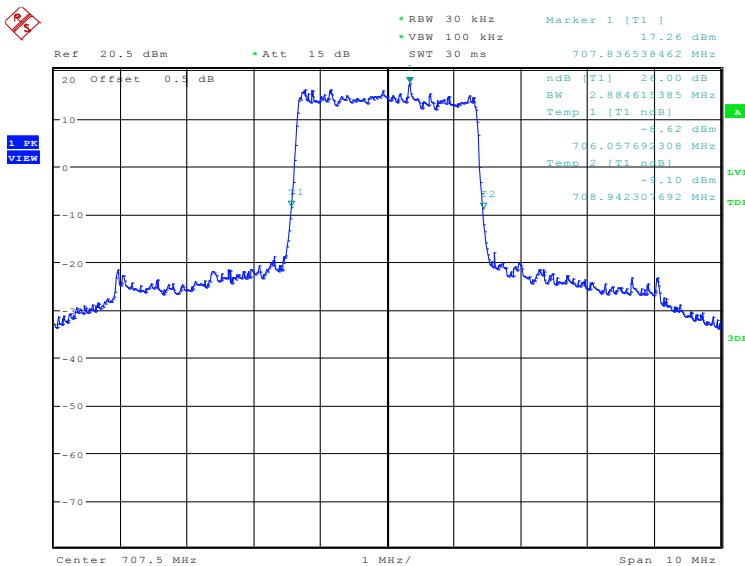
**LTE band 12, 1.4MHz Bandwidth, 64QAM (-26dBc BW)**



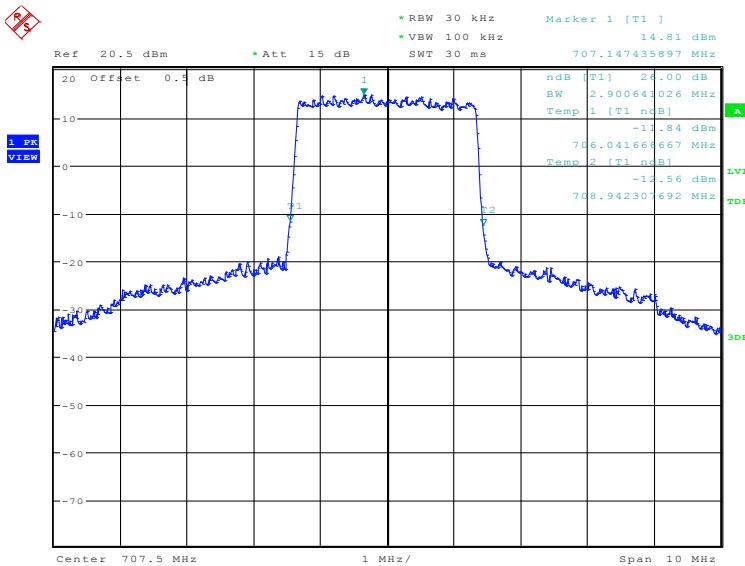
Date: 1.AUG.2019 10:46:23

**LTE band 12, 3MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	2884.62	2900.64	2900.64

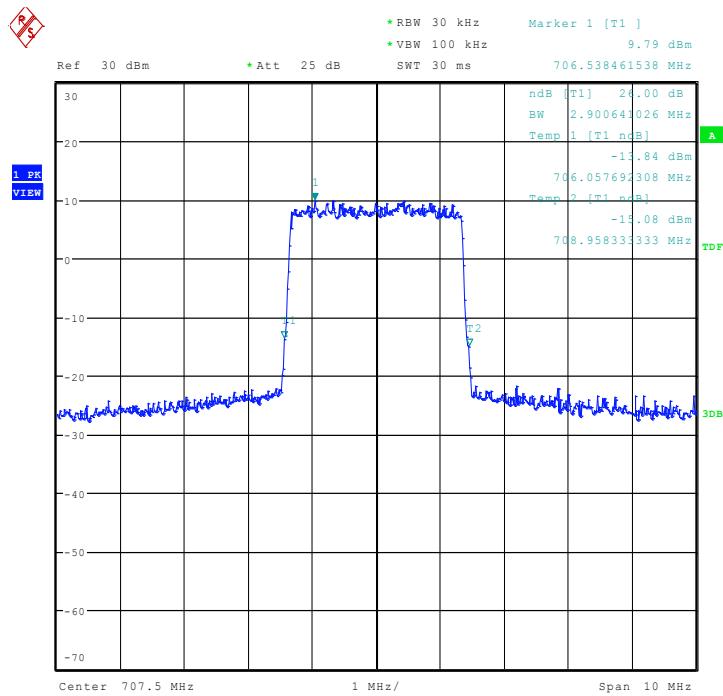
**LTE band 12, 3MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:17:35

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


Date: 26.JUL.2019 11:18:59

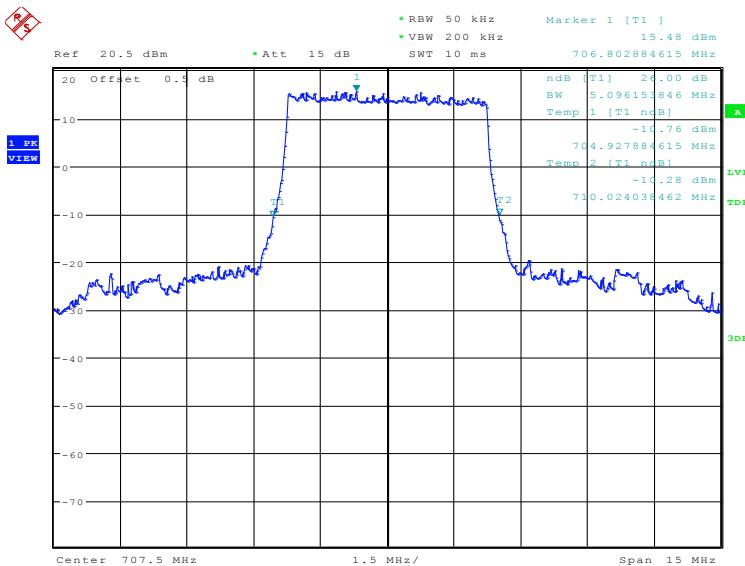
**LTE band 12, 3MHz Bandwidth, 64QAM (-26dBc BW)**



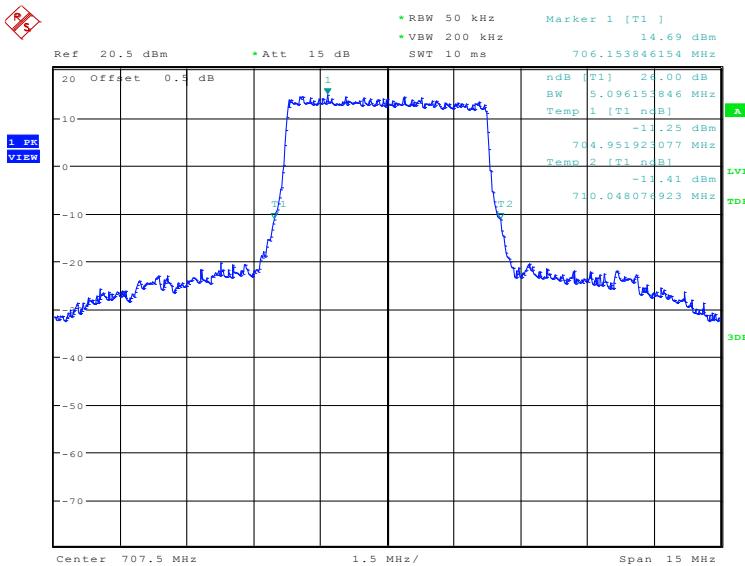
Date: 1.AUG.2019 10:47:59

**LTE band 12, 5MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	5096.15	5096.15	4975.96

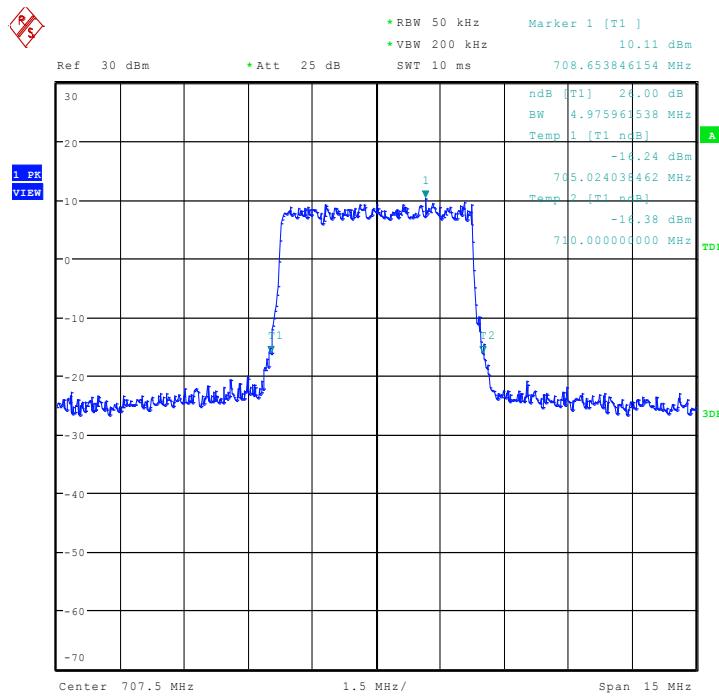
**LTE band 12, 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:21:13

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


Date: 26.JUL.2019 11:22:37

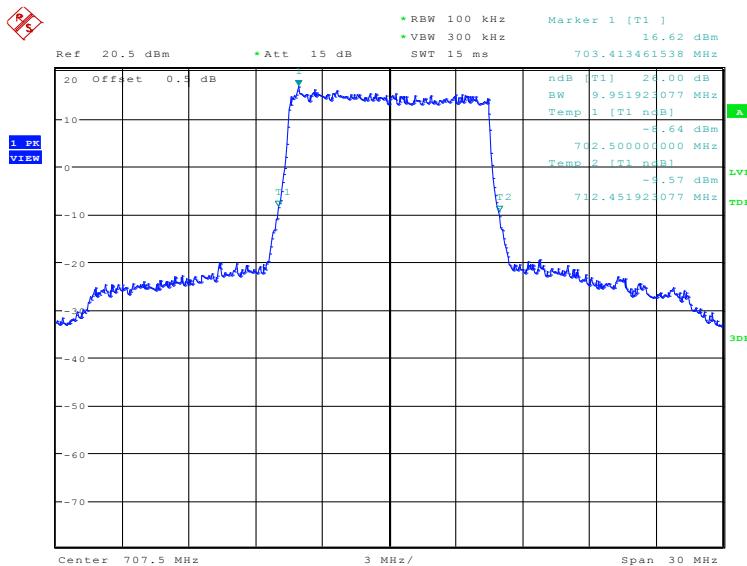
### LTE band 12, 5MHz Bandwidth,64QAM (-26dBc BW)



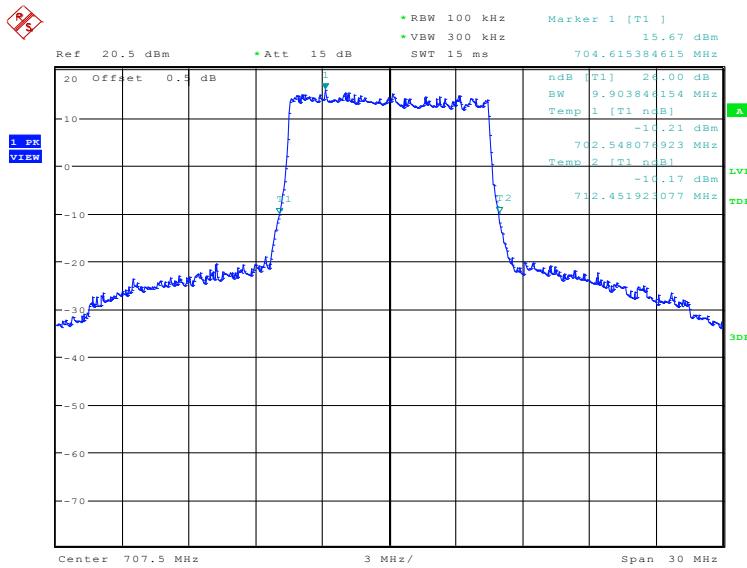
Date: 1.AUG.2019 10:49:15

**LTE band 12, 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	9951.92	9903.85	9855.77

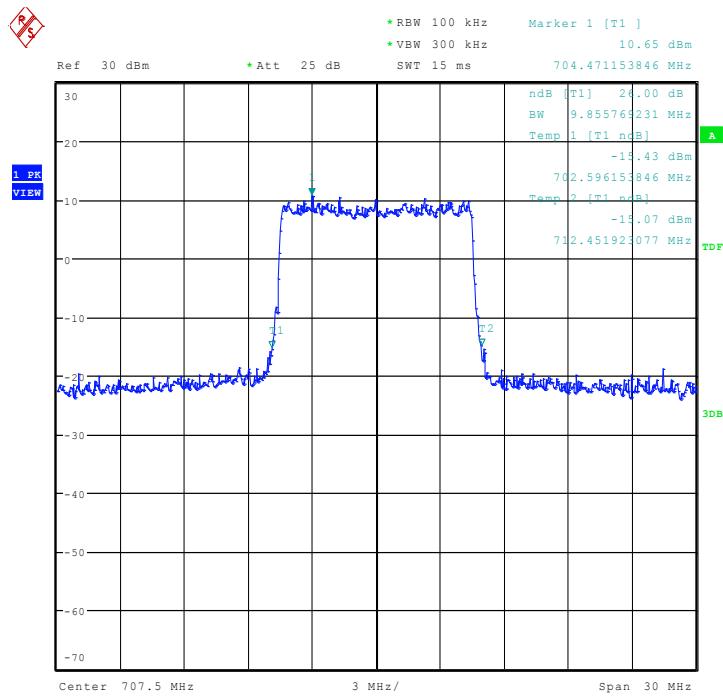
**LTE band 12, 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:24:50

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


Date: 26.JUL.2019 11:26:15

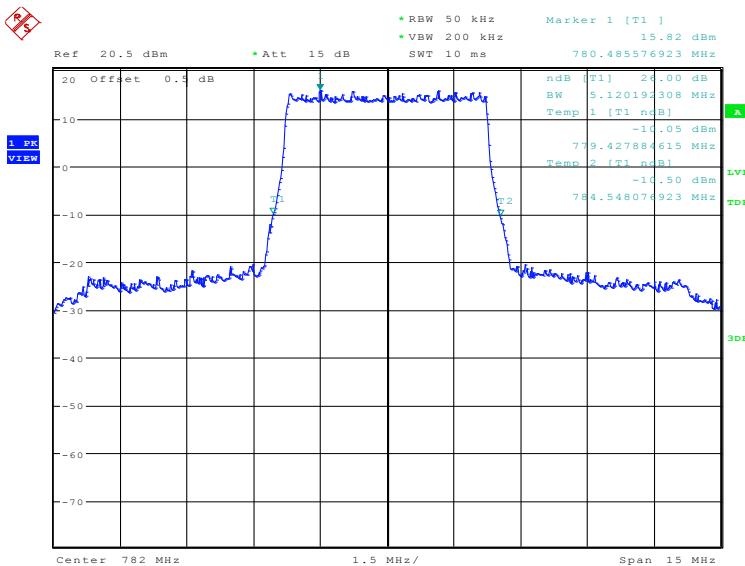
### LTE band 12, 10MHz Bandwidth, 64QAM (-26dBc BW)



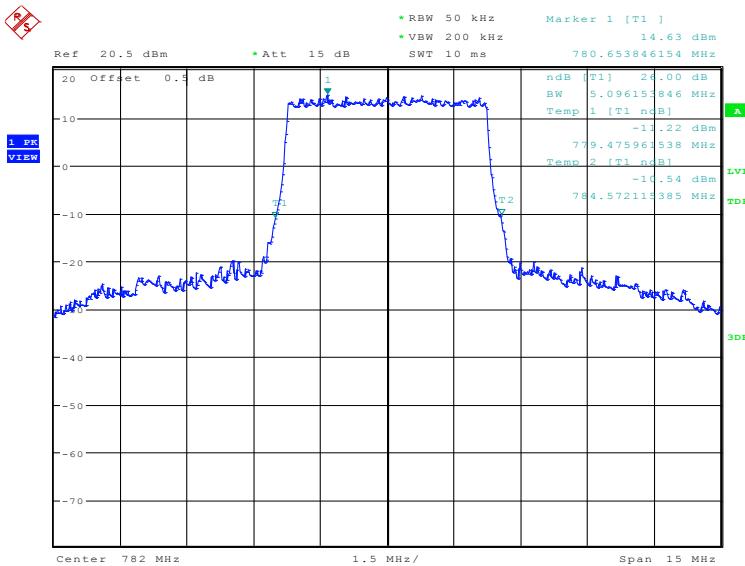
Date: 1.AUG.2019 10:51:07

**LTE band 13, 5MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
782.0	5120.19	5096.15	5048.08

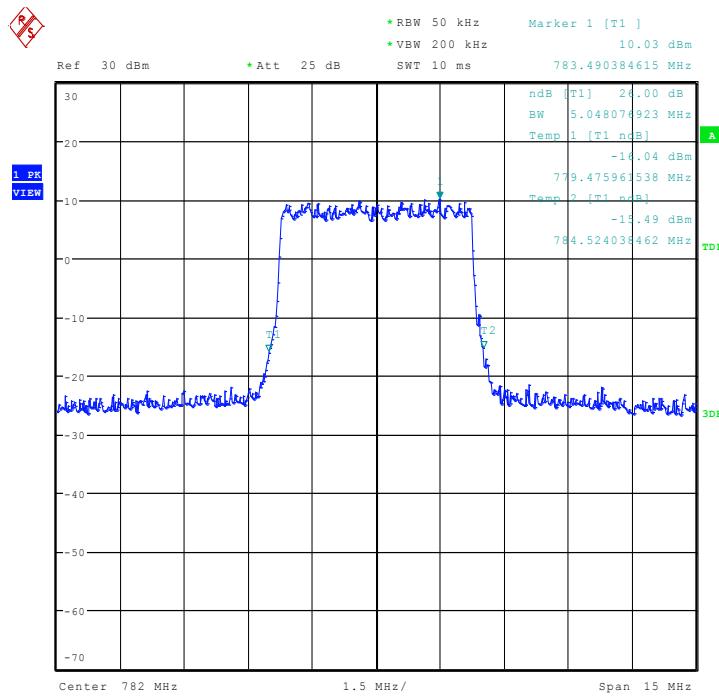
**LTE band 13, 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:41:03

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


Date: 25.JUL.2019 21:42:29

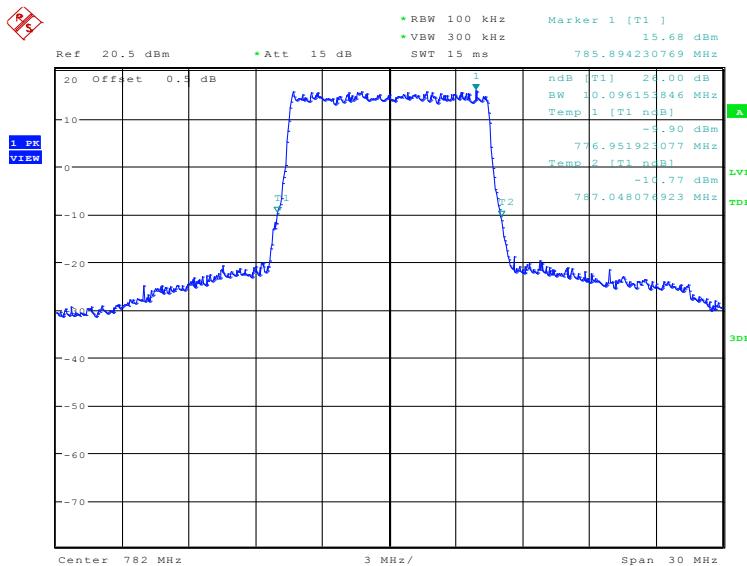
### LTE band 13, 5MHz Bandwidth,64QAM (-26dBc BW)



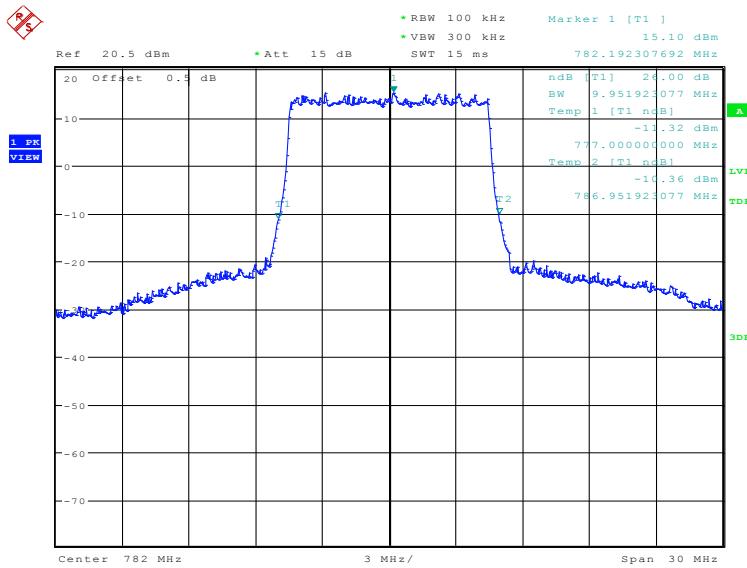
Date: 1.AUG.2019 10:02:01

**LTE band 13, 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
782.0	10096.15	9951.92	9807.69

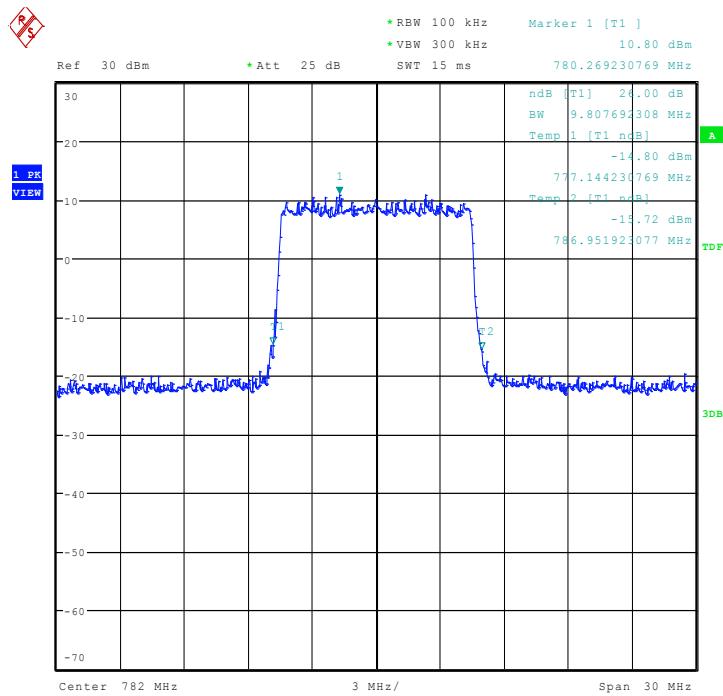
**LTE band 13, 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:44:43

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


Date: 25.JUL.2019 21:46:08

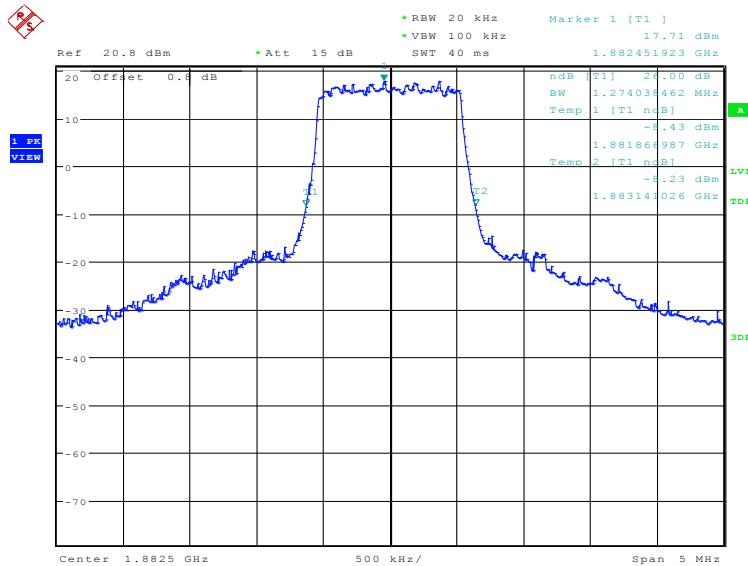
### LTE band 13, 10MHz Bandwidth, 64QAM (-26dBc BW)



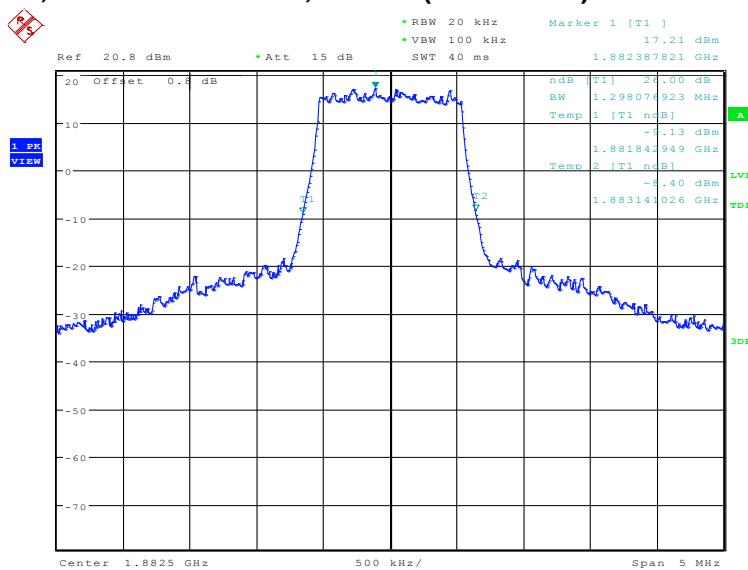
Date: 1.AUG.2019 10:03:11

**LTE band 25, 1.4MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
	1274.04	1298.08	1282.05

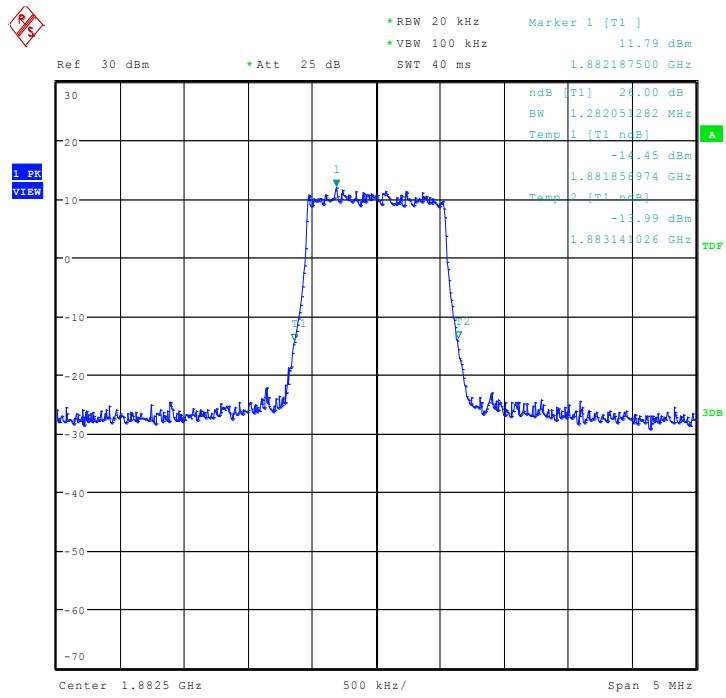
**LTE band 25, 1.4MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:48:24

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


Date: 25.JUL.2019 21:49:50

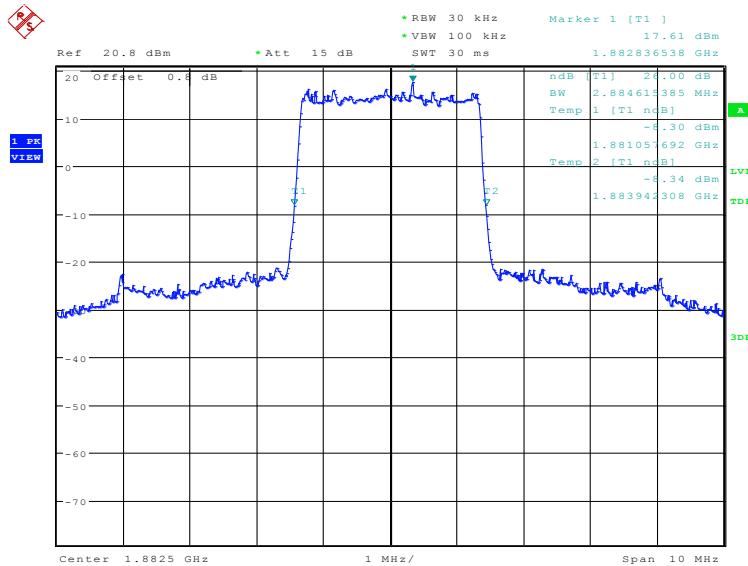
**LTE band 25, 1.4MHz Bandwidth, 64QAM (-26dBc BW)**



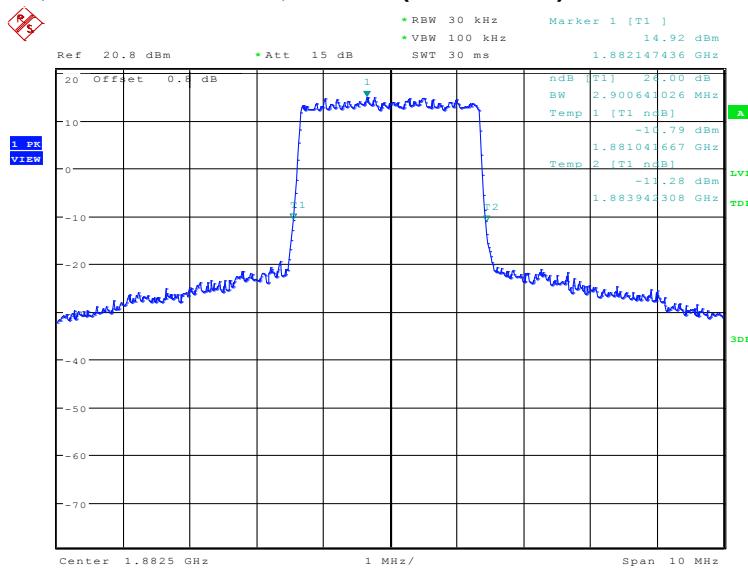
Date: 1.AUG.2019 10:04:40

**LTE band 25, 3MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
	2884.62	2900.64	2884.62

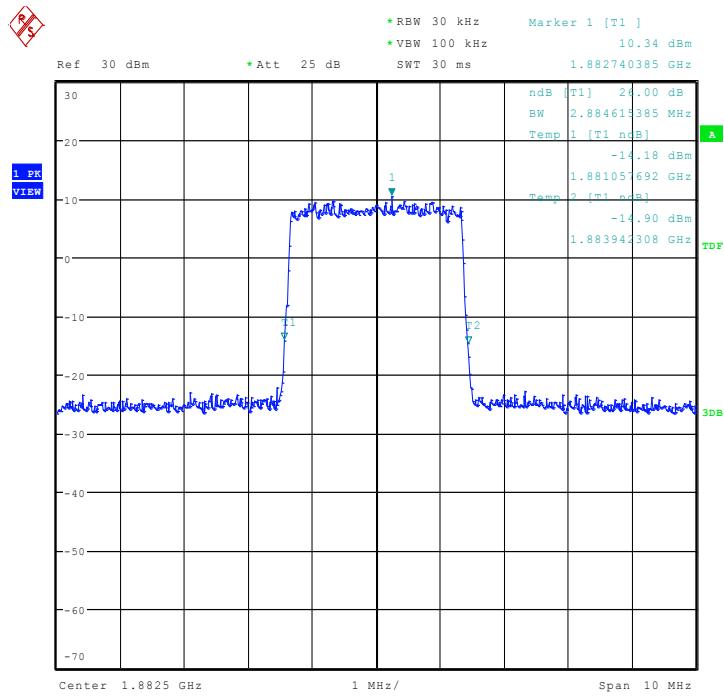
**LTE band 25, 3MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:52:04

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


Date: 25.JUL.2019 21:53:29

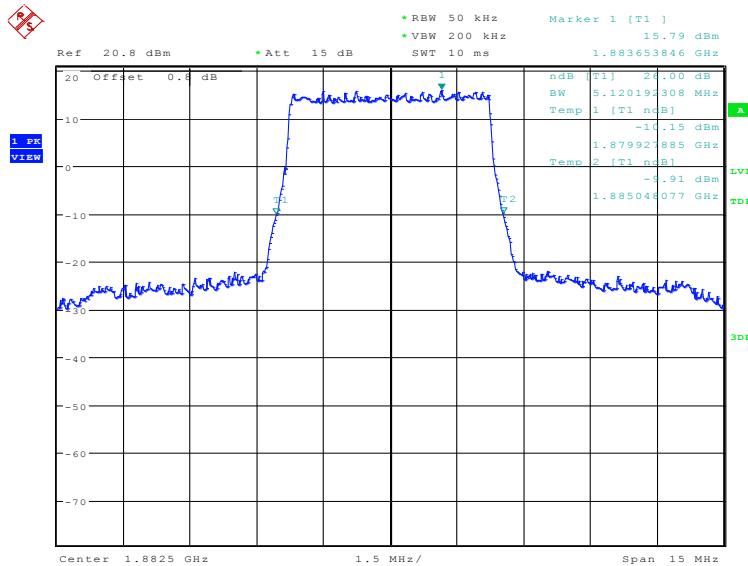
**LTE band 25, 3MHz Bandwidth, 64QAM (-26dBc BW)**



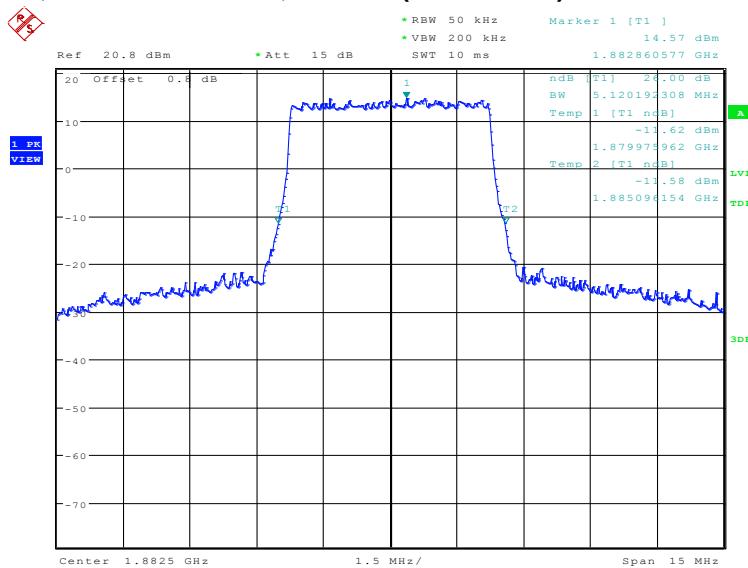
Date: 1.AUG.2019 10:05:39

**LTE band 25, 5MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
	5120.19	5120.19	5048.08

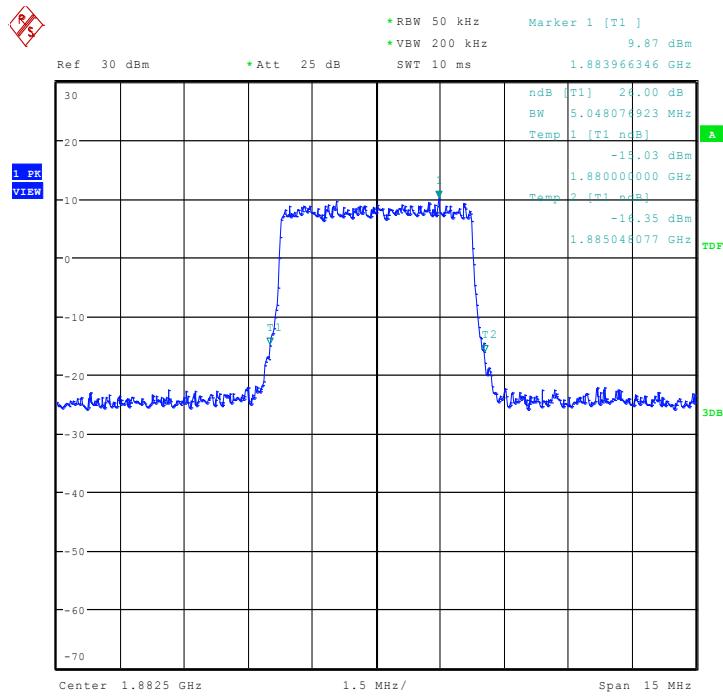
**LTE band 25, 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:55:44

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


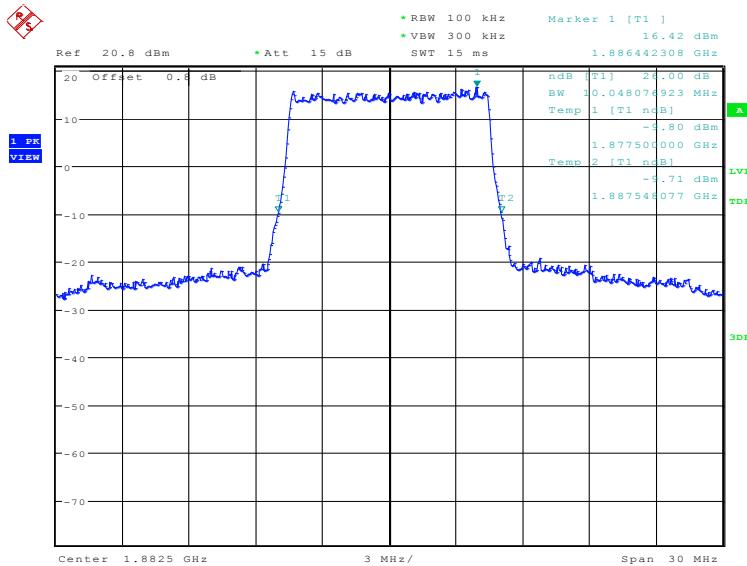
Date: 25.JUL.2019 21:57:09

**LTE band 25, 5MHz Bandwidth,64QAM (-26dBc BW)**

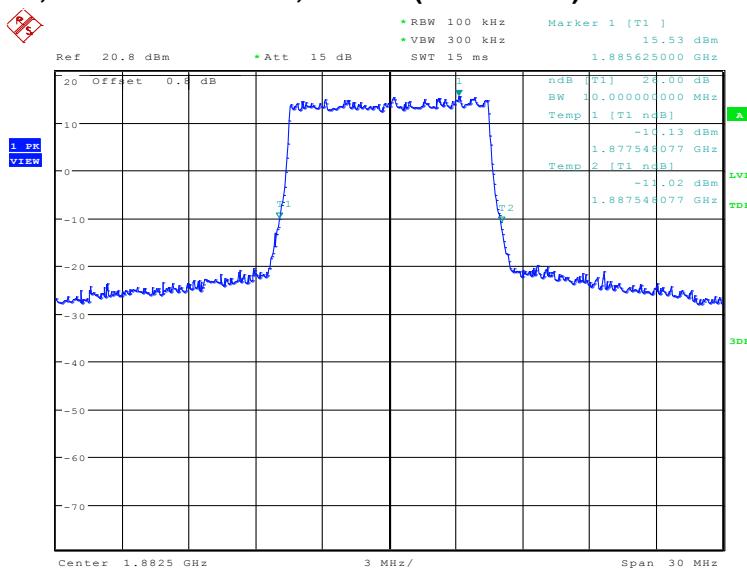


**LTE band 25, 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1882.5	10048.08	10000.00	10000.00

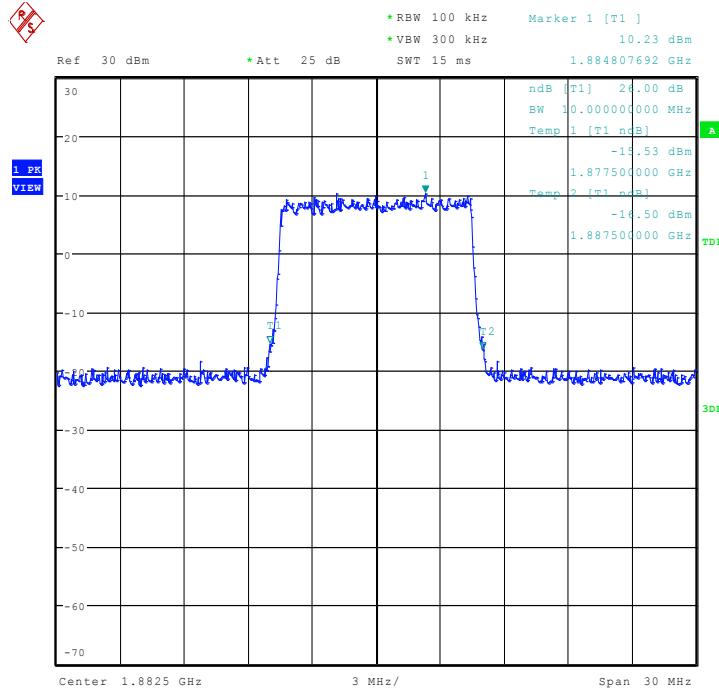
**LTE band 25, 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 21:59:24

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


Date: 25.JUL.2019 22:00:49

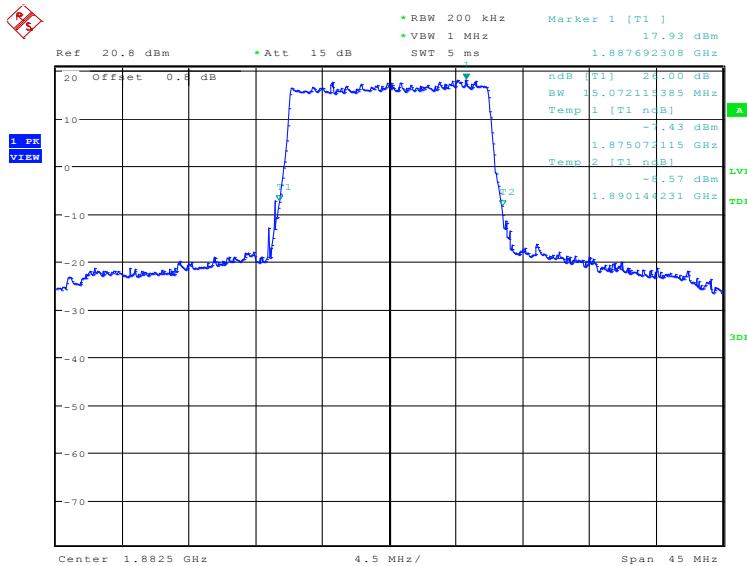
**LTE band 25, 10MHz Bandwidth, 64QAM (-26dBc BW)**



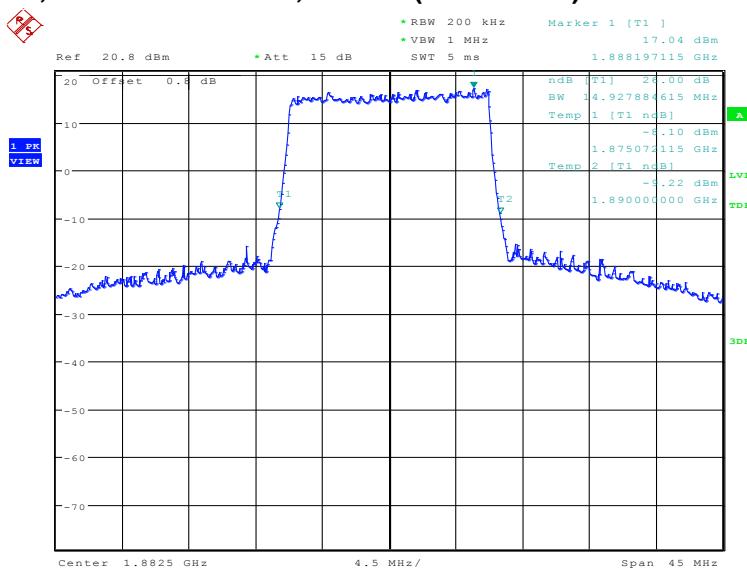
Date: 1.AUG.2019 10:07:49

**LTE band 25, 15MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
	15072.12	14927.88	15144.23

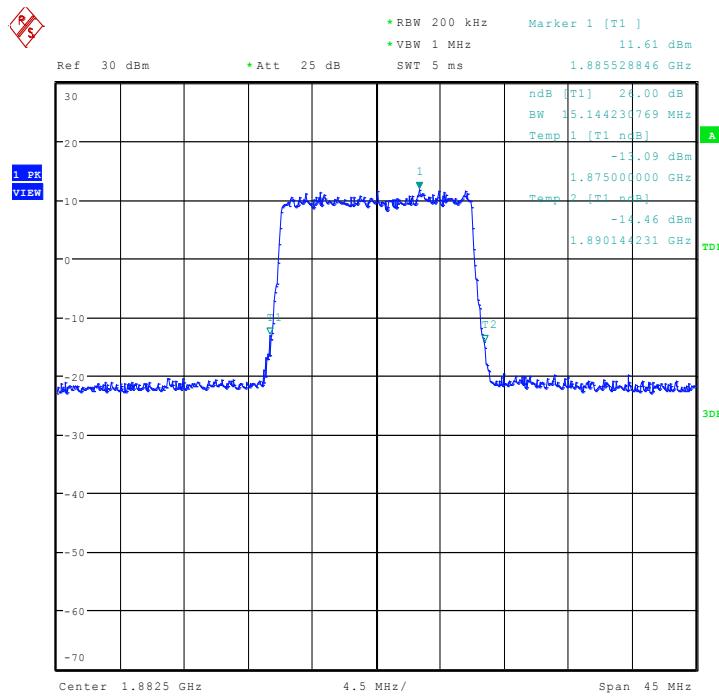
**LTE band 25, 15MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:03:04

**LTE band 25, 15MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 25.JUL.2019 22:04:29

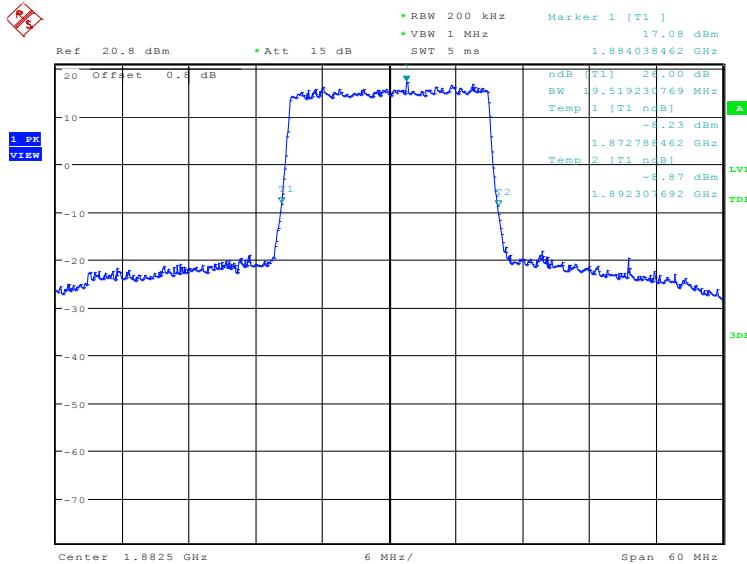
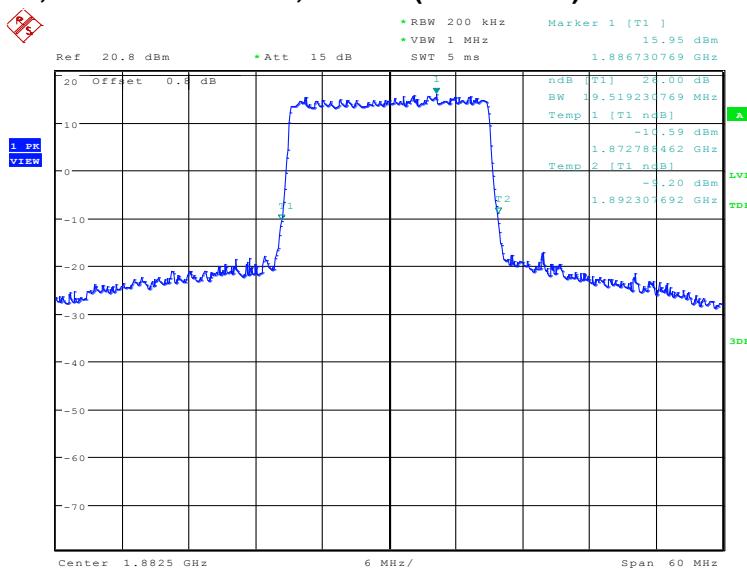
**LTE band 25, 15MHz Bandwidth, 64QAM (-26dBc BW)**



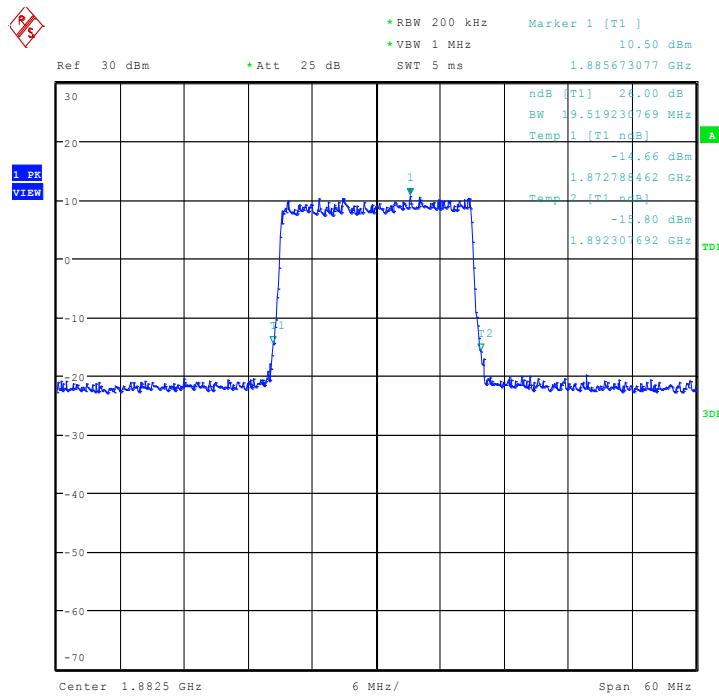
Date: 1.AUG.2019 10:08:49

**LTE band 25, 20MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1882.5	19519.23	19519.23	19519.23

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

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


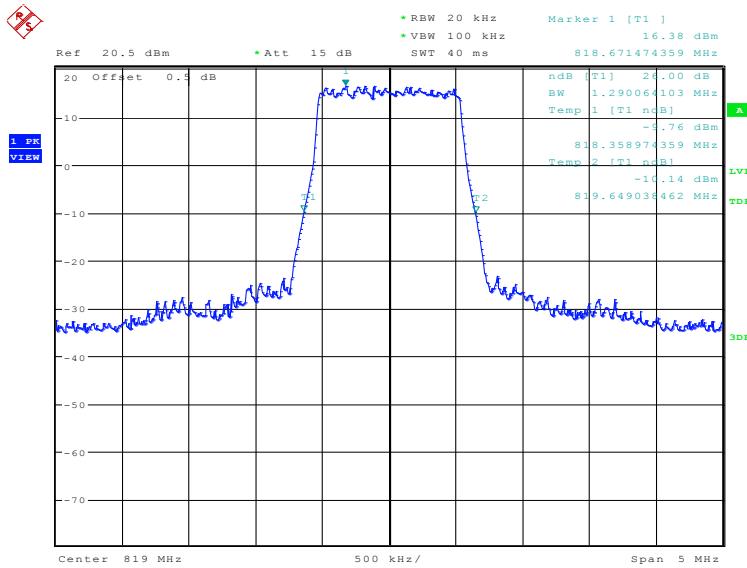
**LTE band 25, 20MHz Bandwidth, 64QAM (-26dBc BW)**



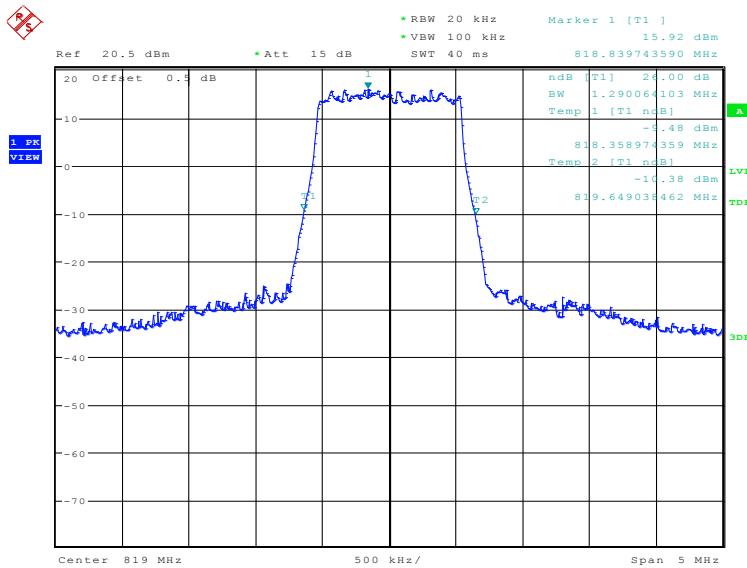
Date: 1.AUG.2019 10:09:51

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

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
819.0			
	1290.06	1290.06	1282.05

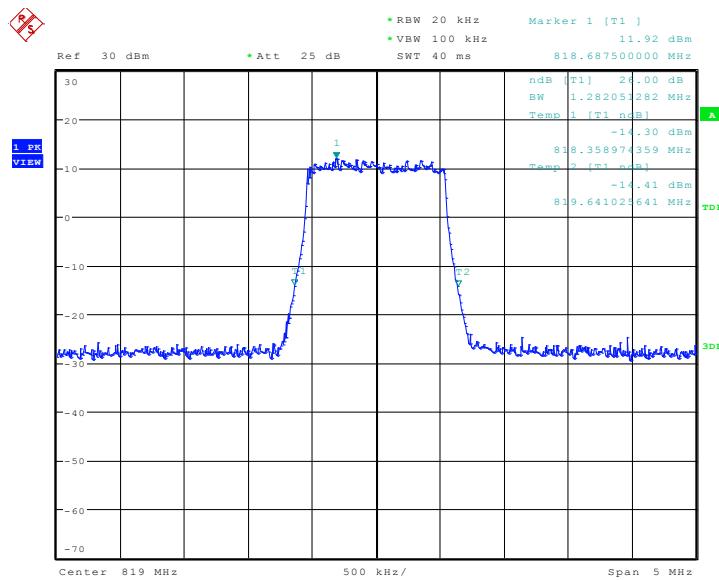
**LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:27:56

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


Date: 25.JUL.2019 22:29:22

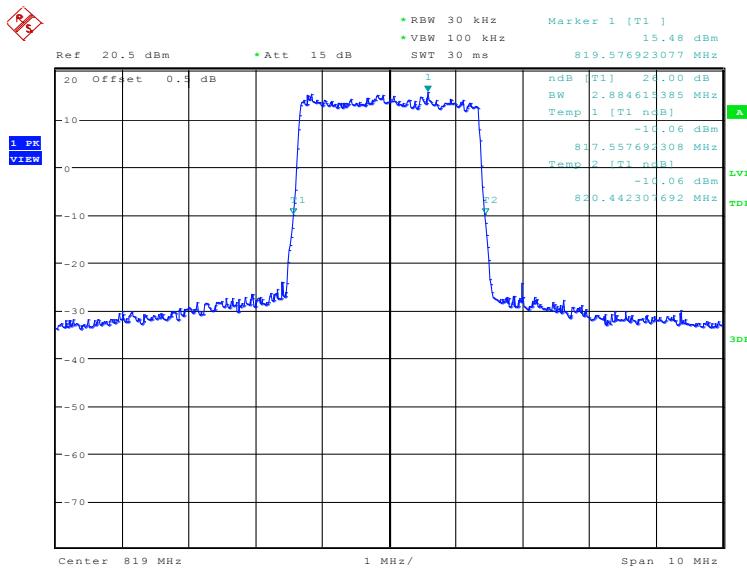
**LTE band 26(814MHz~824MHz), 1.4MHz Bandwidth, 64QAM (-26dBc BW)**



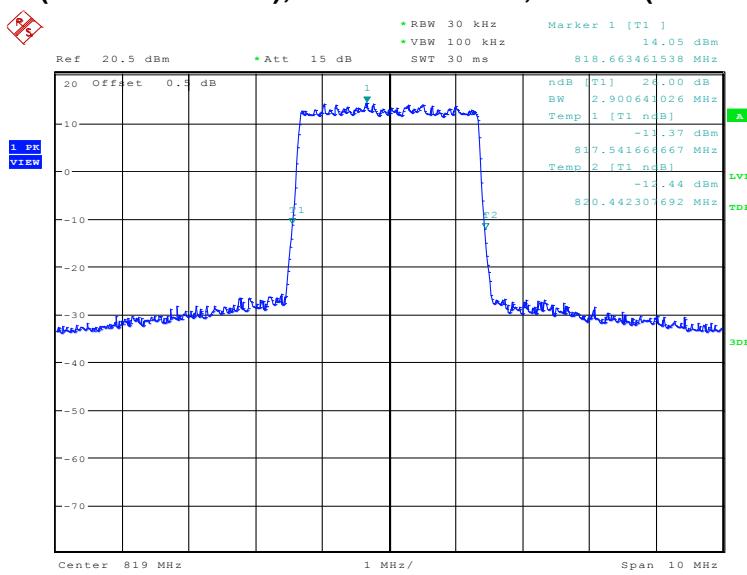
Date: 1.AUG.2019 10:19:09

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

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
819.0			
	2884.62	2900.64	2884.62

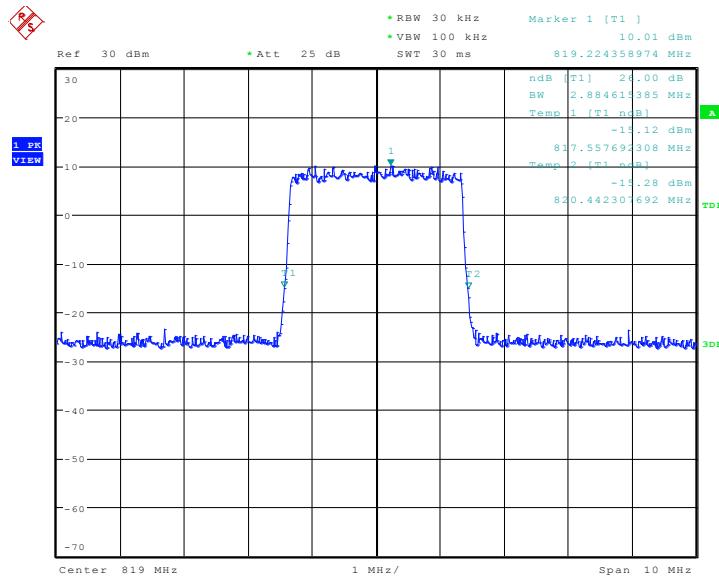
**LTE band 26(814MHz~824MHz), 3MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:31:36

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


Date: 25.JUL.2019 22:33:02

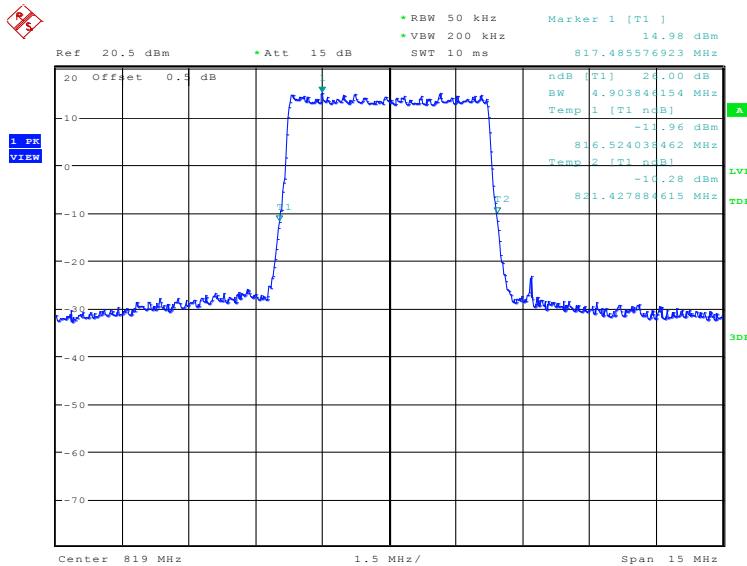
**LTE band 26(814MHz~824MHz), 3MHz Bandwidth, 64QAM (-26dBc BW)**



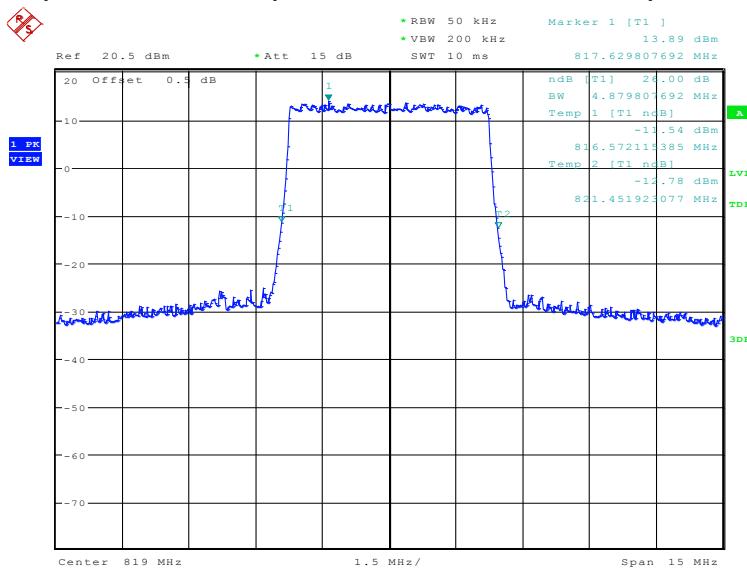
Date: 1.AUG.2019 10:20:18

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

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
819.0			
	4903.85	4879.81	4855.77

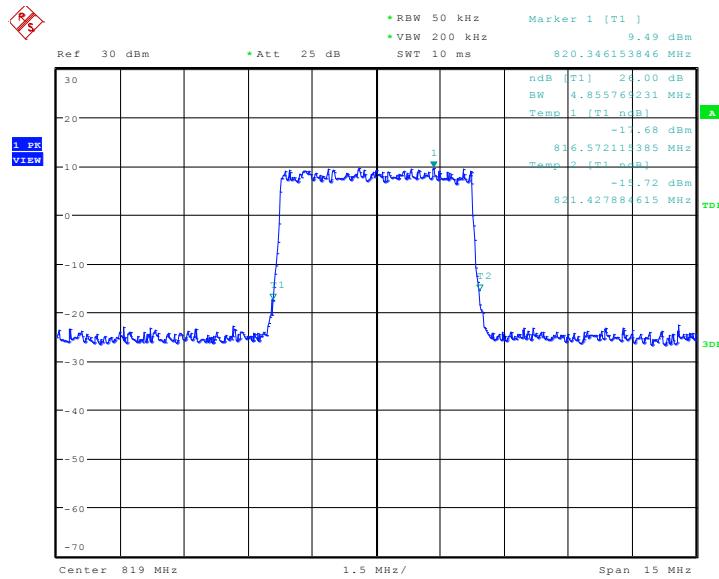
**LTE band 26(814MHz~824MHz), 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:35:17

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


Date: 25.JUL.2019 22:36:42

**LTE band 26(814MHz~824MHz), 5MHz Bandwidth, 64QAM (-26dBc BW)**

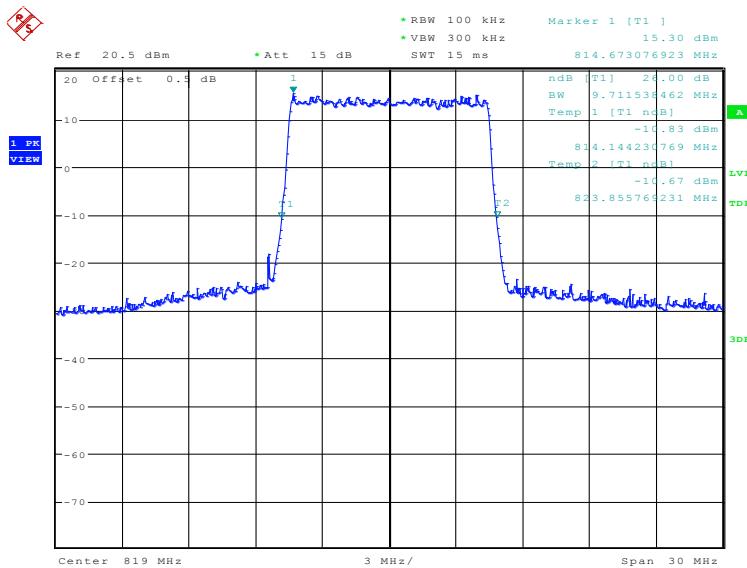


Date: 1.AUG.2019 10:21:19

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

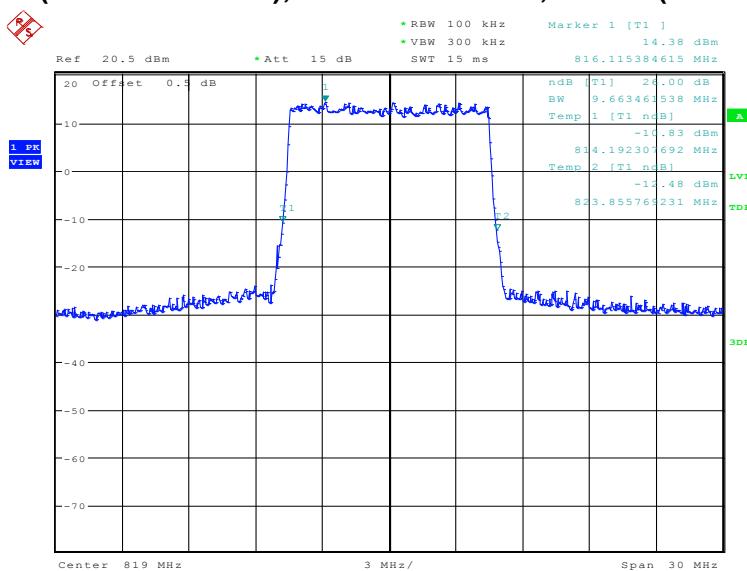
Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
819.0			
	9711.54	9663.46	9567.31

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



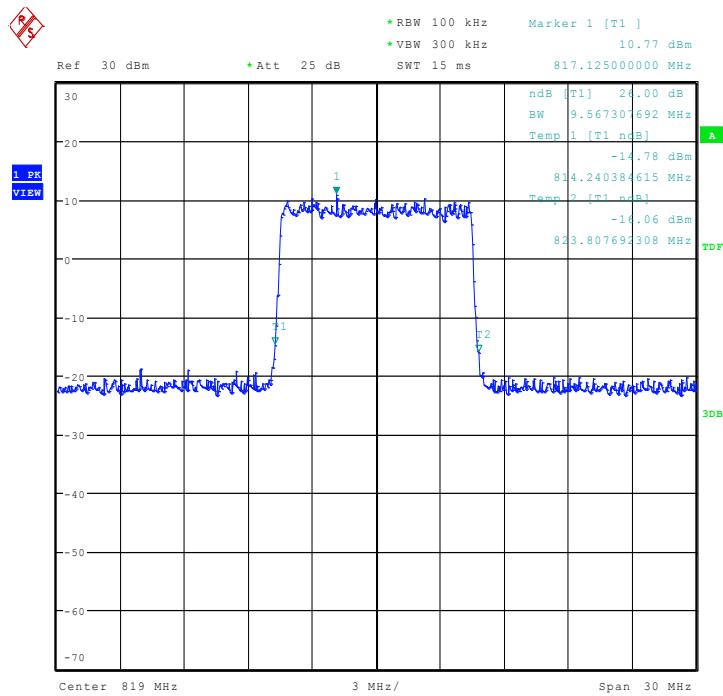
Date: 25.JUL.2019 22:38:57

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



Date: 25.JUL.2019 22:40:23

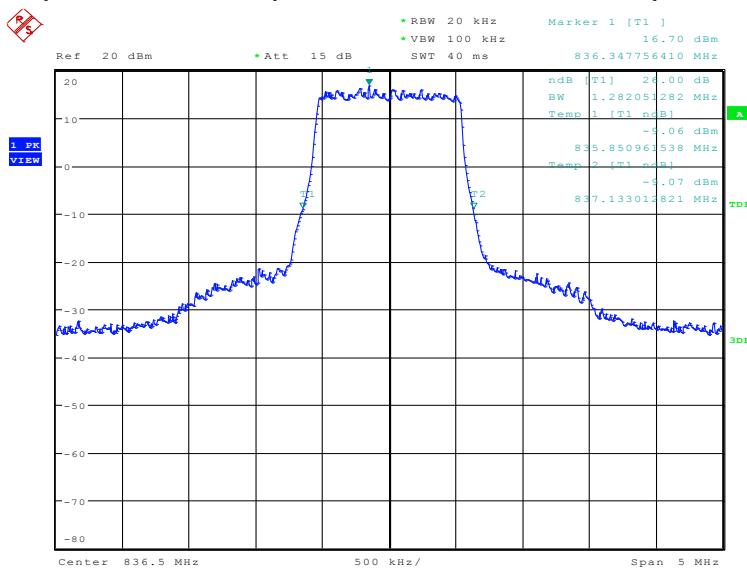
**LTE band 26(814MHz~824MHz), 10MHz Bandwidth, 64QAM (-26dBc BW)**



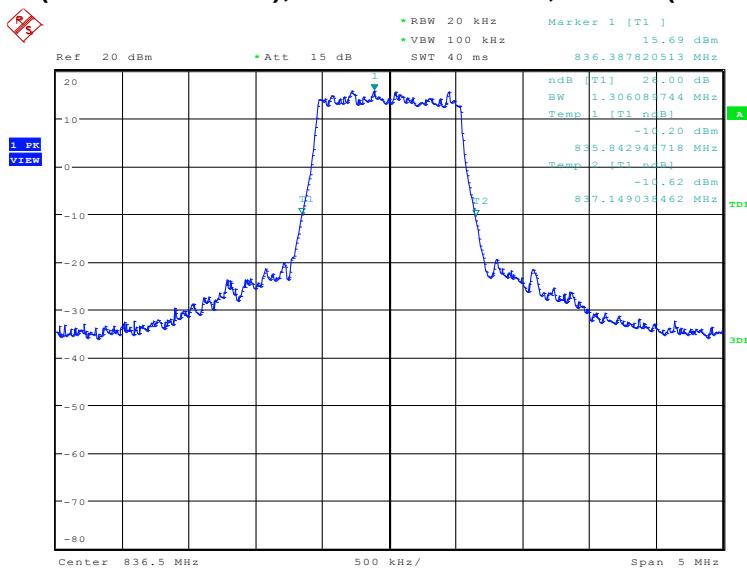
Date: 1.AUG.2019 10:22:27

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

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
836.5	1282.05	1306.09	1266.03

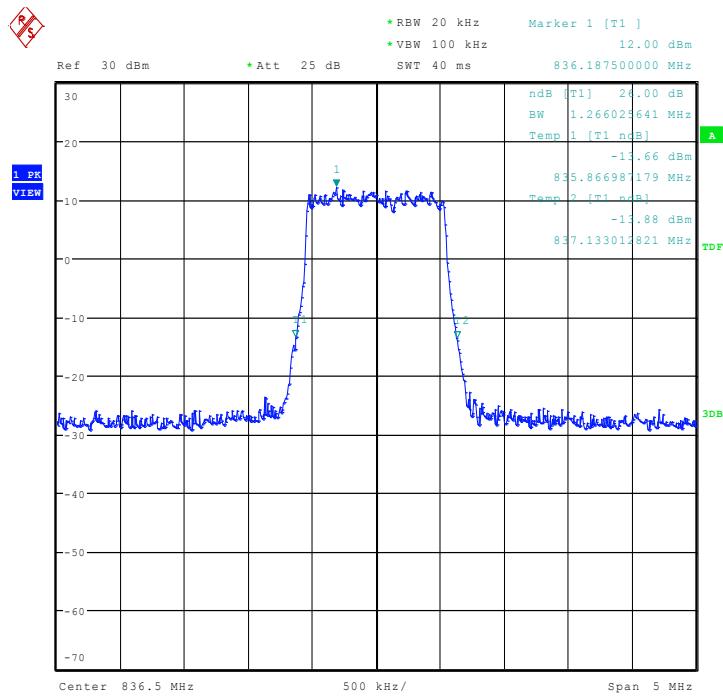
**LTE band 26(824MHz~849MHz), 1.4MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:09:45

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


Date: 25.JUL.2019 22:11:10

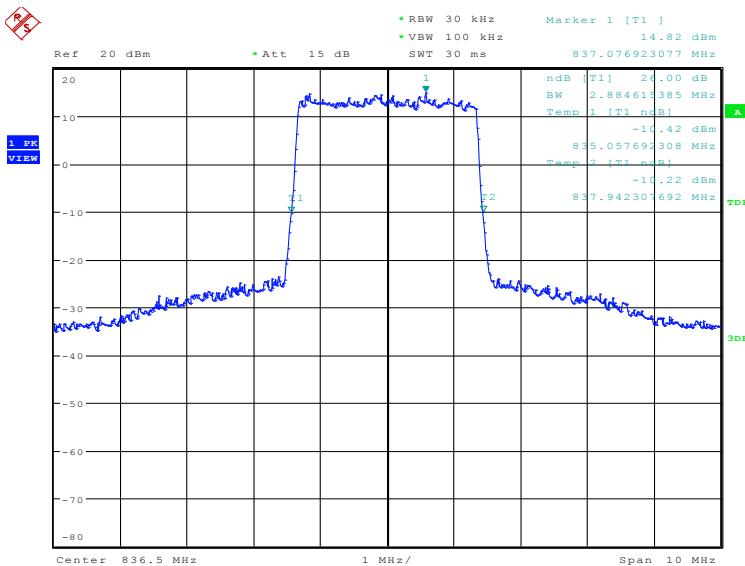
**LTE band 26(824MHz~849MHz), 1.4MHz Bandwidth, 64QAM (-26dBc BW)**



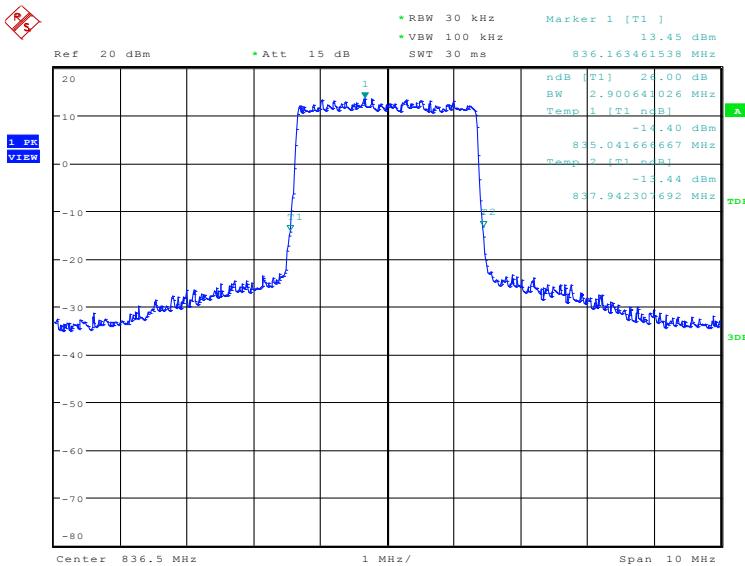
Date: 1.AUG.2019 10:12:29

**LTE band 26(824MHz~849MHz), 3MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
	2884.62	2900.64	2868.59

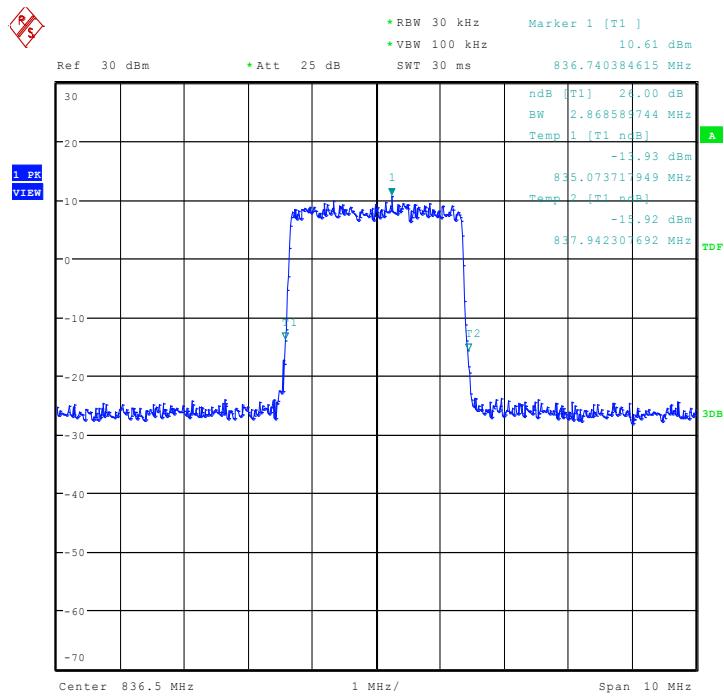
**LTE band 26(824MHz~849MHz), 3MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:13:25

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


Date: 25.JUL.2019 22:14:50

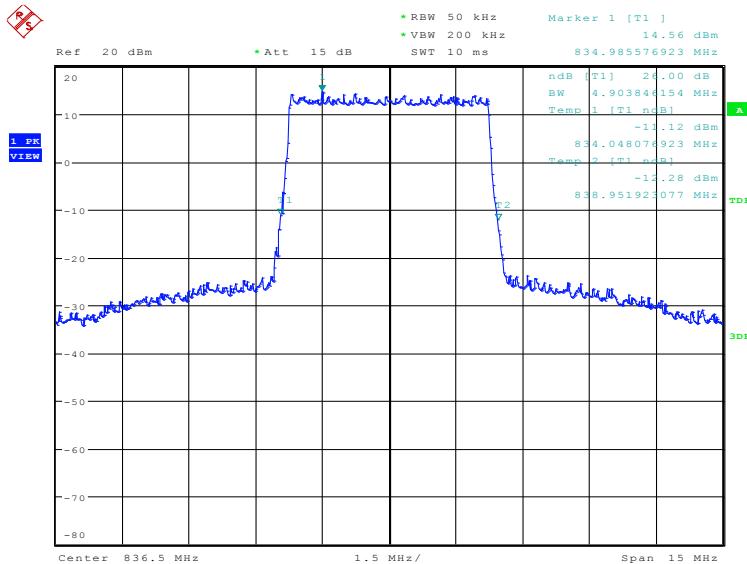
**LTE band 26(824MHz~849MHz), 3MHz Bandwidth, 64QAM (-26dBc BW)**



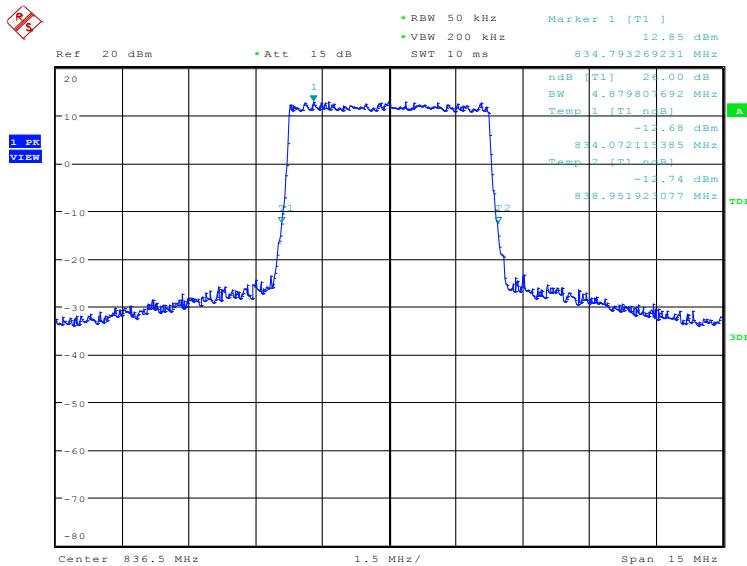
Date: 1.AUG.2019 10:13:26

**LTE band 26(824MHz~849MHz), 5MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
836.5	4903.85	4879.81	4855.77

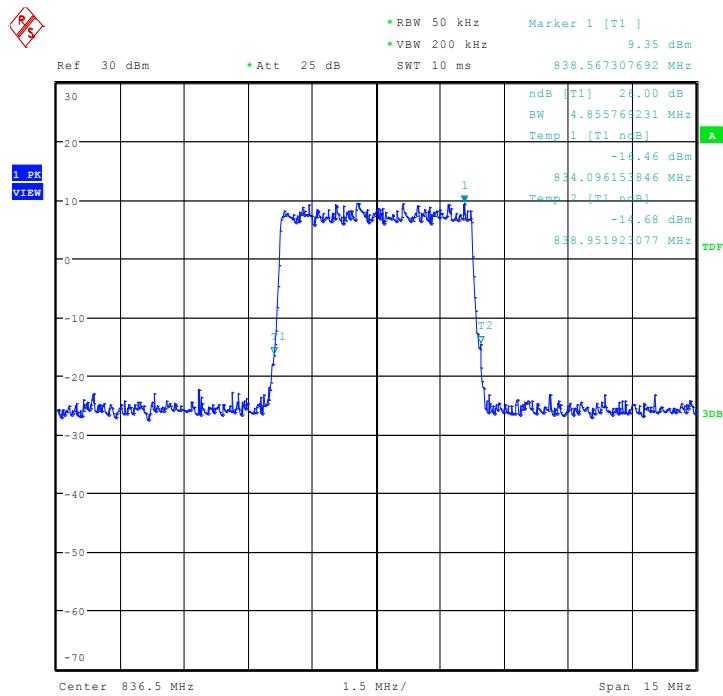
**LTE band 26(824MHz~849MHz), 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:17:05

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


Date: 25.JUL.2019 22:18:30

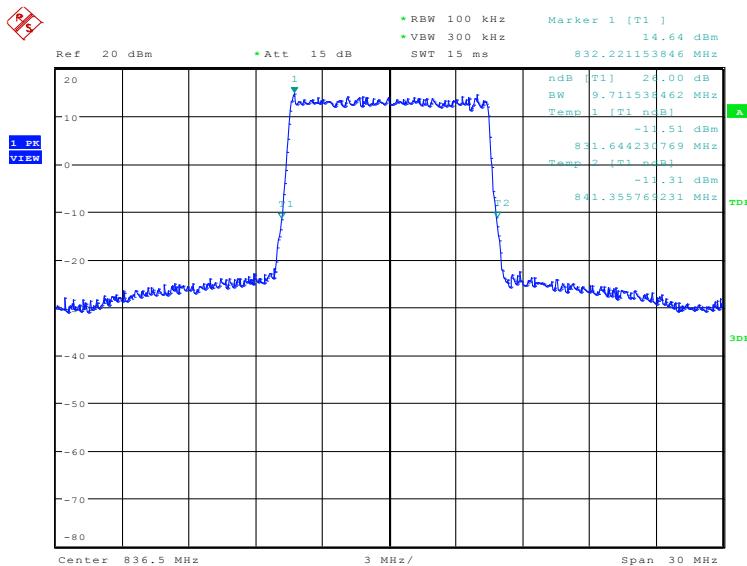
**LTE band 26(824MHz~849MHz), 5MHz Bandwidth, 64QAM (-26dBc BW)**



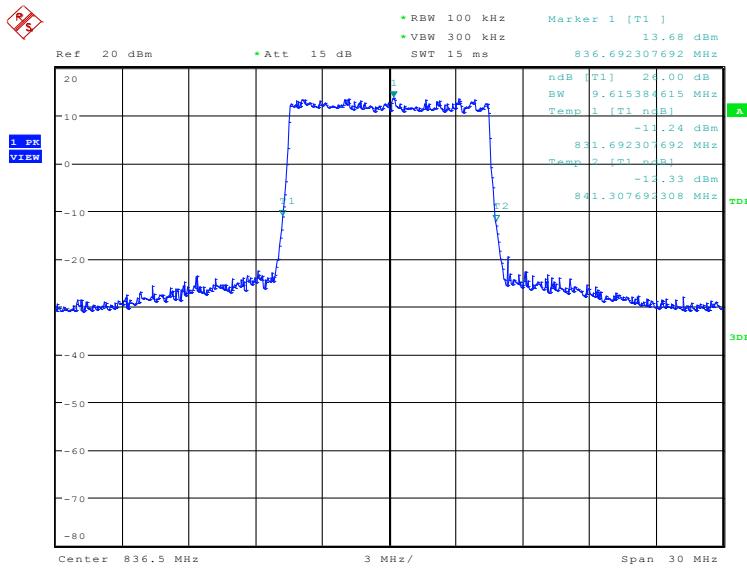
Date: 1.AUG.2019 10:14:26

**LTE band 26(824MHz~849MHz), 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
836.5	9711.54	9615.38	9567.31

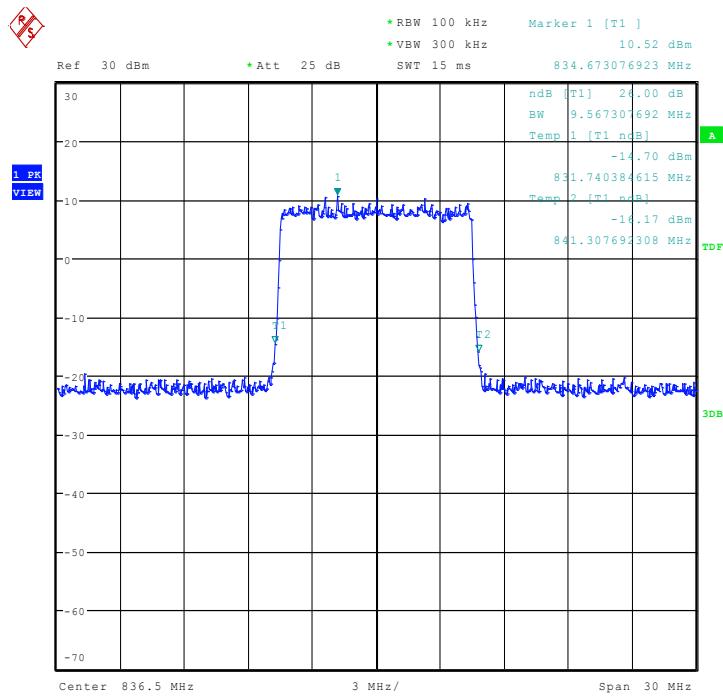
**LTE band 26(824MHz~849MHz), 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:20:45

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


Date: 25.JUL.2019 22:22:10

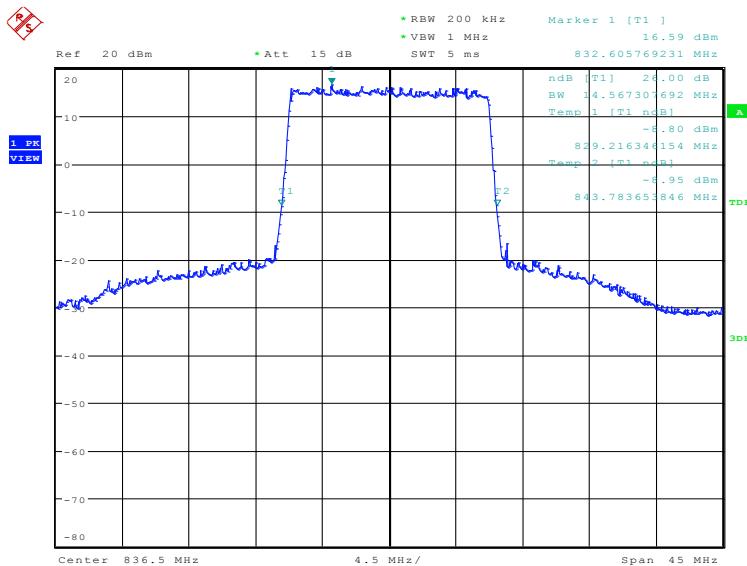
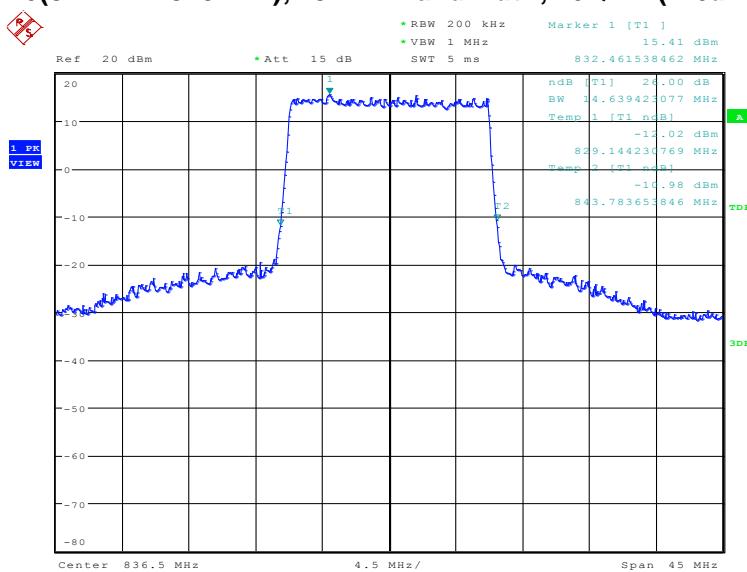
**LTE band 26(824MHz~849MHz), 10MHz Bandwidth, 64QAM (-26dBc BW)**



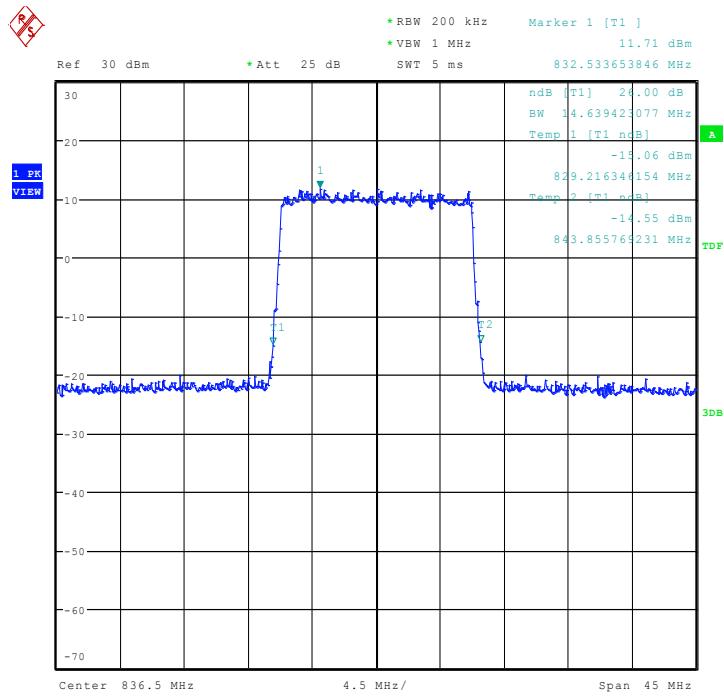
Date: 1.AUG.2019 10:16:34

**LTE band 26(824MHz~849MHz), 15MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
	14567.31	14639.42	14639.42

**LTE band 26(824MHz~849MHz), 15MHz Bandwidth, QPSK (-26dBc BW)**

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


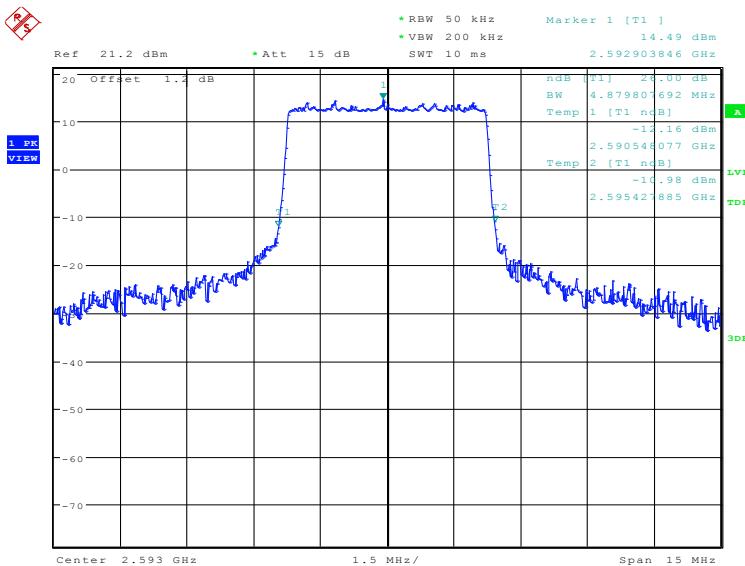
**LTE band 26(824MHz~849MHz), 15MHz Bandwidth, 64QAM (-26dBc BW)**



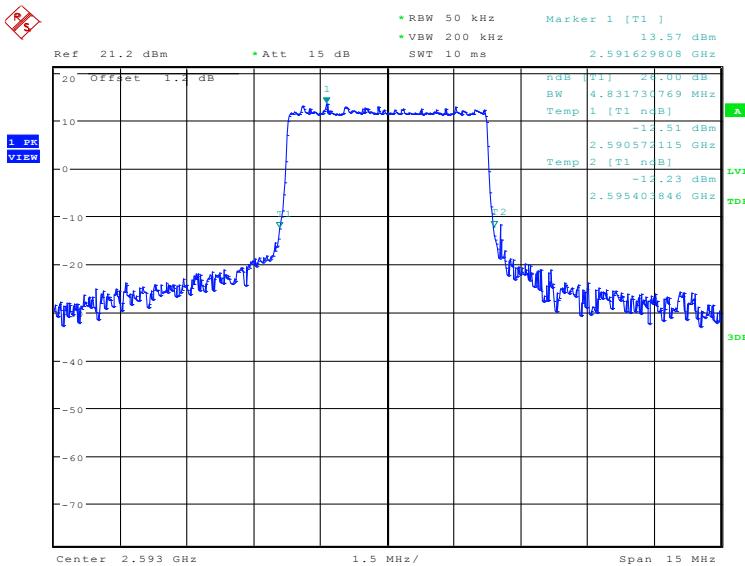
Date: 1.AUG.2019 10:17:36

**LTE Band 41 HPUE, 5MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	4879.81	4831.73	4783.65

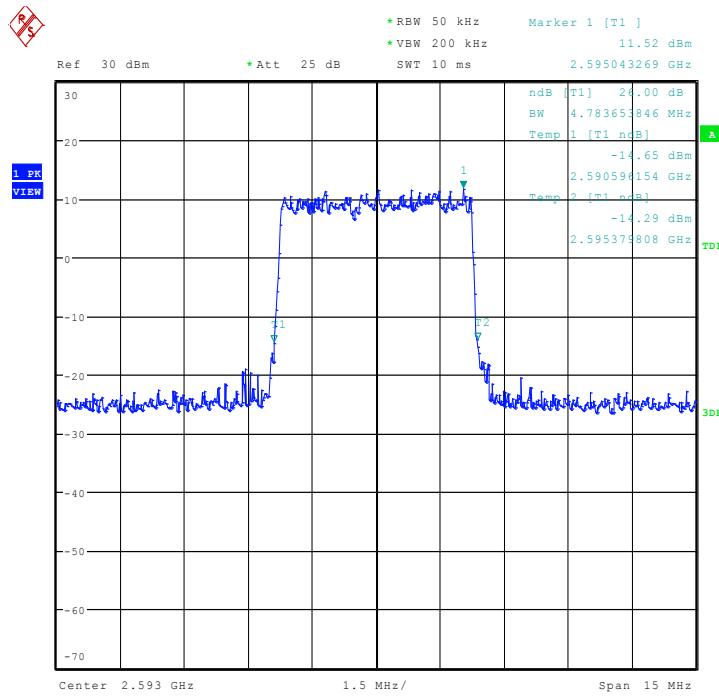
**LTE Band 41 HPUE, 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 12.AUG.2019 10:34:39

**LTE Band 41 HPUE, 5MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 12.AUG.2019 10:36:04

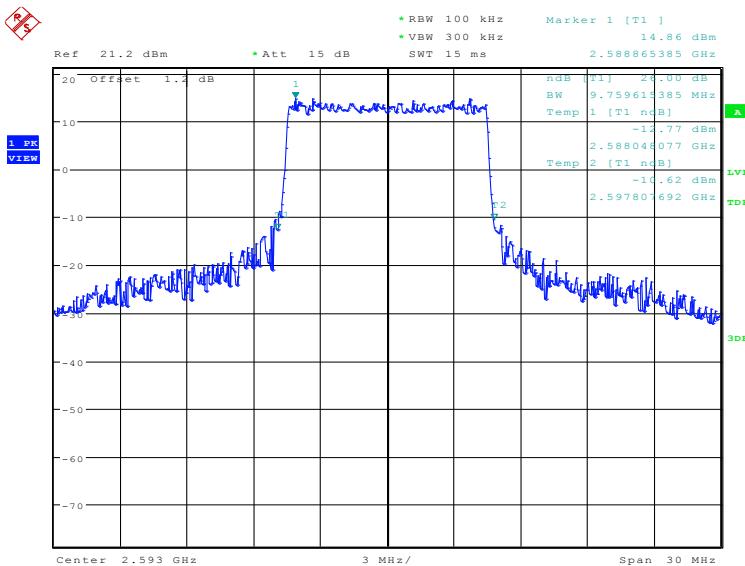
**LTE Band 41 HPUE, 5MHz Bandwidth,64QAM (-26dBc BW)**



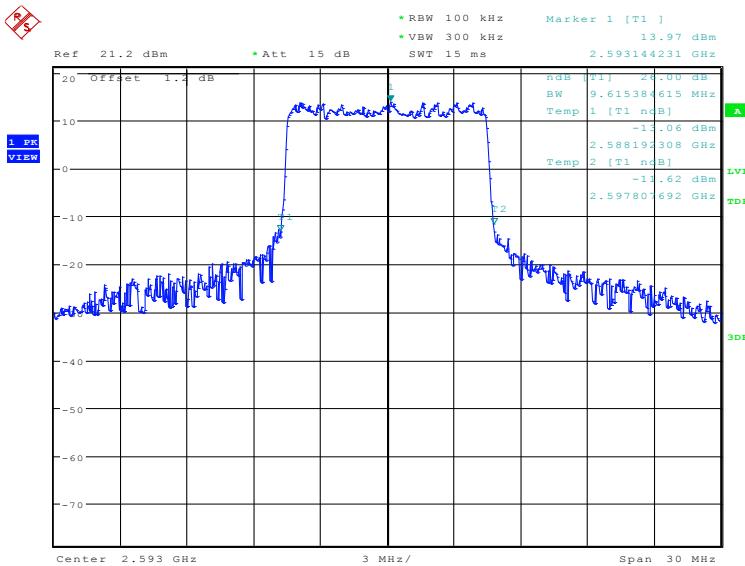
Date: 1.AUG.2019 10:32:34

**LTE Band 41 HPUE, 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	9759.62	9615.38	9615.38

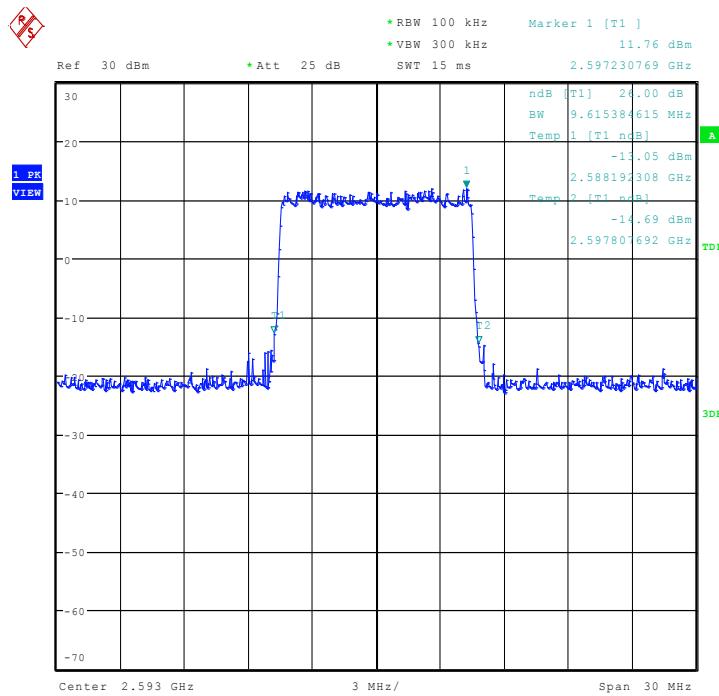
**LTE Band 41 HPUE, 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 12.AUG.2019 10:37:30

**LTE Band 41 HPUE, 10MHz Bandwidth,16QAM (-26dBc BW)**


Date: 12.AUG.2019 10:38:54

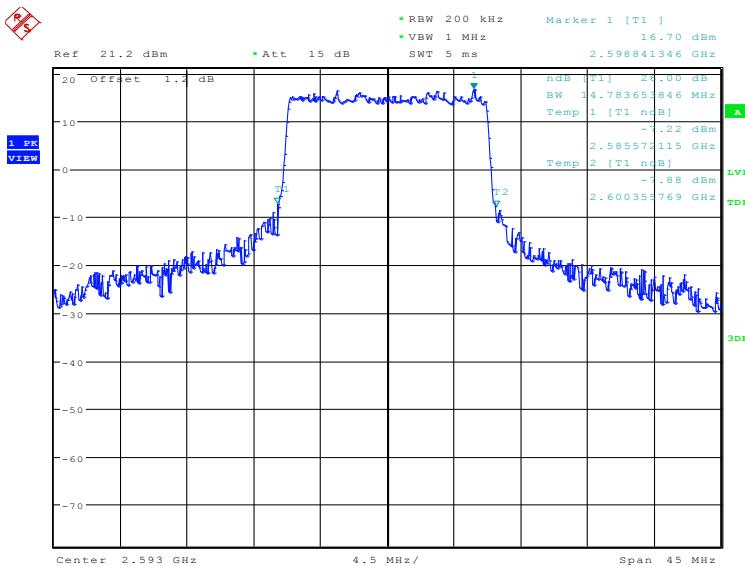
### LTE Band 41 HPUE, 10MHz Bandwidth, 64QAM (-26dBc BW)



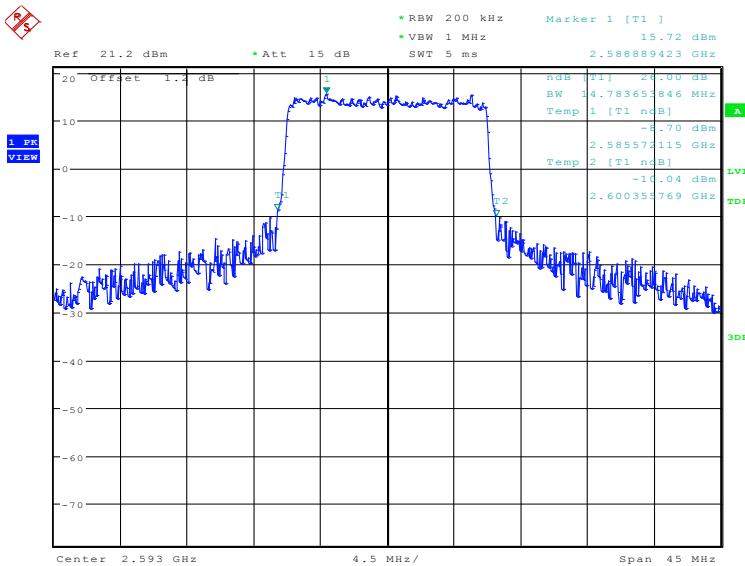
Date: 1.AUG.2019 10:33:44

**LTE Band 41 HPUE, 15MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	14783.65	14783.65	14495.19

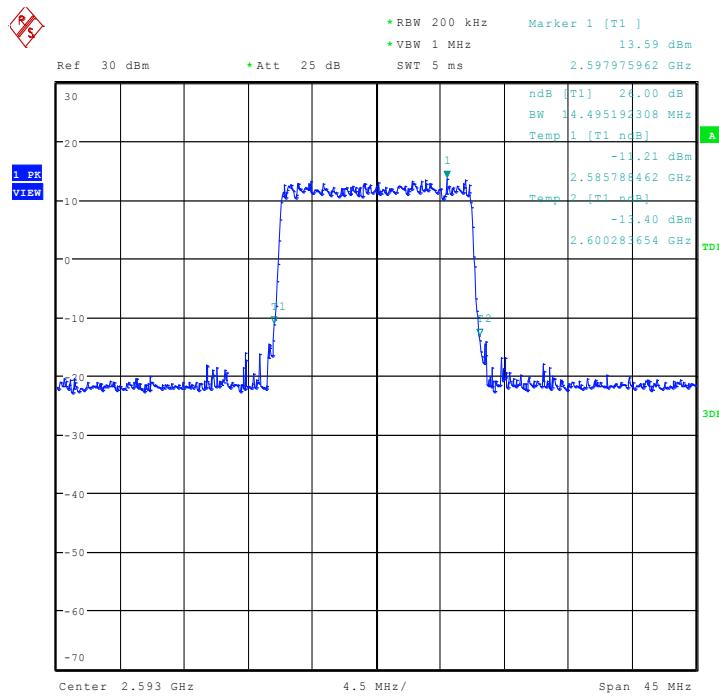
**LTE Band 41 HPUE, 15MHz Bandwidth, QPSK (-26dBc BW)**


Date: 12.AUG.2019 10:41:08

**LTE Band 41 HPUE, 15MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 12.AUG.2019 10:42:32

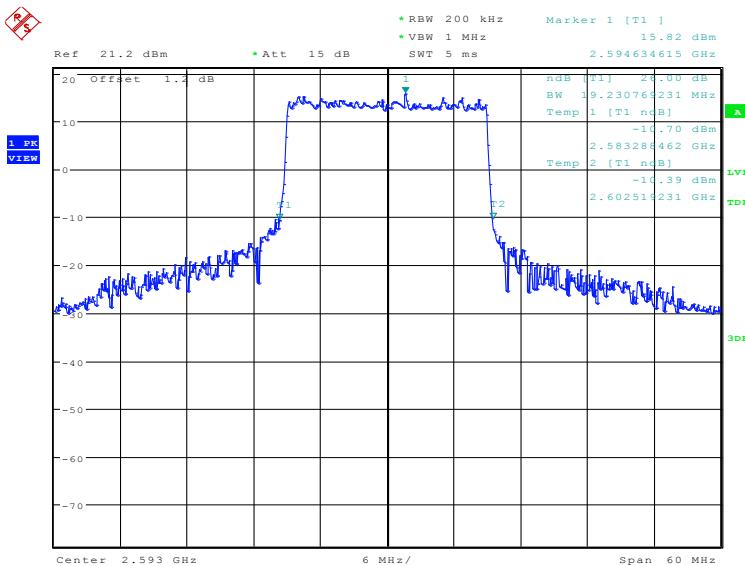
**LTE Band 41 HPUE, 15MHz Bandwidth, 64QAM (-26dBc BW)**



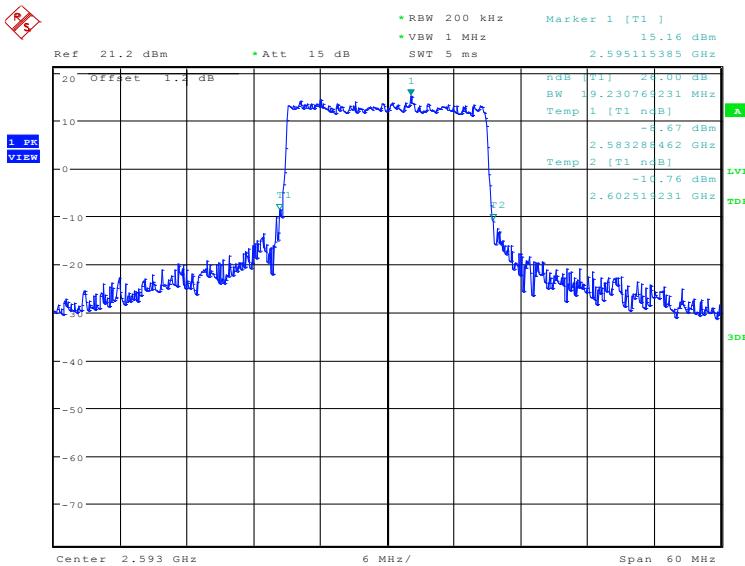
Date: 1.AUG.2019 10:35:11

**LTE Band 41 HPUE, 20MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	19230.77	19230.77	19230.77

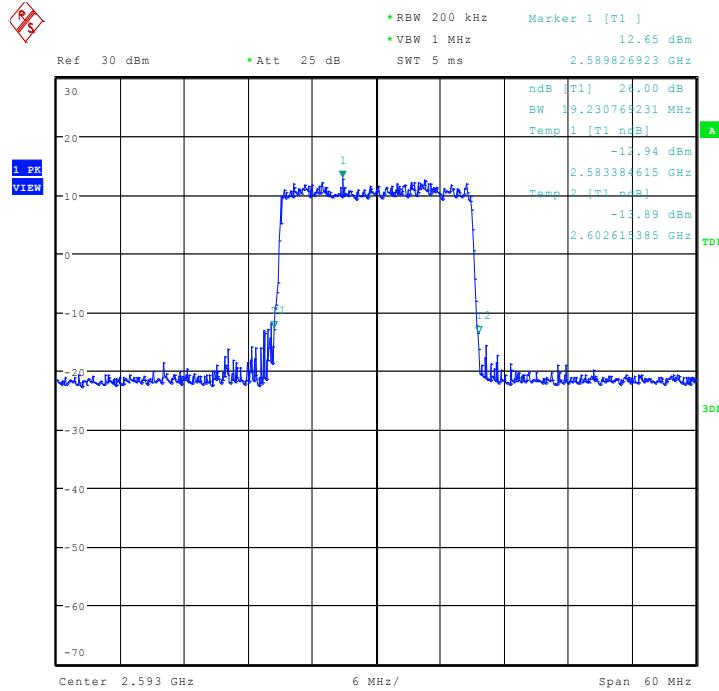
**LTE Band 41 HPUE, 20MHz Bandwidth, QPSK (-26dBc BW)**


Date: 12.AUG.2019 10:44:46

**LTE Band 41 HPUE, 20MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 12.AUG.2019 10:46:10

### LTE Band 41 HPUE, 20MHz Bandwidth, 64QAM (-26dBc BW)

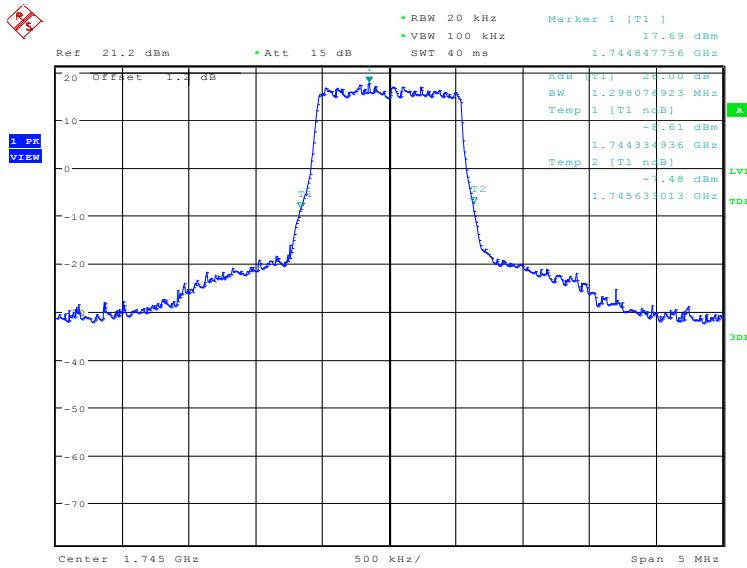


Date: 1.AUG.2019 10:36:17

## LTE band 66, 1.4MHz (-26dBc)

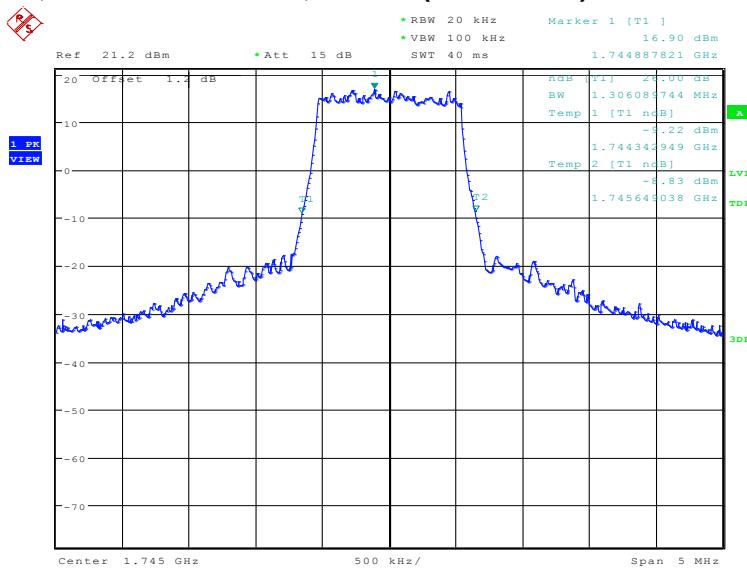
Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
1745.0	QPSK	16QAM	64QAM
	1298.08	1306.09	1274.04

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



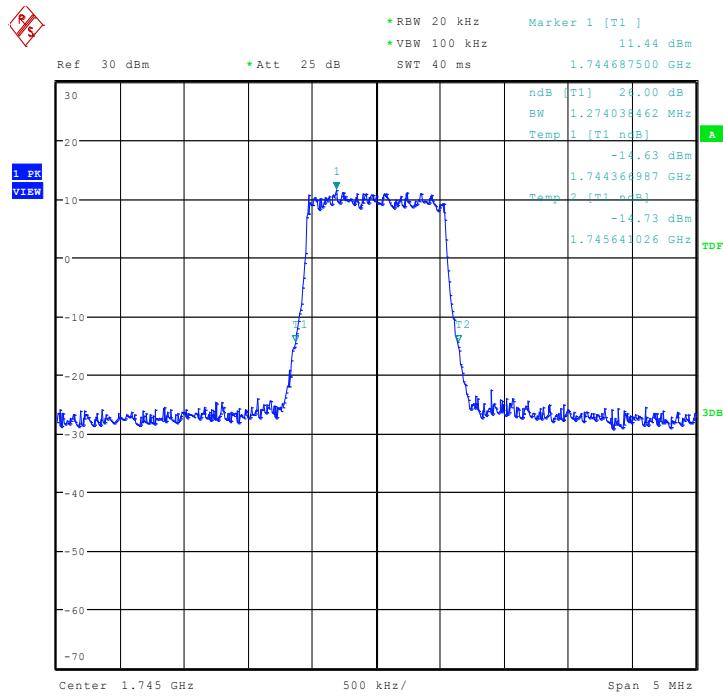
Date: 25.JUL.2019 22:42:39

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



Date: 25.JUL.2019 22:44:05

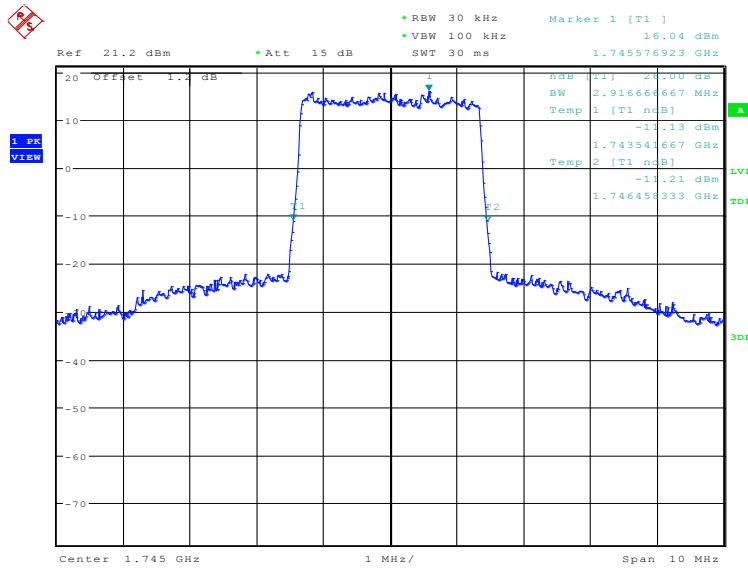
**LTE band 66, 1.4MHz Bandwidth, 64QAM (-26dBc BW)**



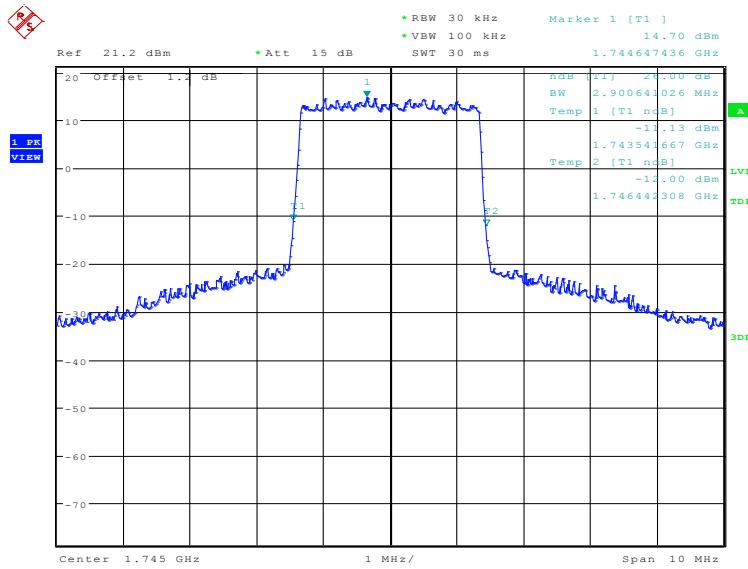
Date: 1.AUG.2019 10:24:34

**LTE band 66, 3MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1745.0	2916.67	2900.64	2900.64

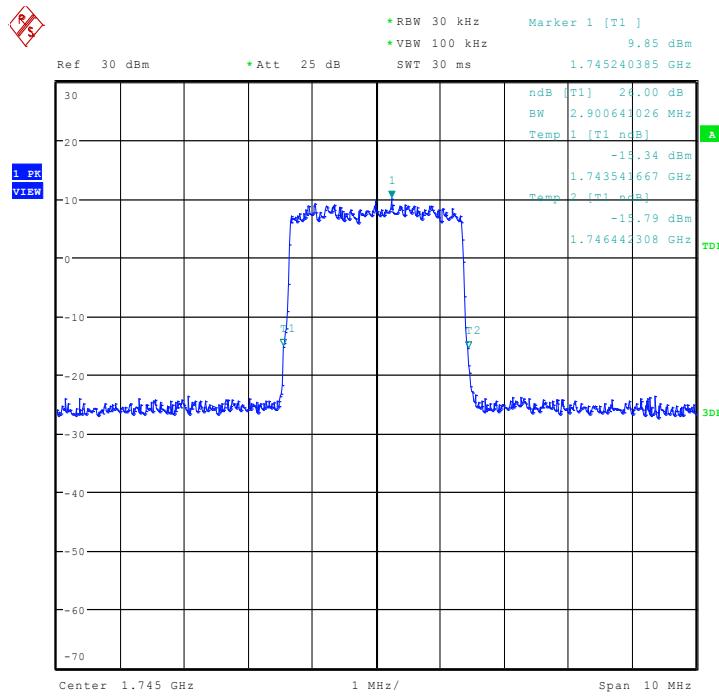
**LTE band 66, 3MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:46:19

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


Date: 25.JUL.2019 22:47:45

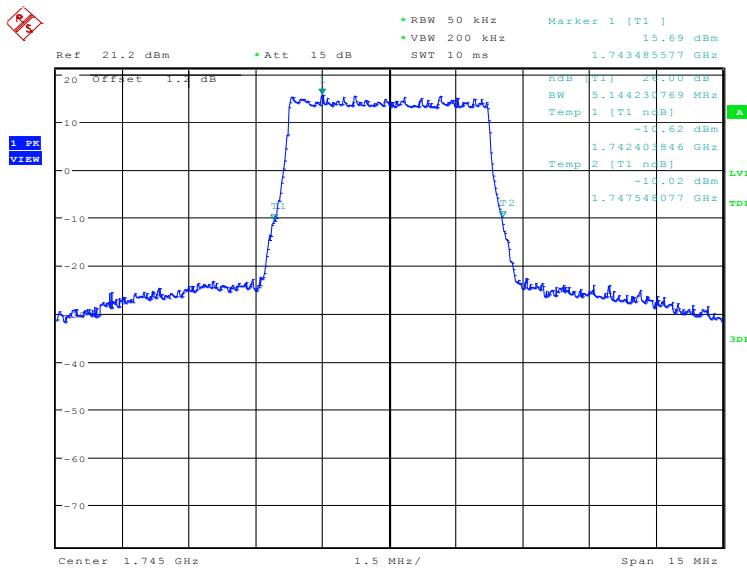
**LTE band 66, 3MHz Bandwidth, 64QAM (-26dBc BW)**



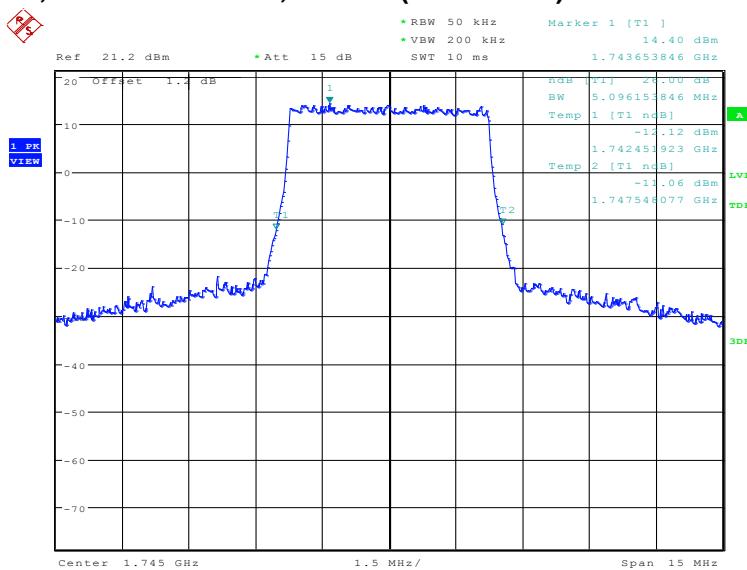
Date: 1.AUG.2019 10:26:03

**LTE band 66, 5MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1745.0	5144.23	5096.15	5048.08

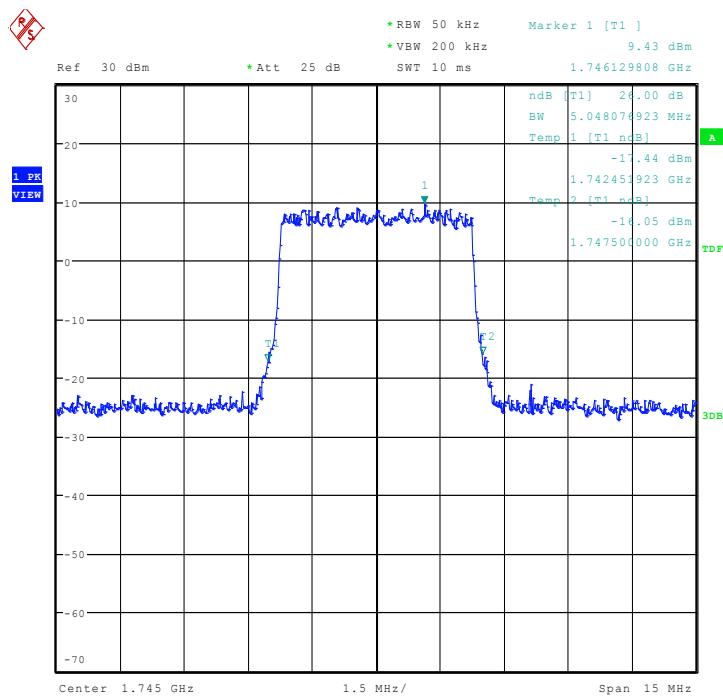
**LTE band 66, 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:50:00

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


Date: 25.JUL.2019 22:51:26

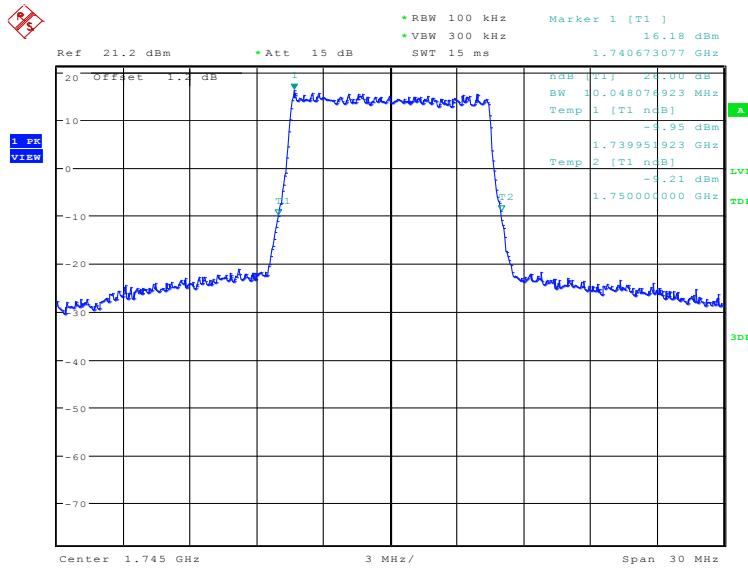
**LTE band 66, 5MHz Bandwidth,64QAM (-26dBc BW)**



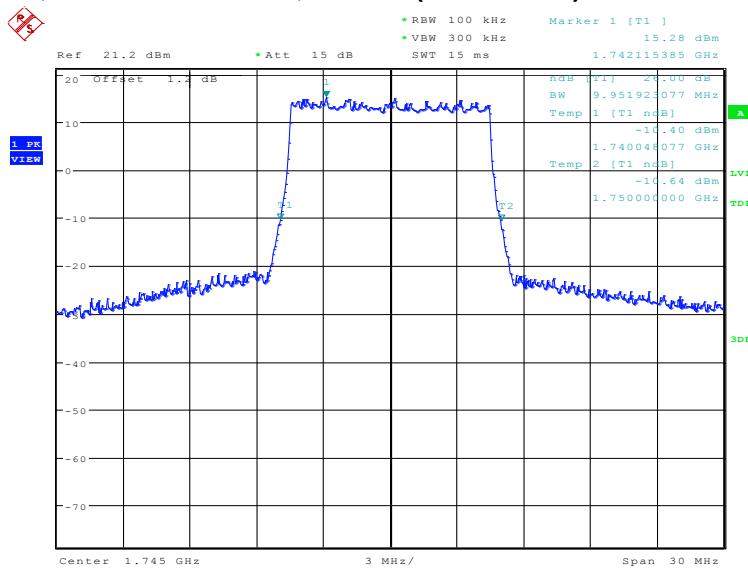
Date: 1.AUG.2019 10:27:13

**LTE band 66, 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1745.0			
	10048.08	9951.92	9855.77

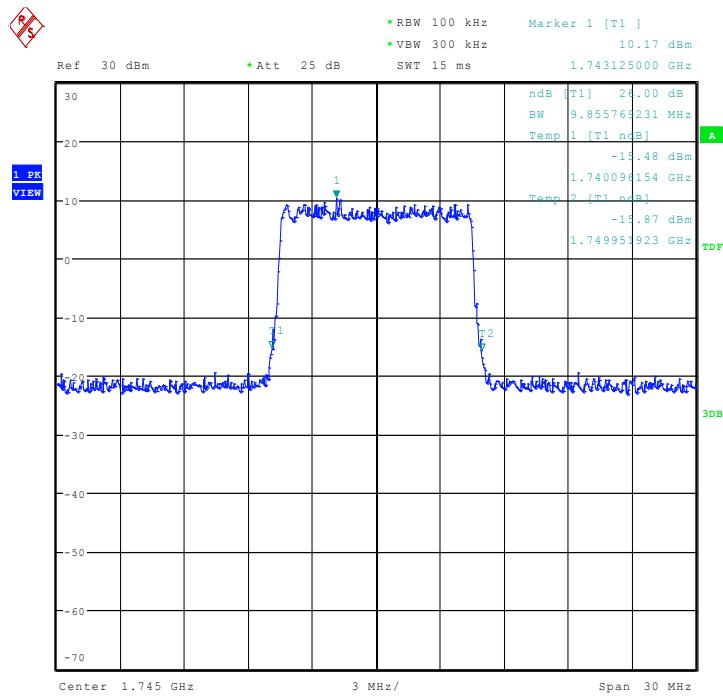
**LTE band 66, 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:53:41

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


Date: 25.JUL.2019 22:55:06

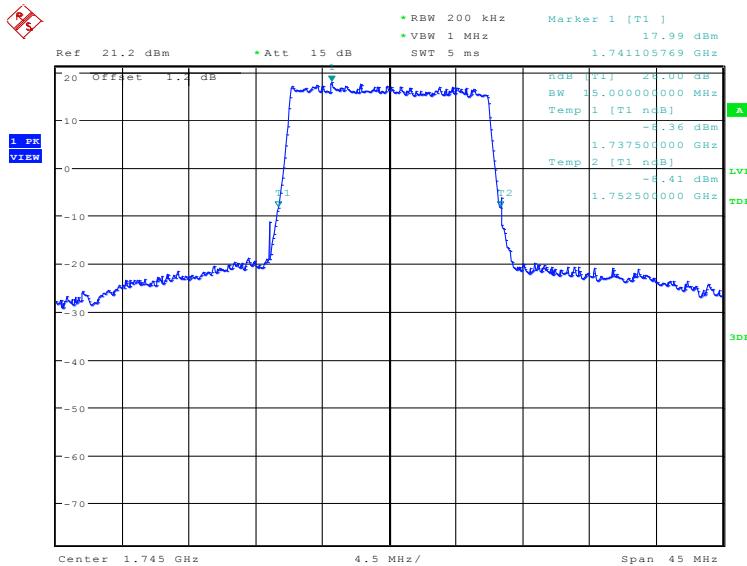
**LTE band 66, 10MHz Bandwidth, 64QAM (-26dBc BW)**



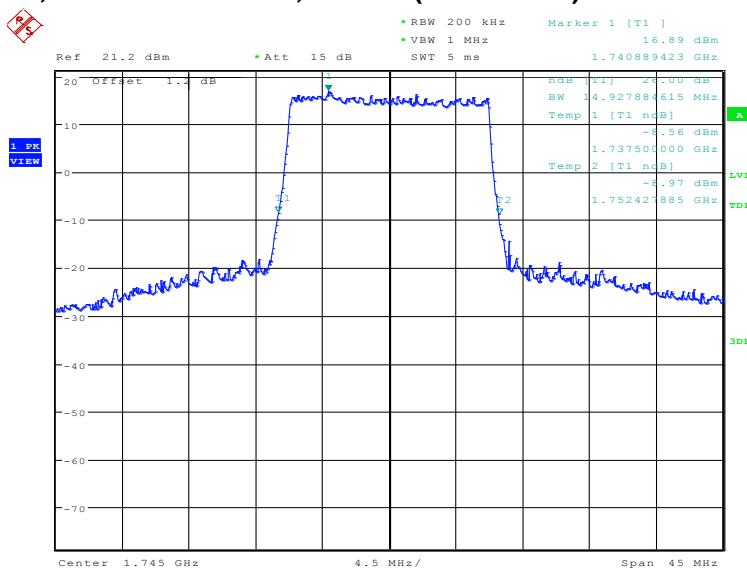
Date: 1.AUG.2019 10:28:17

**LTE band 66, 15MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1745.0		15000.00	14927.88
		14927.88	14927.88

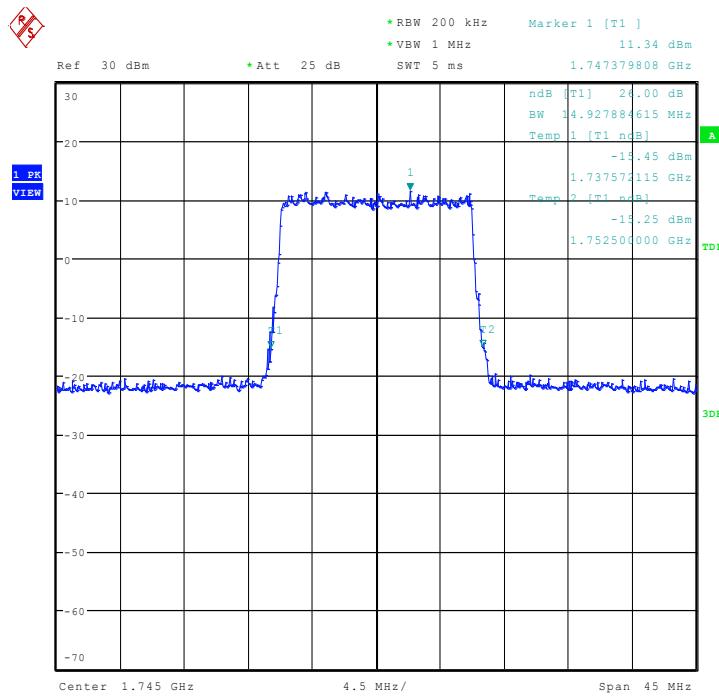
**LTE band 66, 15MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 22:57:21

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


Date: 25.JUL.2019 22:58:47

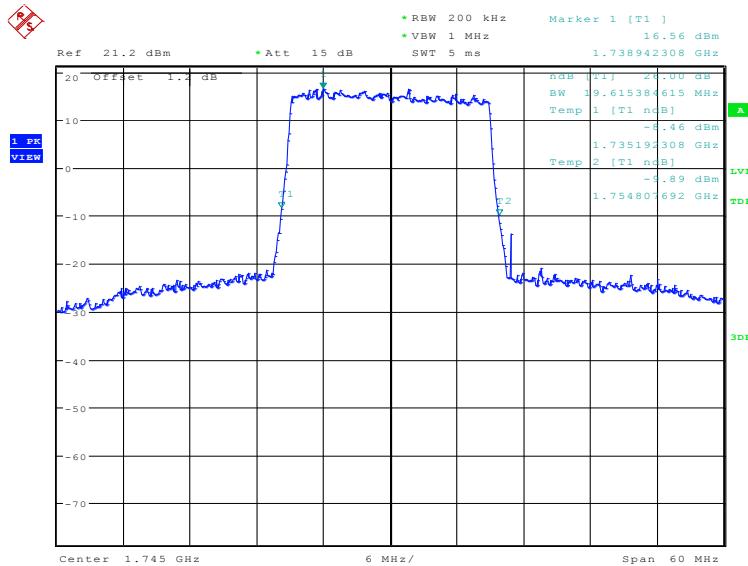
**LTE band 66, 15MHz Bandwidth, 64QAM (-26dBc BW)**



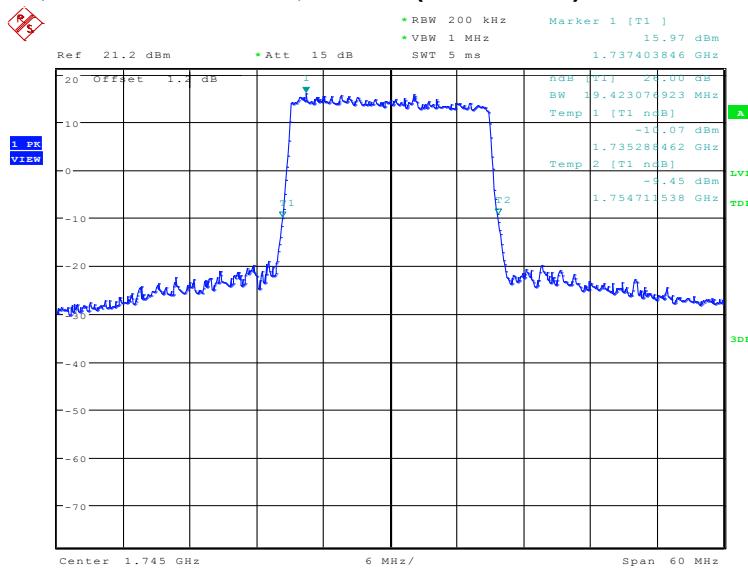
Date: 1.AUG.2019 10:29:31

**LTE band 66, 20MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1745.0		19615.38	19423.08
		19423.08	19423.08

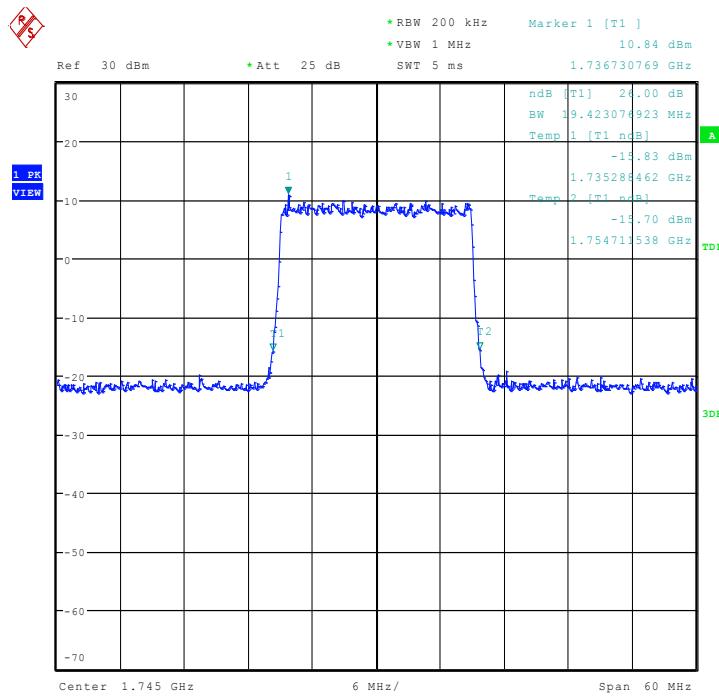
**LTE band 66, 20MHz Bandwidth, QPSK (-26dBc BW)**


Date: 25.JUL.2019 23:01:02

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


Date: 25.JUL.2019 23:02:28

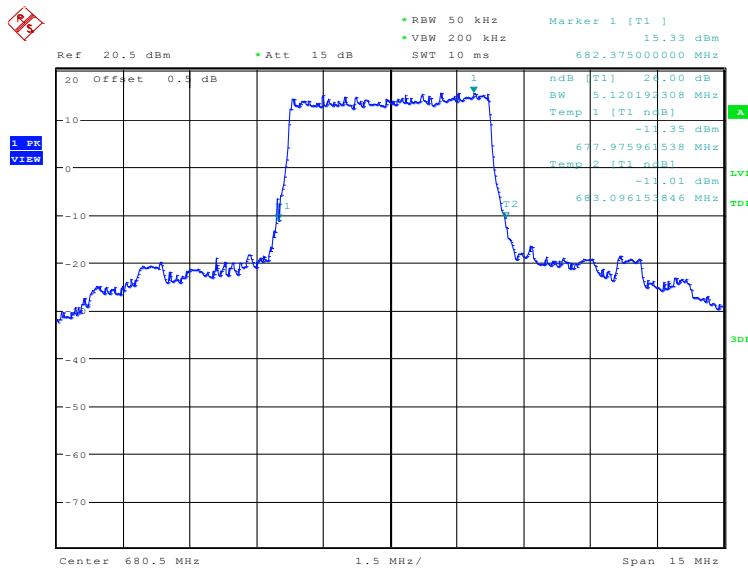
**LTE band 66, 20MHz Bandwidth, 64QAM (-26dBc BW)**



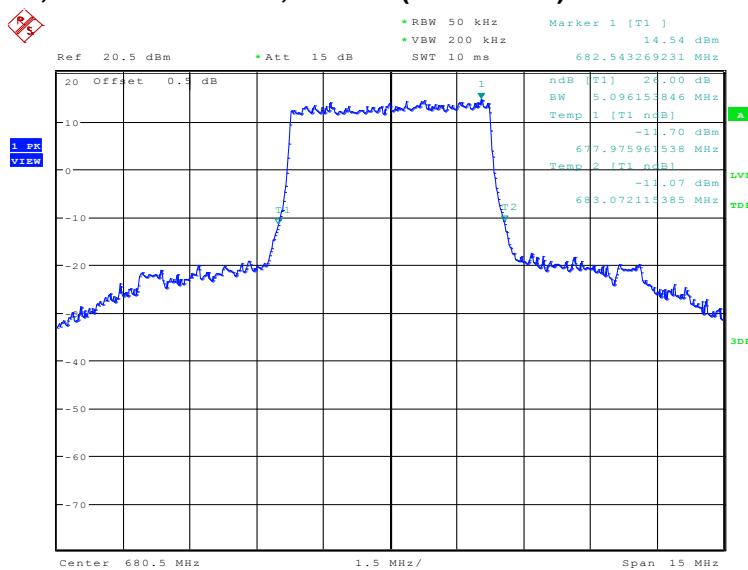
Date: 1.AUG.2019 10:30:35

**LTE band 71, 5MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
680.5	5120.19	5096.15	5024.04

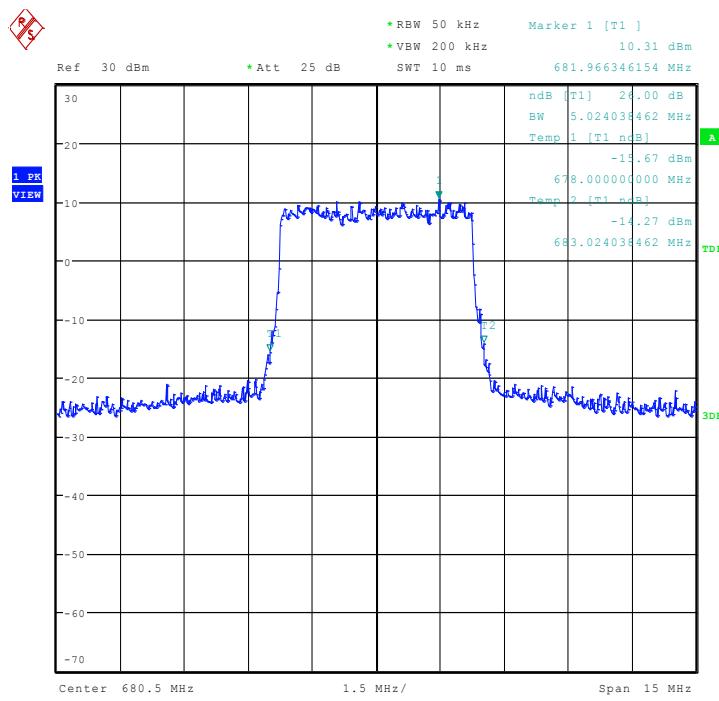
**LTE band 71, 5MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:28:37

**LTE band 71, 5MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 26.JUL.2019 11:30:01

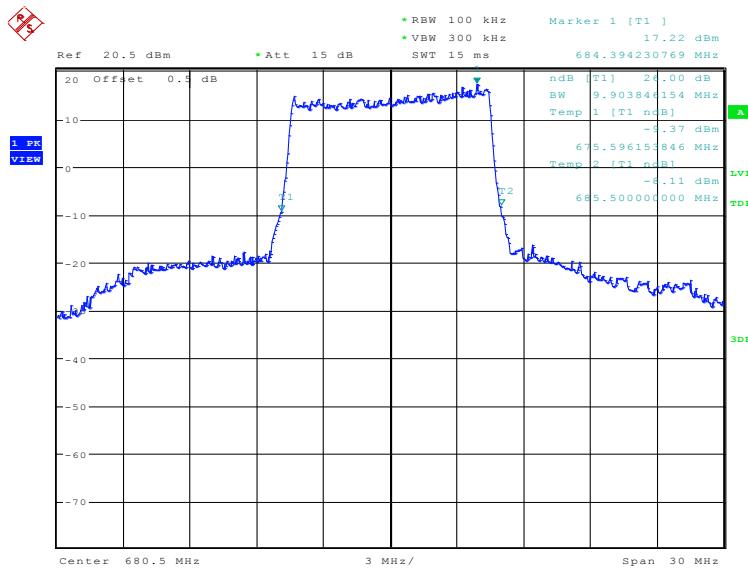
**LTE band 71, 5MHz Bandwidth,64QAM (-26dBc BW)**



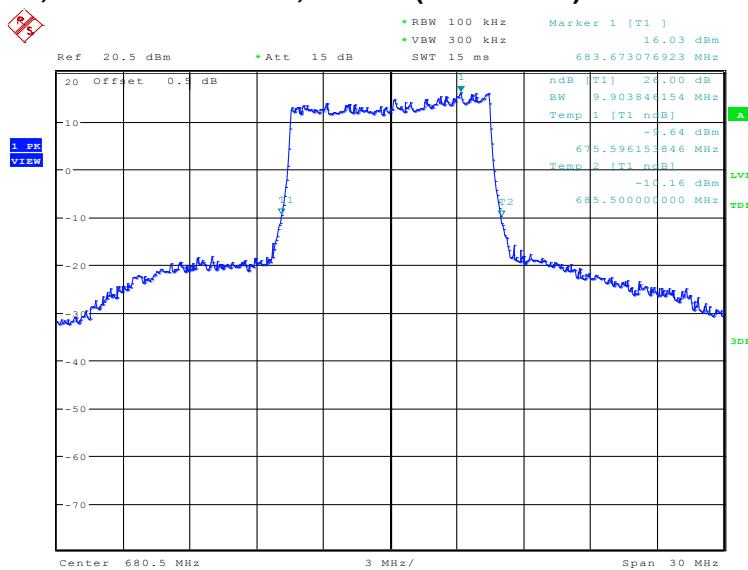
Date: 1.AUG.2019 10:39:22

**LTE band 71, 10MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
680.5		9903.85	9903.85
		9903.85	9903.85

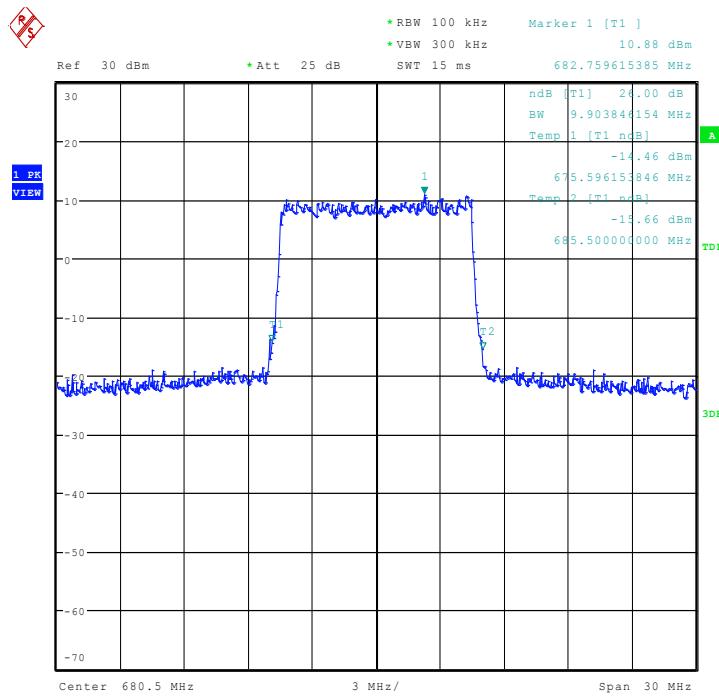
**LTE band 71, 10MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:32:15

**LTE band 71, 10MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 26.JUL.2019 11:33:39

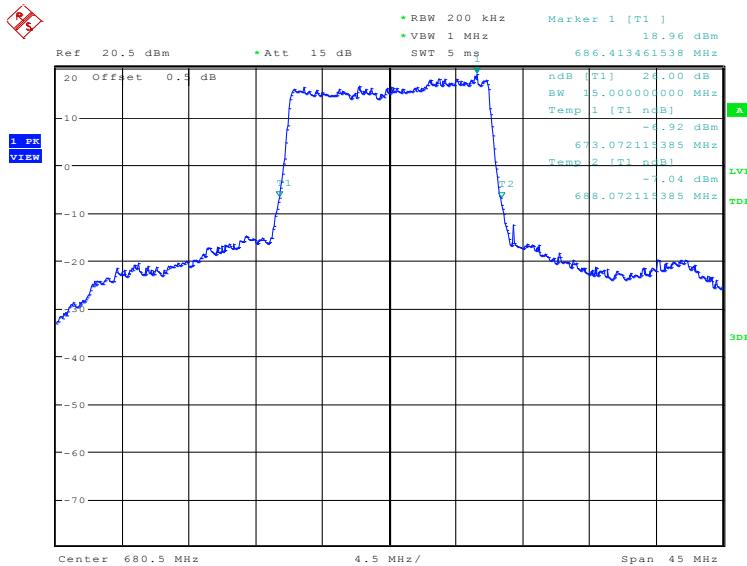
### LTE band 71, 10MHz Bandwidth, 64QAM (-26dBc BW)



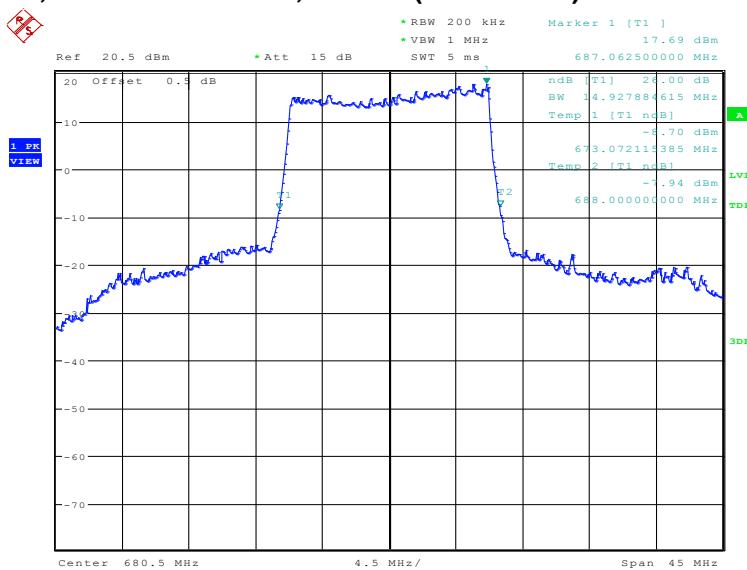
Date: 1.AUG.2019 10:40:31

**LTE band 71, 15MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
680.5			
	15000.00	14927.88	14927.88

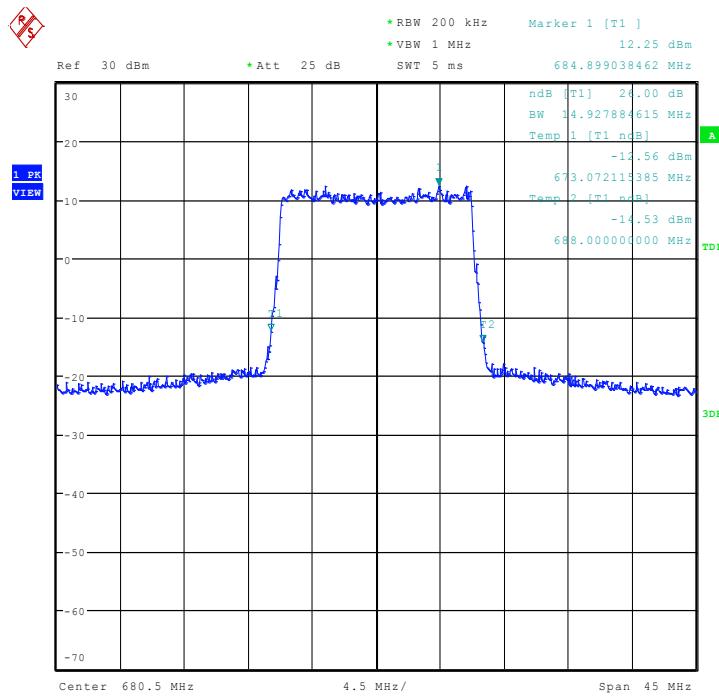
**LTE band 71, 15MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:35:52

**LTE band 71, 15MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 26.JUL.2019 11:37:17

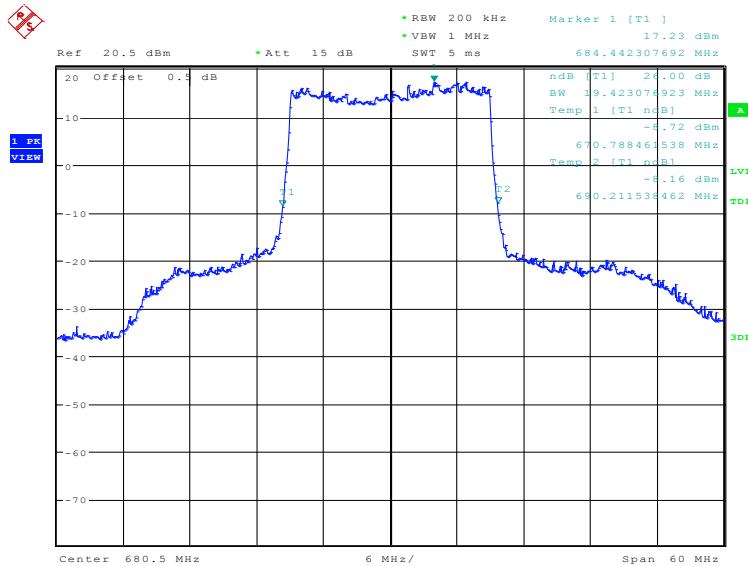
**LTE band 71, 15MHz Bandwidth, 64QAM (-26dBc BW)**



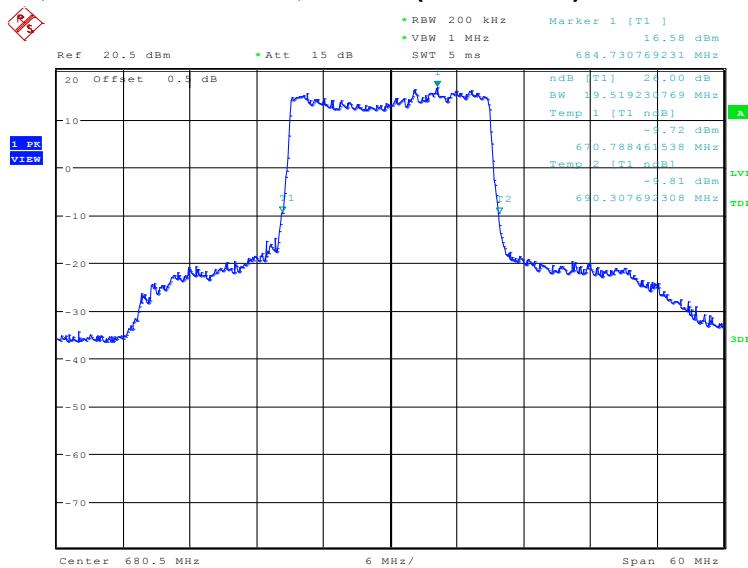
Date: 1.AUG.2019 10:41:32

**LTE band 71, 20MHz (-26dBc)**

Frequency (MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
	19423.08	19519.23	19519.23

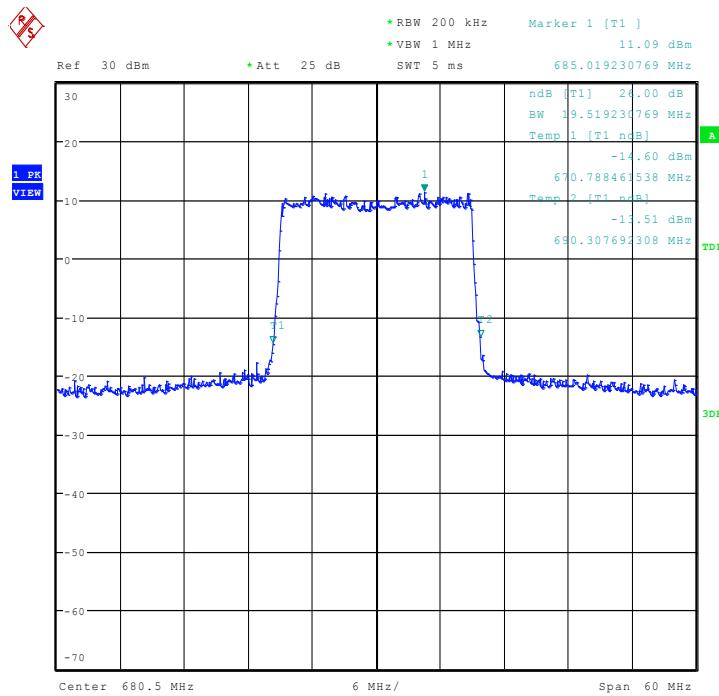
**LTE band 71, 20MHz Bandwidth, QPSK (-26dBc BW)**


Date: 26.JUL.2019 11:39:30

**LTE band 71, 20MHz Bandwidth, 16QAM (-26dBc BW)**


Date: 26.JUL.2019 11:40:55

**LTE band 71, 20MHz Bandwidth, 64QAM (-26dBc BW)**



Date: 1.AUG.2019 10:42:40

## 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.

According to KDB 971168 6.0, a relaxation of the reference bandwidth is often provided for measurements within a specified frequency range at the edge of the authorized frequency block/band. This is often implemented by permitting the use of a narrower RBW (typically limited to a minimum RBW of 1% of the OBW) for measuring the out-of-band emissions without a requirement to integrate the result over the full reference bandwidth.

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

Part 27.53(m)(4) specifies for mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log(P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log(P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log(P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less 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 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.



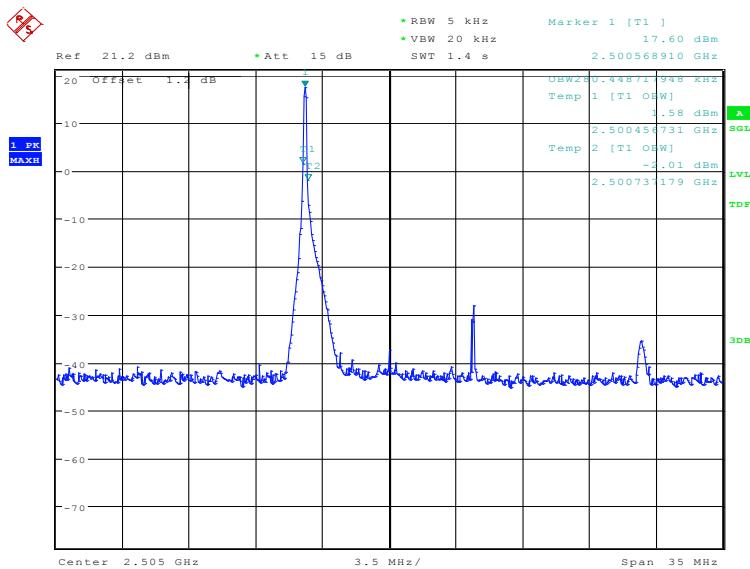
For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10\log_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

## A.6.2 Measurement result

**Only the worst-case result is given below**

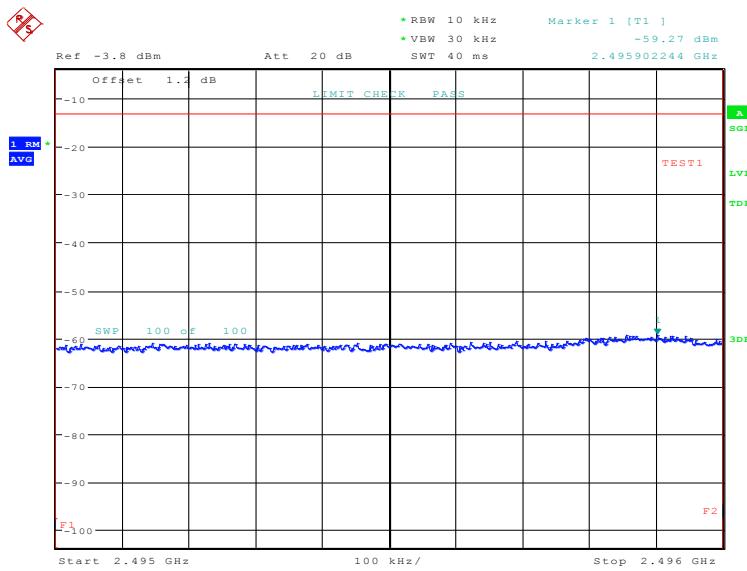
## LTE band 7

## OBW: 1RB-low\_offset

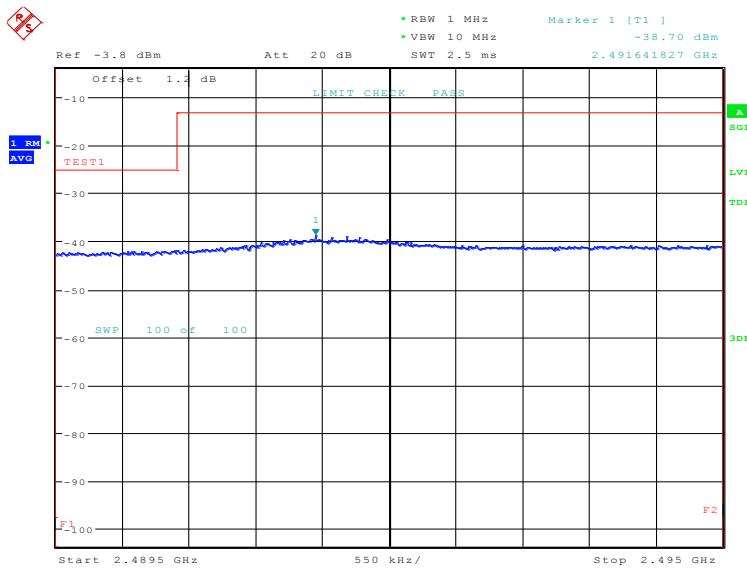


Date: 12.AUG.2019 13:59:05

### LOW BAND EDGE BLOCK-1RB-low\_offset

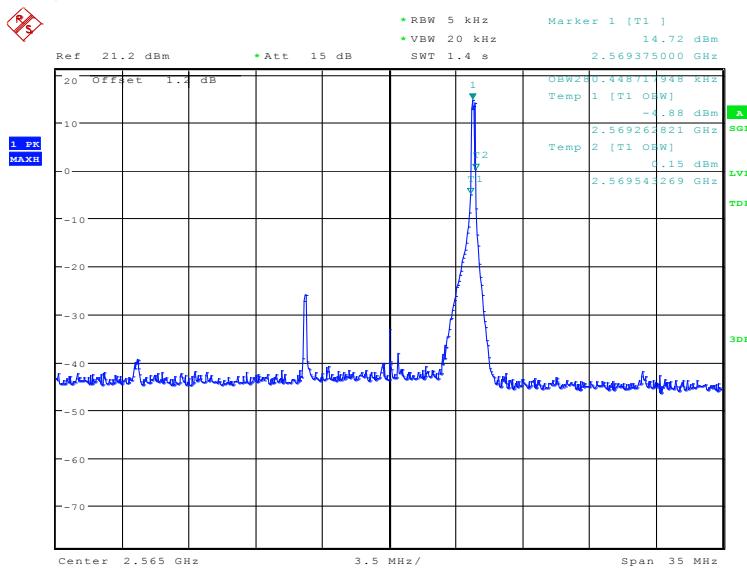


Date: 12.AUG.2019 13:59:25



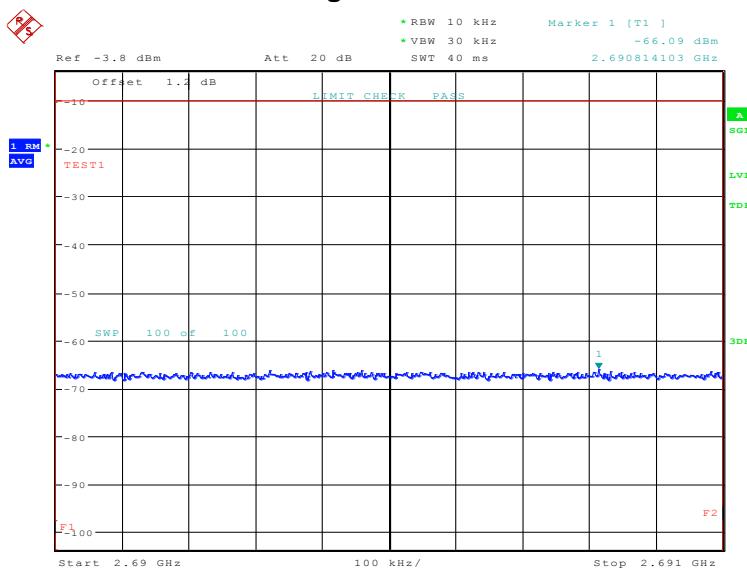
Date: 12.AUG.2019 13:59:40

### OBW: 1RB-high\_offset

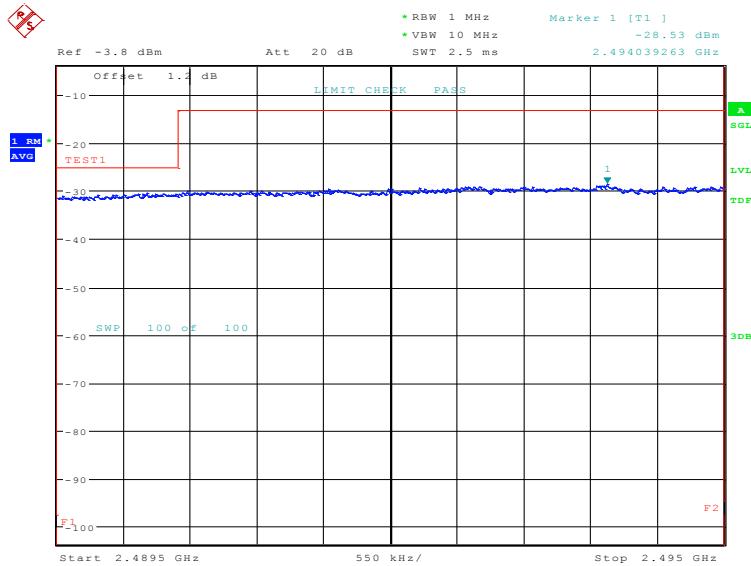


Date: 12.AUG.2019 13:44:47

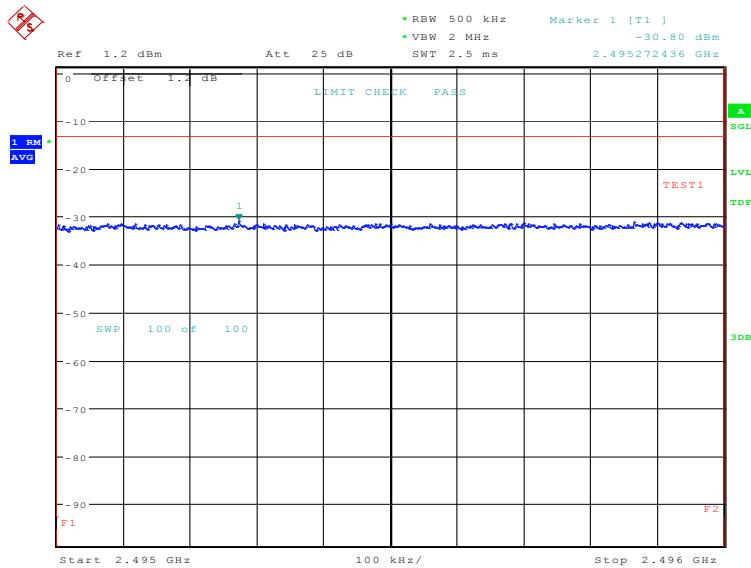
### HIGH BAND EDGE BLOCK-1RB-high\_offset



### LOW BAND EDGE BLOCK-20MHz-100%RB

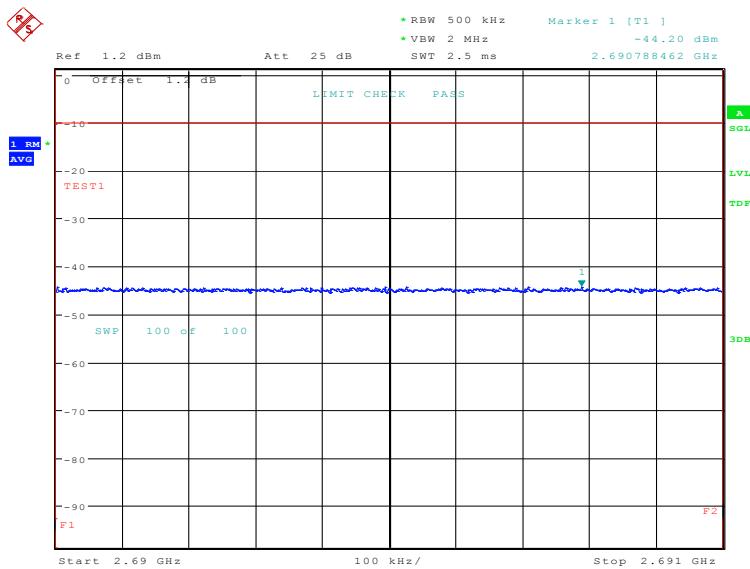


Date: 12.AUG.2019 13:42:47

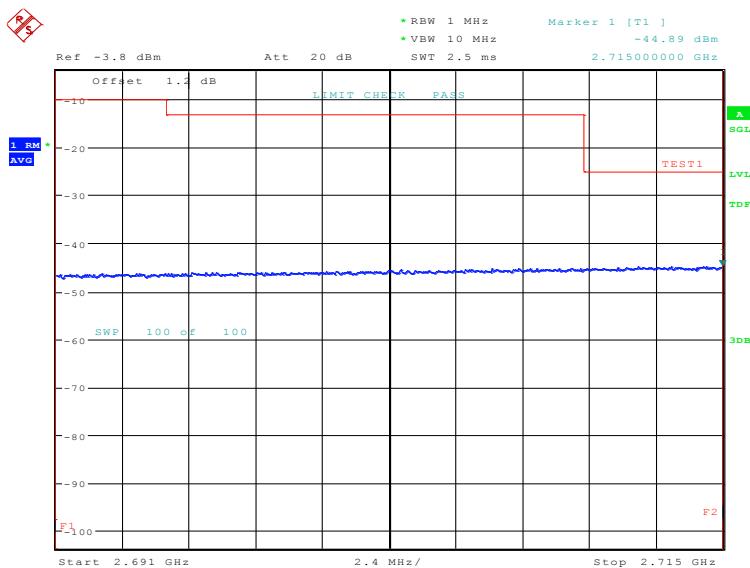


Date: 12.AUG.2019 13:42:32

### HIGH BAND EDGE BLOCK-20MHz-100%RB



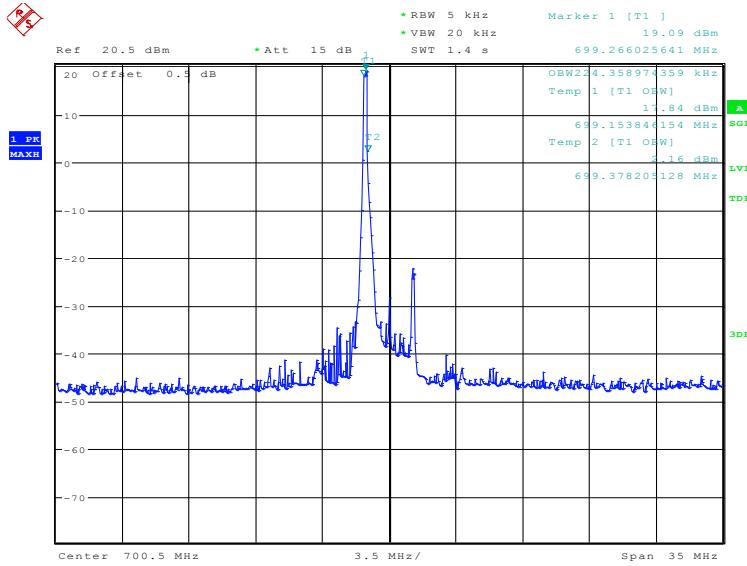
Date: 12.AUG.2019 13:46:08



Date: 12.AUG.2019 13:46:23

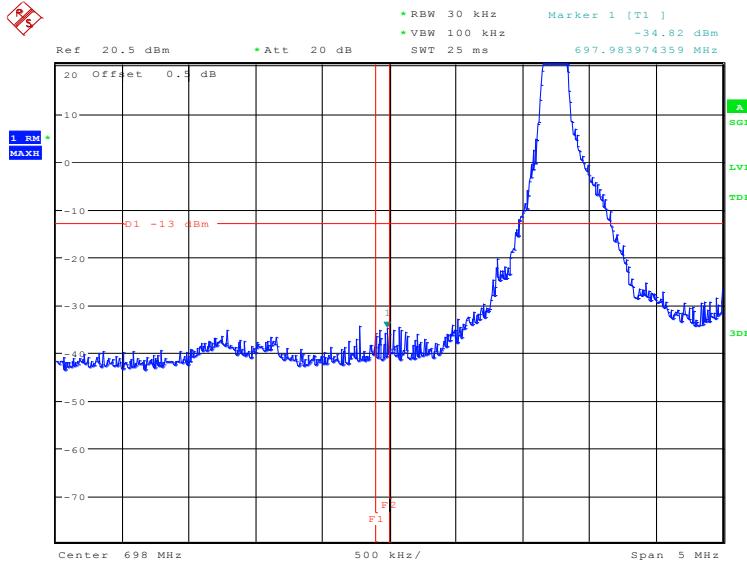
### LTE band 12

#### OBW: 1RB-low\_offset



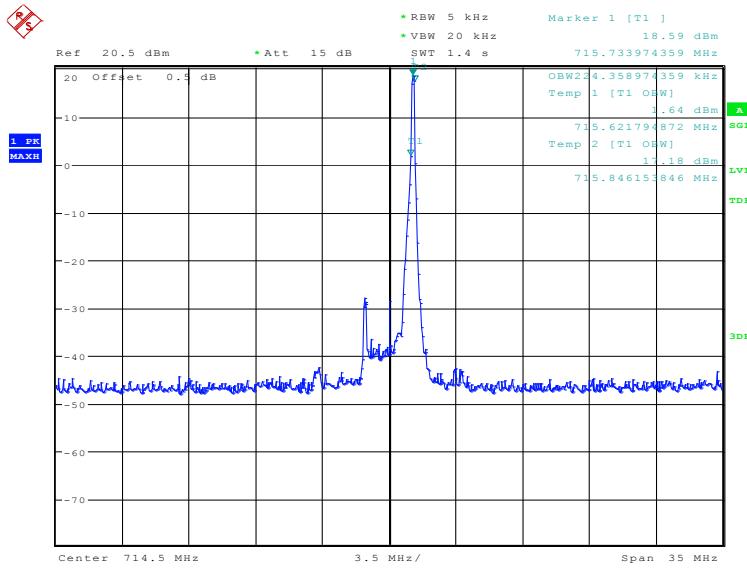
Date: 12.AUG.2019 15:33:15

#### LOW BAND EDGE BLOCK-1RB-low\_offset



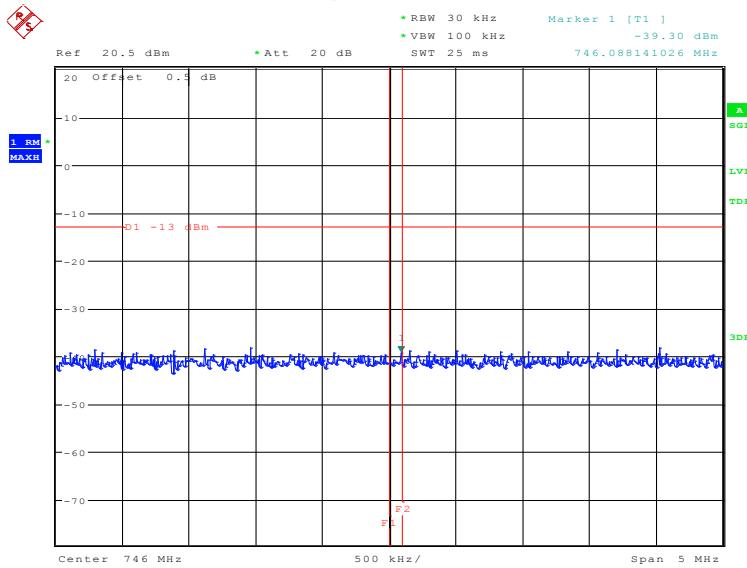
Date: 12.AUG.2019 15:33:31

### OBW: 1RB-high\_offset



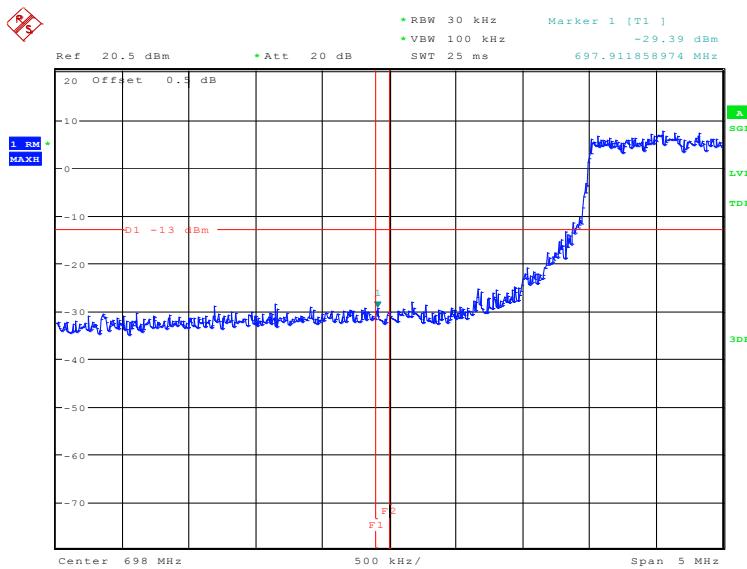
Date: 12.AUG.2019 15:36:07

### HIGH BAND EDGE BLOCK-1RB-high\_offset



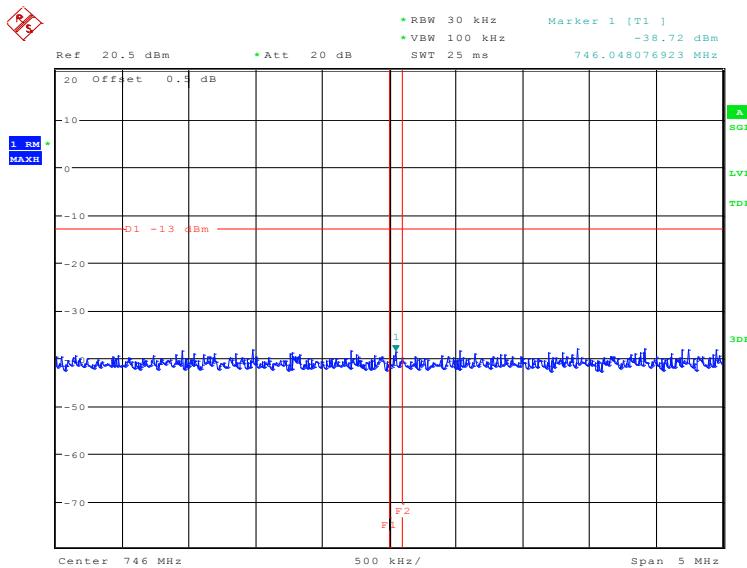
Date: 12.AUG.2019 15:36:22

### LOW BAND EDGE BLOCK-10MHz-100%RB



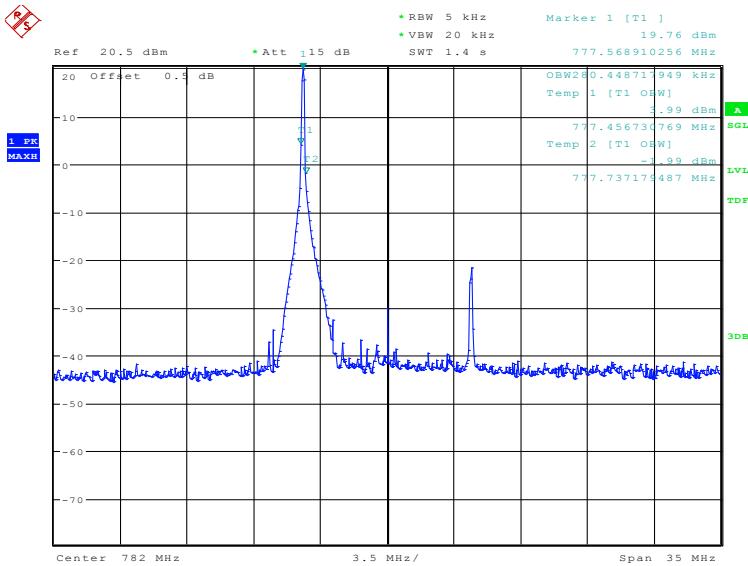
Date: 12.AUG.2019 15:34:07

### HIGH BAND EDGE BLOCK-10MHz-100%RB



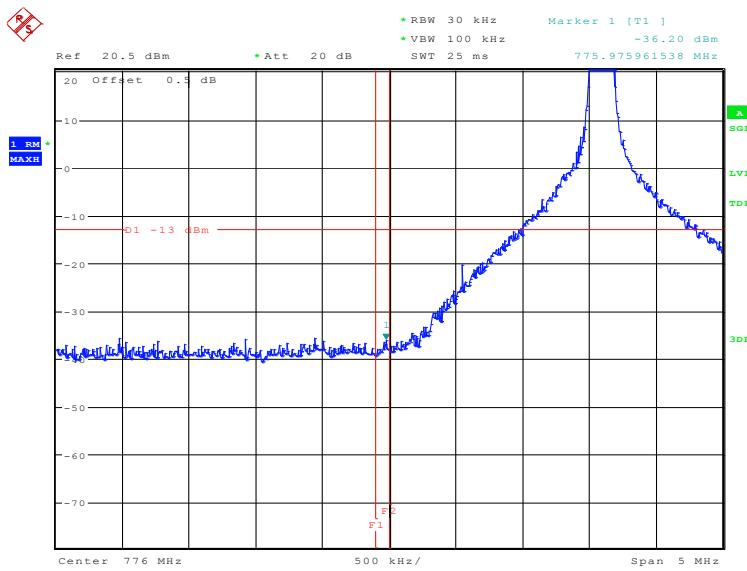
Date: 12.AUG.2019 15:36:59

**LTE band 13**  
**OBW: 1RB-low\_offset**

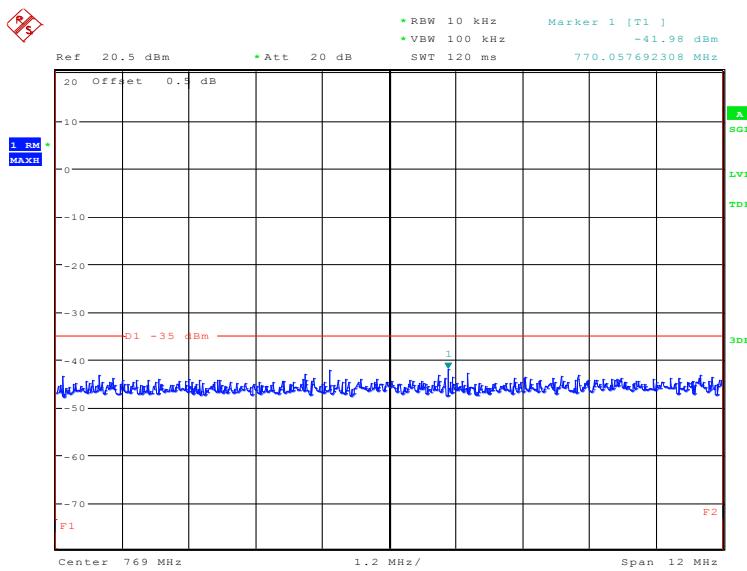


Date: 12.AUG.2019 14:04:13

### LOW BAND EDGE BLOCK-1RB-low\_offset

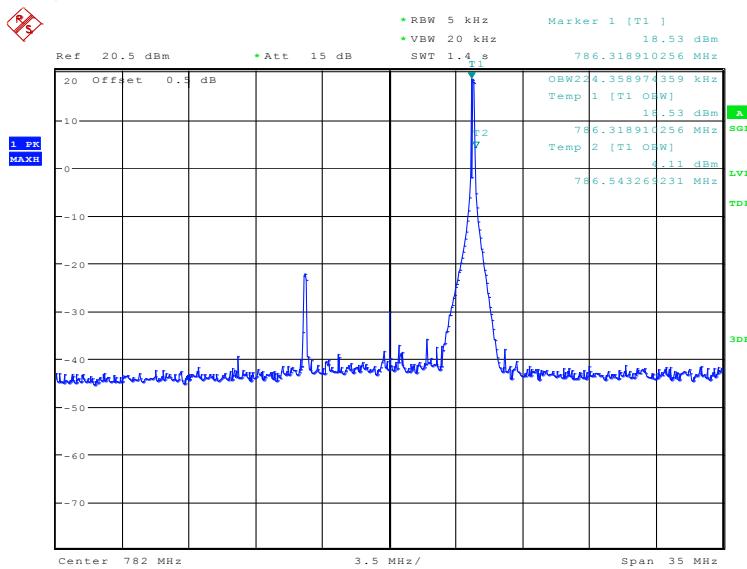


Date: 12.AUG.2019 14:04:29



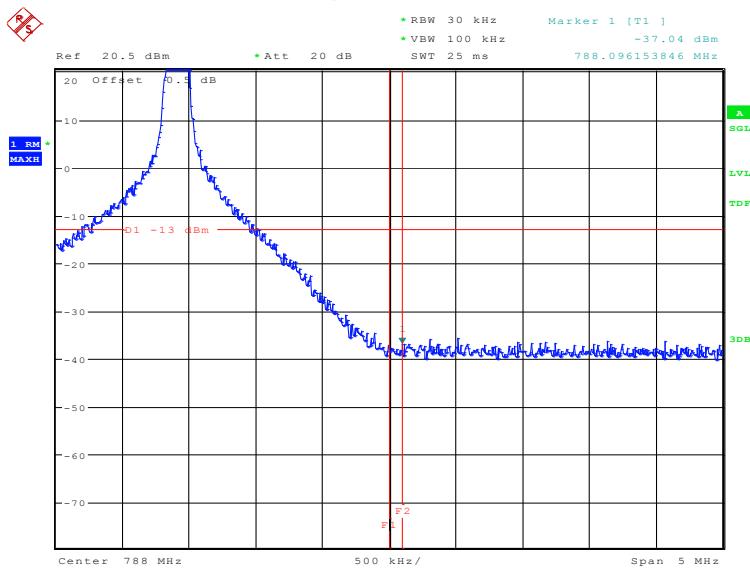
Date: 12.AUG.2019 14:04:43

### OBW: 1RB-high\_offset

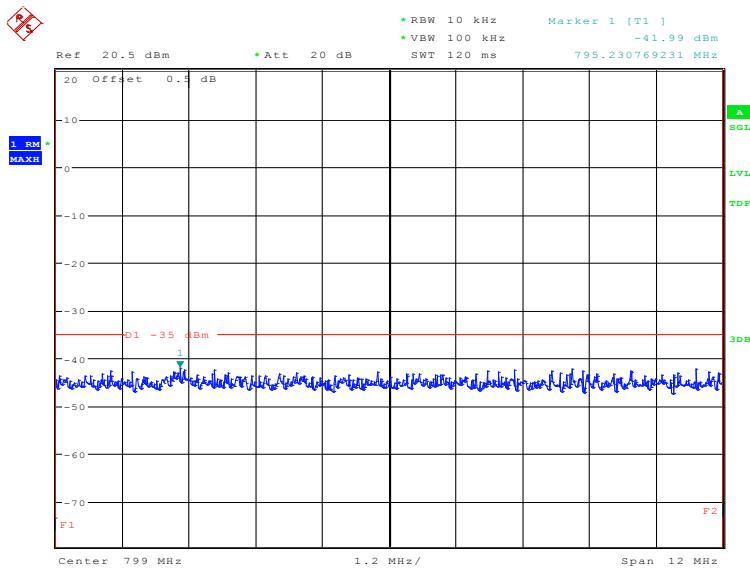


Date: 12.AUG.2019 14:06:46

### HIGH BAND EDGE BLOCK-1RB-high\_offset

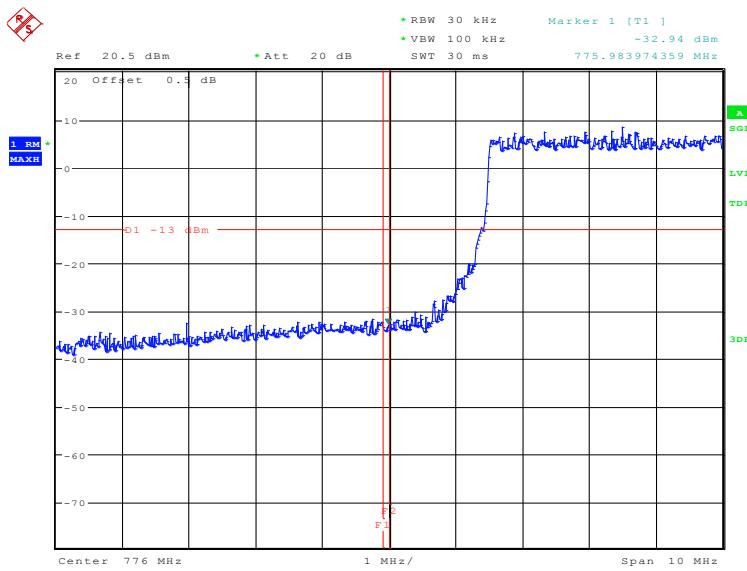


Date: 12.AUG.2019 14:07:01

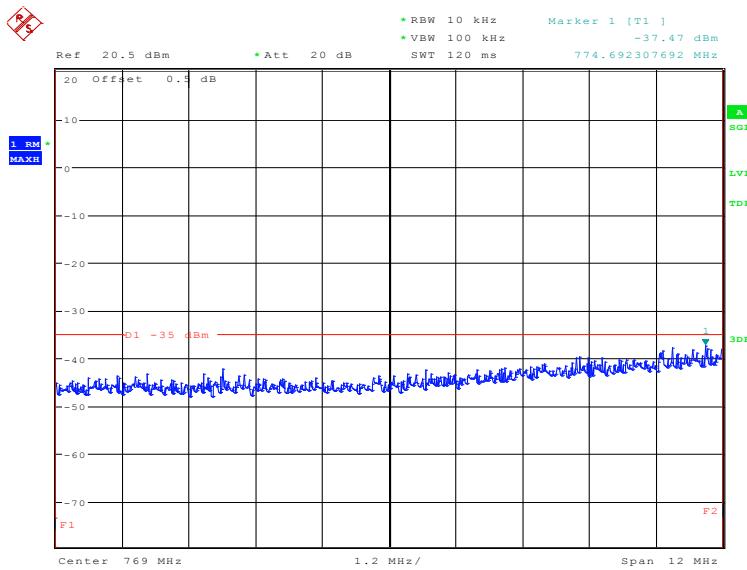


Date: 12.AUG.2019 14:07:16

### LOW BAND EDGE BLOCK-10MHz-100%RB

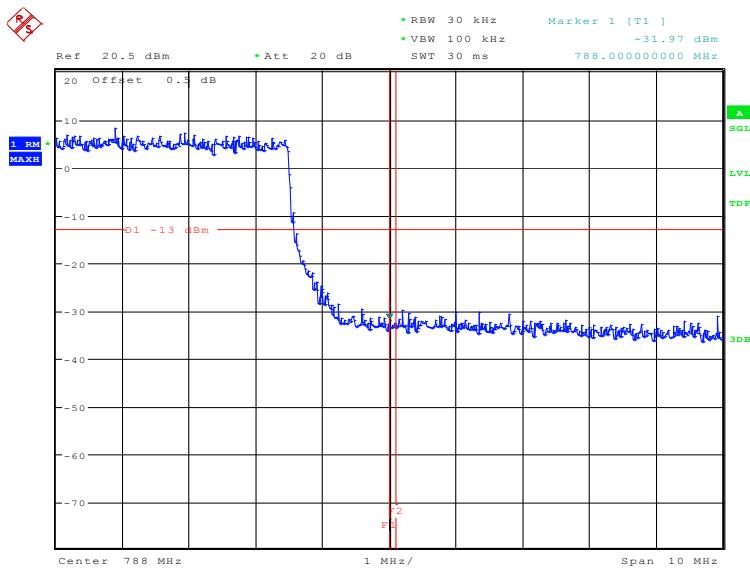


Date: 12.AUG.2019 14:05:12

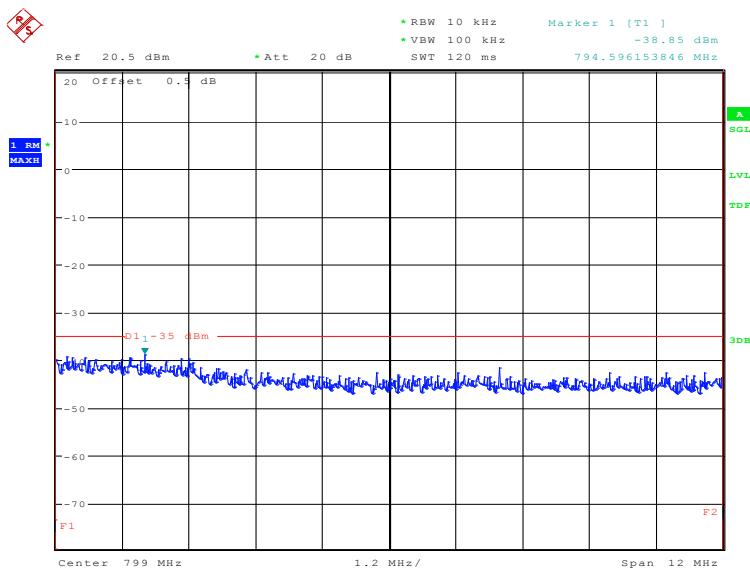


Date: 12.AUG.2019 14:05:27

### HIGH BAND EDGE BLOCK-10MHz-100%RB



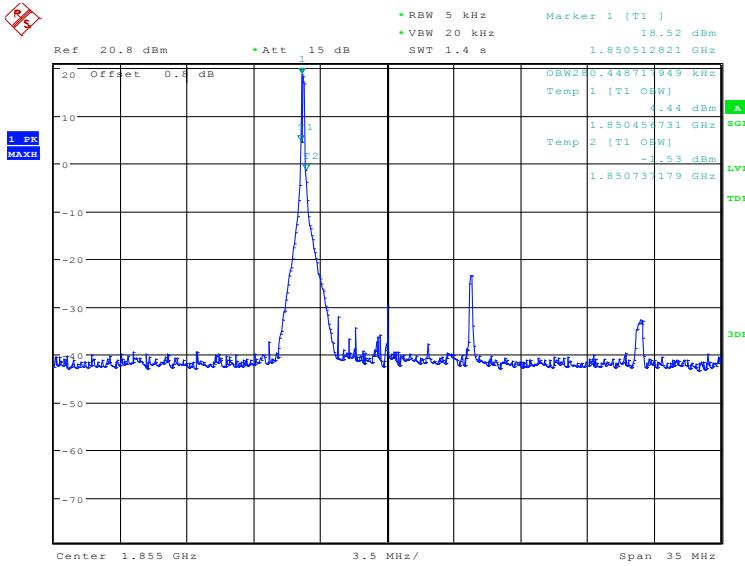
Date: 12.AUG.2019 14:07:45



Date: 12.AUG.2019 14:08:00

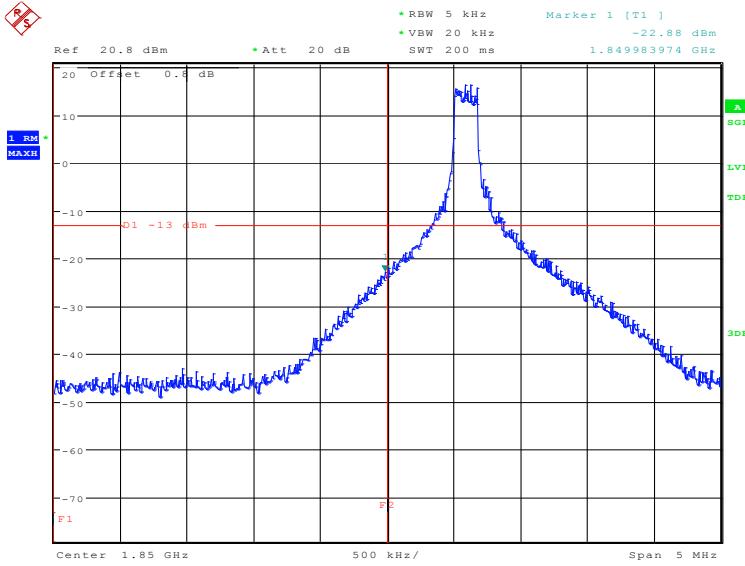
### LTE band 25

#### OBW: 1RB-low\_offset

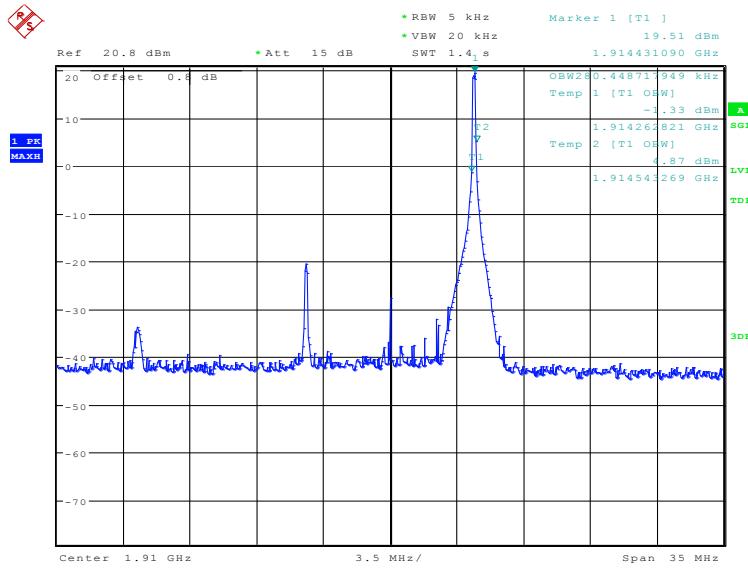


Date: 12.AUG.2019 14:11:48

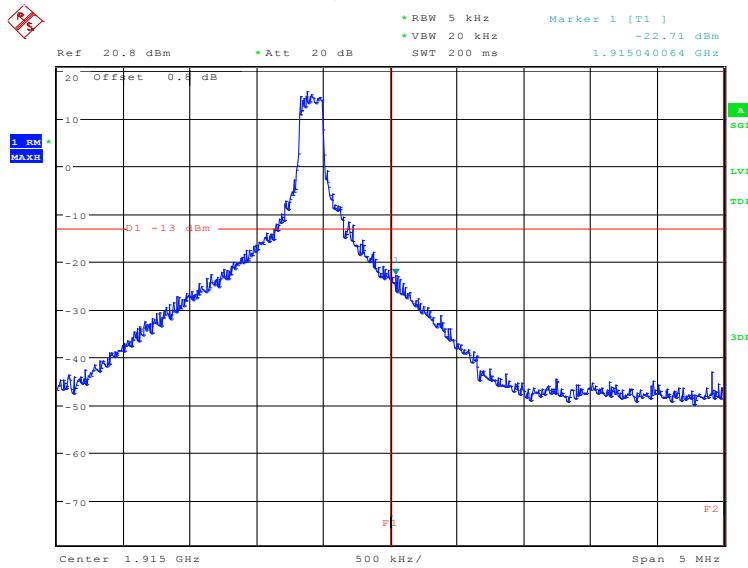
#### LOW BAND EDGE BLOCK-1RB-low\_offset



Date: 12.AUG.2019 14:12:03

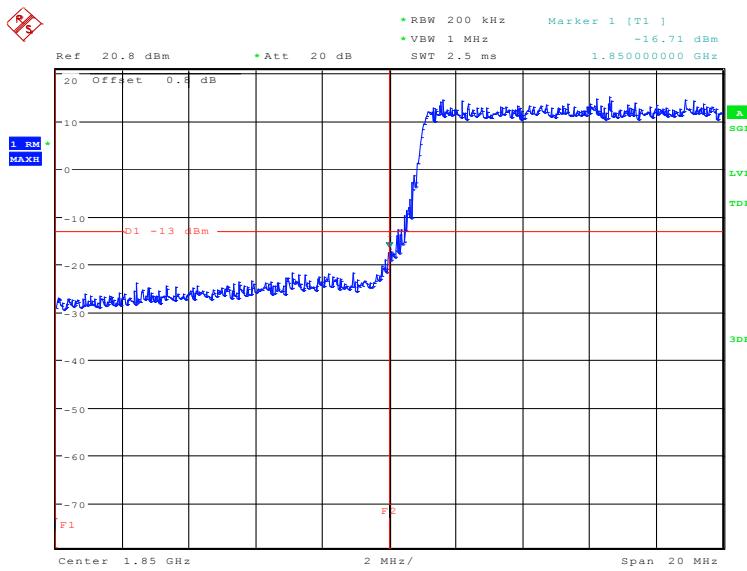
**OBW: 1RB-high\_offset**


Date: 12.AUG.2019 14:14:39

**HIGH BAND EDGE BLOCK-1RB-high\_offset**


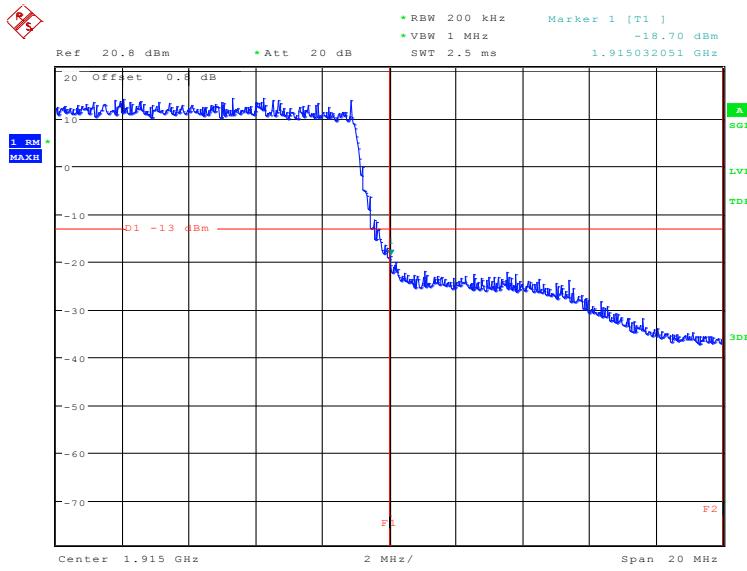
Date: 12.AUG.2019 14:14:55

### LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 12.AUG.2019 14:12:40

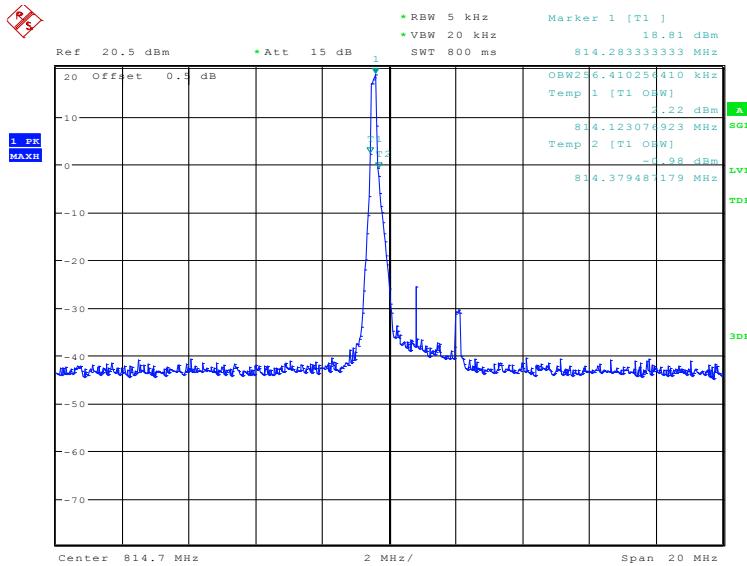
### HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 12.AUG.2019 14:15:32

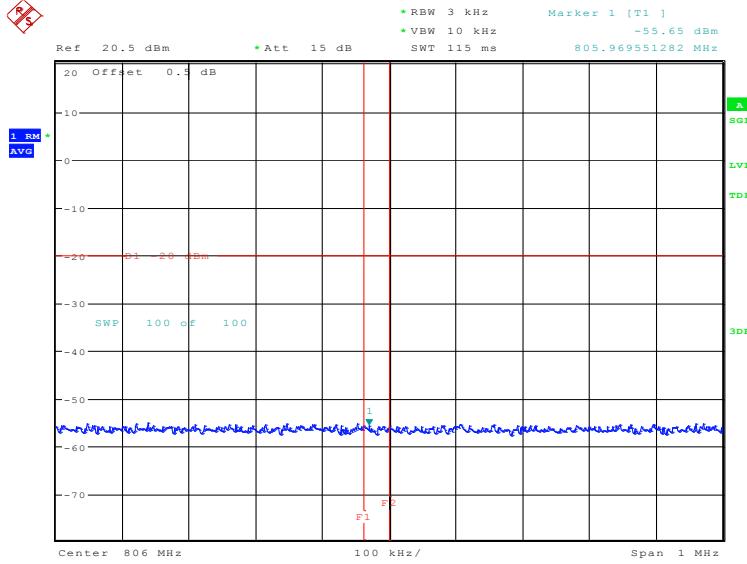
### LTE band 26(814MHz~824MHz)

OBW: 1RB-low\_offset



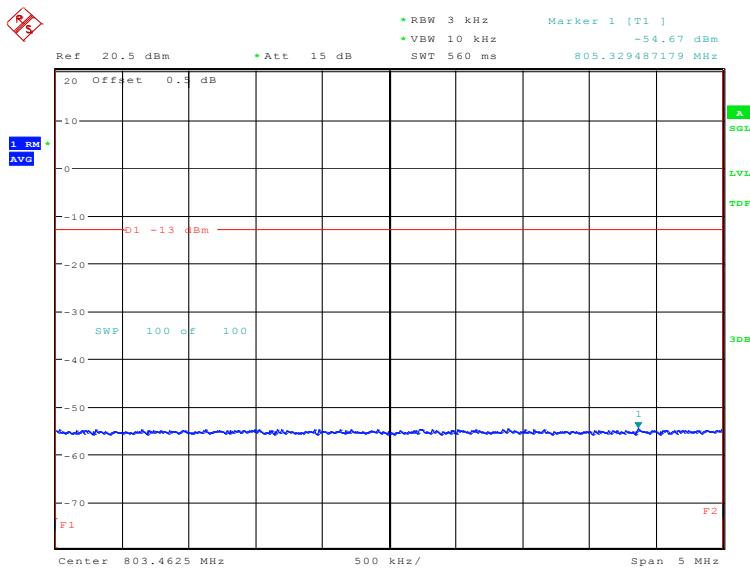
Date: 12.AUG.2019 14:57:42

### LOW BAND EDGE BLOCK-1RB-low\_offset

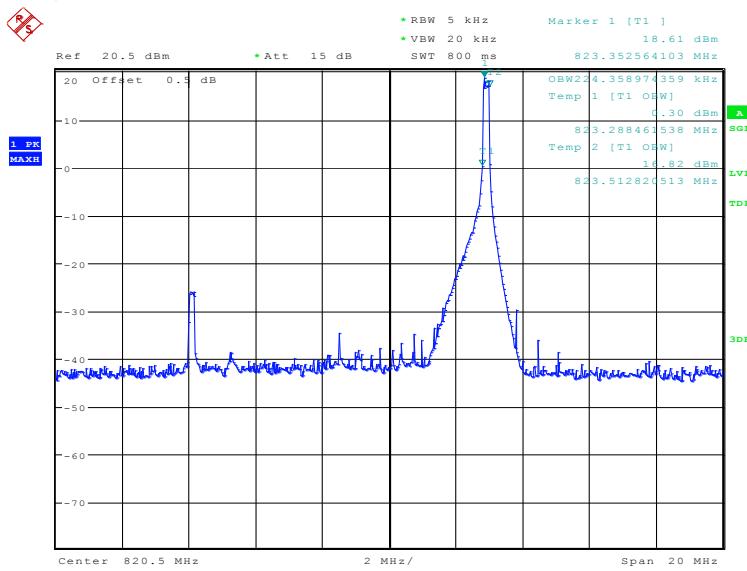


Date: 12.AUG.2019 14:58:08

### LOW Emission Mask -1RB-low\_offset

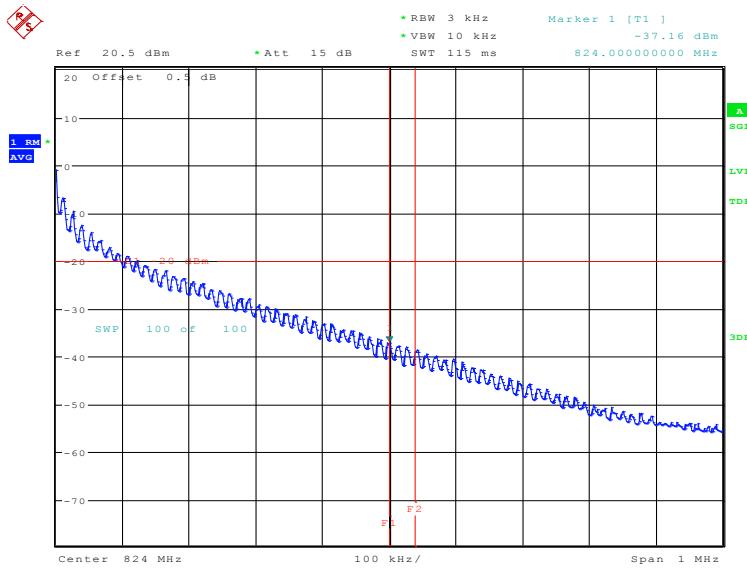


### OBW: 1RB-high\_offset



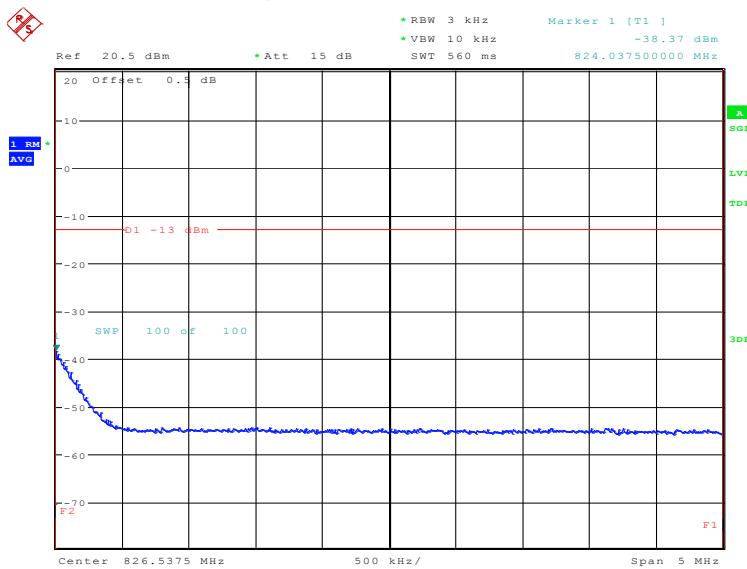
Date: 12.AUG.2019 15:01:36

### HIGH BAND EDGE BLOCK-1RB-high\_offset



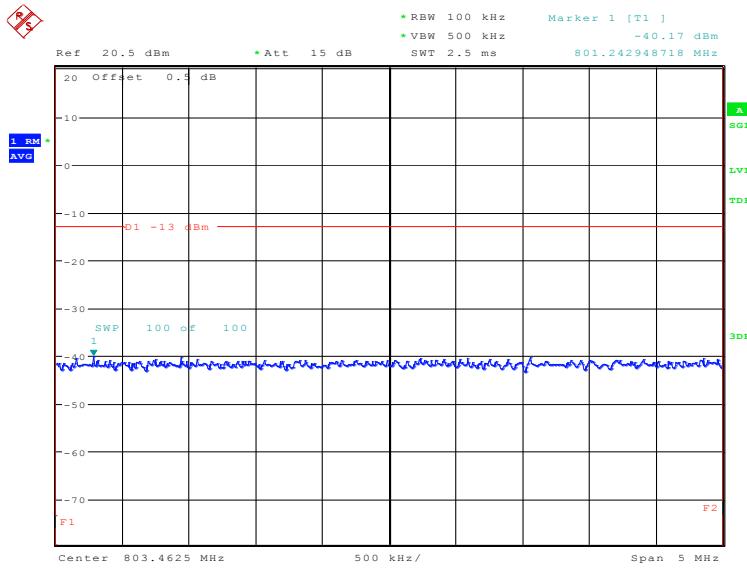
Date: 12.AUG.2019 15:02:02

### HIGH Emission Mask -1RB-high\_offset



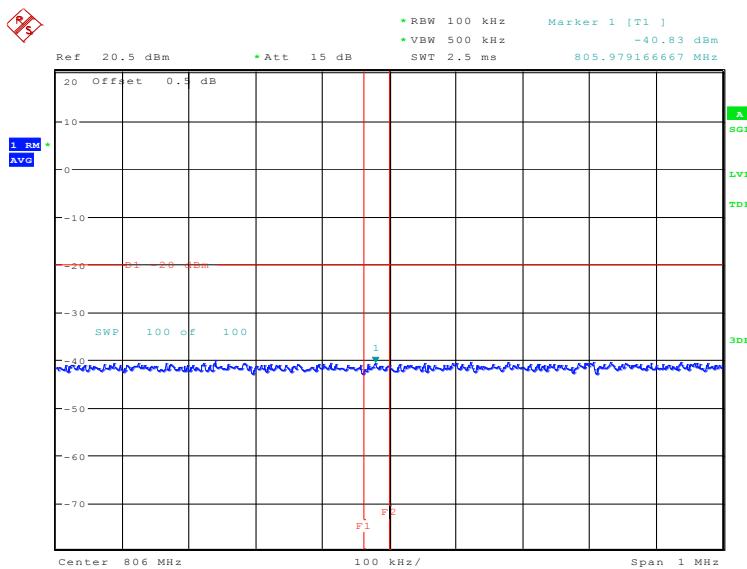
Date: 12.AUG.2019 15:03:13

### LOW Emission Mask -10MHz-100%RB



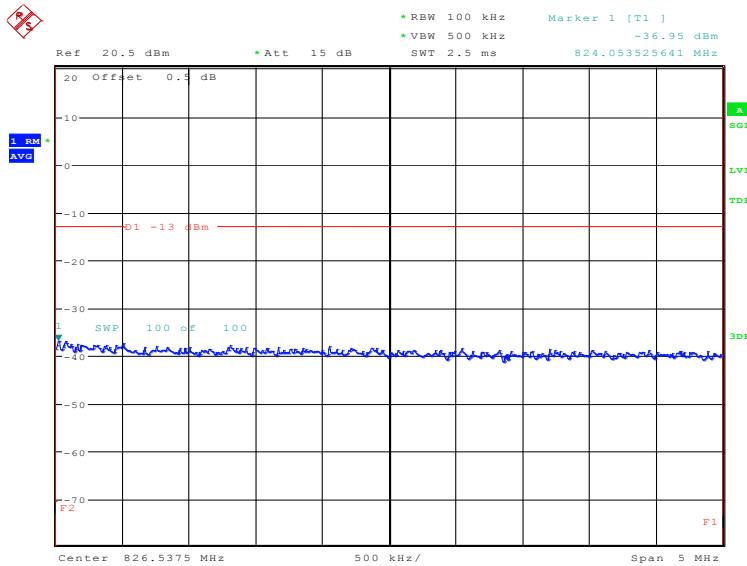
Date: 12.AUG.2019 15:00:17

### LOW BAND EDGE BLOCK-10MHz-100%RB



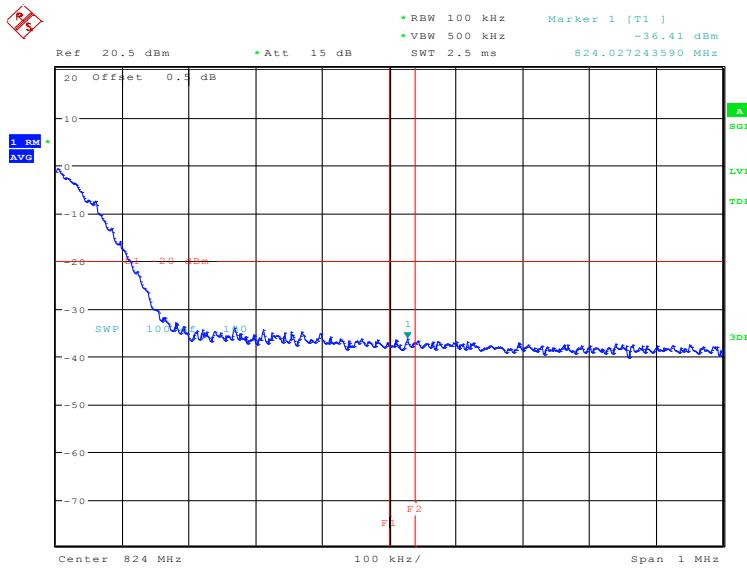
Date: 12.AUG.2019 14:59:58

### HIGH Emission Mask -10MHz-100%RB



Date: 12.AUG.2019 15:03:59

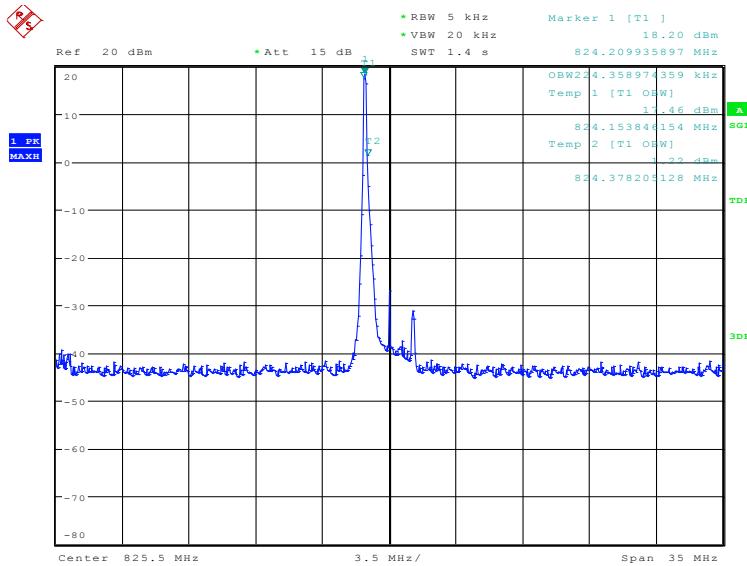
### HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 12.AUG.2019 15:03:43

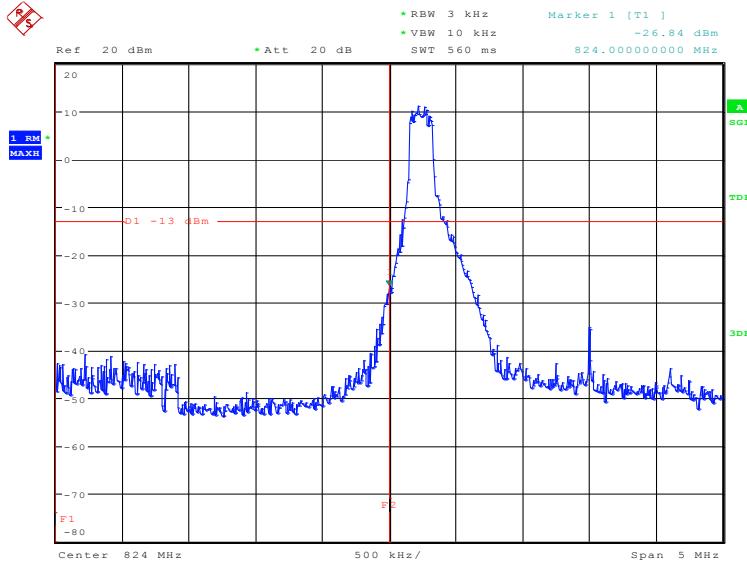
### LTE band 26(824MHz~849MHz)

OBW: 1RB-low\_offset

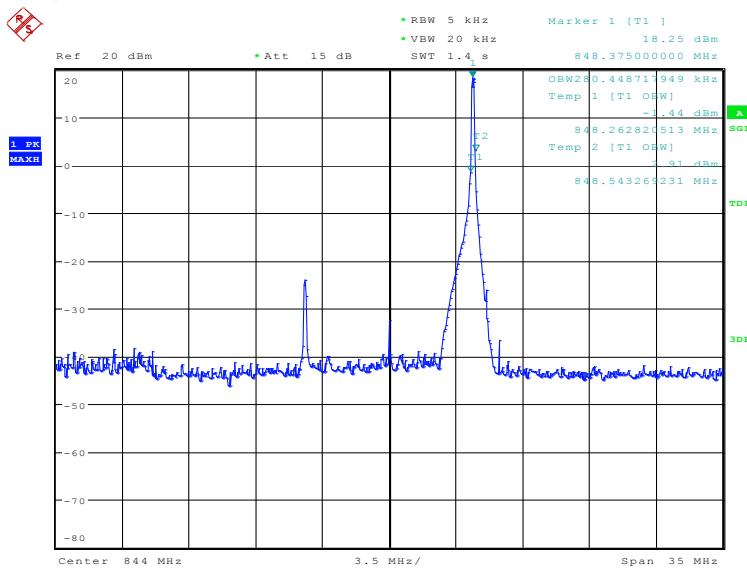


Date: 12.AUG.2019 14:52:41

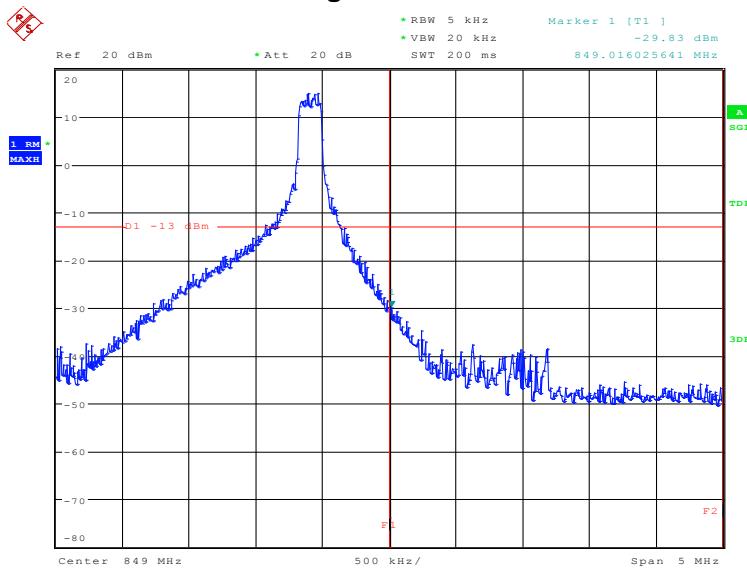
### LOW BAND EDGE BLOCK-1RB-low\_offset



Date: 12.AUG.2019 14:52:57

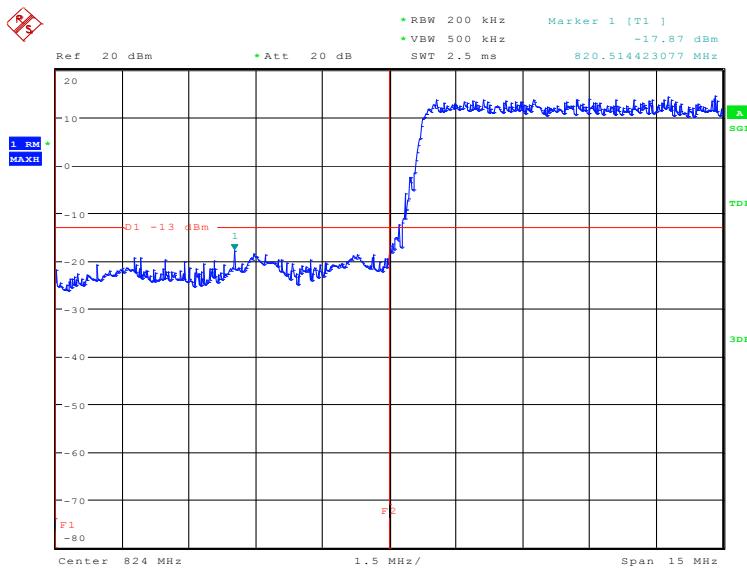
**OBW: 1RB-high\_offset**


Date: 12.AUG.2019 14:48:39

**HIGH BAND EDGE BLOCK-1RB-high\_offset**


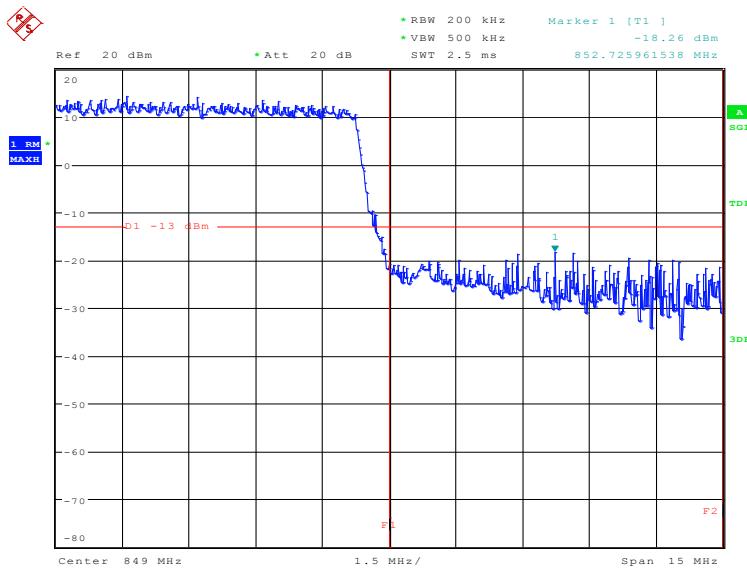
Date: 12.AUG.2019 14:48:55

### LOW BAND EDGE BLOCK-15MHz-100%RB



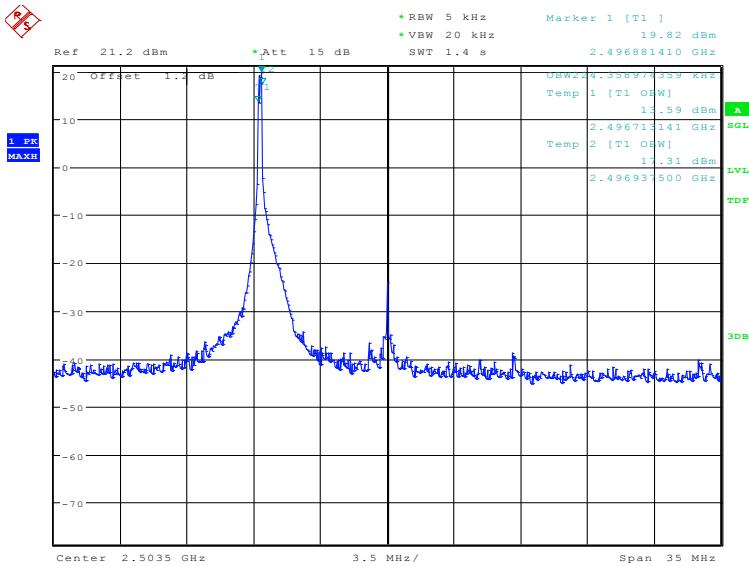
Date: 12.AUG.2019 14:46:41

### HIGH BAND EDGE BLOCK-15MHz-100%RB



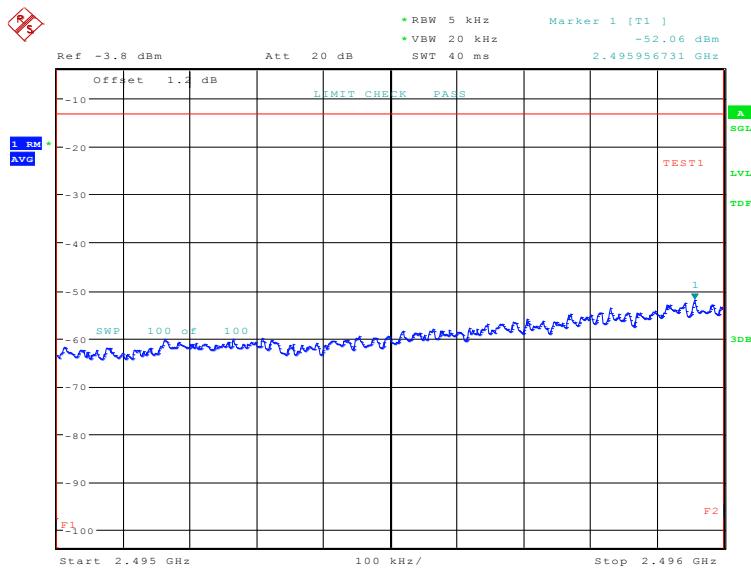
Date: 12.AUG.2019 14:49:31

**LTE Band 41 HPUE  
OBW: 1RB-low\_offset**

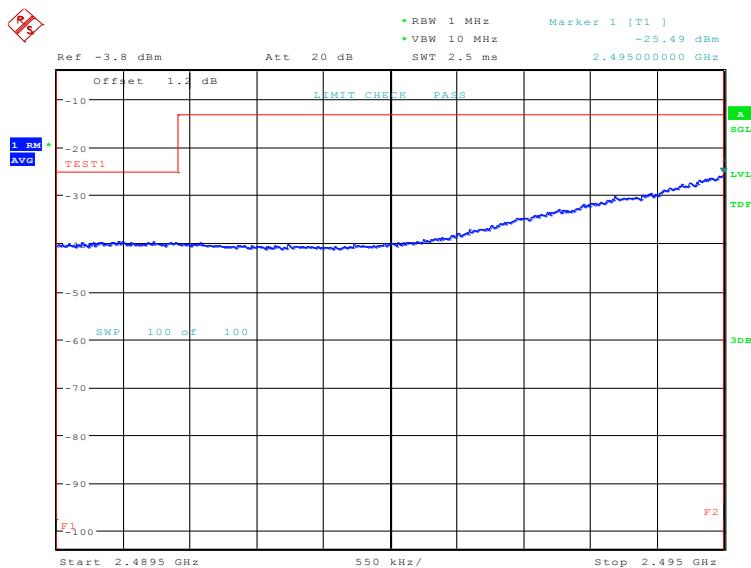


Date: 12.AUG.2019 14:22:21

### LOW BAND EDGE BLOCK-1RB-low\_offset

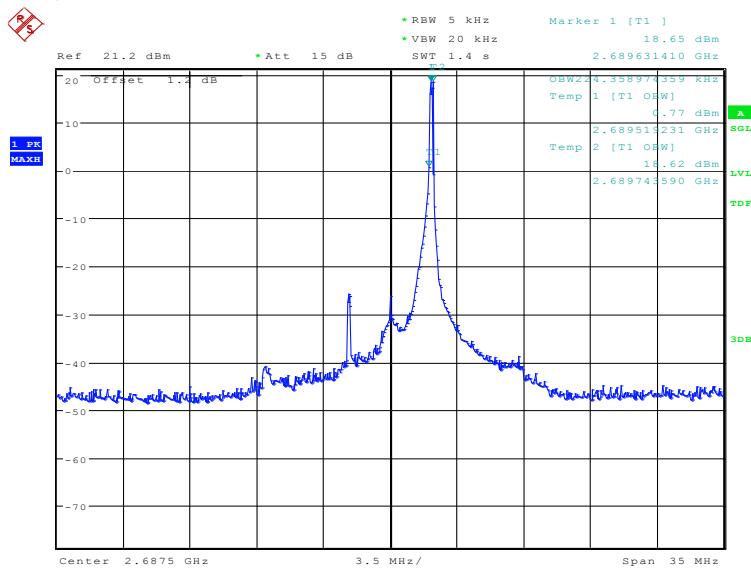


Date: 12.AUG.2019 14:22:42



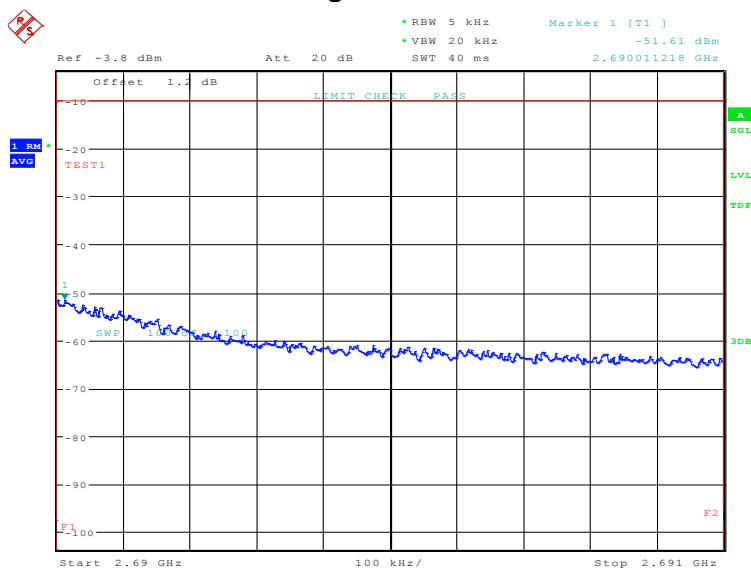
Date: 12.AUG.2019 14:22:57

### OBW: 1RB-high\_offset

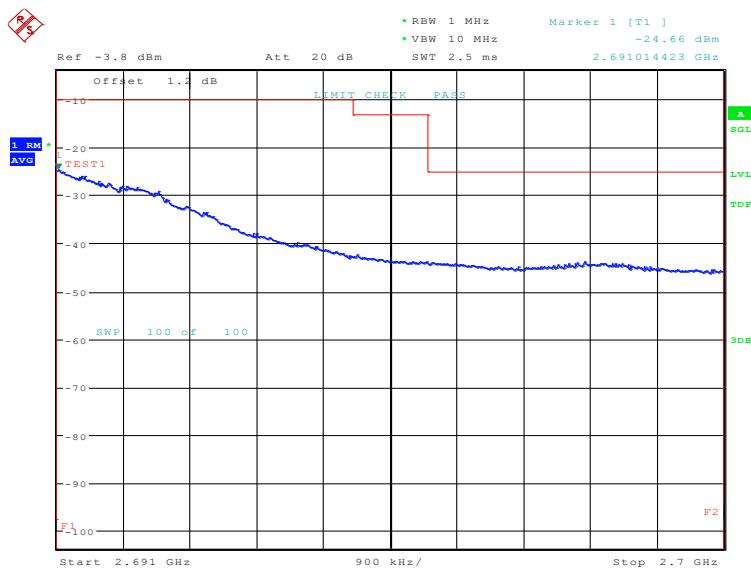


Date: 12.AUG.2019 14:25:53

### HIGH BAND EDGE BLOCK-1RB-high\_offset

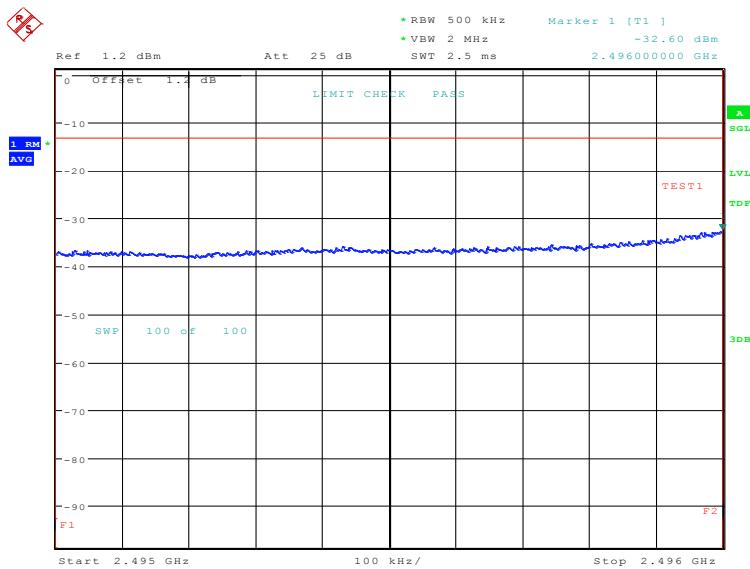


Date: 12.AUG.2019 14:26:14

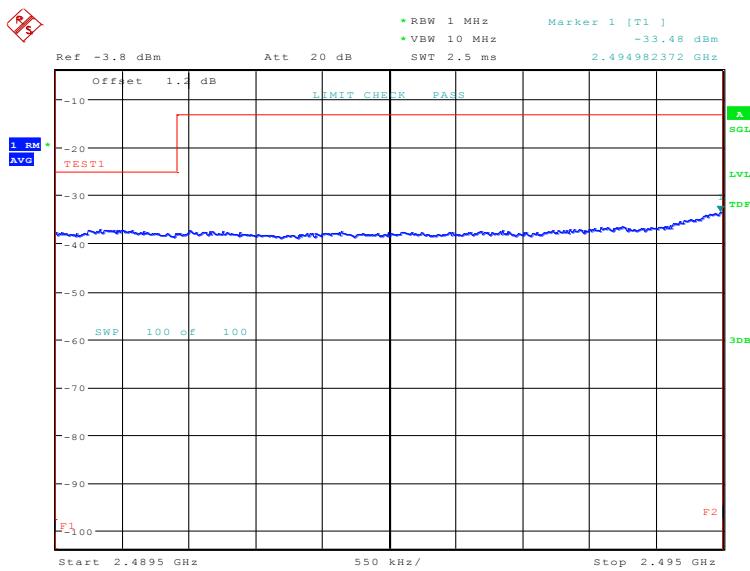


Date: 12.AUG.2019 14:26:29

### LOW BAND EDGE BLOCK-20MHz-100%RB

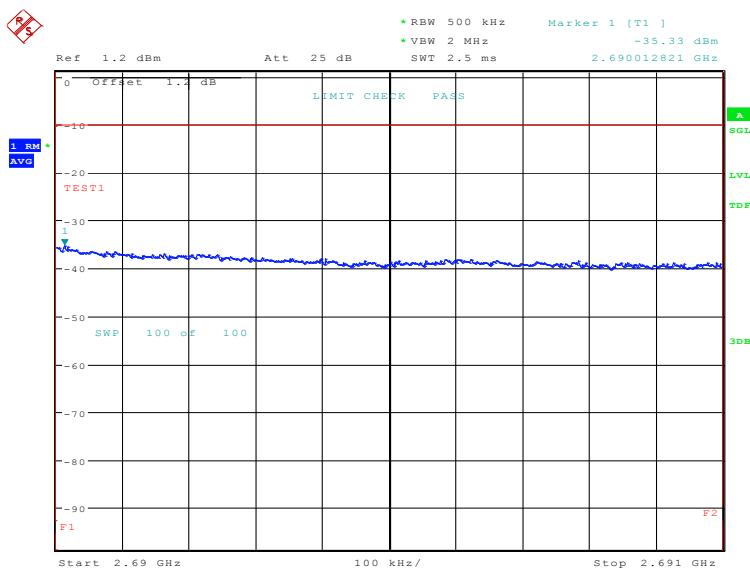


Date: 12.AUG.2019 14:23:38

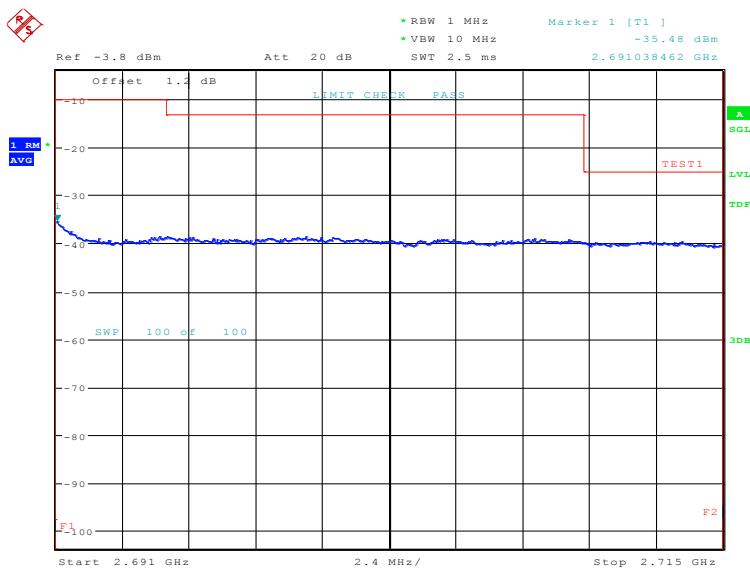


Date: 12.AUG.2019 14:23:53

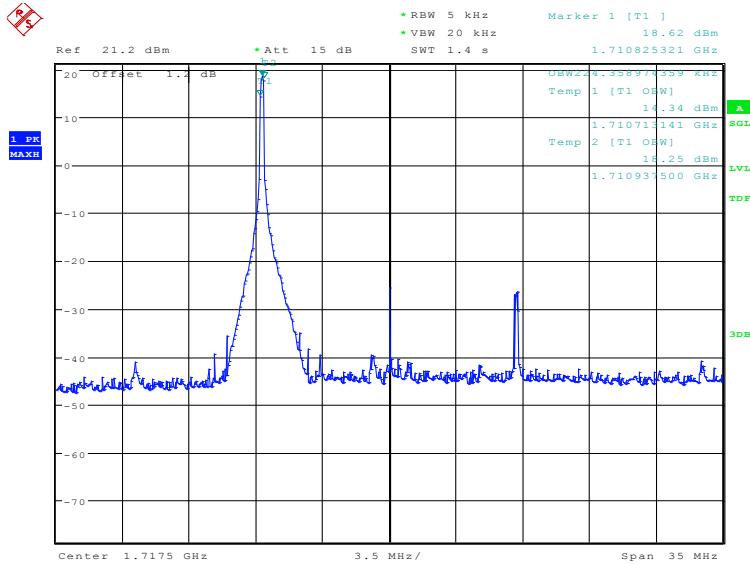
### HIGH BAND EDGE BLOCK-20MHz-100%RB



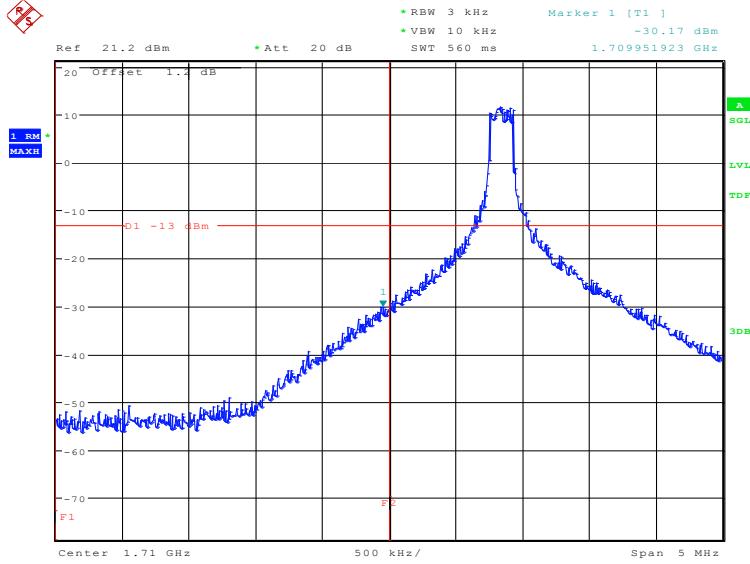
Date: 12.AUG.2019 14:27:04



Date: 12.AUG.2019 14:27:19

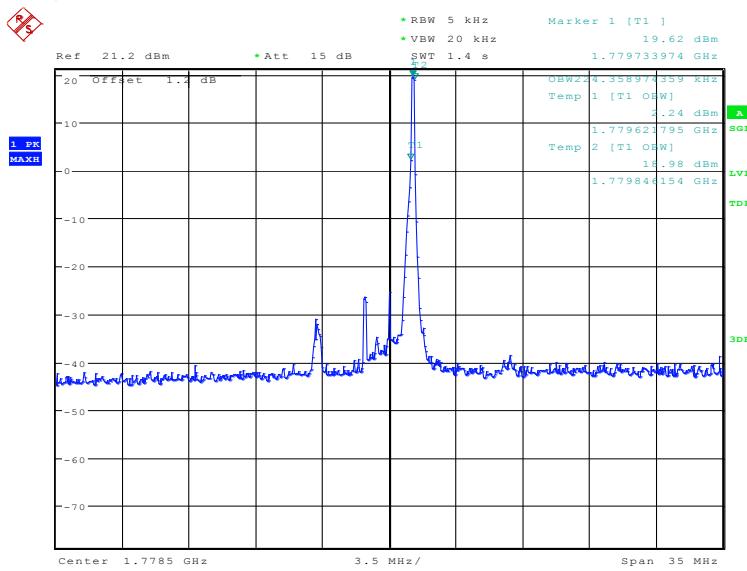
**LTE band 66**
**OBW: 1RB-low\_offset**


Date: 12.AUG.2019 14:38:43

**LOW BAND EDGE BLOCK-1RB-low\_offset**


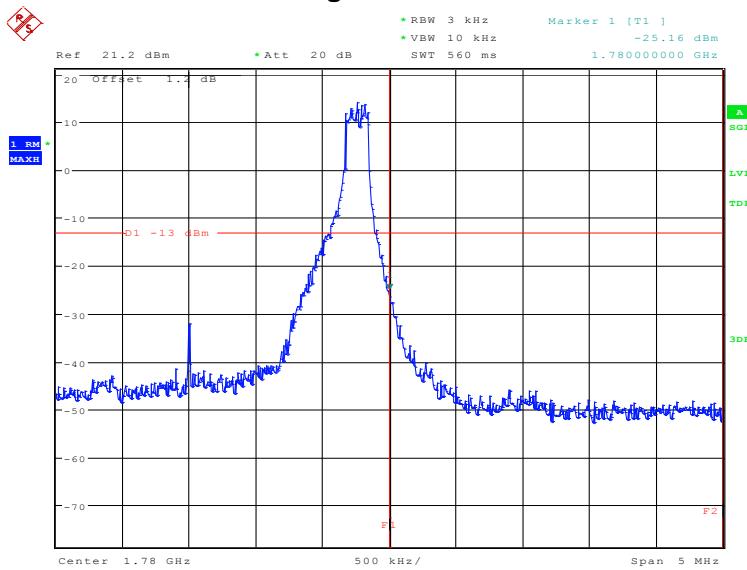
Date: 12.AUG.2019 14:38:59

### OBW: 1RB-high\_offset



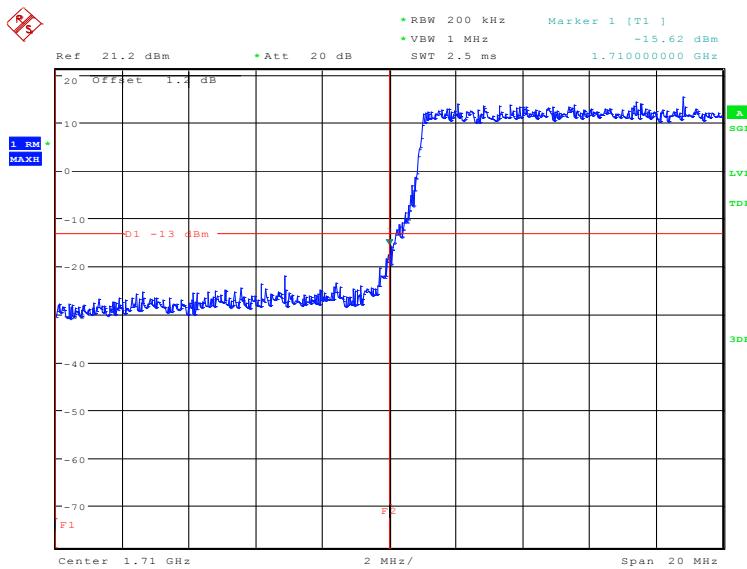
Date: 12.AUG.2019 14:40:57

### HIGH BAND EDGE BLOCK-1RB-high\_offset



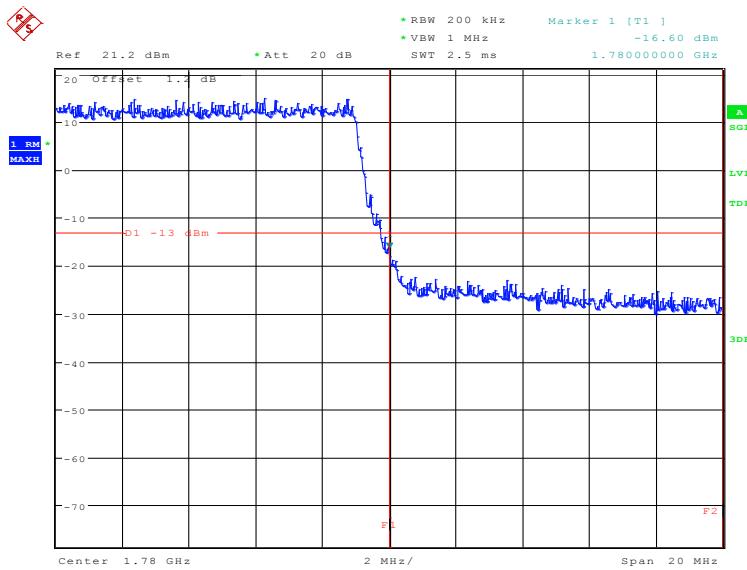
Date: 12.AUG.2019 14:41:12

### LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 12.AUG.2019 14:39:36

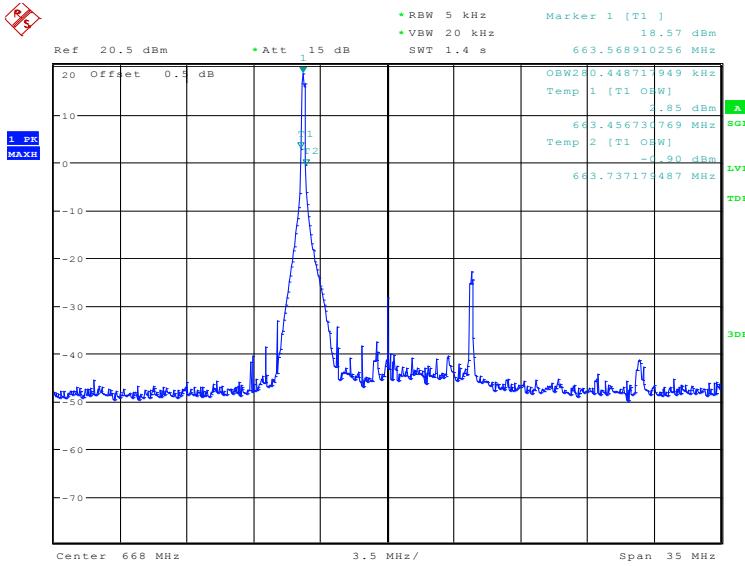
### HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 12.AUG.2019 14:41:49

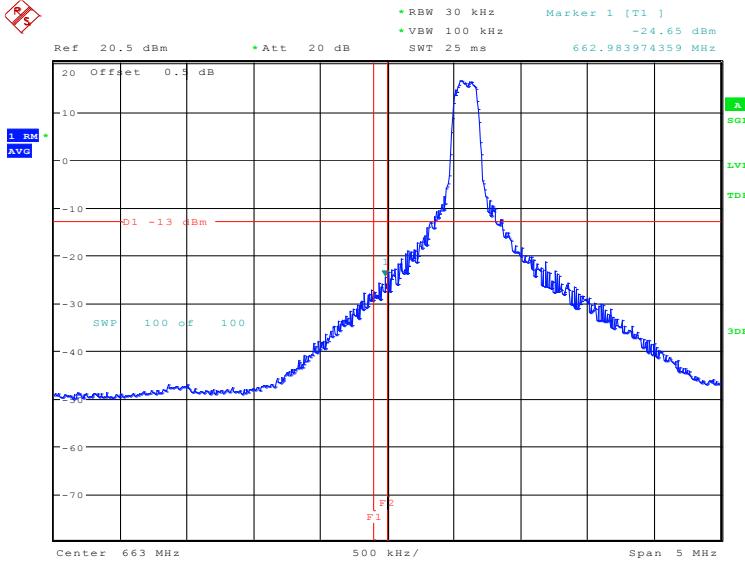
### LTE band 71

#### OBW: 1RB-low\_offset



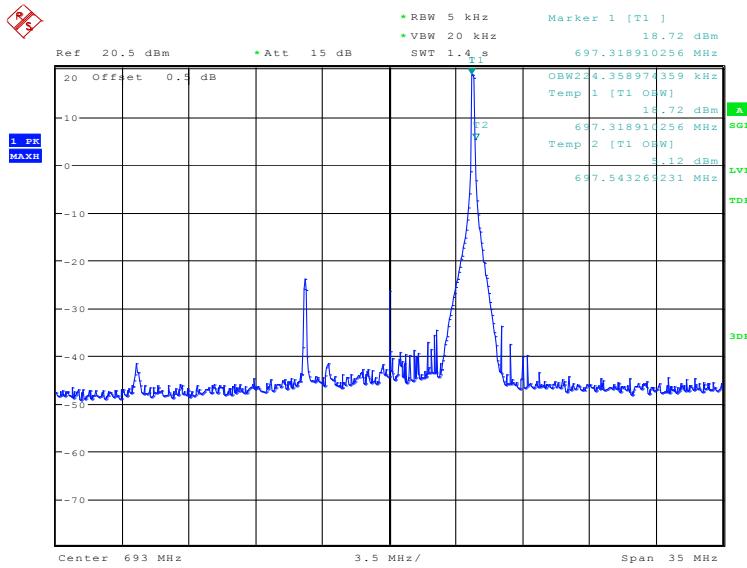
Date: 12.AUG.2019 15:19:03

#### LOW BAND EDGE BLOCK-1RB-low\_offset



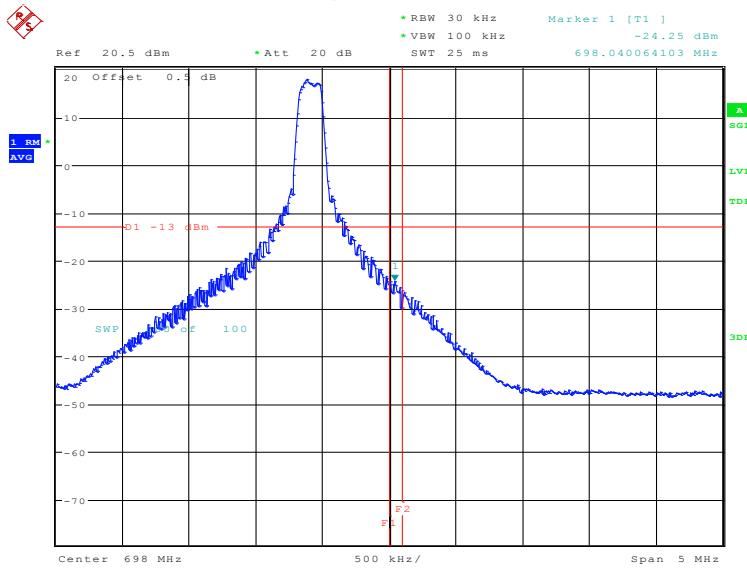
Date: 12.AUG.2019 15:21:24

### OBW: 1RB-high\_offset



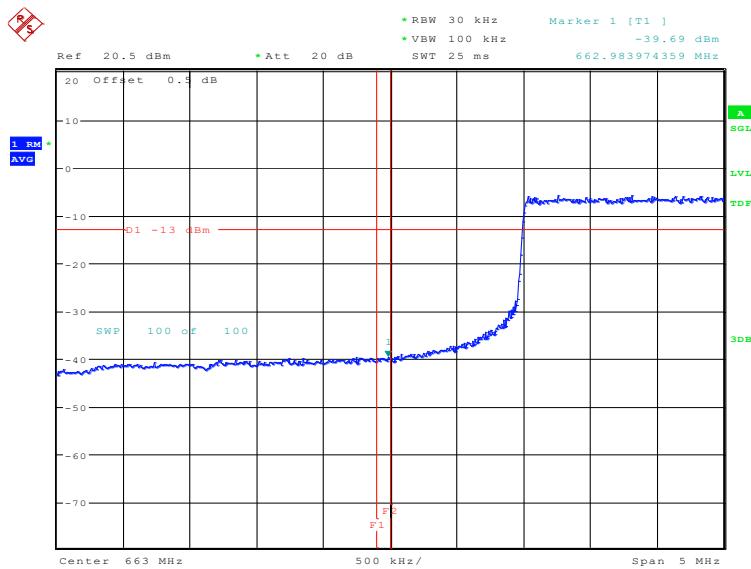
Date: 12.AUG.2019 15:23:56

### HIGH BAND EDGE BLOCK-1RB-high\_offset



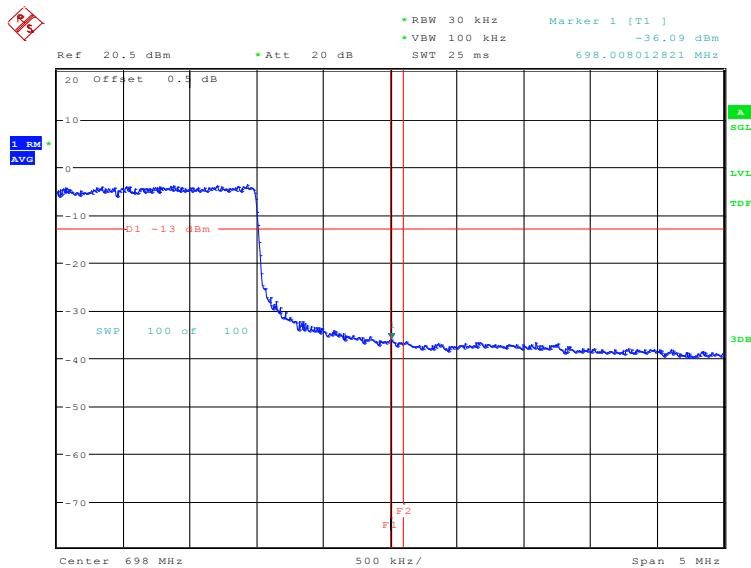
Date: 12.AUG.2019 15:24:47

### LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 12.AUG.2019 15:30:34

### HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 12.AUG.2019 15:28:29

## **A.7 CONDUCTED SPURIOUS EMISSION**

### **A.7.1 Measurement Method**

The following steps outline the procedure used to measure the conducted emissions from the EUT.

1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the mobile station equipment tested, this equates to a frequency range of 13 MHz to 9 GHz, data taken from 10 MHz to 25 GHz.
2. Determine EUT transmit frequencies below outlines the band edge frequencies pertinent to conducted emissions testing.
3. The number of sweep points of spectrum analyzer is set to 30001 which is greater than span/RBW.

### **A.7.2 Measurement Limit**

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

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

Part 27.53(m)(4) specifies for mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log(P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log(P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log(P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less 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  $65 +$

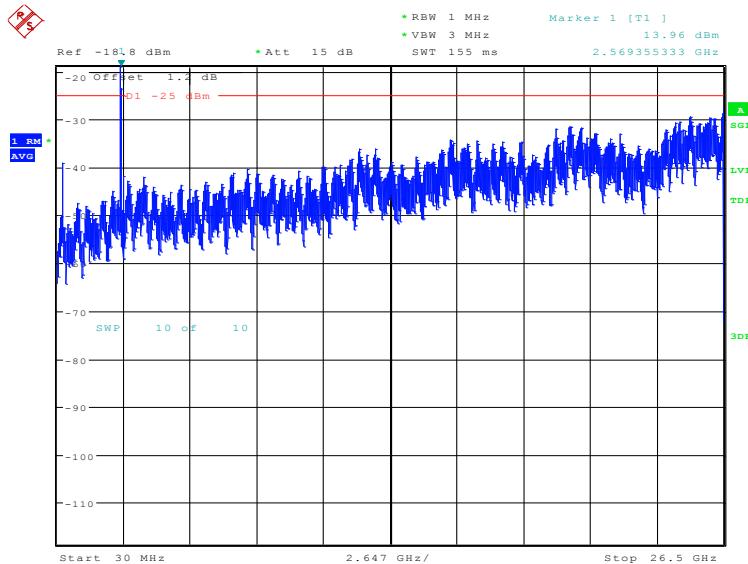
10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.

Part 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.

### A. 7.2 Measurement result

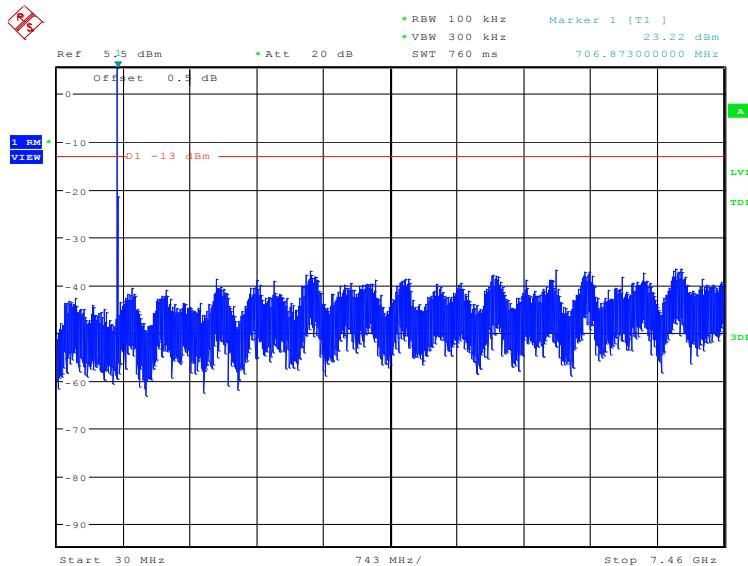
Only the worst-case result is given below

#### LTE band 7: 30MHz – 26.5GHz



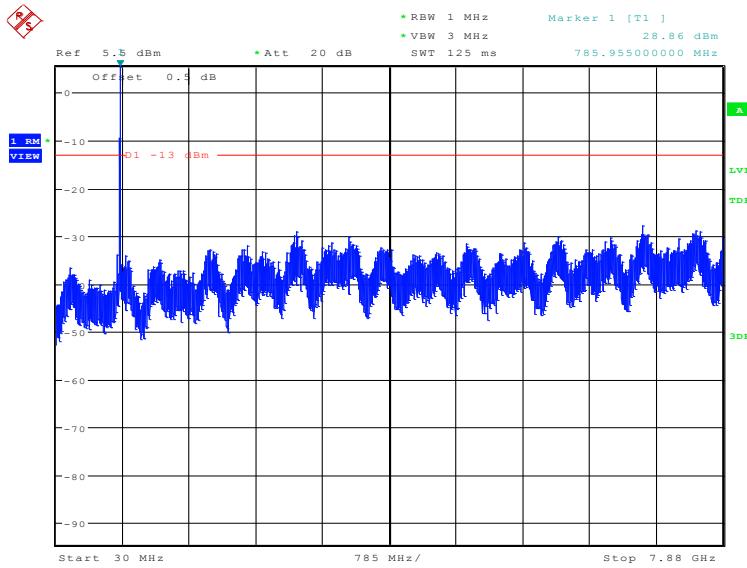
Date: 12.AUG.2019 13:54:42

#### LTE band 12: 30MHz – 7.46GHz



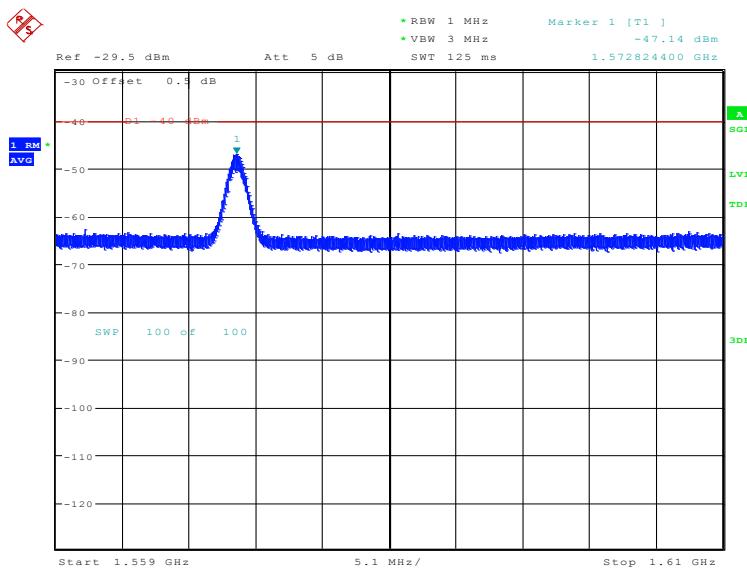
Date: 12.AUG.2019 15:38:00

### LTE band 13: 30MHz – 7.88GHz



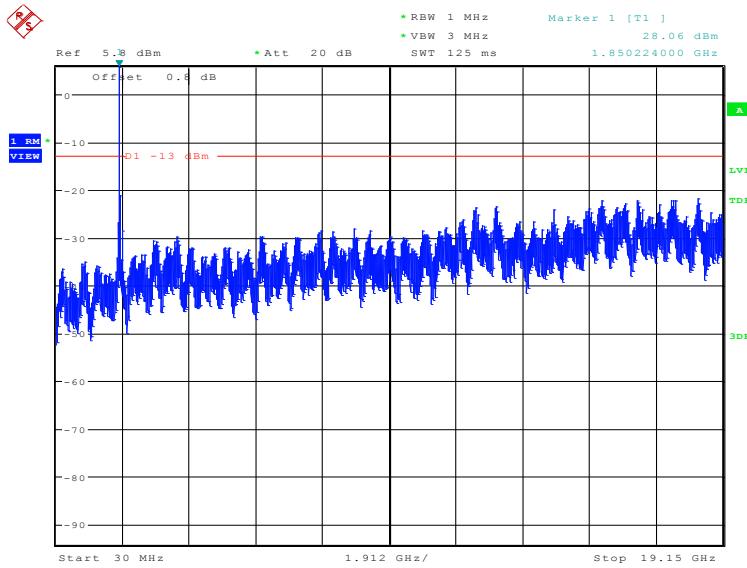
Date: 12.AUG.2019 14:09:01

### LTE band 13: 1559MHz – 1610MHz



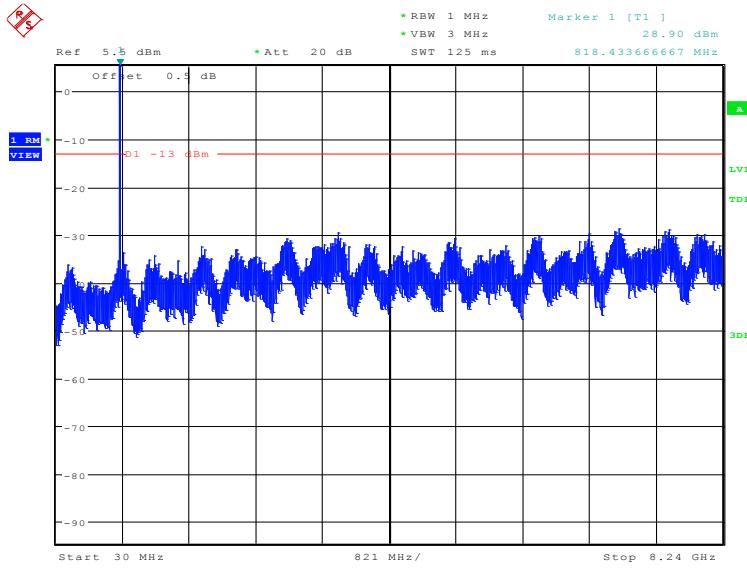
Date: 12.AUG.2019 14:09:35

### LTE band 25: 30MHz – 19.15GHz



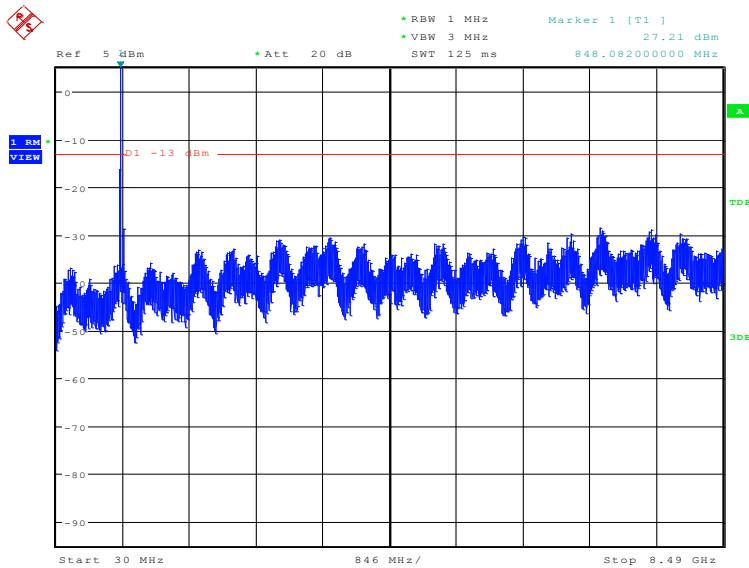
Date: 12.AUG.2019 14:16:33

### LTE band 26(814MHz~824MHz): 30MHz – 8.24GHz



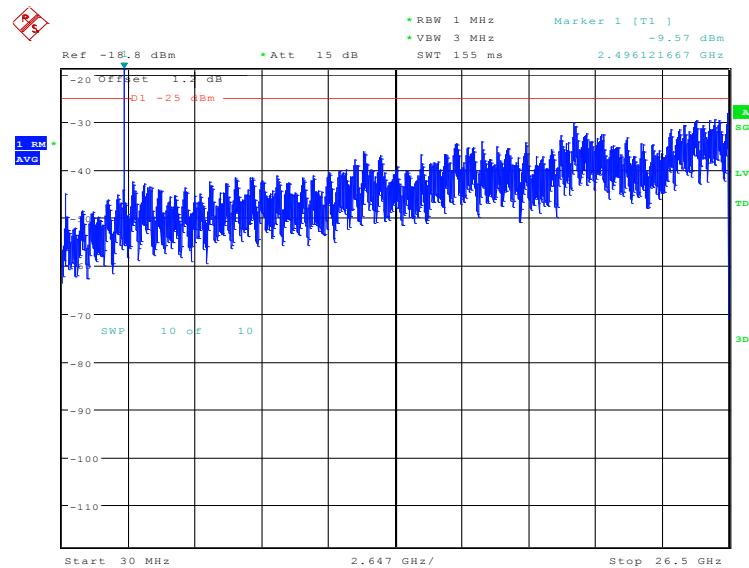
Date: 12.AUG.2019 14:55:46

### LTE band 26(824MHz~849MHz): 30MHz – 8.49GHz



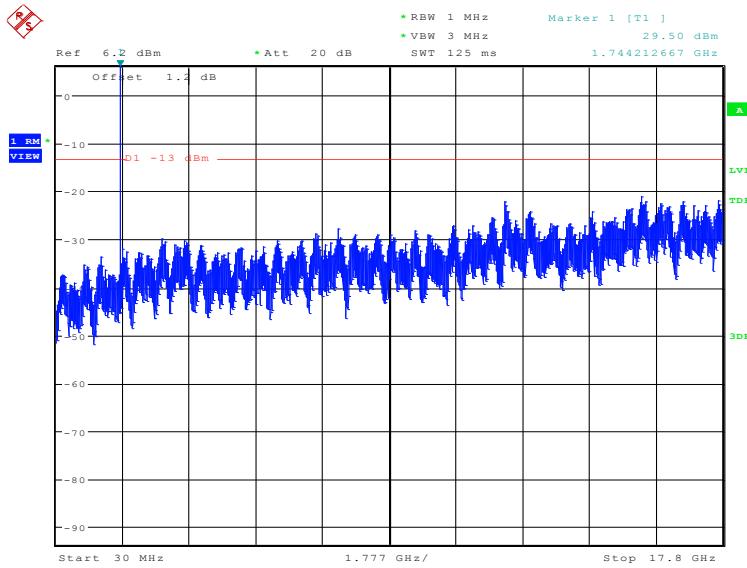
Date: 12.AUG.2019 14:50:33

### LTE Band 41 HPUE: 30MHz – 26.5GHz



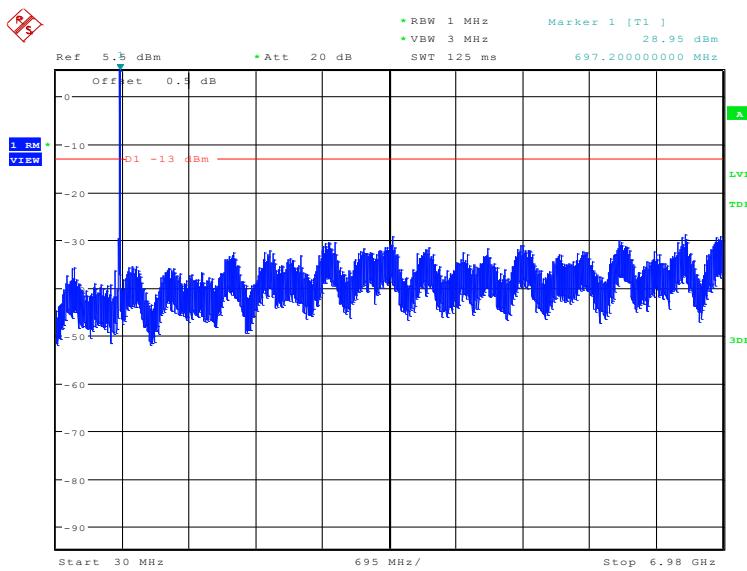
Date: 12.AUG.2019 14:36:26

### LTE band 66: 30MHz – 17.8GHz



Date: 12.AUG.2019 14:42:49

### LTE band 71: 30MHz – 6.98GHz



Date: 12.AUG.2019 15:14:40

## **A.8 PEAK-TO-AVERAGE POWER RATIO**

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

According to KDB 971168 5.7.1:

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval to 1ms.
- e) Record the maximum PAPR level associated with a probability of 0.1%

### **A.8.1 Measurement limit**

not exceed 13 dB

### **A.8.2 Measurement results**

#### **LTE band 7, 20MHz**

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
2535.0	6.83	7.40	7.69

#### **LTE band 12, 10MHz**

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
707.5	5.51	6.35	6.76

#### **LTE band 13, 10MHz**

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
782.0	5.51	6.35	6.67

#### **LTE band 25, 20MHz**

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
1882.5	6.76	7.40	7.72

**LTE Band 41 HPUE, 20MHz**

Frequency (MHz)	PAPR (dB)		
2593.0	QPSK	16QAM	64QAM
	8.14	8.94	8.97

**LTE band 66, 20MHz**

Frequency (MHz)	PAPR (dB)		
1745.0	QPSK	16QAM	64QAM
	6.38	7.24	6.70

**LTE band 71, 20MHz**

Frequency (MHz)	PAPR (dB)		
680.5	QPSK	16QAM	64QAM
	6.70	7.37	7.56



## ANNEX B: Accreditation Certificate



\*\*\*END OF REPORT\*\*\*