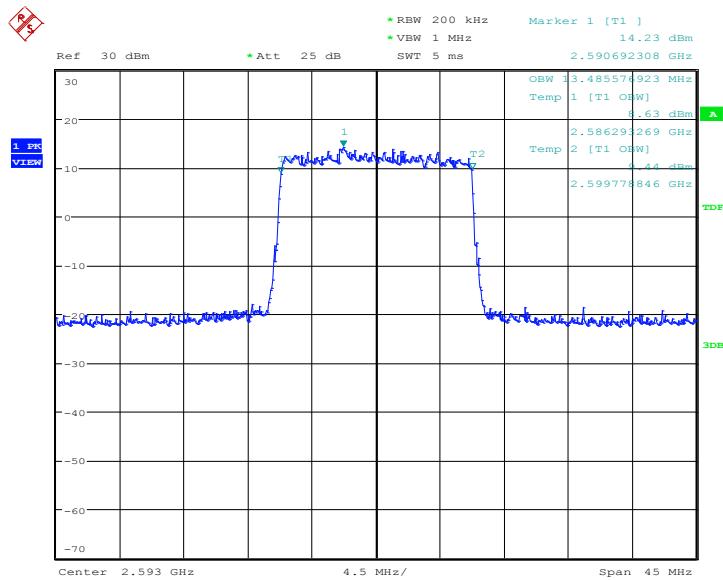
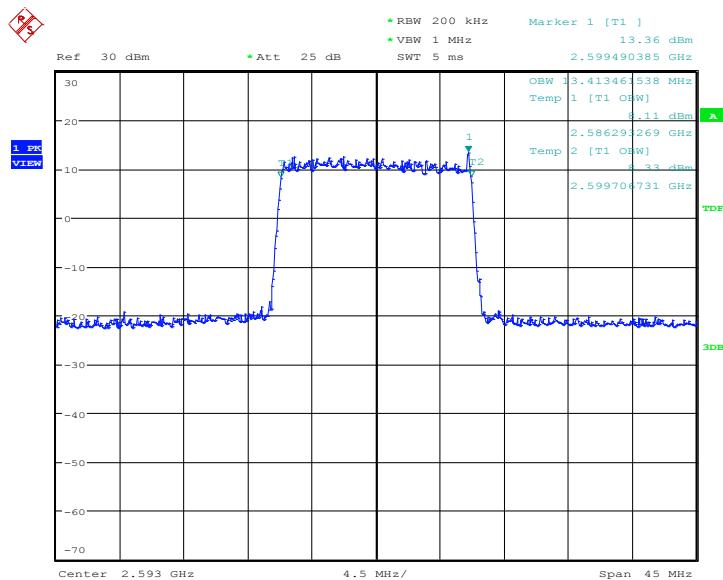


LTE band 41, 15MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)		
	QPSK	16QAM	64QAM
2593.0	13485.58	13413.46	13413.46

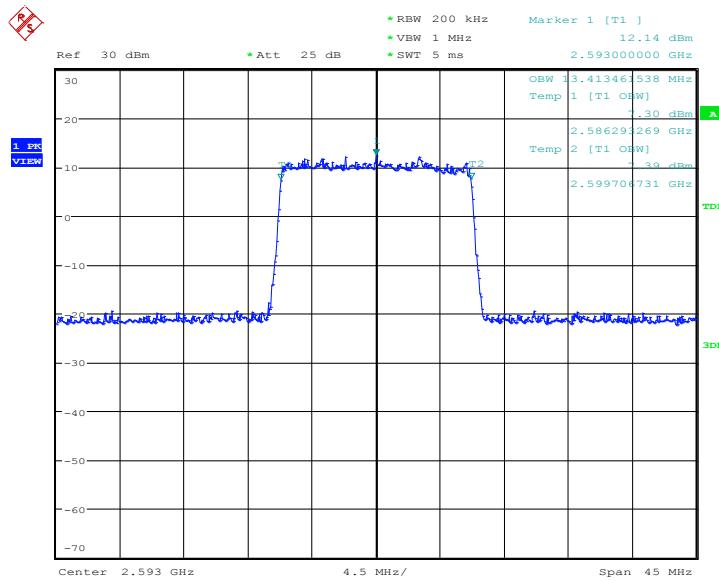
LTE band 41, 15MHz Bandwidth, QPSK (99% BW)


Date: 11.MAY.2018 10:09:20

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


Date: 11.MAY.2018 10:09:35

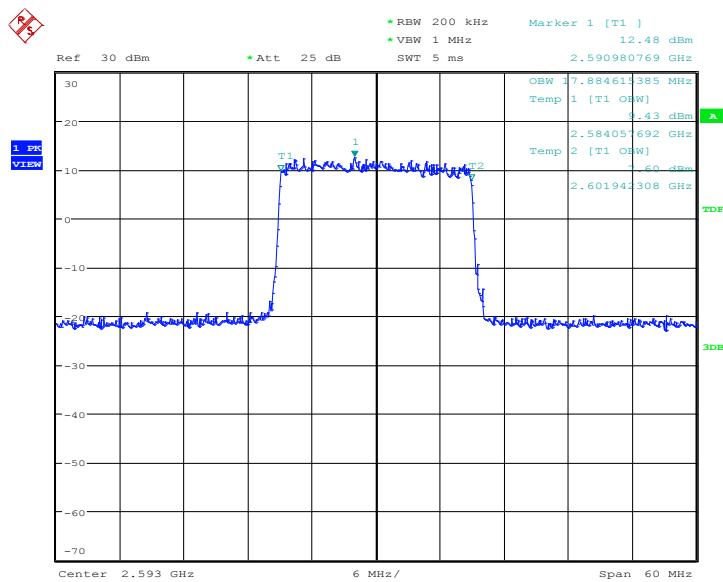
LTE band 41, 15MHz Bandwidth, 64QAM (99% BW)



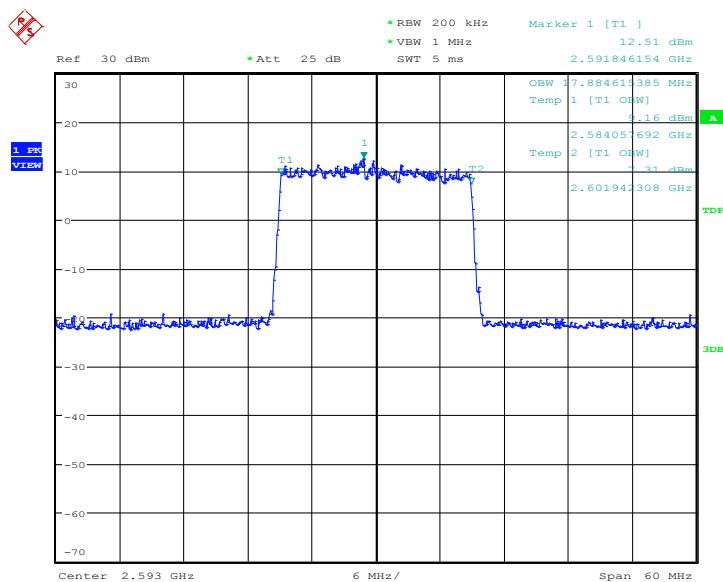
Date: 28.MAY.2018 11:17:06

LTE band 41, 20MHz (99%)

Frequency(MHz)	Occupied Bandwidth (99%)(kHz)		
	QPSK	16QAM	64QAM
2593.0	17884.62	17884.62	17884.62

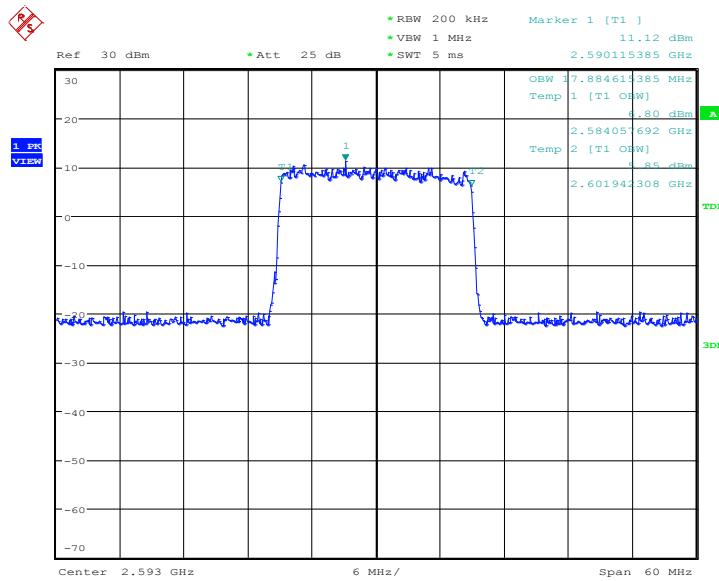
LTE band 41, 20MHz Bandwidth, QPSK (99% BW)


Date: 11.MAY.2018 10:17:02

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


Date: 11.MAY.2018 10:17:17

LTE band 41, 20MHz Bandwidth, 64QAM (99% BW)



Date: 28.MAY.2018 11:19:11

A.5 EMISSION BANDWIDTH

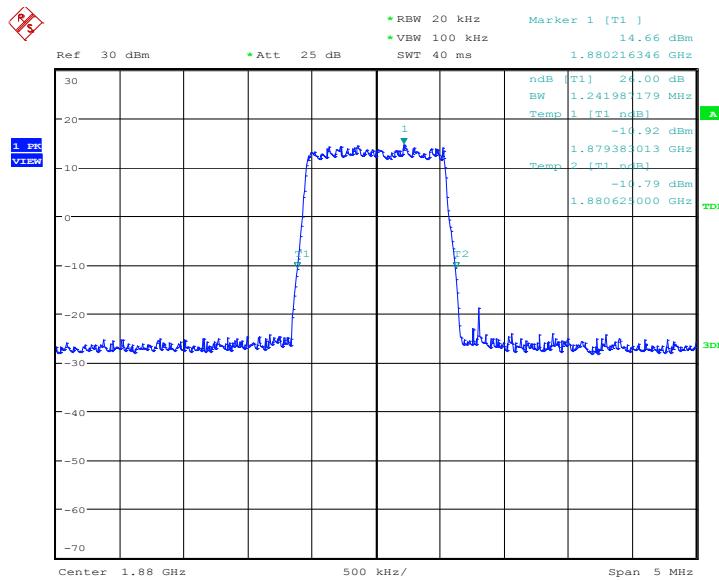
A.5.1 Emission Bandwidth Results

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 2, 1.4MHz (-26dBc)

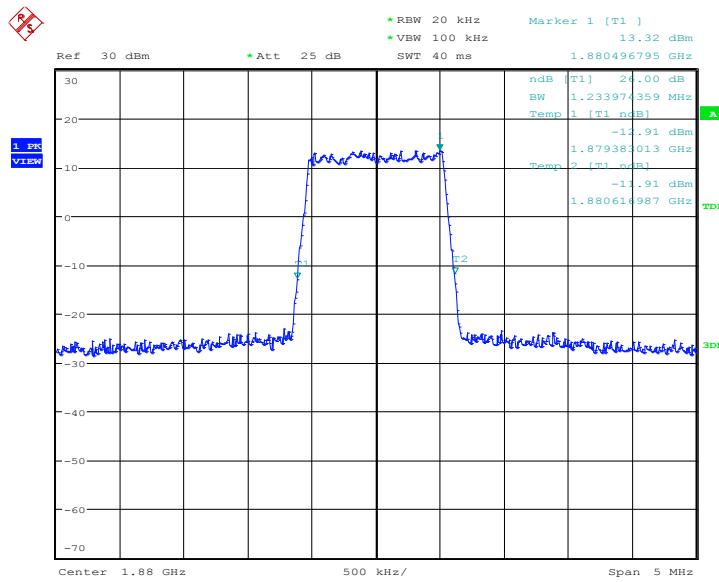
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1880.0	1241.99	1233.97	1233.97

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



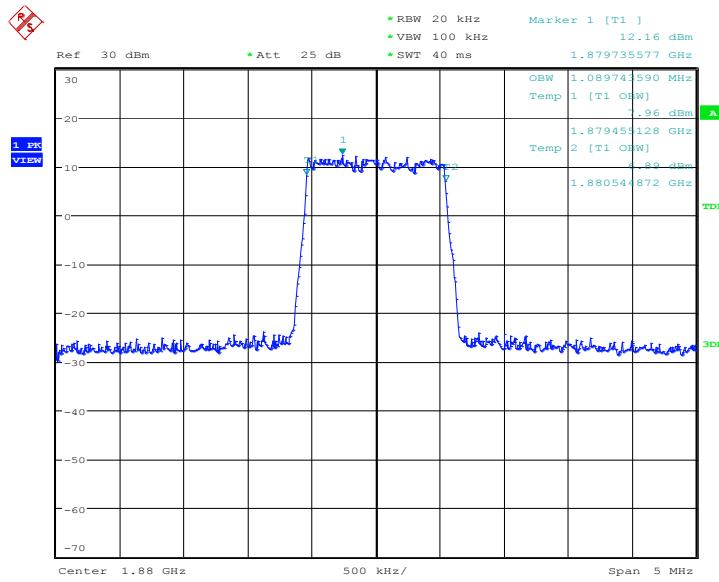
Date: 10.MAY.2018 12:51:04

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



Date: 10.MAY.2018 12:51:20

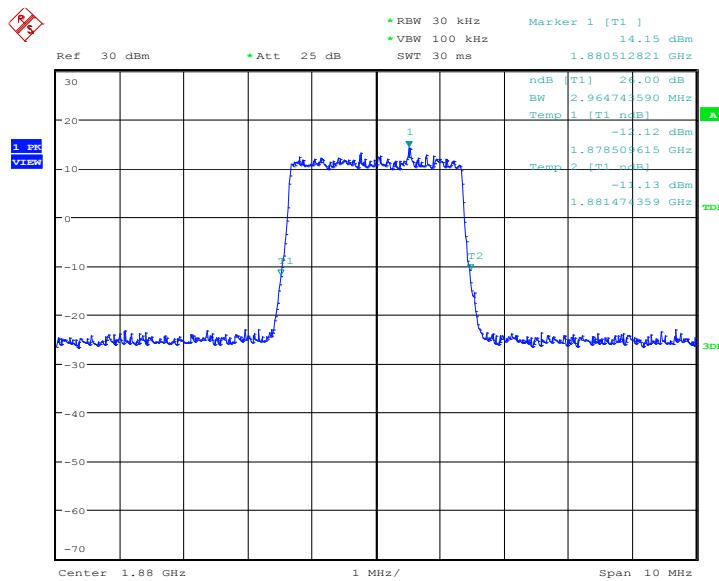
LTE band 2, 1.4MHz Bandwidth, 64QAM (-26dBc BW)



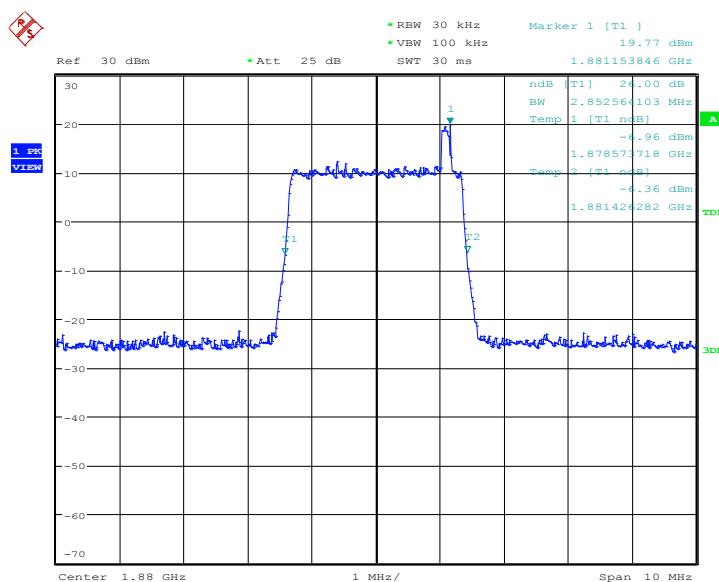
Date: 24.MAY.2018 09:52:08

LTE band 2, 3MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1880.0	2964.74	2852.56	2964.74

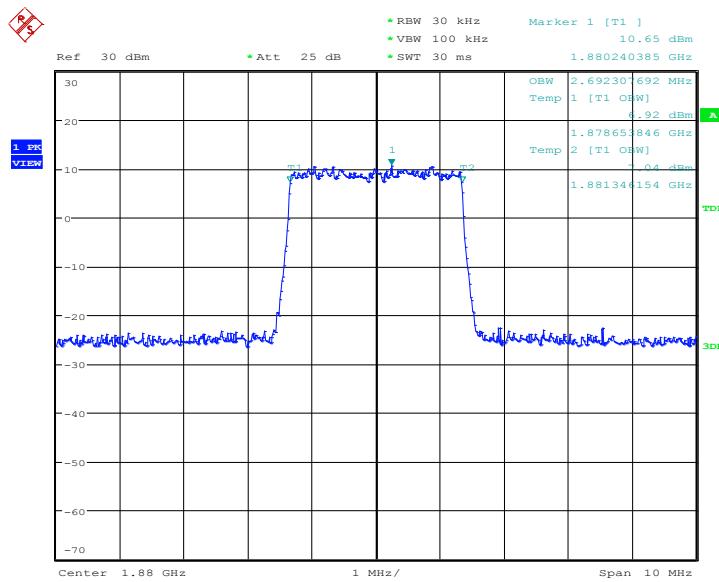
LTE band 2, 3MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 12:57:53

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


Date: 10.MAY.2018 12:58:09

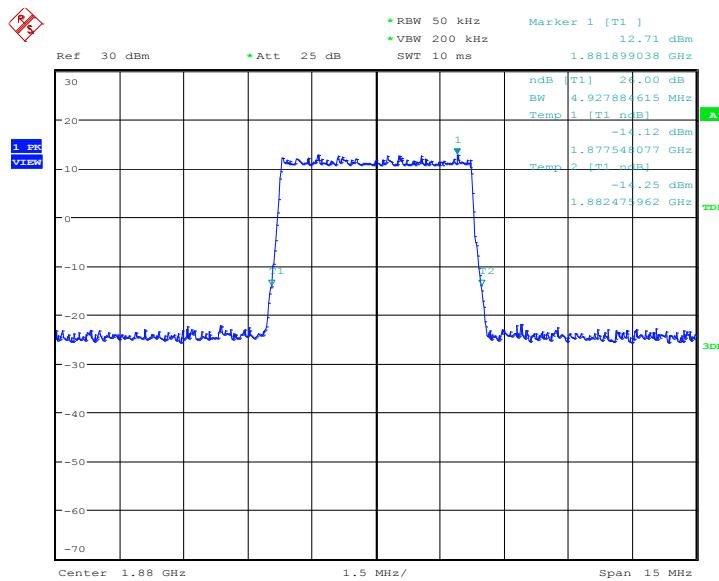
LTE band 2, 3MHz Bandwidth, 64QAM (-26dBc BW)



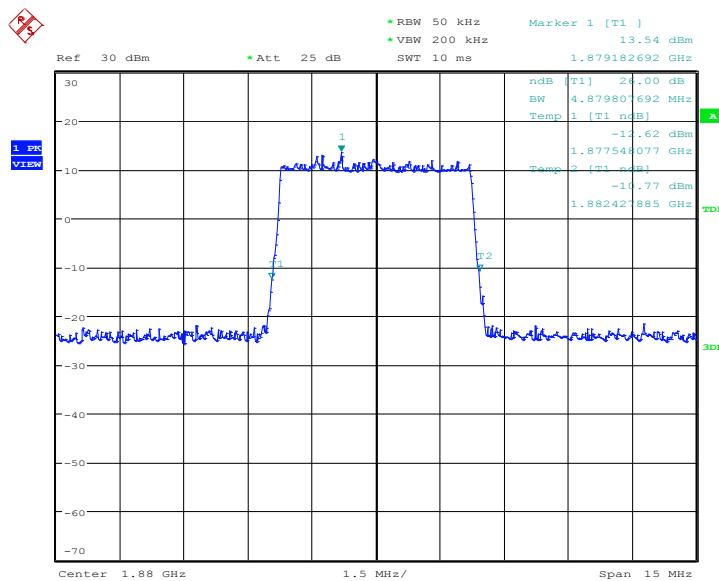
Date: 24.MAY.2018 10:03:05

LTE band 2, 5MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1880.0	4927.88	4879.81	4903.85

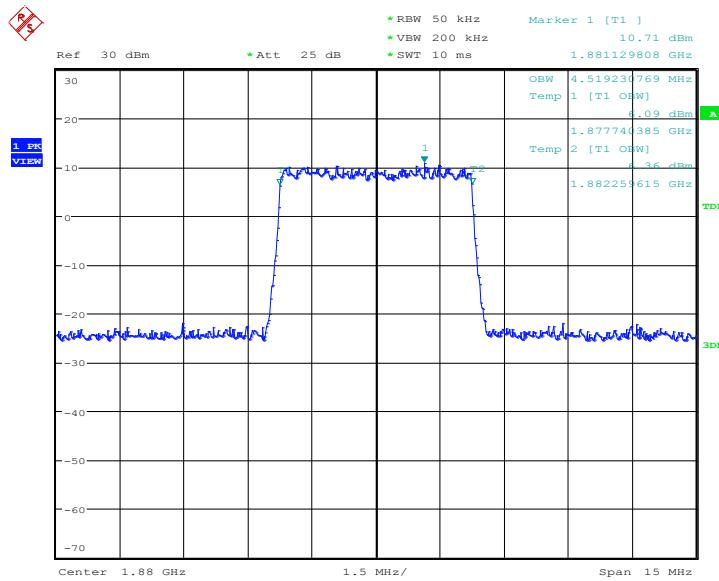
LTE band 2, 5MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 13:04:44

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


Date: 10.MAY.2018 13:05:00

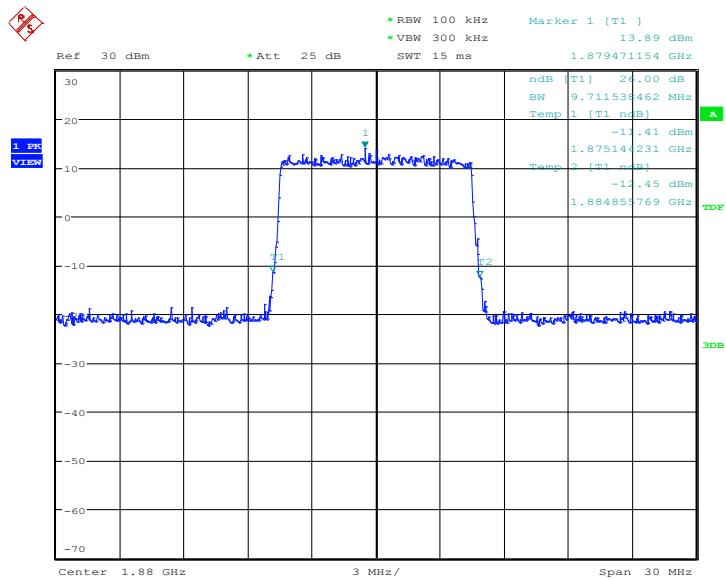
LTE band 2, 5MHz Bandwidth,64QAM (-26dBc BW)



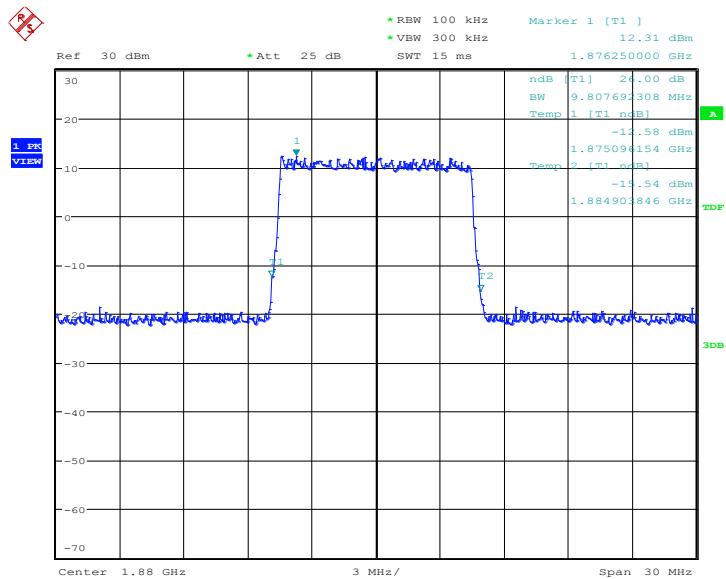
Date: 24.MAY.2018 10:23:57

LTE band 2, 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1880.0	9711.54	9807.69	9615.38

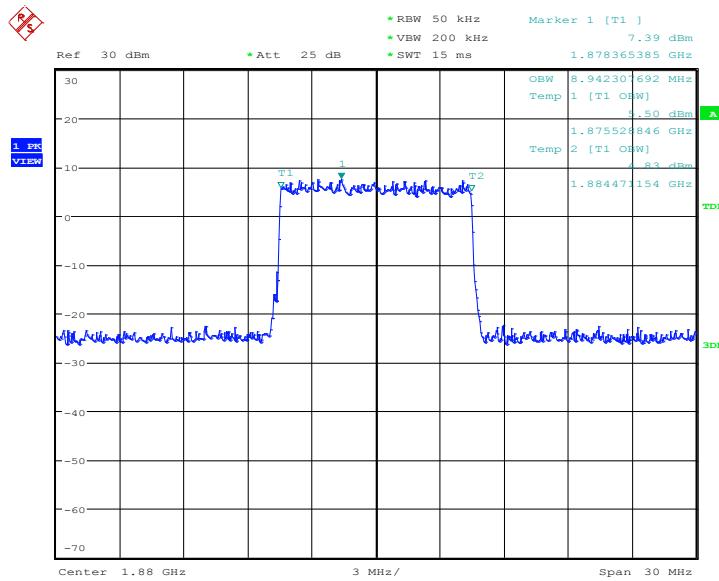
LTE band 2, 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 13:11:35

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


Date: 10.MAY.2018 13:11:50

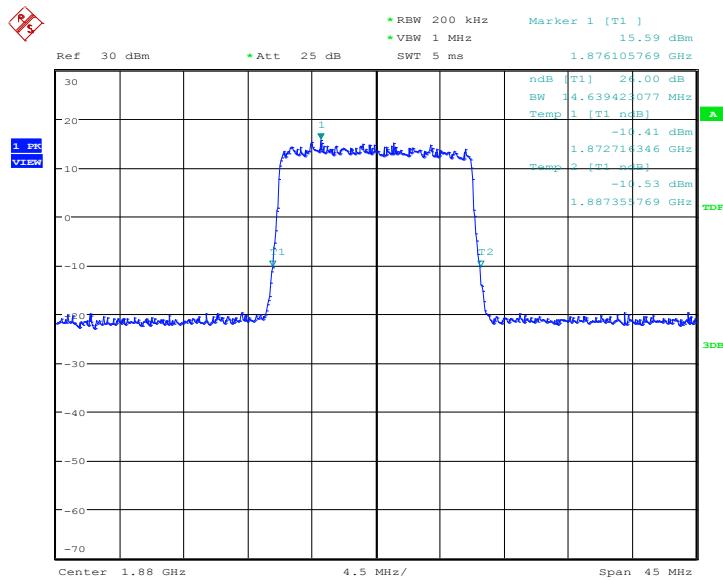
LTE band 2, 10MHz Bandwidth, 64QAM (-26dBc BW)



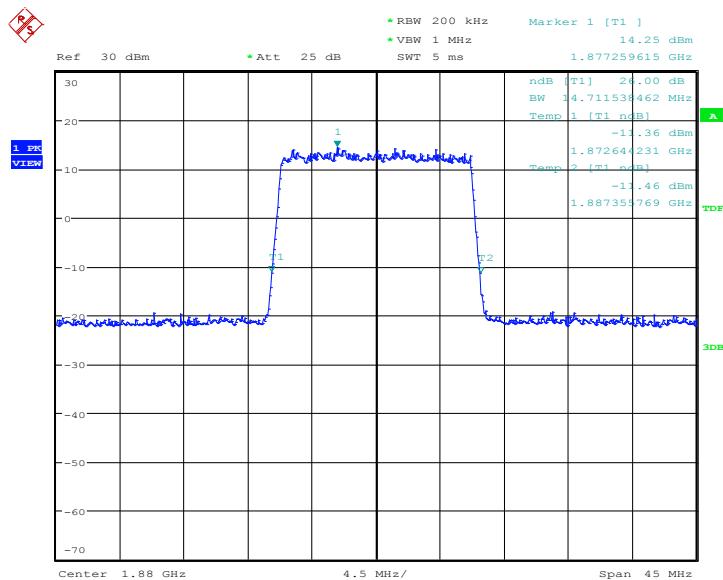
Date: 24.MAY.2018 10:29:28

LTE band 2, 15MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1880.0	14639.42	14711.54	14711.54

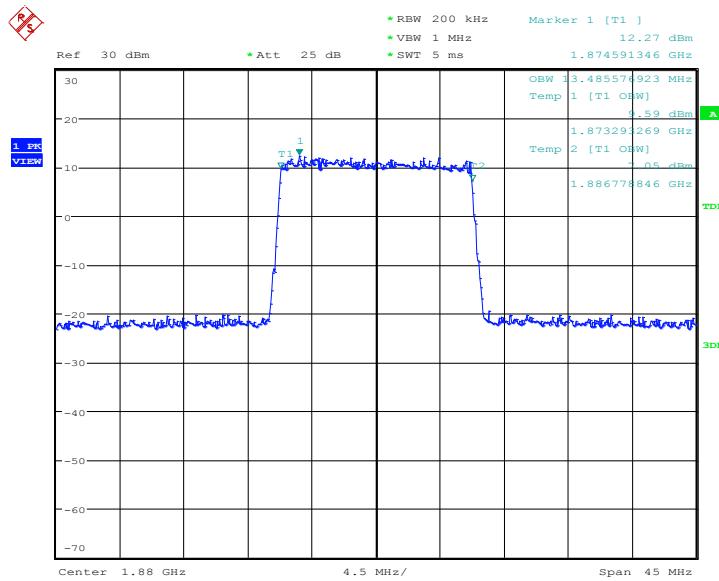
LTE band 2, 15MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 13:19:03

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


Date: 10.MAY.2018 13:19:19

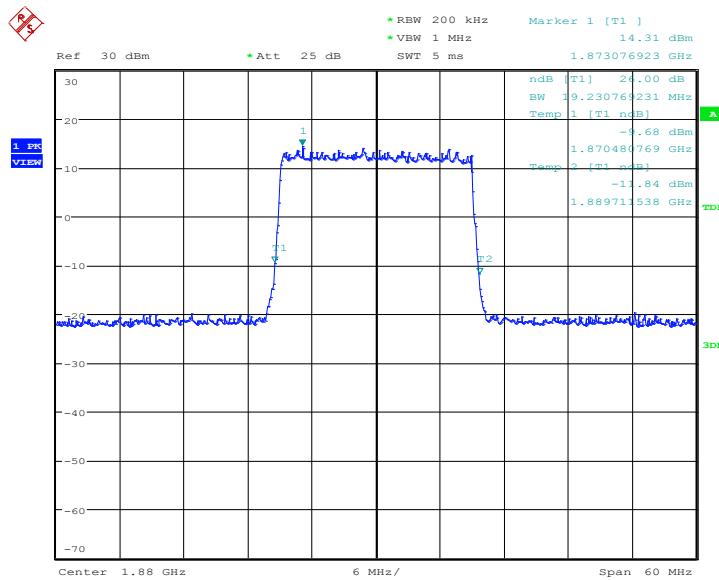
LTE band 2, 15MHz Bandwidth, 64QAM (-26dBc BW)



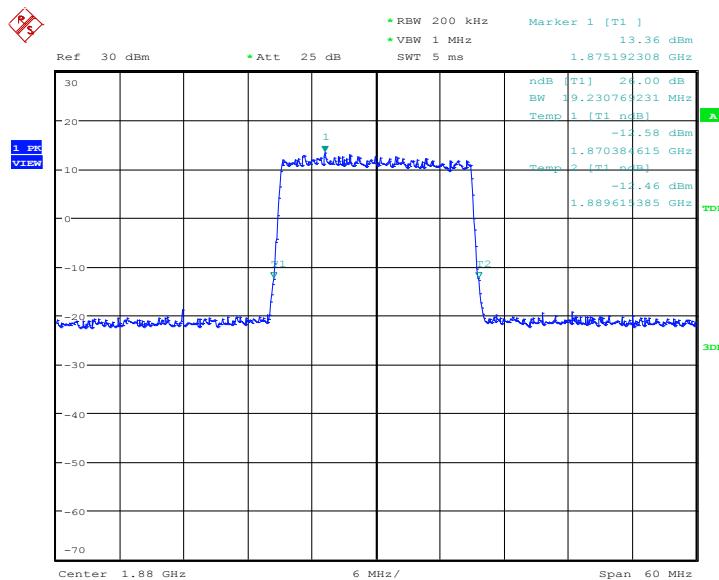
Date: 24.MAY.2018 11:01:04

LTE band 2, 20MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1880.0	19230.77	19230.77	19230.77

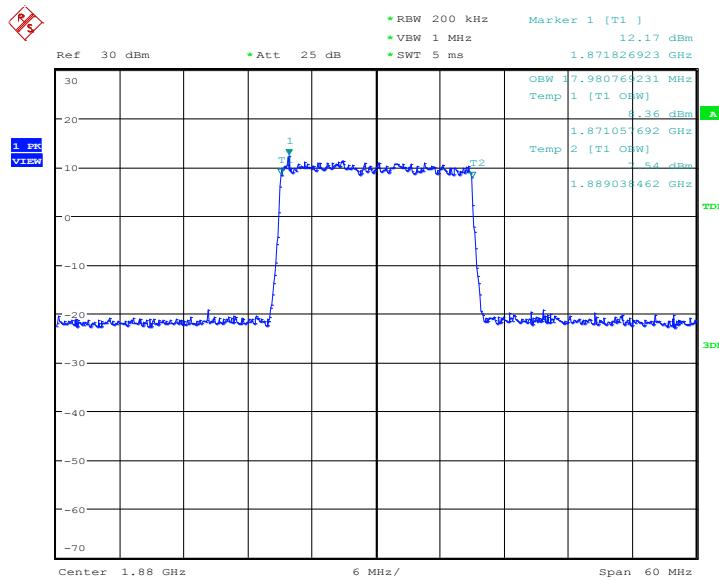
LTE band 2, 20MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 13:26:35

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


Date: 10.MAY.2018 13:26:50

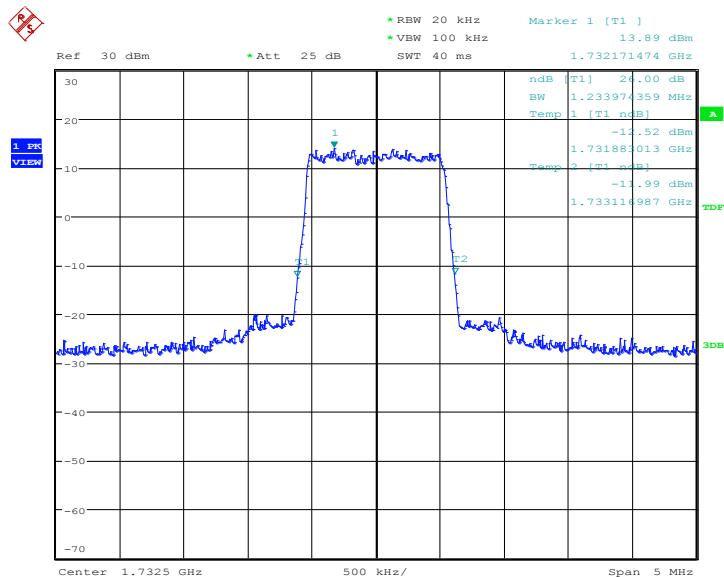
LTE band 2, 20MHz Bandwidth, 64QAM (-26dBc BW)



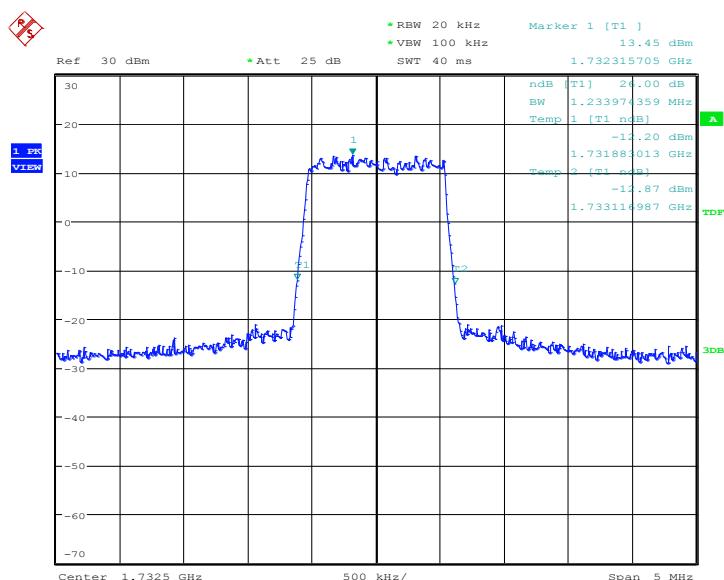
Date: 24.MAY.2018 11:02:15

LTE band 4, 1.4MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1732.5	1233.97	1233.97	1225.96

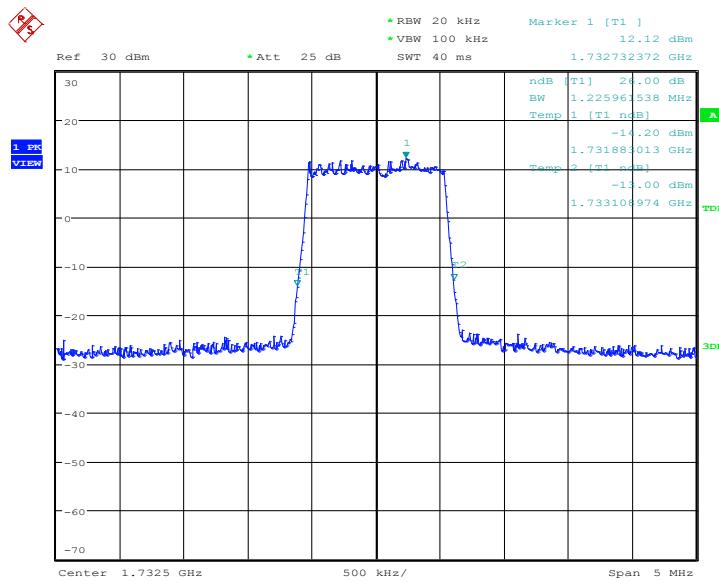
LTE band 4, 1.4MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 14:26:32

LTE band 4, 1.4MHz Bandwidth, 16QAM (-26dBc BW)


Date: 10.MAY.2018 14:26:48

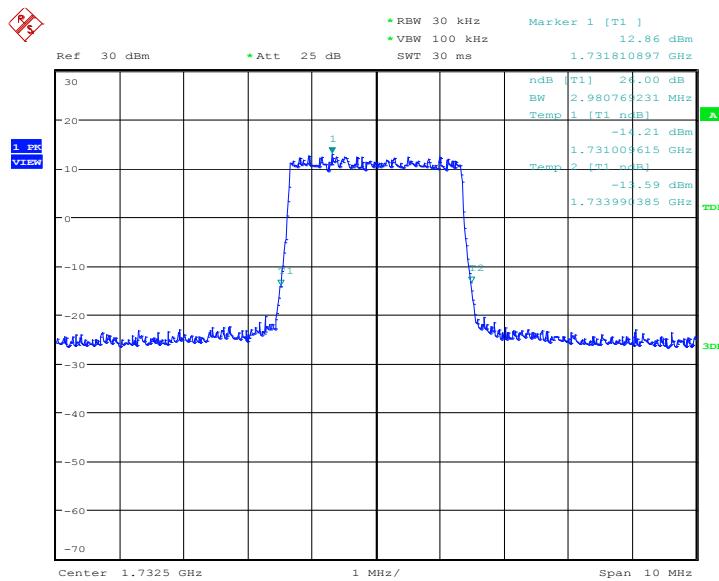
LTE band 4, 1.4MHz Bandwidth, 64QAM (-26dBc BW)



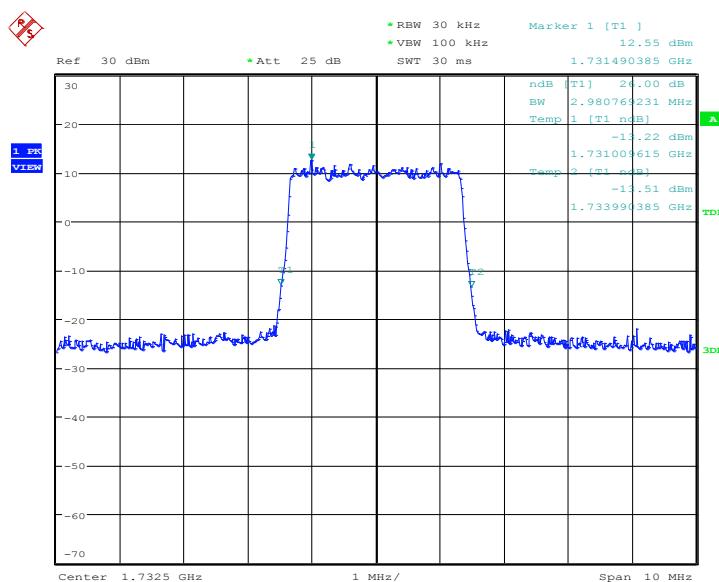
Date: 14.JUN.2018 09:44:21

LTE band 4, 3MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1732.5	2980.77	2980.77	2948.72

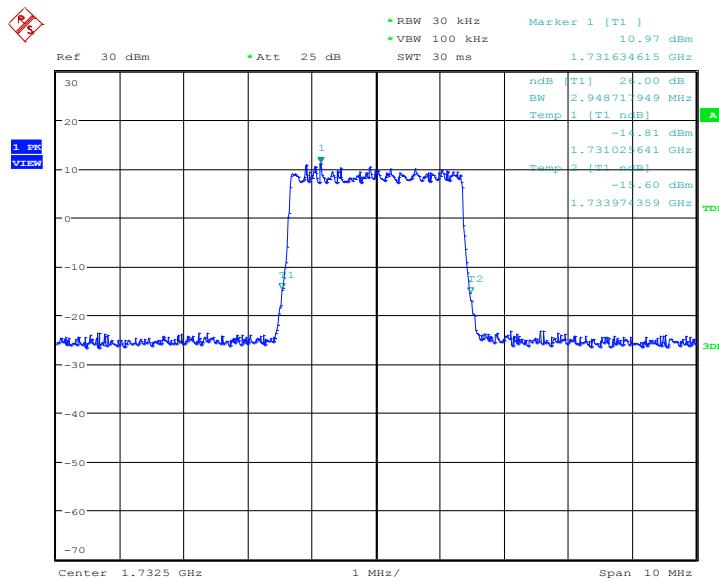
LTE band 4, 3MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 14:33:23

LTE band 4, 3MHz Bandwidth, 16QAM (-26dBc BW)


Date: 10.MAY.2018 14:33:39

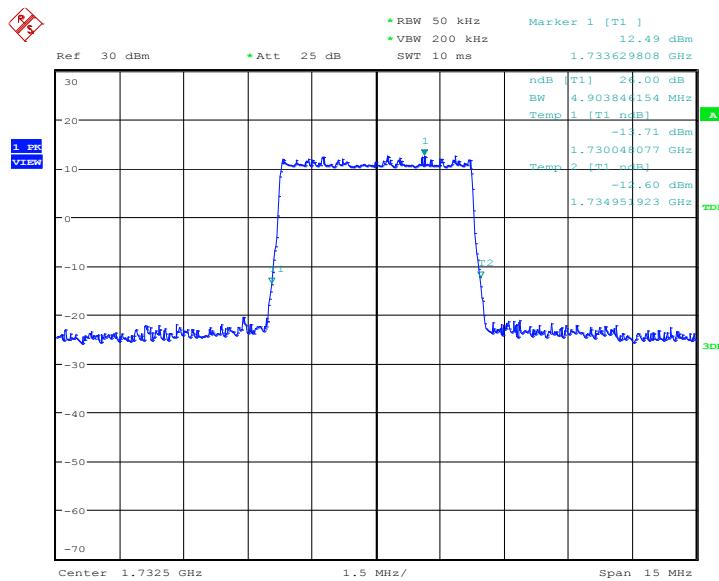
LTE band 4, 3MHz Bandwidth, 64QAM (-26dBc BW)



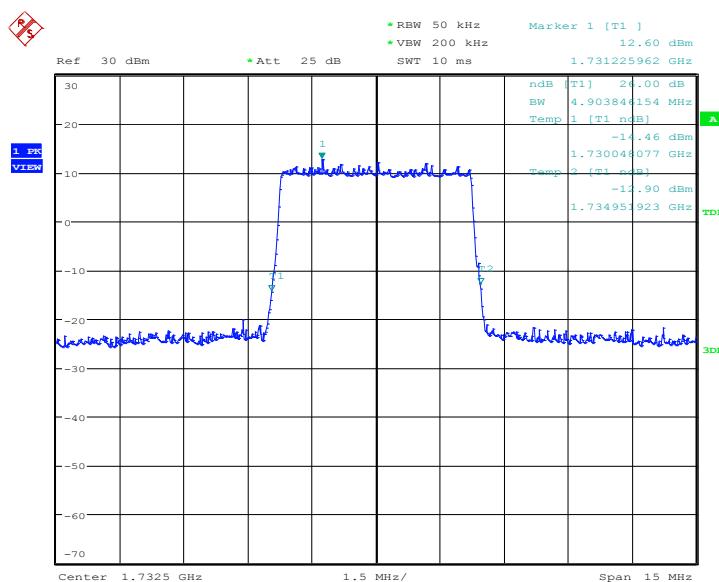
Date: 14.JUN.2018 09:47:09

LTE band 4, 5MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1732.5	4903.85	4903.85	4903.85

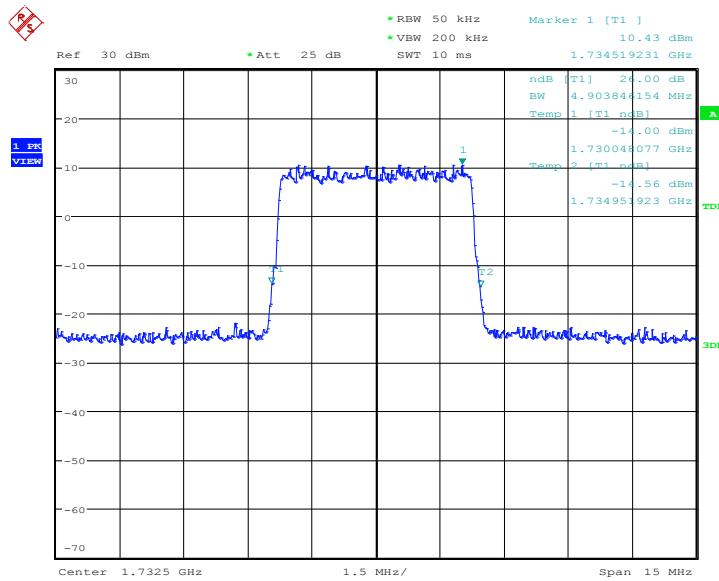
LTE band 4, 5MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 14:40:14

LTE band 4, 5MHz Bandwidth,16QAM (-26dBc BW)


Date: 10.MAY.2018 14:40:29

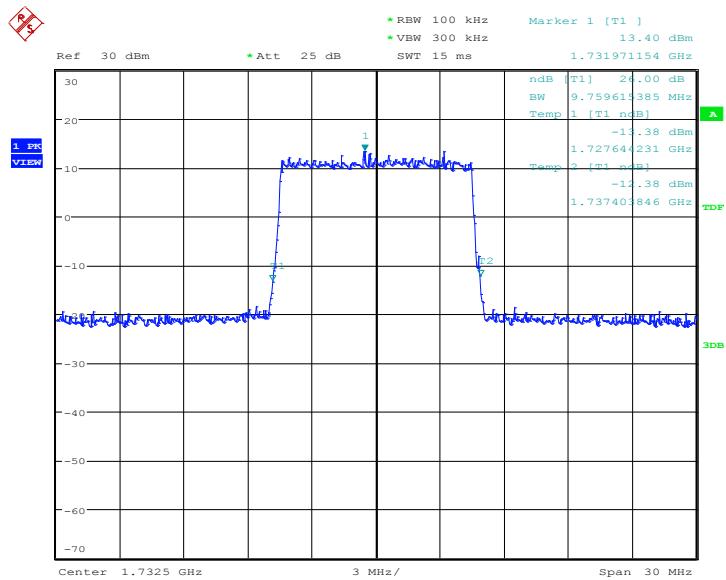
LTE band 4, 5MHz Bandwidth,64QAM (-26dBc BW)



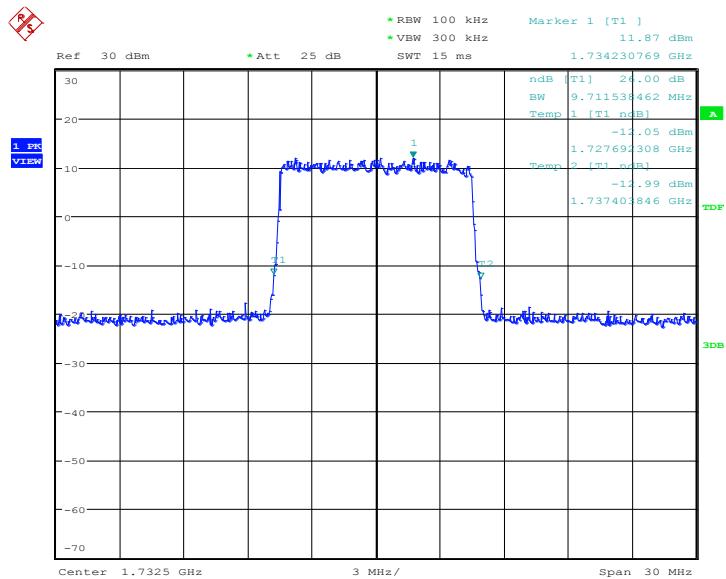
Date: 14.JUN.2018 09:49:08

LTE band 4, 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1732.5	9759.62	9711.54	9711.54

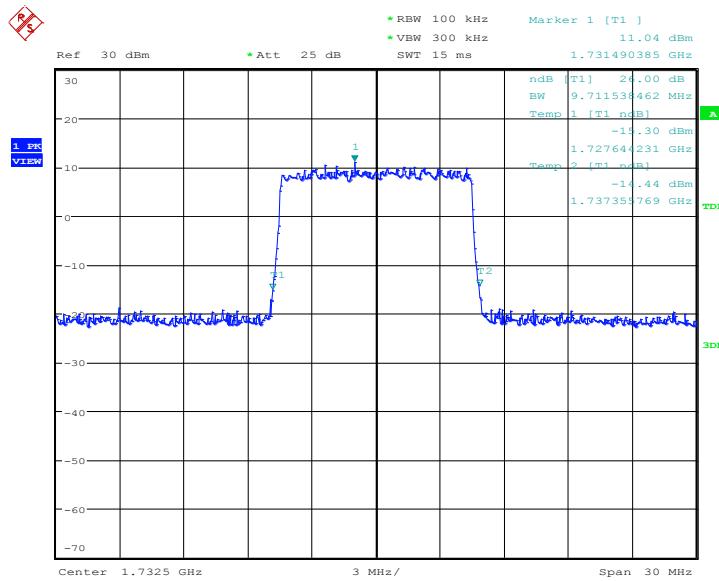
LTE band 4, 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 14:47:03

LTE band 4, 10MHz Bandwidth, 16QAM (-26dBc BW)


Date: 10.MAY.2018 14:47:19

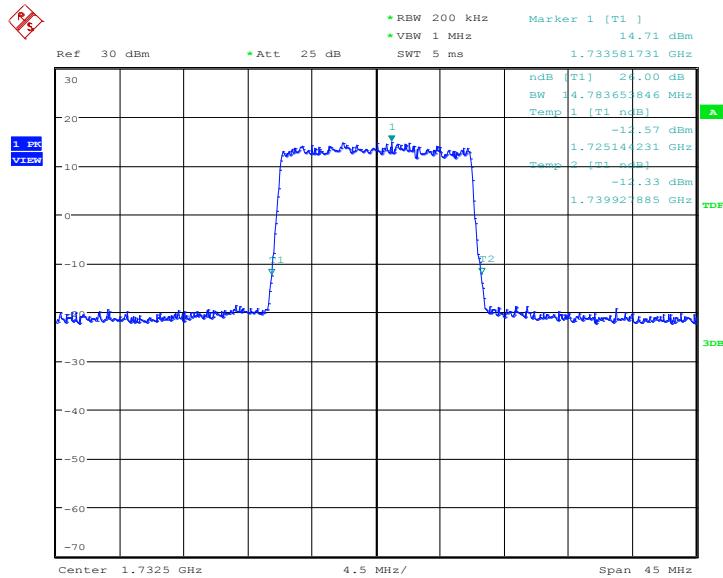
LTE band 4, 10MHz Bandwidth, 64QAM (-26dBc BW)



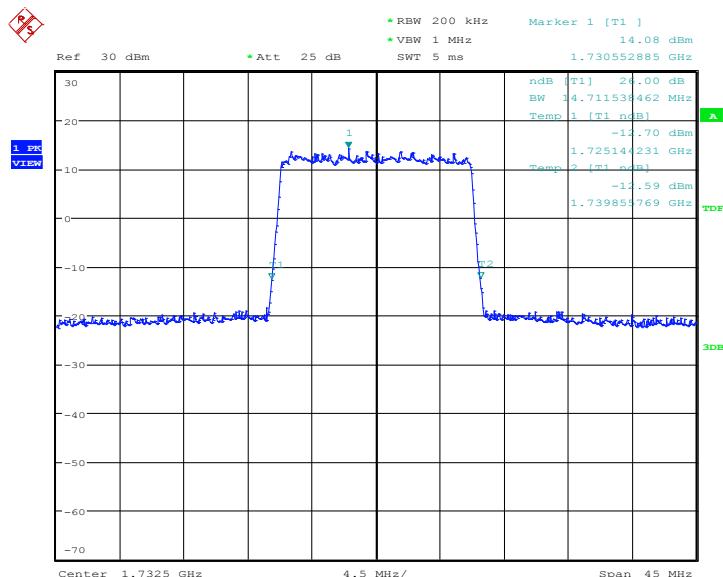
Date: 14.JUN.2018 09:51:10

LTE band 4, 15MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1732.5	14783.65	14711.54	14711.5

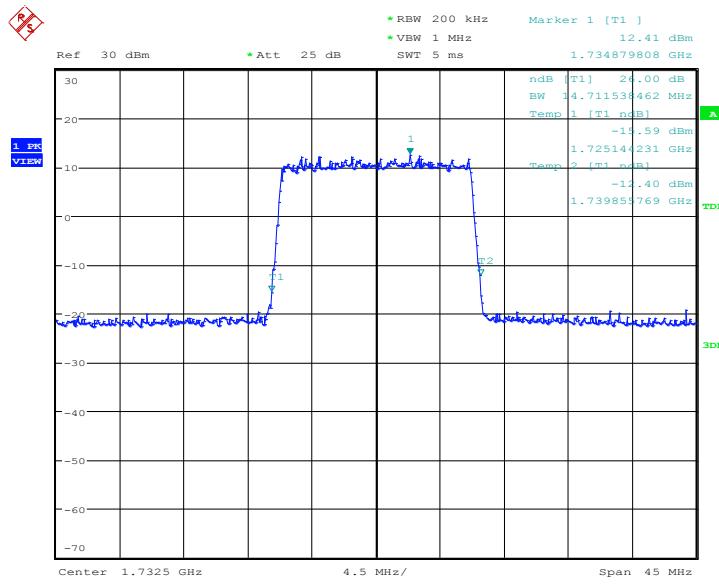
LTE band 4, 15MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 14:54:32

LTE band 4, 15MHz Bandwidth, 16QAM (-26dBc BW)


Date: 10.MAY.2018 14:54:47

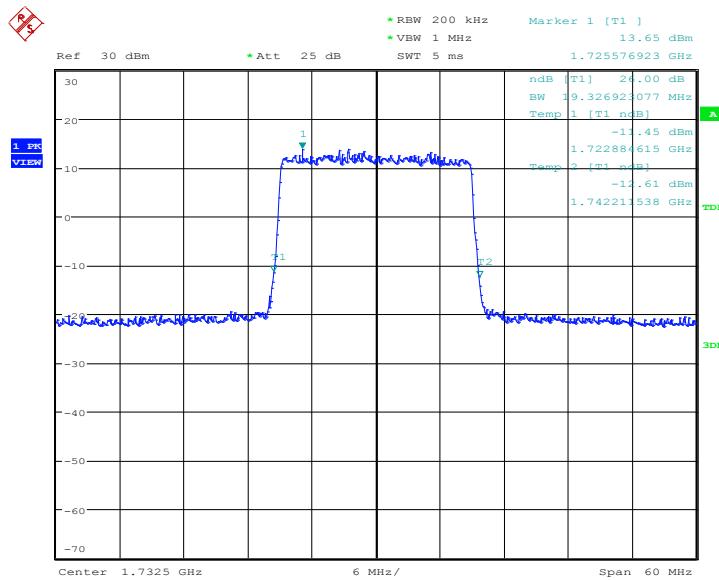
LTE band 4, 15MHz Bandwidth, 64QAM (-26dBc BW)



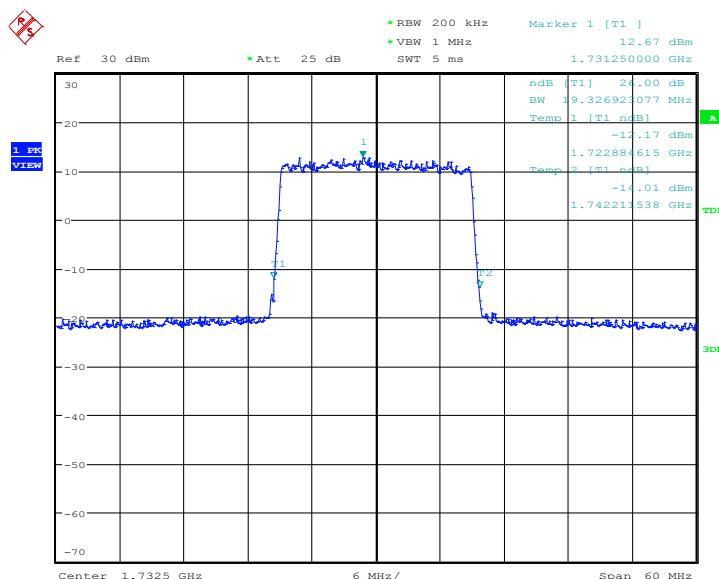
Date: 14.JUN.2018 09:52:18

LTE band 4, 20MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
1732.5	19326.92	19326.92	19326.9

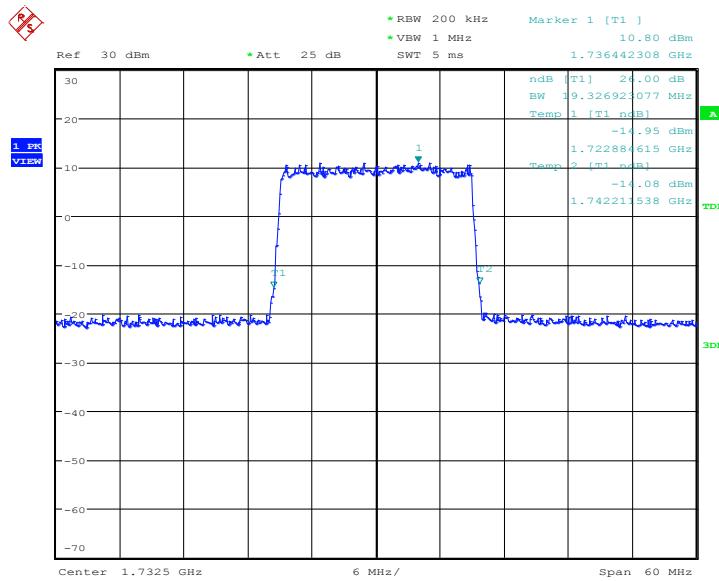
LTE band 4, 20MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 15:02:03

LTE band 4, 20MHz Bandwidth, 16QAM (-26dBc BW)


Date: 10.MAY.2018 15:02:19

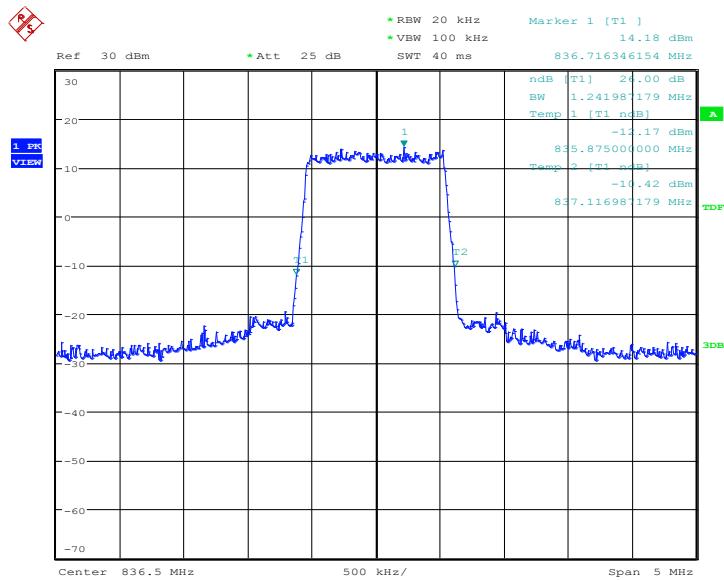
LTE band 4, 20MHz Bandwidth, 64QAM (-26dBc BW)



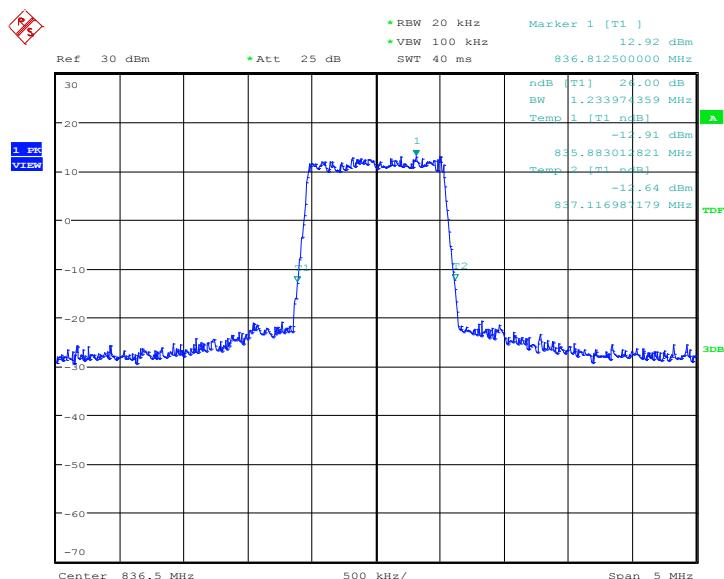
Date: 14.JUN.2018 09:53:23

LTE band 5, 1.4MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
836.5	1241.99	1233.97	1233.97

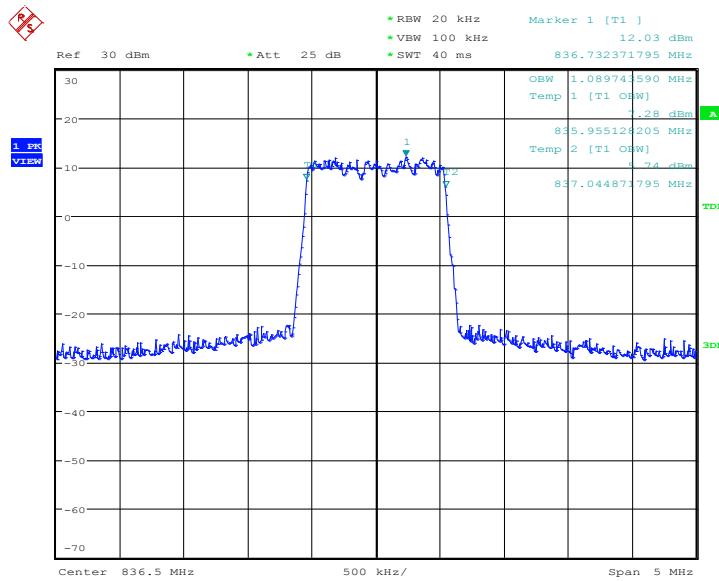
LTE band 5, 1.4MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 12:22:10

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


Date: 10.MAY.2018 12:22:27

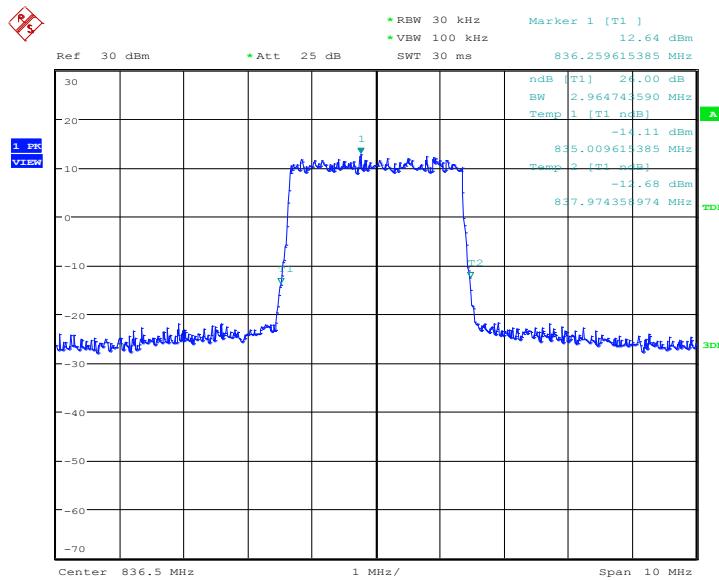
LTE band 5, 1.4MHz Bandwidth, 64QAM (-26dBc BW)



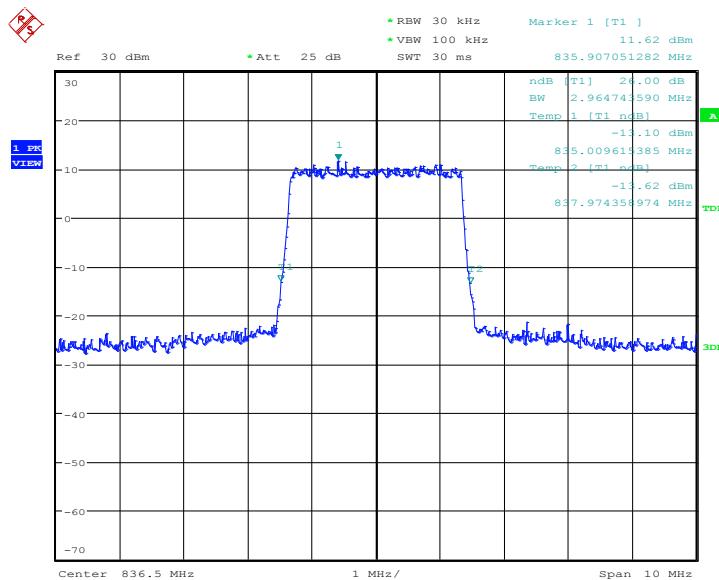
Date: 24.MAY.2018 13:06:38

LTE band 5, 3MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
836.5	2964.74	2964.74	2980.76

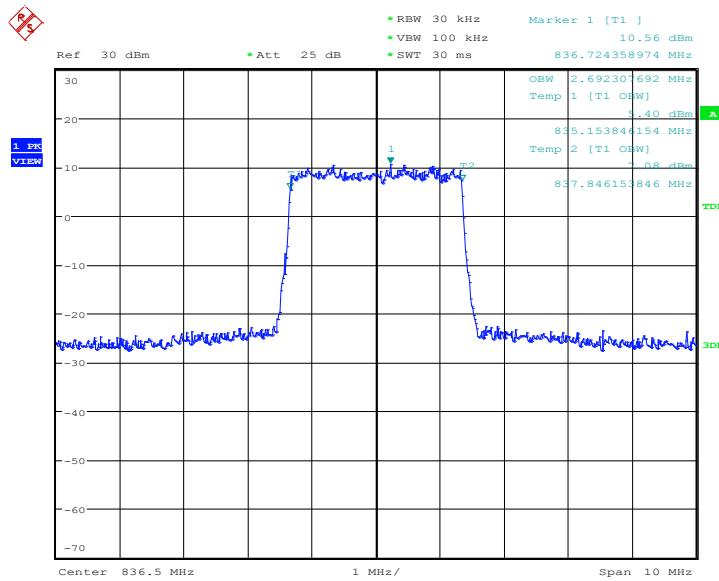
LTE band 5, 3MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 12:29:02

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


Date: 10.MAY.2018 12:29:18

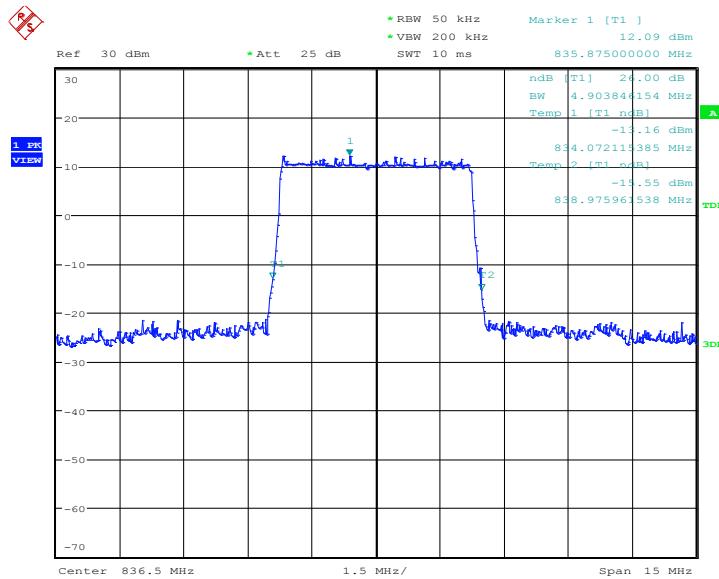
LTE band 5, 3MHz Bandwidth, 64QAM (-26dBc BW)



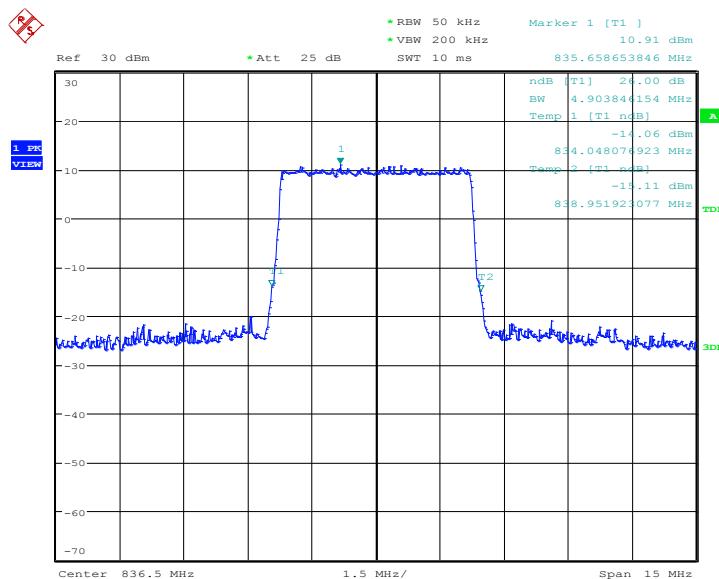
Date: 24.MAY.2018 13:10:19

LTE band 5, 5MHz (-26dBc)

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

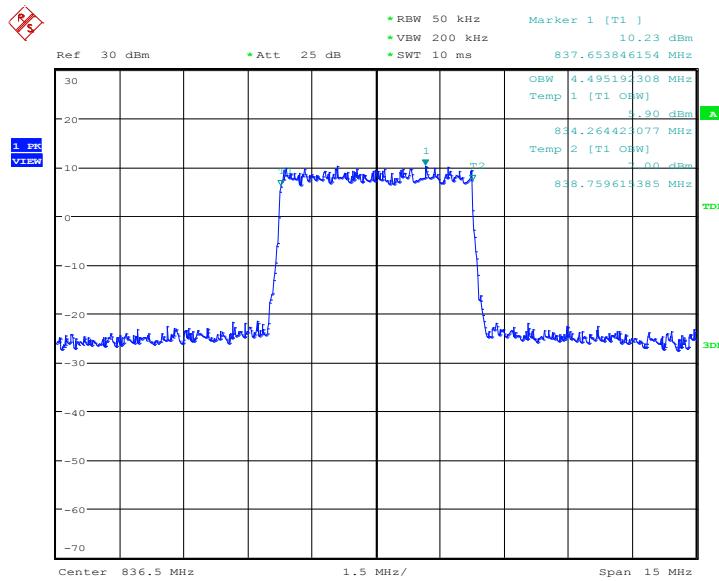
LTE band 5, 5MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 12:35:51

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


Date: 10.MAY.2018 12:36:07

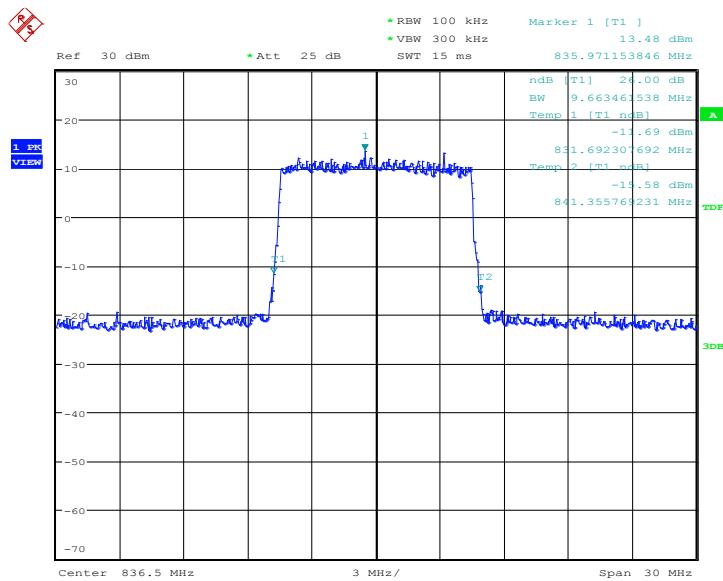
LTE band 5, 5MHz Bandwidth,64QAM (-26dBc BW)



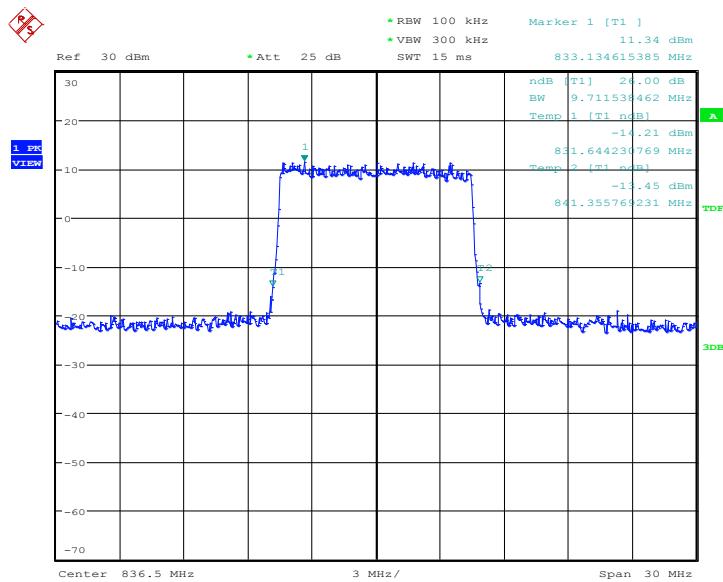
Date: 24.MAY.2018 13:20:59

LTE band 5, 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
836.5	9663.46	9711.54	9711.54

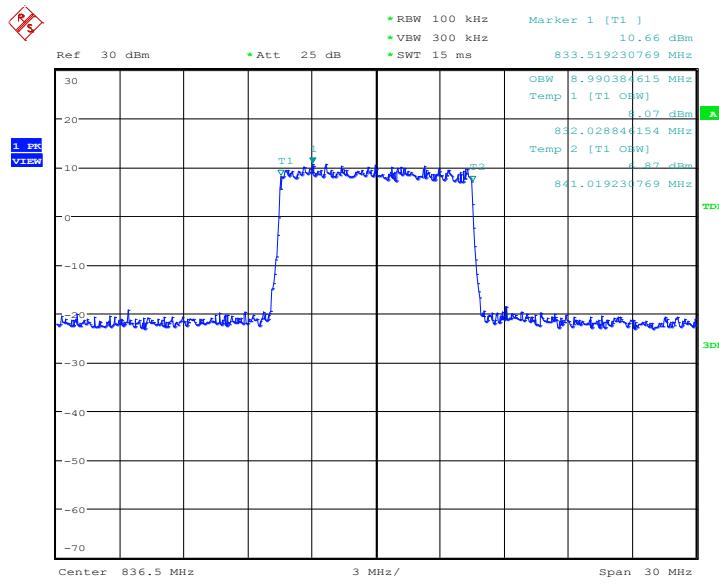
LTE band 5, 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 12:42:42

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


Date: 10.MAY.2018 12:42:57

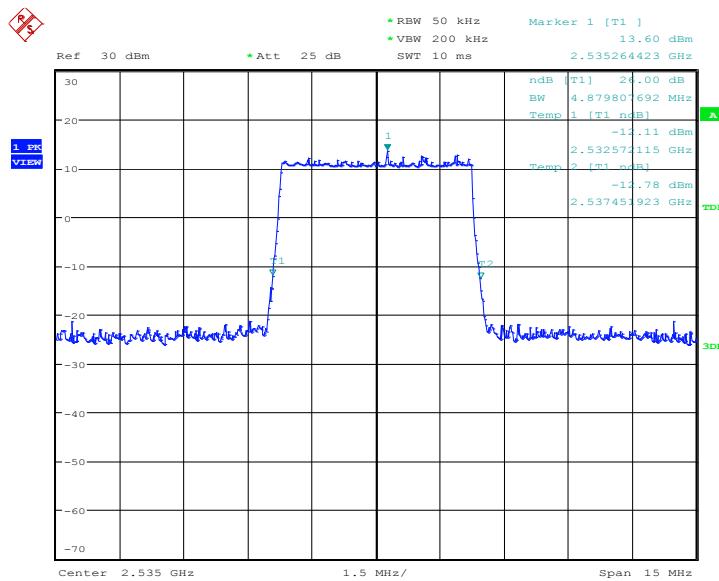
LTE band 5, 10MHz Bandwidth, 64QAM (-26dBc BW)



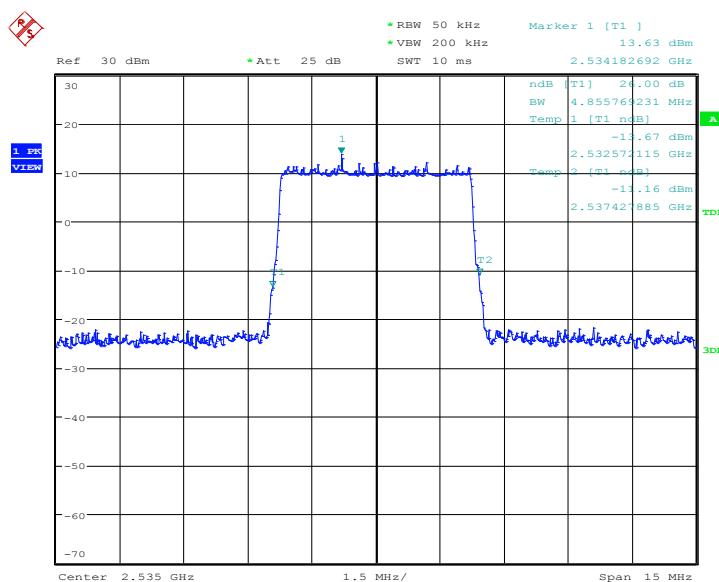
Date: 24.MAY.2018 13:26:12

LTE band 7, 5MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2535.0	4879.81	4855.77	4903.85

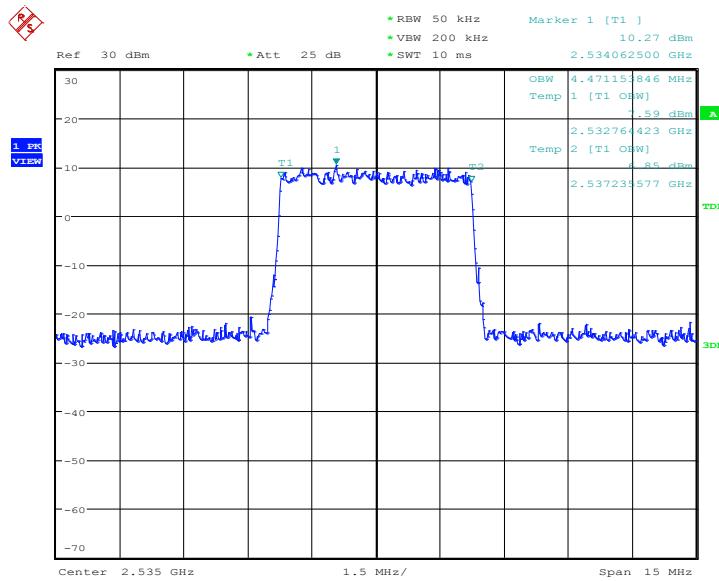
LTE band 7, 5MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 08:55:44

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


Date: 11.MAY.2018 08:56:00

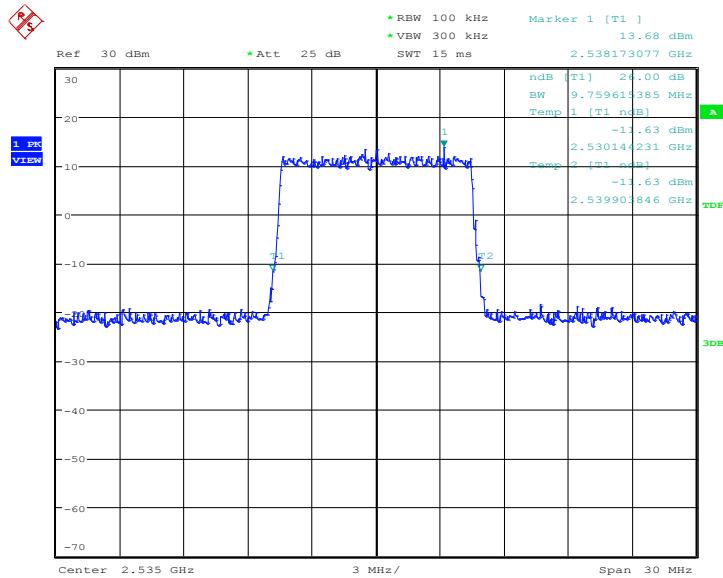
LTE band 7, 5MHz Bandwidth,64QAM (-26dBc BW)



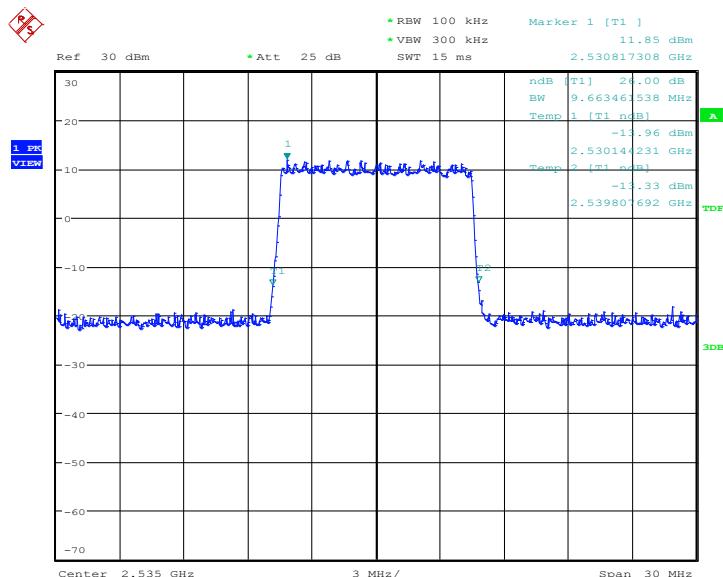
Date: 24.MAY.2018 16:11:46

LTE band 7, 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2535.0	9759.62	9663.46	9711.54

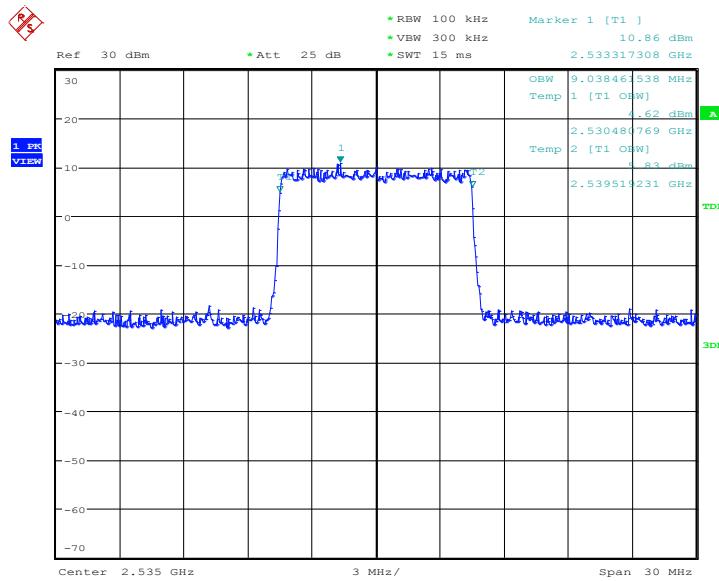
LTE band 7, 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 09:02:43

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


Date: 11.MAY.2018 09:03:00

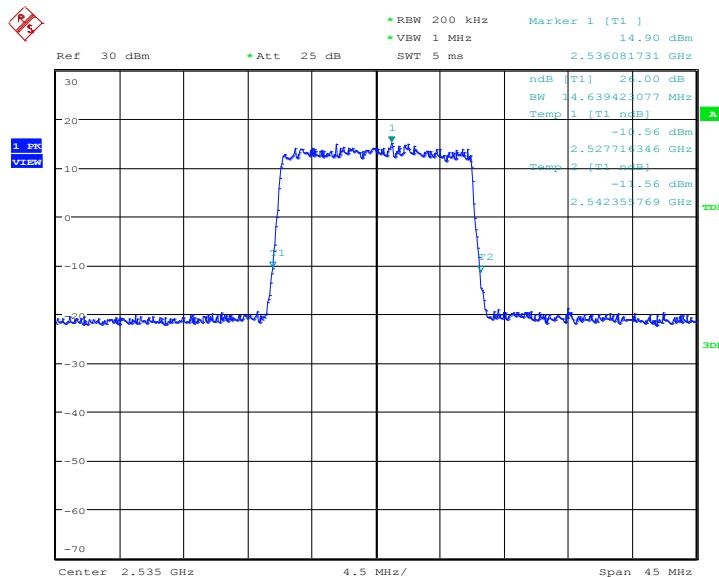
LTE band 7, 10MHz Bandwidth, 64QAM (-26dBc BW)



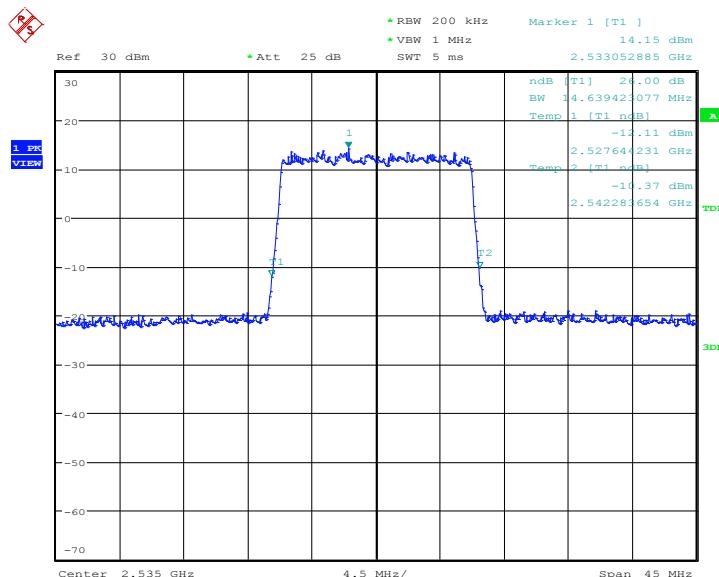
Date: 24.MAY.2018 16:16:43

LTE band 7, 15MHz (-26dBc)

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

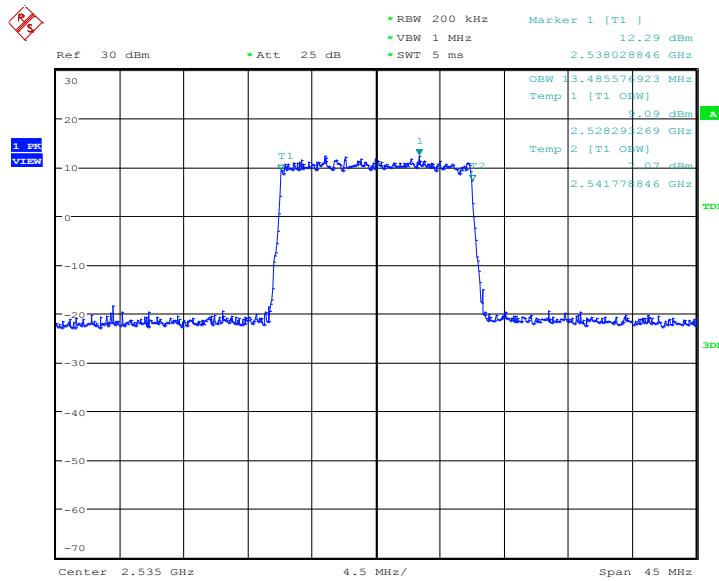
LTE band 7, 15MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 09:10:20

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


Date: 11.MAY.2018 09:10:37

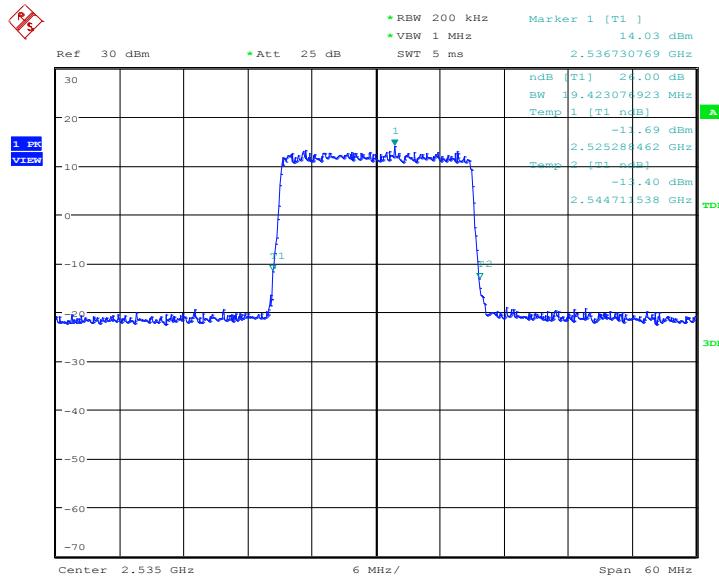
LTE band 7, 15MHz Bandwidth, 64QAM (-26dBc BW)



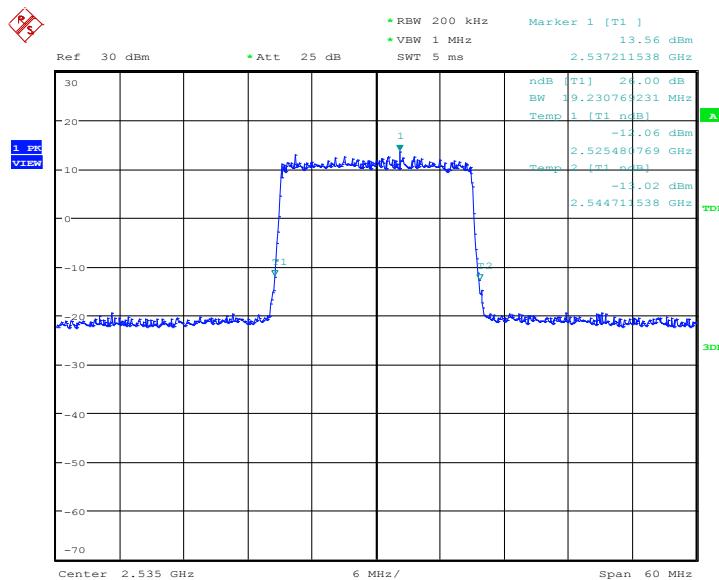
Date: 24.MAY.2018 16:19:57

LTE band 7, 20MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2535.0	19423.08	19230.77	19230.77

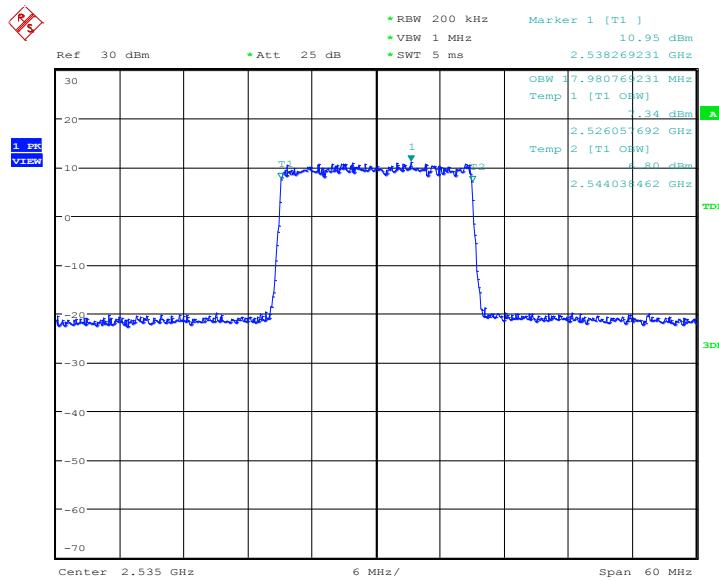
LTE band 7, 20MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 09:18:00

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


Date: 11.MAY.2018 09:18:17

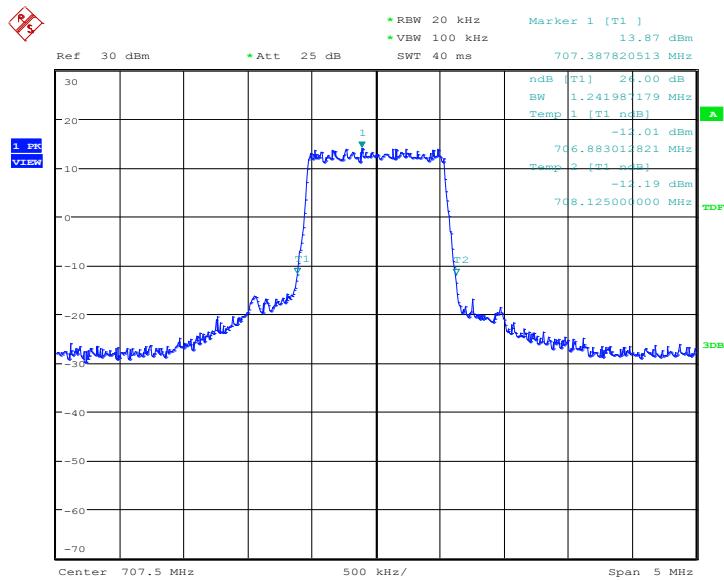
LTE band 7, 20MHz Bandwidth, 64QAM (-26dBc BW)



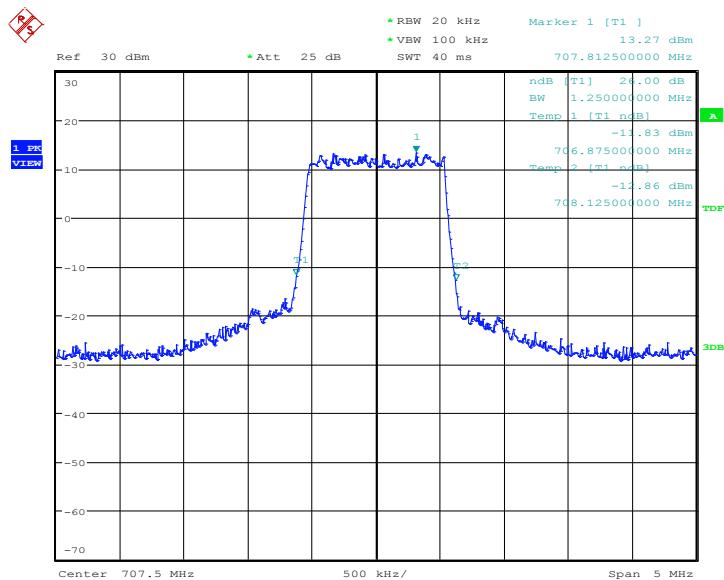
Date: 24.MAY.2018 16:23:16

LTE band 12, 1.4MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	1241.99	1250.00	1241.99

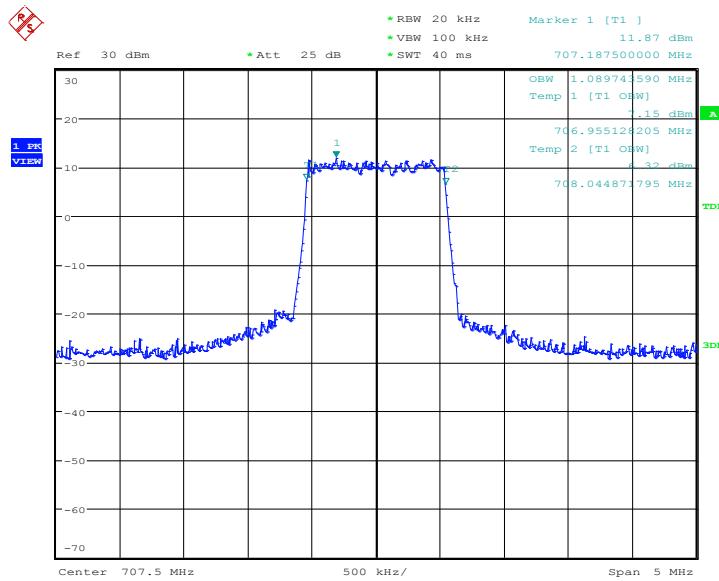
LTE band 12, 1.4MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 15:09:00

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


Date: 10.MAY.2018 15:09:16

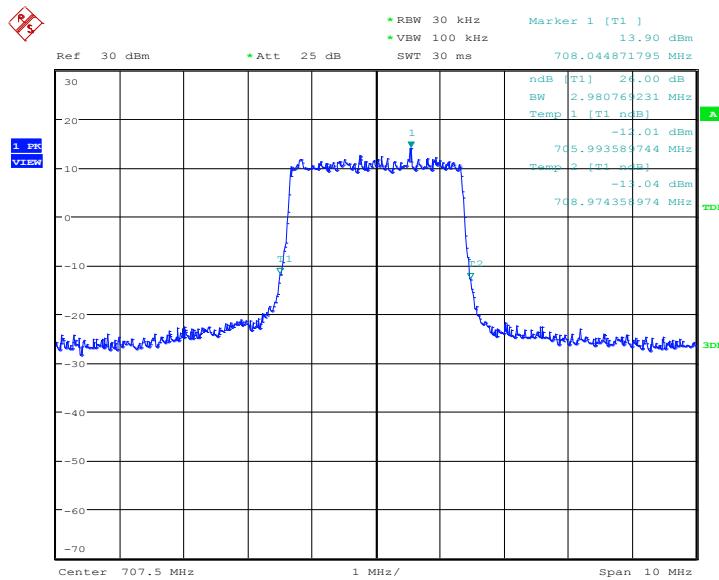
LTE band 12, 1.4MHz Bandwidth, 64QAM (-26dBc BW)



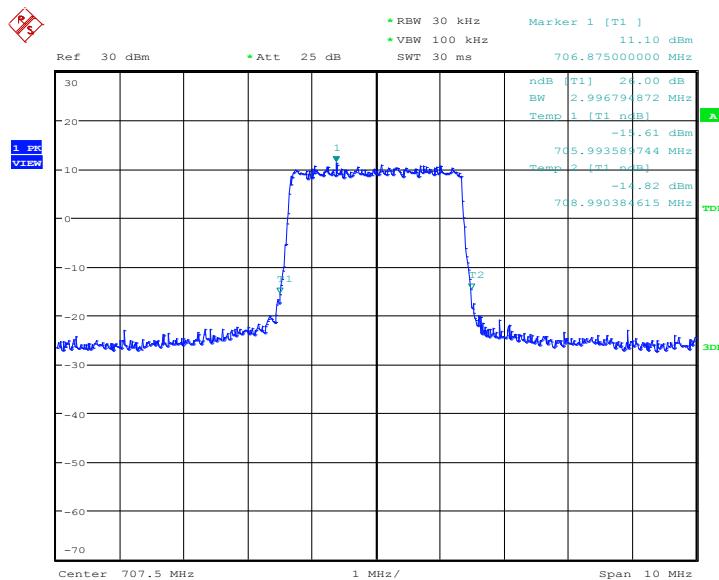
Date: 24.MAY.2018 16:34:53

LTE band 12, 3MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	2980.77	2996.79	2964.74

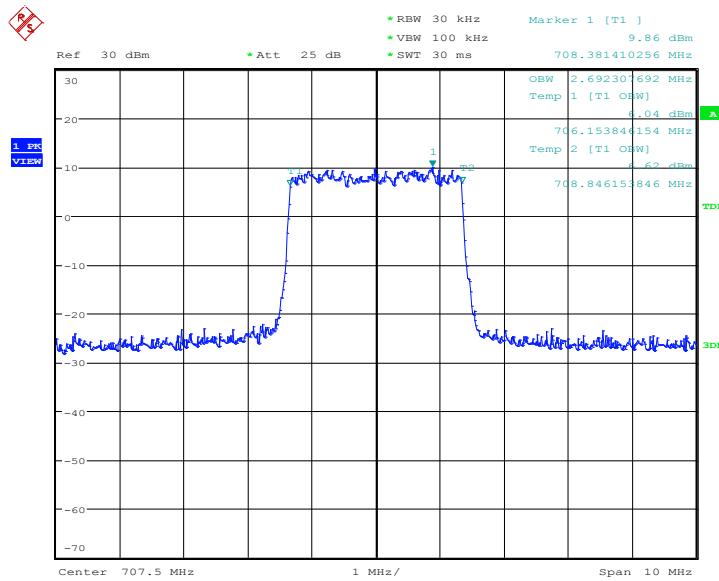
LTE band 12, 3MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 15:15:51

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


Date: 10.MAY.2018 15:16:06

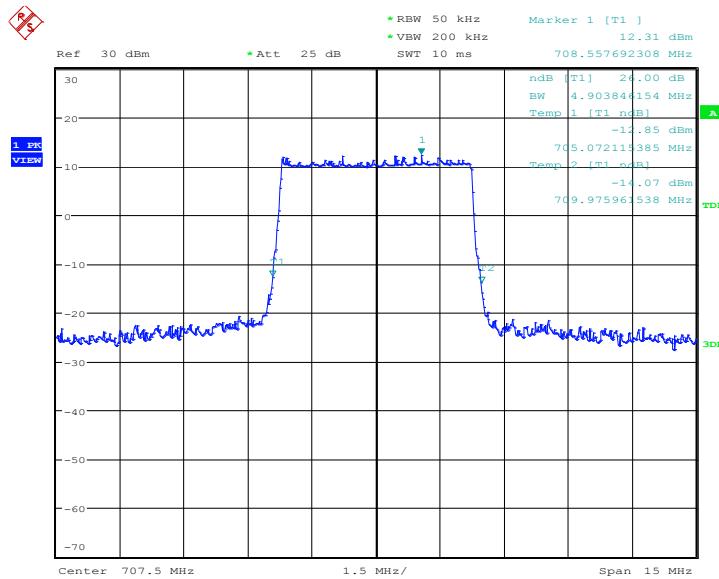
LTE band 12, 3MHz Bandwidth, 64QAM (-26dBc BW)



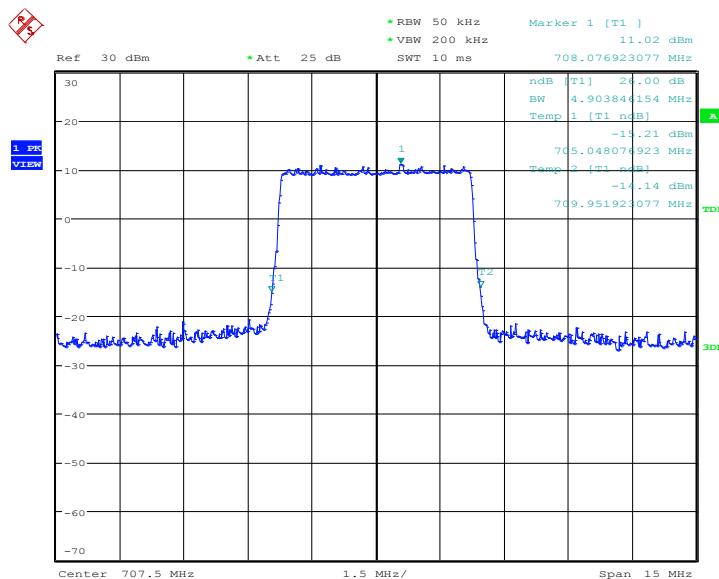
Date: 24.MAY.2018 16:37:57

LTE band 12, 5MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	4903.85	4903.85	4927.88

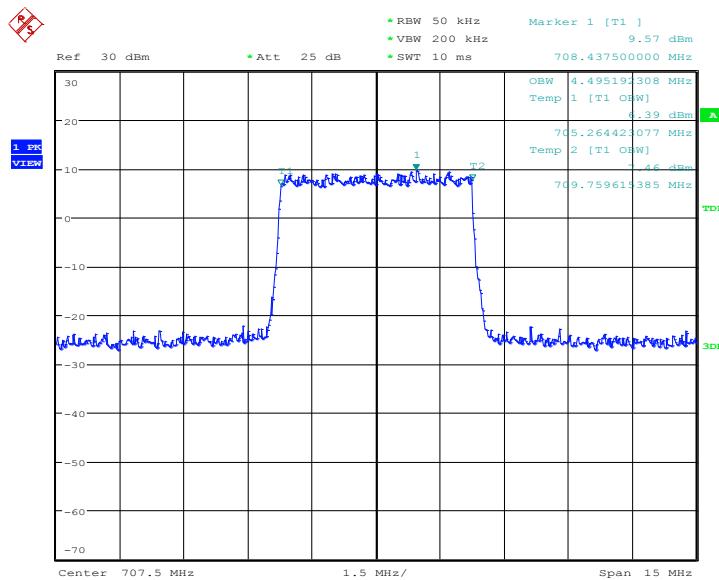
LTE band 12, 5MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 15:22:41

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


Date: 10.MAY.2018 15:22:57

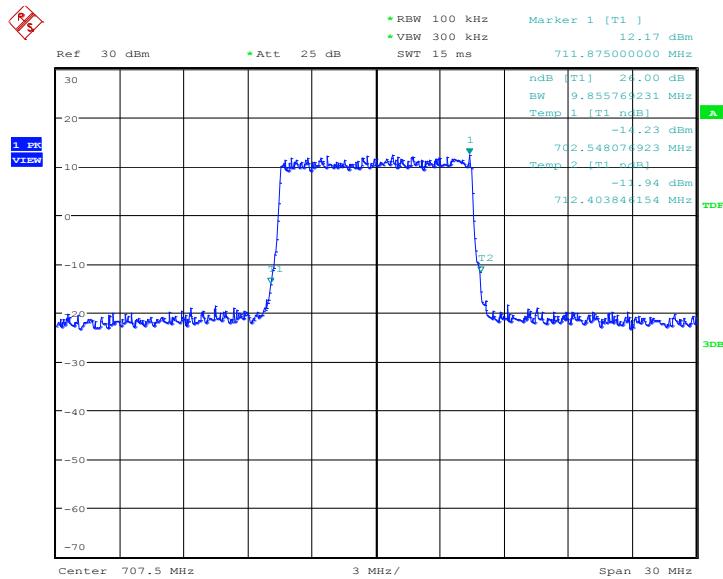
LTE band 12, 5MHz Bandwidth,64QAM (-26dBc BW)



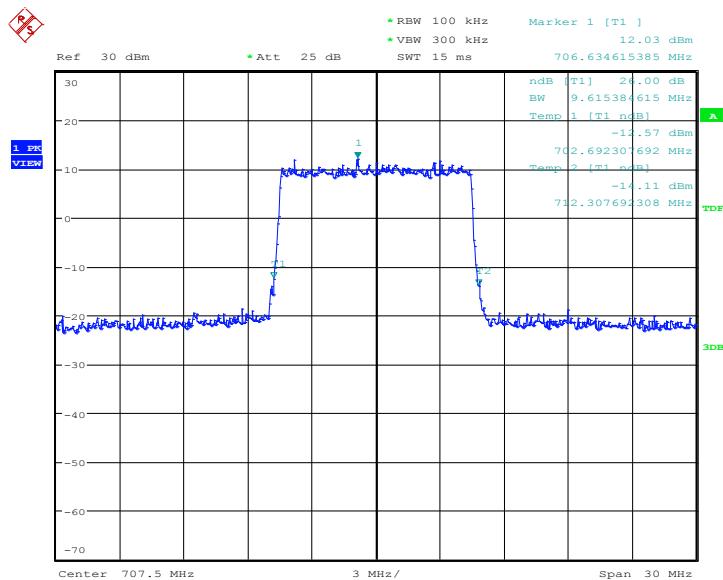
Date: 24.MAY.2018 16:41:20

LTE band 12, 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
707.5	9855.77	9615.38	9711.54

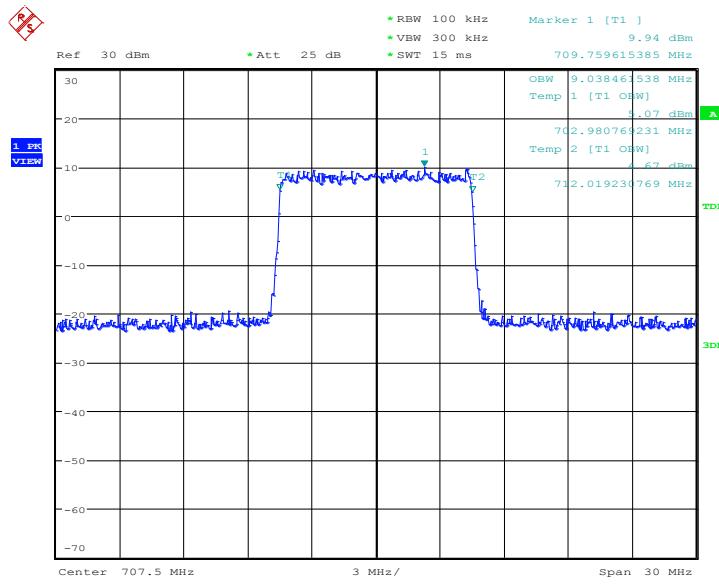
LTE band 12, 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 10.MAY.2018 15:29:32

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


Date: 10.MAY.2018 15:29:48

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

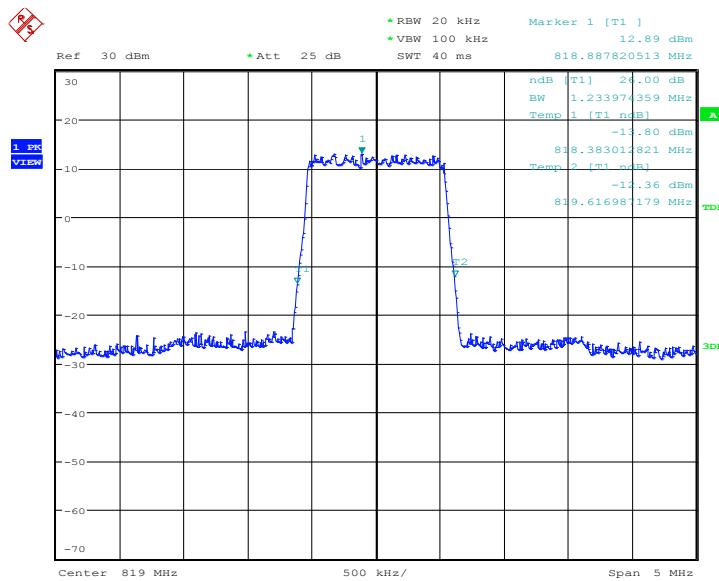


Date: 24.MAY.2018 16:45:11

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

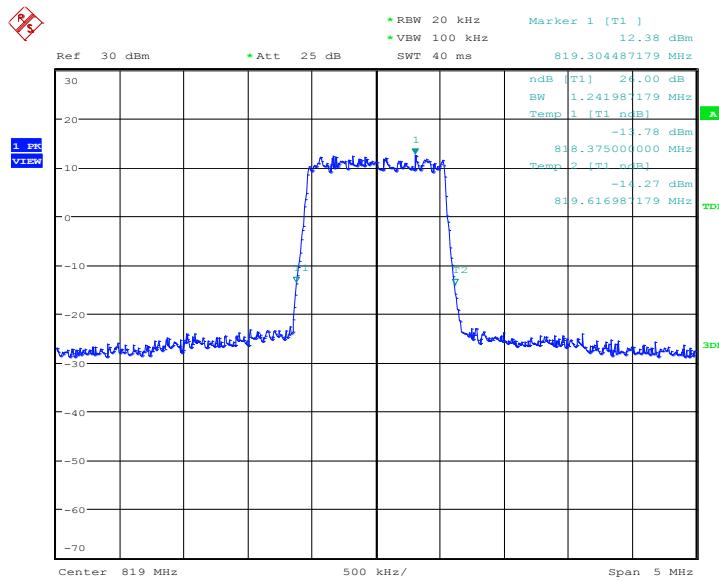
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
819.0	QPSK	16QAM	64QAM
	1233.97	1241.99	1225.96

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



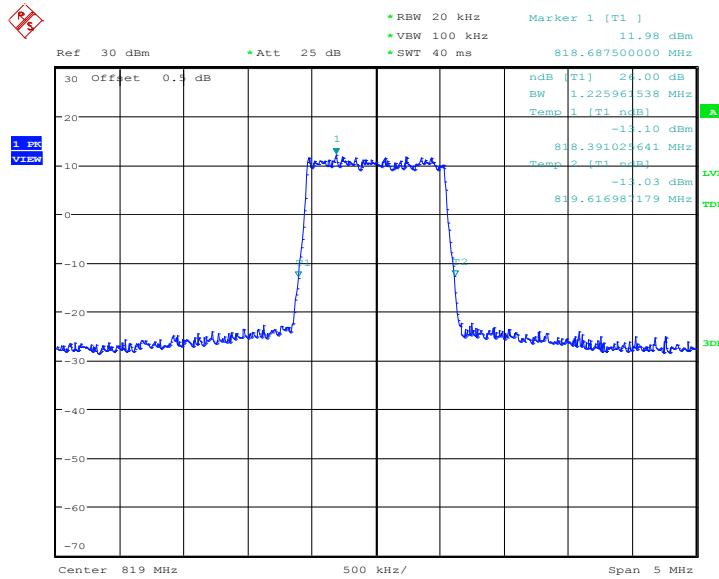
Date: 16.MAY.2018 16:16:12

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



Date: 16.MAY.2018 16:16:29

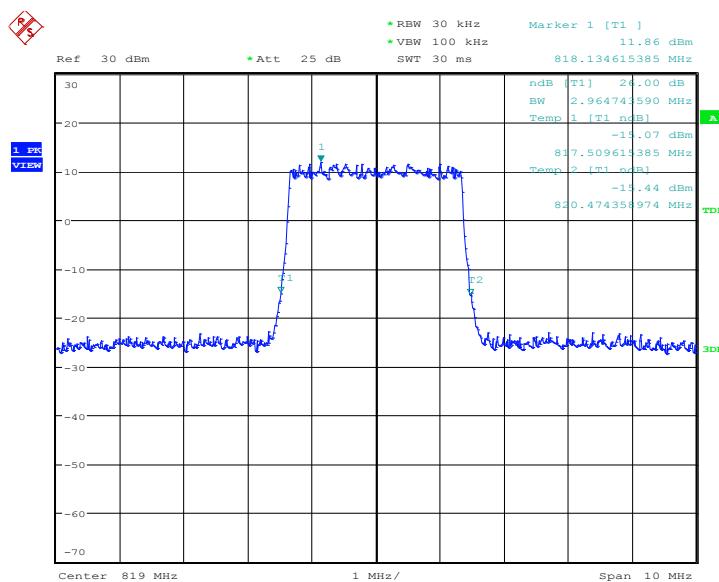
LTE band 26(814MHz-824MHz), 1.4MHz Bandwidth, 64QAM (-26dBc BW)



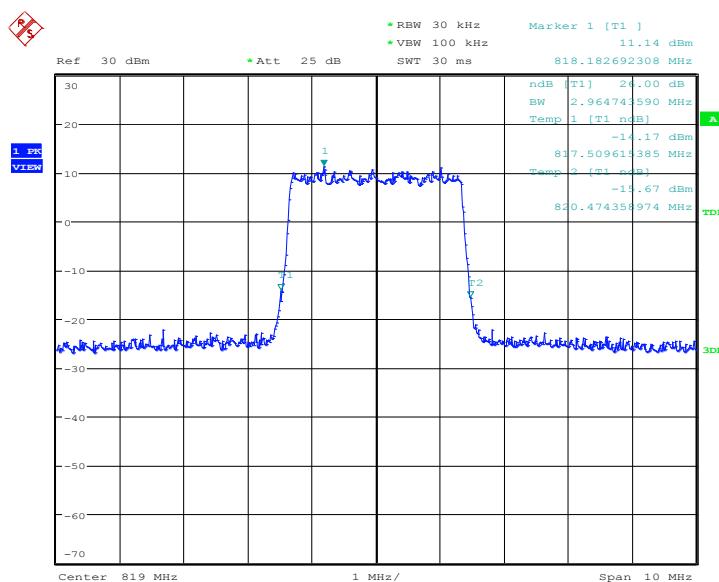
Date: 29.MAY.2018 11:21:05

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

Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
	QPSK	16QAM	64QAM
819.0			
	2964.74	2964.74	2964.74

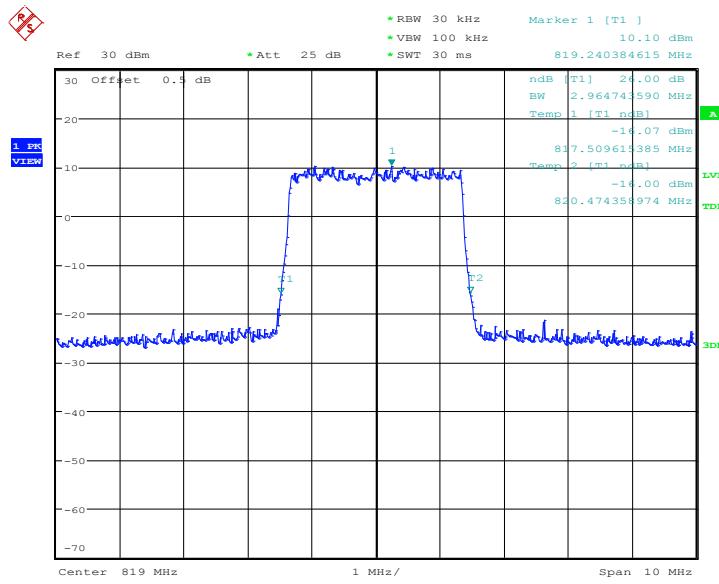
LTE band 26(814MHz-824MHz), 3MHz Bandwidth, QPSK (-26dBc BW)


Date: 16.MAY.2018 16:23:09

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


Date: 16.MAY.2018 16:23:26

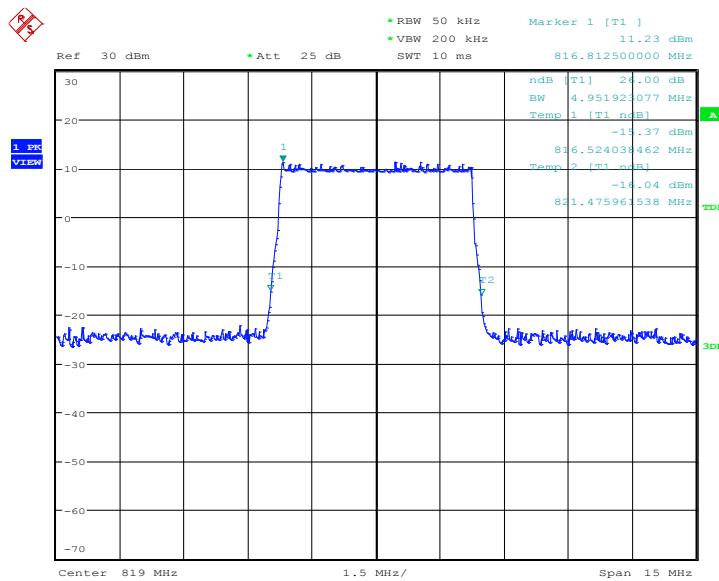
LTE band 26(814MHz-824MHz), 3MHz Bandwidth, 64QAM (-26dBc BW)



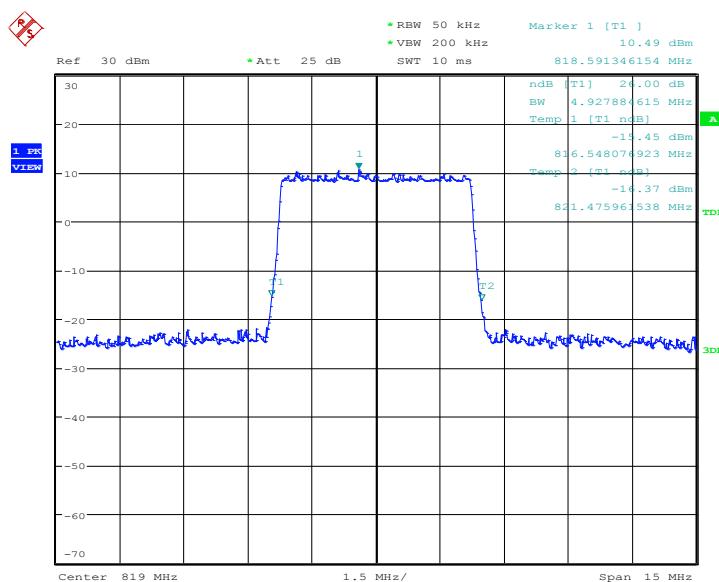
Date: 29.MAY.2018 11:22:56

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

Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
	QPSK	16QAM	64QAM
819.0			
	4951.92	4927.88	4927.88

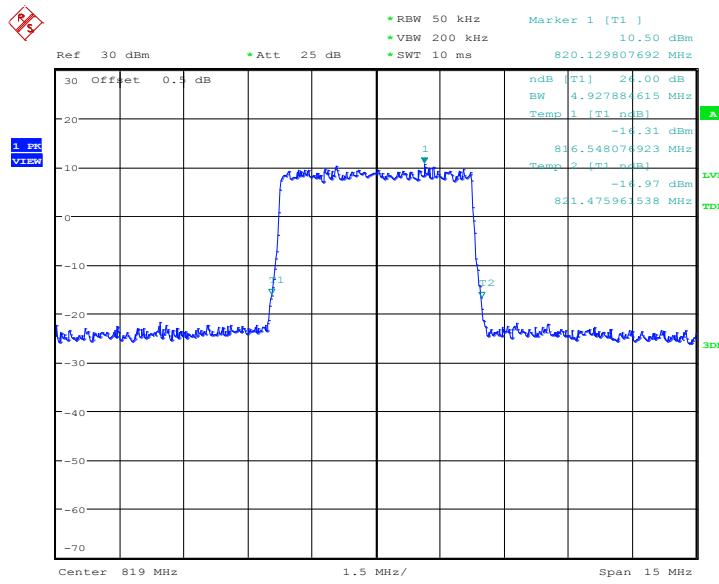
LTE band 26(814MHz-824MHz), 5MHz Bandwidth, QPSK (-26dBc BW)


Date: 16.MAY.2018 16:30:02

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


Date: 16.MAY.2018 16:30:19

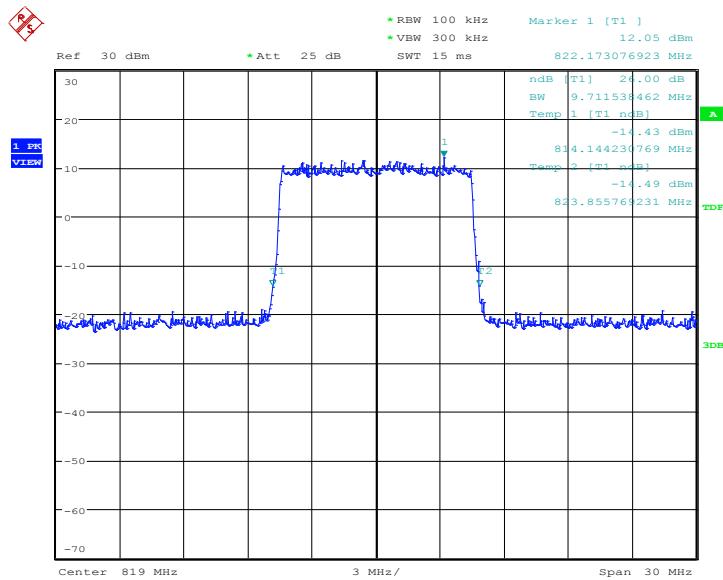
LTE band 26(814MHz-824MHz), 5MHz Bandwidth,64QAM (-26dBc BW)



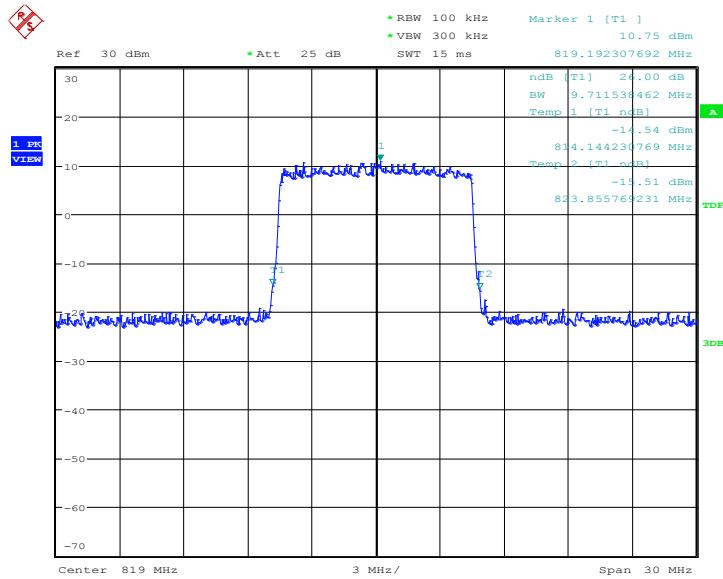
Date: 29.MAY.2018 13:25:46

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

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

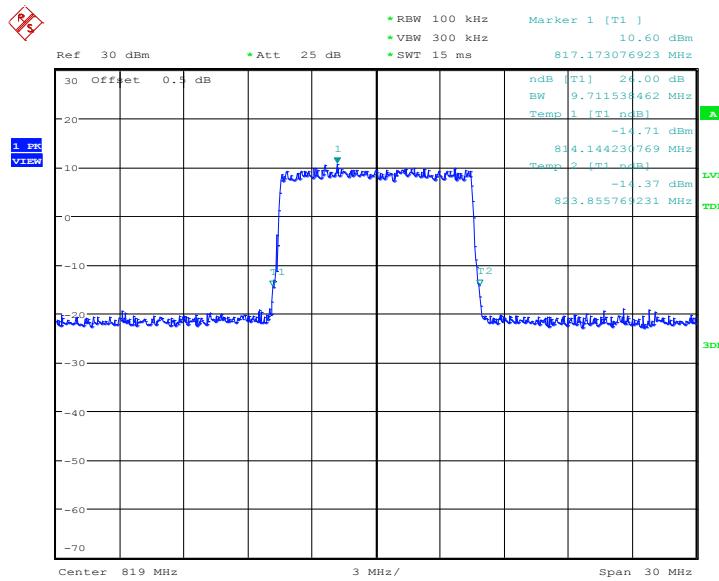
LTE band 26(814MHz-824MHz), 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 16.MAY.2018 16:36:58

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


Date: 16.MAY.2018 16:37:15

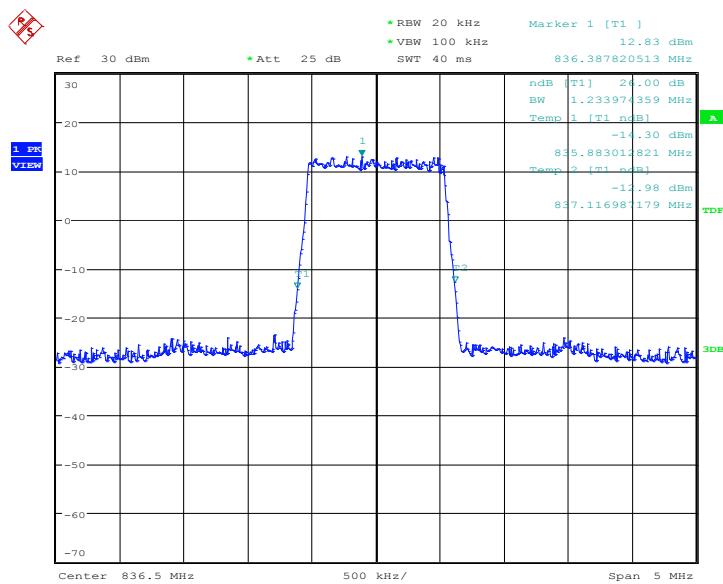
LTE band 26(814MHz-824MHz), 10MHz Bandwidth, 64QAM (-26dBc BW)



Date: 29.MAY.2018 13:27:14

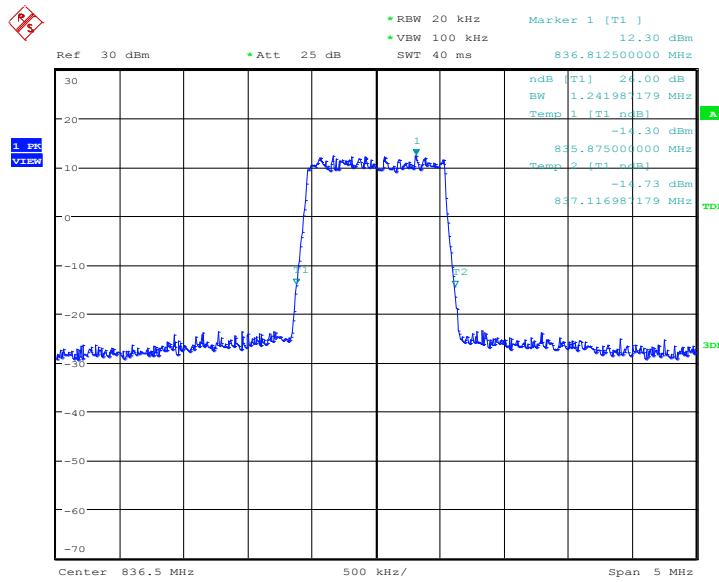
LTE band 26(824MHz-849MHz), 1.4MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
836.5	QPSK	16QAM	64QAM
	1233.97	1241.99	1233.97

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


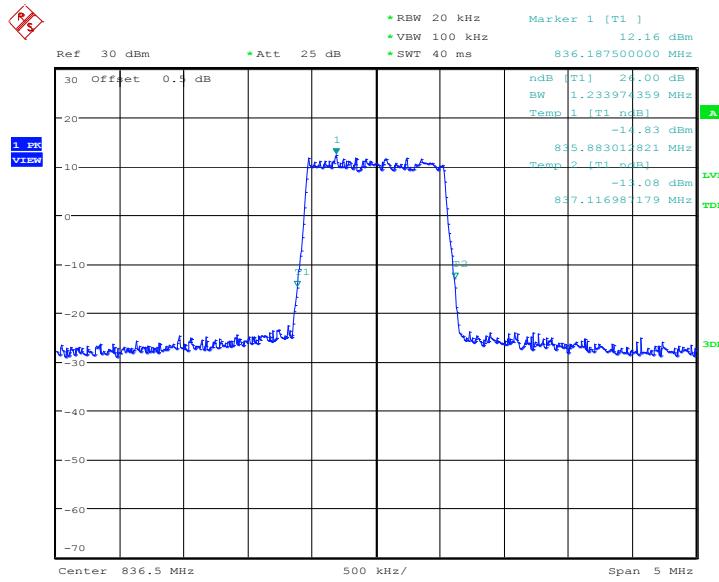
Date: 16.MAY.2018 15:40:58

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



Date: 16.MAY.2018 15:41:15

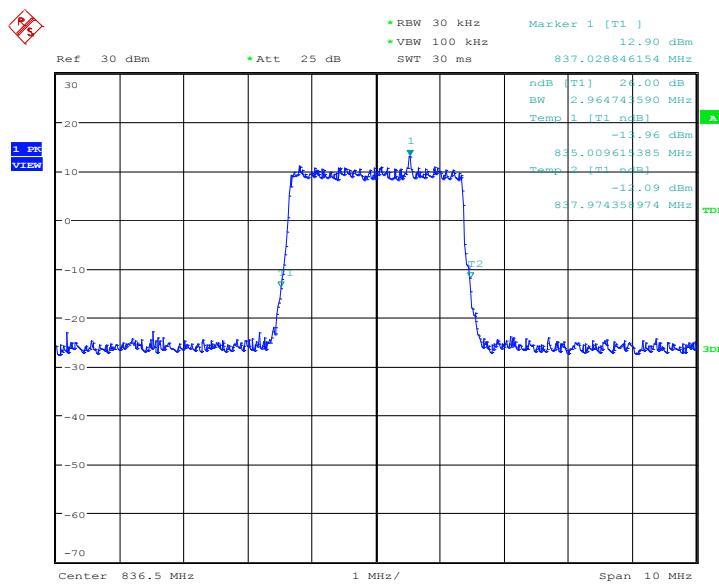
LTE band 26(824MHz-849MHz), 1.4MHz Bandwidth, 64QAM (-26dBc BW)



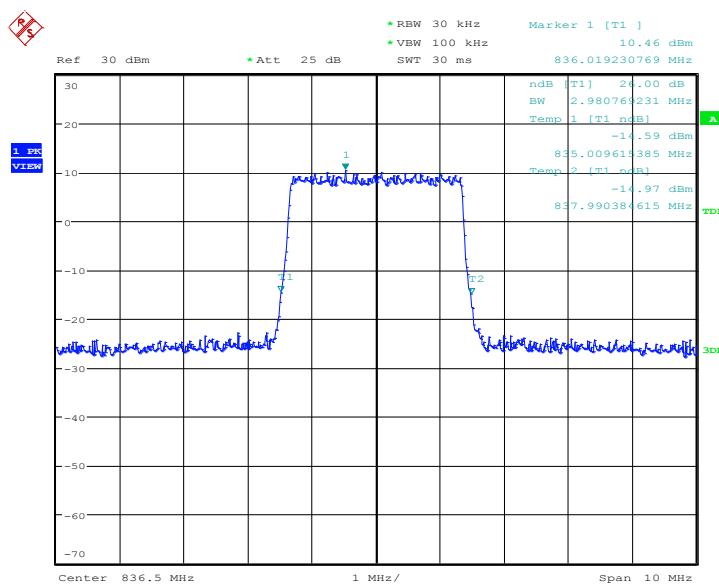
Date: 29.MAY.2018 13:36:05

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

Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
836.5	QPSK	16QAM	64QAM
	2964.74	2980.77	2964.74

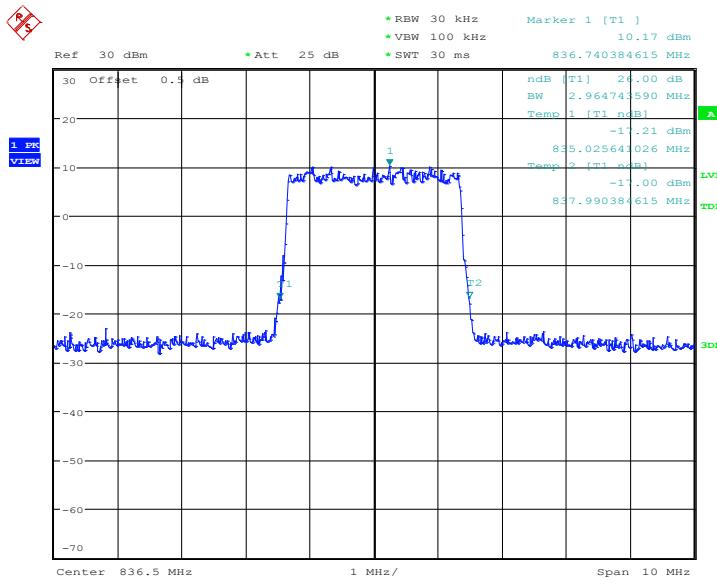
LTE band 26(824MHz-849MHz), 3MHz Bandwidth, QPSK (-26dBc BW)


Date: 16.MAY.2018 15:47:56

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


Date: 16.MAY.2018 15:48:13

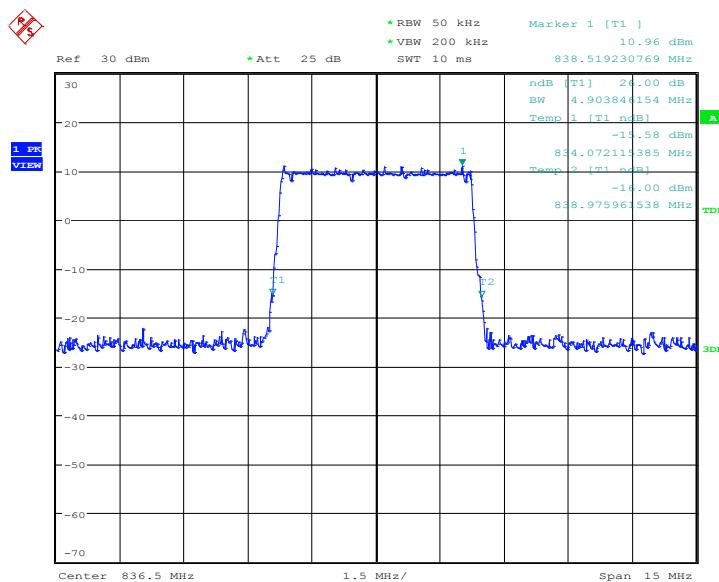
LTE band 26(824MHz-849MHz), 3MHz Bandwidth, 64QAM (-26dBc BW)



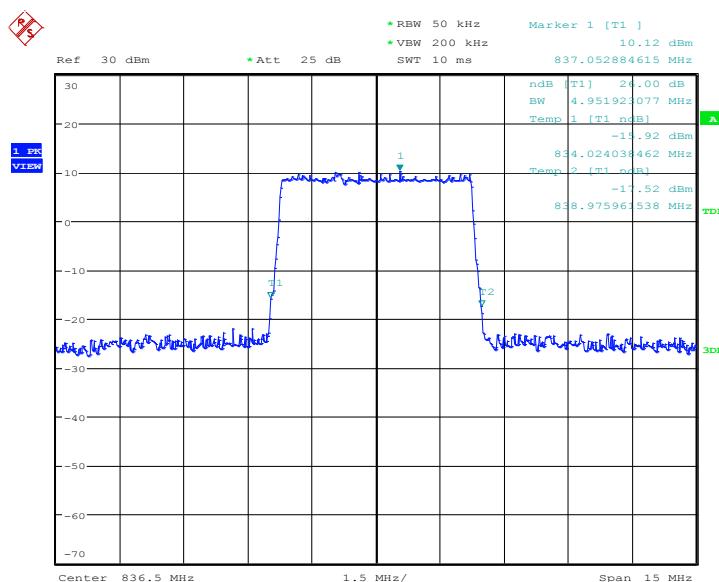
Date: 29.MAY.2018 13:37:57

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

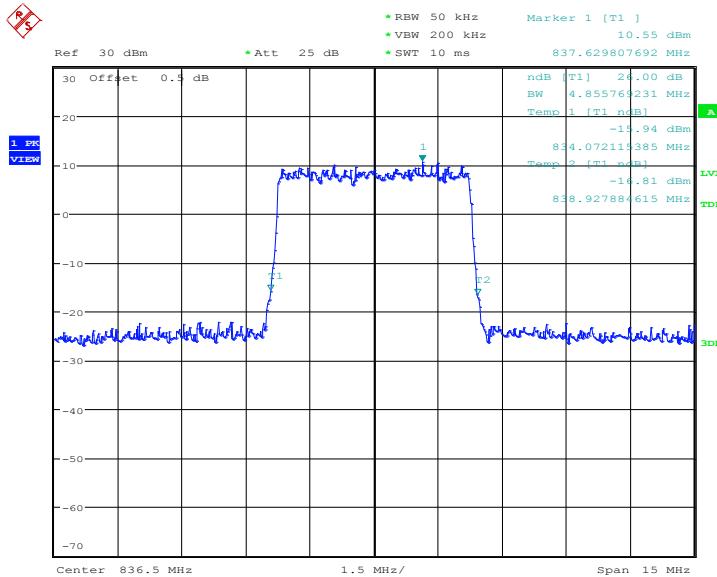
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
	QPSK	16QAM	64QAM
836.5			
	4903.85	4951.92	4855.77

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


Date: 16.MAY.2018 15:54:49

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


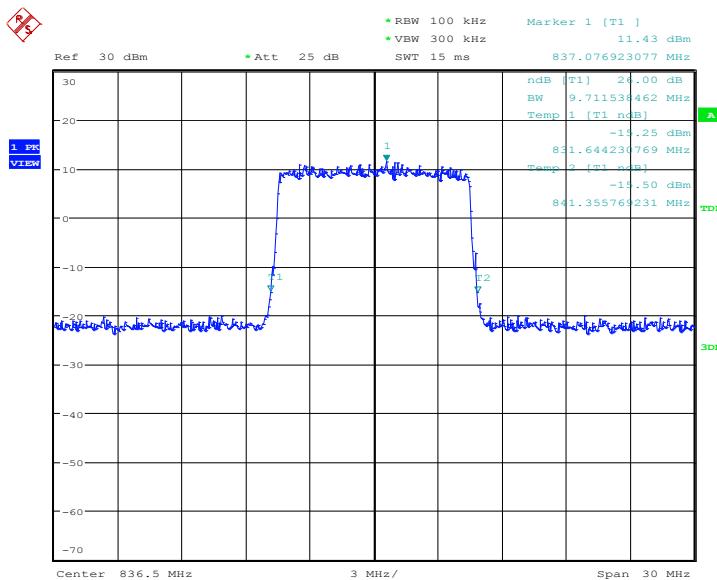
Date: 16.MAY.2018 15:55:06

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


Date: 29.MAY.2018 13:43:45

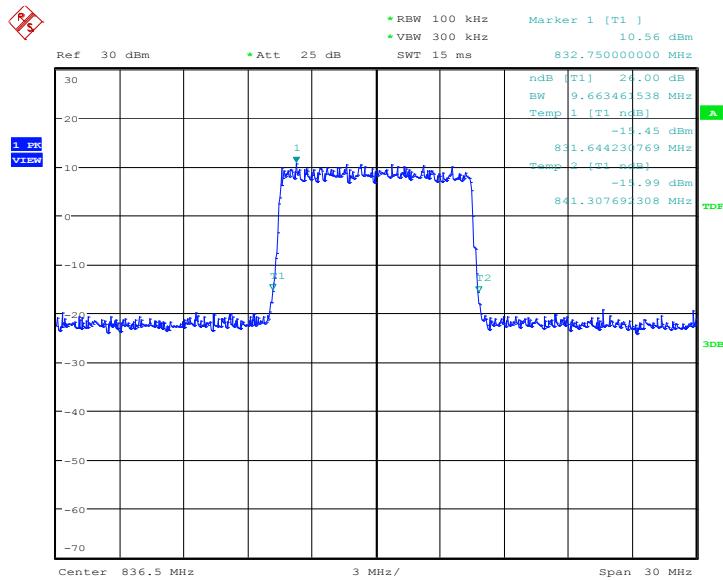
LTE band 26(824MHz-849MHz), 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
	QPSK		16QAM
	9711.54	9663.46	9615.38

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


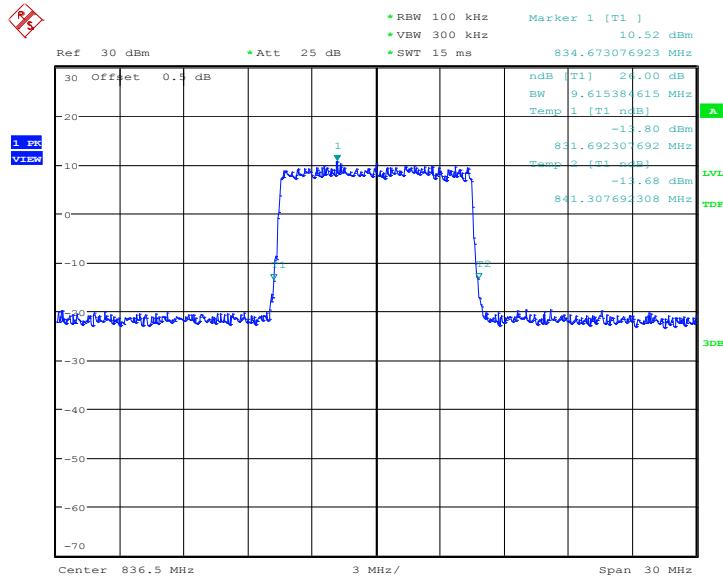
Date: 16.MAY.2018 16:01:42

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



Date: 16.MAY.2018 16:01:59

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

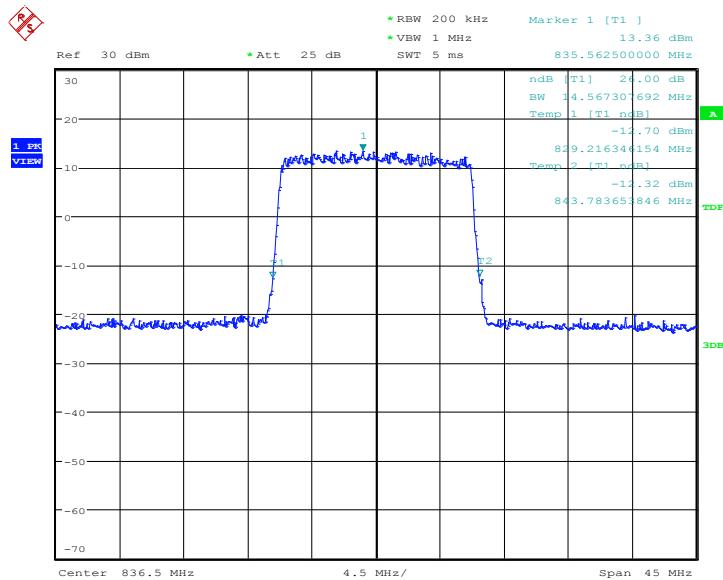


Date: 29.MAY.2018 13:44:55

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

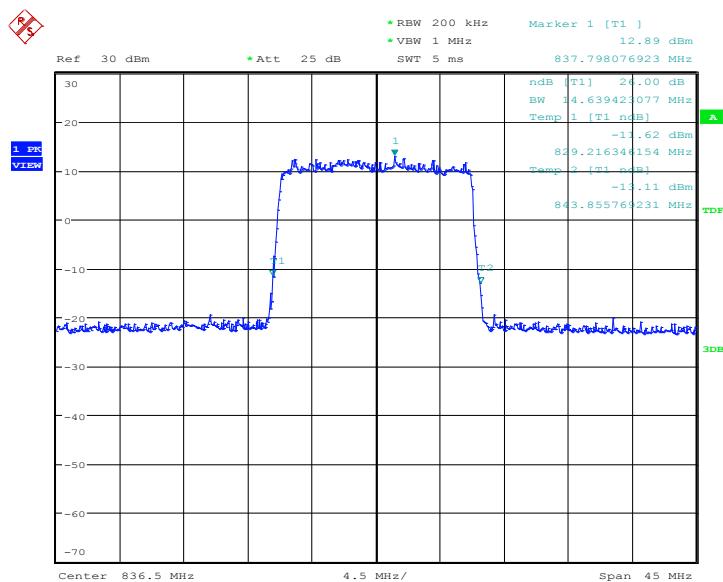
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)		
836.5	QPSK	16QAM	64QAM
	14567.31	14639.42	14639.42

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



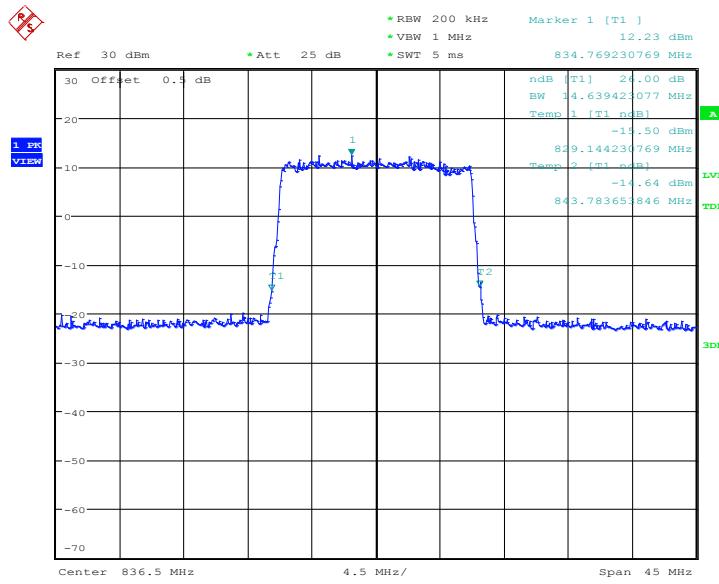
Date: 16.MAY.2018 16:09:13

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



Date: 16.MAY.2018 16:09:30

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

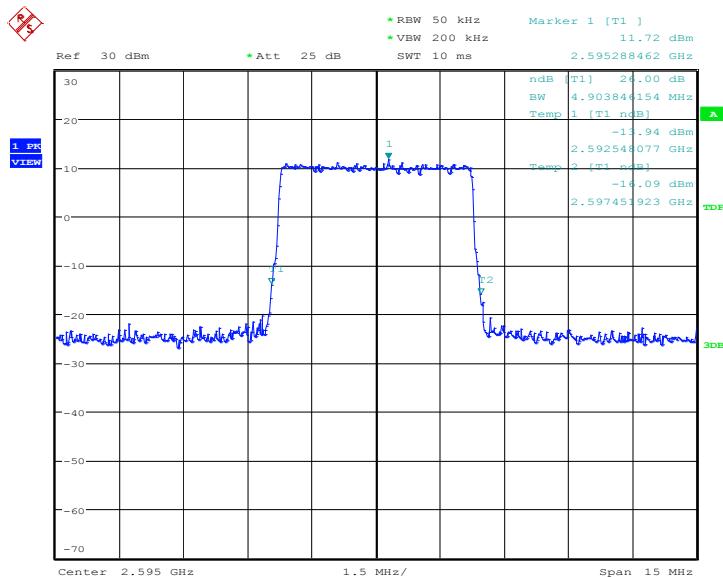


Date: 29.MAY.2018 13:49:59

LTE band 38, 5MHz (-26dBc)

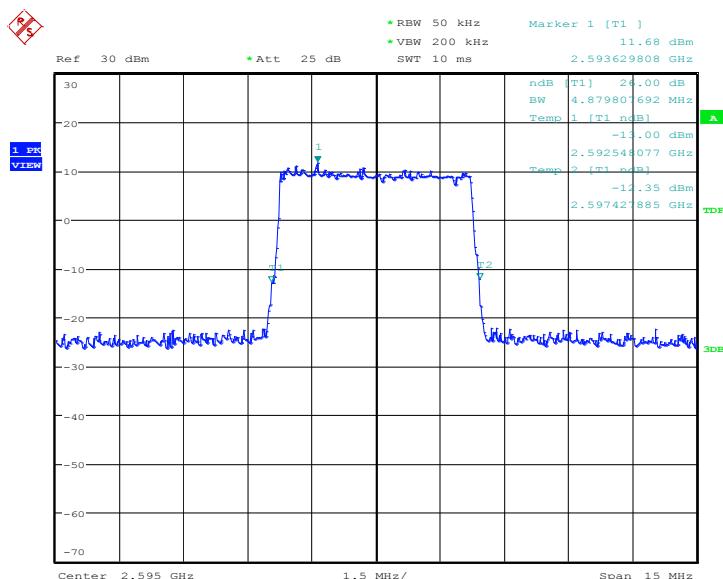
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2595.0	4903.85	4879.81	4855.77

LTE band 38, 5MHz Bandwidth, QPSK (-26dBc BW)



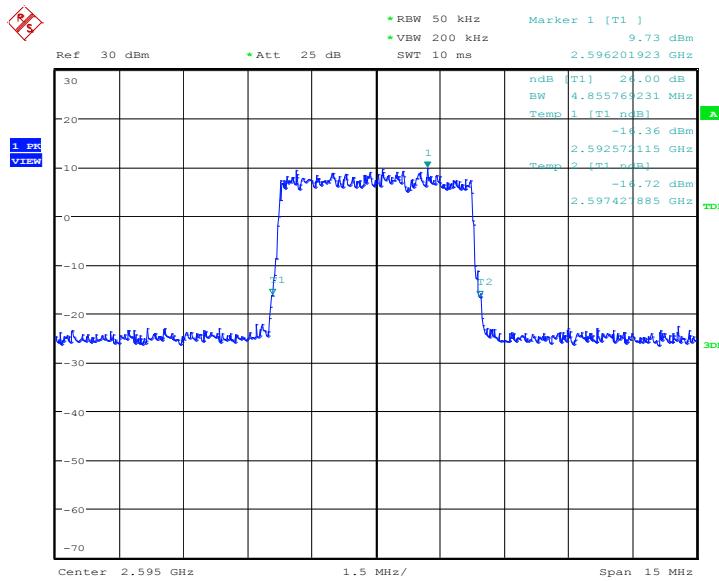
Date: 11.MAY.2018 09:26:36

LTE band 38, 5MHz Bandwidth,16QAM (-26dBc BW)



Date: 11.MAY.2018 09:26:53

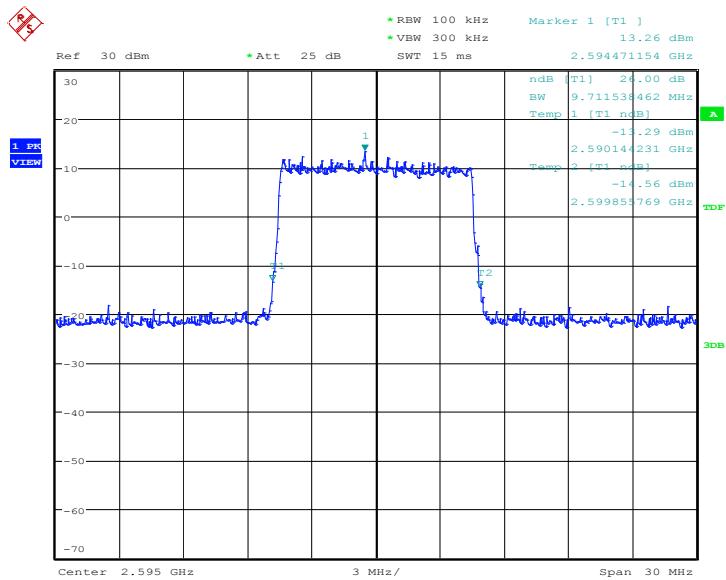
LTE band 38, 5MHz Bandwidth,64QAM (-26dBc BW)



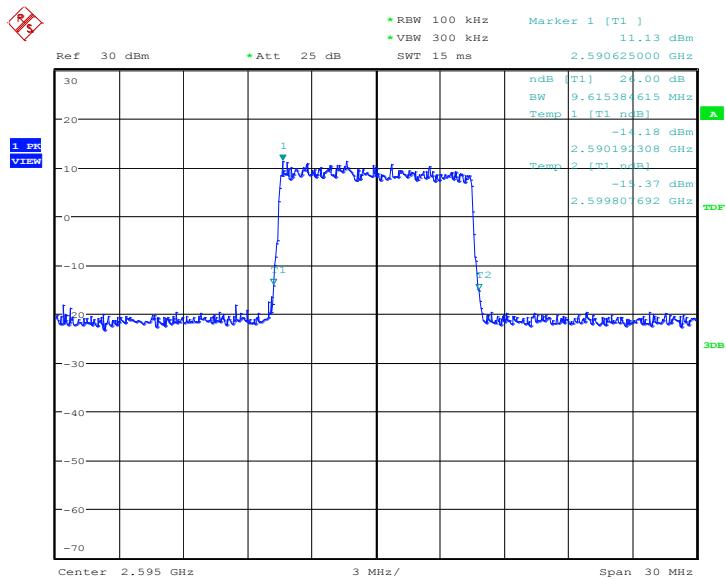
Date: 8.JUN.2018 15:12:24

LTE band 38, 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2595.0	9711.54	9615.38	9615.38

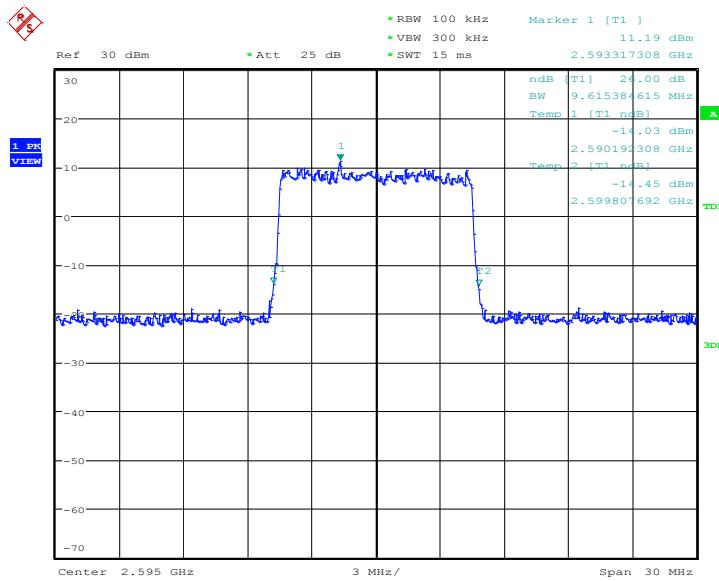
LTE band 38, 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 09:33:35

LTE band 38, 10MHz Bandwidth, 16QAM (-26dBc BW)


Date: 11.MAY.2018 09:33:52

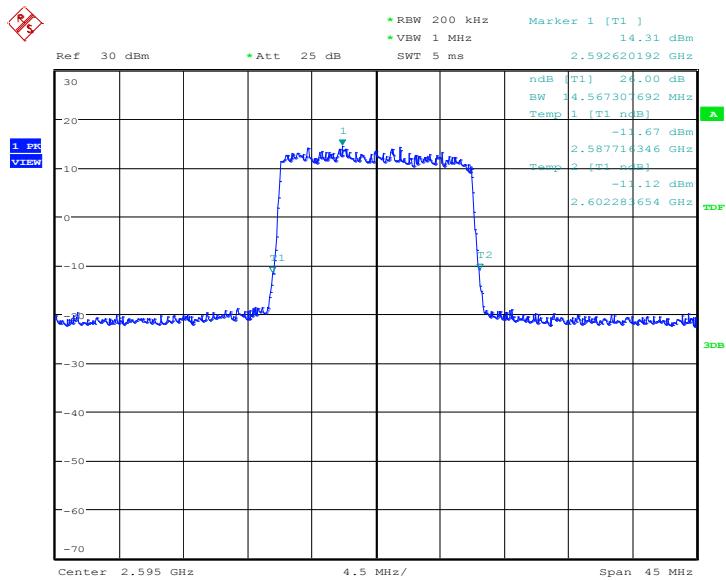
LTE band 38, 10MHz Bandwidth, 64QAM (-26dBc BW)



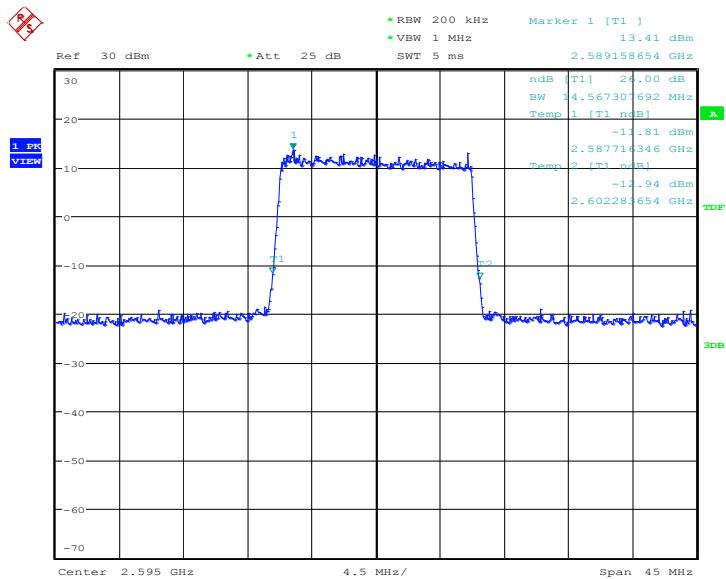
Date: 28.MAY.2018 10:59:48

LTE band 38, 15MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2595.0	14567.31	14567.31	14639.42

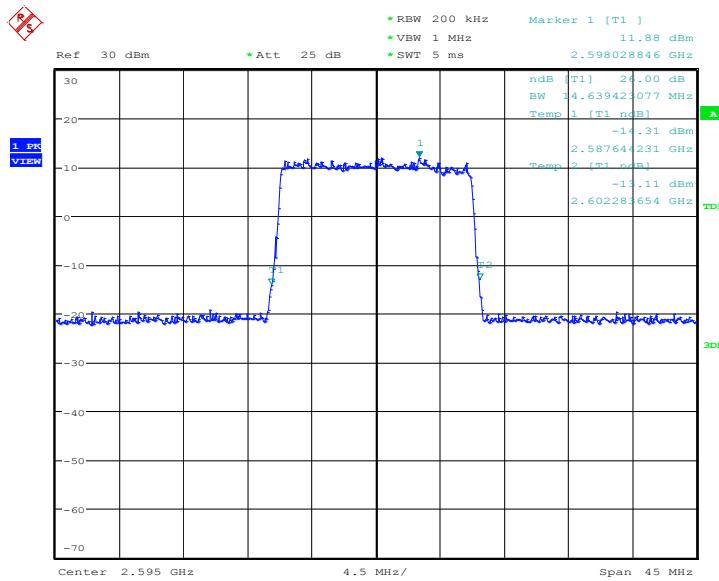
LTE band 38, 15MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 09:41:11

LTE band 38, 15MHz Bandwidth, 16QAM (-26dBc BW)


Date: 11.MAY.2018 09:41:28

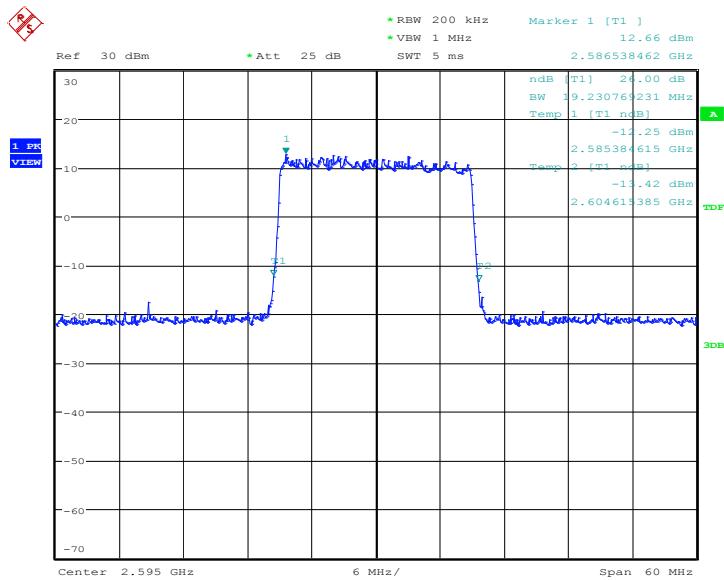
LTE band 38, 15MHz Bandwidth, 64QAM (-26dBc BW)



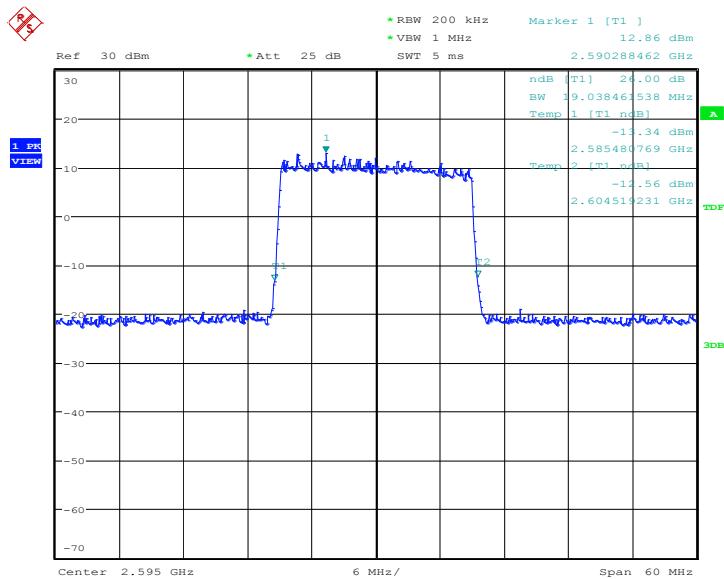
Date: 28.MAY.2018 11:04:33

LTE band 38, 20MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2595.0	19230.77	19038.46	19230.77

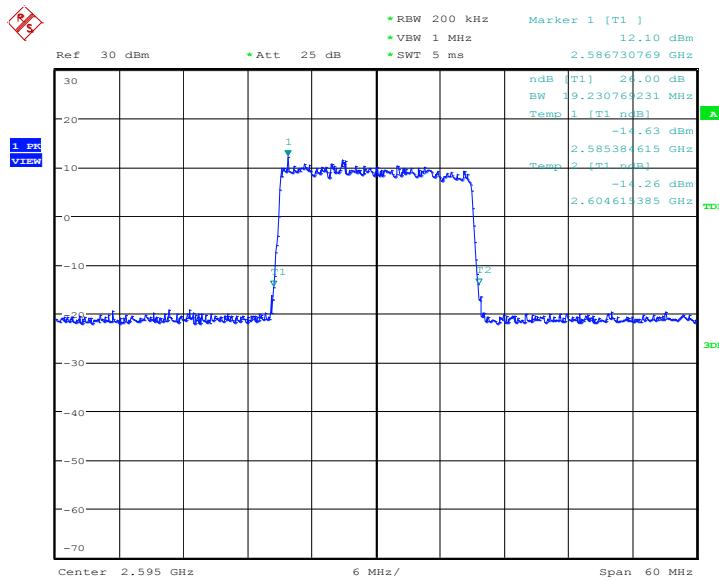
LTE band 38, 20MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 09:48:53

LTE band38, 20MHz Bandwidth, 16QAM (-26dBc BW)


Date: 11.MAY.2018 09:49:10

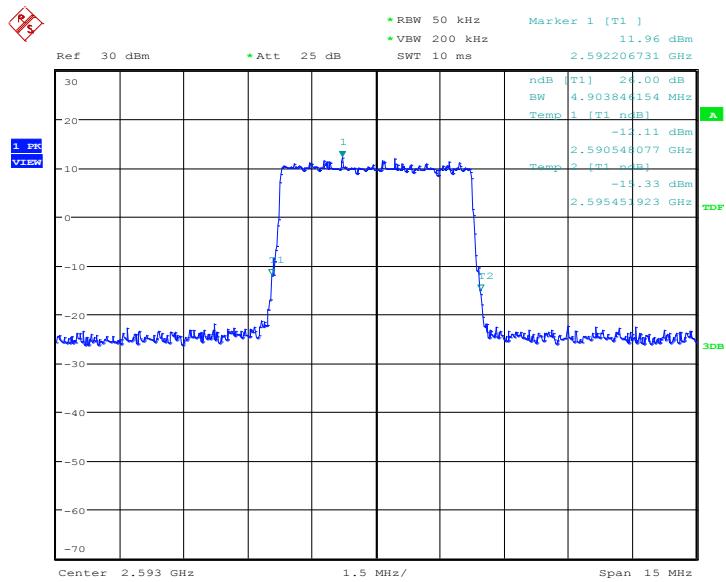
LTE band38, 20MHz Bandwidth, 64QAM (-26dBc BW)



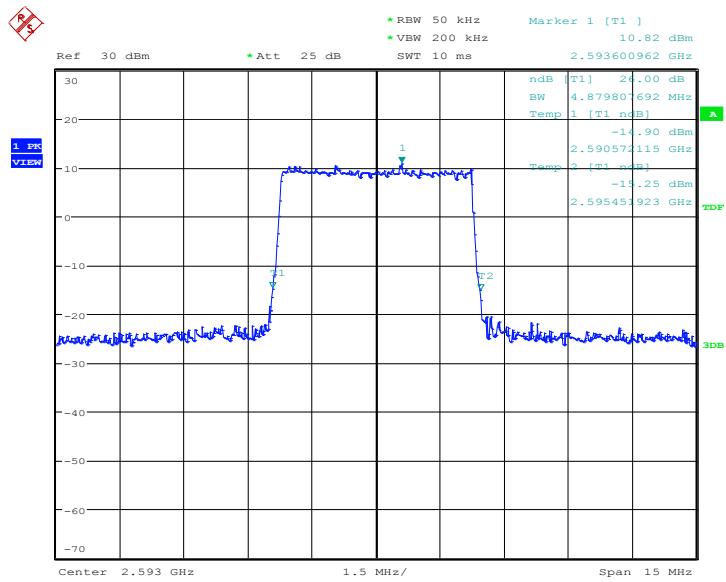
Date: 28.MAY.2018 11:05:34

LTE band 41, 5MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	4903.85	4879.81	4879.81

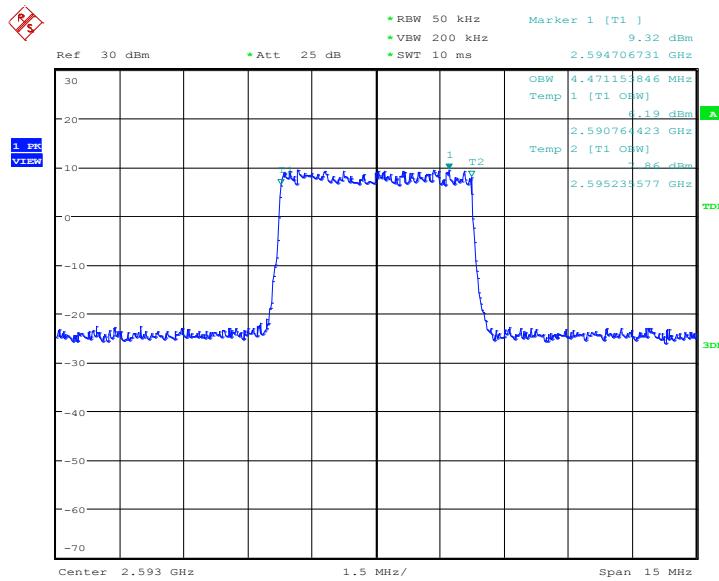
LTE band 41, 5MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 09:55:56

LTE band 41, 5MHz Bandwidth,16QAM (-26dBc BW)


Date: 11.MAY.2018 09:56:13

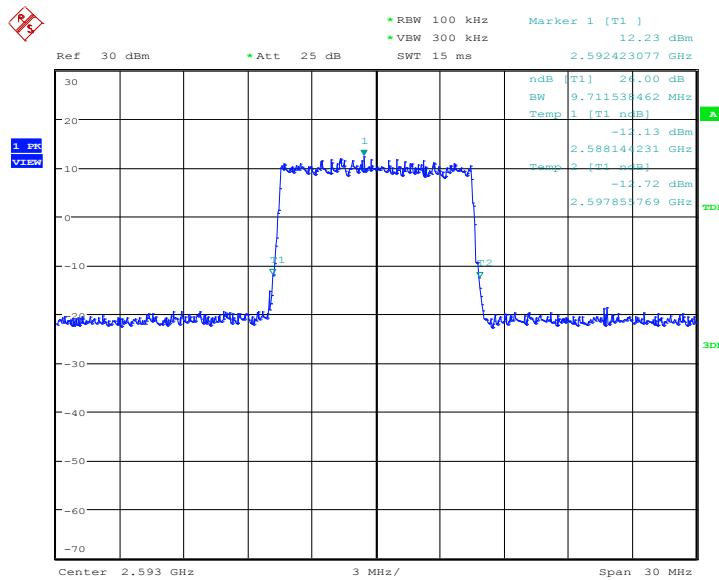
LTE band 41, 5MHz Bandwidth, 64QAM (-26dBc BW)



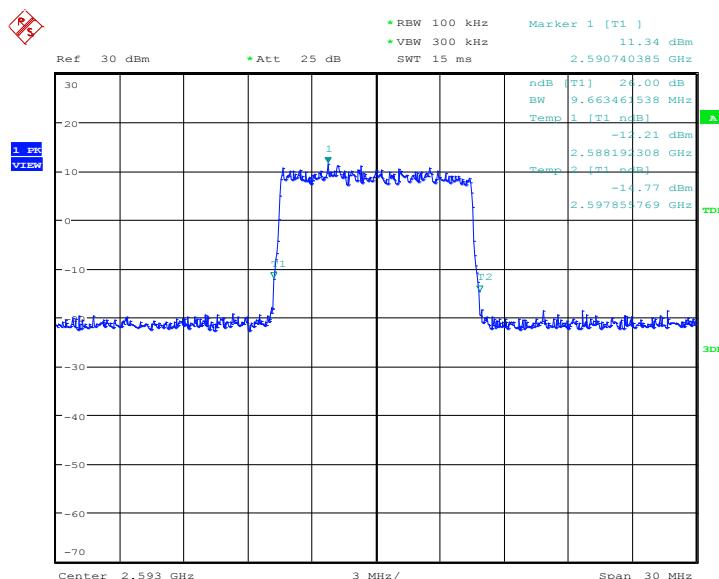
Date: 28.MAY.2018 11:11:25

LTE band 41, 10MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	9711.54	9663.46	9663.46

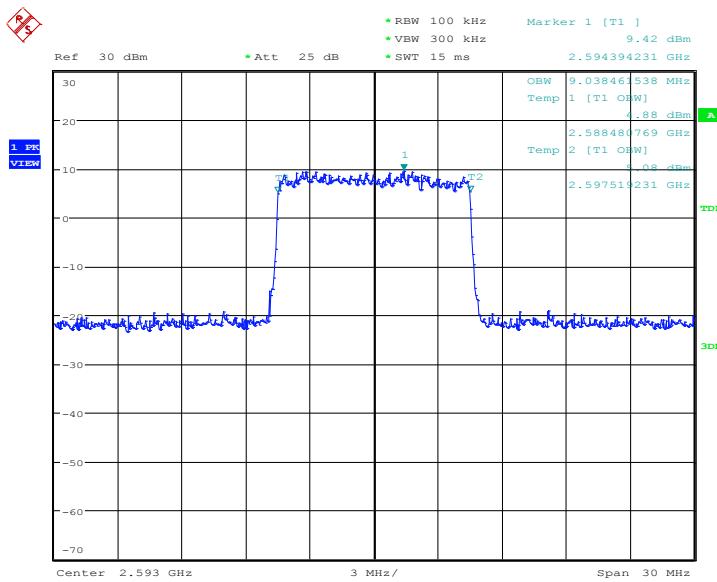
LTE band 41, 10MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 10:02:53

LTE band 41, 10MHz Bandwidth, 16QAM (-26dBc BW)


Date: 11.MAY.2018 10:03:10

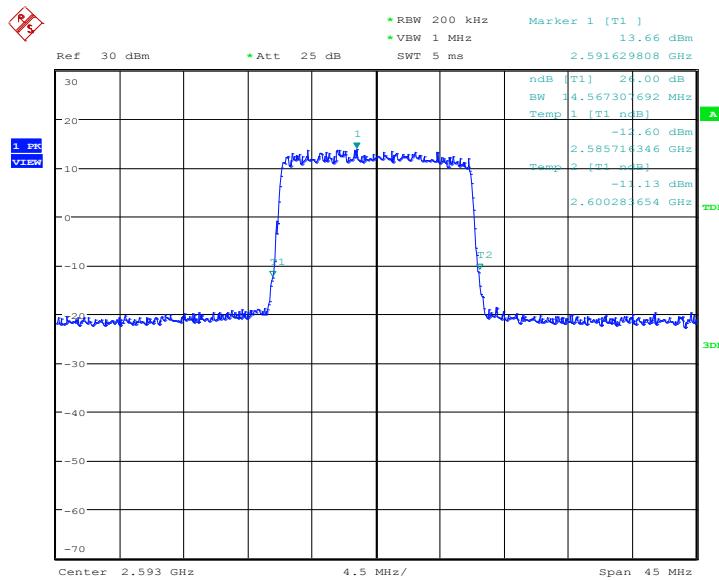
LTE band 41, 10MHz Bandwidth, 64QAM (-26dBc BW)



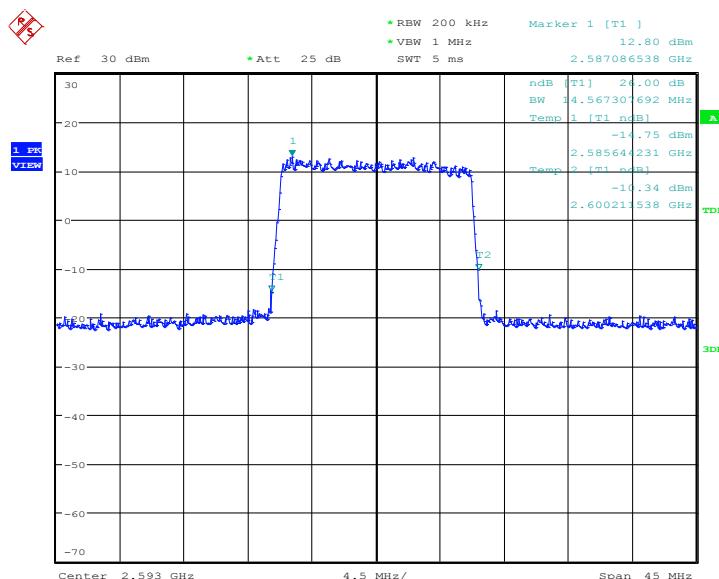
Date: 28.MAY.2018 11:13:52

LTE band 41, 15MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	14567.31	14567.31	14567.31

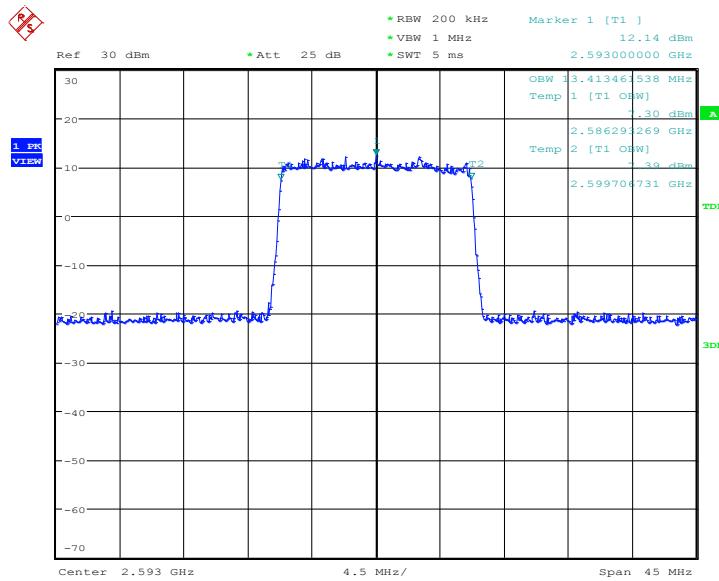
LTE band 41, 15MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 10:10:30

LTE band 41, 15MHz Bandwidth, 16QAM (-26dBc BW)


Date: 11.MAY.2018 10:10:47

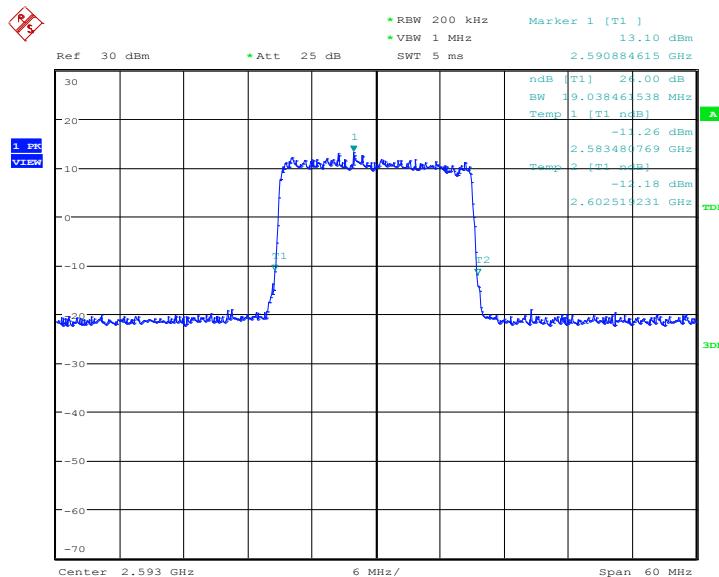
LTE band 41, 15MHz Bandwidth, 64QAM (-26dBc BW)



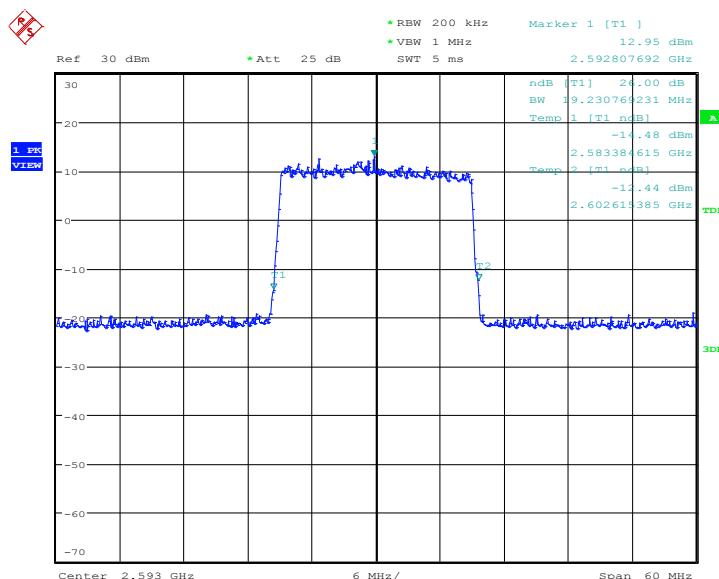
Date: 28.MAY.2018 11:17:06

LTE band 41, 20MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)		
	QPSK	16QAM	64QAM
2593.0	19038.46	19230.77	19326.92

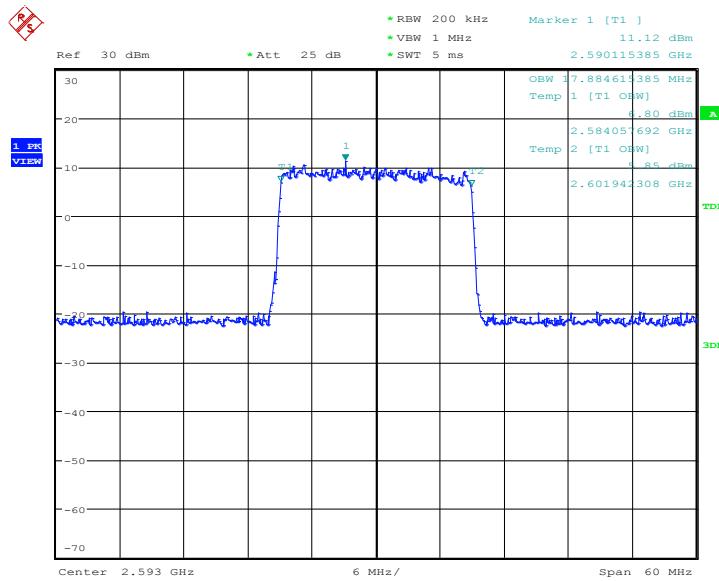
LTE band 41, 20MHz Bandwidth, QPSK (-26dBc BW)


Date: 11.MAY.2018 10:18:12

LTE band 41, 20MHz Bandwidth, 16QAM (-26dBc BW)


Date: 11.MAY.2018 10:18:29

LTE band 41, 20MHz Bandwidth, 64QAM (-26dBc BW)



Date: 28.MAY.2018 11:19:11

A.6 BAND EDGE COMPLIANCE

A.6.1 Measurement limit

Part 22.917(b), 24.238(a), 27.53(h) state that on any frequency outside frequency band of the US Cellular/PCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least $43 + 10 \log(P)$ dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

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.

Part 27.53(m) states that 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.

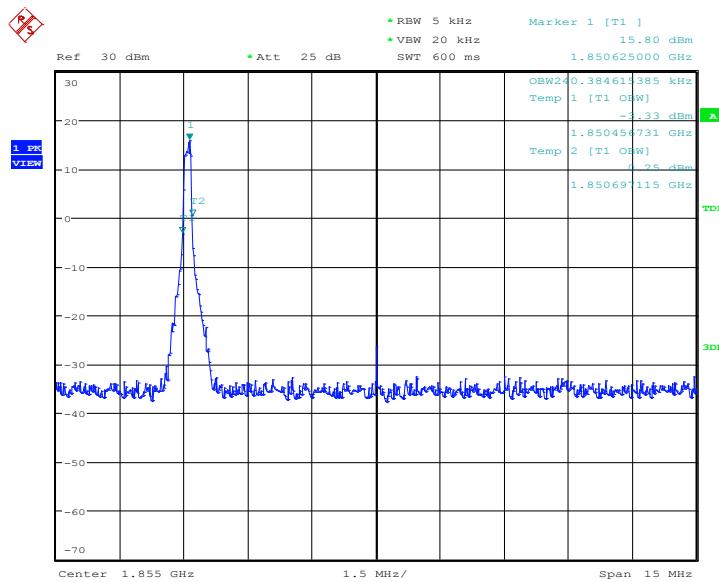
Part 27.53(c) states for operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the 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

A.6.2 Measurement result

Only worst case result is given below

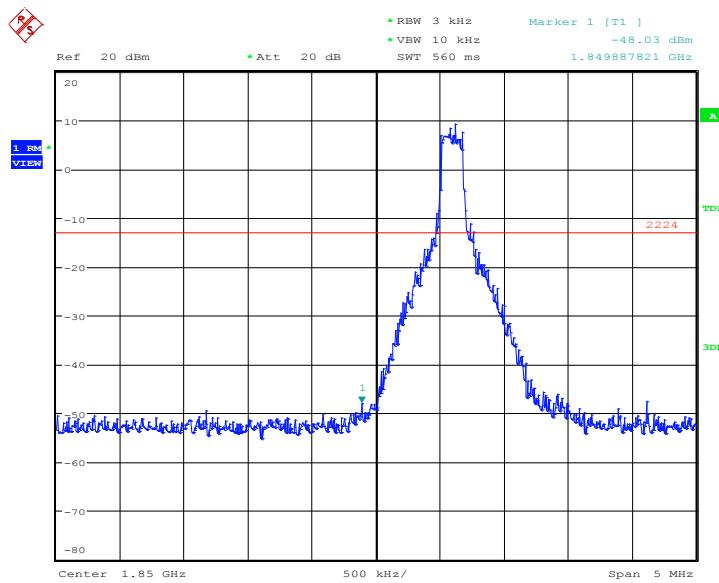
LTE band 2

OBW: 1RB-low_offset



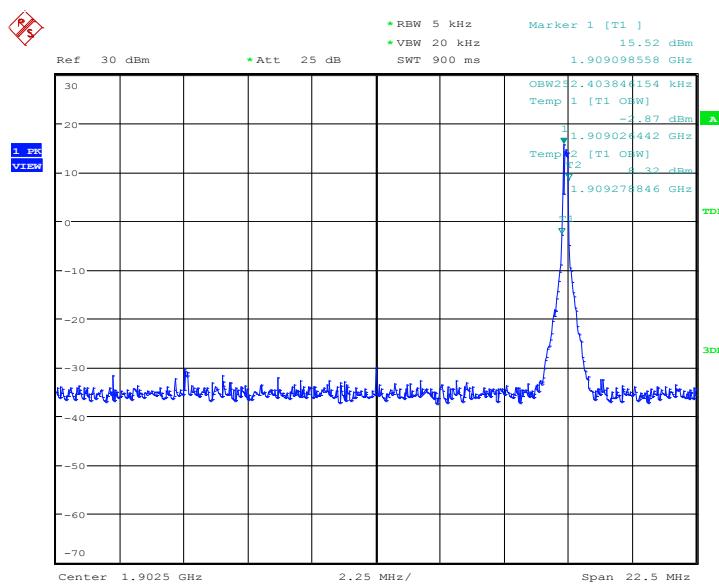
Date: 16.MAY.2018 13:59:21

LOW BAND EDGE BLOCK-1RB-low_offset



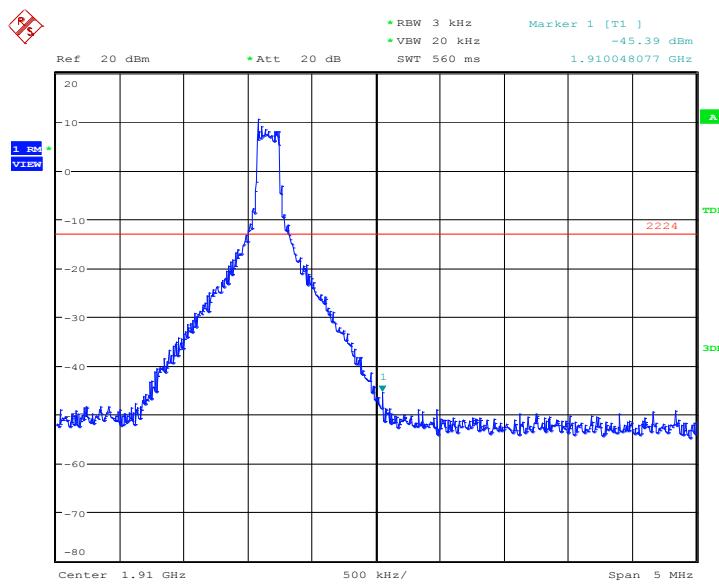
Date: 16.MAY.2018 14:00:14

OBW: 1RB-high_offset



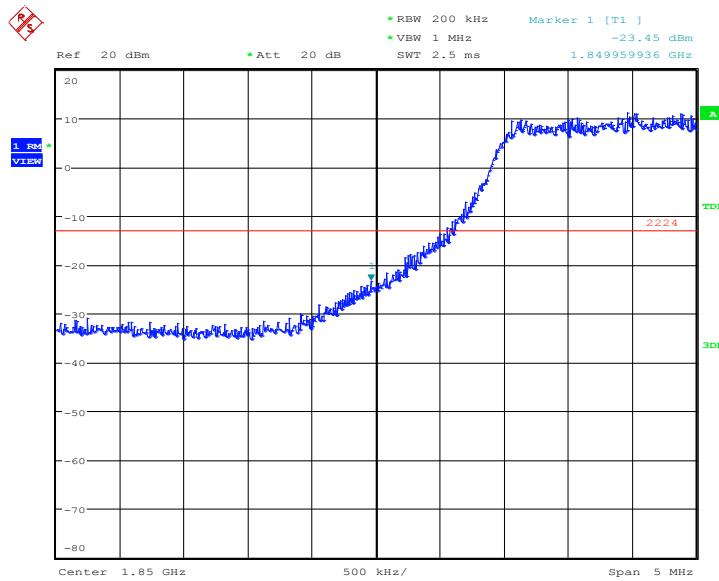
Date: 16.MAY.2018 13:56:19

HIGH BAND EDGE BLOCK-1RB-high_offset



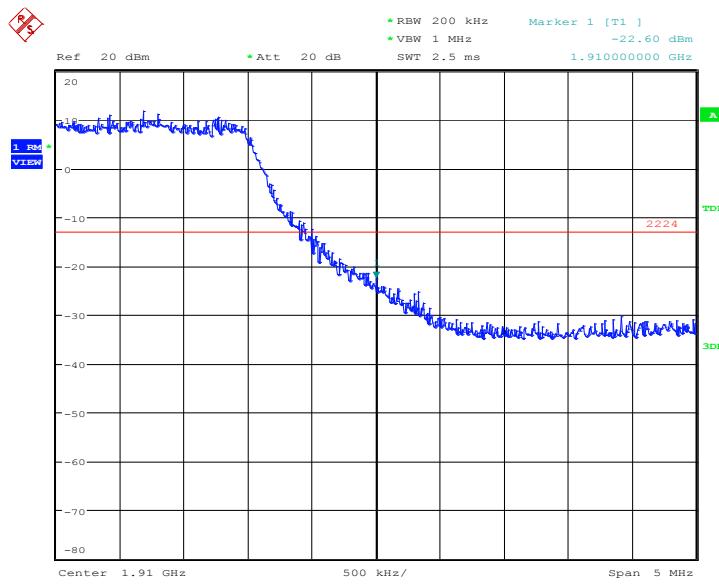
Date: 16.MAY.2018 13:57:13

LOW BAND EDGE BLOCK-20MHz-100%RB



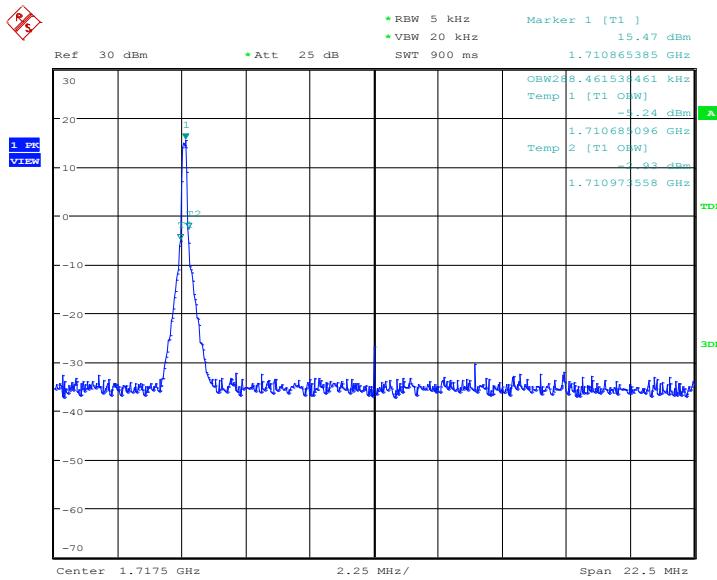
Date: 16.MAY.2018 14:03:47

HIGH BAND EDGE BLOCK-20MHz-100%RB



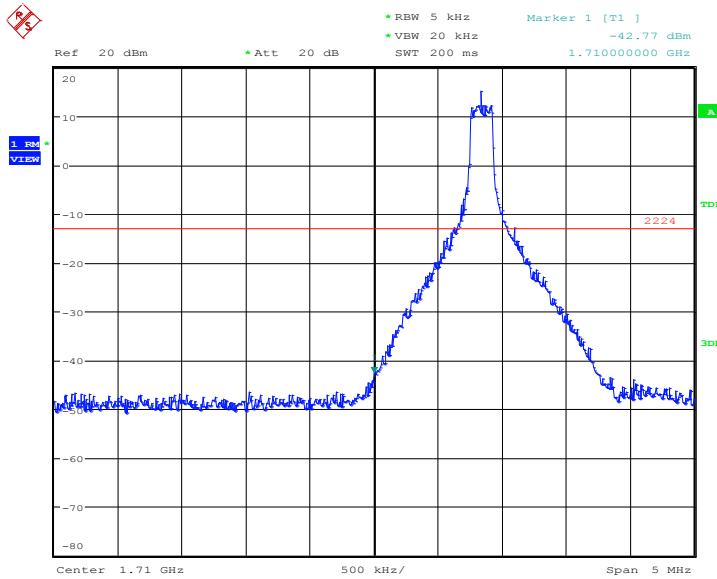
Date: 16.MAY.2018 14:05:25

LTE band 4
OBW: 1RB-low_offset



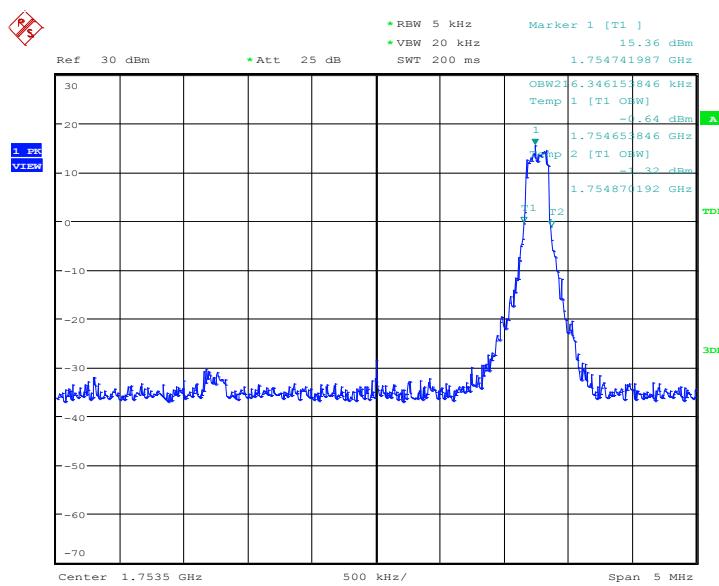
Date: 17.MAY.2018 11:59:16

LOW BAND EDGE BLOCK-1RB-low_offset



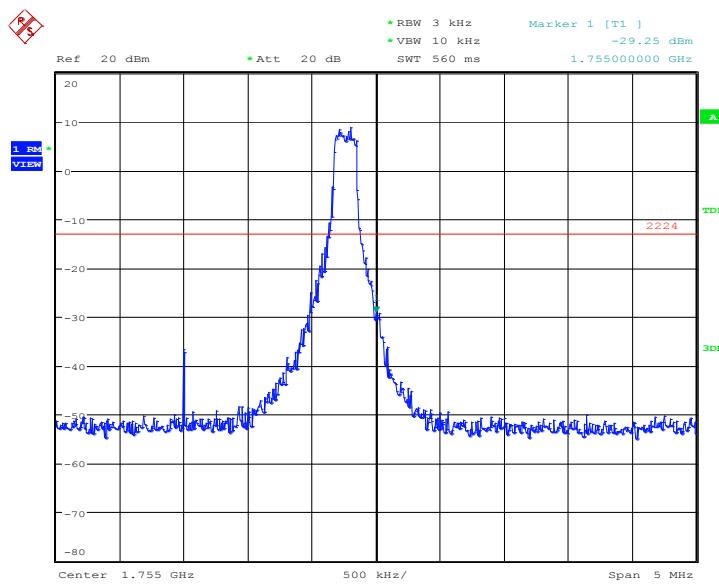
Date: 17.MAY.2018 12:00:10

OBW: 1RB-high_offset



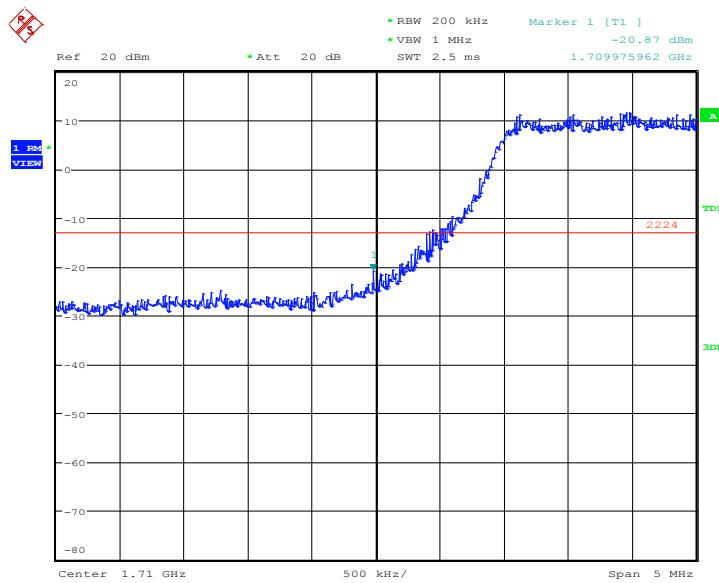
Date: 17.MAY.2018 12:04:53

HIGH BAND EDGE BLOCK-1RB-high_offset



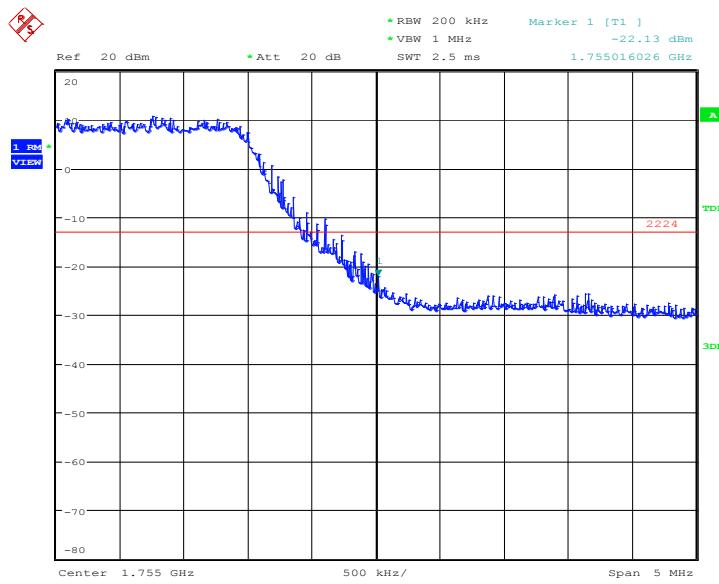
Date: 17.MAY.2018 12:05:47

LOW BAND EDGE BLOCK-20MHz-100%RB



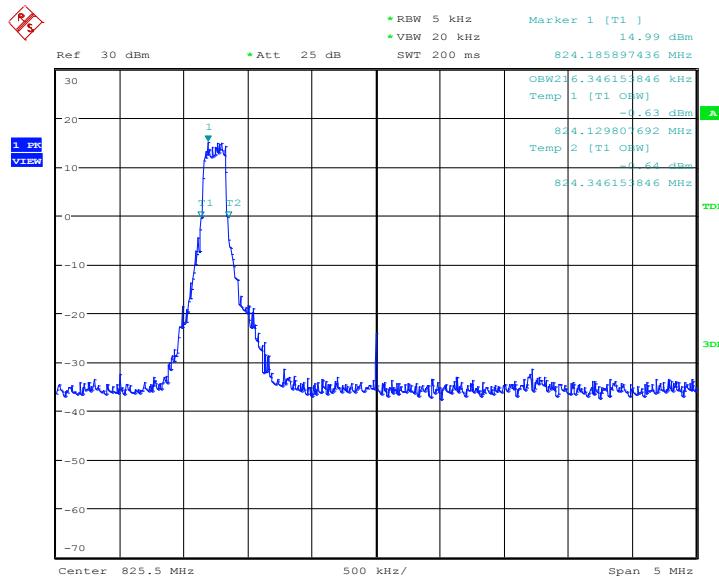
Date: 17.MAY.2018 12:02:23

HIGH BAND EDGE BLOCK-20MHz-100%RB



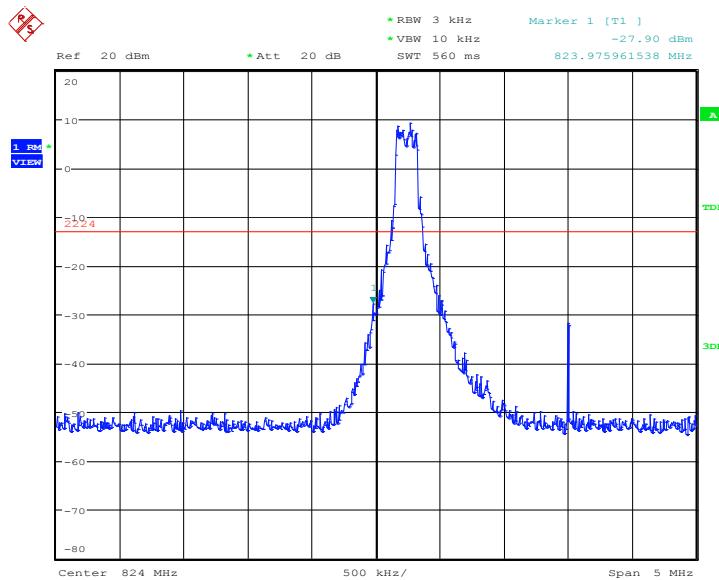
Date: 17.MAY.2018 12:03:16

LTE band 5
OBW: 1RB-low_offset



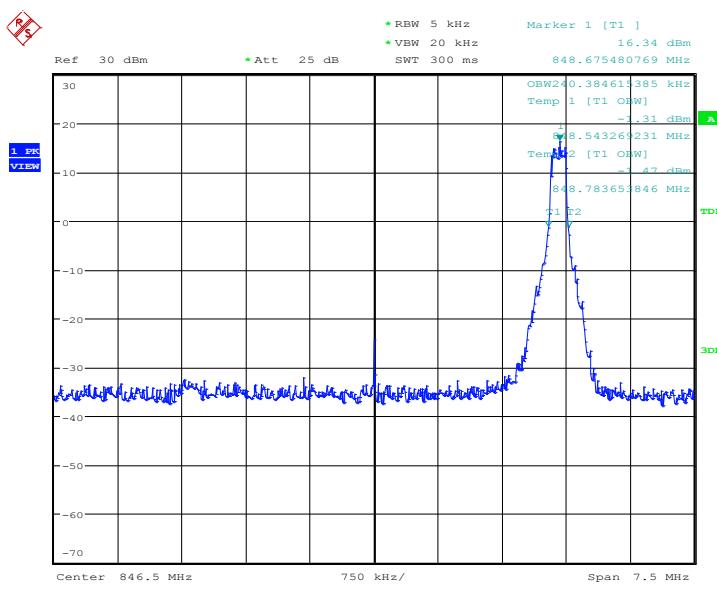
Date: 16.MAY.2018 14:14:36

LOW BAND EDGE BLOCK-1RB-low_offset



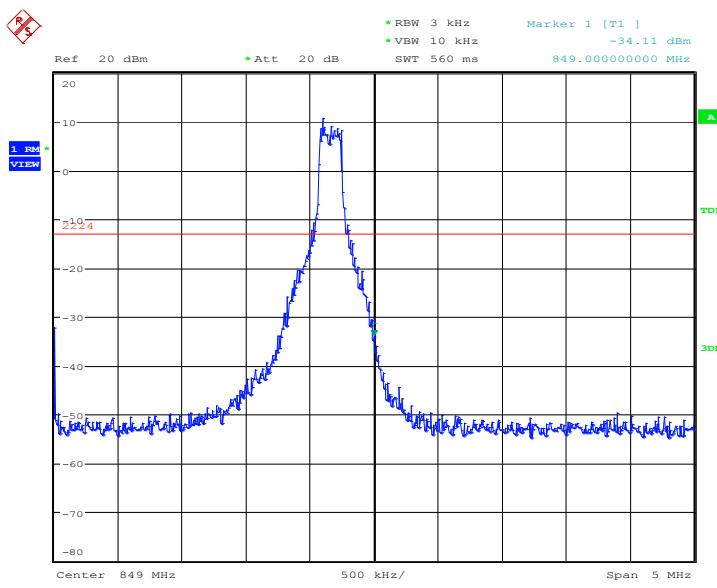
Date: 16.MAY.2018 14:15:28

OBW: 1RB-high_offset



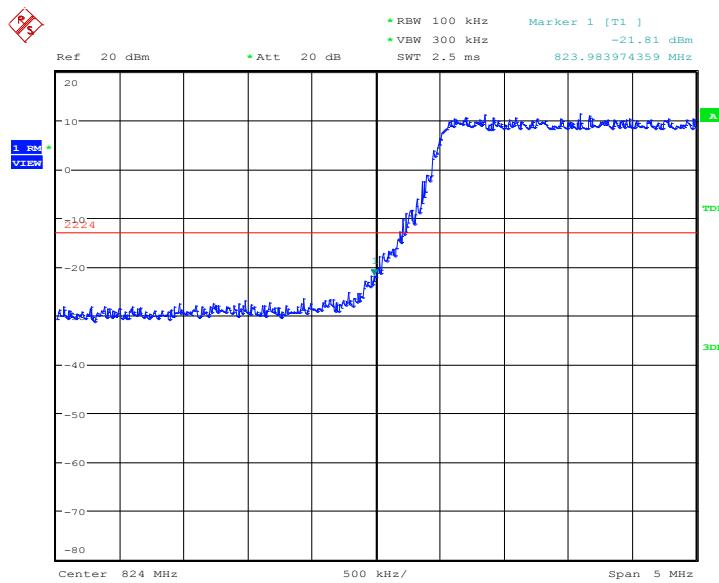
Date: 16.MAY.2018 14:11:32

HIGH BAND EDGE BLOCK-1RB-high_offset



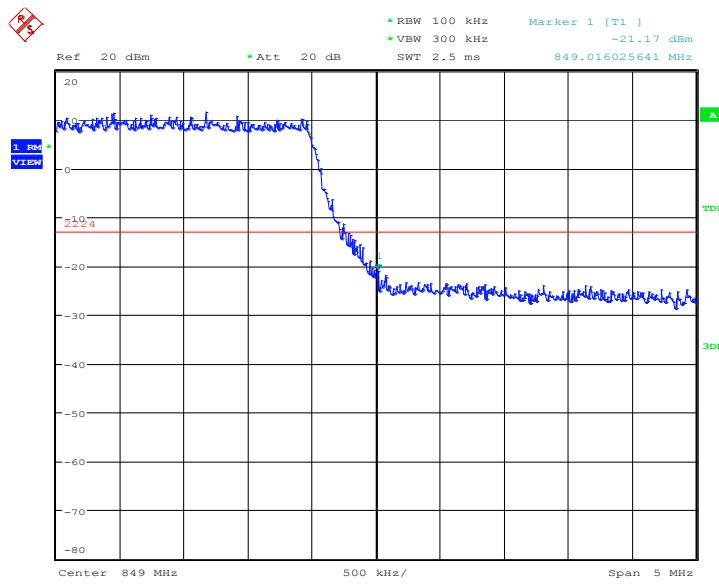
Date: 16.MAY.2018 14:12:23

LOW BAND EDGE BLOCK-10MHz-100%RB



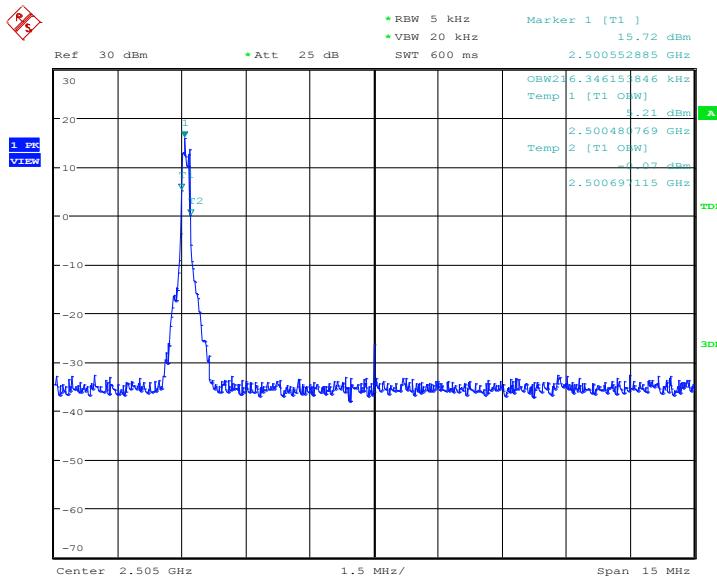
Date: 16.MAY.2018 14:09:01

HIGH BAND EDGE BLOCK-10MHz-100%RB



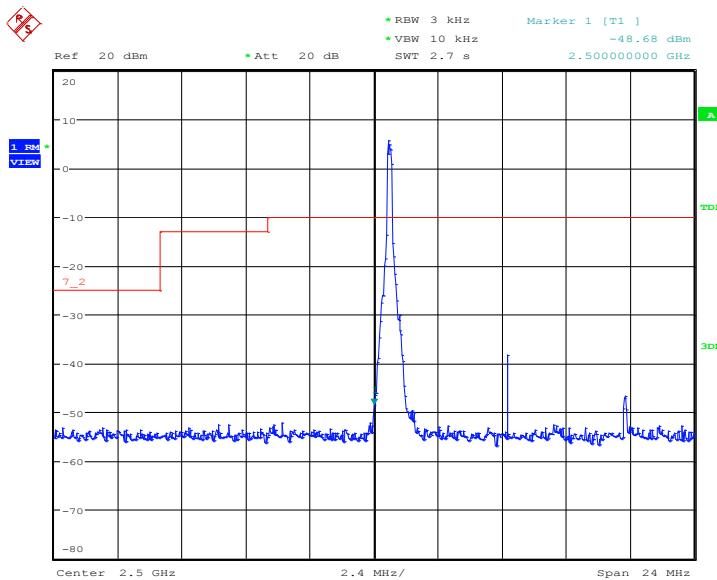
Date: 16.MAY.2018 14:07:59

LTE band 7
OBW: 1RB-low_offset



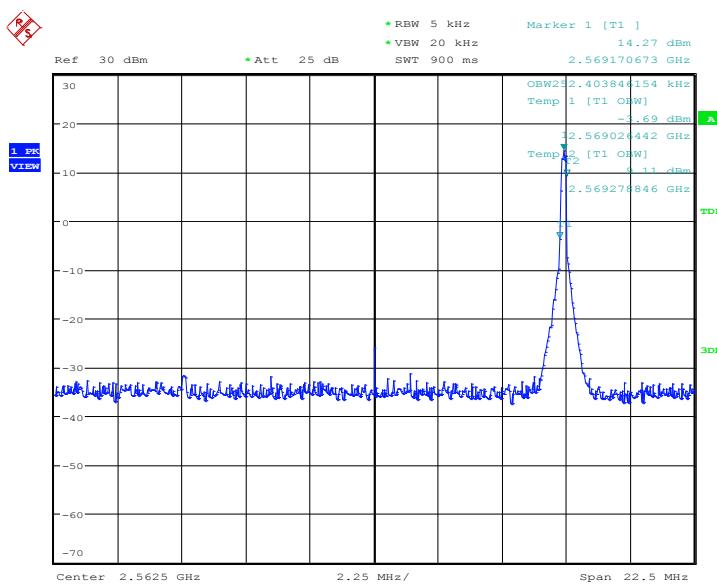
Date: 16.MAY.2018 14:51:05

LOW BAND EDGE BLOCK-1RB-low_offset



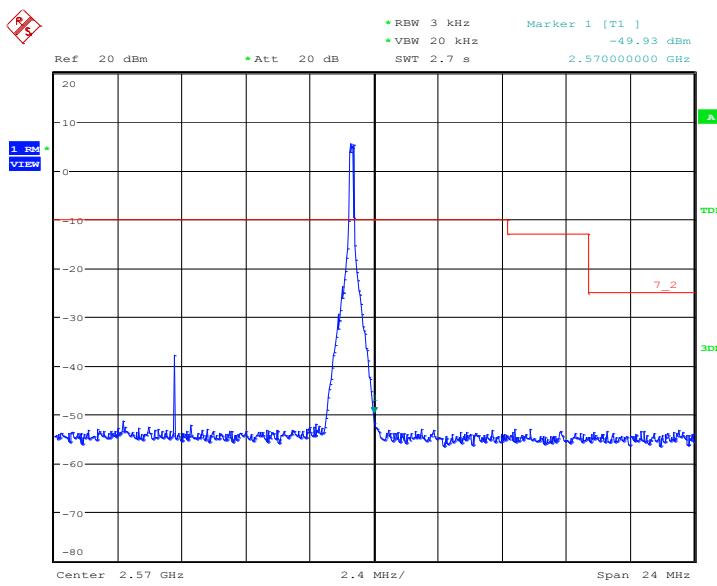
Date: 16.MAY.2018 14:51:56

OBW: 1RB-high_offset



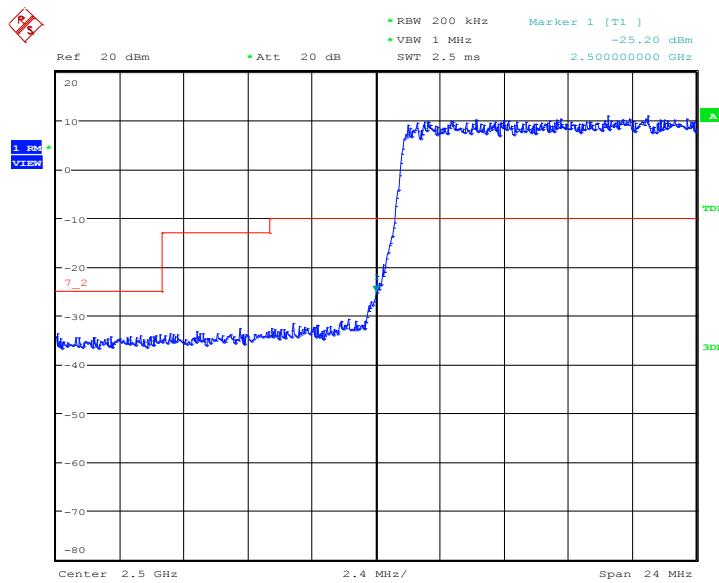
Date: 16.MAY.2018 14:49:04

HIGH BAND EDGE BLOCK-1RB-high_offset



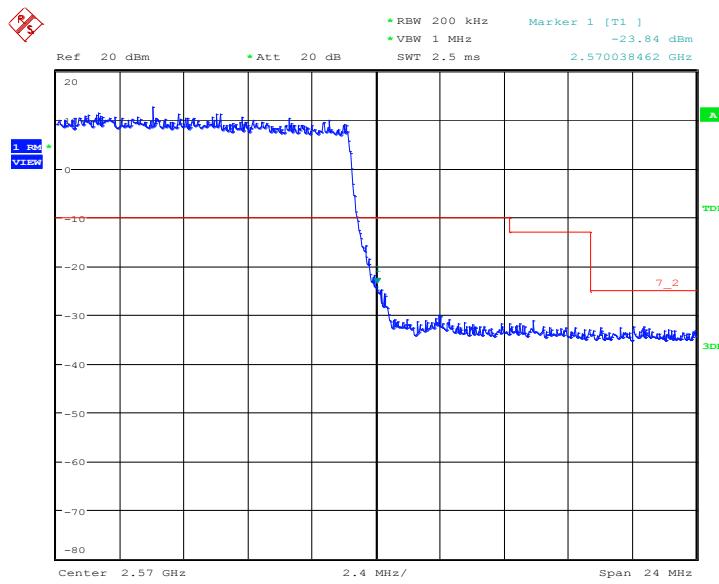
Date: 16.MAY.2018 14:49:55

LOW BAND EDGE BLOCK-20MHz-100%RB



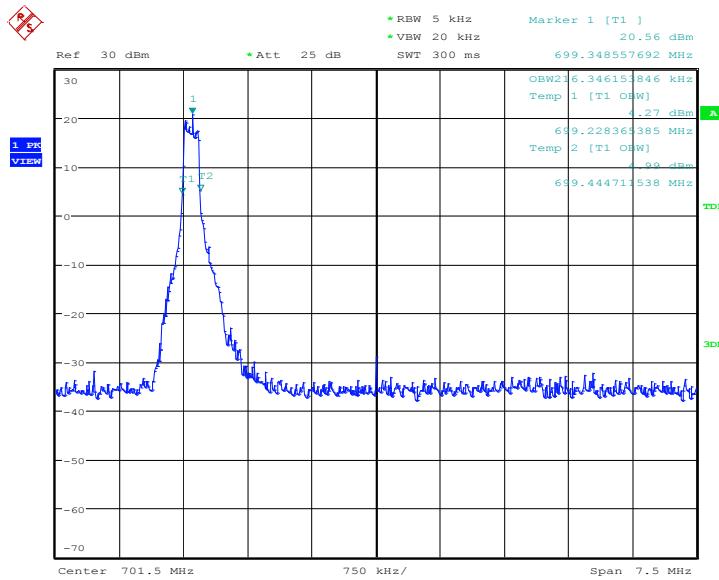
Date: 16.MAY.2018 14:46:25

HIGH BAND EDGE BLOCK-20MHz-100%RB



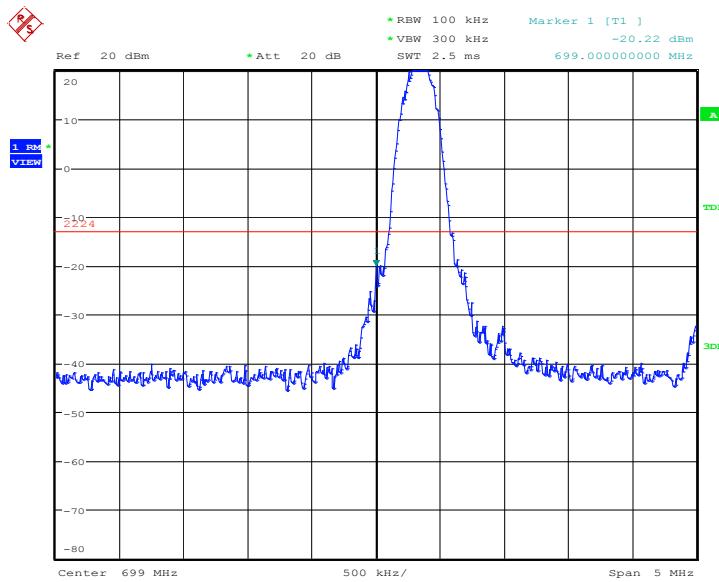
Date: 16.MAY.2018 14:47:35

LTE band 12
OBW: 1RB-low_offset



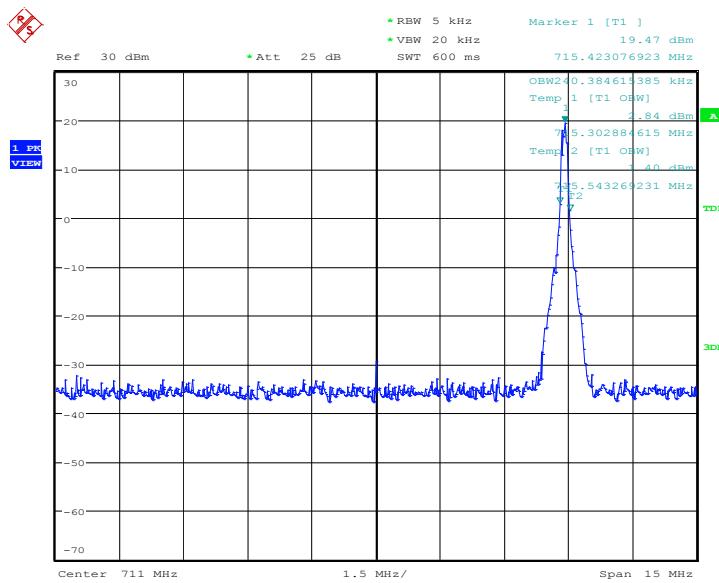
Date: 12.JUL.2018 08:56:59

LOW BAND EDGE BLOCK-1RB-low_offset



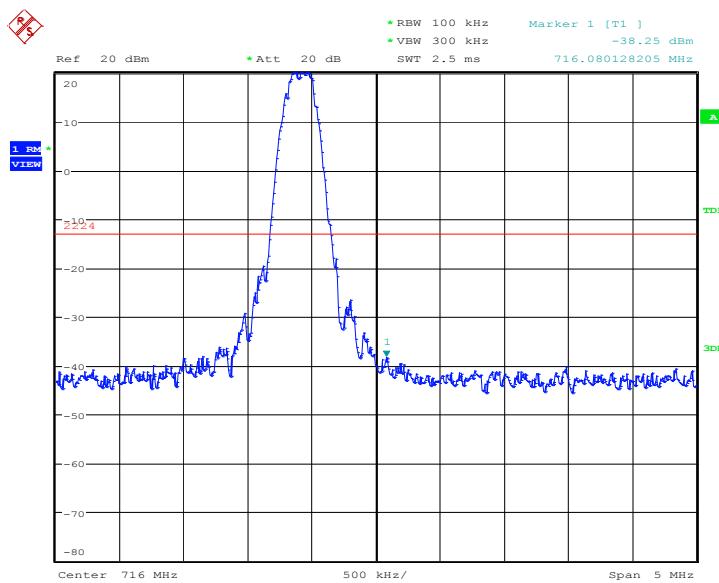
Date: 12.JUL.2018 08:57:44

OBW: 1RB-high_offset



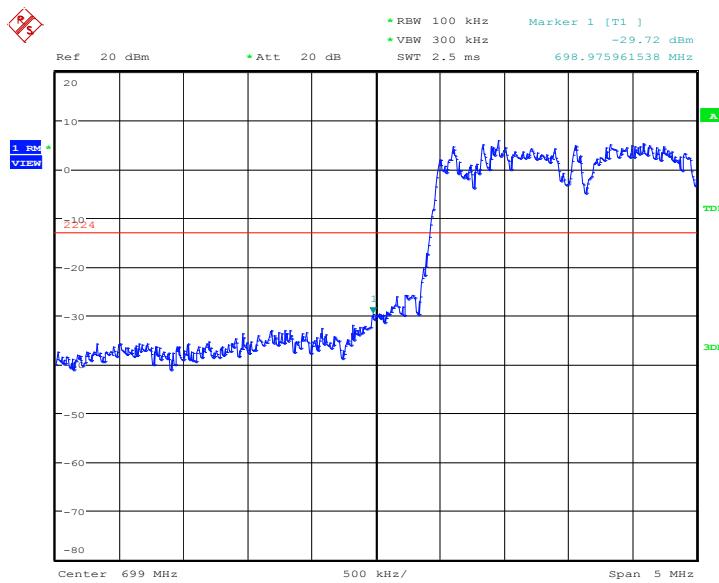
Date: 12.JUL.2018 08:54:05

HIGH BAND EDGE BLOCK-1RB-high_offset



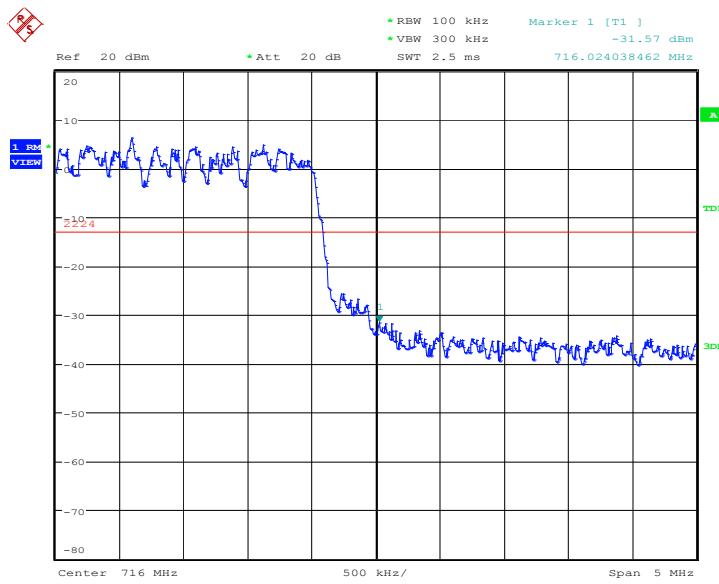
Date: 12.JUL.2018 08:55:04

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 12.JUL.2018 08:59:00

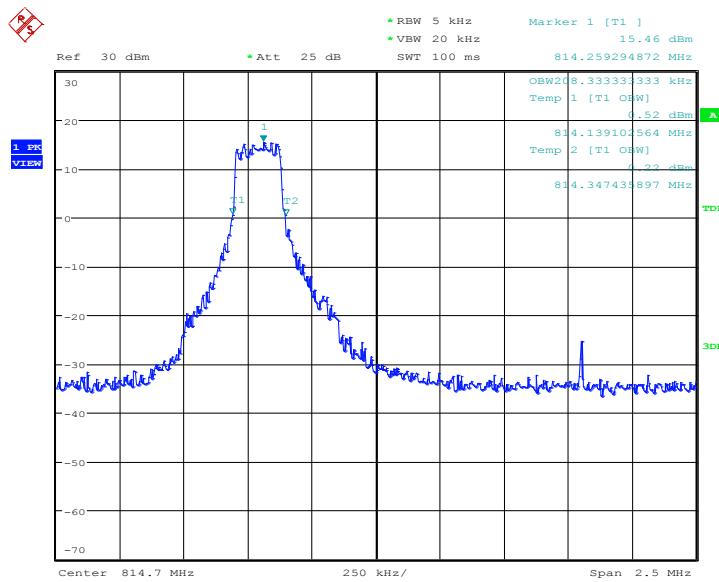
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 12.JUL.2018 08:59:46

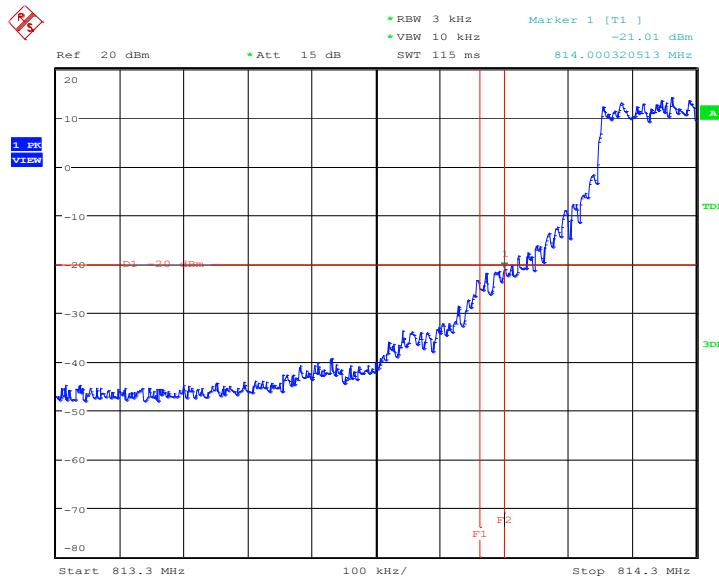
LTE band 26(814MHz-824MHz)

OBW: 1RB-low_offset



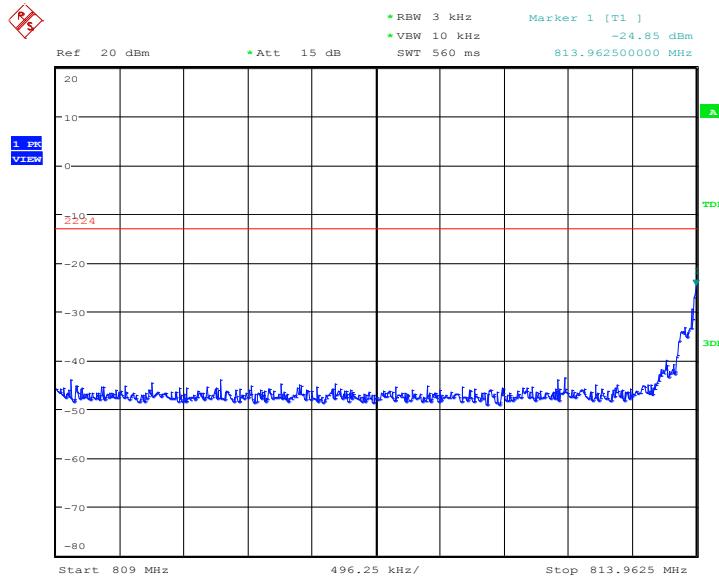
Date: 8.JUN.2018 15:40:17

LOW Emission Mask -1RB-low_offset



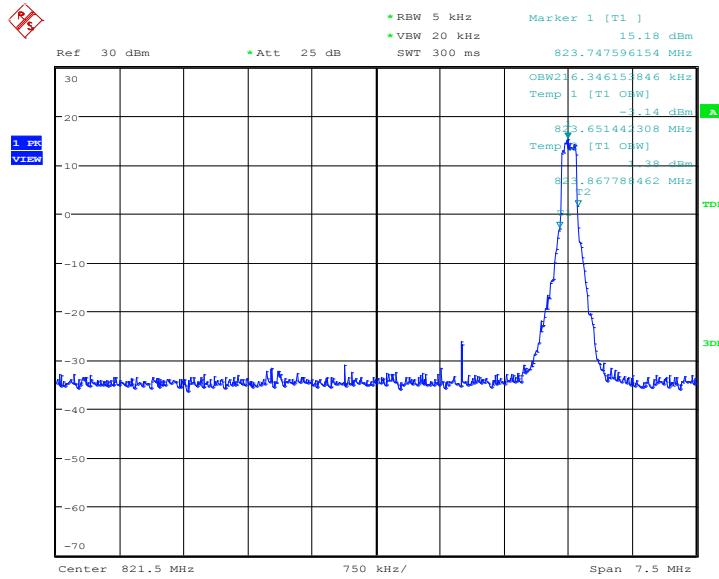
Date: 8.JUN.2018 15:49:09

LOW BAND EDGE BLOCK-1RB-low_offset



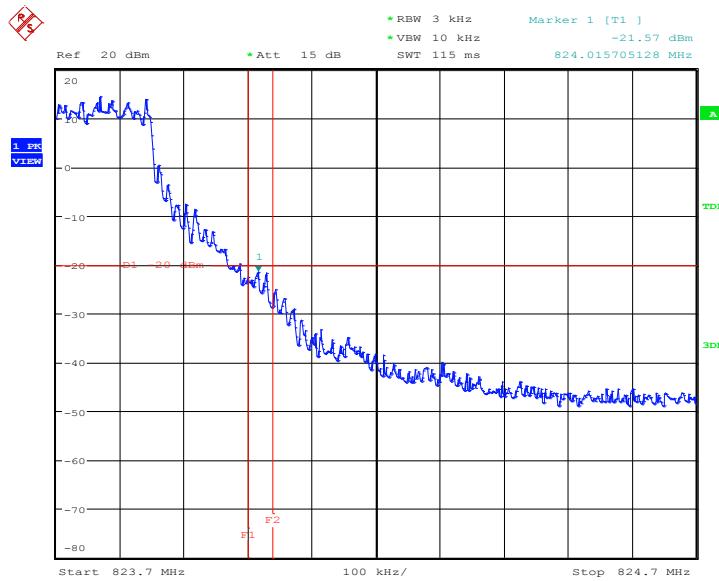
Date: 8.JUN.2018 15:52:30

OBW: 1RB-high_offset



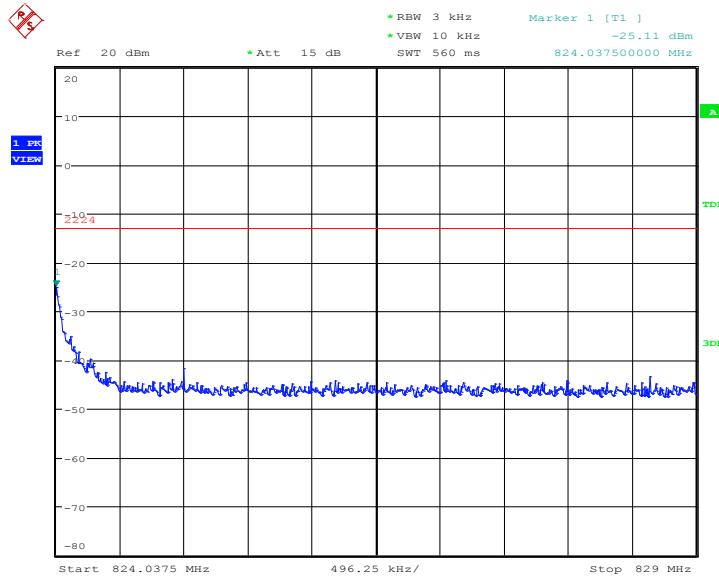
Date: 8.JUN.2018 15:55:51

HIGH Emission Mask -1RB-high_offset



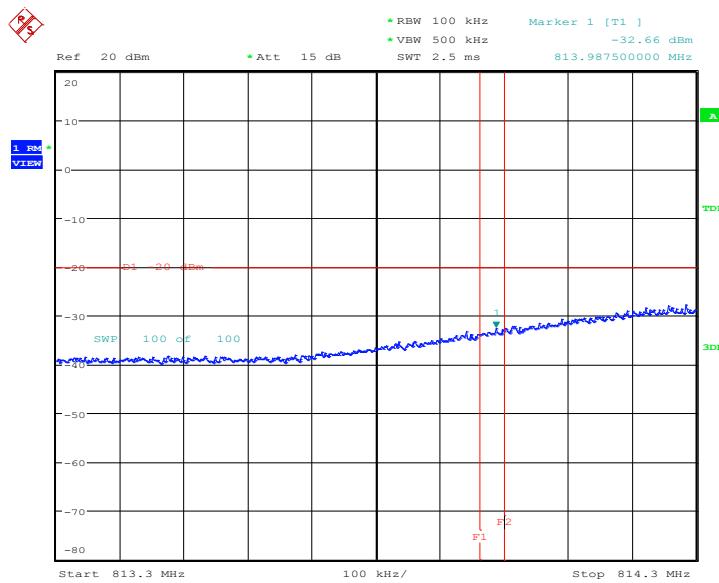
Date: 8.JUN.2018 15:59:42

HIGH BAND EDGE BLOCK-1RB-high_offset

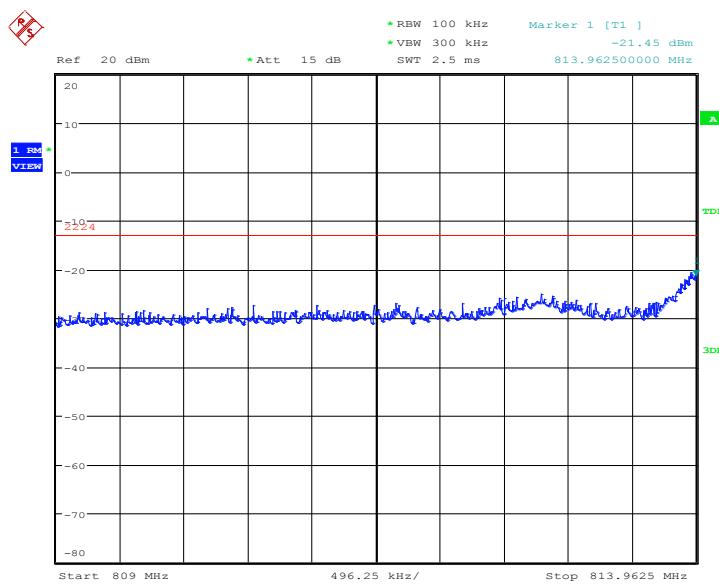


Date: 8.JUN.2018 16:05:32

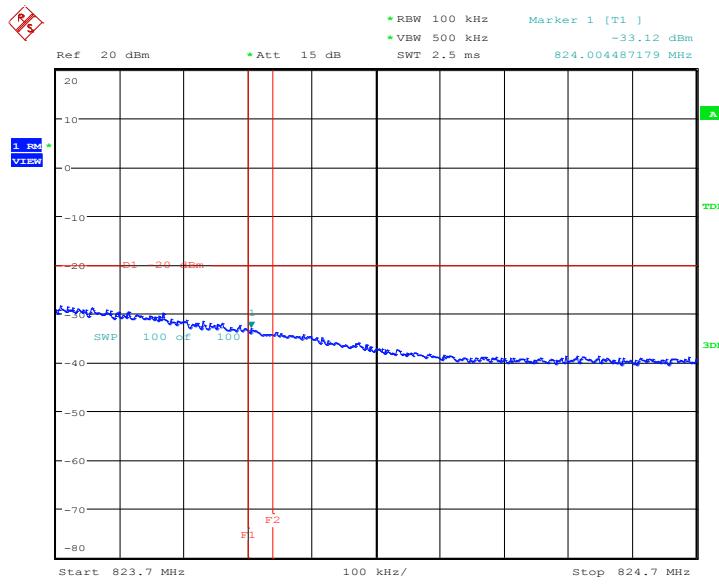
LOW Emission Mask -10MHz-100%RB



LOW BAND EDGE BLOCK-10MHz-100%RB

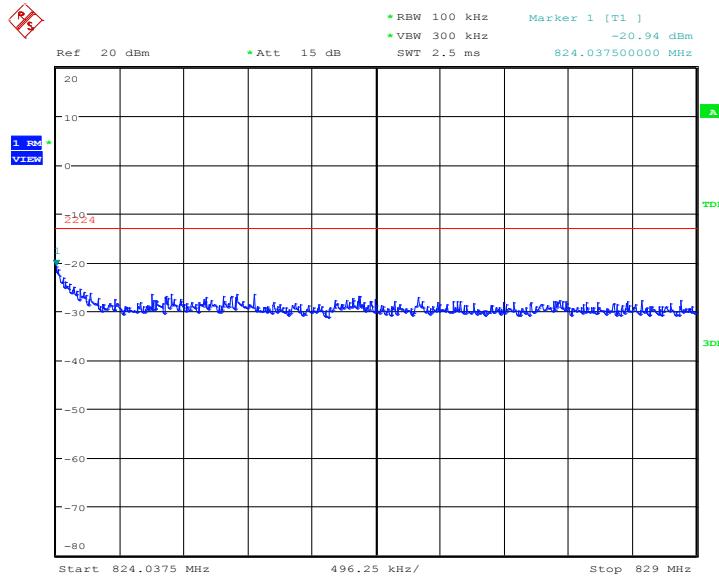


HIGH Emission Mask -10MHz-100%RB



Date: 8.JUN.2018 16:19:31

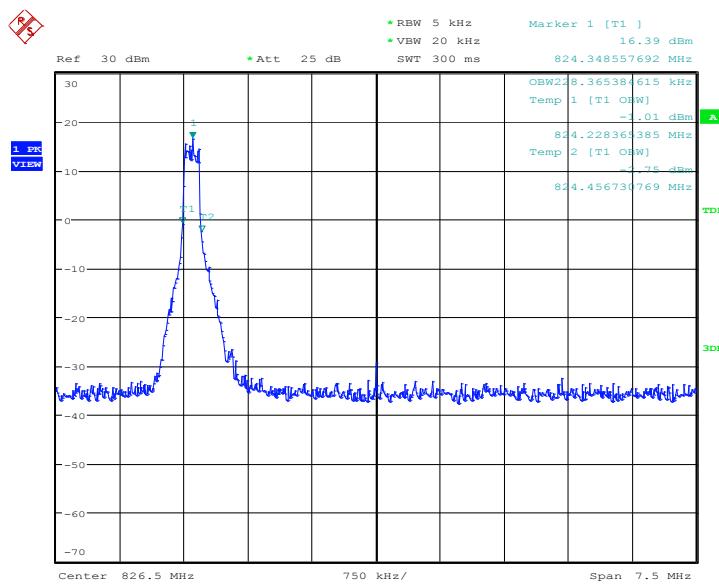
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 8.JUN.2018 16:25:36

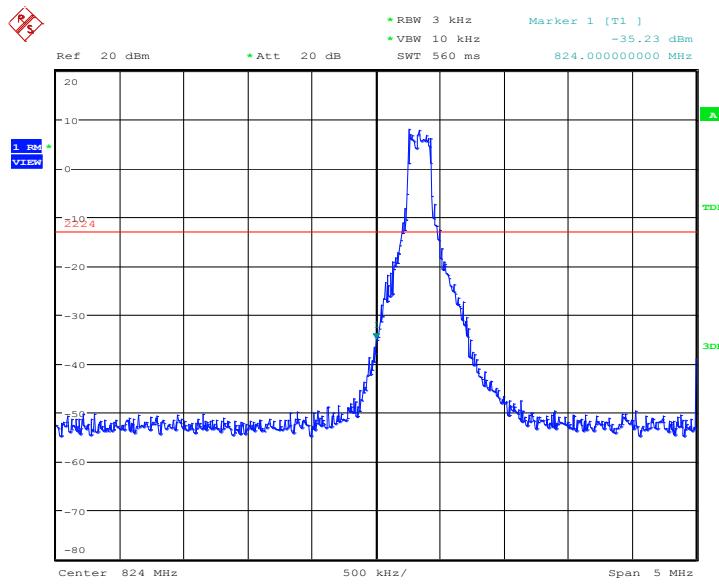
LTE band 26(824MHz-849MHz)

OBW: 1RB-low_offset



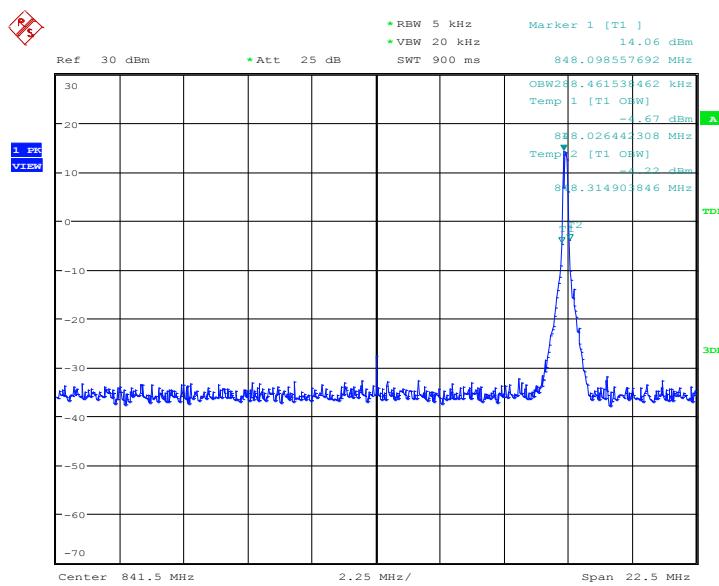
Date: 23.MAY.2018 09:12:05

LOW BAND EDGE BLOCK-1RB-low_offset



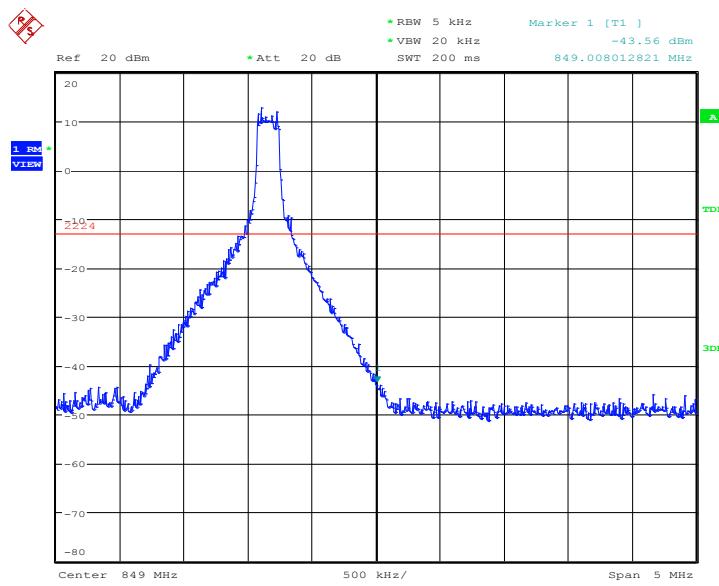
Date: 23.MAY.2018 09:12:56

OBW: 1RB-high_offset



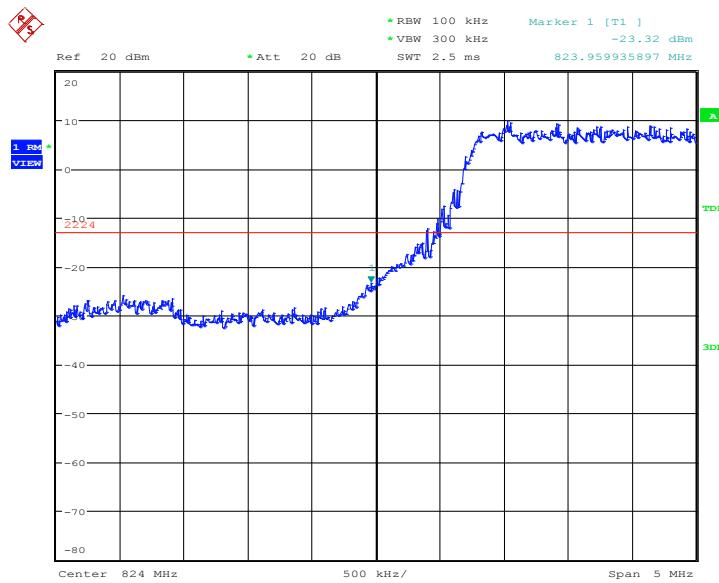
Date: 23.MAY.2018 09:09:31

HIGH BAND EDGE BLOCK-1RB-high_offset



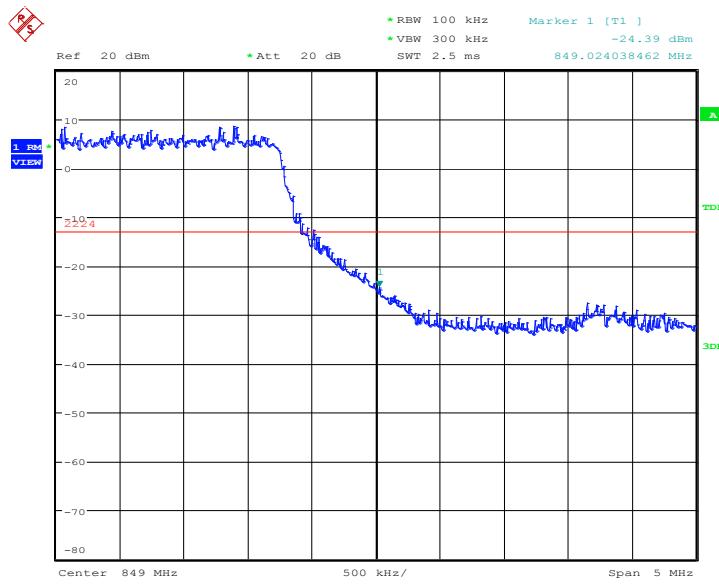
Date: 23.MAY.2018 09:10:23

LOW BAND EDGE BLOCK-15MHz-100%RB



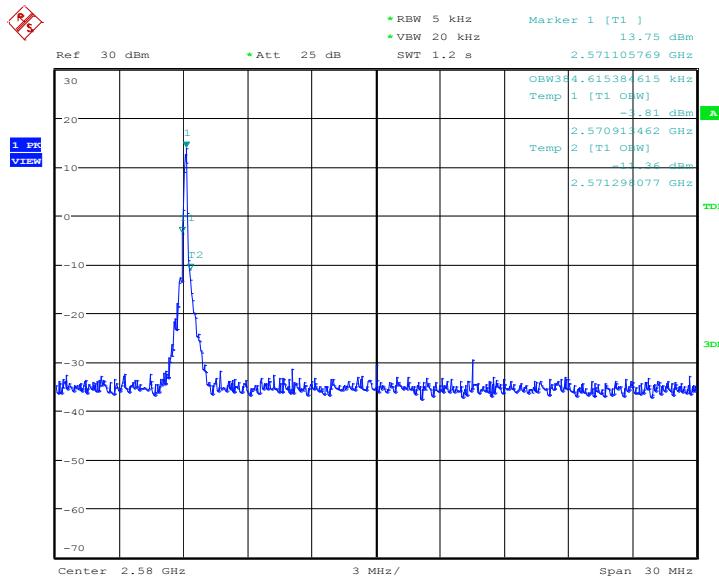
Date: 23.MAY.2018 09:14:25

HIGH BAND EDGE BLOCK-15MHz-100%RB



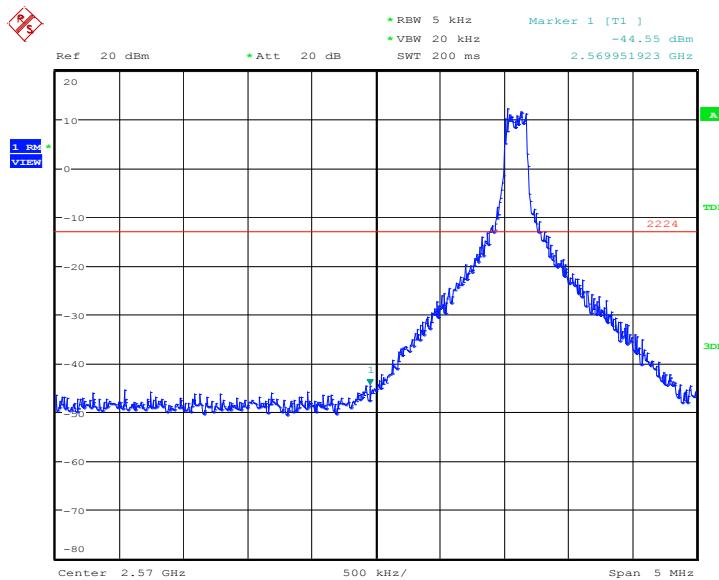
Date: 23.MAY.2018 09:15:27

LTE band 38
OBW: 1RB-low_offset



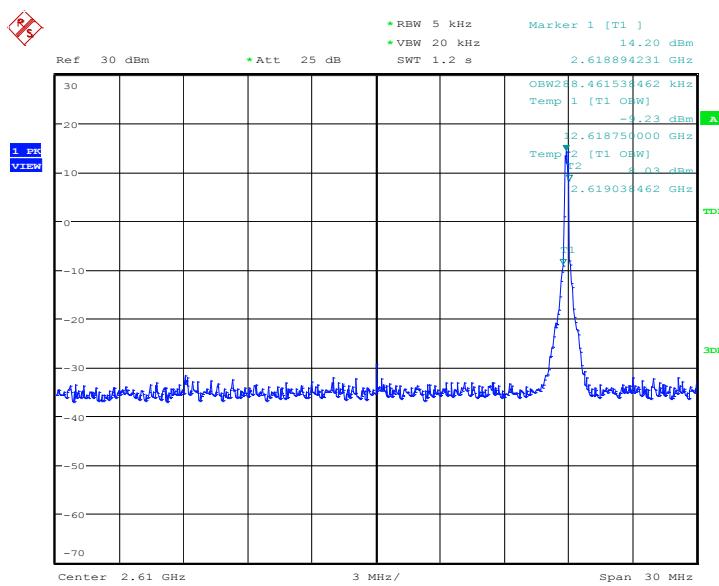
Date: 17.MAY.2018 11:12:57

LOW BAND EDGE BLOCK-1RB-low_offset



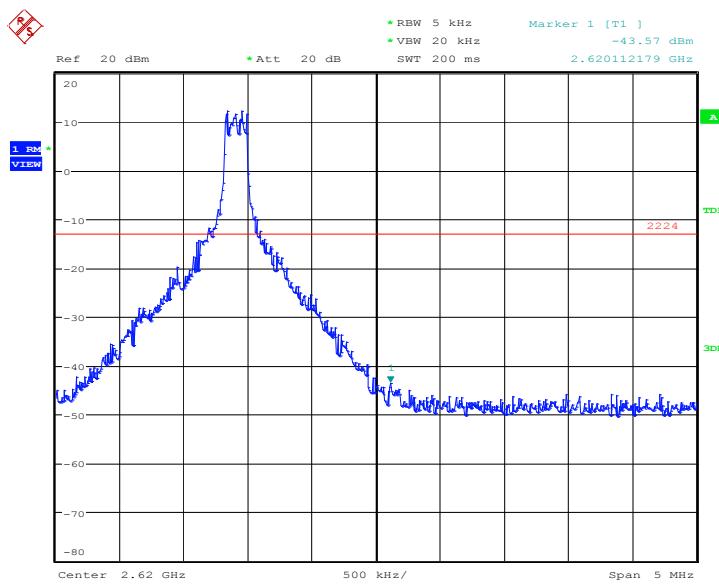
Date: 17.MAY.2018 11:13:48

OBW: 1RB-high_offset



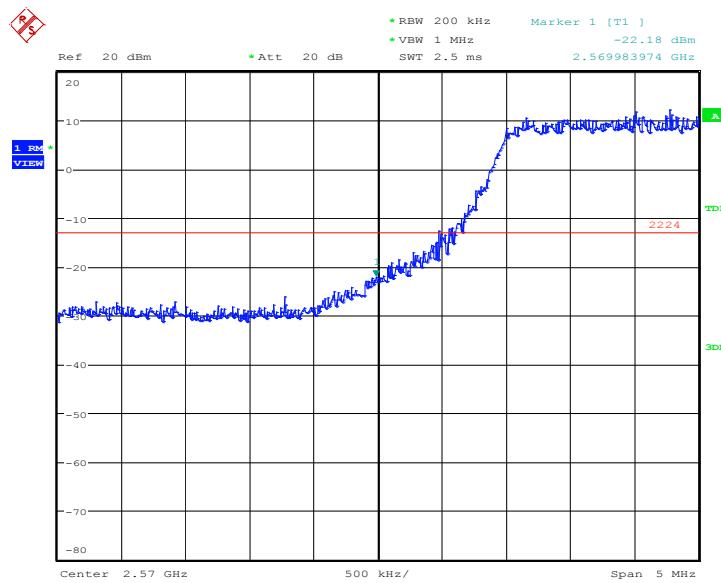
Date: 17.MAY.2018 11:03:26

HIGH BAND EDGE BLOCK-1RB-high_offset



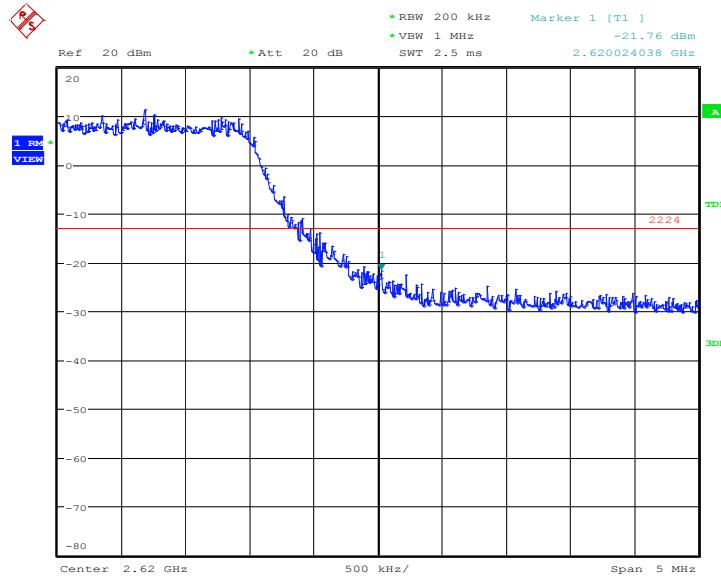
Date: 17.MAY.2018 11:04:17

LOW BAND EDGE BLOCK-20MHz-100%RB



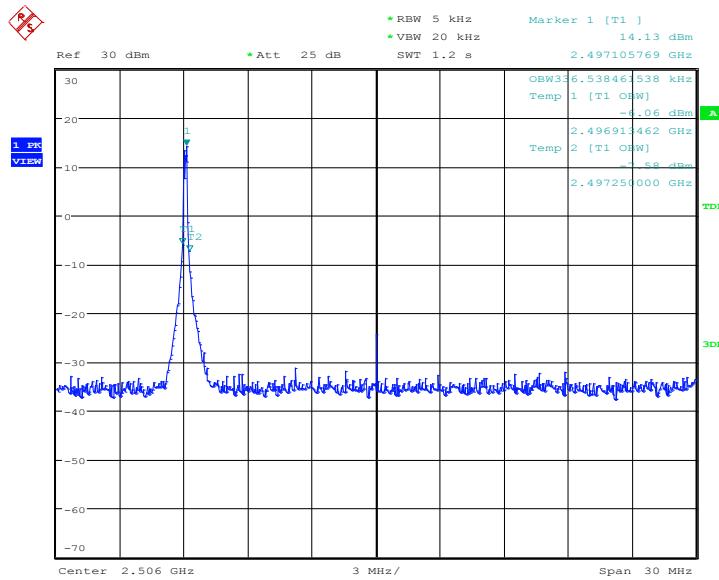
Date: 16.MAY.2018 15:05:41

HIGH BAND EDGE BLOCK-20MHz-100%RB



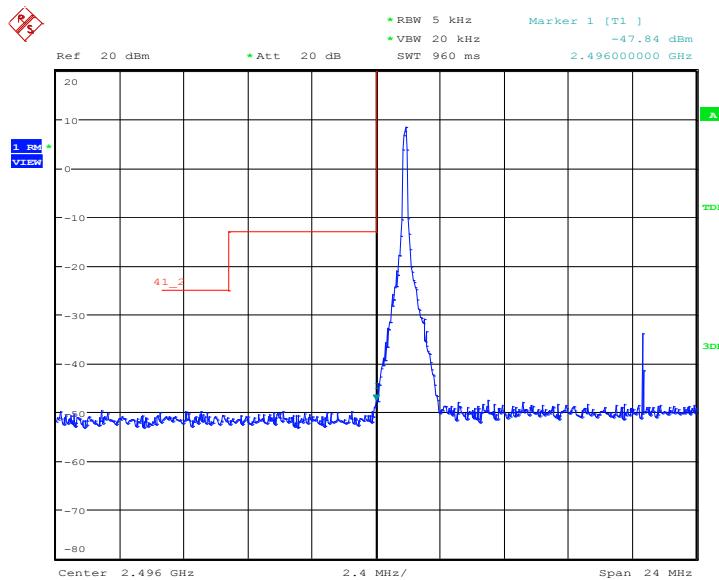
Date: 16.MAY.2018 15:03:04

LTE band 41
OBW: 1RB-low_offset

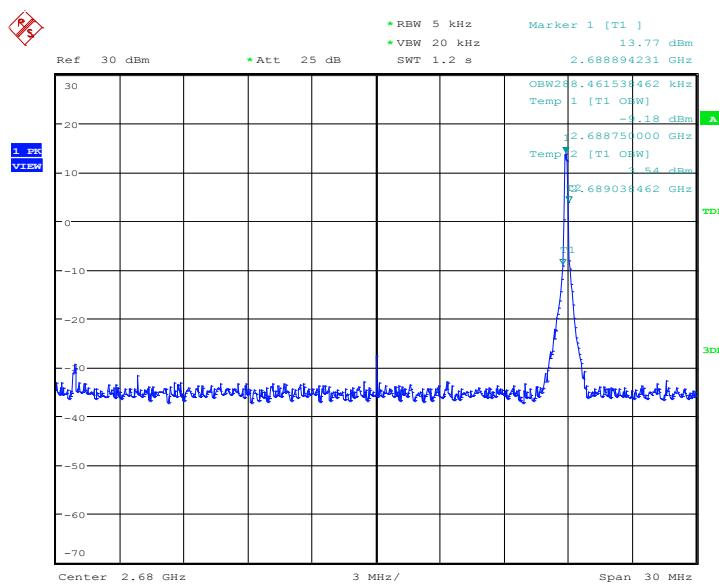


Date: 17.MAY.2018 11:14:46

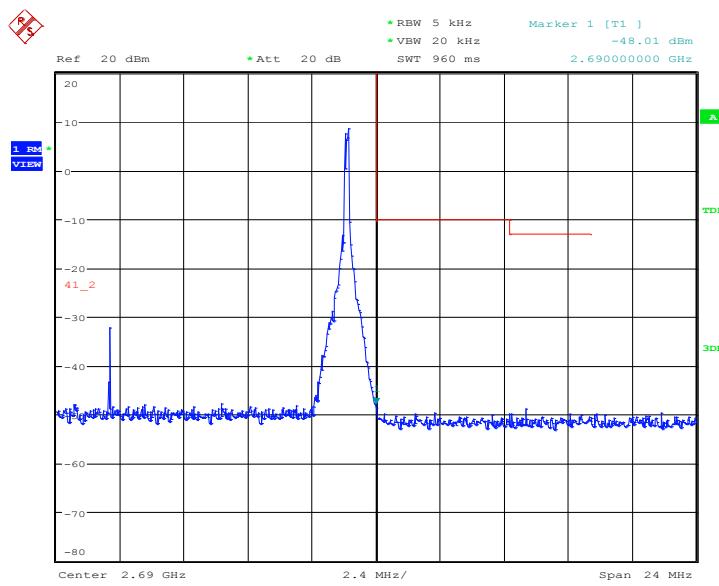
LOW BAND EDGE BLOCK-1RB-low_offset



Date: 17.MAY.2018 11:15:39

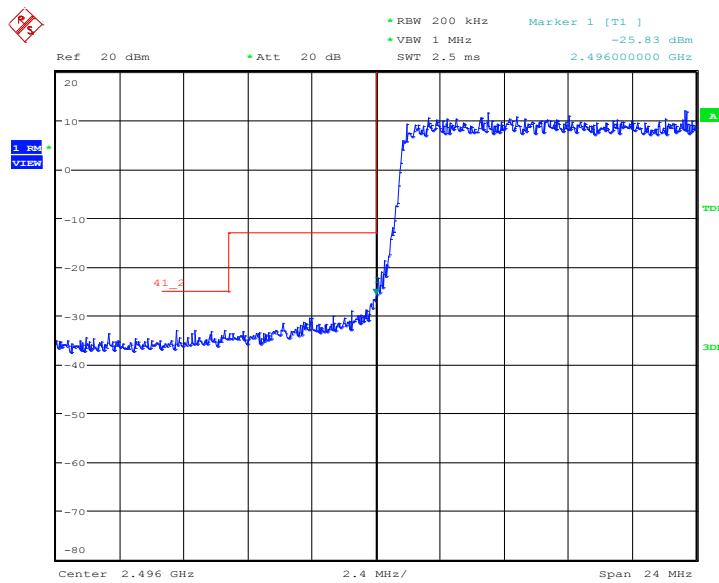
OBW: 1RB-high_offset


Date: 17.MAY.2018 10:59:12

HIGH BAND EDGE BLOCK-1RB-high_offset


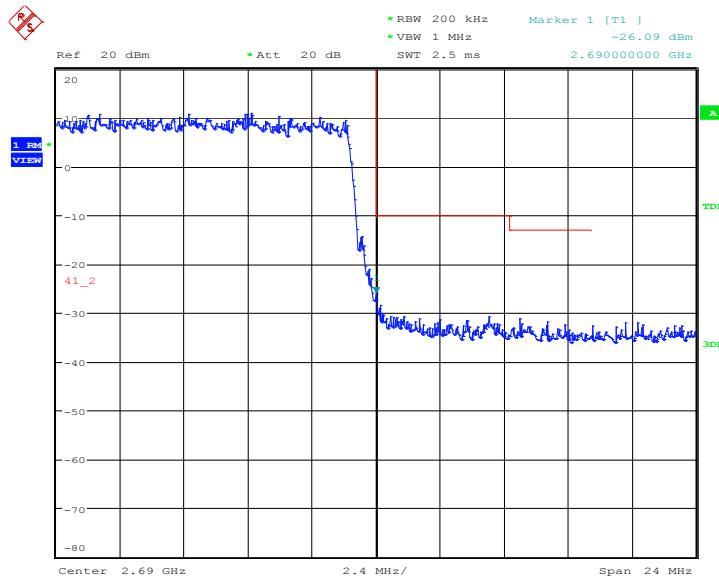
Date: 17.MAY.2018 11:00:04

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 16.MAY.2018 15:20:33

HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 16.MAY.2018 15:14:54

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.

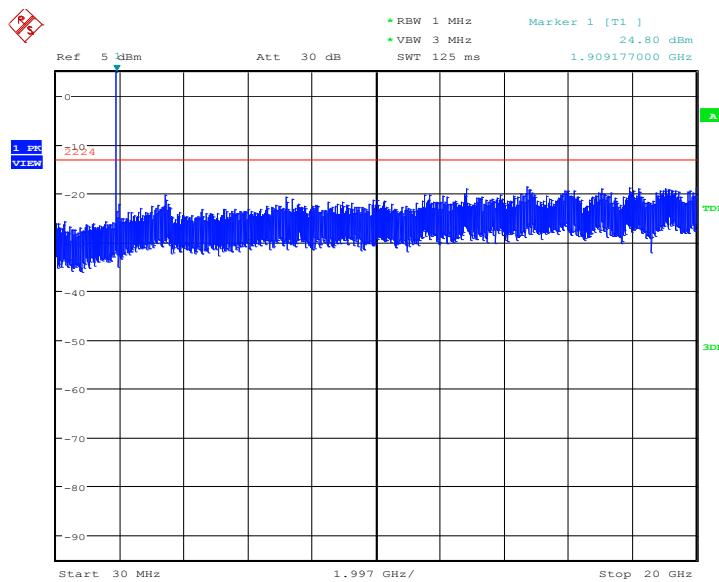
The specification that emissions shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 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.

A. 7.3 Measurement result

Only worst case result is given below

LTE band 2: 30MHz – 20GHz

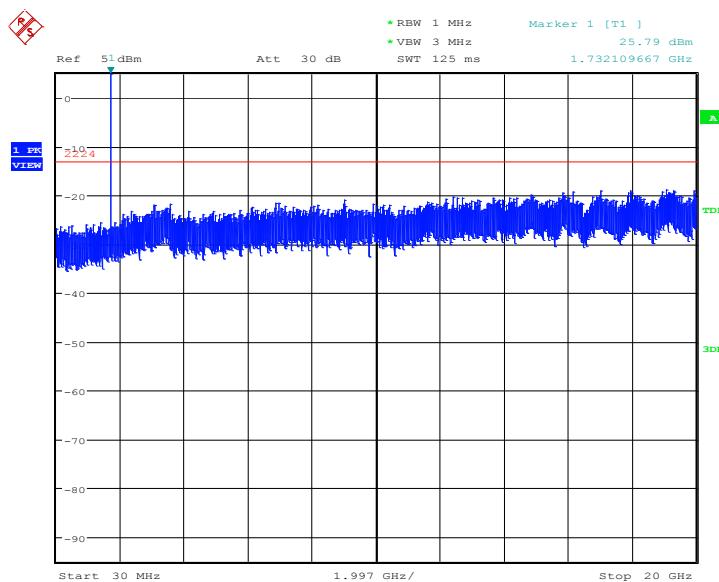
Spurious emission limit –13dBm.



Date: 16.MAY.2018 13:51:09

LTE band 4: 30MHz – 20GHz

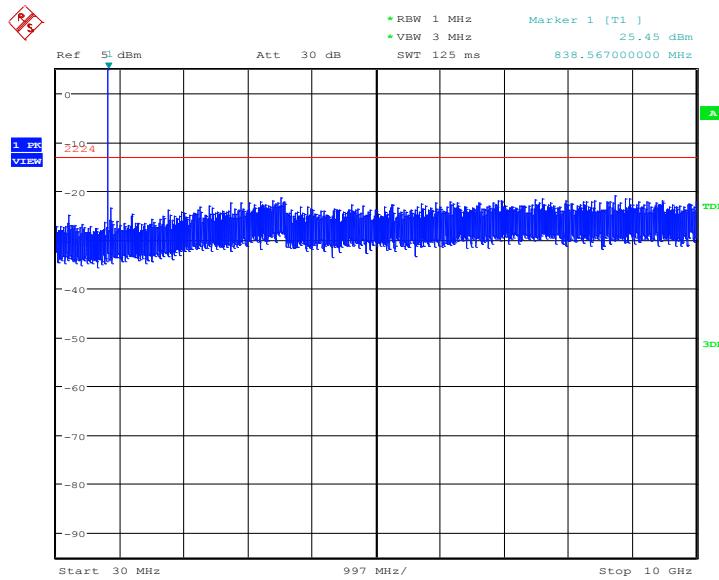
Spurious emission limit –13dBm.



Date: 17.MAY.2018 12:10:46

LTE band 5: 30MHz – 10GHz

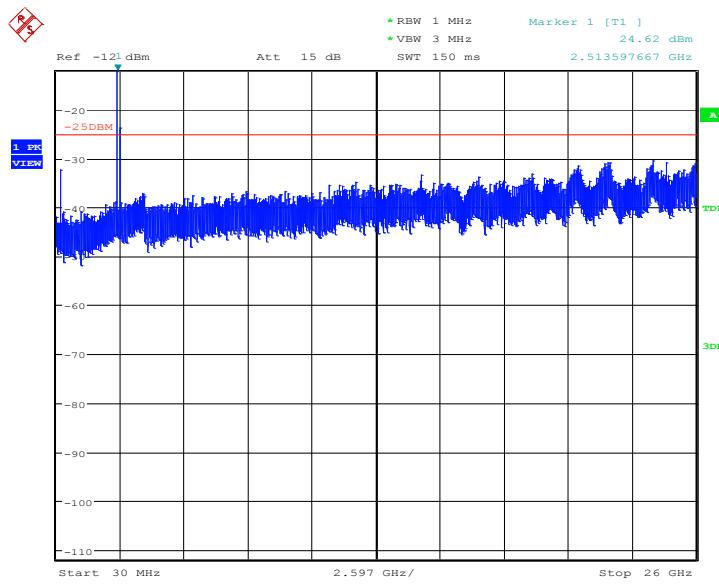
Spurious emission limit –13dBm.



Date: 16.MAY.2018 14:17:58

LTE band 7: 30MHz – 26GHz

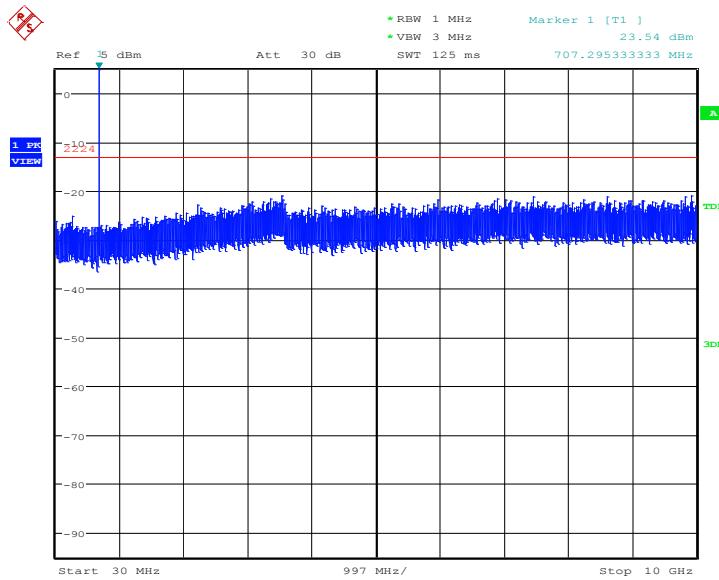
Spurious emission limit –13dBm.



Date: 16.MAY.2018 14:45:06

LTE band 12: 30MHz – 10GHz

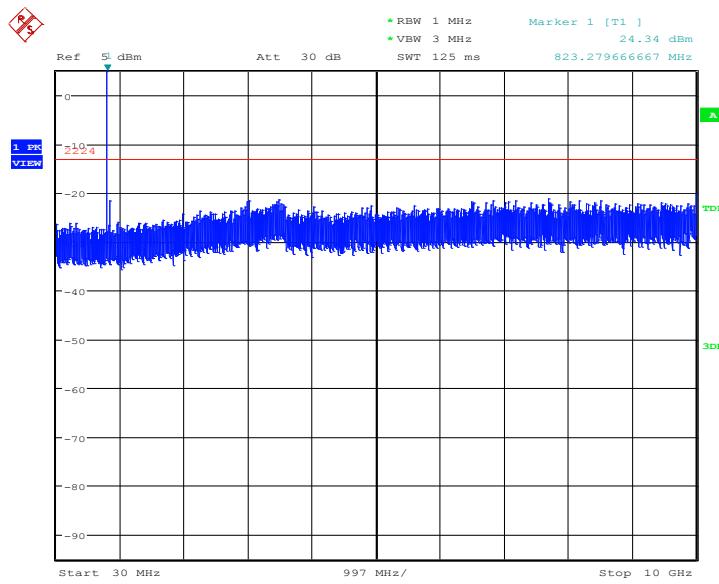
Spurious emission limit –13dBm.



Date: 12.JUL.2018 10:29:20

LTE band 26(814MHz-824MHz): 30MHz – 10GHz

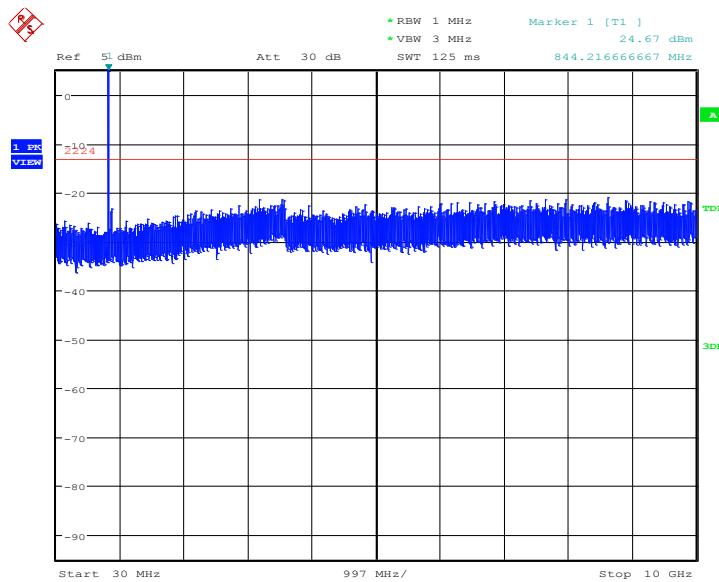
Spurious emission limit –13dBm.



Date: 23.MAY.2018 09:18:28

LTE band 26(824MHz-849MHz): 30MHz – 10GHz

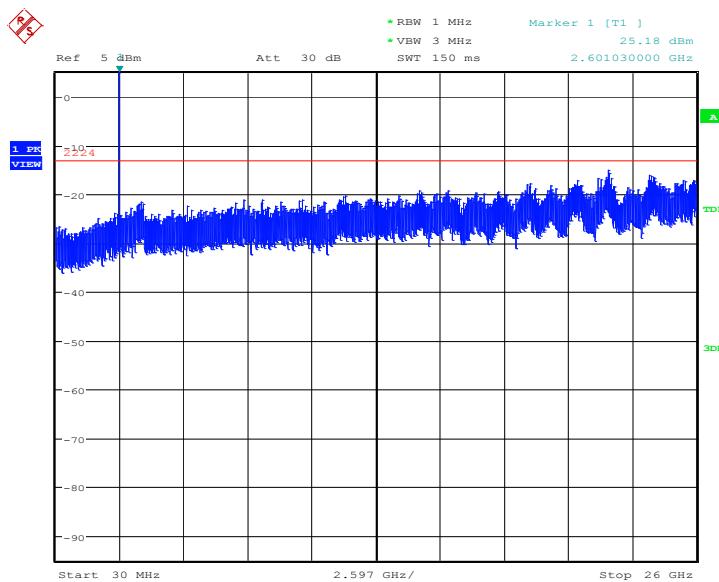
Spurious emission limit –13dBm.



Date: 23.MAY.2018 09:17:11

LTE band 38: 30MHz – 26GHz

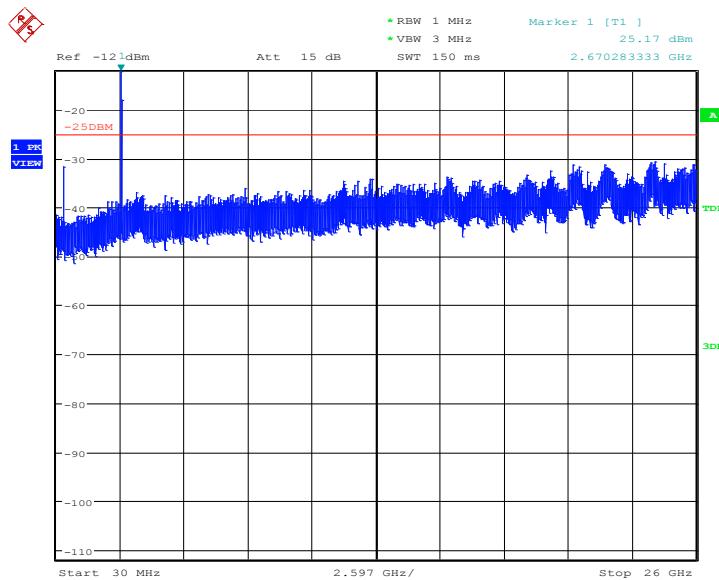
Spurious emission limit –13dBm.



Date: 16.MAY.2018 15:08:59

LTE band 41: 30MHz – 26GHz

Spurious emission limit –13dBm.



Date: 16.MAY.2018 15:11:38

A.8 PEAK-TO-AVERAGE POWER RATIO

Reference

FCC: CFR Part 24.232 (d), 27.50(a)

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 1 ms
- 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 2, 20MHz

Frequency(MHz)	PAPR(dB)		
1860.0	QPSK	16QAM	64QAM
	6.89	7.47	7.37

LTE band 4, 20MHz

Frequency(MHz)	PAPR(dB)		
1732.5	QPSK	16QAM	64QAM
	6.76	7.37	7.50

LTE band 7, 20MHz

Frequency(MHz)	PAPR(dB)		
2510.0	QPSK	16QAM	64QAM
	6.89	7.50	7.37

LTE band 12, 10MHz

Frequency(MHz)	PAPR(dB)		
707.5	QPSK	16QAM	64QAM
	5.29	6.25	6.35



LTE band 38, 20MHz

Frequency(MHz)	PAPR(dB)		
	QPSK	16QAM	64QAM
2595.0	6.73	8.59	8.35

LTE band 41, 20MHz

Frequency(MHz)	PAPR(dB)		
	QPSK	16QAM	64QAM
2680.0	8.14	8.85	8.35



ANNEX B: Accreditation Certificate

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT

Beijing
China

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Electromagnetic Compatibility & Telecommunications

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2017-08-22 through 2018-09-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program

END OF REPORT