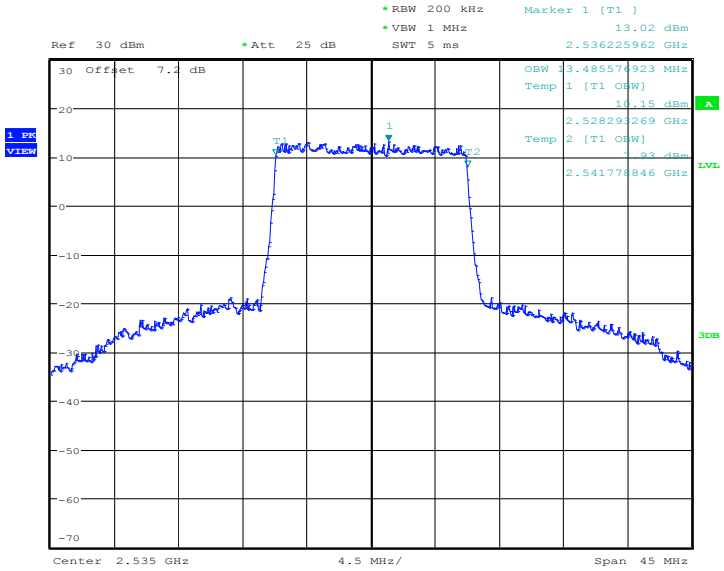
LTE band 7, 15MHz (99%)

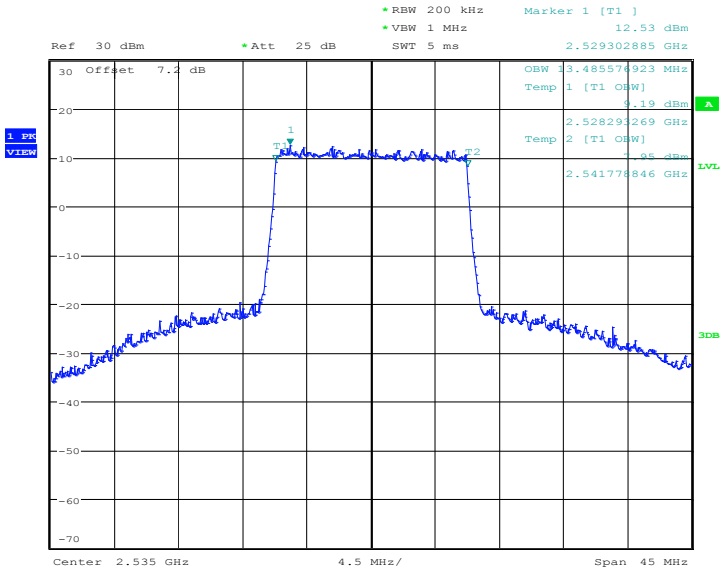
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	13485.58	13485.58

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



Date: 15.FEB.2017 03:46:14

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

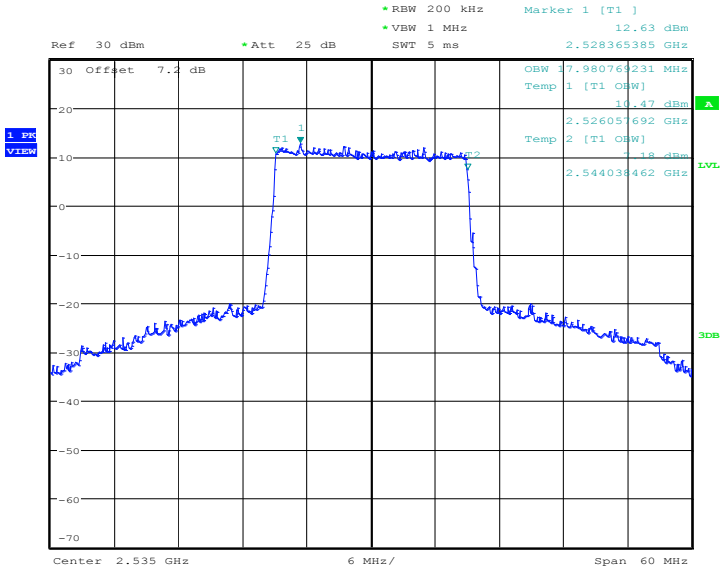


Date: 15.FEB.2017 03:46:44

LTE band 7, 20MHz (99%)

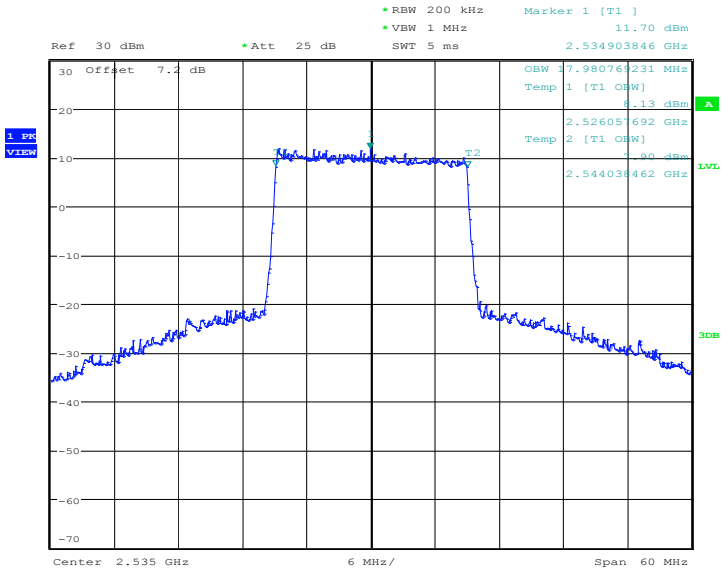
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2535.0	QPSK	16QAM
	17980.77	17980.77

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



Date: 15.FEB.2017 03:59:05

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

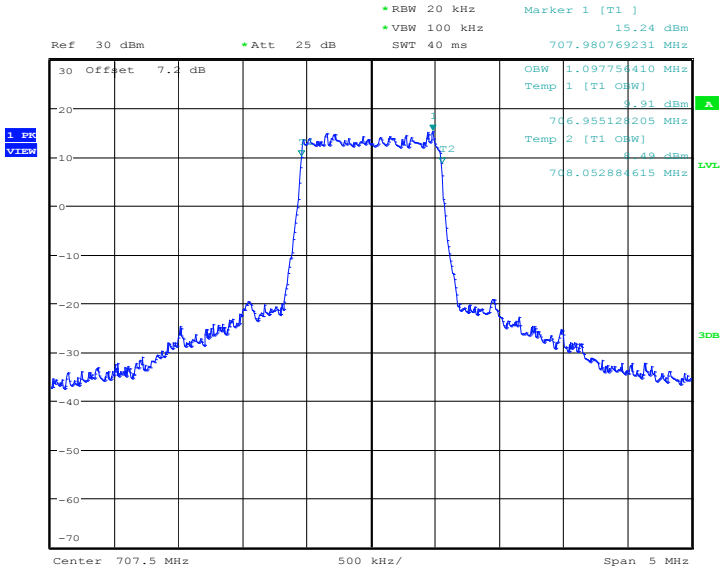


Date: 15.FEB.2017 03:59:41

LTE band 12, 1.4MHz (99%)

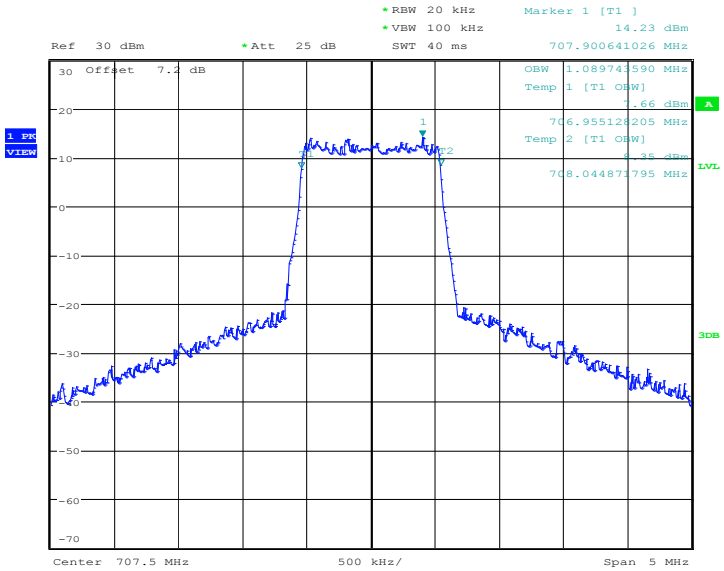
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	1097.76	1089.74

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



Date: 15.FEB.2017 01:46:24

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

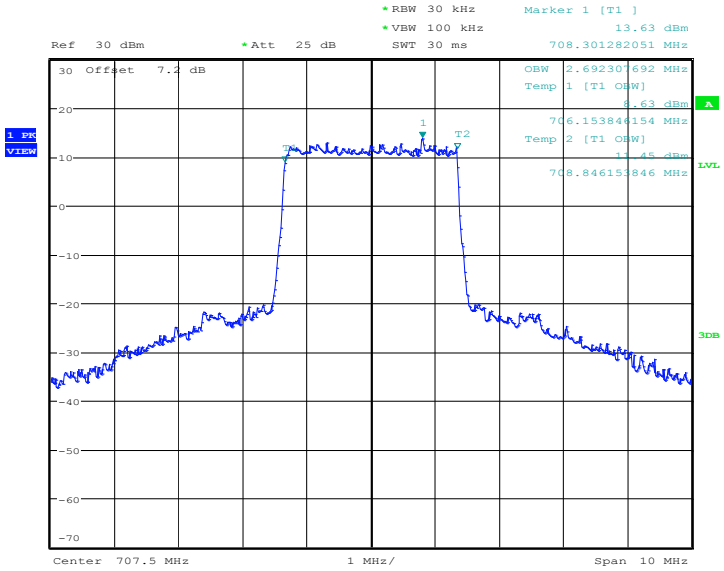


Date: 15.FEB.2017 01:45:40

LTE band 12, 3MHz (99%)

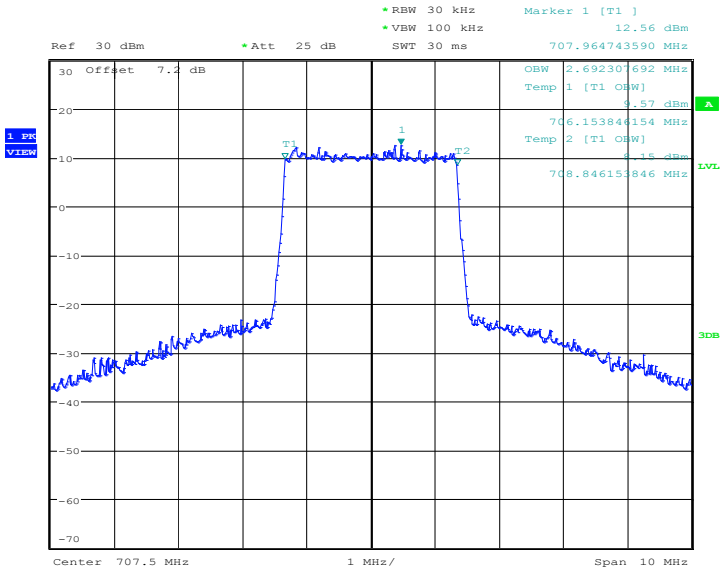
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.FEB.2017 02:03:44

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

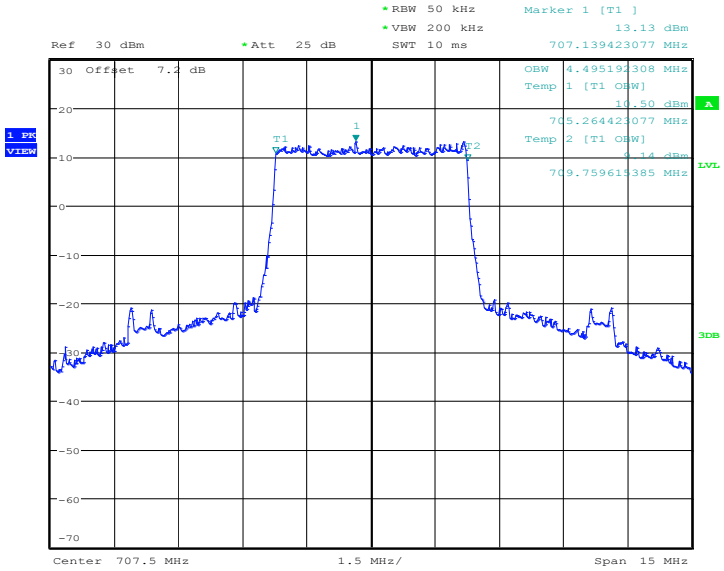


Date: 15.FEB.2017 02:04:22

LTE band 12, 5MHz (99%)

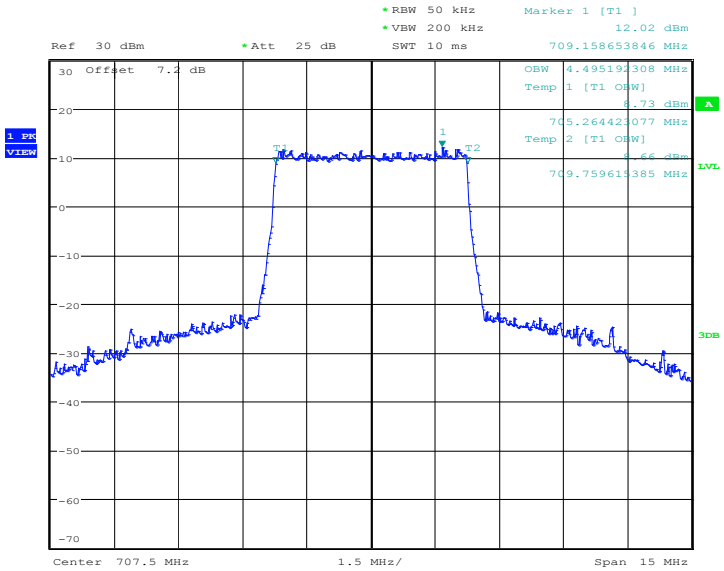
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	4495.19	4495.19

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



Date: 15.FEB.2017 02:41:11

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

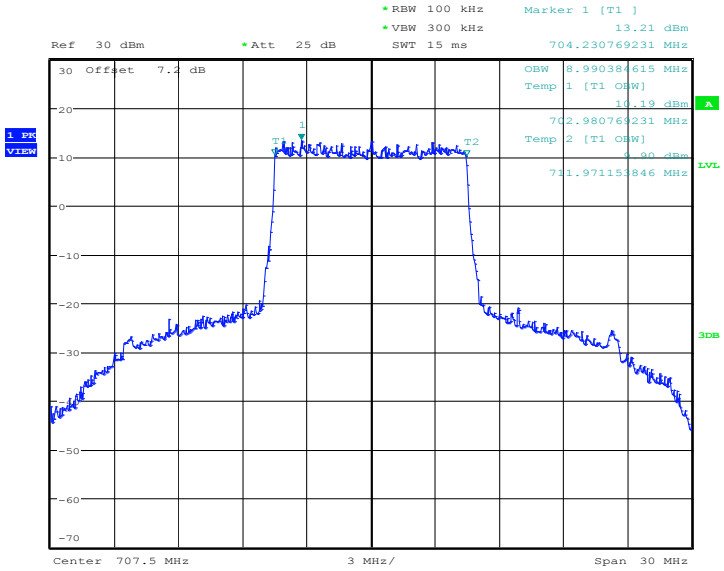


Date: 15.FEB.2017 02:41:58

LTE band 12, 10MHz (99%)

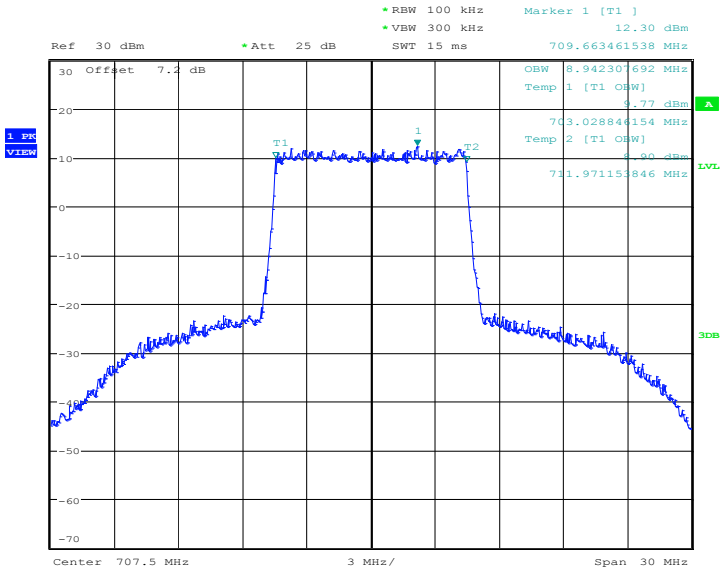
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
707.5	QPSK	16QAM
	8990.38	8942.31

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



Date: 15.FEB.2017 03:22:45

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

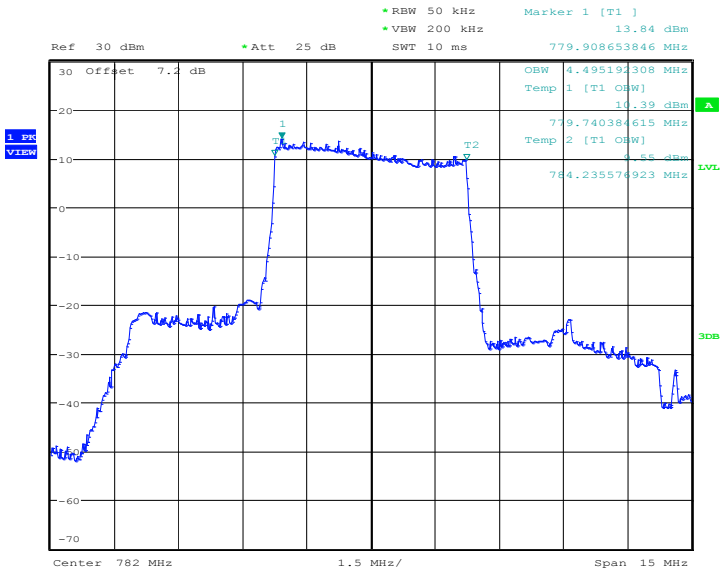


Date: 15.FEB.2017 03:22:07

LTE band 13, 5MHz (99%)

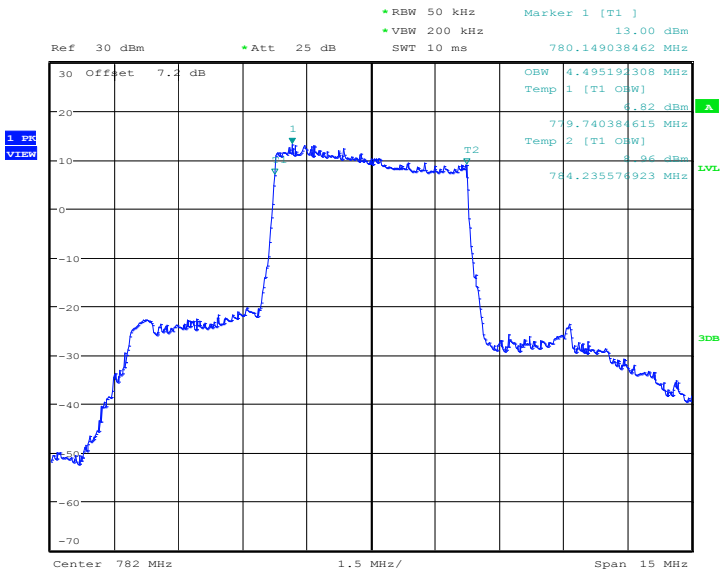
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	4495.19	4495.19

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



Date: 15.FEB.2017 02:47:10

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

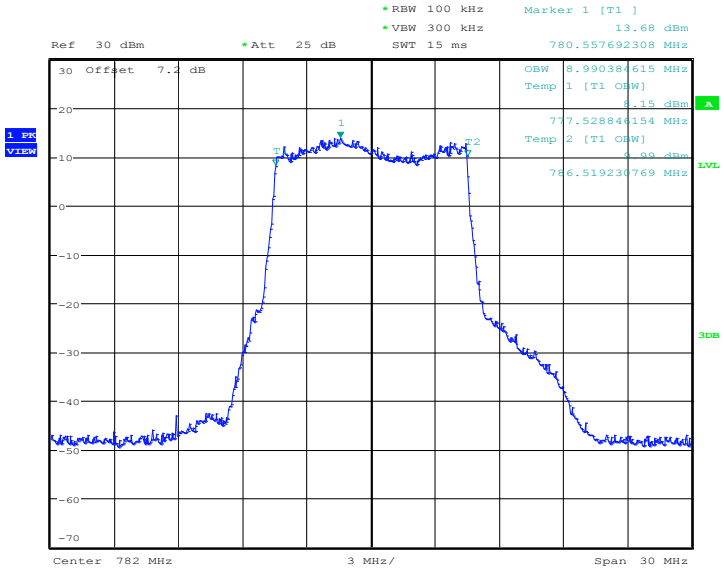


Date: 15.FEB.2017 02:46:35

LTE band 13, 10MHz (99%)

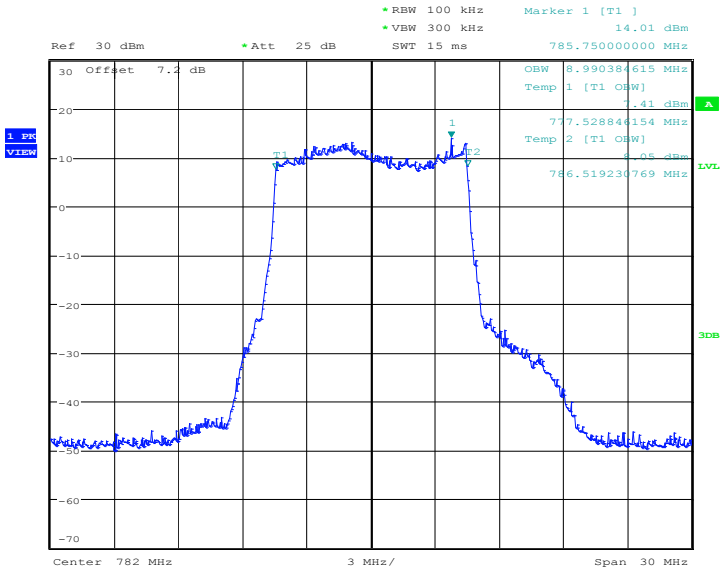
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
782.0	QPSK	16QAM
	8990.38	8990.38

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



Date: 15.FEB.2017 03:17:17

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

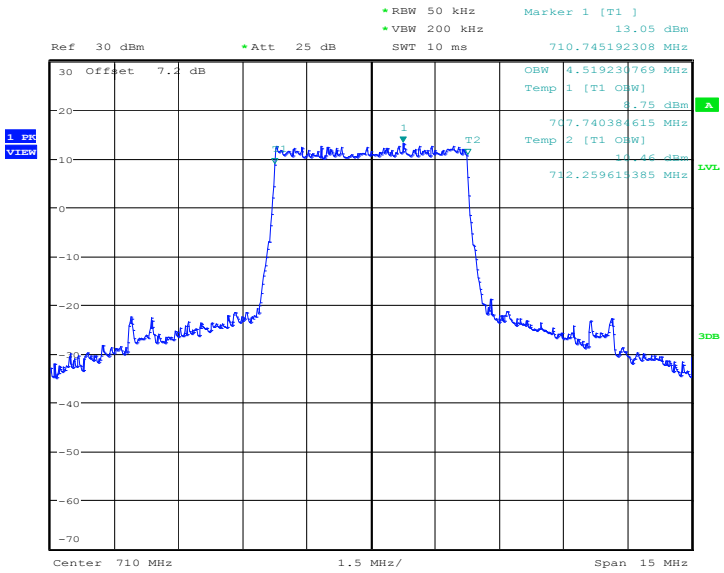


Date: 15.FEB.2017 03:18:38

LTE band 17, 5MHz (99%)

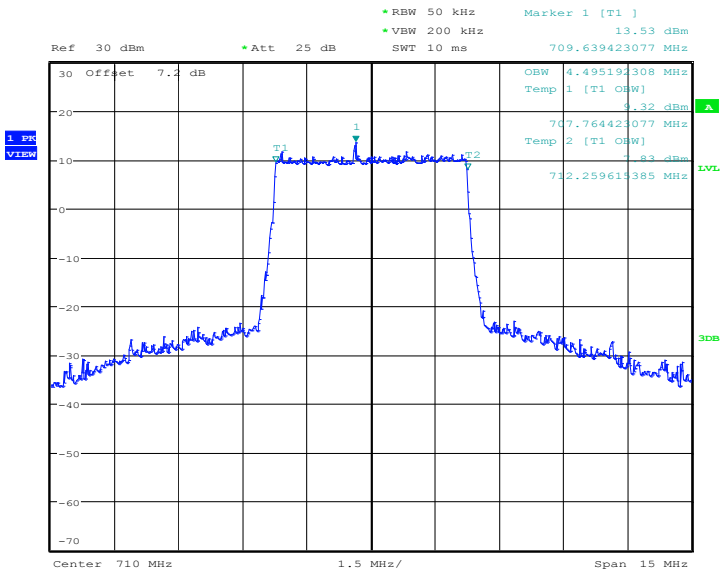
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
710.0	QPSK	16QAM
	4519.23	4495.19

LTE band 17, 5MHz Bandwidth, QPSK (99% BW)



Date: 15.FEB.2017 02:48:40

LTE band 17, 5MHz Bandwidth,16QAM (99% BW)

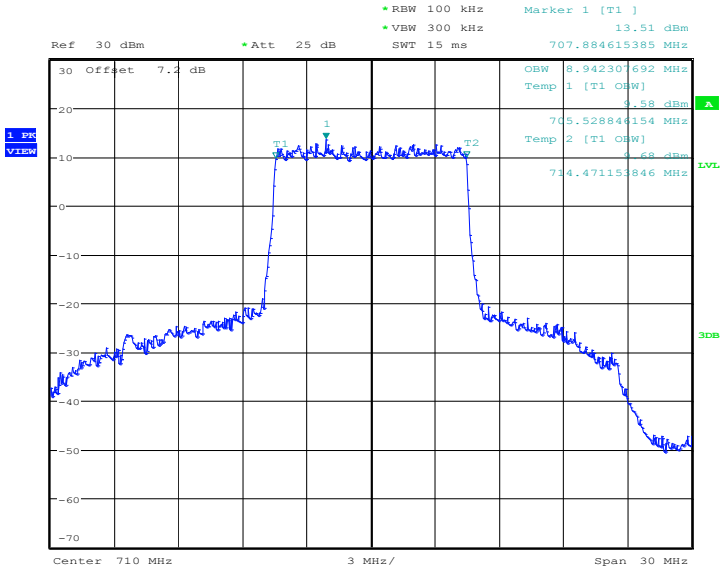


Date: 15.FEB.2017 02:49:13

LTE band 17, 10MHz (99%)

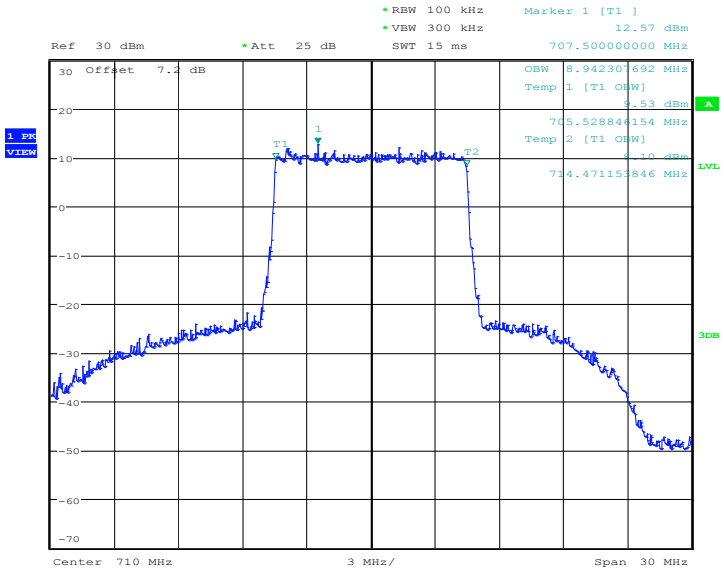
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
710.0	QPSK	16QAM
	8942.31	8942.31

LTE band 17, 10MHz Bandwidth, QPSK (99% BW)



Date: 15.FEB.2017 03:16:03

LTE band 17, 10MHz Bandwidth, 16QAM (99% BW)

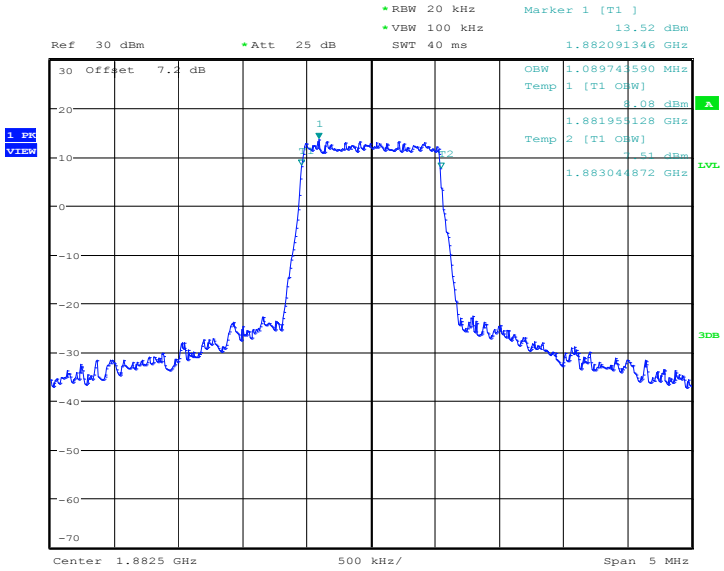


Date: 15.FEB.2017 03:15:39

LTE band 25, 1.4MHz (99%)

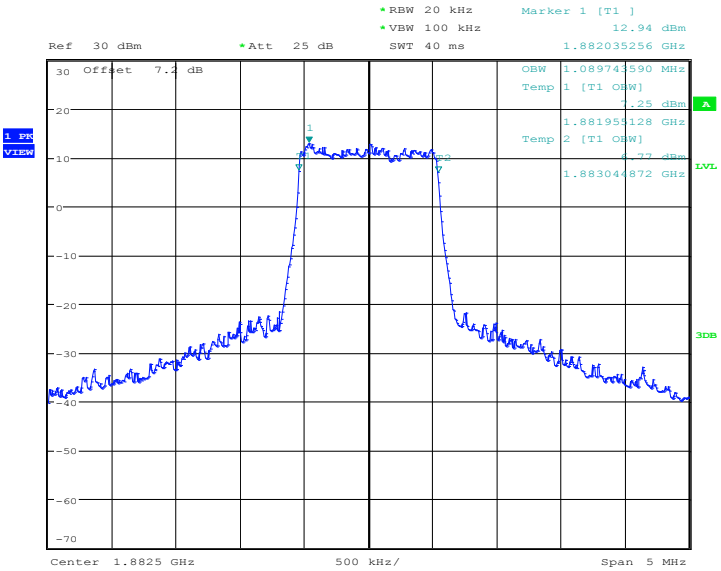
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	1089.74	1089.74

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



Date: 15.FEB.2017 01:47:34

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

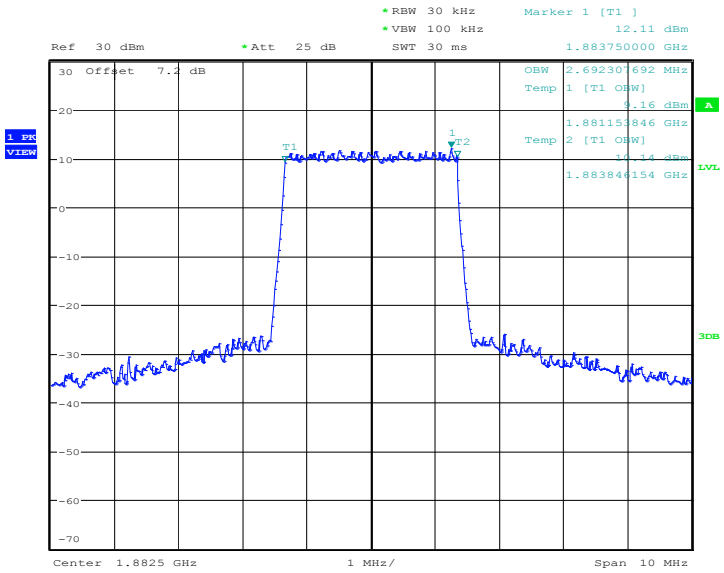


Date: 15.FEB.2017 01:48:06

LTE band25, 3MHz (99%)

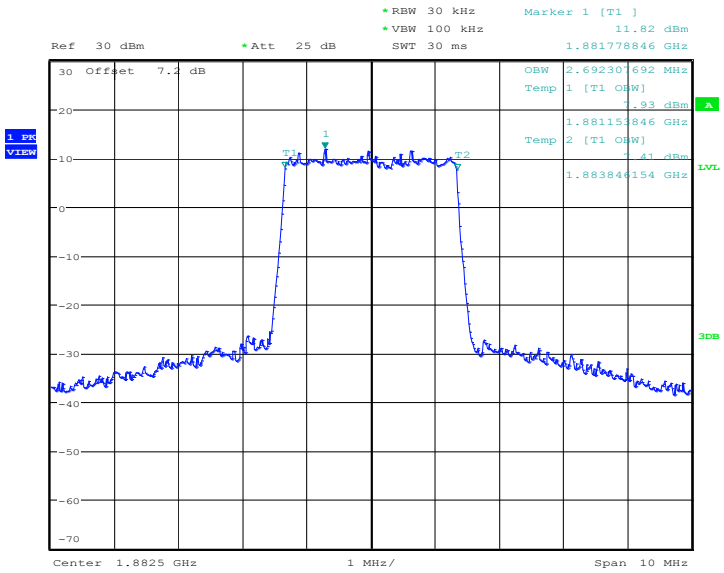
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.FEB.2017 02:02:26

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

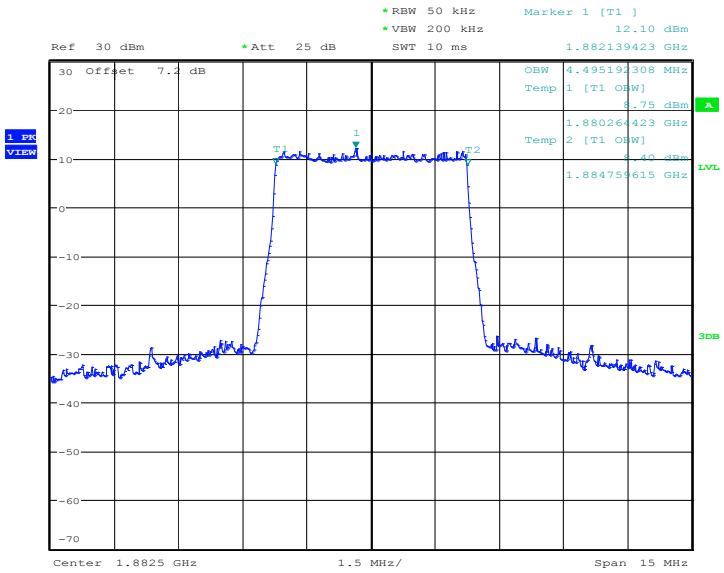


Date: 15.FEB.2017 02:01:28

LTE band 25, 5MHz (99%)

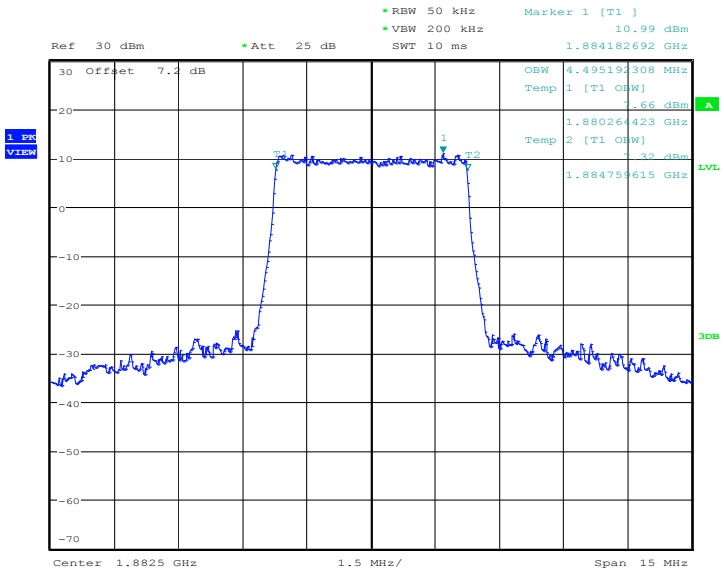
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	4495.19	4495.19

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



Date: 15.FEB.2017 02:54:30

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

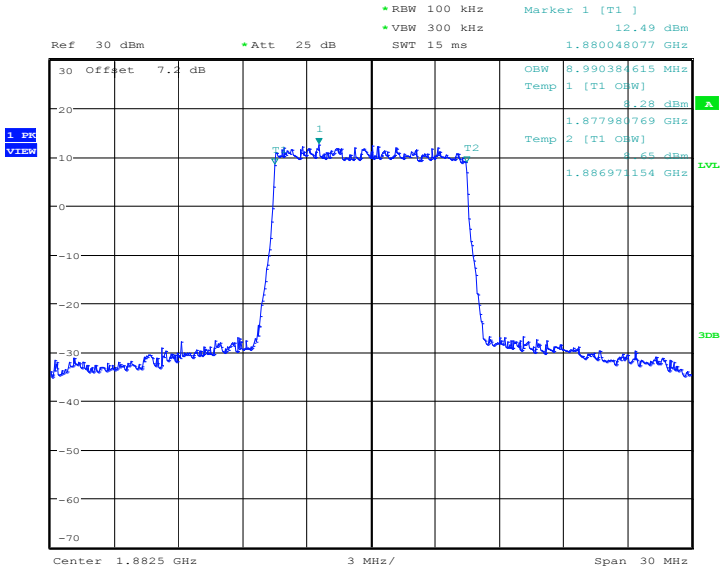


Date: 15.FEB.2017 02:53:52

LTE band 25, 10MHz (99%)

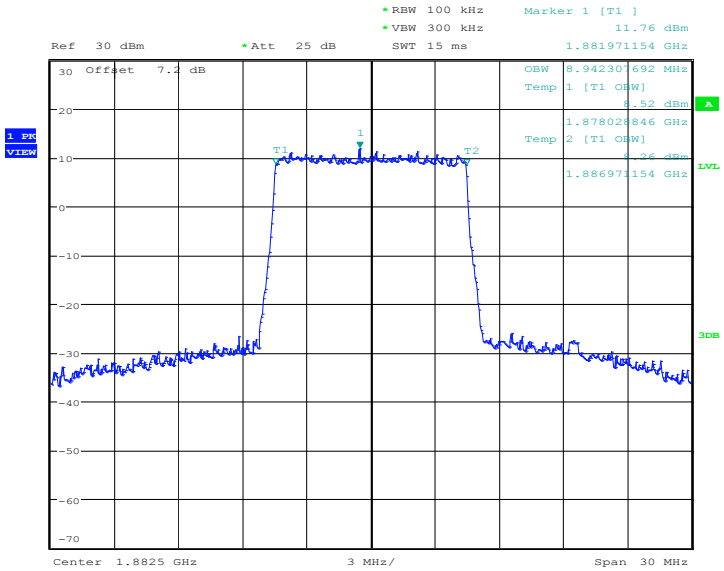
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	8990.38	8942.31

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



Date: 15.FEB.2017 03:09:35

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

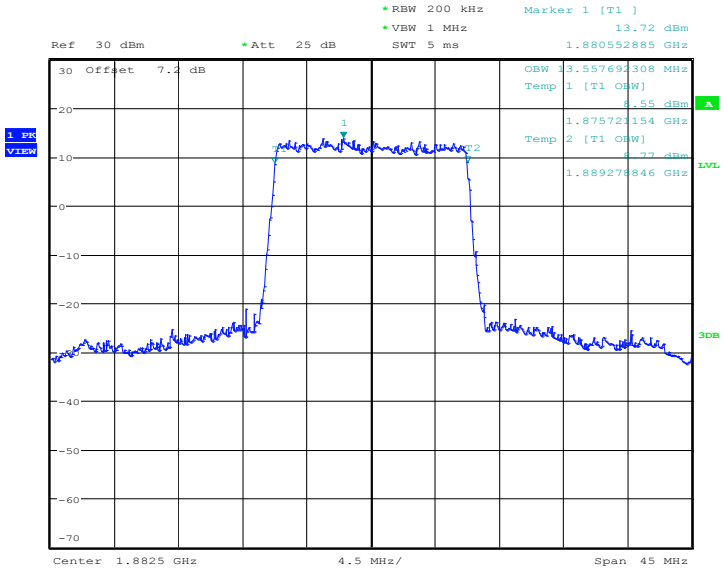


Date: 15.FEB.2017 03:10:14

LTE band 25, 15MHz (99%)

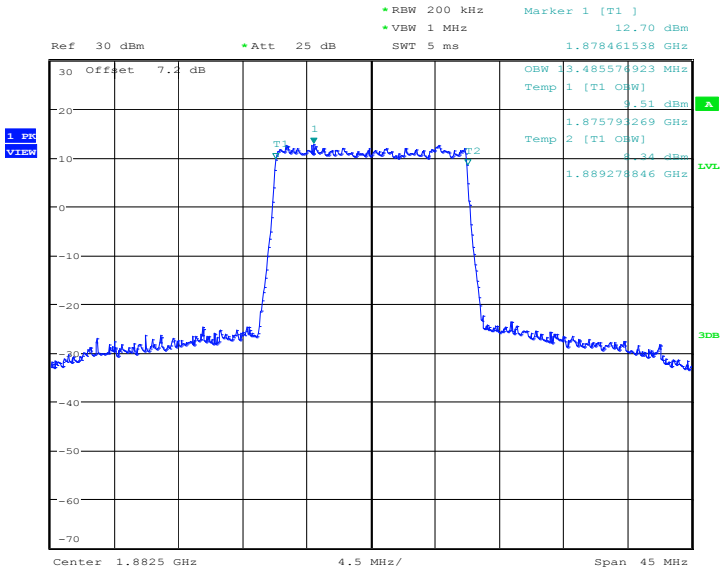
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
1882.5	QPSK	16QAM
	13557.69	13485.58

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



Date: 15.FEB.2017 03:51:04

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

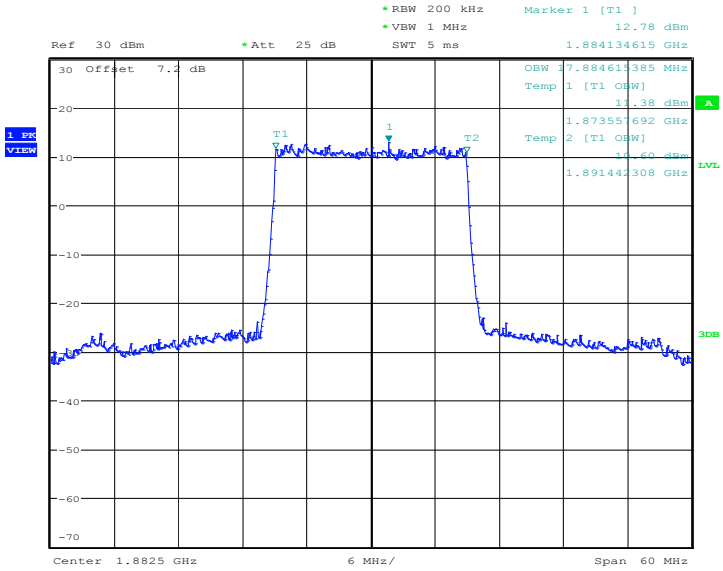


Date: 15.FEB.2017 03:50:35

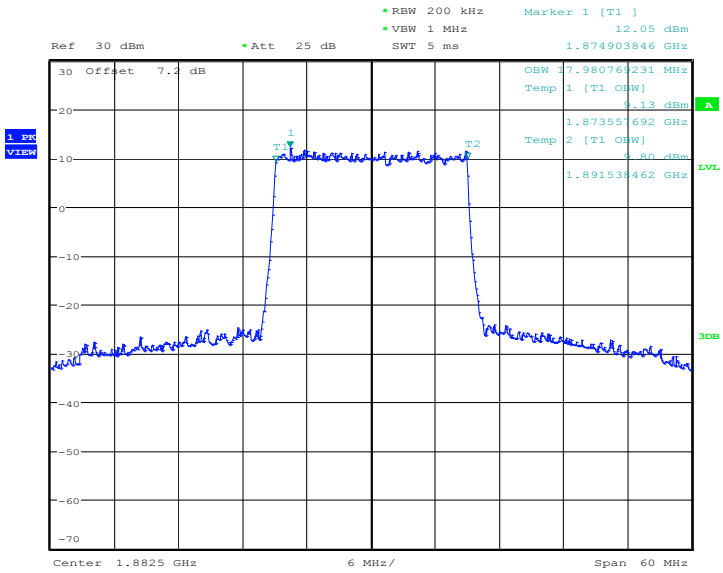
LTE band 25, 20MHz (99%)

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

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



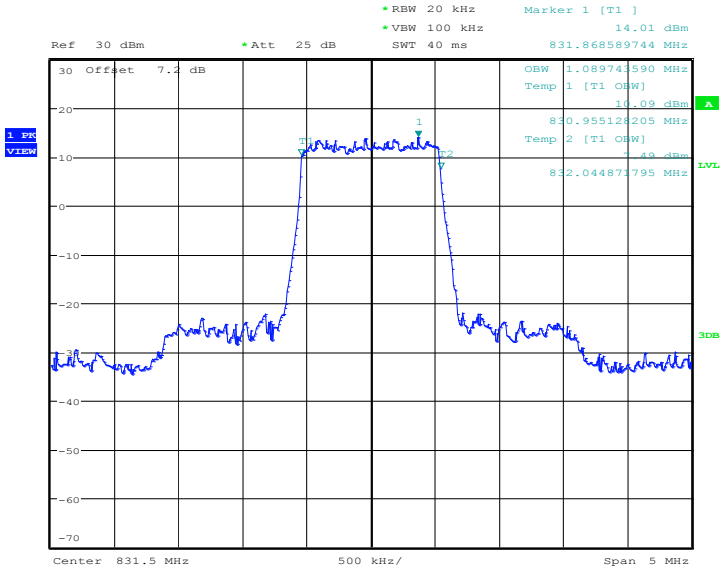
LTE band 25, 20MHz Bandwidth, 16QAM (99% BW)



LTE band 26, 1.4MHz (99%)

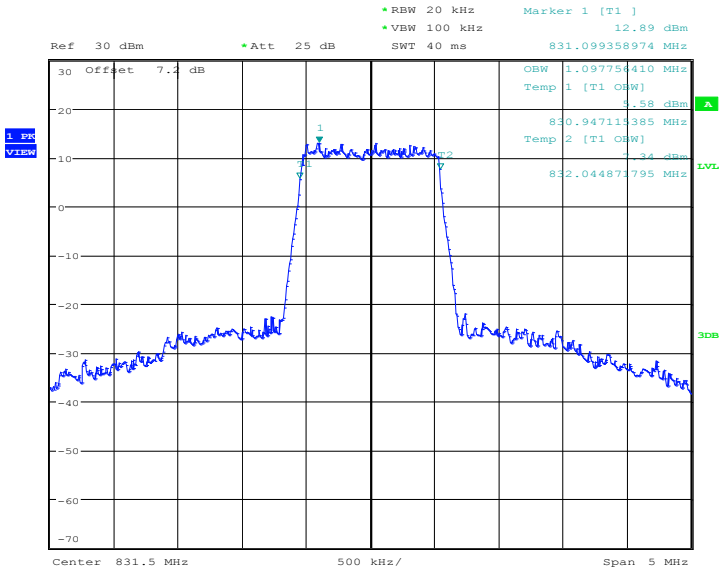
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
831.5	QPSK	16QAM
	1089.74	1097.76

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



Date: 15.FEB.2017 01:52:51

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

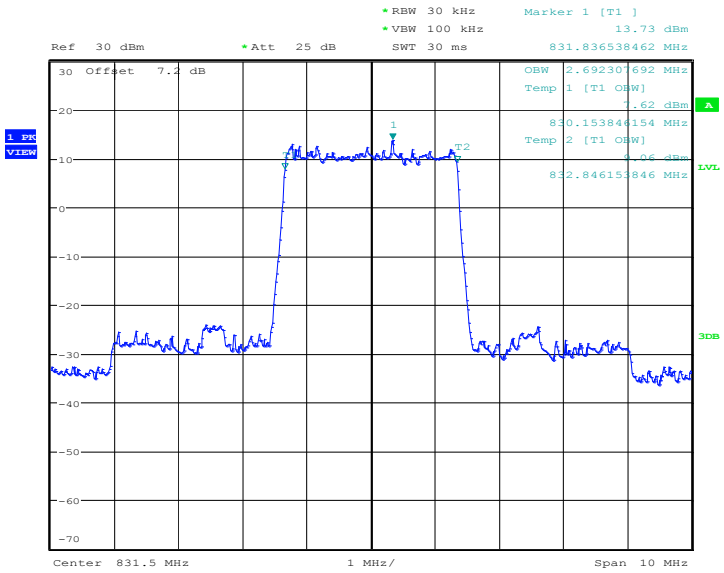


Date: 15.FEB.2017 01:52:11

LTE band26, 3MHz (99%)

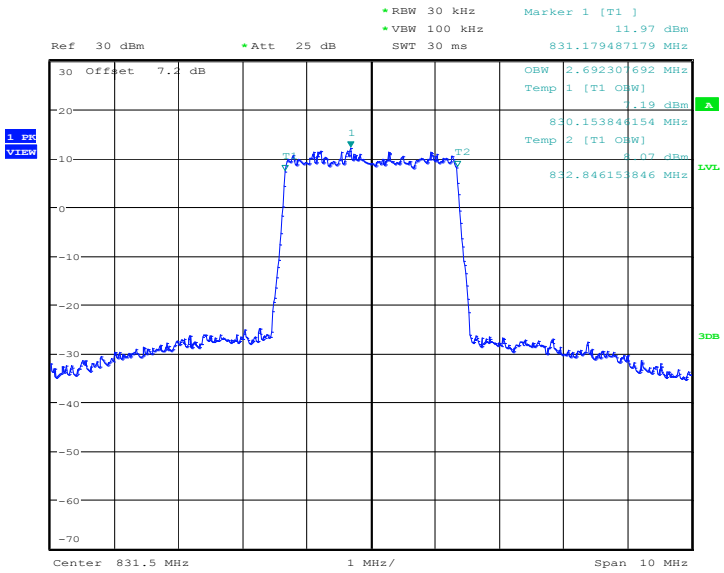
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
831.5	QPSK	16QAM
	2692.31	2692.31

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



Date: 15.FEB.2017 01:54:55

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

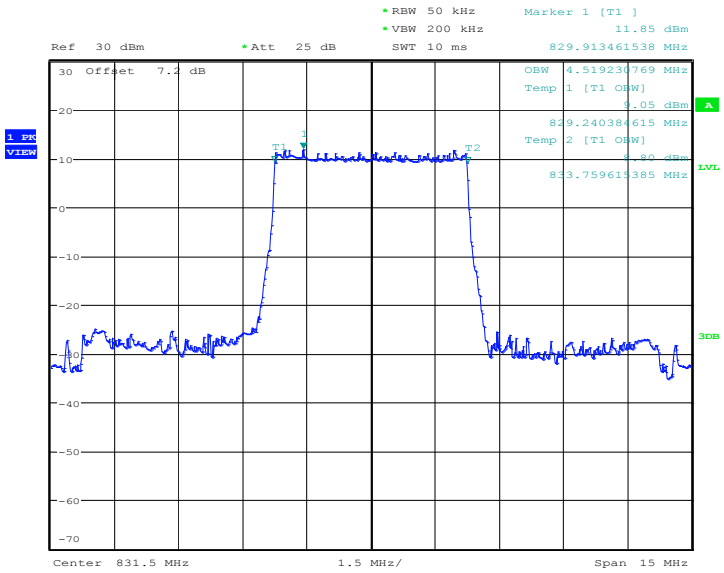


Date: 15.FEB.2017 01:56:05

LTE band 26, 5MHz (99%)

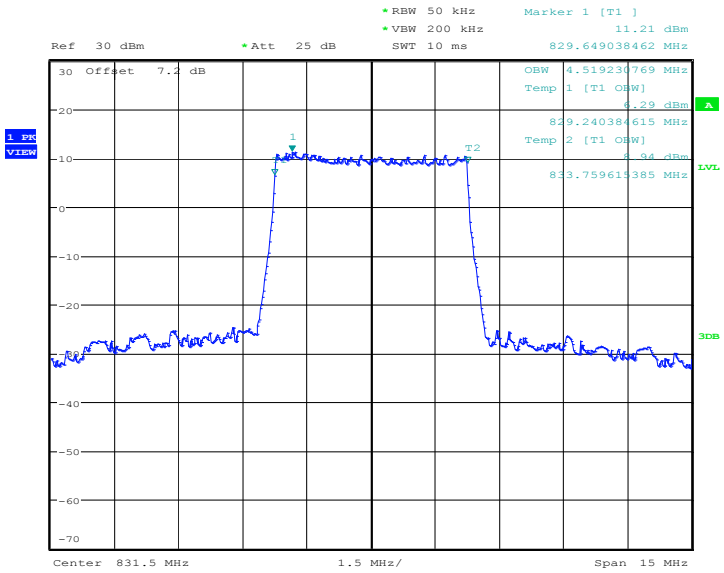
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
831.5	QPSK	16QAM
	4519.23	4519.23

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



Date: 15.FEB.2017 02:55:34

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

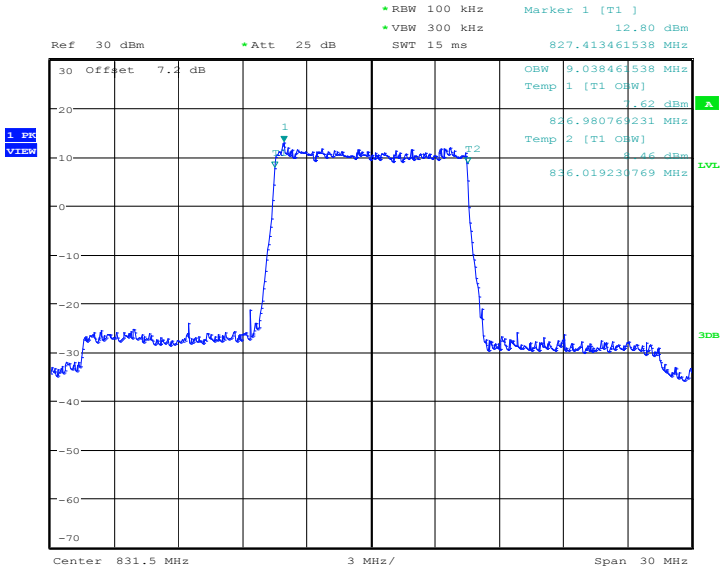


Date: 15.FEB.2017 02:57:27

LTE band 26, 10MHz (99%)

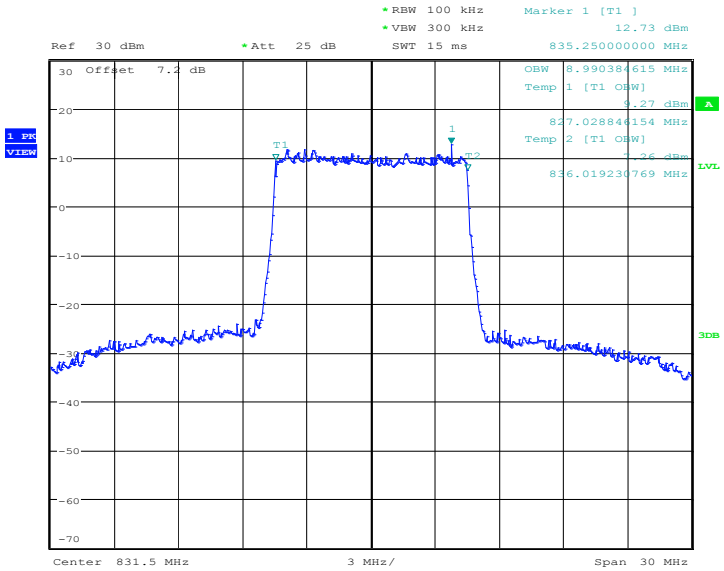
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
831.5	QPSK	16QAM
	9038.46	8990.38

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



Date: 15.FEB.2017 03:08:31

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

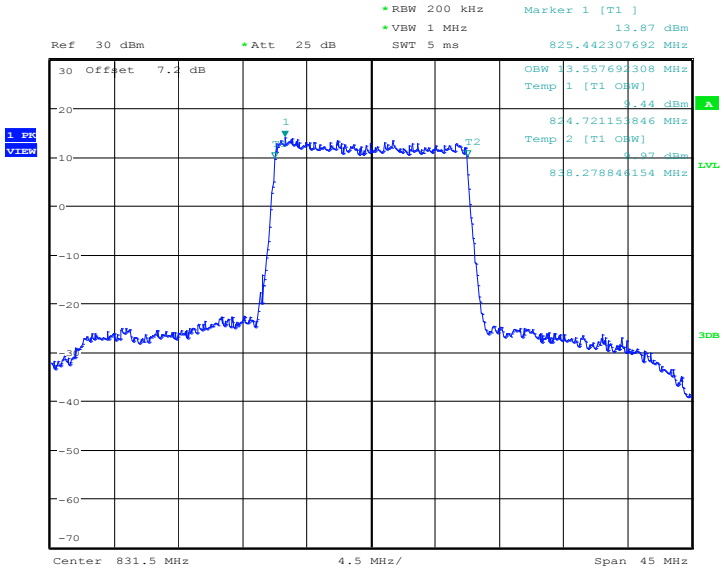


Date: 15.FEB.2017 03:07:35

LTE band 26, 15MHz (99%)

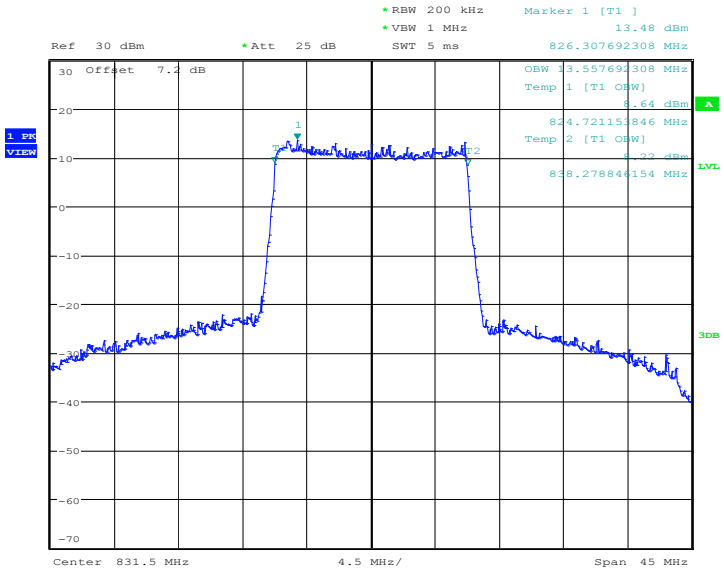
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
831.5	QPSK	16QAM
	13557.69	13557.69

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



Date: 15.FEB.2017 03:51:53

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

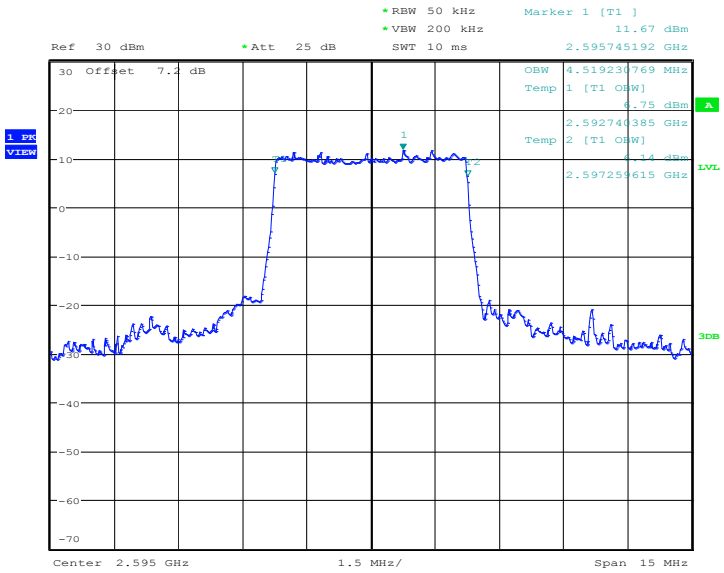


Date: 15.FEB.2017 03:52:22

LTE band 38, 5MHz (99%)

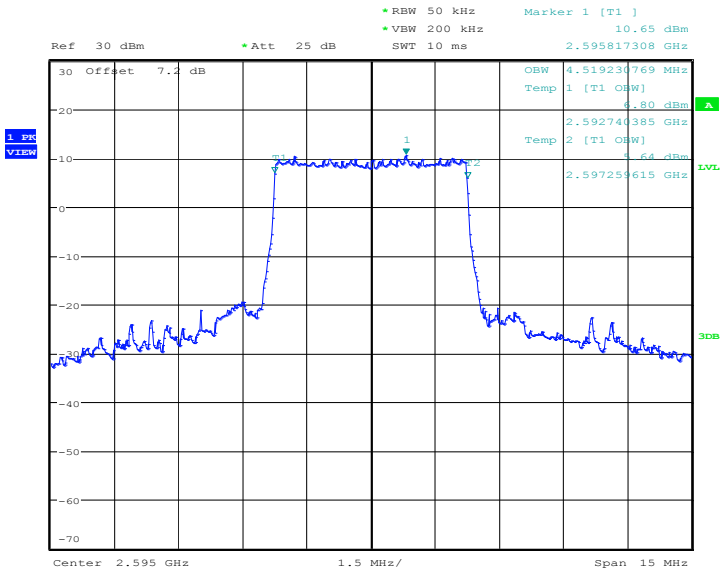
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	4519.23	4519.23

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



Date: 15.FEB.2017 05:31:01

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

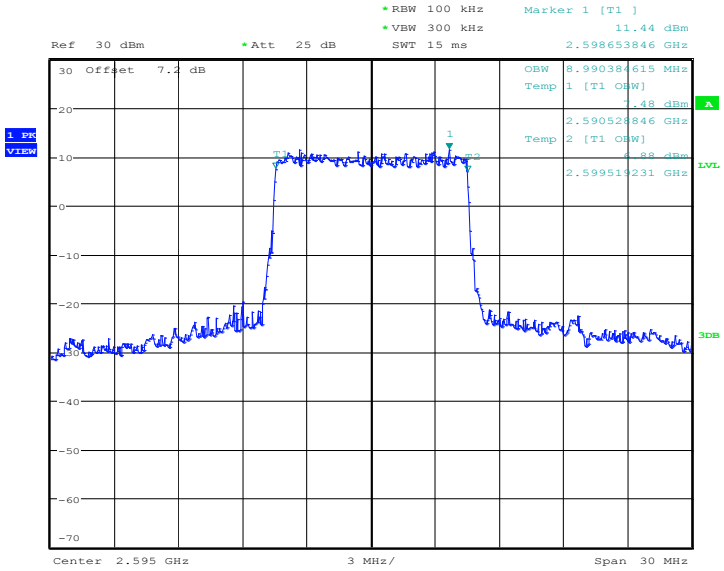


Date: 15.FEB.2017 05:33:33

LTE band 38, 10MHz (99%)

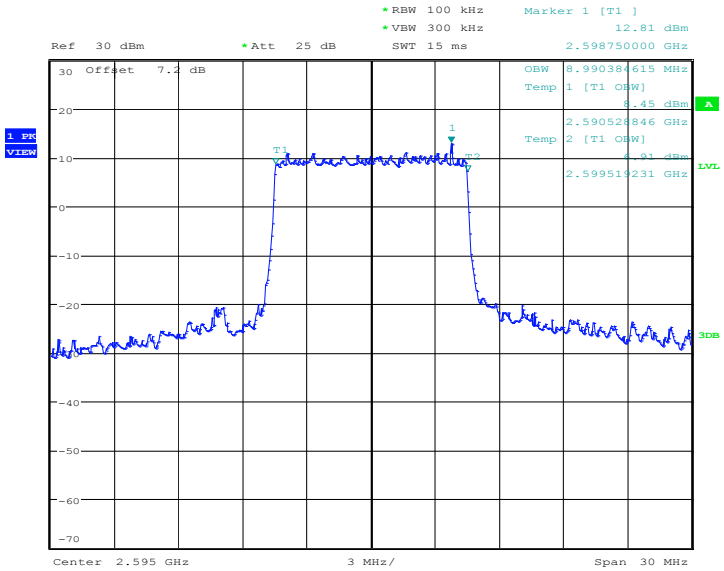
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	8990.38	8990.38

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



Date: 15.FEB.2017 05:27:40

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

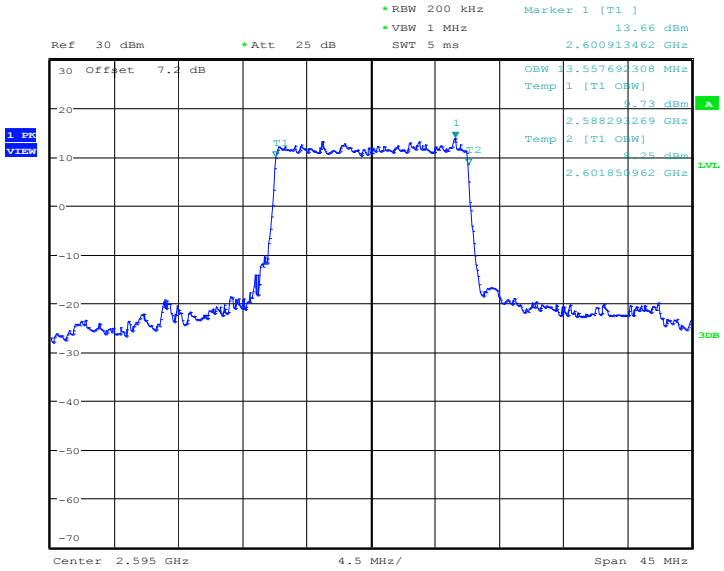


Date: 15.FEB.2017 05:27:09

LTE band 38, 15MHz (99%)

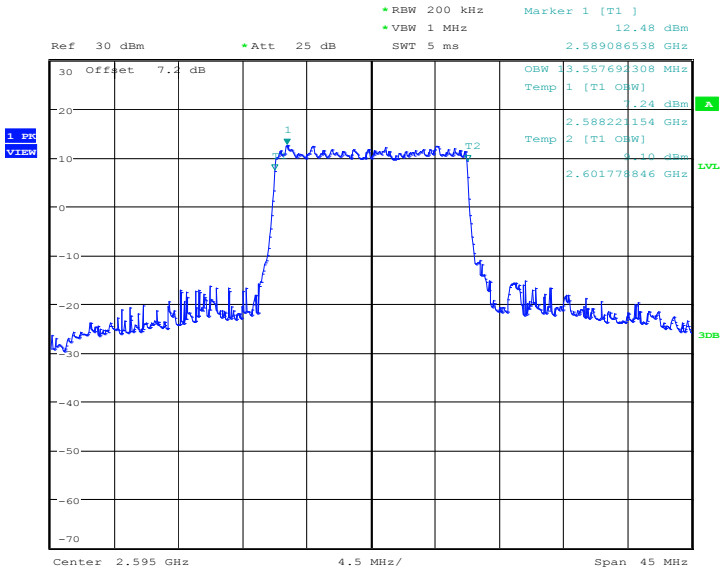
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	13557.69	13557.69

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



Date: 15.FEB.2017 05:16:05

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

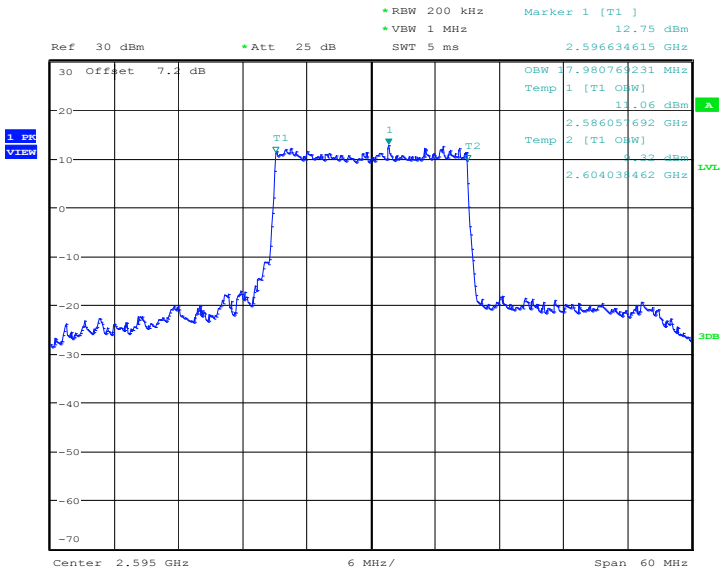


Date: 15.FEB.2017 05:17:37

LTE band 38, 20MHz (99%)

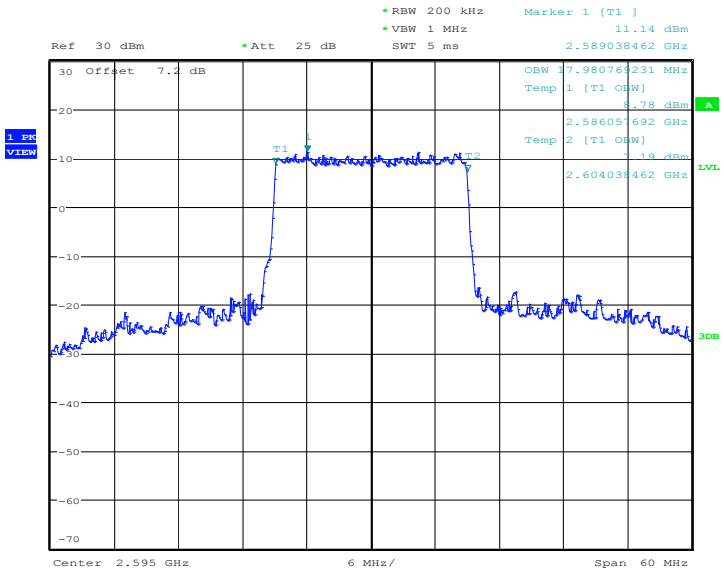
Frequency(MHz)	Occupied Bandwidth (99%)(kHz)	
2595.0	QPSK	16QAM
	17980.77	17980.77

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



Date: 15.FEB.2017 05:14:05

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



Date: 15.FEB.2017 05:11:15

A.5 EMISSION BANDWIDTH

Reference

FCC: CFR Part 22.917(b), 24.238(a), 27.53(h)

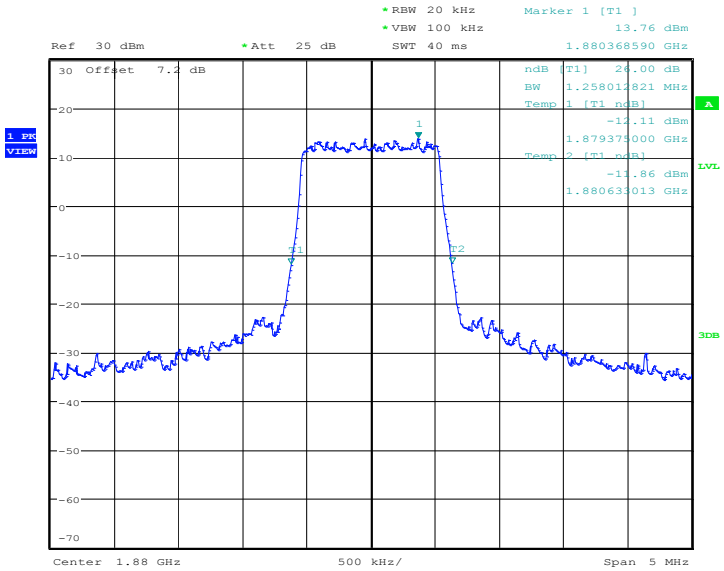
A.5.1Emission Bandwidth Results

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.

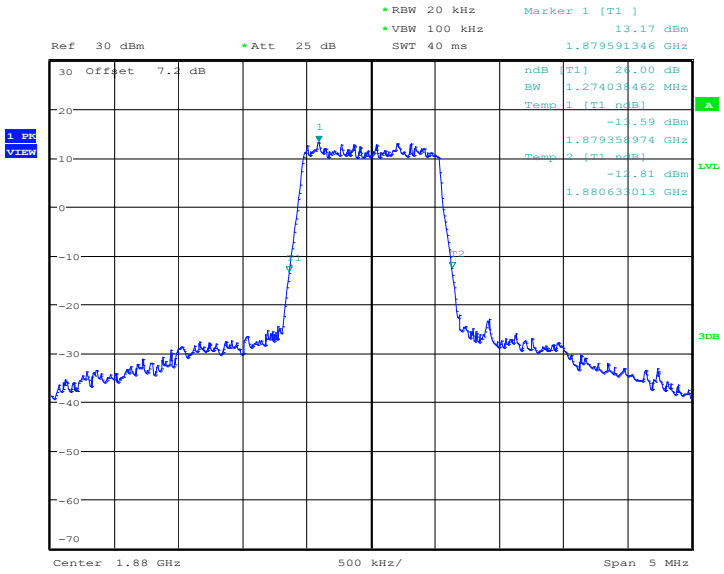
LTE band 2, 1.4MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	1258.01	1274.04

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



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

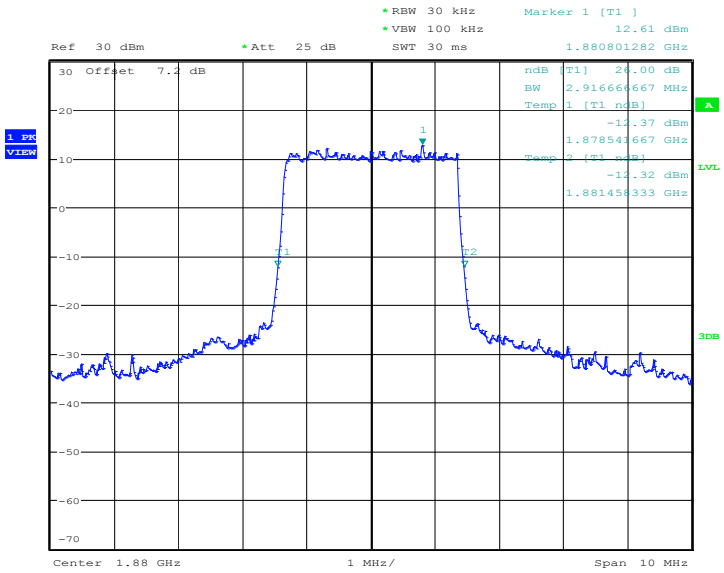


Date: 15.FEB.2017 01:35:09

LTE band 2, 3MHz (-26dBc)

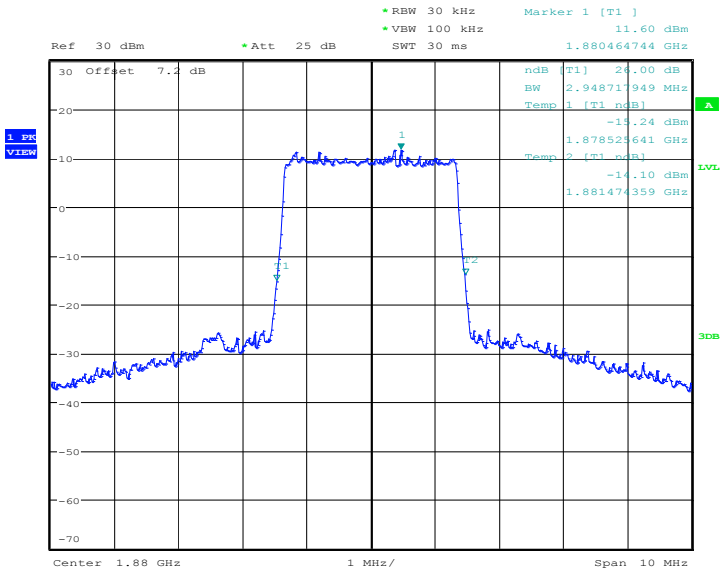
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	2916.67	2948.72

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



Date: 15.FEB.2017 02:16:11

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

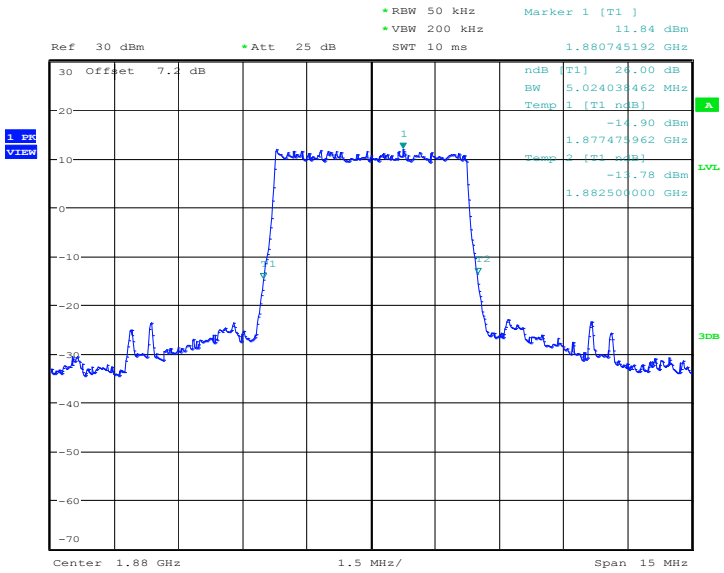


Date: 15.FEB.2017 02:16:57

LTE band 2, 5MHz (-26dBc)

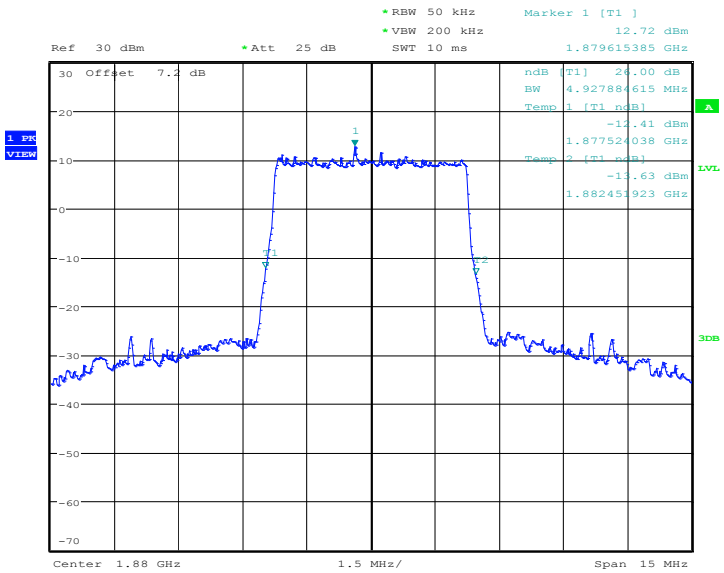
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	5024.04	4927.88

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



Date: 15.FEB.2017 02:30:39

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

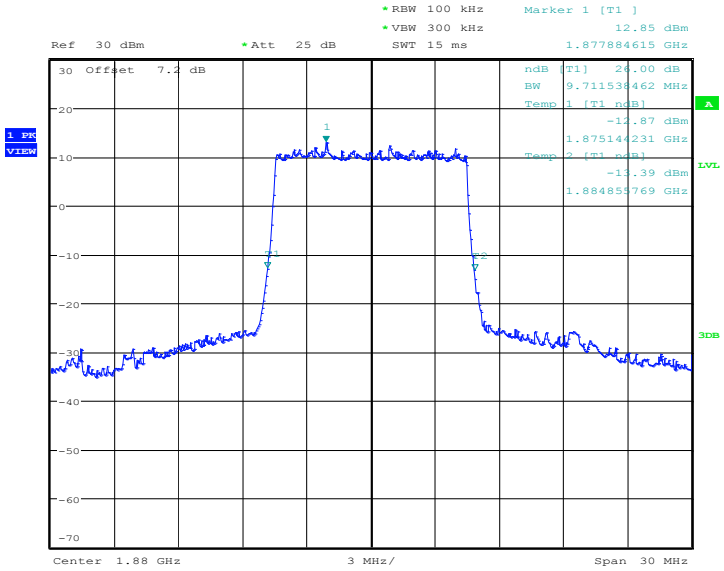


Date: 15.FEB.2017 02:28:47

LTE band 2, 10MHz (-26dBc)

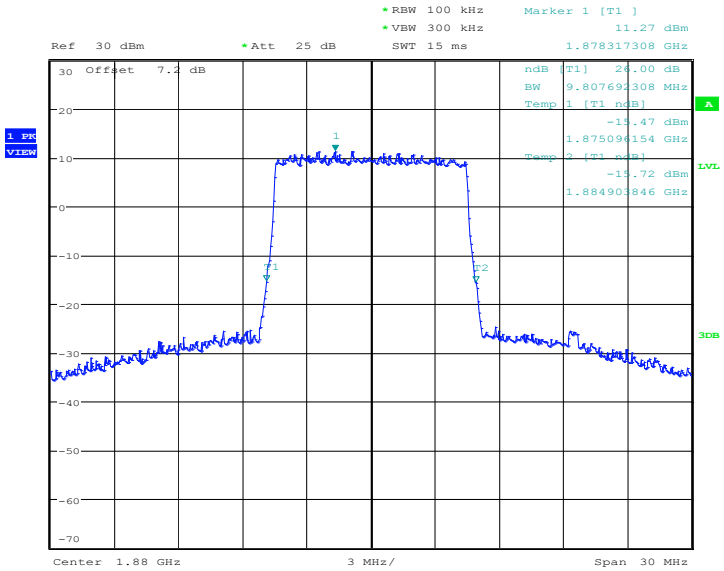
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	9711.54	9807.69

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



Date: 15.FEB.2017 03:34:00

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

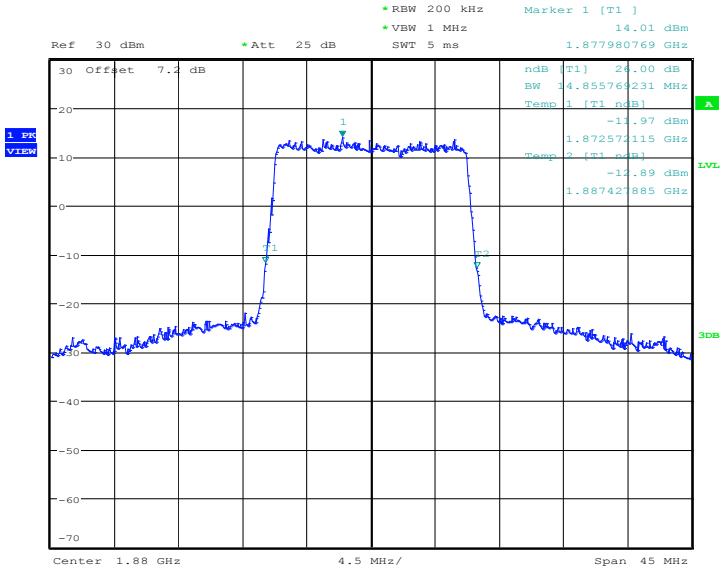


Date: 15.FEB.2017 03:34:34

LTE band 2, 15MHz (-26dBc)

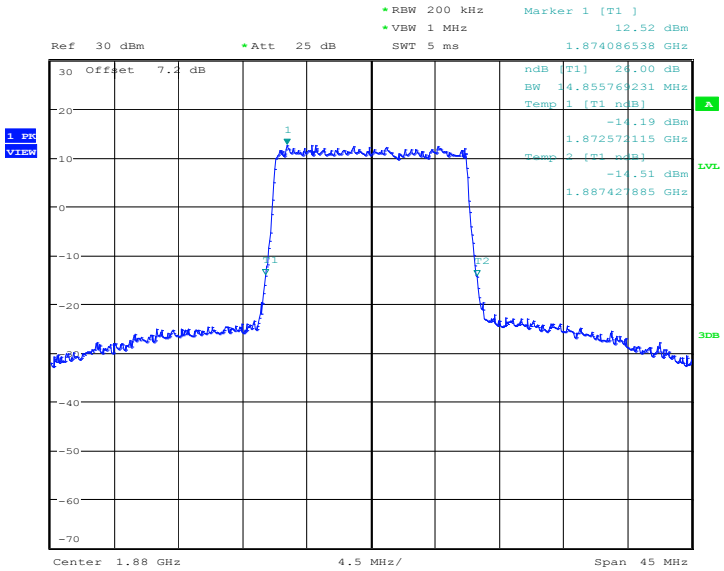
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	14855.77	14855.77

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



Date: 15.FEB.2017 03:41:31

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

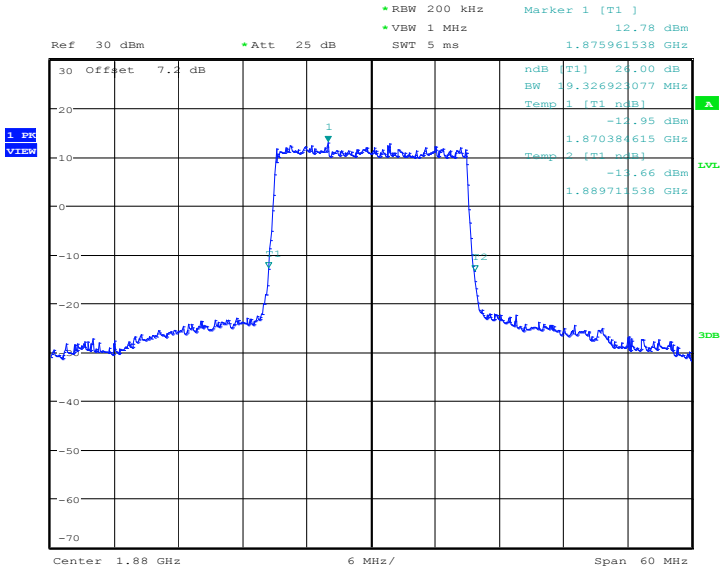


Date: 15.FEB.2017 03:40:53

LTE band 2, 20MHz (-26dBc)

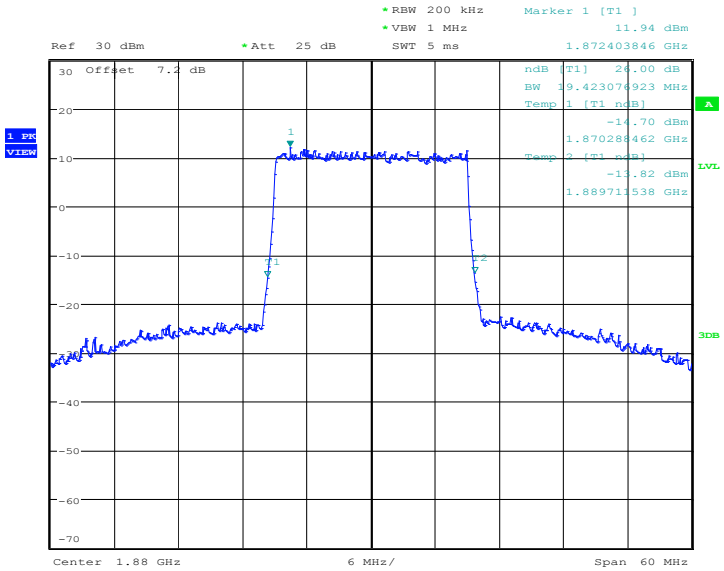
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1880.0	QPSK	16QAM
	19326.92	19423.08

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



Date: 15.FEB.2017 04:07:32

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

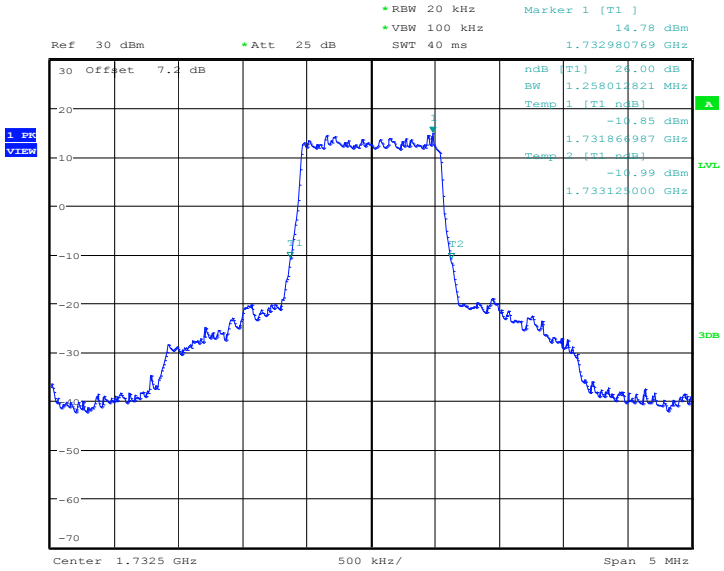


Date: 15.FEB.2017 04:06:49

LTE band 4, 1.4MHz (-26dBc)

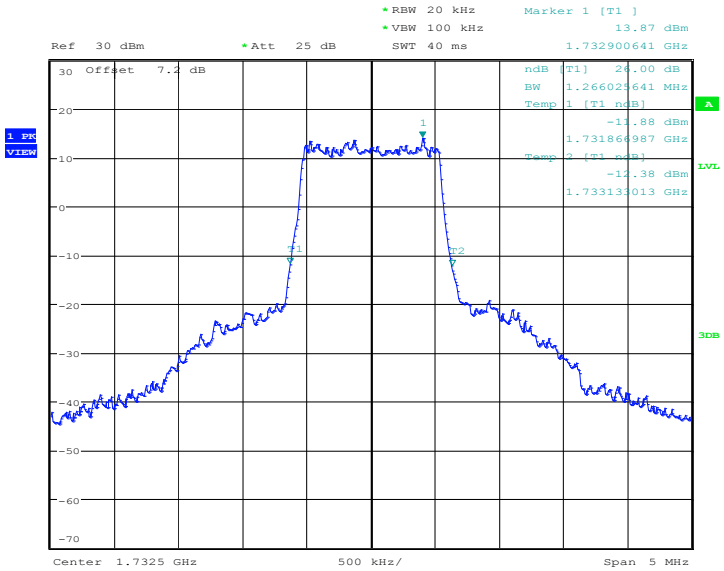
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1732.5	QPSK	16QAM
	1258.01	1266.03

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



Date: 15.FEB.2017 01:37:24

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

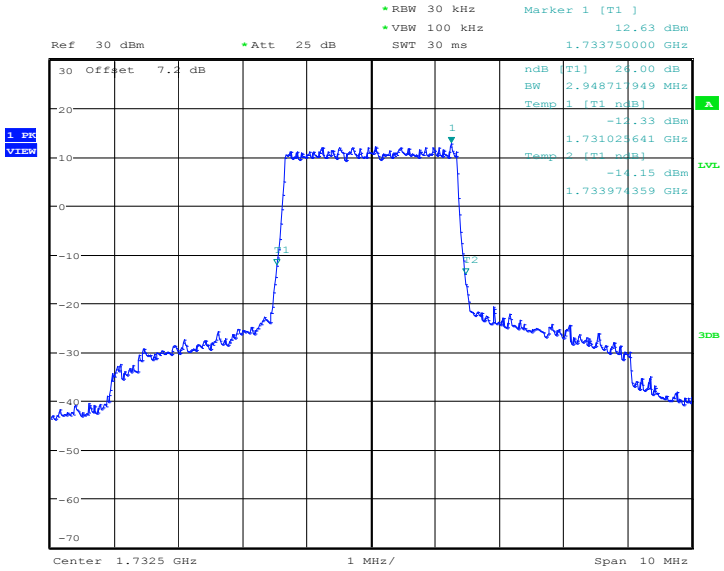


Date: 15.FEB.2017 01:38:37

LTE band 4, 3MHz (-26dBc)

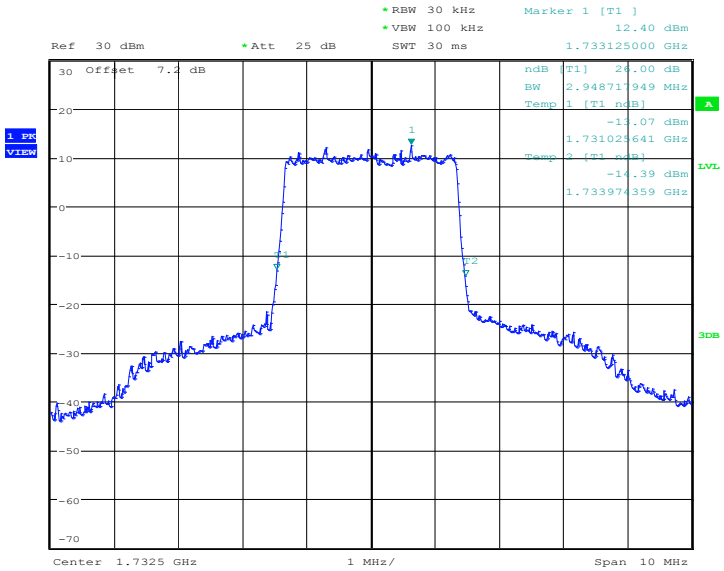
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1732.5	QPSK	16QAM
	2948.72	2948.72

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



Date: 15.FEB.2017 02:14:14

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

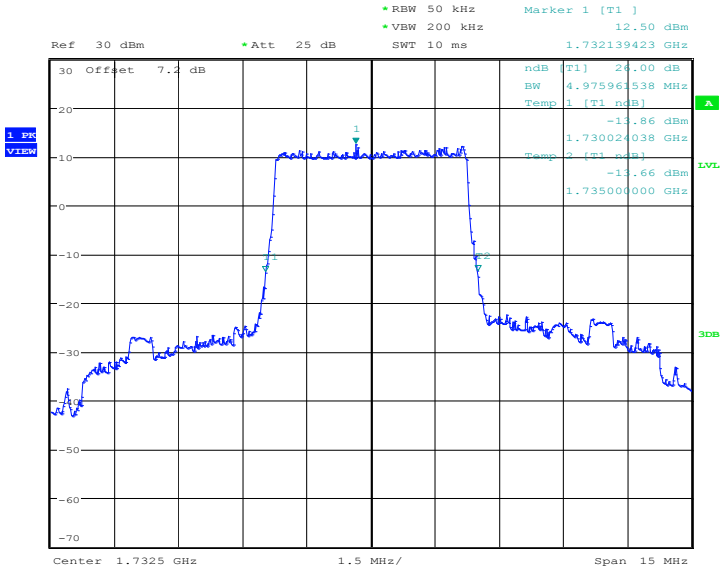


Date: 15.FEB.2017 02:13:32

LTE band 4, 5MHz (-26dBc)

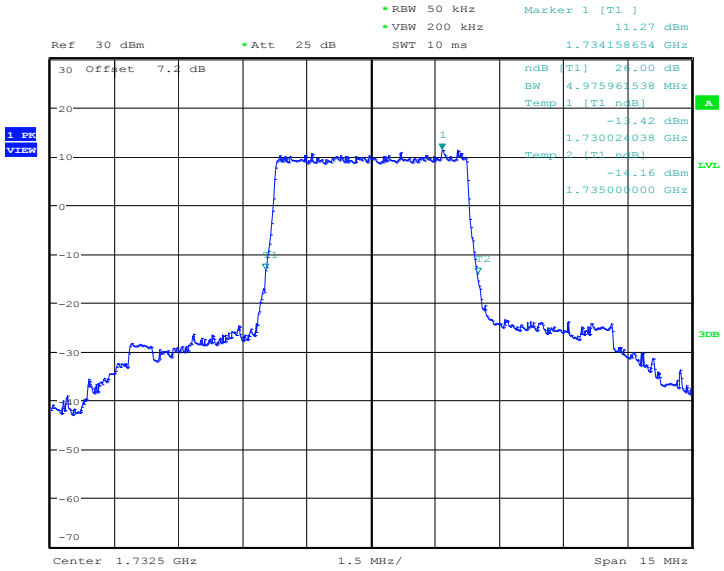
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1732.5	QPSK	16QAM
	4975.96	4975.96

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



Date: 15.FEB.2017 02:31:40

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

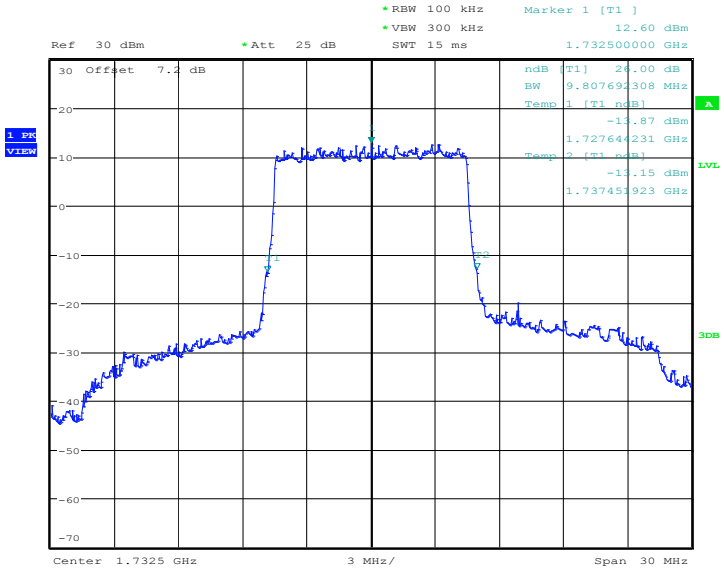


Date: 15.FEB.2017 02:32:18

LTE band 4, 10MHz (-26dBc)

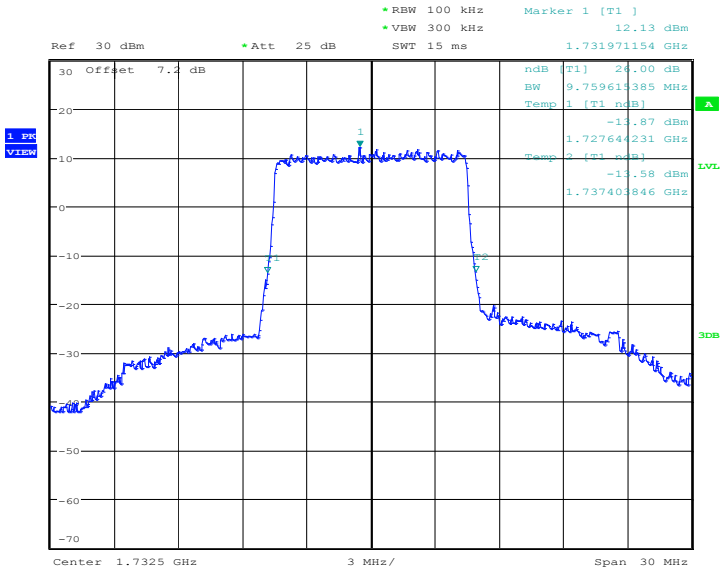
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1732.5	QPSK	16QAM
	9807.69	9759.62

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



Date: 15.FEB.2017 03:33:07

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

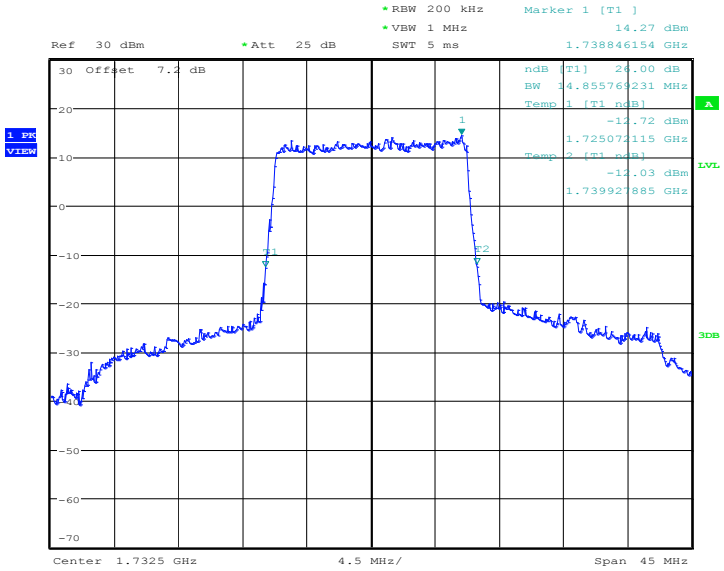


Date: 15.FEB.2017 03:32:31

LTE band 4, 15MHz (-26dBc)

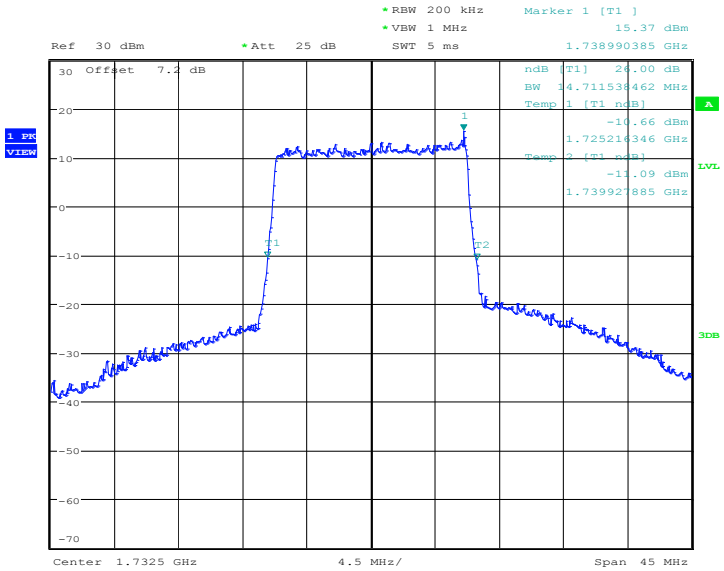
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1732.5	QPSK	16QAM
	14855.77	14711.54

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



Date: 15.FEB.2017 03:42:28

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

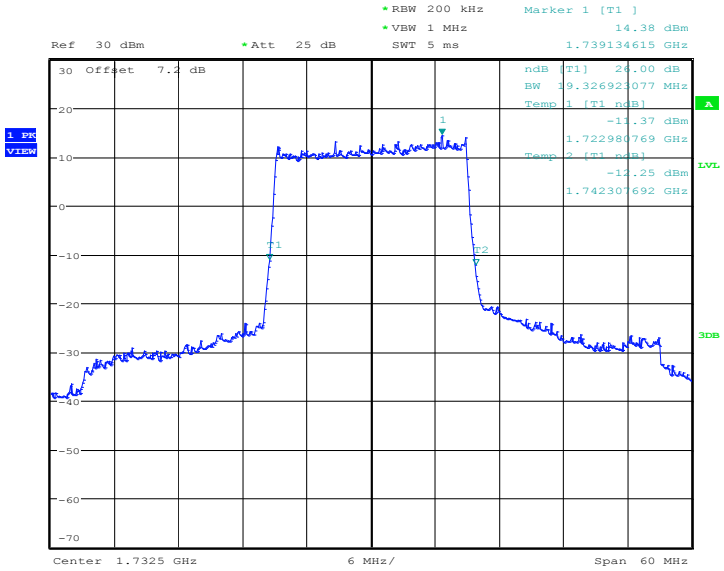


Date: 15.FEB.2017 03:43:18

LTE band 4, 20MHz (-26dBc)

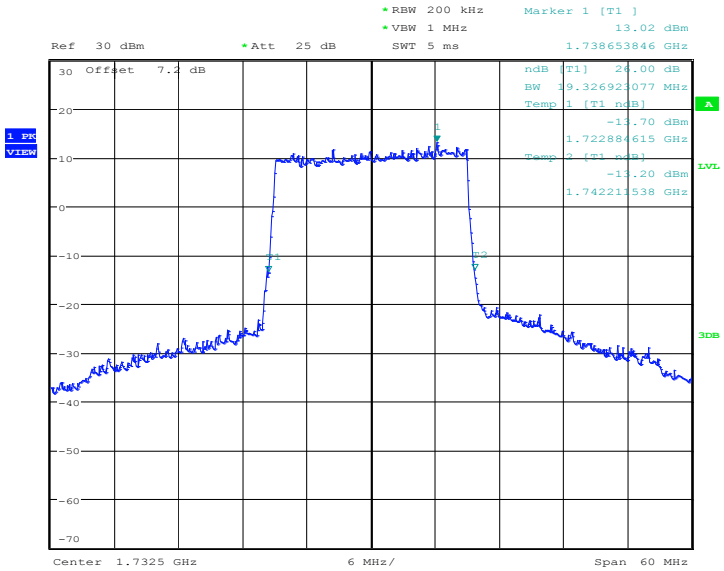
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1732.5	QPSK	16QAM
	19326.92	19326.92

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



Date: 15.FEB.2017 04:02:11

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

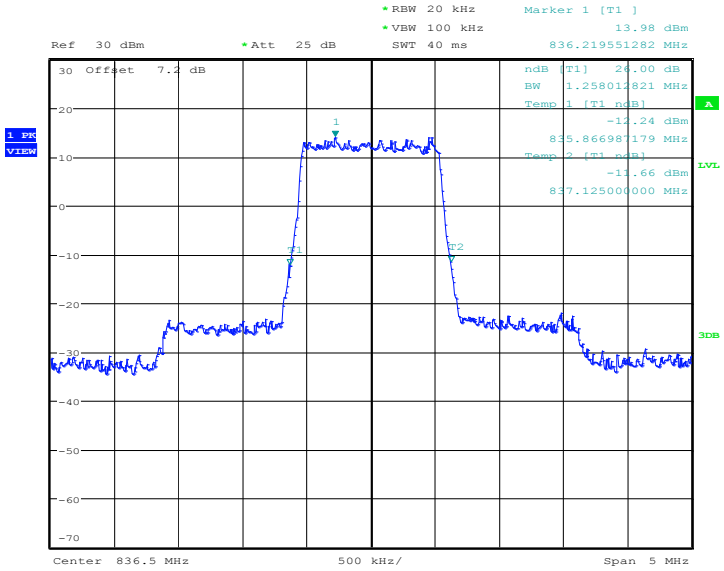


Date: 15.FEB.2017 04:02:46

LTE band 5, 1.4MHz (-26dBc)

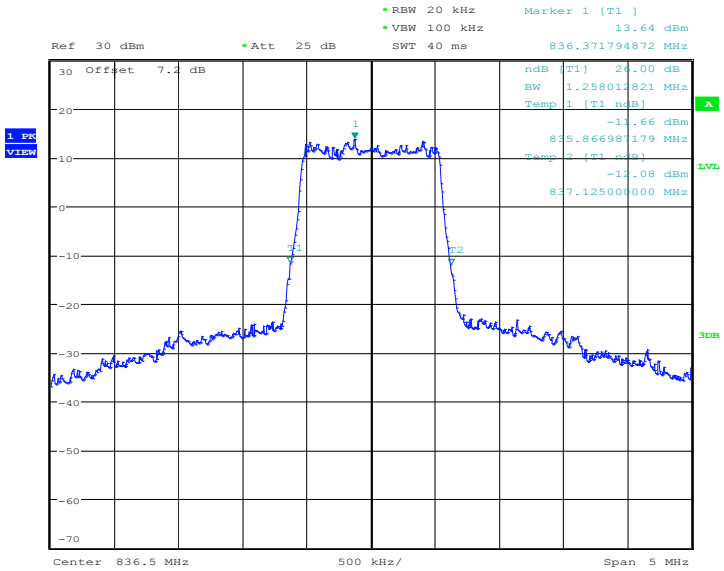
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	1258.01	1258.01

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



Date: 15.FEB.2017 01:43:32

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

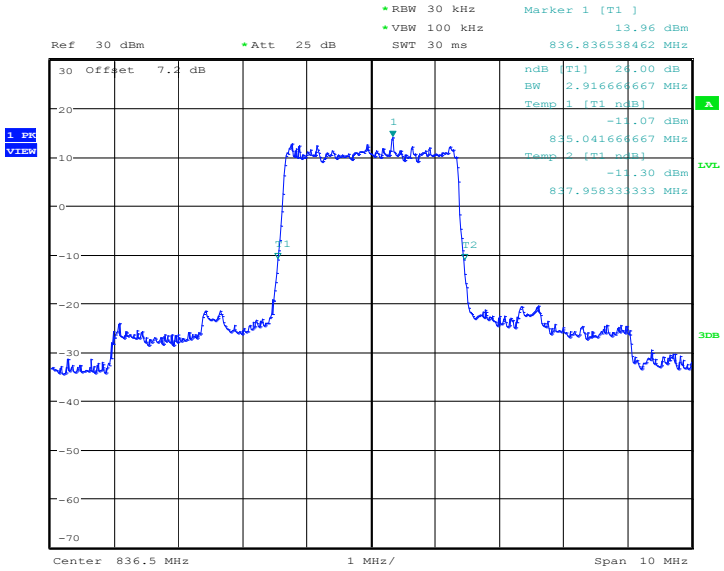


Date: 15.FEB.2017 01:43:00

LTE band 5, 3MHz (-26dBc)

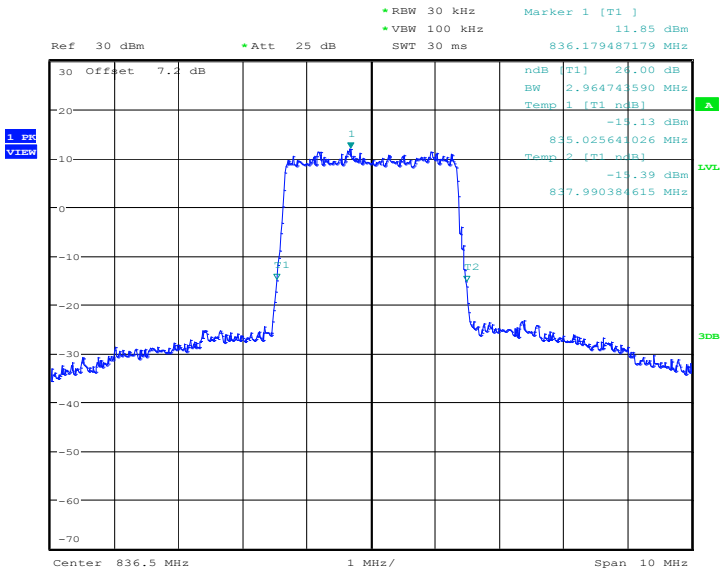
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	2916.67	2964.74

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



Date: 15.FEB.2017 02:08:29

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

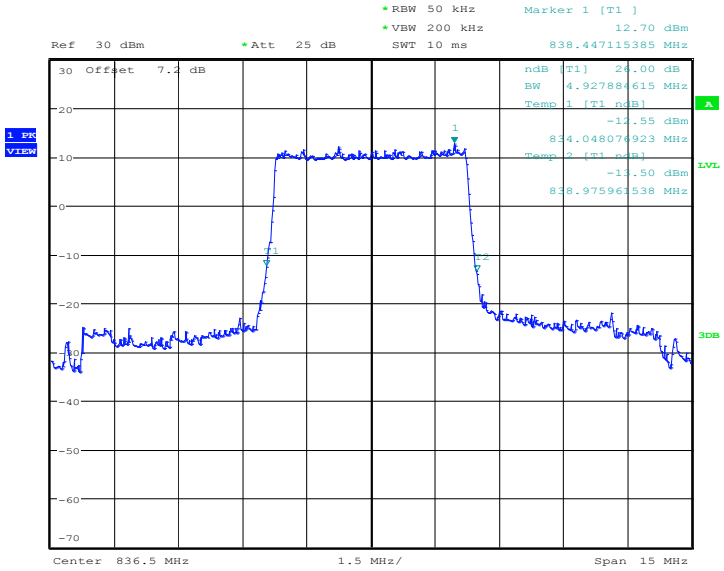


Date: 15.FEB.2017 02:09:06

LTE band 5, 5MHz (-26dBc)

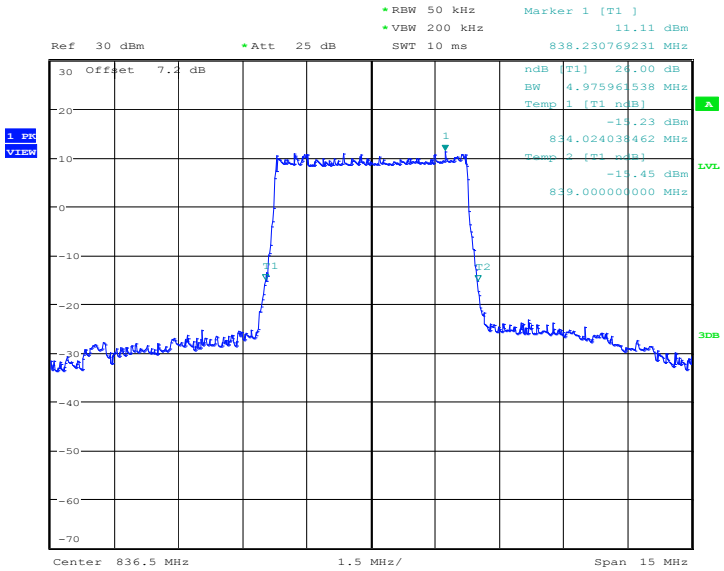
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	4927.88	4975.96

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



Date: 15.FEB.2017 02:36:33

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

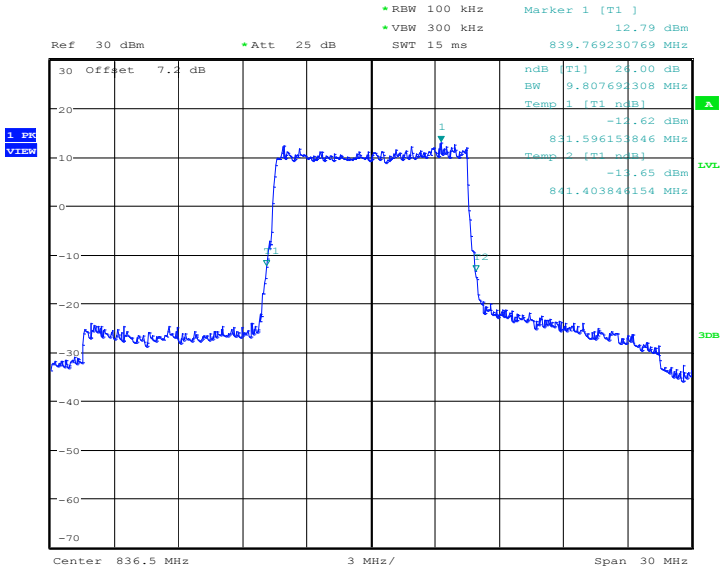


Date: 15.FEB.2017 02:35:32

LTE band 5, 10MHz (-26dBc)

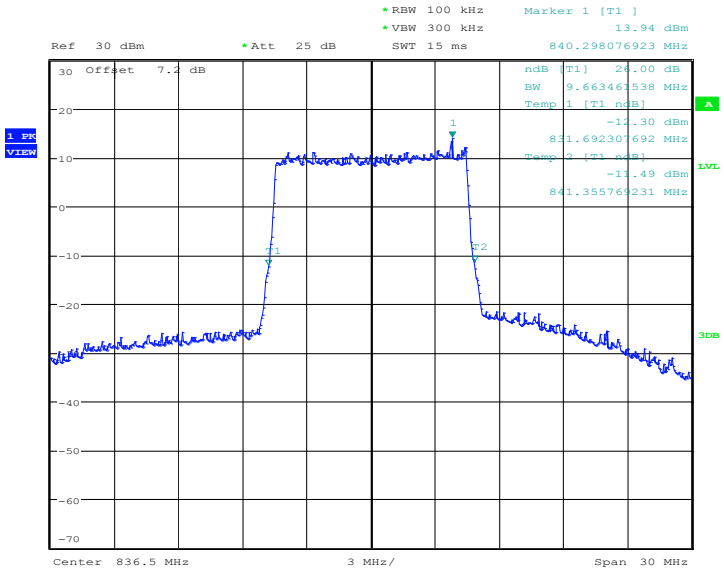
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	9807.69	9663.46

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



Date: 15.FEB.2017 03:27:29

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

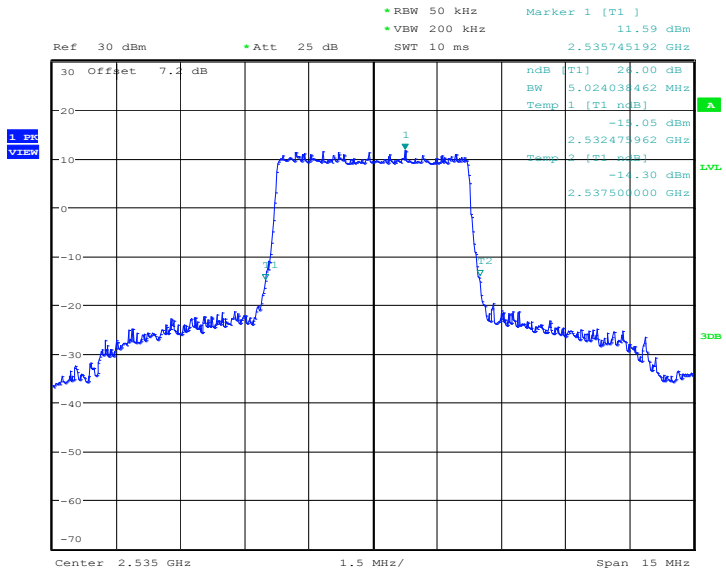


Date: 15.FEB.2017 03:28:36

LTE band 7, 5MHz (-26dBc)

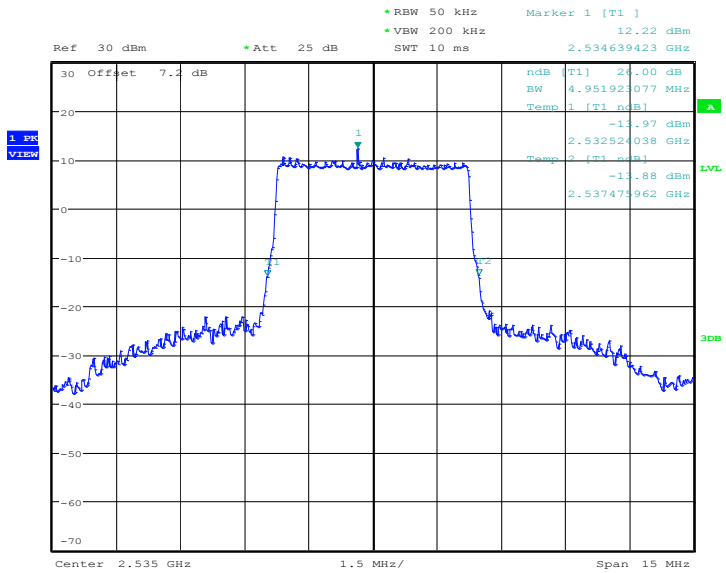
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	5024.04	4951.92

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



Date: 15.FEB.2017 02:37:43

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

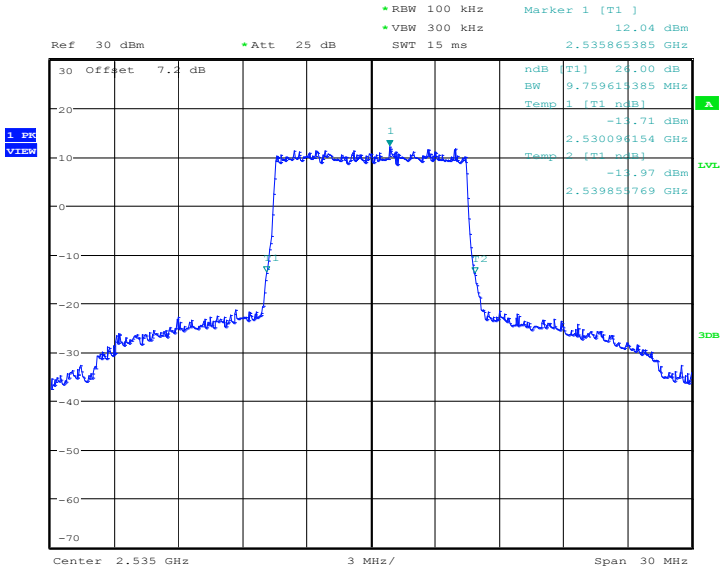


Date: 15.FEB.2017 02:38:26

LTE band 7, 10MHz (-26dBc)

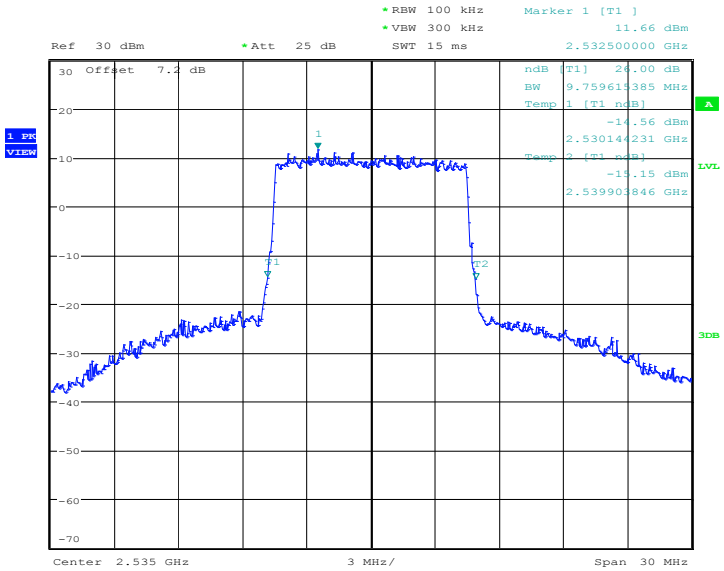
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	9759.62	9759.62

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



Date: 15.FEB.2017 03:26:38

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

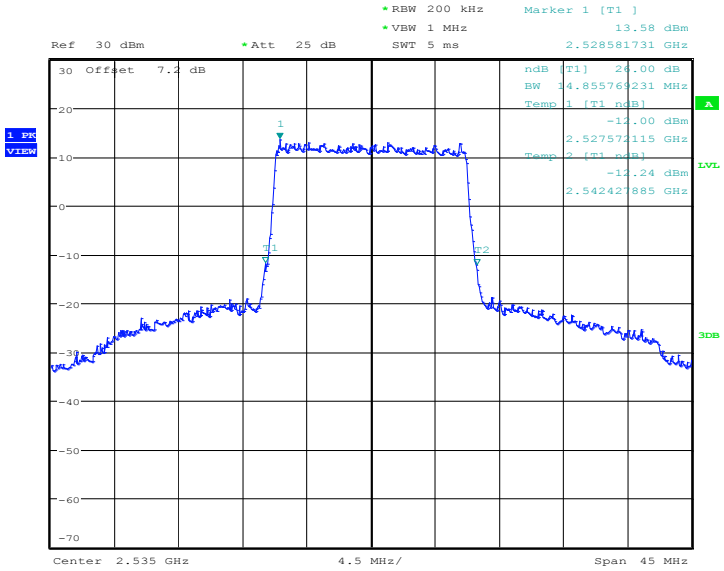


Date: 15.FEB.2017 03:25:57

LTE band 7, 15MHz (-26dBc)

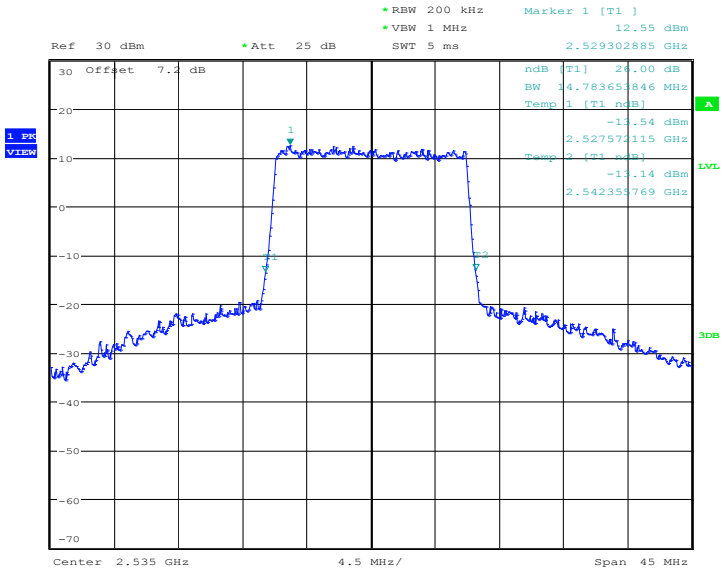
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	14855.77	14783.65

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



Date: 15.FEB.2017 03:47:59

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

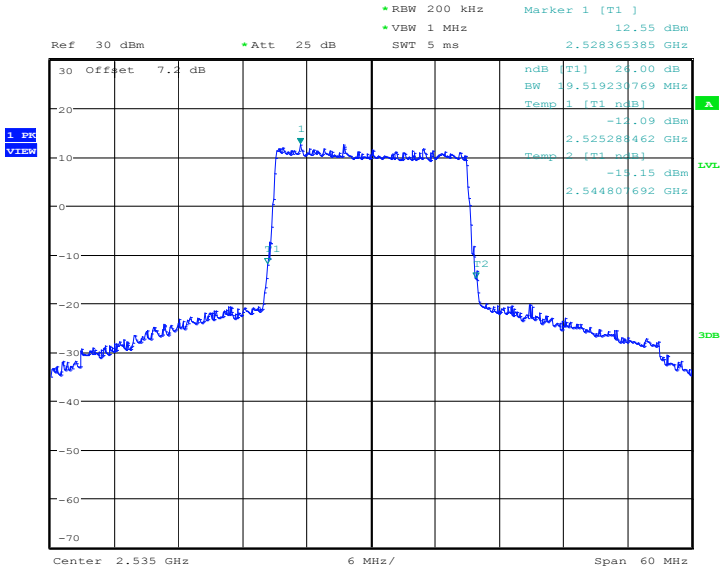


Date: 15.FEB.2017 03:47:24

LTE band 7, 20MHz (-26dBc)

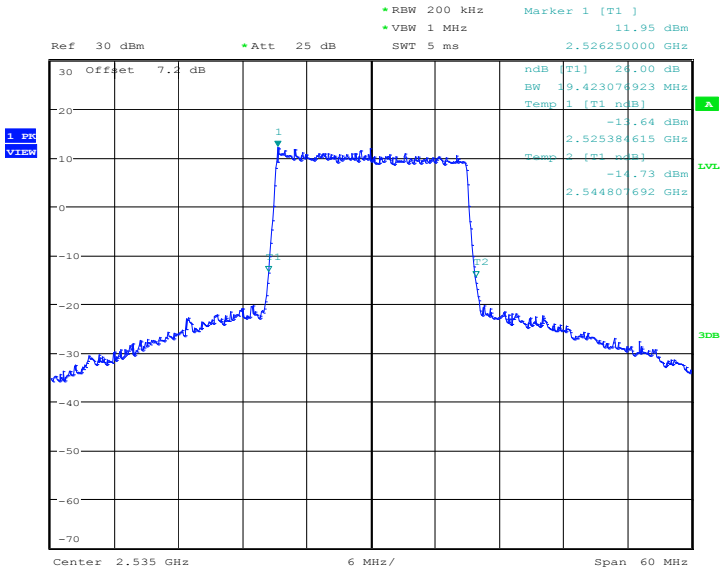
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	19519.23	19423.08

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



Date: 15.FEB.2017 04:01:05

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

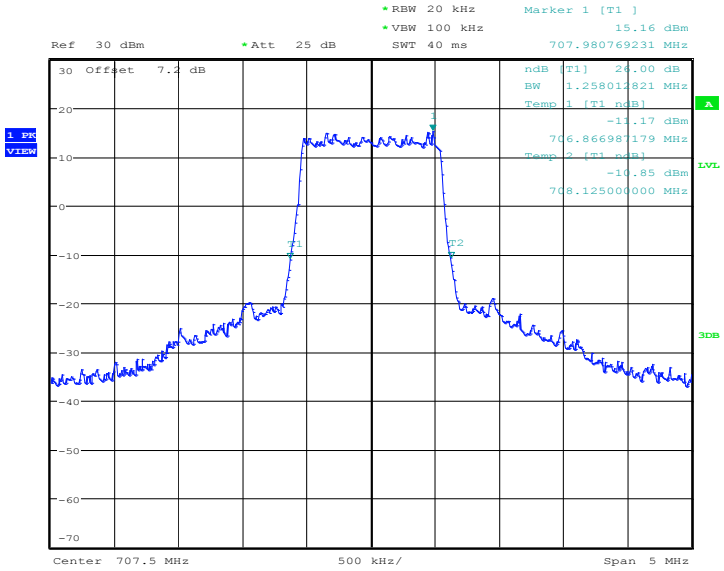


Date: 15.FEB.2017 04:00:24

LTE band 12, 1.4MHz (-26dBc)

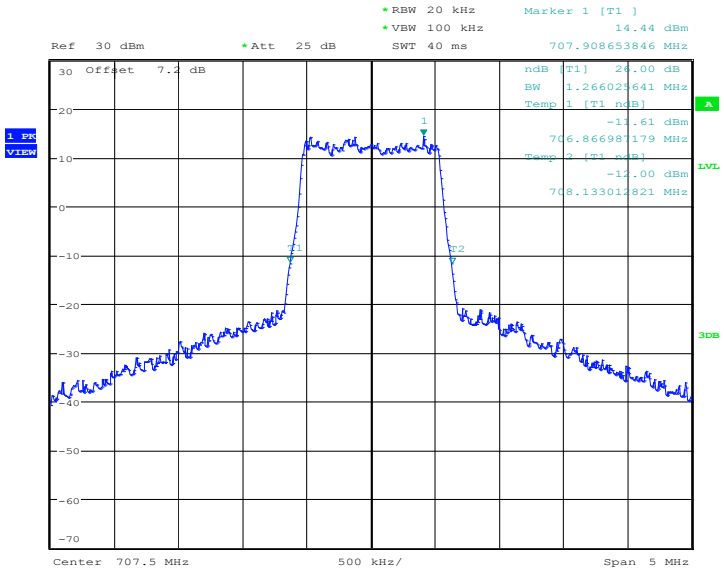
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	1258.01	1266.03

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



Date: 15.FEB.2017 01:44:36

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

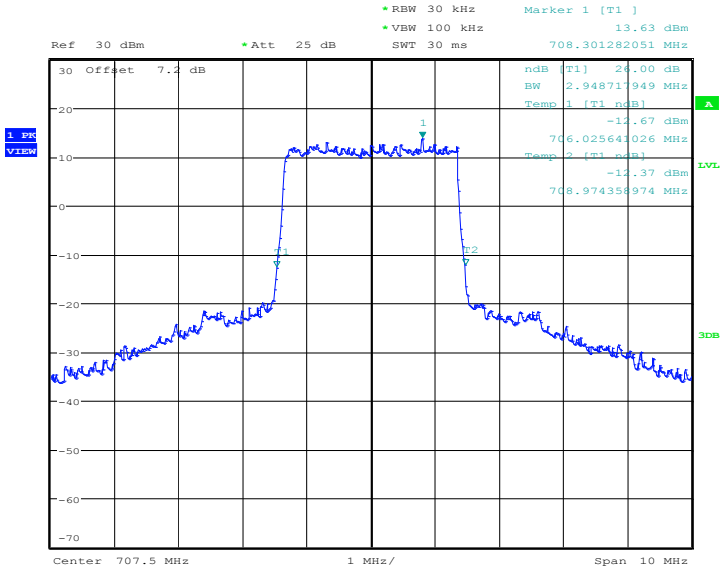


Date: 15.FEB.2017 01:45:14

LTE band 12, 3MHz (-26dBc)

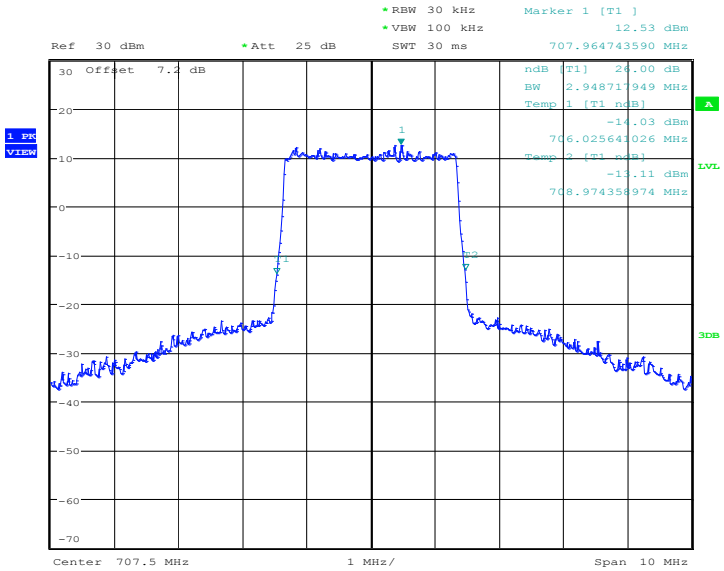
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	2948.72	2948.72

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



Date: 15.FEB.2017 02:06:31

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

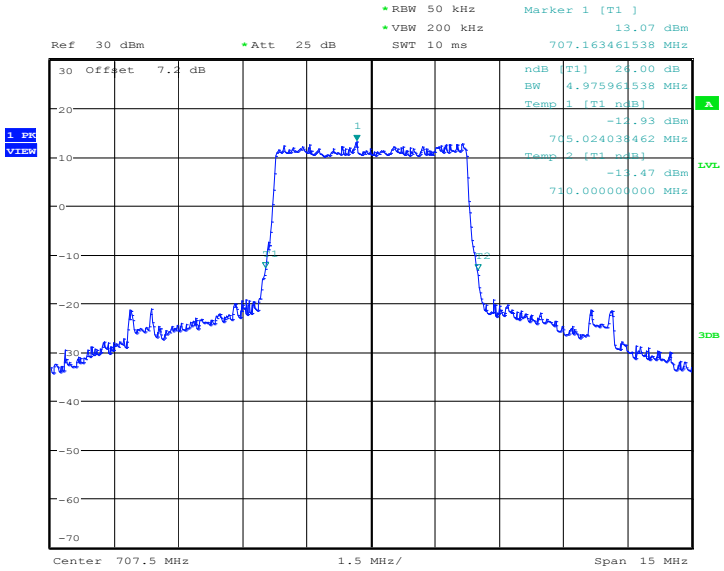


Date: 15.FEB.2017 02:05:21

LTE band 12, 5MHz (-26dBc)

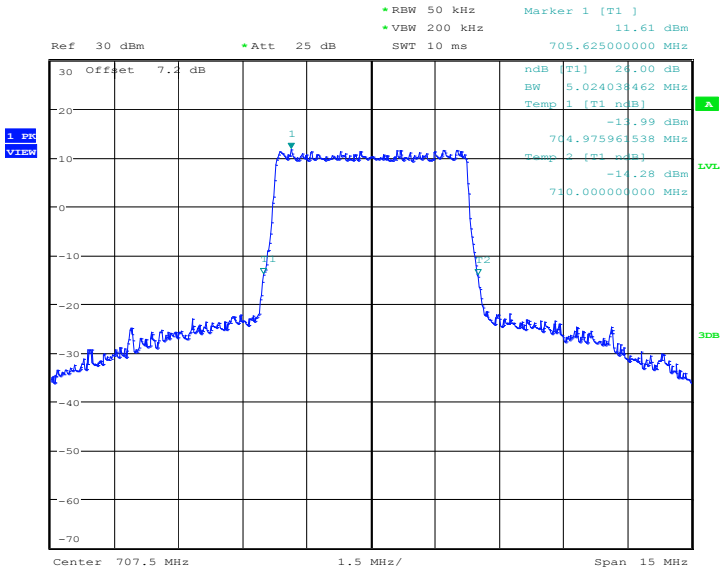
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	4975.96	5024.04

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



Date: 15.FEB.2017 02:43:39

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

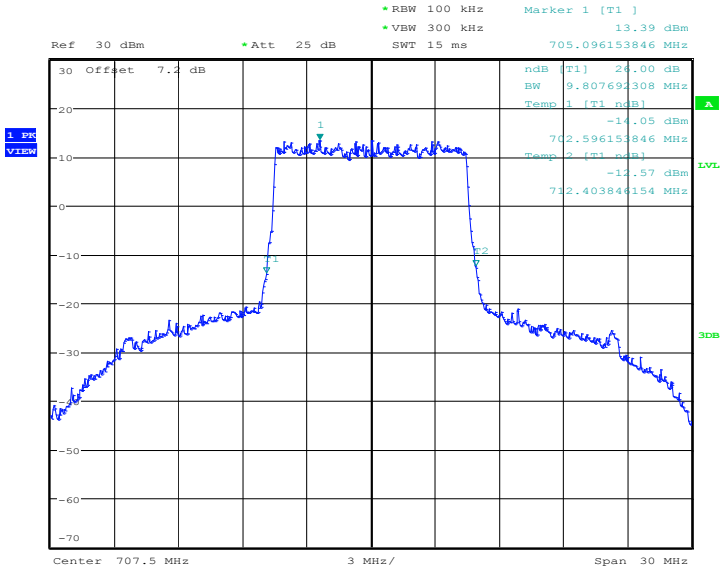


Date: 15.FEB.2017 02:42:48

LTE band 12, 10MHz (-26dBc)

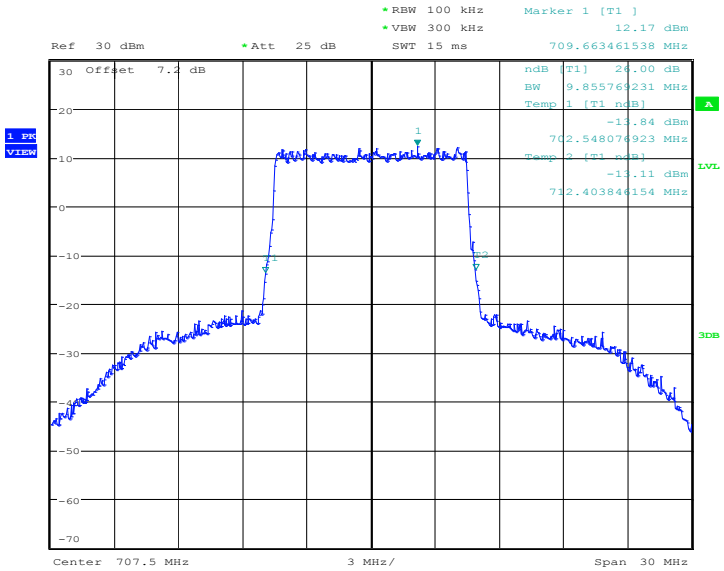
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	9807.69	9855.77

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



Date: 15.FEB.2017 03:21:02

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

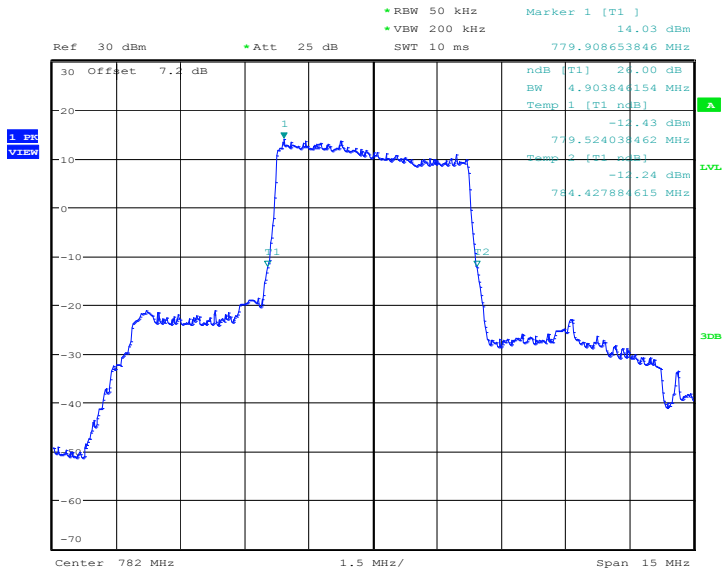


Date: 15.FEB.2017 03:21:39

LTE band 13, 5MHz (-26dBc)

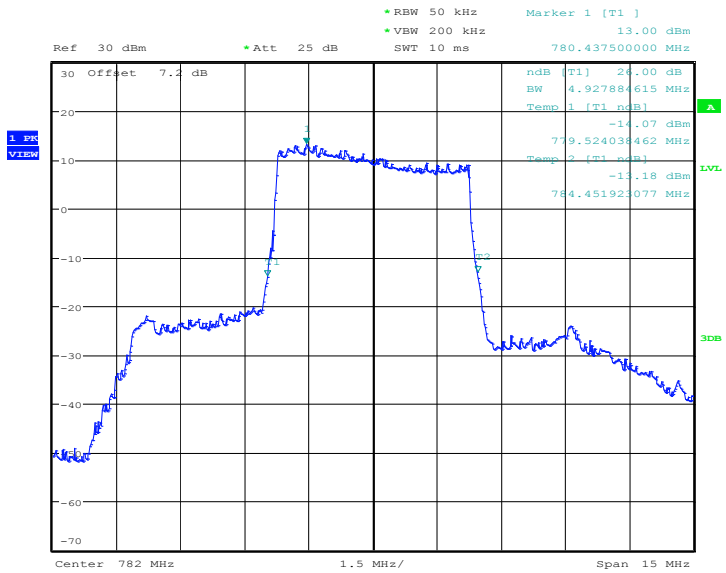
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	4903.85	4927.88

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



Date: 15.FEB.2017 02:45:14

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

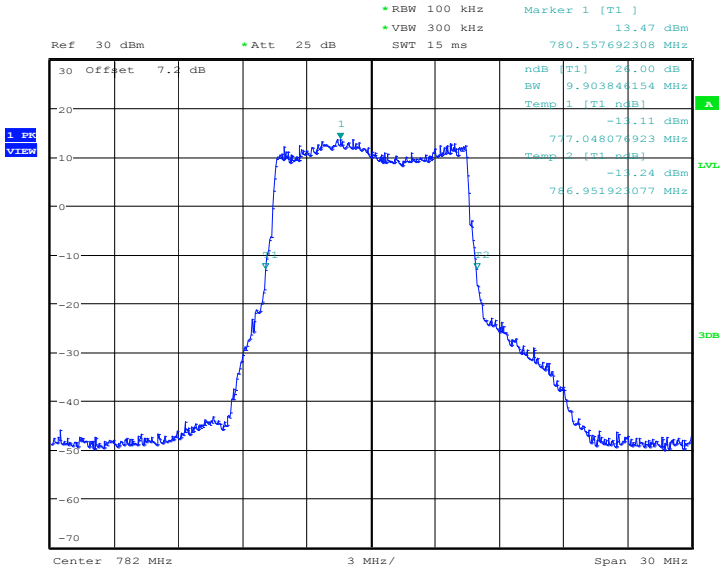


Date: 15.FEB.2017 02:45:55

LTE band 13, 10MHz (-26dBc)

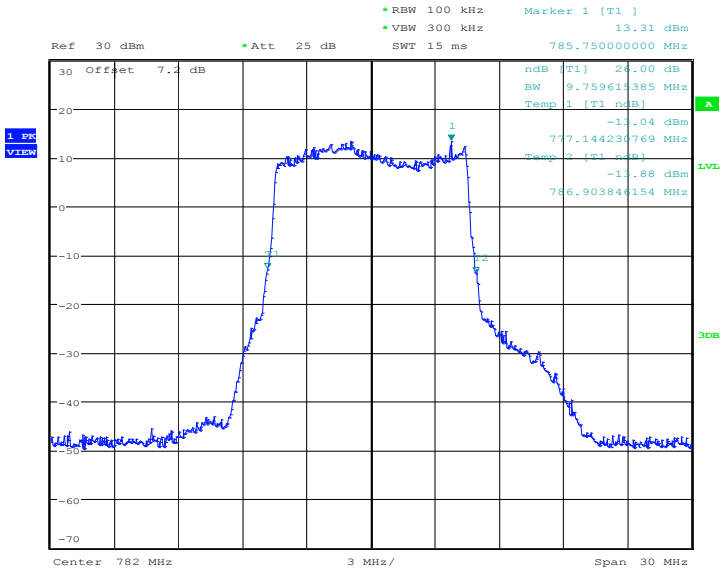
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
782.0	QPSK	16QAM
	9903.85	9759.62

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



Date: 15.FEB.2017 03:19:51

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

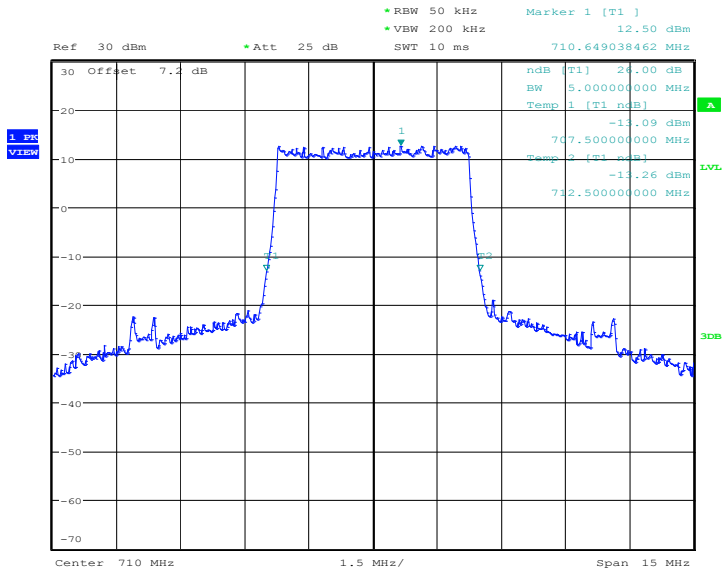


Date: 15.FEB.2017 03:19:20

LTE band 17, 5MHz (-26dBc)

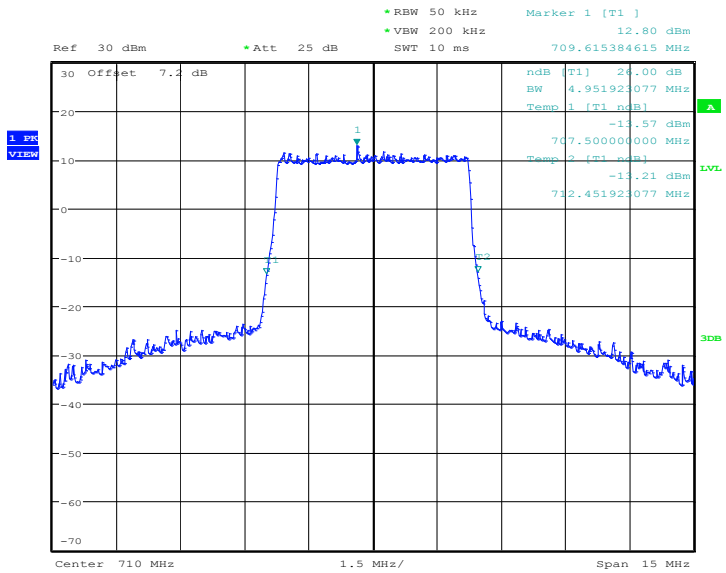
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
710.0	QPSK	16QAM
	5000.00	4951.92

LTE band 17, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.FEB.2017 02:50:53

LTE band 17, 5MHz Bandwidth,16QAM (-26dBc BW)

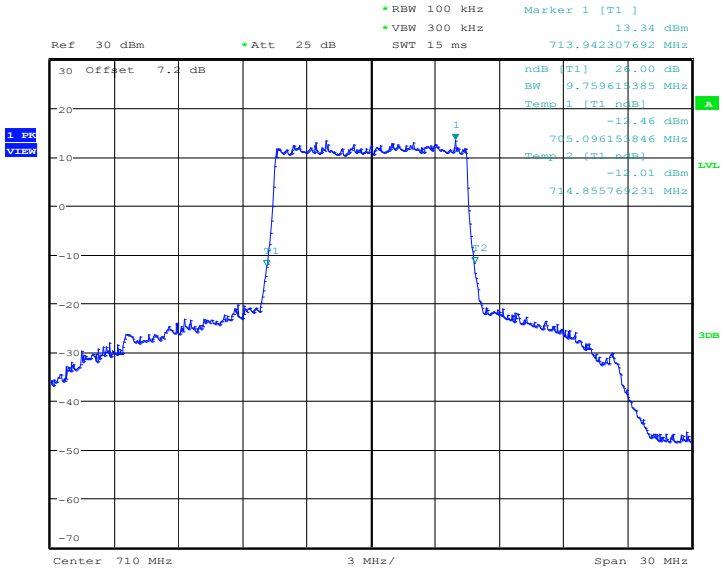


Date: 15.FEB.2017 02:49:50

LTE band 17, 10MHz (-26dBc)

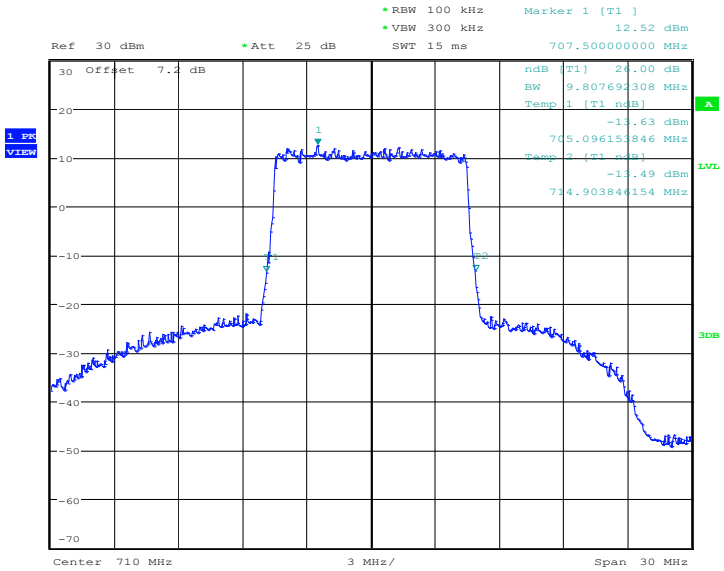
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
710.0	QPSK	16QAM
	9759.62	9807.69

LTE band 17, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 15.FEB.2017 03:14:04

LTE band 17, 10MHz Bandwidth, 16QAM (-26dBc BW)

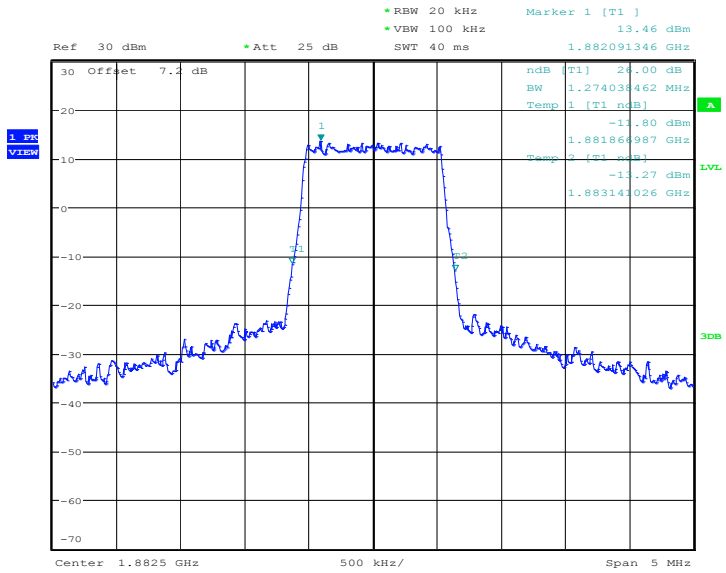


Date: 15.FEB.2017 03:15:09

LTE band 25, 1.4MHz (-26dBc)

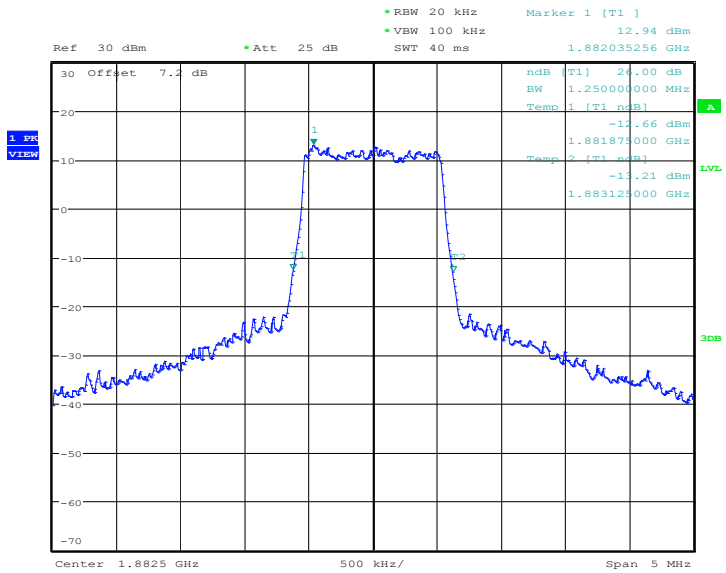
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	1274.04	1250.00

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



Date: 15.FEB.2017 01:50:01

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

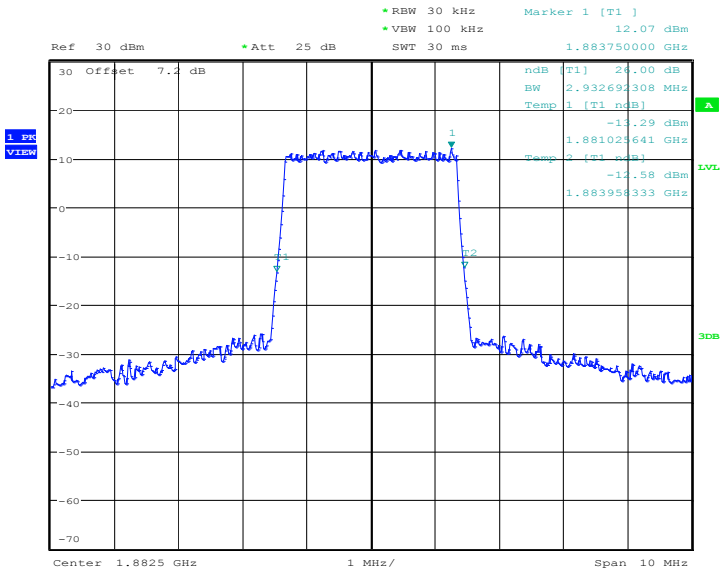


Date: 15.FEB.2017 01:49:17

LTE band 25, 3MHz (-26dBc)

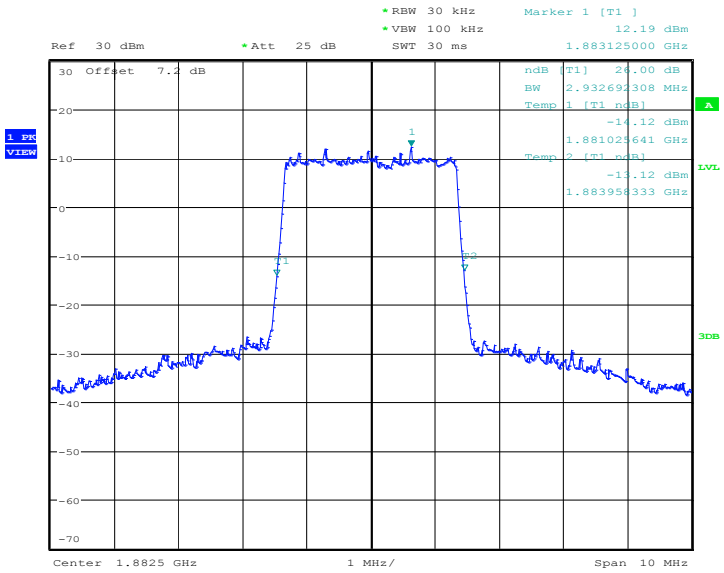
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	2932.69	2932.69

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



Date: 15.FEB.2017 01:59:34

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

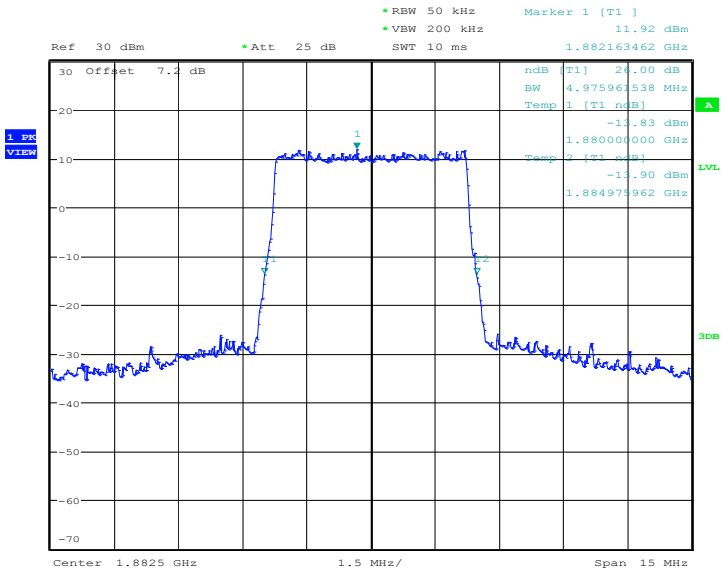


Date: 15.FEB.2017 02:00:33

LTE band 25, 5MHz (-26dBc)

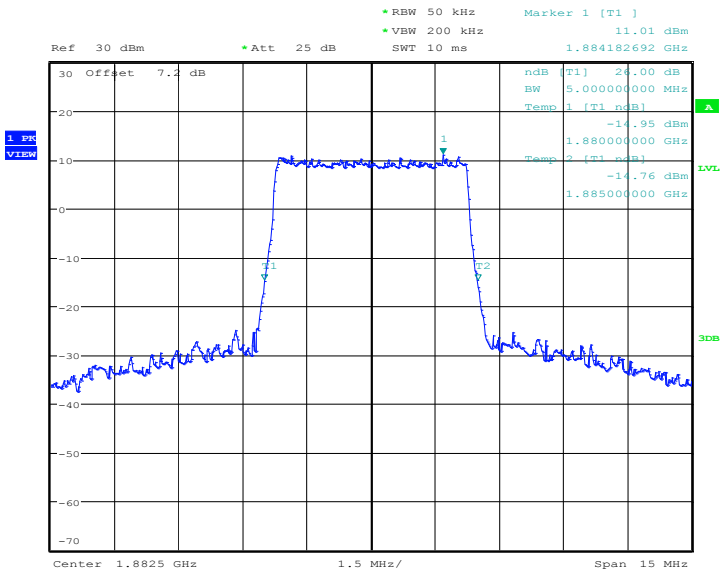
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	4975.96	5000.00

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



Date: 15.FEB.2017 02:52:04

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

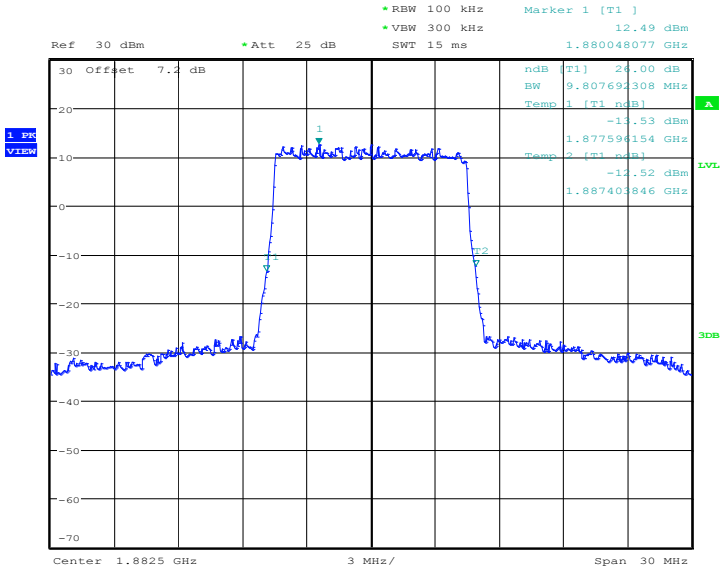


Date: 15.FEB.2017 02:52:42

LTE band 25, 10MHz (-26dBc)

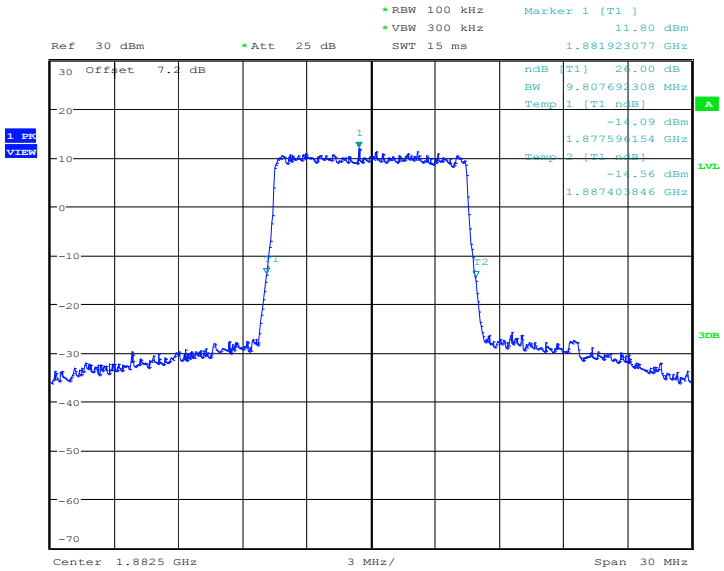
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	9807.69	9807.69

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



Date: 15.FEB.2017 03:12:30

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

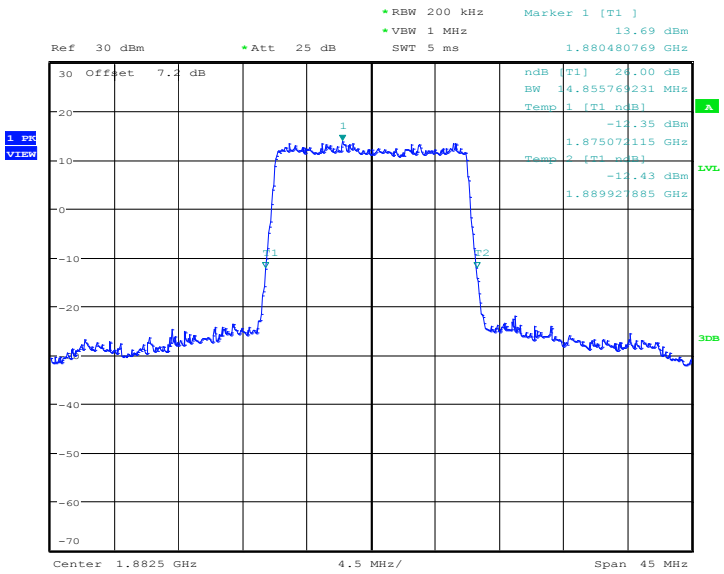


Date: 15.FEB.2017 03:11:19

LTE band 25, 15MHz (-26dBc)

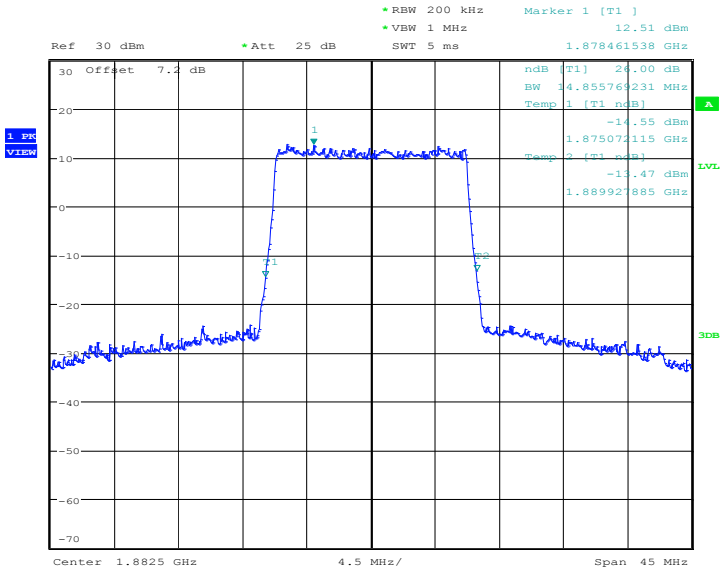
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	14855.77	14855.77

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



Date: 15.FEB.2017 03:49:16

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

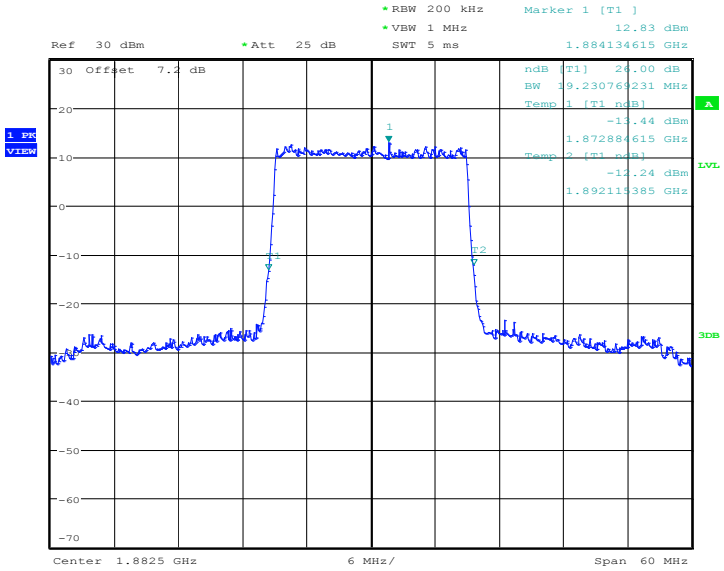


Date: 15.FEB.2017 03:49:48

LTE band 25, 20MHz (-26dBc)

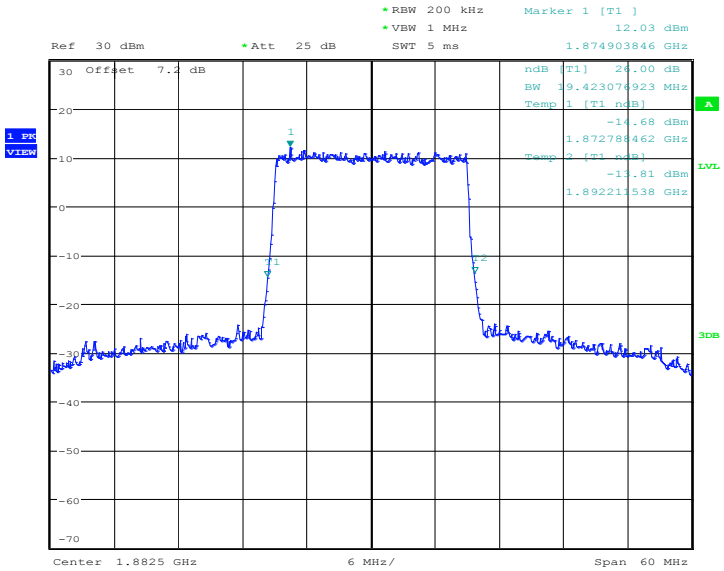
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
1882.5	QPSK	16QAM
	19230.77	19423.08

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



Date: 15.FEB.2017 03:55:33

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

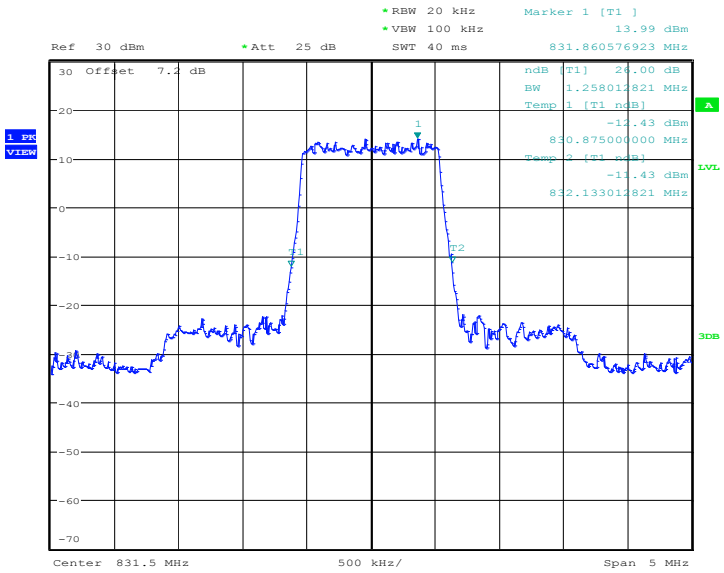


Date: 15.FEB.2017 03:56:09

LTE band 26, 1.4MHz (-26dBc)

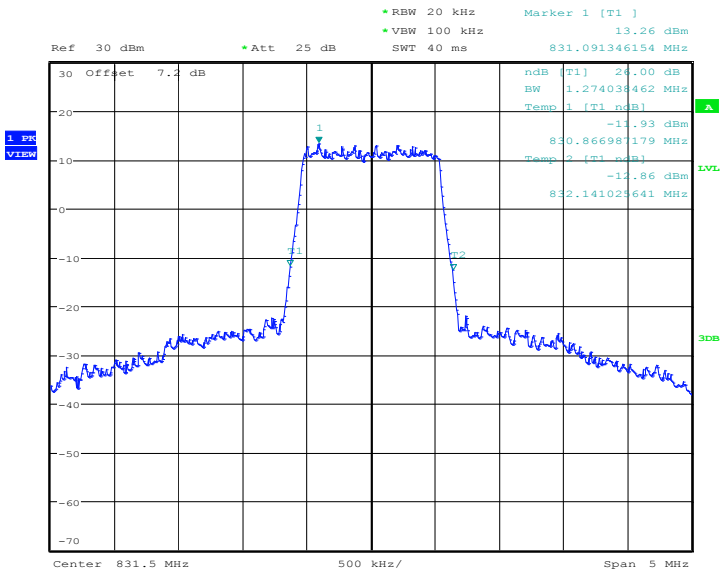
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
831.5	QPSK	16QAM
	1258.01	1274.04

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



Date: 15.FEB.2017 01:51:02

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

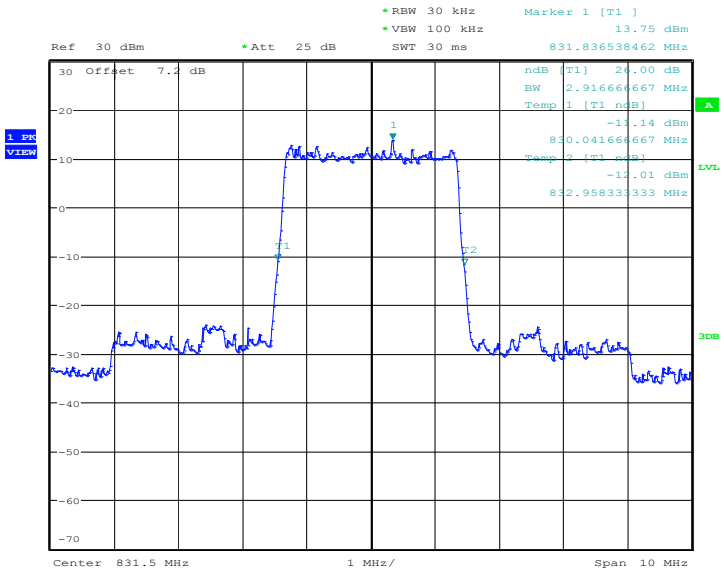


Date: 15.FEB.2017 01:51:42

LTE band 26, 3MHz (-26dBc)

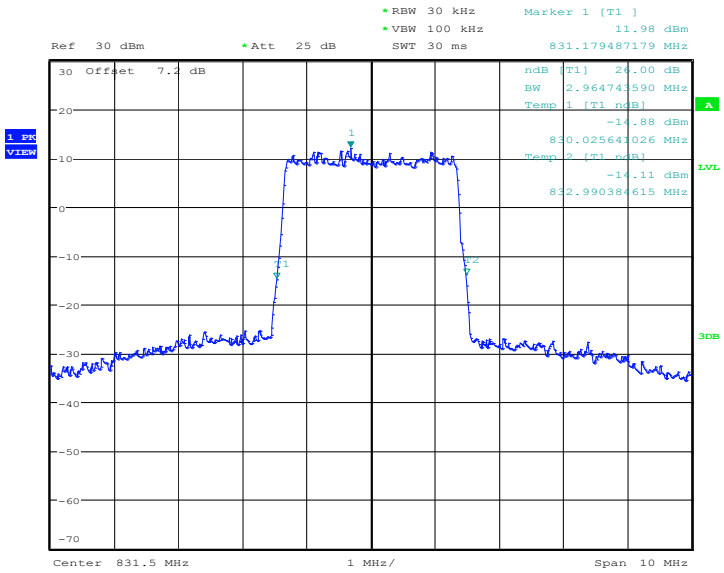
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
831.5	QPSK	16QAM
	2916.67	2964.74

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



Date: 15.FEB.2017 01:57:59

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

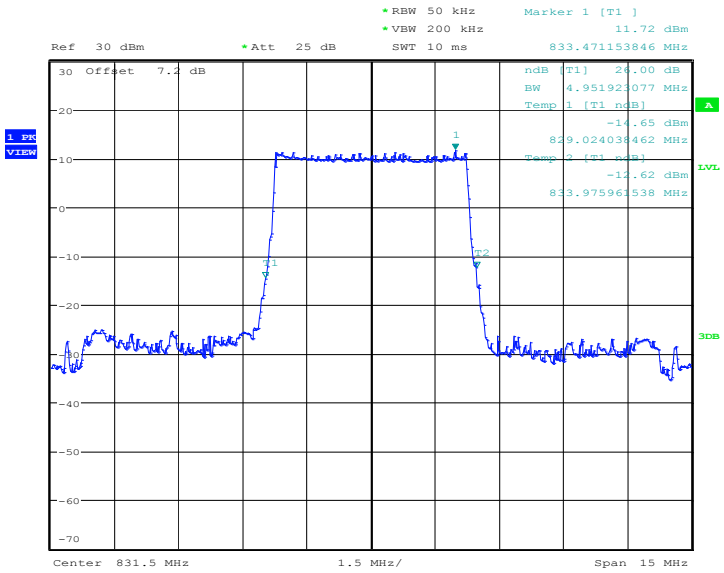


Date: 15.FEB.2017 01:56:51

LTE band 26, 5MHz (-26dBc)

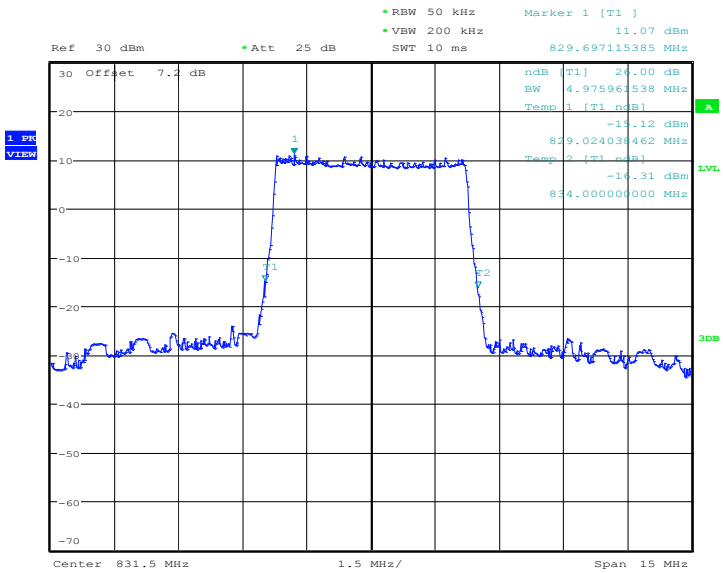
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
831.5	QPSK	16QAM
	4951.92	4975.96

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



Date: 15.FEB.2017 02:58:41

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

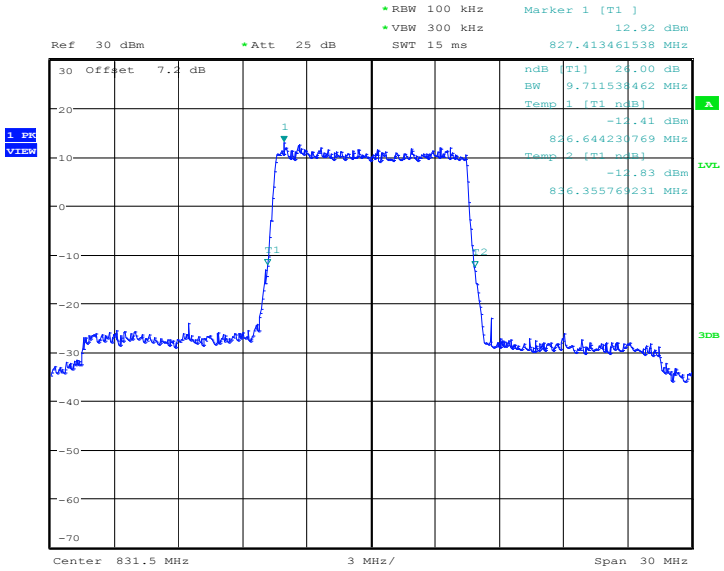


Date: 15.FEB.2017 02:58:03

LTE band 26, 10MHz (-26dBc)

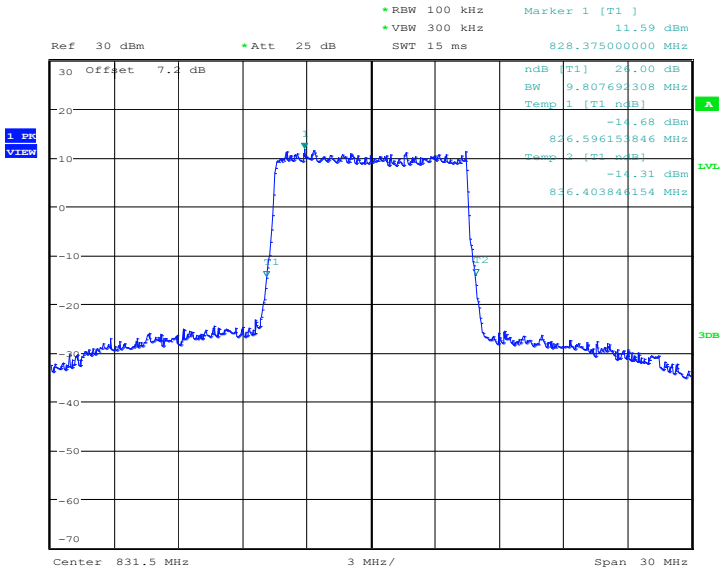
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
831.5	QPSK	16QAM
	9711.54	9807.69

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



Date: 15.FEB.2017 03:05:44

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

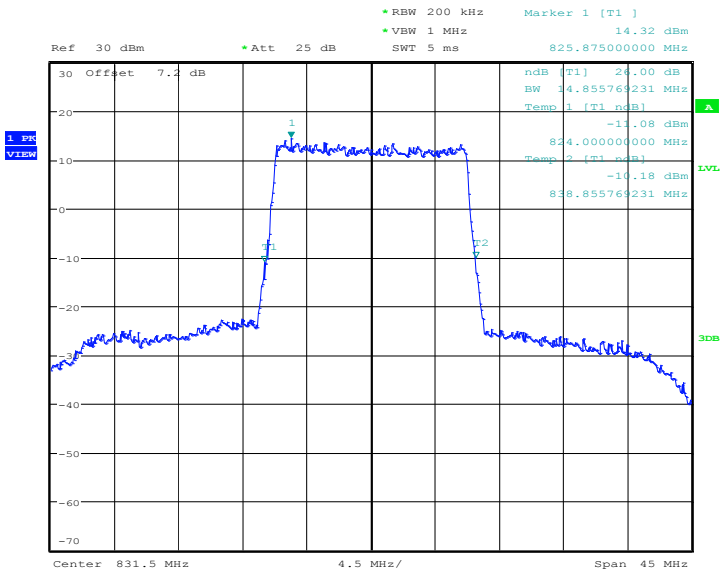


Date: 15.FEB.2017 03:06:44

LTE band 26, 15MHz (-26dBc)

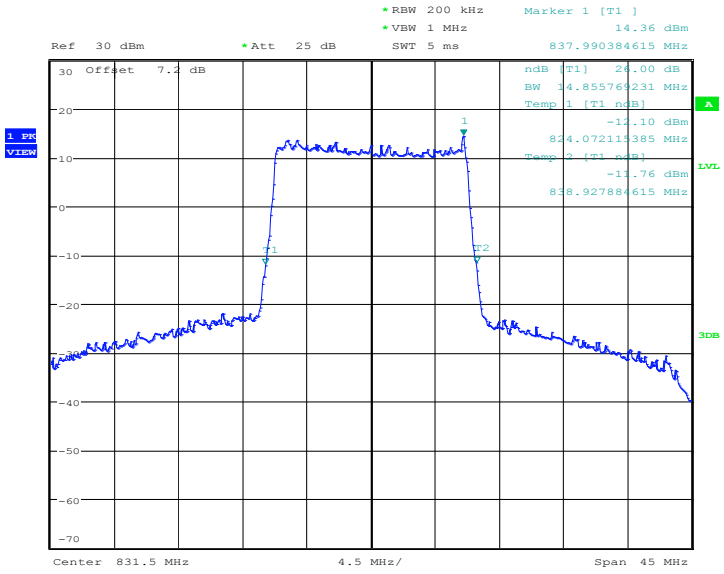
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
831.5	QPSK	16QAM
	14855.77	14855.77

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



Date: 15.FEB.2017 03:53:49

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

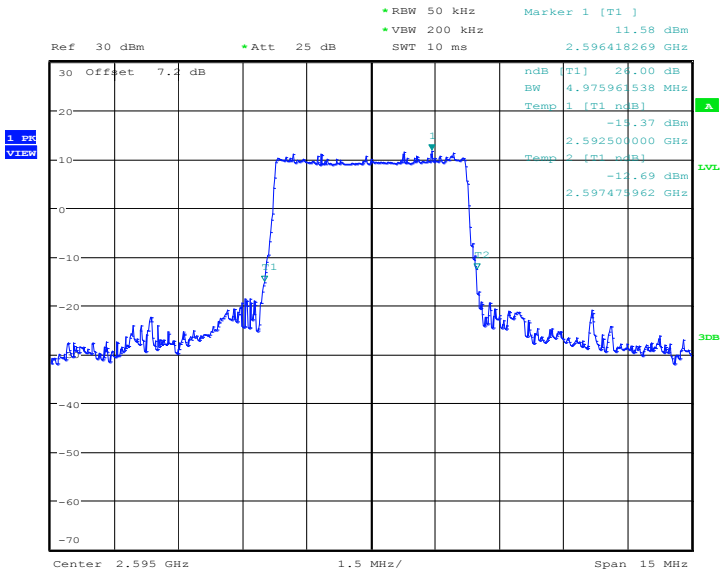


Date: 15.FEB.2017 03:53:19

LTE band 38, 5MHz (-26dBc)

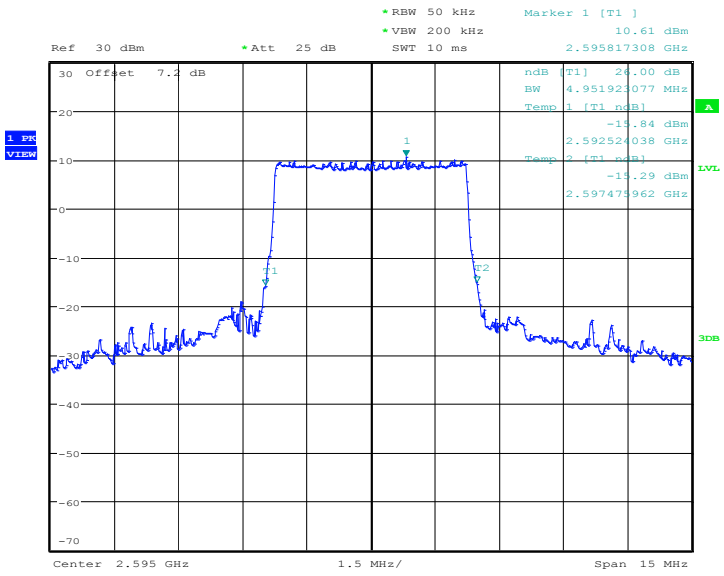
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2595.0	QPSK	16QAM
	4975.96	4951.92

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



Date: 15.FEB.2017 05:37:45

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

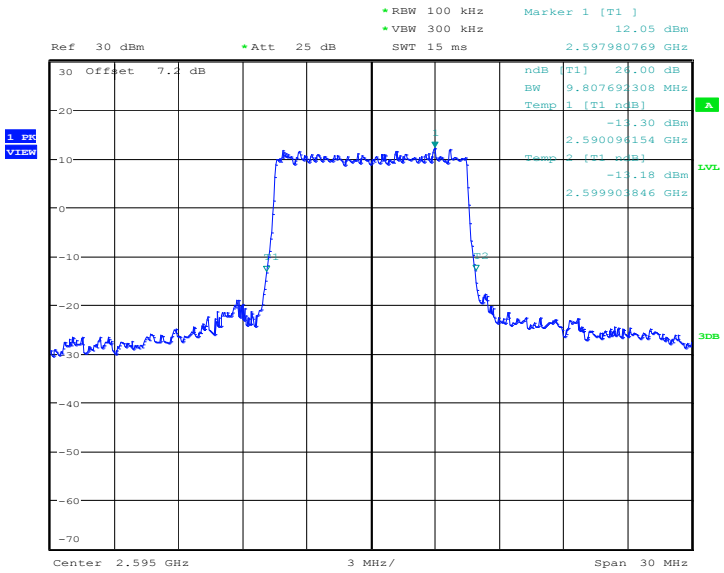


Date: 15.FEB.2017 05:34:48

LTE band 38, 10MHz (-26dBc)

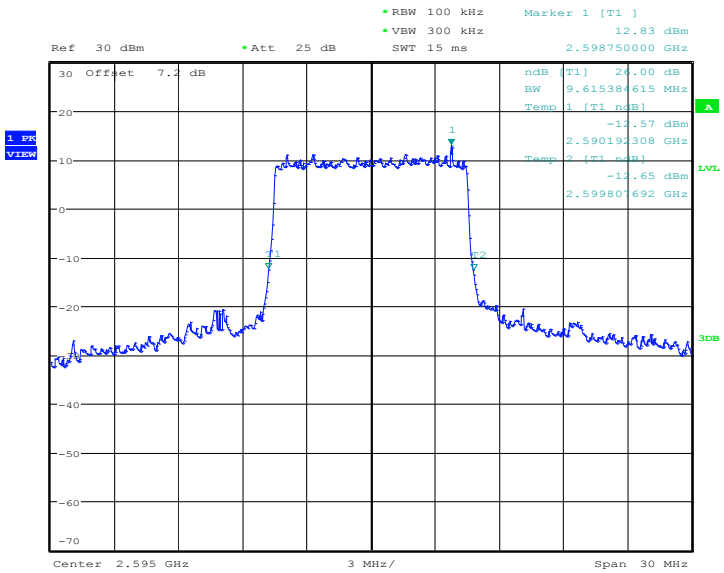
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2595.0	QPSK	16QAM
	9807.69	9615.38

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



Date: 15.FEB.2017 05:22:11

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

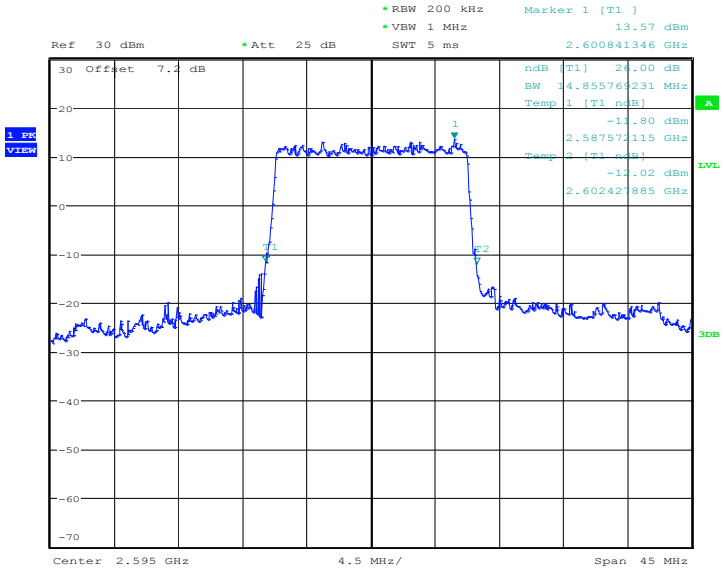


Date: 15.FEB.2017 05:24:22

LTE band 38, 15MHz (-26dBc)

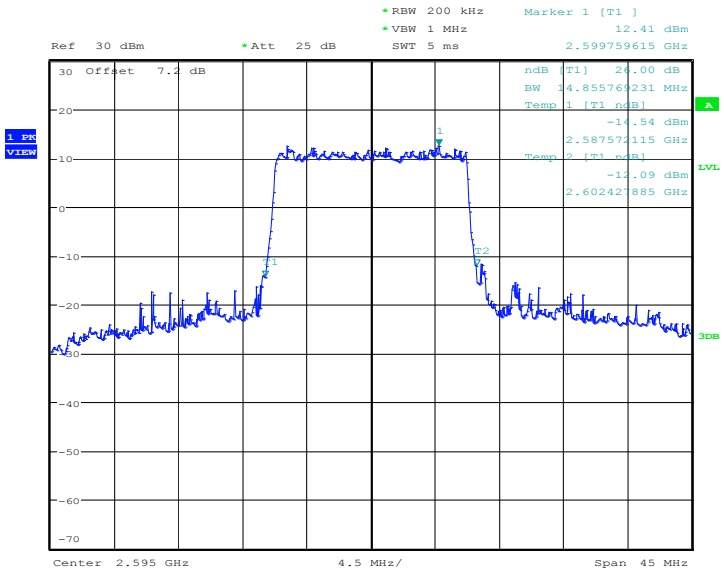
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2595.0	QPSK	16QAM
	14855.77	14855.77

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



Date: 15.FEB.2017 05:20:02

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

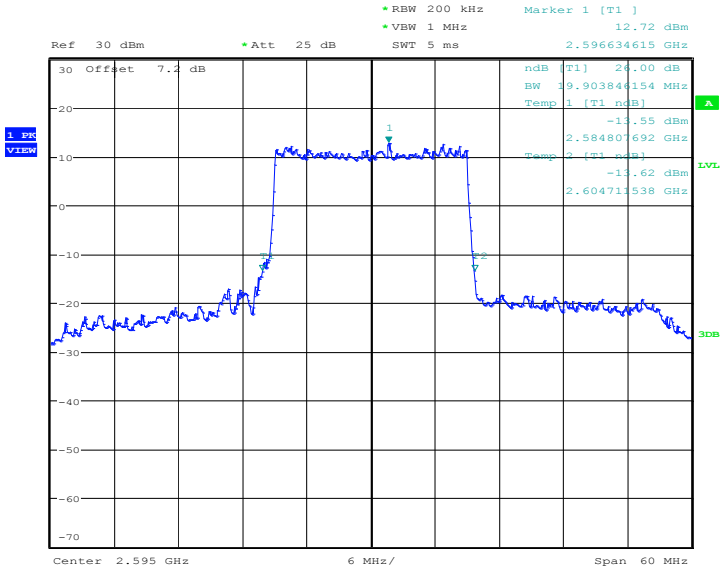


Date: 15.FEB.2017 05:19:22

LTE band 38, 20MHz (-26dBc)

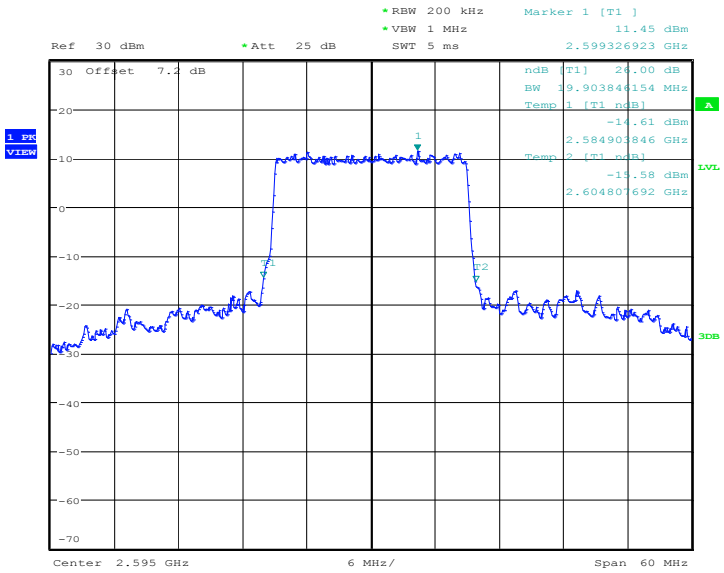
Frequency(MHz)	Occupied Bandwidth (-26dBc)(kHz)	
2595.0	QPSK	16QAM
	19903.85	19903.85

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



Date: 15.FEB.2017 05:05:09

LTE band 38, 20MHz Bandwidth, 16QAM (-26dBc BW)



Date: 15.FEB.2017 05:10:10

A.6 BAND EDGE COMPLIANCE

Reference

FCC: CFR Part 22.917(b), 24.238(a), 27.53(h).

A.6.1 Measurement limit

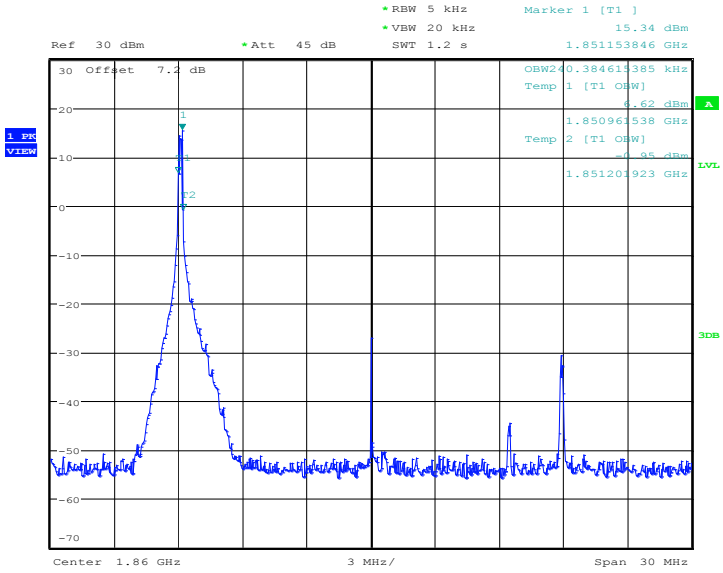
On any frequency outside frequency band of the US Cellular/PCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log (P) dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm. According to KDB 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.

A.6.2 Measurement result

Only worst case result is given below

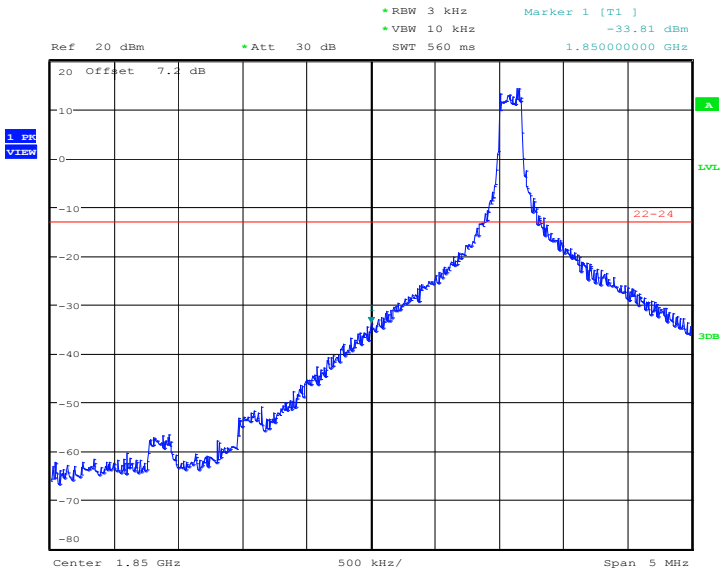
LTE band 2

OBW: 1RB-low_offset



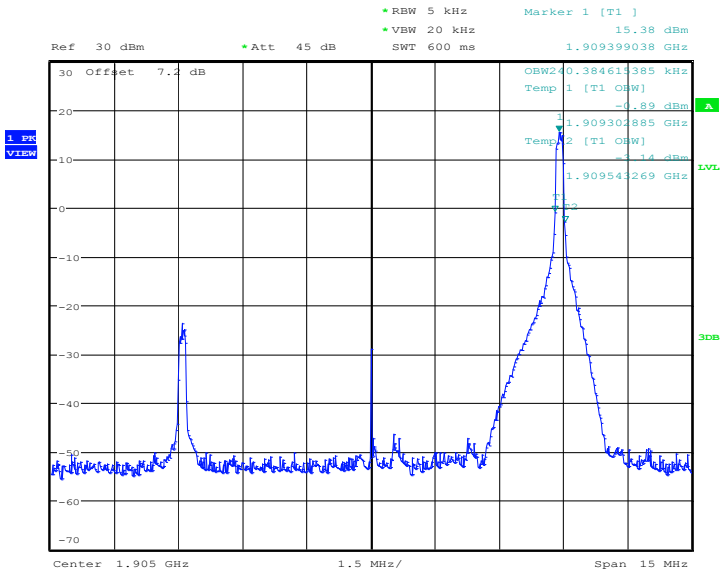
Date: 15.FEB.2017 20:09:08

LOW BAND EDGE BLOCK-1RB-low_offset



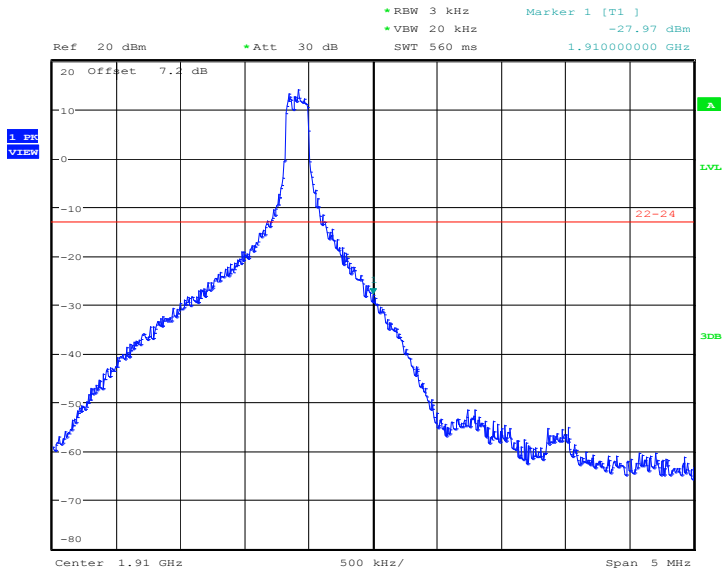
Date: 15.FEB.2017 20:10:13

OBW: 1RB-high_offset



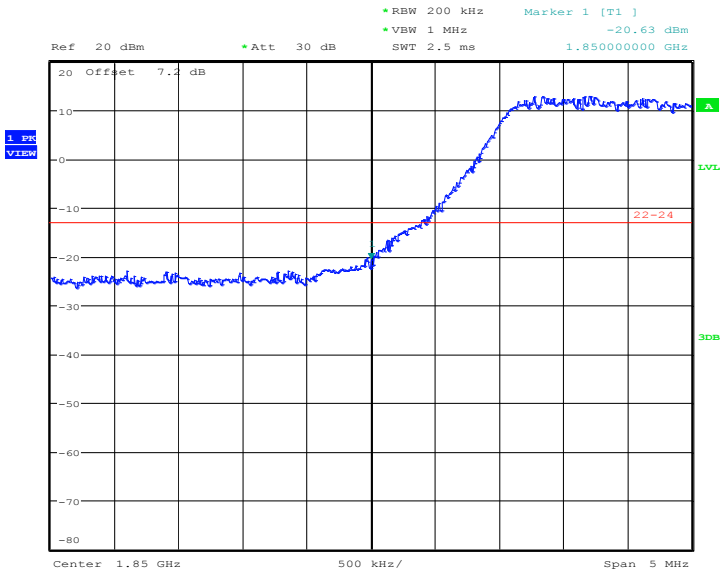
Date: 15.FEB.2017 20:19:44

HIGH BAND EDGE BLOCK-1RB-high_offset



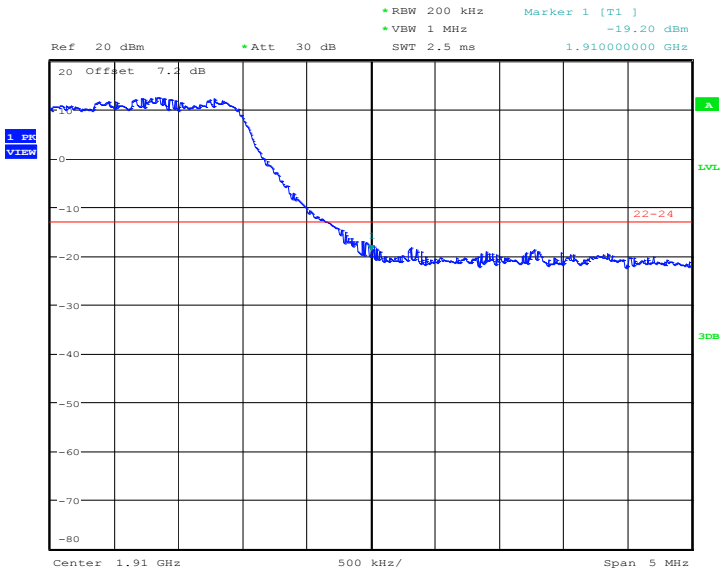
Date: 15.FEB.2017 20:20:56

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 15.FEB.2017 20:07:41

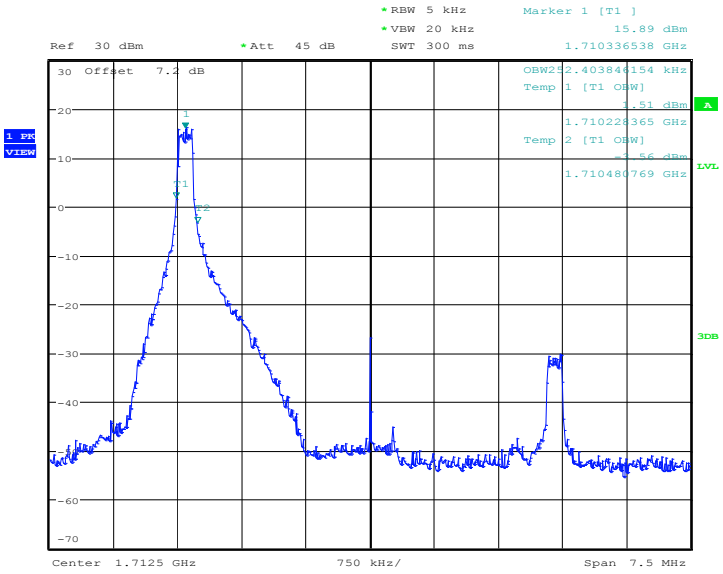
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 15.FEB.2017 20:06:59

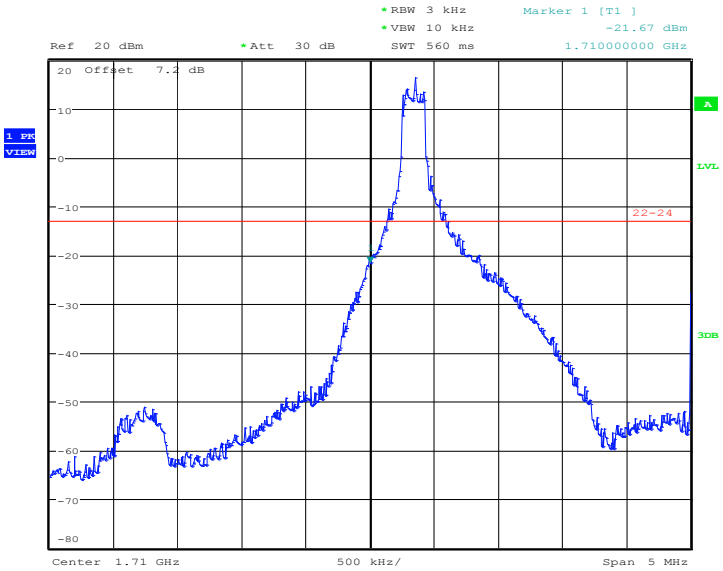
LTE band 4

OBW: 1RB-low_offset



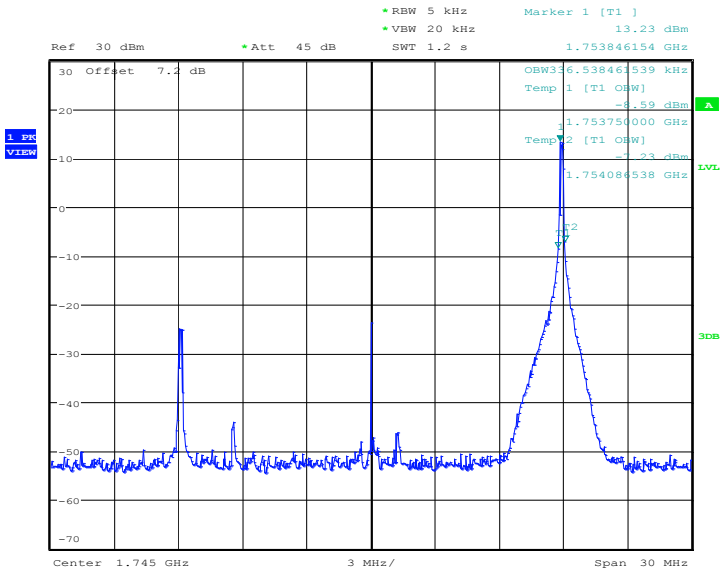
Date: 15.FEB.2017 22:42:12

LOW BAND EDGE BLOCK-1RB-low_offset



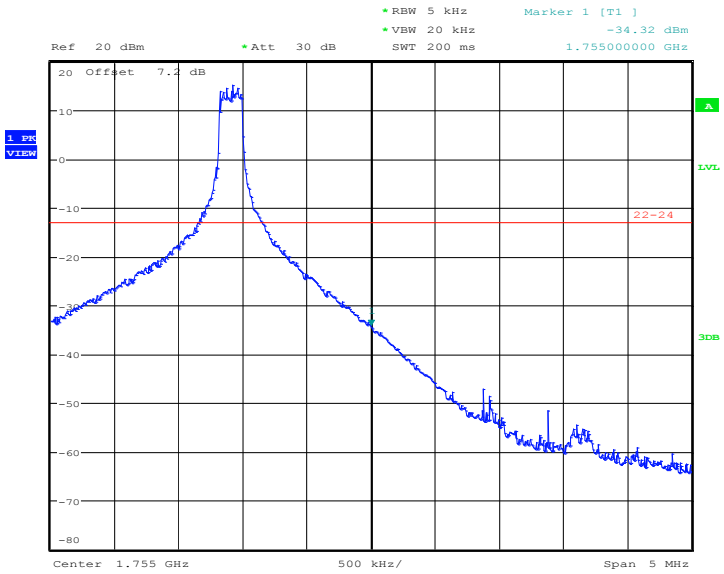
Date: 15.FEB.2017 22:43:21

OBW: 1RB-high_offset



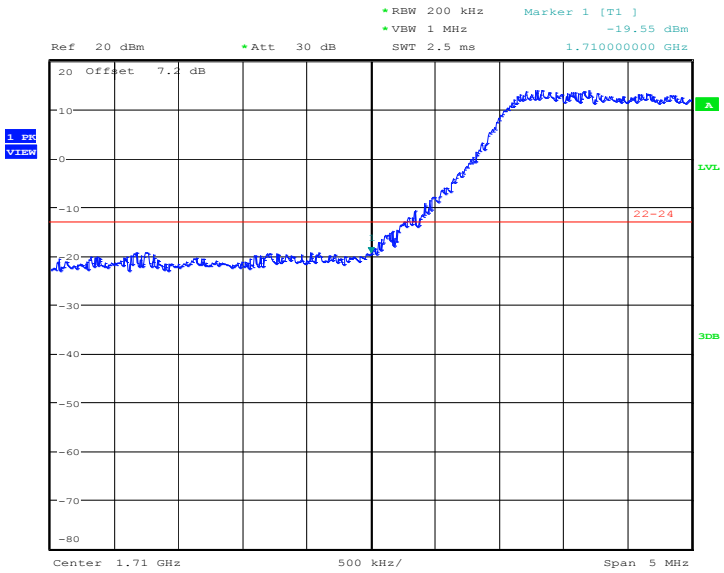
Date: 15.FEB.2017 22:45:34

HIGH BAND EDGE BLOCK-1RB-high_offset



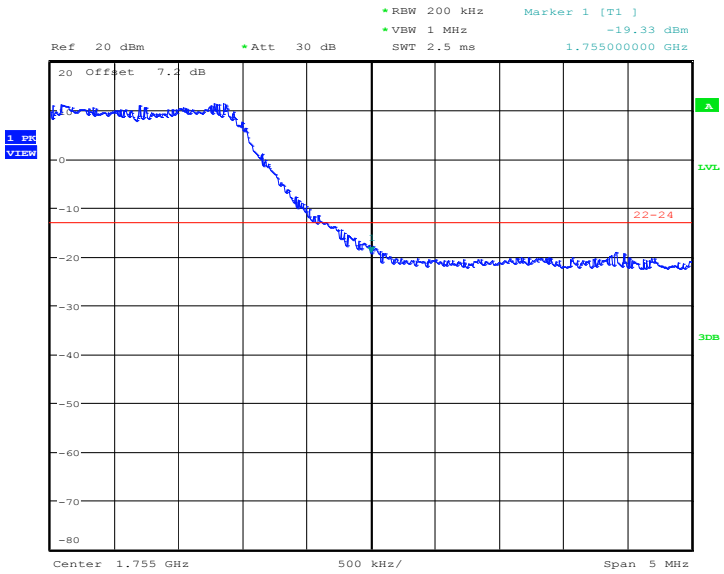
Date: 15.FEB.2017 22:46:29

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 15.FEB.2017 22:50:37

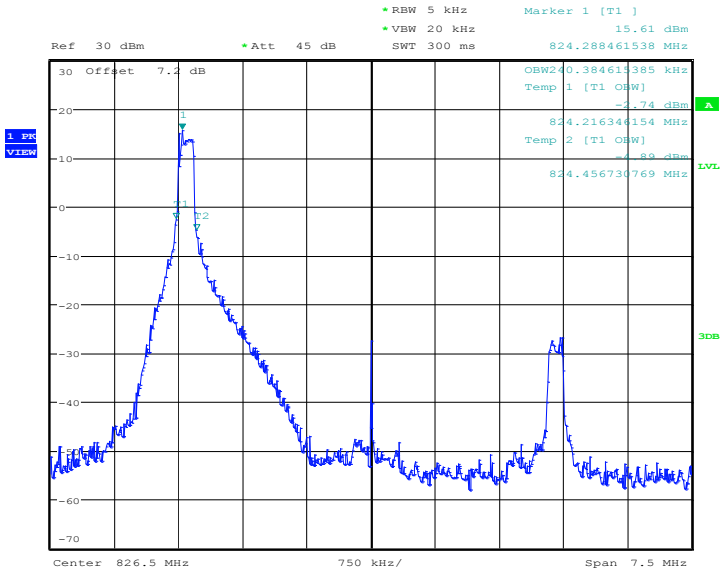
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 15.FEB.2017 22:47:46

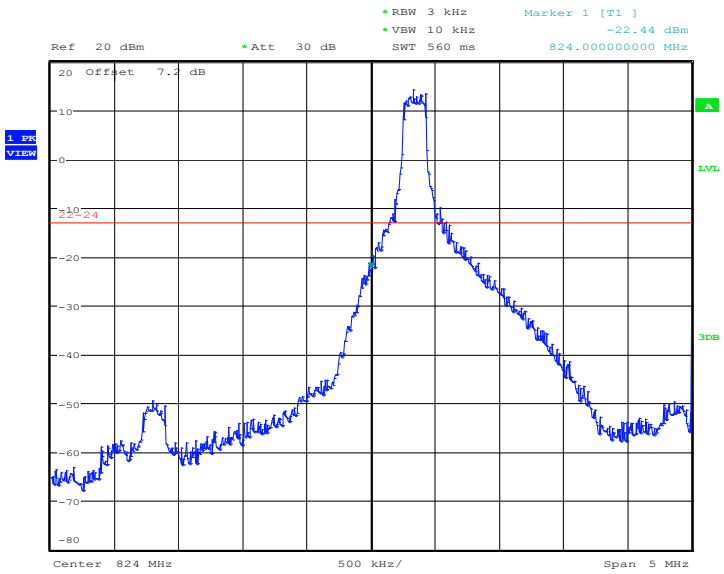
LTE band 5

OBW: 1RB-low_offset



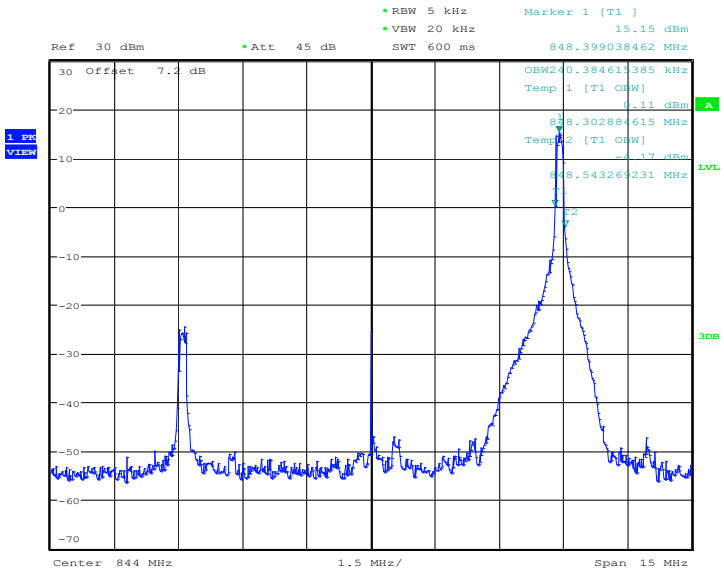
Date: 15.FEB.2017 22:59:13

LOW BAND EDGE BLOCK-1RB-low_offset



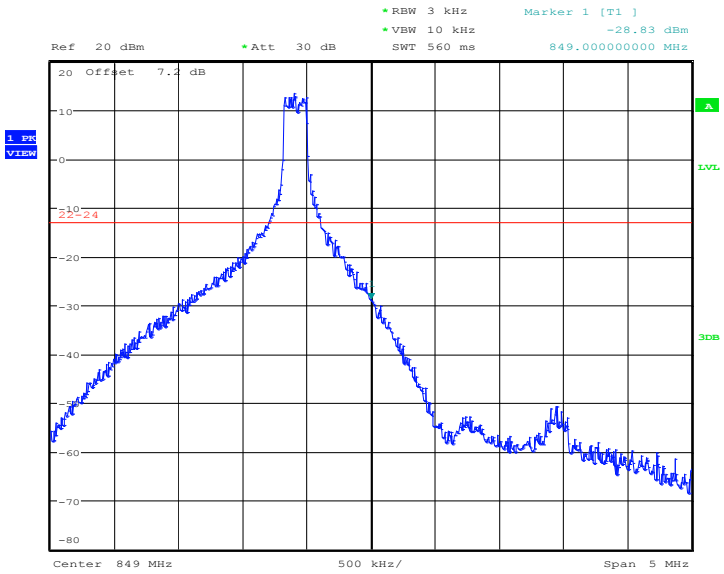
Date: 15.FEB.2017 23:00:07

OBW: 1RB-high_offset



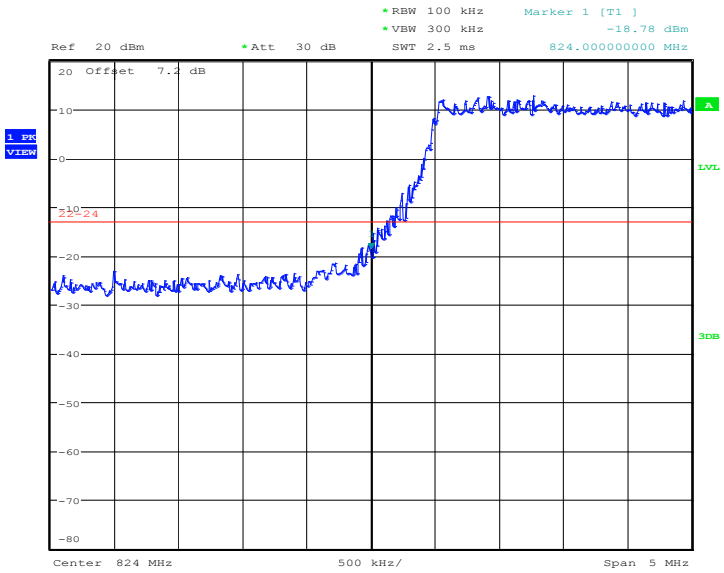
Date: 15.FEB.2017 22:57:27

HIGH BAND EDGE BLOCK-1RB-high_offset



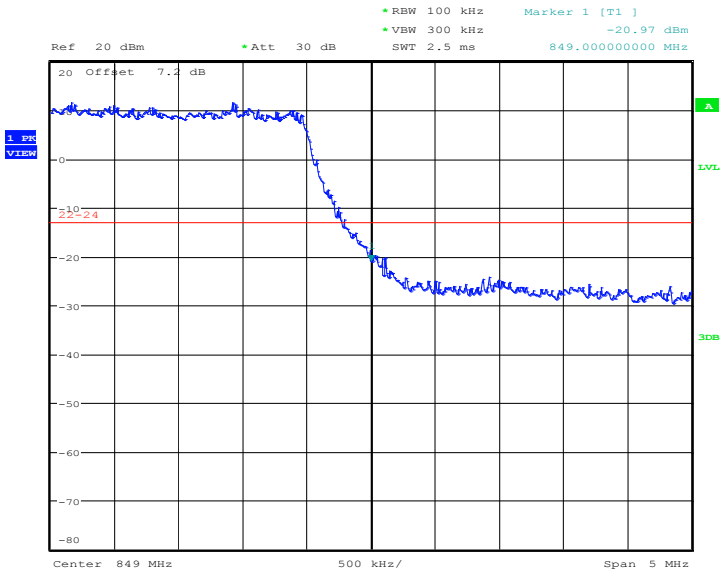
Date: 15.FEB.2017 22:56:30

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 22:54:06

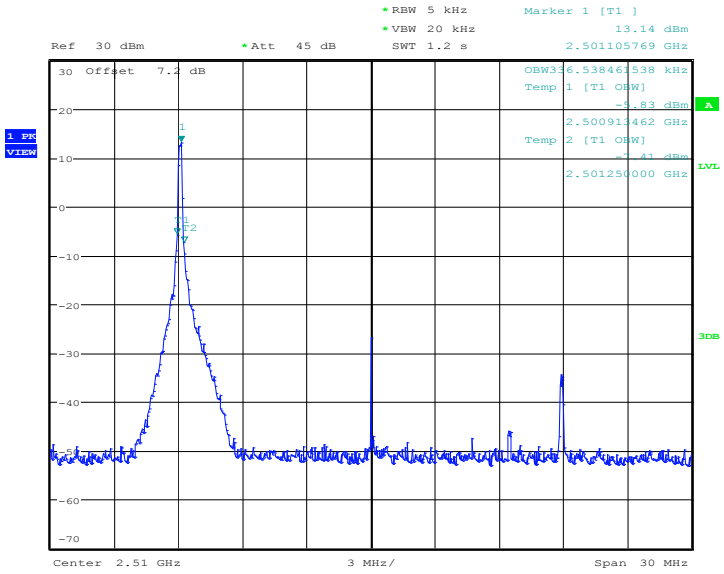
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 22:53:05

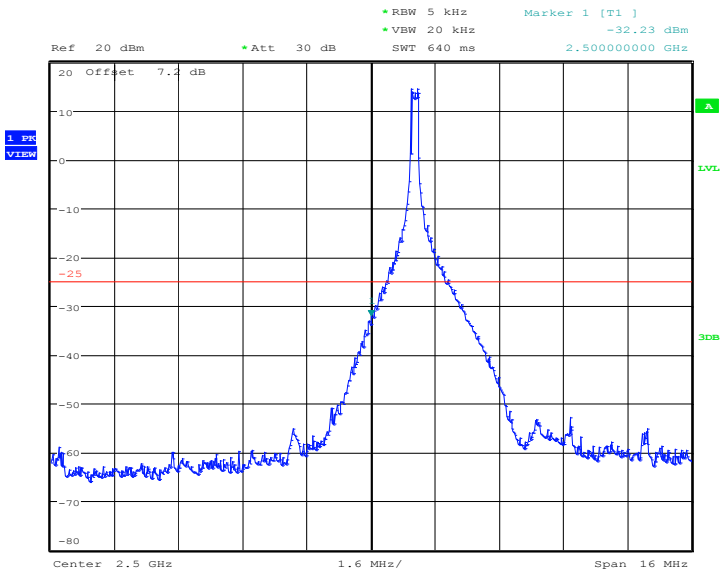
LTE band 7

OBW: 1RB-low_offset



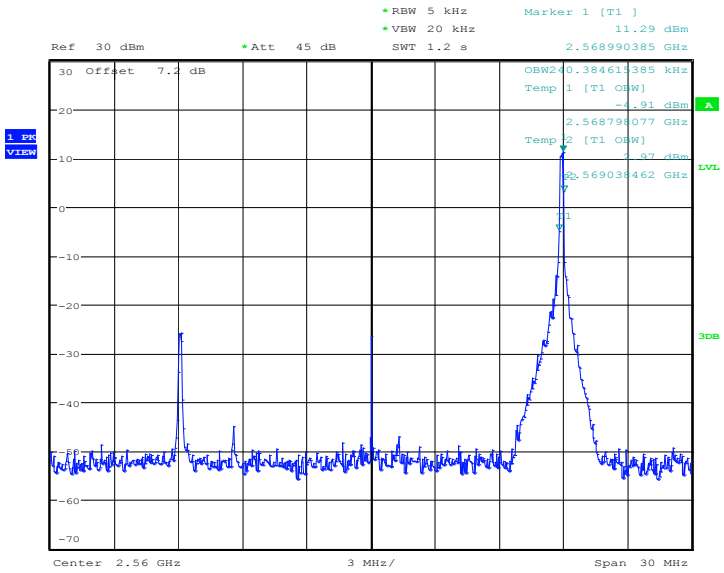
Date: 15.FEB.2017 23:06:17

LOW BAND EDGE BLOCK-1RB-low_offset



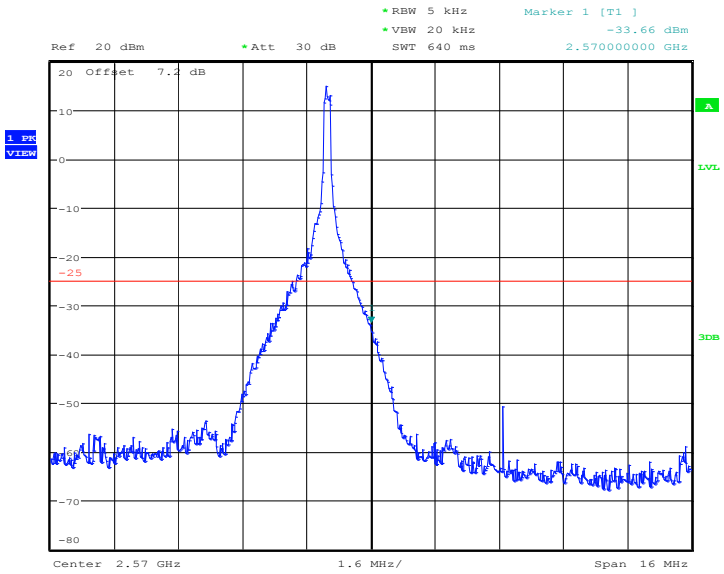
Date: 7.APR.2017 20:42:42

OBW: 1RB-high_offset



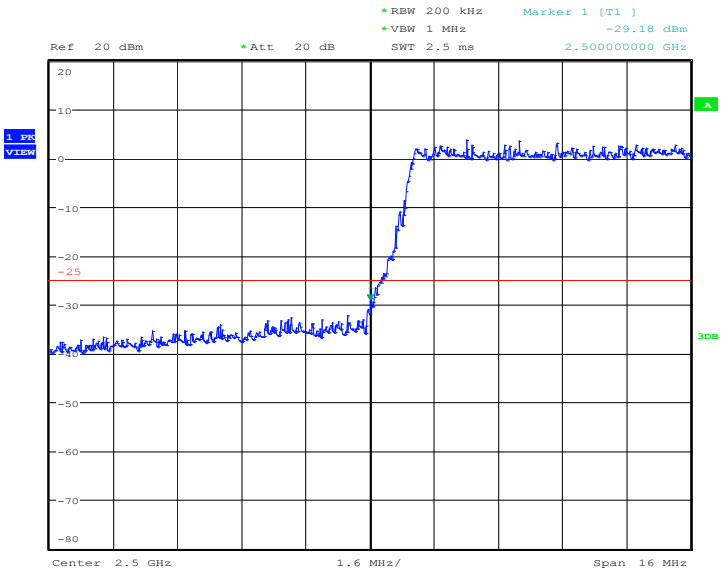
Date: 15.FEB.2017 23:03:07

HIGH BAND EDGE BLOCK-1RB-high_offset



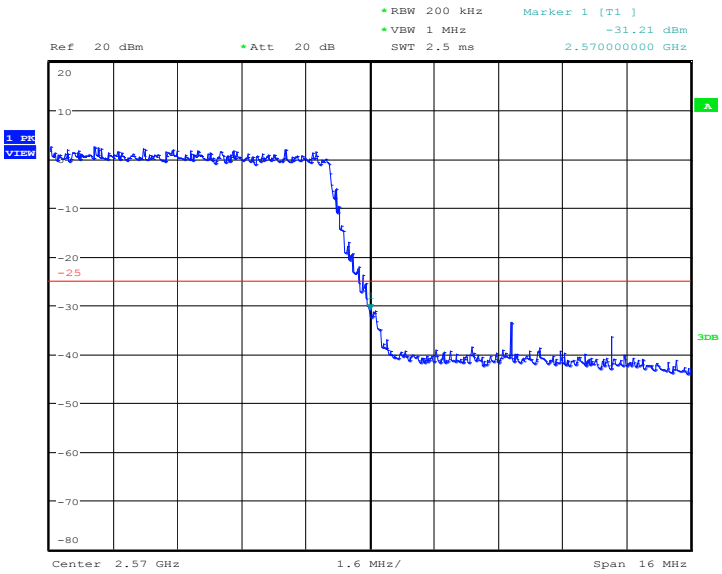
Date: 7.APR.2017 20:45:27

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 7.APR.2017 20:56:02

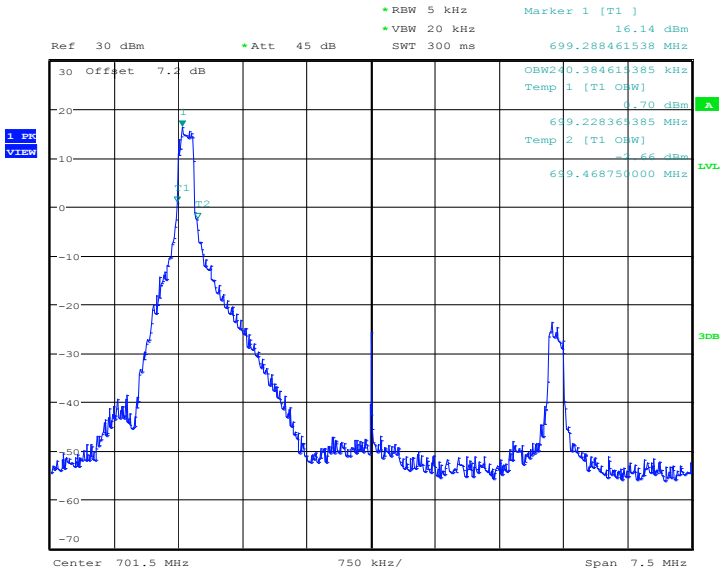
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 7.APR.2017 20:54:47

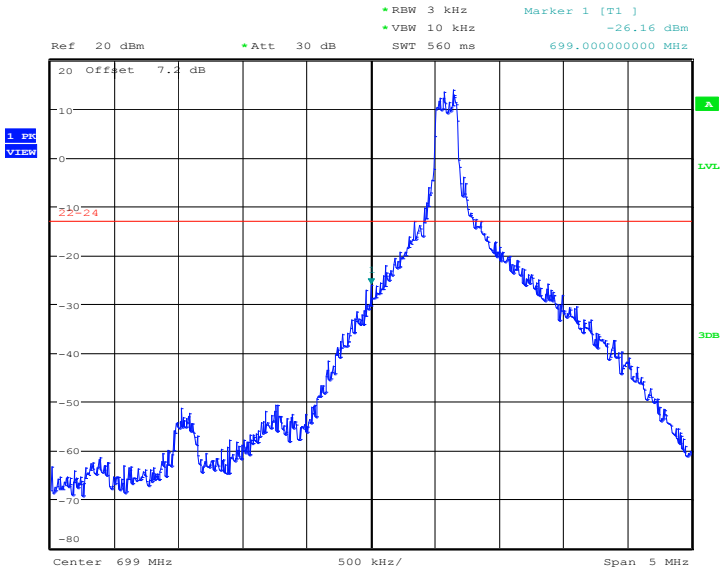
LTE band 12

OBW: 1RB-low_offset



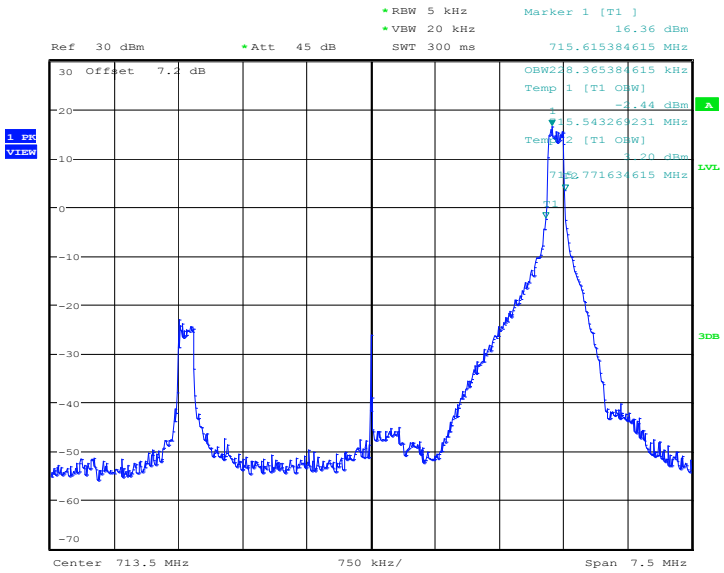
Date: 15.FEB.2017 23:16:05

LOW BAND EDGE BLOCK-1RB-low_offset



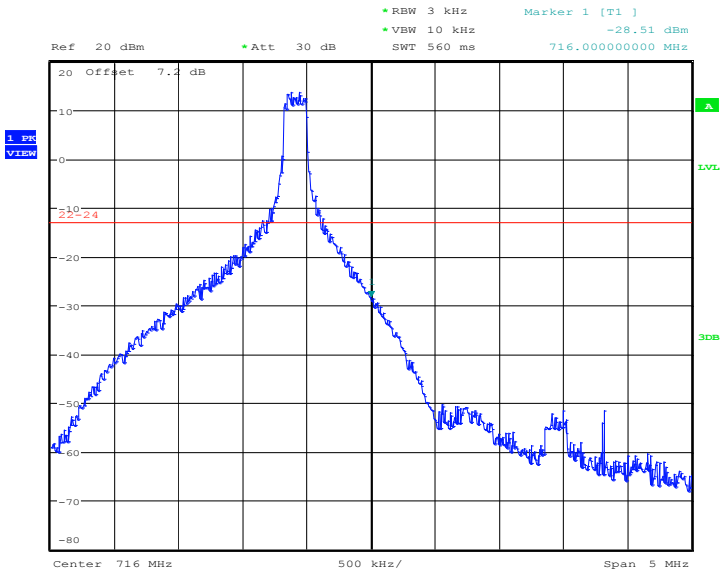
Date: 15.FEB.2017 23:13:20

OBW: 1RB-high_offset



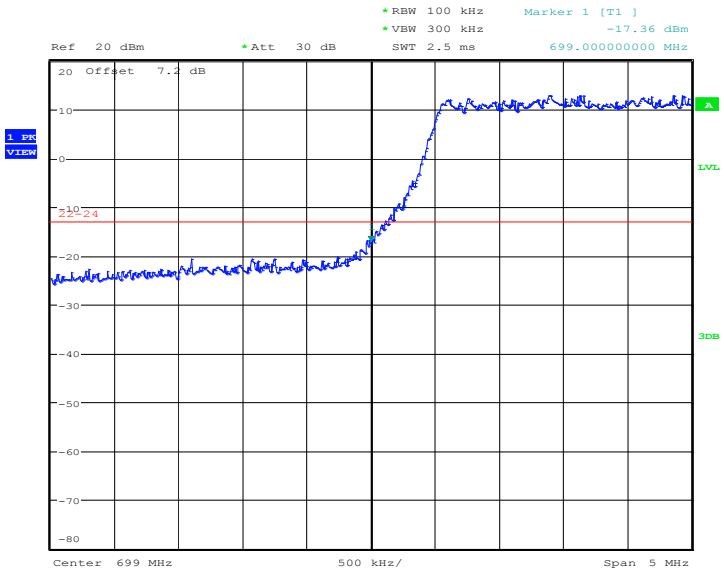
Date: 15.FEB.2017 23:16:52

HIGH BAND EDGE BLOCK-1RB-high_offset



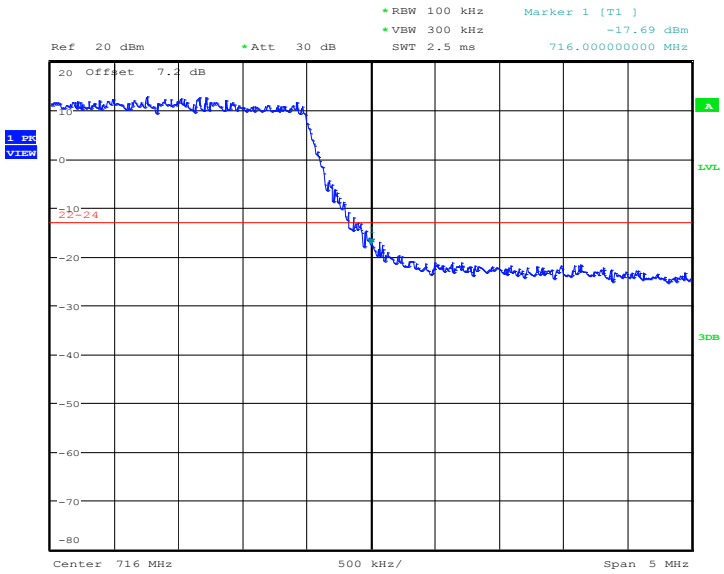
Date: 15.FEB.2017 23:14:30

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 23:11:13

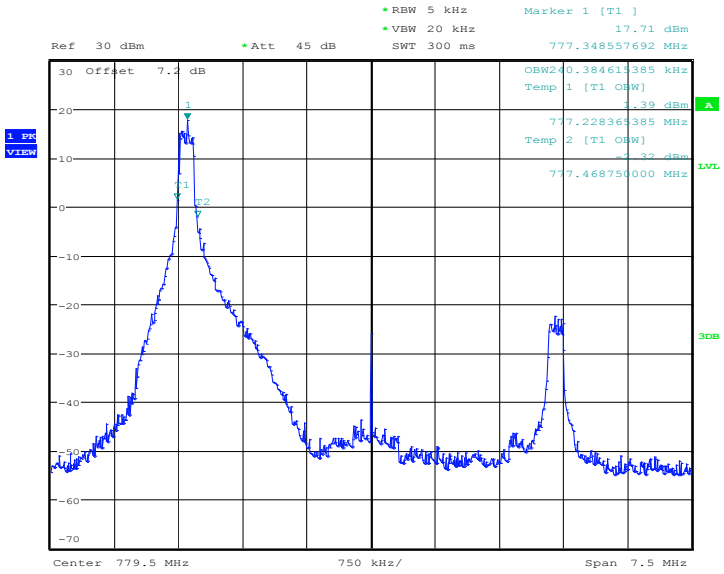
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 23:10:27

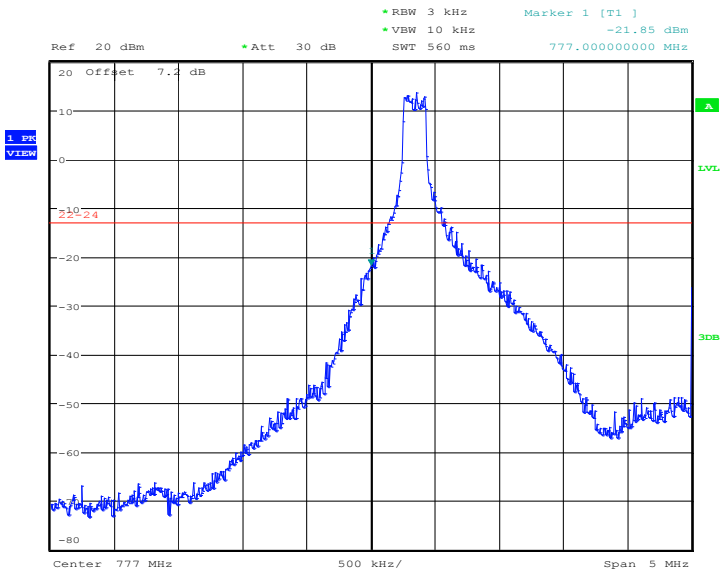
LTE band 13

OBW: 1RB-low_offset



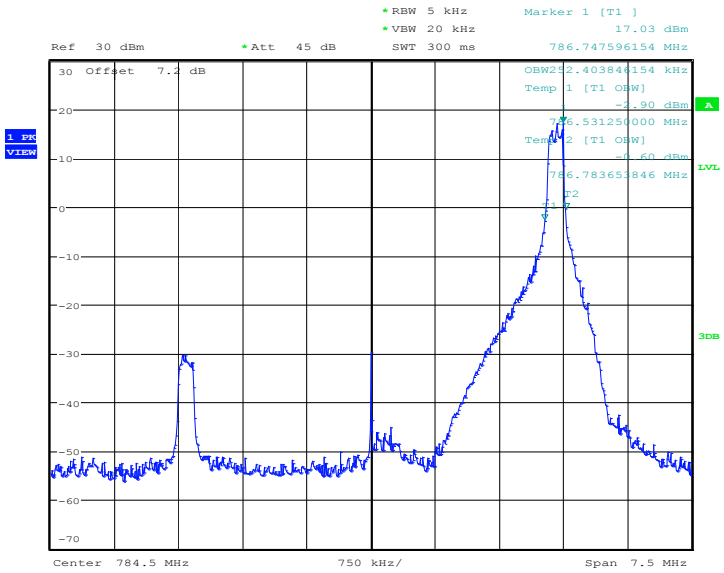
Date: 15.FEB.2017 23:32:15

LOW BAND EDGE BLOCK-1RB-low_offset



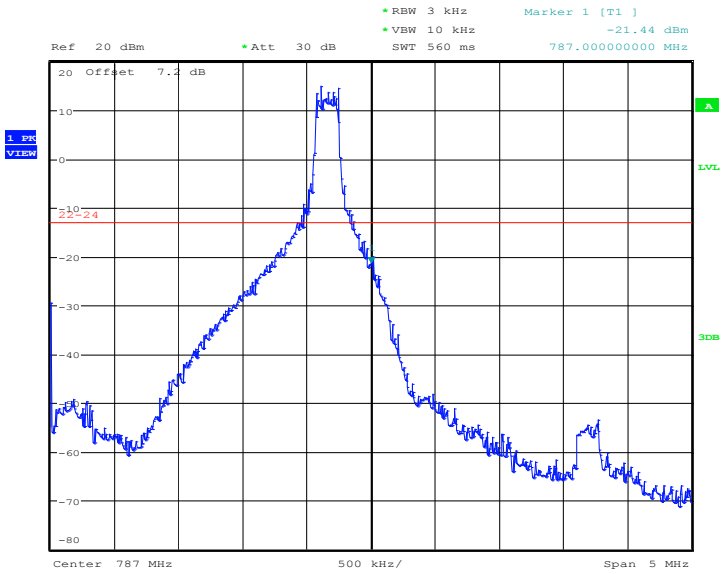
Date: 15.FEB.2017 23:33:25

OBW: 1RB-high_offset



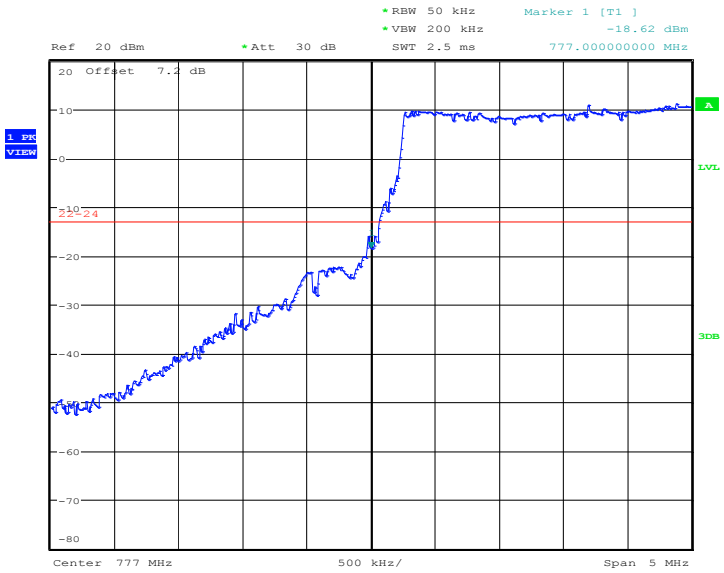
Date: 15.FEB.2017 23:36:18

HIGH BAND EDGE BLOCK-1RB-high_offset



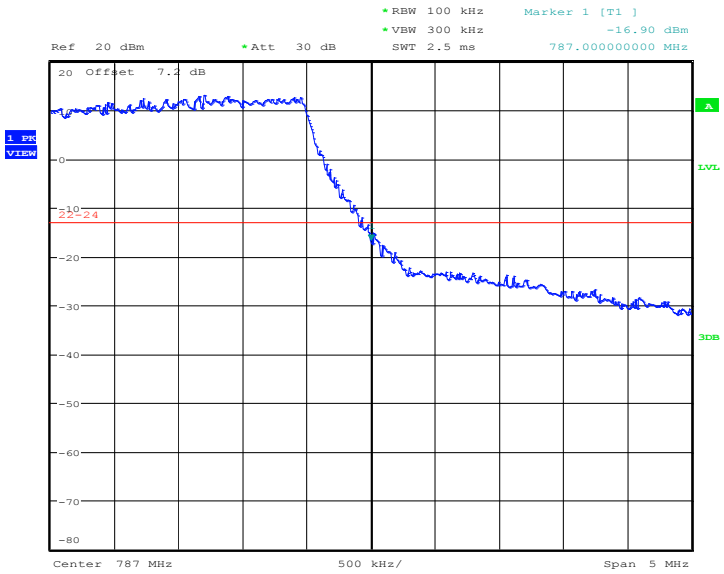
Date: 15.FEB.2017 23:35:11

LOW BAND EDGE BLOCK-5MHz-100%RB



Date: 15.FEB.2017 23:49:48

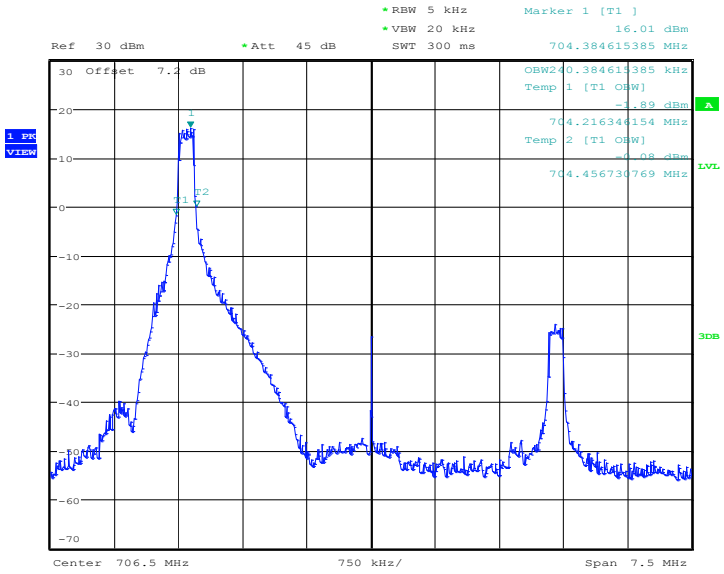
HIGH BAND EDGE BLOCK-5MHz-100%RB



Date: 15.FEB.2017 23:43:43

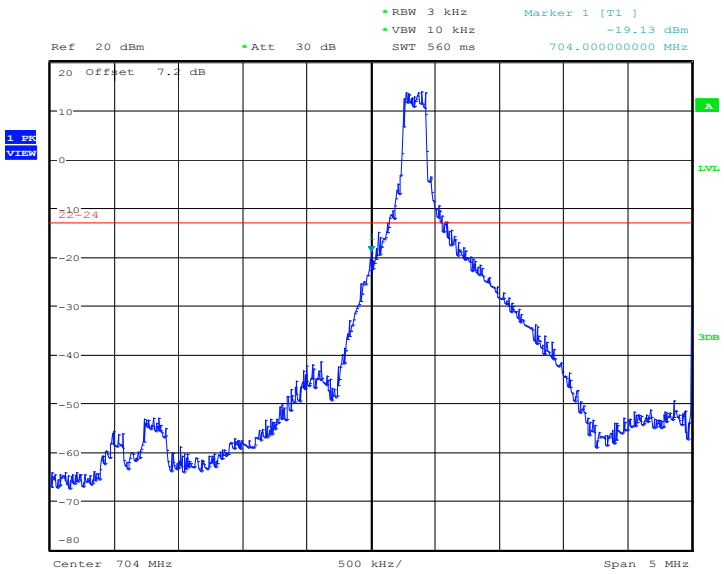
LTE band 17

OBW: 1RB-low_offset



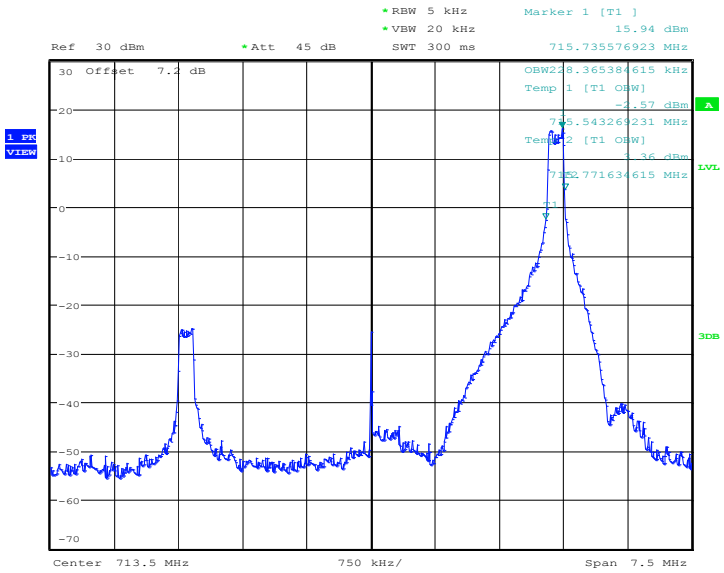
Date: 15.FEB.2017 23:19:20

LOW BAND EDGE BLOCK-1RB-low_offset



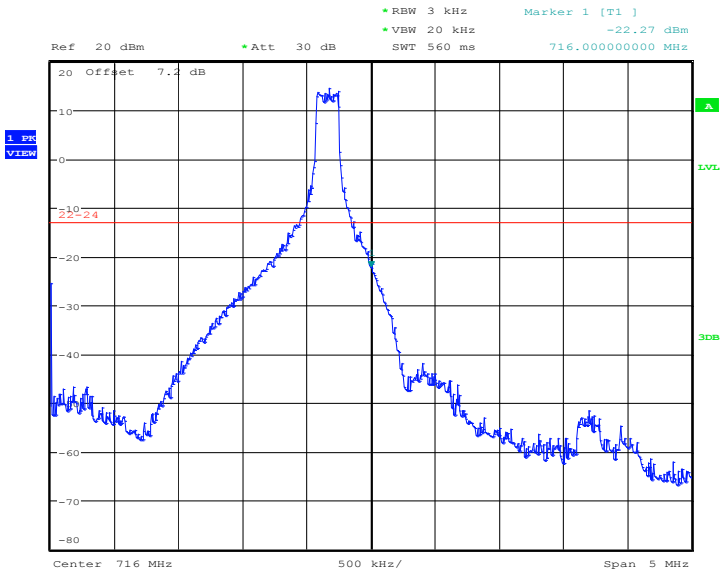
Date: 15.FEB.2017 23:20:36

OBW: 1RB-high_offset



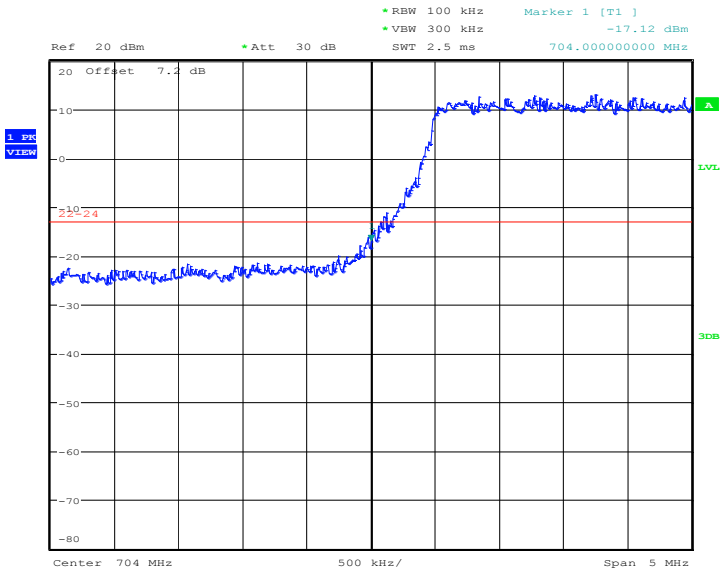
Date: 15.FEB.2017 23:24:11

HIGH BAND EDGE BLOCK-1RB-high_offset



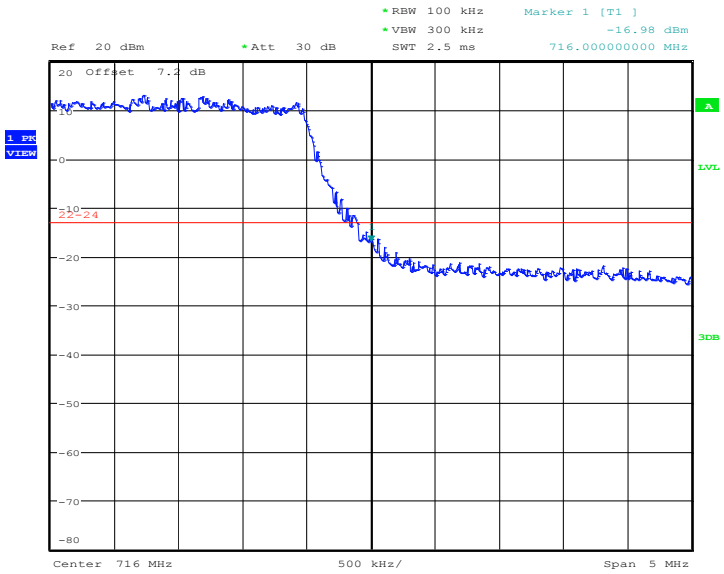
Date: 15.FEB.2017 23:21:42

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 23:26:26

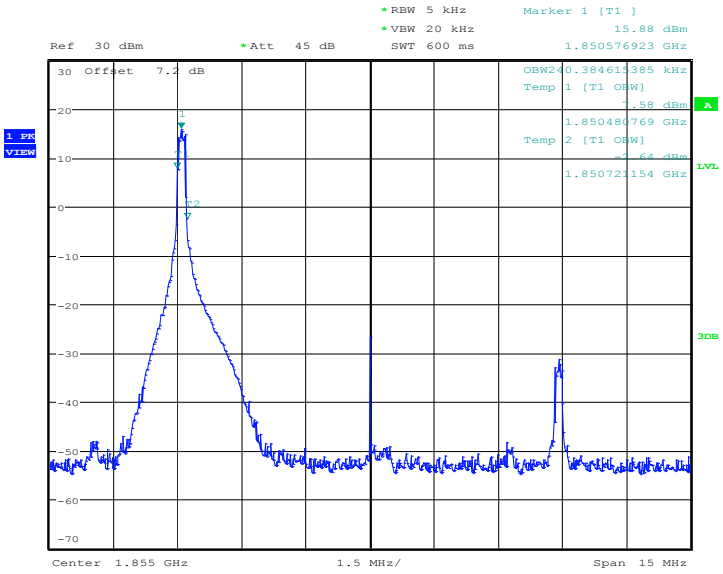
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 23:27:01

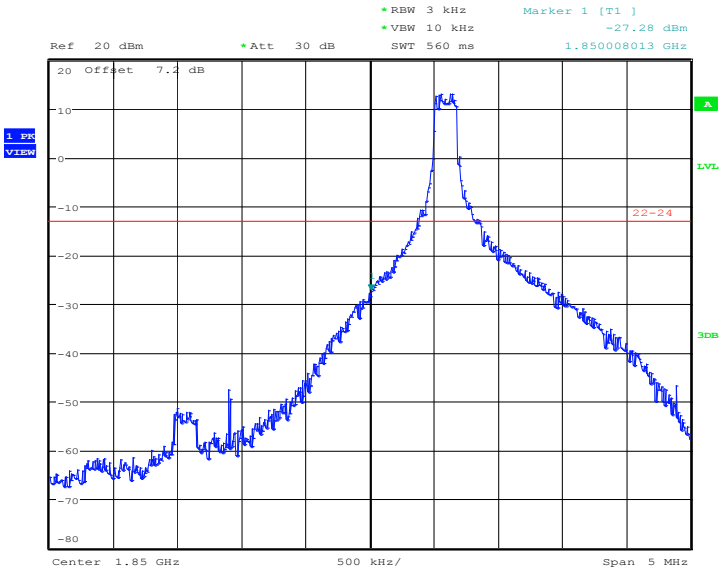
LTE band 25

OBW: 1RB-low_offset



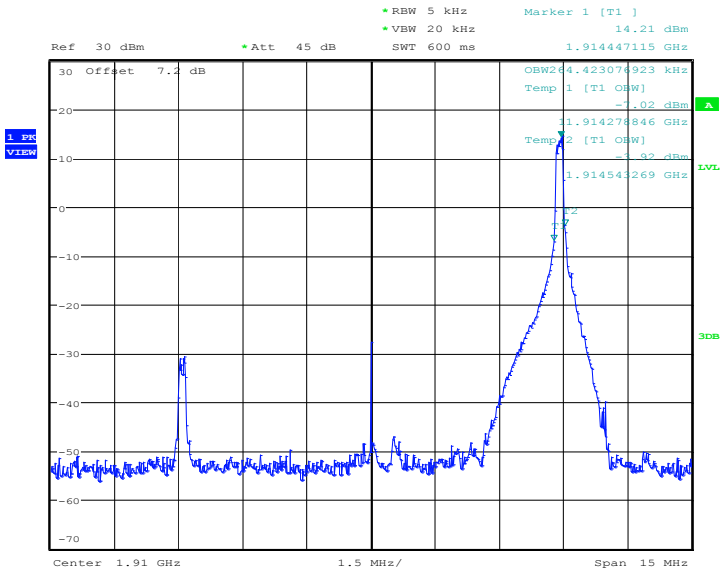
Date: 16.FEB.2017 00:03:35

LOW BAND EDGE BLOCK-1RB-low_offset



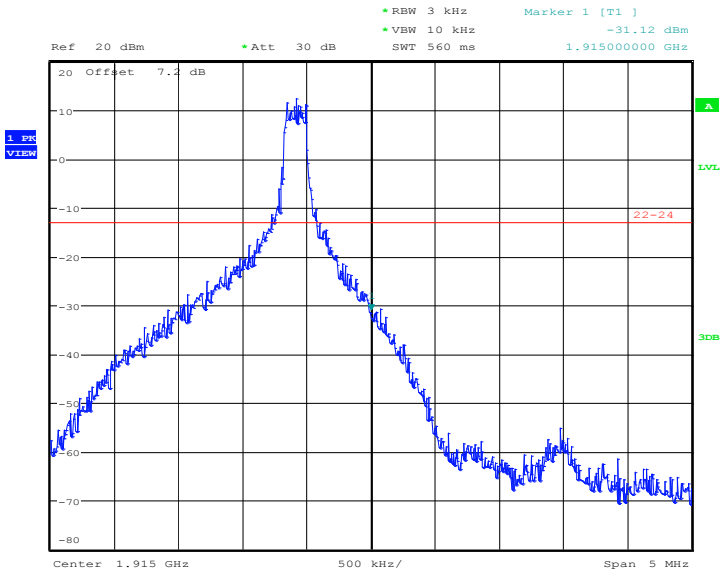
Date: 16.FEB.2017 00:07:36

OBW: 1RB-high_offset



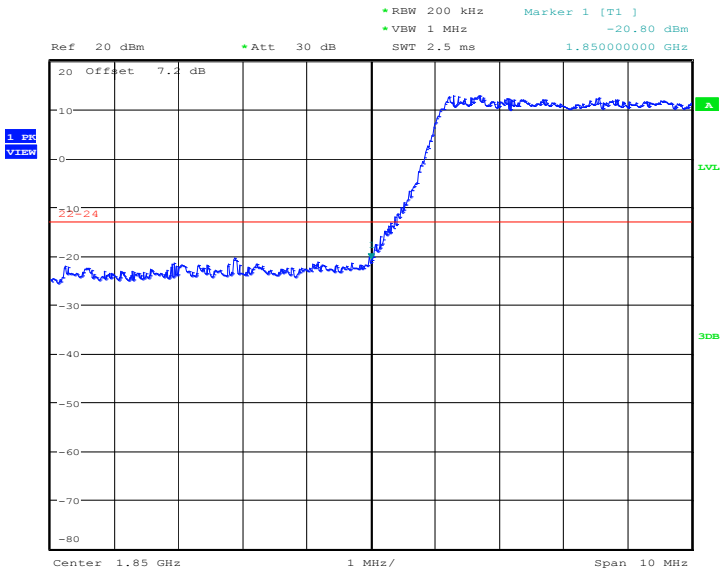
Date: 16.FEB.2017 00:04:40

HIGH BAND EDGE BLOCK-1RB-high_offset



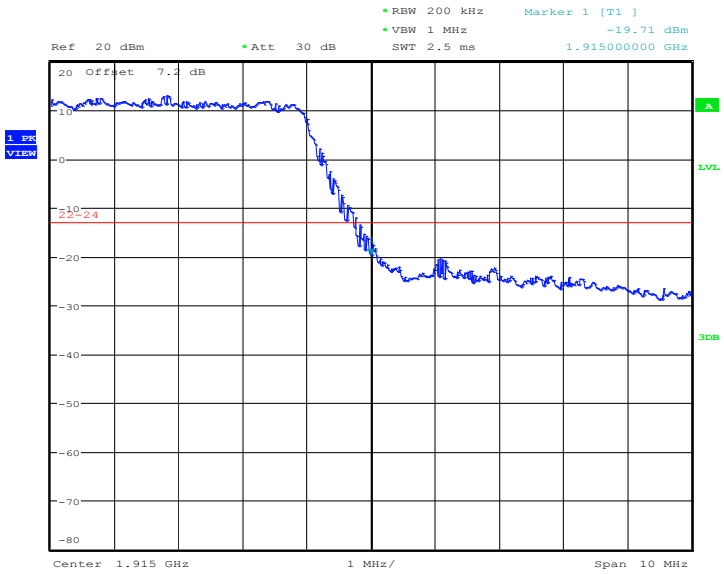
Date: 16.FEB.2017 00:06:53

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 16.FEB.2017 00:10:42

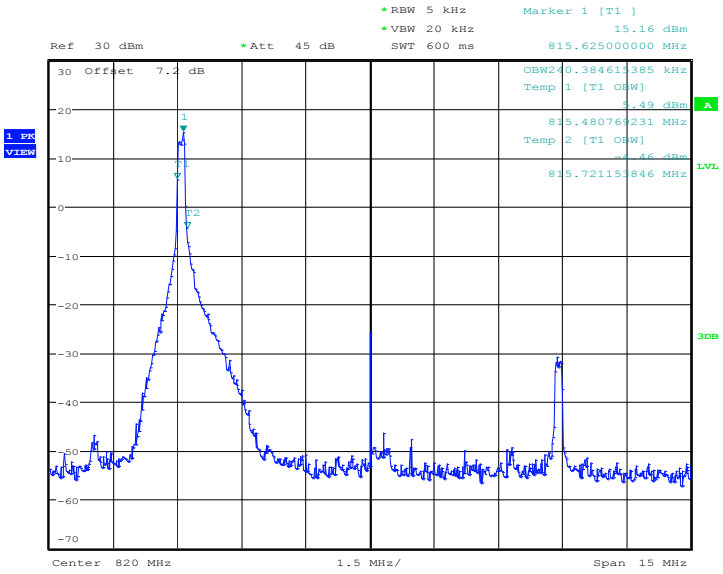
HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 16.FEB.2017 00:11:39

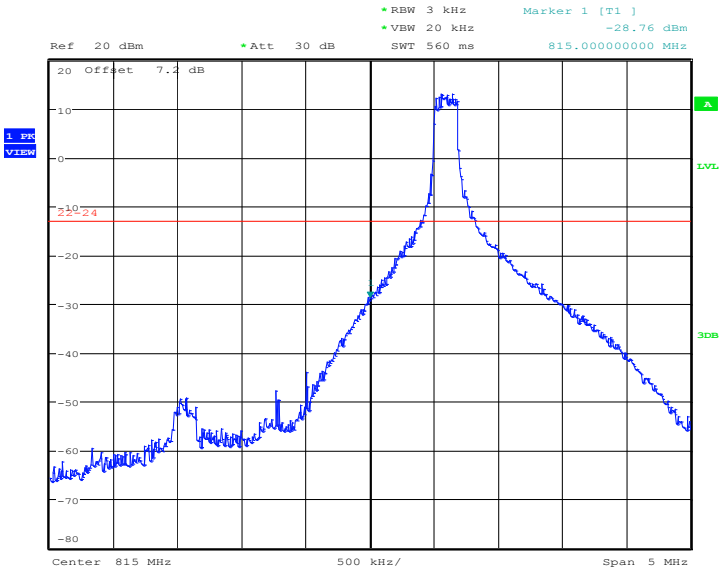
LTE band 26

OBW: 1RB-low_offset



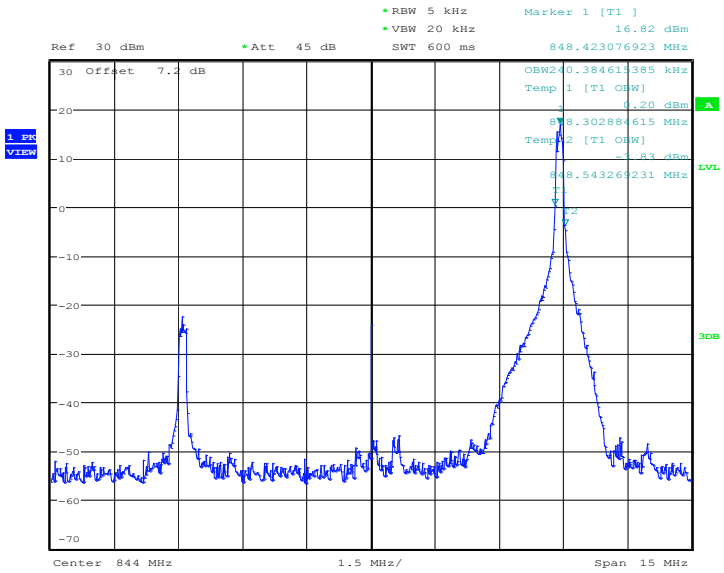
Date: 15.FEB.2017 23:57:34

LOW BAND EDGE BLOCK-1RB-low_offset



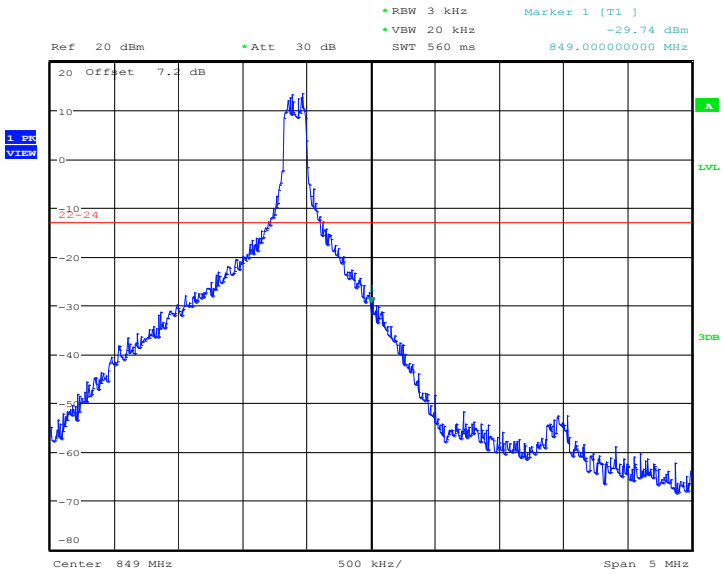
Date: 15.FEB.2017 23:56:04

OBW: 1RB-high_offset



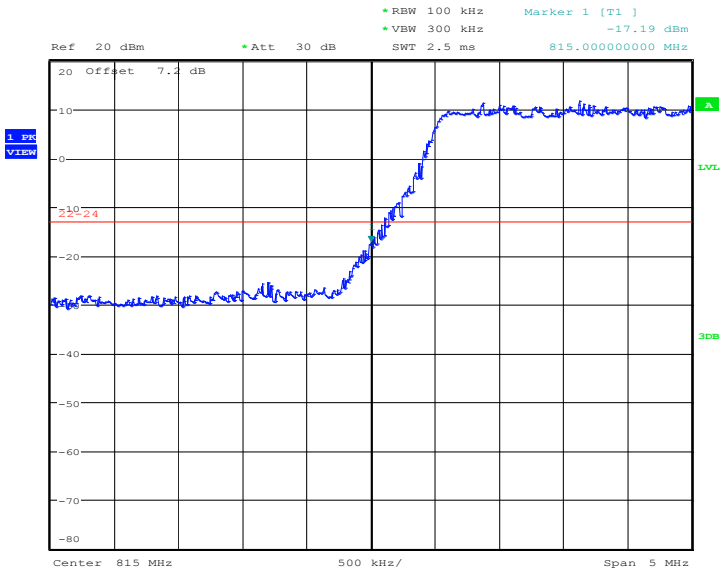
Date: 15.FEB.2017 23:58:22

HIGH BAND EDGE BLOCK-1RB-high_offset



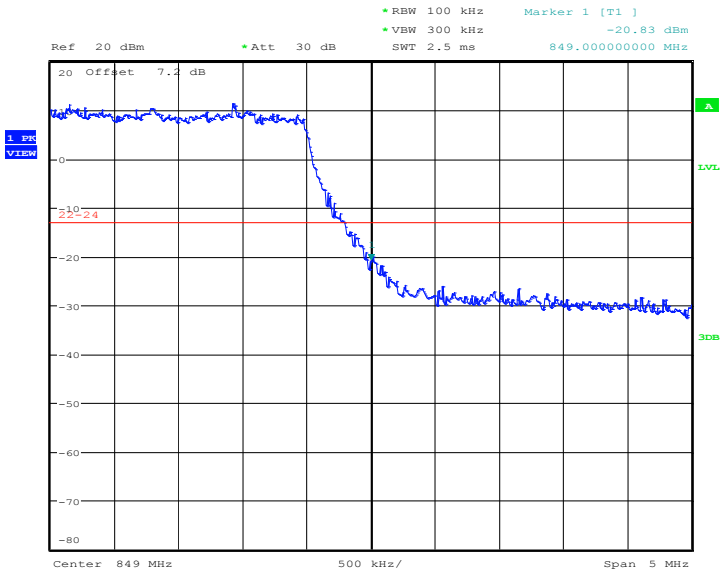
Date: 15.FEB.2017 23:54:55

LOW BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 23:51:59

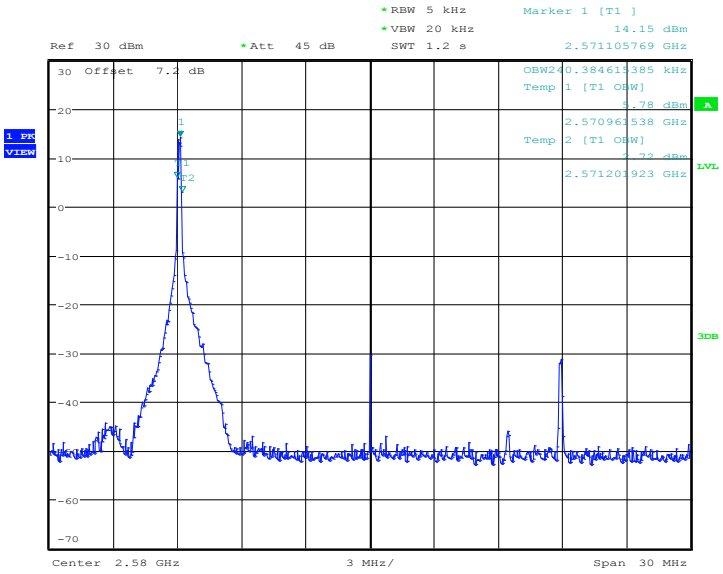
HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 15.FEB.2017 23:52:38

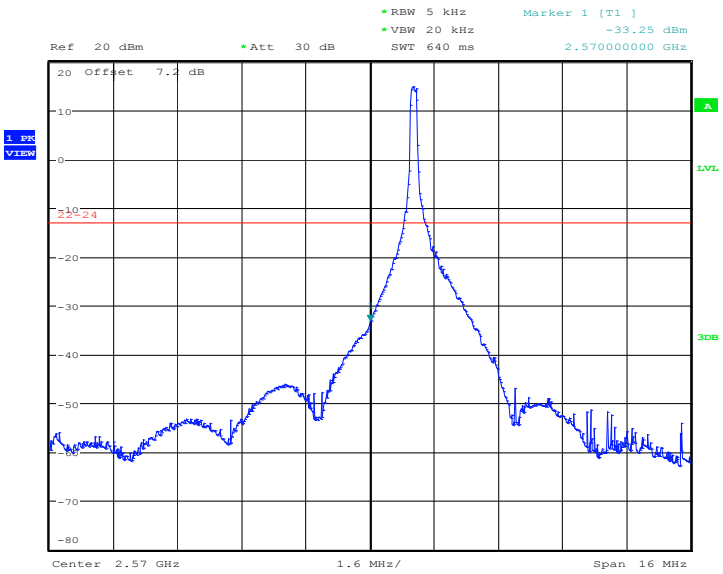
LTE band 38

OBW: 1RB-low_offset



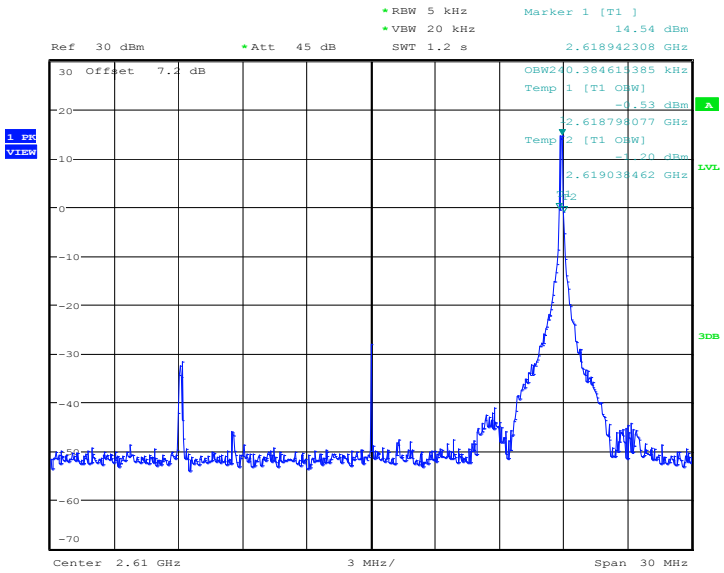
Date: 15.FEB.2017 19:35:30

LOW BAND EDGE BLOCK-1RB-low_offset



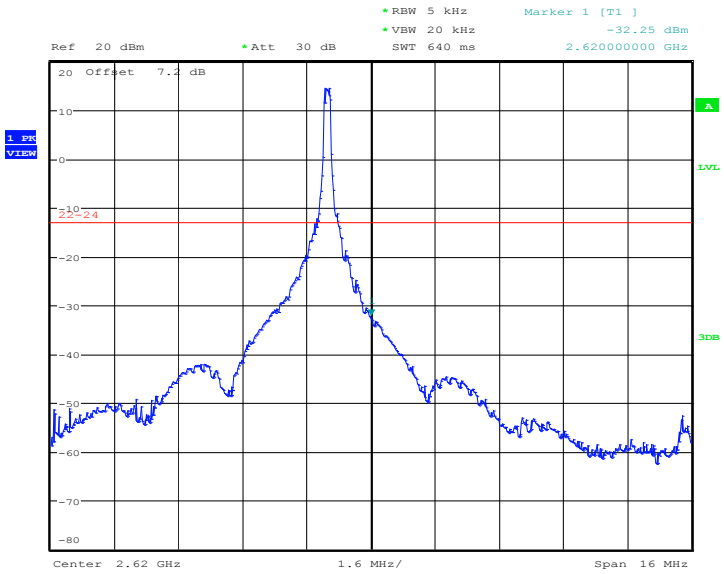
Date: 15.FEB.2017 19:39:08

OBW: 1RB-high_offset



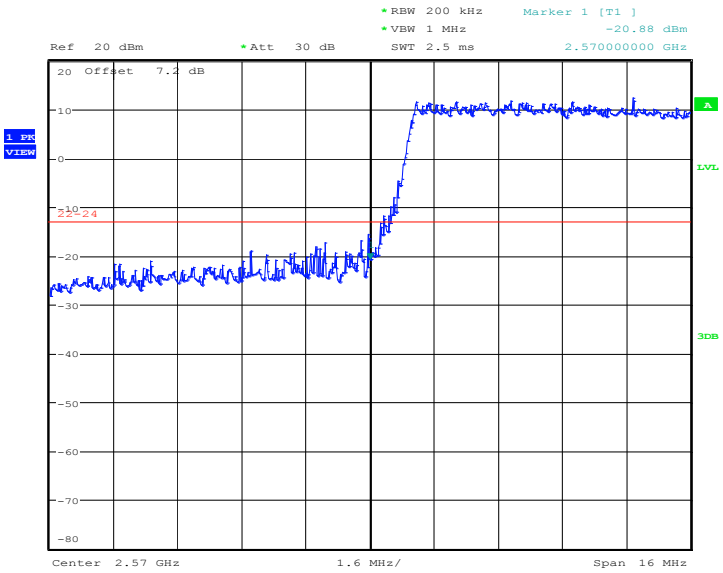
Date: 15.FEB.2017 19:41:39

HIGH BAND EDGE BLOCK-1RB-high_offset



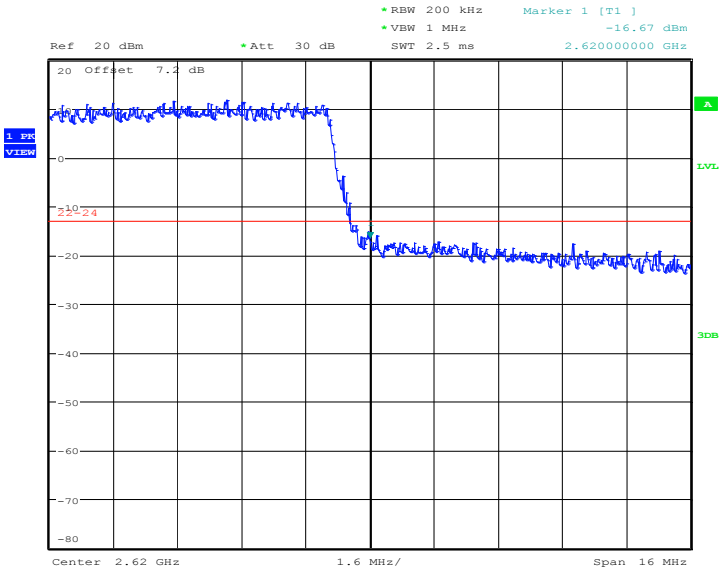
Date: 15.FEB.2017 19:45:59

LOW BAND EDGE BLOCK-20MHz-100%RB



Date: 15.FEB.2017 20:00:51

HIGH BAND EDGE BLOCK-20MHz-100%RB



Date: 15.FEB.2017 20:02:21

A.7 CONDUCTED SPURIOUS EMISSION

Reference

FCC: CFR Part 2.1057, 22.917, 24.238, 27.53(h).

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.

A. 7.2 Measurement Limit

Part 22.917, Part 24.238 and Part 27.53 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.

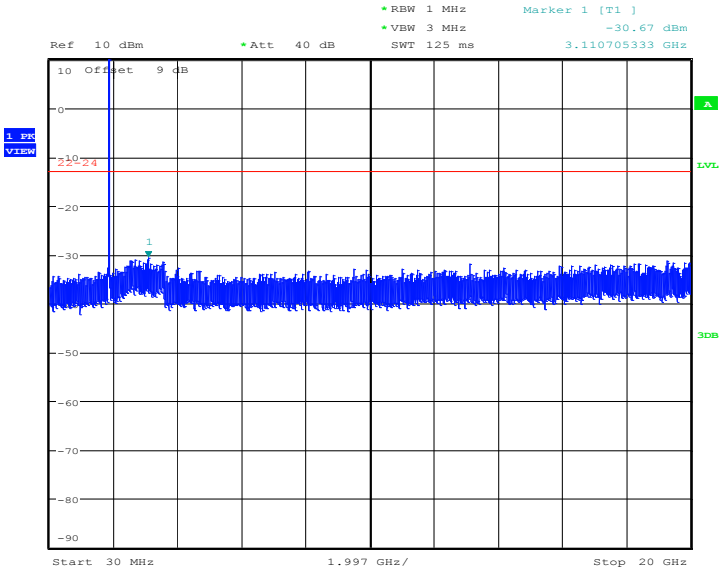
The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm.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

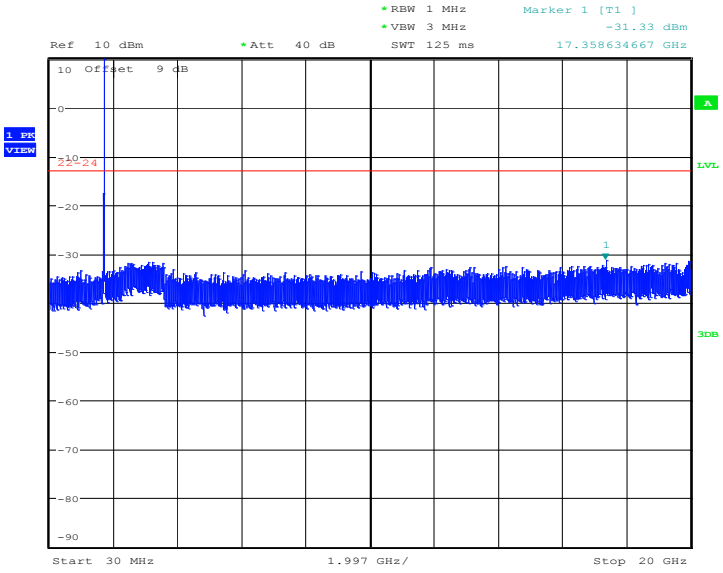
Spurious emission limit –13dBm.



Date: 16.FEB.2017 00:18:53

LTE band 4: 30MHz – 20GHz

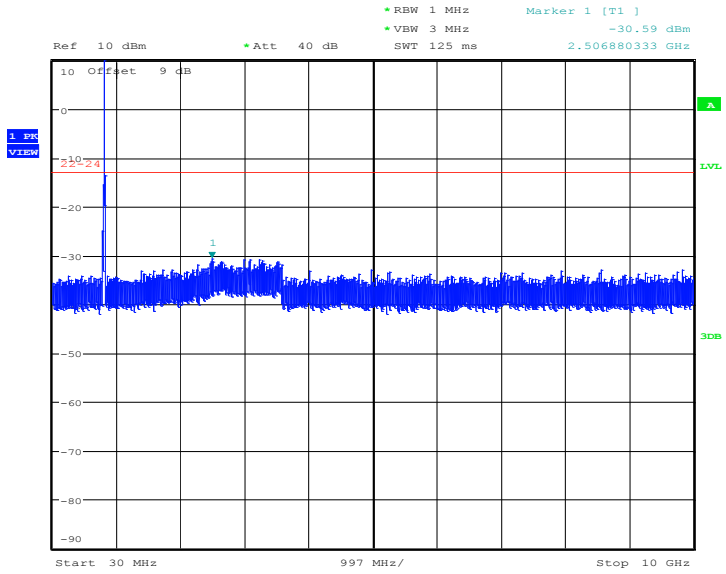
Spurious emission limit –13dBm.



Date: 16.FEB.2017 00:19:35

LTE band 5: 30MHz – 10GHz

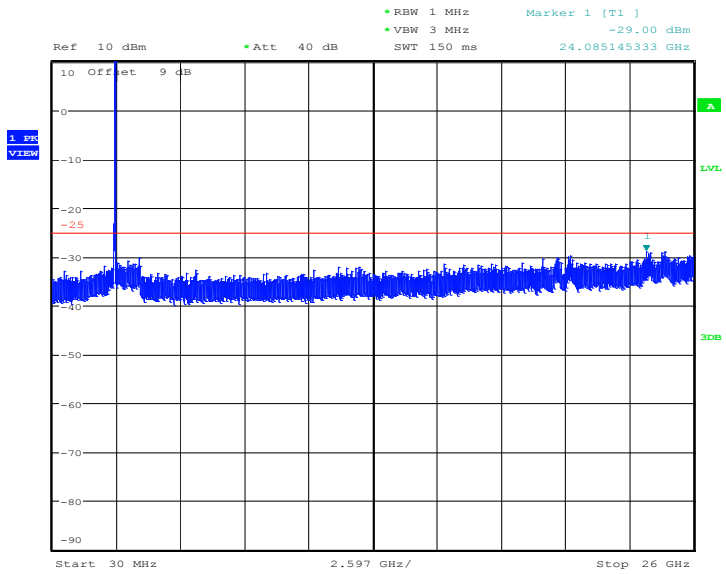
Spurious emission limit –13dBm.



Date: 16.FEB.2017 00:20:28

LTE band 7: 30MHz – 26GHz

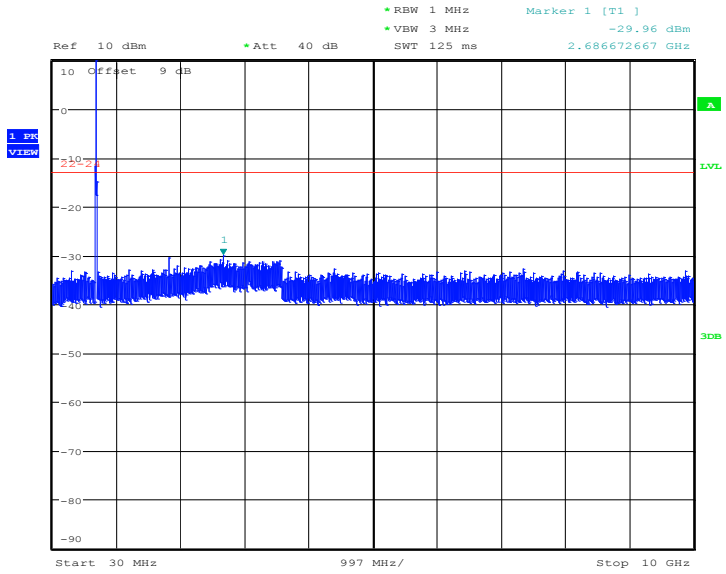
Spurious emission limit –13dBm.



Date: 4.APR.2017 21:59:14

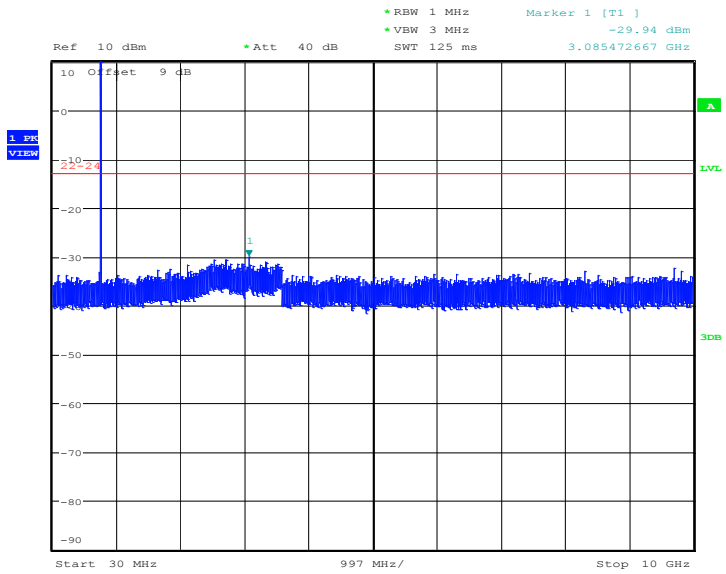
LTE band 12: 30MHz – 10GHz

Spurious emission limit –13dBm.



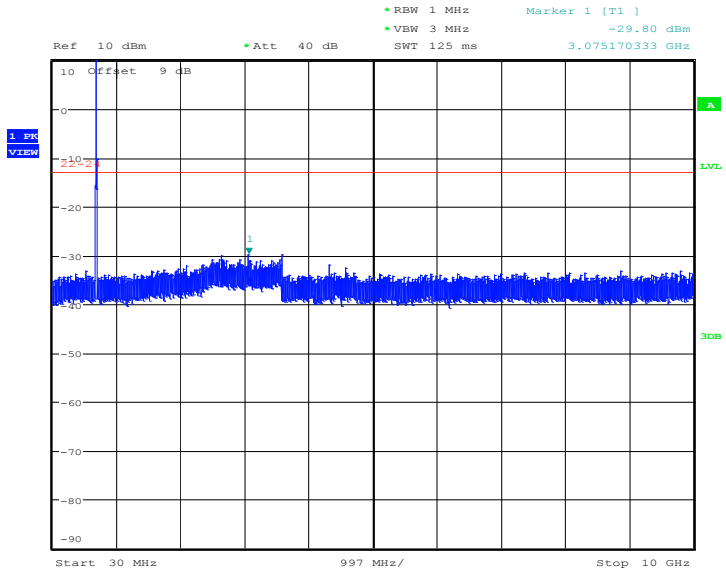
LTE band 13: 30MHz – 10GHz

Spurious emission limit –13dBm.



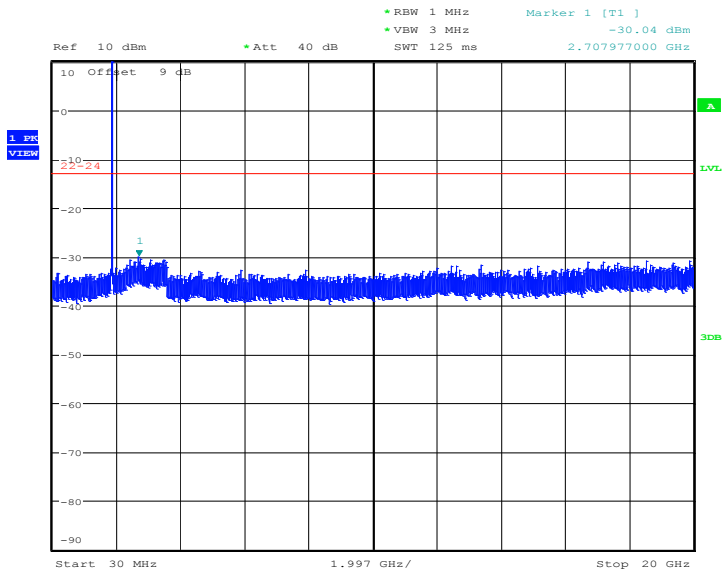
LTE band 17: 30MHz – 10GHz

Spurious emission limit –13dBm.



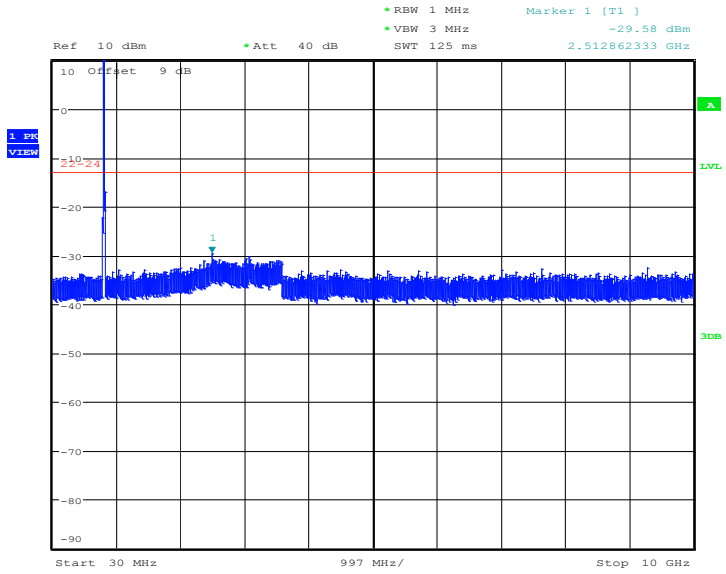
LTE band 25: 30MHz – 20GHz

Spurious emission limit –13dBm.



LTE band 26: 30MHz – 10GHz

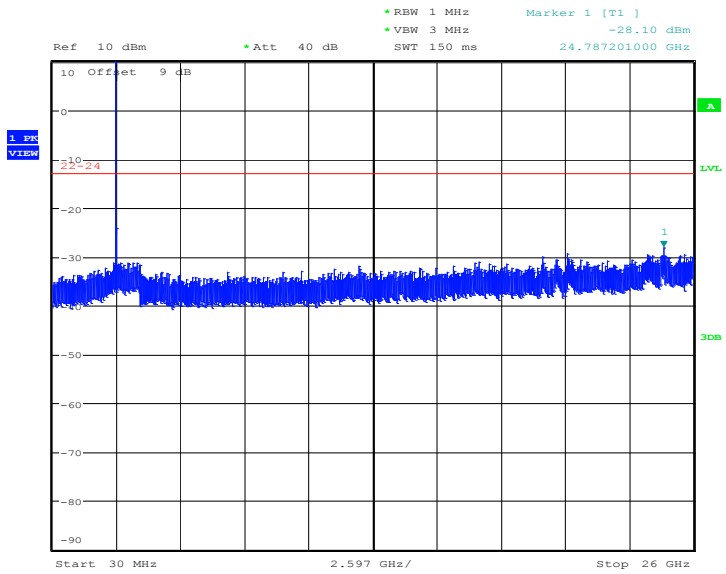
Spurious emission limit –13dBm.



Date: 16.FEB.2017 00:30:09

LTE band 38: 30MHz – 26GHz

Spurious emission limit –13dBm.



Date: 15.FEB.2017 19:29:15

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 ≥ 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)	
1880.0	QPSK	16QAM
	6.56	7.48

LTE band 4, 20MHz

Frequency(MHz)	PAPR(dB)	
1732.5	QPSK	16QAM
	6.65	7.55

LTE band 5, 10MHz

Frequency(MHz)	PAPR(dB)	
836.5	QPSK	16QAM
	6.46	7.48

LTE band 7, 20MHz

Frequency(MHz)	PAPR(dB)	
2510.0	QPSK	16QAM
	6.77	7.53

LTE band 12,10MHz

Frequency(MHz)	PAPR(dB)	
707.5	QPSK	16QAM
	6.38	7.36

LTE band 13,10MHz

Frequency(MHz)	PAPR(dB)	
782.0	QPSK	16QAM
	6.65	7.24

LTE band 17, 10MHz

Frequency(MHz)	PAPR(dB)	
710.0	QPSK	16QAM
	6.52	7.35

LTE band 25, 20MHz

Frequency(MHz)	PAPR(dB)	
1882.5	QPSK	16QAM
	6.47	7.59

LTE band 26, 15MHz

Frequency(MHz)	PAPR(dB)	
831.5	QPSK	16QAM
	6.72	7.48

LTE band 38, 10MHz

Frequency(MHz)	PAPR(dB)	
2595.0	QPSK	16QAM
	6.69	7.44

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