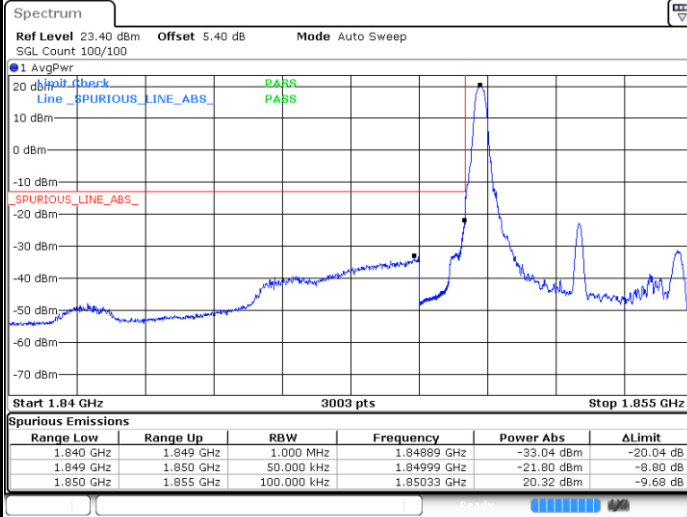




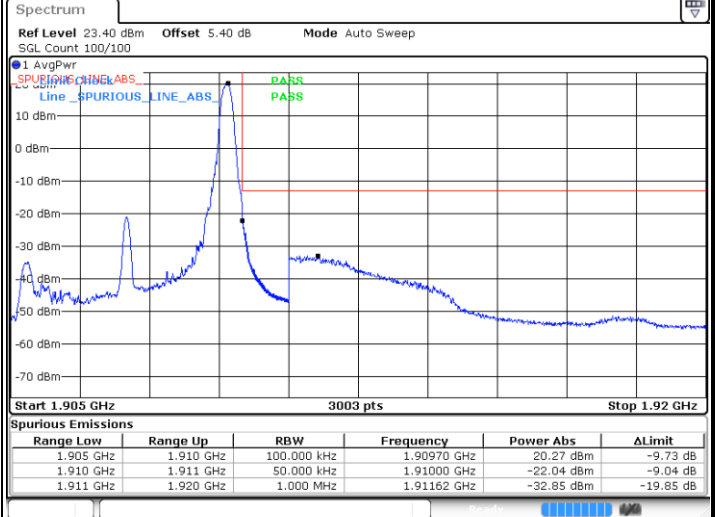
LTE Band 2 / 5MHz / 16QAM

Lowest Band Edge / 1RB



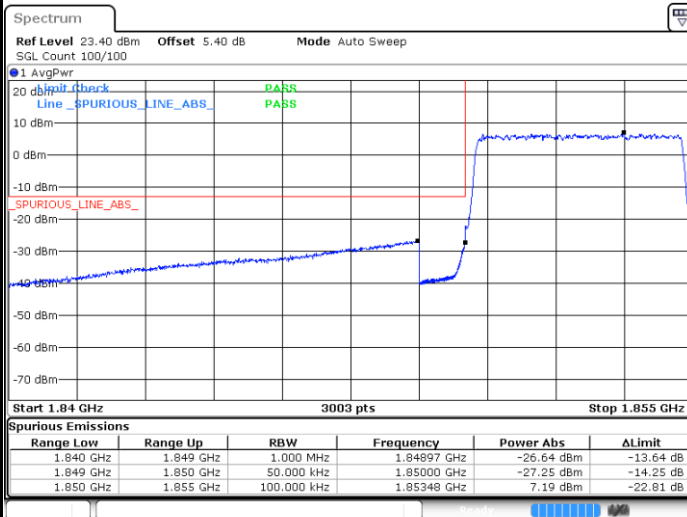
Date: 19.OCT.2019 10:23:29

Highest Band Edge / 1 RB



Date: 19.OCT.2019 10:32:59

Lowest Band Edge / Full RB



Date: 19.OCT.2019 10:25:44

Highest Band Edge / Full RB

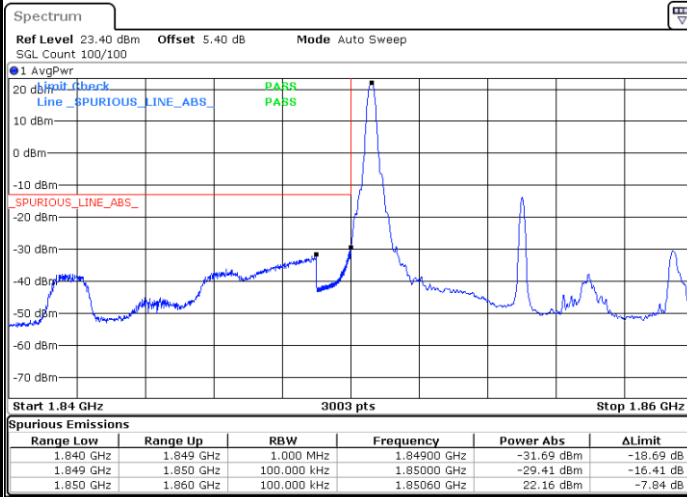


Date: 19.OCT.2019 10:35:14



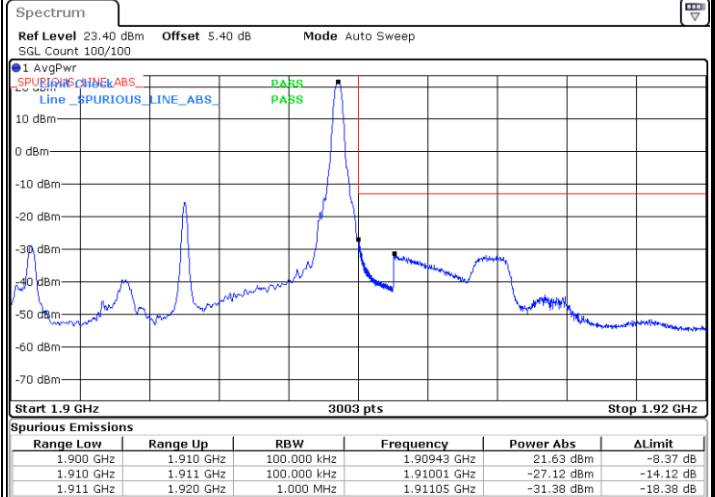
LTE Band 2 / 10MHz / QPSK

Lowest Band Edge / 1 RB



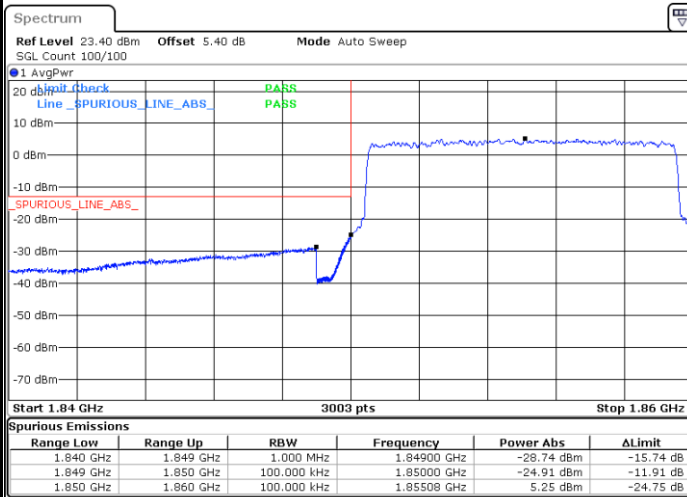
Date: 19.OCT.2019 10:38:51

Highest Band Edge / 1 RB



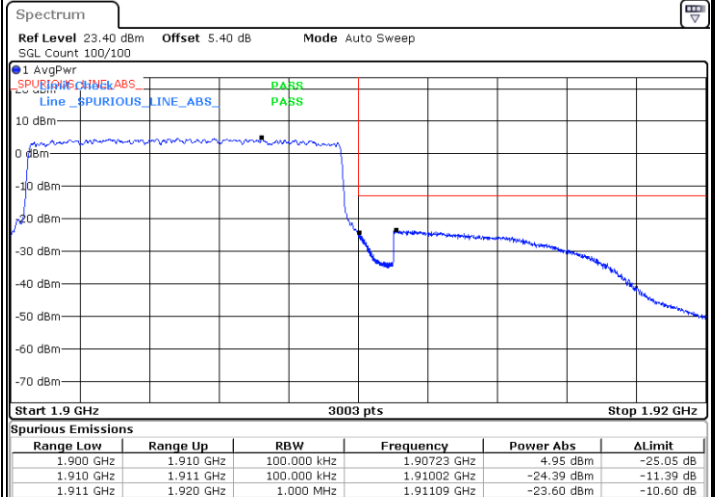
Date: 19.OCT.2019 10:48:21

Lowest Band Edge / Full RB



Date: 19.OCT.2019 10:41:06

Highest Band Edge / Full RB

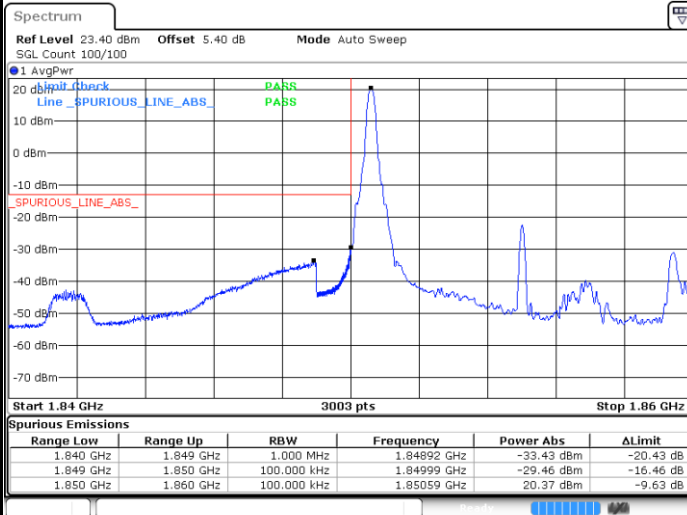


Date: 19.OCT.2019 10:50:36



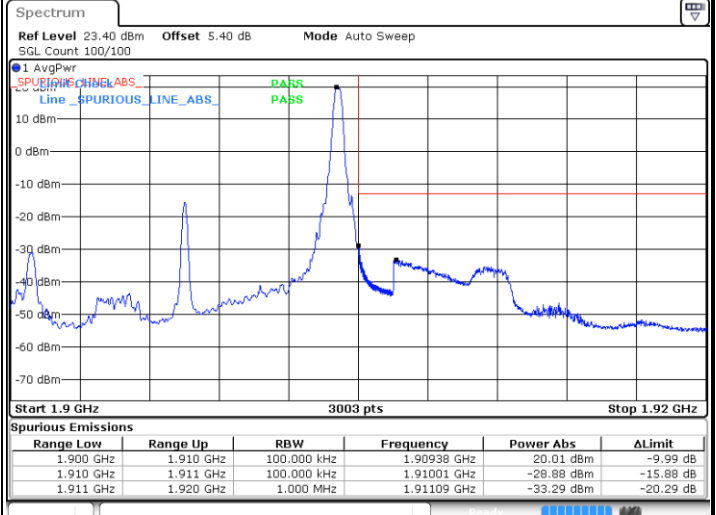
LTE Band 2 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



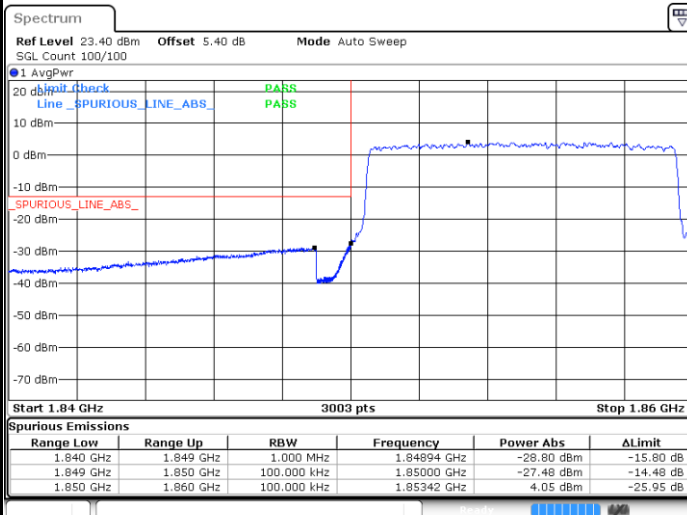
Date: 19.OCT.2019 10:39:59

Highest Band Edge / 1 RB



Date: 19.OCT.2019 10:49:29

Lowest Band Edge / Full RB



Date: 19.OCT.2019 10:42:14

Highest Band Edge / Full RB



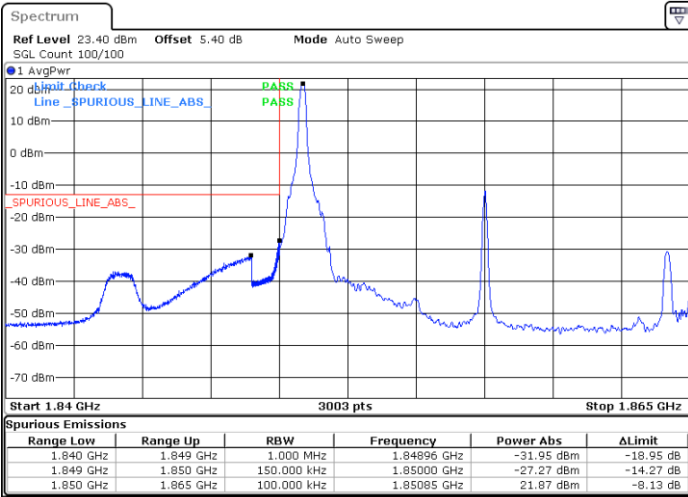
Date: 19.OCT.2019 10:51:44



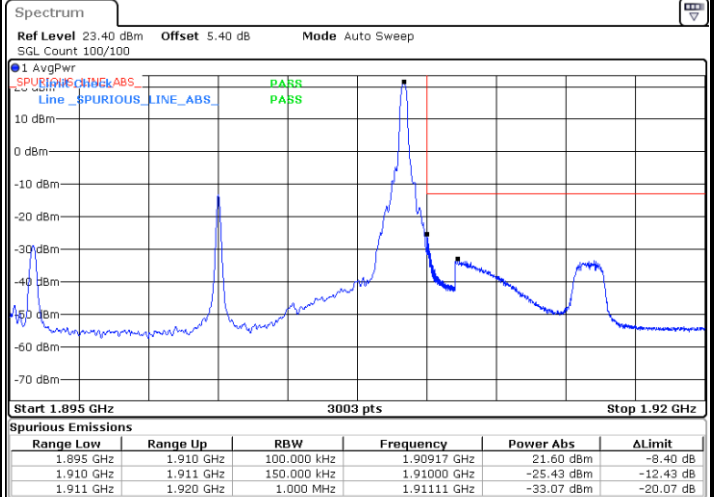
LTE Band 2 / 15MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



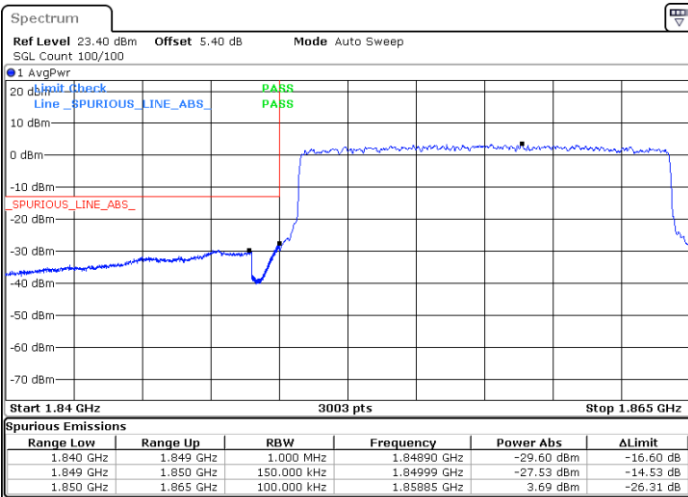
Date: 19.OCT.2019 10:55:21



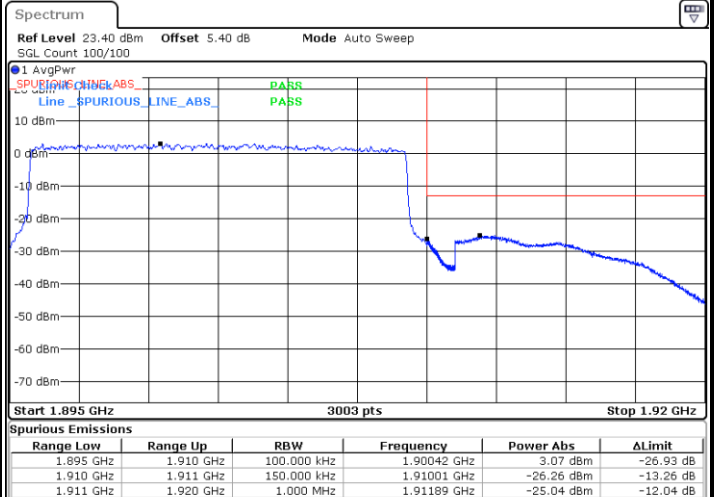
Date: 19.OCT.2019 11:04:51

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 19.OCT.2019 10:57:36

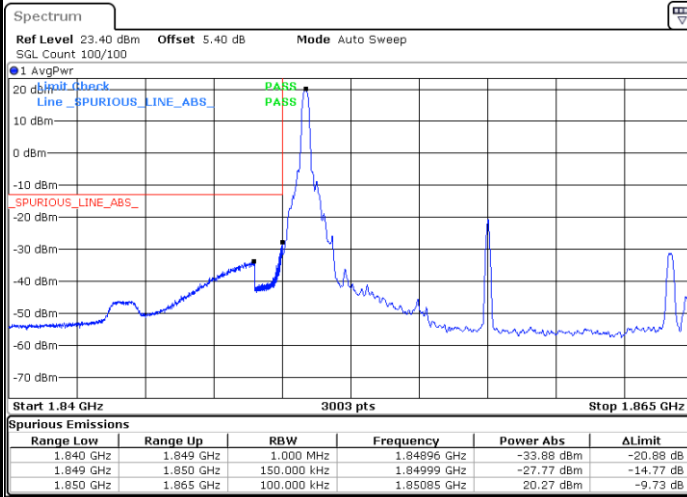


Date: 19.OCT.2019 11:07:06



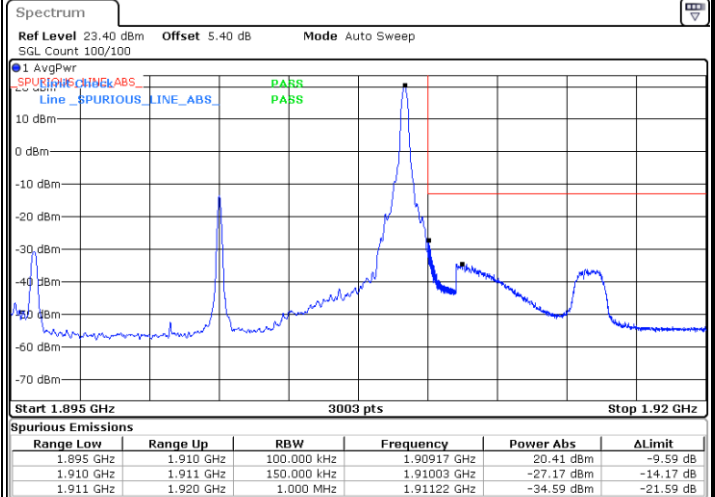
LTE Band 2 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



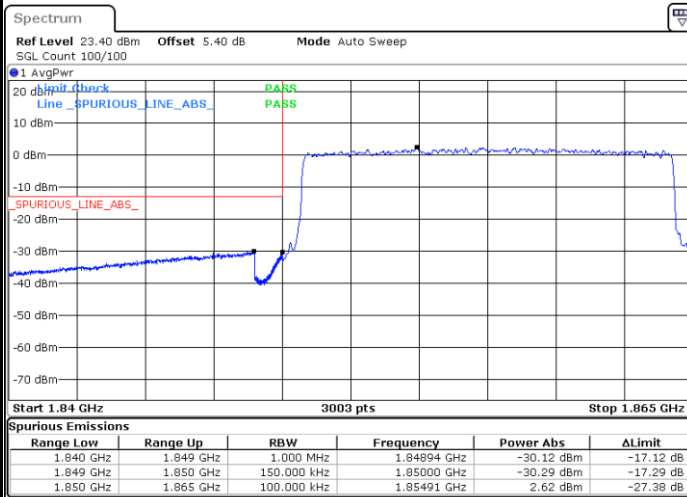
Date: 19.OCT.2019 10:56:28

Highest Band Edge / 1 RB



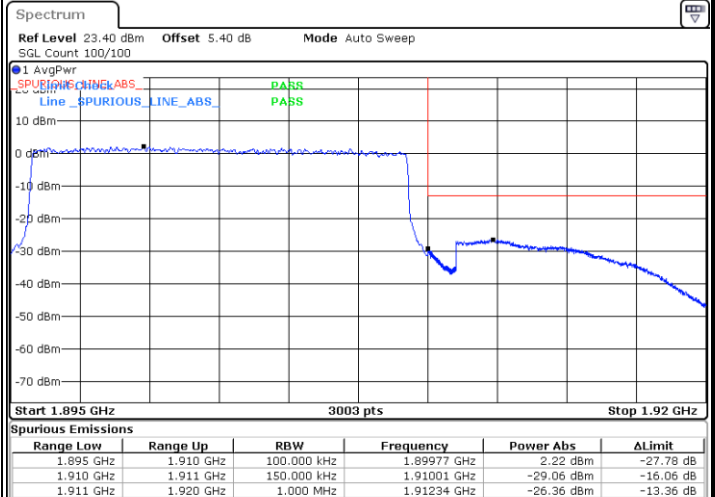
Date: 19.OCT.2019 11:05:59

Lowest Band Edge / Full RB



Date: 19.OCT.2019 10:58:44

Highest Band Edge / Full RB



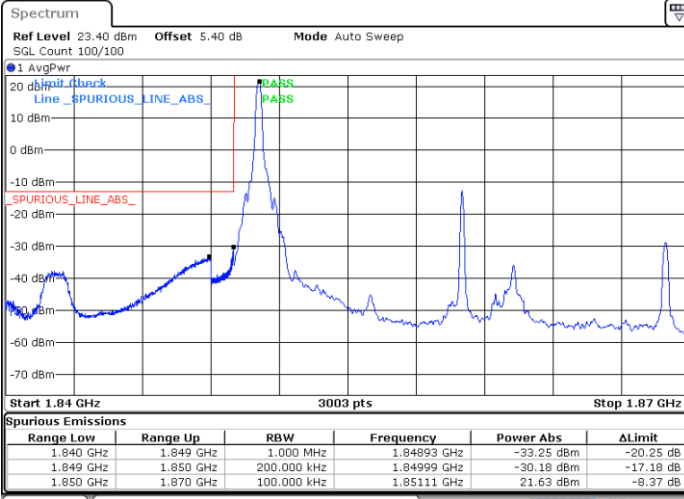
Date: 19.OCT.2019 11:08:14



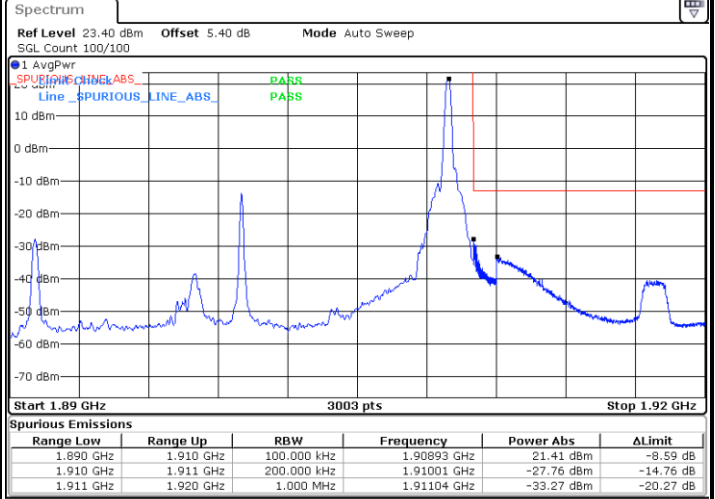
LTE Band 2 / 20MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



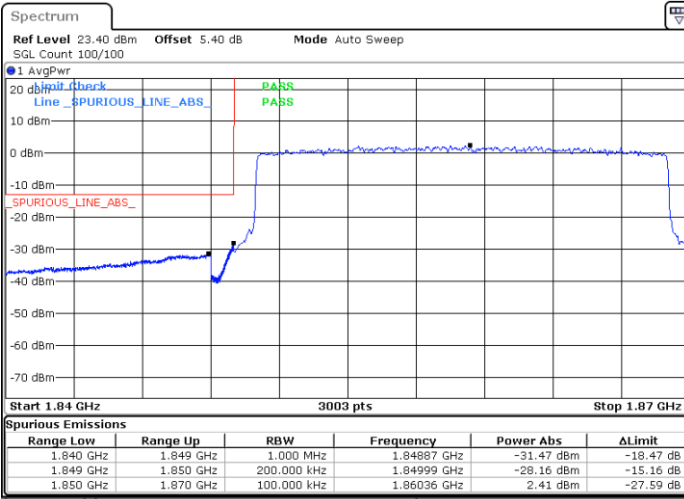
Date: 19.OCT.2019 11:11:51



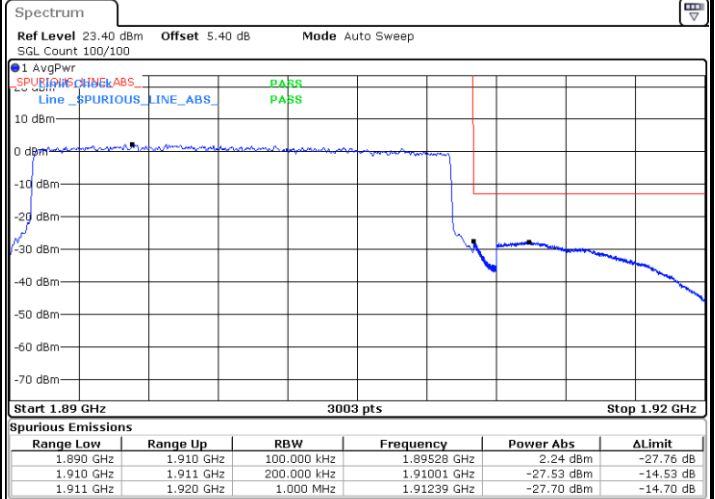
Date: 19.OCT.2019 11:21:20

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 19.OCT.2019 11:14:06

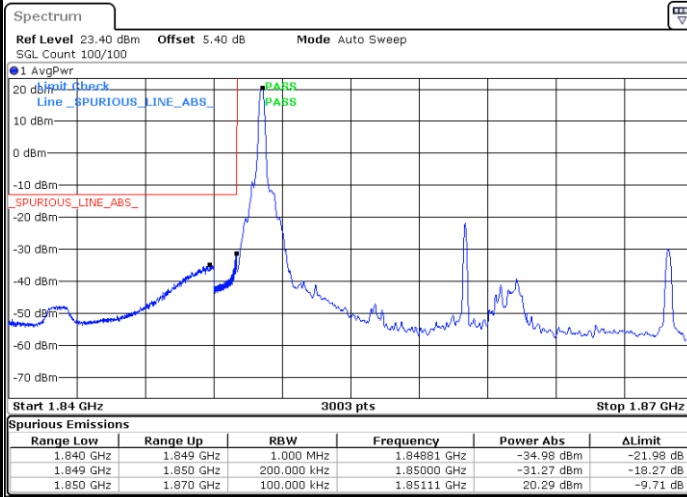


Date: 19.OCT.2019 11:23:35



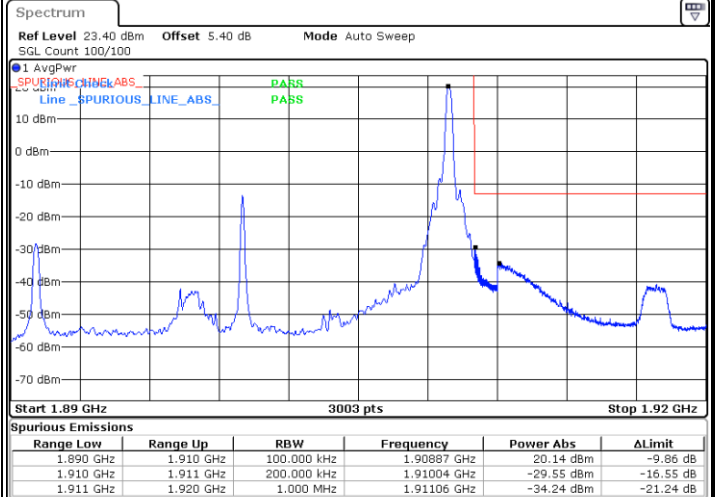
LTE Band 2 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



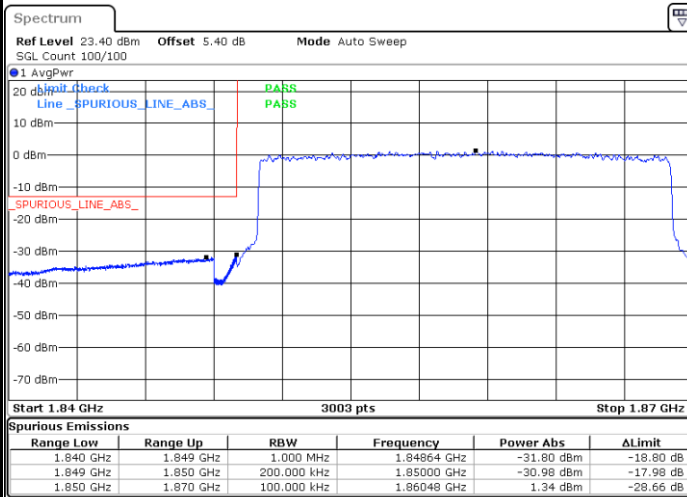
Date: 19.OCT.2019 11:12:59

Highest Band Edge / 1 RB



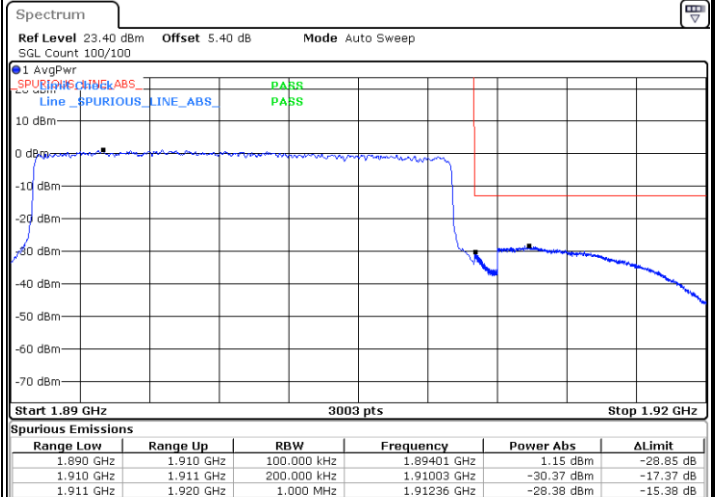
Date: 19.OCT.2019 11:22:28

Lowest Band Edge / Full RB



Date: 19.OCT.2019 11:15:14

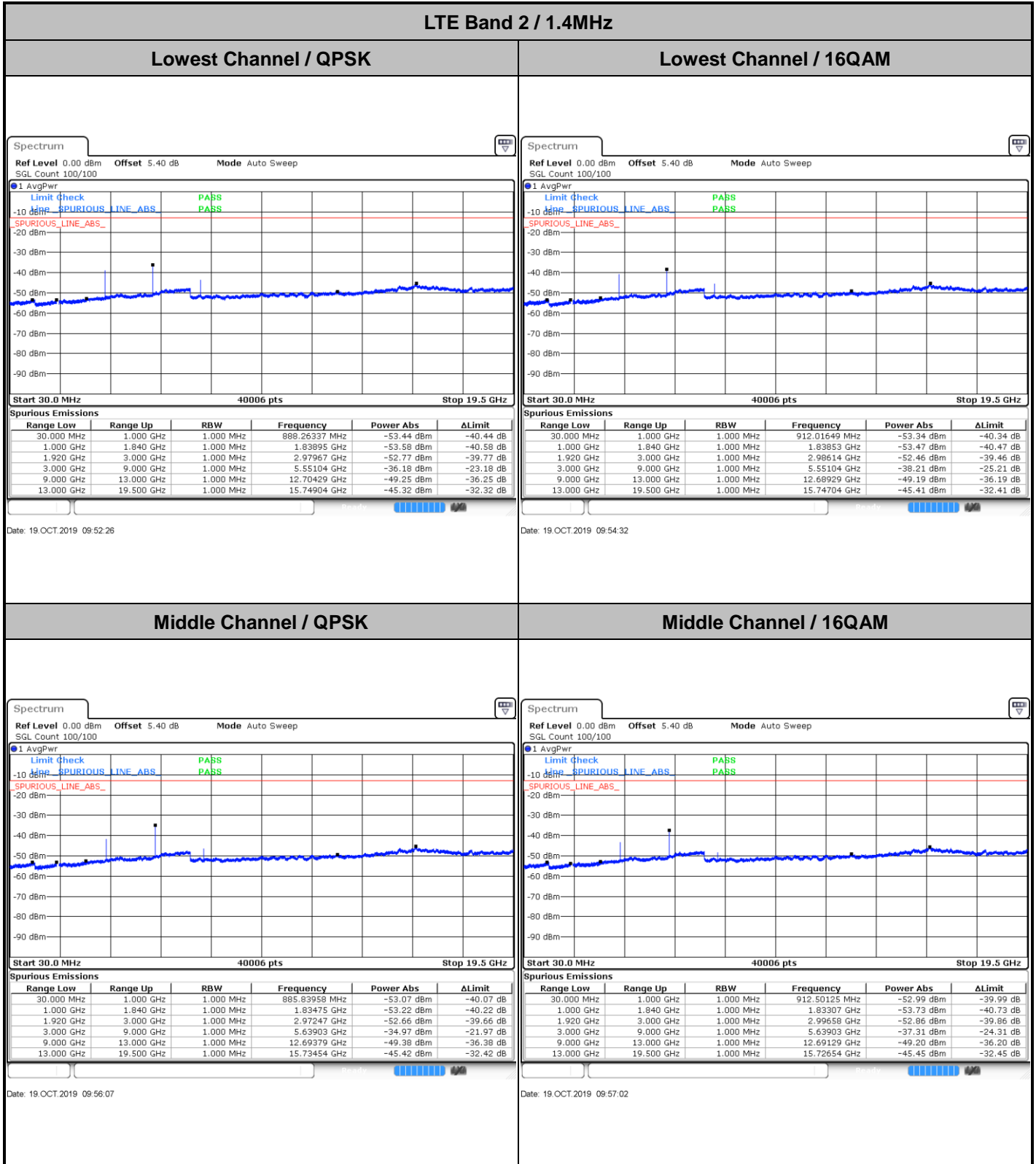
Highest Band Edge / Full RB



Date: 19.OCT.2019 11:24:43



# Conducted Spurious Emission



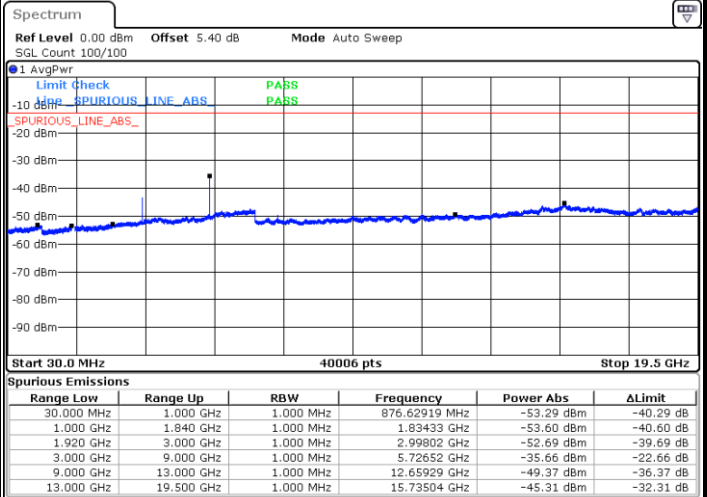
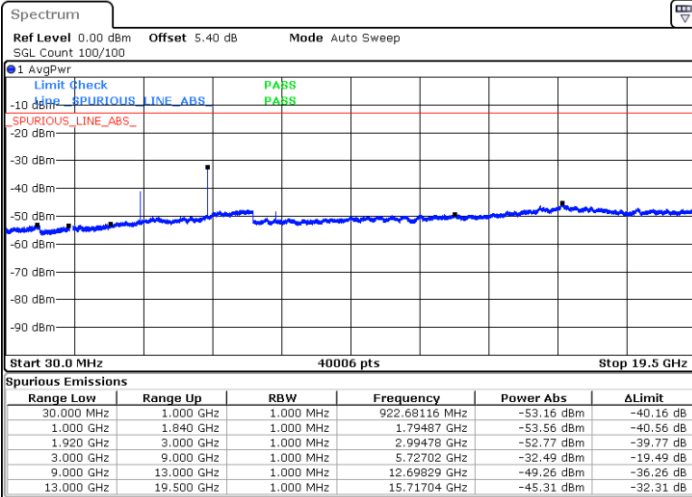




LTE Band 2 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



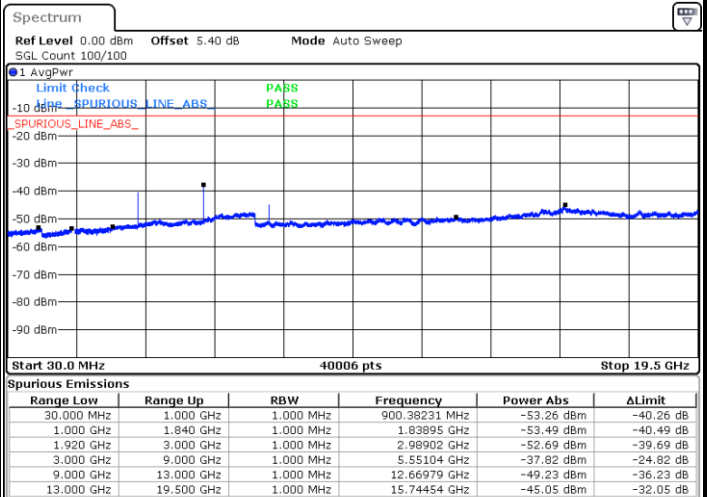
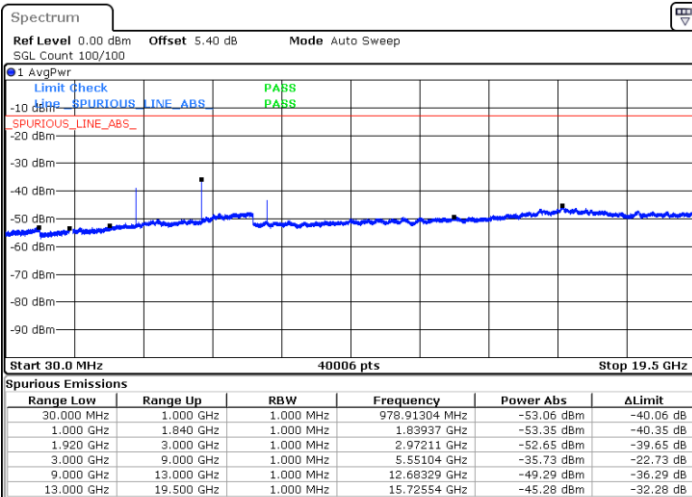
Date: 19.OCT.2019 10:03:07

Date: 19.OCT.2019 10:04:02

LTE Band 2 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 19.OCT.2019 10:10:07

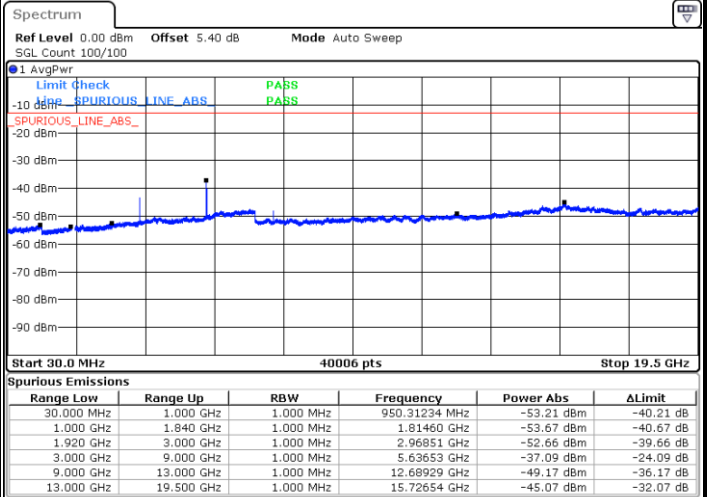
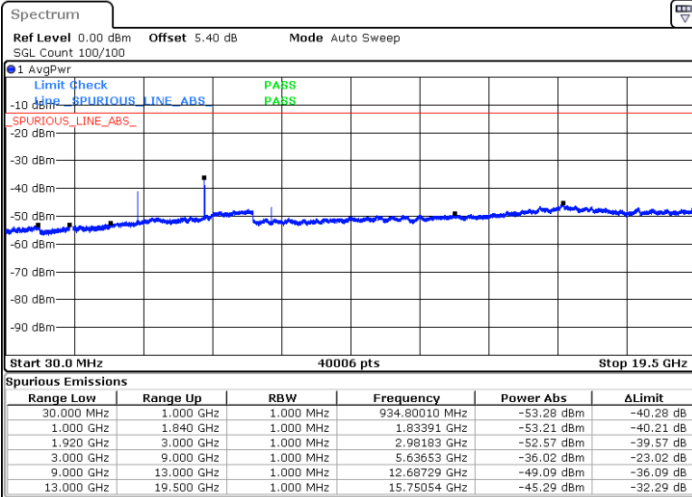
Date: 19.OCT.2019 10:11:02



LTE Band 2 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

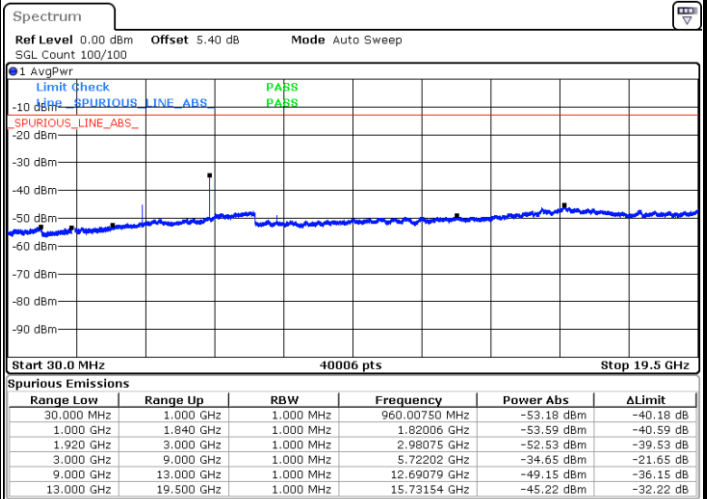
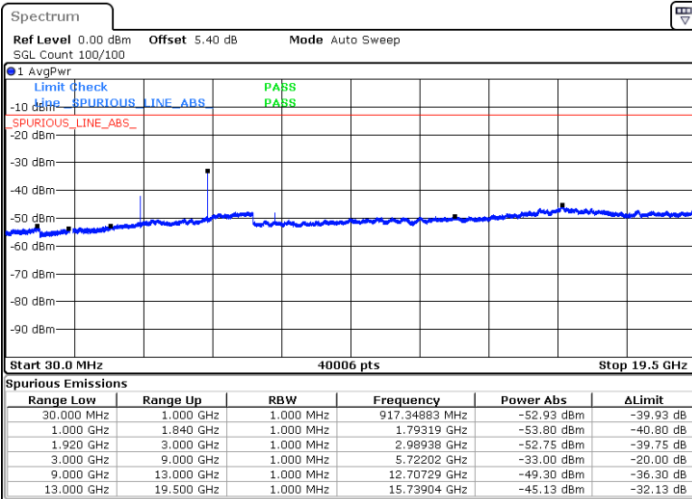


Date: 19.OCT.2019 10:12:37

Date: 19.OCT.2019 10:13:32

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 19.OCT.2019 10:19:37

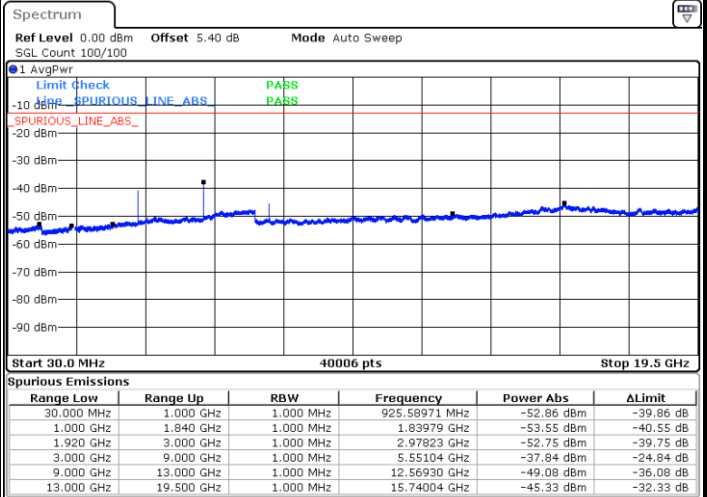
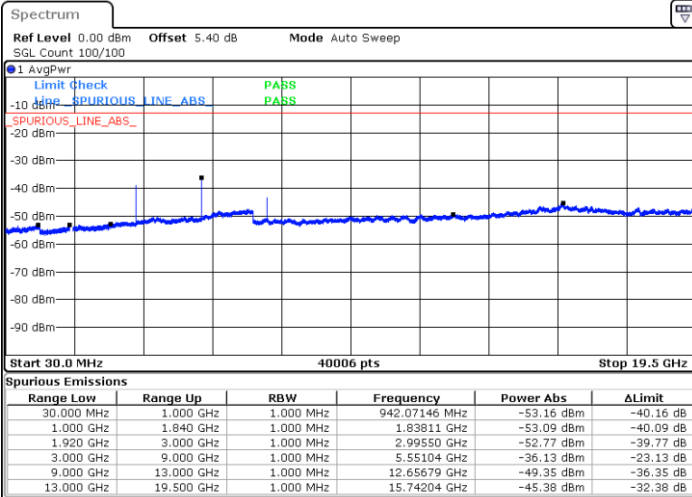
Date: 19.OCT.2019 10:20:32



LTE Band 2 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

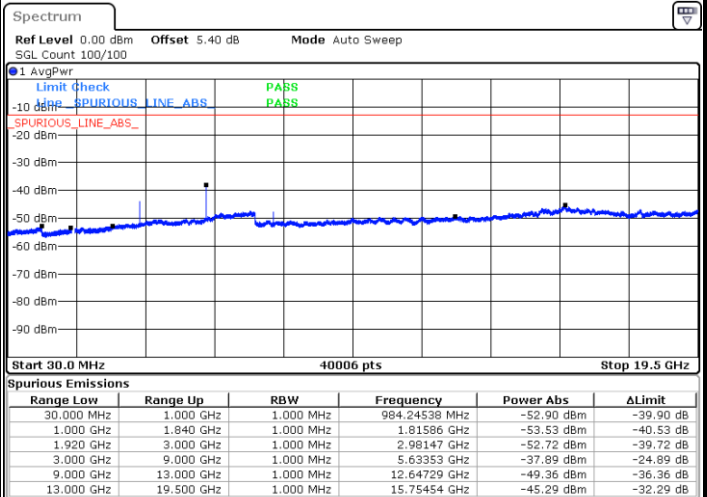
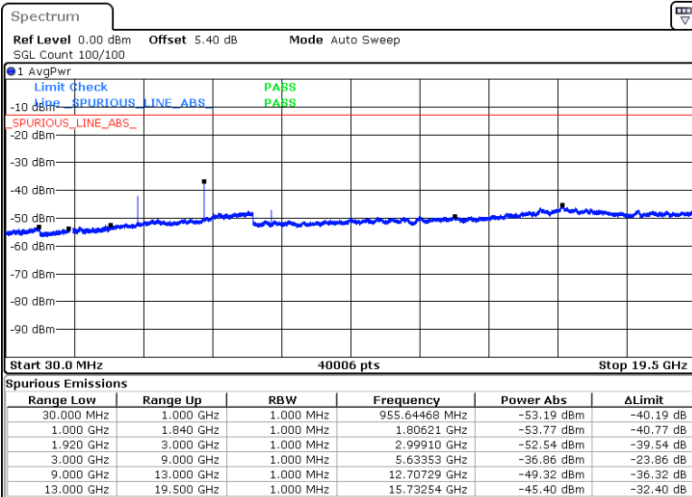


Date: 19.OCT.2019 10:26:37

Date: 19.OCT.2019 10:27:32

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 19.OCT.2019 10:29:07

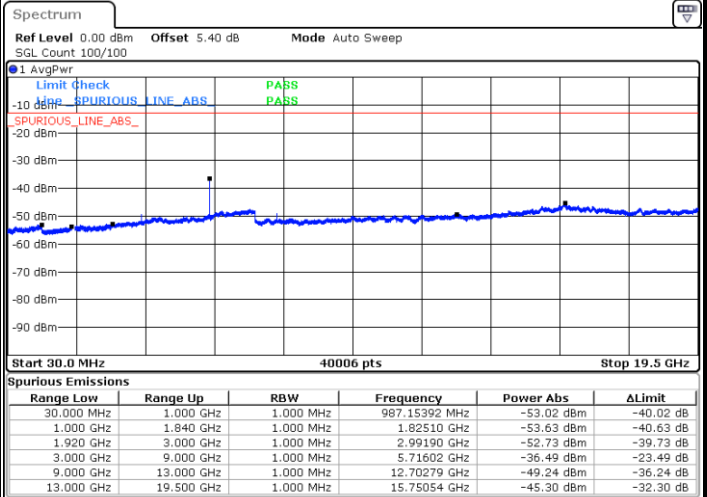
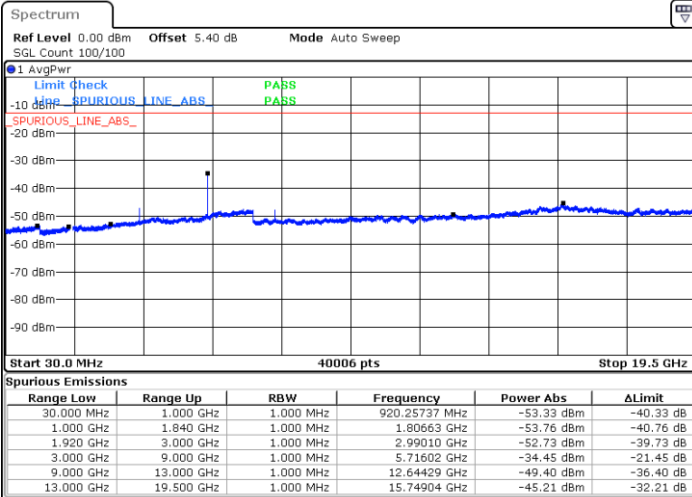
Date: 19.OCT.2019 10:30:02



LTE Band 2 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM



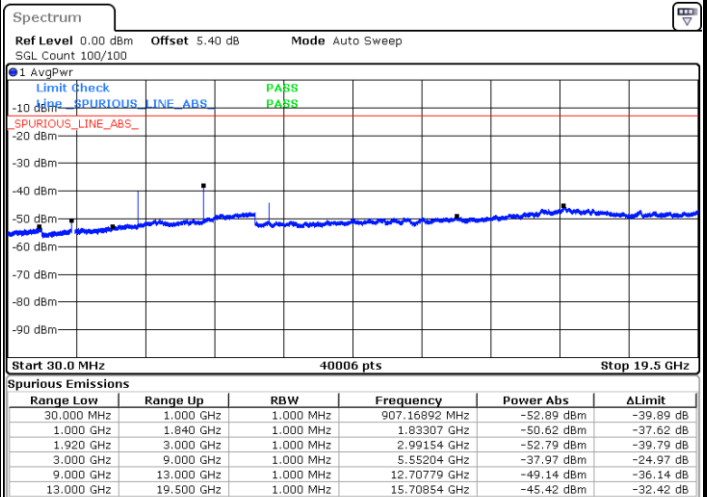
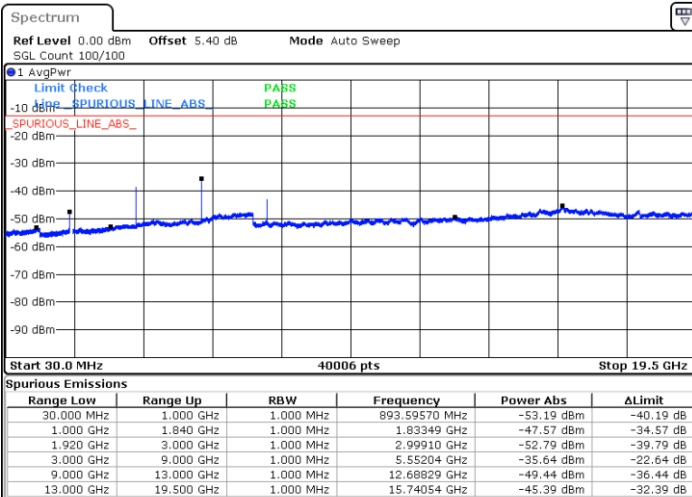
Date: 19.OCT.2019 10:36:07

Date: 19.OCT.2019 10:37:02

LTE Band 2 / 10MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 19.OCT.2019 10:43:07

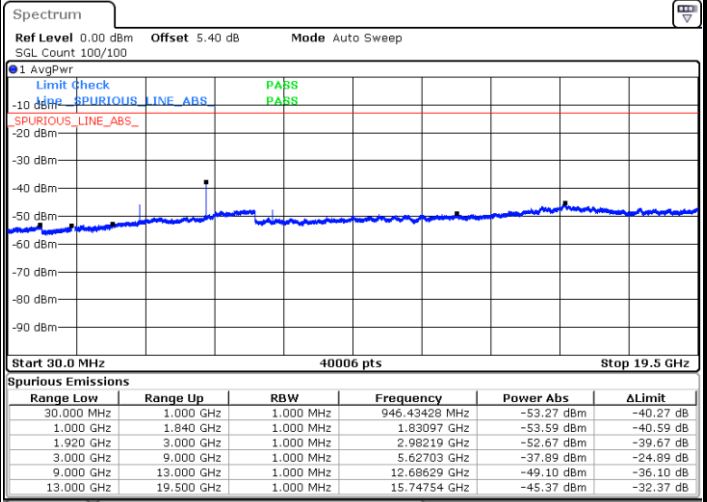
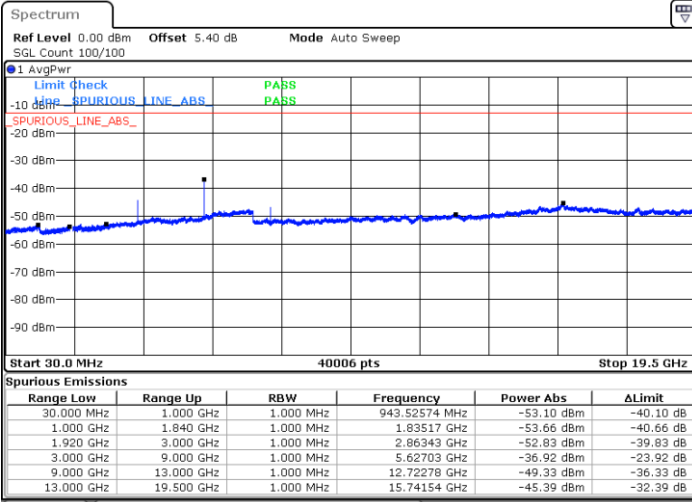
Date: 19.OCT.2019 10:44:02



LTE Band 2 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

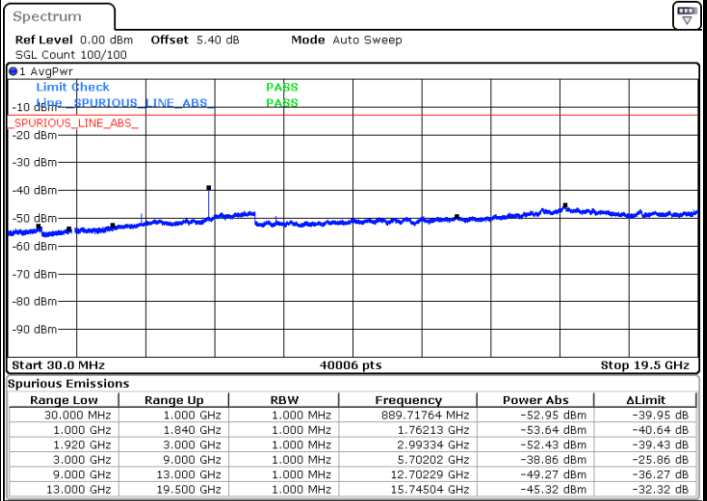
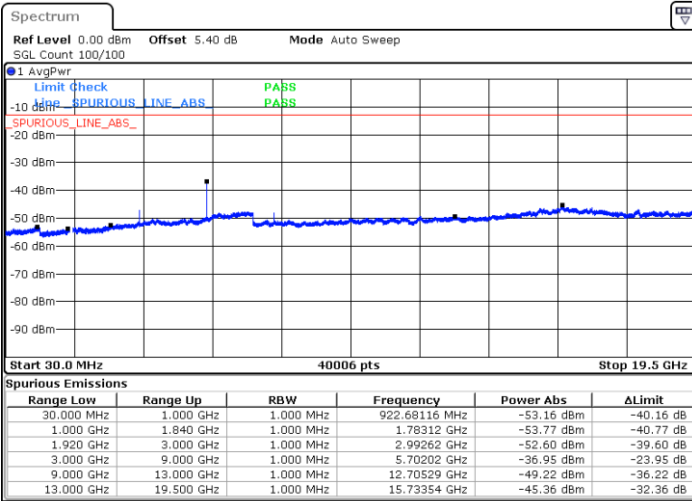


Date: 19.OCT.2019 10:45:37

Date: 19.OCT.2019 10:46:32

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 19.OCT.2019 10:52:37

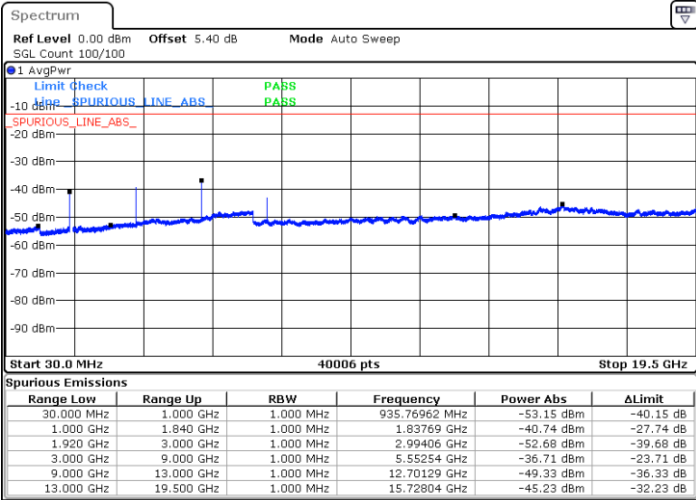
Date: 19.OCT.2019 10:53:32



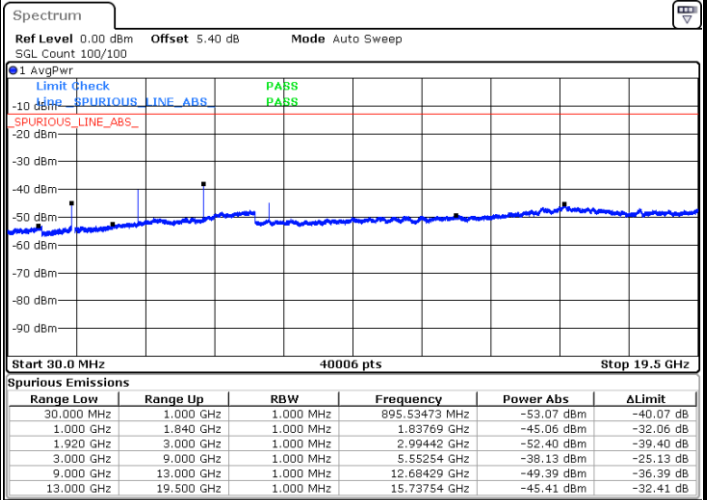
LTE Band 2 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



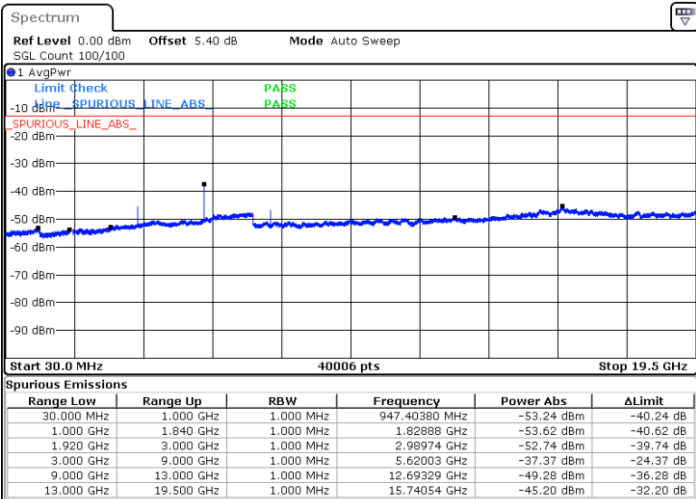
Date: 19.OCT.2019 10:59:37



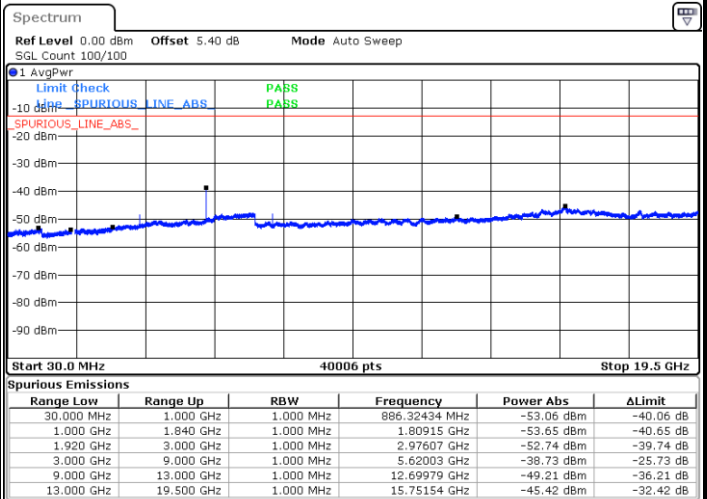
Date: 19.OCT.2019 11:00:32

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 19.OCT.2019 11:02:07

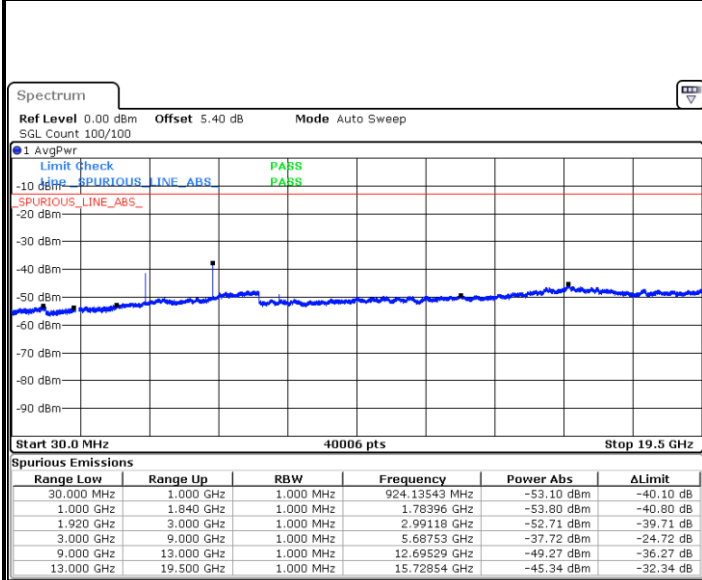


Date: 19.OCT.2019 11:03:02



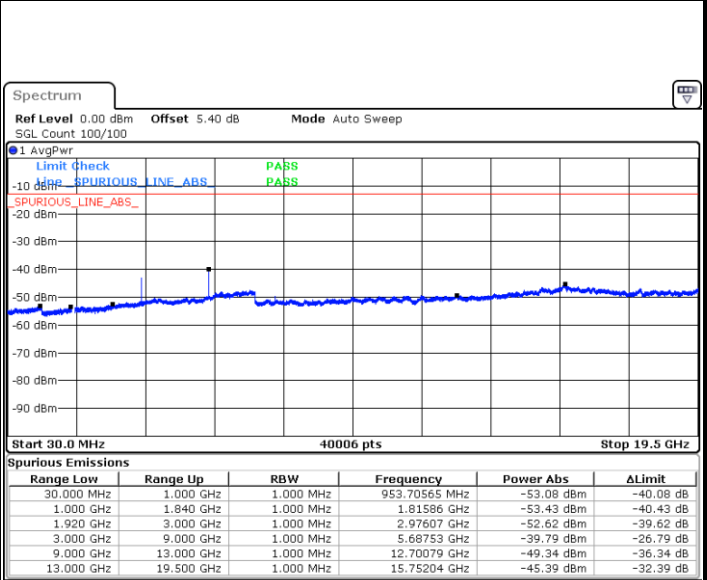
LTE Band 2 / 15MHz

Highest Channel / QPSK



Date: 19.OCT.2019 11:09:07

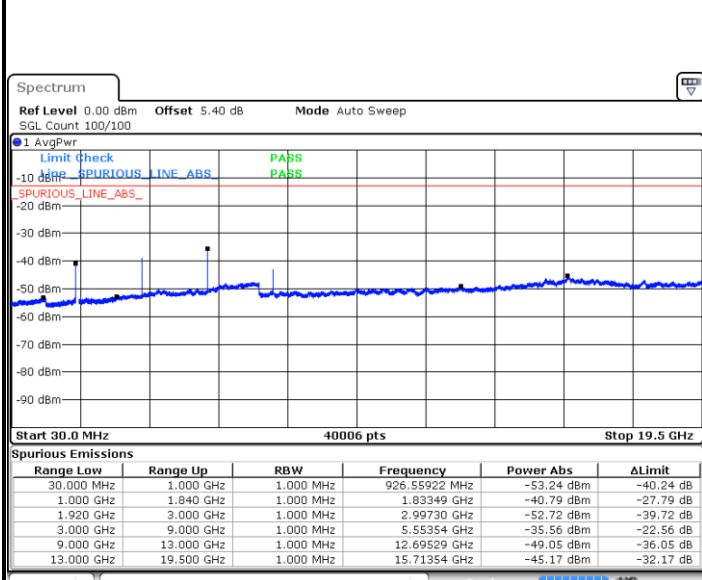
Highest Channel / 16QAM



Date: 19.OCT.2019 11:10:02

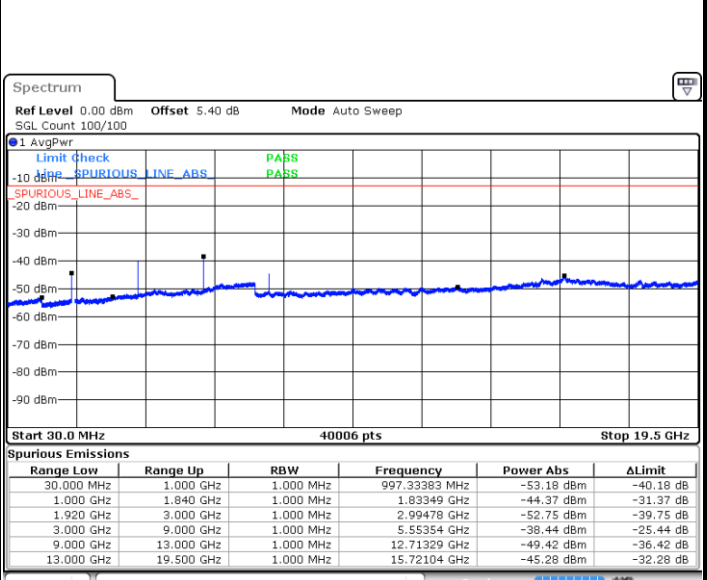
LTE Band 2 / 20MHz

Lowest Channel / QPSK



Date: 19.OCT.2019 11:16:07

Lowest Channel / 16QAM



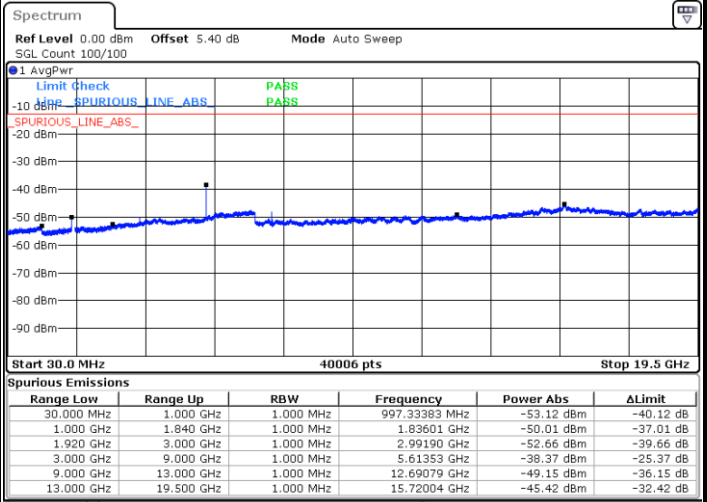
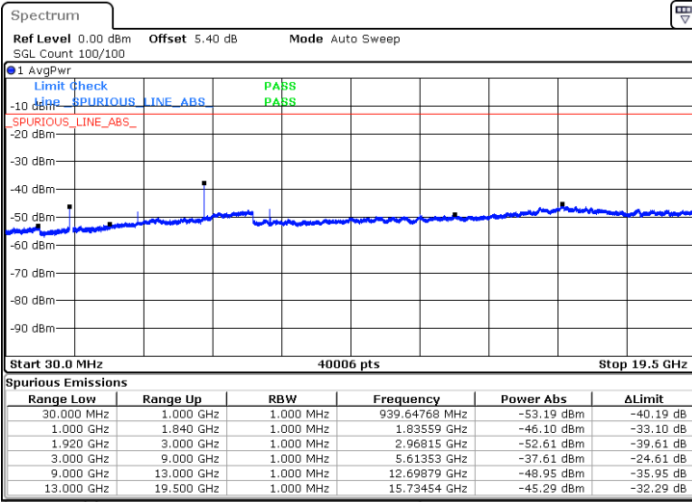
Date: 19.OCT.2019 11:17:02



LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

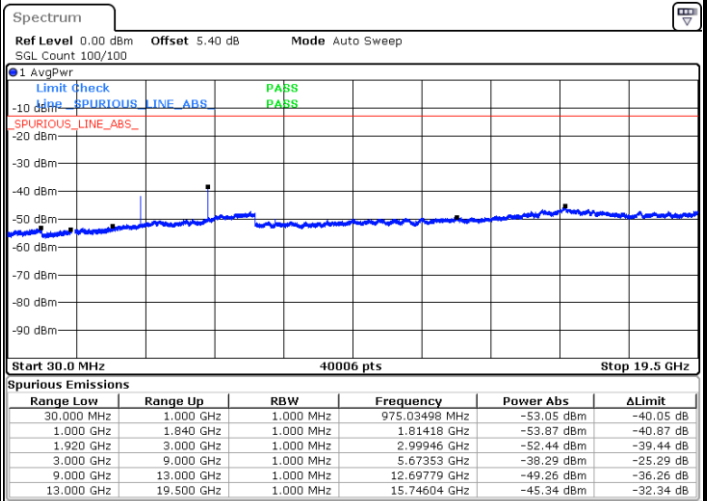
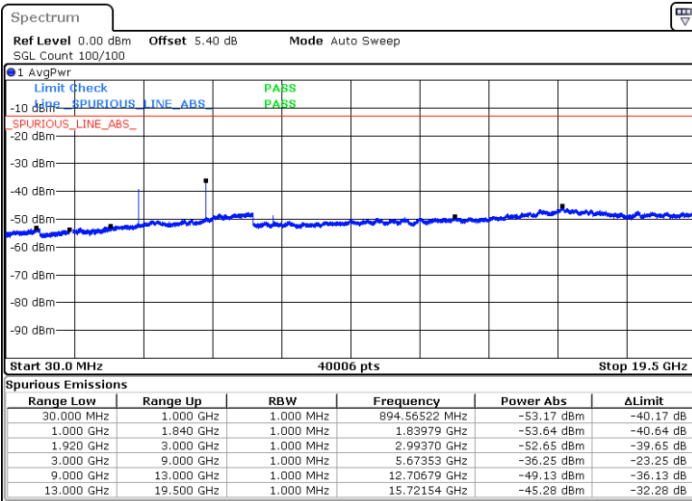


Date: 19.OCT.2019 11:18:37

Date: 19.OCT.2019 11:19:31

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 19.OCT.2019 11:25:37

Date: 19.OCT.2019 11:26:32





Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0048	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0024	
0	Normal Voltage	0.0034	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 4

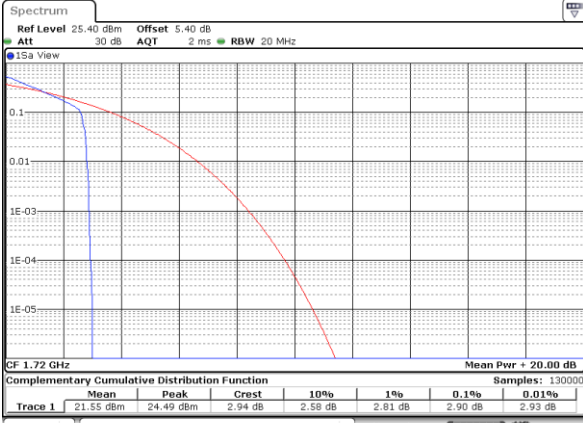
### Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	2.90	4.00	3.65	4.87	PASS
Middle CH	2.90	3.88	3.88	4.81	
Highest CH	2.90	4.09	3.74	4.96	



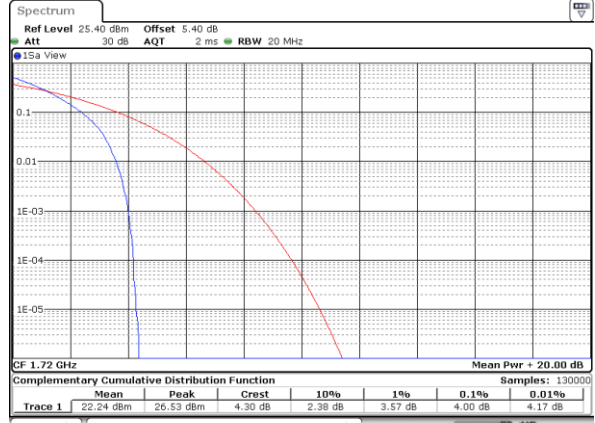
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



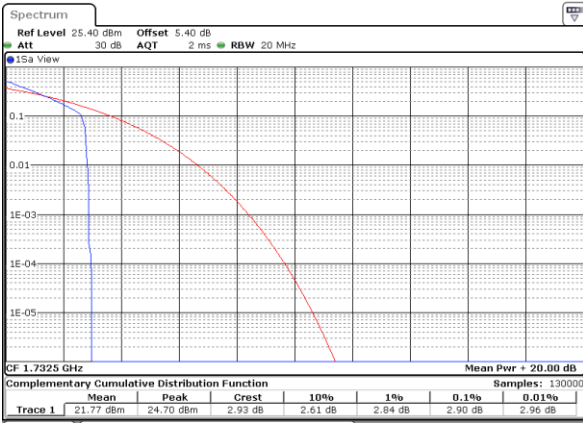
Date: 19.OCT.2019 14:32:46

Lowest Channel / Full RB



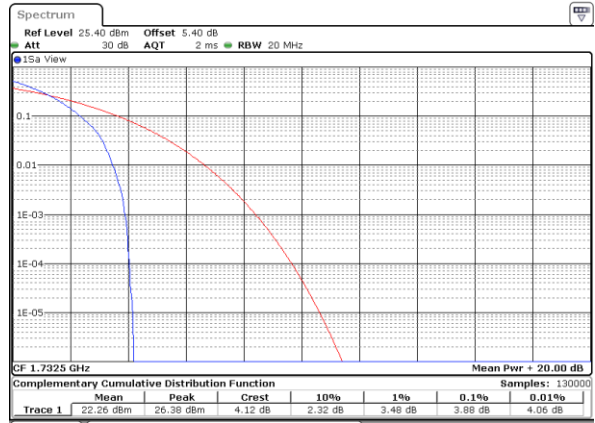
Date: 19.OCT.2019 14:31:39

Middle Channel / 1RB



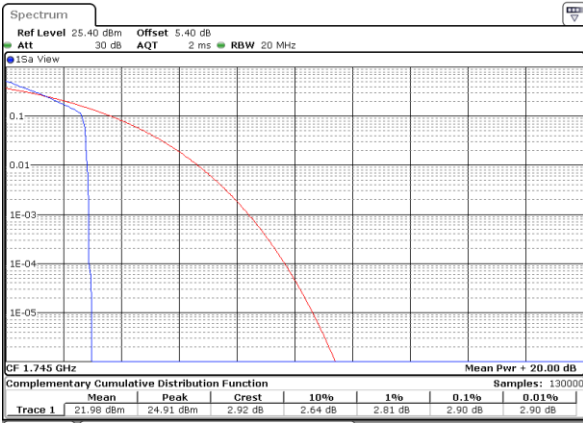
Date: 19.OCT.2019 14:32:58

Middle Channel / Full RB



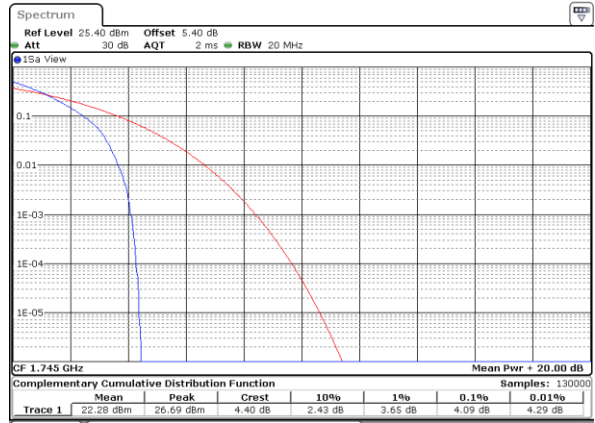
Date: 19.OCT.2019 14:31:51

Highest Channel / 1RB



Date: 19.OCT.2019 14:33:20

Highest Channel / Full RB

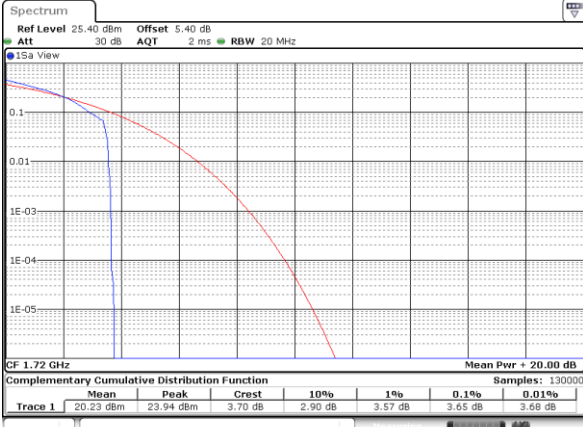


Date: 19.OCT.2019 14:32:10



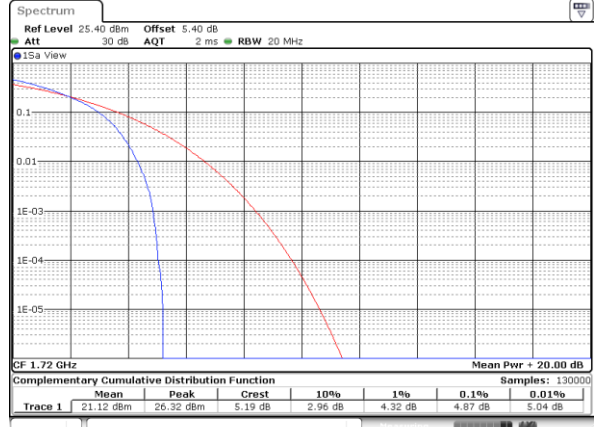
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



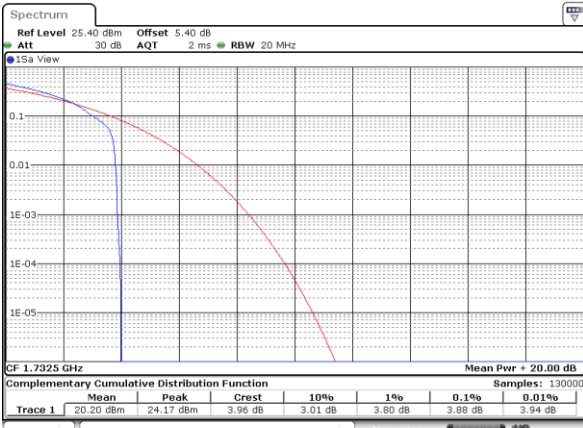
Date: 19.OCT.2019 14:30:34

Lowest Channel / Full RB



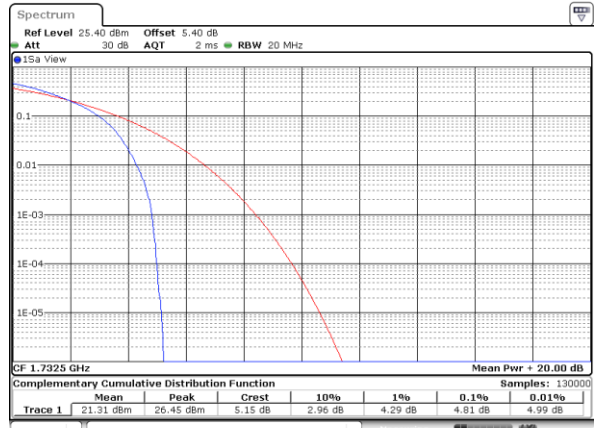
Date: 19.OCT.2019 14:30:43

Middle Channel / 1RB



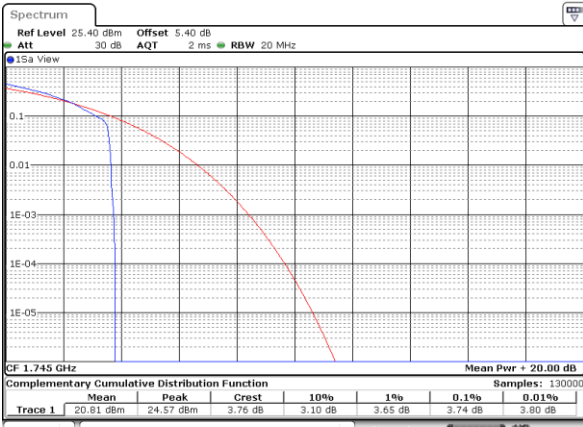
Date: 19.OCT.2019 14:30:52

Middle Channel / Full RB



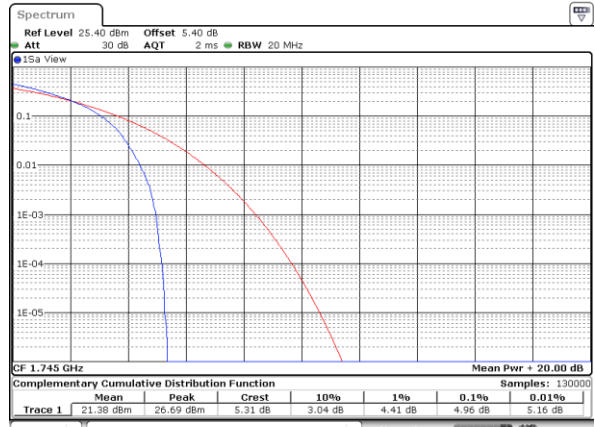
Date: 19.OCT.2019 14:31:00

Highest Channel / 1RB



Date: 19.OCT.2019 14:31:09

Highest Channel / Full RB



Date: 19.OCT.2019 14:31:19



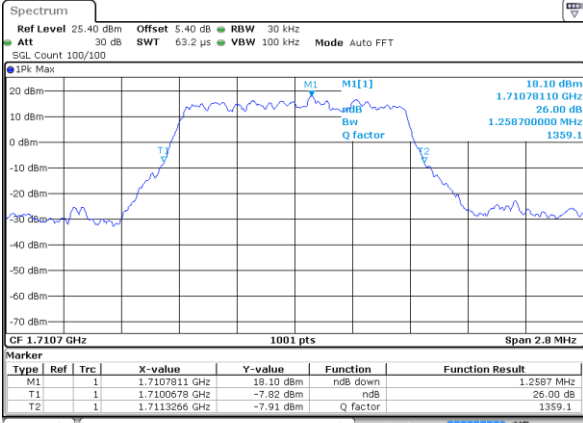
**26dB Bandwidth**

Mode	LTE Band 4 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.259	1.298	3.009	2.973	4.985	4.895	9.69	9.89	14.386	14.685	20.26	20.18
Middle CH	1.264	1.256	3.027	3.027	4.965	5.005	9.89	9.89	14.595	14.476	20.22	20.02
Highest CH	1.295	1.298	3.027	2.997	4.985	4.965	9.75	9.91	14.386	14.446	20.26	20.02



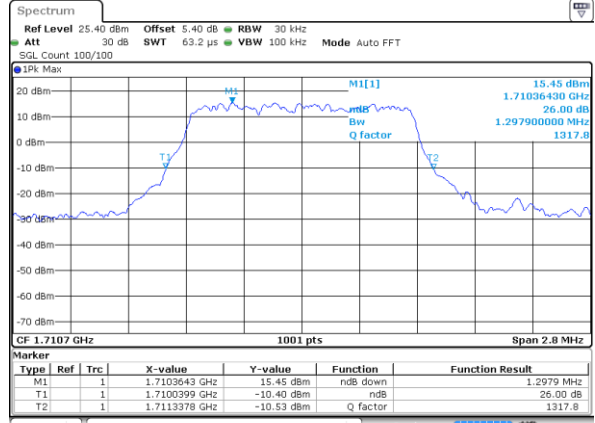
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



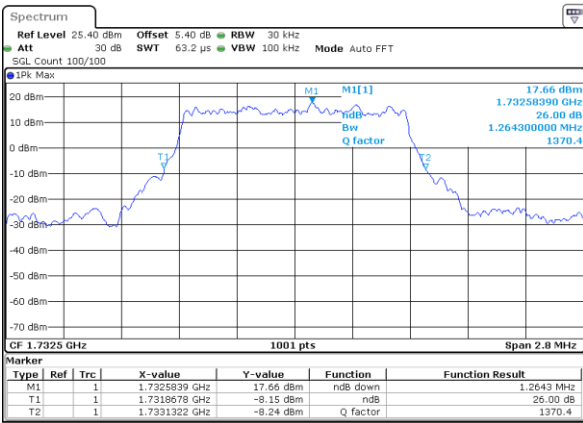
Date: 19.OCT.2019 11:35:02

Lowest Channel / 1.4MHz / 16QAM



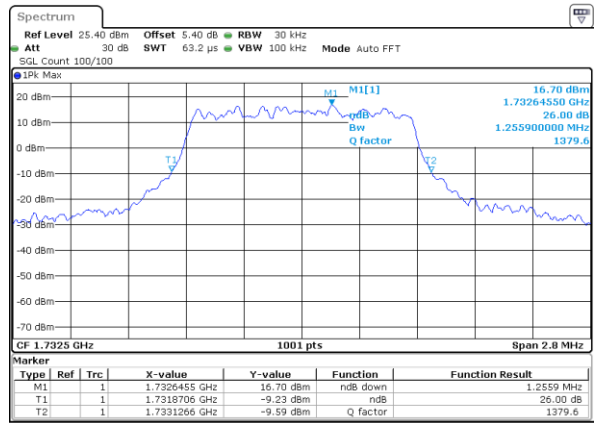
Date: 19.OCT.2019 11:35:12

Middle Channel / 1.4MHz / QPSK



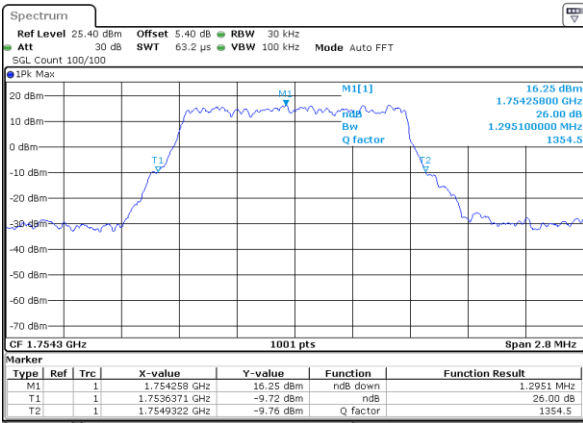
Date: 19.OCT.2019 11:43:28

Middle Channel / 1.4MHz / 16QAM



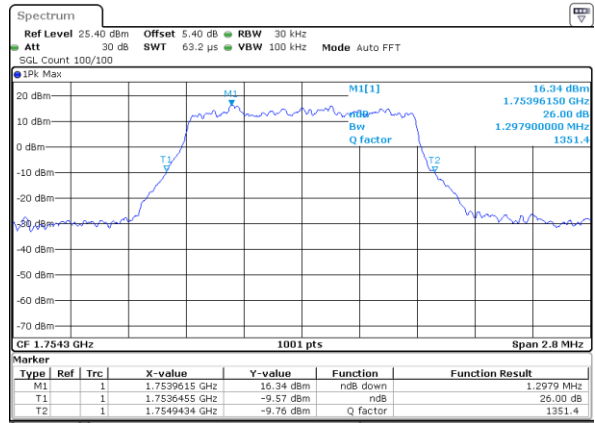
Date: 19.OCT.2019 11:43:36

Highest Channel / 1.4MHz / QPSK



Date: 19.OCT.2019 11:45:55

Highest Channel / 1.4MHz / 16QAM

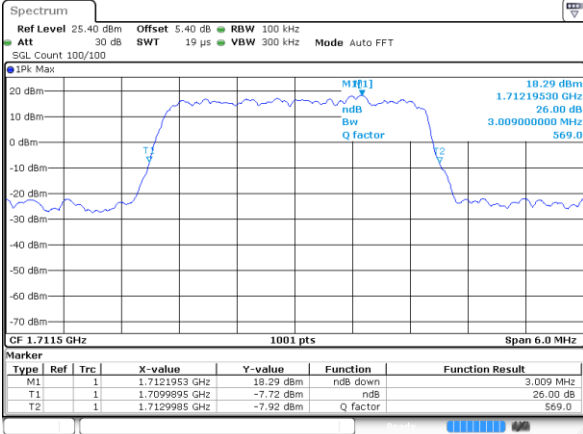


Date: 19.OCT.2019 11:46:05



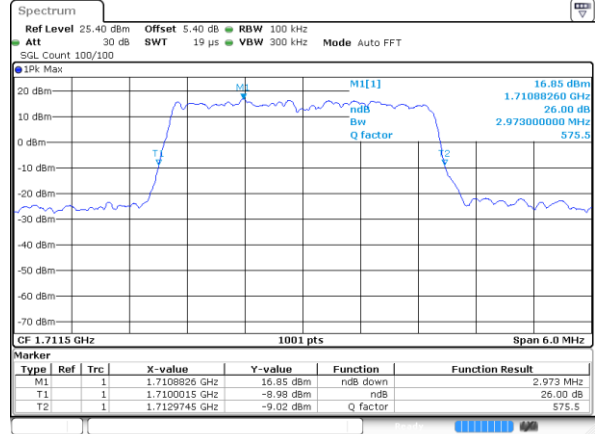
LTE Band 4

Lowest Channel / 3MHz / QPSK



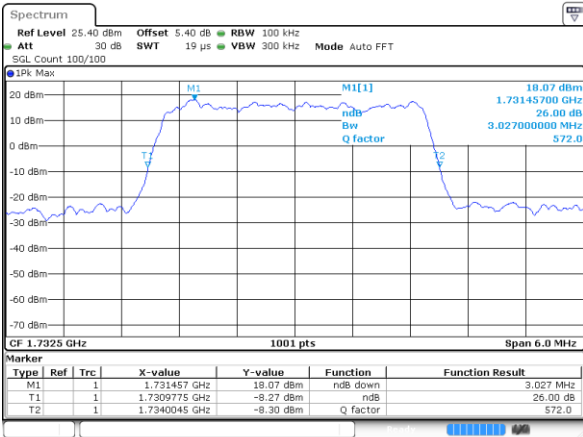
Date: 19.OCT.2019 11:52:55

Lowest Channel / 3MHz / 16QAM



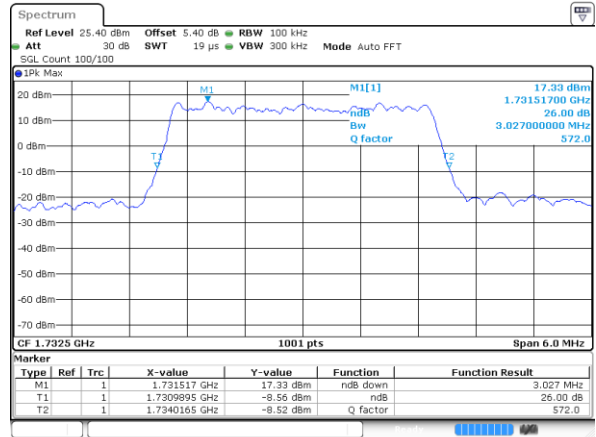
Date: 19.OCT.2019 11:53:05

Middle Channel / 3MHz / QPSK



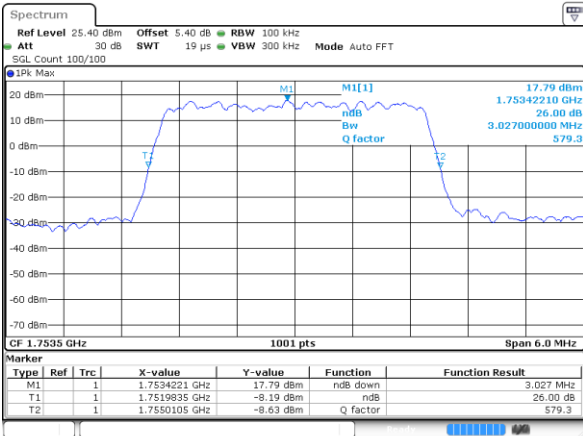
Date: 19.OCT.2019 12:01:54

Middle Channel / 3MHz / 16QAM



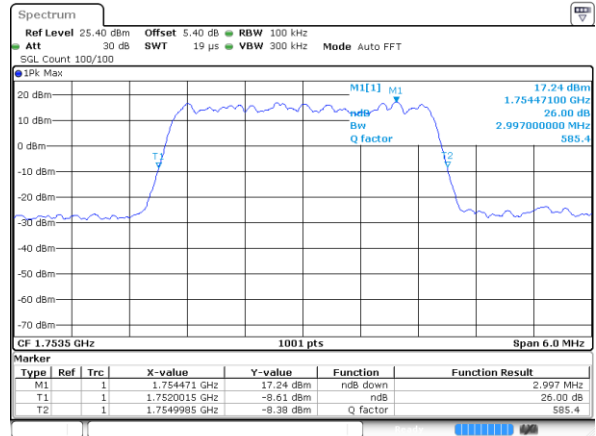
Date: 19.OCT.2019 12:02:04

Highest Channel / 3MHz / QPSK



Date: 19.OCT.2019 12:04:23

Highest Channel / 3MHz / 16QAM

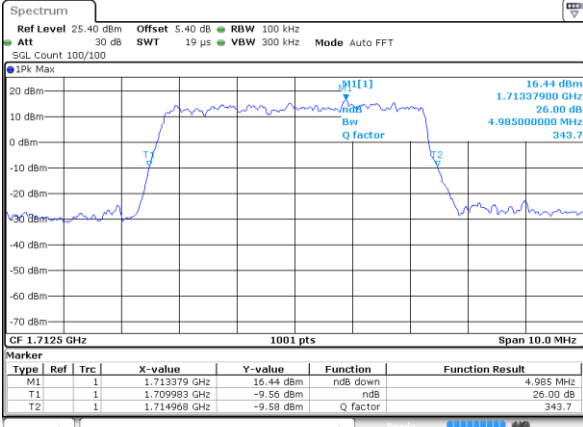


Date: 19.OCT.2019 12:04:34



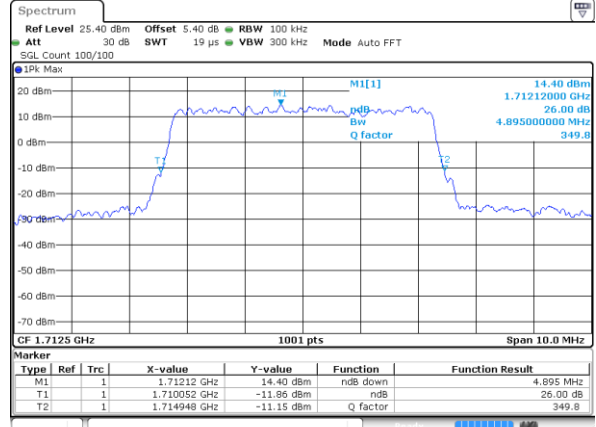
LTE Band 4

Lowest Channel / 5MHz / QPSK



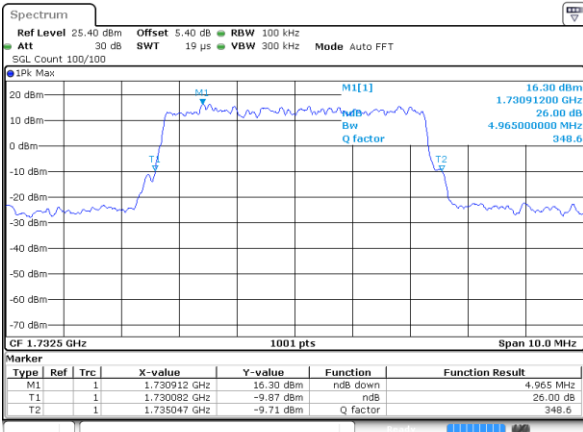
Date: 19.OCT.2019 12:36:15

Lowest Channel / 5MHz / 16QAM



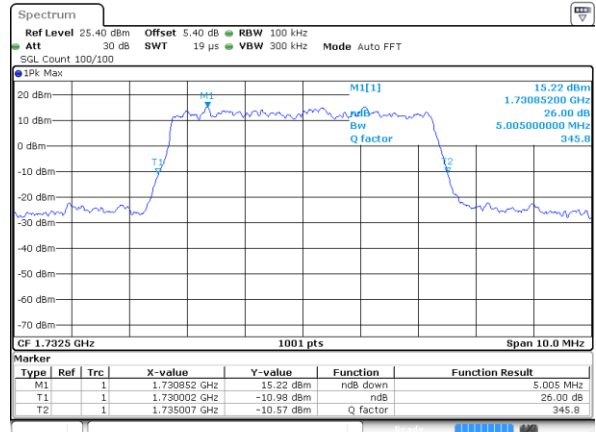
Date: 19.OCT.2019 12:36:25

Middle Channel / 5MHz / QPSK



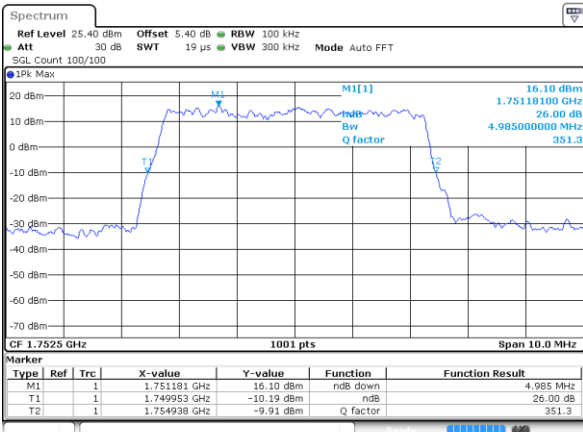
Date: 19.OCT.2019 12:43:15

Middle Channel / 5MHz / 16QAM



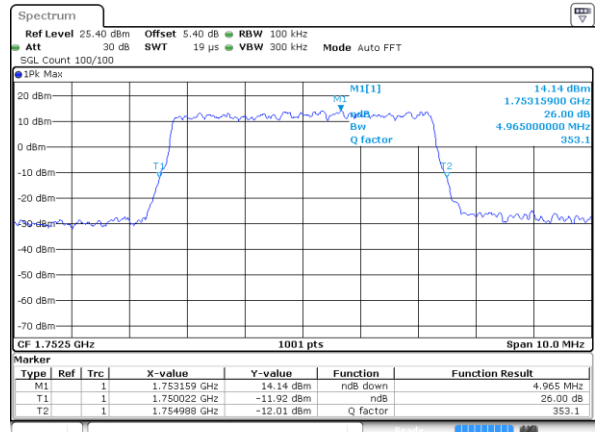
Date: 19.OCT.2019 12:43:25

Highest Channel / 5MHz / QPSK



Date: 19.OCT.2019 12:45:45

Highest Channel / 5MHz / 16QAM



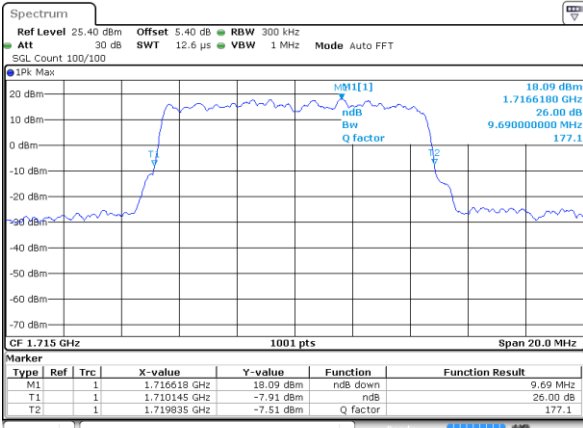
Date: 19.OCT.2019 12:45:55





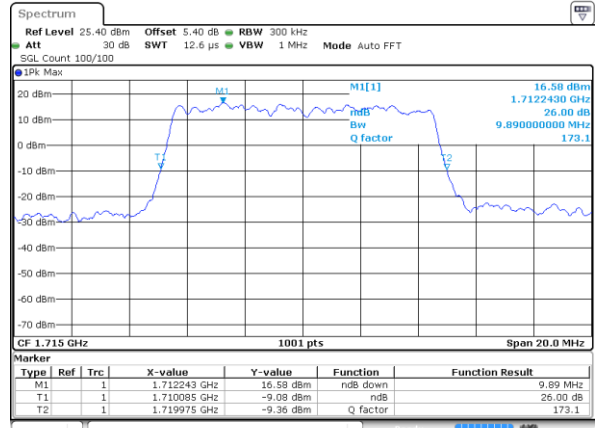
LTE Band 4

Lowest Channel / 10MHz / QPSK



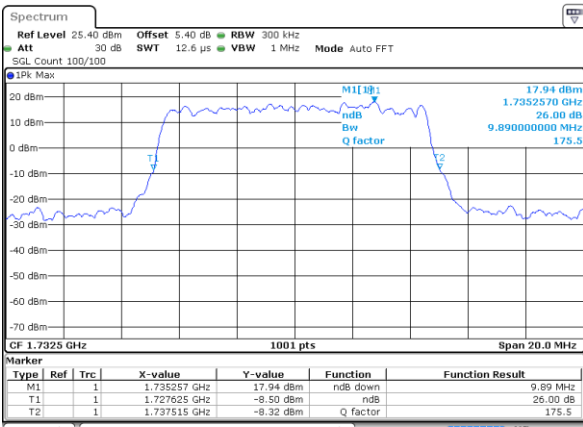
Date: 19.OCT.2019 12:52:45

Lowest Channel / 10MHz / 16QAM



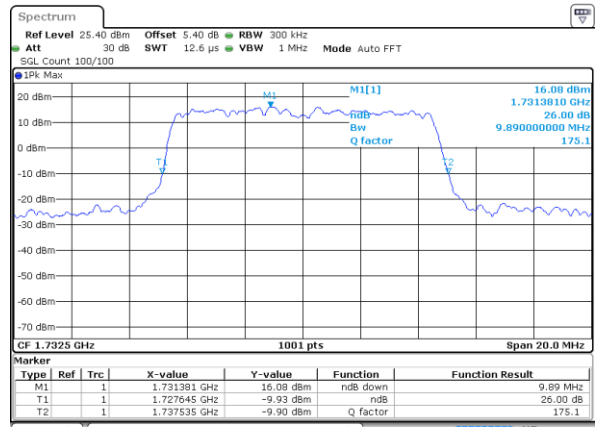
Date: 19.OCT.2019 12:52:55

Middle Channel / 10MHz / QPSK



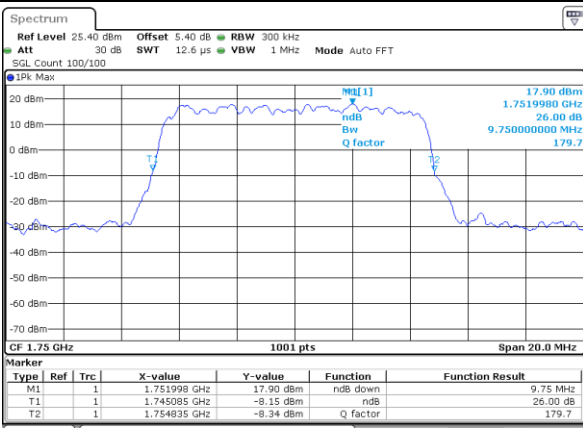
Date: 19.OCT.2019 12:59:45

Middle Channel / 10MHz / 16QAM



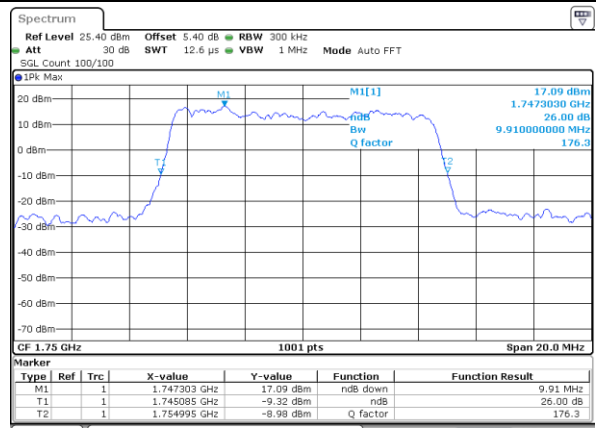
Date: 19.OCT.2019 12:59:55

Highest Channel / 10MHz / QPSK



Date: 19.OCT.2019 13:02:15

Highest Channel / 10MHz / 16QAM

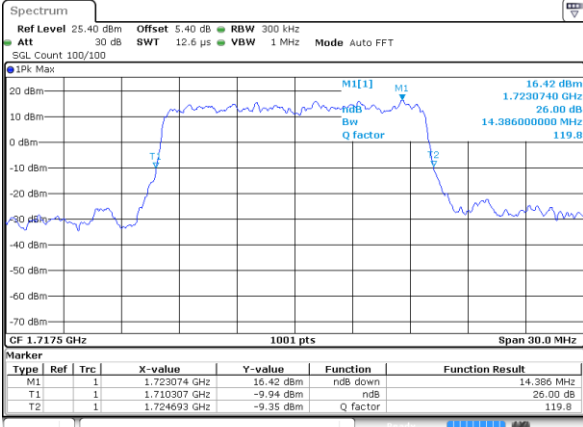


Date: 19.OCT.2019 13:02:25



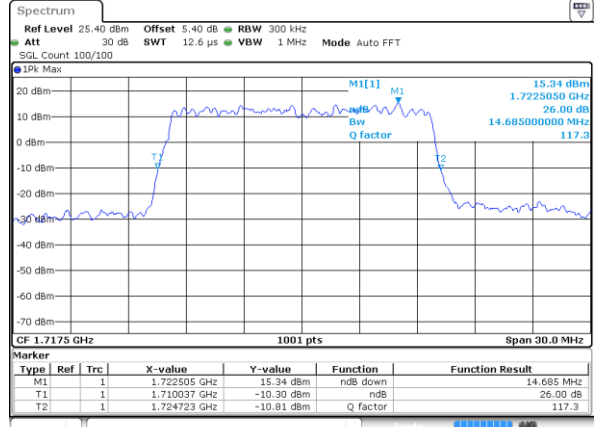
LTE Band 4

Lowest Channel / 15MHz / QPSK



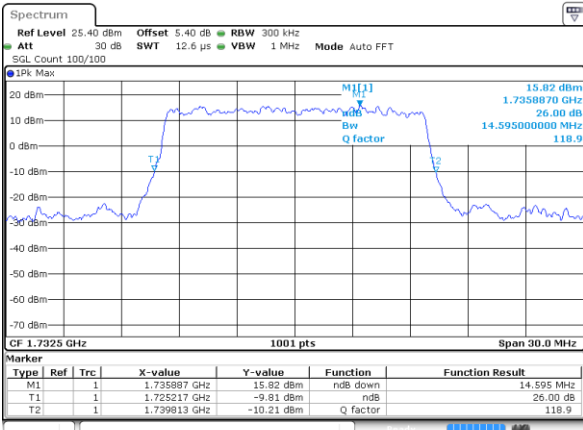
Date: 19.OCT.2019 13:15:12

Lowest Channel / 15MHz / 16QAM



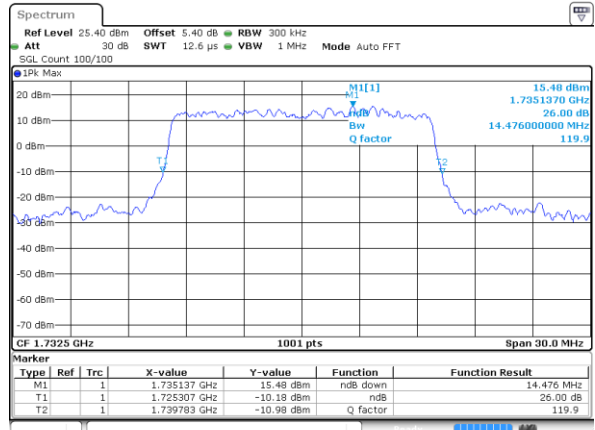
Date: 19.OCT.2019 13:15:22

Middle Channel / 15MHz / QPSK



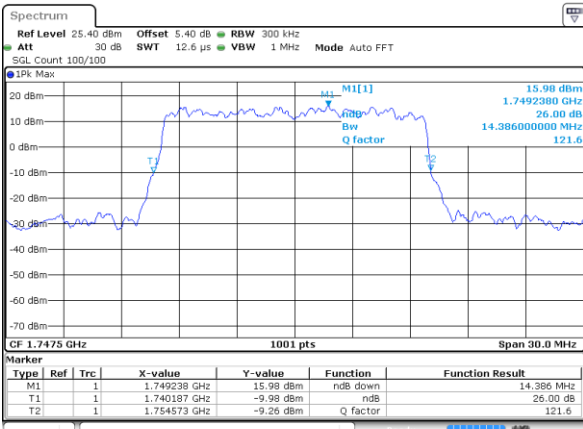
Date: 19.OCT.2019 13:22:13

Middle Channel / 15MHz / 16QAM



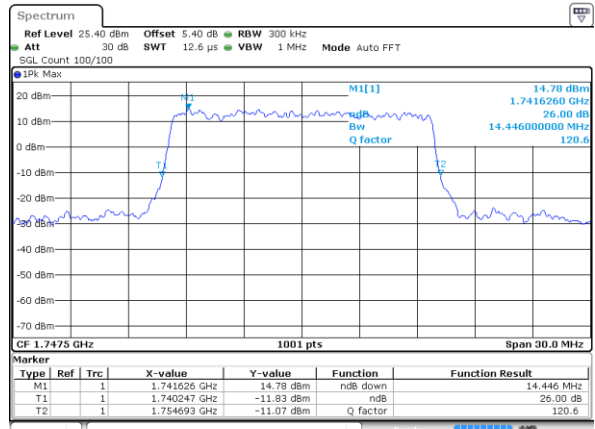
Date: 19.OCT.2019 13:22:23

Highest Channel / 15MHz / QPSK



Date: 19.OCT.2019 13:24:42

Highest Channel / 15MHz / 16QAM

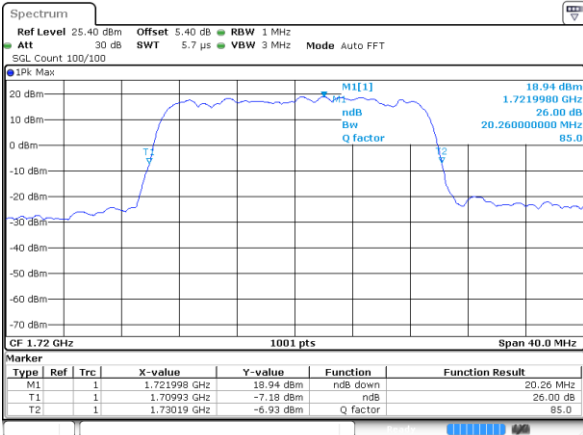


Date: 19.OCT.2019 13:24:52



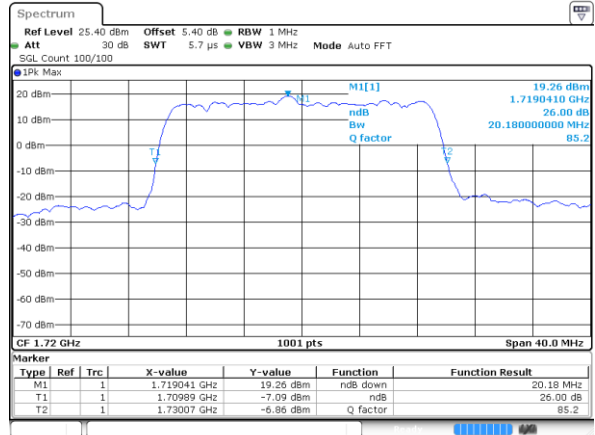
LTE Band 4

Lowest Channel / 20MHz / QPSK



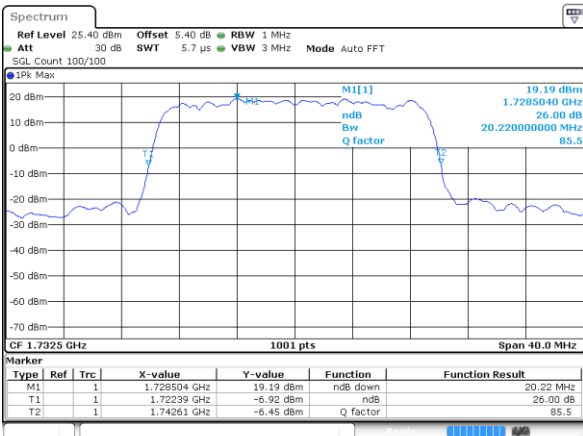
Date: 19.OCT.2019 13:39:20

Lowest Channel / 20MHz / 16QAM



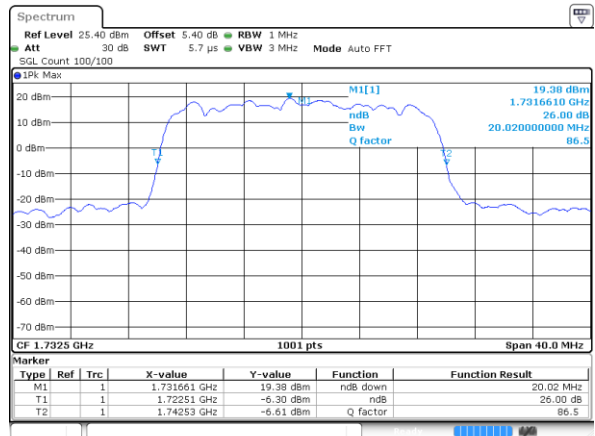
Date: 19.OCT.2019 13:39:30

Middle Channel / 20MHz / QPSK



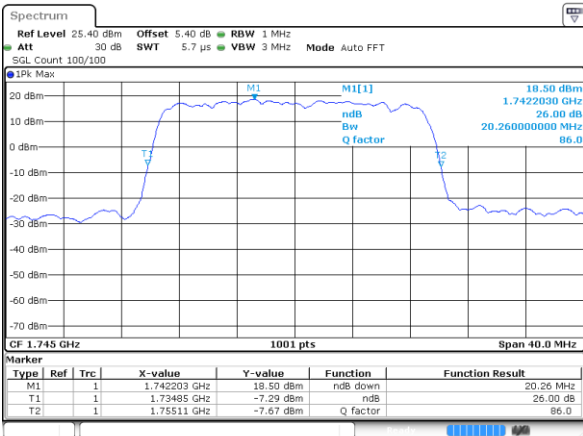
Date: 19.OCT.2019 13:46:19

Middle Channel / 20MHz / 16QAM



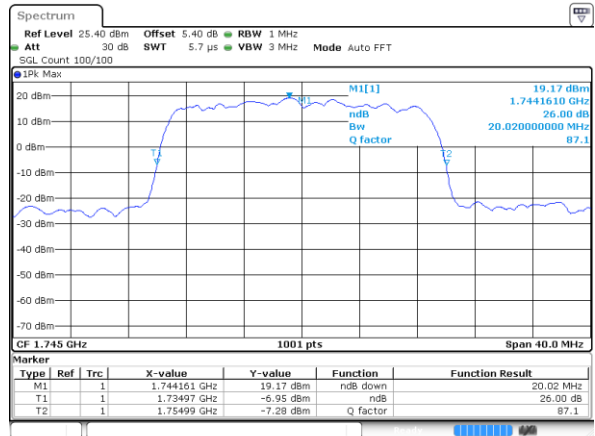
Date: 19.OCT.2019 13:49:54

Highest Channel / 20MHz / QPSK



Date: 19.OCT.2019 14:23:54

Highest Channel / 20MHz / 16QAM



Date: 19.OCT.2019 14:24:04



### Occupied Bandwidth

Mode	LTE Band 4 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.10	1.10	2.72	2.73	4.48	4.49	8.99	9.03	13.37	13.52	18.10	18.46
Middle CH	1.10	1.09	2.73	2.72	4.49	4.51	9.03	8.99	13.49	13.34	18.14	18.30
Highest CH	1.09	1.09	2.72	2.73	4.49	4.49	9.03	8.99	13.43	13.43	18.18	18.34