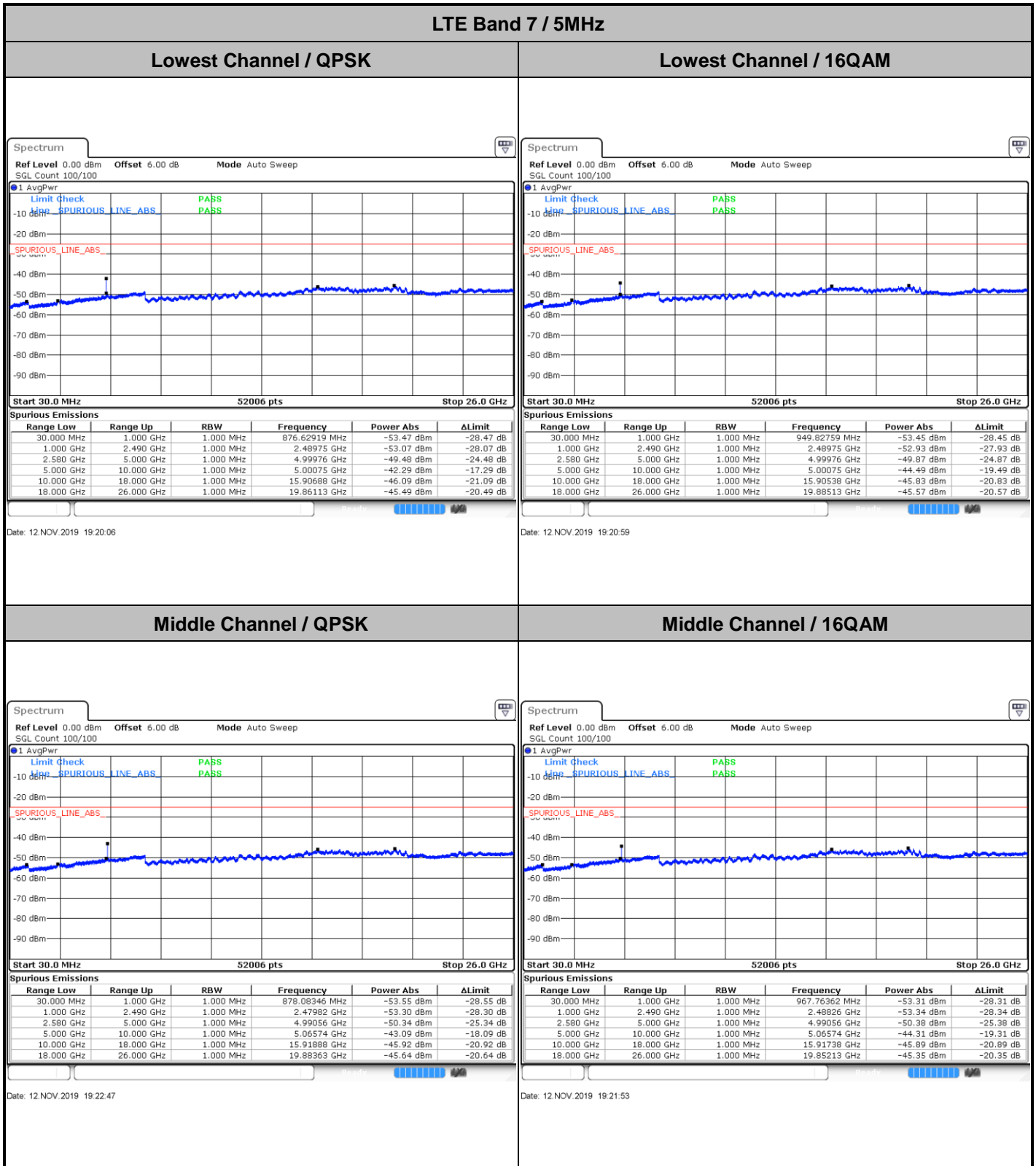




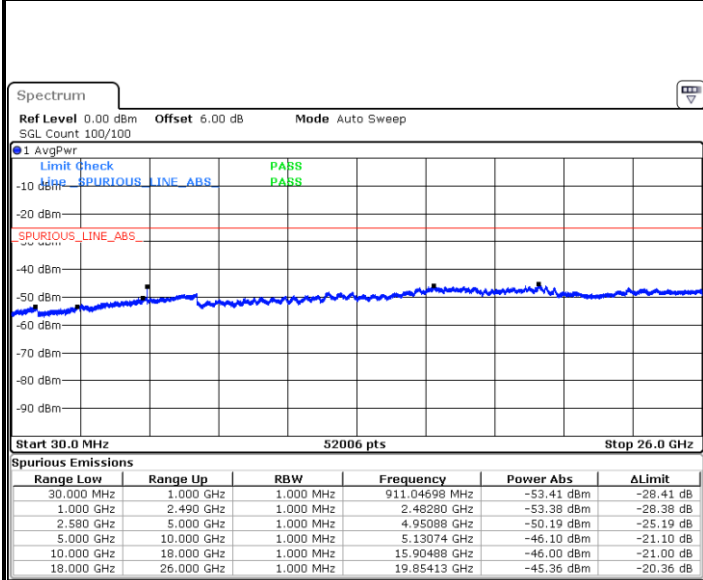
# Conducted Spurious Emission





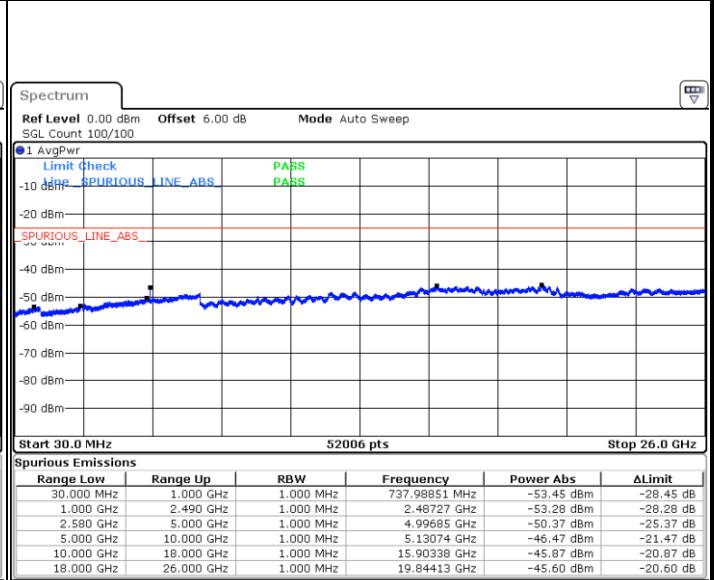
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 12.NOV.2019 19:23:41

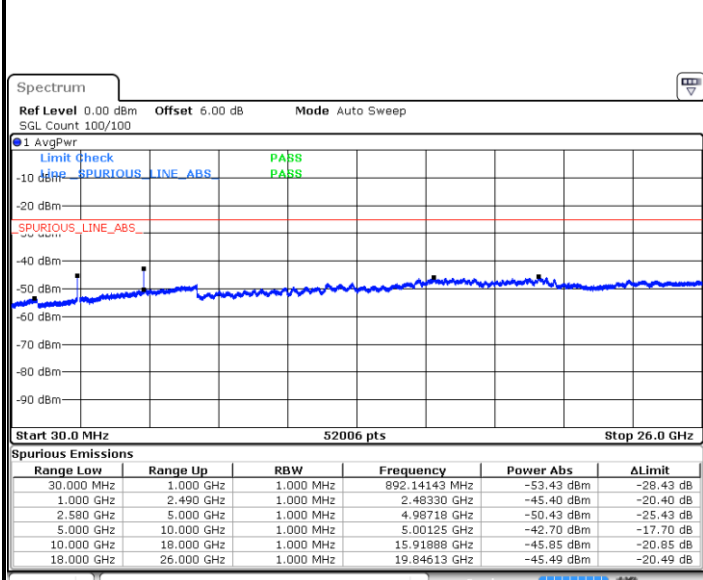
Highest Channel / 16QAM



Date: 12.NOV.2019 19:24:35

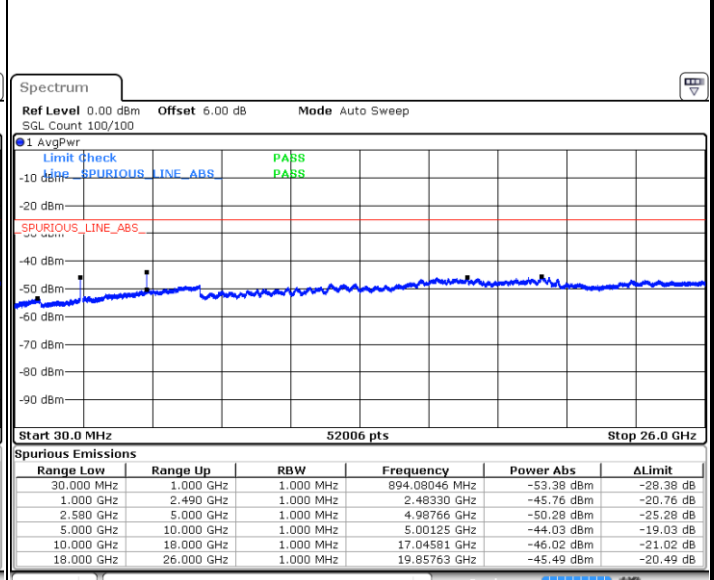
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 12.NOV.2019 19:36:32

Lowest Channel / 16QAM



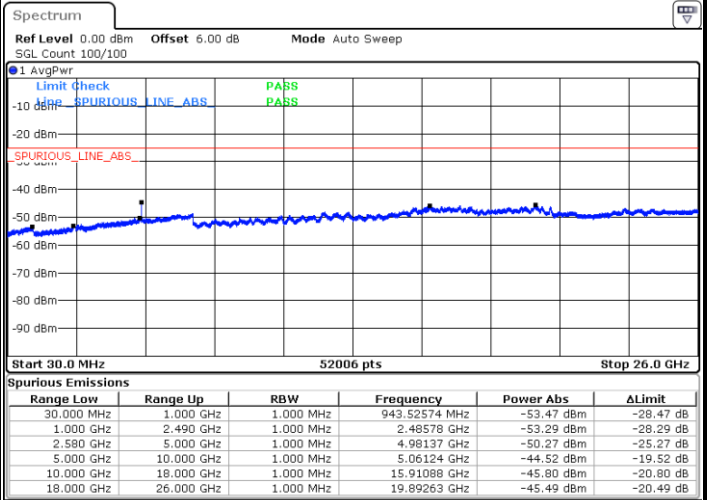
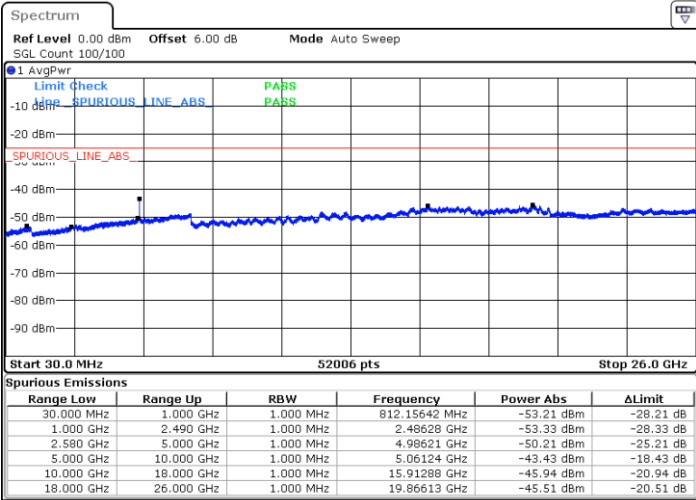
Date: 12.NOV.2019 19:37:26



LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

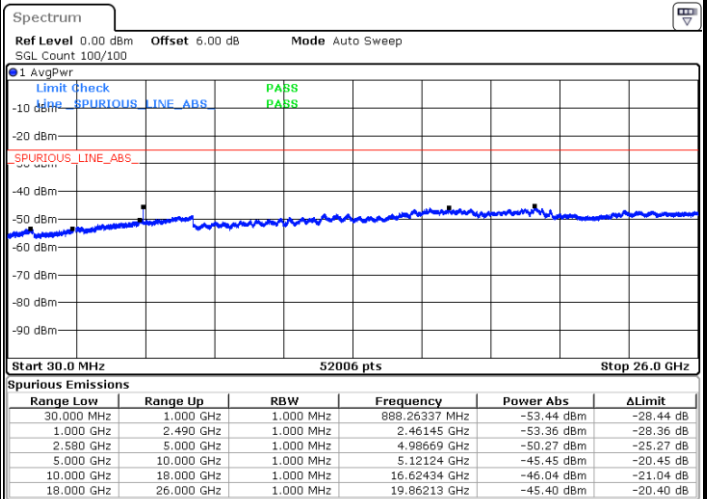
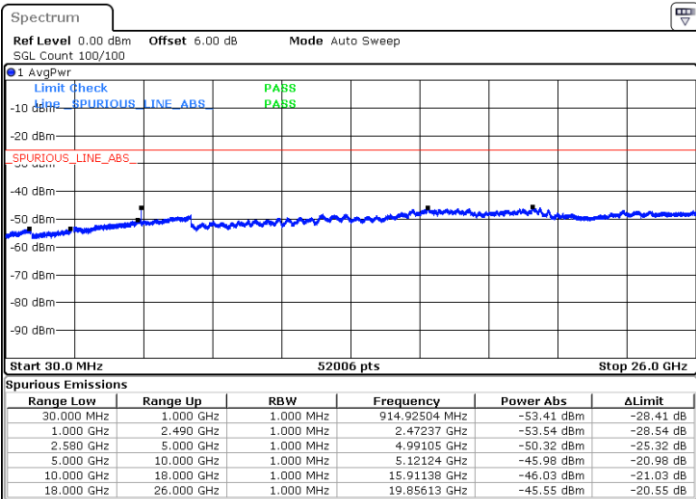


Date: 12.NOV.2019 19:39:14

Date: 12.NOV.2019 19:38:20

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 12.NOV.2019 19:40:08

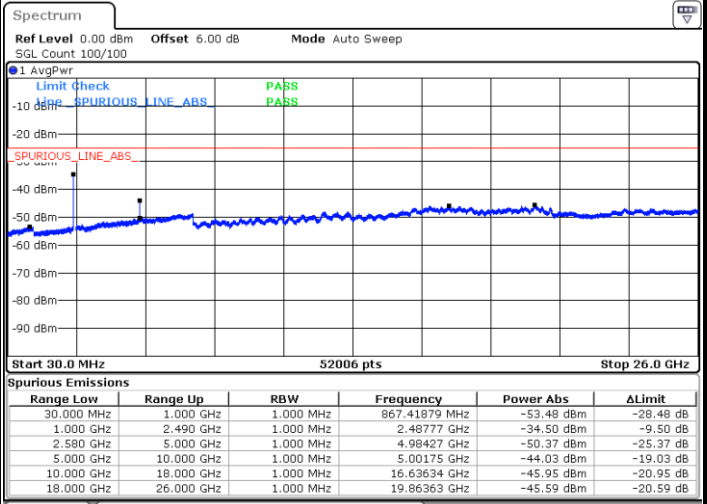
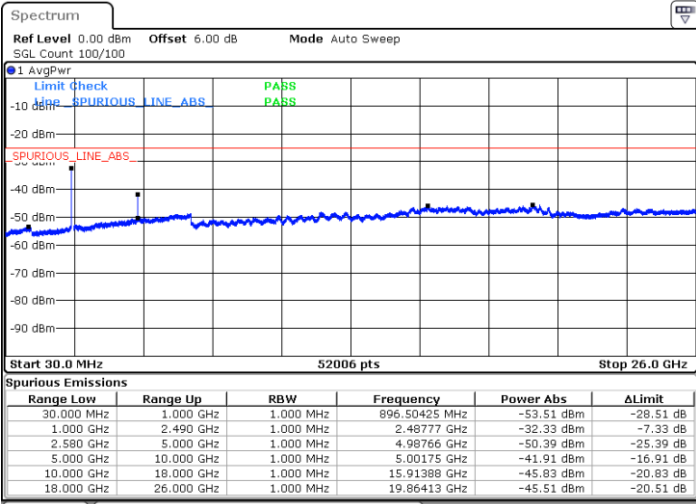
Date: 12.NOV.2019 19:41:02



LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

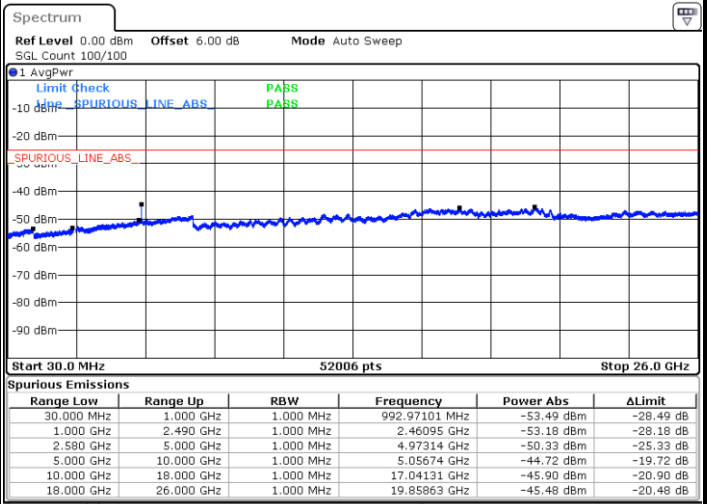
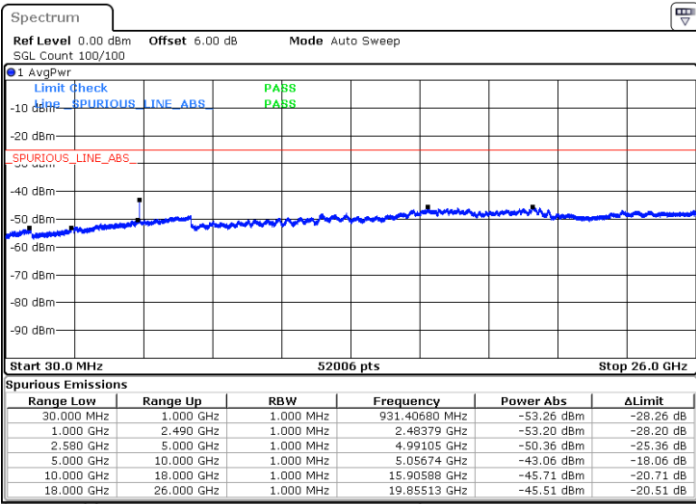


Date: 12 NOV 2019 19:53:00

Date: 12 NOV 2019 19:53:54

Middle Channel / QPSK

Middle Channel / 16QAM



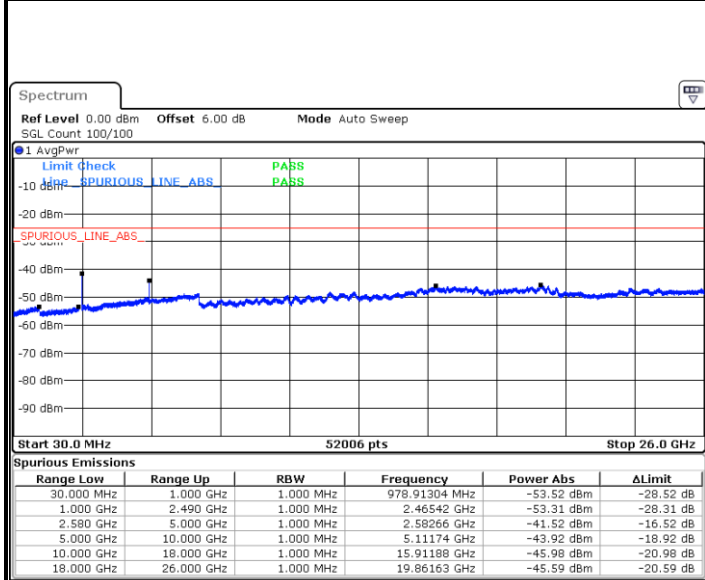
Date: 12 NOV 2019 19:55:42

Date: 12 NOV 2019 19:54:48



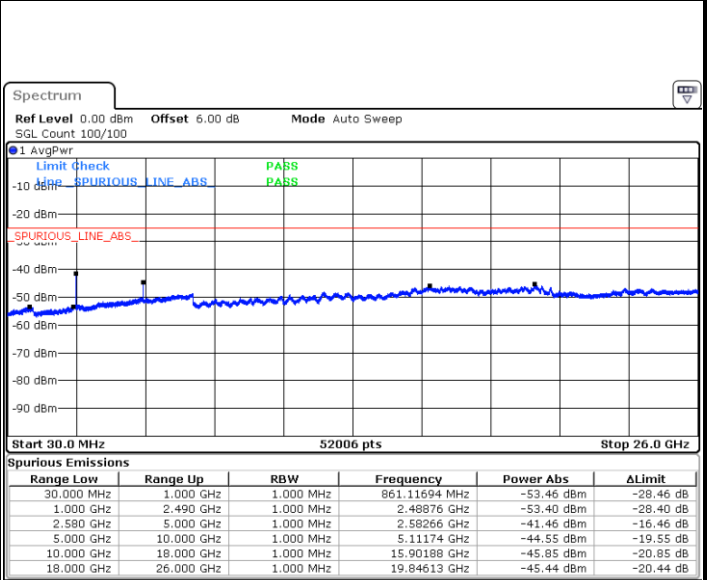
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 12 NOV 2019 19:56:36

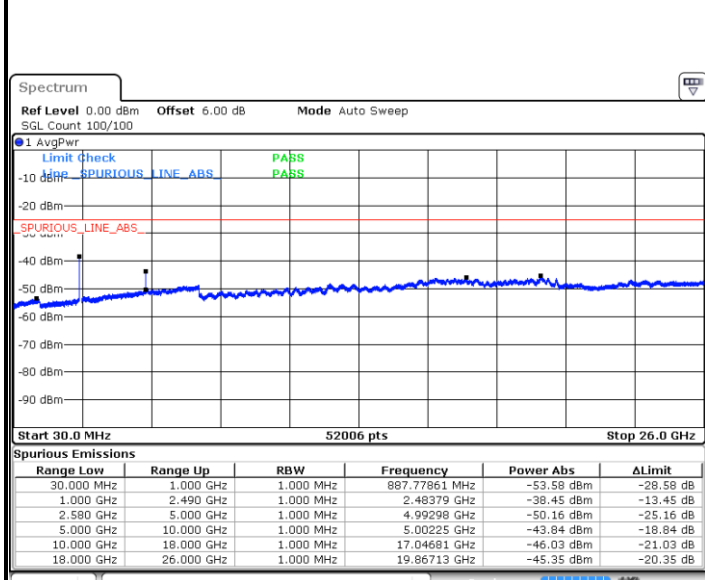
Highest Channel / 16QAM



Date: 12 NOV 2019 19:57:30

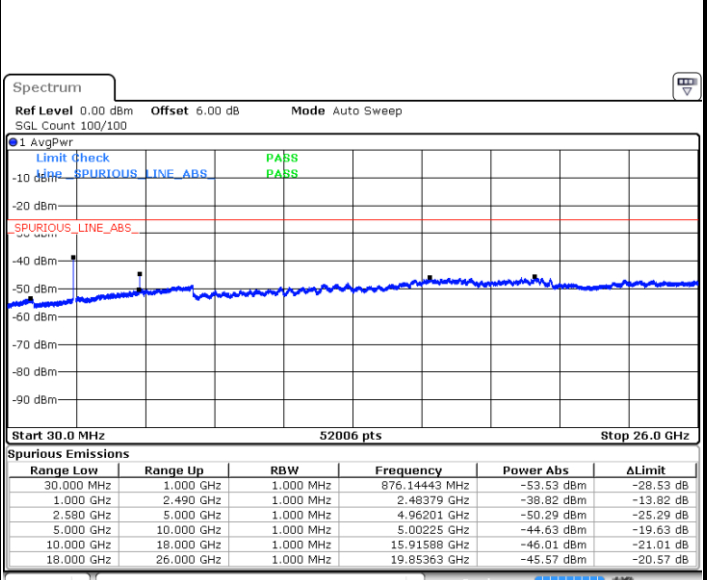
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 12 NOV 2019 20:09:28

Lowest Channel / 16QAM



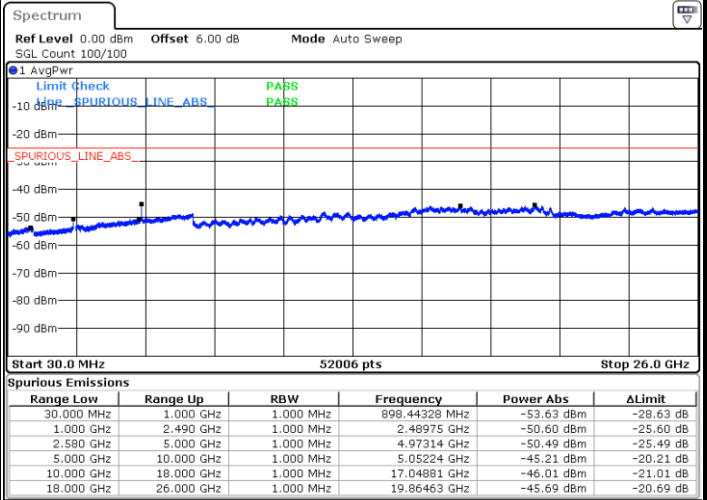
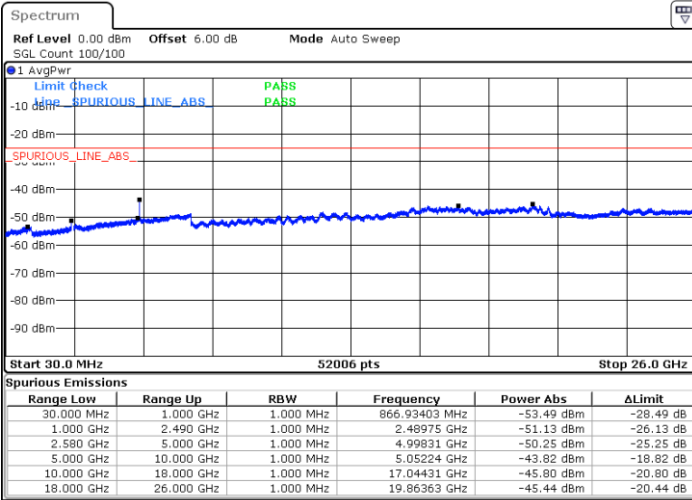
Date: 12 NOV 2019 20:10:22



LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

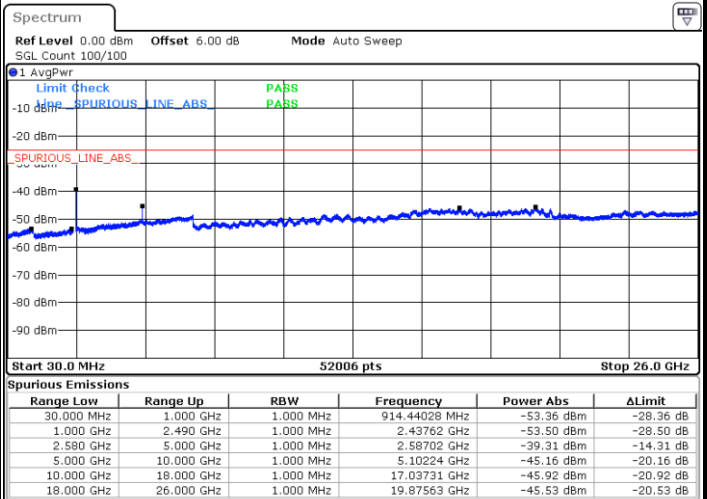
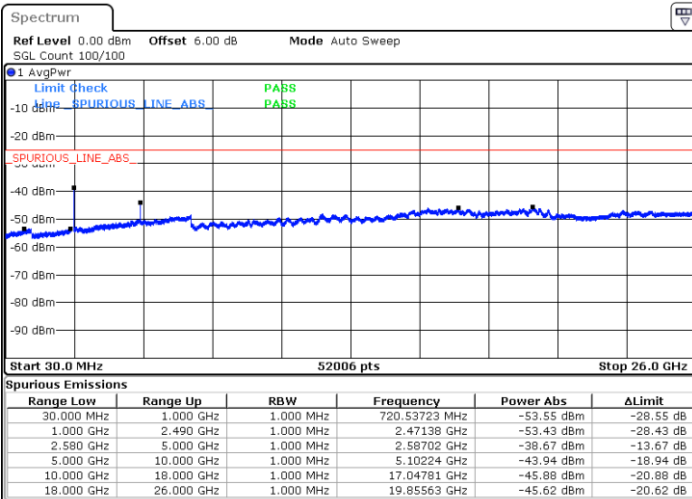


Date: 12.NOV.2019 20:12:10

Date: 12.NOV.2019 20:11:16

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 12.NOV.2019 20:13:04

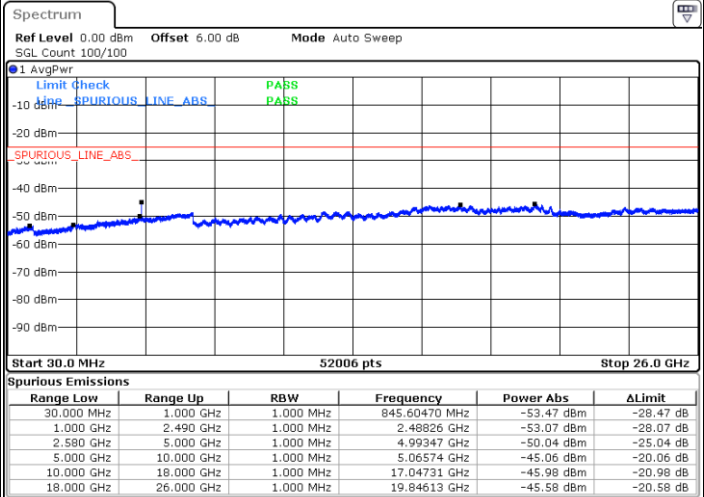
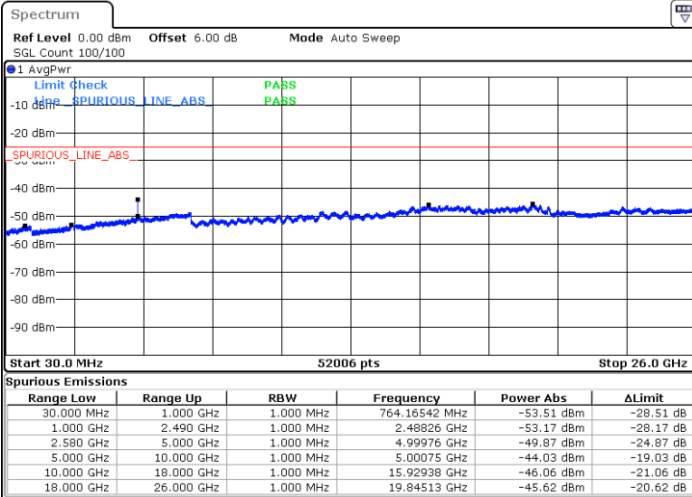
Date: 12.NOV.2019 20:13:58



LTE Band 7 / 5MHz

Lowest Channel / 64QAM

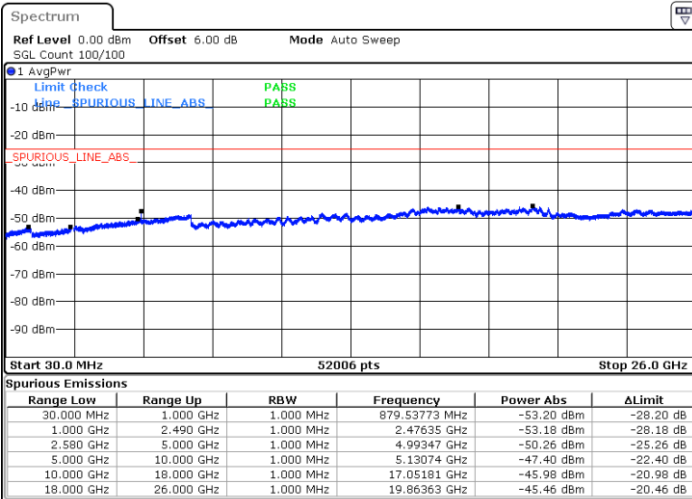
Middle Channel / 64QAM



Date: 12 NOV 2019 20:15:52

Date: 12 NOV 2019 20:16:45

Highest Channel / 64QAM



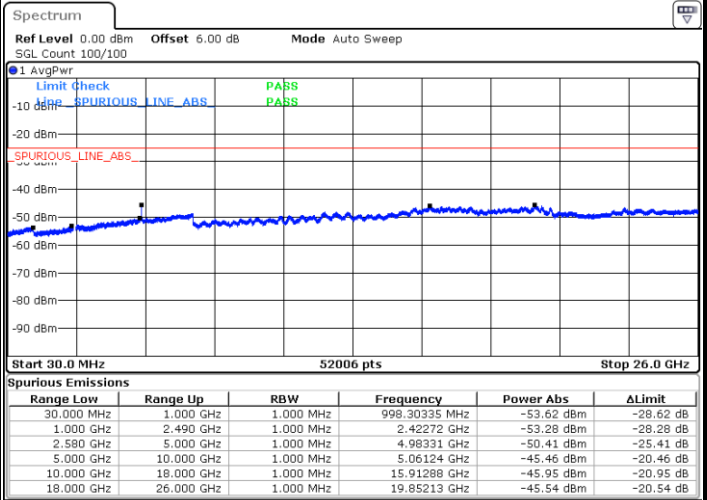
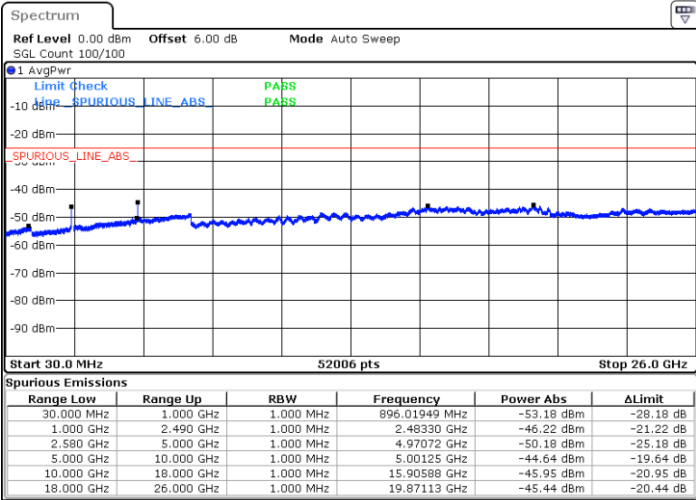
Date: 12 NOV 2019 20:17:39



LTE Band 7 / 10MHz

Lowest Channel / 64QAM

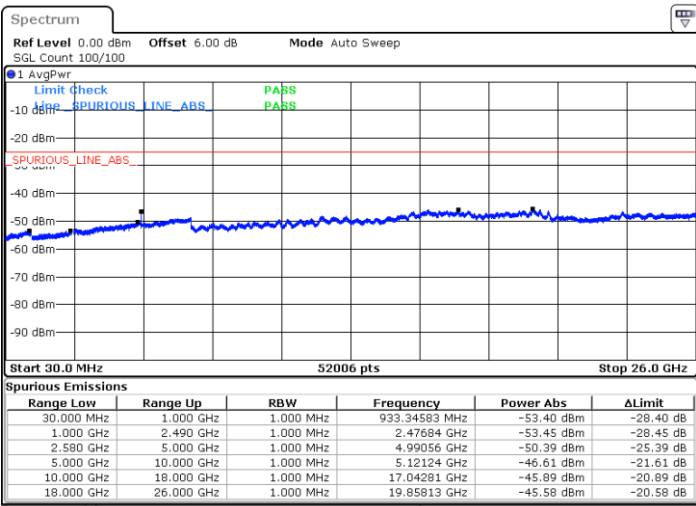
Middle Channel / 64QAM



Date: 12.NOV.2019 20:24:06

Date: 12.NOV.2019 20:24:59

Highest Channel / 64QAM



Date: 12.NOV.2019 20:25:53

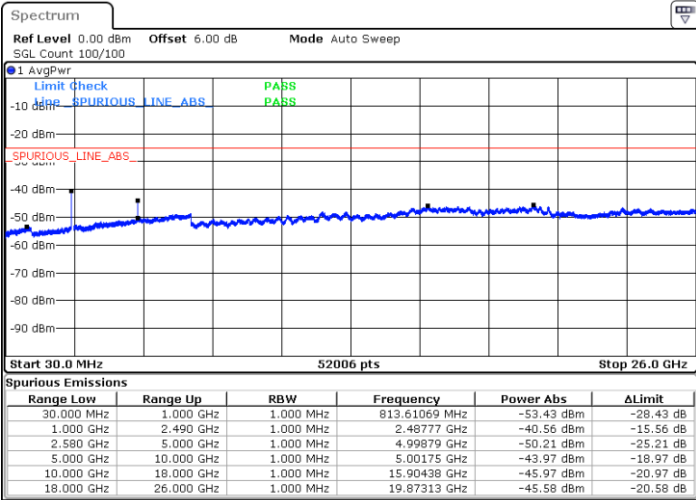




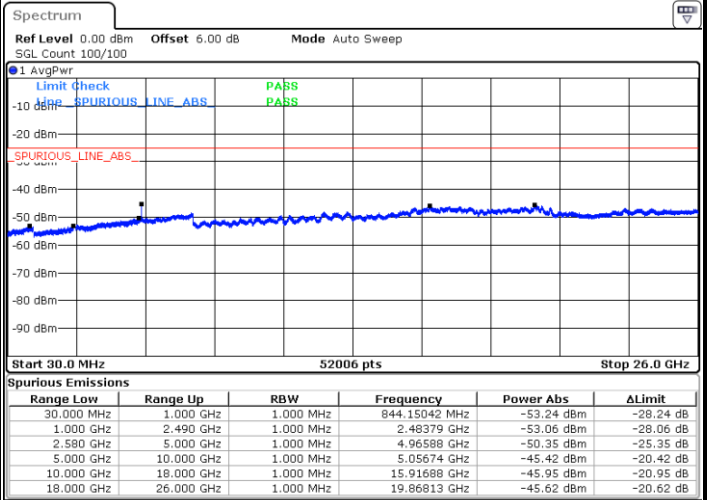
LTE Band 7 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

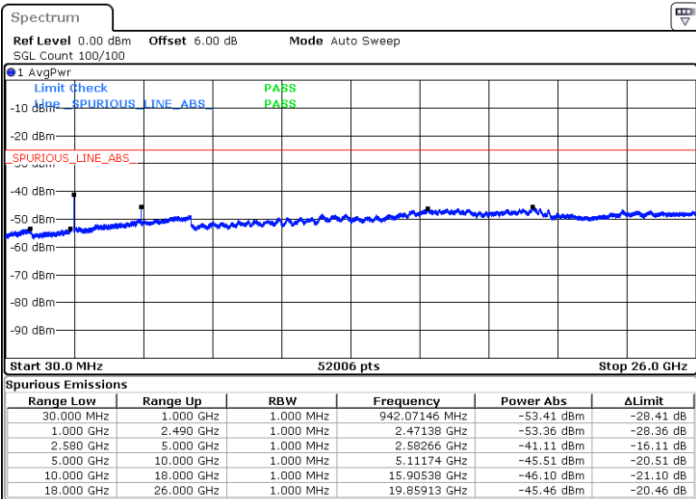


Date: 12 NOV 2019 20:36:51



Date: 12 NOV 2019 20:37:45

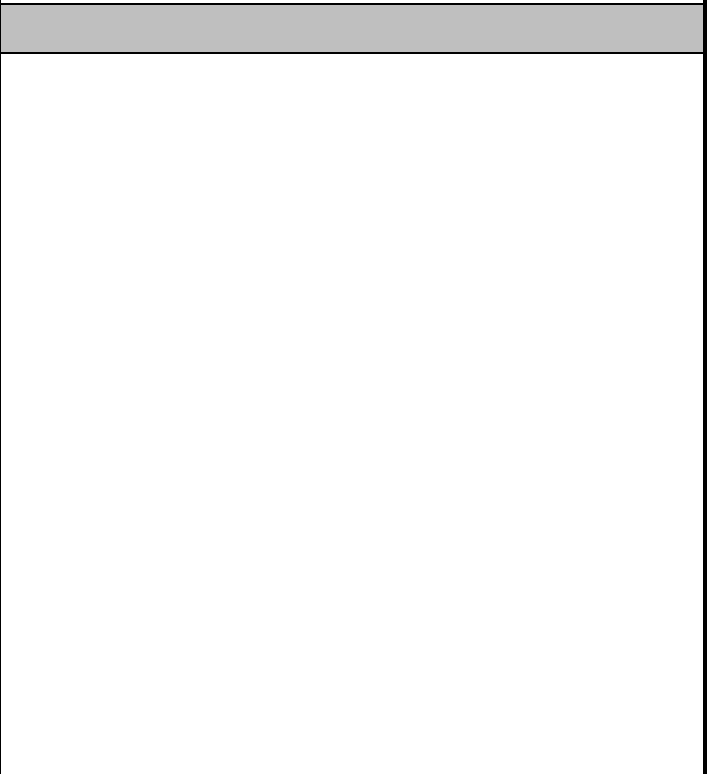
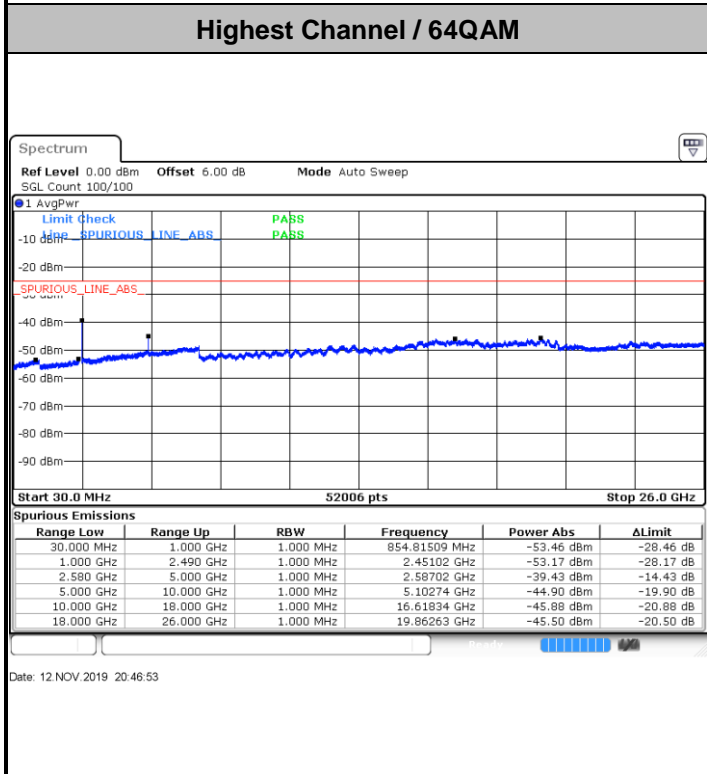
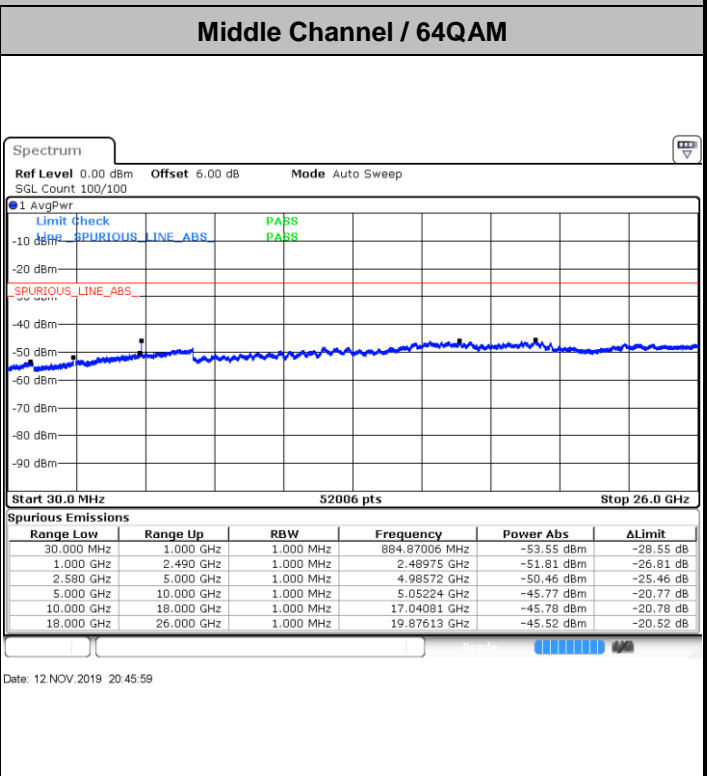
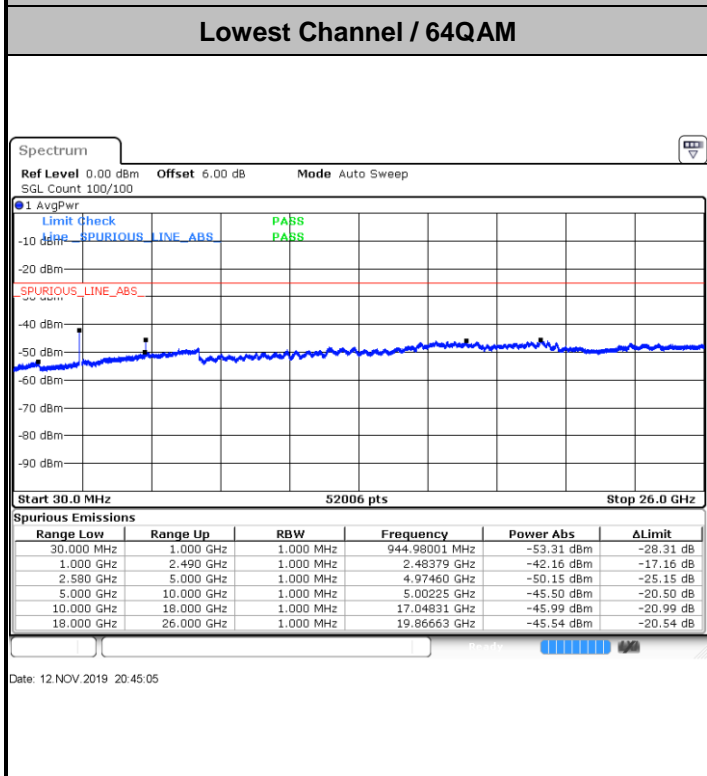
Highest Channel / 64QAM



Date: 12 NOV 2019 20:38:39



**LTE Band 7 / 20MHz**





Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0013	PASS
40	Normal Voltage	0.0038	
30	Normal Voltage	0.0028	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0029	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0020	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0024	
20	Battery End Point	0.0027	

Note:

1. Normal Voltage =3.8 V.; Battery End Point (BEP) =3.6 V.; Maximum Voltage =4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 12

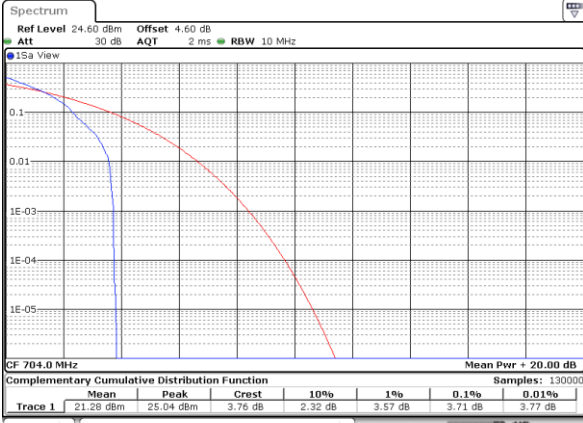
## Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.71	4.35	4.70	5.25	<b>PASS</b>
Middle CH	3.51	4.43	4.49	5.36	
Highest CH	3.51	4.29	4.64	5.36	
Mod.	64QAM		Limit: 13dB		
RB Size	1RB	Full RB	Result		
Lowest CH	5.74	5.86	<b>PASS</b>		
Middle CH	5.36	5.94			
Highest CH	5.25	5.88			



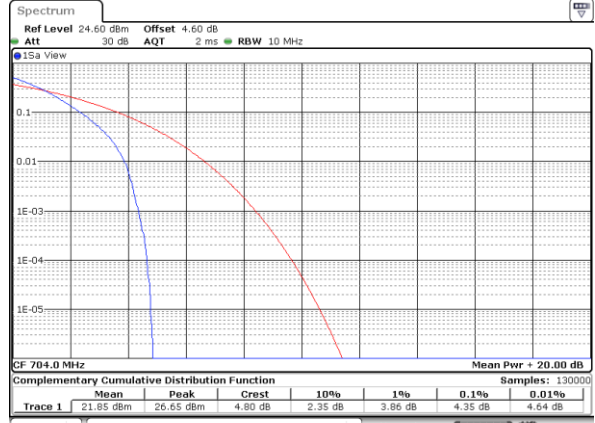
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



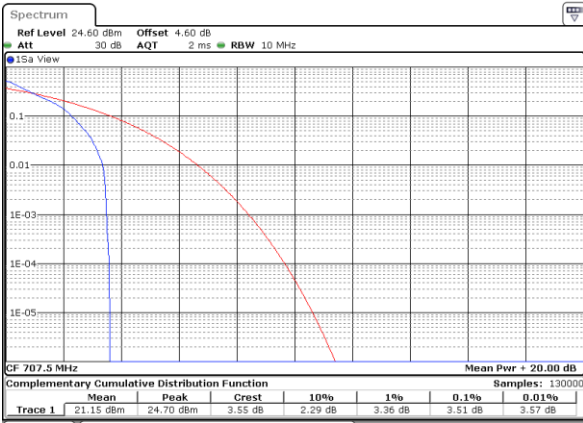
Date: 14 NOV 2019 00:25:35

Lowest Channel / Full RB



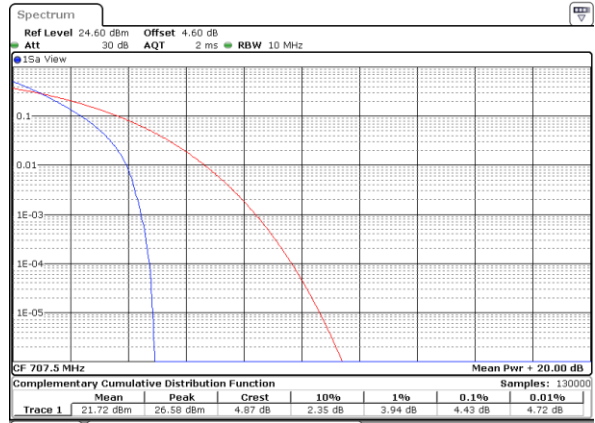
Date: 14 NOV 2019 00:25:44

Middle Channel / 1RB



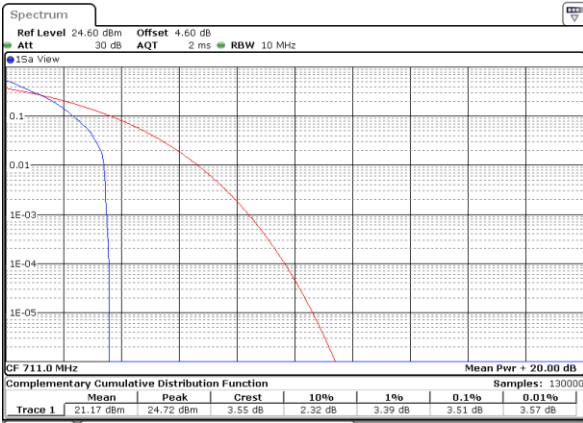
Date: 14 NOV 2019 00:26:20

Middle Channel / Full RB



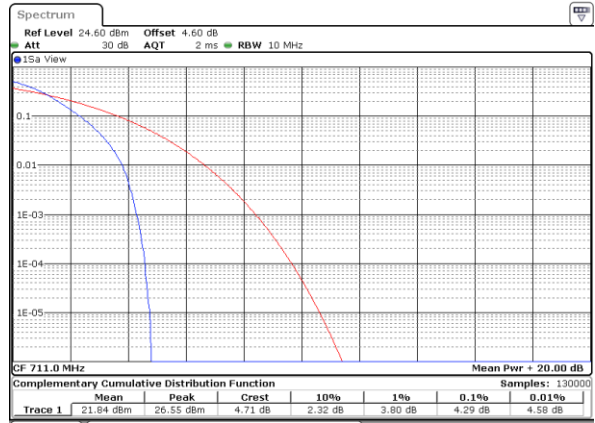
Date: 14 NOV 2019 00:26:11

Highest Channel / 1RB



Date: 14 NOV 2019 00:26:51

Highest Channel / Full RB

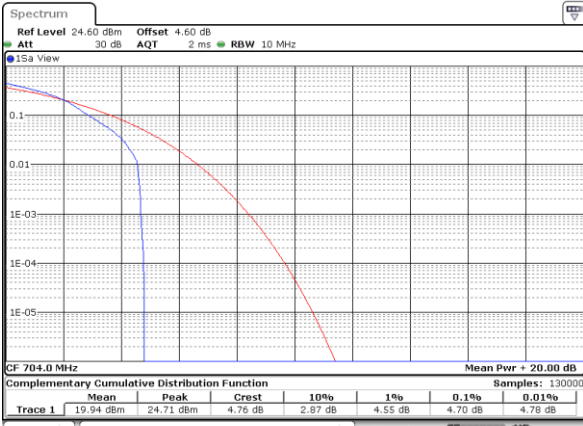


Date: 14 NOV 2019 00:27:00



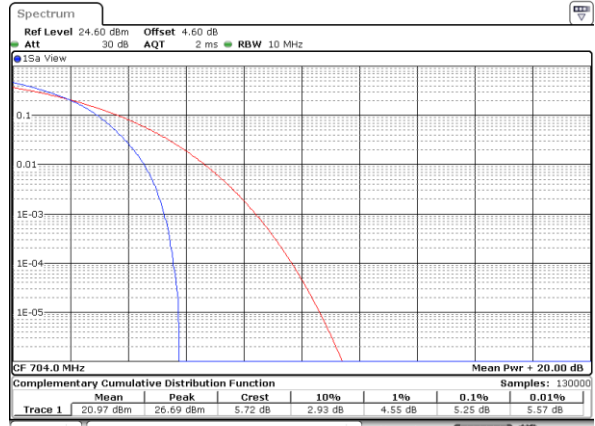
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



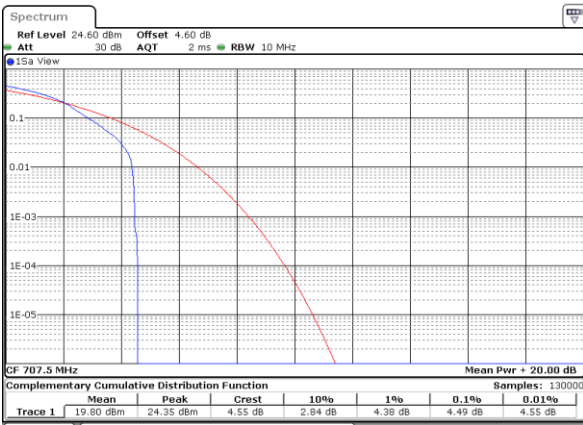
Date: 14 NOV 2019 00:25:25

Lowest Channel / Full RB



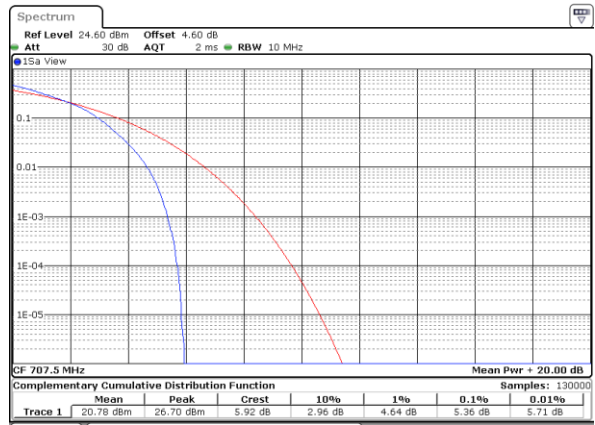
Date: 14 NOV 2019 00:25:53

Middle Channel / 1RB



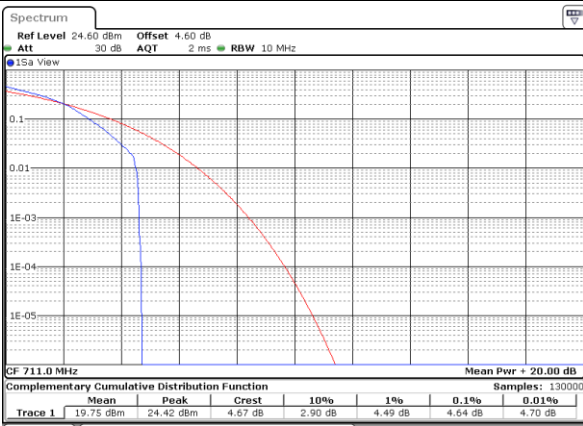
Date: 14 NOV 2019 00:26:32

Middle Channel / Full RB



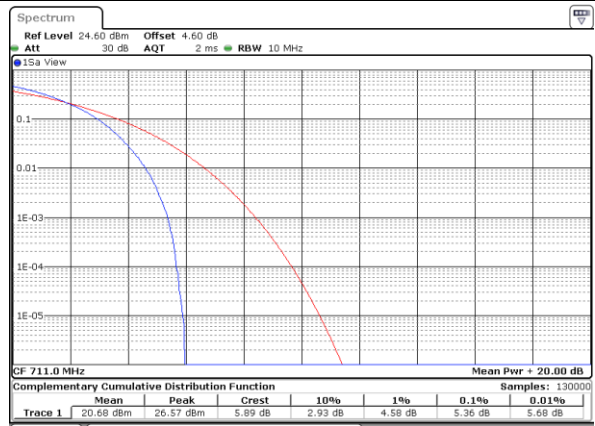
Date: 14 NOV 2019 00:26:02

Highest Channel / 1RB



Date: 14 NOV 2019 00:26:41

Highest Channel / Full RB

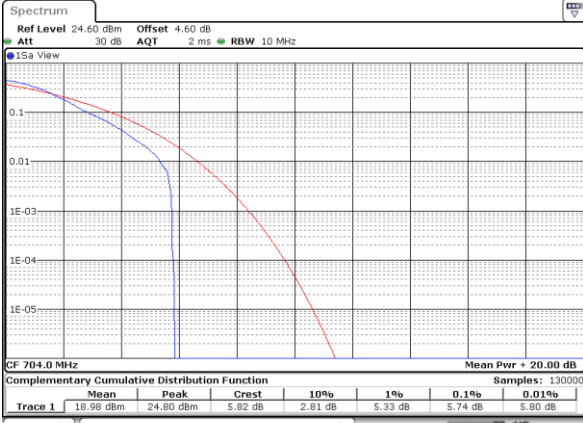


Date: 14 NOV 2019 00:27:10



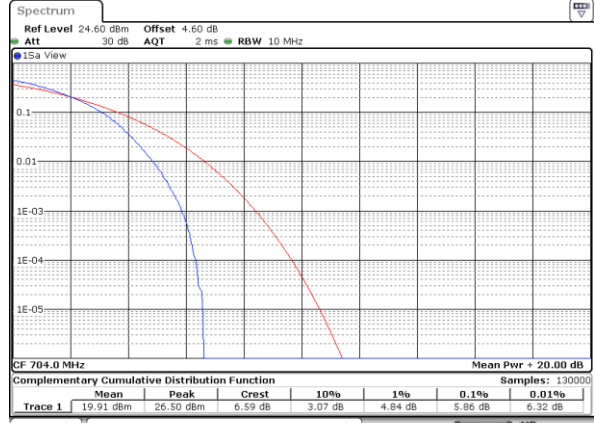
LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



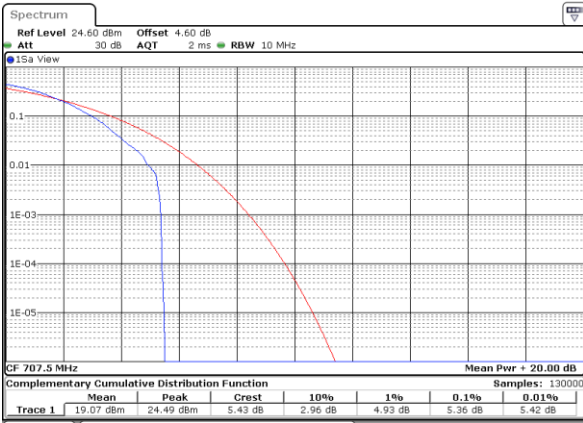
Date: 14 NOV 2019 00:24:30

Lowest Channel / Full RB



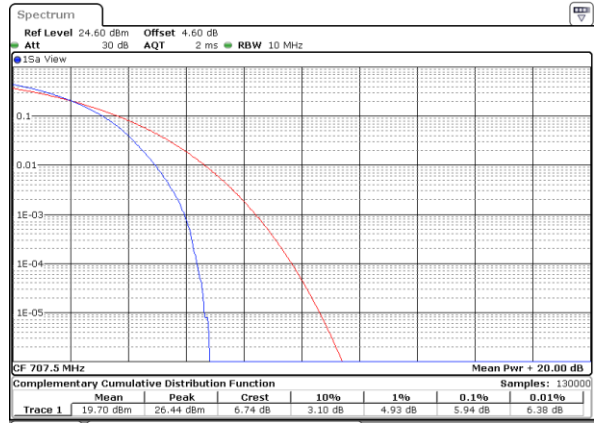
Date: 14 NOV 2019 00:24:39

Middle Channel / 1RB



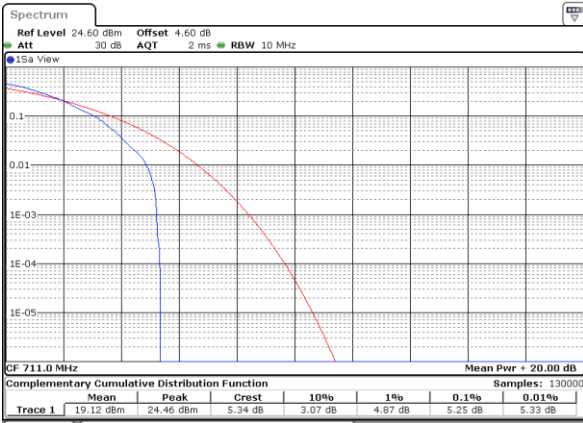
Date: 14 NOV 2019 00:24:57

Middle Channel / Full RB



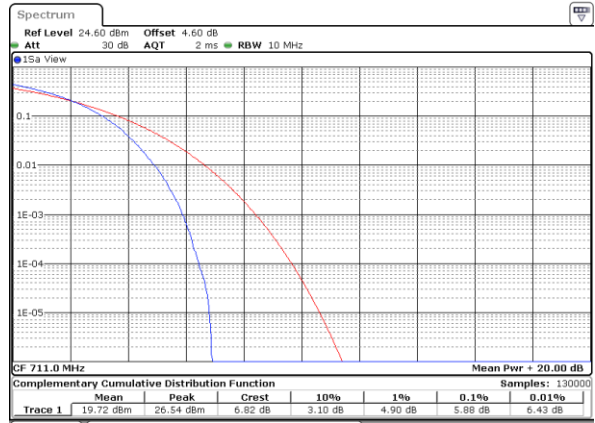
Date: 14 NOV 2019 00:24:48

Highest Channel / 1RB



Date: 14 NOV 2019 00:25:06

Highest Channel / Full RB



Date: 14 NOV 2019 00:25:15



**26dB Bandwidth**

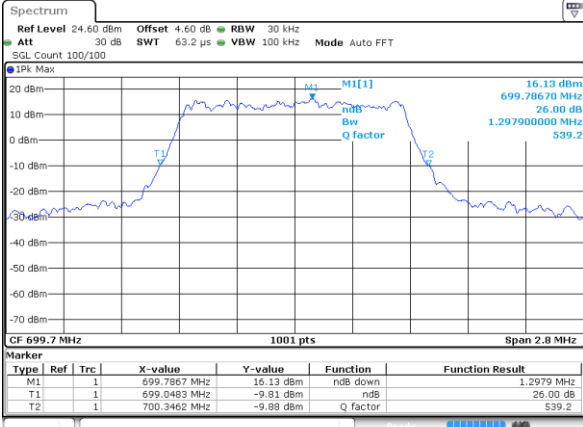
Mode	LTE Band 12 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		1.4MHz	3MHz	5MHz	10MHz
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	1.2979	1.3007	2.985	3.009	4.905	4.975	9.83	9.71	1.2503	2.991	4.835	9.85
Middle CH	1.2811	1.2923	2.997	3.009	4.895	4.905	9.69	9.79	1.2727	3.003	4.905	9.75
Highest CH	1.2951	1.3203	2.967	2.985	4.955	4.885	9.71	9.81	1.2476	2.991	4.915	9.87





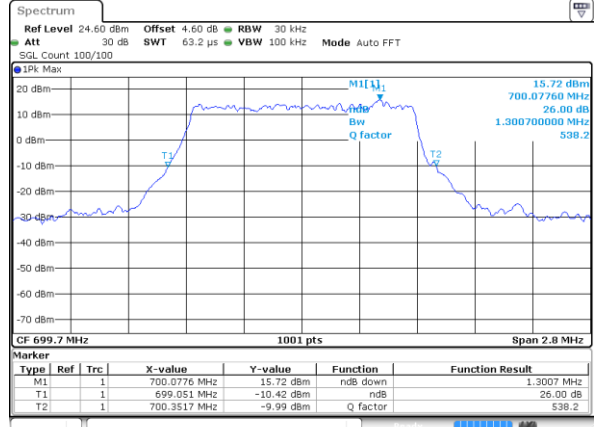
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



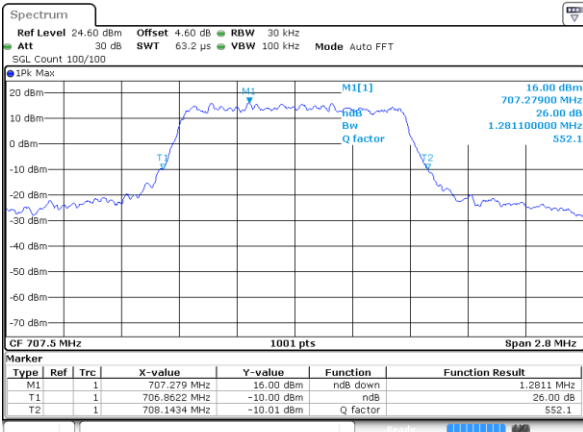
Date: 13 NOV 2019 22:47:21

Lowest Channel / 1.4MHz / 16QAM



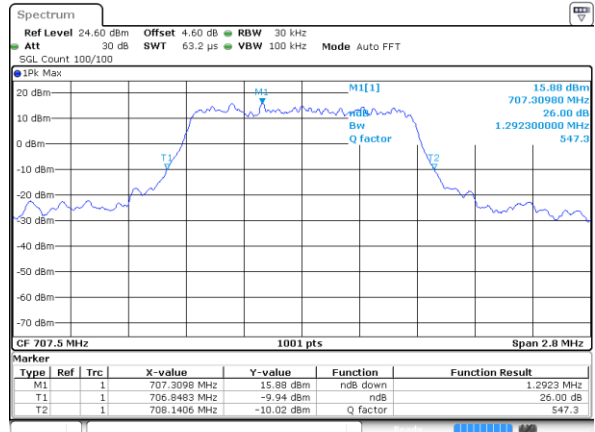
Date: 13 NOV 2019 22:47:11

Middle Channel / 1.4MHz / QPSK



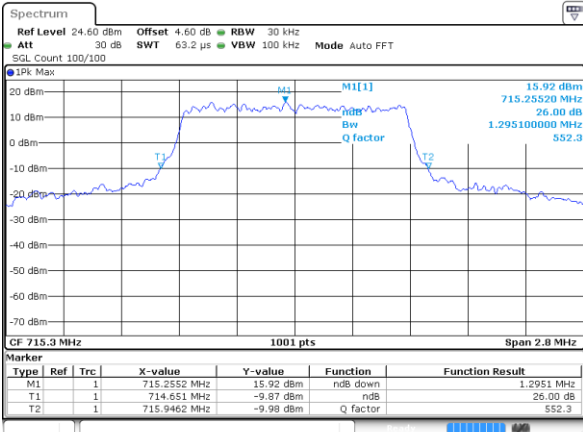
Date: 13 NOV 2019 22:46:51

Middle Channel / 1.4MHz / 16QAM



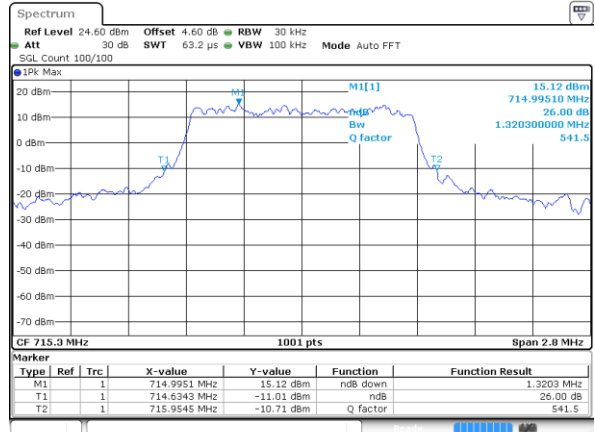
Date: 13 NOV 2019 22:47:01

Highest Channel / 1.4MHz / QPSK



Date: 13 NOV 2019 22:46:41

Highest Channel / 1.4MHz / 16QAM

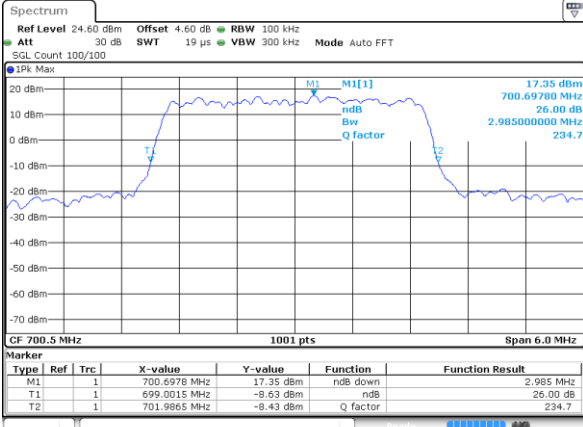


Date: 13 NOV 2019 22:46:31



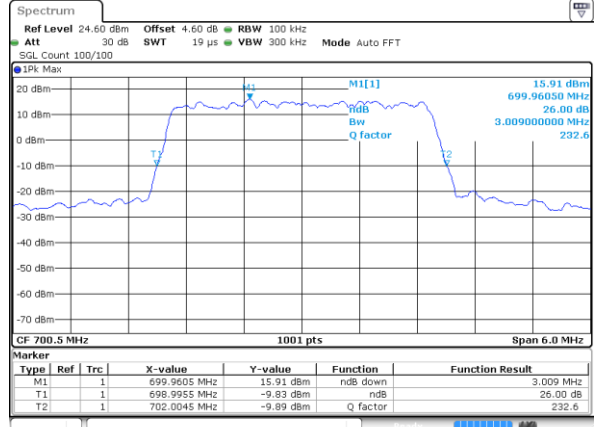
LTE Band 12

Lowest Channel / 3MHz / QPSK



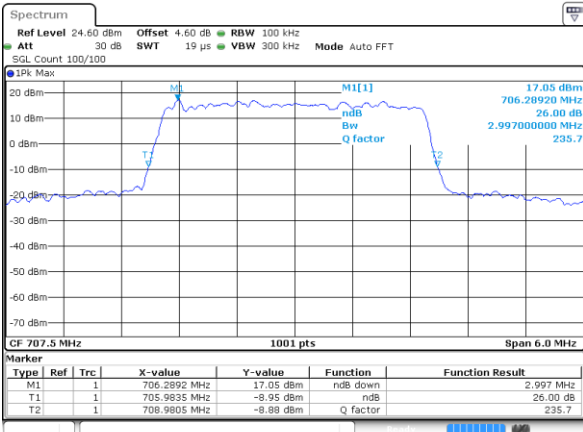
Date: 13 NOV 2019 23:02:51

Lowest Channel / 3MHz / 16QAM



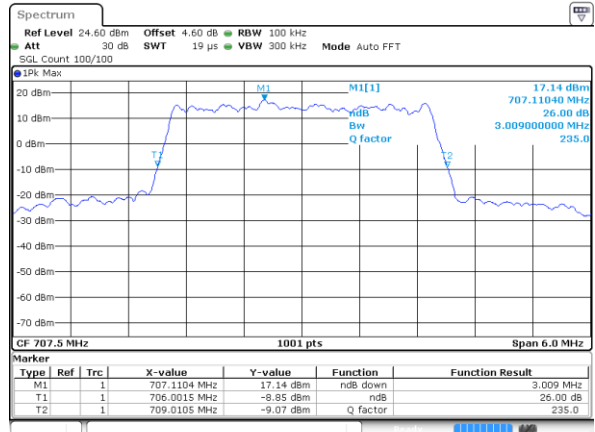
Date: 13 NOV 2019 23:02:41

Middle Channel / 3MHz / QPSK



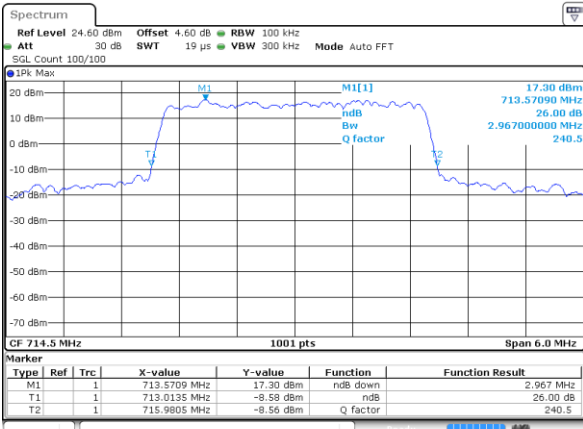
Date: 13 NOV 2019 23:02:21

Middle Channel / 3MHz / 16QAM



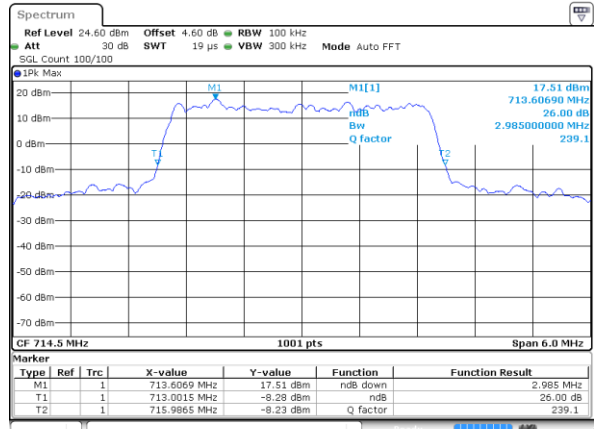
Date: 13 NOV 2019 23:02:31

Highest Channel / 3MHz / QPSK



Date: 13 NOV 2019 23:02:11

Highest Channel / 3MHz / 16QAM

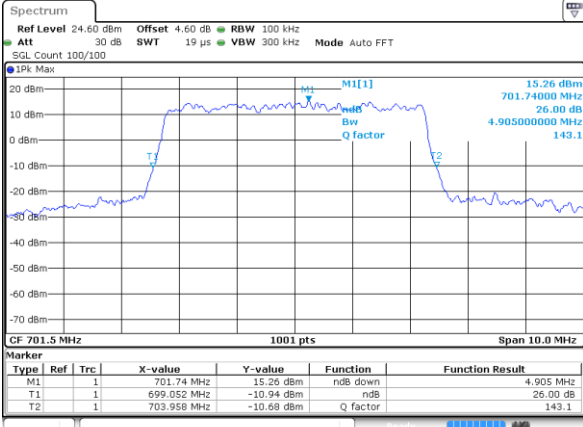


Date: 13 NOV 2019 23:02:01



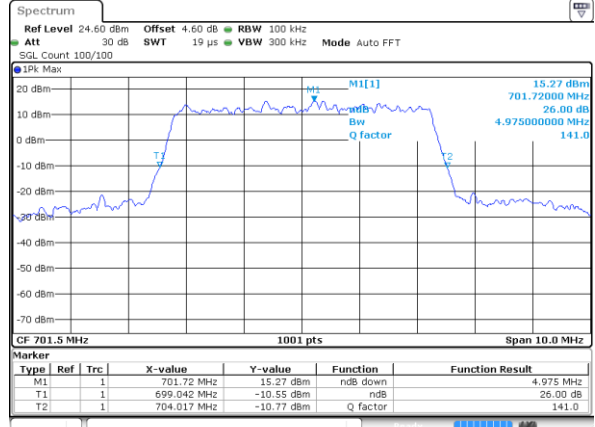
LTE Band 12

Lowest Channel / 5MHz / QPSK



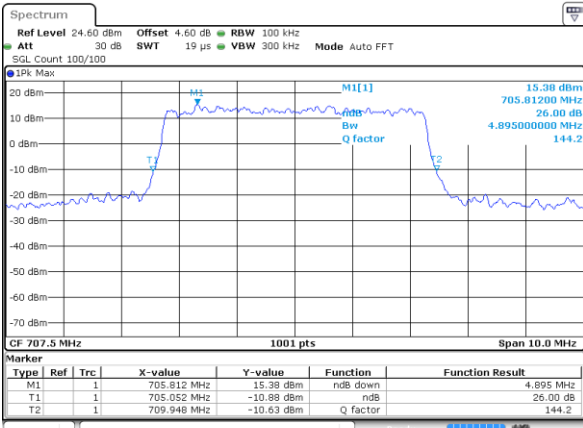
Date: 13 NOV 2019 23:19:17

Lowest Channel / 5MHz / 16QAM



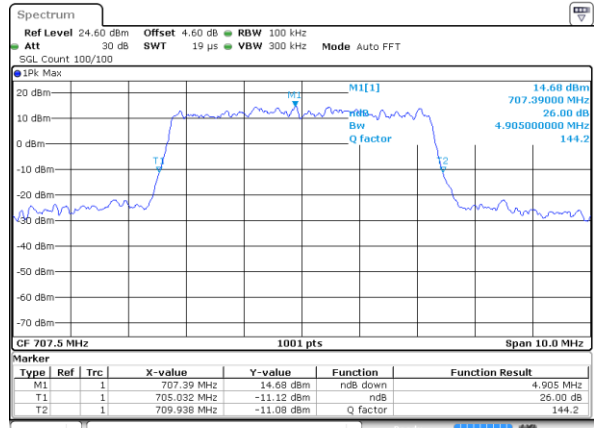
Date: 13 NOV 2019 23:19:07

Middle Channel / 5MHz / QPSK



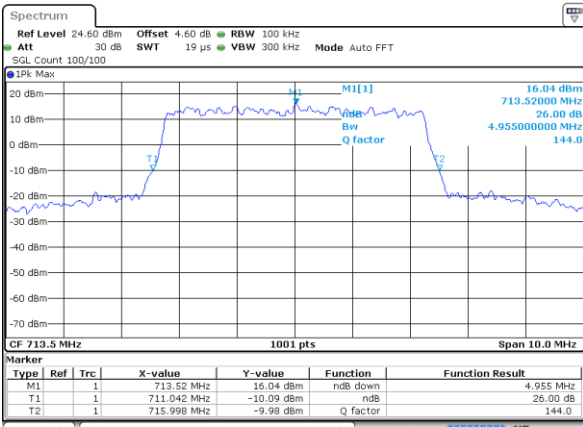
Date: 13 NOV 2019 23:18:46

Middle Channel / 5MHz / 16QAM



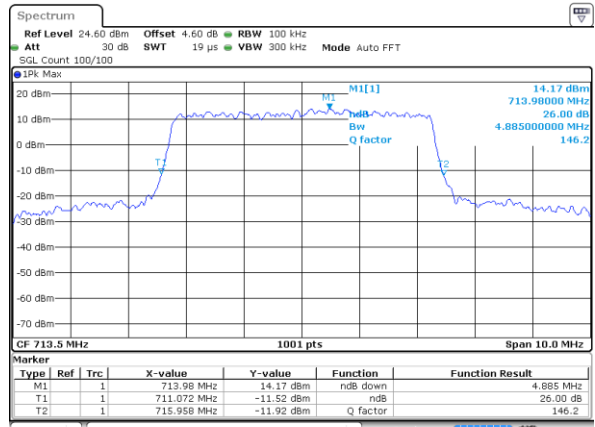
Date: 13 NOV 2019 23:18:57

Highest Channel / 5MHz / QPSK



Date: 13 NOV 2019 23:18:36

Highest Channel / 5MHz / 16QAM

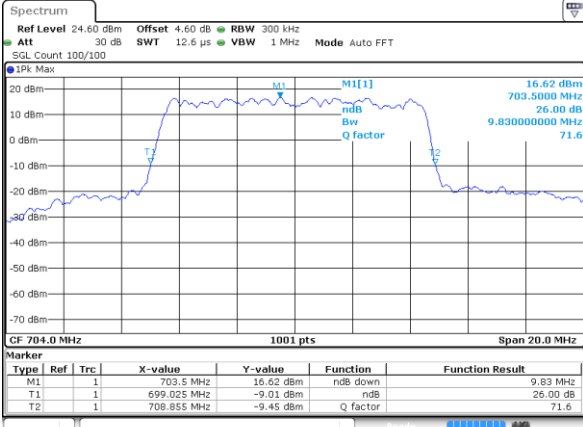


Date: 13 NOV 2019 23:18:26



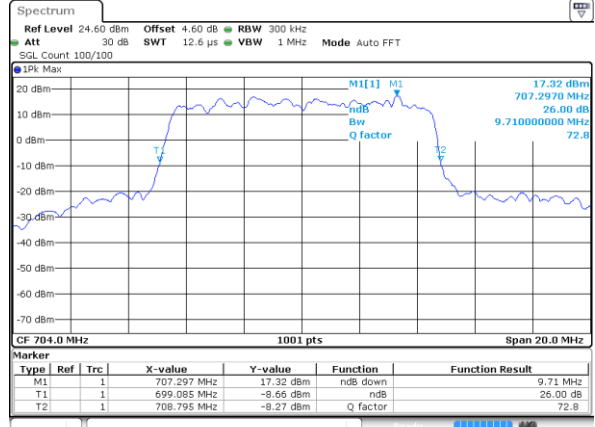
LTE Band 12

Lowest Channel / 10MHz / QPSK



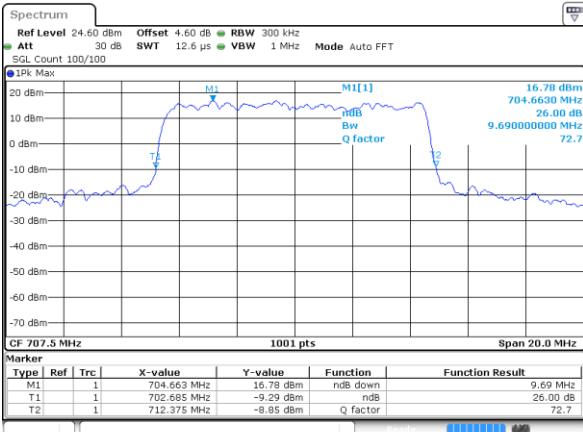
Date: 14 NOV 2019 00:28:30

Lowest Channel / 10MHz / 16QAM



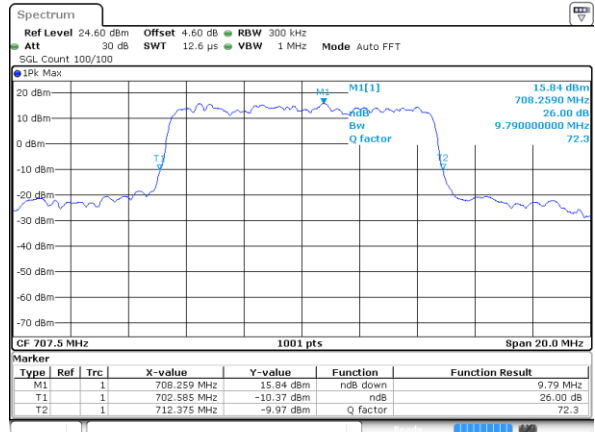
Date: 13 NOV 2019 23:35:32

Middle Channel / 10MHz / QPSK



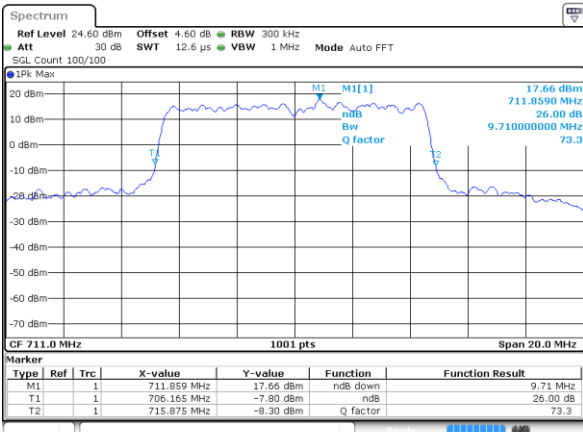
Date: 14 NOV 2019 00:28:03

Middle Channel / 10MHz / 16QAM



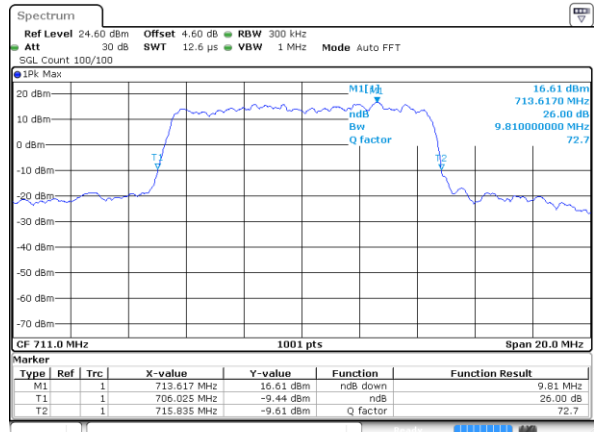
Date: 13 NOV 2019 23:35:22

Highest Channel / 10MHz / QPSK



Date: 13 NOV 2019 23:35:02

Highest Channel / 10MHz / 16QAM

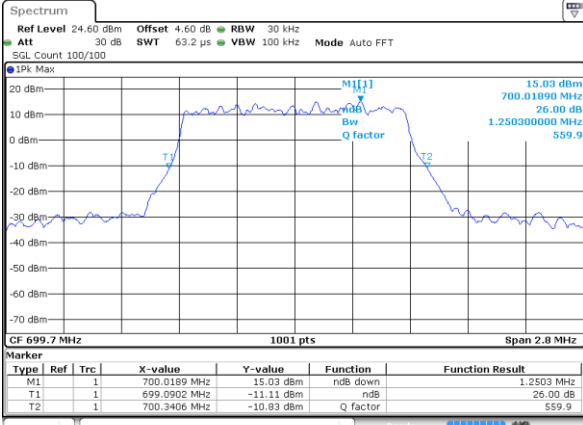


Date: 13 NOV 2019 23:34:52



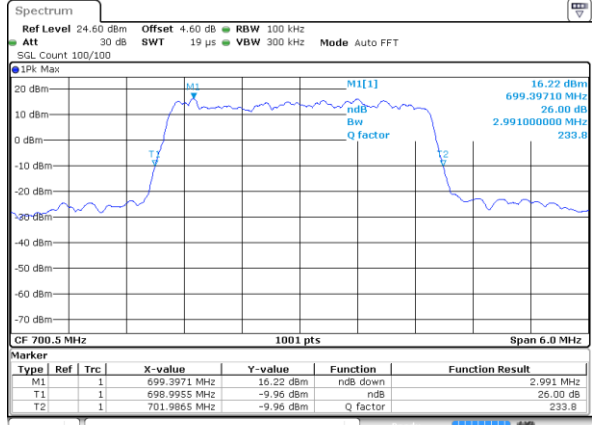
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



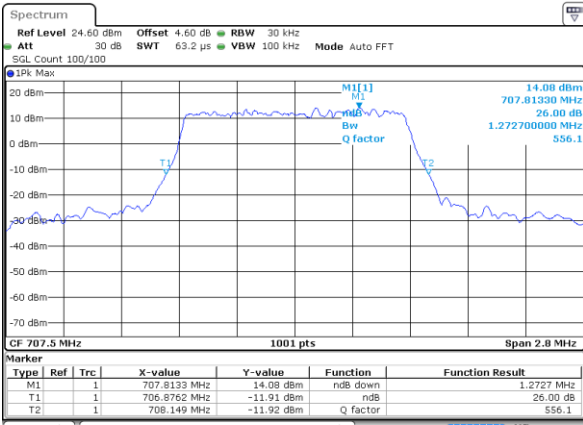
Date: 13 NOV 2019 23:50:27

Lowest Channel / 3MHz / 64QAM



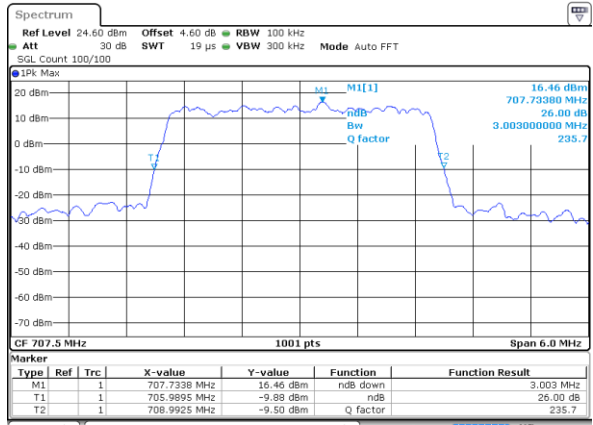
Date: 14 NOV 2019 00:01:22

Middle Channel / 1.4MHz / 64QAM



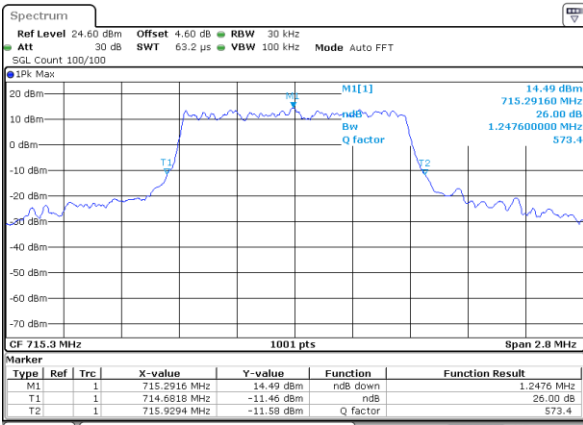
Date: 13 NOV 2019 23:50:47

Middle Channel / 3MHz / 64QAM



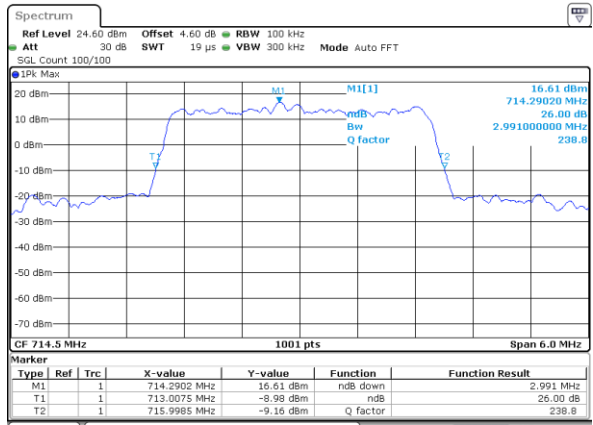
Date: 14 NOV 2019 00:01:42

Highest Channel / 1.4MHz / 64QAM



Date: 13 NOV 2019 23:51:07

Highest Channel / 3MHz / 64QAM

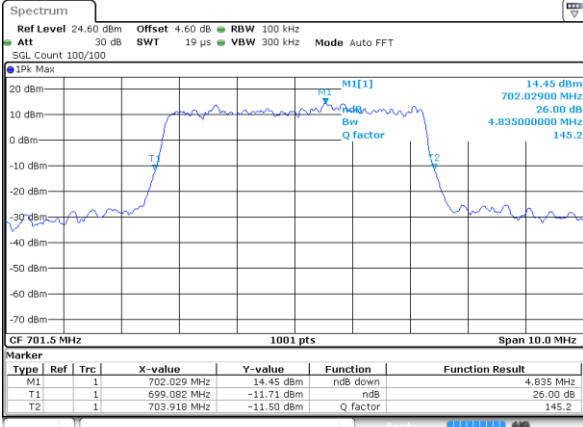


Date: 14 NOV 2019 00:02:02



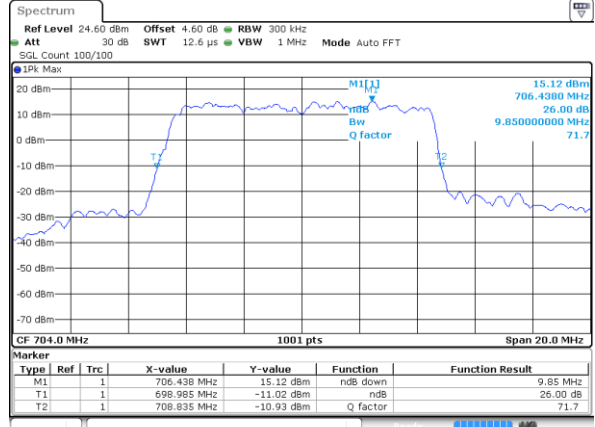
LTE Band 12

Lowest Channel / 5MHz / 64QAM



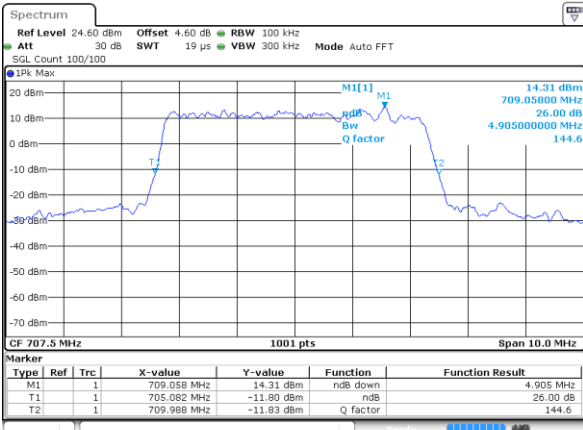
Date: 14 NOV 2019 00:06:51

Lowest Channel / 10MHz / 64QAM



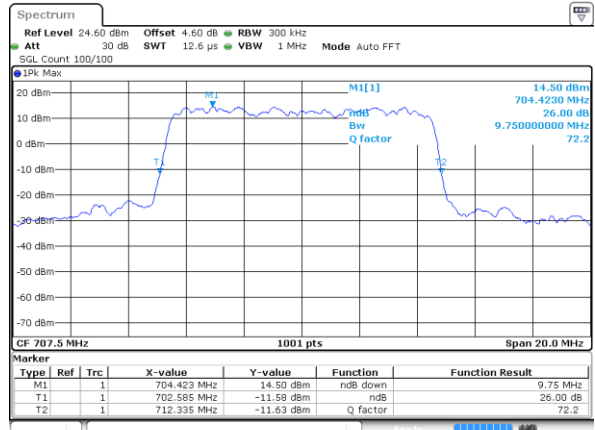
Date: 14 NOV 2019 00:17:47

Middle Channel / 5MHz / 64QAM



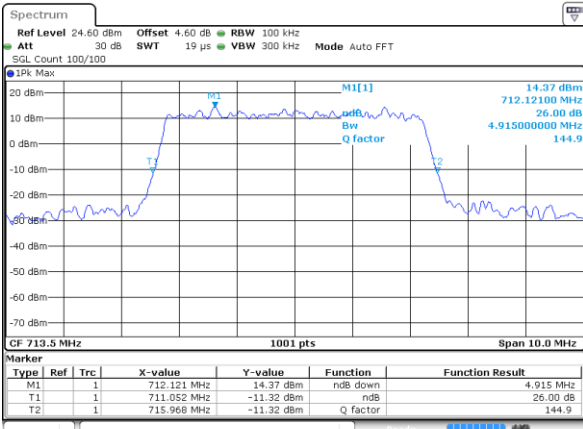
Date: 14 NOV 2019 00:07:11

Middle Channel / 10MHz / 64QAM



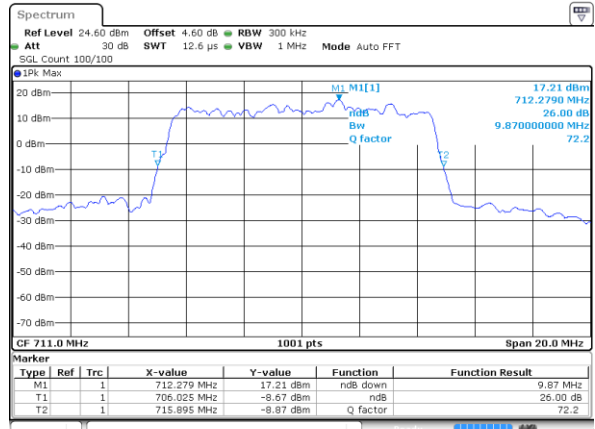
Date: 14 NOV 2019 00:18:07

Highest Channel / 5MHz / 64QAM



Date: 14 NOV 2019 00:07:31

Highest Channel / 10MHz / 64QAM



Date: 14 NOV 2019 00:18:27



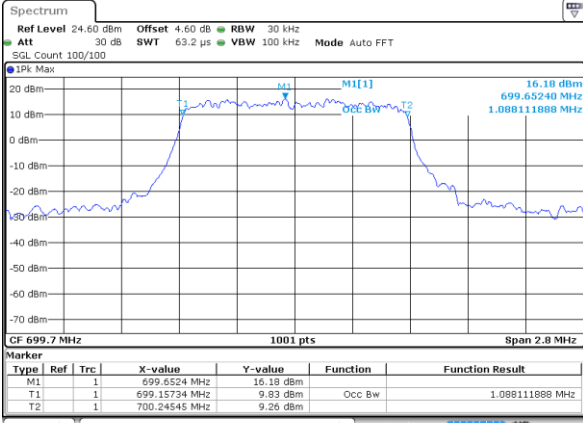
### Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		1.4MHz	3MHz	5MHz	10MHz
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	1.09	1.09	2.72	2.72	4.48	4.47	9.05	9.01	1.09	2.71	4.47	8.97
Middle CH	1.10	1.09	2.72	2.72	4.50	4.48	9.01	9.03	1.09	2.73	4.52	9.01
Highest CH	1.11	1.10	2.72	2.70	4.48	4.47	9.05	8.99	1.10	2.73	4.52	9.05



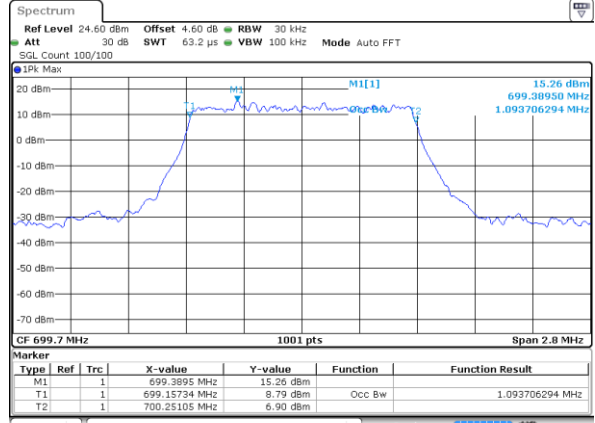
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



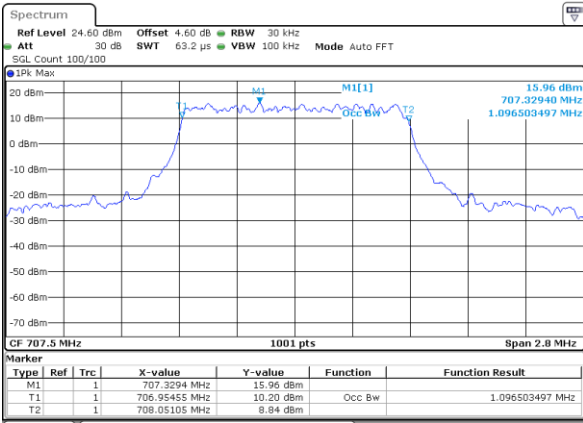
Date: 13 NOV 2019 22:45:30

Lowest Channel / 1.4MHz / 16QAM



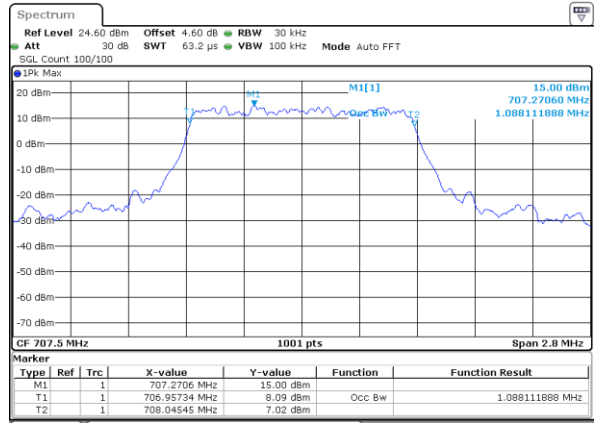
Date: 13 NOV 2019 22:45:40

Middle Channel / 1.4MHz / QPSK



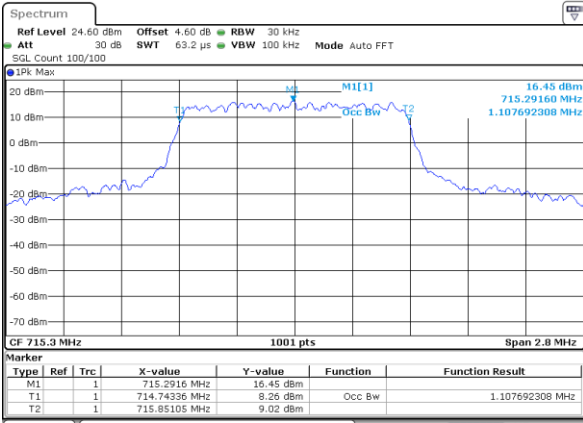
Date: 13 NOV 2019 22:46:00

Middle Channel / 1.4MHz / 16QAM



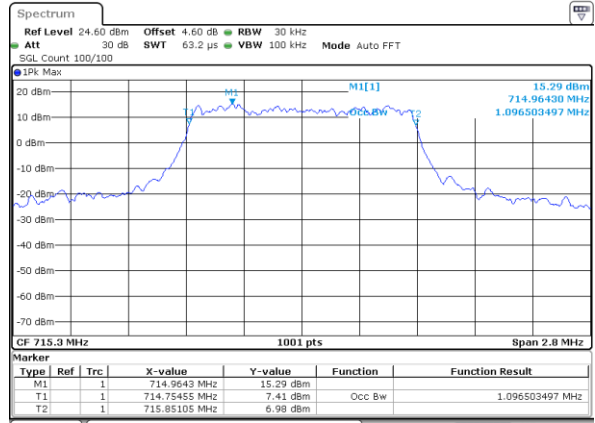
Date: 13 NOV 2019 22:45:50

Highest Channel / 1.4MHz / QPSK



Date: 13 NOV 2019 22:46:11

Highest Channel / 1.4MHz / 16QAM



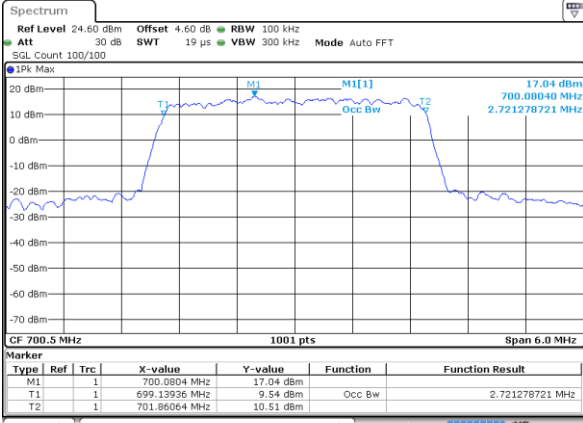
Date: 13 NOV 2019 22:46:21





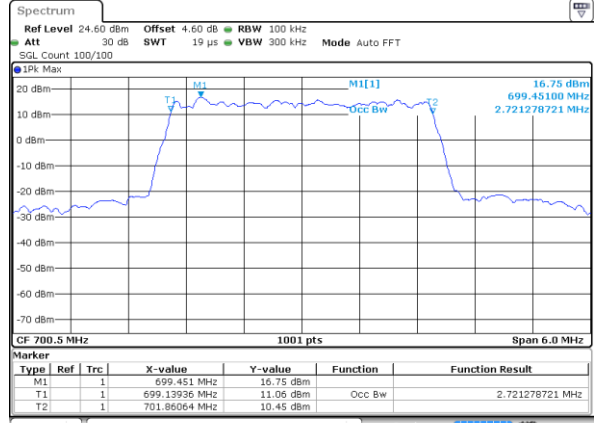
LTE Band 12

Lowest Channel / 3MHz / QPSK



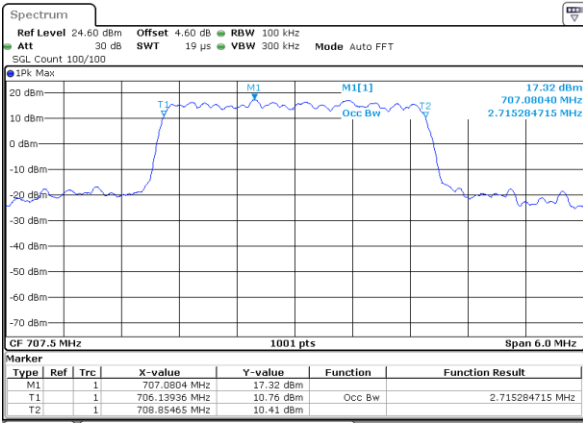
Date: 13 NOV 2019 23:01:01

Lowest Channel / 3MHz / 16QAM



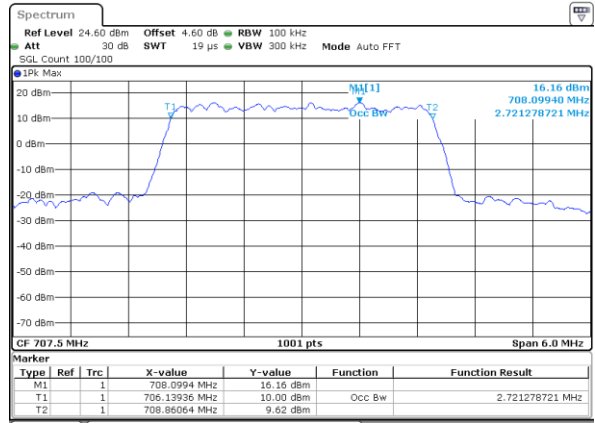
Date: 13 NOV 2019 23:01:11

Middle Channel / 3MHz / QPSK



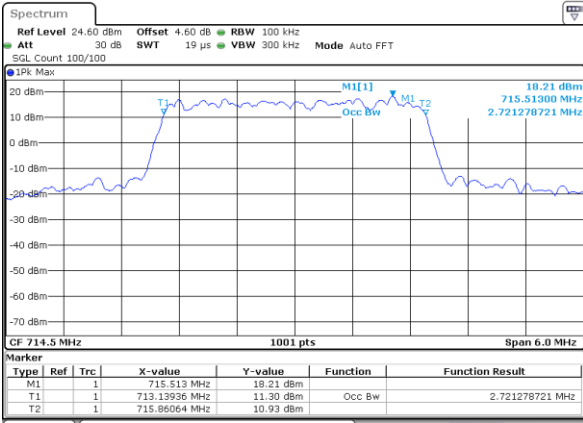
Date: 13 NOV 2019 23:01:31

Middle Channel / 3MHz / 16QAM



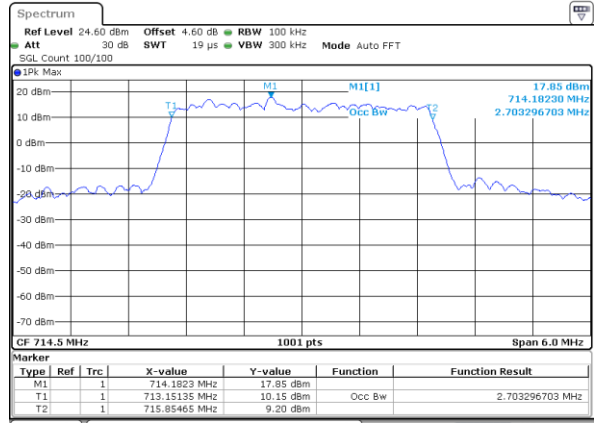
Date: 13 NOV 2019 23:01:21

Highest Channel / 3MHz / QPSK



Date: 13 NOV 2019 23:01:41

Highest Channel / 3MHz / 16QAM

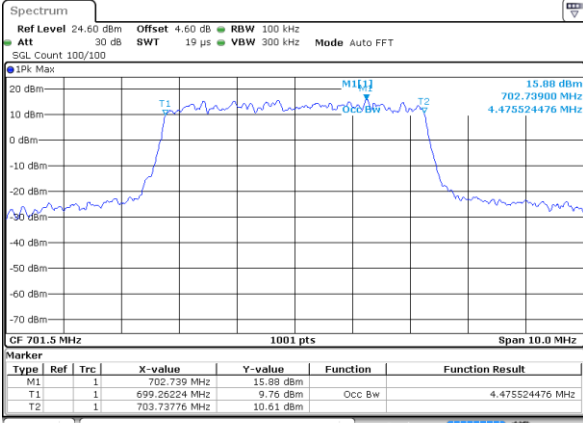


Date: 13 NOV 2019 23:01:51



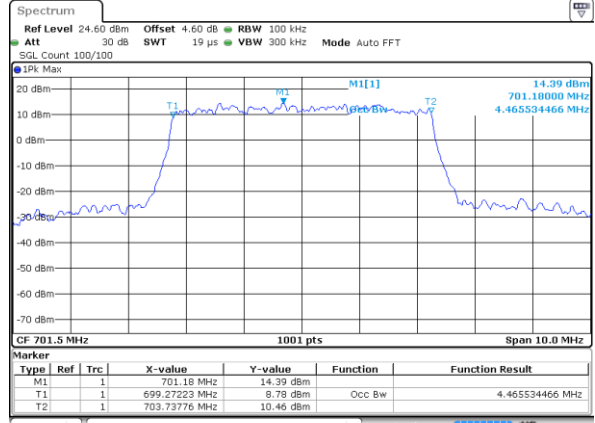
LTE Band 12

Lowest Channel / 5MHz / QPSK



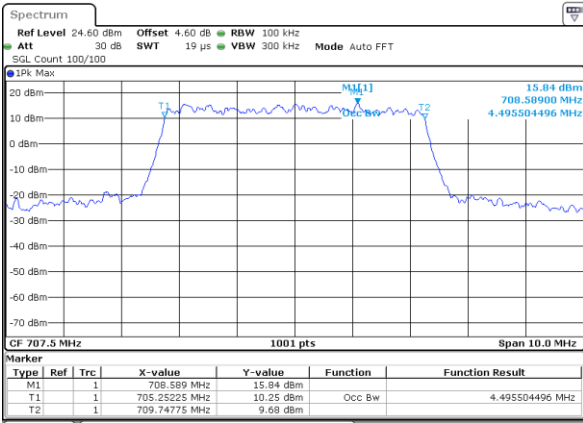
Date: 13 NOV 2019 23:17:26

Lowest Channel / 5MHz / 16QAM



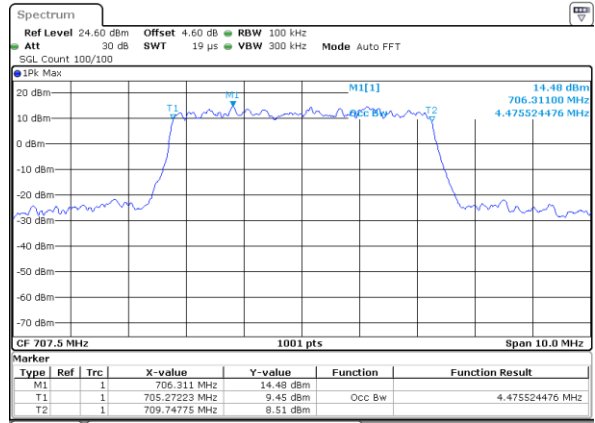
Date: 13 NOV 2019 23:17:36

Middle Channel / 5MHz / QPSK



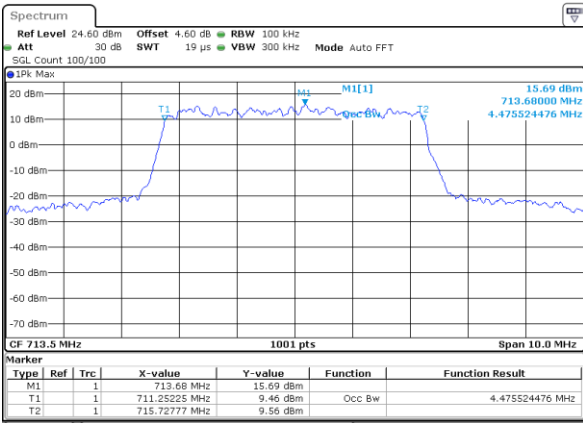
Date: 13 NOV 2019 23:17:56

Middle Channel / 5MHz / 16QAM



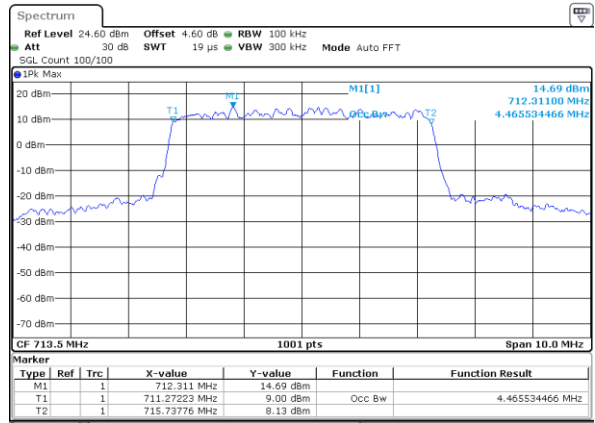
Date: 13 NOV 2019 23:17:46

Highest Channel / 5MHz / QPSK



Date: 13 NOV 2019 23:18:06

Highest Channel / 5MHz / 16QAM

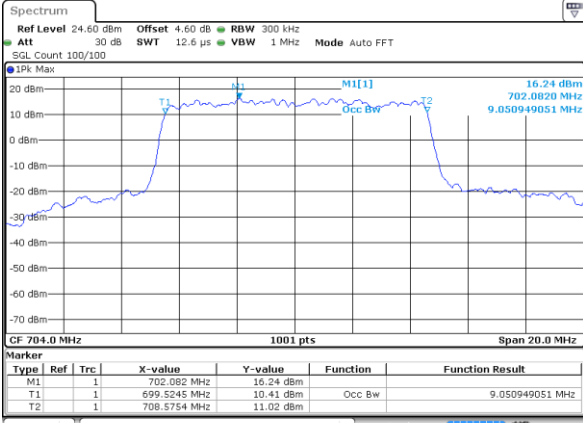


Date: 13 NOV 2019 23:18:16



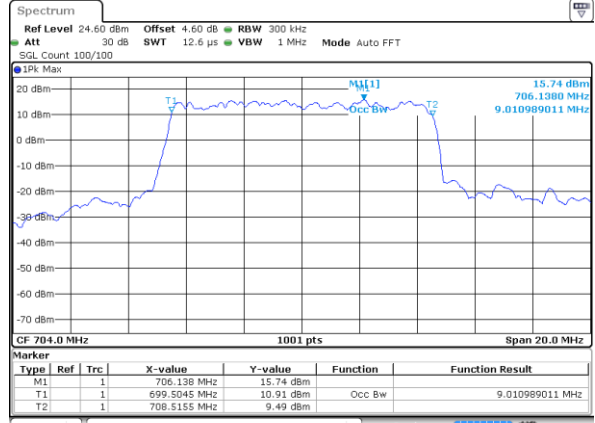
LTE Band 12

Lowest Channel / 10MHz / QPSK



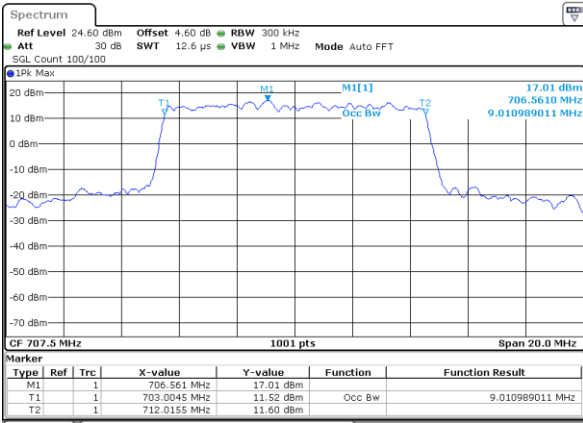
Date: 13 NOV 2019 23:33:51

Lowest Channel / 10MHz / 16QAM



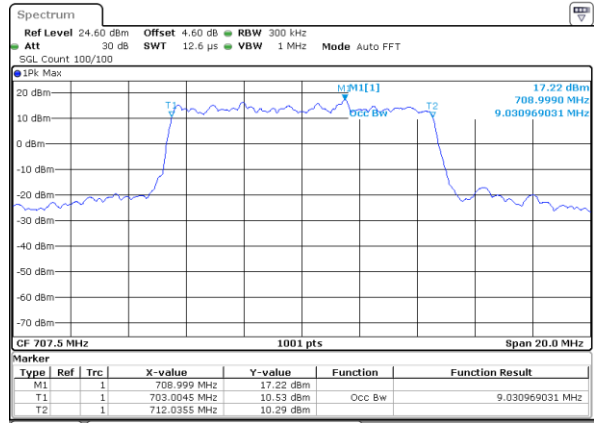
Date: 13 NOV 2019 23:34:01

Middle Channel / 10MHz / QPSK



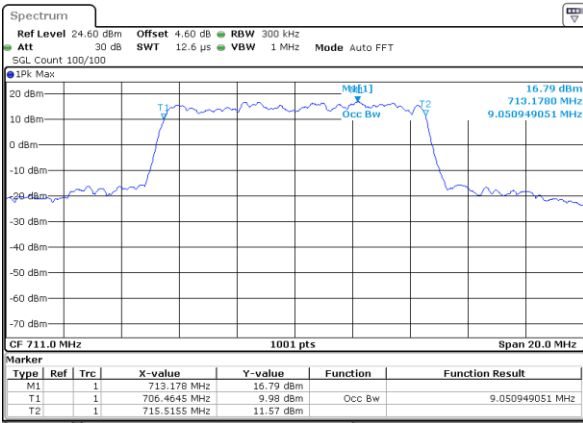
Date: 13 NOV 2019 23:34:21

Middle Channel / 10MHz / 16QAM



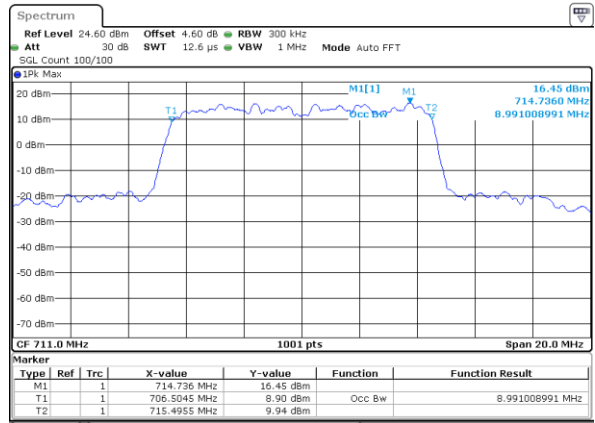
Date: 13 NOV 2019 23:34:11

Highest Channel / 10MHz / QPSK



Date: 13 NOV 2019 23:34:32

Highest Channel / 10MHz / 16QAM

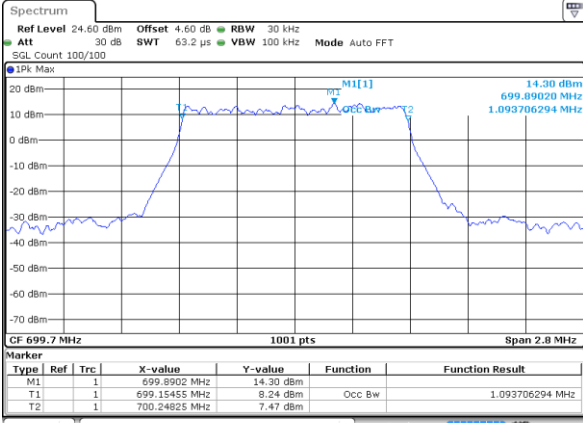


Date: 13 NOV 2019 23:34:42



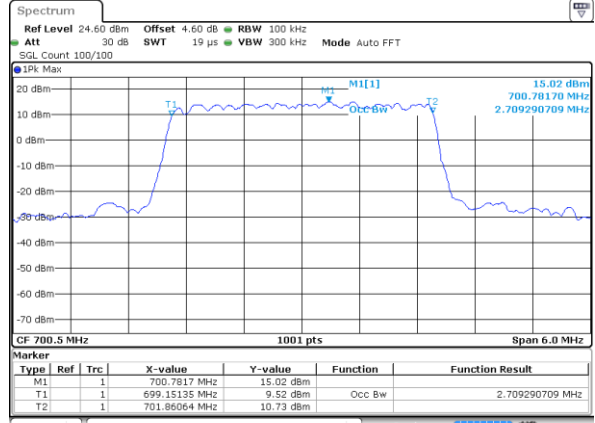
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



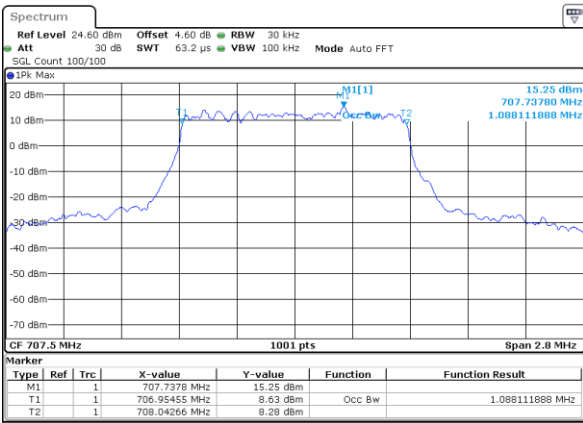
Date: 13 NOV 2019 23:50:17

Lowest Channel / 3MHz / 64QAM



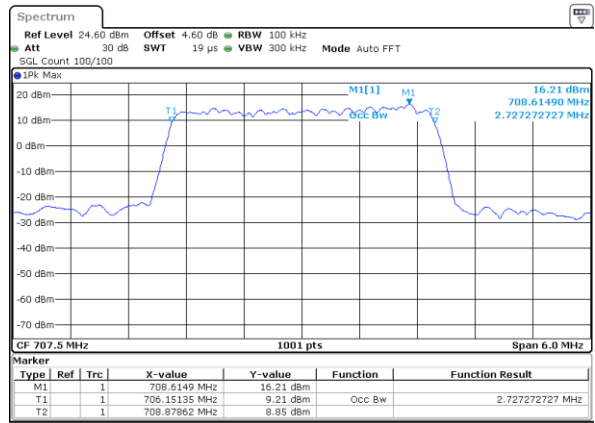
Date: 14 NOV 2019 00:01:12

Middle Channel / 1.4MHz / 64QAM



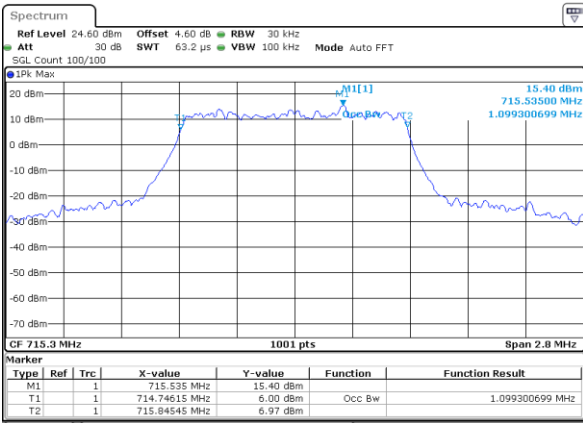
Date: 13 NOV 2019 23:50:37

Middle Channel / 3MHz / 64QAM



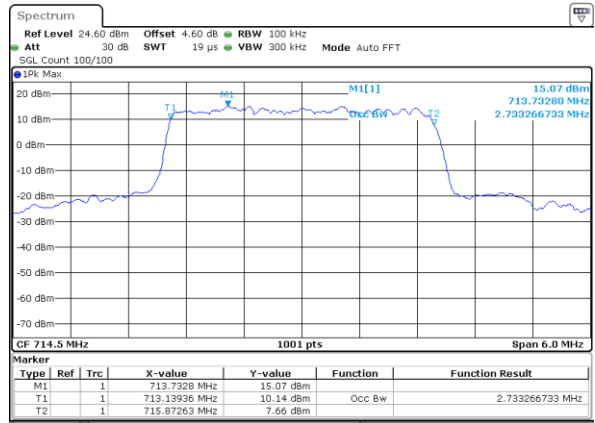
Date: 14 NOV 2019 00:01:32

Highest Channel / 1.4MHz / 64QAM



Date: 13 NOV 2019 23:50:57

Highest Channel / 3MHz / 64QAM



Date: 14 NOV 2019 00:01:52