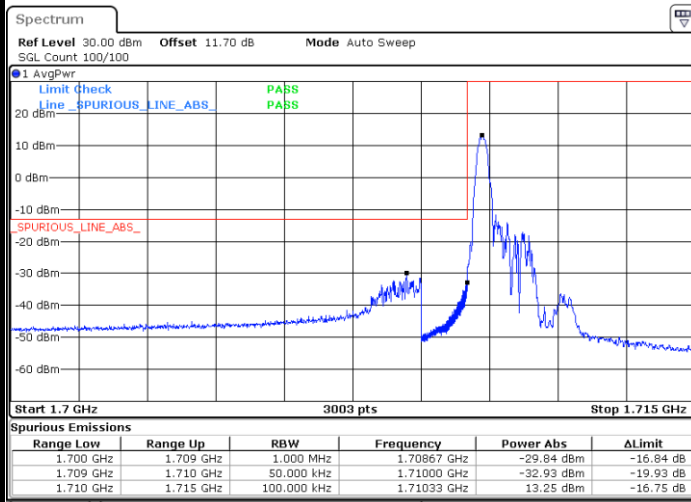


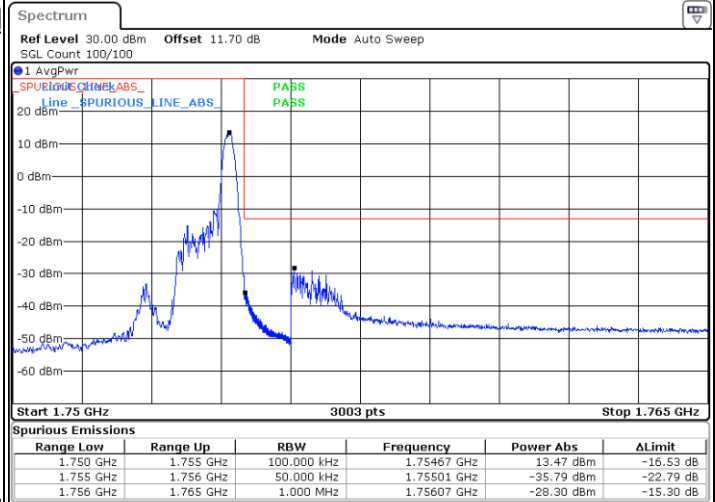


LTE Band 4 / 5MHz / QPSK

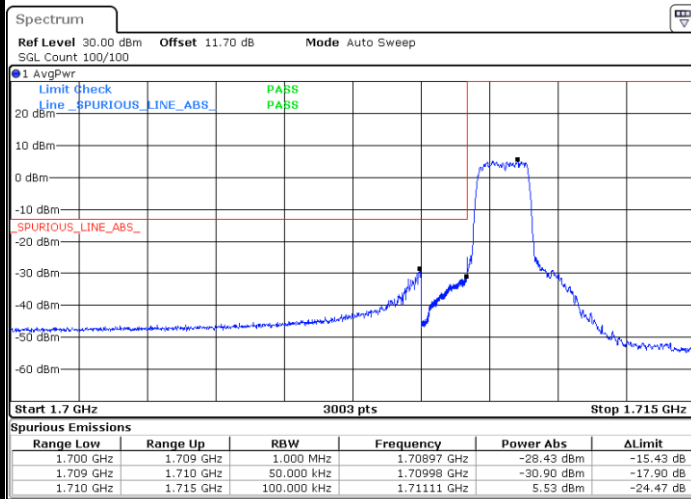
Lowest Band Edge / 1 RB



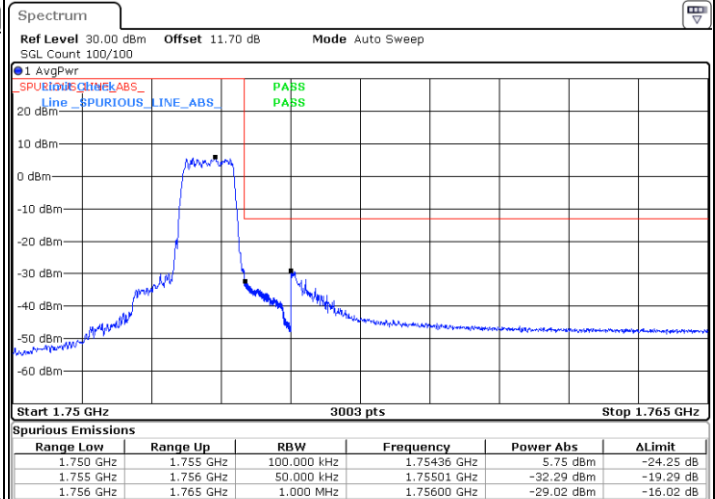
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



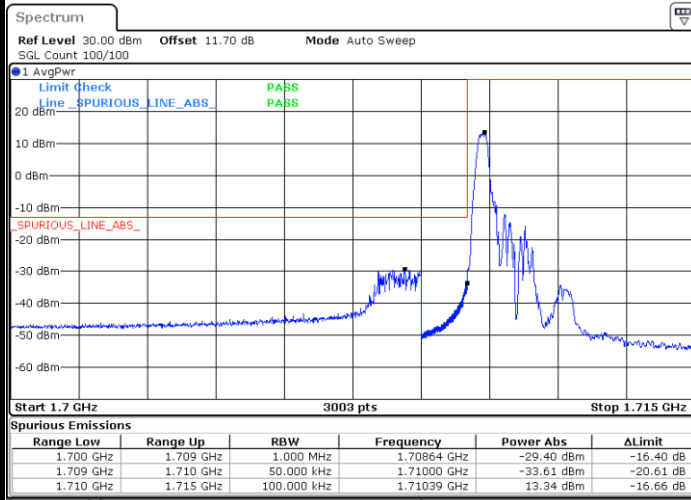
Highest Band Edge / Full RB



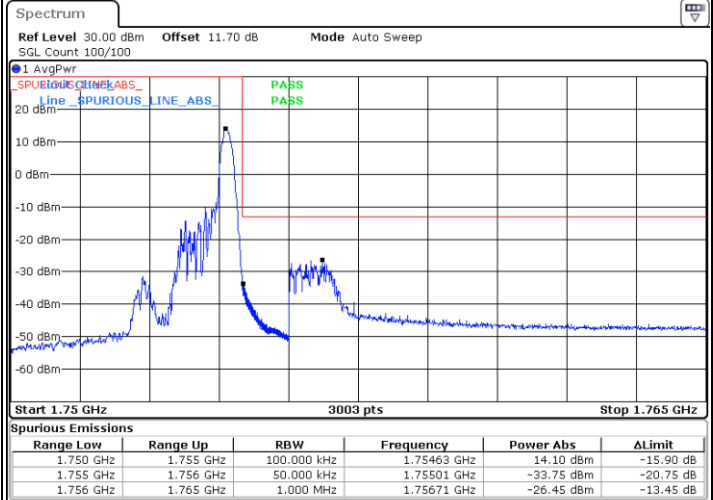


LTE Band 4 / 5MHz / 16QAM

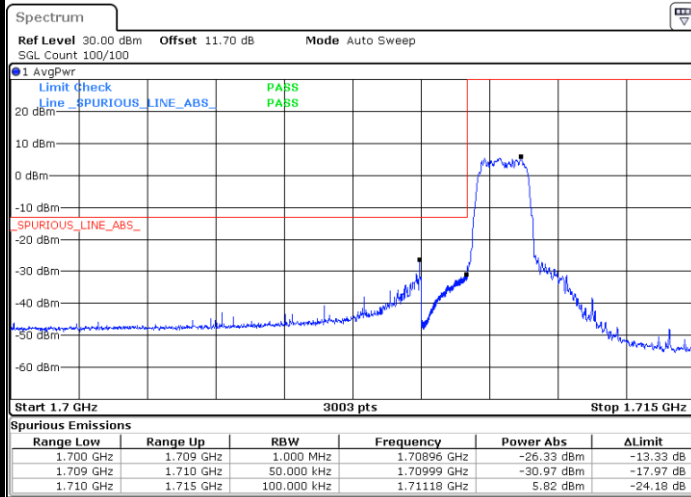
Lowest Band Edge / 1RB



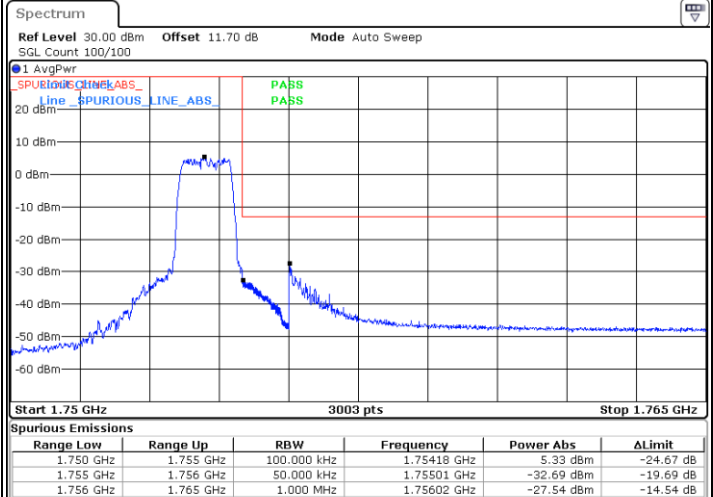
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



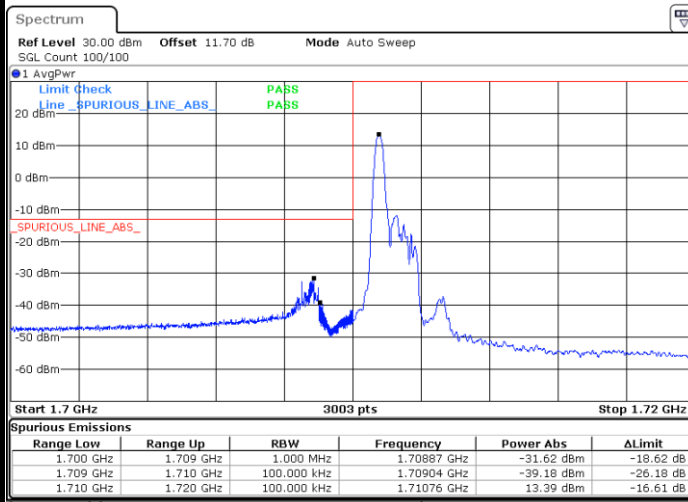
Highest Band Edge / Full RB



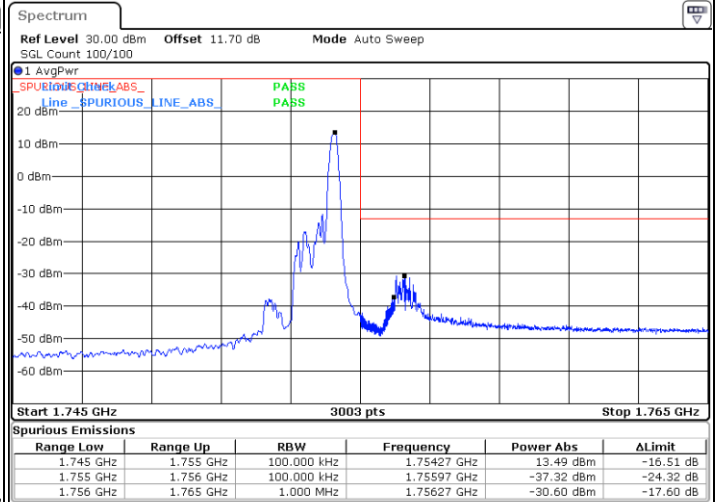


LTE Band 4 / 10MHz / QPSK

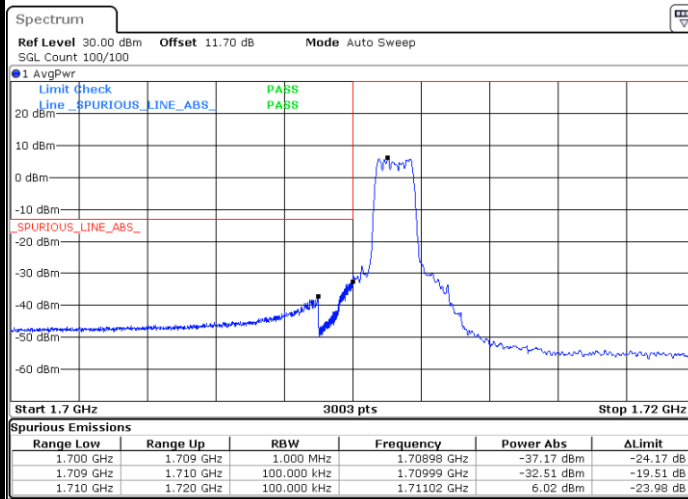
Lowest Band Edge / 1 RB



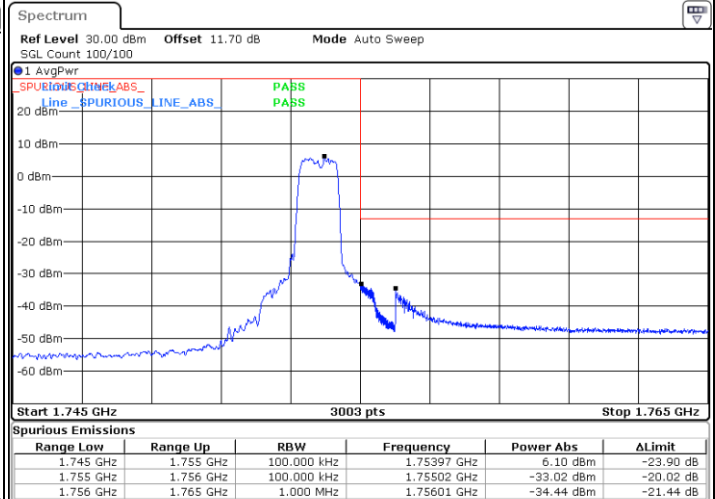
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



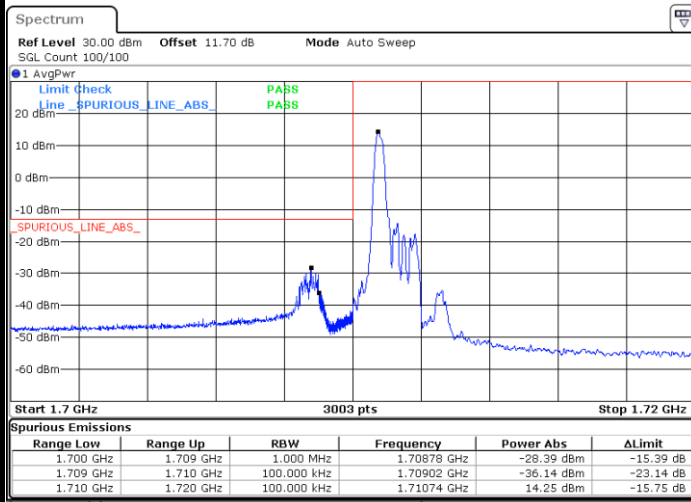
Highest Band Edge / Full RB



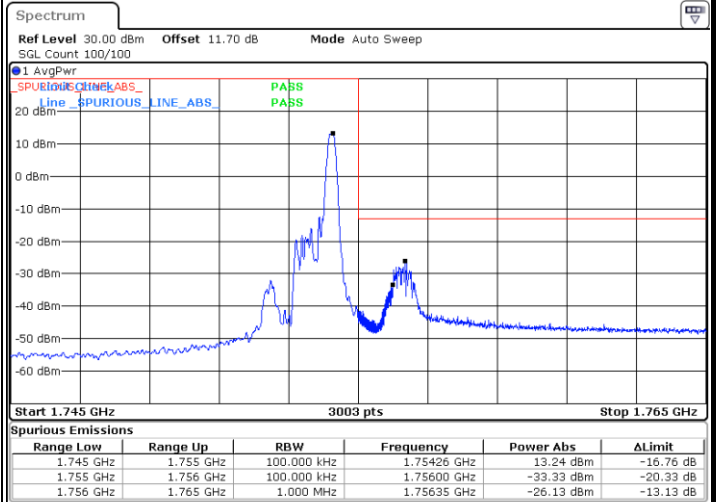


LTE Band 4 / 10MHz / 16QAM

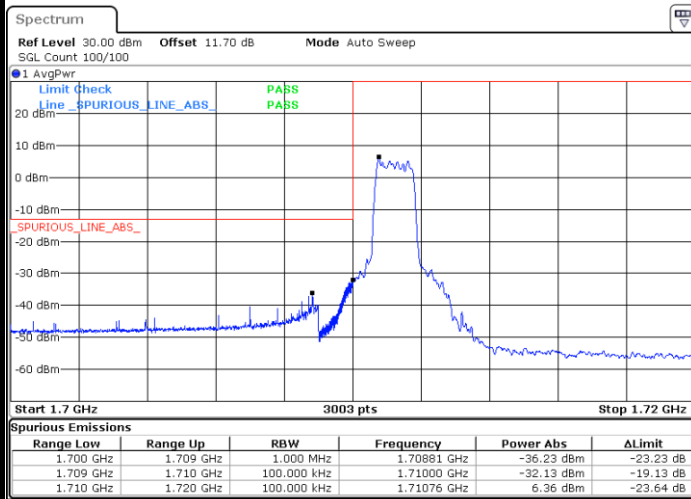
Lowest Band Edge / 1 RB



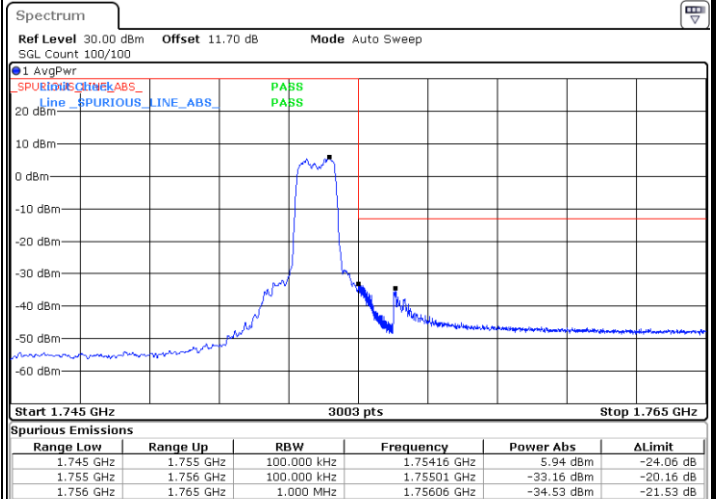
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



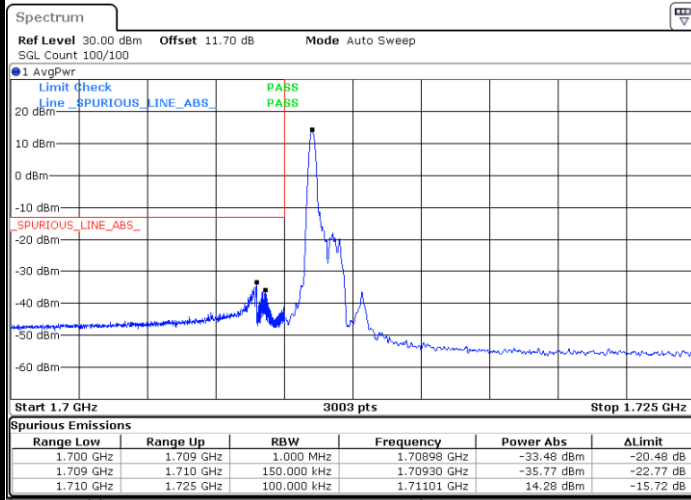
Highest Band Edge / Full RB



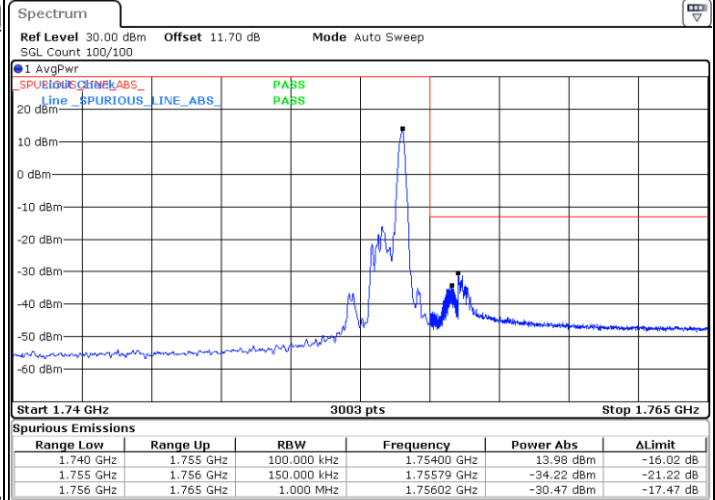


LTE Band 4 / 15MHz / QPSK

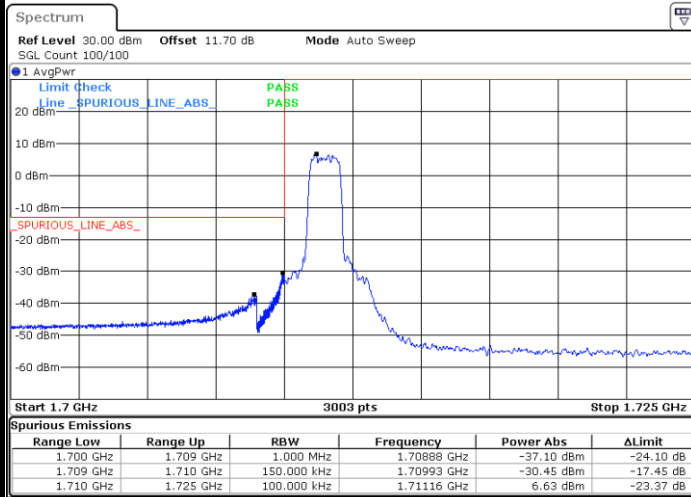
Lowest Band Edge / 1 RB



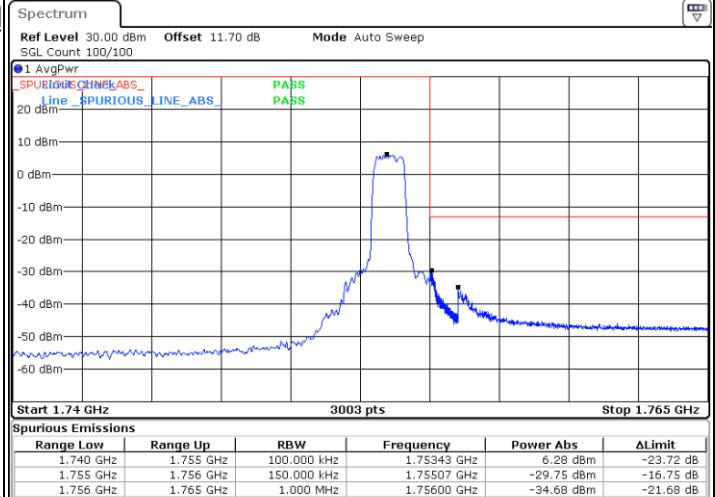
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



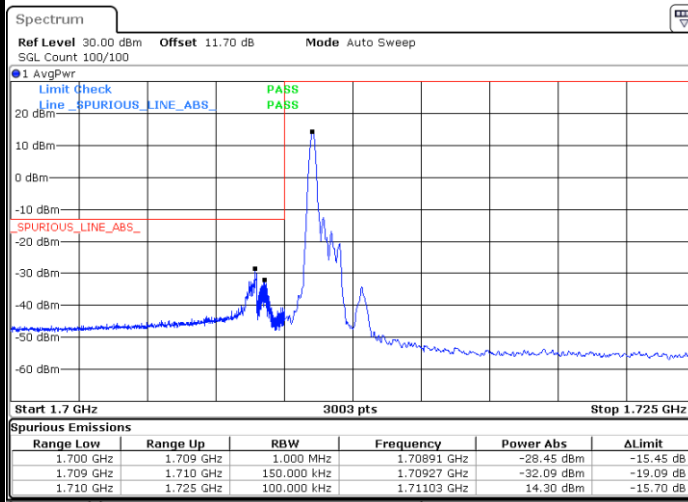
Highest Band Edge / Full RB



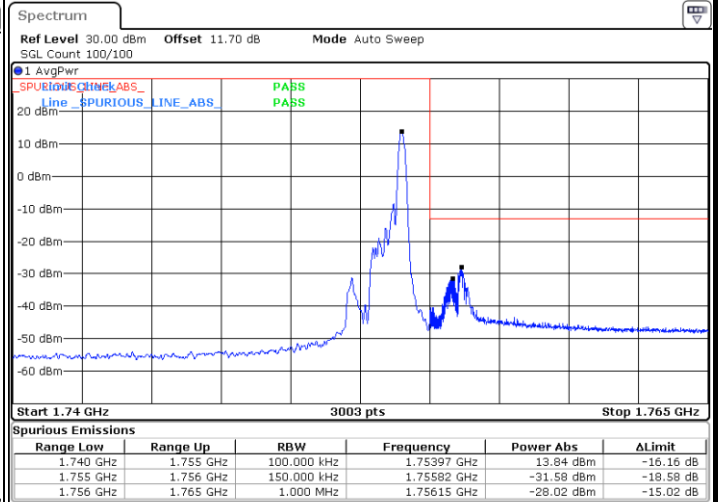


LTE Band 4 / 15MHz / 16QAM

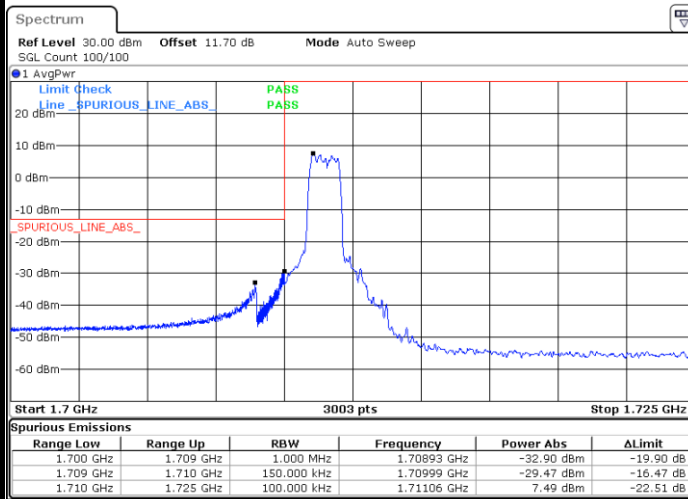
Lowest Band Edge / 1 RB



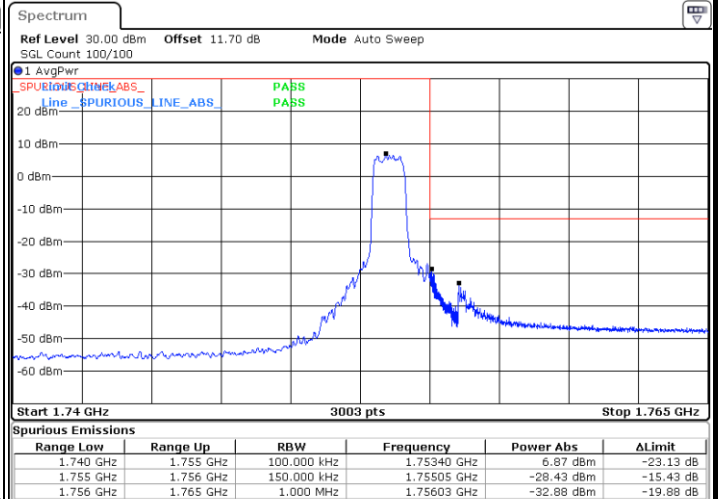
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



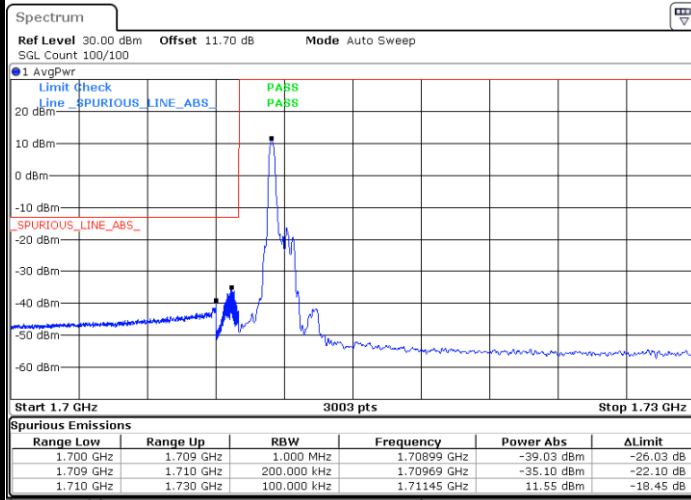
Highest Band Edge / Full RB



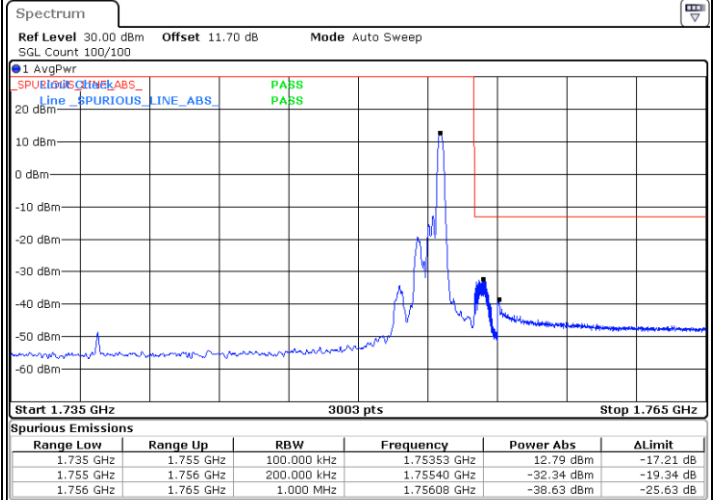


LTE Band 4 / 20MHz / QPSK

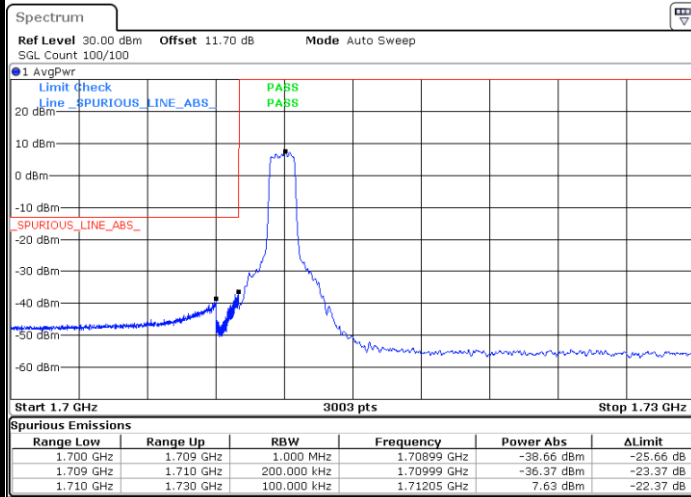
Lowest Band Edge / 1 RB



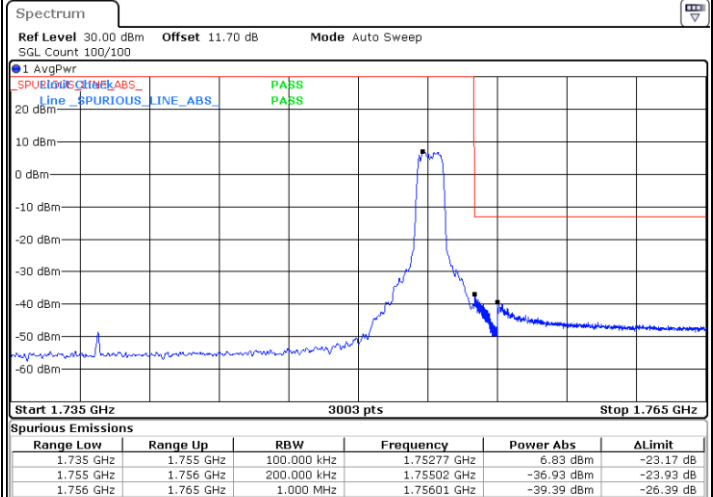
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



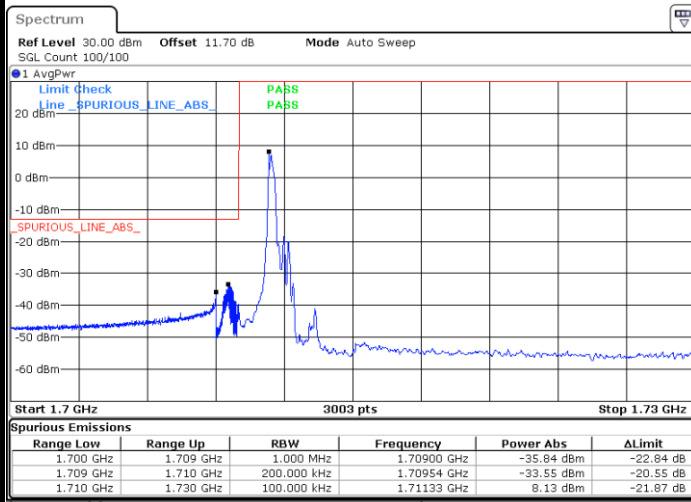
Highest Band Edge / Full RB



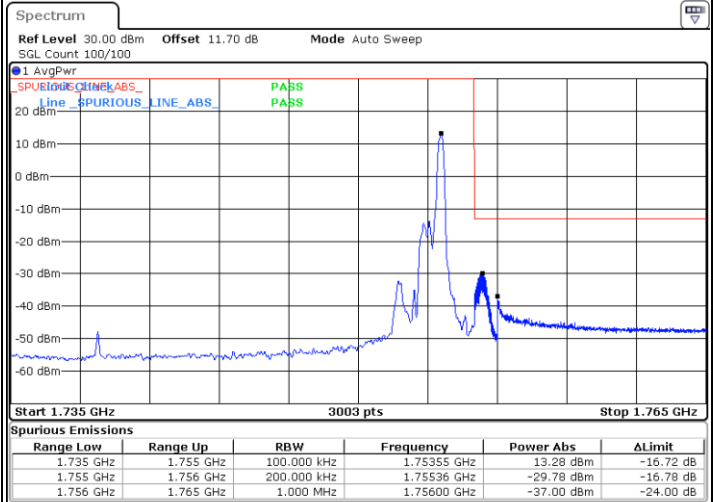


LTE Band 4 / 20MHz / 16QAM

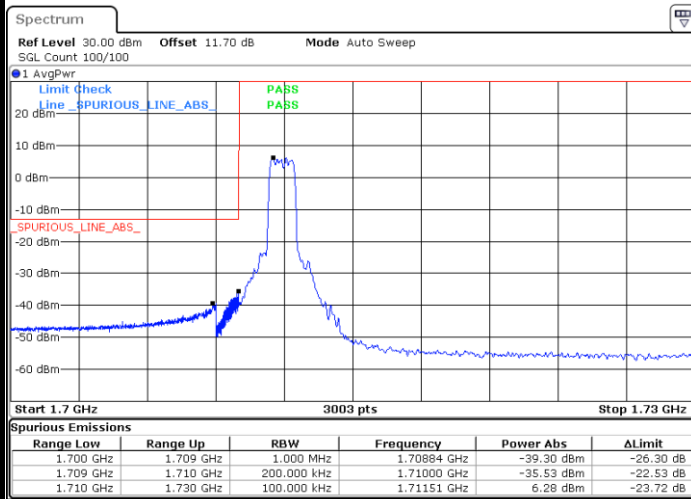
Lowest Band Edge / 1 RB



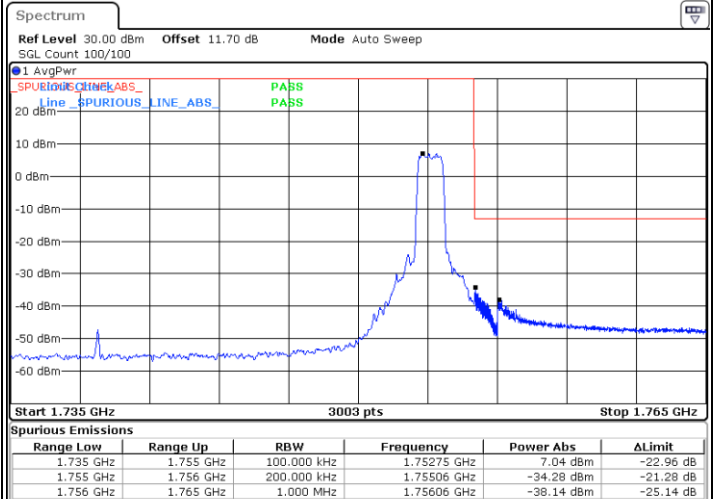
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

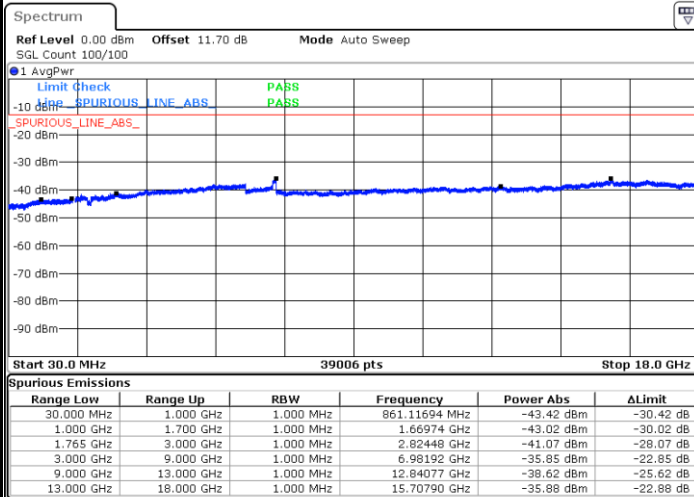




Conducted Spurious Emission

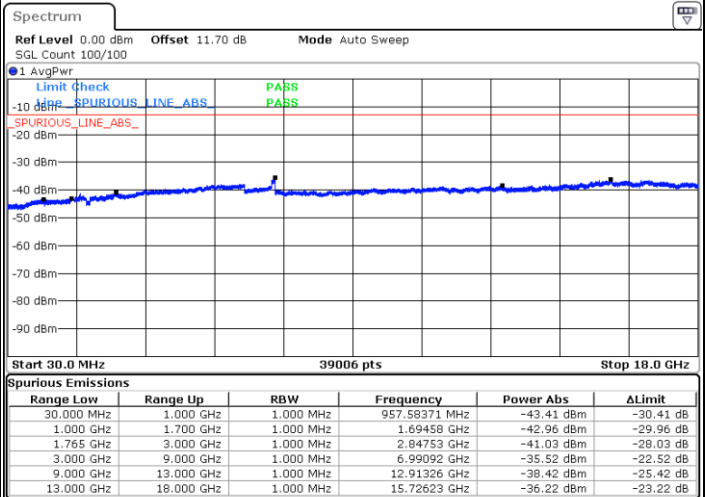
LTE Band 4 / 1.4MHz

Lowest Channel / QPSK



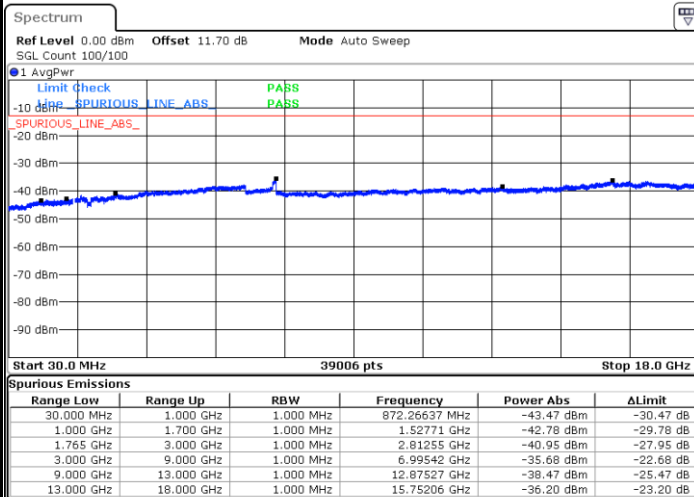
Date: 15.NOV.2019 18:56:31

Lowest Channel / 16QAM



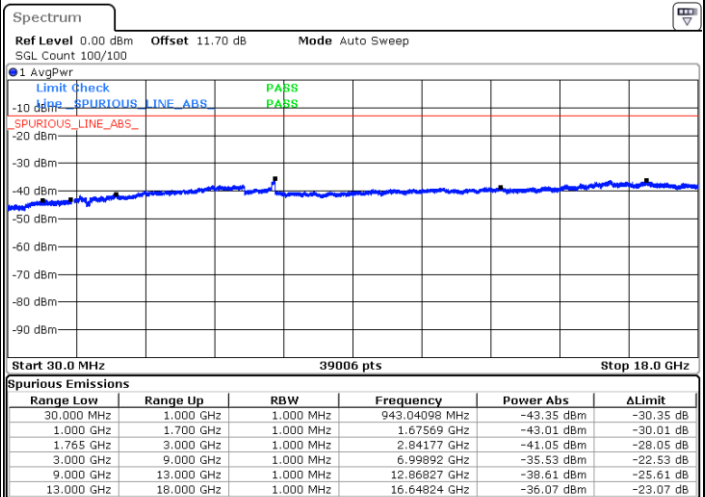
Date: 15.NOV.2019 18:57:31

Middle Channel / QPSK



Date: 15.NOV.2019 19:02:10

Middle Channel / 16QAM

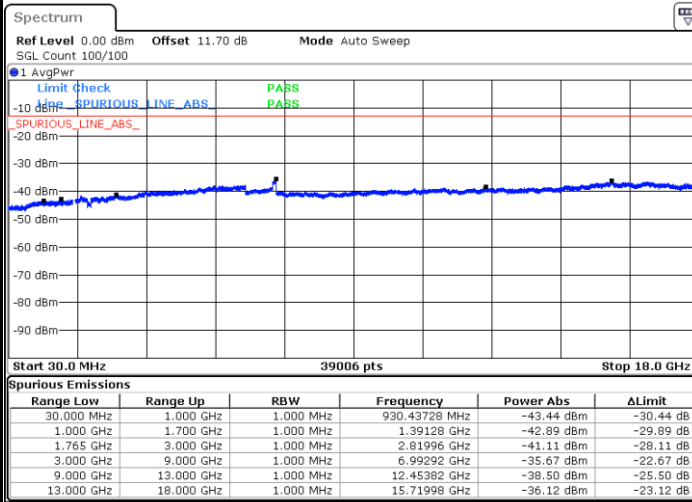


Date: 15.NOV.2019 19:02:54



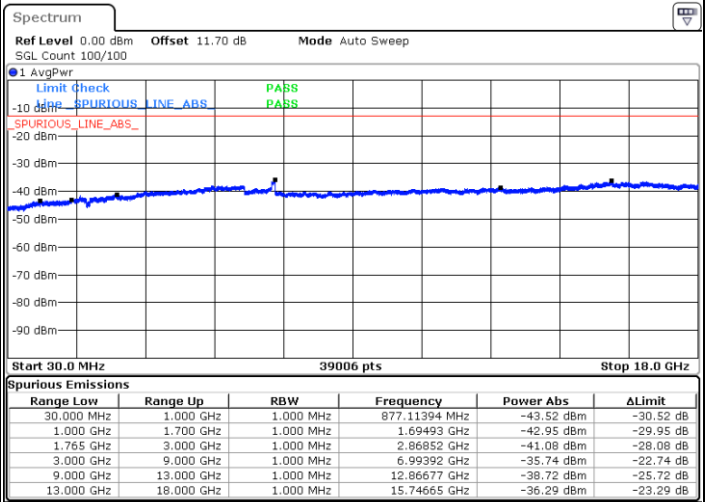
LTE Band 4 / 1.4MHz

Highest Channel / QPSK



Date: 15.NOV.2019 18:22:19

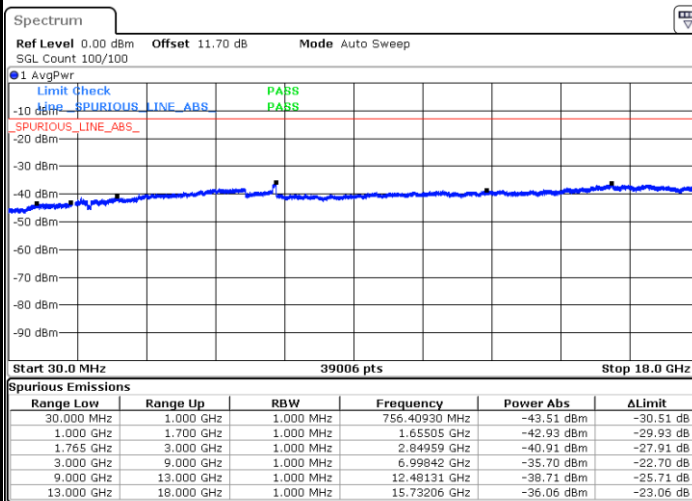
Highest Channel / 16QAM



Date: 15.NOV.2019 18:23:09

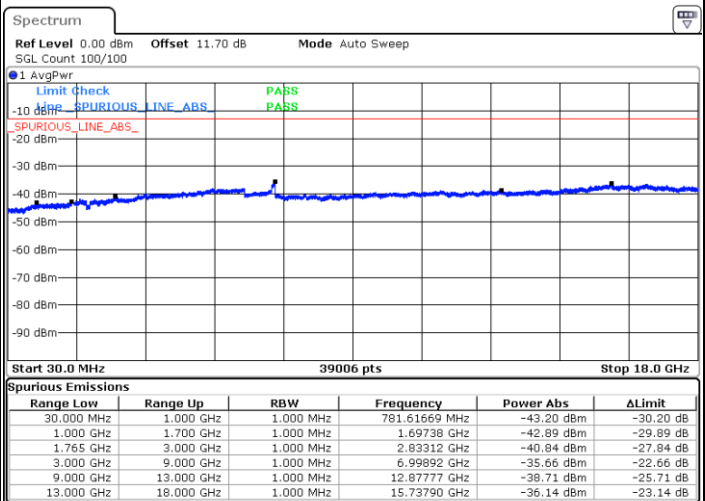
LTE Band 4 / 3MHz

Lowest Channel / QPSK



Date: 15.NOV.2019 19:30:02

Lowest Channel / 16QAM

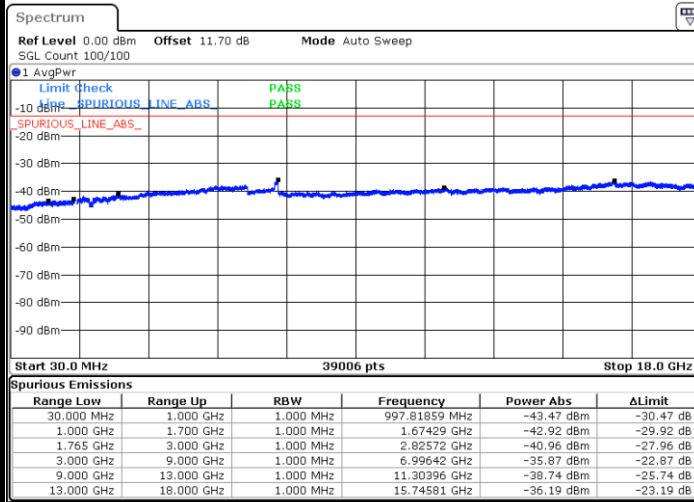


Date: 15.NOV.2019 19:30:55



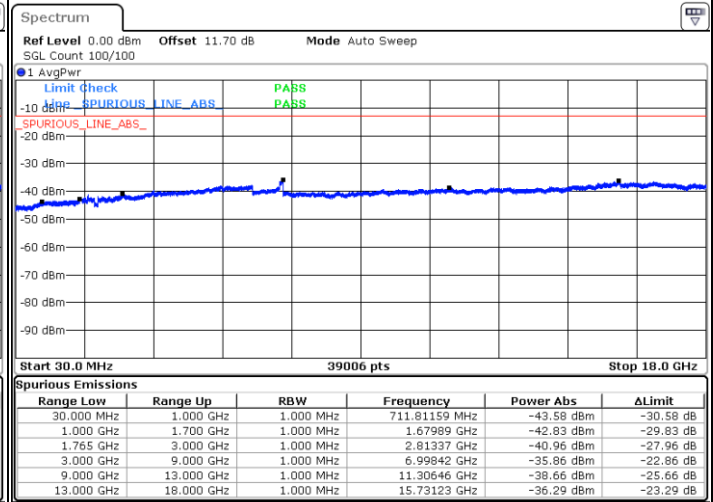
LTE Band 4 / 3MHz

Middle Channel / QPSK



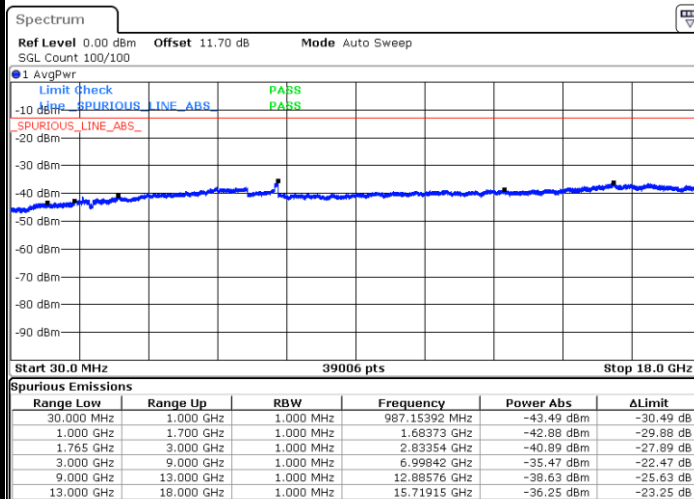
Date: 15.NOV.2019 19:34:43

Middle Channel / 16QAM



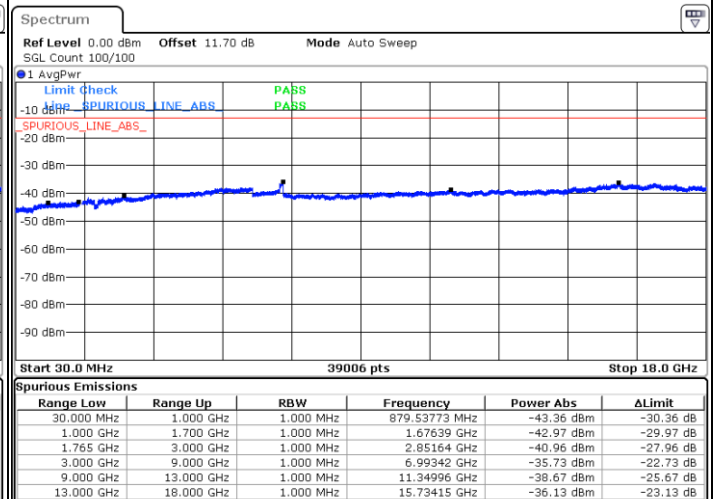
Date: 15.NOV.2019 19:35:46

Highest Channel / QPSK



Date: 15.NOV.2019 19:46:18

Highest Channel / 16QAM

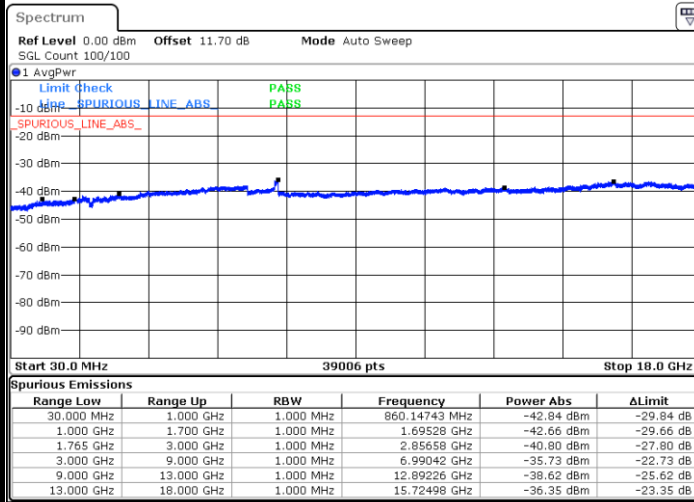


Date: 15.NOV.2019 19:47:09



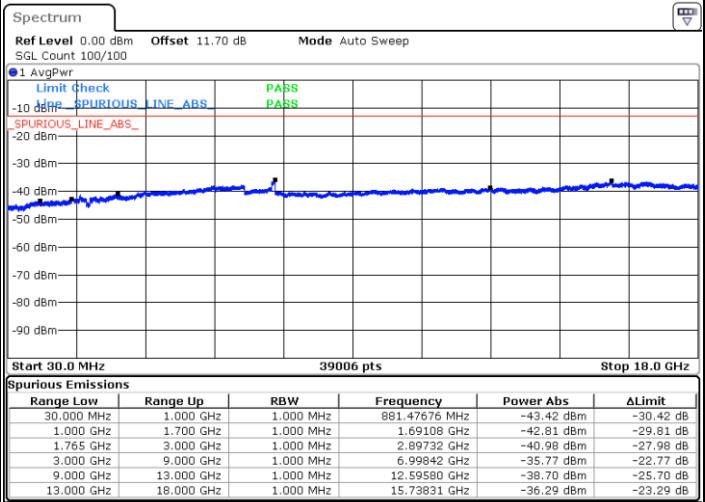
LTE Band 4 / 5MHz

Lowest Channel / QPSK



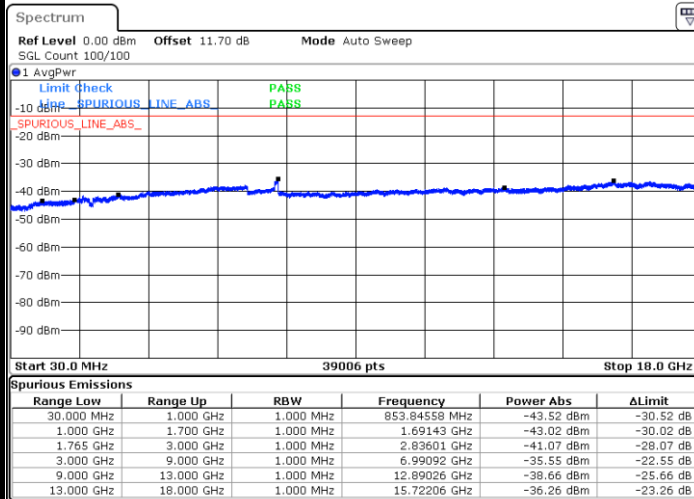
Date: 15.NOV.2019 20:00:05

Lowest Channel / 16QAM



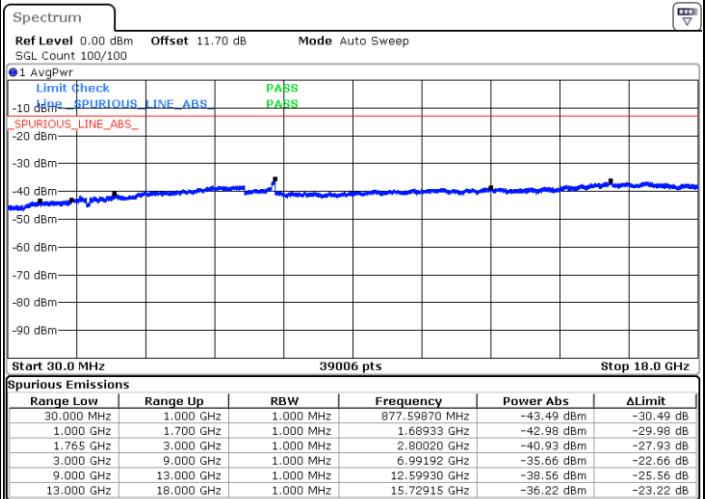
Date: 15.NOV.2019 20:01:19

Middle Channel / QPSK



Date: 15.NOV.2019 20:03:36

Middle Channel / 16QAM

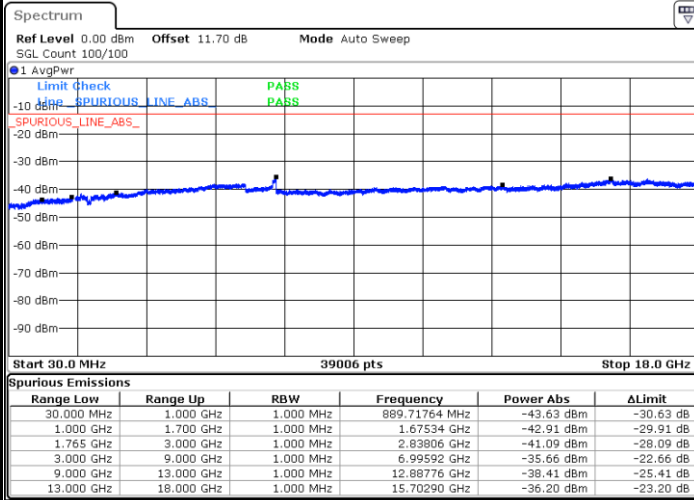


Date: 15.NOV.2019 20:04:34



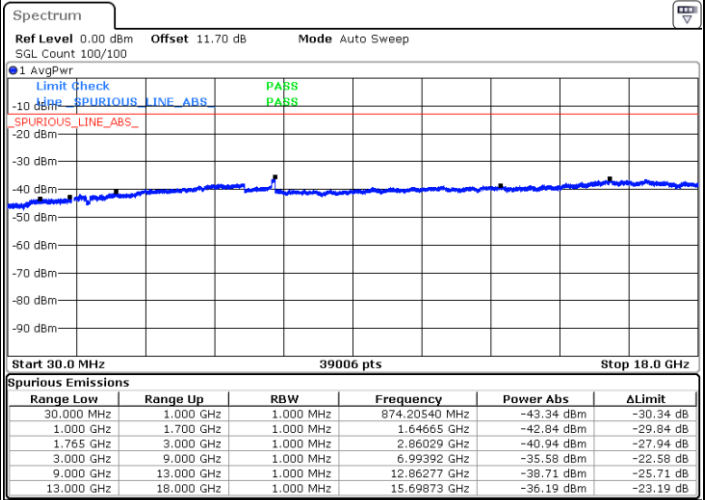
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 15.NOV.2019 21:18:43

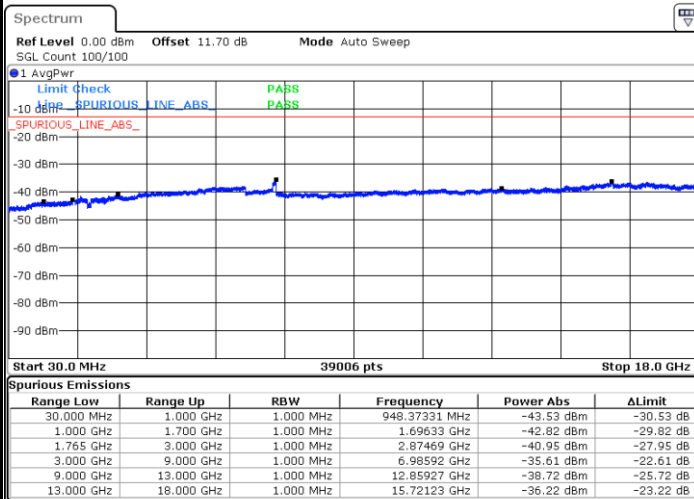
Highest Channel / 16QAM



Date: 15.NOV.2019 21:19:31

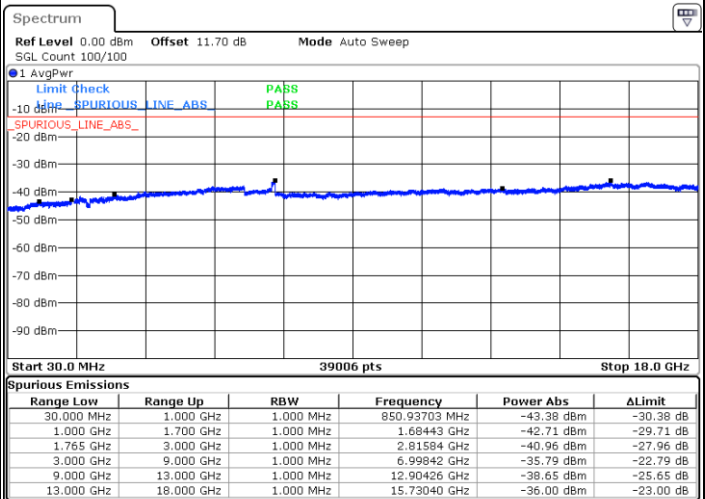
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 15.NOV.2019 21:29:28

Lowest Channel / 16QAM

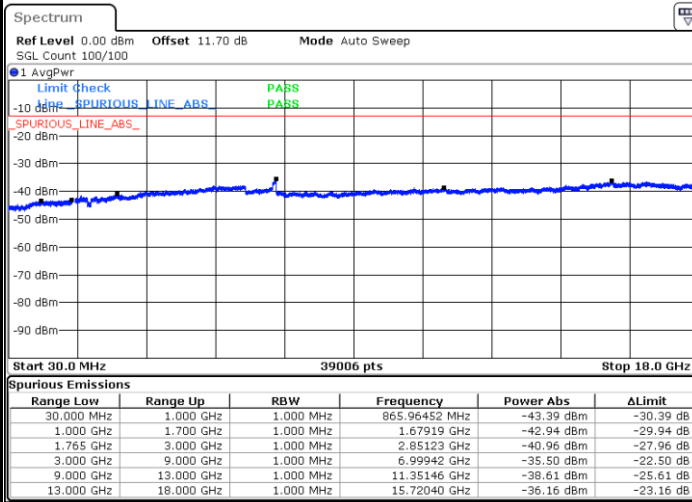


Date: 15.NOV.2019 21:30:11



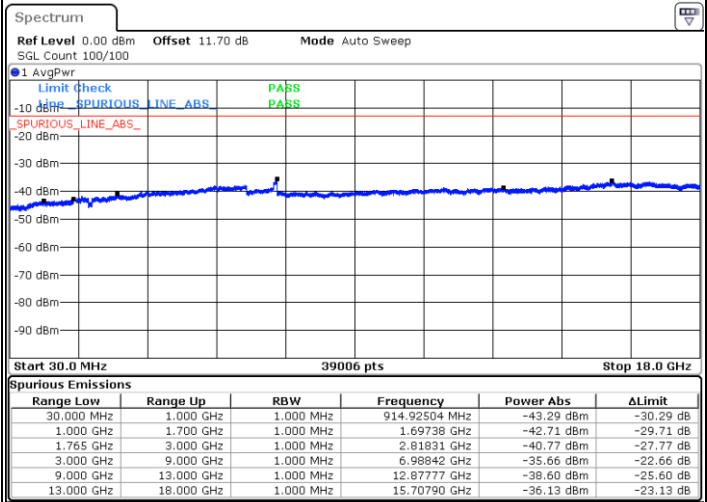
LTE Band 4 / 10MHz

Middle Channel / QPSK



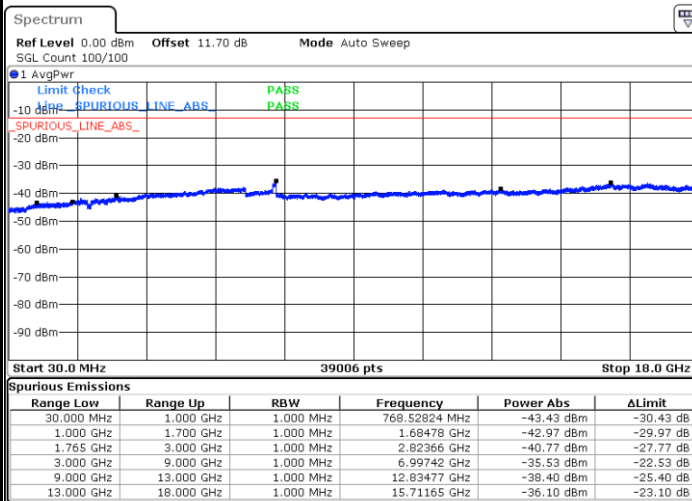
Date: 15.NOV.2019 21:32:26

Middle Channel / 16QAM



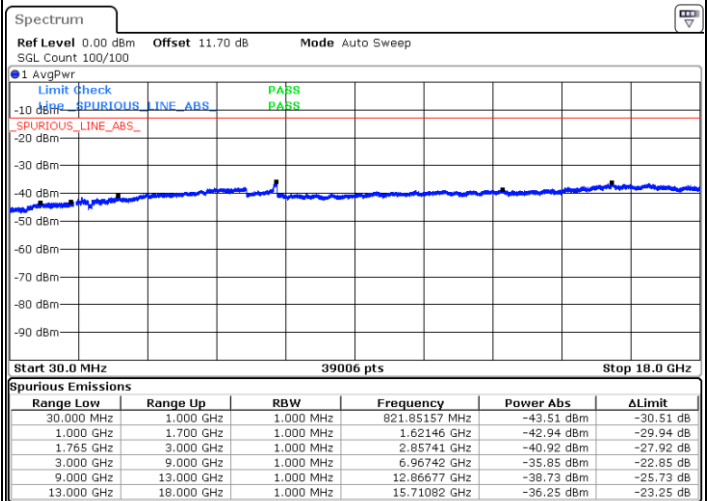
Date: 15.NOV.2019 21:33:09

Highest Channel / QPSK



Date: 15.NOV.2019 21:46:23

Highest Channel / 16QAM

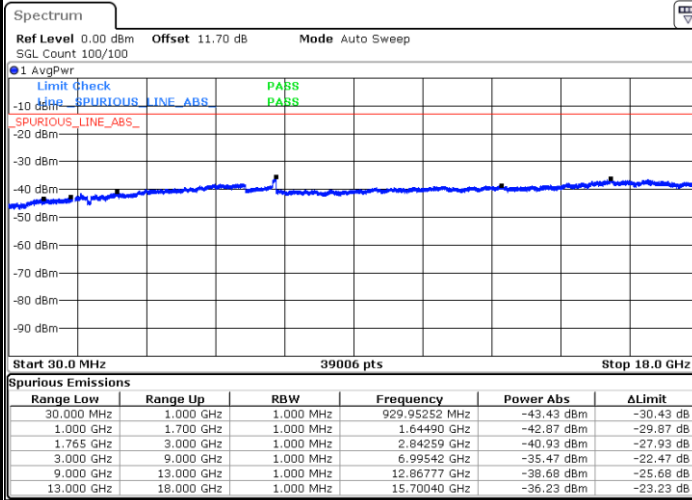


Date: 15.NOV.2019 21:48:10



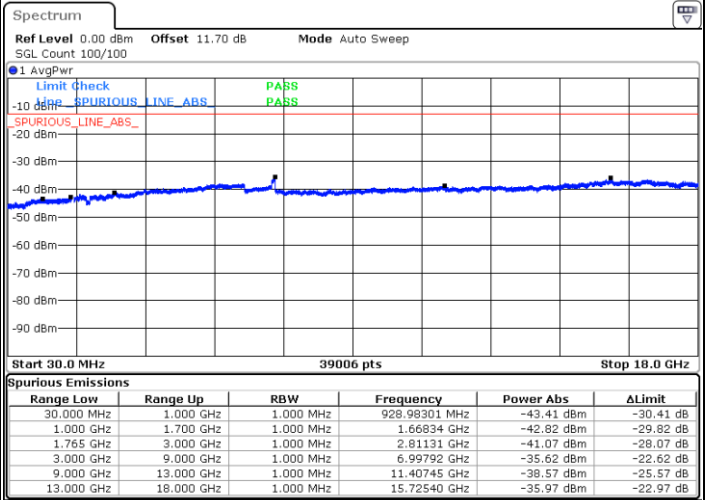
LTE Band 4 / 15MHz

Lowest Channel / QPSK



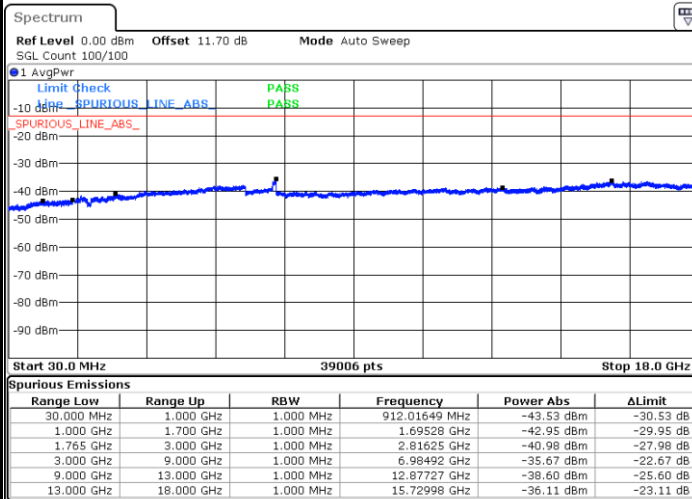
Date: 15.NOV.2019 21:58:50

Lowest Channel / 16QAM



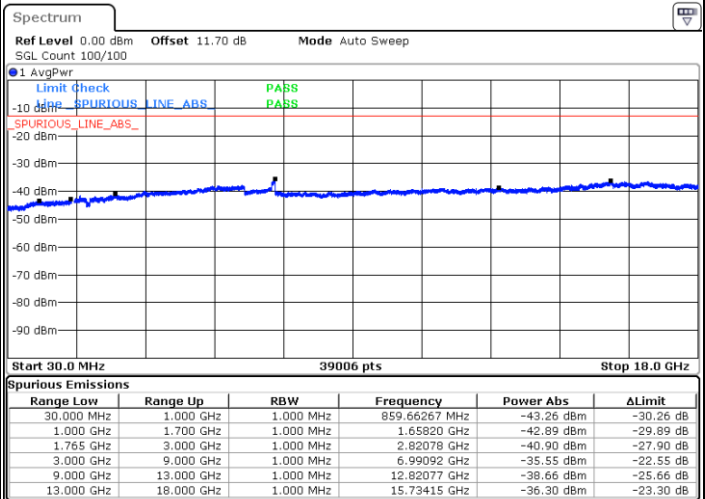
Date: 15.NOV.2019 21:59:36

Middle Channel / QPSK



Date: 15.NOV.2019 22:01:59

Middle Channel / 16QAM

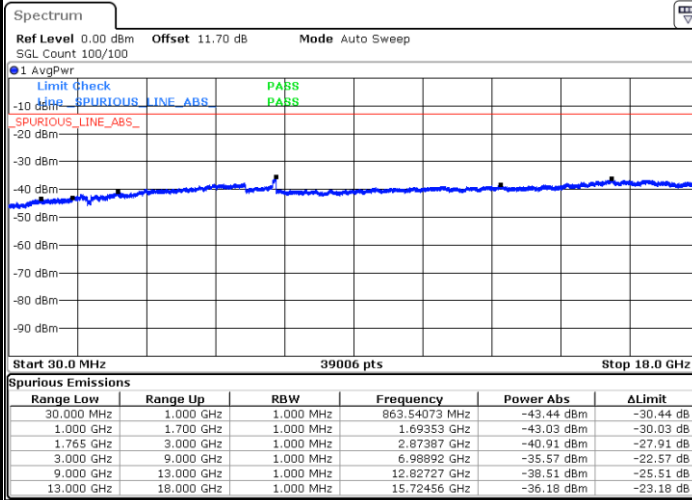


Date: 15.NOV.2019 22:02:46



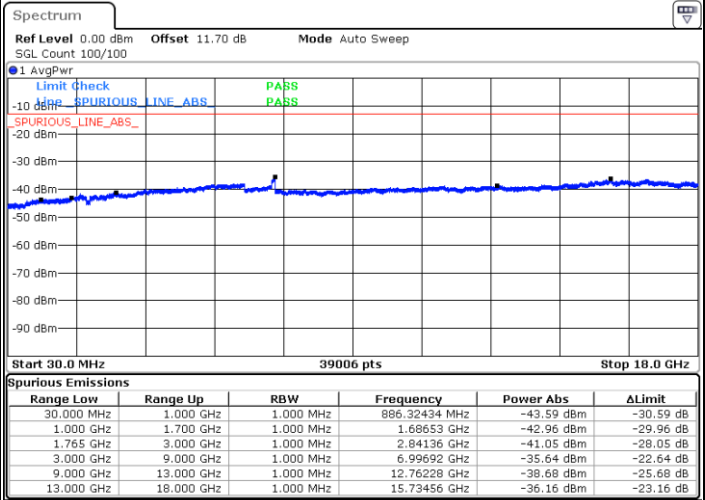
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 15.NOV.2019 22:09:40

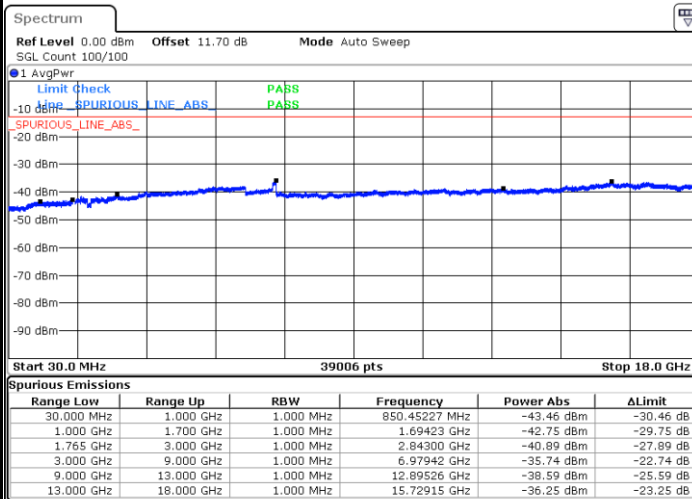
Highest Channel / 16QAM



Date: 15.NOV.2019 22:10:29

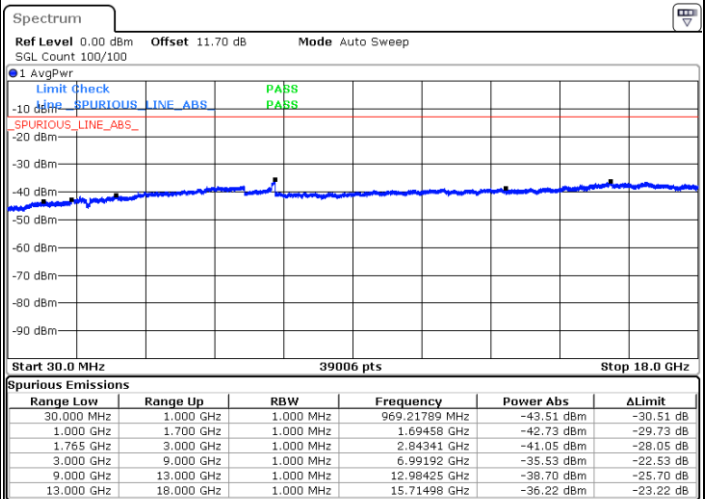
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 15.NOV.2019 22:16:35

Lowest Channel / 16QAM

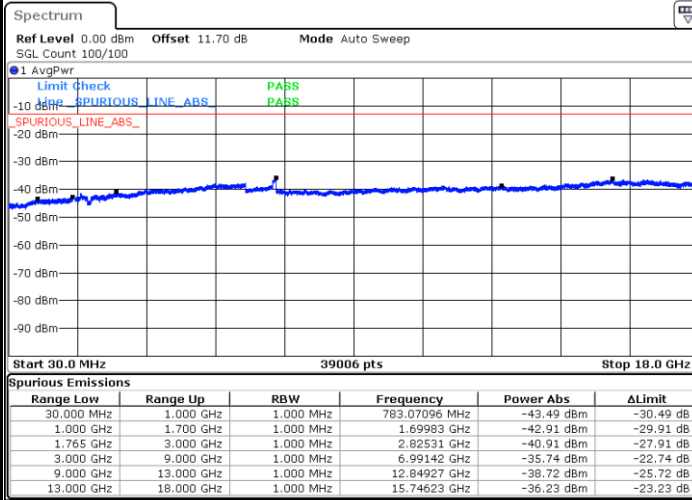


Date: 15.NOV.2019 22:17:54



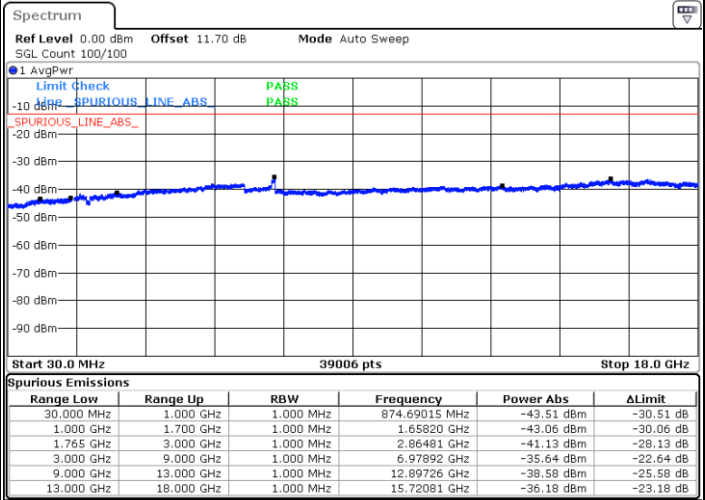
LTE Band 4 / 20MHz

Middle Channel / QPSK



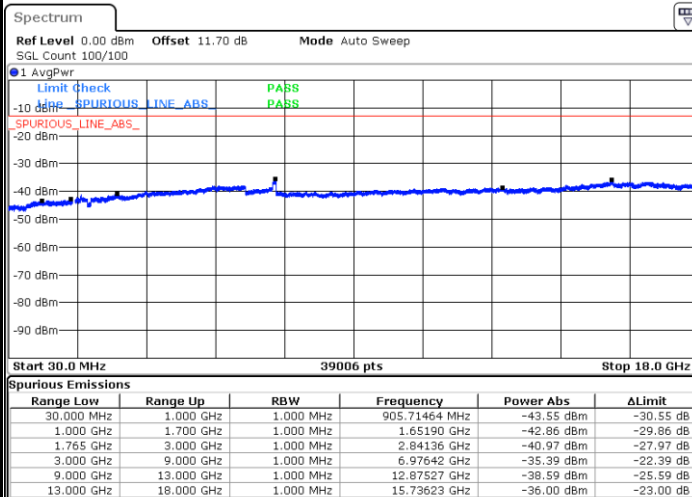
Date: 15.NOV.2019 22:19:57

Middle Channel / 16QAM



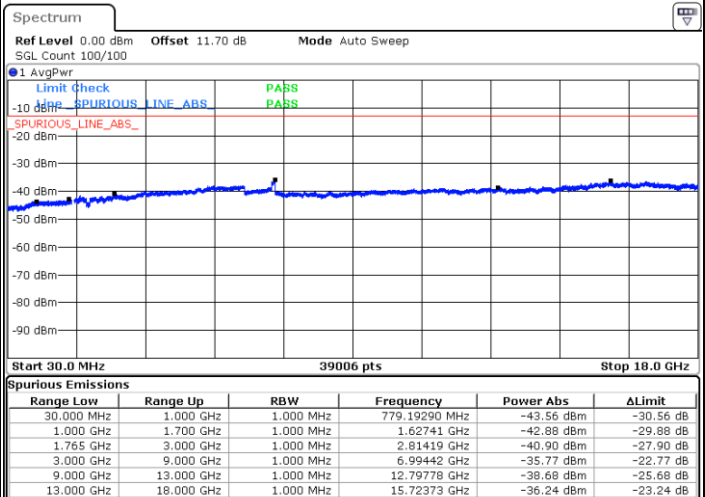
Date: 15.NOV.2019 22:22:18

Highest Channel / QPSK



Date: 15.NOV.2019 22:54:38

Highest Channel / 16QAM



Date: 15.NOV.2019 22:55:20

Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0045	PASS
40	Normal Voltage	0.0053	
30	Normal Voltage	0.0026	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0054	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0062	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0064	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 12

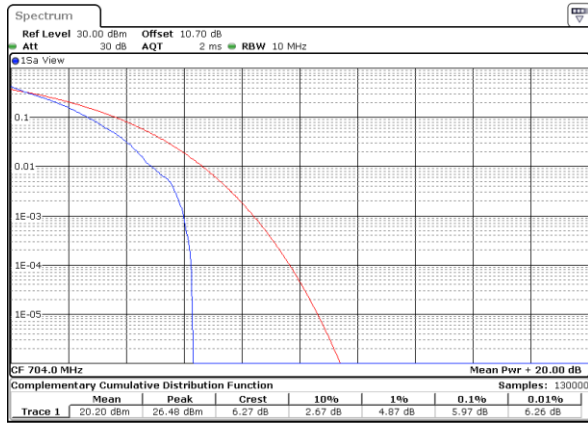
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.97	6.78	7.01	7.01	PASS
Middle CH	6.49	6.20	7.16	7.25	
Highest CH	5.80	6.38	7.19	7.54	



LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



Lowest Channel / Full RB



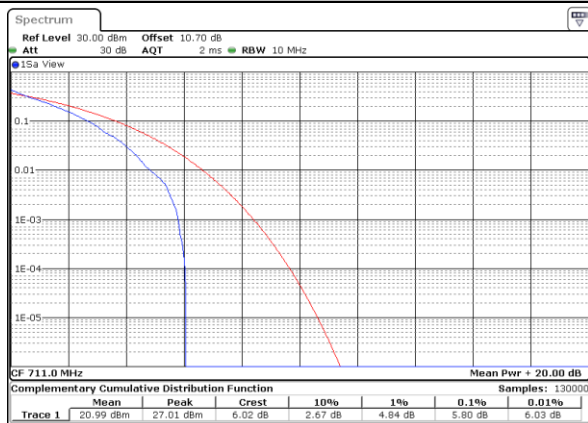
Middle Channel / 1RB



Middle Channel / Full RB

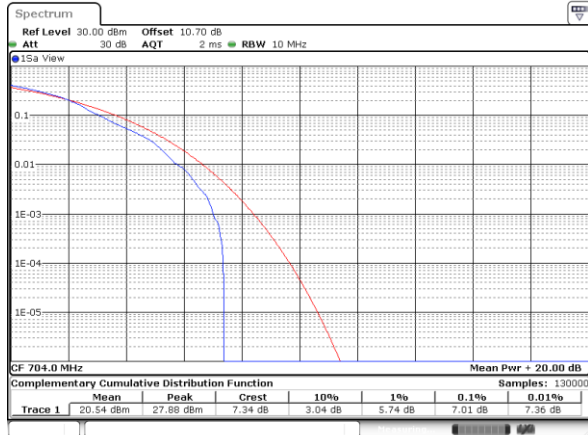


Highest Channel / 1RB

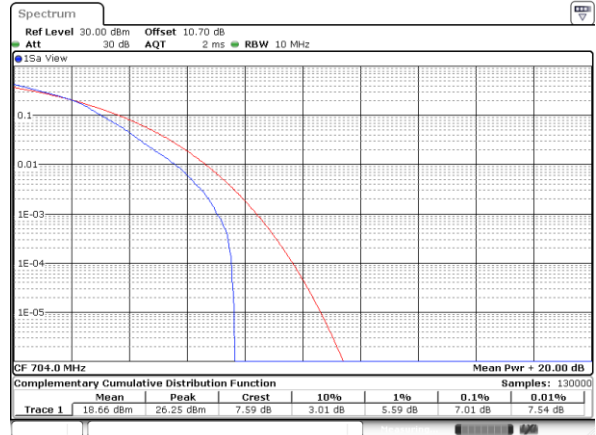


Highest Channel / Full RB

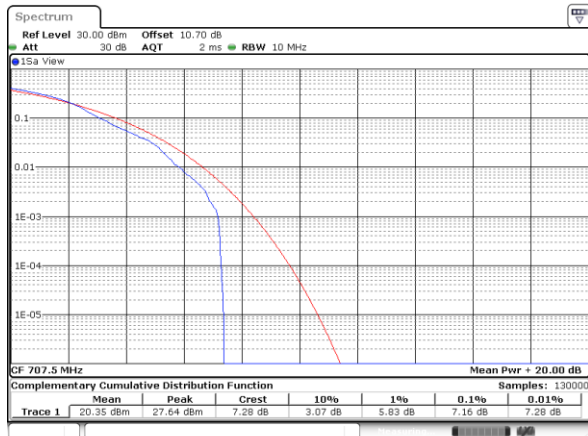


LTE Band 12 / 10MHz / 16QAM
Lowest Channel / 1RB


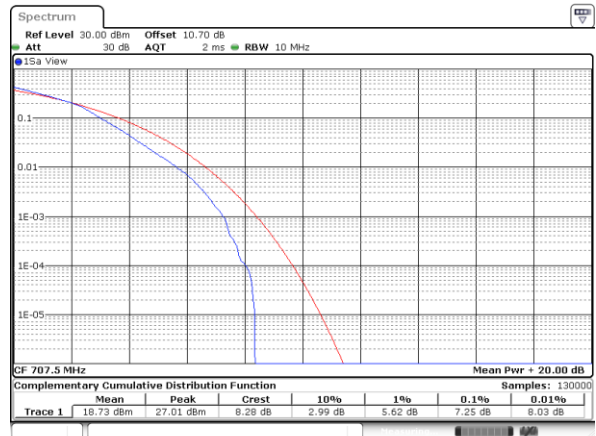
Date: 10 JAN 2020 23:17:21

Lowest Channel / Full RB


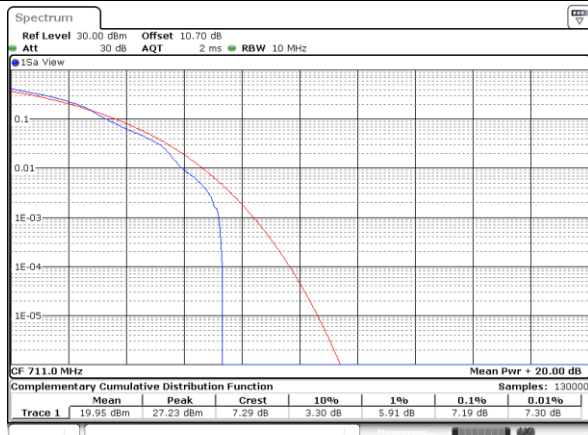
Date: 10 JAN 2020 23:18:13

Middle Channel / 1RB


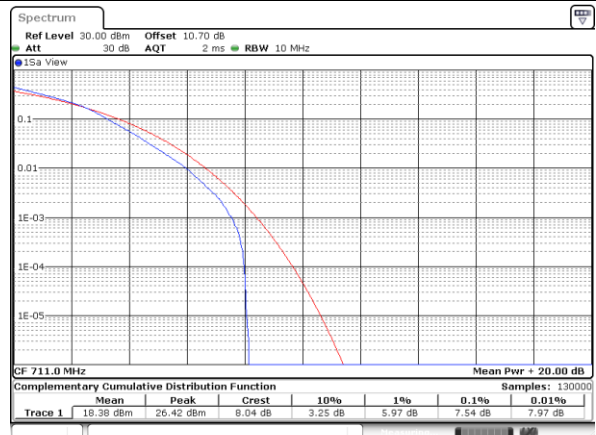
Date: 10 JAN 2020 23:25:30

Middle Channel / Full RB


Date: 10 JAN 2020 23:27:25

Highest Channel / 1RB


Date: 10 JAN 2020 23:45:22

Highest Channel / Full RB


Date: 10 JAN 2020 23:38:56

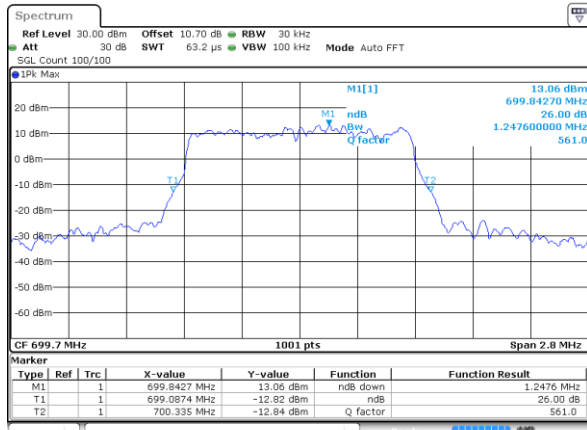
**26dB Bandwidth**

Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.25	1.28	1.32	1.35	1.46	1.30	1.80	1.84	-	-	-	-
Middle CH	1.29	1.29	1.34	1.44	1.40	1.39	1.80	1.78	-	-	-	-
Highest CH	1.30	1.25	1.37	1.40	1.39	1.42	1.82	1.80	-	-	-	-



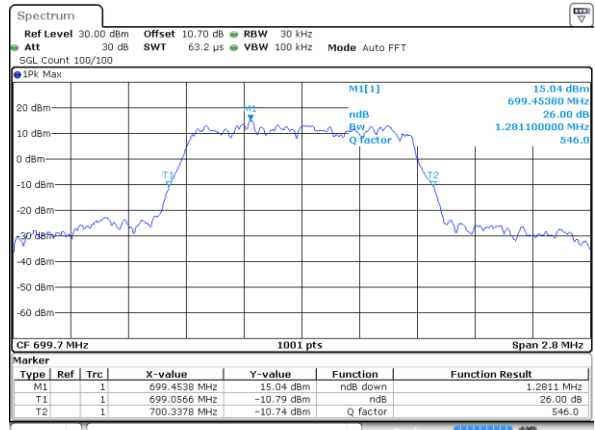
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



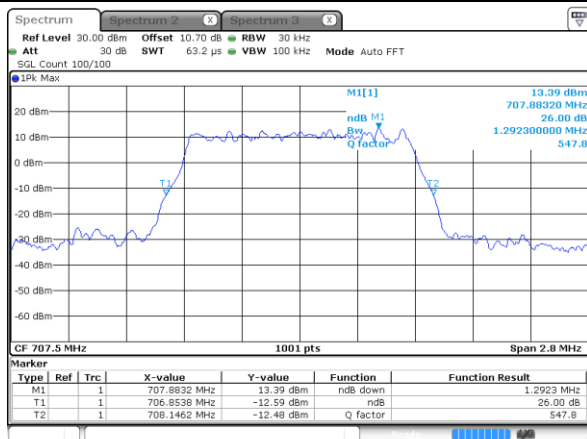
Date: 11 JAN 2020 00:22:29

Lowest Channel / 1.4MHz / 16QAM



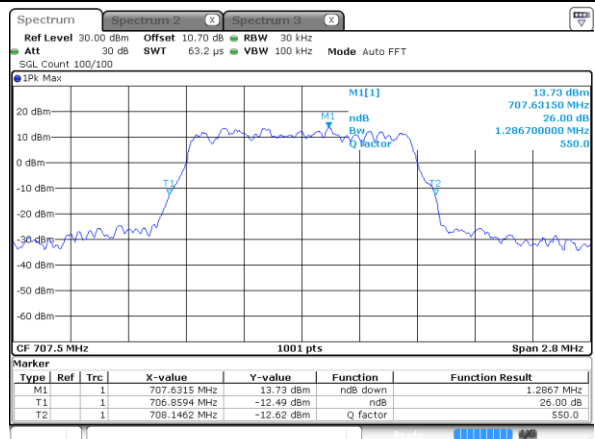
Date: 11 JAN 2020 00:21:51

Middle Channel / 1.4MHz / QPSK



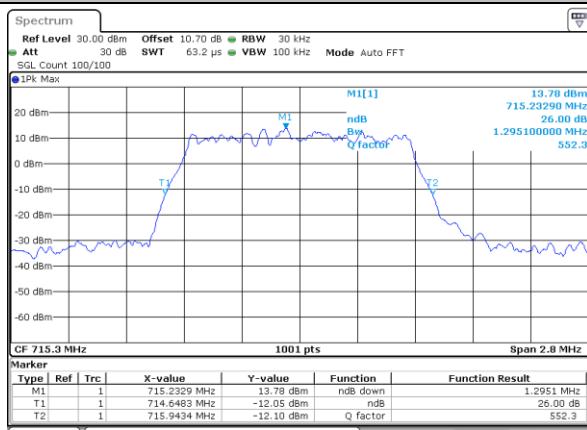
Date: 10 JAN 2020 00:44:56

Middle Channel / 1.4MHz / 16QAM



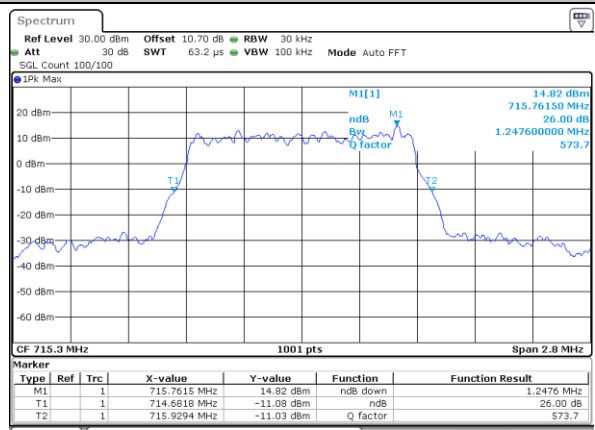
Date: 10 JAN 2020 00:45:17

Highest Channel / 1.4MHz / QPSK



Date: 11 JAN 2020 00:10:21

Highest Channel / 1.4MHz / 16QAM

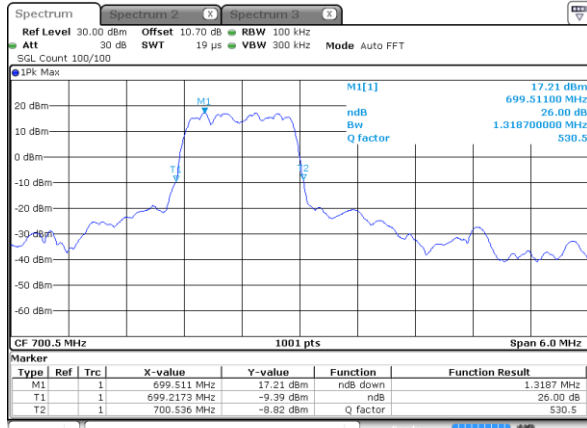


Date: 11 JAN 2020 00:11:45



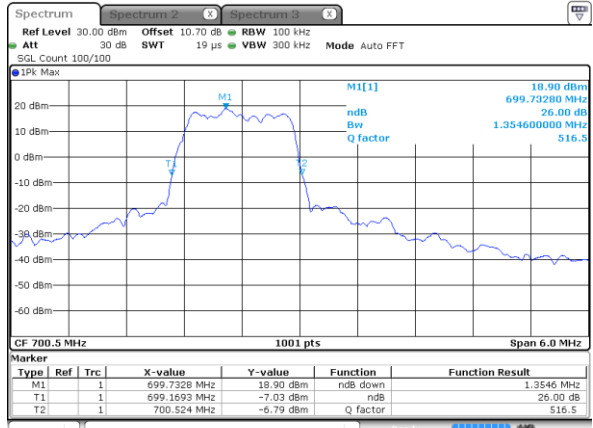
LTE Band 12

Lowest Channel / 3MHz / QPSK



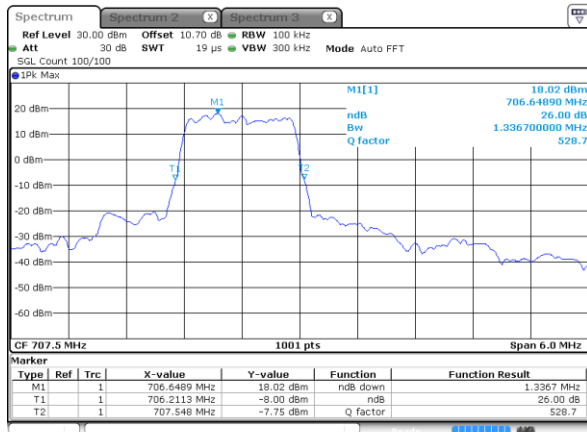
Date: 10 JAN 2020 00:19:37

Lowest Channel / 3MHz / 16QAM



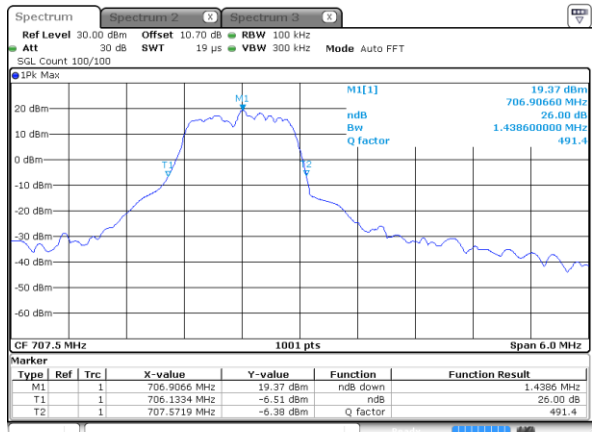
Date: 10 JAN 2020 00:19:15

Middle Channel / 3MHz / QPSK



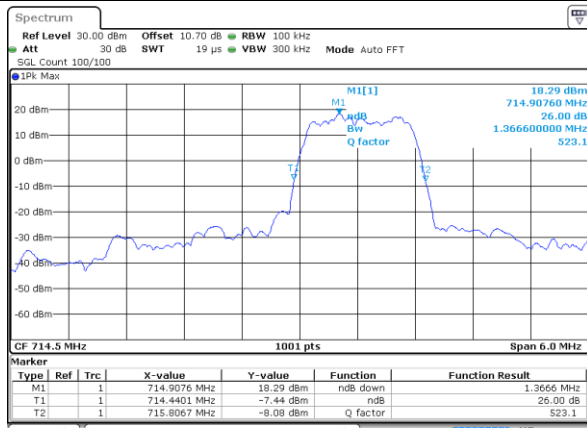
Date: 10 JAN 2020 00:27:34

Middle Channel / 3MHz / 16QAM



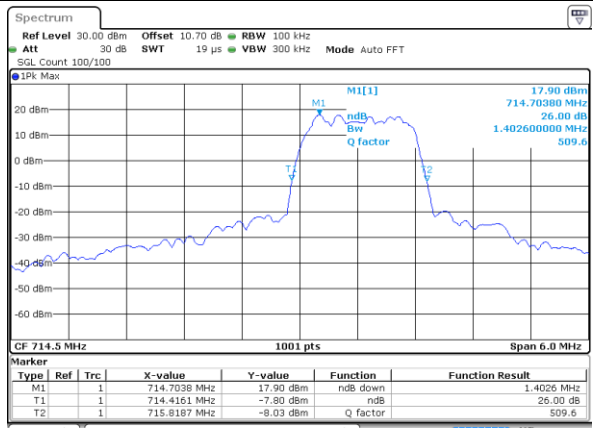
Date: 10 JAN 2020 00:27:57

Highest Channel / 3MHz / QPSK



Date: 10 JAN 2020 23:57:27

Highest Channel / 3MHz / 16QAM

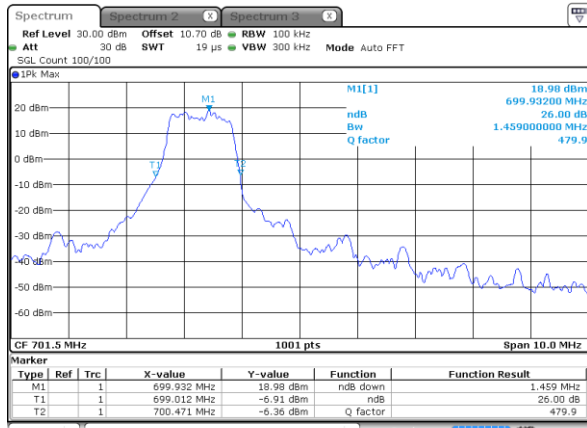


Date: 10 JAN 2020 23:58:29



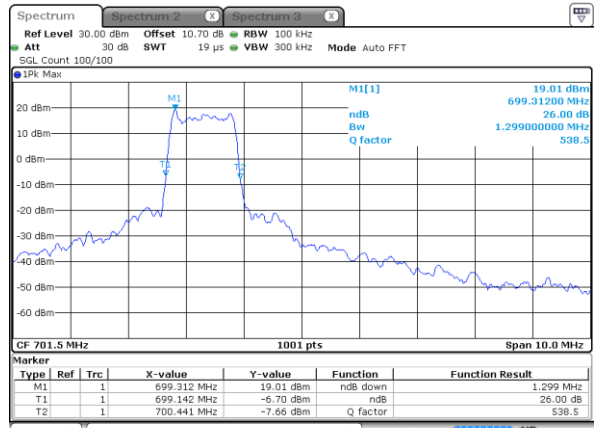
LTE Band 12

Lowest Channel / 5MHz / QPSK



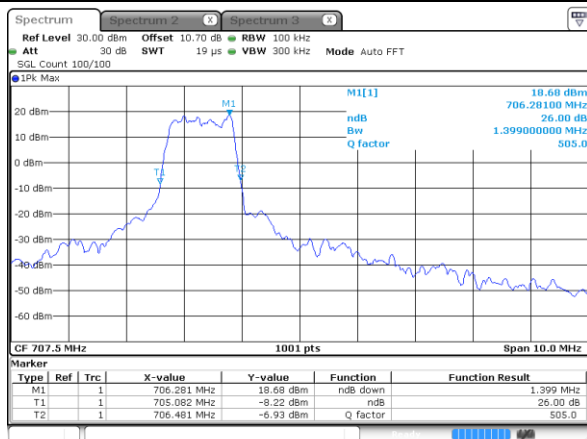
Date: 10 JAN 2020 00:57:24

Lowest Channel / 5MHz / 16QAM



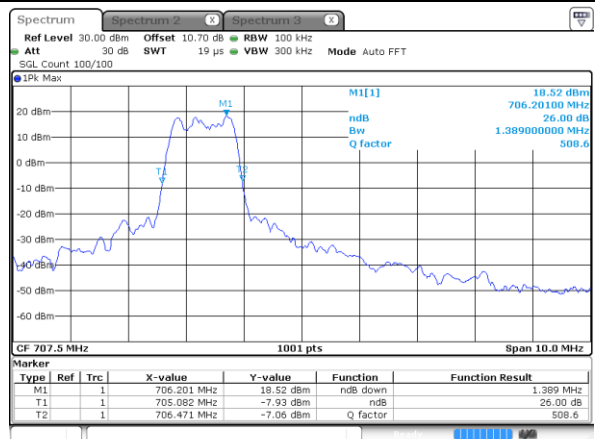
Date: 10 JAN 2020 00:59:56

Middle Channel / 5MHz / QPSK



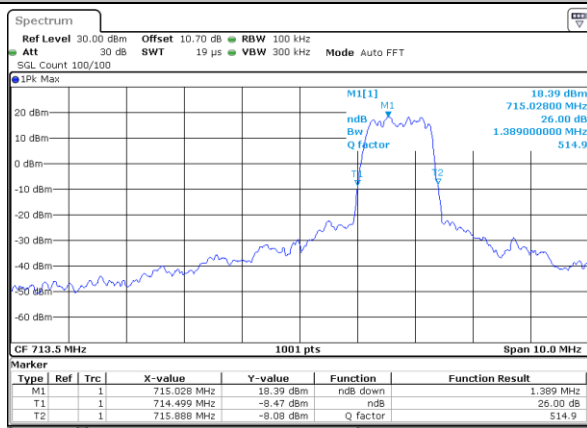
Date: 10 JAN 2020 00:56:10

Middle Channel / 5MHz / 16QAM



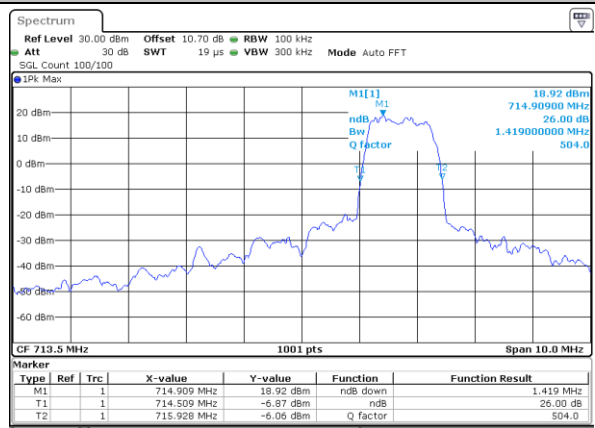
Date: 10 JAN 2020 00:59:39

Highest Channel / 5MHz / QPSK



Date: 10 JAN 2020 23:54:57

Highest Channel / 5MHz / 16QAM

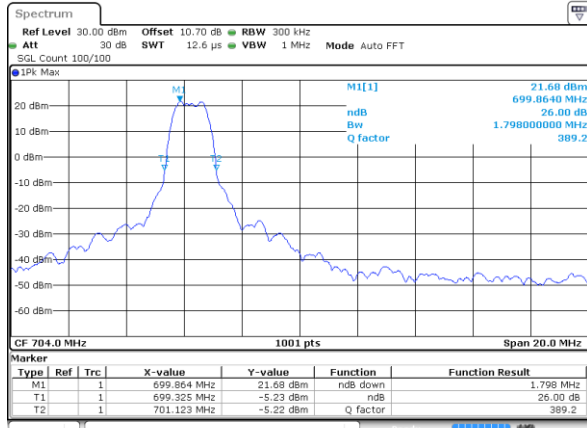


Date: 10 JAN 2020 23:55:39

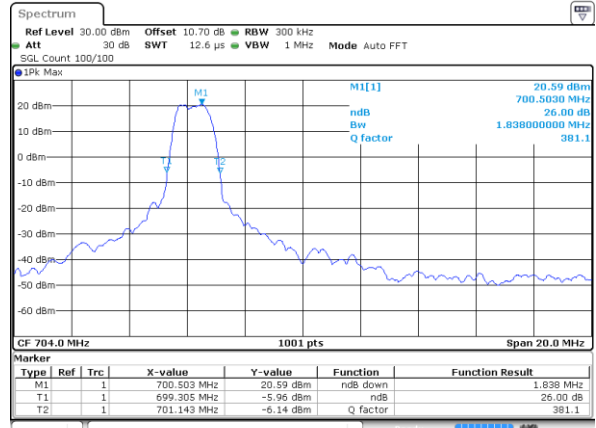


LTE Band 12

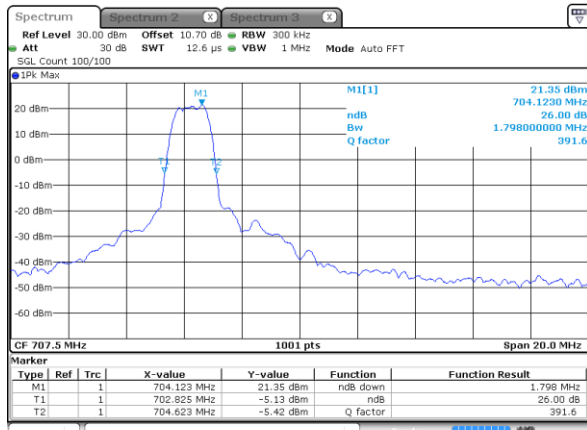
Lowest Channel / 10MHz / QPSK



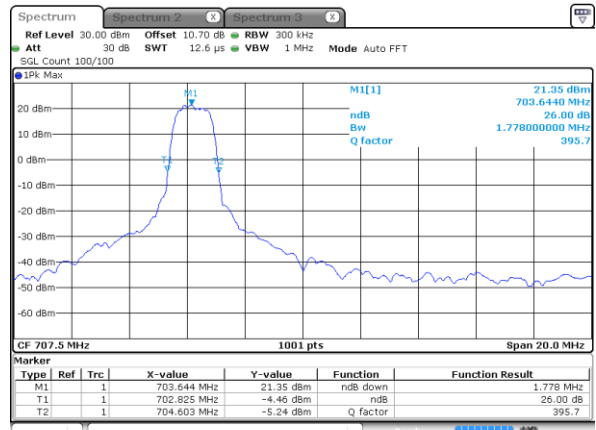
Lowest Channel / 10MHz / 16QAM



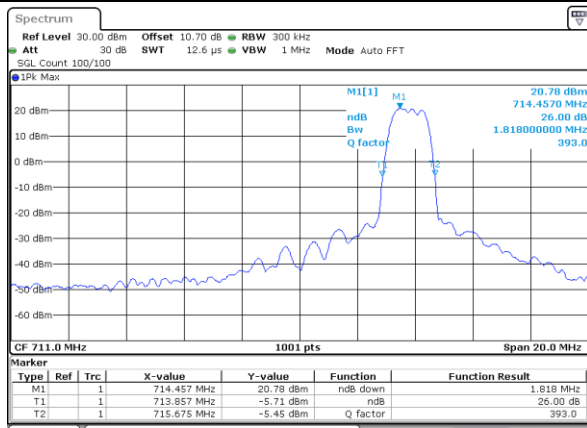
Middle Channel / 10MHz / QPSK



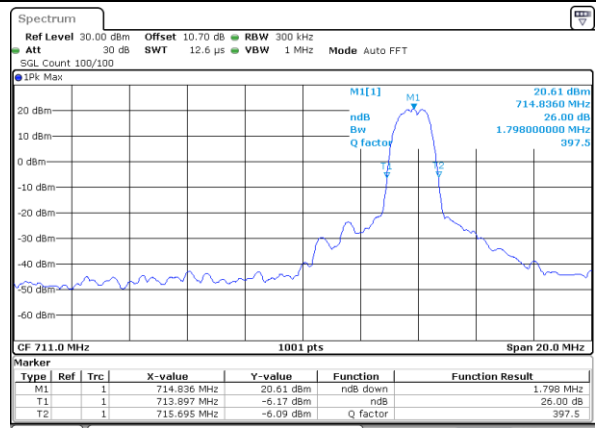
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM



**Occupied Bandwidth**

Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	1.16	1.20	1.14	1.17	1.44	1.46	-	-	-	-
Middle CH	1.09	1.09	1.17	1.15	1.15	1.17	1.42	1.44	-	-	-	-
Highest CH	1.09	1.10	1.17	1.13	1.16	1.14	1.48	1.44	-	-	-	-