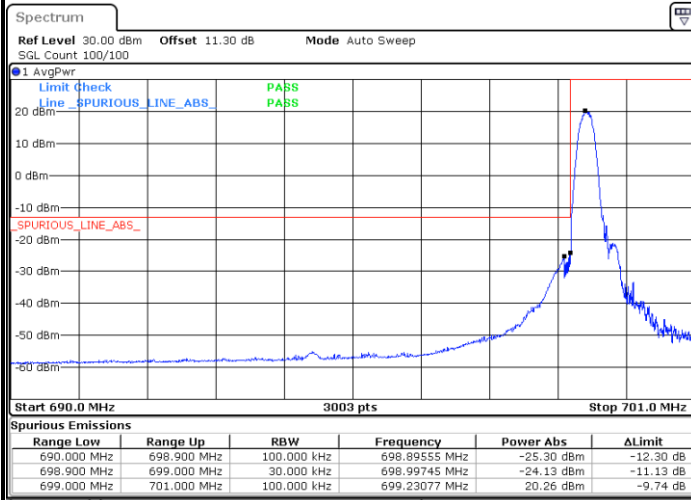




LTE Band 12 / 1.4MHz / 64QAM

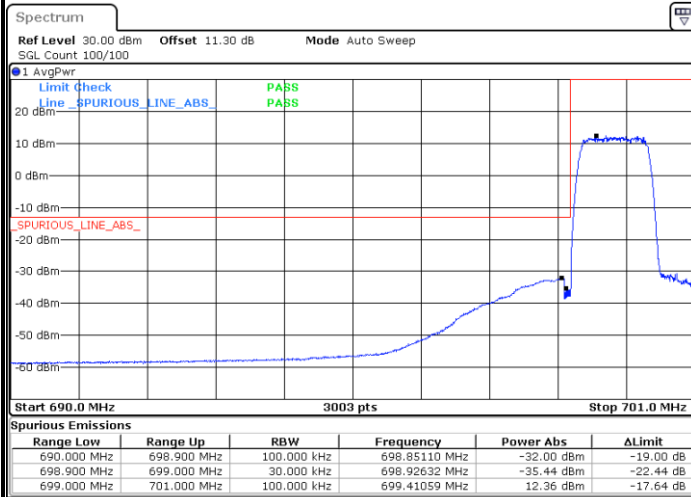
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



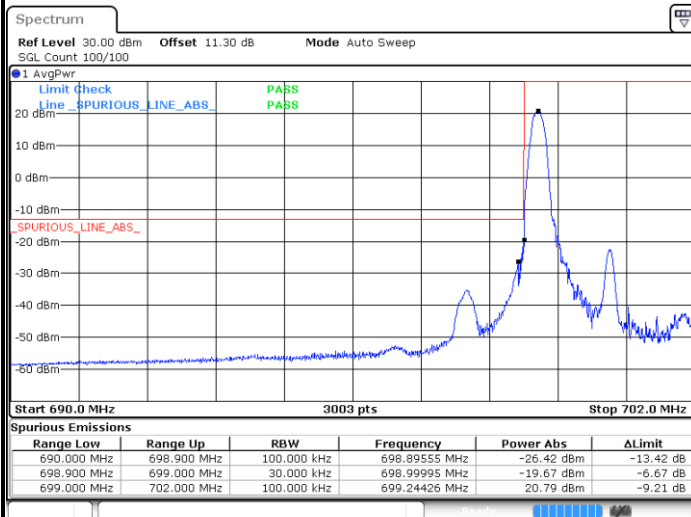
Highest Band Edge / Full RB



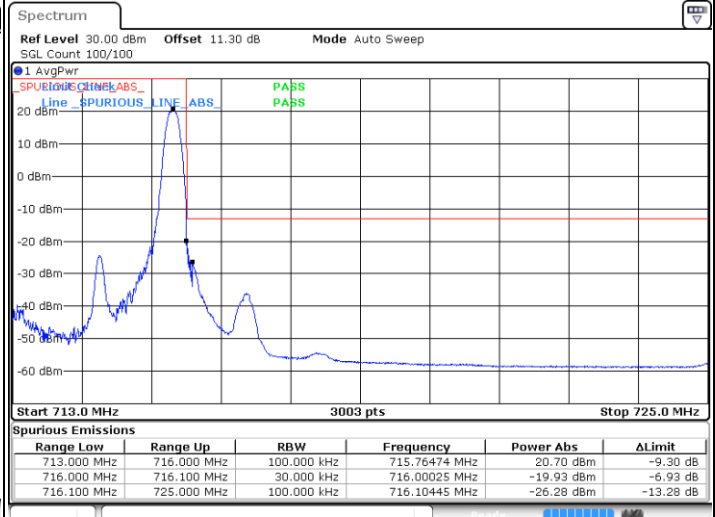


LTE Band 12 / 3MHz / QPSK

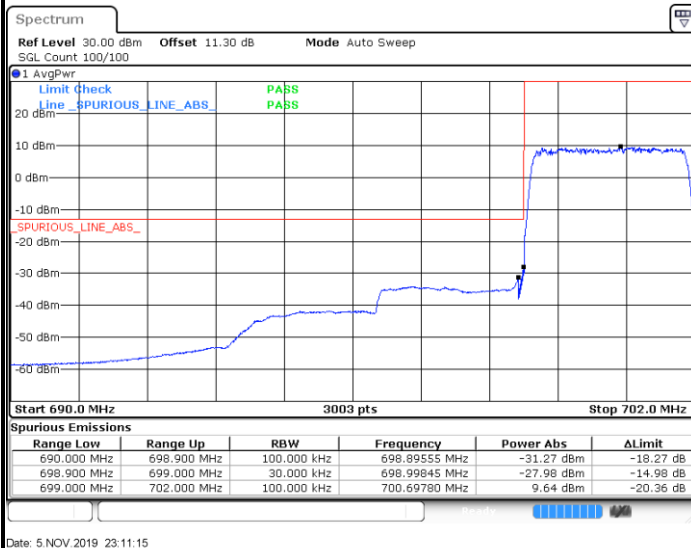
Lowest Band Edge / 1RB



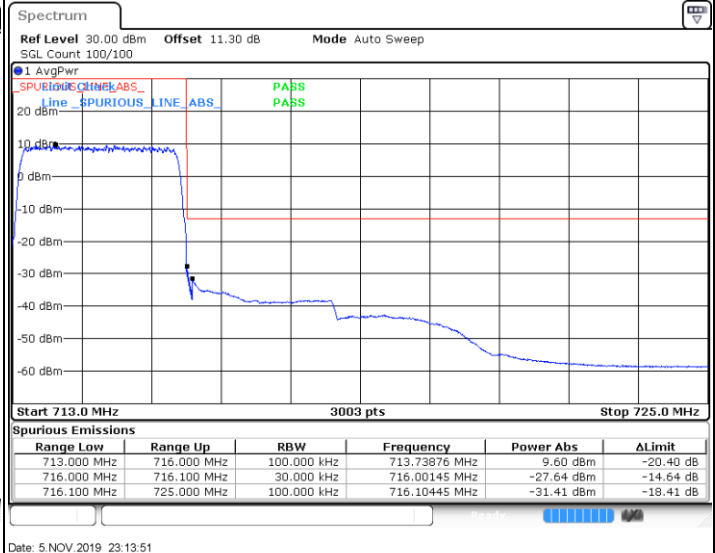
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



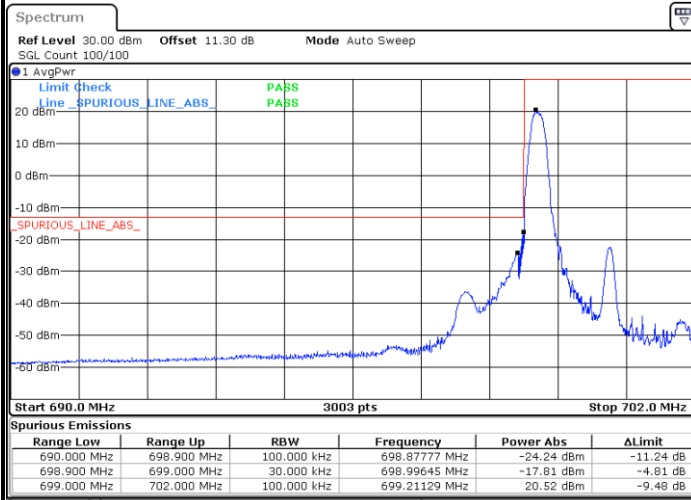
Highest Band Edge / Full RB



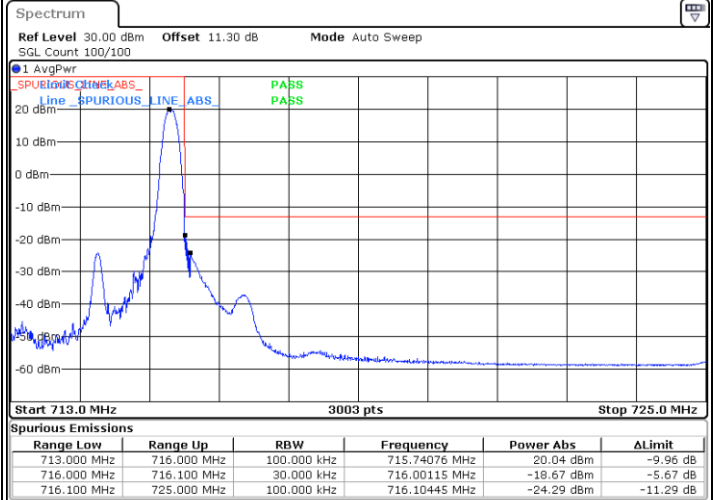


LTE Band 12 / 3MHz / 16QAM

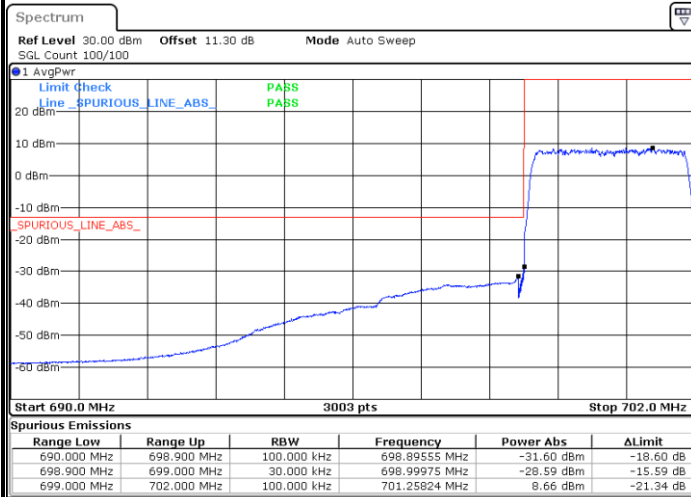
Lowest Band Edge / 1 RB



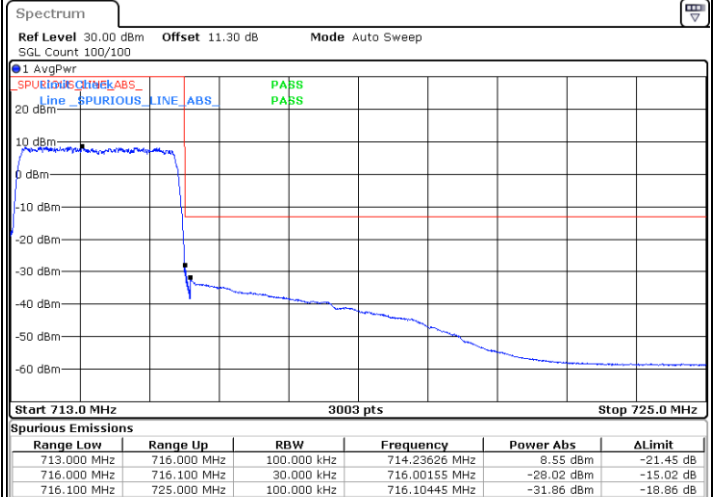
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



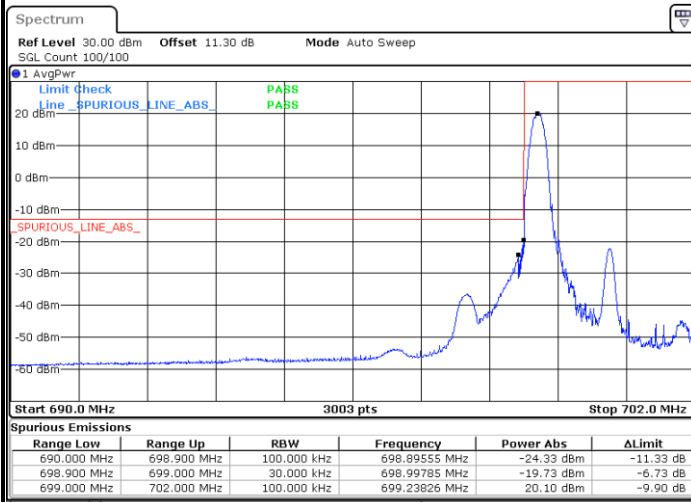
Highest Band Edge / Full RB



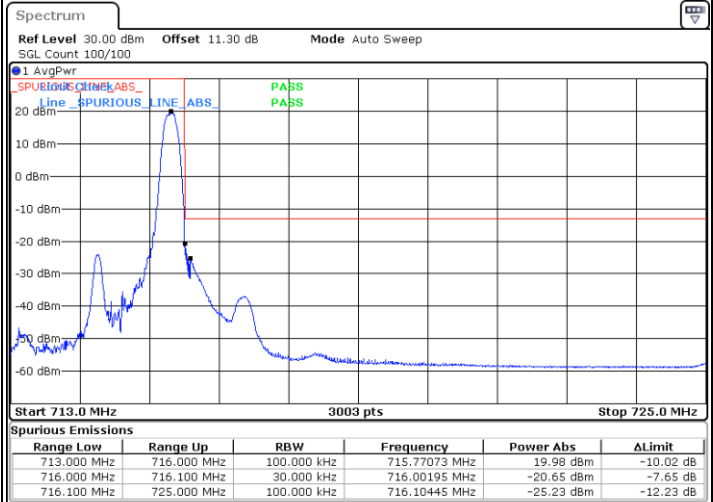


LTE Band 12 / 3MHz / 64QAM

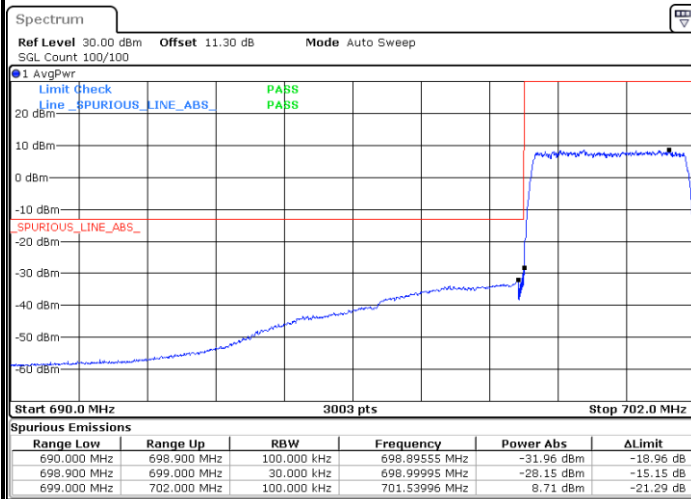
Lowest Band Edge / 1 RB



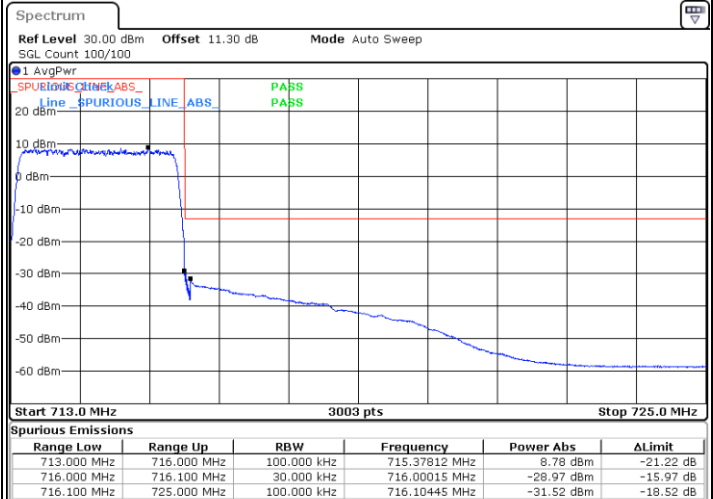
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



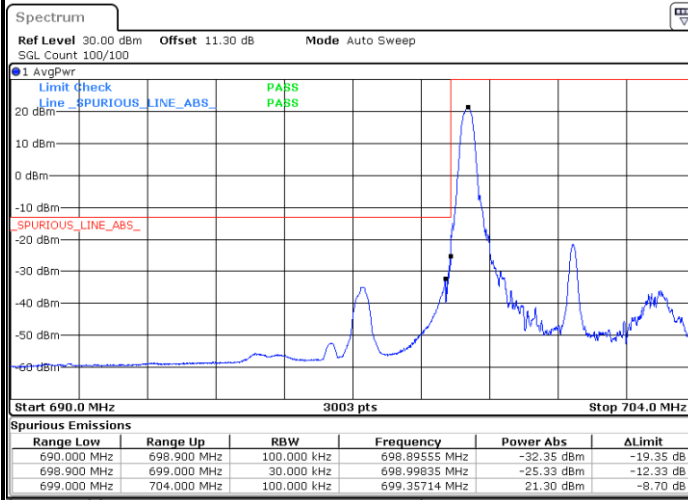
Highest Band Edge / Full RB



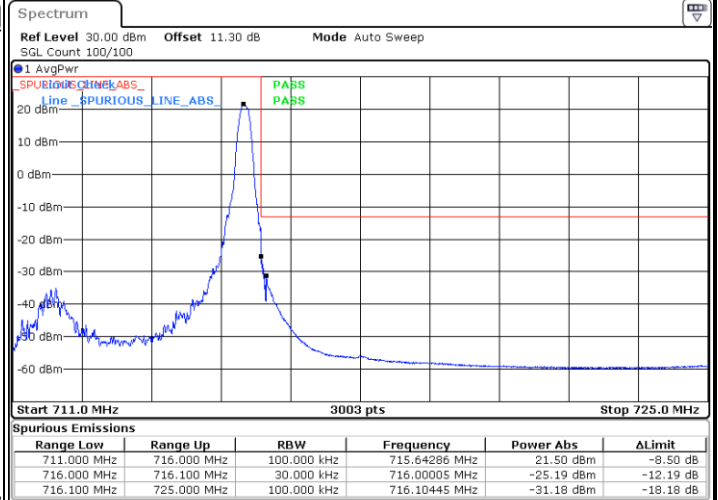


LTE Band 12 / 5MHz / QPSK

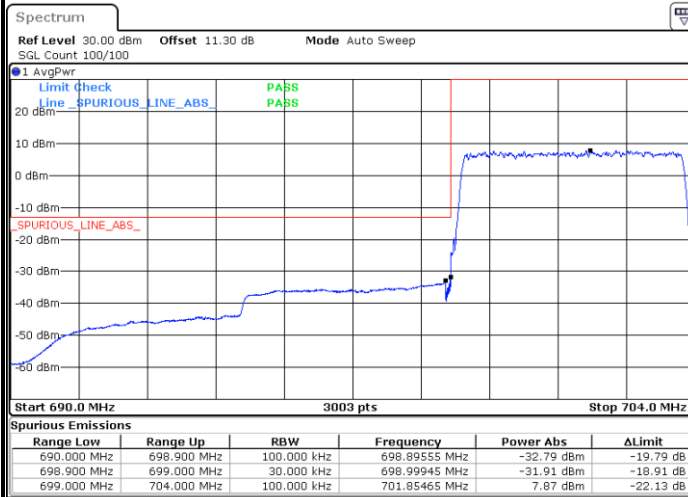
Lowest Band Edge / 1 RB



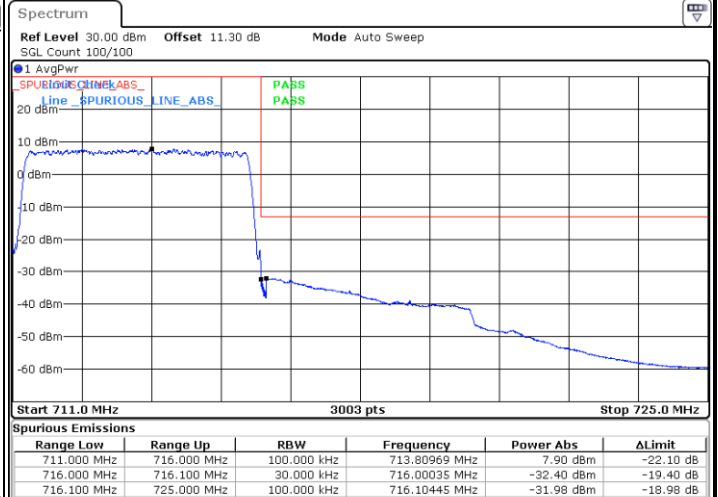
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



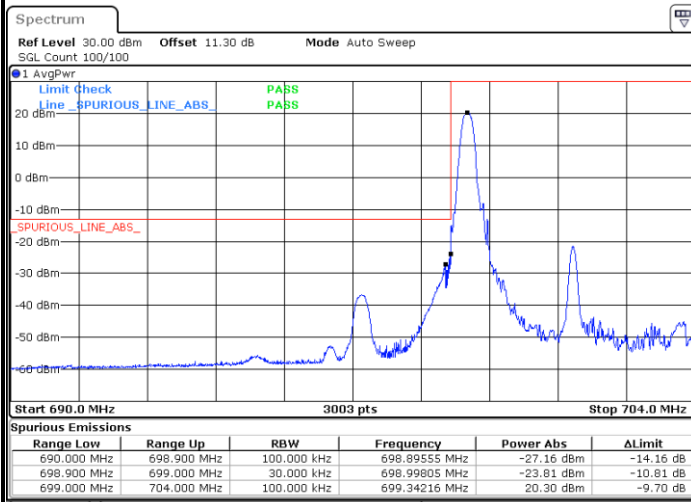
Highest Band Edge / Full RB



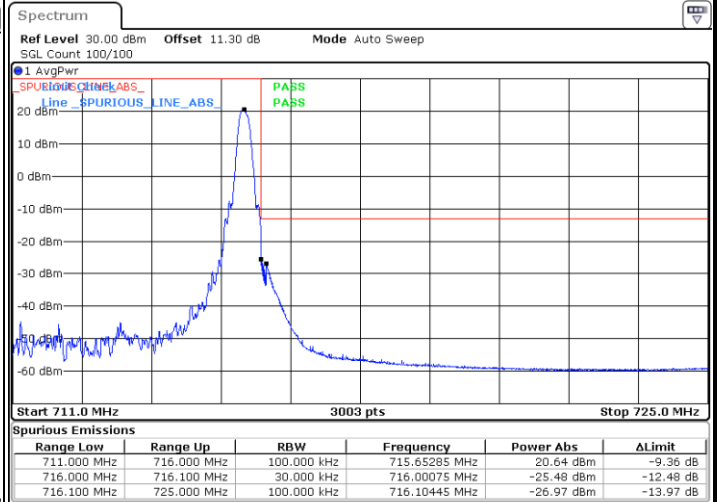


LTE Band 12 / 5MHz / 16QAM

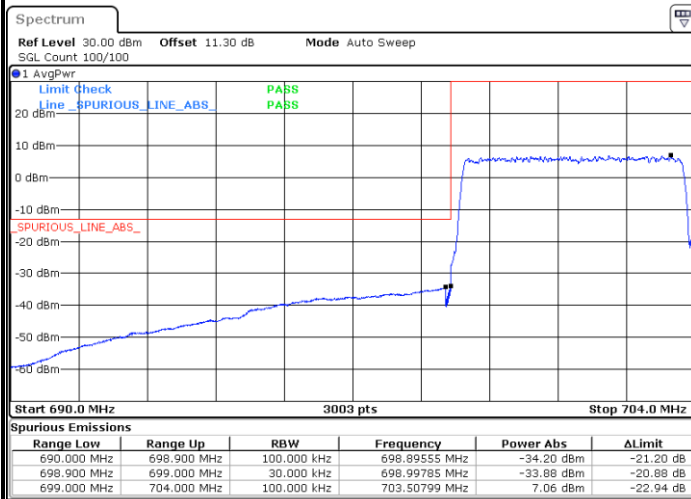
Lowest Band Edge / 1RB



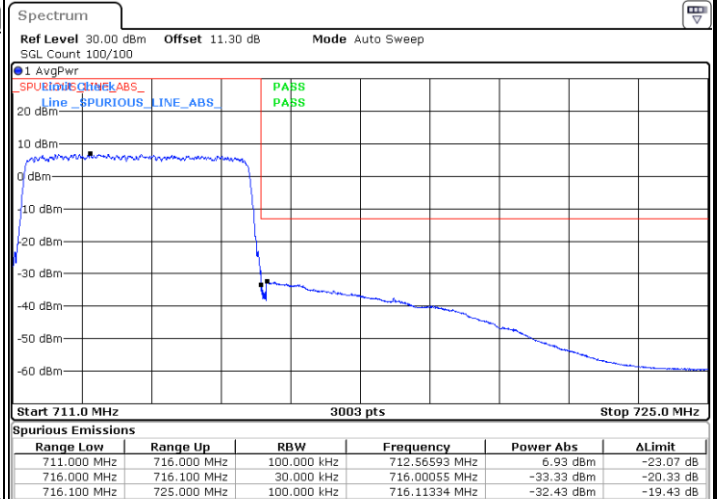
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



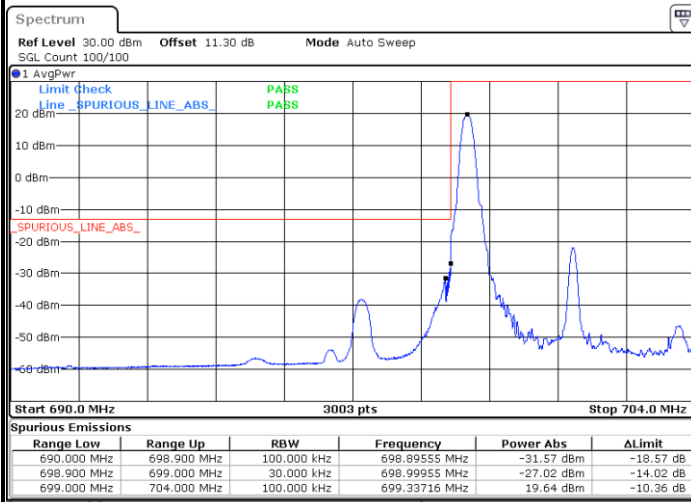
Highest Band Edge / Full RB



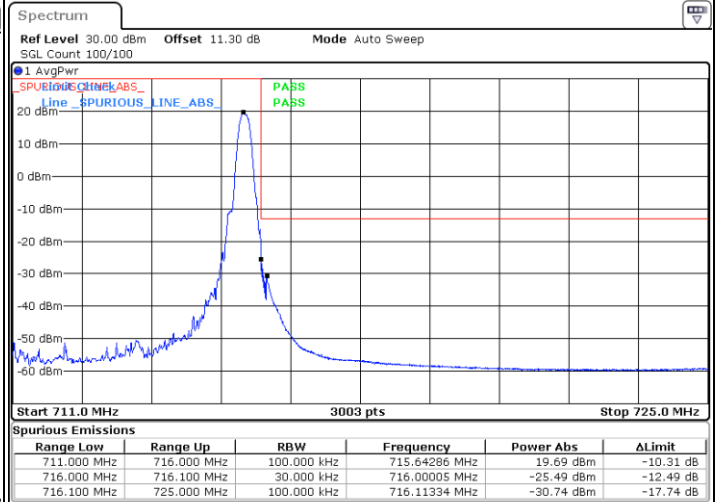


LTE Band 12 / 5MHz / 64QAM

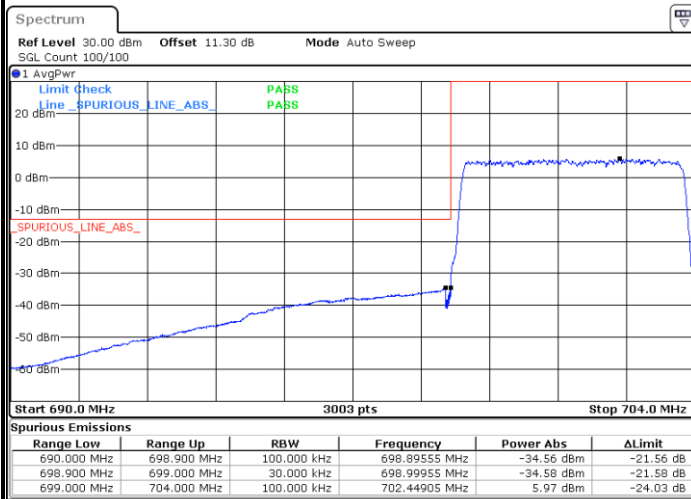
Lowest Band Edge / 1RB



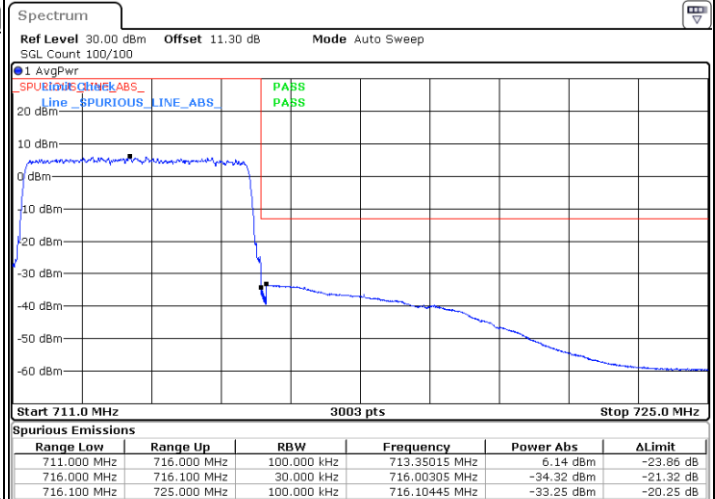
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



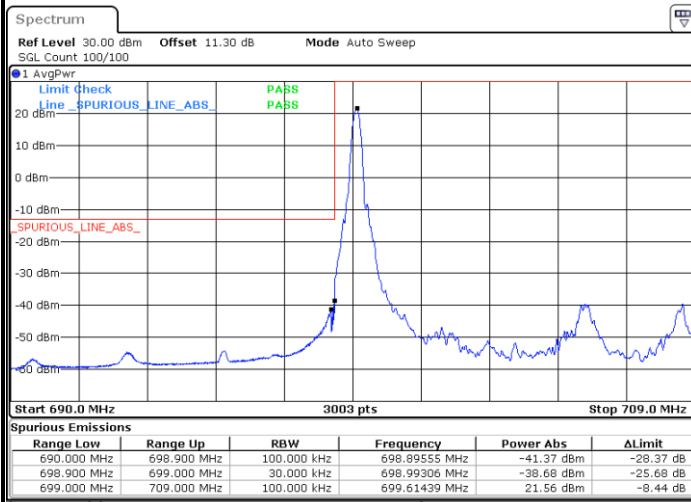
Highest Band Edge / Full RB



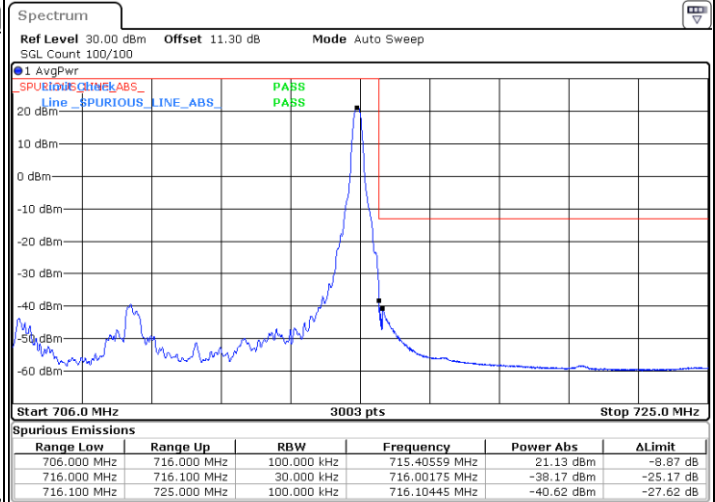


LTE Band 12 / 10MHz / QPSK

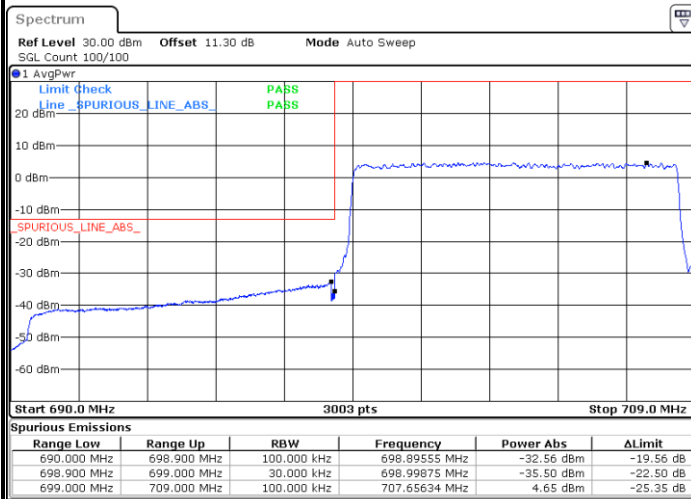
Lowest Band Edge / 1 RB



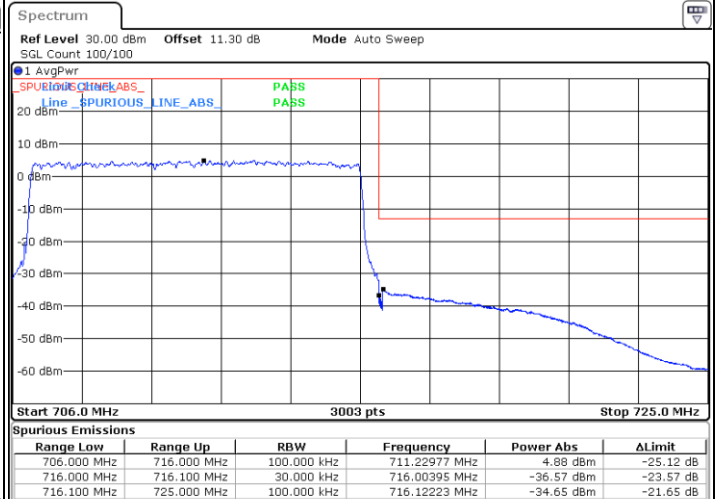
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



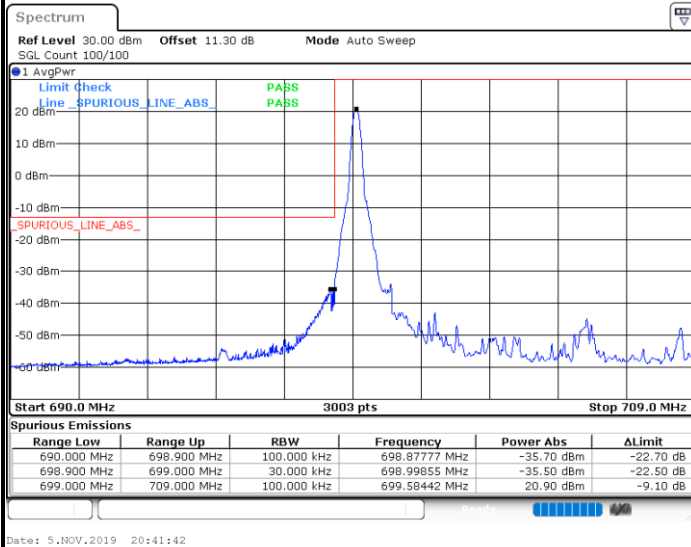
Highest Band Edge / Full RB



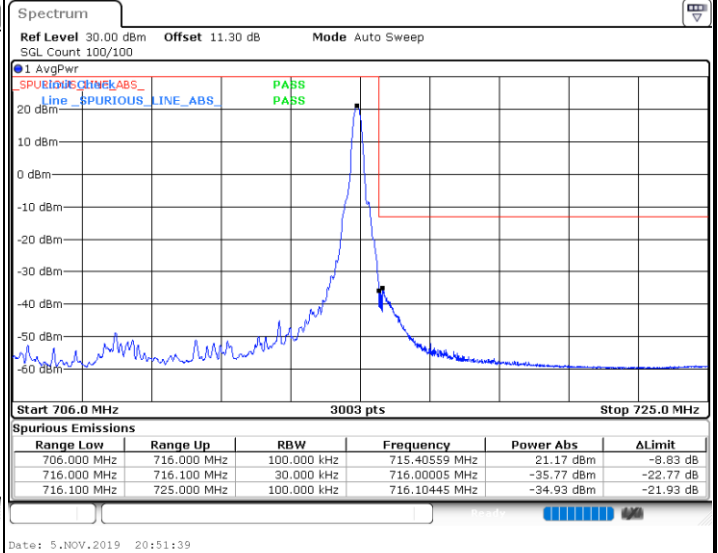


LTE Band 12 / 10MHz / 16QAM

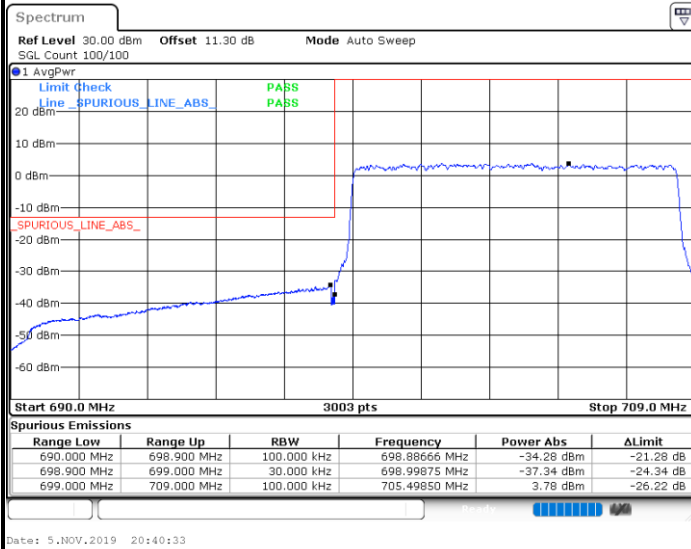
Lowest Band Edge / 1 RB



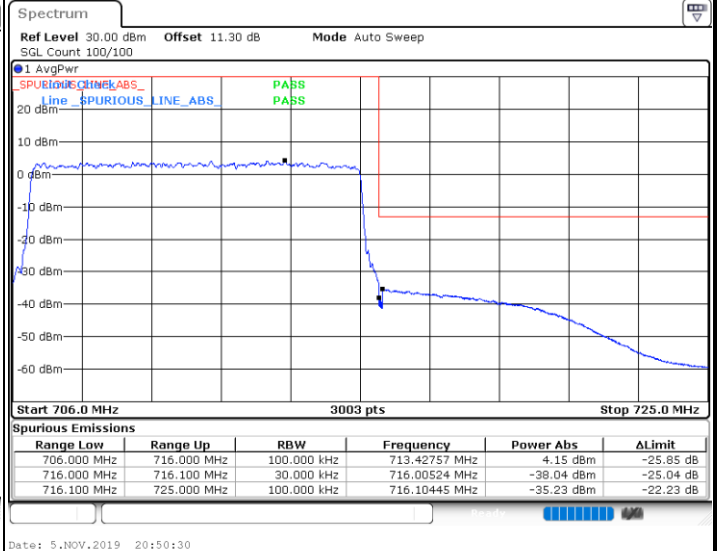
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



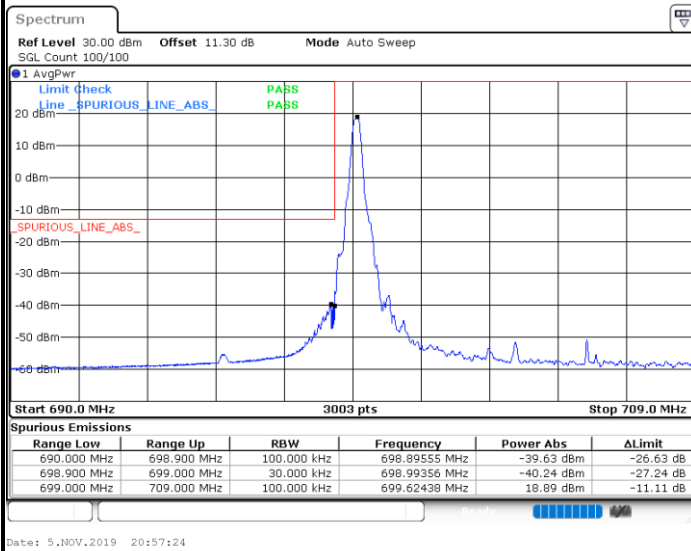
Highest Band Edge / Full RB



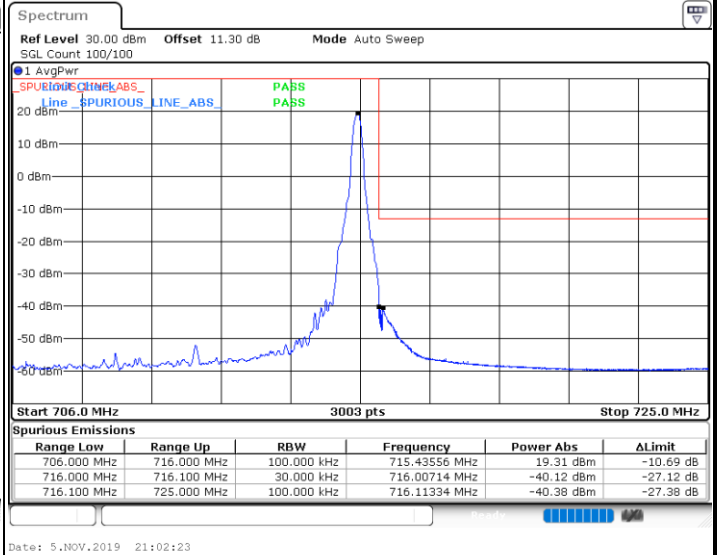


LTE Band 12 / 10MHz / 64QAM

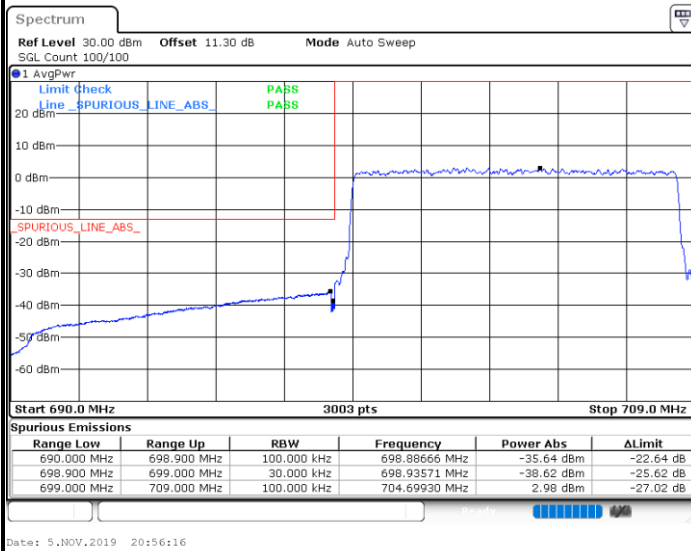
Lowest Band Edge / 1 RB



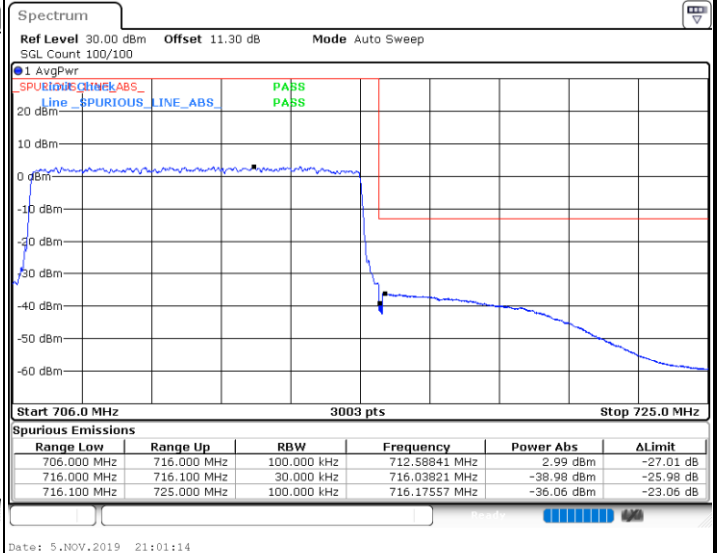
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

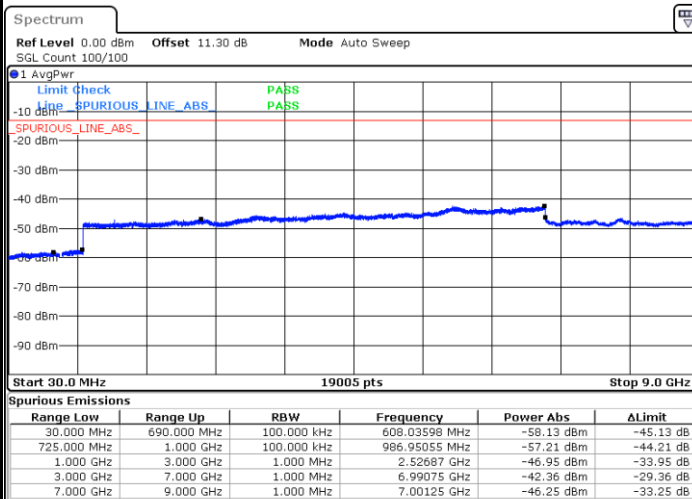




Conducted Spurious Emission

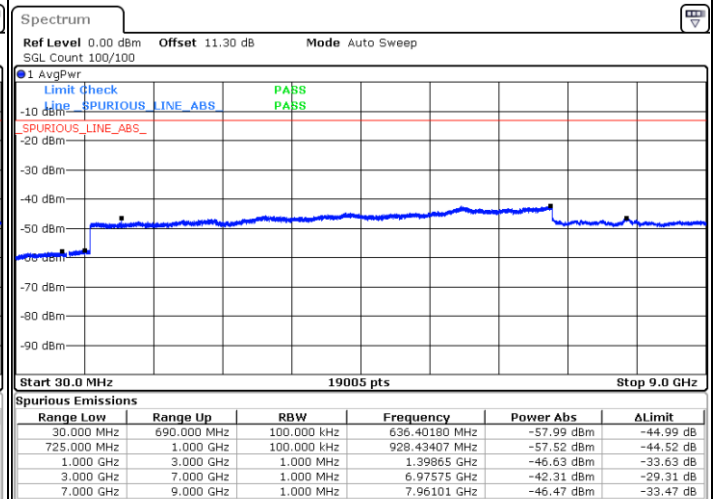
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



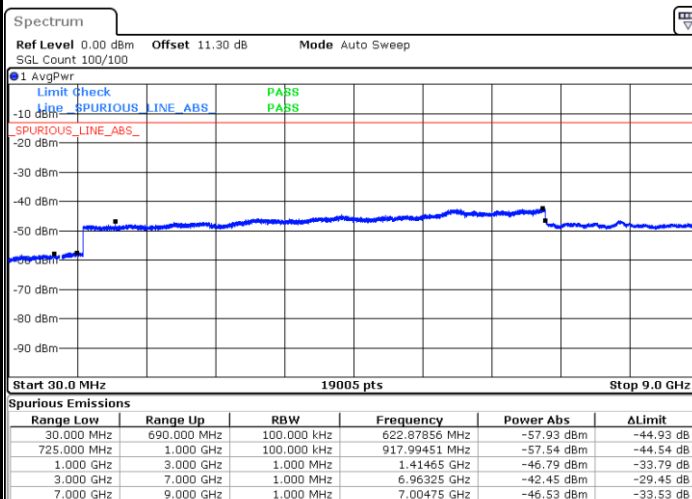
Date: 5.NOV.2019 19:11:48

Lowest Channel / 16QAM



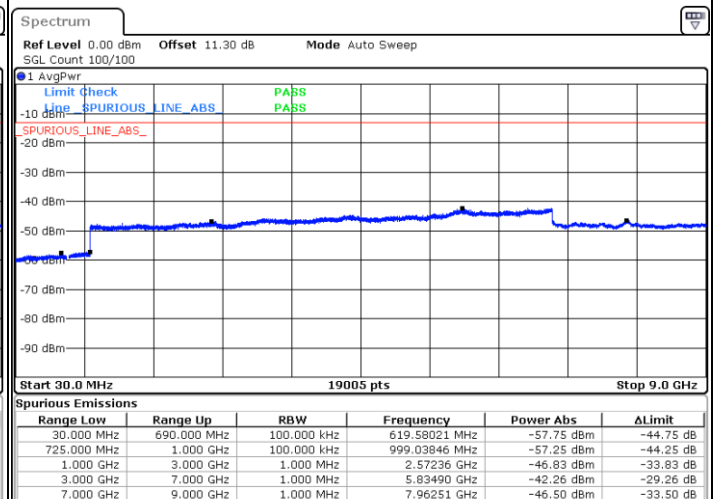
Date: 5.NOV.2019 19:12:47

Middle Channel / QPSK



Date: 5.NOV.2019 19:15:27

Middle Channel / 16QAM

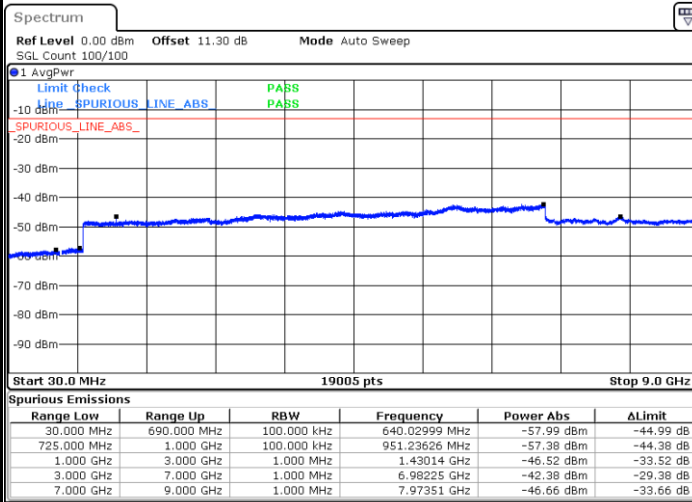


Date: 5.NOV.2019 19:14:29



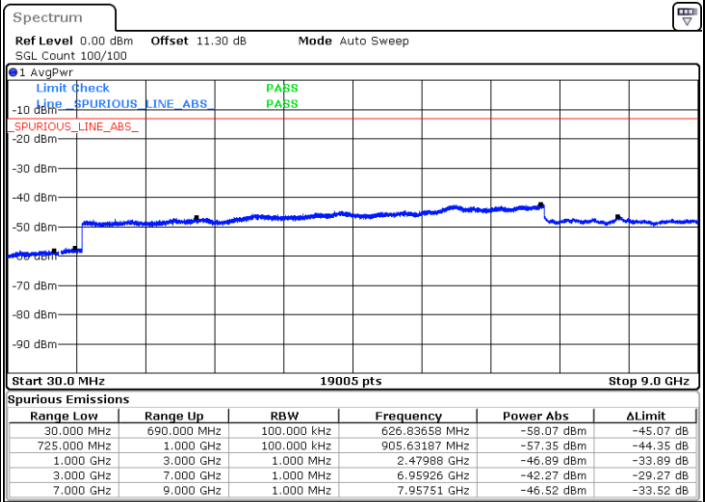
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 5.NOV.2019 19:21:45

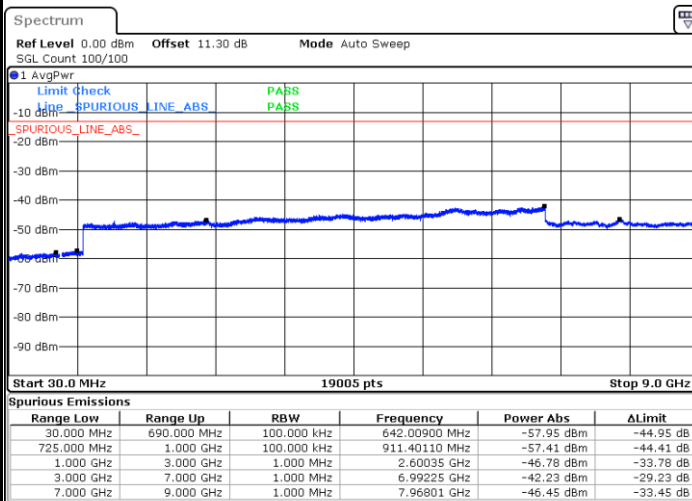
Highest Channel / 16QAM



Date: 5.NOV.2019 19:22:44

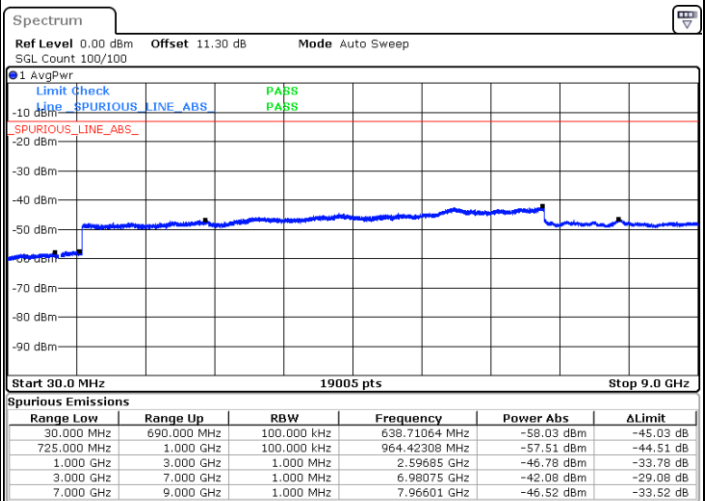
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 5.NOV.2019 19:37:37

Lowest Channel / 16QAM

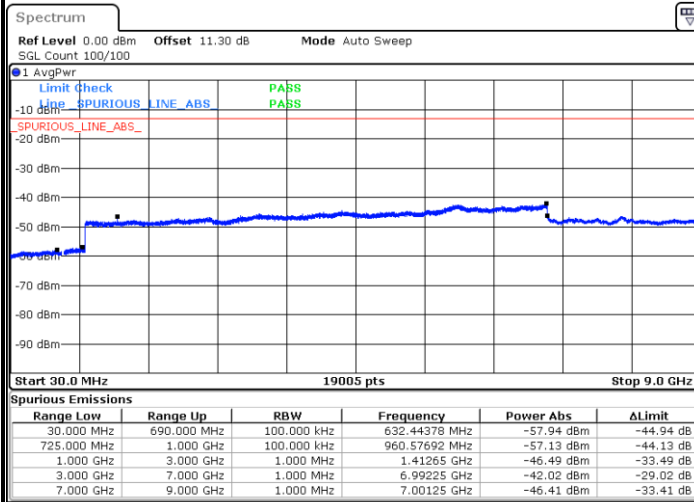


Date: 5.NOV.2019 19:38:36



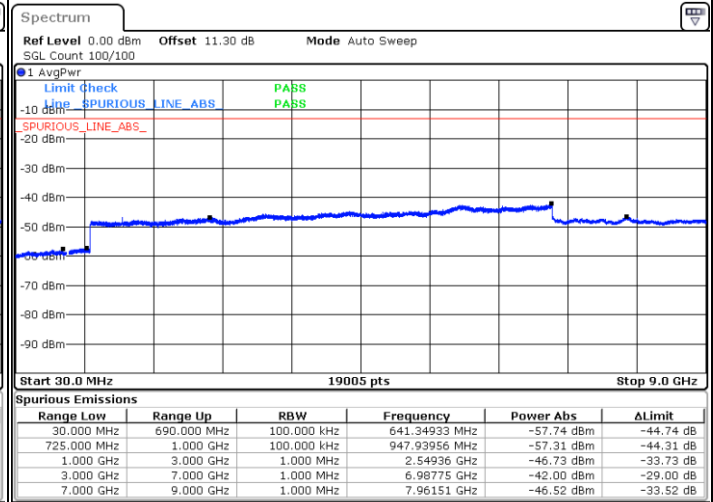
LTE Band 12 / 3MHz

Middle Channel / QPSK



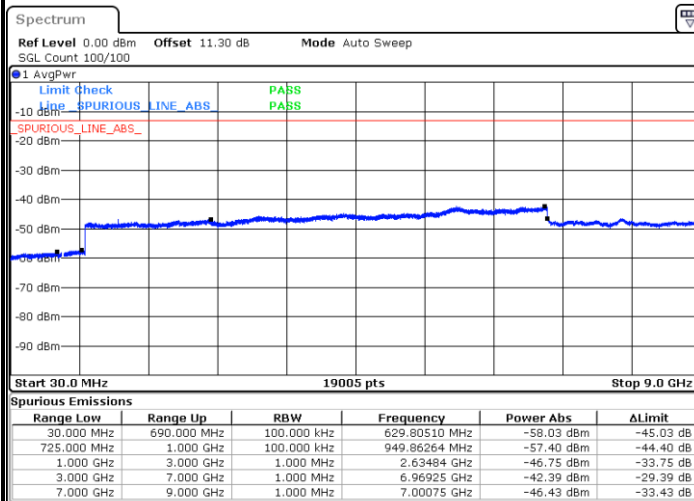
Date: 5.NOV.2019 19:41:17

Middle Channel / 16QAM



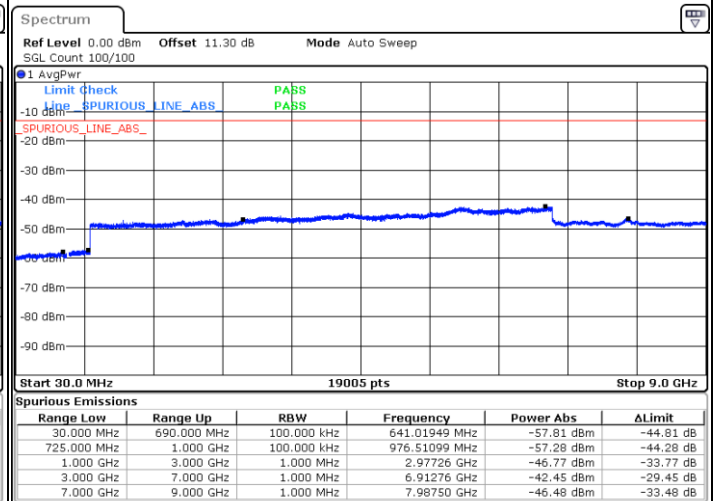
Date: 5.NOV.2019 19:40:18

Highest Channel / QPSK



Date: 5.NOV.2019 19:47:35

Highest Channel / 16QAM

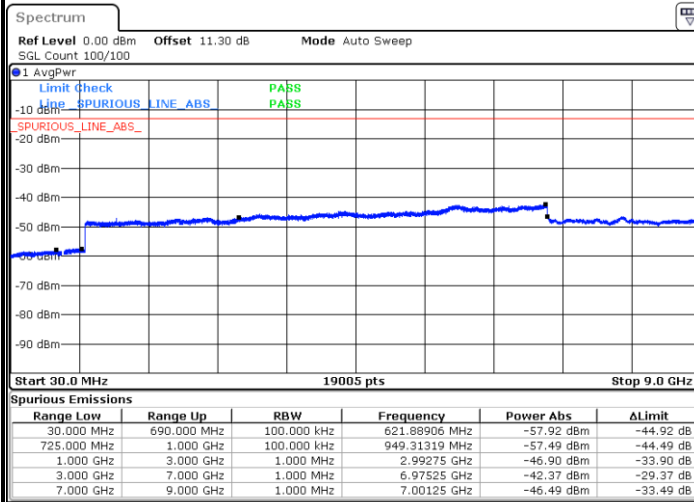


Date: 5.NOV.2019 19:48:34



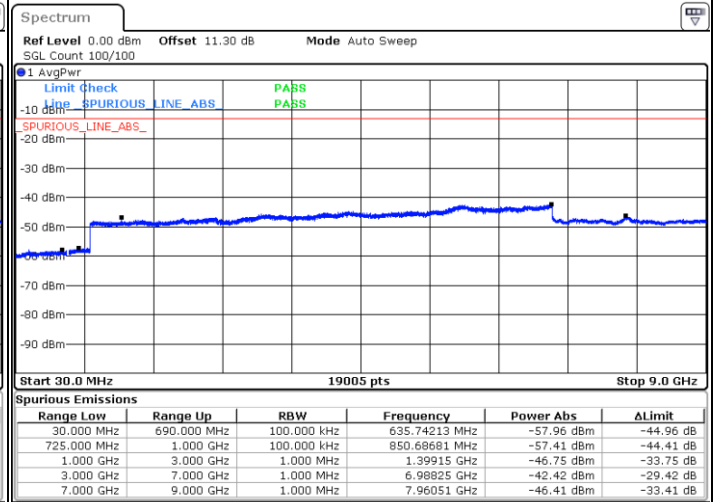
LTE Band 12 / 5MHz

Lowest Channel / QPSK



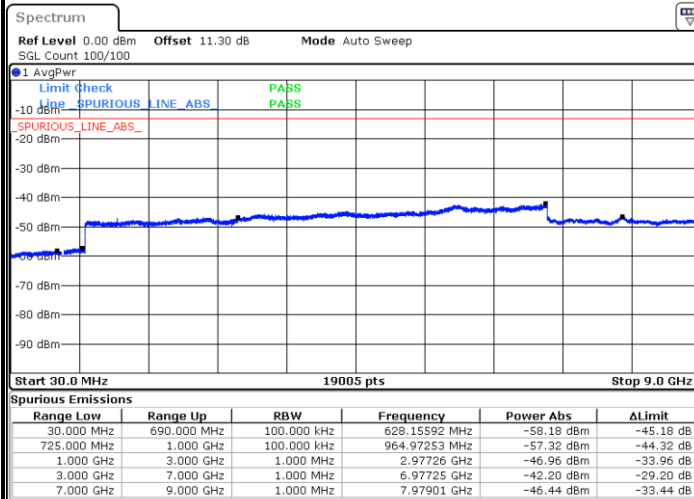
Date: 5.NOV.2019 20:26:36

Lowest Channel / 16QAM



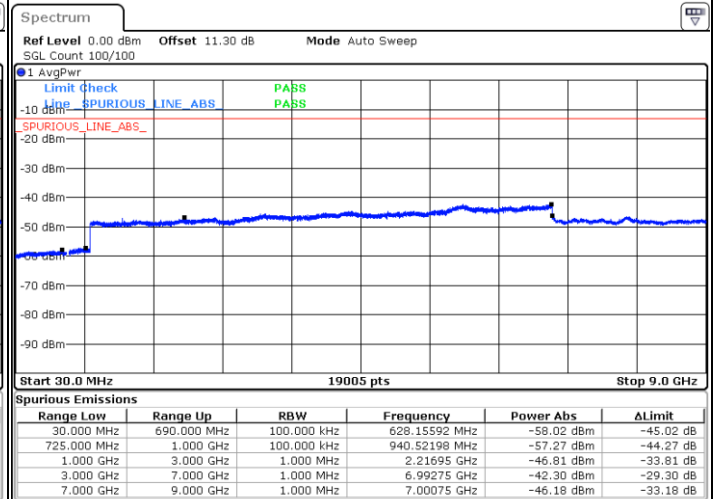
Date: 5.NOV.2019 20:27:35

Middle Channel / QPSK



Date: 5.NOV.2019 20:30:16

Middle Channel / 16QAM

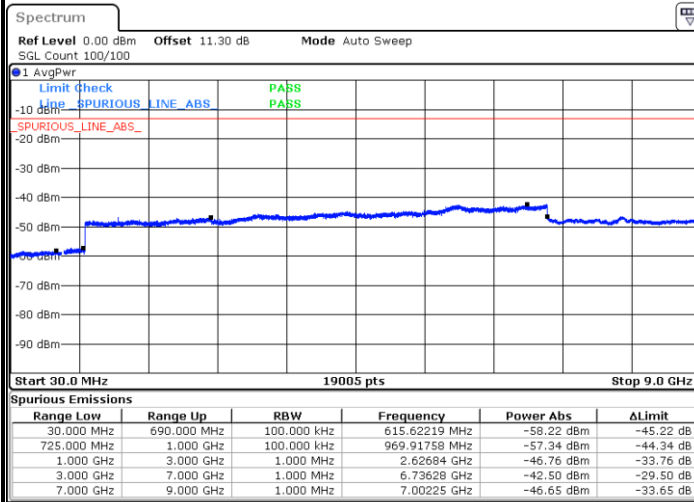


Date: 5.NOV.2019 20:29:17



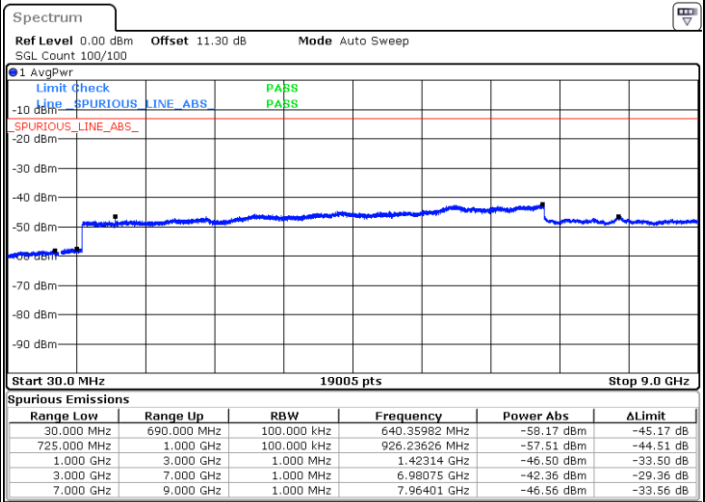
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 5.NOV.2019 20:37:33

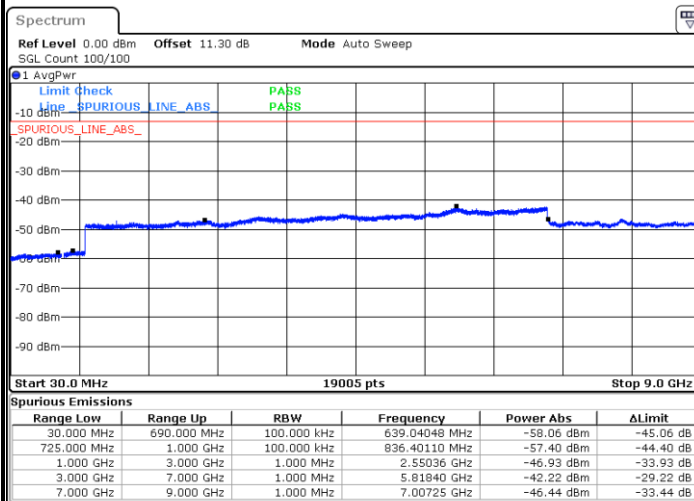
Highest Channel / 16QAM



Date: 5.NOV.2019 20:36:34

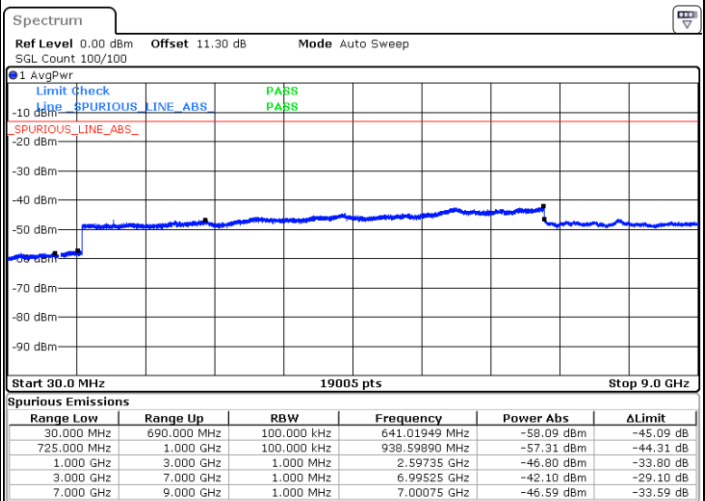
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 5.NOV.2019 20:43:50

Lowest Channel / 16QAM

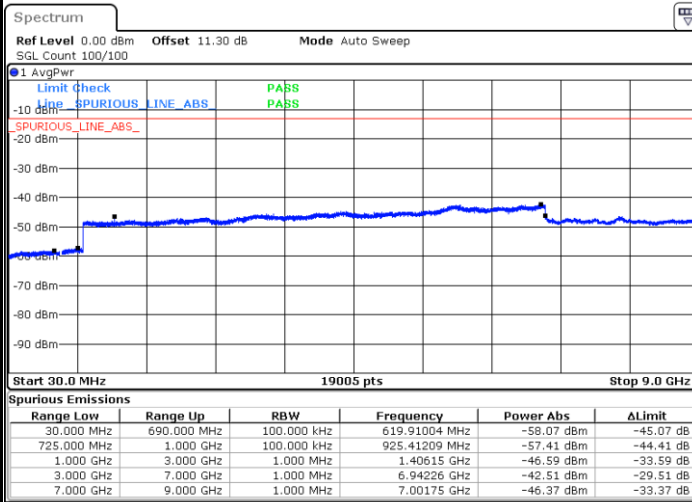


Date: 5.NOV.2019 20:44:49



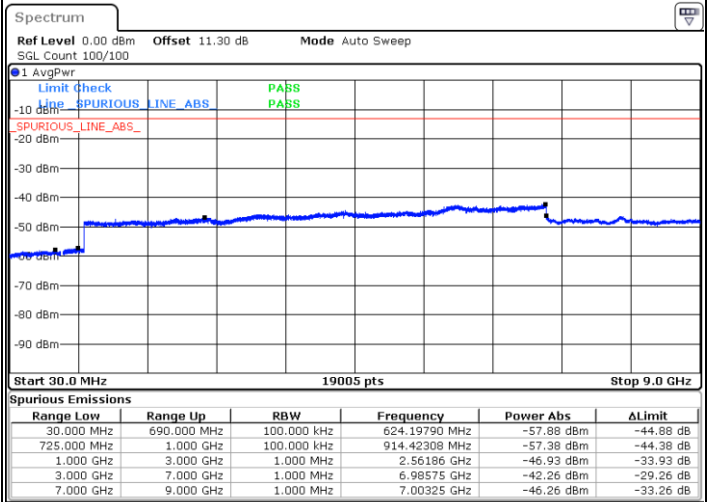
LTE Band 12 / 10MHz

Middle Channel / QPSK



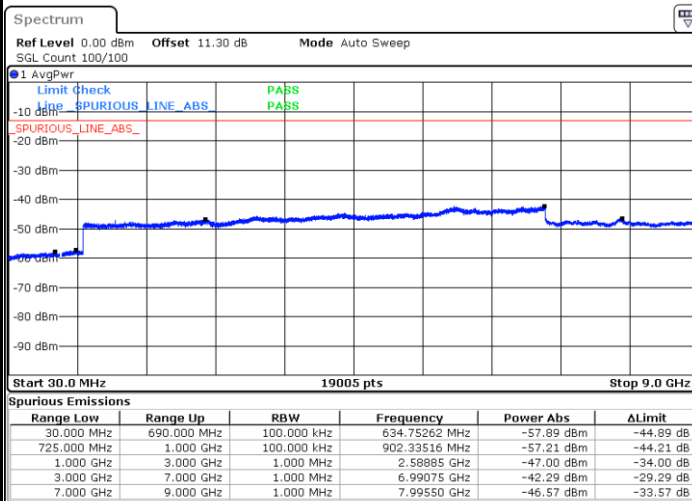
Date: 5.NOV.2019 20:47:30

Middle Channel / 16QAM



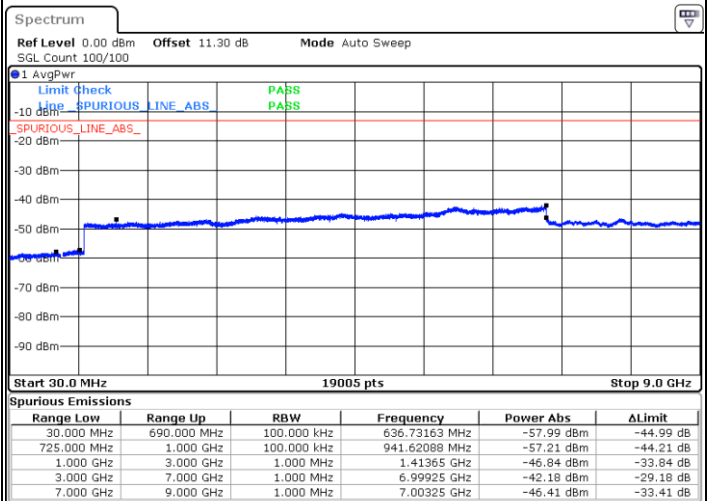
Date: 5.NOV.2019 20:46:31

Highest Channel / QPSK



Date: 5.NOV.2019 20:53:47

Highest Channel / 16QAM

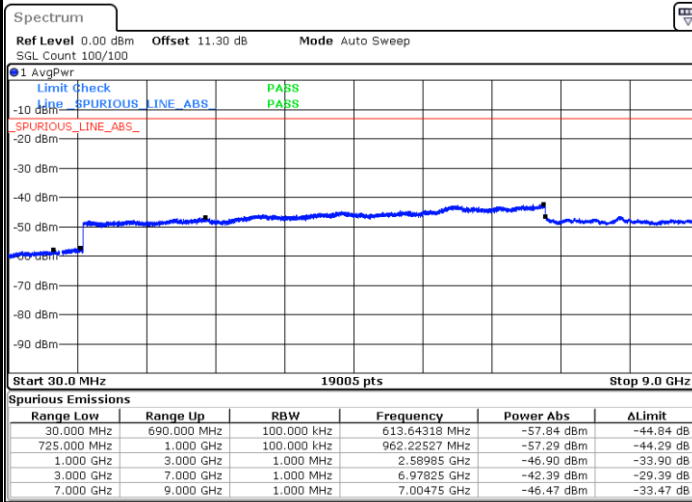


Date: 5.NOV.2019 20:54:46



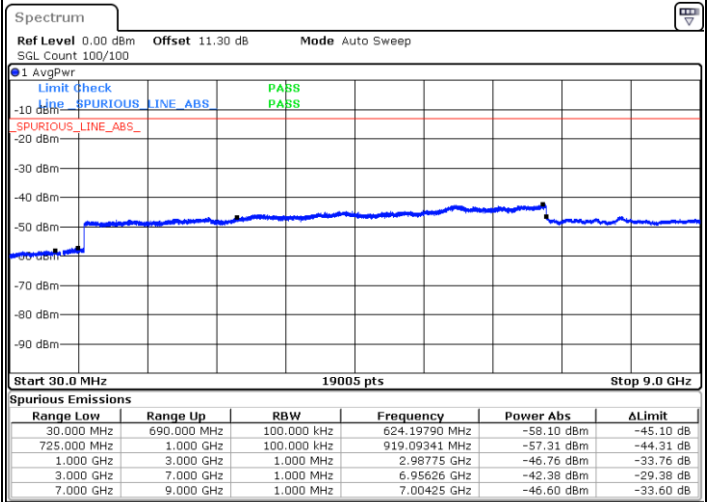
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



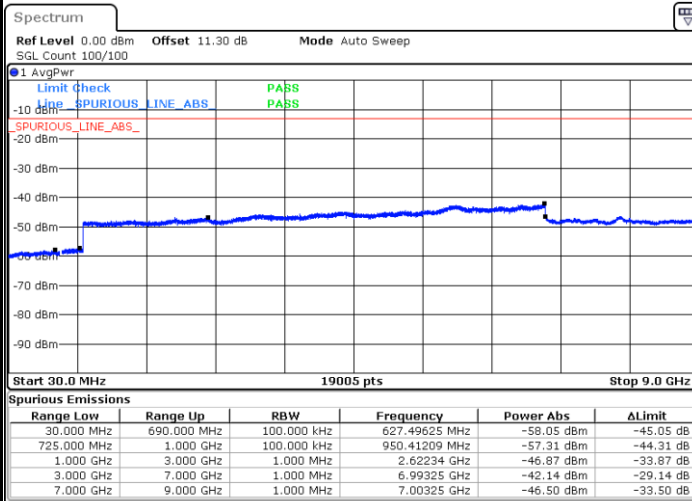
Date: 5.NOV.2019 19:26:22

Middle Channel / 64QAM



Date: 5.NOV.2019 19:27:42

Highest Channel / 64QAM

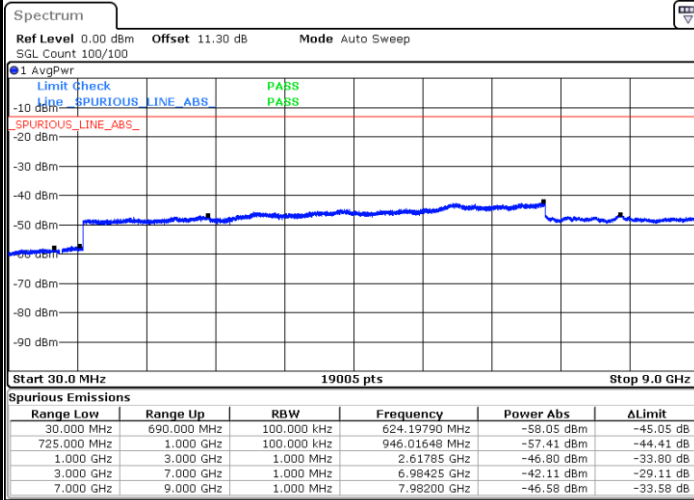


Date: 5.NOV.2019 19:31:20



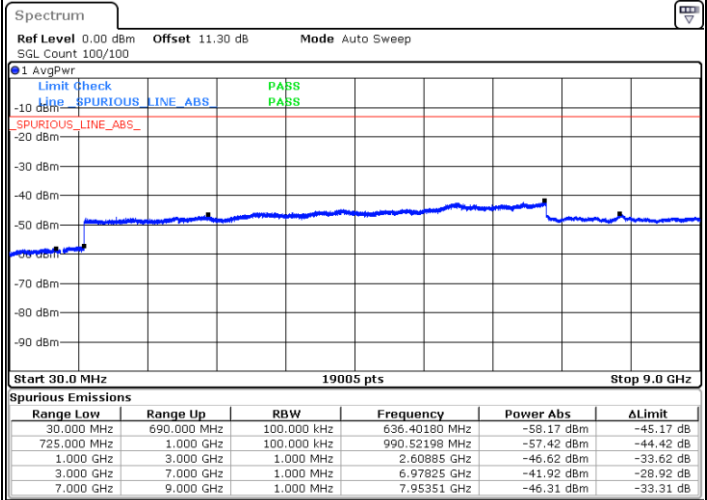
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



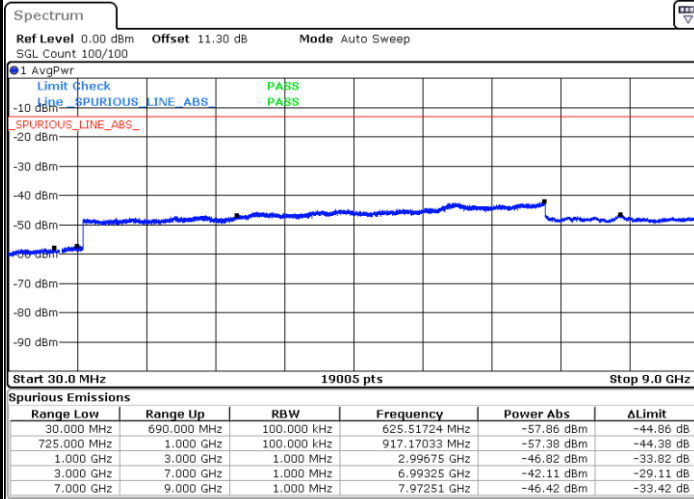
Date: 5.NOV.2019 19:52:12

Middle Channel / 64QAM



Date: 5.NOV.2019 19:53:33

Highest Channel / 64QAM

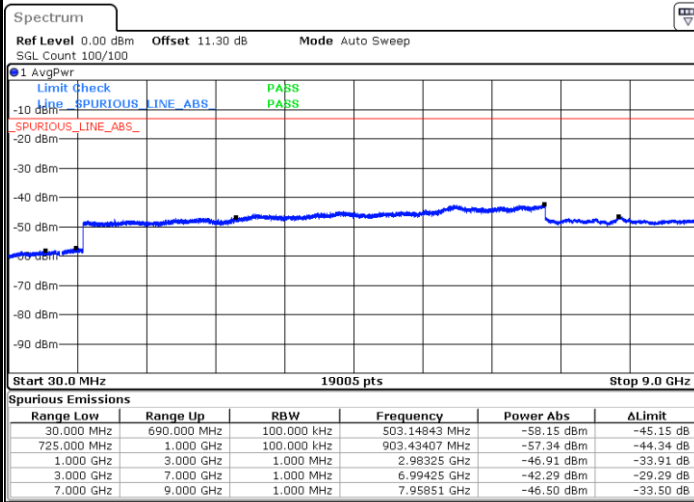


Date: 5.NOV.2019 19:57:10



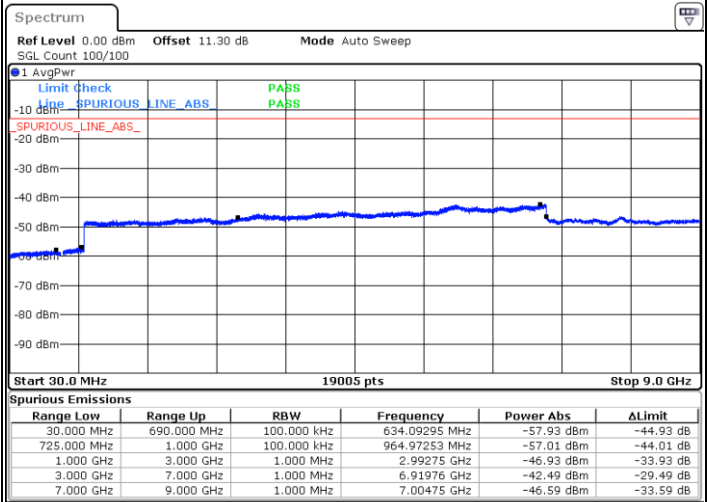
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



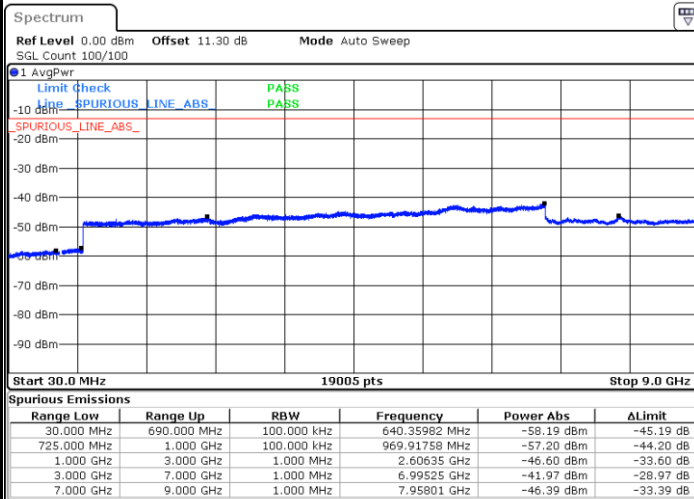
Date: 5.NOV.2019 20:15:20

Middle Channel / 64QAM



Date: 5.NOV.2019 20:16:41

Highest Channel / 64QAM

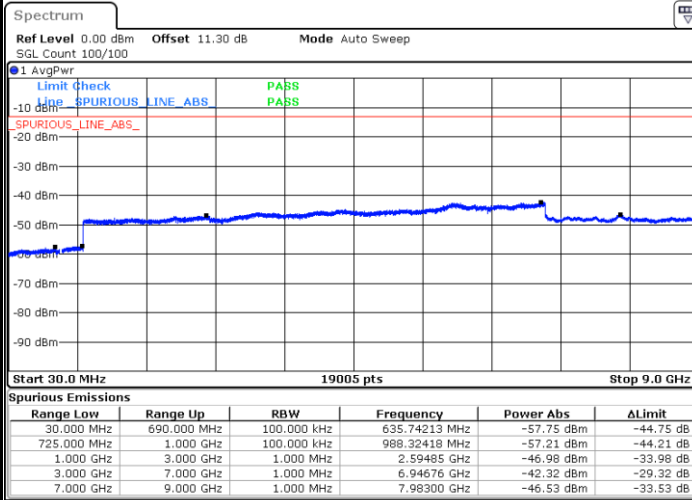


Date: 5.NOV.2019 20:20:19



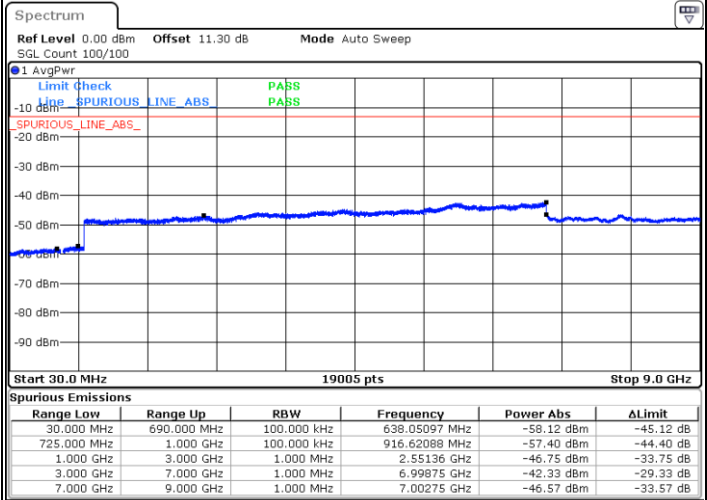
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



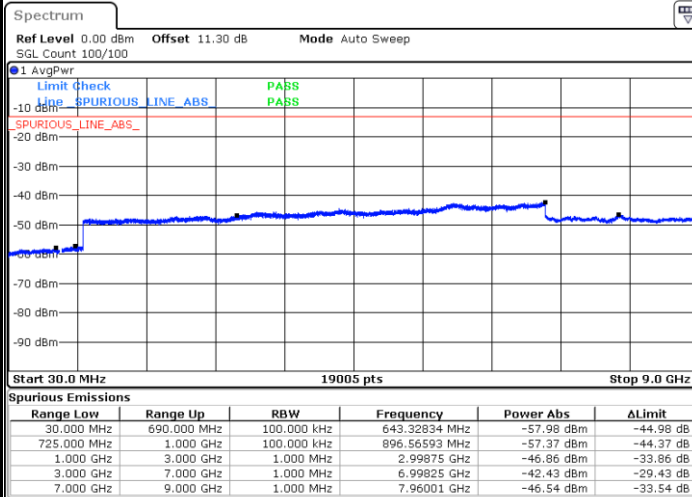
Date: 5.NOV.2019 20:58:23

Middle Channel / 64QAM



Date: 5.NOV.2019 20:59:44

Highest Channel / 64QAM



Date: 5.NOV.2019 21:03:22

Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0075	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0096	
-10	Normal Voltage	0.0072	
-20	Normal Voltage	0.0020	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0049	

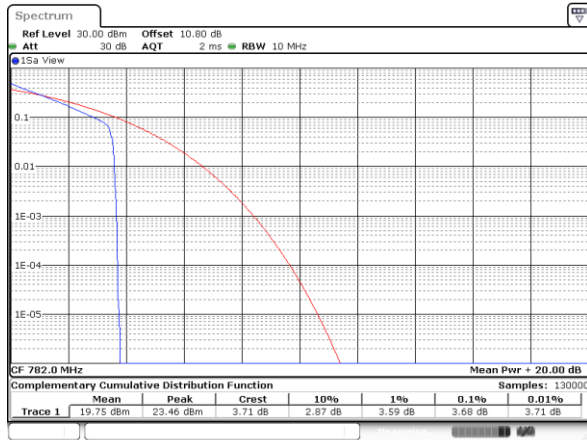
Note:

1. Normal Voltage =4.0 V. ; Battery End Point (BEP) =3.8 V. ; Maximum Voltage =4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

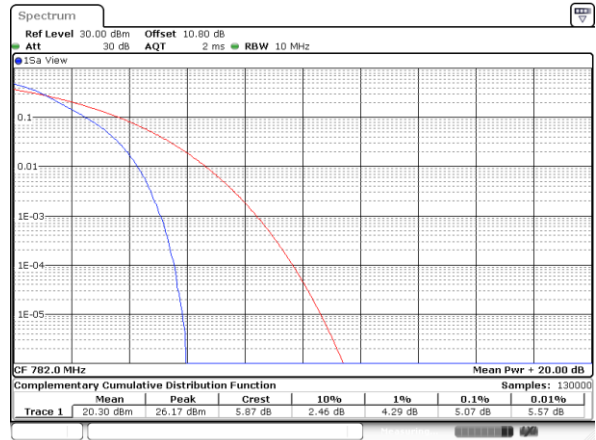
LTE Band 13

Peak-to-Average Ratio

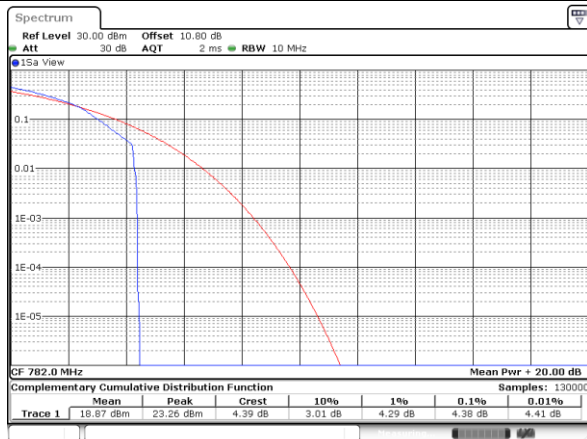
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.68	5.07	4.38	6.03	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.83	6.52	-	-	
Highest CH	-	-	-	-	

LTE Band 13 / 10MHz / QPSK
Middle Channel / 1RB


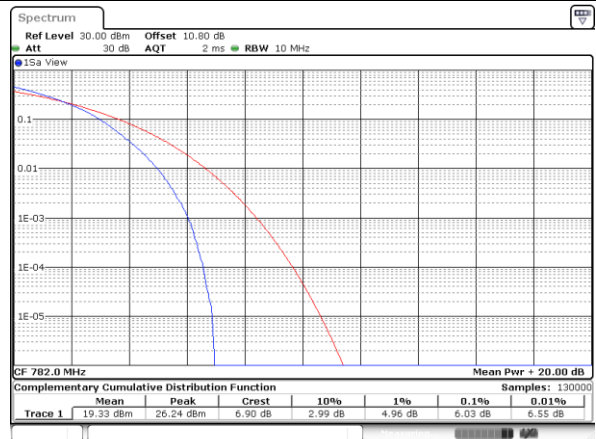
Date: 6 NOV 2019 00:37:28

Middle Channel / Full RB


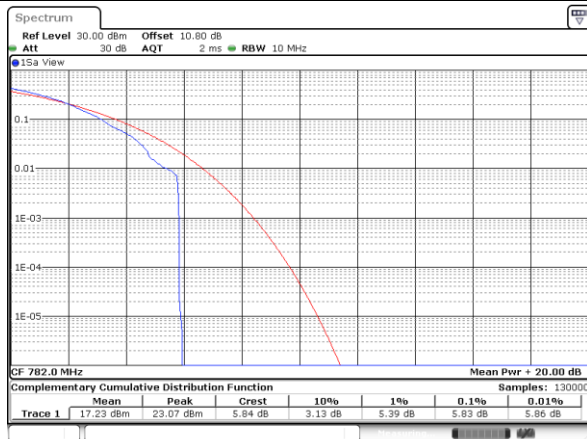
Date: 6 NOV 2019 00:37:40

LTE Band 13 / 10MHz / 16QAM
Middle Channel / 1RB


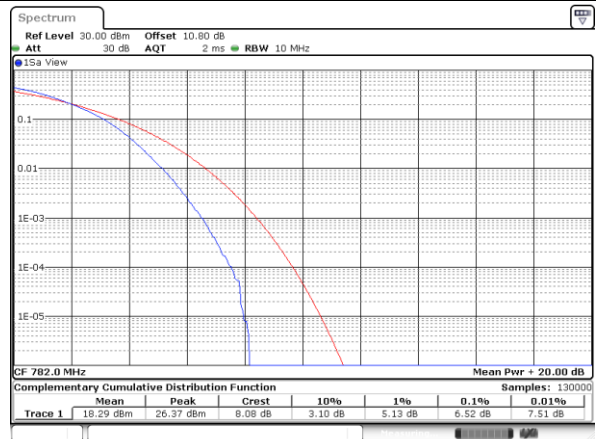
Date: 6 NOV 2019 00:37:06

Middle Channel / Full RB


Date: 6 NOV 2019 00:37:17

LTE Band 13 / 10MHz / 64QAM
Middle Channel / 1RB


Date: 6 NOV 2019 00:36:39

Middle Channel / Full RB


Date: 6 NOV 2019 00:36:51

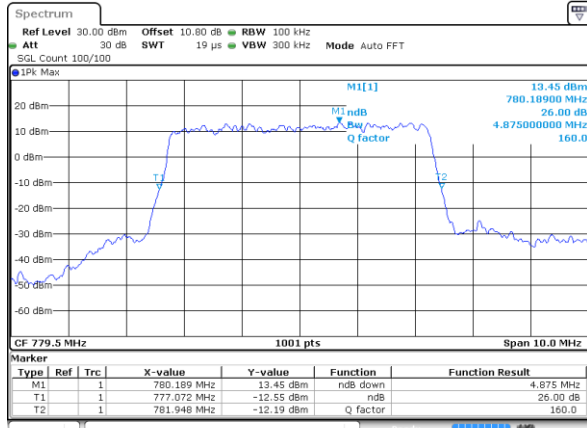
**26dB Bandwidth**

Mode	LTE Band 13 : 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	-	-	-	-	4.88	4.86	-	-	-	-	-	-
Middle CH	-	-	-	-	4.83	4.93	9.71	9.75	-	-	-	-
Highest CH	-	-	-	-	4.90	4.92	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.91	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.93	-	9.73	-	-	-	-	-
Highest CH	-	-	-	-	4.94	-	-	-	-	-	-	-

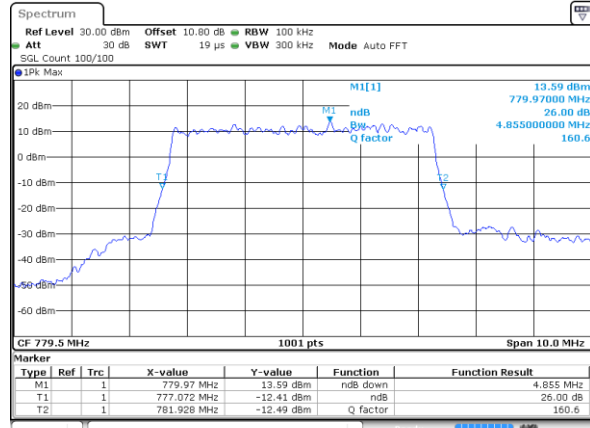


LTE Band 13

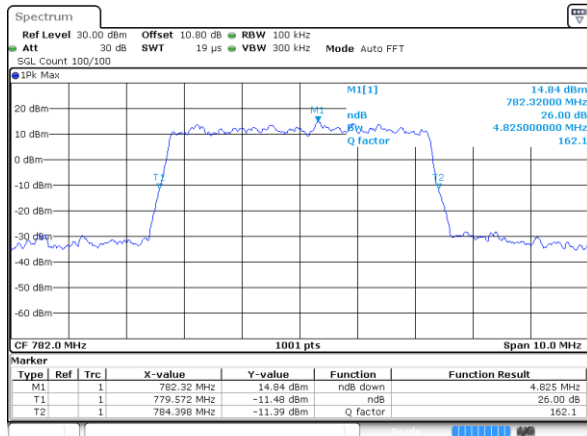
Lowest Channel / 5MHz / QPSK



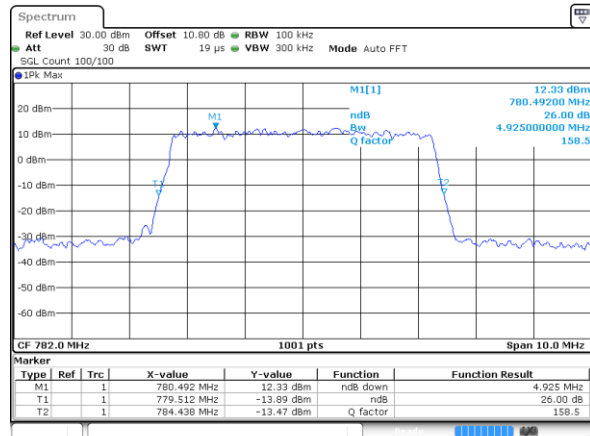
Lowest Channel / 5MHz / 16QAM



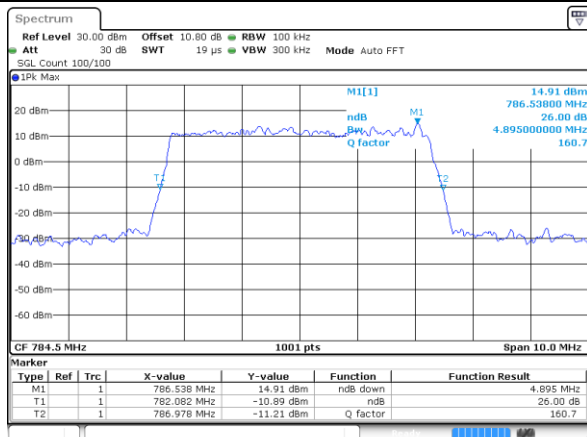
Middle Channel / 5MHz / QPSK



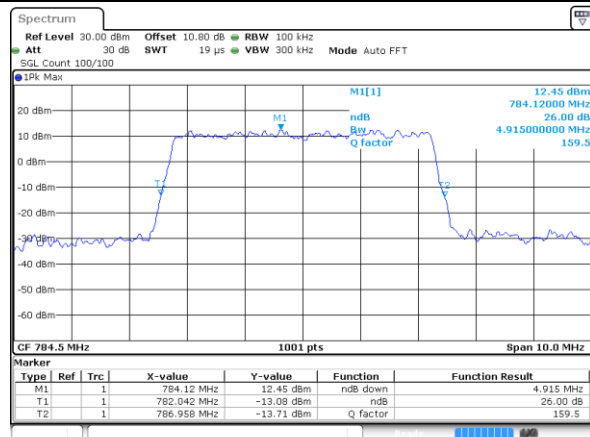
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



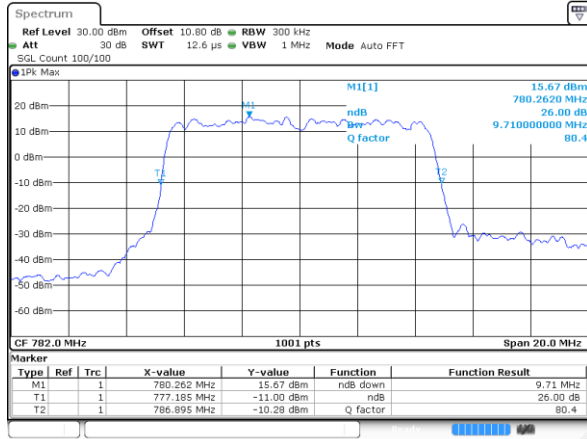
Highest Channel / 5MHz / 16QAM





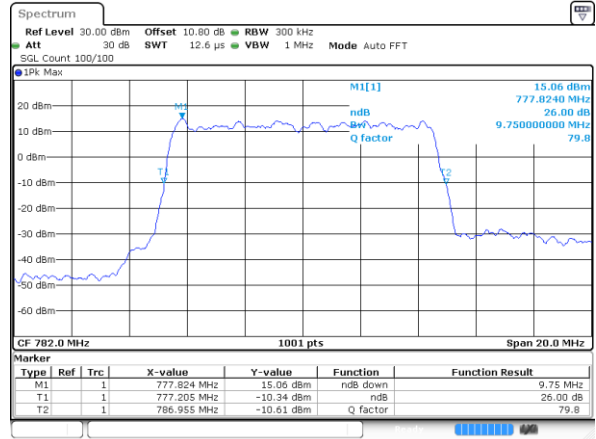
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 6 NOV 2019 00:15:40

Middle Channel / 10MHz / 16QAM

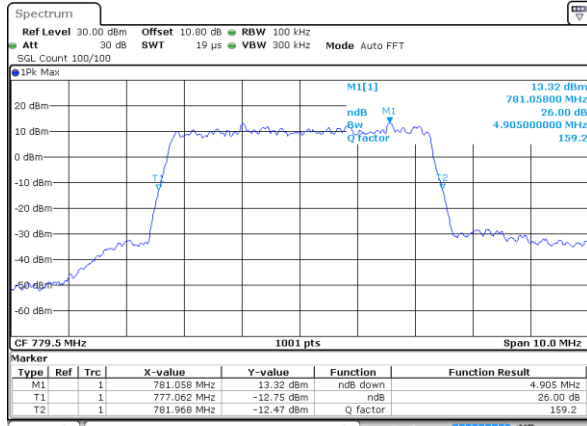


Date: 6 NOV 2019 00:15:29

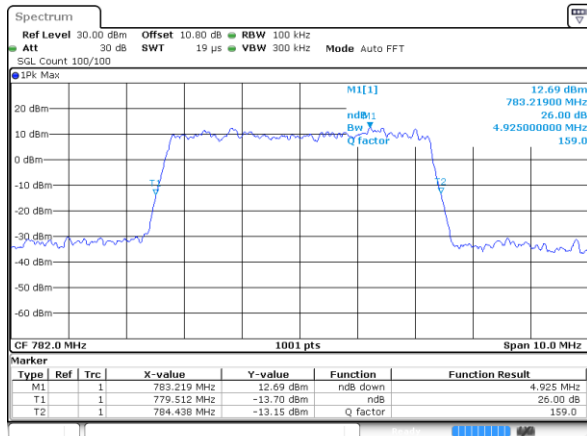


LTE Band 13

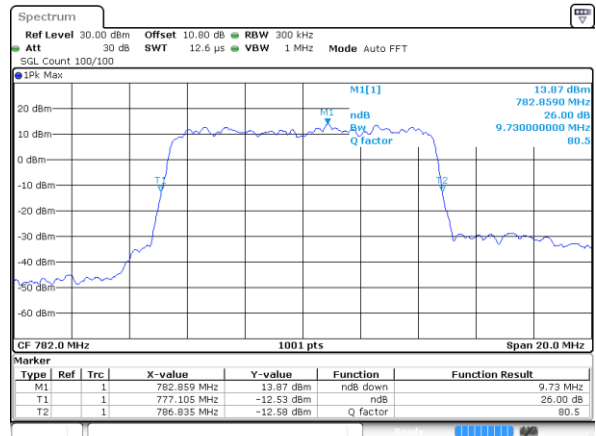
Lowest Channel / 5MHz / 64QAM



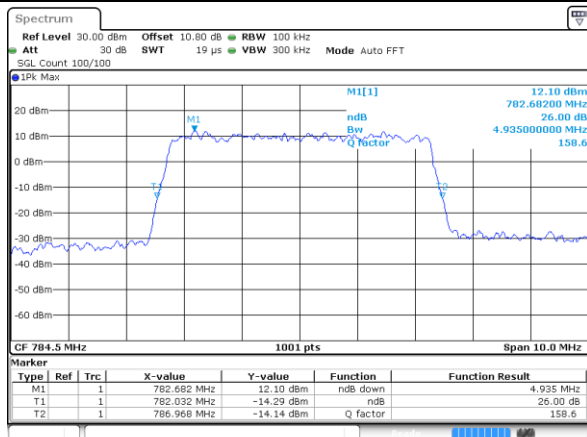
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



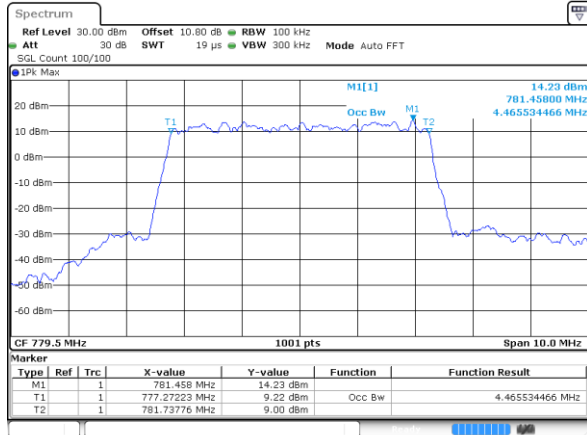
**Occupied Bandwidth**

Mode	LTE Band 13 : 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	-	-	-	-	4.47	4.50	-	-	-	-	-	-
Middle CH	-	-	-	-	4.51	4.48	9.01	8.99	-	-	-	-
Highest CH	-	-	-	-	4.49	4.51	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.53	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	-	8.97	-	-	-	-	-
Highest CH	-	-	-	-	4.49	-	-	-	-	-	-	-



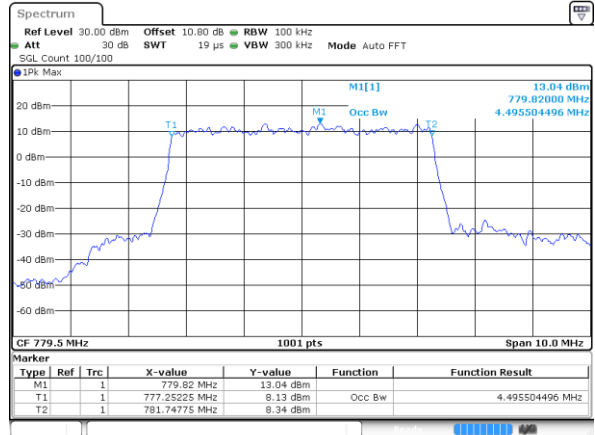
LTE Band 13

Lowest Channel / 5MHz / QPSK



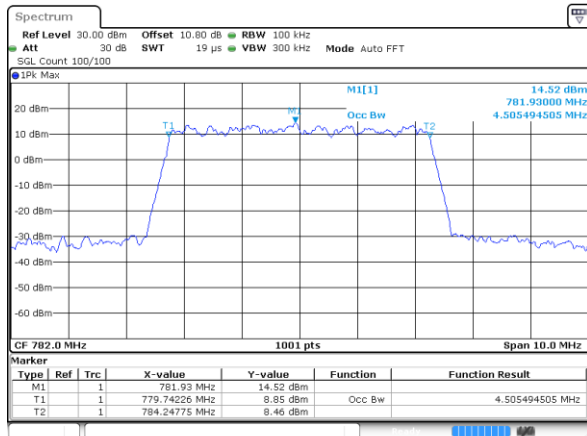
Date: 5 NOV 2019 23:42:45

Lowest Channel / 5MHz / 16QAM



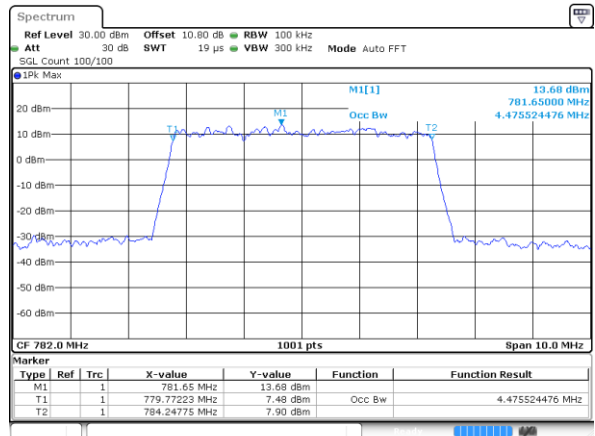
Date: 5 NOV 2019 23:42:57

Middle Channel / 5MHz / QPSK



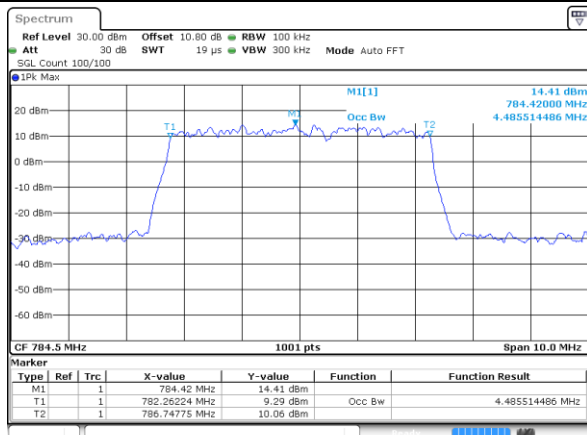
Date: 5 NOV 2019 23:54:43

Middle Channel / 5MHz / 16QAM



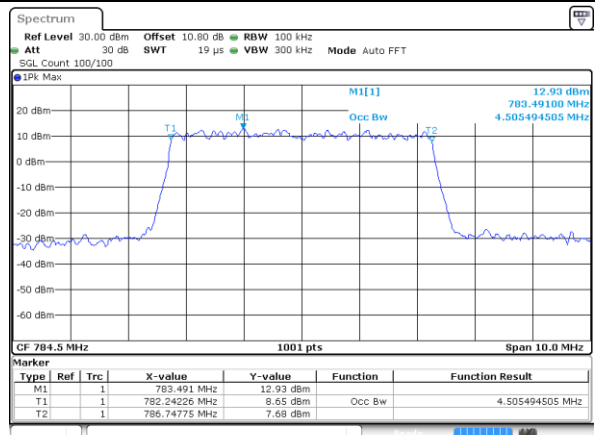
Date: 5 NOV 2019 23:54:32

Highest Channel / 5MHz / QPSK



Date: 5 NOV 2019 23:54:55

Highest Channel / 5MHz / 16QAM

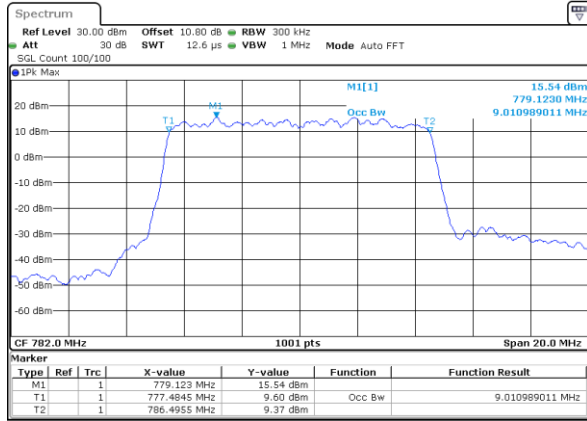


Date: 5 NOV 2019 23:55:07



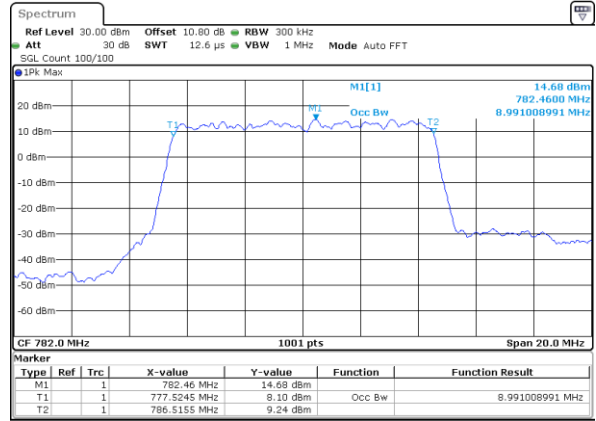
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 6 NOV 2019 00:15:06

Middle Channel / 10MHz / 16QAM

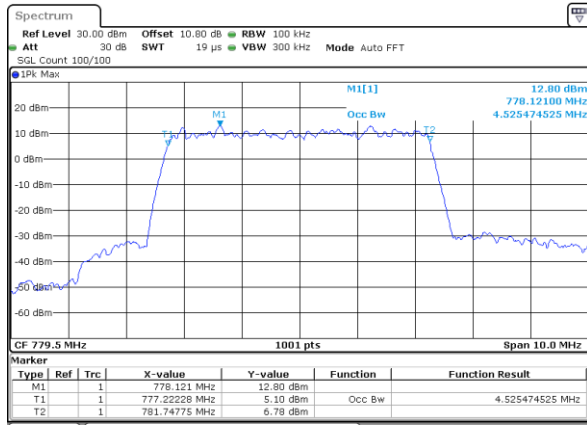


Date: 6 NOV 2019 00:15:18



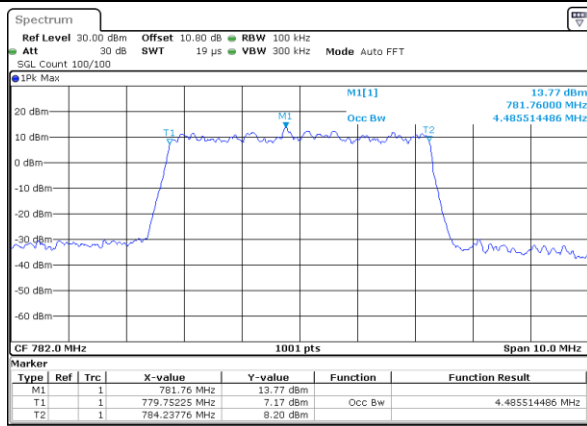
LTE Band 13

Lowest Channel / 5MHz / 64QAM



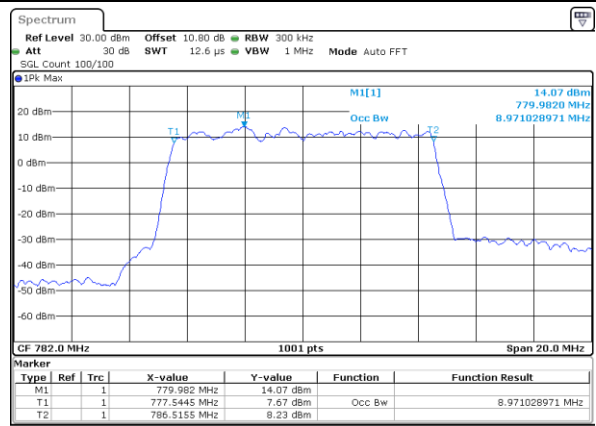
Date: 6 NOV 2019 00:04:19

Middle Channel / 5MHz / 64QAM



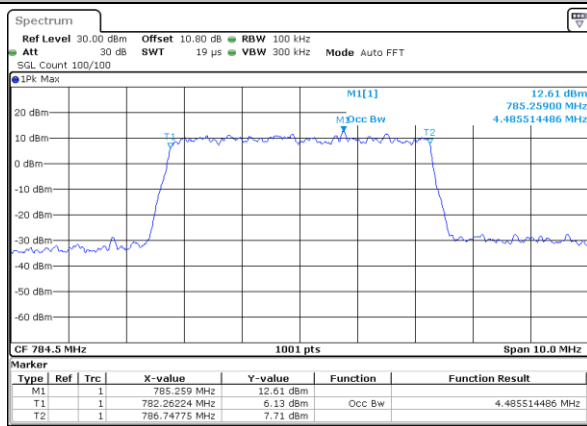
Date: 6 NOV 2019 00:10:12

Middle Channel / 10MHz / 64QAM



Date: 6 NOV 2019 00:27:42

Highest Channel / 5MHz / 64QAM



Date: 6 NOV 2019 00:10:23