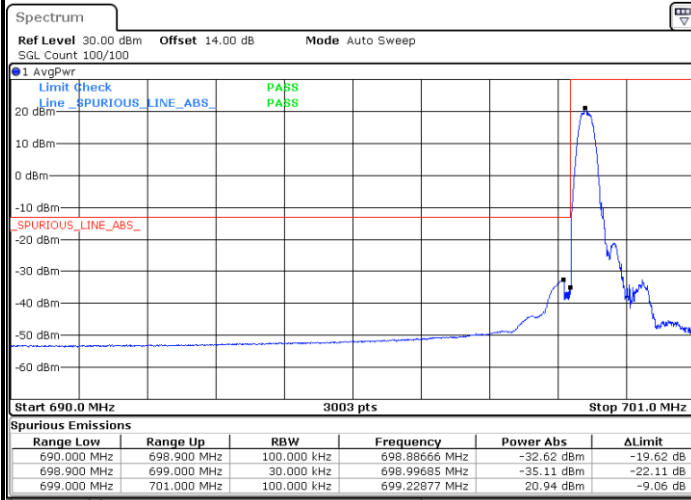




LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



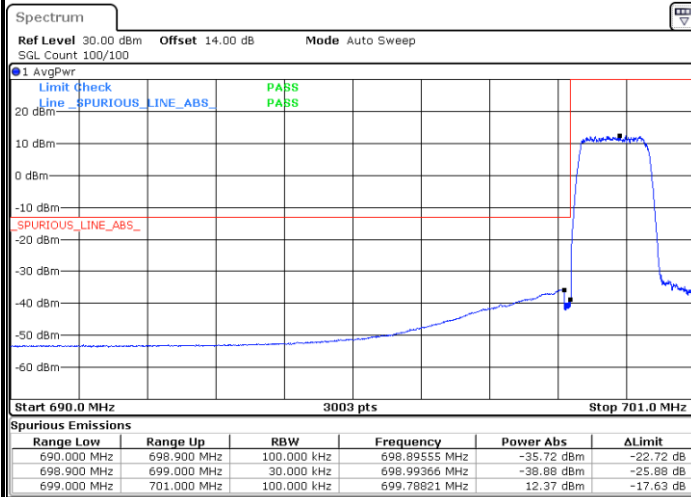
Date: 17.MAR.2020 18:21:56

Highest Band Edge / 1 RB



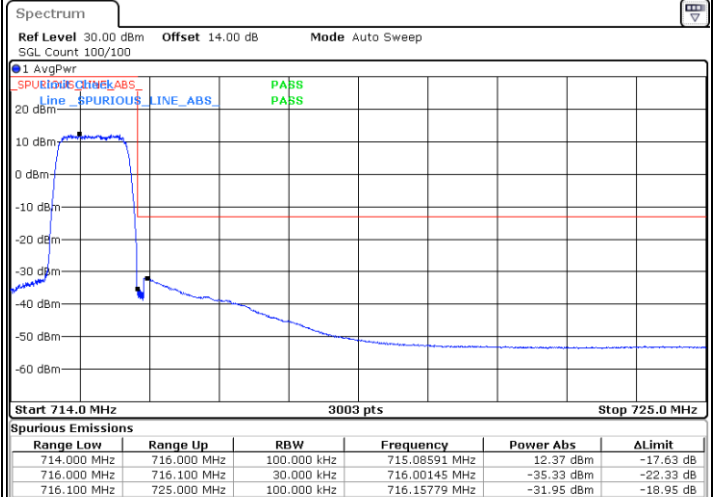
Date: 17.MAR.2020 18:30:06

Lowest Band Edge / Full RB



Date: 17.MAR.2020 18:20:56

Highest Band Edge / Full RB

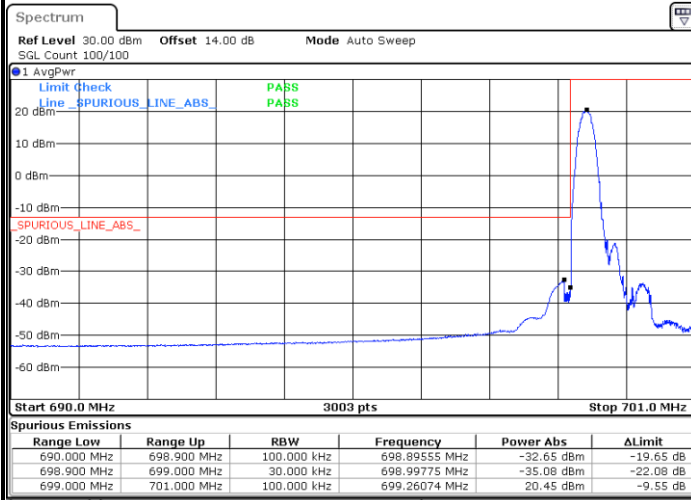


Date: 17.MAR.2020 18:29:06



LTE Band 12 / 1.4MHz / 64QAM

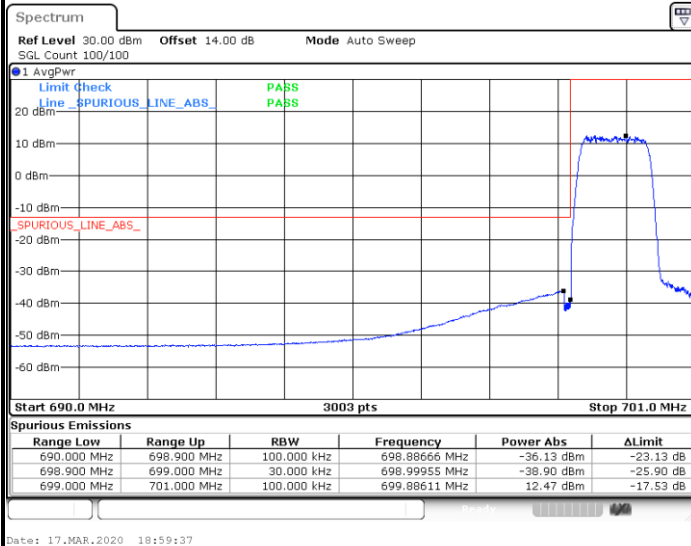
Lowest Band Edge / 1 RB



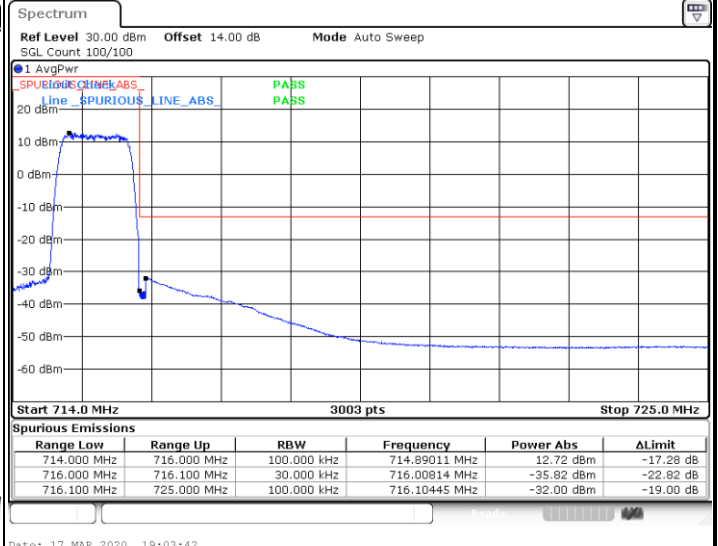
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



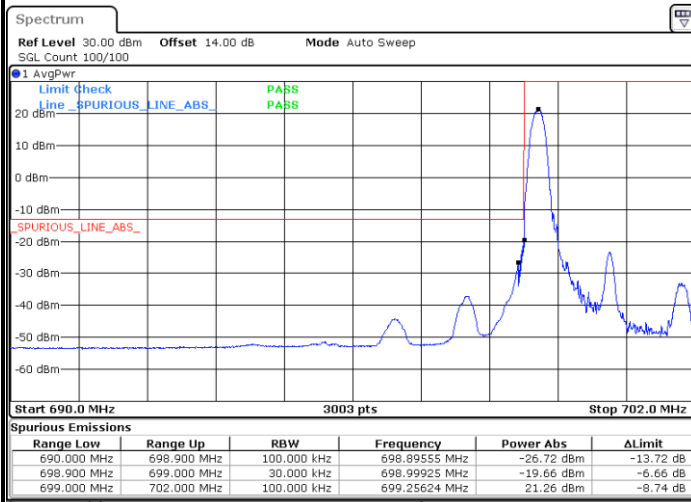
Highest Band Edge / Full RB



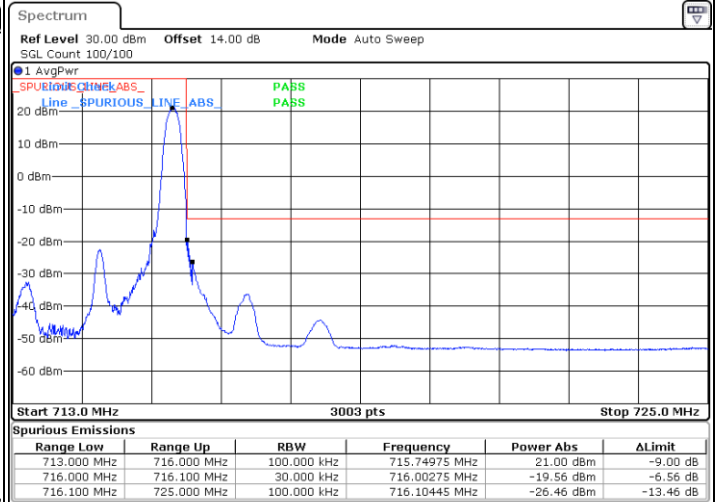


LTE Band 12 / 3MHz / QPSK

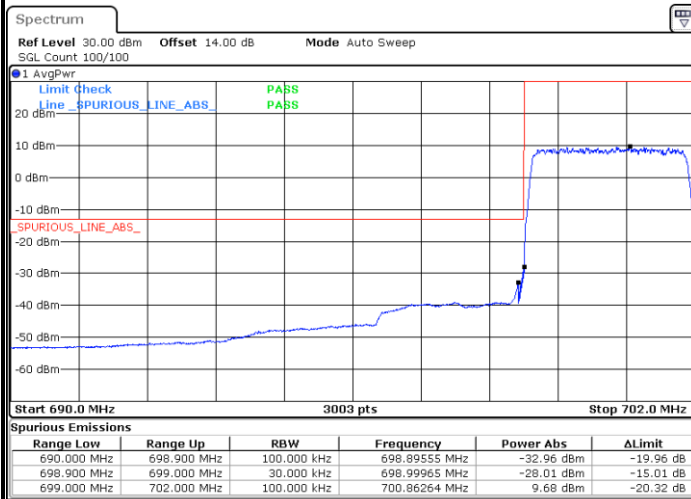
Lowest Band Edge / 1RB



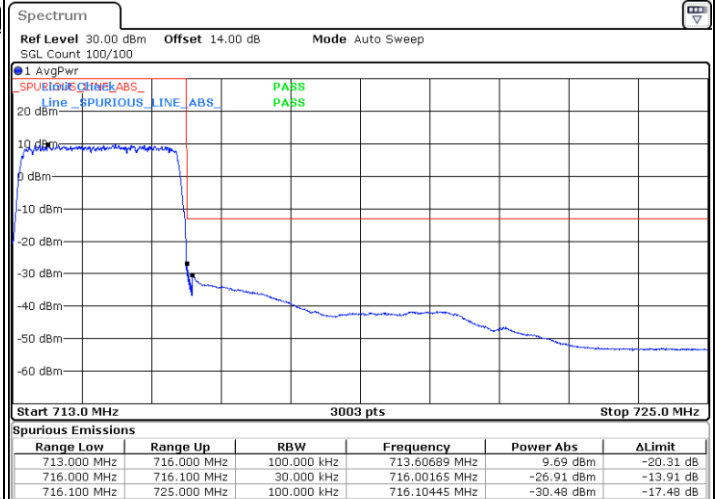
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



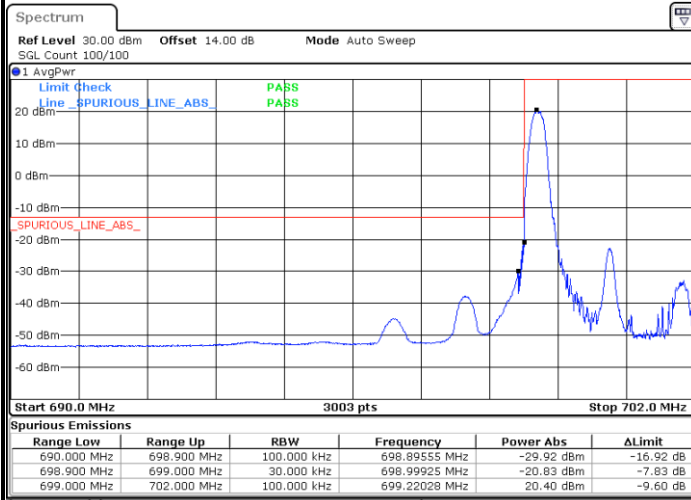
Highest Band Edge / Full RB



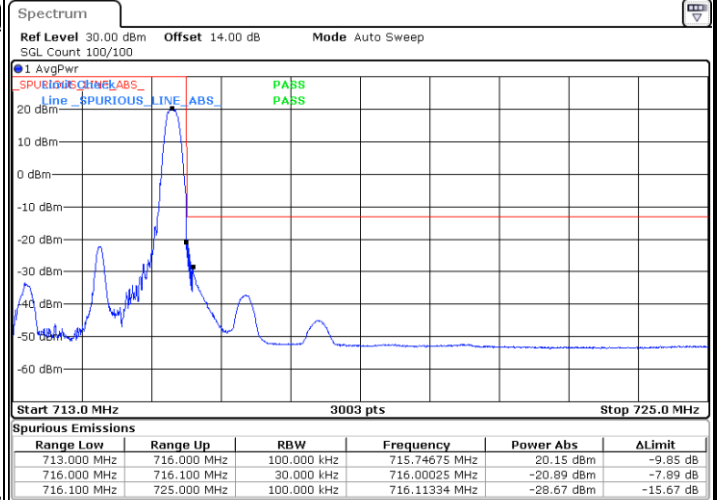


LTE Band 12 / 3MHz / 16QAM

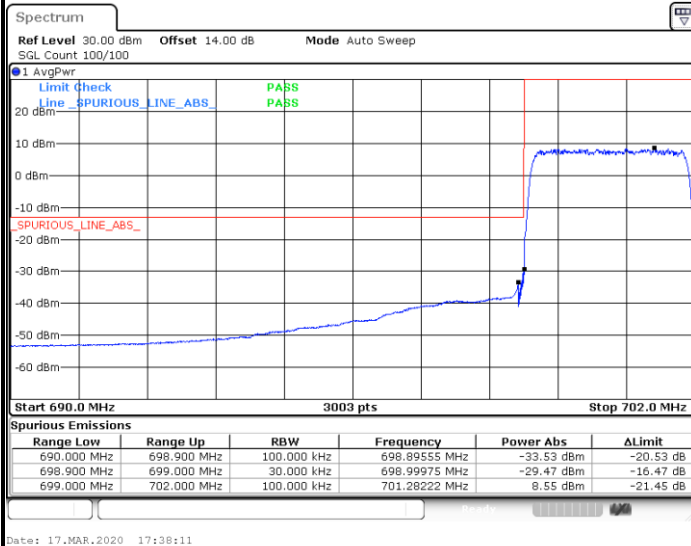
Lowest Band Edge / 1 RB



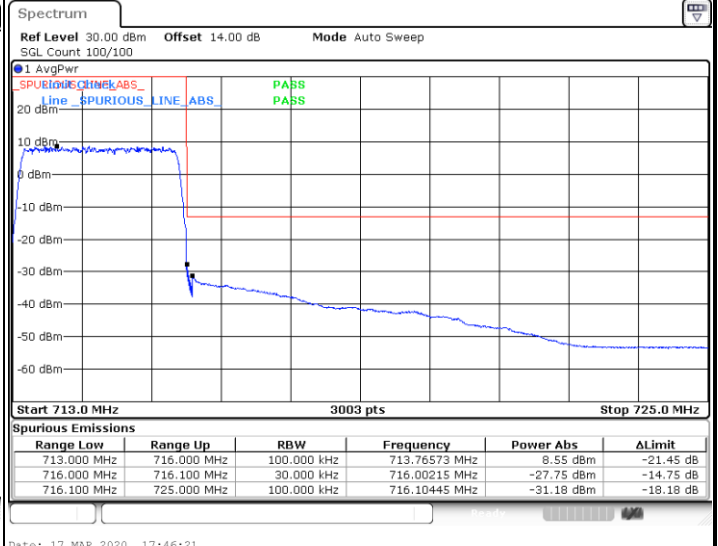
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



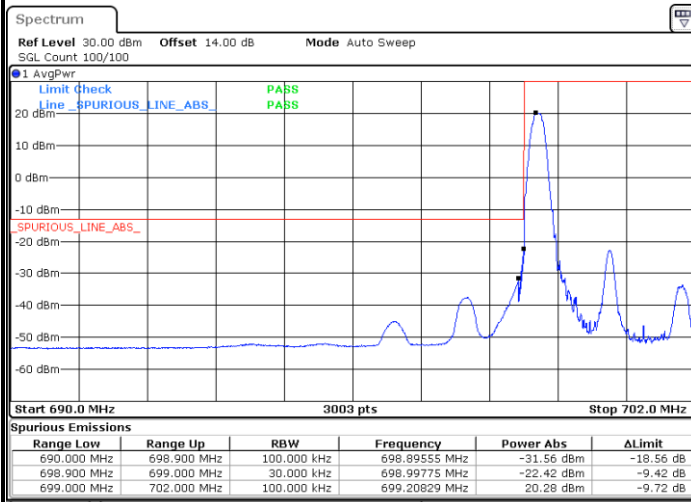
Highest Band Edge / Full RB



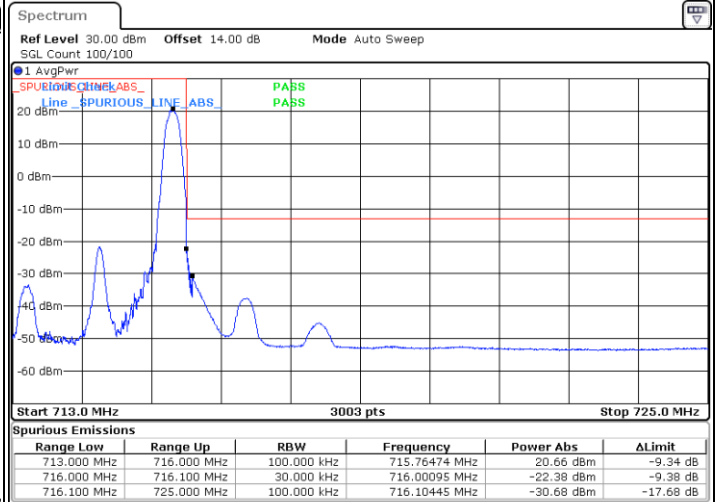


LTE Band 12 / 3MHz / 64QAM

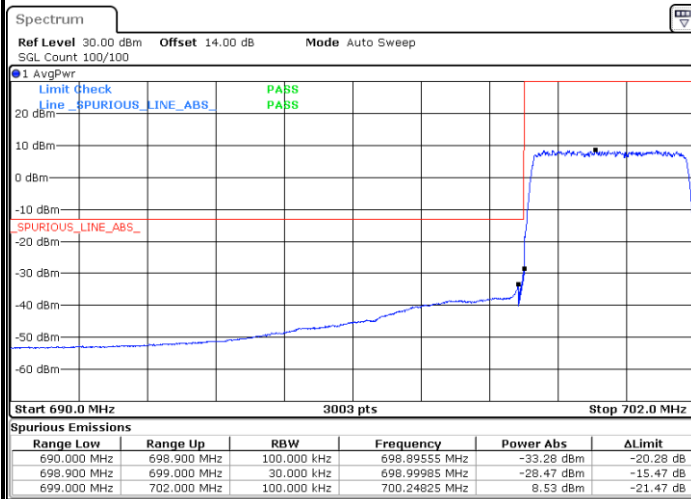
Lowest Band Edge / 1 RB



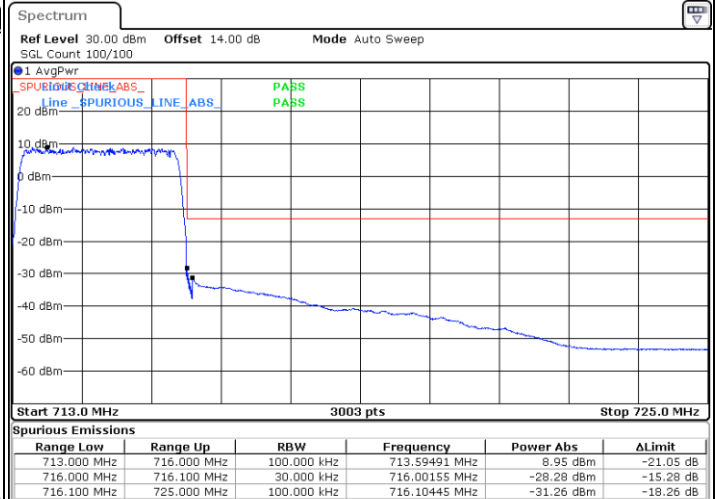
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



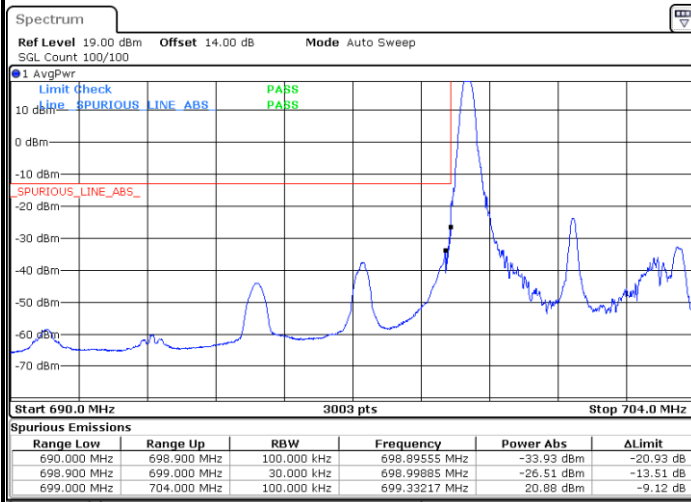
Highest Band Edge / Full RB



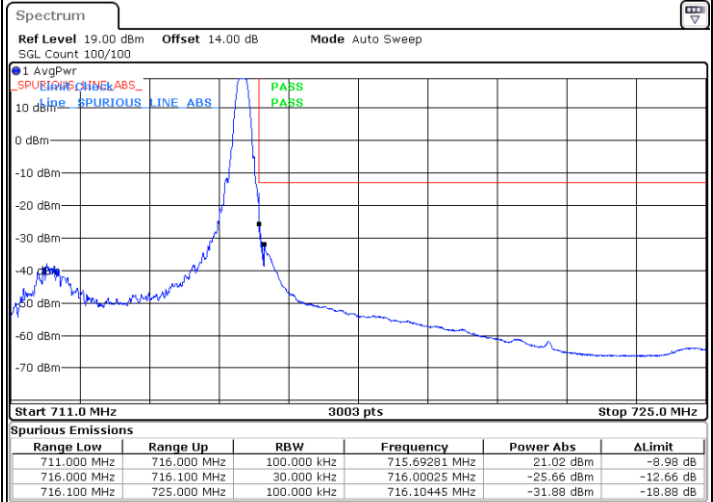


LTE Band 12 / 5MHz / QPSK

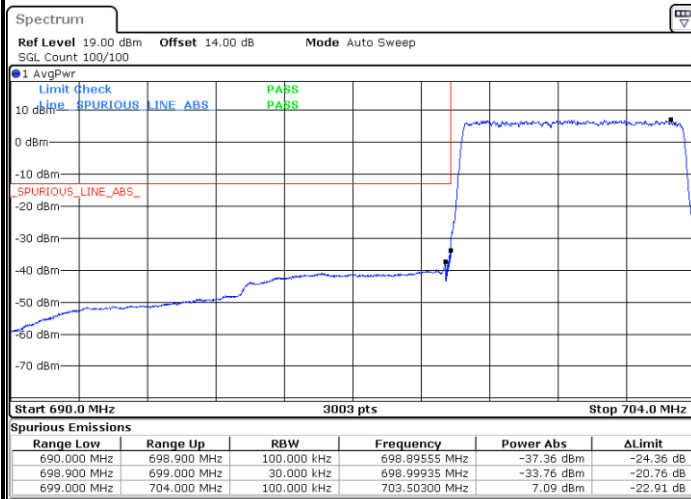
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



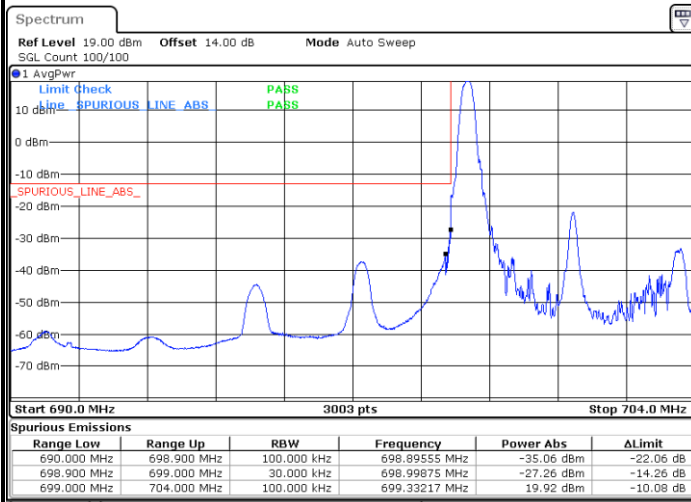
Highest Band Edge / Full RB



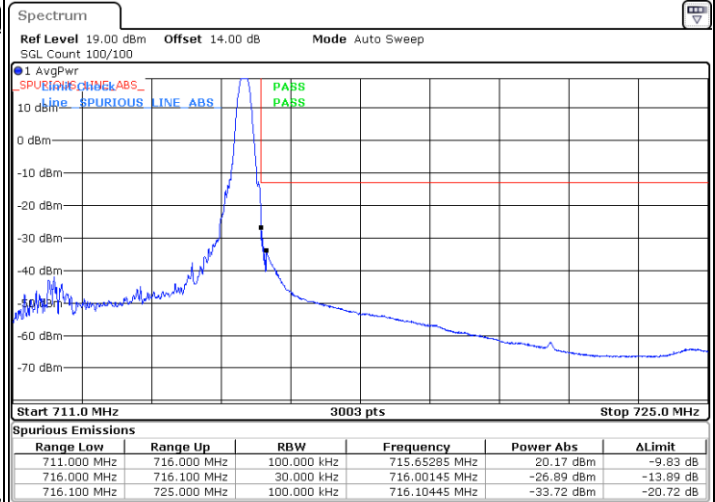


LTE Band 12 / 5MHz / 16QAM

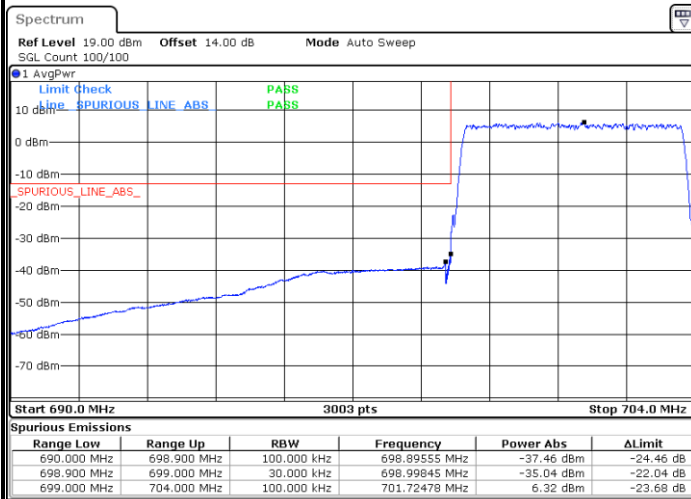
Lowest Band Edge / 1RB



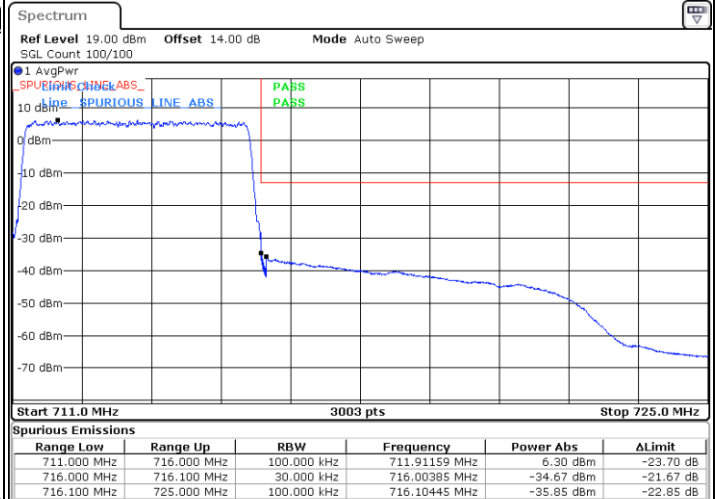
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



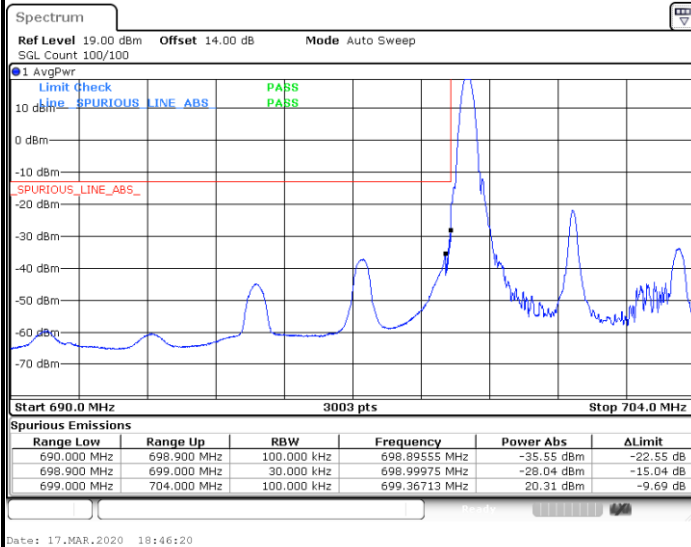
Highest Band Edge / Full RB



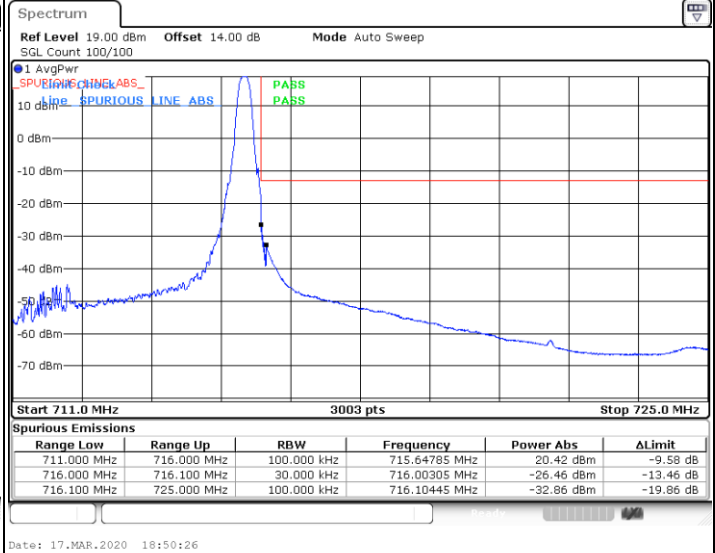


LTE Band 12 / 5MHz / 64QAM

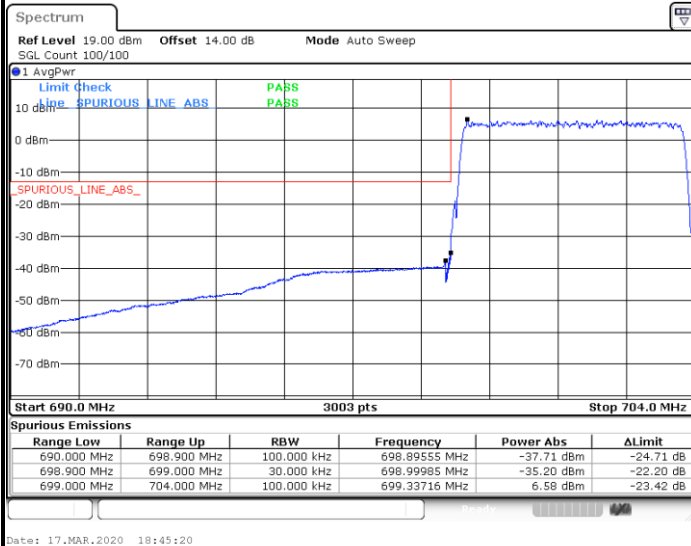
Lowest Band Edge / 1RB



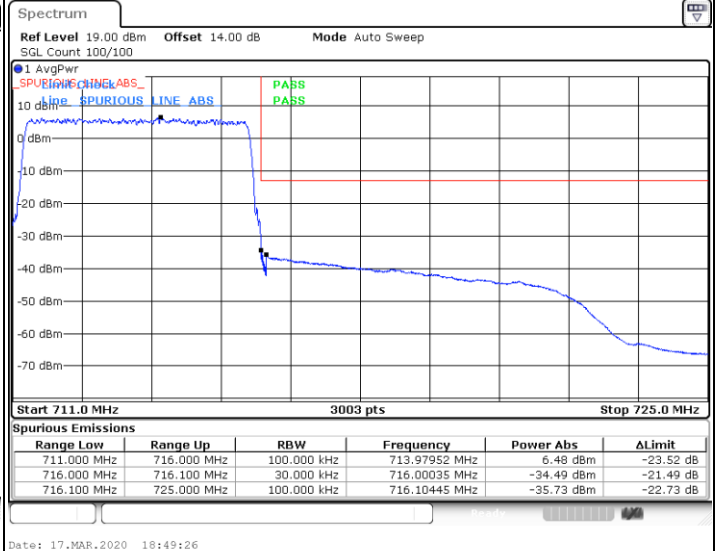
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



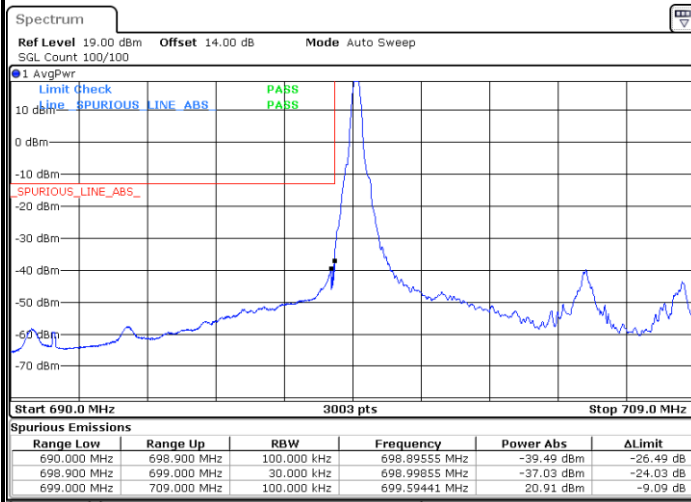
Highest Band Edge / Full RB



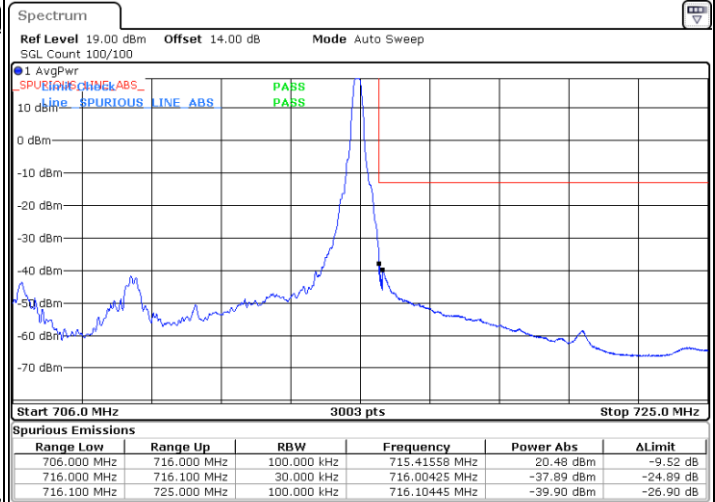


LTE Band 12 / 10MHz / QPSK

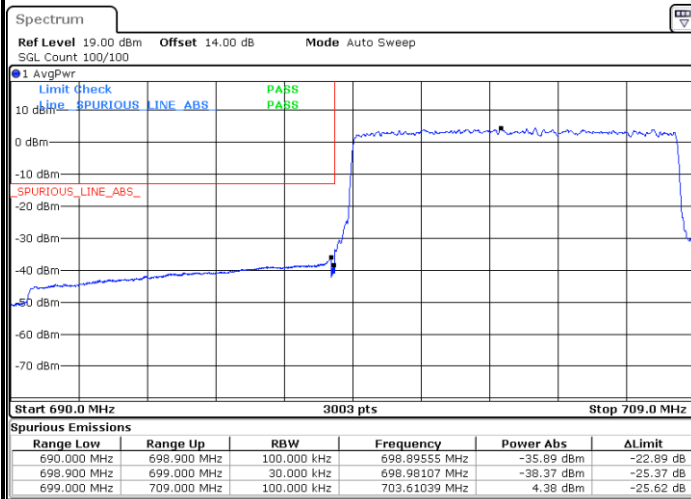
Lowest Band Edge / 1 RB



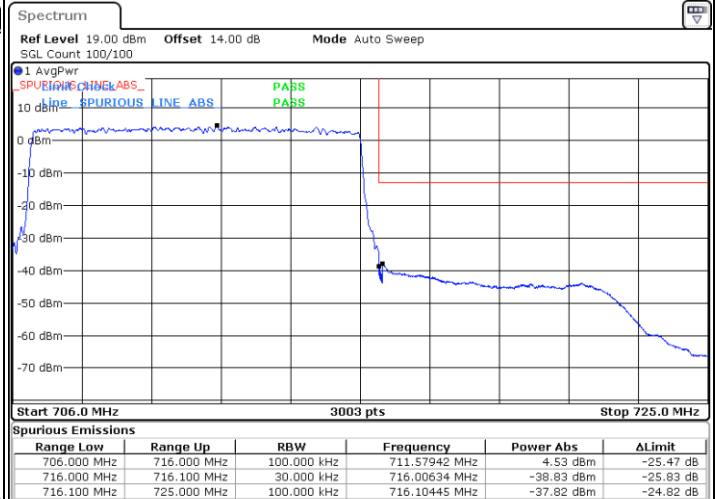
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



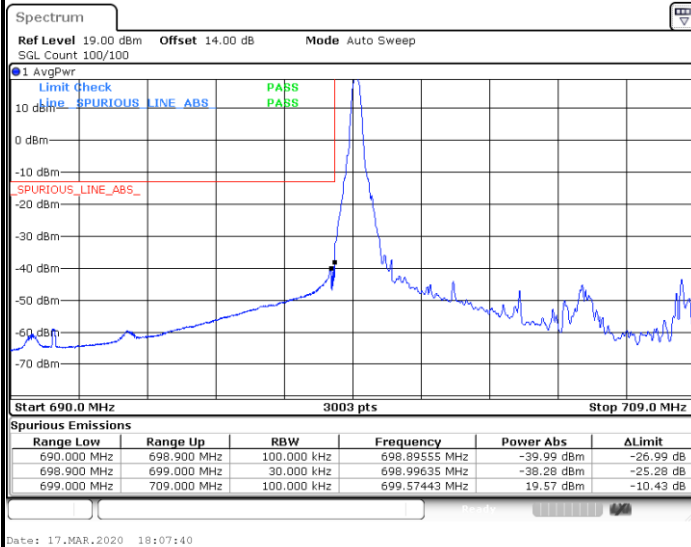
Highest Band Edge / Full RB



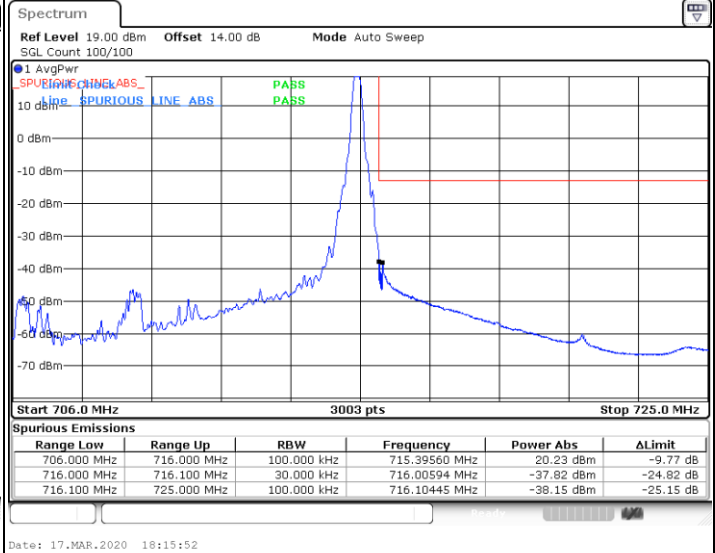


LTE Band 12 / 10MHz / 16QAM

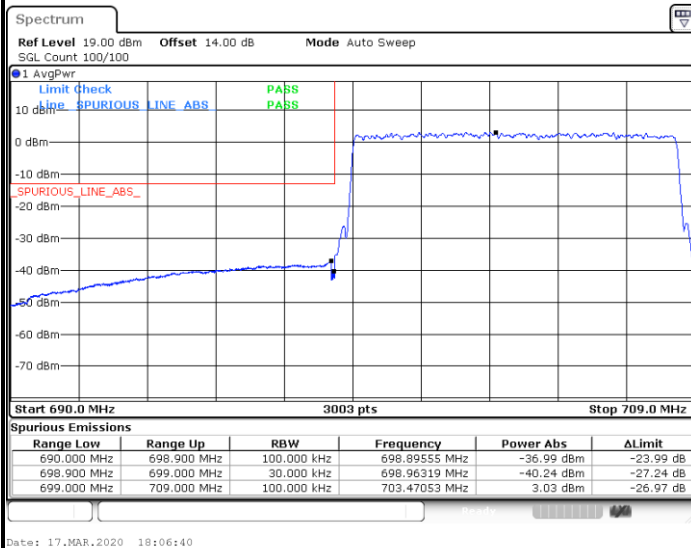
Lowest Band Edge / 1 RB



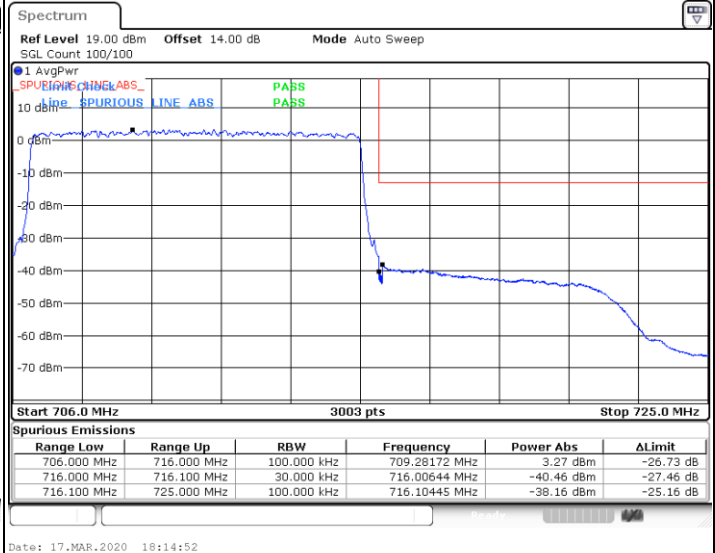
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



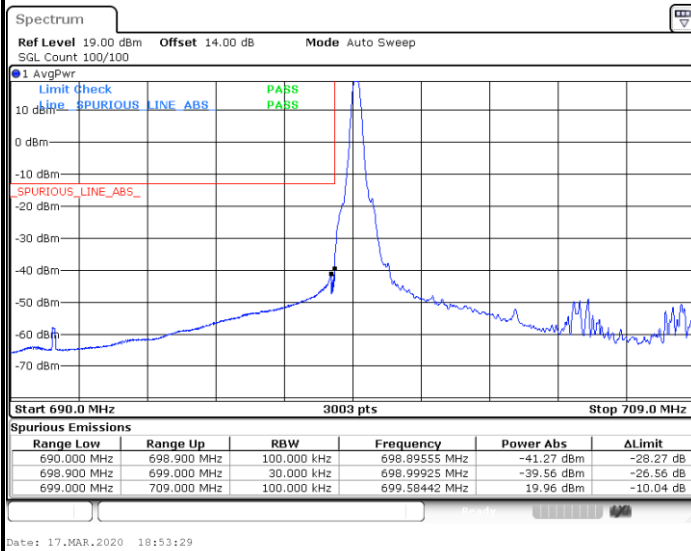
Highest Band Edge / Full RB



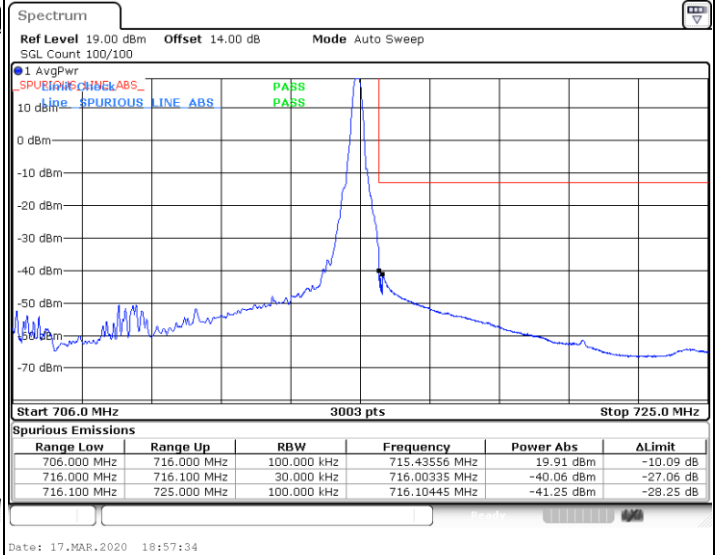


LTE Band 12 / 10MHz / 64QAM

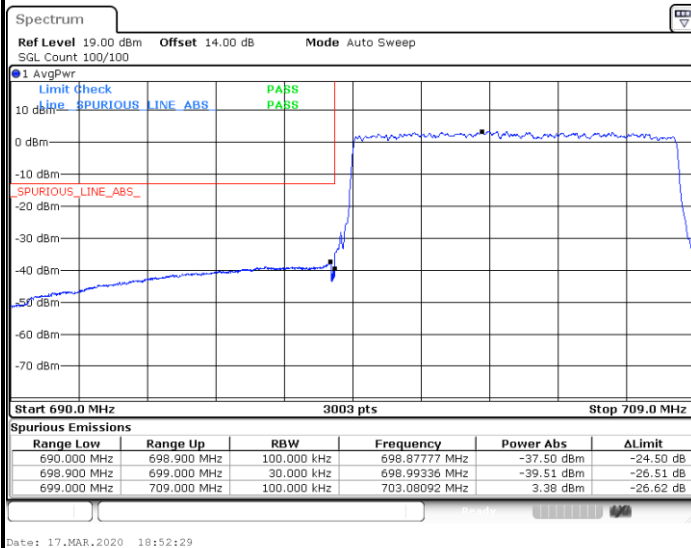
Lowest Band Edge / 1 RB



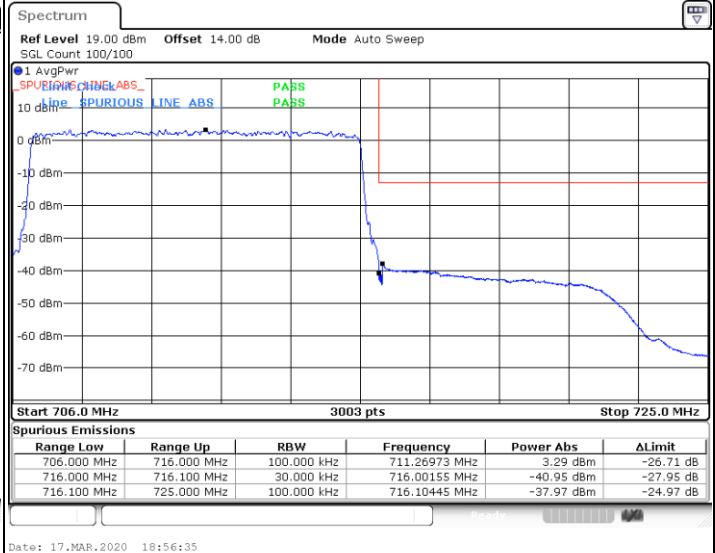
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

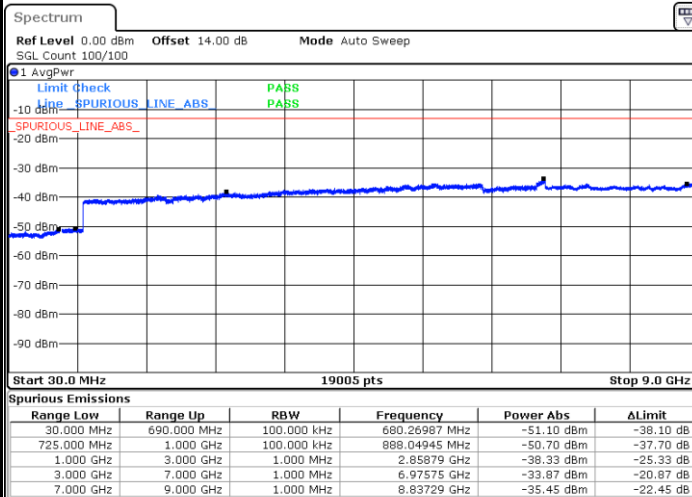




Conducted Spurious Emission

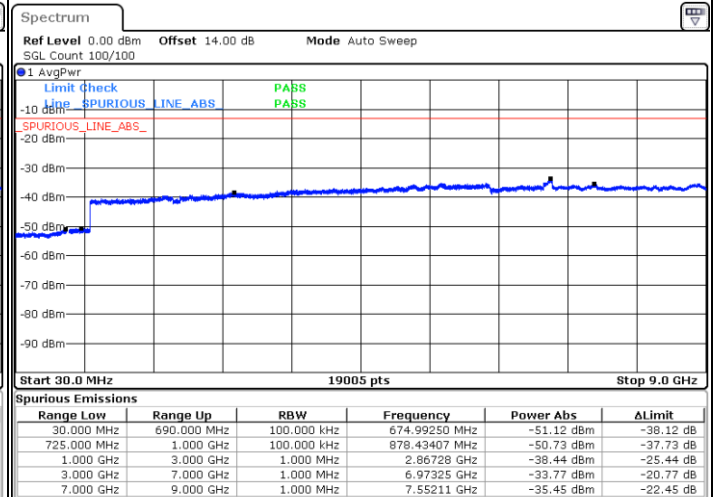
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



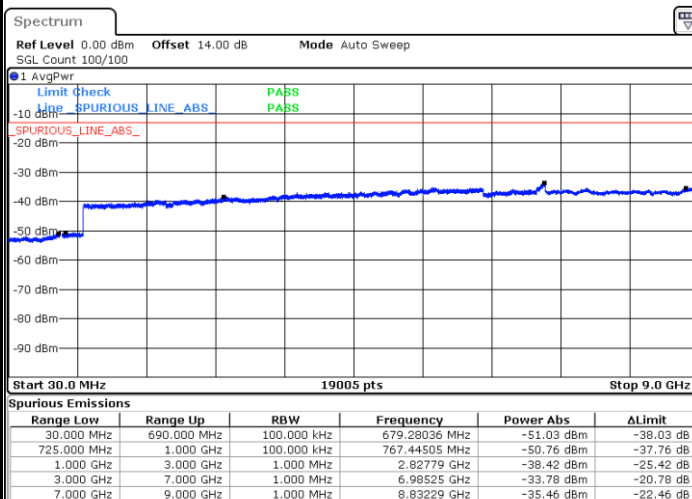
Date: 17.MAR.2020 18:23:37

Lowest Channel / 16QAM



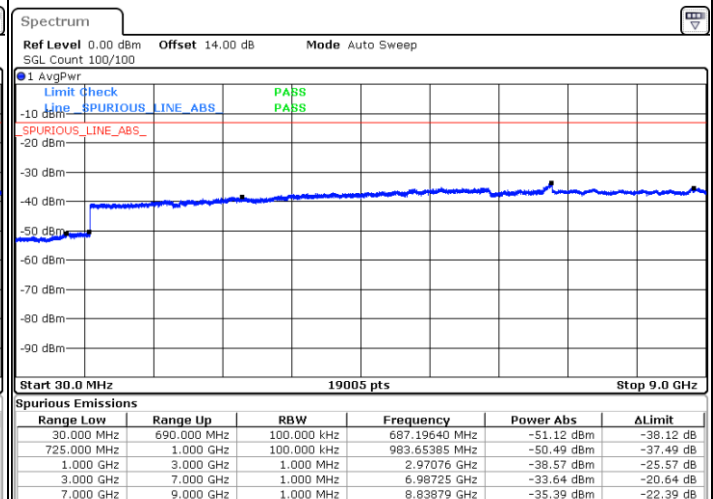
Date: 17.MAR.2020 18:24:17

Middle Channel / QPSK



Date: 17.MAR.2020 18:26:23

Middle Channel / 16QAM

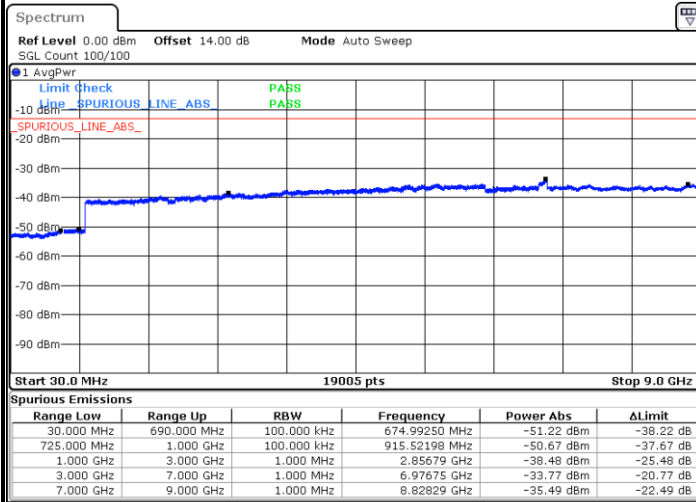


Date: 17.MAR.2020 18:25:42



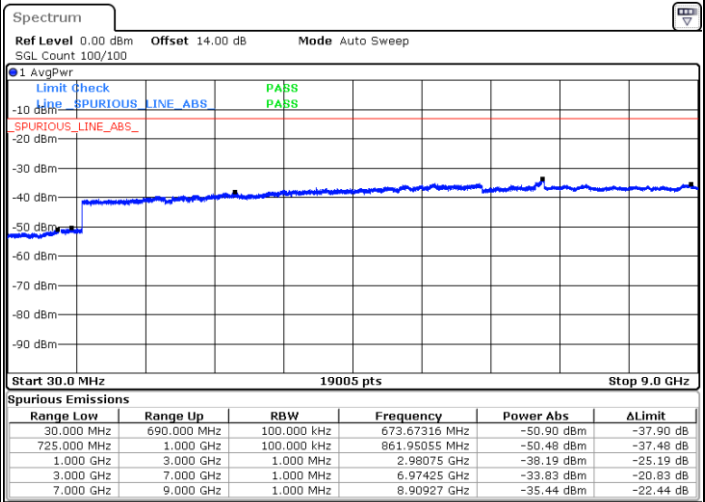
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 17.MAR.2020 18:31:48

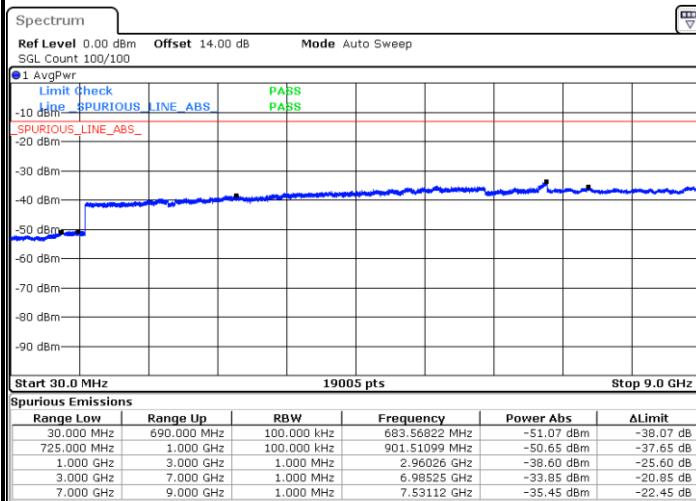
Highest Channel / 16QAM



Date: 17.MAR.2020 18:32:28

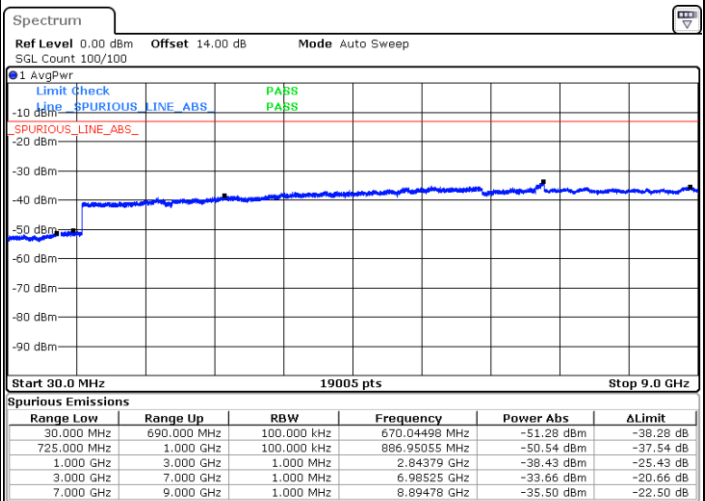
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 17.MAR.2020 17:40:52

Lowest Channel / 16QAM

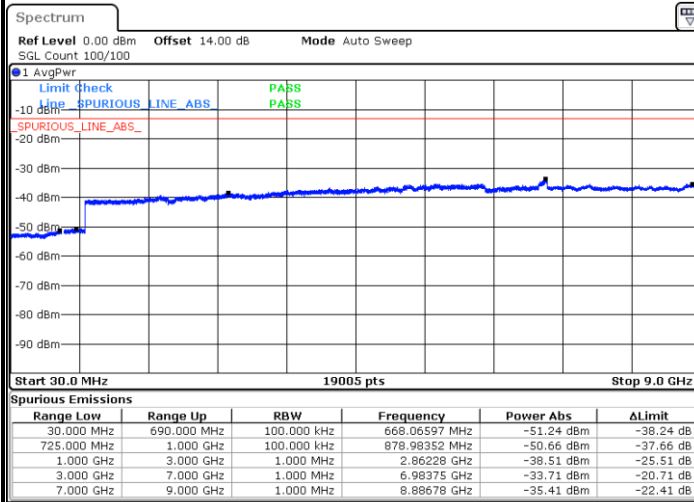


Date: 17.MAR.2020 17:41:32



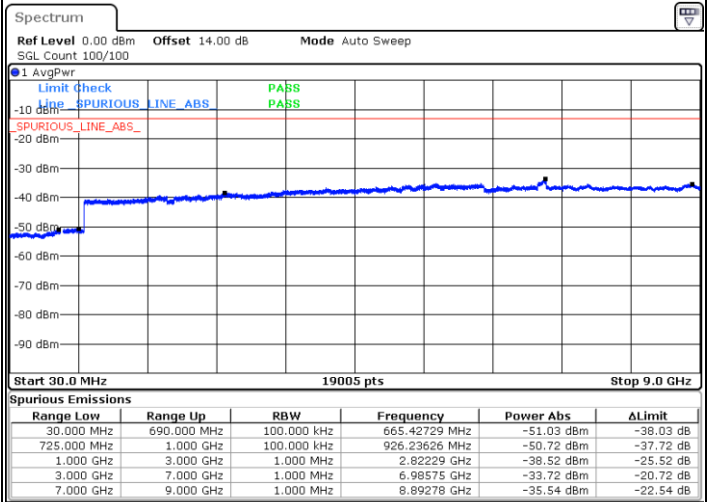
LTE Band 12 / 3MHz

Middle Channel / QPSK



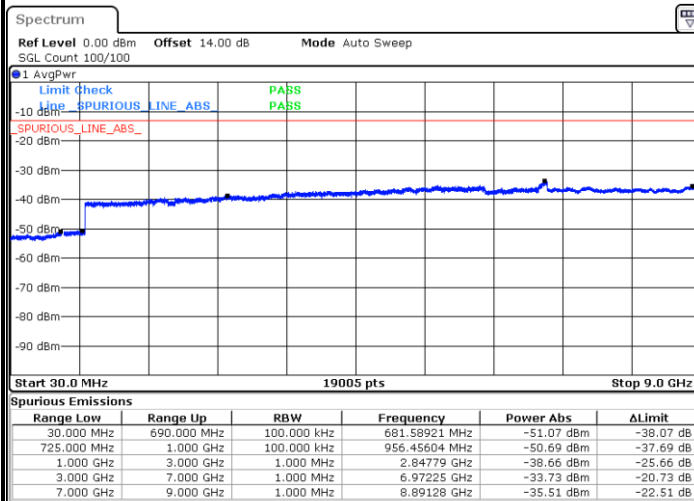
Date: 17.MAR.2020 17:43:37

Middle Channel / 16QAM



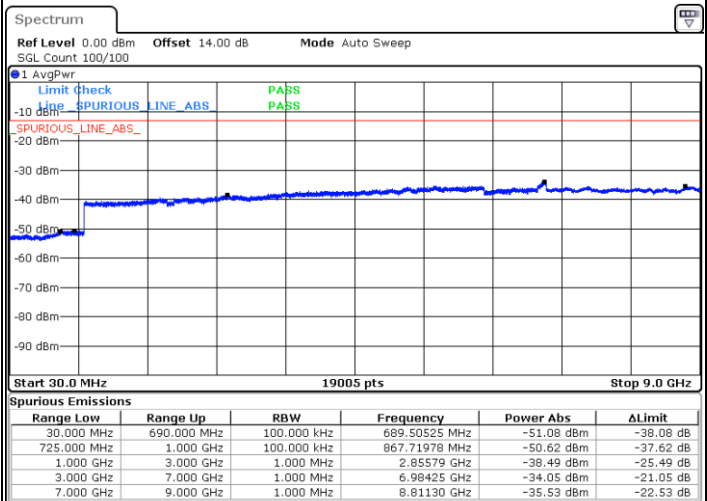
Date: 17.MAR.2020 17:42:57

Highest Channel / QPSK



Date: 17.MAR.2020 17:49:02

Highest Channel / 16QAM

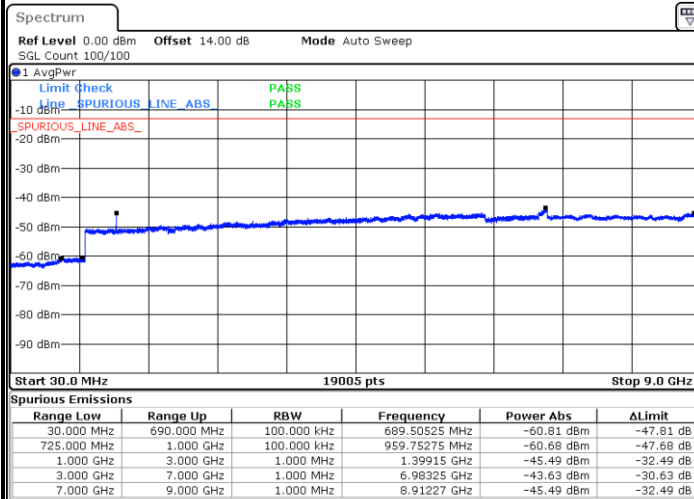


Date: 17.MAR.2020 17:49:43



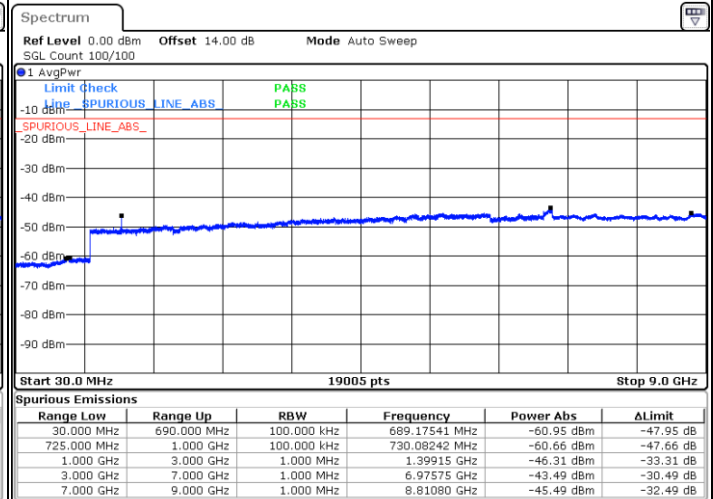
LTE Band 12 / 5MHz

Lowest Channel / QPSK



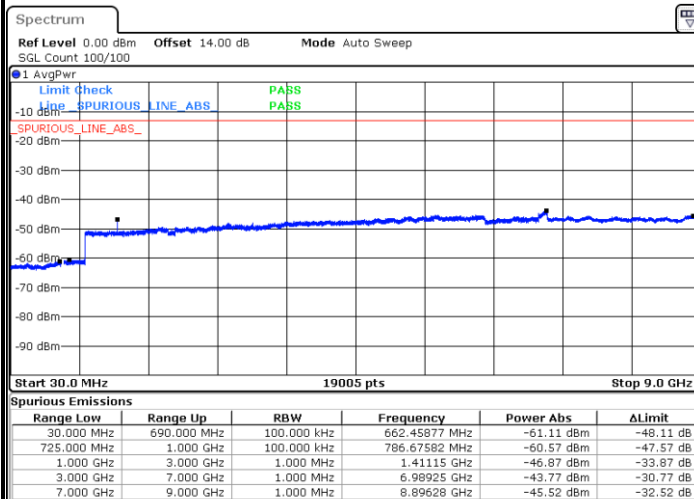
Date: 17.MAR.2020 17:55:07

Lowest Channel / 16QAM



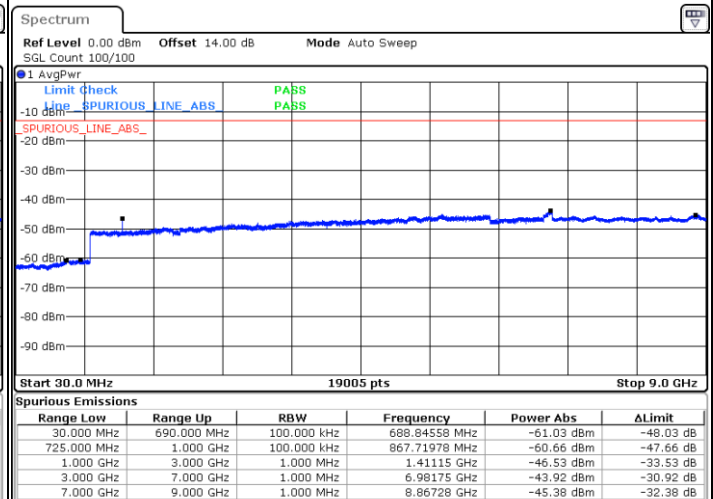
Date: 17.MAR.2020 17:55:48

Middle Channel / QPSK



Date: 17.MAR.2020 17:57:53

Middle Channel / 16QAM

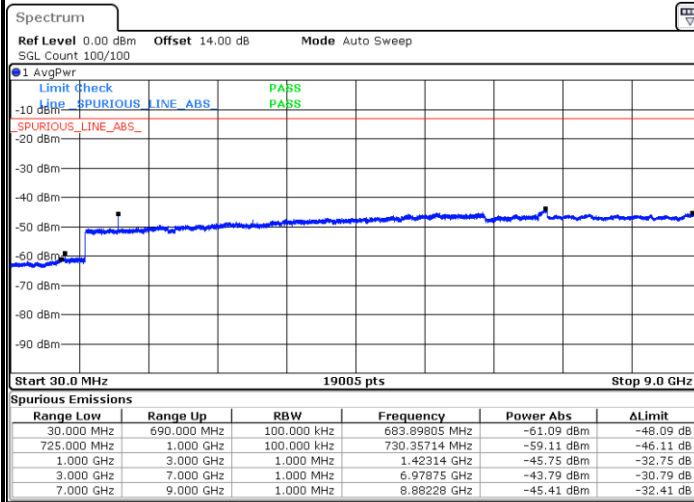


Date: 17.MAR.2020 17:57:12



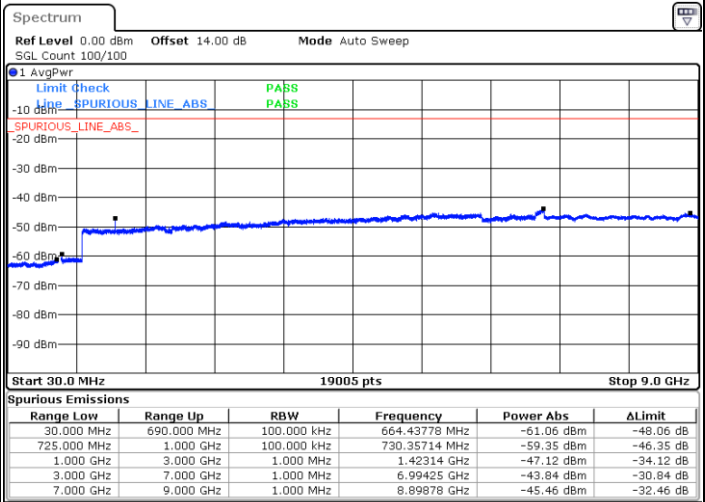
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 17.MAR.2020 18:03:57

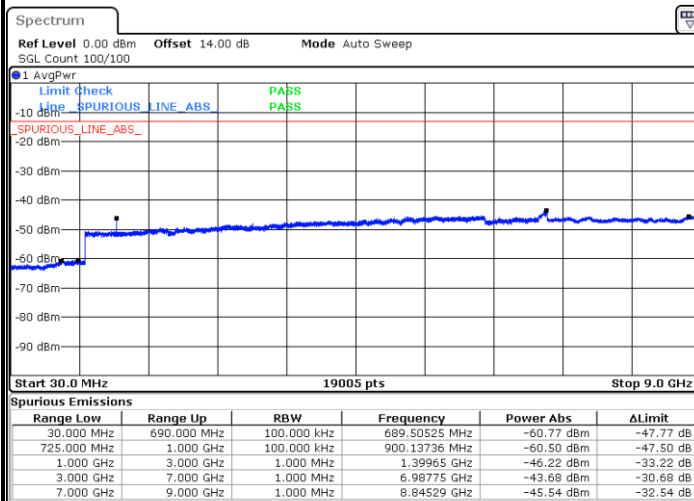
Highest Channel / 16QAM



Date: 17.MAR.2020 18:03:17

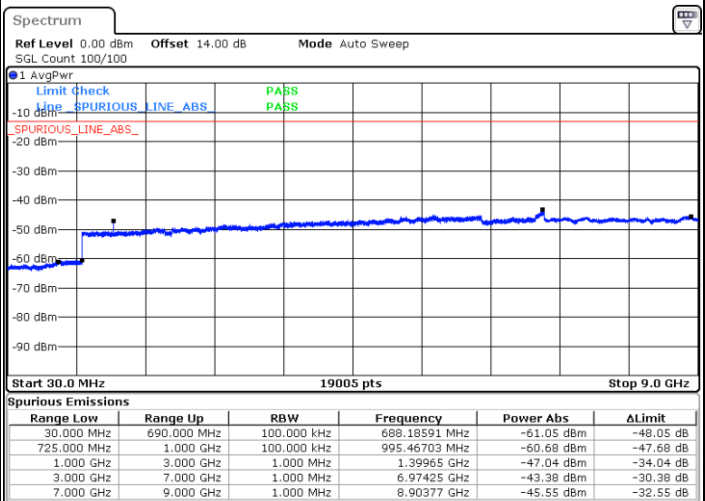
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 17.MAR.2020 18:09:21

Lowest Channel / 16QAM

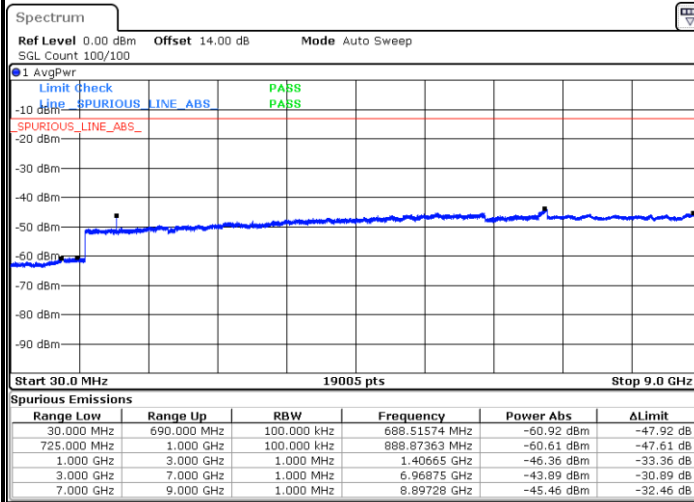


Date: 17.MAR.2020 18:10:03



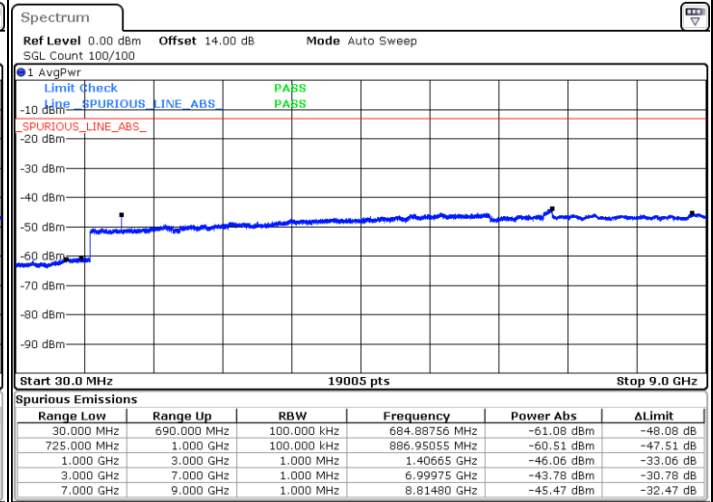
LTE Band 12 / 10MHz

Middle Channel / QPSK



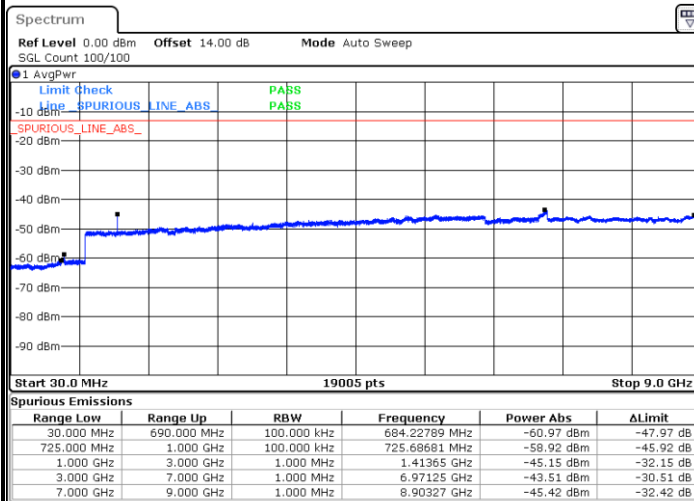
Date: 17.MAR.2020 18:12:08

Middle Channel / 16QAM



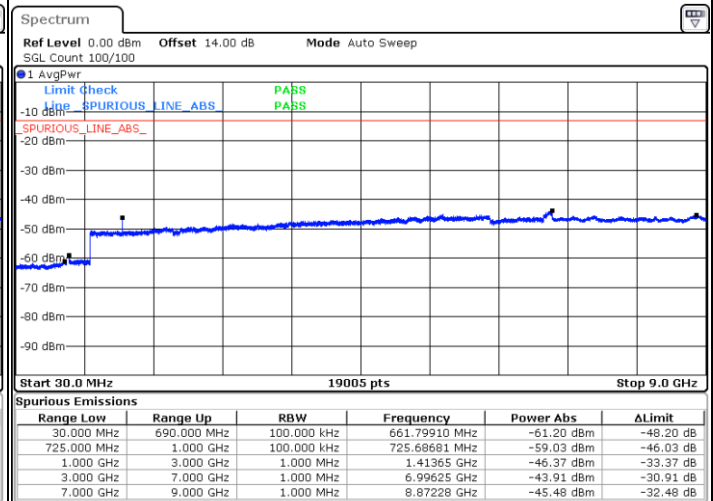
Date: 17.MAR.2020 18:11:28

Highest Channel / QPSK



Date: 17.MAR.2020 18:17:33

Highest Channel / 16QAM

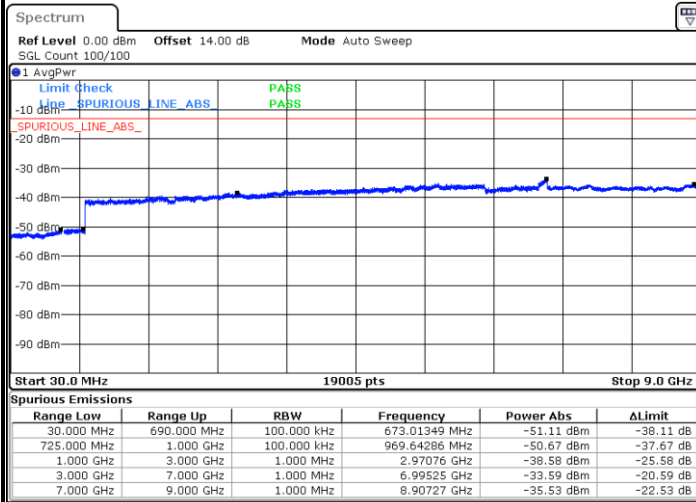


Date: 17.MAR.2020 18:18:13



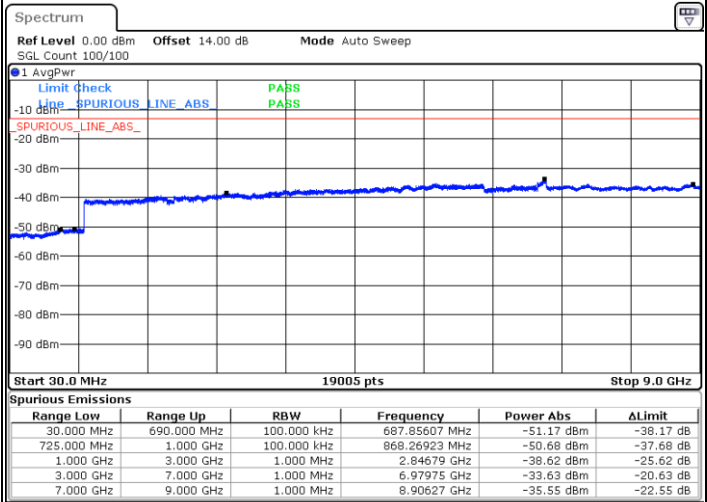
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



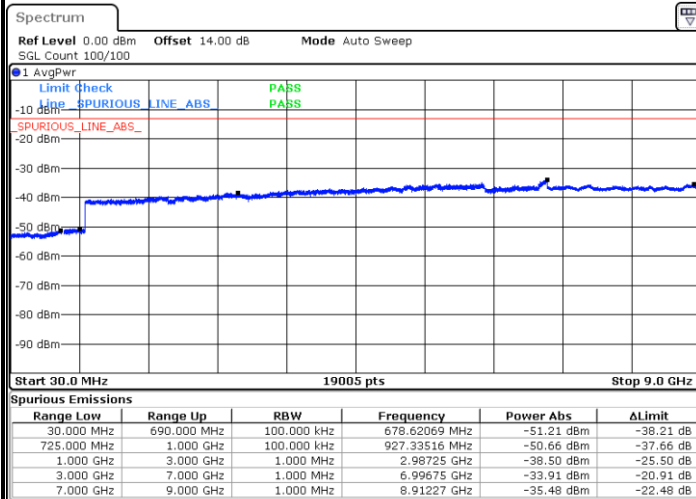
Date: 17.MAR.2020 19:01:18

Middle Channel / 64QAM



Date: 17.MAR.2020 19:02:20

Highest Channel / 64QAM

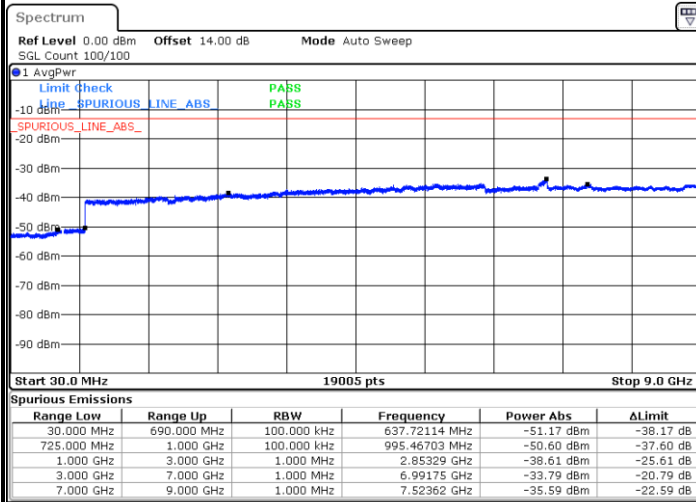


Date: 17.MAR.2020 19:05:22



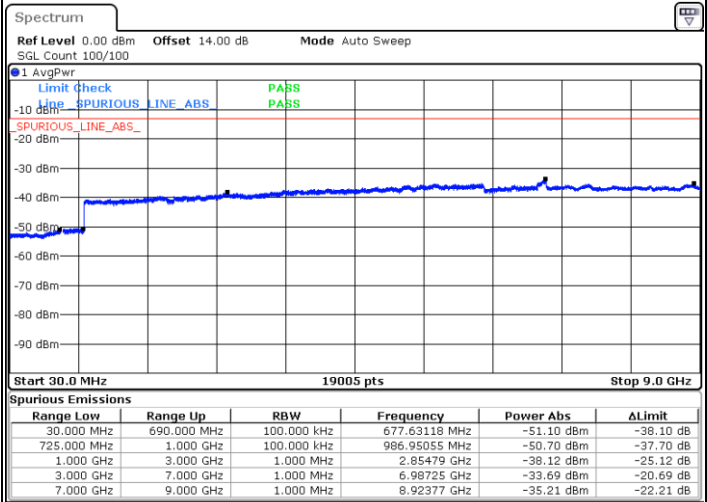
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



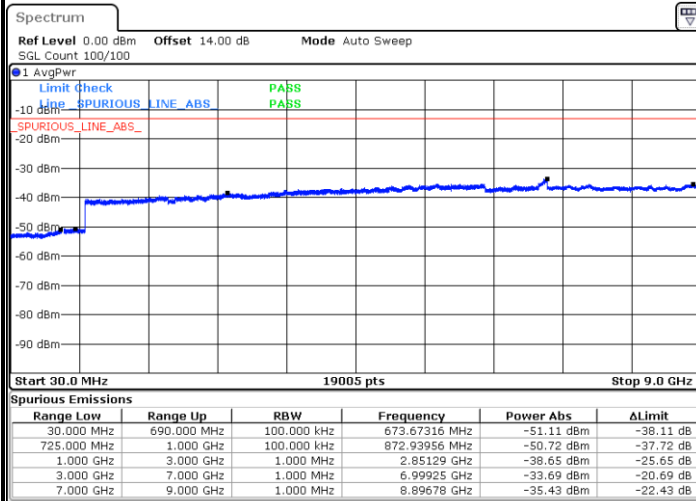
Date: 17.MAR.2020 18:39:53

Middle Channel / 64QAM



Date: 17.MAR.2020 18:40:56

Highest Channel / 64QAM

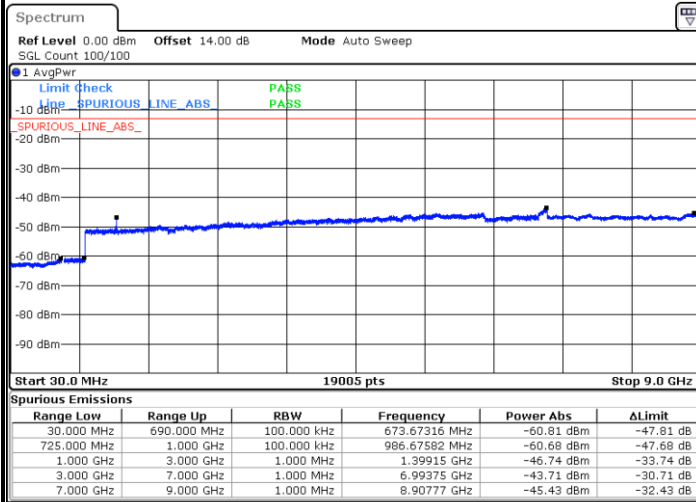


Date: 17.MAR.2020 18:43:59



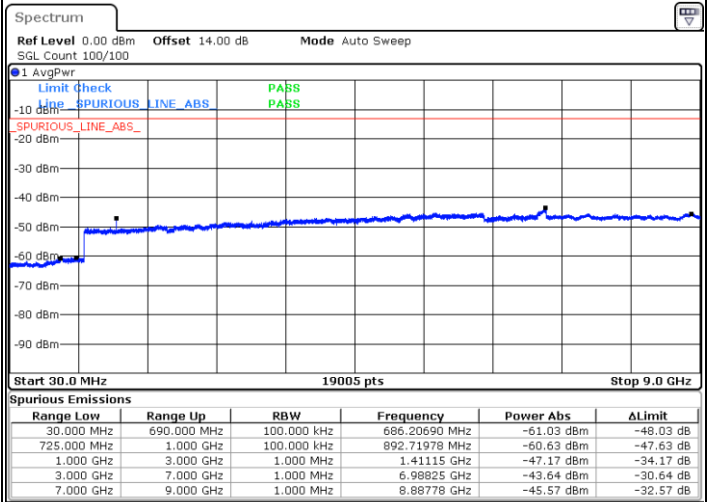
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



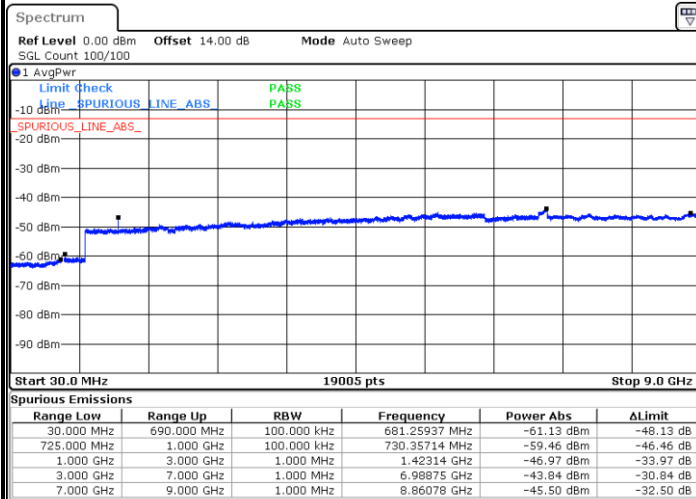
Date: 17.MAR.2020 18:47:02

Middle Channel / 64QAM



Date: 17.MAR.2020 18:48:05

Highest Channel / 64QAM

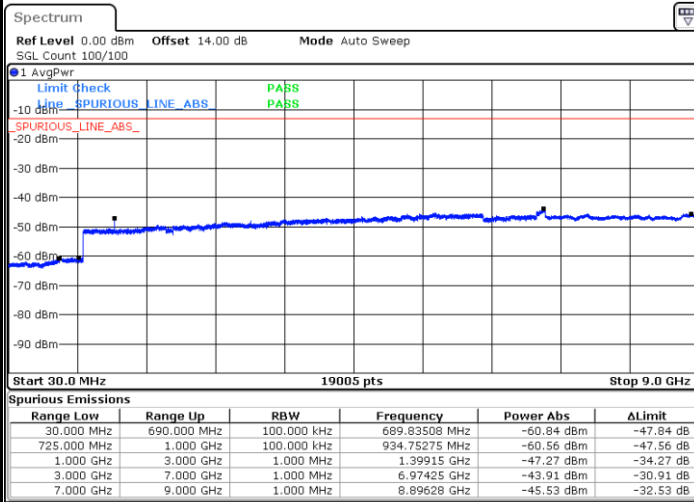


Date: 17.MAR.2020 18:51:07



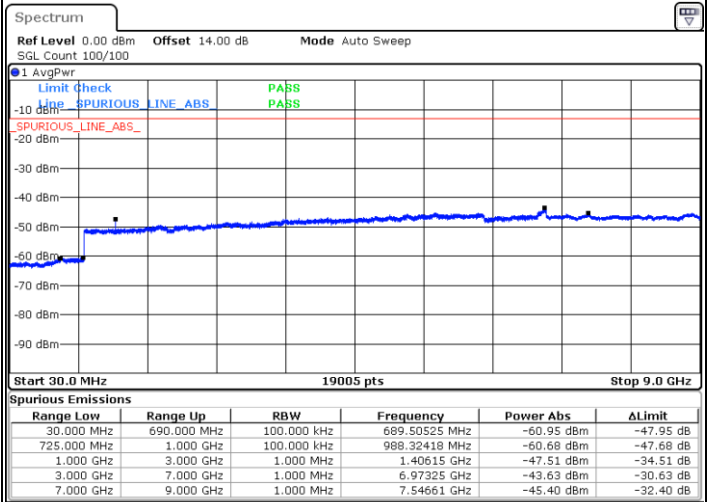
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



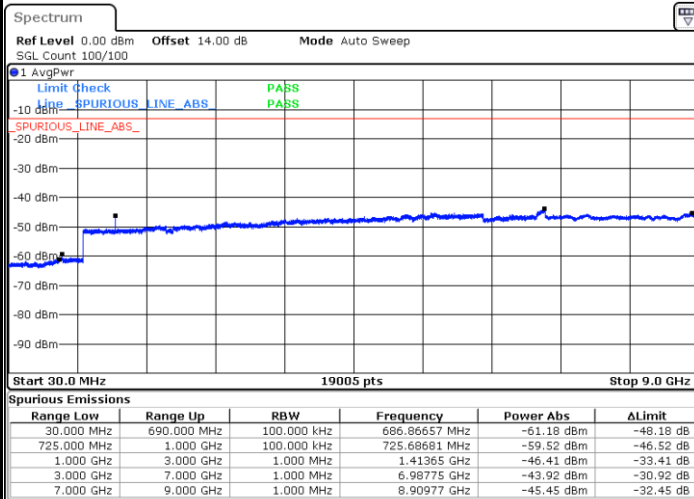
Date: 17.MAR.2020 18:54:10

Middle Channel / 64QAM



Date: 17.MAR.2020 18:55:13

Highest Channel / 64QAM



Date: 17.MAR.2020 18:58:16

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	0.0013	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0011	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.135 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

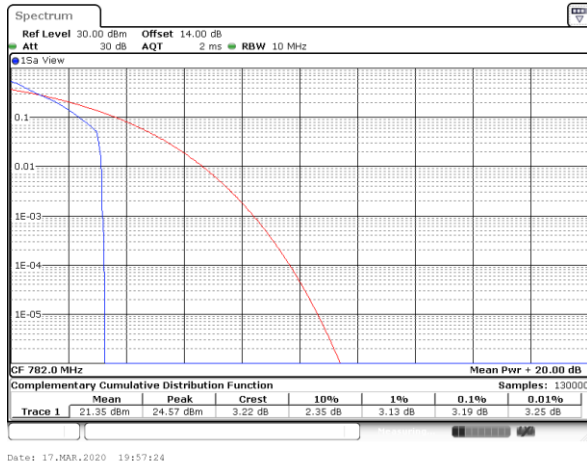
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.19	4.78	4.49	5.62	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	4.58	5.74	-	-	
Highest CH	-	-	-	-	

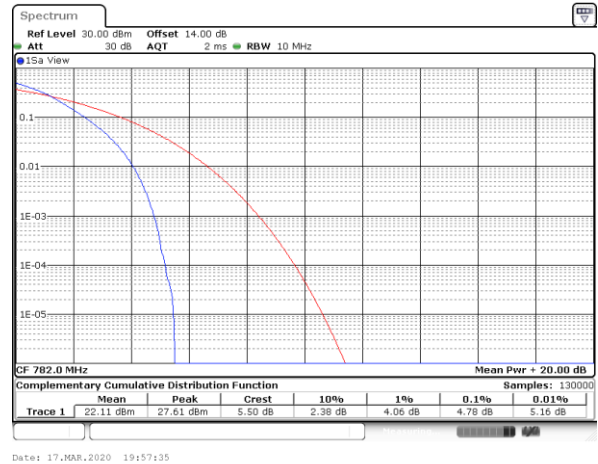


LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB

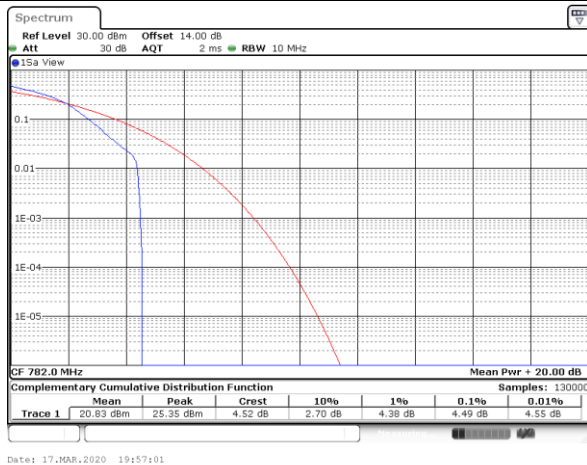


Middle Channel / Full RB

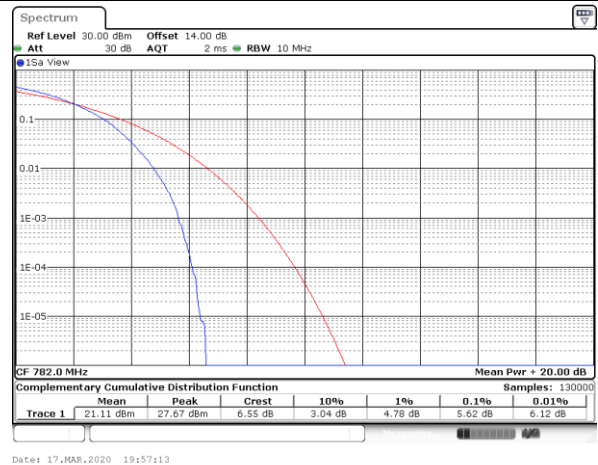


LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB

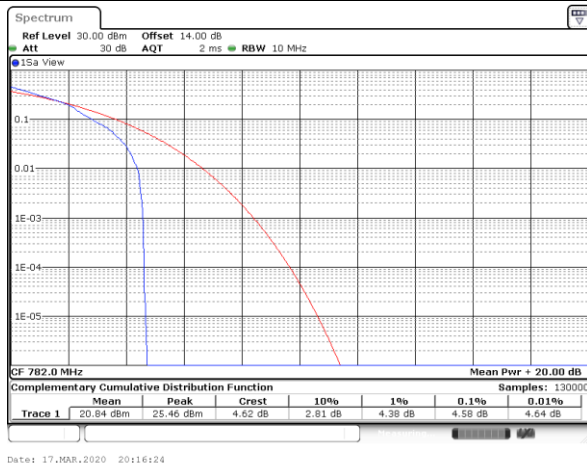


Middle Channel / Full RB

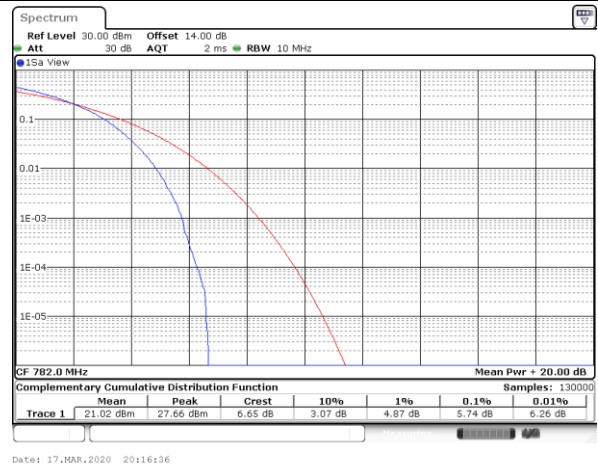


LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Middle Channel / Full RB



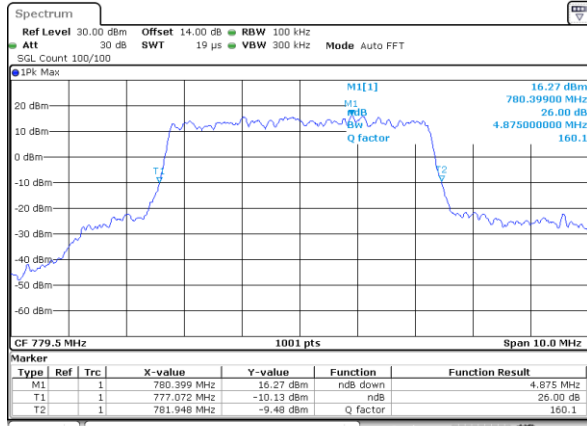
**26dB Bandwidth**

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	4.87	-	-	-	-	-	-
Middle CH	-	-	-	-	4.83	4.93	9.73	9.89	-	-	-	-
Highest CH	-	-	-	-	4.99	4.88	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.80	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.88	-	9.75	-	-	-	-	-
Highest CH	-	-	-	-	4.97	-	-	-	-	-	-	-



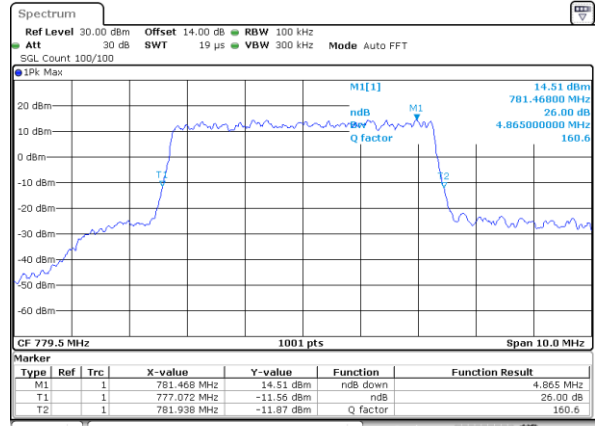
LTE Band 13

Lowest Channel / 5MHz / QPSK



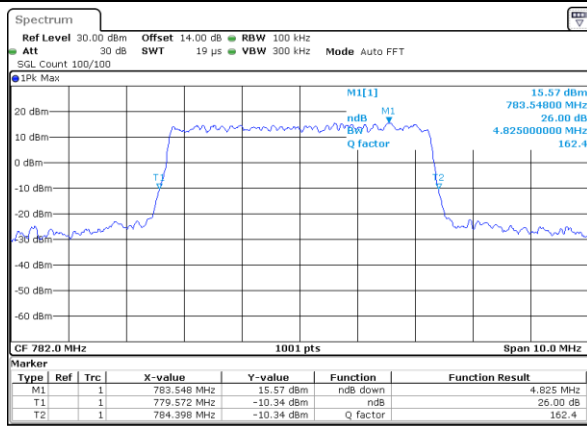
Date: 17, MAR, 2020 19:26:01

Lowest Channel / 5MHz / 16QAM



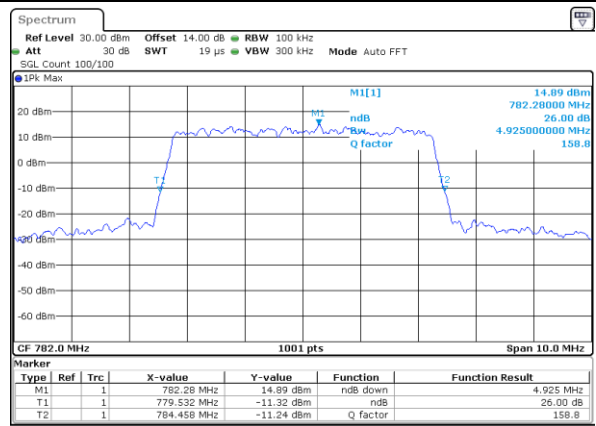
Date: 17, MAR, 2020 19:25:50

Middle Channel / 5MHz / QPSK



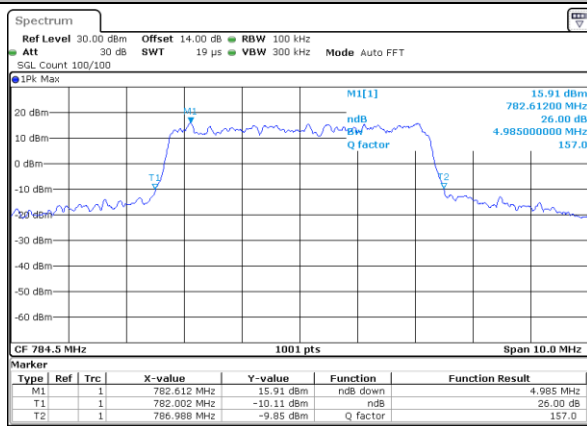
Date: 17, MAR, 2020 19:35:29

Middle Channel / 5MHz / 16QAM



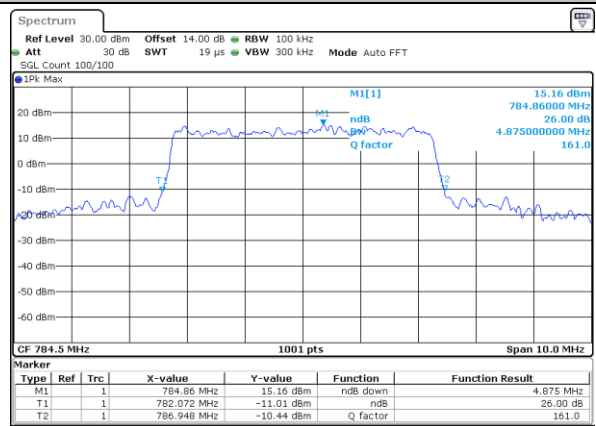
Date: 17, MAR, 2020 19:35:40

Highest Channel / 5MHz / QPSK



Date: 17, MAR, 2020 19:36:47

Highest Channel / 5MHz / 16QAM

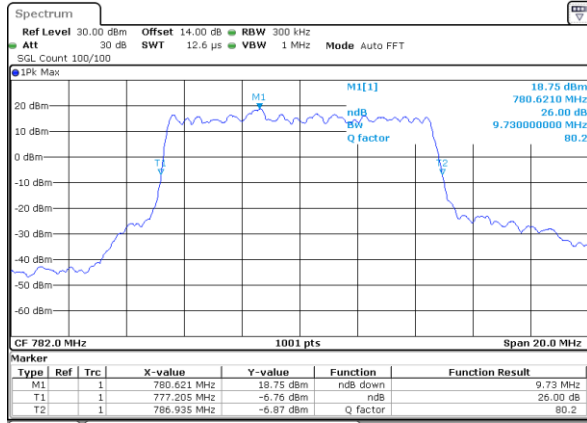


Date: 17, MAR, 2020 19:36:36



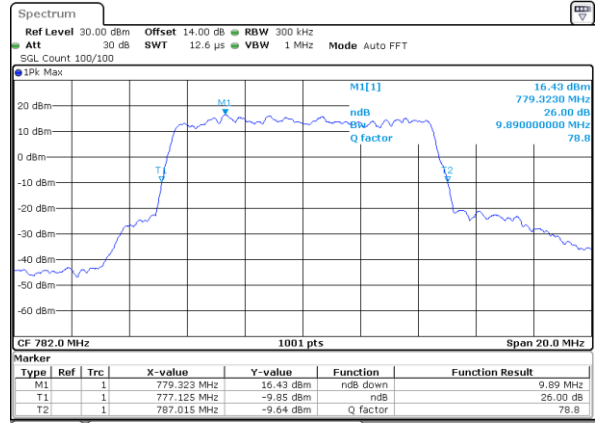
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 17.MAR.2020 19:45:30

Middle Channel / 10MHz / 16QAM

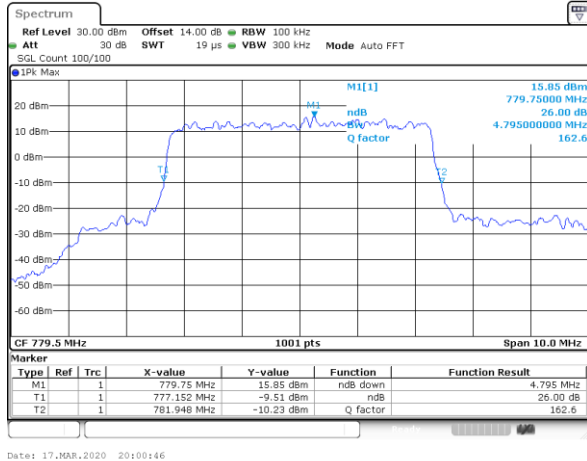


Date: 17.MAR.2020 19:45:18

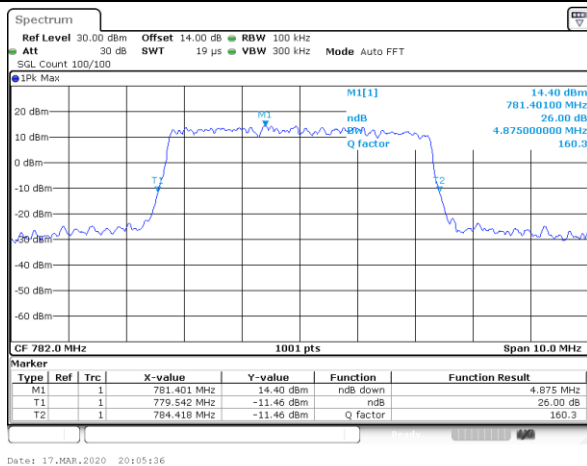


LTE Band 13

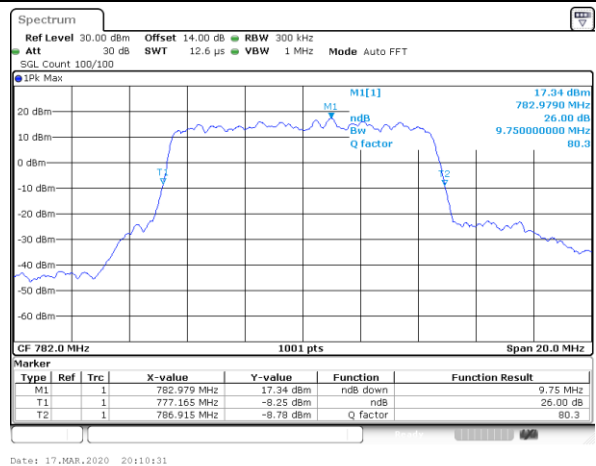
Lowest Channel / 5MHz / 64QAM



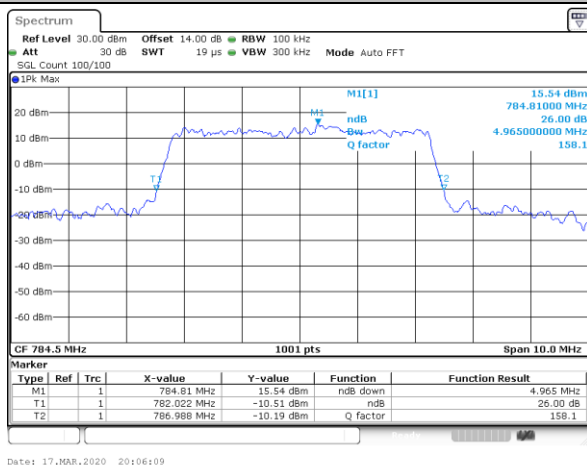
Middle Channel / 5MHz / 64QAM



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	-	-	-	-	4.51	4.49	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.48	8.97	9.03	-	-	-	-
Highest CH	-	-	-	-	4.50	4.49	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.47	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.48	-	-	-	-	-	-	-