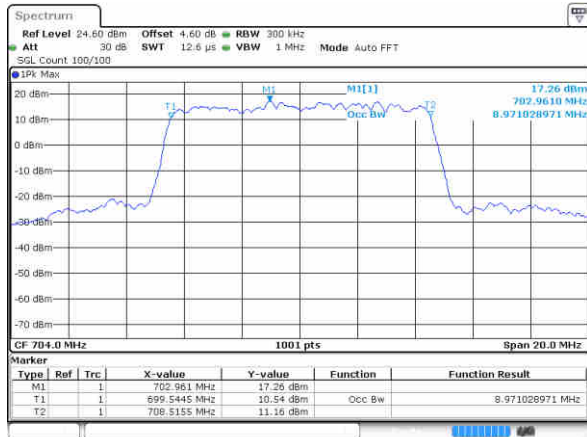


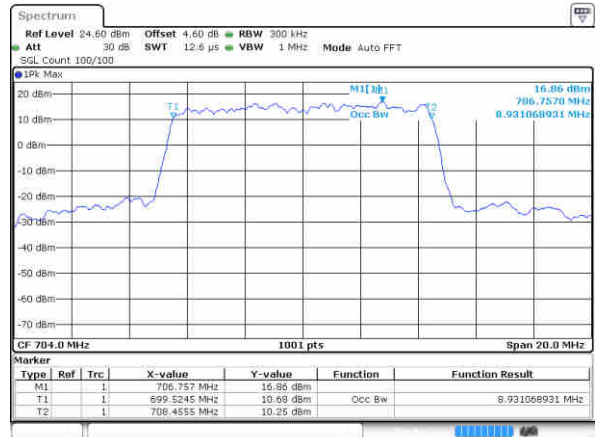


LTE Band 12

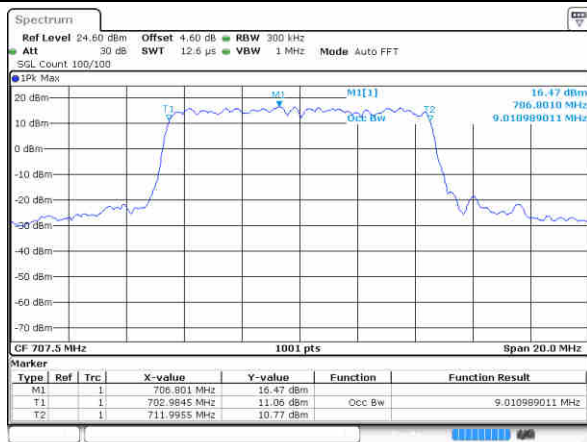
Lowest Channel / 10MHz / QPSK



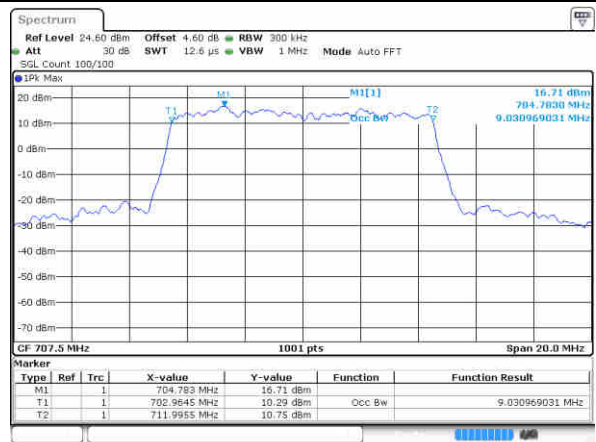
Lowest Channel / 10MHz / 16QAM



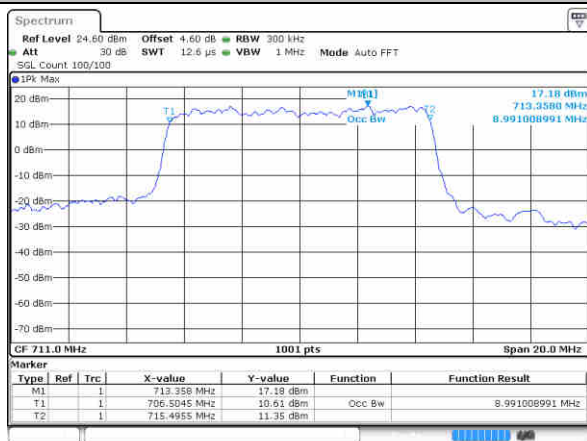
Middle Channel / 10MHz / QPSK



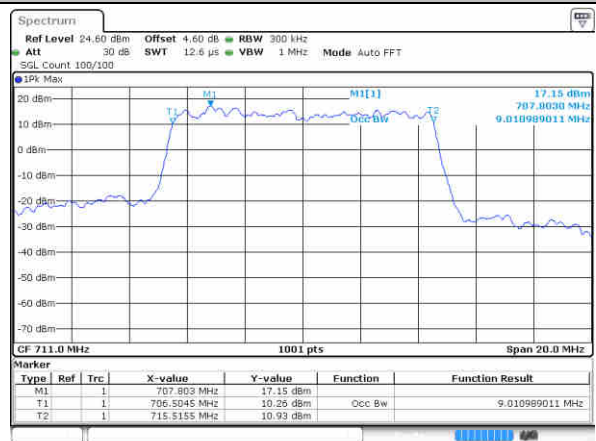
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



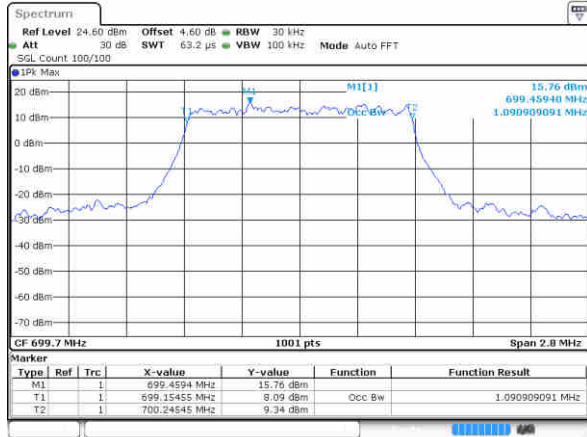
Highest Channel / 10MHz / 16QAM



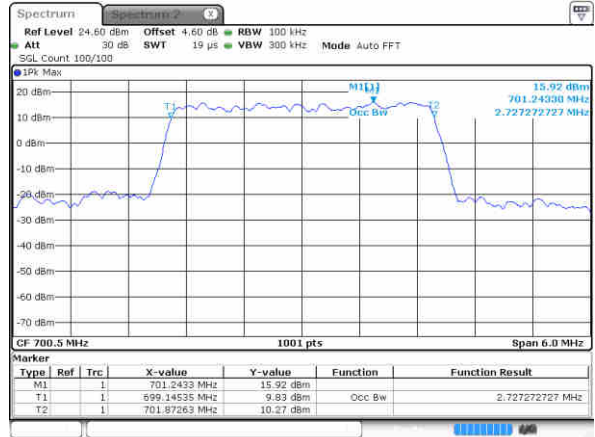


LTE Band 12

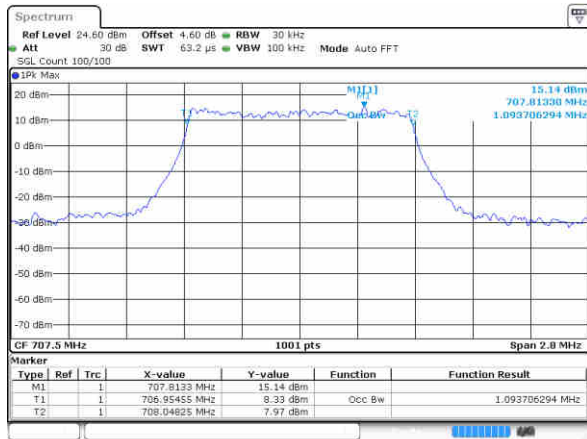
Lowest Channel / 1.4MHz / 64QAM



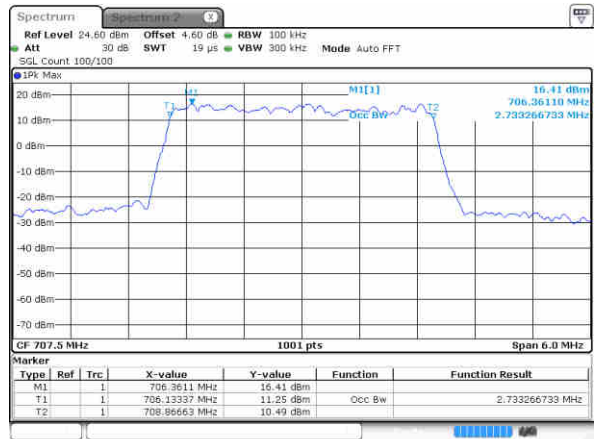
Lowest Channel / 3MHz / 64QAM



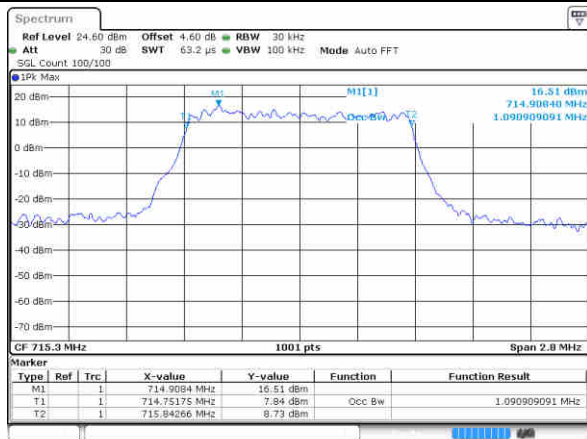
Middle Channel / 1.4MHz / 64QAM



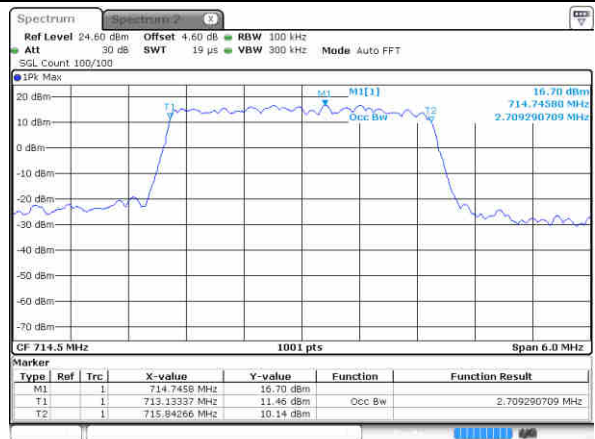
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM



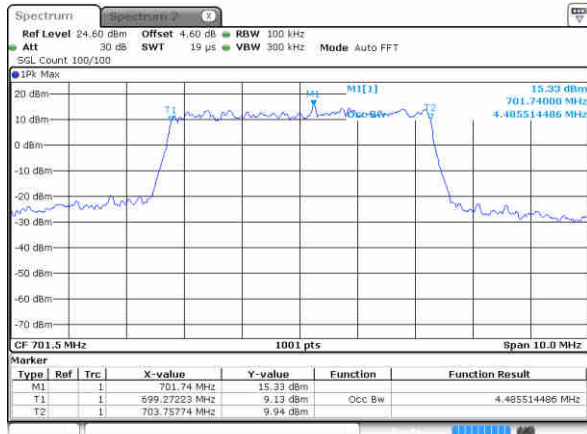
Highest Channel / 3MHz / 64QAM



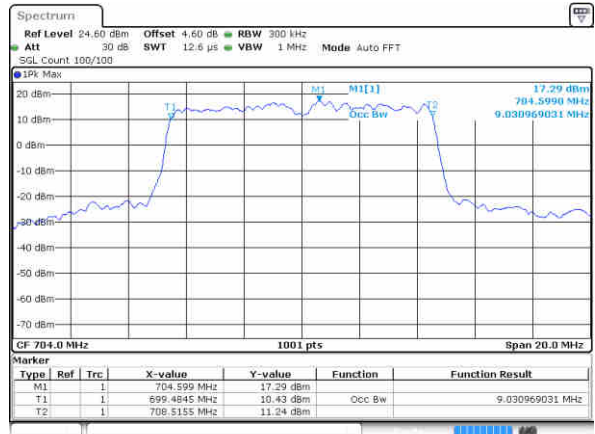


LTE Band 12

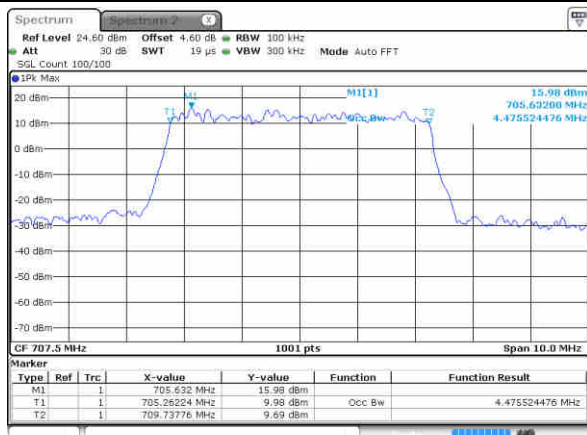
Lowest Channel / 5MHz / 64QAM



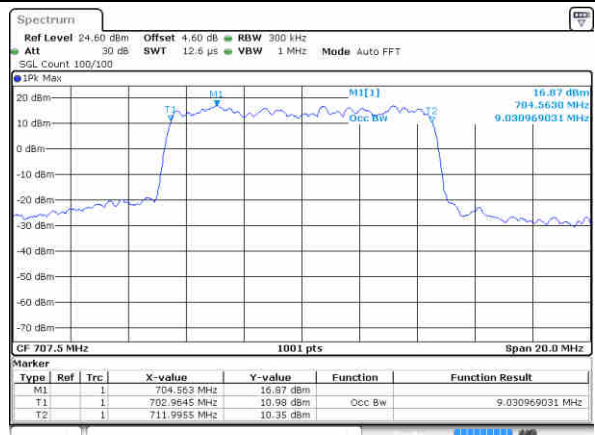
Lowest Channel / 10MHz / 64QAM



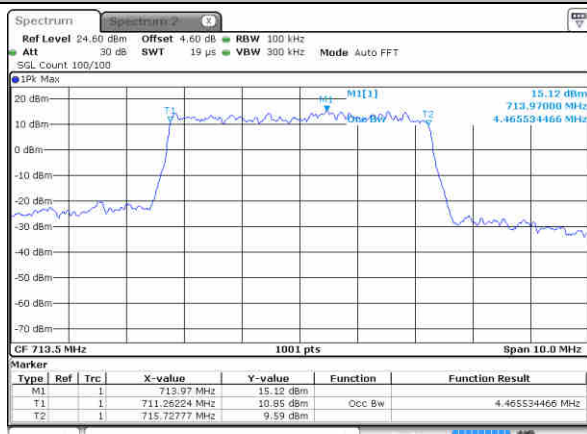
Middle Channel / 5MHz / 64QAM



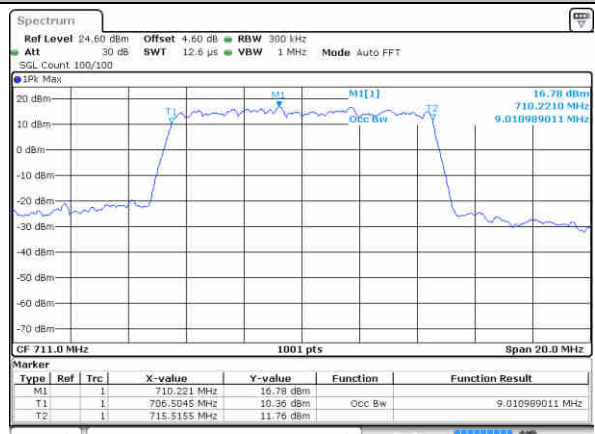
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



Highest Channel / 10MHz / 64QAM

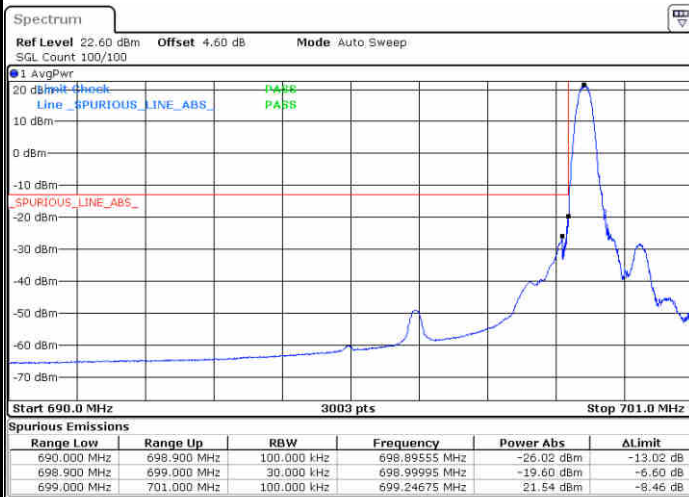




Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1RB



Lowest Band Edge / Full RB



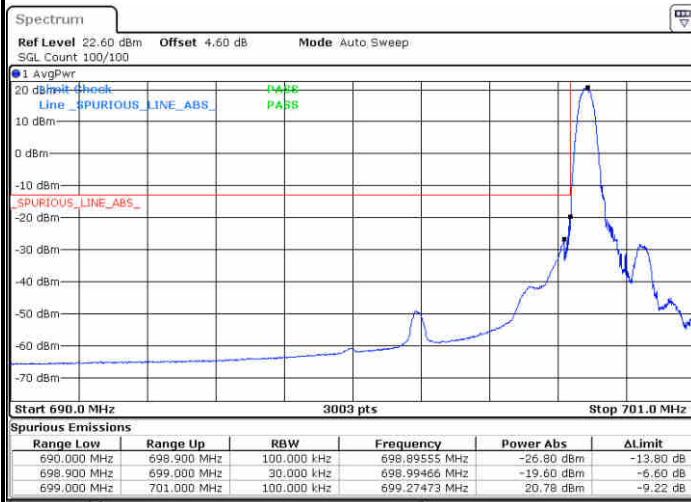
Highest Band Edge / Full RB





LTE Band 12 / 1.4MHz / 16QAM

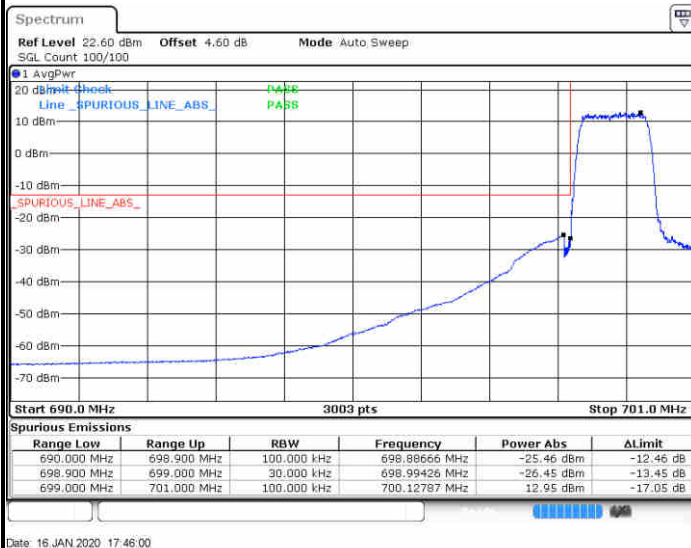
Lowest Band Edge / 1 RB



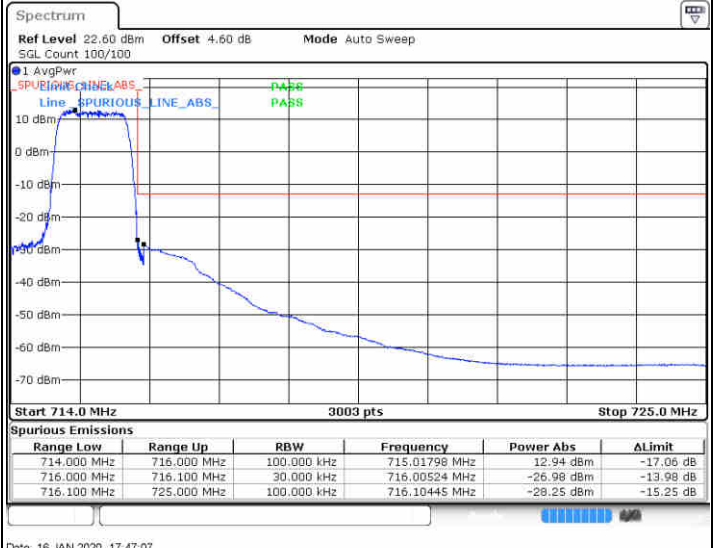
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB





LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



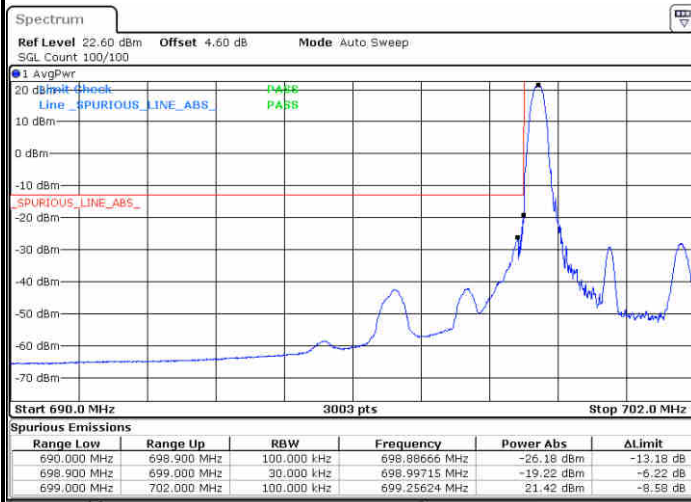
Highest Band Edge / Full RB



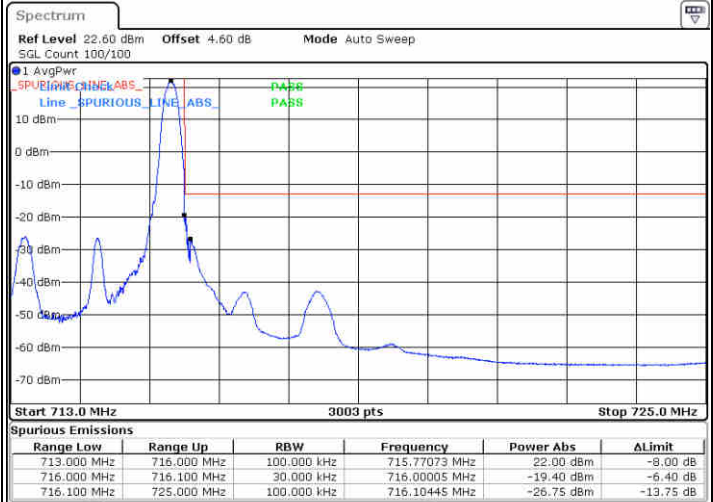


LTE Band 12 / 3MHz / QPSK

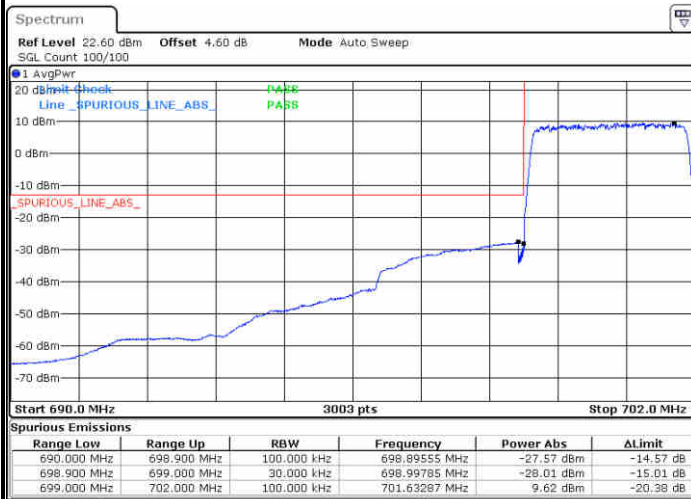
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



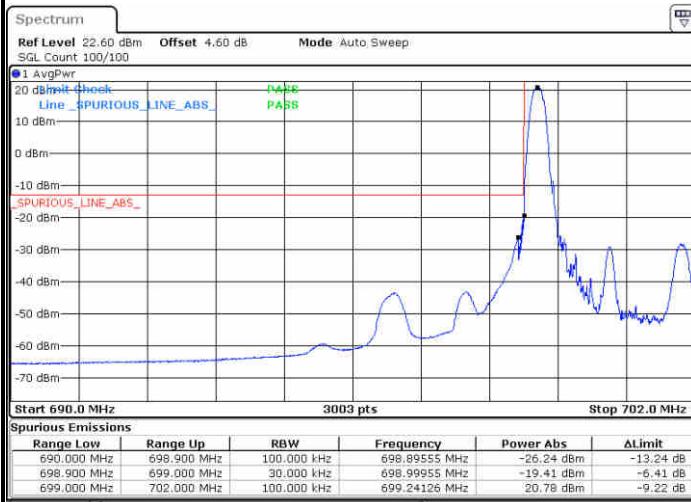
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / 16QAM

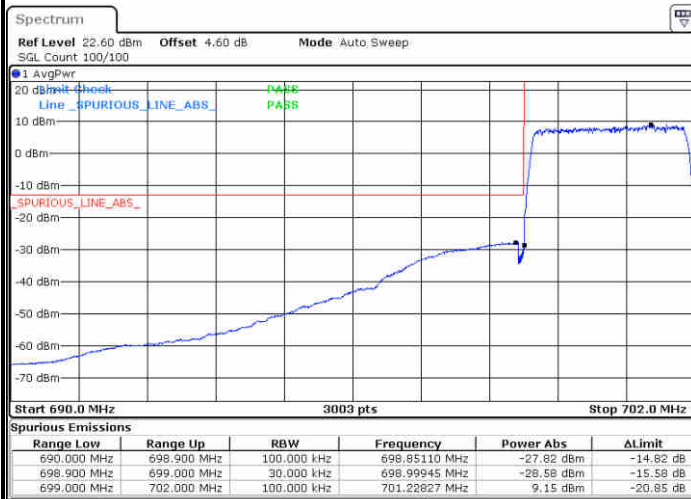
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



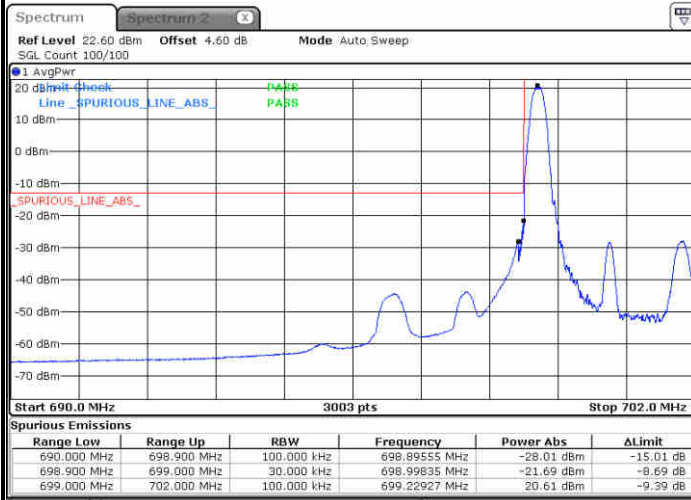
Highest Band Edge / Full RB



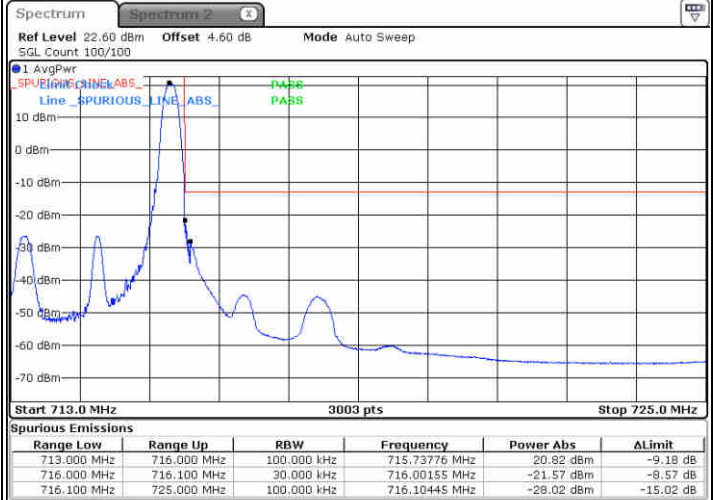


LTE Band 12 / 3MHz / 64QAM

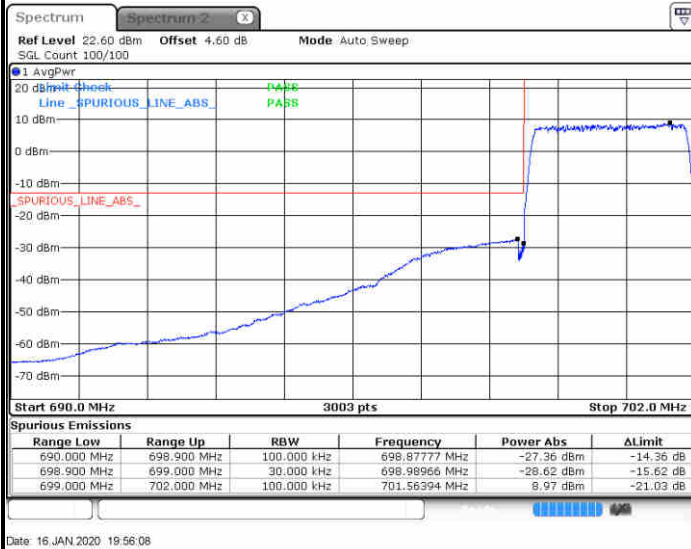
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



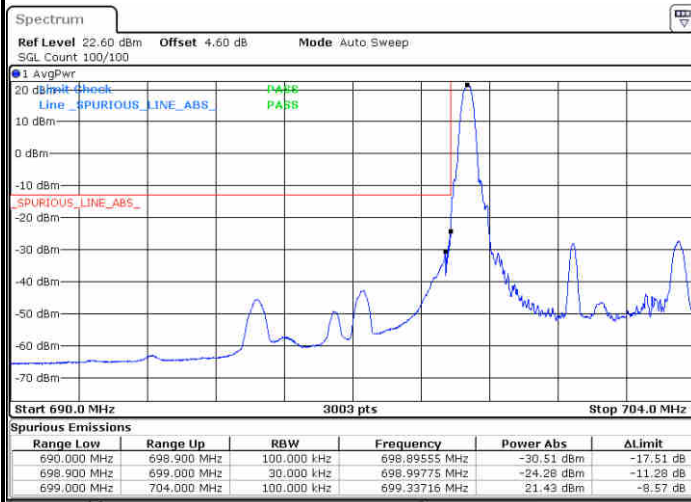
Highest Band Edge / Full RB



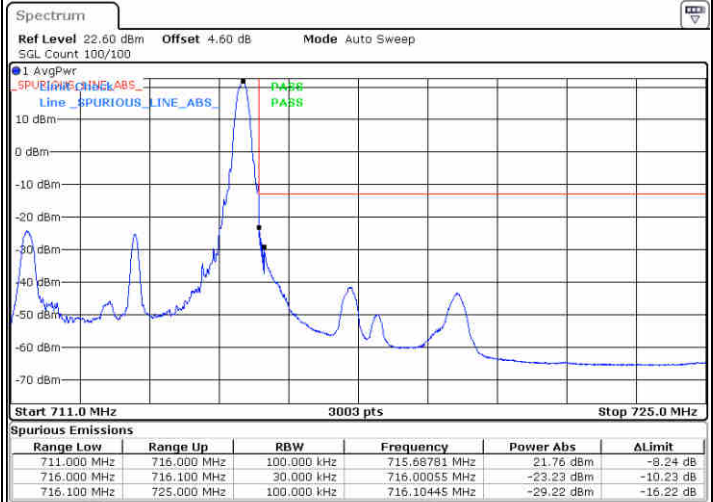


LTE Band 12 / 5MHz / QPSK

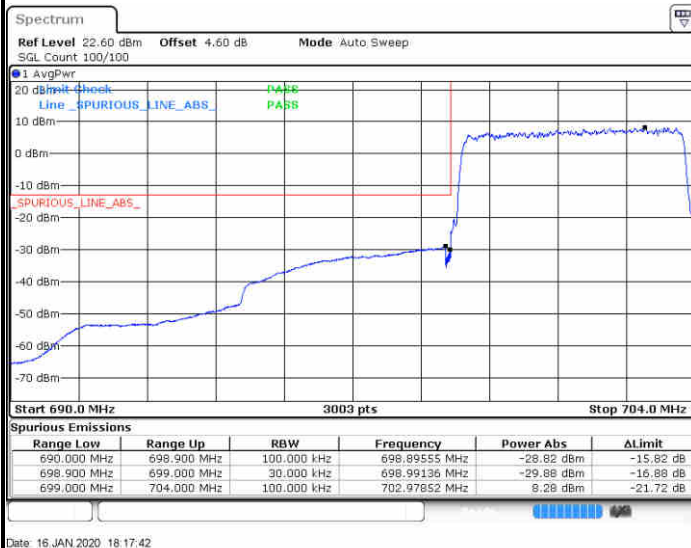
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



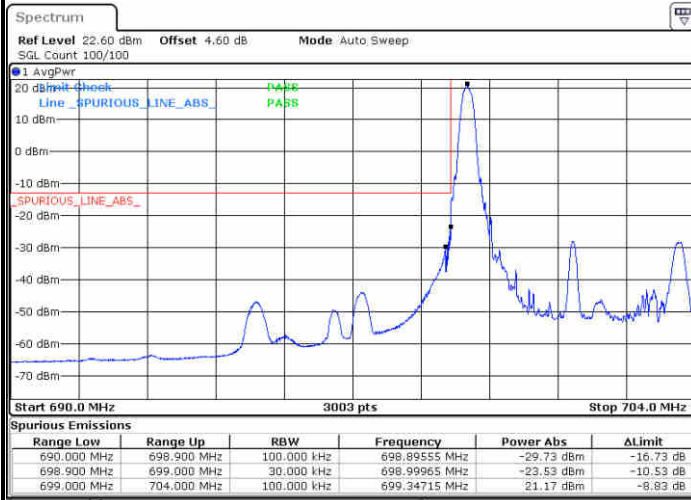
Highest Band Edge / Full RB



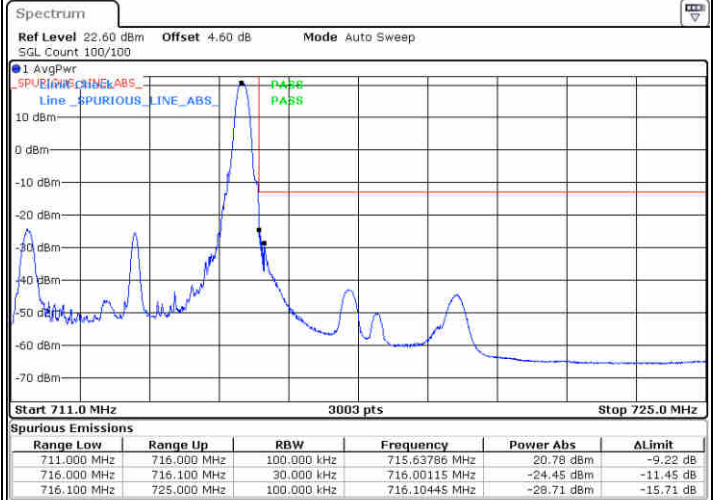


LTE Band 12 / 5MHz / 16QAM

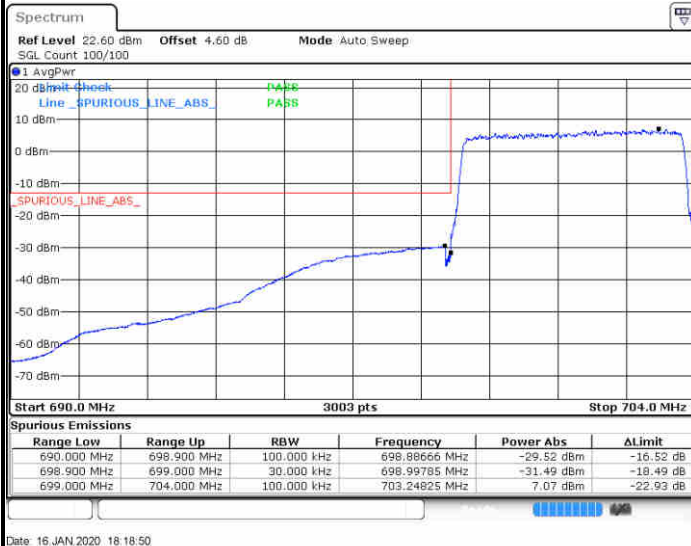
Lowest Band Edge / 1RB



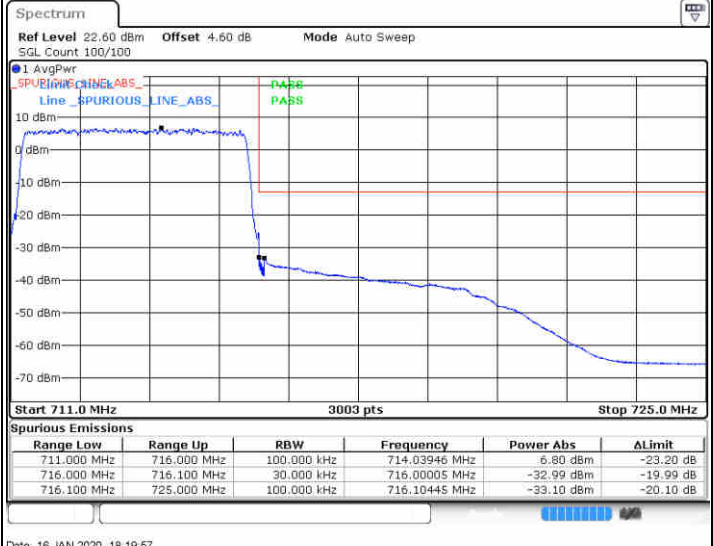
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



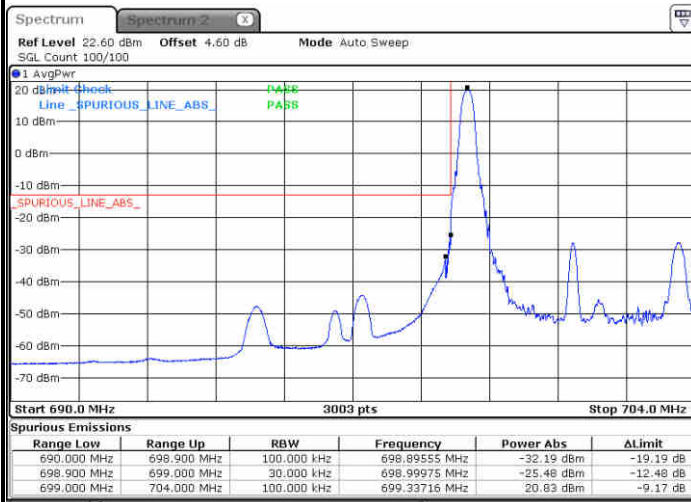
Highest Band Edge / Full RB



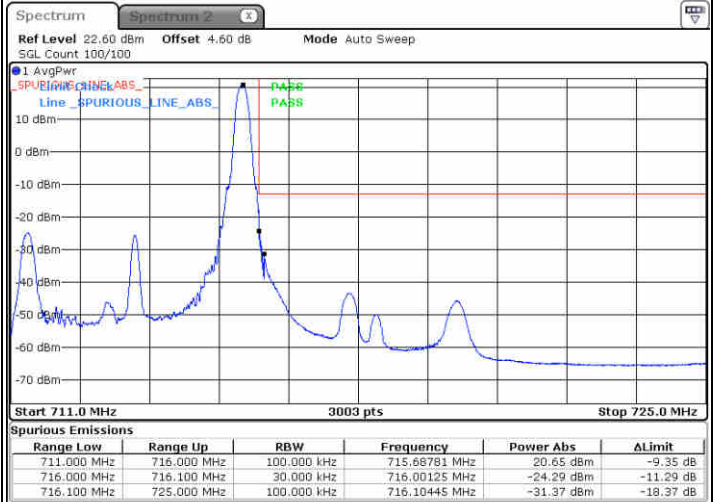


LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



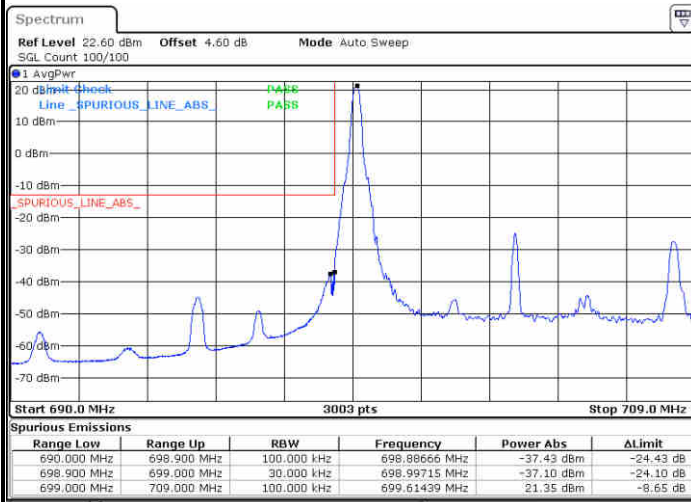
Highest Band Edge / Full RB



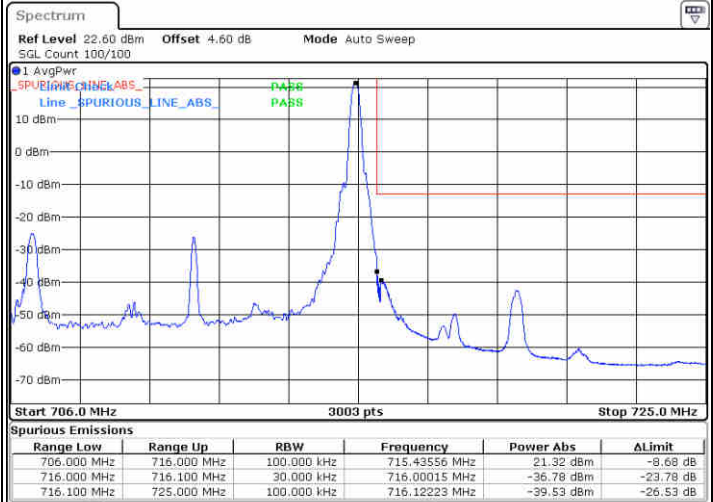


LTE Band 12 / 10MHz / QPSK

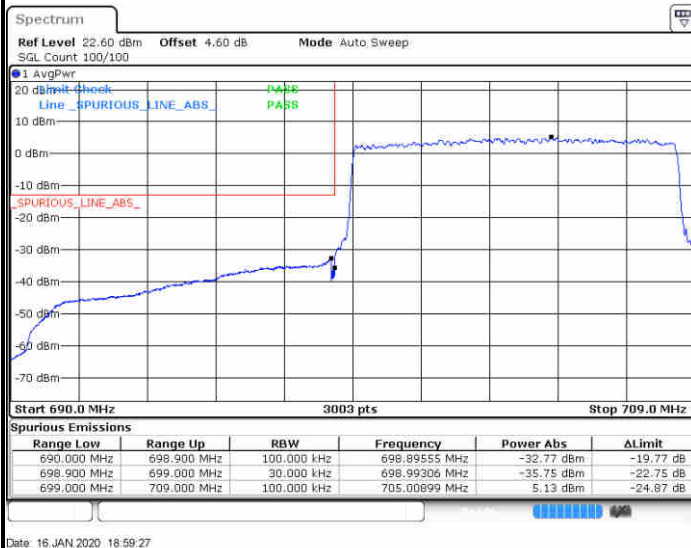
Lowest Band Edge / 1 RB



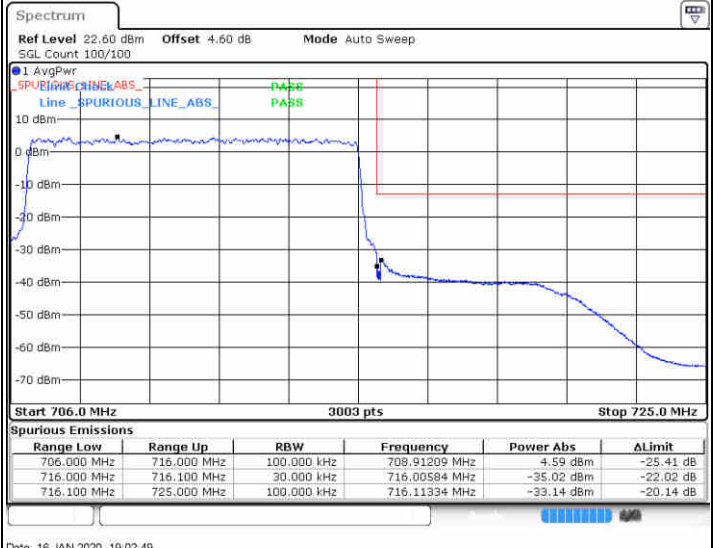
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



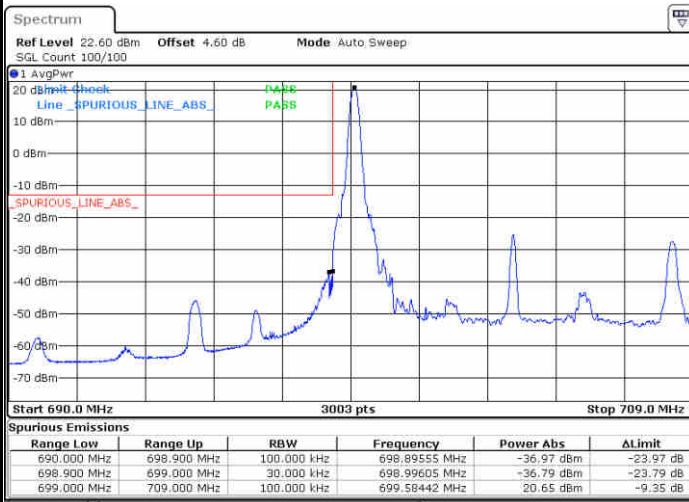
Highest Band Edge / Full RB



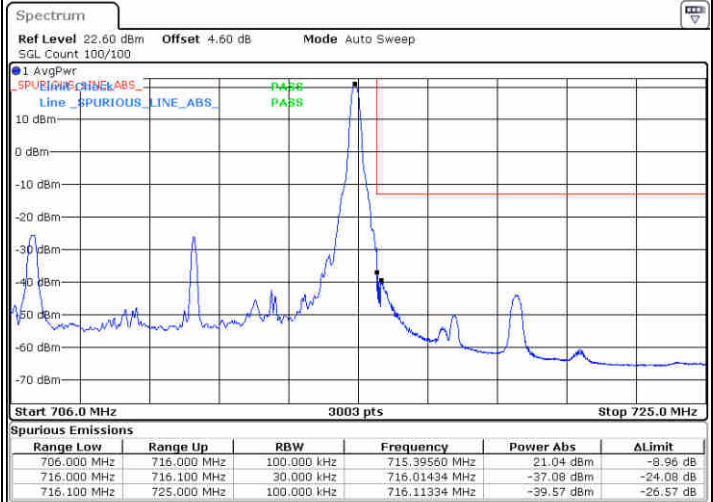


LTE Band 12 / 10MHz / 16QAM

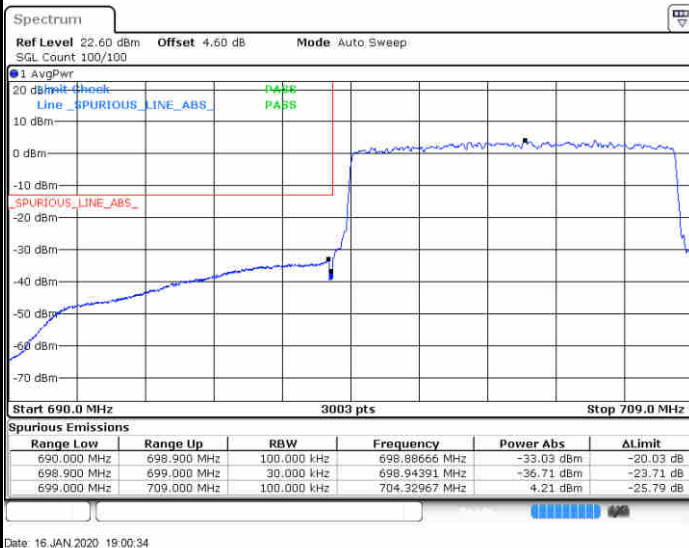
Lowest Band Edge / 1 RB



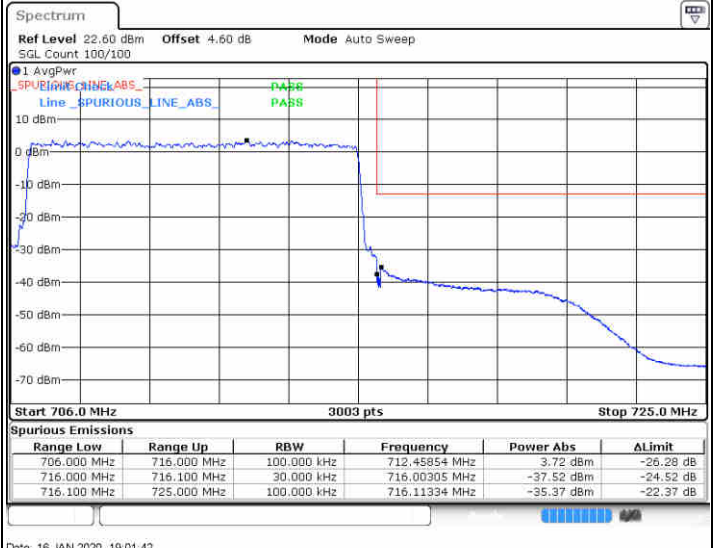
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



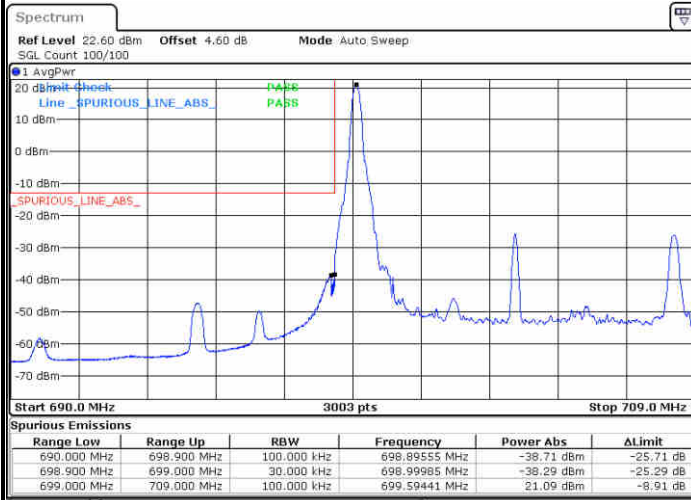
Highest Band Edge / Full RB



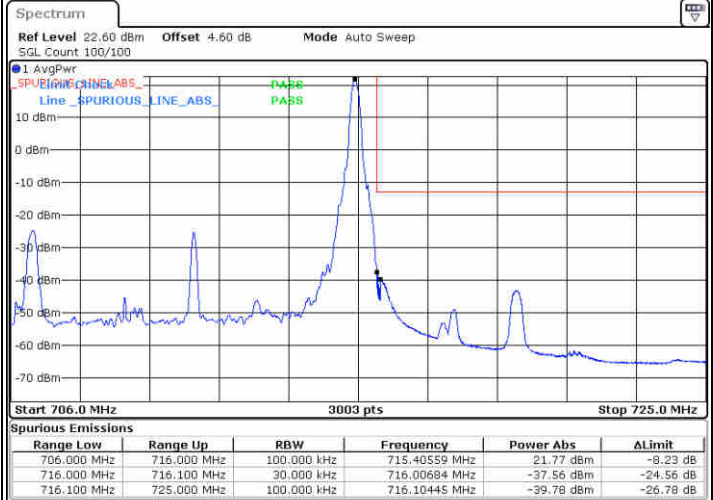


LTE Band 12 / 10MHz / 64QAM

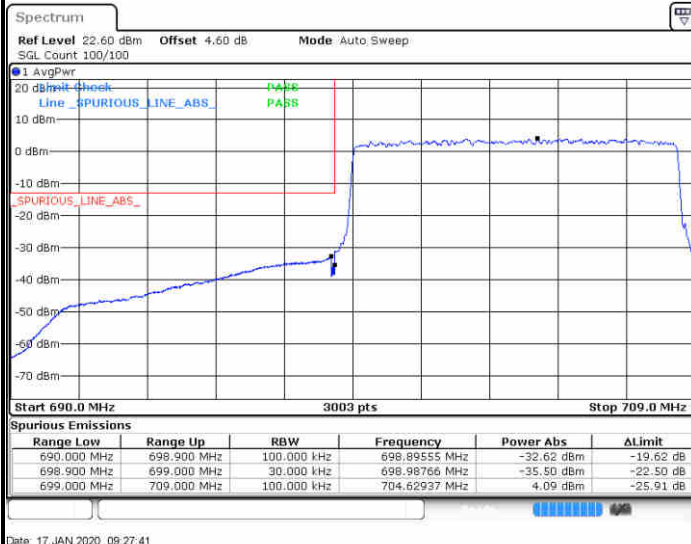
Lowest Band Edge / 1 RB



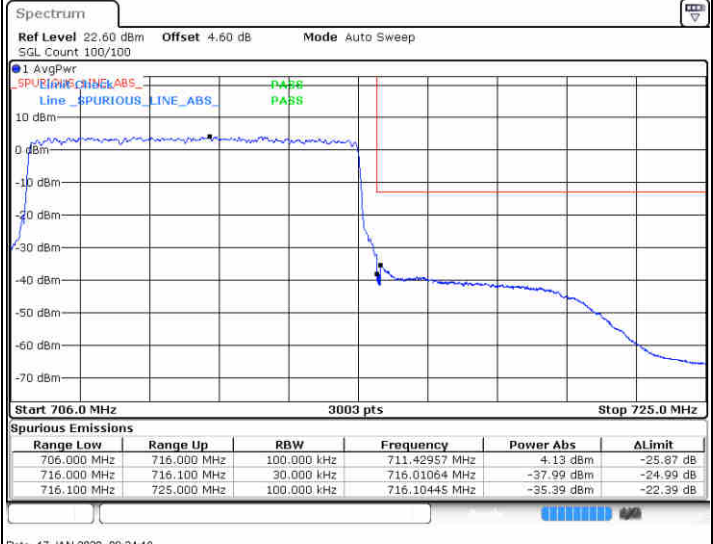
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

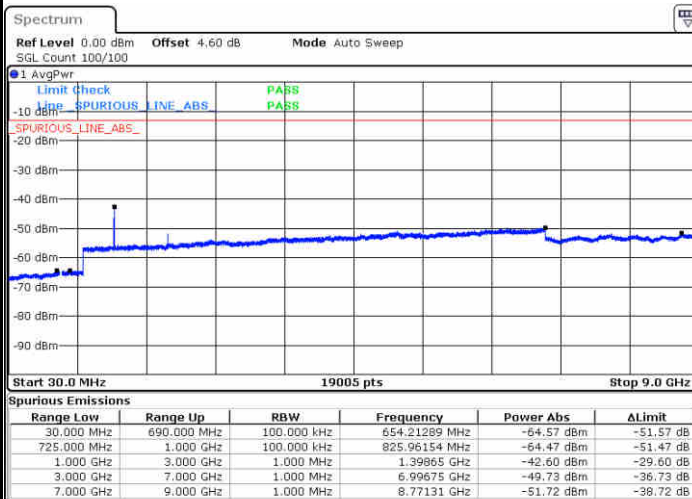




Conducted Spurious Emission

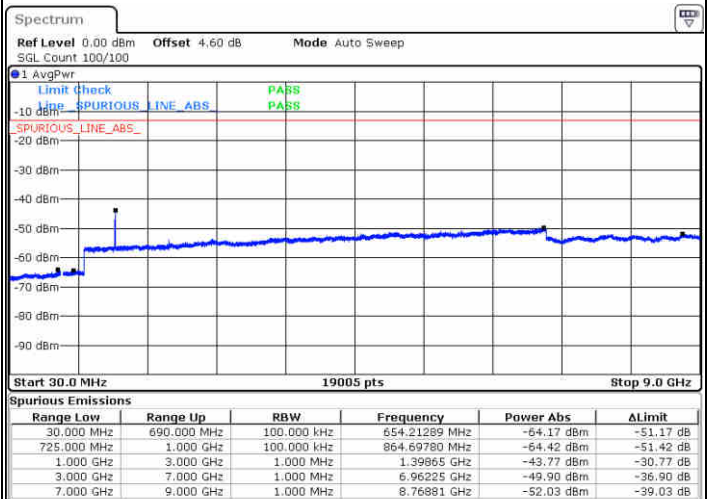
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



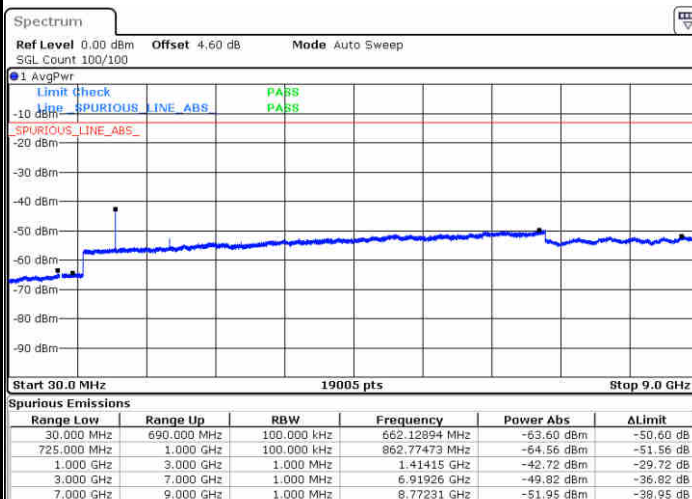
Date: 16 JAN 2020 17:36:58

Lowest Channel / 16QAM



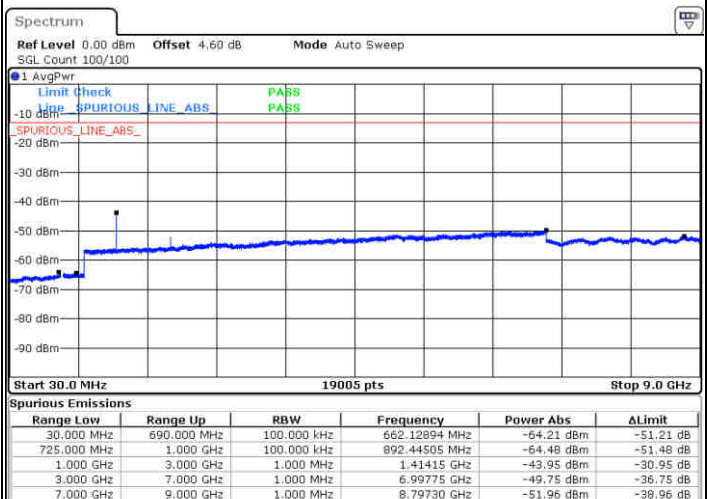
Date: 16 JAN 2020 17:37:52

Middle Channel / QPSK



Date: 16 JAN 2020 17:39:41

Middle Channel / 16QAM

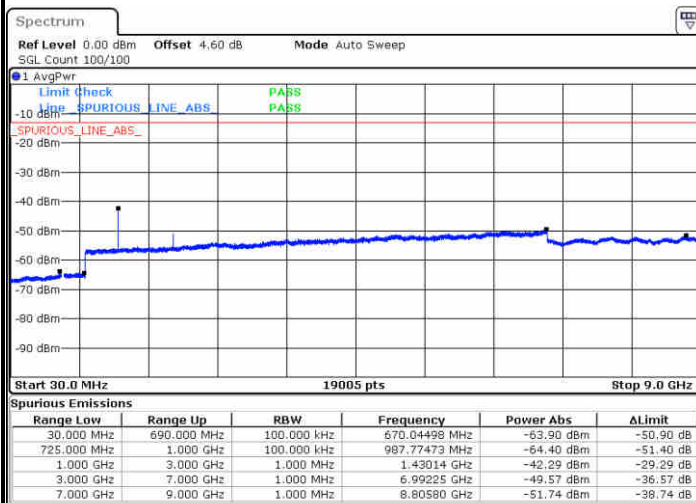


Date: 16 JAN 2020 17:38:46



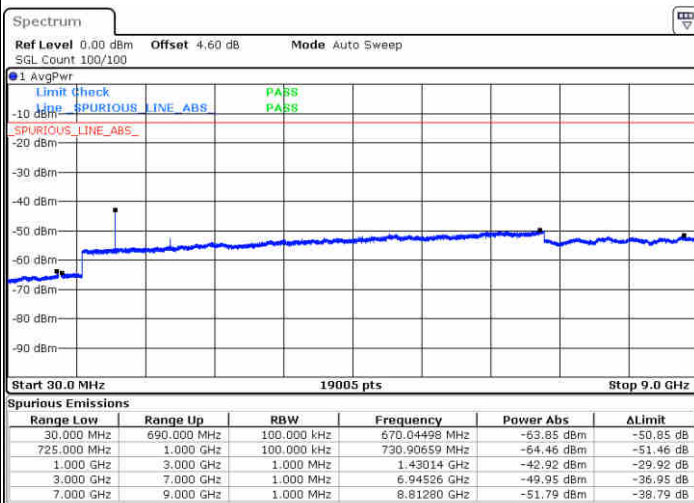
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 16 JAN 2020 17:40:35

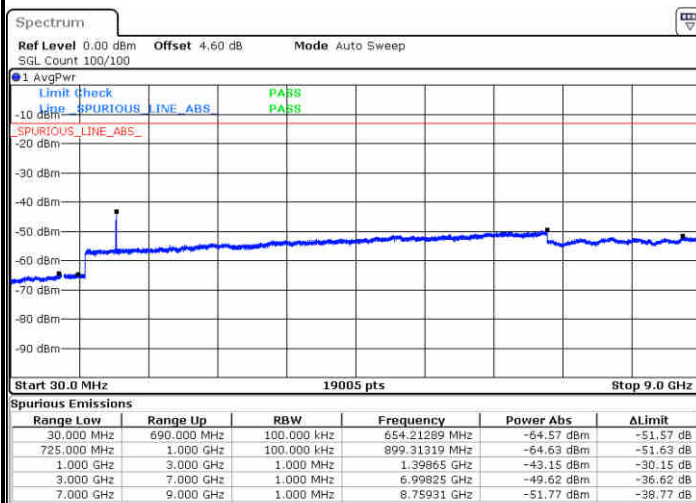
Highest Channel / 16QAM



Date: 16 JAN 2020 17:41:29

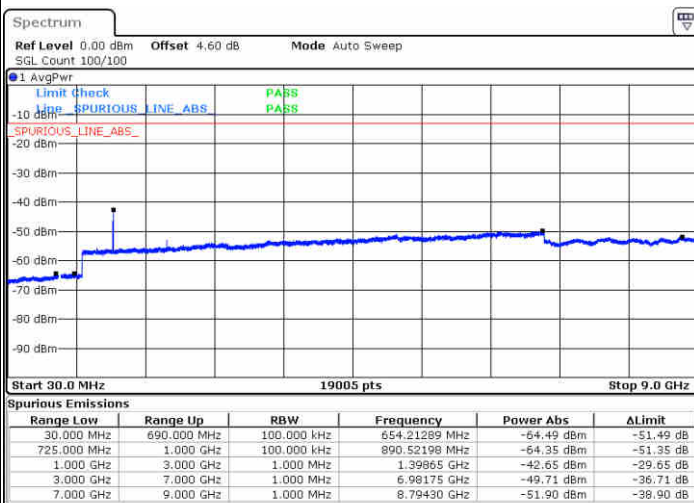
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 16 JAN 2020 17:53:22

Lowest Channel / 16QAM

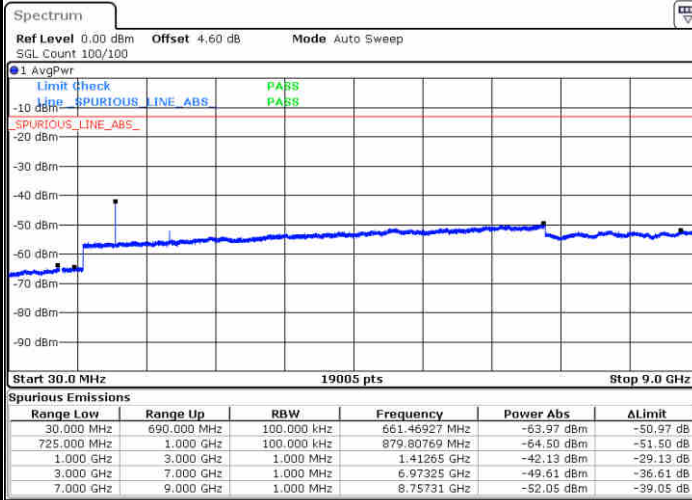


Date: 16 JAN 2020 17:54:16



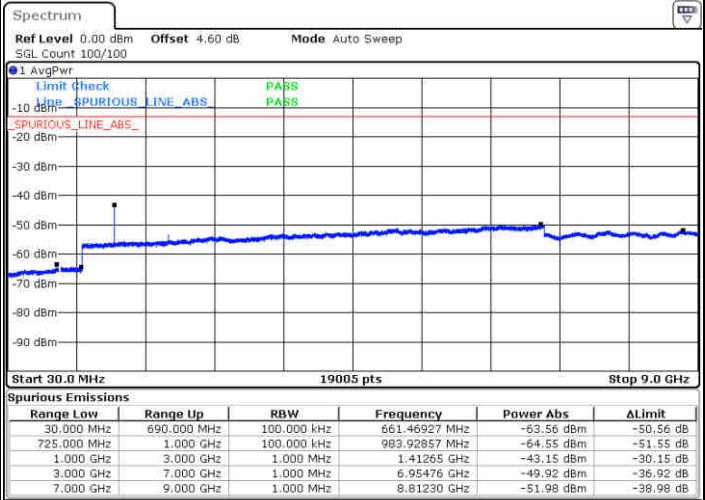
LTE Band 12 / 3MHz

Middle Channel / QPSK



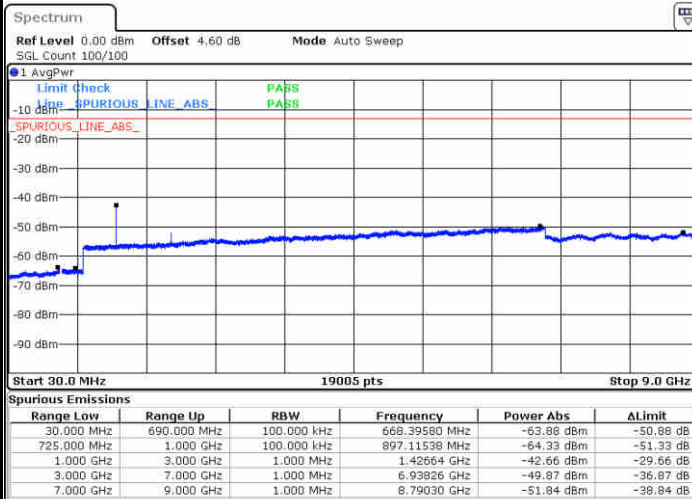
Date: 16 JAN 2020 17:56:05

Middle Channel / 16QAM



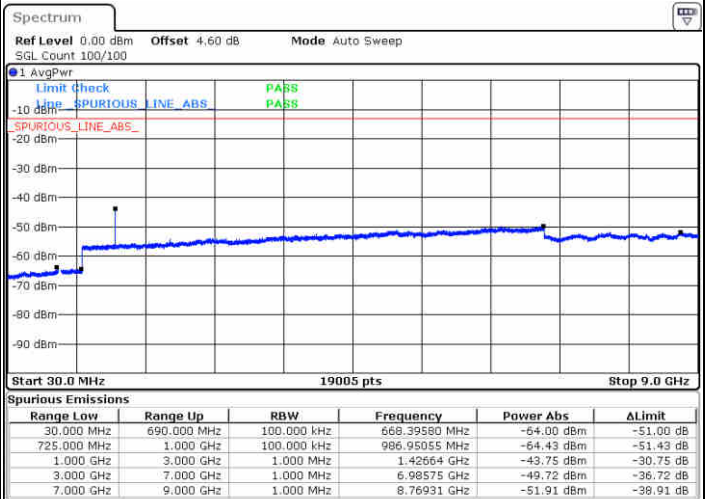
Date: 16 JAN 2020 17:55:11

Highest Channel / QPSK



Date: 16 JAN 2020 17:56:59

Highest Channel / 16QAM

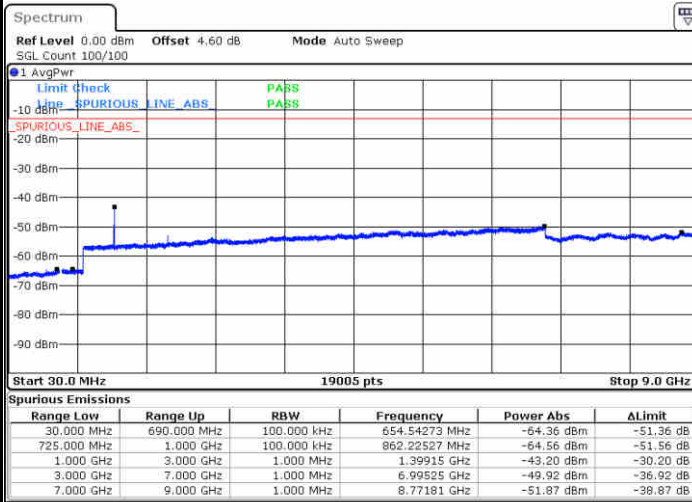


Date: 16 JAN 2020 17:57:54



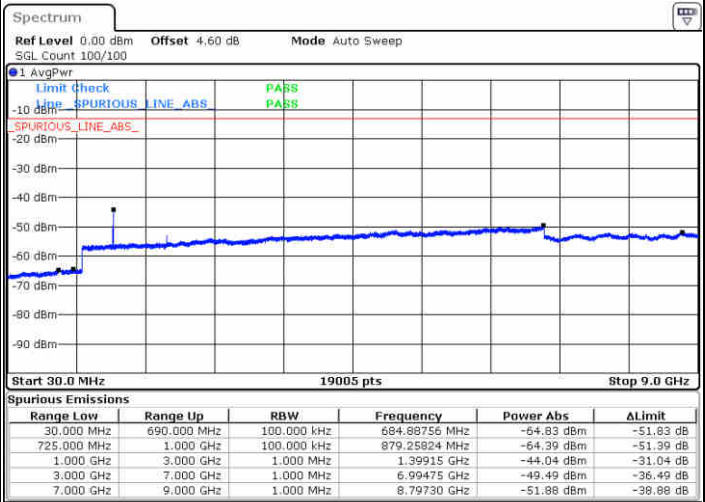
LTE Band 12 / 5MHz

Lowest Channel / QPSK



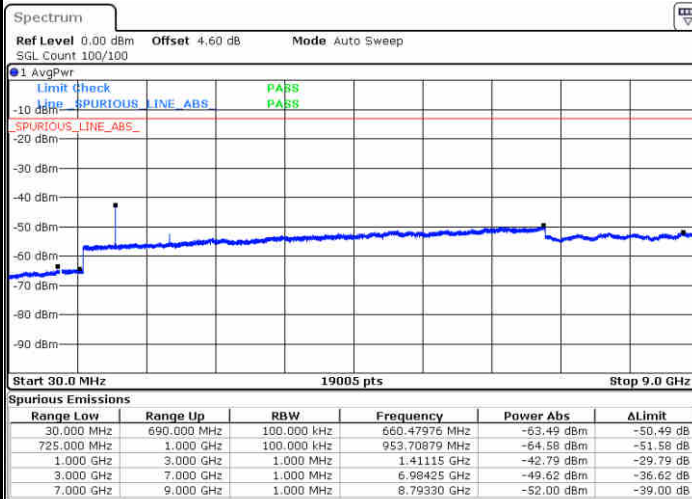
Date: 16 JAN 2020 18:09:47

Lowest Channel / 16QAM



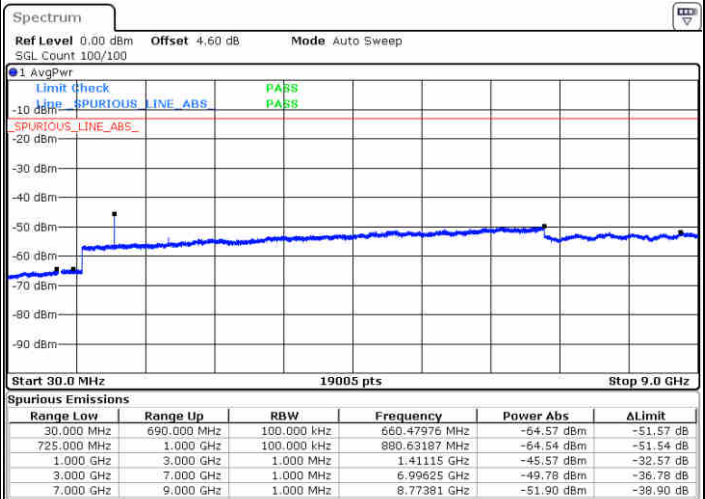
Date: 16 JAN 2020 18:10:42

Middle Channel / QPSK



Date: 16 JAN 2020 18:12:30

Middle Channel / 16QAM

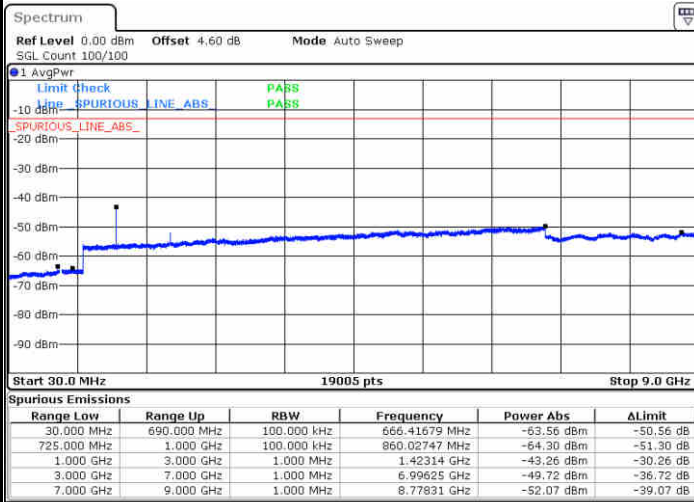


Date: 16 JAN 2020 18:11:36



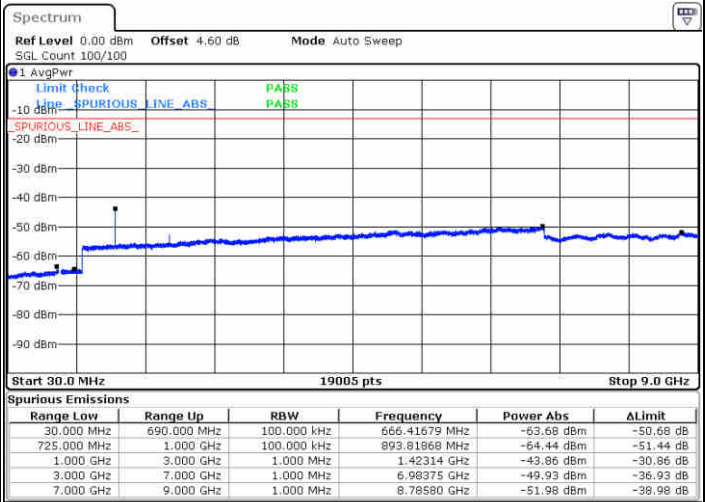
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 16 JAN 2020 18:13:25

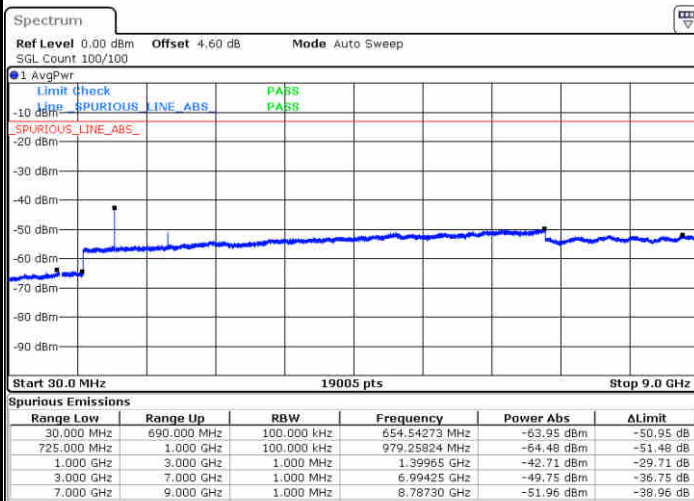
Highest Channel / 16QAM



Date: 16 JAN 2020 18:14:19

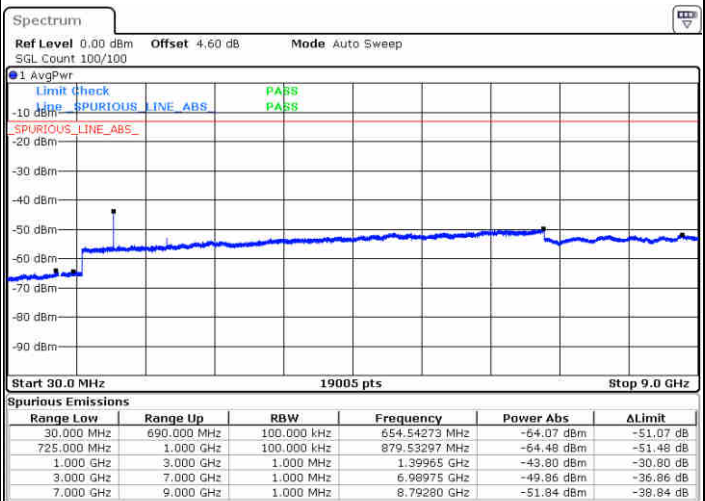
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 16 JAN 2020 17:32:31

Lowest Channel / 16QAM

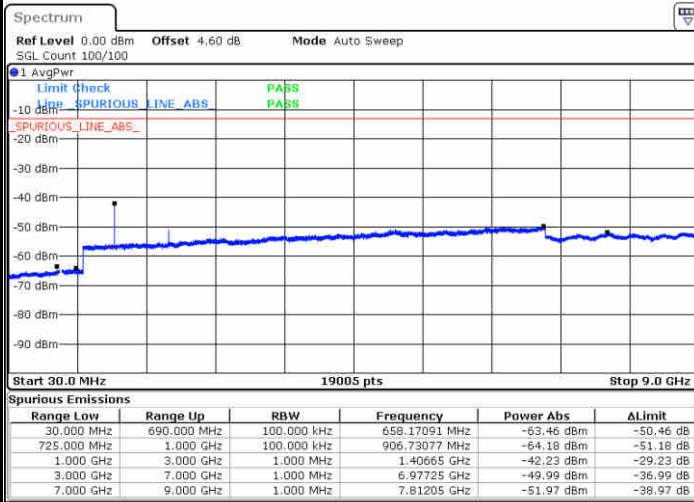


Date: 16 JAN 2020 18:52:26



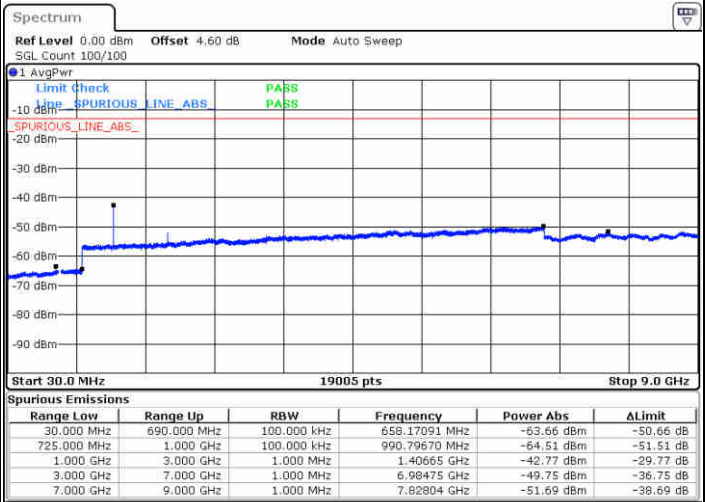
LTE Band 12 / 10MHz

Middle Channel / QPSK



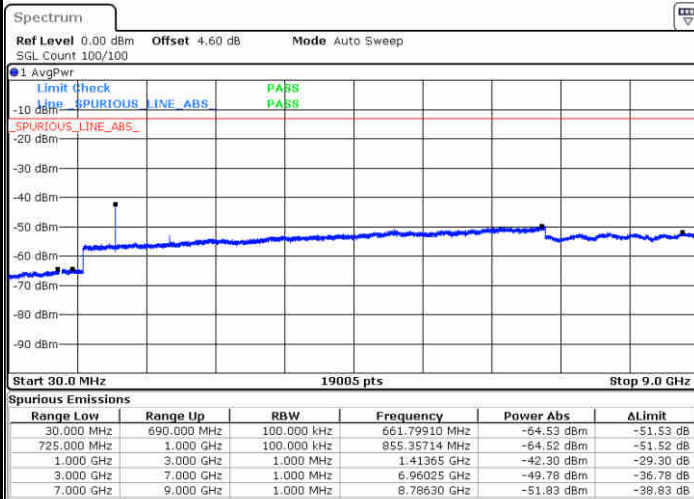
Date: 16 JAN 2020 18:54:15

Middle Channel / 16QAM



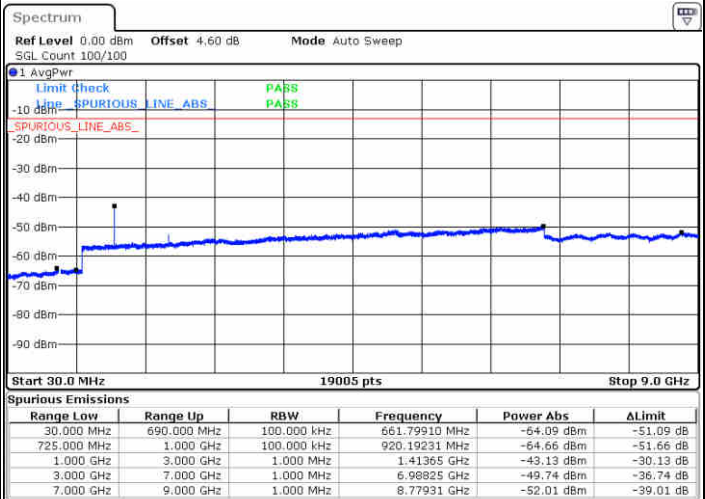
Date: 16 JAN 2020 18:53:21

Highest Channel / QPSK



Date: 16 JAN 2020 18:55:09

Highest Channel / 16QAM

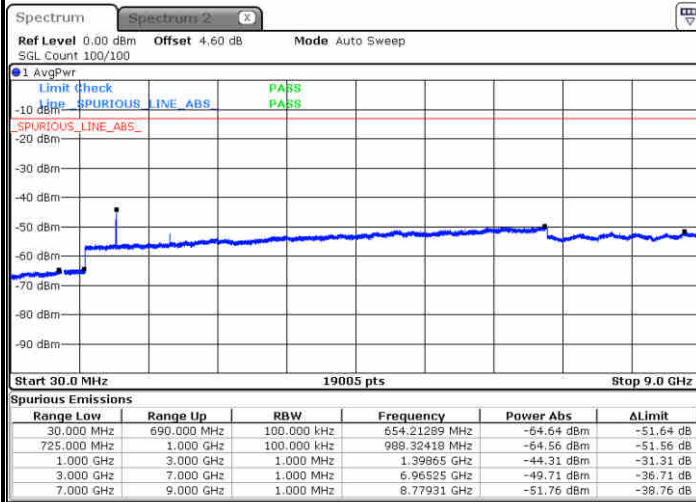


Date: 16 JAN 2020 18:56:04



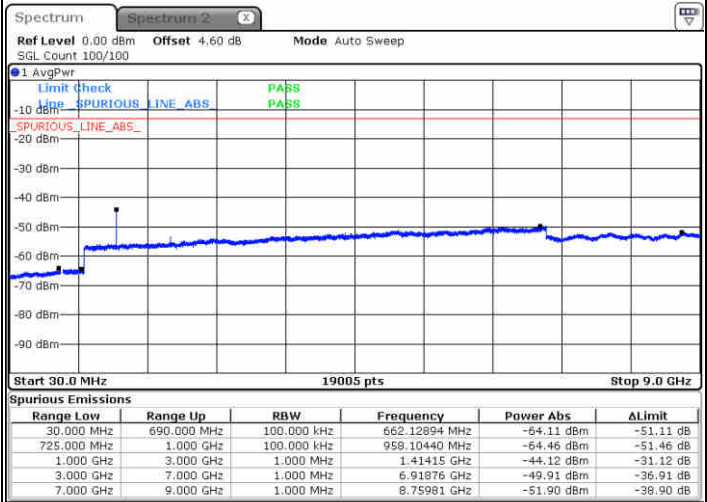
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



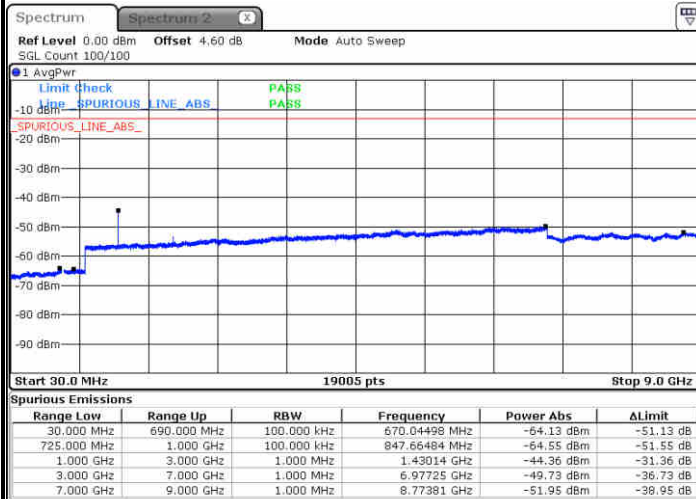
Date: 16 JAN 2020 19:48:20

Middle Channel / 64QAM



Date: 16 JAN 2020 19:49:15

Highest Channel / 64QAM

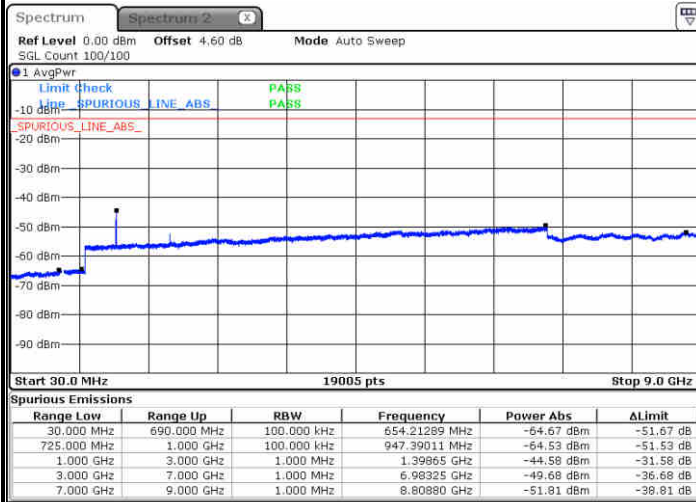


Date: 16 JAN 2020 19:50:09



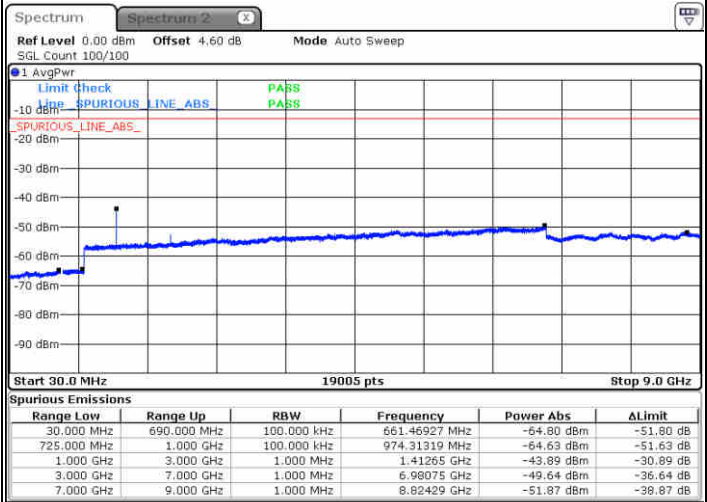
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



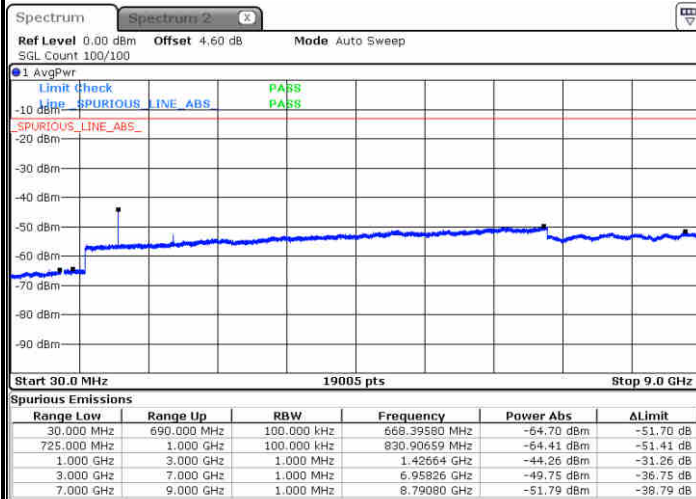
Date: 16 JAN 2020 19:51:03

Middle Channel / 64QAM



Date: 16 JAN 2020 19:51:58

Highest Channel / 64QAM

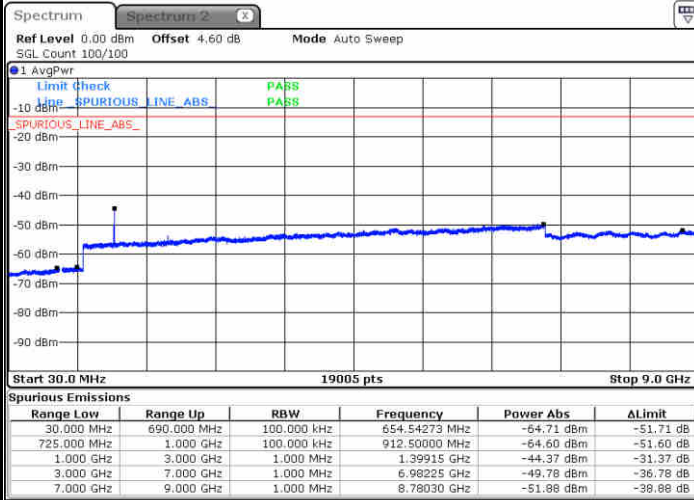


Date: 16 JAN 2020 19:52:52



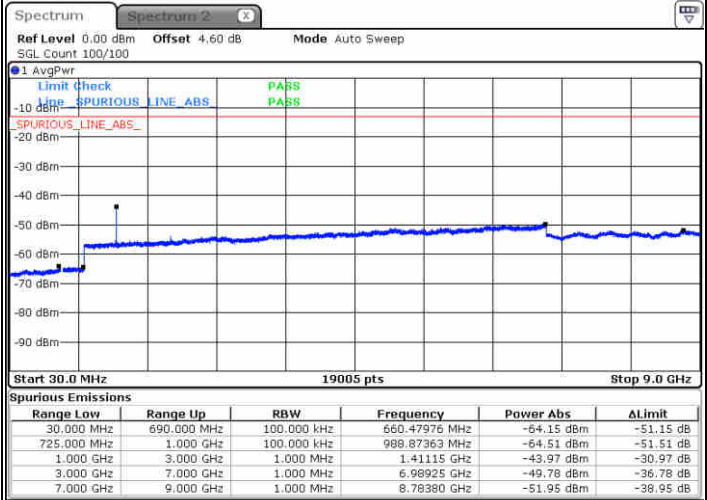
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



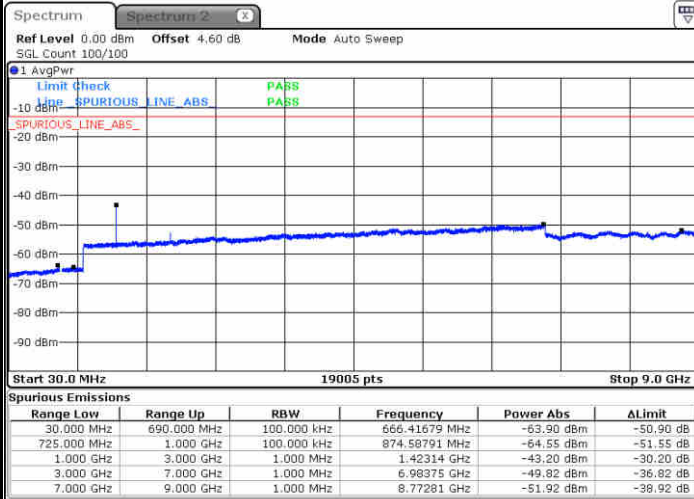
Date: 16 JAN 2020 20:04:45

Middle Channel / 64QAM



Date: 16 JAN 2020 20:05:39

Highest Channel / 64QAM

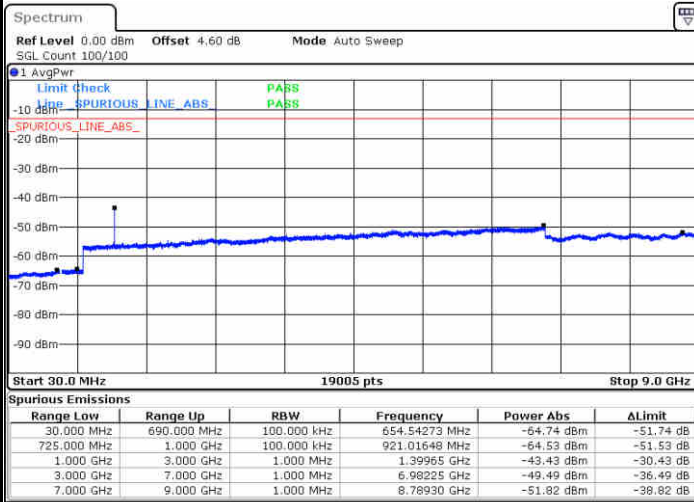


Date: 16 JAN 2020 20:06:34



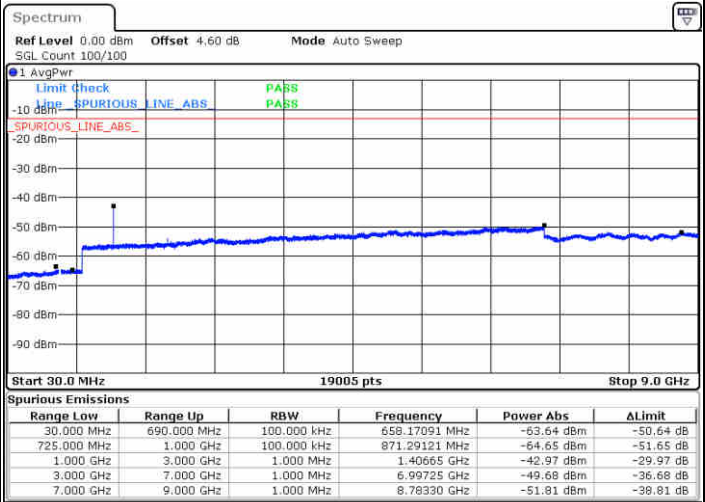
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



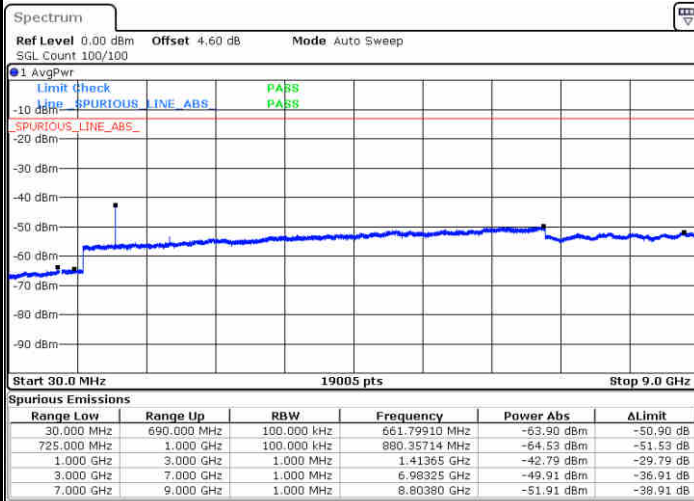
Date: 17 JAN 2020 09:20:21

Middle Channel / 64QAM



Date: 17 JAN 2020 09:21:15

Highest Channel / 64QAM



Date: 17 JAN 2020 09:22:10

**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	0.0031	PASS
40	Normal Voltage	0.0044	
30	Normal Voltage	0.0050	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0102	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0076	
-30	Normal Voltage	0.0068	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0007	
20	Battery End Point	0.0006	

Note:

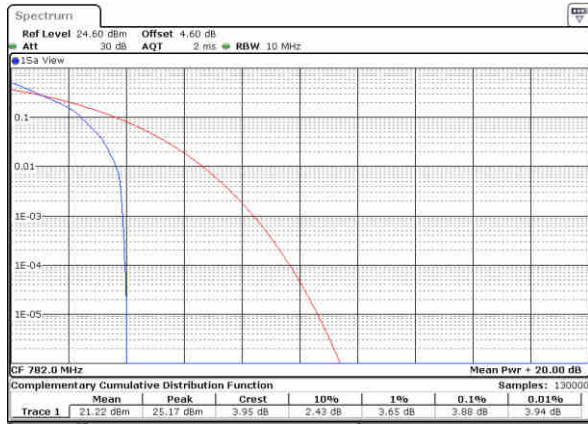
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.65 V. ; Maximum Voltage =4.40 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



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	3.88	4.78	4.78	5.68	
Highest CH	-	-	-	-	
Mod.	64QAM		Limit: 13dB		
RB Size	1RB	Full RB	Result		
Lowest CH	-	-	PASS		
Middle CH	4.84	5.65			
Highest CH	-	-			

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


Date: 16 JAN 2020 16:57:33

Middle Channel / Full RB


Date: 16 JAN 2020 16:58:02

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


Date: 16 JAN 2020 16:57:42

Middle Channel / Full RB


Date: 16 JAN 2020 16:57:51

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


Date: 16 JAN 2020 17:30:44

Middle Channel / Full RB


Date: 16 JAN 2020 17:31:32

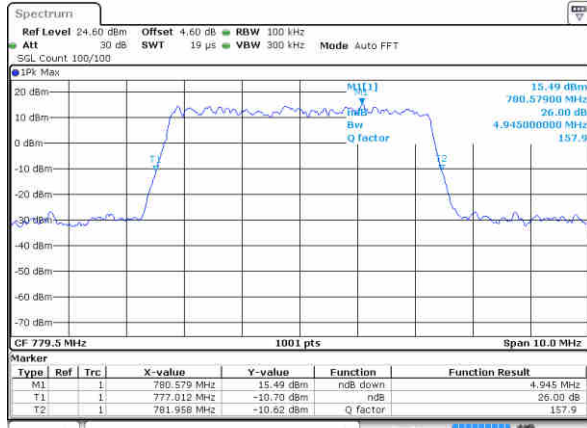
**26dB Bandwidth**

Mode	LTE Band 13 : 26dB BW(MHz)											
BW	5MHz		10MHz		5MHz		10MHz		-		-	
Mod.	QPSK	16QAM	QPSK	16QAM	64QAM	-	64QAM	-	-	-	-	-
Lowest CH	4.95	4.92	-	-	4.92	-	-	-	-	-	-	-
Middle CH	4.88	4.90	9.91	9.97	4.95	-	9.63	-	-	-	-	-
Highest CH	5.00	5.05	-	-	4.90	-	-	-	-	-	-	-



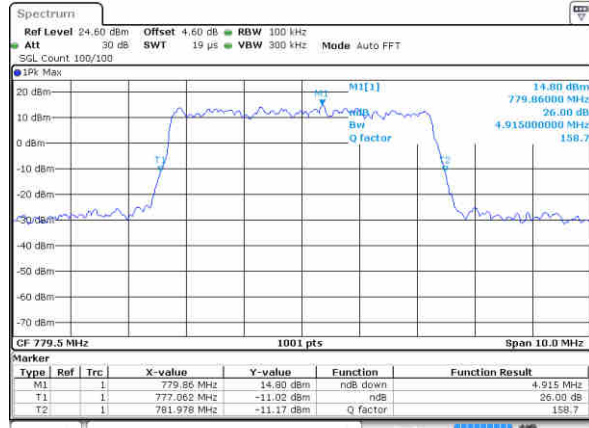
LTE Band 13

Lowest Channel / 5MHz / QPSK



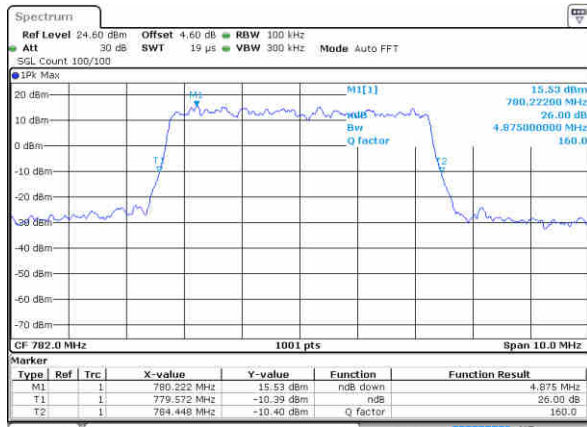
Date: 16 JAN 2020 16:25:21

Lowest Channel / 5MHz / 16QAM



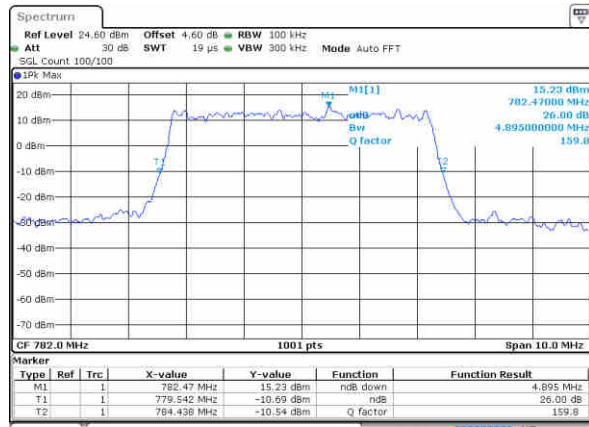
Date: 16 JAN 2020 16:25:31

Middle Channel / 5MHz / QPSK



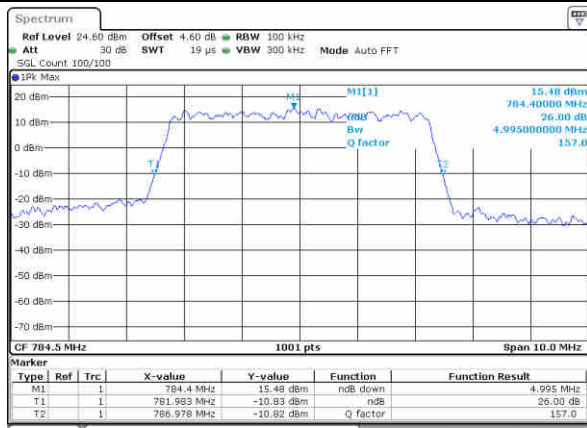
Date: 16 JAN 2020 16:34:20

Middle Channel / 5MHz / 16QAM



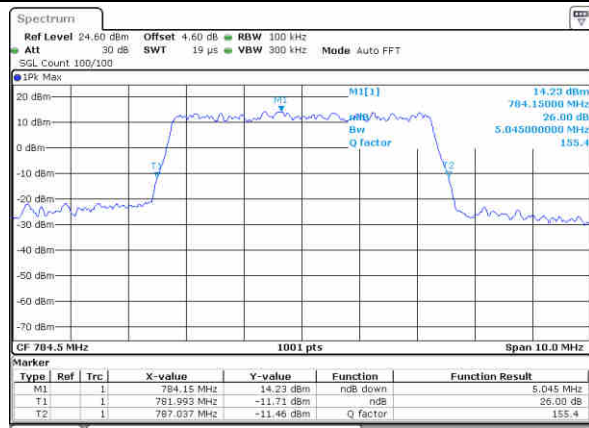
Date: 16 JAN 2020 16:34:29

Highest Channel / 5MHz / QPSK



Date: 16 JAN 2020 16:36:58

Highest Channel / 5MHz / 16QAM

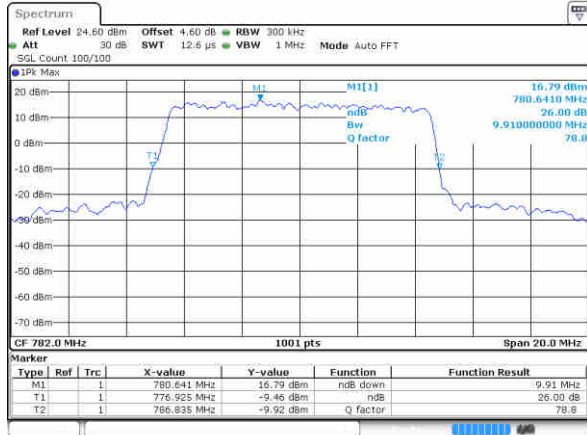


Date: 16 JAN 2020 16:36:48



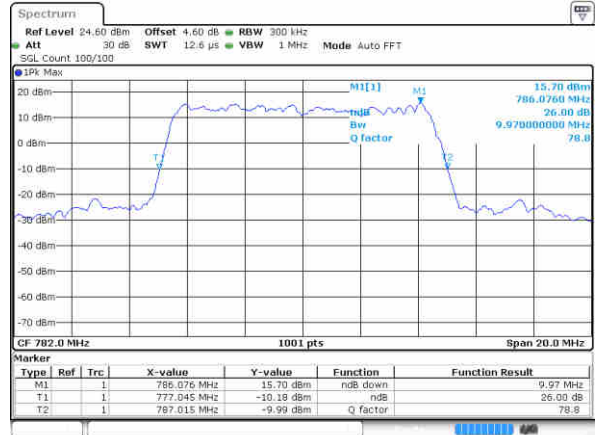
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 16 JAN 2020 16:45:56

Middle Channel / 10MHz / 16QAM

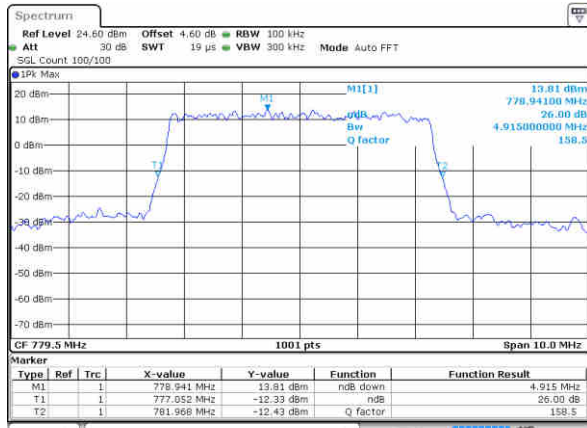


Date: 16 JAN 2020 16:45:46

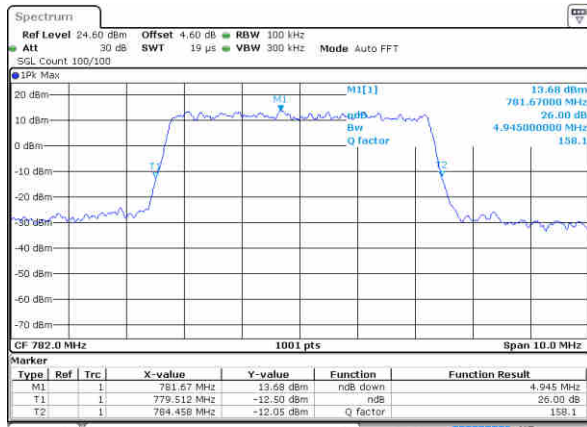


LTE Band 13

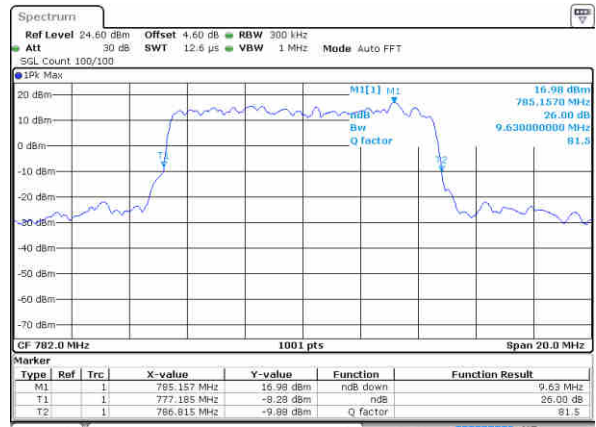
Lowest Channel / 5MHz / 64QAM



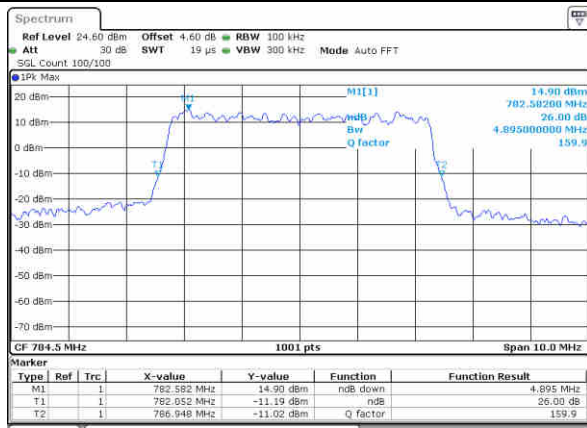
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



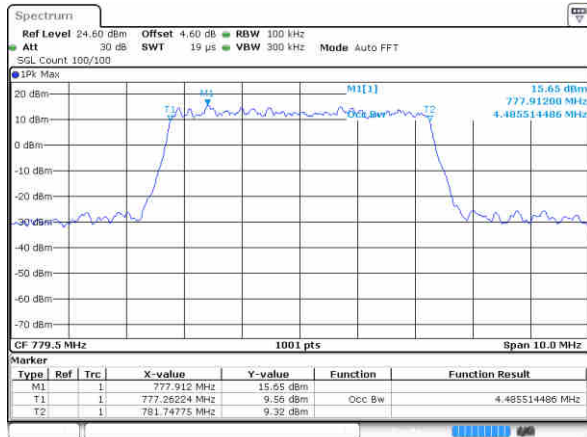
**Occupied Bandwidth**

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	5MHz		10MHz		5MHz		10MHz		-		-	
Mod.	QPSK	16QAM	QPSK	16QAM	64QAM	-	64QAM	-	-	-	-	-
Lowest CH	4.49	4.50	-	-	4.50	-	-	-	-	-	-	-
Middle CH	4.49	4.49	9.05	9.03	4.50	-	8.97	-	-	-	-	-
Highest CH	4.48	4.48	-	-	4.49	-	-	-	-	-	-	-

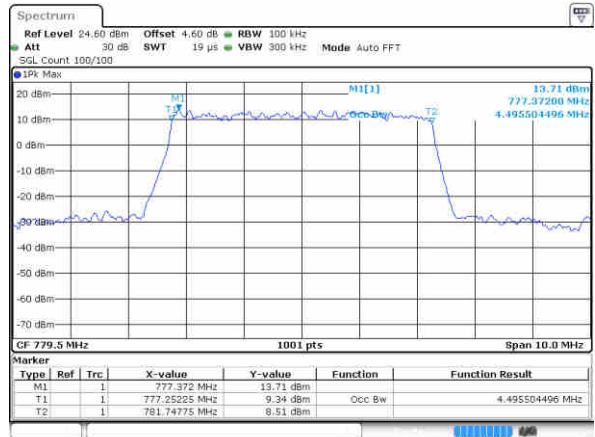


LTE Band 13

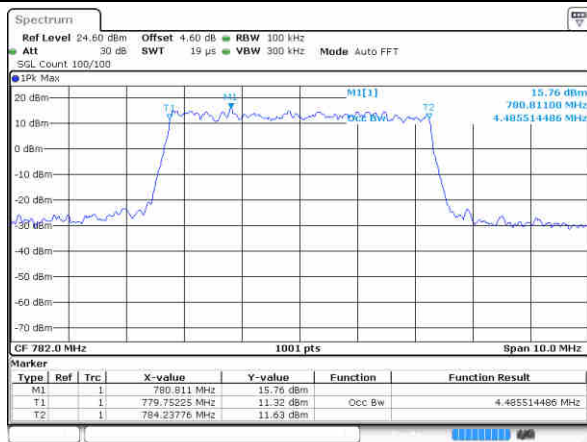
Lowest Channel / 5MHz / QPSK



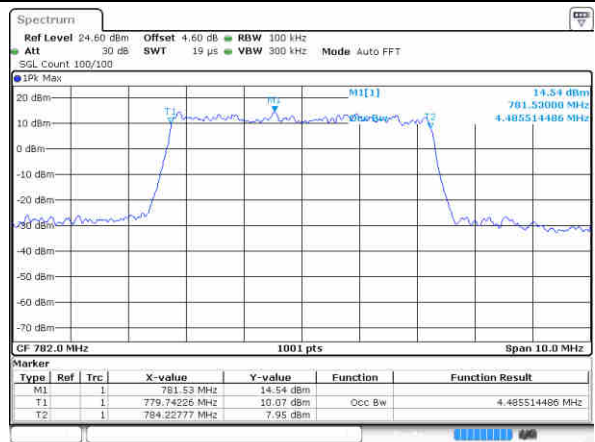
Lowest Channel / 5MHz / 16QAM



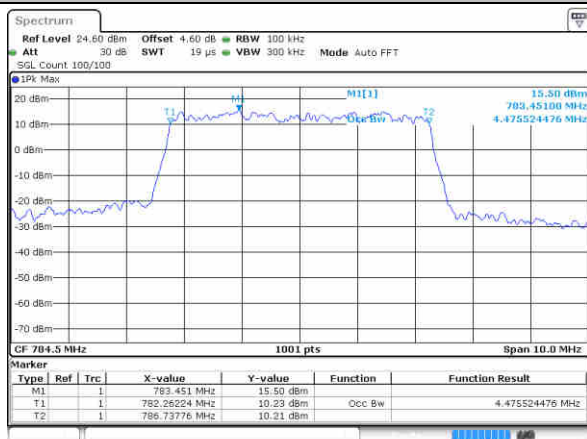
Middle Channel / 5MHz / QPSK



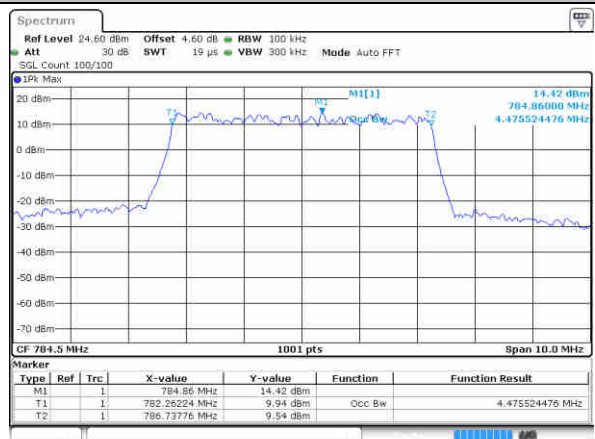
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



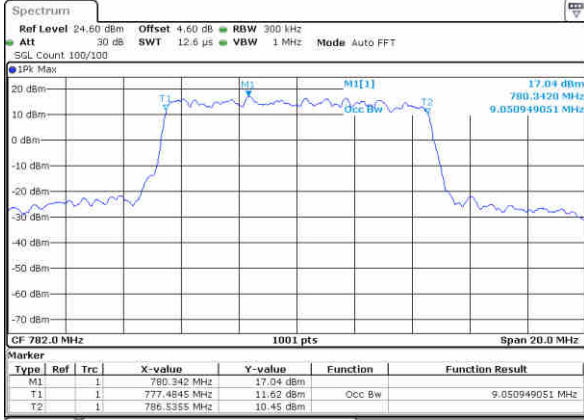
Highest Channel / 5MHz / 16QAM





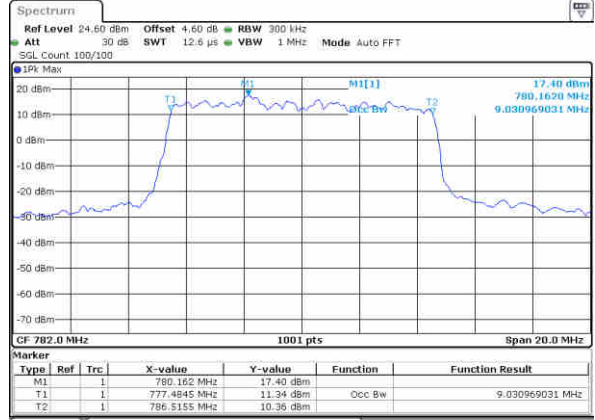
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 16 JAN 2020 16:46:06

Middle Channel / 10MHz / 16QAM

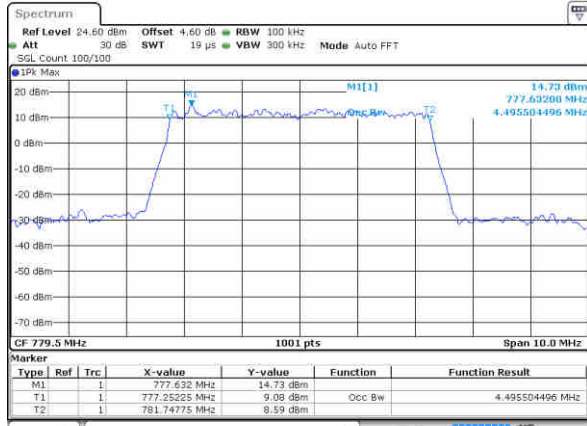


Date: 16 JAN 2020 16:46:16



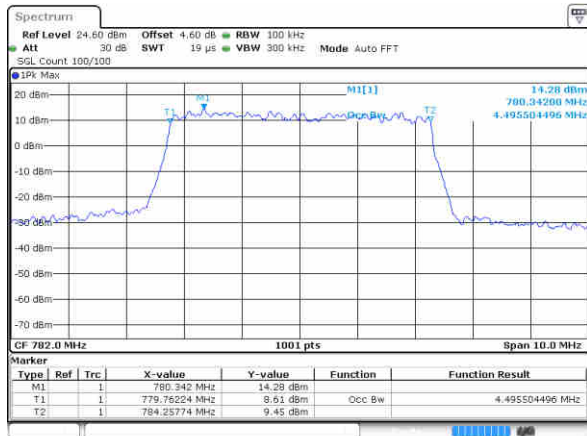
LTE Band 13

Lowest Channel / 5MHz / 64QAM



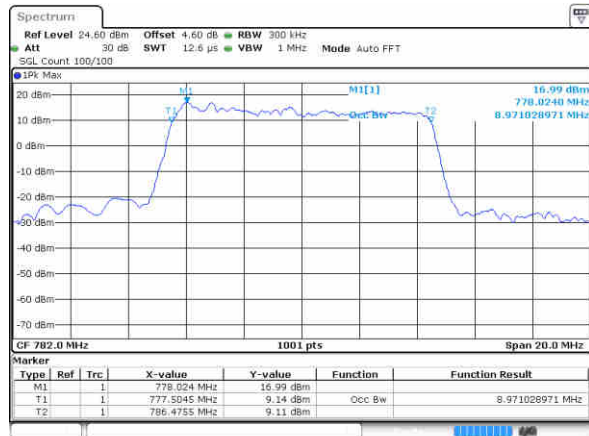
Date: 16 JAN 2020 16:58:12

Middle Channel / 5MHz / 64QAM



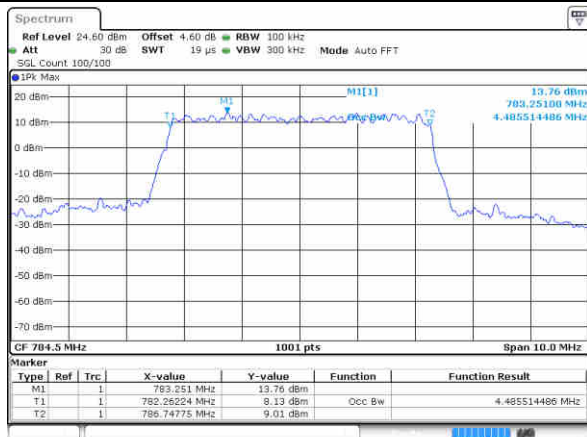
Date: 16 JAN 2020 16:58:21

Middle Channel / 10MHz / 64QAM

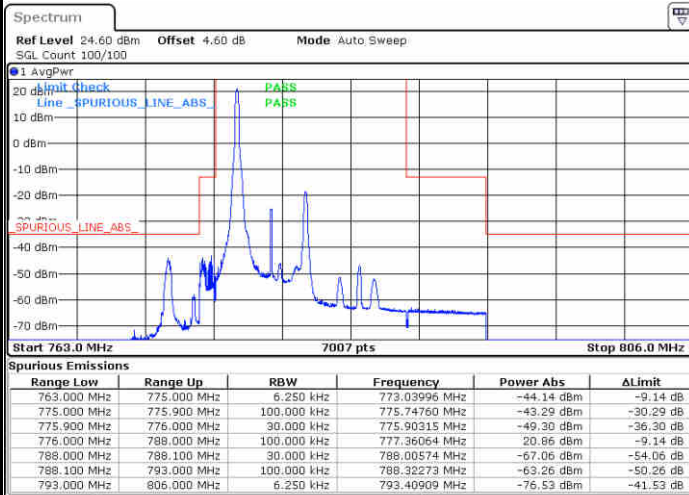
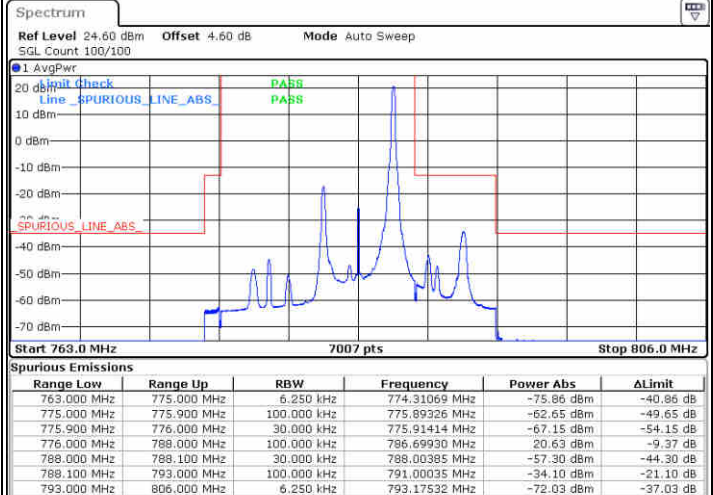
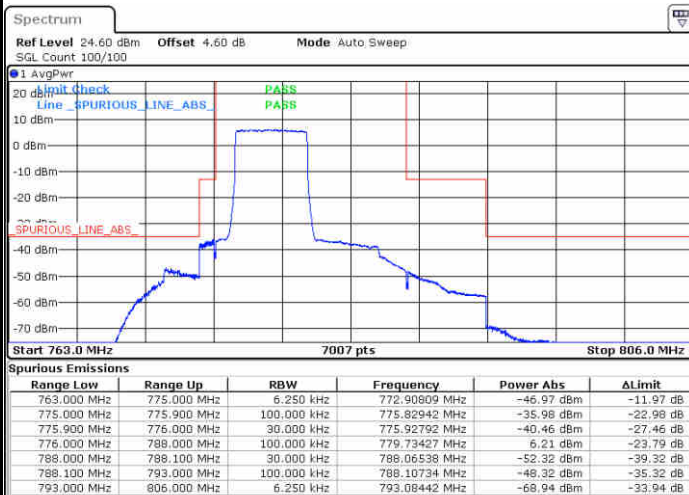


Date: 16 JAN 2020 17:06:24

Highest Channel / 5MHz / 64QAM



Date: 16 JAN 2020 16:58:31

**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**