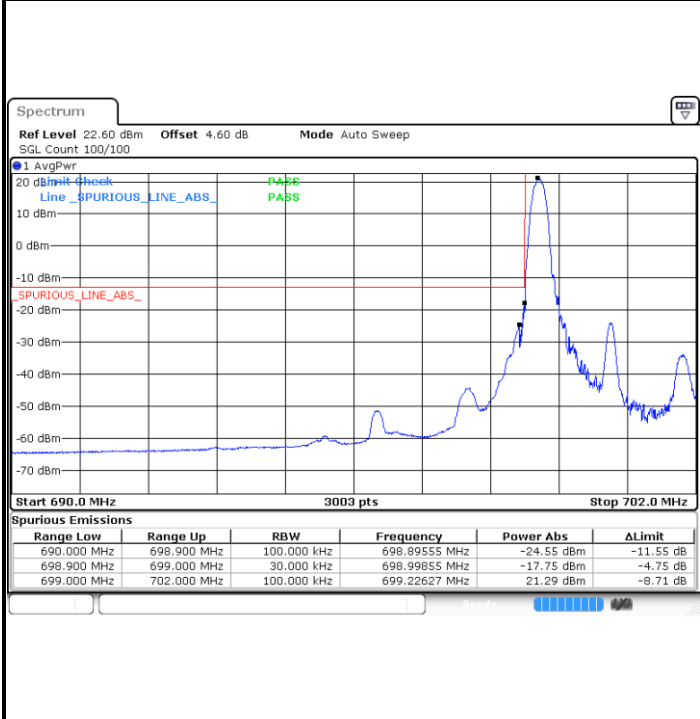


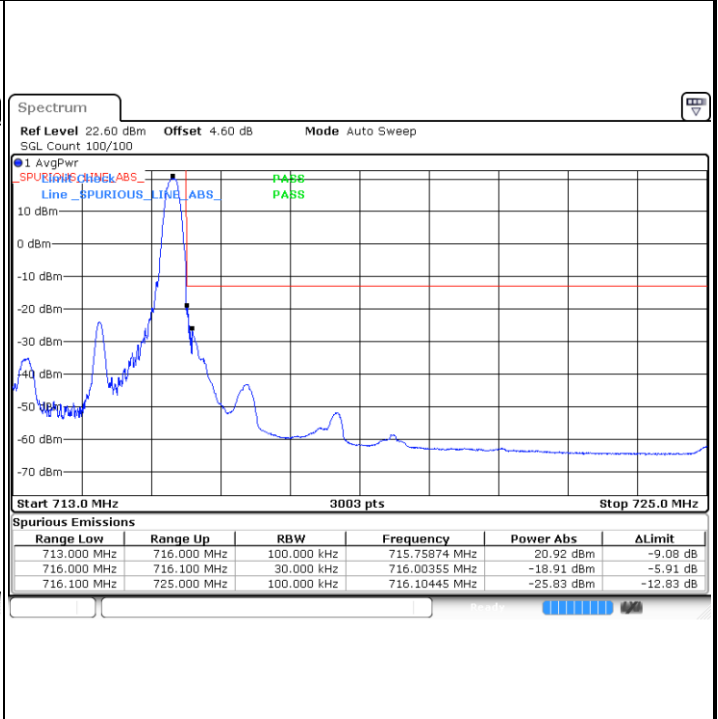


**LTE Band 12 / 3MHz / QPSK**

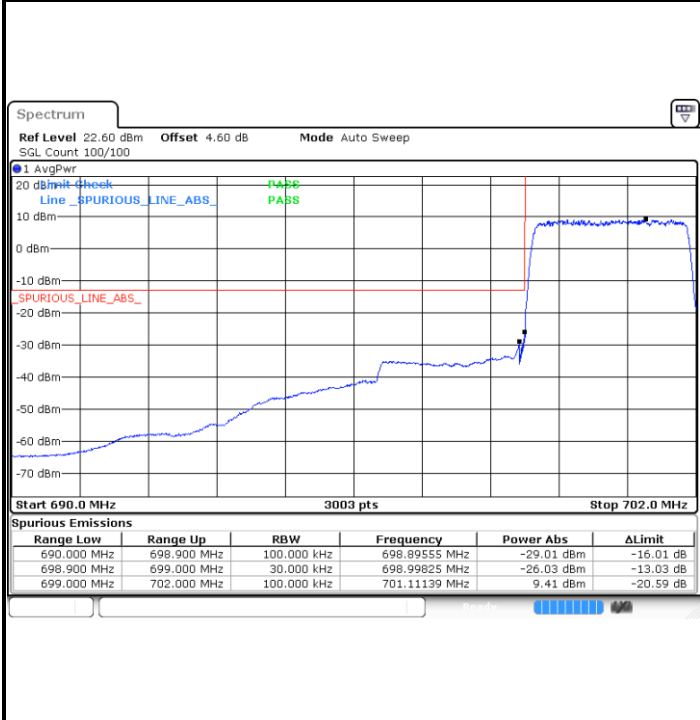
**Lowest Band Edge / 1RB**



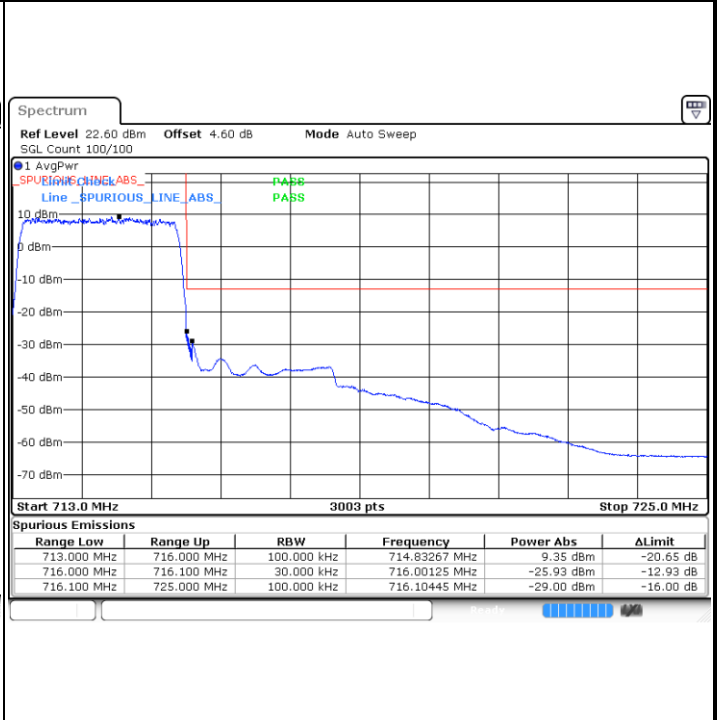
**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



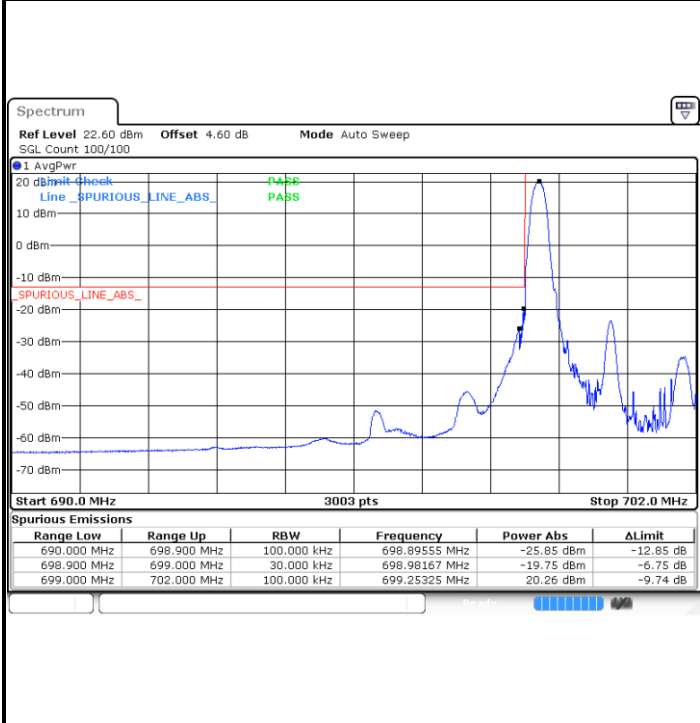
**Highest Band Edge / Full RB**



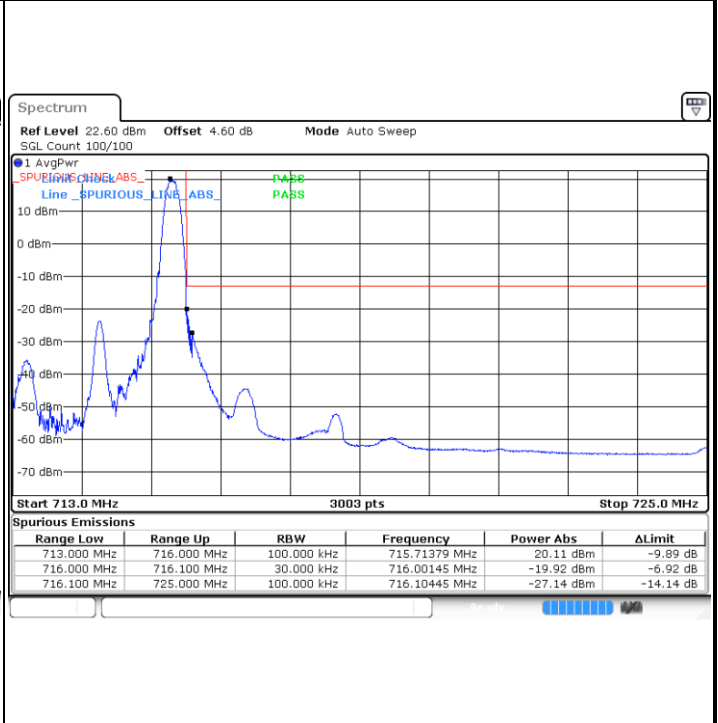


**LTE Band 12 / 3MHz / 16QAM**

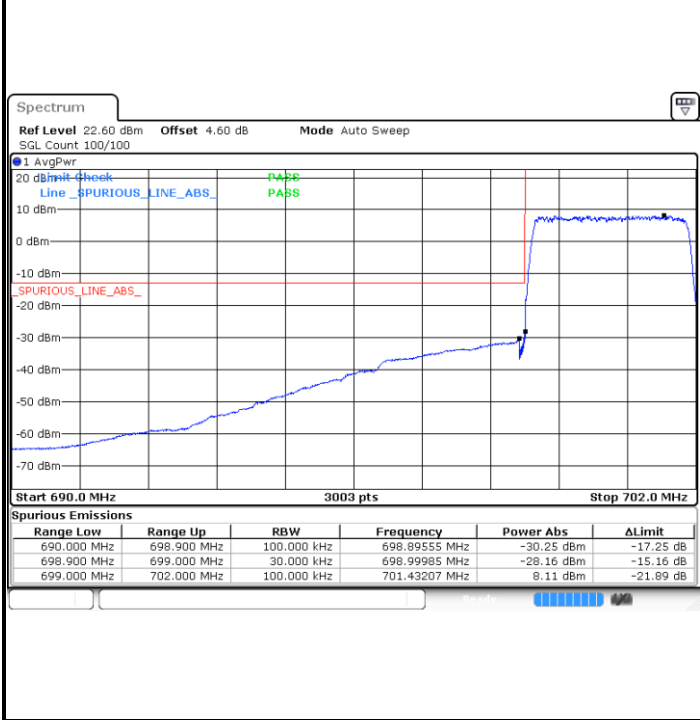
**Lowest Band Edge / 1 RB**



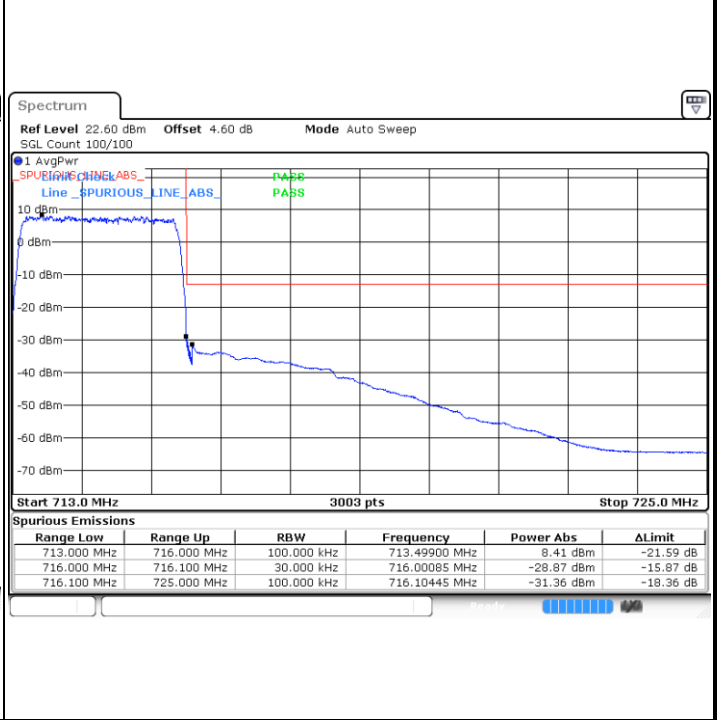
**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



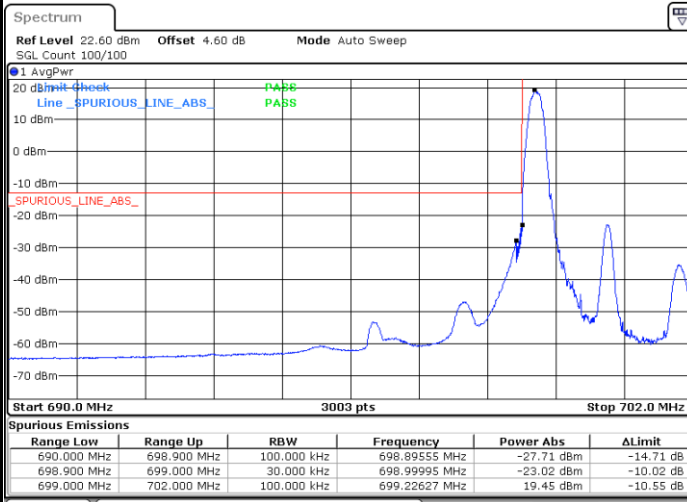
**Highest Band Edge / Full RB**



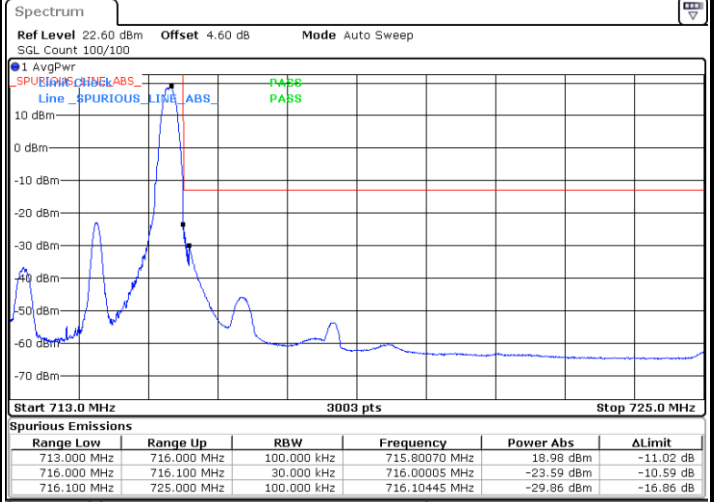


LTE Band 12 / 3MHz / 64QAM

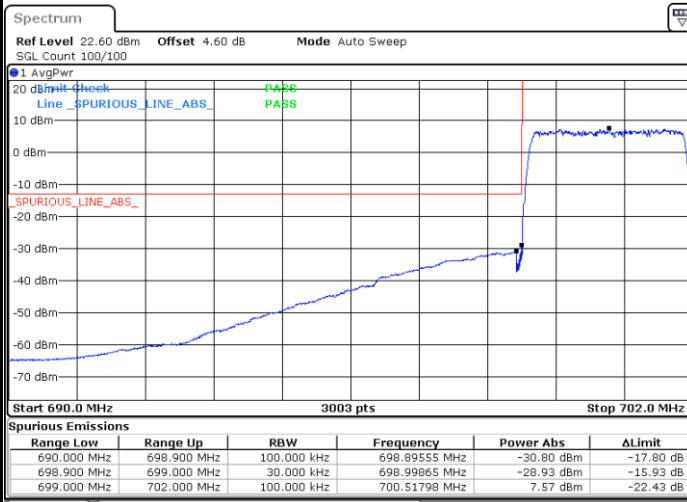
Lowest Band Edge / 1 RB



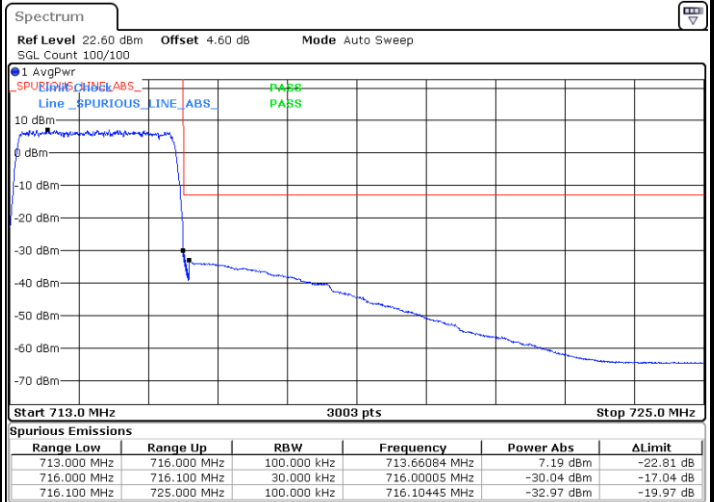
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



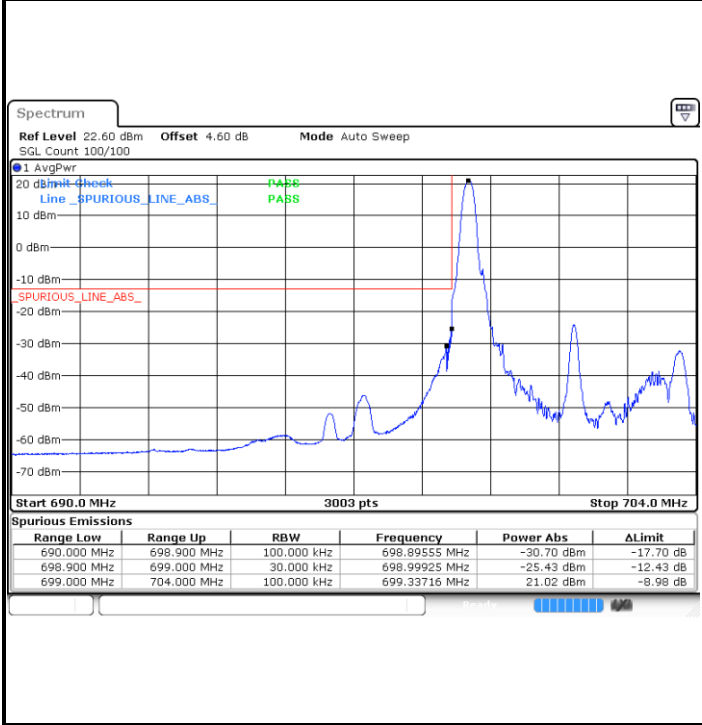
Highest Band Edge / Full RB



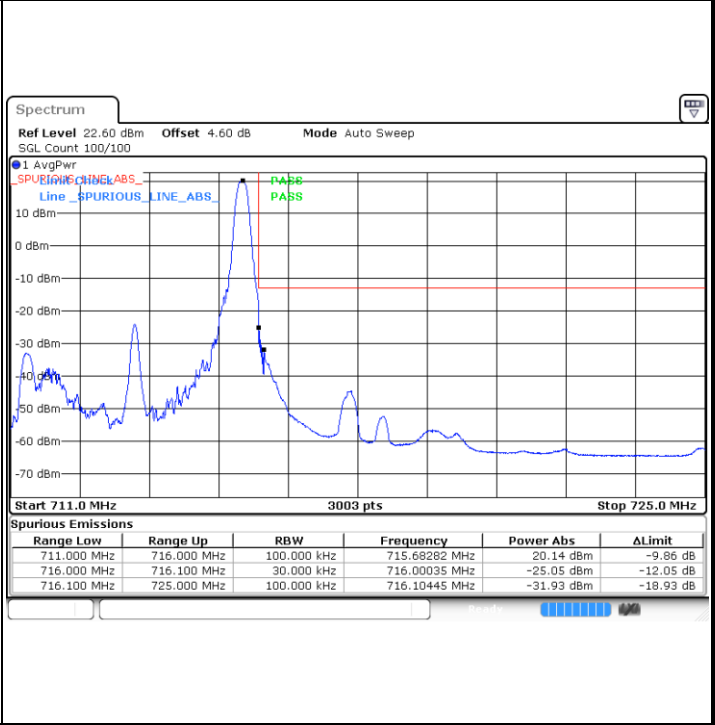


**LTE Band 12 / 5MHz / QPSK**

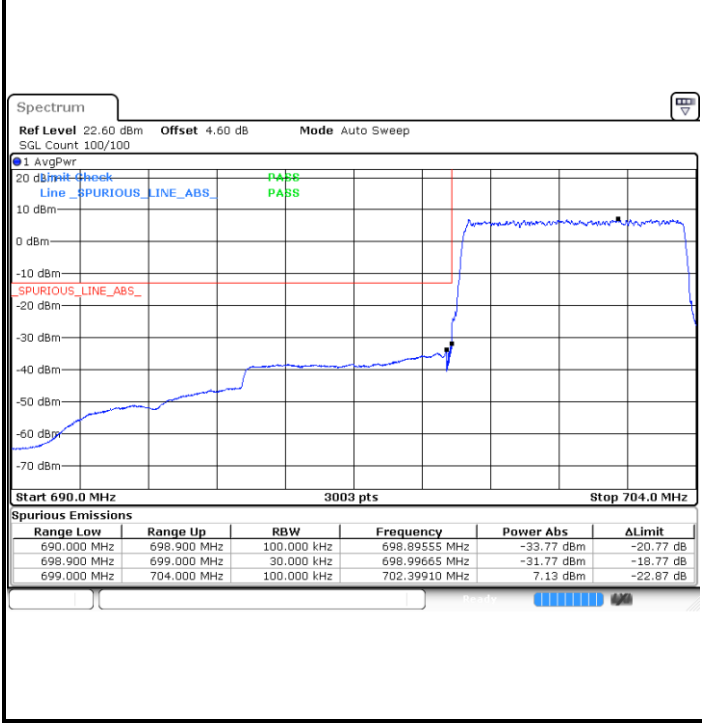
**Lowest Band Edge / 1 RB**



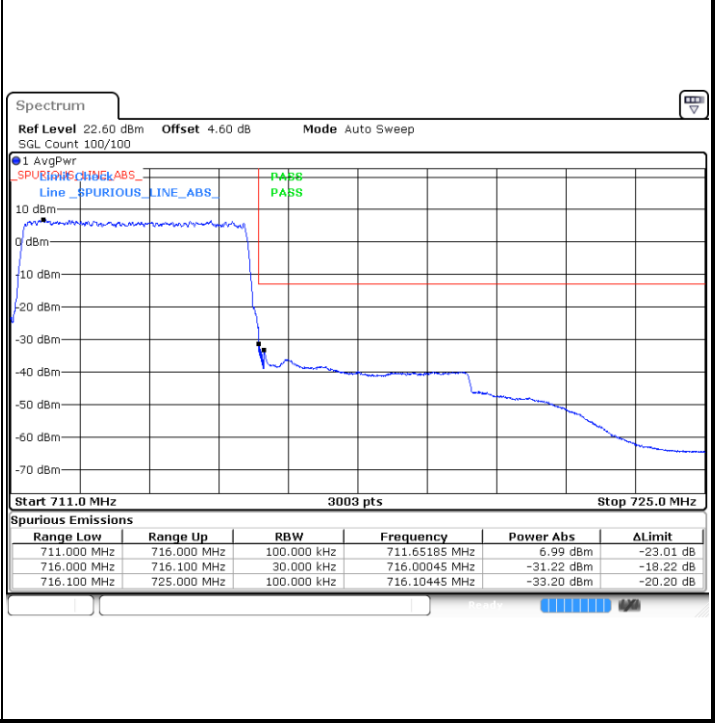
**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



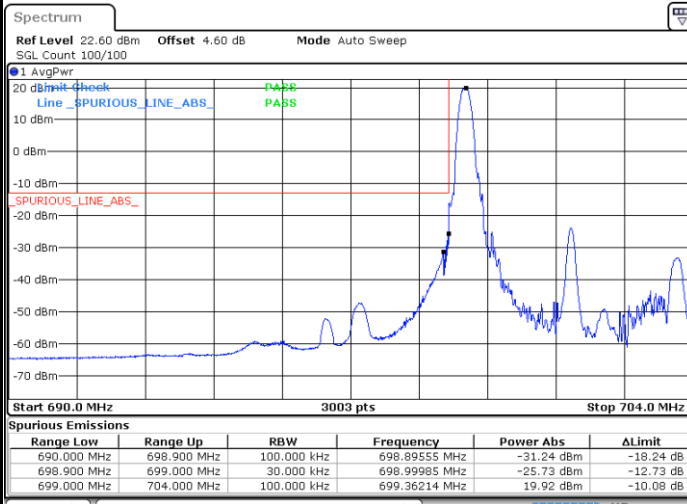
**Highest Band Edge / Full RB**



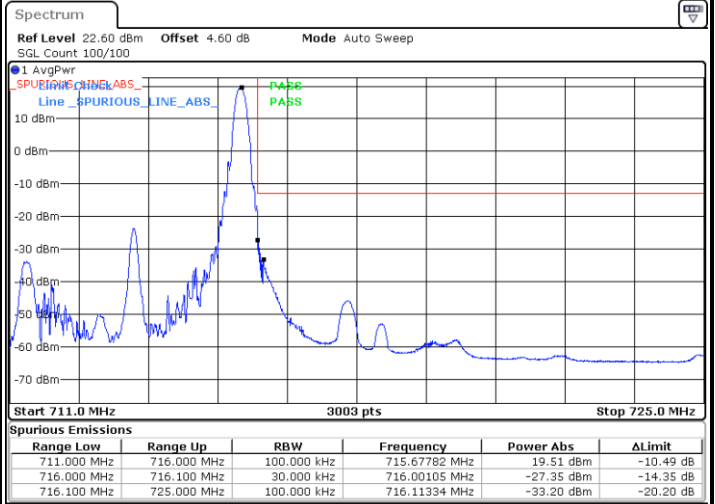


LTE Band 12 / 5MHz / 16QAM

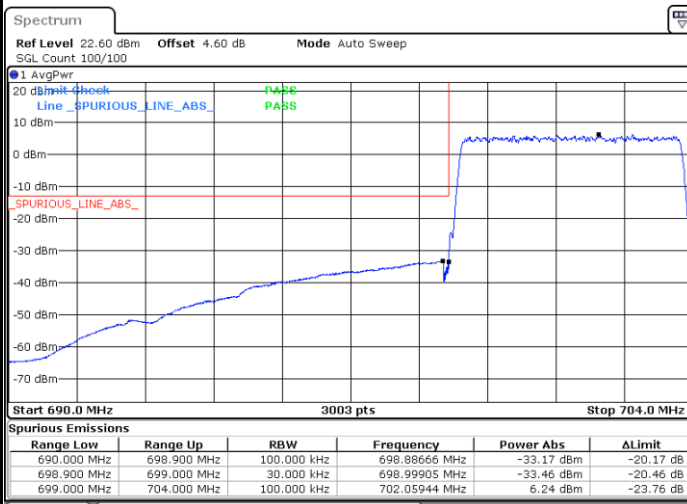
Lowest Band Edge / 1RB



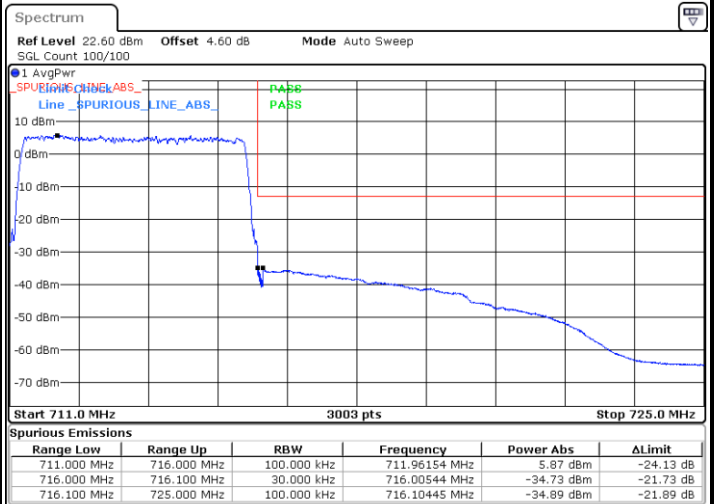
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



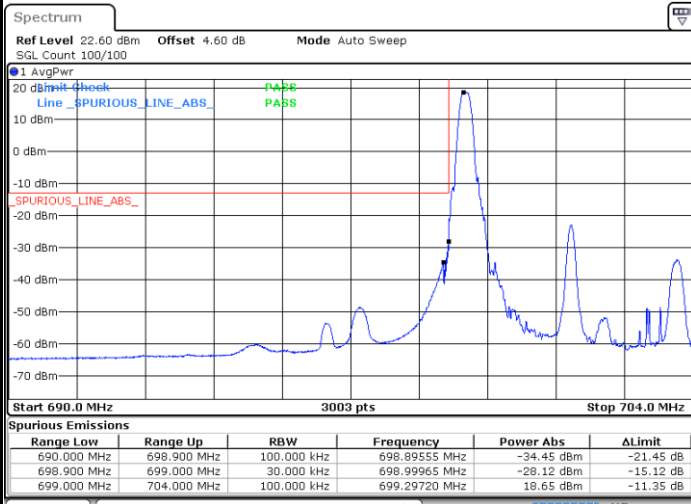
Highest Band Edge / Full RB



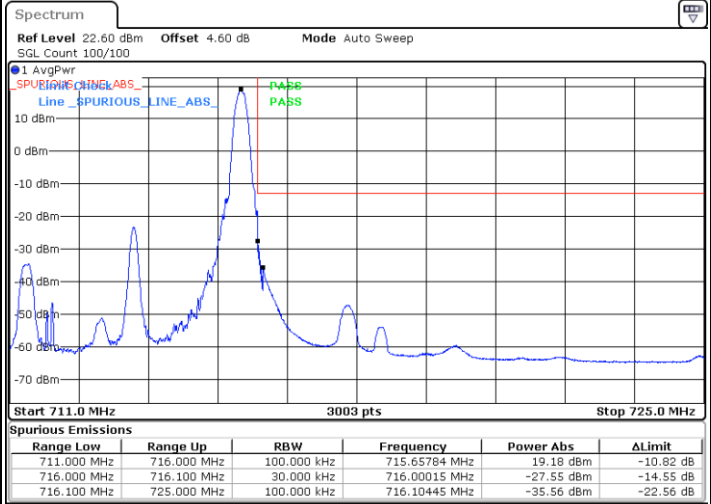


LTE Band 12 / 5MHz / 64QAM

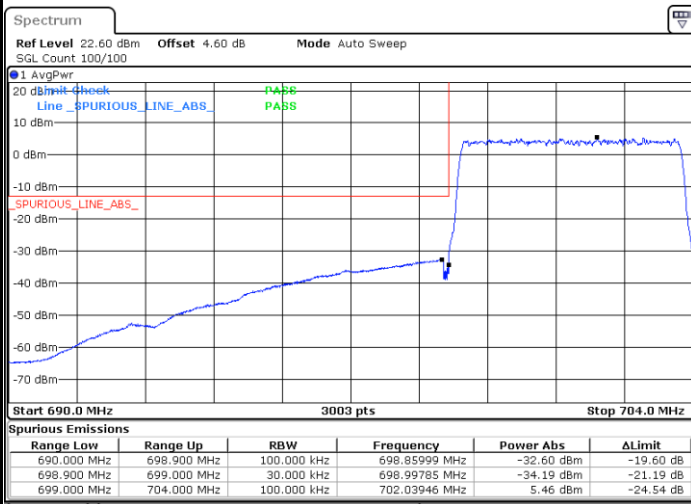
Lowest Band Edge / 1RB



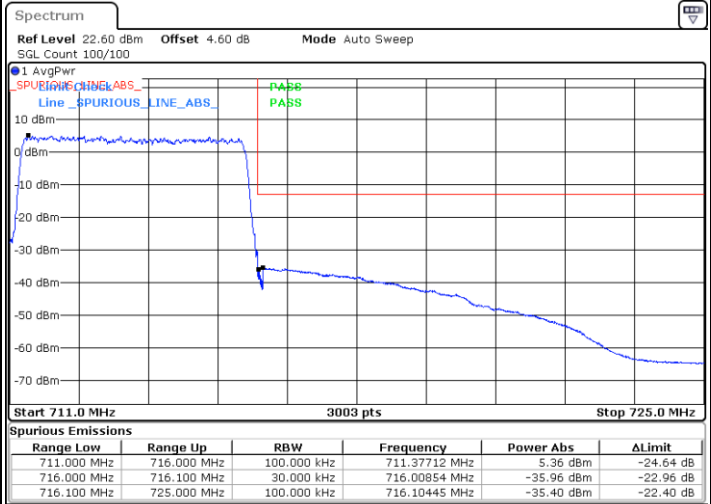
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



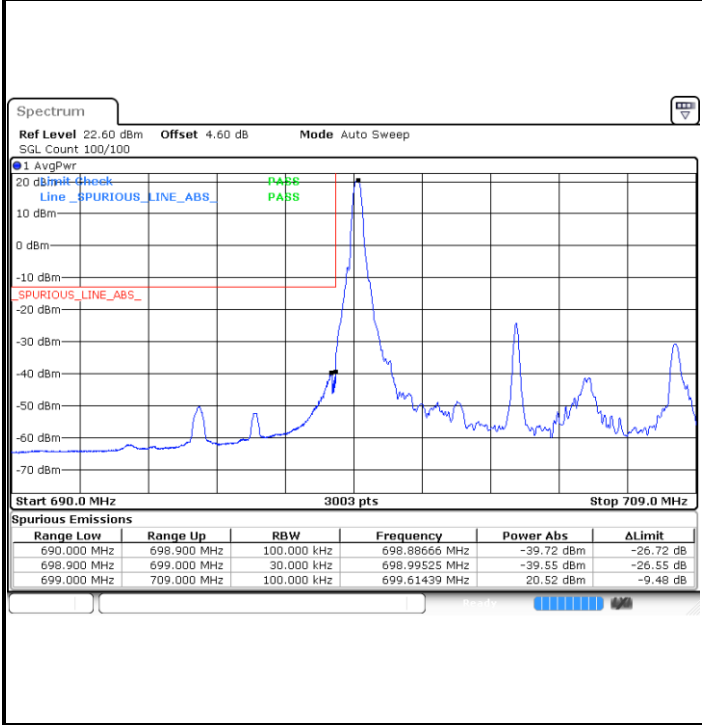
Highest Band Edge / Full RB



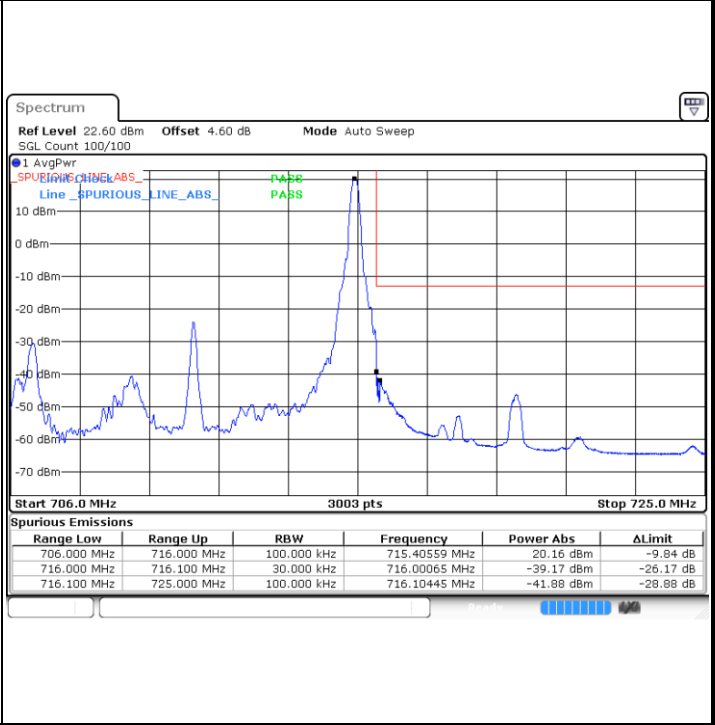


**LTE Band 12 / 10MHz / QPSK**

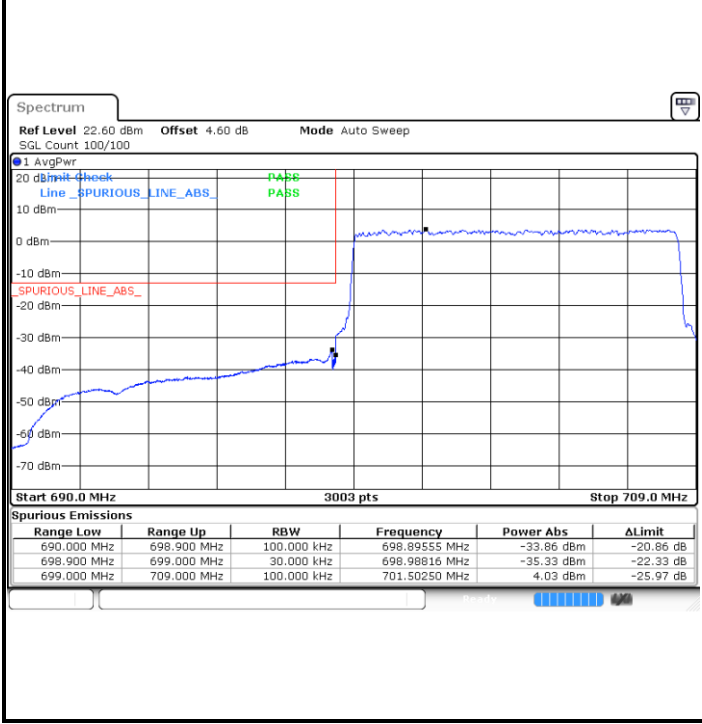
**Lowest Band Edge / 1 RB**



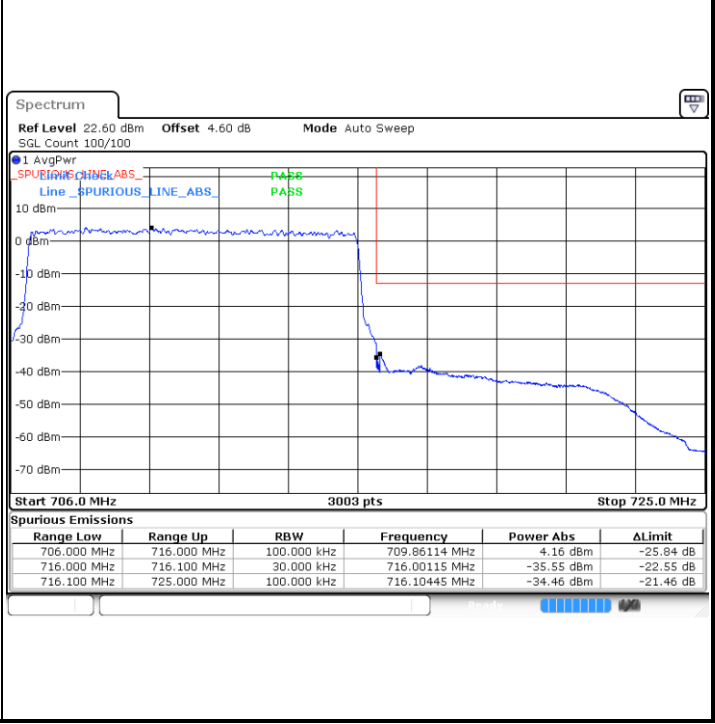
**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



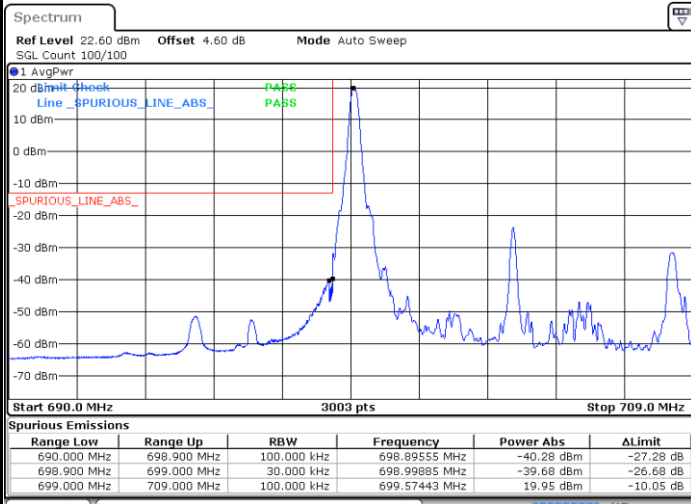
**Highest Band Edge / Full RB**



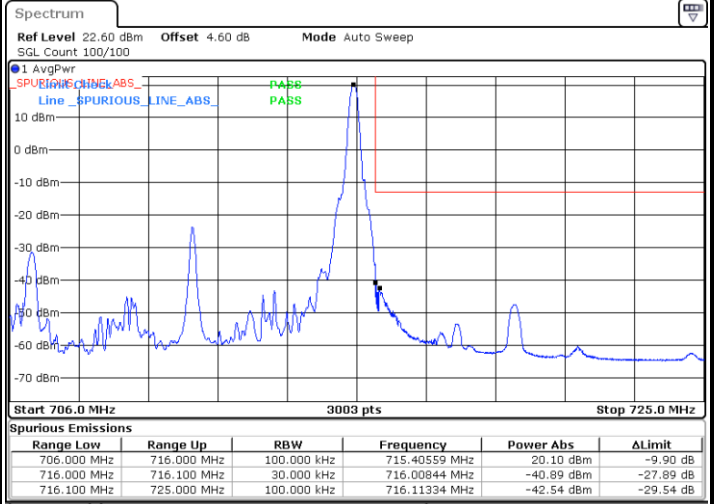


LTE Band 12 / 10MHz / 16QAM

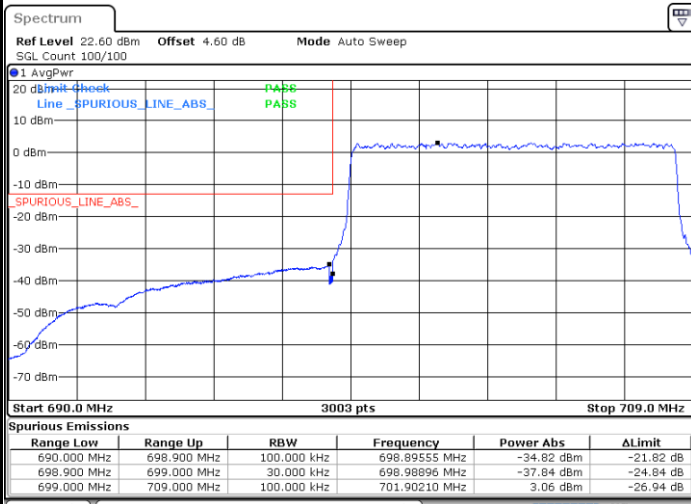
Lowest Band Edge / 1 RB



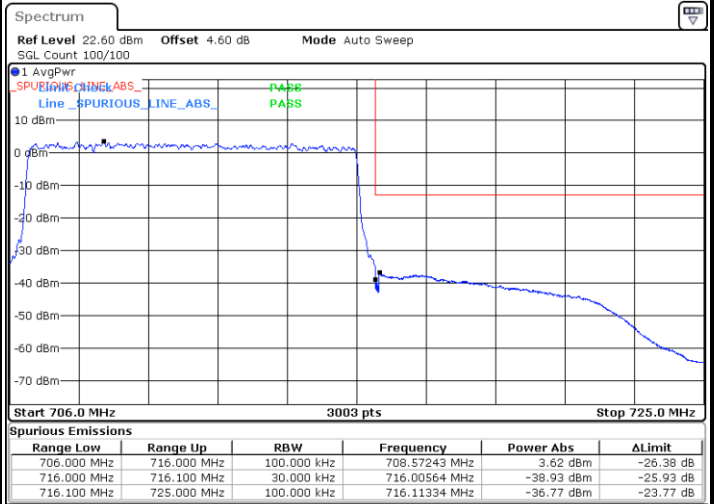
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



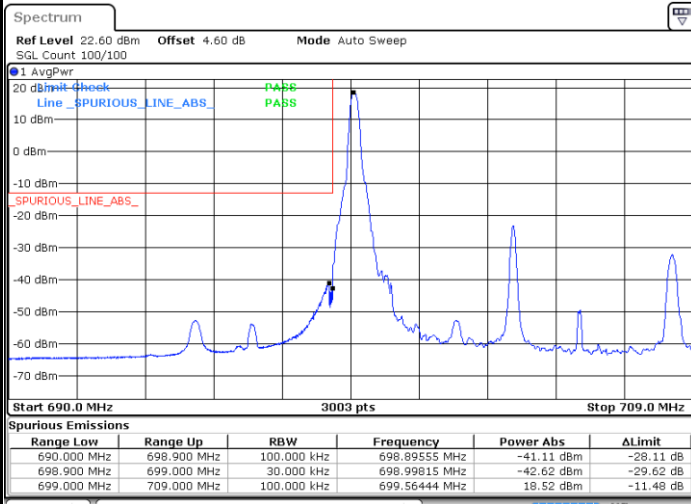
Highest Band Edge / Full RB



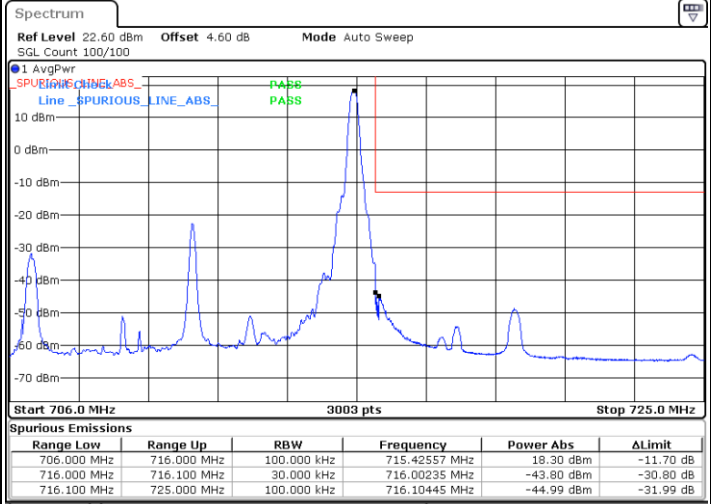


LTE Band 12 / 10MHz / 64QAM

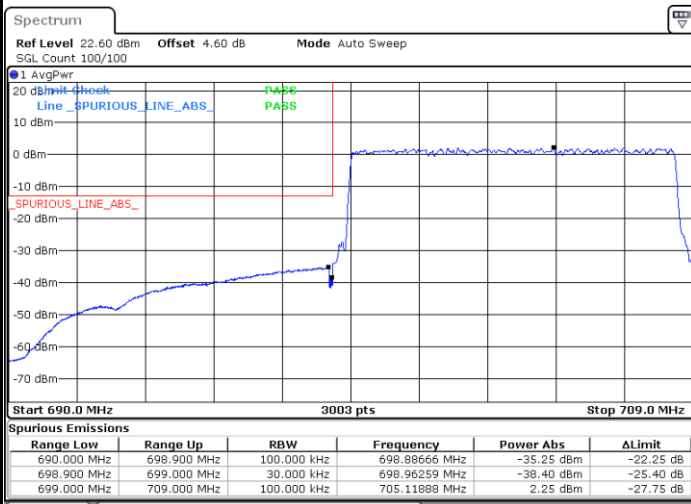
Lowest Band Edge / 1 RB



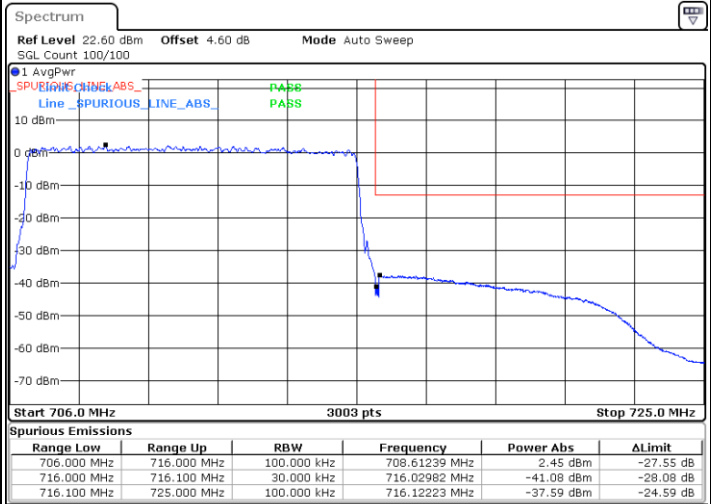
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

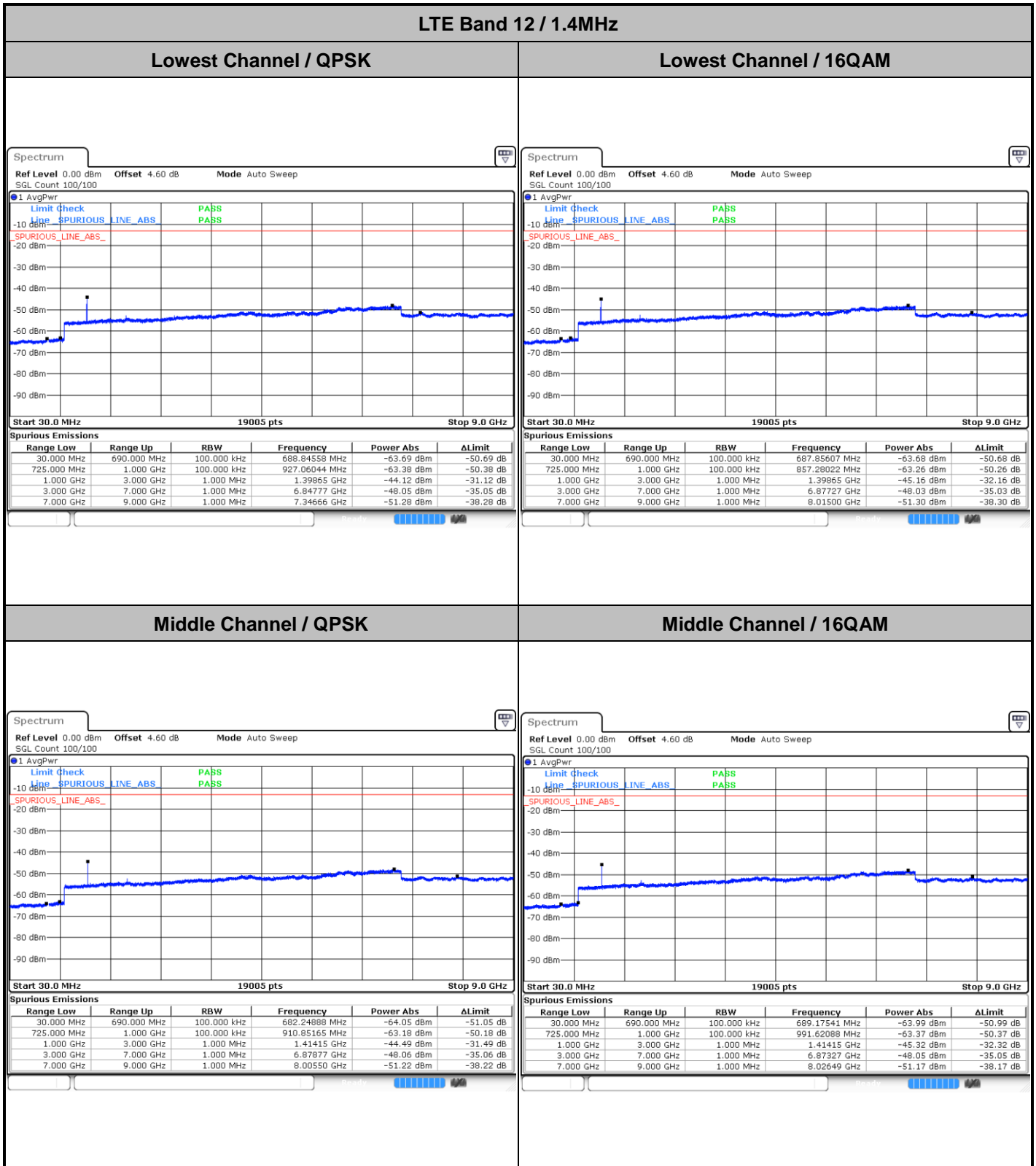


Highest Band Edge / Full RB





# Conducted Spurious Emission

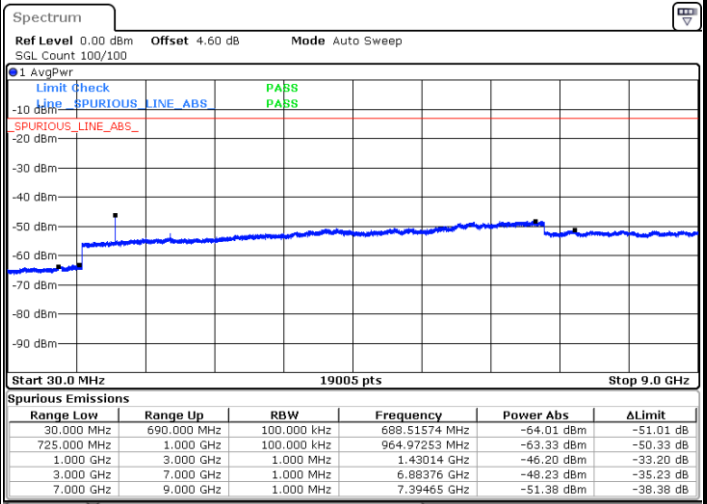
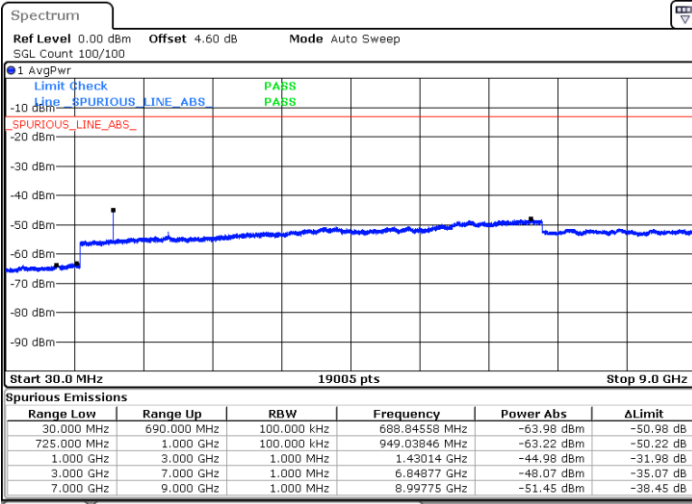




LTE Band 12 / 1.4MHz

Highest Channel / QPSK

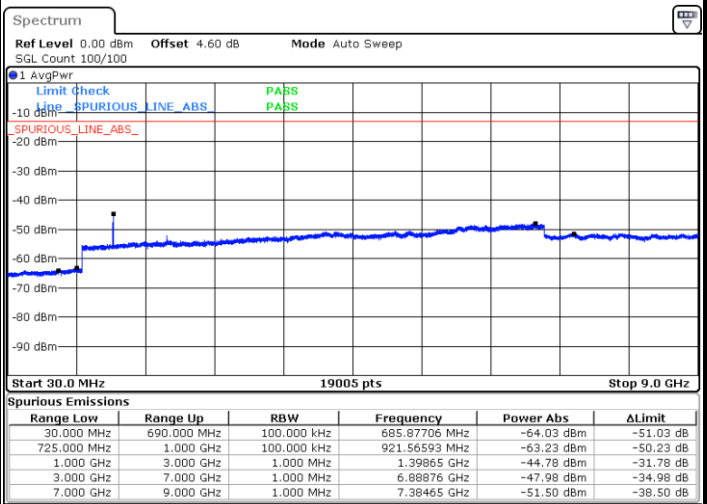
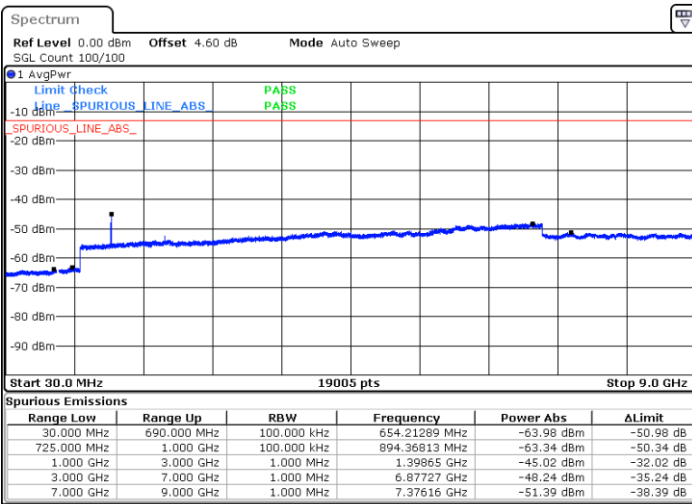
Highest Channel / 16QAM



LTE Band 12 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

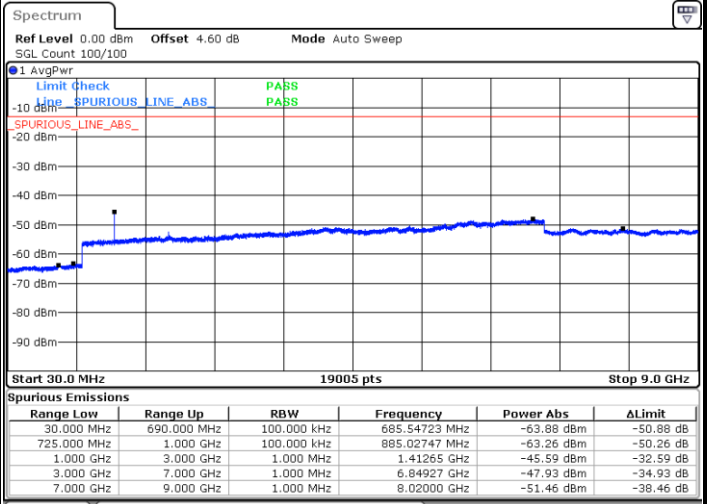
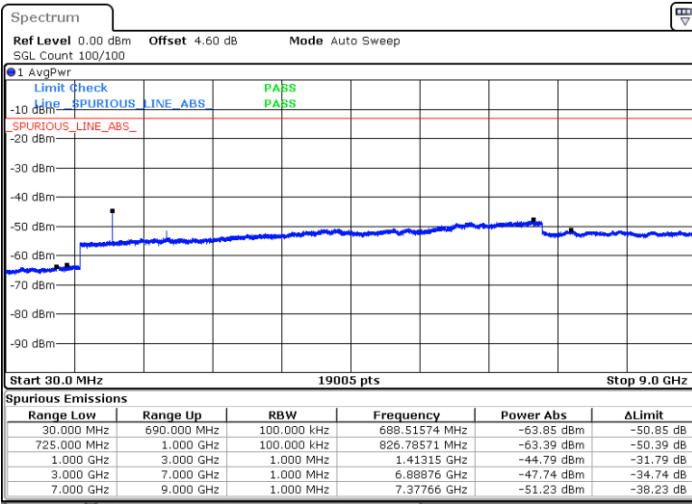




LTE Band 12 / 3MHz

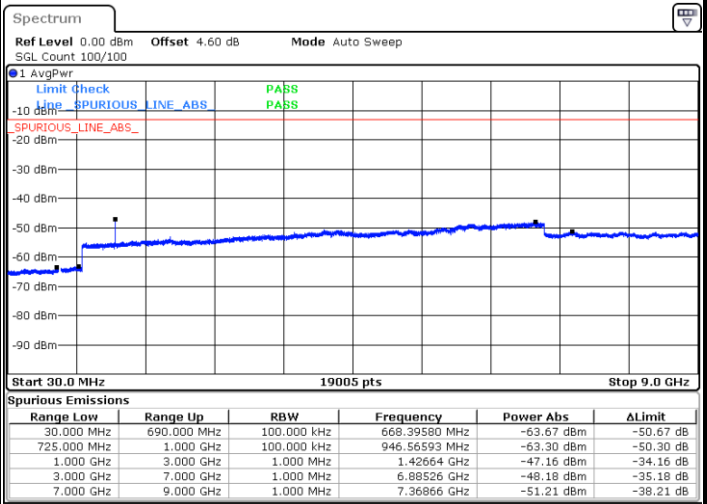
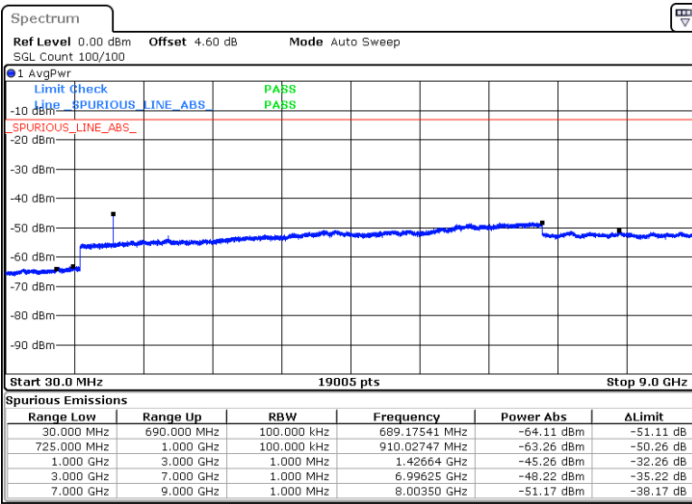
Middle Channel / QPSK

Middle Channel / 16QAM



Highest Channel / QPSK

Highest Channel / 16QAM

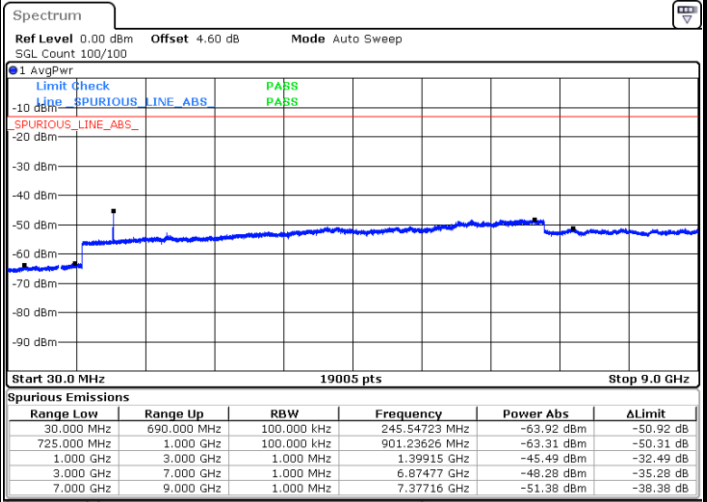
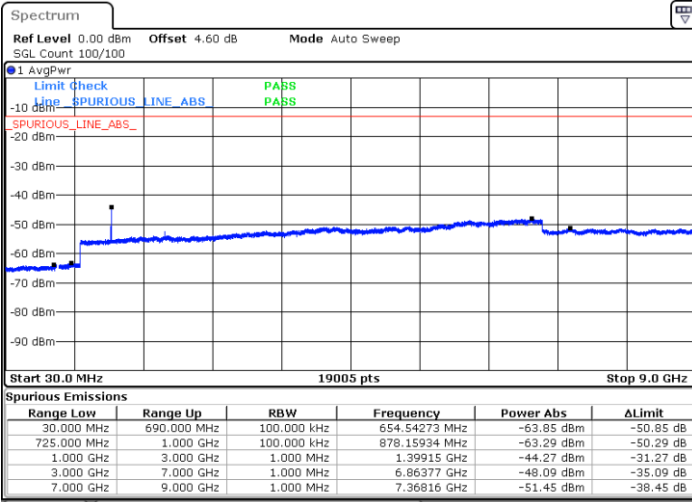




LTE Band 12 / 5MHz

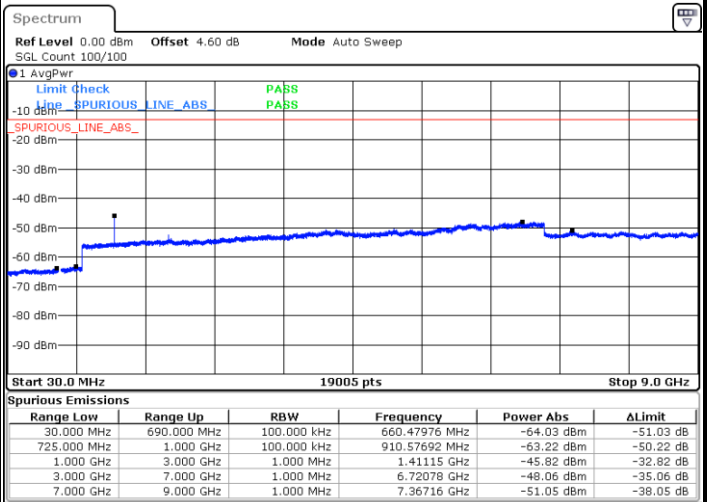
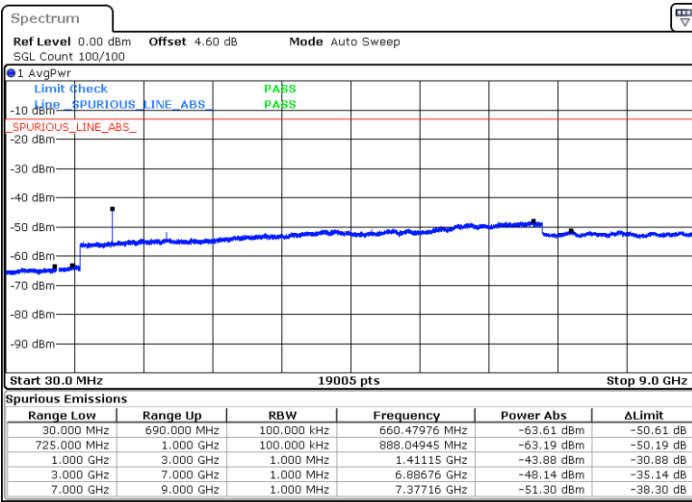
Lowest Channel / QPSK

Lowest Channel / 16QAM



Middle Channel / QPSK

Middle Channel / 16QAM

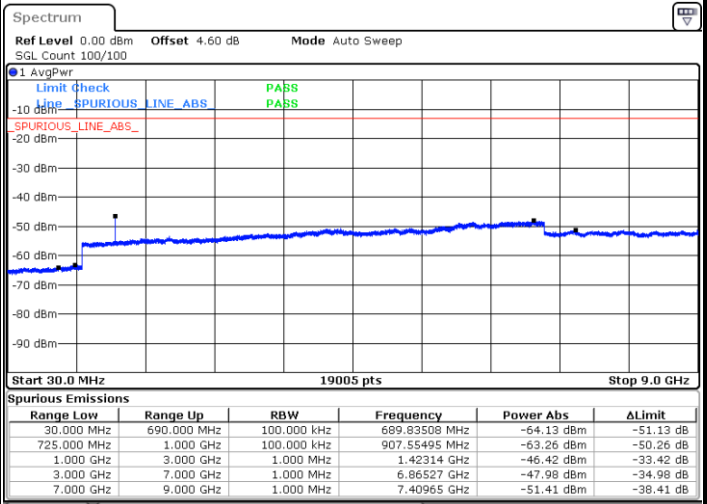
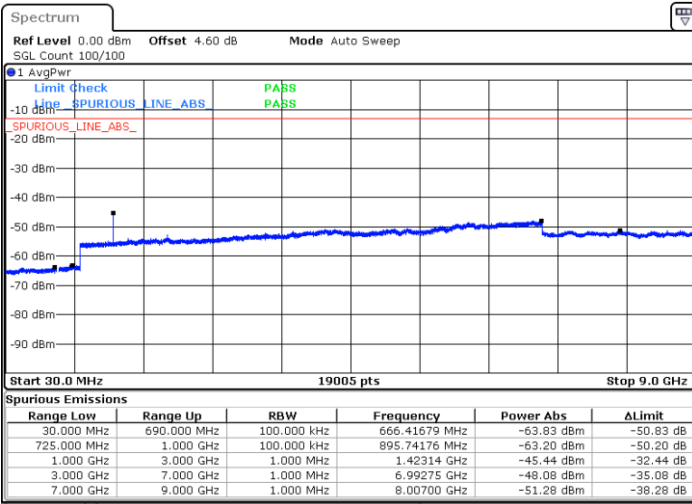




LTE Band 12 / 5MHz

Highest Channel / QPSK

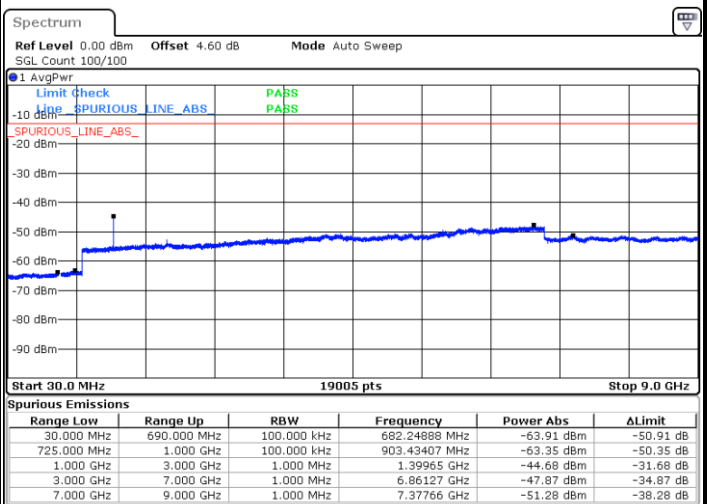
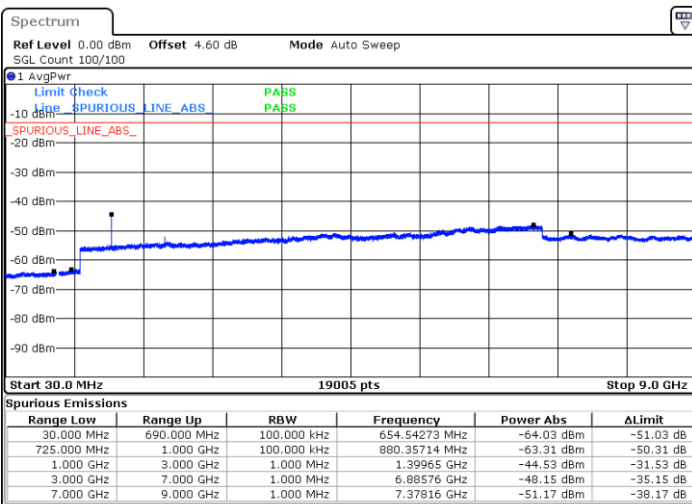
Highest Channel / 16QAM



LTE Band 12 / 10MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

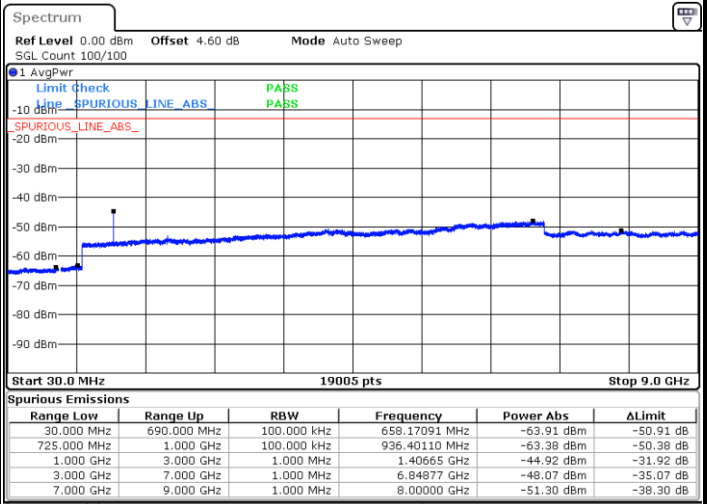
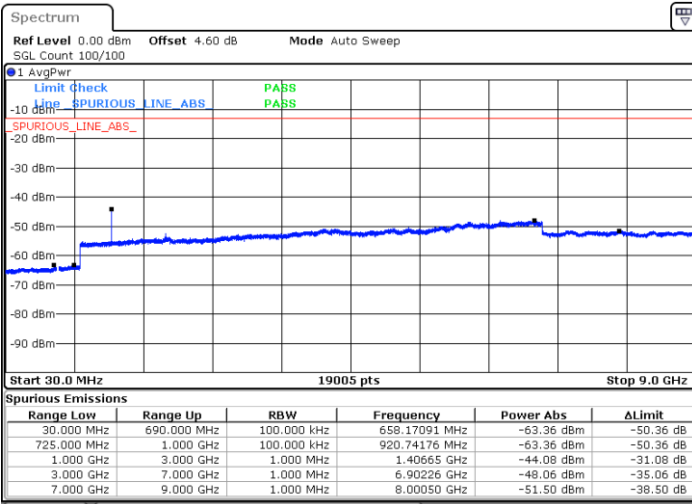




LTE Band 12 / 10MHz

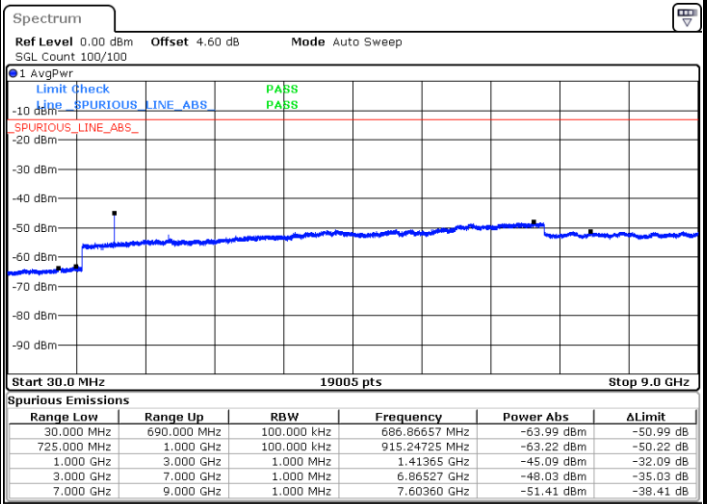
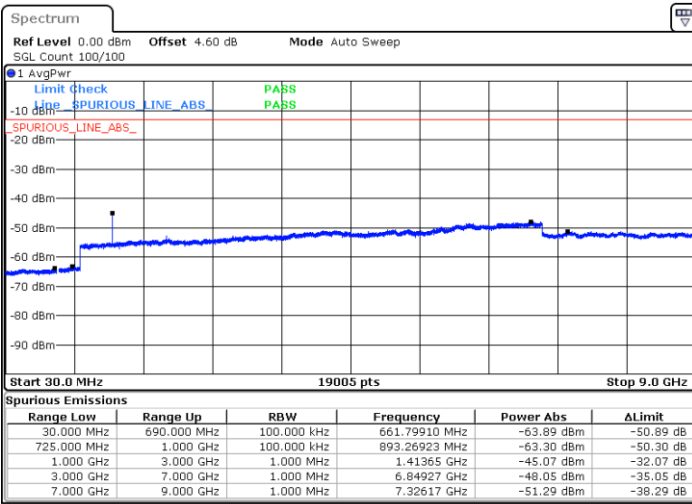
Middle Channel / QPSK

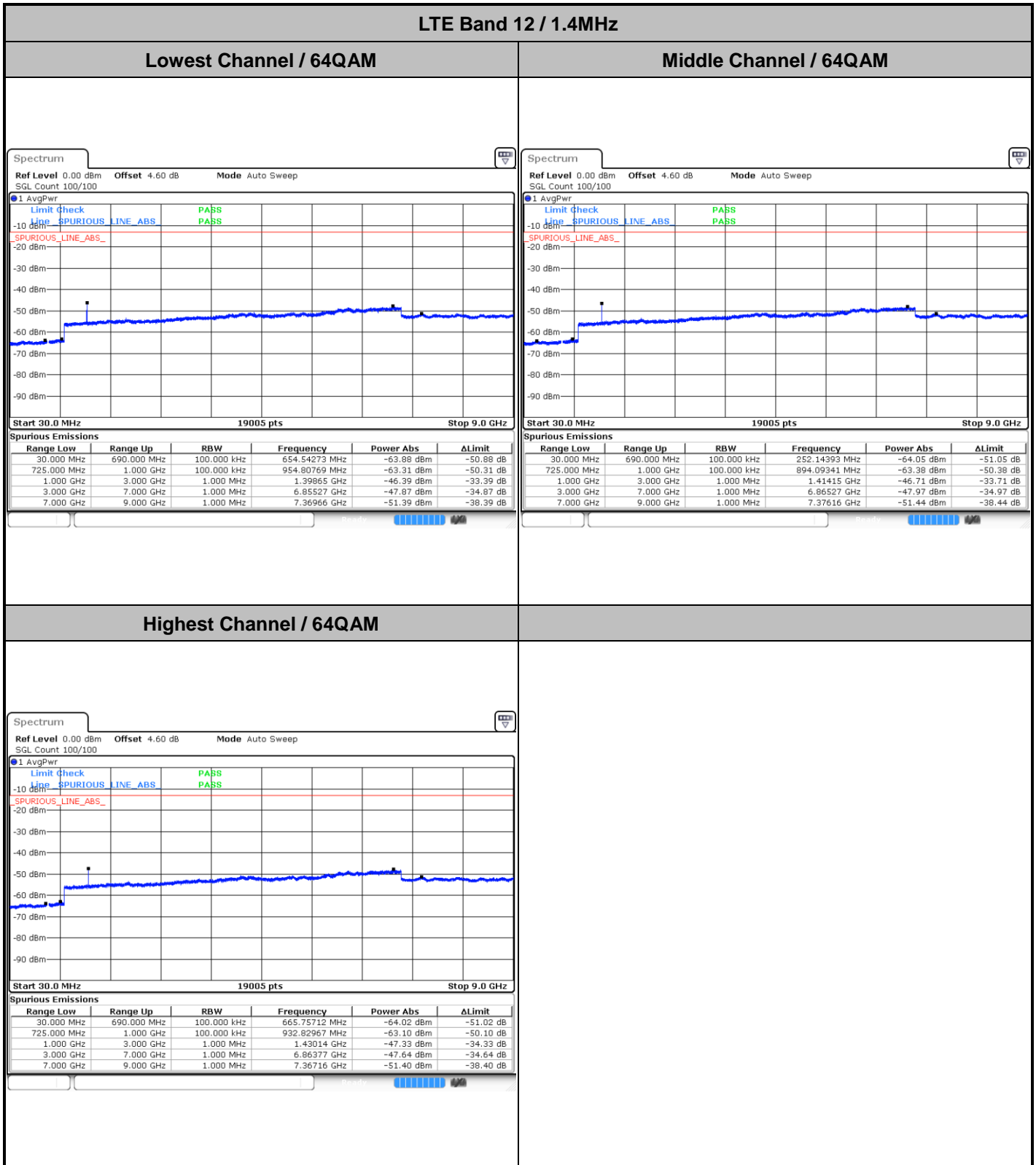
Middle Channel / 16QAM



Highest Channel / QPSK

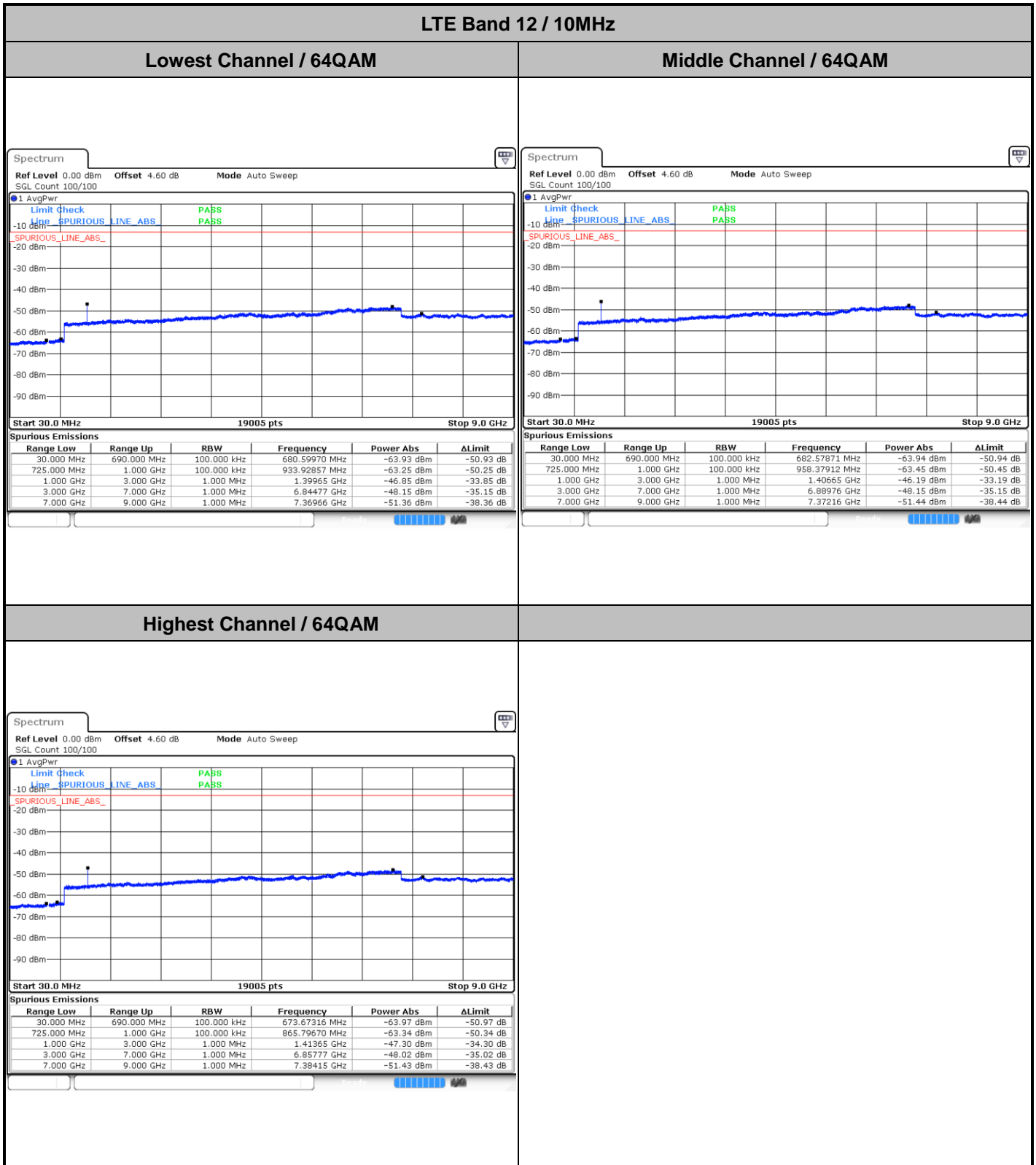
Highest Channel / 16QAM













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	0.0010	PASS
40	Normal Voltage	0.0023	
30	Normal Voltage	0.0089	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0100	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0021	
-20	Normal Voltage	0.0075	
-30	Normal Voltage	0.0066	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0008	
20	Battery End Point	0.0105	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 13

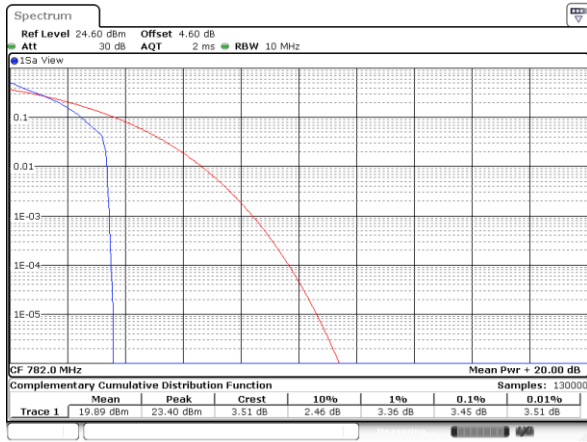
## Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH		-	-	-	<b>PASS</b>
Middle CH	3.45	4.90	4.93	6.14	
Highest CH	-	-	-	-	
Mod.	64QAM		Limit: 13dB		
RB Size	1RB	Full RB	Result		
Lowest CH			<b>PASS</b>		
Middle CH	4.84	6.09			
Highest CH					



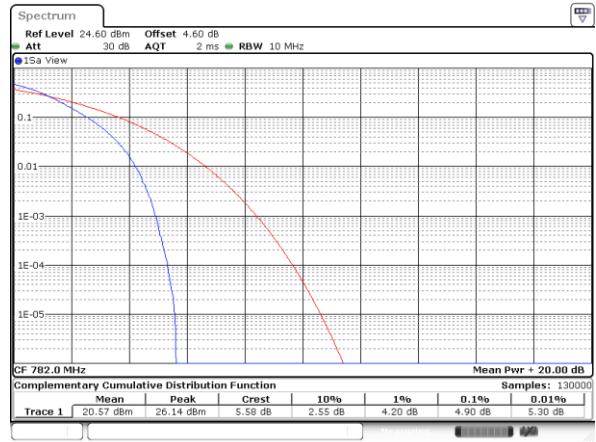
LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB



Date: 14.OCT.2019 21:08:11

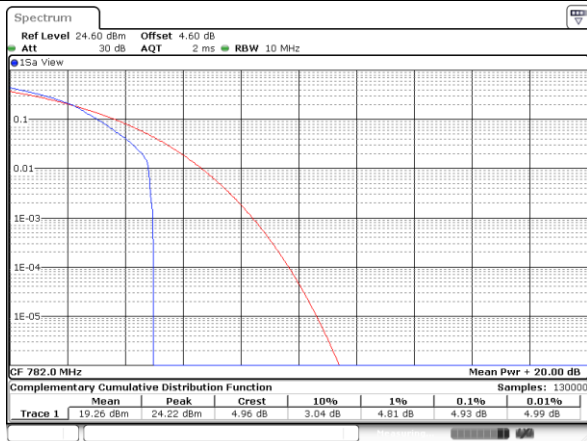
Middle Channel / Full RB



Date: 14.OCT.2019 21:09:07

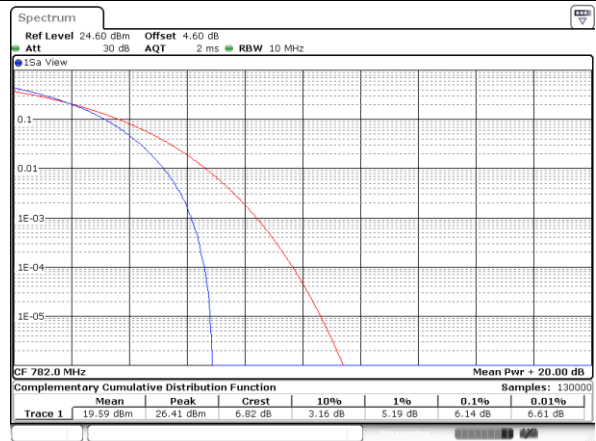
LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB



Date: 14.OCT.2019 21:08:22

Middle Channel / Full RB



Date: 14.OCT.2019 21:08:56

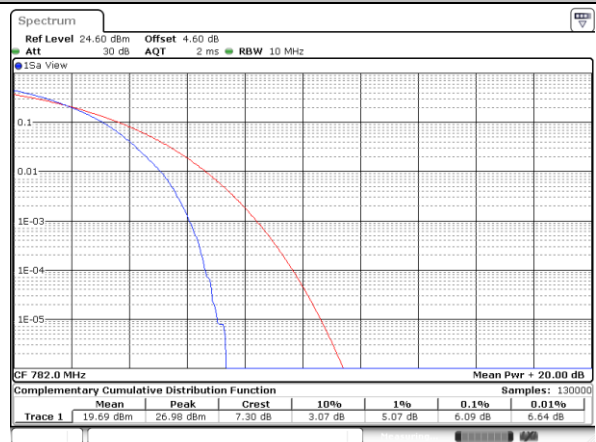
LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Date: 14.OCT.2019 21:08:33

Middle Channel / Full RB



Date: 14.OCT.2019 21:08:46



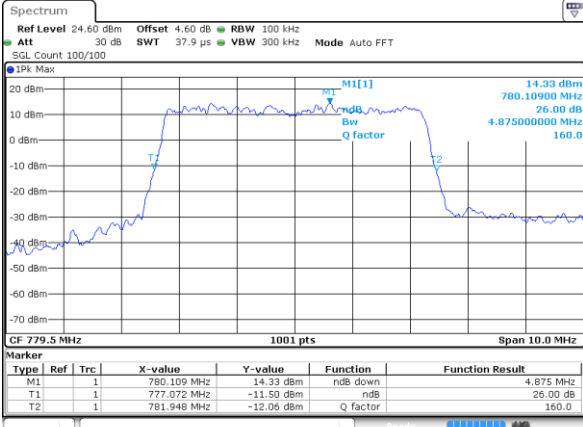
26dB Bandwidth

Mode	LTE Band 13 : 26dB BW(MHz)										
BW	5MHz		10MHz		5MHz	10MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM					
Lowest CH	4.875	4.885			4.905						
Middle CH	4.935	4.885	9.83	9.71	4.845	9.77					
Highest CH	4.875	4.975			4.875						



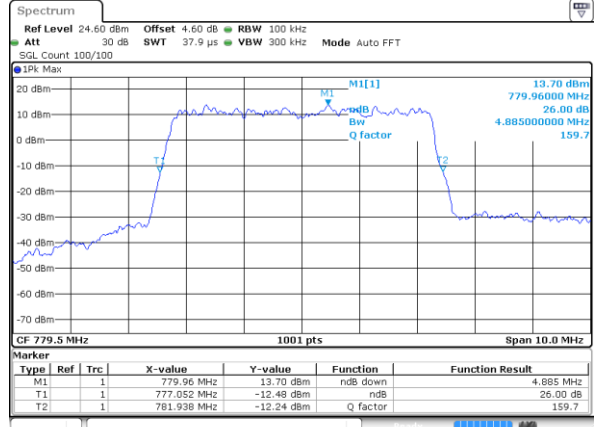
LTE Band 13

Lowest Channel / 5MHz / QPSK



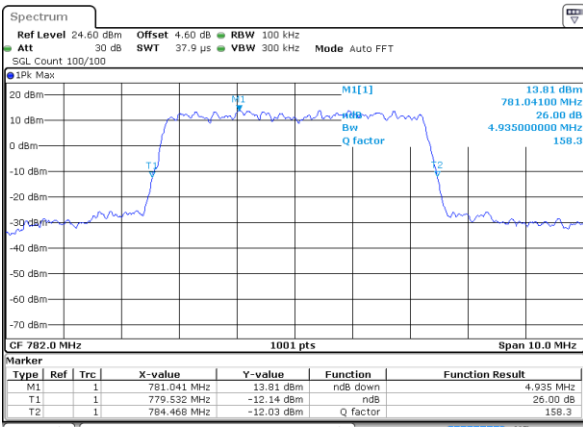
Date: 14.OCT.2019 21:27:51

Lowest Channel / 5MHz / 16QAM



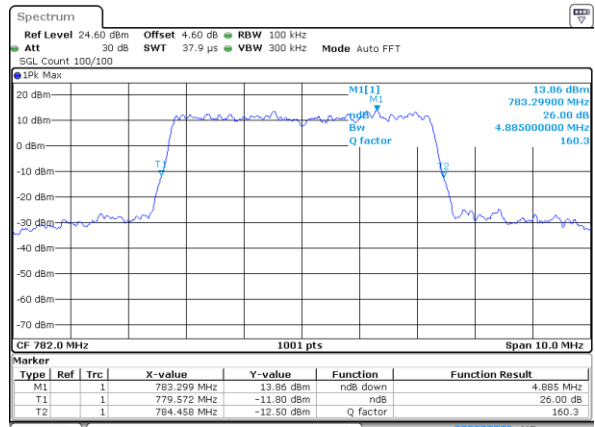
Date: 14.OCT.2019 21:28:01

Middle Channel / 5MHz / QPSK



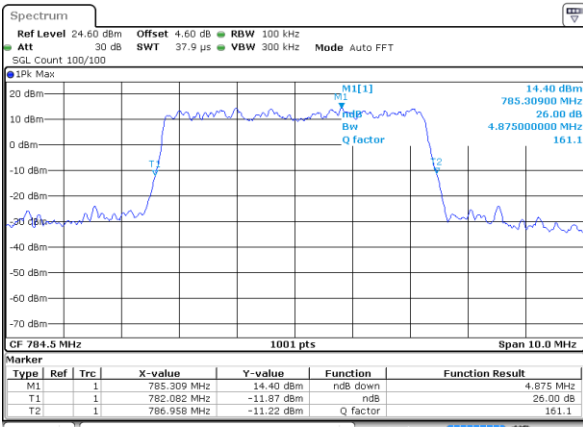
Date: 14.OCT.2019 21:36:54

Middle Channel / 5MHz / 16QAM



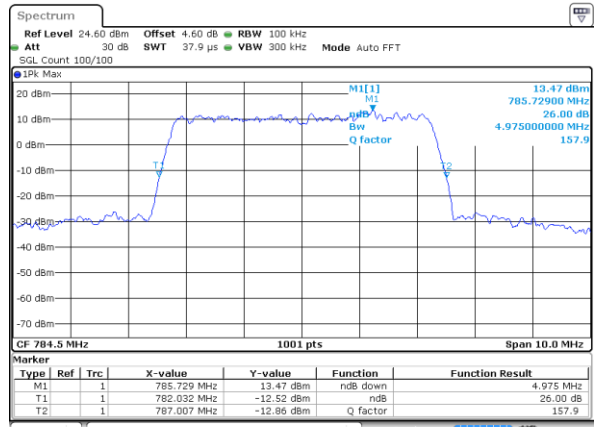
Date: 14.OCT.2019 21:37:05

Highest Channel / 5MHz / QPSK



Date: 14.OCT.2019 21:39:32

Highest Channel / 5MHz / 16QAM

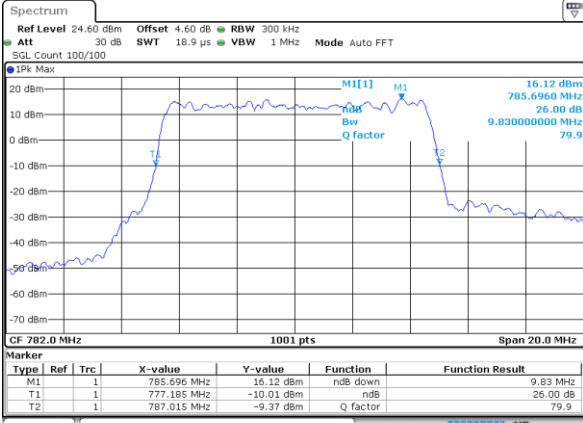


Date: 14.OCT.2019 21:39:22



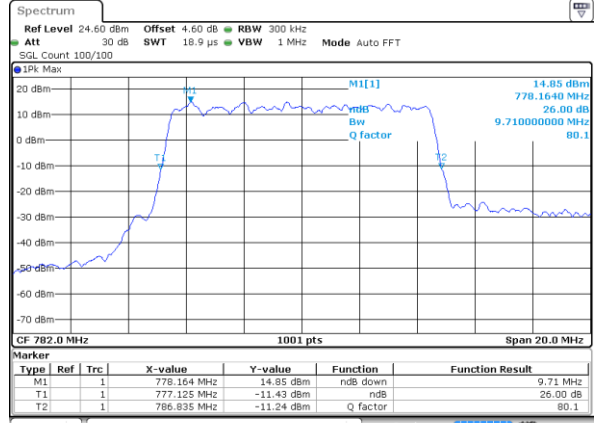
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 14.OCT.2019 21:10:00

Middle Channel / 10MHz / 16QAM

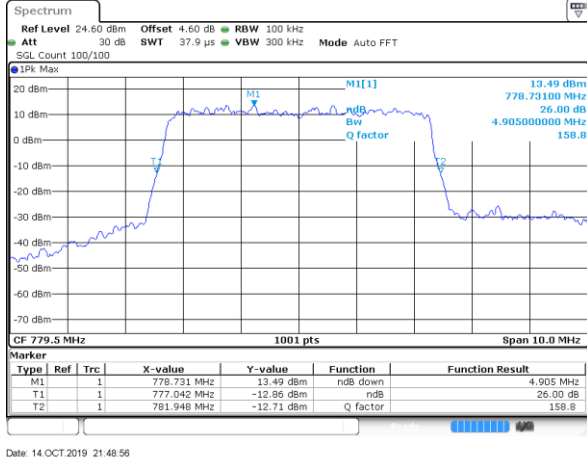


Date: 14.OCT.2019 21:11:58



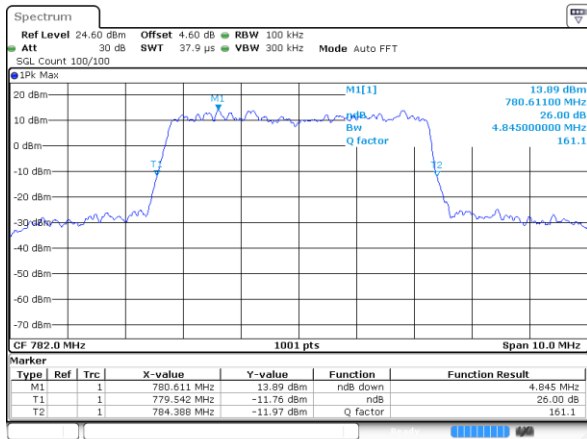
LTE Band 13

Lowest Channel / 5MHz / 64QAM



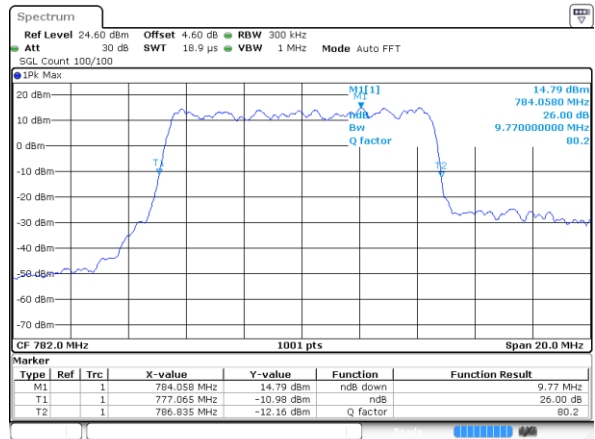
Date: 14.OCT.2019 21:48:56

Middle Channel / 5MHz / 64QAM



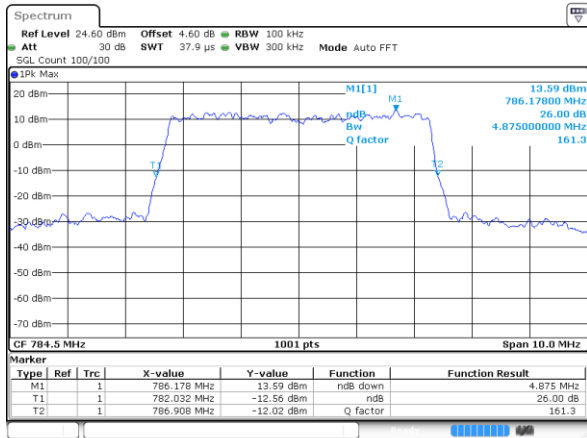
Date: 14.OCT.2019 21:49:07

Middle Channel / 10MHz / 64QAM



Date: 14.OCT.2019 21:14:04

Highest Channel / 5MHz / 64QAM



Date: 14.OCT.2019 21:49:17



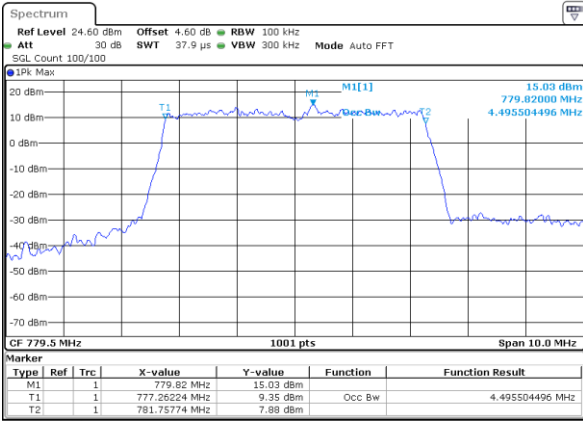
Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)										
BW	5MHz		10MHz		5MHz	10MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM					
Lowest CH	4.50	4.49			4.47						
Middle CH	4.50	4.49	9.01	9.03	4.51	9.01					
Highest CH	4.50	4.48			4.51						



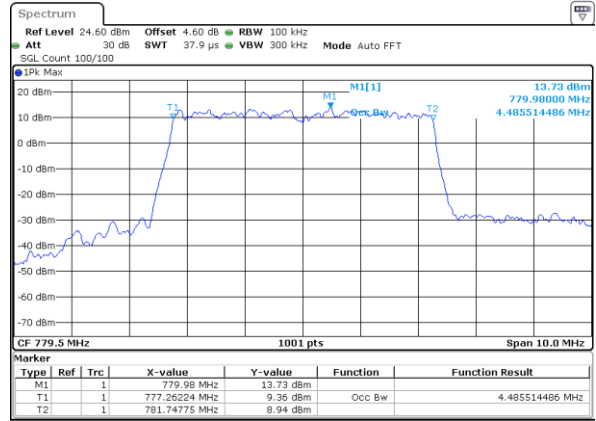
LTE Band 13

Lowest Channel / 5MHz / QPSK



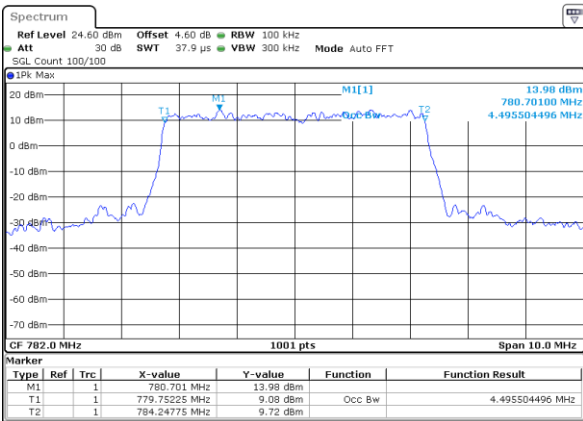
Date: 14.OCT.2019 21:28:21

Lowest Channel / 5MHz / 16QAM



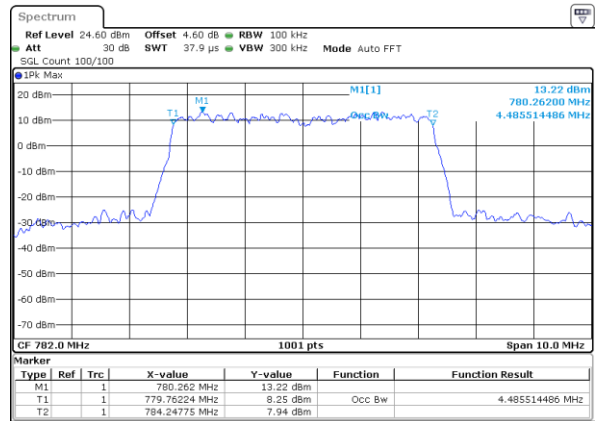
Date: 14.OCT.2019 21:28:11

Middle Channel / 5MHz / QPSK



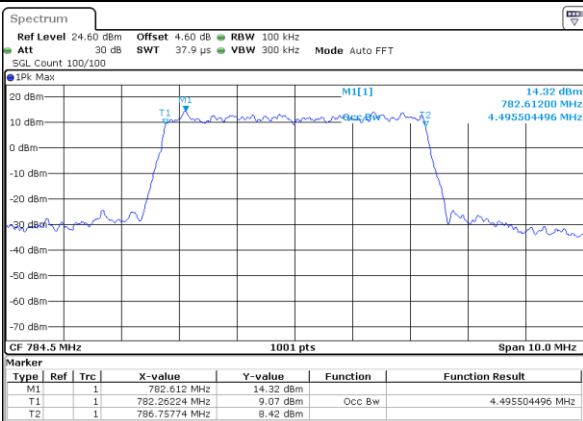
Date: 14.OCT.2019 21:37:15

Middle Channel / 5MHz / 16QAM



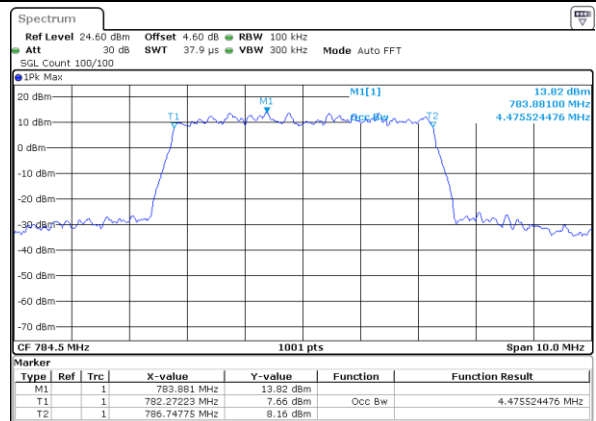
Date: 14.OCT.2019 21:37:25

Highest Channel / 5MHz / QPSK



Date: 14.OCT.2019 21:39:42

Highest Channel / 5MHz / 16QAM

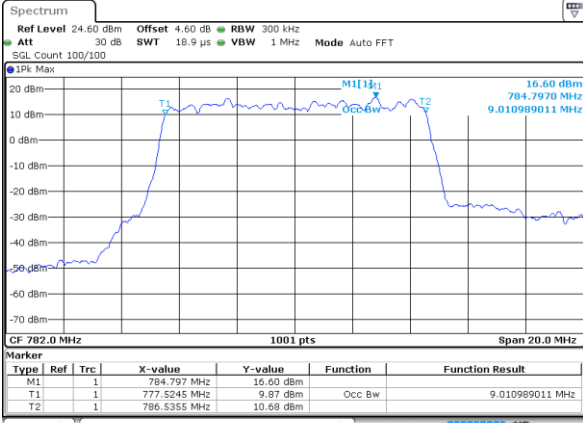


Date: 14.OCT.2019 21:39:52



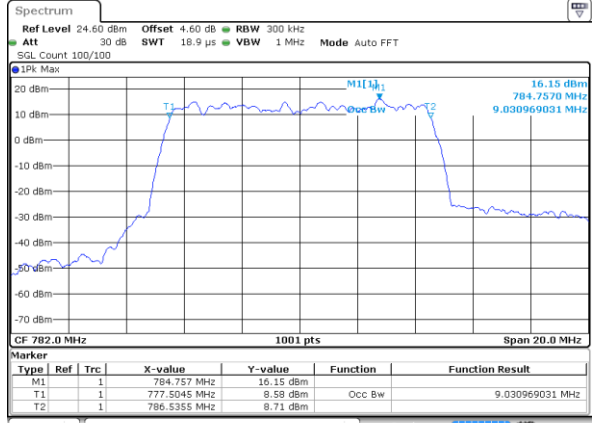
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 14.OCT.2019 21:09:45

Middle Channel / 10MHz / 16QAM

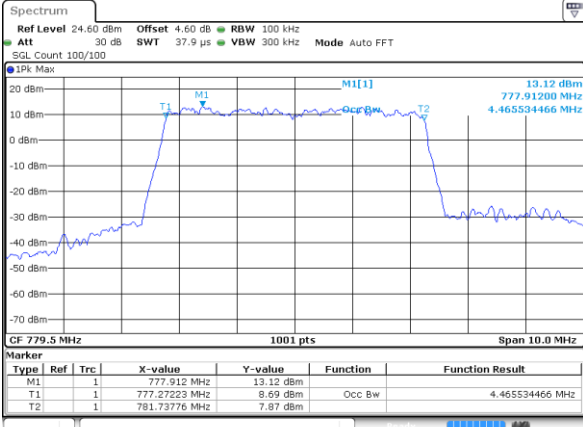


Date: 14.OCT.2019 21:11:17



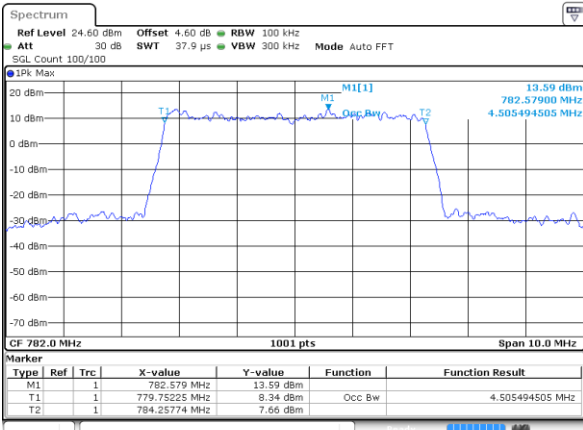
LTE Band 13

Lowest Channel / 5MHz / 64QAM



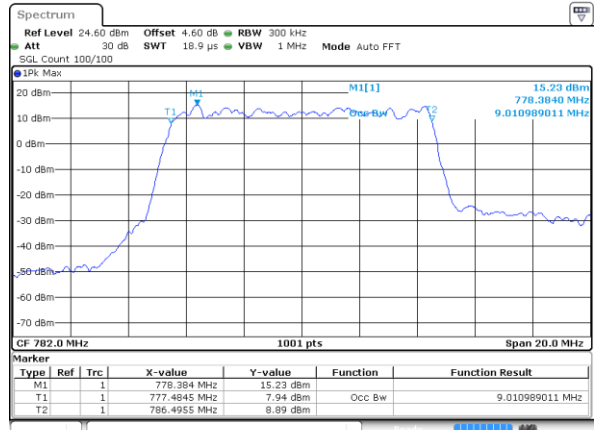
Date: 14.OCT.2019 21:48:26

Middle Channel / 5MHz / 64QAM



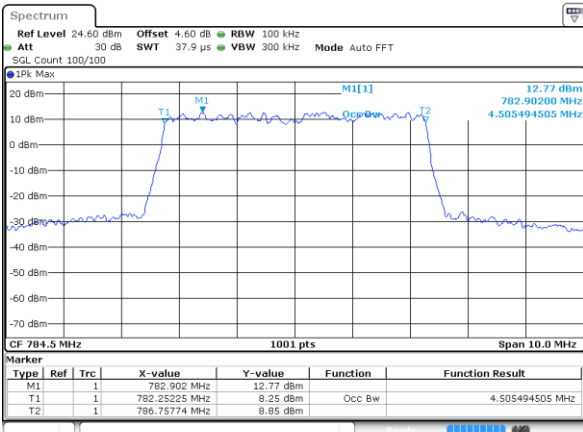
Date: 14.OCT.2019 21:48:36

Middle Channel / 10MHz / 64QAM



Date: 14.OCT.2019 21:13:37

Highest Channel / 5MHz / 64QAM



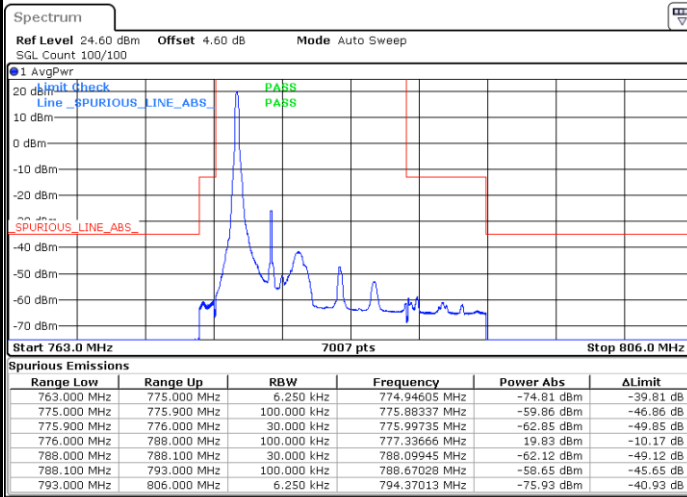
Date: 14.OCT.2019 21:48:46



# Conducted Band Edge

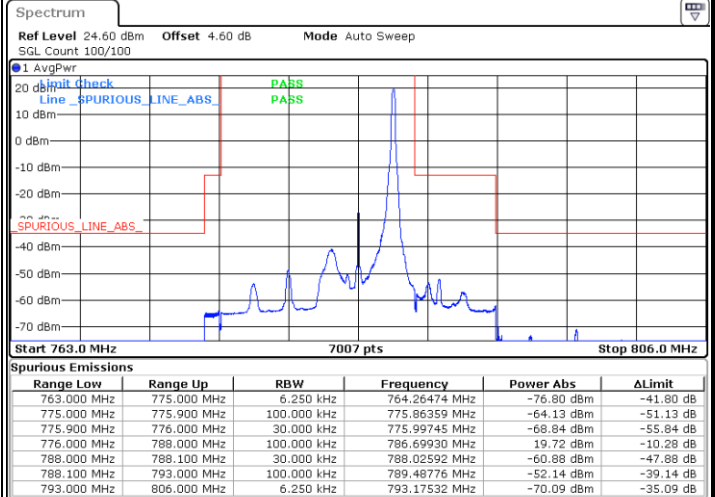
## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



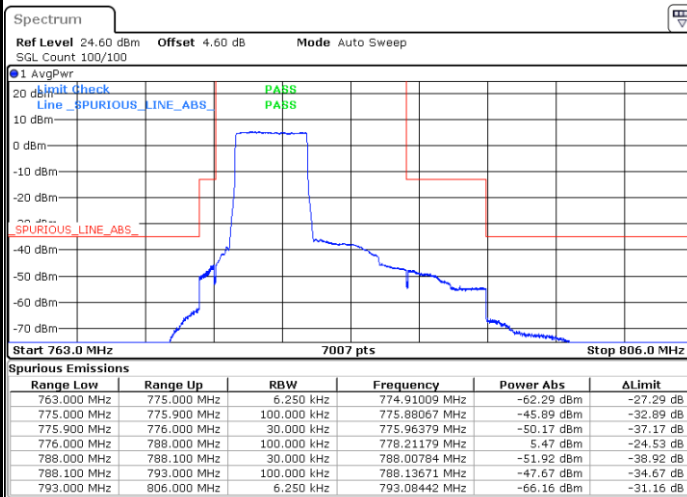
Date: 14.OCT.2019 21:33:18

### Highest Band Edge / 1 RB



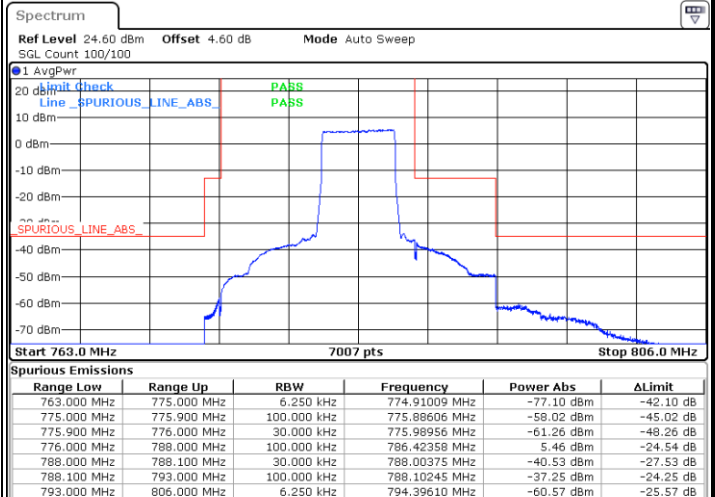
Date: 14.OCT.2019 21:44:49

### Lowest Band Edge / Full RB



Date: 14.OCT.2019 21:31:39

### Highest Band Edge / Full RB



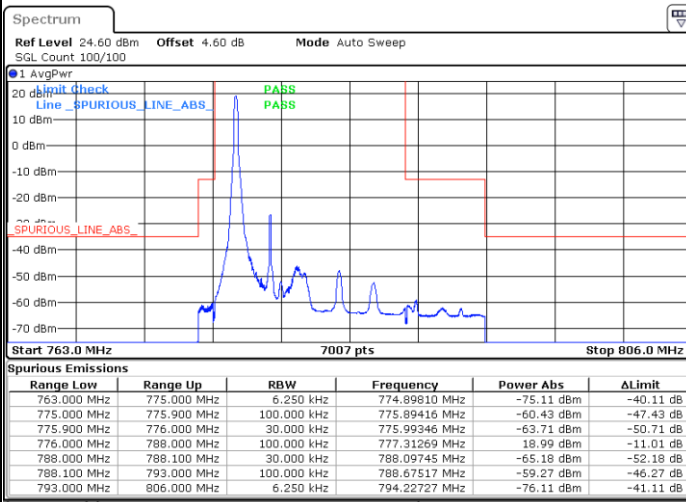
Date: 14.OCT.2019 21:43:10



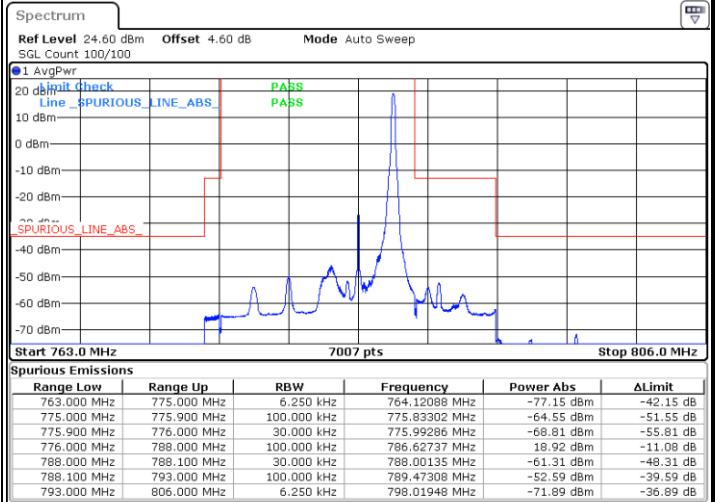
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



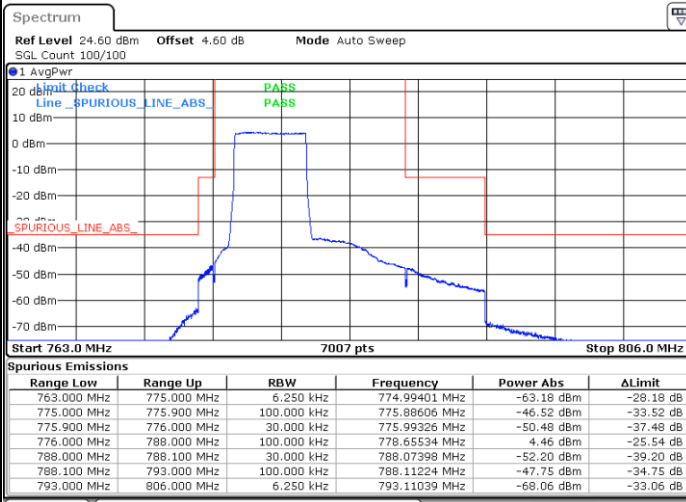
Date: 14.OCT.2019 21:34:57



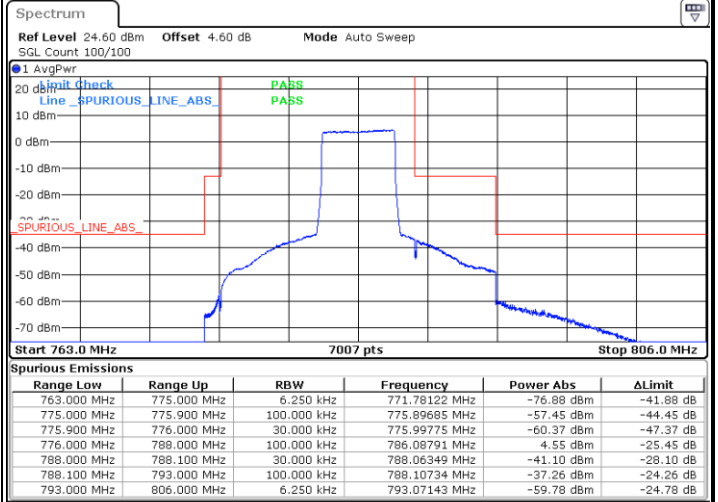
Date: 14.OCT.2019 21:46:28

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 14.OCT.2019 21:30:00



Date: 14.OCT.2019 21:41:31