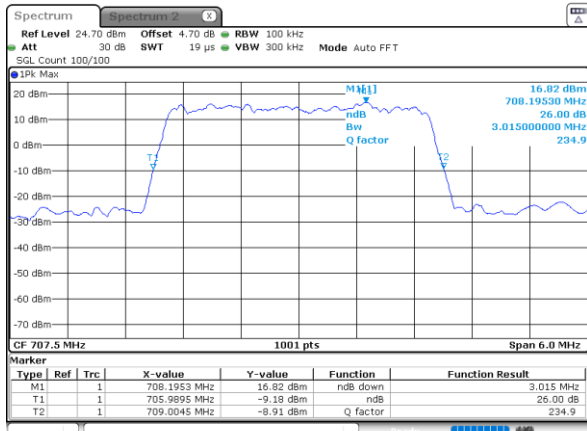




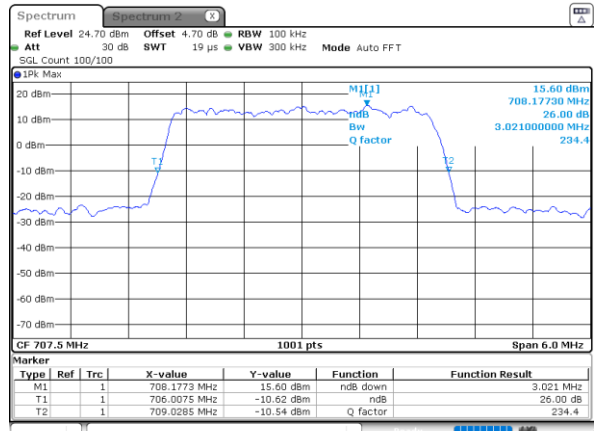
LTE Band 12

Middle Channel / 3MHz / QPSK



Date: 22\_JAN,2022 13:46:16

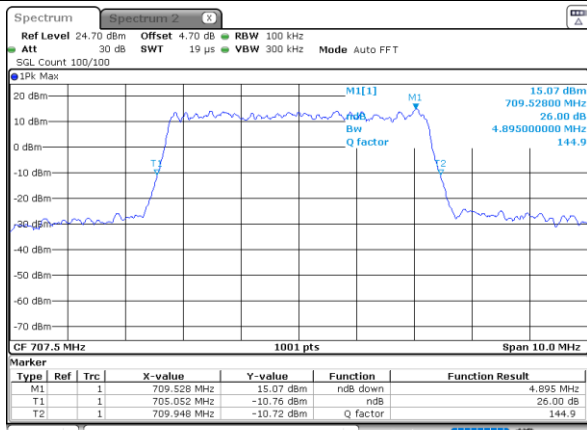
Middle Channel / 3MHz / 16QAM



Date: 22\_JAN,2022 13:46:18

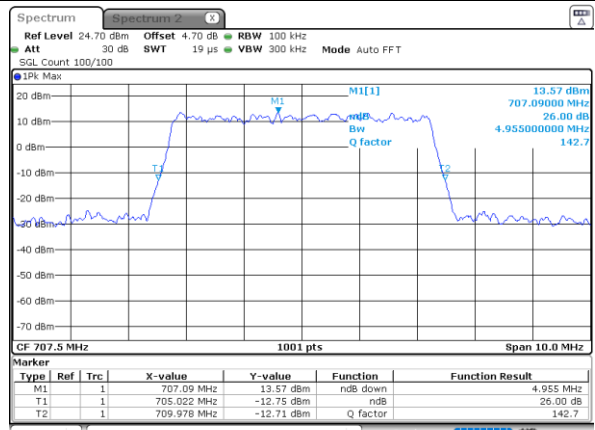
LTE Band 12

Middle Channel / 5MHz / QPSK



Date: 22\_JAN,2022 13:47:43

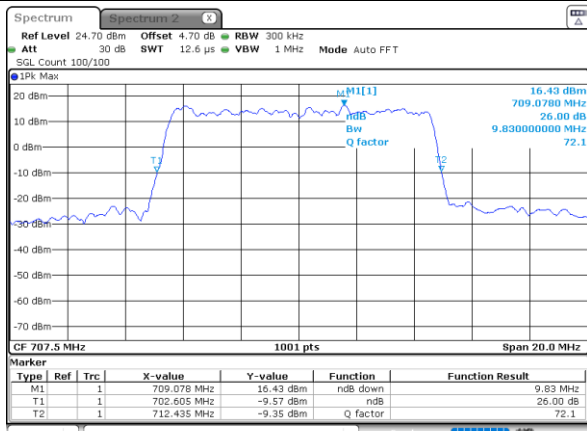
Middle Channel / 5MHz / 16QAM



Date: 22\_JAN,2022 13:48:04

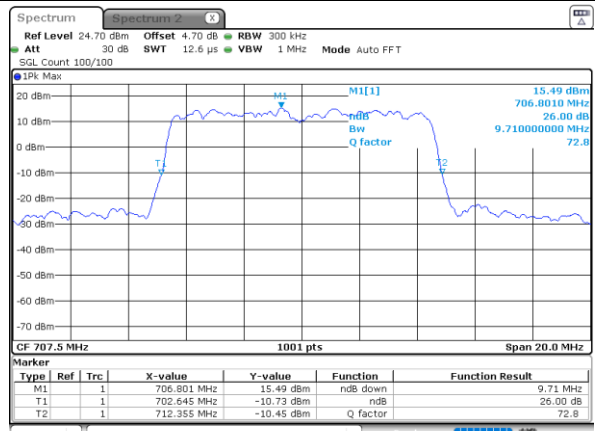
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 22\_JAN,2022 13:49:09

Middle Channel / 10MHz / 16QAM

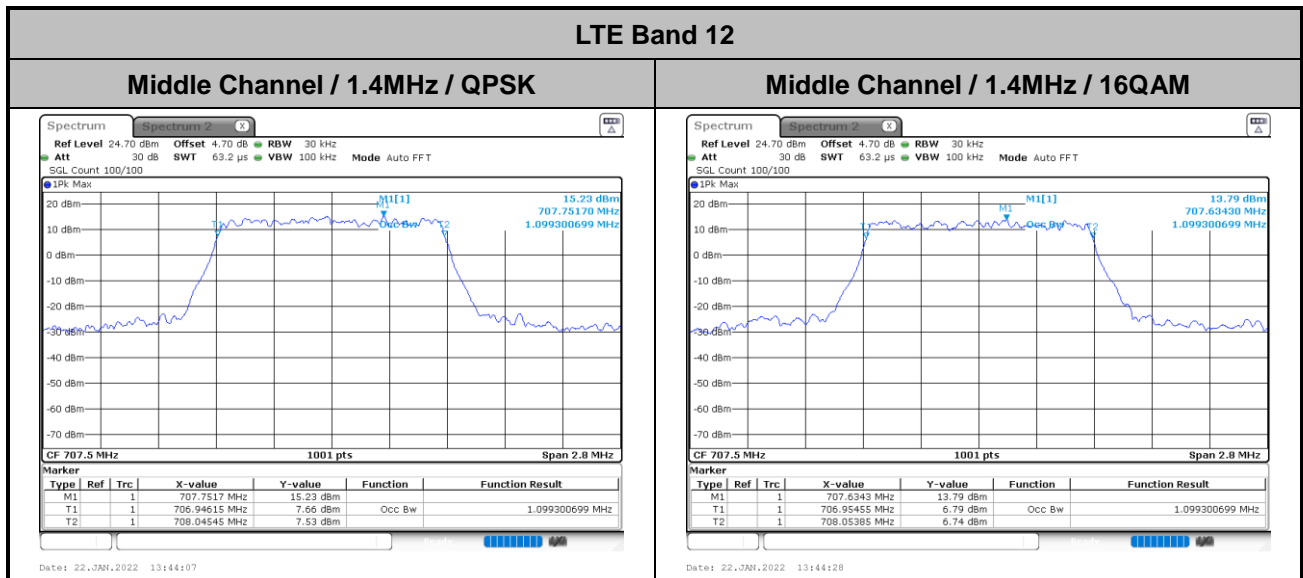


Date: 22\_JAN,2022 13:49:31



## Occupied Bandwidth

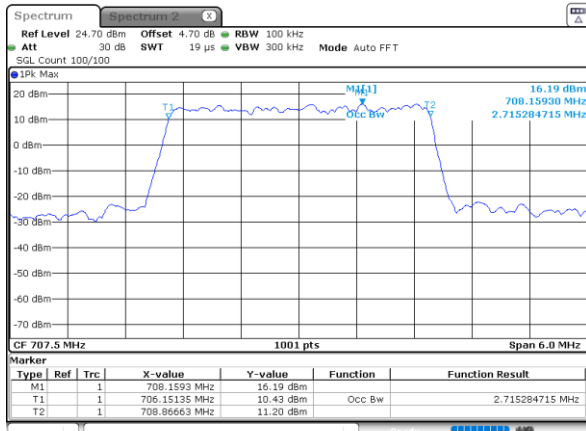
Mode	LTE Band 12 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.10	1.10
Mode	LTE Band 12 : 99%OBW(MHz)	
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.72	2.71
Mode	LTE Band 12 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.49	4.50
Mode	LTE Band 12 : 99%OBW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.03	9.01





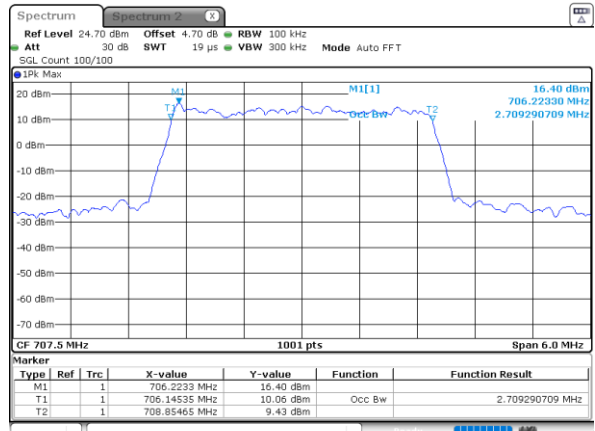
LTE Band 12

Middle Channel / 3MHz / QPSK



Date: 22\_JAN\_2022 13:45:33

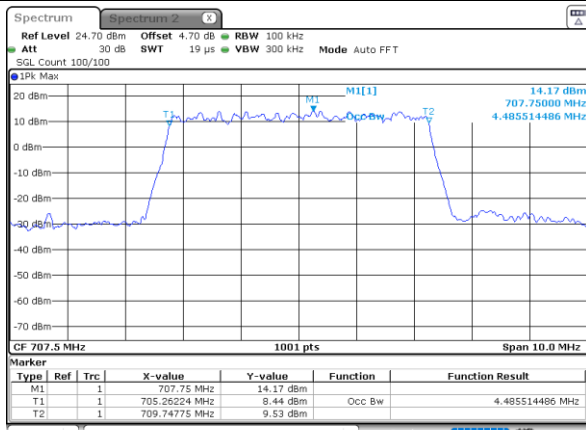
Middle Channel / 3MHz / 16QAM



Date: 22\_JAN\_2022 13:45:55

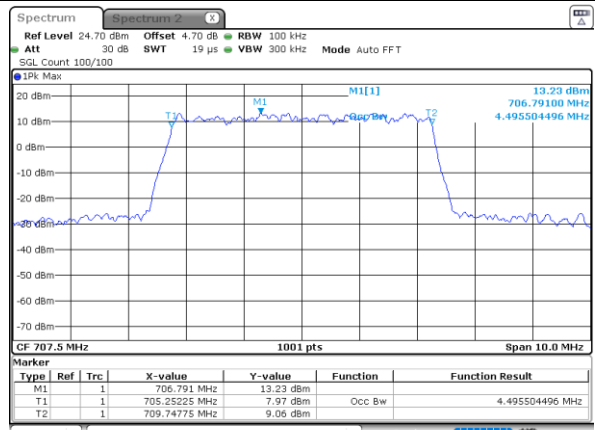
LTE Band 12

Middle Channel / 5MHz / QPSK



Date: 22\_JAN\_2022 13:47:00

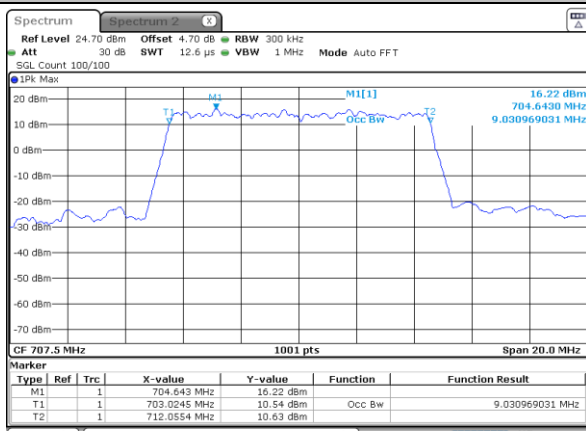
Middle Channel / 5MHz / 16QAM



Date: 22\_JAN\_2022 13:47:21

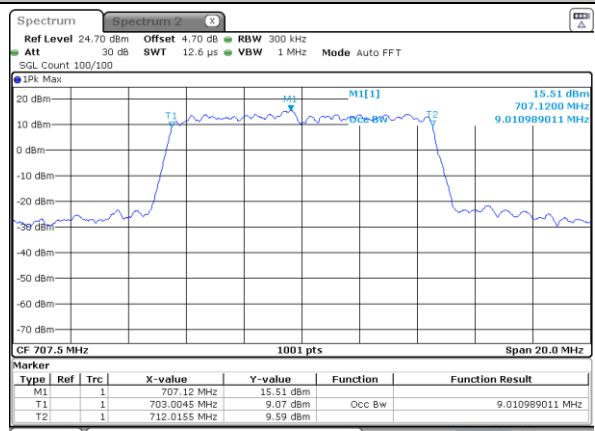
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 22\_JAN\_2022 13:48:26

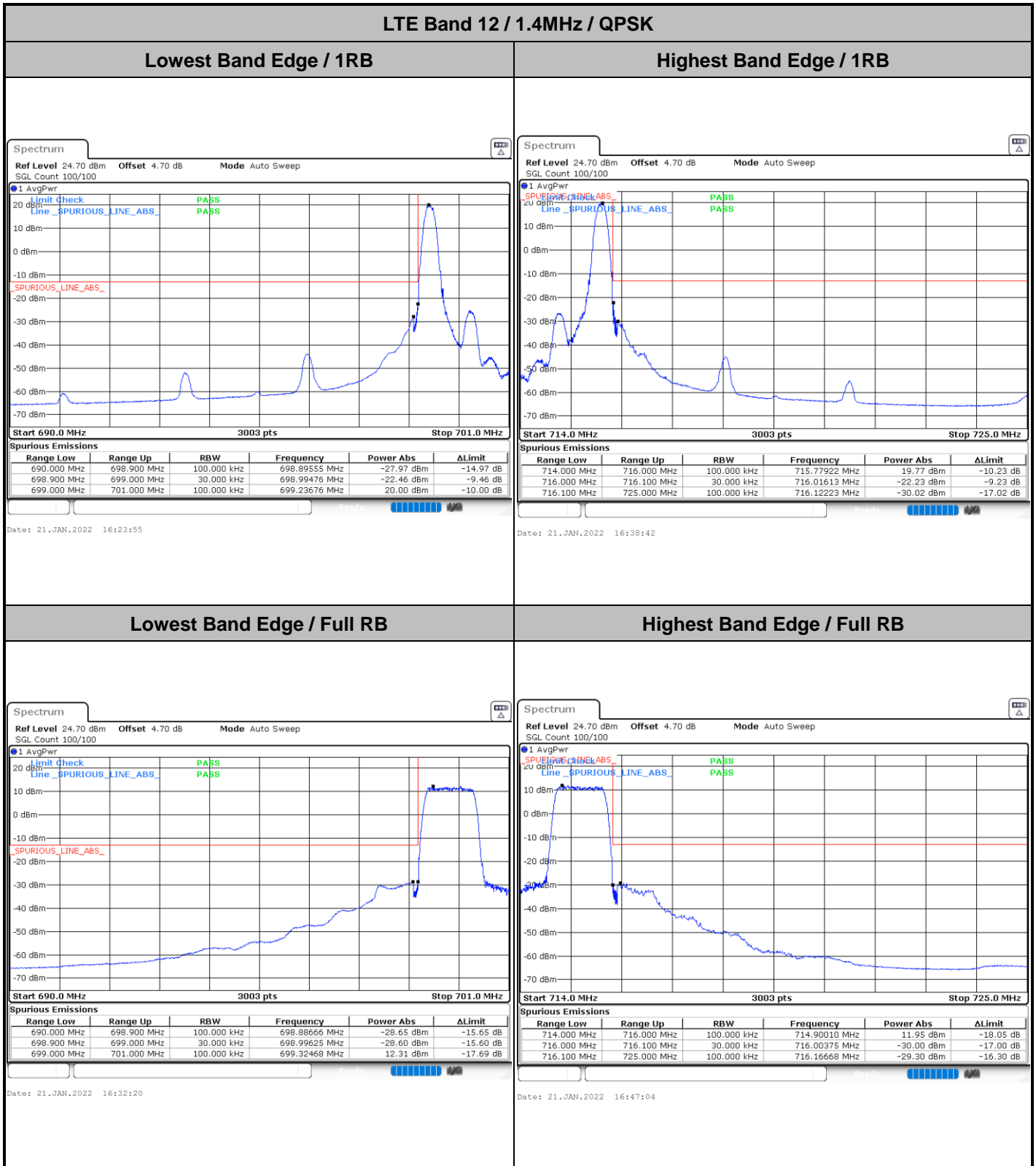
Middle Channel / 10MHz / 16QAM



Date: 22\_JAN\_2022 13:48:48



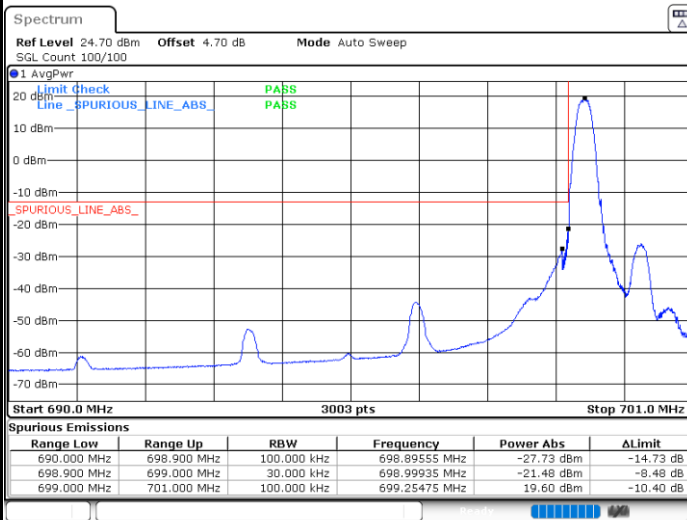
# Conducted Band Edge





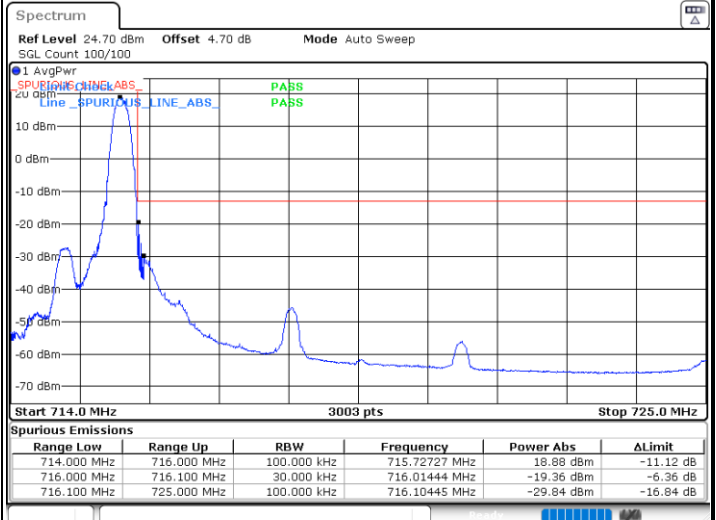
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



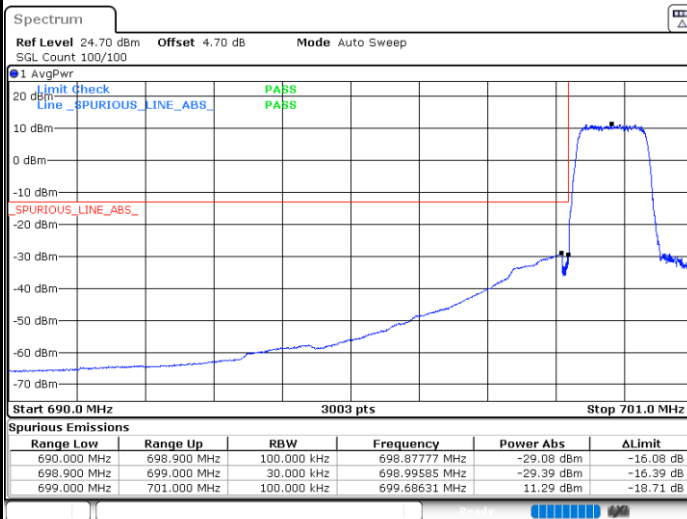
Date: 21.JAN.2022 16:25:38

Highest Band Edge / 1 RB



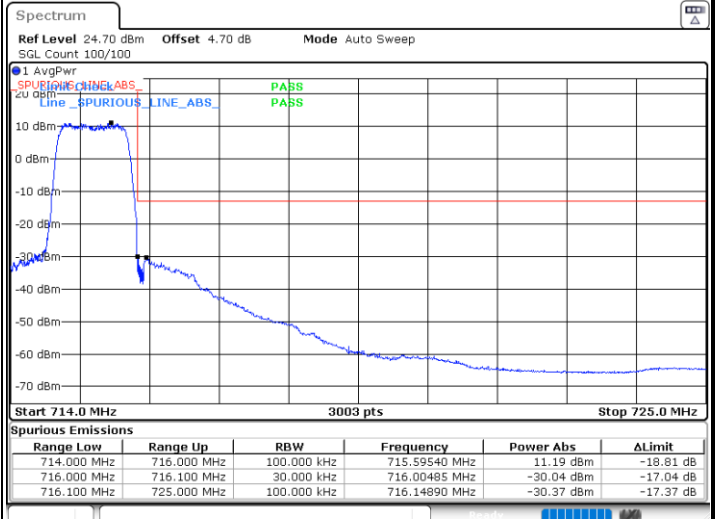
Date: 21.JAN.2022 16:40:23

Lowest Band Edge / Full RB



Date: 21.JAN.2022 16:30:40

Highest Band Edge / Full RB

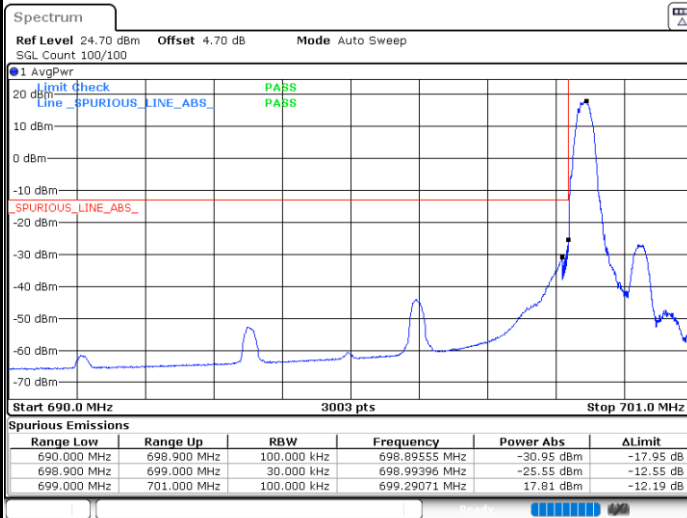


Date: 21.JAN.2022 16:45:23



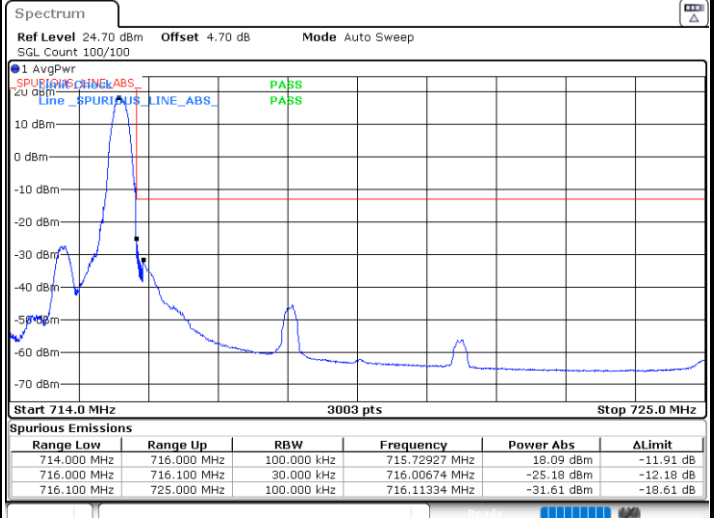
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



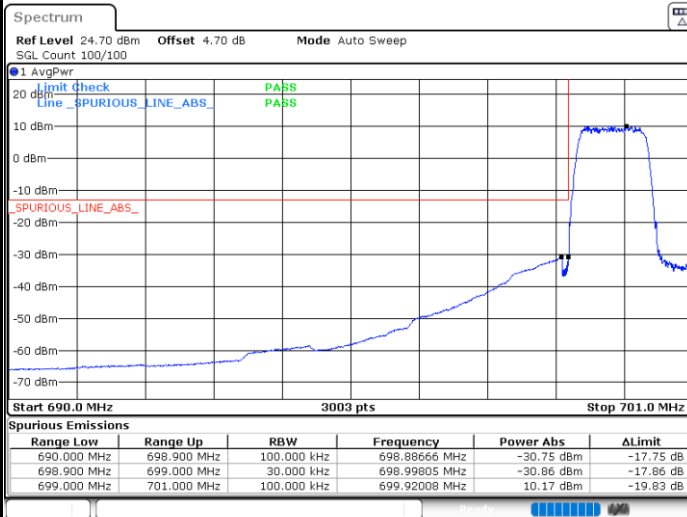
Date: 21.JAN.2022 16:27:20

Highest Band Edge / 1 RB



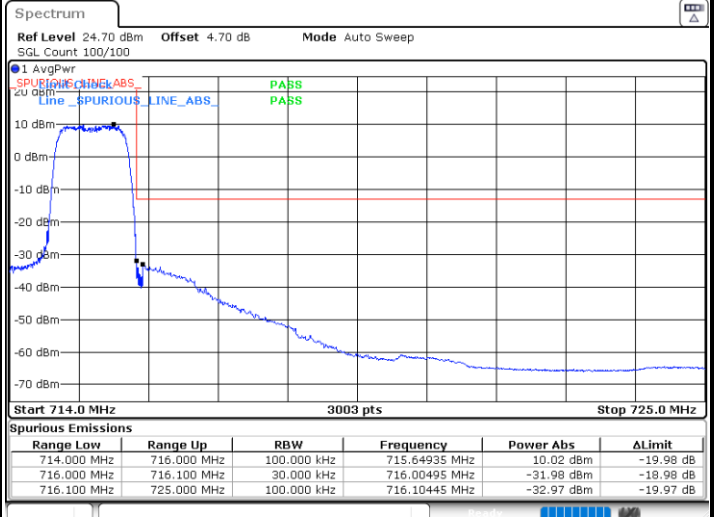
Date: 21.JAN.2022 16:42:03

Lowest Band Edge / Full RB



Date: 21.JAN.2022 16:29:00

Highest Band Edge / Full RB

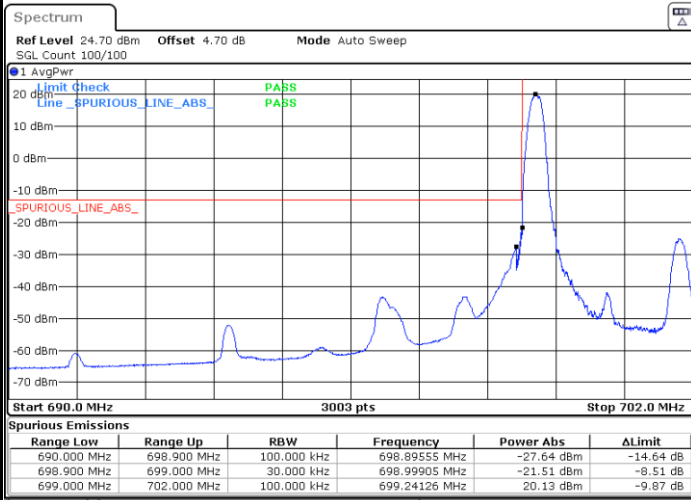


Date: 21.JAN.2022 16:43:43



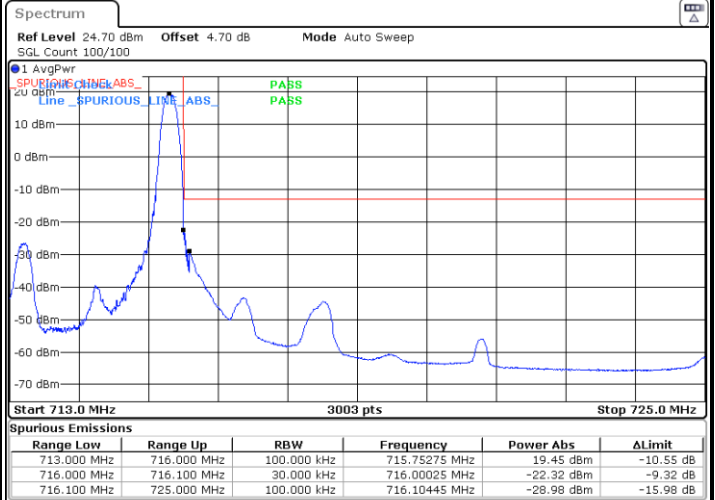
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



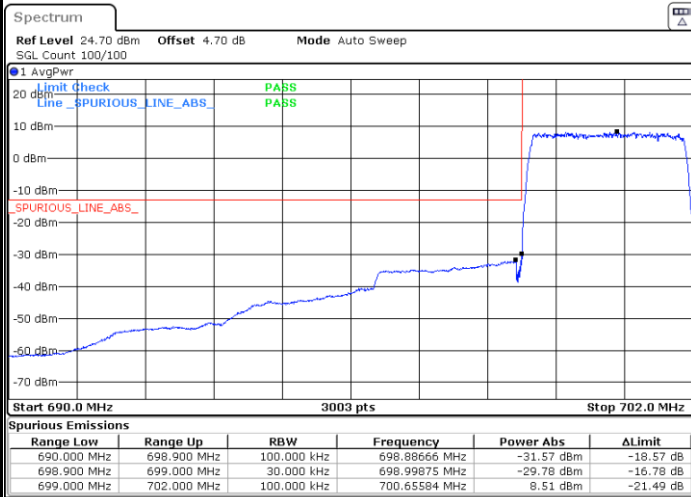
Date: 21.JAN.2022 16:51:07

Highest Band Edge / 1 RB



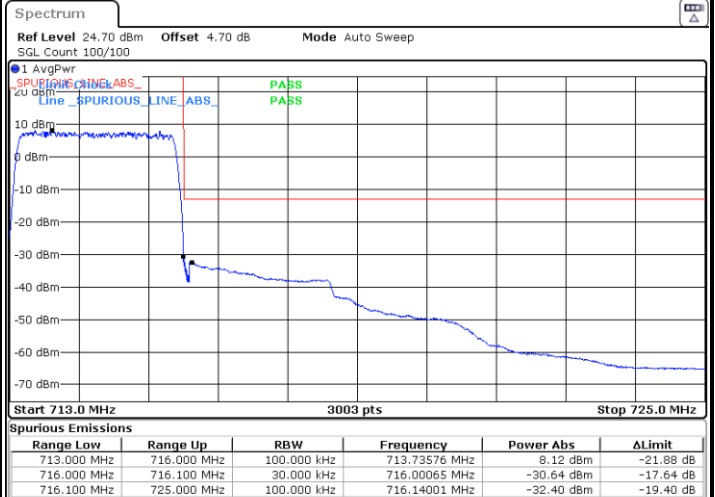
Date: 21.JAN.2022 17:05:52

Lowest Band Edge / Full RB



Date: 21.JAN.2022 16:59:30

Highest Band Edge / Full RB

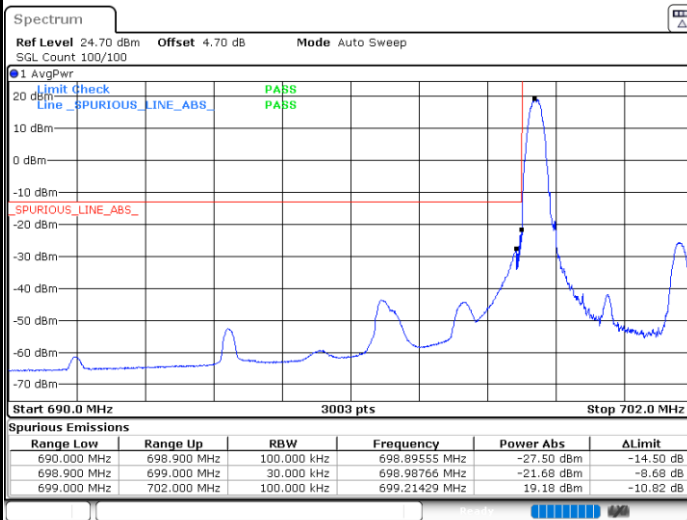


Date: 21.JAN.2022 17:14:16



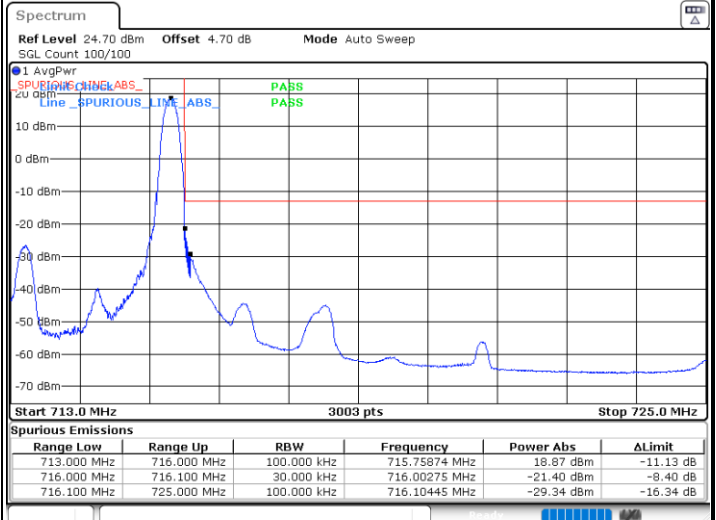
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



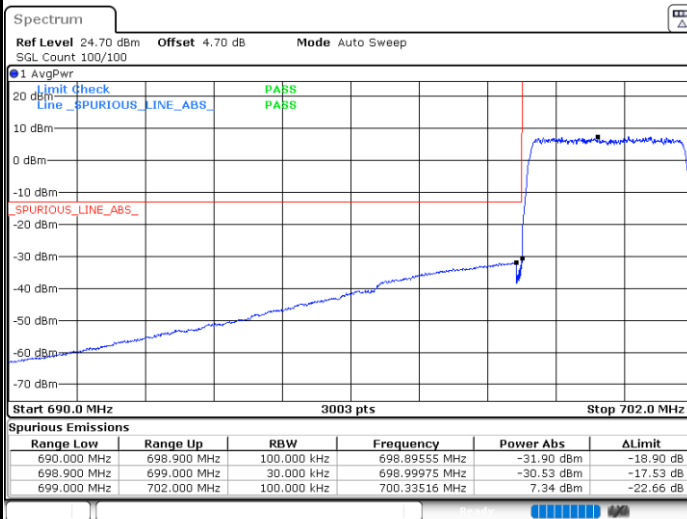
Date: 21.JAN.2022 16:52:49

Highest Band Edge / 1 RB



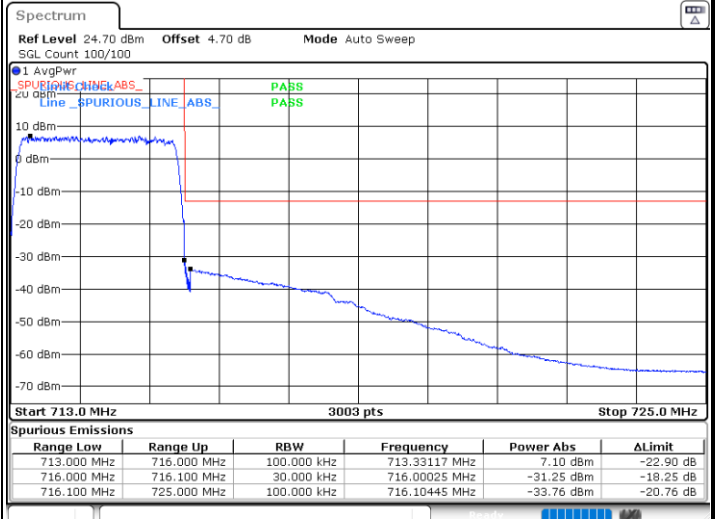
Date: 21.JAN.2022 17:07:33

Lowest Band Edge / Full RB



Date: 21.JAN.2022 16:57:50

Highest Band Edge / Full RB



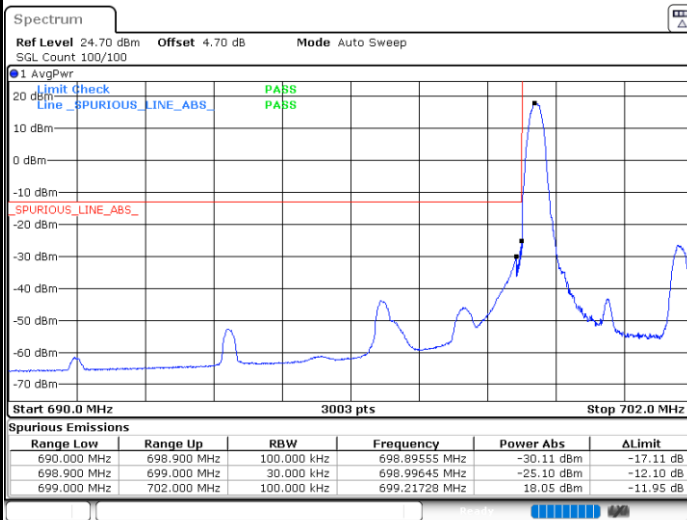
Date: 21.JAN.2022 17:12:36



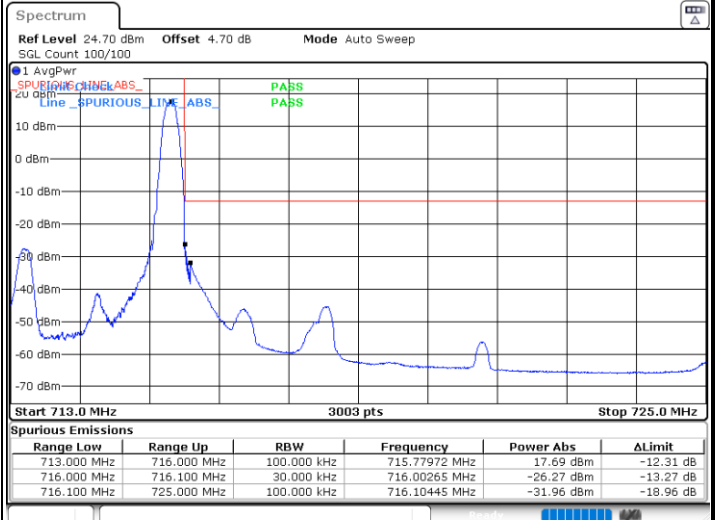


LTE Band 12 / 3MHz / 64QAM

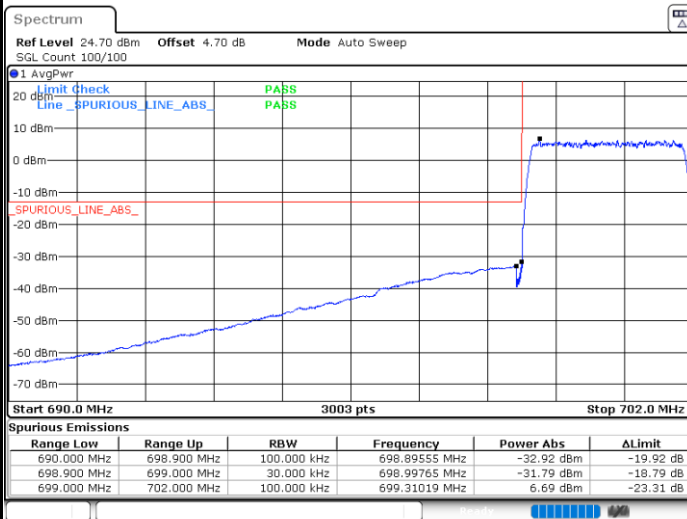
Lowest Band Edge / 1 RB



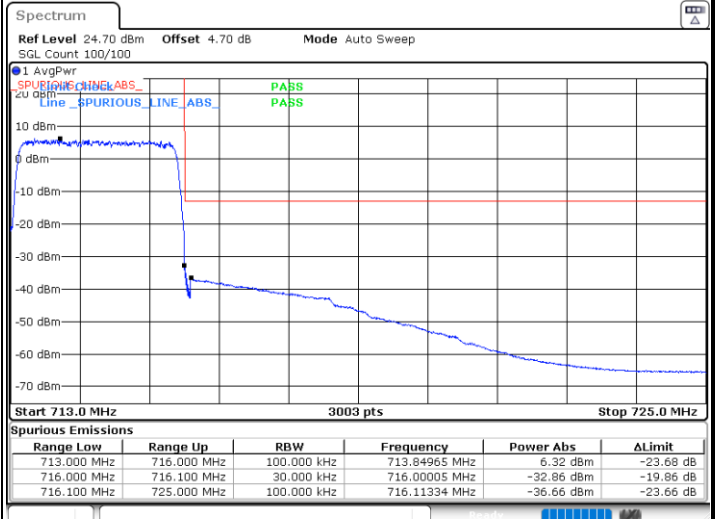
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



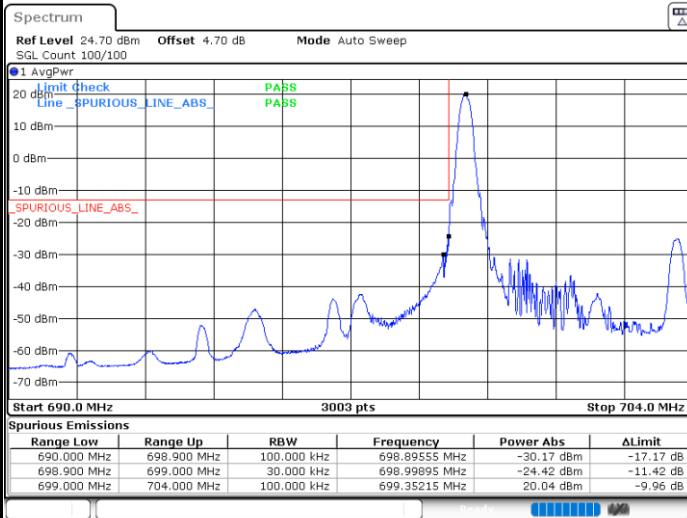
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



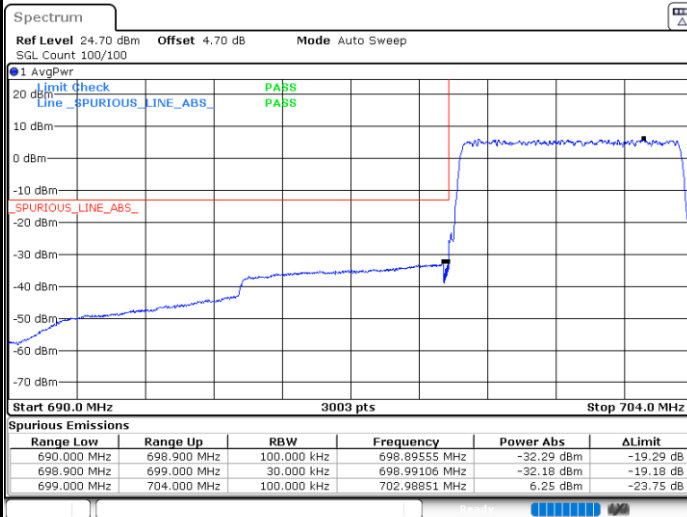
Date: 21.JAN.2022 17:18:18

Highest Band Edge / 1 RB



Date: 21.JAN.2022 17:33:05

Lowest Band Edge / Full RB



Date: 21.JAN.2022 17:26:41

Highest Band Edge / Full RB

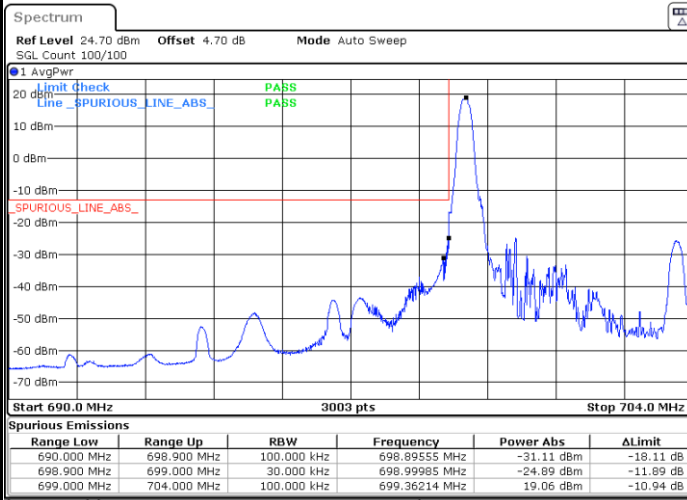


Date: 21.JAN.2022 17:41:26



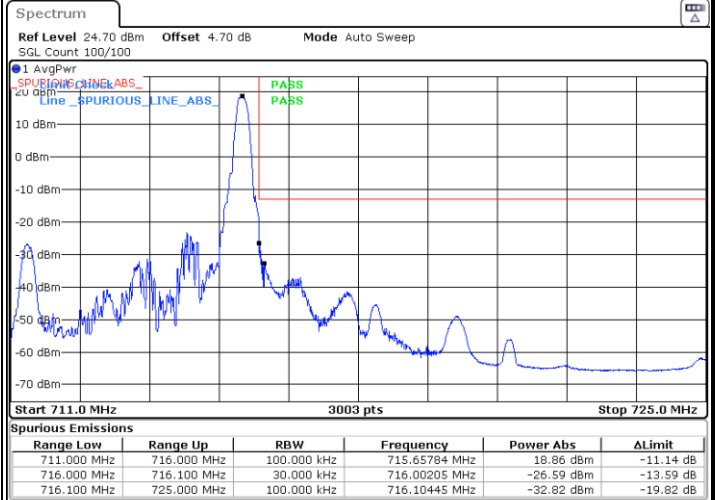
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



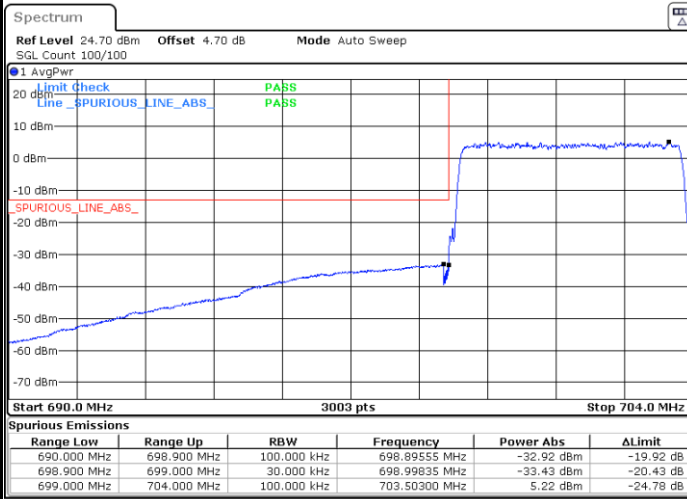
Date: 21.JAN.2022 17:19:59

Highest Band Edge / 1 RB



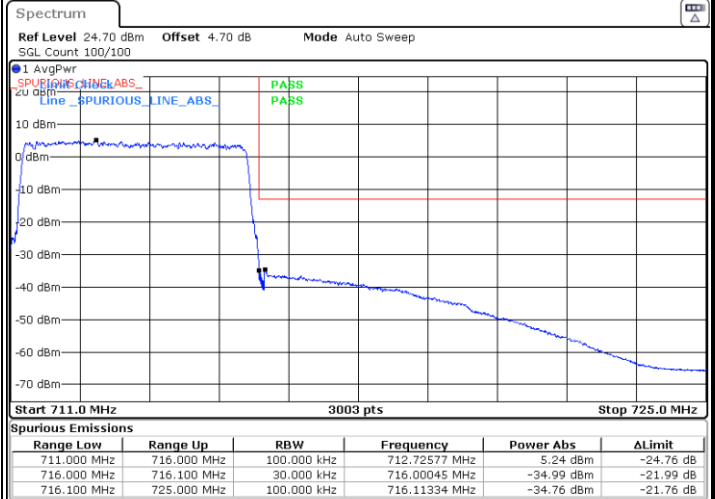
Date: 21.JAN.2022 17:34:45

Lowest Band Edge / Full RB



Date: 21.JAN.2022 17:25:01

Highest Band Edge / Full RB

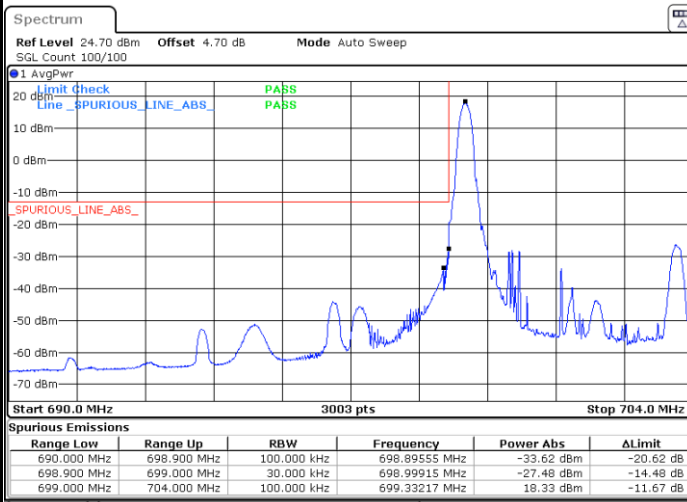


Date: 21.JAN.2022 17:39:46



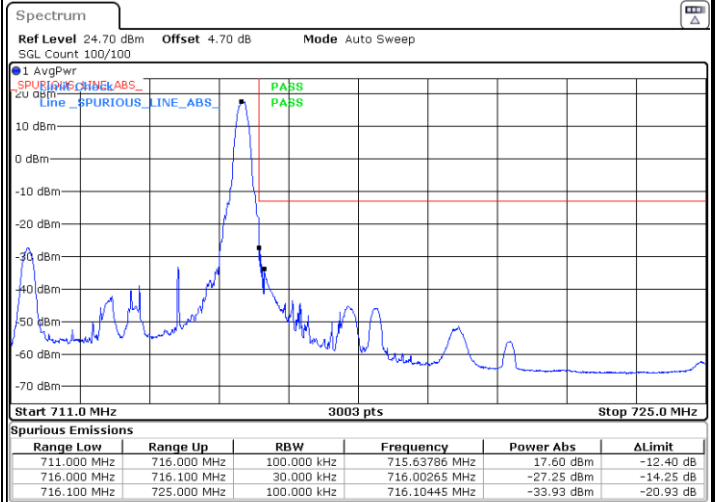
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



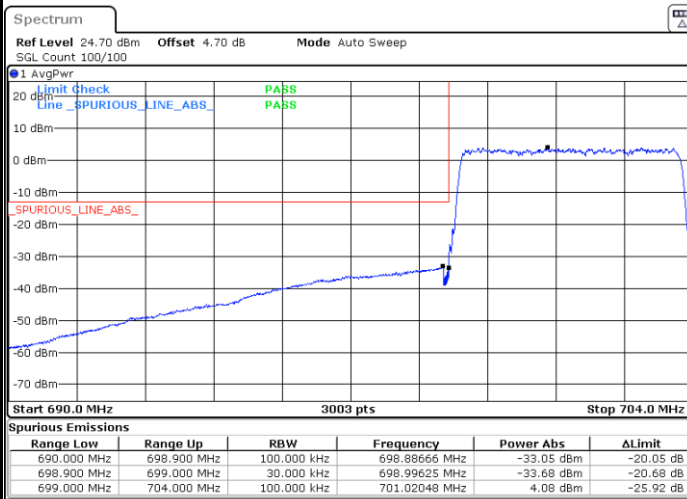
Date: 21.JAN.2022 17:21:39

Highest Band Edge / 1 RB



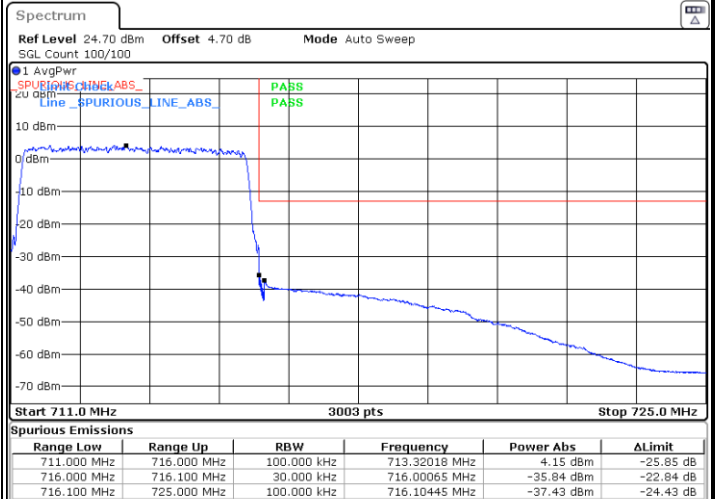
Date: 21.JAN.2022 17:36:25

Lowest Band Edge / Full RB



Date: 21.JAN.2022 17:23:21

Highest Band Edge / Full RB

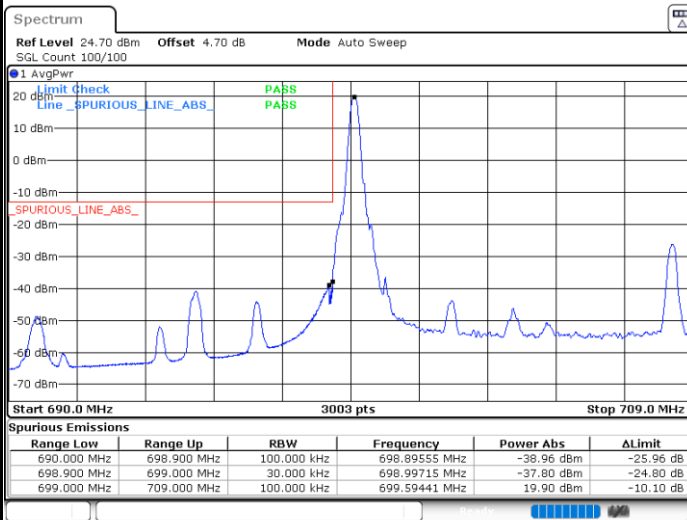


Date: 21.JAN.2022 17:38:05

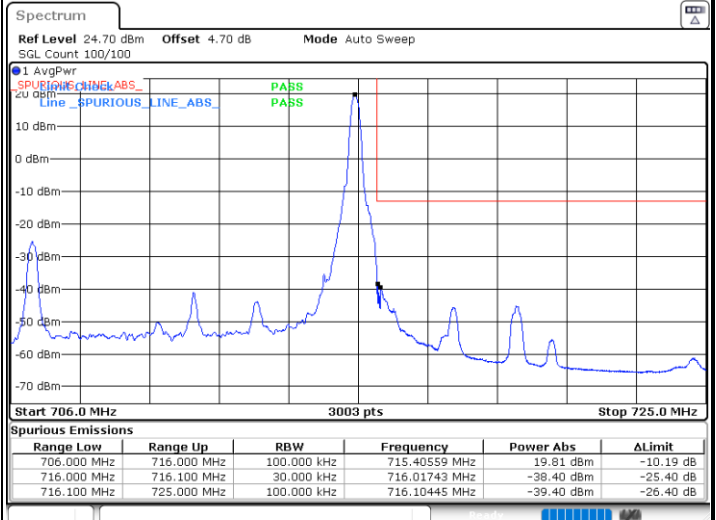


LTE Band 12 / 10MHz / QPSK

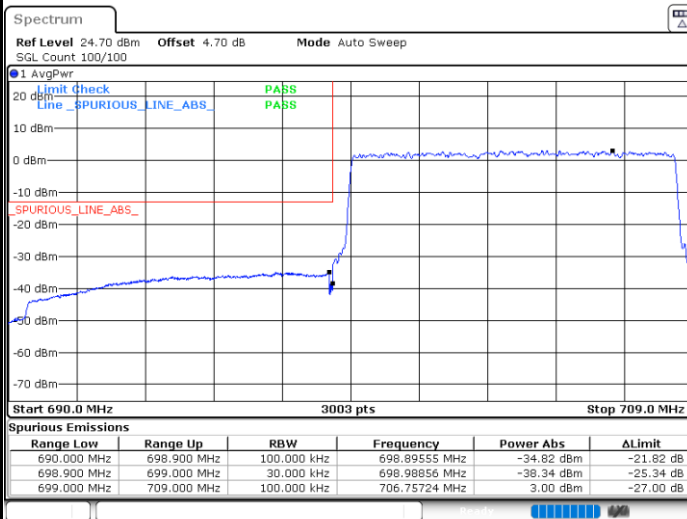
Lowest Band Edge / 1 RB



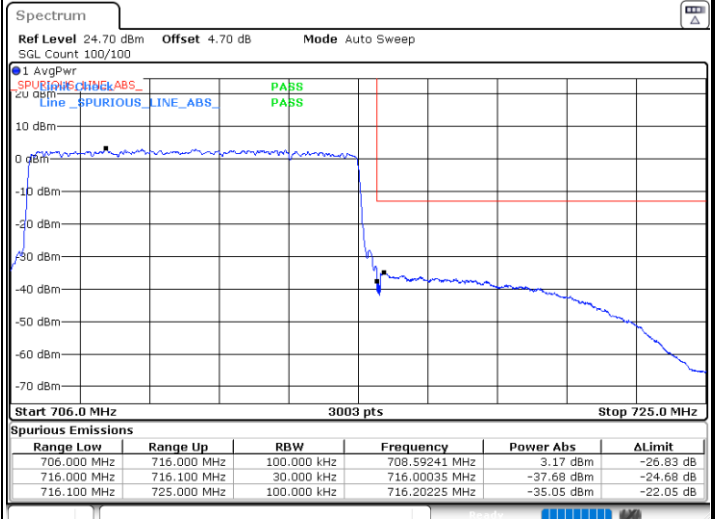
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



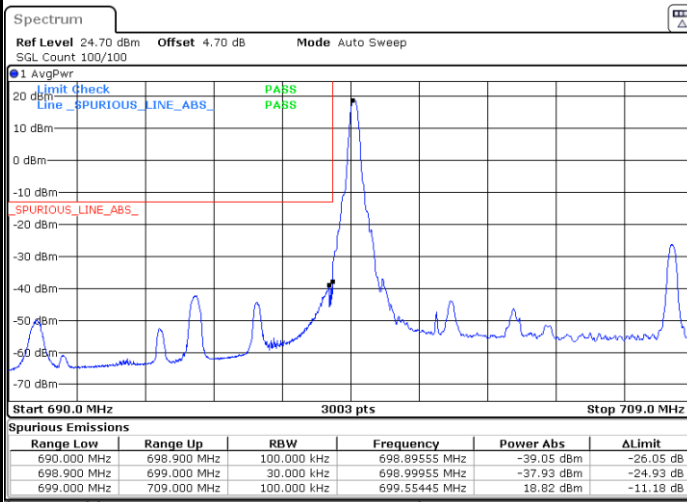
Highest Band Edge / Full RB





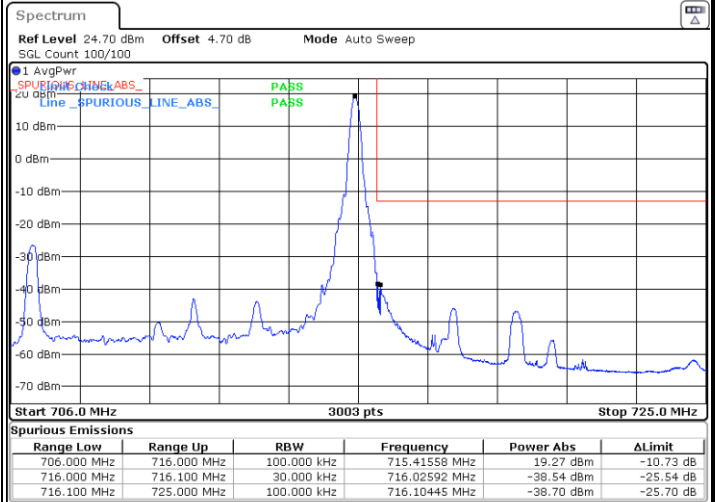
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



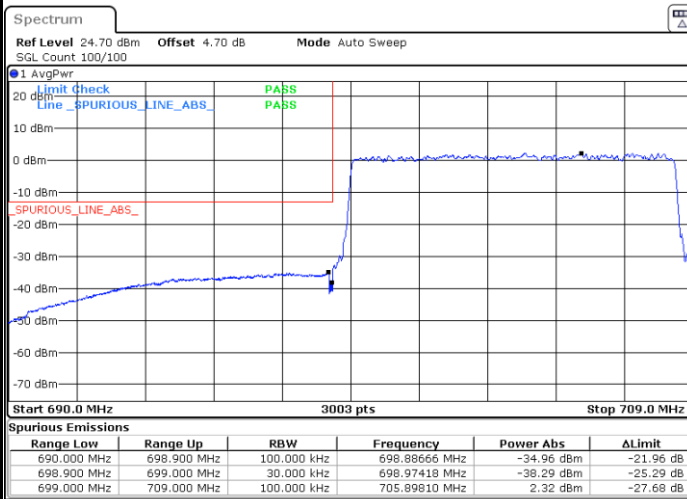
Date: 21.JAN.2022 17:47:08

Highest Band Edge / 1 RB



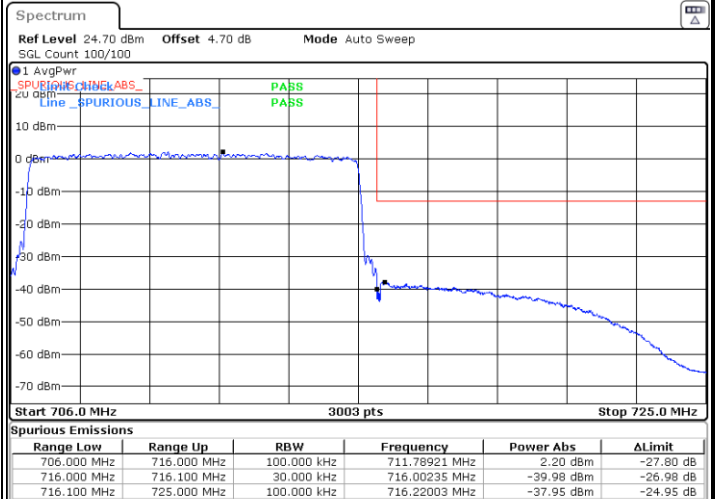
Date: 21.JAN.2022 18:01:52

Lowest Band Edge / Full RB



Date: 21.JAN.2022 17:52:11

Highest Band Edge / Full RB

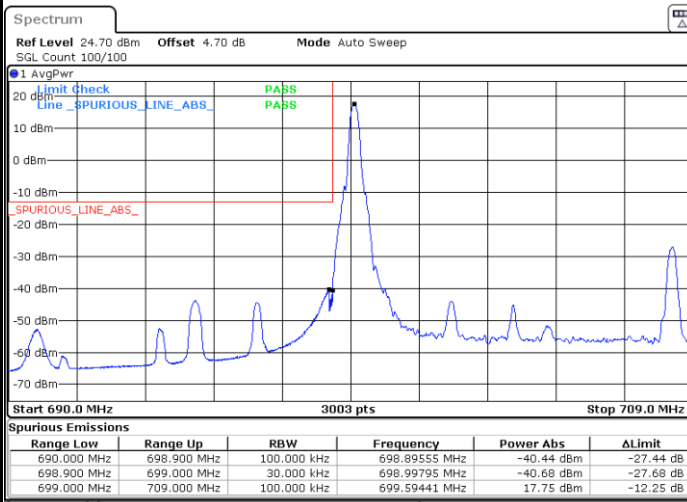


Date: 21.JAN.2022 18:06:52



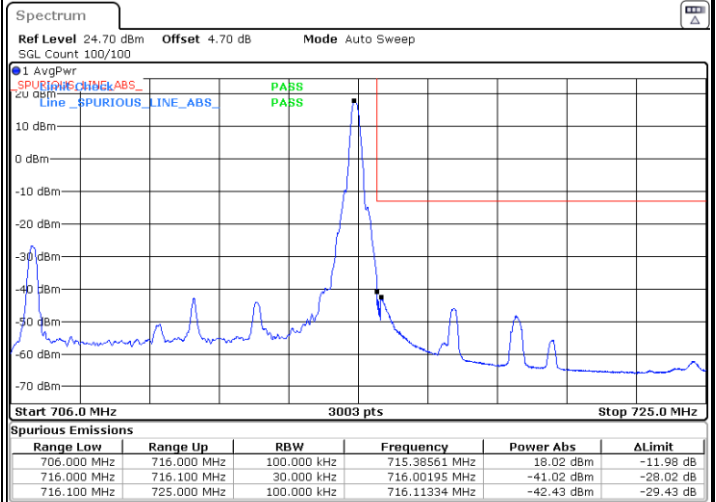
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



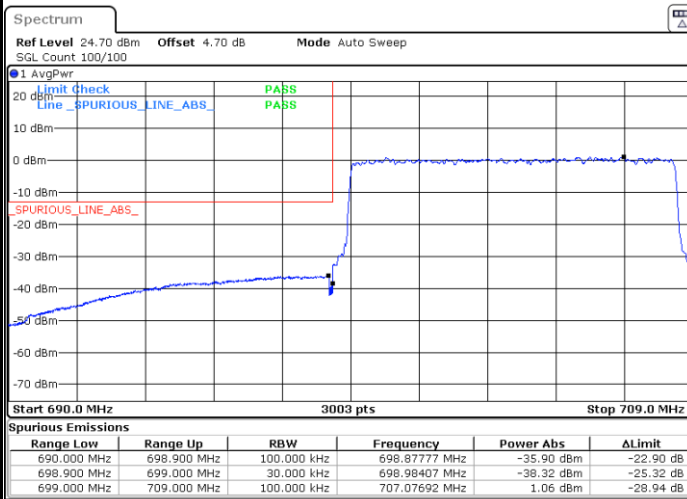
Date: 21.JAN.2022 17:48:50

Highest Band Edge / 1 RB



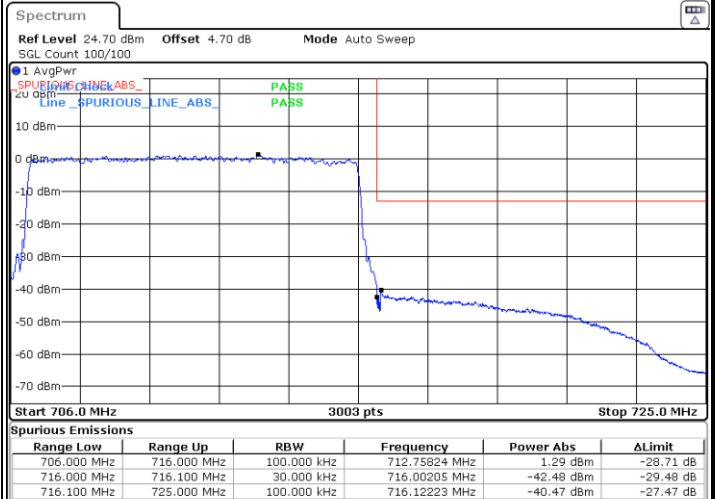
Date: 21.JAN.2022 18:03:32

Lowest Band Edge / Full RB



Date: 21.JAN.2022 17:50:31

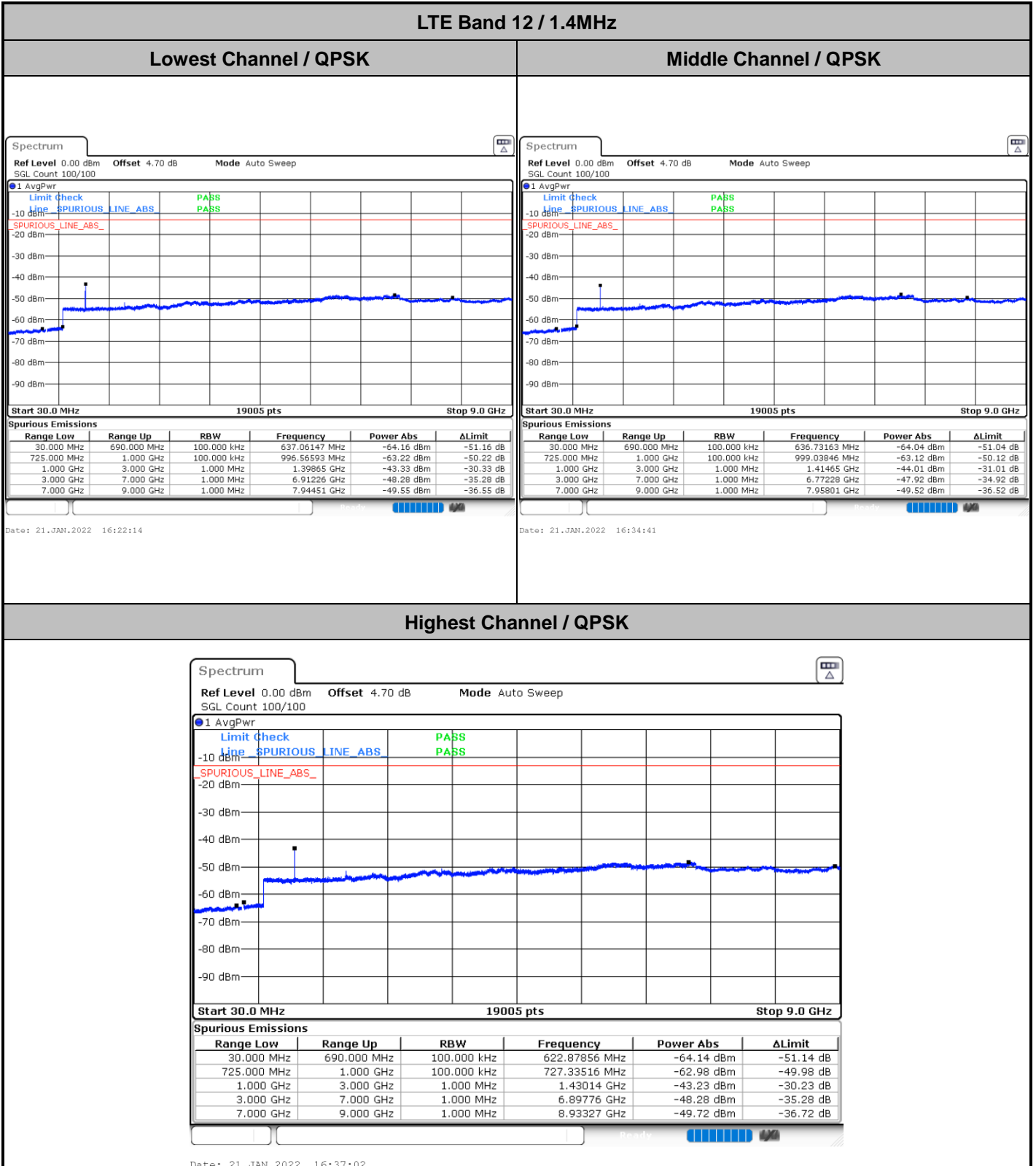
Highest Band Edge / Full RB



Date: 21.JAN.2022 18:05:12



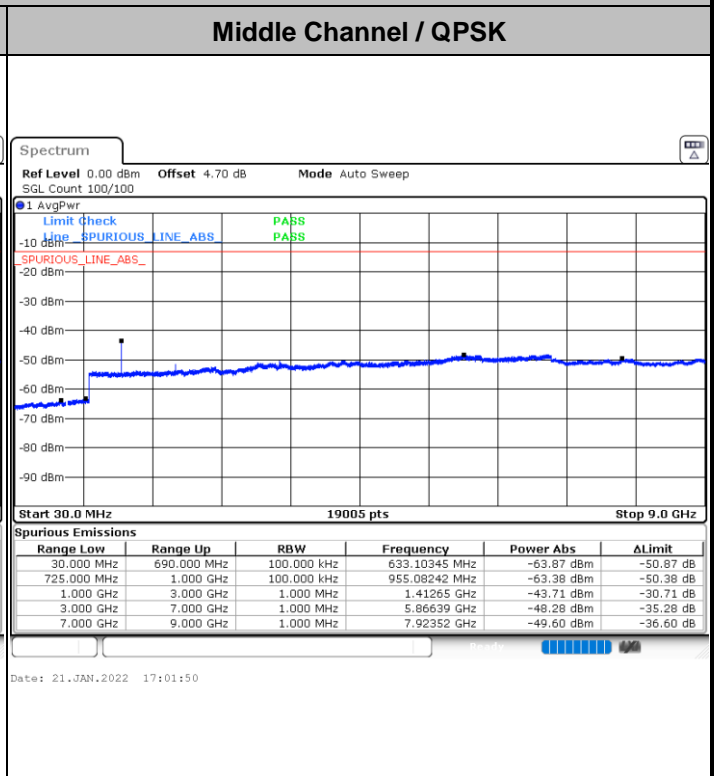
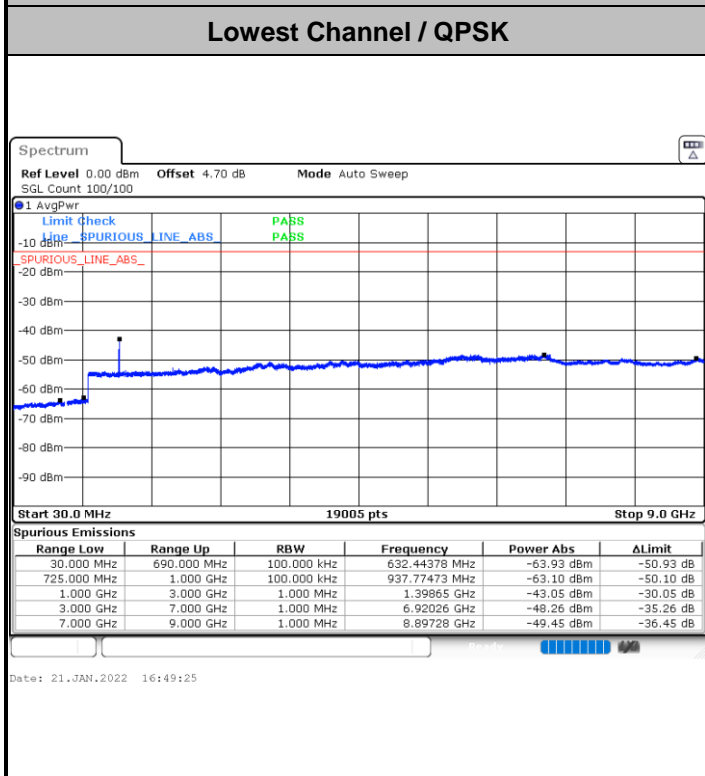
# Conducted Spurious Emission



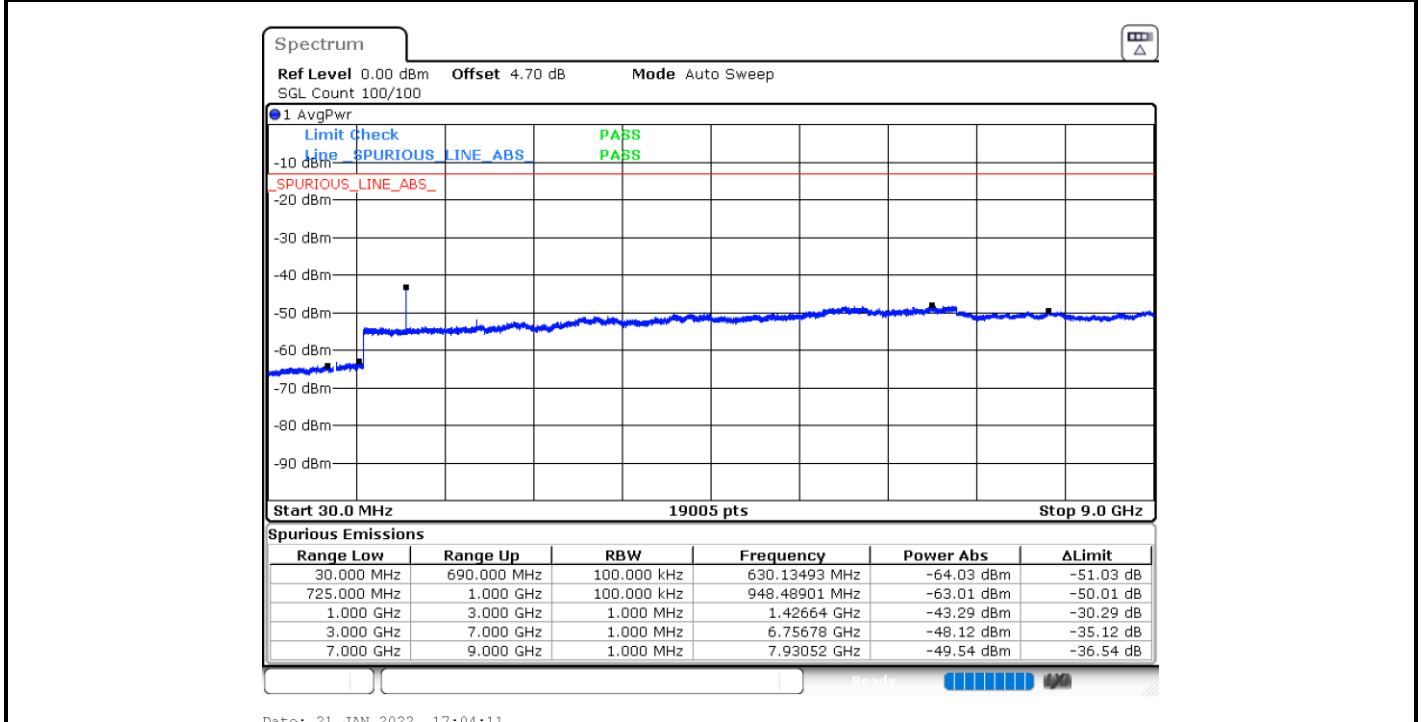




**LTE Band 12 / 3MHz**



**Highest Channel / QPSK**

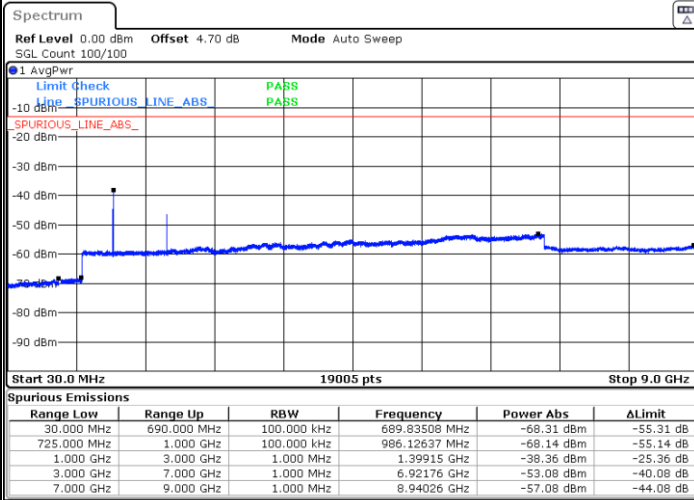




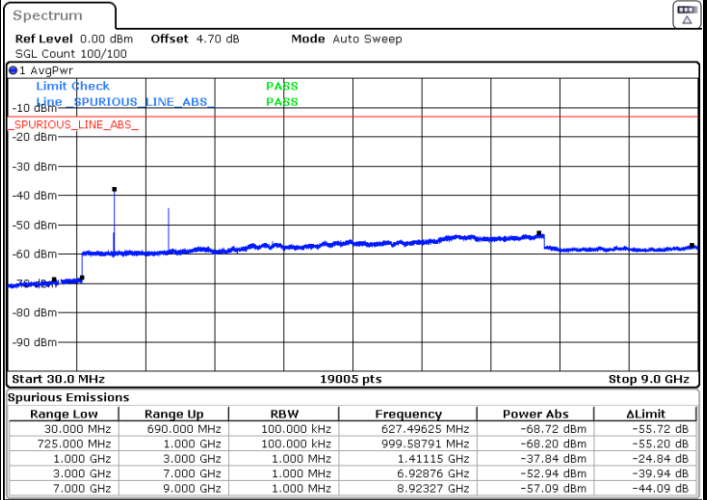
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

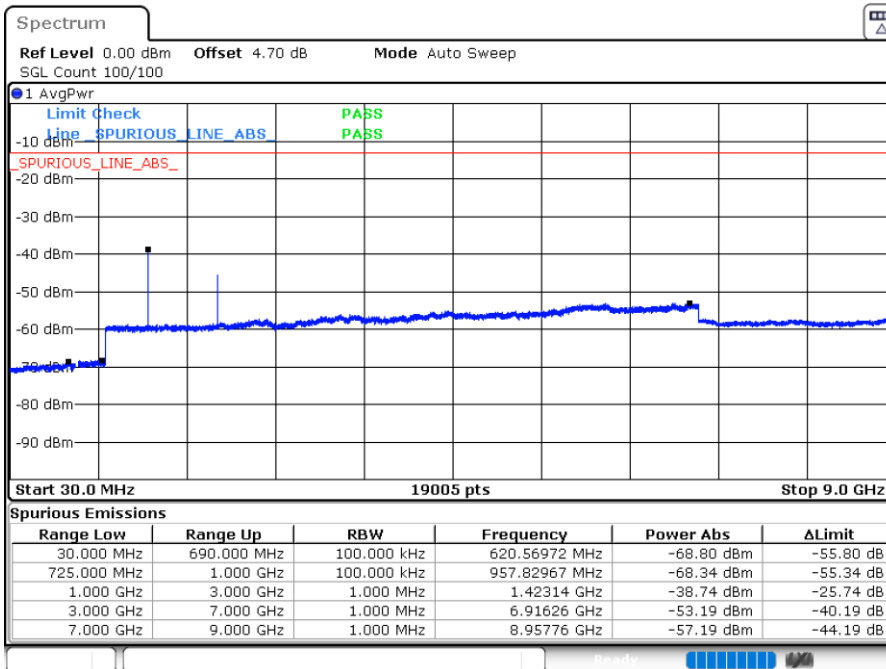


Date: 21.JAN.2022 17:16:37



Date: 21.JAN.2022 17:29:01

Highest Channel / QPSK

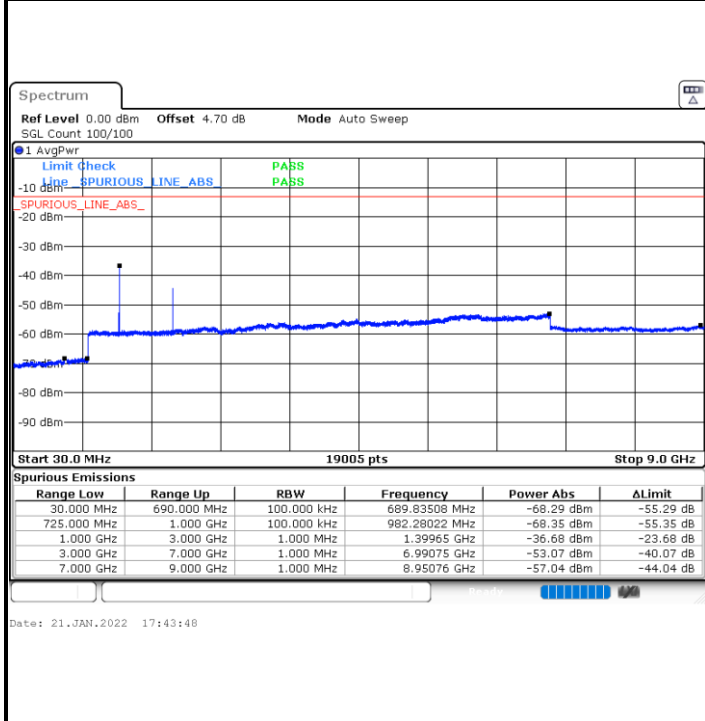


Date: 21.JAN.2022 17:31:23

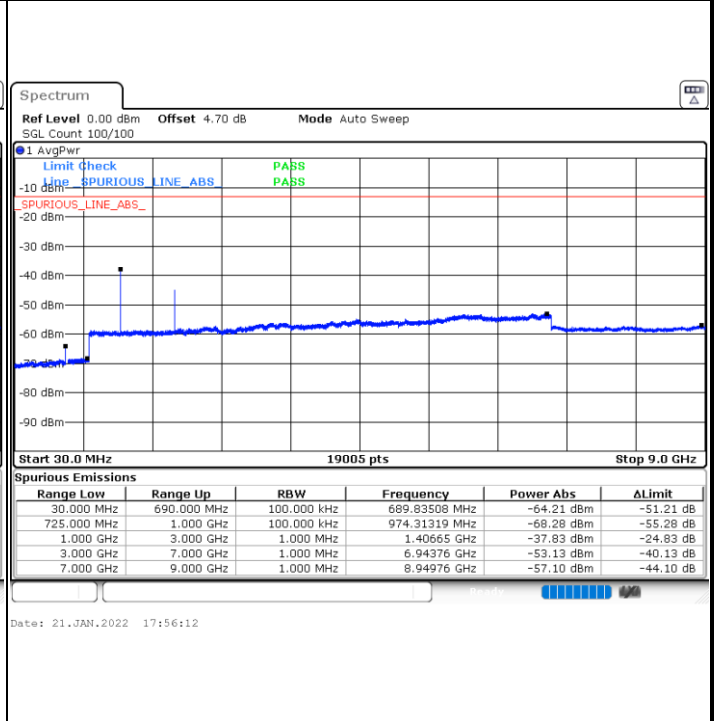


**LTE Band 12 / 10MHz**

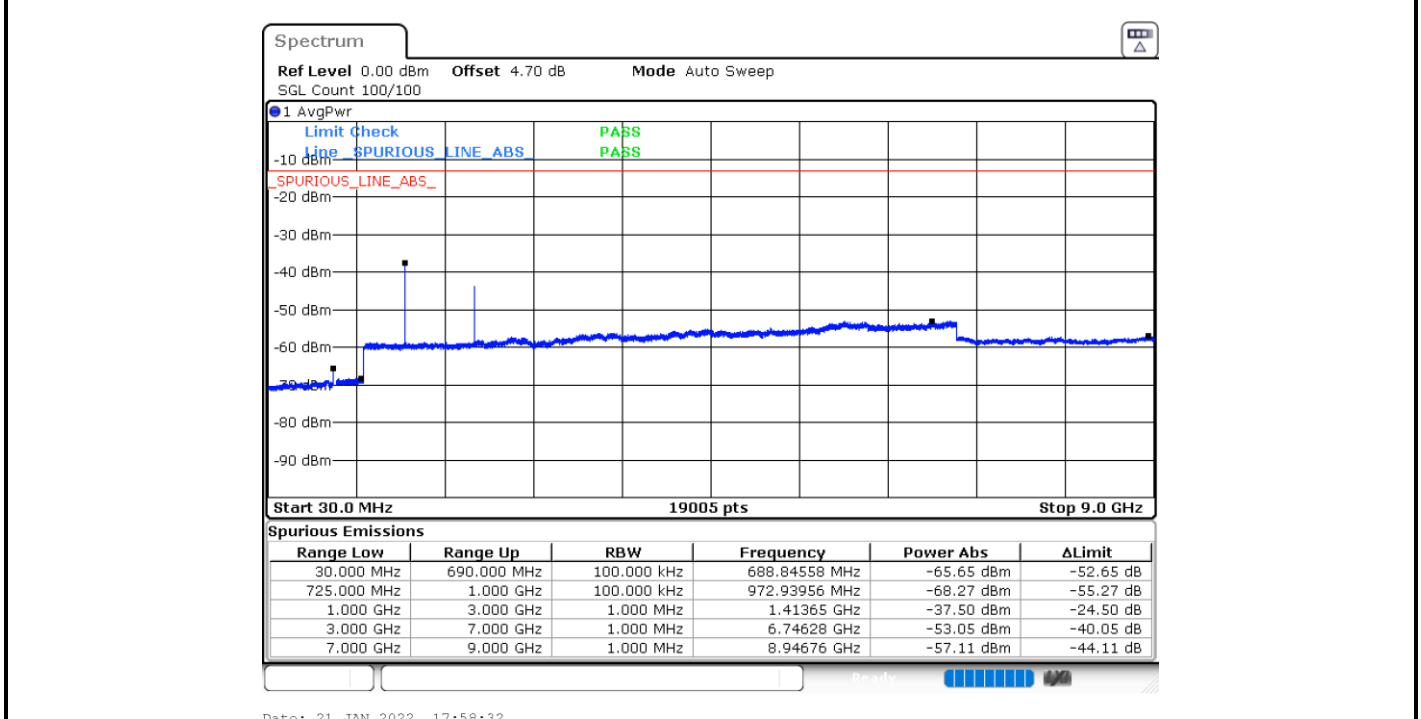
**Lowest Channel / QPSK**



**Middle Channel / QPSK**



**Highest Channel / QPSK**





### 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	0.0021	PASS
40	Normal Voltage	0.0025	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0003	
-30	Normal Voltage	0.0026	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0022	

**Note:**

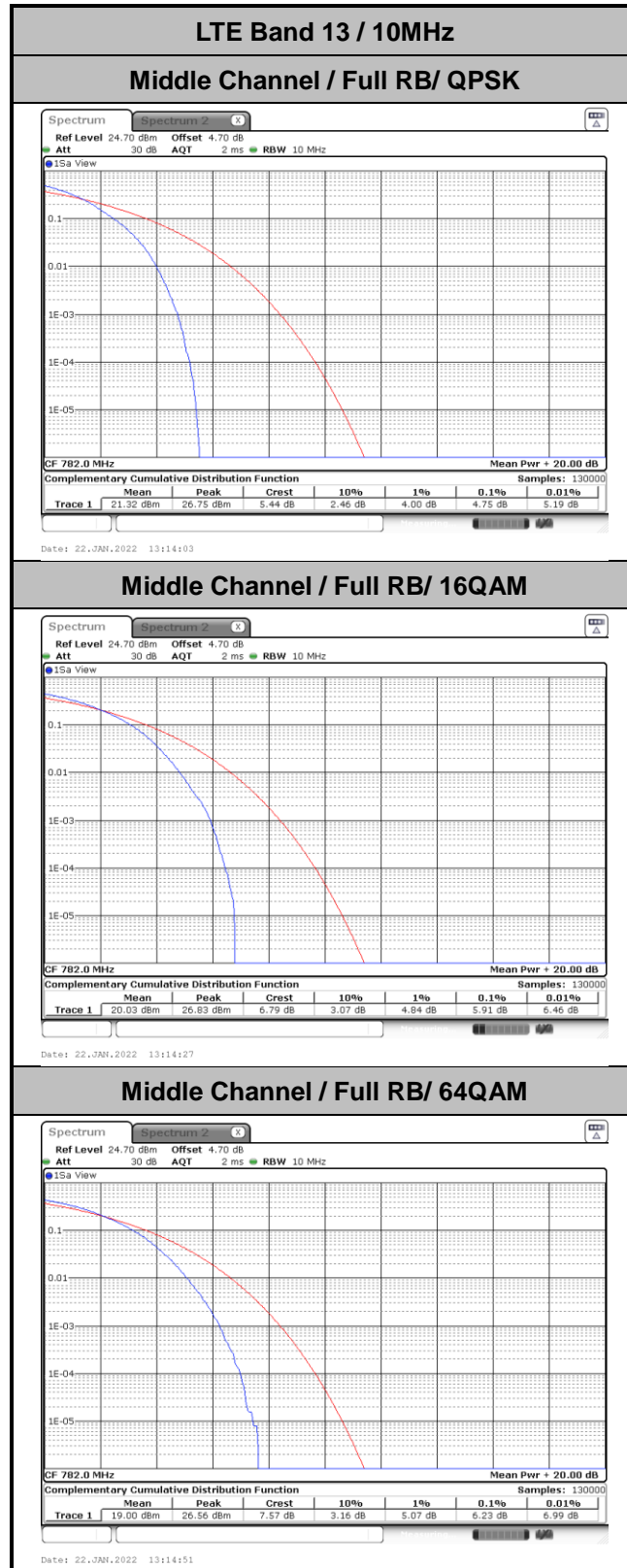
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

### Peak-to-Average Ratio

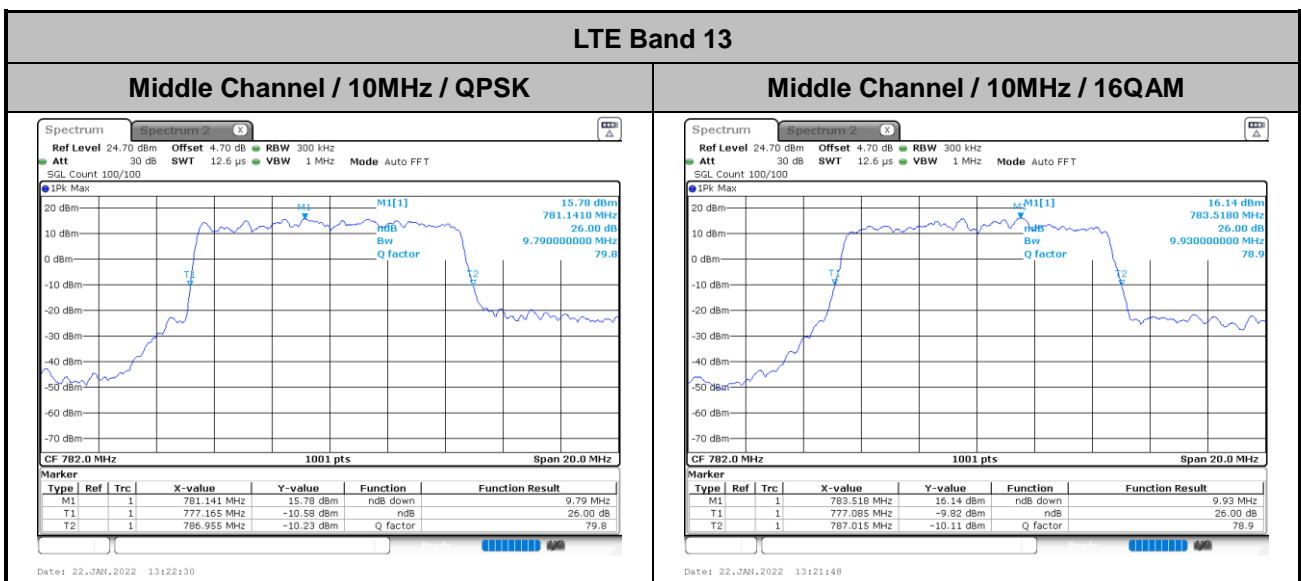
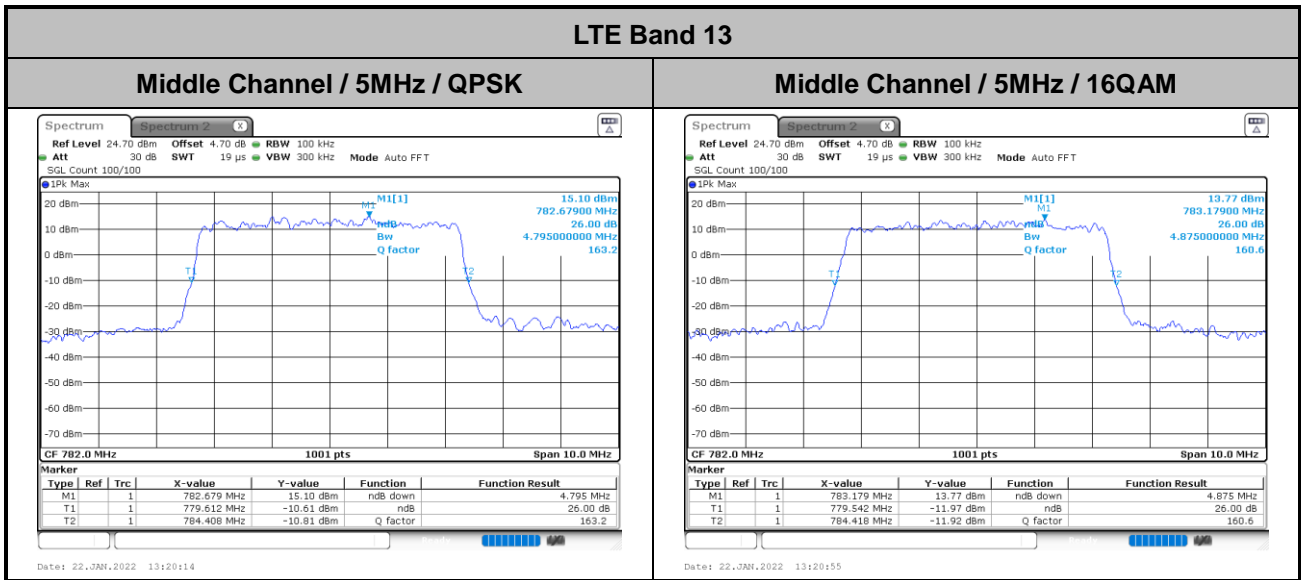
Mode	LTE Band 13 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.75	5.91	6.23	PASS





**26dB Bandwidth**

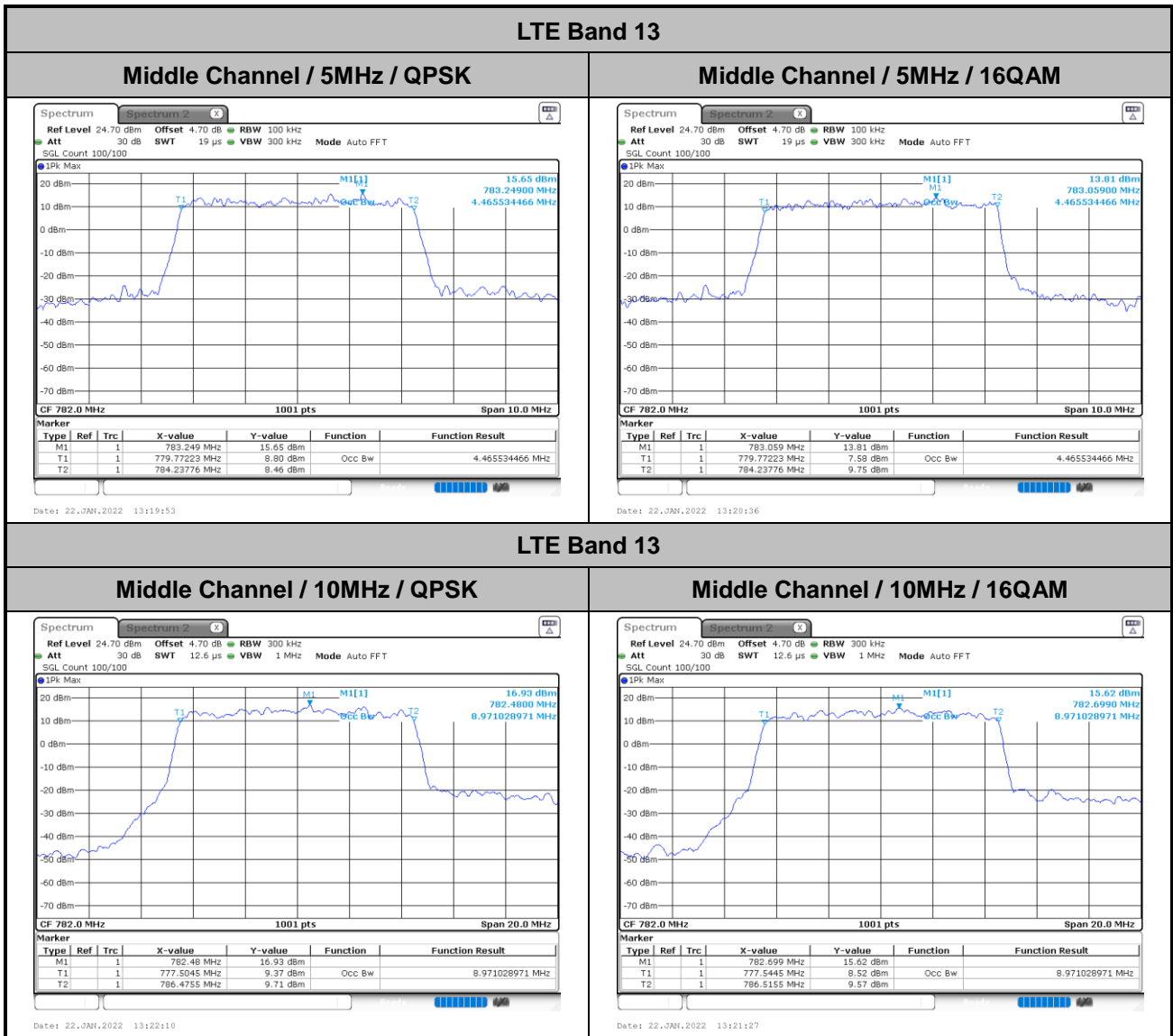
Mode	LTE Band 13 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.80	4.88
Mode	LTE Band 13 : 26dB BW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.79	9.93





# Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.47	4.47
Mode	LTE Band 13 : 99%OBW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	8.97	8.97



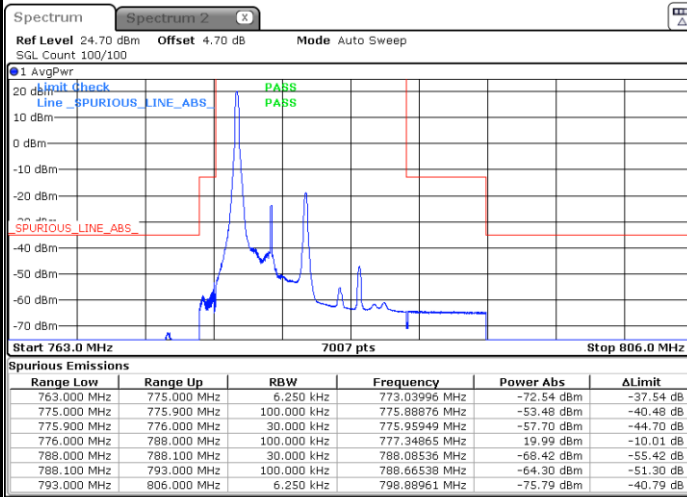




# Conducted Band Edge

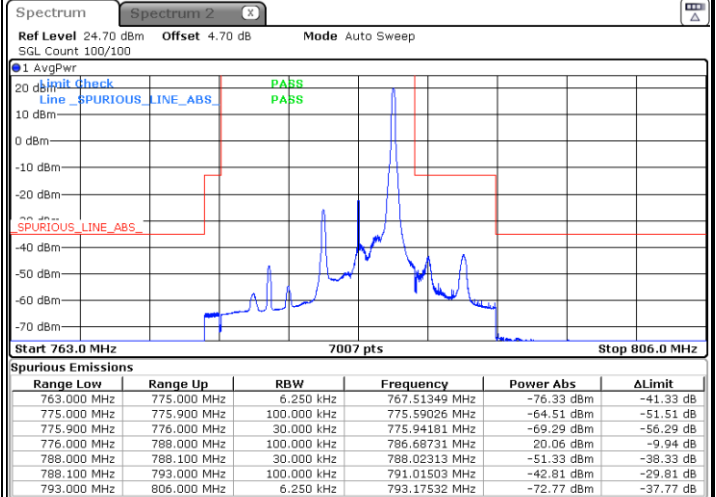
## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



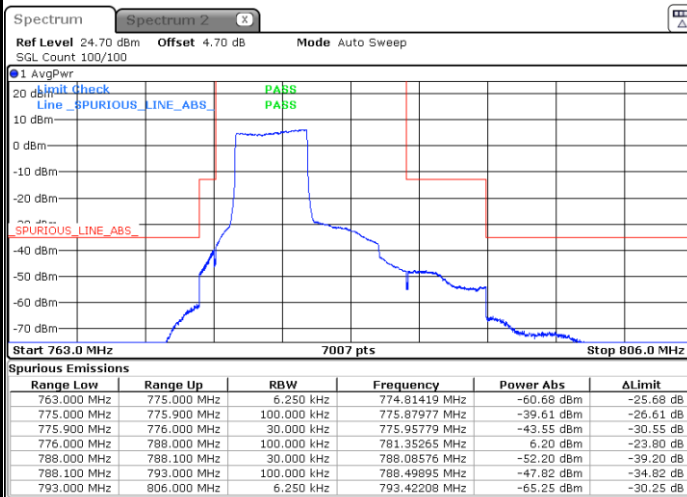
Date: 22.JAN.2022 12:29:41

### Highest Band Edge / 1 RB



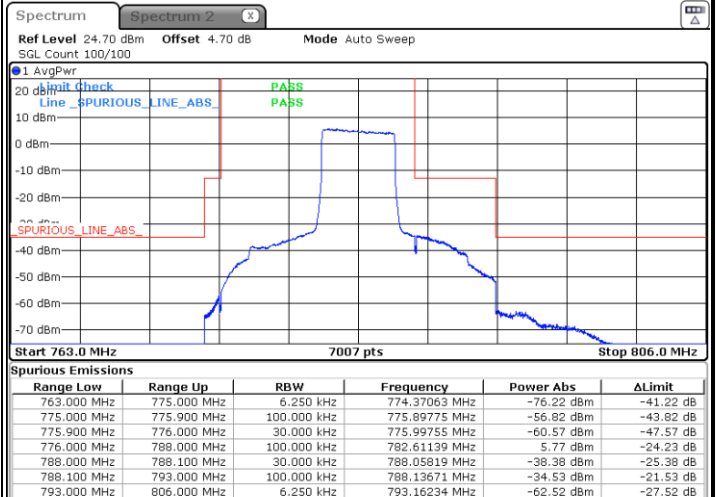
Date: 22.JAN.2022 12:44:25

### Lowest Band Edge / Full RB



Date: 22.JAN.2022 12:39:08

### Highest Band Edge / Full RB



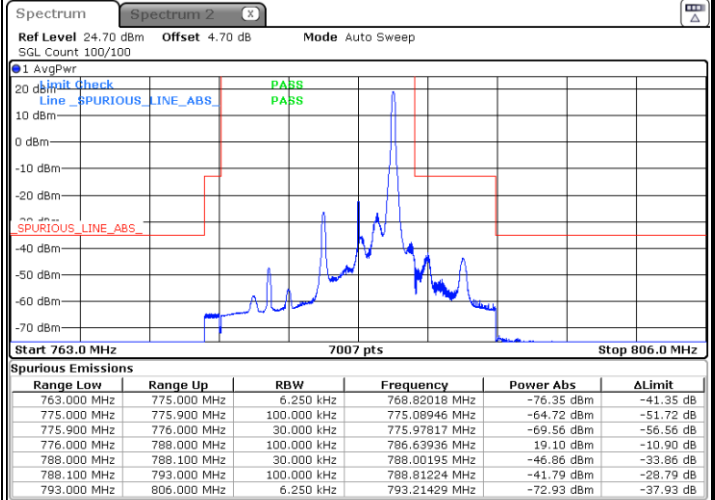
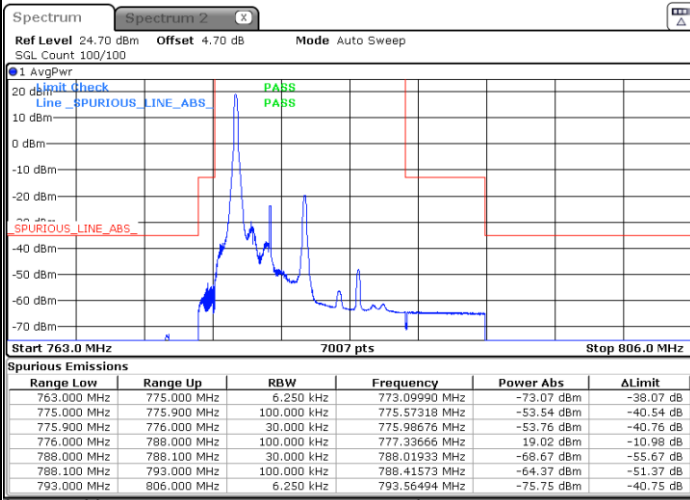
Date: 22.JAN.2022 12:53:46



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RB

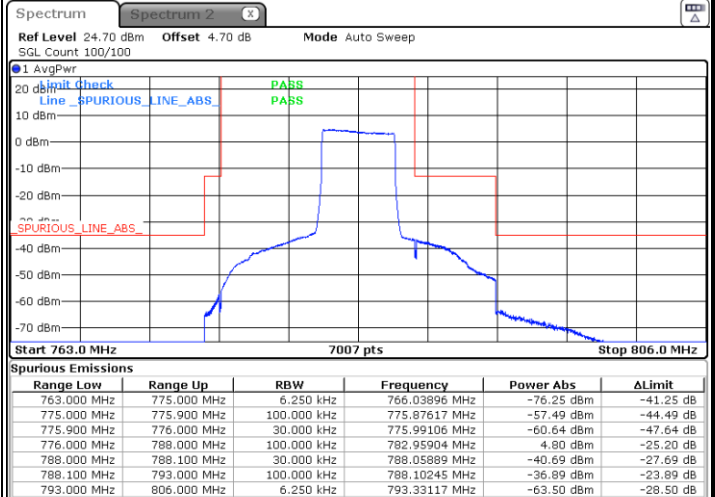
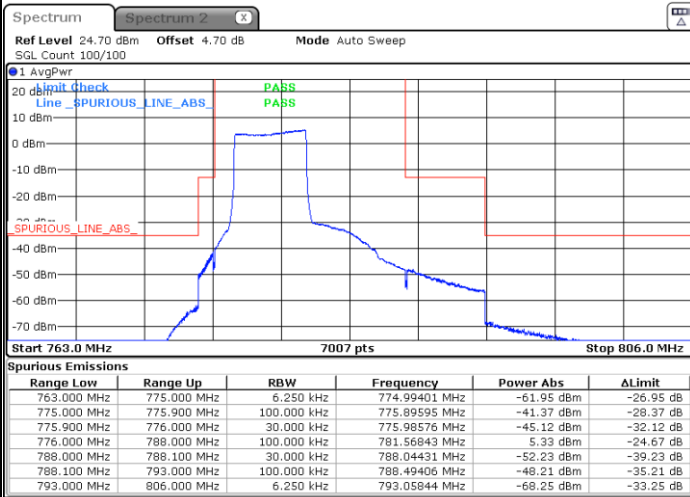


Date: 22.JAN.2022 12:31:35

Date: 22.JAN.2022 12:46:17

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 22.JAN.2022 12:37:15

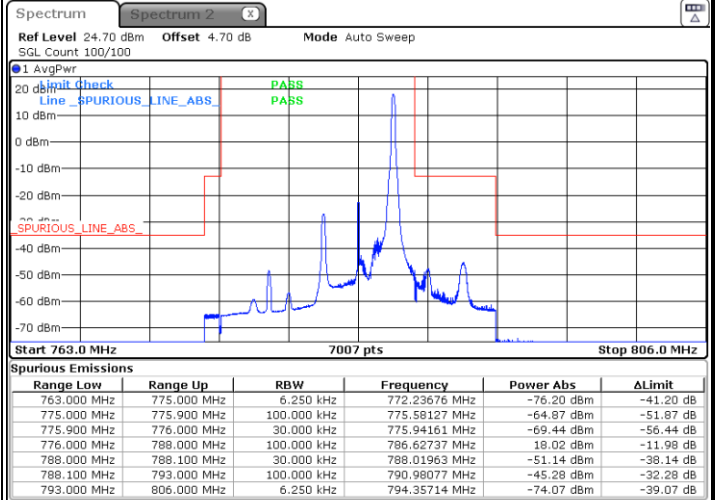
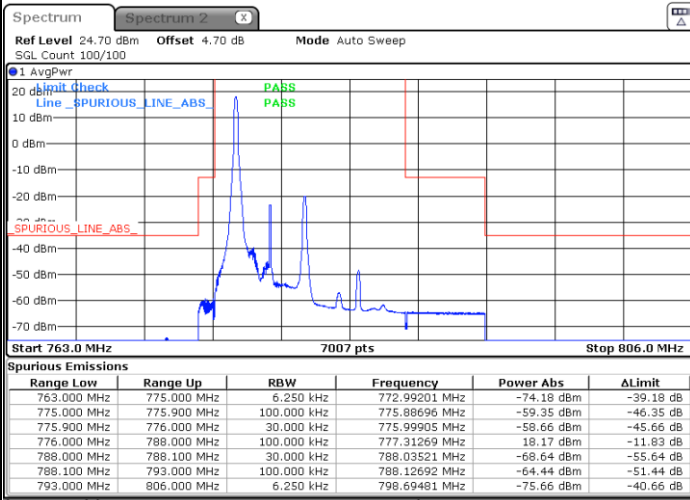
Date: 22.JAN.2022 12:51:54



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RB

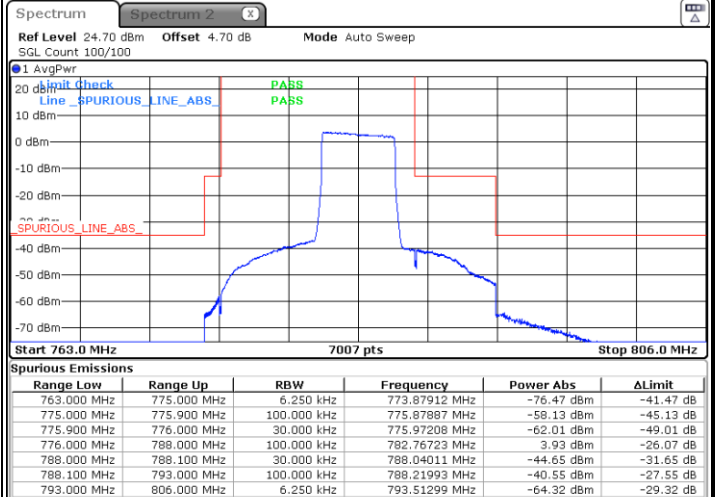
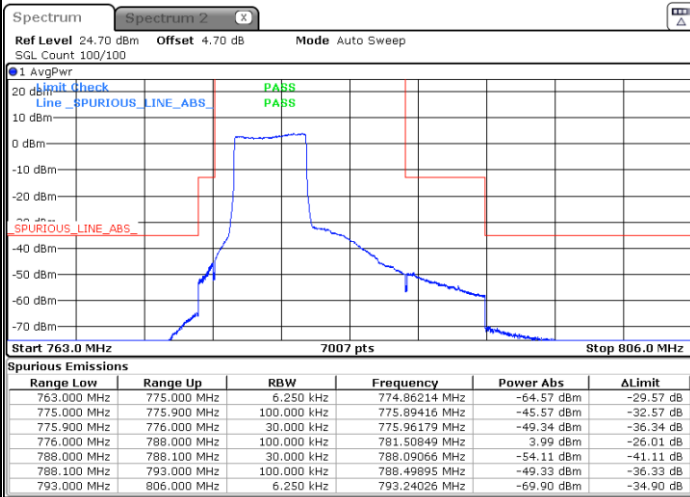


Date: 22.JAN.2022 12:33:29

Date: 22.JAN.2022 12:48:09

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



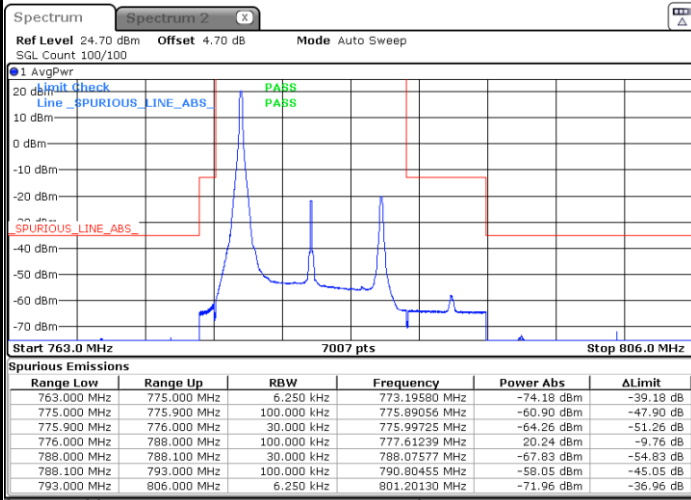
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Date: 22.JAN.2022 12:50:02



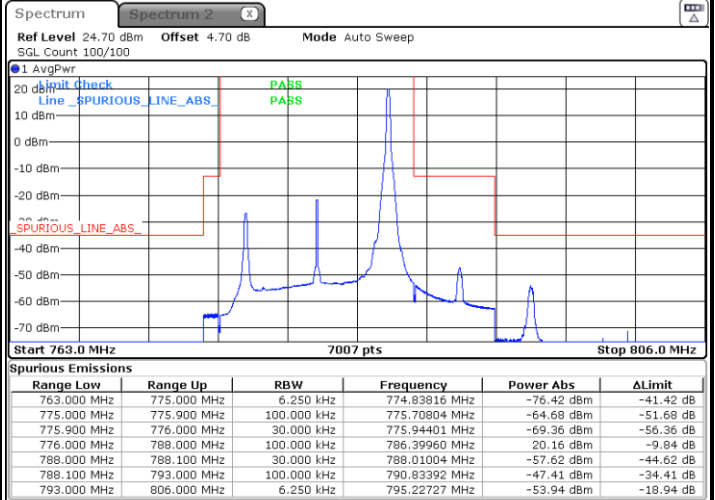
LTE Band 13 / 10MHz / QPSK

middle Band Edge / 1 RB



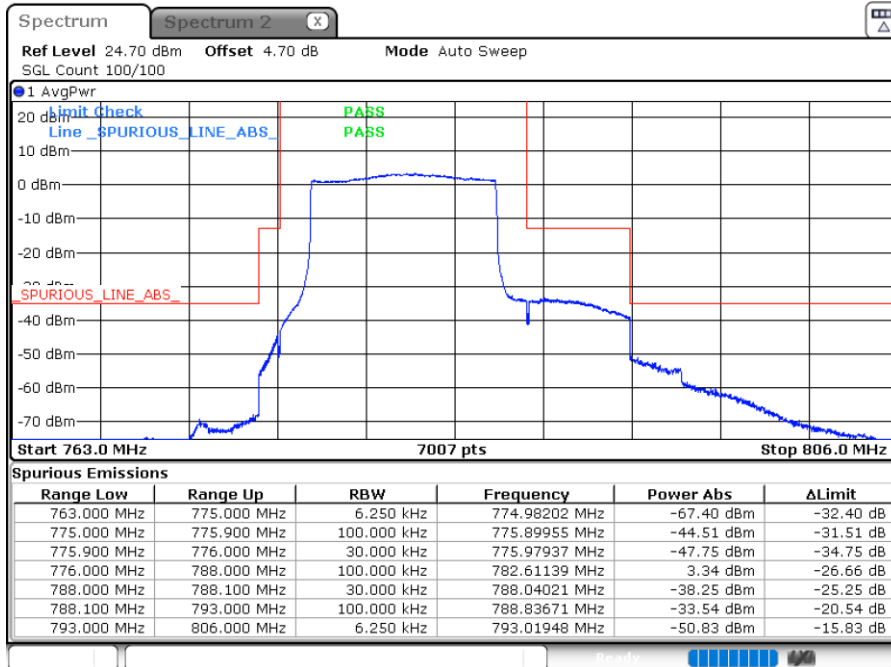
Date: 22.JAN.2022 12:57:20

middle Band Edge / 1 RB



Date: 22.JAN.2022 13:08:30

Middle Band Edge / Full RB

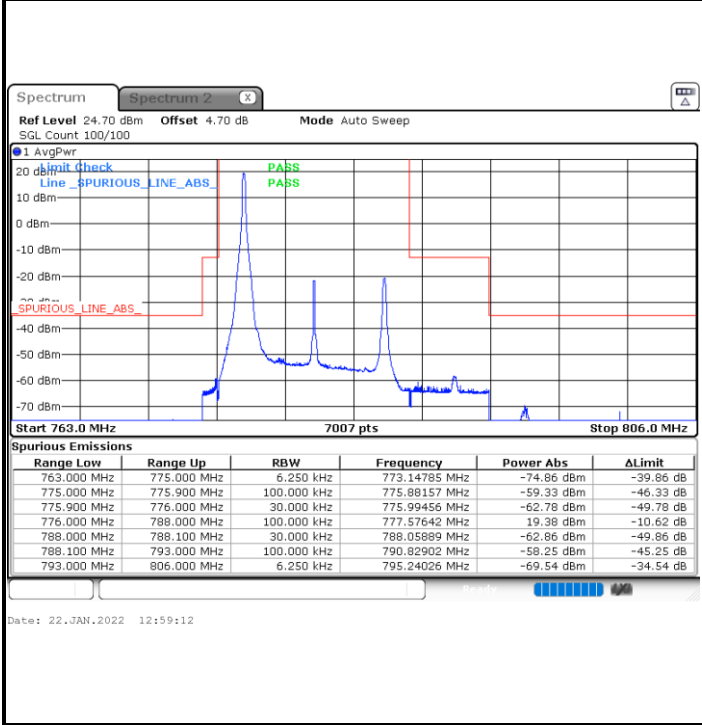


Date: 22.JAN.2022 13:06:39

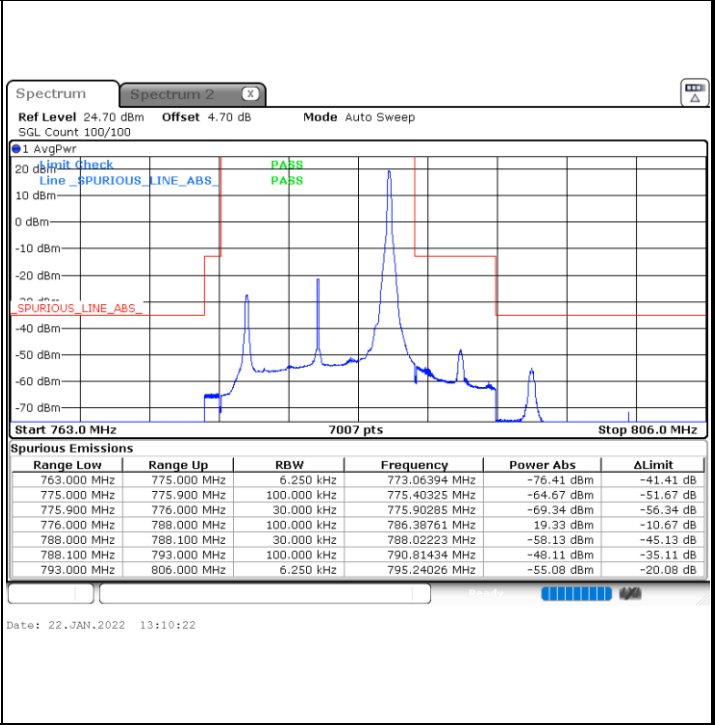


**LTE Band 13 / 10MHz / 16QAM**

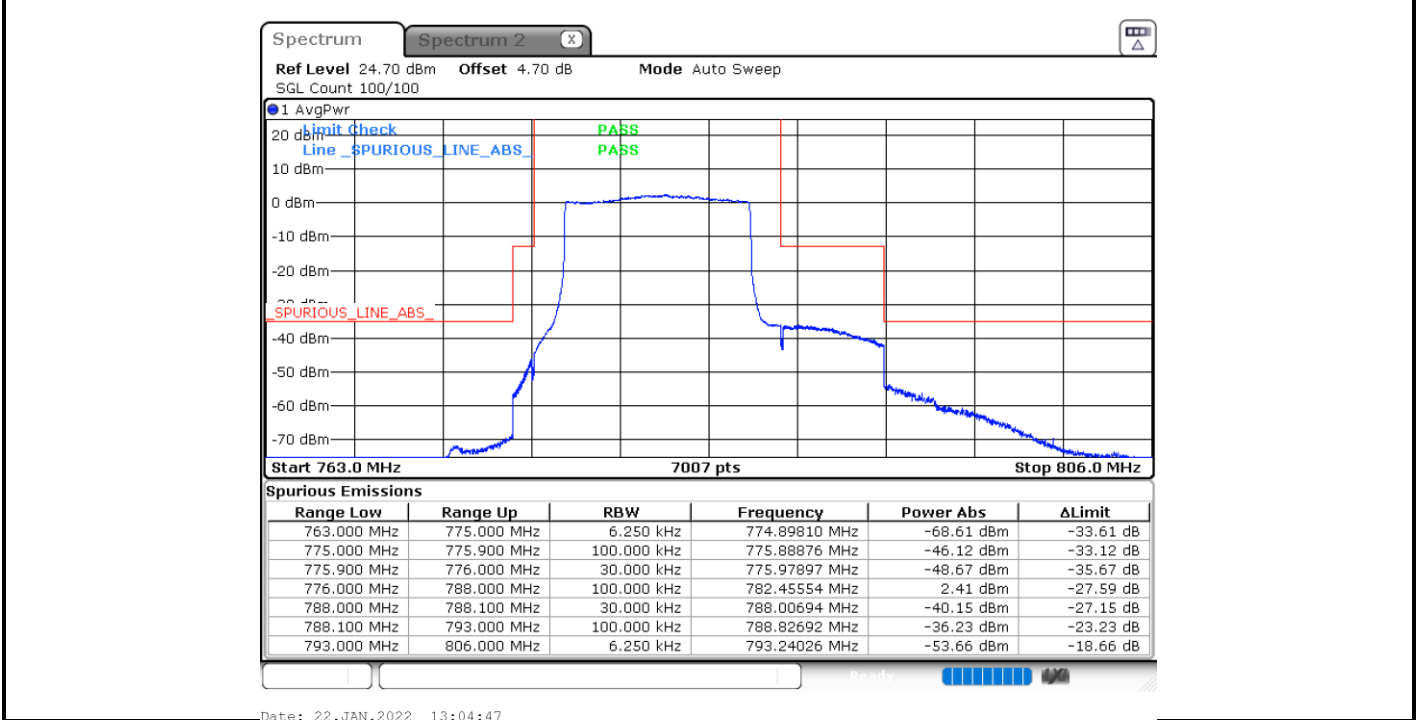
**middle Band Edge / 1 RB**



**middle Band Edge / 1 RB**



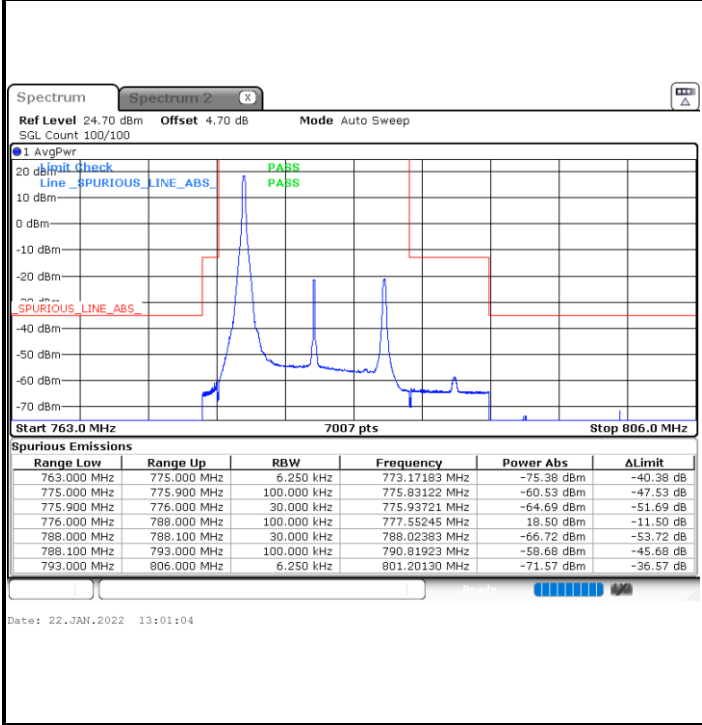
**middle Band Edge / Full RB**



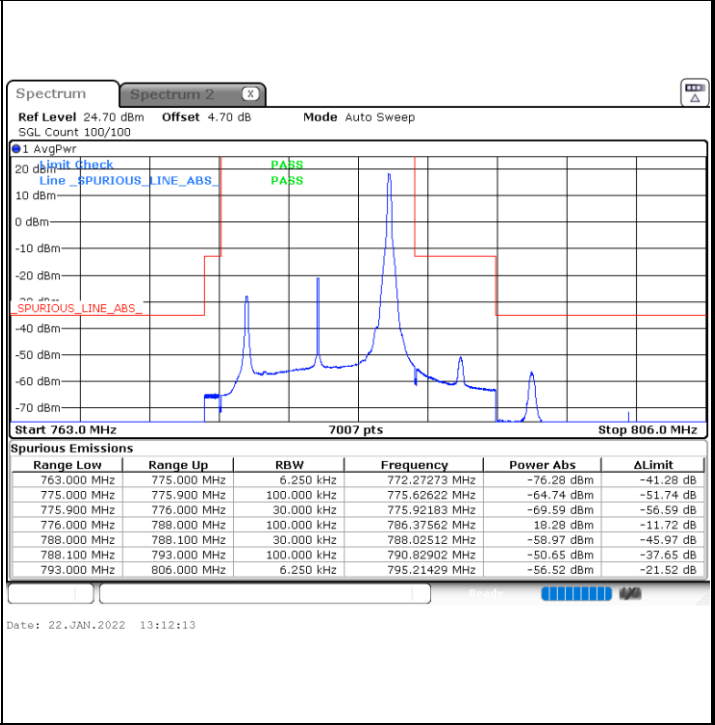


**LTE Band 13 / 10MHz / 64QAM**

**middle Band Edge / 1 RB**



**middle Band Edge / 1 RB**



**middle Band Edge / Full RB**

