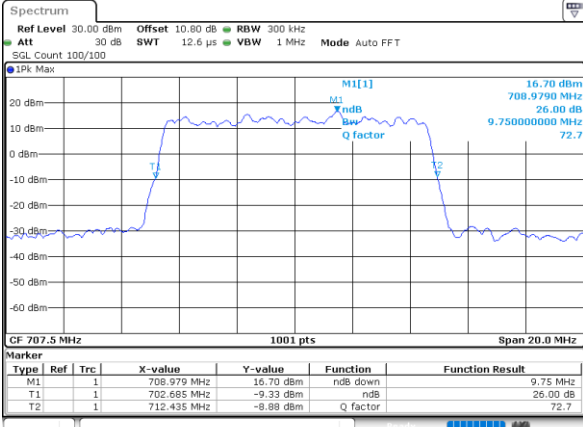




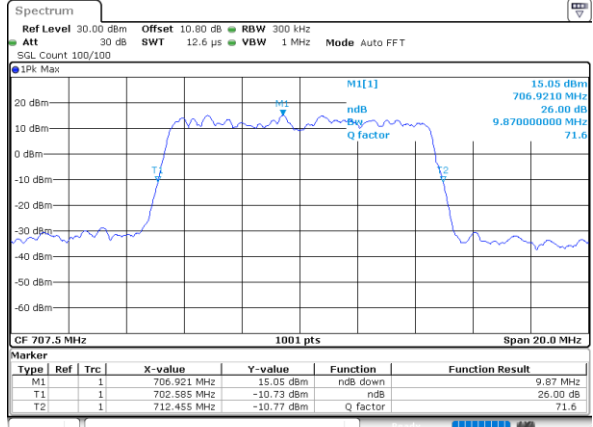
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 25\_MAY\_2021 11:09:11

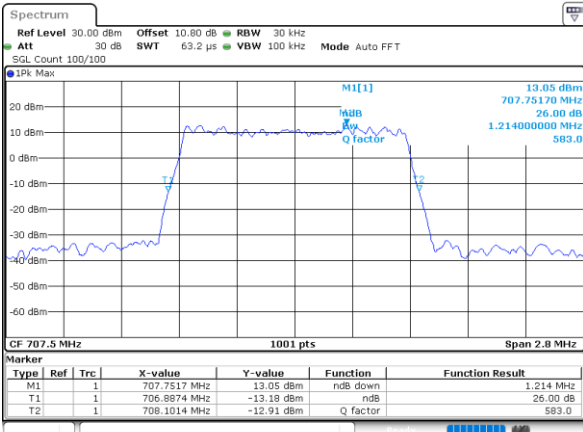
Middle Channel / 10MHz / 16QAM



Date: 25\_MAY\_2021 11:09:32

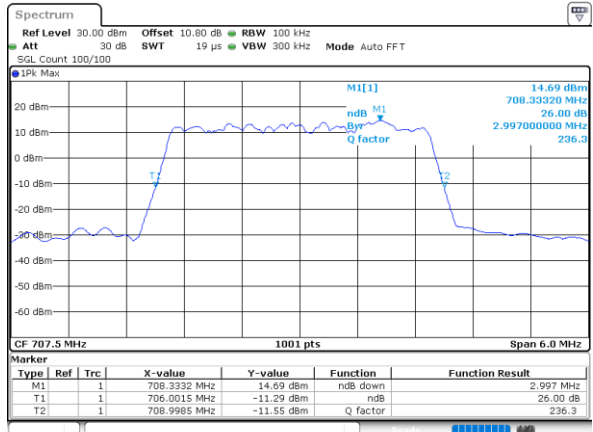
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



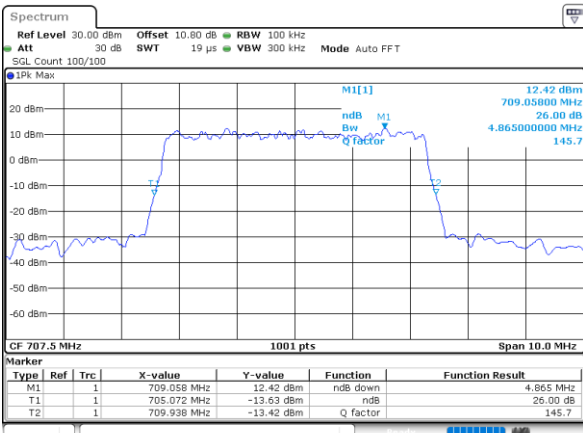
Date: 25\_MAY\_2021 10:38:41

Middle Channel / 3MHz / 64QAM



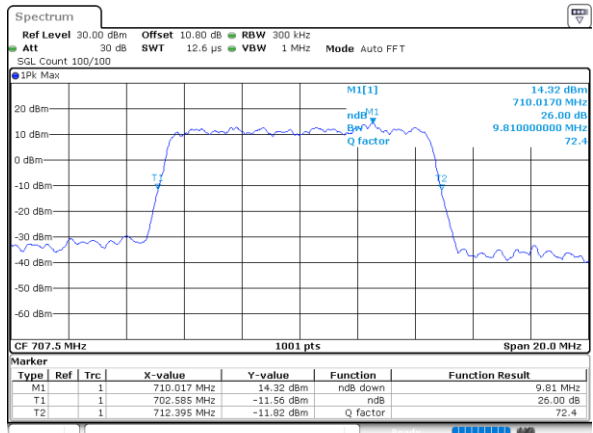
Date: 25\_MAY\_2021 10:50:58

Middle Channel / 5MHz / 64QAM



Date: 25\_MAY\_2021 10:54:28

Middle Channel / 10MHz / 64QAM



Date: 25\_MAY\_2021 11:16:39



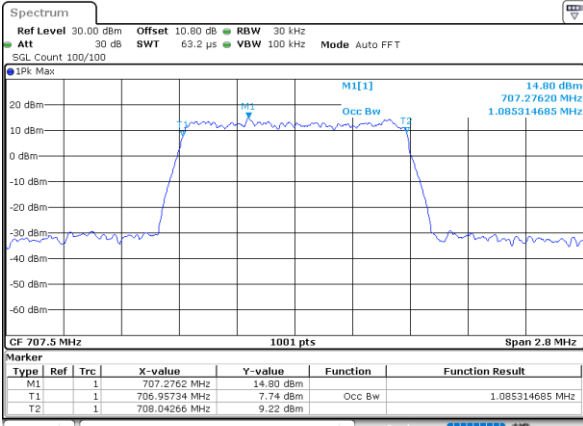
**Occupied Bandwidth**

Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.08	2.71	2.72	4.49	4.50	9.01	8.99	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	1.09	-	2.70	-	4.47	-	8.97	-	-	-	-	-



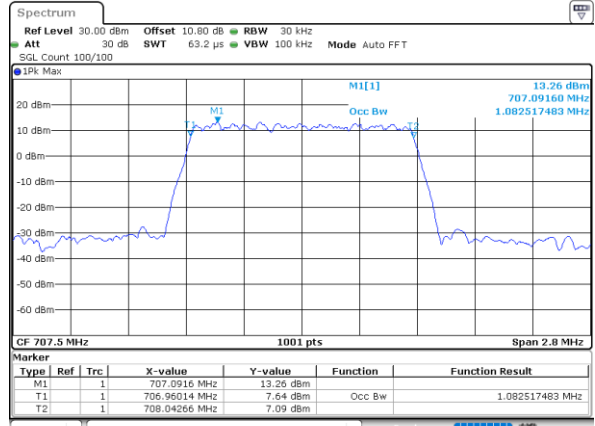
LTE Band 12

Middle Channel / 1.4MHz / QPSK



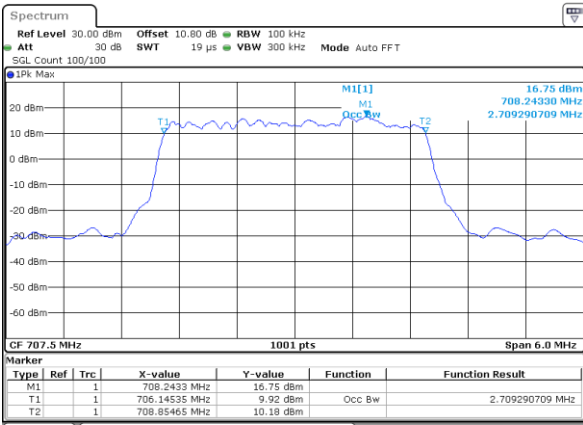
Date: 25.MAY.2021 10:31:52

Middle Channel / 1.4MHz / 16QAM



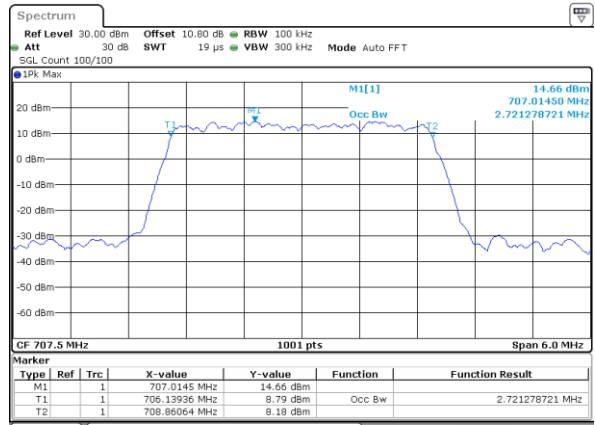
Date: 25.MAY.2021 10:31:30

Middle Channel / 3MHz / QPSK



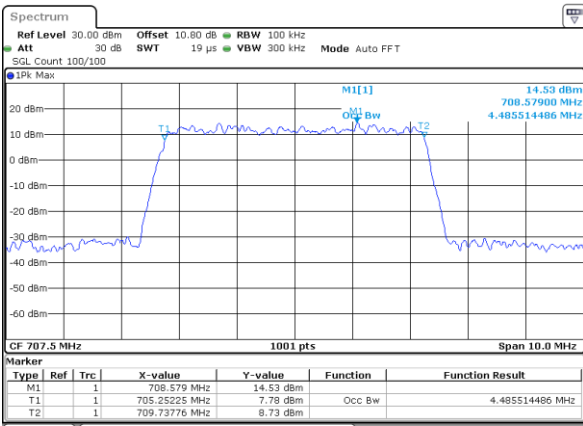
Date: 25.MAY.2021 10:44:10

Middle Channel / 3MHz / 16QAM



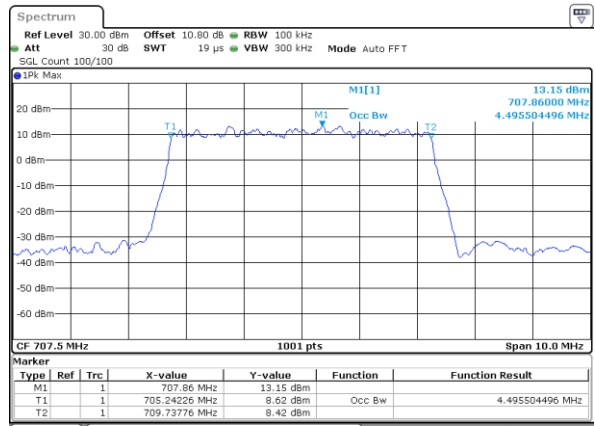
Date: 25.MAY.2021 10:43:47

Middle Channel / 5MHz / QPSK



Date: 25.MAY.2021 10:59:57

Middle Channel / 5MHz / 16QAM

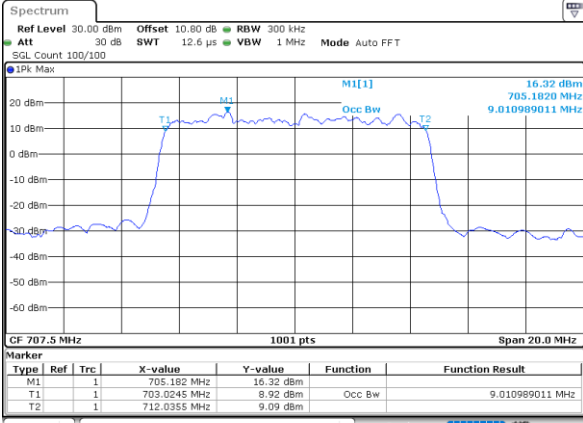


Date: 25.MAY.2021 10:59:34



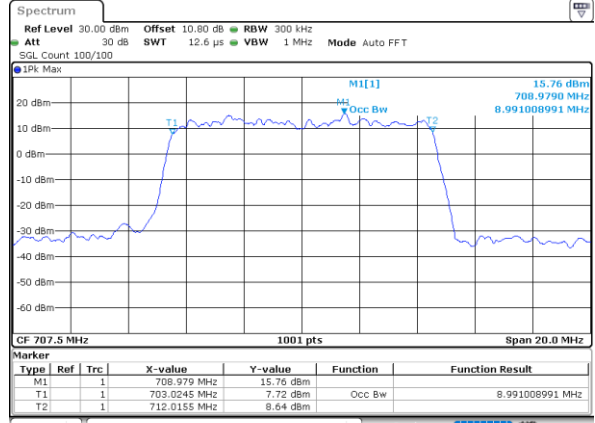
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 25\_MAY\_2021 11:08:49

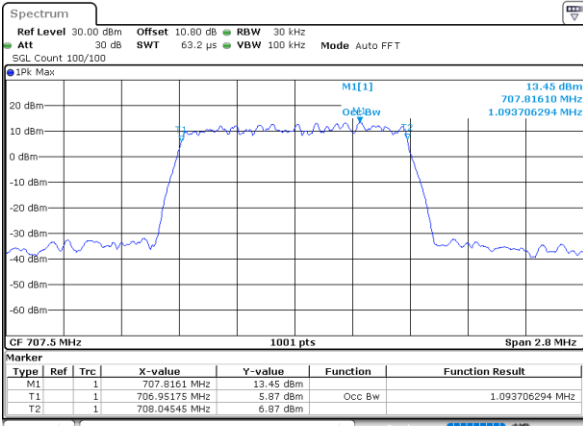
Middle Channel / 10MHz / 16QAM



Date: 25\_MAY\_2021 11:08:26

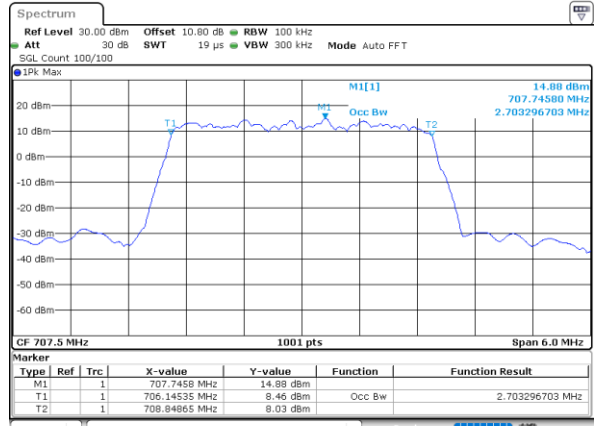
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



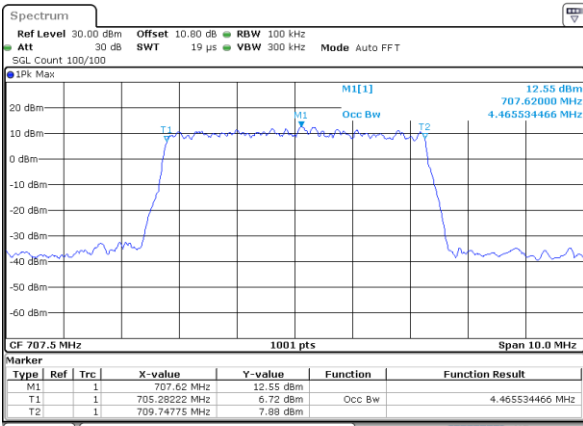
Date: 25\_MAY\_2021 10:38:18

Middle Channel / 3MHz / 64QAM



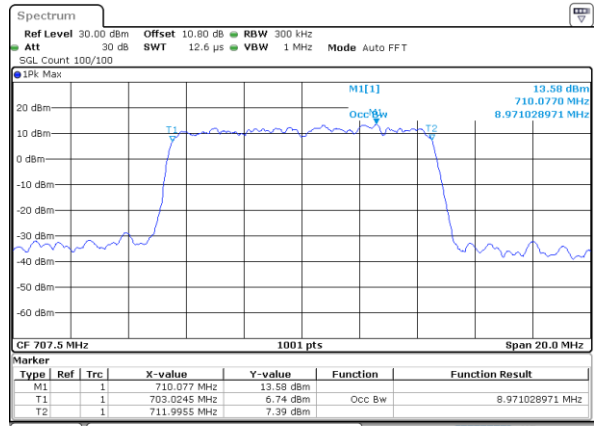
Date: 25\_MAY\_2021 10:50:36

Middle Channel / 5MHz / 64QAM



Date: 25\_MAY\_2021 10:54:05

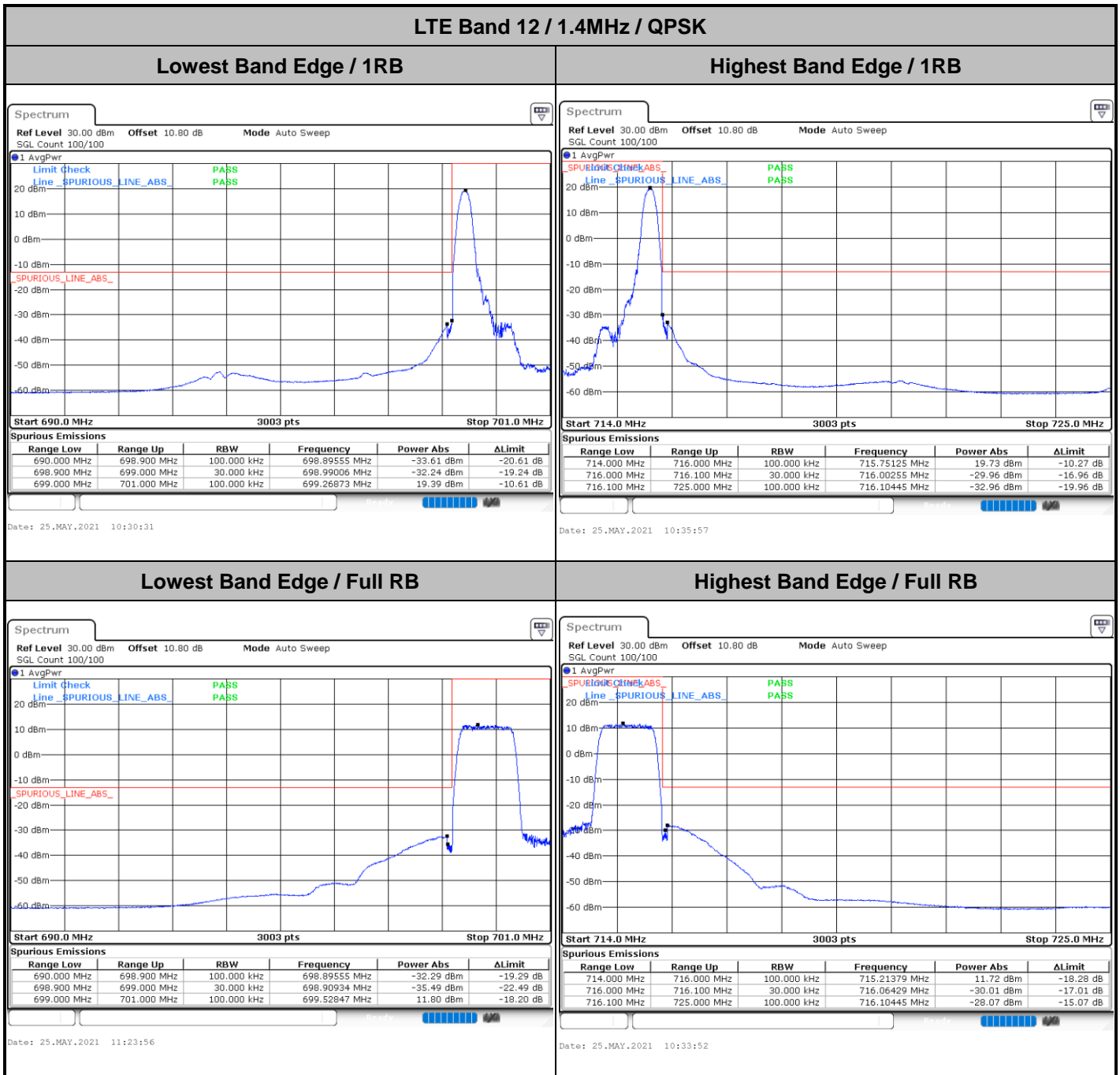
Middle Channel / 10MHz / 64QAM



Date: 25\_MAY\_2021 11:16:16



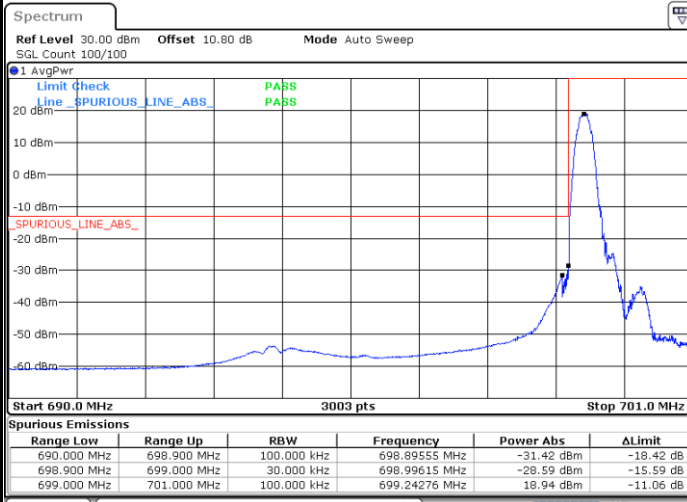
# Conducted Band Edge





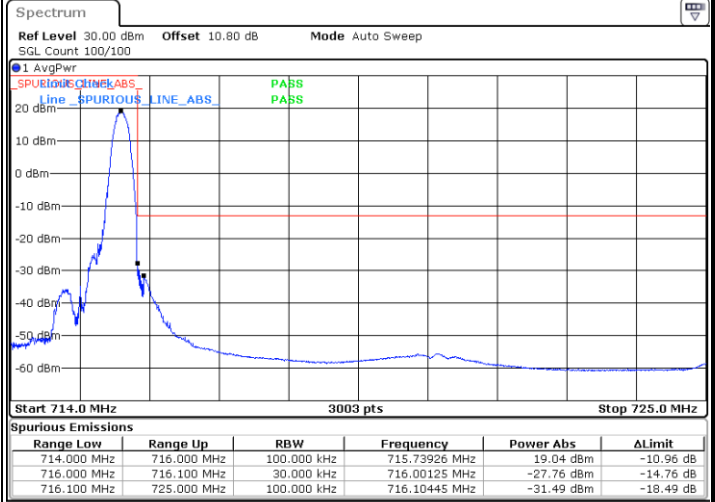
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



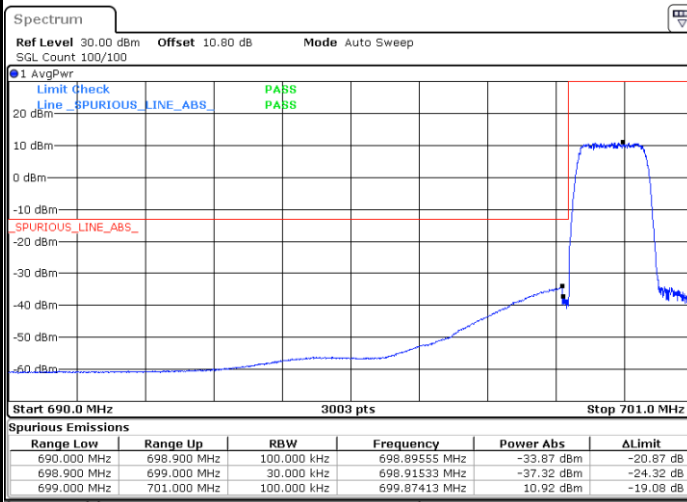
Date: 25.MAY.2021 10:29:50

Highest Band Edge / 1 RB



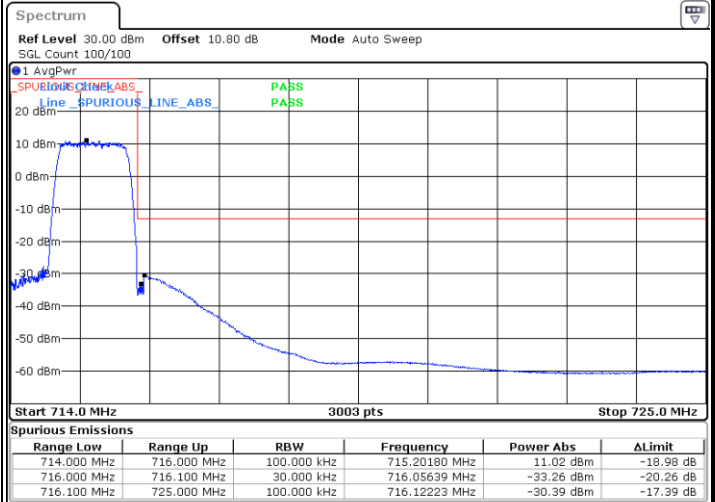
Date: 25.MAY.2021 10:35:16

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:29:09

Highest Band Edge / Full RB

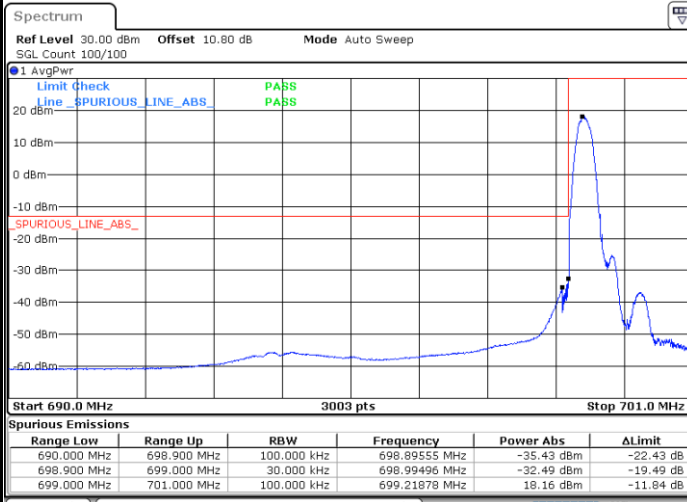


Date: 25.MAY.2021 10:34:33



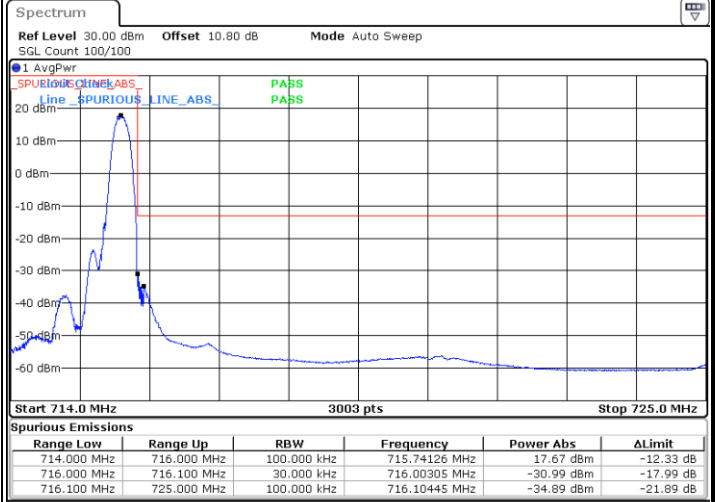
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



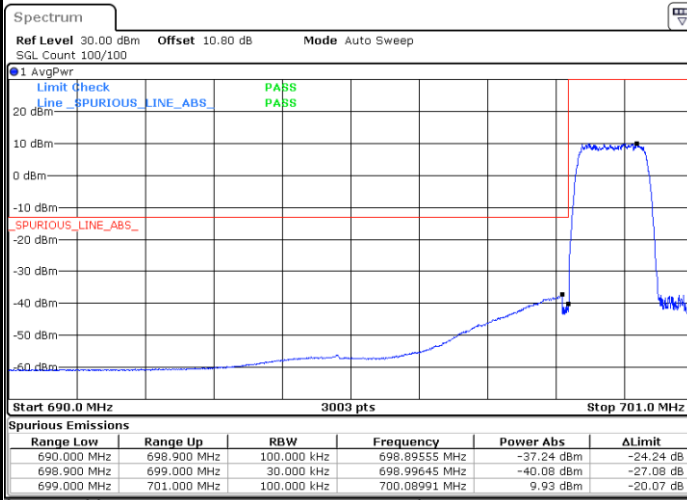
Date: 25.MAY.2021 10:37:57

Highest Band Edge / 1 RB



Date: 25.MAY.2021 10:40:02

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:37:15

Highest Band Edge / Full RB

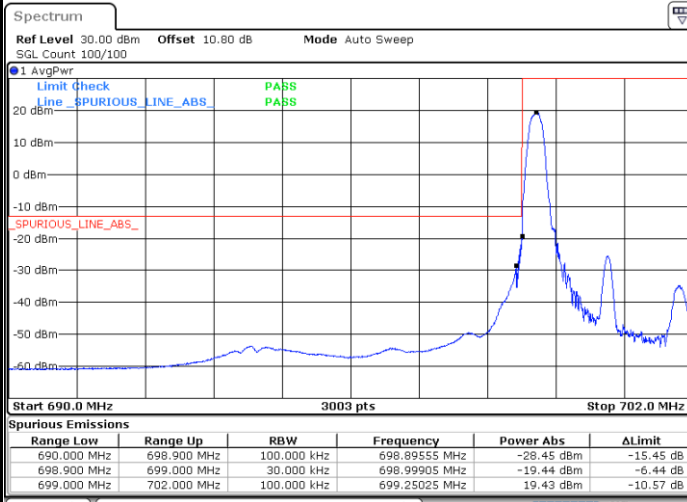


Date: 25.MAY.2021 10:39:21



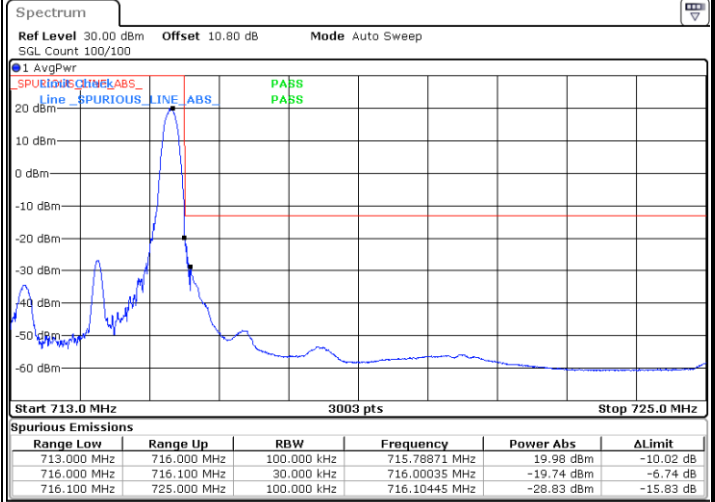
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



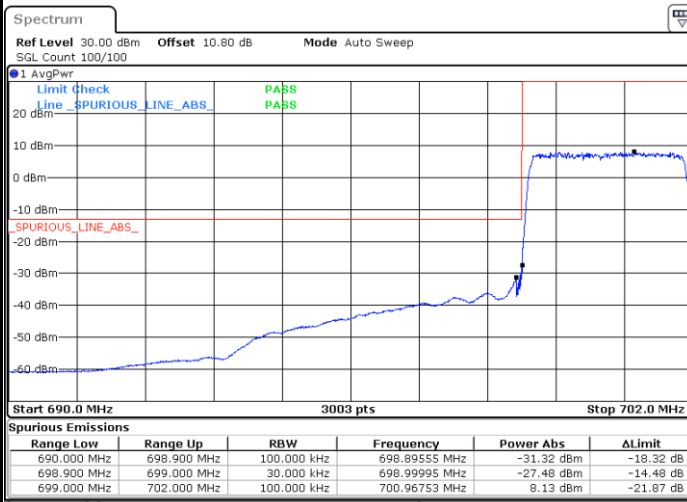
Date: 25.MAY.2021 10:42:49

Highest Band Edge / 1 RB



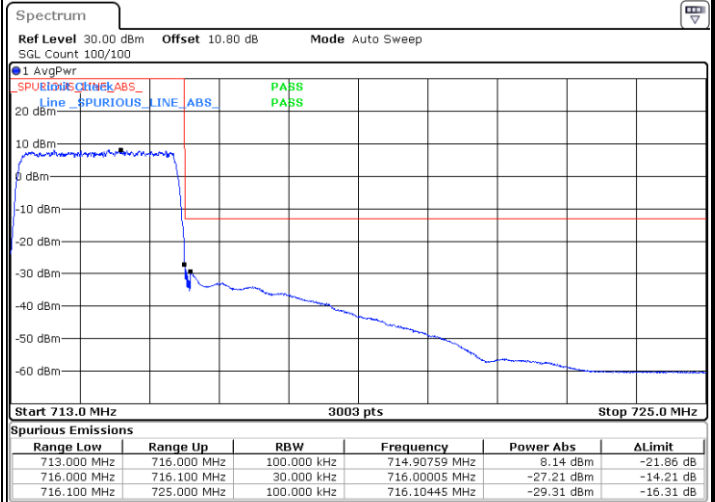
Date: 25.MAY.2021 10:48:14

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:40:44

Highest Band Edge / Full RB



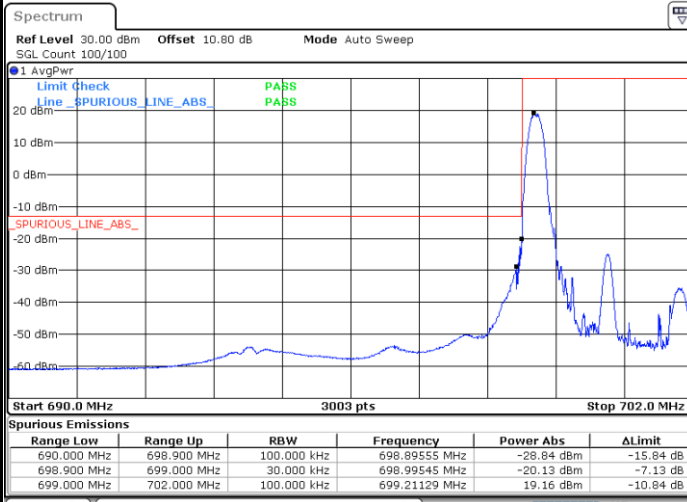
Date: 25.MAY.2021 10:46:10





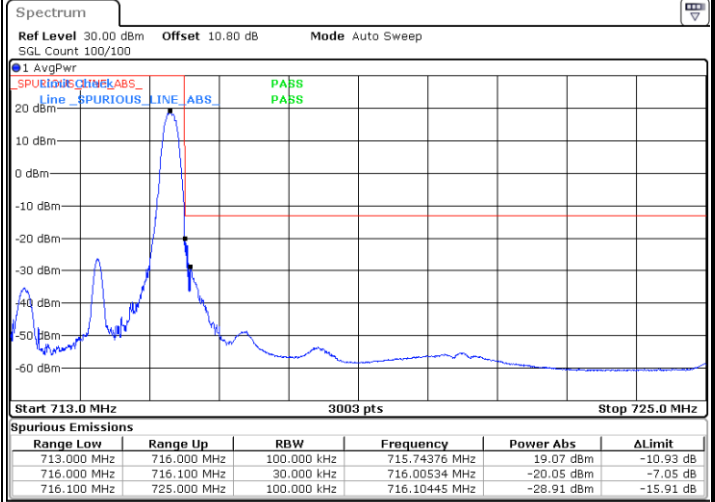
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



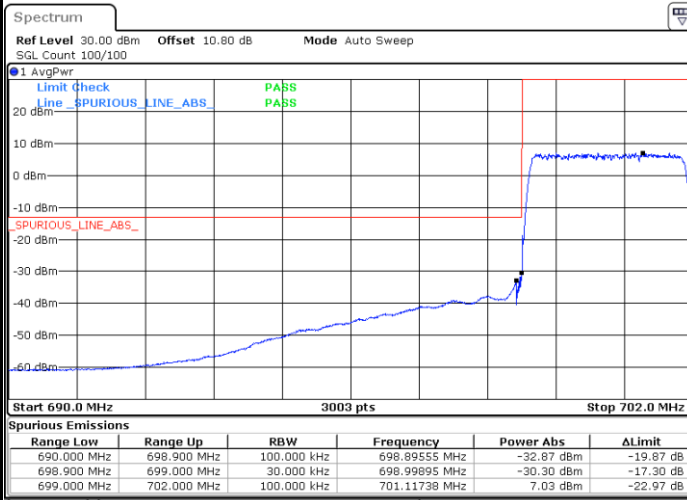
Date: 25.MAY.2021 10:42:07

Highest Band Edge / 1 RB



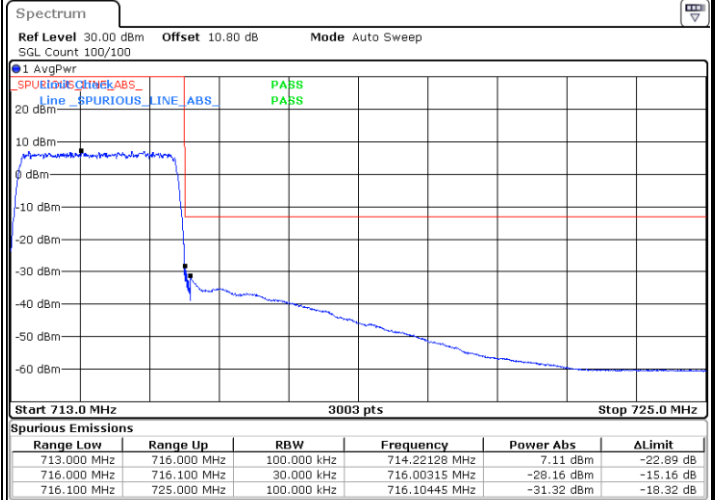
Date: 25.MAY.2021 10:47:33

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:41:25

Highest Band Edge / Full RB

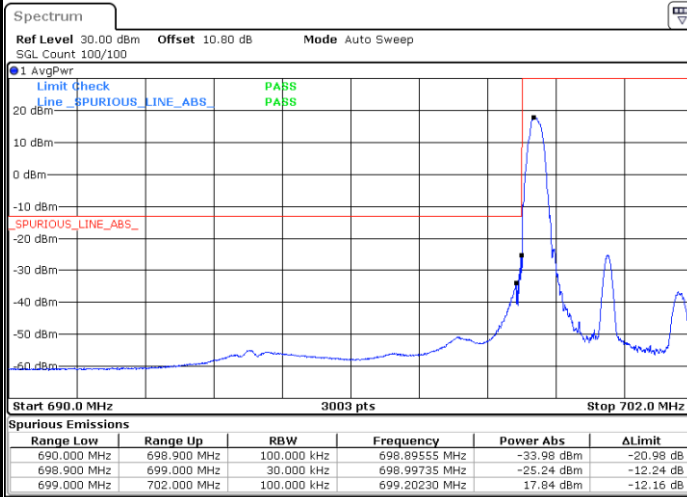


Date: 25.MAY.2021 10:46:51



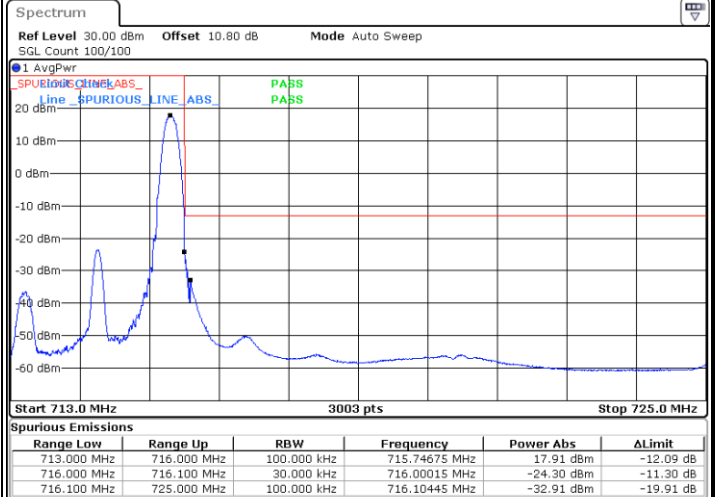
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



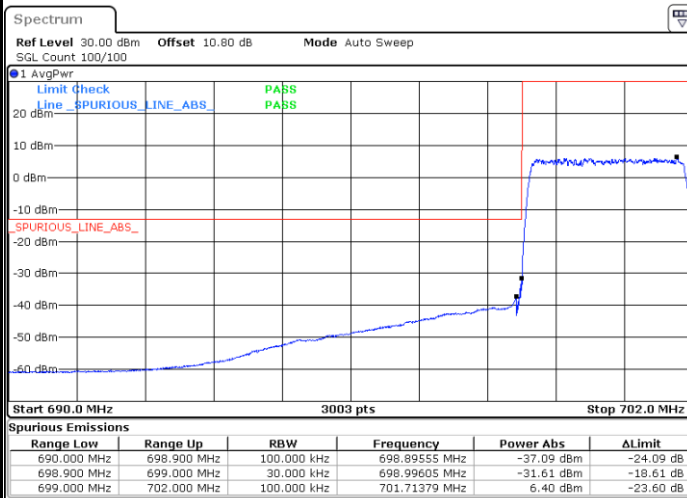
Date: 25.MAY.2021 10:50:14

Highest Band Edge / 1 RB



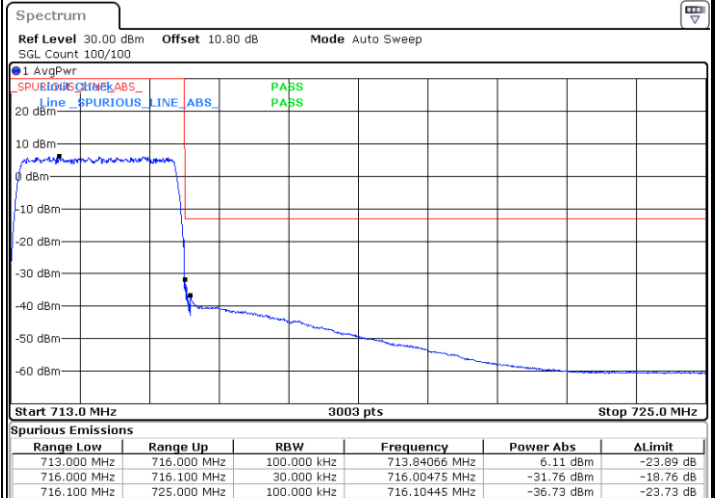
Date: 25.MAY.2021 10:52:20

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:49:32

Highest Band Edge / Full RB

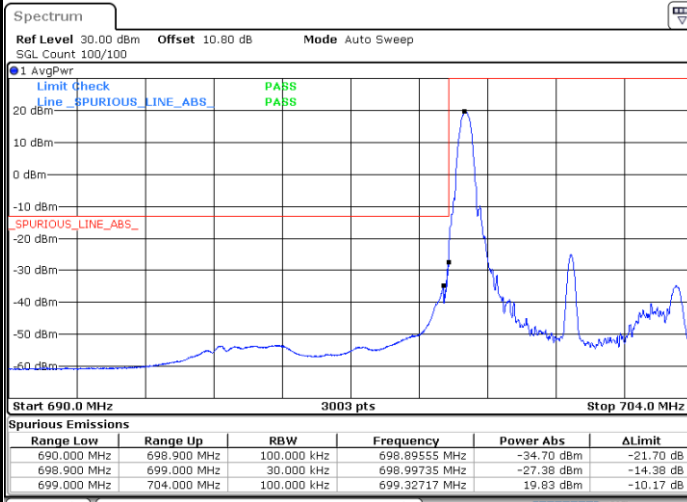


Date: 25.MAY.2021 10:51:38



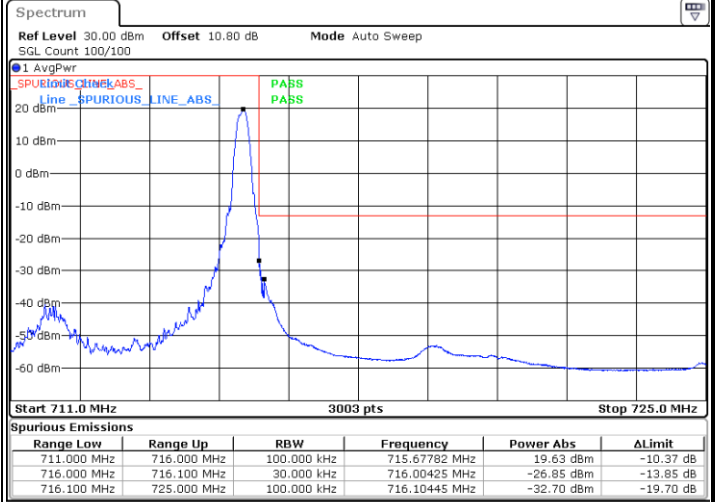
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



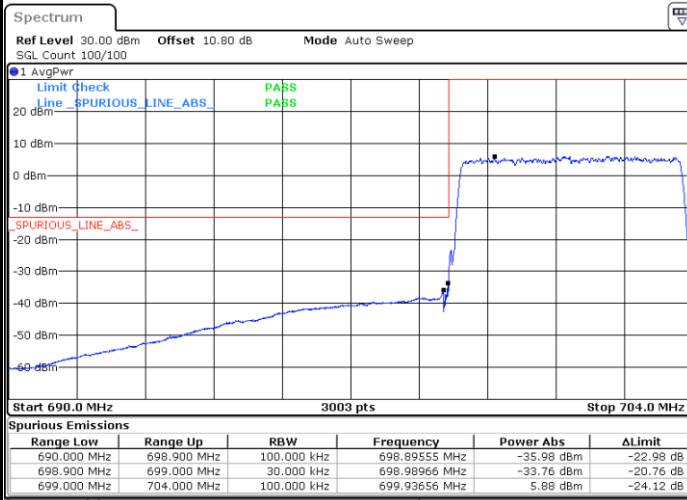
Date: 25.MAY.2021 10:58:36

Highest Band Edge / 1 RB



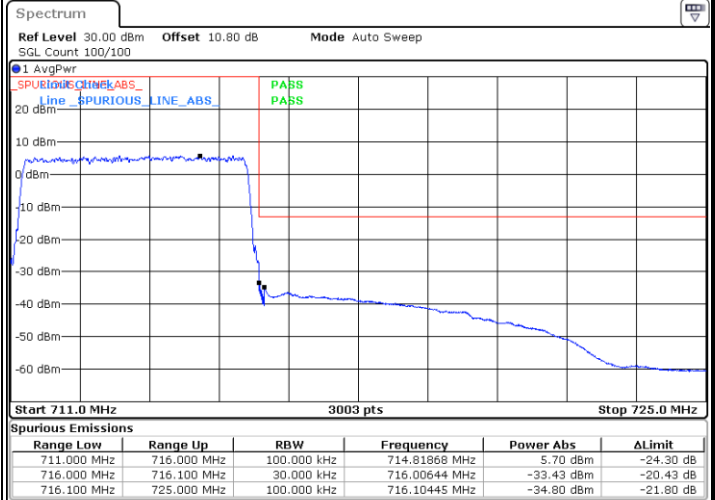
Date: 25.MAY.2021 11:03:19

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:56:31

Highest Band Edge / Full RB

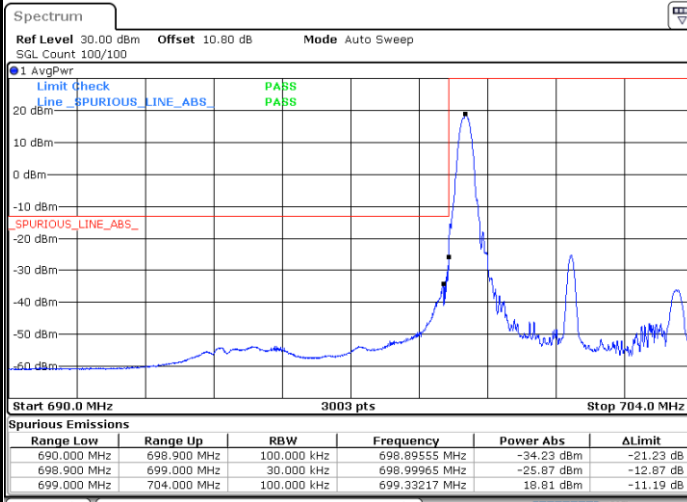


Date: 25.MAY.2021 11:01:57



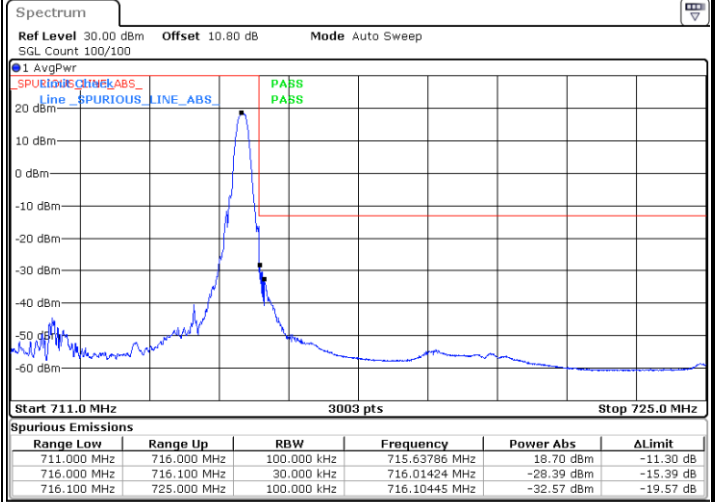
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



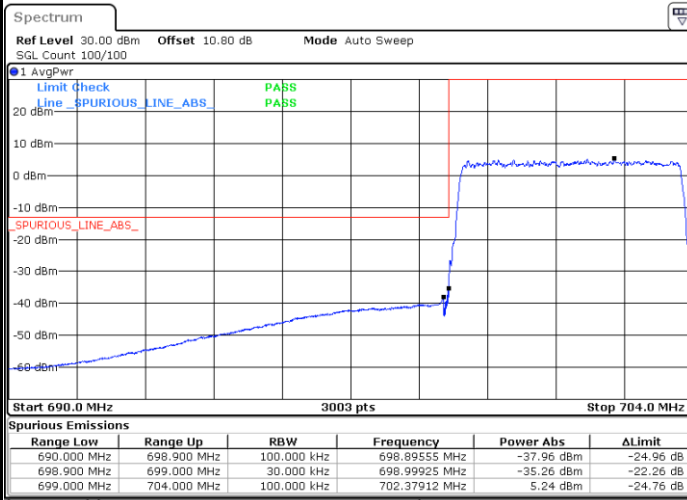
Date: 25.MAY.2021 10:57:54

Highest Band Edge / 1 RB



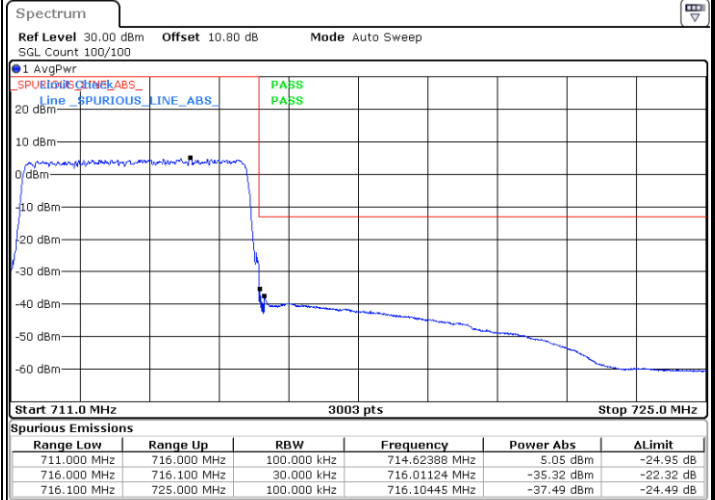
Date: 25.MAY.2021 11:04:00

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:57:12

Highest Band Edge / Full RB

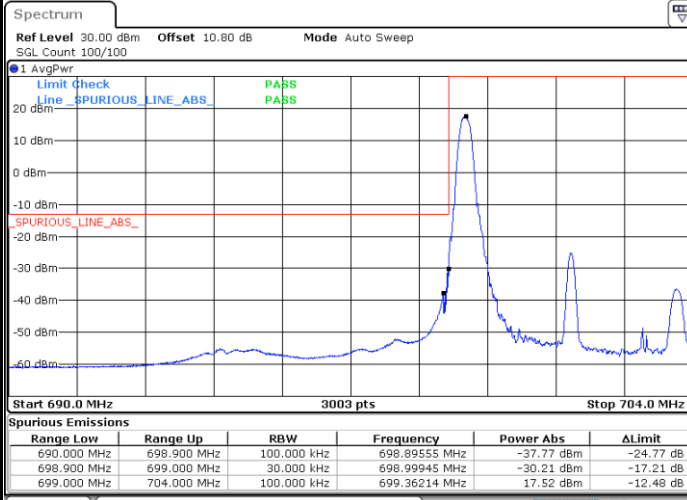


Date: 25.MAY.2021 11:02:38



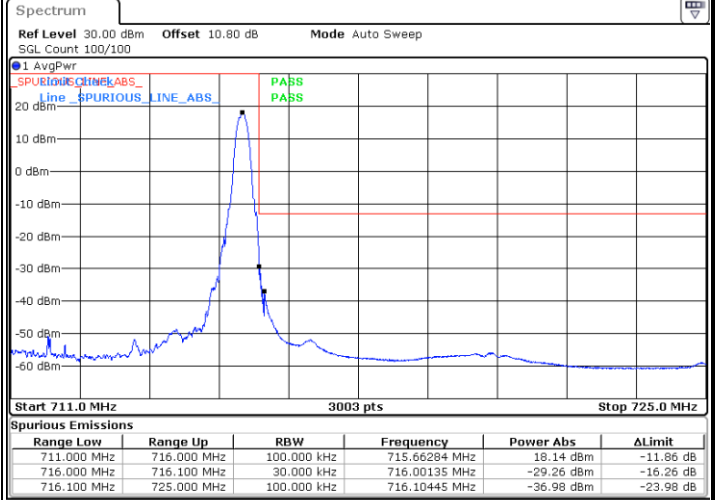
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



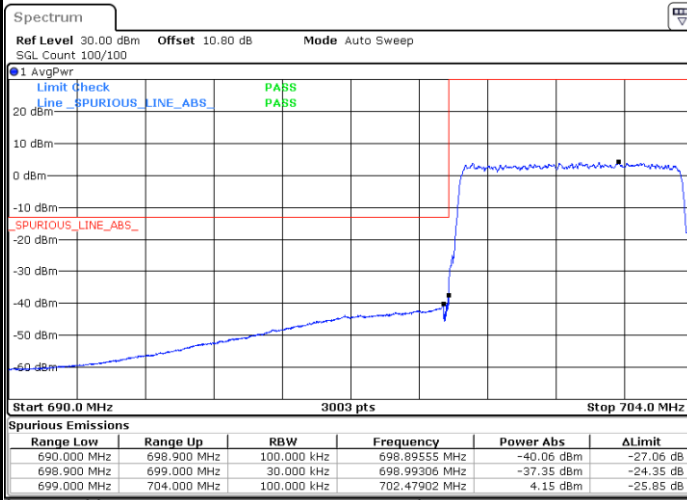
Date: 25.MAY.2021 10:53:43

Highest Band Edge / 1 RB



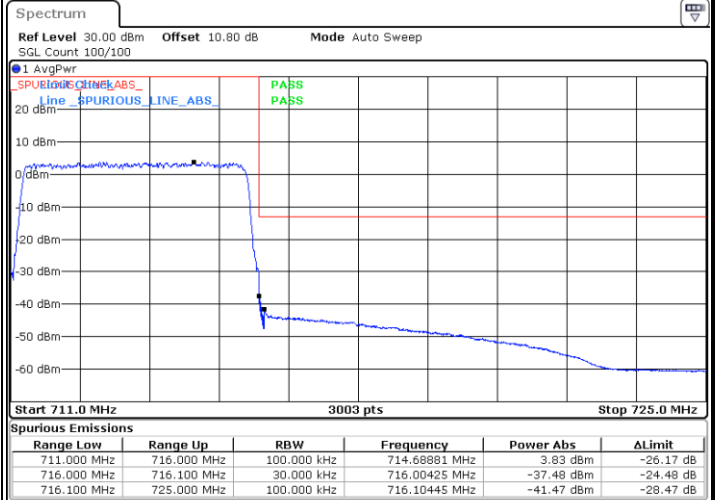
Date: 25.MAY.2021 10:55:50

Lowest Band Edge / Full RB



Date: 25.MAY.2021 10:53:02

Highest Band Edge / Full RB

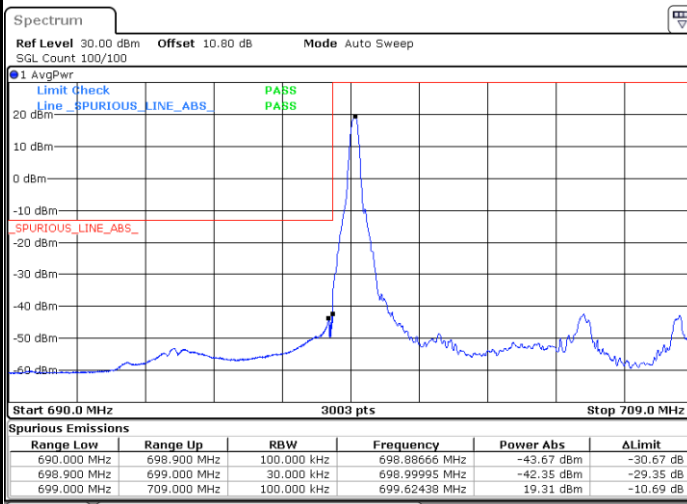


Date: 25.MAY.2021 10:55:08



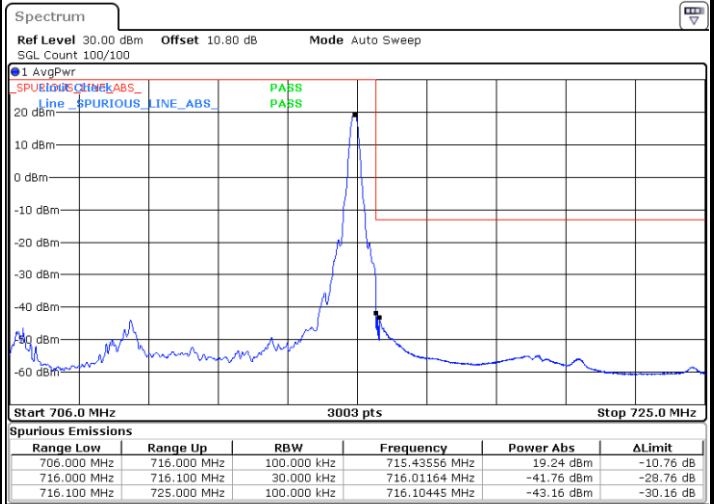
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



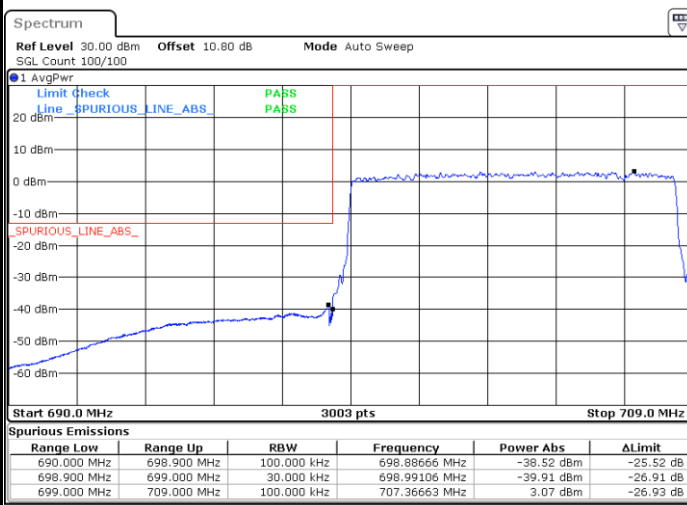
Date: 25.MAY.2021 11:07:28

Highest Band Edge / 1 RB



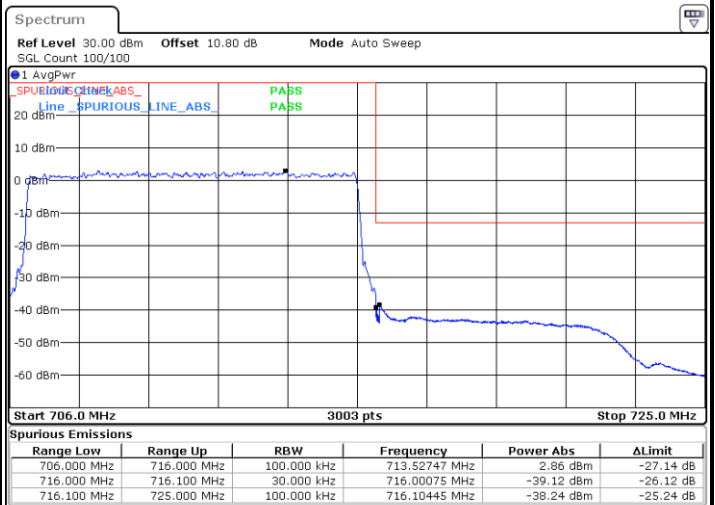
Date: 25.MAY.2021 11:13:54

Lowest Band Edge / Full RB



Date: 25.MAY.2021 11:05:20

Highest Band Edge / Full RB

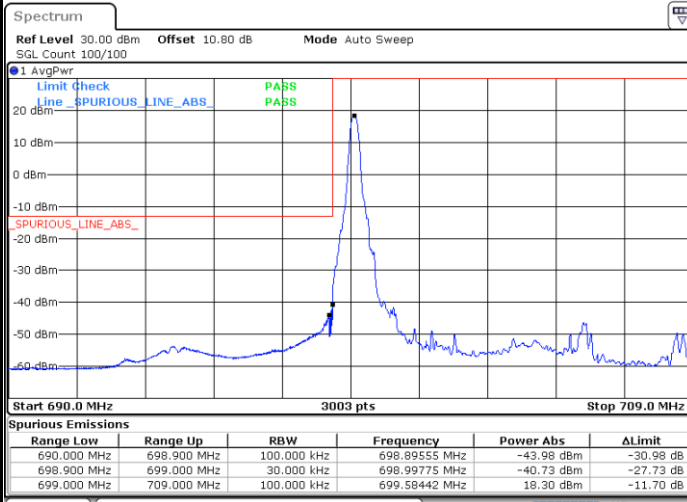


Date: 25.MAY.2021 11:11:49



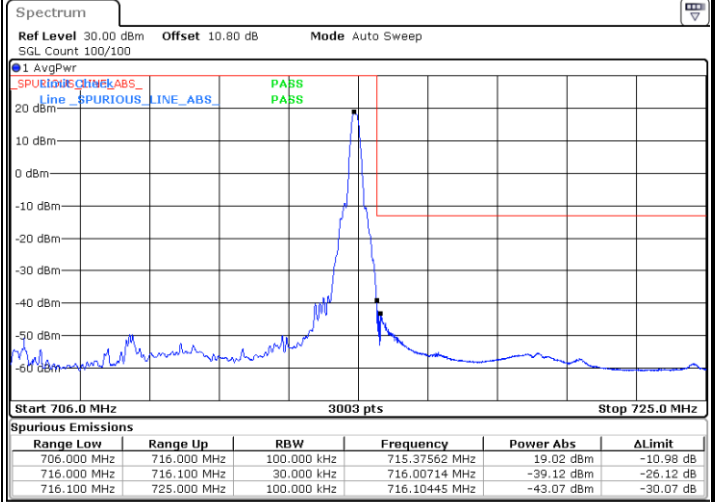
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



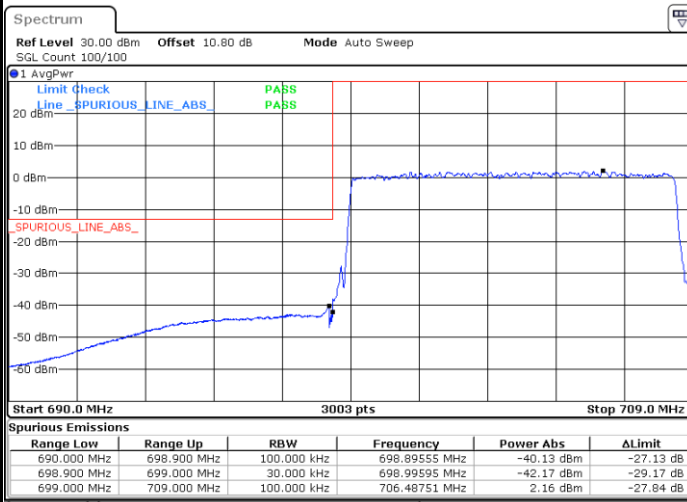
Date: 25.MAY.2021 11:06:46

Highest Band Edge / 1 RB



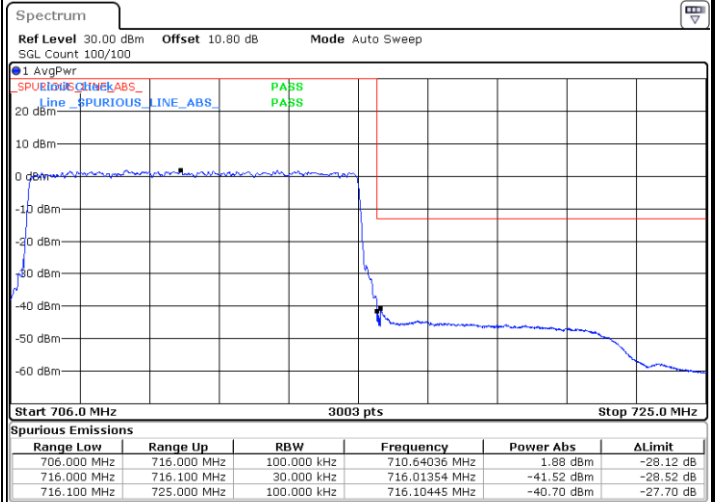
Date: 25.MAY.2021 11:13:12

Lowest Band Edge / Full RB



Date: 25.MAY.2021 11:06:02

Highest Band Edge / Full RB

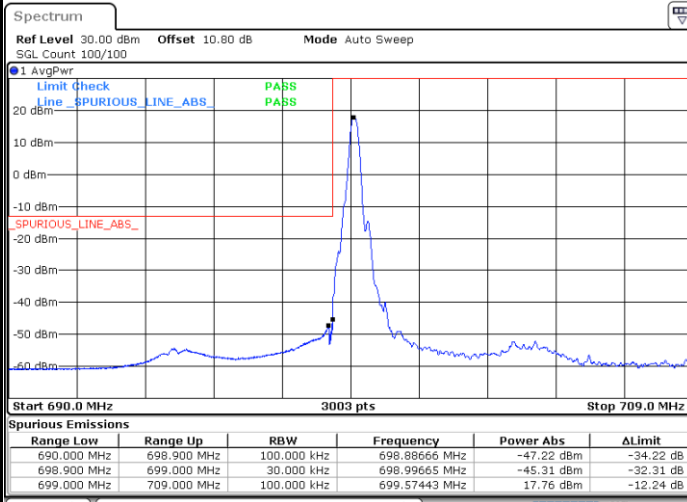


Date: 25.MAY.2021 11:12:31



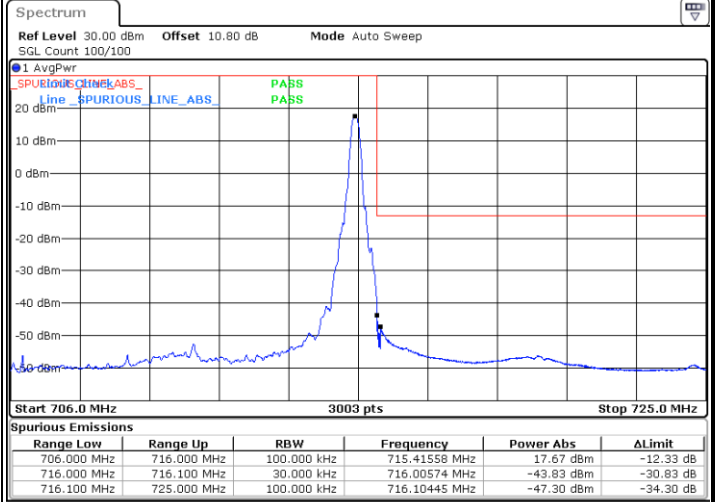
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



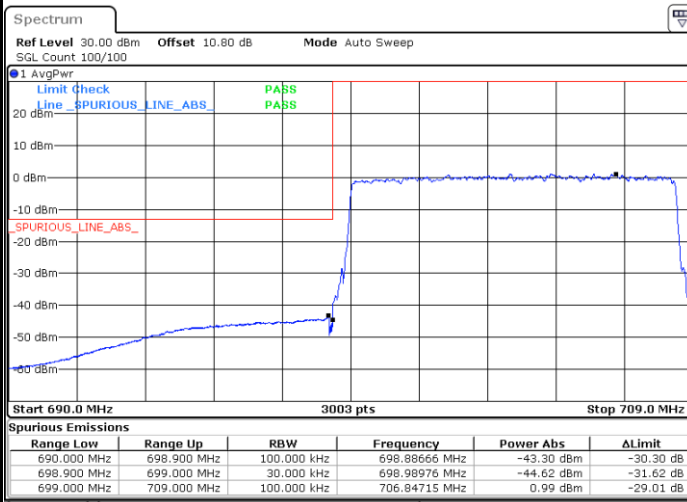
Date: 25.MAY.2021 11:15:55

Highest Band Edge / 1 RB



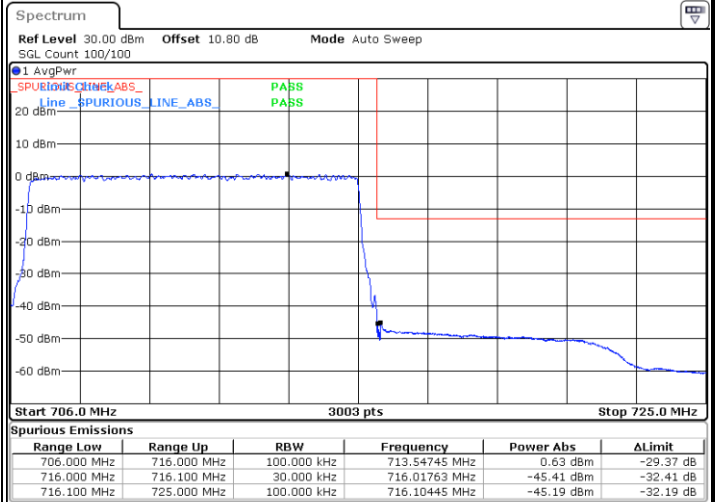
Date: 25.MAY.2021 11:18:02

Lowest Band Edge / Full RB



Date: 25.MAY.2021 11:15:13

Highest Band Edge / Full RB



Date: 25.MAY.2021 11:17:21



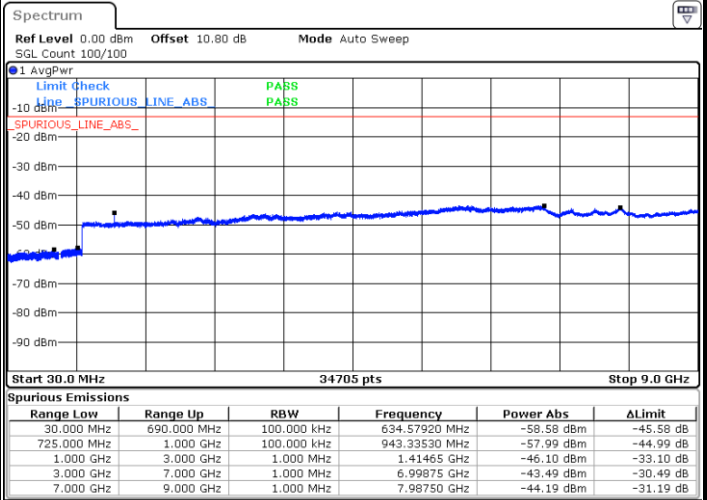
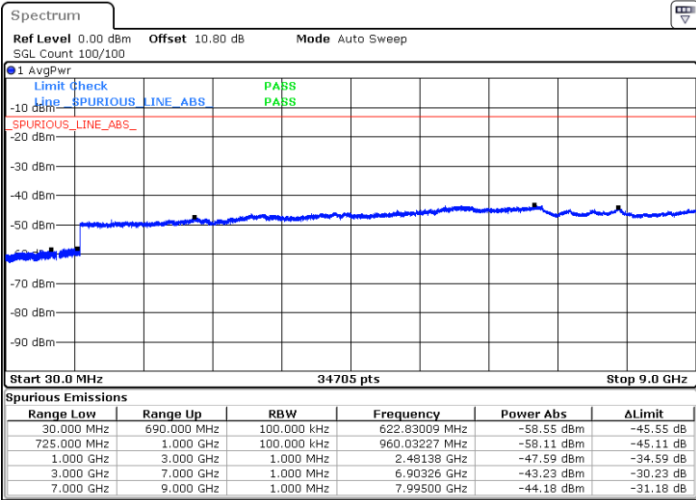


# Conducted Spurious Emission

## LTE Band 12 / 1.4MHz

### Lowest Channel / QPSK

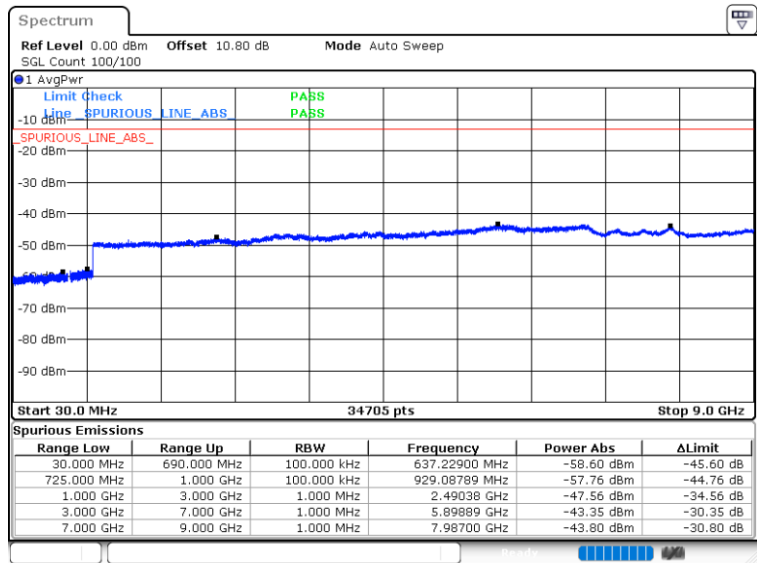
### Middle Channel / QPSK



Date: 25.MAY.2021 10:31:07

Date: 25.MAY.2021 10:33:10

### Highest Channel / QPSK



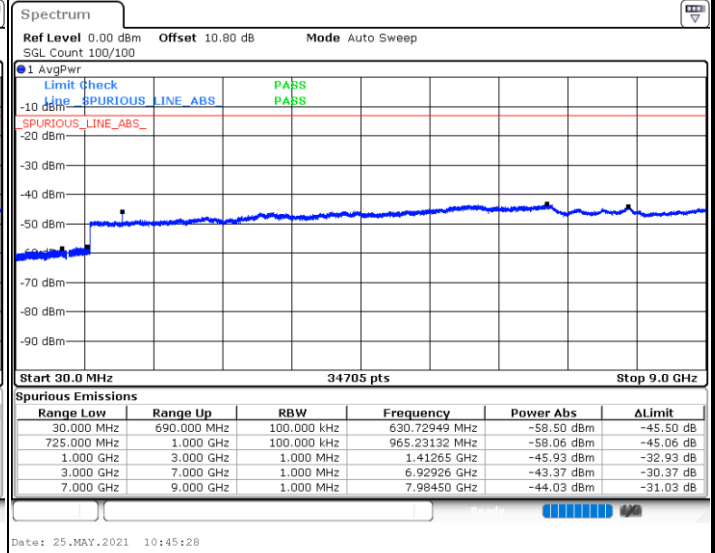
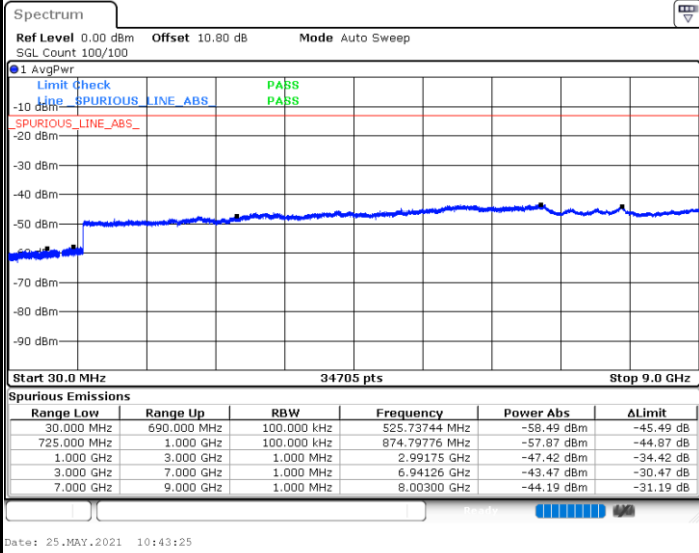
Date: 25.MAY.2021 10:36:32



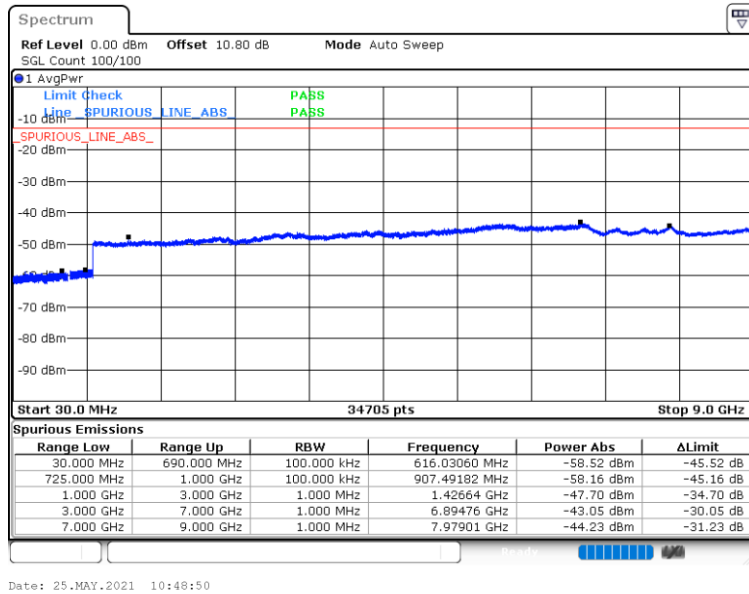
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

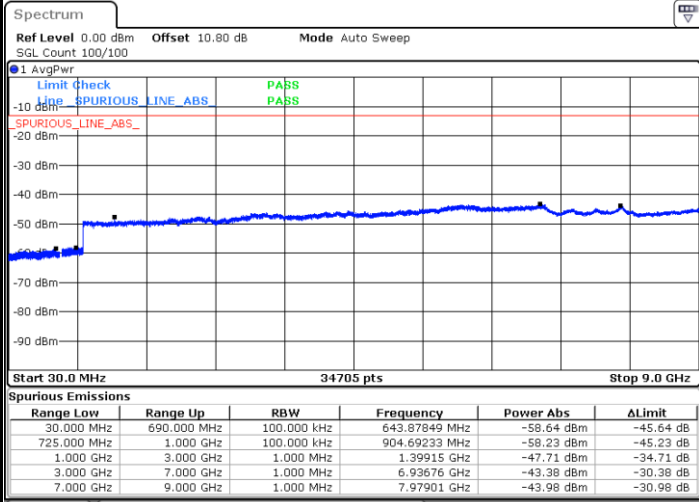




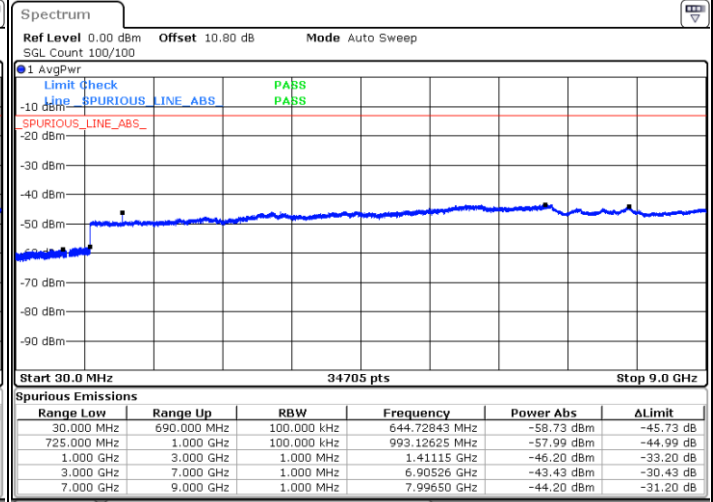
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

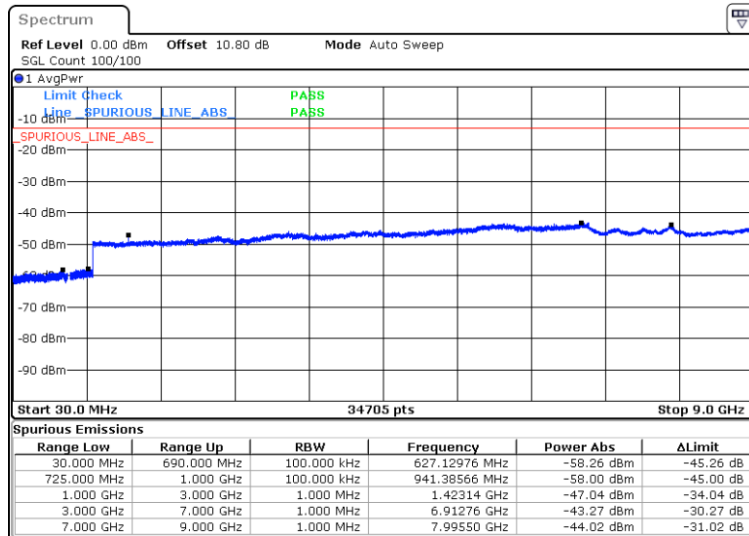


Date: 25.MAY.2021 10:59:12



Date: 25.MAY.2021 11:01:15

Highest Channel / QPSK



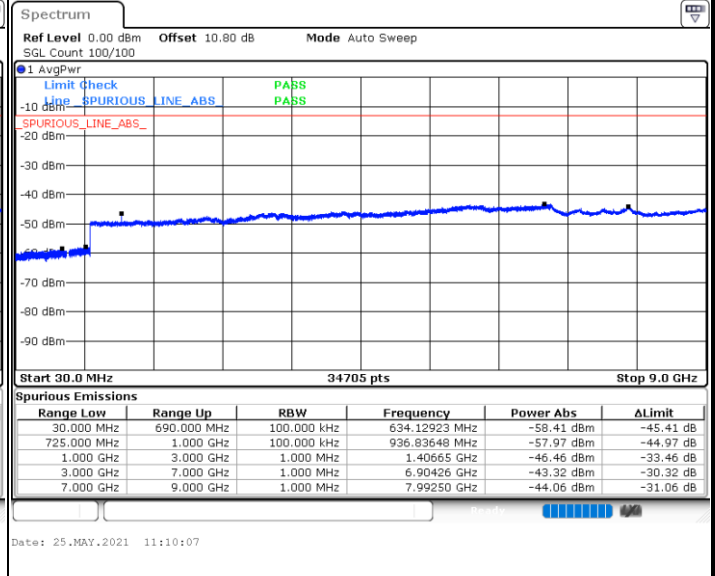
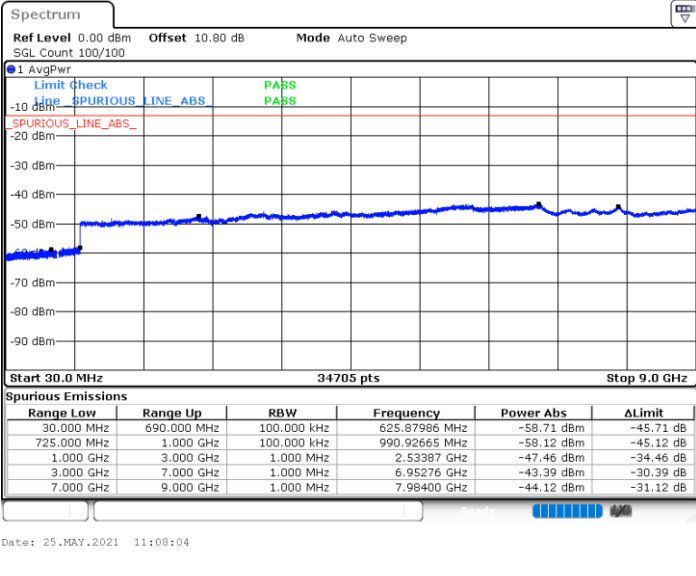
Date: 25.MAY.2021 11:04:37



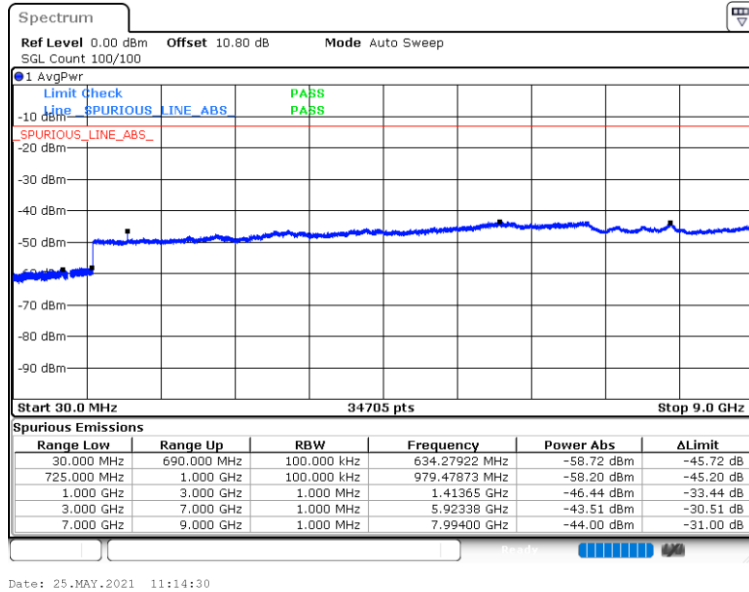
LTE Band 12 / 10MHz

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	0.0184	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0076	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0177	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0065	
-20	Normal Voltage	0.0072	
-30	Normal Voltage	0.0048	
20	Maximum Voltage	0.0057	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0045	

**Note:**

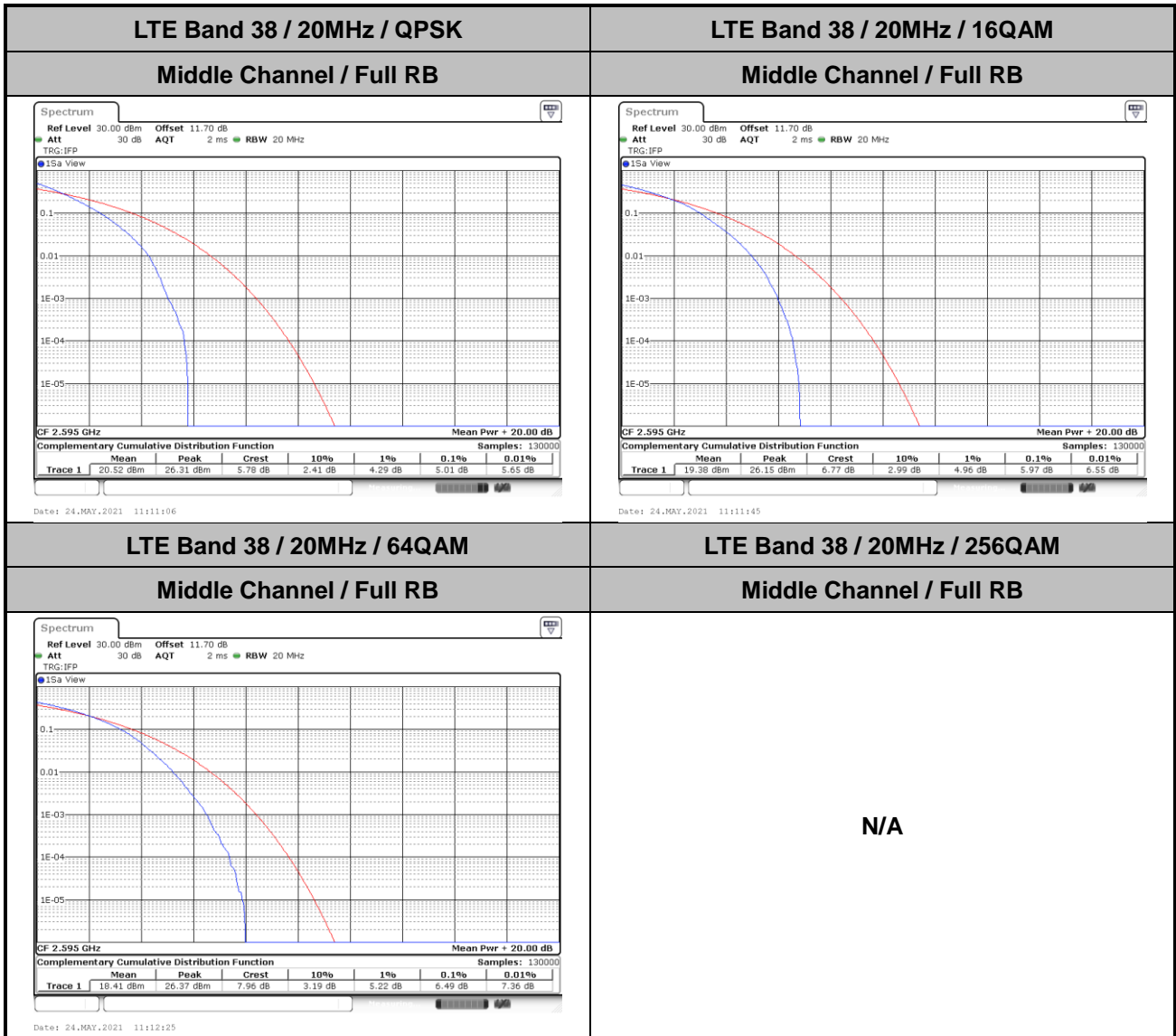
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.55 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 38

### Peak-to-Average Ratio

Mode	LTE Band 38 / 20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.01	5.97	6.49	-	PASS





**26dB Bandwidth**

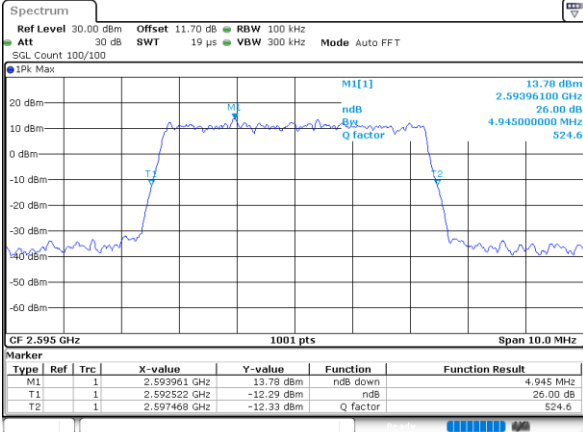
Mode	LTE Band 38 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.95	4.77	9.71	9.67	14.60	14.09	18.74	18.82
Mode	LTE Band 38 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.92	-	9.69	-	14.27	-	19.02	-





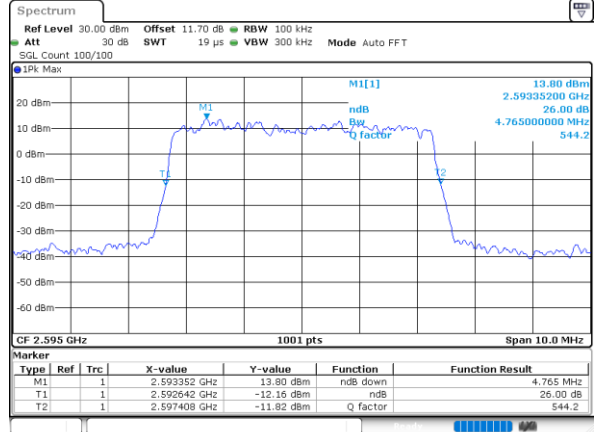
LTE Band 38

Middle Channel / 5MHz / QPSK



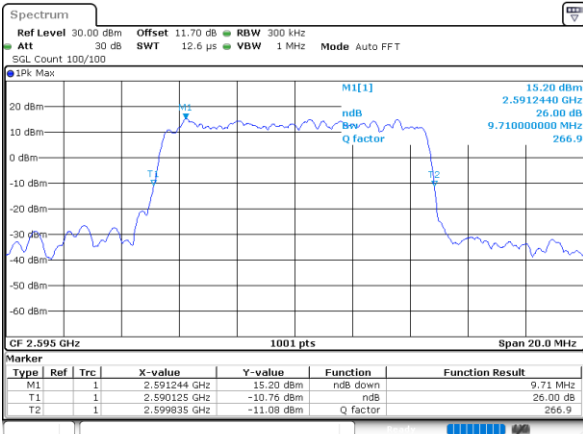
Date: 24.MAY.2021 11:01:52

Middle Channel / 5MHz / 16QAM



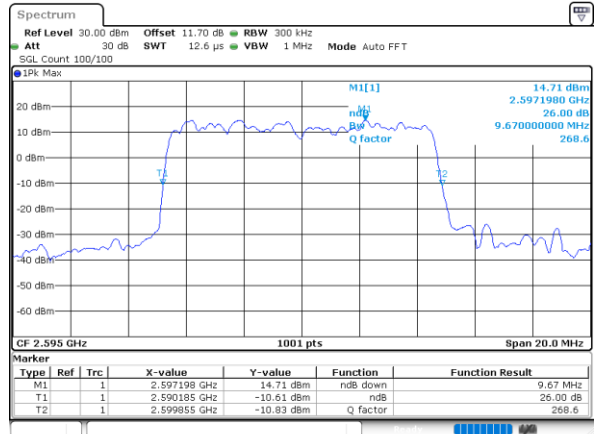
Date: 24.MAY.2021 11:02:13

Middle Channel / 10MHz / QPSK



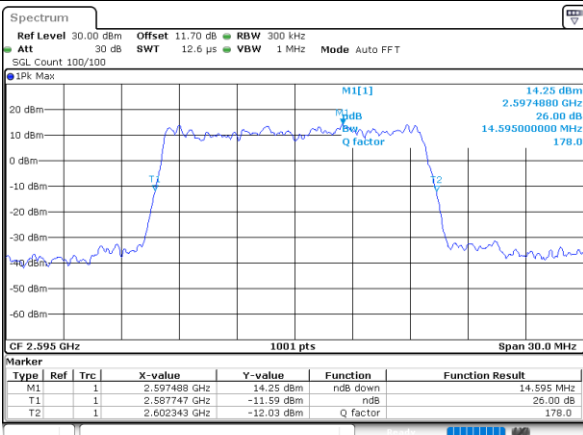
Date: 24.MAY.2021 11:03:20

Middle Channel / 10MHz / 16QAM



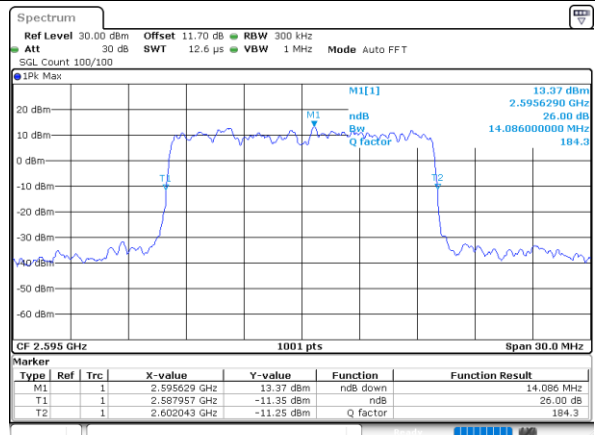
Date: 24.MAY.2021 11:03:41

Middle Channel / 15MHz / QPSK



Date: 24.MAY.2021 11:04:49

Middle Channel / 15MHz / 16QAM

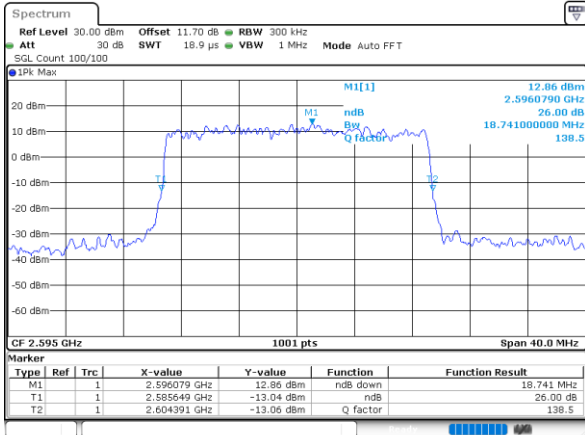


Date: 24.MAY.2021 11:05:10



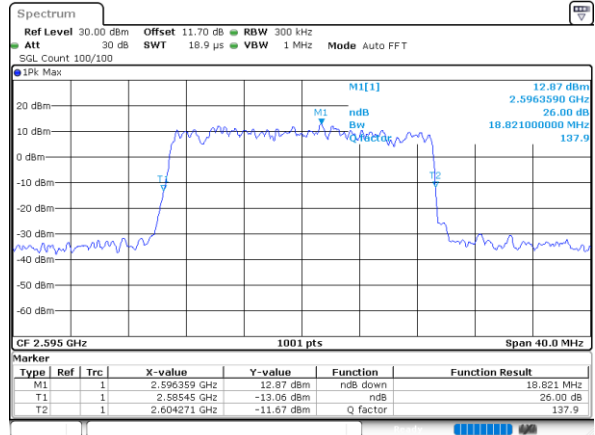
LTE Band 38

Middle Channel / 20MHz / QPSK



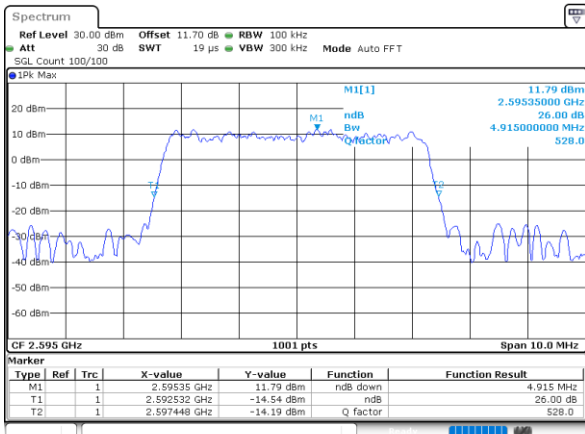
Date: 24.MAY.2021 11:06:16

Middle Channel / 20MHz / 16QAM



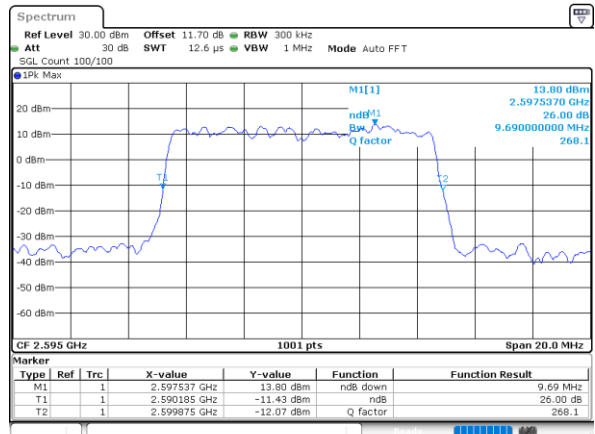
Date: 24.MAY.2021 11:06:37

Middle Channel / 5MHz / 64QAM



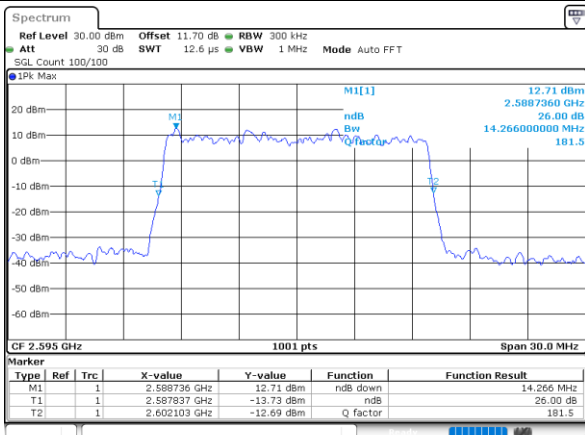
Date: 24.MAY.2021 11:07:22

Middle Channel / 10MHz / 64QAM



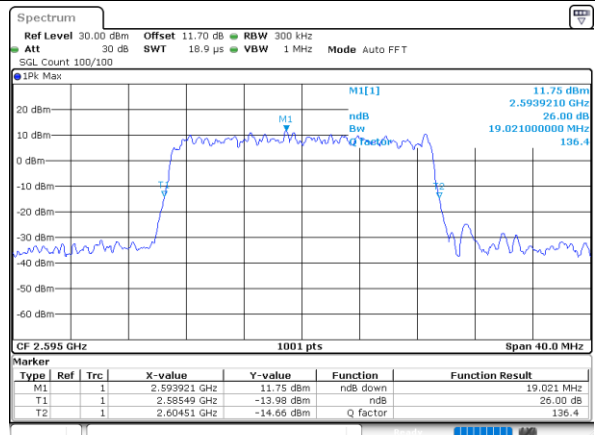
Date: 24.MAY.2021 11:08:06

Middle Channel / 15MHz / 64QAM



Date: 24.MAY.2021 11:08:50

Middle Channel / 20MHz / 64QAM



Date: 24.MAY.2021 11:09:34



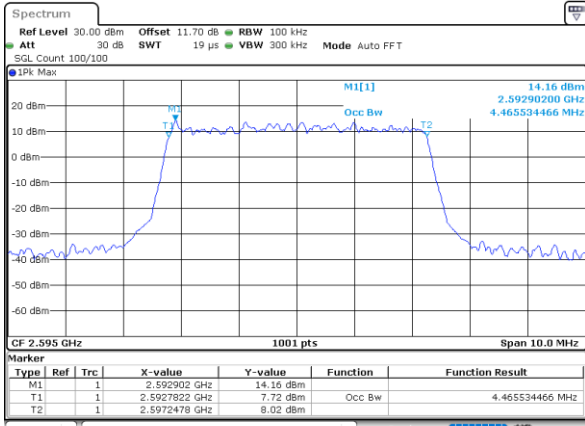
**Occupied Bandwidth**

Mode	LTE Band 38 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.47	4.49	9.01	9.05	13.46	13.43	17.90	17.86
Mode	LTE Band 38 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.48	-	8.99	-	13.46	-	17.90	-



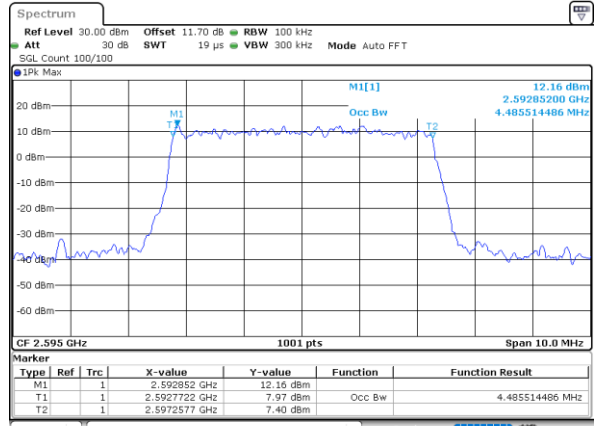
LTE Band 38

Middle Channel / 5MHz / QPSK



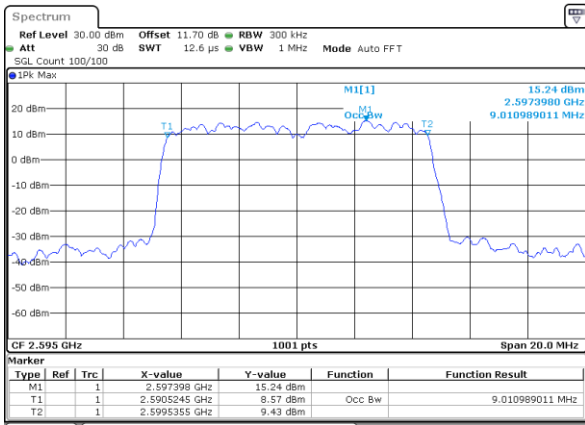
Date: 24.MAY.2021 11:01:07

Middle Channel / 5MHz / 16QAM



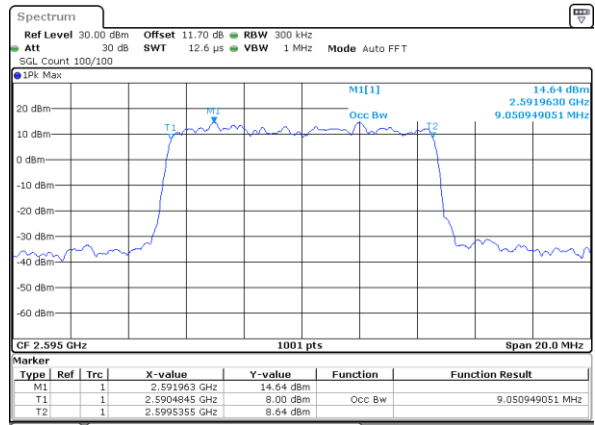
Date: 24.MAY.2021 11:01:30

Middle Channel / 10MHz / QPSK



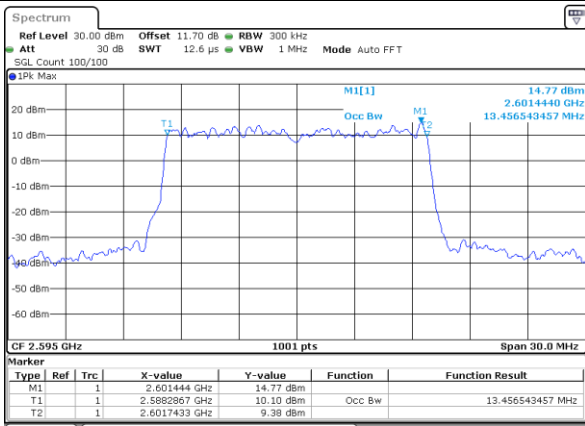
Date: 24.MAY.2021 11:02:05

Middle Channel / 10MHz / 16QAM



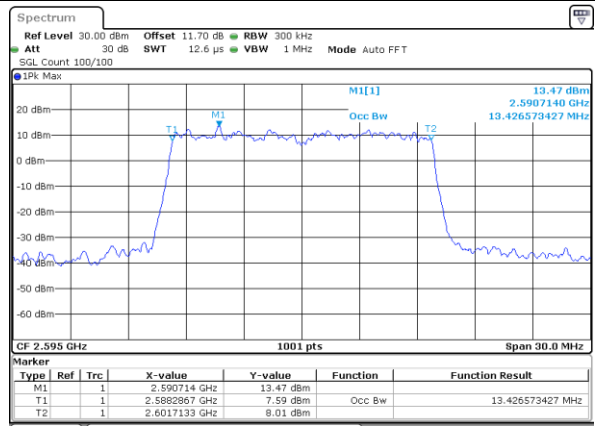
Date: 24.MAY.2021 11:02:58

Middle Channel / 15MHz / QPSK



Date: 24.MAY.2021 11:04:03

Middle Channel / 15MHz / 16QAM

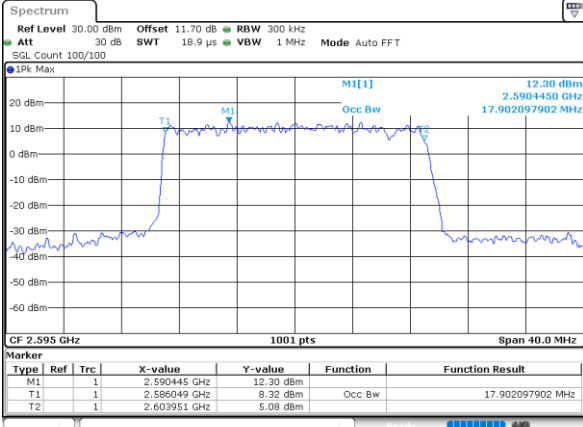


Date: 24.MAY.2021 11:04:26



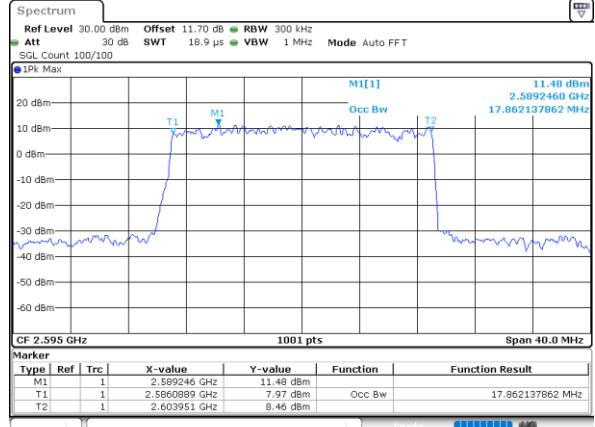
LTE Band 38

Middle Channel / 20MHz / QPSK



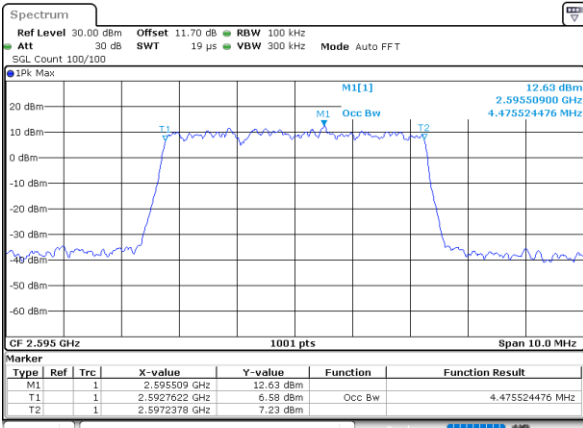
Date: 24.MAY.2021 11:05:13

Middle Channel / 20MHz / 16QAM



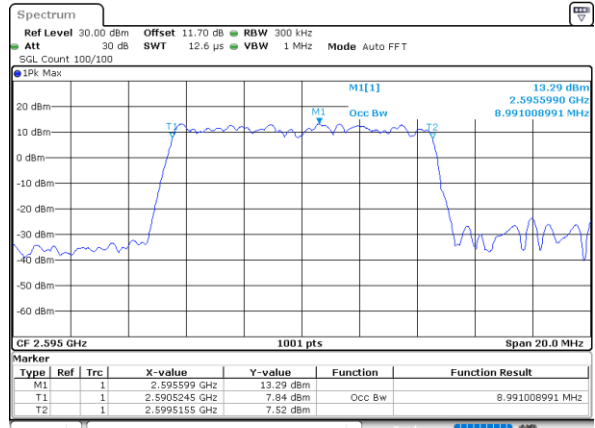
Date: 24.MAY.2021 11:05:54

Middle Channel / 5MHz / 64QAM



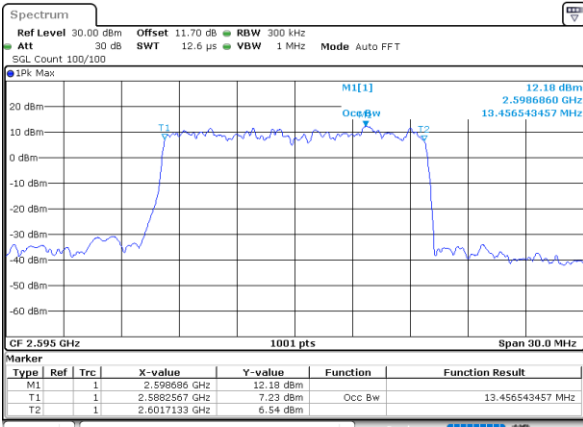
Date: 24.MAY.2021 11:06:59

Middle Channel / 10MHz / 64QAM



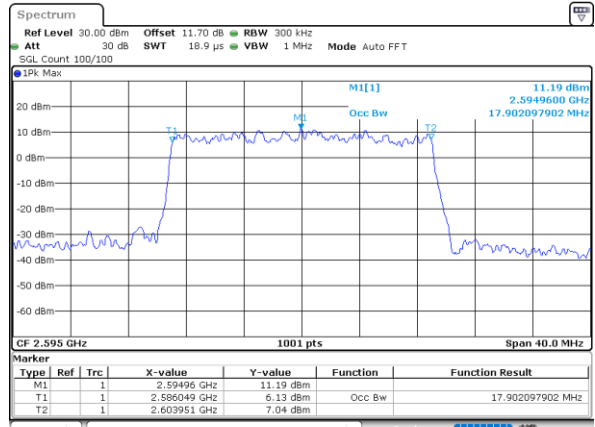
Date: 24.MAY.2021 11:07:43

Middle Channel / 15MHz / 64QAM



Date: 24.MAY.2021 11:08:28

Middle Channel / 20MHz / 64QAM



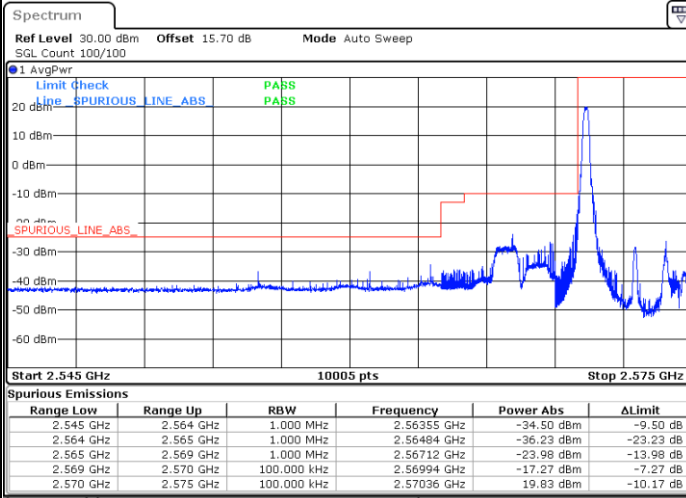
Date: 24.MAY.2021 11:09:11



# Conducted Band Edge

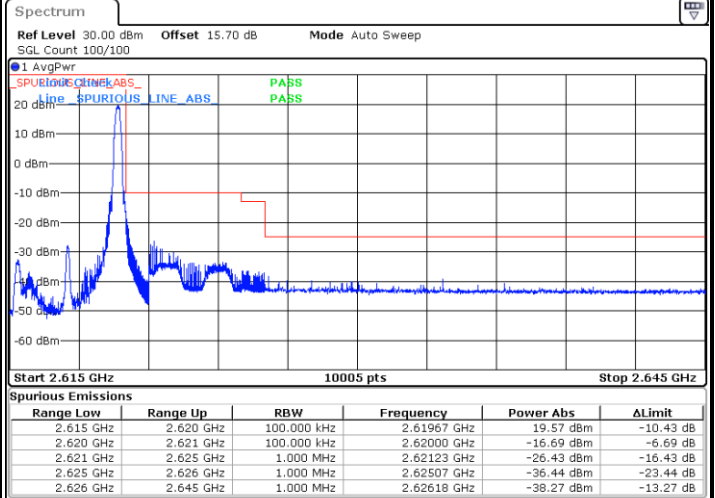
## LTE Band 38 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



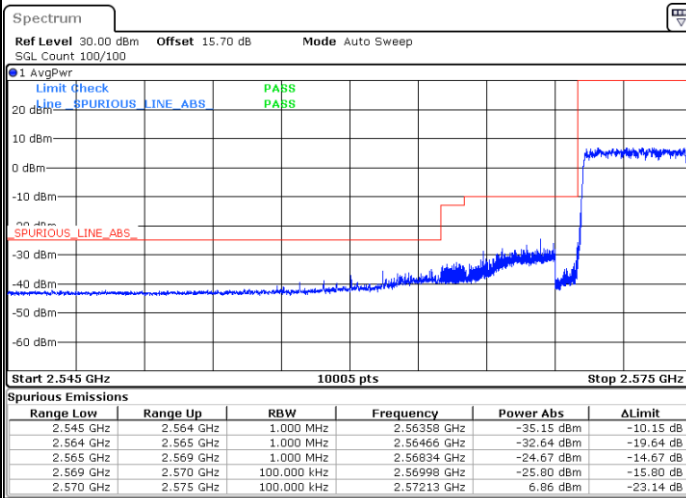
Date: 24.MAY.2021 08:29:31

### Highest Band Edge / 1 RB



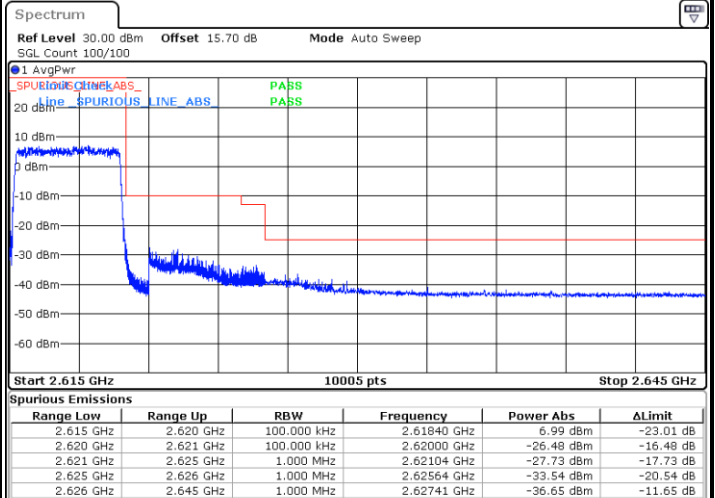
Date: 24.MAY.2021 08:32:05

### Lowest Band Edge / Full RB



Date: 24.MAY.2021 08:30:22

### Highest Band Edge / Full RB

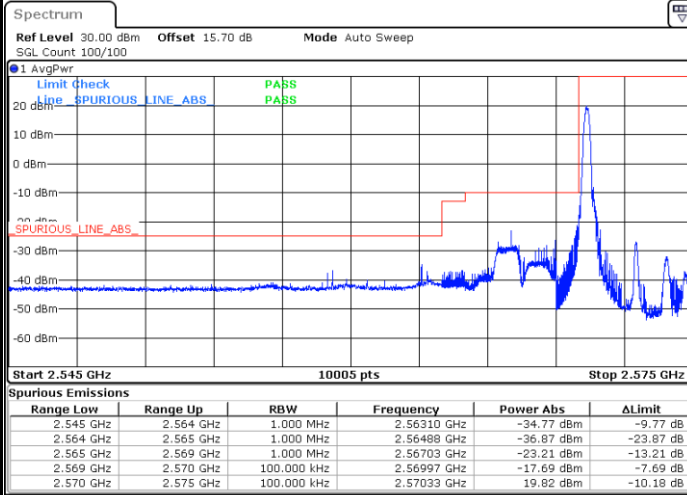


Date: 24.MAY.2021 08:31:14



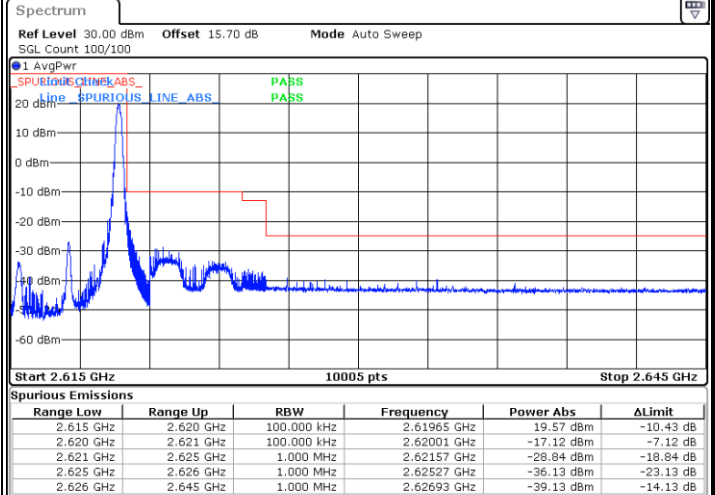
LTE Band 38 / 5MHz / 16QAM

Lowest Band Edge / 1RB



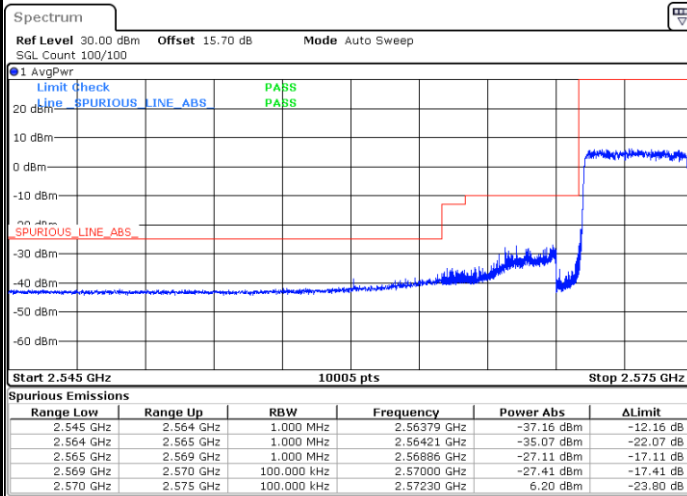
Date: 24.MAY.2021 08:29:57

Highest Band Edge / 1 RB



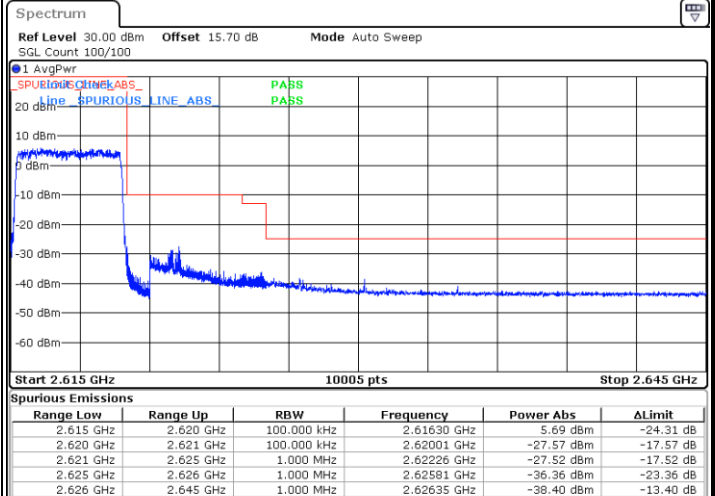
Date: 24.MAY.2021 08:32:31

Lowest Band Edge / Full RB



Date: 24.MAY.2021 08:30:48

Highest Band Edge / Full RB



Date: 24.MAY.2021 08:31:39