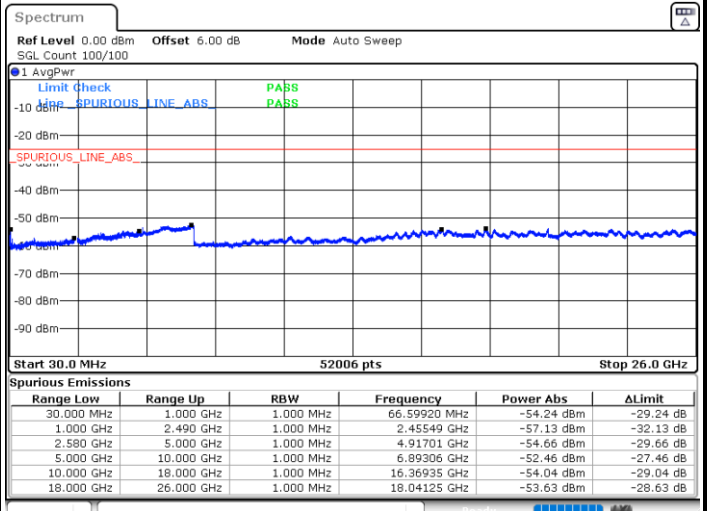
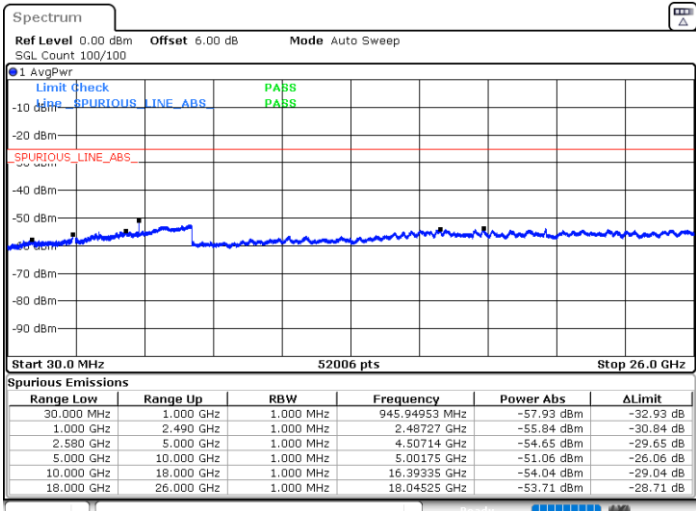




LTE Band 7 / 15MHz

Lowest Channel / QPSK

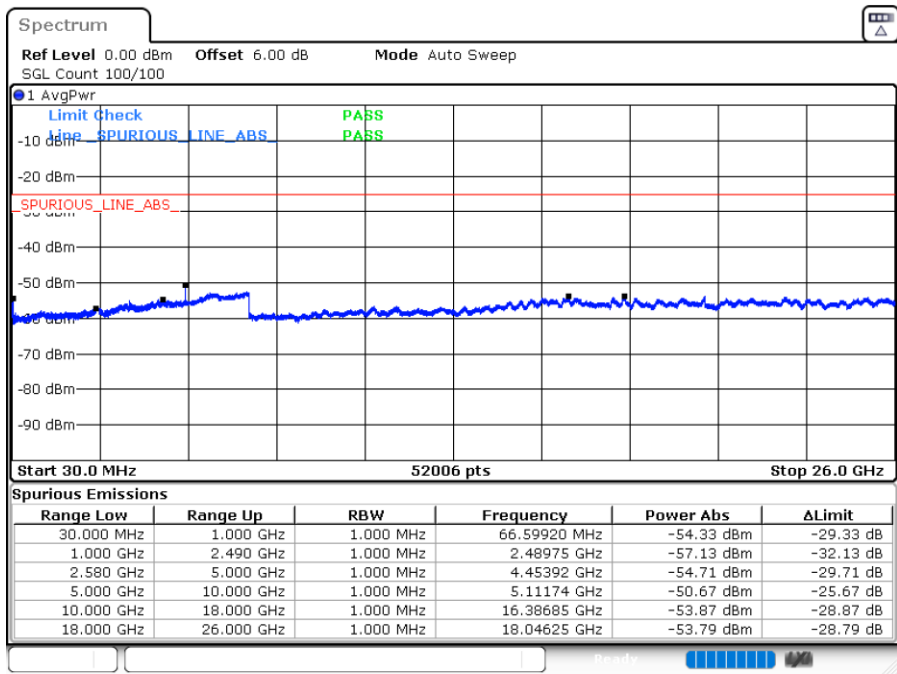
Middle Channel / QPSK



Date: 28.FEB.2023 21:18:09

Date: 28.FEB.2023 21:30:32

Highest Channel / QPSK



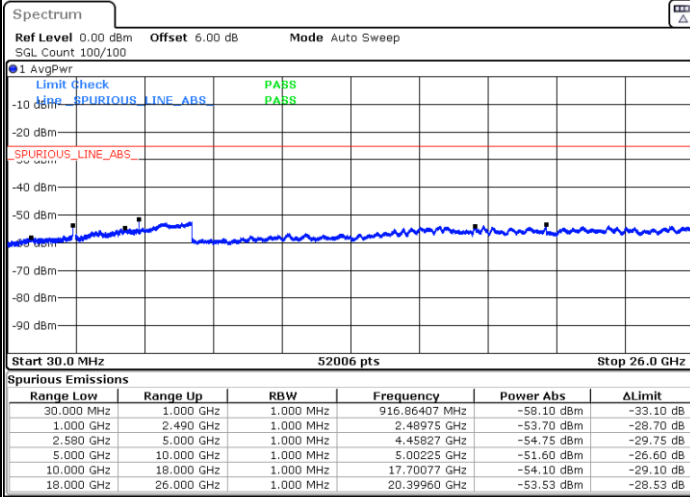
Date: 28.FEB.2023 21:31:51



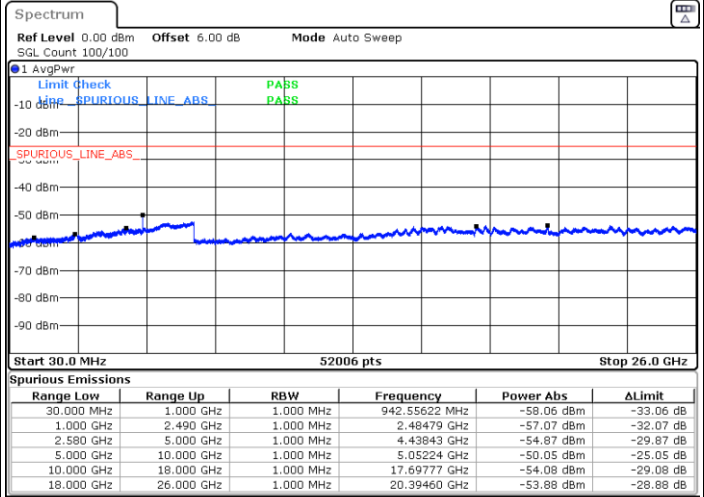
LTE Band 7 / 20MHz

Lowest Channel / QPSK

Middle Channel / QPSK

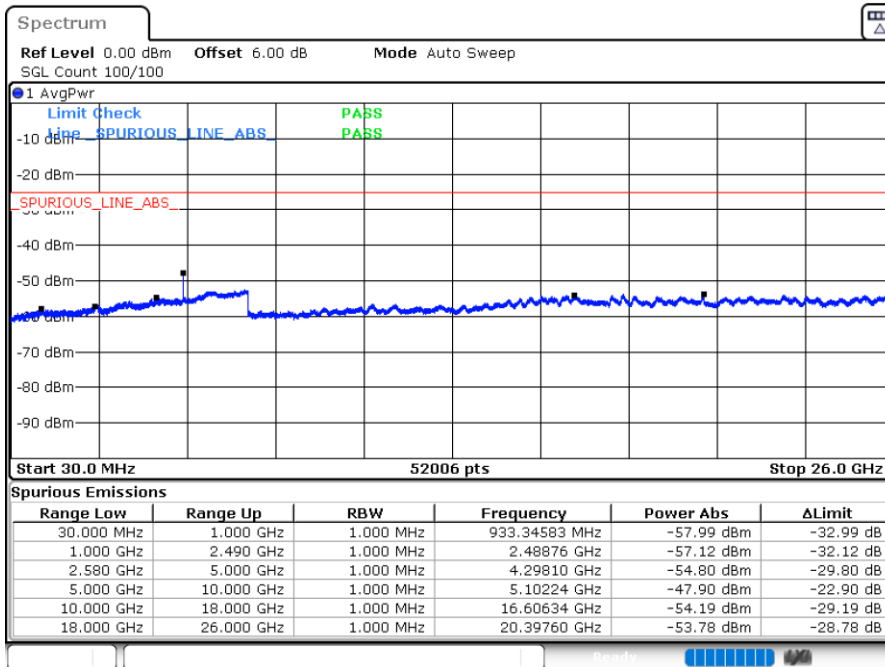


Date: 28.FEB.2023 21:41:16



Date: 28.FEB.2023 21:51:08

Highest Channel / QPSK



Date: 28.FEB.2023 21:52:27



### Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0007	
-30	Normal Voltage	0.0011	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0015	
20	Battery End Point	0.0022	

**Note:**

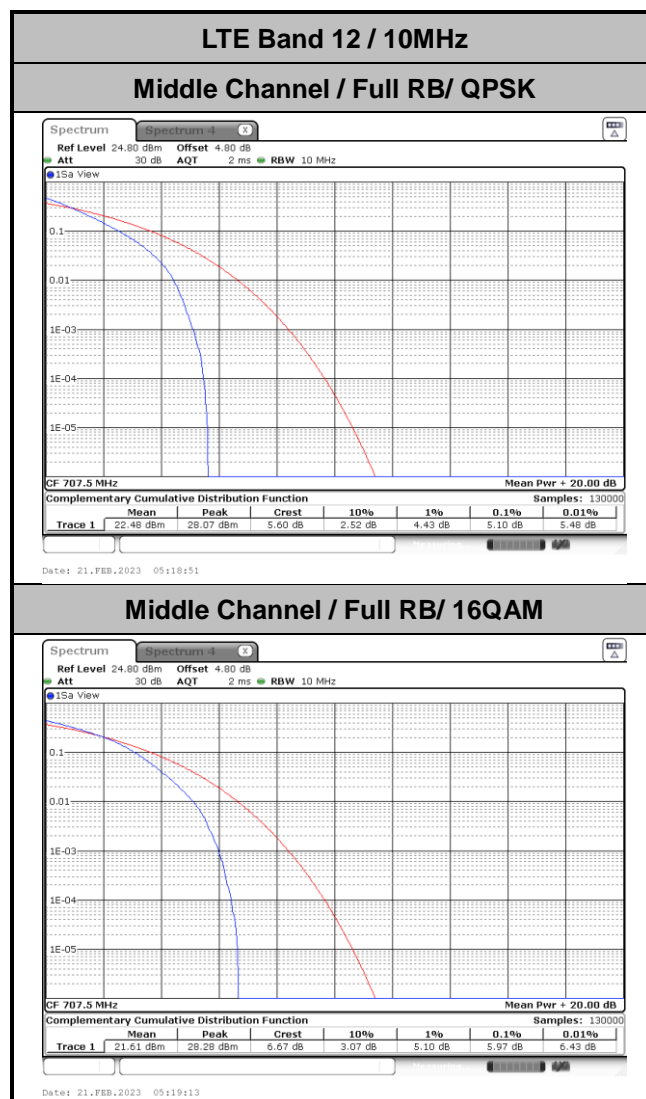
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.45 V. ; Maximum Voltage =4.41 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

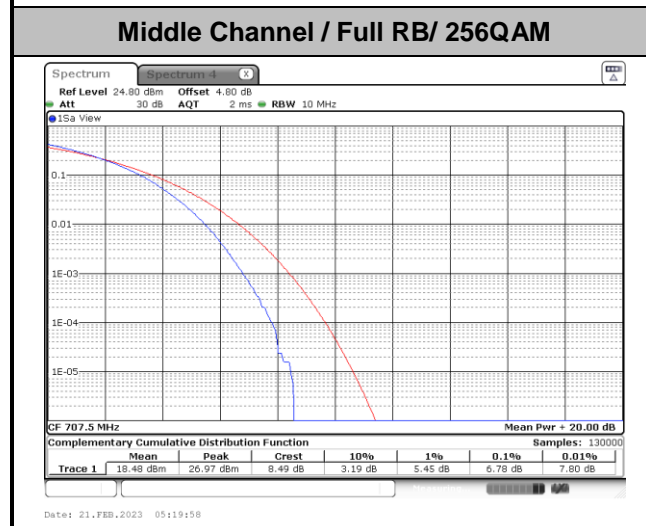
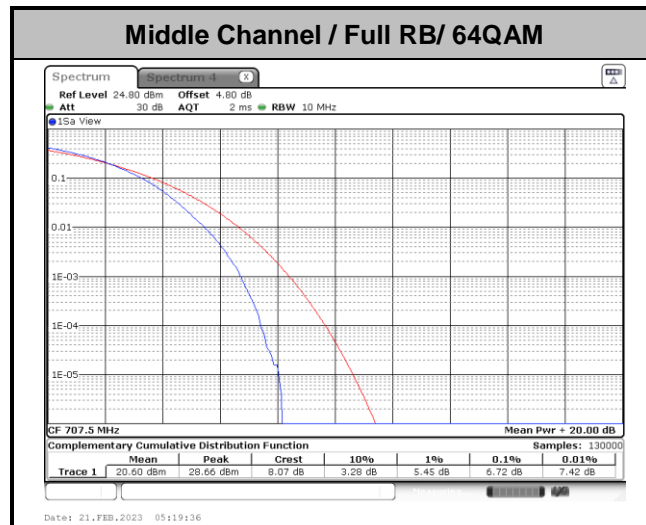


# LTE Band 12

## Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.10	5.97	6.72	6.78	PASS

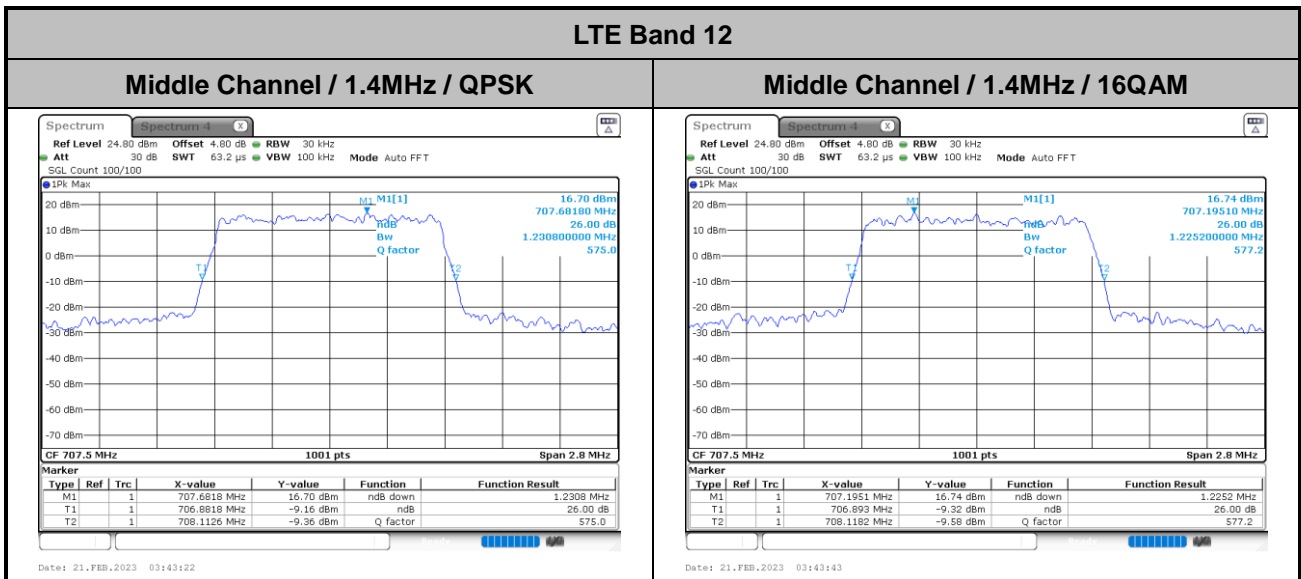






## 26dB Bandwidth

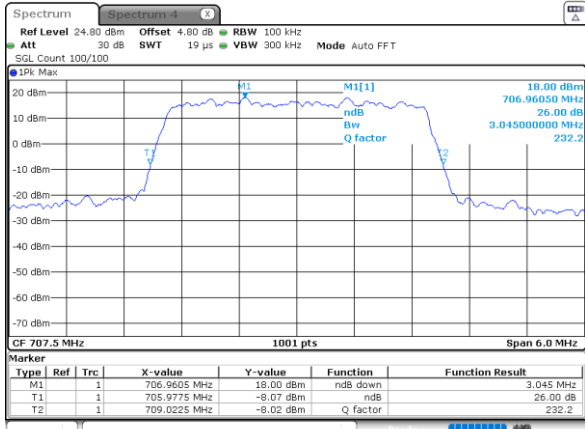
Mode	LTE Band 12 : 26dB BW(MHz)	
<b>BW</b>	<b>1.4MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	1.23	1.23
<b>BW</b>	<b>3MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	3.05	3.00
<b>BW</b>	<b>5MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	4.89	4.82
<b>BW</b>	<b>10MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	9.81	9.75





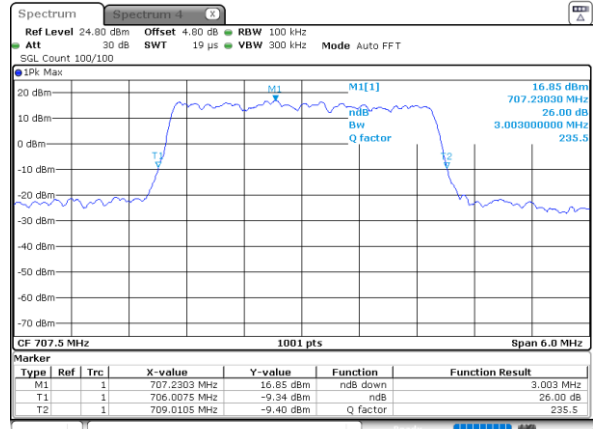
LTE Band 12

Middle Channel / 3MHz / QPSK



Date: 21.FEB.2023 04:10:21

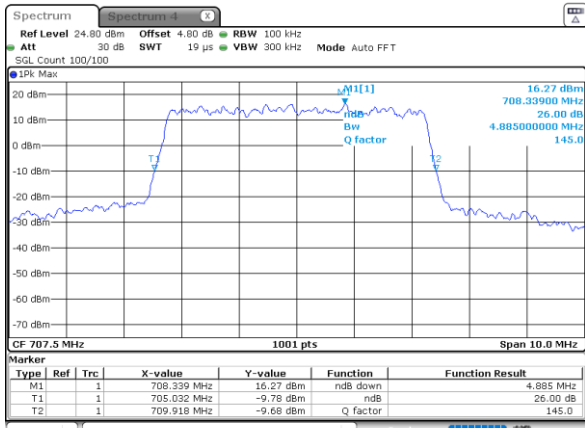
Middle Channel / 3MHz / 16QAM



Date: 21.FEB.2023 04:10:41

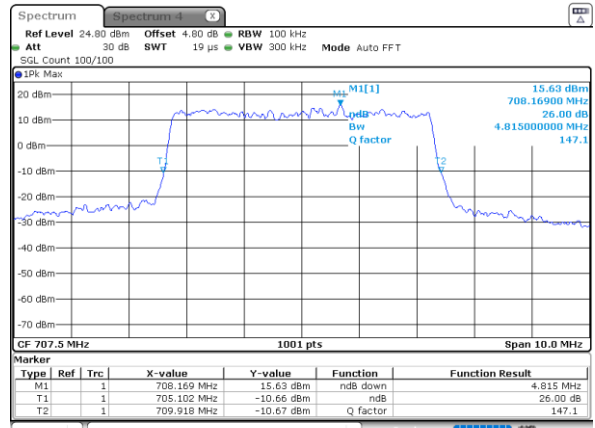
LTE Band 12

Middle Channel / 5MHz / QPSK



Date: 21.FEB.2023 04:37:21

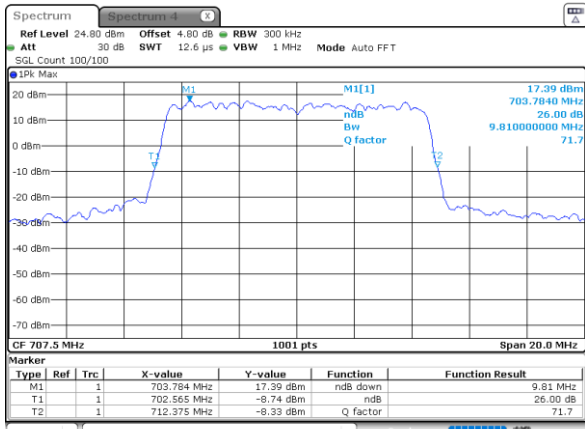
Middle Channel / 5MHz / 16QAM



Date: 21.FEB.2023 04:37:42

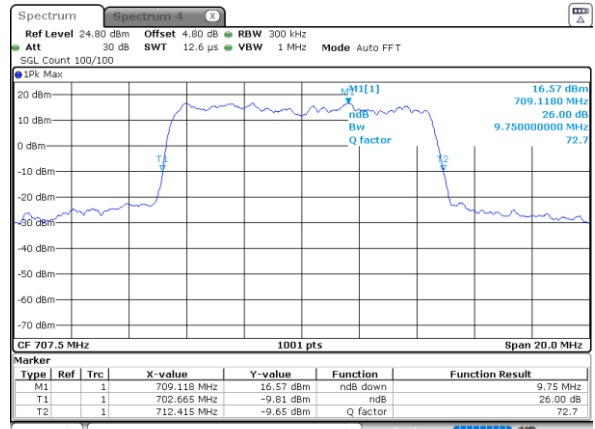
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 21.FEB.2023 05:18:08

Middle Channel / 10MHz / 16QAM

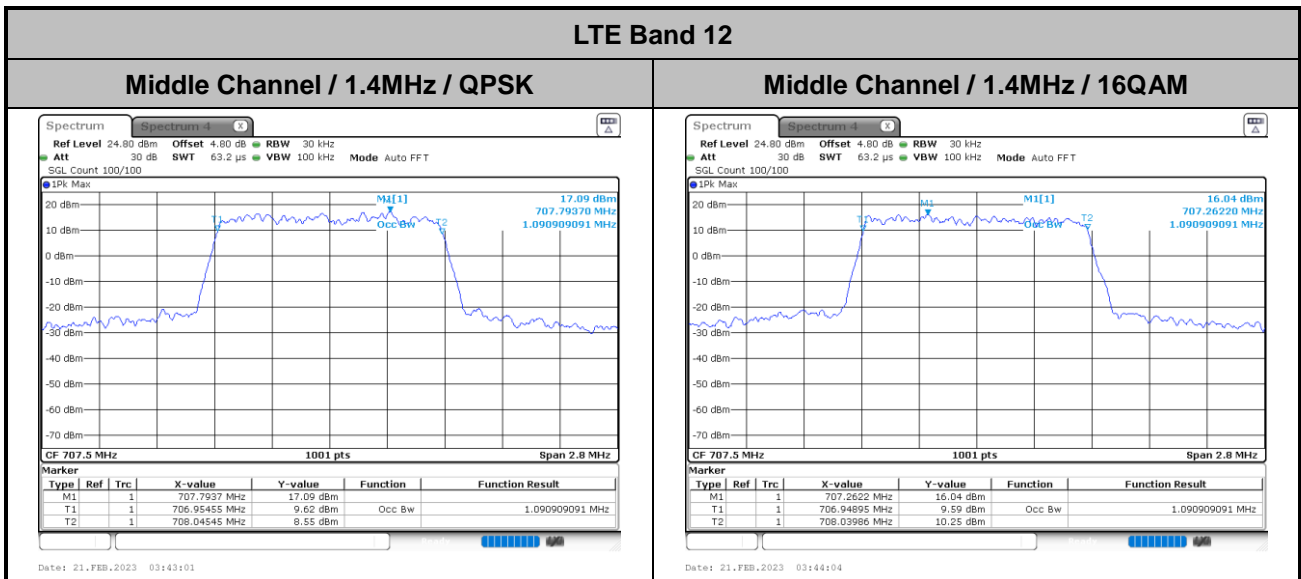


Date: 21.FEB.2023 05:18:29



# Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)	
<b>BW</b>	<b>1.4MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	1.09	1.09
<b>BW</b>	<b>3MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	2.73	2.73
<b>BW</b>	<b>5MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	4.49	4.47
<b>BW</b>	<b>10MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	8.99	8.95

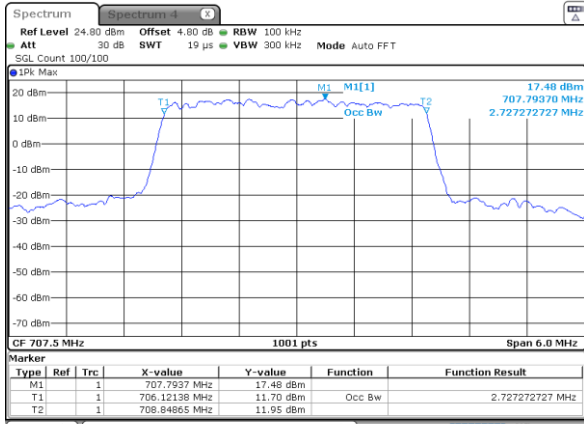






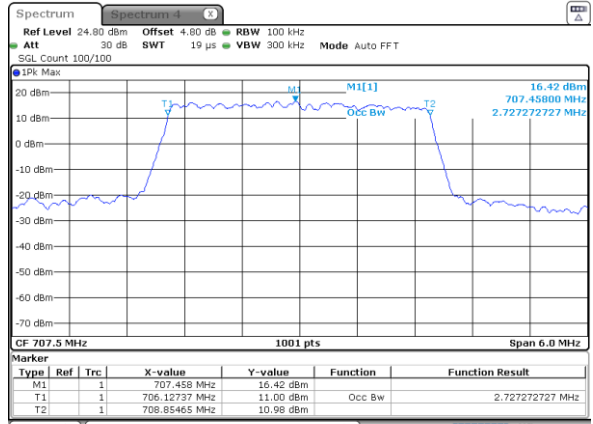
LTE Band 12

Middle Channel / 3MHz / QPSK



Date: 21.FEB.2023 04:10:00

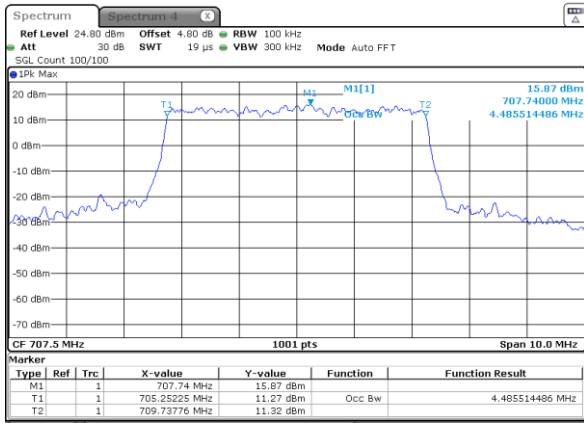
Middle Channel / 3MHz / 16QAM



Date: 21.FEB.2023 04:11:02

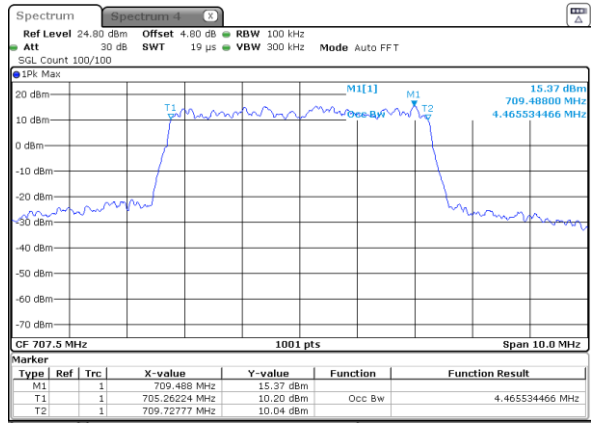
LTE Band 12

Middle Channel / 5MHz / QPSK



Date: 21.FEB.2023 04:37:00

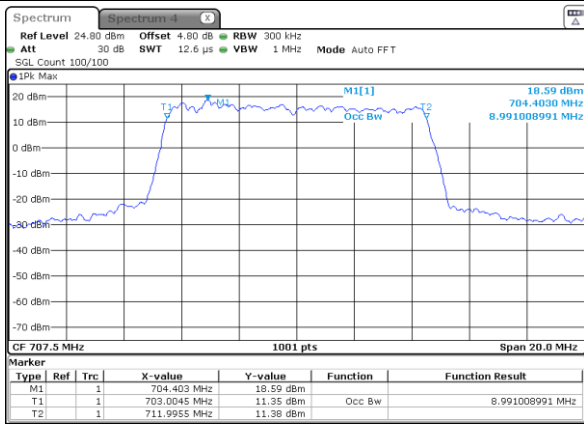
Middle Channel / 5MHz / 16QAM



Date: 21.FEB.2023 04:38:03

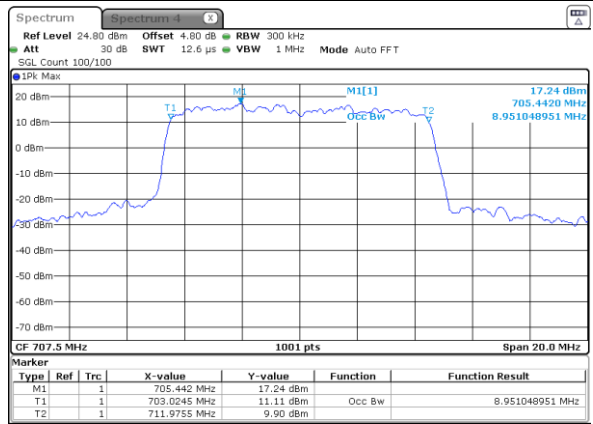
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 21.FEB.2023 05:17:26

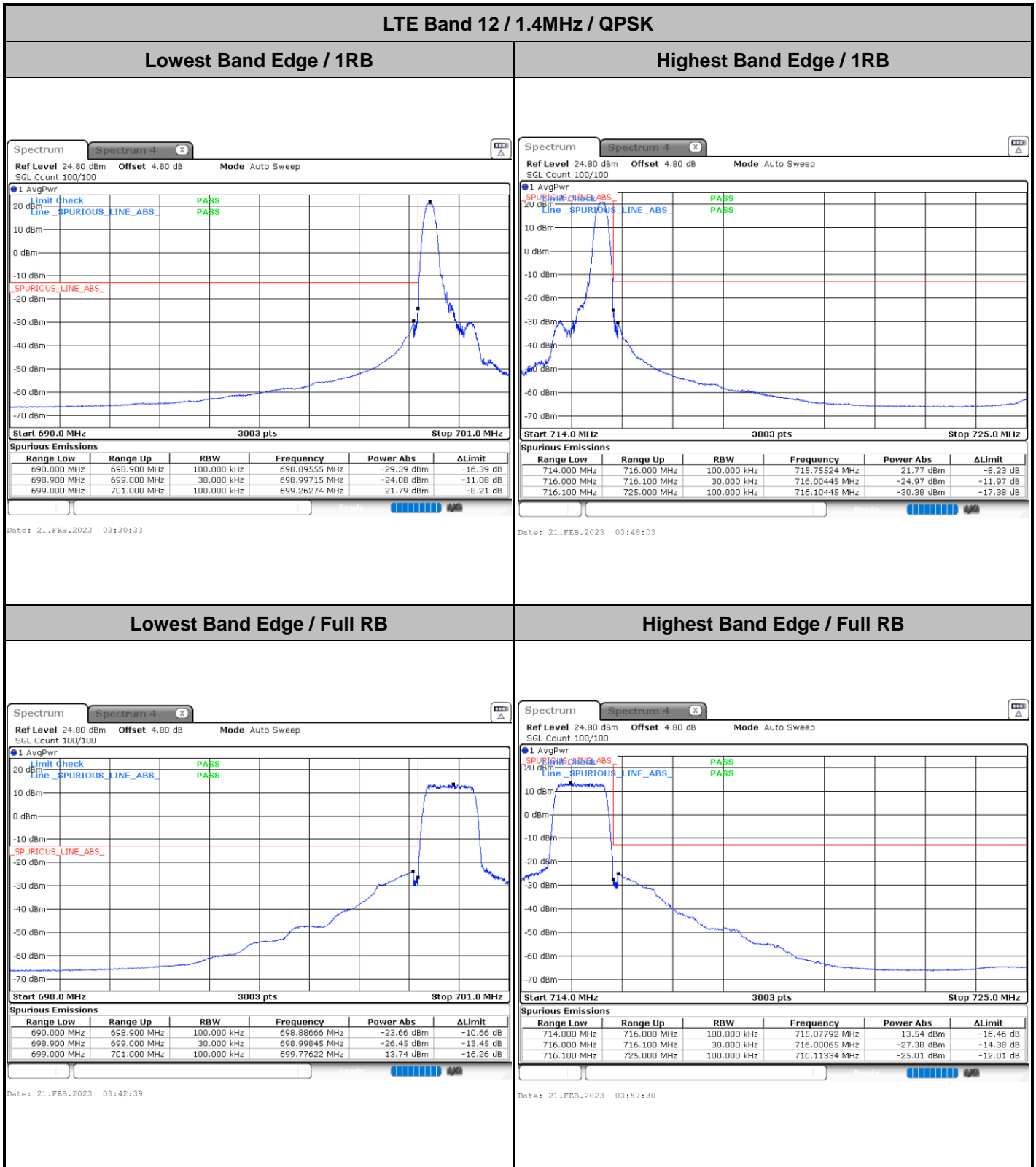
Middle Channel / 10MHz / 16QAM



Date: 21.FEB.2023 05:17:47



# Conducted Band Edge





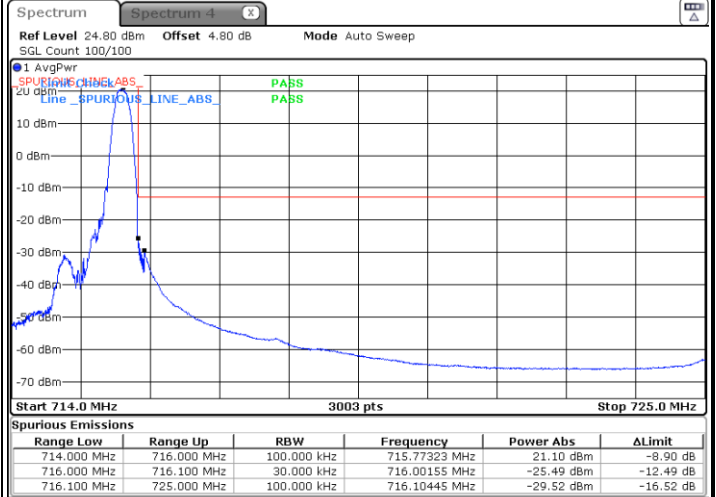
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



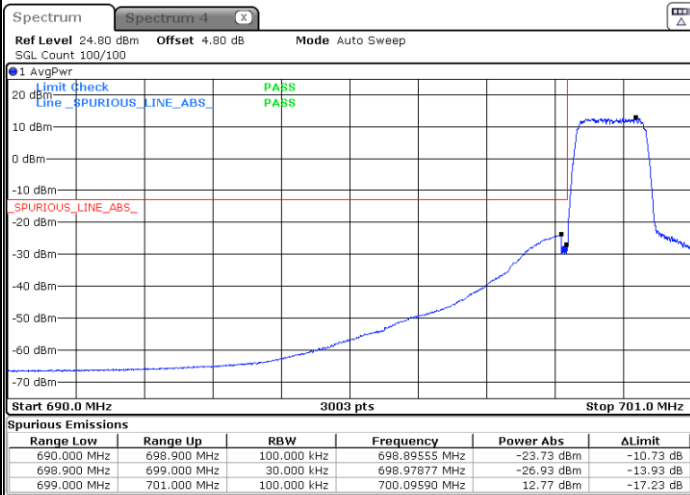
Date: 21.FEB.2023 03:32:33



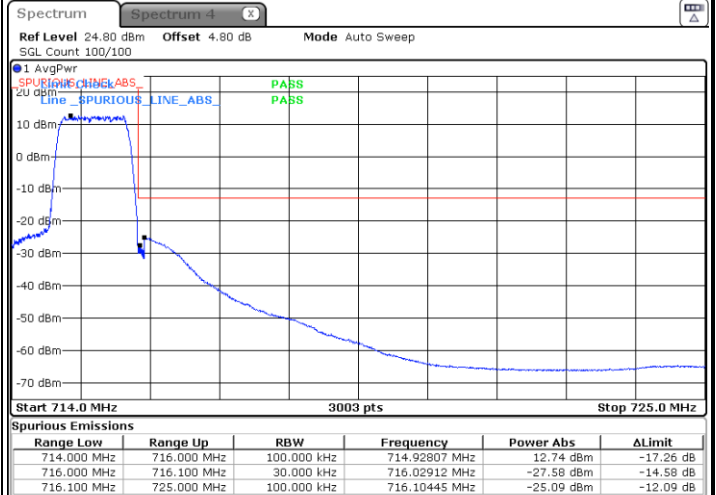
Date: 21.FEB.2023 03:49:24

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 21.FEB.2023 03:41:20

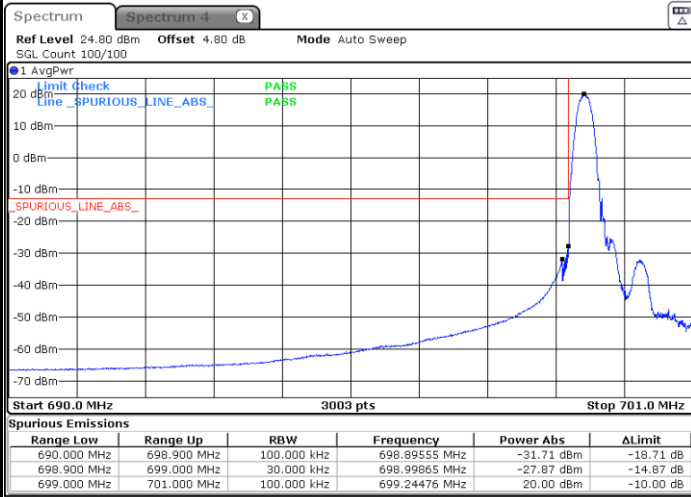


Date: 21.FEB.2023 03:56:10



LTE Band 12 / 1.4MHz / 64QAM

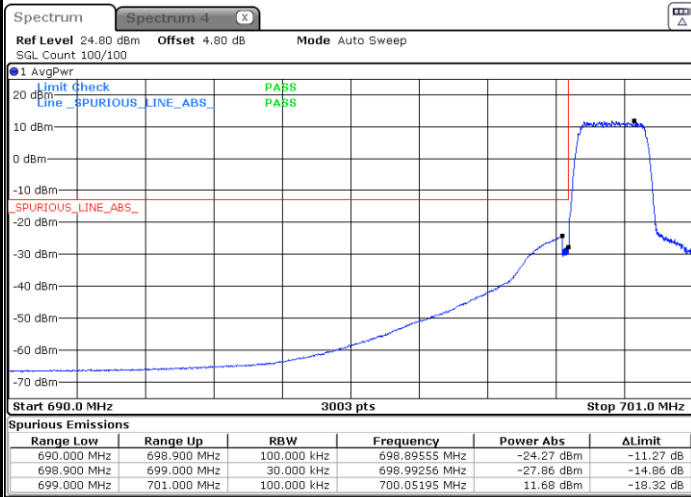
Lowest Band Edge / 1 RB



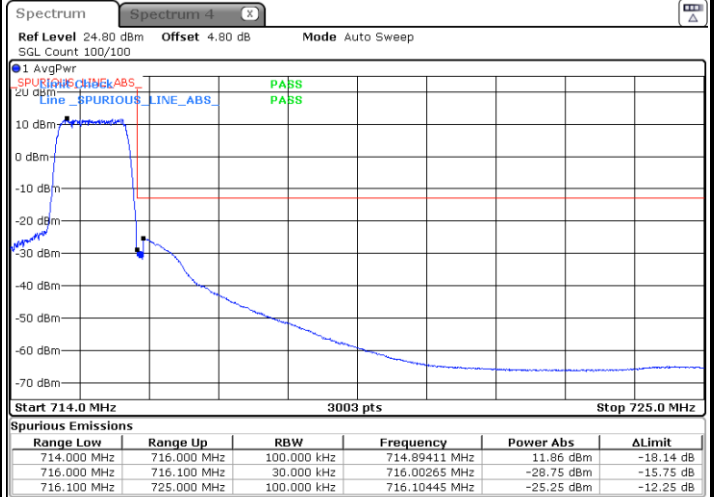
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



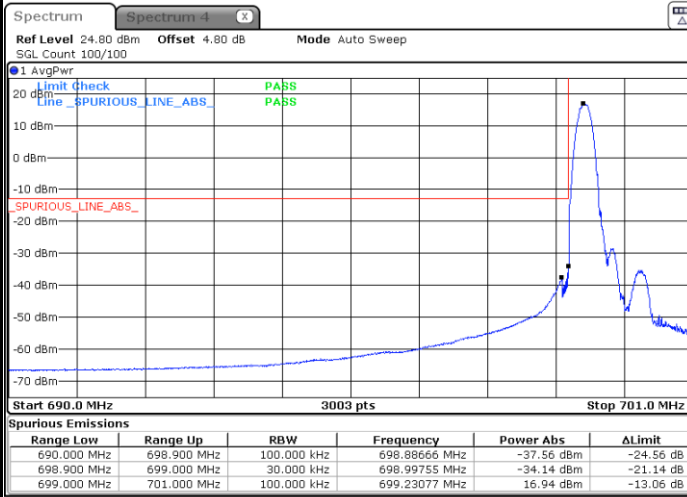
Highest Band Edge / Full RB





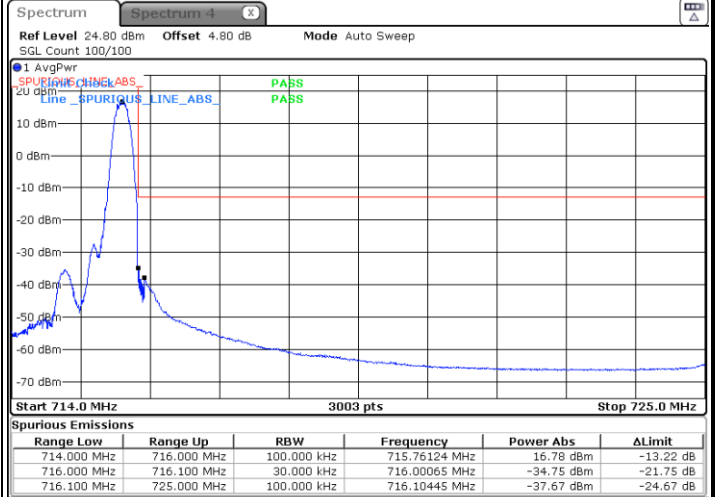
LTE Band 12 / 1.4MHz / 256QAM

Lowest Band Edge / 1 RB



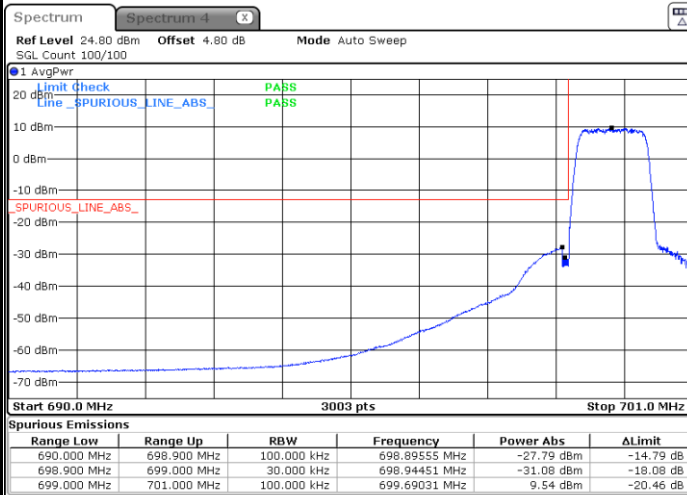
Date: 21.FEB.2023 03:36:34

Highest Band Edge / 1 RB



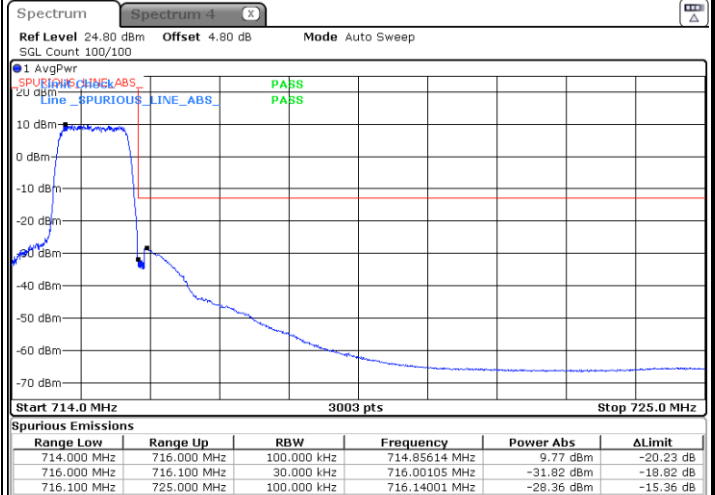
Date: 21.FEB.2023 03:52:04

Lowest Band Edge / Full RB



Date: 21.FEB.2023 03:38:37

Highest Band Edge / Full RB

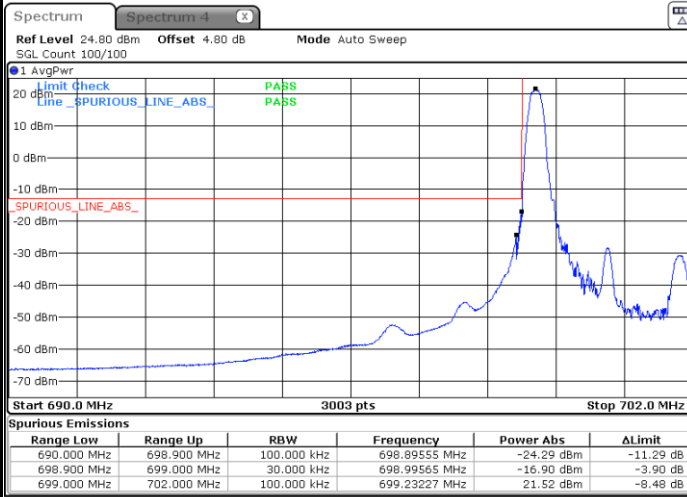


Date: 21.FEB.2023 03:53:27



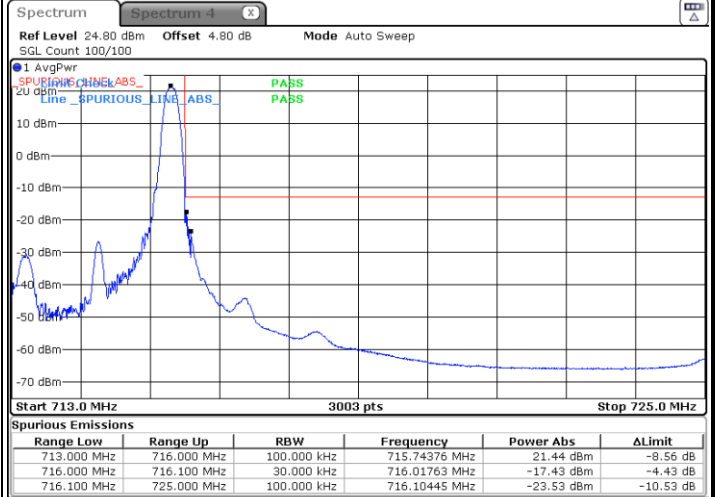
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



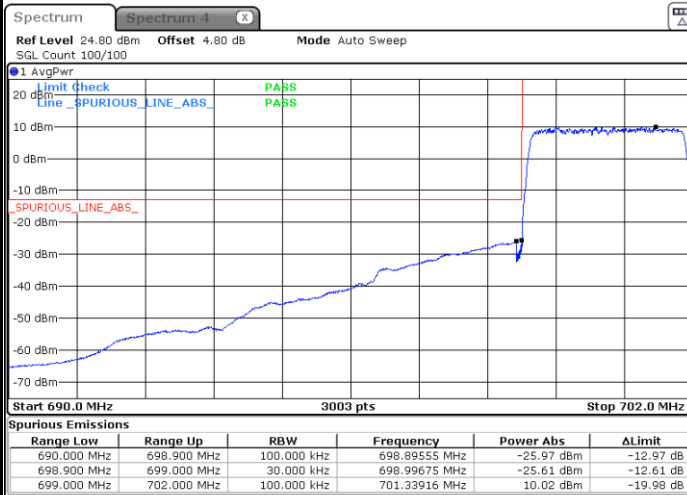
Date: 21.FEB.2023 04:00:12

Highest Band Edge / 1 RB



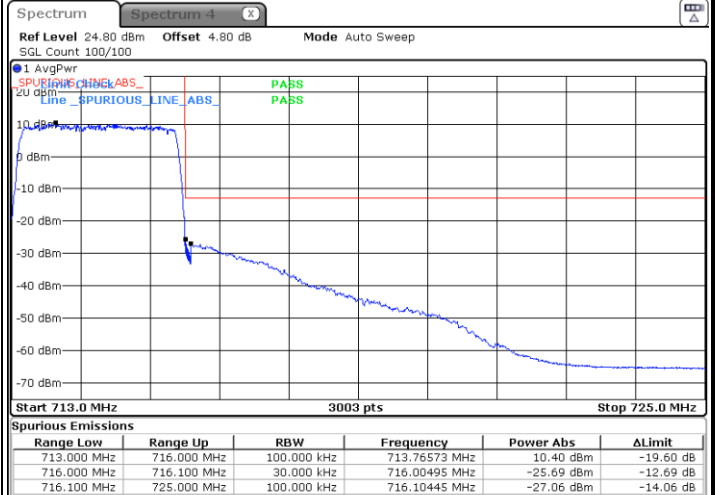
Date: 21.FEB.2023 04:15:01

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:09:38

Highest Band Edge / Full RB

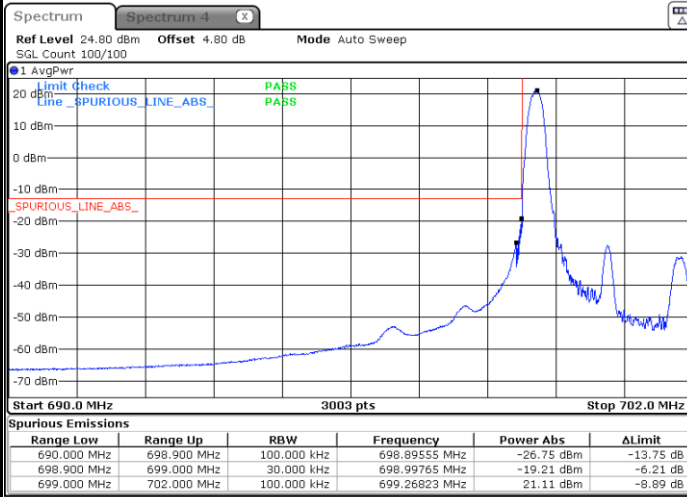


Date: 21.FEB.2023 04:24:29

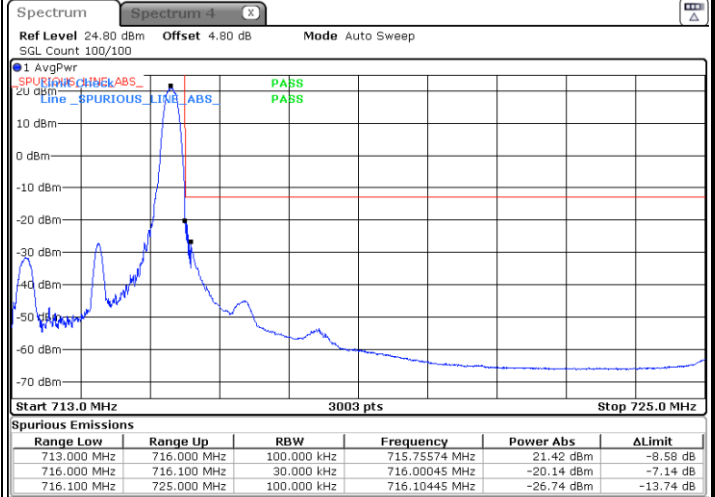


LTE Band 12 / 3MHz / 16QAM

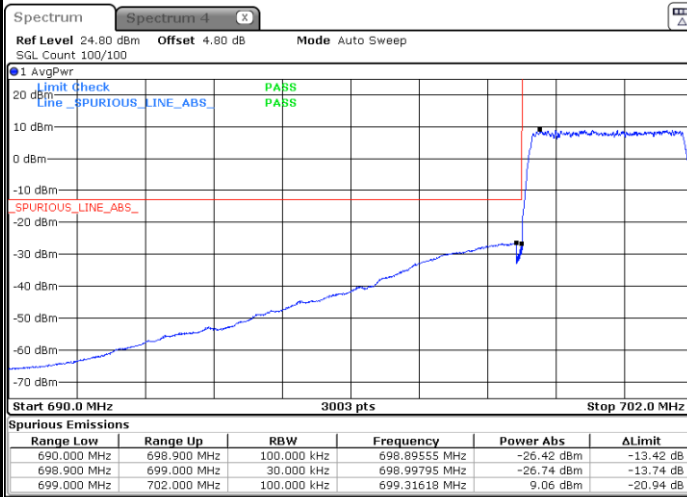
Lowest Band Edge / 1 RB



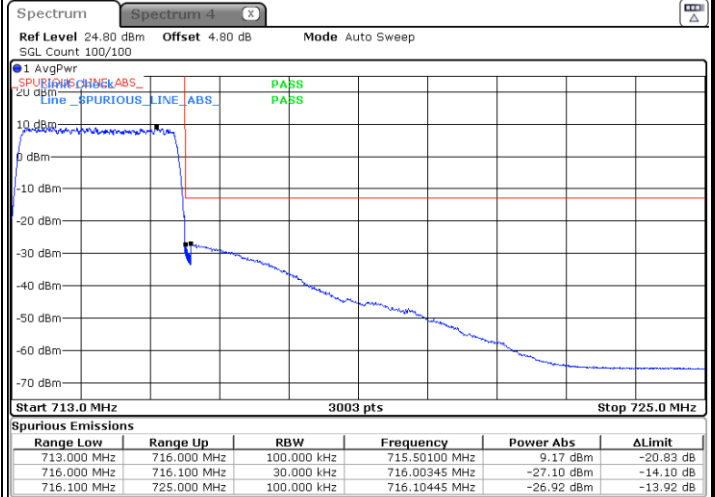
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



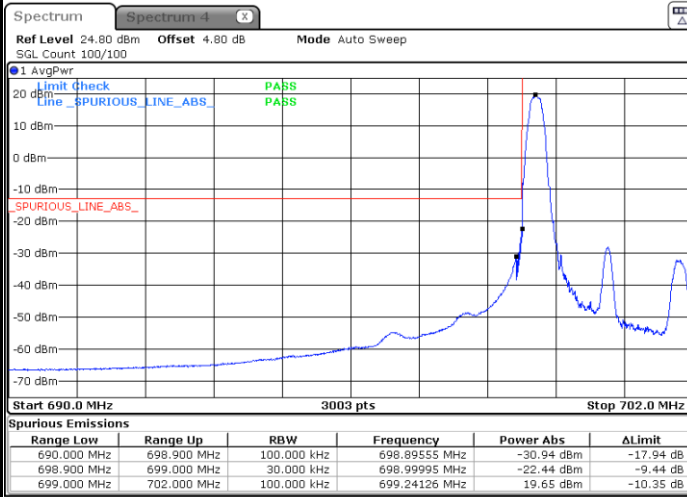
Highest Band Edge / Full RB





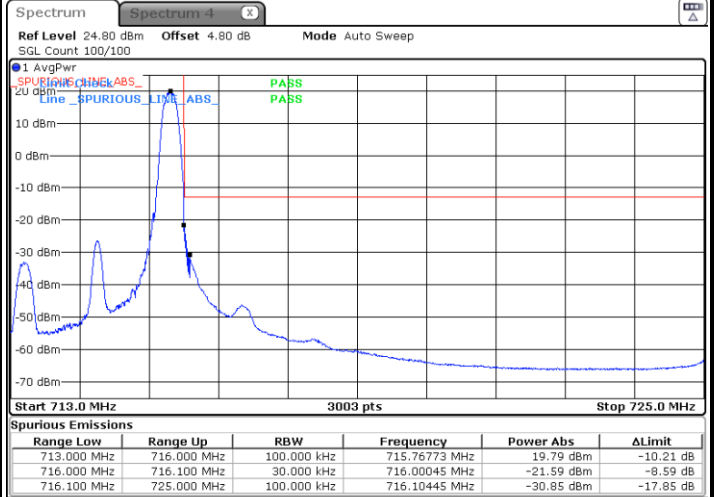
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



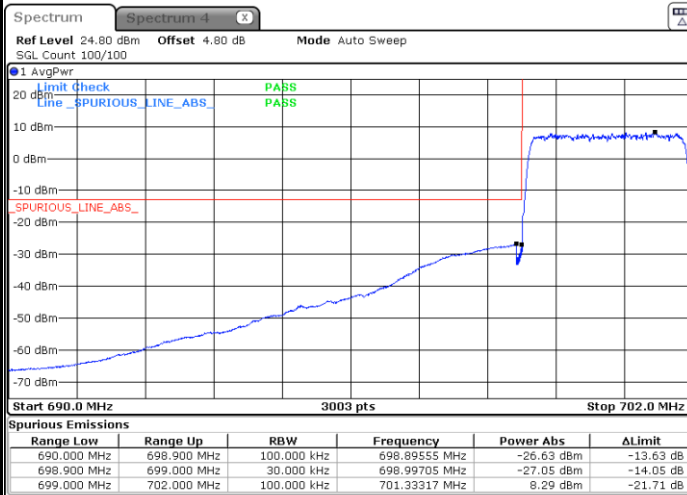
Date: 21.FEB.2023 04:02:52

Highest Band Edge / 1 RB



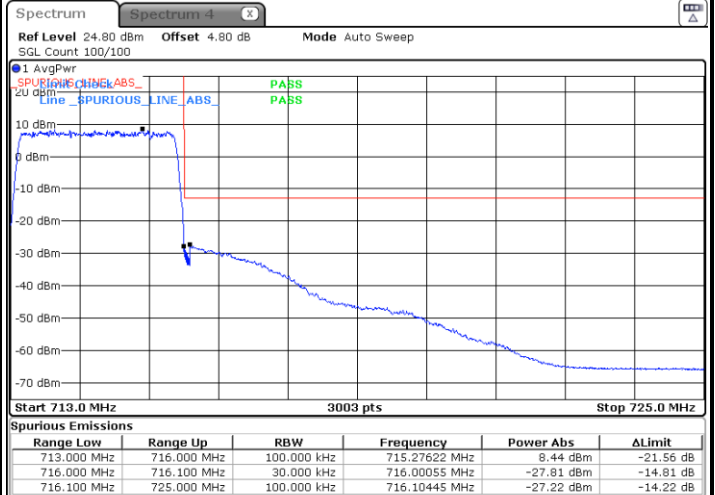
Date: 21.FEB.2023 04:17:42

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:06:58

Highest Band Edge / Full RB



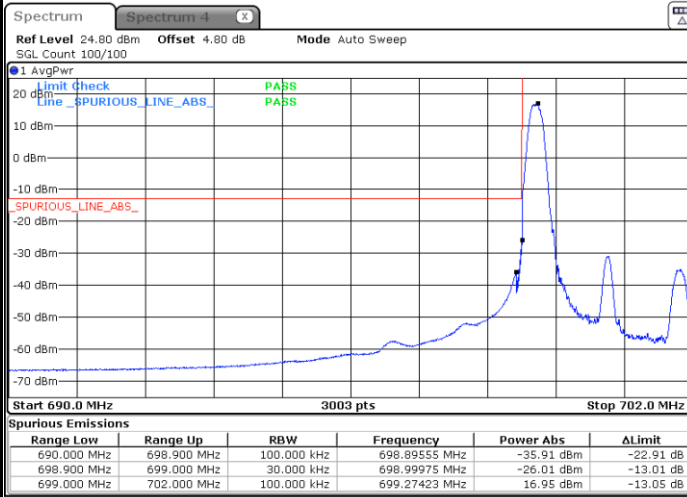
Date: 21.FEB.2023 04:21:48





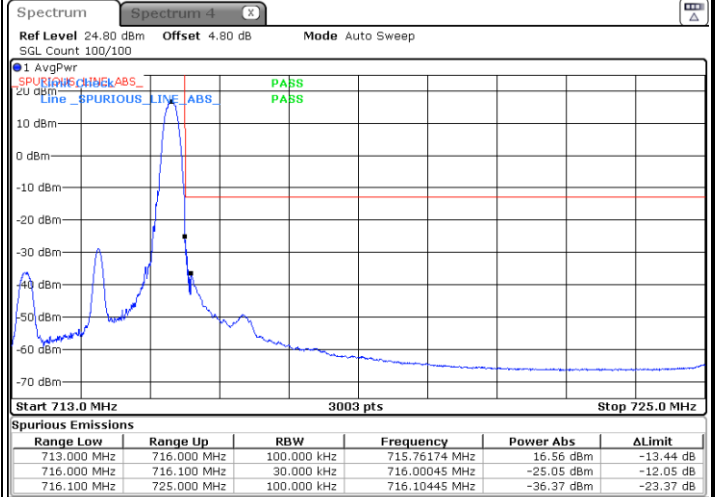
LTE Band 12 / 3MHz / 256QAM

Lowest Band Edge / 1 RB



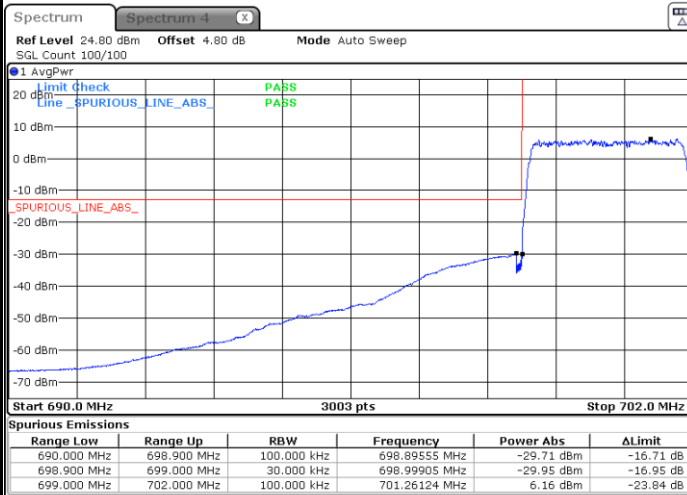
Date: 21.FEB.2023 04:04:12

Highest Band Edge / 1 RB



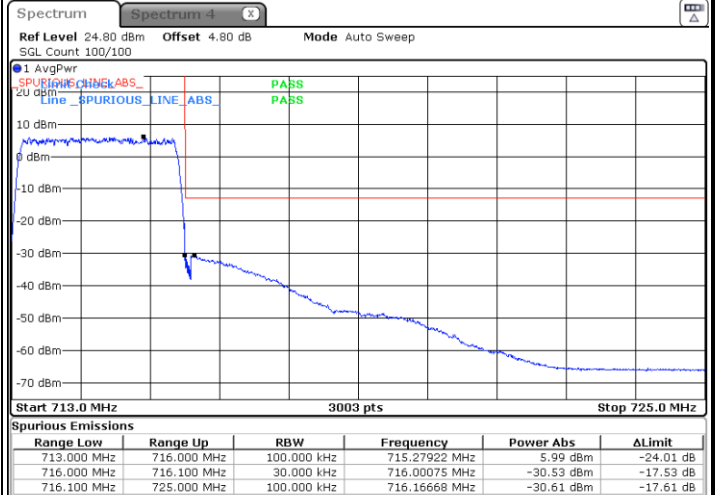
Date: 21.FEB.2023 04:19:02

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:05:35

Highest Band Edge / Full RB

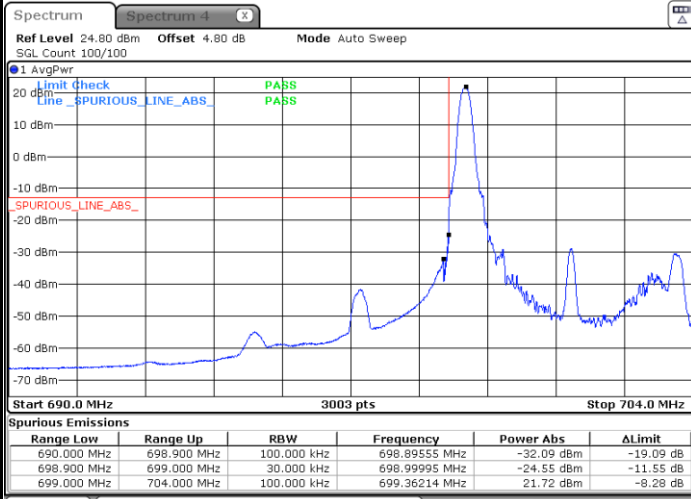


Date: 21.FEB.2023 04:20:25



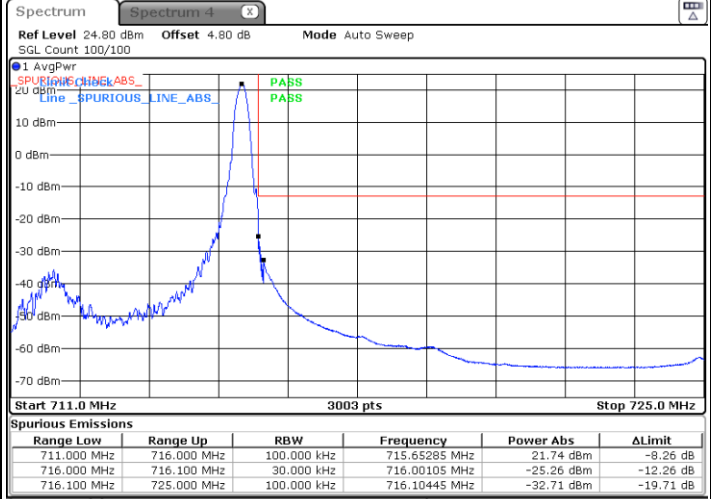
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



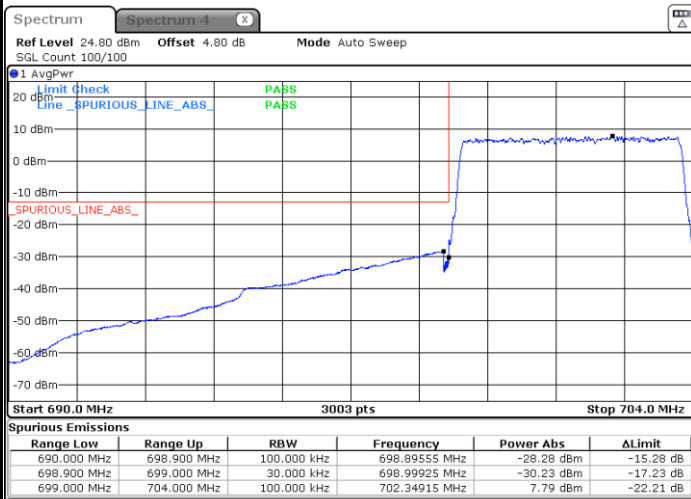
Date: 21.FEB.2023 04:27:11

Highest Band Edge / 1 RB



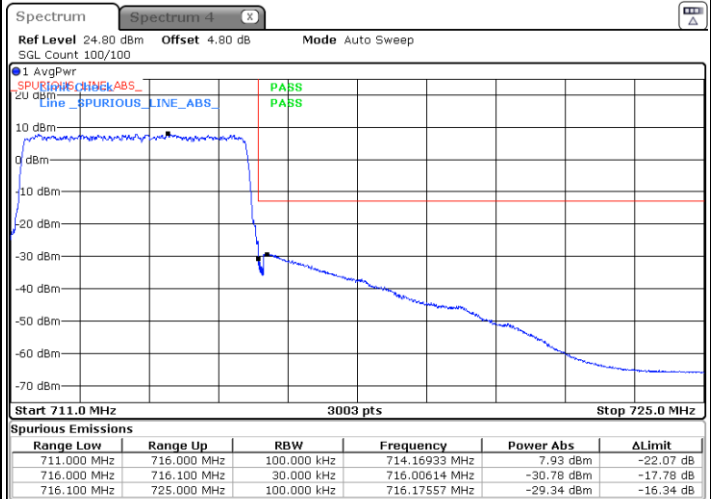
Date: 21.FEB.2023 04:42:02

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:36:39

Highest Band Edge / Full RB

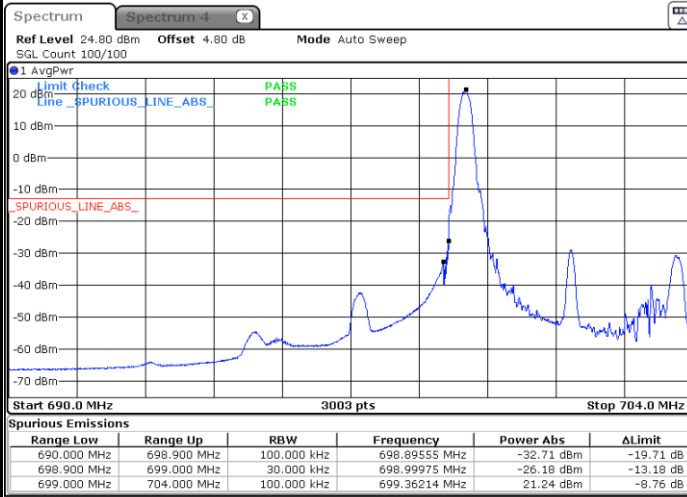


Date: 21.FEB.2023 04:51:29



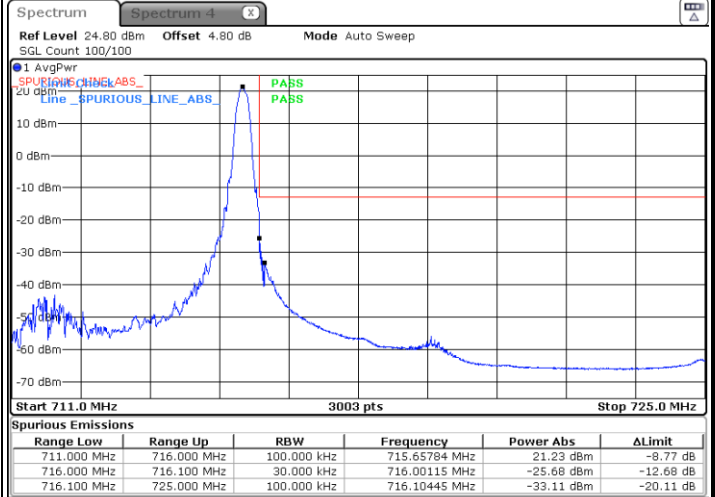
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



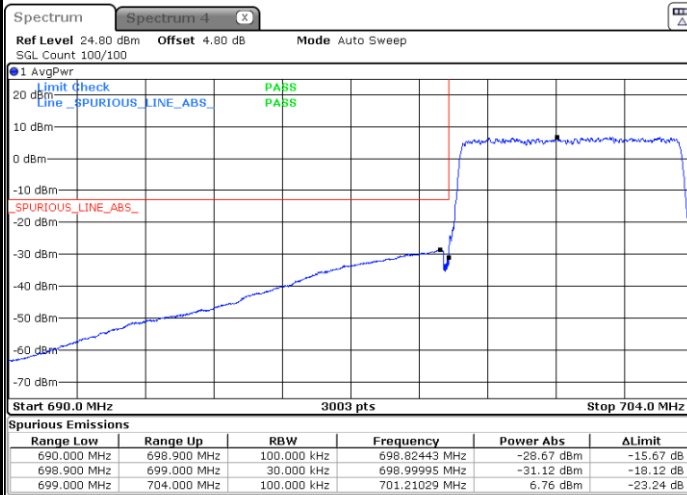
Date: 21.FEB.2023 04:28:31

Highest Band Edge / 1 RB



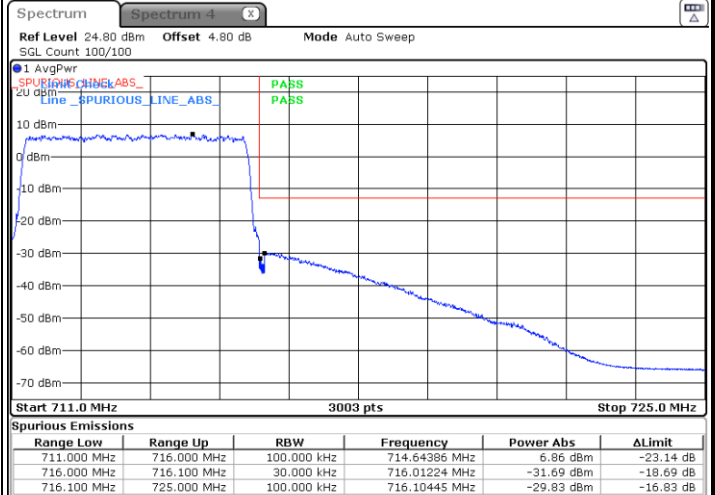
Date: 21.FEB.2023 04:43:21

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:35:19

Highest Band Edge / Full RB

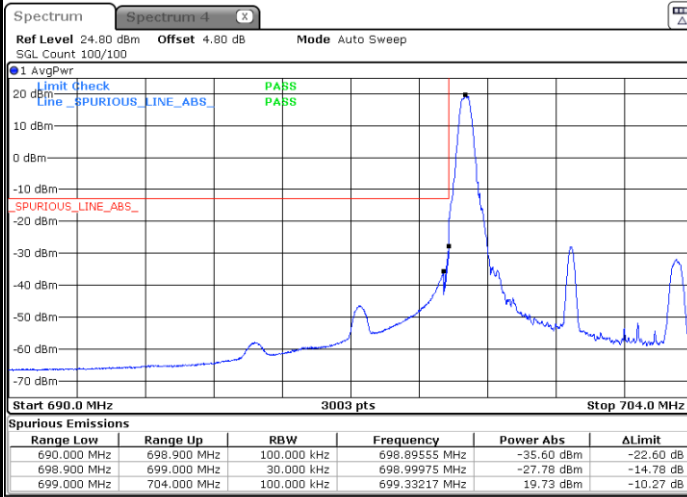


Date: 21.FEB.2023 04:50:09



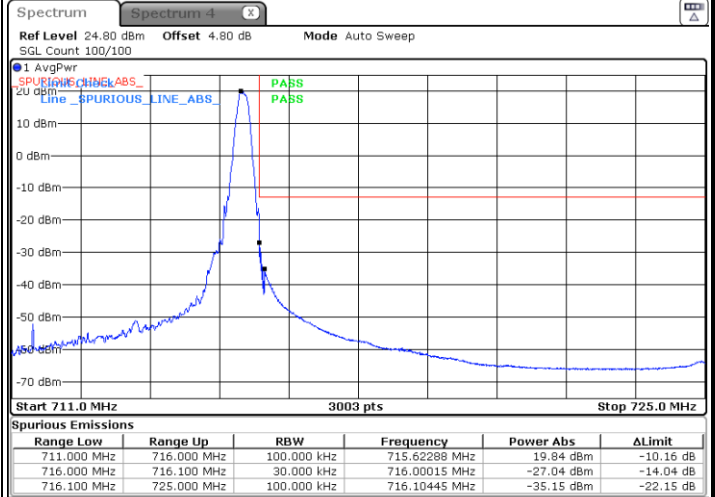
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



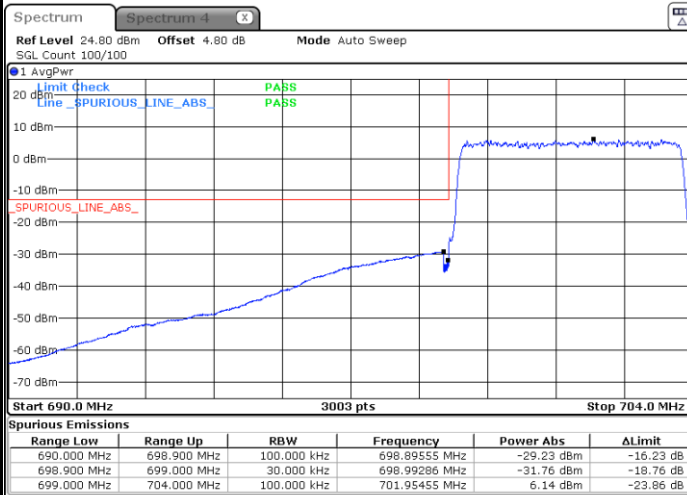
Date: 21.FEB.2023 04:29:51

Highest Band Edge / 1 RB



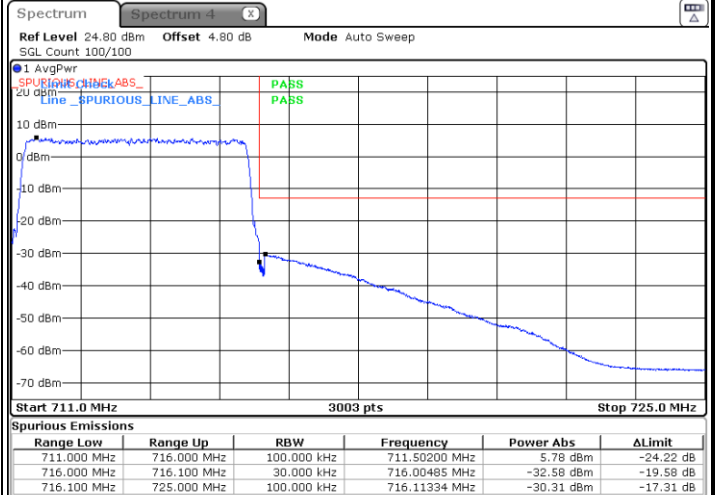
Date: 21.FEB.2023 04:44:42

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:33:58

Highest Band Edge / Full RB

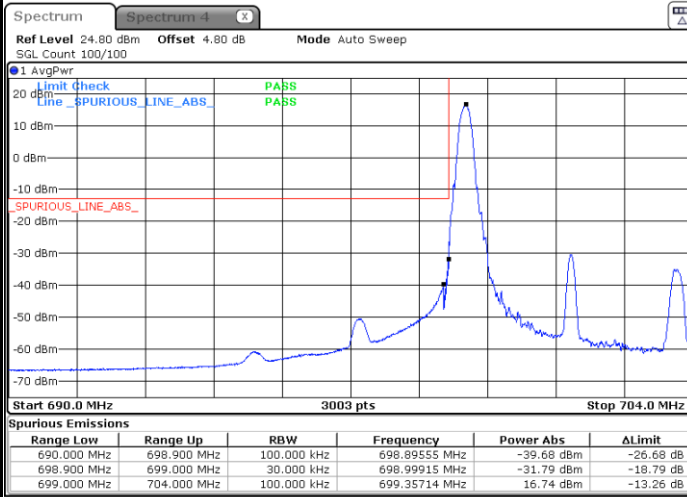


Date: 21.FEB.2023 04:48:49



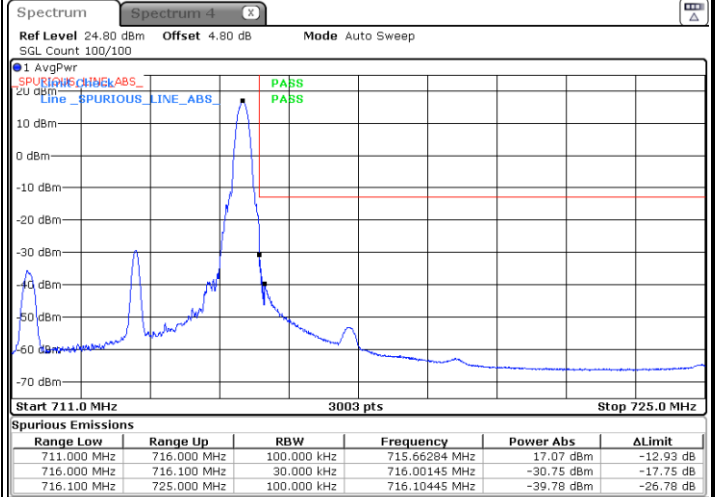
LTE Band 12 / 5MHz / 256QAM

Lowest Band Edge / 1RB



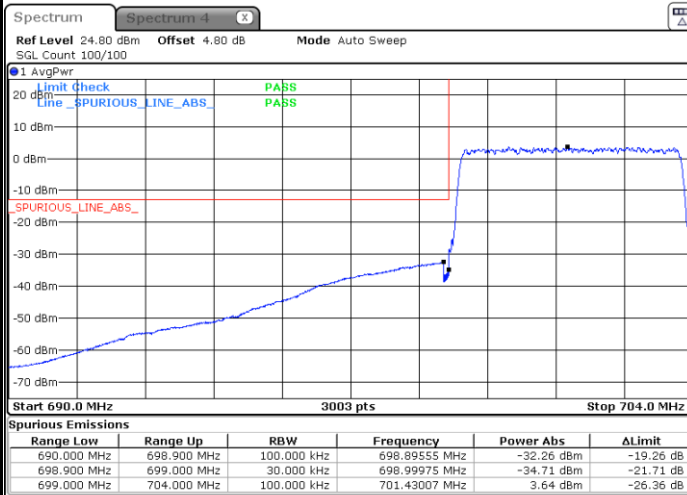
Date: 21.FEB.2023 04:31:11

Highest Band Edge / 1 RB



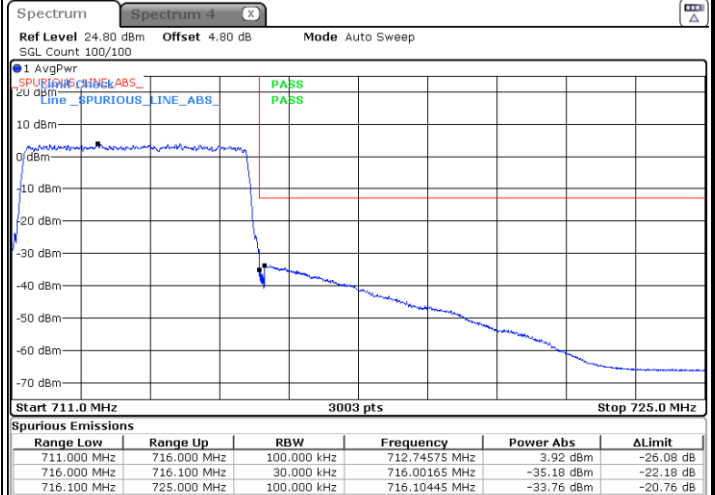
Date: 21.FEB.2023 04:46:02

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:32:34

Highest Band Edge / Full RB

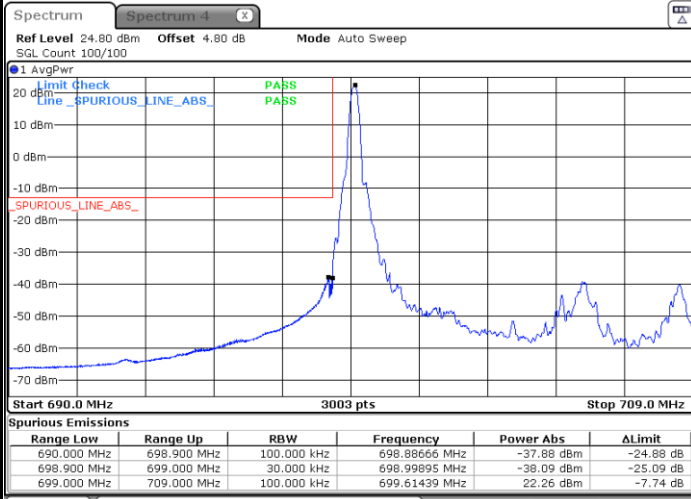


Date: 21.FEB.2023 04:47:25



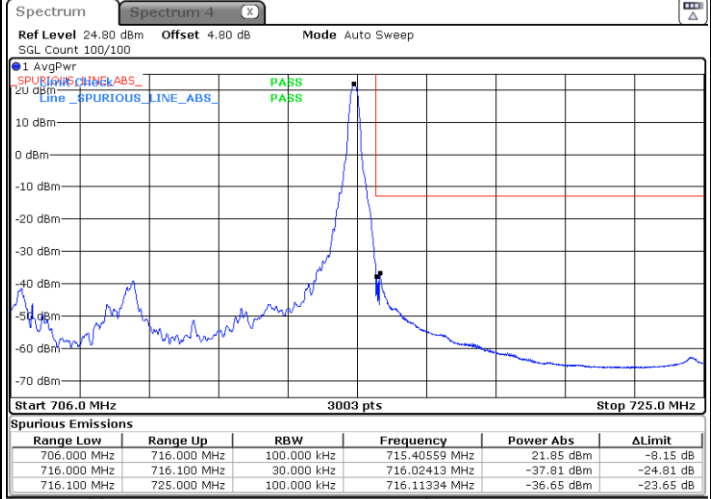
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



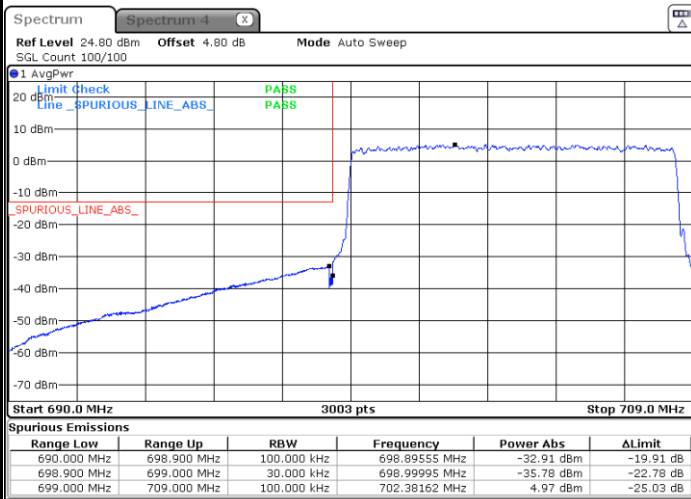
Date: 21.FEB.2023 04:54:11

Highest Band Edge / 1 RB



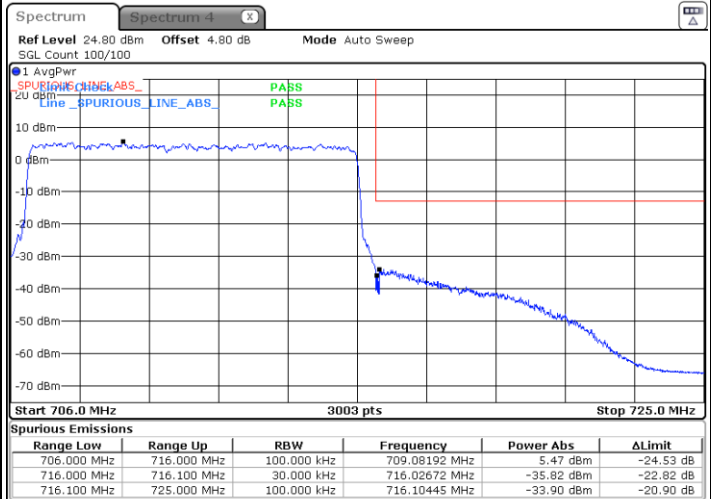
Date: 21.FEB.2023 05:07:36

Lowest Band Edge / Full RB



Date: 21.FEB.2023 05:03:36

Highest Band Edge / Full RB

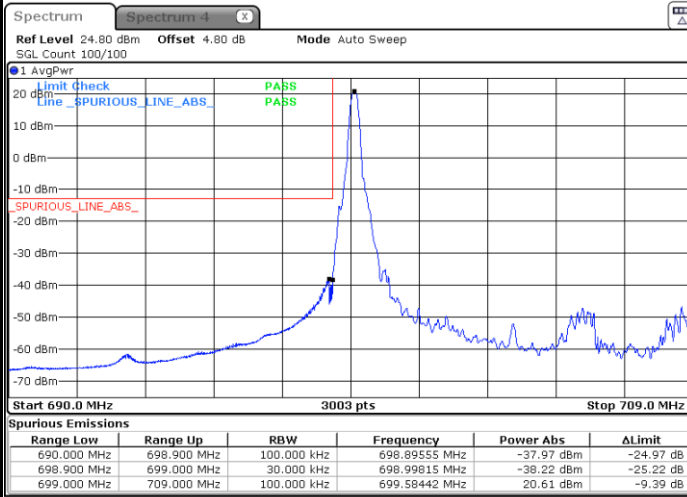


Date: 21.FEB.2023 05:17:05



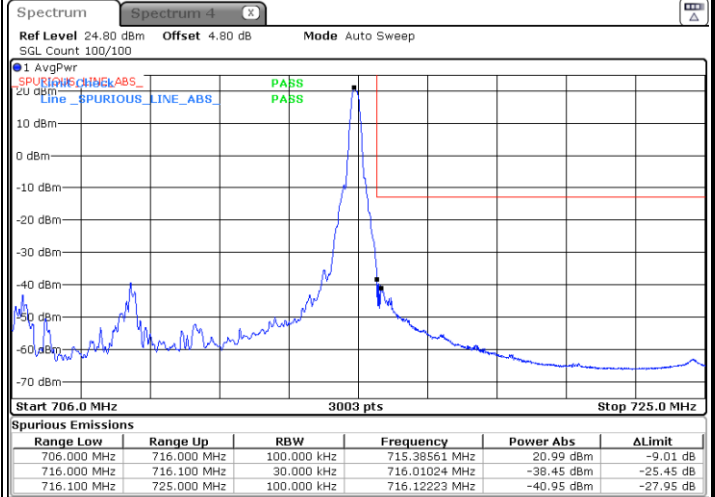
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



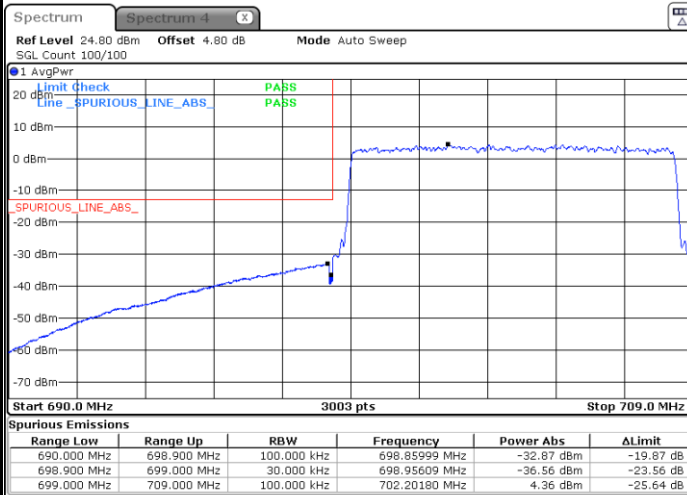
Date: 21.FEB.2023 04:55:30

Highest Band Edge / 1 RB



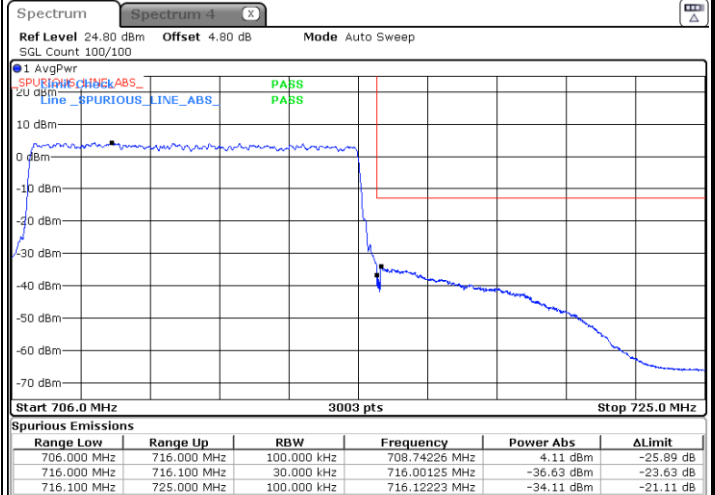
Date: 21.FEB.2023 05:08:57

Lowest Band Edge / Full RB



Date: 21.FEB.2023 05:02:16

Highest Band Edge / Full RB

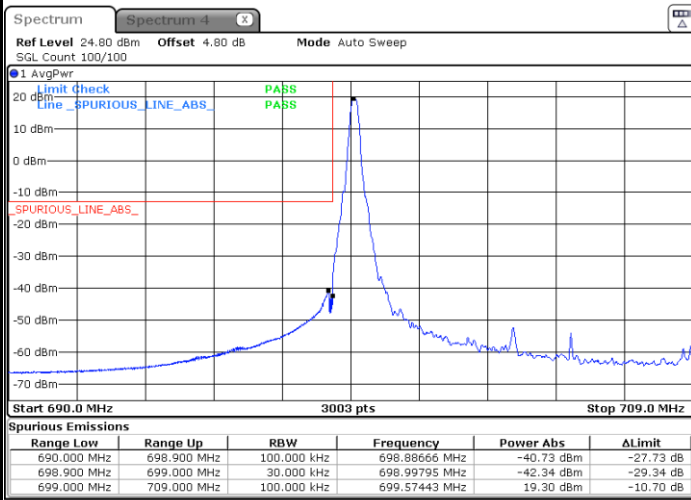


Date: 21.FEB.2023 05:15:43



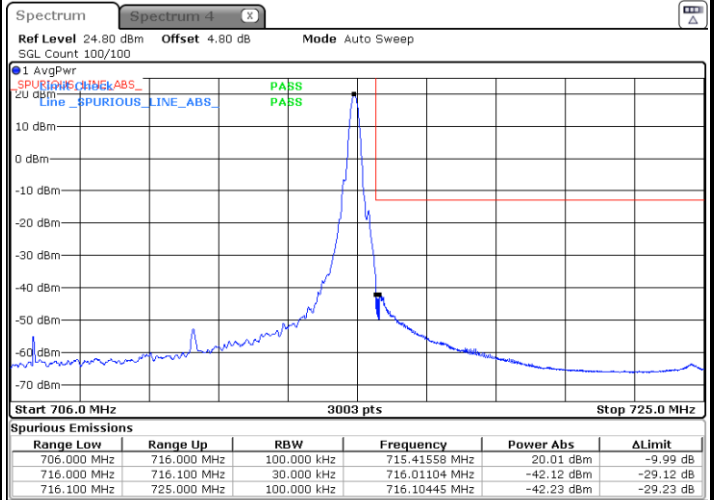
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



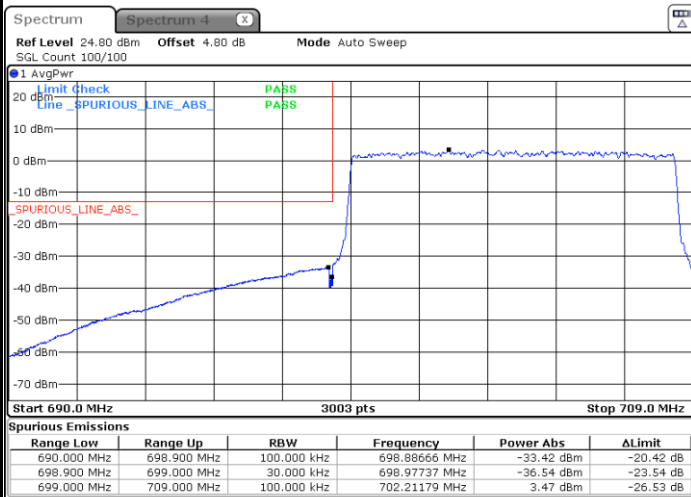
Date: 21.FEB.2023 04:56:50

Highest Band Edge / 1 RB



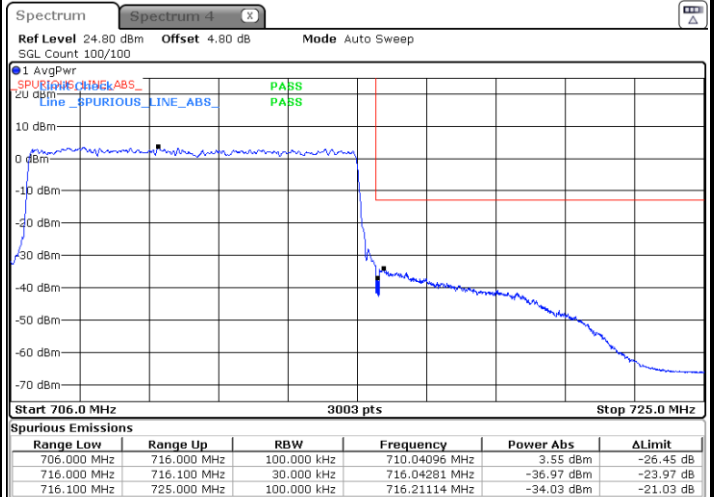
Date: 21.FEB.2023 05:10:17

Lowest Band Edge / Full RB



Date: 21.FEB.2023 05:00:57

Highest Band Edge / Full RB



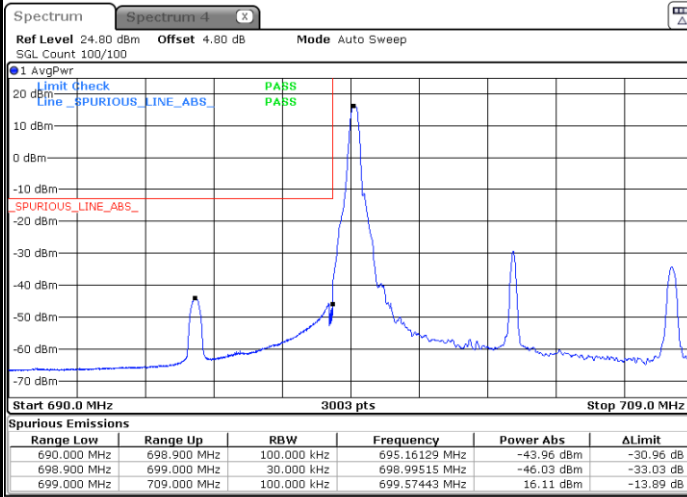
Date: 21.FEB.2023 05:14:23





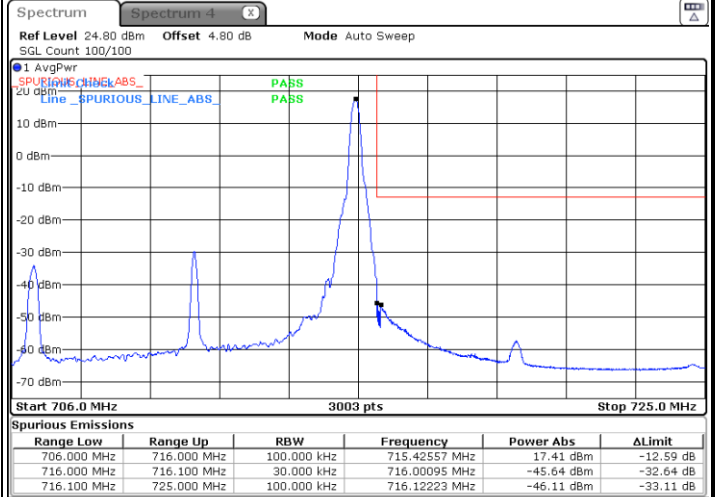
LTE Band 12 / 10MHz / 256QAM

Lowest Band Edge / 1 RB



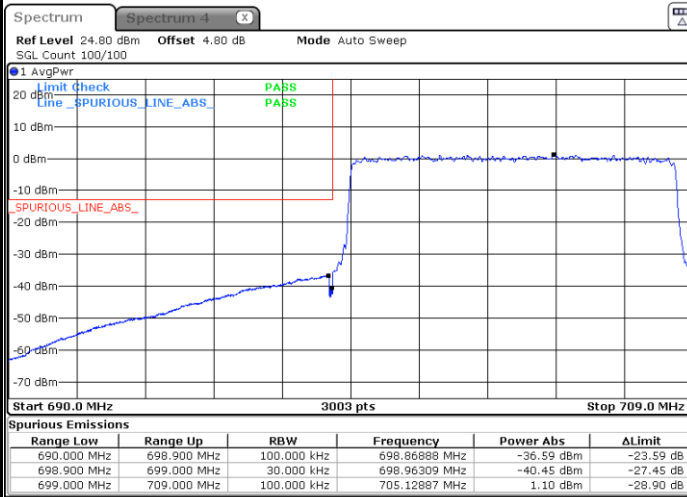
Date: 21.FEB.2023 04:58:10

Highest Band Edge / 1 RB



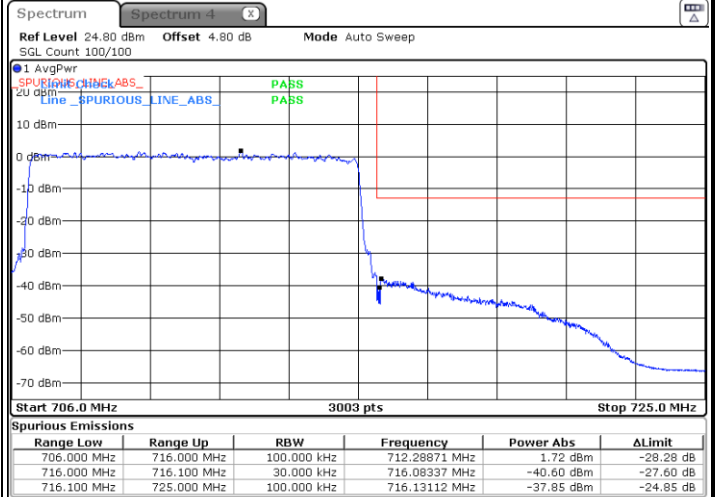
Date: 21.FEB.2023 05:11:38

Lowest Band Edge / Full RB



Date: 21.FEB.2023 04:59:34

Highest Band Edge / Full RB



Date: 21.FEB.2023 05:13:01

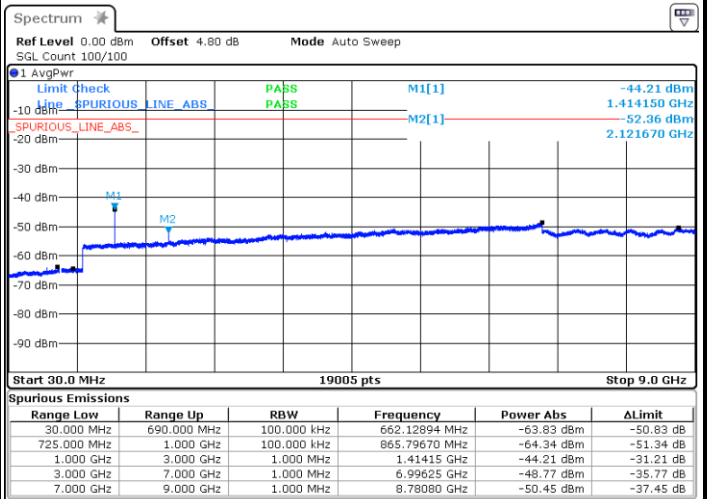
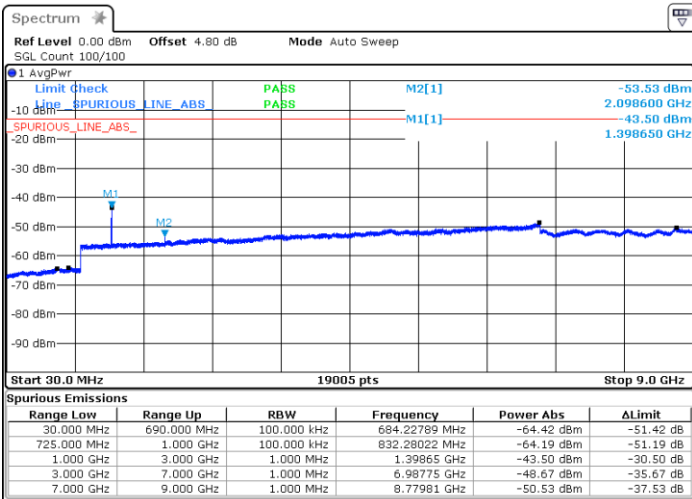


# Conducted Spurious Emission

## LTE Band 12 / 1.4MHz

### Lowest Channel / QPSK

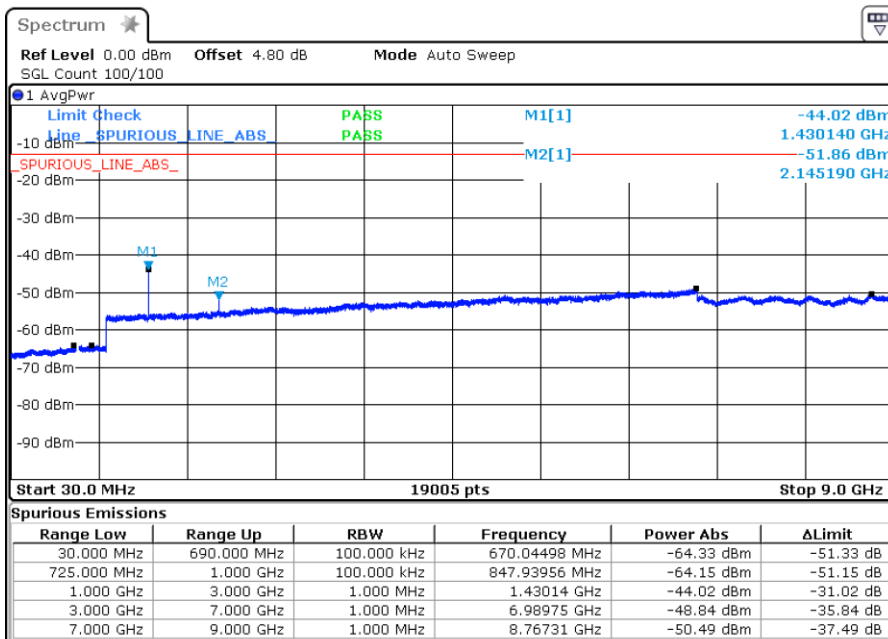
### Middle Channel / QPSK



Date: 21.APR.2023 15:21:51

Date: 21.APR.2023 15:23:23

### Highest Channel / QPSK



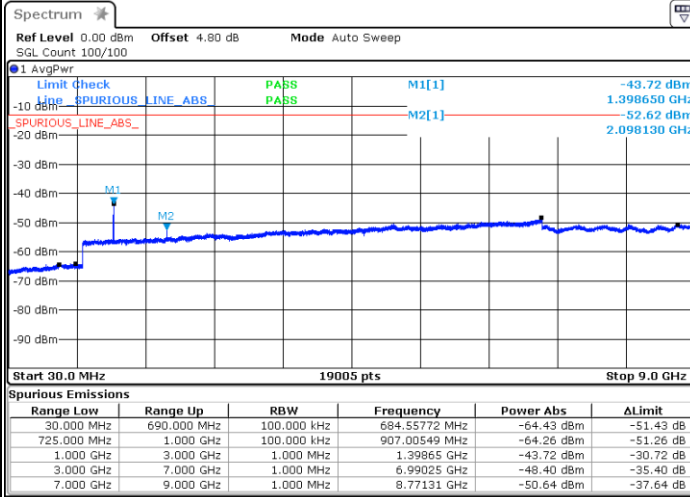
Date: 21.APR.2023 15:25:06



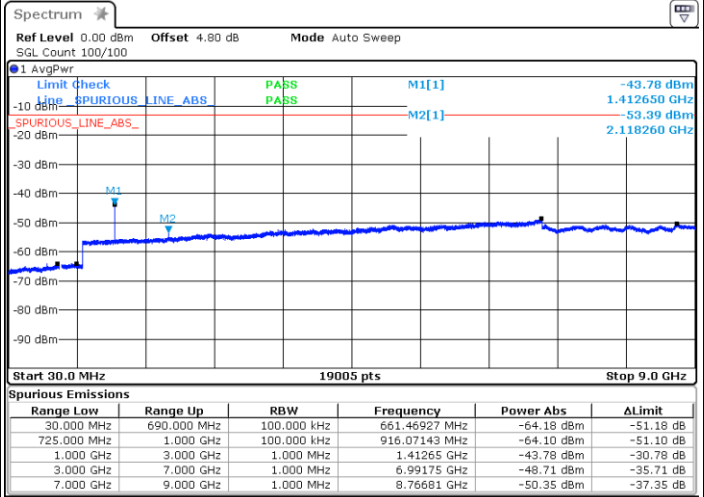
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK

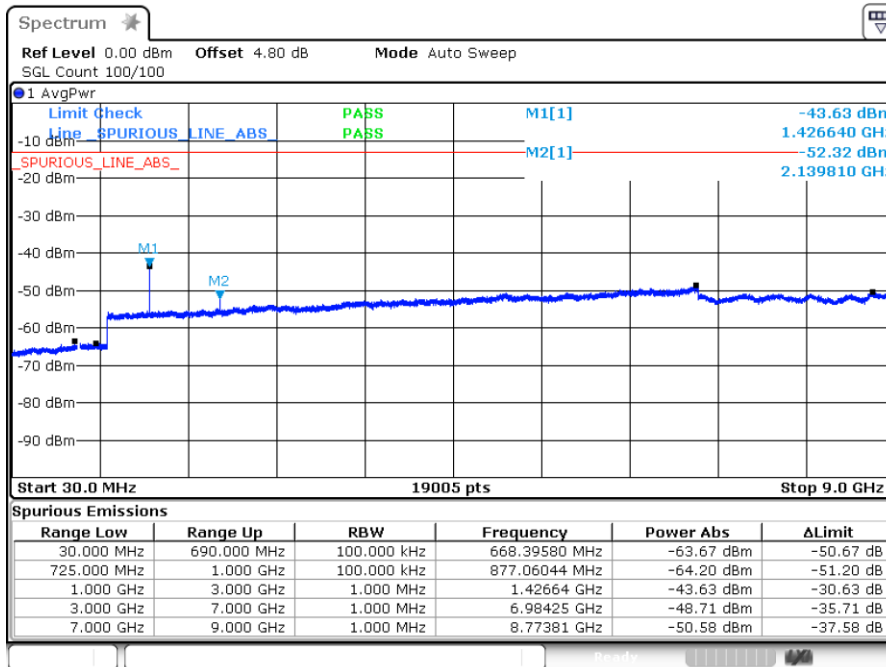


Date: 21.APR.2023 15:27:08



Date: 21.APR.2023 15:28:39

Highest Channel / QPSK

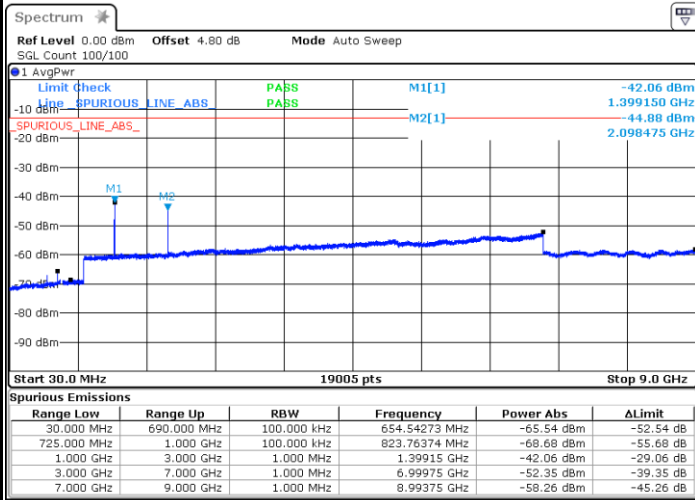


Date: 21.APR.2023 15:30:27



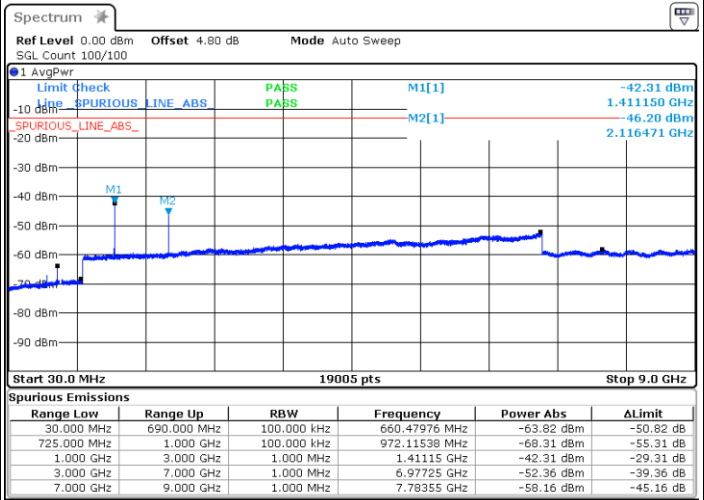
LTE Band 12 / 5MHz

Lowest Channel / QPSK



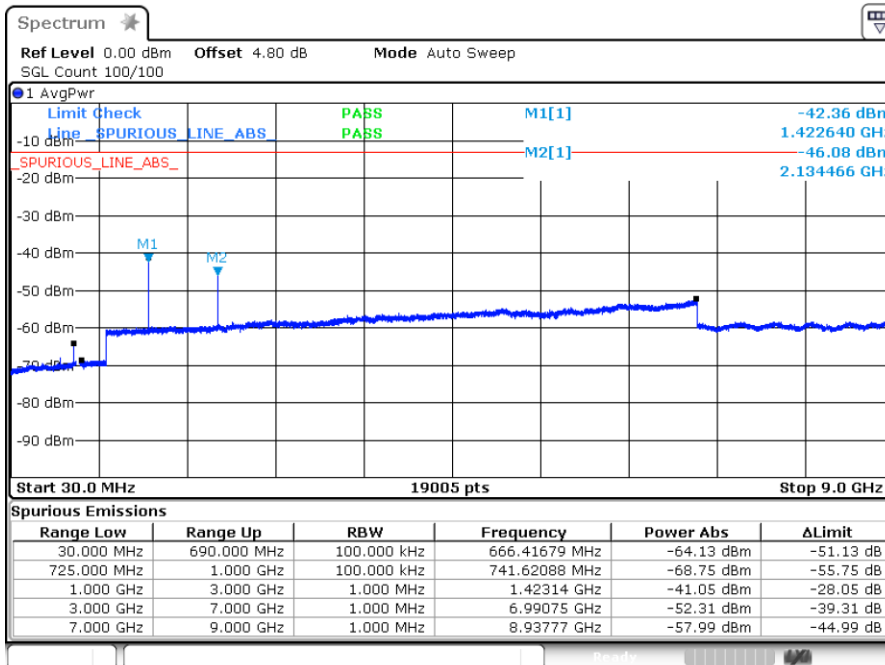
Date: 21.APR.2023 15:15:37

Middle Channel / QPSK



Date: 21.APR.2023 15:14:08

Highest Channel / QPSK



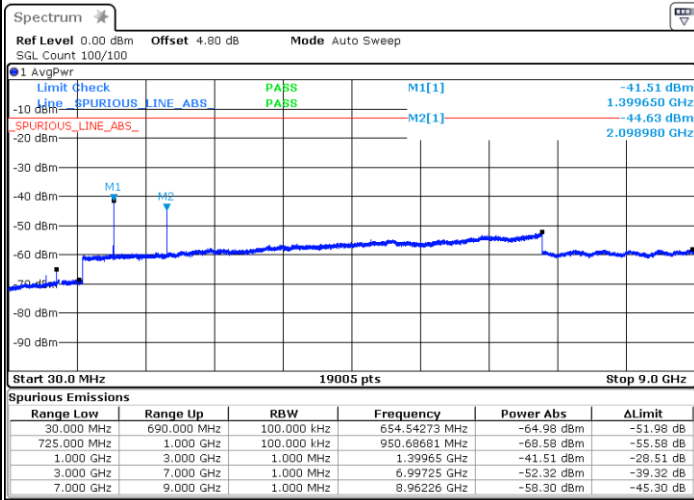
Date: 21.APR.2023 15:17:07



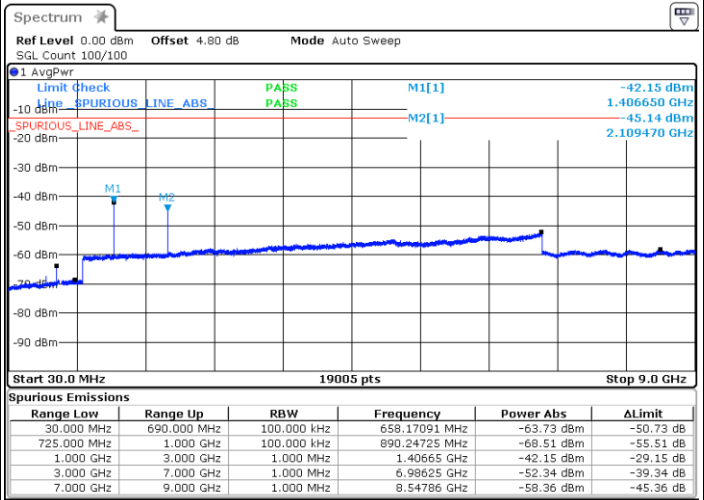
LTE Band 12 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK

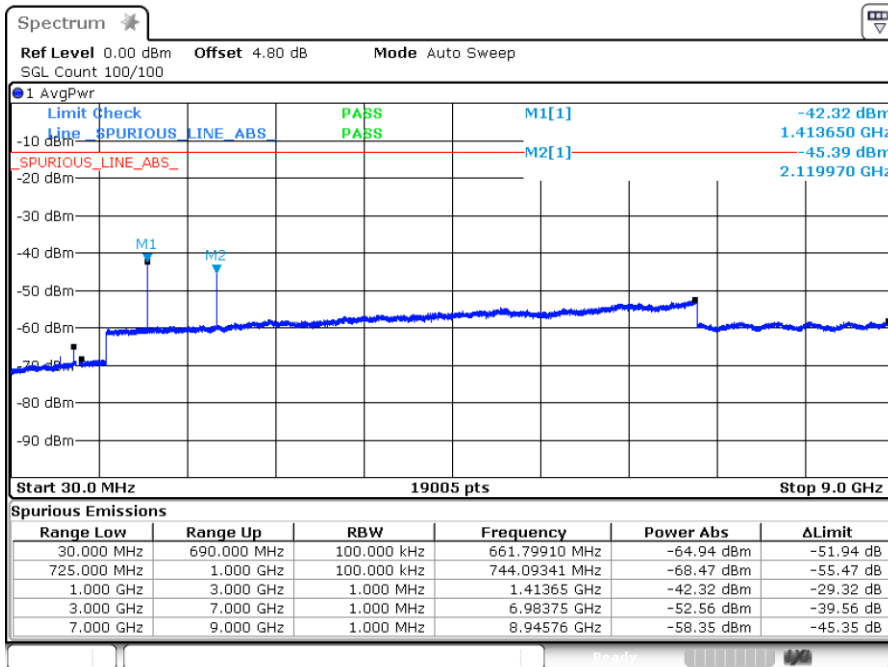


Date: 21.APR.2023 15:32:13



Date: 21.APR.2023 15:33:40

Highest Channel / QPSK



Date: 21.APR.2023 15:35:09



### 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	0.0027	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0028	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0003	
20	Battery End Point	0.0017	

**Note:**

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.45 V. ; Maximum Voltage =4.41 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.