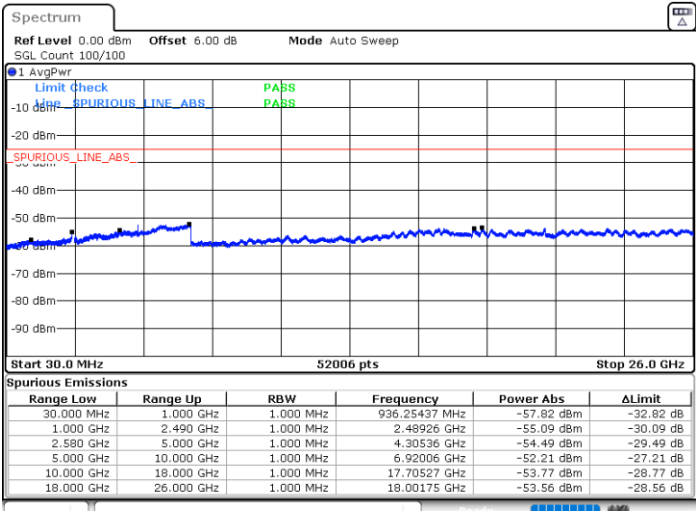




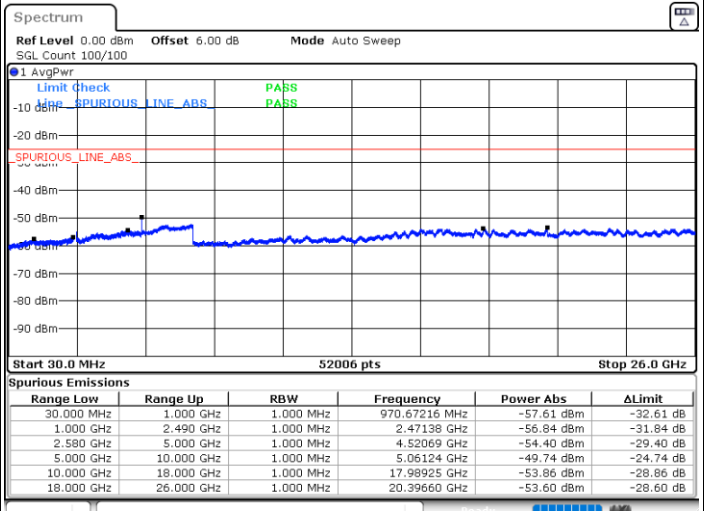
LTE Band 7 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK

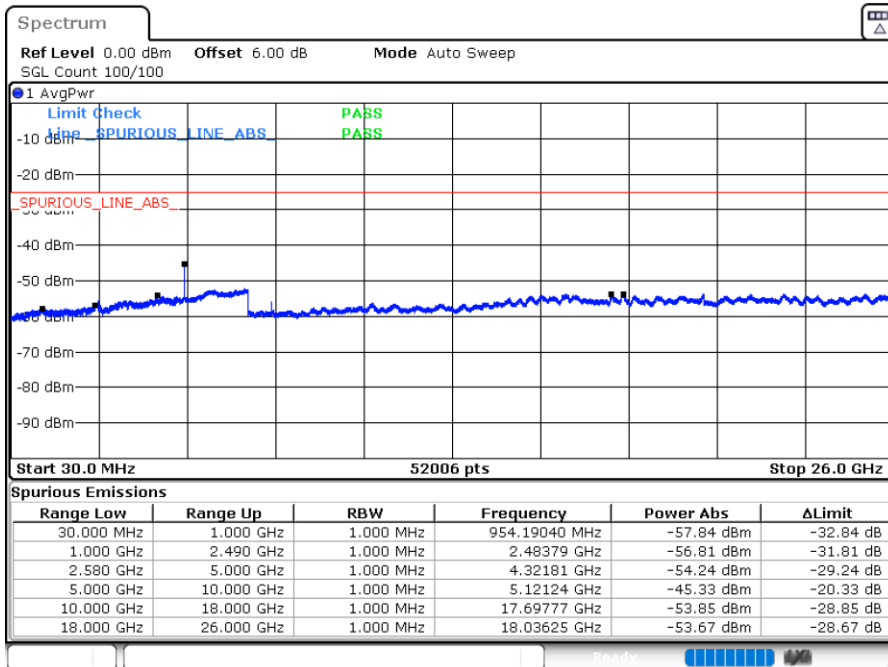


Date: 25.OCT.2023 14:33:16



Date: 25.OCT.2023 14:41:29

Highest Channel / QPSK



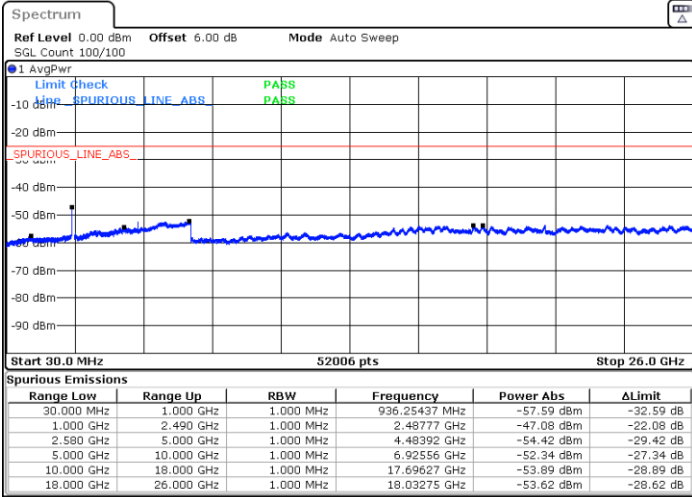
Date: 25.OCT.2023 14:44:58



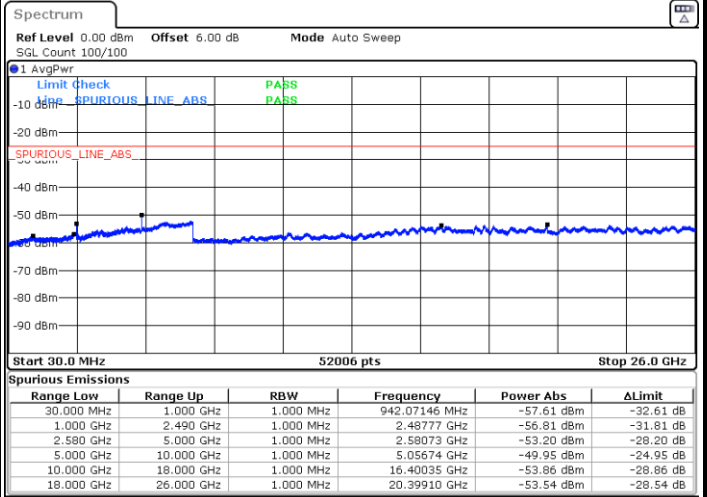
LTE Band 7 / 15MHz

Lowest Channel / QPSK

Middle Channel / QPSK

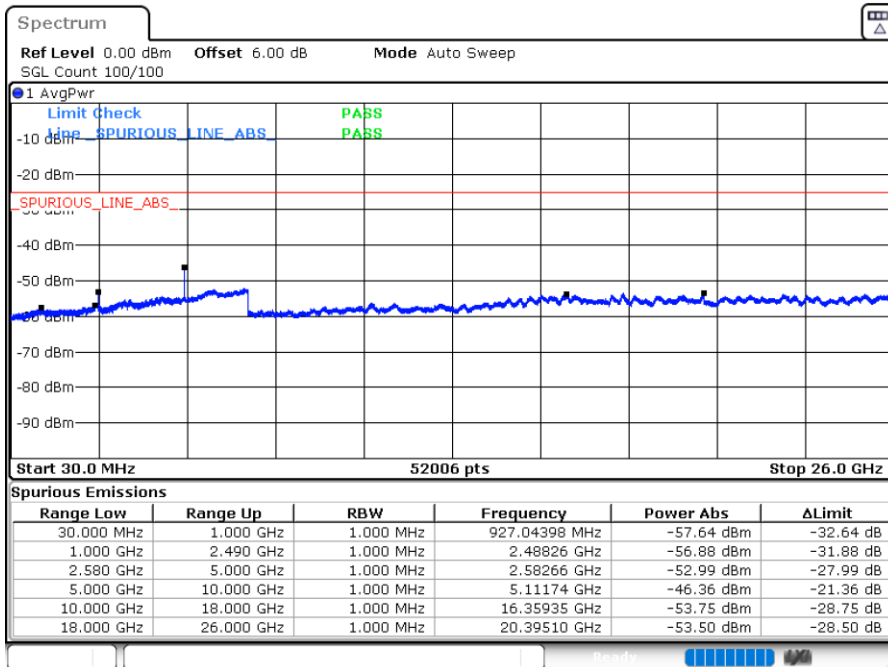


Date: 25.OCT.2023 14:54:54



Date: 25.OCT.2023 15:12:37

Highest Channel / QPSK



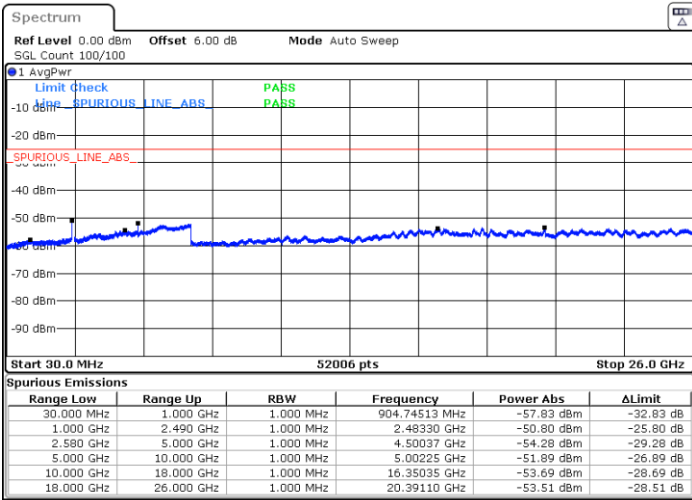
Date: 25.OCT.2023 15:16:05



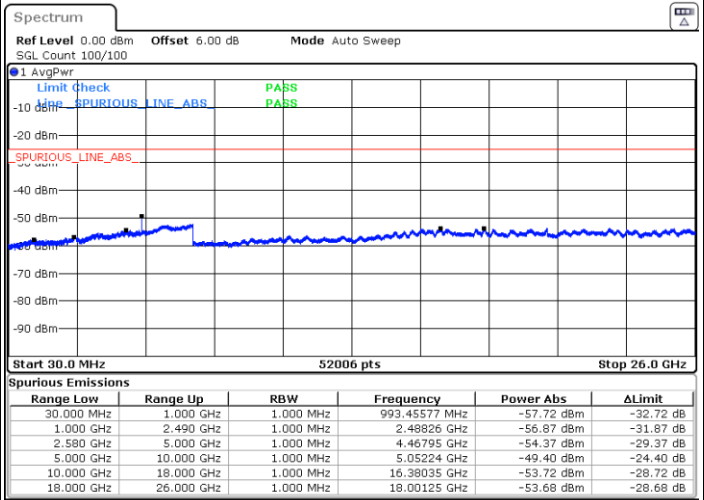
LTE Band 7 / 20MHz

Lowest Channel / QPSK

Middle Channel / QPSK

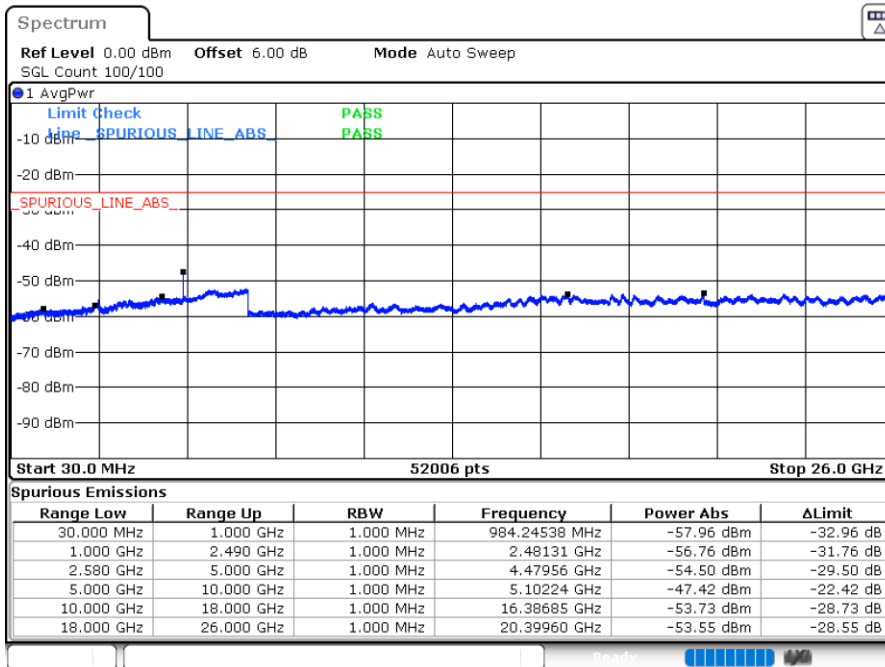


Date: 25.OCT.2023 16:14:15



Date: 25.OCT.2023 16:00:00

Highest Channel / QPSK



Date: 25.OCT.2023 16:07:56



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	0.0023	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0026	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0027	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0036	
20	Maximum Voltage	0.0022	
20	Normal Voltage	0.0016	
20	Battery End Point	0.0029	

Note:

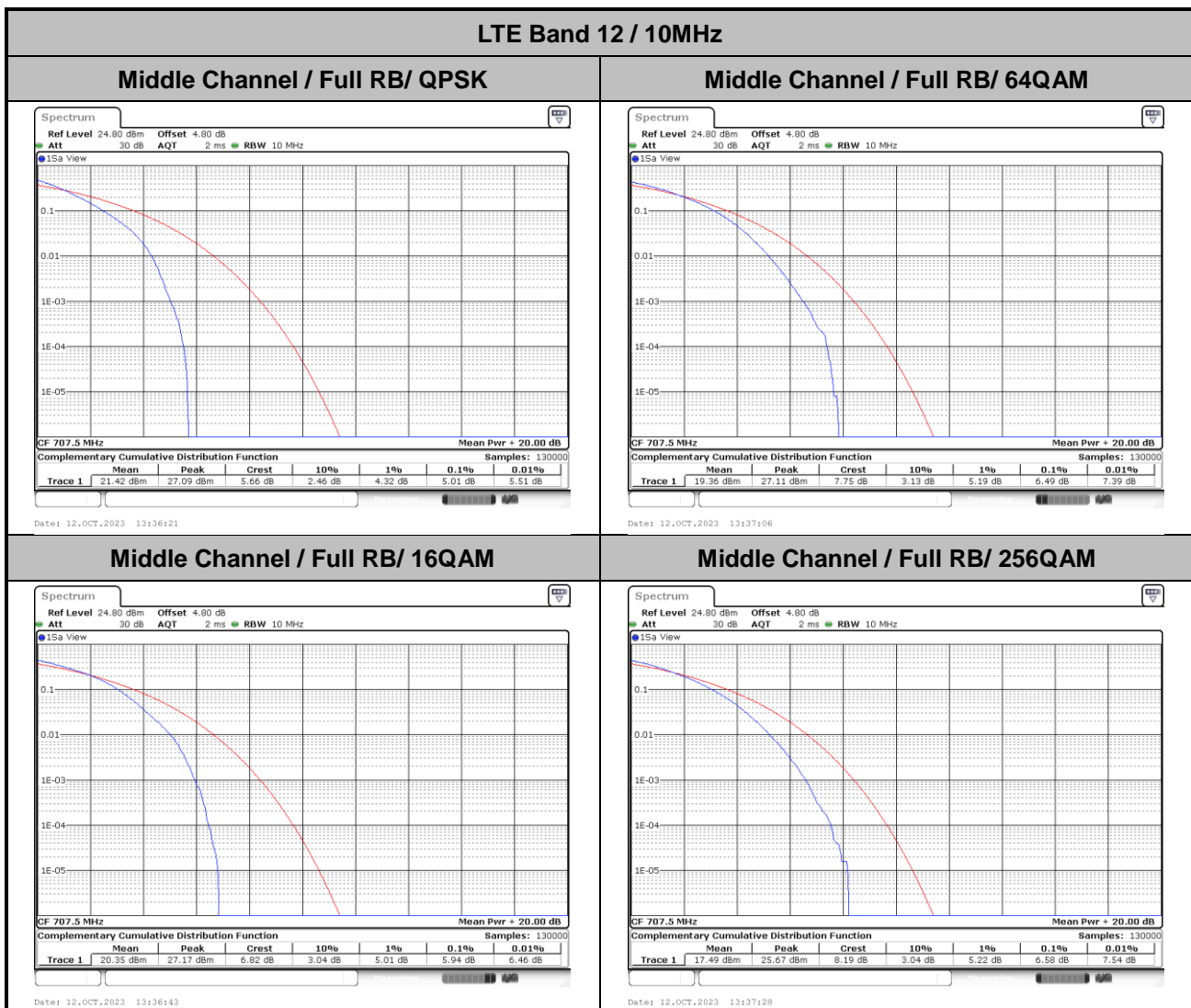
1. Normal Voltage =3.91 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.5V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 12

## Peak-to-Average Ratio

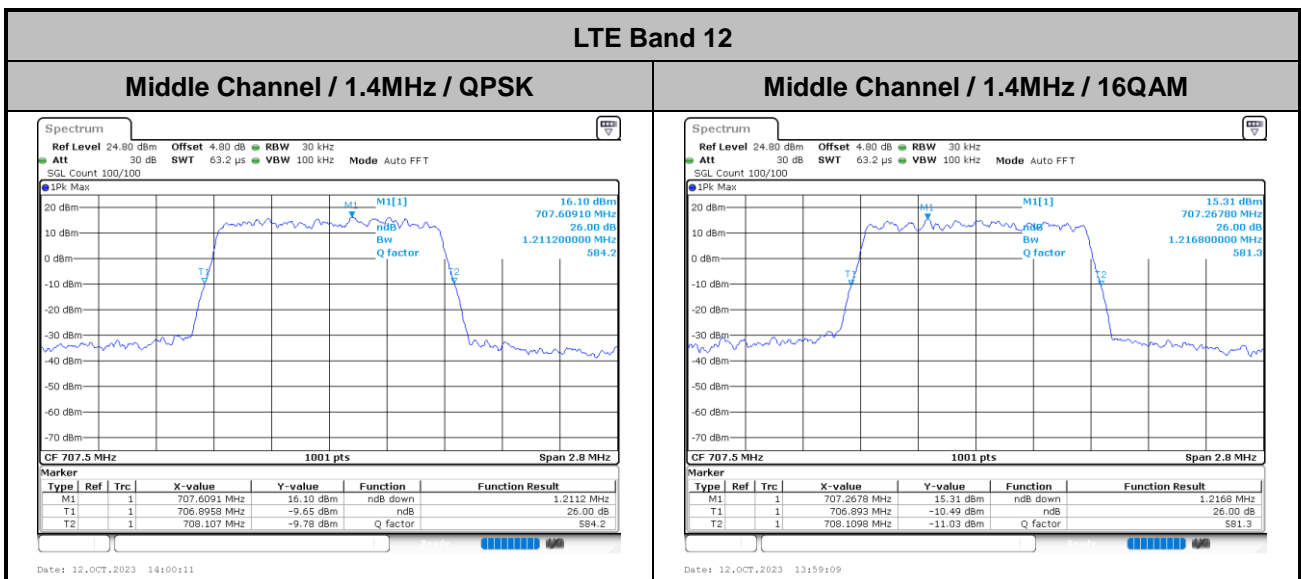
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.01	5.94	6.49	6.58	PASS





## 26dB Bandwidth

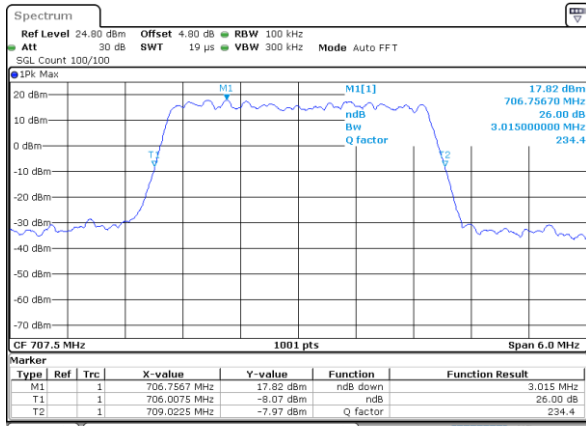
Mode	LTE Band 12 : 26dB BW(MHz)	
<b>BW</b>	<b>1.4MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	1.21	1.22
<b>BW</b>	<b>3MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	3.02	3.03
<b>BW</b>	<b>5MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	4.92	4.91
<b>BW</b>	<b>10MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	9.79	9.85





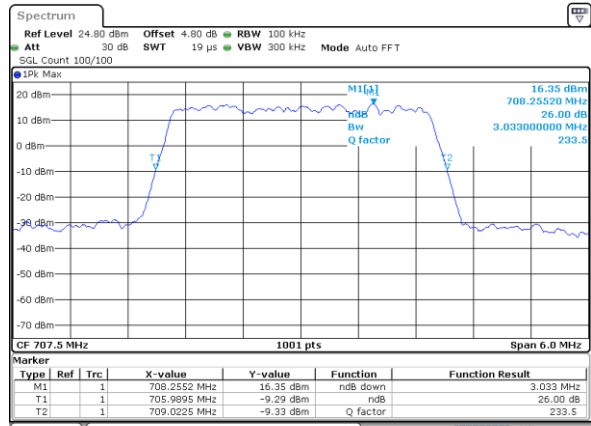
LTE Band 12

Middle Channel / 3MHz / QPSK



Date: 12.OCT.2023 13:56:51

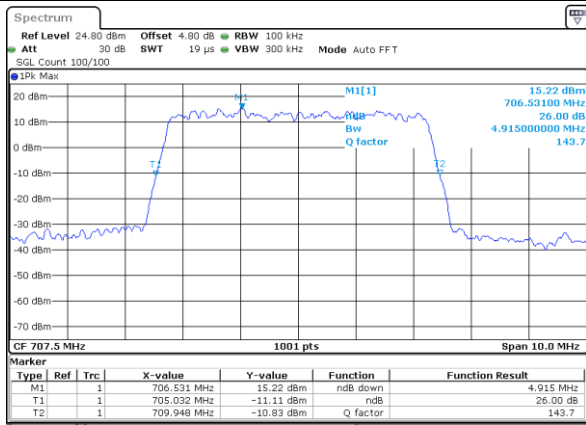
Middle Channel / 3MHz / 16QAM



Date: 12.OCT.2023 13:57:38

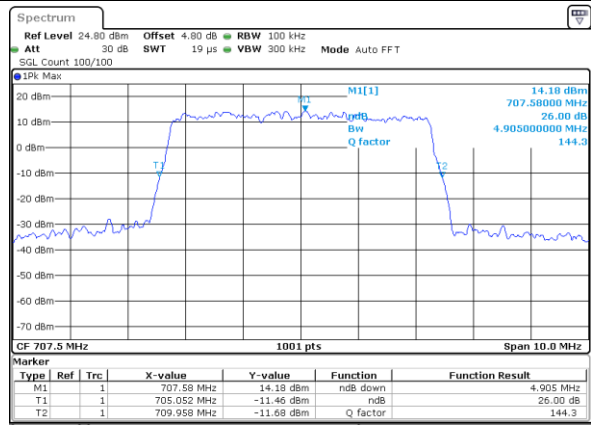
LTE Band 12

Middle Channel / 5MHz / QPSK



Date: 12.OCT.2023 13:51:27

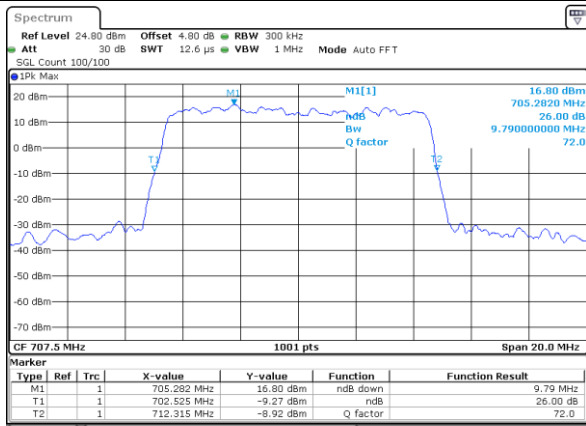
Middle Channel / 5MHz / 16QAM



Date: 12.OCT.2023 13:53:45

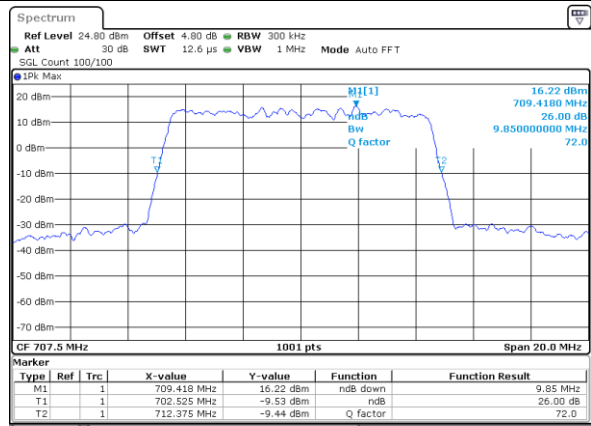
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 12.OCT.2023 13:48:57

Middle Channel / 10MHz / 16QAM

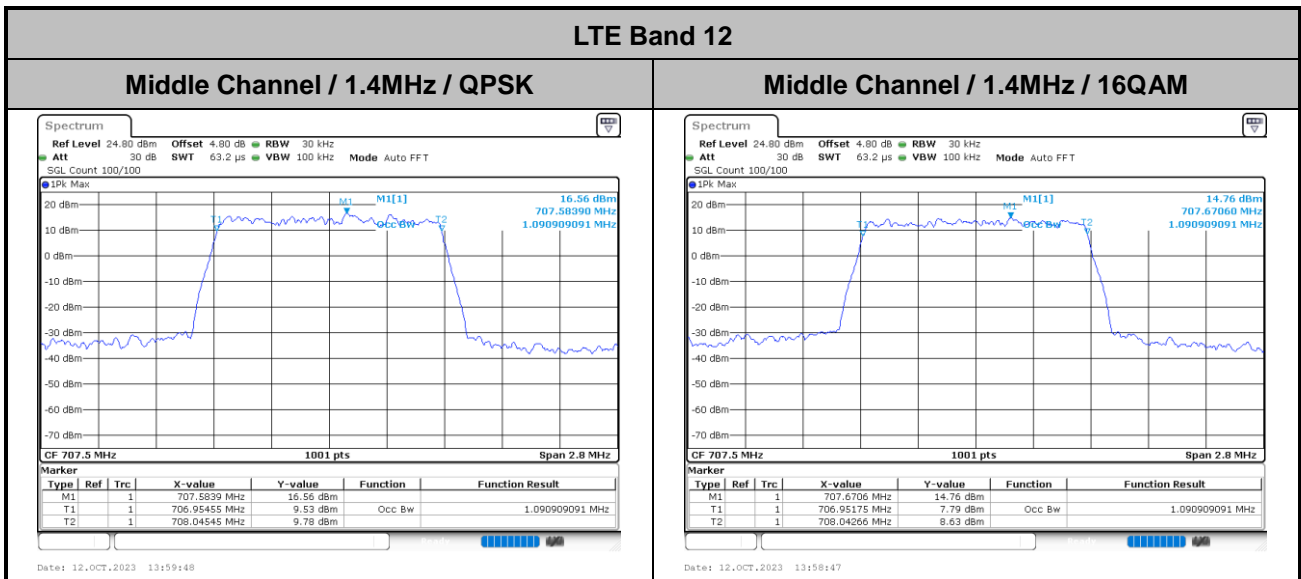


Date: 12.OCT.2023 13:49:57



# Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.09	1.09
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.72	2.73
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.49	4.49
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	8.95	9.01

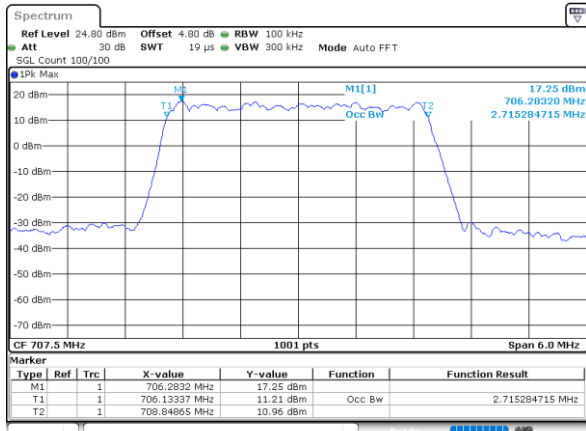






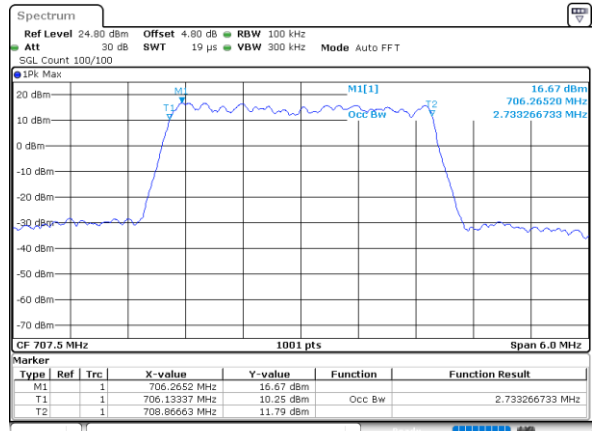
LTE Band 12

Middle Channel / 3MHz / QPSK



Date: 12.OCT.2023 13:56:21

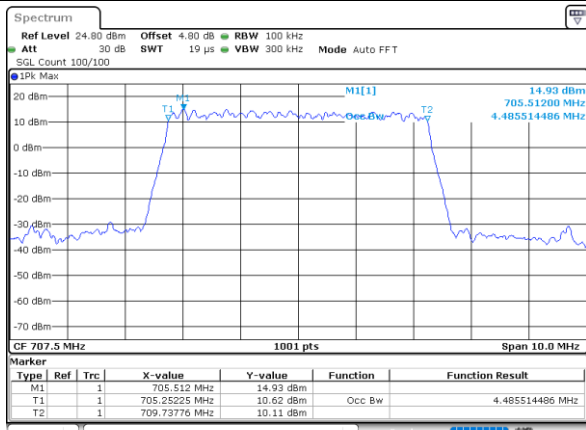
Middle Channel / 3MHz / 16QAM



Date: 12.OCT.2023 13:57:18

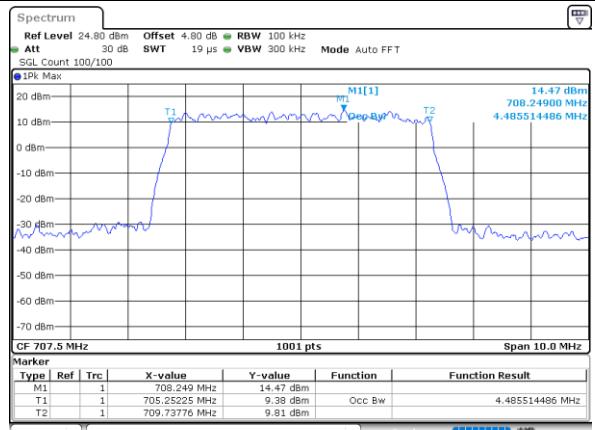
LTE Band 12

Middle Channel / 5MHz / QPSK



Date: 12.OCT.2023 13:50:59

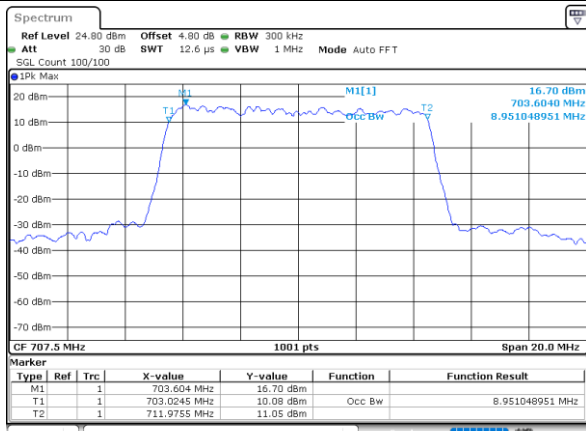
Middle Channel / 5MHz / 16QAM



Date: 12.OCT.2023 13:53:21

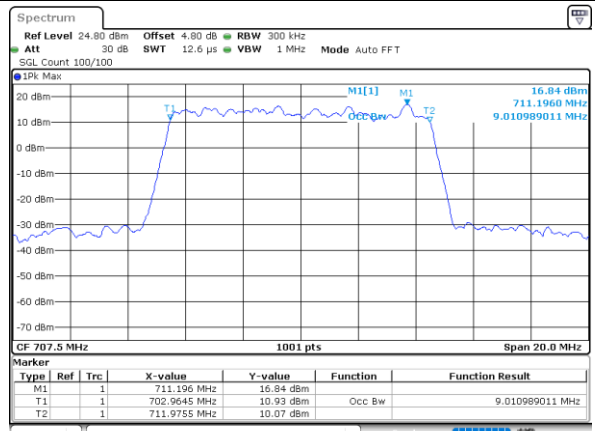
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 12.OCT.2023 13:48:38

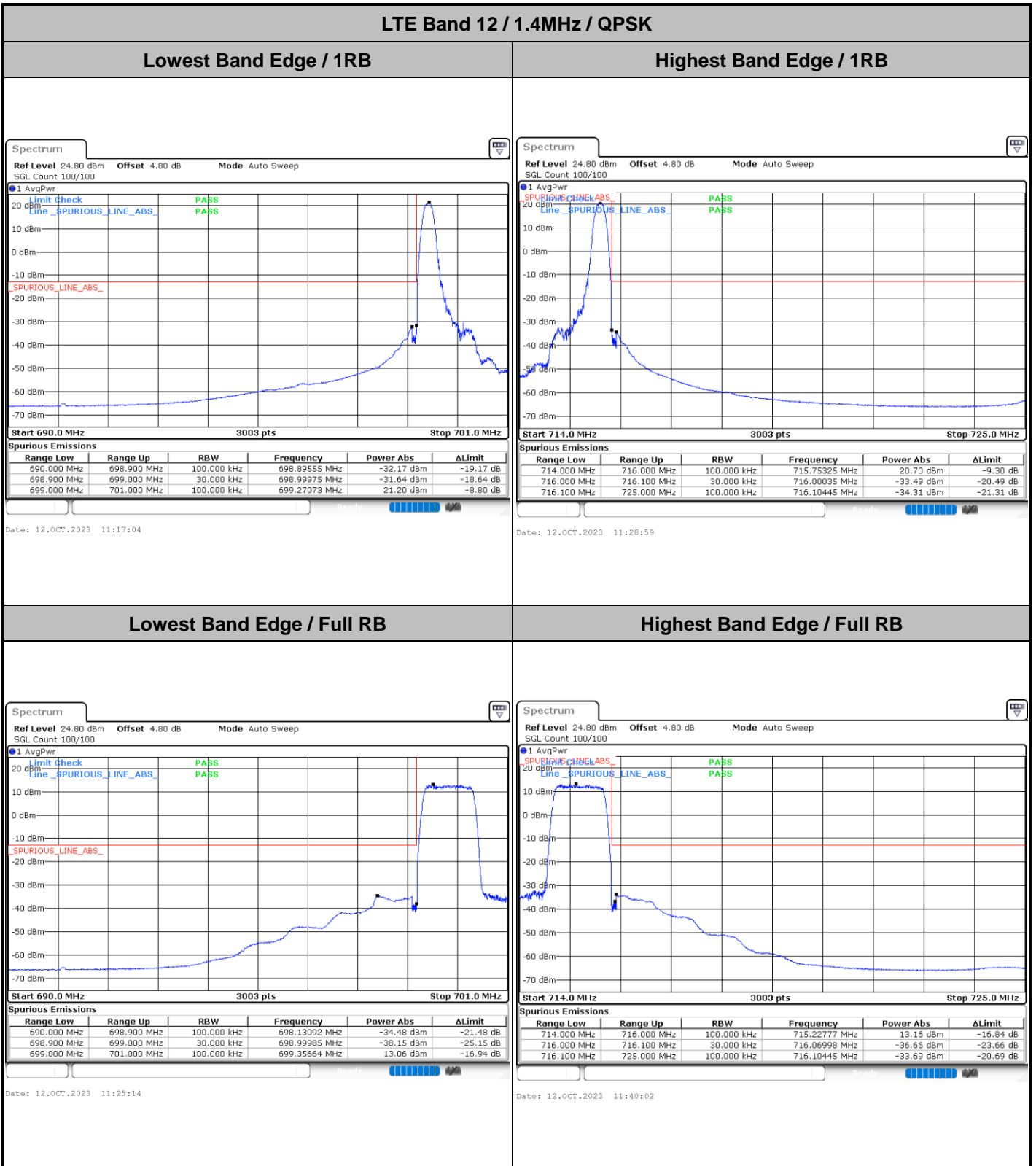
Middle Channel / 10MHz / 16QAM



Date: 12.OCT.2023 13:49:18



# Conducted Band Edge

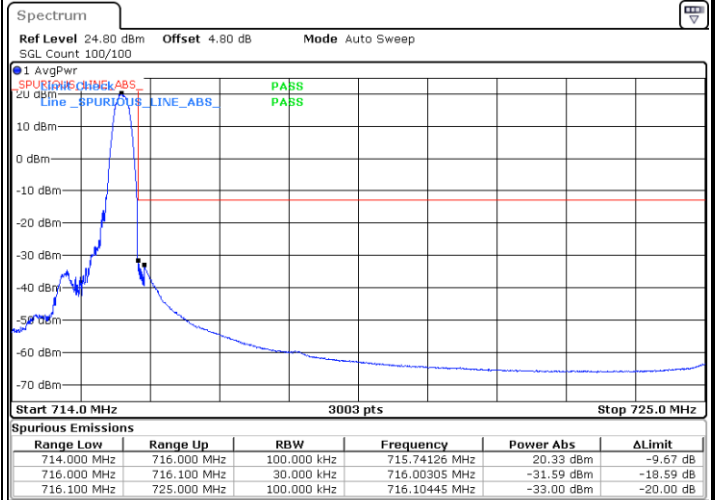
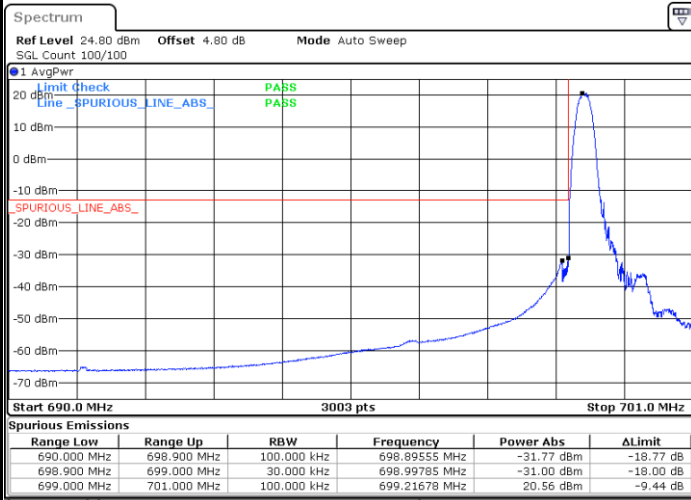




LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

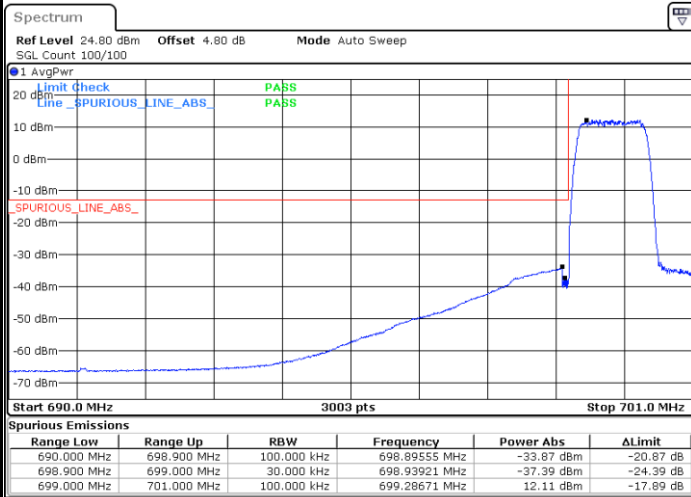


Date: 12.OCT.2023 11:17:59

Date: 12.OCT.2023 11:29:54

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



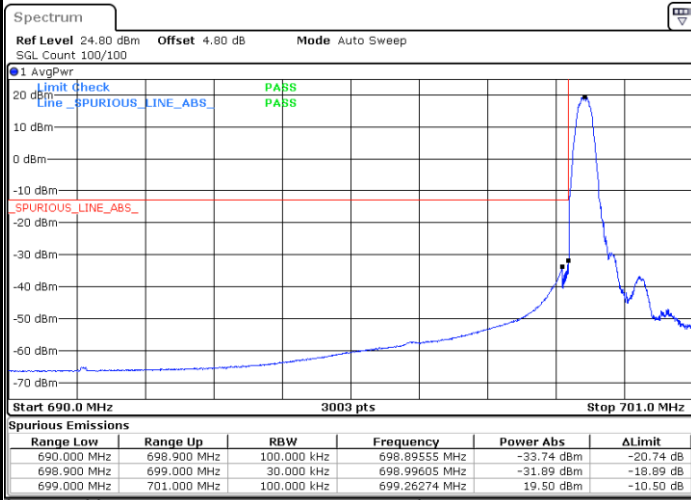
Date: 12.OCT.2023 11:24:18

Date: 12.OCT.2023 11:39:07



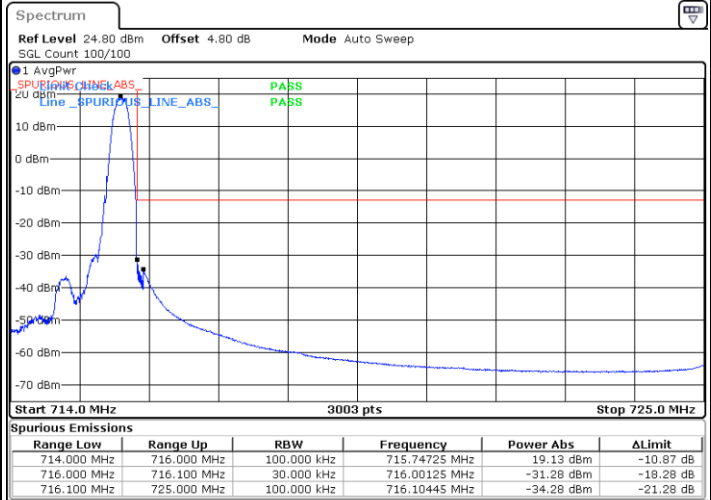
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



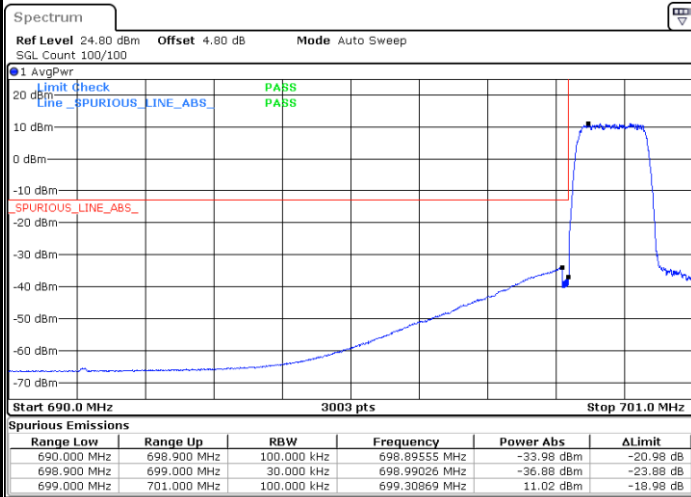
Date: 12.OCT.2023 11:18:54

Highest Band Edge / 1 RB



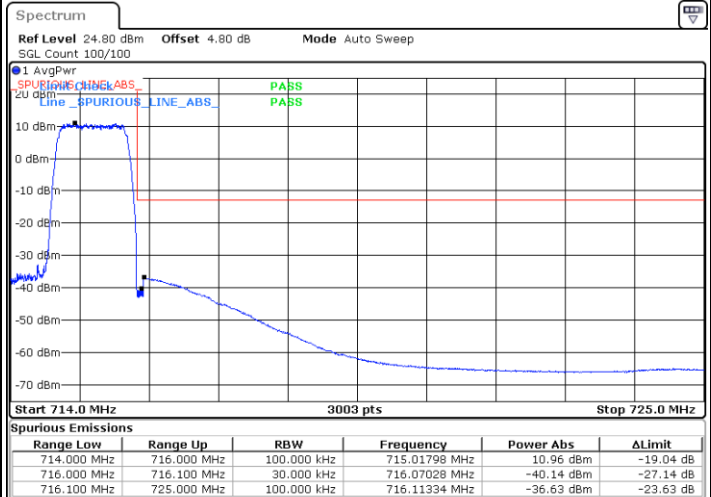
Date: 12.OCT.2023 11:30:49

Lowest Band Edge / Full RB



Date: 12.OCT.2023 11:23:23

Highest Band Edge / Full RB



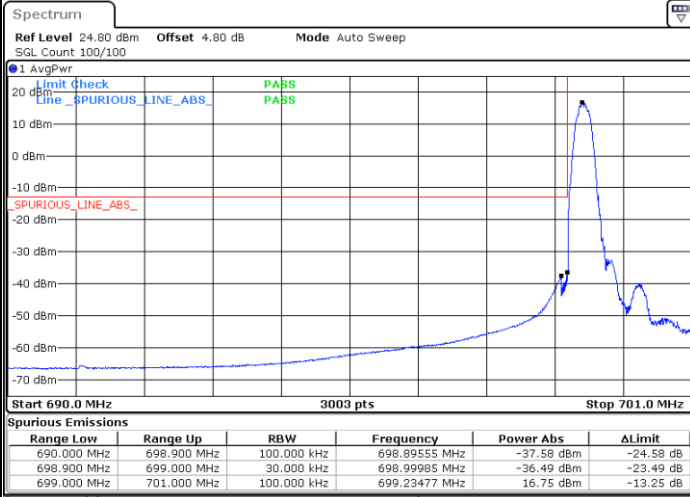
Date: 12.OCT.2023 11:38:11



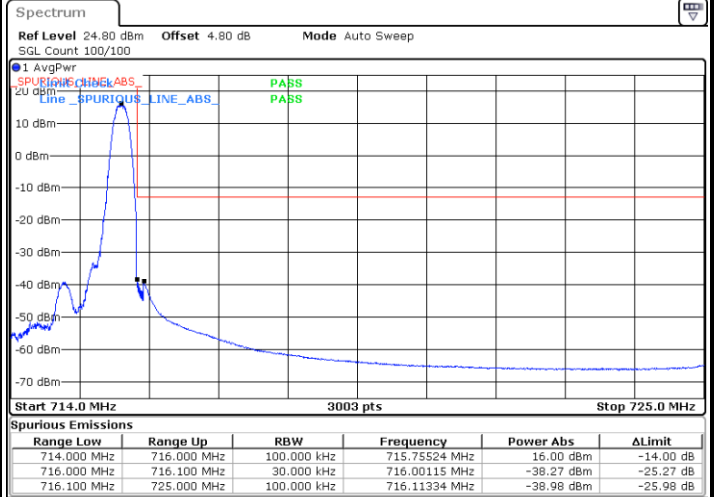
LTE Band 12 / 1.4MHz / 256QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



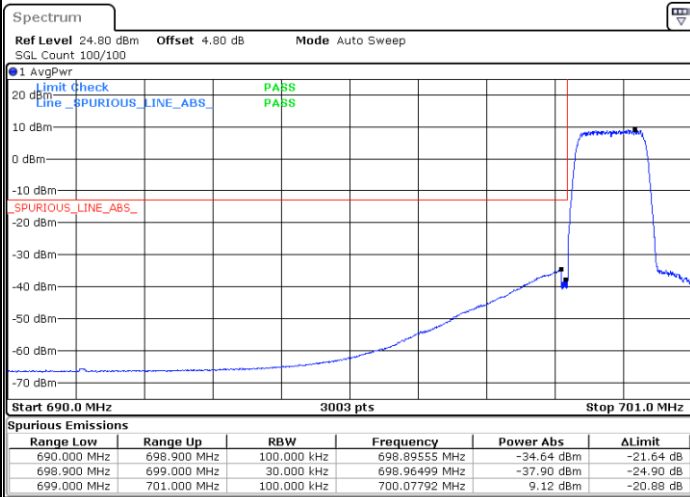
Date: 12.OCT.2023 11:19:50



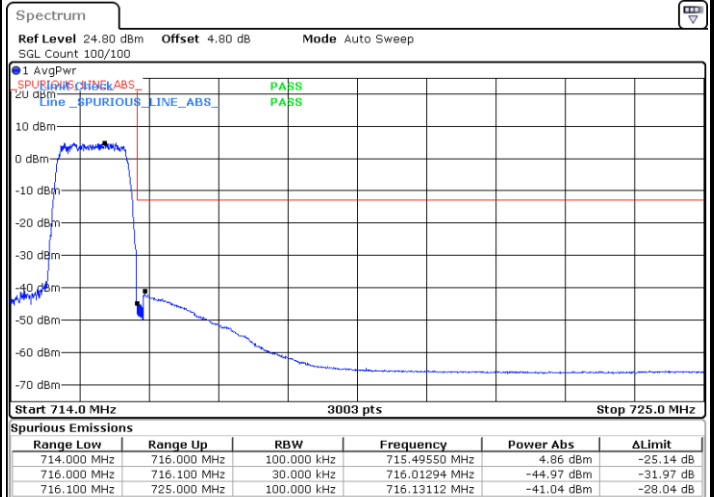
Date: 12.OCT.2023 11:31:44

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 12.OCT.2023 14:01:10

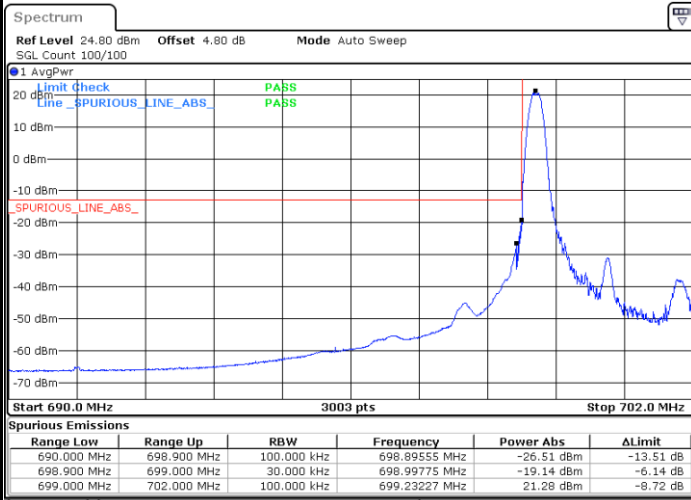


Date: 12.OCT.2023 11:37:10



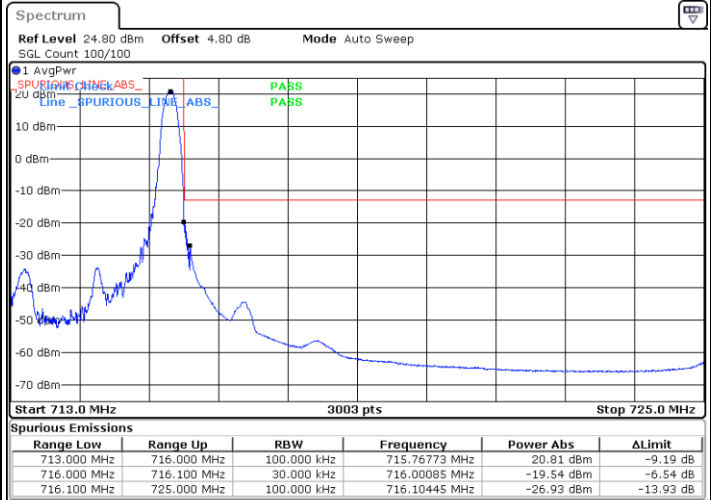
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



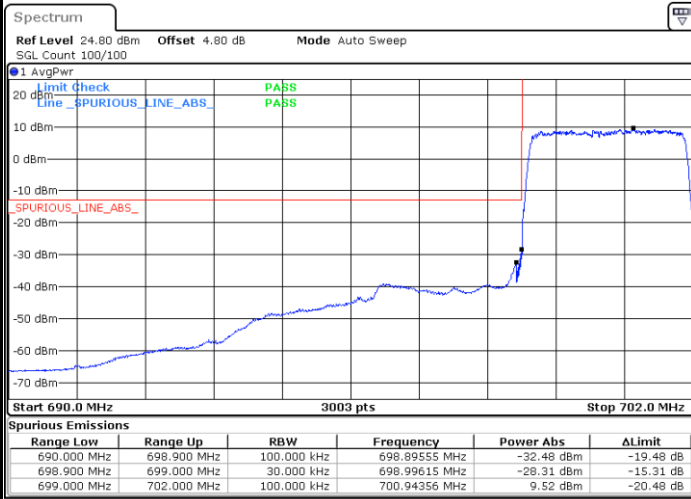
Date: 12.OCT.2023 11:42:47

Highest Band Edge / 1 RB



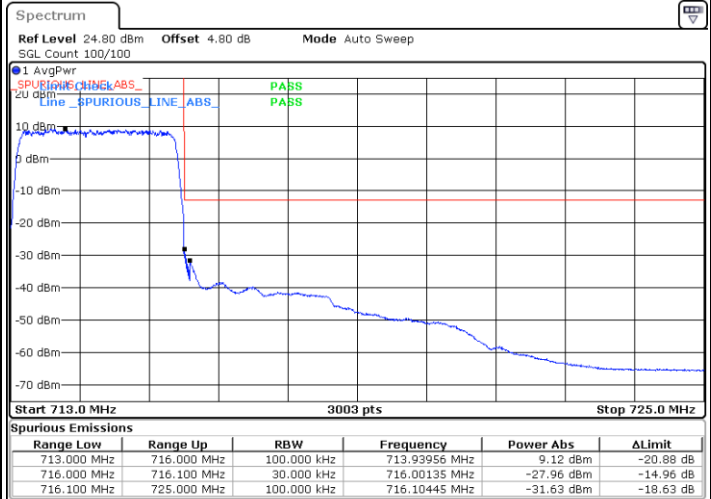
Date: 12.OCT.2023 11:53:00

Lowest Band Edge / Full RB



Date: 12.OCT.2023 11:49:16

Highest Band Edge / Full RB



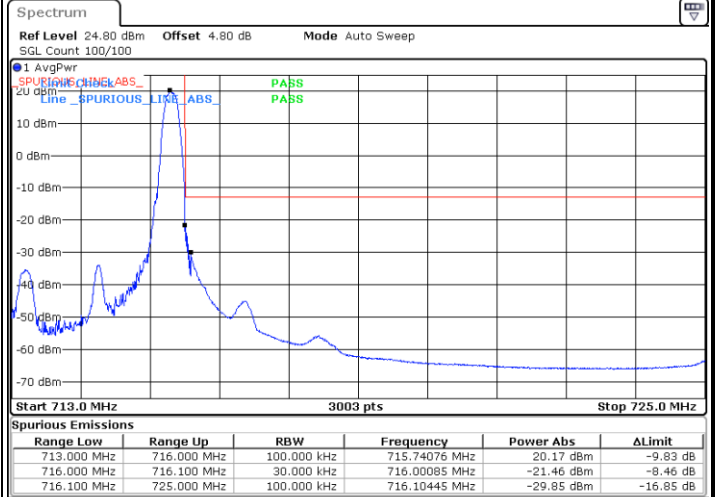
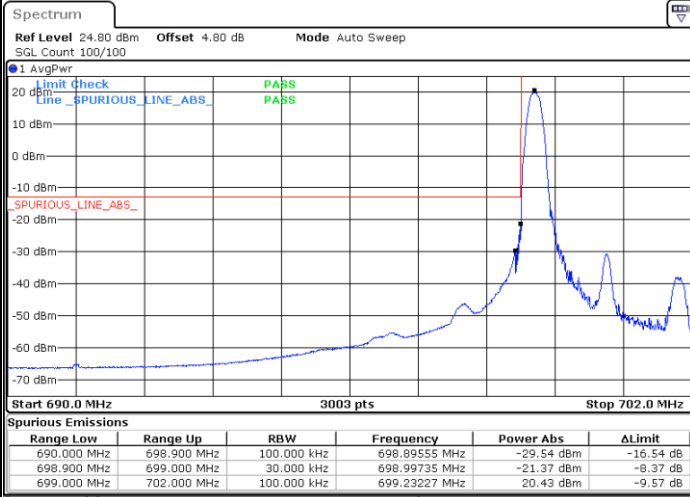
Date: 12.OCT.2023 11:59:30



LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

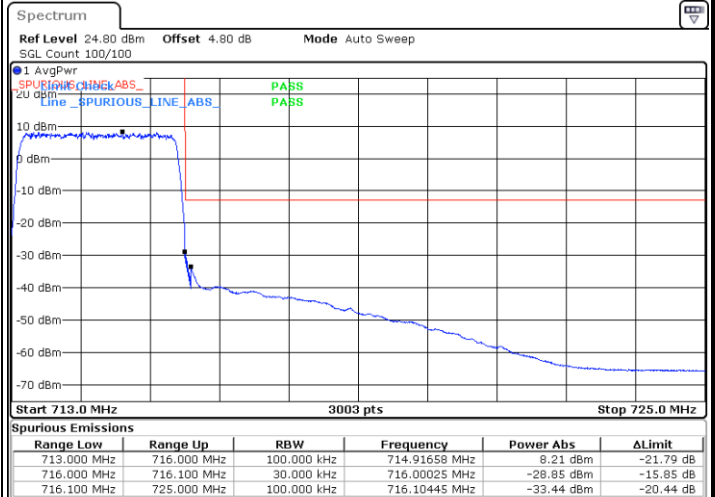
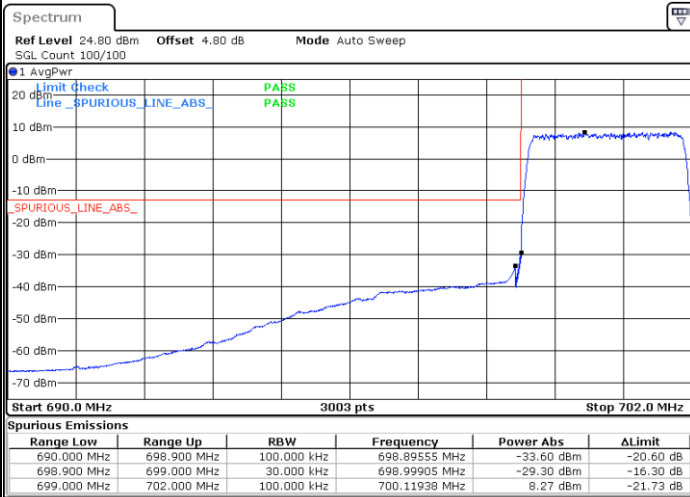


Date: 12.OCT.2023 11:43:43

Date: 12.OCT.2023 11:53:55

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



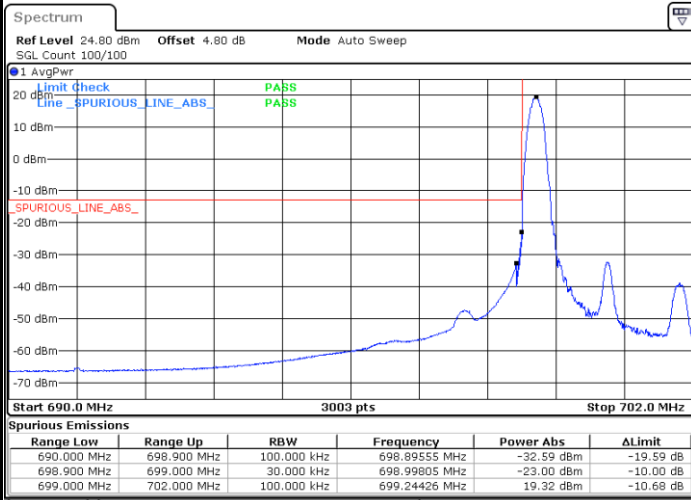
Date: 12.OCT.2023 11:48:21

Date: 12.OCT.2023 11:58:35



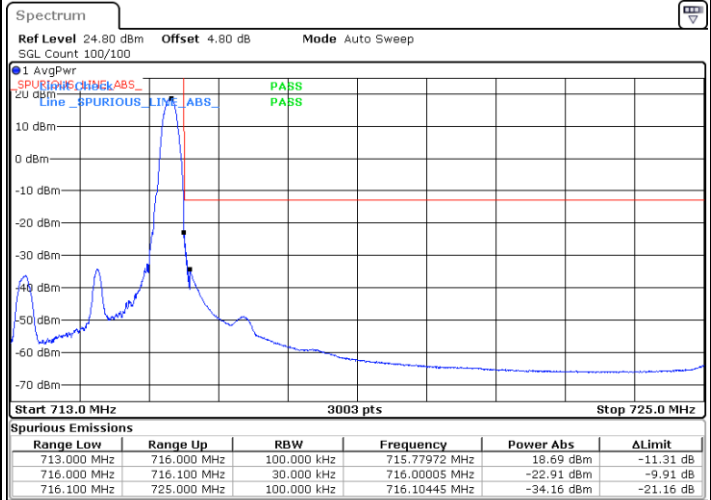
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



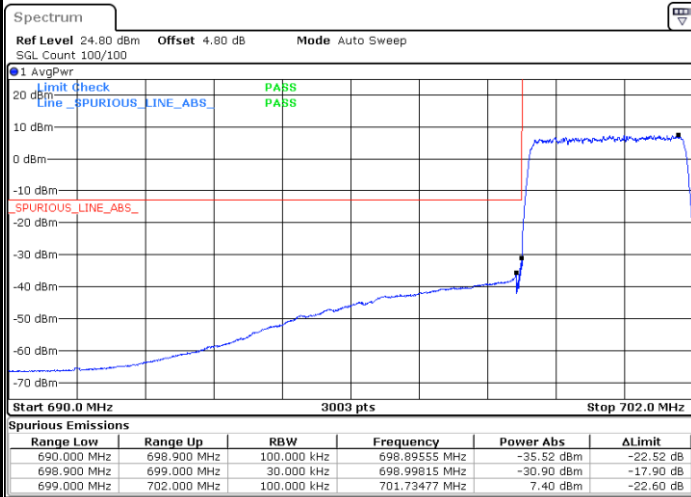
Date: 12.OCT.2023 11:44:38

Highest Band Edge / 1 RB



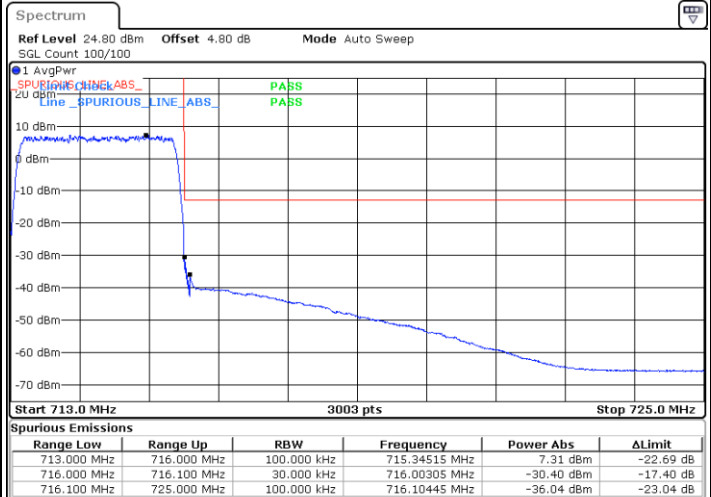
Date: 12.OCT.2023 11:54:50

Lowest Band Edge / Full RB



Date: 12.OCT.2023 11:47:26

Highest Band Edge / Full RB



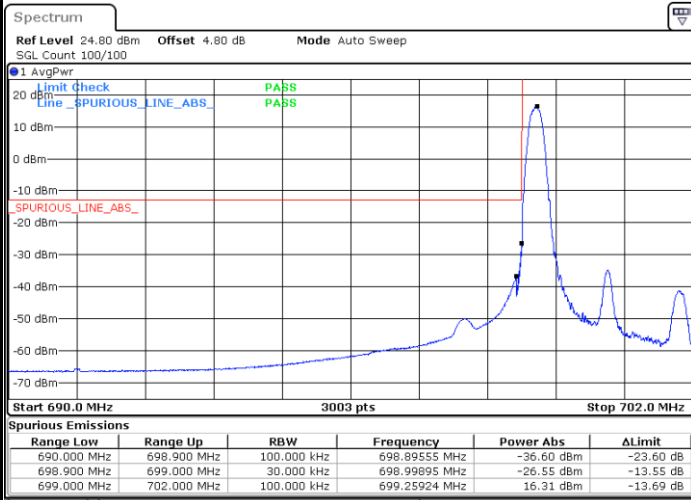
Date: 12.OCT.2023 11:57:40





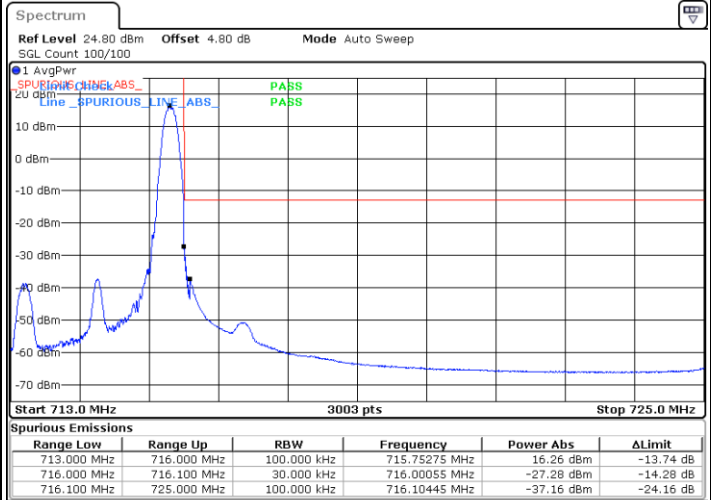
LTE Band 12 / 3MHz / 256QAM

Lowest Band Edge / 1 RB



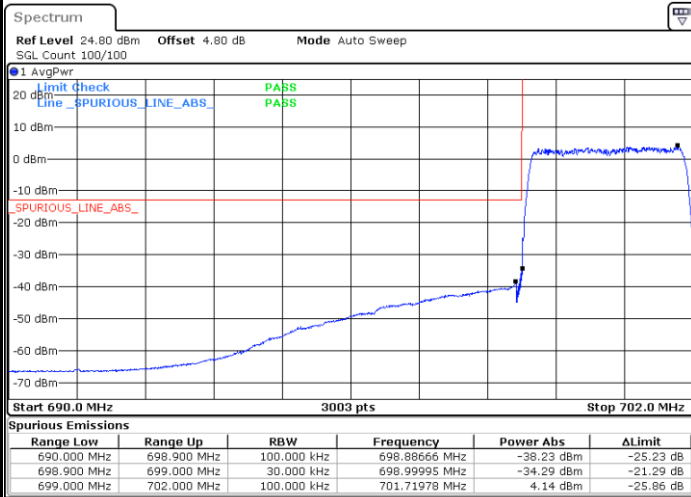
Date: 12.OCT.2023 11:45:33

Highest Band Edge / 1 RB



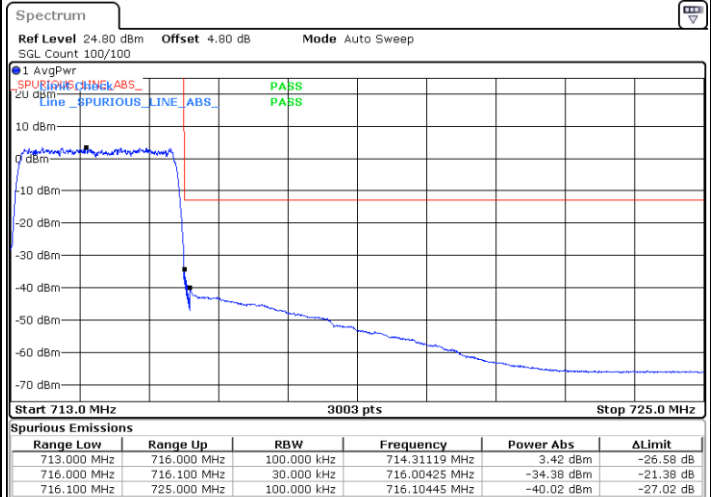
Date: 12.OCT.2023 11:55:45

Lowest Band Edge / Full RB



Date: 12.OCT.2023 14:02:51

Highest Band Edge / Full RB

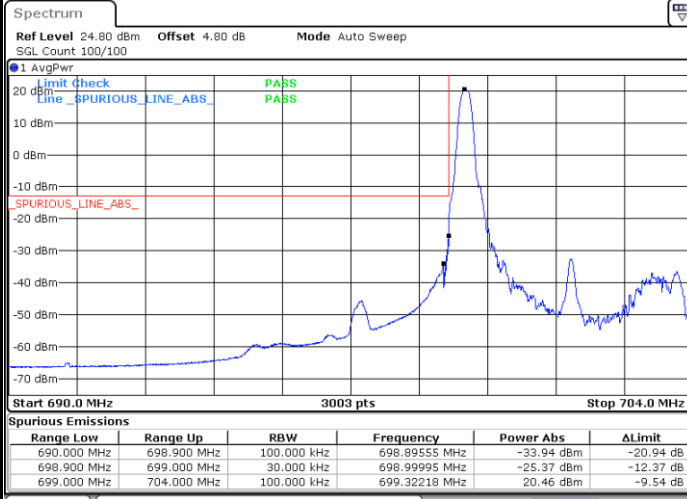


Date: 12.OCT.2023 11:56:43



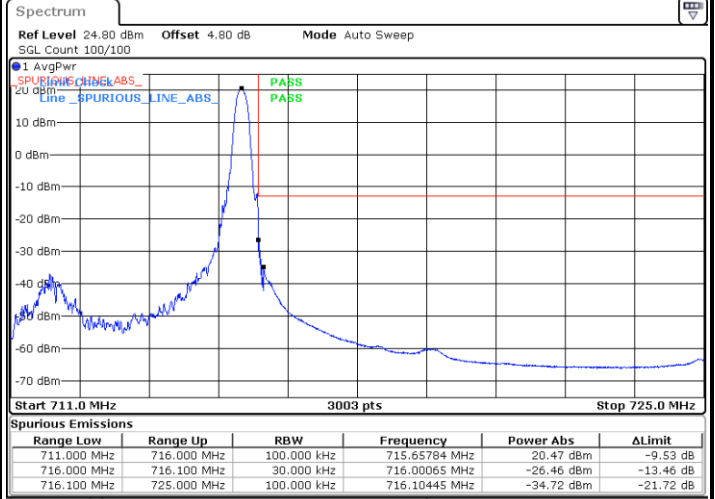
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



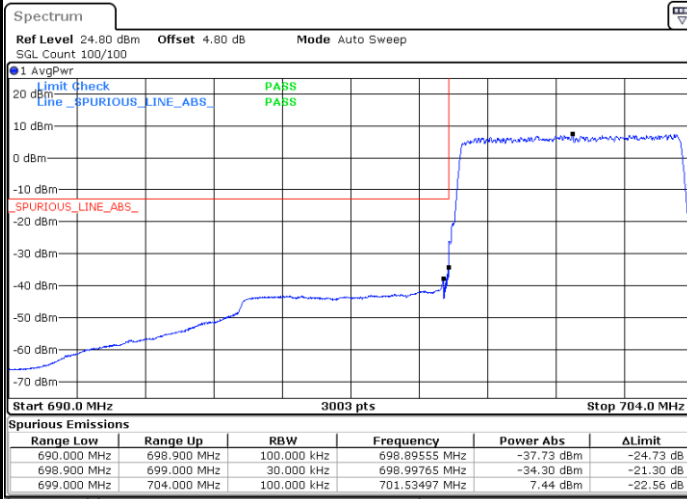
Date: 12.OCT.2023 12:55:14

Highest Band Edge / 1 RB



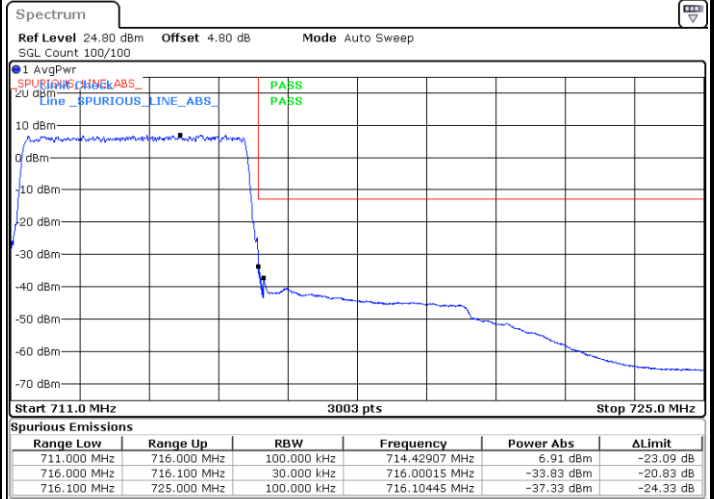
Date: 12.OCT.2023 13:09:14

Lowest Band Edge / Full RB



Date: 12.OCT.2023 13:05:29

Highest Band Edge / Full RB

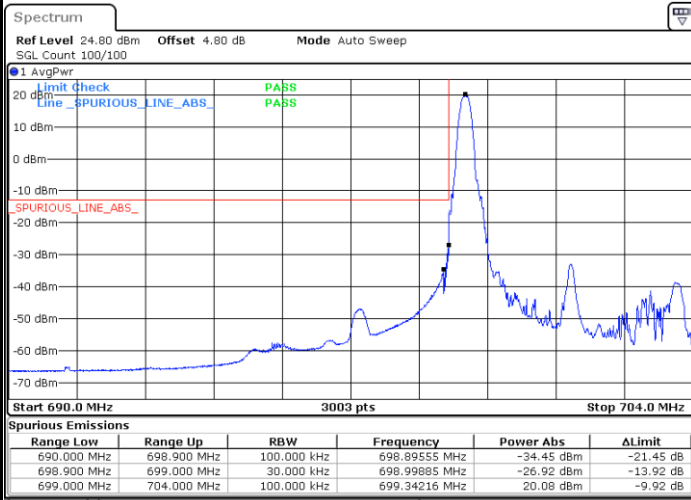


Date: 12.OCT.2023 13:16:01



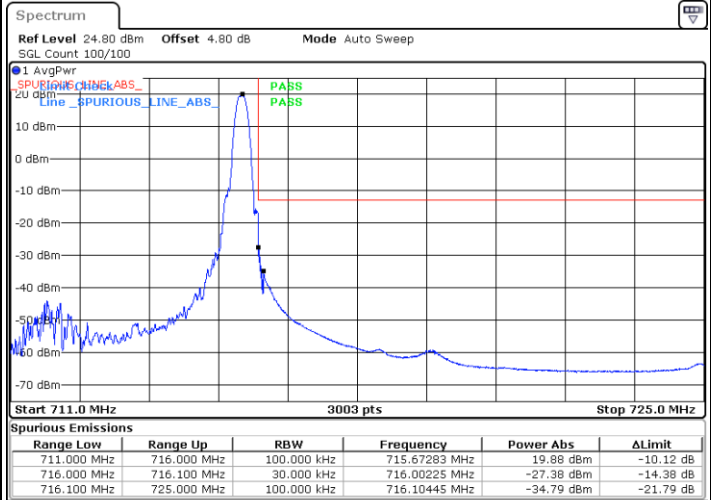
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



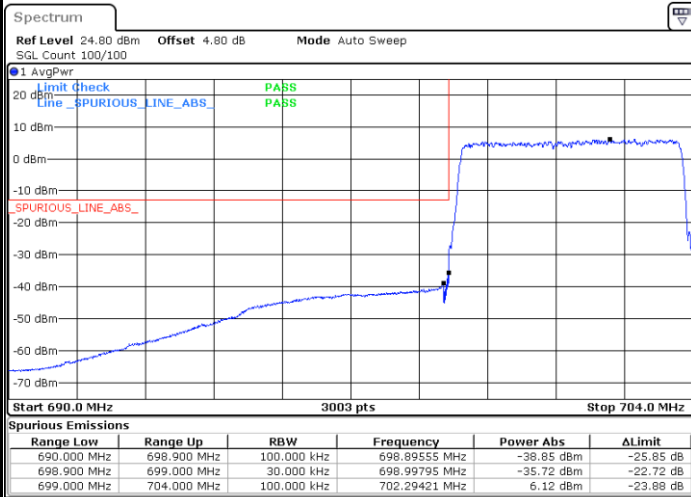
Date: 12.OCT.2023 12:56:09

Highest Band Edge / 1 RB



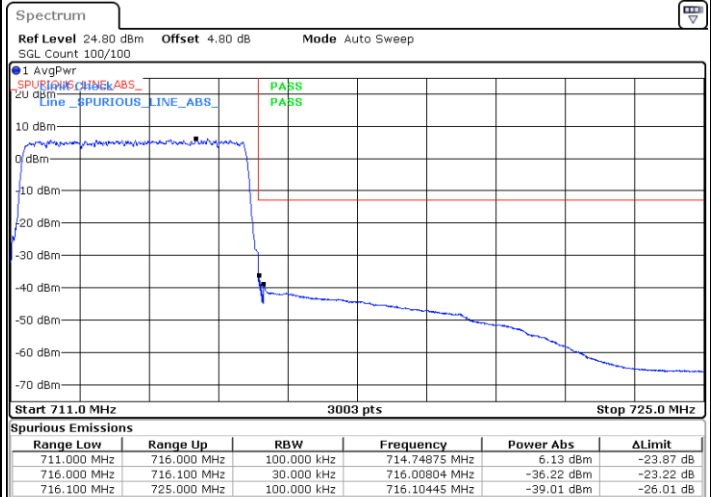
Date: 12.OCT.2023 13:10:09

Lowest Band Edge / Full RB



Date: 12.OCT.2023 13:04:23

Highest Band Edge / Full RB

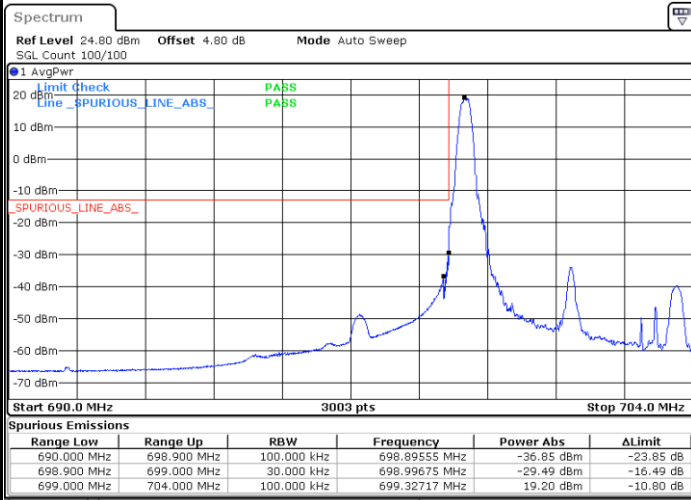


Date: 12.OCT.2023 13:15:06



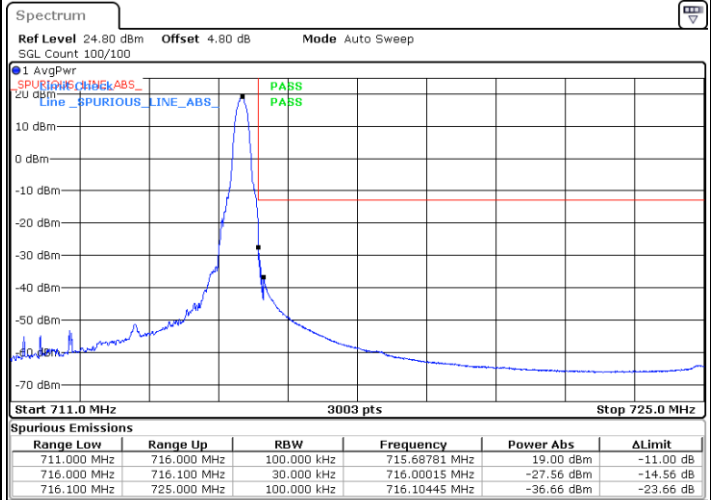
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



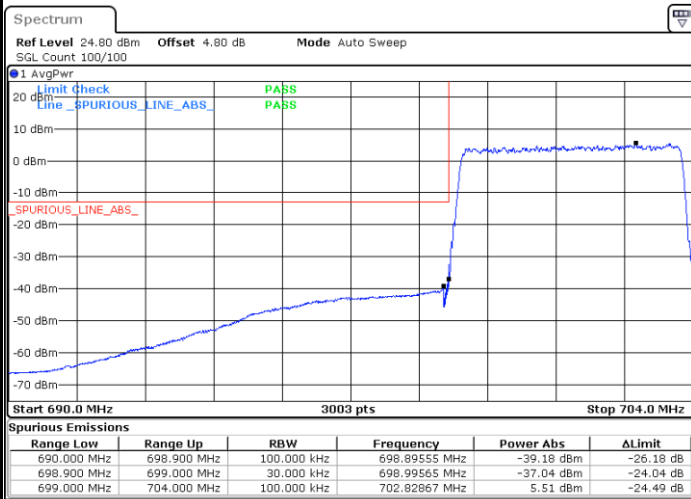
Date: 12.OCT.2023 12:57:04

Highest Band Edge / 1 RB



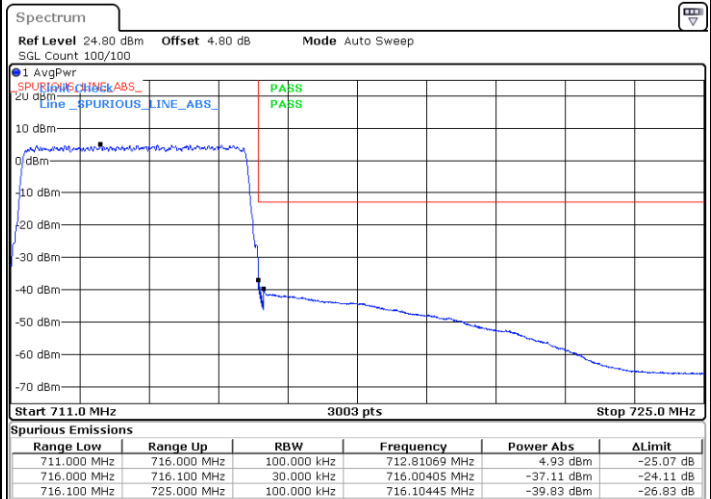
Date: 12.OCT.2023 13:11:04

Lowest Band Edge / Full RB



Date: 12.OCT.2023 13:03:28

Highest Band Edge / Full RB

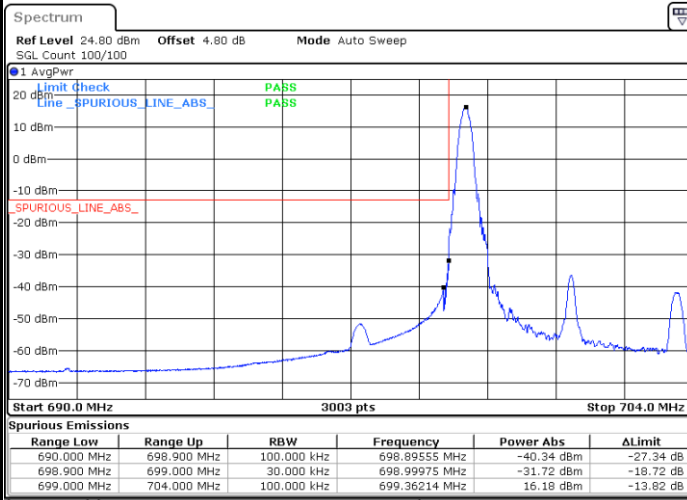


Date: 12.OCT.2023 13:14:11



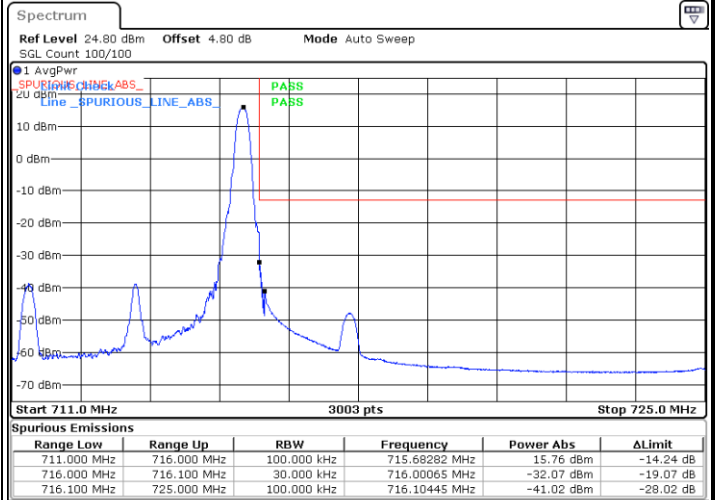
LTE Band 12 / 5MHz / 256QAM

Lowest Band Edge / 1RB



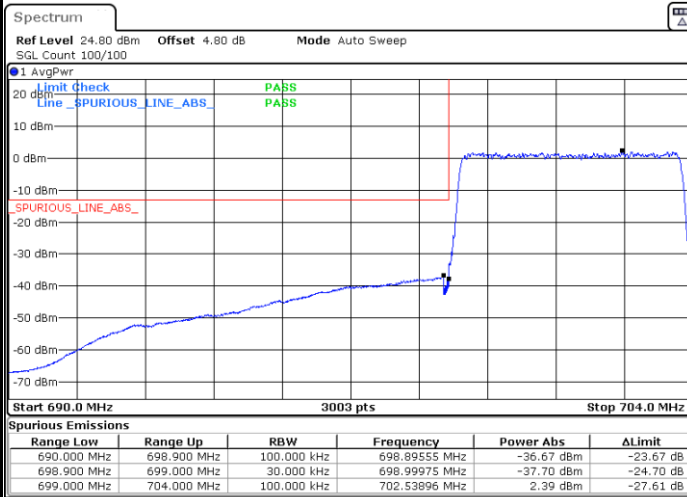
Date: 12.OCT.2023 12:58:00

Highest Band Edge / 1 RB



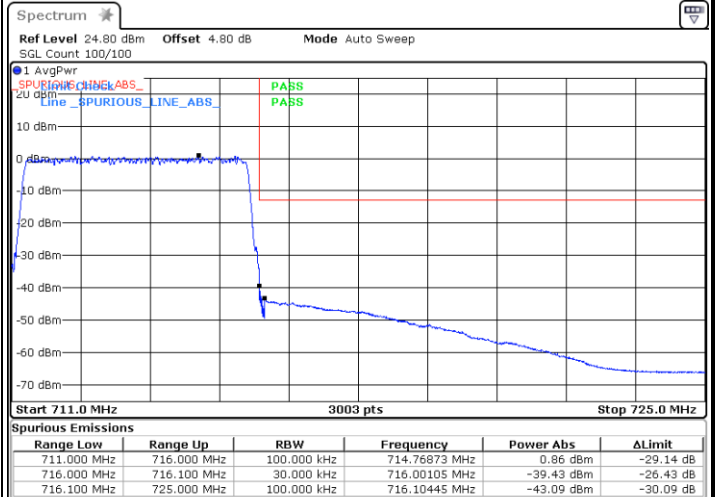
Date: 12.OCT.2023 13:11:59

Lowest Band Edge / Full RB



Date: 15.JAN.2023 03:41:59

Highest Band Edge / Full RB



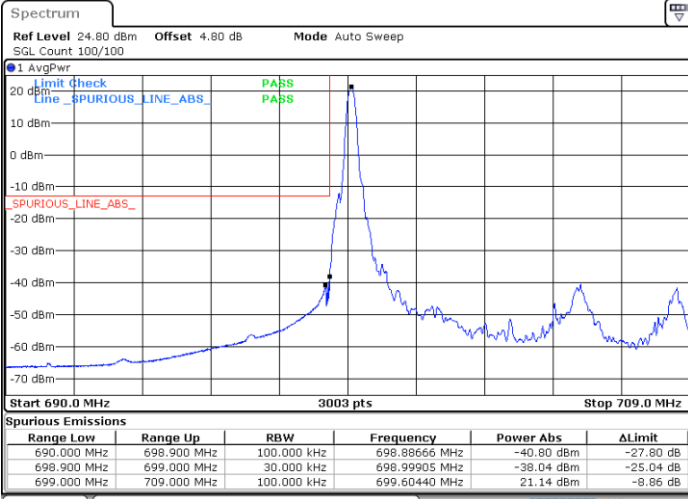
Date: 12.OCT.2023 13:12:58



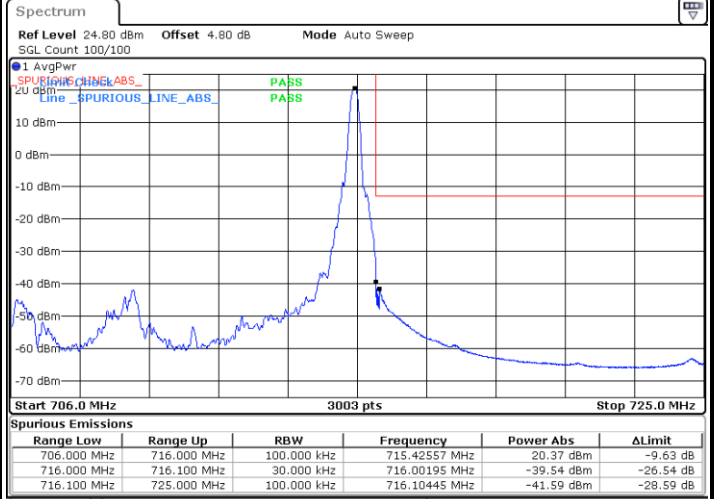
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



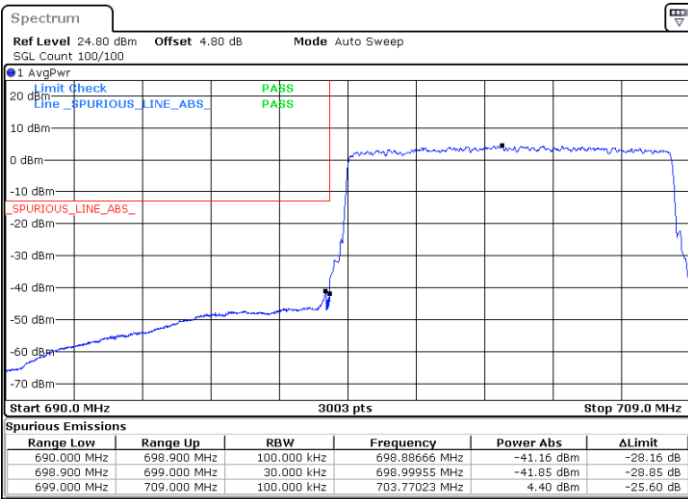
Date: 12.OCT.2023 13:18:22



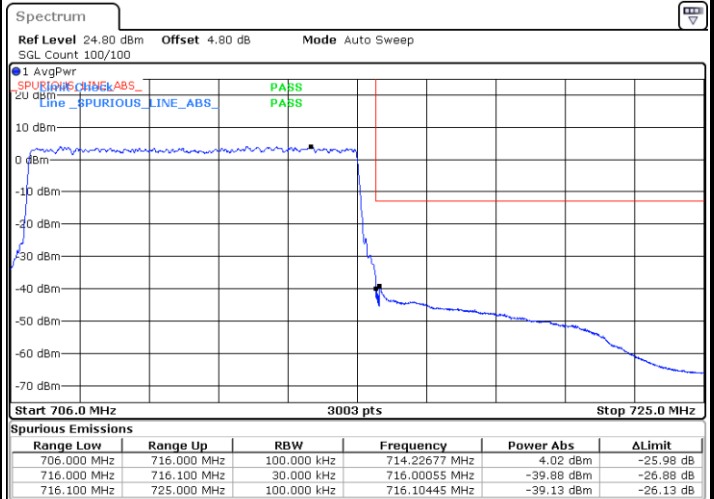
Date: 12.OCT.2023 13:29:01

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 12.OCT.2023 13:25:16

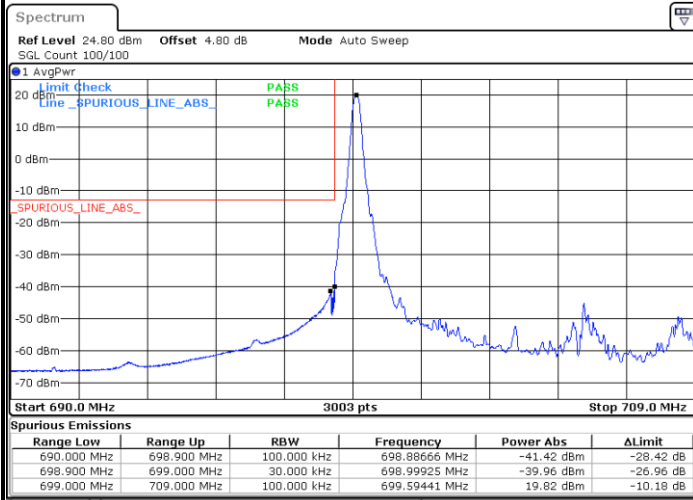


Date: 12.OCT.2023 13:35:58

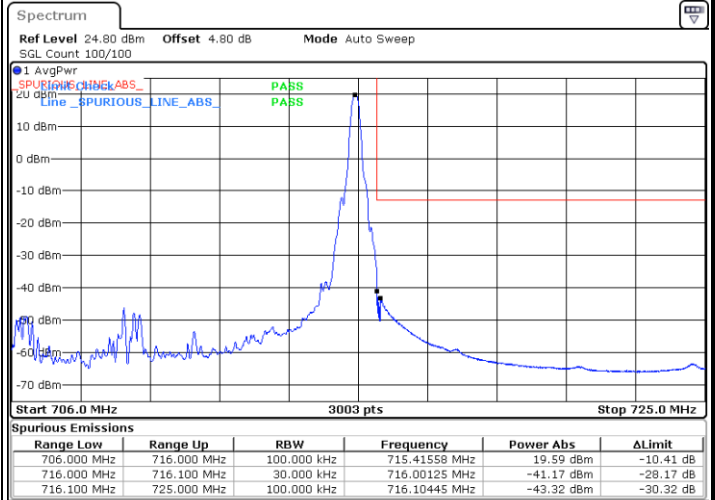


LTE Band 12 / 10MHz / 16QAM

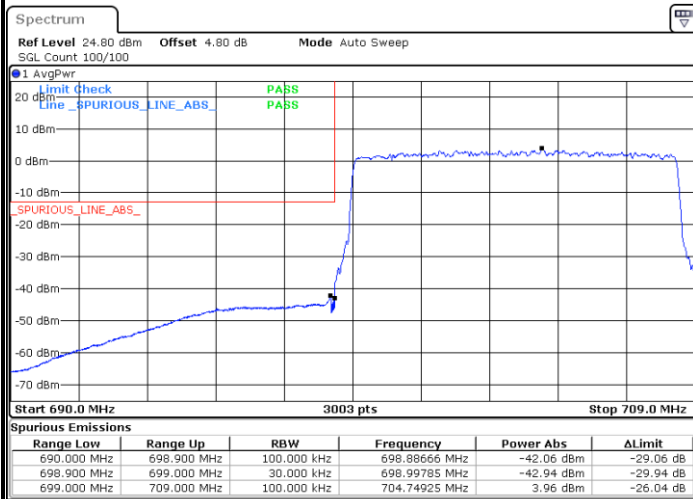
Lowest Band Edge / 1 RB



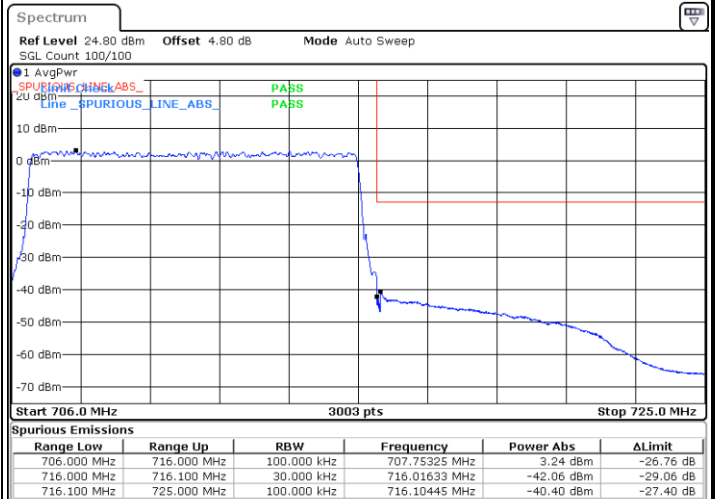
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



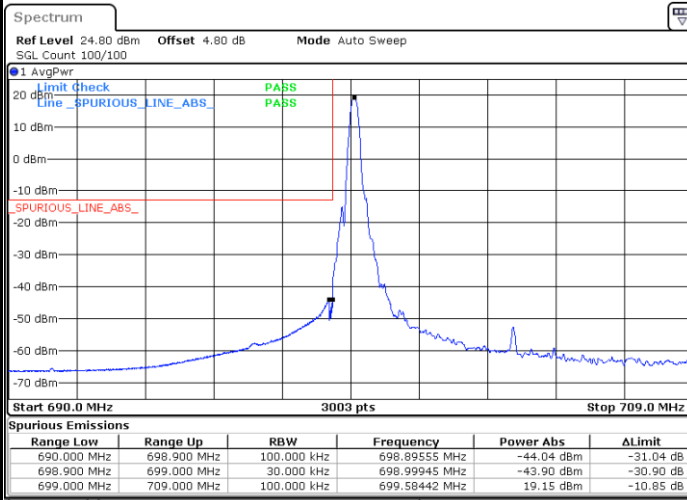
Highest Band Edge / Full RB





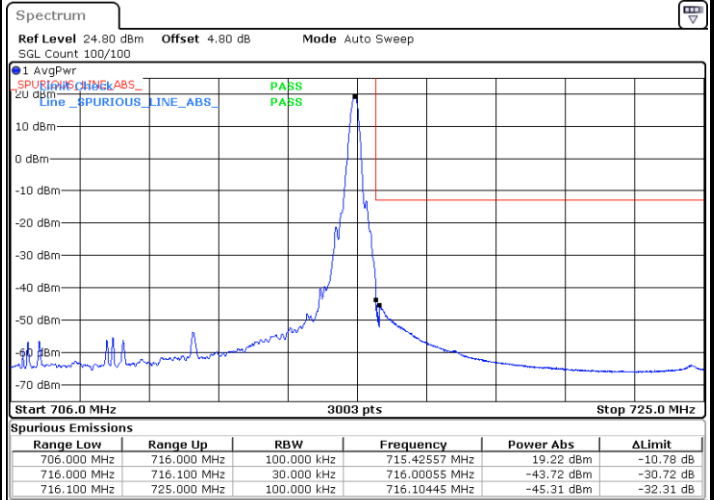
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



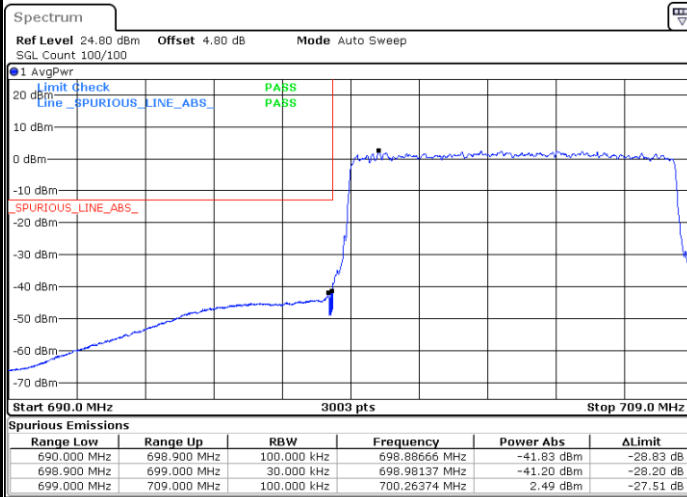
Date: 12.OCT.2023 13:20:12

Highest Band Edge / 1 RB



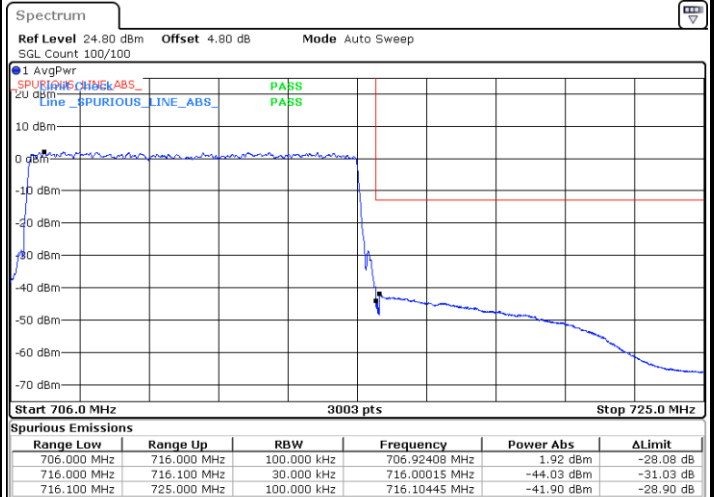
Date: 12.OCT.2023 13:30:51

Lowest Band Edge / Full RB



Date: 12.OCT.2023 13:23:25

Highest Band Edge / Full RB



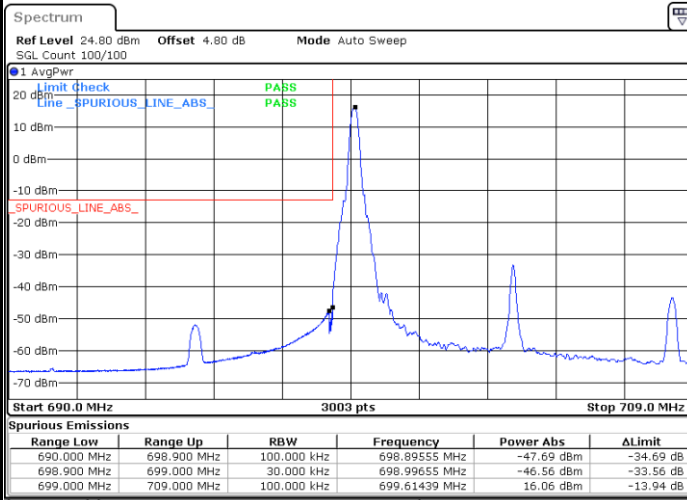
Date: 12.OCT.2023 13:34:08





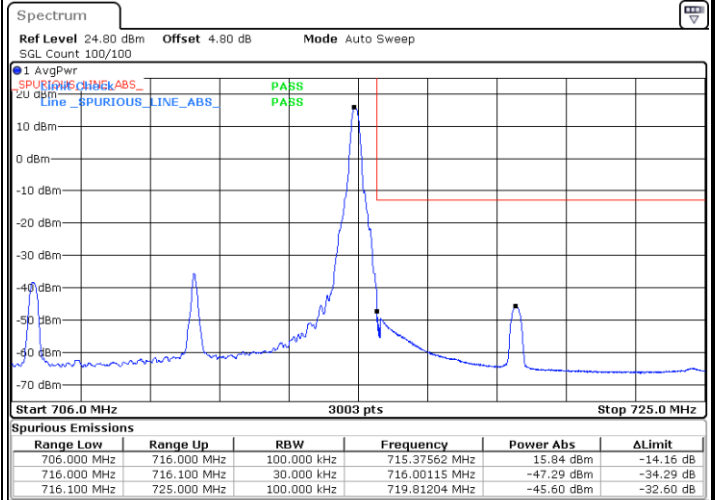
LTE Band 12 / 10MHz / 256QAM

Lowest Band Edge / 1 RB



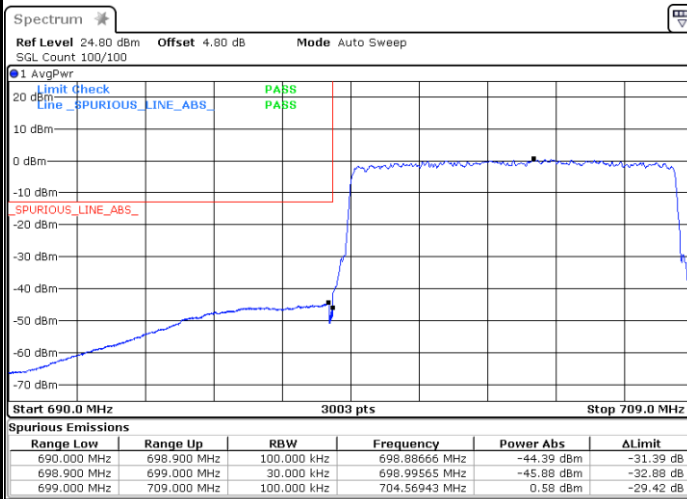
Date: 12.OCT.2023 13:21:08

Highest Band Edge / 1 RB



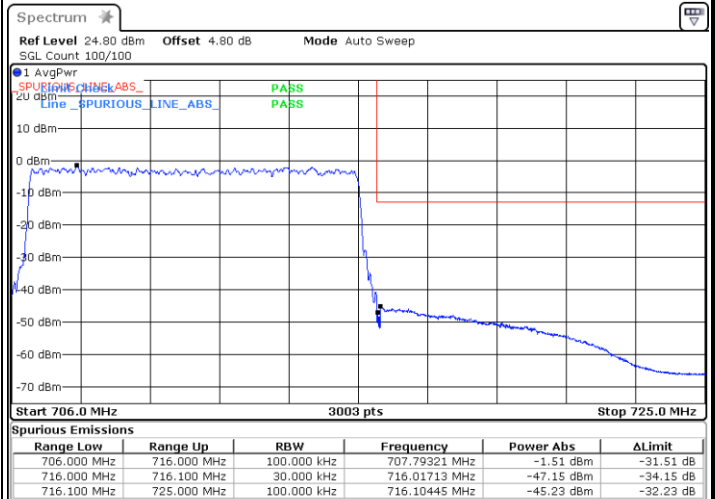
Date: 12.OCT.2023 13:31:46

Lowest Band Edge / Full RB



Date: 12.OCT.2023 13:48:00

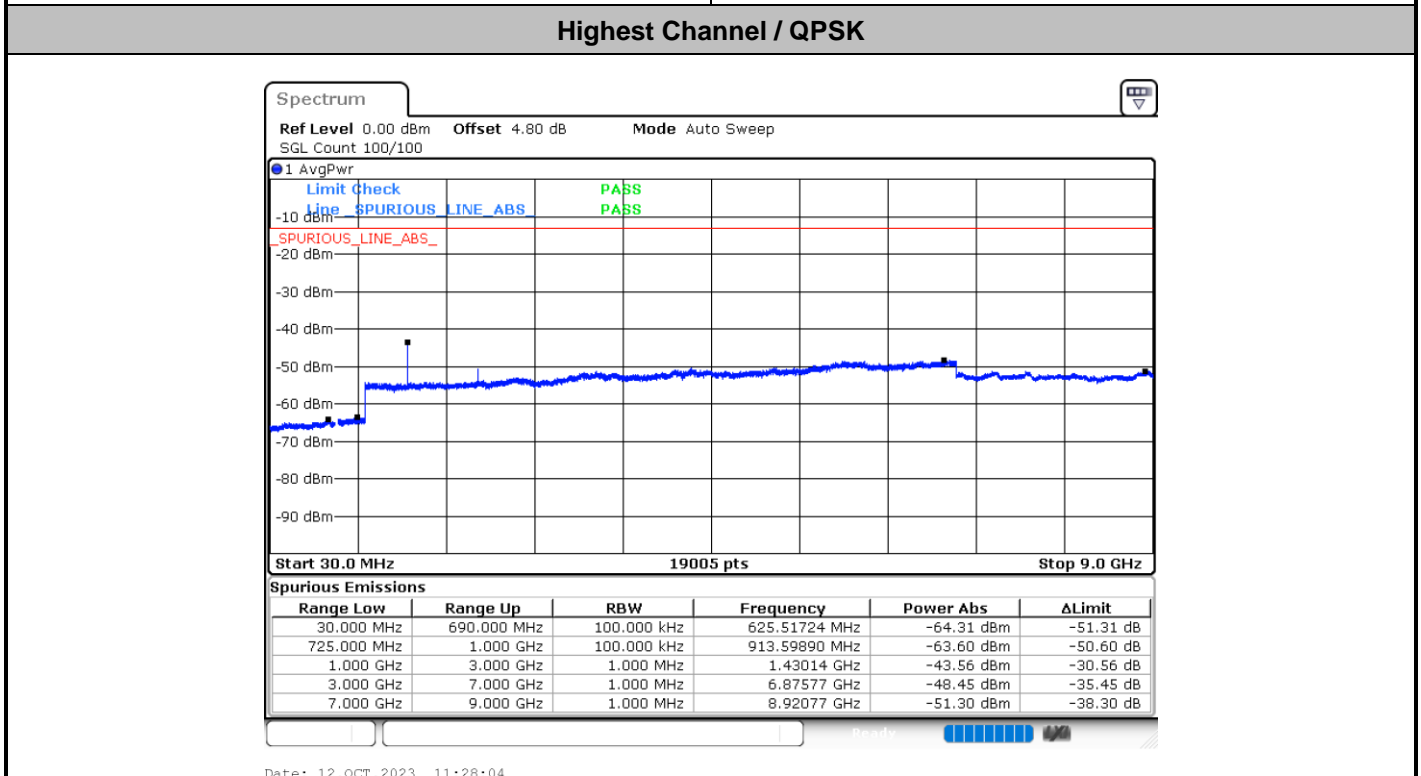
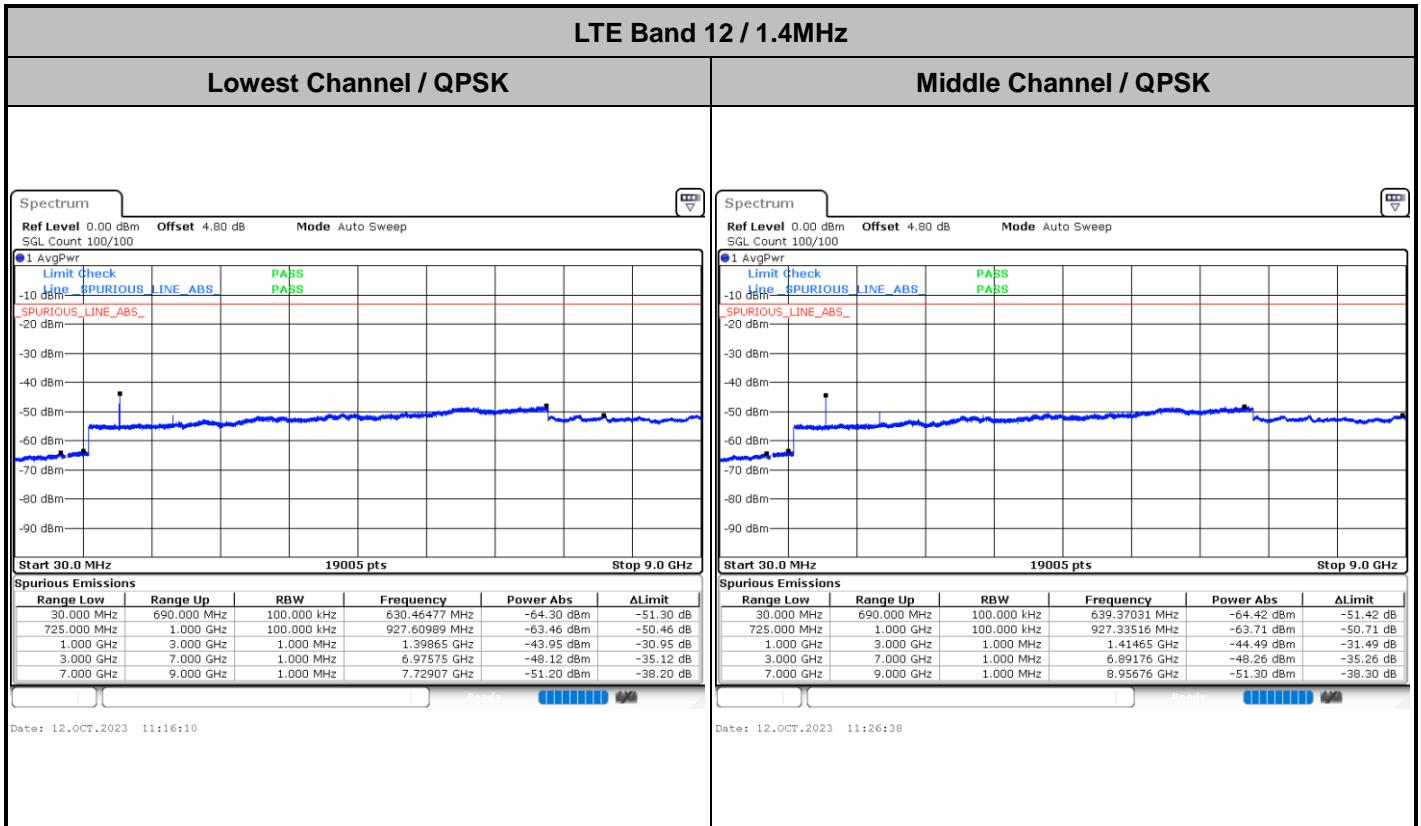
Highest Band Edge / Full RB



Date: 12.OCT.2023 13:45:13



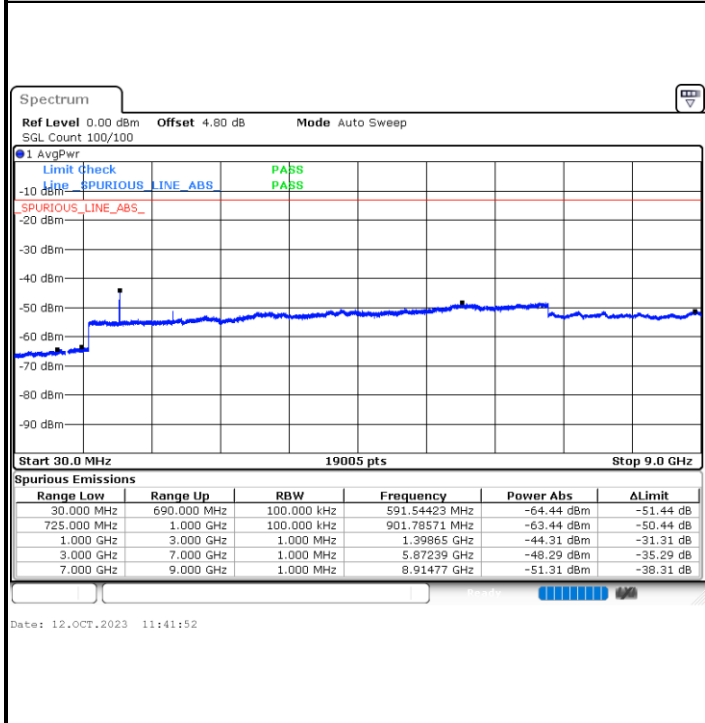
# Conducted Spurious Emission



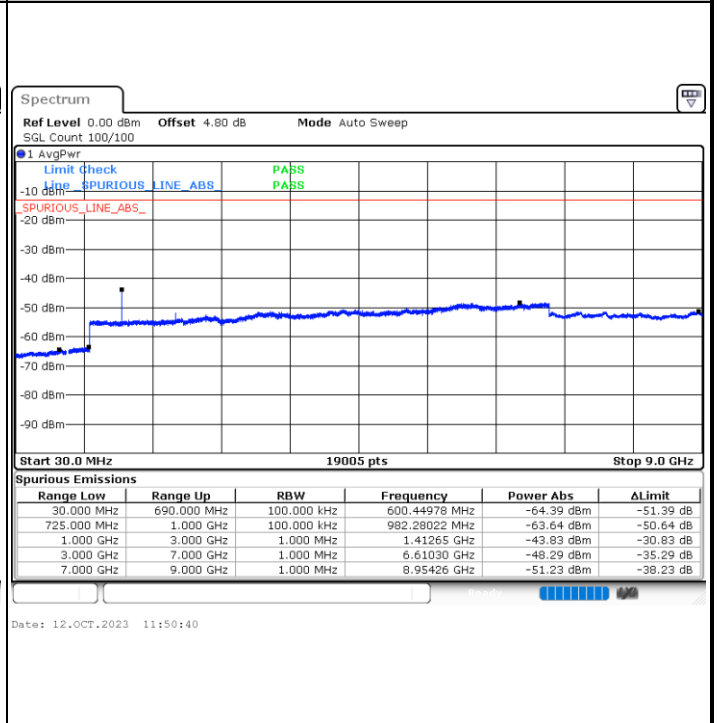


**LTE Band 12 / 3MHz**

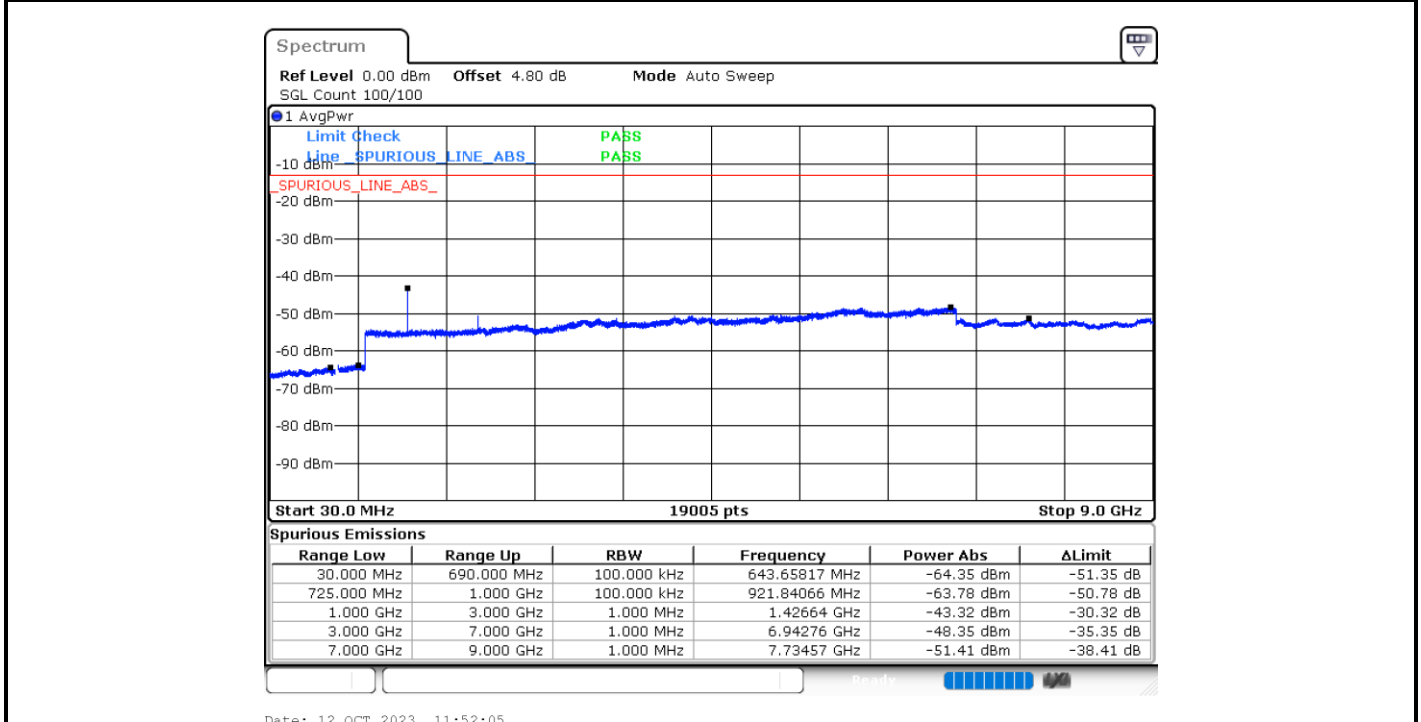
**Lowest Channel / QPSK**



**Middle Channel / QPSK**



**Highest Channel / QPSK**

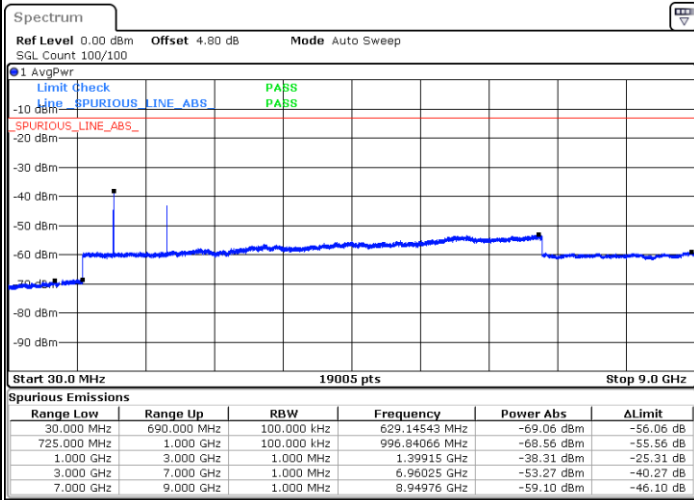




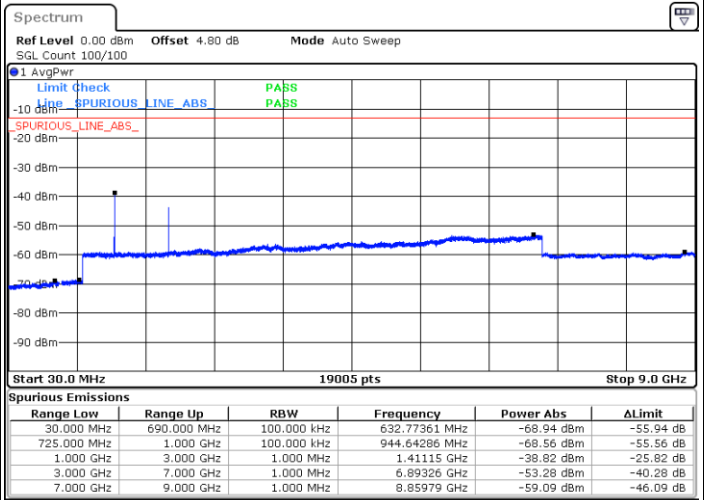
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

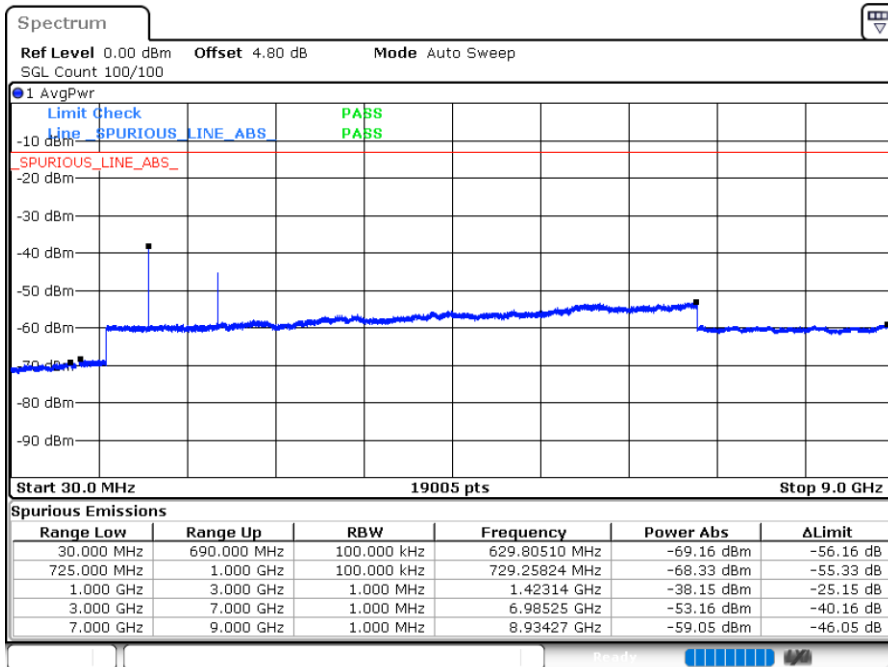


Date: 12.OCT.2023 12:00:55



Date: 12.OCT.2023 13:06:54

Highest Channel / QPSK



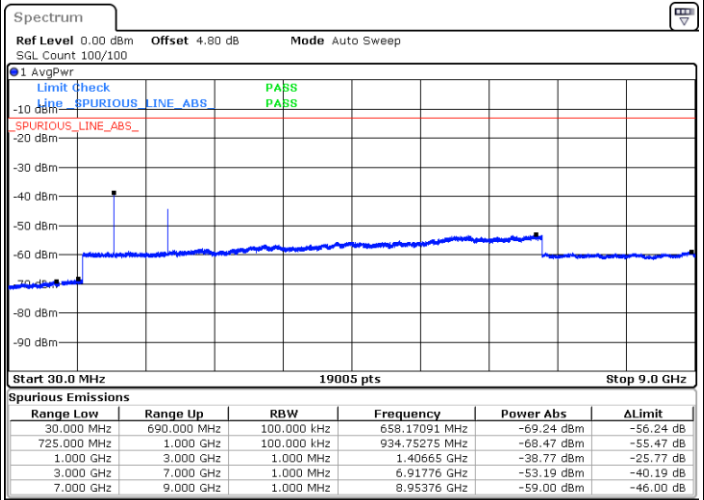
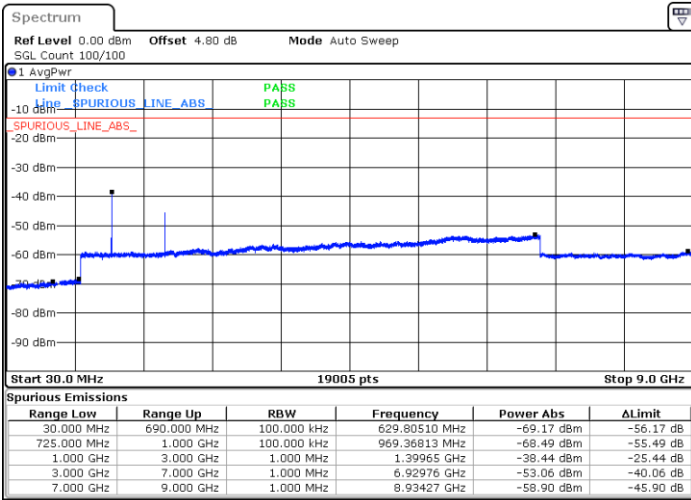
Date: 12.OCT.2023 13:08:19



LTE Band 12 / 10MHz

Lowest Channel / QPSK

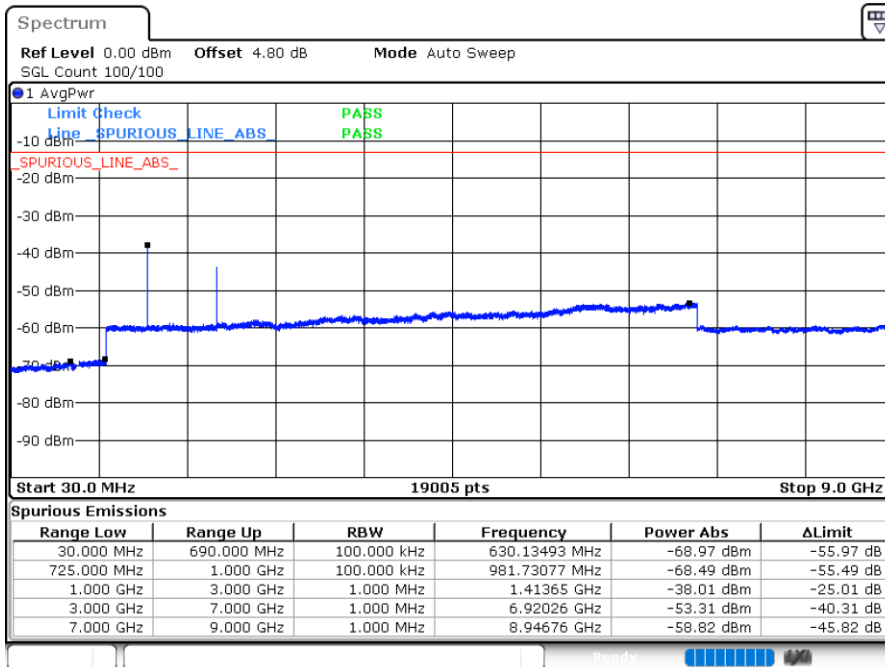
Middle Channel / QPSK



Date: 12.OCT.2023 13:17:27

Date: 12.OCT.2023 13:26:41

Highest Channel / QPSK



Date: 12.OCT.2023 13:28:05



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	0.0022	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0019	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0028	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0008	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.91 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.5 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.