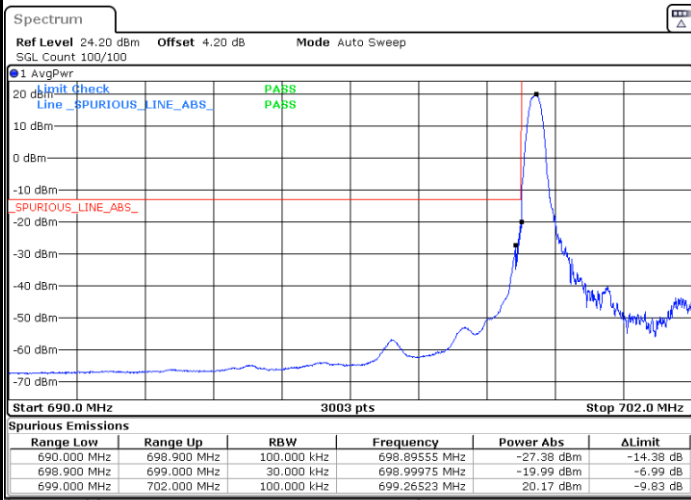


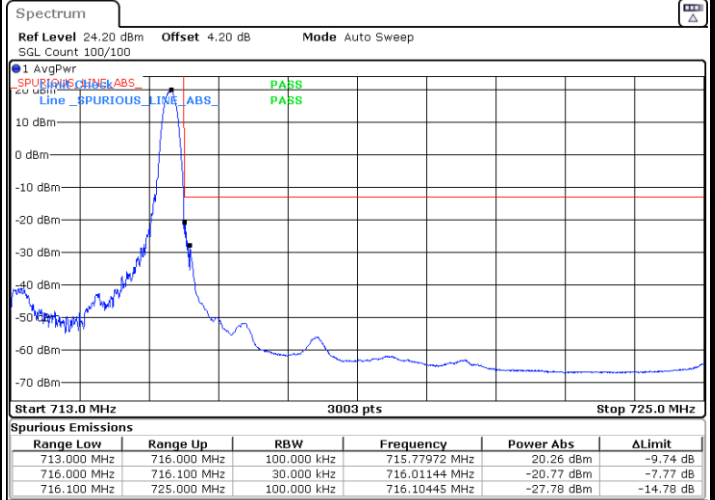


LTE Band 12 / 3MHz / QPSK

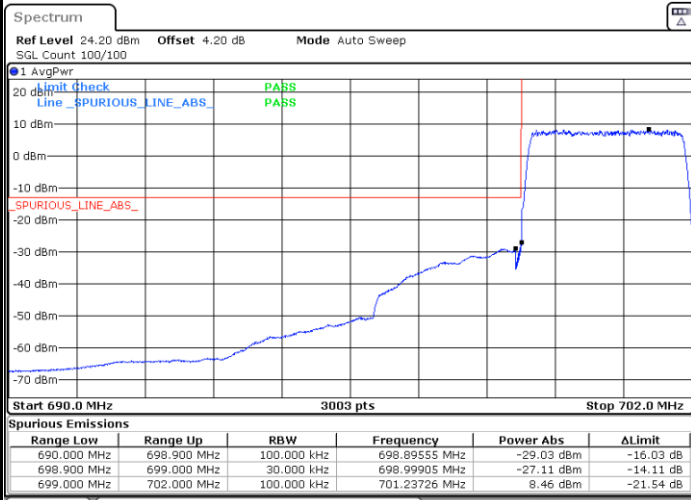
Lowest Band Edge / 1RB



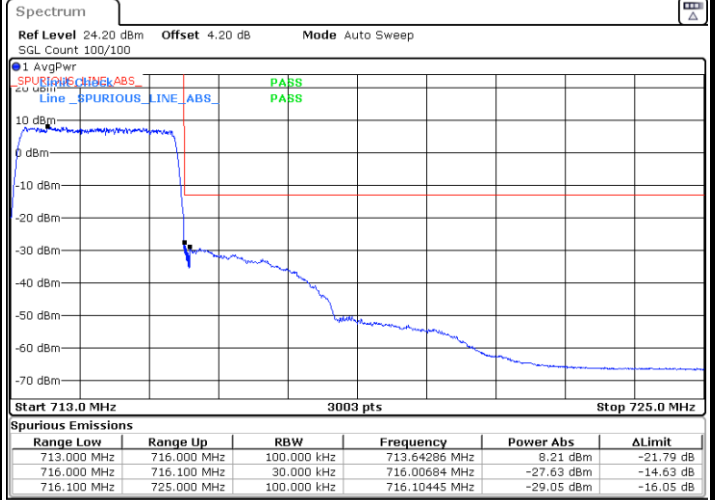
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



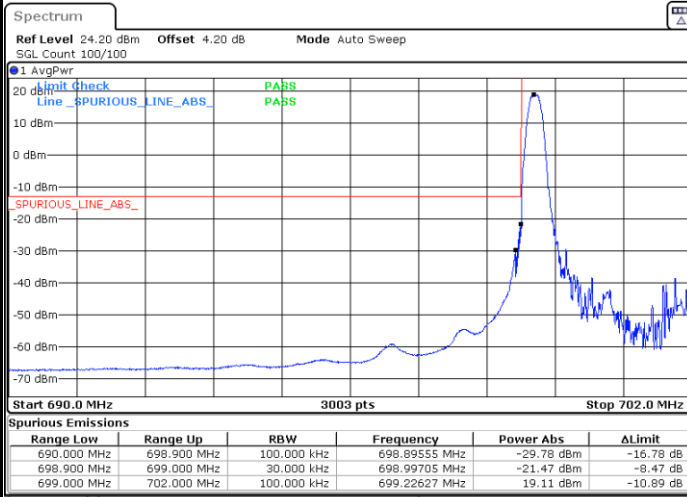
Highest Band Edge / Full RB





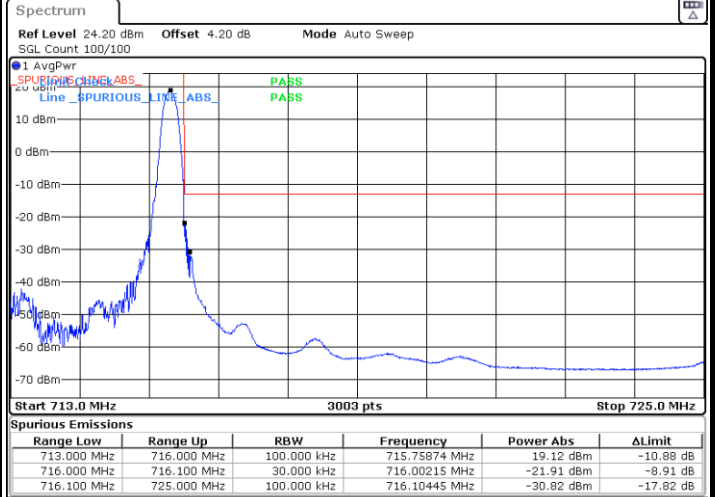
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



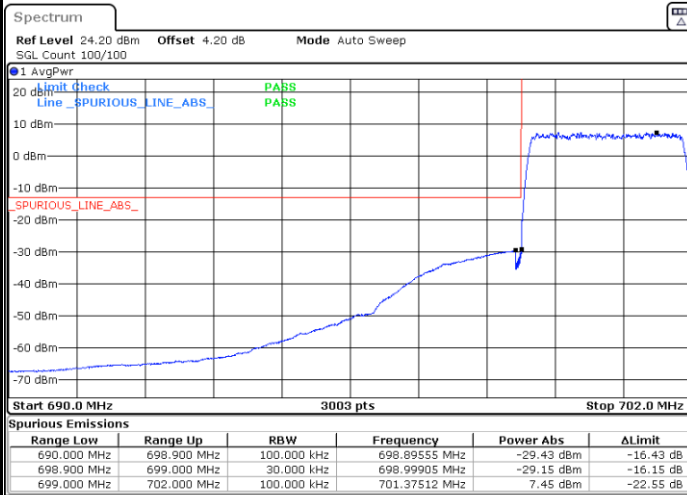
Date: 5.FEB.2023 09:36:21

Highest Band Edge / 1 RB



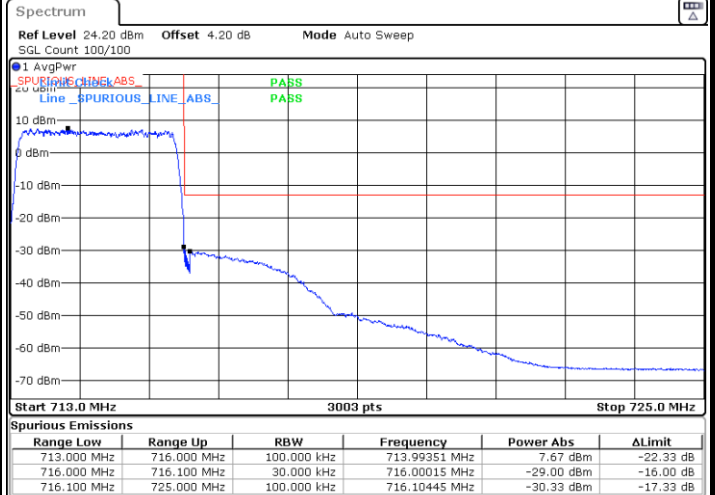
Date: 5.FEB.2023 09:45:05

Lowest Band Edge / Full RB



Date: 5.FEB.2023 09:37:32

Highest Band Edge / Full RB

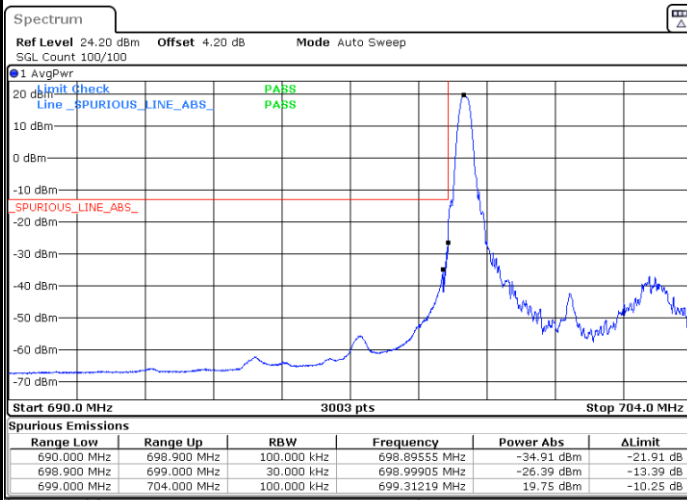


Date: 5.FEB.2023 09:46:15

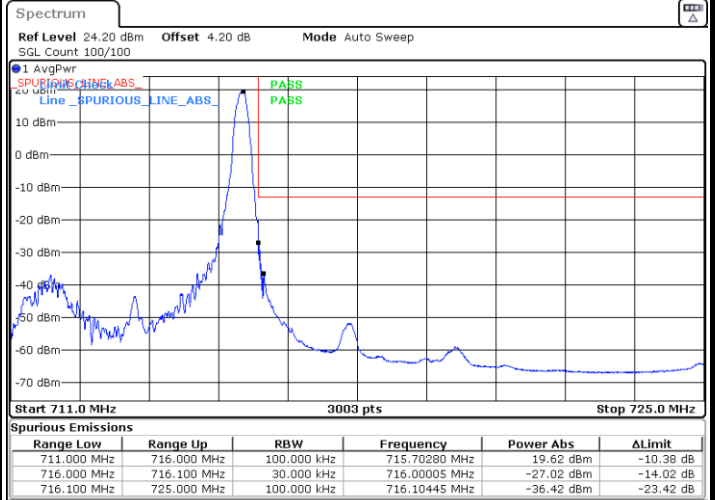


LTE Band 12 / 5MHz / QPSK

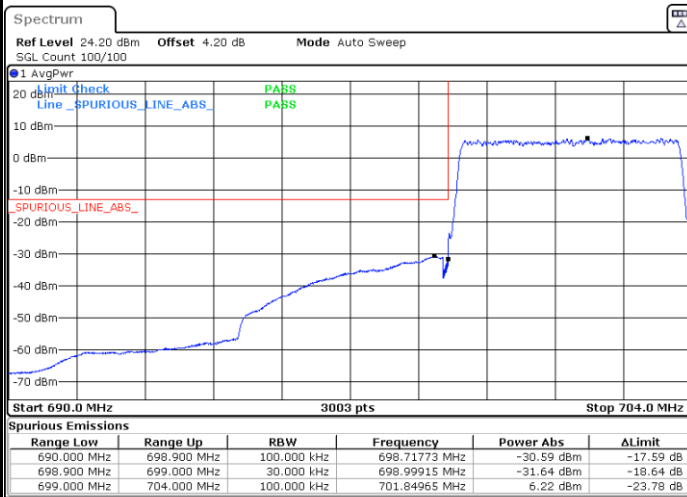
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



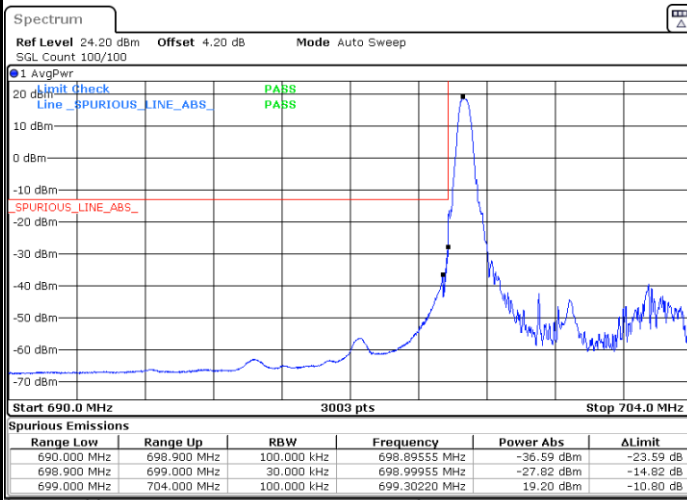
Highest Band Edge / Full RB



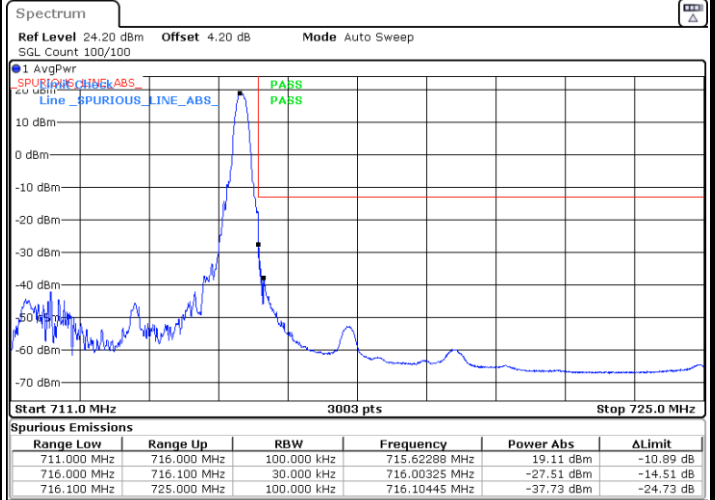


LTE Band 12 / 5MHz / 16QAM

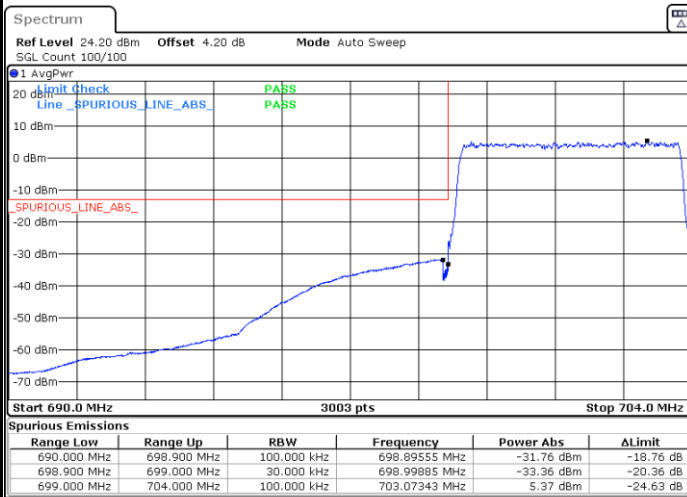
Lowest Band Edge / 1RB



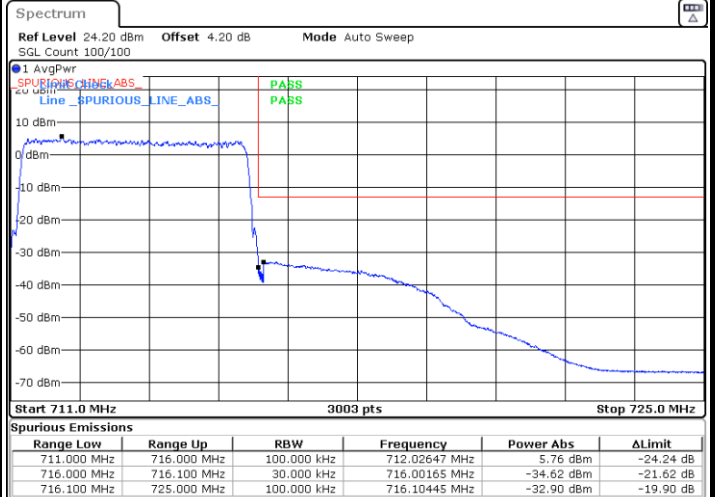
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



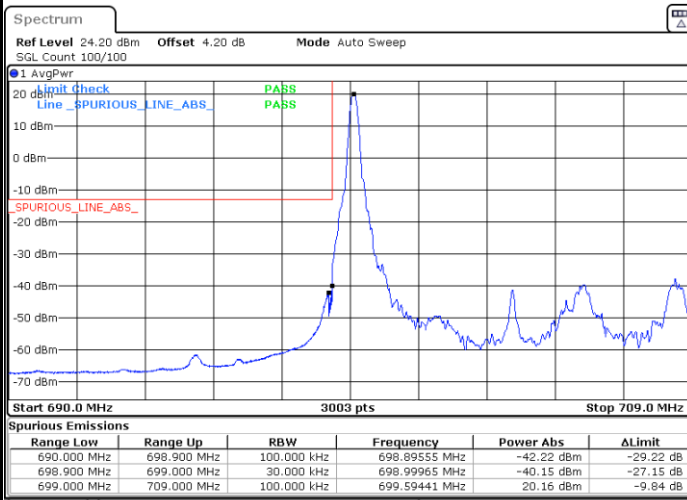
Highest Band Edge / Full RB





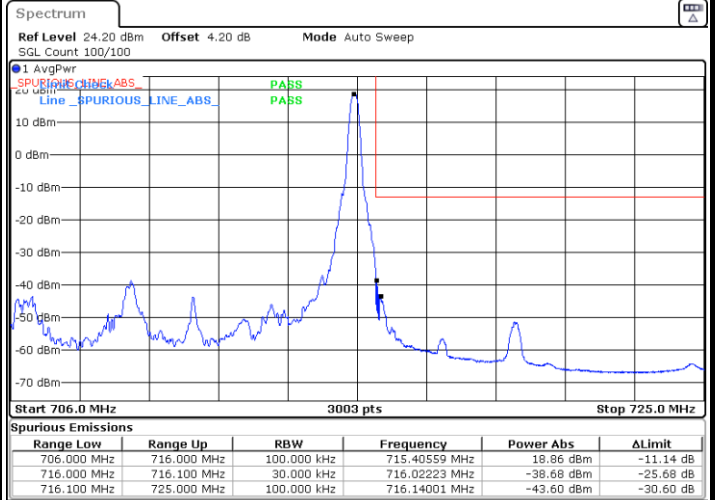
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



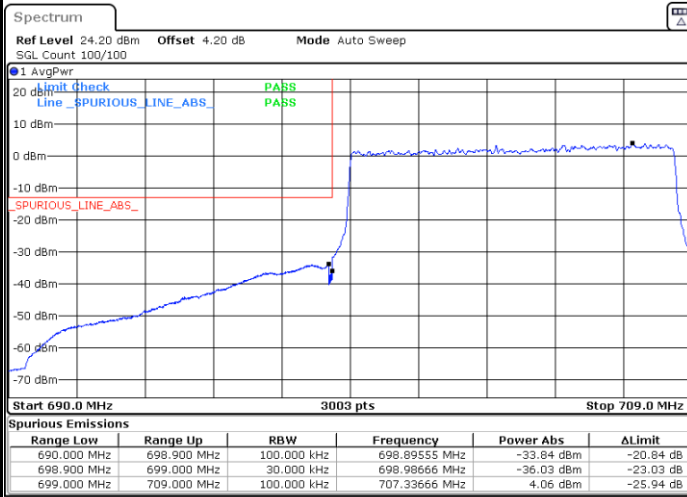
Date: 5.FEB.2023 10:04:38

Highest Band Edge / 1 RB



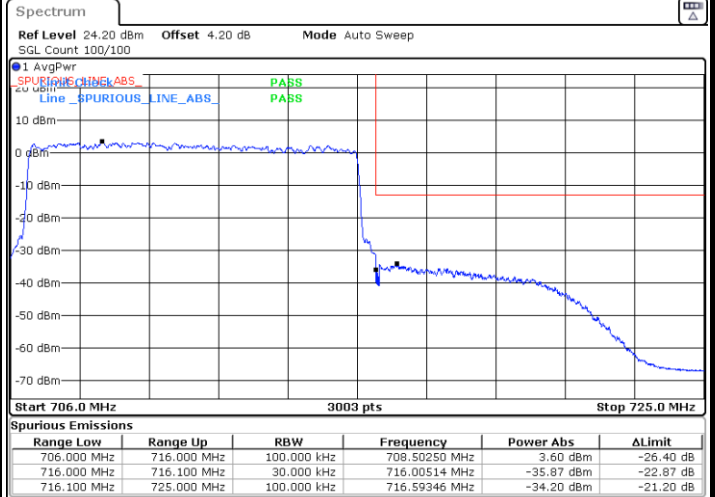
Date: 5.FEB.2023 10:11:57

Lowest Band Edge / Full RB



Date: 5.FEB.2023 10:08:08

Highest Band Edge / Full RB

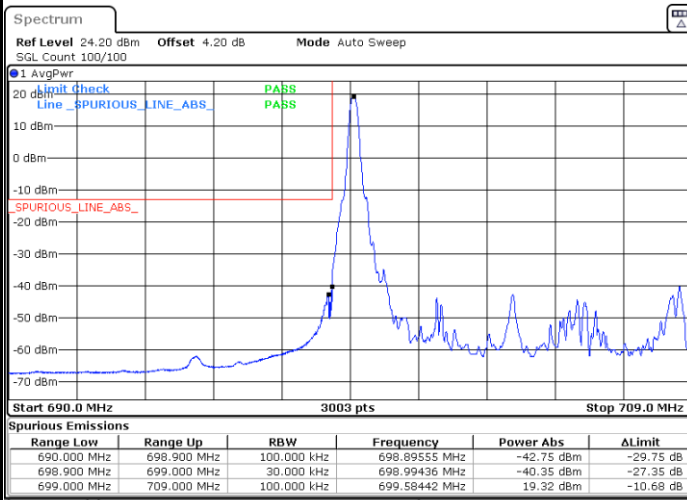


Date: 5.FEB.2023 10:15:27



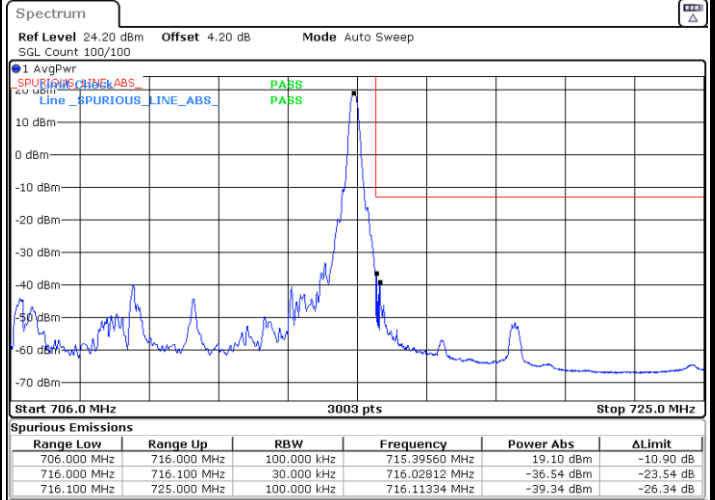
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



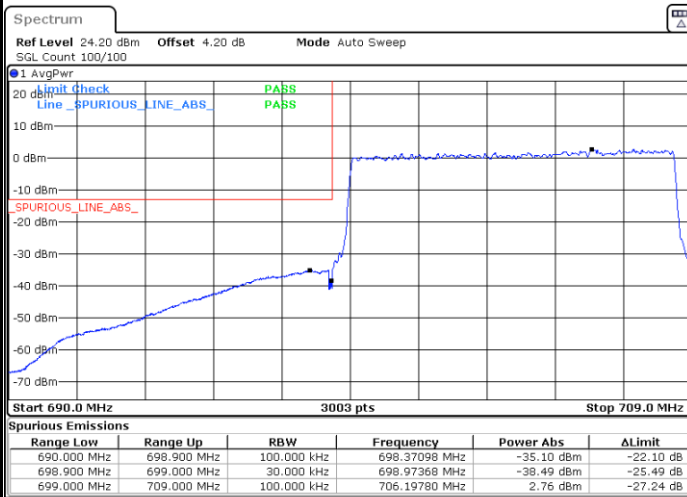
Date: 5.FEB.2023 10:05:48

Highest Band Edge / 1 RB



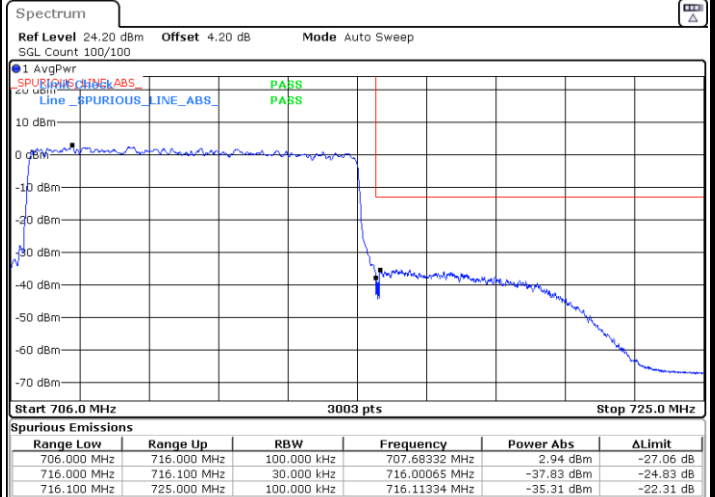
Date: 5.FEB.2023 10:13:07

Lowest Band Edge / Full RB



Date: 5.FEB.2023 10:06:58

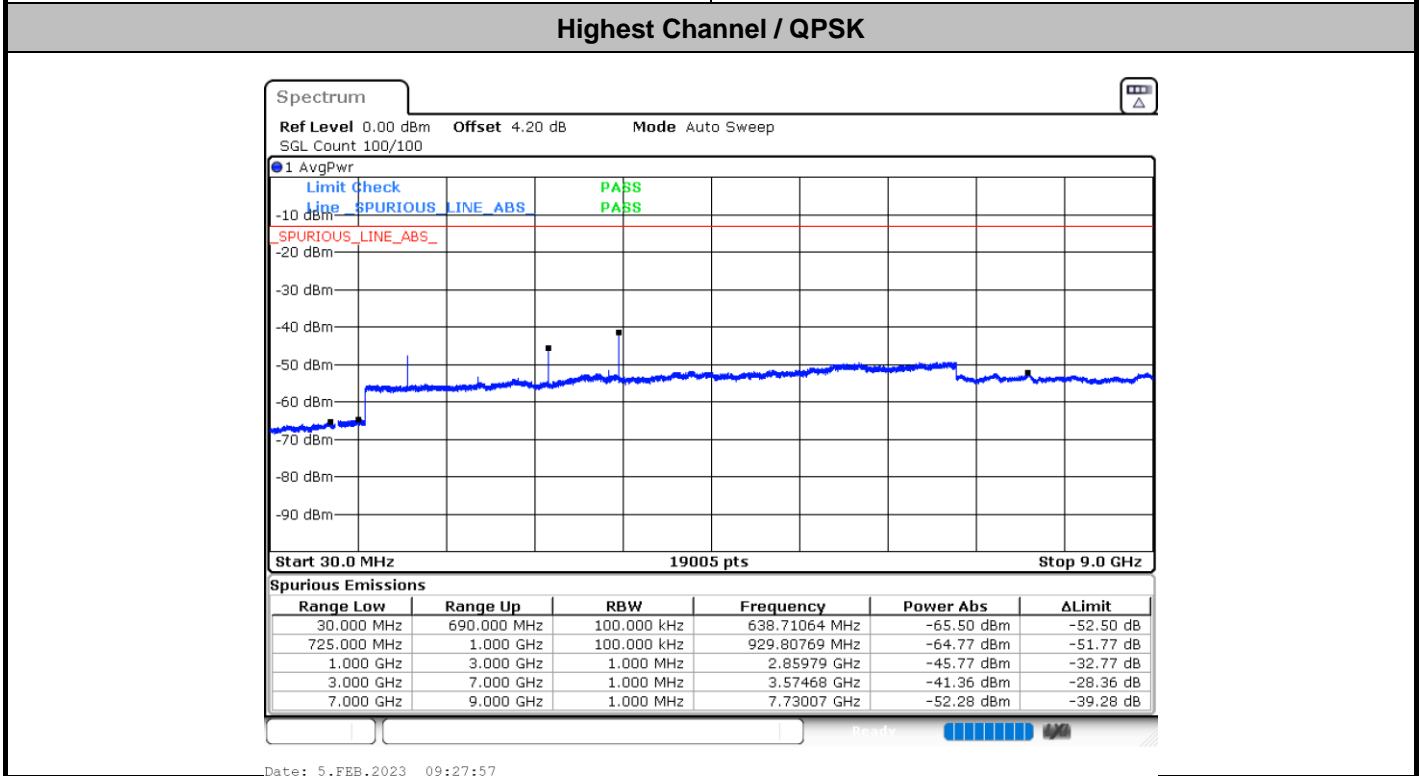
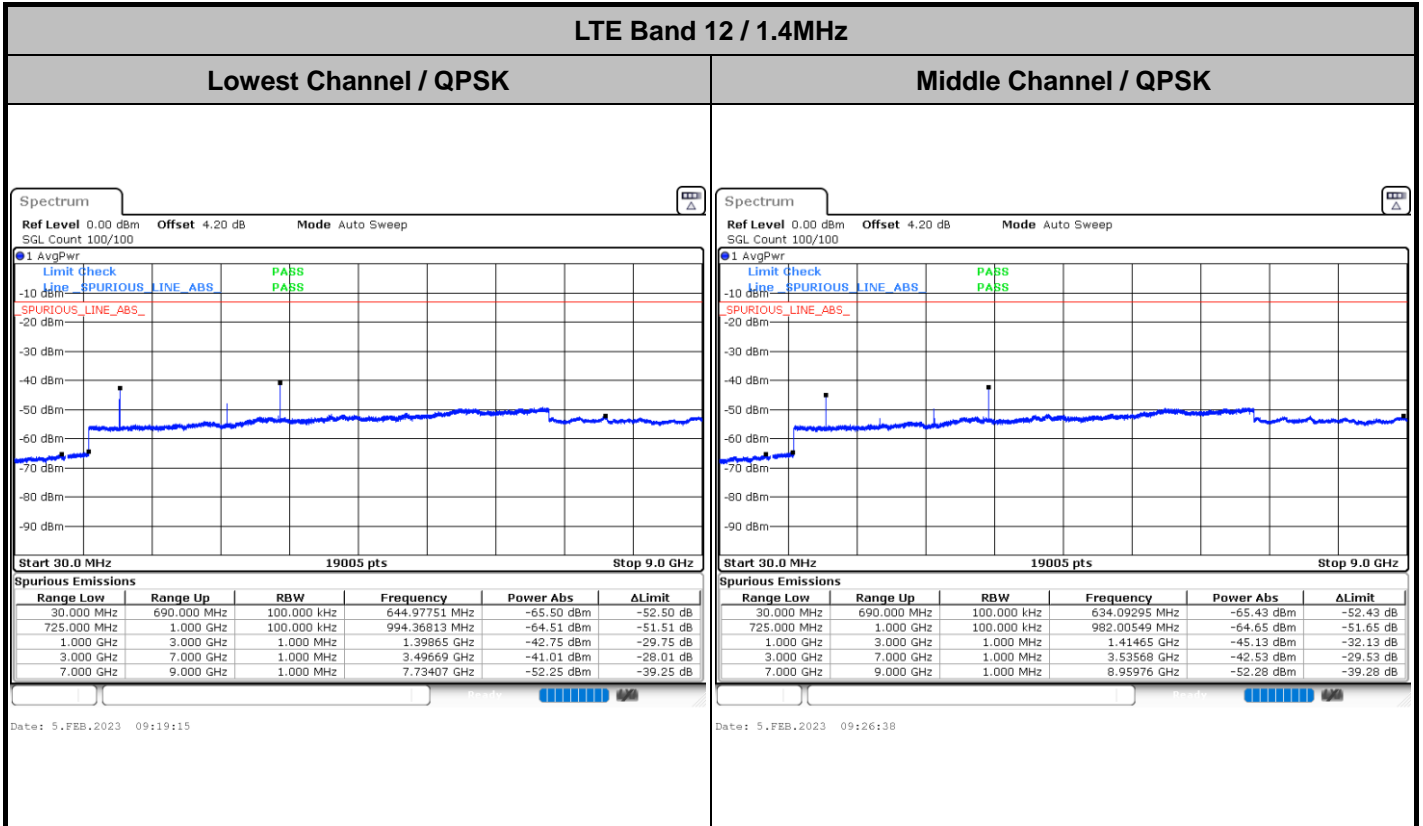
Highest Band Edge / Full RB



Date: 5.FEB.2023 10:14:17



Conducted Spurious Emission

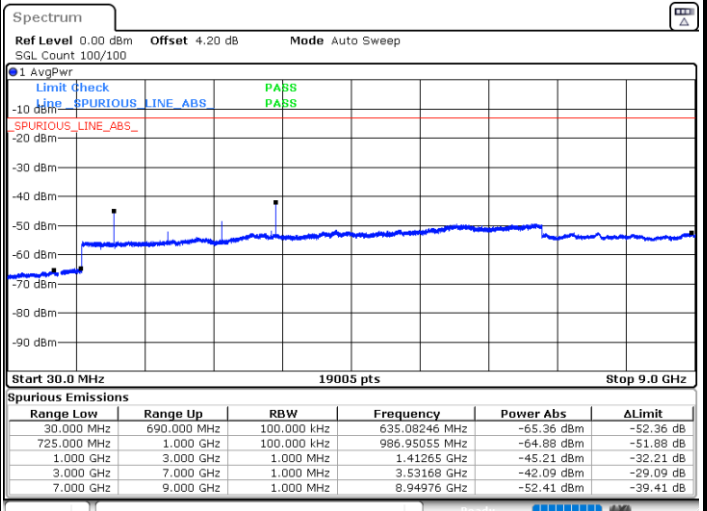
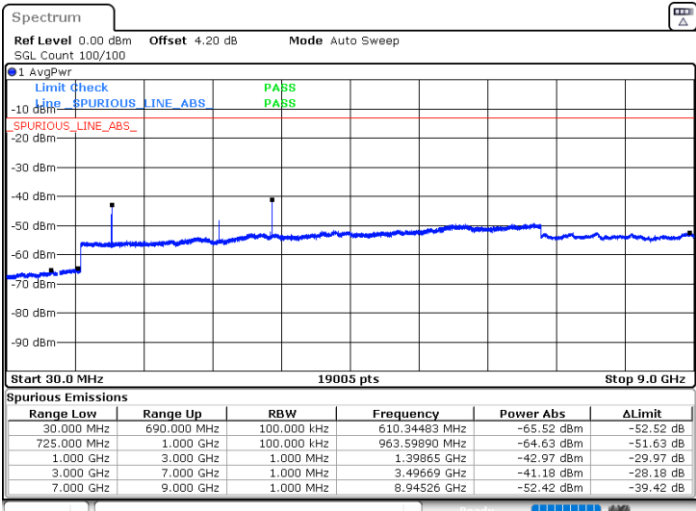




LTE Band 12 / 3MHz

Lowest Channel / QPSK

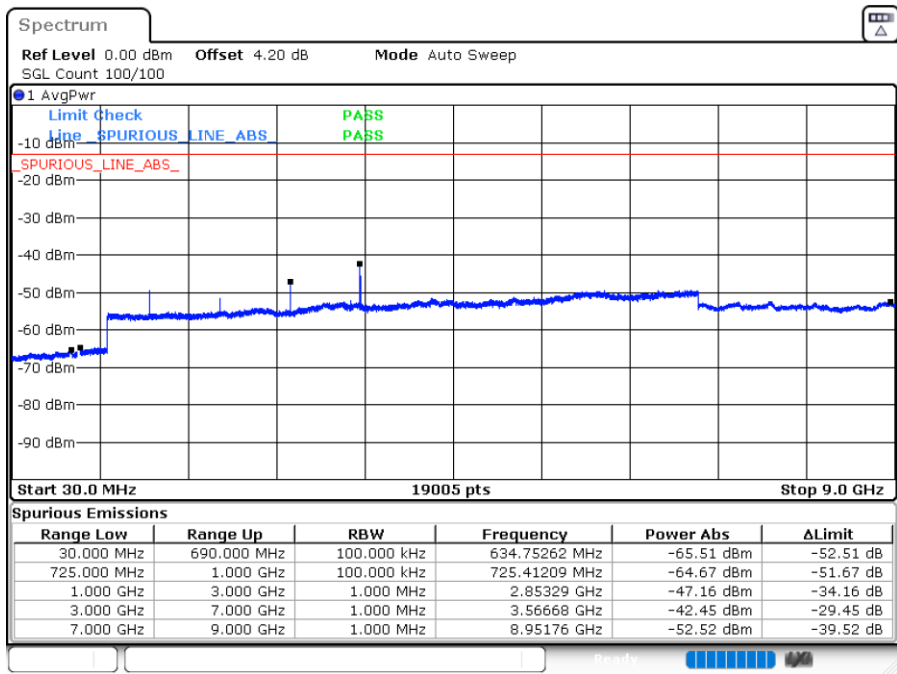
Middle Channel / QPSK



Date: 5.FEB.2023 09:33:57

Date: 5.FEB.2023 09:41:25

Highest Channel / QPSK



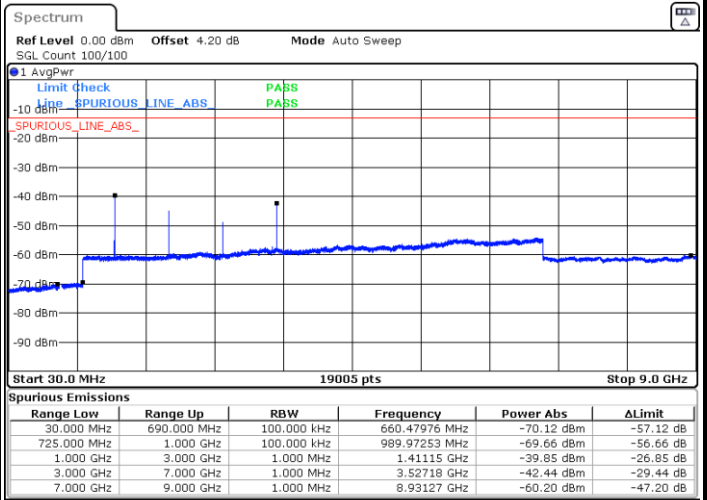
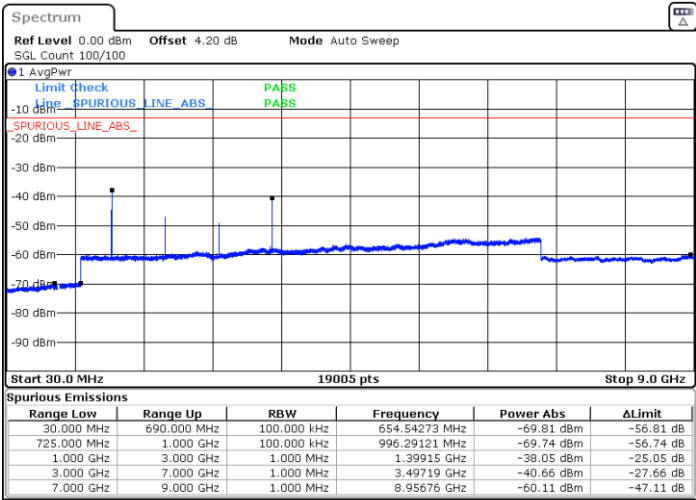
Date: 5.FEB.2023 09:42:45



LTE Band 12 / 5MHz

Lowest Channel / QPSK

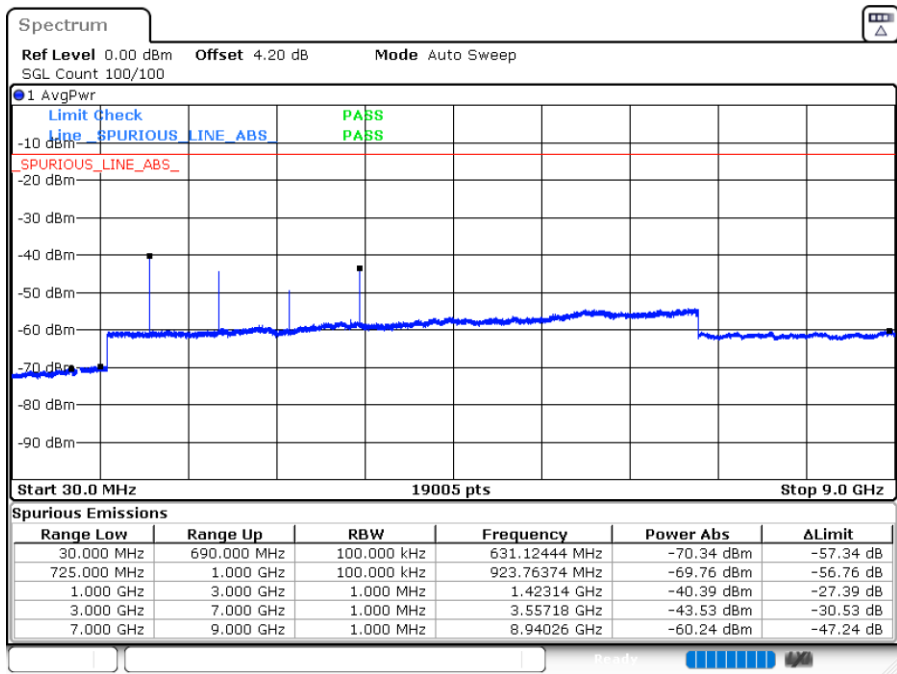
Middle Channel / QPSK



Date: 5.FEB.2023 09:48:45

Date: 5.FEB.2023 09:56:09

Highest Channel / QPSK



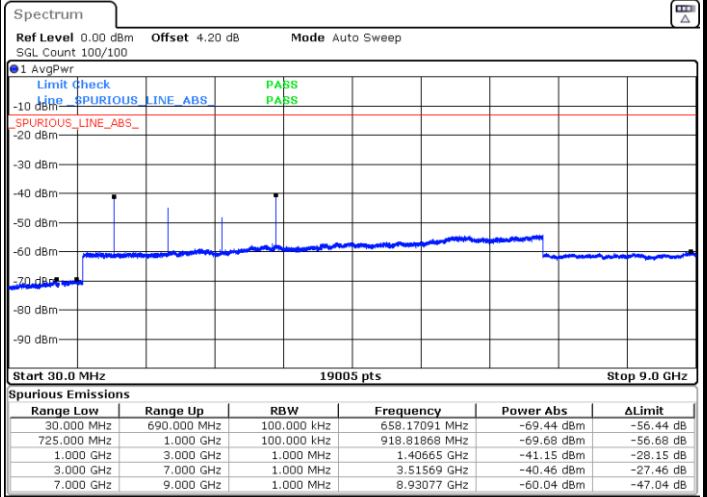
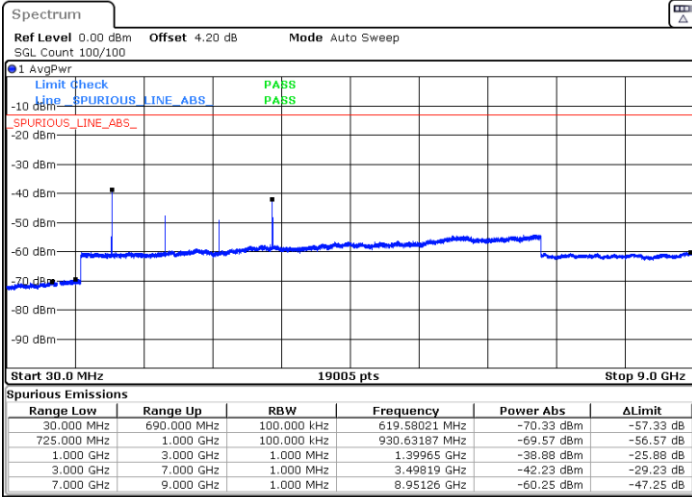
Date: 5.FEB.2023 09:57:28



LTE Band 12 / 10MHz

Lowest Channel / QPSK

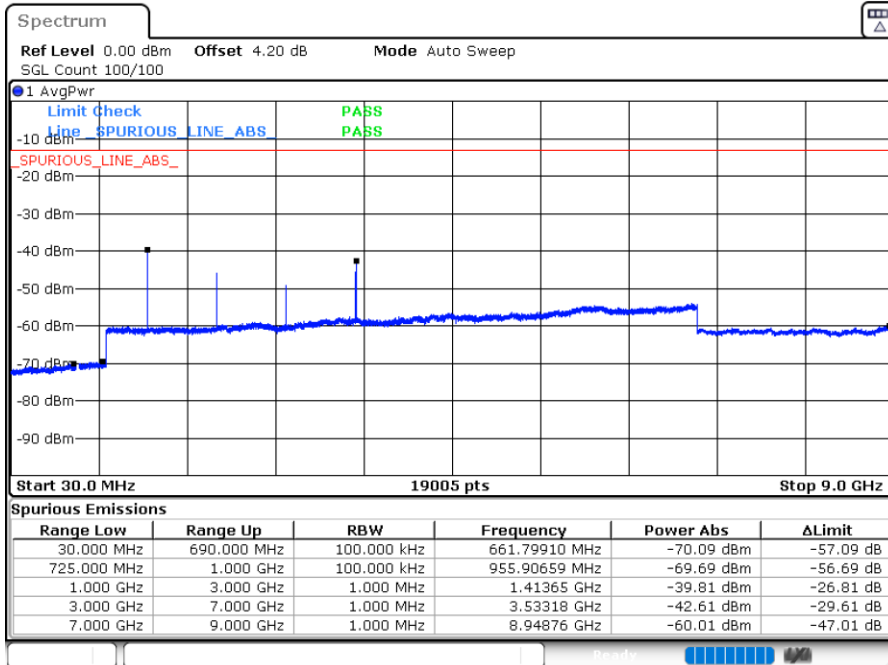
Middle Channel / QPSK



Date: 5.FEB.2023 10:03:28

Date: 5.FEB.2023 10:09:28

Highest Channel / QPSK



Date: 5.FEB.2023 10:10:47



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	0.0019	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0039	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0036	
0	Normal Voltage	0.0025	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0047	
-30	Normal Voltage	0.0038	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0013	
20	Minimum Voltage	0.0007	

Note:

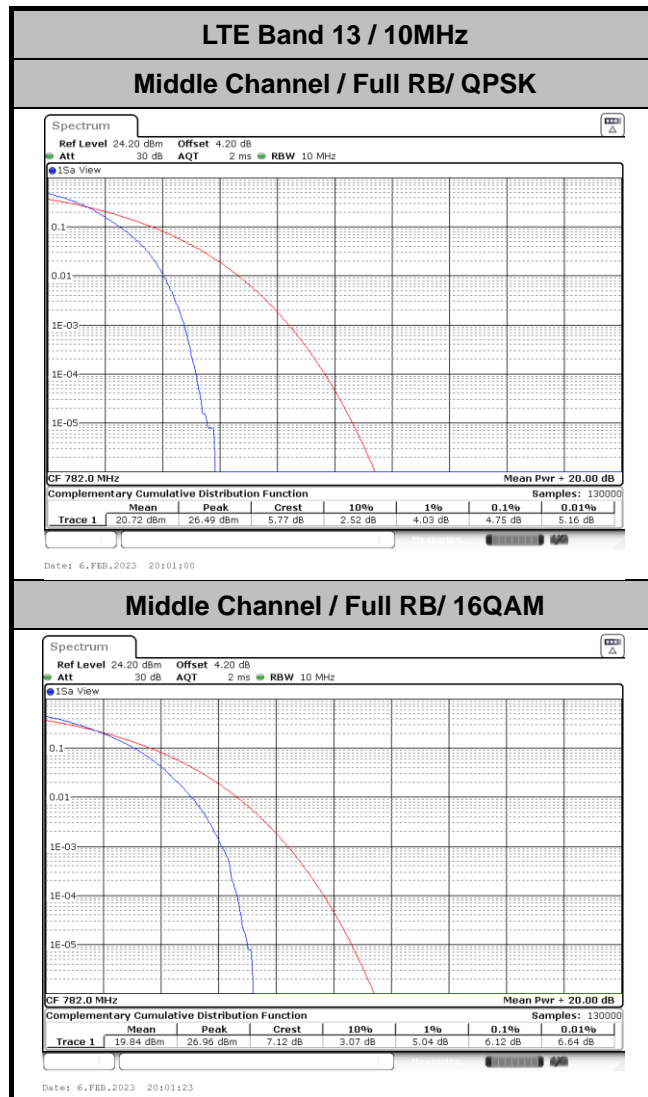
1. Normal Voltage =3.8 V. ; Minimum Voltage =3.55 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

Peak-to-Average Ratio

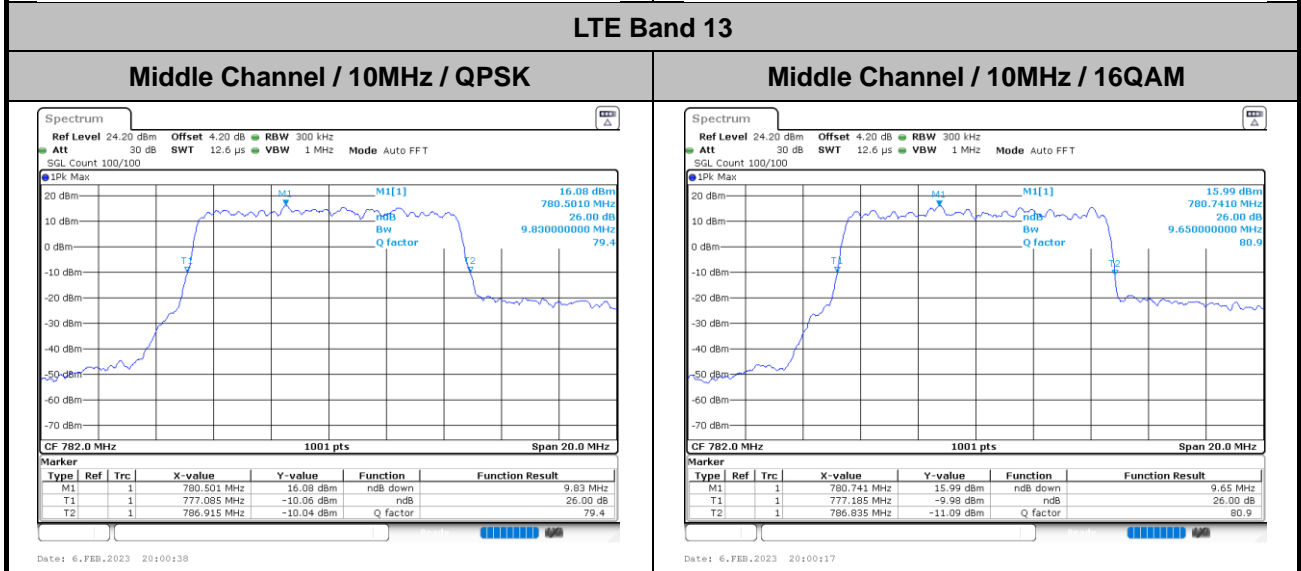
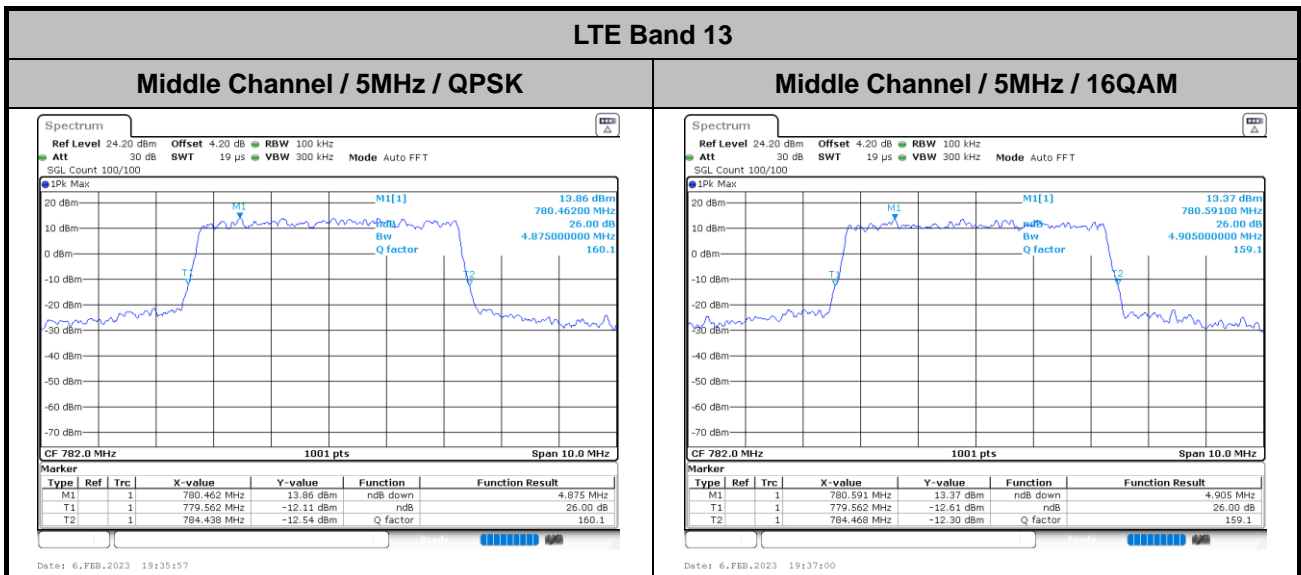
Mode	LTE Band 13 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	4.75	6.12	PASS





26dB Bandwidth

Mode	LTE Band 13 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.88	4.91
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.83	9.65

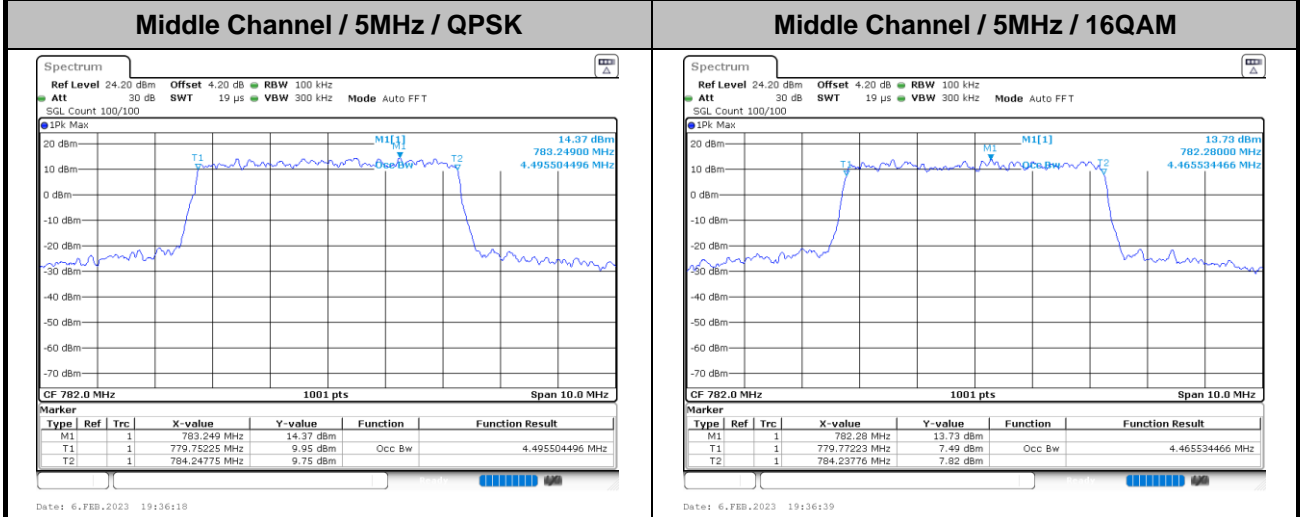




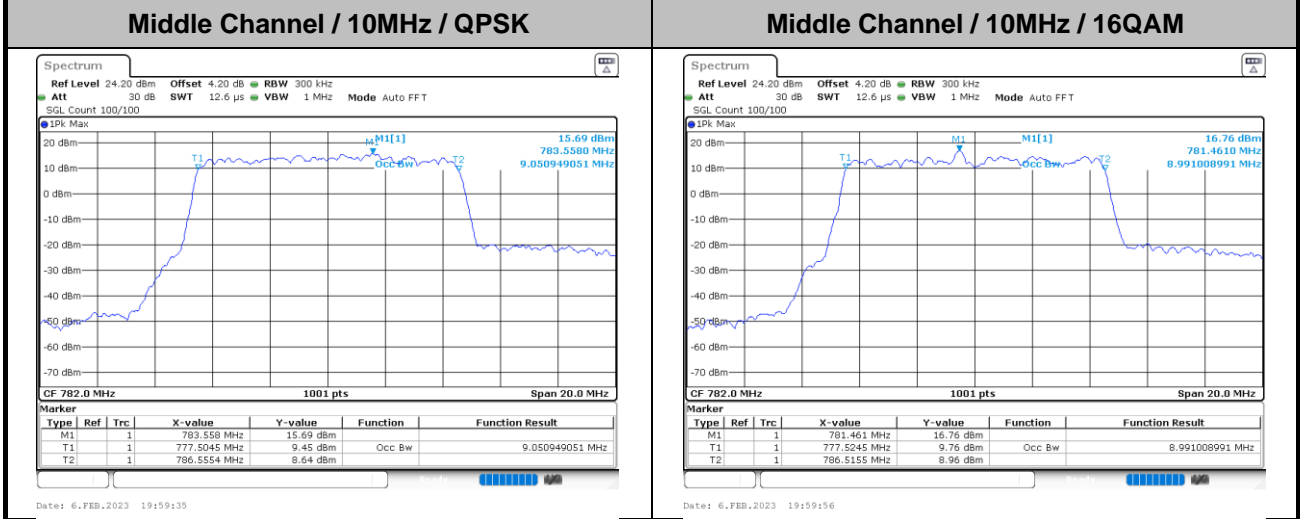
Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.50	4.47
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.05	8.99

LTE Band 13



LTE Band 13

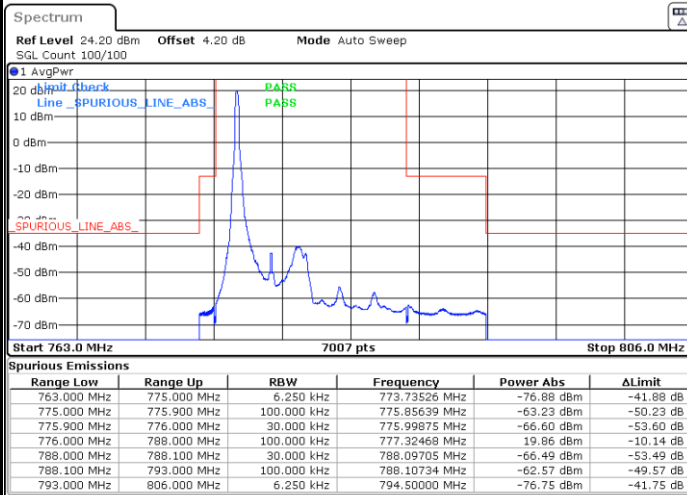




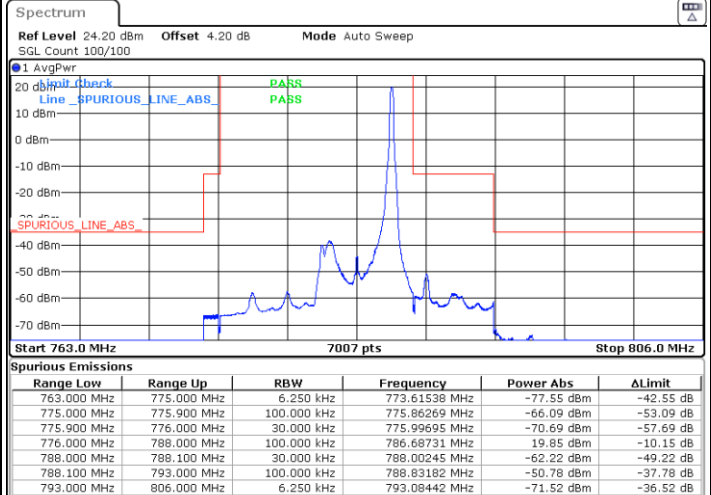
Conducted Band Edge

LTE Band 13 / 5MHz / QPSK

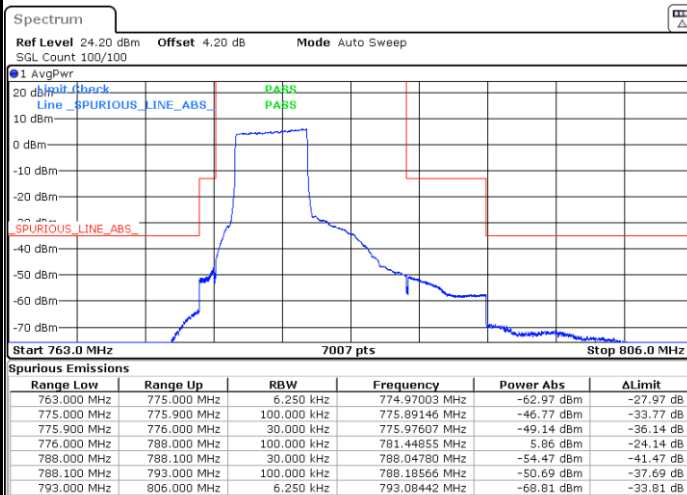
Lowest Band Edge / 1 RB



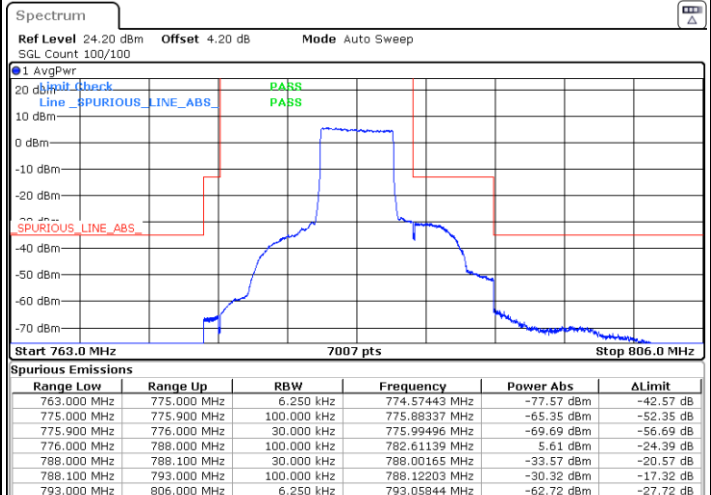
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

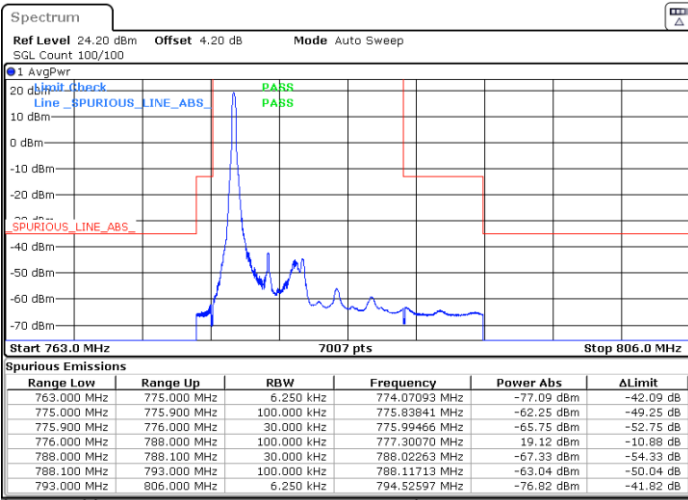




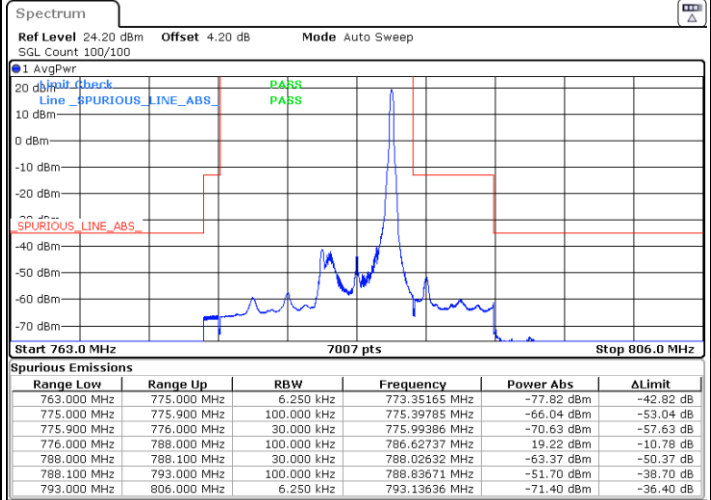
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RB



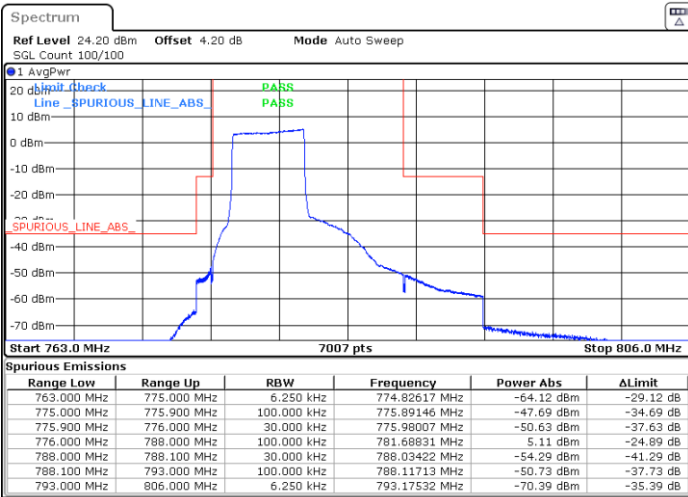
Date: 6.FEB.2023 19:31:56



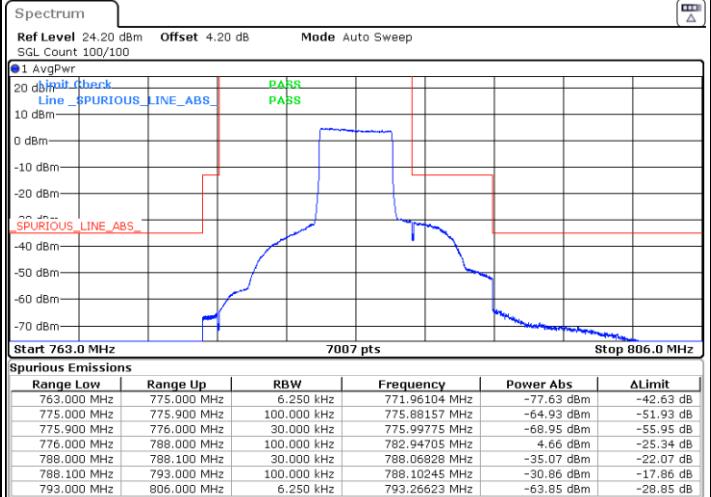
Date: 6.FEB.2023 19:43:18

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 6.FEB.2023 19:33:46



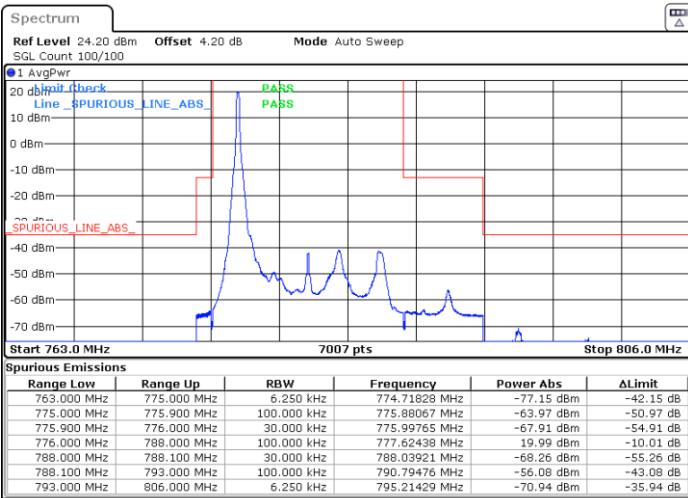
Date: 6.FEB.2023 19:45:08



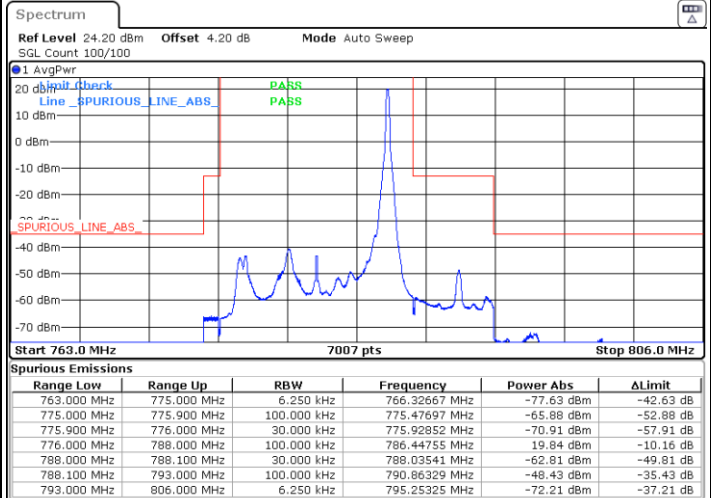
LTE Band 13 / 10MHz / QPSK

middle Band Edge / 1 RB

middle Band Edge / 1 RB

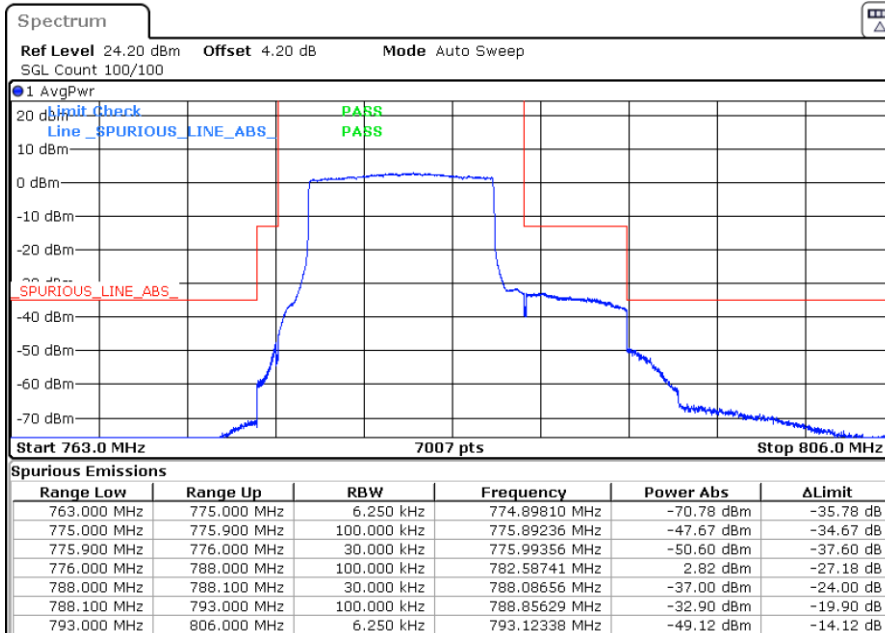


Date: 6.FEB.2023 19:50:07



Date: 6.FEB.2023 19:55:35

Middle Band Edge / Full RB

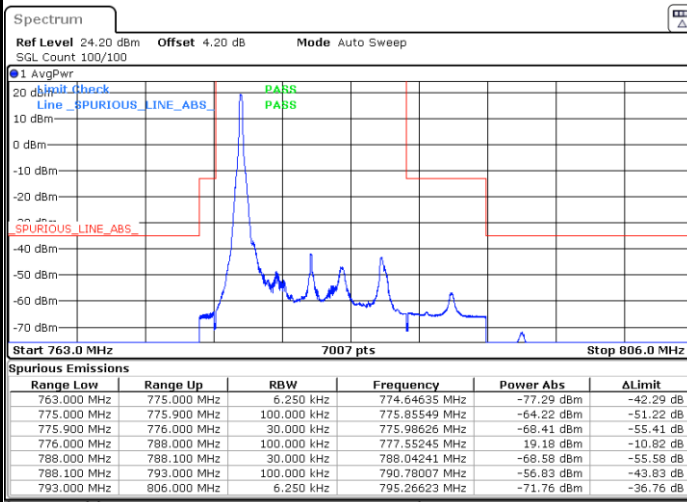


Date: 6.FEB.2023 19:57:25



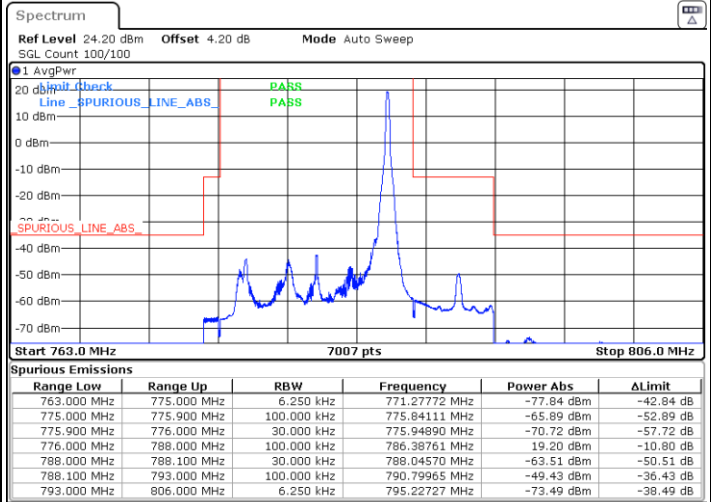
LTE Band 13 / 10MHz / 16QAM

middle Band Edge / 1 RB



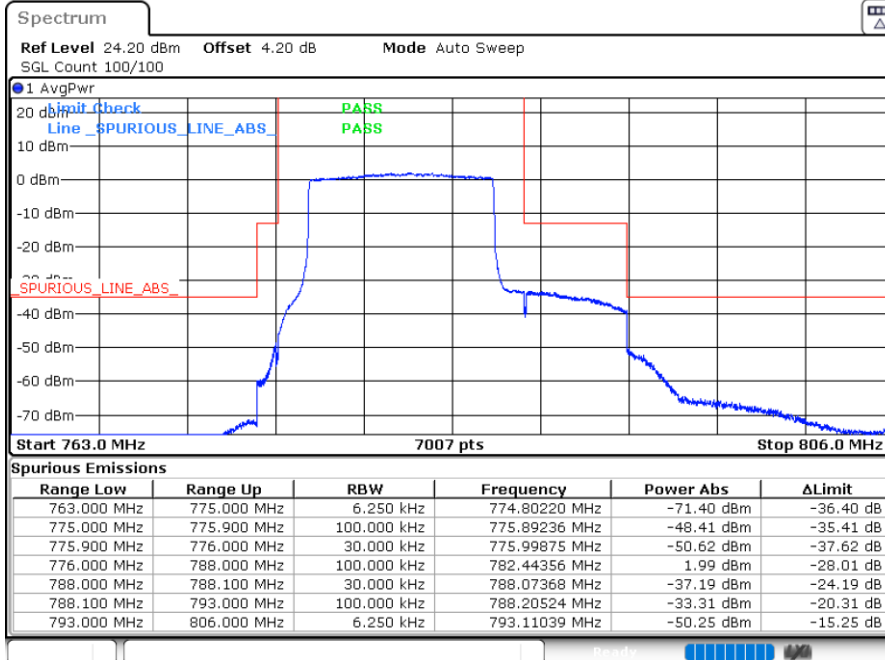
Date: 6.FEB.2023 19:51:57

middle Band Edge / 1 RB



Date: 6.FEB.2023 19:53:46

middle Band Edge / Full RB



Date: 6.FEB.2023 19:59:14

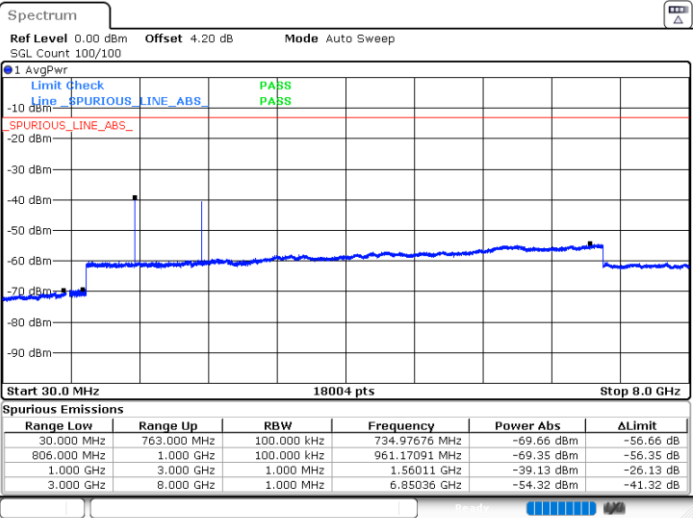
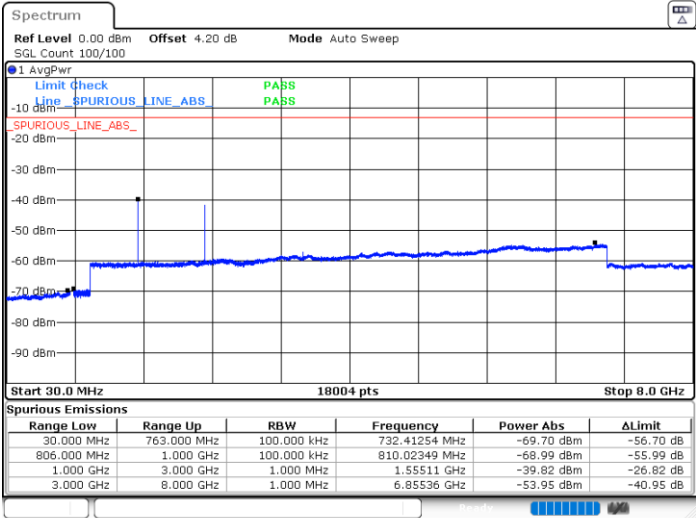


Conducted Spurious Emission

LTE Band 13 / 5MHz

Lowest Channel / QPSK

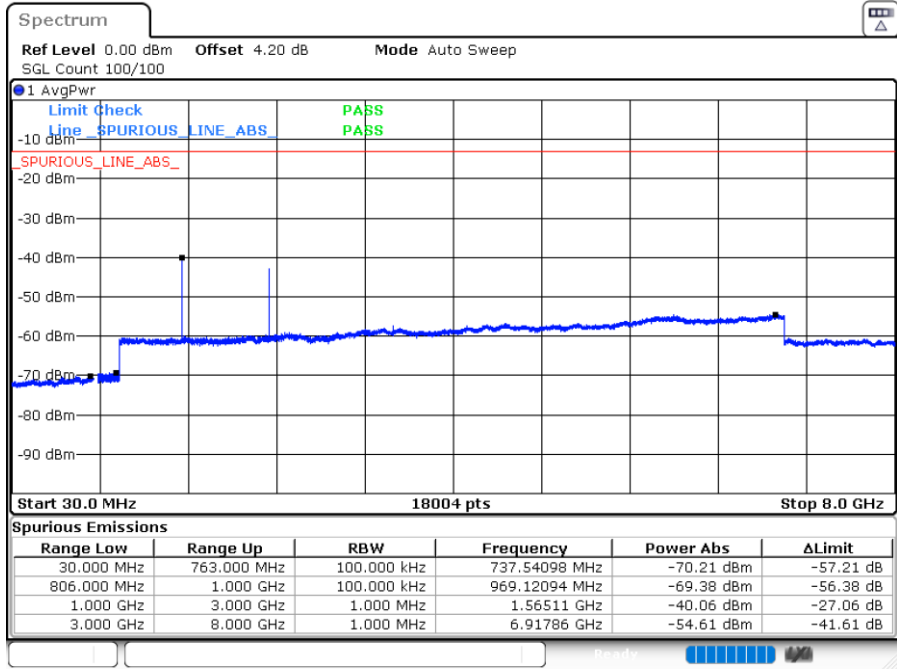
Middle Channel / QPSK



Date: 6.FEB.2023 19:28:16

Date: 6.FEB.2023 19:38:19

Highest Channel / QPSK

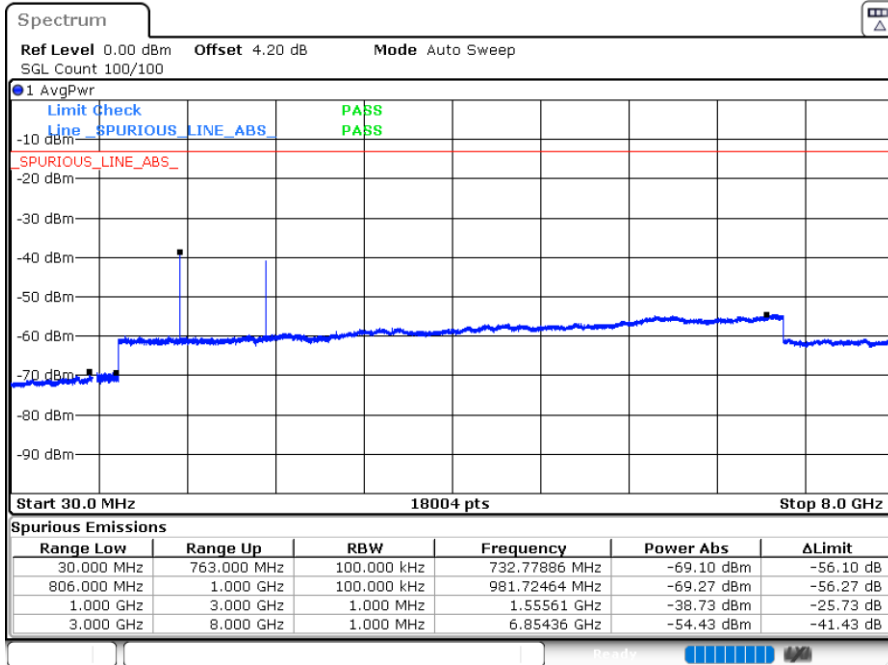


Date: 6.FEB.2023 19:39:38



LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 6.FEB.2023 19:48:18



Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0041	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0049	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0021	
-10	Normal Voltage	0.0017	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0051	
20	Maximum Voltage	0.0062	
20	Normal Voltage	0.0002	
20	Minimum Voltage	0.0024	

Note:

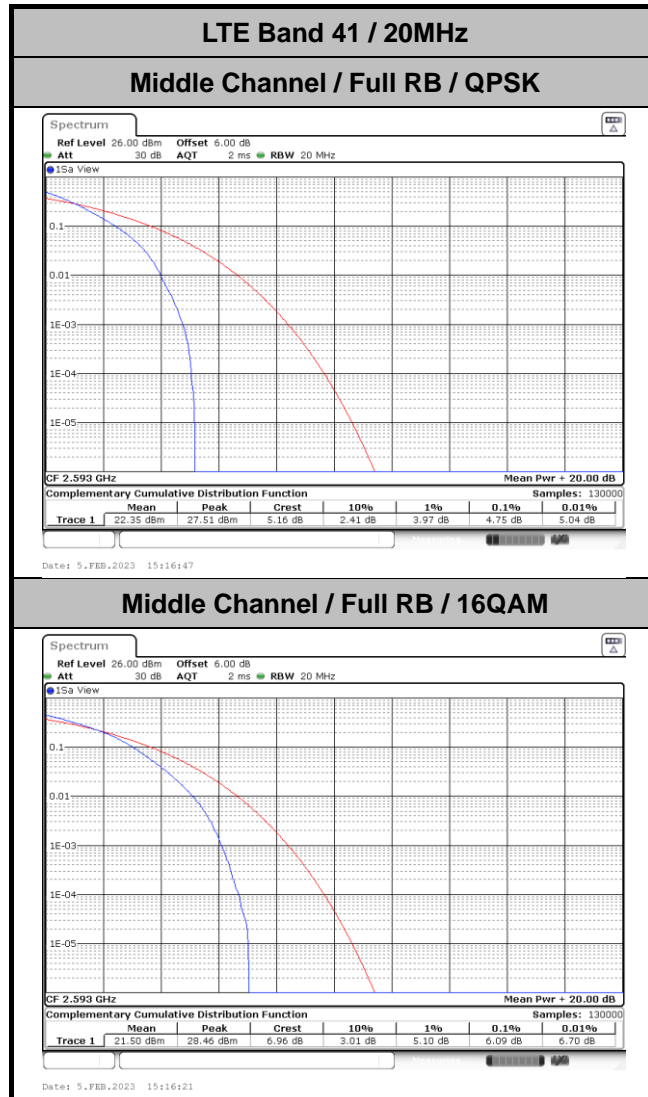
1. Normal Voltage =3.8 V. ; Minimum Voltage =3.55V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 41

Peak-to-Average Ratio

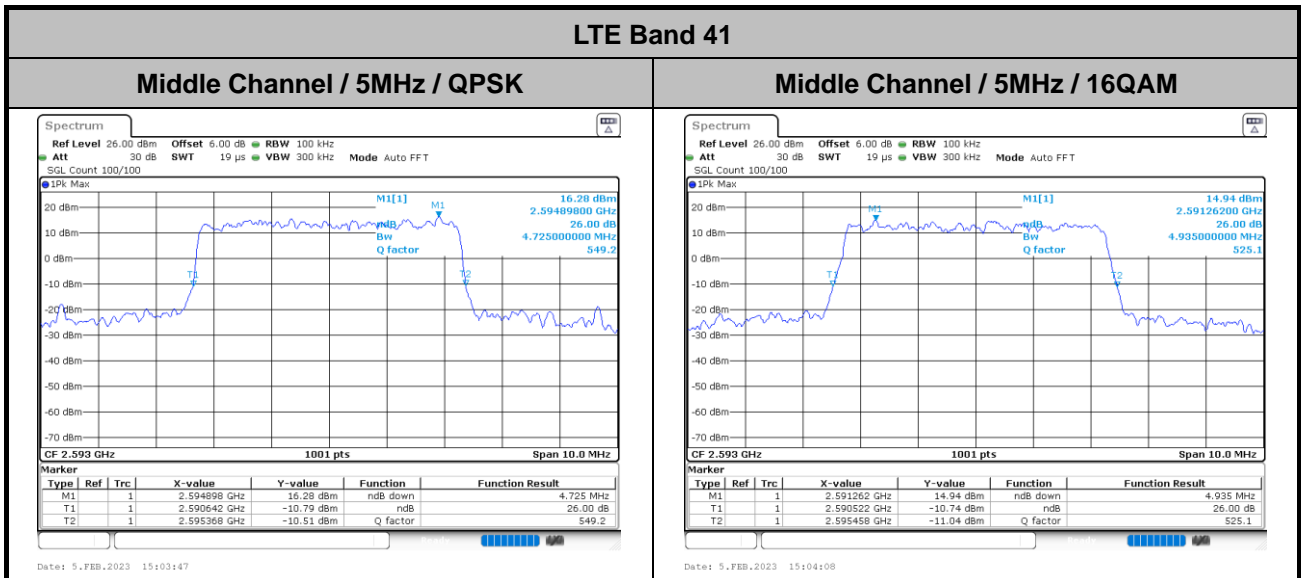
Mode	LTE Band 41 / 20MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	4.75	6.09	PASS





26dB Bandwidth

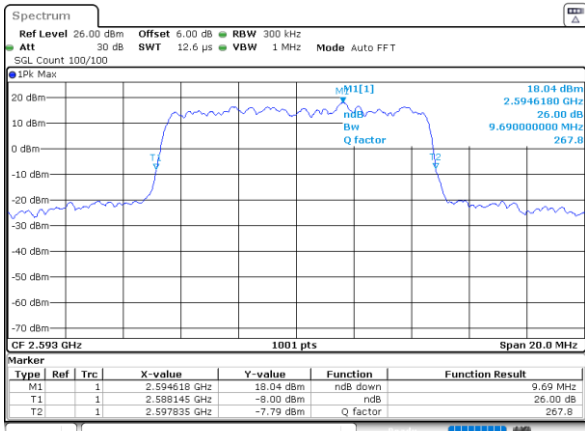
Mode	LTE Band 41 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.73	4.94
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.69	9.71
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	14.54	14.33
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	18.82	18.86





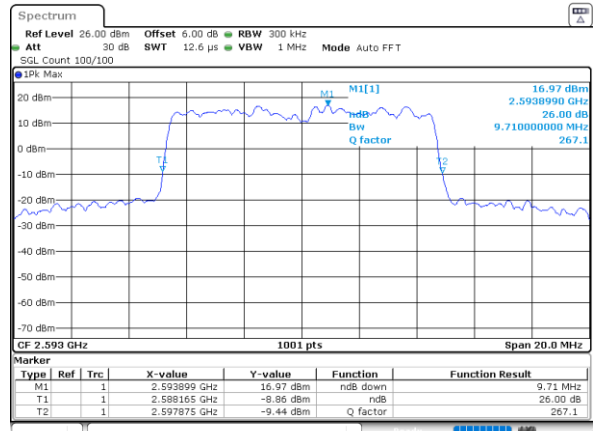
LTE Band 41

Middle Channel / 10MHz / QPSK



Date: 5.FEB.2023 15:05:11

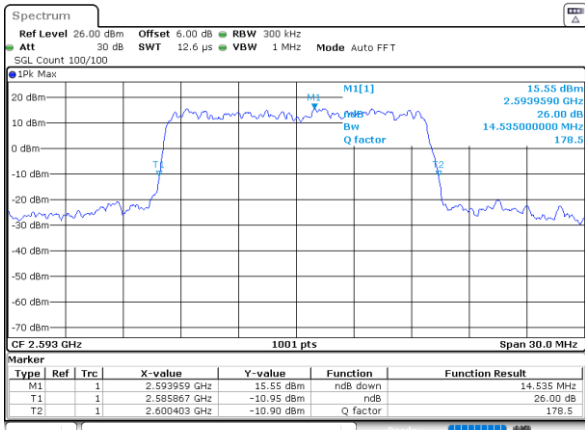
Middle Channel / 10MHz / 16QAM



Date: 5.FEB.2023 15:05:32

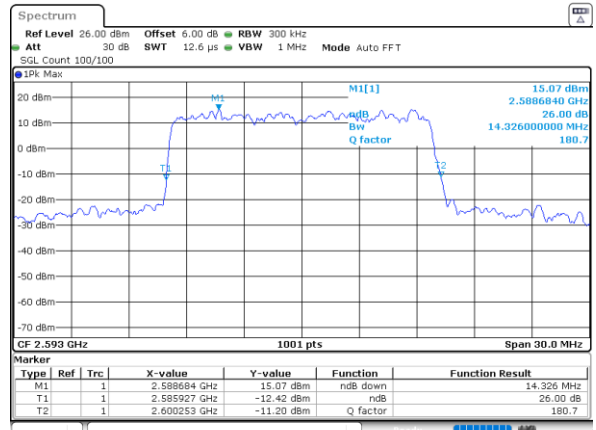
LTE Band 41

Middle Channel / 15MHz / QPSK



Date: 5.FEB.2023 15:06:16

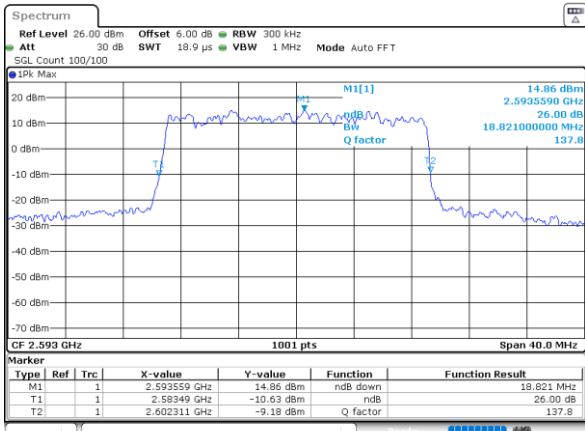
Middle Channel / 15MHz / 16QAM



Date: 5.FEB.2023 15:06:57

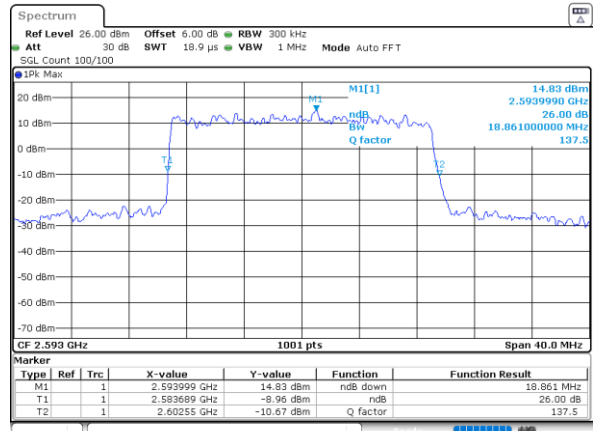
LTE Band 41

Middle Channel / 20MHz / QPSK



Date: 5.FEB.2023 15:08:01

Middle Channel / 20MHz / 16QAM

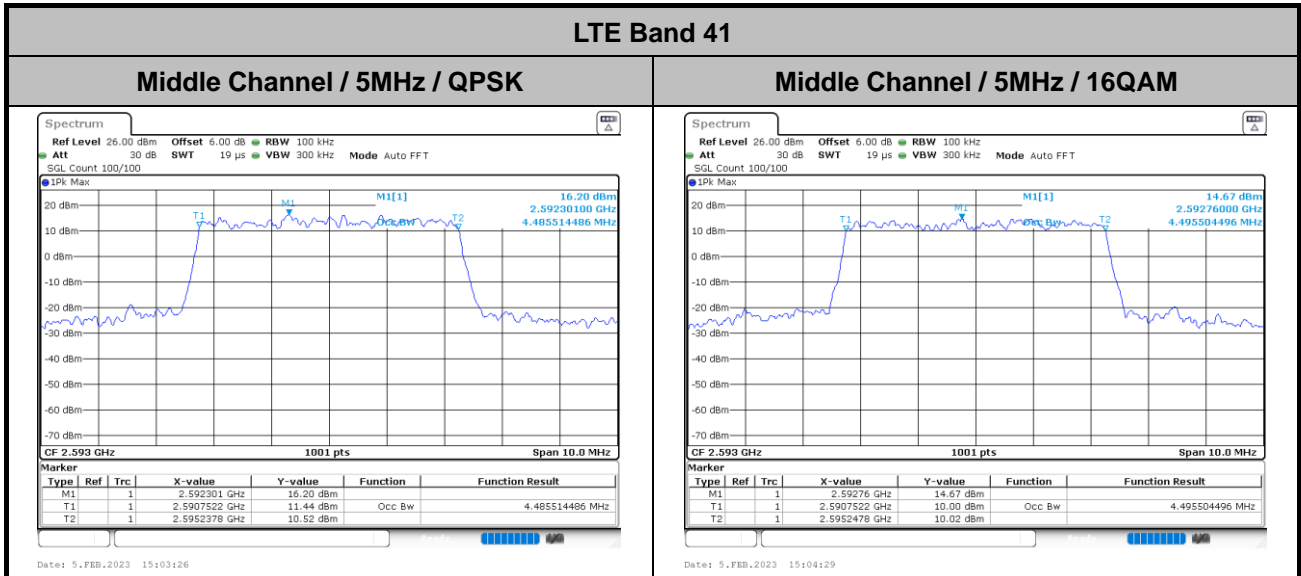


Date: 5.FEB.2023 15:08:22



Occupied Bandwidth

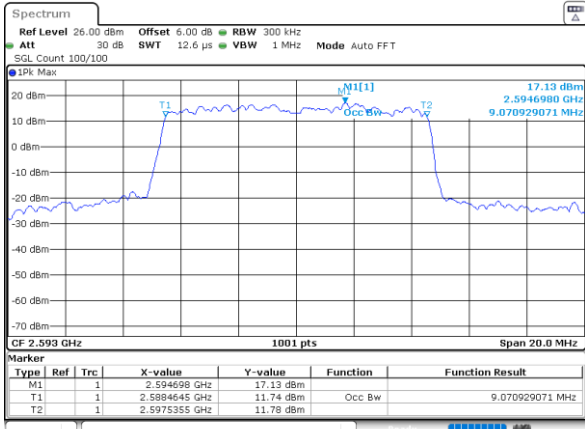
Mode	LTE Band 41 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.49	4.50
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.07	9.03
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	13.40	13.43
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.94	17.86





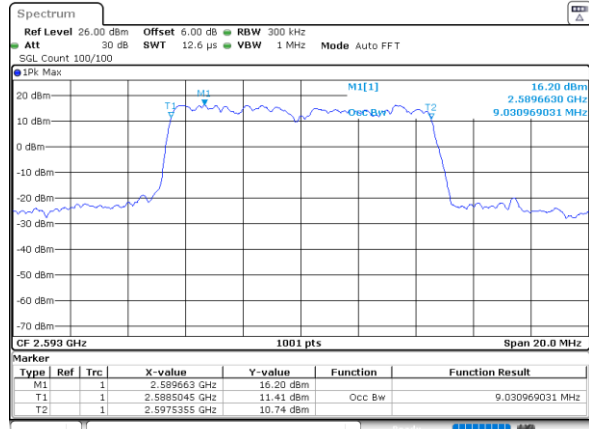
LTE Band 41

Middle Channel / 10MHz / QPSK



Date: 5.FEB.2023 15:04:50

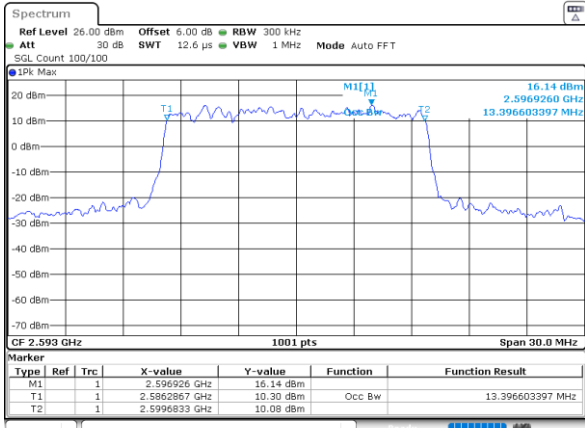
Middle Channel / 10MHz / 16QAM



Date: 5.FEB.2023 15:05:53

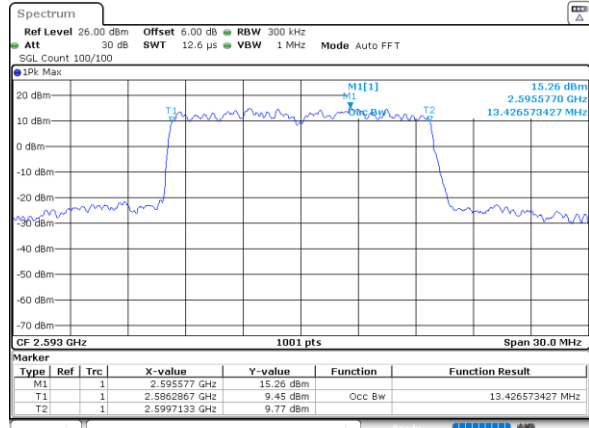
LTE Band 41

Middle Channel / 15MHz / QPSK



Date: 5.FEB.2023 15:06:15

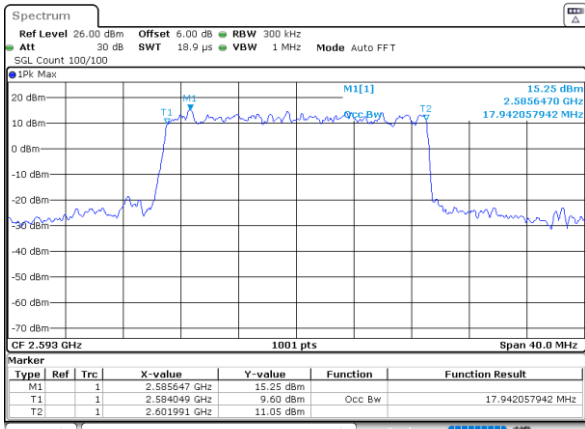
Middle Channel / 15MHz / 16QAM



Date: 5.FEB.2023 15:07:18

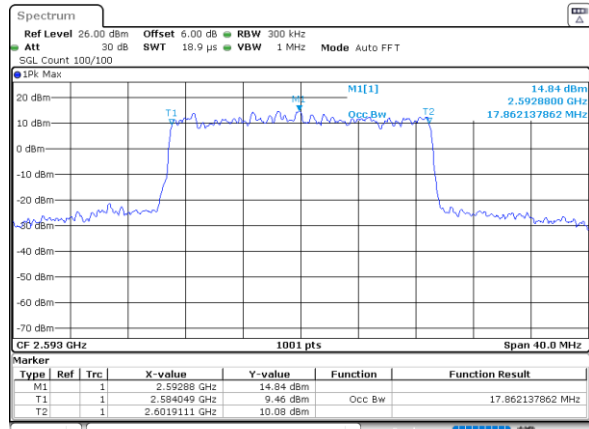
LTE Band 41

Middle Channel / 20MHz / QPSK



Date: 5.FEB.2023 15:07:40

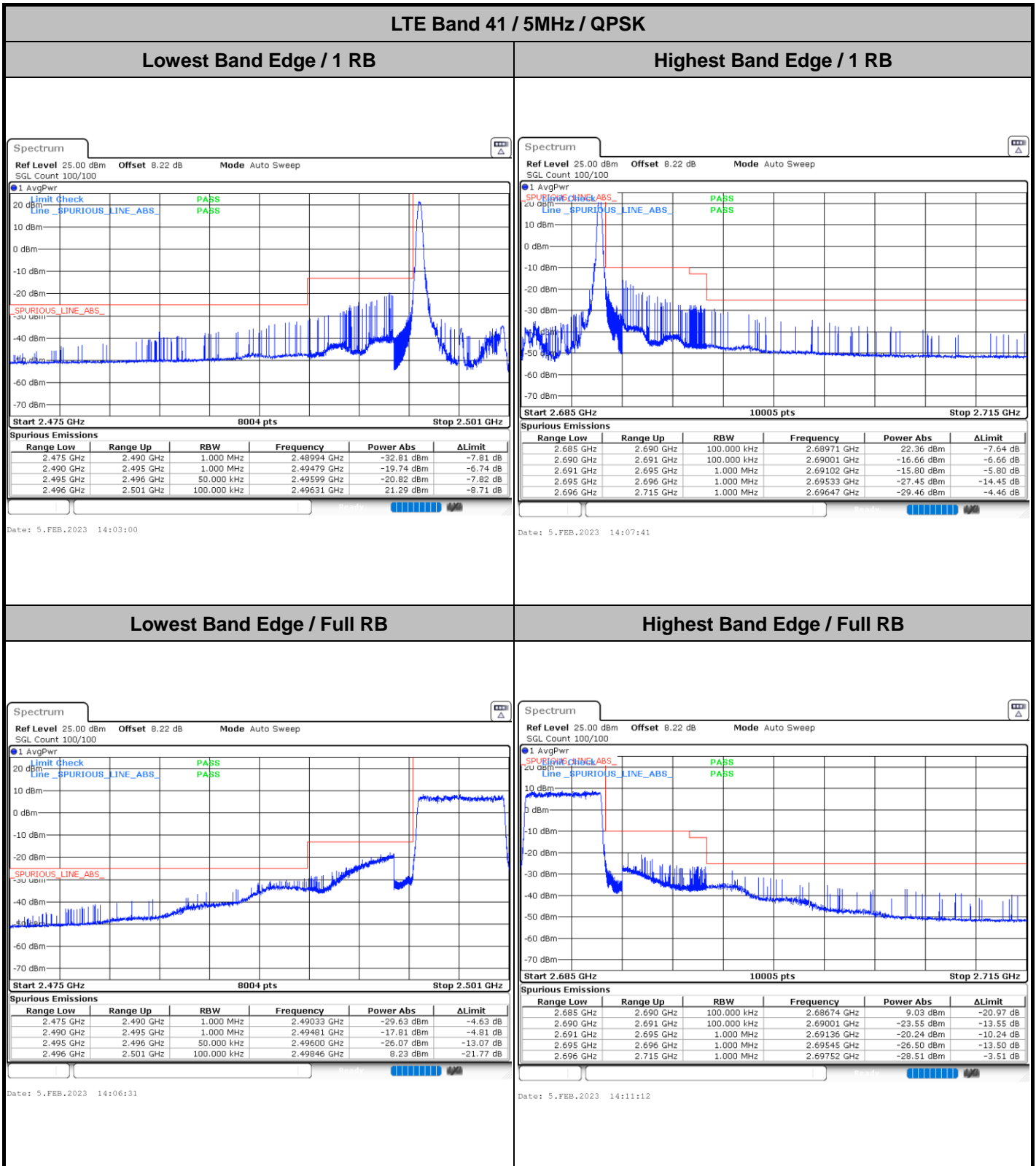
Middle Channel / 20MHz / 16QAM



Date: 5.FEB.2023 15:08:43



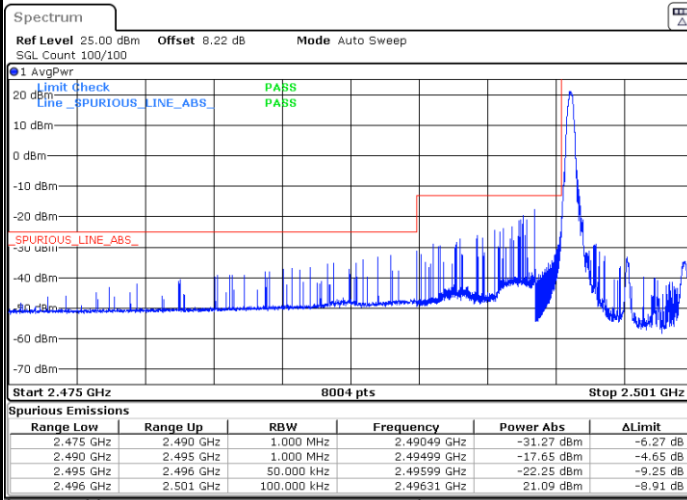
Conducted Band Edge





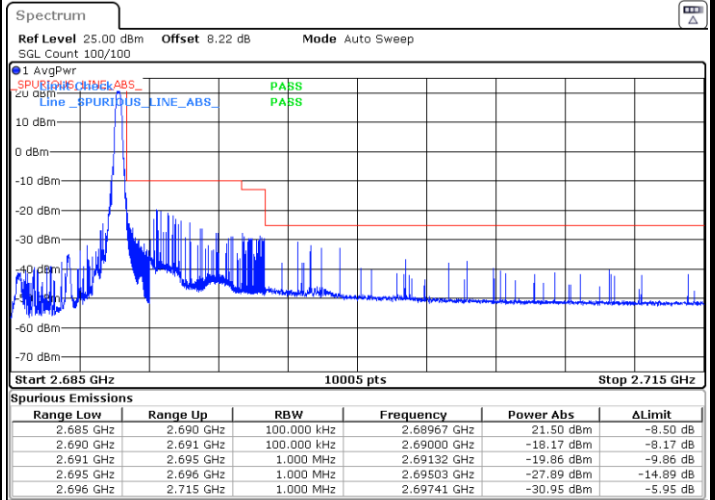
LTE Band 41 / 5MHz / 16QAM

Lowest Band Edge / 1RB



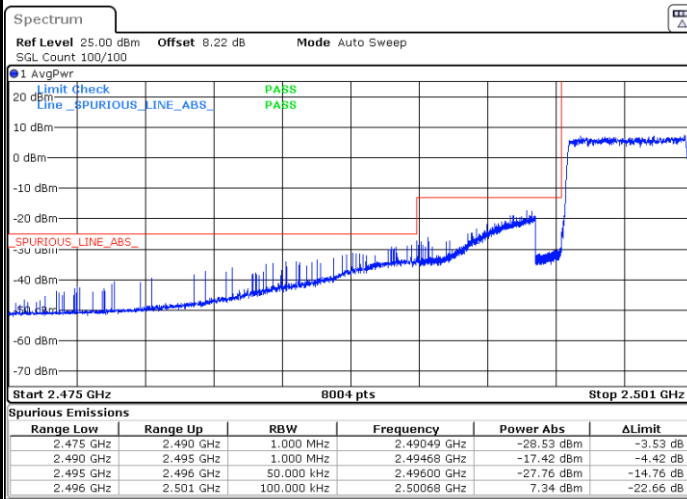
Date: 5.FEB.2023 14:04:10

Highest Band Edge / 1 RB



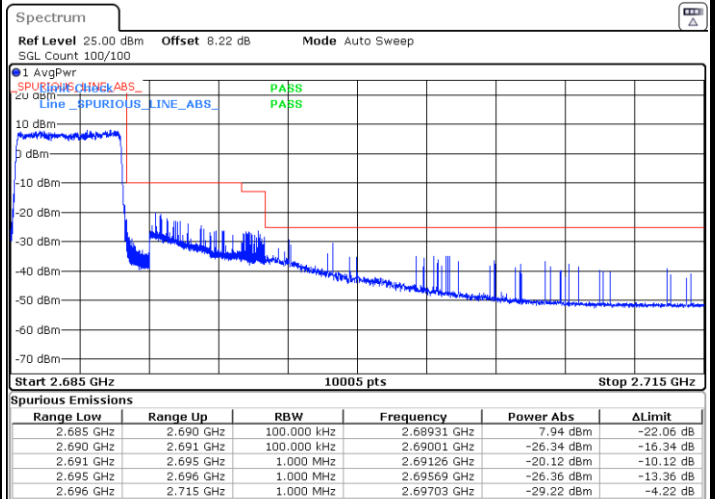
Date: 5.FEB.2023 14:08:51

Lowest Band Edge / Full RB



Date: 5.FEB.2023 14:05:21

Highest Band Edge / Full RB

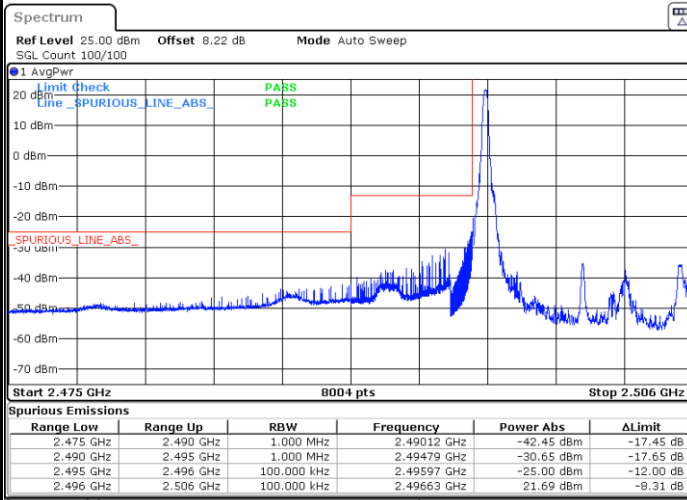


Date: 5.FEB.2023 14:10:01

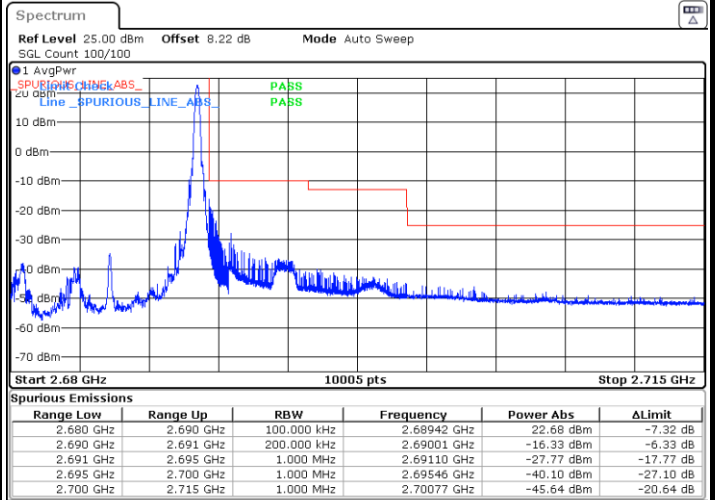


LTE Band 41 / 10MHz / QPSK

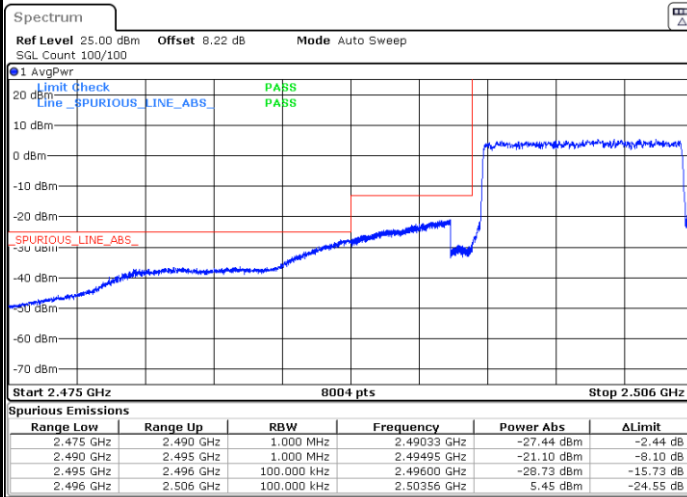
Lowest Band Edge / 1 RB



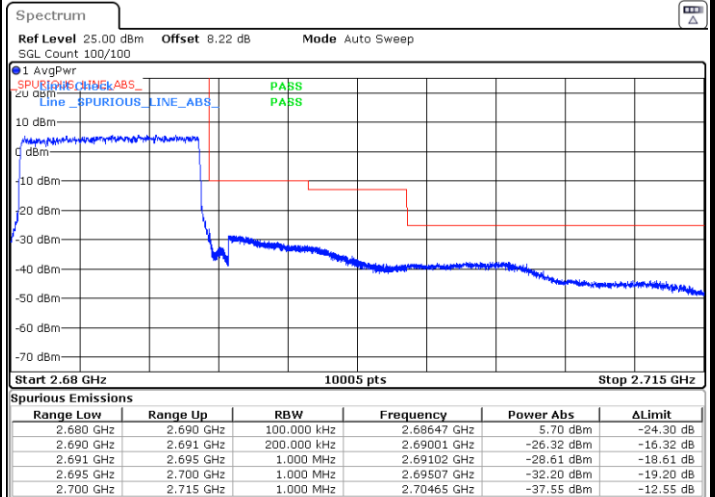
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



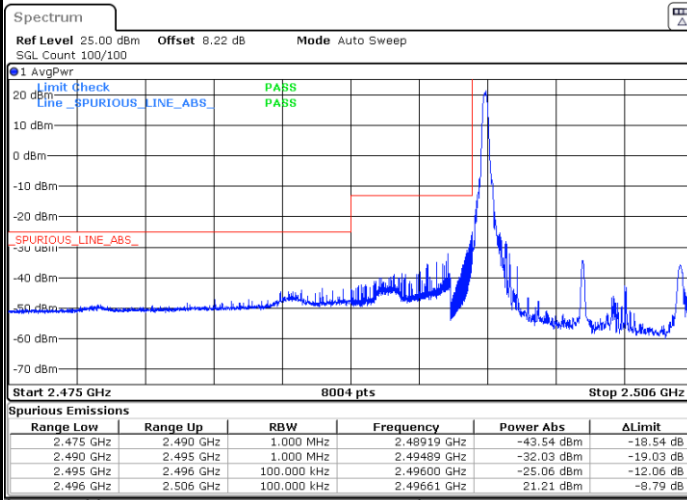
Highest Band Edge / Full RB





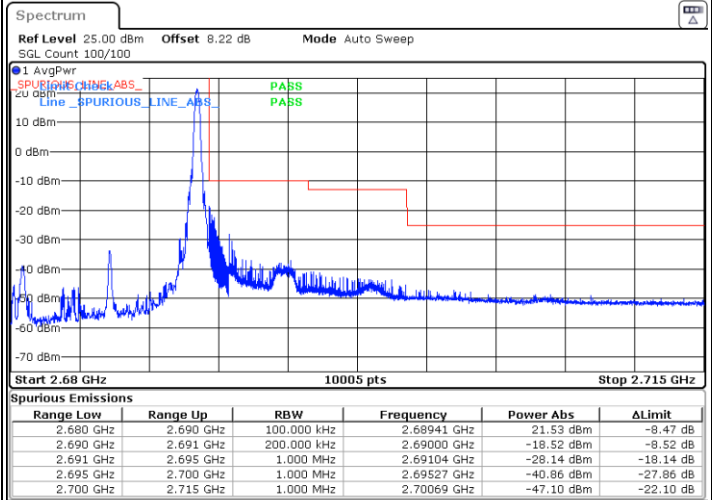
LTE Band 41 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



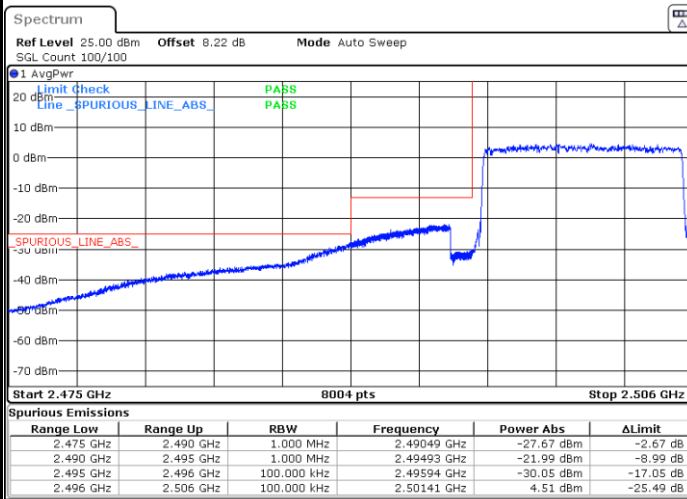
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Highest Band Edge / 1 RB



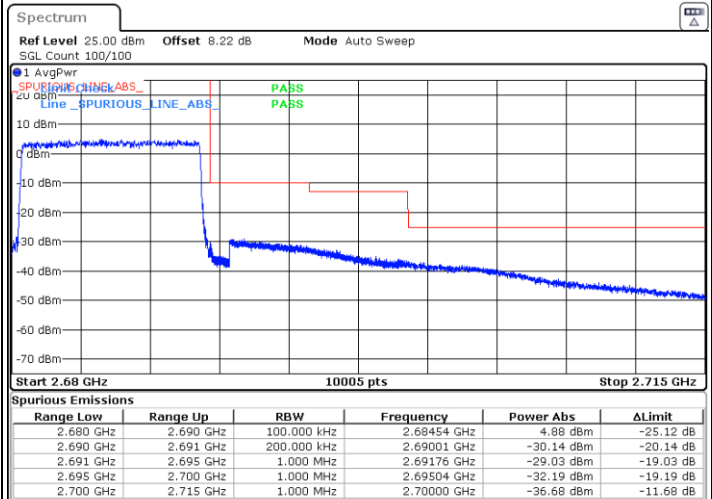
Date: 5.FEB.2023 14:22:14

Lowest Band Edge / Full RB



Date: 5.FEB.2023 14:18:43

Highest Band Edge / Full RB



Date: 5.FEB.2023 14:23:24