



LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



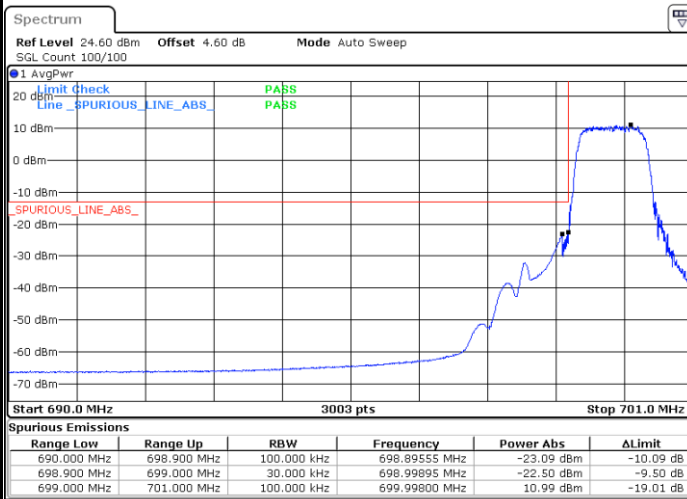
Date: 17.JAN.2023 22:01:41

Highest Band Edge / 1 RB



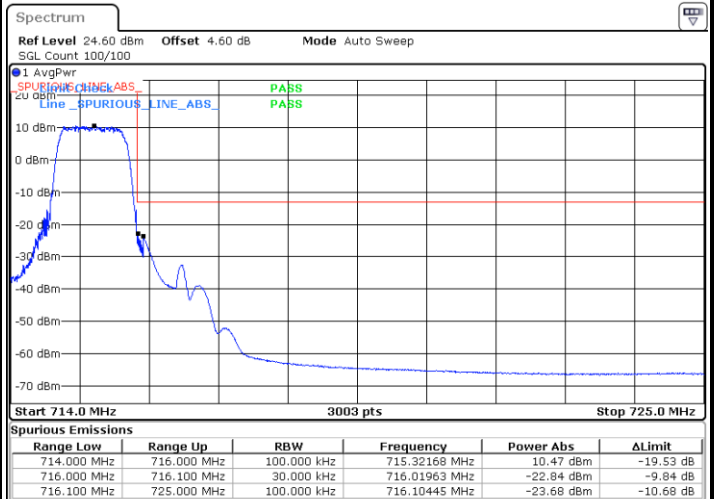
Date: 17.JAN.2023 22:12:32

Lowest Band Edge / Full RB



Date: 17.JAN.2023 22:03:22

Highest Band Edge / Full RB

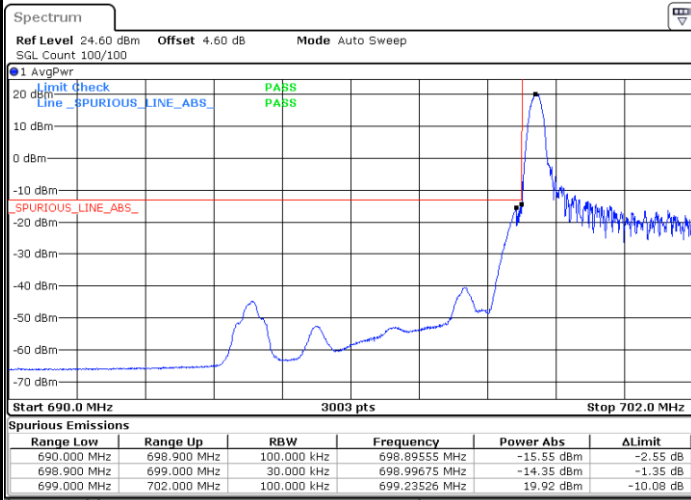


Date: 17.JAN.2023 22:14:12



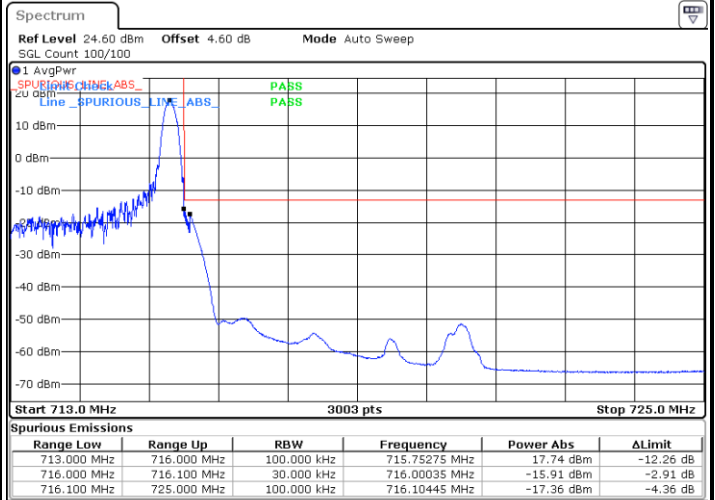
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



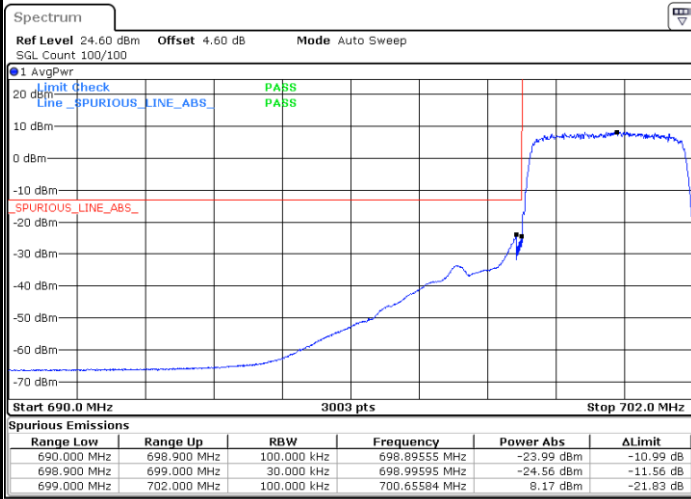
Date: 17.JAN.2023 22:19:44

Highest Band Edge / 1 RB



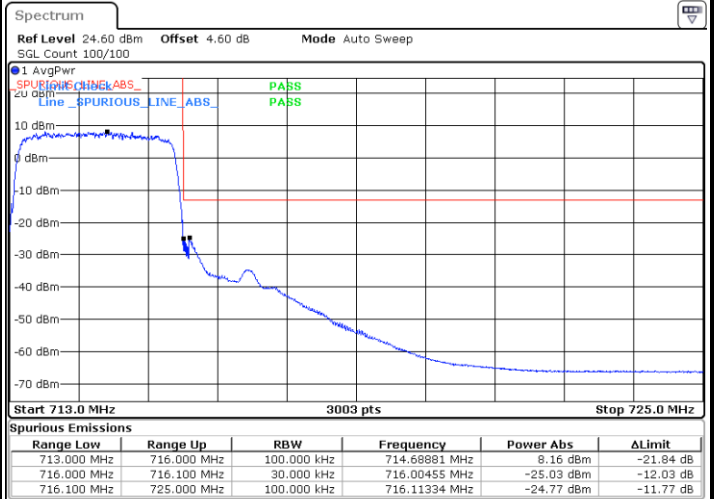
Date: 17.JAN.2023 22:31:32

Lowest Band Edge / Full RB



Date: 17.JAN.2023 22:25:43

Highest Band Edge / Full RB

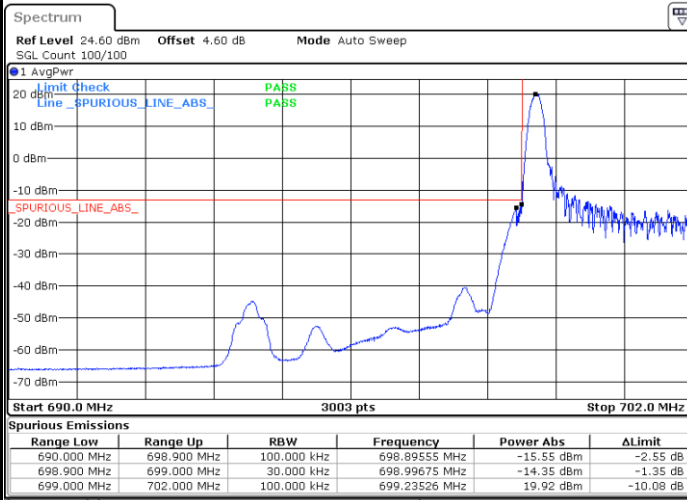


Date: 17.JAN.2023 22:36:32



LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



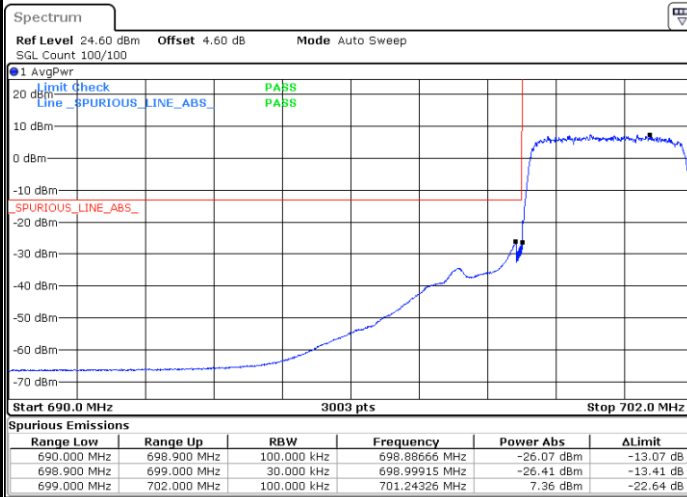
Date: 17.JAN.2023 22:19:44

Highest Band Edge / 1 RB



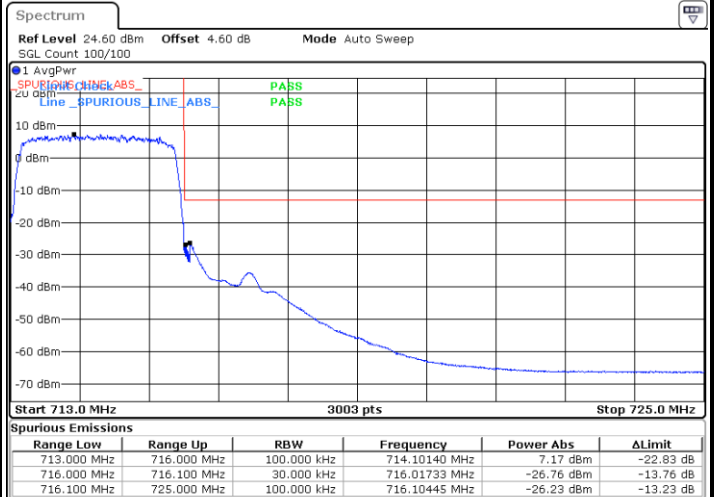
Date: 17.JAN.2023 22:33:12

Lowest Band Edge / Full RB



Date: 17.JAN.2023 22:24:03

Highest Band Edge / Full RB

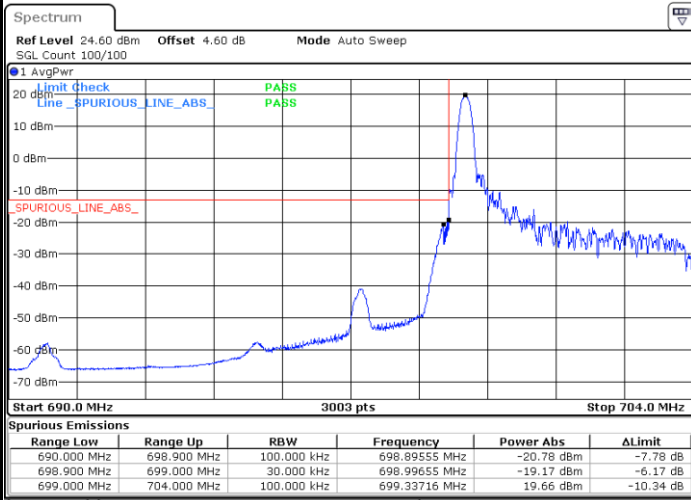


Date: 17.JAN.2023 22:34:52



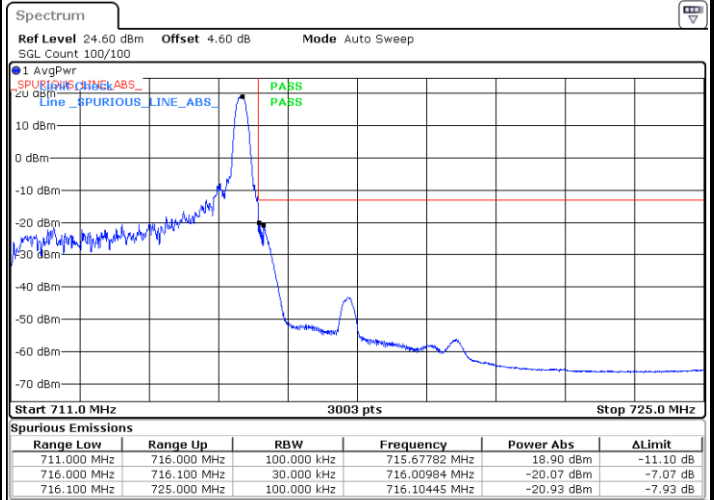
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



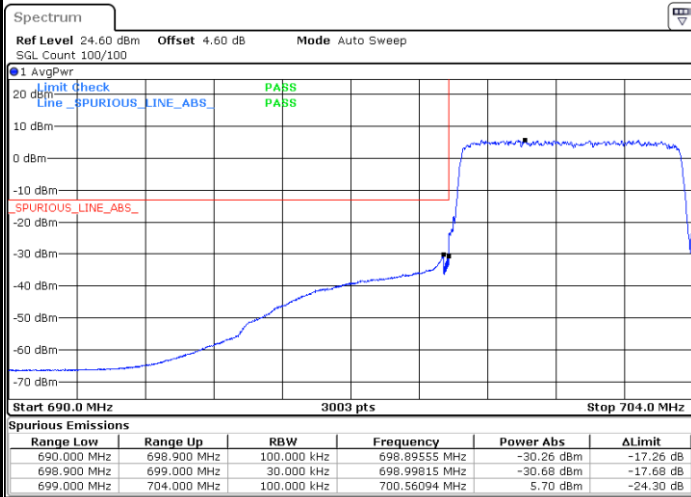
Date: 17.JAN.2023 22:39:34

Highest Band Edge / 1 RB



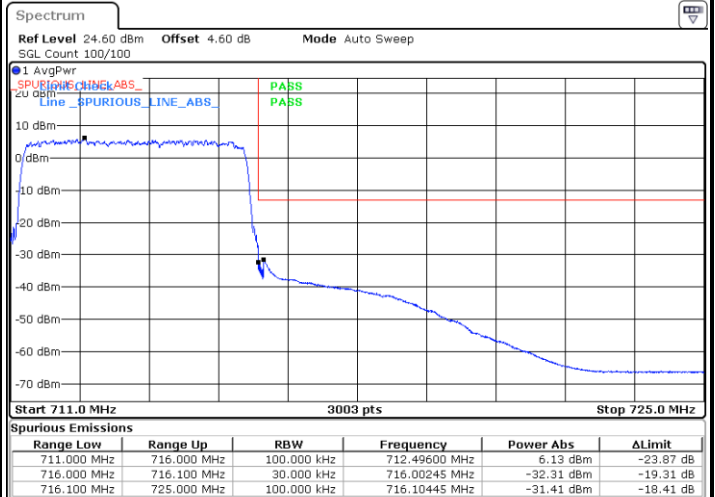
Date: 17.JAN.2023 22:50:23

Lowest Band Edge / Full RB



Date: 17.JAN.2023 22:44:34

Highest Band Edge / Full RB

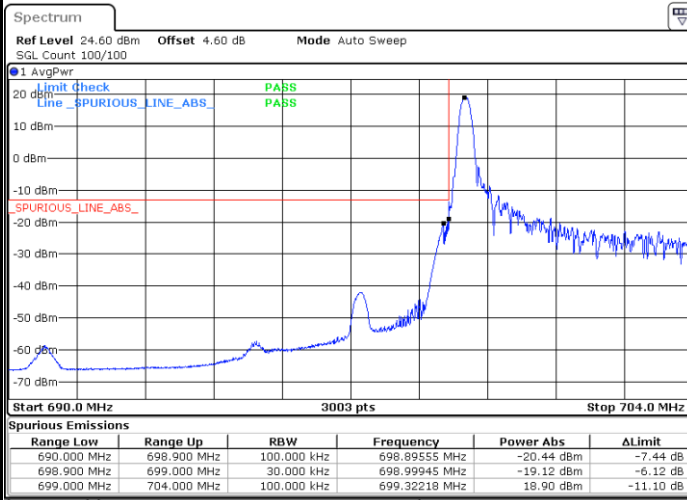


Date: 17.JAN.2023 22:55:23



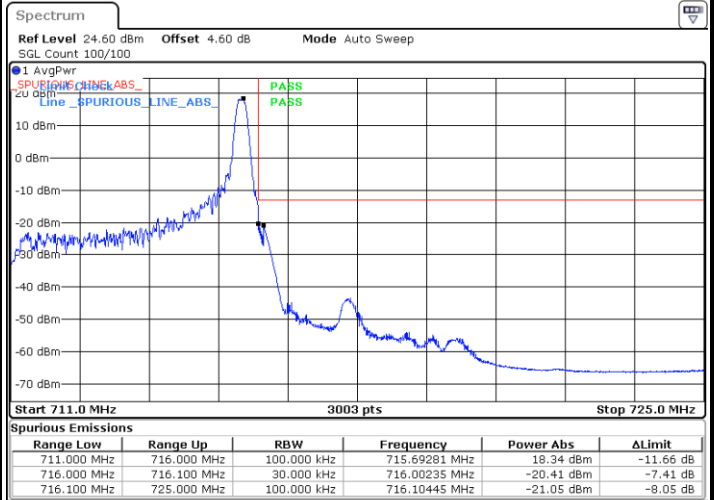
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



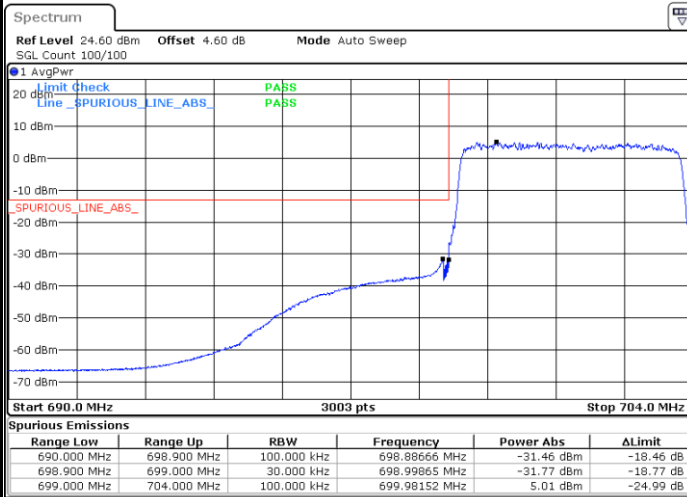
Date: 17.JAN.2023 22:41:13

Highest Band Edge / 1 RB



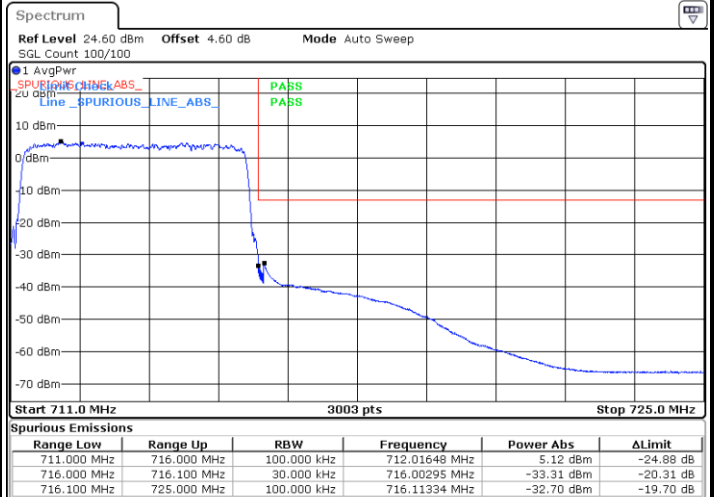
Date: 17.JAN.2023 22:52:03

Lowest Band Edge / Full RB



Date: 17.JAN.2023 22:42:54

Highest Band Edge / Full RB

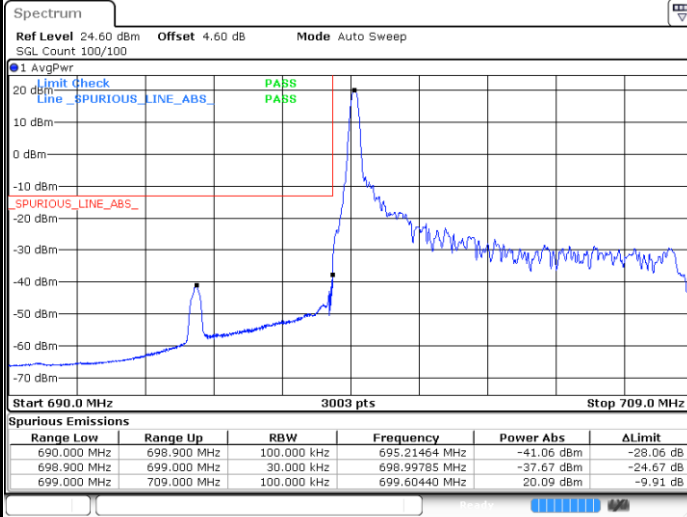


Date: 17.JAN.2023 22:53:43



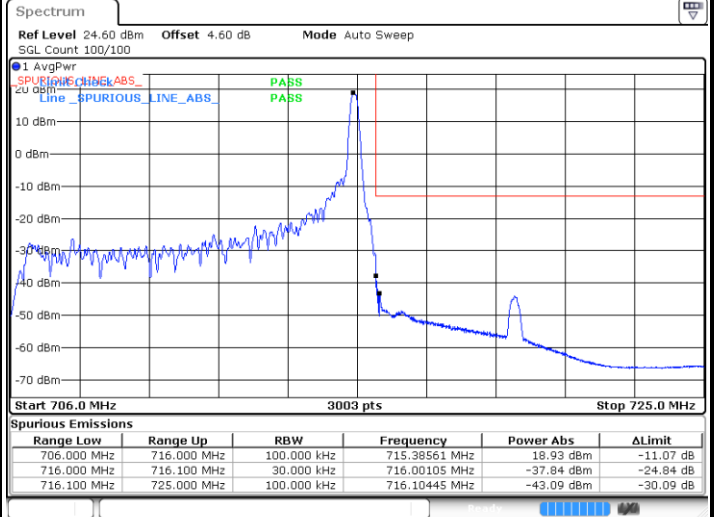
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



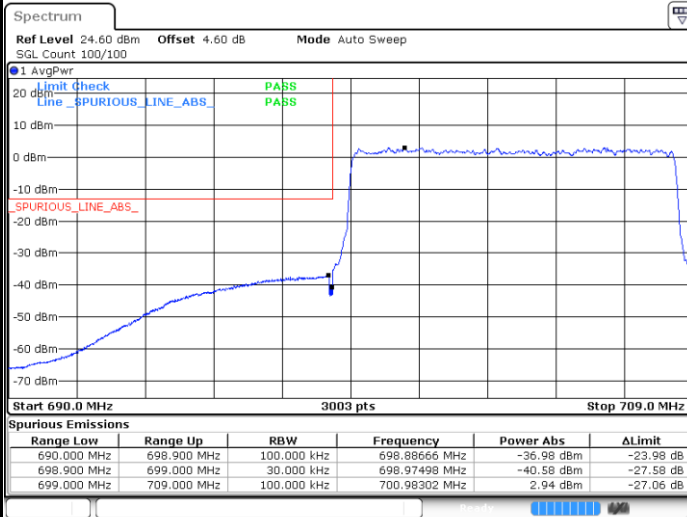
Date: 17.JAN.2023 22:58:25

Highest Band Edge / 1 RB



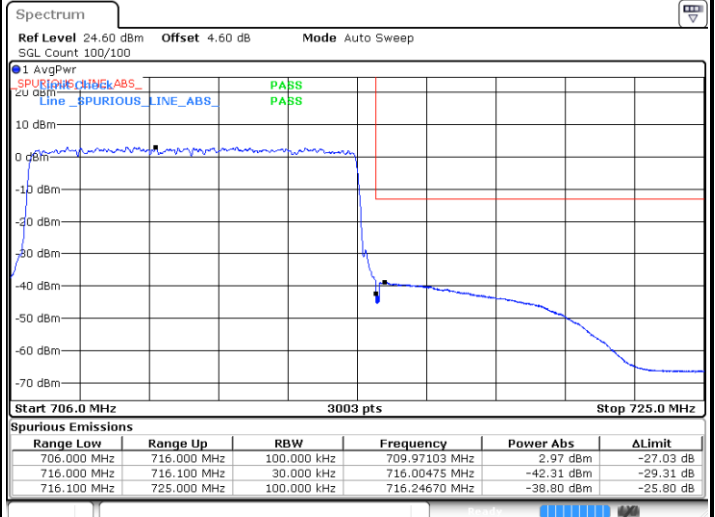
Date: 17.JAN.2023 23:06:07

Lowest Band Edge / Full RB



Date: 17.JAN.2023 23:01:45

Highest Band Edge / Full RB

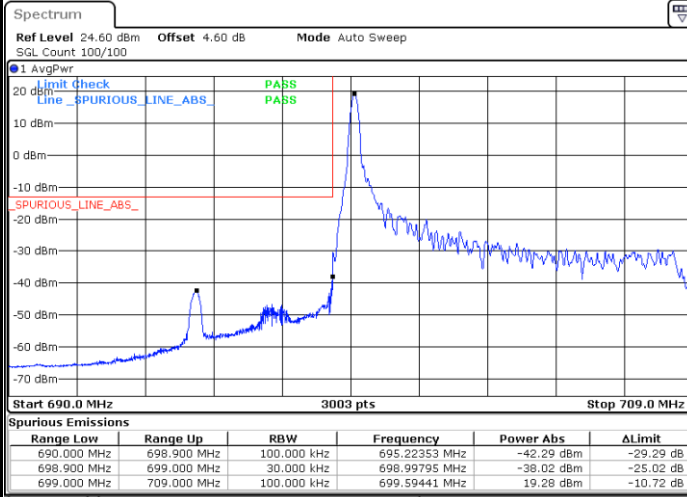


Date: 17.JAN.2023 23:09:27



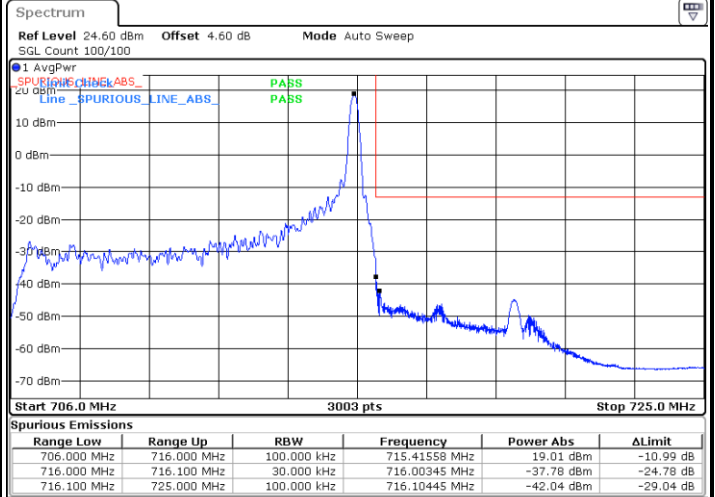
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



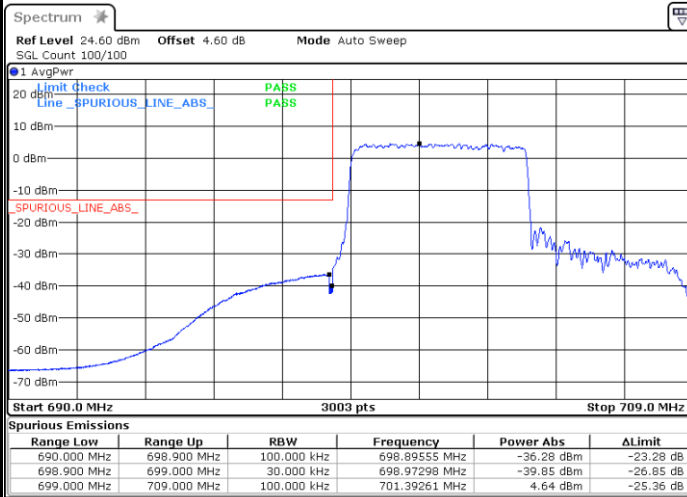
Date: 17.JAN.2023 23:22:07

Highest Band Edge / 1 RB



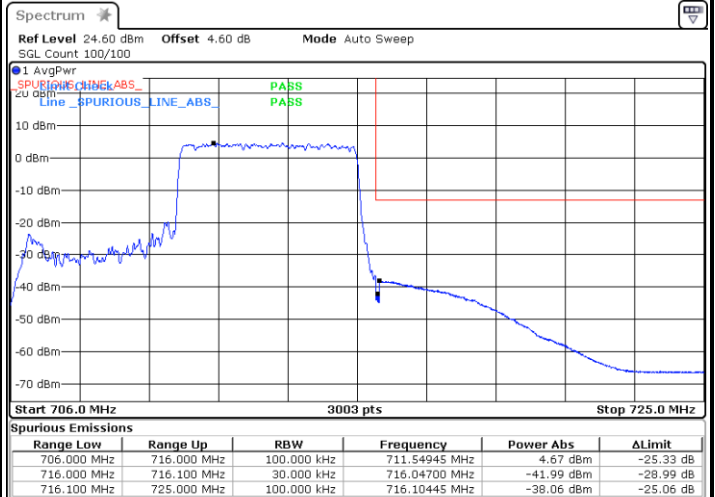
Date: 17.JAN.2023 23:07:47

Lowest Band Edge / Full RB



Date: 17.JAN.2023 23:23:18

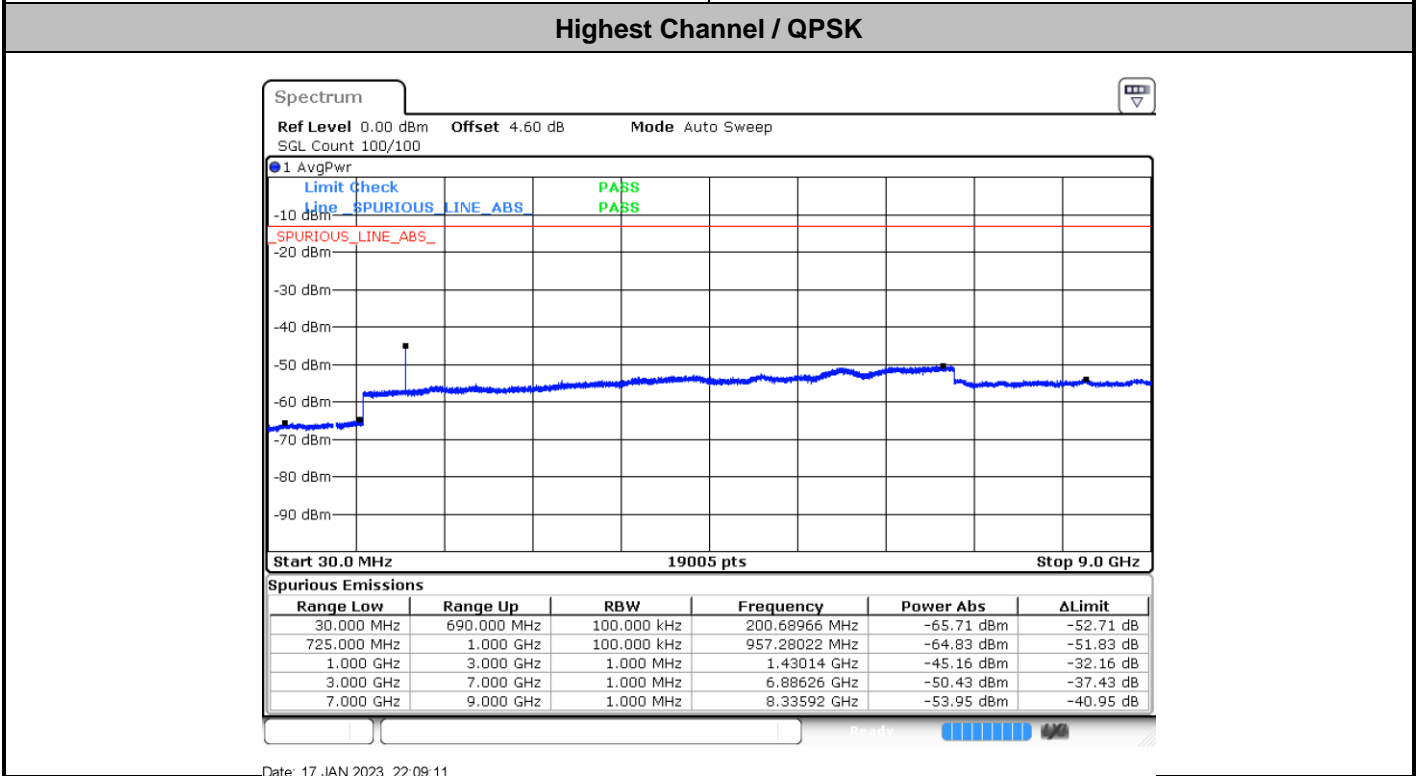
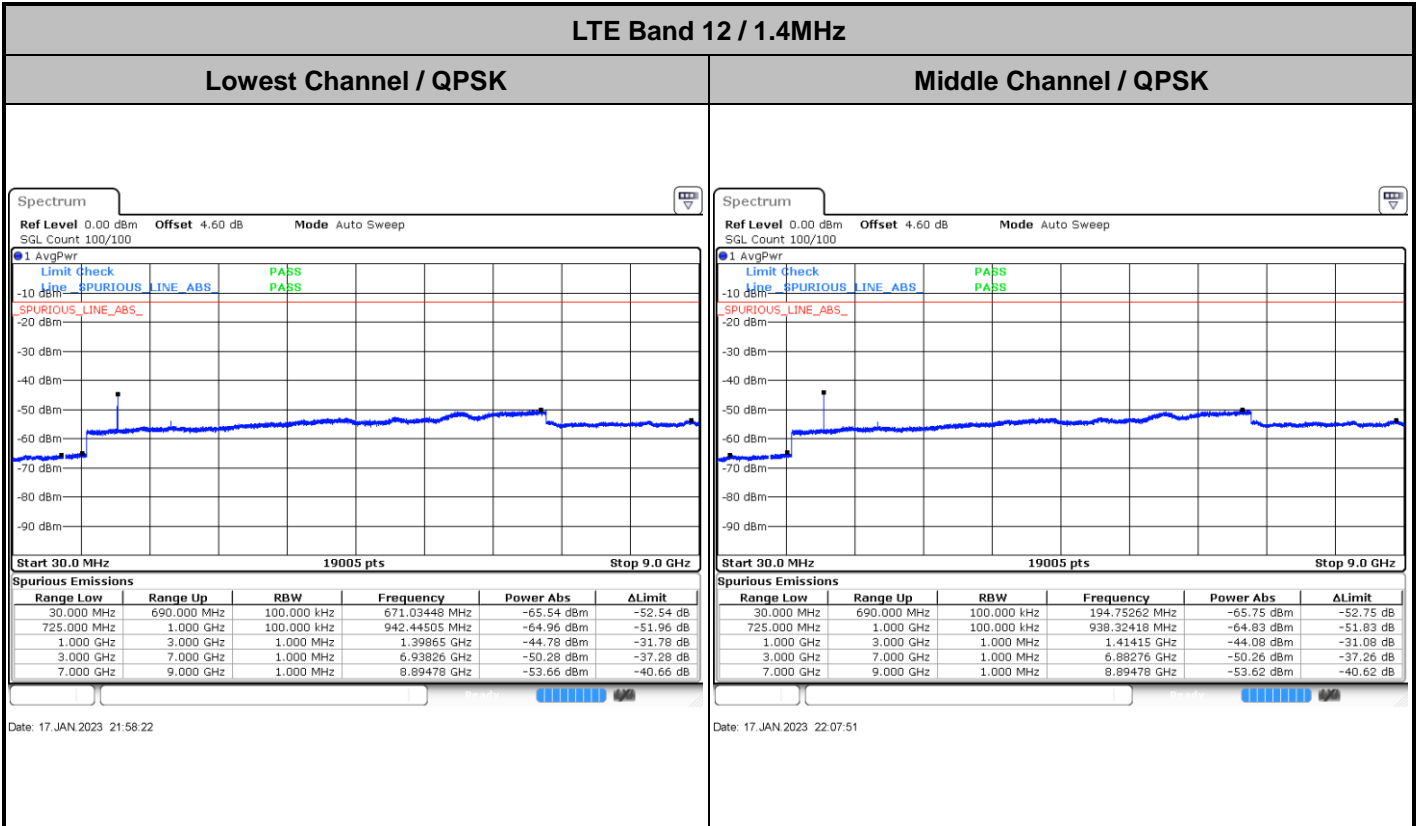
Highest Band Edge / Full RB



Date: 17.JAN.2023 23:24:35



Conducted Spurious Emission

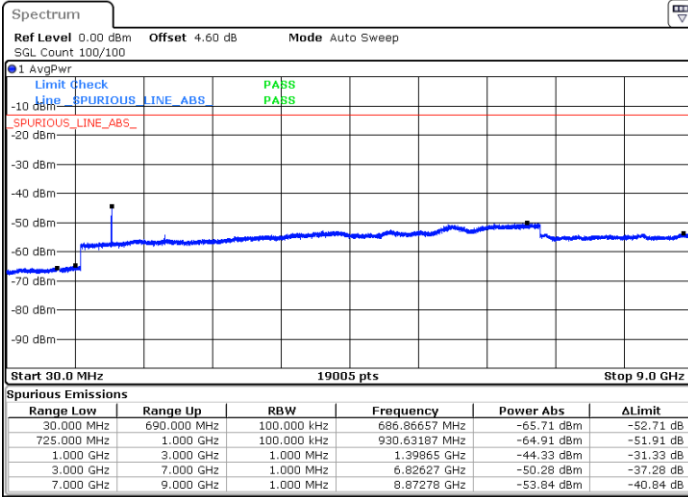




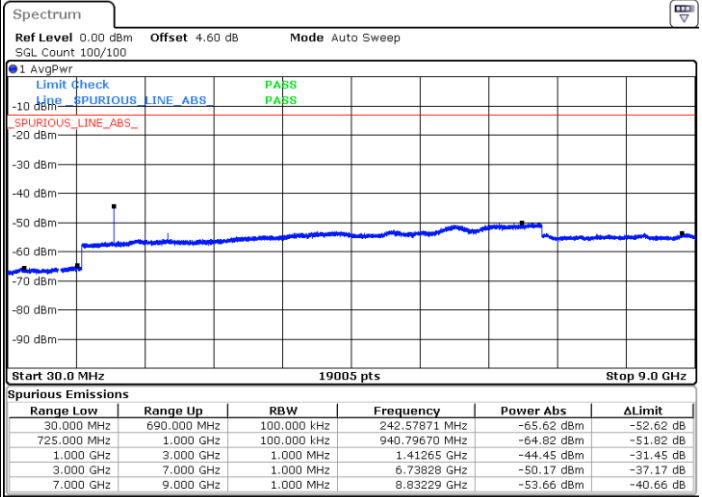
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK

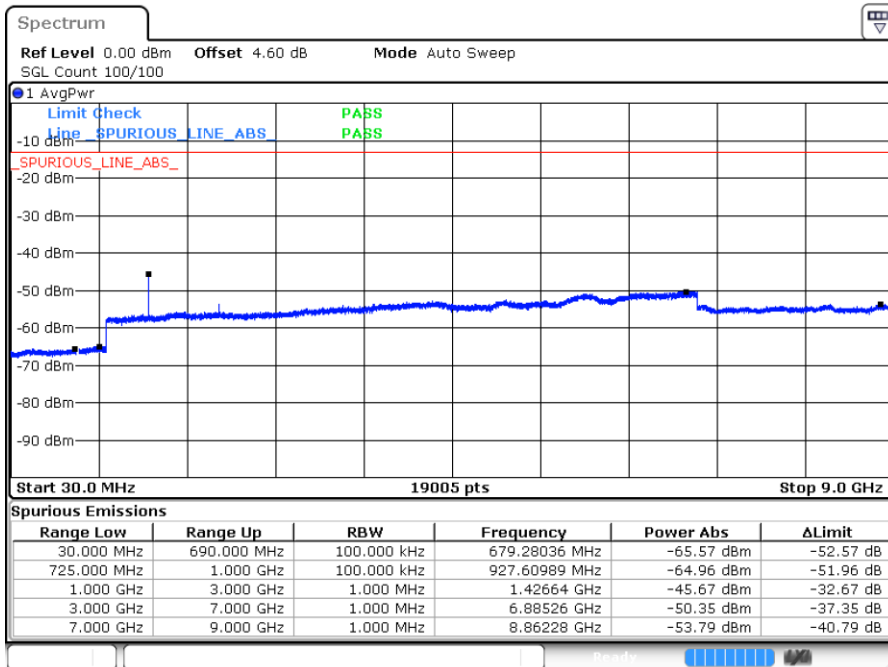


Date: 17 JAN 2023 22:17:14



Date: 17 JAN 2023 22:28:31

Highest Channel / QPSK



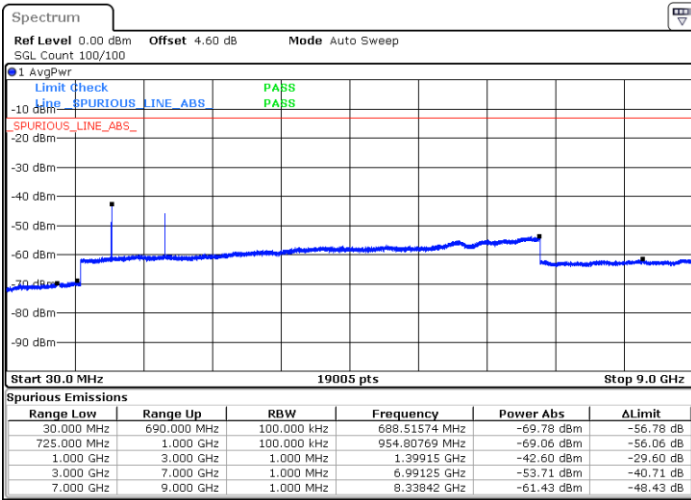
Date: 17 JAN 2023 22:29:51



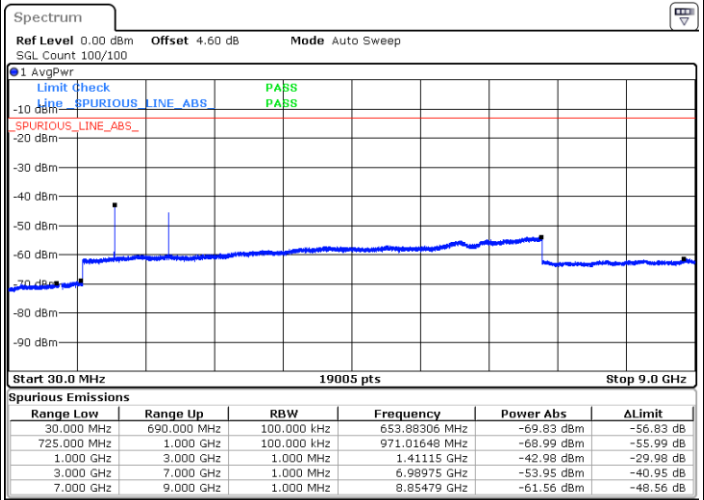
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

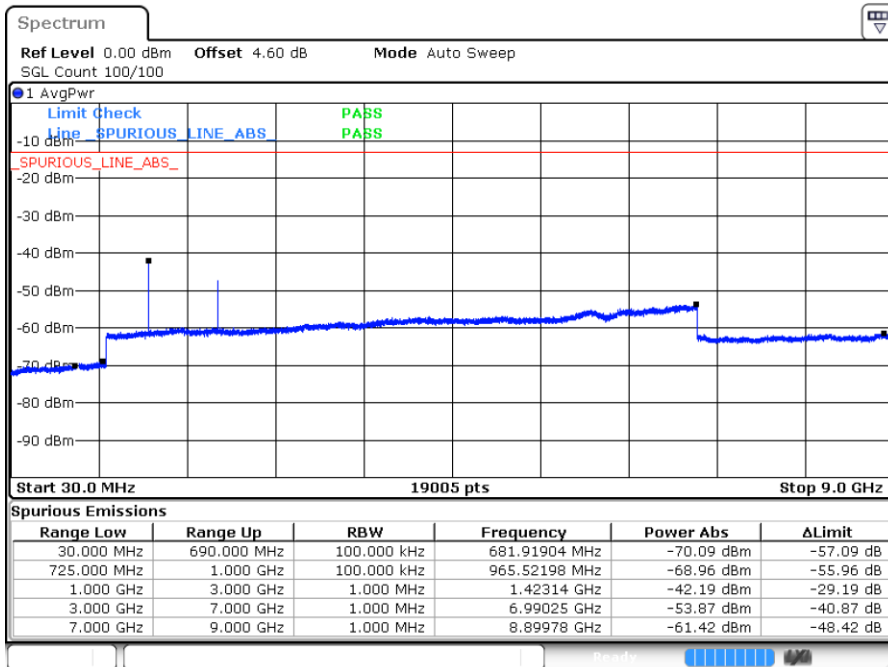


Date: 17 JAN 2023 22:37:54



Date: 17 JAN 2023 22:47:22

Highest Channel / QPSK



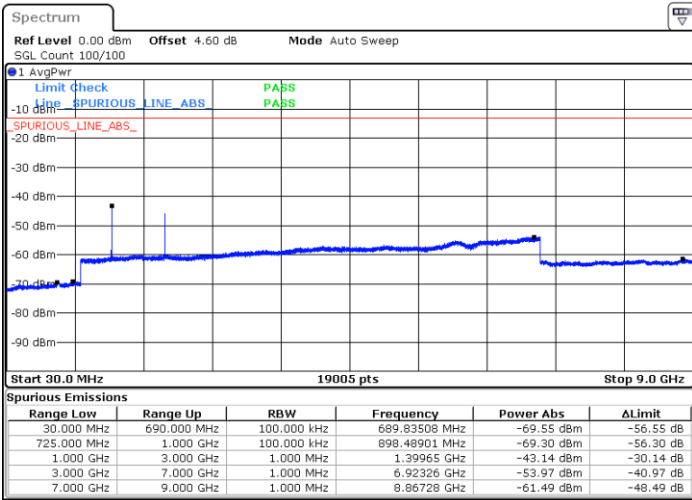
Date: 17 JAN 2023 22:48:42



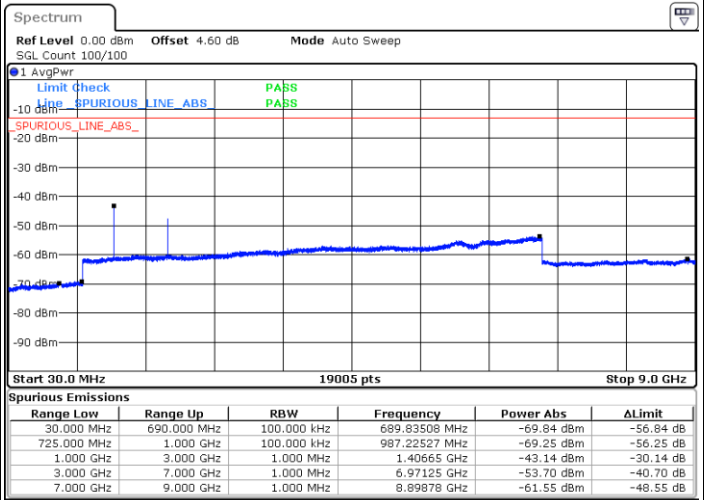
LTE Band 12 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK

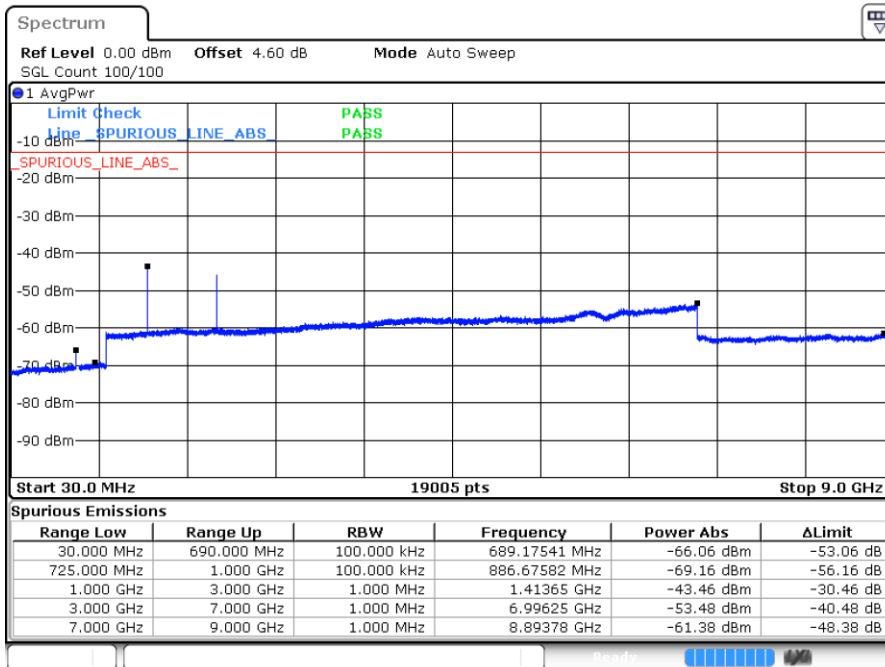


Date: 17 JAN 2023 22:56:44



Date: 17 JAN 2023 23:03:06

Highest Channel / QPSK



Date: 17 JAN 2023 23:04:27



Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0042	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0035	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0018	
-20	Normal Voltage	0.0053	
-30	Normal Voltage	0.0042	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0013	
20	End Point	0.0006	

Note:

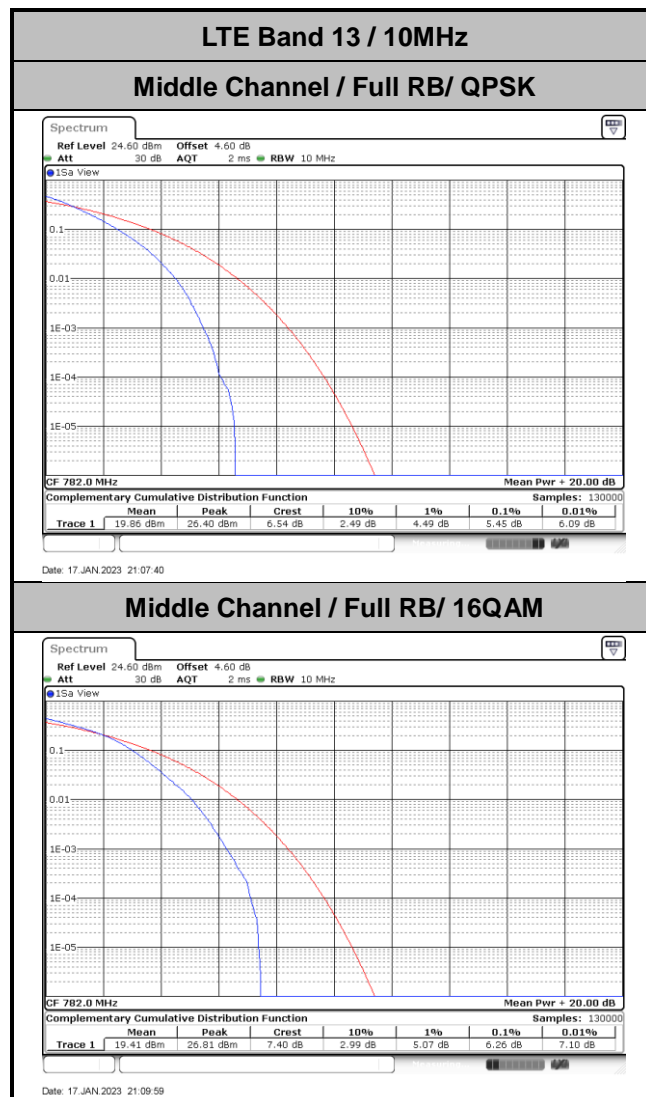
1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

Peak-to-Average Ratio

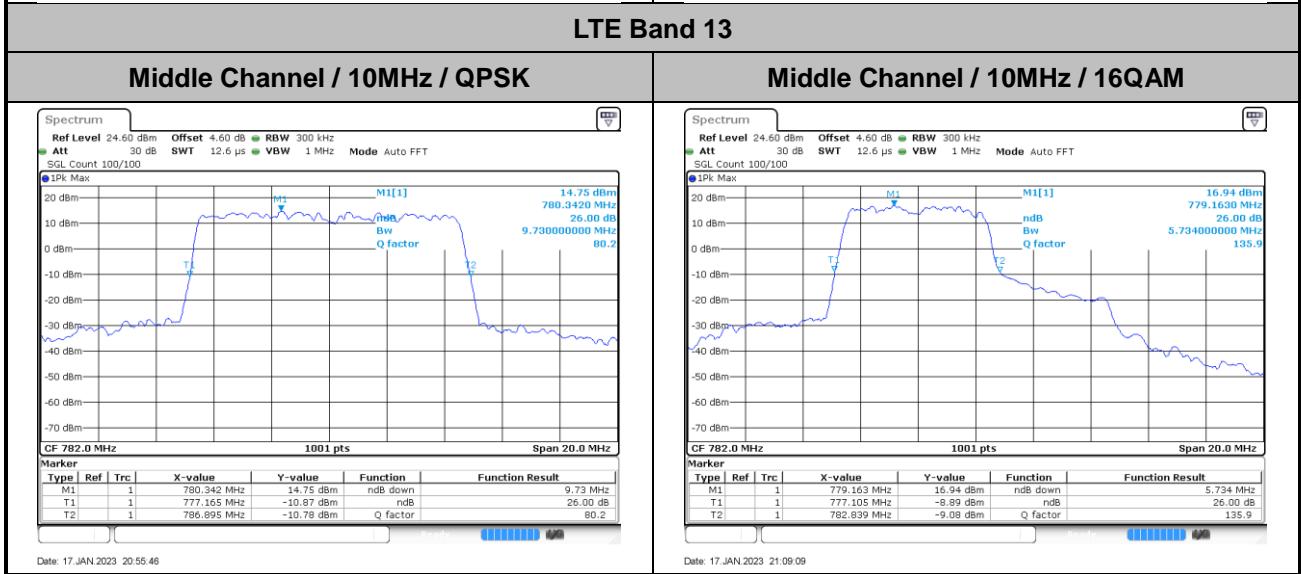
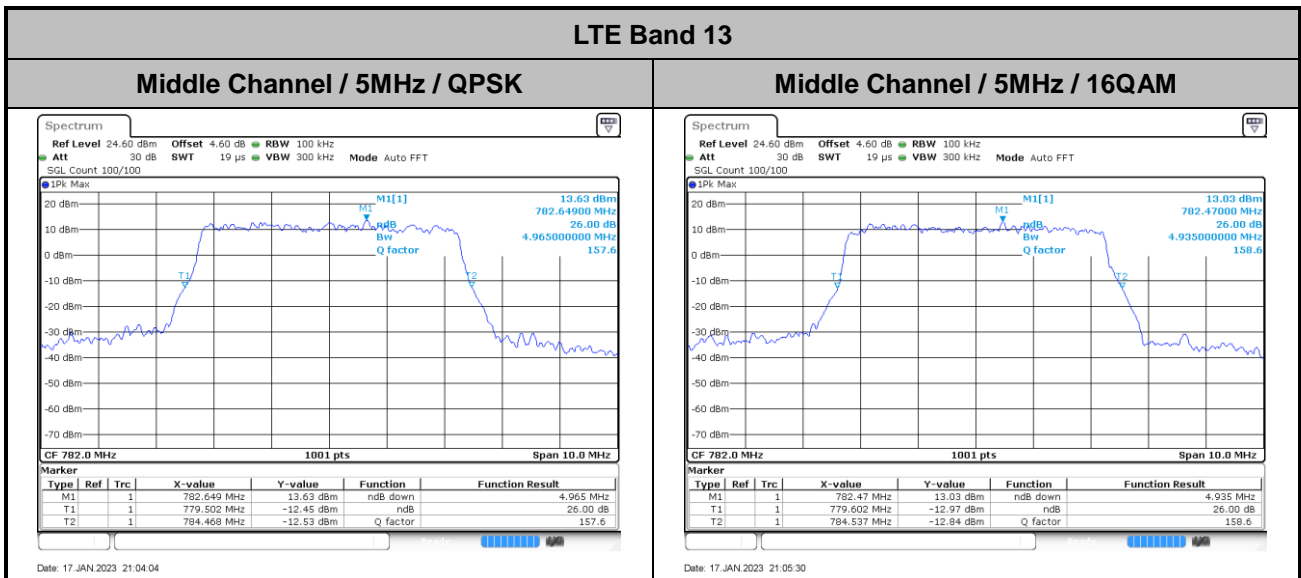
Mode	LTE Band 13 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	5.45	6.26	PASS





26dB Bandwidth

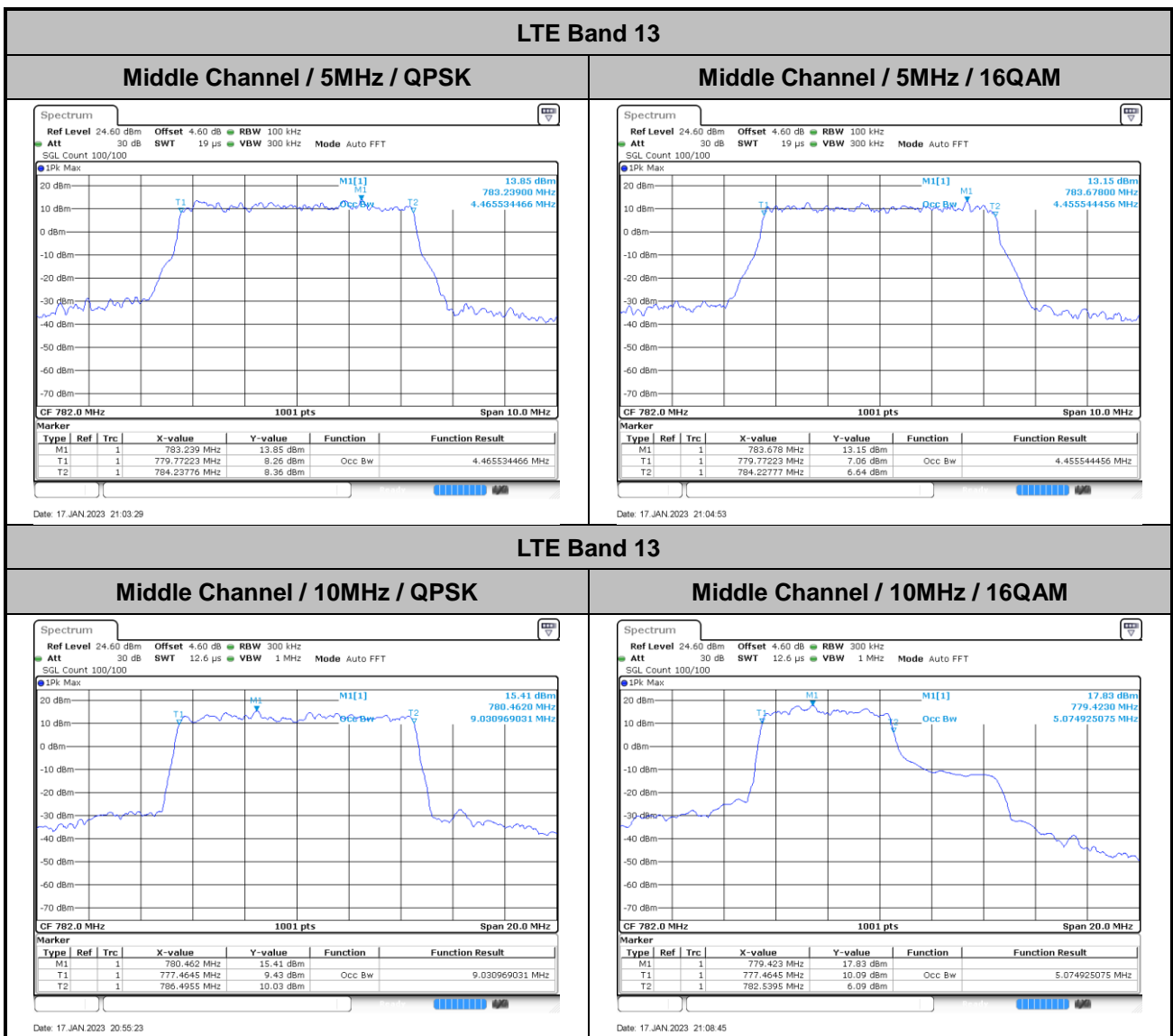
Mode	LTE Band 13 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.97	4.94
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.73	5.73





Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.47	4.46
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.03	5.07

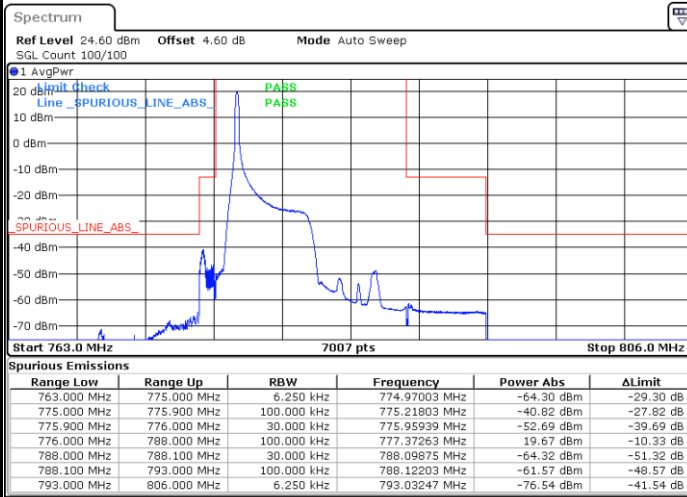




Conducted Band Edge

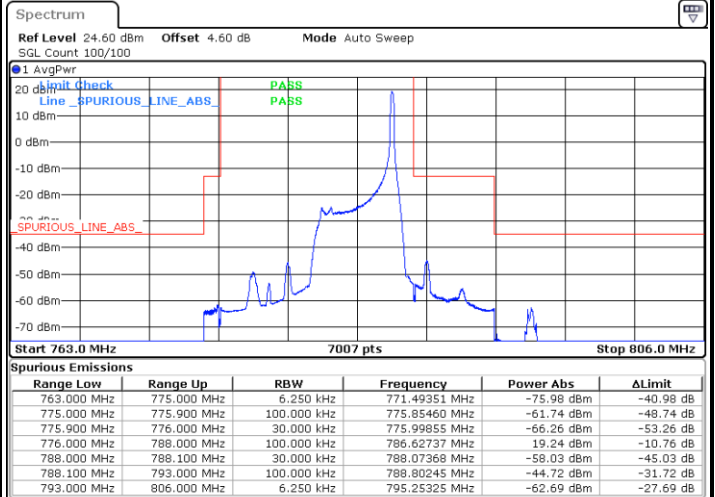
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB



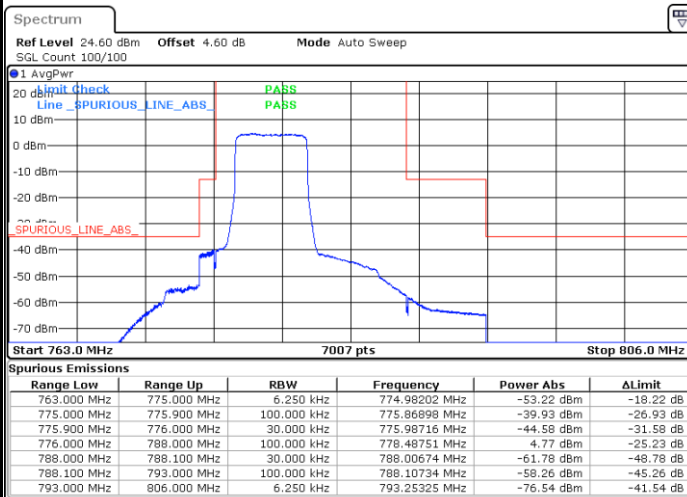
Date: 17.JAN.2023 20:29:03

Highest Band Edge / 1 RB



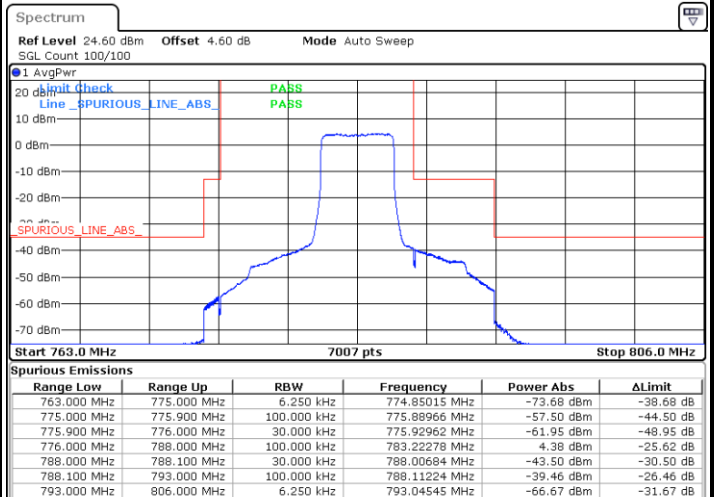
Date: 17.JAN.2023 20:39:03

Lowest Band Edge / Full RB



Date: 17.JAN.2023 20:34:33

Highest Band Edge / Full RB



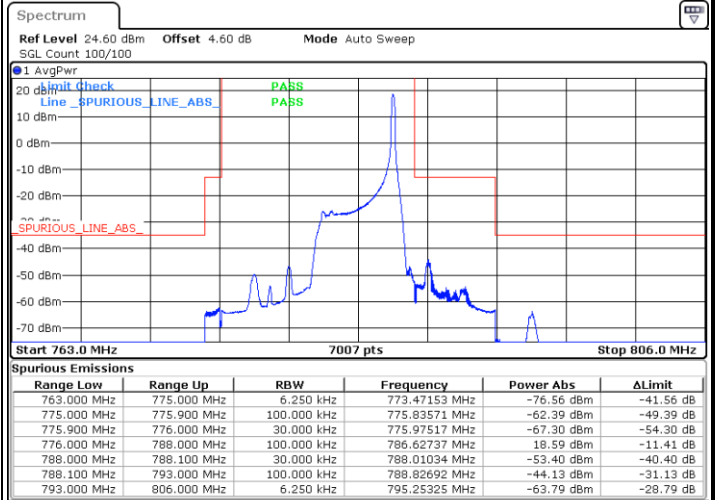
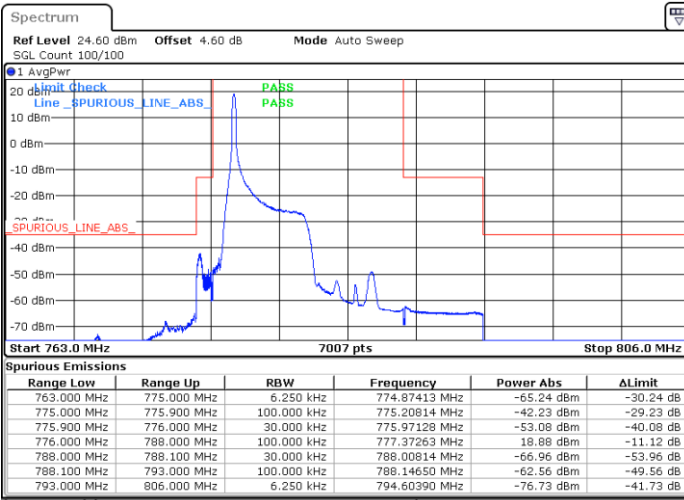
Date: 17.JAN.2023 20:44:34



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RB

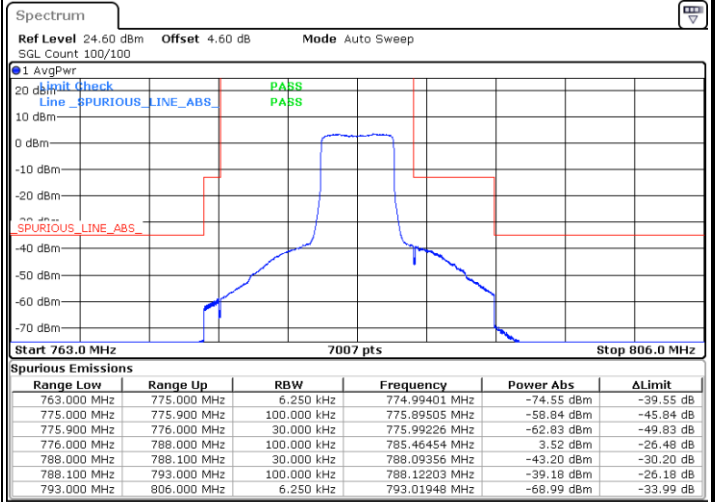
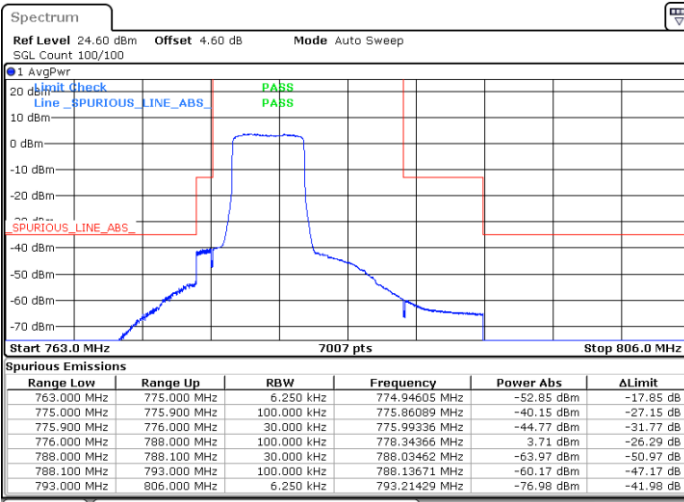


Date: 17. JAN 2023 20:30:53

Date: 17. JAN 2023 20:40:53

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 17. JAN 2023 20:32:43

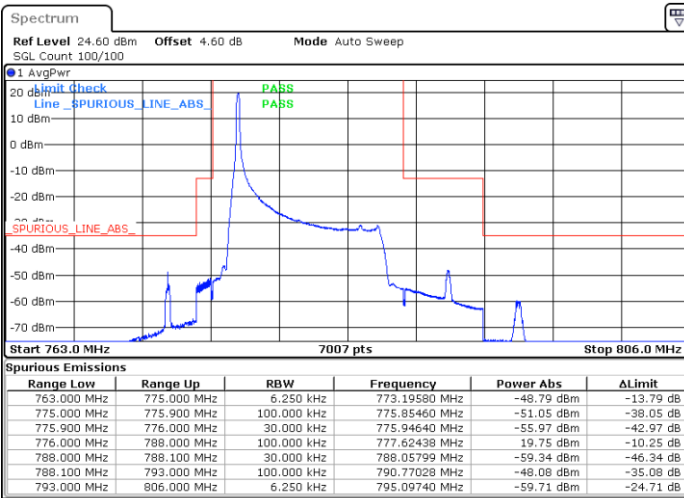
Date: 17. JAN 2023 20:42:44



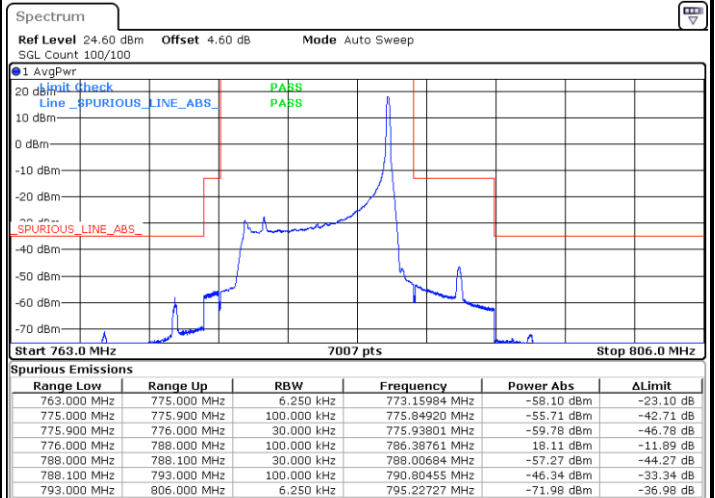
LTE Band 13 / 10MHz / QPSK

middle Band Edge / 1 RB

middle Band Edge / 1 RB

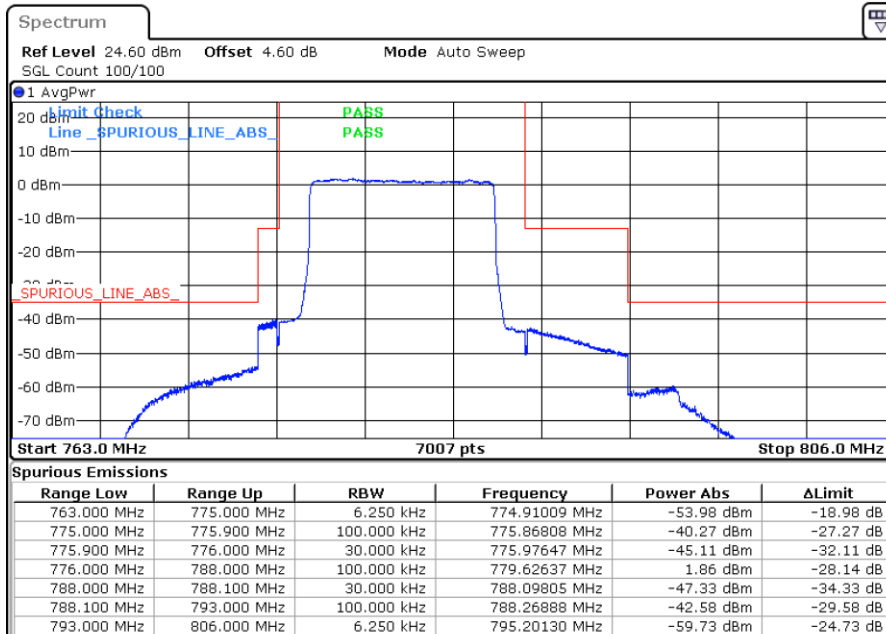


Date: 17. JAN 2023 20:47:44



Date: 17. JAN 2023 20:53:12

middle Band Edge / Full RB



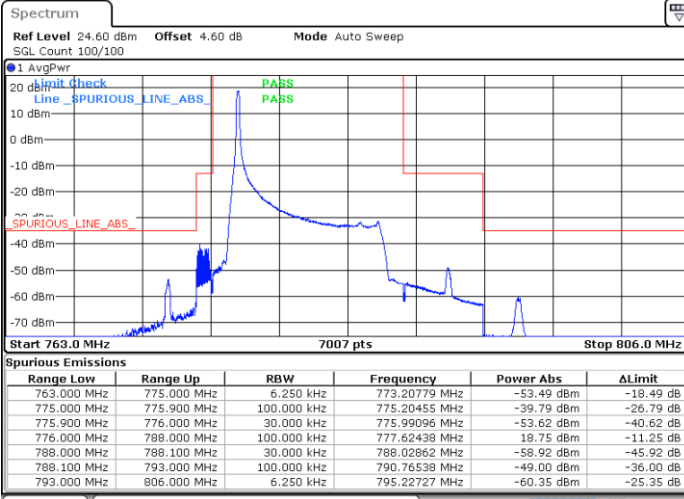
Date: 17. JAN 2023 20:55:02



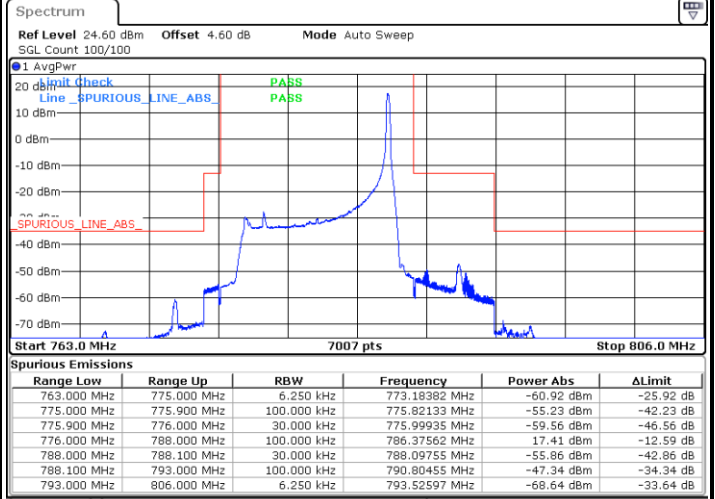
LTE Band 13 / 10MHz / 16QAM

middle Band Edge / 1 RB

middle Band Edge / 1 RB



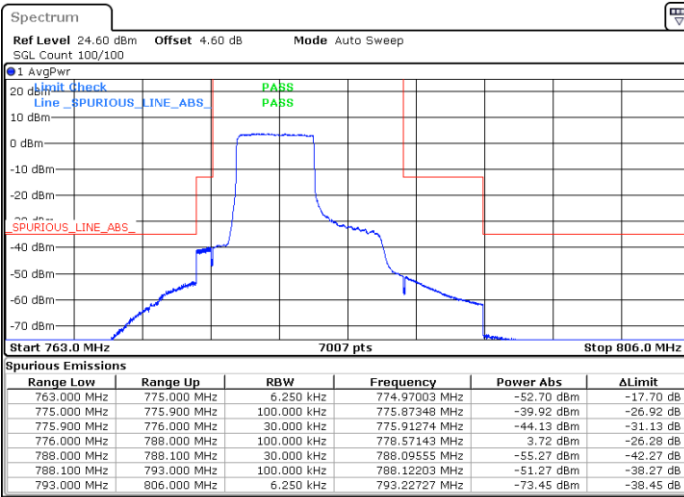
Date: 17.JAN.2023 20:49:34



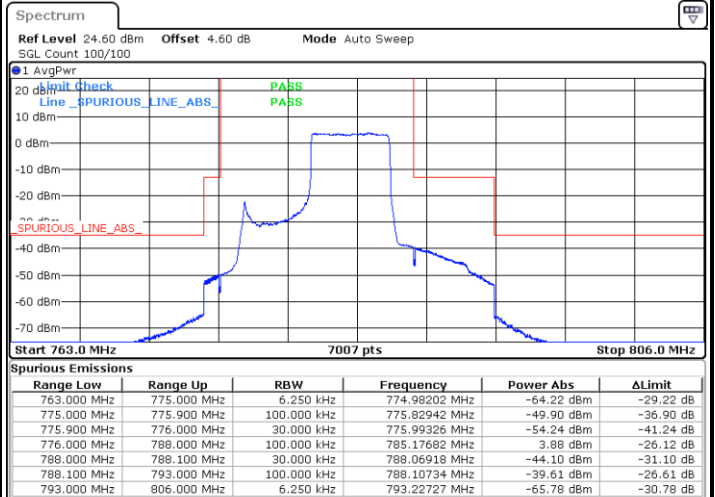
Date: 17.JAN.2023 20:51:23

middle Band Edge / 27 RB 0

middle Band Edge / 27 RB 23



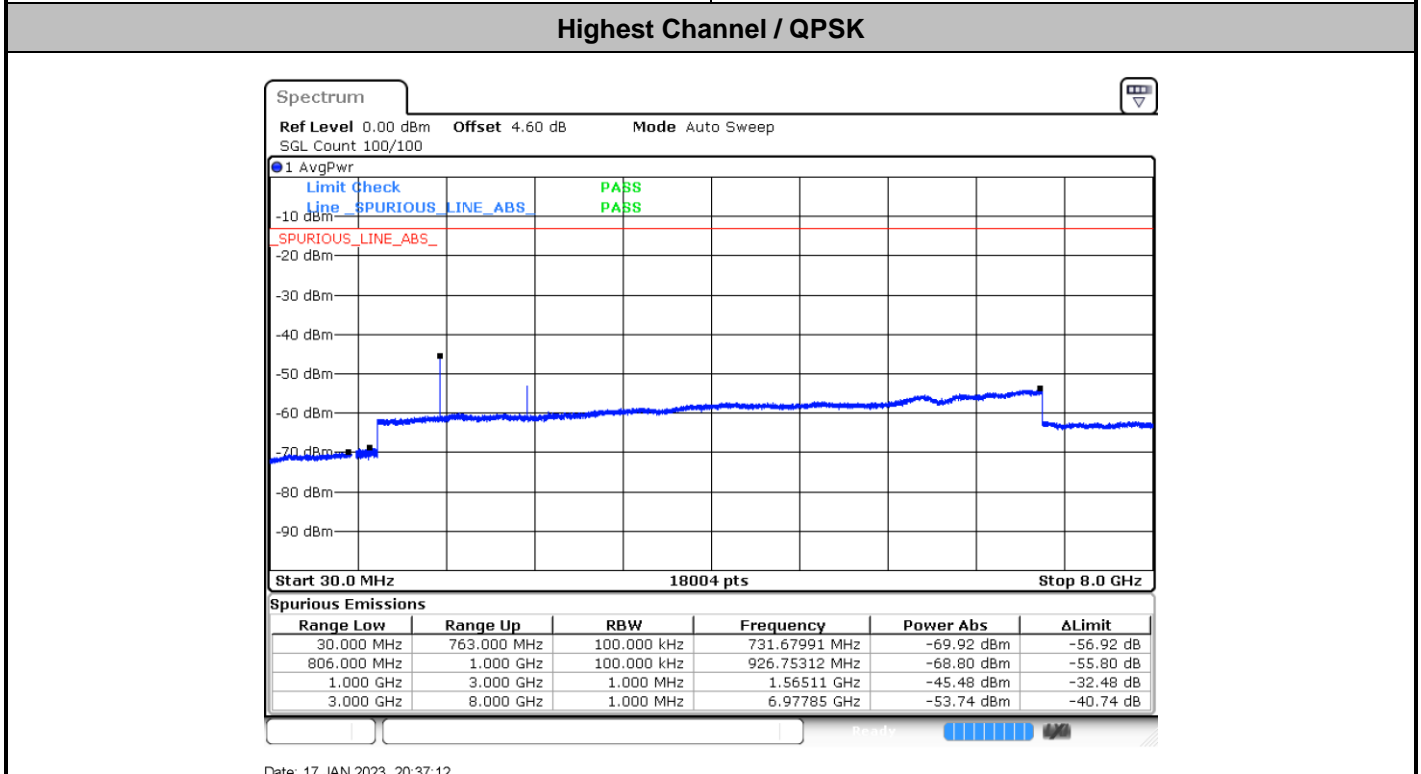
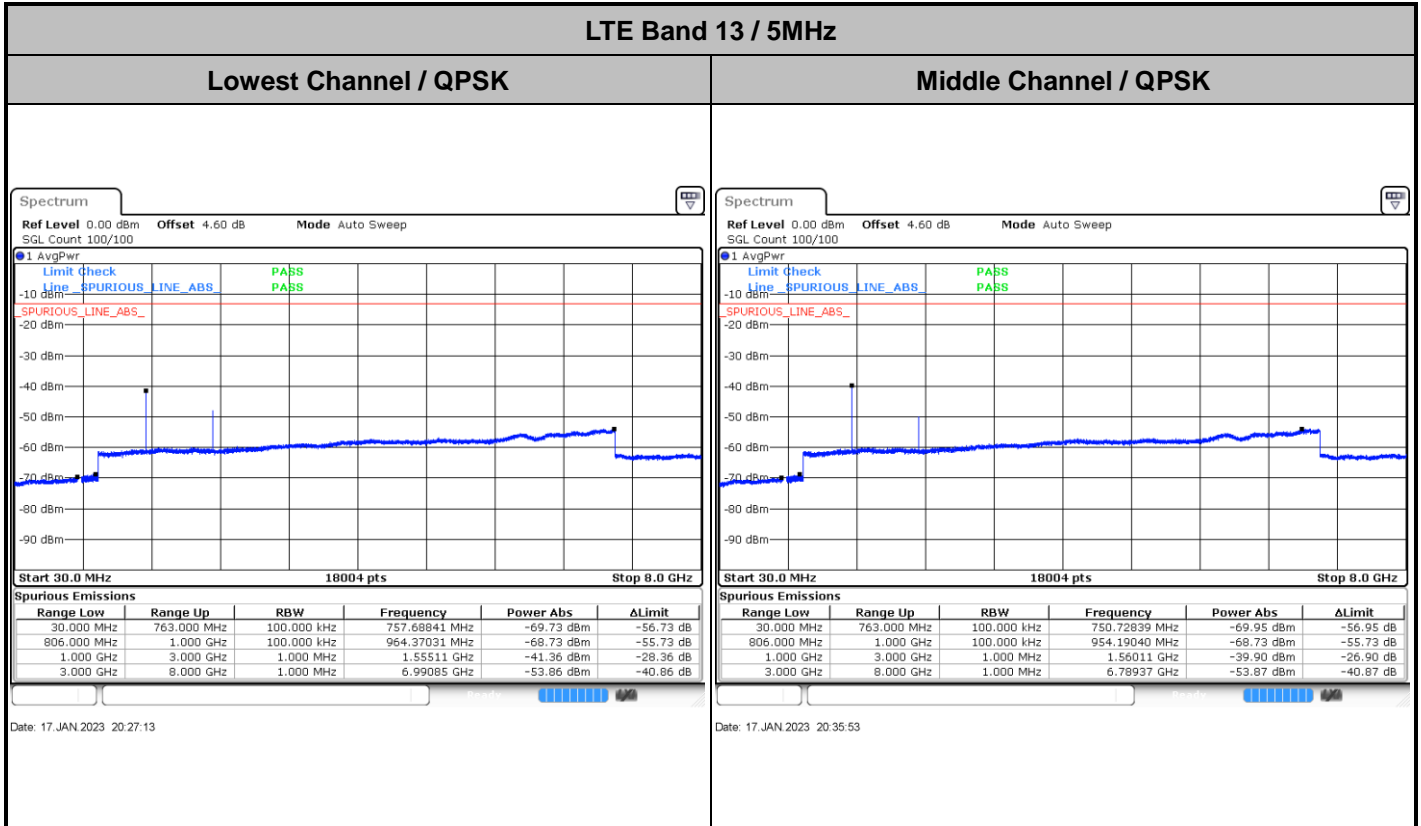
Date: 17.JAN.2023 21:14:36



Date: 17.JAN.2023 21:17:11



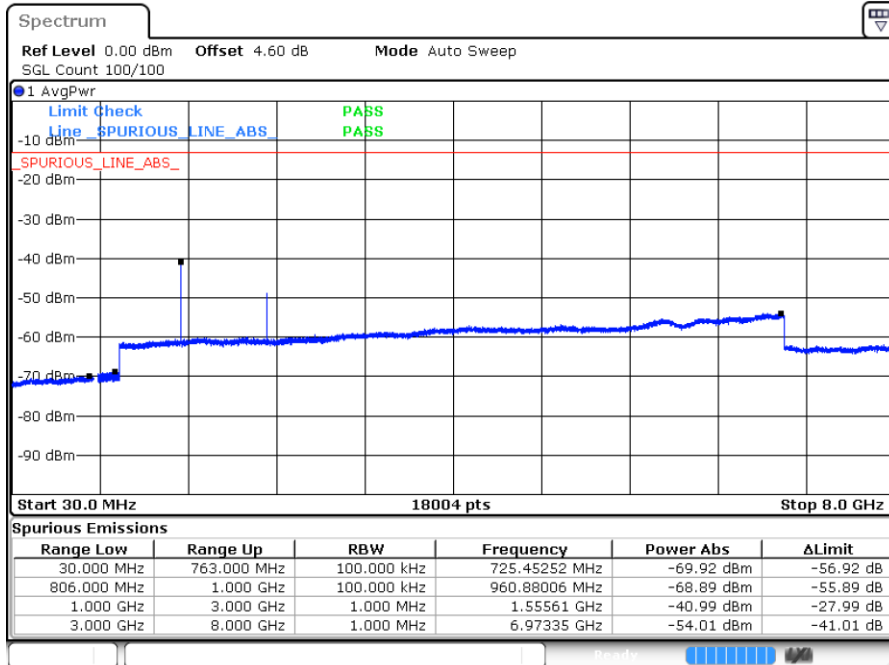
Conducted Spurious Emission





LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 17 JAN 2023 20:45:54



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	0.0045	PASS
40	Normal Voltage	0.0036	
30	Normal Voltage	0.0052	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0023	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0056	
20	Maximum Voltage	0.0064	
20	Normal Voltage	0.0002	
20	End Point	0.0026	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3V. ; Maximum Voltage =4.3 V.
2. Note: 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	5.86	6.72	PASS

