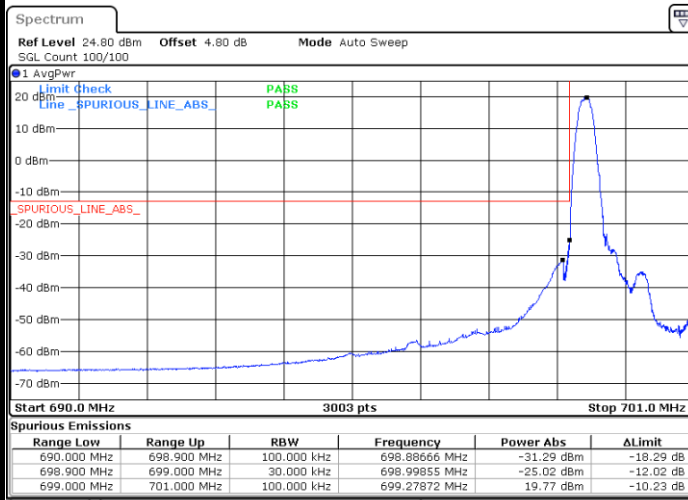


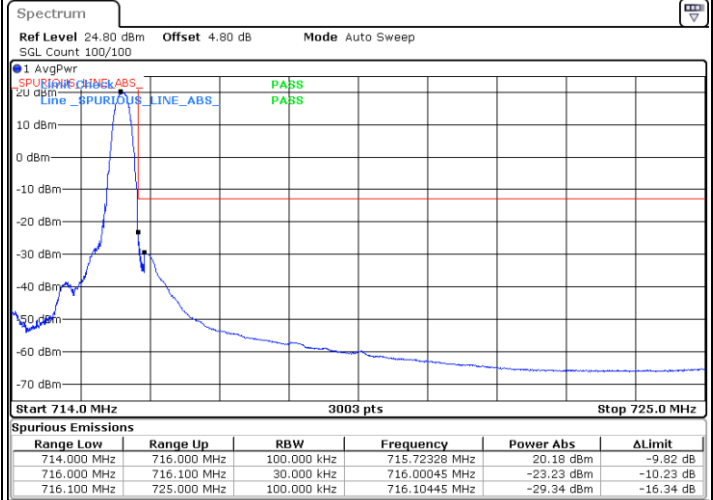


LTE Band 12 / 1.4MHz / 16QAM

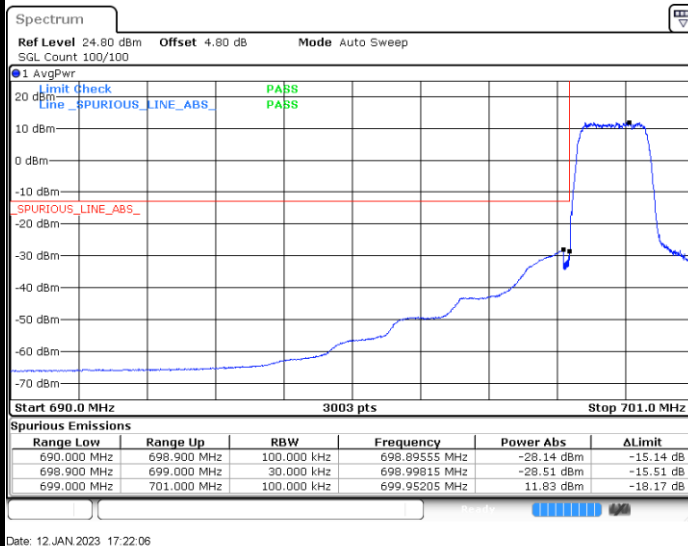
Lowest Band Edge / 1 RB



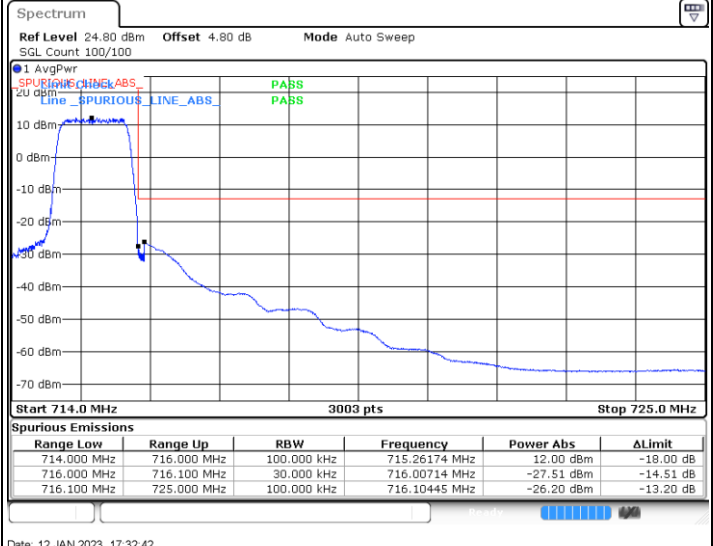
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



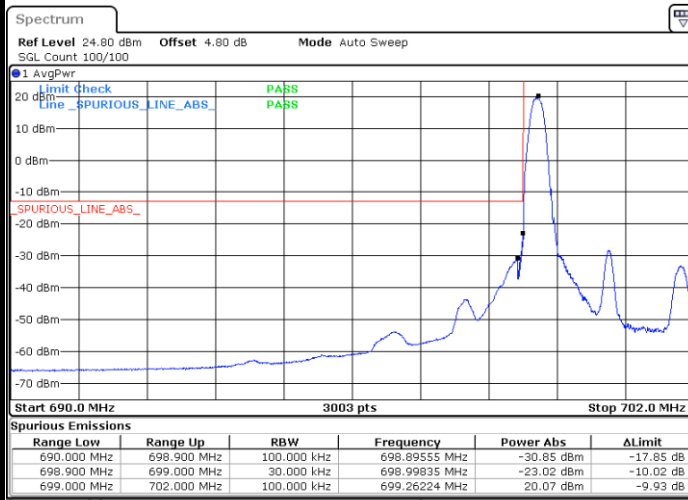
Highest Band Edge / Full RB



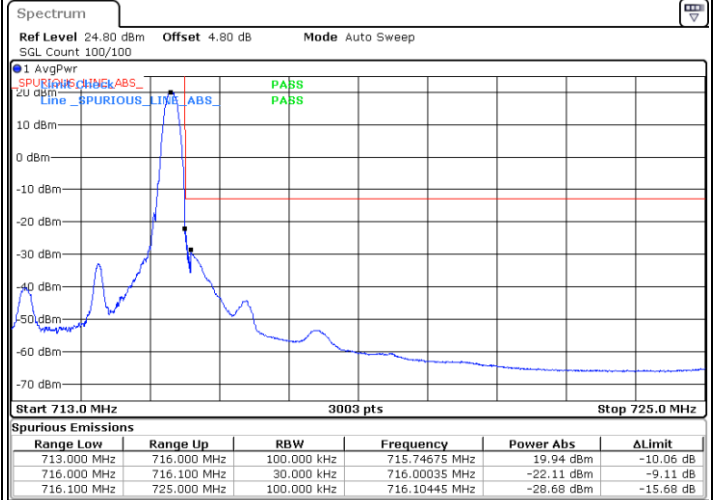


LTE Band 12 / 3MHz / QPSK

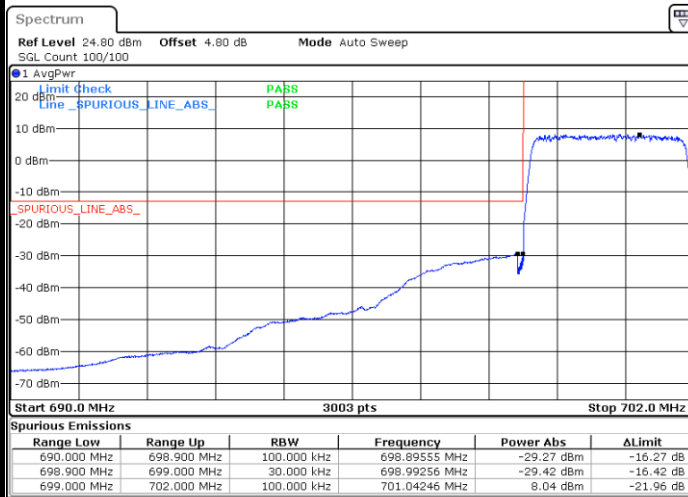
Lowest Band Edge / 1RB



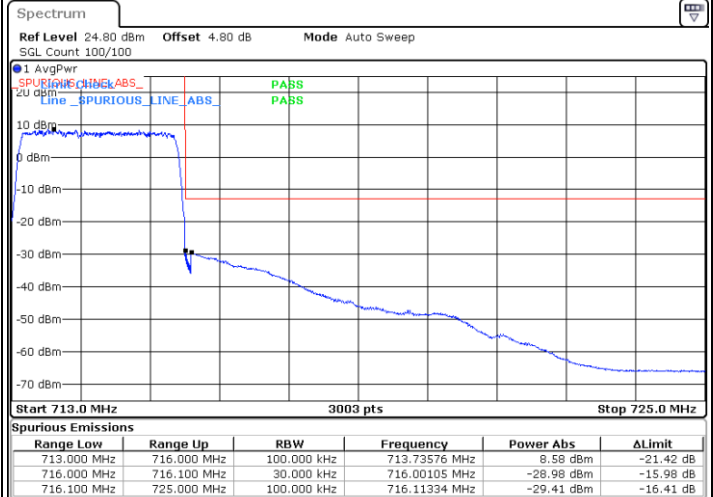
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



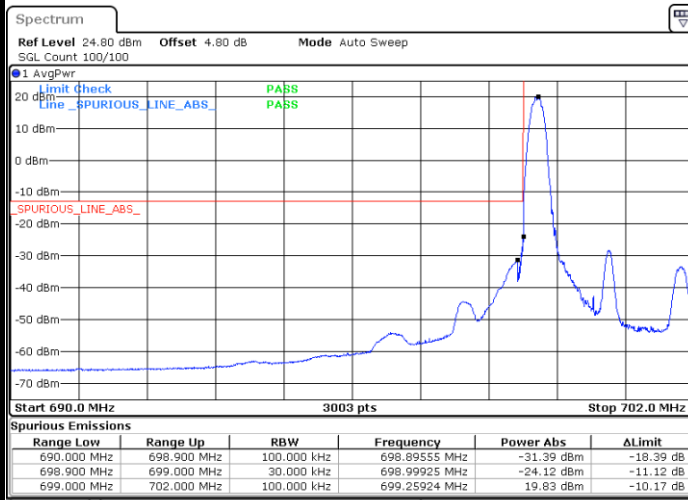
Highest Band Edge / Full RB



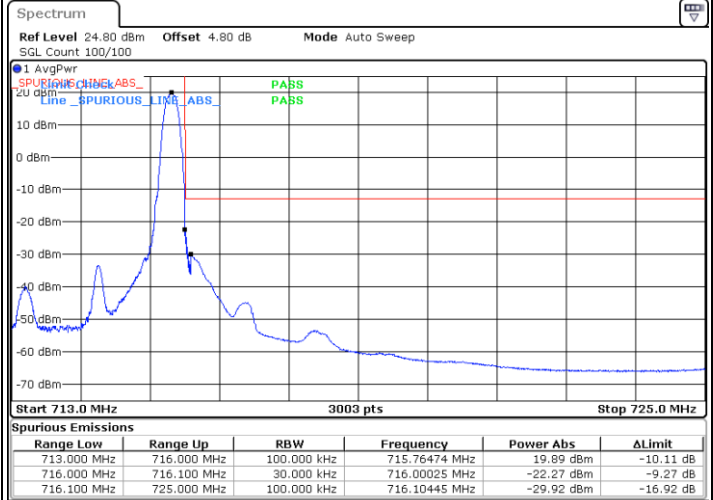


LTE Band 12 / 3MHz / 16QAM

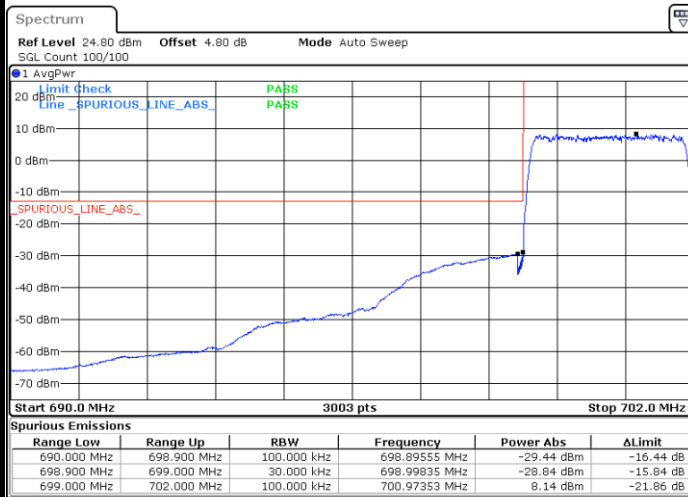
Lowest Band Edge / 1 RB



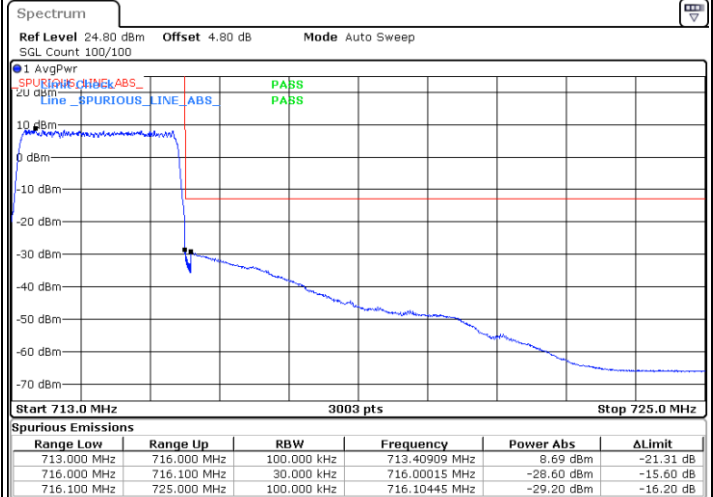
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



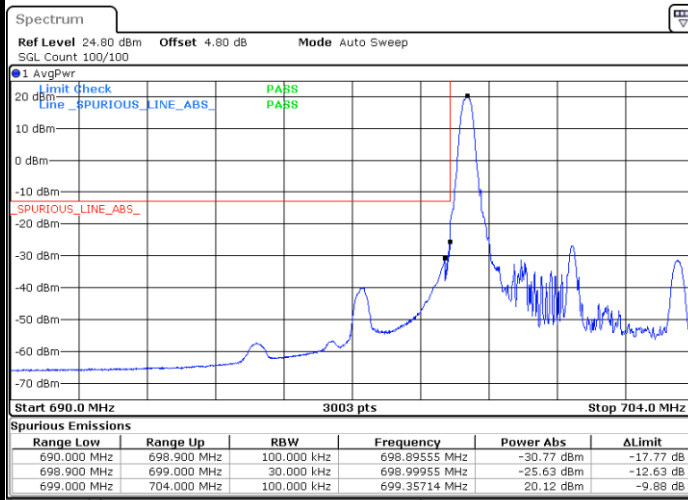
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / QPSK

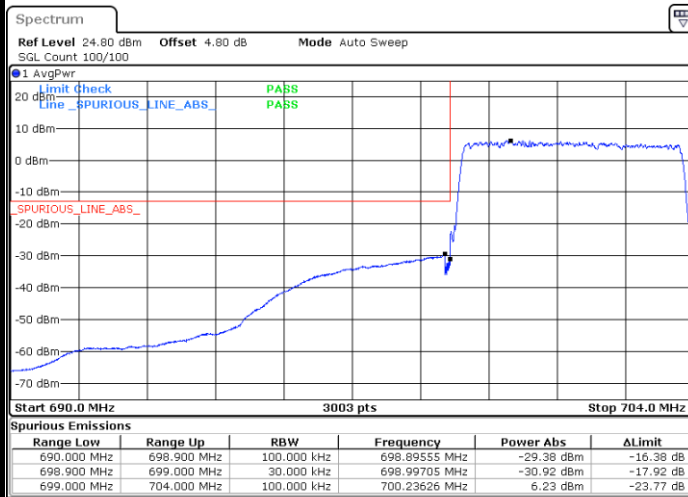
Lowest Band Edge / 1 RB



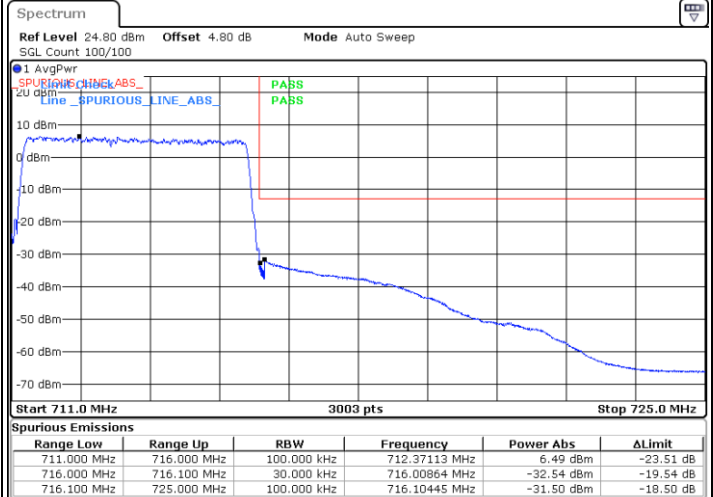
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



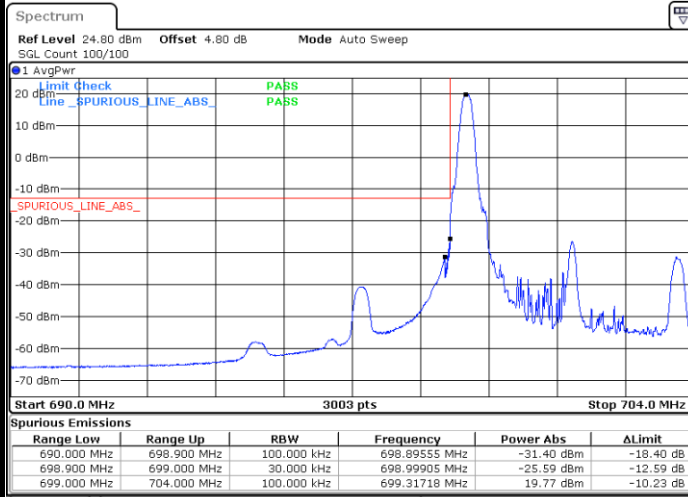
Highest Band Edge / Full RB



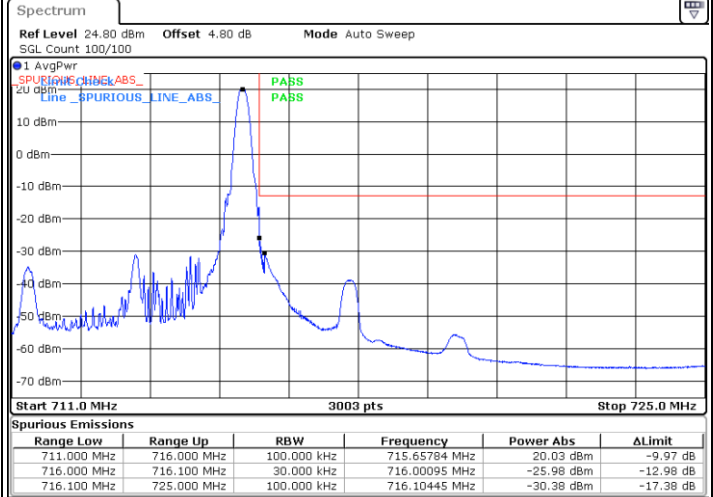


LTE Band 12 / 5MHz / 16QAM

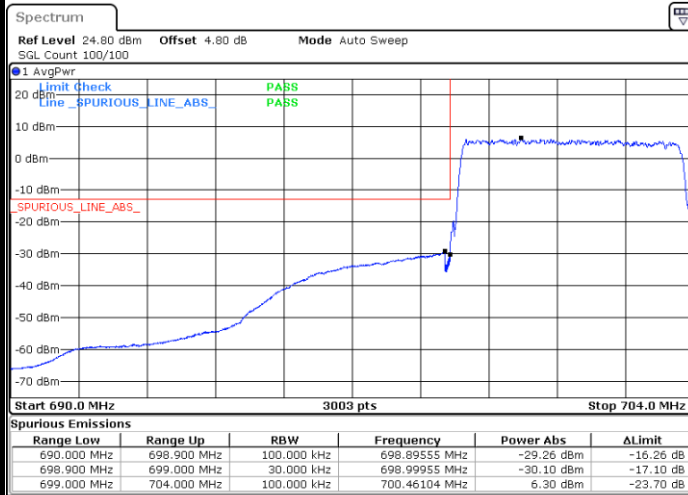
Lowest Band Edge / 1RB



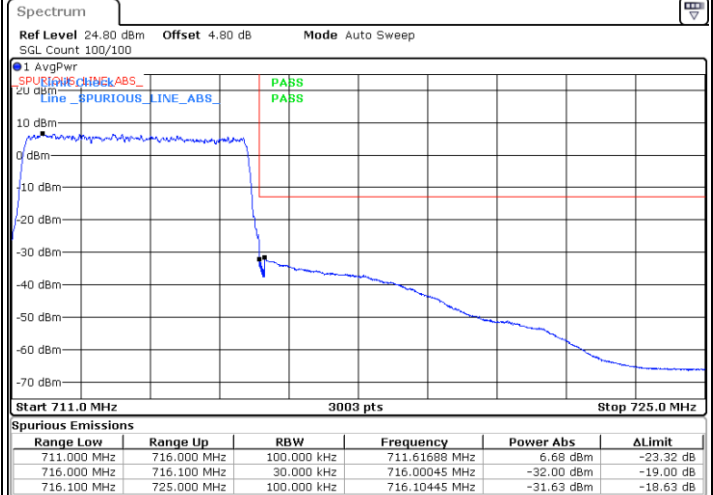
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



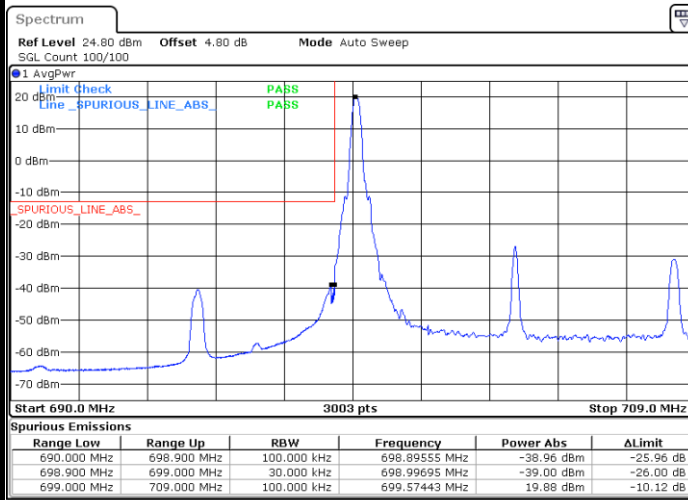
Highest Band Edge / Full RB



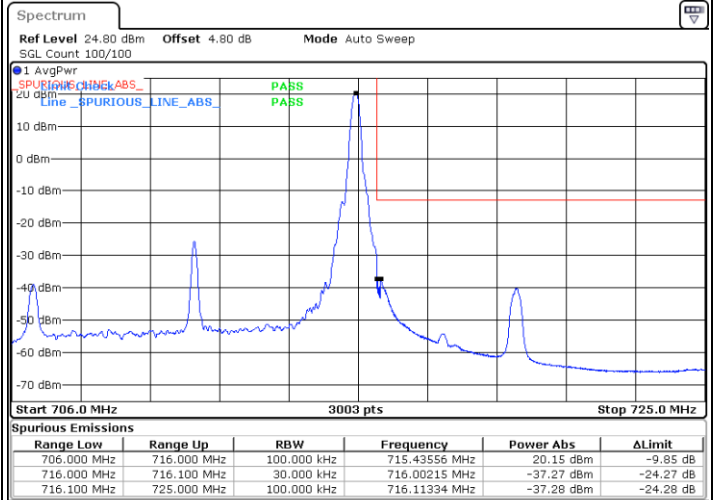


LTE Band 12 / 10MHz / QPSK

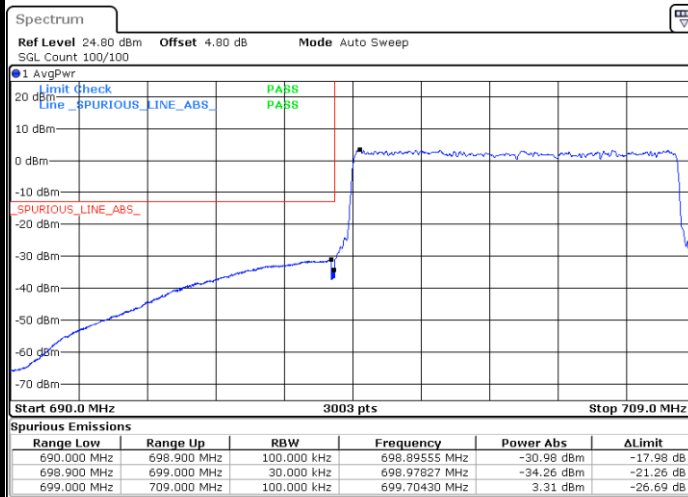
Lowest Band Edge / 1 RB



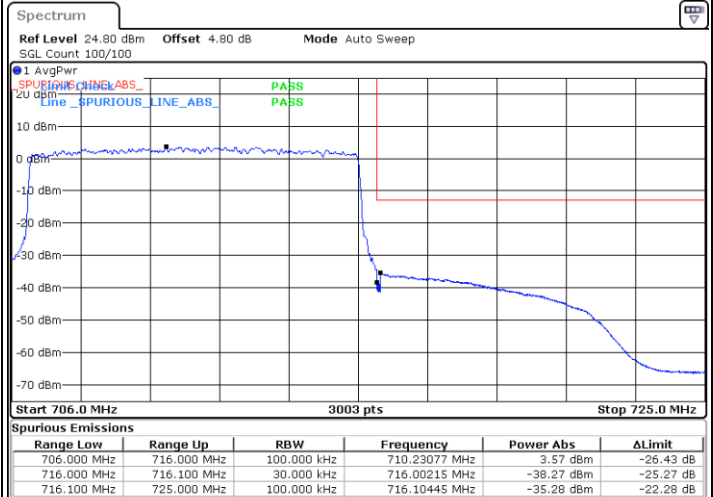
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



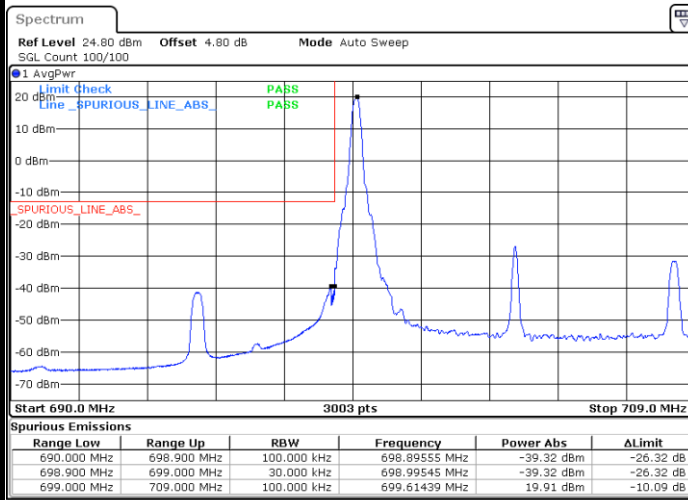
Highest Band Edge / Full RB



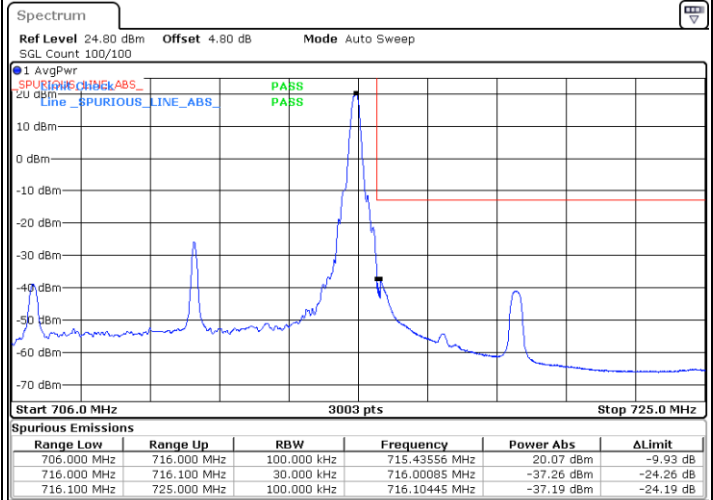


LTE Band 12 / 10MHz / 16QAM

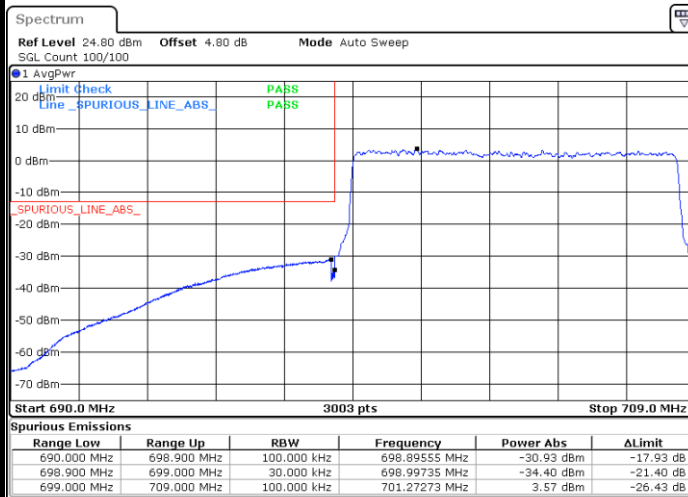
Lowest Band Edge / 1 RB



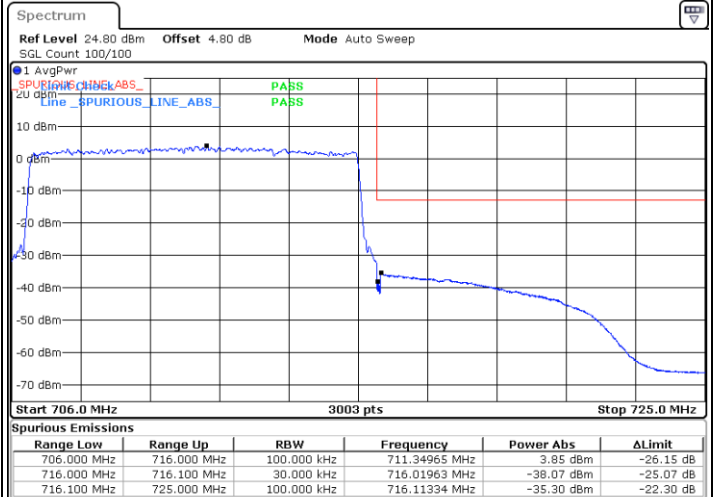
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

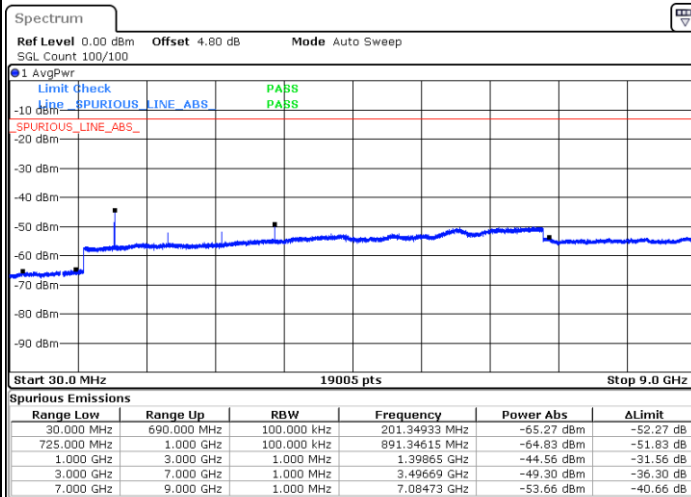




Conducted Spurious Emission

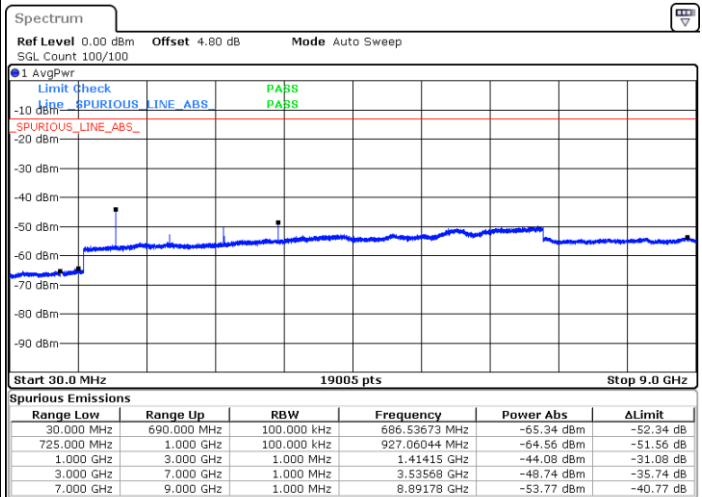
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



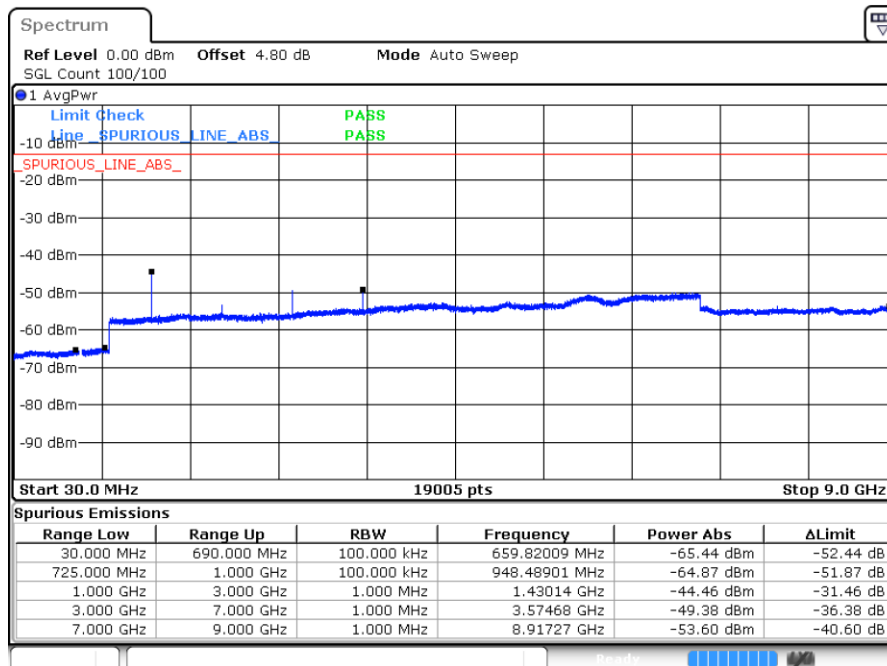
Date: 12 JAN 2023 17:43:06

Middle Channel / QPSK



Date: 12 JAN 2023 17:45:39

Highest Channel / QPSK

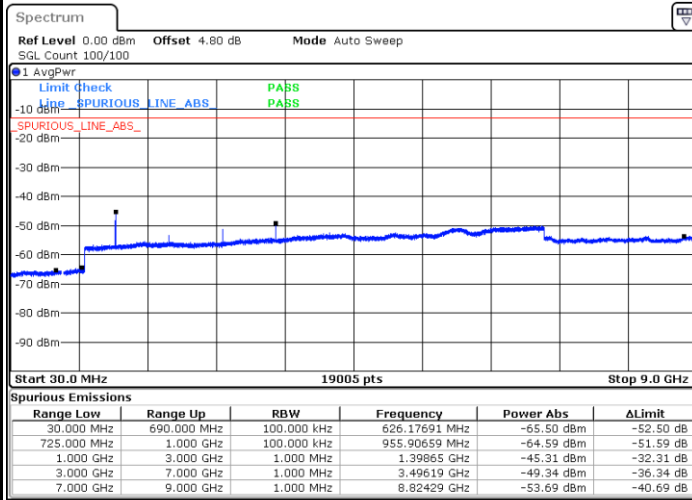


Date: 12 JAN 2023 17:47:07



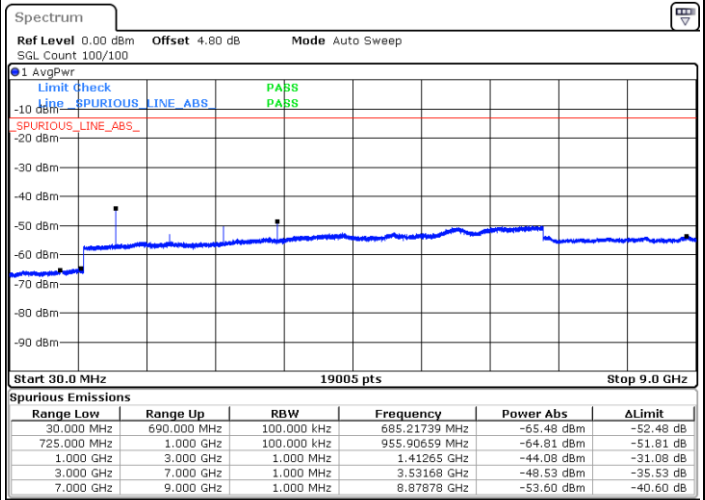
LTE Band 12 / 3MHz

Lowest Channel / QPSK



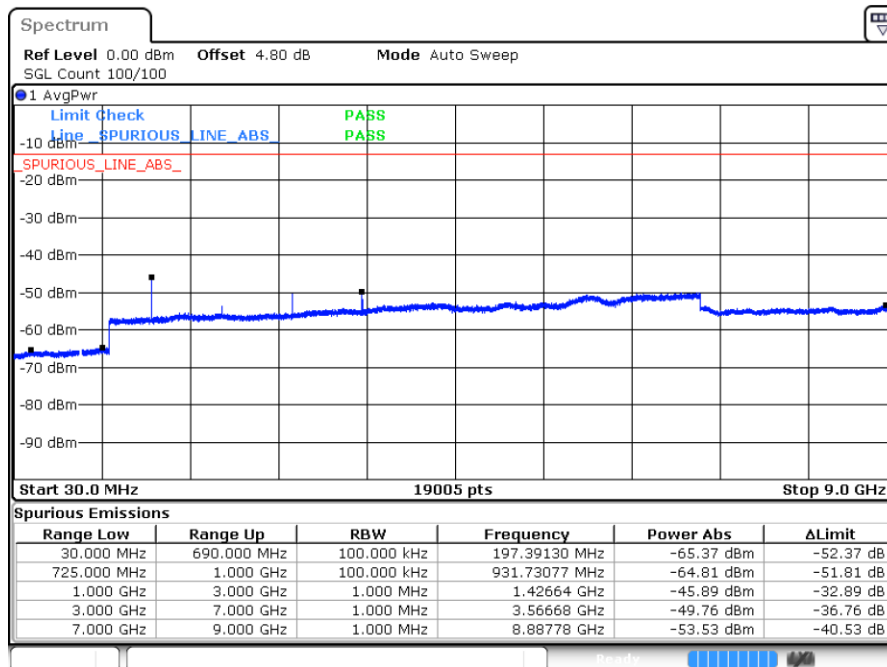
Date: 12 JAN 2023 18:18:15

Middle Channel / QPSK



Date: 12 JAN 2023 18:20:47

Highest Channel / QPSK

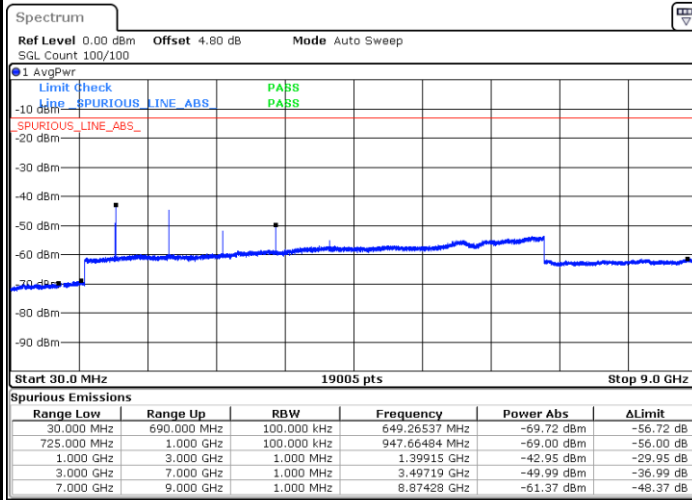


Date: 12 JAN 2023 18:23:17



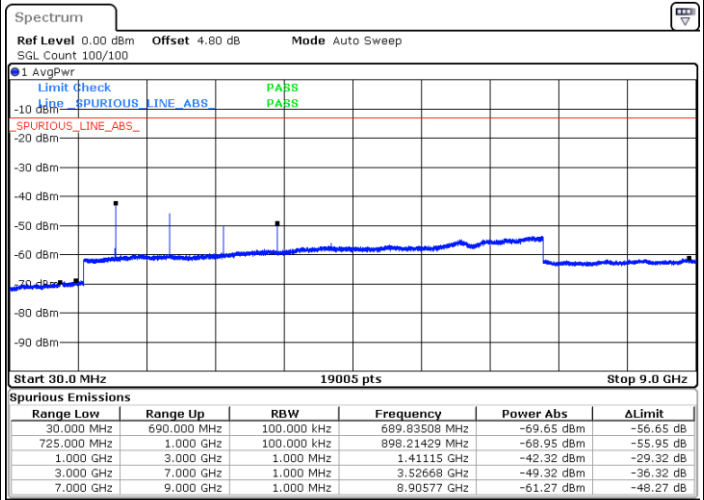
LTE Band 12 / 5MHz

Lowest Channel / QPSK



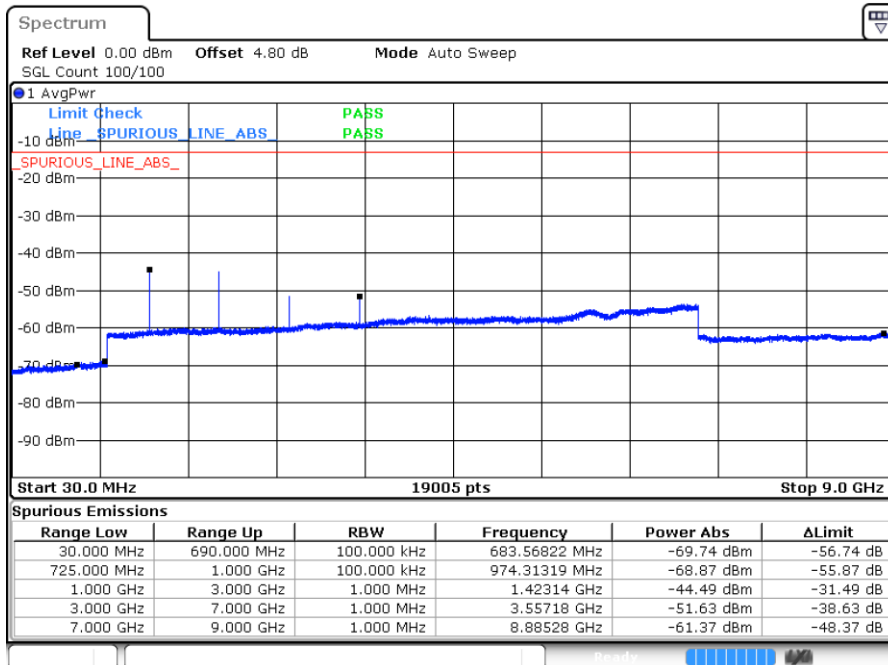
Date: 13 JAN 2023 08:12:03

Middle Channel / QPSK



Date: 13 JAN 2023 08:14:11

Highest Channel / QPSK

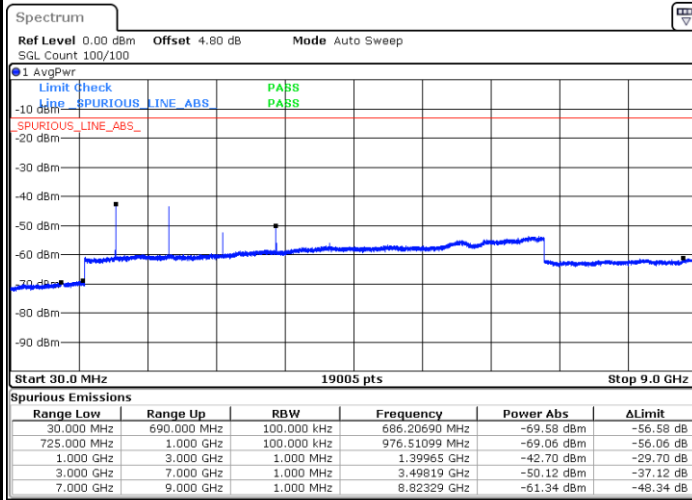


Date: 13 JAN 2023 08:15:48



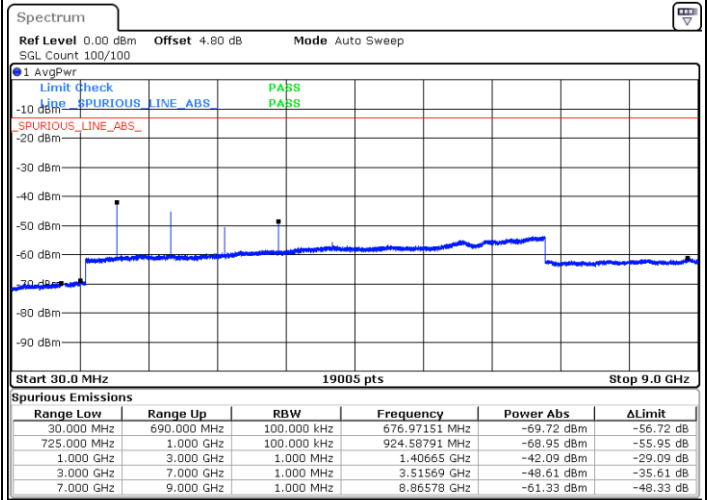
LTE Band 12 / 10MHz

Lowest Channel / QPSK



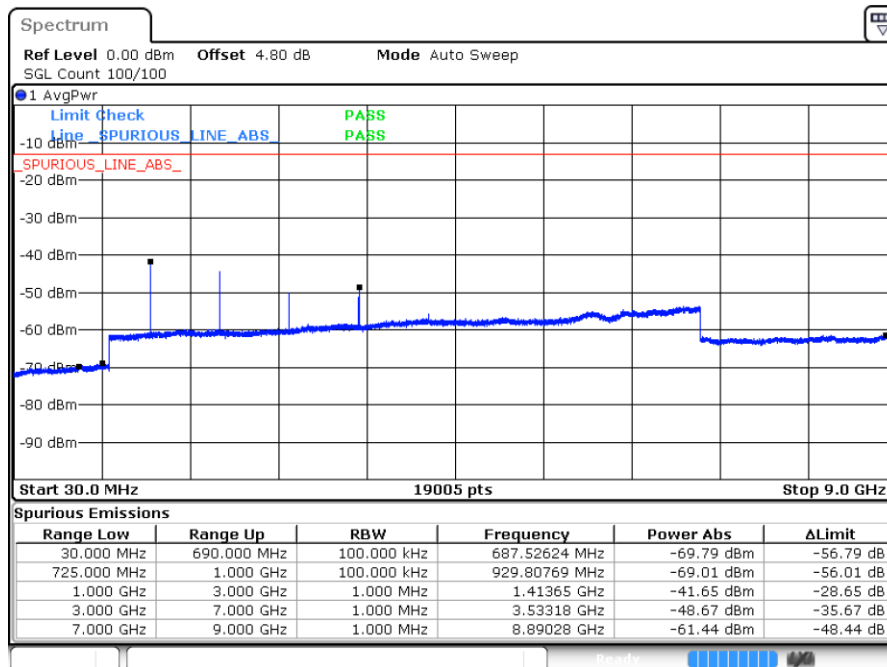
Date: 13 JAN 2023 08:49:54

Middle Channel / QPSK



Date: 13 JAN 2023 08:51:58

Highest Channel / QPSK



Date: 13 JAN 2023 08:53:46

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	0.0011	PASS
40	Normal Voltage	0.0026	
30	Normal Voltage	0.0027	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0026	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0036	
-30	Normal Voltage	0.0042	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0000	
20	End Point	0.0015	

Note:

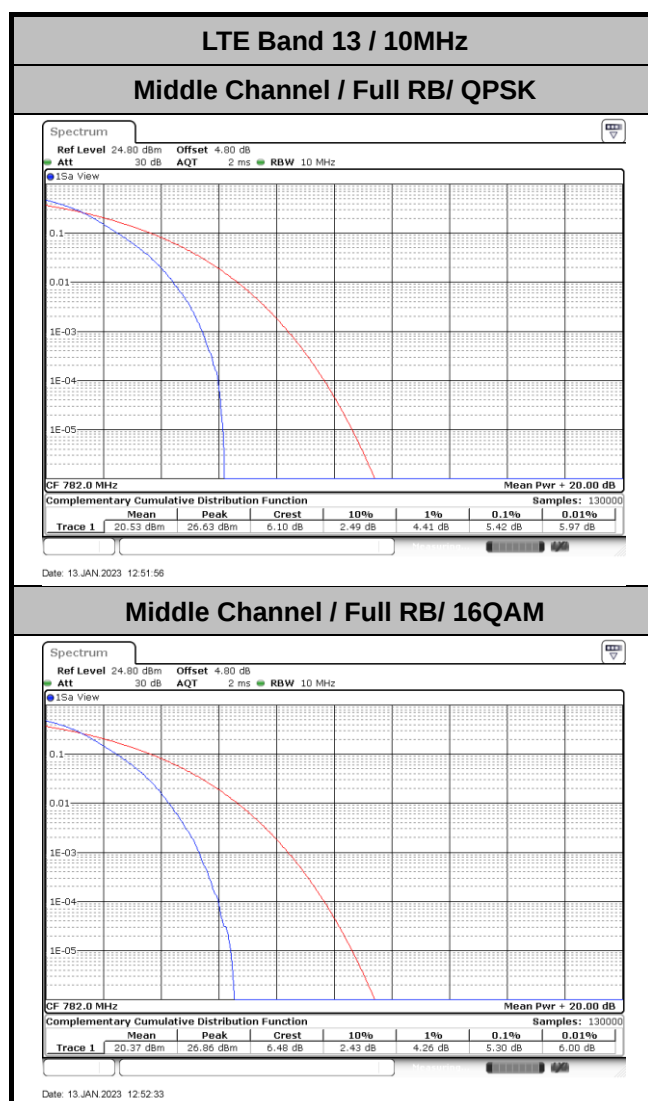
1. Normal Voltage =3.8 V. ; End Point (BEP) =3.55 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

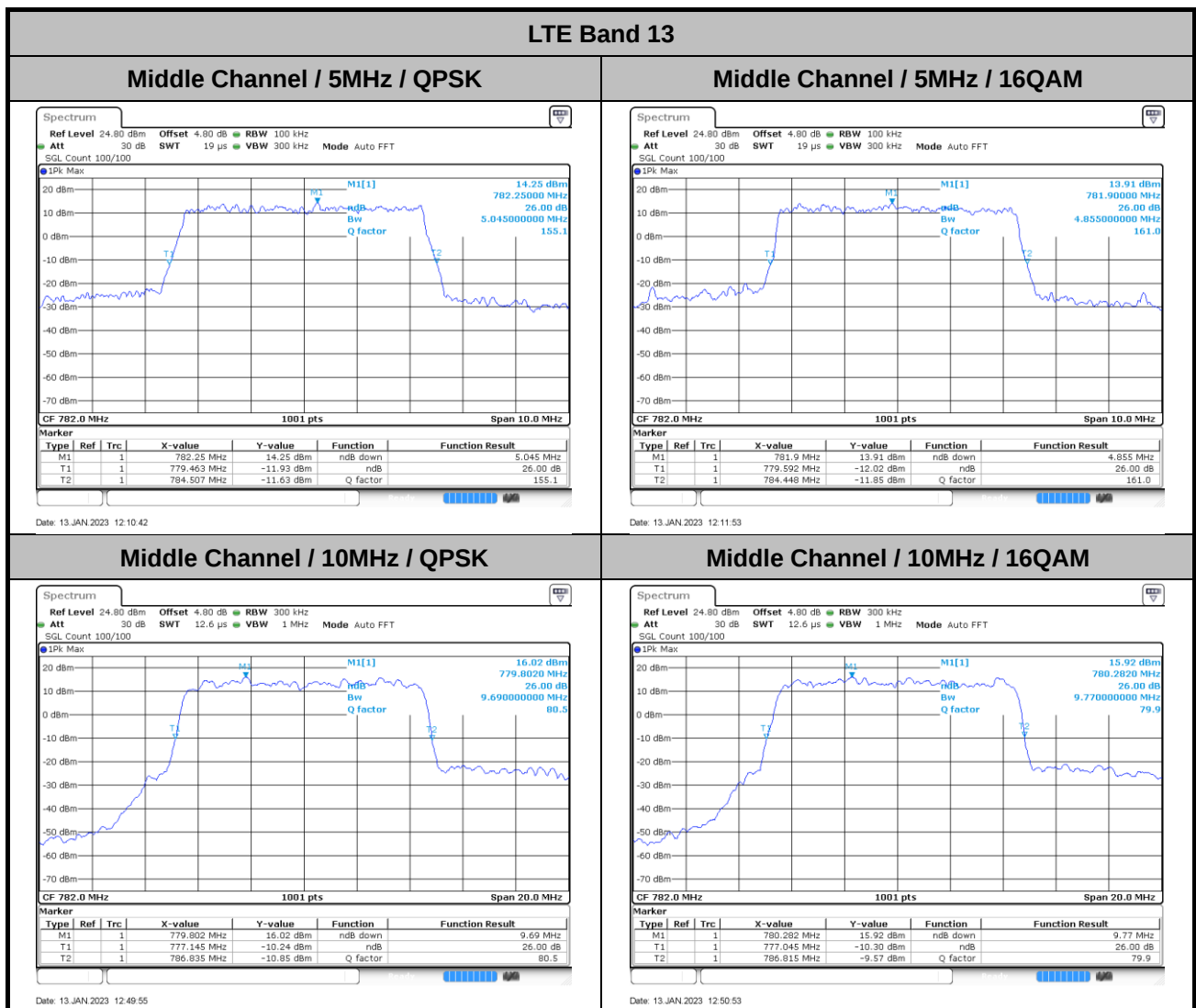
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB		Result
Middle CH	5.42	5.30	PASS



**26dB Bandwidth**

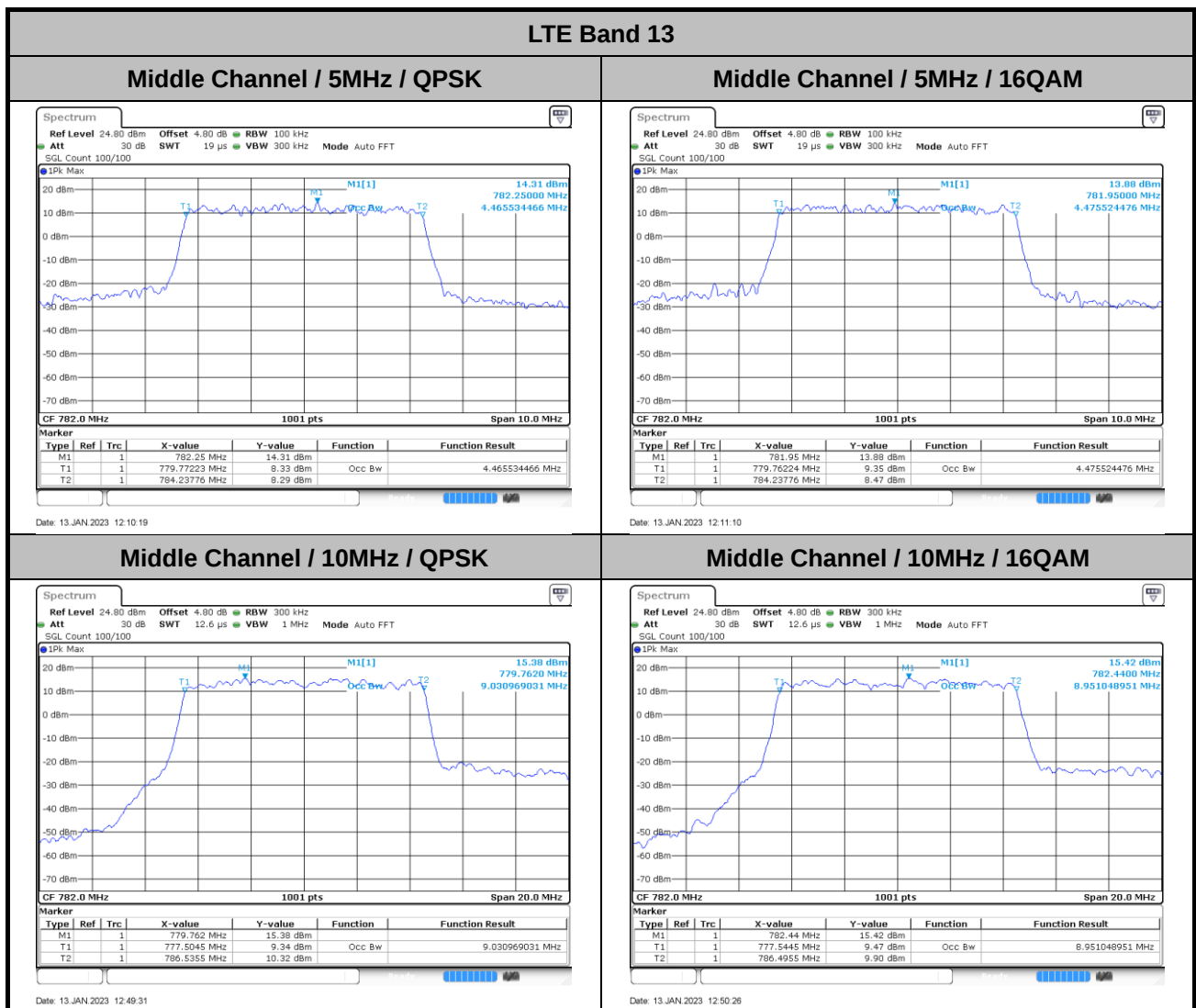
Mode	LTE Band 13 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	5.05	4.86
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.69	9.77





Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.47	4.48
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.03	8.95

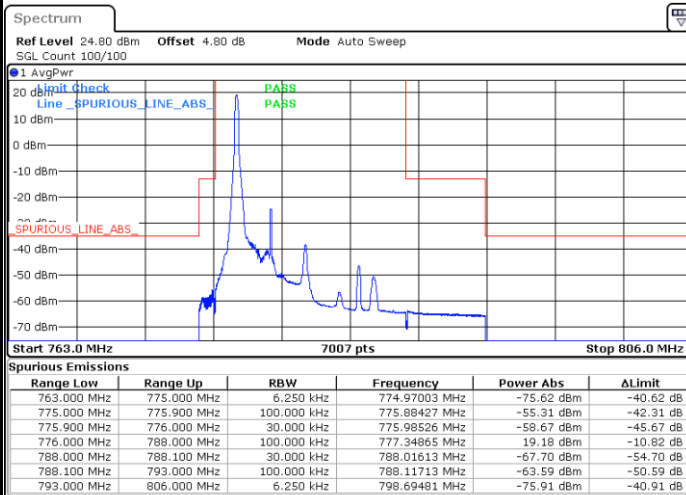




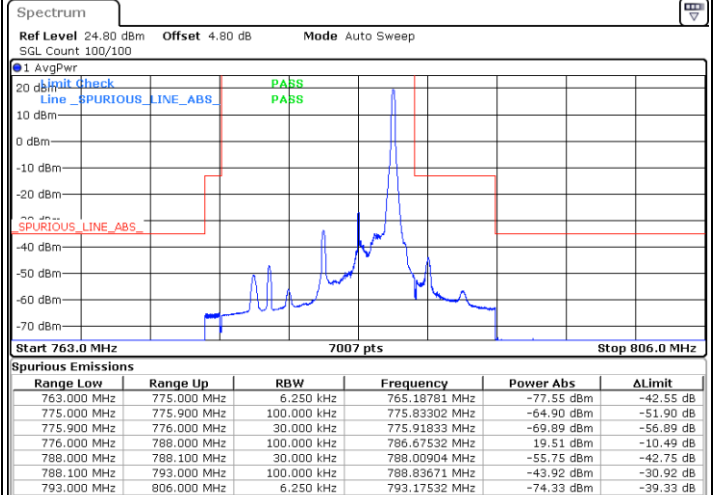
Conducted Band Edge

LTE Band 13 / 5MHz / QPSK

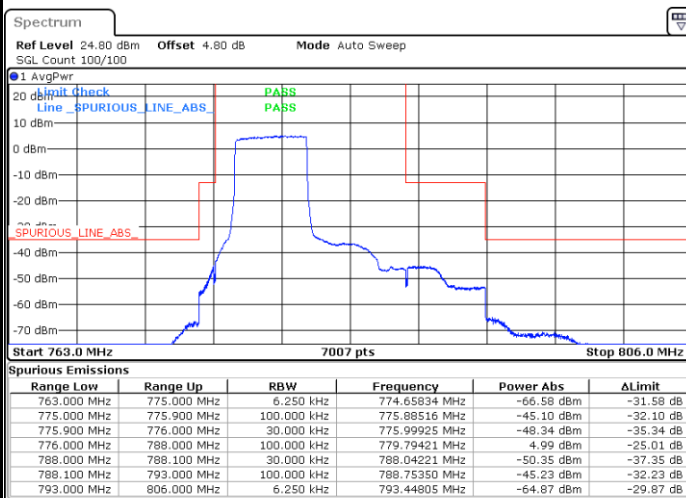
Lowest Band Edge / 1 RB



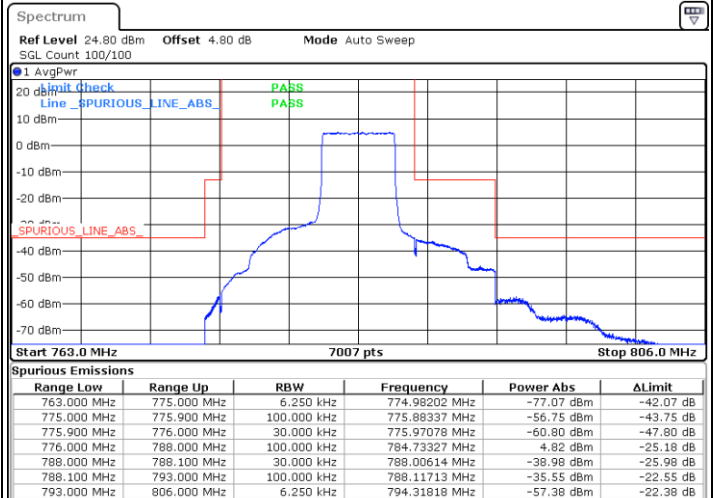
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



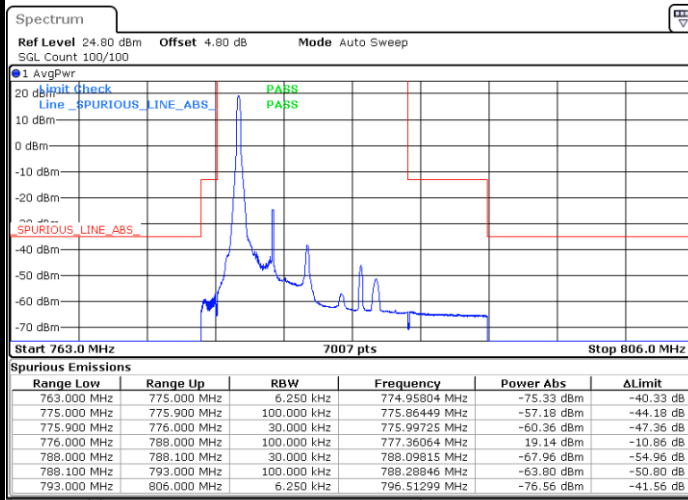
Highest Band Edge / Full RB



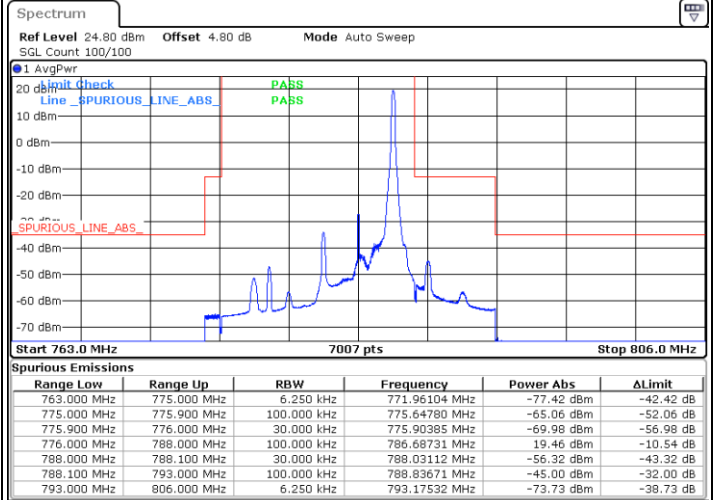


LTE Band 13 / 5MHz / 16QAM

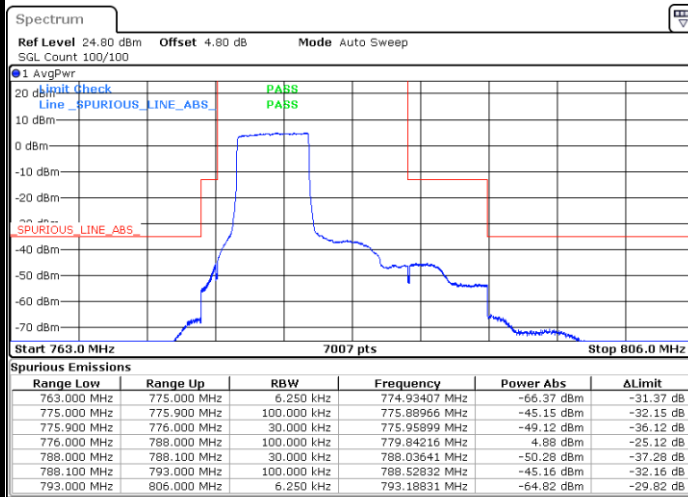
Lowest Band Edge / 1RB



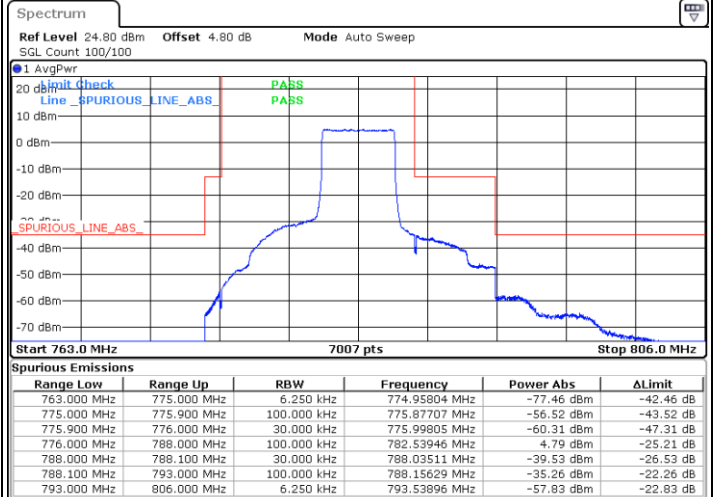
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



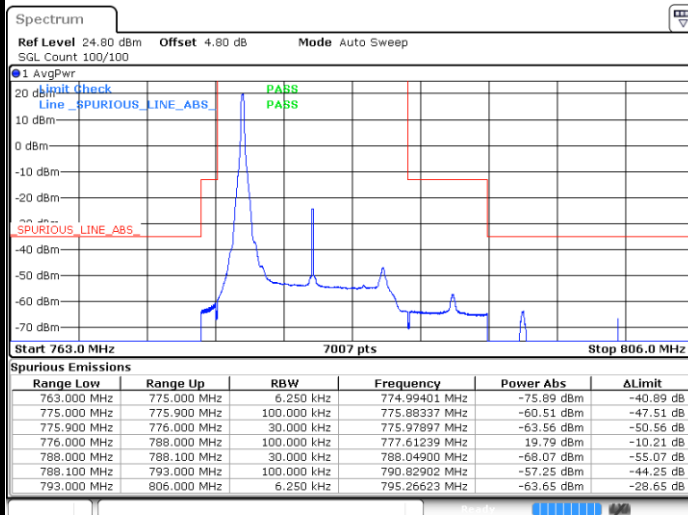
Highest Band Edge / Full RB



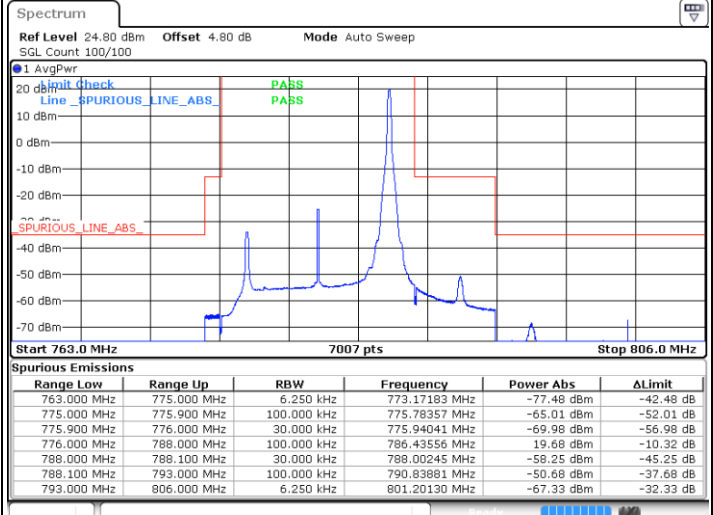


LTE Band 13 / 10MHz / QPSK

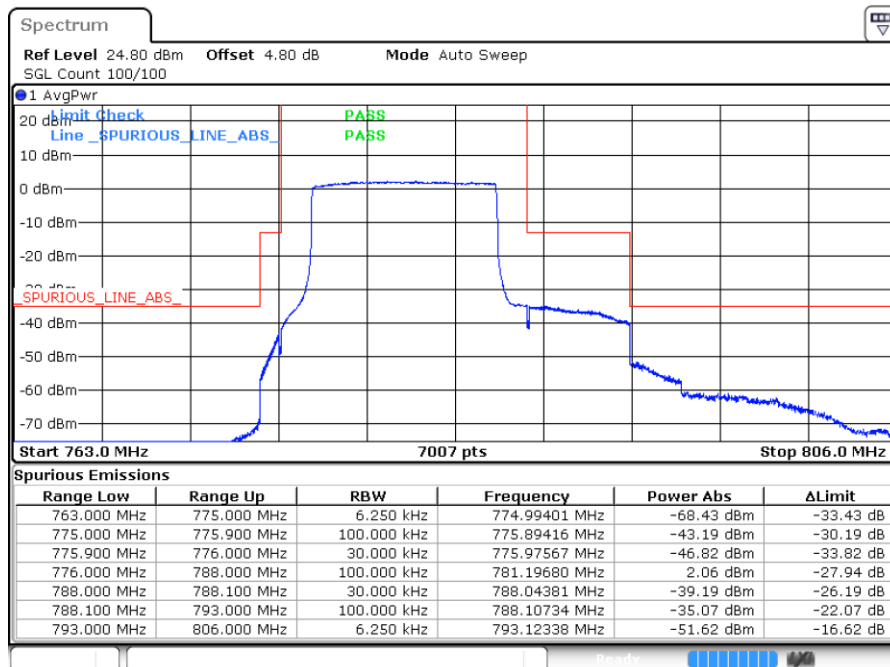
middle Band Edge / 1 RB



middle Band Edge / 1 RB



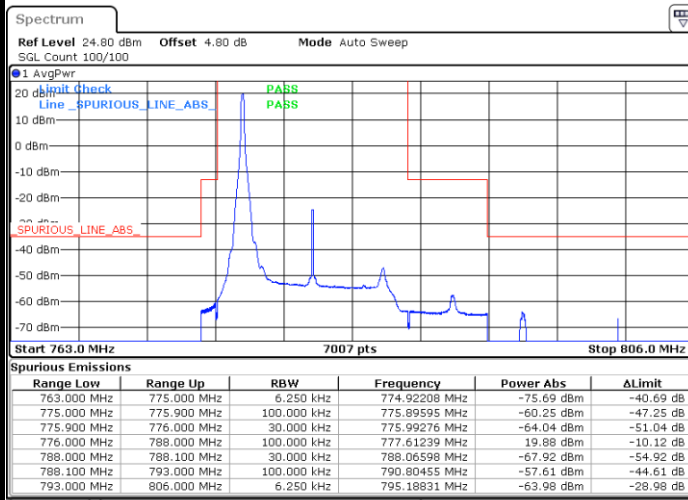
Middle Band Edge / Full RB





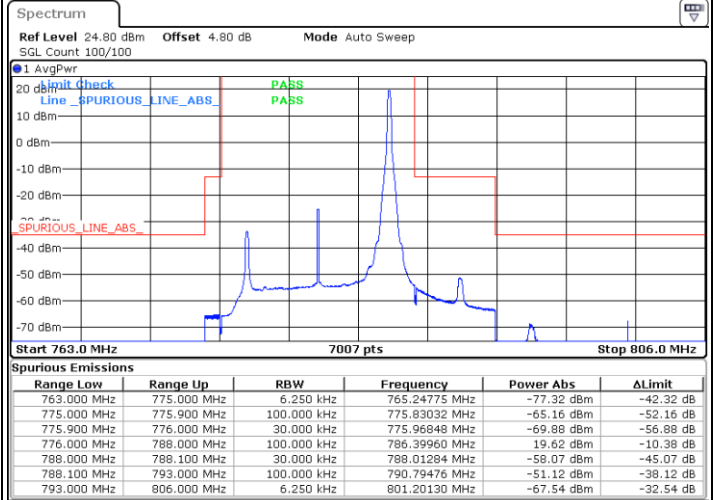
LTE Band 13 / 10MHz / 16QAM

middle Band Edge / 1 RB



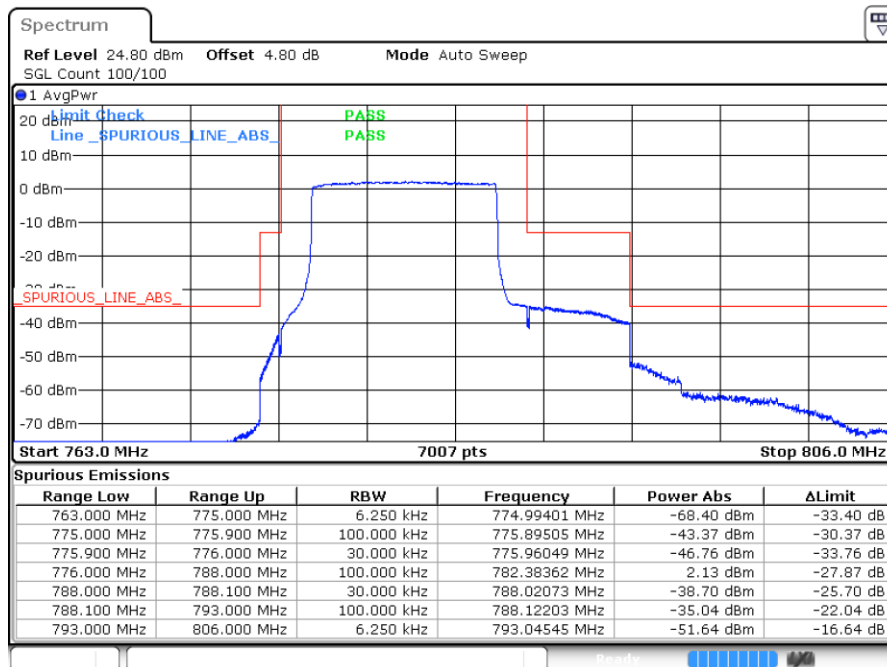
Date: 13 JAN 2023 12:39:48

middle Band Edge / 1 RB



Date: 13 JAN 2023 12:45:05

middle Band Edge / Full RB



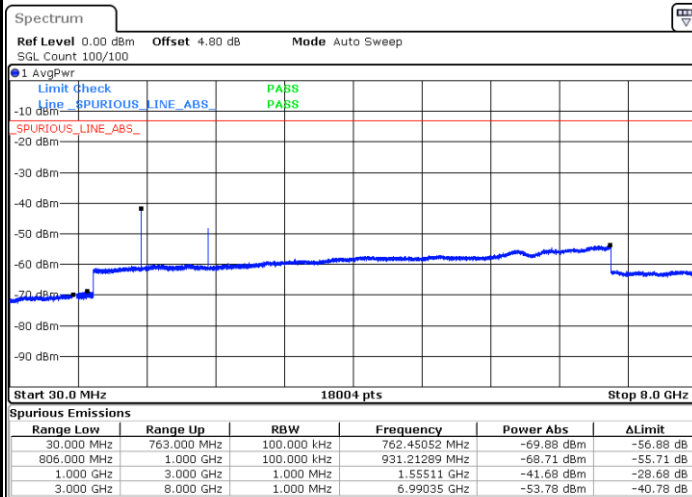
Date: 13 JAN 2023 12:32:26



Conducted Spurious Emission

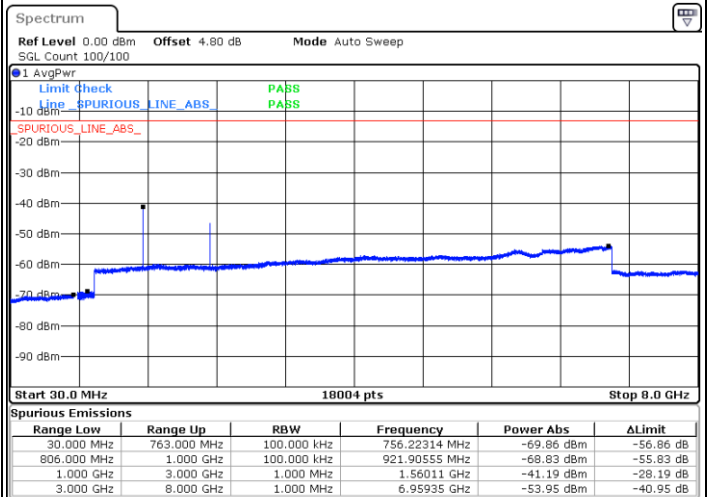
LTE Band 13 / 5MHz

Lowest Channel / QPSK



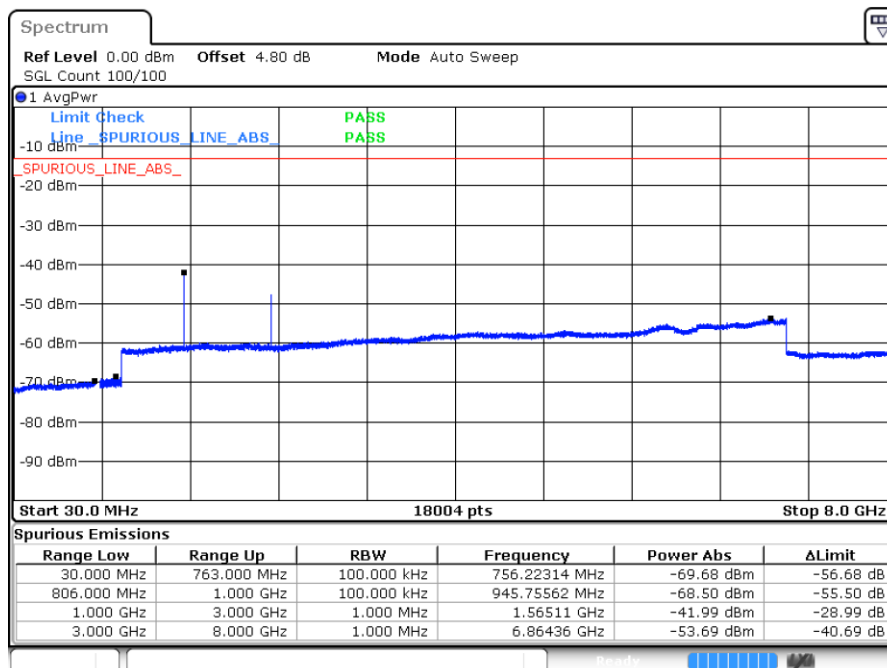
Date: 13 JAN 2023 12:14:07

Middle Channel / QPSK



Date: 13 JAN 2023 12:15:40

Highest Channel / QPSK

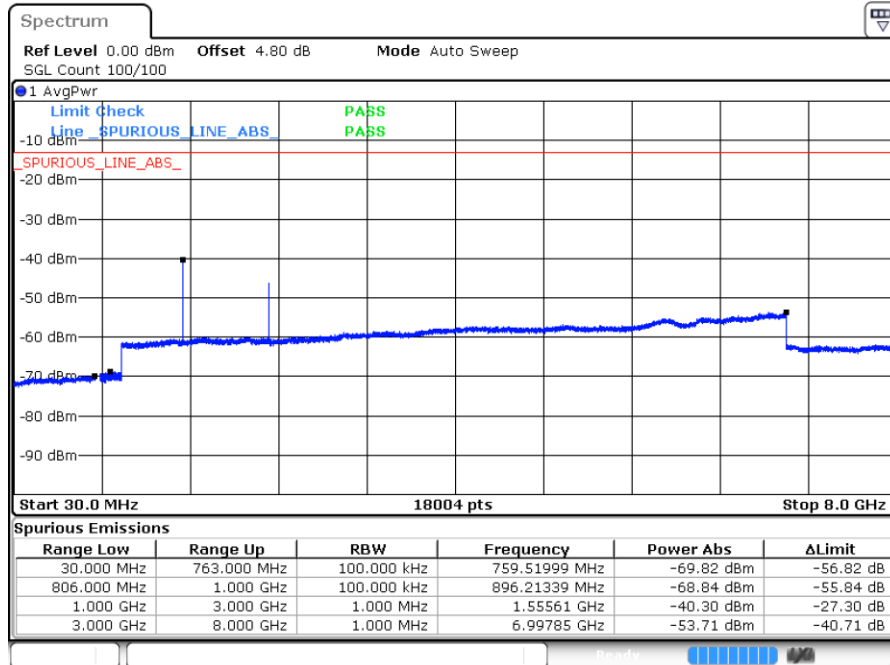


Date: 13 JAN 2023 12:17:31



LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 13 JAN 2023 12:56:54

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	0.0011	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0017	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0010	
-30	Normal Voltage	0.0011	
20	Maximum Voltage	0.0021	
20	Normal Voltage	0.0000	
20	End Point	0.0021	

Note:

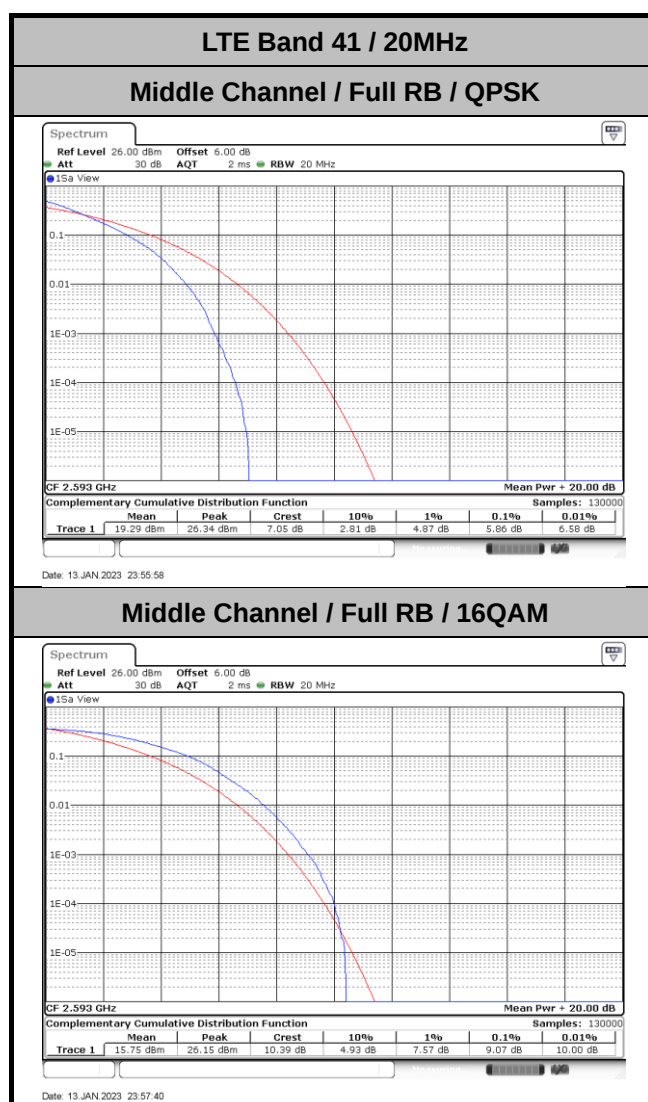
1. Normal Voltage =3.8 V. ; End Point (BEP) =3.55 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 41

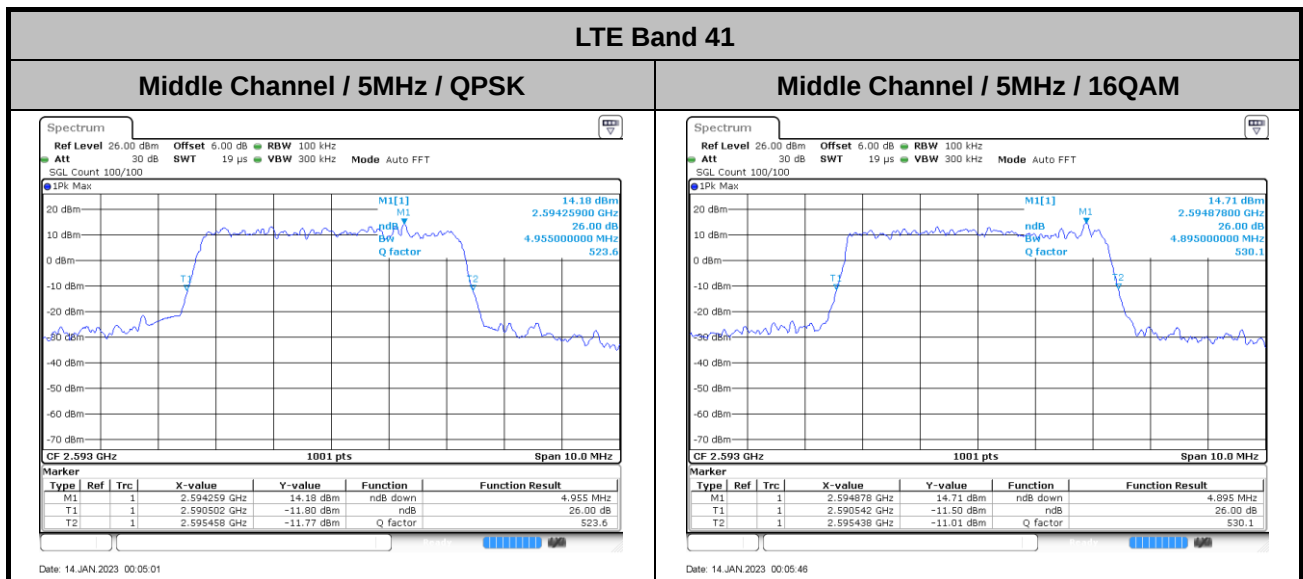
Peak-to-Average Ratio

Mode	LTE Band 41 / 20MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	5.86	9.07	PASS



**26dB Bandwidth**

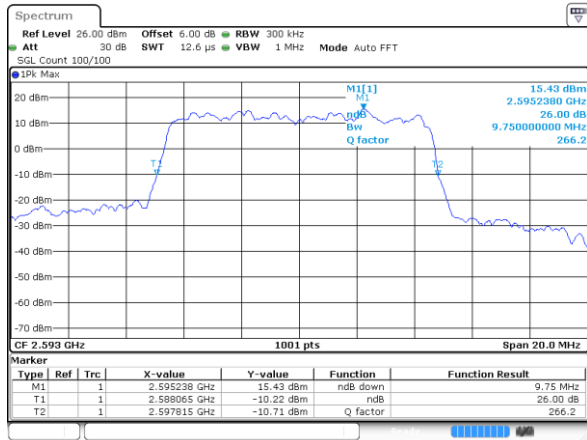
Mode	LTE Band 41 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.96	4.90
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.75	9.91
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	14.12	14.21
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	19.02	18.70





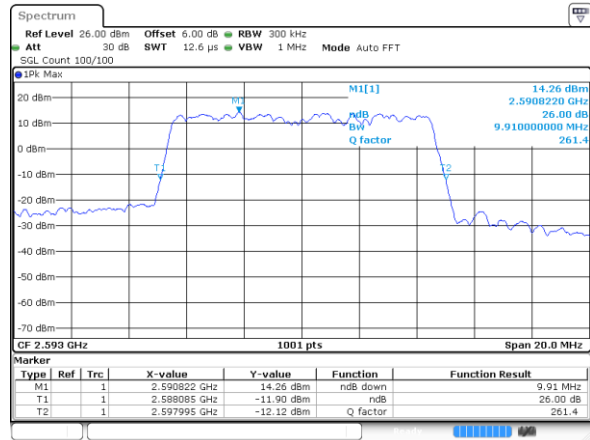
LTE Band 41

Middle Channel / 10MHz / QPSK



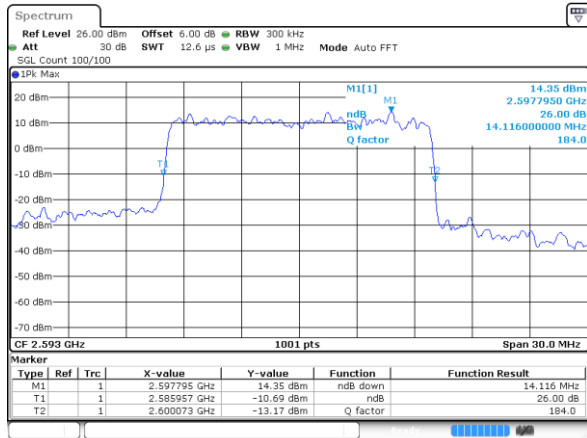
Date: 14 JAN 2023 00:02:16

Middle Channel / 10MHz / 16QAM



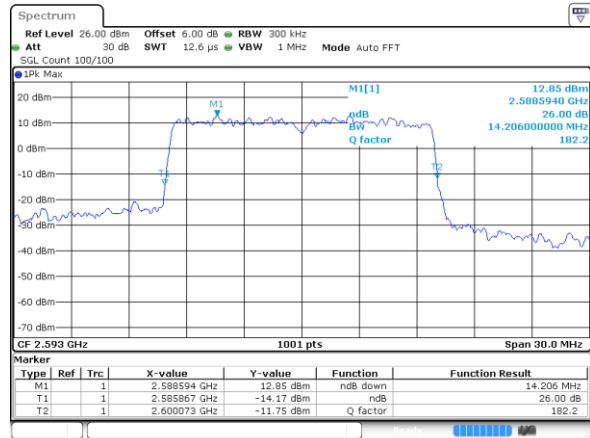
Date: 14 JAN 2023 00:03:38

Middle Channel / 15MHz / QPSK



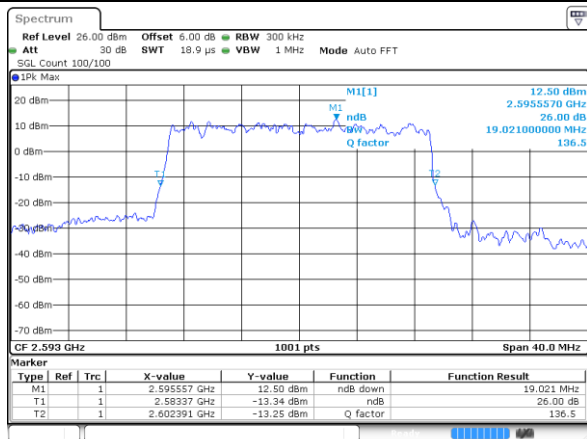
Date: 13 JAN 2023 23:49:23

Middle Channel / 15MHz / 16QAM



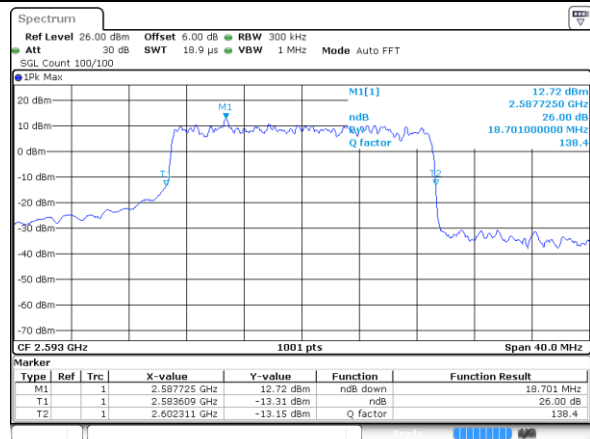
Date: 13 JAN 2023 23:50:41

Middle Channel / 20MHz / QPSK



Date: 13 JAN 2023 23:57:08

Middle Channel / 20MHz / 16QAM

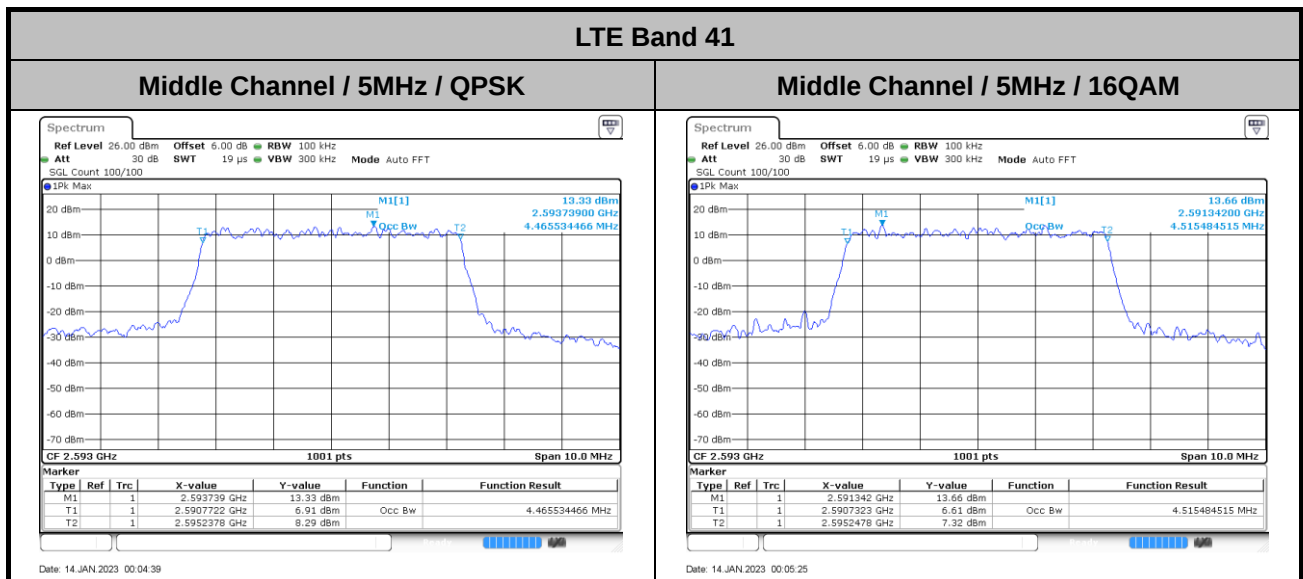


Date: 13 JAN 2023 23:58:29



Occupied Bandwidth

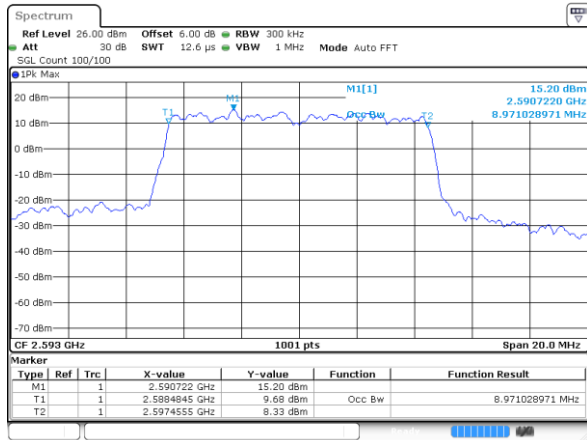
Mode	LTE Band 41 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.47	4.52
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	8.97	9.05
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	13.40	13.43
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.98	17.98



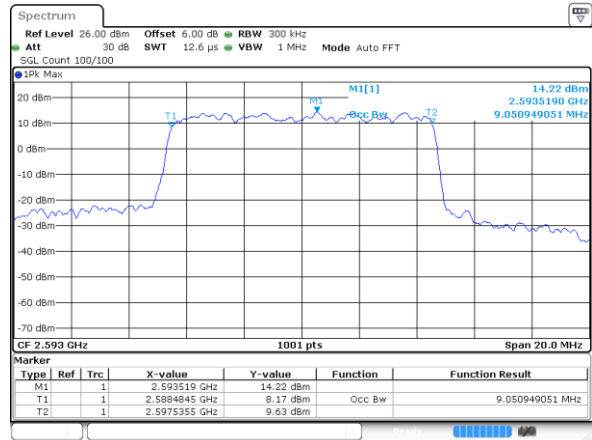


LTE Band 41

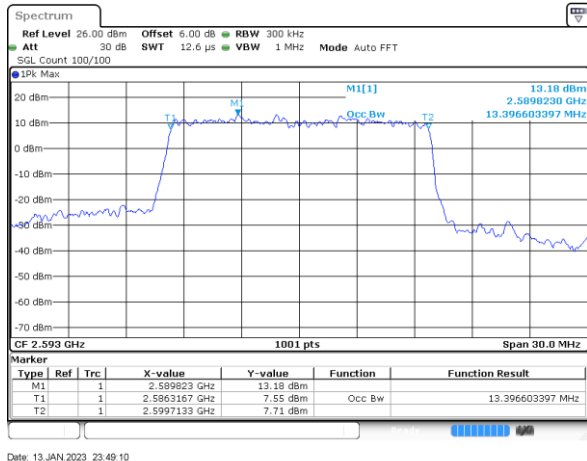
Middle Channel / 10MHz / QPSK



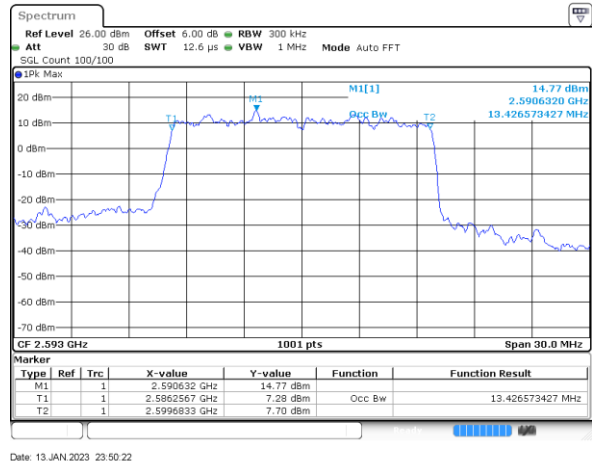
Middle Channel / 10MHz / 16QAM



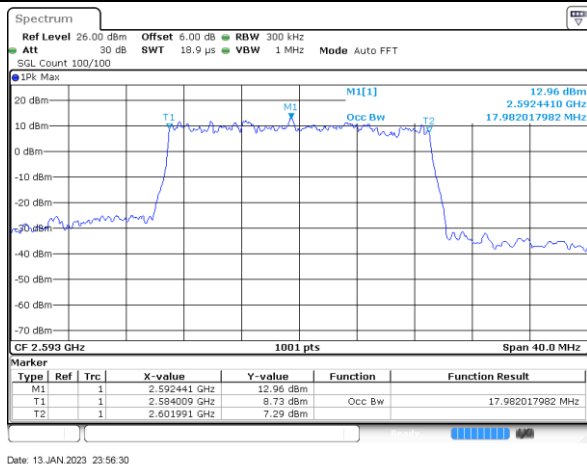
Middle Channel / 15MHz / QPSK



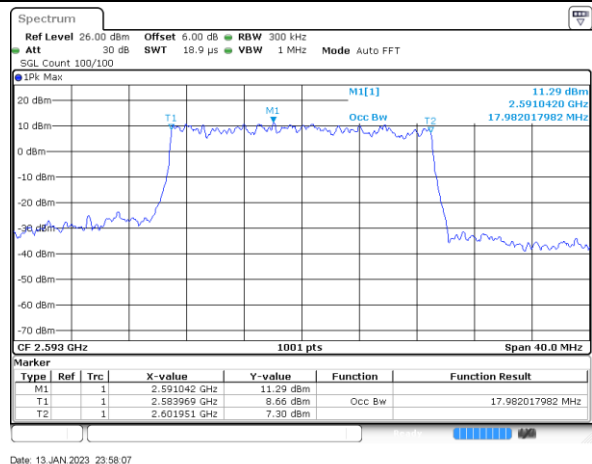
Middle Channel / 15MHz / 16QAM



Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM

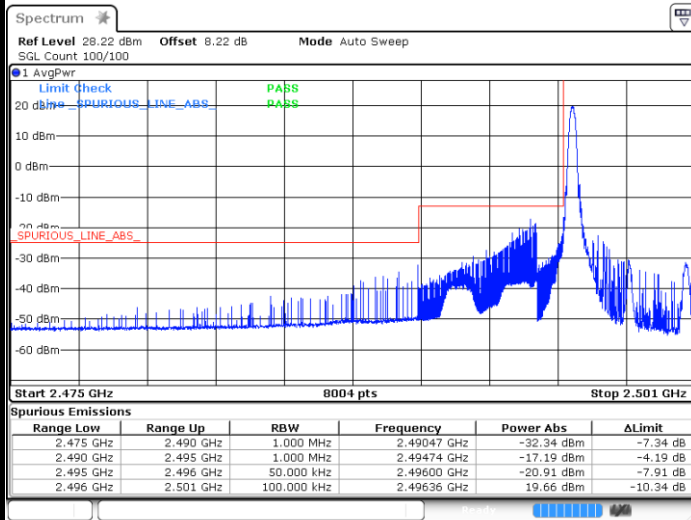




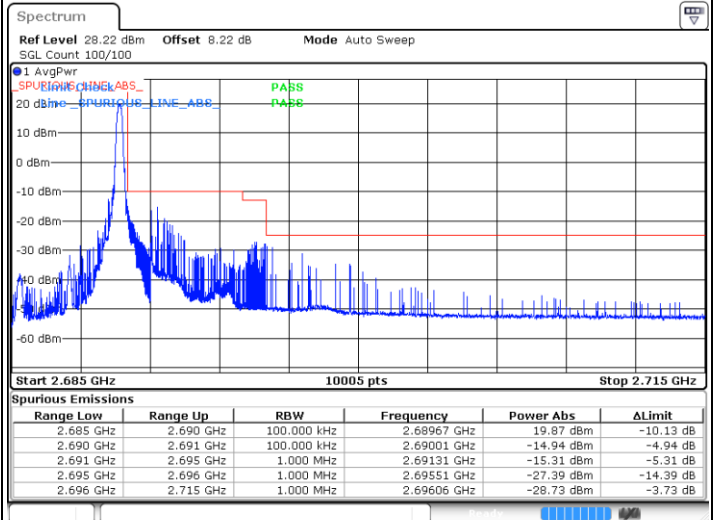
Conducted Band Edge

LTE Band 41 / 5MHz / QPSK

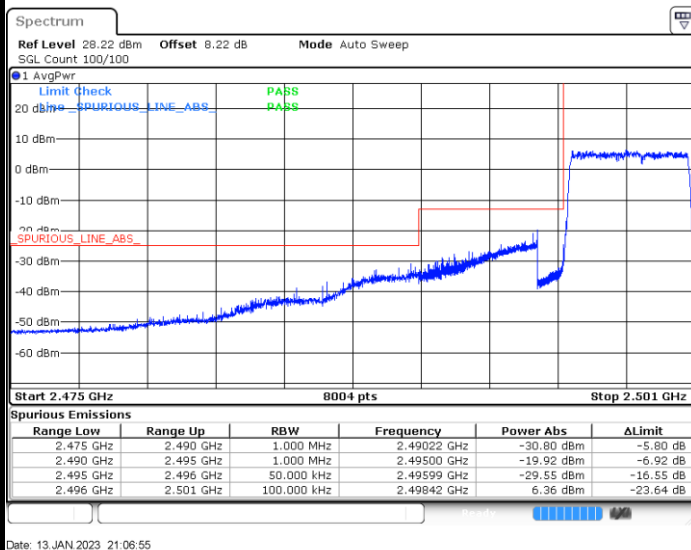
Lowest Band Edge / 1 RB



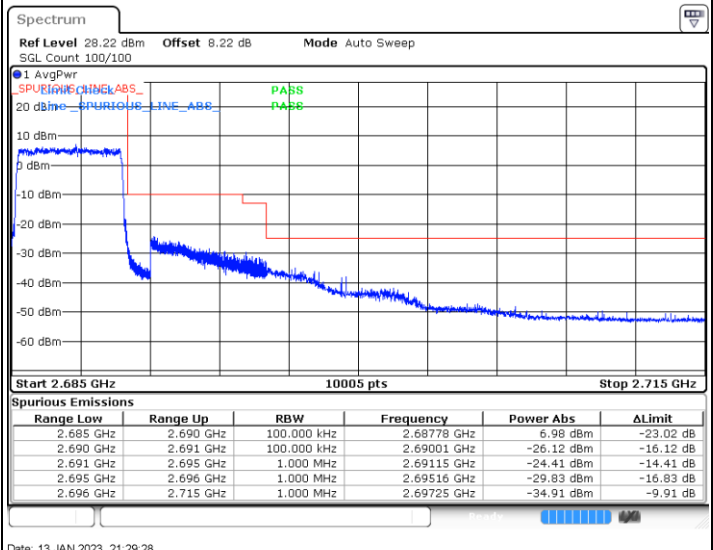
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



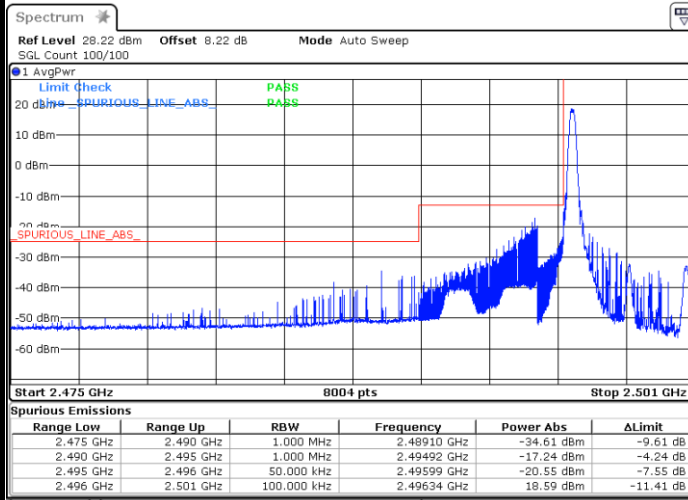
Highest Band Edge / Full RB



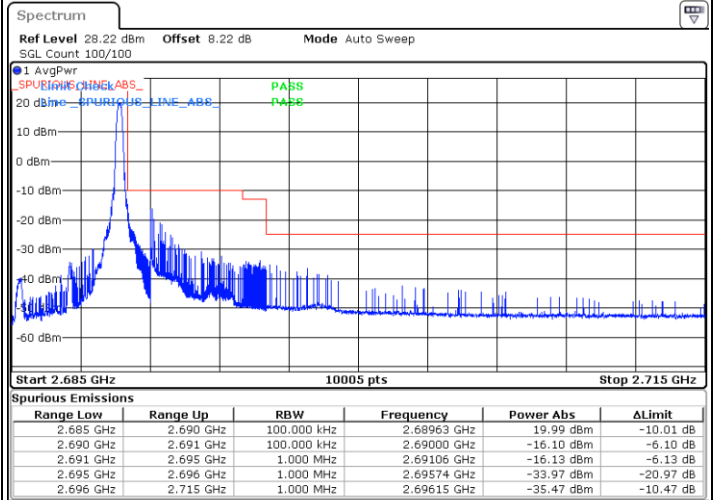


LTE Band 41 / 5MHz / 16QAM

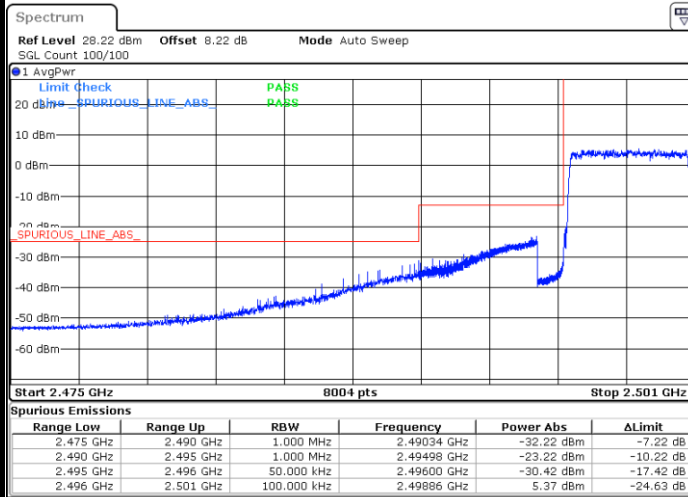
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

