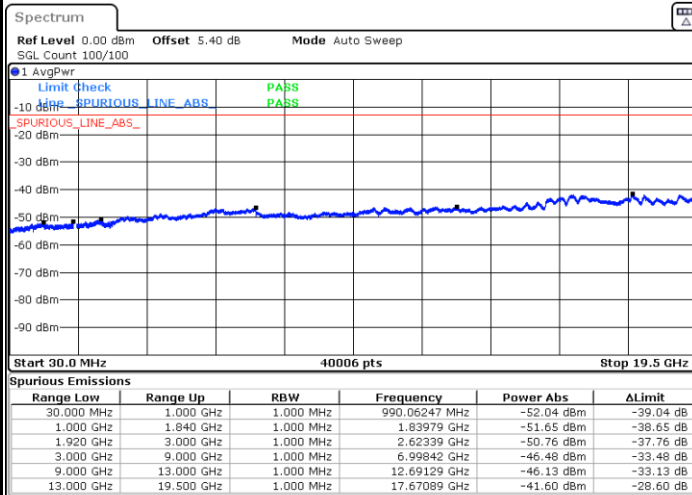




Conducted Spurious Emission

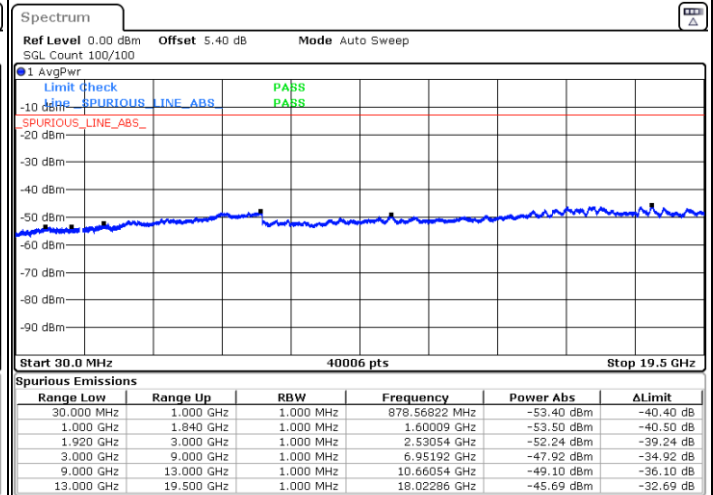
LTE Band 2 / 1.4MHz

Lowest Channel / QPSK



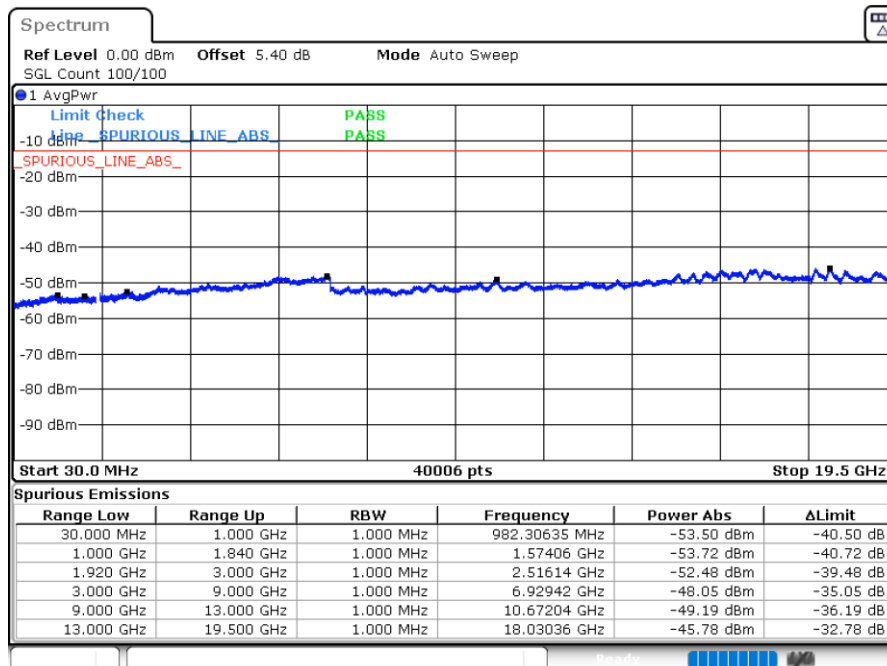
Date: 27.JUL.2023 10:38:39

Middle Channel / QPSK



Date: 27.JUL.2023 10:22:42

Highest Channel / QPSK

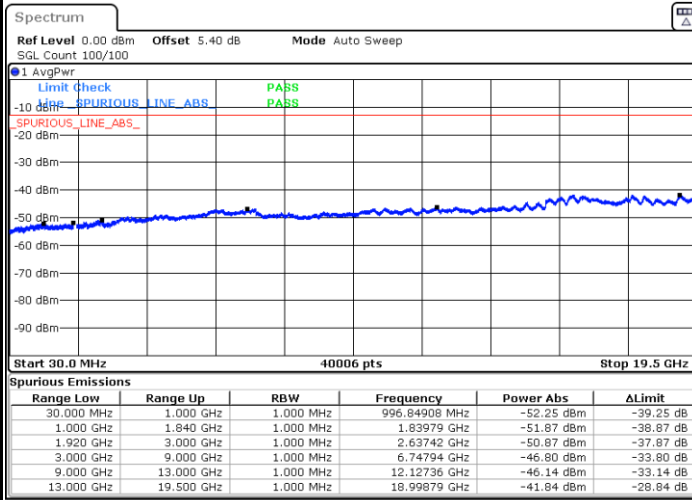


Date: 27.JUL.2023 10:21:22



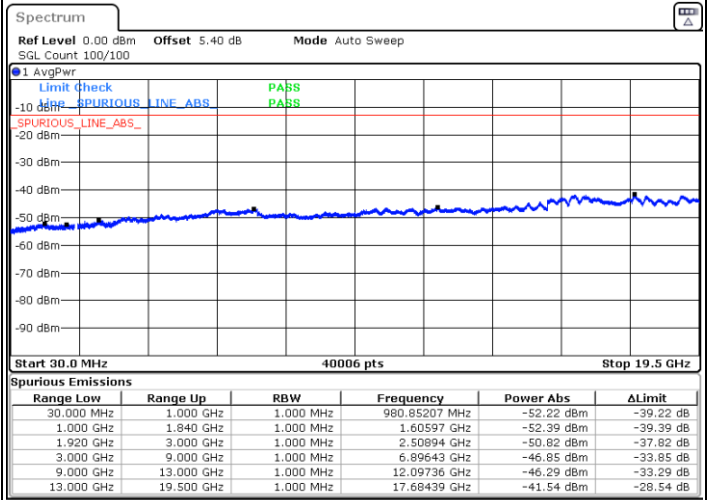
LTE Band 2 / 3MHz

Lowest Channel / QPSK



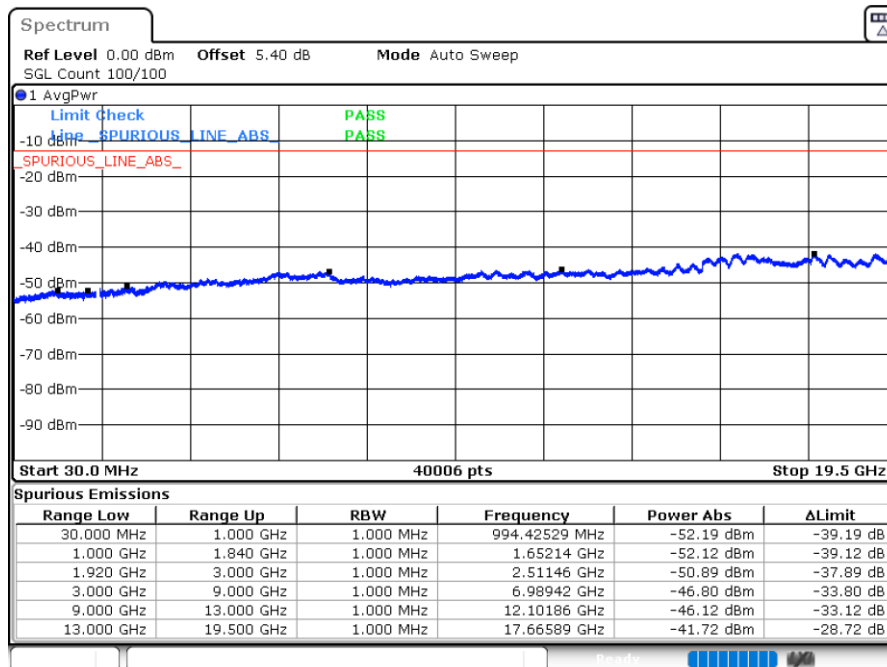
Date: 27.JUL.2023 10:40:00

Middle Channel / QPSK



Date: 27.JUL.2023 10:47:23

Highest Channel / QPSK

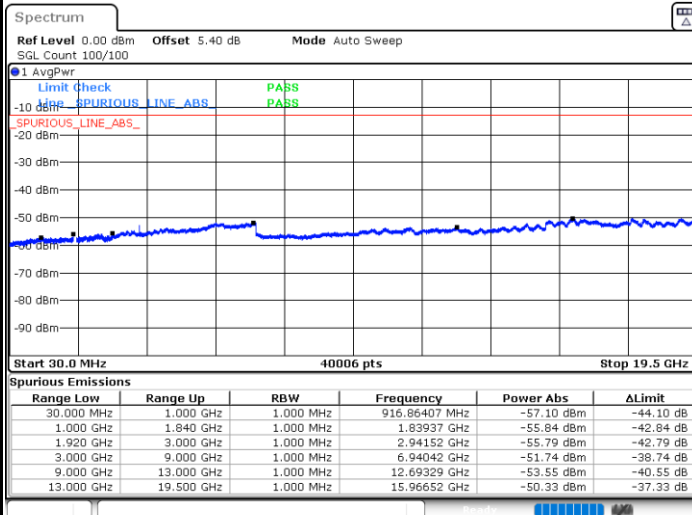


Date: 27.JUL.2023 10:48:43



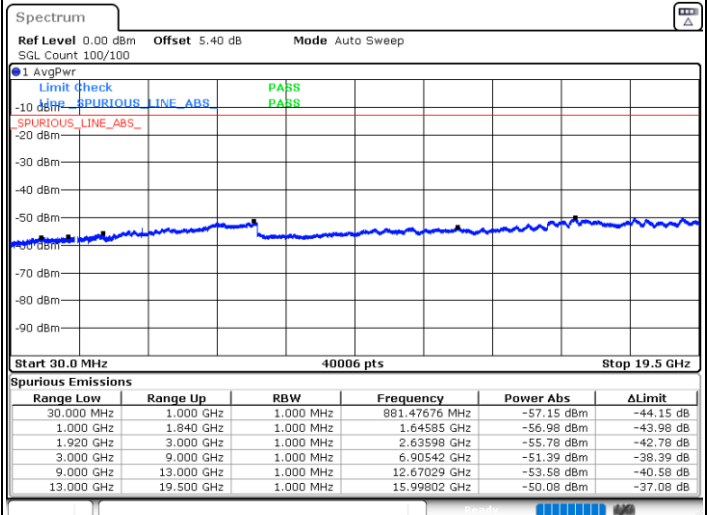
LTE Band 2 / 5MHz

Lowest Channel / QPSK



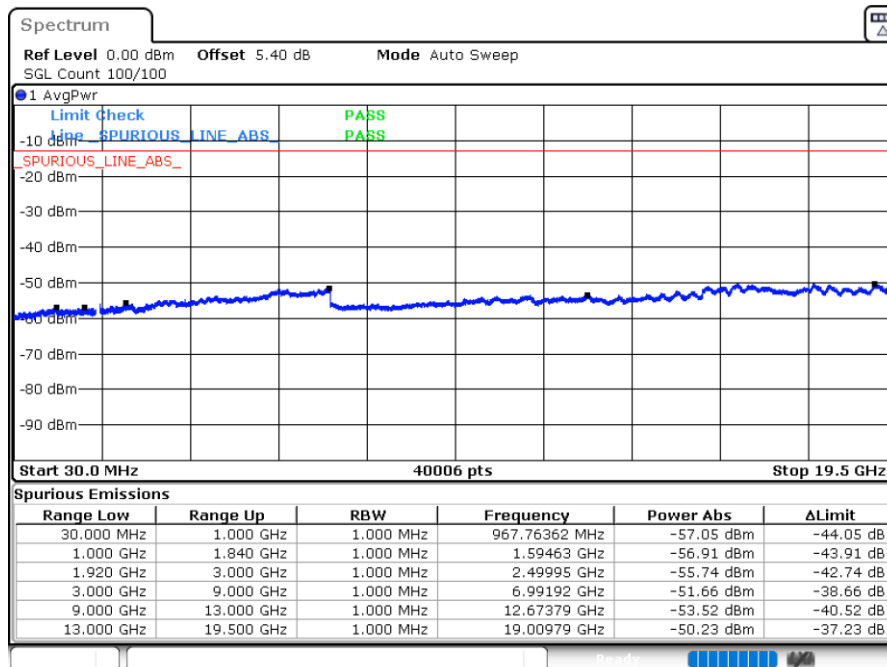
Date: 27.JUL.2023 10:54:24

Middle Channel / QPSK



Date: 27.JUL.2023 11:00:04

Highest Channel / QPSK

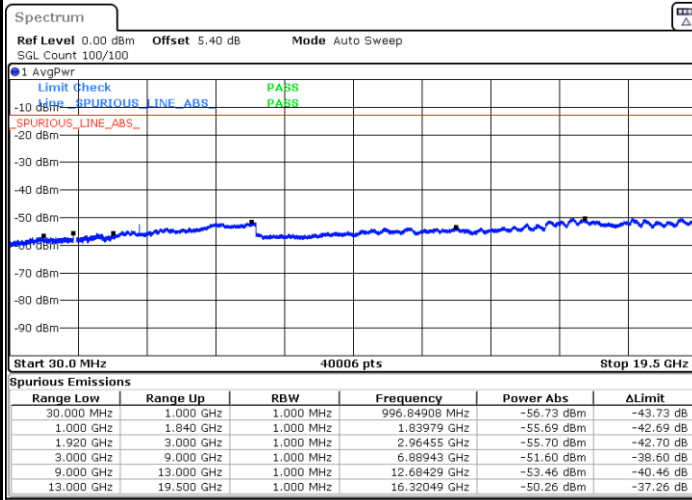


Date: 27.JUL.2023 11:01:23



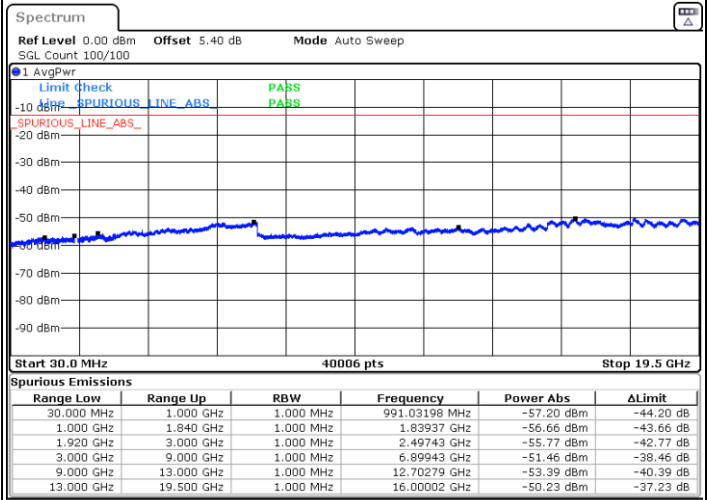
LTE Band 2 / 10MHz

Lowest Channel / QPSK



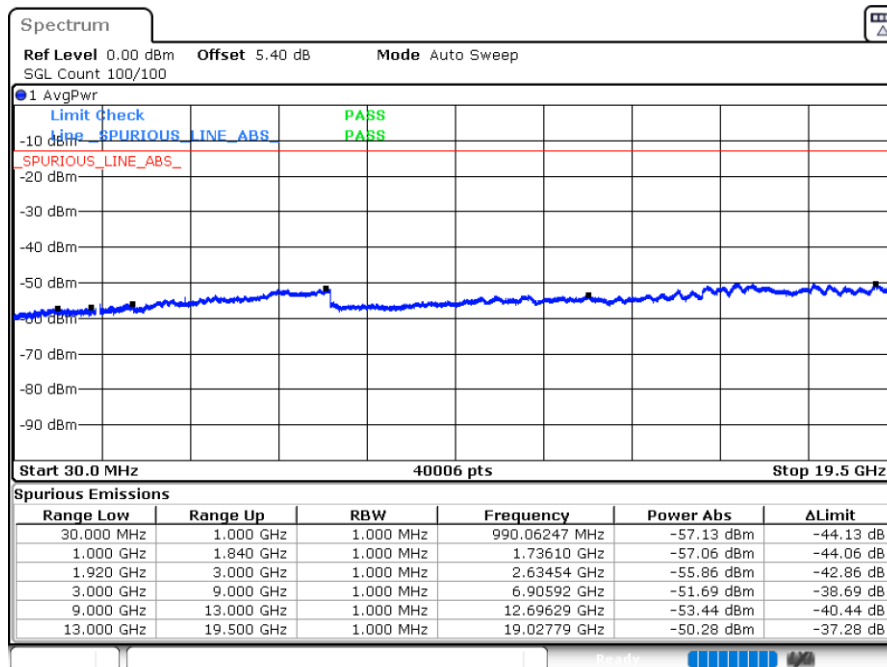
Date: 27.JUL.2023 11:07:04

Middle Channel / QPSK



Date: 27.JUL.2023 11:33:08

Highest Channel / QPSK

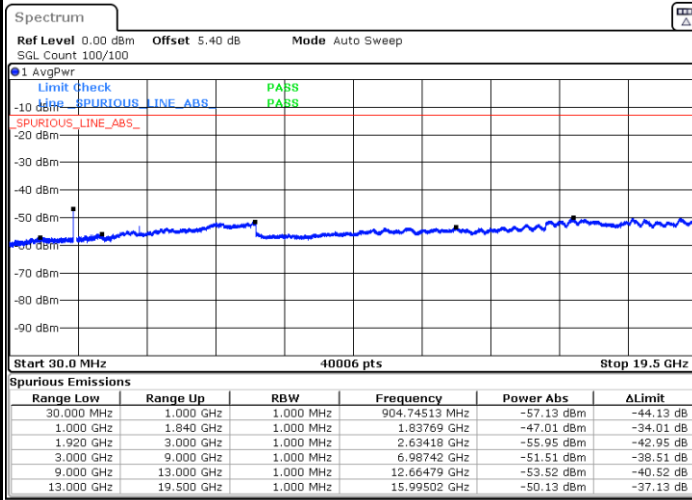


Date: 27.JUL.2023 11:34:28



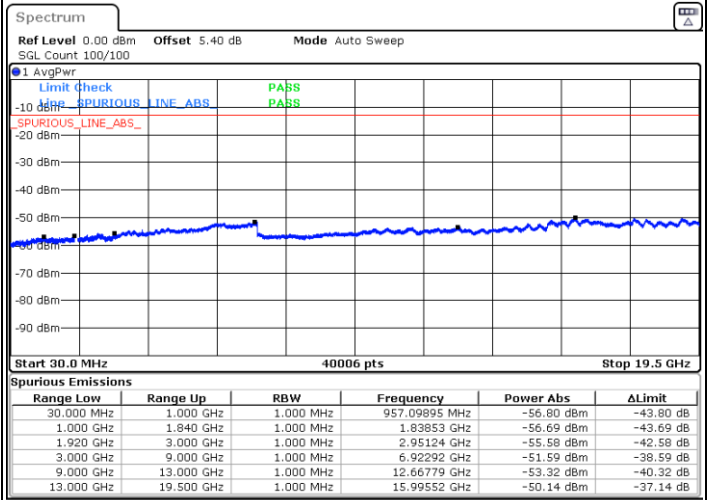
LTE Band 2 / 15MHz

Lowest Channel / QPSK



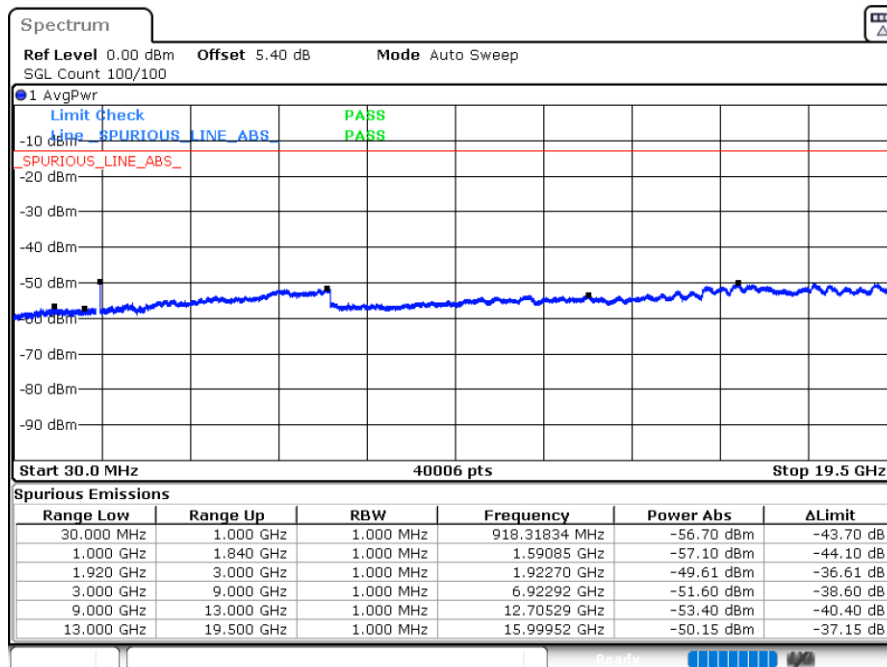
Date: 27.JUL.2023 11:38:03

Middle Channel / QPSK



Date: 27.JUL.2023 11:41:38

Highest Channel / QPSK

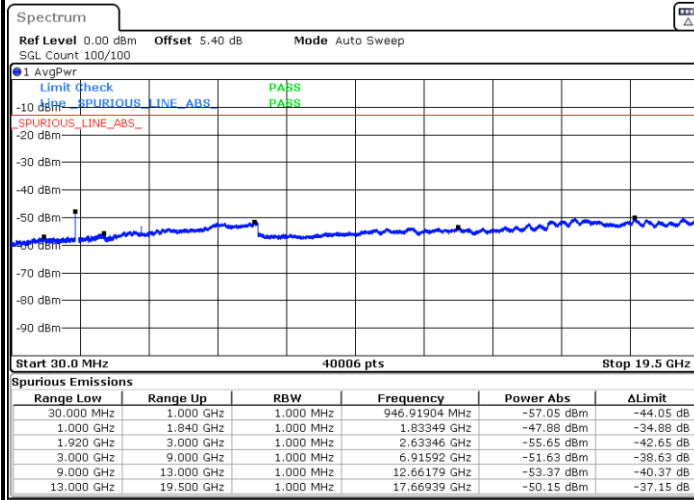


Date: 27.JUL.2023 11:42:58



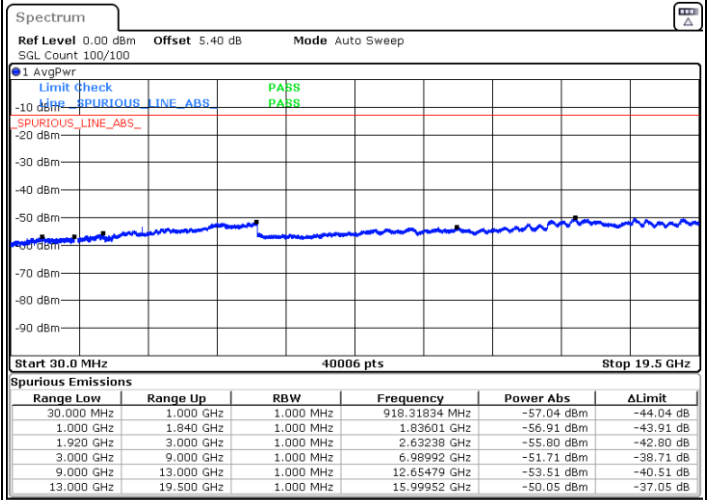
LTE Band 2 / 20MHz

Lowest Channel / QPSK



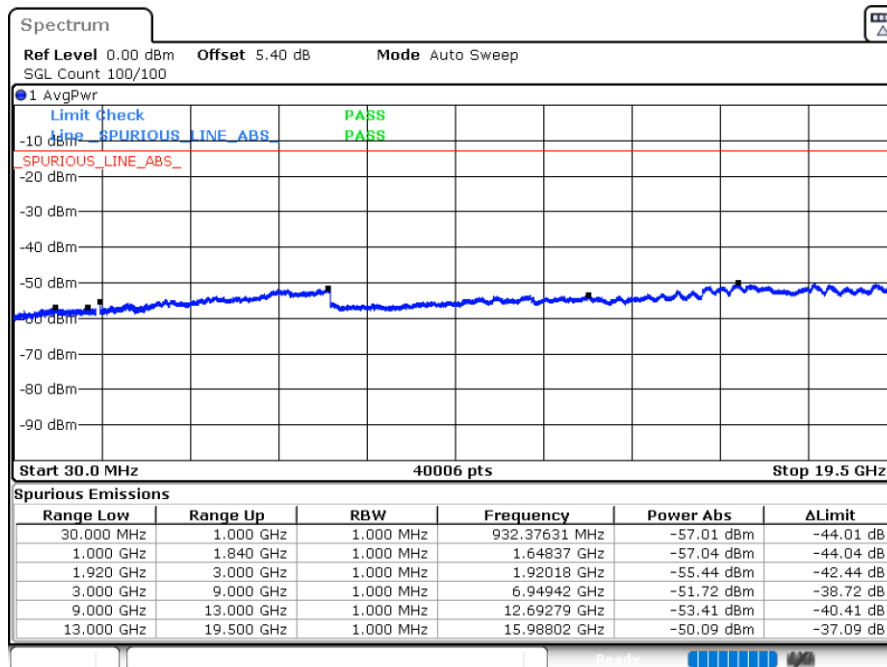
Date: 27.JUL.2023 11:46:33

Middle Channel / QPSK



Date: 27.JUL.2023 11:50:08

Highest Channel / QPSK



Date: 27.JUL.2023 11:51:27

Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0043	
30	Normal Voltage	0.0038	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0035	
-10	Normal Voltage	0.0027	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0003	
20	Minimum Voltage	0.0046	

Note:

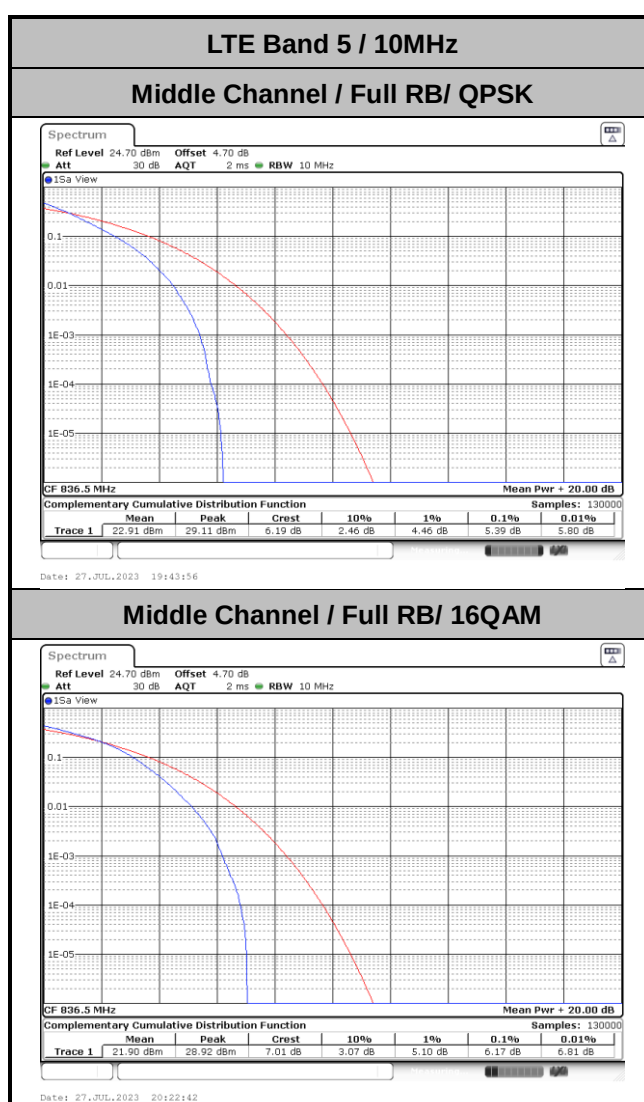
1. Normal Voltage = 3.8 V. ; Minimum Voltage =3.3 V. ; Maximum Voltage = 4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 5

Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	5.39	6.17	PASS



26dB Bandwidth

Mode	LTE Band 5 : 26dB BW(MHz) Full RB	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.30	1.27
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	3.09	3.02
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	5.06	5.00
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	10.11	6.39

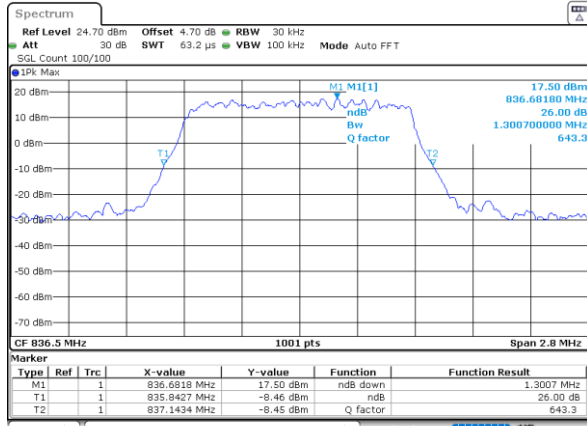
Mode	LTE Band 5 : 26dB BW(MHz) 1RB	
BW	3MHz	
Mod.	QPSK	16QAM
L CH 1RB	0.60	0.59
H CH 1RB	0.60	0.61
BW	5MHz	
Mod.	QPSK	16QAM
L CH 1RB	0.89	0.83
H CH 1RB	0.80	0.78
BW	10MHz	
Mod.	QPSK	16QAM
L CH 1RB	1.80	1.74
H CH 1RB	1.30	1.54



Full RB (Middle CH):

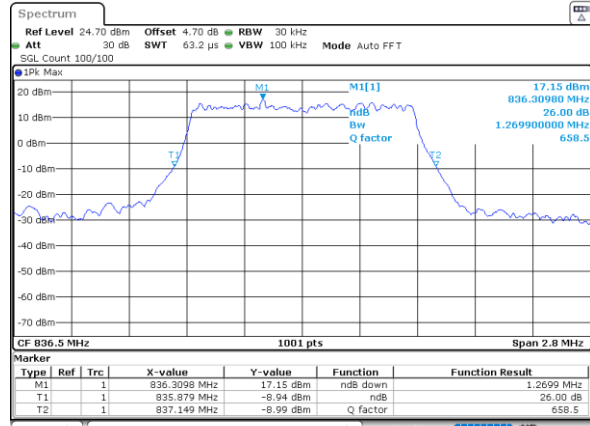
LTE Band 5

Middle Channel / 1.4MHz / QPSK



Date: 27.JUL.2023 19:48:11

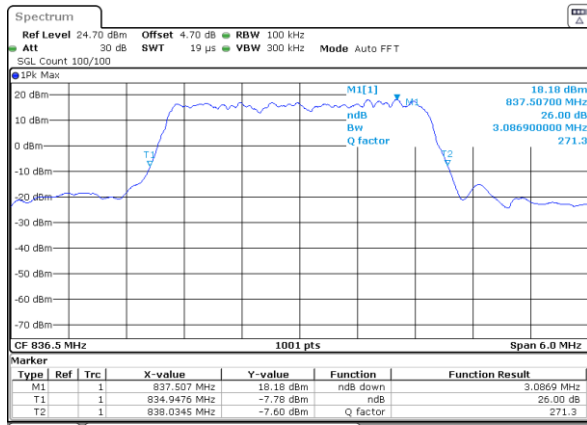
Middle Channel / 1.4MHz / 16QAM



Date: 27.JUL.2023 19:48:132

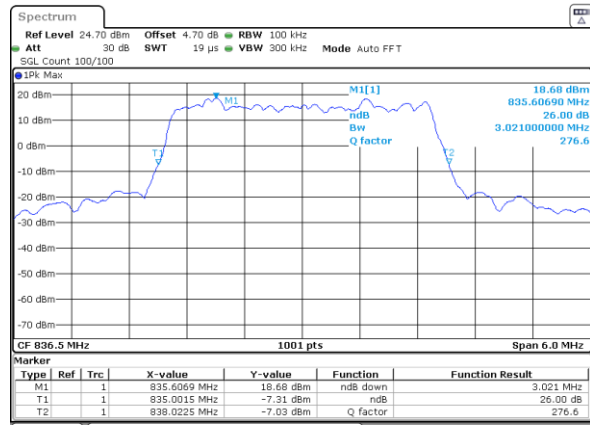
LTE Band 5

Middle Channel / 3MHz / QPSK



Date: 27.JUL.2023 19:46:45

Middle Channel / 3MHz / 16QAM

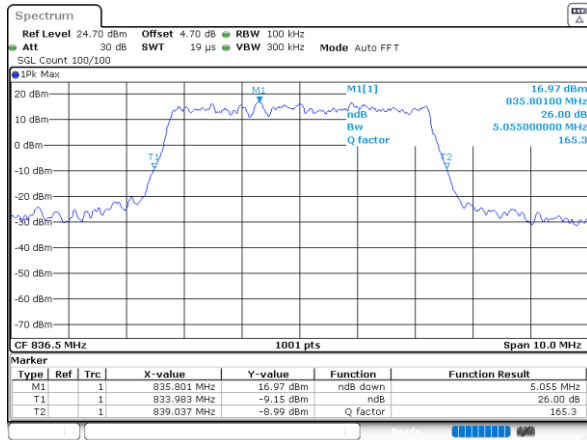


Date: 27.JUL.2023 19:47:06

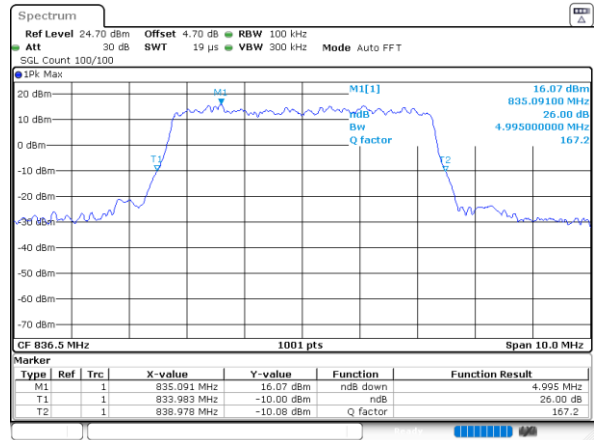


LTE Band 5

Middle Channel / 5MHz / QPSK

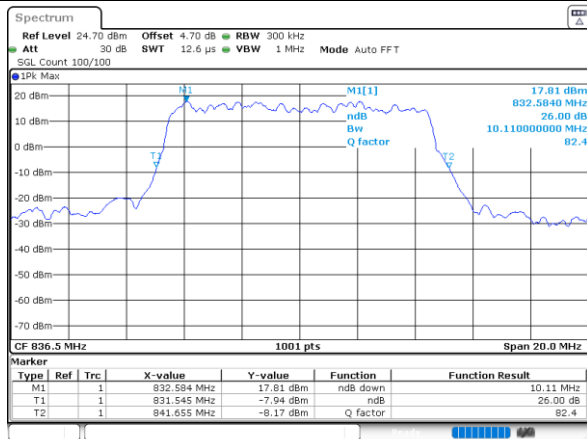


Middle Channel / 5MHz / 16QAM

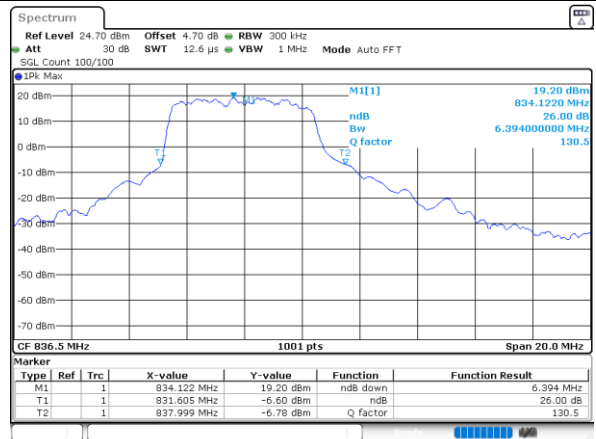


LTE Band 5

Middle Channel / 10MHz / QPSK

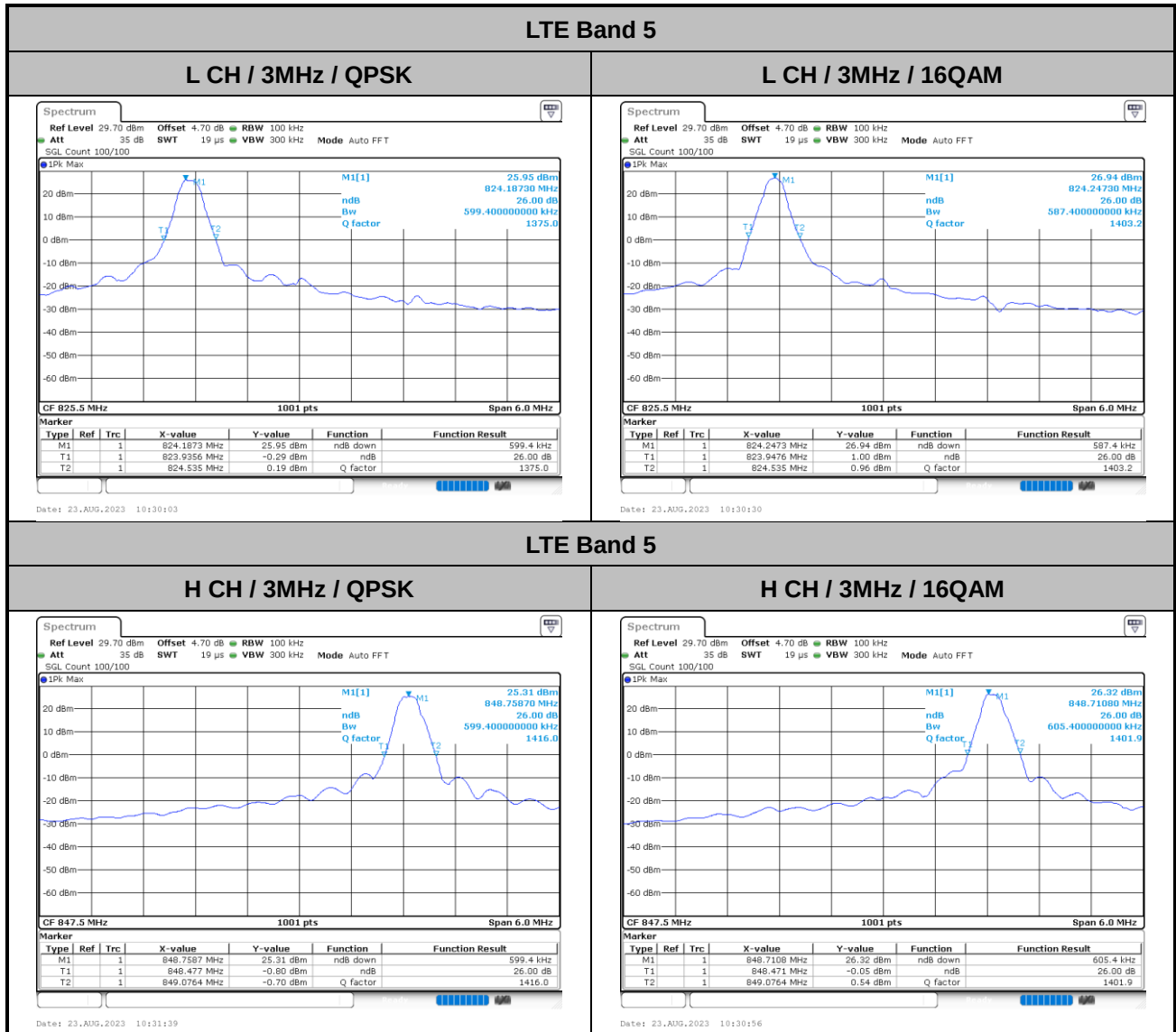


Middle Channel / 10MHz / 16QAM





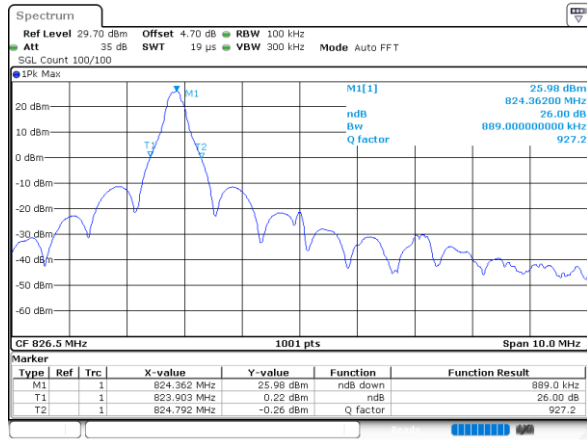
1 RB (Low/High CH):





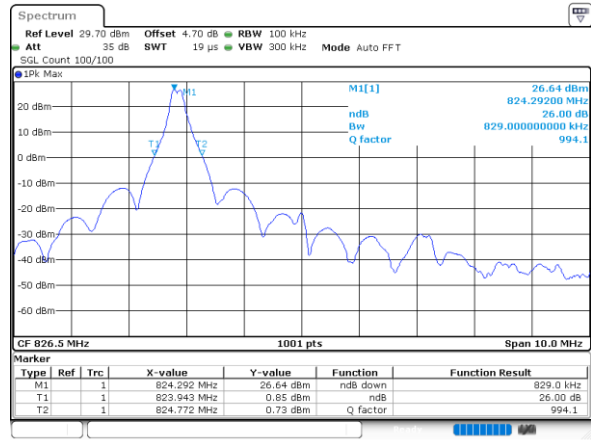
LTE Band 5

L CH / 5MHz / QPSK



Date: 23.AUG.2023 10:32:04

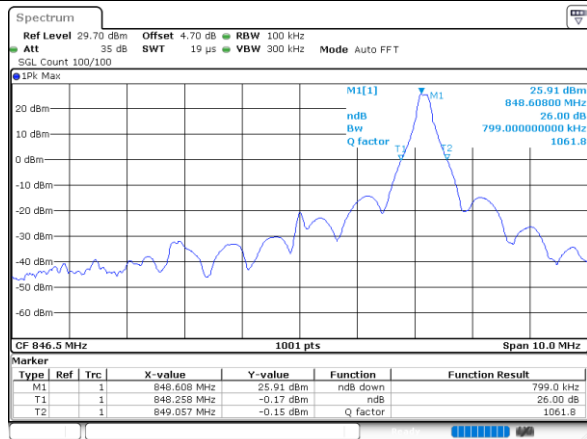
L CH / 5MHz / 16QAM



Date: 23.AUG.2023 10:32:27

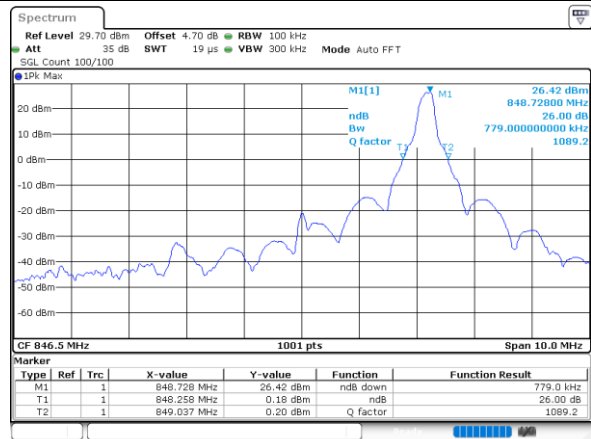
LTE Band 5

H CH / 5MHz / QPSK



Date: 23.AUG.2023 10:33:15

H CH / 5MHz / 16QAM

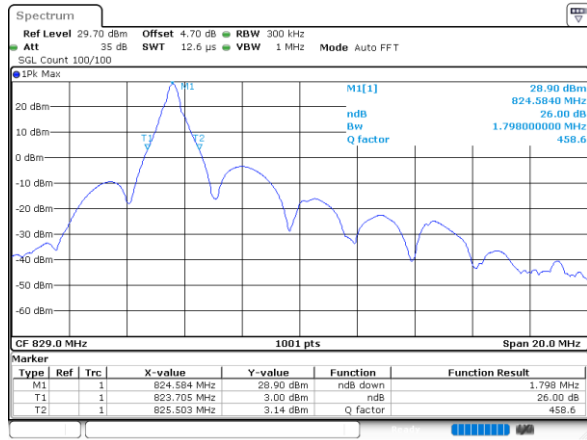


Date: 23.AUG.2023 10:33:52



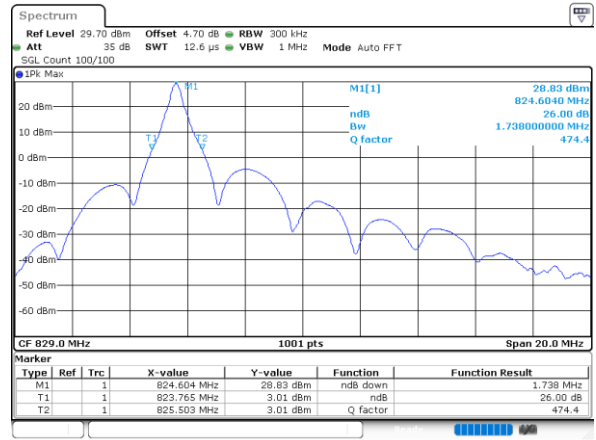
LTE Band 5

L CH / 10MHz / QPSK



Date: 23.AUG.2023 10:33:40

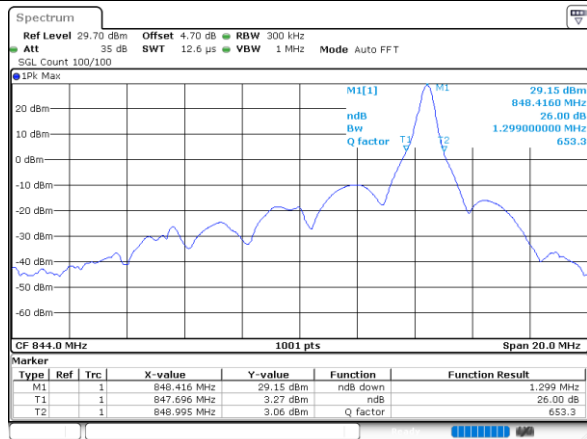
L CH / 10MHz / 16QAM



Date: 23.AUG.2023 10:35:57

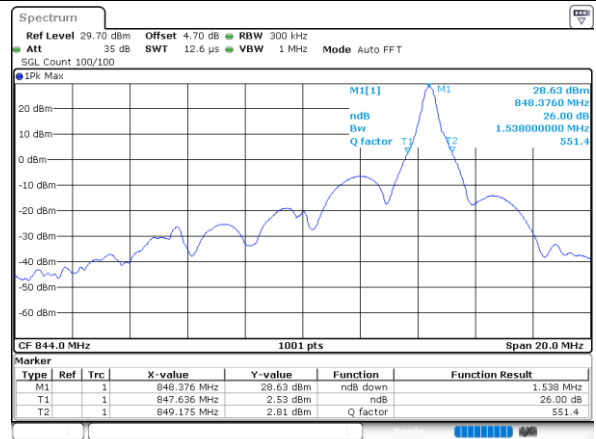
LTE Band 5

H CH / 10MHz / QPSK



Date: 23.AUG.2023 10:35:02

H CH / 10MHz / 16QAM

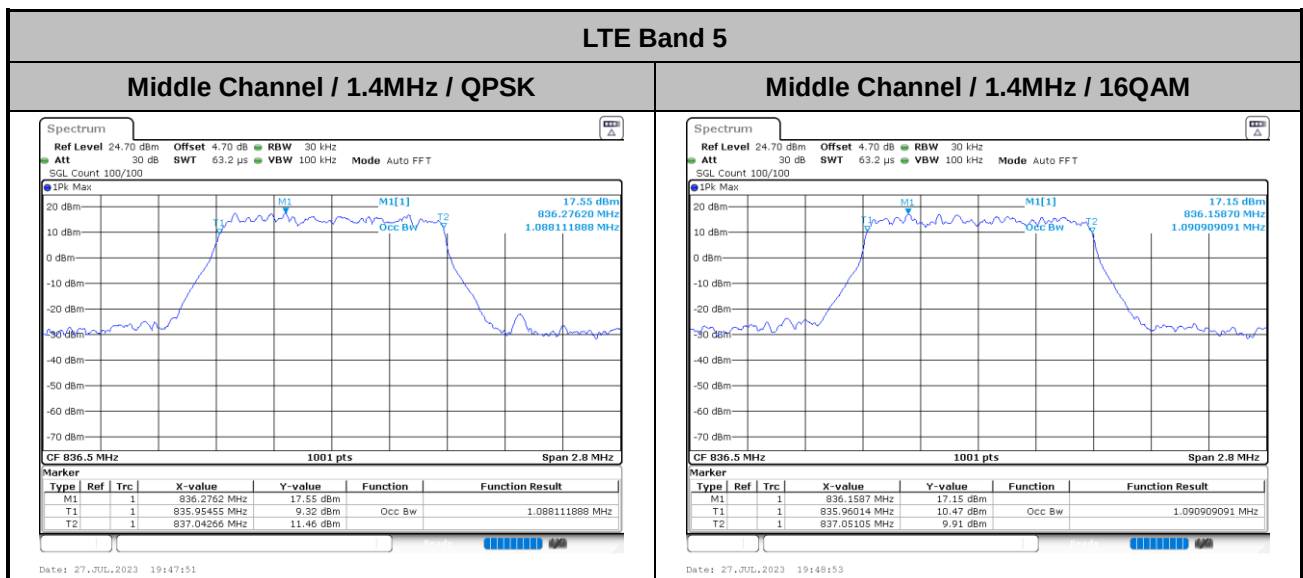


Date: 23.AUG.2023 10:34:38



Occupied Bandwidth

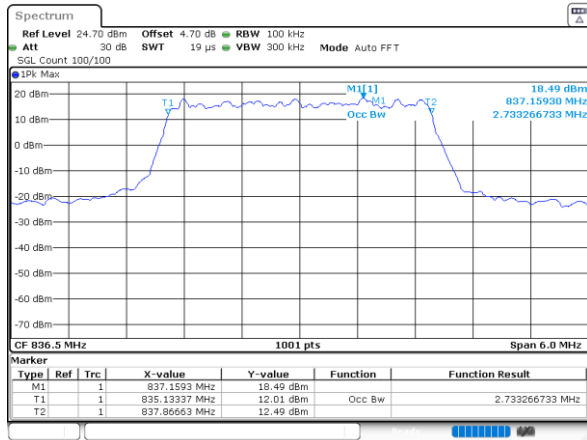
Mode	LTE Band 5 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.09	1.09
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.73	2.74
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.48	4.49
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.11	5.03



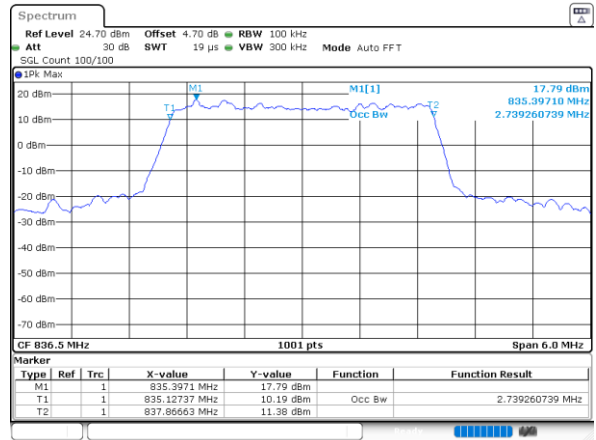


LTE Band 5

Middle Channel / 3MHz / QPSK

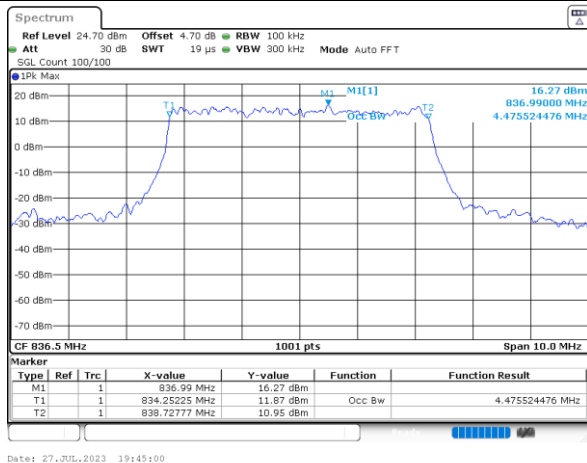


Middle Channel / 3MHz / 16QAM

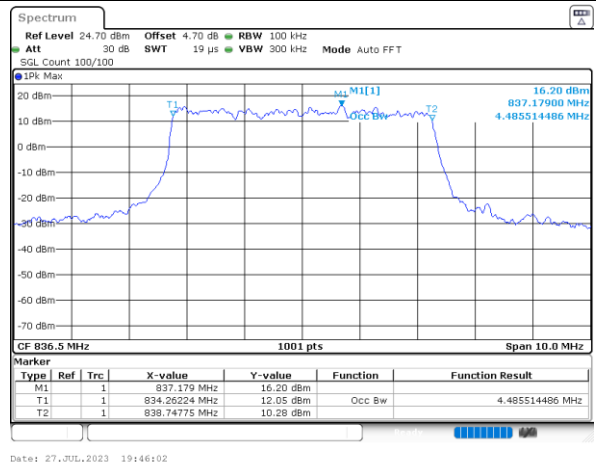


LTE Band 5

Middle Channel / 5MHz / QPSK

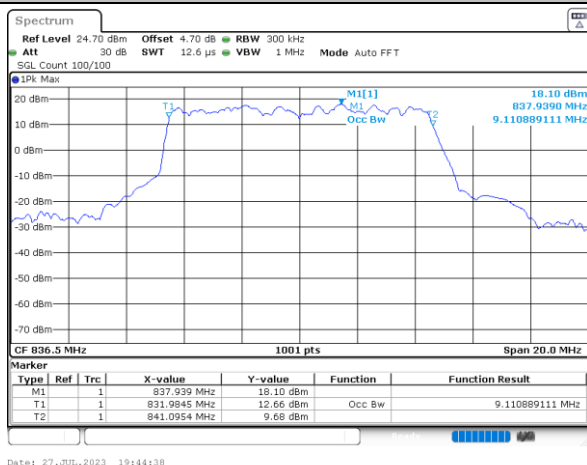


Middle Channel / 5MHz / 16QAM

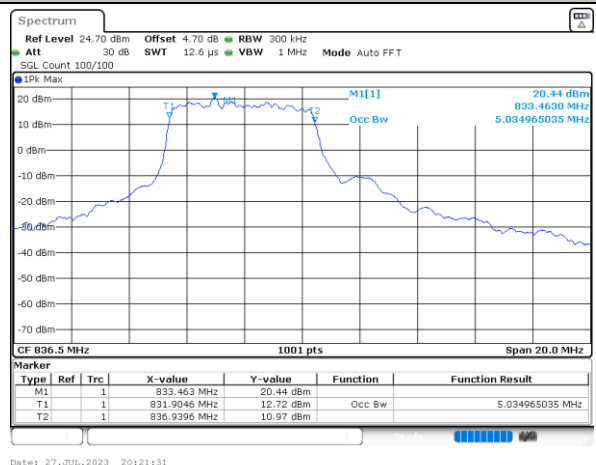


LTE Band 5

Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM

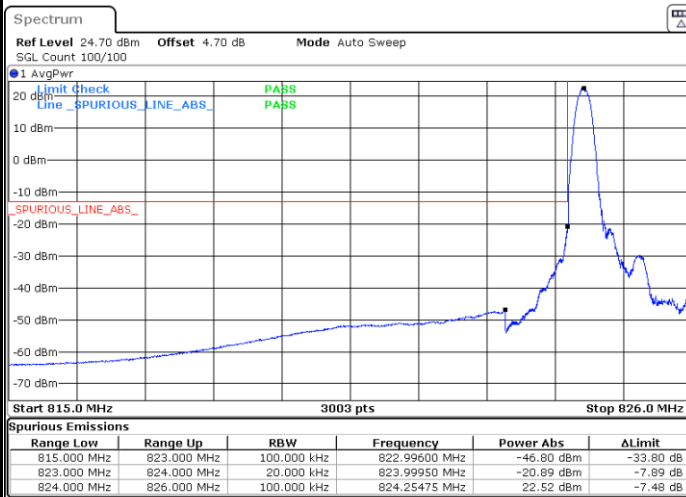




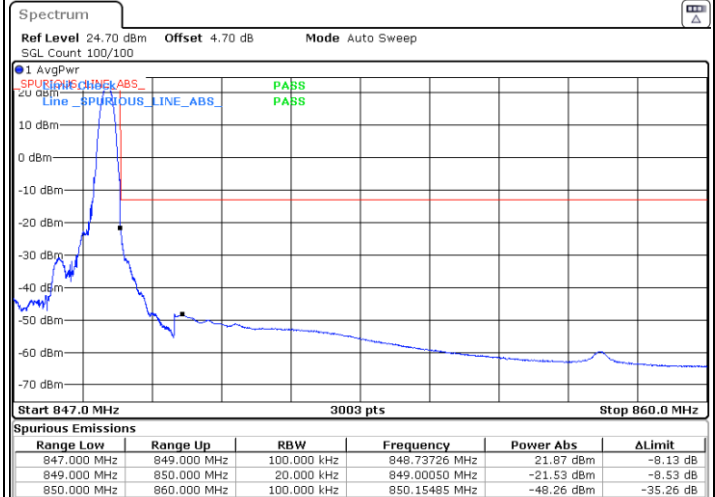
Conducted Band Edge

LTE Band 5 / 1.4MHz / QPSK

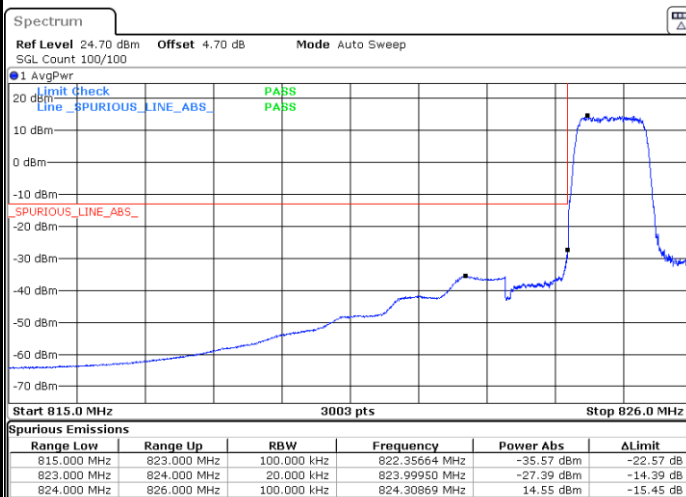
Lowest Band Edge / 1RB



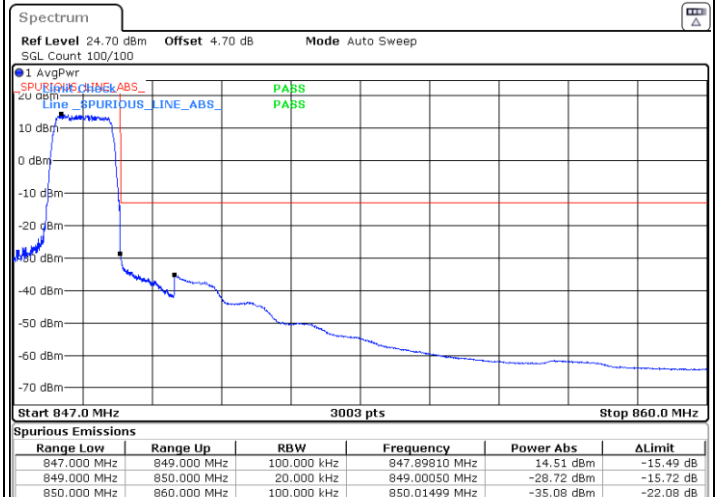
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



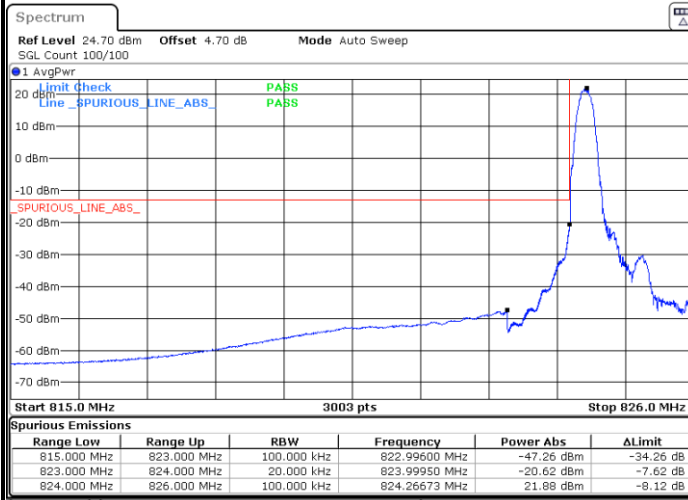
Highest Band Edge / Full RB



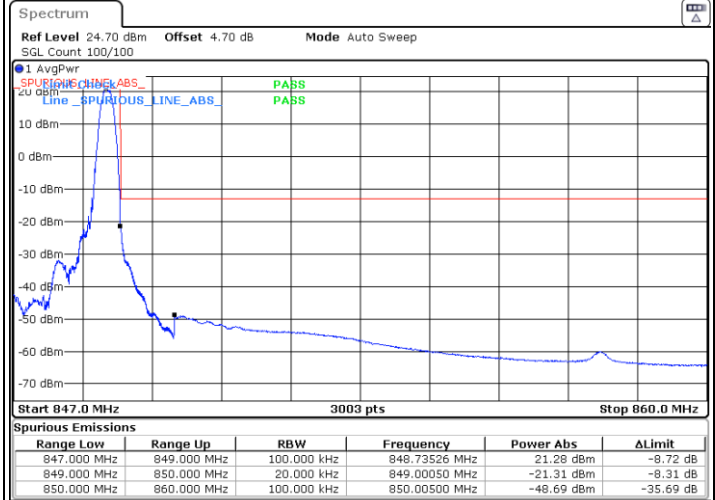


LTE Band 5 / 1.4MHz / 16QAM

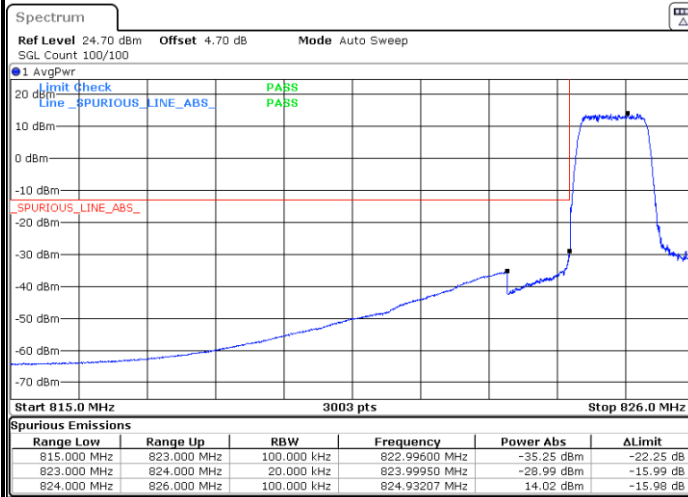
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



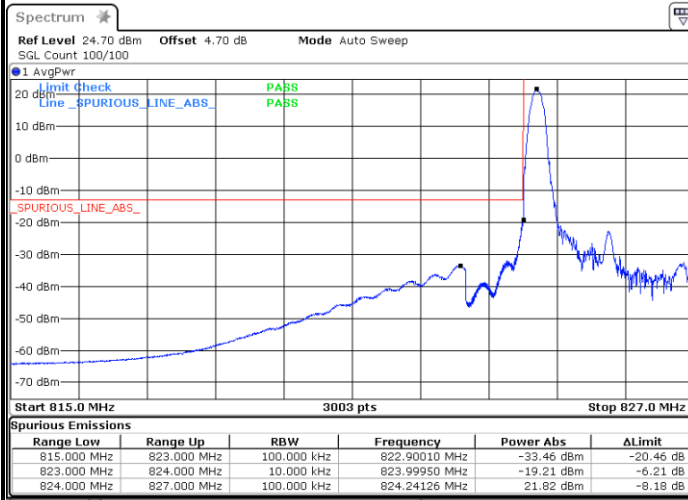
Highest Band Edge / Full RB





LTE Band 5 / 3MHz / QPSK

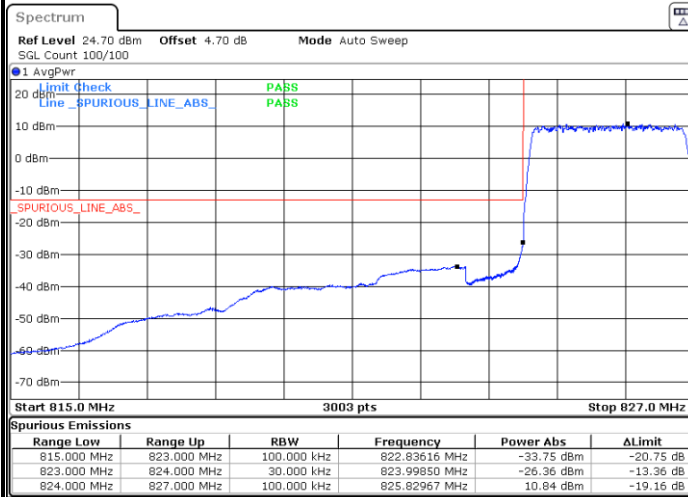
Lowest Band Edge / 1RB



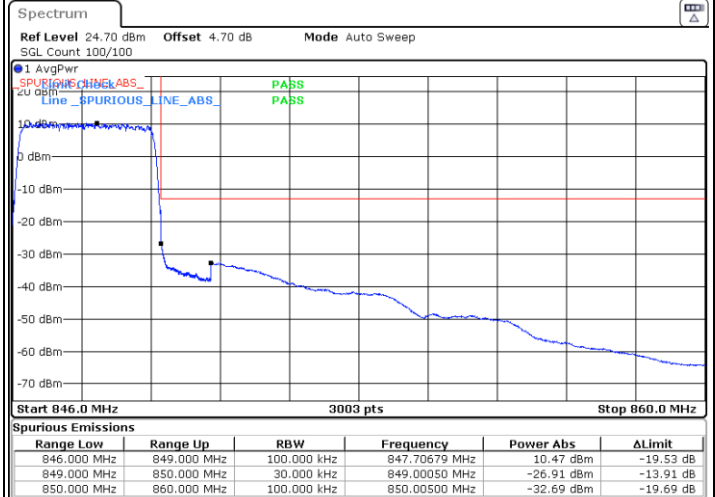
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



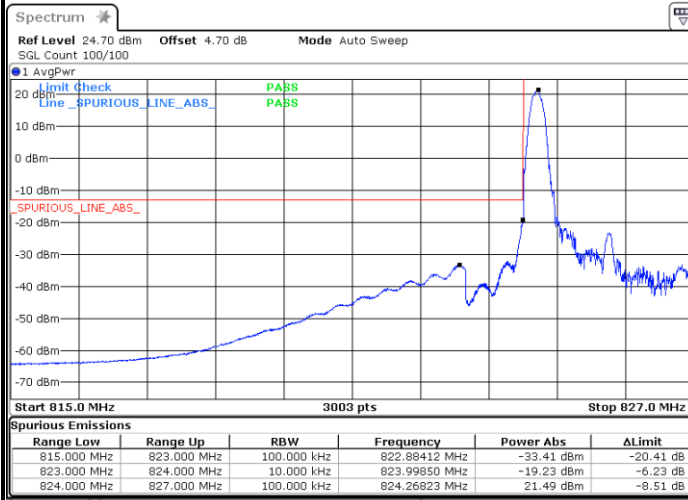
Highest Band Edge / Full RB





LTE Band 5 / 3MHz / 16QAM

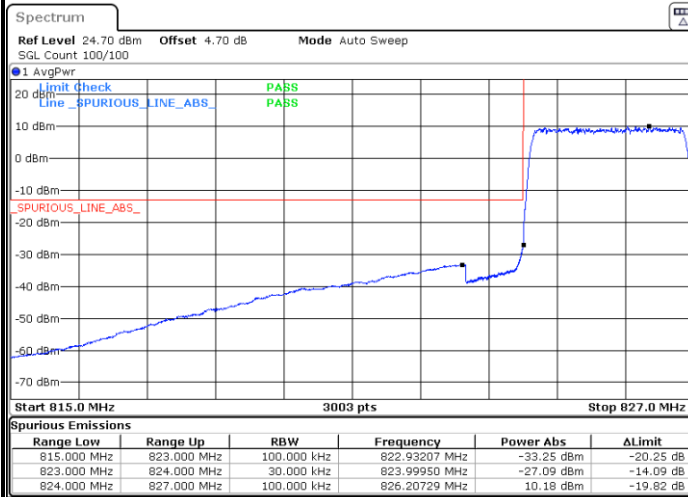
Lowest Band Edge / 1 RB



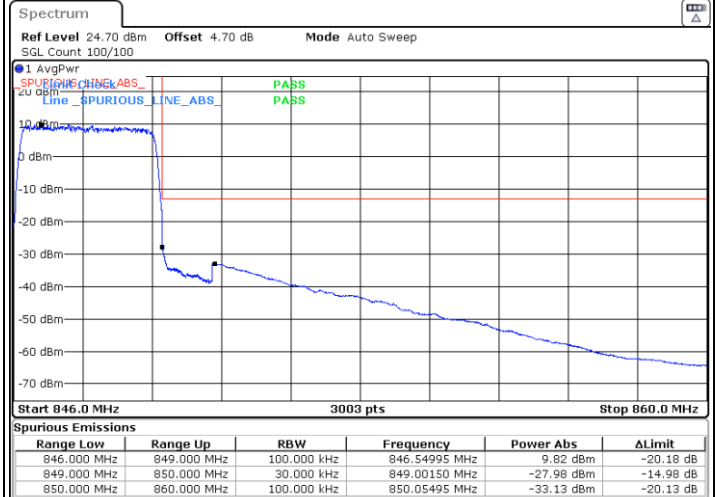
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



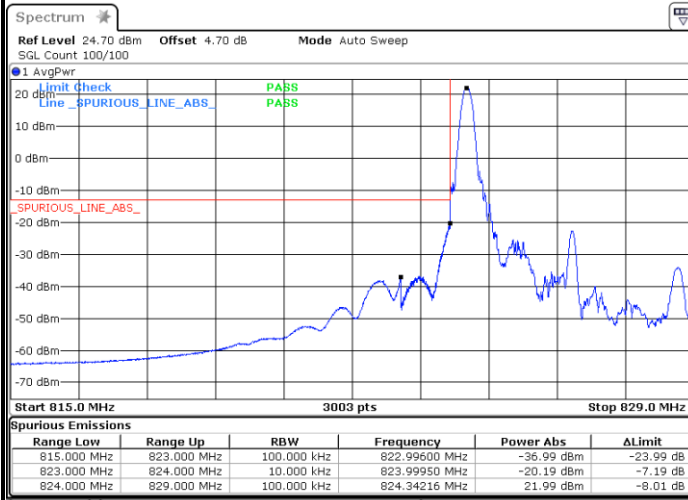
Highest Band Edge / Full RB





LTE Band 5 / 5MHz / QPSK

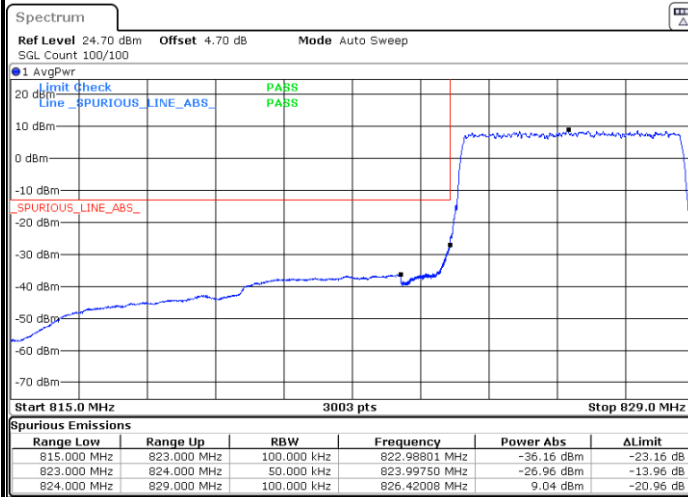
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



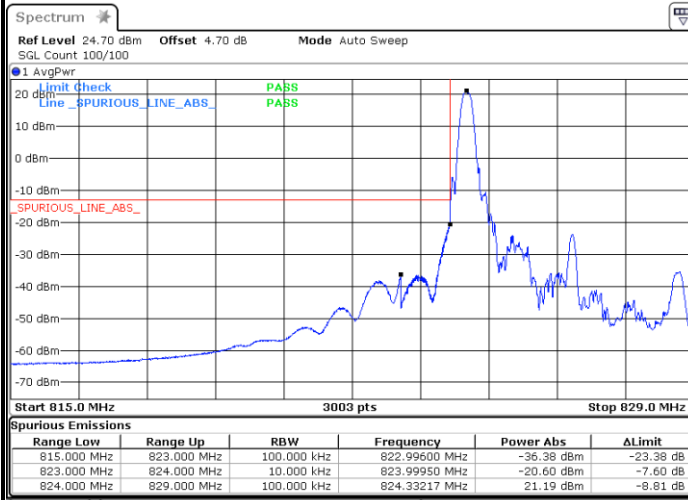
Highest Band Edge / Full RB





LTE Band 5 / 5MHz / 16QAM

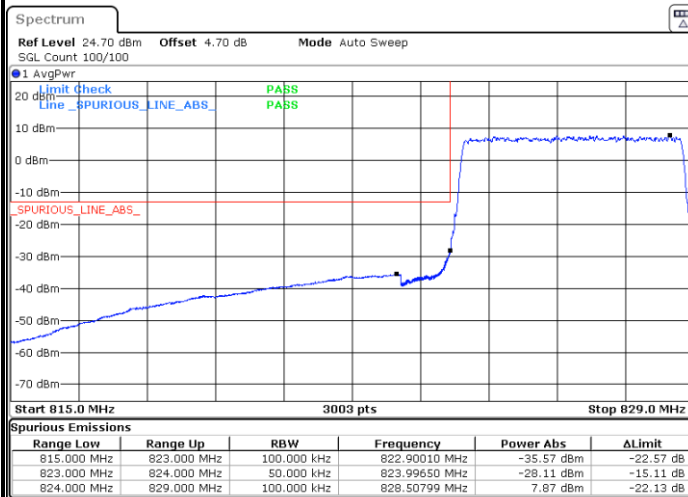
Lowest Band Edge / 1RB



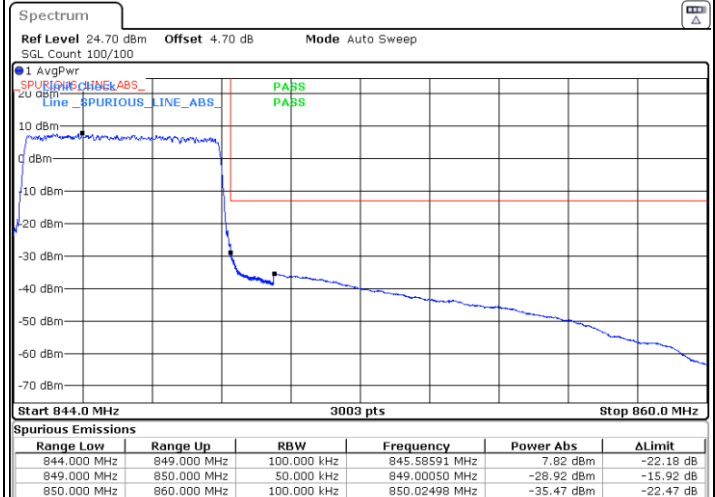
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



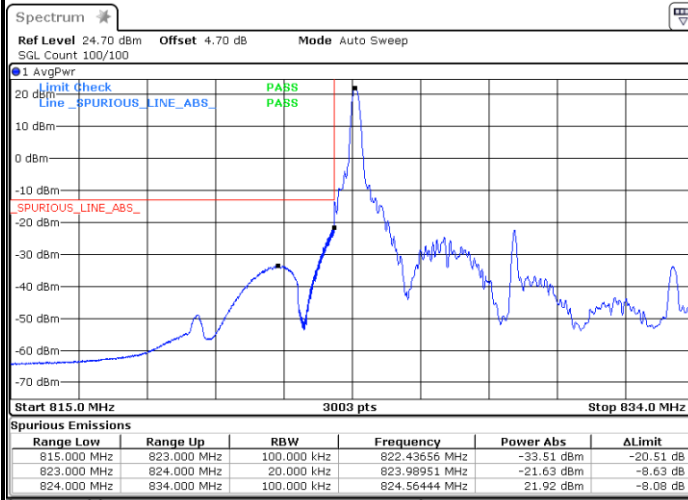
Highest Band Edge / Full RB



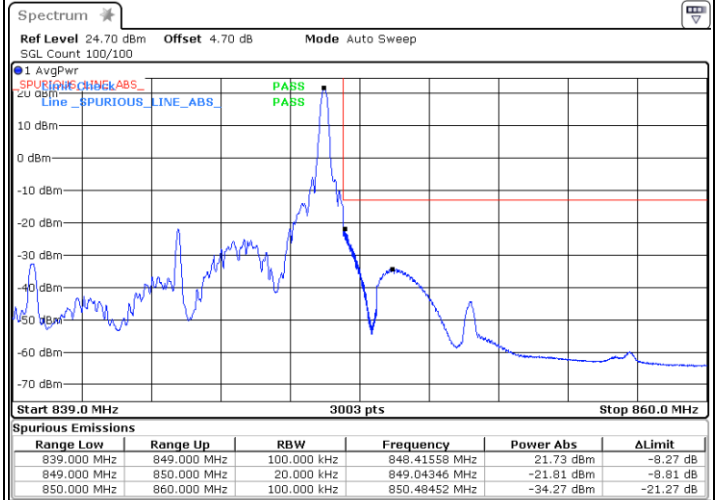


LTE Band 5 / 10MHz / QPSK

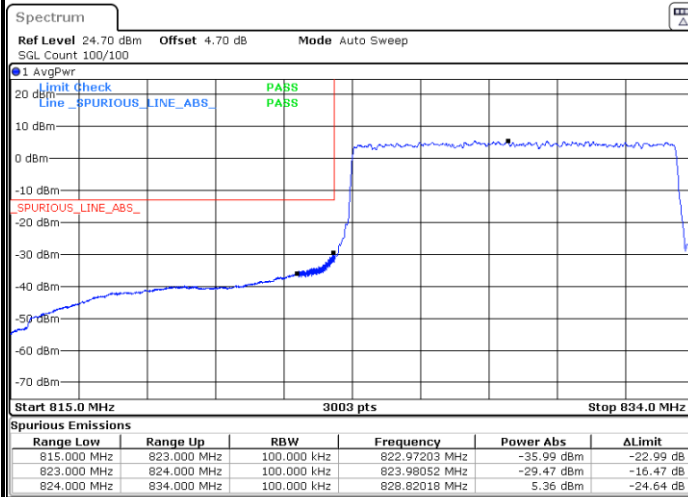
Lowest Band Edge / 1 RB



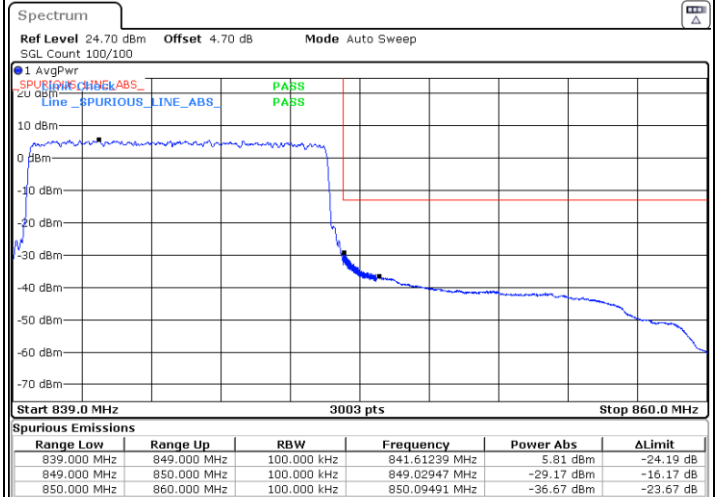
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



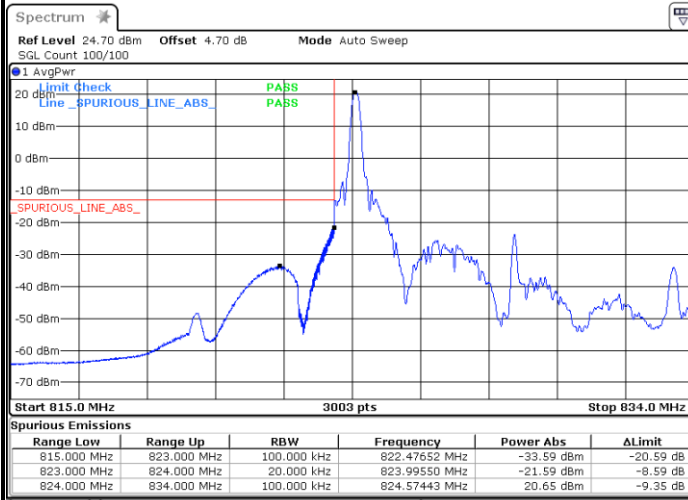
Highest Band Edge / Full RB



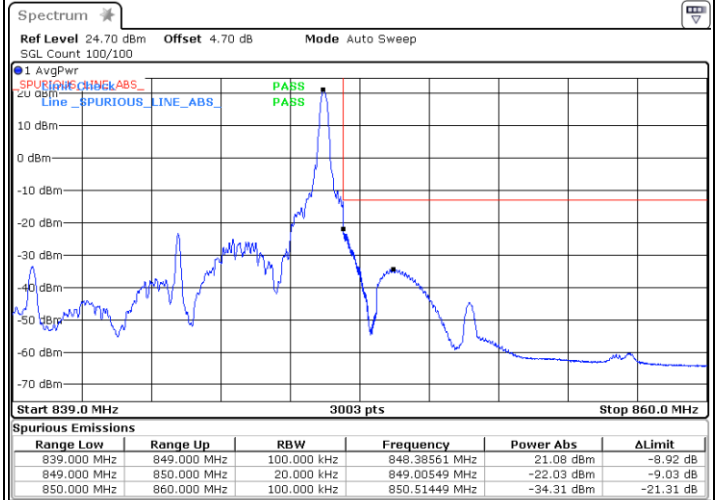


LTE Band 5 / 10MHz / 16QAM

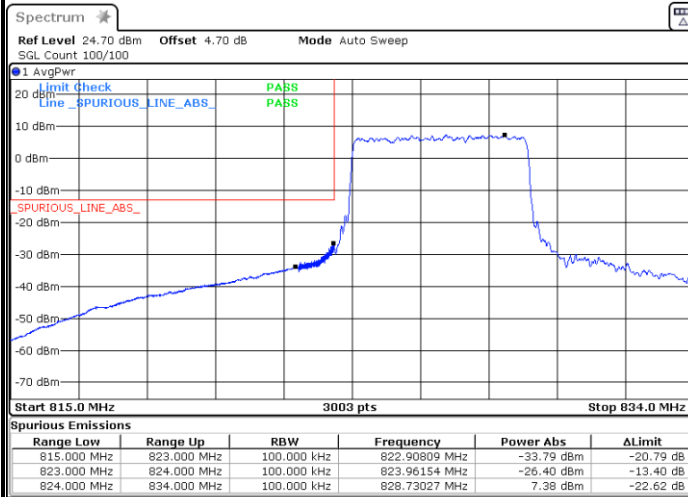
Lowest Band Edge / 1 RB



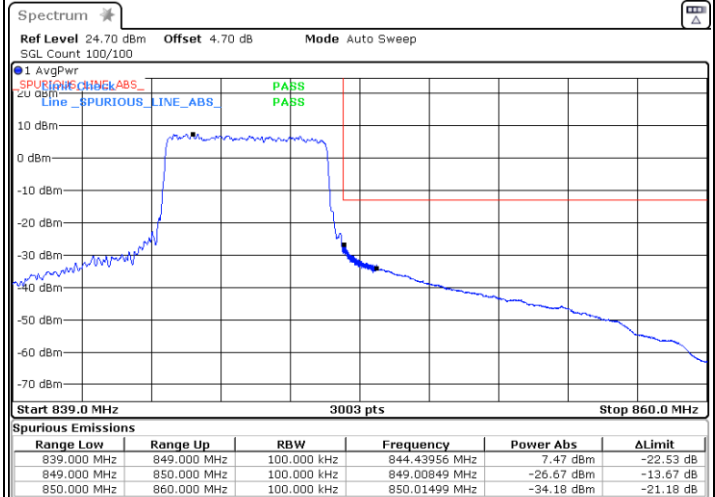
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

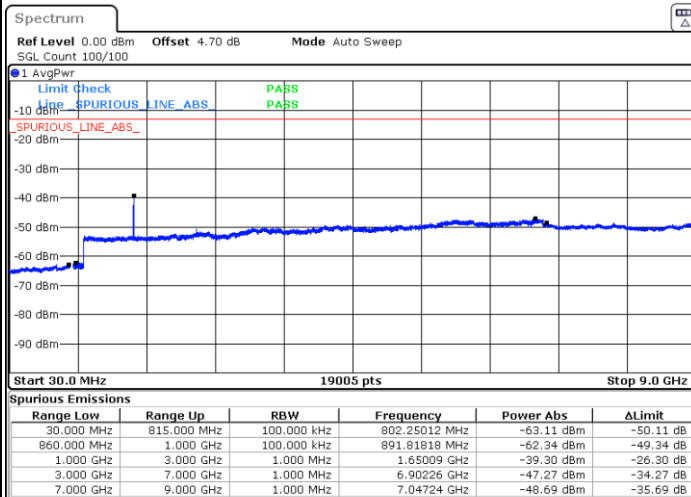




Conducted Spurious Emission

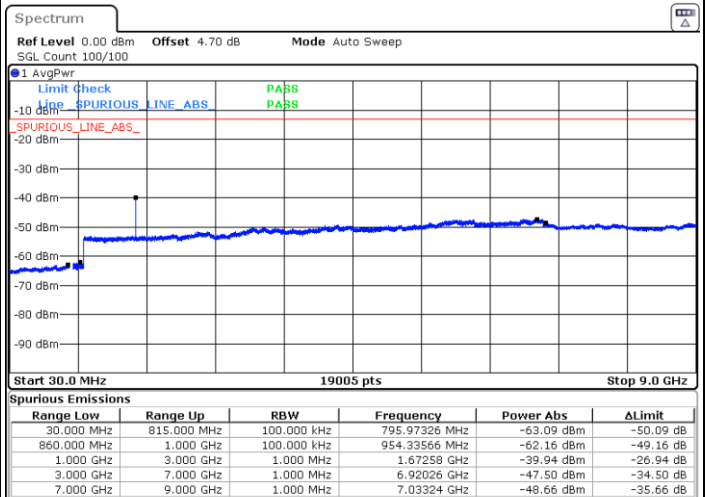
LTE Band 5 / 1.4MHz

Lowest Channel / QPSK



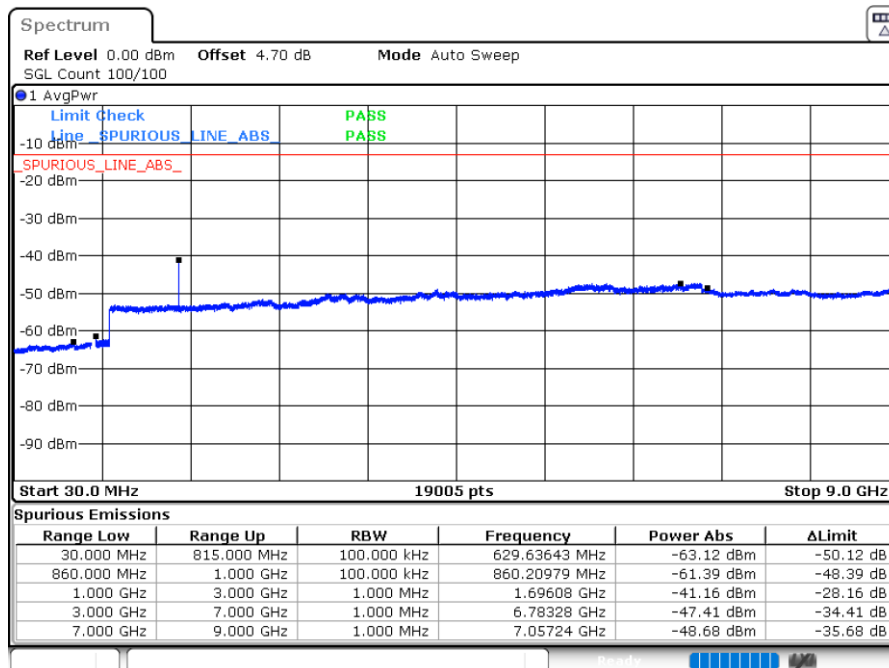
Date: 27.JUL.2023 18:33:49

Middle Channel / QPSK



Date: 27.JUL.2023 18:42:30

Highest Channel / QPSK

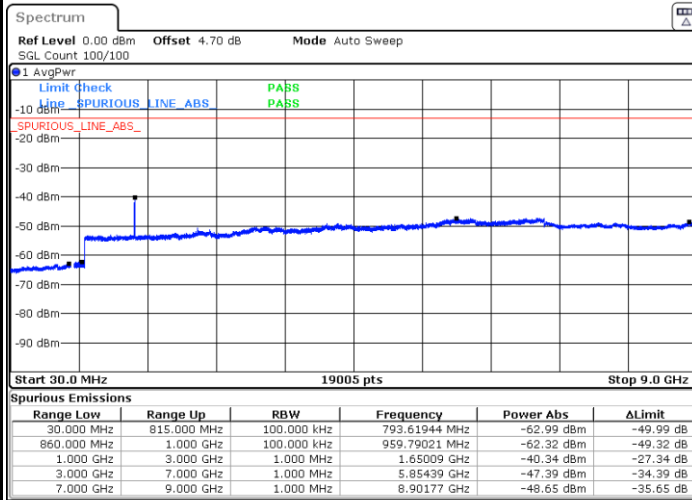


Date: 27.JUL.2023 18:43:49



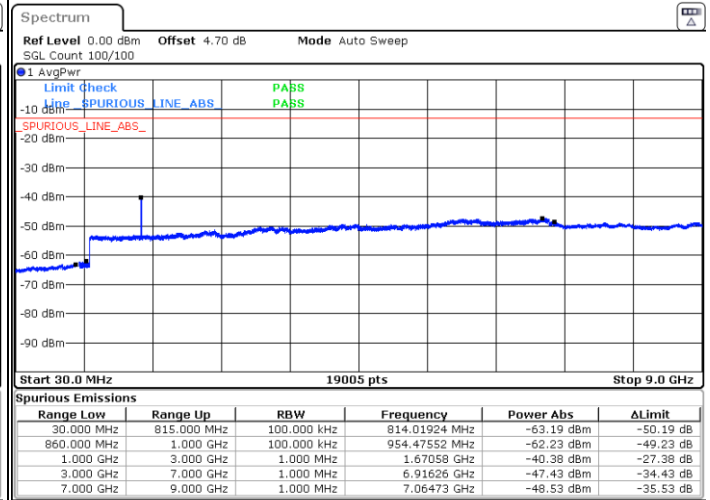
LTE Band 5 / 3MHz

Lowest Channel / QPSK



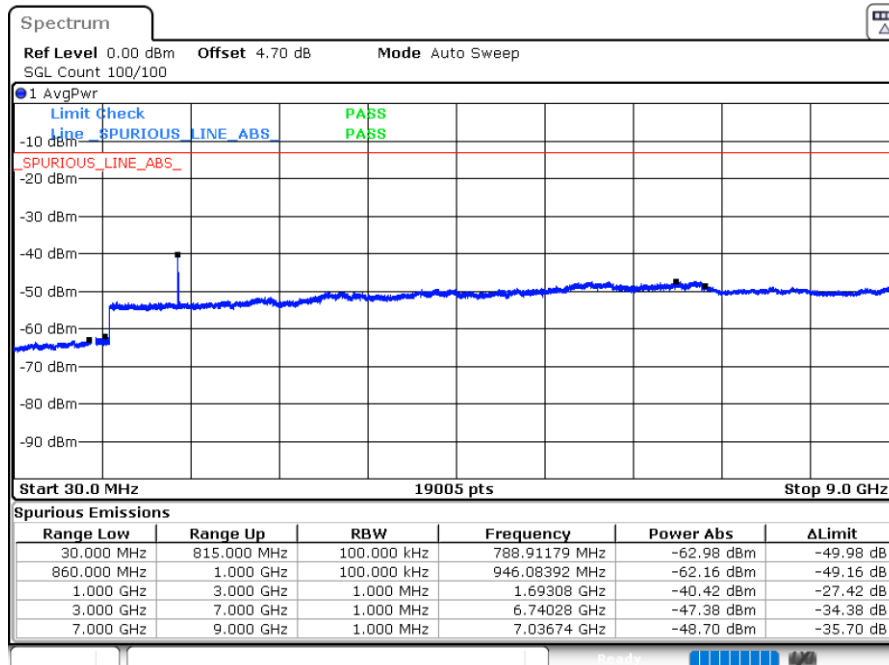
Date: 27.JUL.2023 18:52:30

Middle Channel / QPSK



Date: 27.JUL.2023 19:01:11

Highest Channel / QPSK

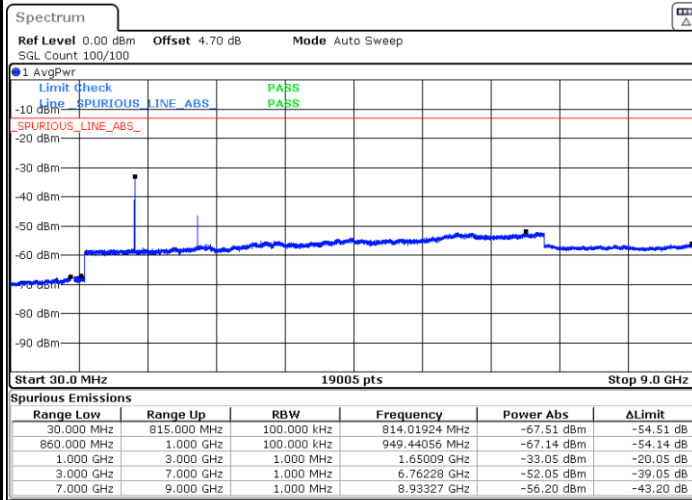


Date: 27.JUL.2023 19:02:31



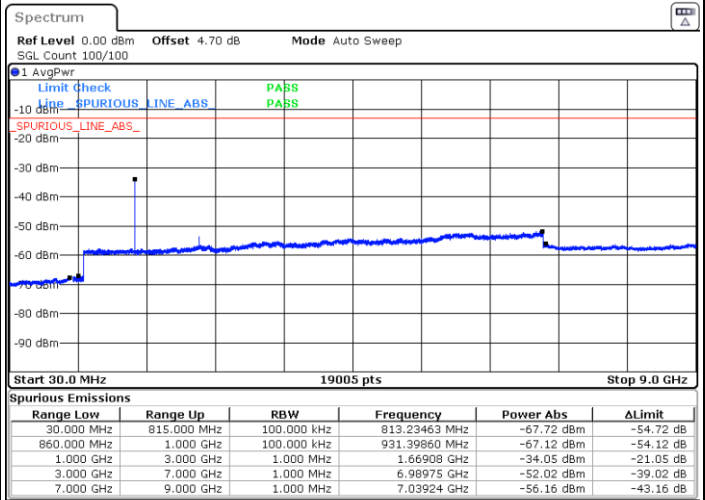
LTE Band 5 / 5MHz

Lowest Channel / QPSK



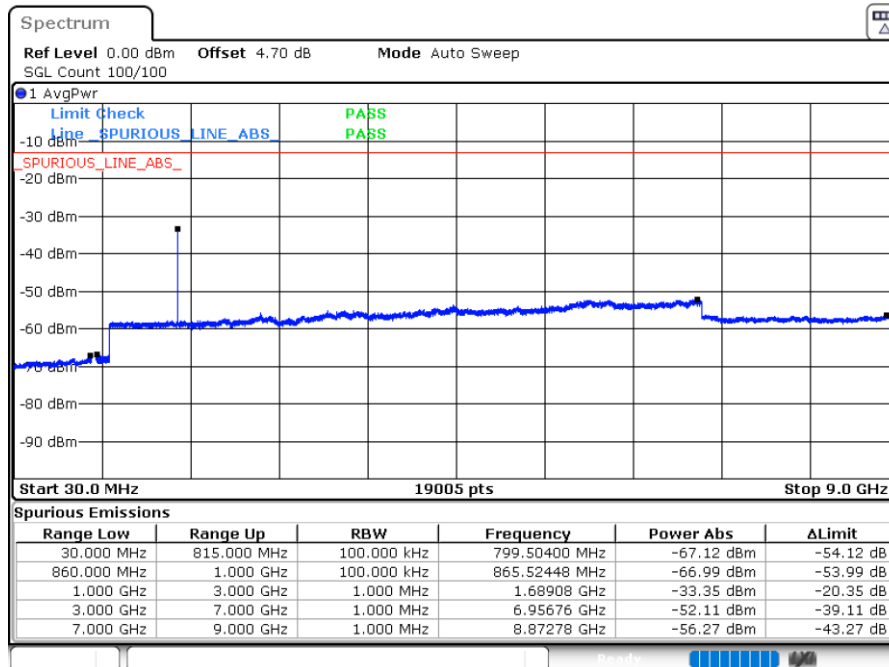
Date: 27.JUL.2023 19:11:12

Middle Channel / QPSK



Date: 27.JUL.2023 19:19:53

Highest Channel / QPSK

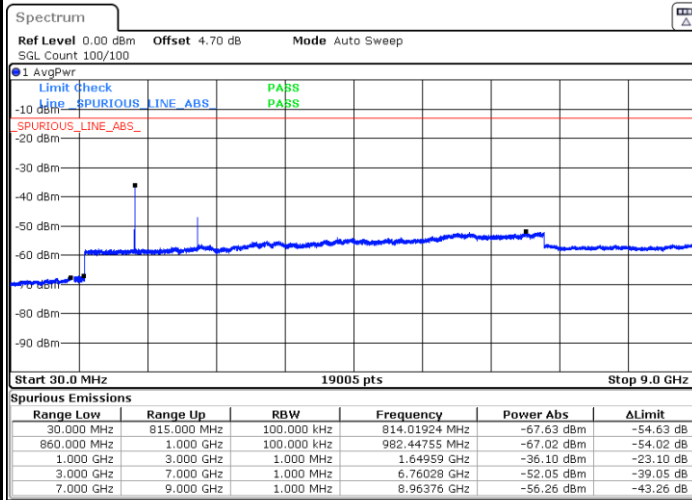


Date: 27.JUL.2023 19:21:13



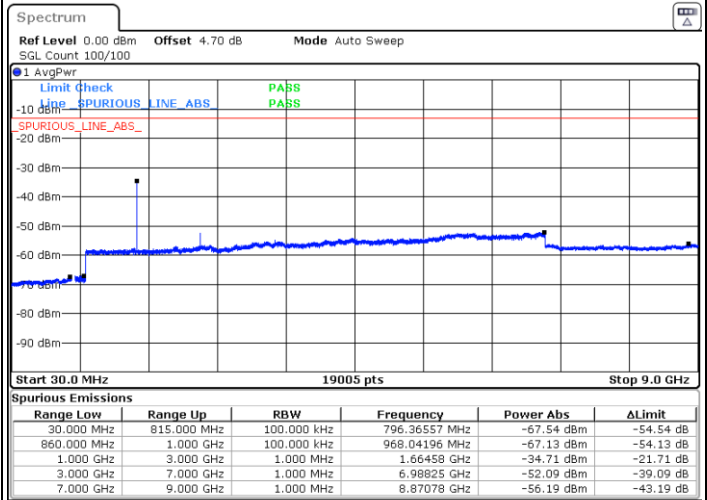
LTE Band 5 / 10MHz

Lowest Channel / QPSK



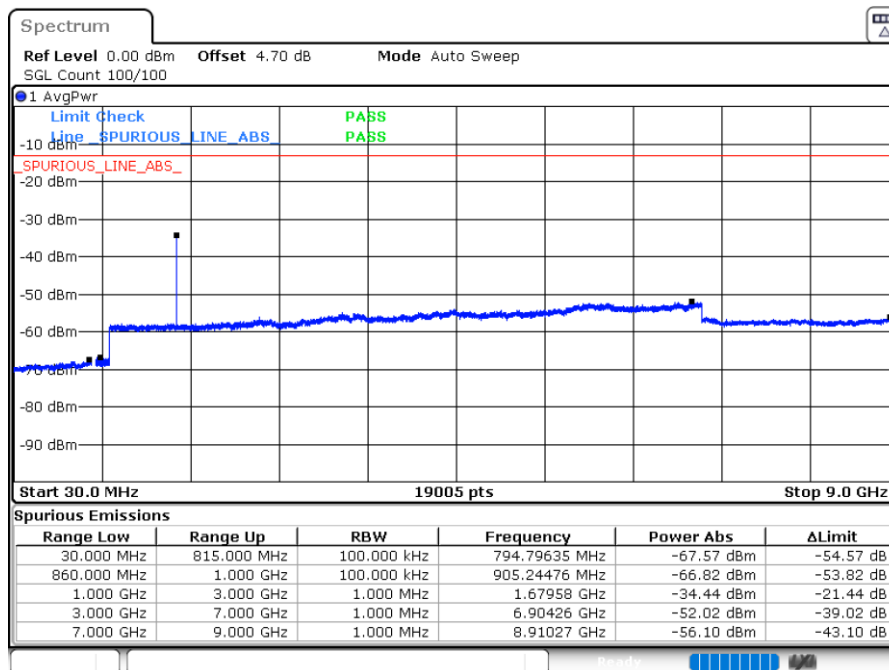
Date: 27.JUL.2023 19:29:54

Middle Channel / QPSK



Date: 27.JUL.2023 19:36:44

Highest Channel / QPSK



Date: 27.JUL.2023 19:38:04

Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0029	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0035	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0017	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0029	
-30	Normal Voltage	0.0027	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0022	
20	Minimum Voltage	0.0015	

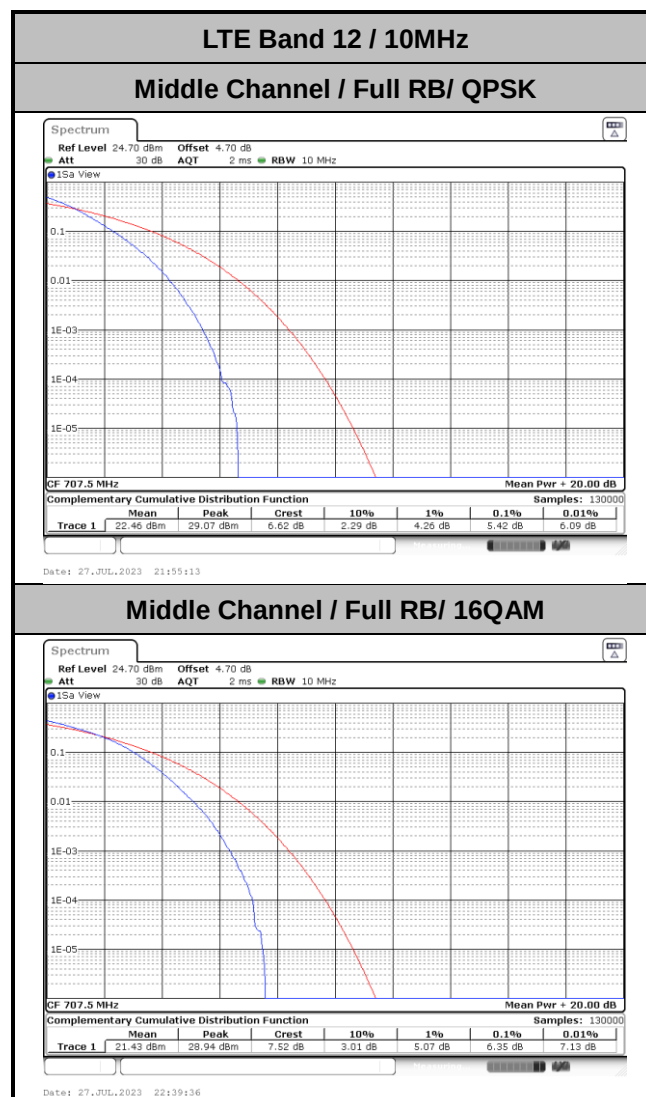
Note:

1. Normal Voltage =3.8 V. ; Minimum Voltage =3.3 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 12

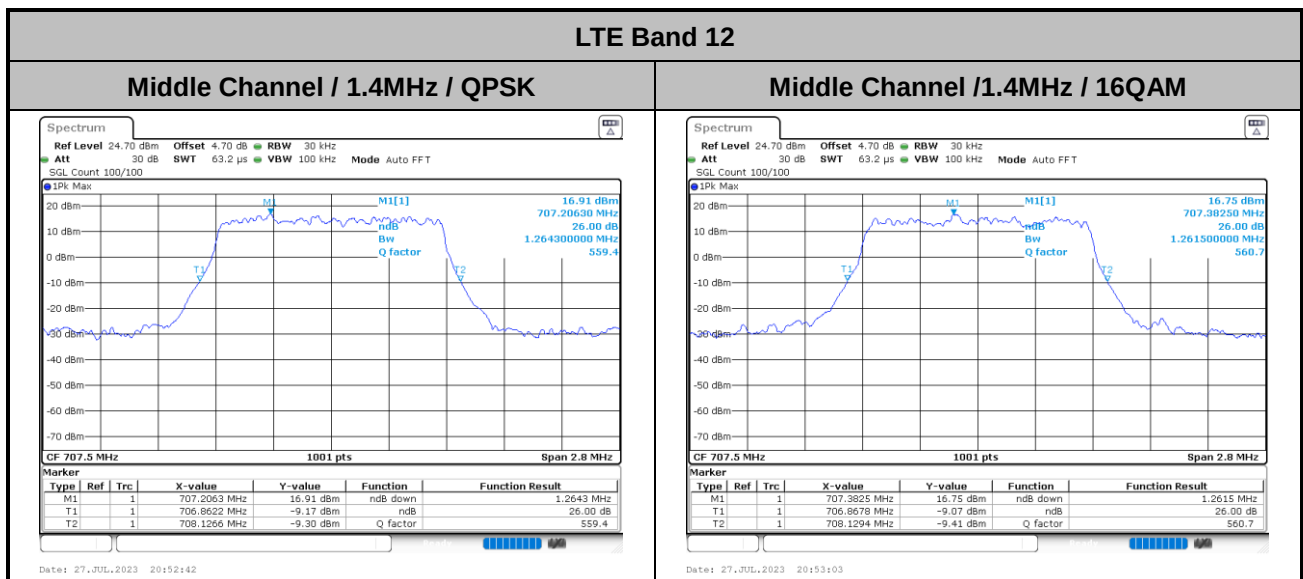
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	5.42	6.35	PASS



**26dB Bandwidth**

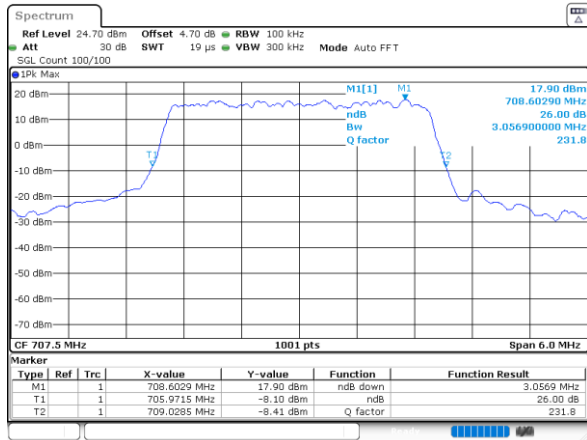
Mode	LTE Band 12 : 26dB BW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.26	1.26
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	3.06	3.06
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	5.05	4.94
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	10.17	5.79



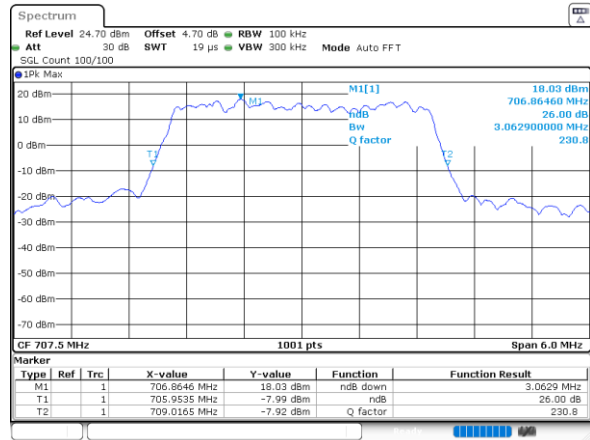


LTE Band 12

Middle Channel / 3MHz / QPSK

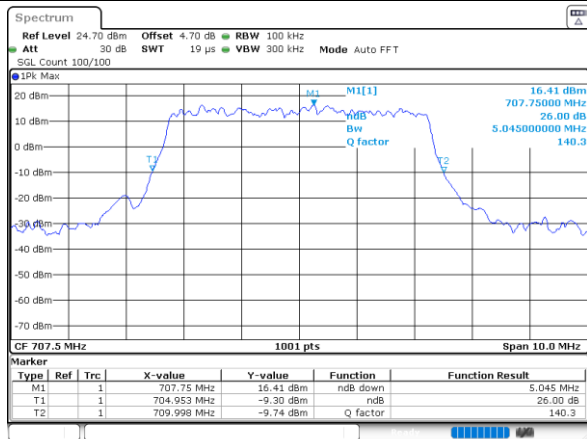


Middle Channel / 3MHz / 16QAM

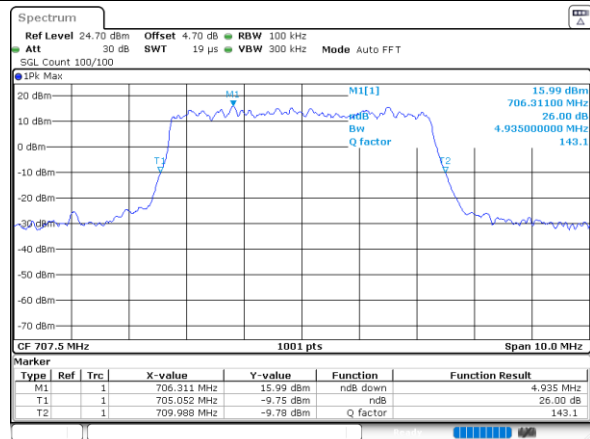


LTE Band 12

Middle Channel / 5MHz / QPSK

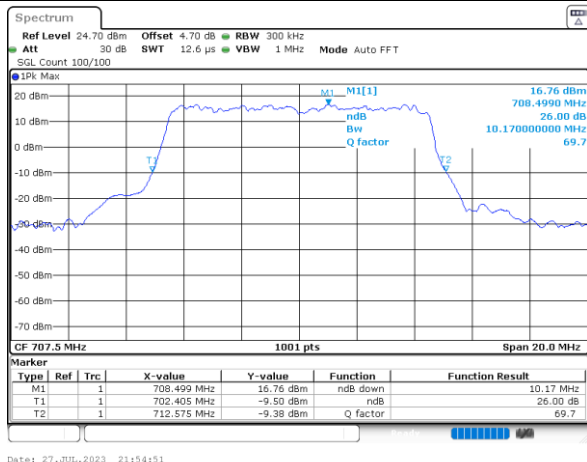


Middle Channel / 5MHz / 16QAM

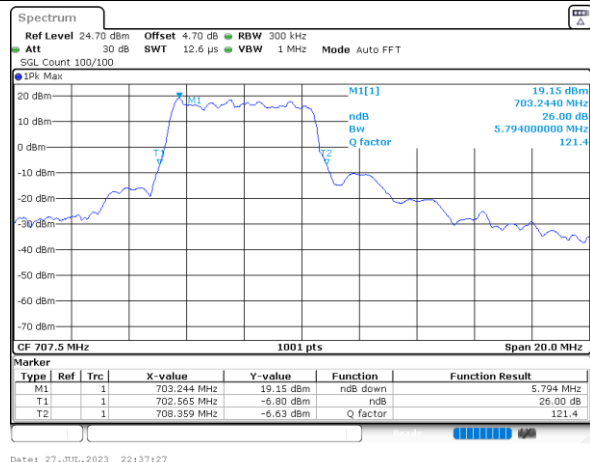


LTE Band 12

Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM



Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.09	1.10
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.70	2.72
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.49	4.48
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	8.97	5.03

