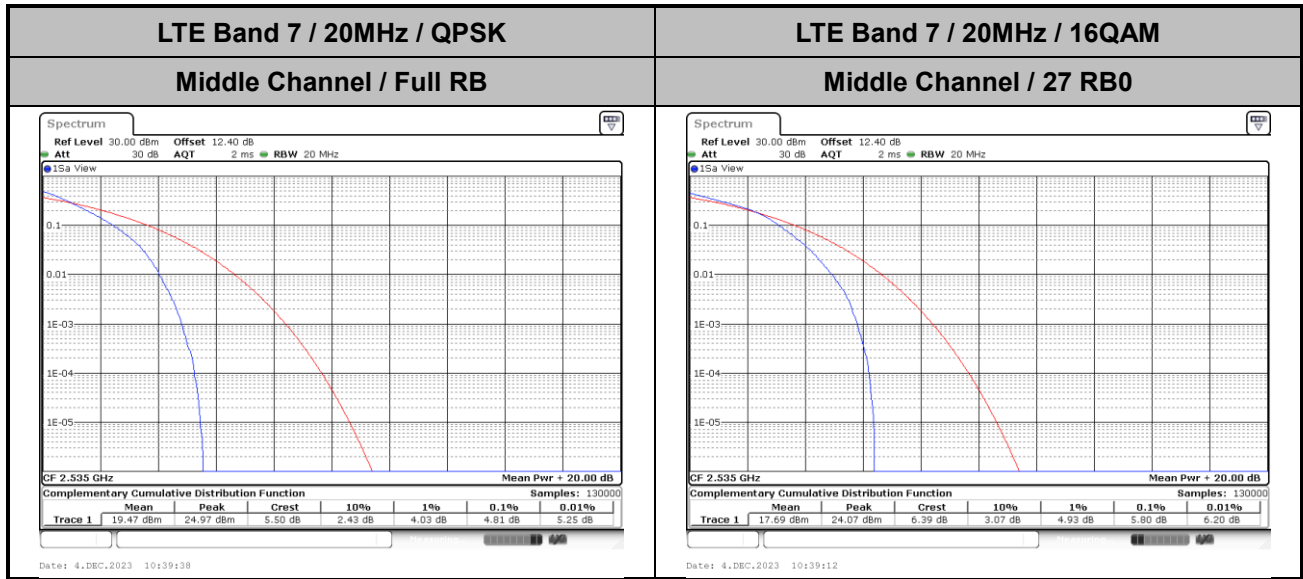




LTE Band 7

Peak-to-Average Ratio

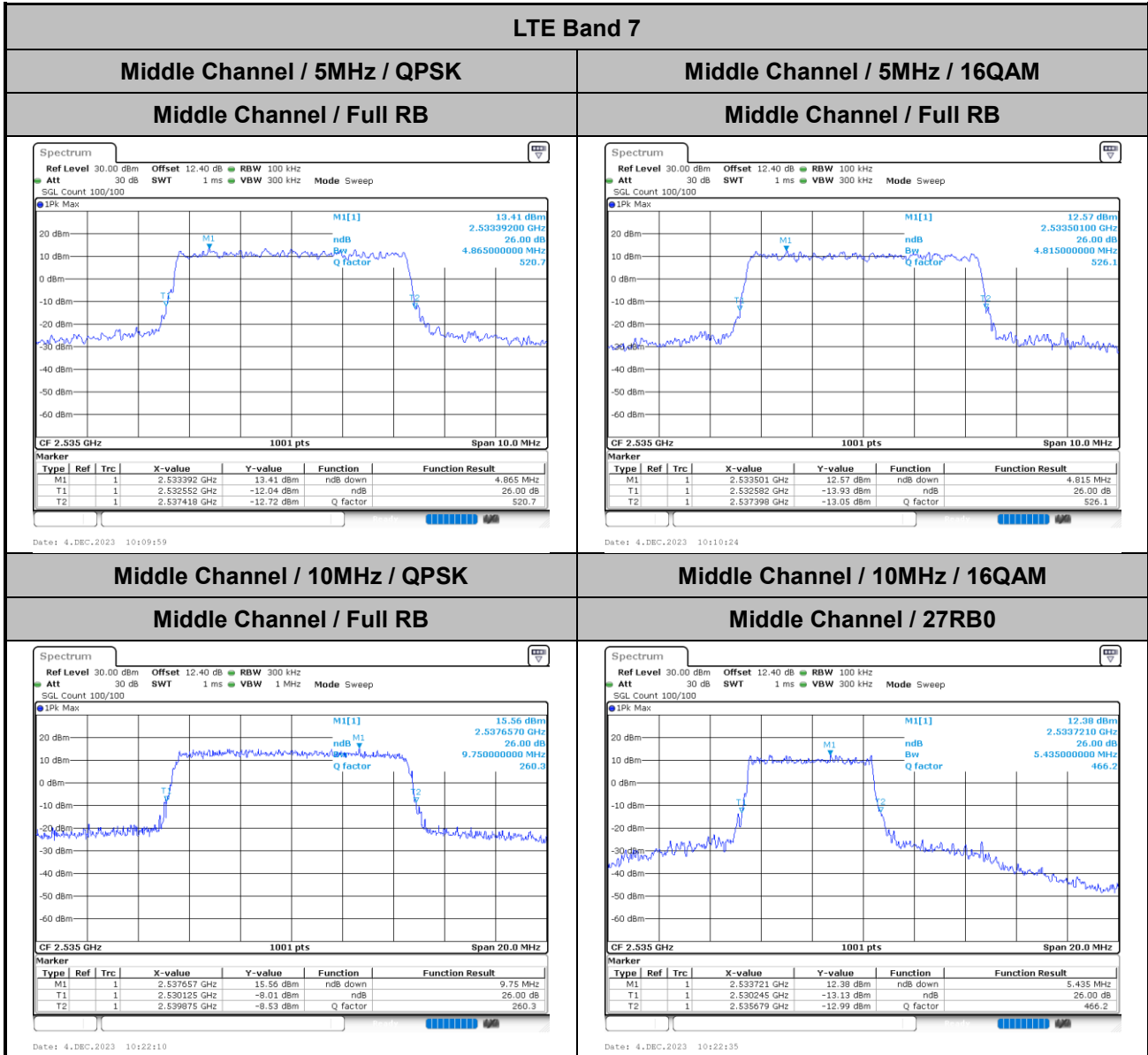
Mode	LTE Band 7 / 20MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	27 RB	Result
Middle CH	4.81	5.79	PASS





26dB Bandwidth

Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.86	4.81	9.75	5.43	14.35	5.39	19.10	5.67





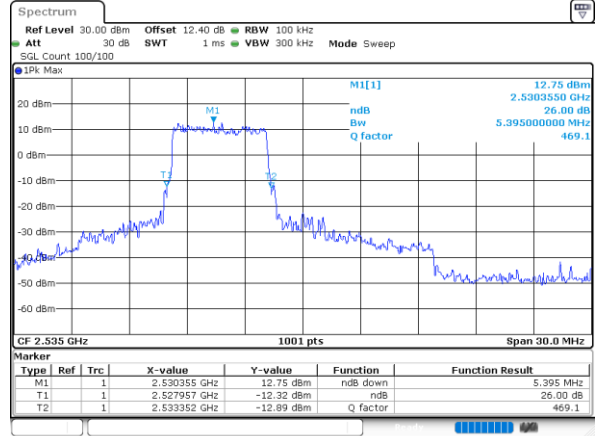
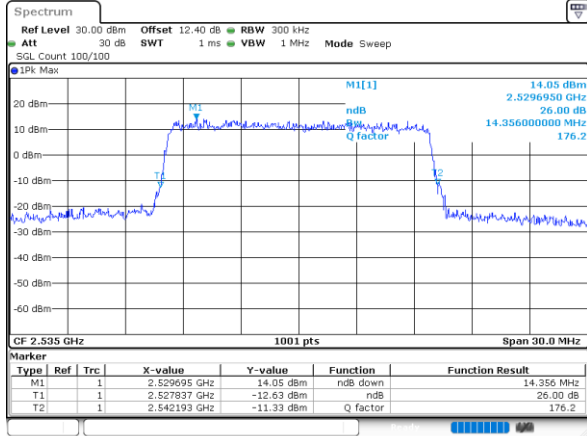
LTE Band 7

Middle Channel / 15MHz / QPSK

Middle Channel / 15MHz / 16QAM

Middle Channel / Full RB

Middle Channel / 27RB0



Date: 4.DEC.2023 10:28:48

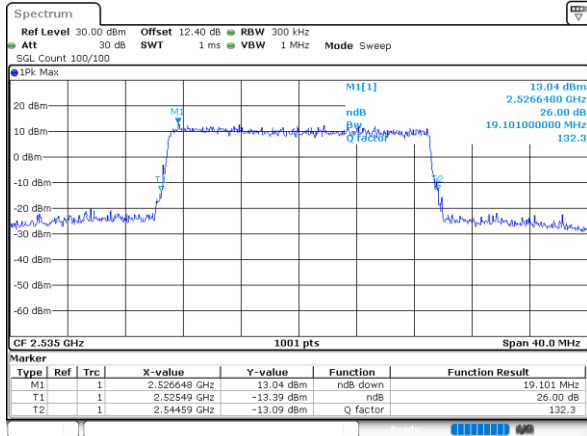
Date: 4.DEC.2023 10:29:13

Middle Channel / 20MHz / QPSK

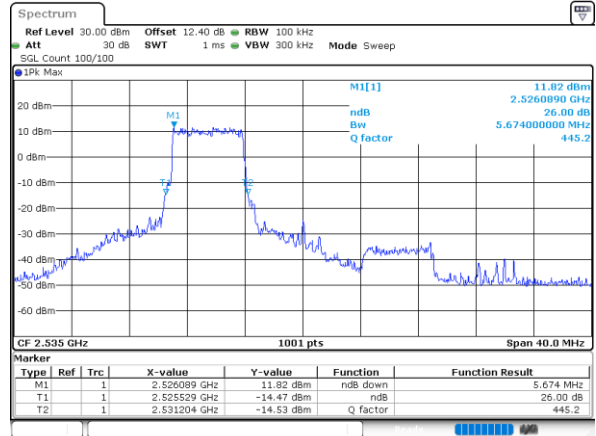
Middle Channel / 20MHz / 16QAM

Middle Channel / Full RB

Middle Channel / 27RB0



Date: 4.DEC.2023 10:35:53

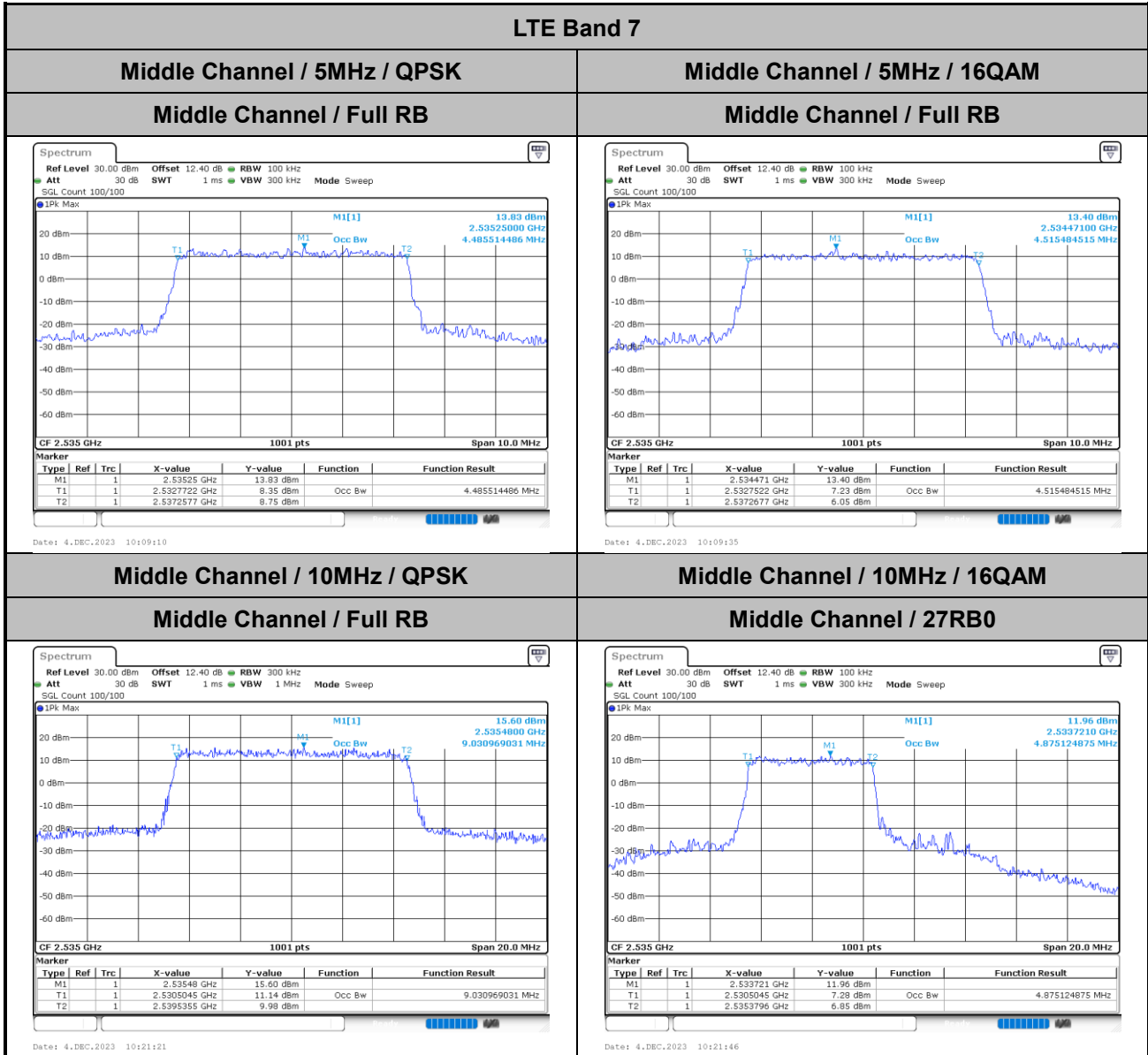


Date: 4.DEC.2023 10:36:18



Occupied Bandwidth

Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.48	4.51	9.03	4.87	13.45	4.85	17.94	4.91





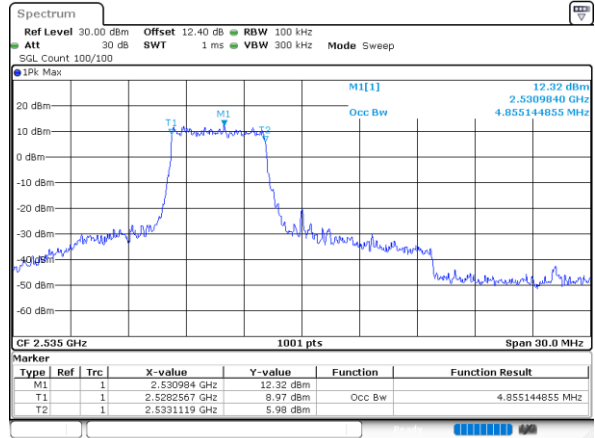
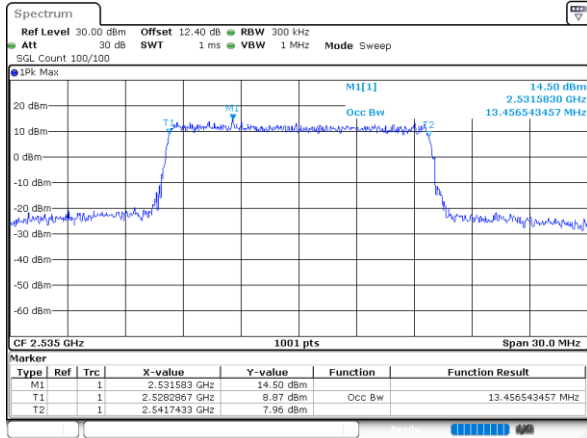
LTE Band 7

Middle Channel / 15MHz / QPSK

Middle Channel / 15MHz / 16QAM

Middle Channel / Full RB

Middle Channel / 27RB0



Date: 4.DEC.2023 10:27:59

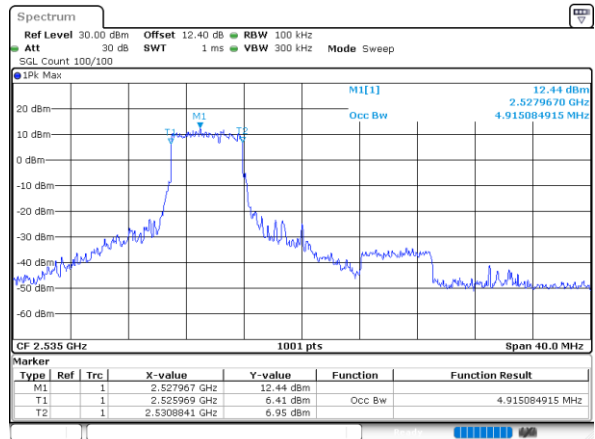
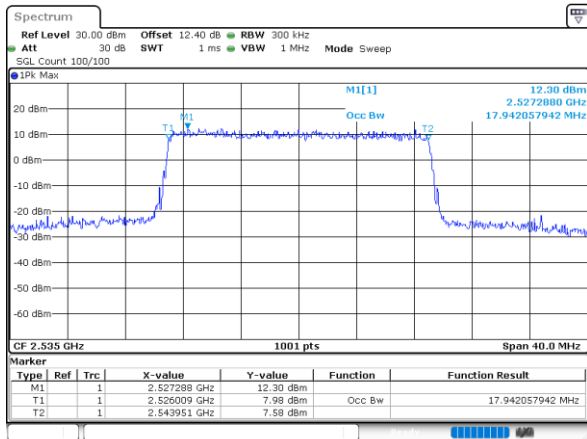
Date: 4.DEC.2023 10:28:23

Middle Channel / 20MHz / QPSK

Middle Channel / 20MHz / 16QAM

Middle Channel / Full RB

Middle Channel / 27RB0



Date: 4.DEC.2023 10:35:04

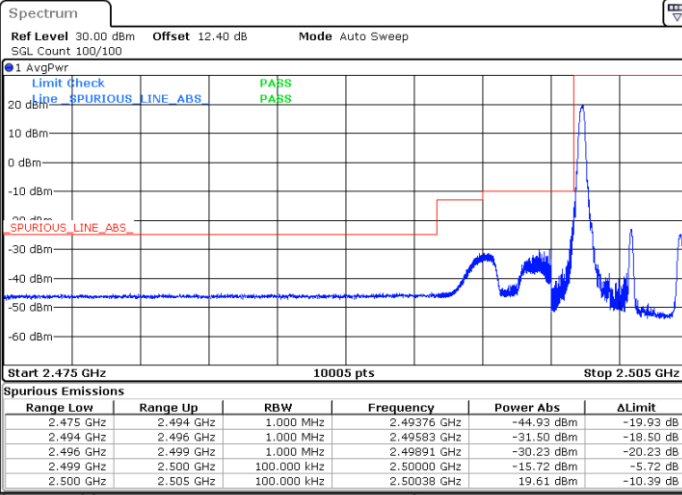
Date: 4.DEC.2023 10:35:29



Conducted Band Edge

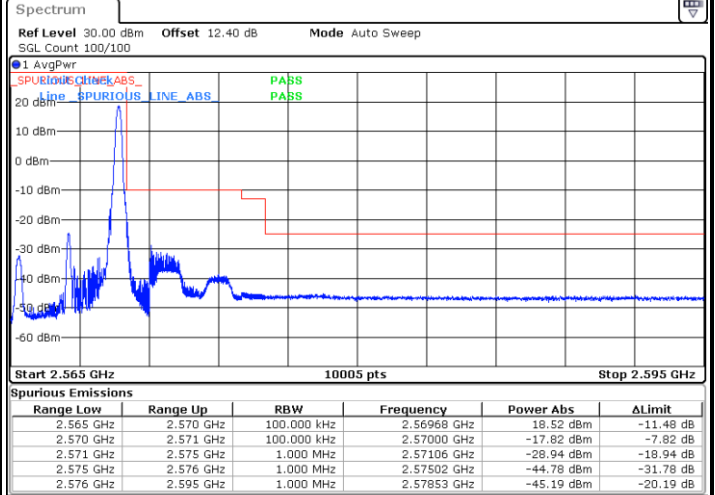
LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB0



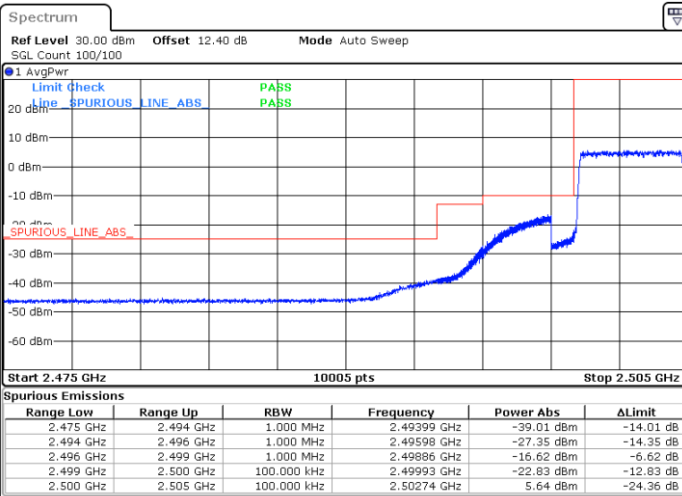
Date: 4.DEC.2023 10:03:49

Highest Band Edge / 1 RBmax



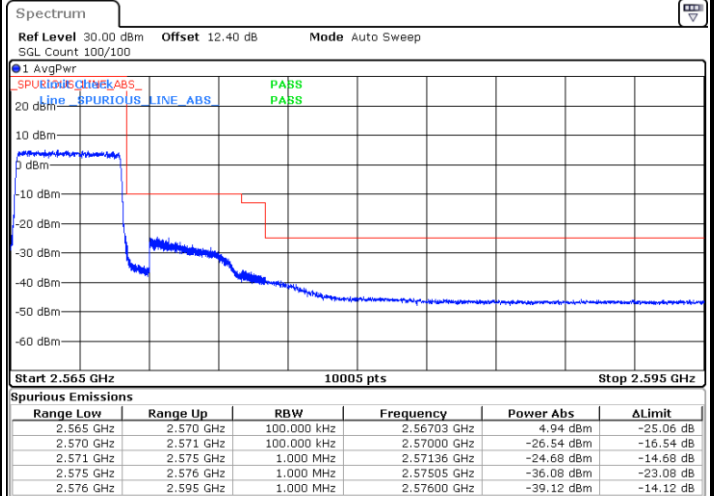
Date: 4.DEC.2023 10:12:50

Lowest Band Edge / Full RB



Date: 4.DEC.2023 10:06:17

Highest Band Edge / Full RB



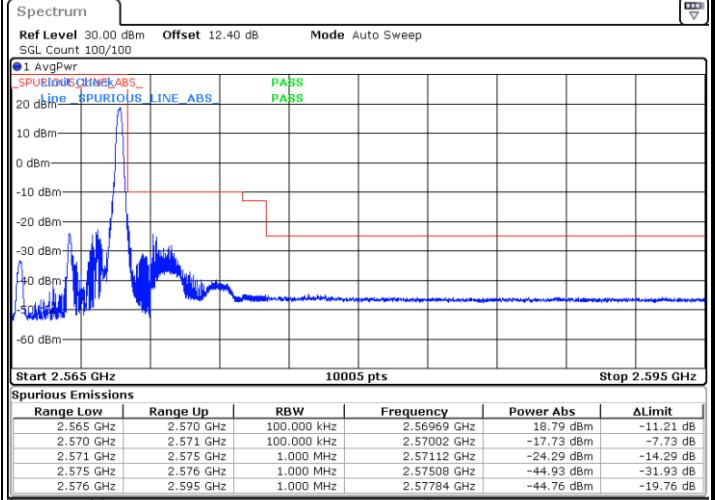
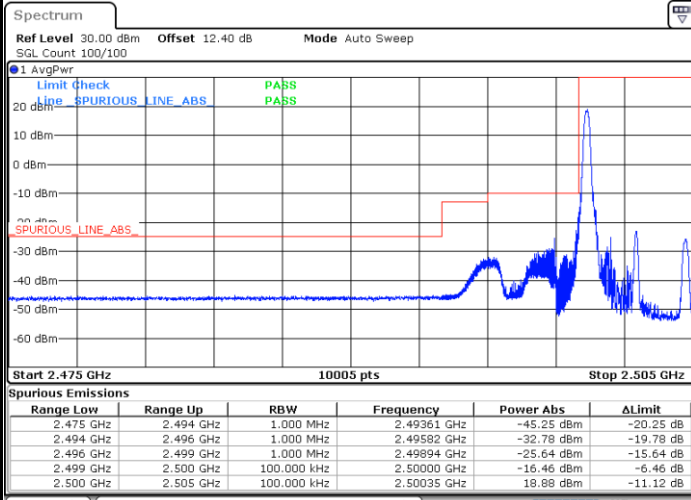
Date: 4.DEC.2023 10:15:18



LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1 RBmax

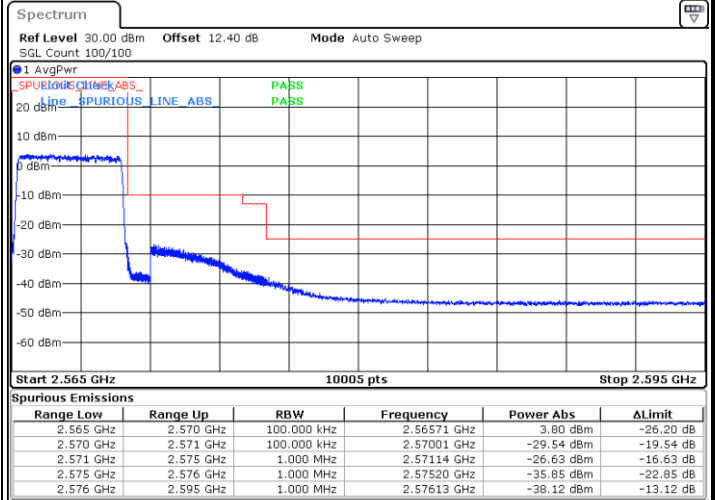
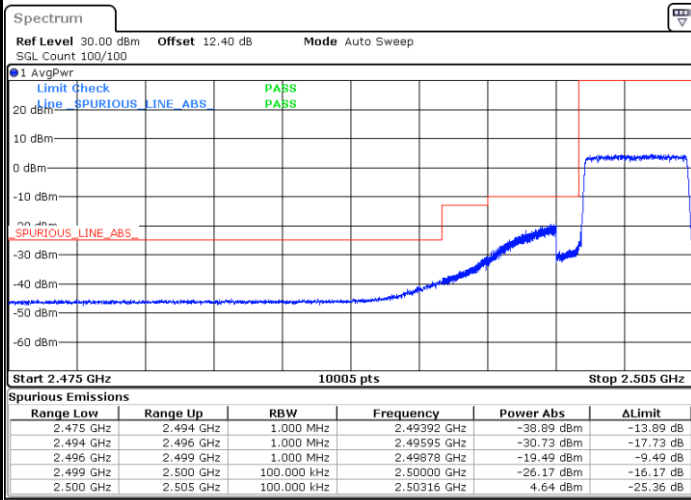


Date: 4.DEC.2023 10:05:03

Date: 4.DEC.2023 15:41:12

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 4.DEC.2023 10:07:31

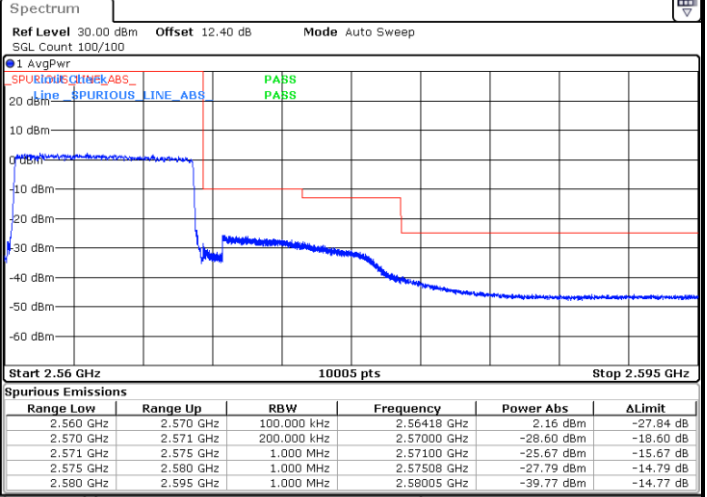
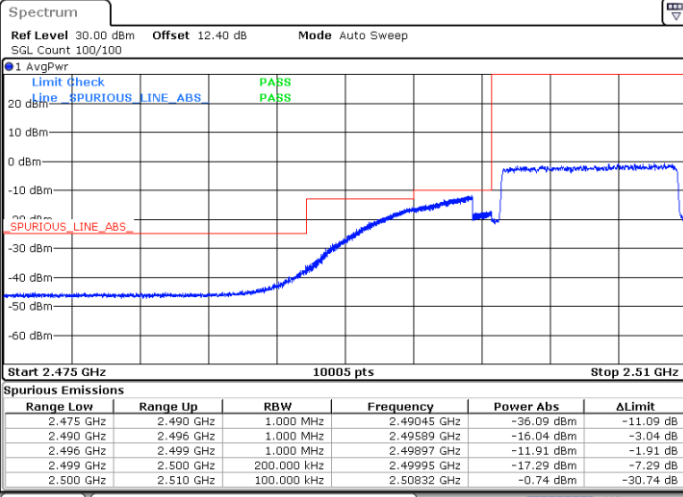
Date: 4.DEC.2023 10:16:32



LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



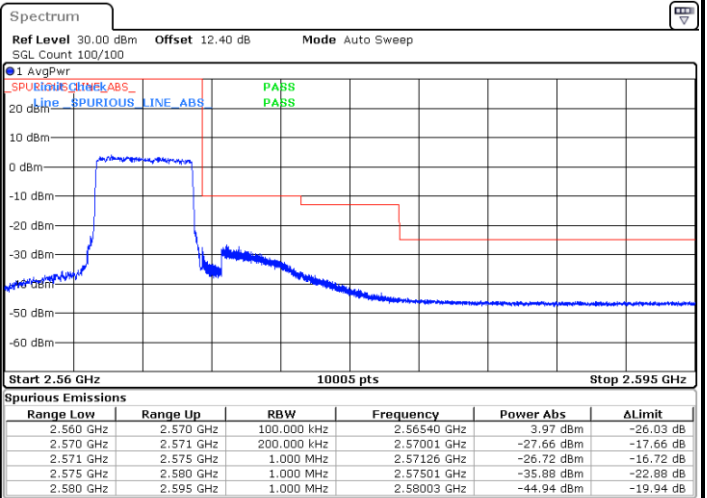
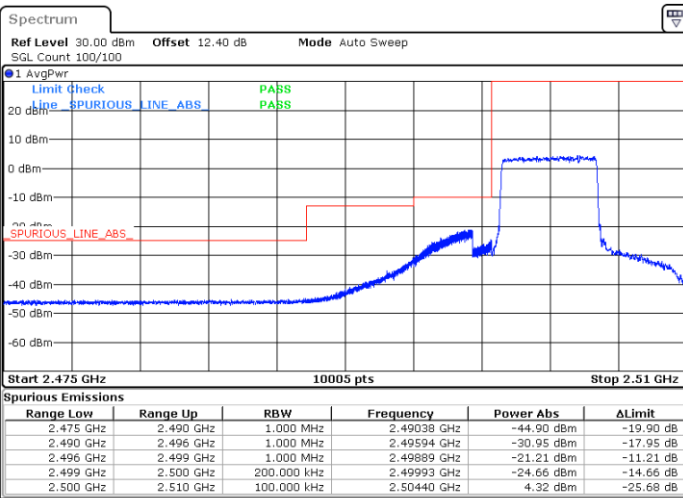
Date: 4.DEC.2023 10:57:18

Date: 4.DEC.2023 10:23:49

LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 27 RB0

Highest Band Edge / 27 RBmax



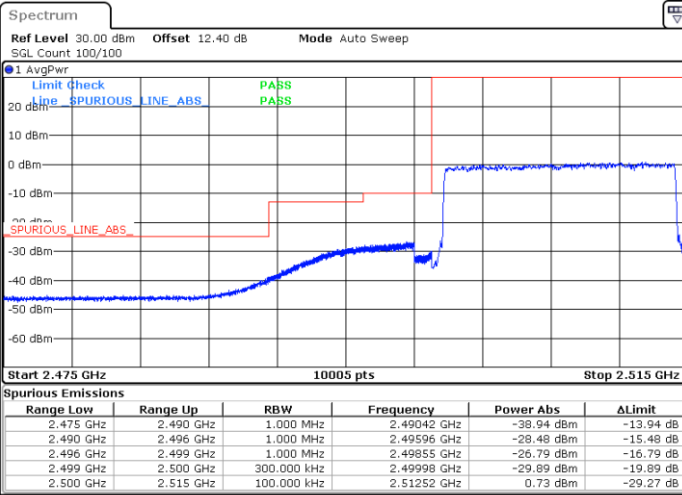
Date: 4.DEC.2023 10:20:55

Date: 4.DEC.2023 10:25:03



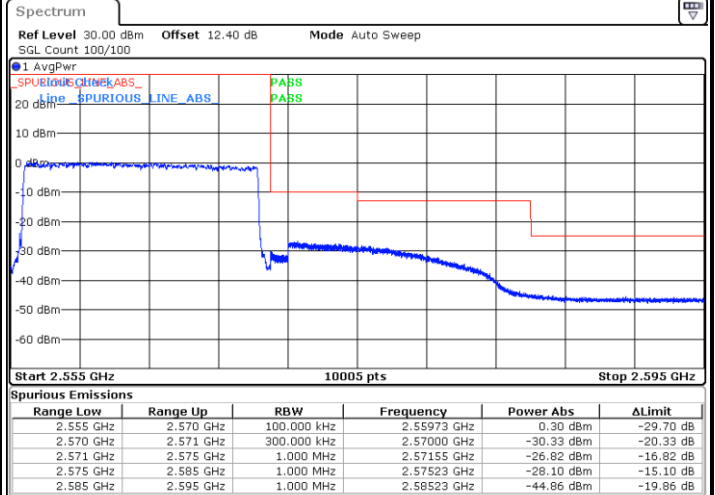
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / Full RB



Date: 4.DEC.2023 10:26:19

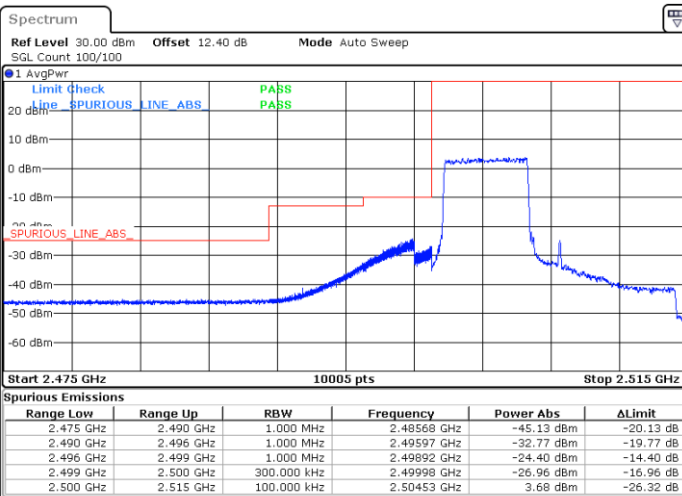
Highest Band Edge / Full RB



Date: 4.DEC.2023 10:30:26

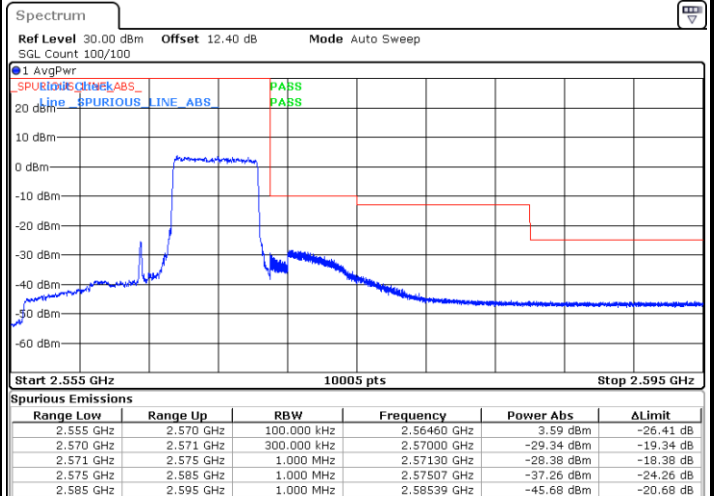
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 27 RB0



Date: 4.DEC.2023 10:27:33

Highest Band Edge / 27 RBmax

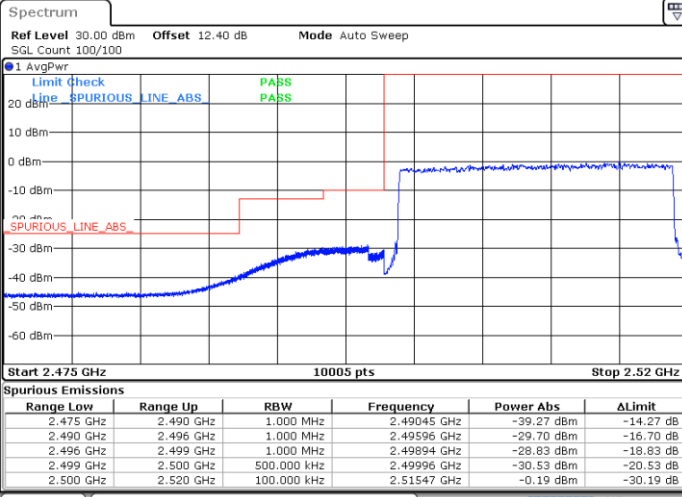


Date: 4.DEC.2023 10:31:41



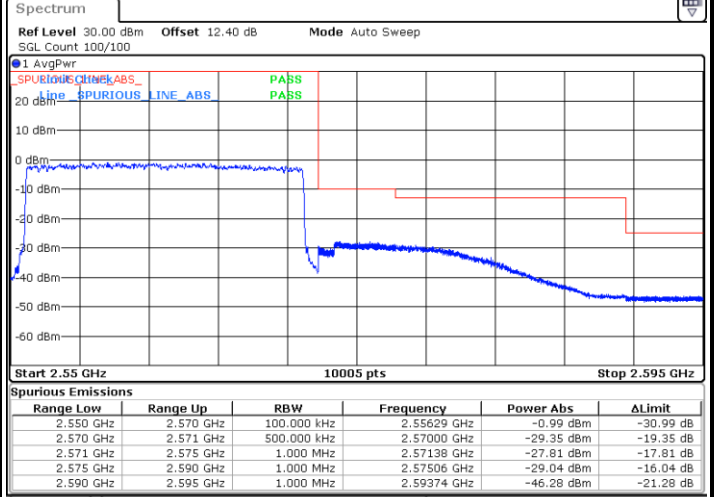
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / Full RB



Date: 4.DEC.2023 10:33:25

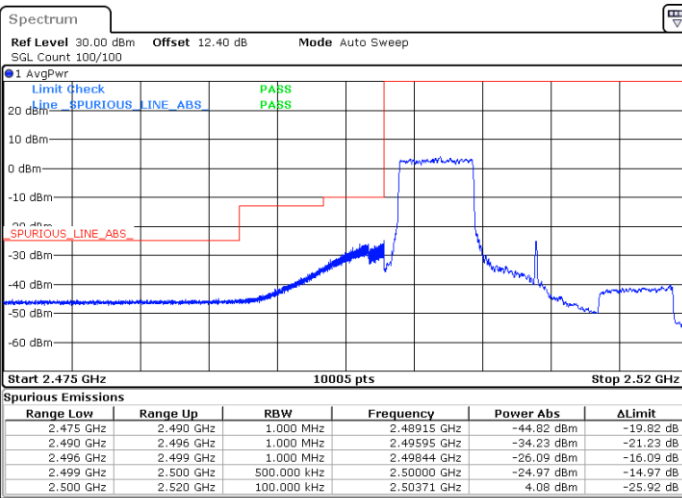
Highest Band Edge / Full RB



Date: 4.DEC.2023 10:38:46

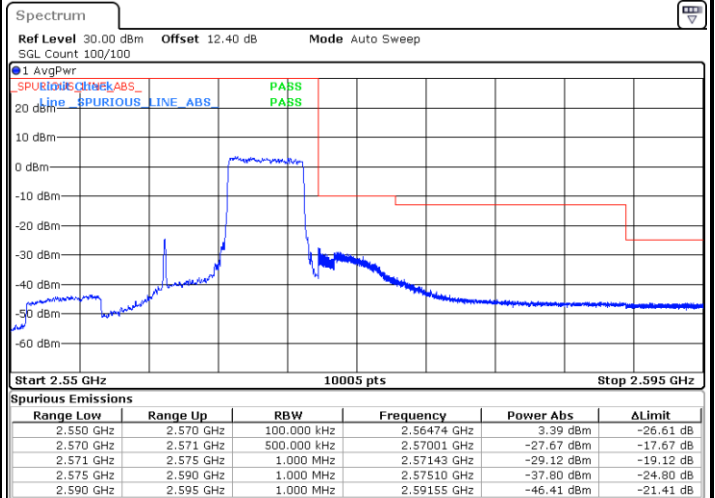
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 27 RB0



Date: 4.DEC.2023 10:34:39

Highest Band Edge / 27 RBmax



Date: 4.DEC.2023 10:37:31

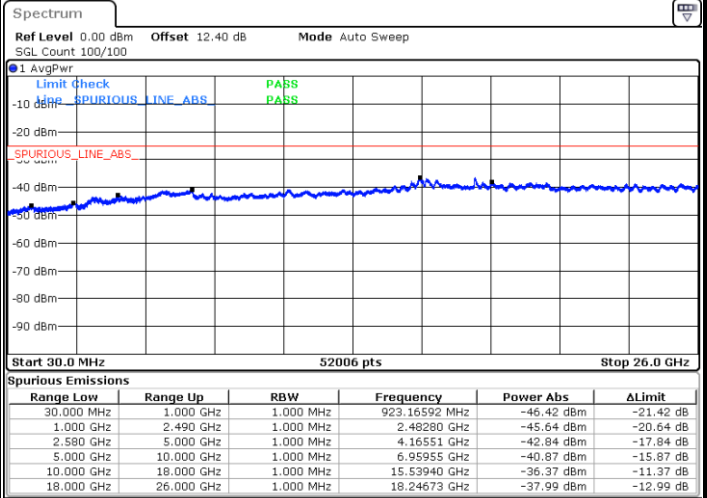
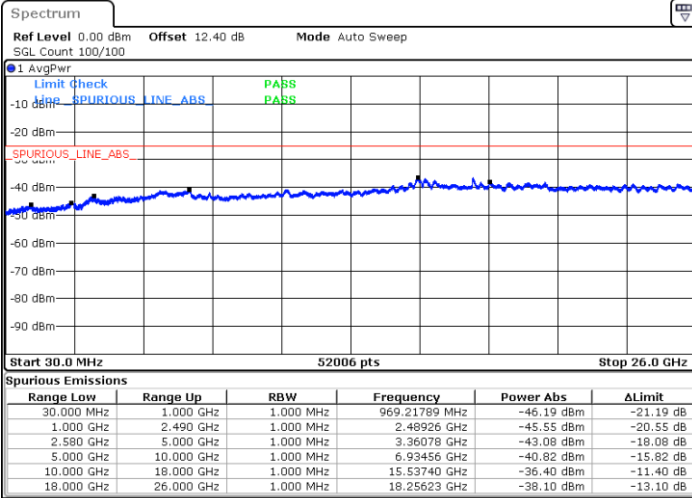


Conducted Spurious Emission

LTE Band 7 / 5MHz

Lowest Channel / QPSK

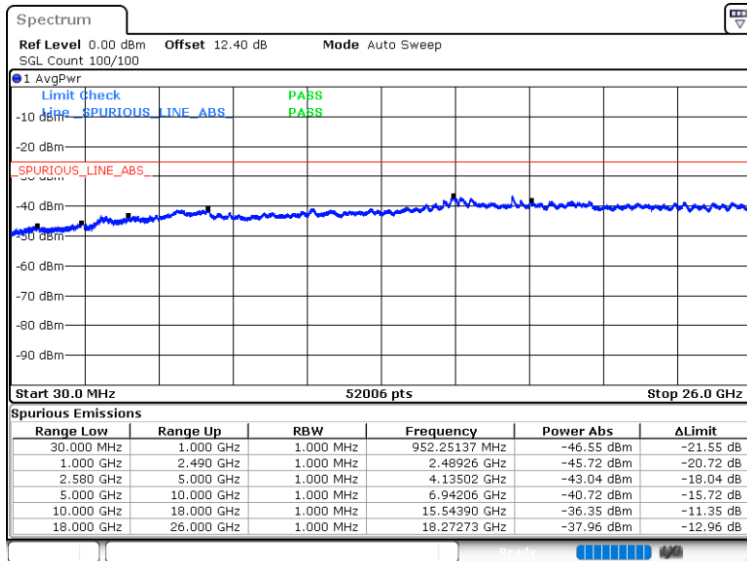
Middle Channel / QPSK



Date: 4.DEC.2023 10:08:45

Date: 4.DEC.2023 10:55:16

Highest Channel / QPSK

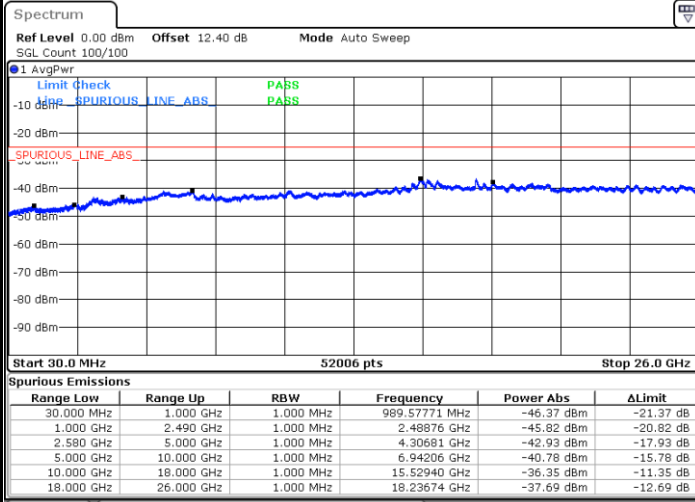


Date: 4.DEC.2023 10:17:45



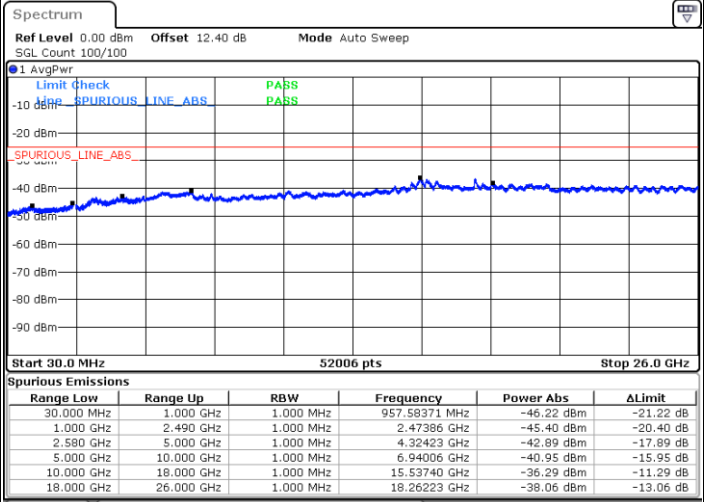
LTE Band 7 / 10MHz

Lowest Channel / QPSK



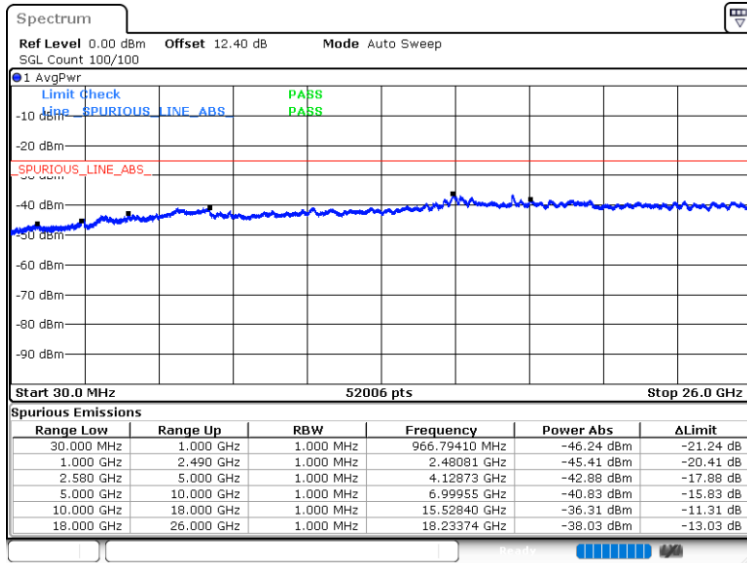
Date: 4. DEC. 2023 10:41:34

Middle Channel / QPSK



Date: 4. DEC. 2023 10:42:46

Highest Channel / QPSK

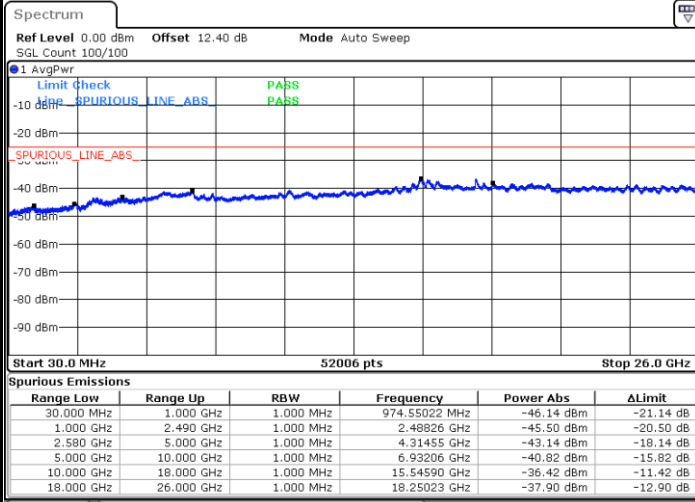


Date: 4. DEC. 2023 10:43:59



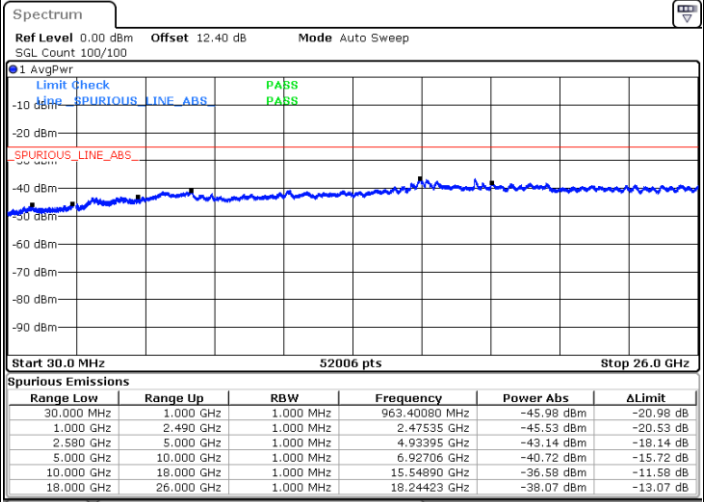
LTE Band 7 / 15MHz

Lowest Channel / QPSK



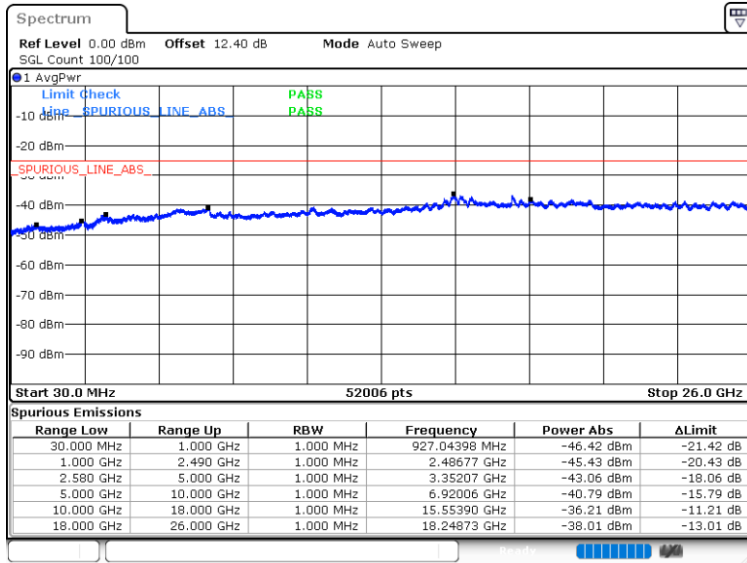
Date: 4.DEC.2023 10:45:13

Middle Channel / QPSK



Date: 4.DEC.2023 10:46:26

Highest Channel / QPSK



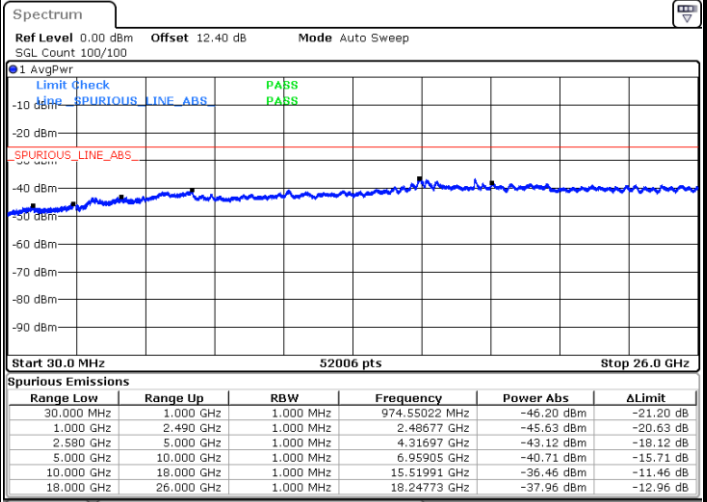
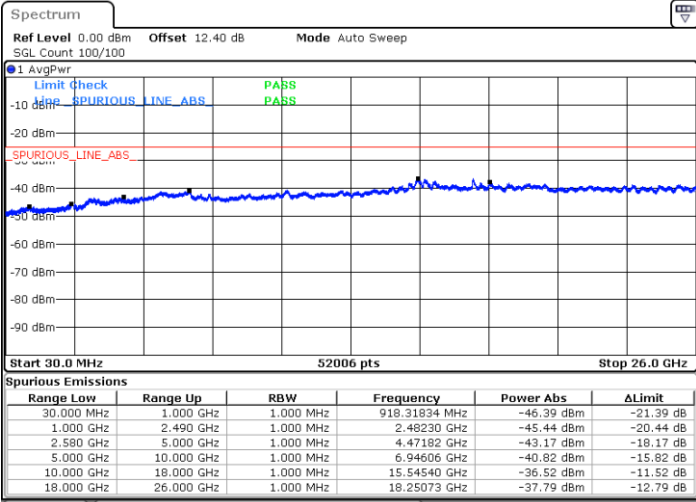
Date: 4.DEC.2023 10:47:38



LTE Band 7 / 20MHz

Lowest Channel / QPSK

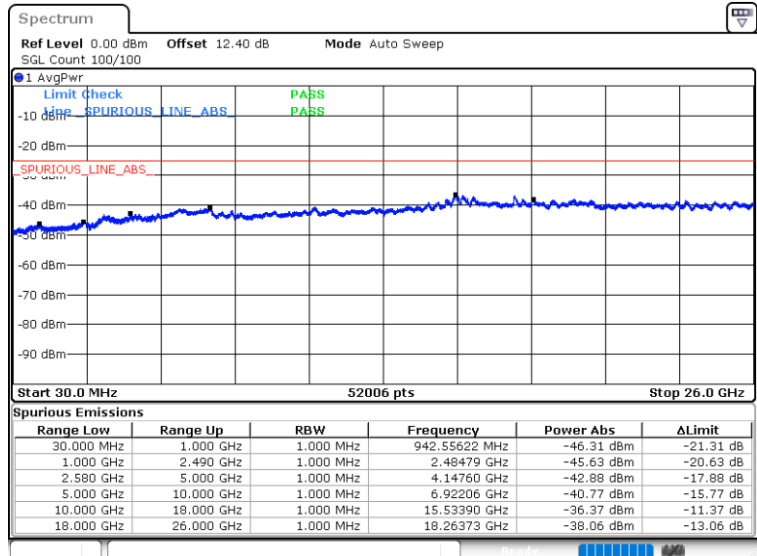
Middle Channel / QPSK



Date: 4. DEC. 2023 10:49:34

Date: 4. DEC. 2023 10:50:47

Highest Channel / QPSK



Date: 4. DEC. 2023 12:36:31



Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
35	Normal Voltage	0.0005	PASS
30	Normal Voltage	0.0032	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0059	
0	Normal Voltage	0.0020	
20	Maximum Voltage	0.0049	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0054	

Note:

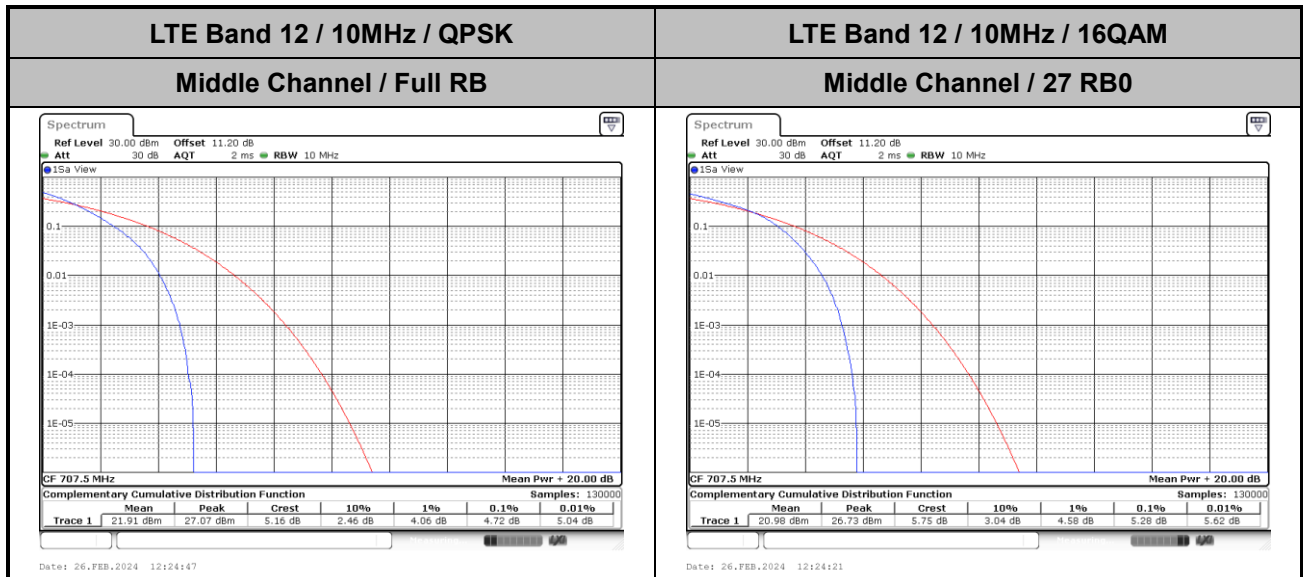
- 1. Normal Voltage = 3.88 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.4 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 12

Peak-to-Average Ratio

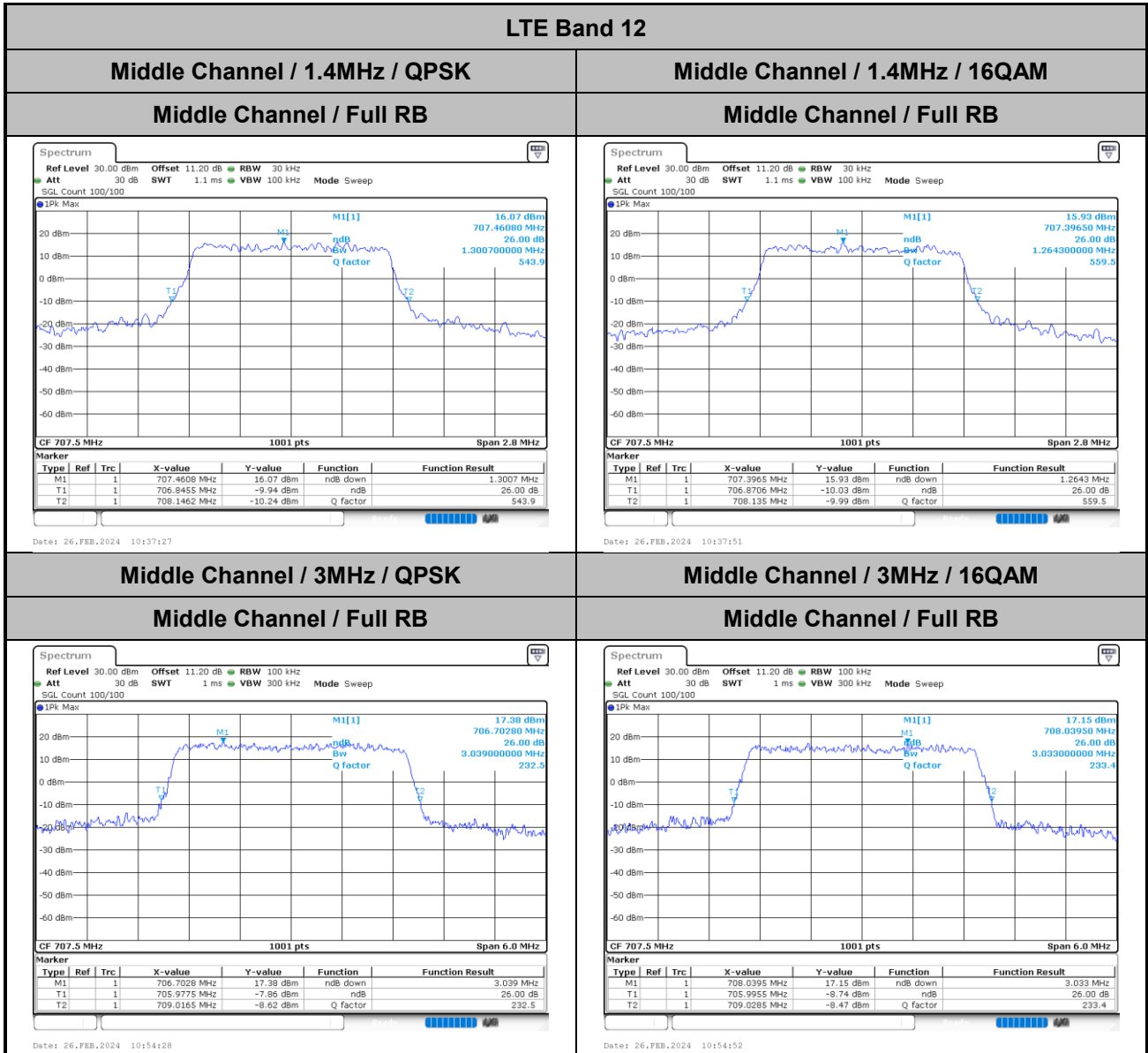
Mode	LTE Band 12 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	27 RB	Result
Middle CH	4.72	5.28	PASS





26dB Bandwidth

Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.30	1.26	3.03	3.03	4.89	4.86	9.68	5.37	-	-	-	-





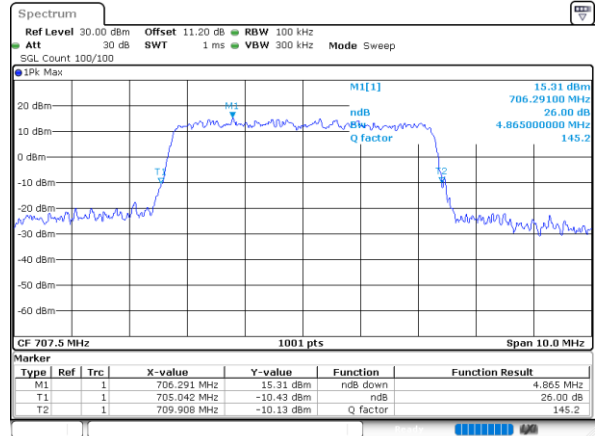
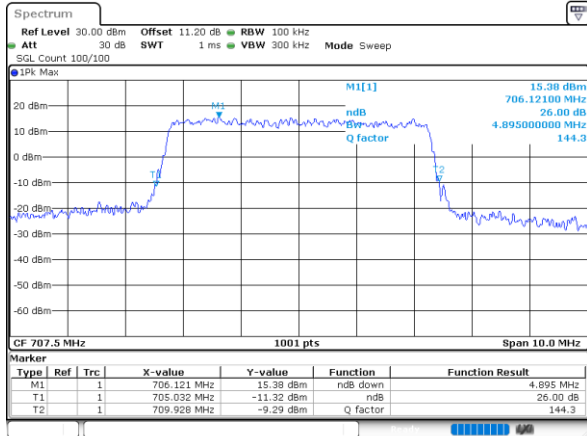
LTE Band 12

Middle Channel / 5MHz / QPSK

Middle Channel / 5MHz / 16QAM

Middle Channel / Full RB

Middle Channel / Full RB



Date: 26.FEB.2024 12:08:57

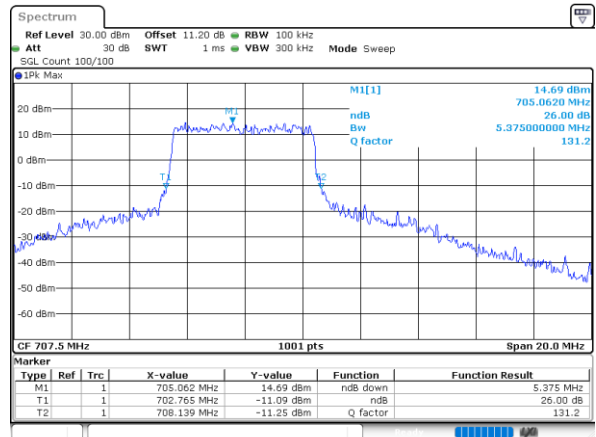
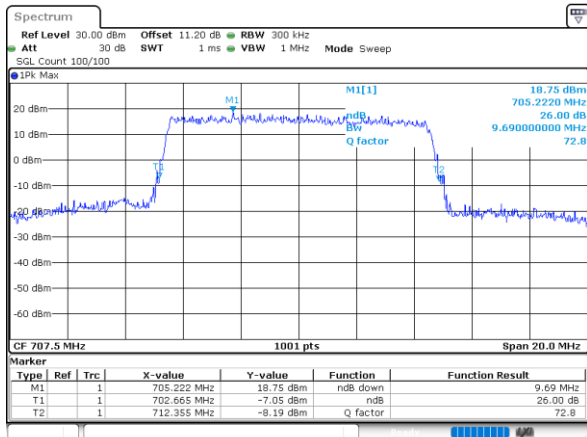
Date: 26.FEB.2024 12:09:21

Middle Channel / 10MHz / QPSK

Middle Channel / 10MHz / 16QAM

Middle Channel / Full RB

Middle Channel / 27RB0



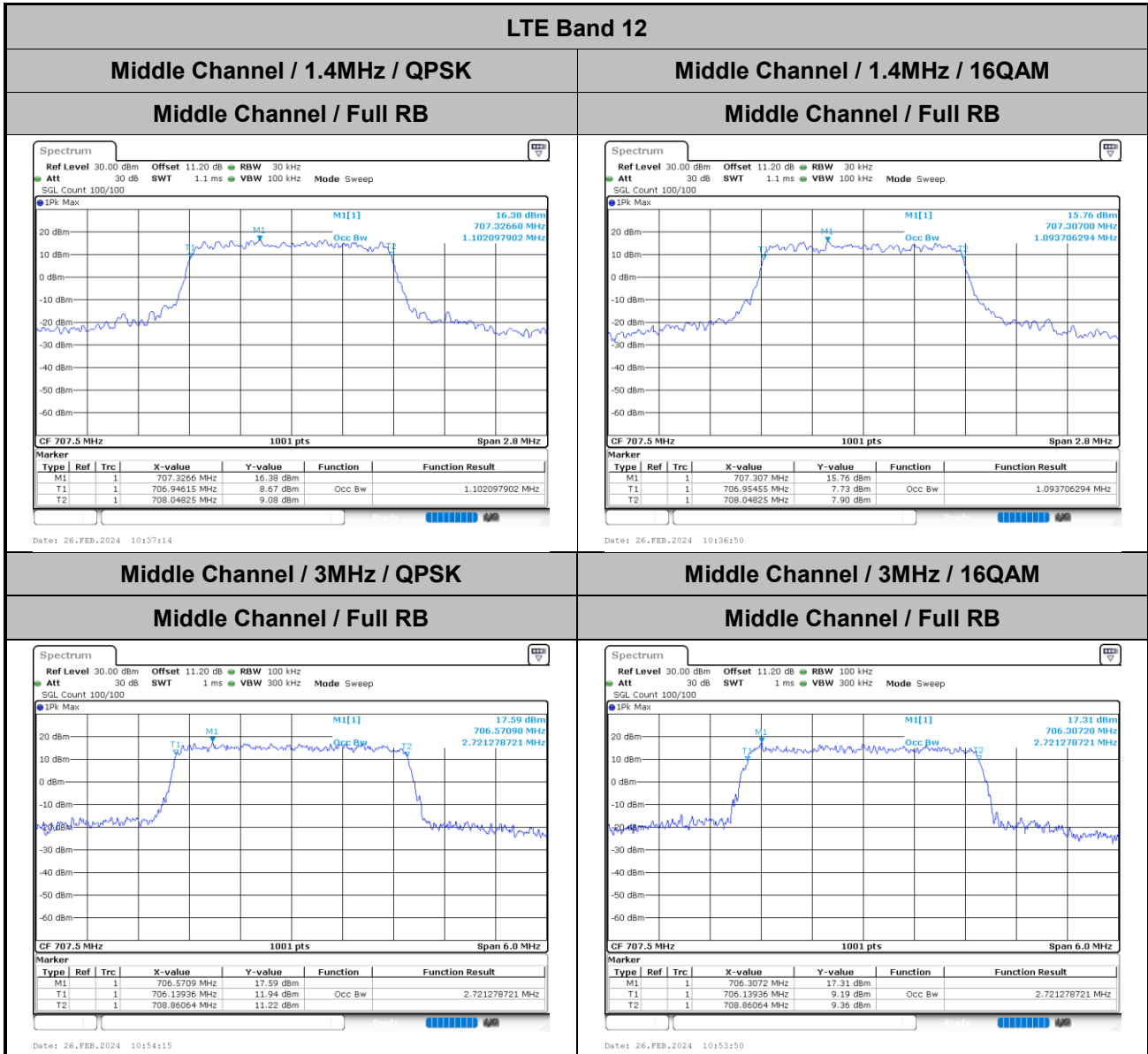
Date: 26.FEB.2024 12:19:22

Date: 26.FEB.2024 12:19:47



Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.10	1.09	2.72	2.72	4.50	4.48	9.05	4.87	-	-	-	-





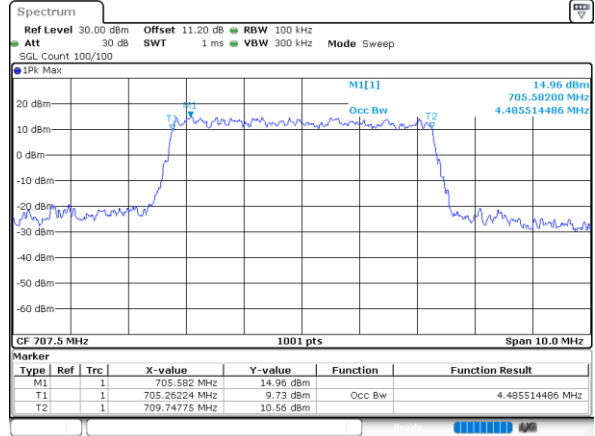
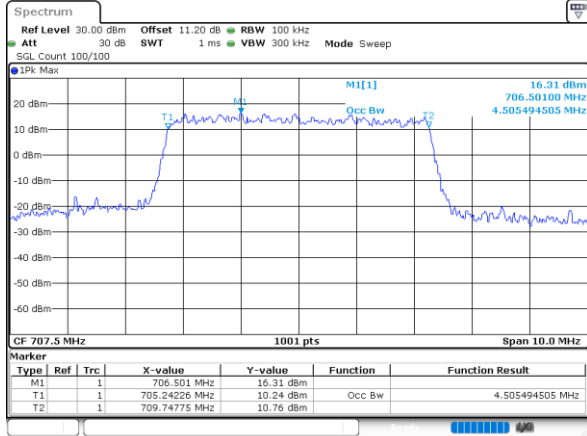
LTE Band 12

Middle Channel / 5MHz / QPSK

Middle Channel / 5MHz / 16QAM

Middle Channel / Full RB

Middle Channel / Full RB



Date: 26.FEB.2024 12:08:44

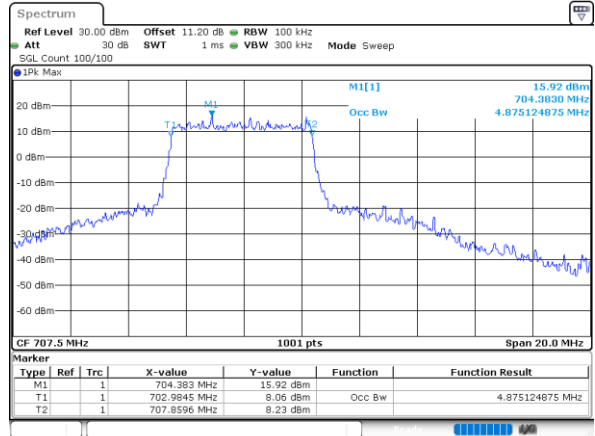
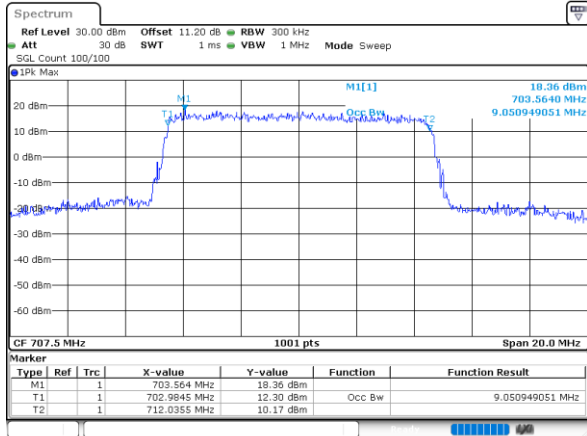
Date: 26.FEB.2024 12:08:19

Middle Channel / 10MHz / QPSK

Middle Channel / 10MHz / 16QAM

Middle Channel / Full RB

Middle Channel / 27RB0

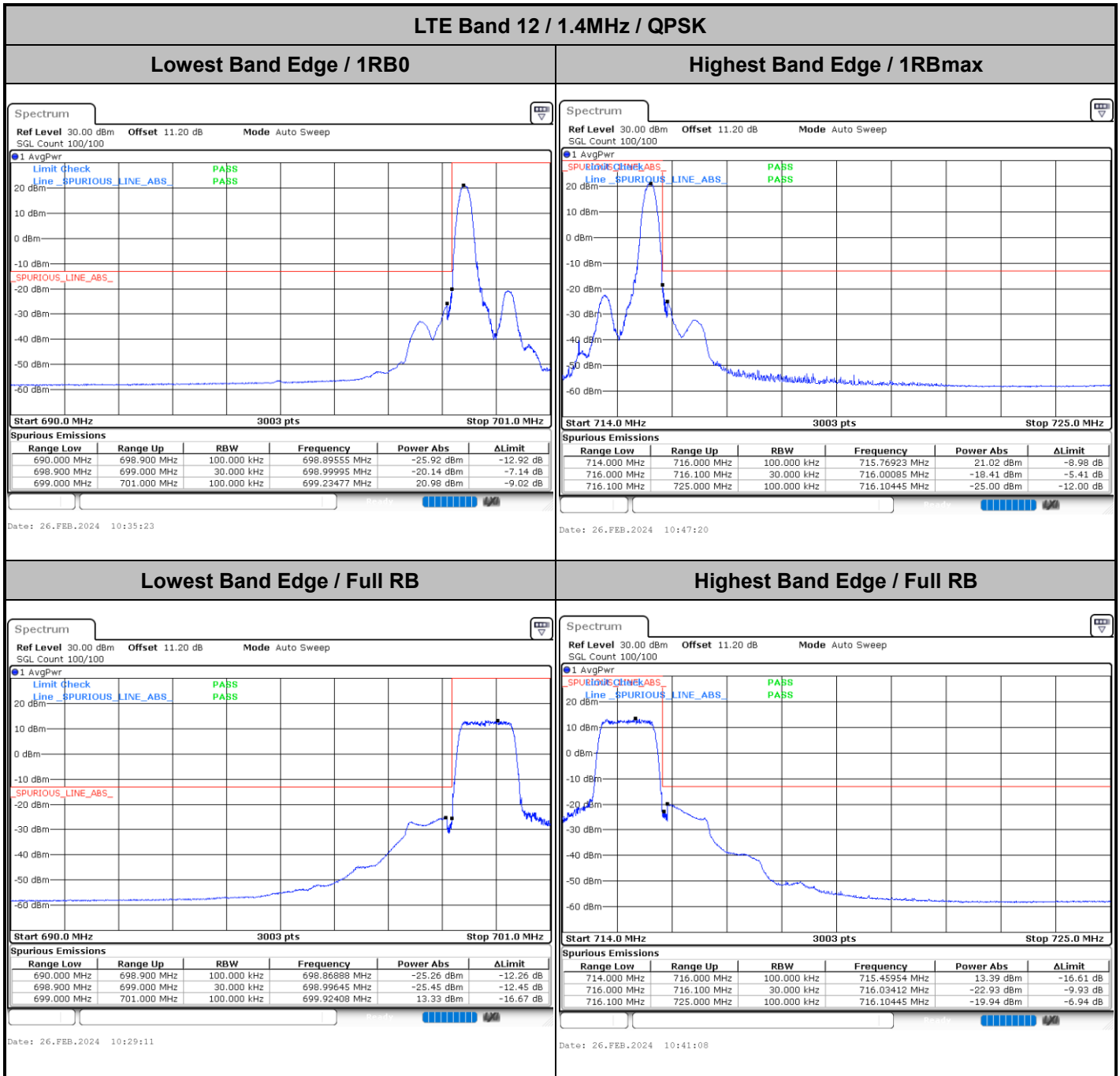


Date: 26.FEB.2024 12:19:09

Date: 26.FEB.2024 12:18:45



Conducted Band Edge

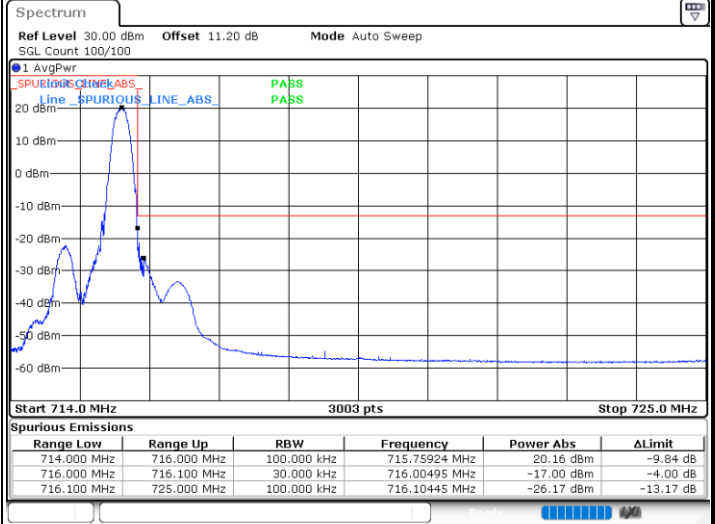
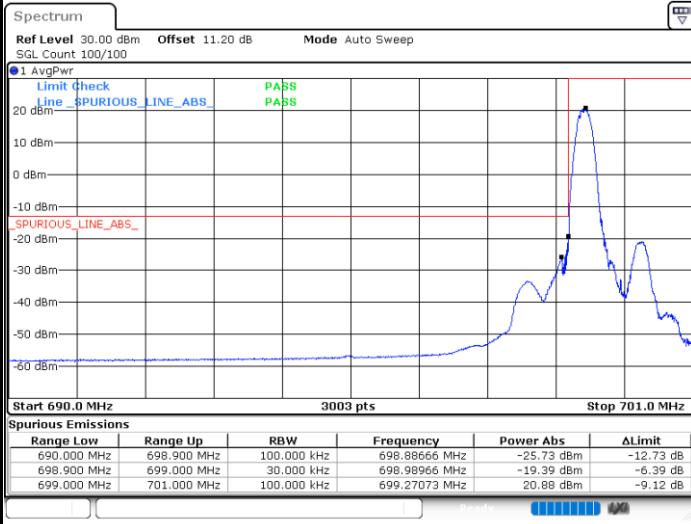




LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB0

Highest Band Edge / 1 RBmax

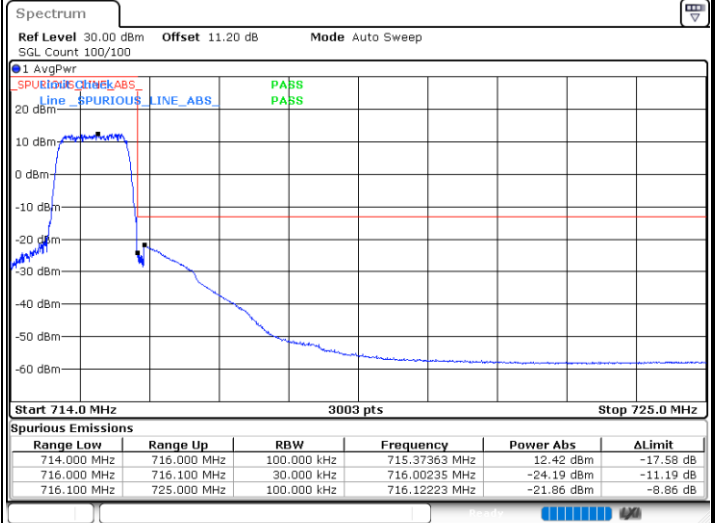
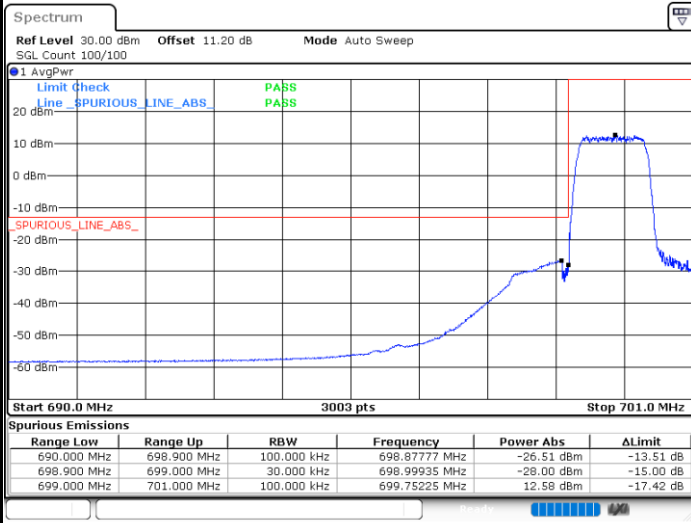


Date: 26.FEB.2024 10:33:19

Date: 26.FEB.2024 10:45:16

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



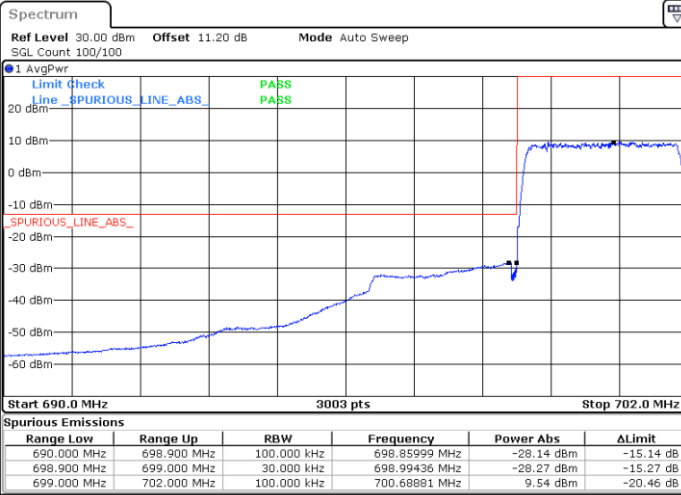
Date: 26.FEB.2024 10:31:15

Date: 26.FEB.2024 10:43:12



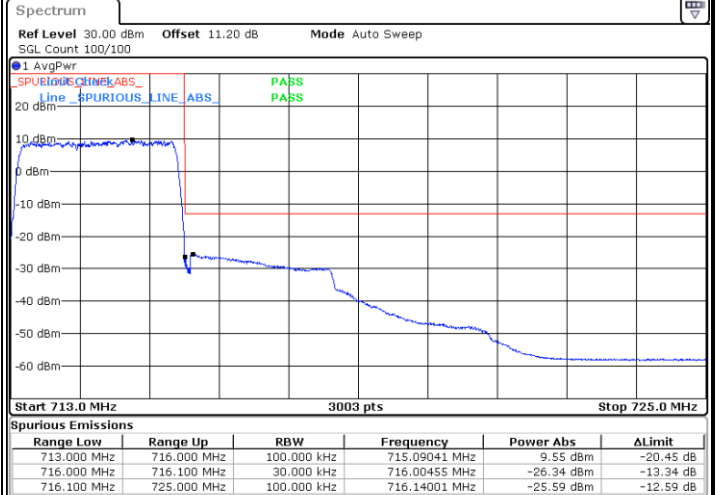
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / Full RB



Date: 26.FEB.2024 10:51:20

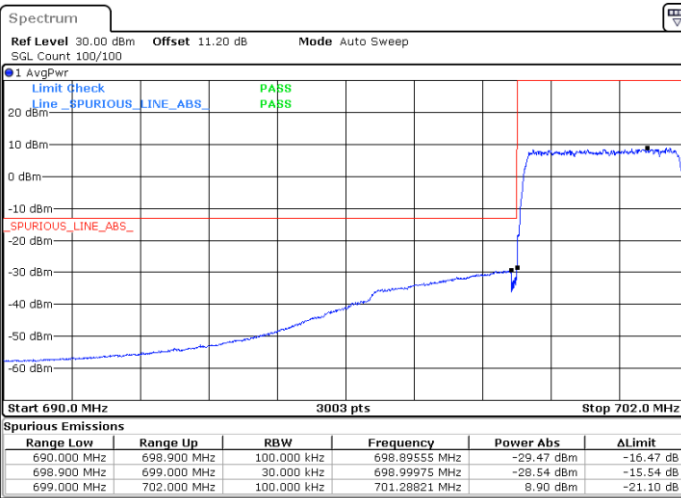
Highest Band Edge / Full RB



Date: 26.FEB.2024 10:56:56

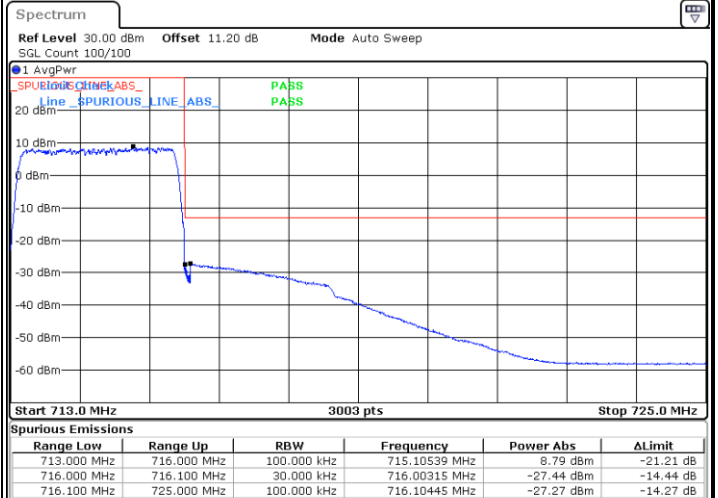
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / Full RB



Date: 26.FEB.2024 10:53:25

Highest Band Edge / Full RB

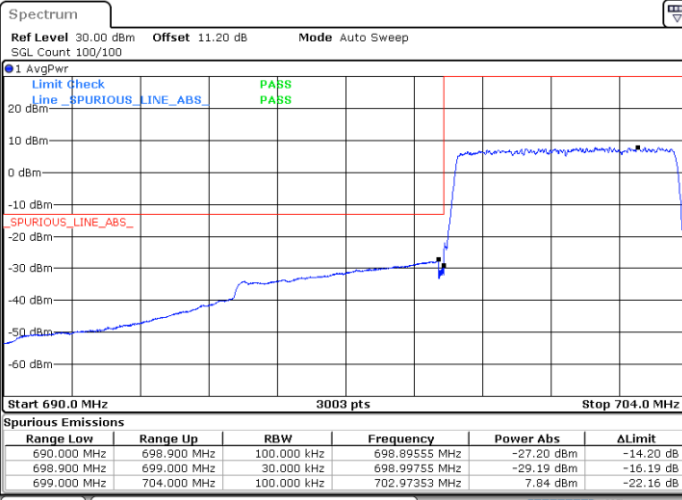


Date: 26.FEB.2024 10:59:00



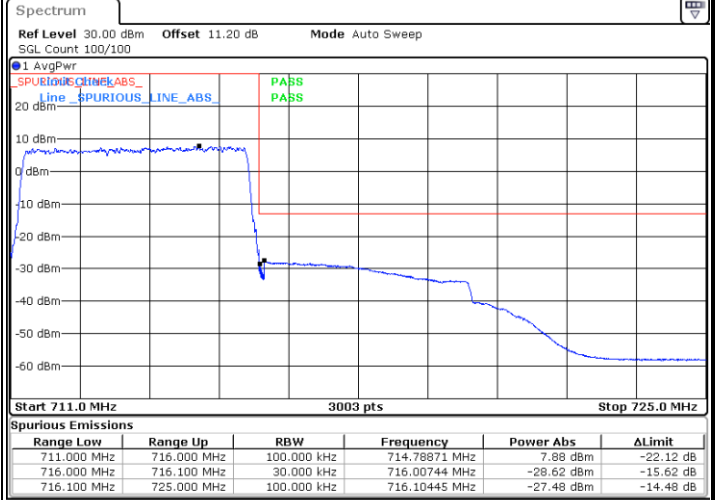
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / Full RB



Date: 26.FEB.2024 12:05:50

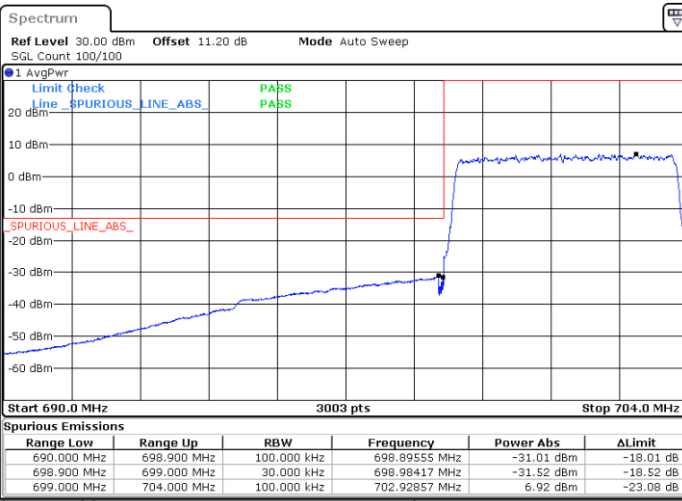
Highest Band Edge / Full RB



Date: 26.FEB.2024 12:11:24

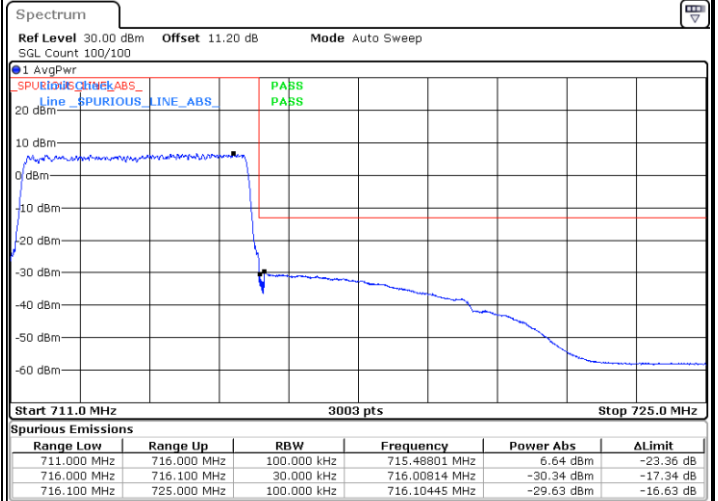
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / Full RB



Date: 26.FEB.2024 12:07:54

Highest Band Edge / Full RB

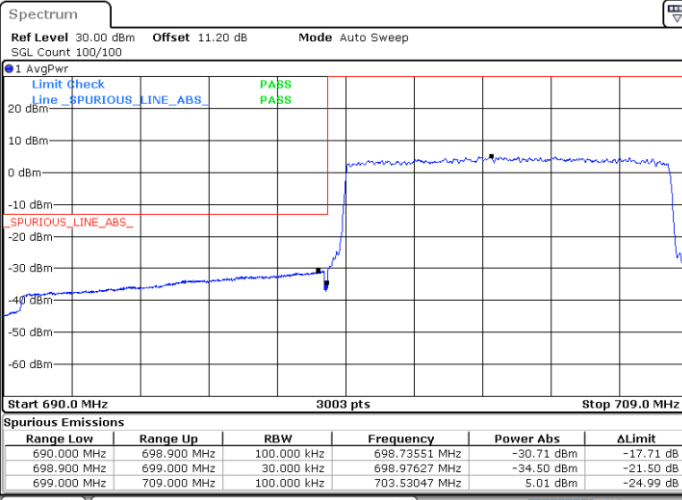


Date: 26.FEB.2024 12:13:28



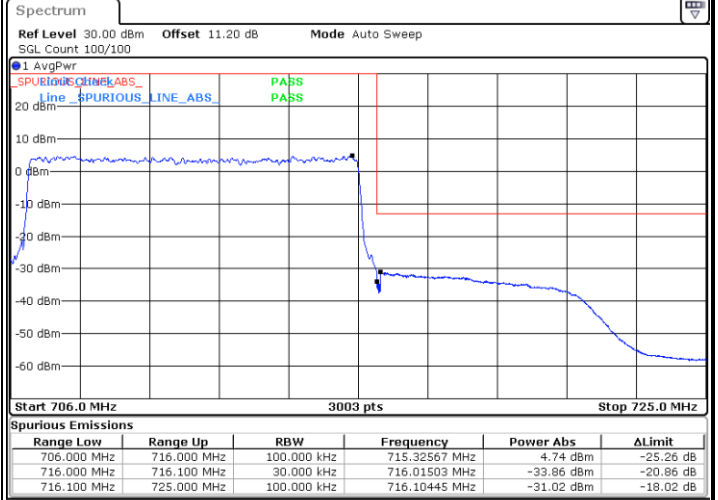
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / Full RB



Date: 26.FEB.2024 12:16:16

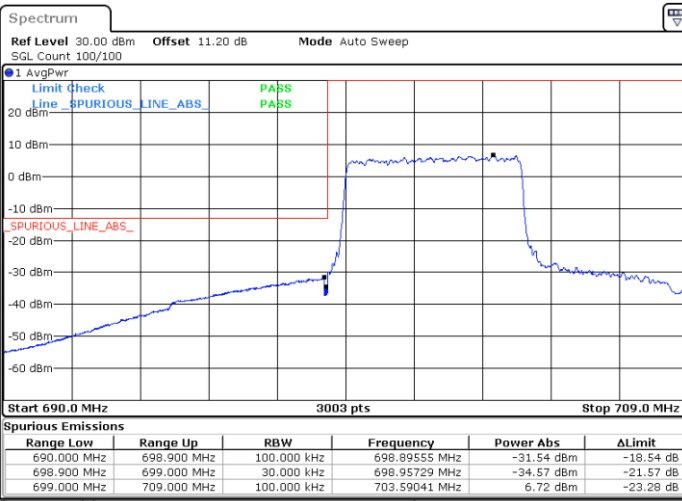
Highest Band Edge / Full RB



Date: 26.FEB.2024 12:21:51

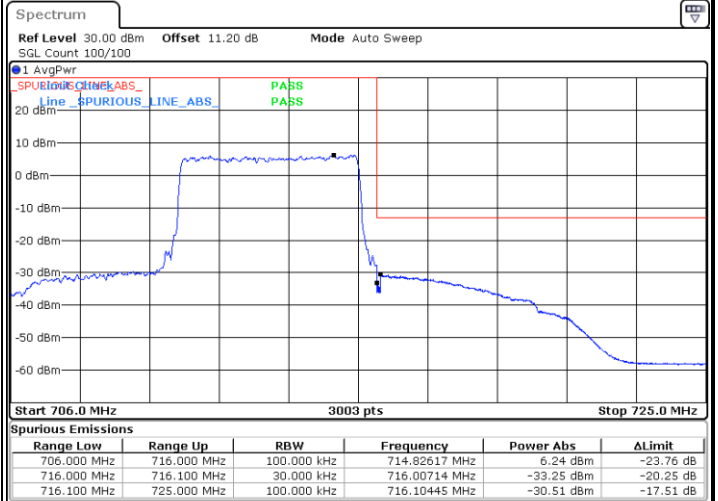
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 27 RB0



Date: 26.FEB.2024 12:18:20

Highest Band Edge / 27 RBmax



Date: 26.FEB.2024 12:23:55



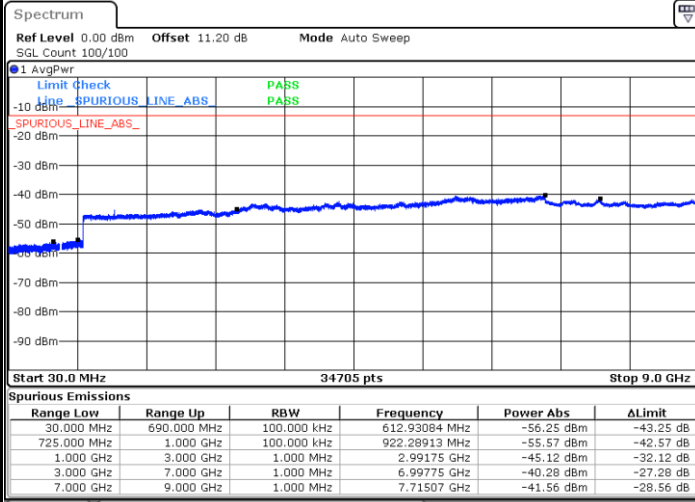
Conducted Spurious Emission





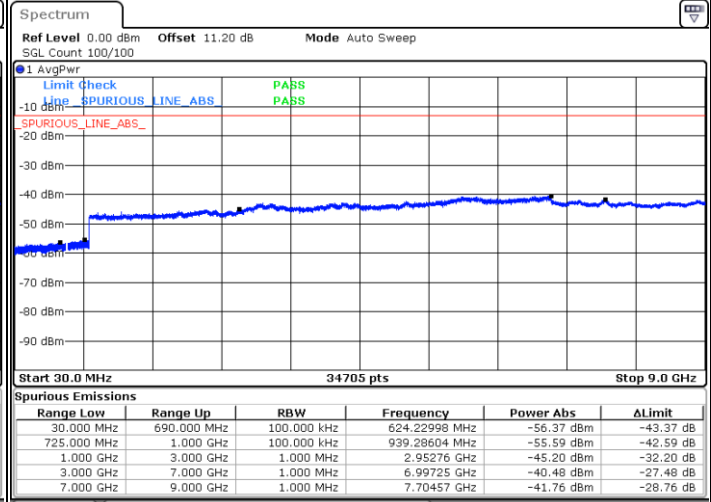
LTE Band 12 / 3MHz

Lowest Channel / QPSK



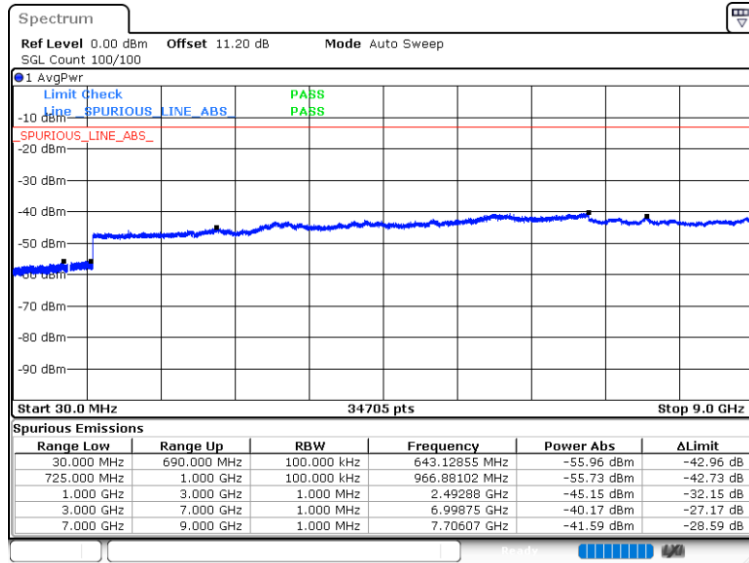
Date: 26.FEB.2024 12:26:43

Middle Channel / QPSK



Date: 26.FEB.2024 12:27:56

Highest Channel / QPSK



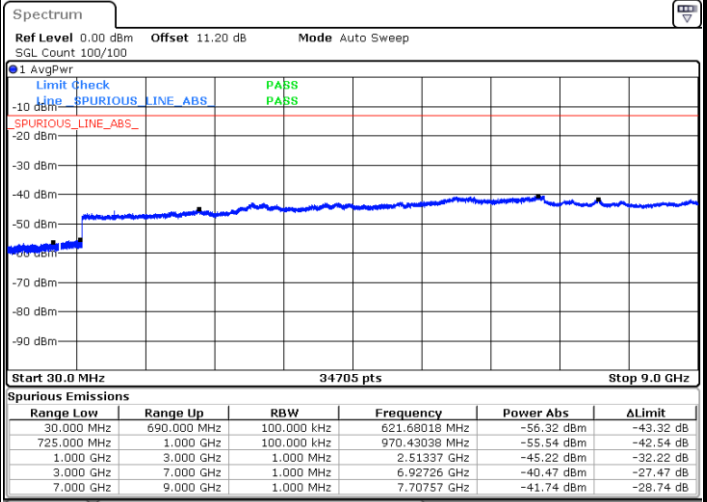
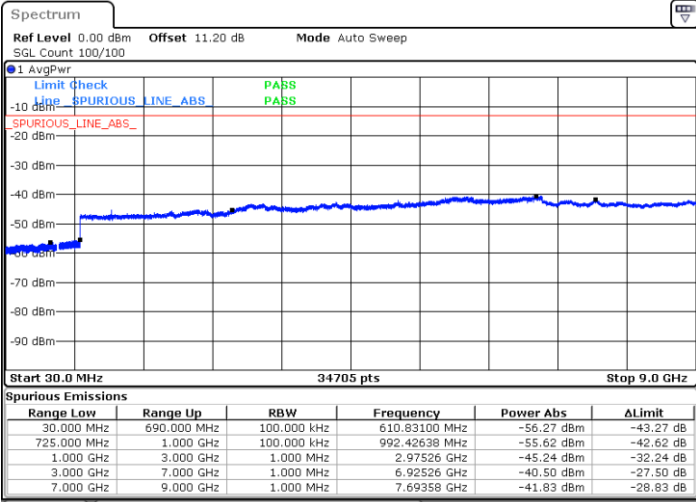
Date: 26.FEB.2024 12:29:09



LTE Band 12 / 5MHz

Lowest Channel / QPSK

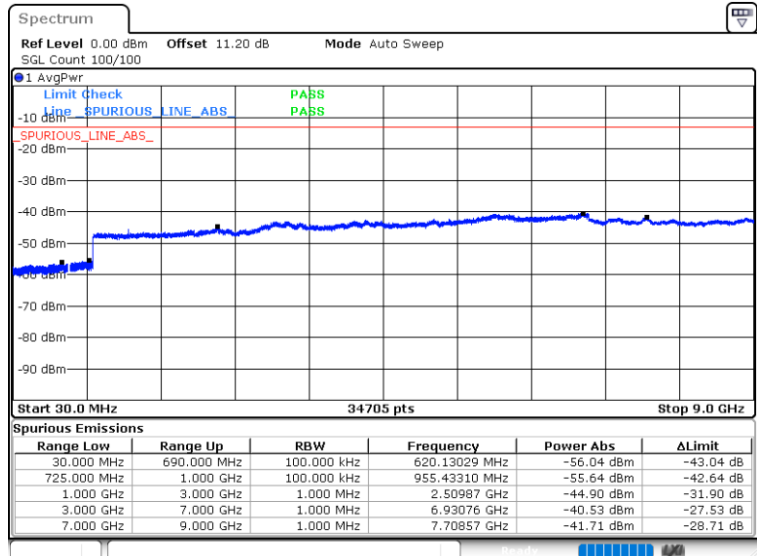
Middle Channel / QPSK



Date: 26.FEB.2024 12:30:24

Date: 26.FEB.2024 12:31:37

Highest Channel / QPSK



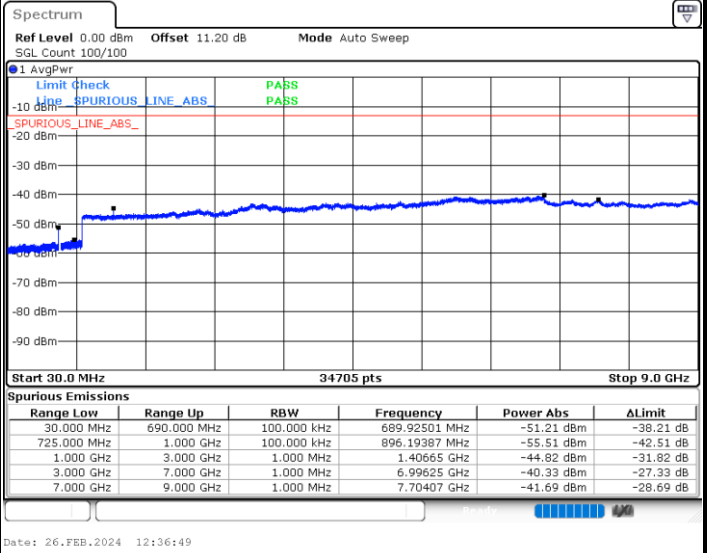
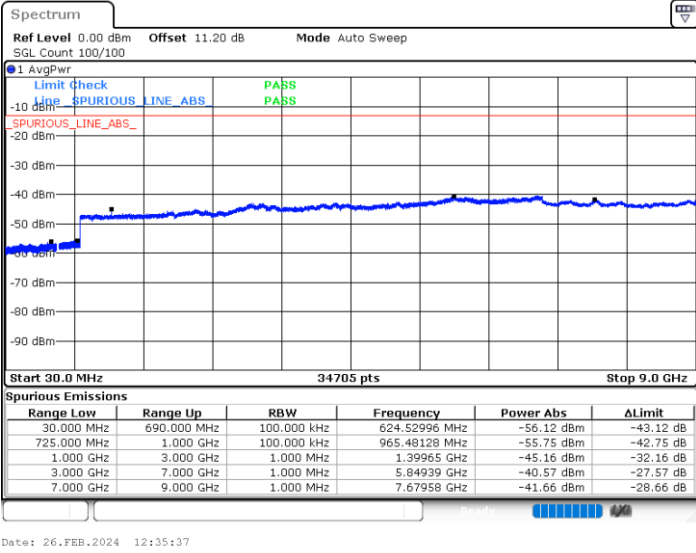
Date: 26.FEB.2024 12:32:50



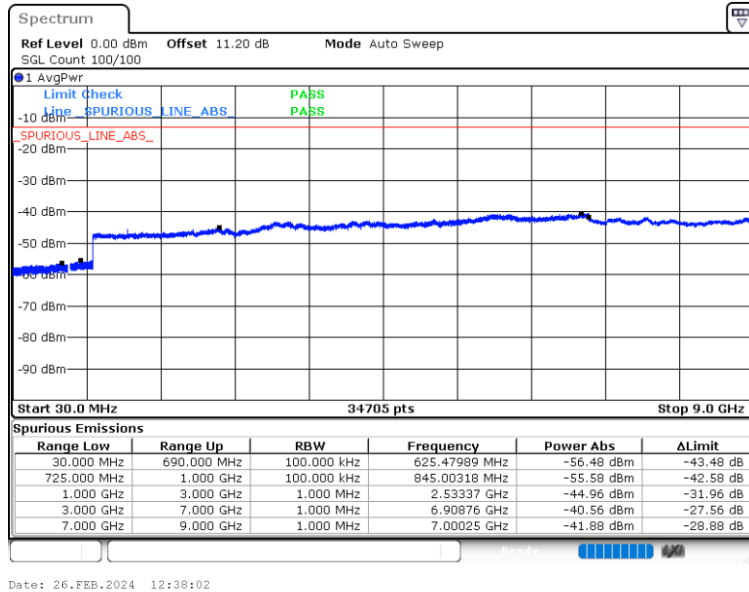
LTE Band 12 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK





Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
35	Normal Voltage	0.0191	PASS
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0066	
20	Maximum Voltage	0.0090	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0095	

Note:

1. Normal Voltage = 3.88 V. ; Battery End Point (BEP) = 3.6 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	27 RB	Result
Middle CH	5.16	6.20	PASS

