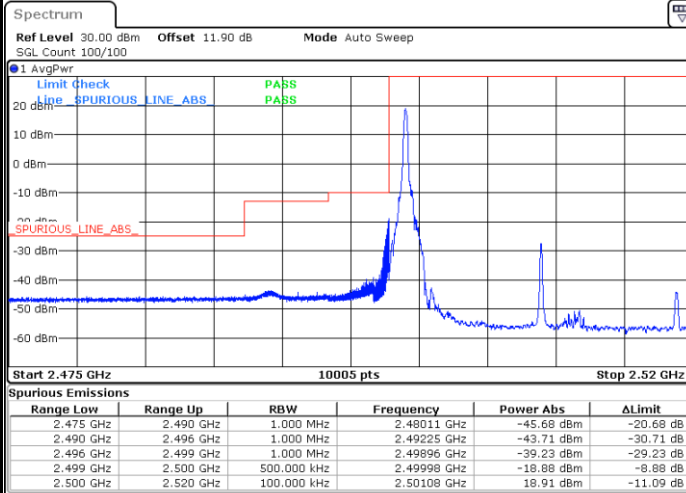


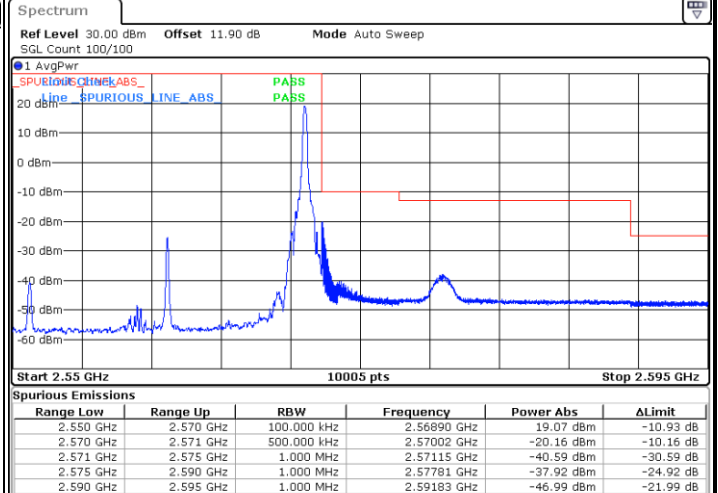


LTE Band 7 / 20MHz / 64QAM

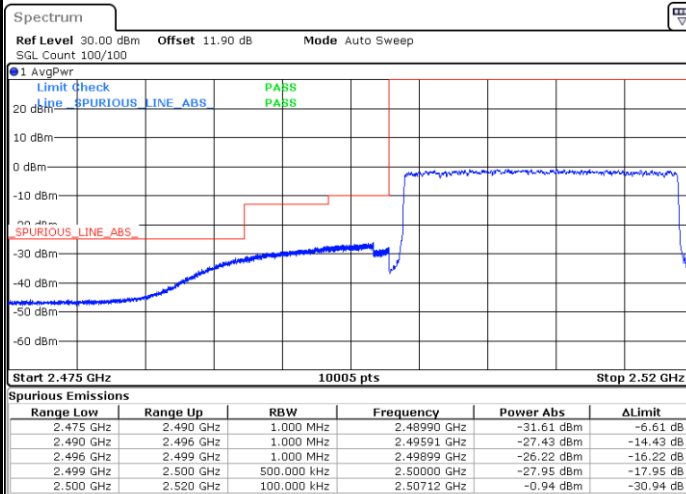
Lowest Band Edge / 1 RB



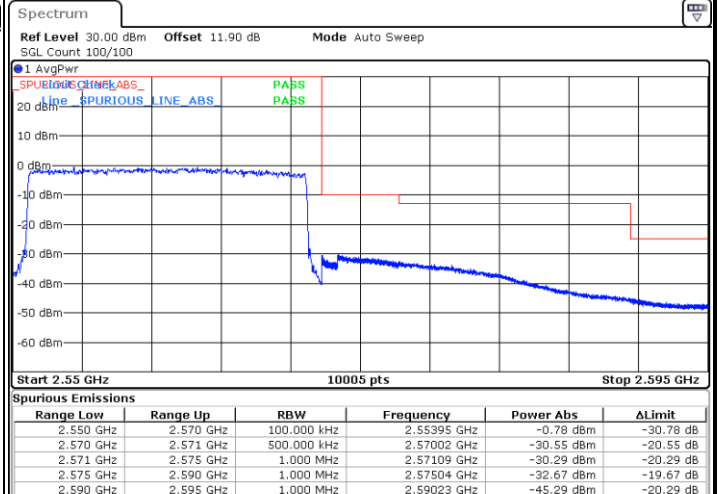
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

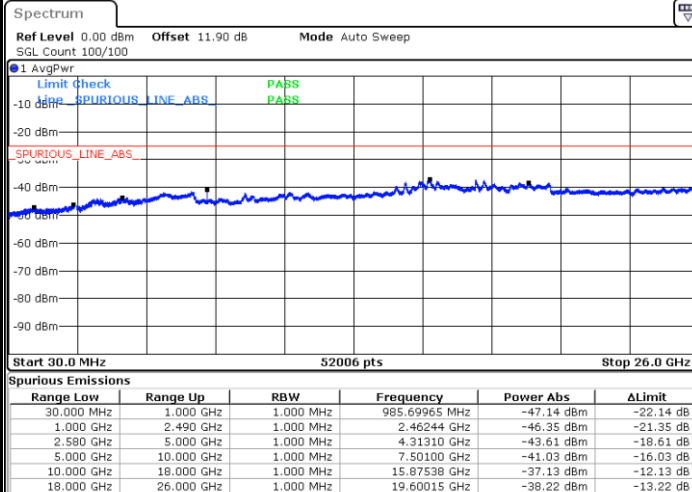




Conducted Spurious Emission

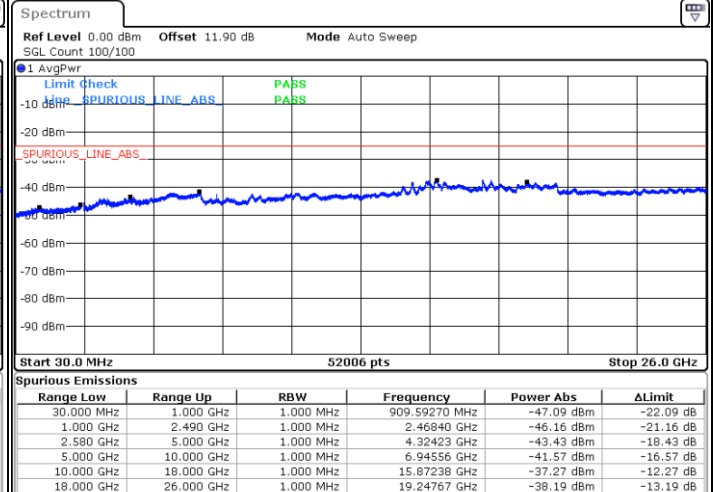
LTE Band 7 / 5MHz

Lowest Channel / QPSK



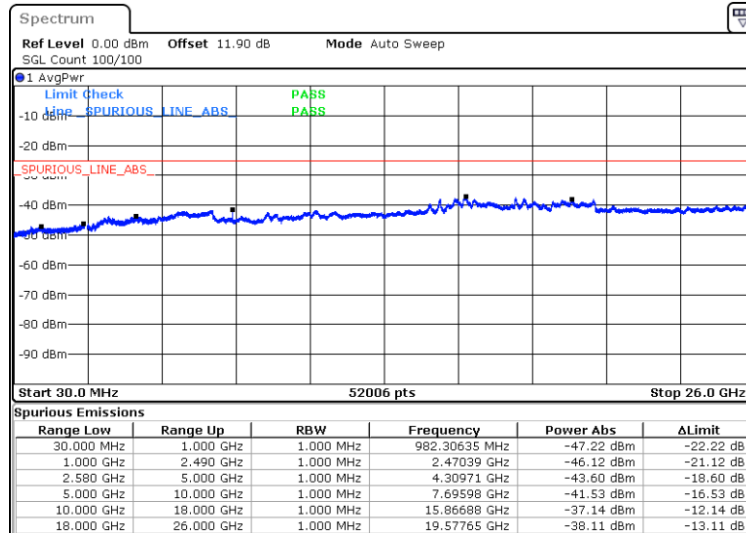
Date: 3.FEB.2021 09:35:48

Middle Channel / QPSK



Date: 3.FEB.2021 09:37:46

Highest Channel / QPSK

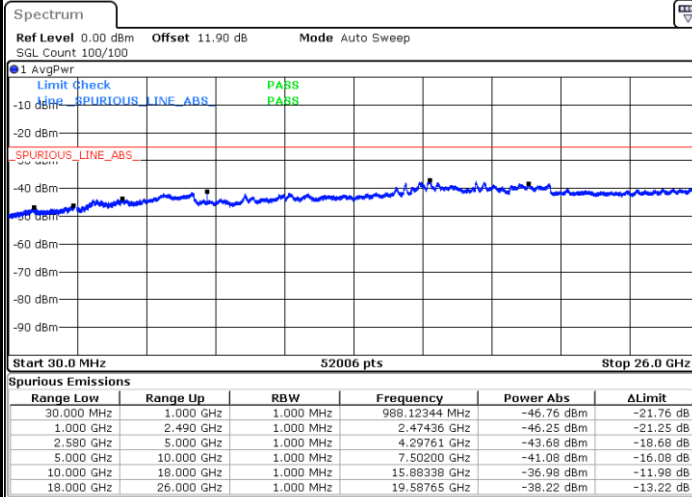


Date: 3.FEB.2021 09:40:57



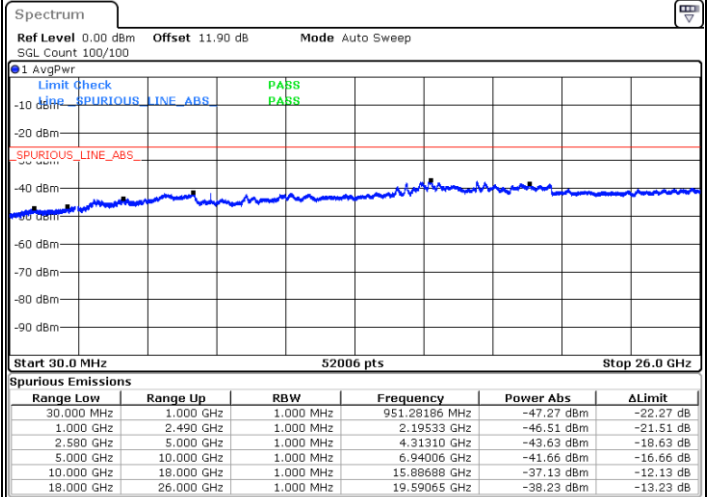
LTE Band 7 / 10MHz

Lowest Channel / QPSK



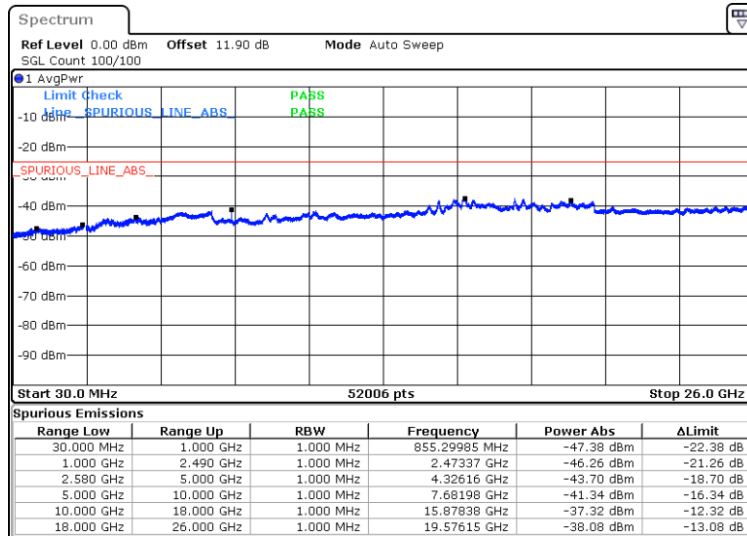
Date: 3.FEB.2021 09:46:48

Middle Channel / QPSK



Date: 3.FEB.2021 09:48:45

Highest Channel / QPSK

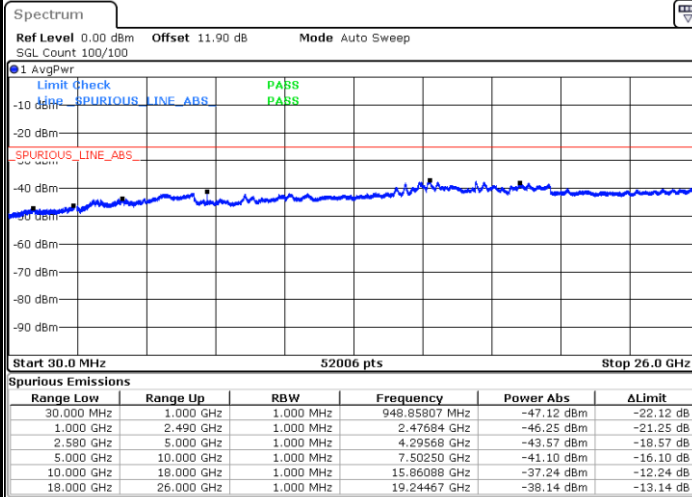


Date: 3.FEB.2021 09:51:57



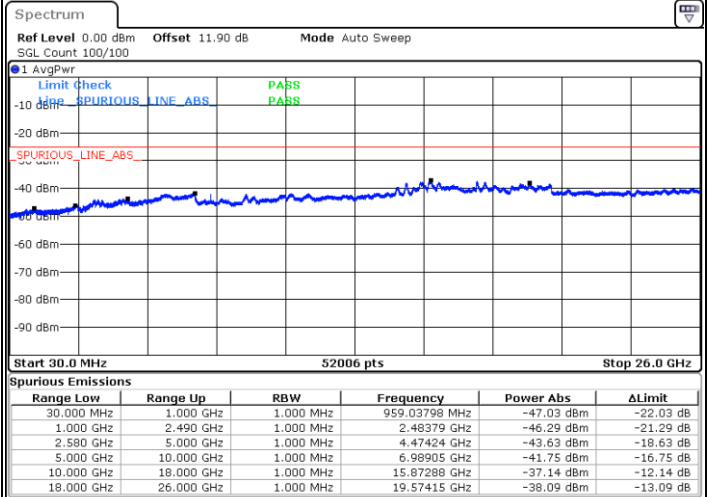
LTE Band 7 / 15MHz

Lowest Channel / QPSK



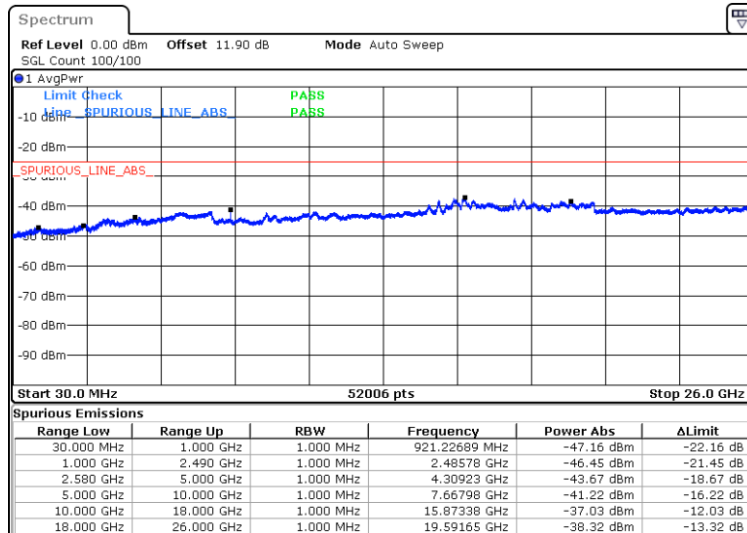
Date: 3.FEB.2021 09:57:48

Middle Channel / QPSK



Date: 3.FEB.2021 09:59:45

Highest Channel / QPSK

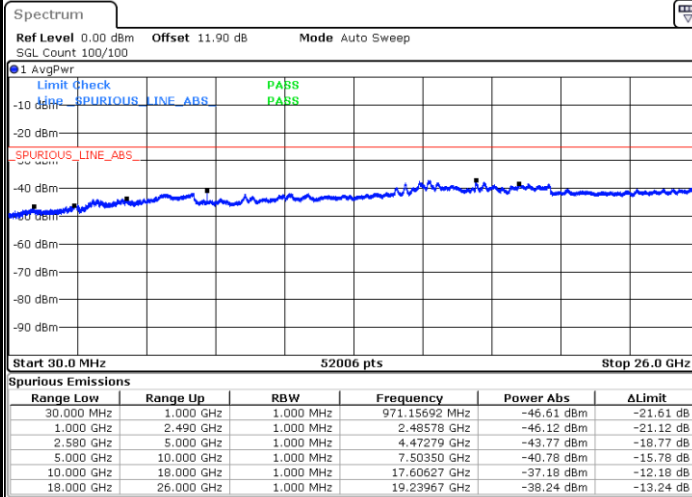


Date: 3.FEB.2021 10:02:57



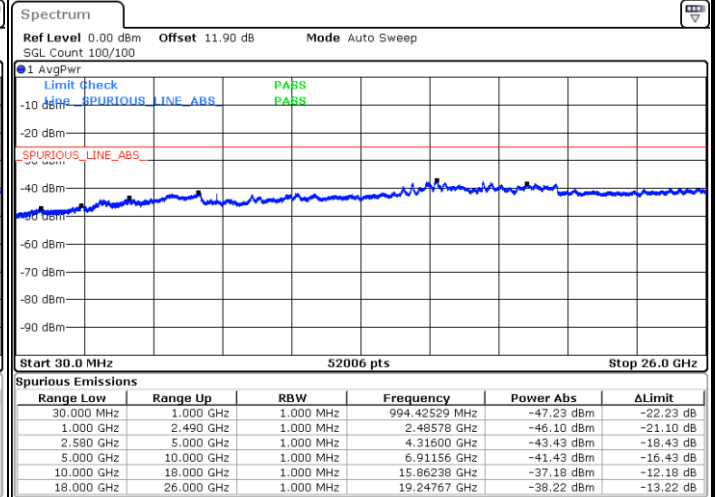
LTE Band 7 / 20MHz

Lowest Channel / QPSK



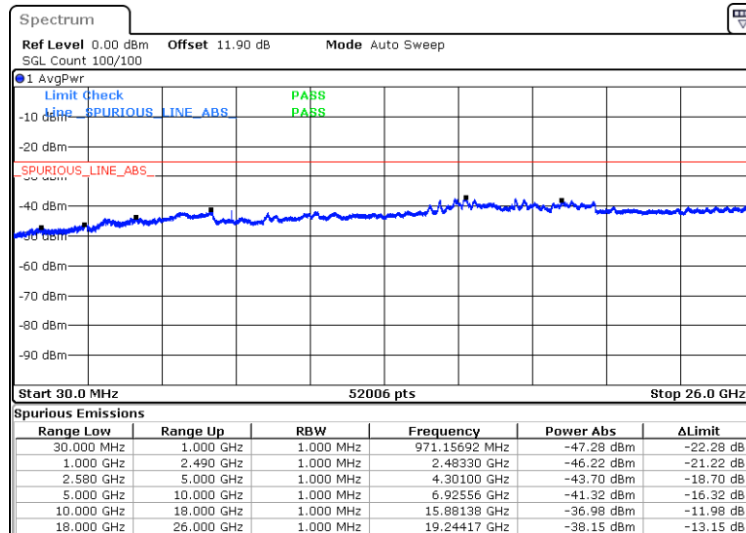
Date: 3.FEB.2021 10:08:49

Middle Channel / QPSK



Date: 3.FEB.2021 10:10:46

Highest Channel / QPSK



Date: 3.FEB.2021 10:13:58

Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0009	PASS
40	Normal Voltage	0.0054	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0027	
0	Normal Voltage	0.0037	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0040	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

Note:

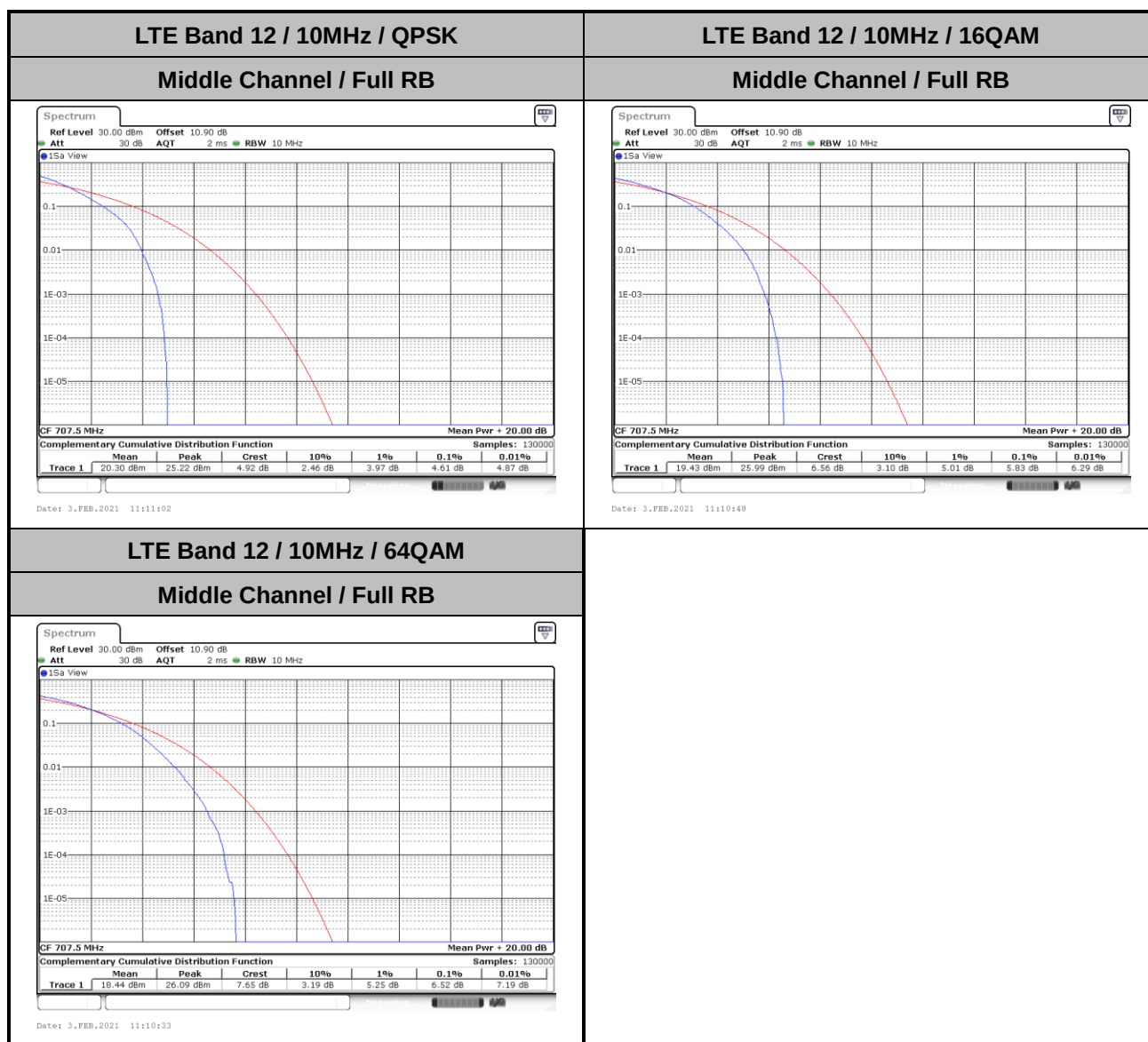
1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 12

Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.61	5.83	6.52	PASS



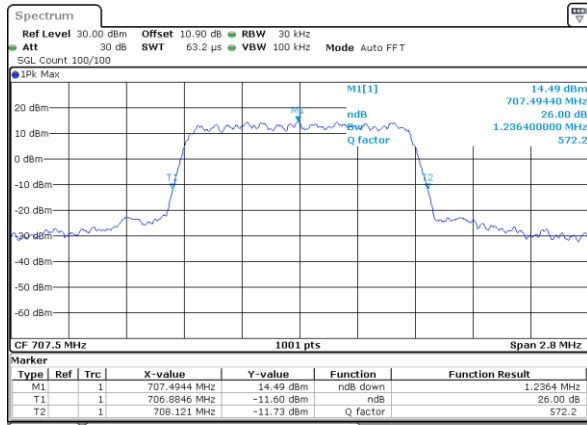
**26dB Bandwidth**

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	1.24	1.23	2.99	3.06	4.90	4.91	9.79	10.03	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-
Middle CH	1.23	-	3.05	-	4.89	-	9.77	-	-	-	-	-



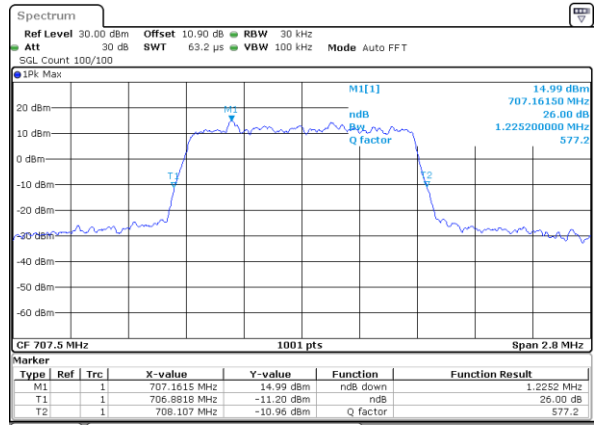
LTE Band 12

Middle Channel / 1.4MHz / QPSK



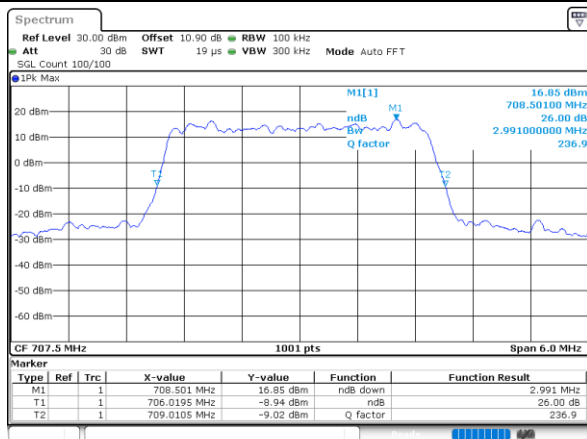
Date: 3.FEB.2021 10:29:46

Middle Channel / 1.4MHz / 16QAM



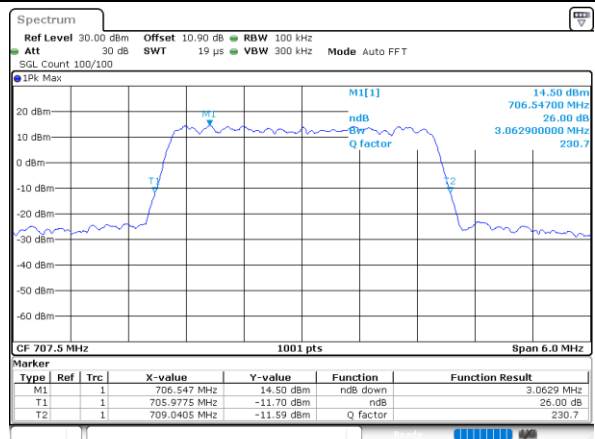
Date: 3.FEB.2021 10:29:59

Middle Channel / 3MHz / QPSK



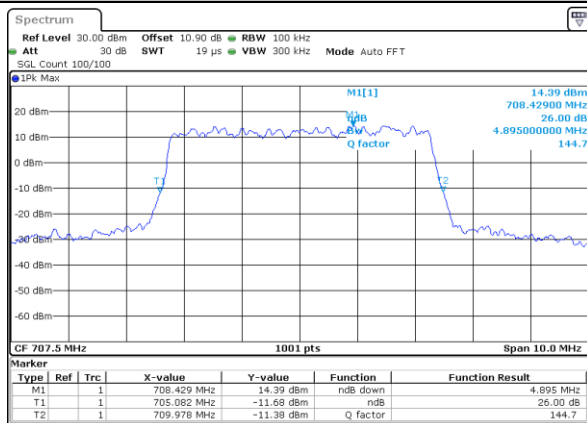
Date: 3.FEB.2021 10:40:51

Middle Channel / 3MHz / 16QAM



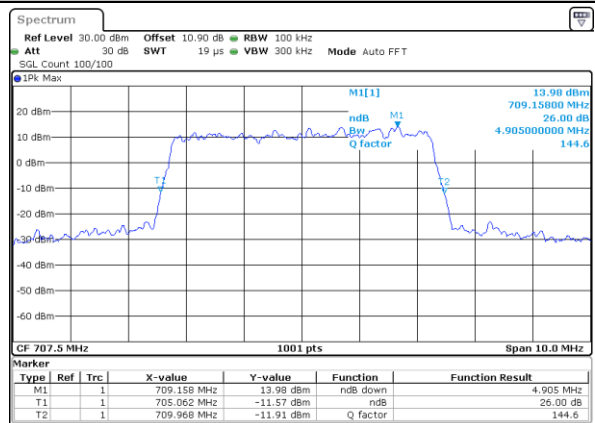
Date: 3.FEB.2021 10:41:05

Middle Channel / 5MHz / QPSK



Date: 3.FEB.2021 10:54:36

Middle Channel / 5MHz / 16QAM

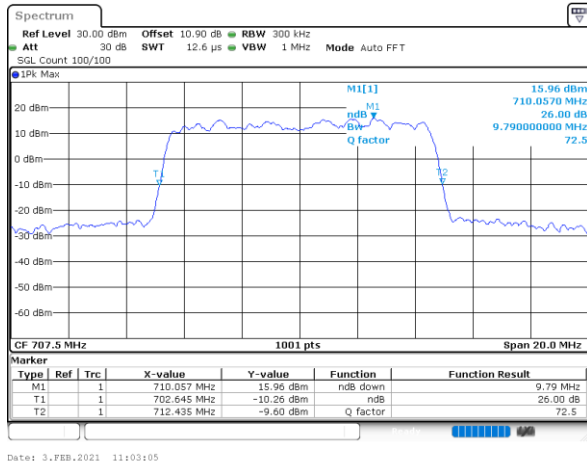


Date: 3.FEB.2021 10:54:50

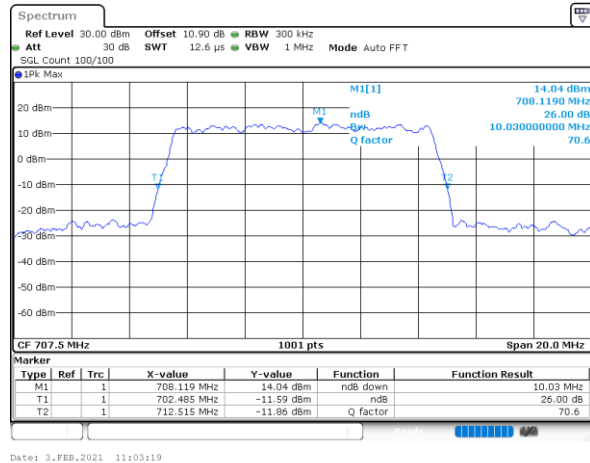


LTE Band 12

Middle Channel / 10MHz / QPSK

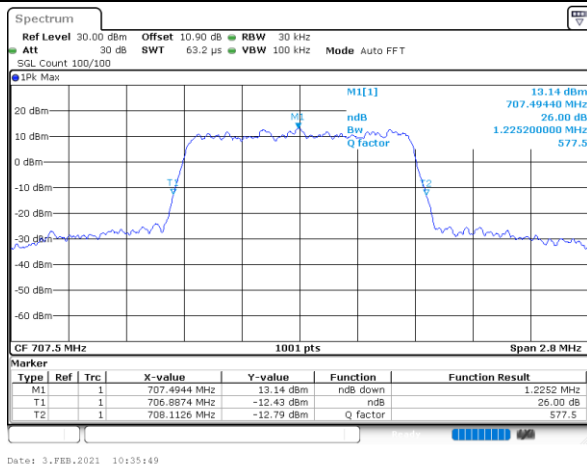


Middle Channel / 10MHz / 16QAM

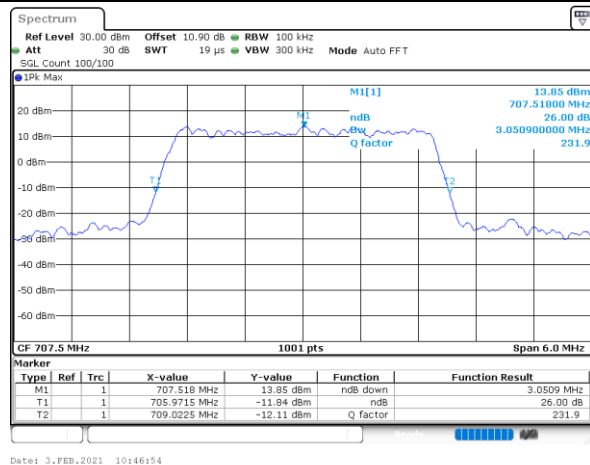


LTE Band 12

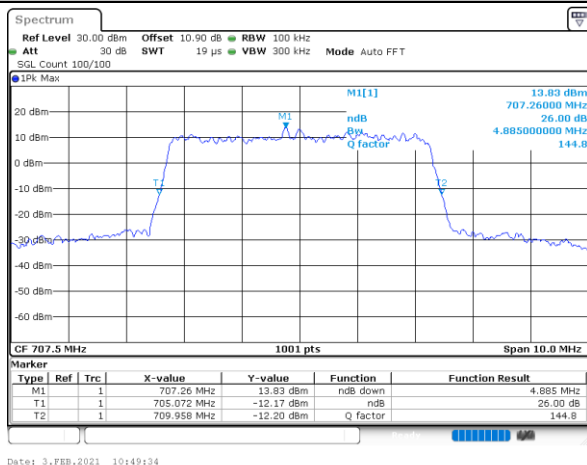
Middle Channel / 1.4MHz / 64QAM



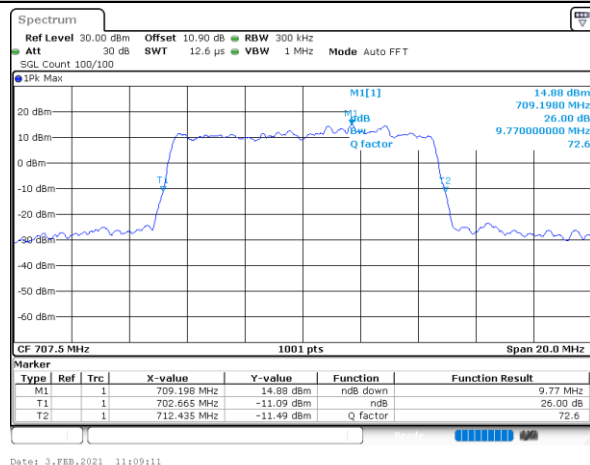
Middle Channel / 3MHz / 64QAM



Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



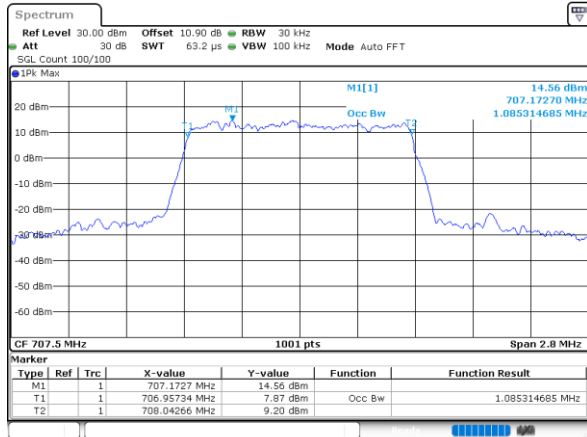
**Occupied Bandwidth**

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	1.09	1.09	2.72	2.72	4.48	4.50	8.93	9.03	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-
Middle CH	1.09	-	2.74	-	4.49	-	8.97	-	-	-	-	-

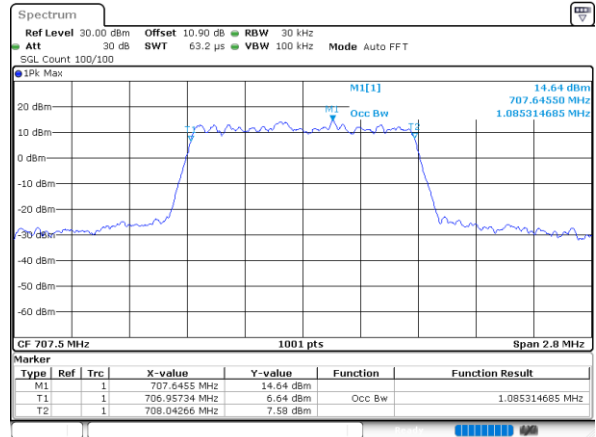


LTE Band 12

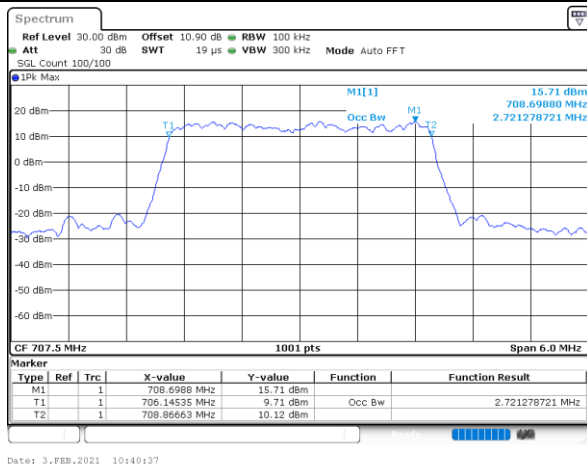
Middle Channel / 1.4MHz / QPSK



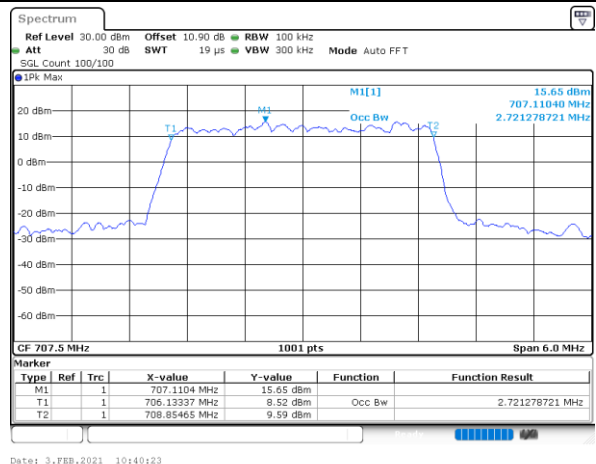
Middle Channel / 1.4MHz / 16QAM



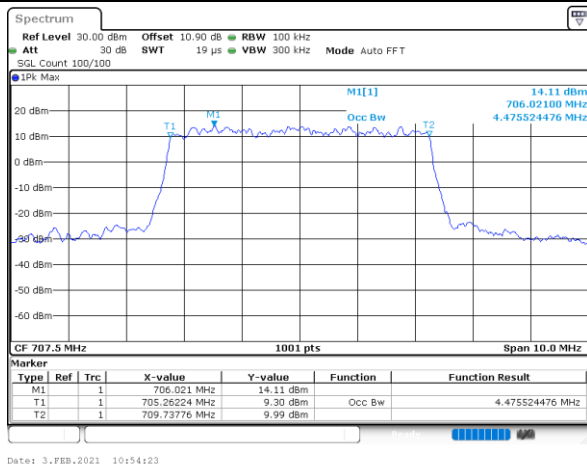
Middle Channel / 3MHz / QPSK



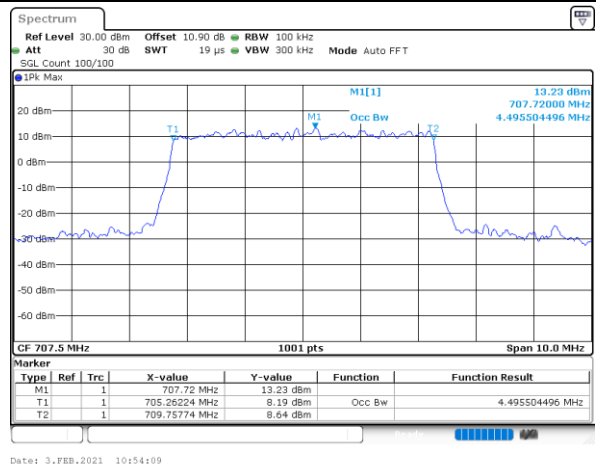
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK



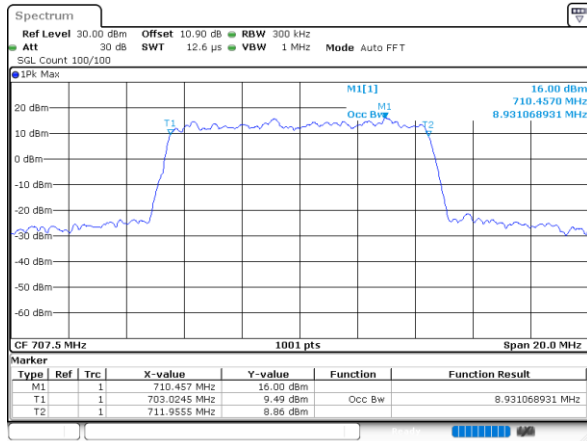
Middle Channel / 5MHz / 16QAM



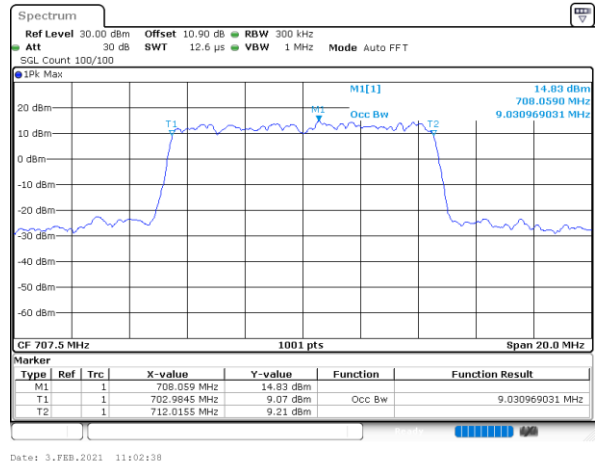


LTE Band 12

Middle Channel / 10MHz / QPSK

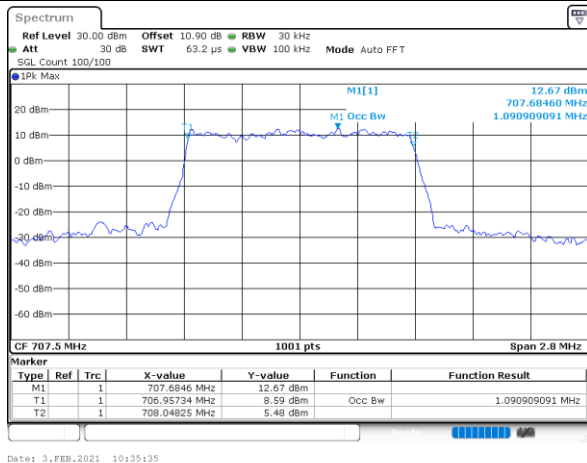


Middle Channel / 10MHz / 16QAM

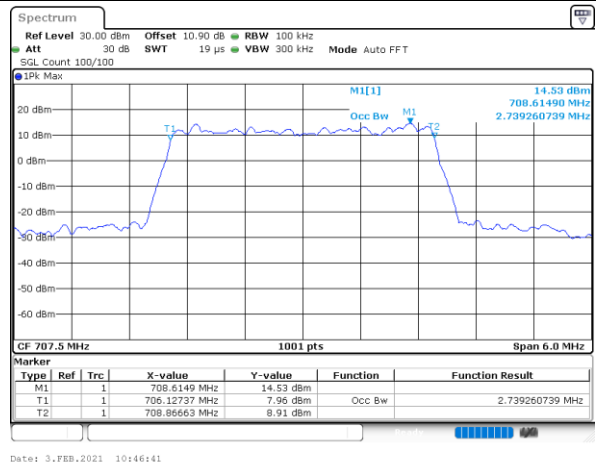


LTE Band 12

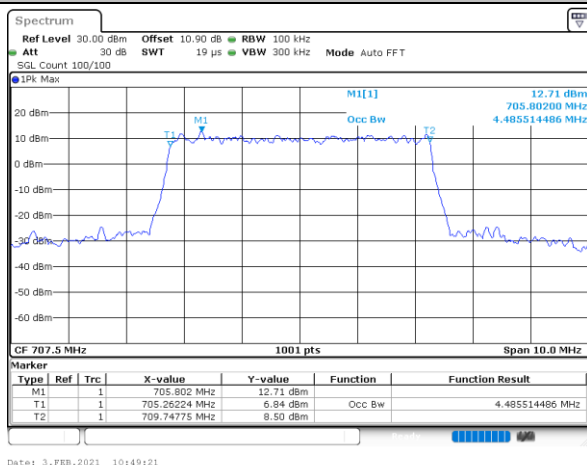
Middle Channel / 1.4MHz / 64QAM



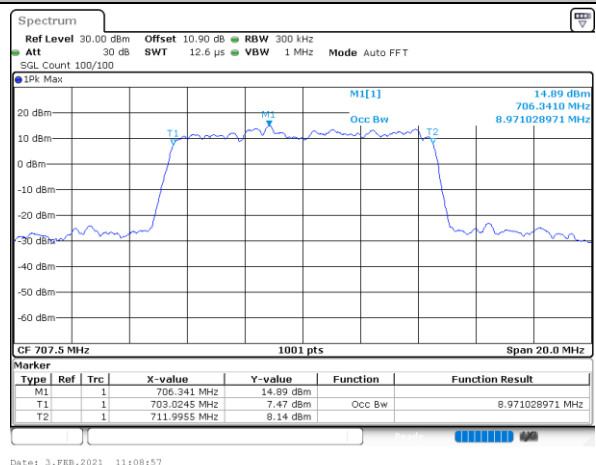
Middle Channel / 3MHz / 64QAM



Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM

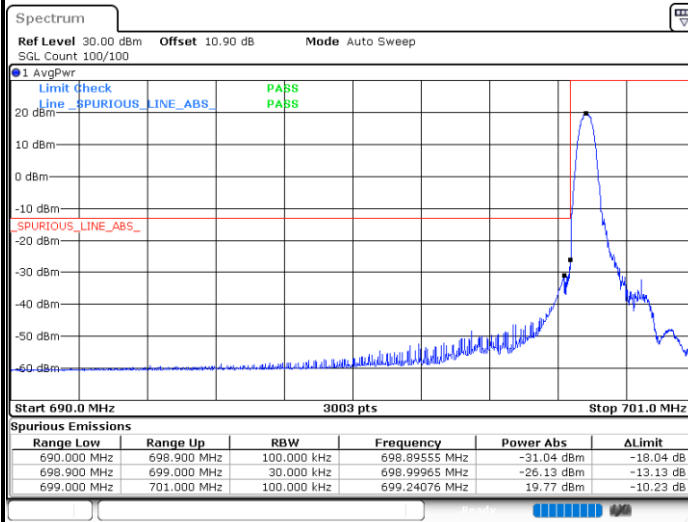




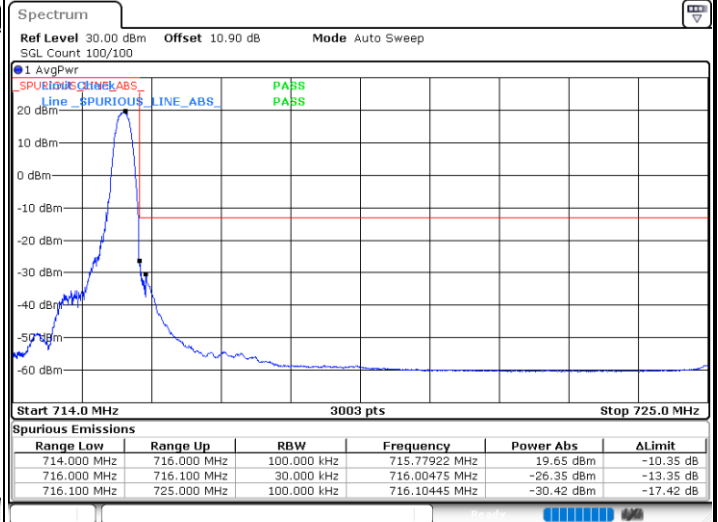
Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

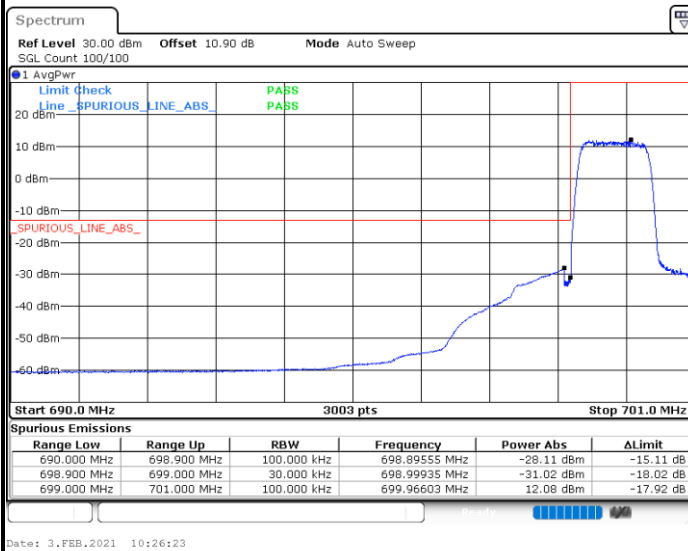
Lowest Band Edge / 1RB



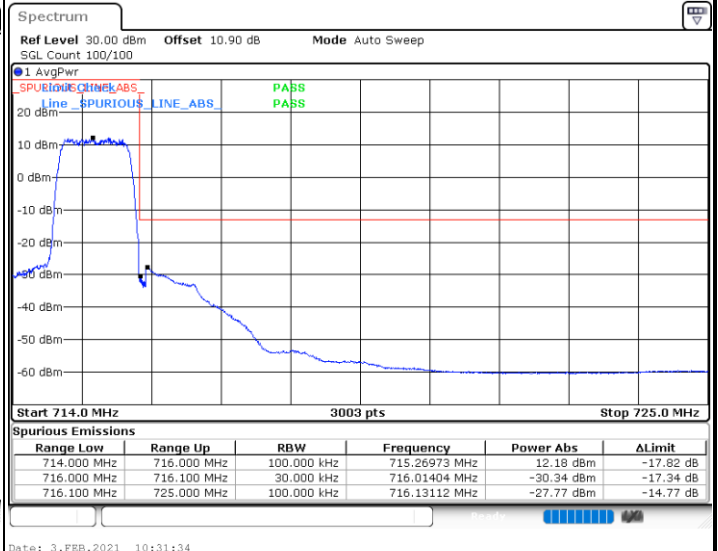
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



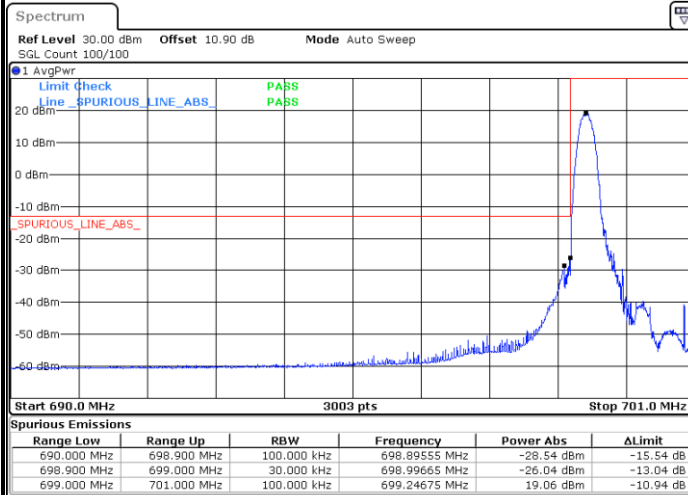
Highest Band Edge / Full RB



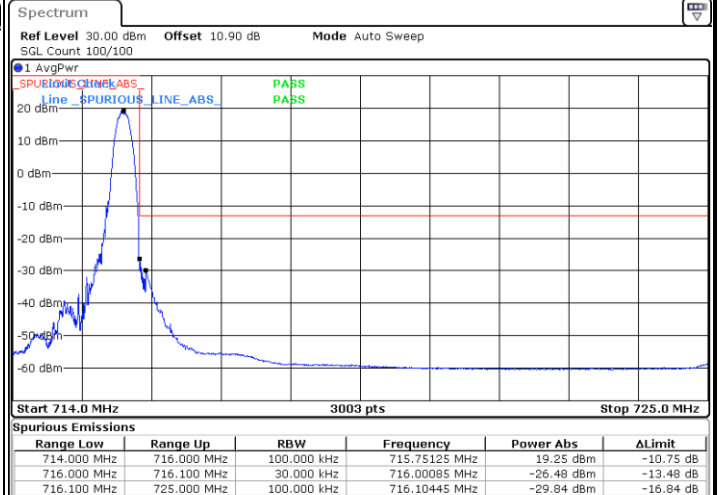


LTE Band 12 / 1.4MHz / 16QAM

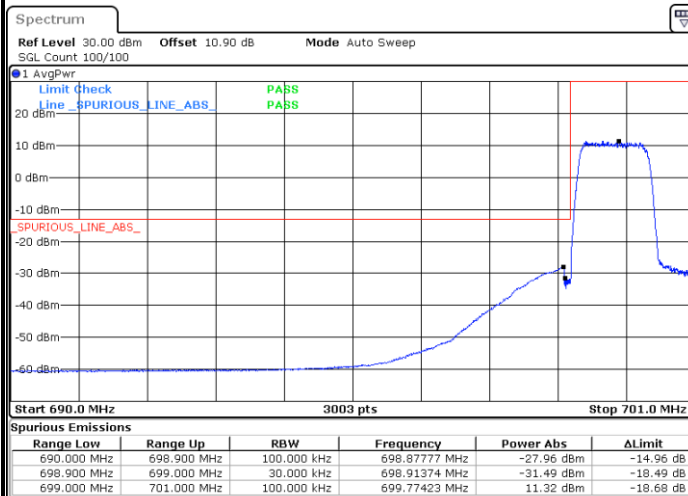
Lowest Band Edge / 1 RB



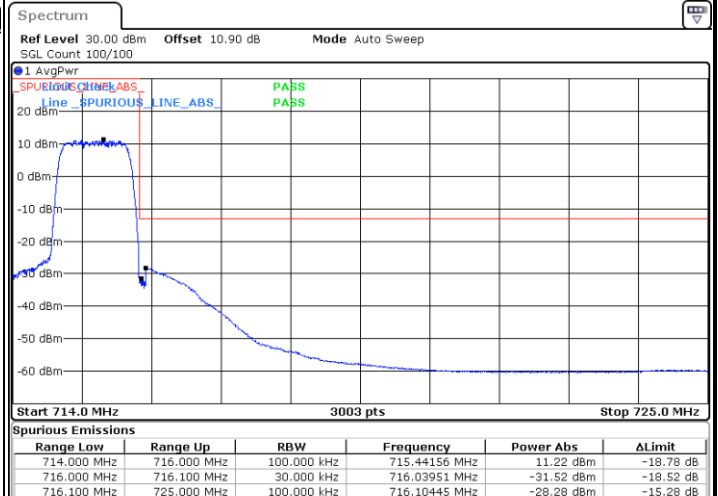
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



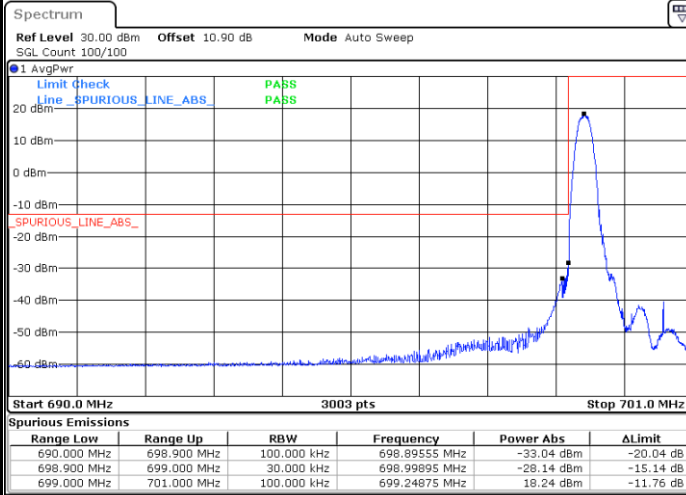
Highest Band Edge / Full RB



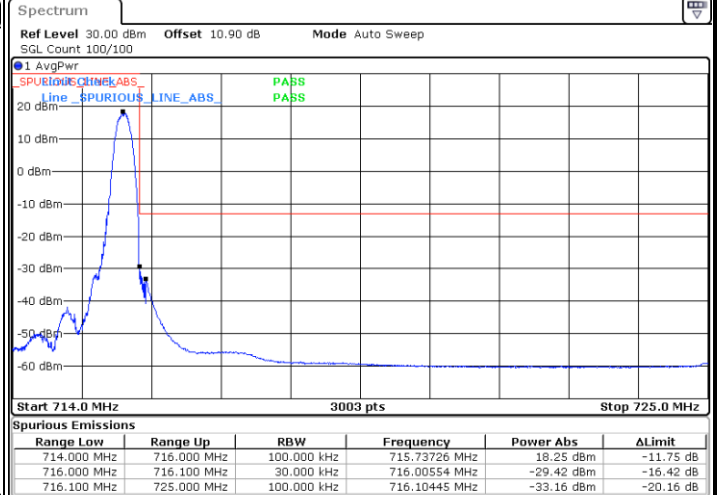


LTE Band 12 / 1.4MHz / 64QAM

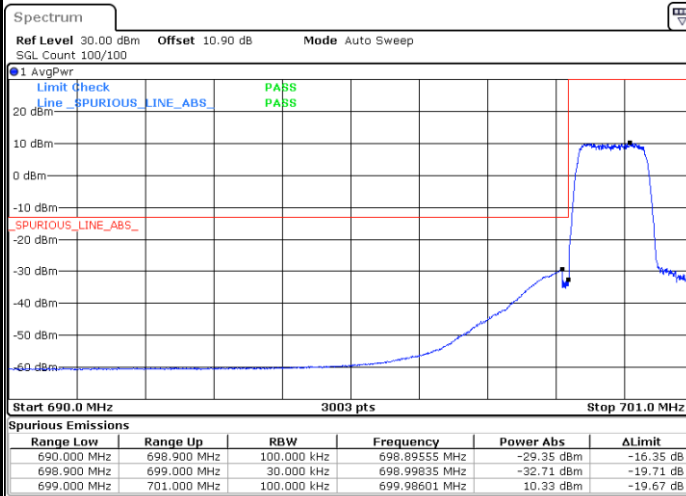
Lowest Band Edge / 1 RB



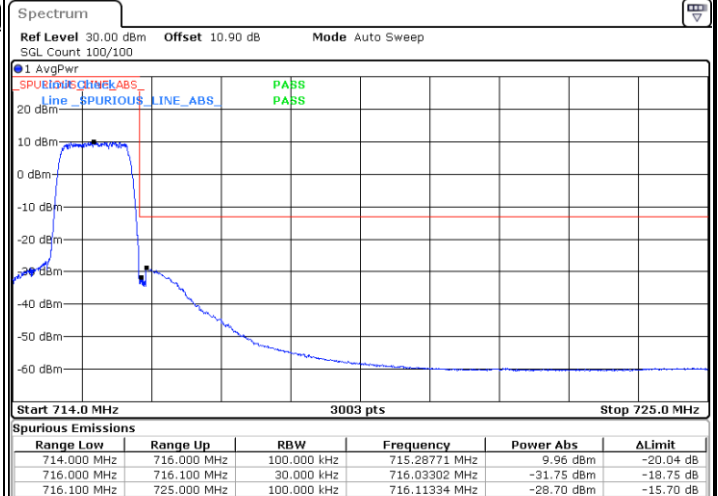
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



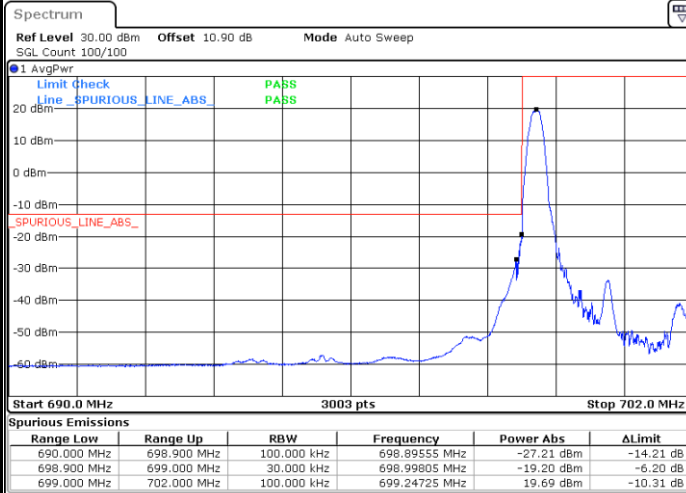
Highest Band Edge / Full RB



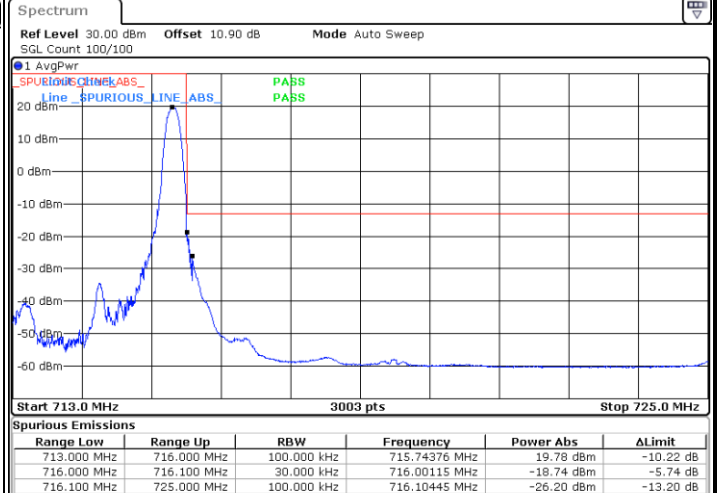


LTE Band 12 / 3MHz / QPSK

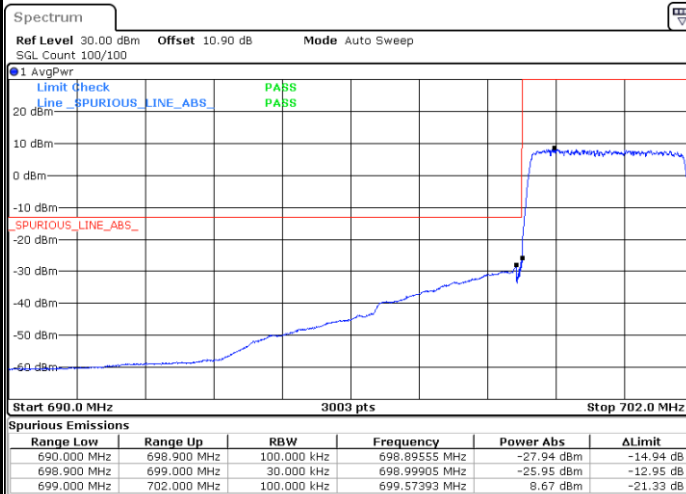
Lowest Band Edge / 1RB



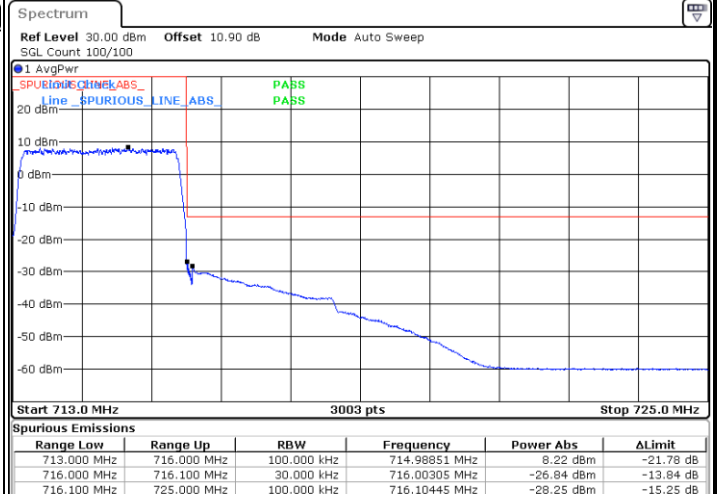
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



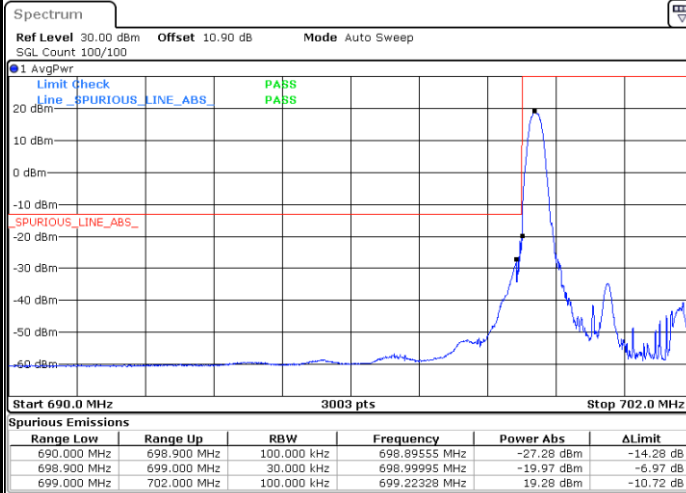
Highest Band Edge / Full RB



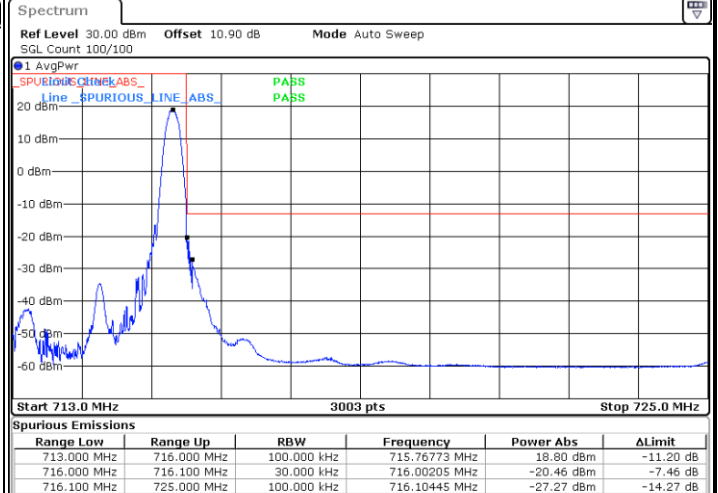


LTE Band 12 / 3MHz / 16QAM

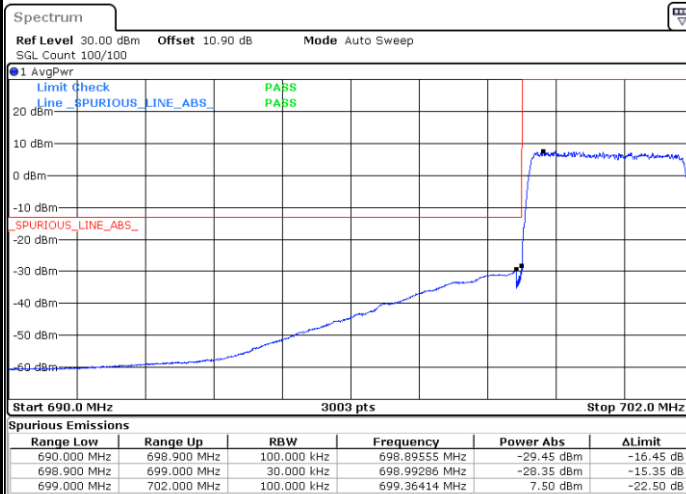
Lowest Band Edge / 1 RB



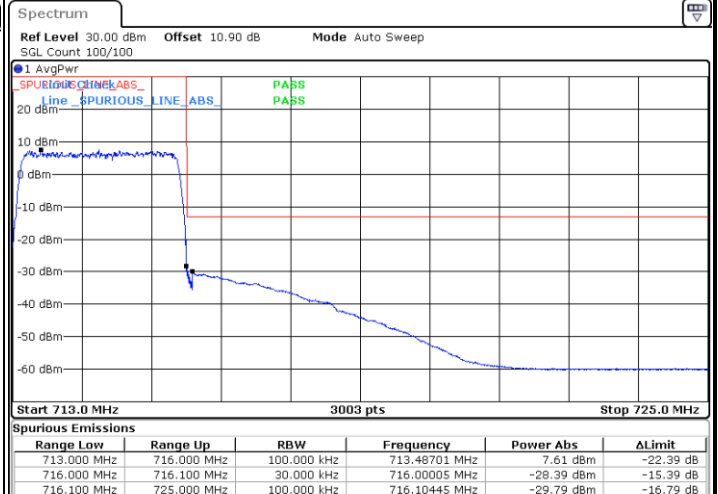
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



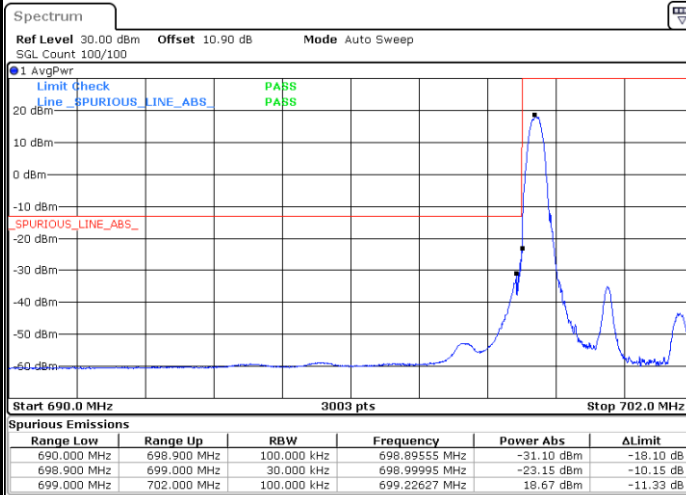
Highest Band Edge / Full RB



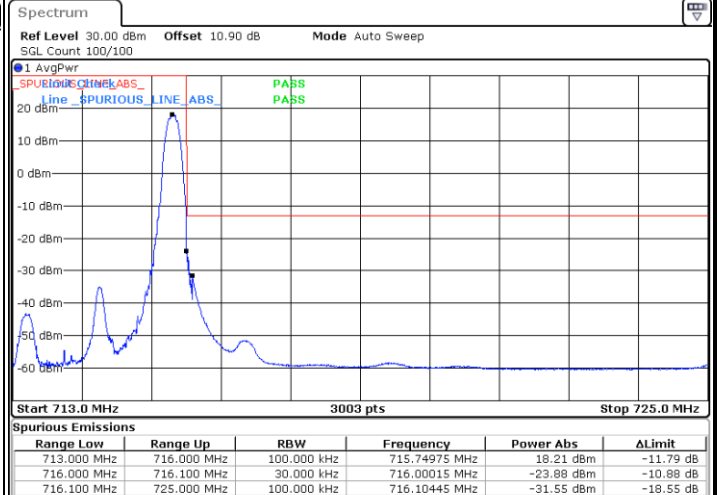


LTE Band 12 / 3MHz / 64QAM

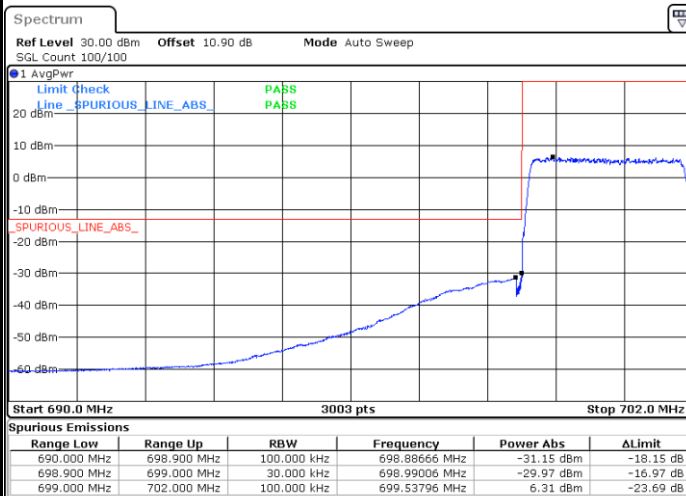
Lowest Band Edge / 1 RB



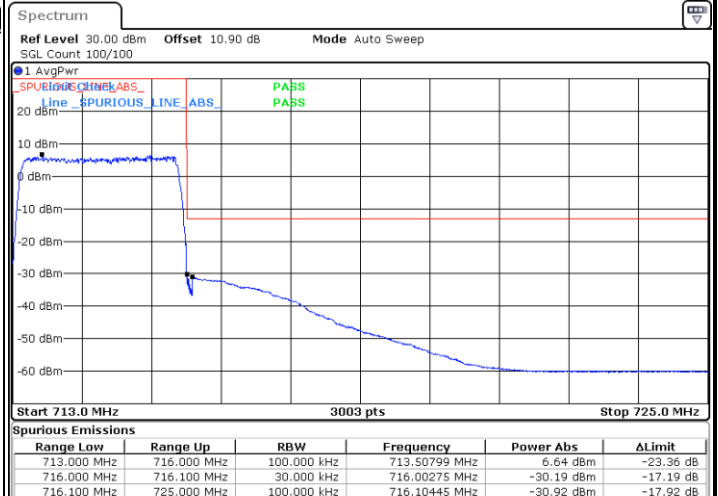
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



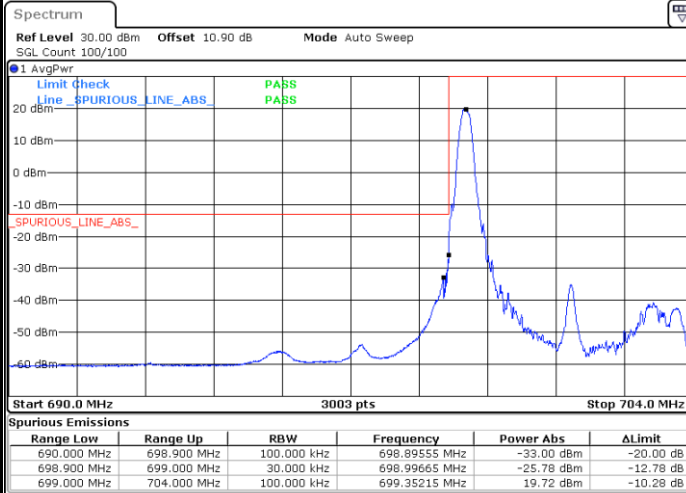
Highest Band Edge / Full RB



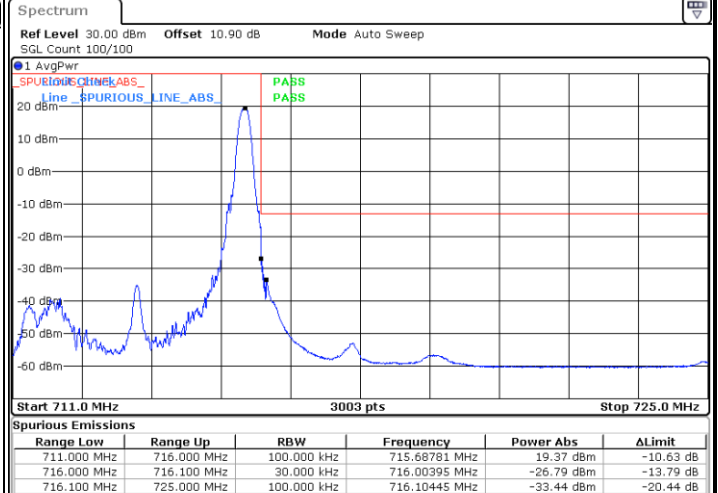


LTE Band 12 / 5MHz / QPSK

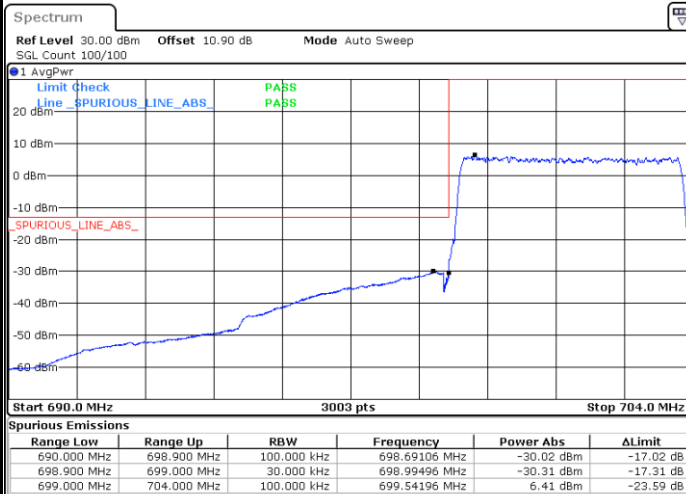
Lowest Band Edge / 1 RB



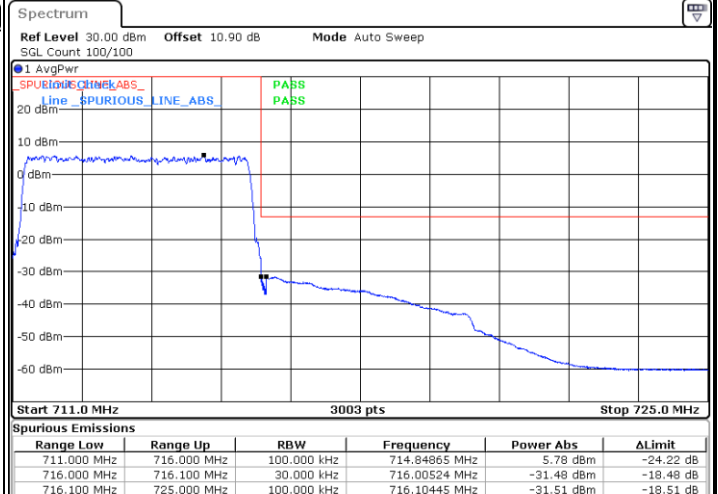
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



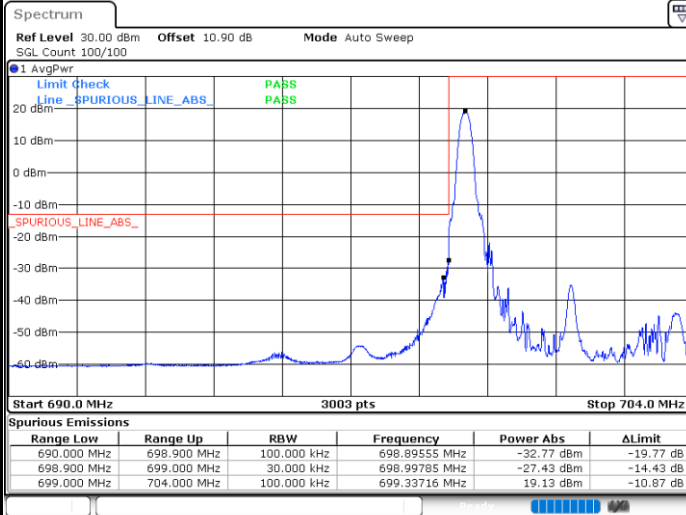
Highest Band Edge / Full RB



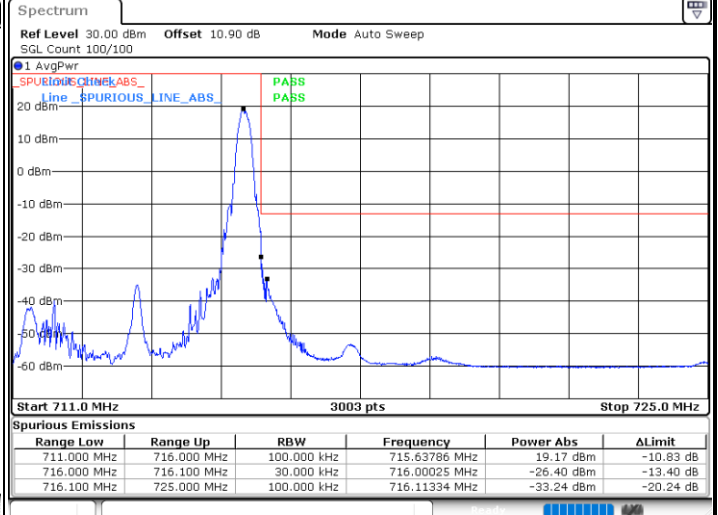


LTE Band 12 / 5MHz / 16QAM

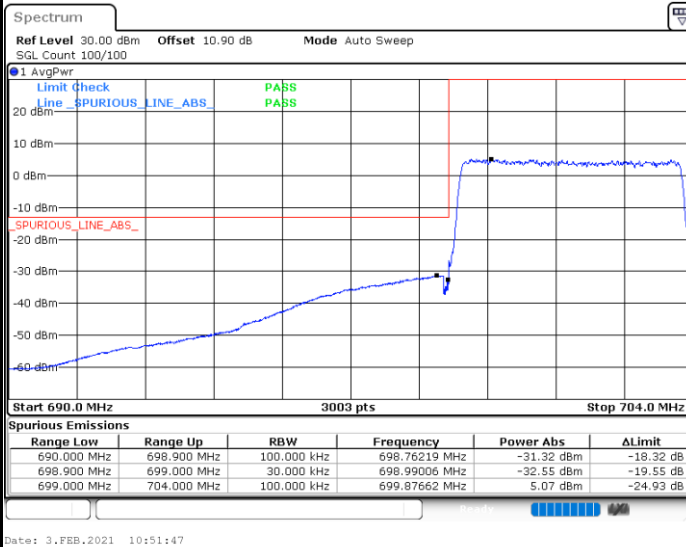
Lowest Band Edge / 1RB



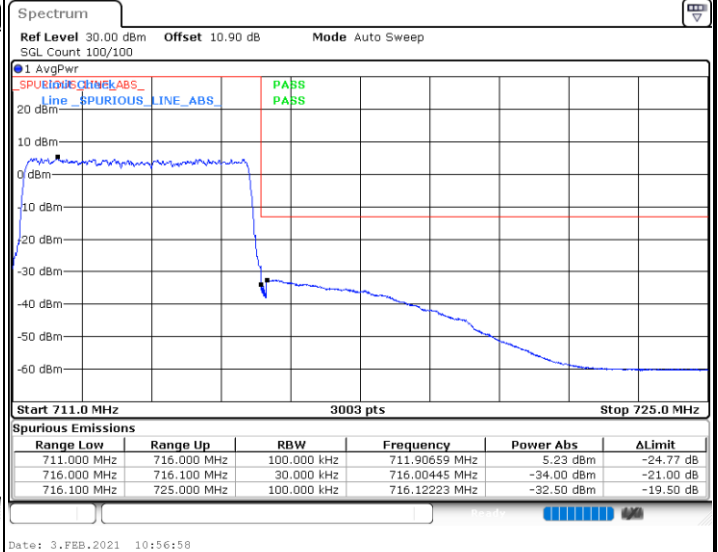
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



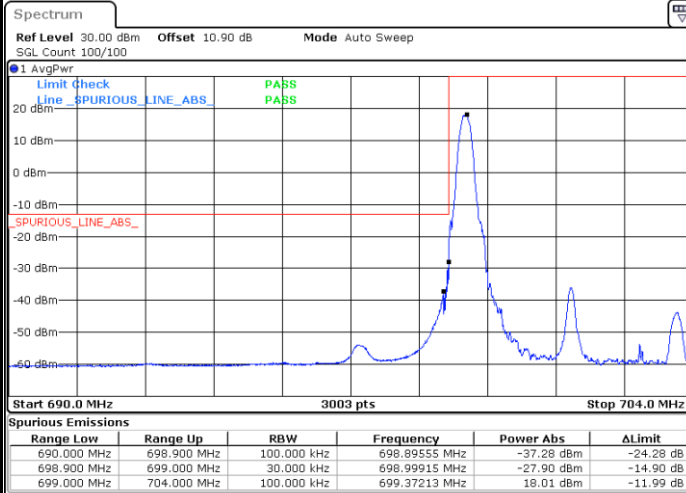
Highest Band Edge / Full RB



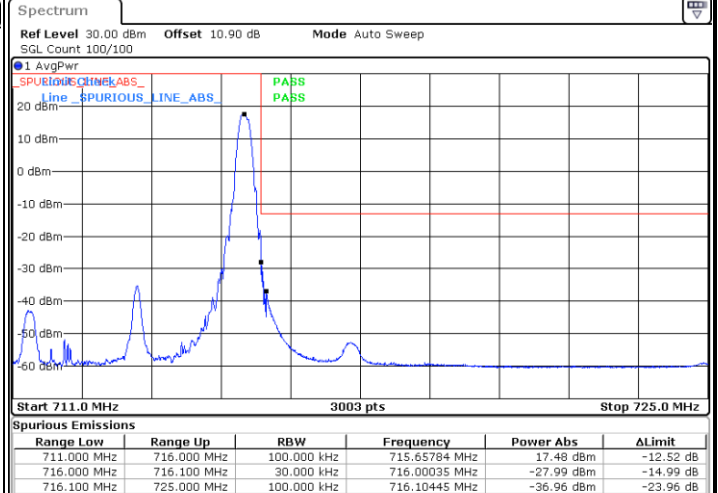


LTE Band 12 / 5MHz / 64QAM

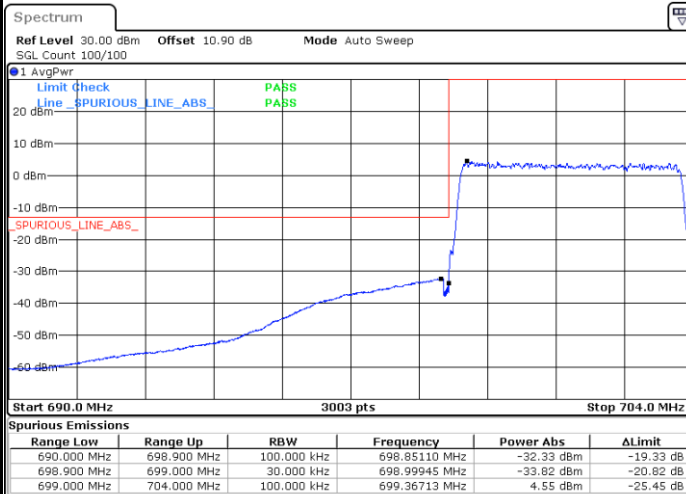
Lowest Band Edge / 1RB



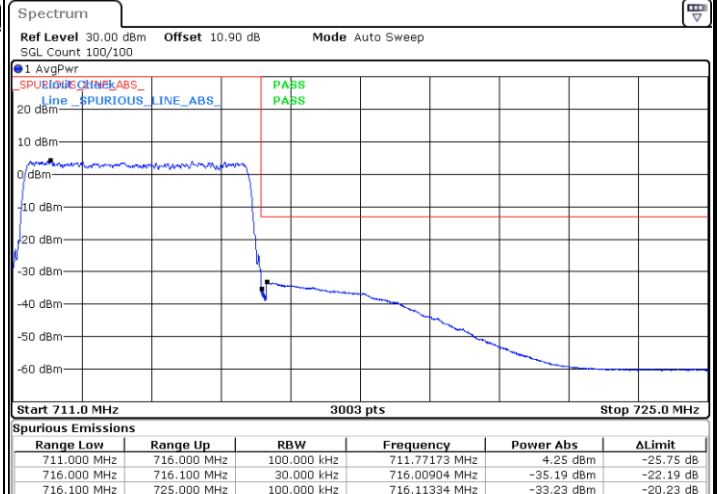
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



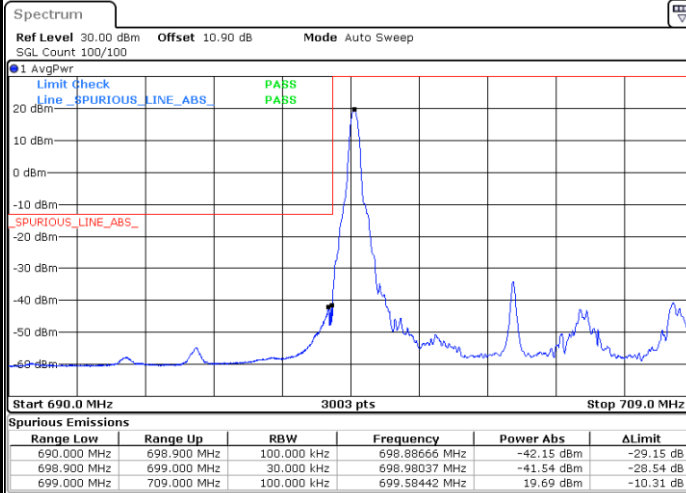
Highest Band Edge / Full RB



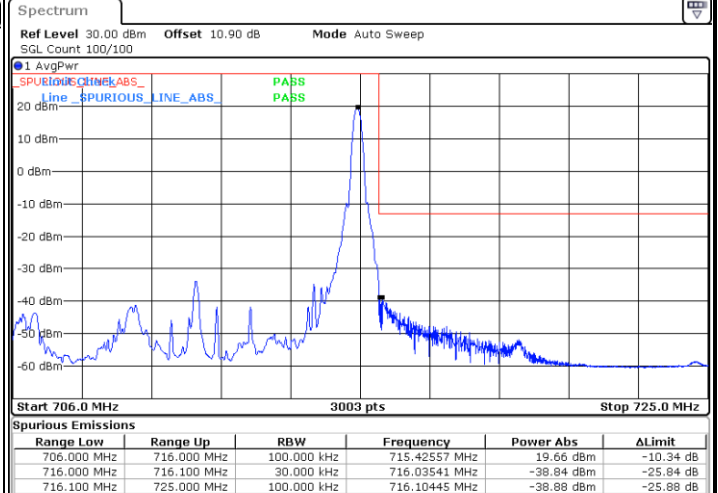


LTE Band 12 / 10MHz / QPSK

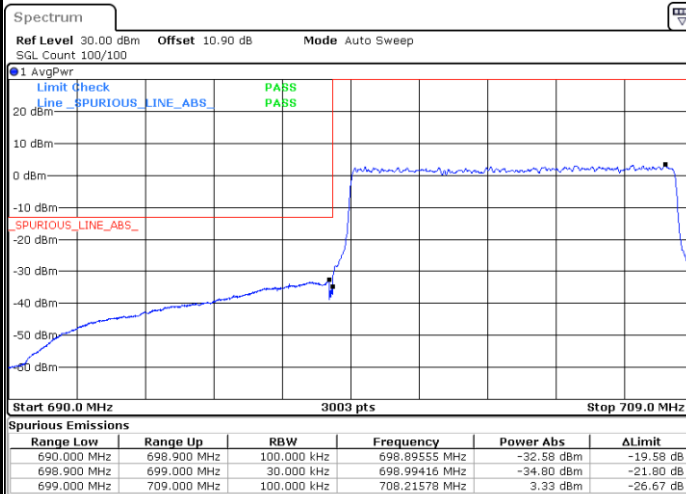
Lowest Band Edge / 1 RB



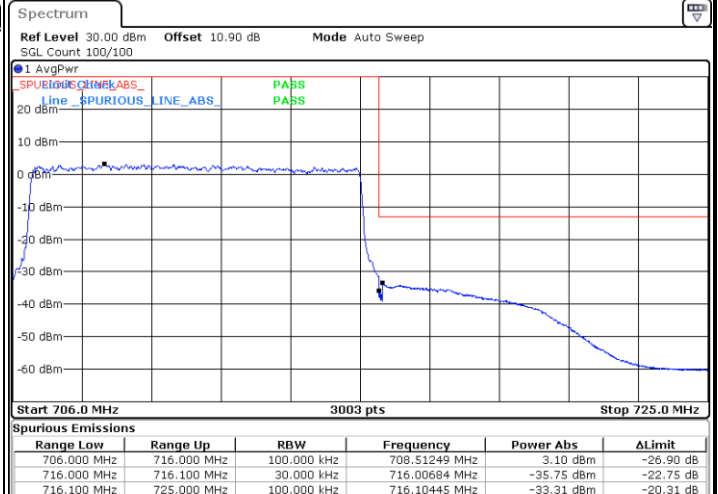
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



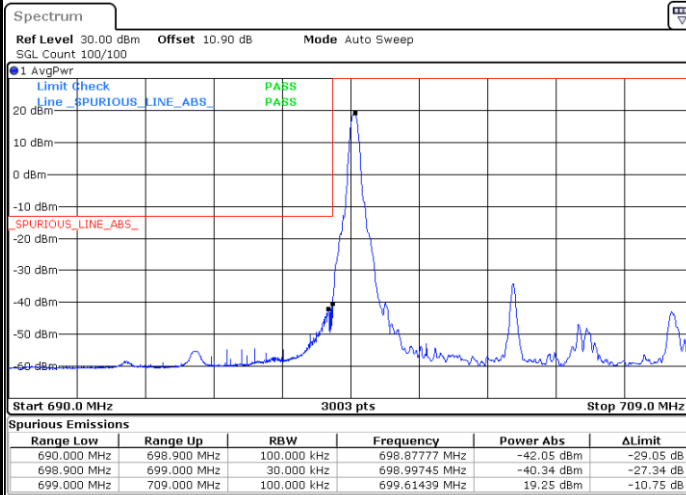
Highest Band Edge / Full RB



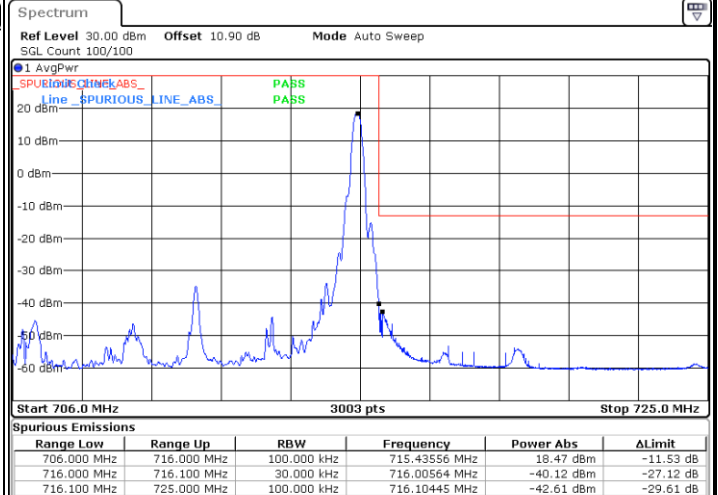


LTE Band 12 / 10MHz / 16QAM

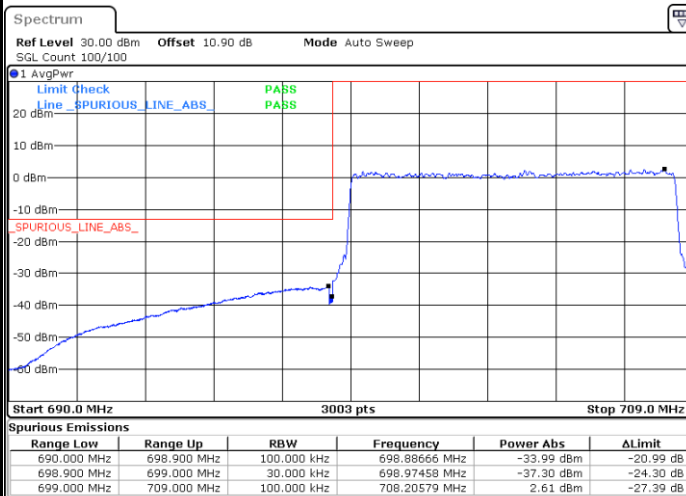
Lowest Band Edge / 1 RB



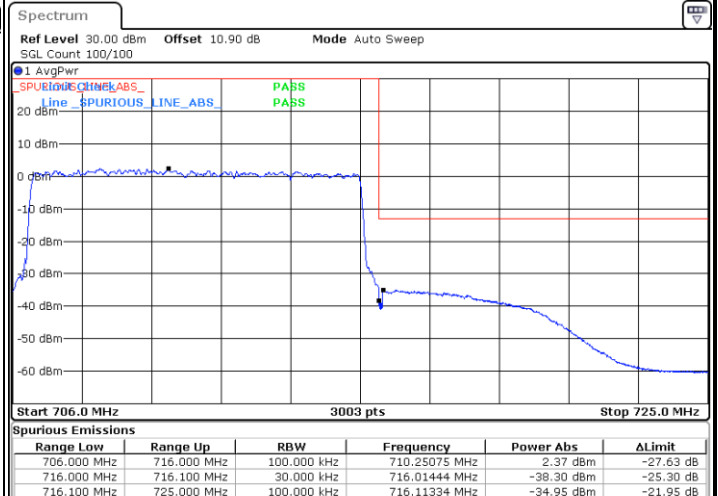
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



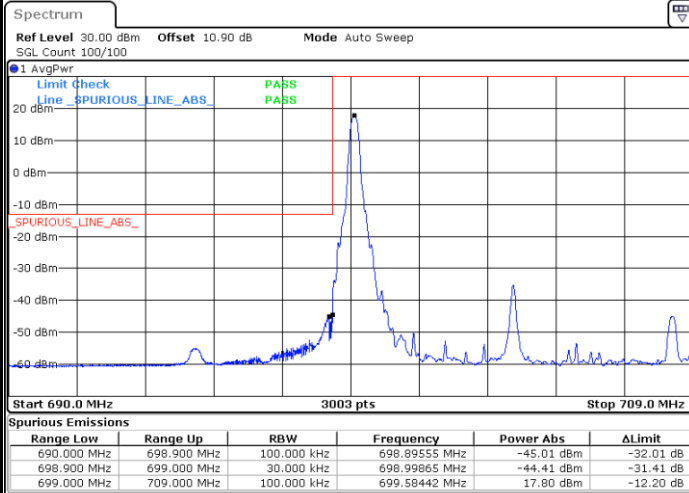
Highest Band Edge / Full RB



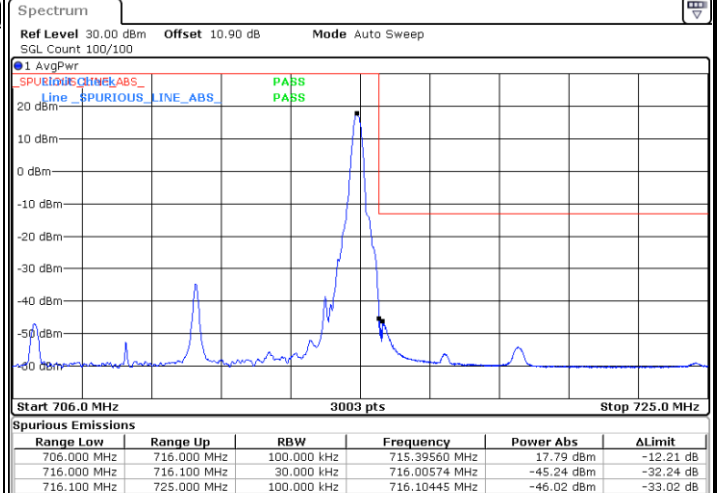


LTE Band 12 / 10MHz / 64QAM

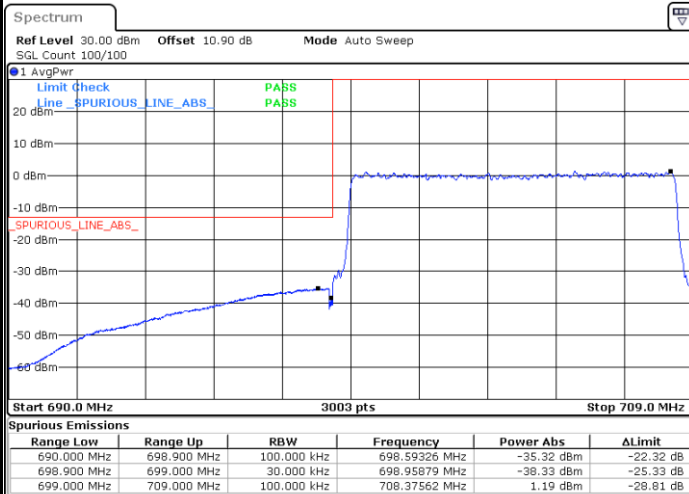
Lowest Band Edge / 1 RB



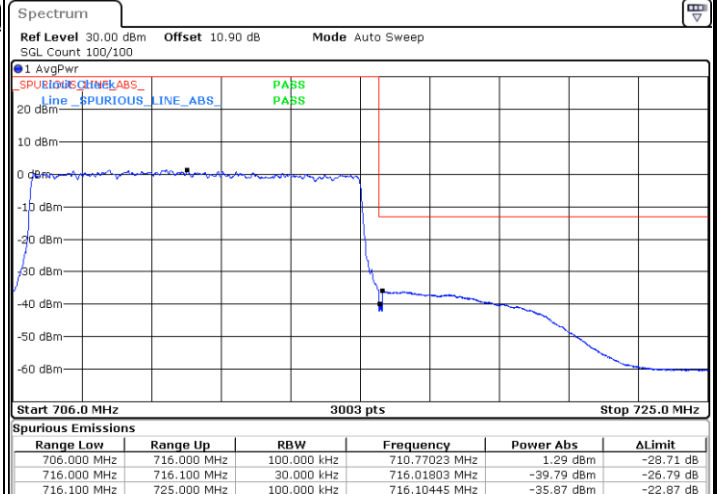
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

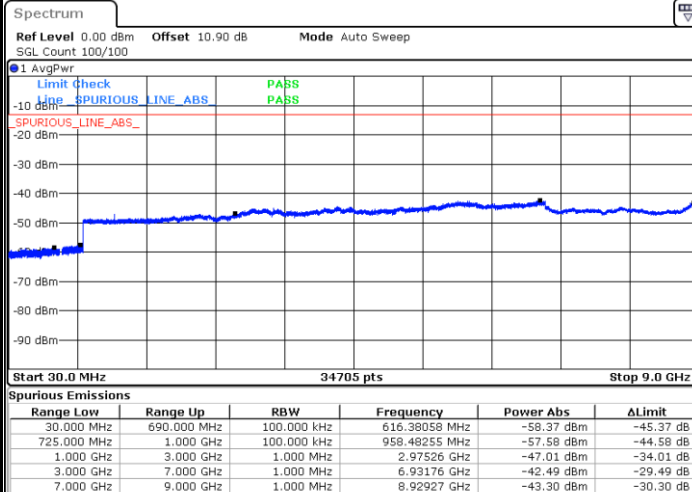




Conducted Spurious Emission

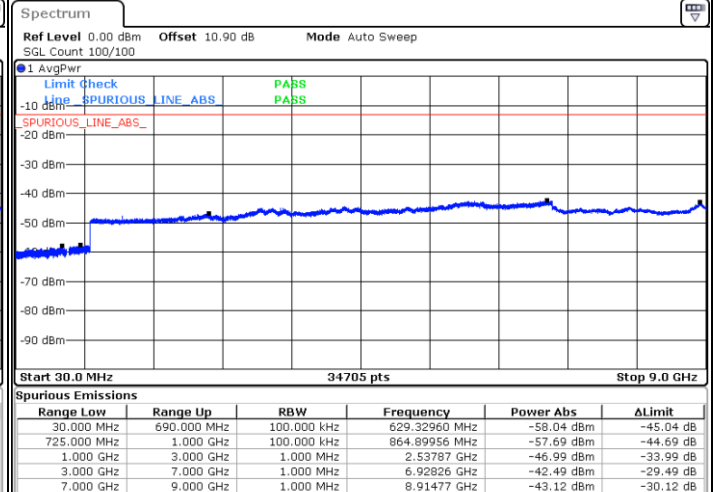
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



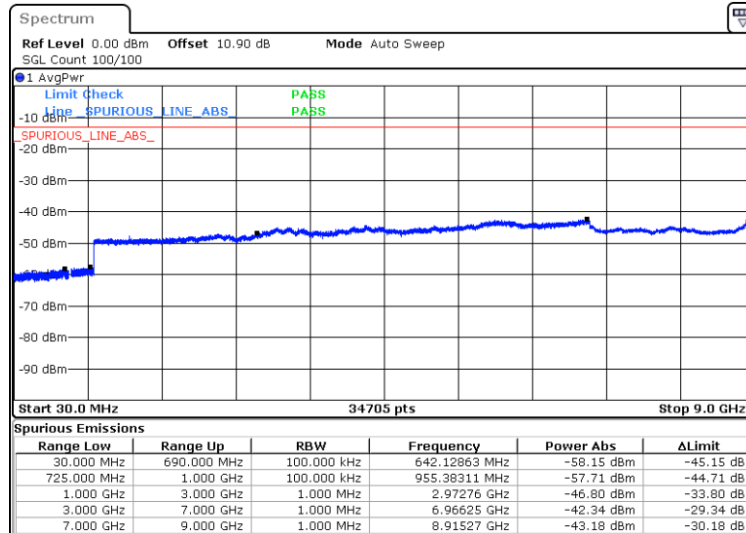
Date: 3.FEB.2021 10:29:04

Middle Channel / QPSK



Date: 3.FEB.2021 10:31:02

Highest Channel / QPSK

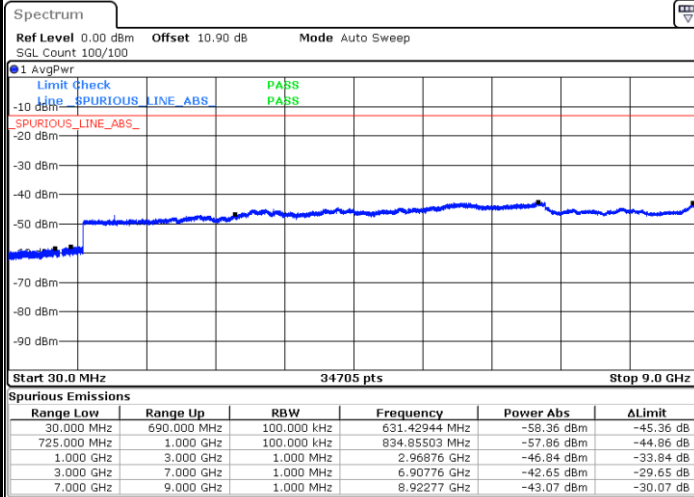


Date: 3.FEB.2021 10:34:15



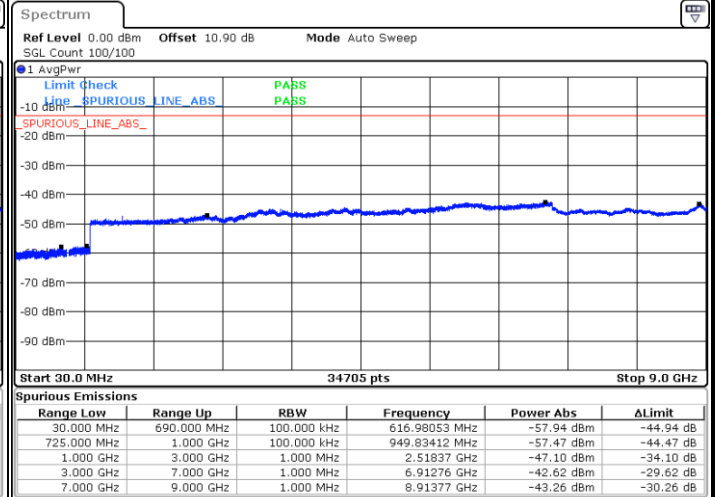
LTE Band 12 / 3MHz

Lowest Channel / QPSK



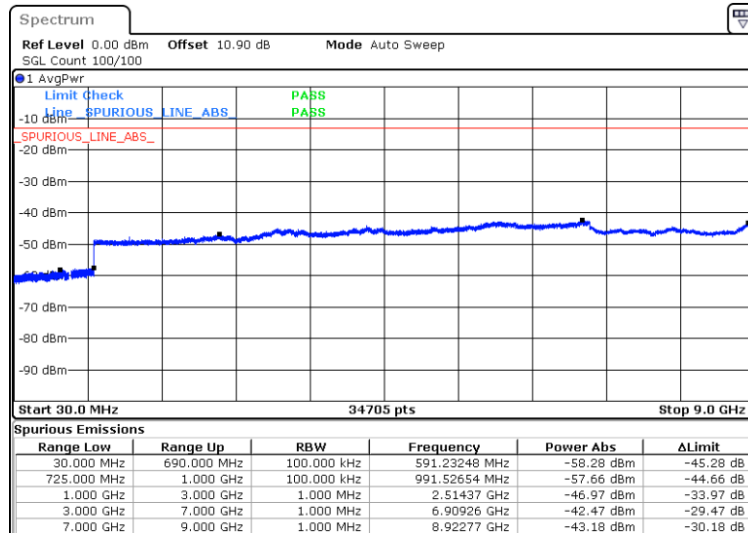
Date: 3.FEB.2021 10:40:09

Middle Channel / QPSK



Date: 3.FEB.2021 10:42:07

Highest Channel / QPSK

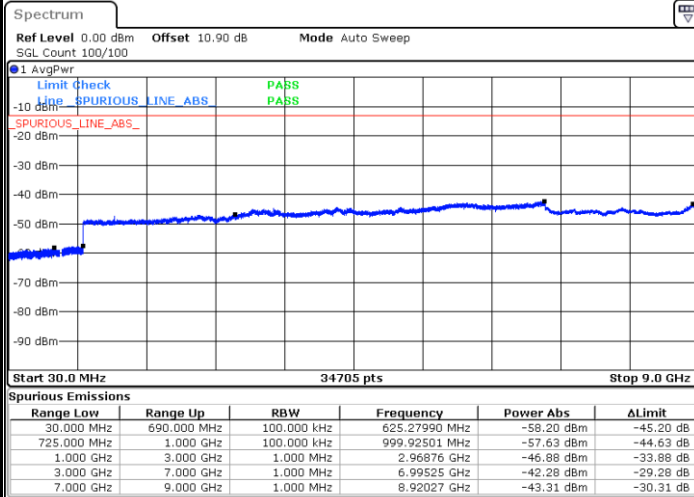


Date: 3.FEB.2021 10:45:20



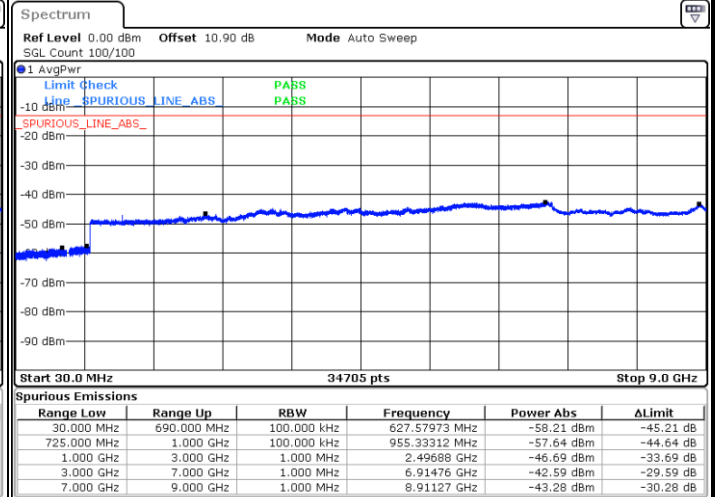
LTE Band 12 / 5MHz

Lowest Channel / QPSK



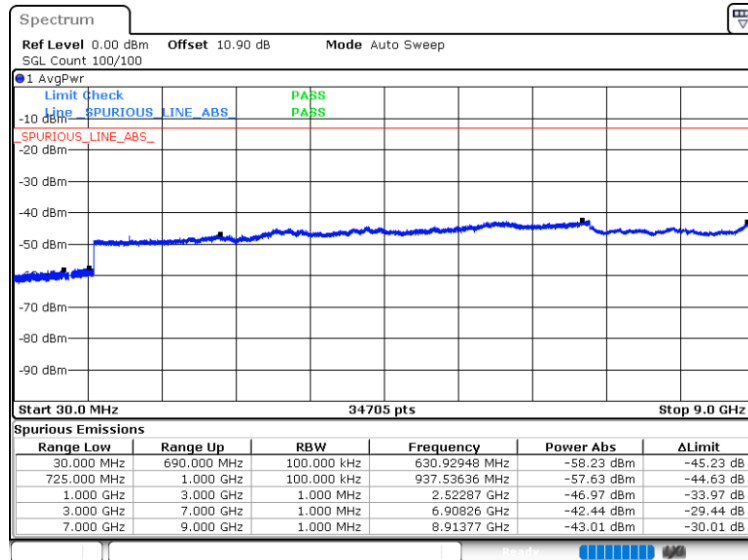
Date: 3.FEB.2021 10:53:55

Middle Channel / QPSK



Date: 3.FEB.2021 10:55:53

Highest Channel / QPSK

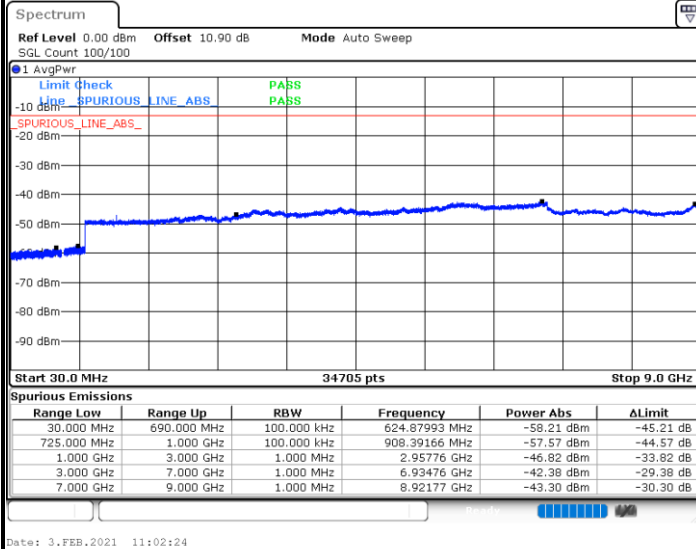


Date: 3.FEB.2021 10:59:06

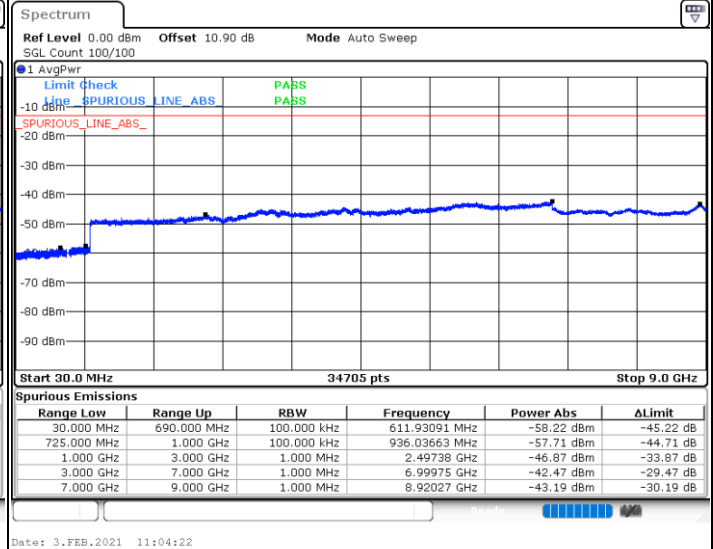


LTE Band 12 / 10MHz

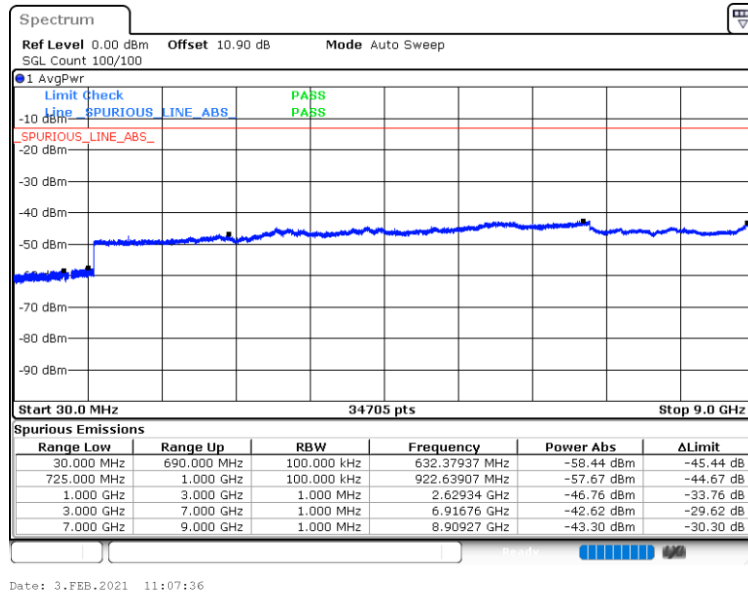
Lowest Channel / QPSK



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
50	Normal Voltage	0.0148	PASS
40	Normal Voltage	0.0124	
30	Normal Voltage	0.0133	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0098	
0	Normal Voltage	0.0206	
-10	Normal Voltage	0.0027	
-20	Normal Voltage	0.0163	
-30	Normal Voltage	0.0038	
20	Maximum Voltage	0.0129	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0237	

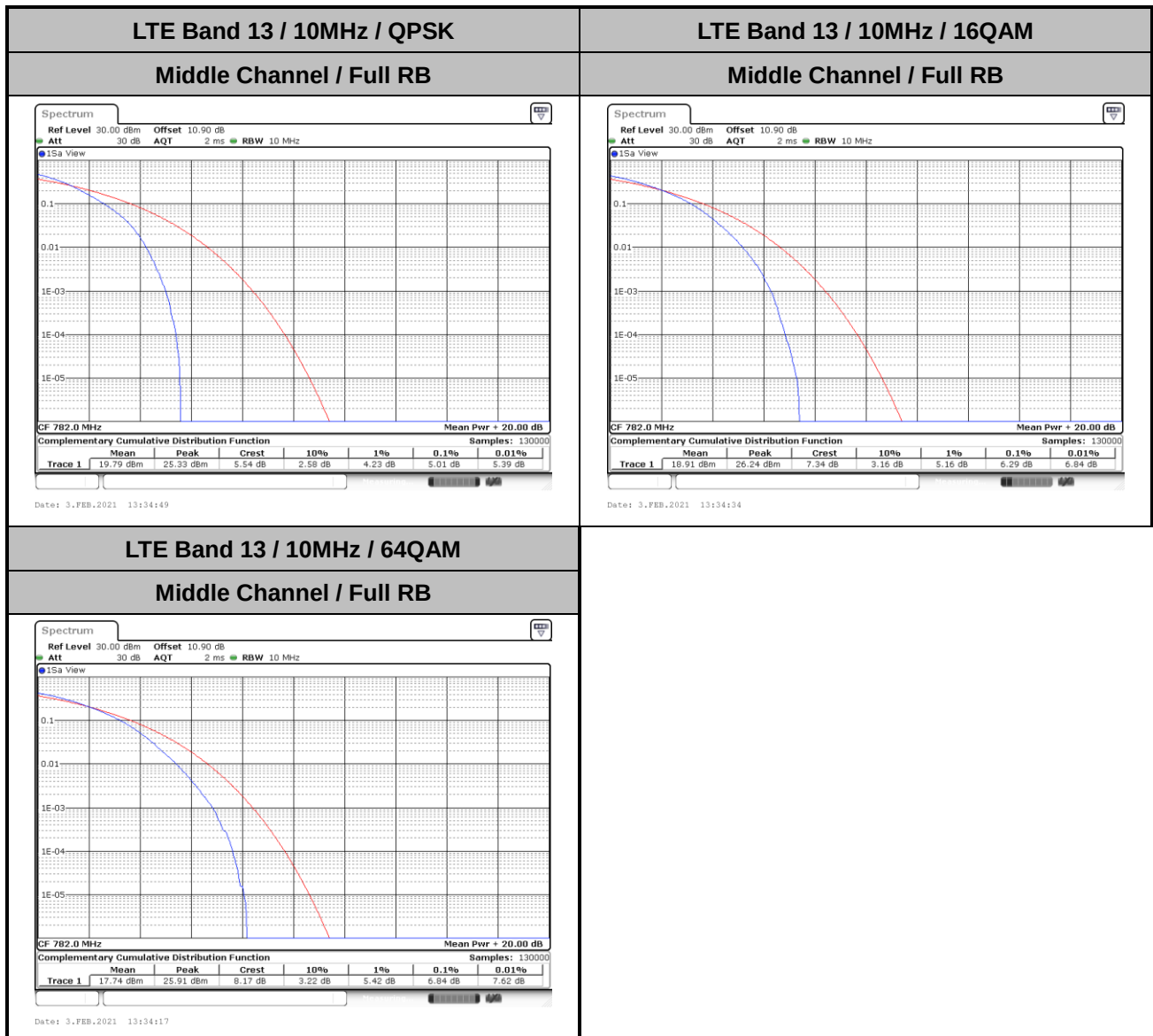
Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 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	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.01	6.29	6.84	PASS



**26dB Bandwidth**

Mode	LTE Band 13 : 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	4.90	9.81	9.73	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-
Middle CH	-	-	-	-	4.95	-	9.71	-	-	-	-	-