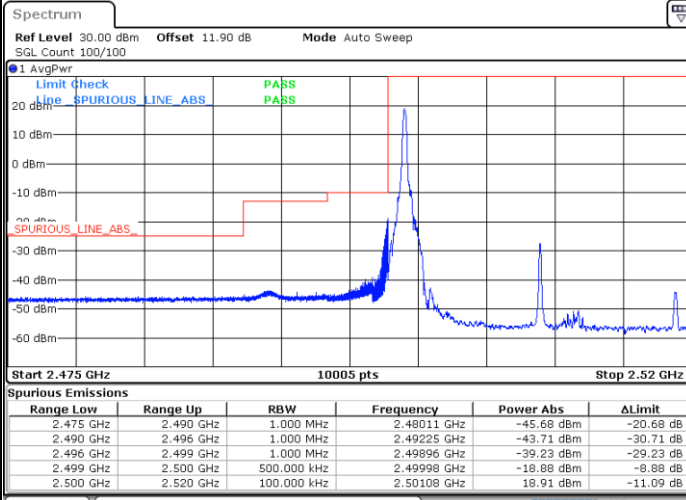




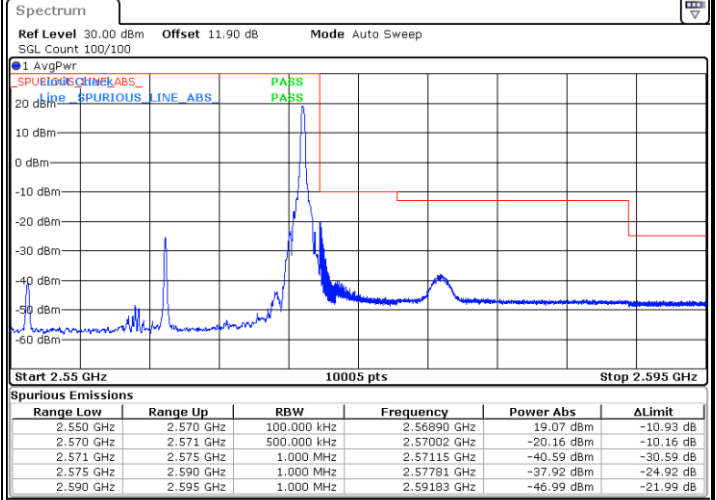
LTE Band 7 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



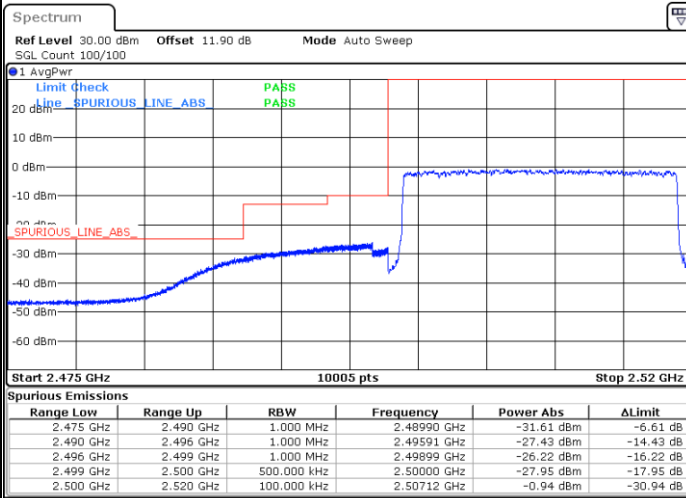
Date: 3.FEB.2021 10:14:31

Highest Band Edge / 1 RB



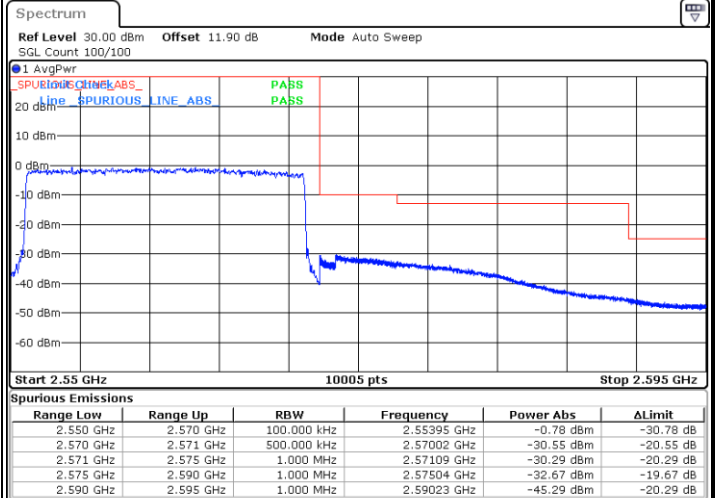
Date: 3.FEB.2021 10:16:04

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:15:03

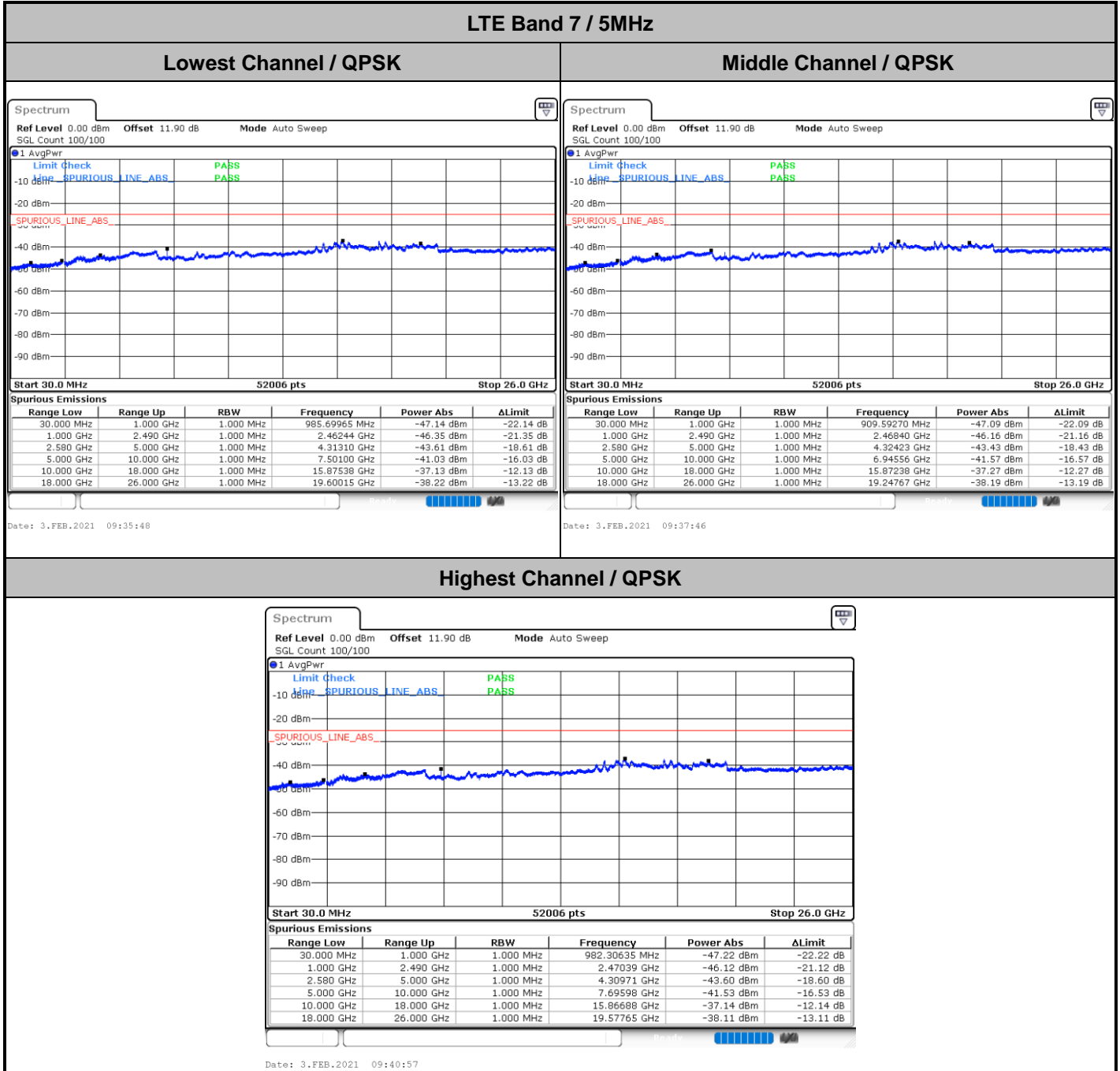
Highest Band Edge / Full RB



Date: 3.FEB.2021 10:16:36



Conducted Spurious Emission

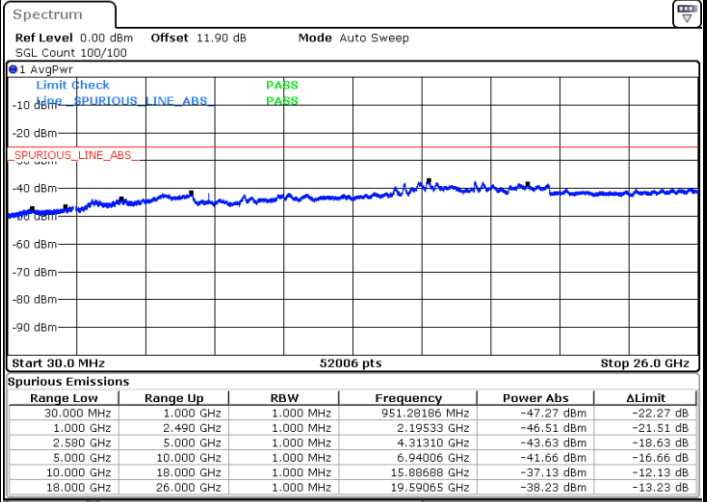
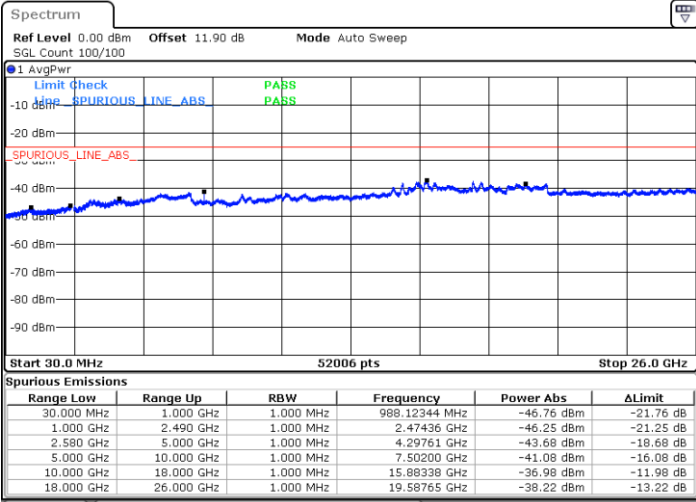




LTE Band 7 / 10MHz

Lowest Channel / QPSK

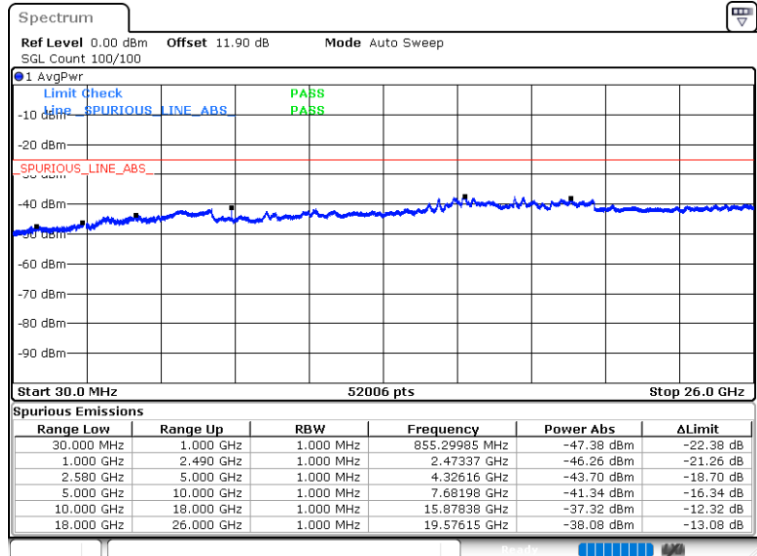
Middle Channel / QPSK



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

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

Highest Channel / QPSK



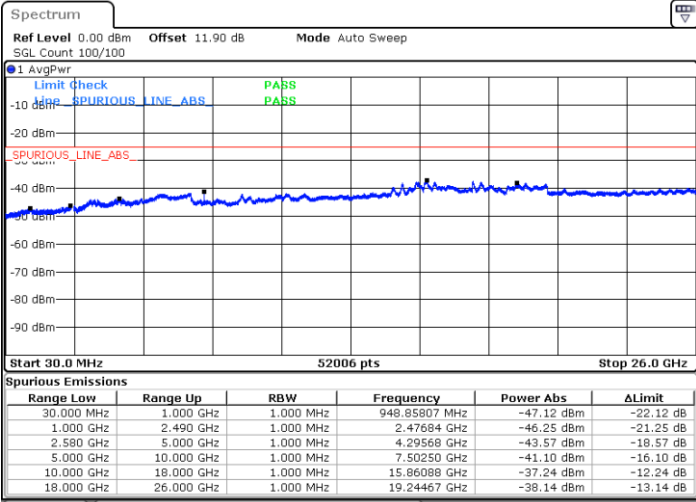
Date: 3.FEB.2021 09:51:57



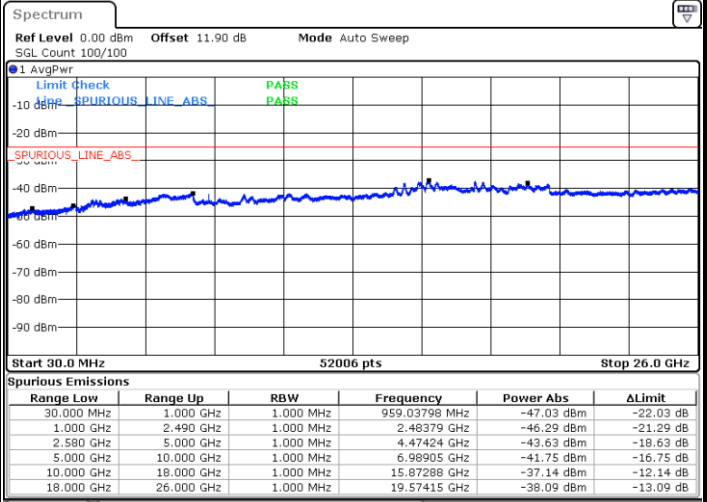
LTE Band 7 / 15MHz

Lowest Channel / QPSK

Middle Channel / QPSK

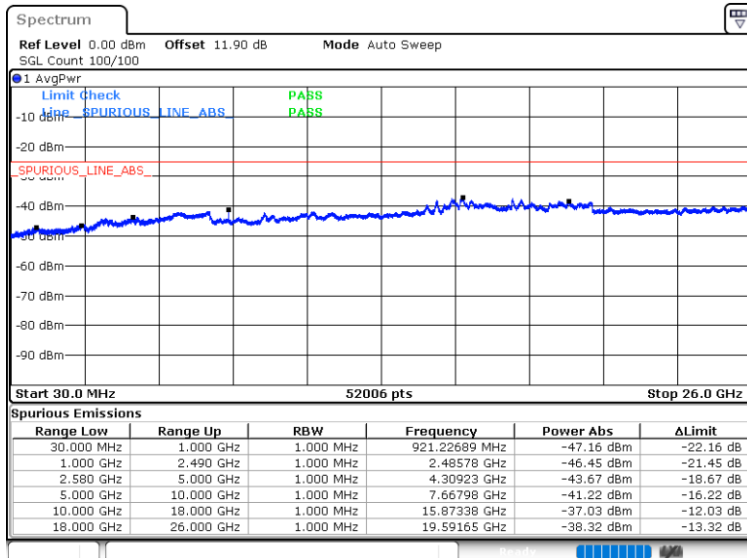


Date: 3.FEB.2021 09:57:48



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

Highest Channel / QPSK



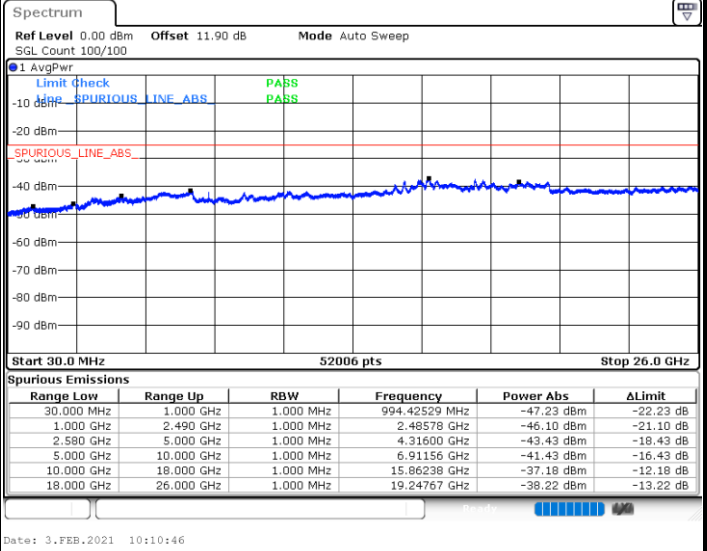
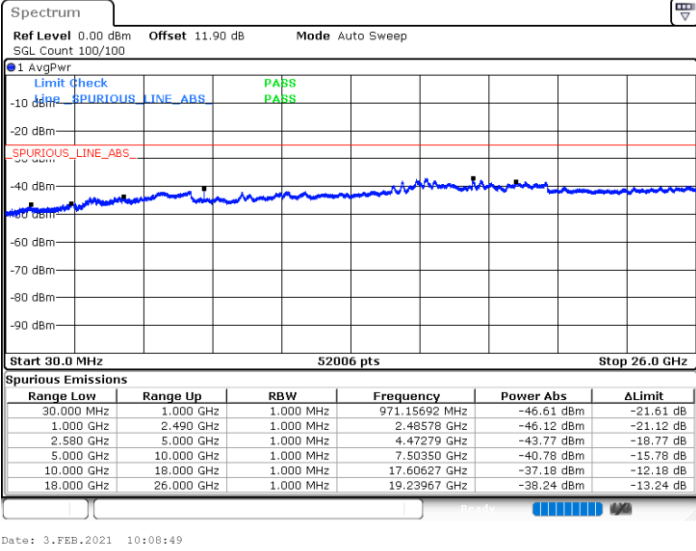
Date: 3.FEB.2021 10:02:57



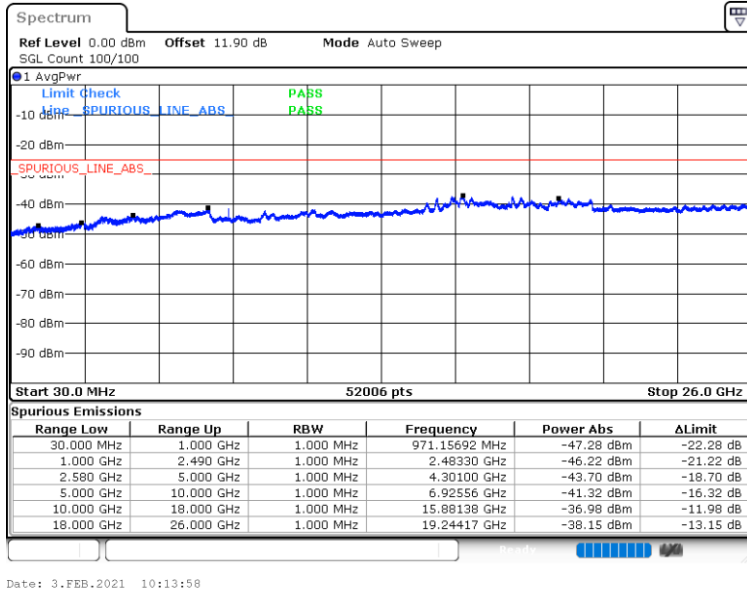
LTE Band 7 / 20MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK





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:

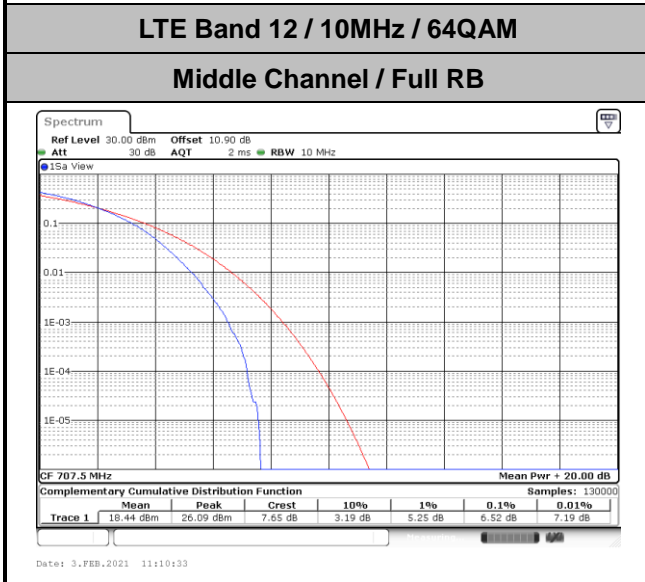
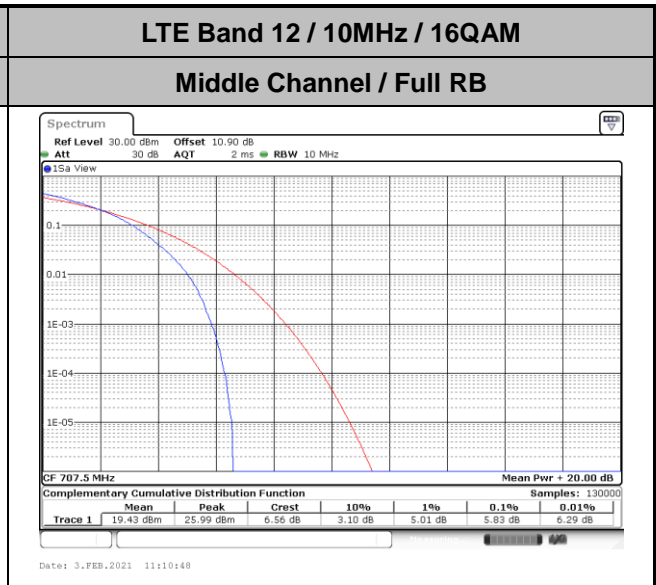
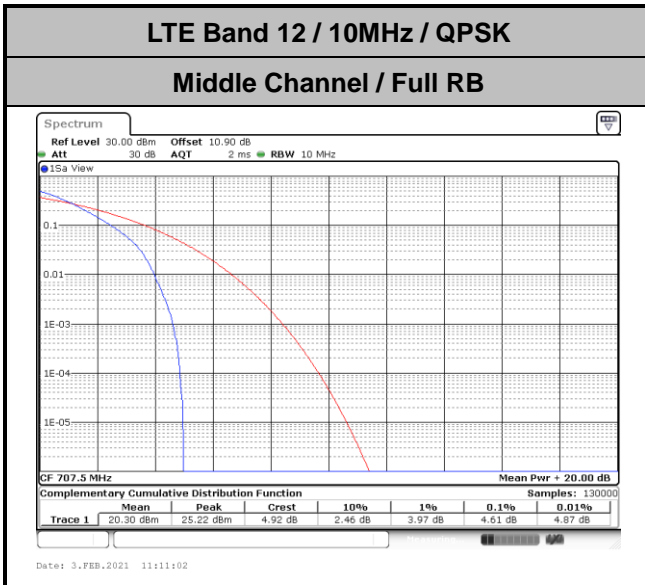
- 1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



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





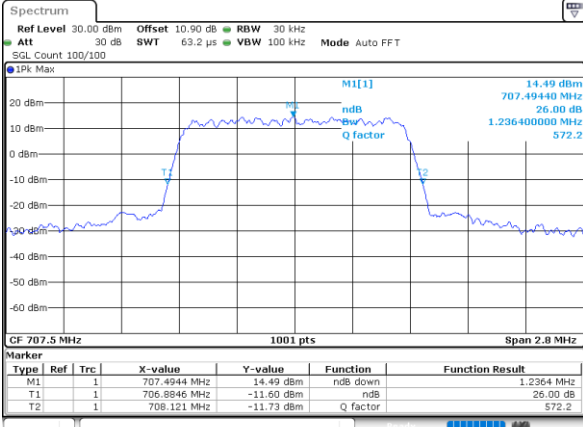
26dB Bandwidth

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	-	-	-	-	-



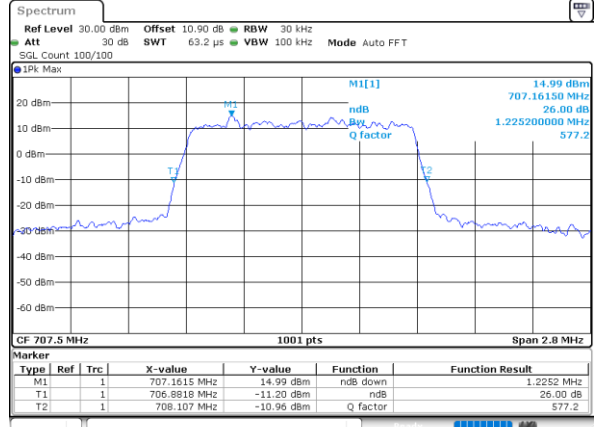
LTE Band 12

Middle Channel / 1.4MHz / QPSK



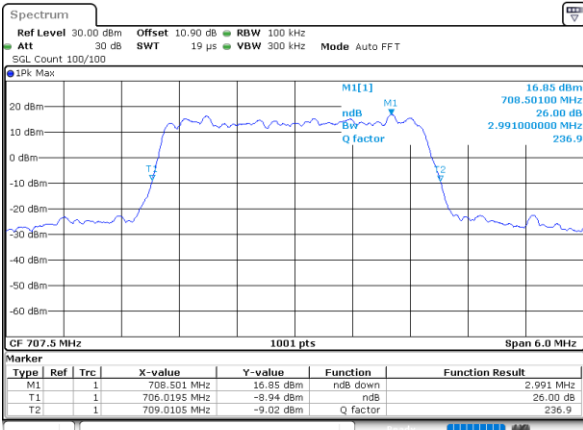
Date: 3.FEB.2021 10:29:46

Middle Channel / 1.4MHz / 16QAM



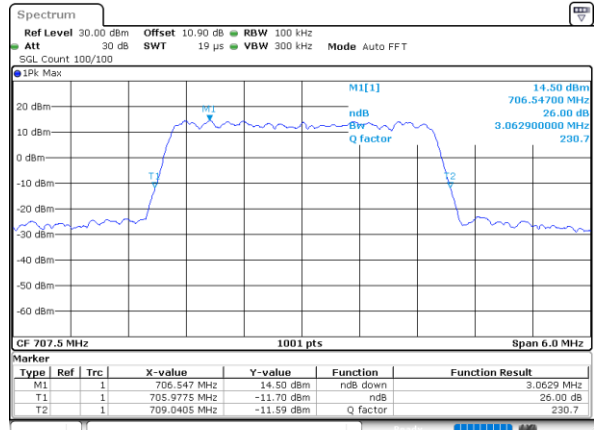
Date: 3.FEB.2021 10:29:59

Middle Channel / 3MHz / QPSK



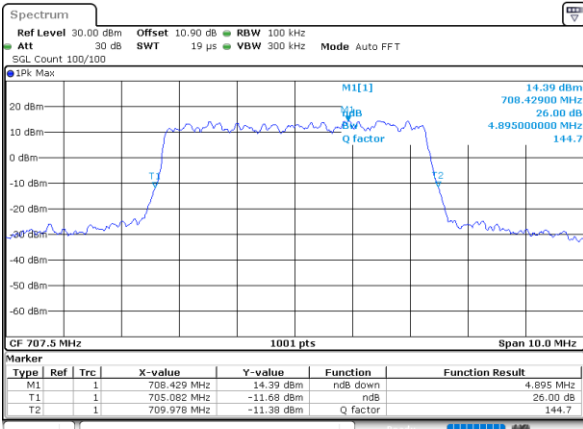
Date: 3.FEB.2021 10:40:51

Middle Channel / 3MHz / 16QAM



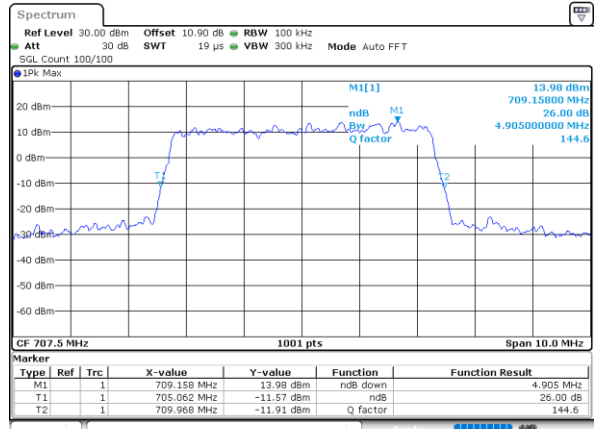
Date: 3.FEB.2021 10:41:05

Middle Channel / 5MHz / QPSK



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

Middle Channel / 5MHz / 16QAM

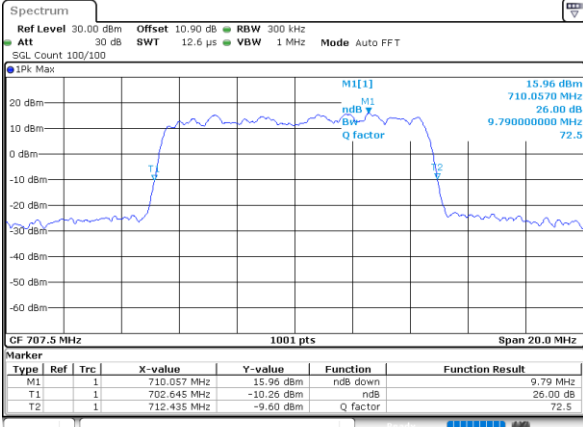


Date: 3.FEB.2021 10:54:50



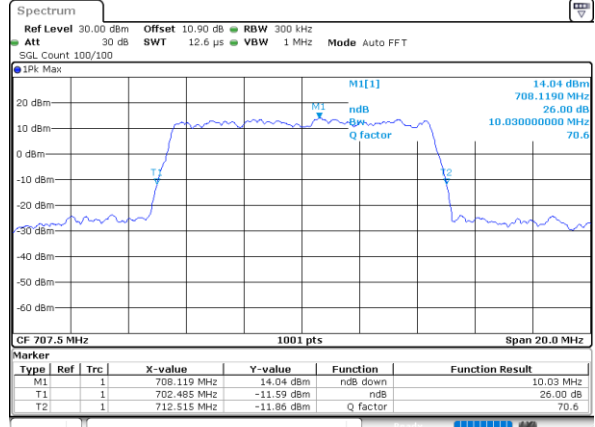
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 3.FEB.2021 11:03:05

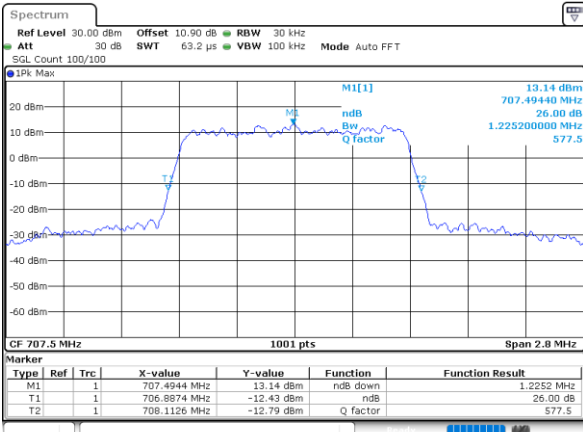
Middle Channel / 10MHz / 16QAM



Date: 3.FEB.2021 11:03:19

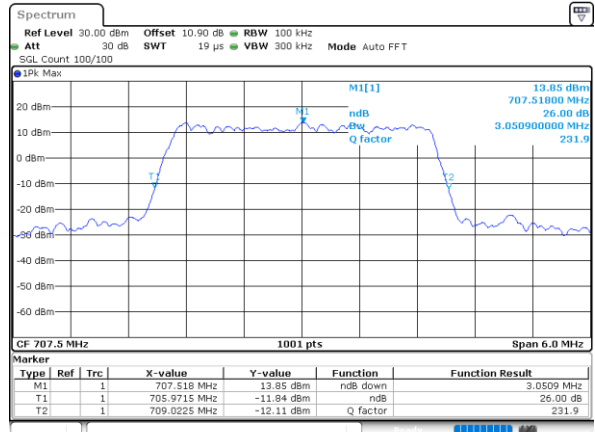
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



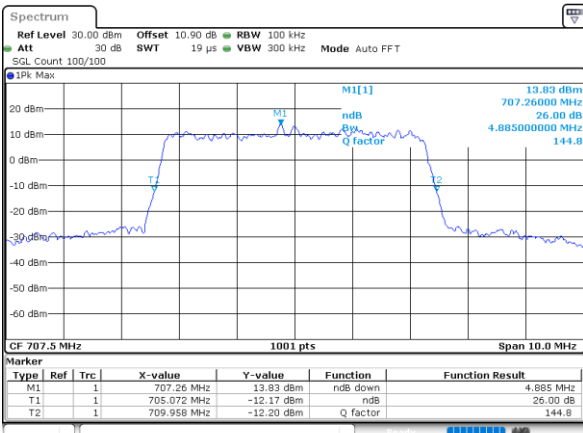
Date: 3.FEB.2021 10:35:49

Middle Channel / 3MHz / 64QAM



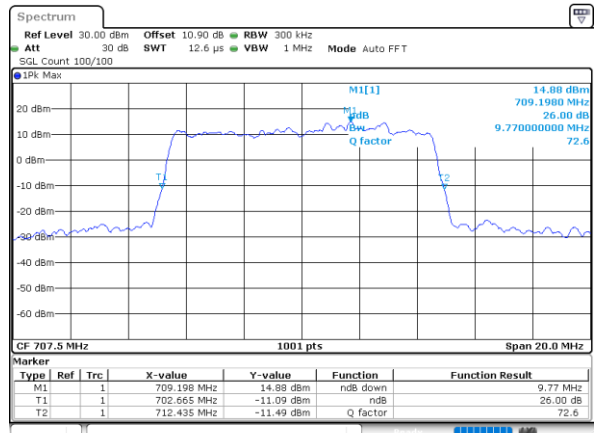
Date: 3.FEB.2021 10:46:54

Middle Channel / 5MHz / 64QAM



Date: 3.FEB.2021 10:49:34

Middle Channel / 10MHz / 64QAM



Date: 3.FEB.2021 11:09:11



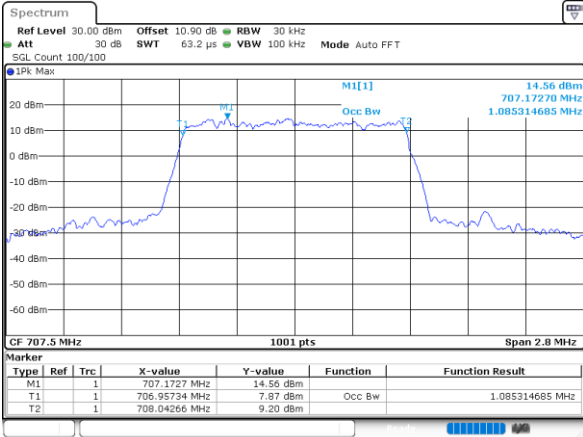
Occupied Bandwidth

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	-	-	-	-	-



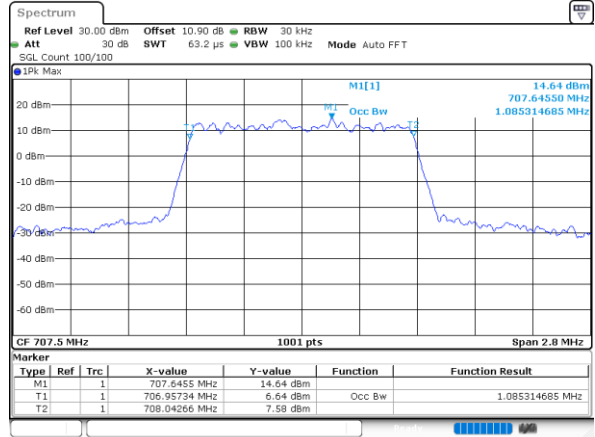
LTE Band 12

Middle Channel / 1.4MHz / QPSK



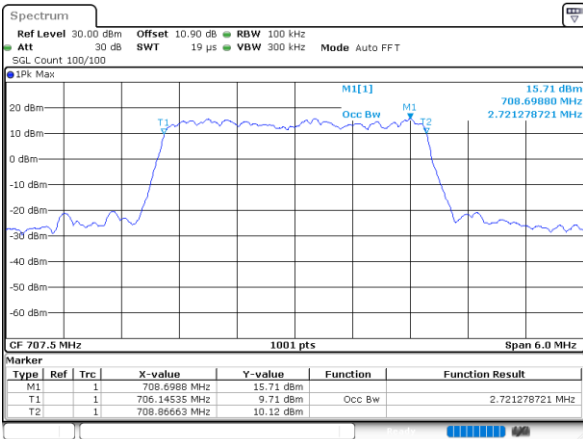
Date: 3.FEB.2021 10:29:32

Middle Channel / 1.4MHz / 16QAM



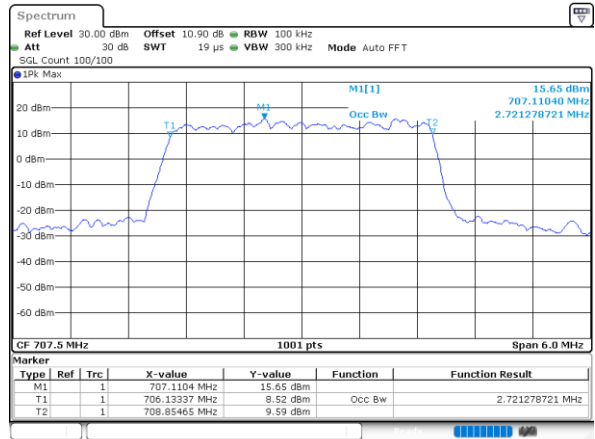
Date: 3.FEB.2021 10:29:18

Middle Channel / 3MHz / QPSK



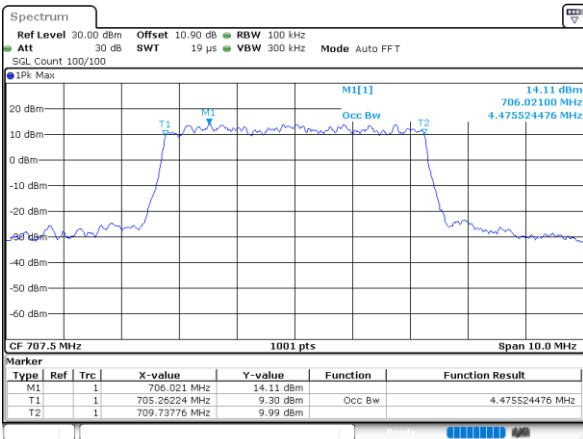
Date: 3.FEB.2021 10:40:37

Middle Channel / 3MHz / 16QAM



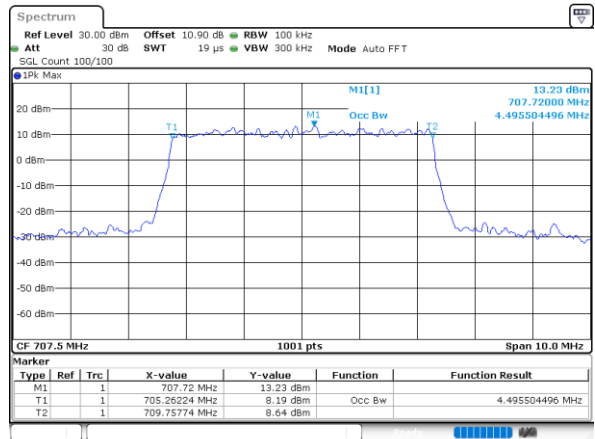
Date: 3.FEB.2021 10:40:23

Middle Channel / 5MHz / QPSK



Date: 3.FEB.2021 10:54:23

Middle Channel / 5MHz / 16QAM

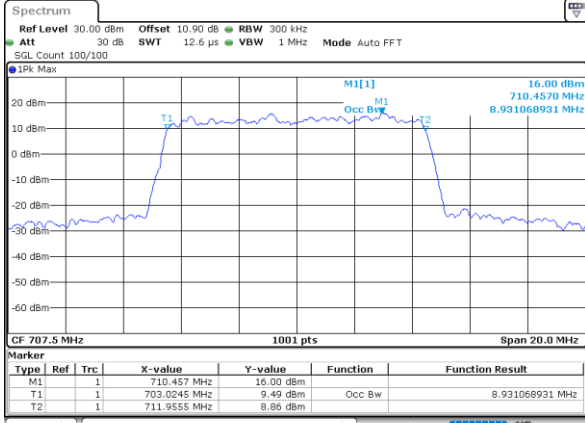


Date: 3.FEB.2021 10:54:09



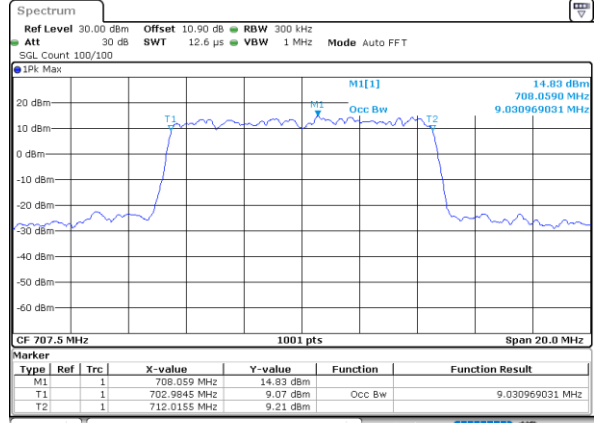
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 3.FEB.2021 11:02:52

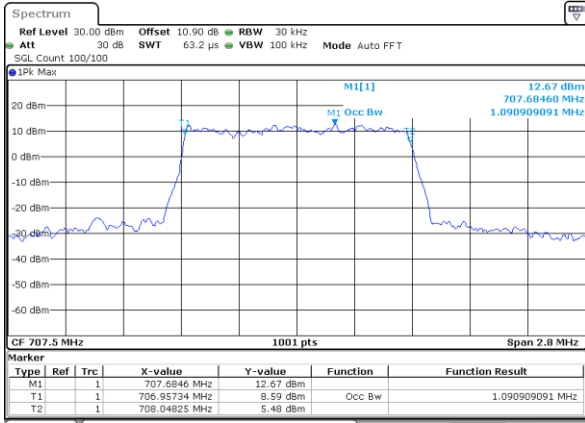
Middle Channel / 10MHz / 16QAM



Date: 3.FEB.2021 11:02:38

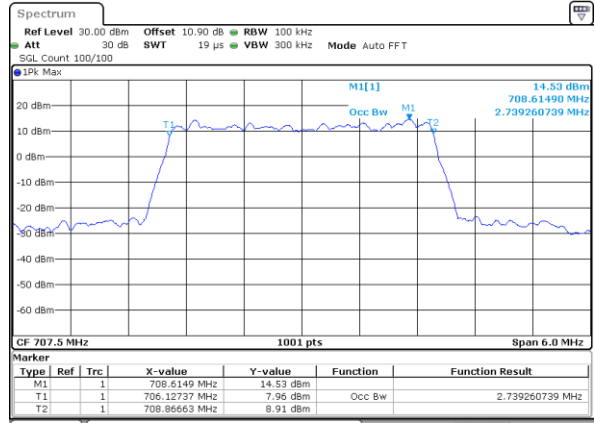
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



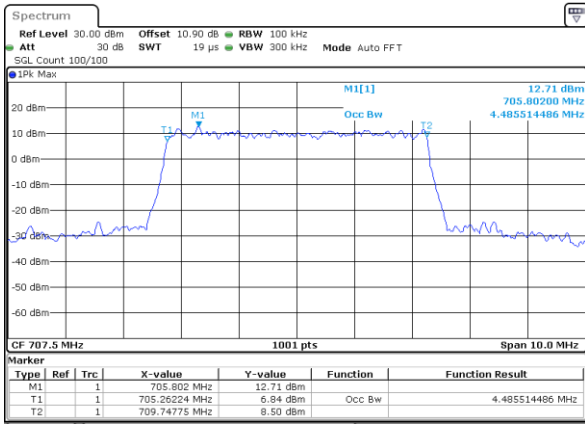
Date: 3.FEB.2021 10:35:35

Middle Channel / 3MHz / 64QAM



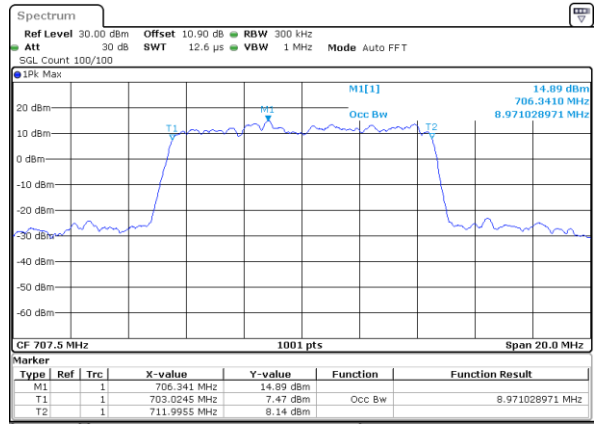
Date: 3.FEB.2021 10:46:41

Middle Channel / 5MHz / 64QAM



Date: 3.FEB.2021 10:49:21

Middle Channel / 10MHz / 64QAM



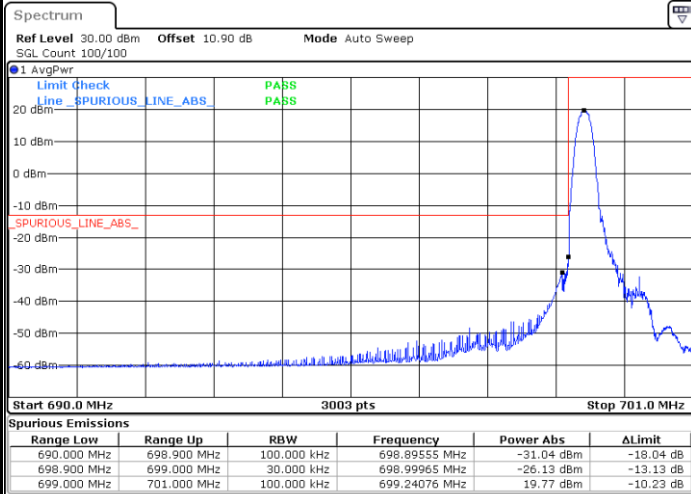
Date: 3.FEB.2021 11:08:57



Conducted Band Edge

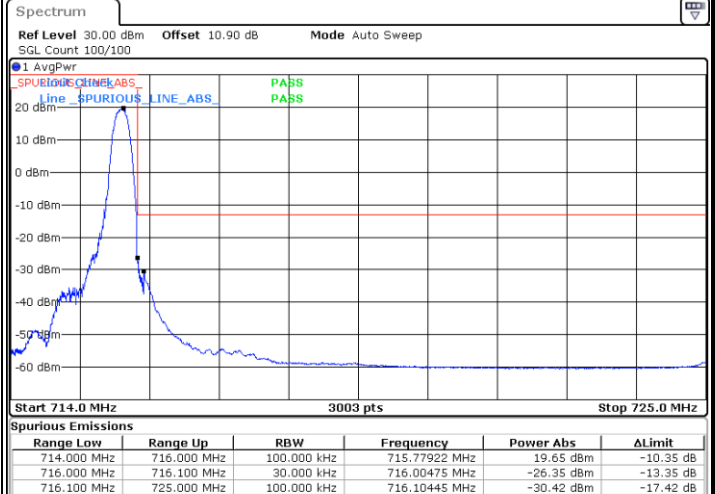
LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



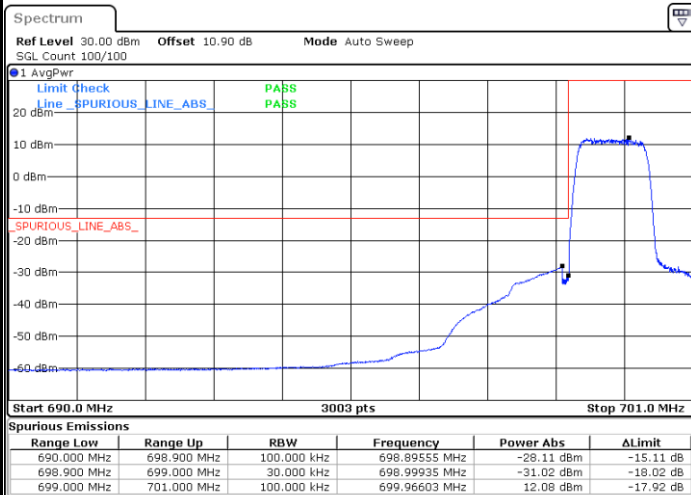
Date: 3.FEB.2021 10:28:02

Highest Band Edge / 1RB



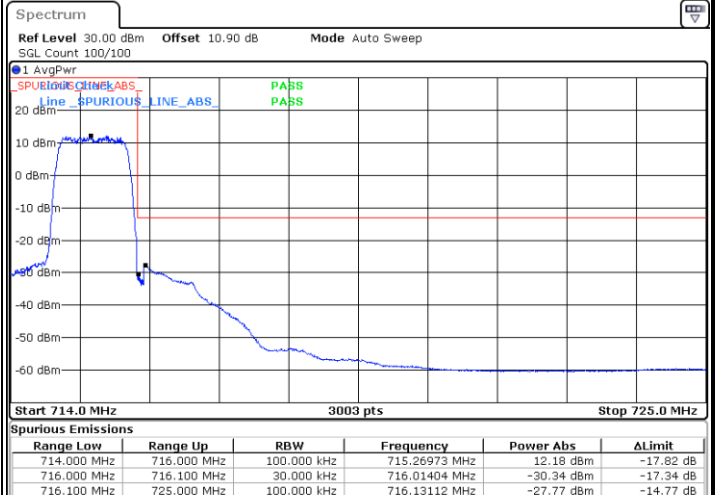
Date: 3.FEB.2021 10:33:13

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:26:23

Highest Band Edge / Full RB

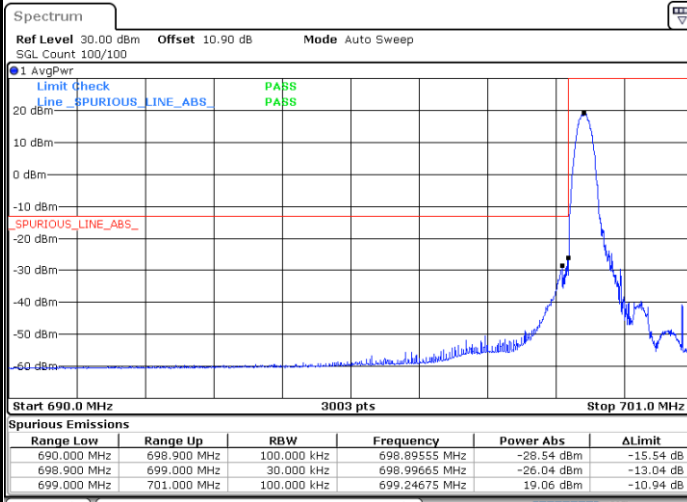


Date: 3.FEB.2021 10:31:34



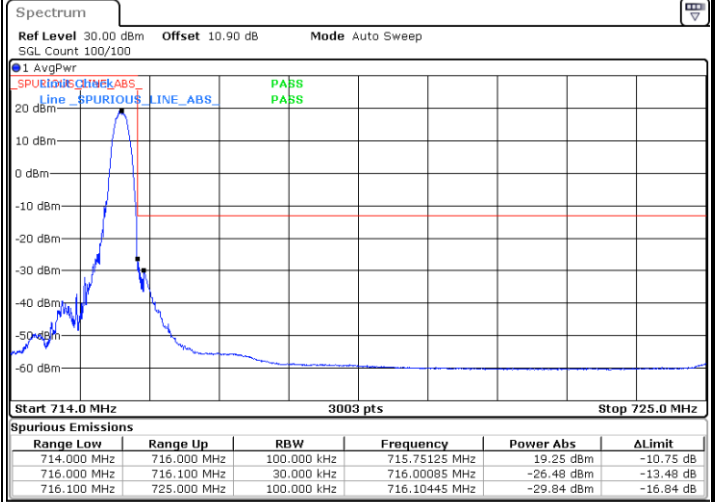
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



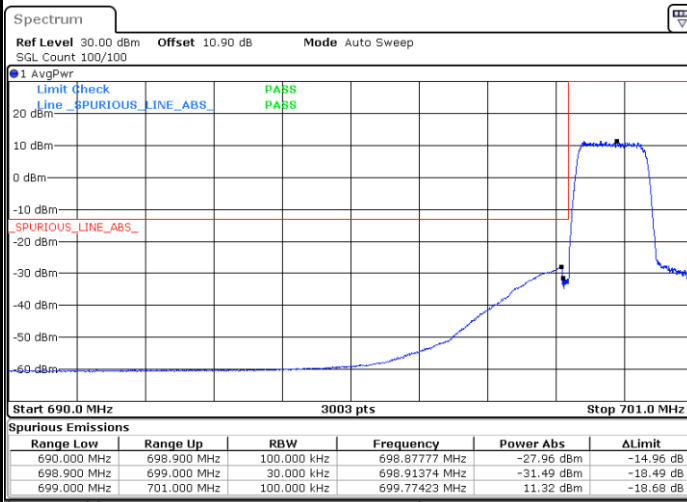
Date: 3.FEB.2021 10:27:28

Highest Band Edge / 1 RB



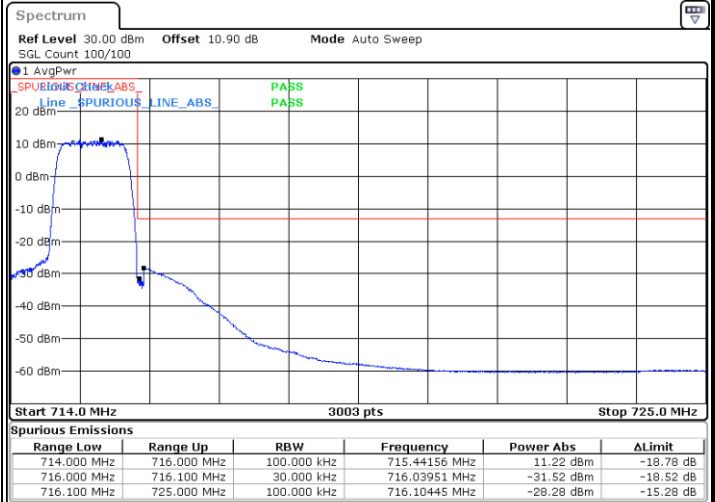
Date: 3.FEB.2021 10:32:40

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:26:56

Highest Band Edge / Full RB

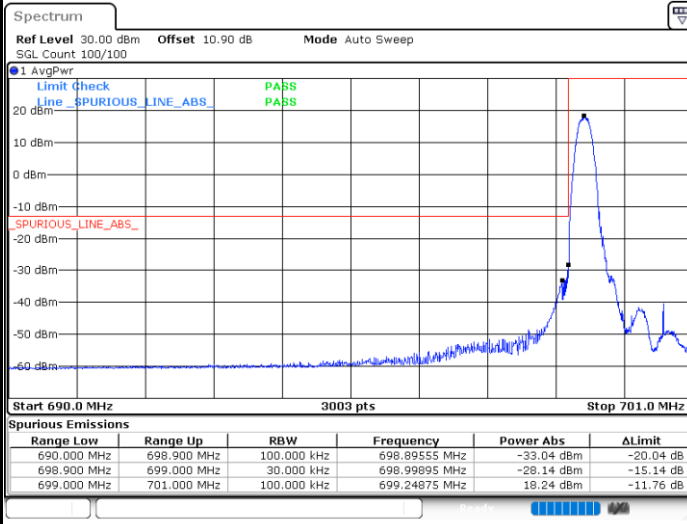


Date: 3.FEB.2021 10:32:07

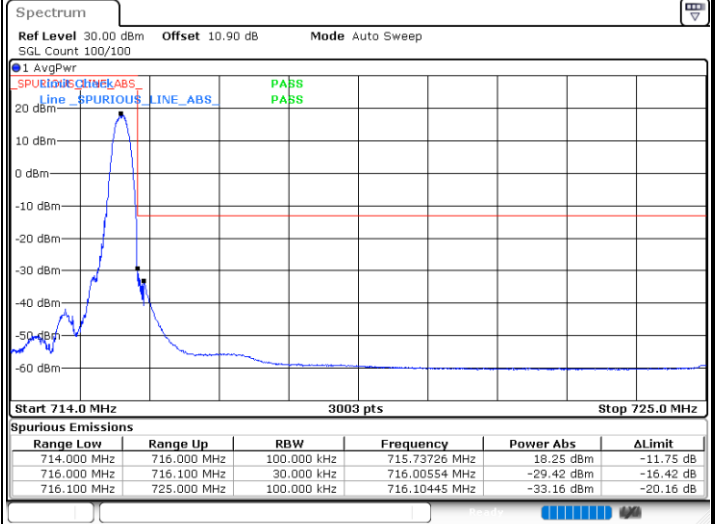


LTE Band 12 / 1.4MHz / 64QAM

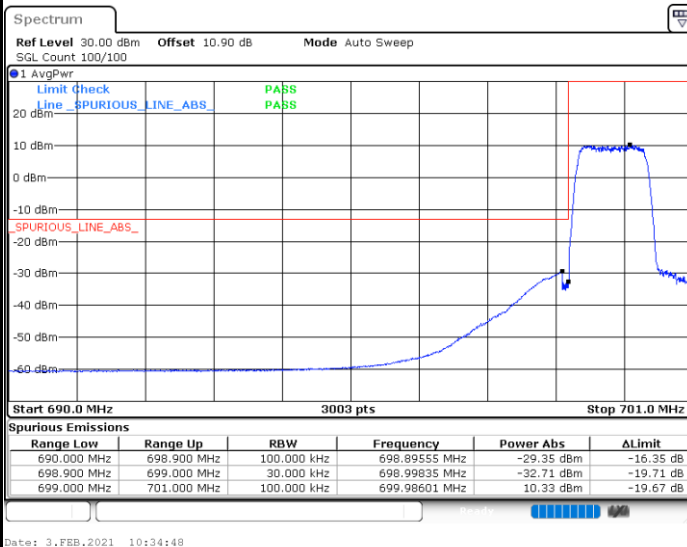
Lowest Band Edge / 1 RB



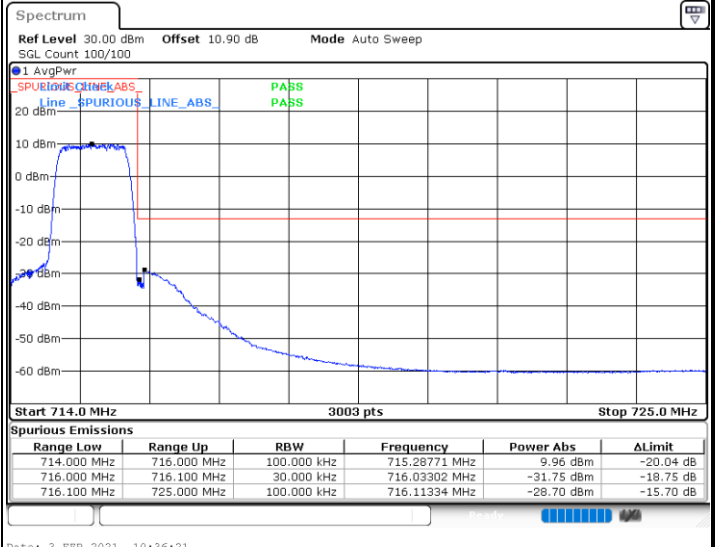
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



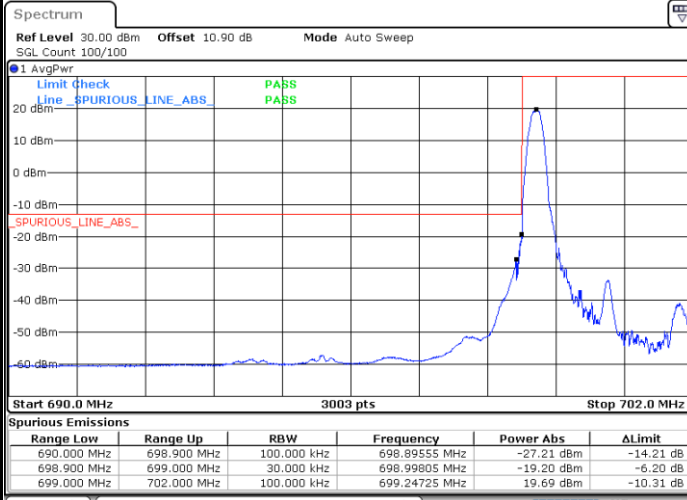
Highest Band Edge / Full RB





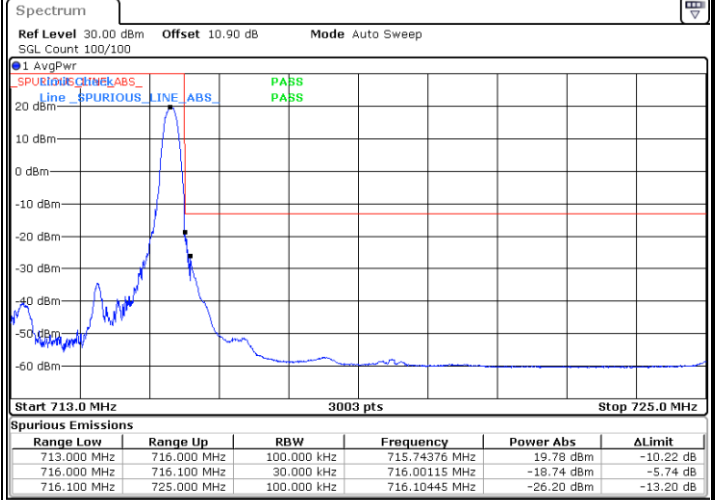
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



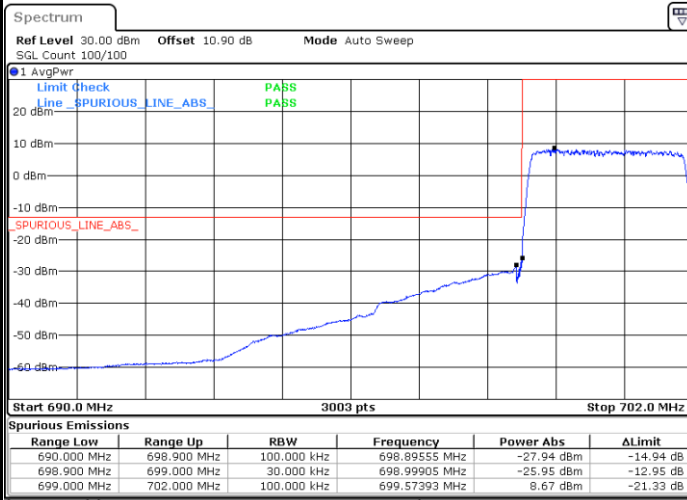
Date: 3.FEB.2021 10:39:07

Highest Band Edge / 1 RB



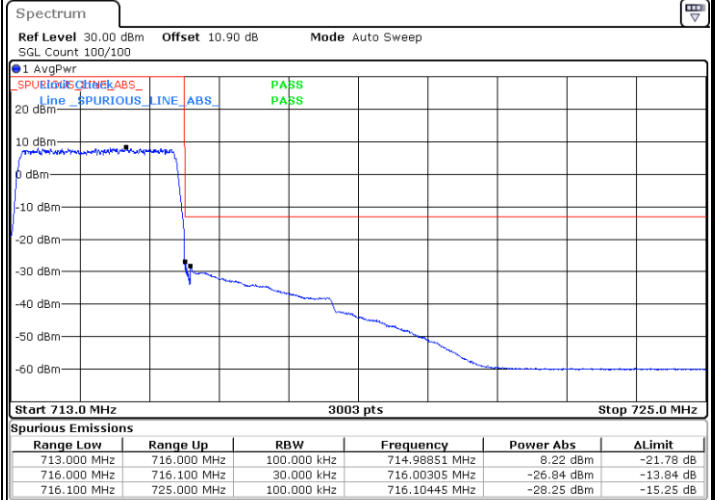
Date: 3.FEB.2021 10:44:18

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:37:28

Highest Band Edge / Full RB

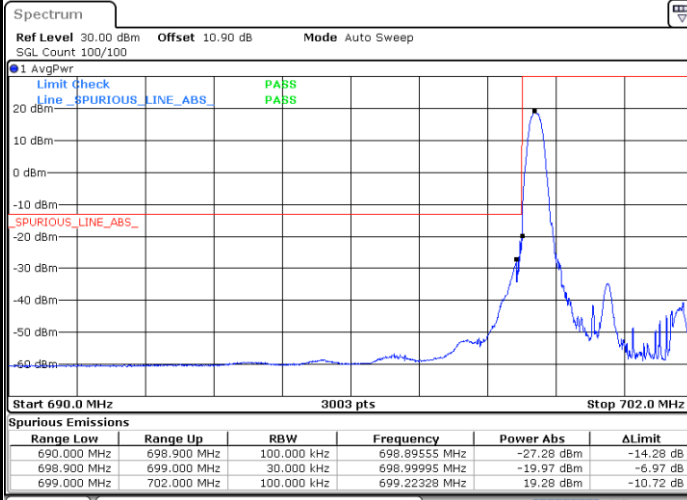


Date: 3.FEB.2021 10:42:40



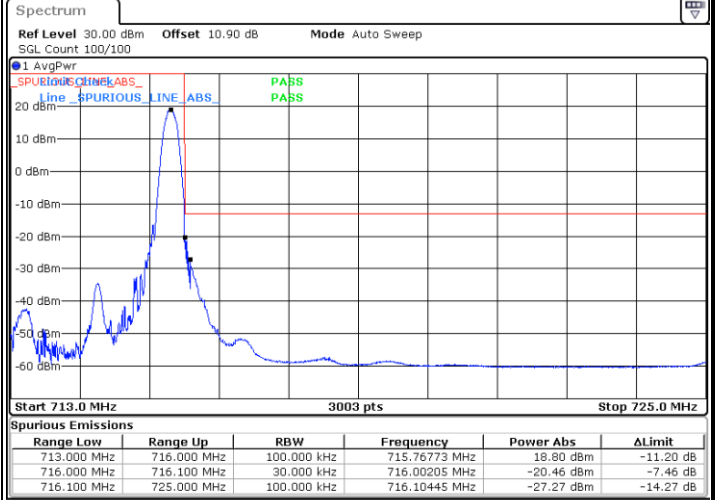
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



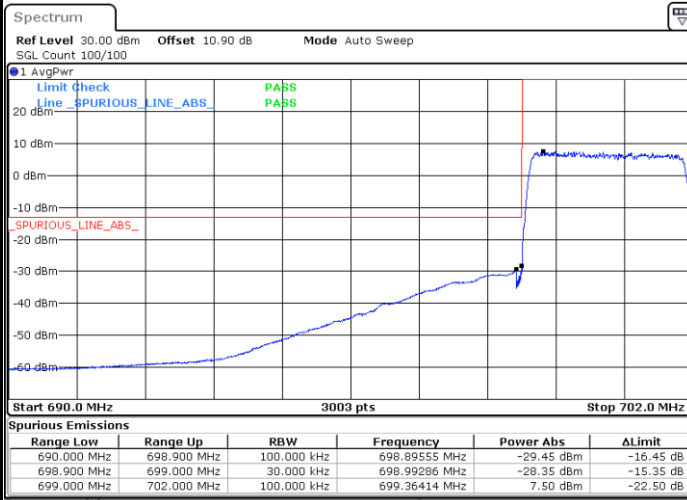
Date: 3.FEB.2021 10:38:34

Highest Band Edge / 1 RB



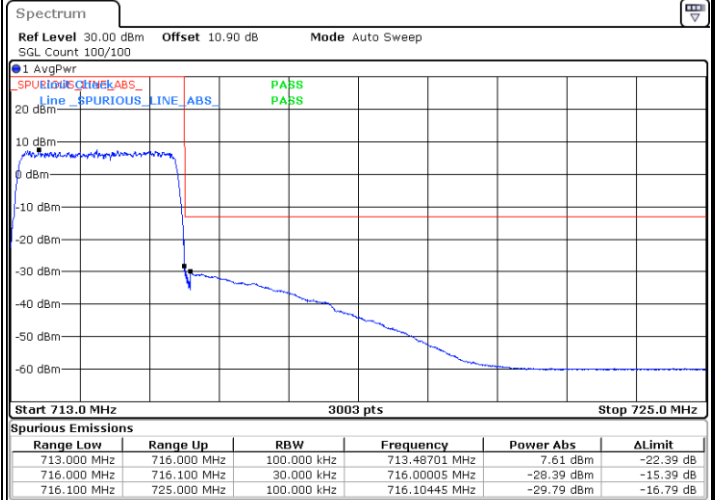
Date: 3.FEB.2021 10:43:45

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:38:01

Highest Band Edge / Full RB

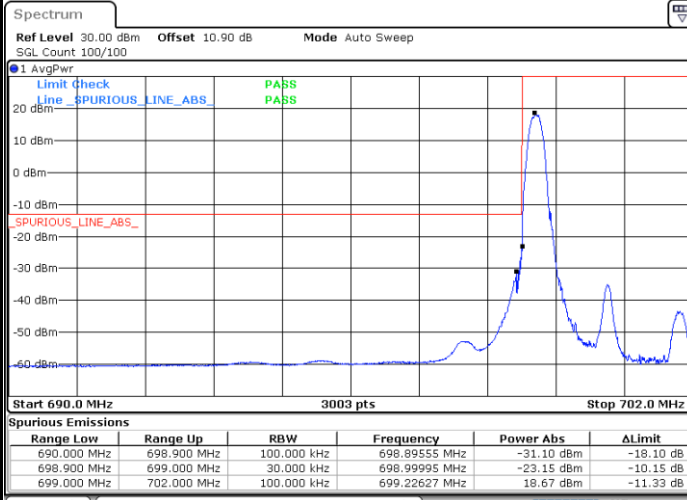


Date: 3.FEB.2021 10:43:12



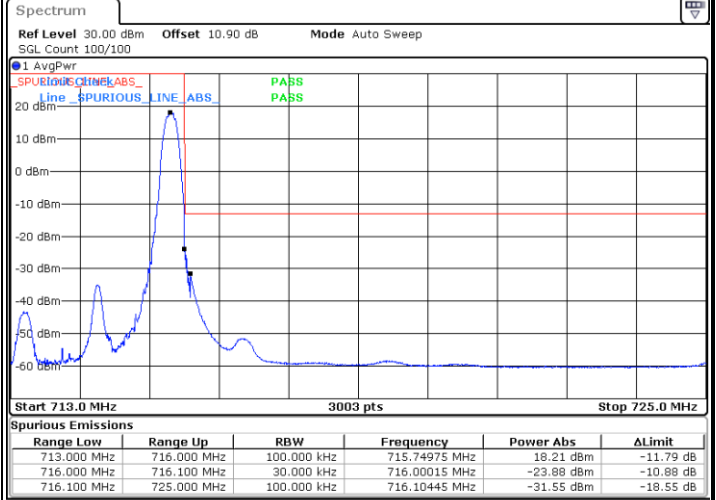
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



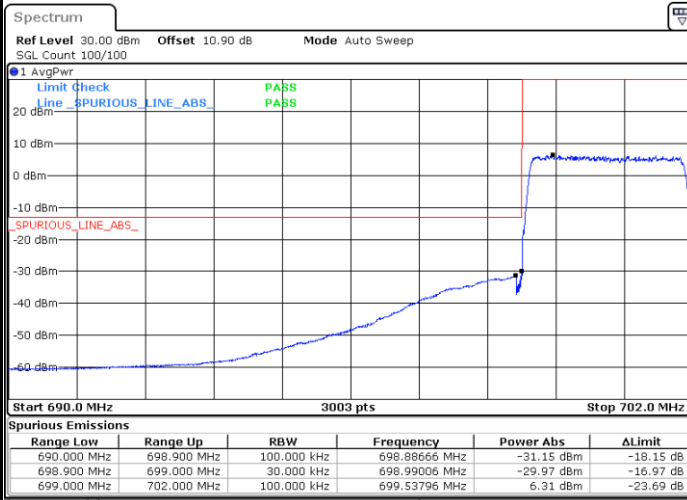
Date: 3.FEB.2021 10:46:27

Highest Band Edge / 1 RB



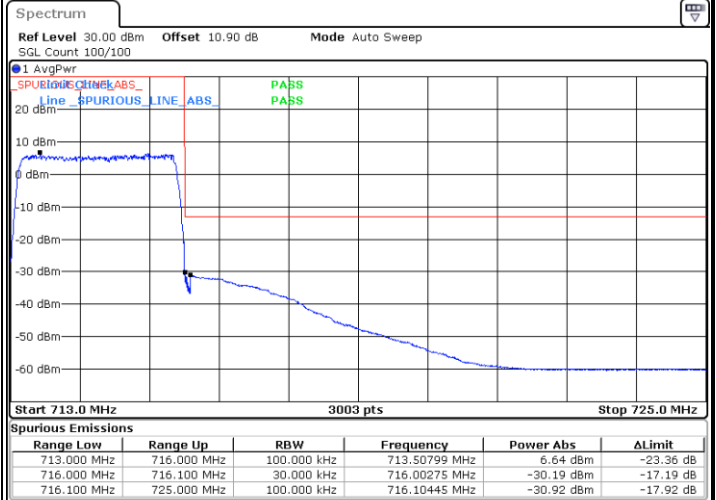
Date: 3.FEB.2021 10:48:00

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:45:54

Highest Band Edge / Full RB

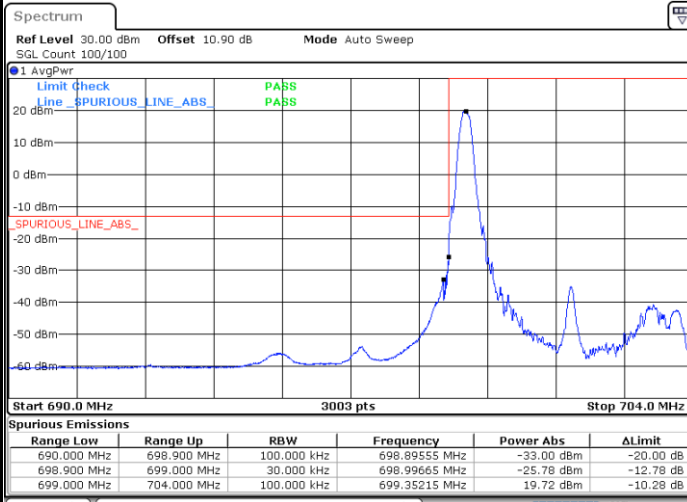


Date: 3.FEB.2021 10:47:27



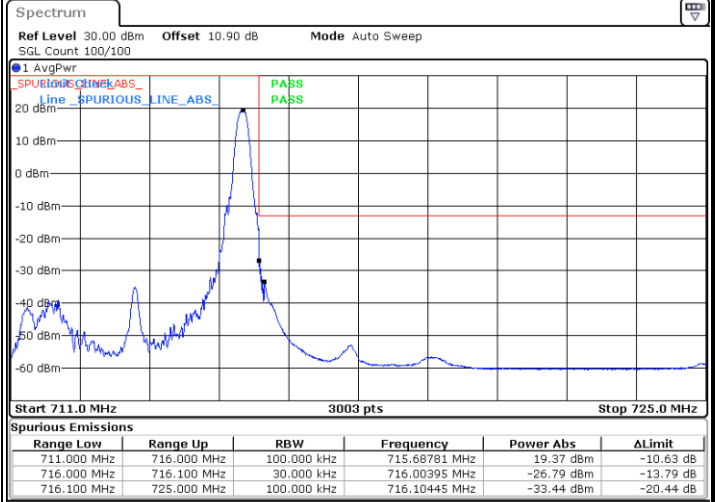
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



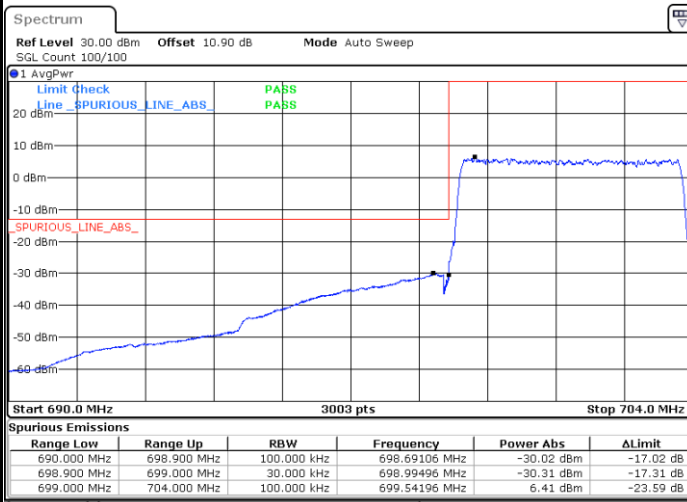
Date: 3.FEB.2021 10:52:53

Highest Band Edge / 1 RB



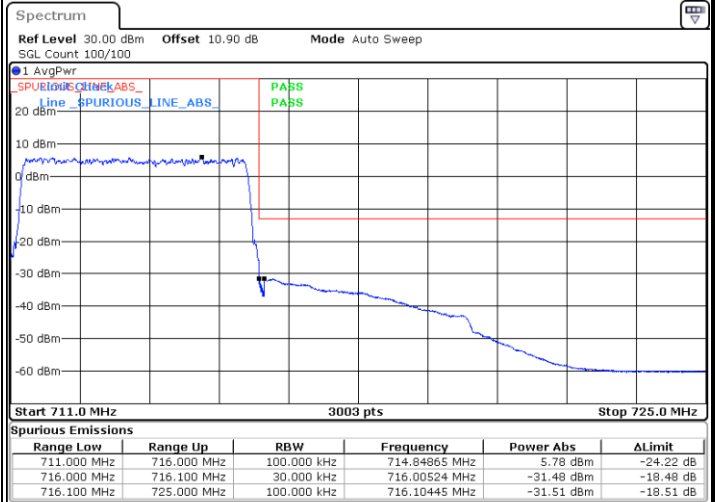
Date: 3.FEB.2021 10:57:31

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:51:14

Highest Band Edge / Full RB

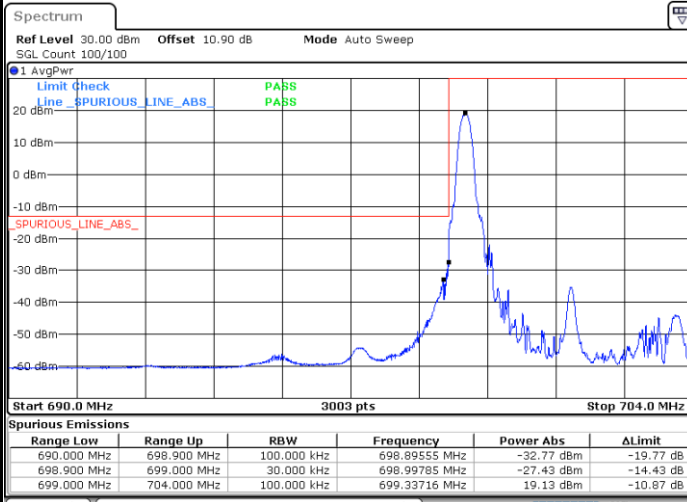


Date: 3.FEB.2021 10:56:25



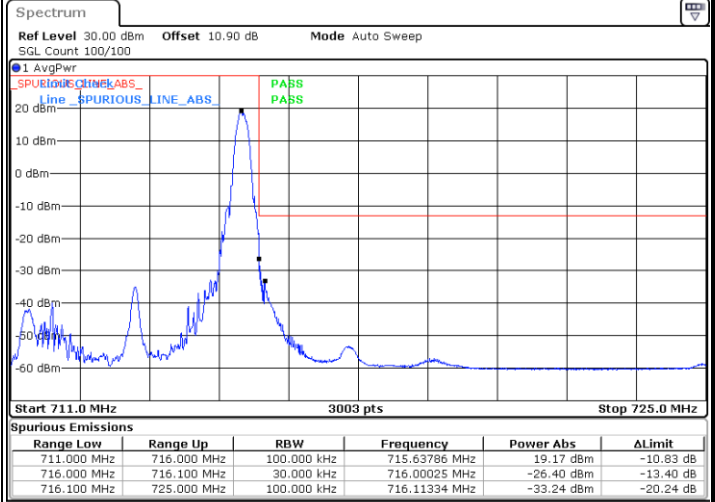
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



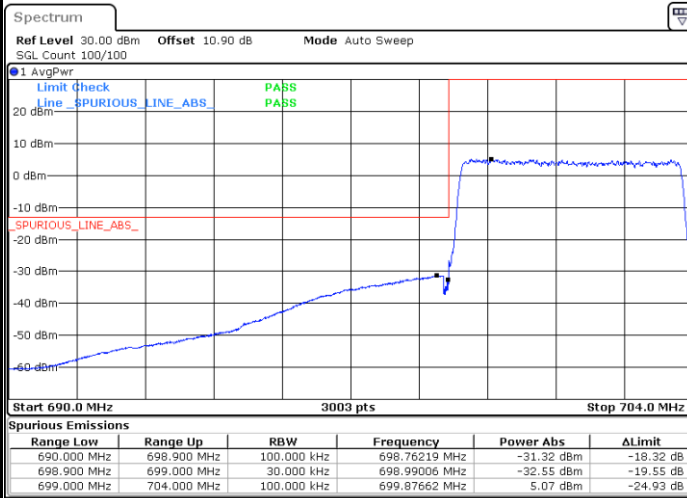
Date: 3.FEB.2021 10:52:20

Highest Band Edge / 1 RB



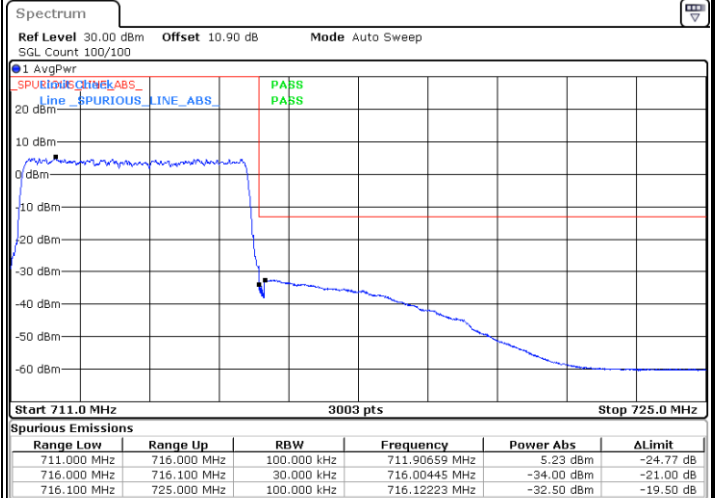
Date: 3.FEB.2021 10:58:04

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:51:47

Highest Band Edge / Full RB

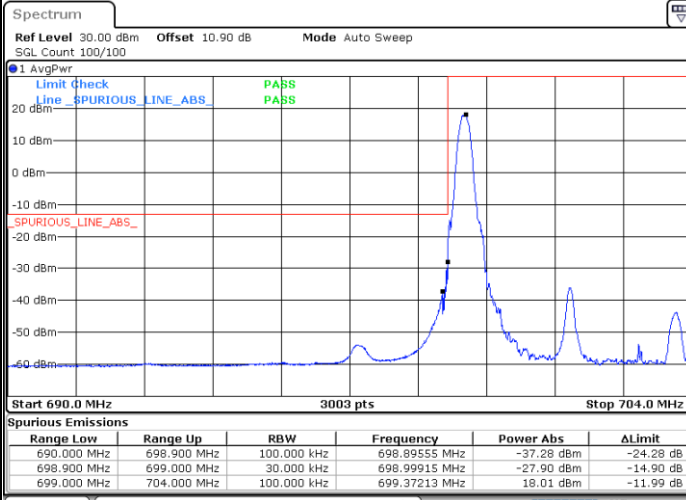


Date: 3.FEB.2021 10:56:58



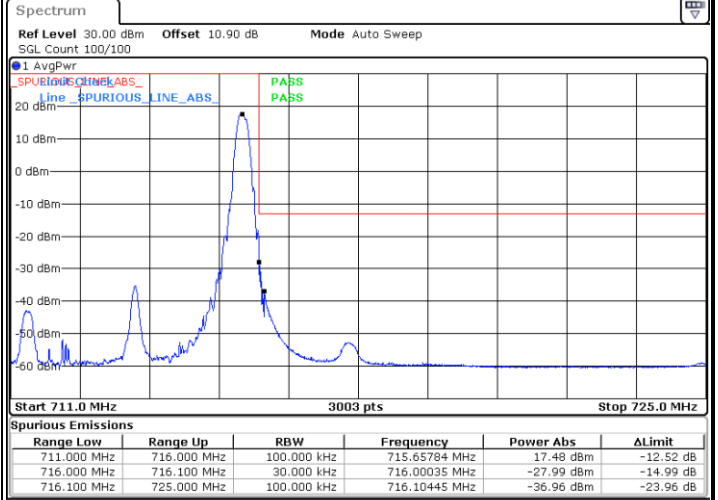
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



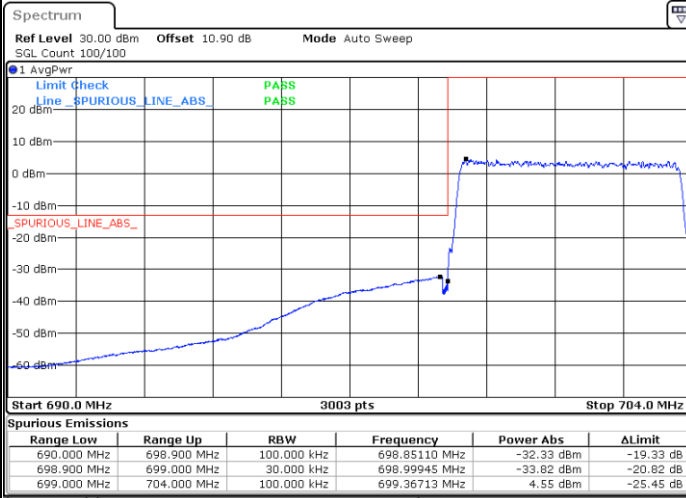
Date: 3.FEB.2021 10:49:07

Highest Band Edge / 1 RB



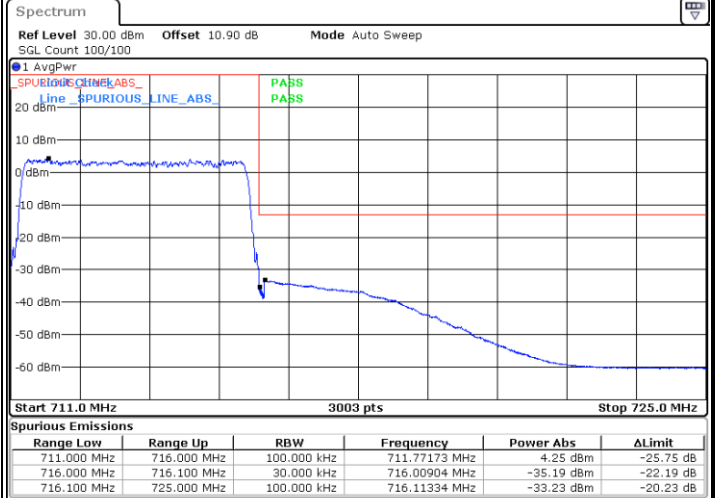
Date: 3.FEB.2021 10:50:40

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:48:34

Highest Band Edge / Full RB

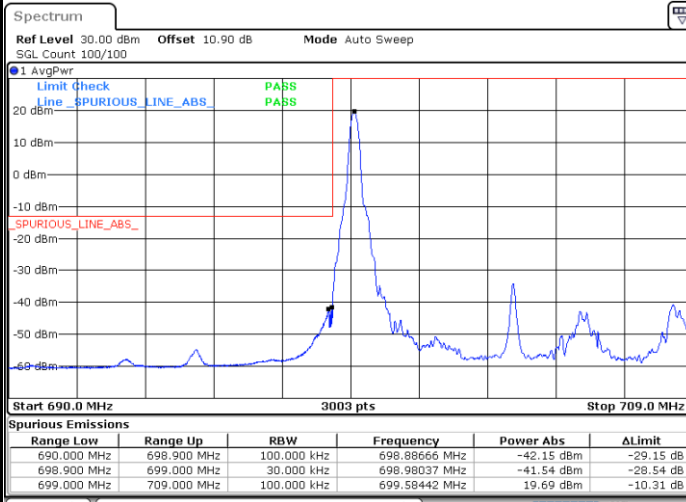


Date: 3.FEB.2021 10:50:07



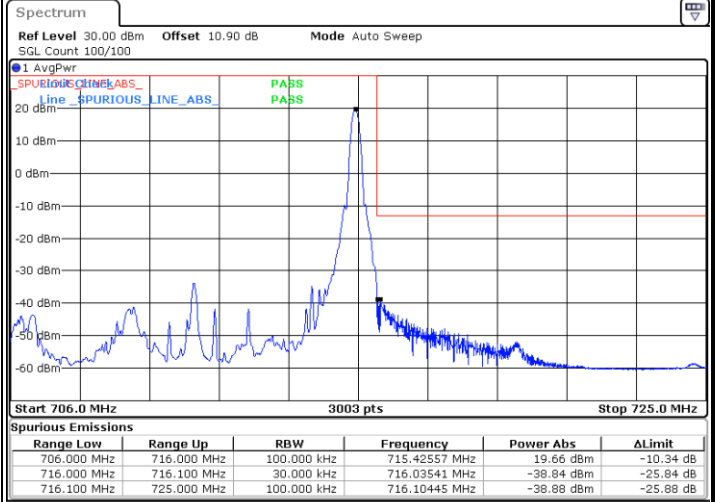
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



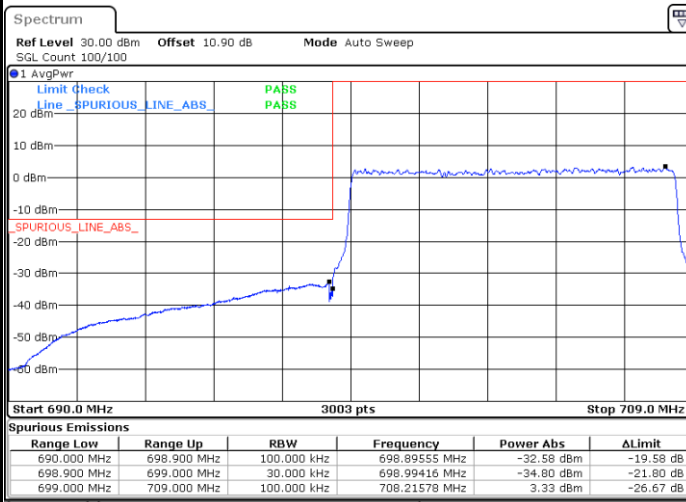
Date: 3.FEB.2021 11:01:21

Highest Band Edge / 1 RB



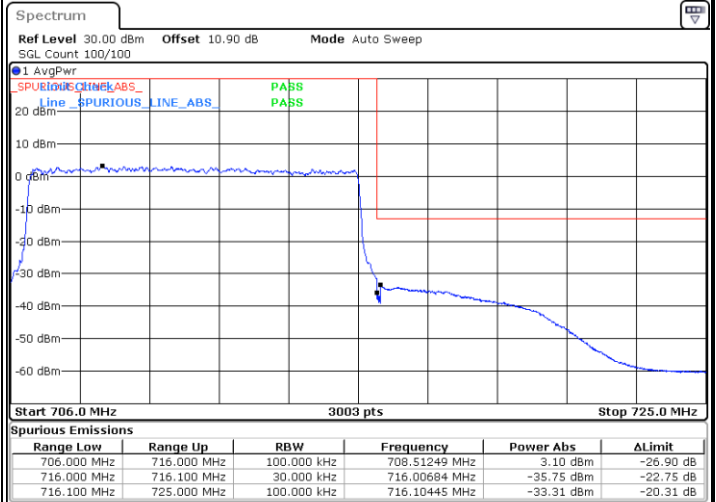
Date: 3.FEB.2021 11:06:34

Lowest Band Edge / Full RB



Date: 3.FEB.2021 10:59:40

Highest Band Edge / Full RB

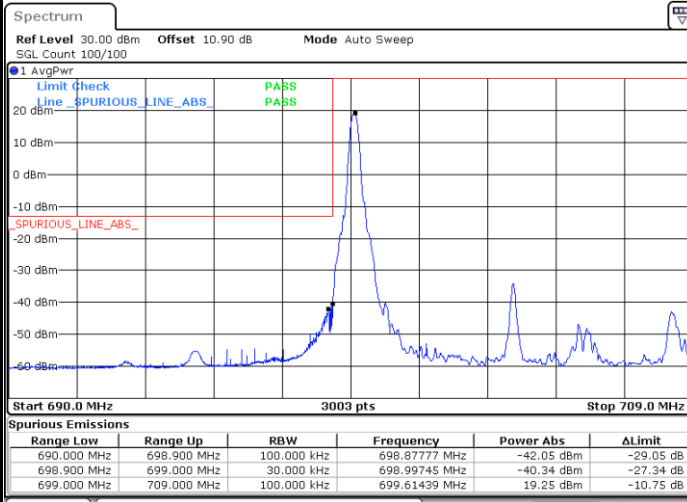


Date: 3.FEB.2021 11:04:55



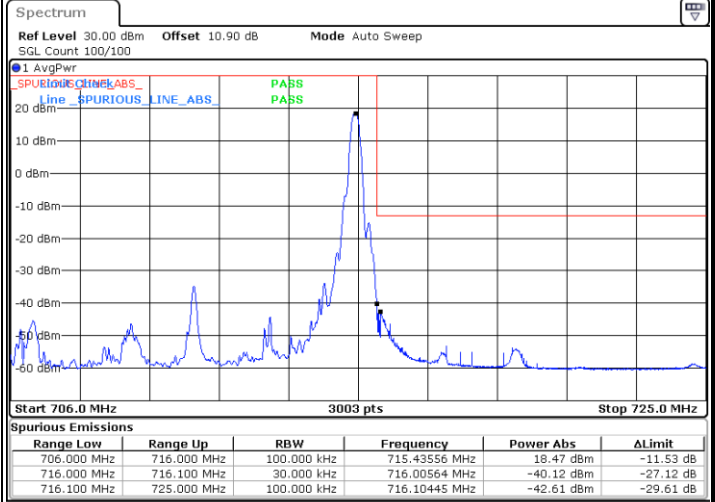
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



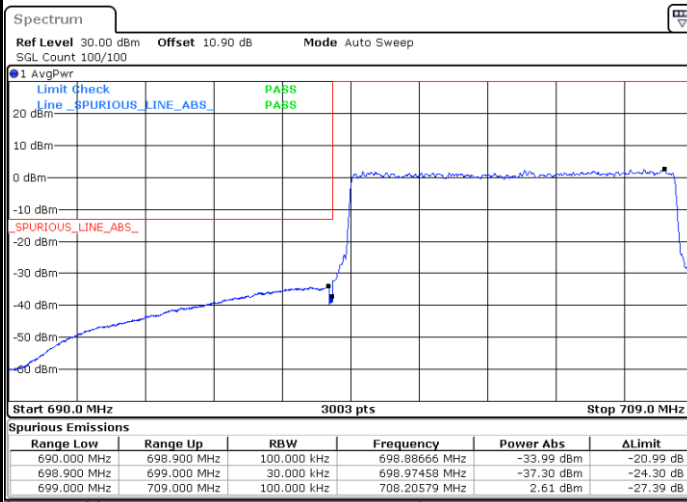
Date: 3.FEB.2021 11:00:48

Highest Band Edge / 1 RB



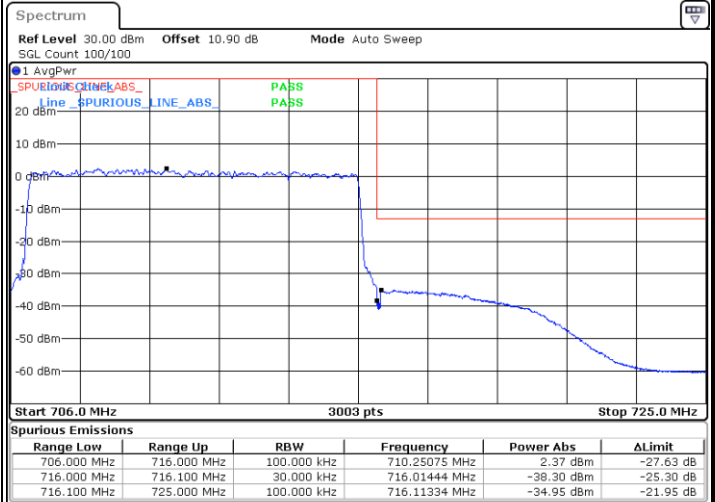
Date: 3.FEB.2021 11:06:01

Lowest Band Edge / Full RB



Date: 3.FEB.2021 11:00:14

Highest Band Edge / Full RB

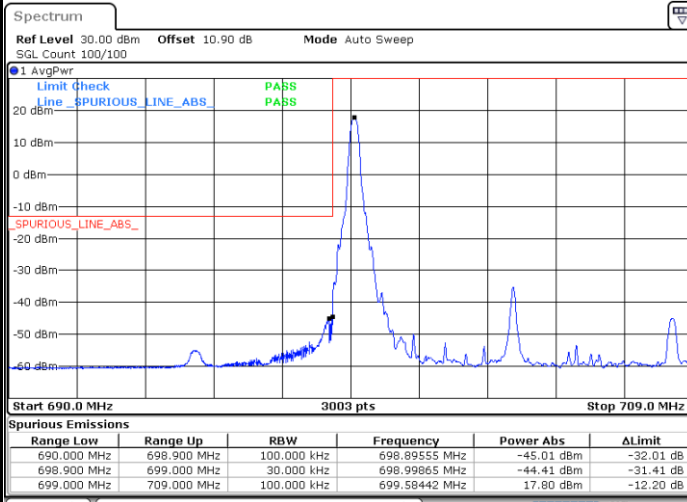


Date: 3.FEB.2021 11:05:28



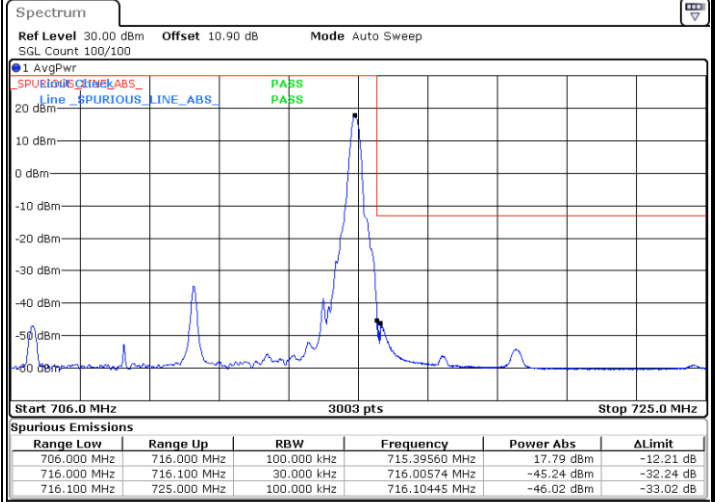
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



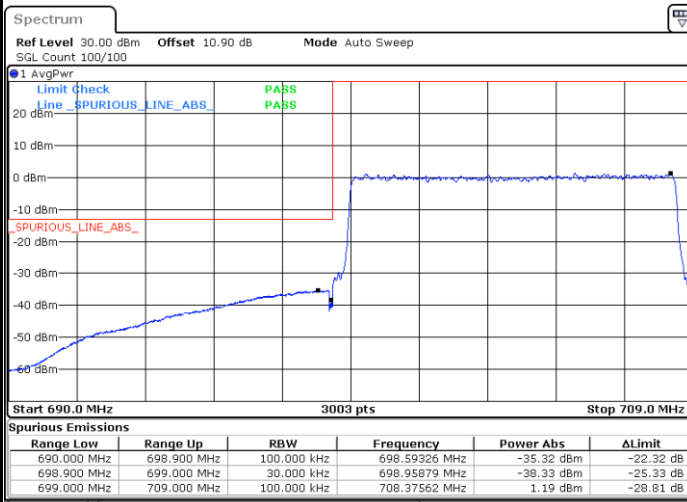
Date: 3.FEB.2021 11:08:44

Highest Band Edge / 1 RB



Date: 3.FEB.2021 11:10:17

Lowest Band Edge / Full RB



Date: 3.FEB.2021 11:08:10

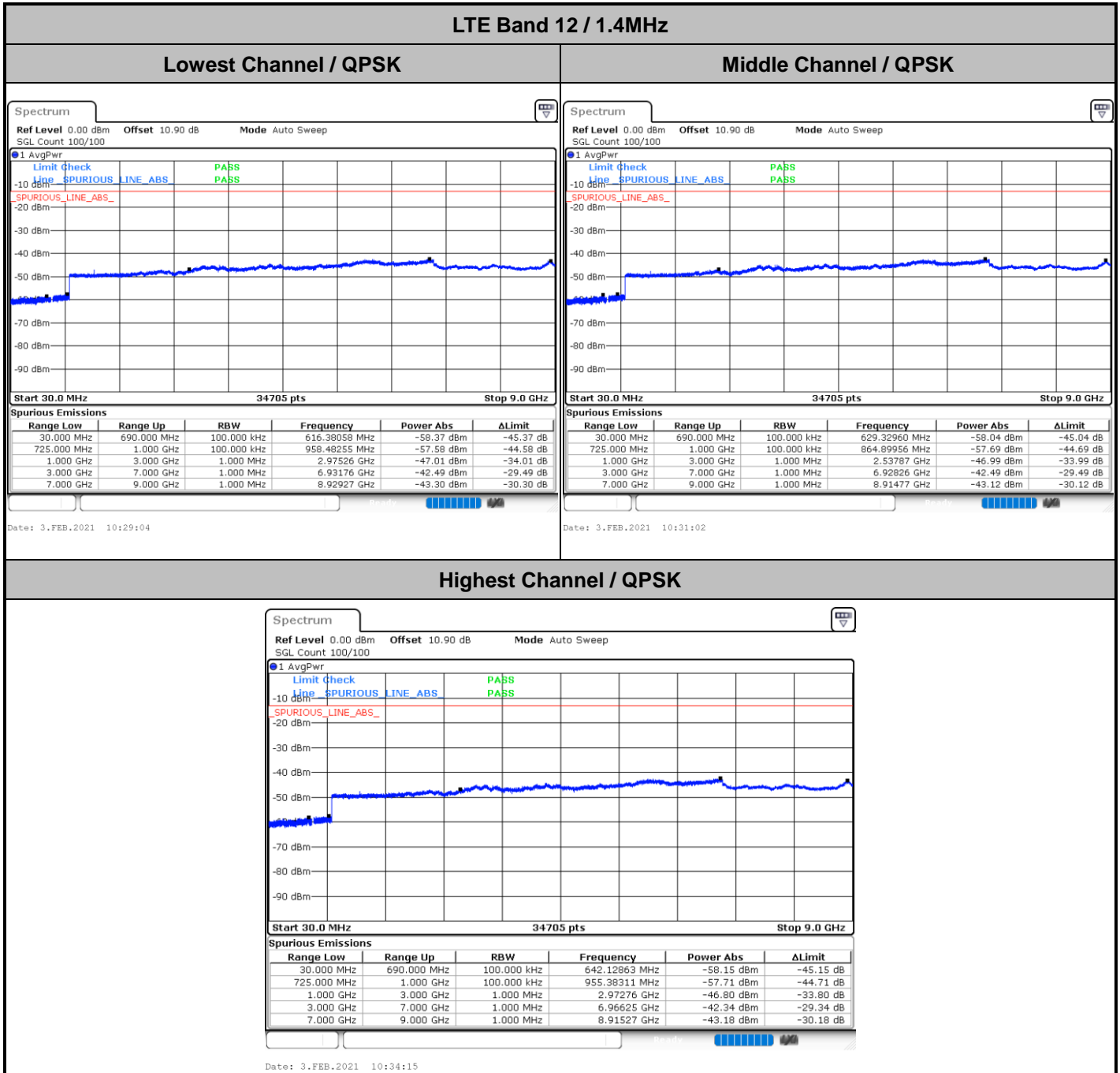
Highest Band Edge / Full RB



Date: 3.FEB.2021 11:09:44



Conducted Spurious Emission

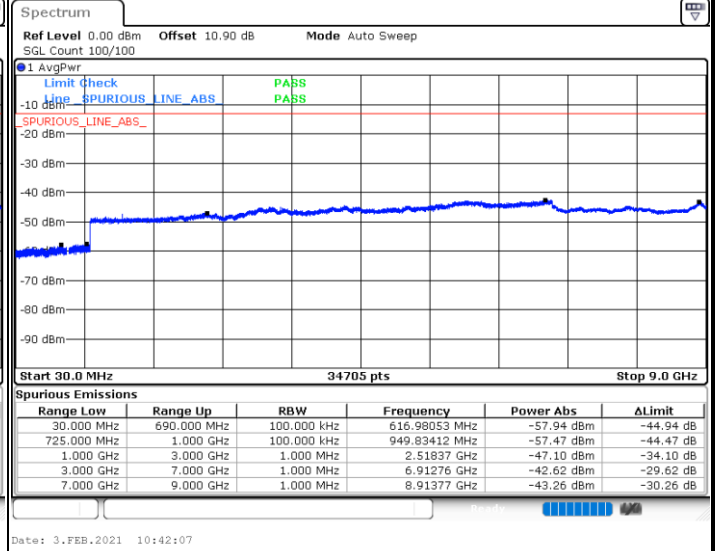
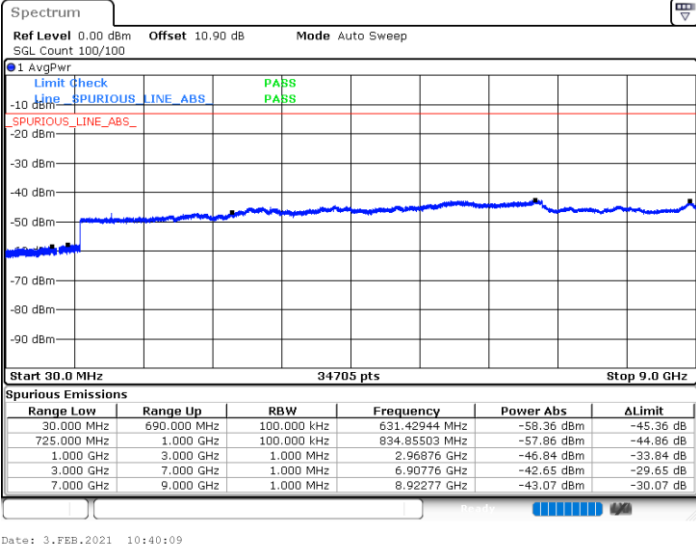




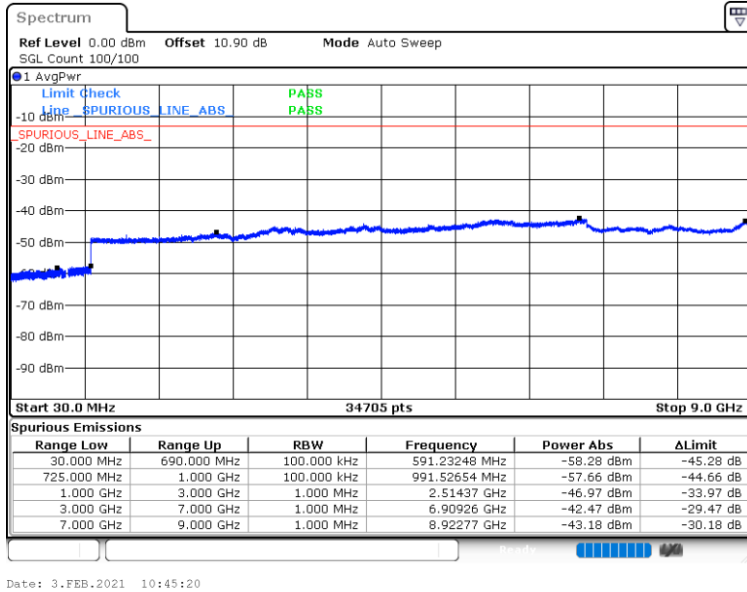
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



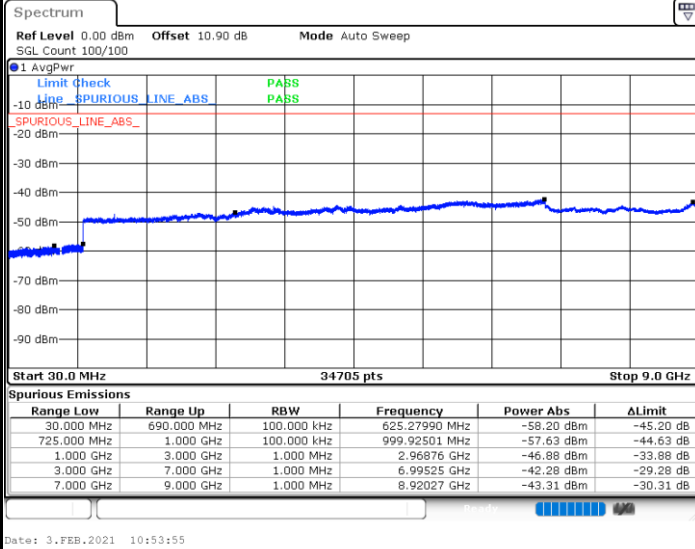
Highest Channel / QPSK



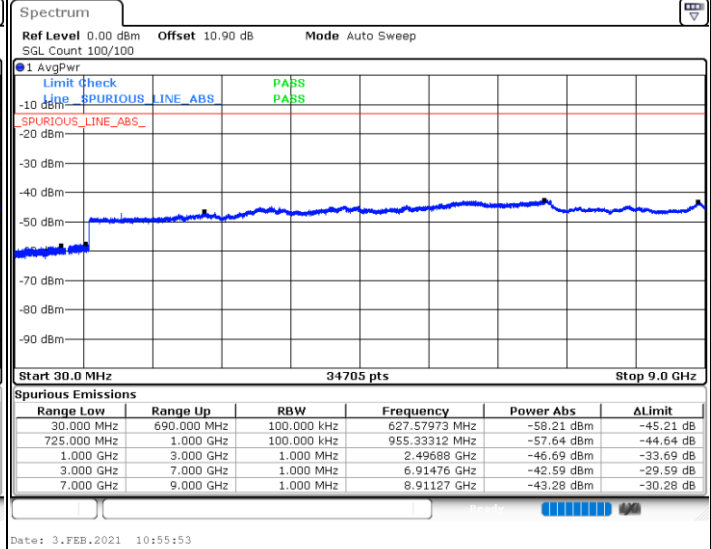


LTE Band 12 / 5MHz

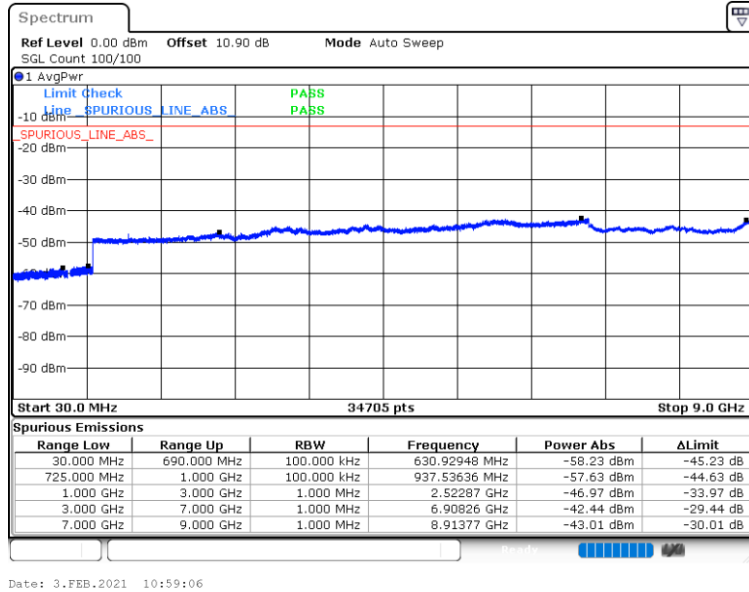
Lowest Channel / QPSK



Middle Channel / QPSK



Highest Channel / QPSK

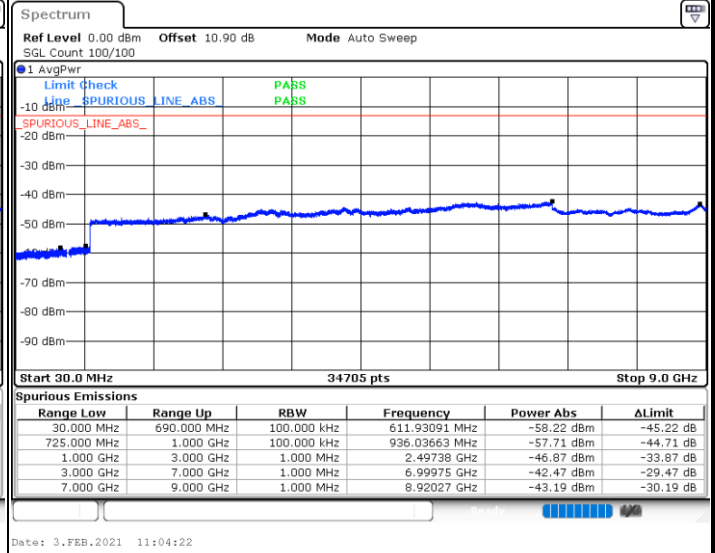
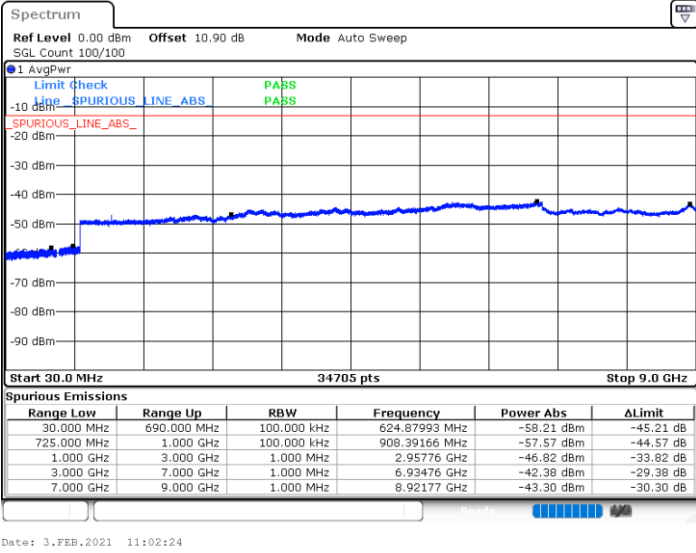




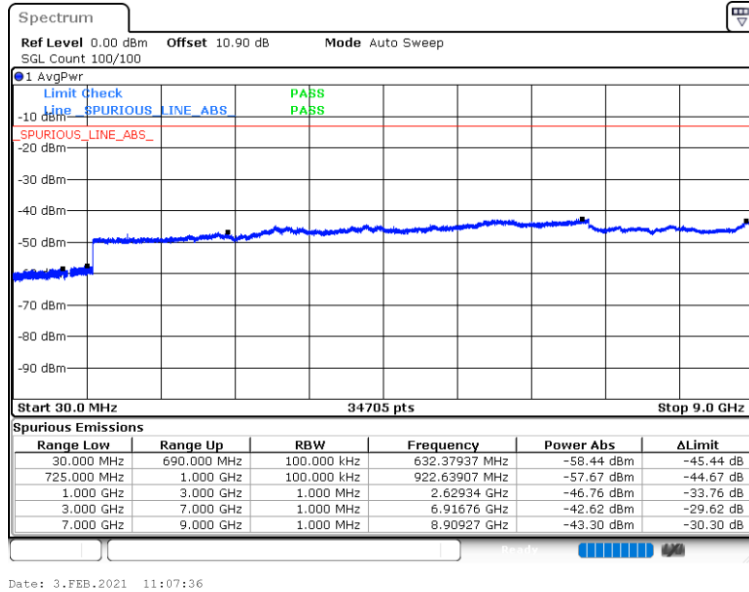
LTE Band 12 / 10MHz

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:

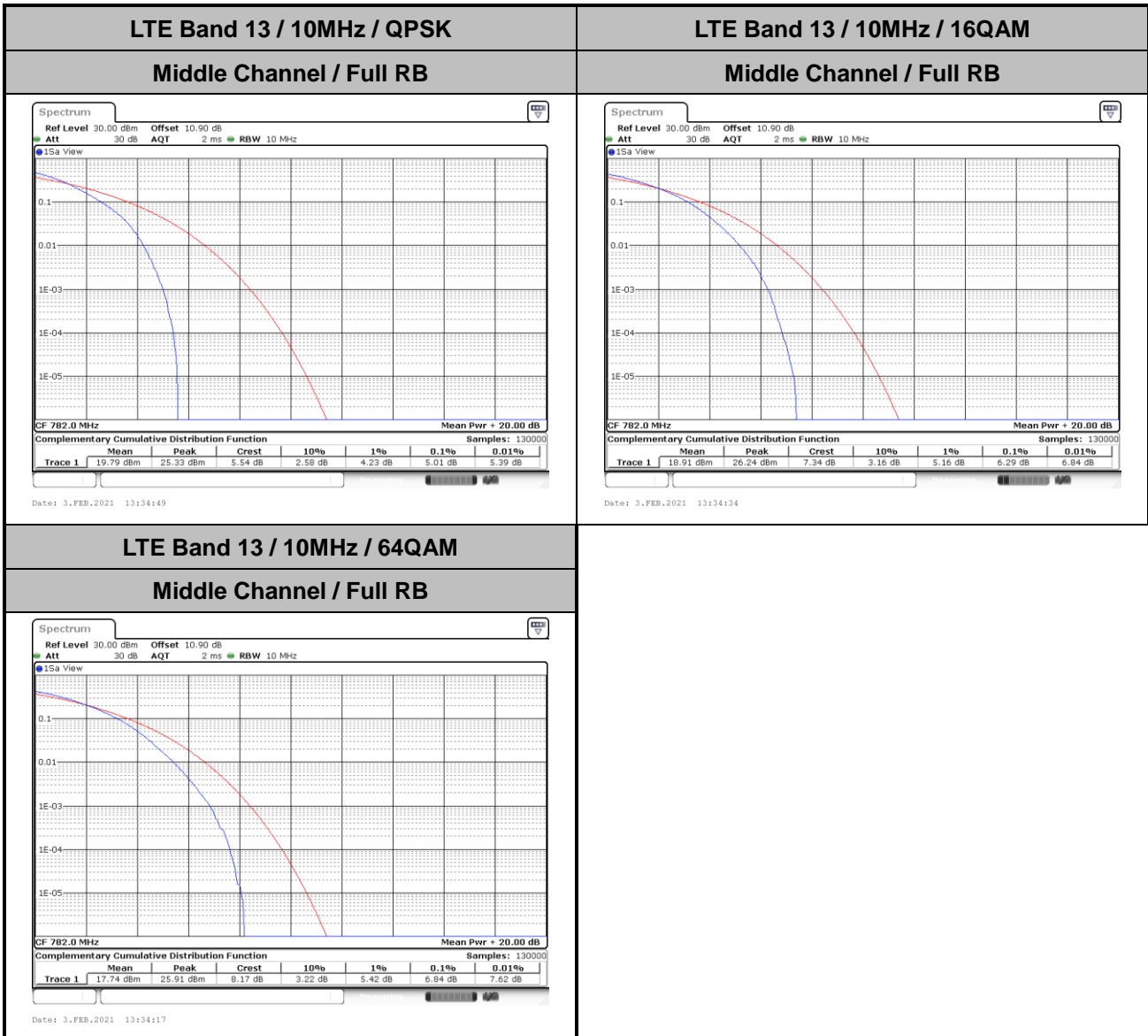
- 1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



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	-	-	-	-	-