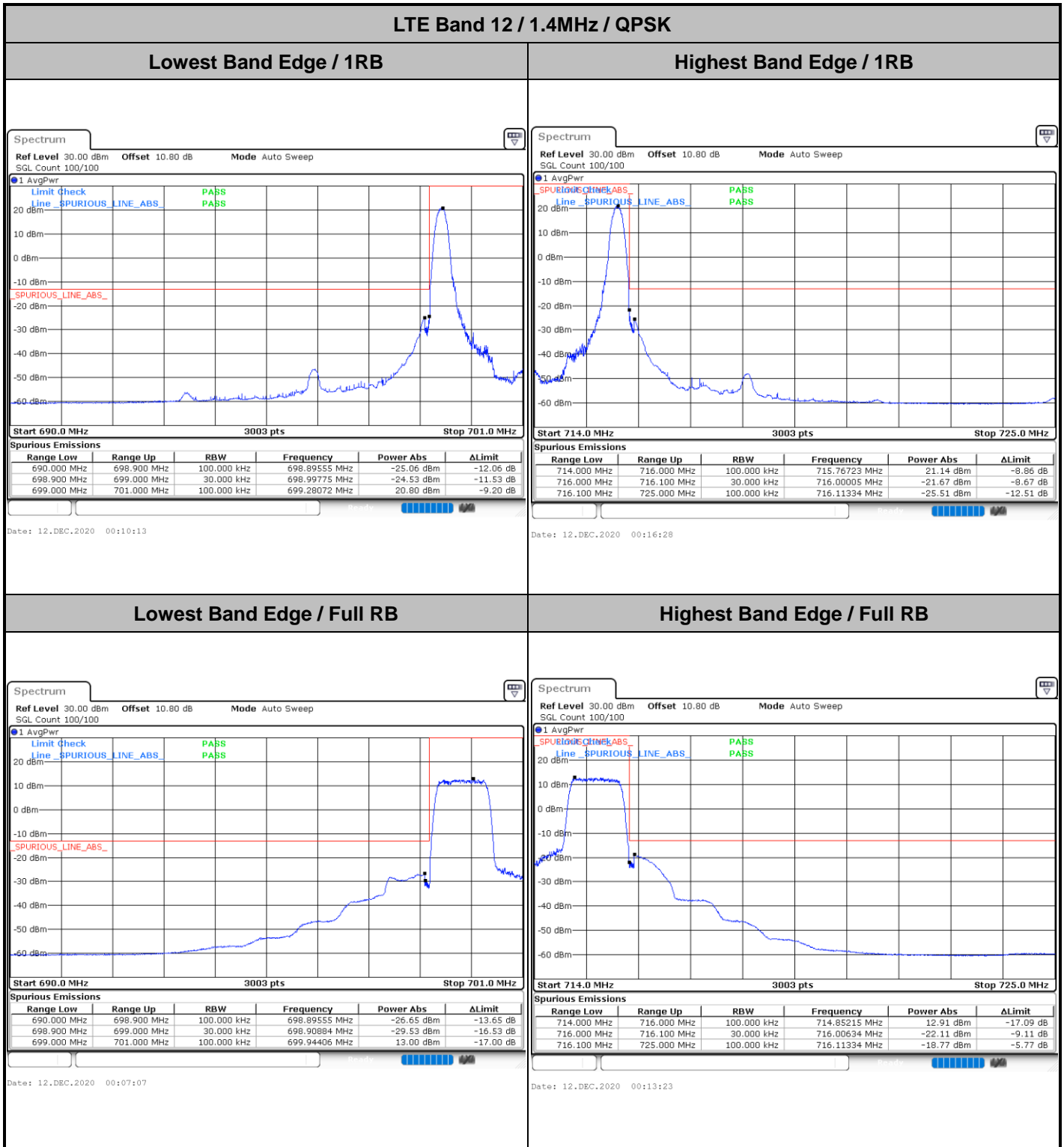




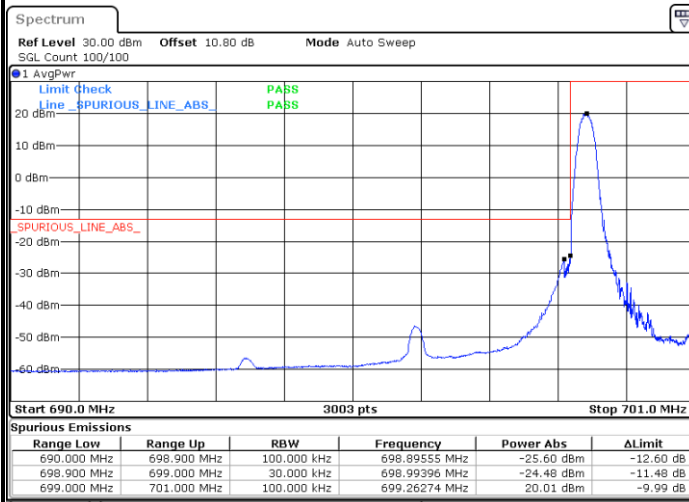
Conducted Band Edge





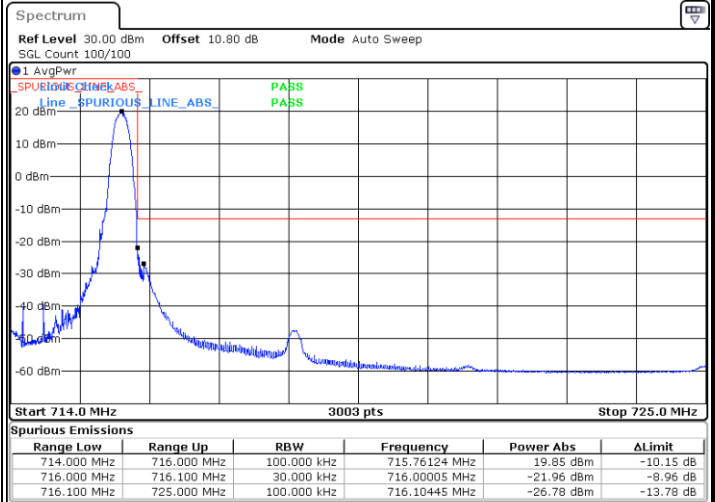
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



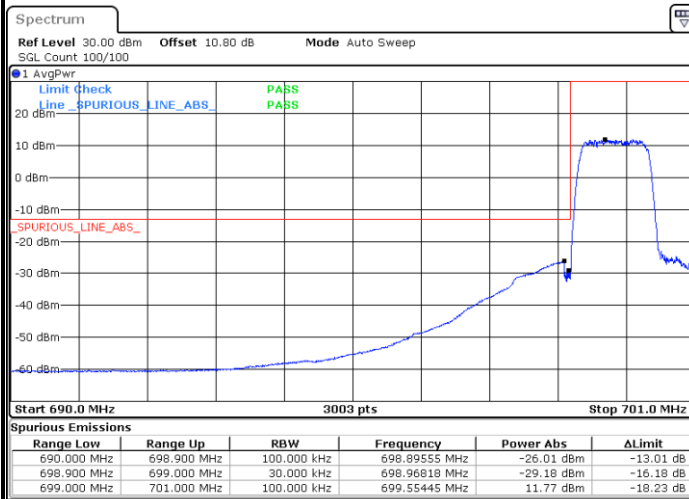
Date: 12.DEC.2020 00:09:11

Highest Band Edge / 1 RB



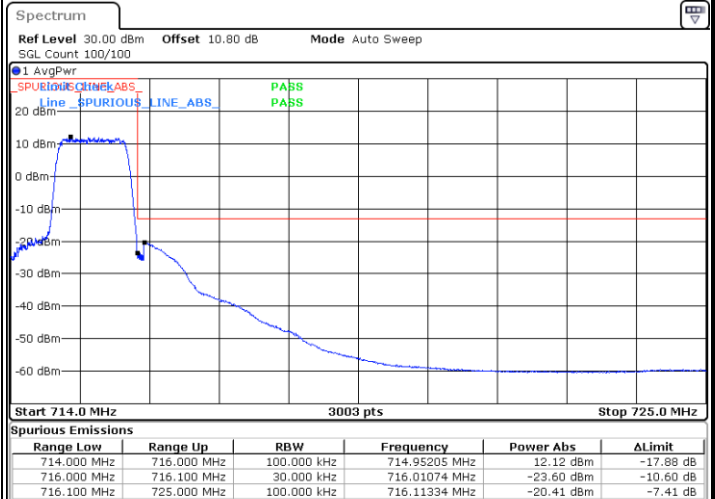
Date: 12.DEC.2020 00:15:26

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:08:09

Highest Band Edge / Full RB

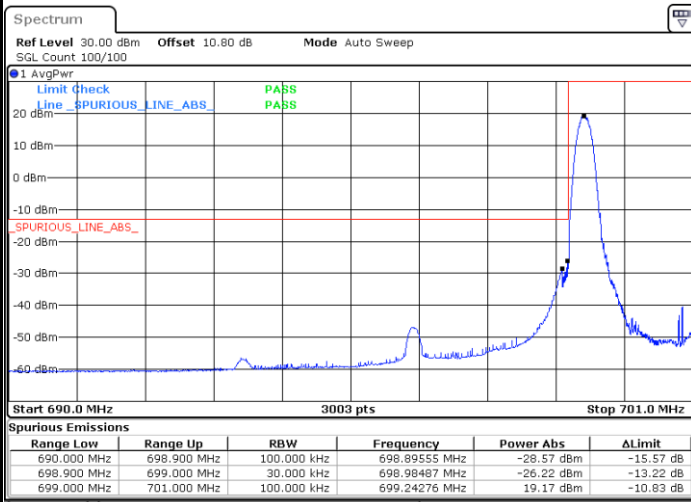


Date: 12.DEC.2020 00:14:24



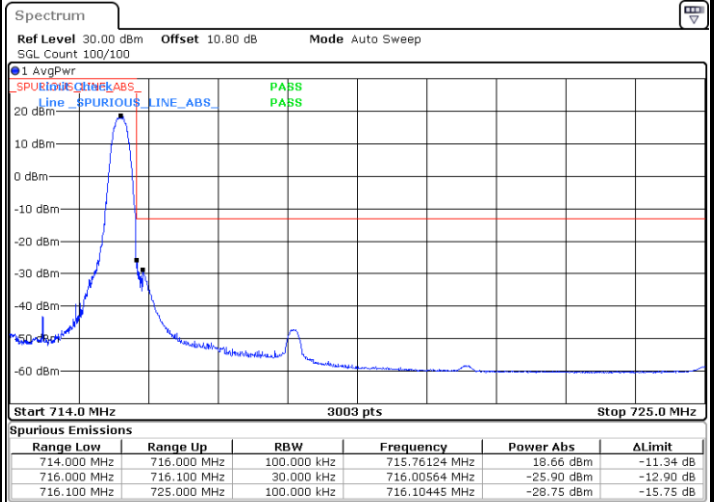
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



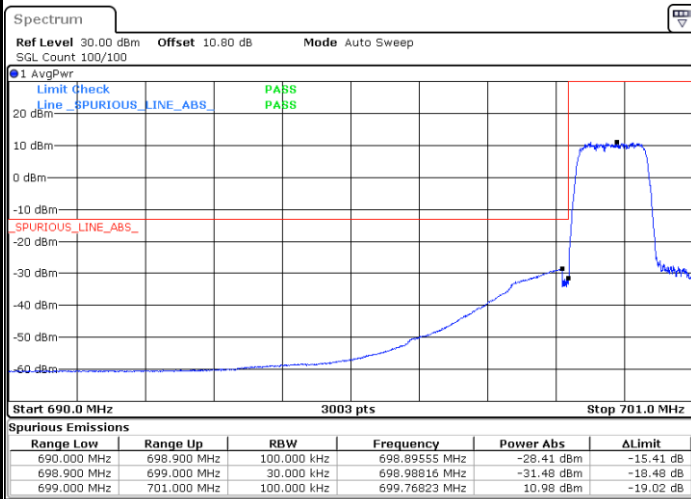
Date: 12.DEC.2020 00:19:14

Highest Band Edge / 1 RB



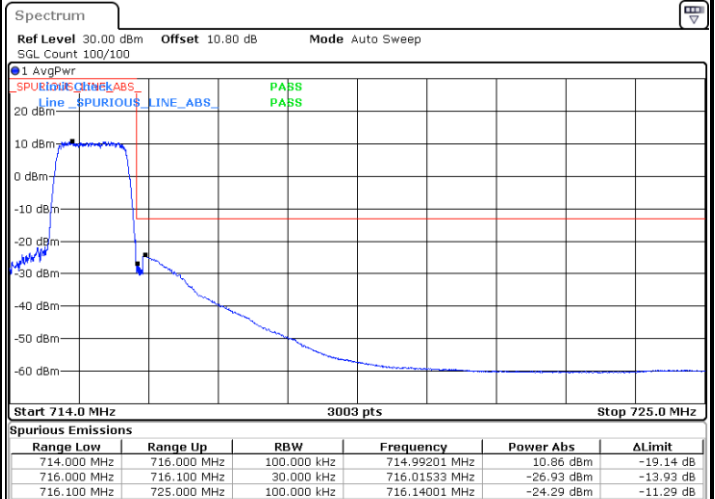
Date: 12.DEC.2020 00:21:39

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:18:12

Highest Band Edge / Full RB

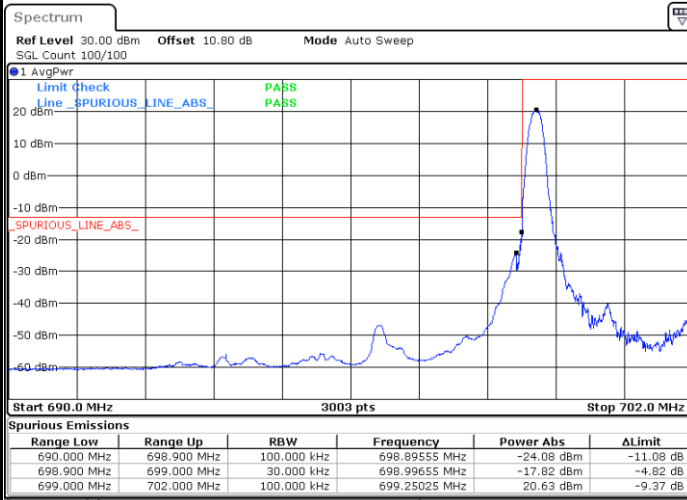


Date: 12.DEC.2020 00:20:38



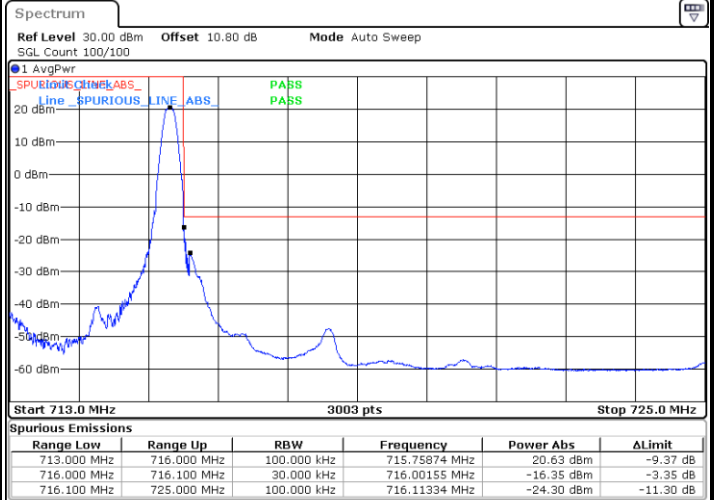
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



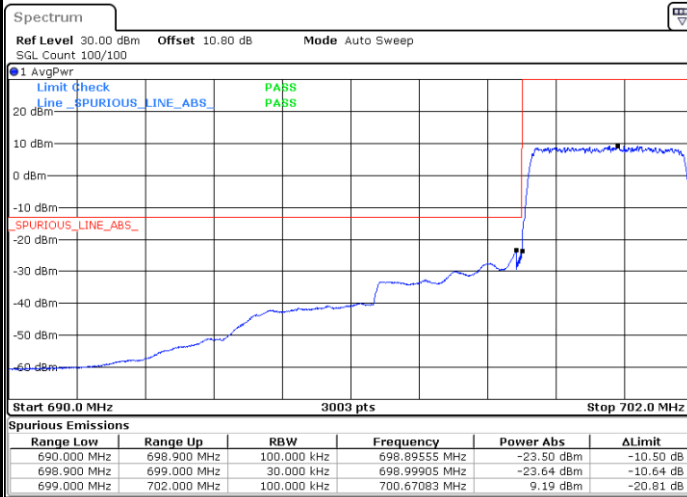
Date: 12.DEC.2020 00:25:49

Highest Band Edge / 1 RB



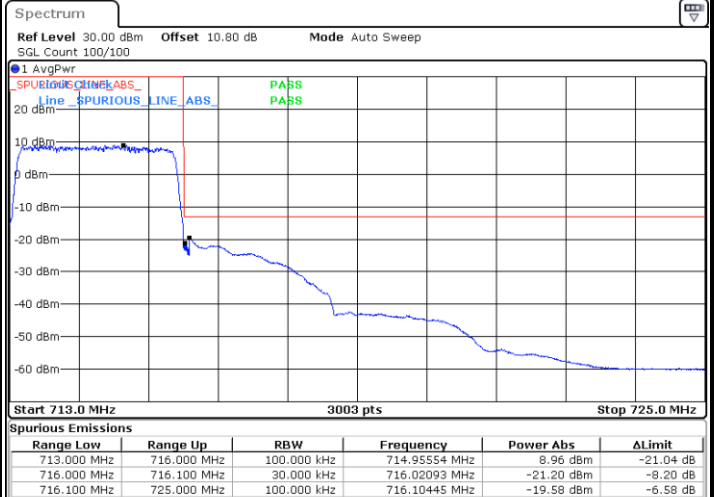
Date: 12.DEC.2020 00:32:03

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:22:43

Highest Band Edge / Full RB

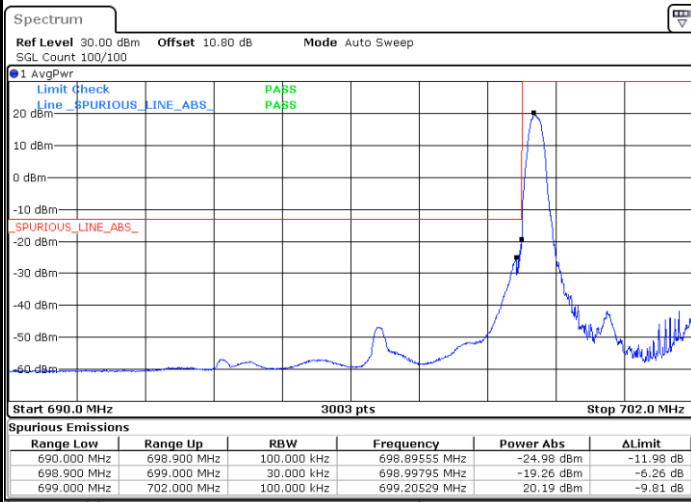


Date: 12.DEC.2020 00:28:58



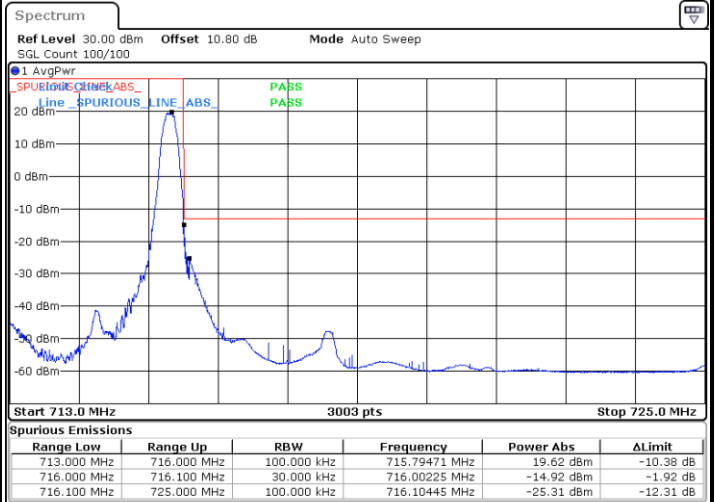
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



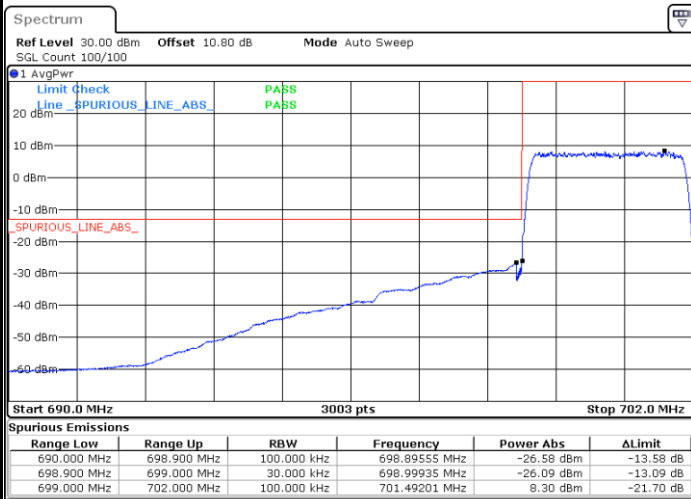
Date: 12.DEC.2020 00:24:47

Highest Band Edge / 1 RB



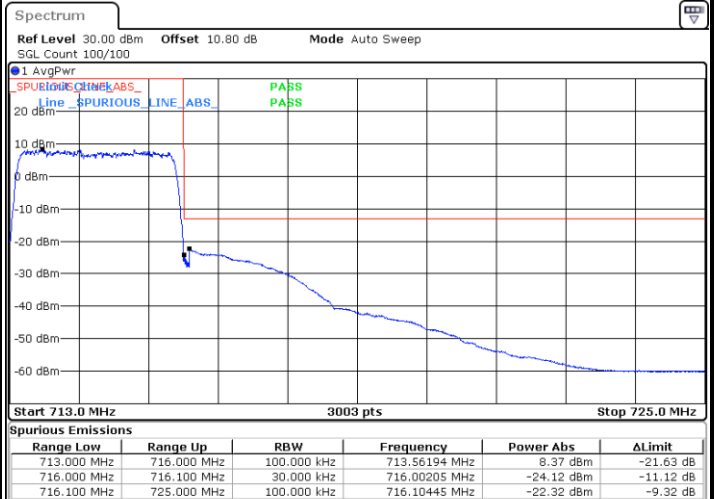
Date: 12.DEC.2020 00:31:02

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:23:45

Highest Band Edge / Full RB

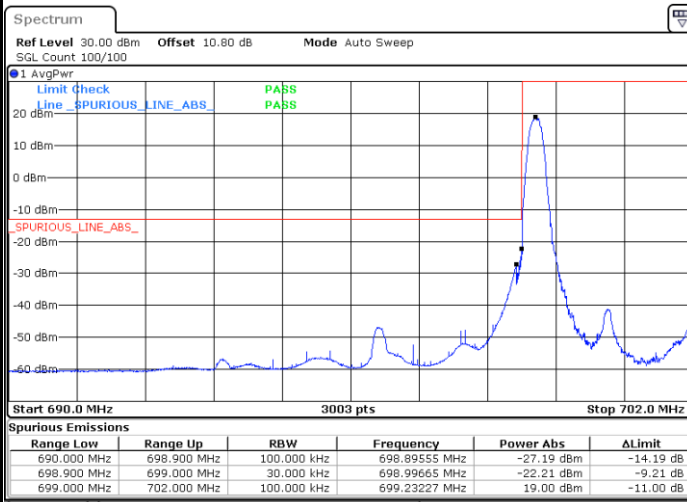


Date: 12.DEC.2020 00:30:00



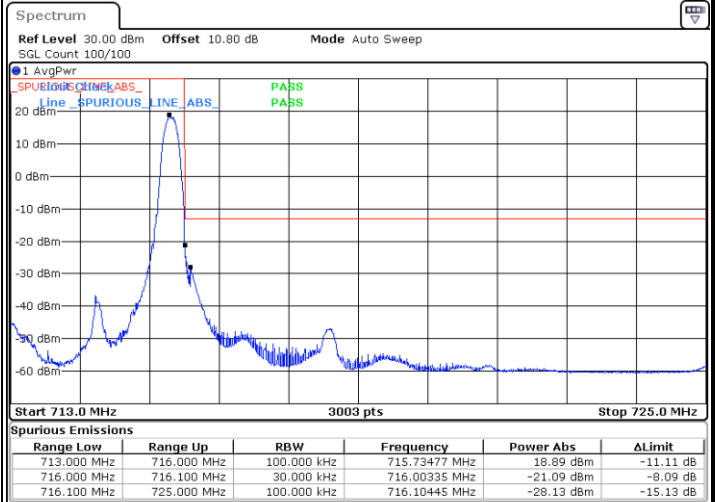
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



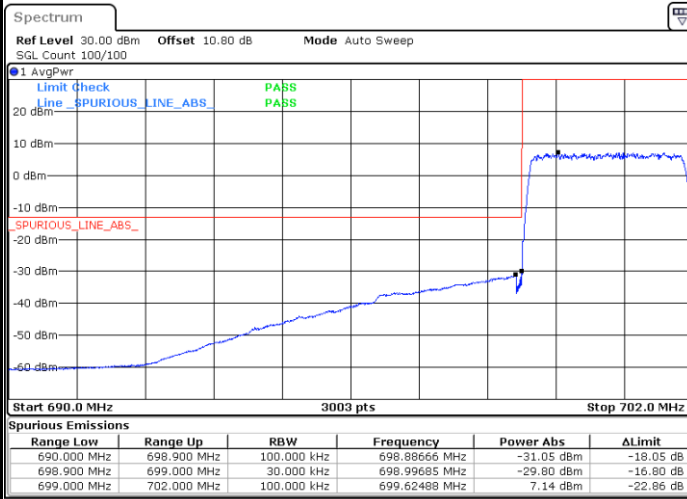
Date: 12.DEC.2020 00:34:48

Highest Band Edge / 1 RB



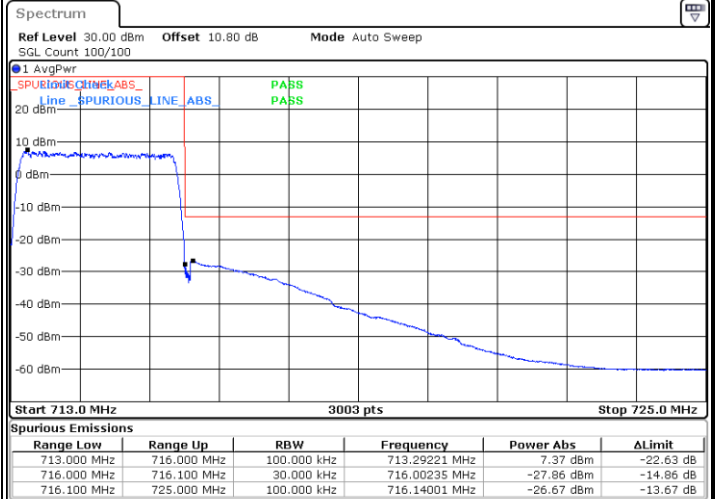
Date: 12.DEC.2020 00:37:14

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:33:47

Highest Band Edge / Full RB

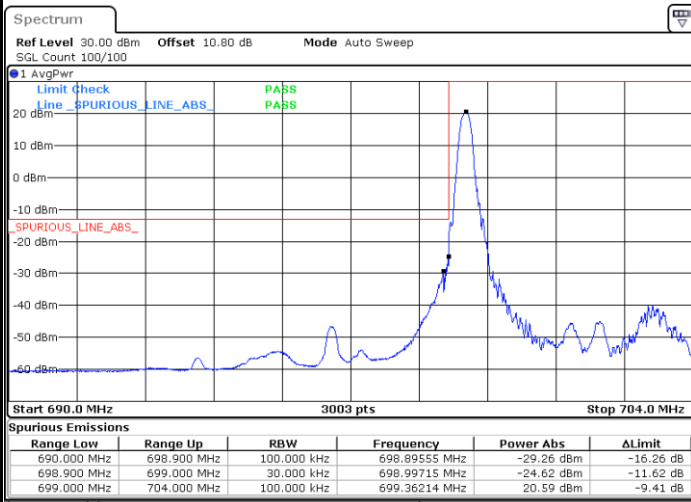


Date: 12.DEC.2020 00:36:12



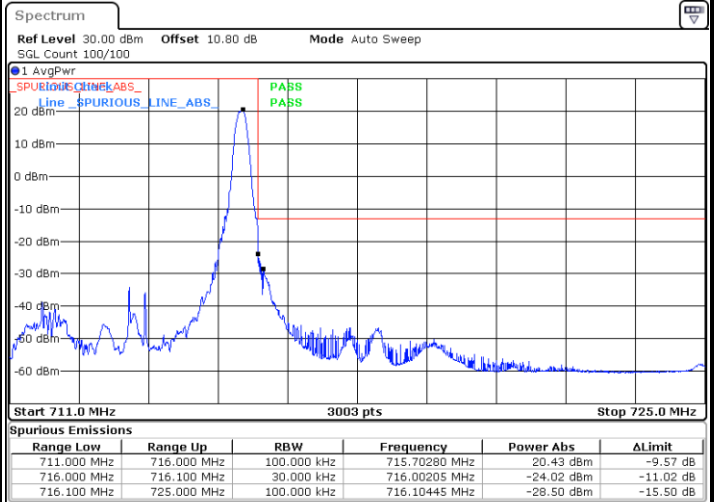
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



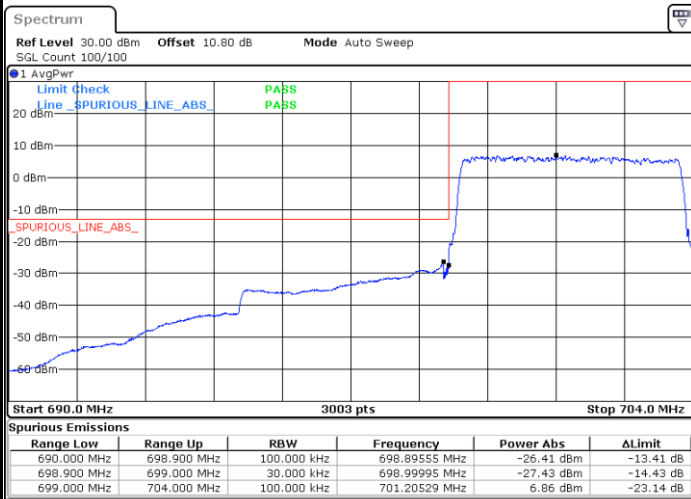
Date: 12.DEC.2020 00:45:51

Highest Band Edge / 1 RB



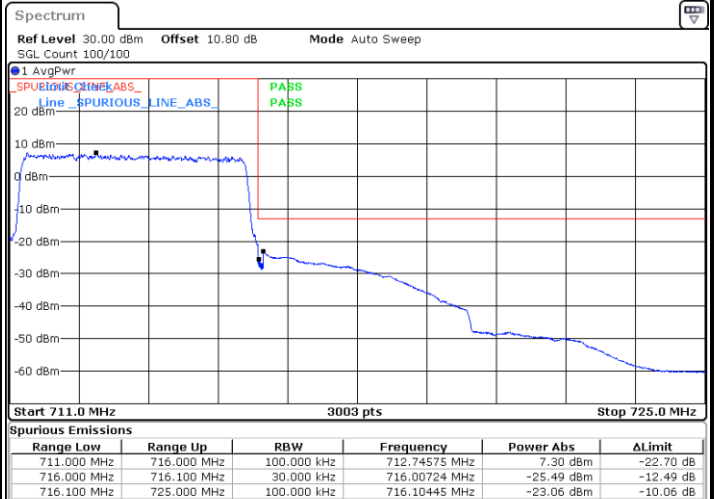
Date: 12.DEC.2020 00:51:04

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:42:46

Highest Band Edge / Full RB

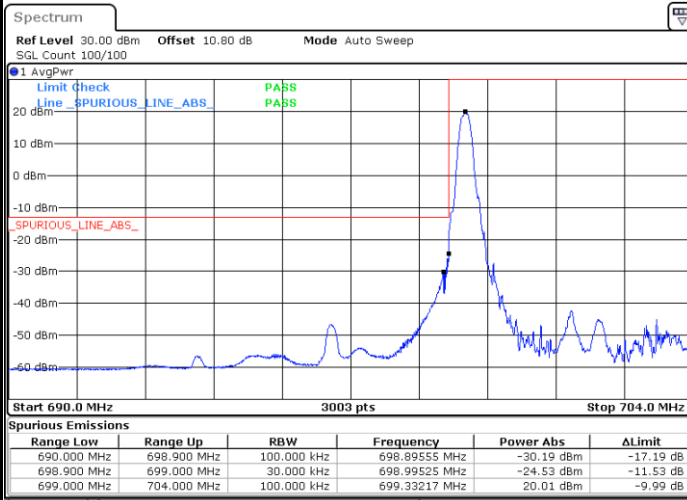


Date: 12.DEC.2020 00:49:01



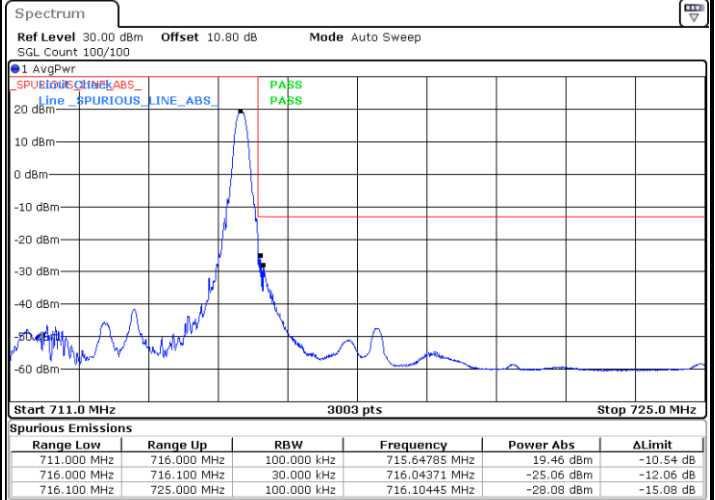
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



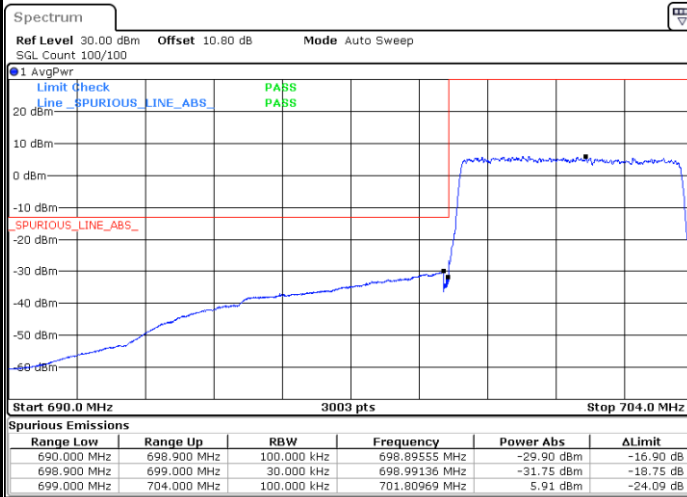
Date: 12.DEC.2020 00:44:49

Highest Band Edge / 1 RB



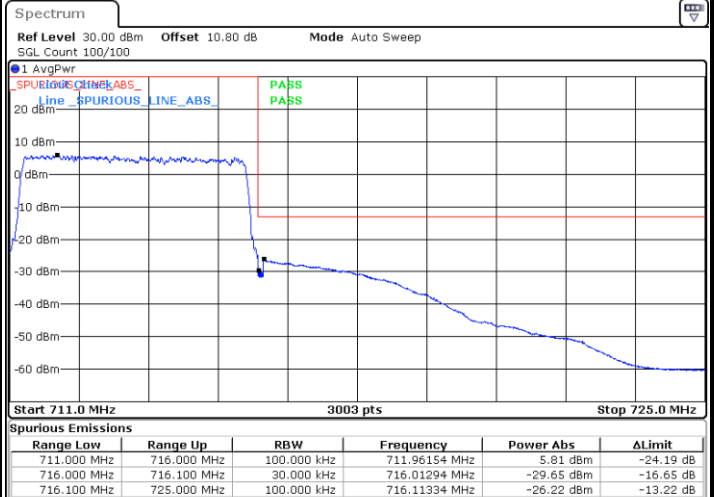
Date: 12.DEC.2020 00:52:06

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:43:48

Highest Band Edge / Full RB

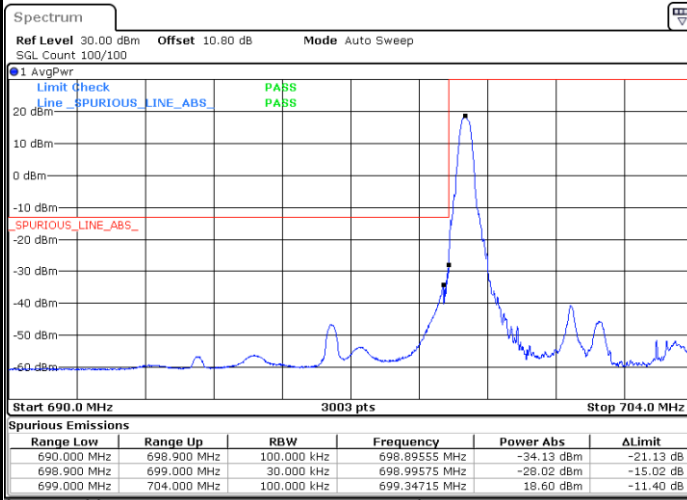


Date: 12.DEC.2020 00:50:02



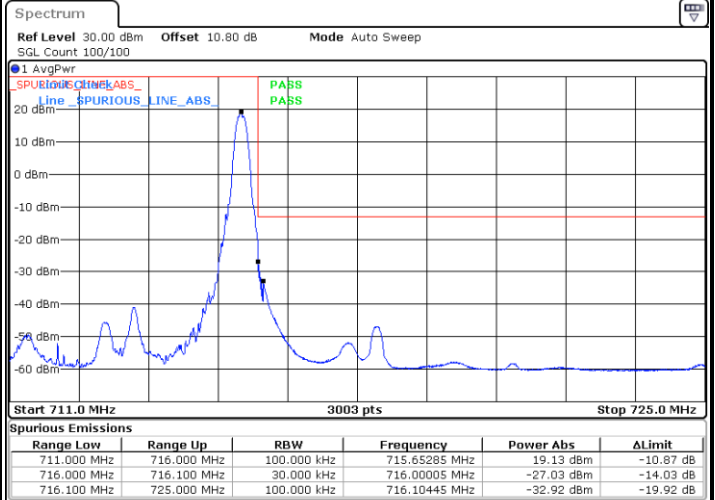
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



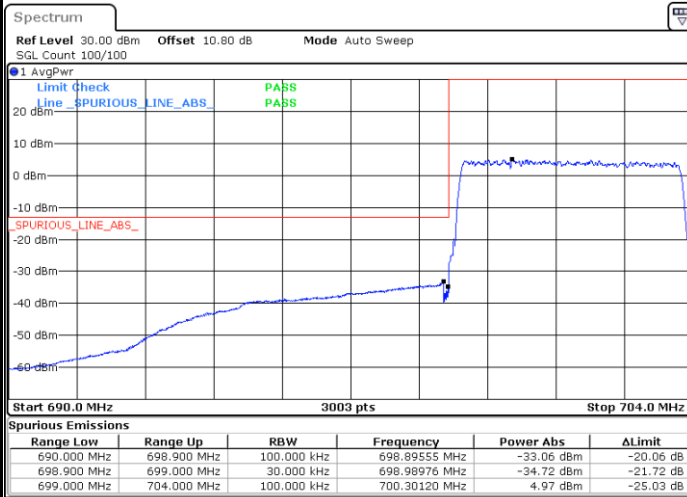
Date: 12.DEC.2020 00:39:19

Highest Band Edge / 1 RB



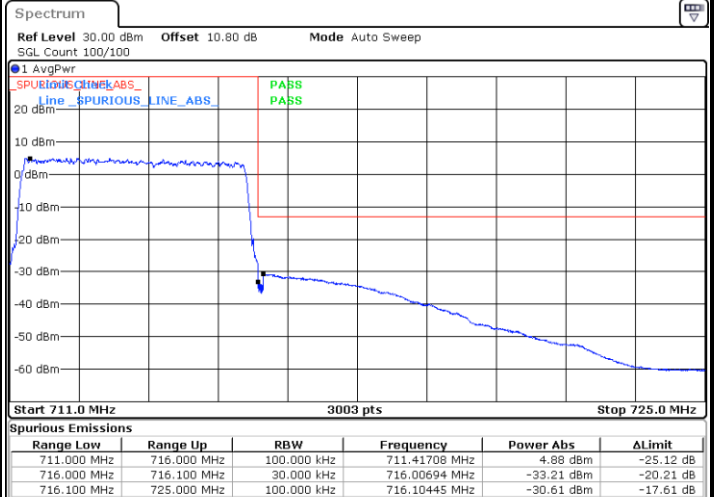
Date: 12.DEC.2020 00:41:44

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:38:17

Highest Band Edge / Full RB

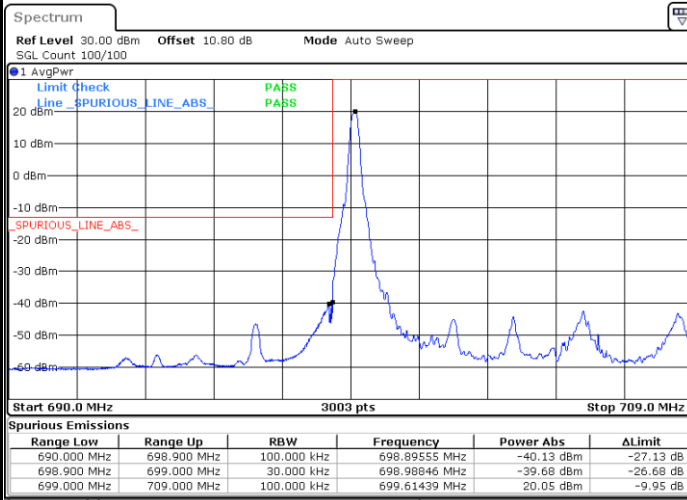


Date: 12.DEC.2020 00:40:43



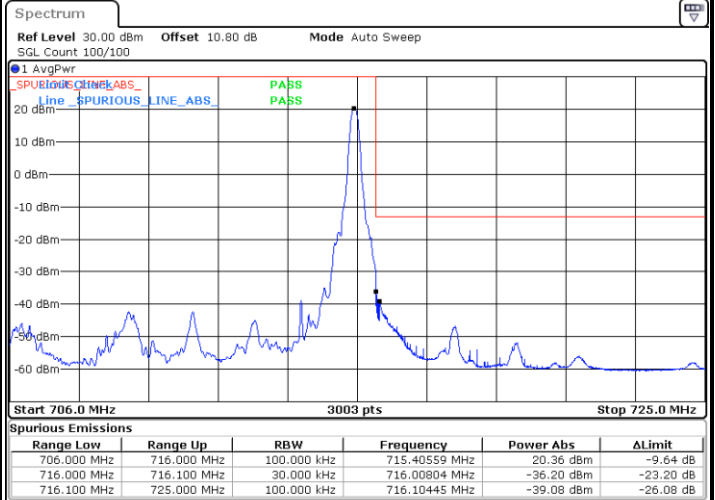
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



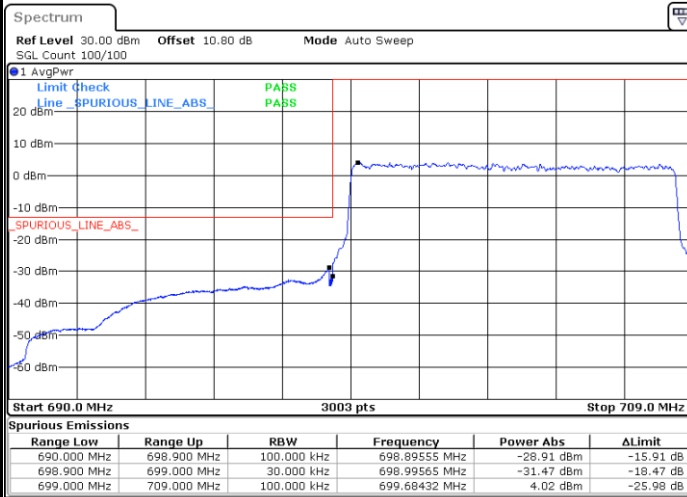
Date: 12.DEC.2020 00:56:55

Highest Band Edge / 1 RB



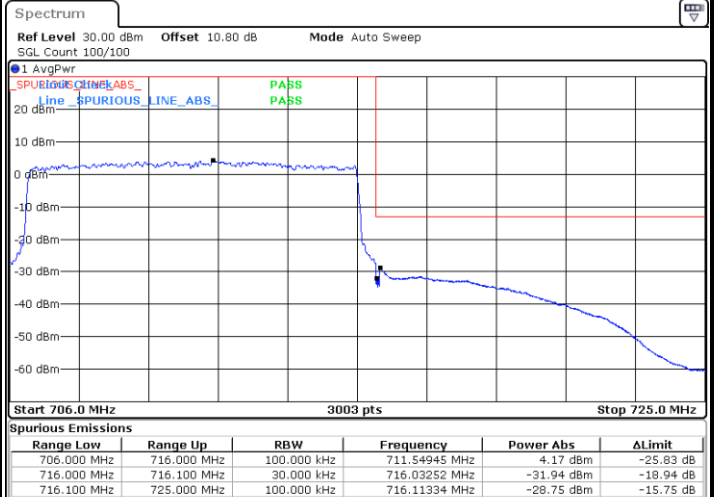
Date: 12.DEC.2020 01:03:10

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:53:51

Highest Band Edge / Full RB

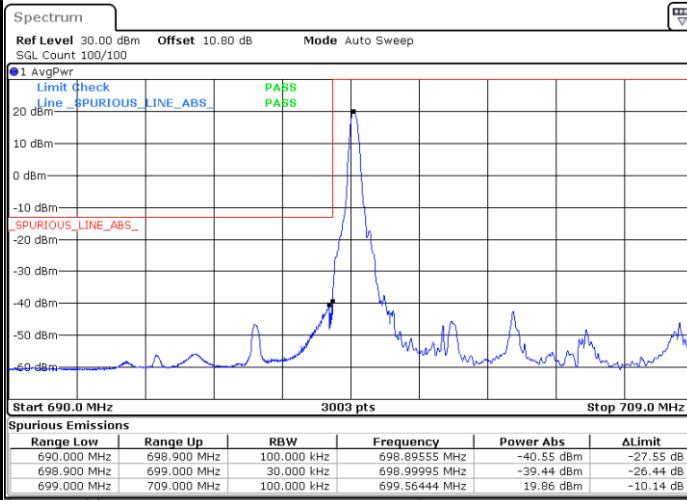


Date: 12.DEC.2020 01:00:06



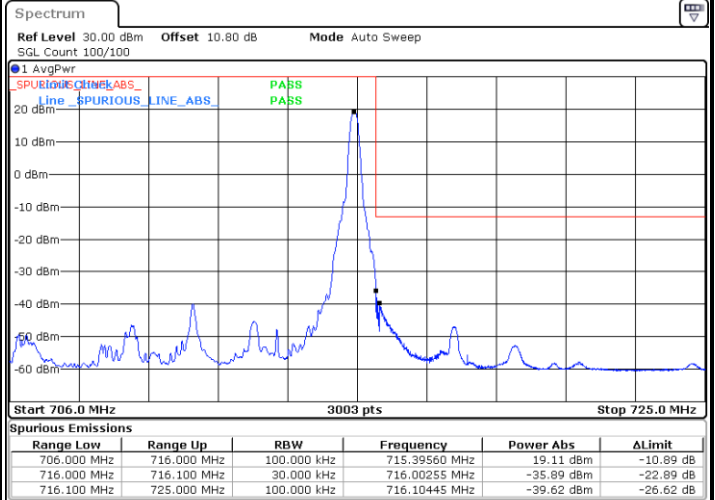
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



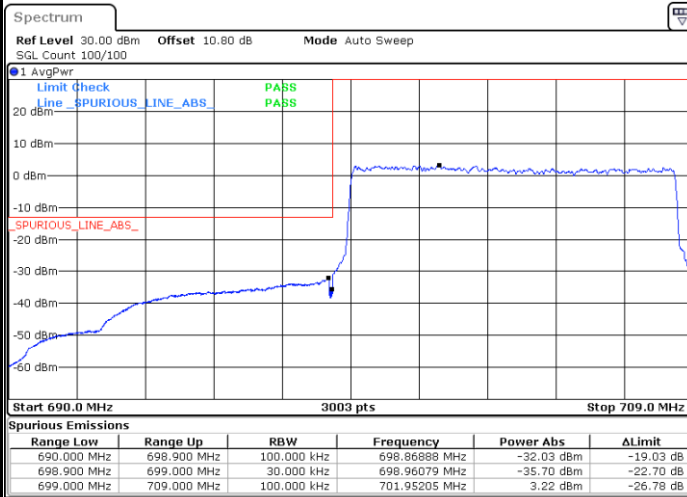
Date: 12.DEC.2020 00:55:54

Highest Band Edge / 1 RB



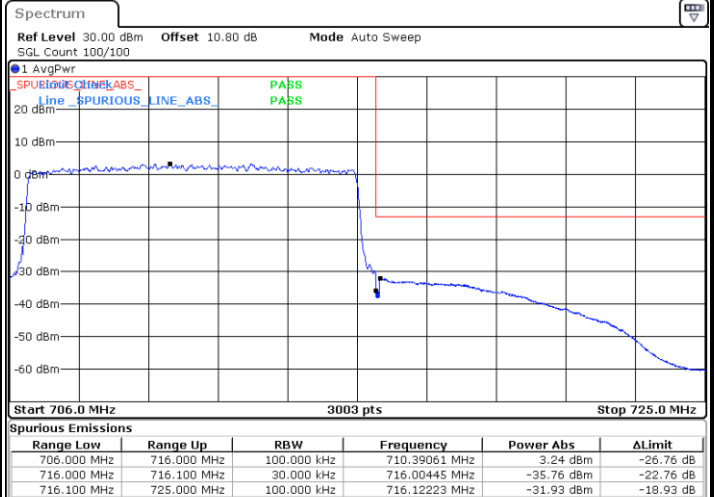
Date: 12.DEC.2020 01:02:09

Lowest Band Edge / Full RB



Date: 12.DEC.2020 00:54:52

Highest Band Edge / Full RB

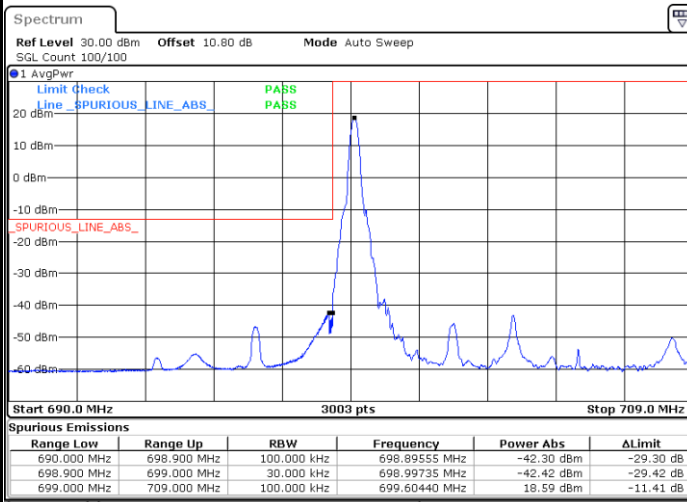


Date: 12.DEC.2020 01:01:07



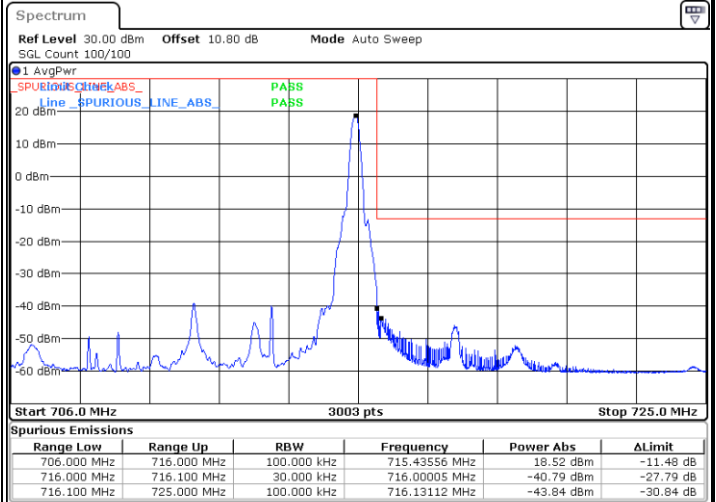
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



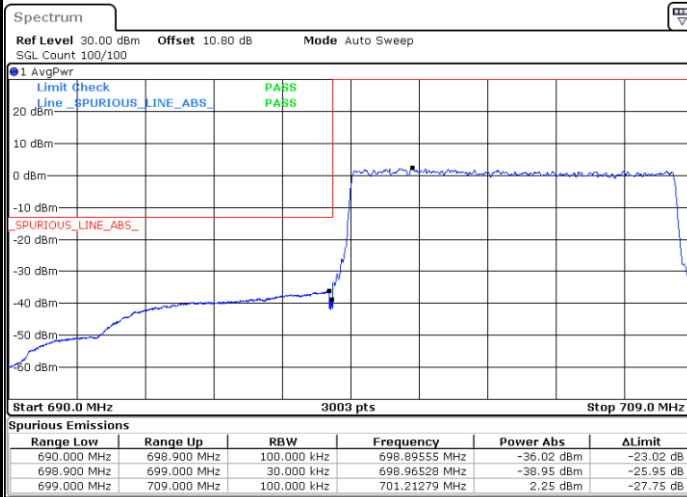
Date: 12.DEC.2020 01:05:56

Highest Band Edge / 1 RB



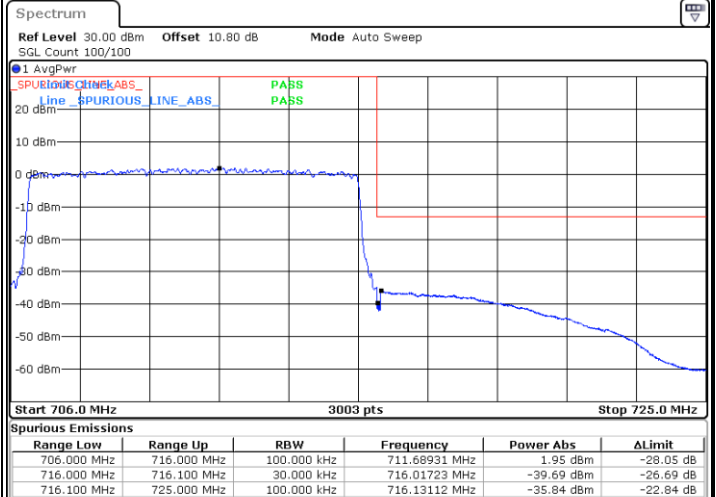
Date: 12.DEC.2020 01:08:21

Lowest Band Edge / Full RB



Date: 12.DEC.2020 01:04:54

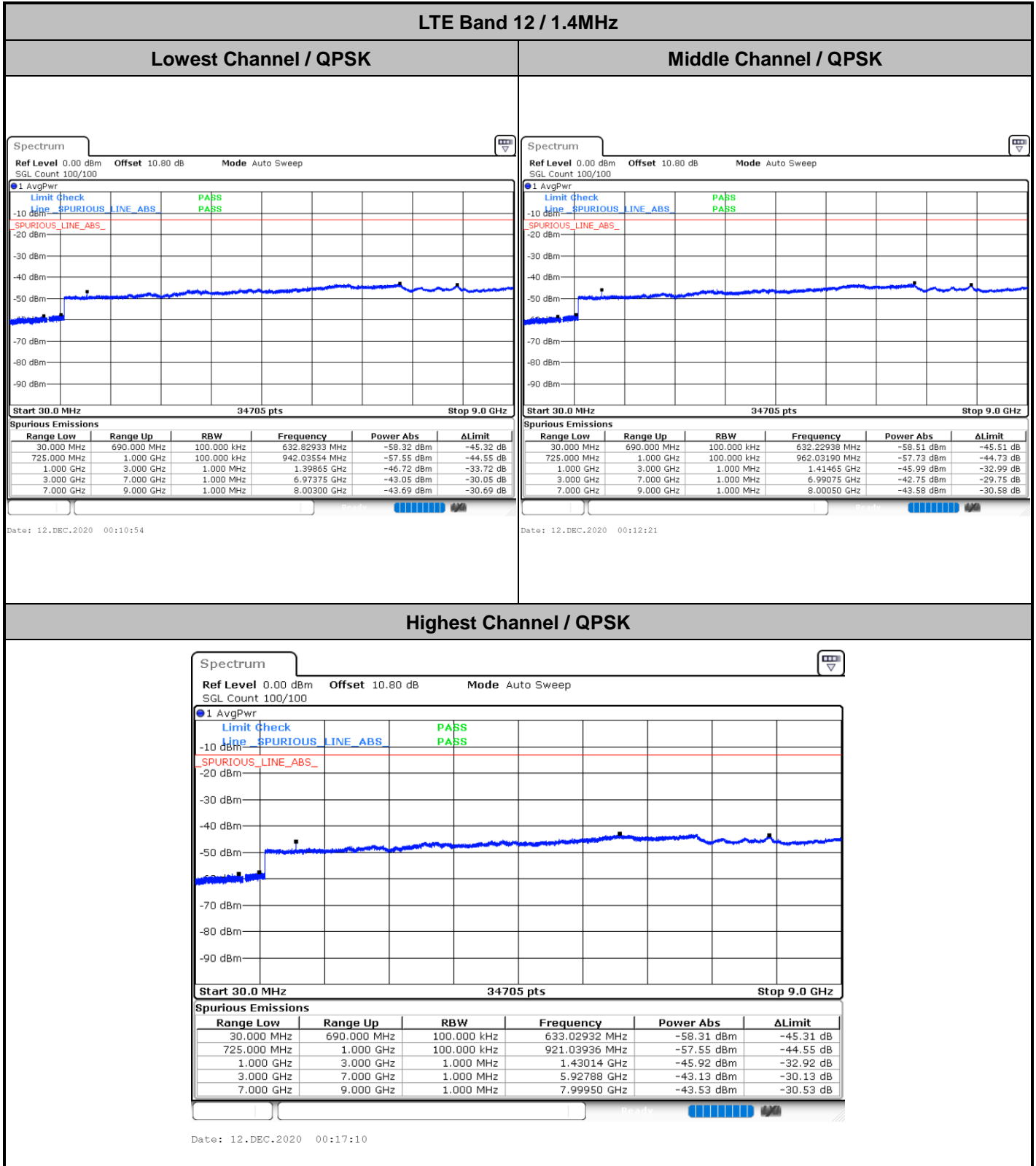
Highest Band Edge / Full RB



Date: 12.DEC.2020 01:07:20



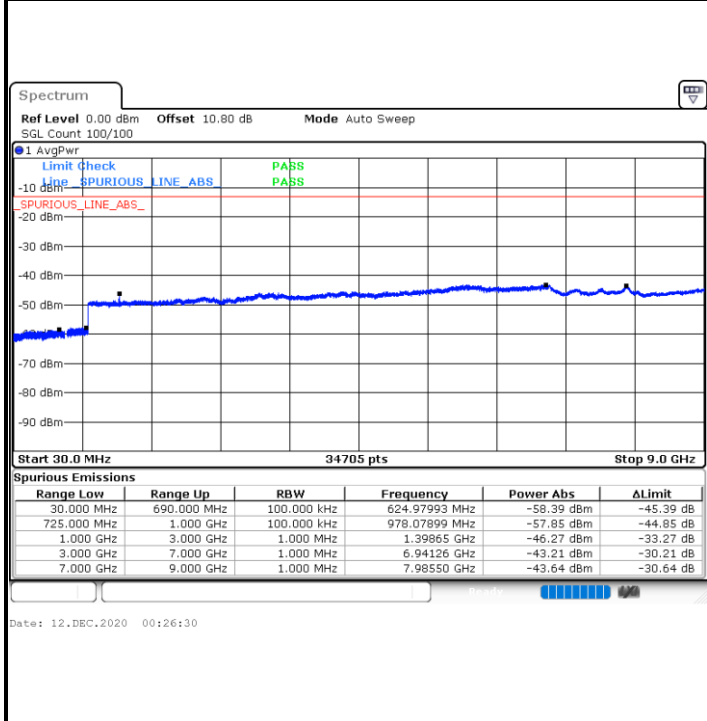
Conducted Spurious Emission



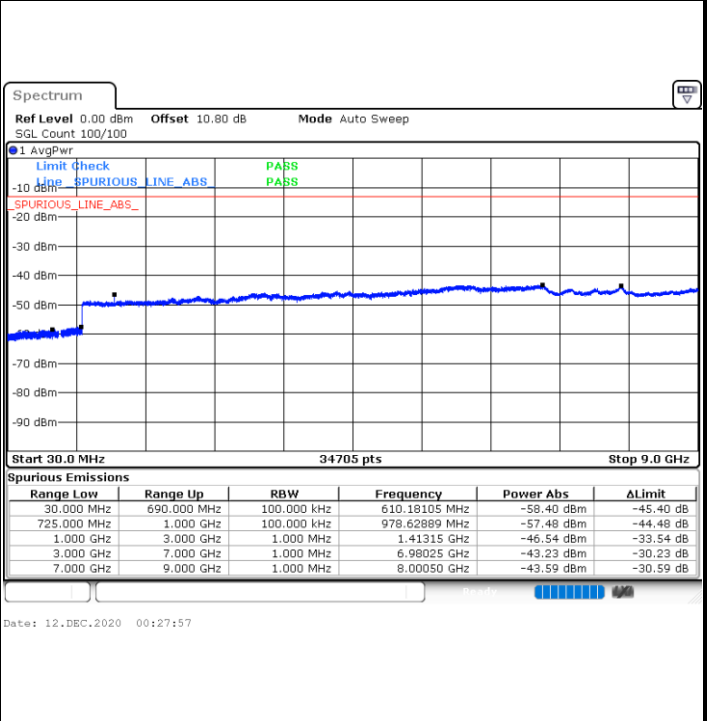


LTE Band 12 / 3MHz

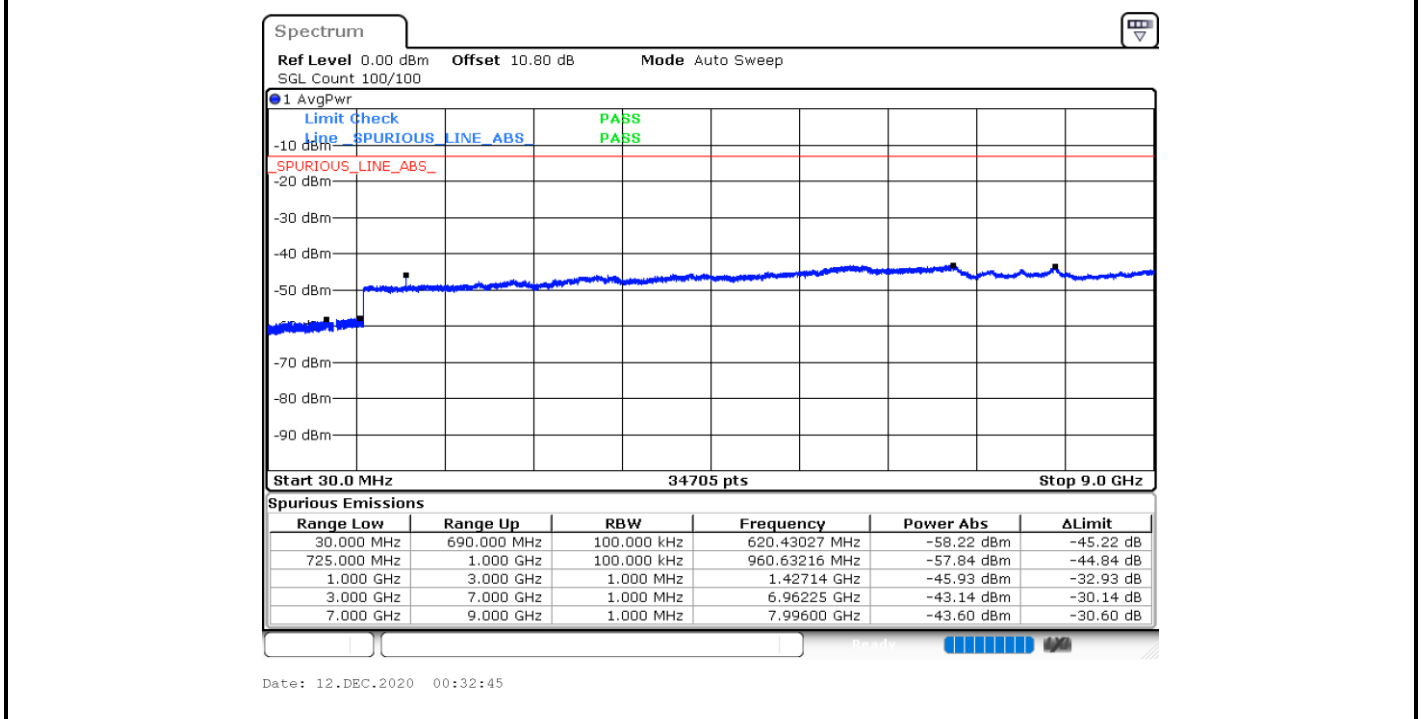
Lowest Channel / QPSK



Middle Channel / QPSK



Highest Channel / QPSK

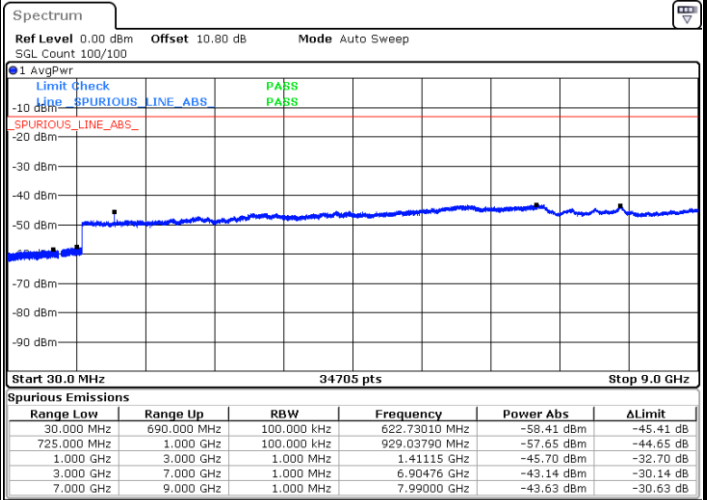
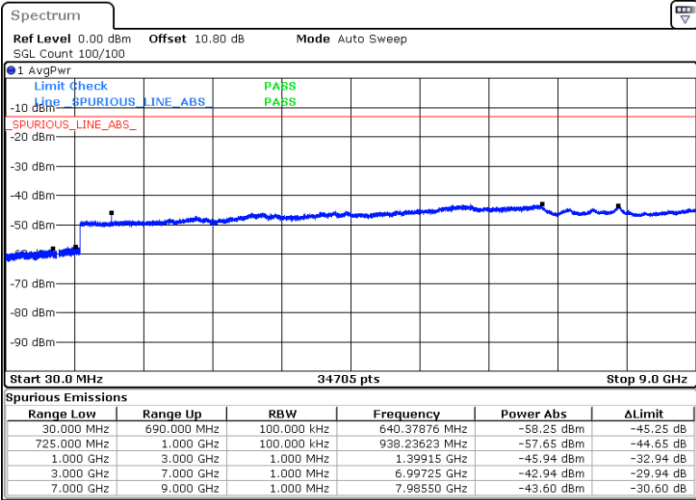




LTE Band 12 / 5MHz

Lowest Channel / QPSK

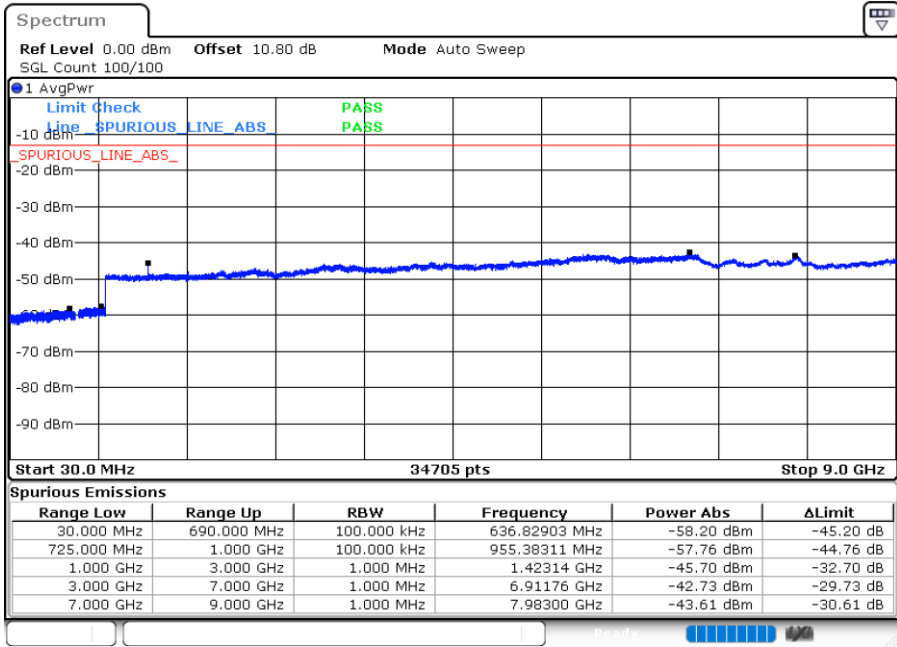
Middle Channel / QPSK



Date: 12.DEC.2020 00:46:32

Date: 12.DEC.2020 00:47:59

Highest Channel / QPSK

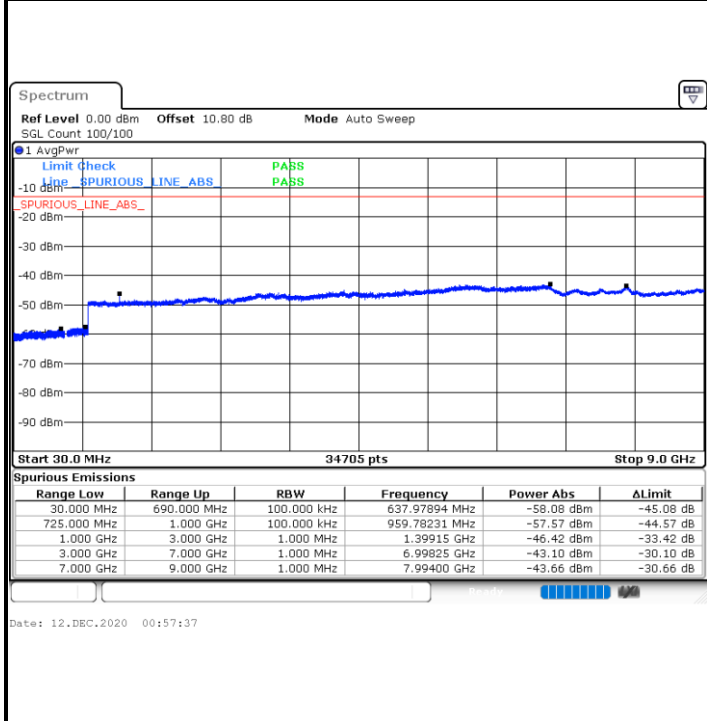


Date: 12.DEC.2020 00:52:47

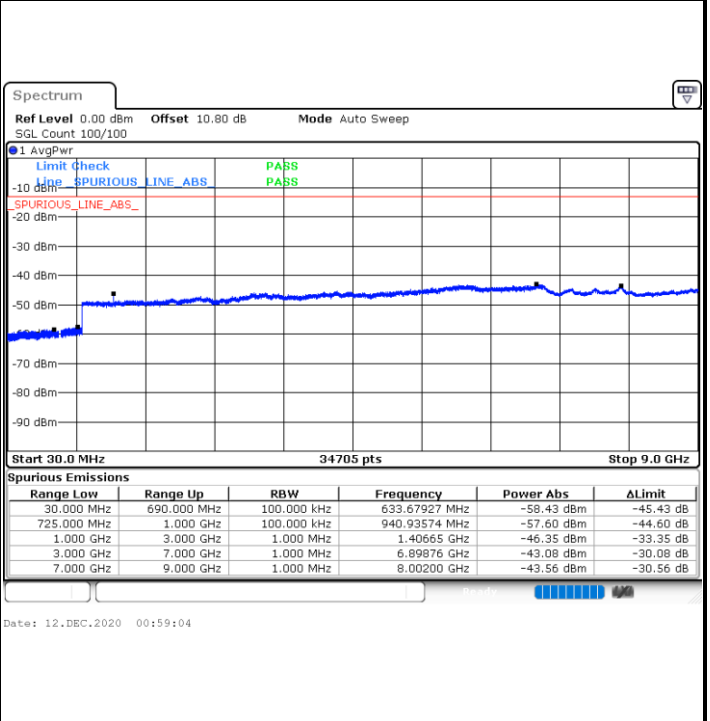


LTE Band 12 / 10MHz

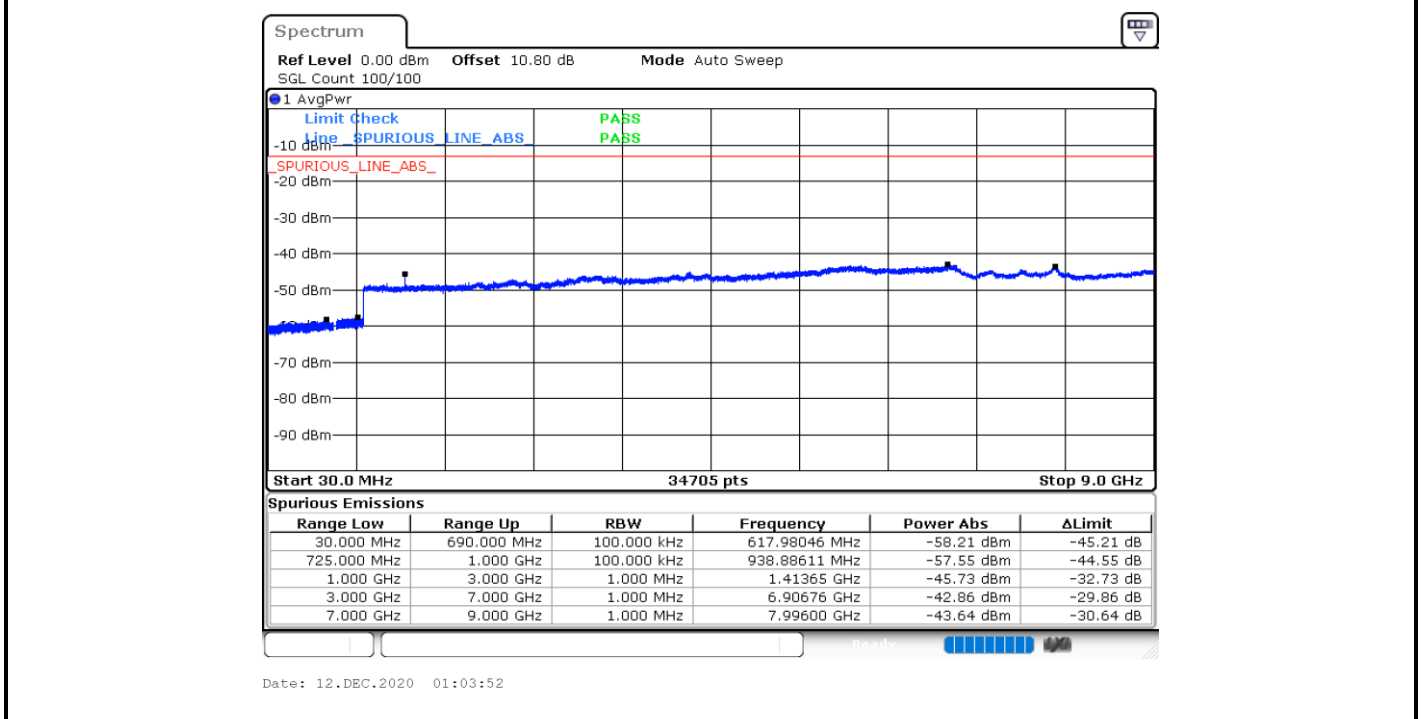
Lowest Channel / QPSK



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	0.0008	PASS
40	Normal Voltage	0.0047	
30	Normal Voltage	0.0172	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0154	
-20	Normal Voltage	0.0020	
-30	Normal Voltage	0.0143	
20	Maximum Voltage	0.0069	
20	Normal Voltage	0.0008	
20	Battery End Point	0.0045	

Note:

- 1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

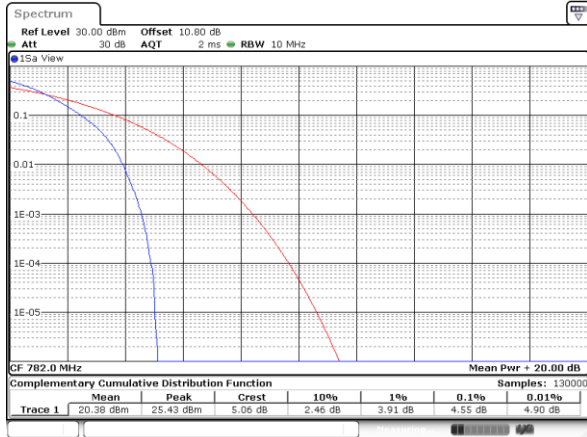
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.55	5.86	6.43	PASS



LTE Band 13 / 10MHz / QPSK

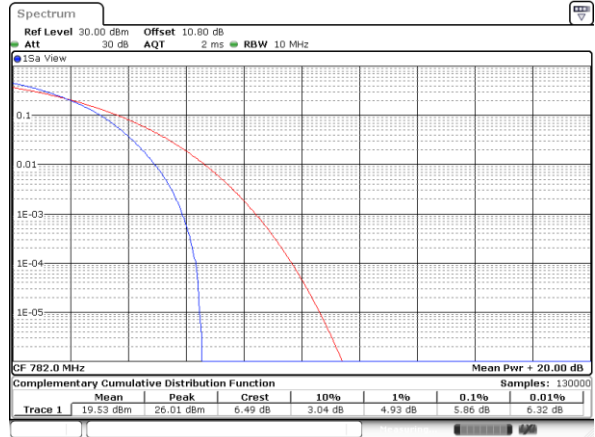
Middle Channel / Full RB



Date: 13, DEC, 2020 11:01:40

LTE Band 13 / 10MHz / 16QAM

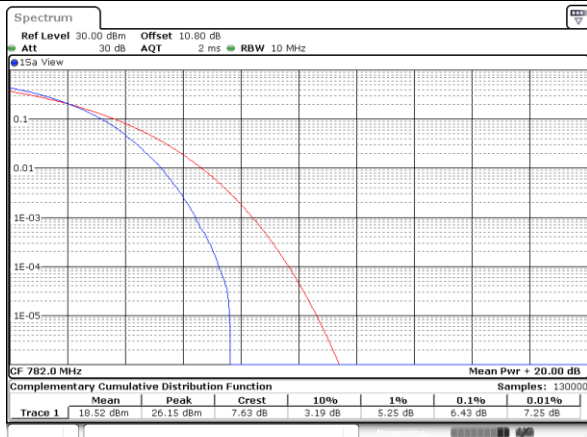
Middle Channel / Full RB



Date: 13, DEC, 2020 11:01:26

LTE Band 13 / 10MHz / 64QAM

Middle Channel / Full RB



Date: 13, DEC, 2020 11:01:13



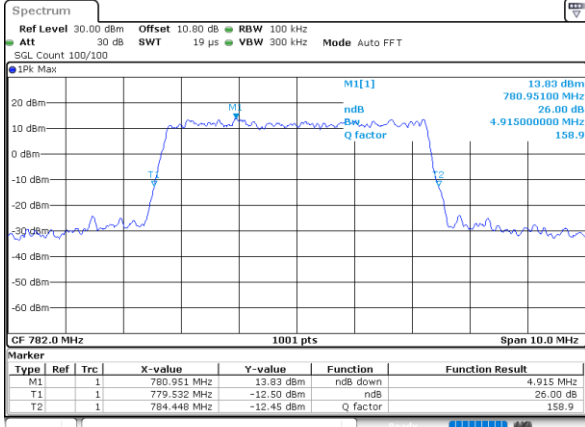
26dB Bandwidth

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	-	-	-	-	4.92	4.92	9.71	9.75	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.89	-	9.71	-	-	-	-	-



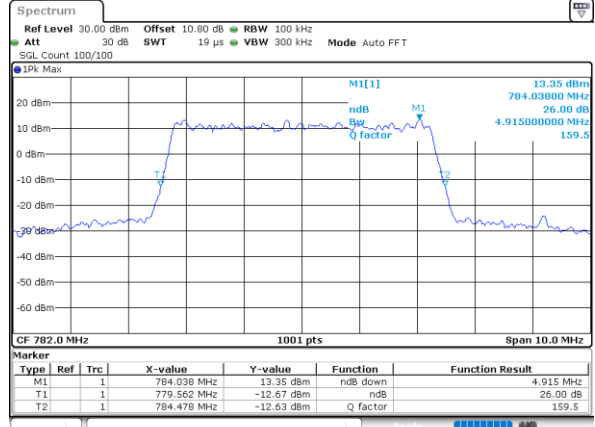
LTE Band 13

Middle Channel / 5MHz / QPSK



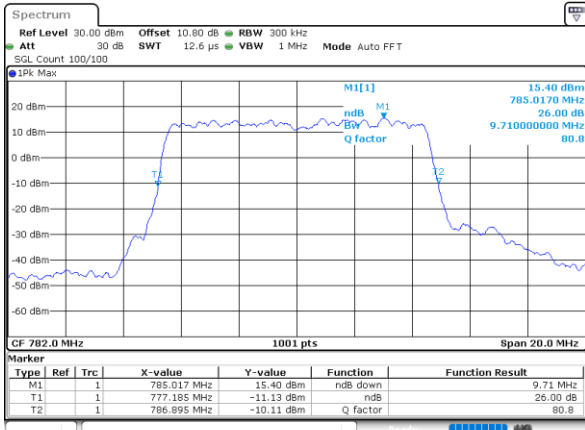
Date: 13.DEC.2020 09:19:13

Middle Channel / 5MHz / 16QAM



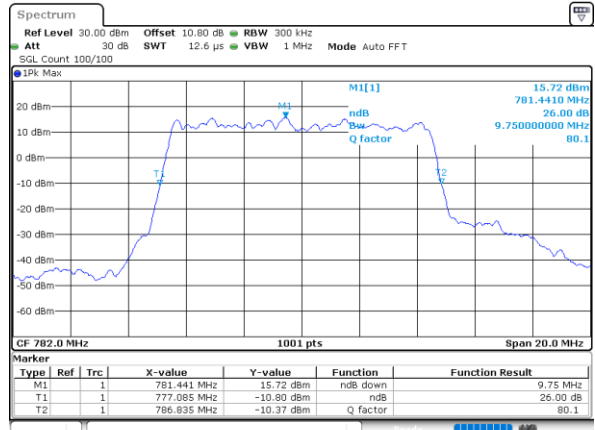
Date: 13.DEC.2020 09:19:24

Middle Channel / 10MHz / QPSK



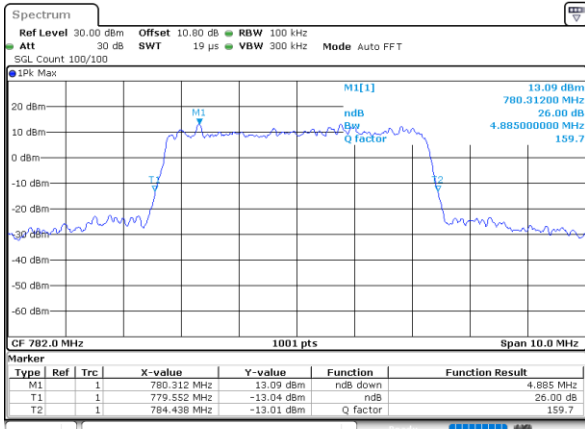
Date: 13.DEC.2020 09:34:58

Middle Channel / 10MHz / 16QAM



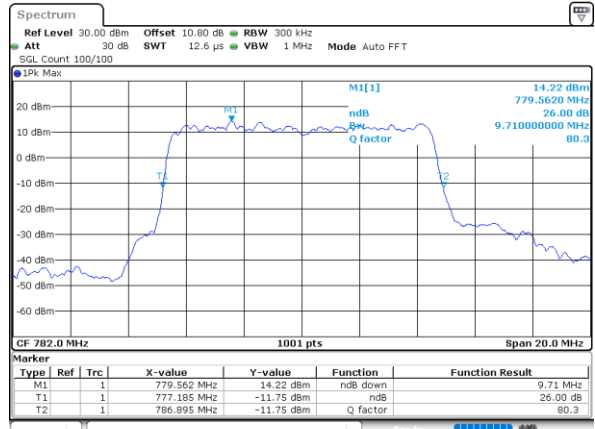
Date: 13.DEC.2020 09:34:46

Middle Channel / 5MHz / 64QAM



Date: 13.DEC.2020 09:30:37

Middle Channel / 10MHz / 64QAM



Date: 13.DEC.2020 09:45:54



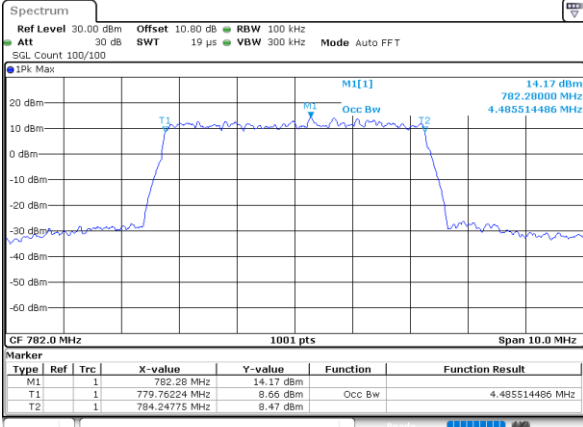
Occupied Bandwidth

Mode	LTE Band 13 : 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	-	-	-	-	4.49	4.50	8.99	9.01	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.49	-	8.95	-	-	-	-	-



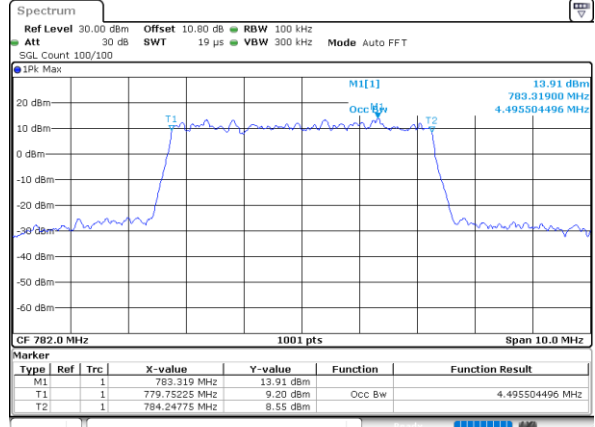
LTE Band 13

Middle Channel / 5MHz / QPSK



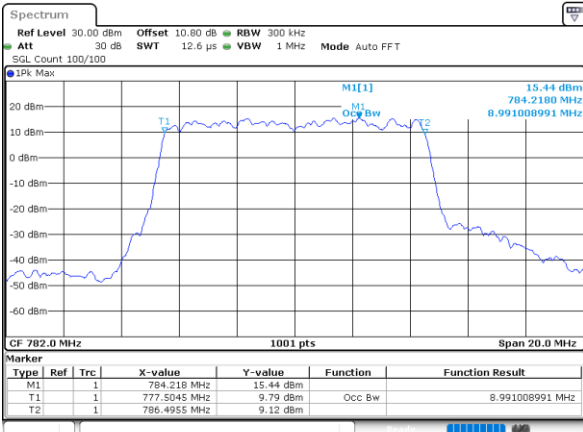
Date: 13.DEC.2020 09:19:47

Middle Channel / 5MHz / 16QAM



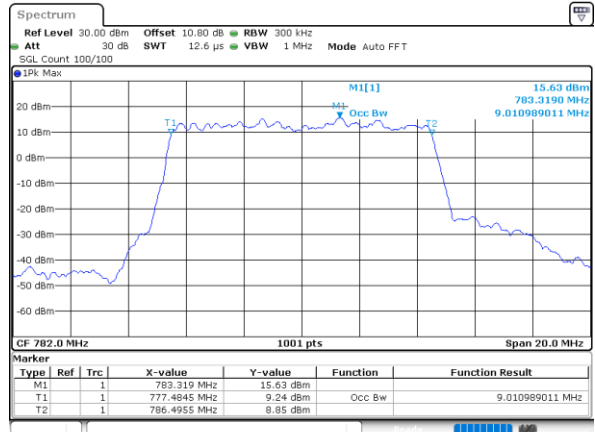
Date: 13.DEC.2020 09:19:36

Middle Channel / 10MHz / QPSK



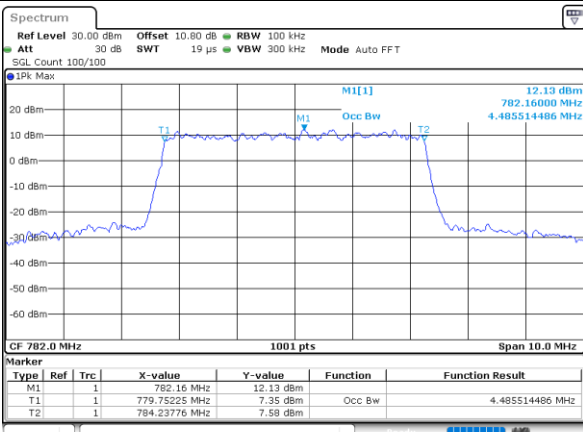
Date: 13.DEC.2020 09:34:23

Middle Channel / 10MHz / 16QAM



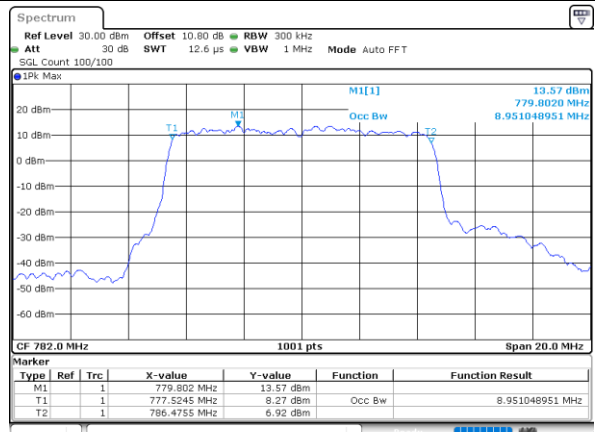
Date: 13.DEC.2020 09:34:35

Middle Channel / 5MHz / 64QAM



Date: 13.DEC.2020 09:30:48

Middle Channel / 10MHz / 64QAM



Date: 13.DEC.2020 09:45:43

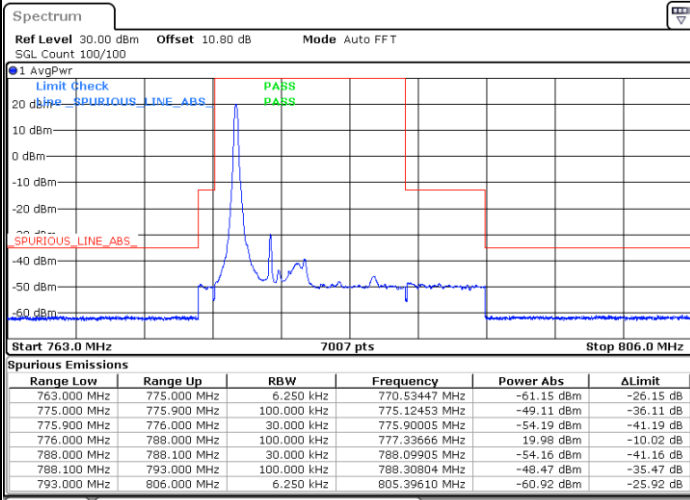


Conducted Band Edge

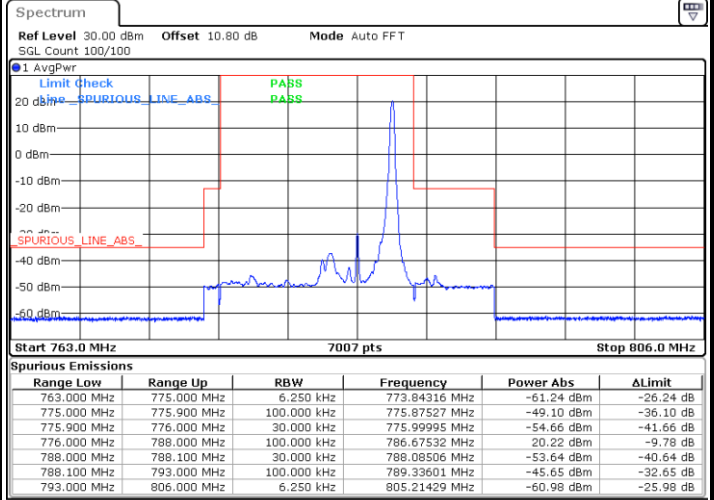
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



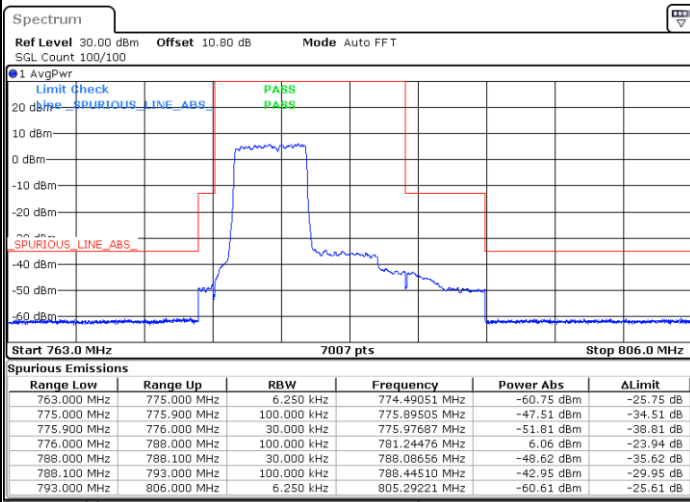
Date: 13.DEC.2020 09:18:08



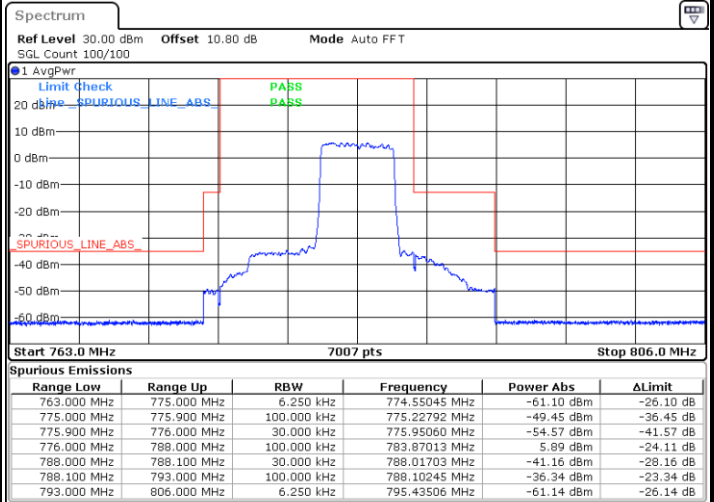
Date: 13.DEC.2020 09:26:33

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 13.DEC.2020 09:13:02



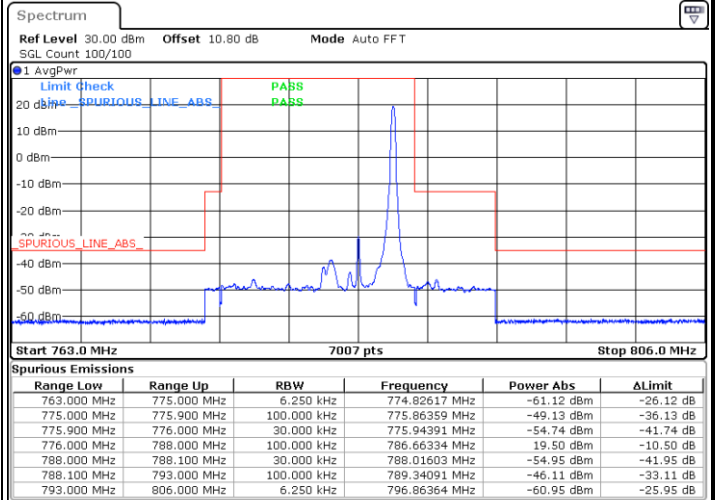
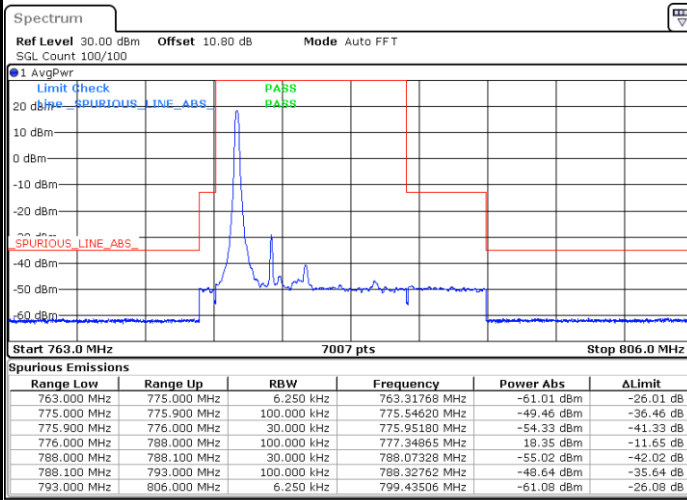
Date: 13.DEC.2020 09:21:27



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

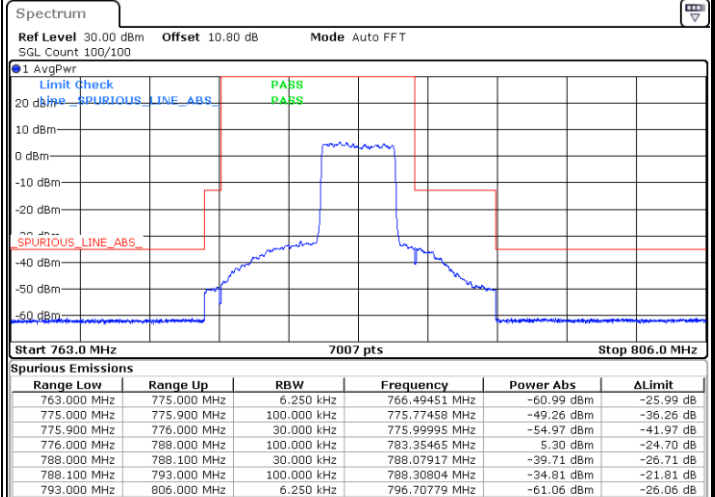
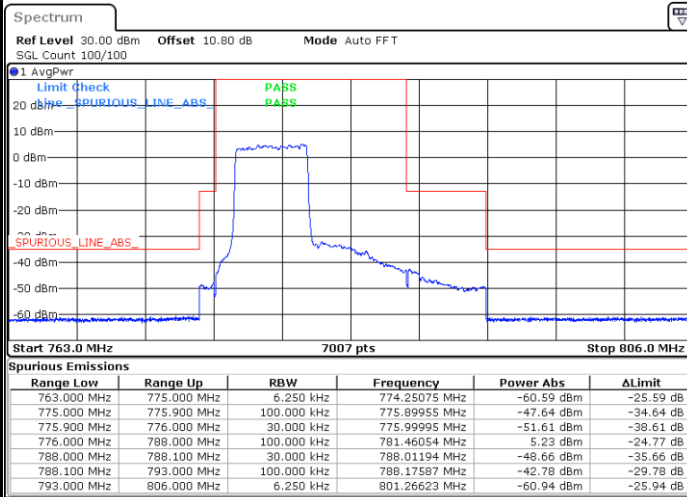


Date: 13.DEC.2020 09:16:26

Date: 13.DEC.2020 09:24:51

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 13.DEC.2020 09:14:44

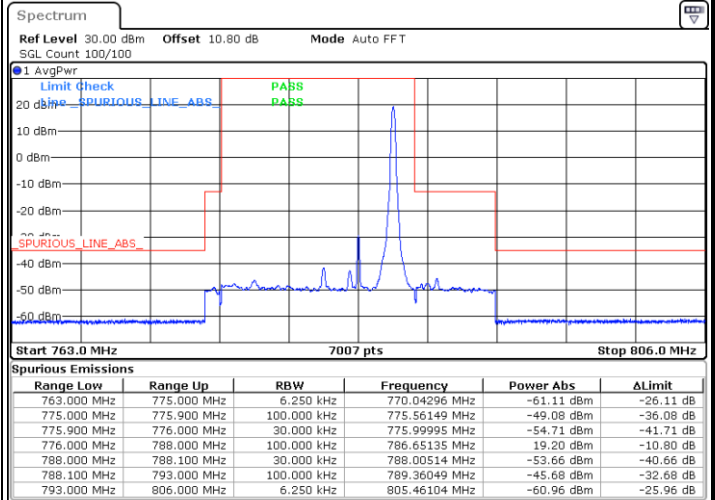
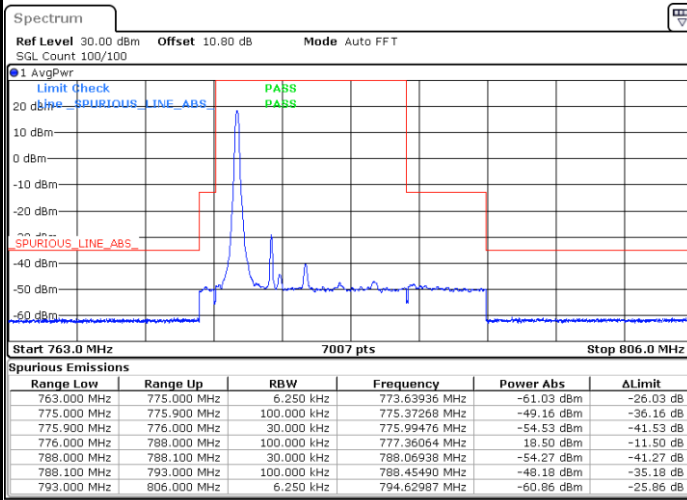
Date: 13.DEC.2020 09:23:09



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

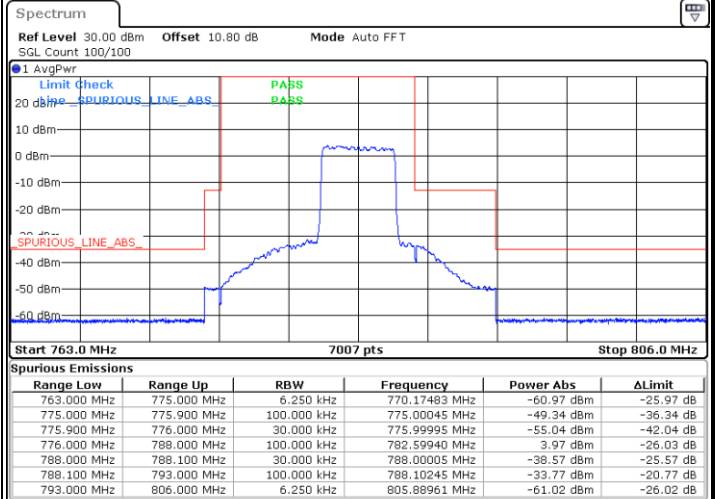
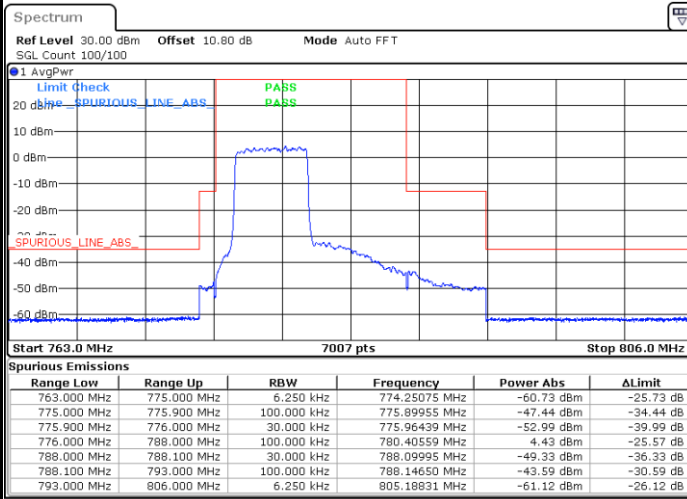


Date: 13.DEC.2020 09:30:24

Date: 13.DEC.2020 09:34:10

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



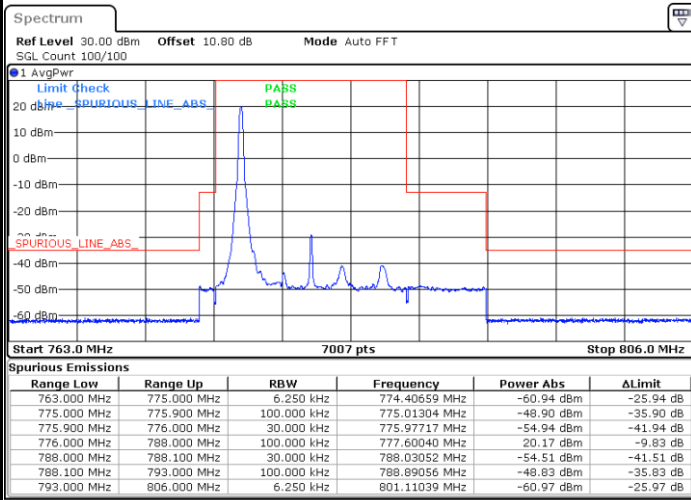
Date: 13.DEC.2020 09:28:42

Date: 13.DEC.2020 09:32:28



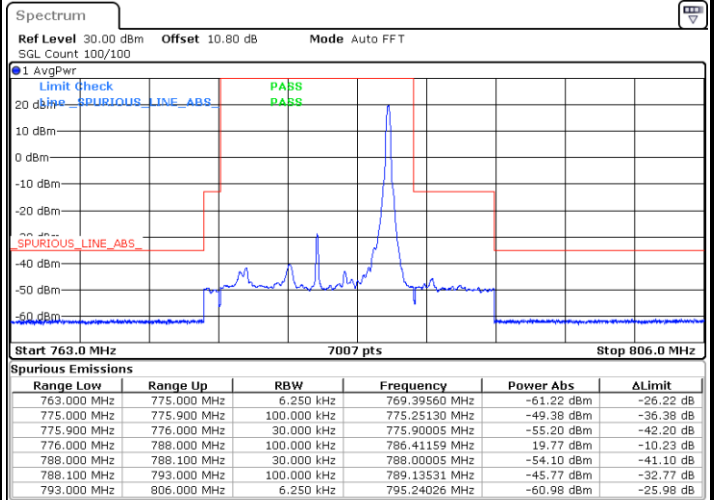
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



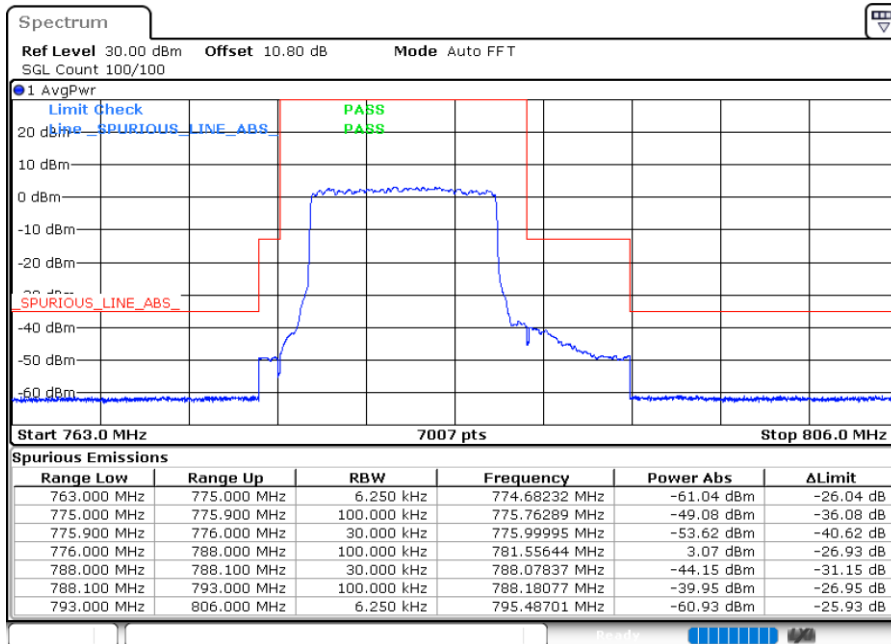
Date: 13.DEC.2020 09:41:42

Highest Band Edge / 1 RB



Date: 13.DEC.2020 09:43:23

Band Edge / Full RB

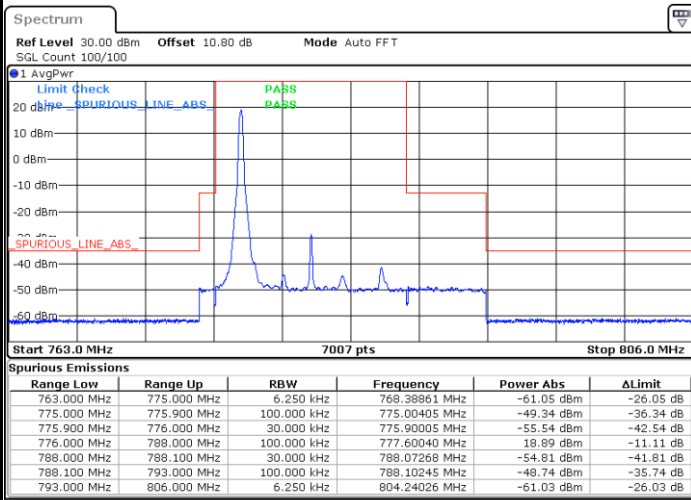


Date: 13.DEC.2020 09:36:38



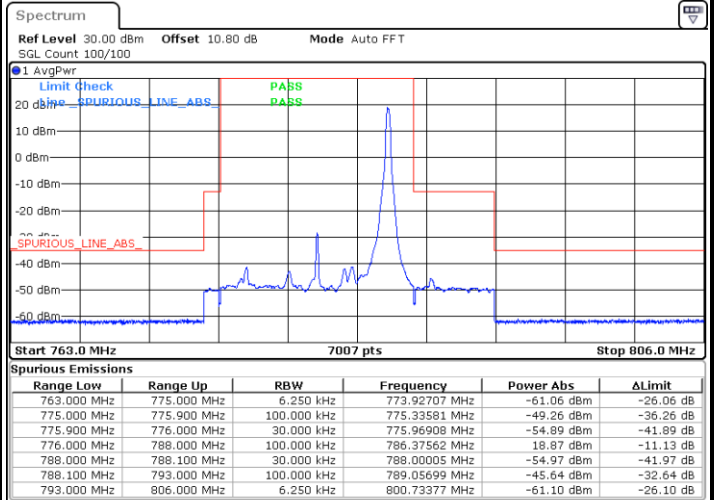
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



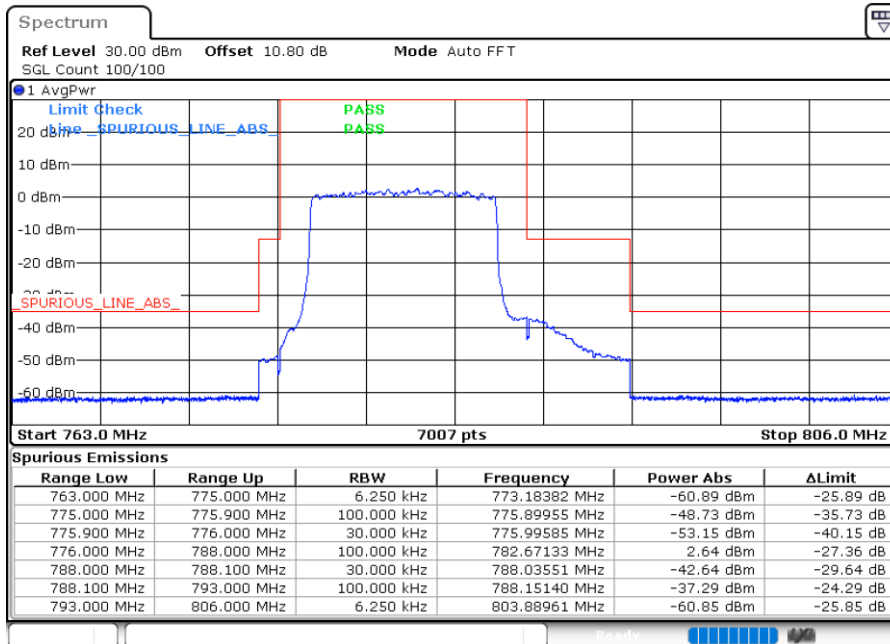
Date: 13.DEC.2020 09:40:00

Highest Band Edge / 1 RB



Date: 13.DEC.2020 09:45:04

Band Edge / Full RB



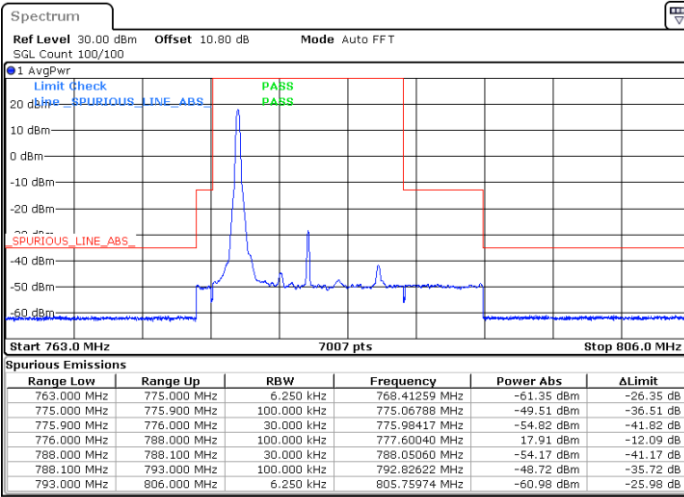
Date: 13.DEC.2020 09:38:19



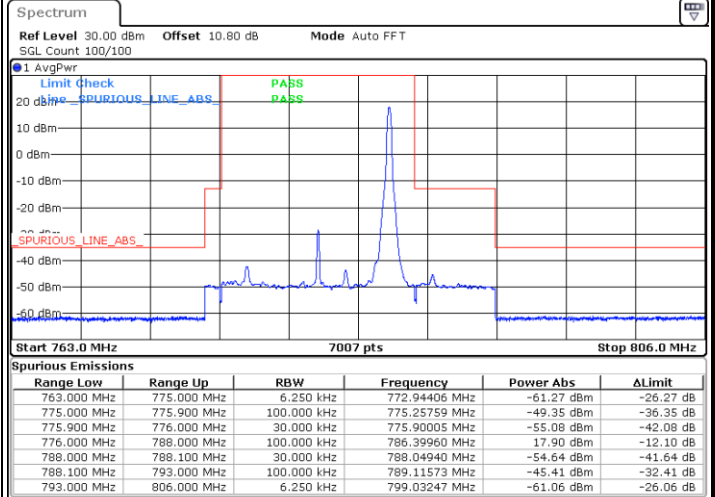
LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

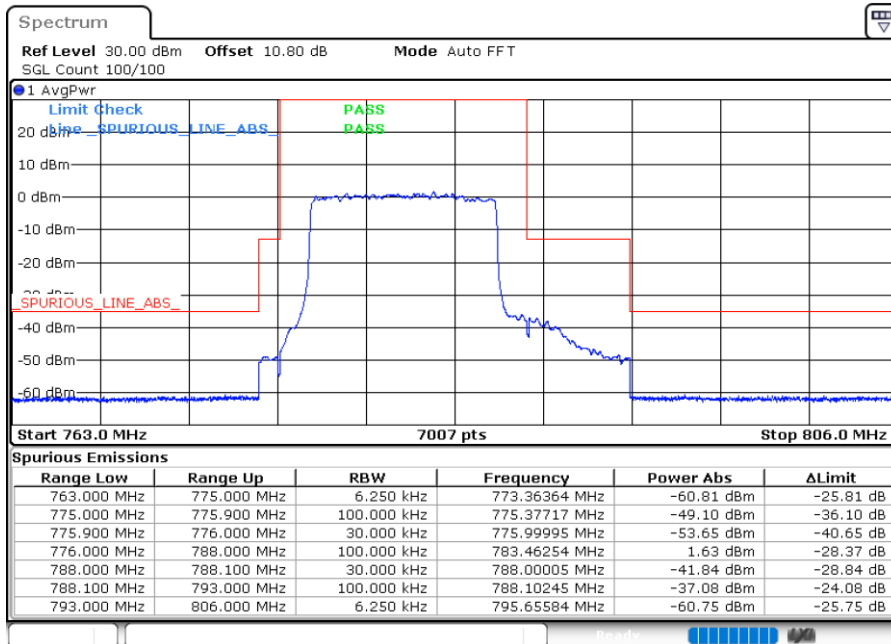


Date: 13.DEC.2020 09:49:15



Date: 13.DEC.2020 09:50:57

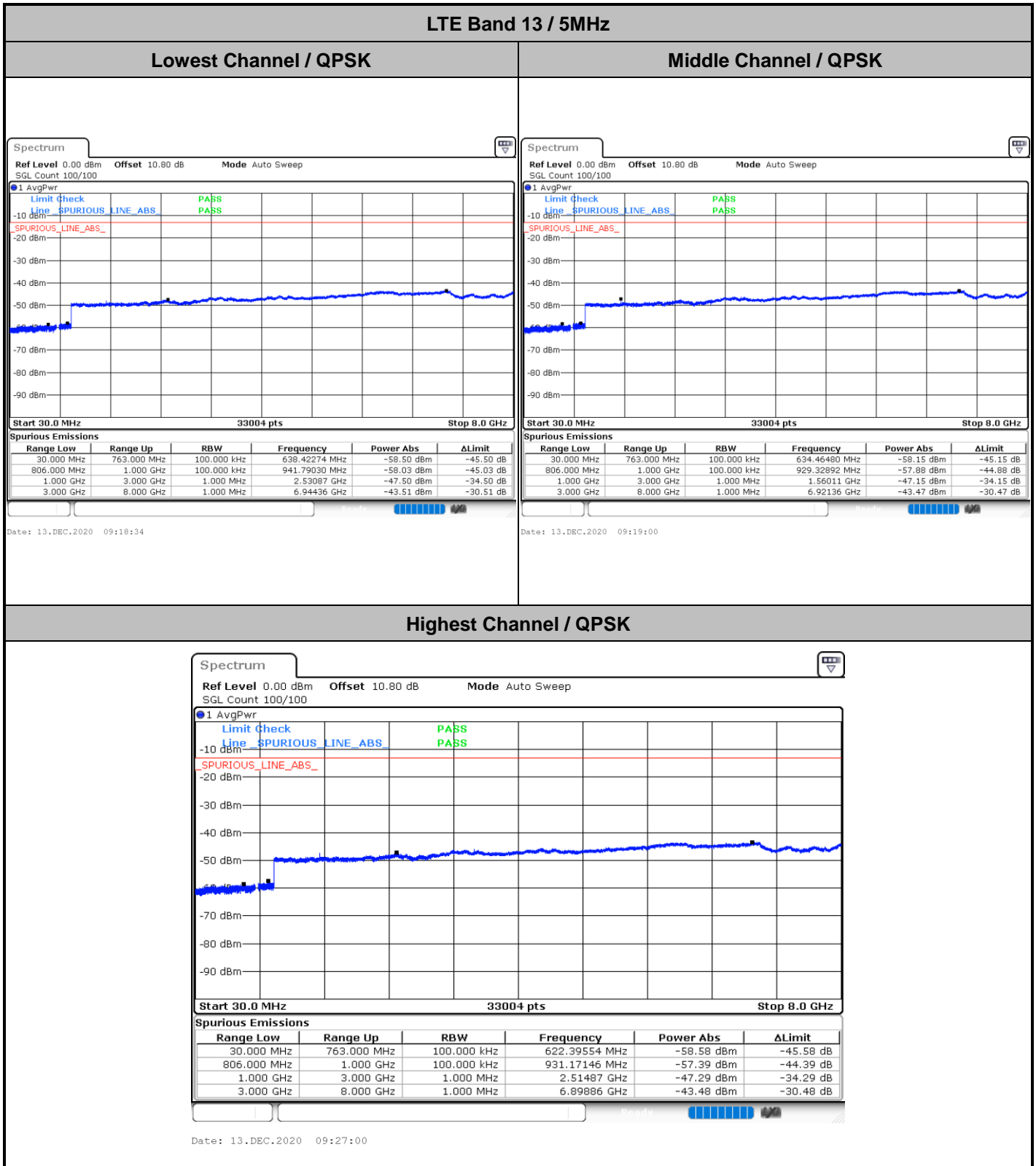
Band Edge / Full RB



Date: 13.DEC.2020 09:47:34



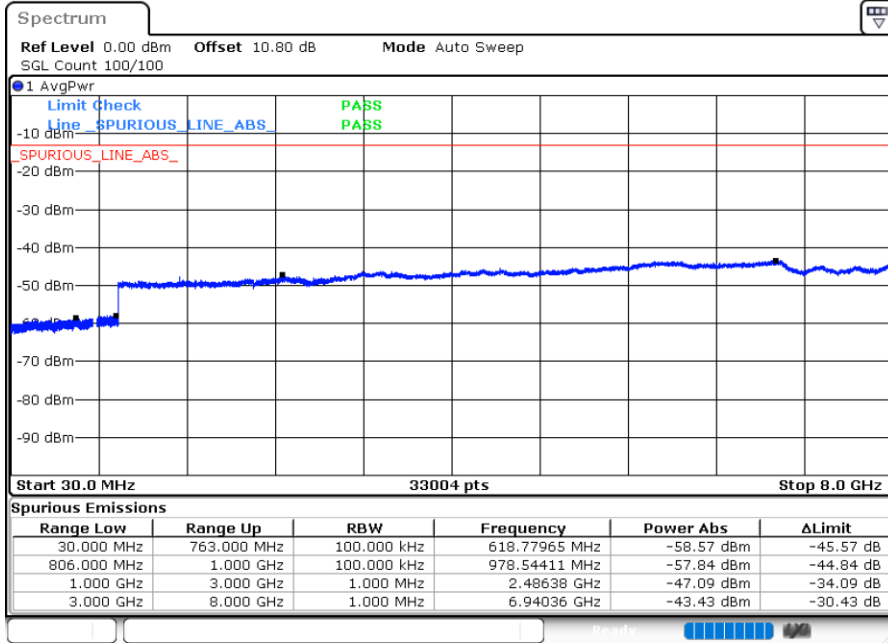
Conducted Spurious Emission





LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 13.DEC.2020 09:45:30



Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0029	PASS
40	Normal Voltage	0.0024	
30	Normal Voltage	0.0110	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0029	
0	Normal Voltage	0.0145	
-10	Normal Voltage	0.0130	
-20	Normal Voltage	0.0125	
-30	Normal Voltage	0.0159	
20	Maximum Voltage	0.0134	
20	Normal Voltage	0.0029	
20	Battery End Point	0.0199	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 25

Peak-to-Average Ratio

Mode	LTE Band 25 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.81	6.17	6.84	PASS