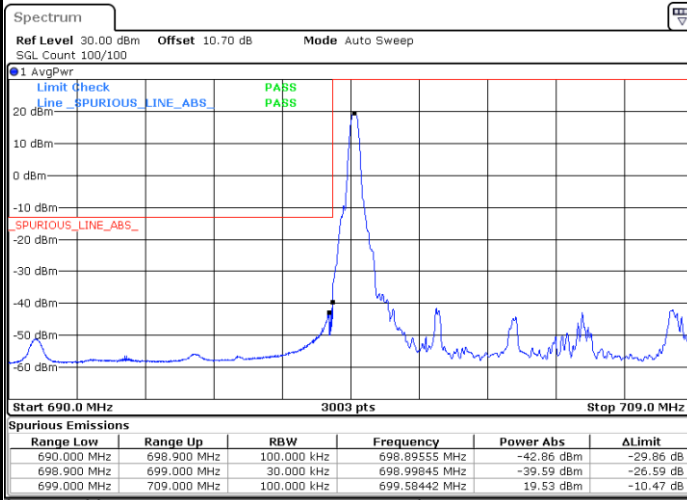




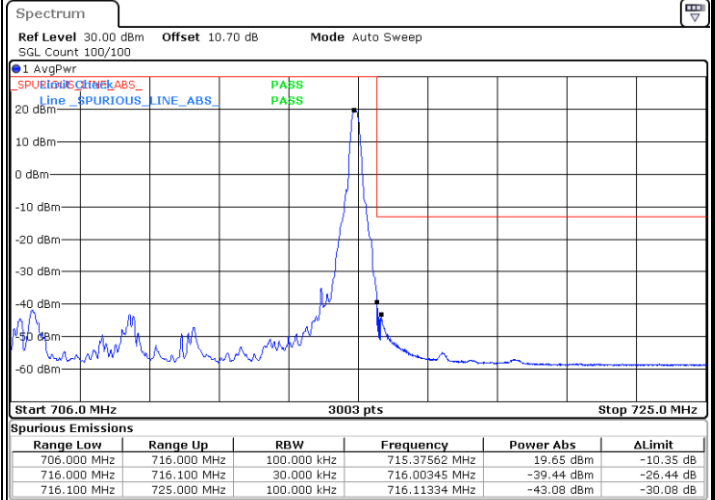
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



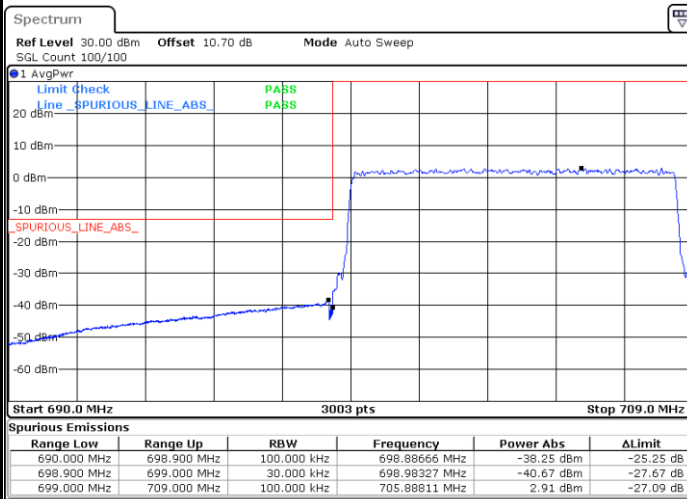
Date: 28.JAN.2020 01:51:03

Highest Band Edge / 1 RB



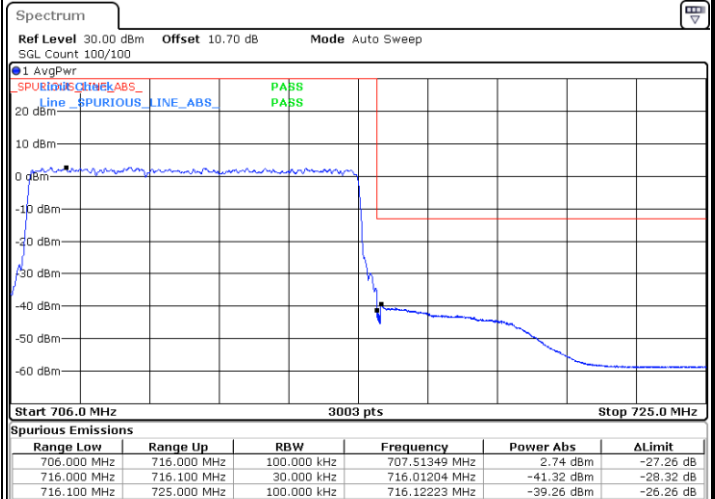
Date: 28.JAN.2020 02:01:14

Lowest Band Edge / Full RB



Date: 28.JAN.2020 01:50:07

Highest Band Edge / Full RB

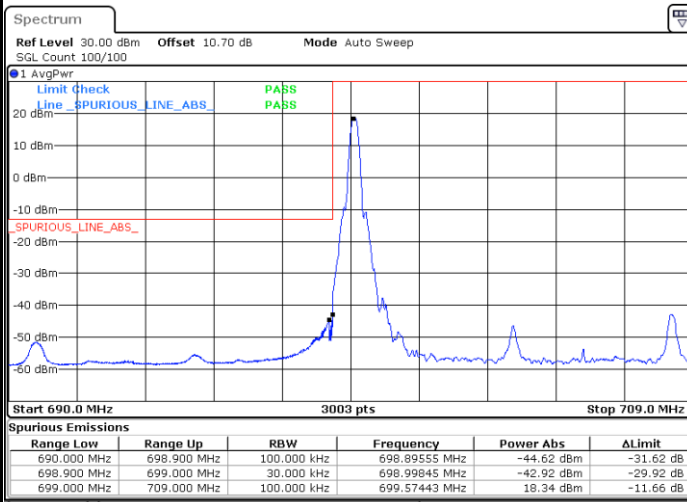


Date: 28.JAN.2020 02:00:18



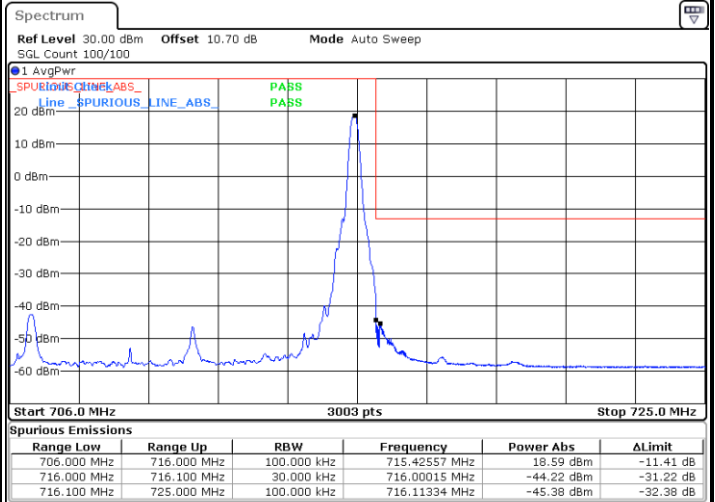
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



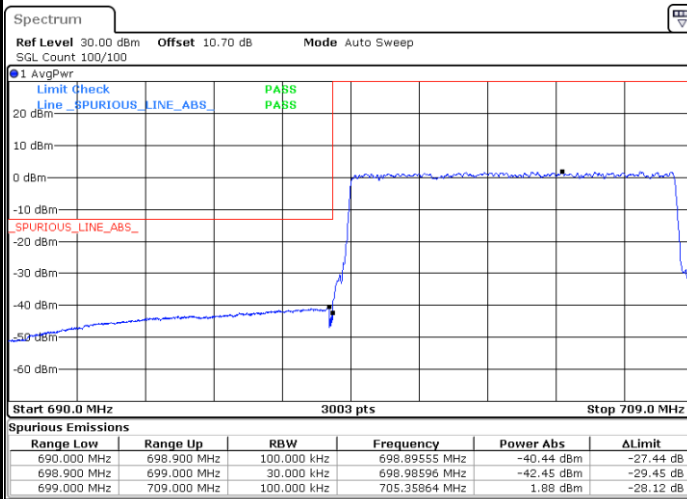
Date: 28.JAN.2020 02:06:19

Highest Band Edge / 1 RB



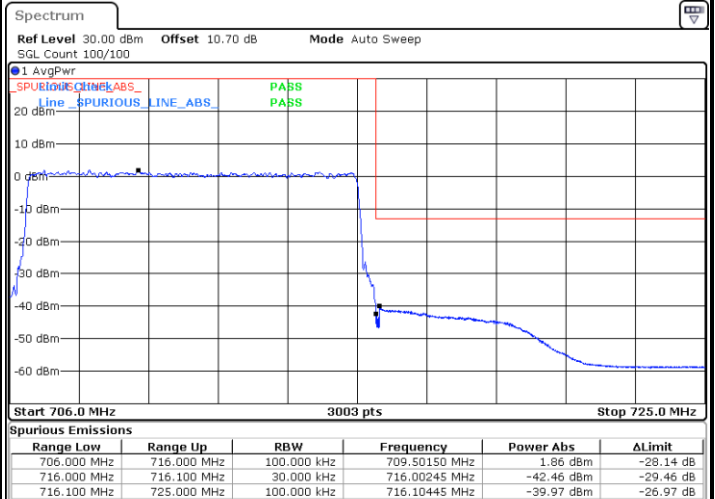
Date: 28.JAN.2020 02:10:54

Lowest Band Edge / Full RB



Date: 28.JAN.2020 02:05:23

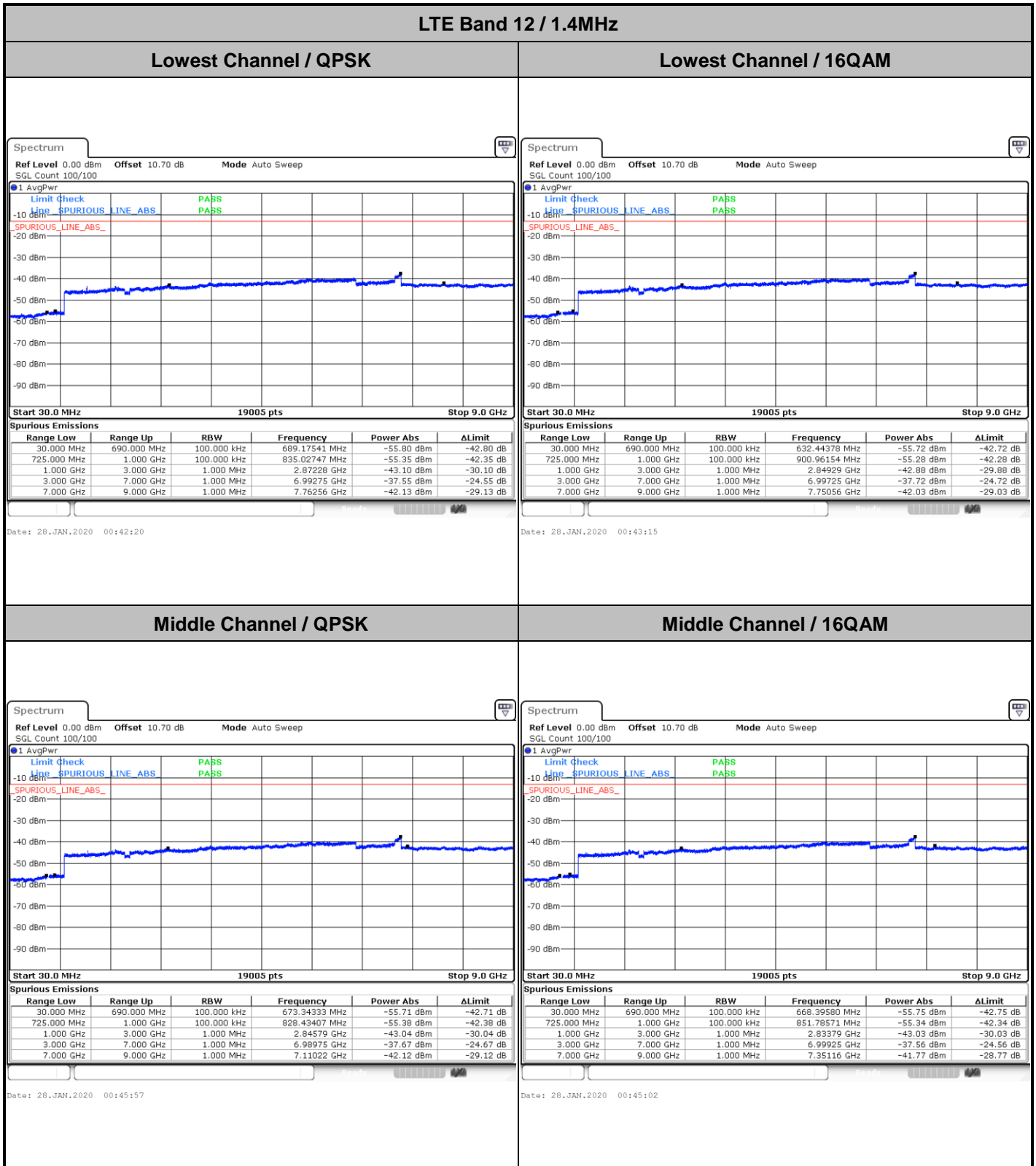
Highest Band Edge / Full RB



Date: 28.JAN.2020 02:09:58



# Conducted Spurious Emission

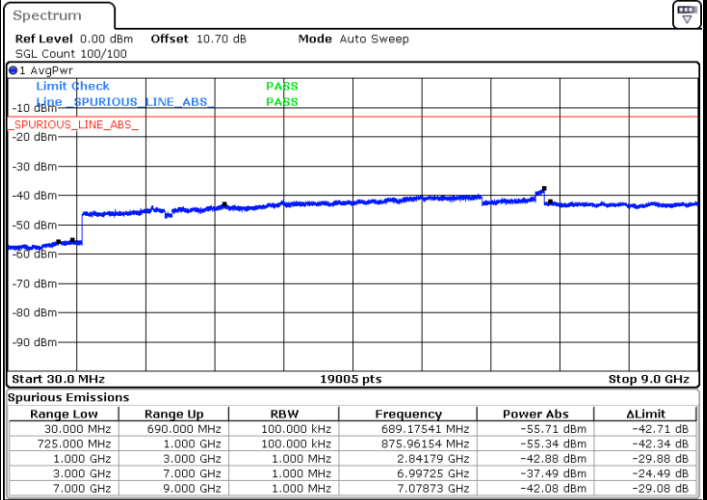
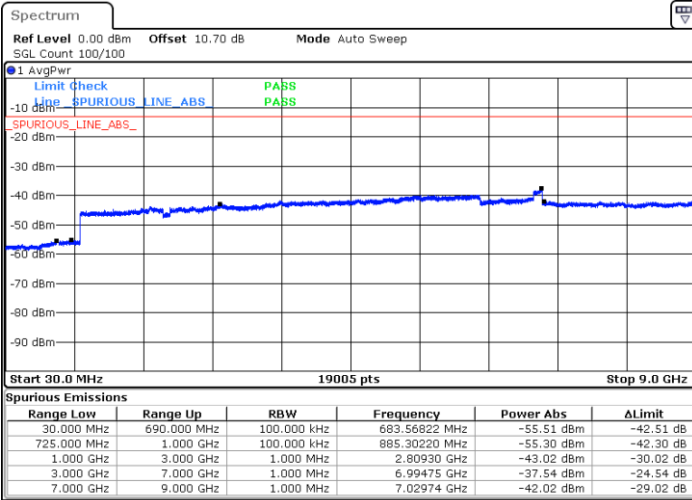




LTE Band 12 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



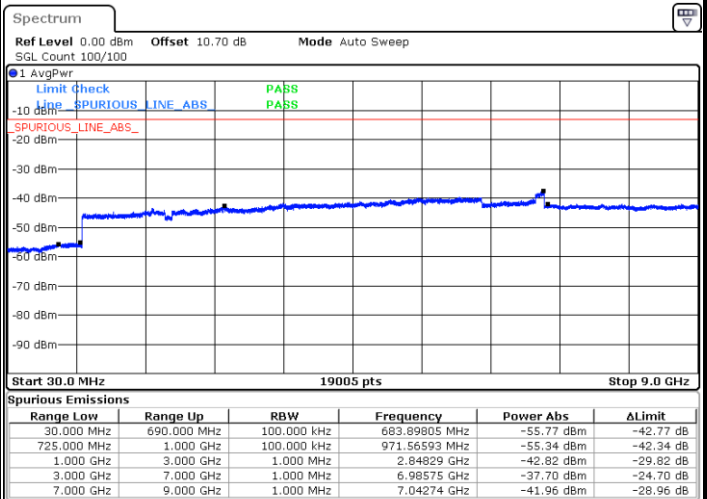
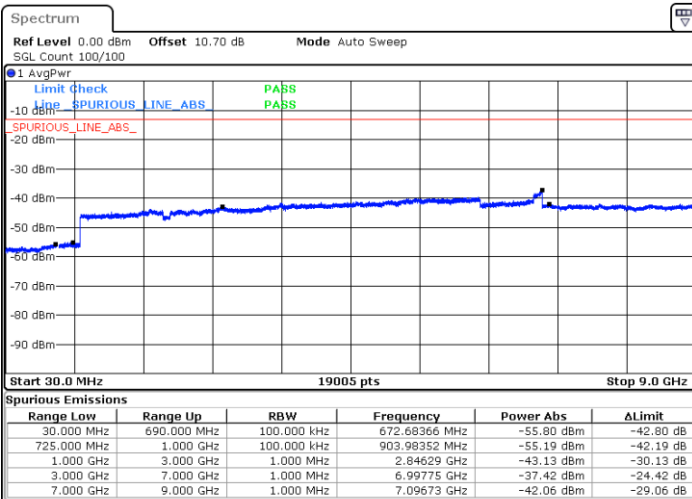
Date: 28.JAN.2020 00:51:31

Date: 28.JAN.2020 00:52:26

LTE Band 12 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 28.JAN.2020 01:05:51

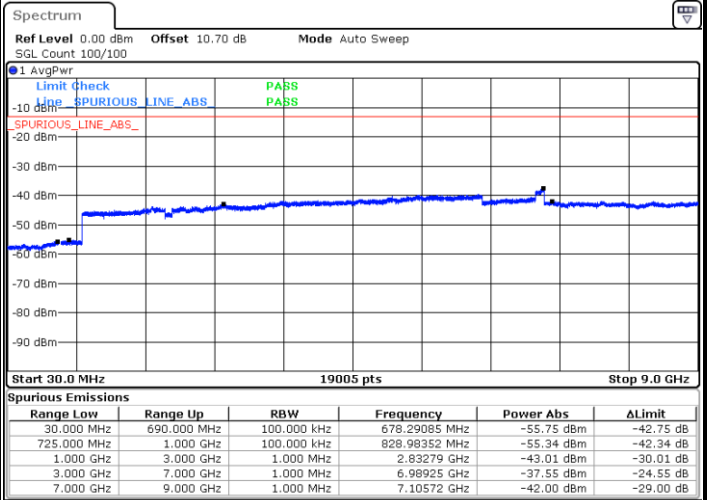
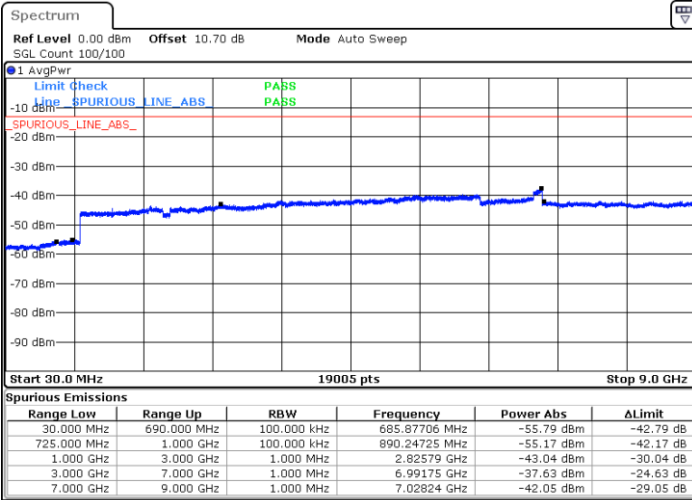
Date: 28.JAN.2020 01:06:46



LTE Band 12 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

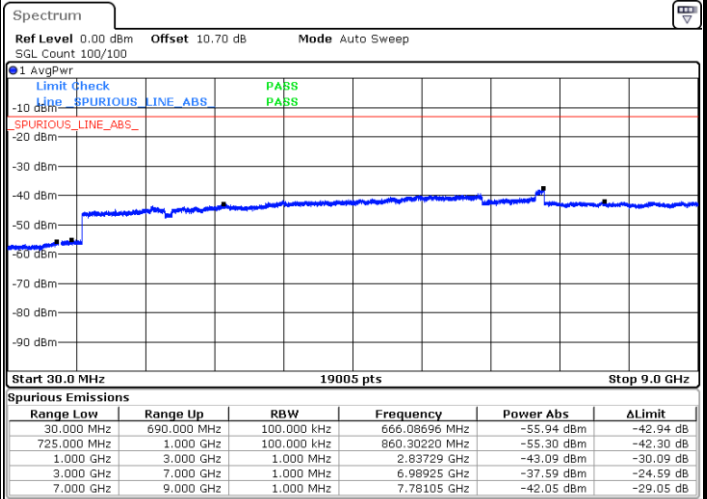
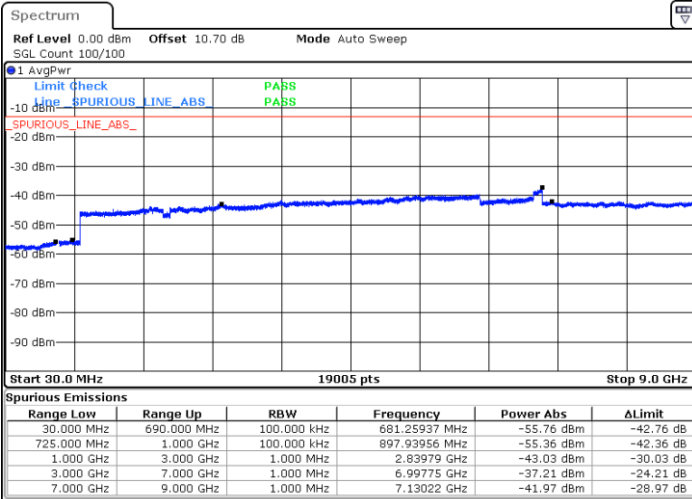


Date: 28.JAN.2020 01:09:28

Date: 28.JAN.2020 01:08:34

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 28.JAN.2020 01:15:03

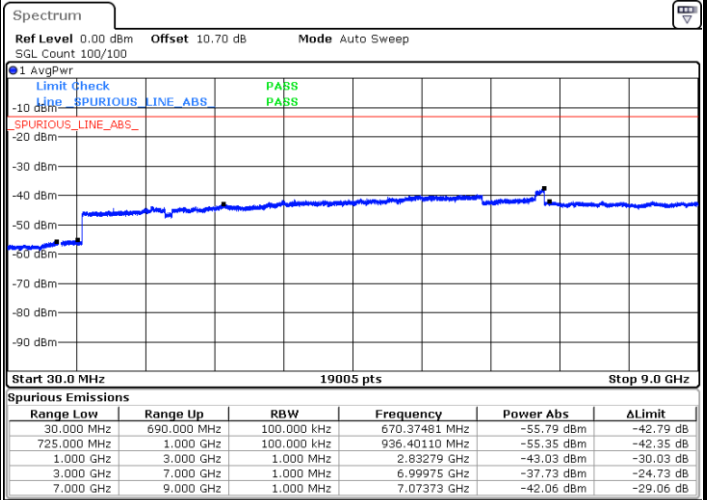
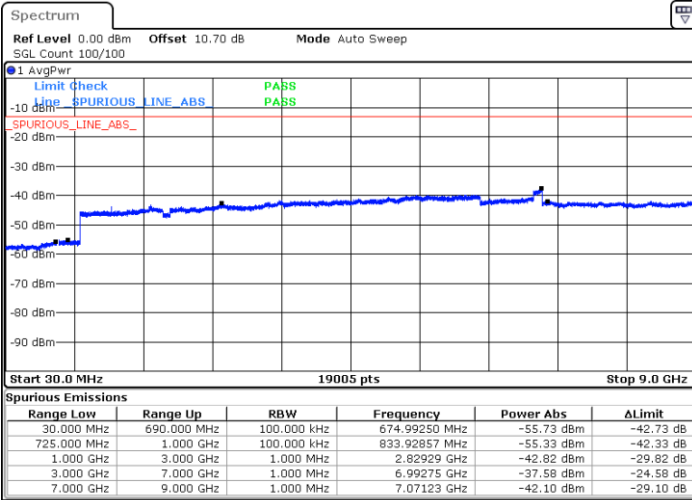
Date: 28.JAN.2020 01:15:58



LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

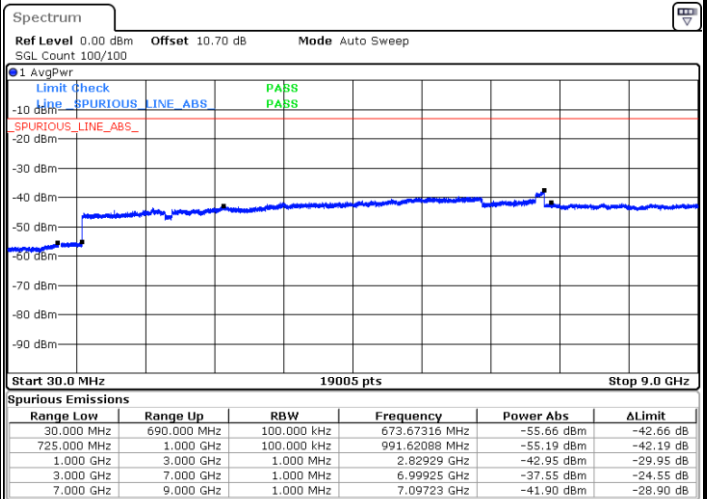
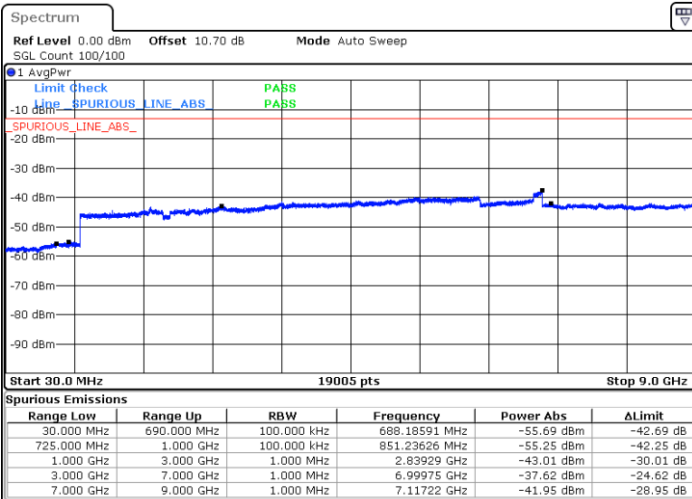


Date: 28.JAN.2020 01:37:12

Date: 28.JAN.2020 01:38:07

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 28.JAN.2020 01:40:49

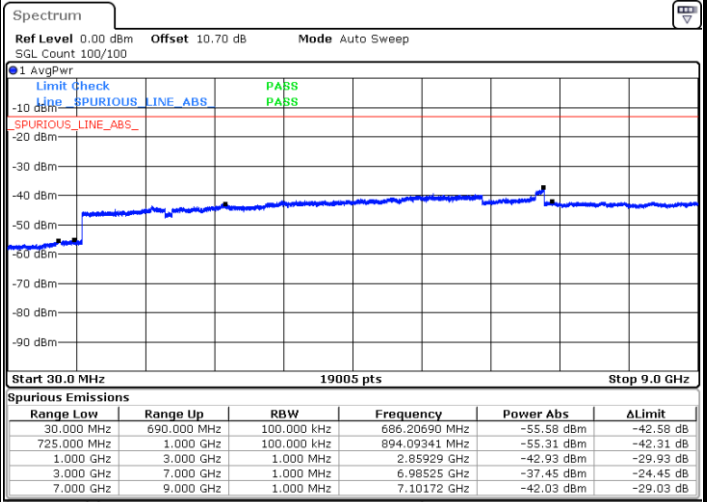
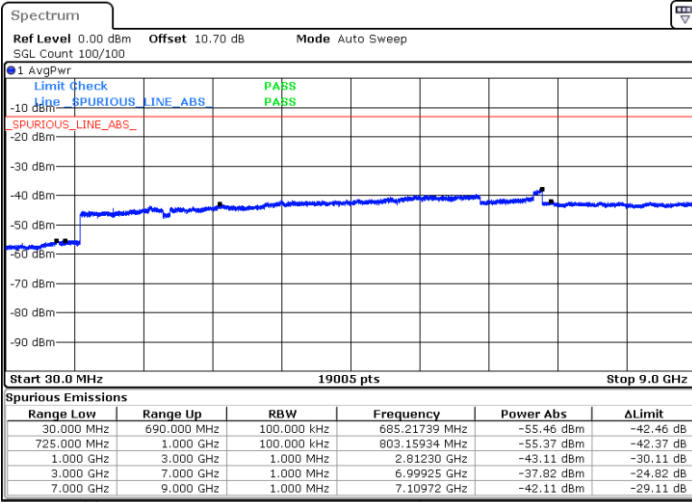
Date: 28.JAN.2020 01:39:55



LTE Band 12 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM



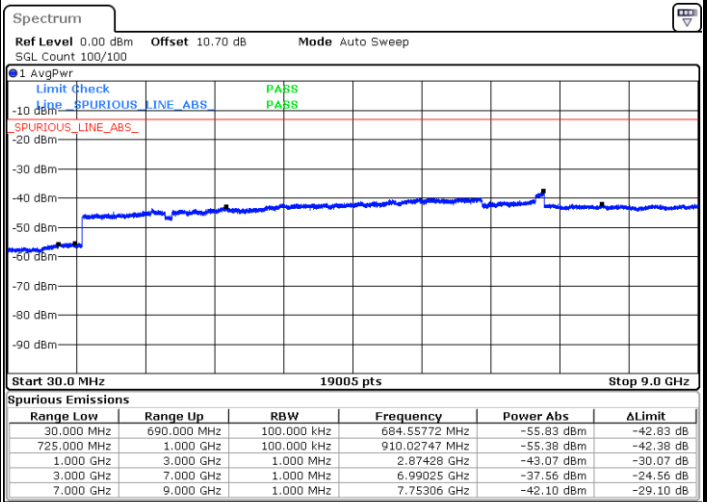
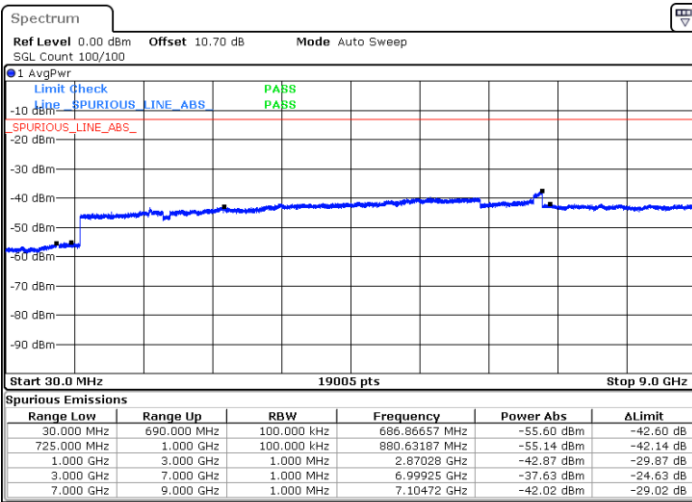
Date: 28.JAN.2020 01:47:18

Date: 28.JAN.2020 01:46:23

LTE Band 12 / 10MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 28.JAN.2020 01:52:53

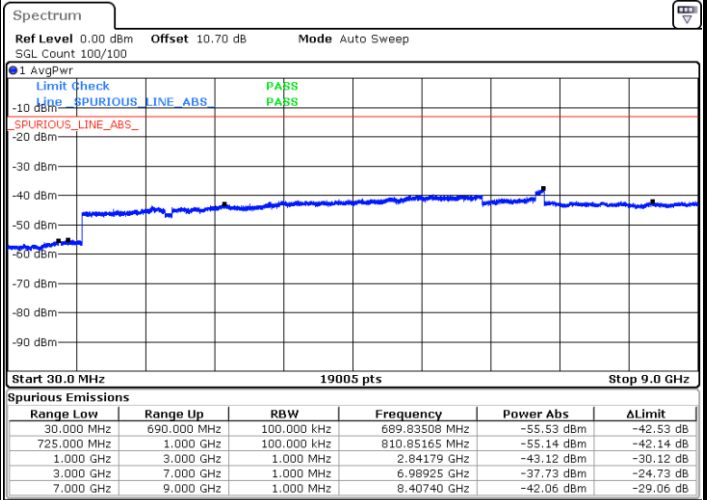
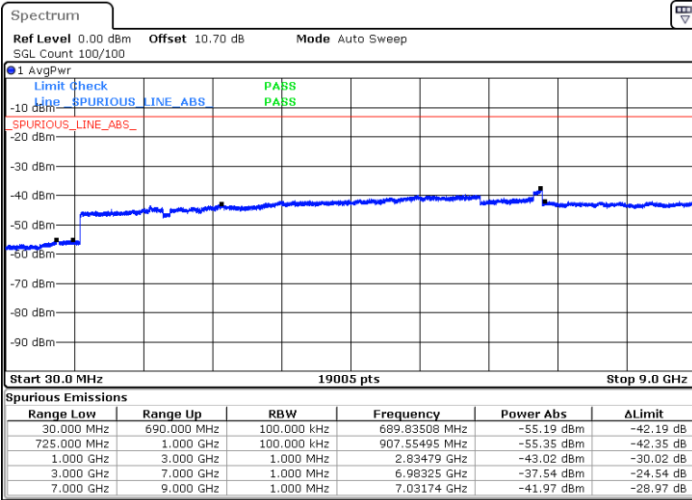
Date: 28.JAN.2020 01:53:48



LTE Band 12 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

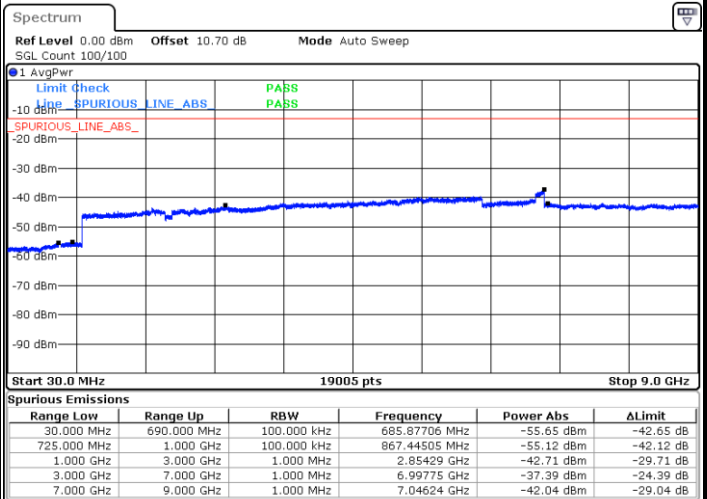
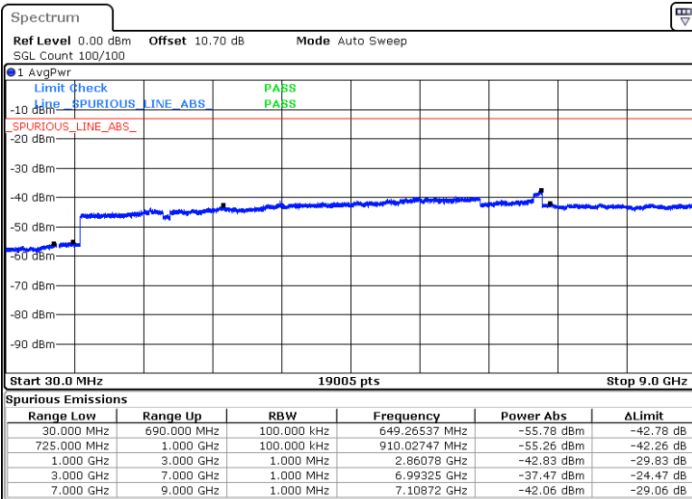


Date: 28.JAN.2020 01:57:29

Date: 28.JAN.2020 01:56:35

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 28.JAN.2020 02:03:04

Date: 28.JAN.2020 02:03:58

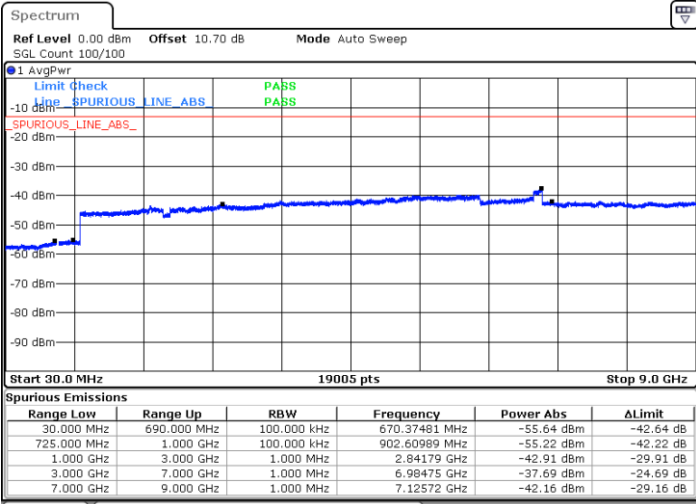




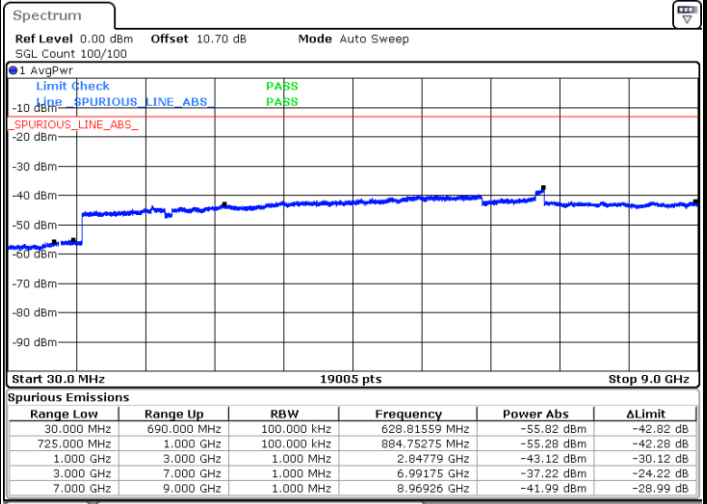
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

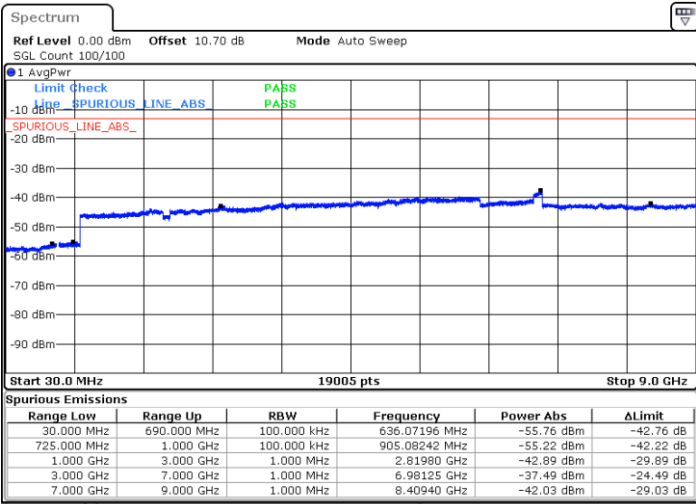


Date: 28.JAN.2020 00:55:41



Date: 28.JAN.2020 00:57:02

Highest Channel / 64QAM



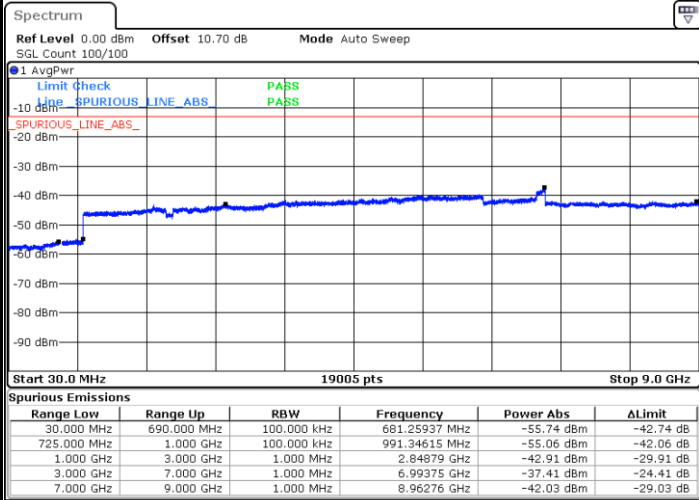
Date: 28.JAN.2020 01:00:16



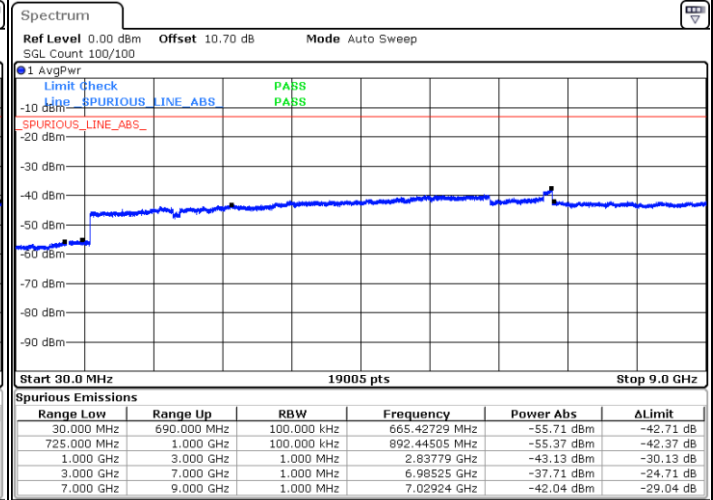
LTE Band 12 / 3MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

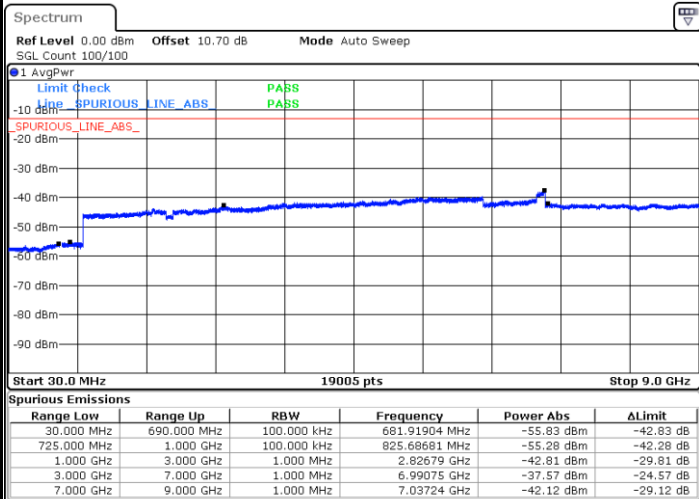


Date: 28.JAN.2020 01:19:12



Date: 28.JAN.2020 01:20:33

Highest Channel / 64QAM



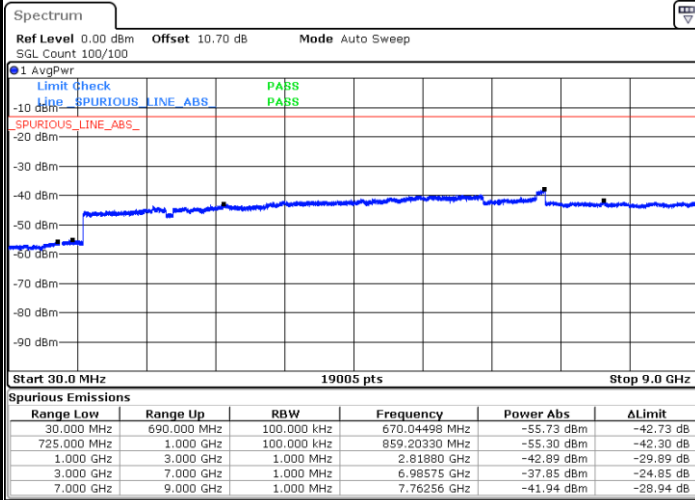
Date: 28.JAN.2020 01:23:47



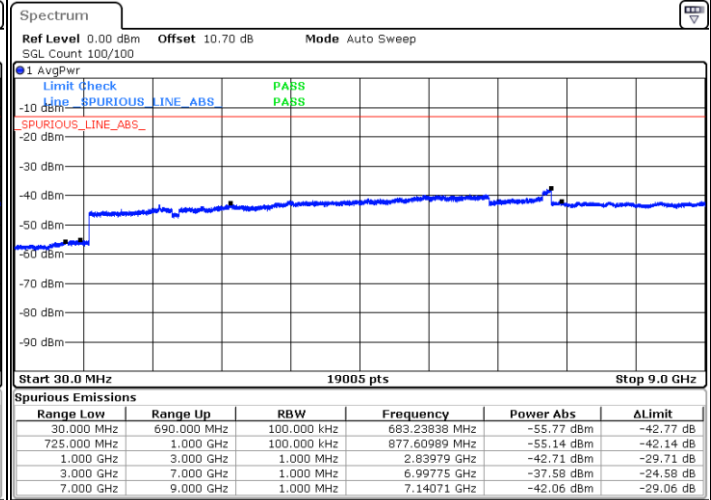
LTE Band 12 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

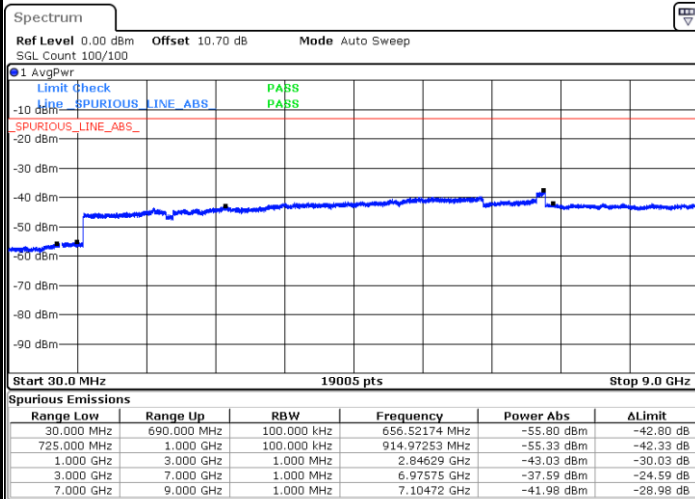


Date: 28.JAN.2020 01:27:02



Date: 28.JAN.2020 01:28:23

Highest Channel / 64QAM



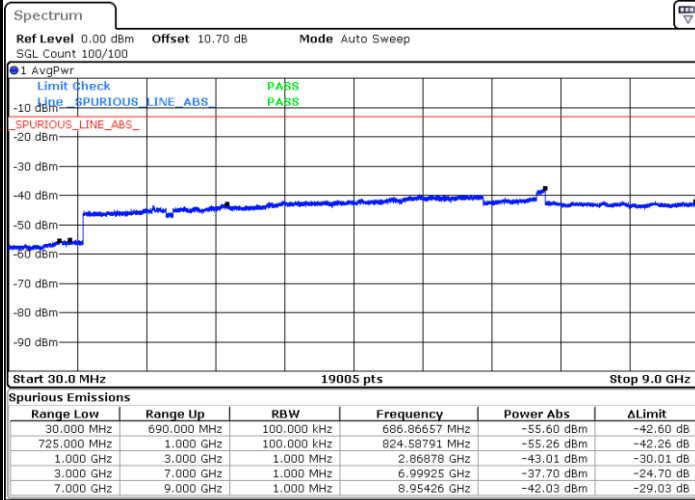
Date: 28.JAN.2020 01:31:38



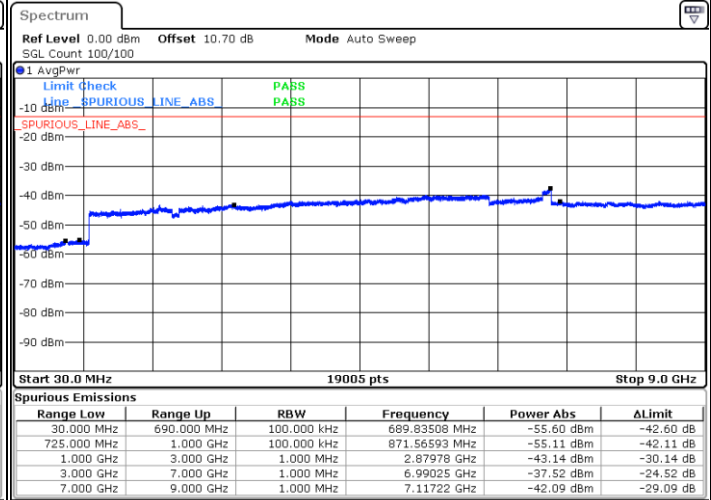
LTE Band 12 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

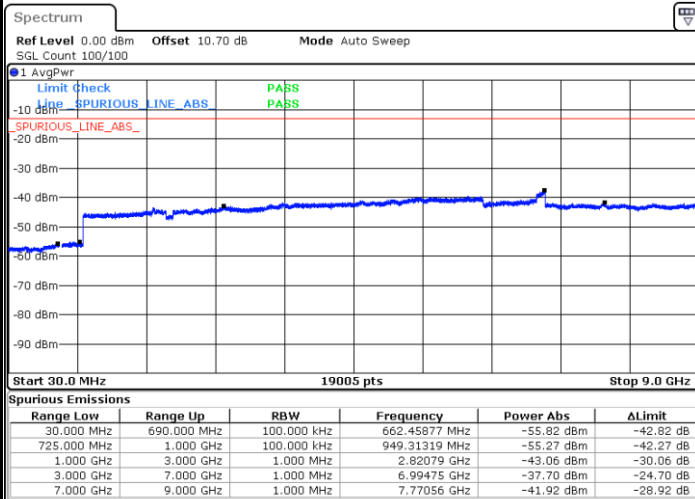


Date: 28.JAN.2020 02:07:13



Date: 28.JAN.2020 02:08:34

Highest Channel / 64QAM



Date: 28.JAN.2020 02:11:48



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	0.0014	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0037	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0034	
-20	Normal Voltage	0.0008	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0109	

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

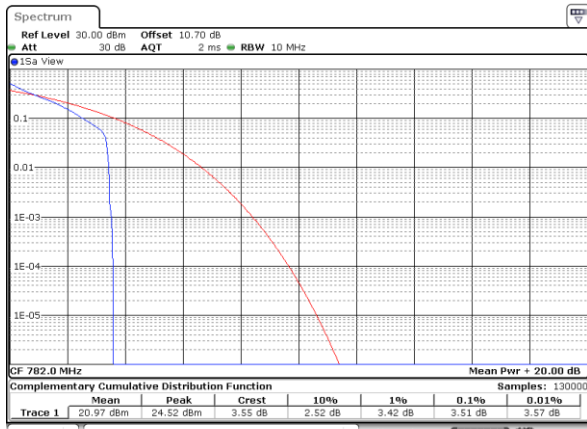
### Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.51	4.72	4.72	6.03	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.62	6.55	-	-	
Highest CH	-	-	-	-	



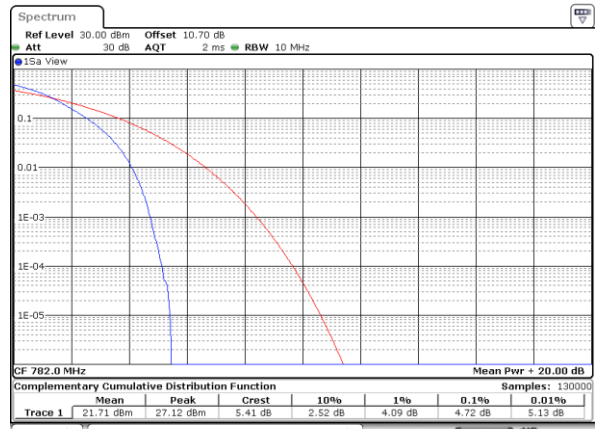
LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB



Date: 24\_JAN.2020 15:56:07

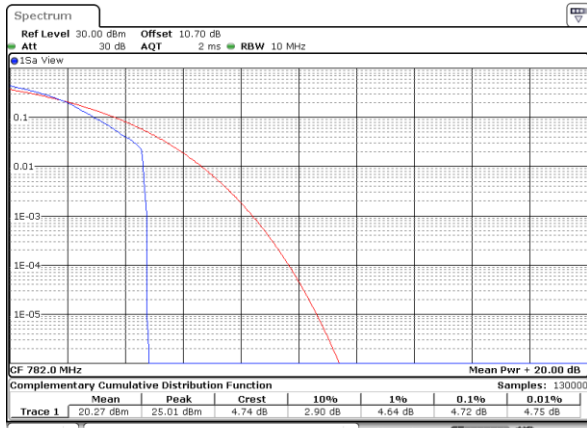
Middle Channel / Full RB



Date: 24\_JAN.2020 15:56:20

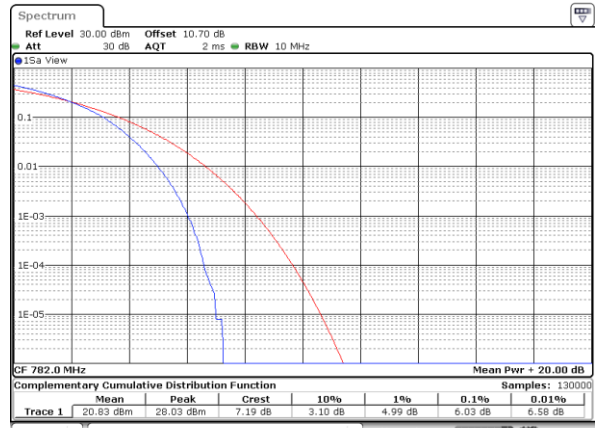
LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB



Date: 24\_JAN.2020 15:55:36

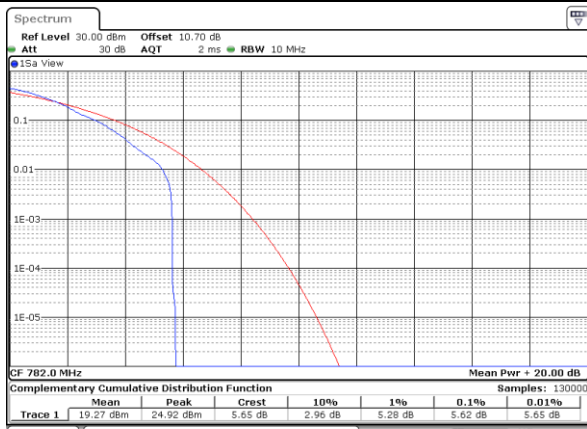
Middle Channel / Full RB



Date: 24\_JAN.2020 15:55:49

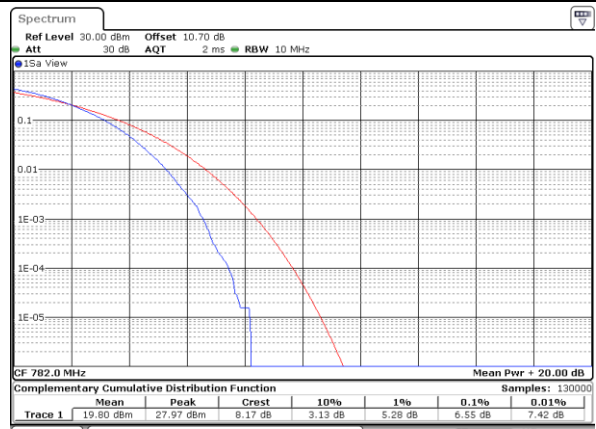
LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Date: 24\_JAN.2020 15:55:09

Middle Channel / Full RB



Date: 24\_JAN.2020 15:55:23



**26dB Bandwidth**

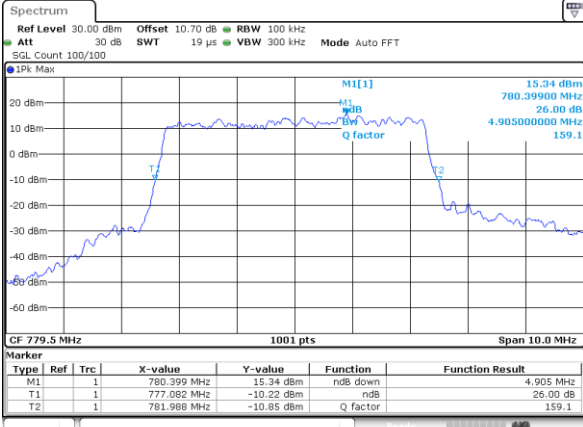
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.91	4.85	-	-	-	-	-	-
Middle CH	-	-	-	-	4.88	4.89	9.69	9.67	-	-	-	-
Highest CH	-	-	-	-	4.87	4.88	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.88	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.91	-	9.91	-	-	-	-	-
Highest CH	-	-	-	-	4.95	-	-	-	-	-	-	-





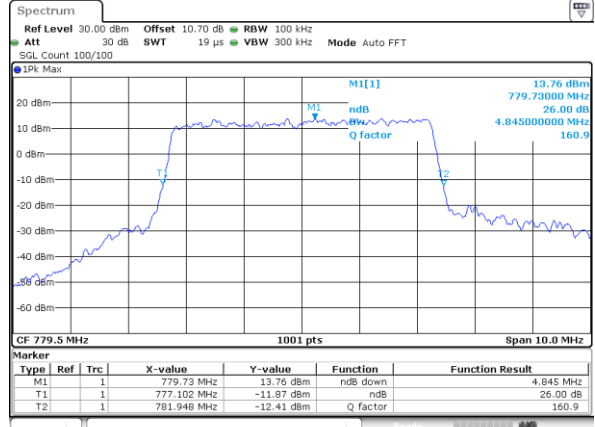
LTE Band 13

Lowest Channel / 5MHz / QPSK



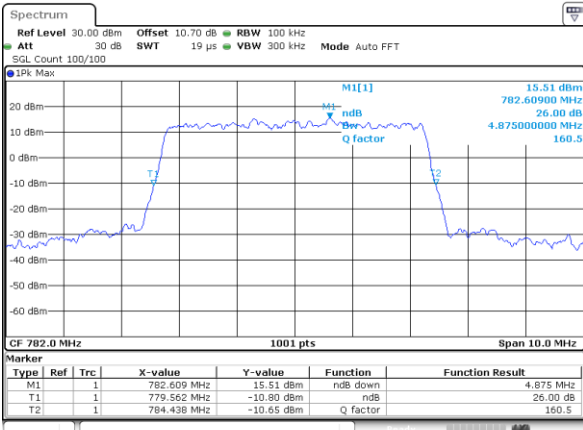
Date: 28 JAN 2020 02:18:49

Lowest Channel / 5MHz / 16QAM



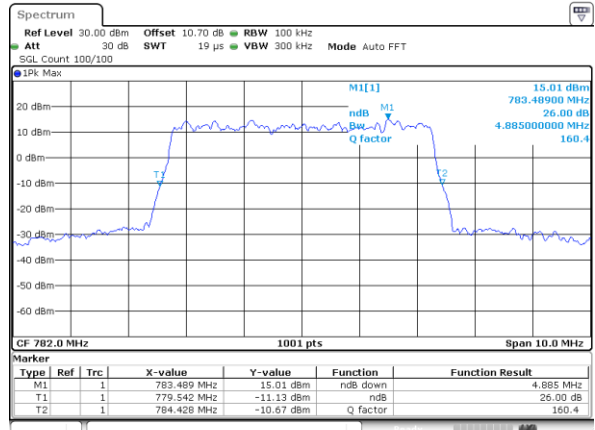
Date: 24 JAN 2020 15:50:19

Middle Channel / 5MHz / QPSK



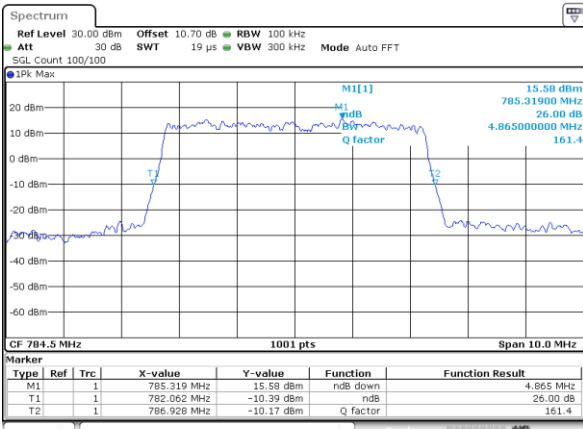
Date: 24 JAN 2020 15:50:32

Middle Channel / 5MHz / 16QAM



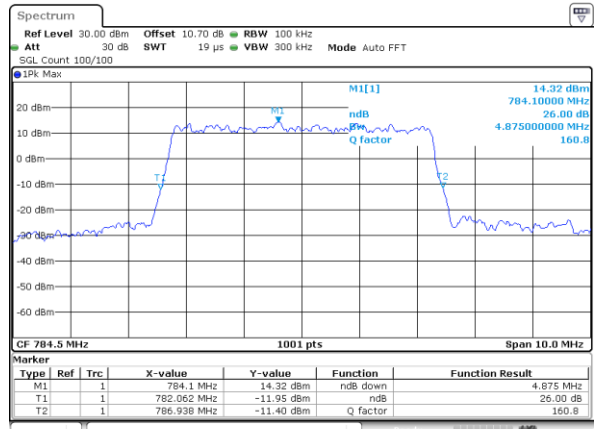
Date: 24 JAN 2020 15:50:45

Highest Channel / 5MHz / QPSK



Date: 24 JAN 2020 15:52:07

Highest Channel / 5MHz / 16QAM



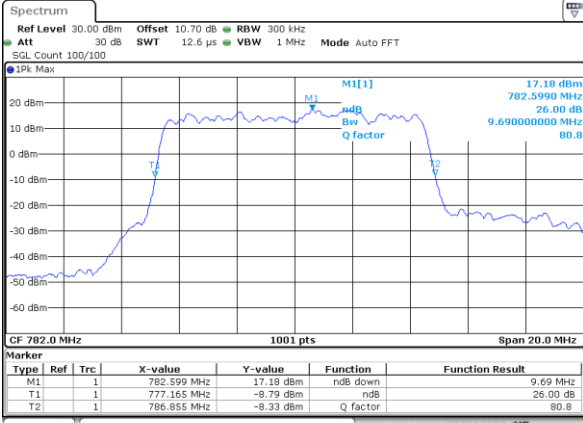
Date: 24 JAN 2020 15:51:53



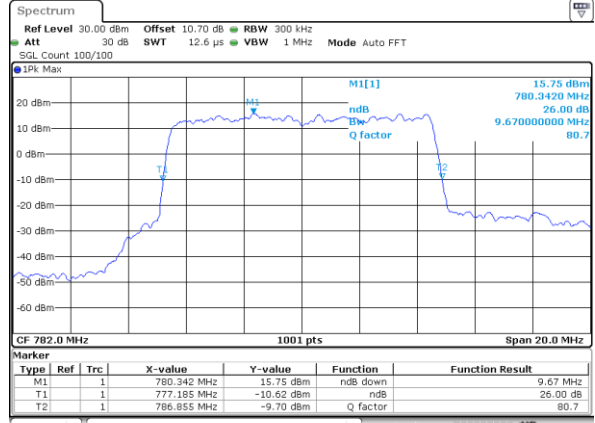
LTE Band 13

Middle Channel / 10MHz / QPSK

Middle Channel / 10MHz / 16QAM



Date: 24\_JAN\_2020 15:54:28

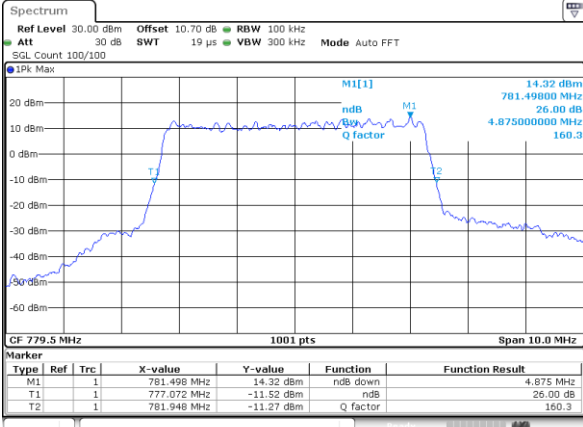


Date: 24\_JAN\_2020 15:54:15

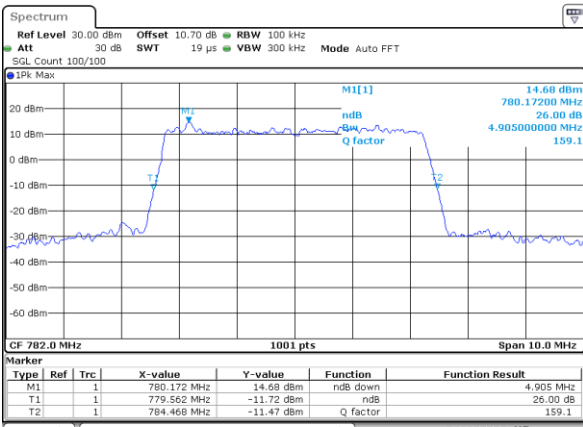


LTE Band 13

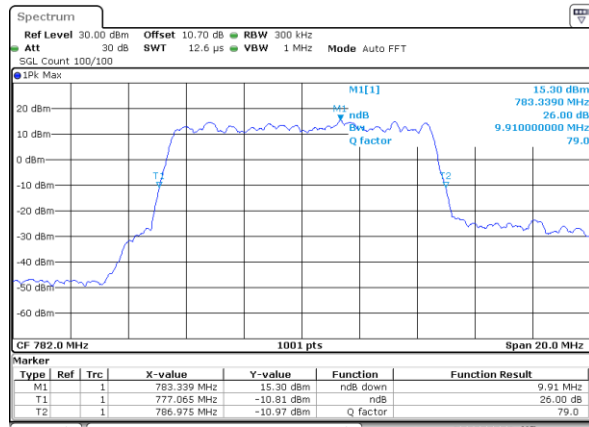
Lowest Channel / 5MHz / 64QAM



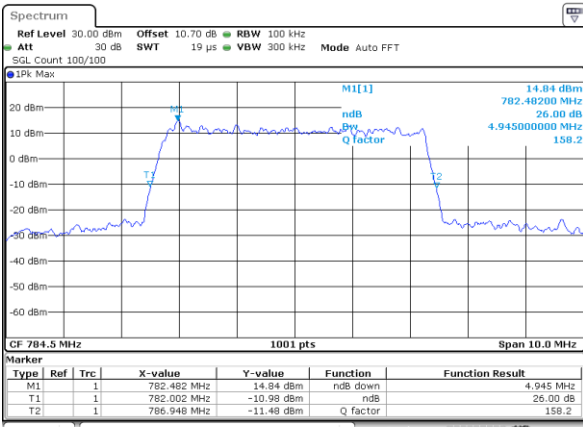
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM





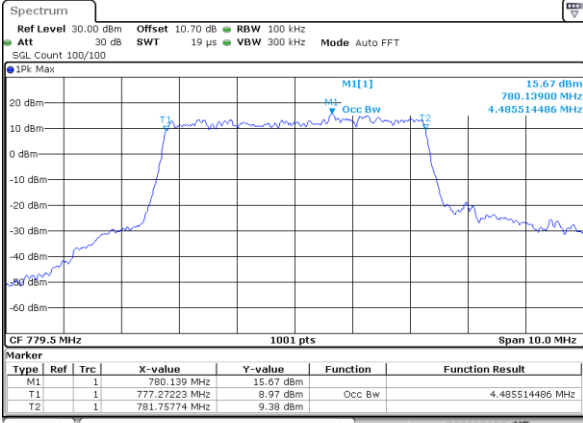
**Occupied Bandwidth**

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
Lowest CH	-	-	-	-	4.49	4.49	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	4.49	9.05	8.99	-	-	-	-
Highest CH	-	-	-	-	4.47	4.51	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	-	8.99	-	-	-	-	-
Highest CH	-	-	-	-	4.50	-	-	-	-	-	-	-



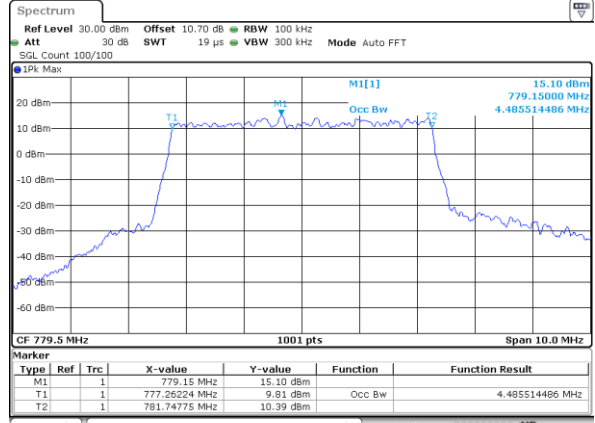
LTE Band 13

Lowest Channel / 5MHz / QPSK



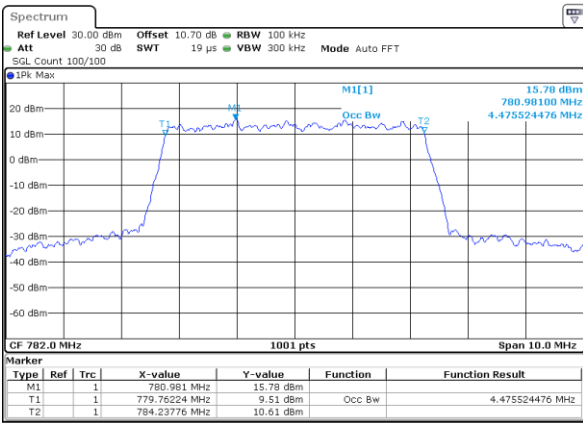
Date: 28\_JAN,2020 02:17:53

Lowest Channel / 5MHz / 16QAM



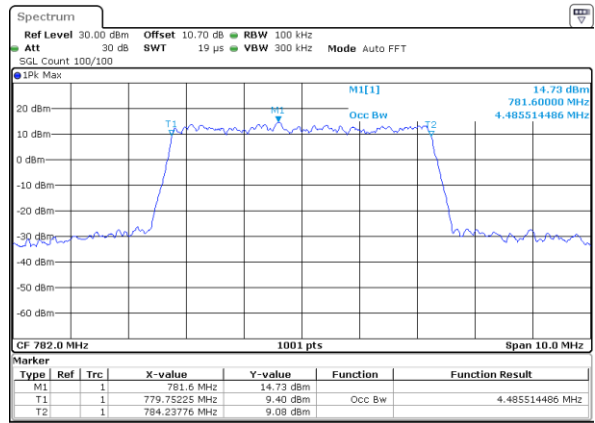
Date: 24\_JAN,2020 15:50:05

Middle Channel / 5MHz / QPSK



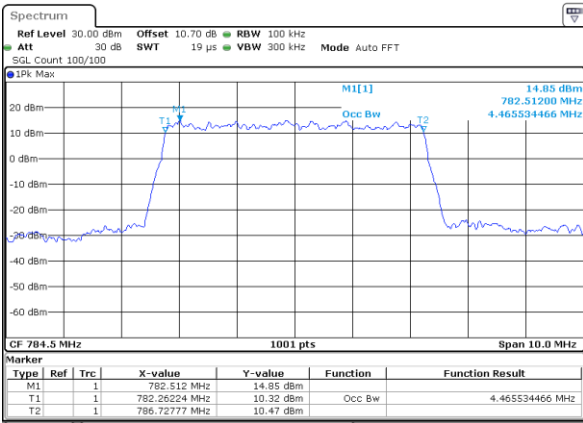
Date: 24\_JAN,2020 15:51:12

Middle Channel / 5MHz / 16QAM



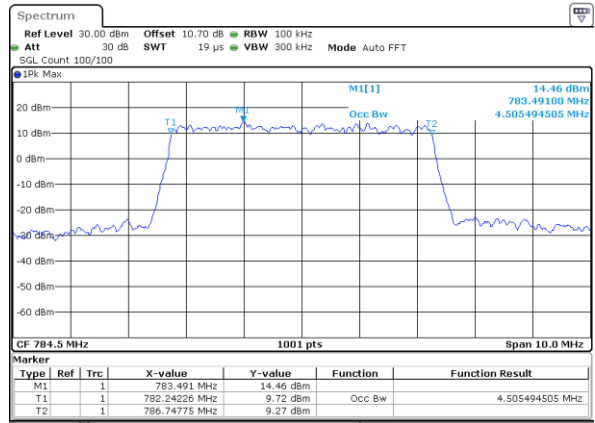
Date: 24\_JAN,2020 15:50:58

Highest Channel / 5MHz / QPSK



Date: 24\_JAN,2020 15:51:25

Highest Channel / 5MHz / 16QAM

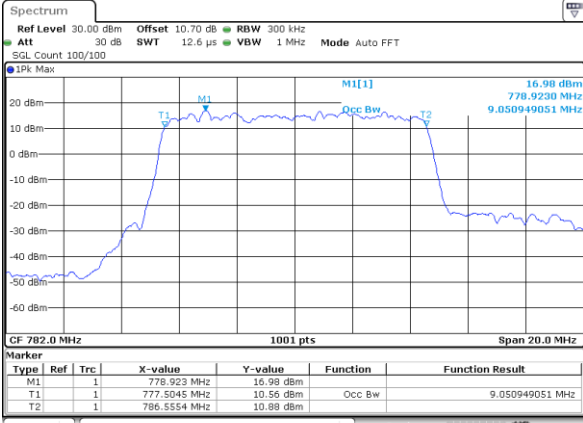


Date: 24\_JAN,2020 15:51:39



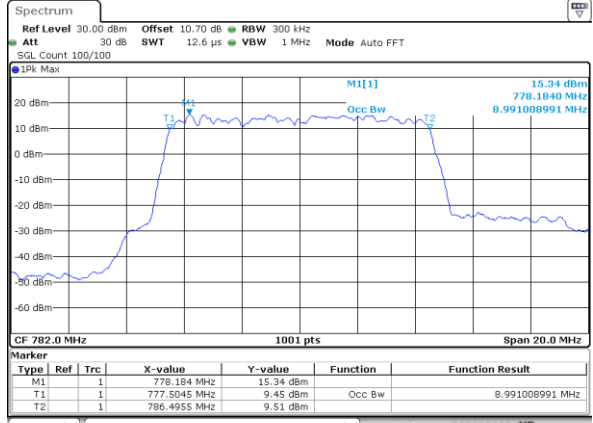
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 24\_JAN\_2020 15:53:40

Middle Channel / 10MHz / 16QAM

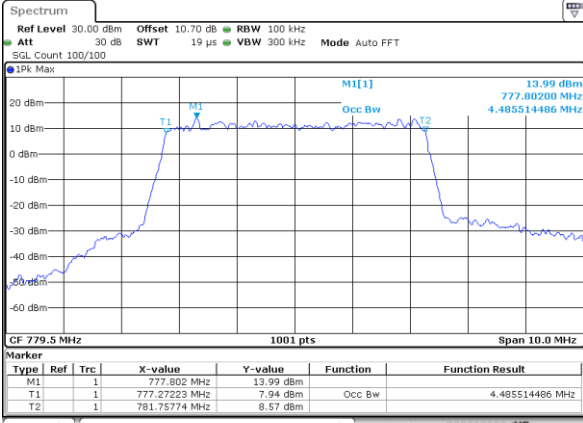


Date: 24\_JAN\_2020 15:54:02



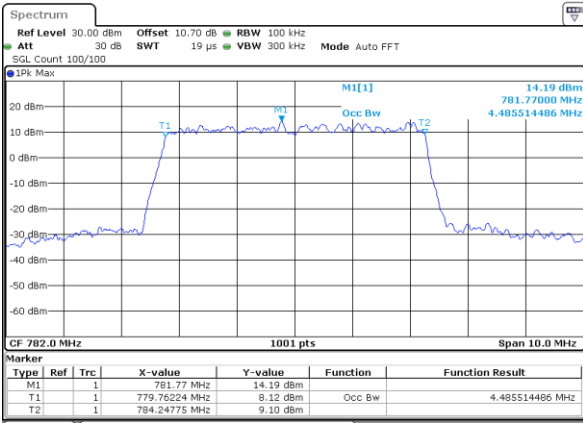
LTE Band 13

Lowest Channel / 5MHz / 64QAM



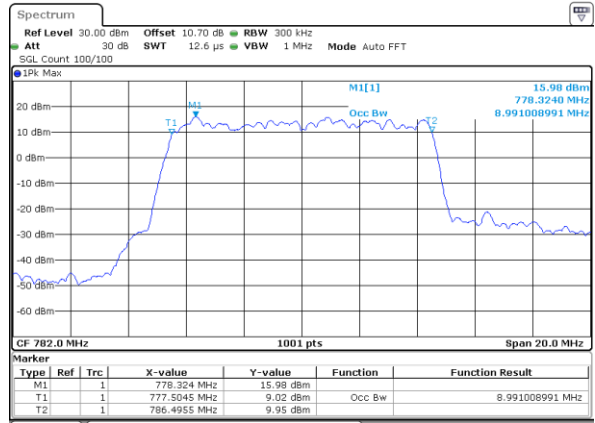
Date: 24\_JAN\_2020 15:52:22

Middle Channel / 5MHz / 64QAM



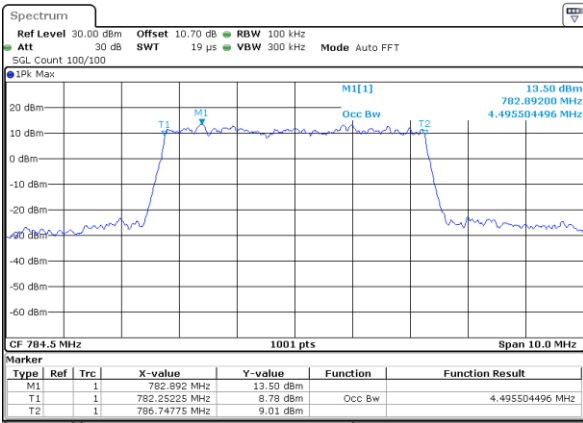
Date: 24\_JAN\_2020 15:53:06

Middle Channel / 10MHz / 64QAM



Date: 24\_JAN\_2020 15:54:41

Highest Channel / 5MHz / 64QAM



Date: 24\_JAN\_2020 15:53:19

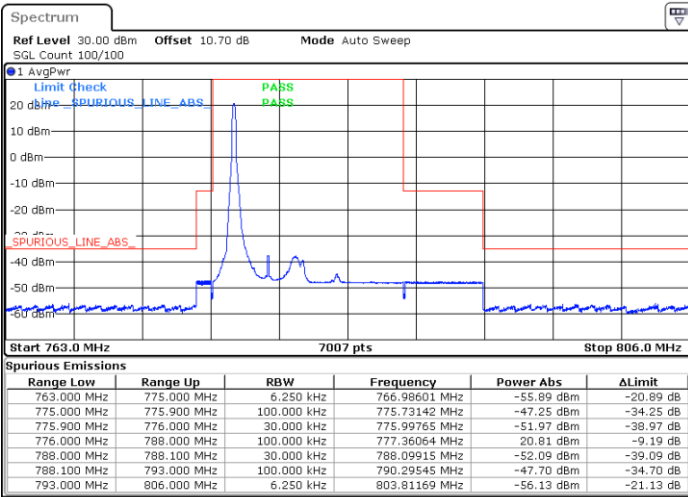


Conducted Band Edge

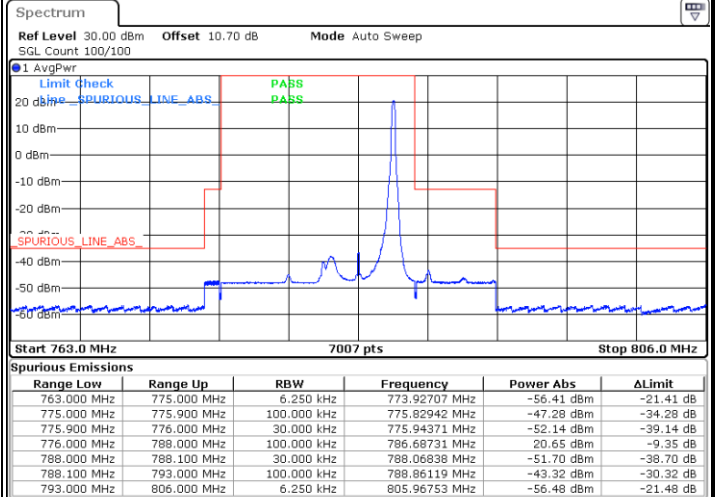
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



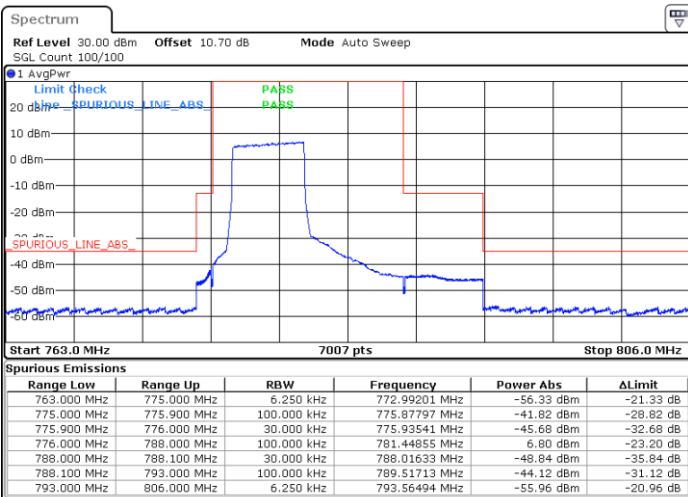
Date: 24.JAN.2020 14:48:27



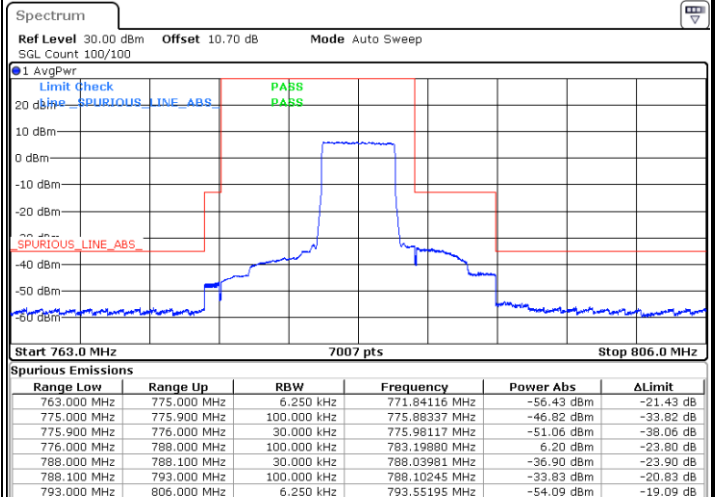
Date: 24.JAN.2020 14:51:51

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 24.JAN.2020 14:46:46



Date: 24.JAN.2020 14:50:08

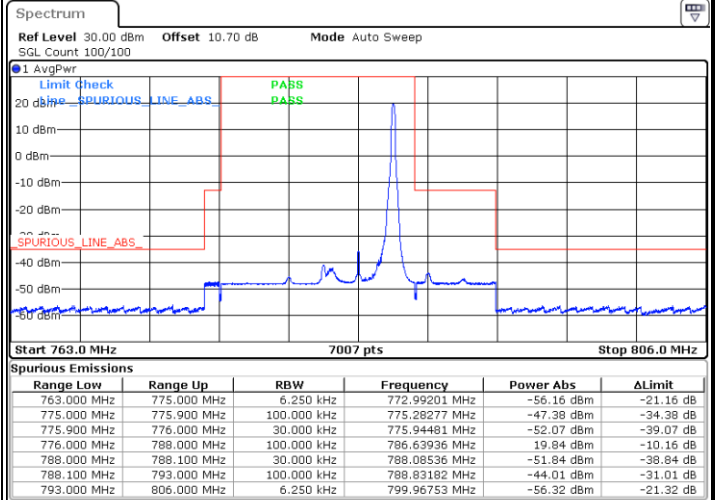
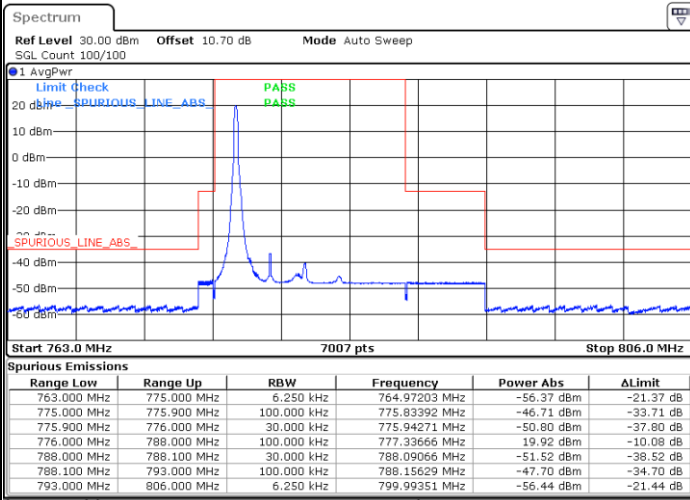




LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

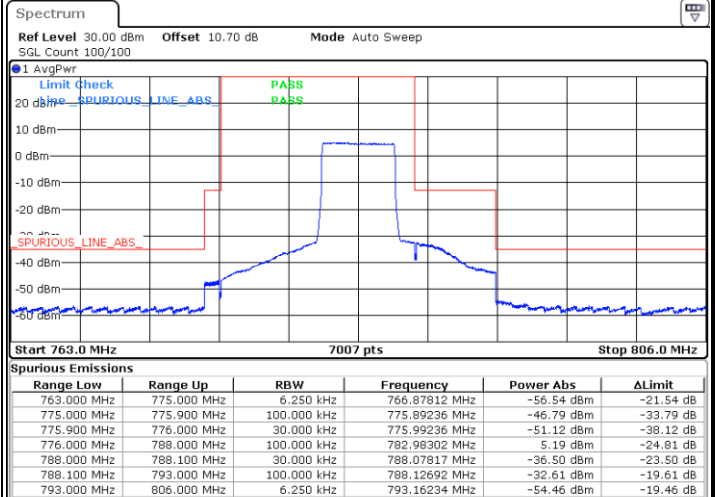
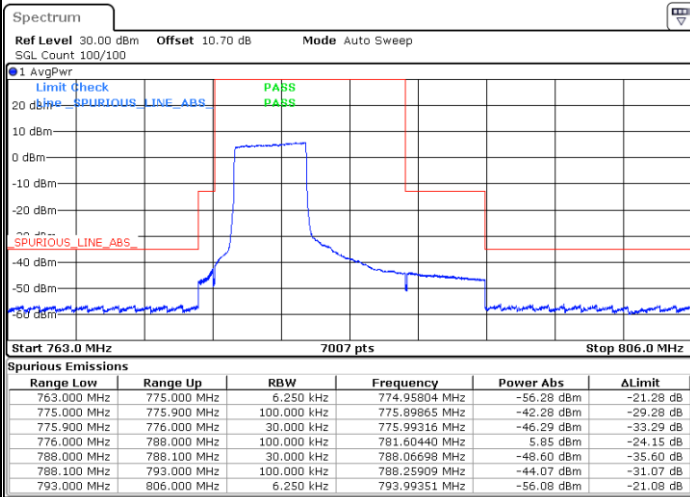


Date: 24.JAN.2020 14:55:14

Date: 24.JAN.2020 14:58:36

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 24.JAN.2020 14:53:32

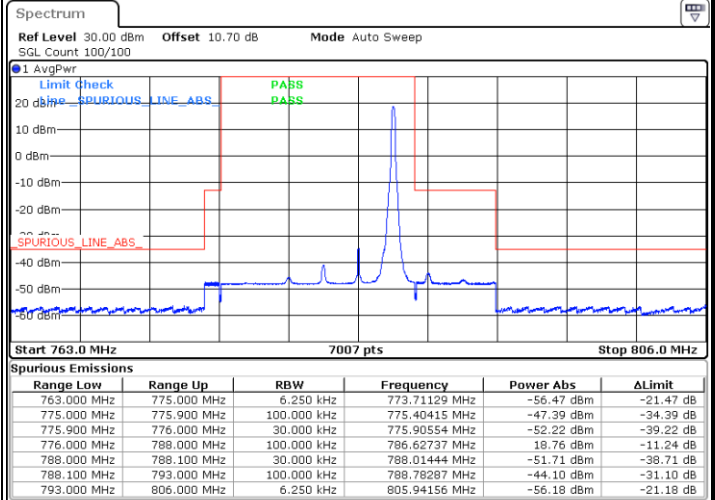
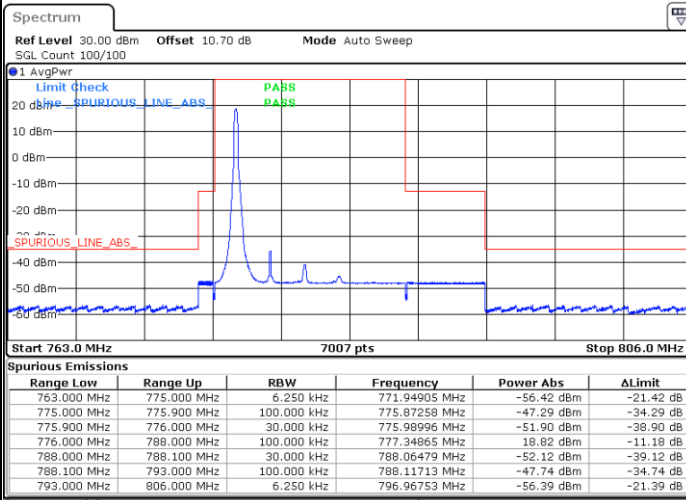
Date: 24.JAN.2020 14:56:55



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

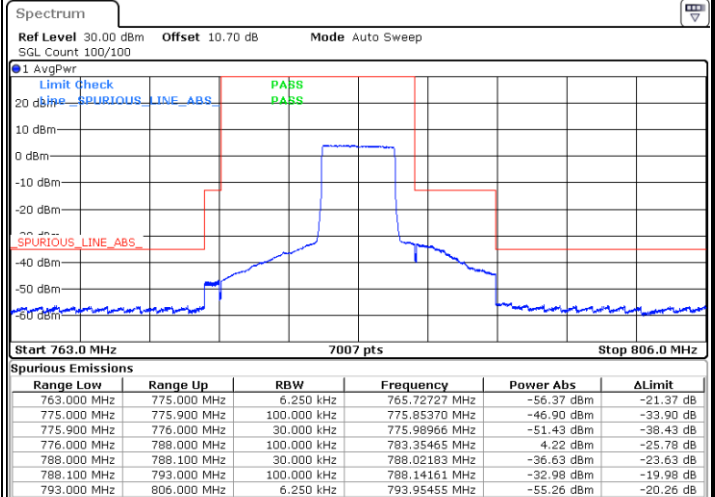
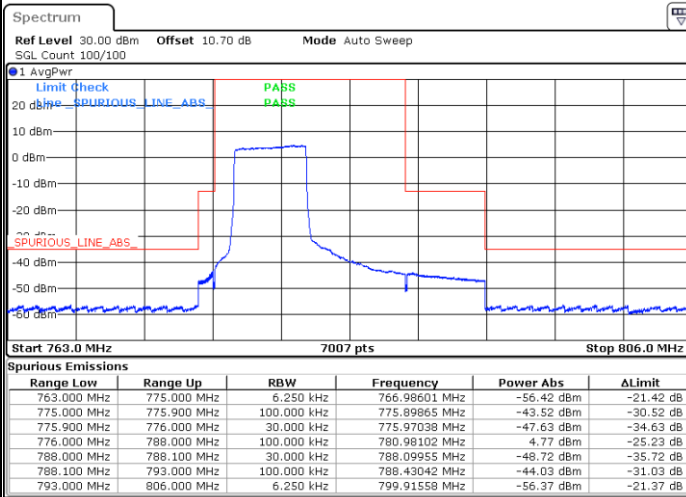


Date: 24.JAN.2020 15:01:58

Date: 24.JAN.2020 15:05:20

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



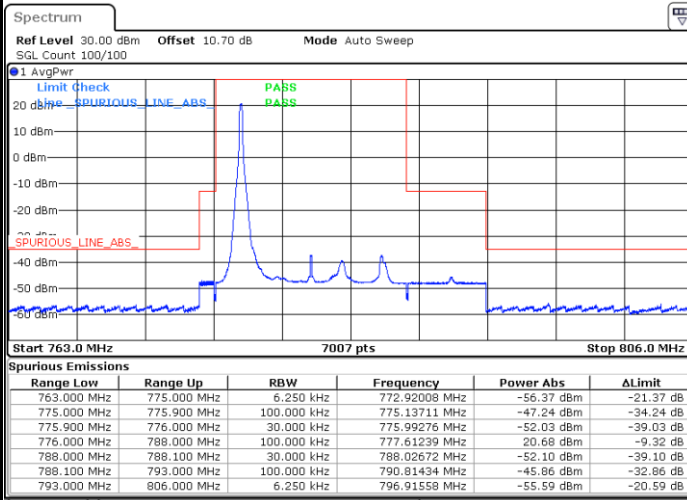
Date: 24.JAN.2020 15:00:17

Date: 24.JAN.2020 15:03:39



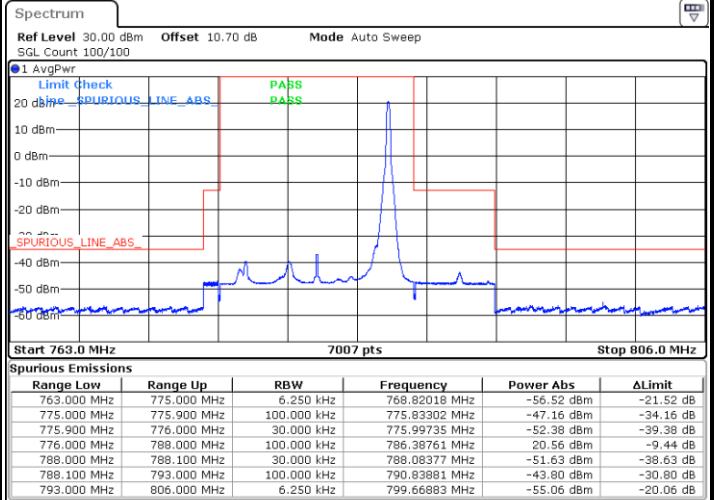
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



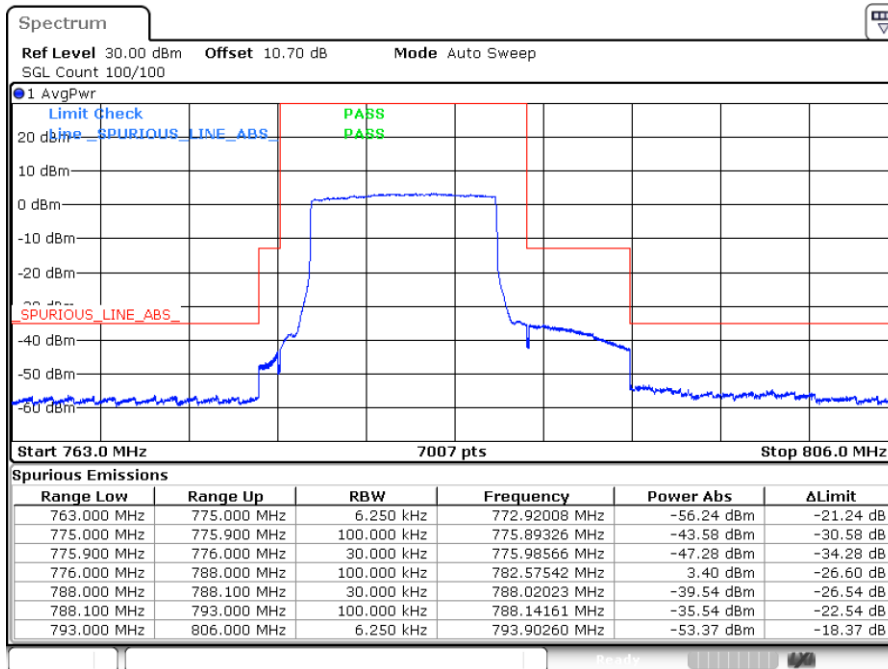
Date: 24.JAN.2020 15:08:42

Highest Band Edge / 1 RB



Date: 24.JAN.2020 15:10:23

Band Edge / Full RB



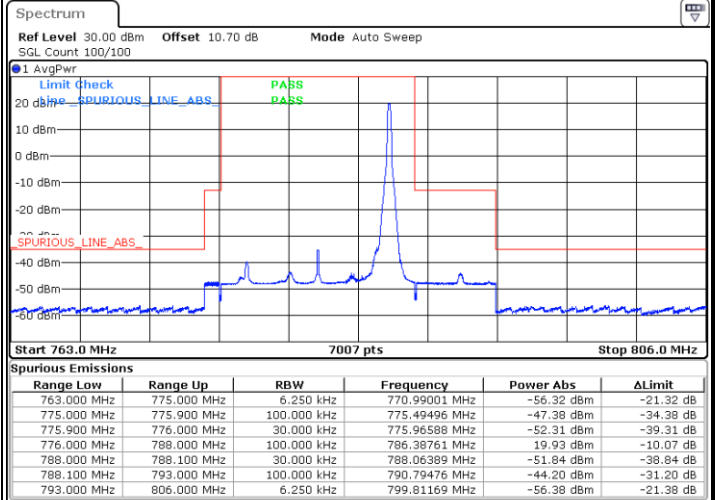
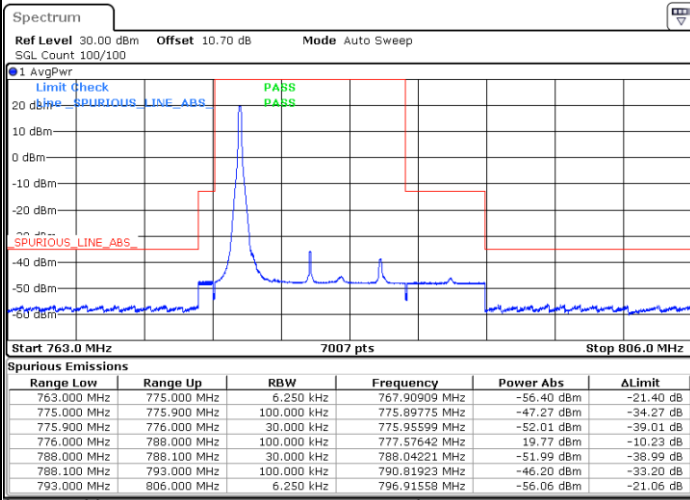
Date: 24.JAN.2020 15:07:02



LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

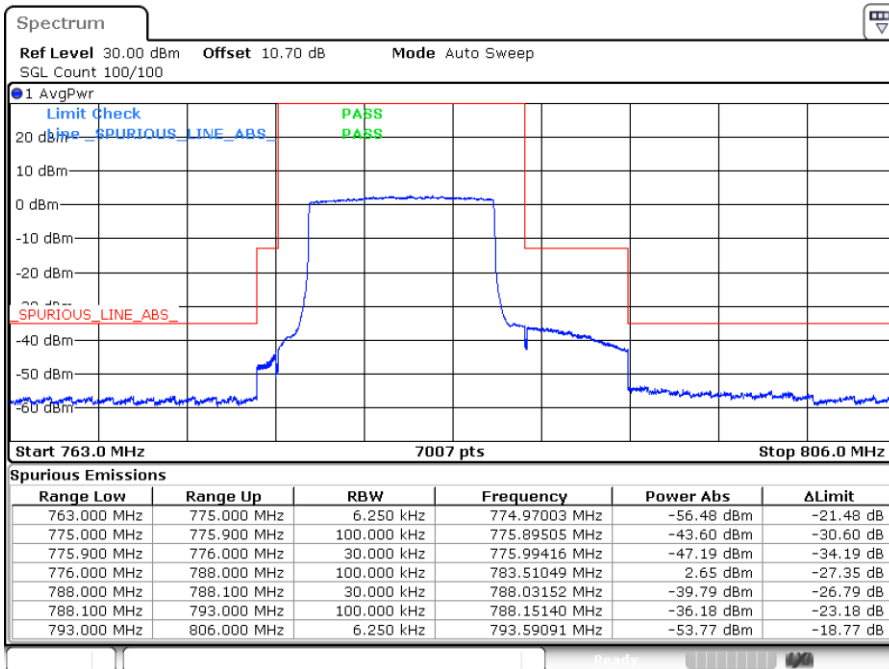
Highest Band Edge / 1 RB



Date: 24.JAN.2020 15:13:44

Date: 24.JAN.2020 15:15:25

Band Edge / Full RB

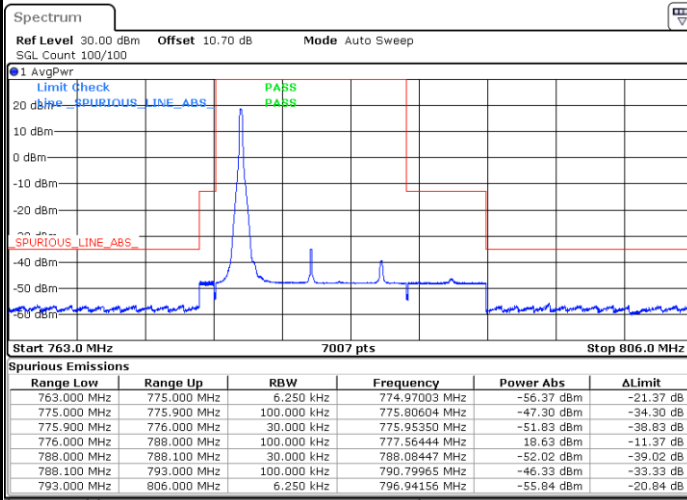


Date: 24.JAN.2020 15:12:03



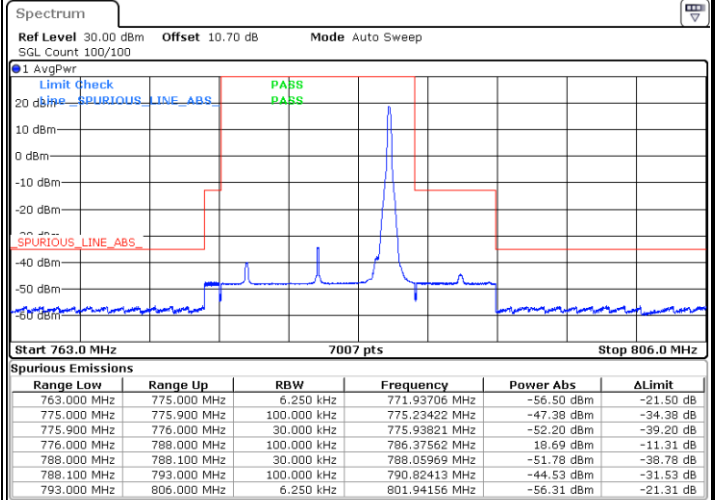
LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



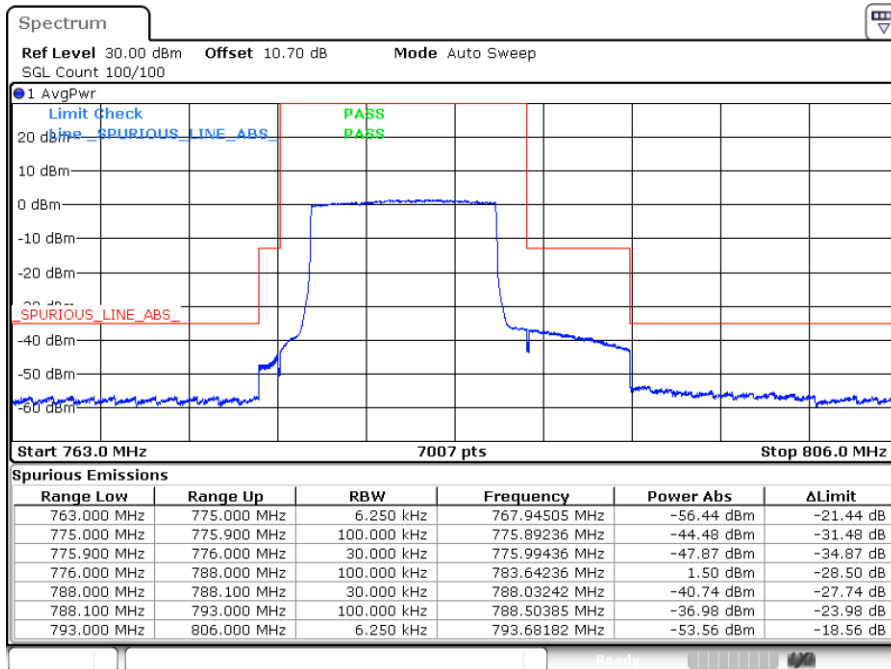
Date: 24.JAN.2020 15:18:46

Highest Band Edge / 1 RB



Date: 24.JAN.2020 15:20:26

Band Edge / Full RB



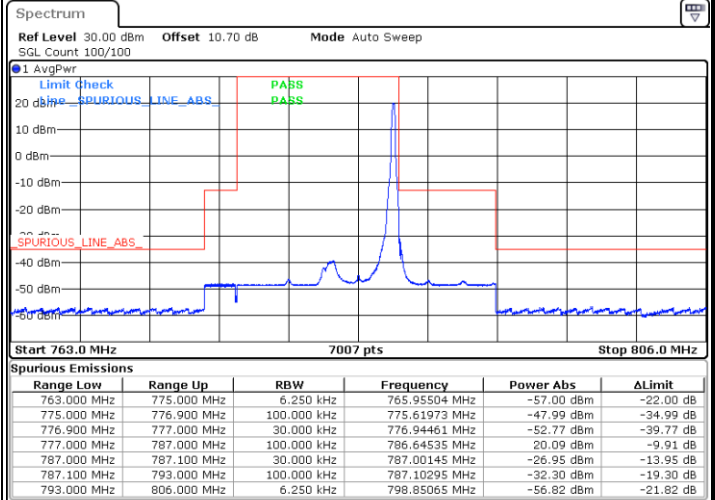
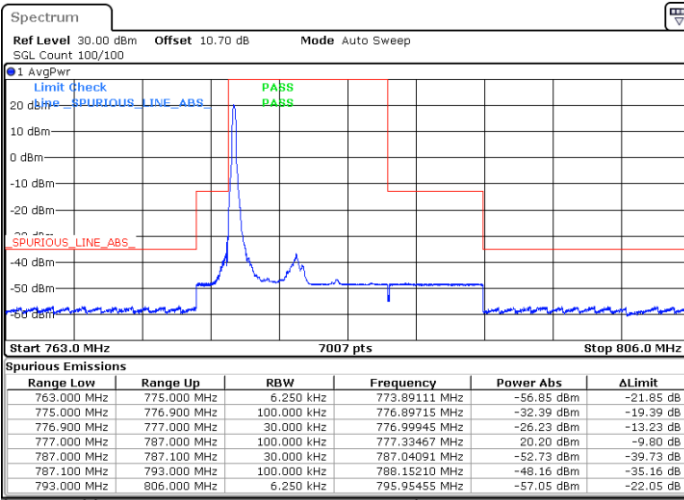
Date: 24.JAN.2020 15:17:05



IC LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

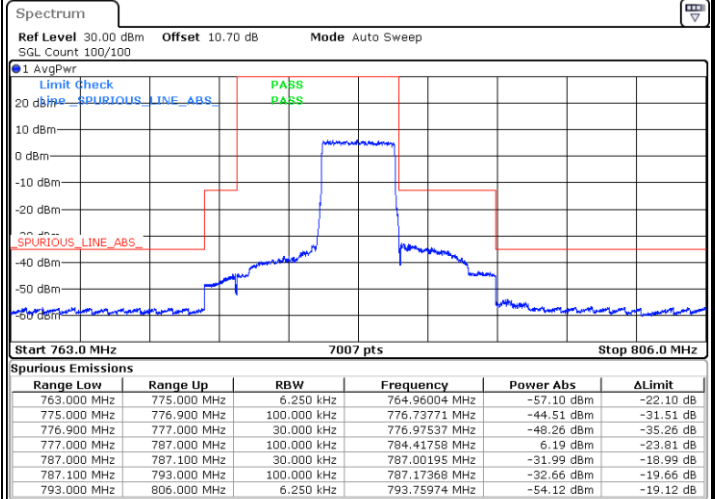
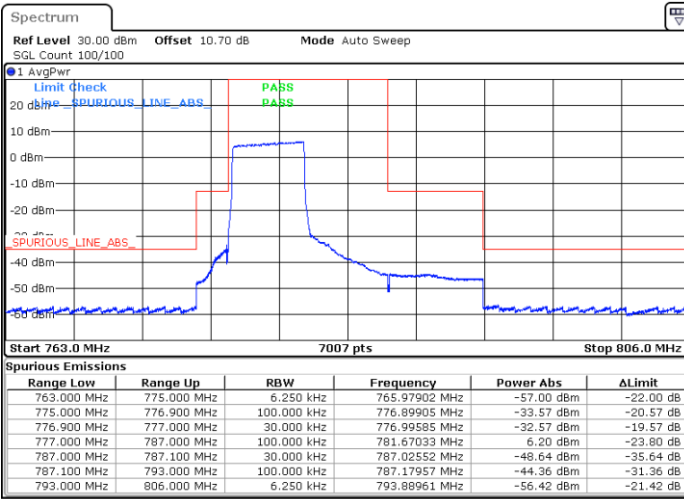


Date: 28.JAN.2020 02:26:04

Date: 28.JAN.2020 02:32:49

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 28.JAN.2020 02:21:01

Date: 28.JAN.2020 02:27:46