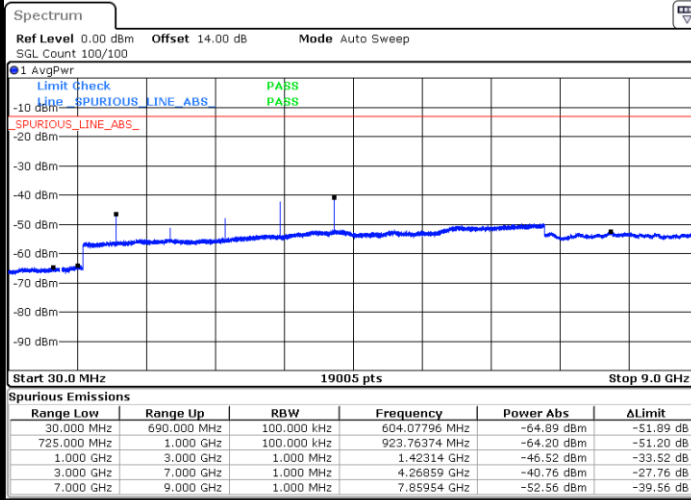




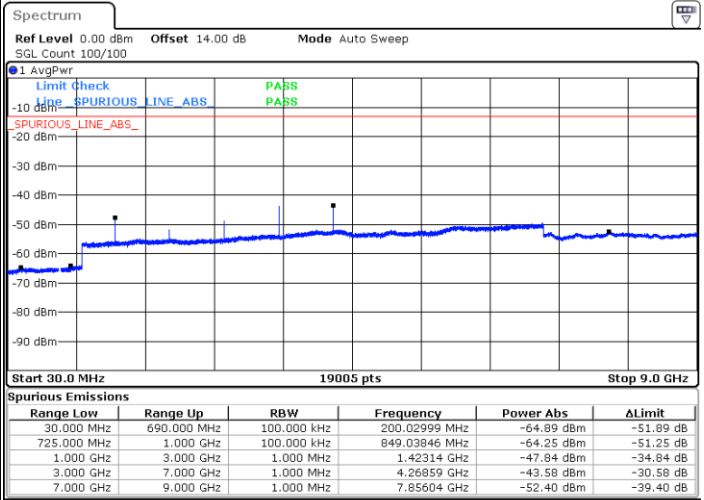
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 14.MAR.2020 22:34:38

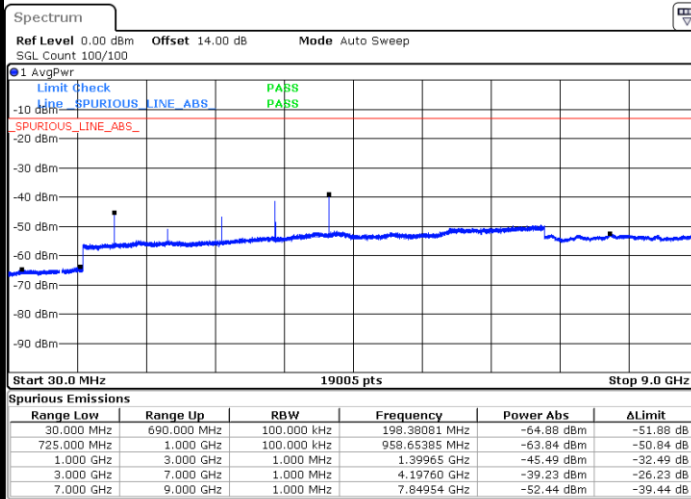
Highest Channel / 16QAM



Date: 14.MAR.2020 22:34:04

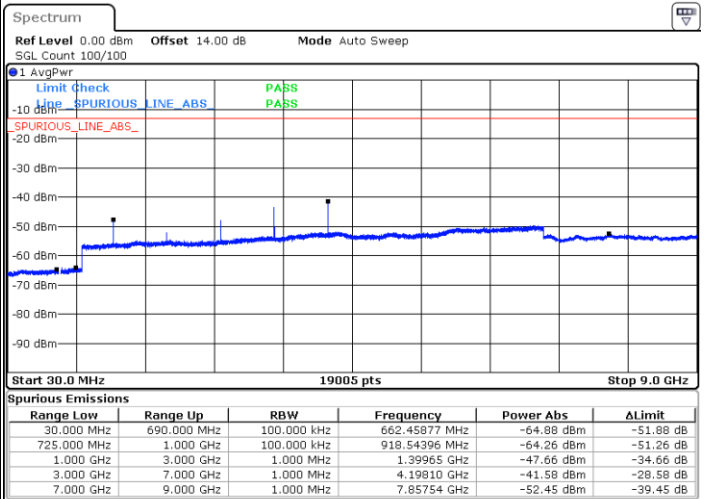
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 14.MAR.2020 22:39:52

Lowest Channel / 16QAM



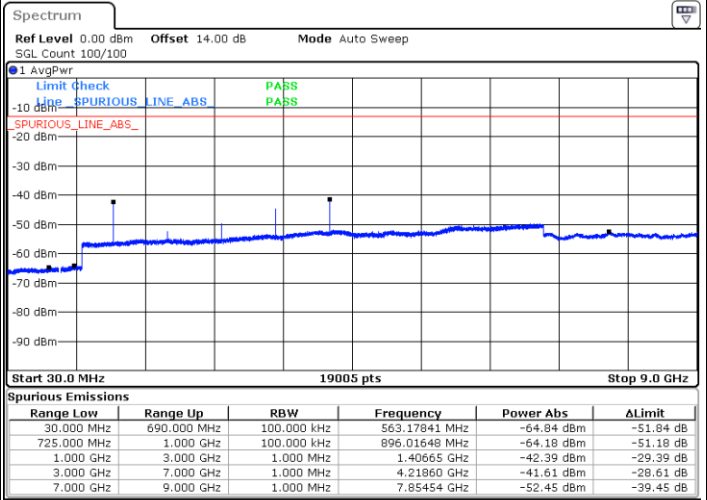
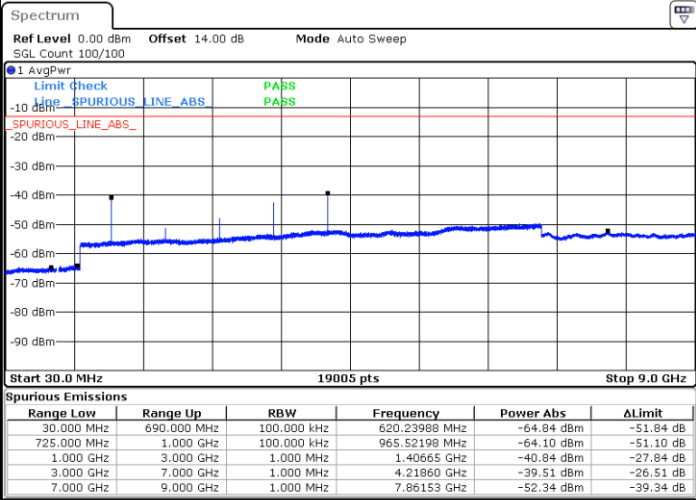
Date: 14.MAR.2020 22:40:26



LTE Band 12 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

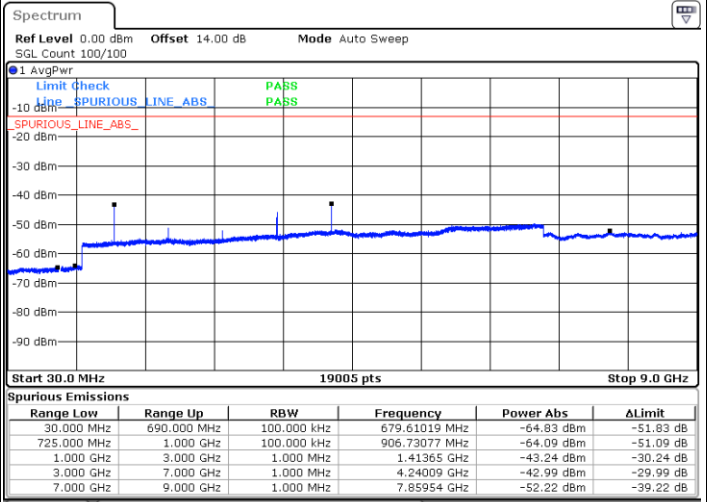
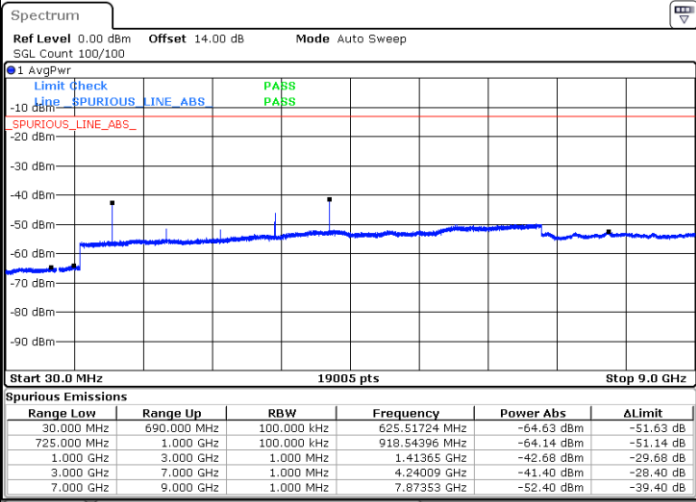


Date: 14.MAR.2020 22:42:18

Date: 14.MAR.2020 22:41:44

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 14.MAR.2020 22:47:32

Date: 14.MAR.2020 22:48:06



### 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	0.0023	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0011	

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

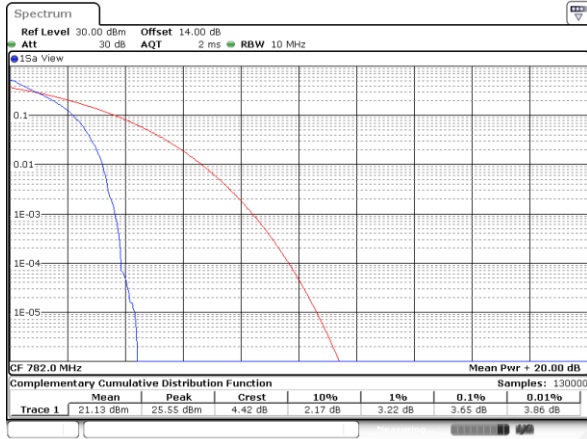
### Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.65	5.07	5.1	5.8	
Highest CH	-	-	-	-	



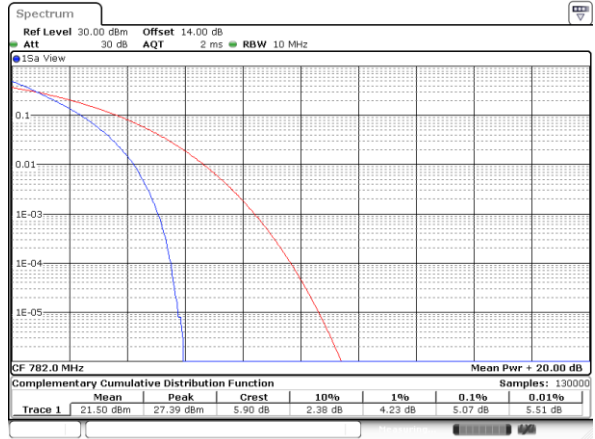
LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB



Date: 15 MAR 2020 02:06:34

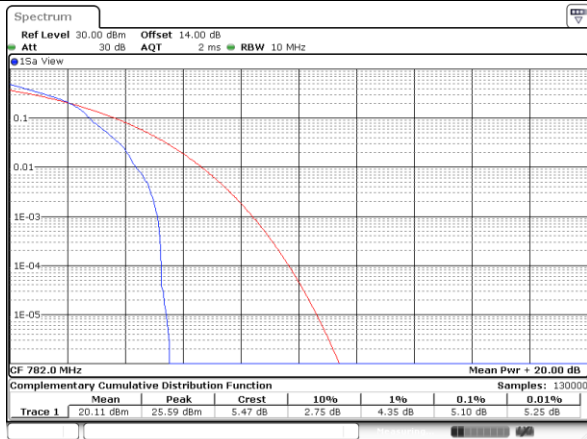
Middle Channel / Full RB



Date: 15 MAR 2020 01:12:41

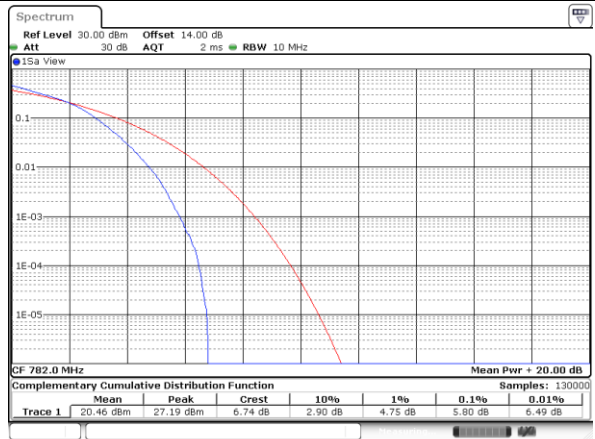
LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Date: 15 MAR 2020 02:08:12

Middle Channel / Full RB



Date: 15 MAR 2020 01:12:20



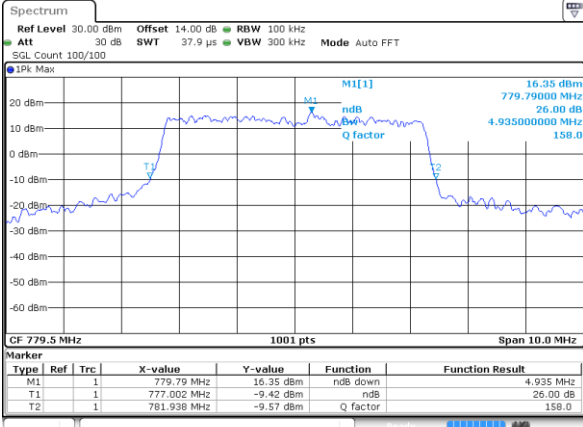
26dB Bandwidth

Mode	LTE Band 13 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.94	4.95	-	-	-	-	-	-
Middle CH	-	-	-	-	4.95	4.96	10.17	9.85	-	-	-	-
Highest CH	-	-	-	-	4.88	4.91	-	-	-	-	-	-



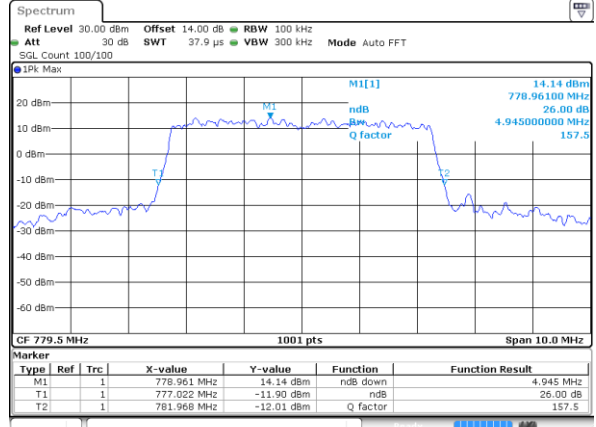
LTE Band 13

Lowest Channel / 5MHz / QPSK



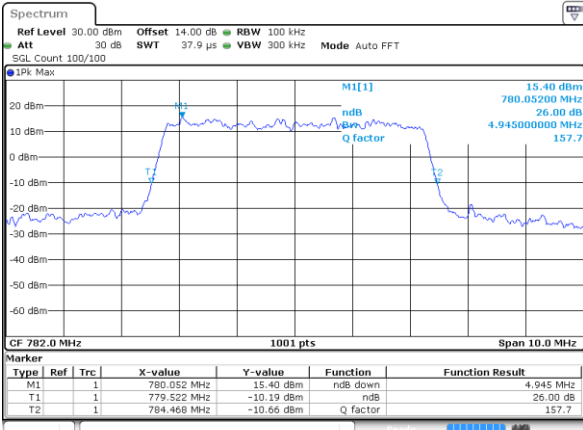
Date: 15 MAR 2020 00:39:07

Lowest Channel / 5MHz / 16QAM



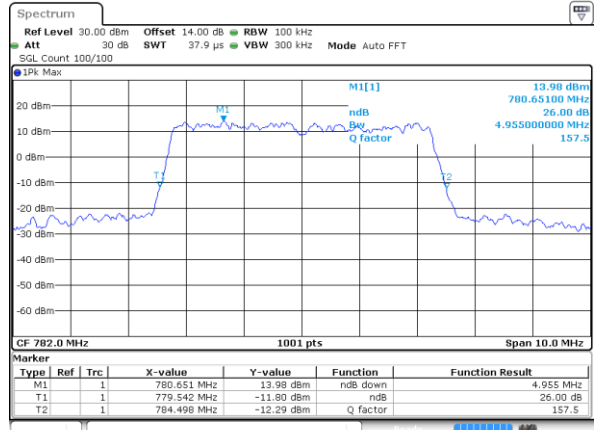
Date: 15 MAR 2020 00:38:56

Middle Channel / 5MHz / QPSK



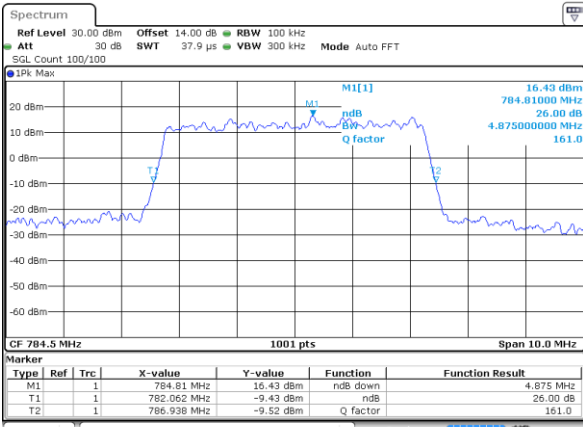
Date: 15 MAR 2020 00:48:10

Middle Channel / 5MHz / 16QAM



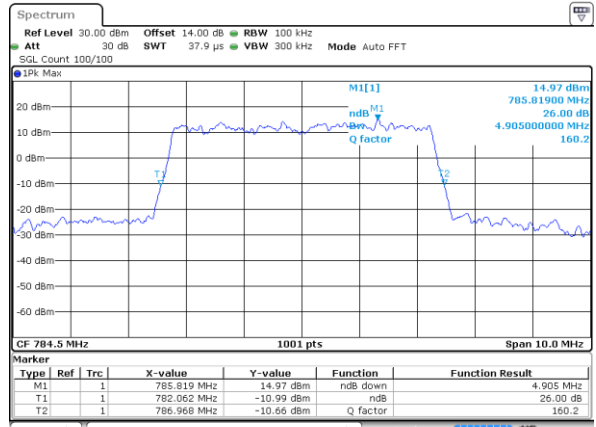
Date: 15 MAR 2020 00:48:20

Highest Channel / 5MHz / QPSK



Date: 15 MAR 2020 00:49:28

Highest Channel / 5MHz / 16QAM

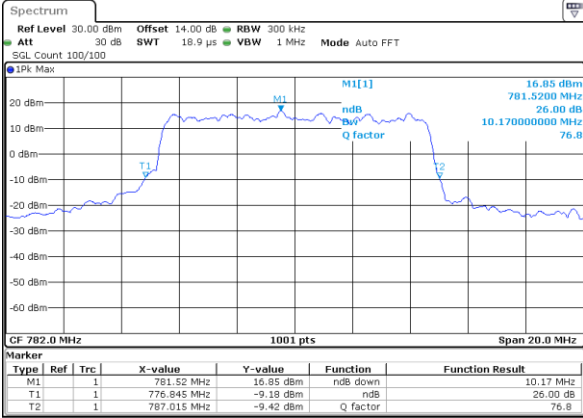


Date: 15 MAR 2020 00:49:15



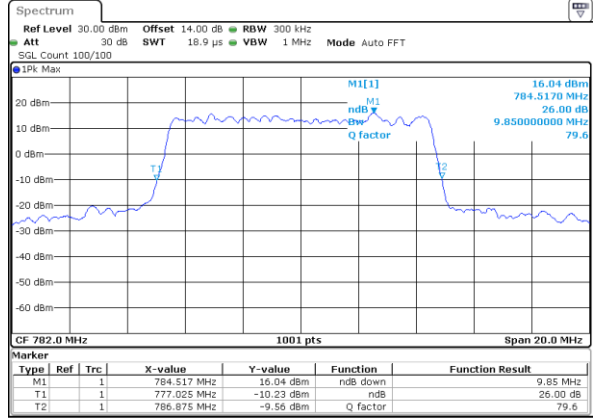
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 15 MAR 2020 00:57:53

Middle Channel / 10MHz / 16QAM



Date: 15 MAR 2020 00:57:42





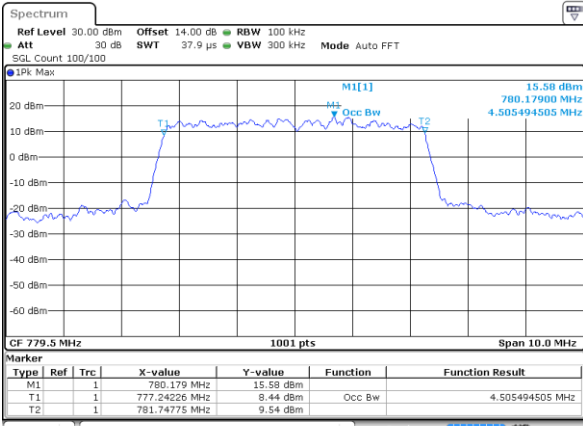
Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.51	4.48	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.49	9.03	9.07	-	-	-	-
Highest CH	-	-	-	-	4.50	4.50	-	-	-	-	-	-



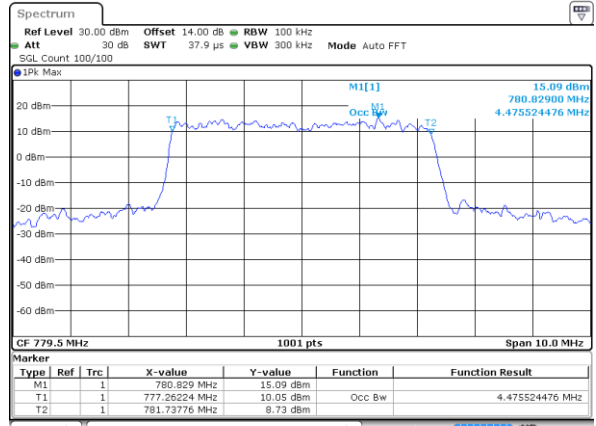
LTE Band 13

Lowest Channel / 5MHz / QPSK



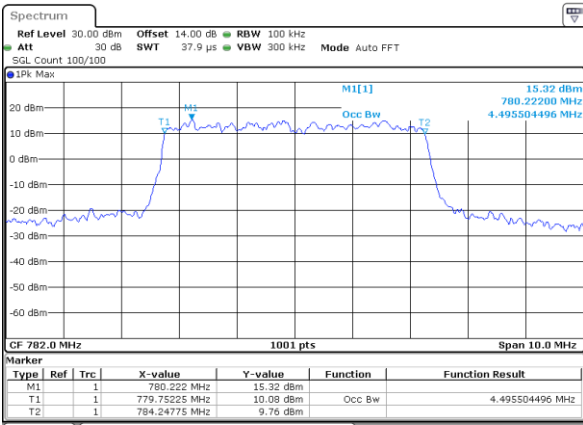
Date: 15 MAR 2020 00:38:34

Lowest Channel / 5MHz / 16QAM



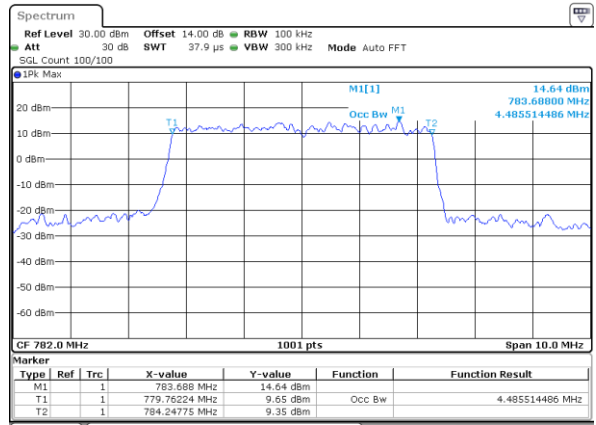
Date: 15 MAR 2020 00:38:45

Middle Channel / 5MHz / QPSK



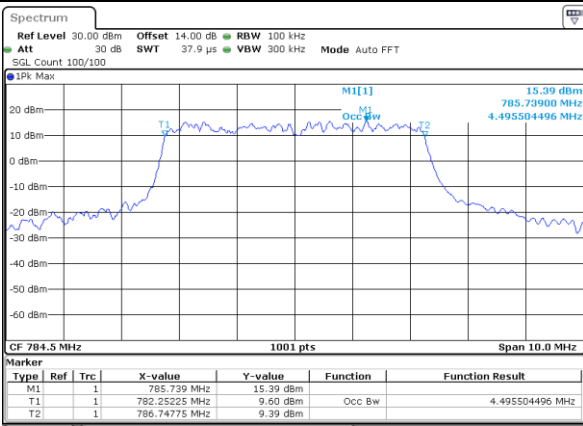
Date: 15 MAR 2020 00:48:42

Middle Channel / 5MHz / 16QAM



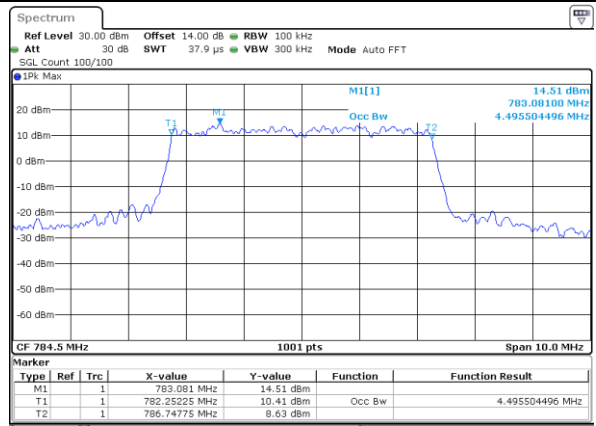
Date: 15 MAR 2020 00:48:31

Highest Channel / 5MHz / QPSK



Date: 15 MAR 2020 00:48:53

Highest Channel / 5MHz / 16QAM

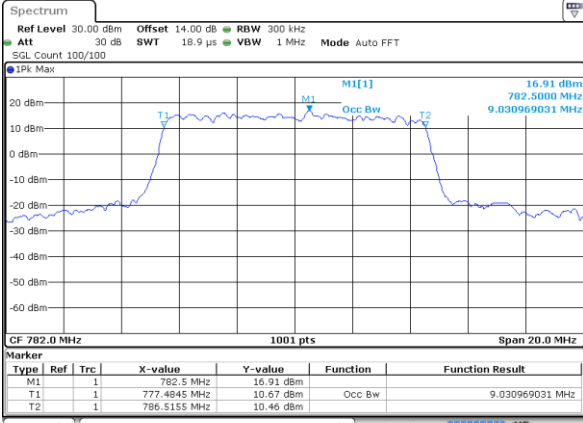


Date: 15 MAR 2020 00:49:04



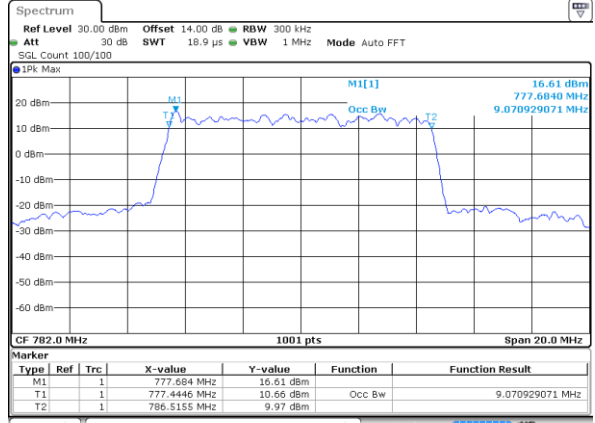
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 15 MAR 2020 00:57:21

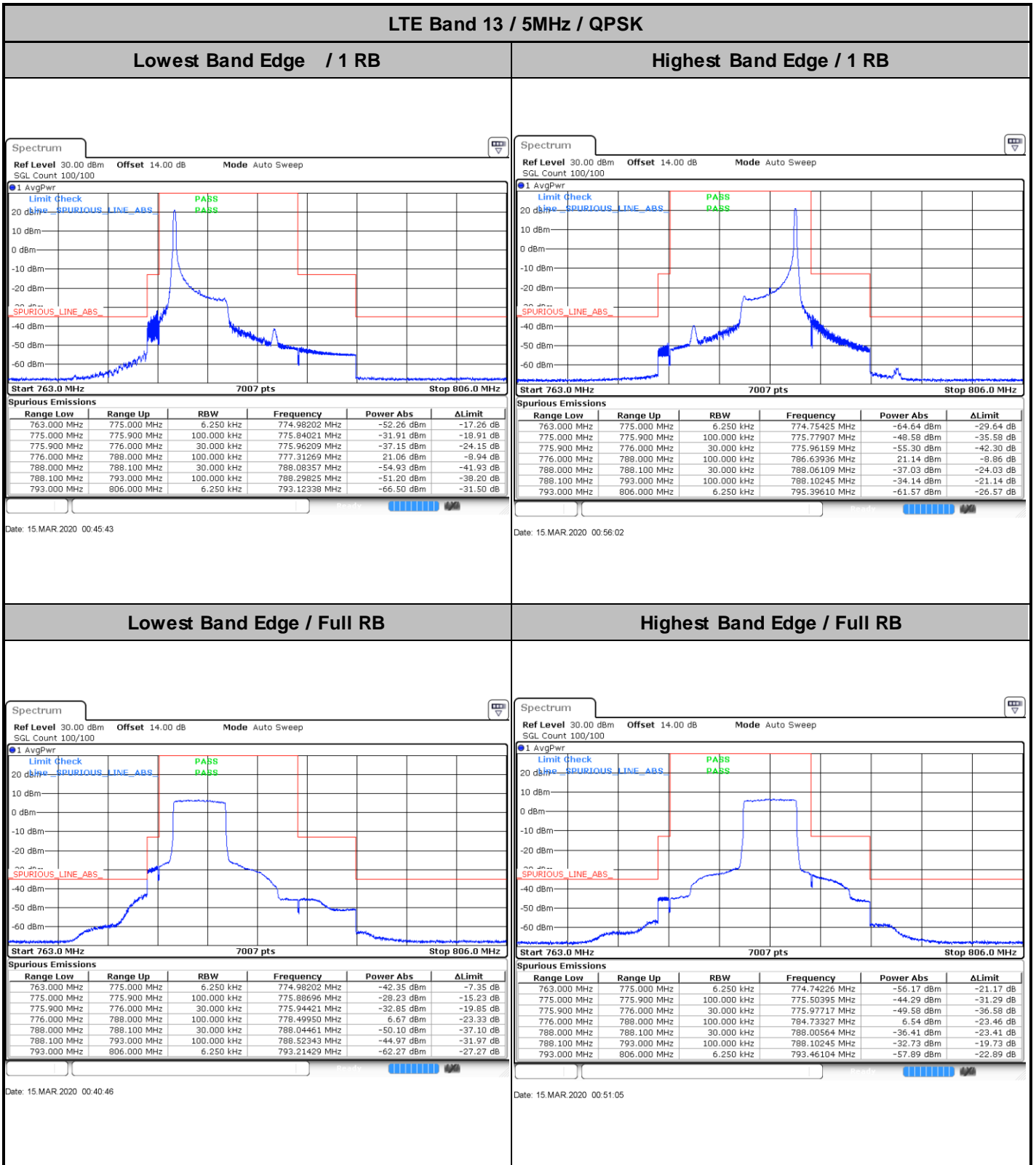
Middle Channel / 10MHz / 16QAM



Date: 15 MAR 2020 00:57:31



# Conducted Band Edge

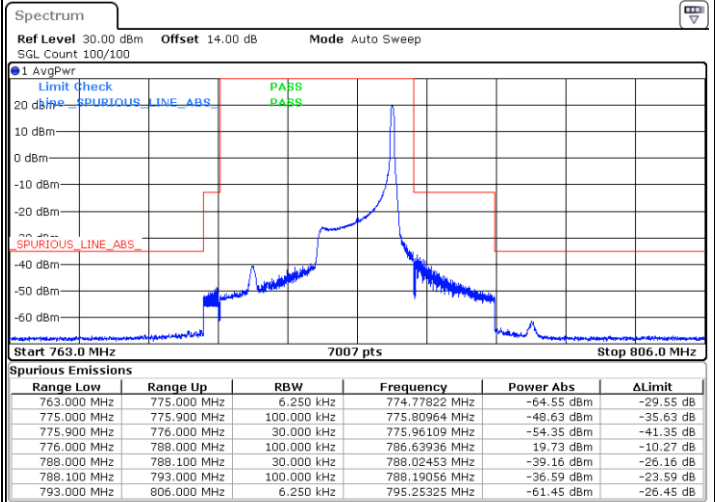
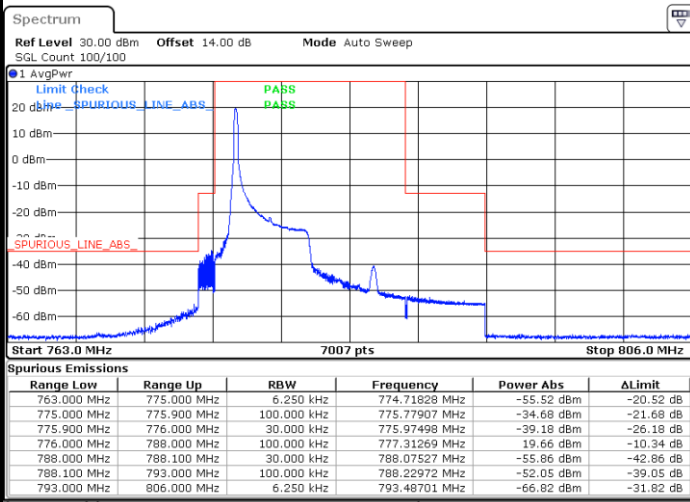




LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

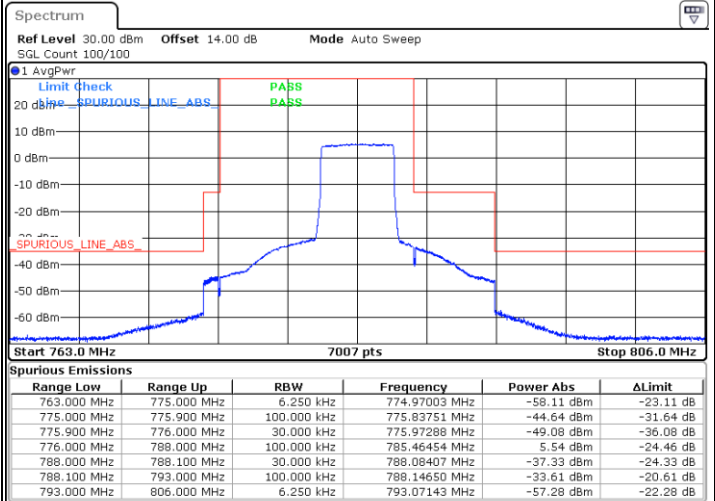
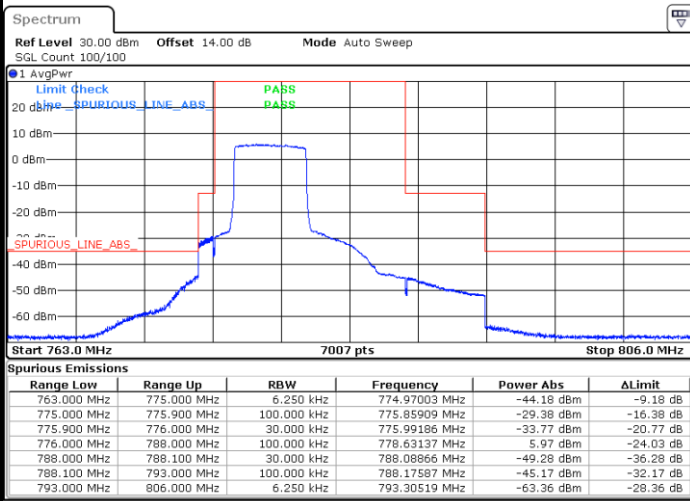


Date: 15.MAR.2020 00:44:04

Date: 15.MAR.2020 00:54:23

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



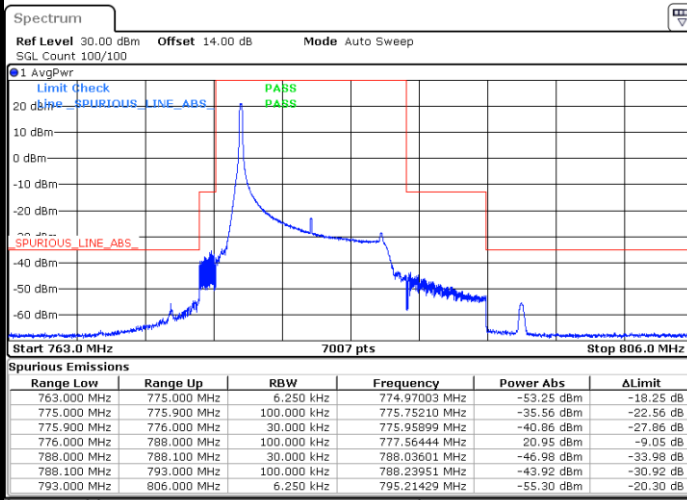
Date: 15.MAR.2020 00:42:25

Date: 15.MAR.2020 00:52:44



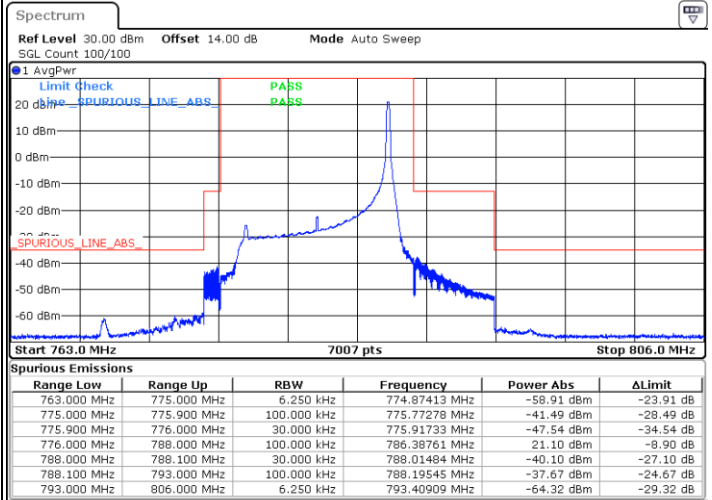
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



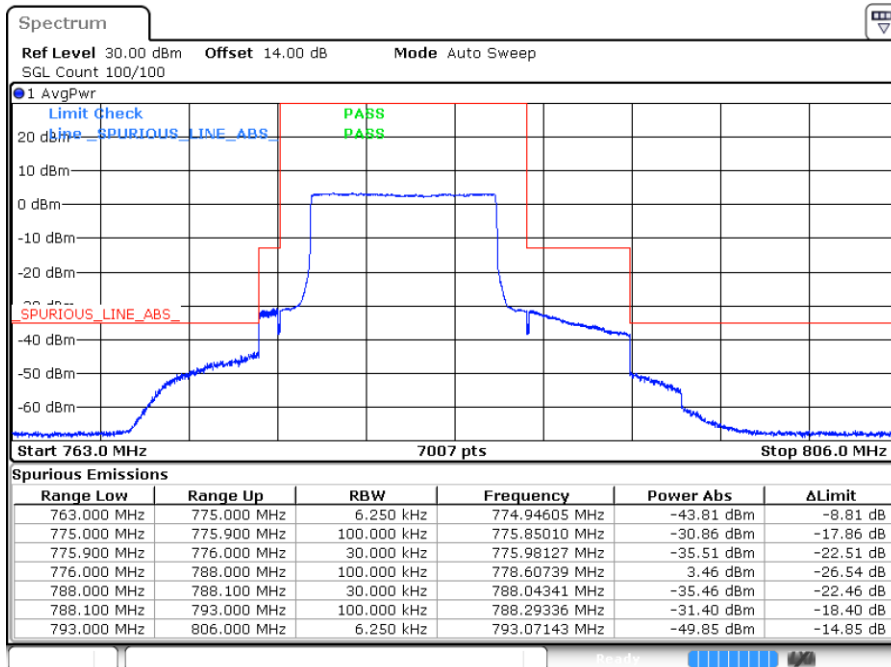
Date: 15.MAR.2020 01:04:29

Highest Band Edge / 1 RB



Date: 15.MAR.2020 01:06:08

Band Edge / Full RB

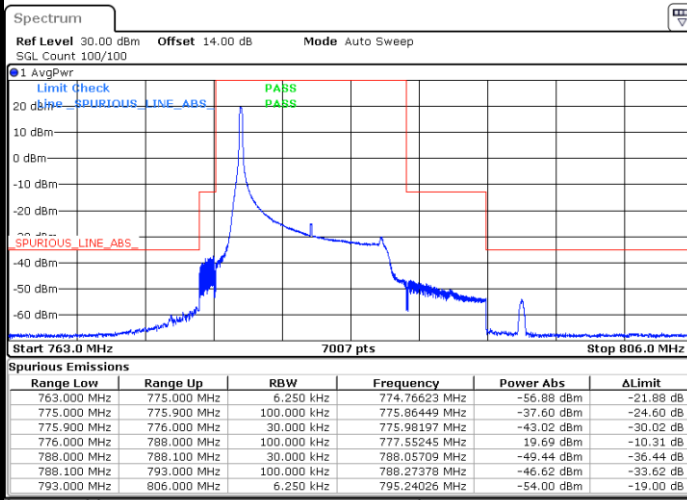


Date: 15.MAR.2020 00:59:32



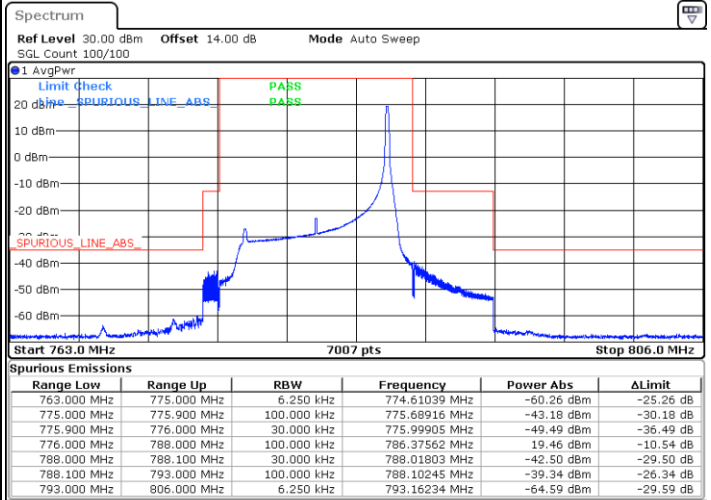
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



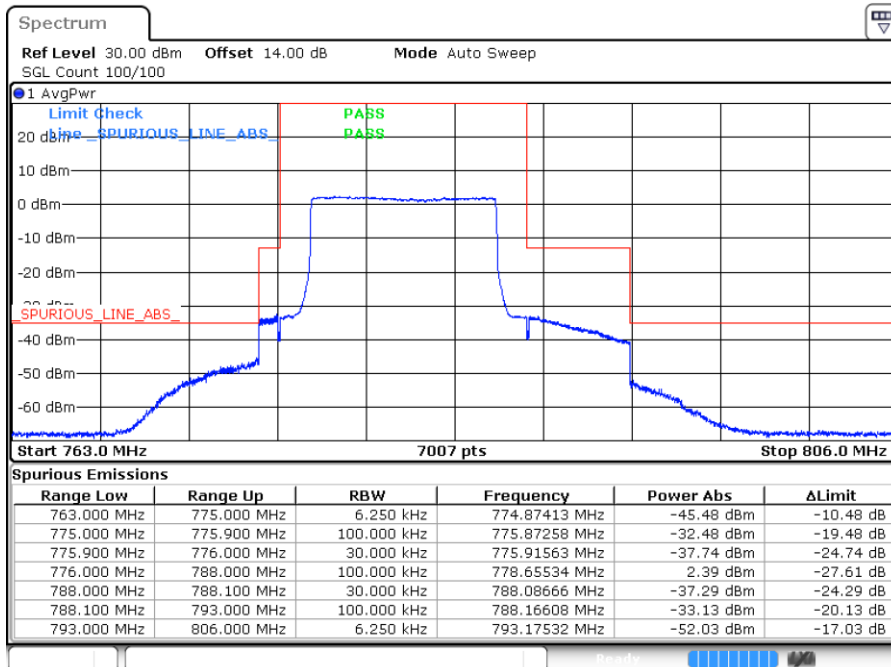
Date: 15.MAR.2020 01:02:50

Highest Band Edge / 1 RB



Date: 20.MAR.2020 21:48:53

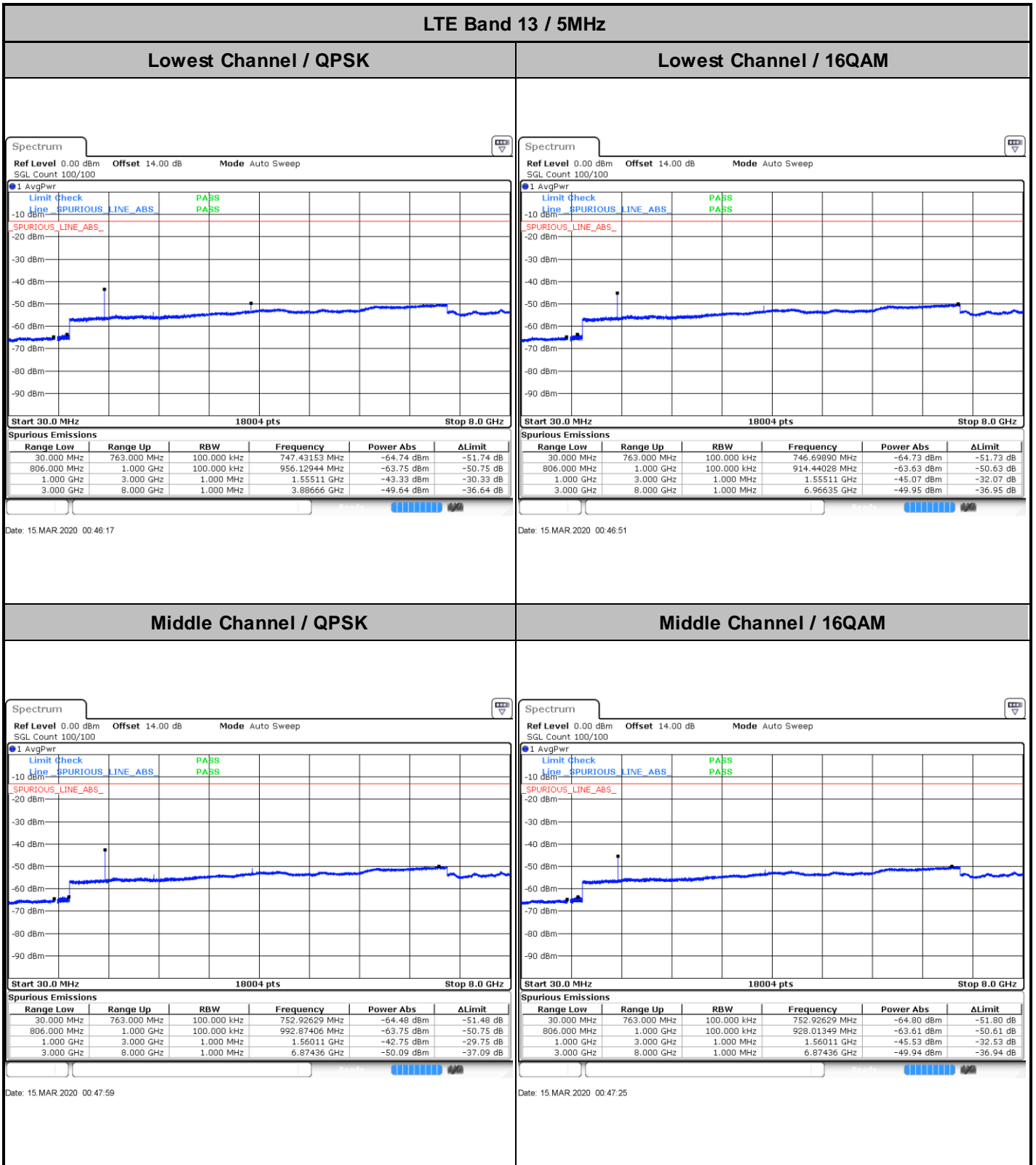
Band Edge / Full RB



Date: 15.MAR.2020 01:01:11



# Conducted Spurious Emission

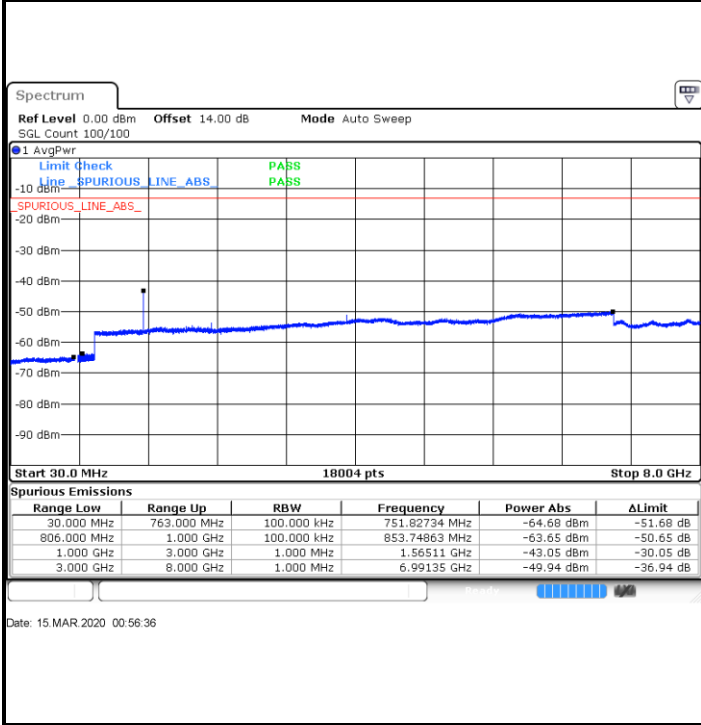




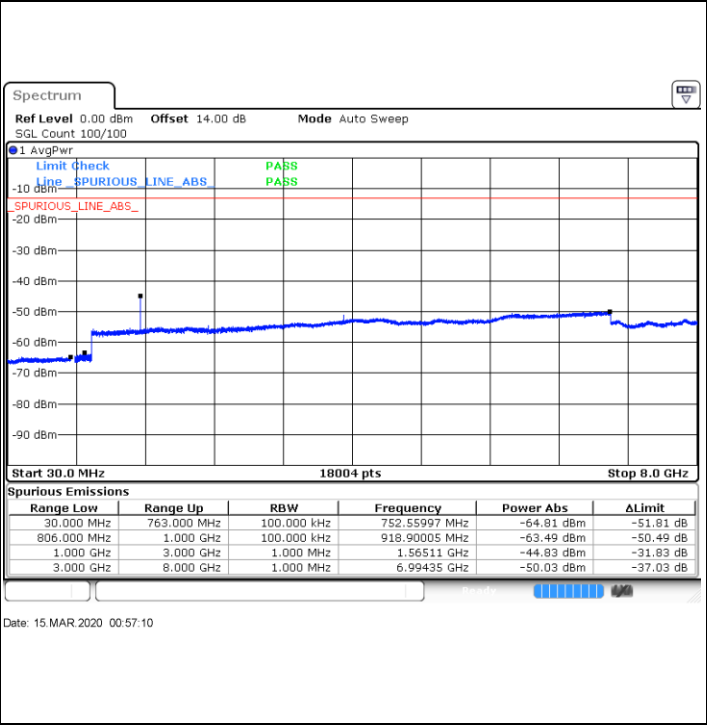


LTE Band 13 / 5MHz

Highest Channel / QPSK

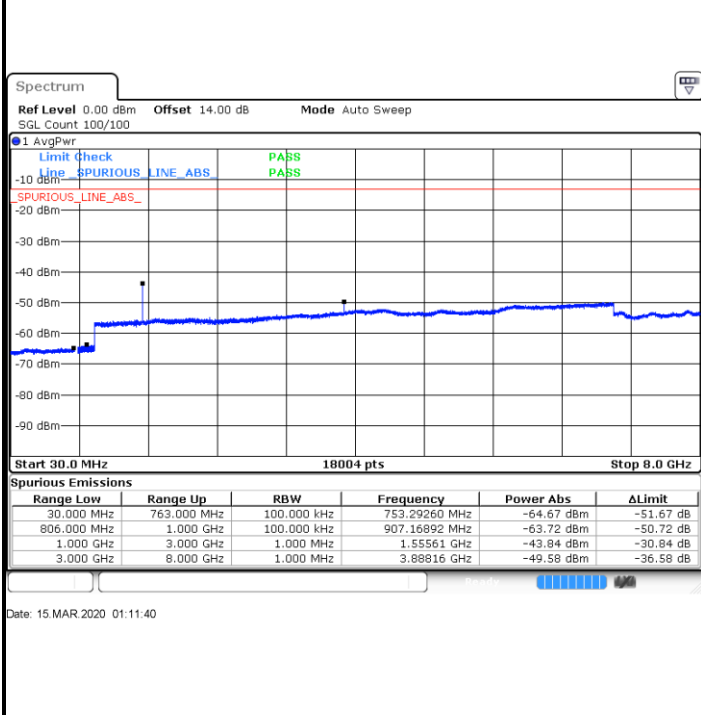


Highest Channel / 16QAM

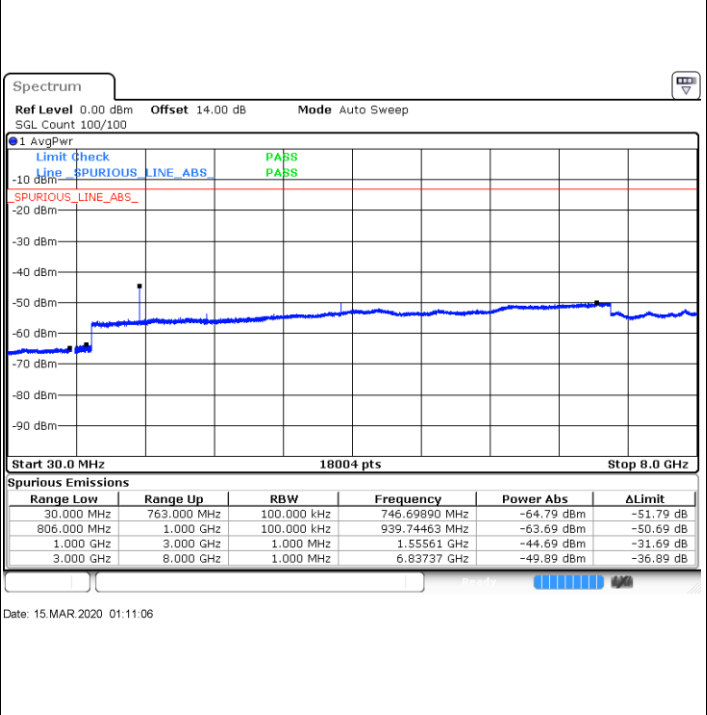


LTE Band 13 / 10MHz

Middle Channel / QPSK



Middle Channel / 16QAM





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	0.0351	PASS
40	Normal Voltage	0.0461	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0042	
-10	Normal Voltage	0.0146	
-20	Normal Voltage	0.0237	
-30	Normal Voltage	0.0285	
20	Maximum Voltage	0.0366	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0426	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 17

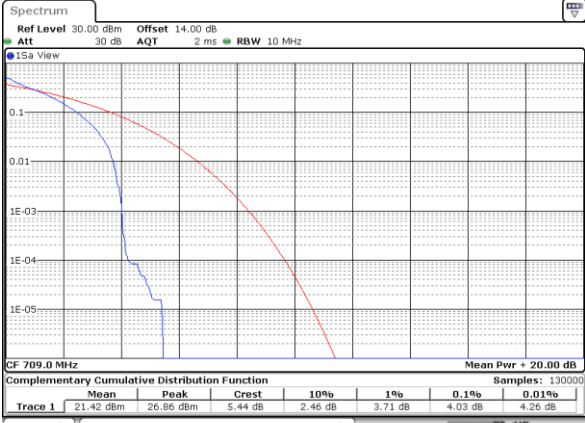
### Peak-to-Average Ratio

Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.03	5.19	5.39	6.00	<b>PASS</b>
Middle CH	4.29	5.04	5.01	5.91	
Highest CH	4.46	4.93	5.22	5.94	



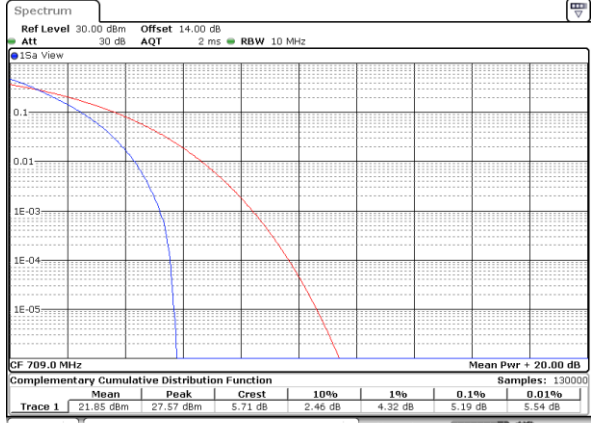
LTE Band 17 / 10MHz / QPSK

Lowest Channel / 1RB



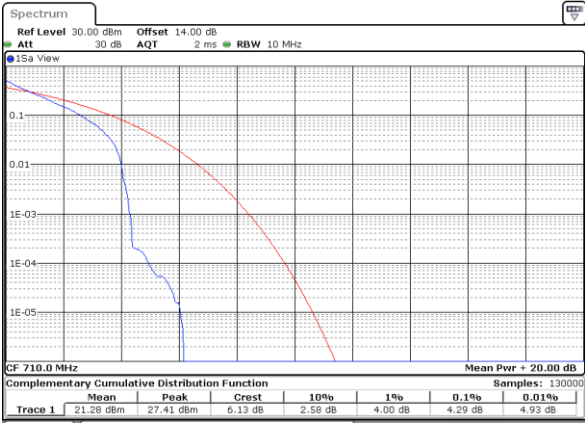
Date: 14 MAR 2020 23:59:58

Lowest Channel / Full RB



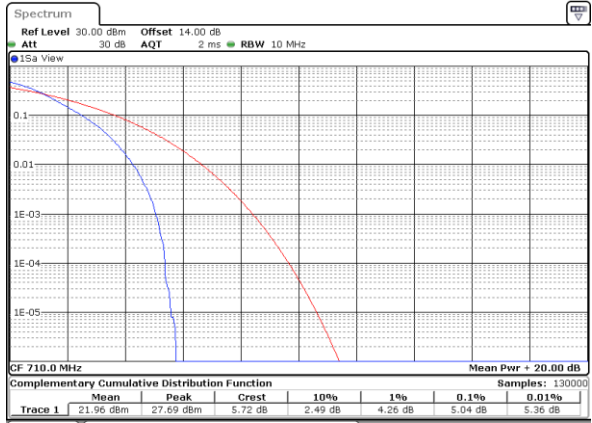
Date: 15 MAR 2020 00:00:08

Middle Channel / 1RB



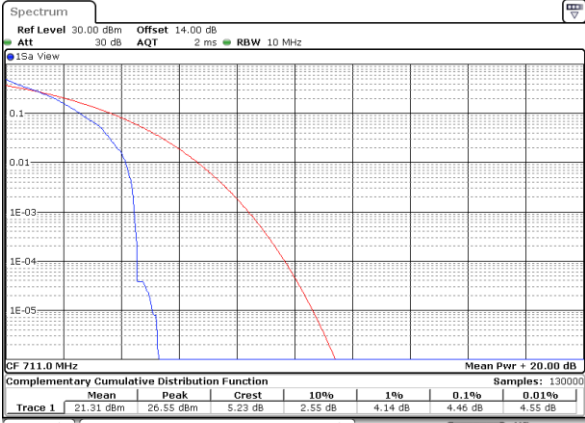
Date: 15 MAR 2020 00:00:19

Middle Channel / Full RB



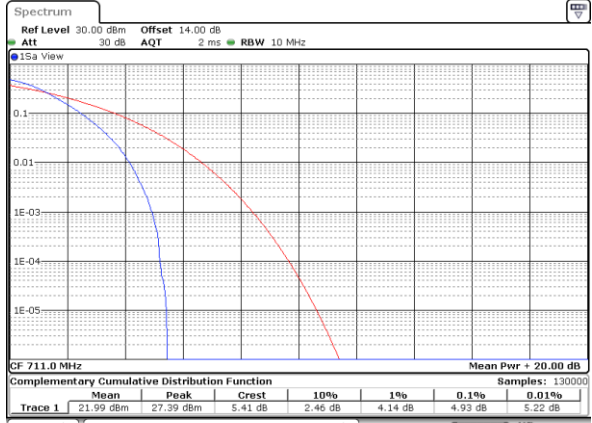
Date: 15 MAR 2020 00:00:30

Highest Channel / 1RB



Date: 15 MAR 2020 00:00:40

Highest Channel / Full RB

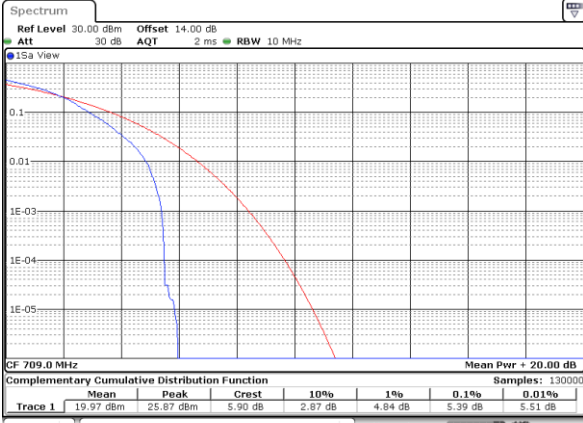


Date: 15 MAR 2020 00:01:00



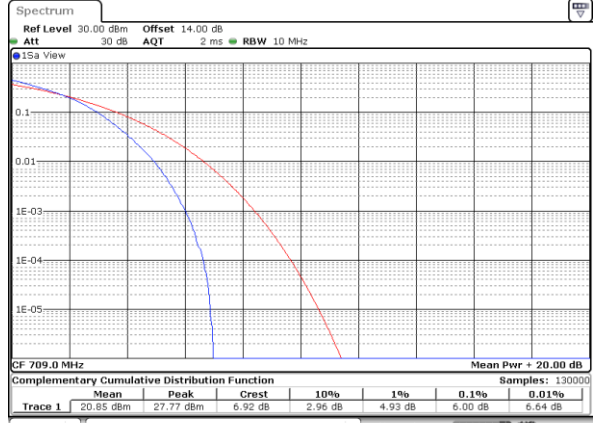
LTE Band 17 / 10MHz / 16QAM

Lowest Channel / 1RB



Date: 14.MAR.2020 23:58:55

Lowest Channel / Full RB



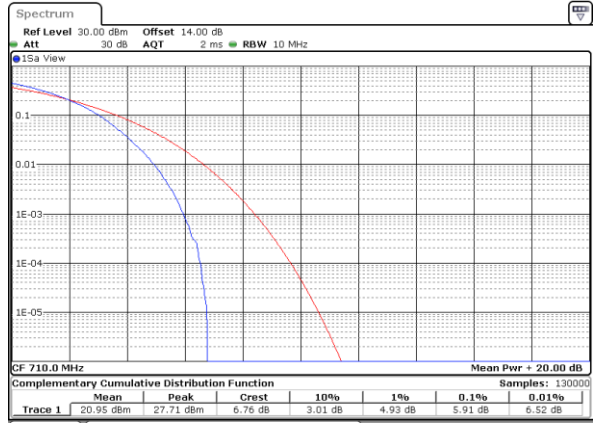
Date: 14.MAR.2020 23:59:06

Middle Channel / 1RB



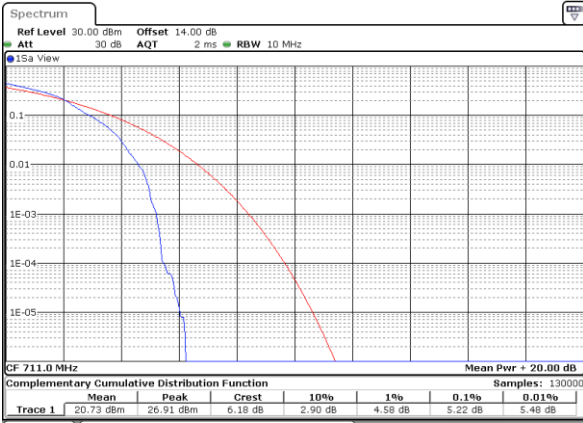
Date: 14.MAR.2020 23:59:16

Middle Channel / Full RB



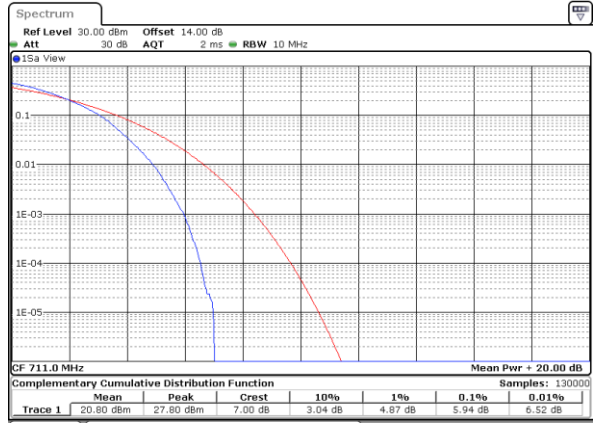
Date: 14.MAR.2020 23:59:27

Highest Channel / 1RB



Date: 14.MAR.2020 23:59:37

Highest Channel / Full RB



Date: 14.MAR.2020 23:59:47



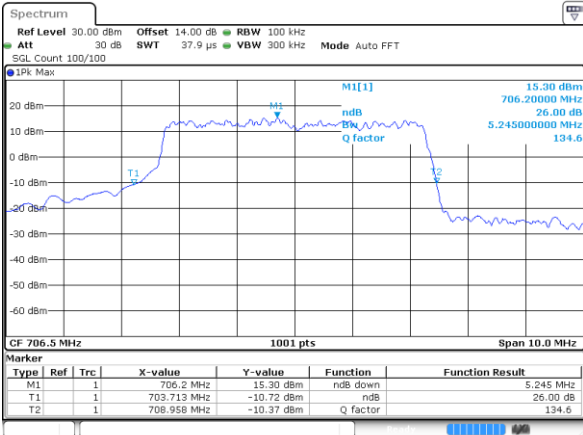
**26dB Bandwidth**

Mode	LTE Band 17 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	5.25	4.91	9.89	9.71	-	-	-	-
Middle CH	-	-	-	-	5.12	4.92	9.95	9.87	-	-	-	-
Highest CH	-	-	-	-	4.93	4.87	9.99	10.03	-	-	-	-



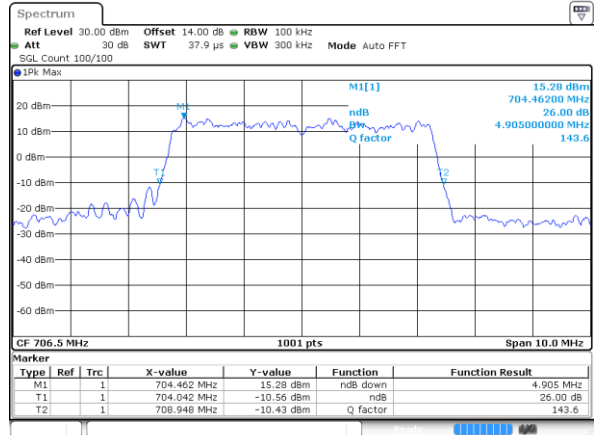
LTE Band 17

Lowest Channel / 5MHz / QPSK



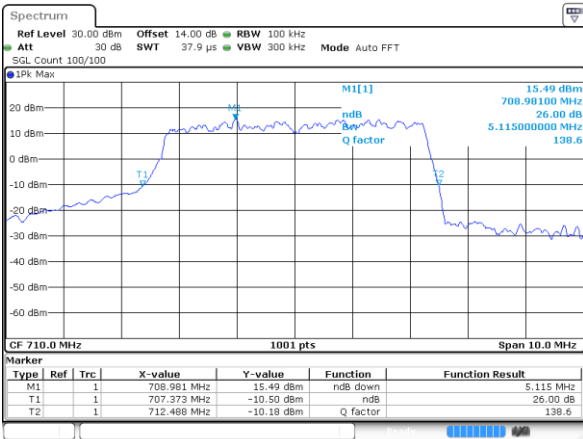
Date: 14 MAR 2020 23:25:44

Lowest Channel / 5MHz / 16QAM



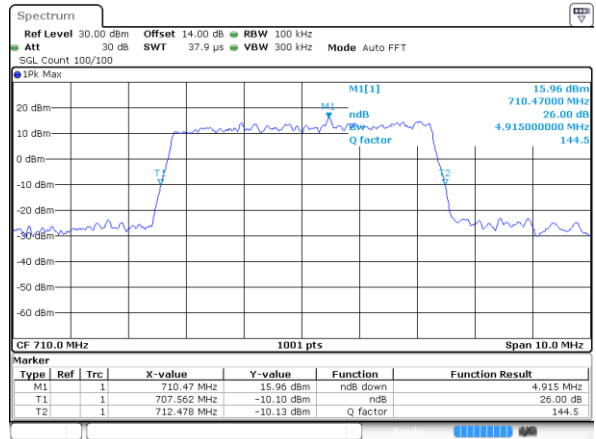
Date: 14 MAR 2020 23:25:55

Middle Channel / 5MHz / QPSK



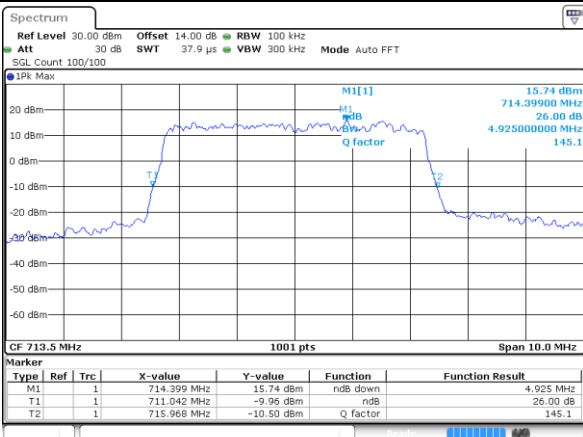
Date: 14 MAR 2020 23:31:41

Middle Channel / 5MHz / 16QAM



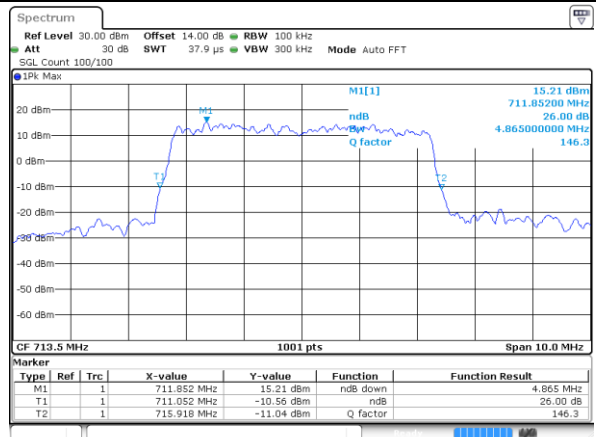
Date: 14 MAR 2020 23:31:52

Highest Channel / 5MHz / QPSK



Date: 14 MAR 2020 23:33:33

Highest Channel / 5MHz / 16QAM

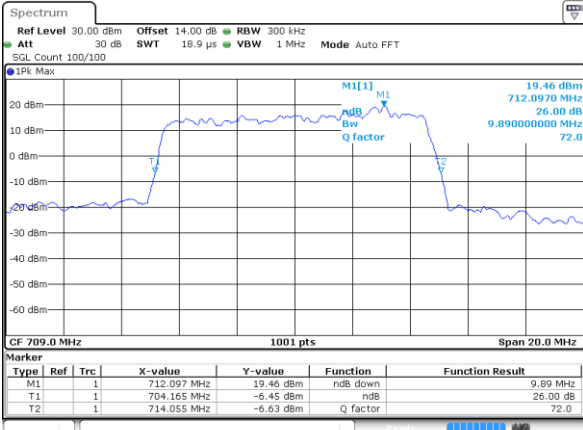


Date: 14 MAR 2020 23:33:44



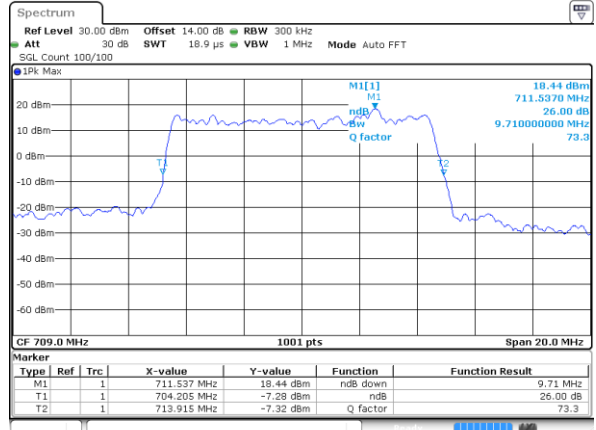
LTE Band 17

Lowest Channel / 10MHz / QPSK



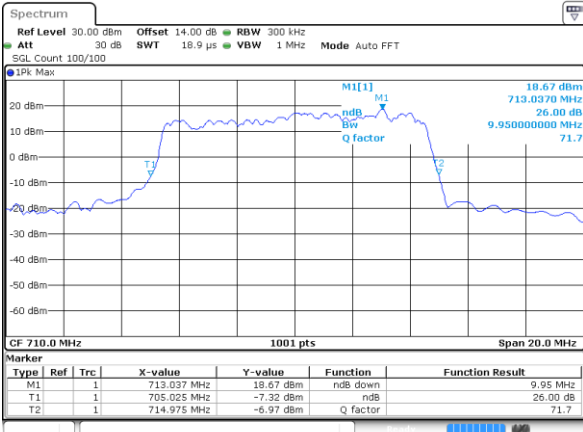
Date: 14 MAR 2020 23:39:29

Lowest Channel / 10MHz / 16QAM



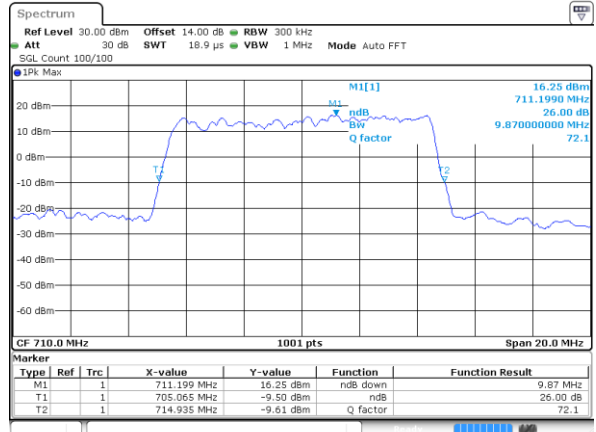
Date: 14 MAR 2020 23:39:40

Middle Channel / 10MHz / QPSK



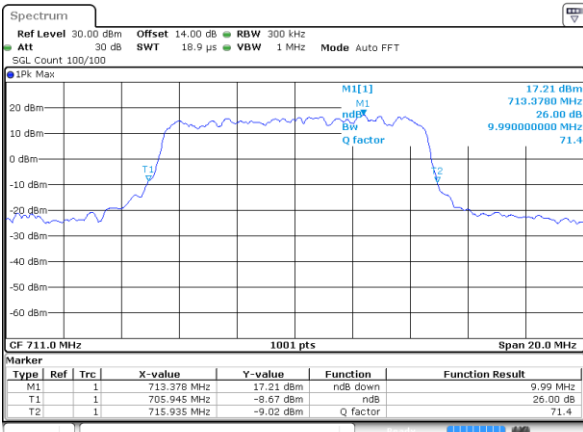
Date: 14 MAR 2020 23:45:43

Middle Channel / 10MHz / 16QAM



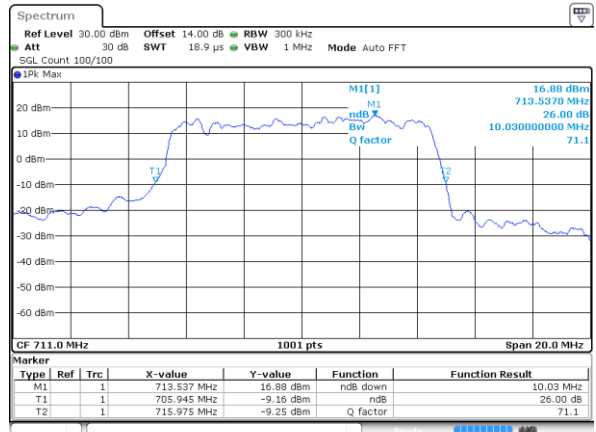
Date: 14 MAR 2020 23:45:54

Highest Channel / 10MHz / QPSK



Date: 14 MAR 2020 23:47:35

Highest Channel / 10MHz / 16QAM



Date: 14 MAR 2020 23:47:46





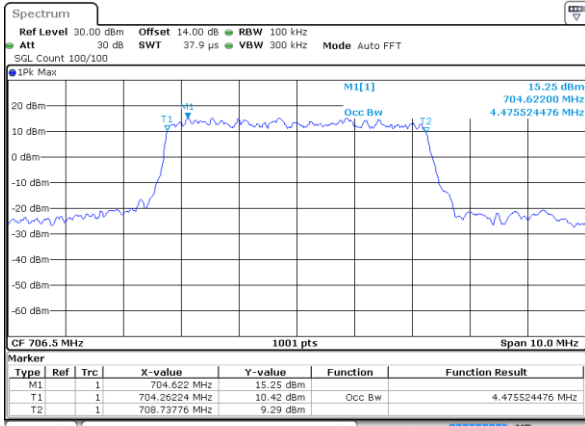
### Occupied Bandwidth

Mode	LTE Band 17 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.49	9.17	9.07	-	-	-	-
Middle CH	-	-	-	-	4.5	4.5	9.03	8.99	-	-	-	-
Highest CH	-	-	-	-	4.48	4.47	9.01	8.97	-	-	-	-



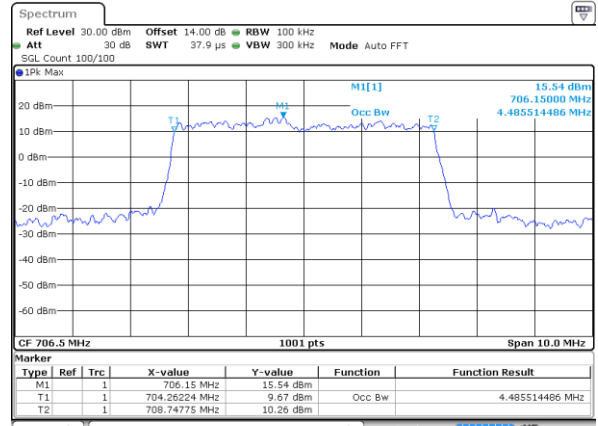
LTE Band 17

Lowest Channel / 5MHz / QPSK



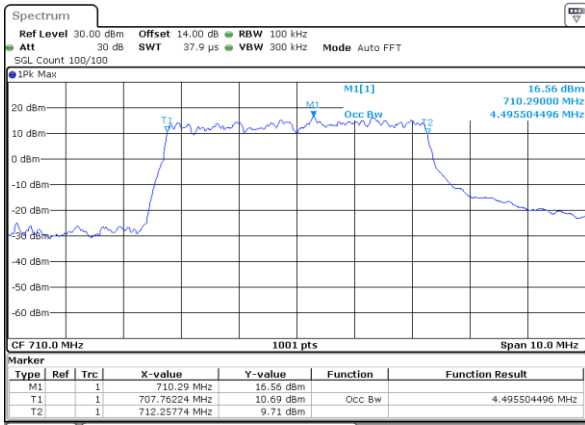
Date: 14 MAR 2020 23:25:22

Lowest Channel / 5MHz / 16QAM



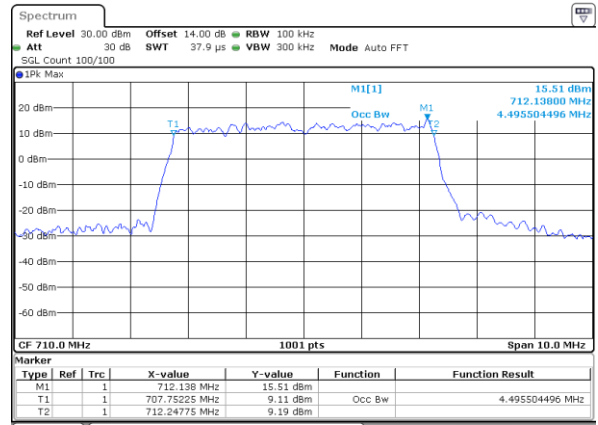
Date: 14 MAR 2020 23:25:33

Middle Channel / 5MHz / QPSK



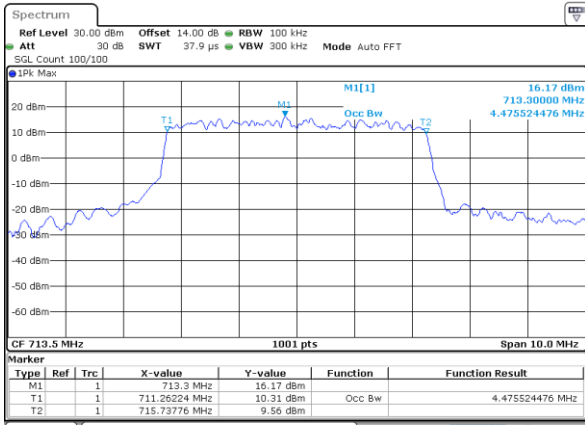
Date: 14 MAR 2020 23:31:19

Middle Channel / 5MHz / 16QAM



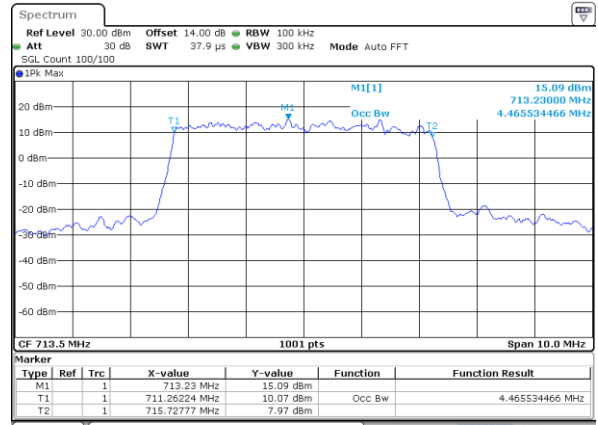
Date: 14 MAR 2020 23:31:30

Highest Channel / 5MHz / QPSK



Date: 14 MAR 2020 23:33:12

Highest Channel / 5MHz / 16QAM

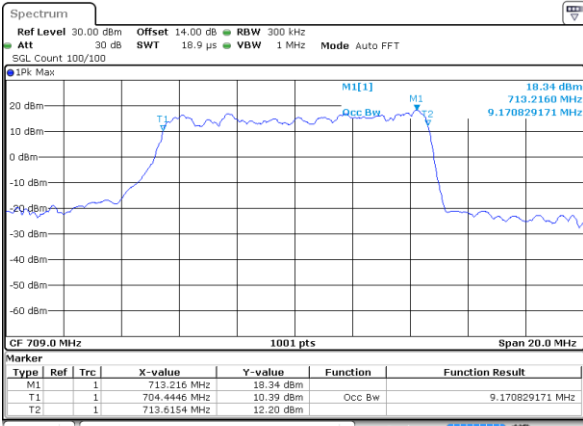


Date: 14 MAR 2020 23:33:22



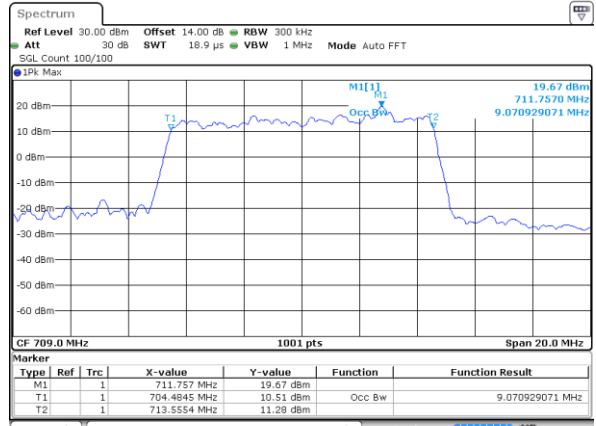
LTE Band 17

Lowest Channel / 10MHz / QPSK



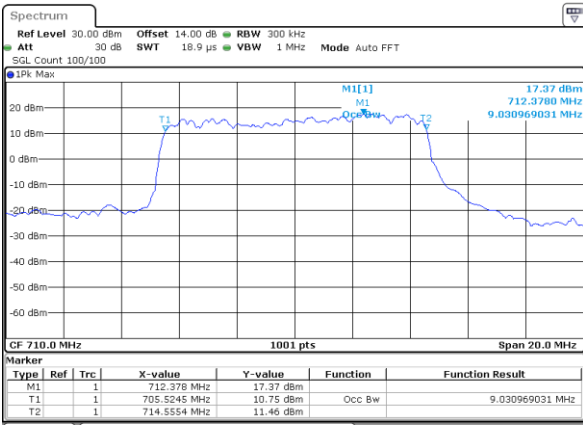
Date: 14 MAR 2020 23:39:08

Lowest Channel / 10MHz / 16QAM



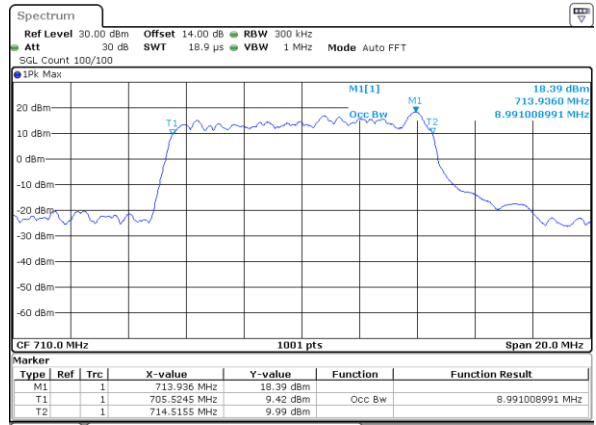
Date: 14 MAR 2020 23:39:19

Middle Channel / 10MHz / QPSK



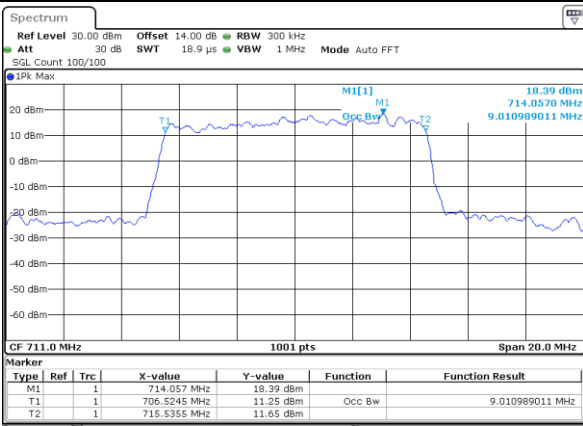
Date: 14 MAR 2020 23:45:21

Middle Channel / 10MHz / 16QAM



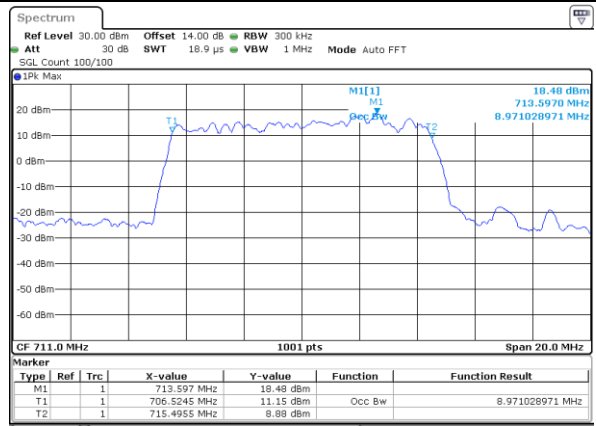
Date: 14 MAR 2020 23:45:32

Highest Channel / 10MHz / QPSK



Date: 14 MAR 2020 23:47:13

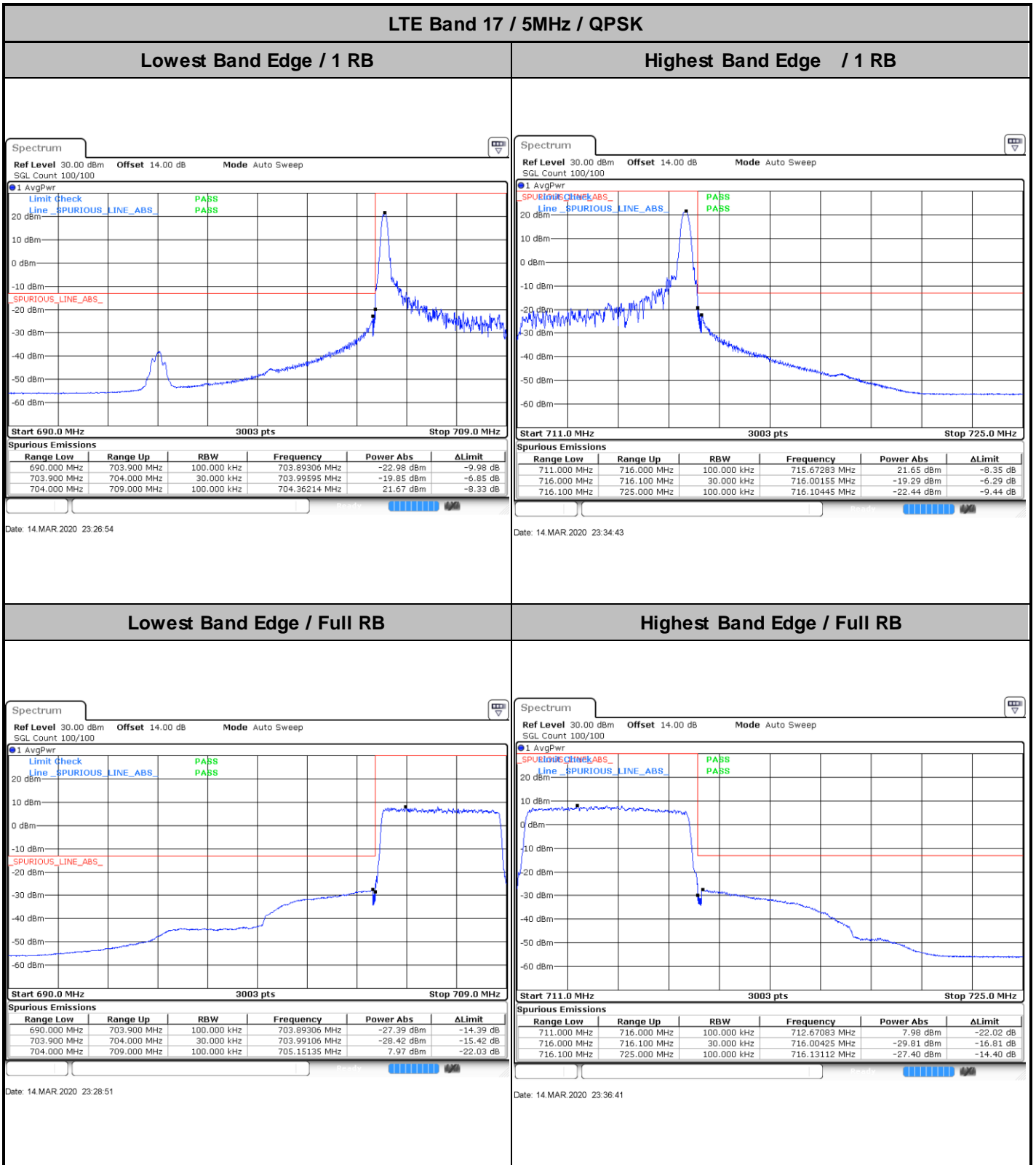
Highest Channel / 10MHz / 16QAM



Date: 14 MAR 2020 23:47:24



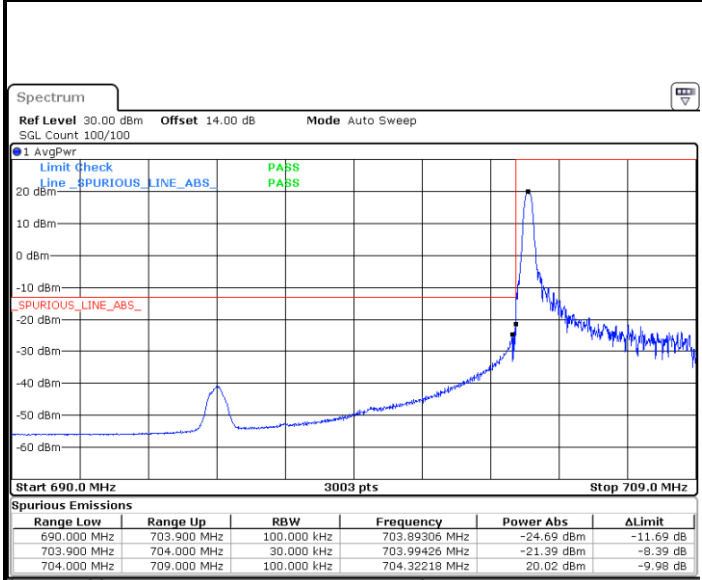
# Conducted Band Edge





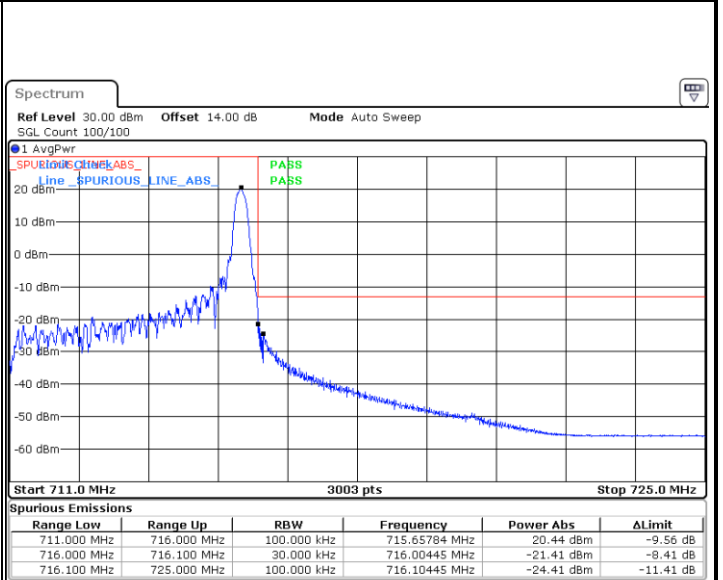
LTE Band 17 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



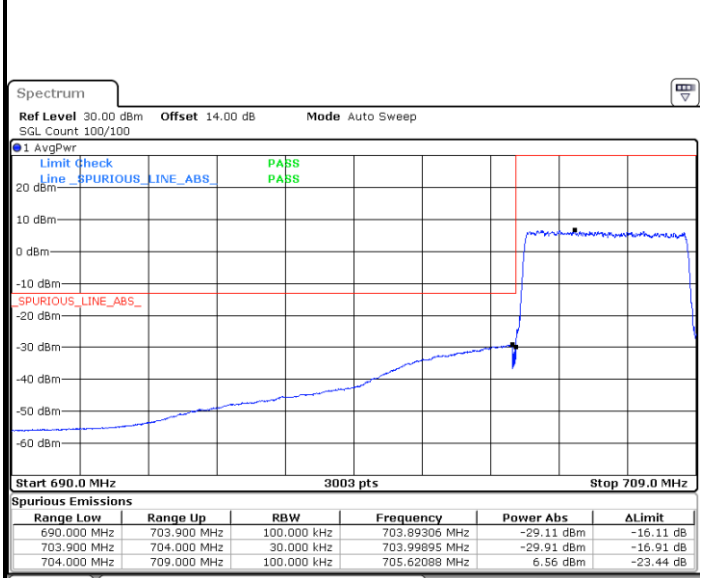
Date: 14.MAR.2020 23:27:53

Highest Band Edge / 1 RB



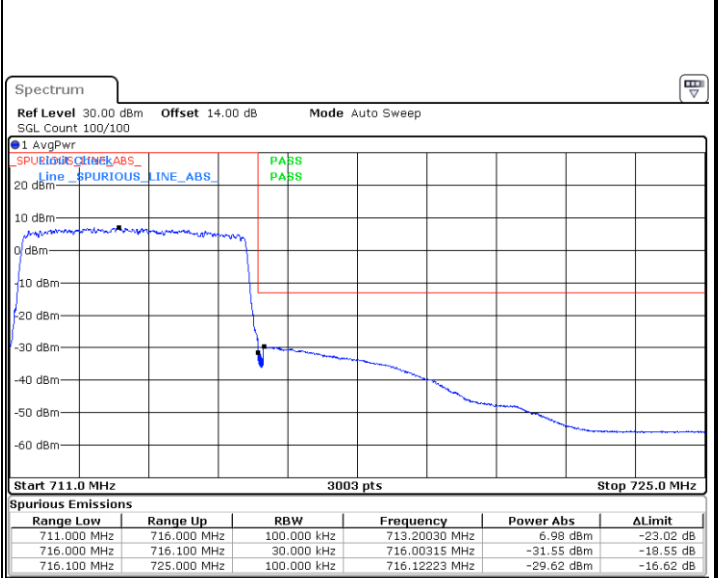
Date: 14.MAR.2020 23:35:42

Lowest Band Edge / Full RB



Date: 14.MAR.2020 23:30:00

Highest Band Edge / Full RB

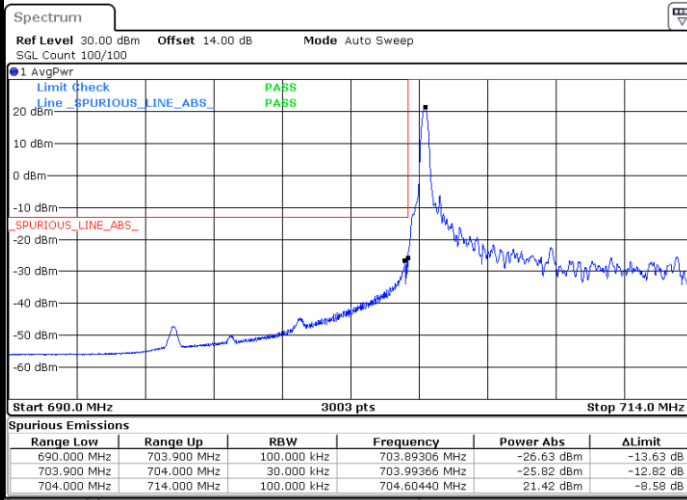


Date: 14.MAR.2020 23:37:48



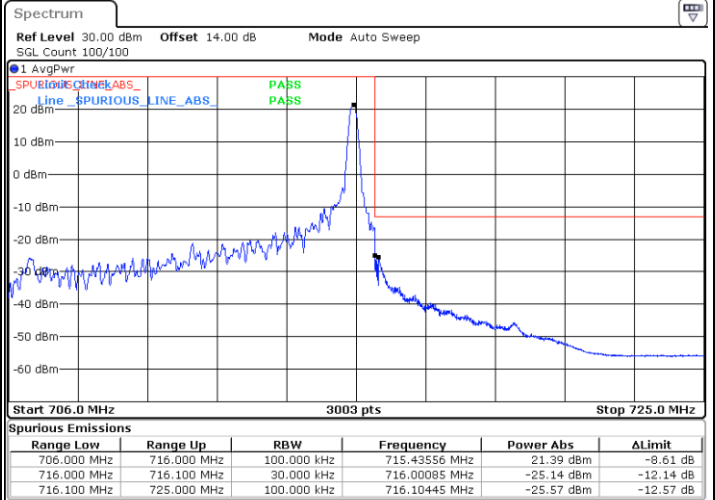
LTE Band 17 / 10MHz / QPSK

Lowest Band Edge / 1 RB



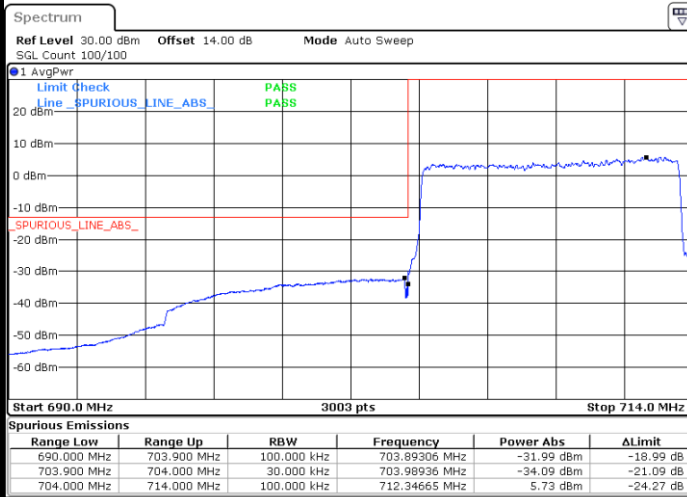
Date: 14.MAR.2020 23:40:39

Highest Band Edge / 1 RB



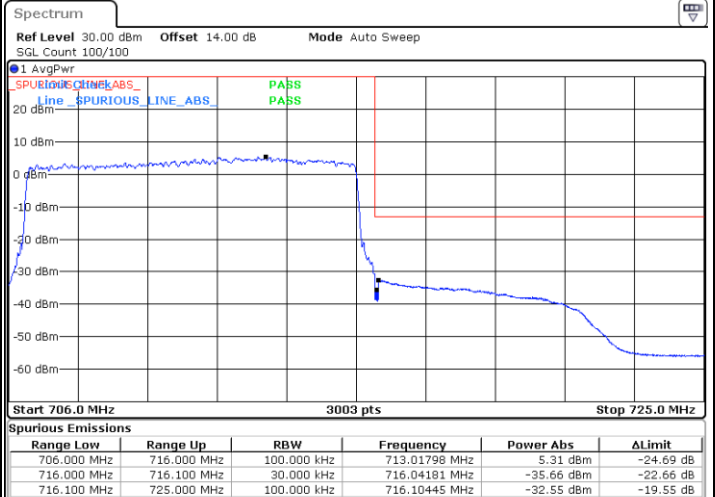
Date: 14.MAR.2020 23:48:45

Lowest Band Edge / Full RB



Date: 14.MAR.2020 23:42:37

Highest Band Edge / Full RB

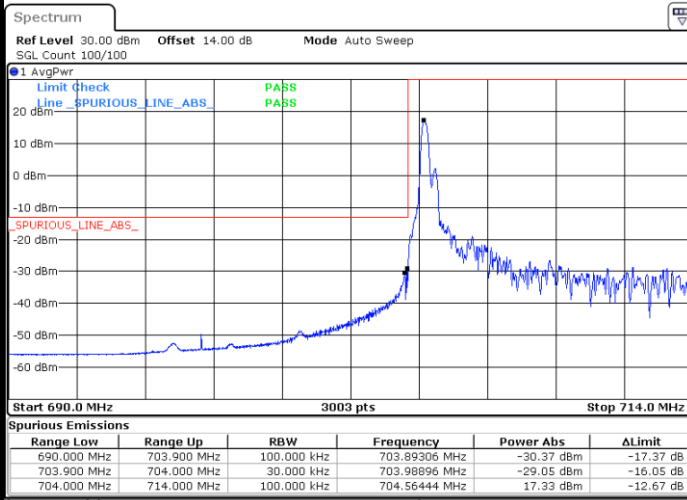


Date: 14.MAR.2020 23:50:43



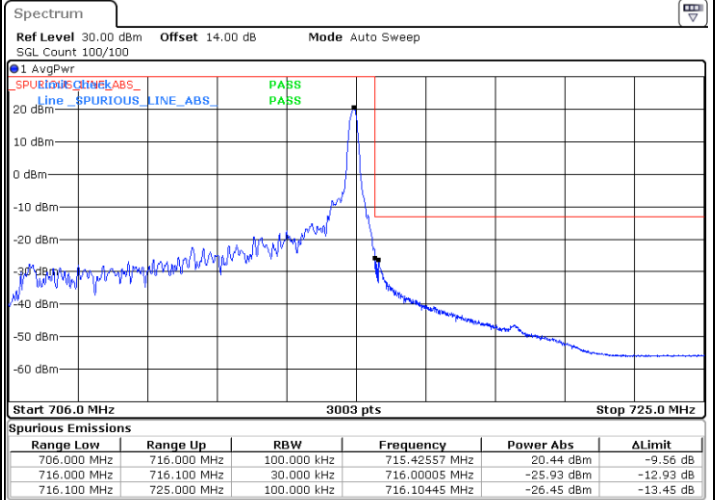
LTE Band 17 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



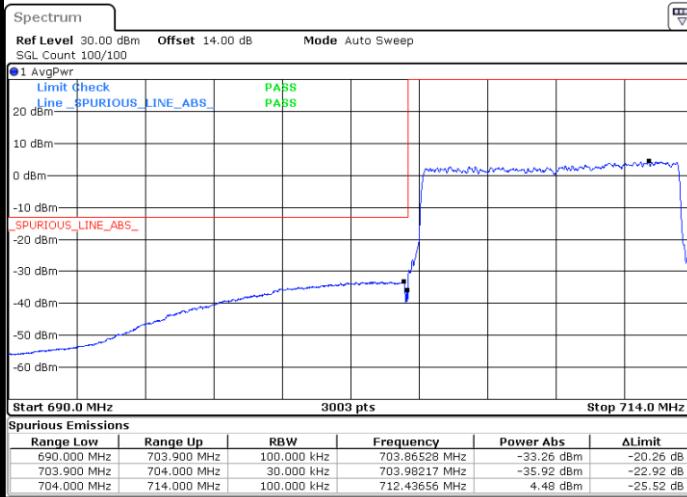
Date: 14.MAR.2020 23:41:38

Highest Band Edge / 1 RB



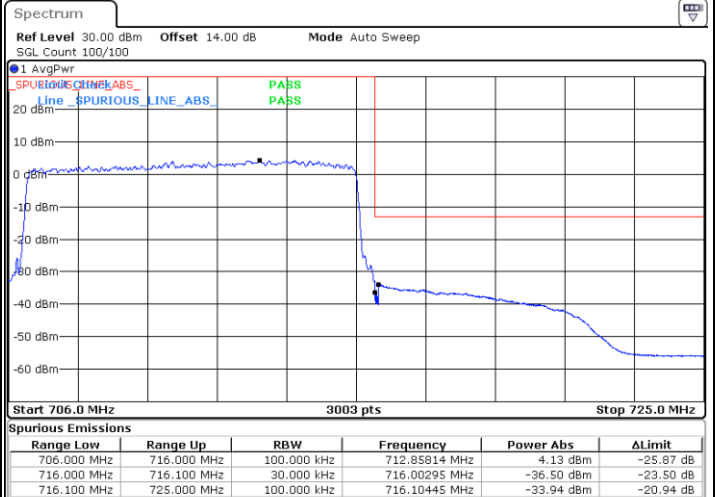
Date: 14.MAR.2020 23:49:44

Lowest Band Edge / Full RB



Date: 14.MAR.2020 23:43:36

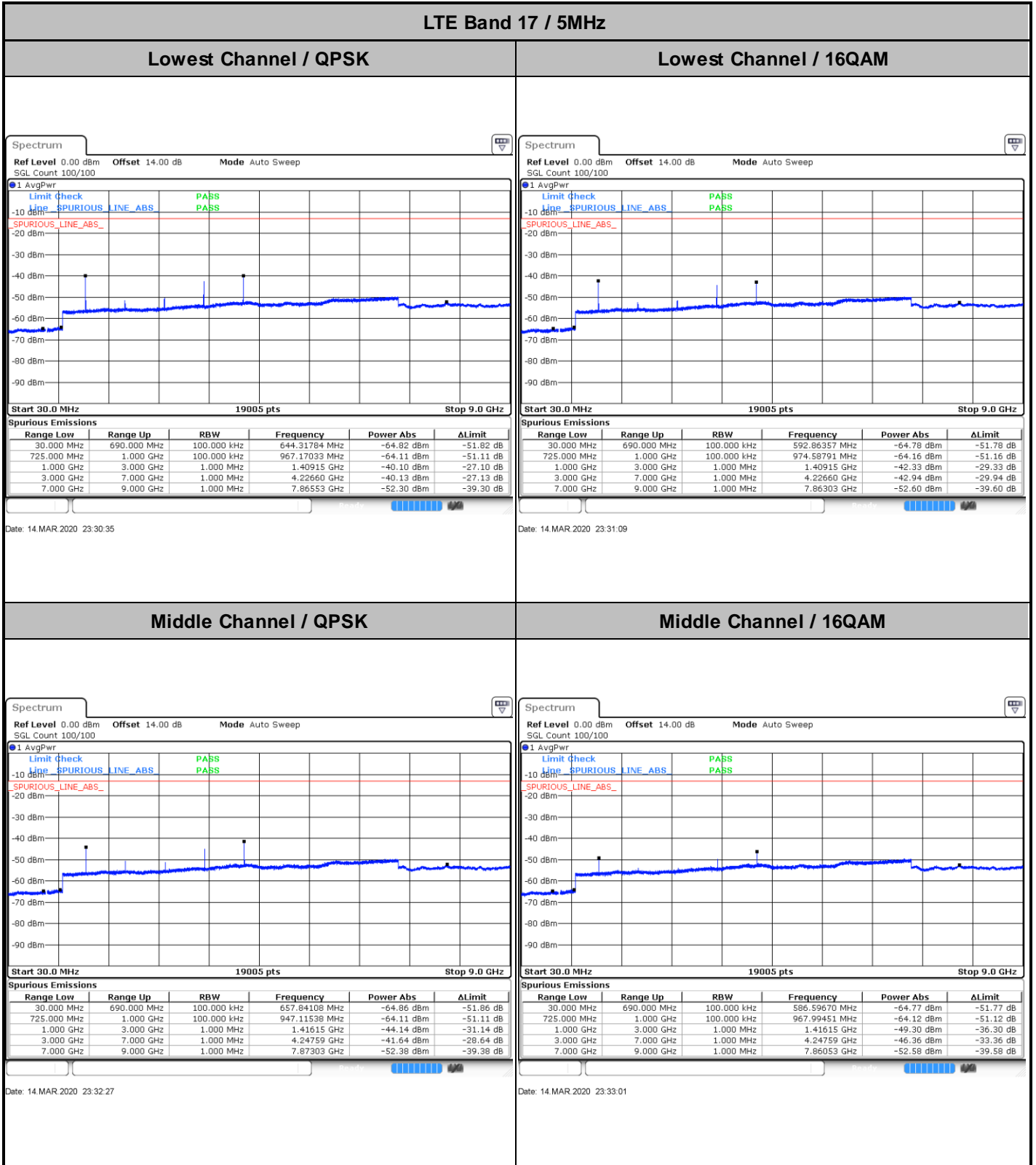
Highest Band Edge / Full RB



Date: 14.MAR.2020 23:51:42



# Conducted Spurious Emission

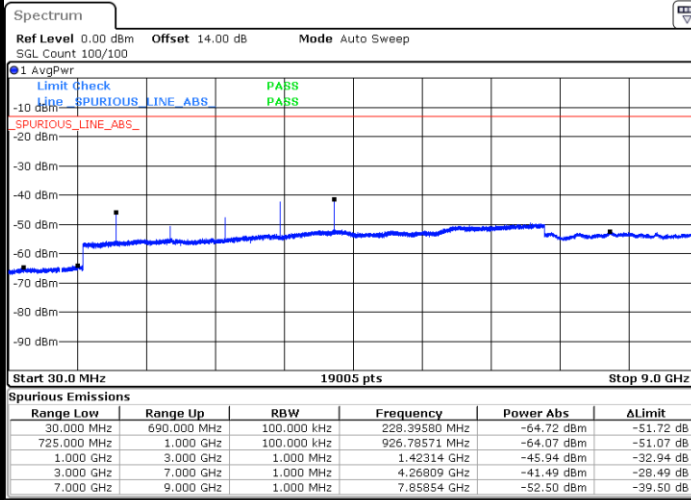






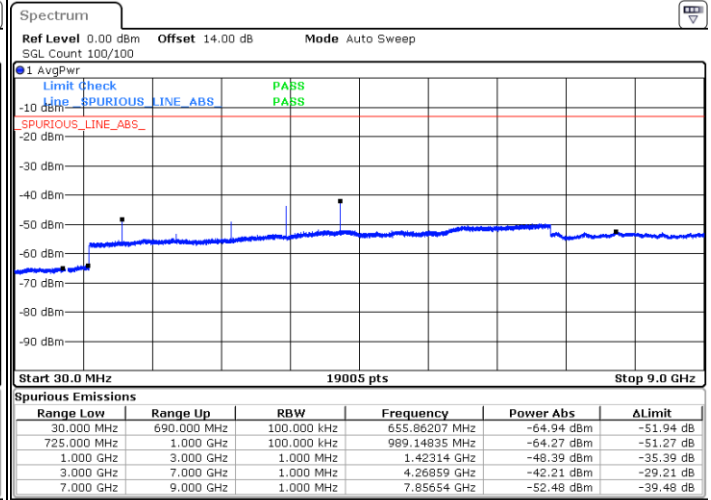
LTE Band 17 / 5MHz

Highest Channel / QPSK



Date: 14.MAR.2020 23:38:23

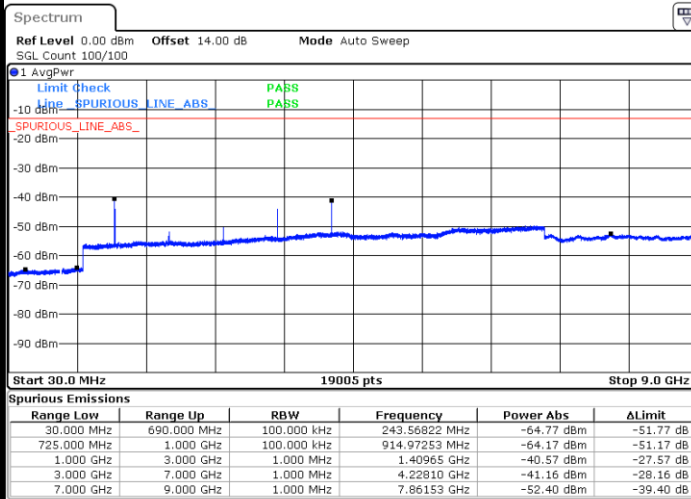
Highest Channel / 16QAM



Date: 14.MAR.2020 23:38:57

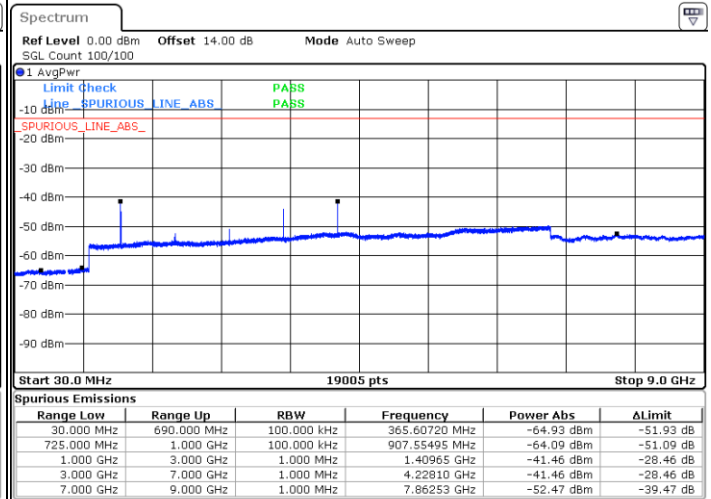
LTE Band 17 / 10MHz

Lowest Channel / QPSK



Date: 14.MAR.2020 23:44:11

Lowest Channel / 16QAM



Date: 14.MAR.2020 23:44:45