

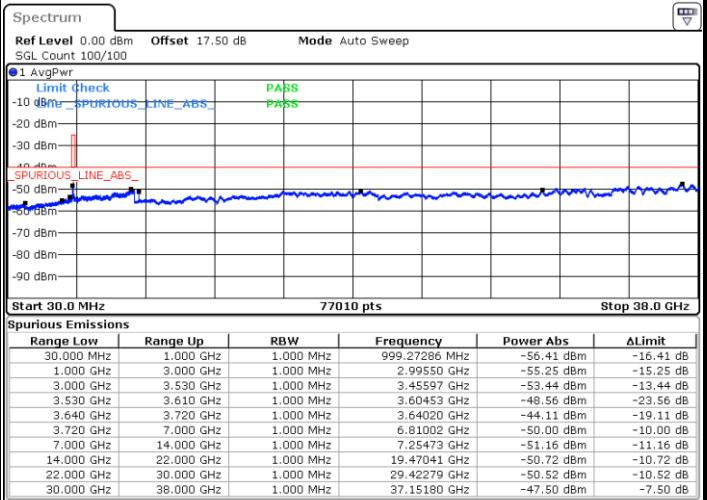
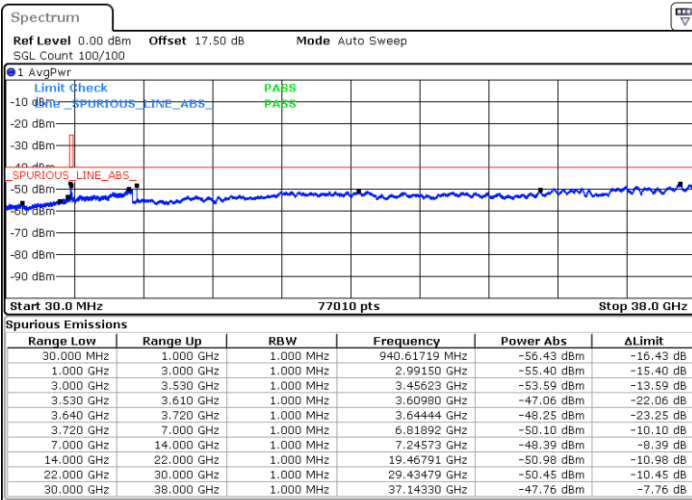


LTE Band 48 / 5MHz

64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

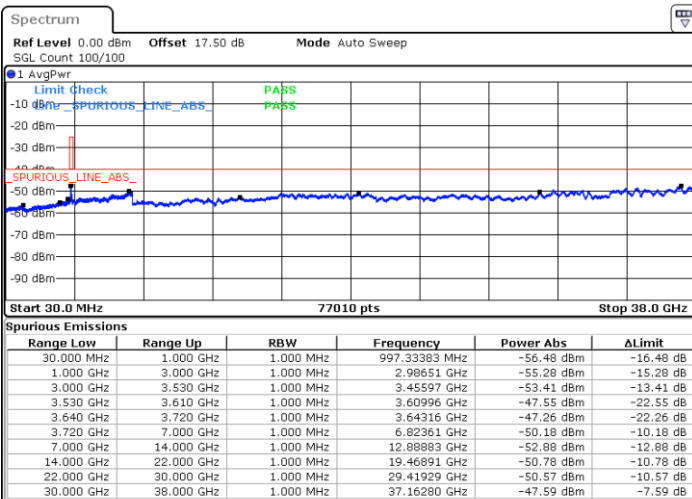


Date: 2 FEB 2020 16:45:31

Date: 2 FEB 2020 17:03:49

Middle Channel / FullIRB

N/A



Date: 2 FEB 2020 16:54:40

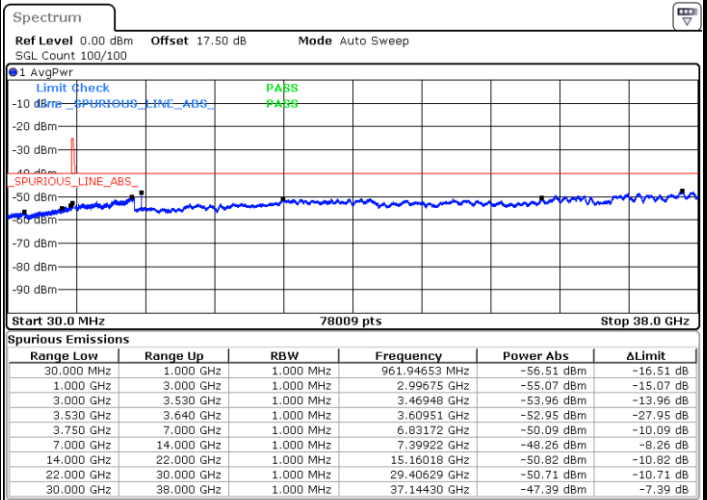
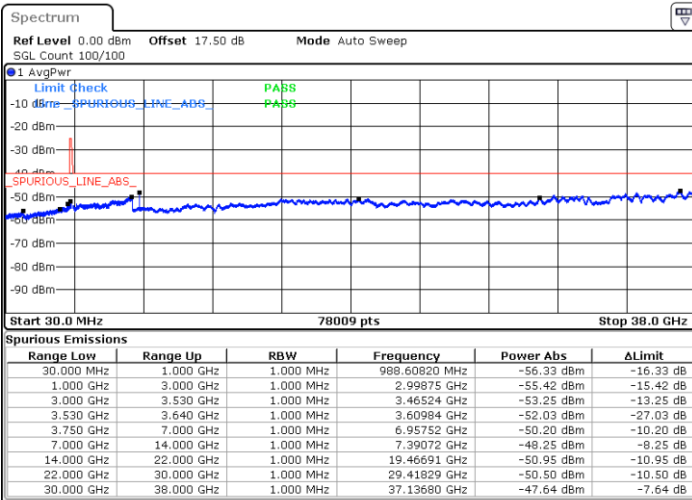


LTE Band 48 / 5MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

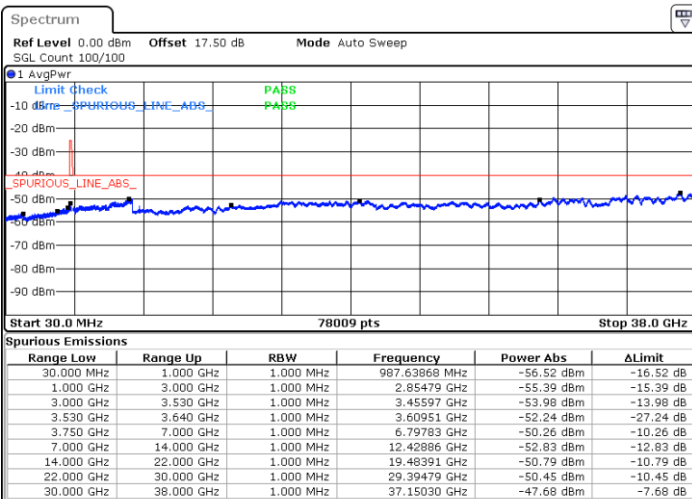


Date: 2 FEB 2020 16:50:36

Date: 2 FEB 2020 17:08:53

Highest Channel / FullIRB

N/A



Date: 2 FEB 2020 16:59:45

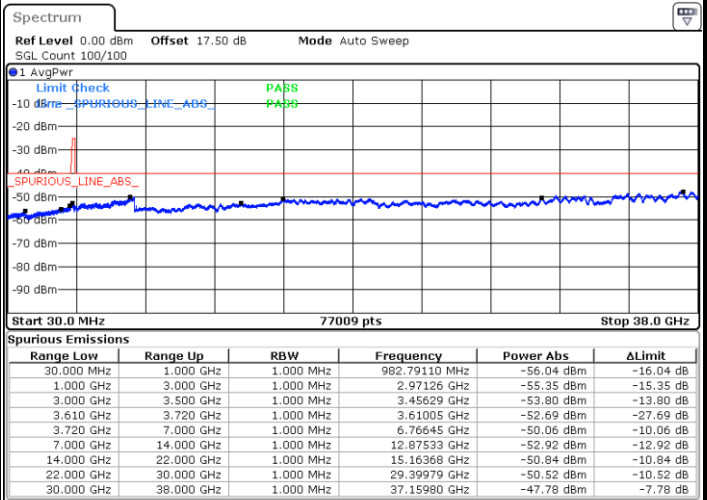
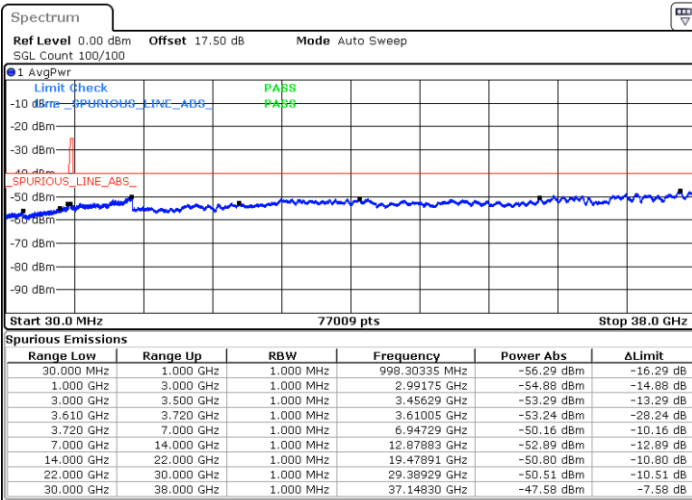


LTE Band 48 / 10MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

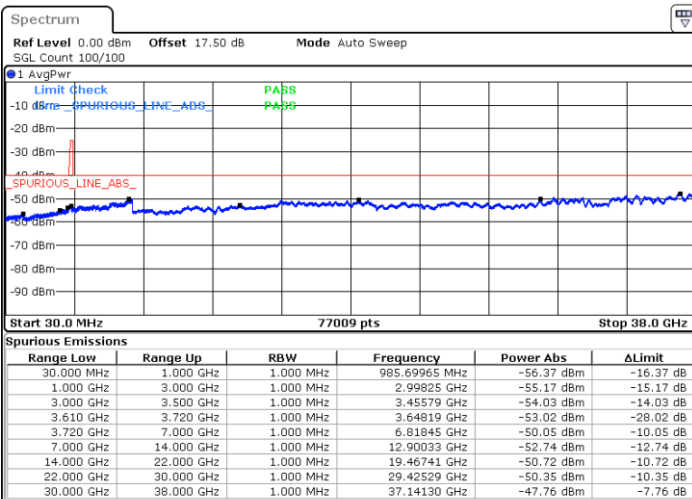


Date: 2 FEB 2020 17:09:55

Date: 2 FEB 2020 17:28:12

Lowest Channel / FullIRB

N/A



Date: 2 FEB 2020 17:19:04

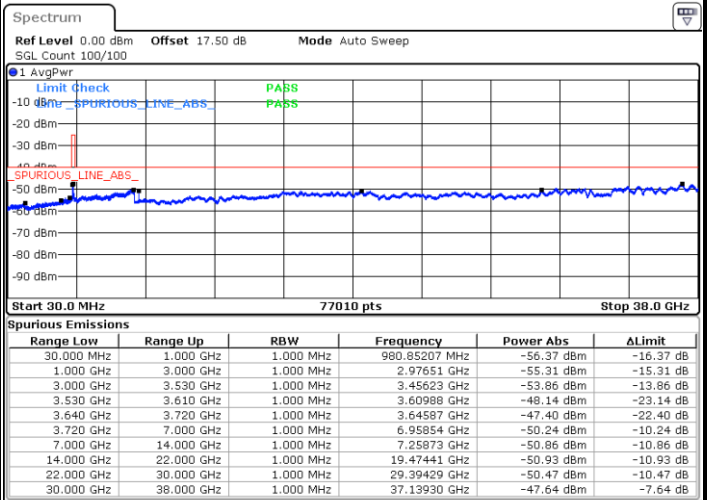
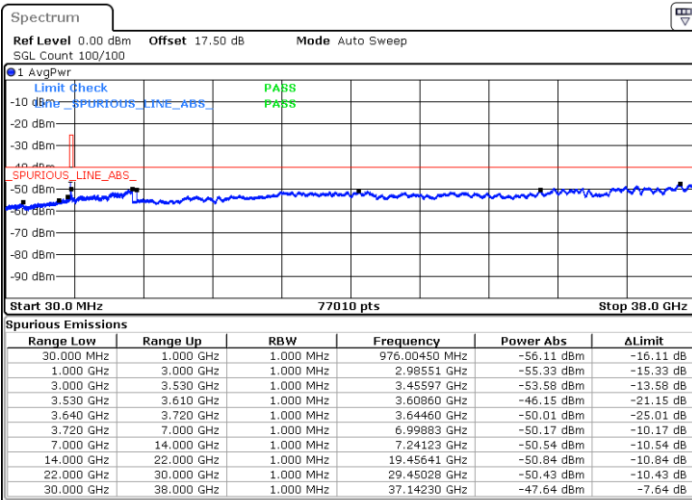


LTE Band 48 / 10MHz

64QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax

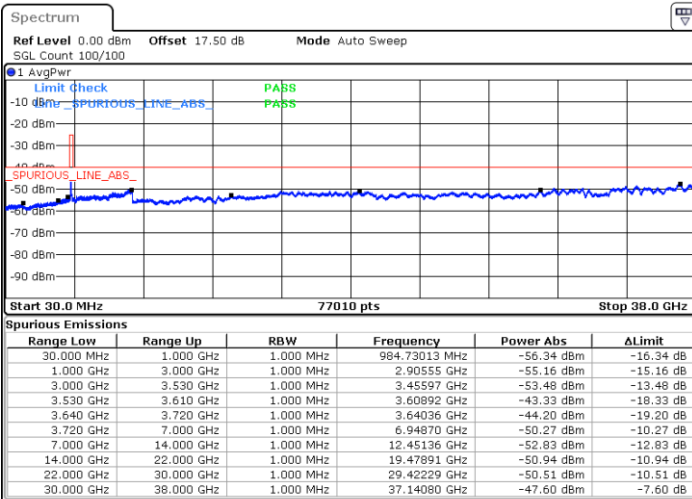


Date: 2 FEB 2020 17:15:00

Date: 2 FEB 2020 17:39:39

Middle Channel / FullIRB

N/A



Date: 2 FEB 2020 17:24:08

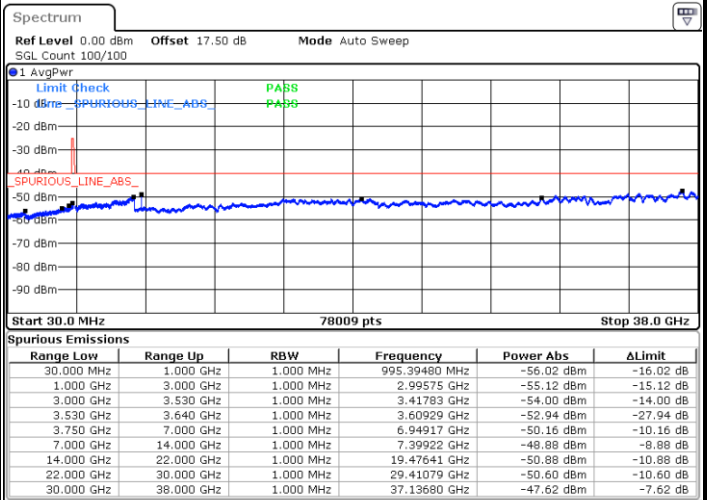
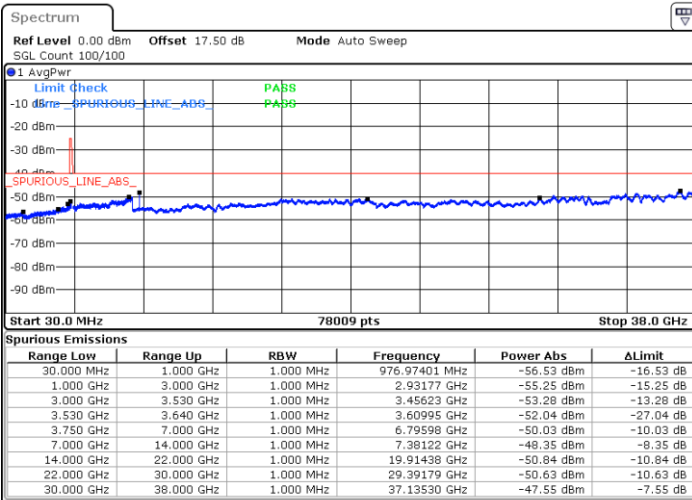


LTE Band 48 / 10MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

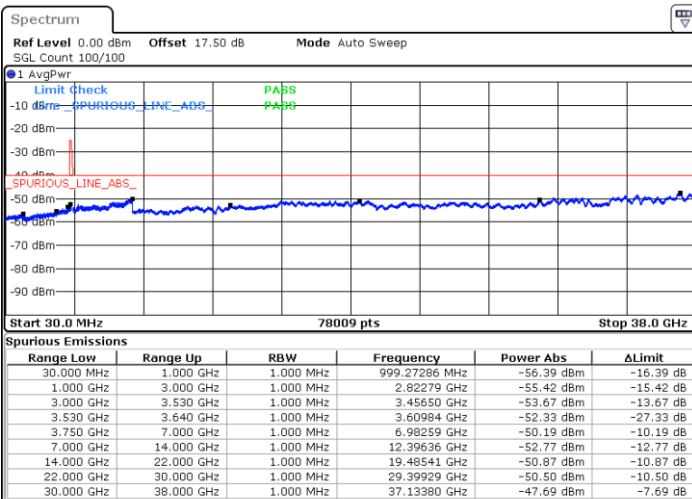


Date: 2 FEB 2020 17:16:01

Date: 2 FEB 2020 17:40:39

Highest Channel / FullIRB

N/A



Date: 2 FEB 2020 17:25:09

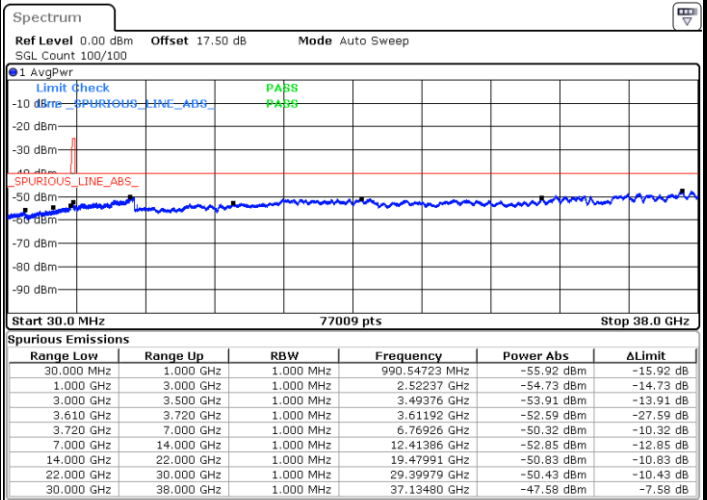
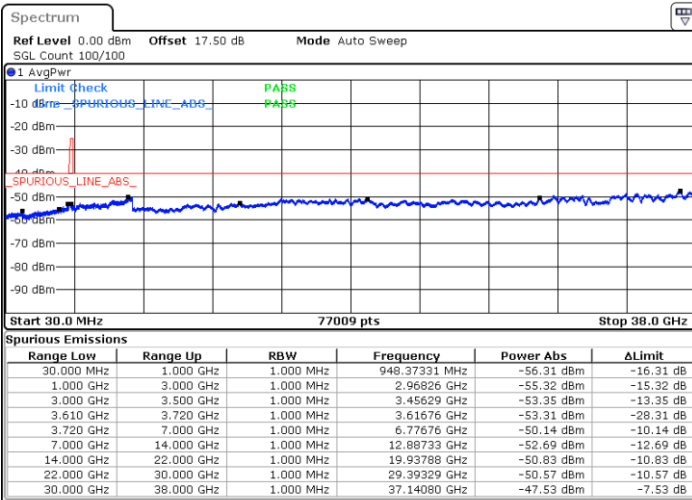


LTE Band 48 / 15MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

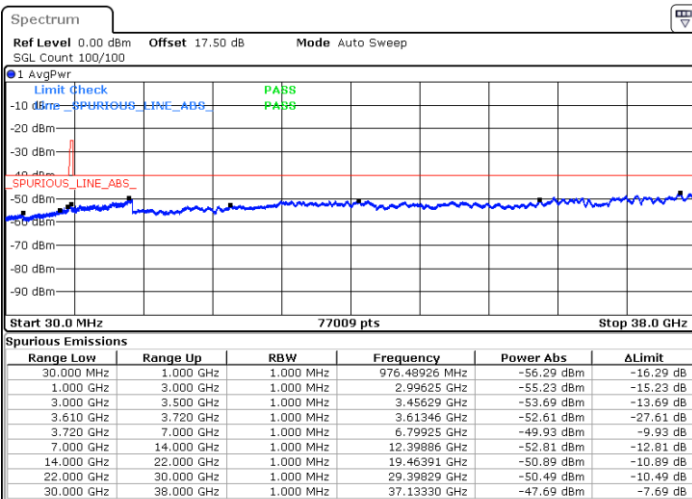


Date: 2 FEB 2020 17:45:46

Date: 2 FEB 2020 18:04:03

Lowest Channel / FullIRB

N/A



Date: 2 FEB 2020 17:54:54

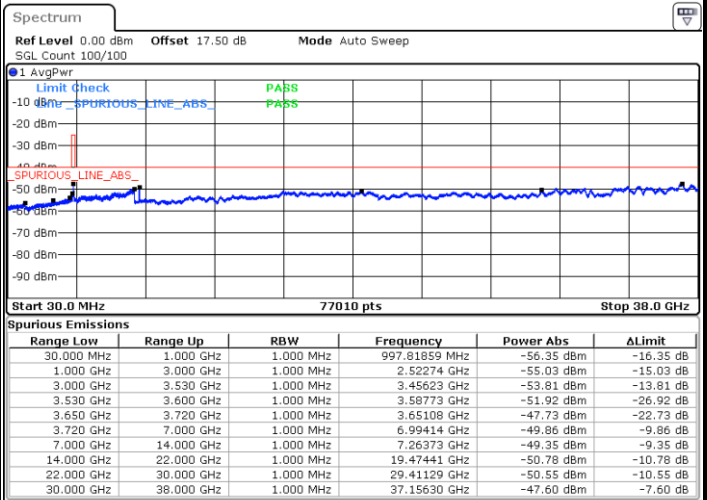
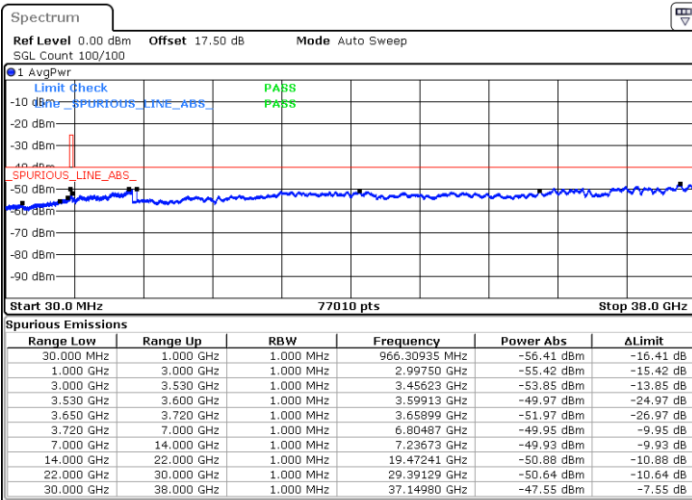


LTE Band 48 / 15MHz

64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

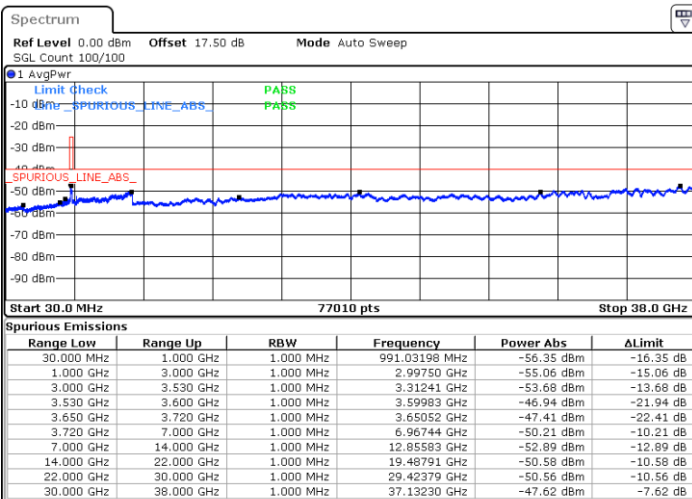


Date: 2 FEB 2020 17:46:47

Date: 2 FEB 2020 18:05:03

Middle Channel / FullIRB

N/A



Date: 2 FEB 2020 17:55:55

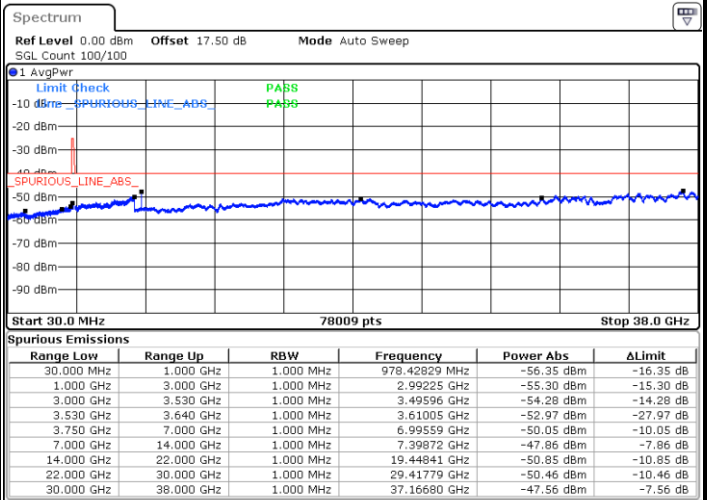
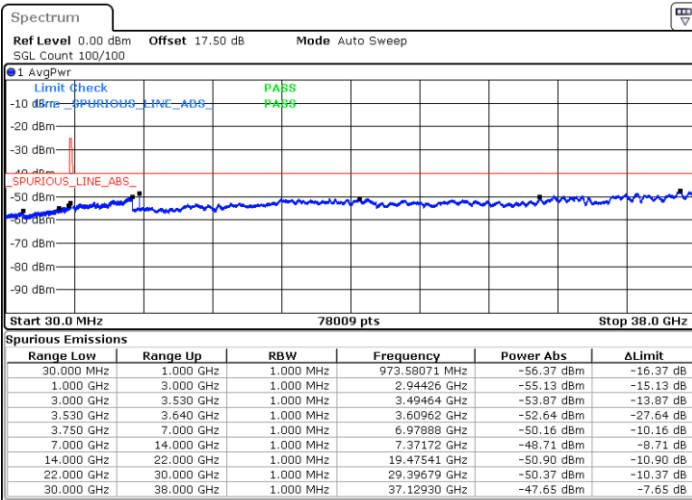


LTE Band 48 / 15MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

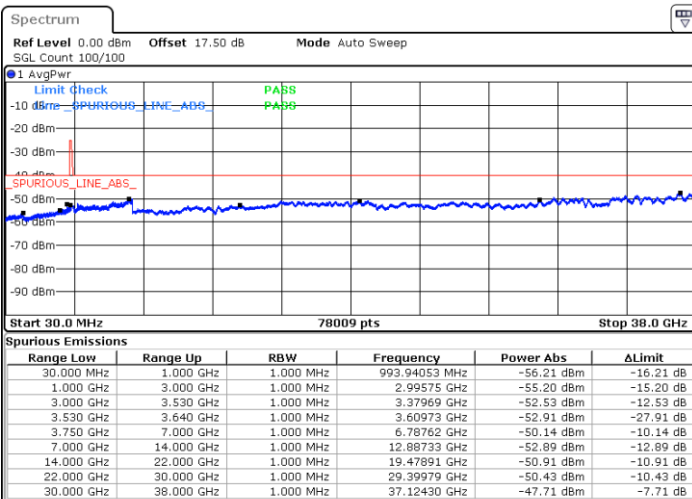


Date: 2 FEB 2020 17:51:51

Date: 2 FEB 2020 18:10:08

Highest Channel / FullIRB

N/A



Date: 2 FEB 2020 18:00:59



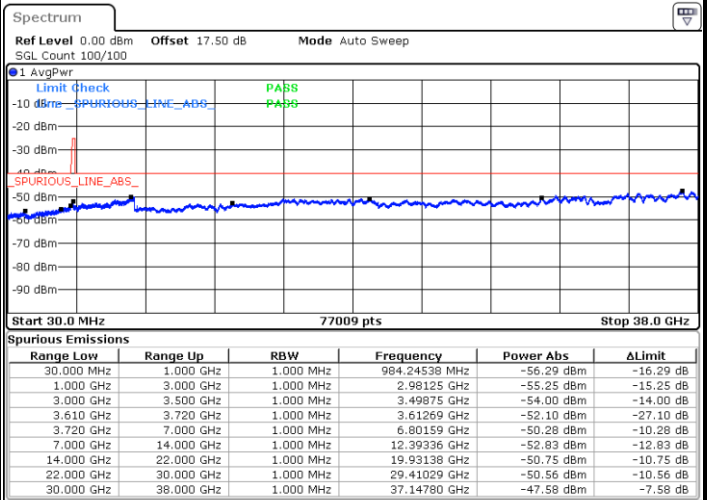
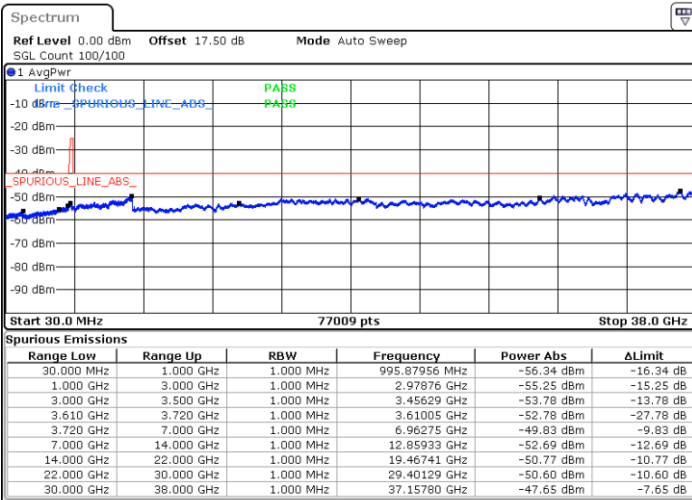


LTE Band 48 / 20MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

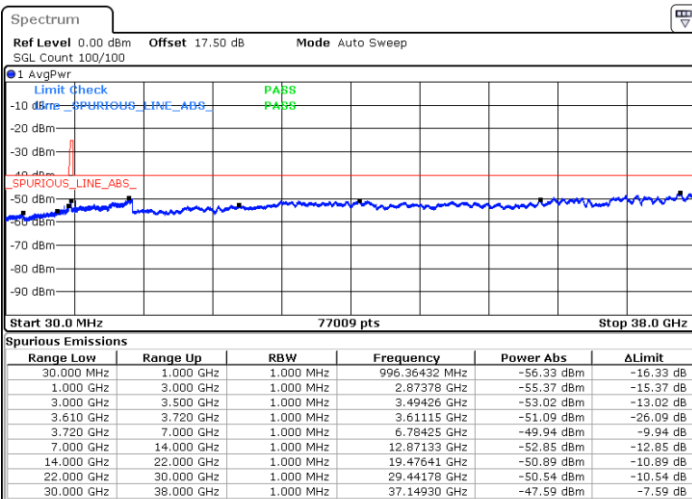


Date: 2 FEB 2020 18:20:18

Date: 2 FEB 2020 18:29:27

Lowest Channel / FullIRB

N/A



Date: 2 FEB 2020 18:11:09

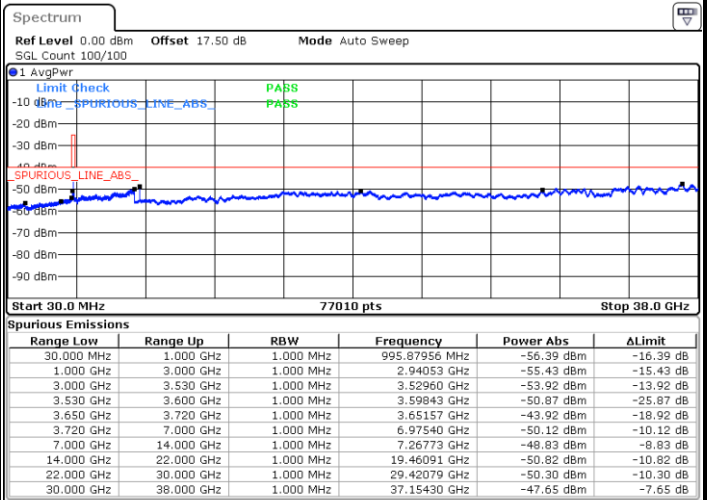
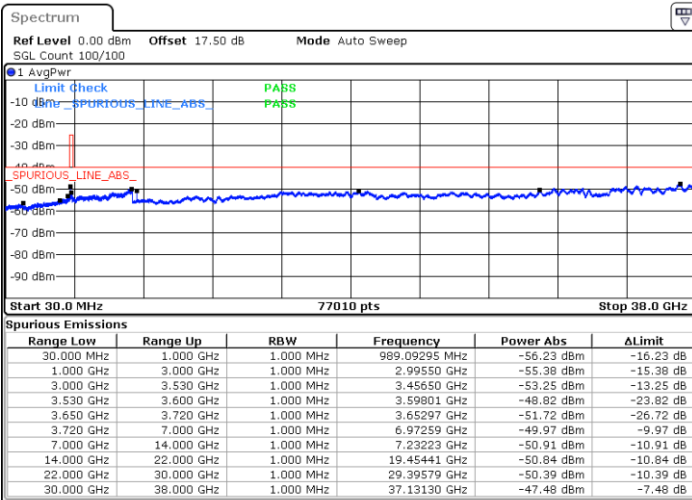


LTE Band 48 / 20MHz

64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

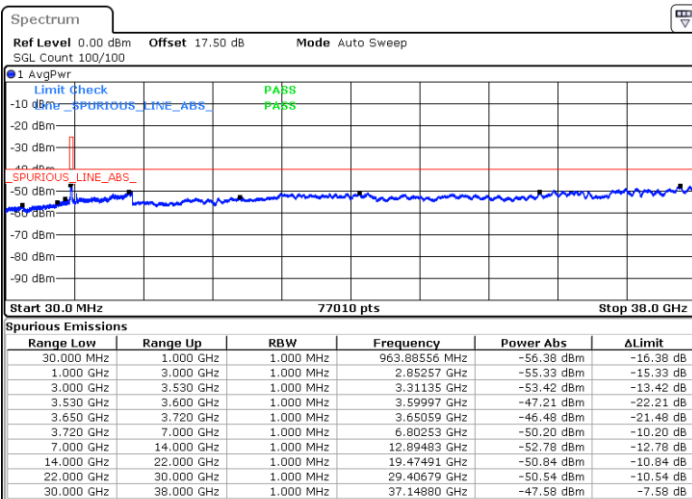


Date: 2 FEB 2020 18:25:22

Date: 2 FEB 2020 18:34:31

Middle Channel / FullIRB

N/A



Date: 2 FEB 2020 18:16:14

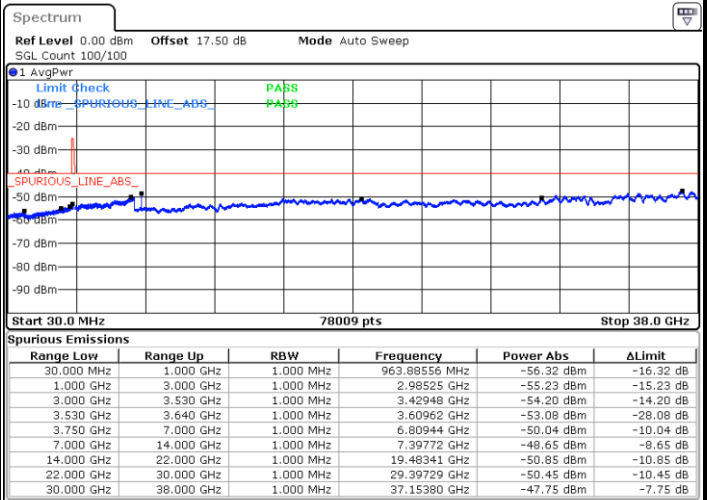
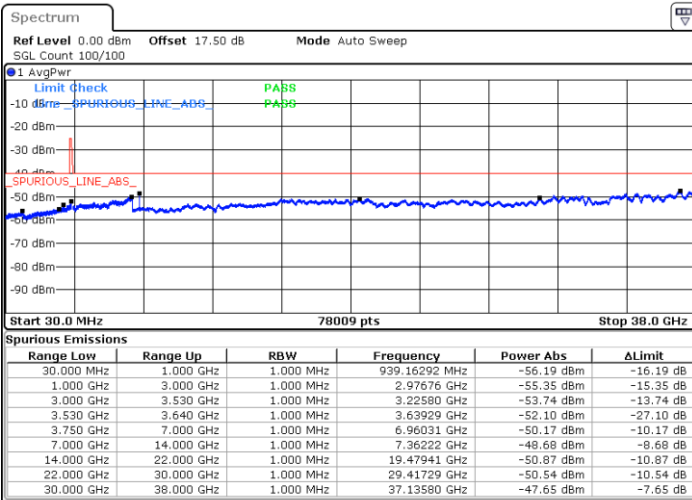


LTE Band 48 / 20MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

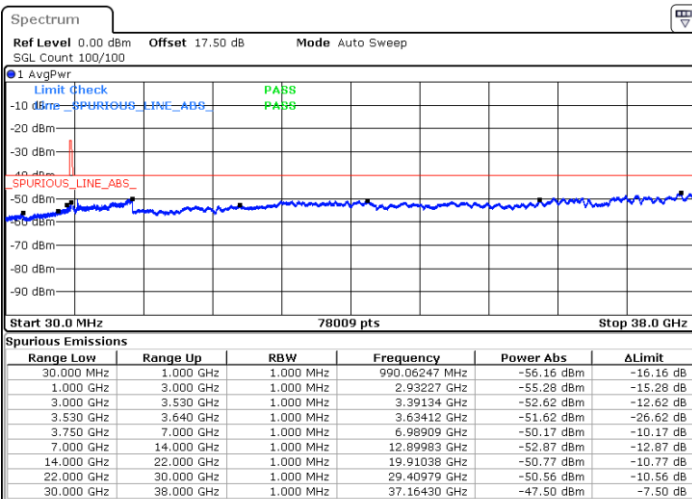


Date: 2 FEB 2020 18:26:23

Date: 2 FEB 2020 18:35:32

Highest Channel / FullIRB

N/A



Date: 2 FEB 2020 18:17:15



Frequency Stability

Test Conditions		LTE Band 48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0031	PASS
40	Normal Voltage	0.0044	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0030	
-10	Normal Voltage	0.0024	
-20	Normal Voltage	0.0010	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0009	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

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 48C\_CA

## 26dB Bandwidth

Mode	LTE Band 48C : 26dB BW(MHz)			
QPSK				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Lowest CH	24.78	30.03	34.83	24.88
Middle CH	24.83	30.21	34.90	24.93
Highest CH	24.98	30.03	34.90	25.03
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Lowest CH	30.21	34.97	40.04	-
Middle CH	30.15	34.90	39.88	-
Highest CH	29.97	34.97	39.72	-

Mode	LTE Band 48C : 26dB BW(MHz)			
16QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Lowest CH	24.68	30.09	34.83	24.88
Middle CH	24.88	29.97	34.90	24.83
Highest CH	24.88	29.97	34.90	24.98
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Lowest CH	29.97	35.11	39.88	-
Middle CH	30.03	34.83	39.80	-
Highest CH	30.03	34.97	39.96	-

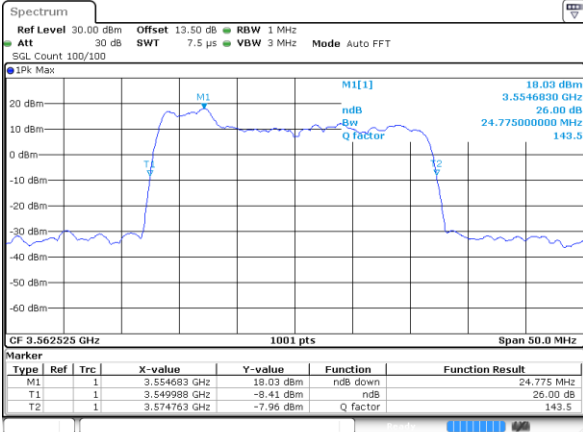
Mode	LTE Band 48C : 26dB BW(MHz)			
64QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Lowest CH	24.83	29.97	34.90	24.93
Middle CH	24.88	29.85	34.90	24.83
Highest CH	24.83	29.97	34.90	24.93
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Lowest CH	30.03	34.90	39.80	-
Middle CH	29.97	34.83	40.04	-
Highest CH	29.85	34.76	39.80	-



LTE Band 48C

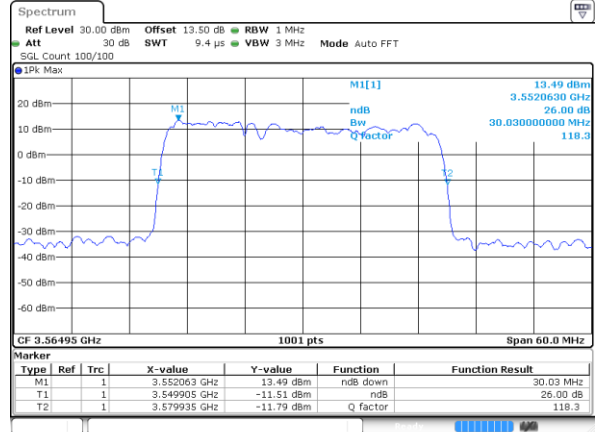
QPSK

Lowest Channel / 5MHz+20MHz



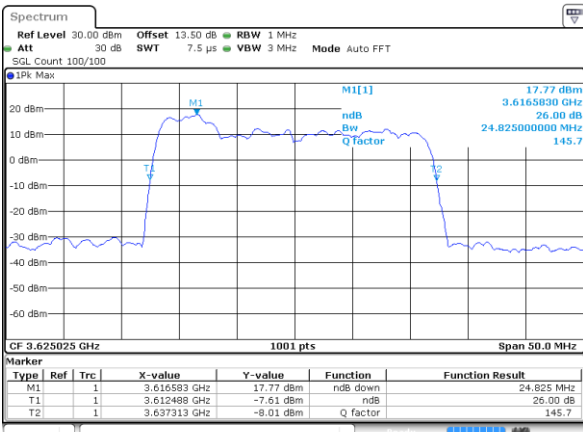
Date: 29 JAN 2020 02:40:40

Lowest Channel / 10MHz+20MHz



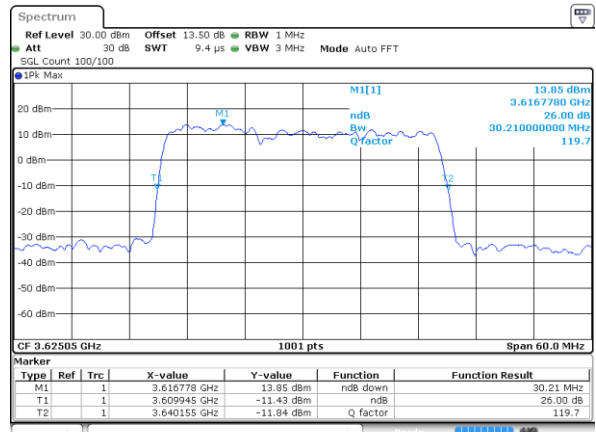
Date: 28 JAN 2020 20:40:43

Middle Channel / 5MHz+20MHz



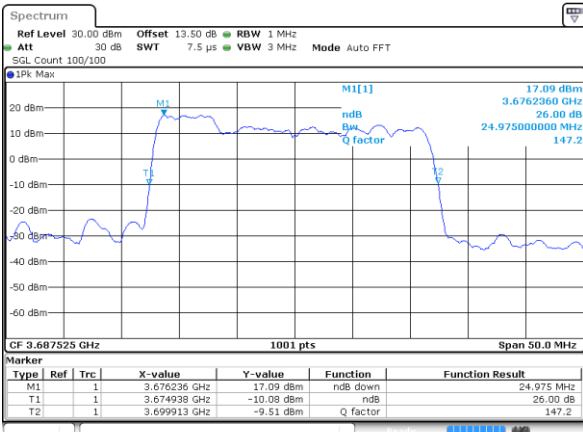
Date: 29 JAN 2020 03:56:36

Middle Channel / 10MHz+20MHz



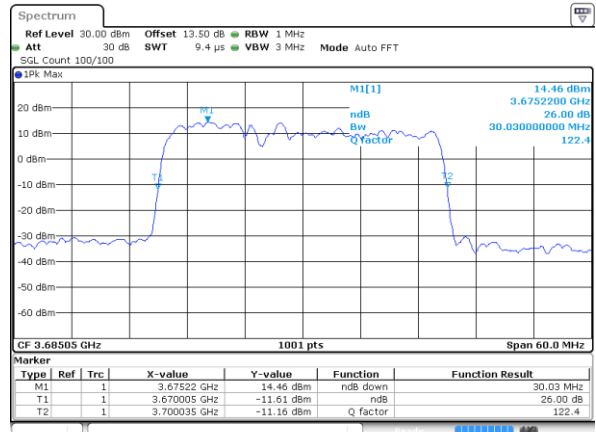
Date: 28 JAN 2020 22:15:08

Highest Channel / 5MHz+20MHz



Date: 29 JAN 2020 13:36:40

Highest Channel / 10MHz+20MHz



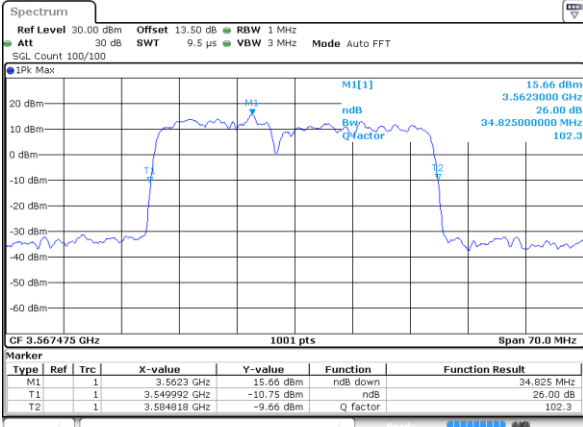
Date: 28 JAN 2020 22:21:26



LTE Band 48C

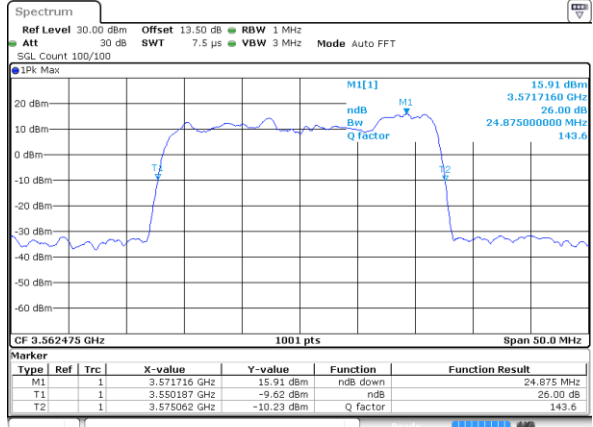
QPSK

Lowest Channel / 15MHz+20MHz



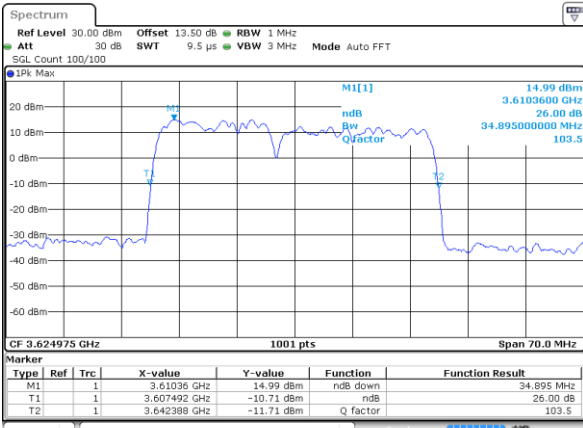
Date: 28 JAN 2020 00:39:06

Lowest Channel / 20MHz+5MHz



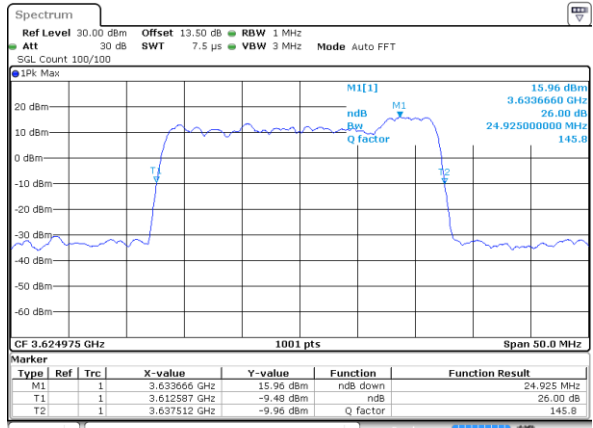
Date: 29 JAN 2020 00:09:54

Middle Channel / 15MHz+20MHz



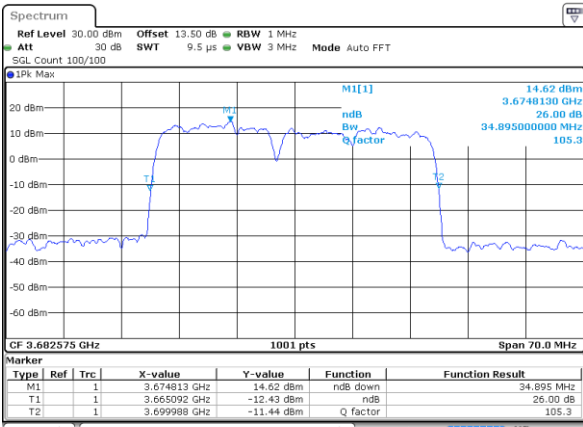
Date: 28 JAN 2020 02:15:14

Middle Channel / 20MHz+5MHz



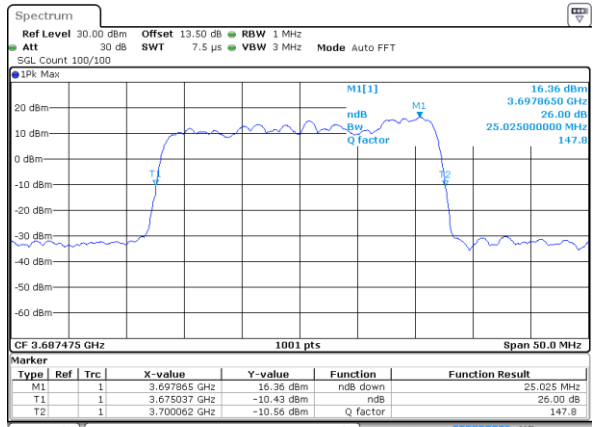
Date: 29 JAN 2020 00:15:03

Highest Channel / 15MHz+20MHz



Date: 28 JAN 2020 03:07:41

Highest Channel / 20MHz+5MHz



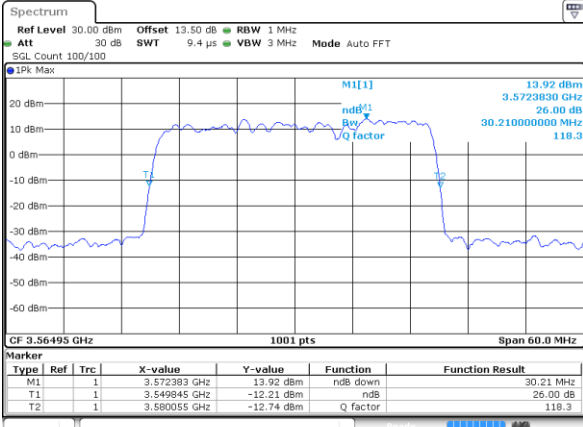
Date: 29 JAN 2020 01:08:43



LTE Band 48C

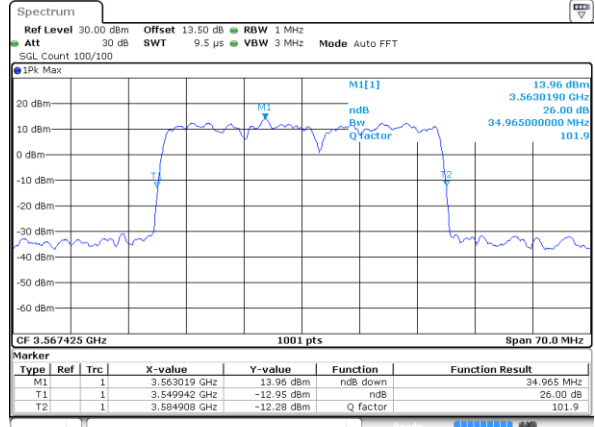
QPSK

Lowest Channel / 20MHz+10MHz



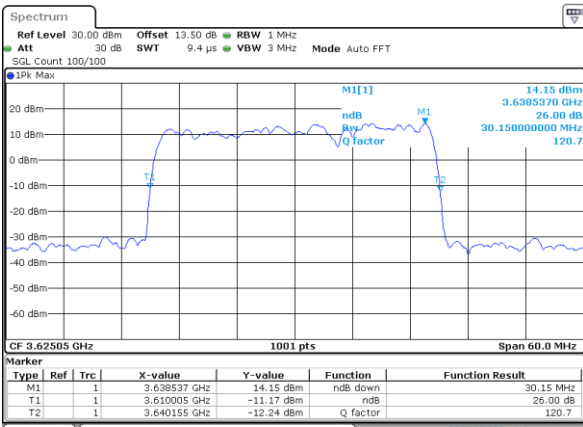
Date: 28 JAN 2020 18:44:05

Lowest Channel / 20MHz+15MHz



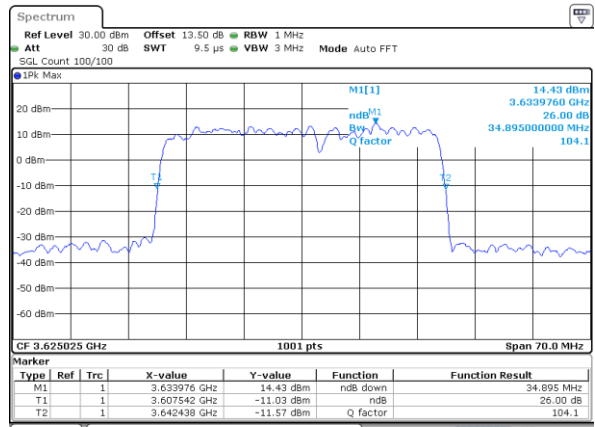
Date: 27 JAN 2020 22:51:02

Middle Channel / 20MHz+10MHz



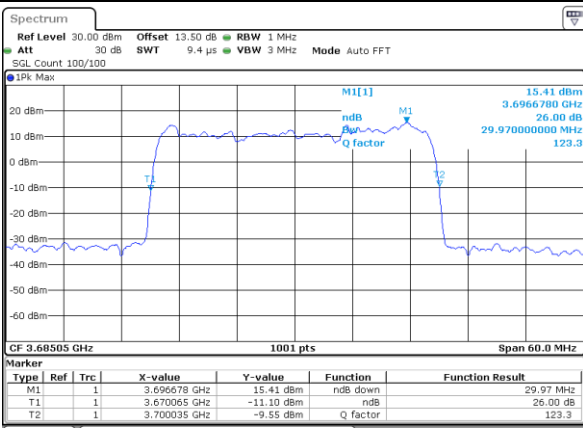
Date: 28 JAN 2020 18:51:25

Middle Channel / 20MHz+15MHz



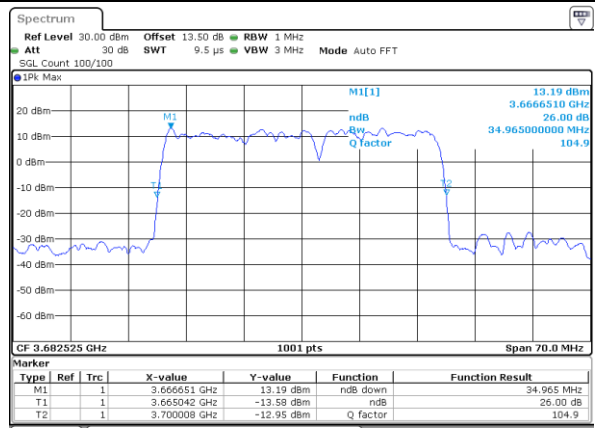
Date: 27 JAN 2020 22:57:47

Highest Channel / 20MHz+10MHz



Date: 28 JAN 2020 20:33:24

Highest Channel / 20MHz+15MHz



Date: 28 JAN 2020 00:31:03



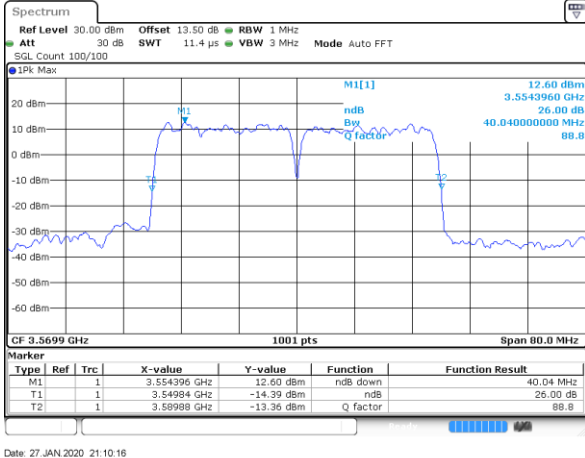


LTE Band 48C

QPSK

Lowest Channel / 20MHz+20MHz

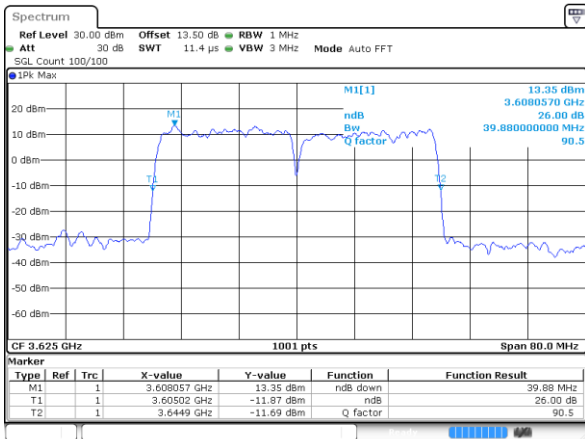
N/A



Date: 27 JAN 2020 21:10:16

Middle Channel / 20MHz+20MHz

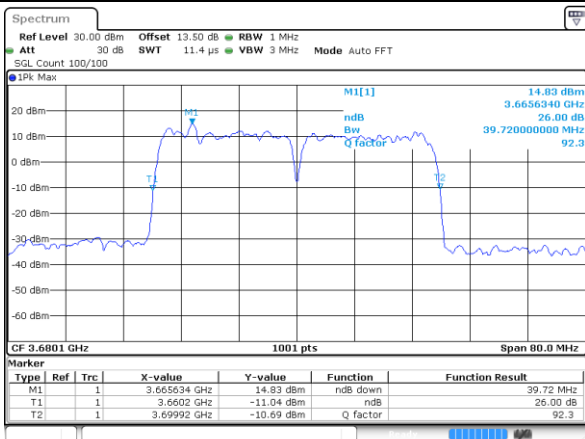
N/A



Date: 27 JAN 2020 20:09:32

Highest Channel / 20MHz+20MHz

N/A



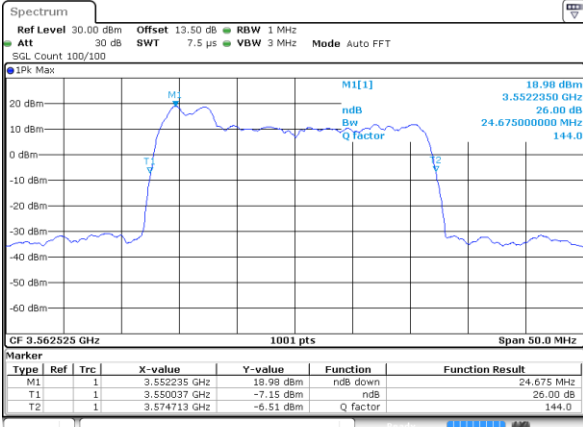
Date: 27 JAN 2020 19:55:50



LTE Band 48C

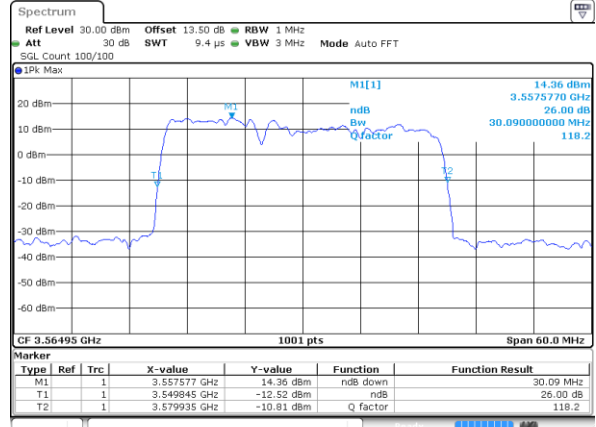
16QAM

Lowest Channel / 5MHz+20MHz



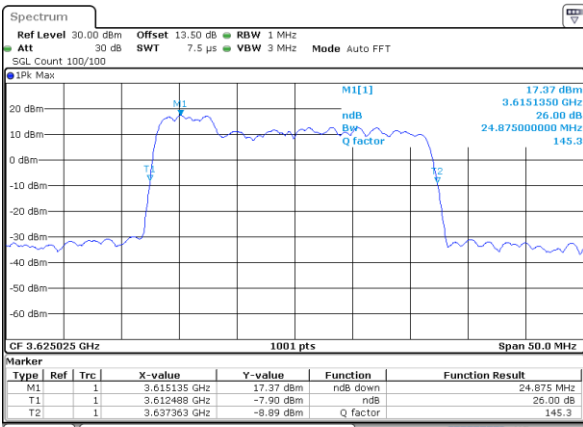
Date: 29 JAN 2020 02:40:17

Lowest Channel / 10MHz+15MHz



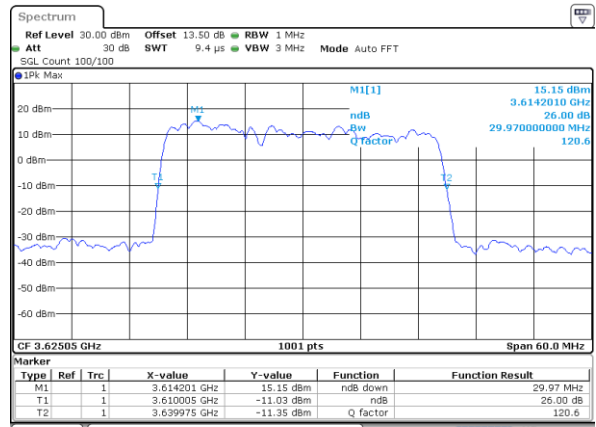
Date: 28 JAN 2020 20:40:21

Middle Channel / 5MHz+20MHz



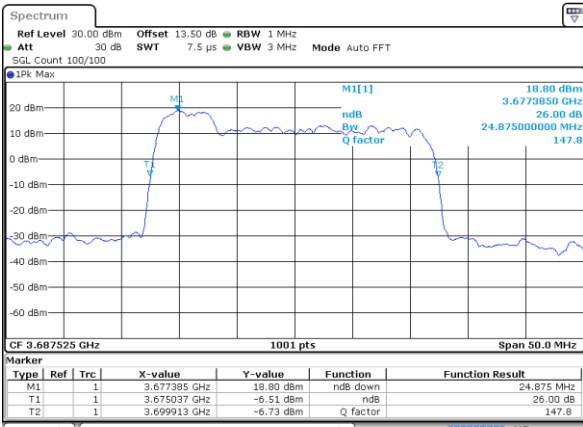
Date: 29 JAN 2020 03:56:12

Middle Channel / 10MHz+20MHz



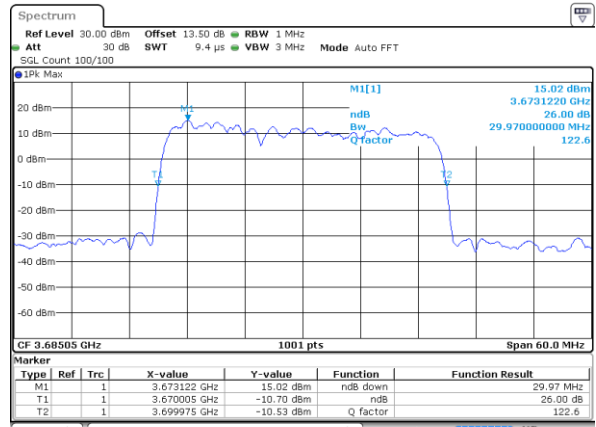
Date: 28 JAN 2020 22:14:46

Highest Channel / 5MHz+20MHz



Date: 29 JAN 2020 13:37:03

Highest Channel / 10MHz+20MHz



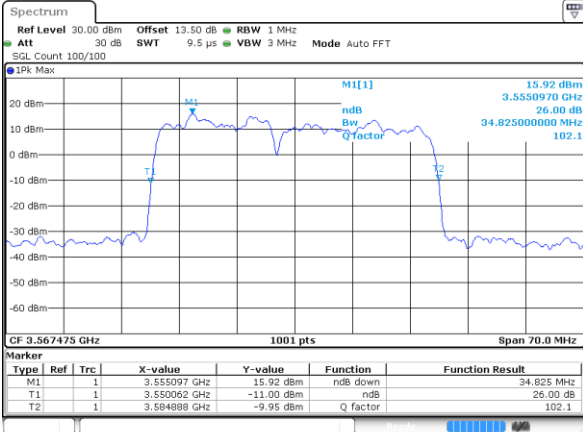
Date: 28 JAN 2020 22:21:49



LTE Band 48C

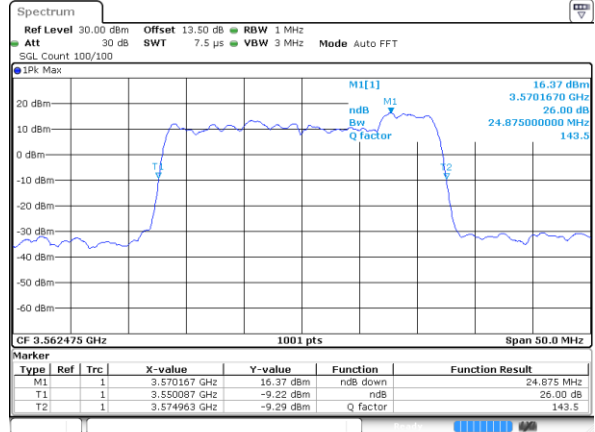
16QAM

Lowest Channel / 10MHz+20MHz



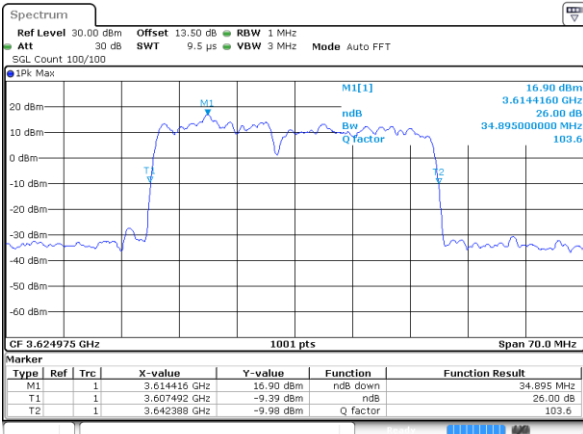
Date: 28 JAN 2020 00:38:42

Lowest Channel / 15MHz+10MHz



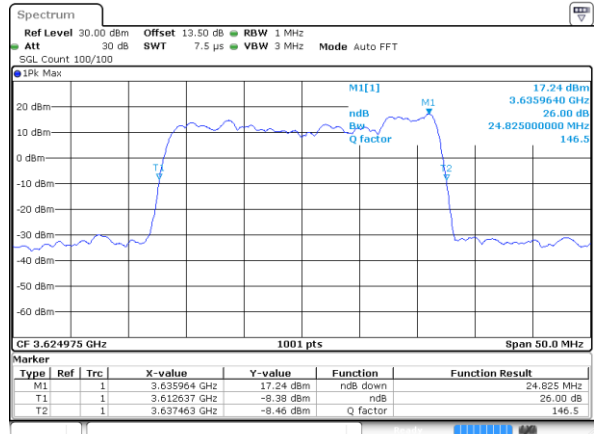
Date: 29 JAN 2020 00:09:32

Middle Channel / 15MHz+20MHz



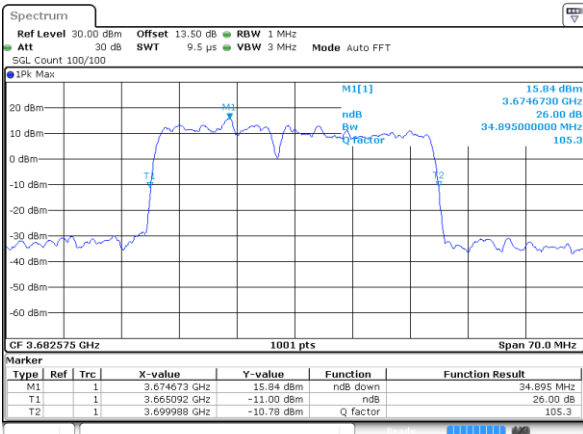
Date: 28 JAN 2020 02:14:51

Middle Channel / 20MHz+5MHz



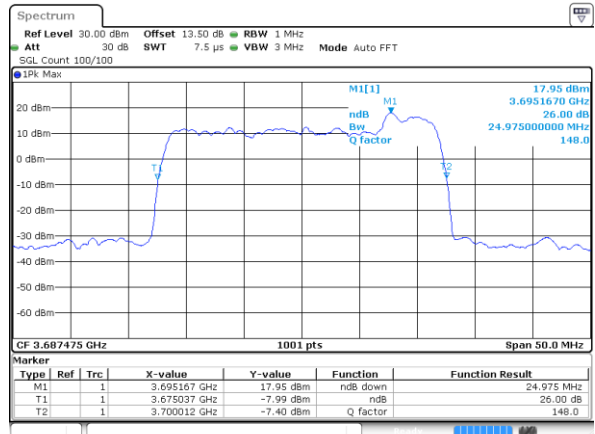
Date: 29 JAN 2020 00:14:40

Highest Channel / 15MHz+20MHz



Date: 28 JAN 2020 03:08:05

Highest Channel / 20MHz+5MHz



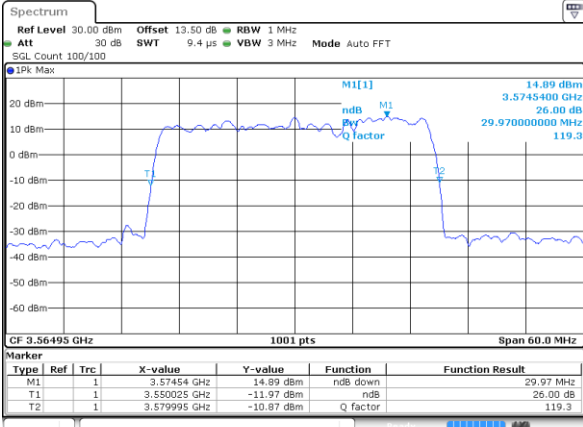
Date: 29 JAN 2020 01:09:06



LTE Band 48C

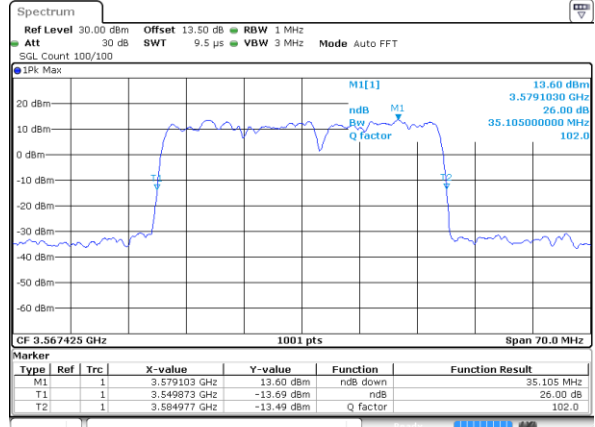
16QAM

Lowest Channel / 15MHz+15MHz



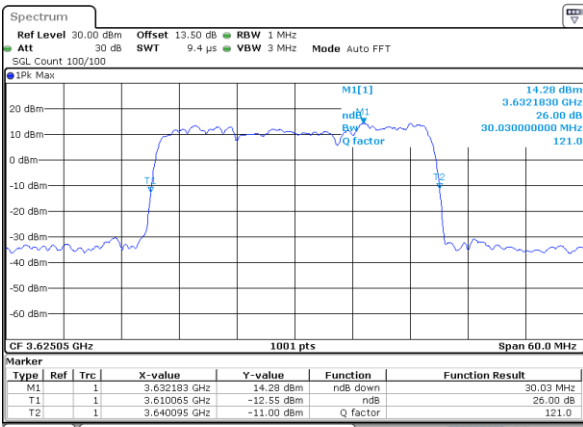
Date: 28 JAN 2020 18:43:42

Lowest Channel / 15MHz+20MHz



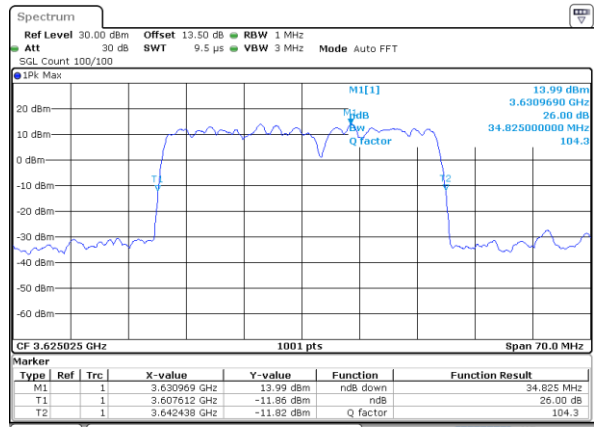
Date: 27 JAN 2020 22:50:39

Middle Channel / 20MHz+10MHz



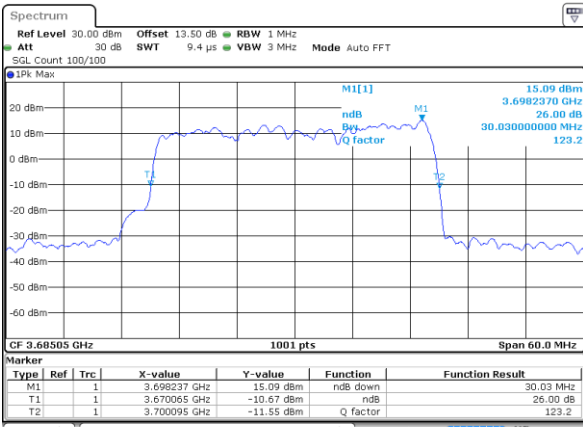
Date: 28 JAN 2020 18:51:03

Middle Channel / 20MHz+15MHz



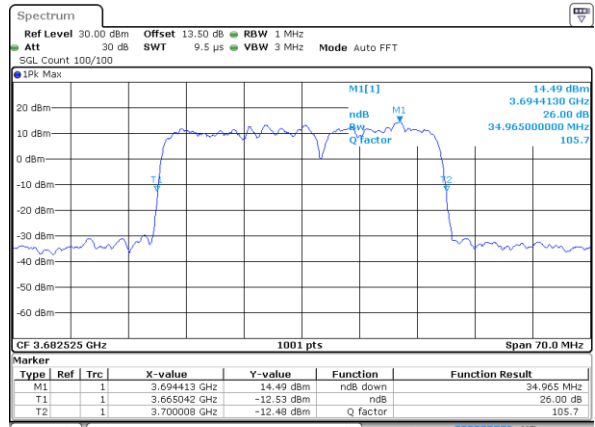
Date: 27 JAN 2020 22:57:23

Highest Channel / 20MHz+10MHz



Date: 28 JAN 2020 20:33:47

Highest Channel / 20MHz+15MHz



Date: 28 JAN 2020 00:31:27

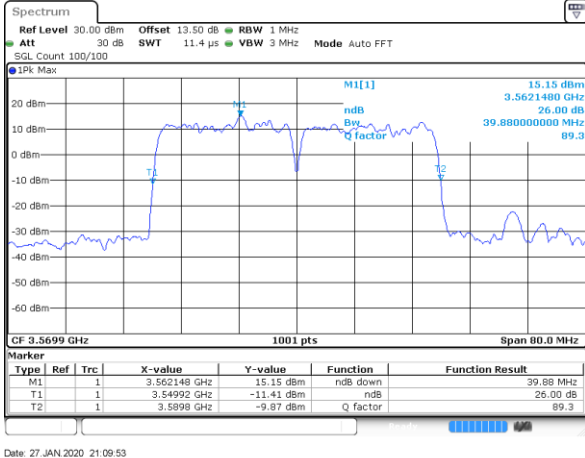


LTE Band 48C

16QAM

Lowest Channel / 20MHz+20MHz

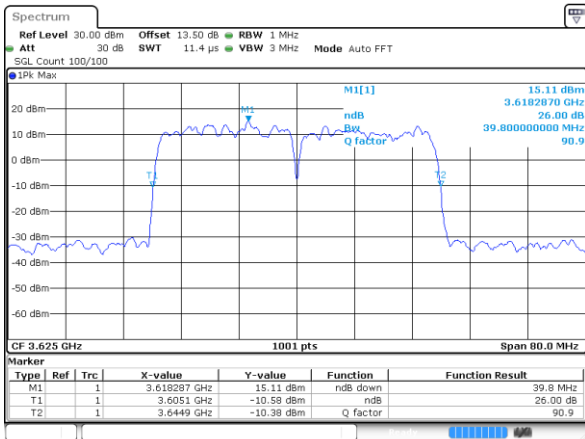
N/A



Date: 27 JAN 2020 21 09 53

Middle Channel / 20MHz+20MHz

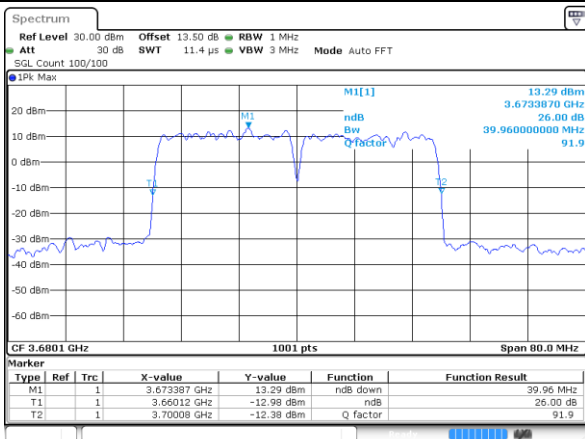
N/A



Date: 27 JAN 2020 20 09 08

Highest Channel / 20MHz+20MHz

N/A



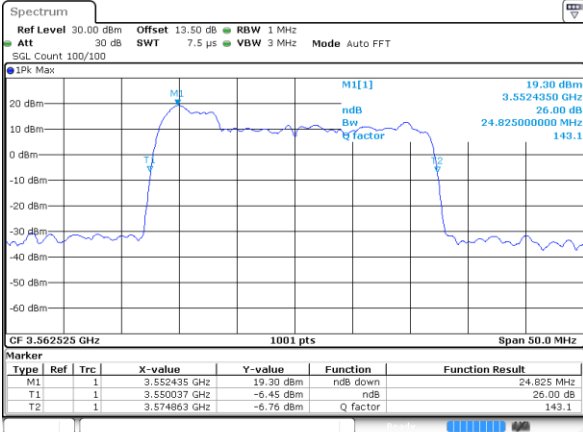
Date: 27 JAN 2020 19 56 13



LTE Band 48C

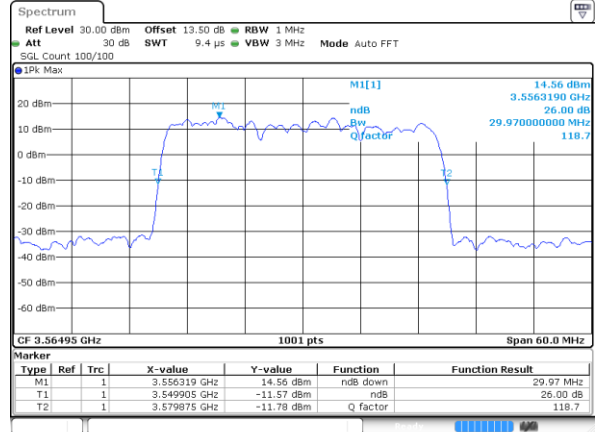
64QAM

Lowest Channel / 5MHz+20MHz



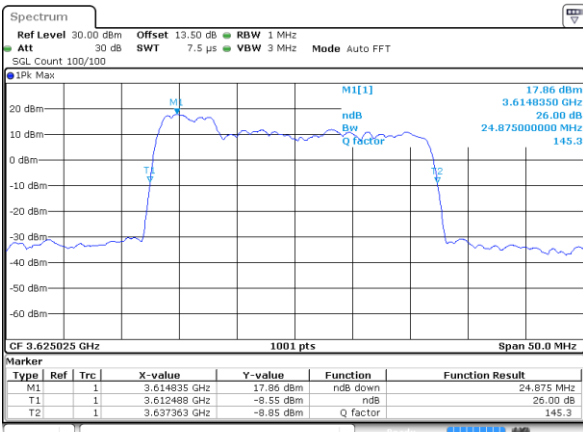
Date: 29 JAN 2020 02:39:54

Lowest Channel / 10MHz+15MHz



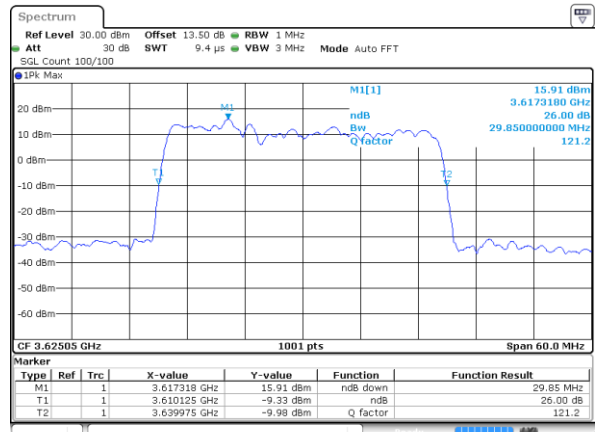
Date: 28 JAN 2020 20:39:58

Middle Channel / 5MHz+20MHz



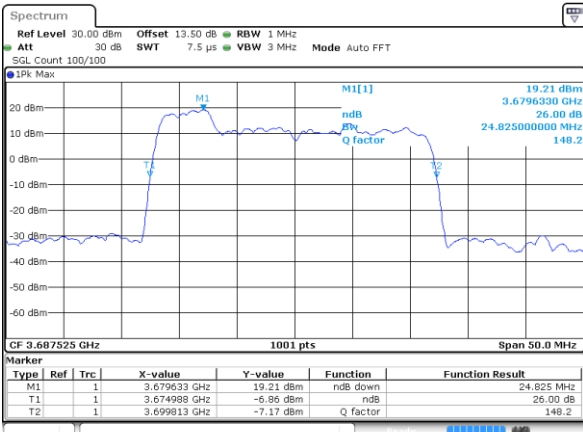
Date: 29 JAN 2020 03:55:49

Middle Channel / 10MHz+20MHz



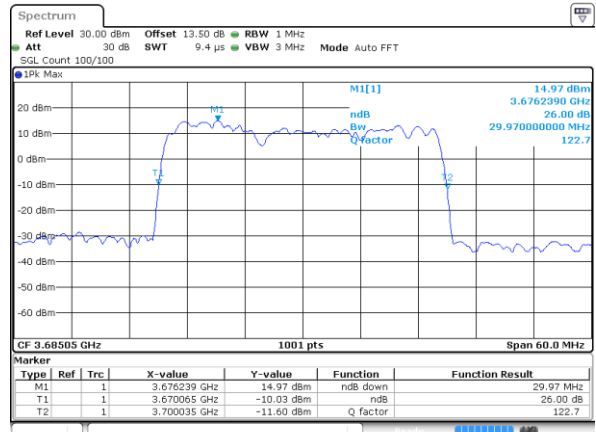
Date: 28 JAN 2020 22:14:23

Highest Channel / 5MHz+20MHz



Date: 29 JAN 2020 13:37:27

Highest Channel / 10MHz+20MHz



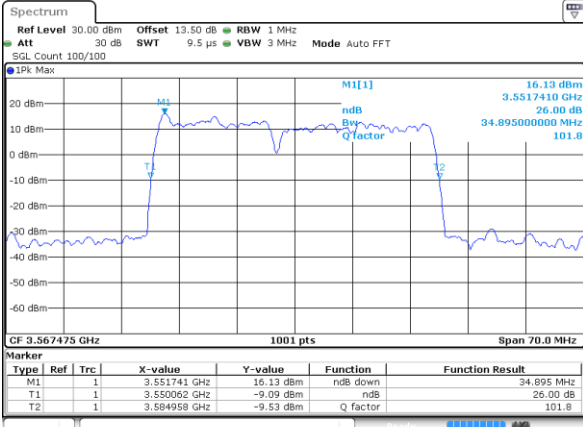
Date: 28 JAN 2020 22:22:11



LTE Band 48C

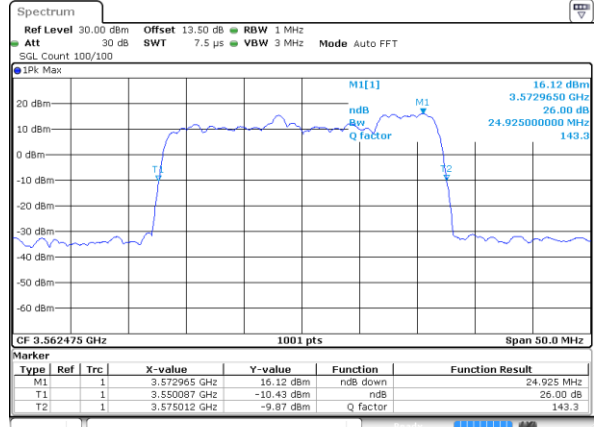
64QAM

Lowest Channel / 10MHz+20MHz



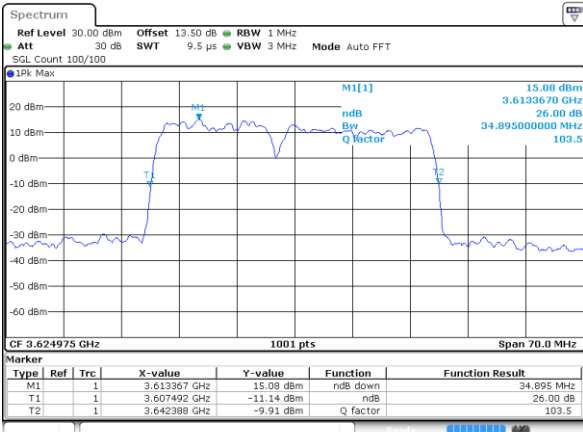
Date: 28 JAN 2020 00:38:19

Lowest Channel / 15MHz+10MHz



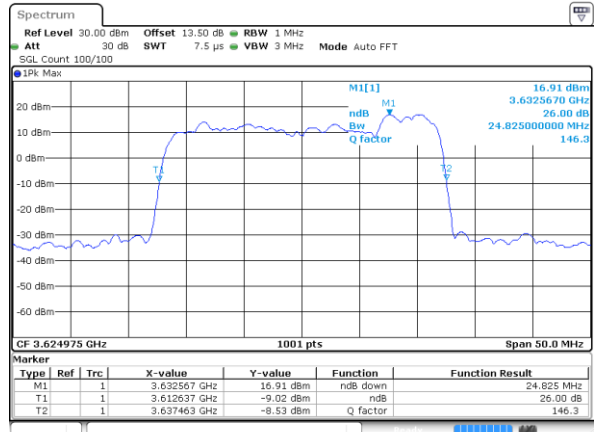
Date: 29 JAN 2020 00:09:09

Middle Channel / 15MHz+20MHz



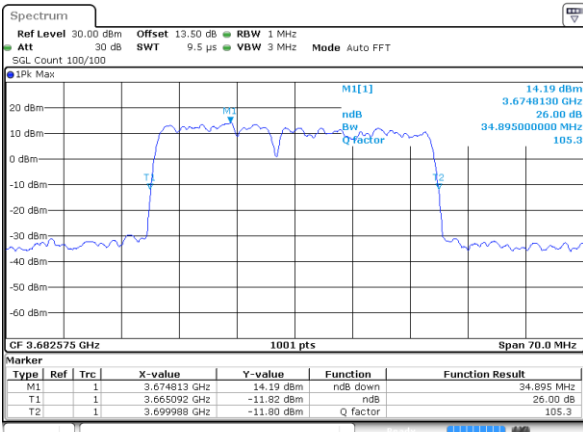
Date: 28 JAN 2020 02:14:28

Middle Channel / 20MHz+5MHz



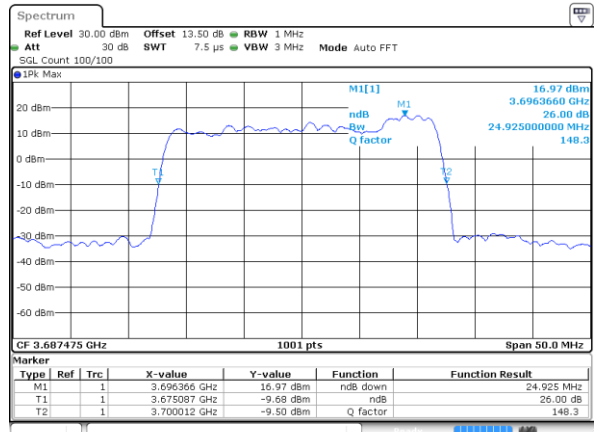
Date: 29 JAN 2020 00:14:18

Highest Channel / 15MHz+20MHz



Date: 28 JAN 2020 03:08:29

Highest Channel / 20MHz+5MHz



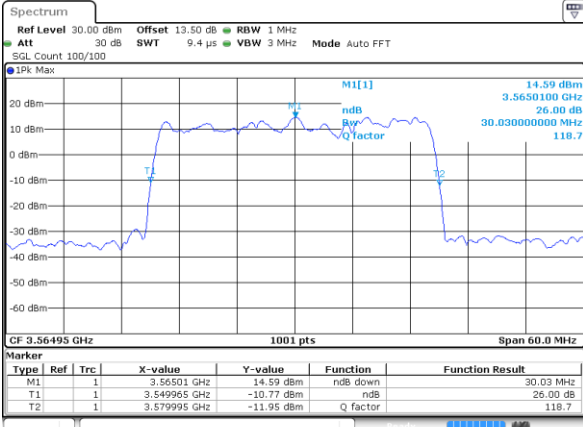
Date: 29 JAN 2020 01:09:28



LTE Band 48C

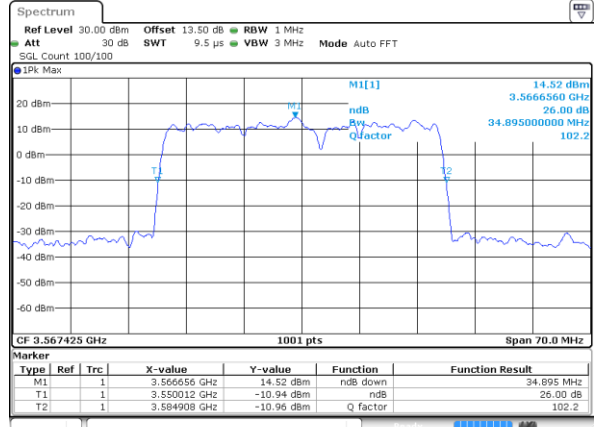
64QAM

Lowest Channel / 15MHz+15MHz



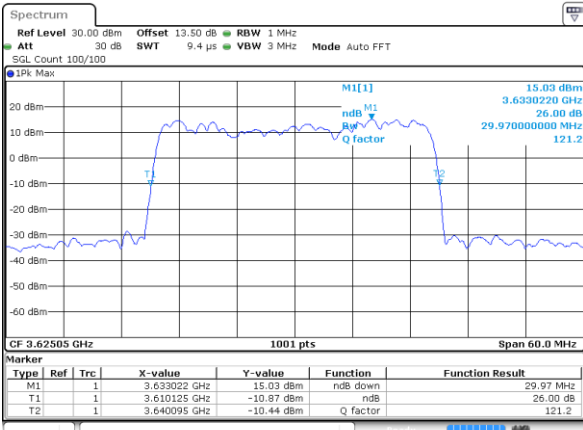
Date: 28 JAN 2020 18:43:20

Lowest Channel / 15MHz+20MHz



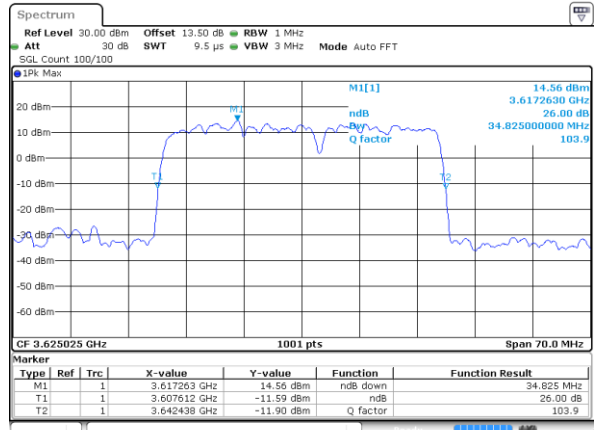
Date: 27 JAN 2020 22:50:15

Middle Channel / 20MHz+10MHz



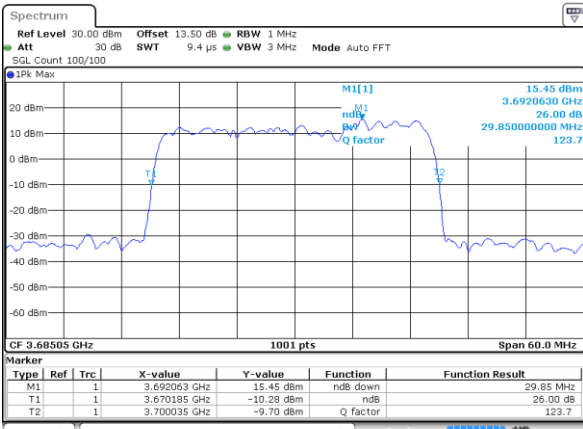
Date: 28 JAN 2020 18:50:40

Middle Channel / 20MHz+15MHz



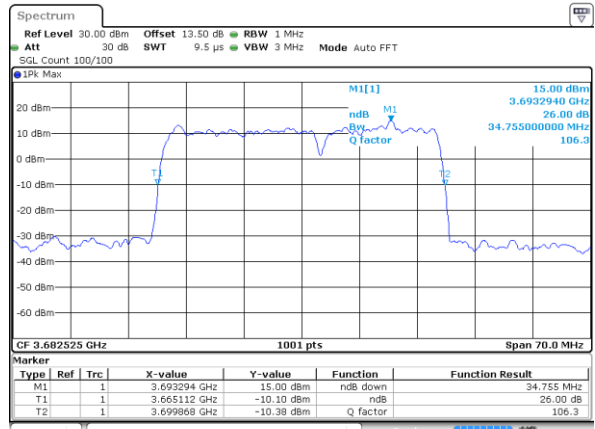
Date: 27 JAN 2020 22:57:00

Highest Channel / 20MHz+10MHz



Date: 28 JAN 2020 20:34:12

Highest Channel / 20MHz+15MHz



Date: 28 JAN 2020 00:31:50



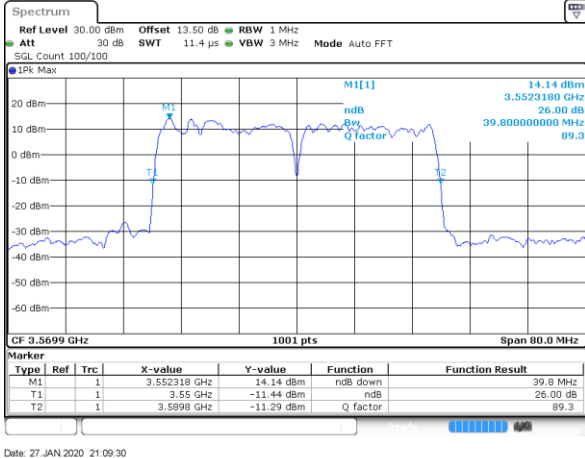


LTE Band 48C

64QAM

Lowest Channel / 20MHz+20MHz

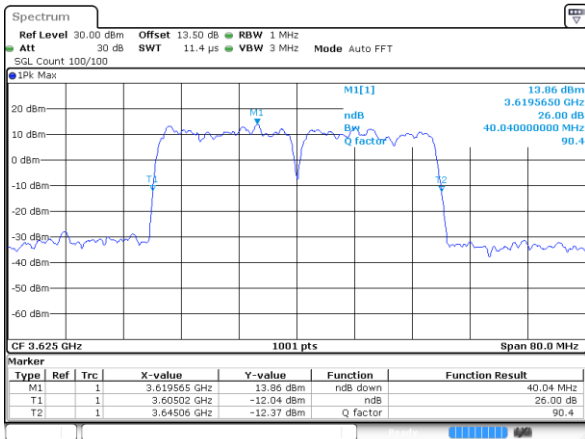
N/A



Date: 27 JAN 2020 21:09:30

Middle Channel / 20MHz+20MHz

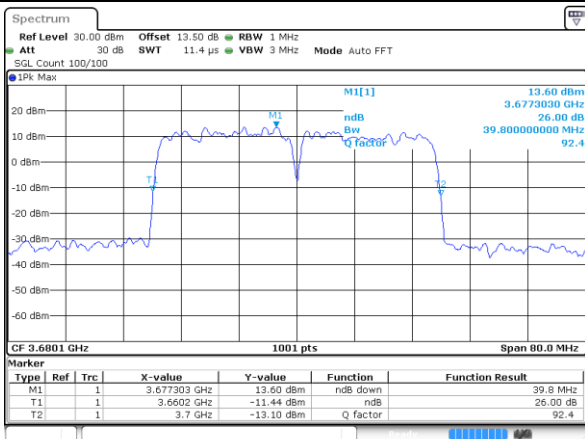
N/A



Date: 27 JAN 2020 20:08:45

Highest Channel / 20MHz+20MHz

N/A



Date: 27 JAN 2020 19:56:37



### Occupied Bandwidth

Mode	LTE Band 48C : 99%OBW(MHz)			
QPSK				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Lowest CH	23.23	27.93	32.66	23.28
Middle CH	23.33	28.11	32.80	23.33
Highest CH	23.13	27.93	32.73	23.23
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Lowest CH	27.99	32.87	37.56	-
Middle CH	28.29	32.73	37.64	-
Highest CH	28.11	32.66	37.64	-

Mode	LTE Band 48C : 99%OBW(MHz)			
16QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Lowest CH	23.38	28.23	33.01	23.33
Middle CH	23.28	28.05	33.08	23.28
Highest CH	23.08	28.11	32.59	23.28
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Lowest CH	27.93	33.22	37.80	-
Middle CH	28.05	32.94	37.80	-
Highest CH	27.93	32.87	37.64	-

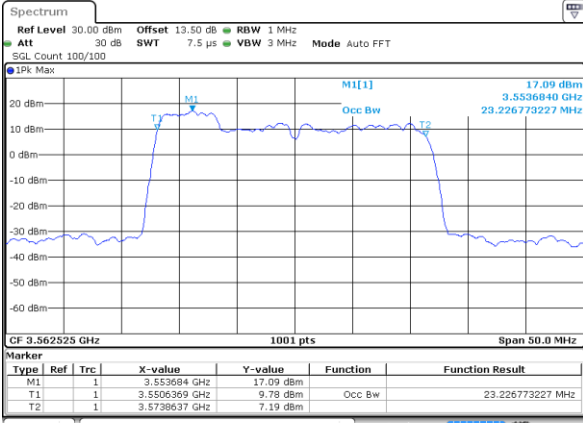
Mode	LTE Band 48C : 99%OBW(MHz)			
64QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Lowest CH	23.33	28.17	32.59	23.28
Middle CH	23.08	28.11	32.66	23.38
Highest CH	23.23	28.05	32.73	23.28
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Lowest CH	28.17	32.73	37.80	-
Middle CH	28.17	32.87	37.72	-
Highest CH	28.11	32.80	37.56	-



LTE Band 48C

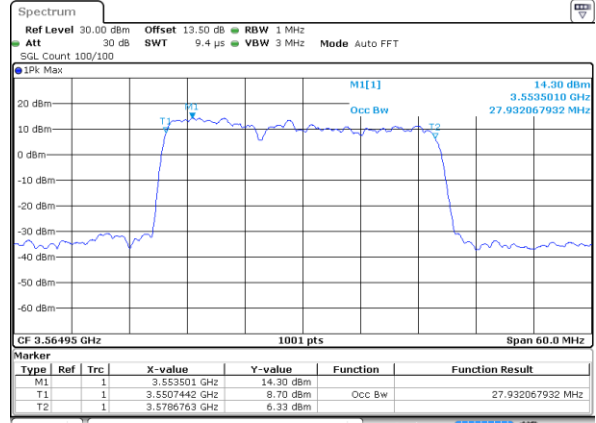
QPSK

Lowest Channel / 5MHz+20MHz



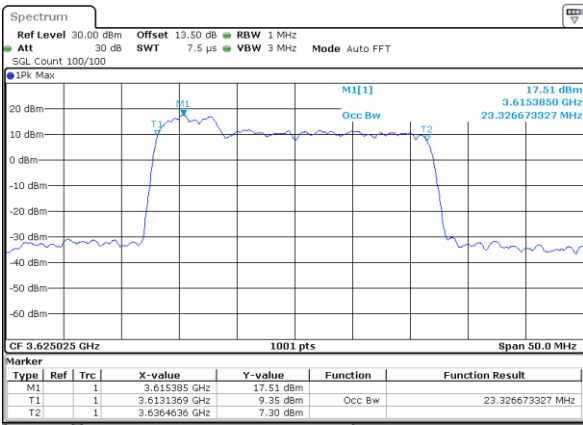
Date: 29 JAN 2020 02:38:44

Lowest Channel / 10MHz+20MHz



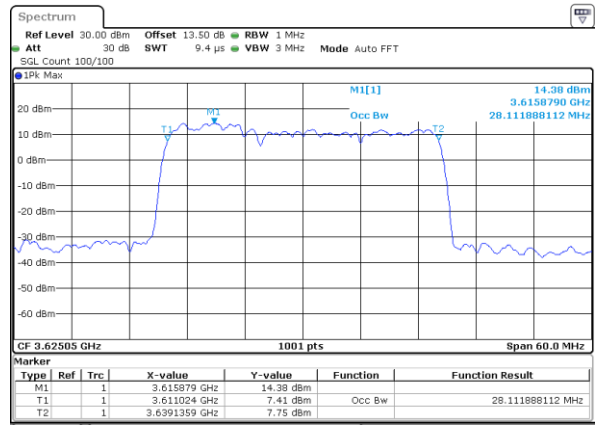
Date: 28 JAN 2020 20:38:51

Middle Channel / 5MHz+20MHz



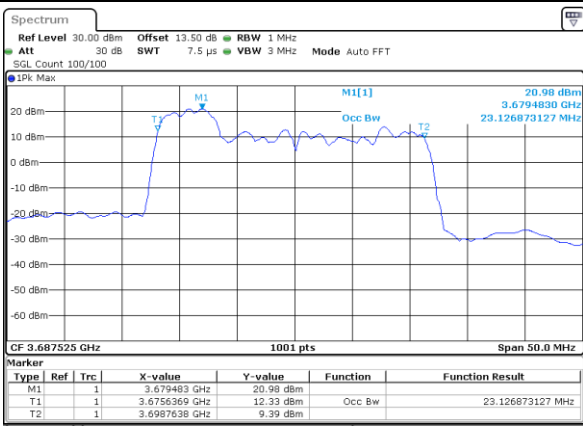
Date: 29 JAN 2020 03:54:40

Middle Channel / 10MHz+20MHz



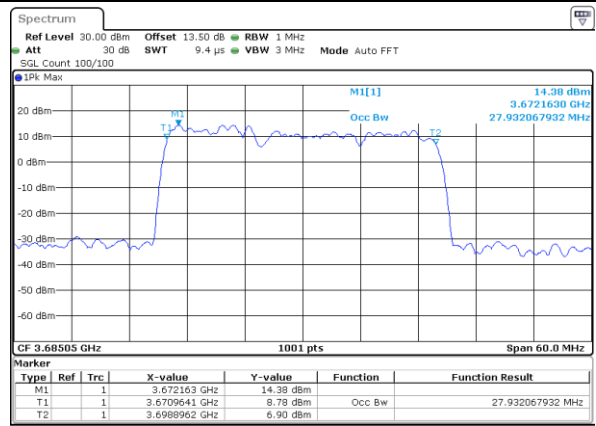
Date: 28 JAN 2020 22:19:15

Highest Channel / 5MHz+20MHz



Date: 29 JAN 2020 13:07:12

Highest Channel / 10MHz+20MHz



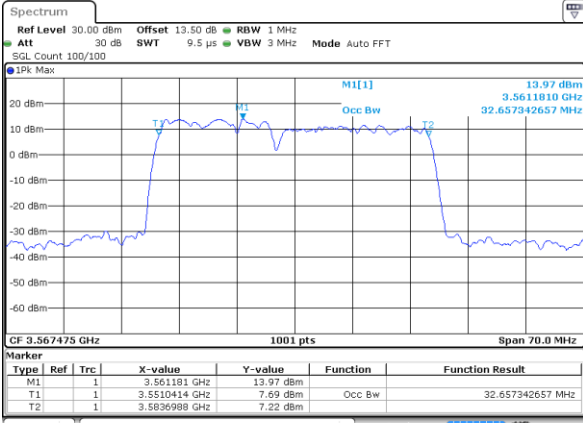
Date: 28 JAN 2020 22:21:04



LTE Band 48C

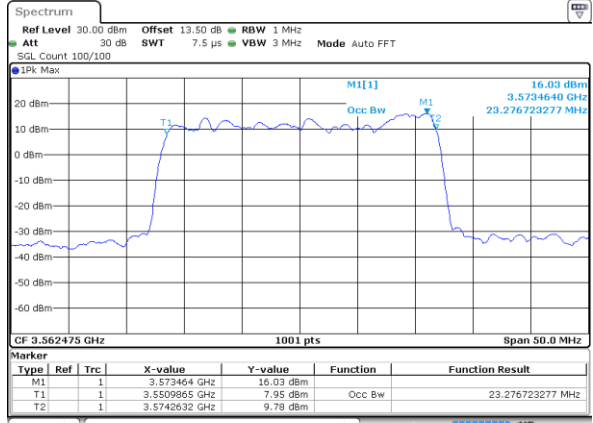
QPSK

Lowest Channel / 15MHz+20MHz



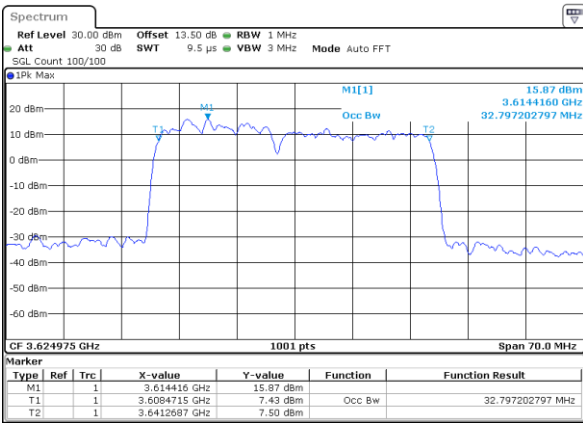
Date: 28 JAN 2020 00:37:10

Lowest Channel / 20MHz+5MHz



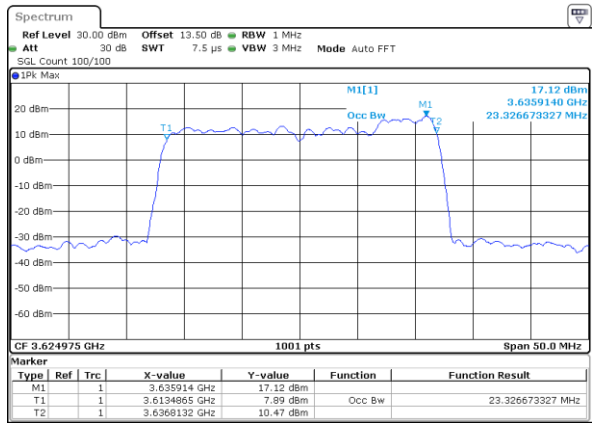
Date: 29 JAN 2020 00:08:02

Middle Channel / 15MHz+20MHz



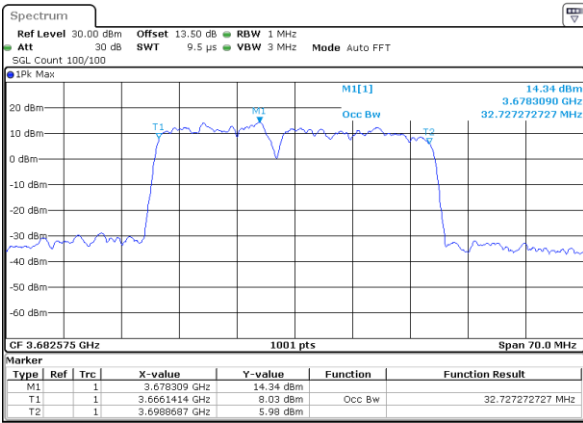
Date: 28 JAN 2020 02:13:18

Middle Channel / 20MHz+5MHz



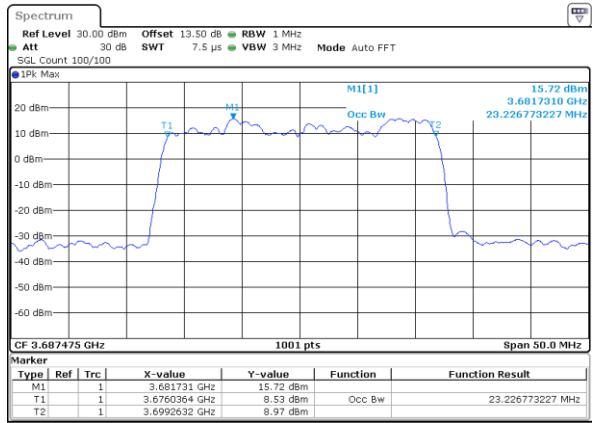
Date: 29 JAN 2020 00:13:10

Highest Channel / 15MHz+20MHz



Date: 28 JAN 2020 03:07:19

Highest Channel / 20MHz+5MHz



Date: 29 JAN 2020 01:08:21