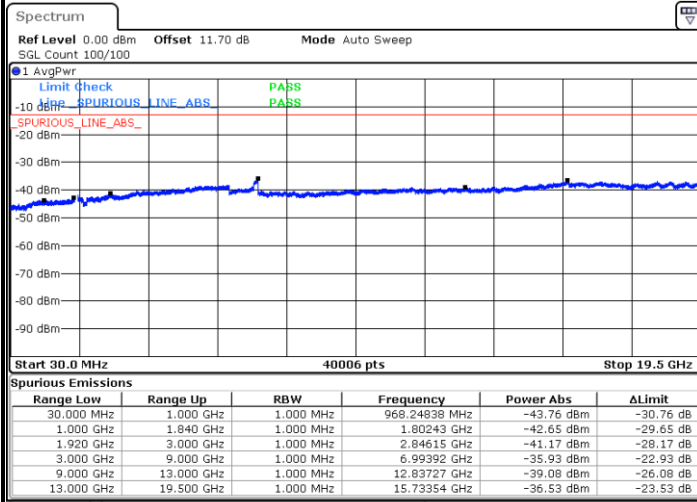




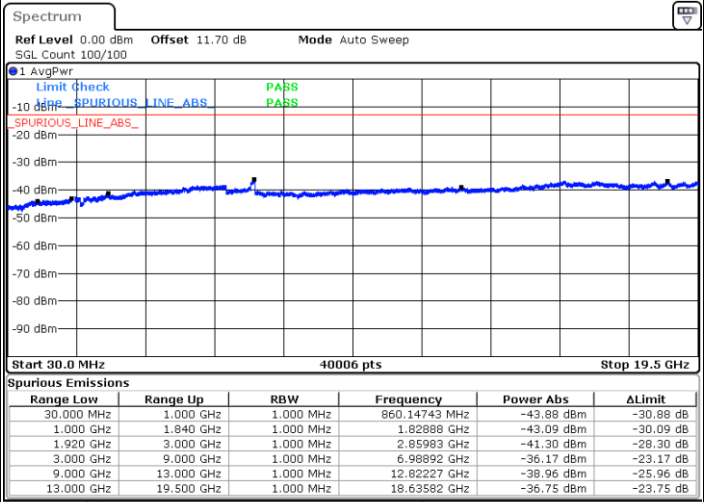
LTE Band 2 / 5MHz

Highest Channel / QPSK



Date: 11.FEB.2020 02:44:27

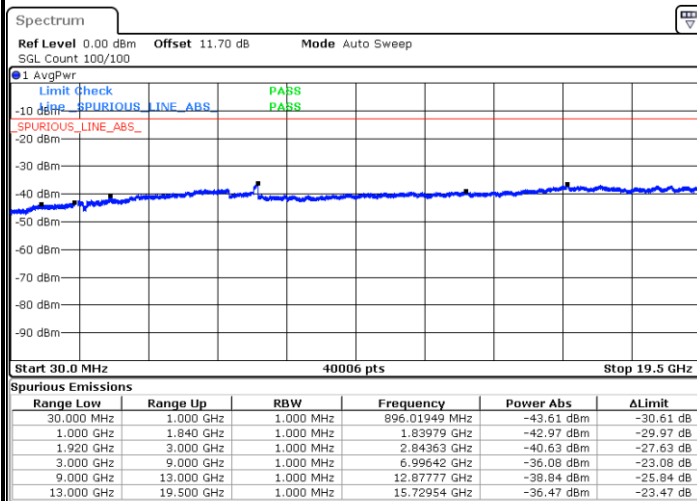
Highest Channel / 16QAM



Date: 11.FEB.2020 02:45:21

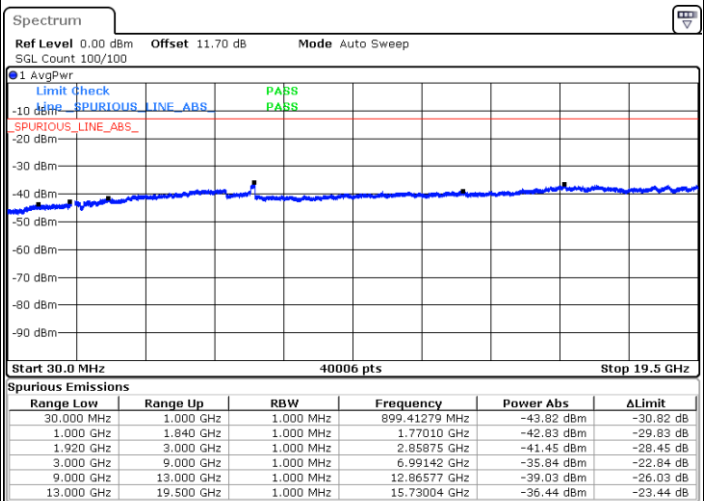
LTE Band 2 / 10MHz

Lowest Channel / QPSK



Date: 11.FEB.2020 02:51:56

Lowest Channel / 16QAM



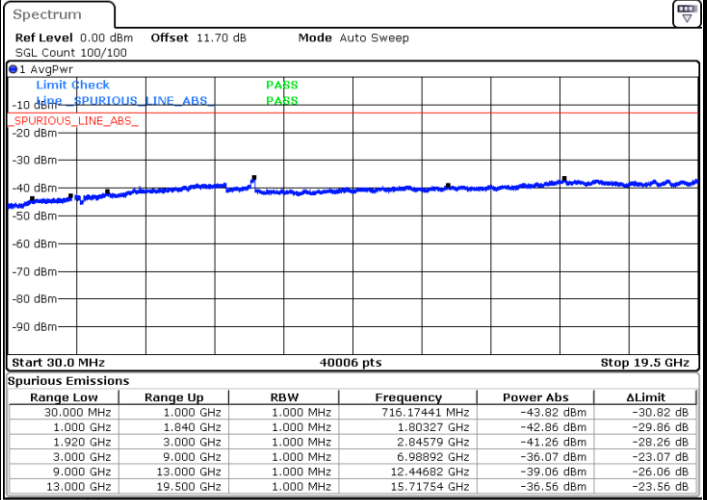
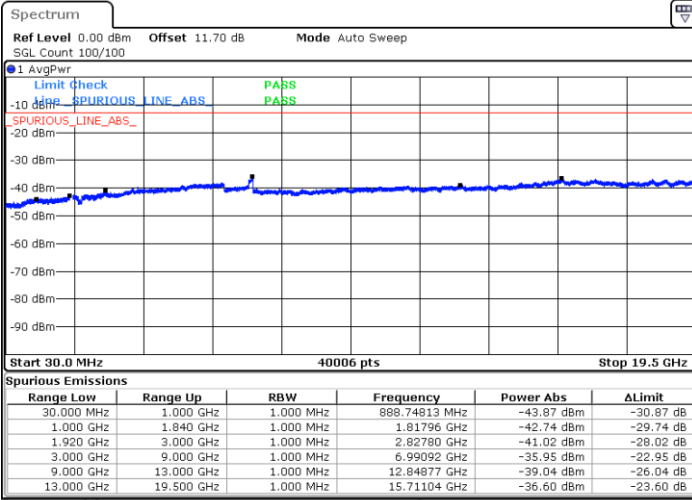
Date: 11.FEB.2020 02:52:50



LTE Band 2 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

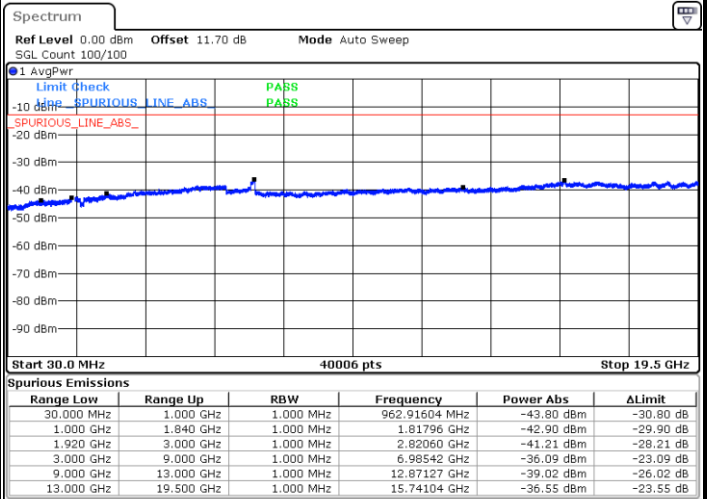
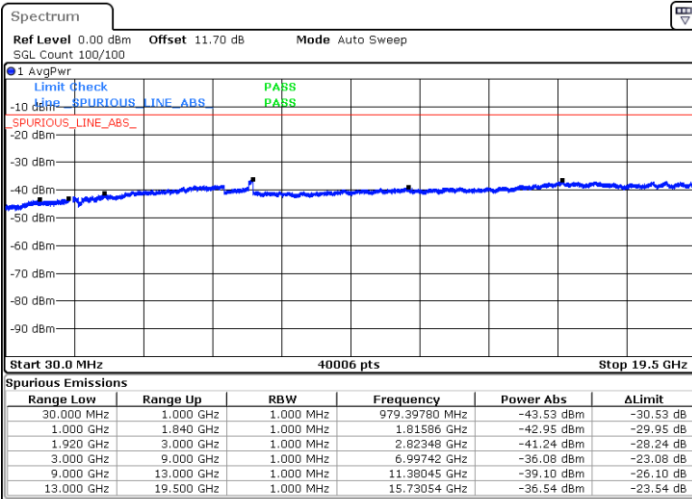


Date: 11.FEB.2020 02:54:38

Date: 11.FEB.2020 02:55:32

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 11.FEB.2020 03:02:05

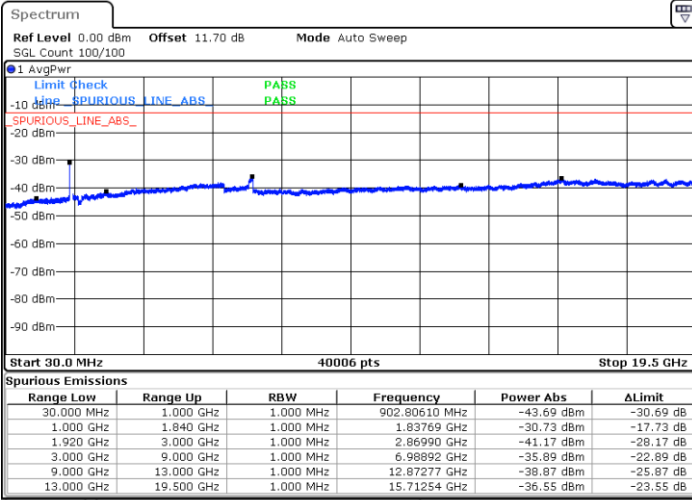
Date: 11.FEB.2020 03:02:59



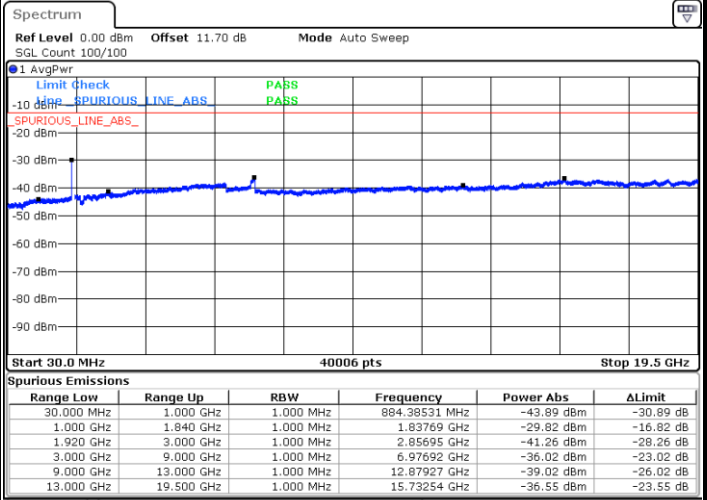
LTE Band 2 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



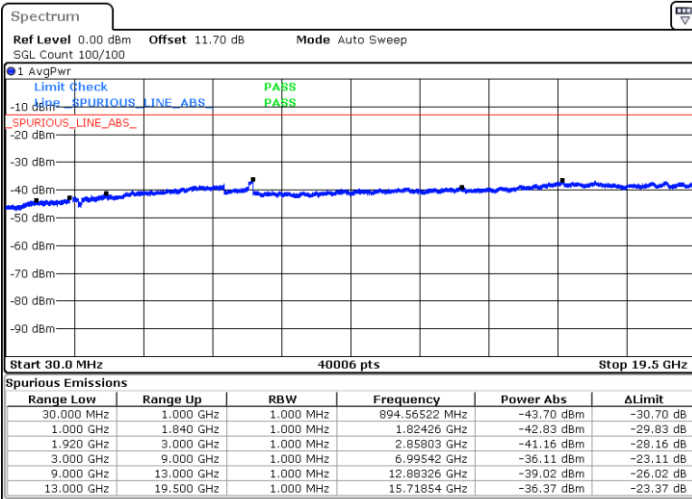
Date: 11.FEB.2020 03:09:34



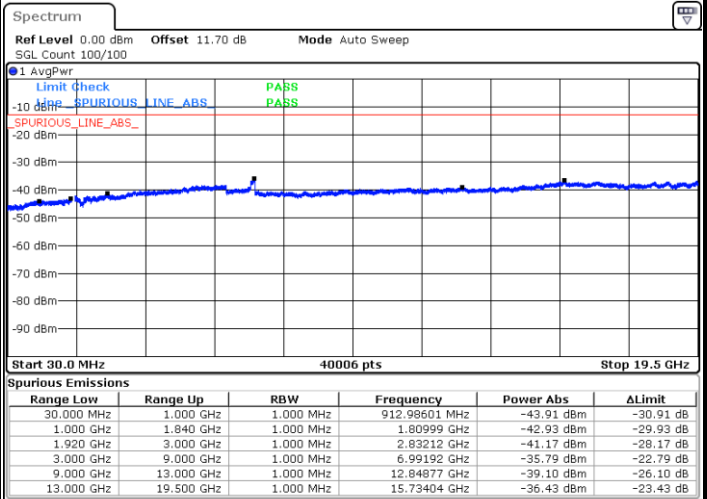
Date: 11.FEB.2020 03:10:28

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 11.FEB.2020 03:12:15



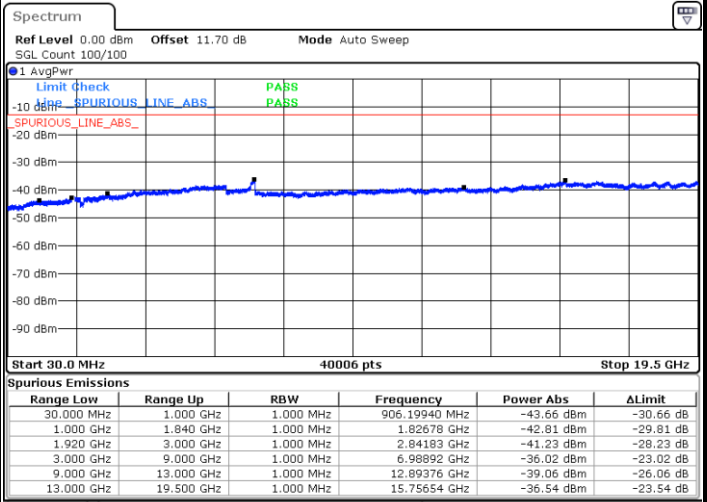
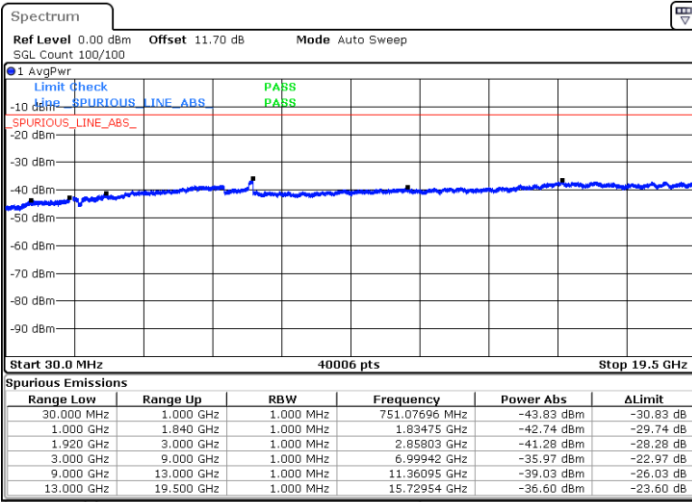
Date: 11.FEB.2020 03:13:09



LTE Band 2 / 15MHz

Highest Channel / QPSK

Highest Channel / 16QAM



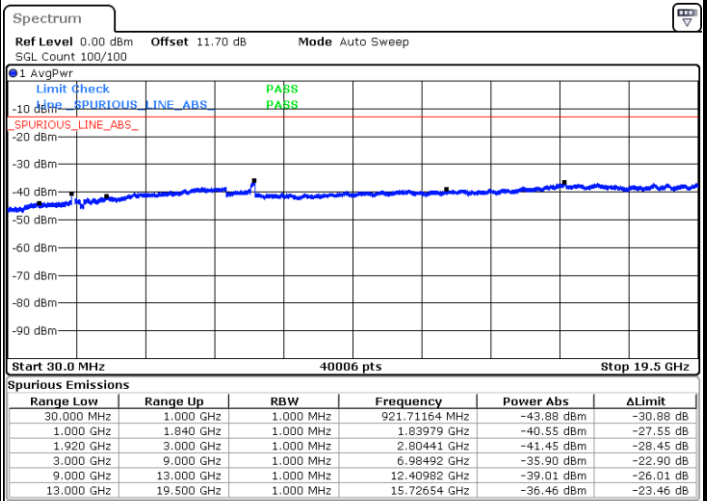
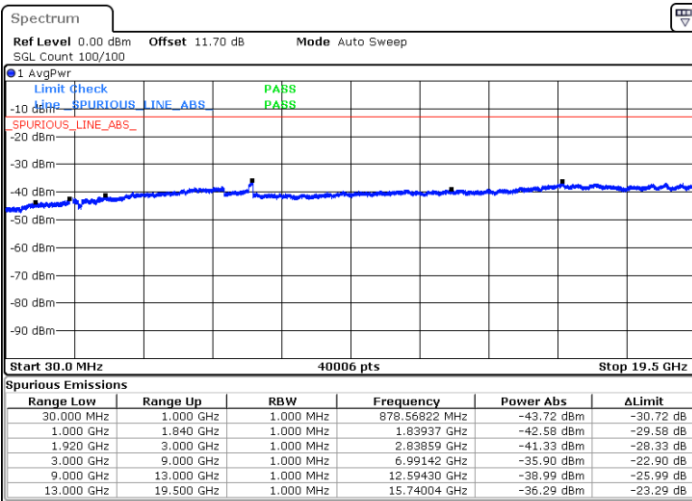
Date: 11.FEB.2020 03:19:43

Date: 11.FEB.2020 03:20:38

LTE Band 2 / 20MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 11.FEB.2020 03:27:12

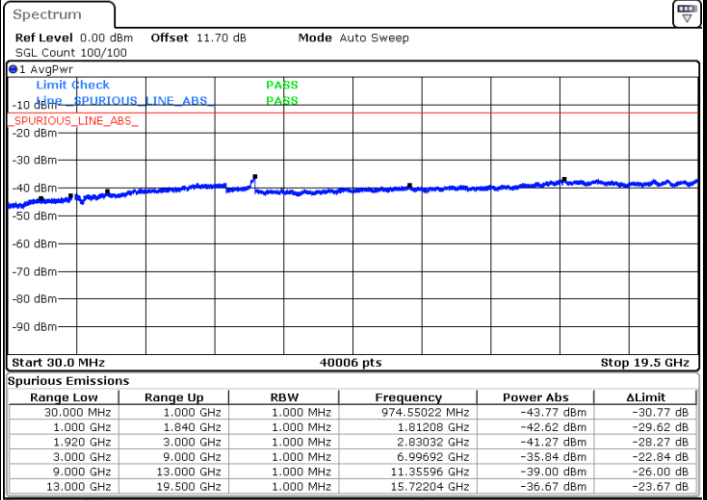
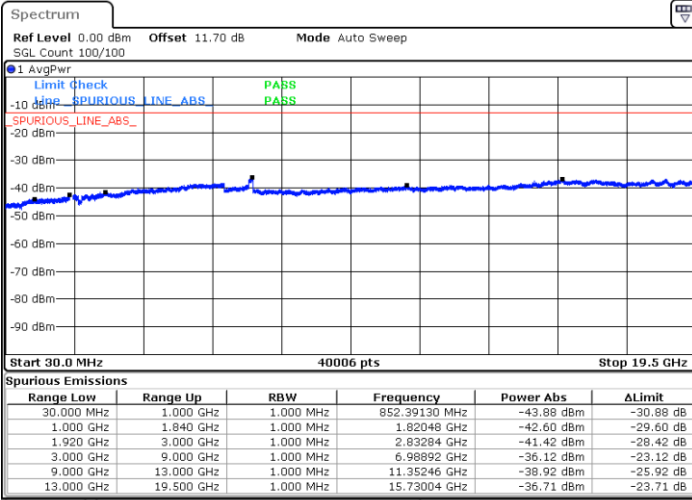
Date: 11.FEB.2020 03:28:07



LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

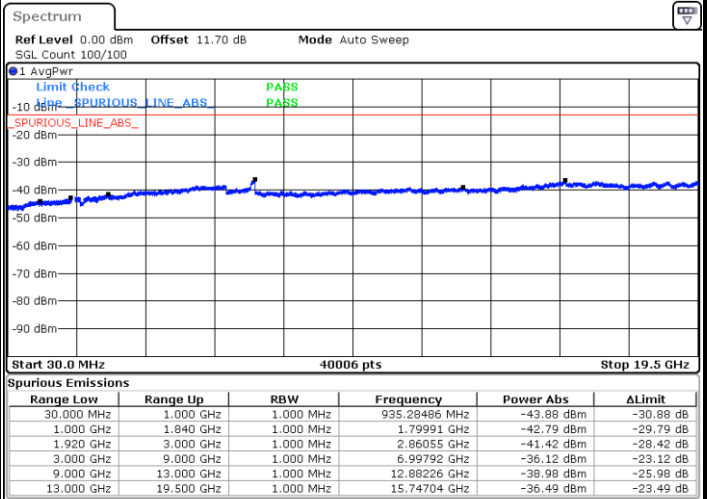
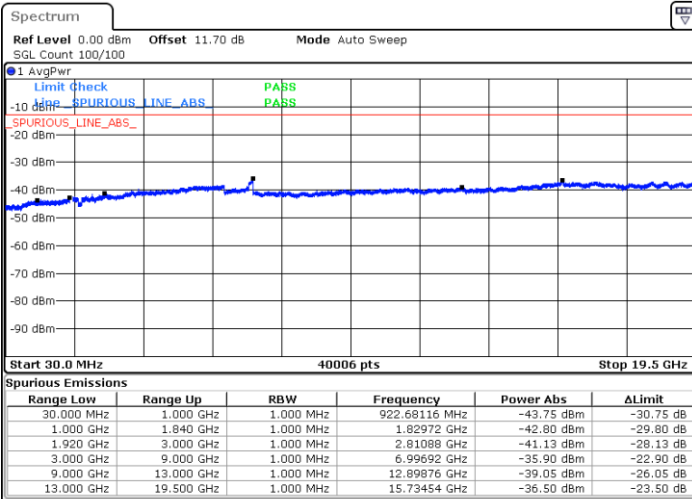


Date: 11.FEB.2020 03:29:54

Date: 11.FEB.2020 03:30:48

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 11.FEB.2020 03:37:22

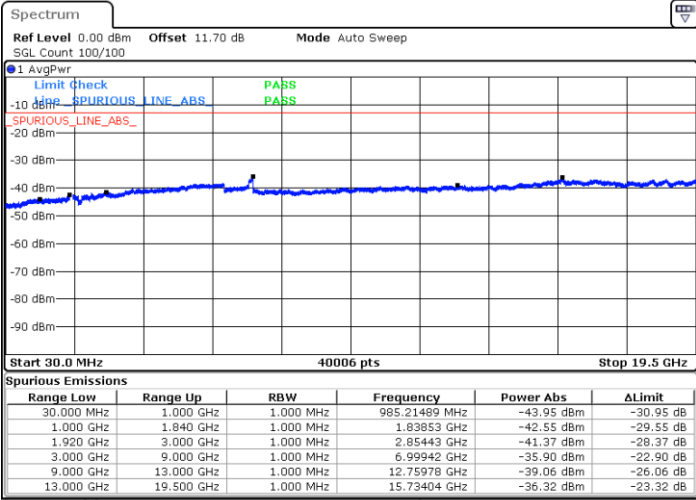
Date: 11.FEB.2020 03:38:16



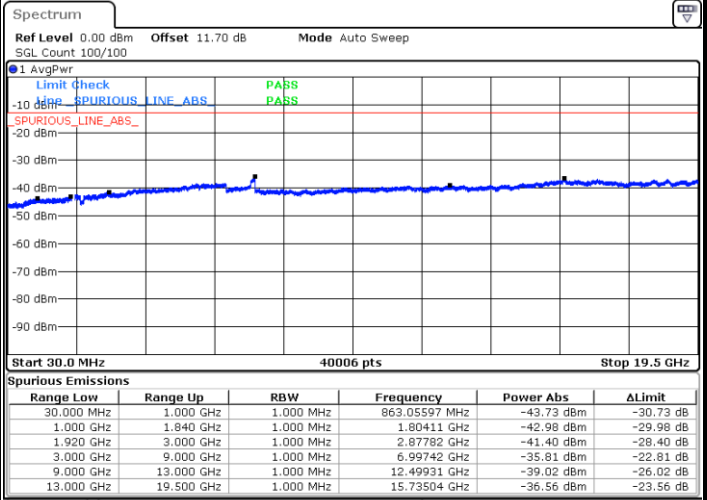
LTE Band 2 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

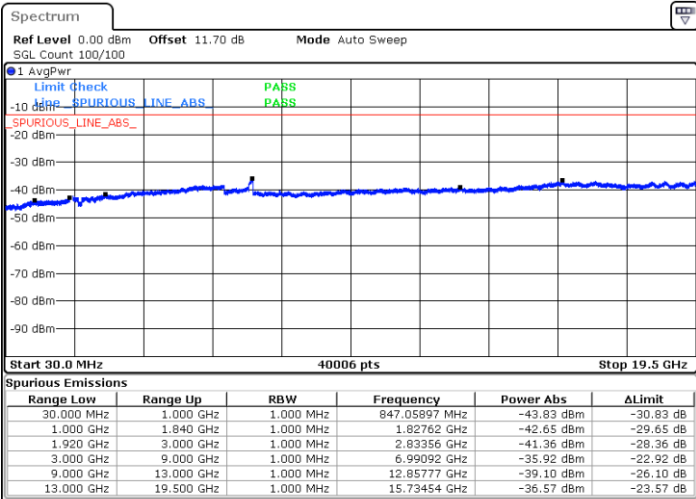


Date: 11.FEB.2020 01:47:19



Date: 11.FEB.2020 01:48:40

Highest Channel / 64QAM



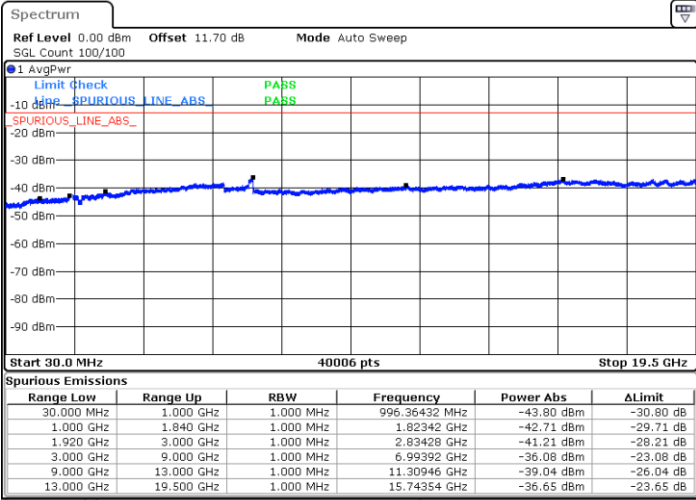
Date: 11.FEB.2020 01:52:24



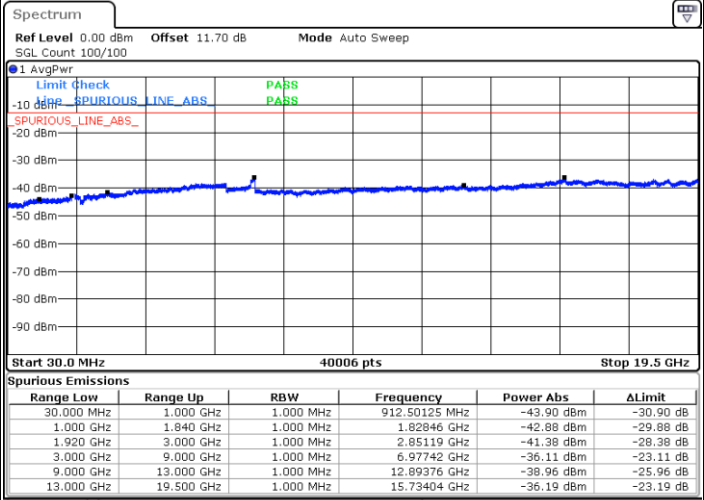
LTE Band 2 / 3MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

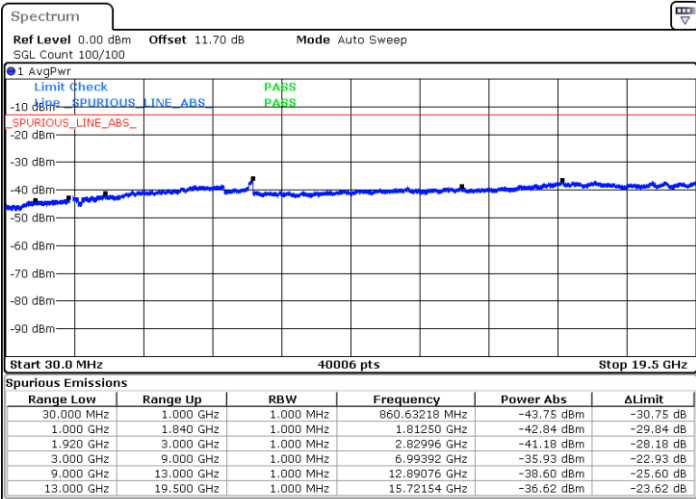


Date: 11.FEB.2020 03:42:01



Date: 11.FEB.2020 03:43:21

Highest Channel / 64QAM



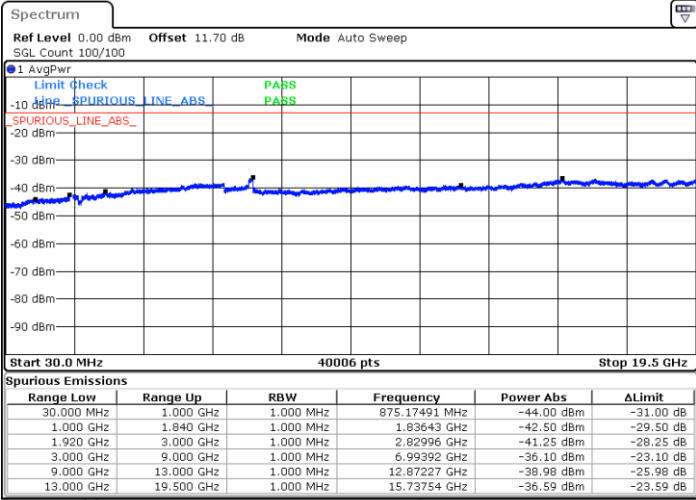
Date: 11.FEB.2020 03:47:05



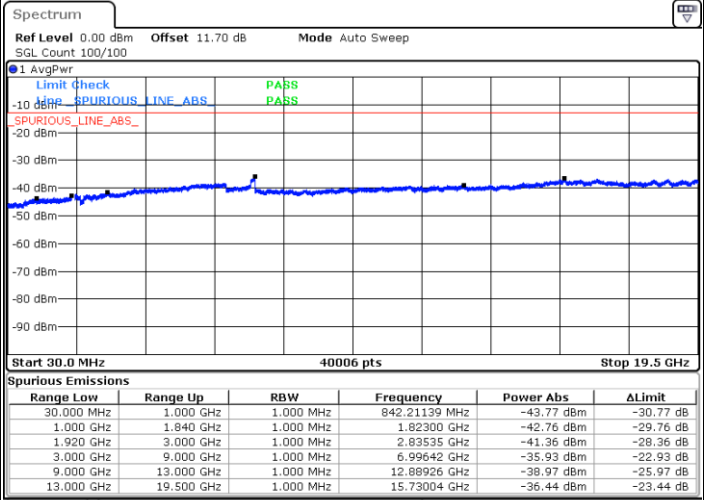
LTE Band 2 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

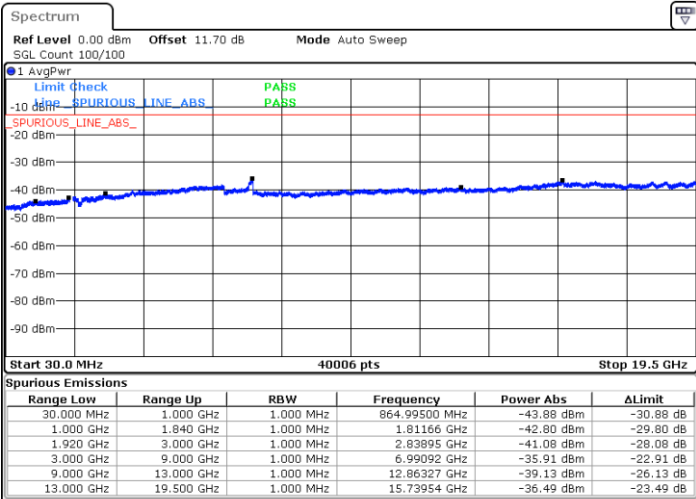


Date: 11.FEB.2020 03:50:49



Date: 11.FEB.2020 03:52:10

Highest Channel / 64QAM



Date: 11.FEB.2020 03:55:54

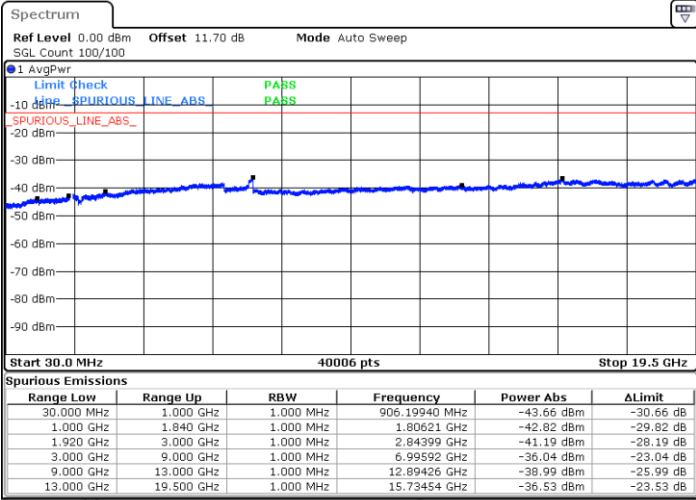




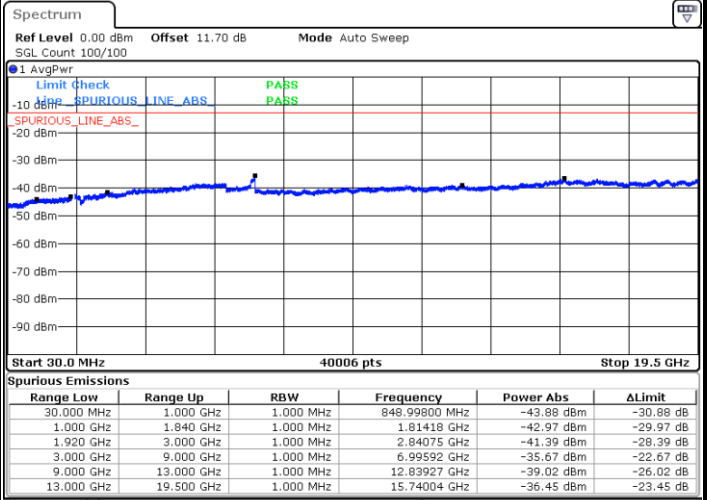
LTE Band 2 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

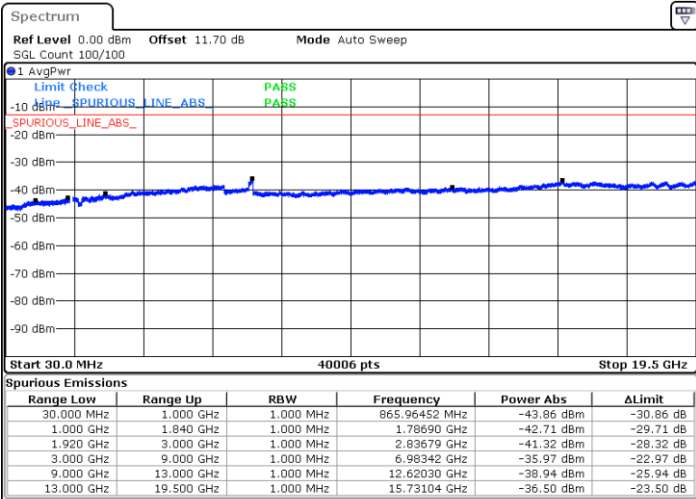


Date: 11.FEB.2020 03:59:38



Date: 11.FEB.2020 04:00:59

Highest Channel / 64QAM



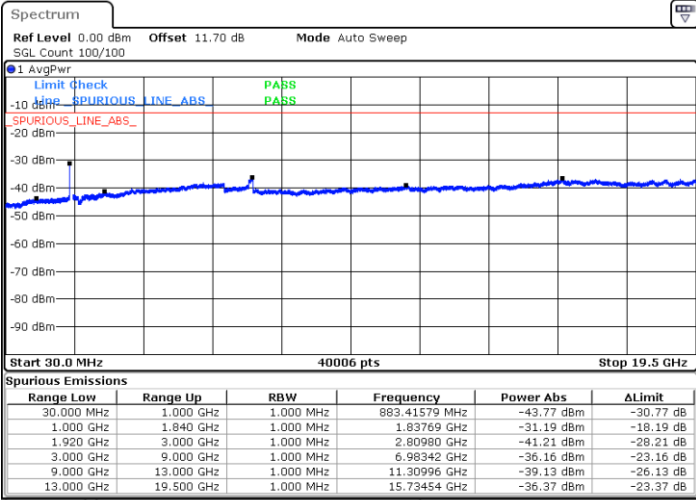
Date: 11.FEB.2020 04:04:42



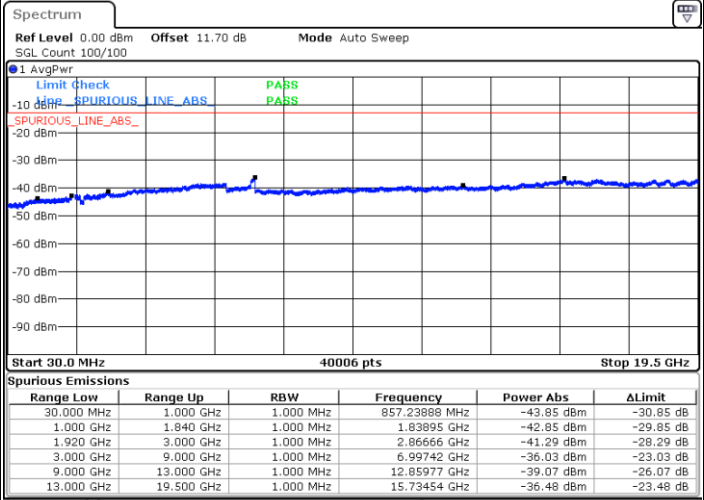
LTE Band 2 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

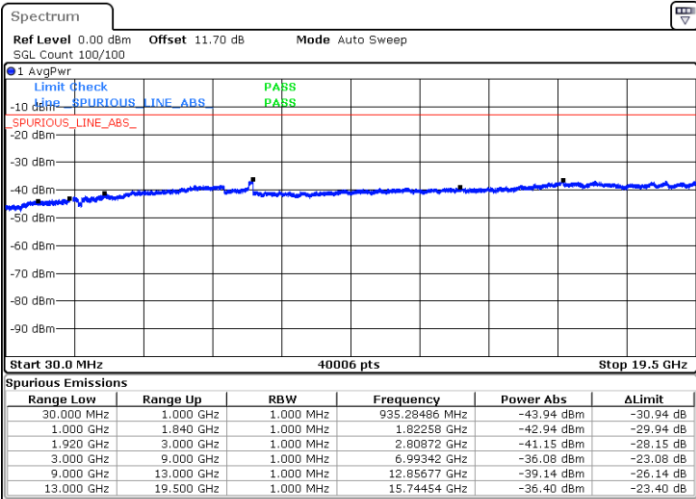


Date: 11.FEB.2020 04:08:26



Date: 11.FEB.2020 04:09:47

Highest Channel / 64QAM



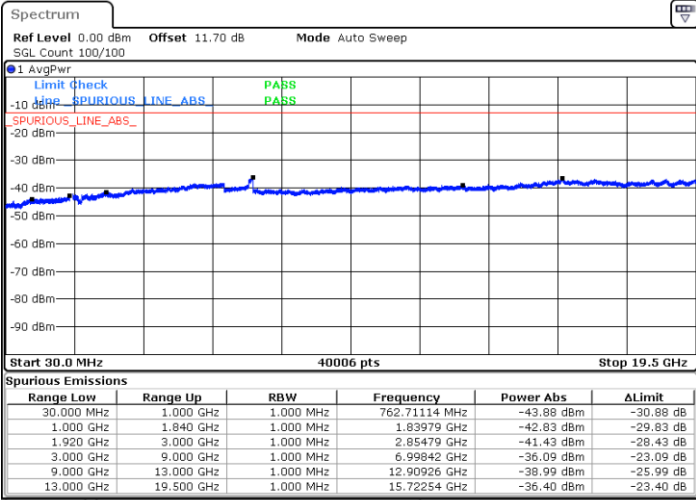
Date: 11.FEB.2020 04:13:31



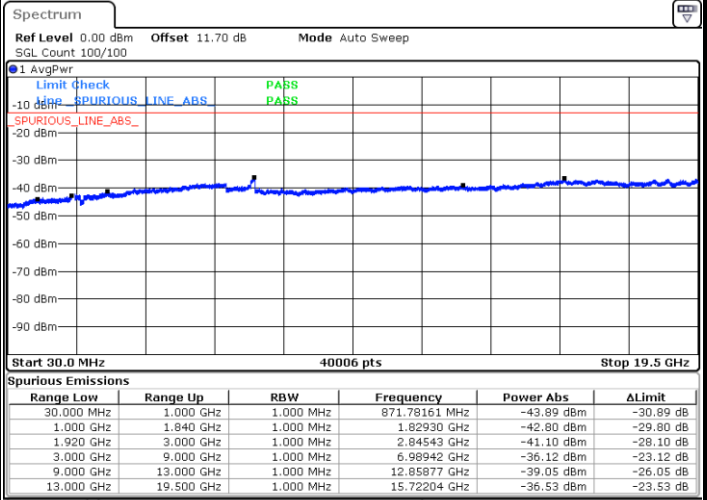
LTE Band 2 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

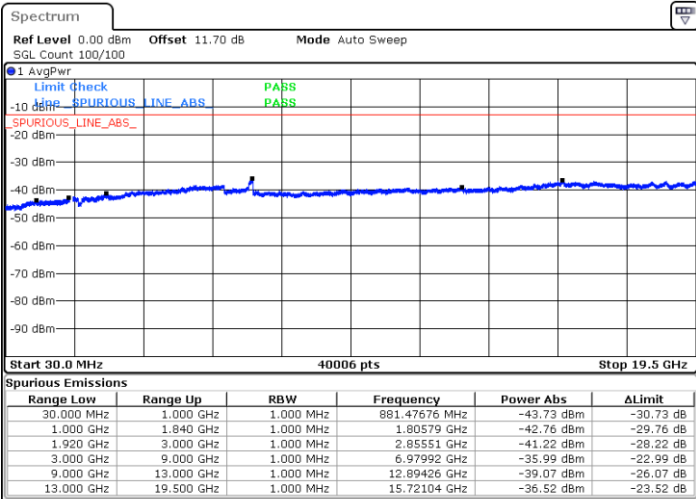


Date: 11.FEB.2020 04:17:15



Date: 11.FEB.2020 04:18:36

Highest Channel / 64QAM



Date: 11.FEB.2020 04:22:20



**Frequency Stability**

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0007	

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 4

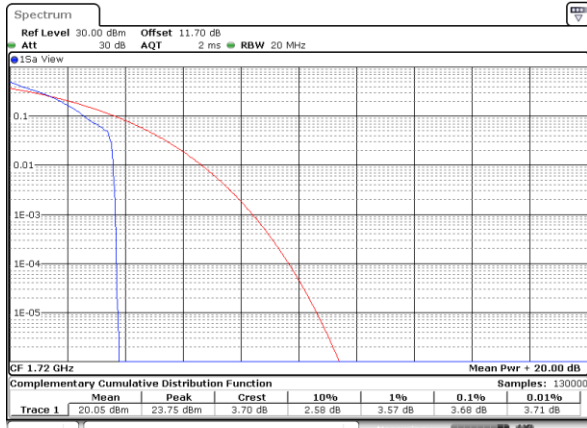
## Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.68	4.67	4.20	5.74	<b>PASS</b>
Middle CH	3.62	4.64	5.16	5.54	
Highest CH	3.80	4.75	4.46	5.65	
Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.41	6.38	-	-	<b>PASS</b>
Middle CH	6.29	6.29	-	-	
Highest CH	6.26	6.46	-	-	



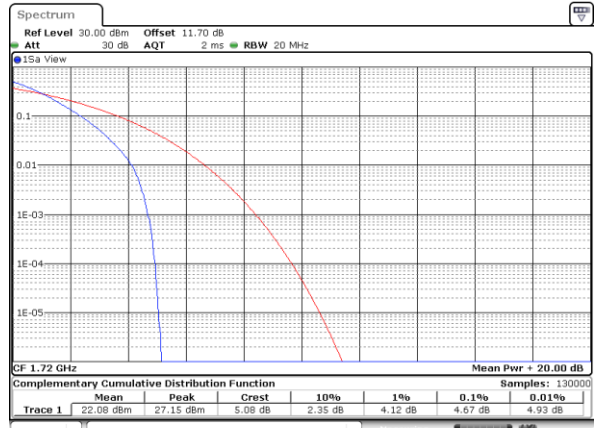
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



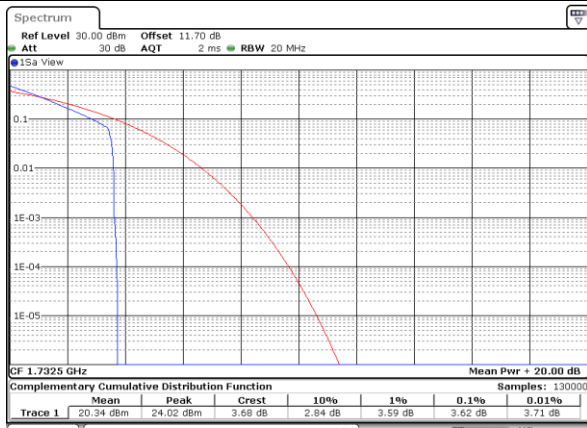
Date: 11.FEB.2020 01:34:03

Lowest Channel / Full RB



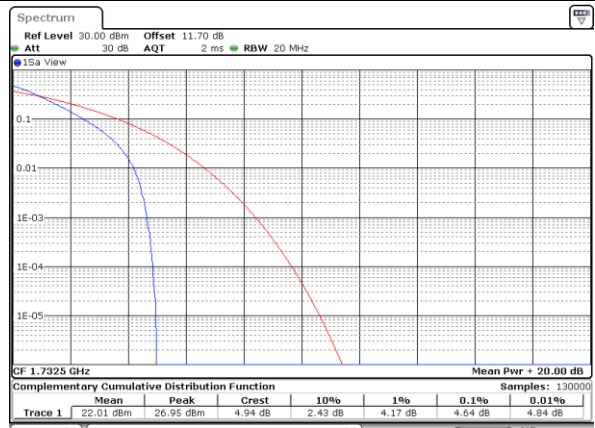
Date: 11.FEB.2020 01:34:21

Middle Channel / 1RB



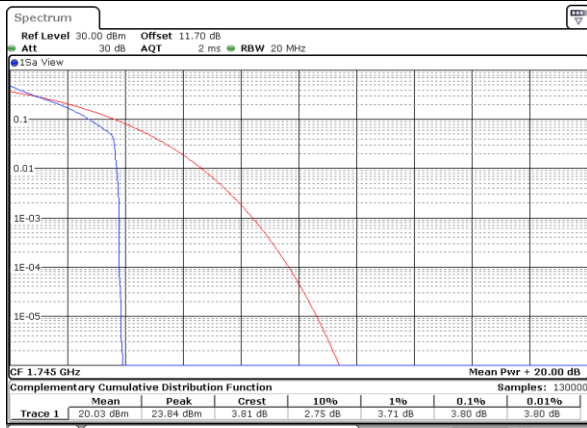
Date: 11.FEB.2020 01:34:41

Middle Channel / Full RB



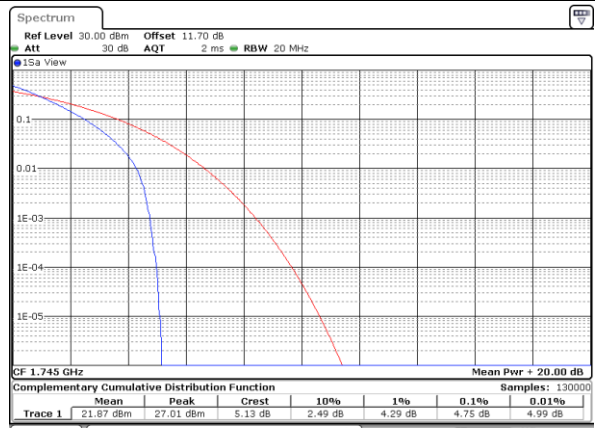
Date: 11.FEB.2020 01:34:54

Highest Channel / 1RB



Date: 11.FEB.2020 01:35:10

Highest Channel / Full RB

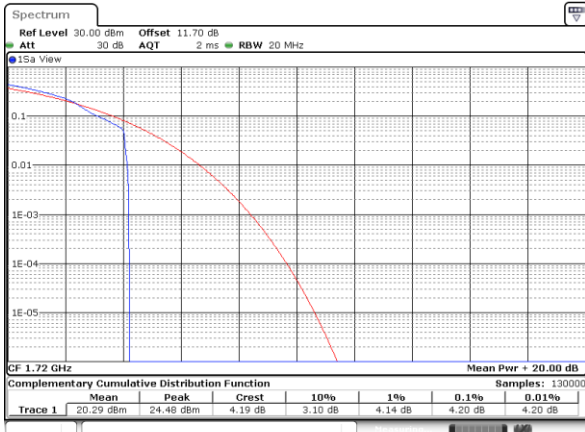


Date: 11.FEB.2020 01:35:33



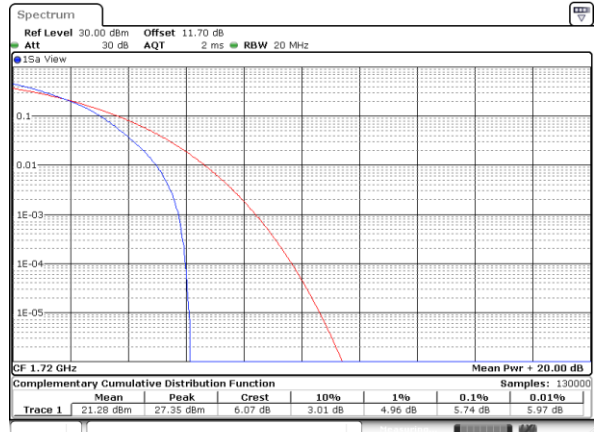
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



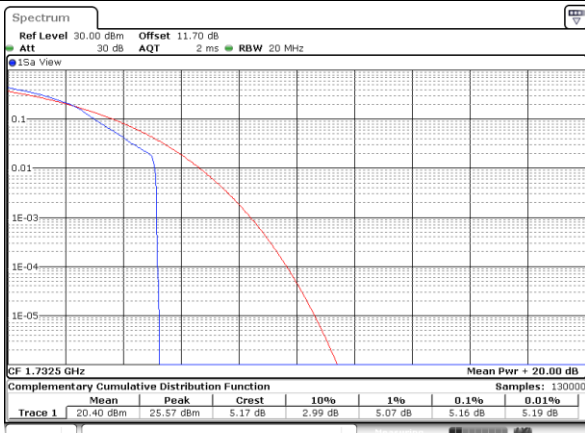
Date: 11.FEB.2020 01:11:08

Lowest Channel / Full RB



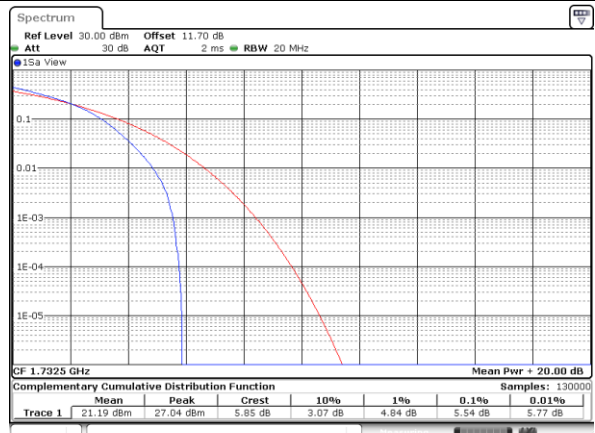
Date: 11.FEB.2020 01:11:24

Middle Channel / 1RB



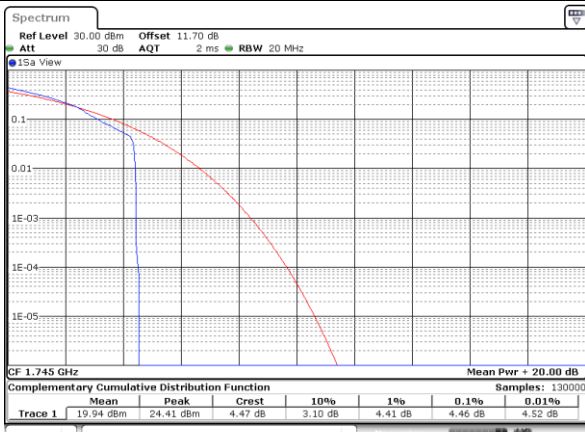
Date: 11.FEB.2020 01:17:08

Middle Channel / Full RB



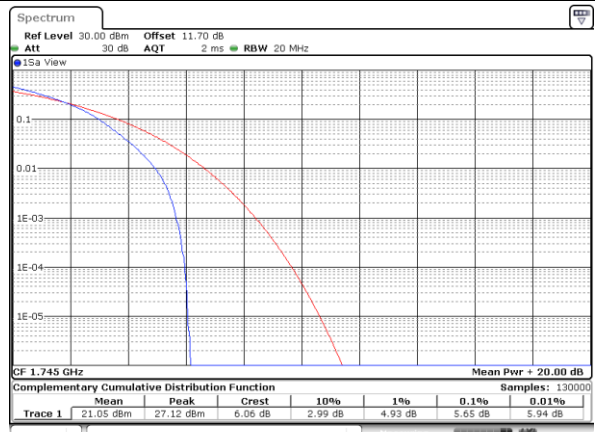
Date: 11.FEB.2020 01:24:09

Highest Channel / 1RB



Date: 11.FEB.2020 01:25:17

Highest Channel / Full RB

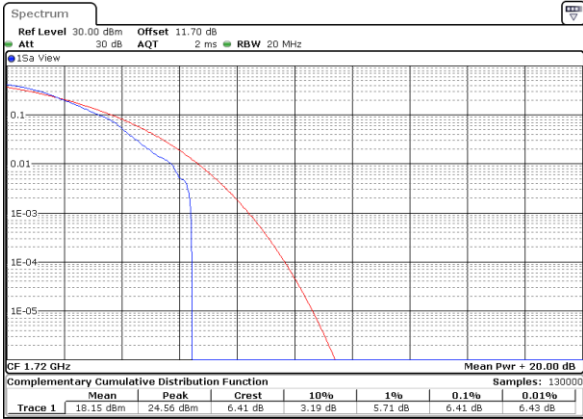


Date: 11.FEB.2020 01:25:34



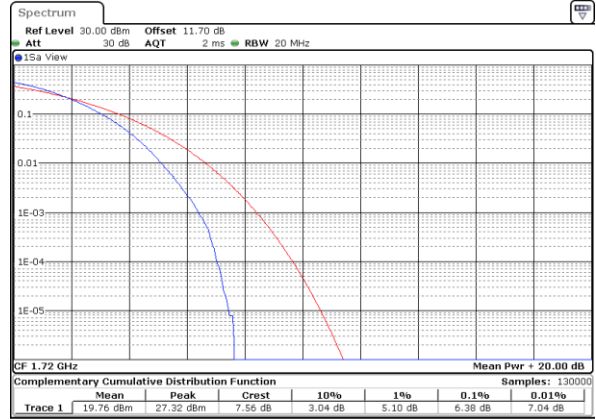
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



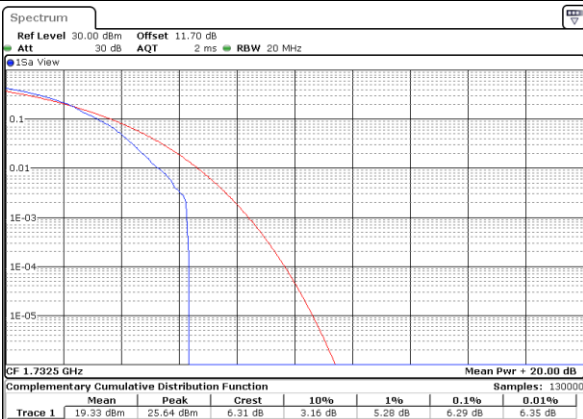
Date: 11.FEB.2020 01:36:33

Lowest Channel / Full RB



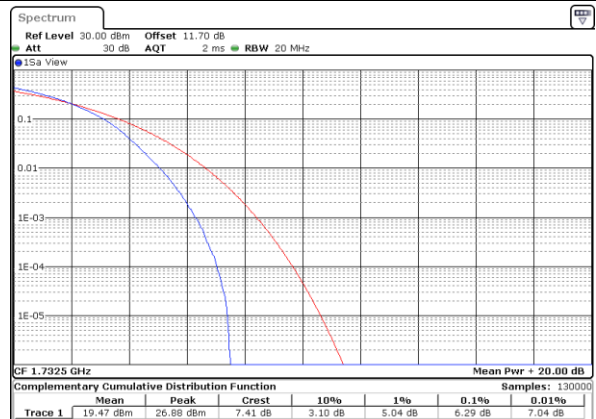
Date: 11.FEB.2020 01:38:34

Middle Channel / 1RB



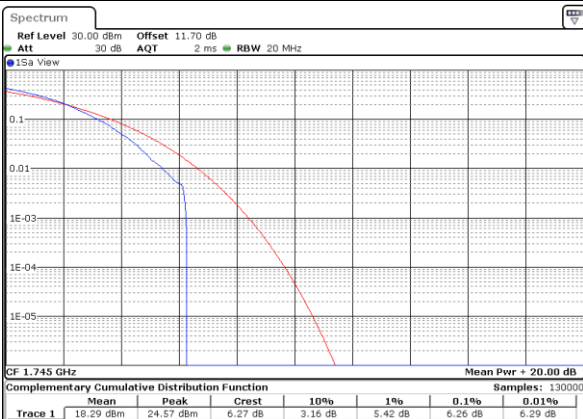
Date: 11.FEB.2020 01:38:48

Middle Channel / Full RB



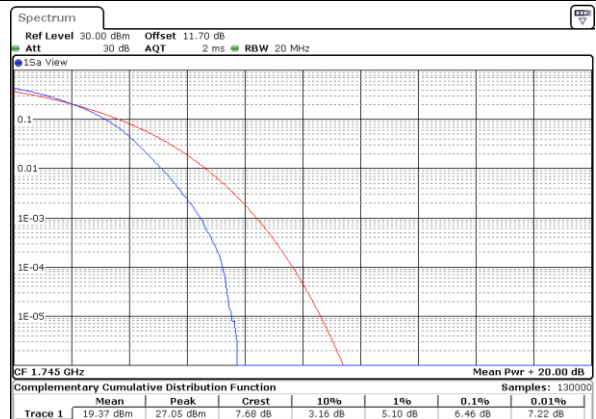
Date: 11.FEB.2020 01:40:46

Highest Channel / 1RB



Date: 11.FEB.2020 01:41:34

Highest Channel / Full RB



Date: 11.FEB.2020 01:42:01





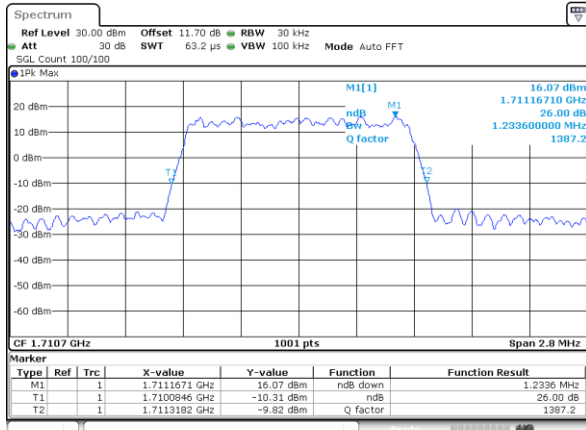
**26dB Bandwidth**

Mode	LTE Band 4 : 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	1.23	1.23	3.00	2.97	4.93	4.92	9.71	9.69	14.36	14.24	18.66	19.10
Middle CH	1.23	1.23	3.05	3.03	4.96	4.90	9.83	9.81	14.51	14.57	19.10	18.94
Highest CH	1.23	1.23	3.02	3.00	4.93	4.97	9.83	9.83	14.72	14.36	18.94	18.86
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.21	-	3.04	-	4.95	-	9.89	-	14.21	-	19.22	-
Middle CH	1.22	-	3.02	-	4.86	-	9.93	-	14.18	-	18.78	-
Highest CH	1.23	-	3.02	-	4.89	-	9.73	-	14.51	-	19.14	-



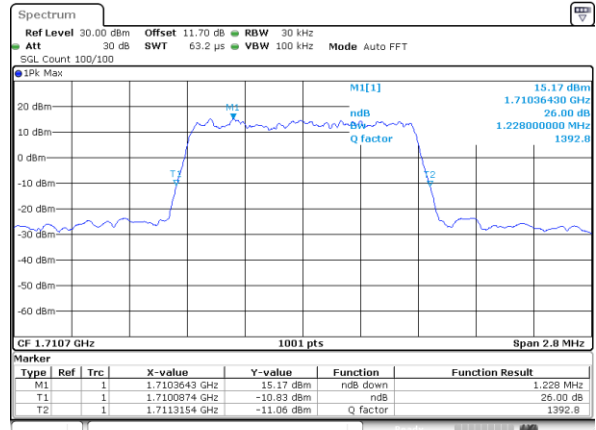
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



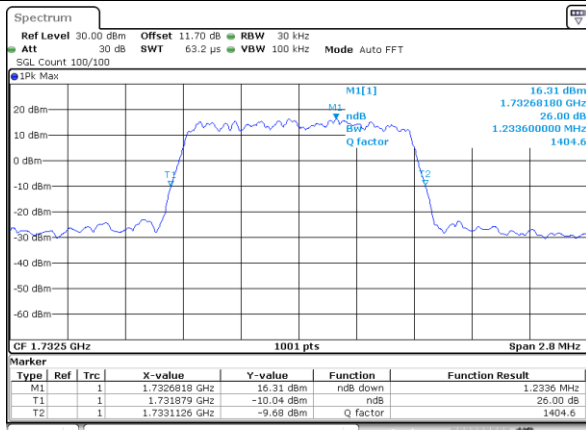
Date: 10.FEB.2020 20:13:47

Lowest Channel / 1.4MHz / 16QAM



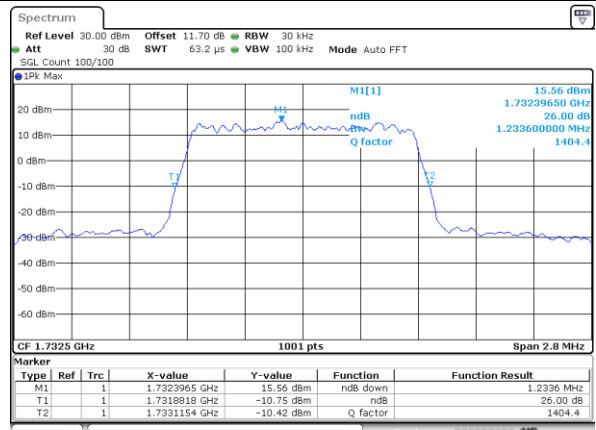
Date: 10.FEB.2020 20:14:00

Middle Channel / 1.4MHz / QPSK



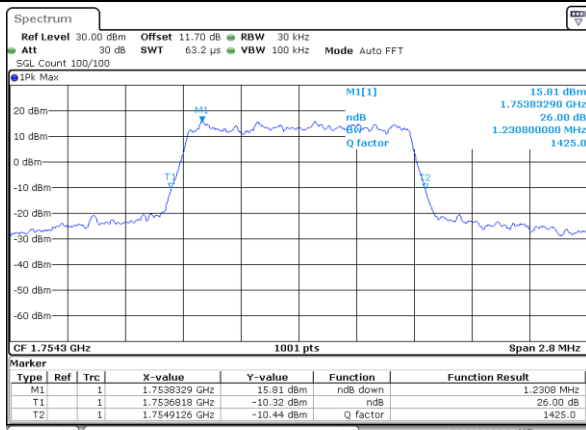
Date: 10.FEB.2020 20:20:48

Middle Channel / 1.4MHz / 16QAM



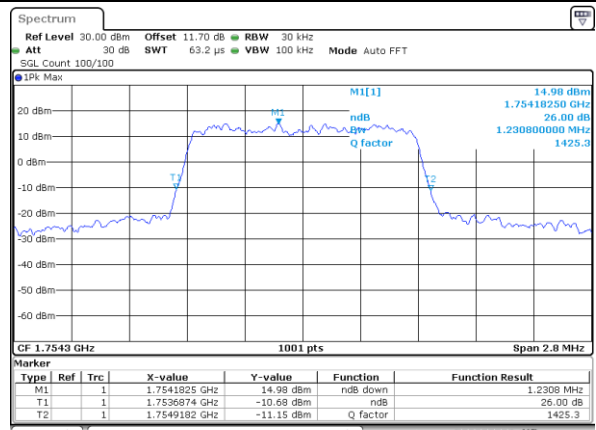
Date: 10.FEB.2020 20:21:02

Highest Channel / 1.4MHz / QPSK



Date: 10.FEB.2020 20:23:30

Highest Channel / 1.4MHz / 16QAM

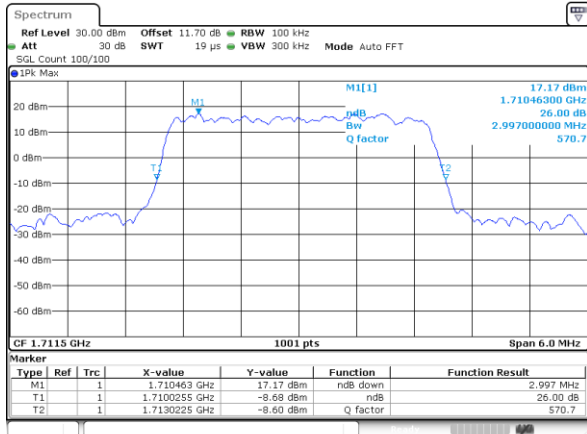


Date: 10.FEB.2020 20:23:44



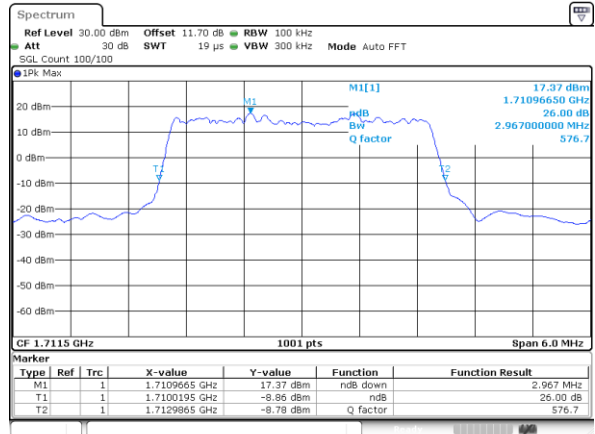
LTE Band 4

Lowest Channel / 3MHz / QPSK



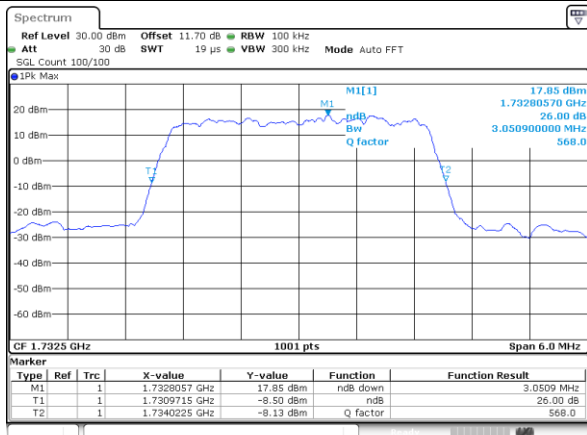
Date: 10.FEB.2020 20:38:50

Lowest Channel / 3MHz / 16QAM



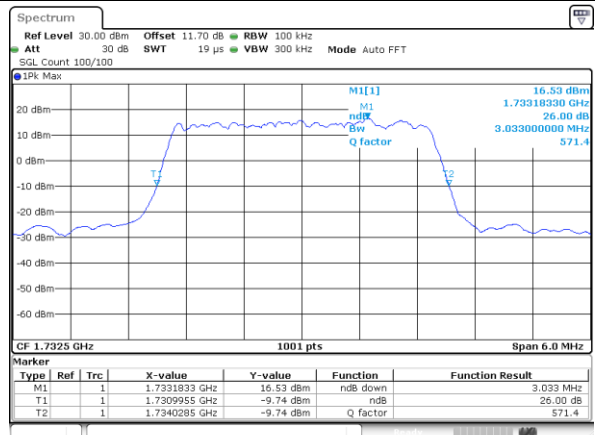
Date: 10.FEB.2020 20:39:11

Middle Channel / 3MHz / QPSK



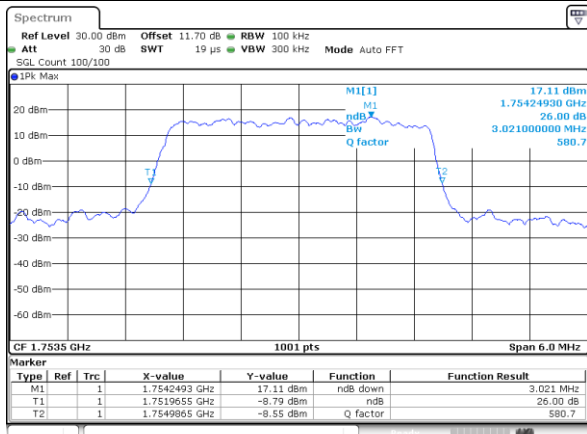
Date: 10.FEB.2020 20:45:45

Middle Channel / 3MHz / 16QAM



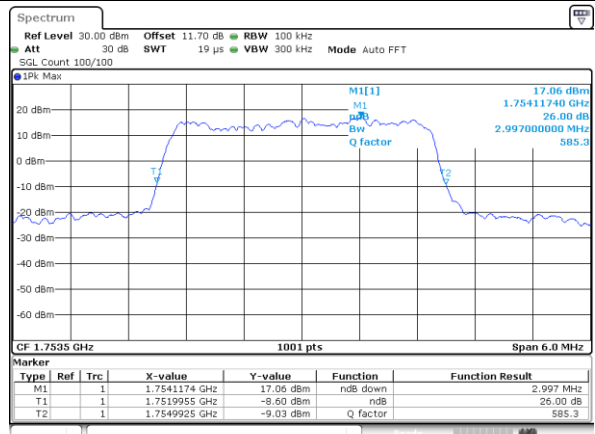
Date: 10.FEB.2020 20:45:58

Highest Channel / 3MHz / QPSK



Date: 10.FEB.2020 20:48:27

Highest Channel / 3MHz / 16QAM

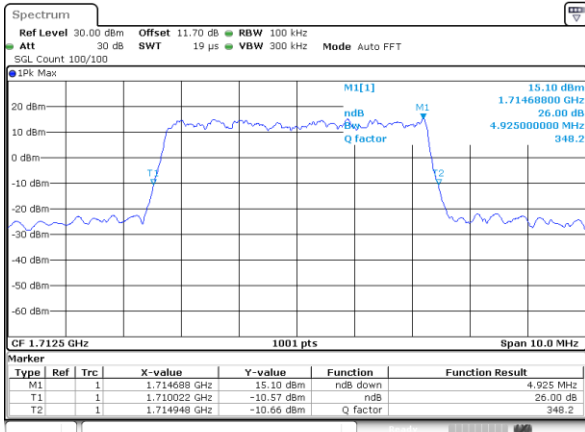


Date: 10.FEB.2020 20:48:41



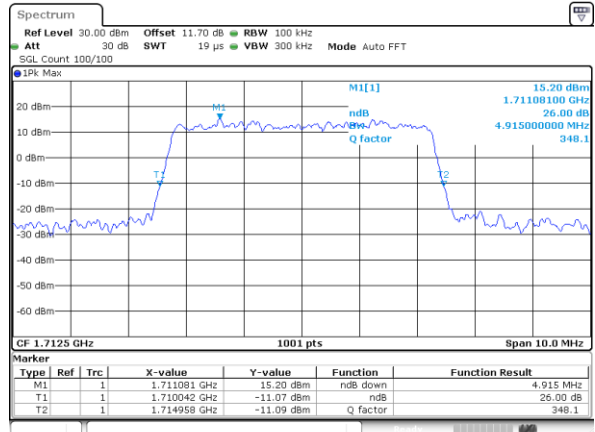
LTE Band 4

Lowest Channel / 5MHz / QPSK



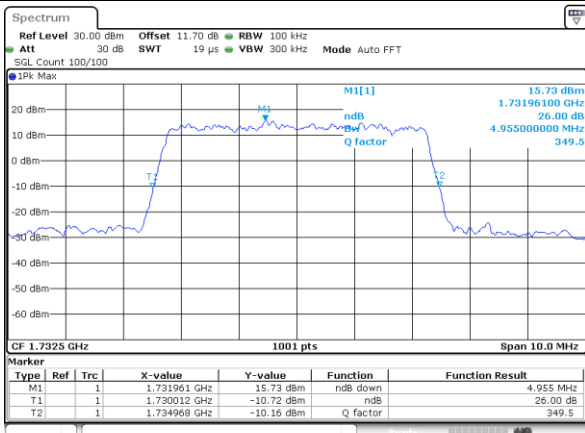
Date: 10.FEB.2020 21:11:33

Lowest Channel / 5MHz / 16QAM



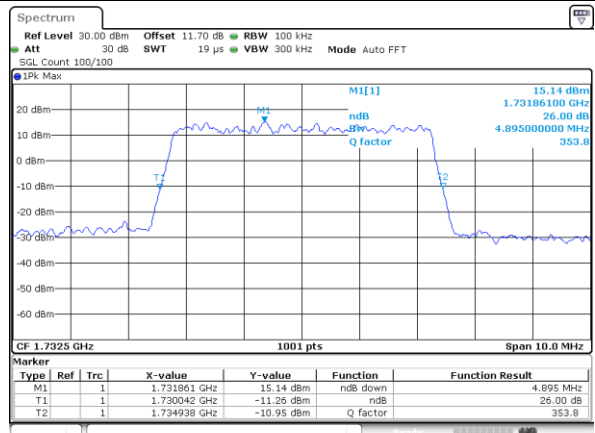
Date: 10.FEB.2020 21:11:47

Middle Channel / 5MHz / QPSK



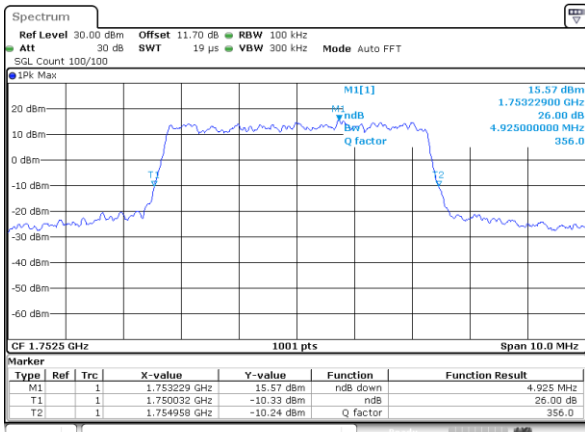
Date: 10.FEB.2020 21:18:20

Middle Channel / 5MHz / 16QAM



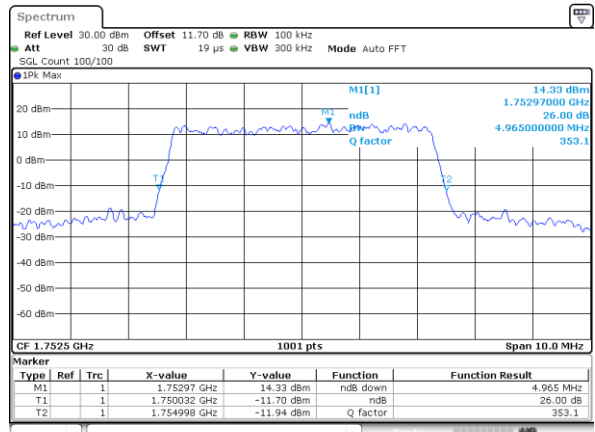
Date: 10.FEB.2020 21:18:33

Highest Channel / 5MHz / QPSK



Date: 10.FEB.2020 21:21:02

Highest Channel / 5MHz / 16QAM

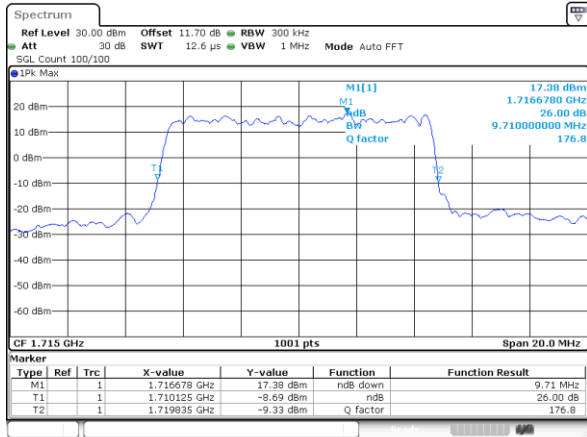


Date: 10.FEB.2020 21:21:16



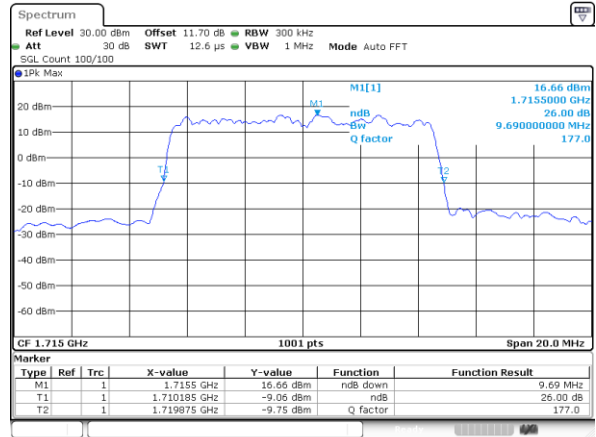
LTE Band 4

Lowest Channel / 10MHz / QPSK



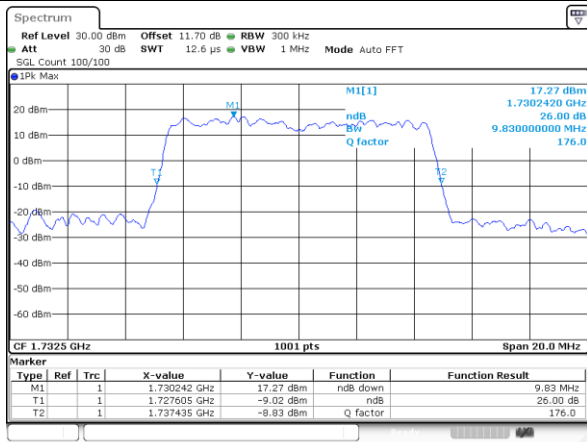
Date: 10.FEB.2020 21:27:51

Lowest Channel / 10MHz / 16QAM



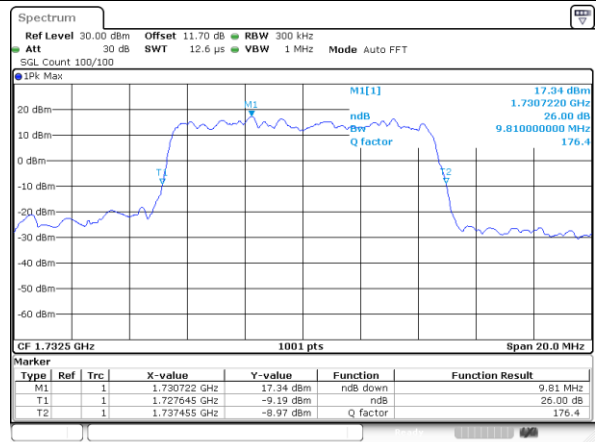
Date: 10.FEB.2020 21:28:05

Middle Channel / 10MHz / QPSK



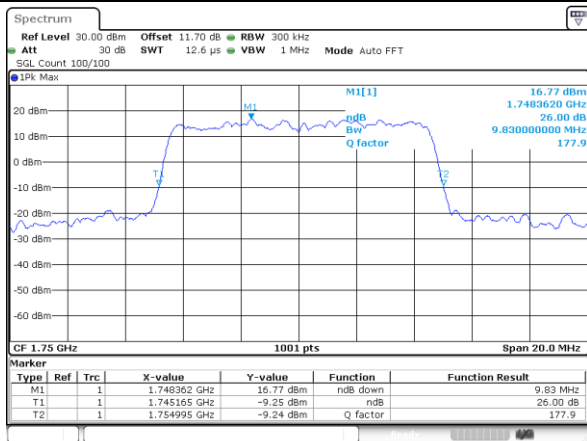
Date: 10.FEB.2020 21:34:38

Middle Channel / 10MHz / 16QAM



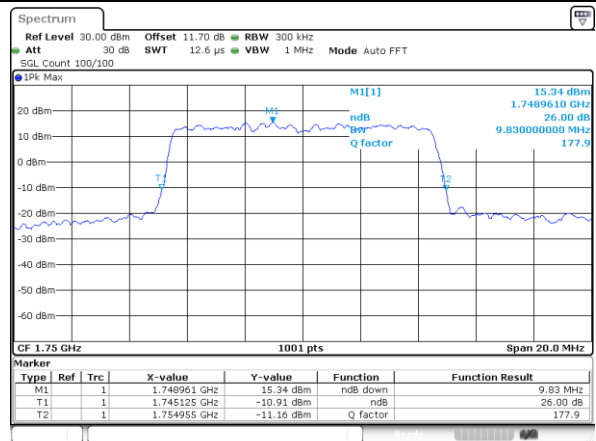
Date: 10.FEB.2020 21:34:52

Highest Channel / 10MHz / QPSK



Date: 10.FEB.2020 21:37:21

Highest Channel / 10MHz / 16QAM

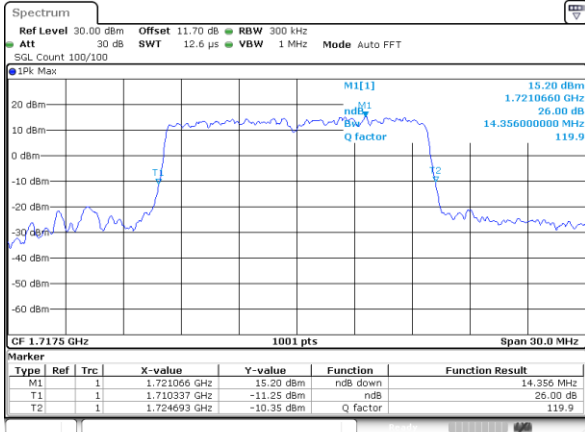


Date: 10.FEB.2020 21:37:35



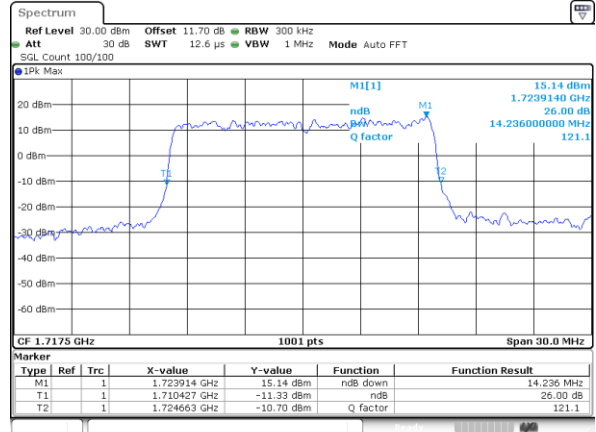
LTE Band 4

Lowest Channel / 15MHz / QPSK



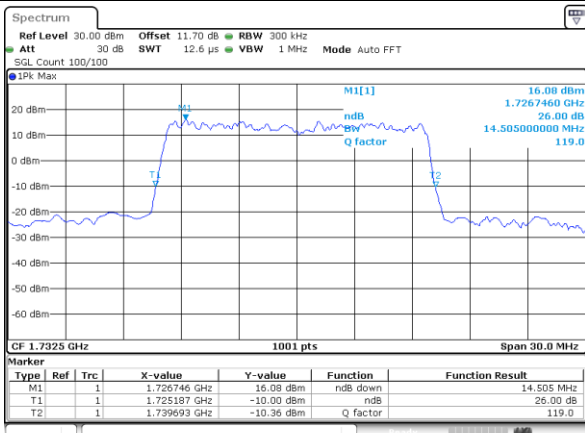
Date: 10.FEB.2020 21:52:19

Lowest Channel / 15MHz / 16QAM



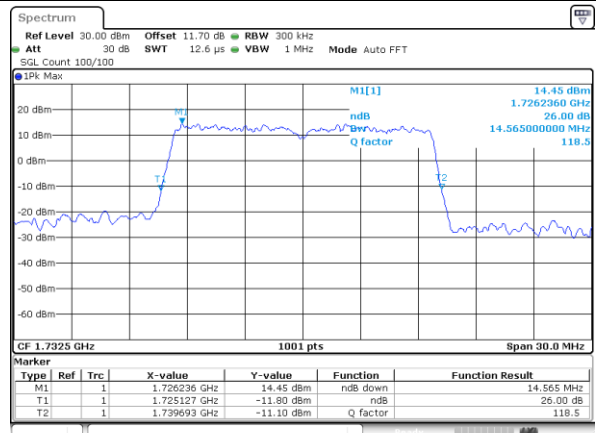
Date: 10.FEB.2020 21:52:32

Middle Channel / 15MHz / QPSK



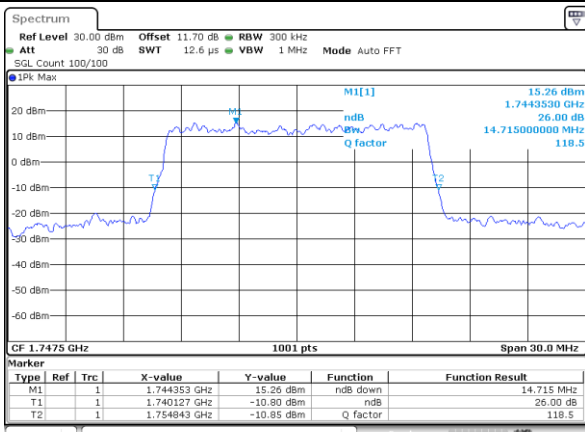
Date: 10.FEB.2020 21:59:06

Middle Channel / 15MHz / 16QAM



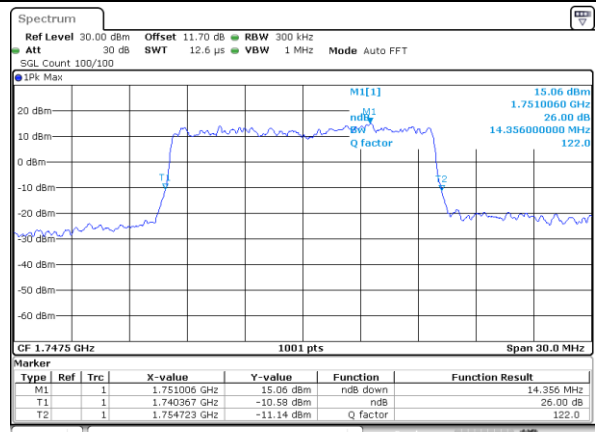
Date: 10.FEB.2020 21:59:19

Highest Channel / 15MHz / QPSK



Date: 10.FEB.2020 22:01:49

Highest Channel / 15MHz / 16QAM

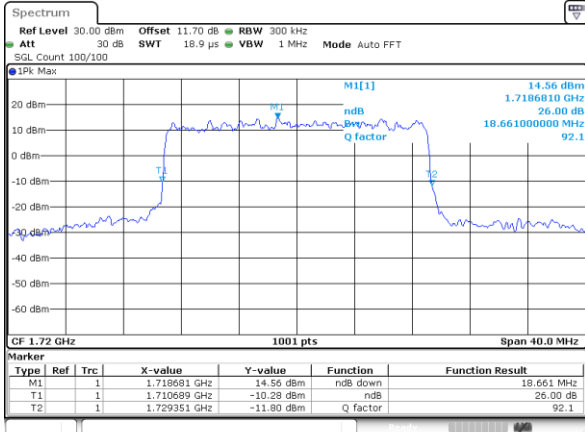


Date: 10.FEB.2020 22:02:03



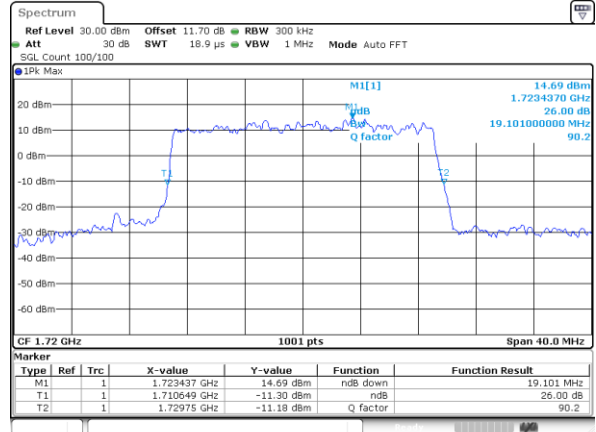
LTE Band 4

Lowest Channel / 20MHz / QPSK



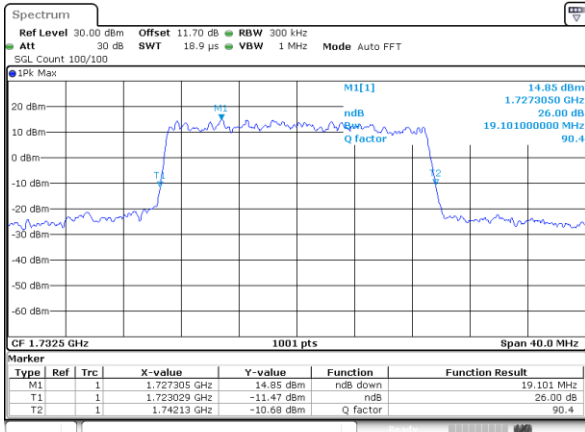
Date: 10.FEB.2020 22:16:46

Lowest Channel / 20MHz / 16QAM



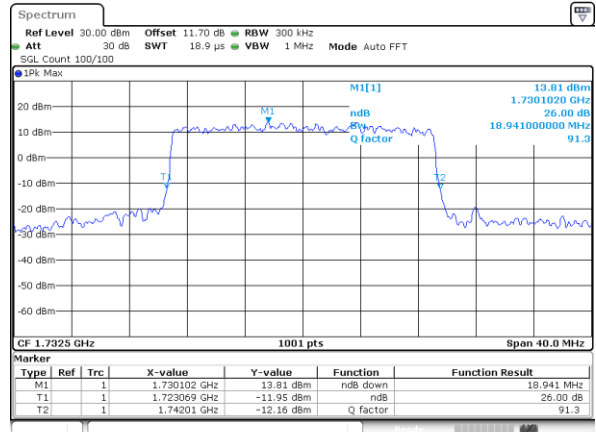
Date: 10.FEB.2020 22:17:00

Middle Channel / 20MHz / QPSK



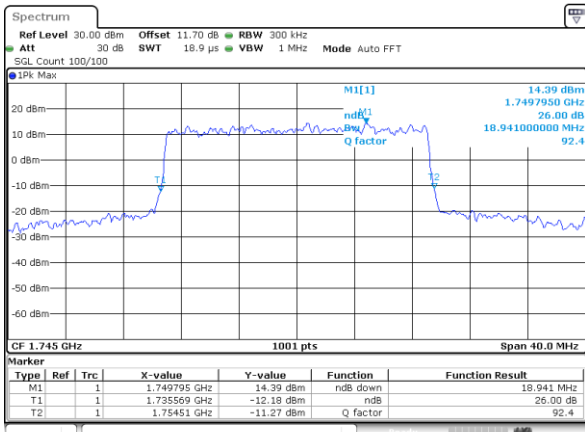
Date: 10.FEB.2020 22:23:33

Middle Channel / 20MHz / 16QAM



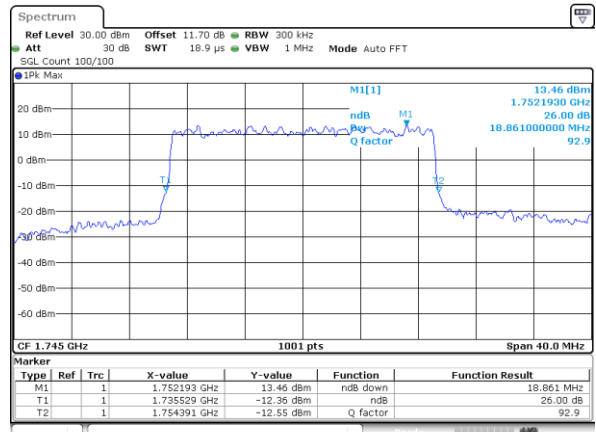
Date: 10.FEB.2020 22:23:47

Highest Channel / 20MHz / QPSK



Date: 10.FEB.2020 22:26:16

Highest Channel / 20MHz / 16QAM

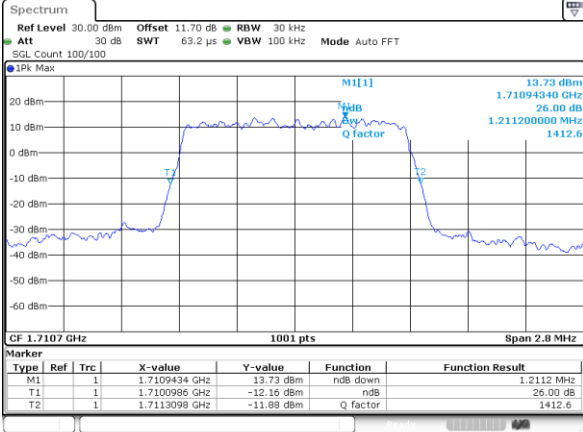


Date: 10.FEB.2020 22:26:30



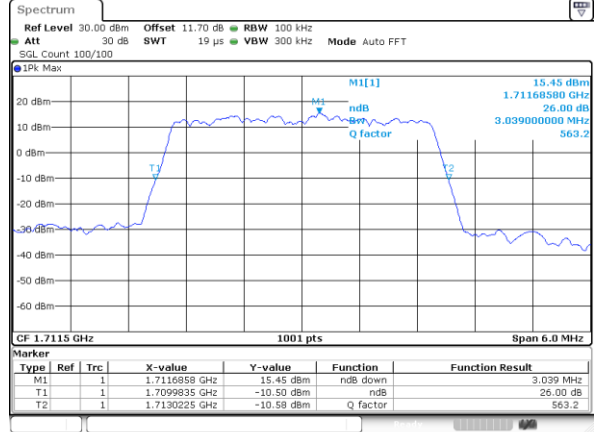
LTE Band 4

Lowest Channel / 1.4MHz / 64QAM



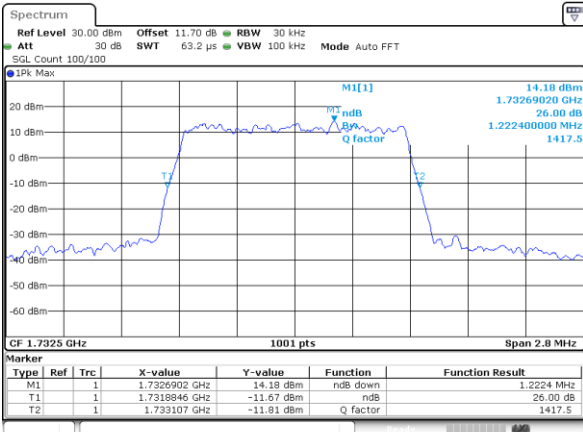
Date: 10.FEB.2020 20:30:20

Lowest Channel / 3MHz / 64QAM



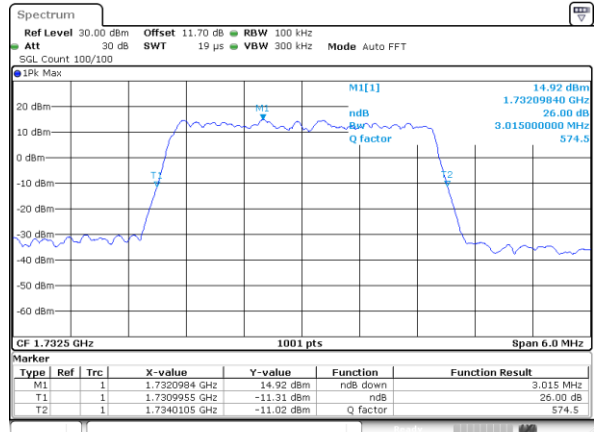
Date: 10.FEB.2020 20:55:02

Middle Channel / 1.4MHz / 64QAM



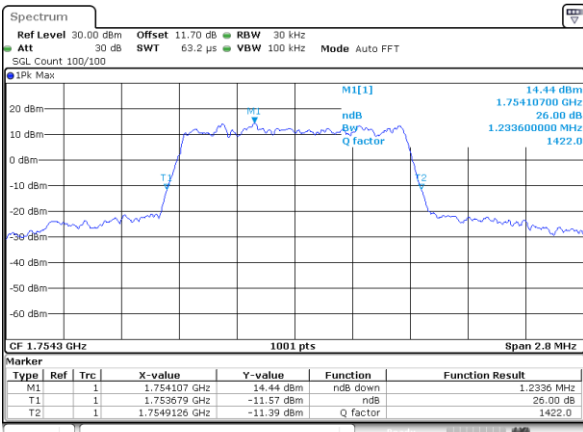
Date: 10.FEB.2020 20:33:51

Middle Channel / 3MHz / 64QAM



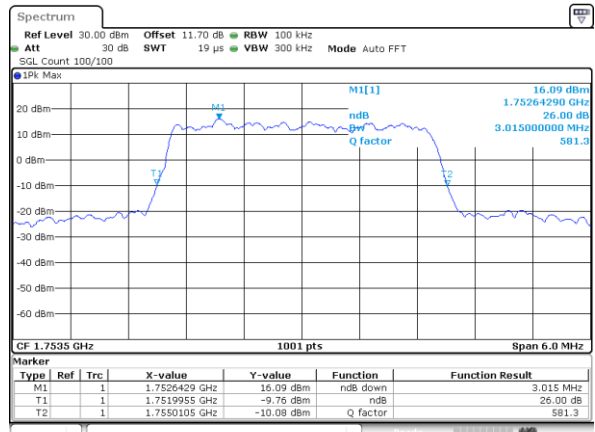
Date: 10.FEB.2020 20:58:25

Highest Channel / 1.4MHz / 64QAM



Date: 10.FEB.2020 20:35:12

Highest Channel / 3MHz / 64QAM



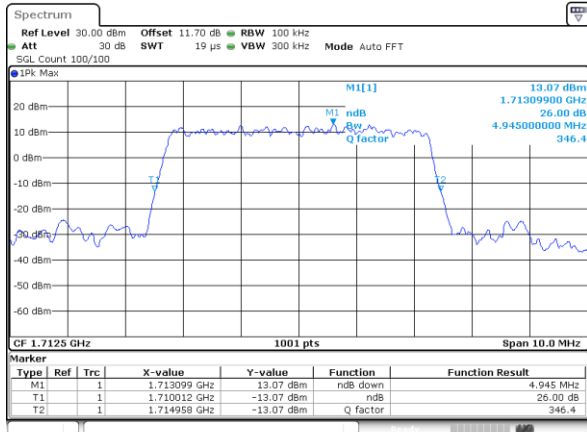
Date: 10.FEB.2020 20:59:46



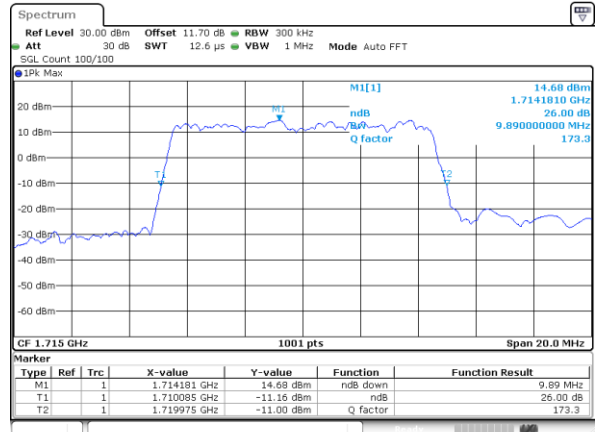


LTE Band 4

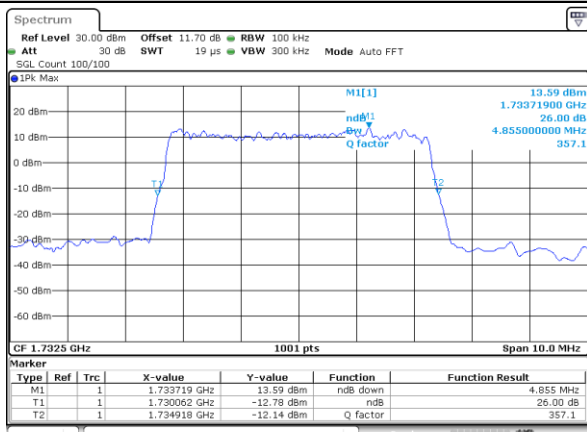
Lowest Channel / 5MHz / 64QAM



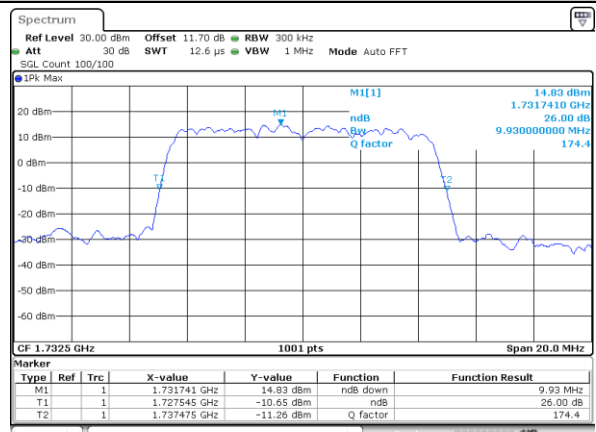
Lowest Channel / 10MHz / 64QAM



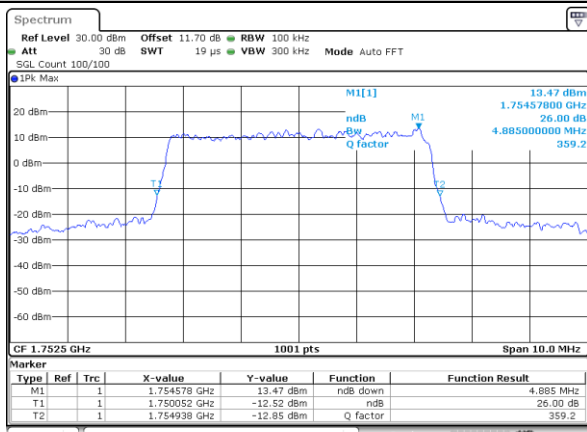
Middle Channel / 5MHz / 64QAM



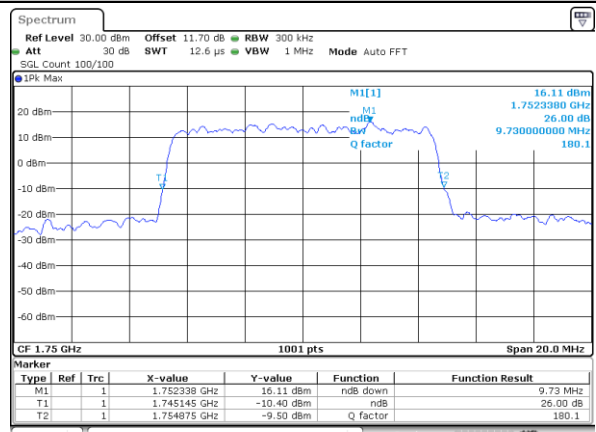
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



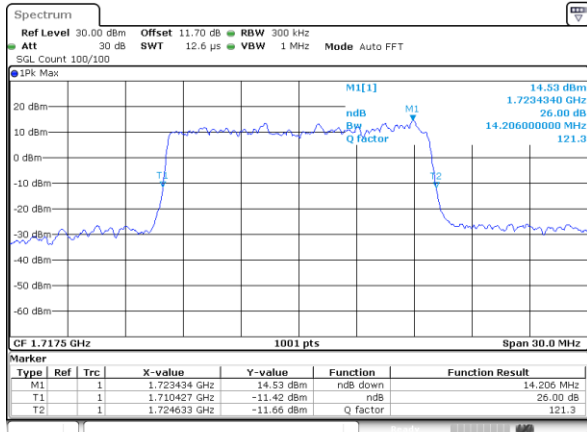
Highest Channel / 10MHz / 64QAM





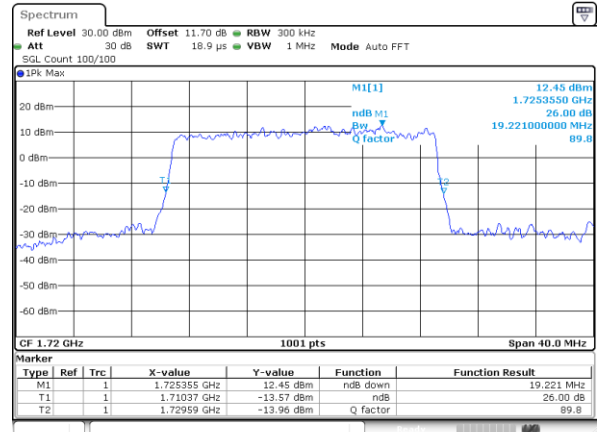
LTE Band 4

Lowest Channel / 15MHz / 64QAM



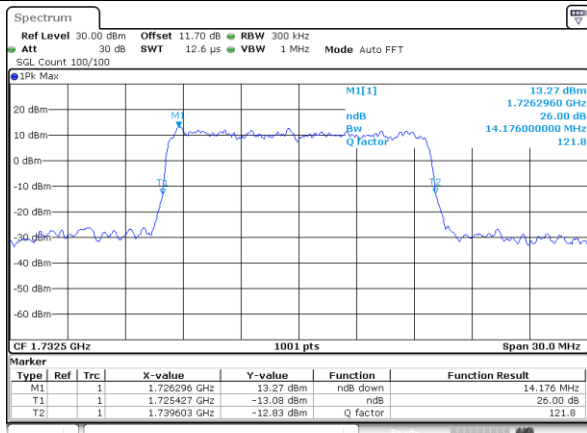
Date: 10.FEB.2020 22:08:23

Lowest Channel / 20MHz / 64QAM



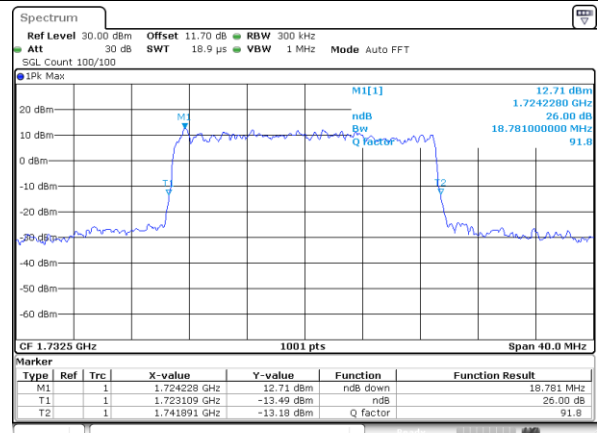
Date: 10.FEB.2020 22:13:15

Middle Channel / 15MHz / 64QAM



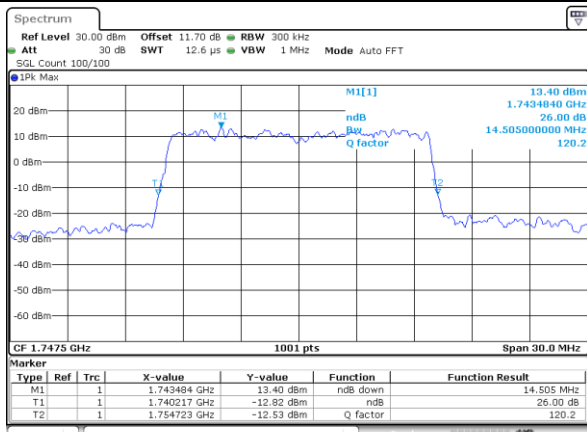
Date: 10.FEB.2020 22:11:46

Middle Channel / 20MHz / 64QAM



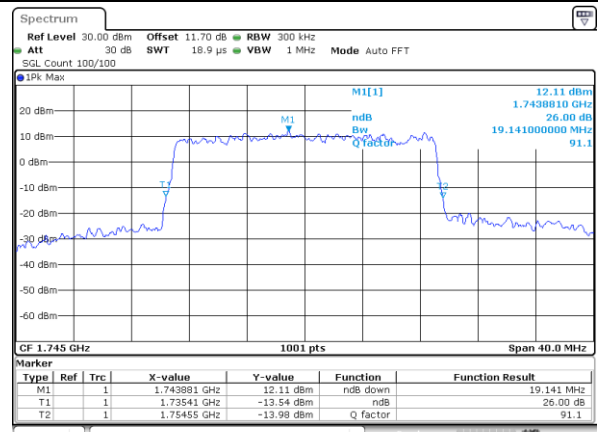
Date: 10.FEB.2020 22:13:14

Highest Channel / 15MHz / 64QAM



Date: 10.FEB.2020 22:13:07

Highest Channel / 20MHz / 64QAM



Date: 10.FEB.2020 22:13:15



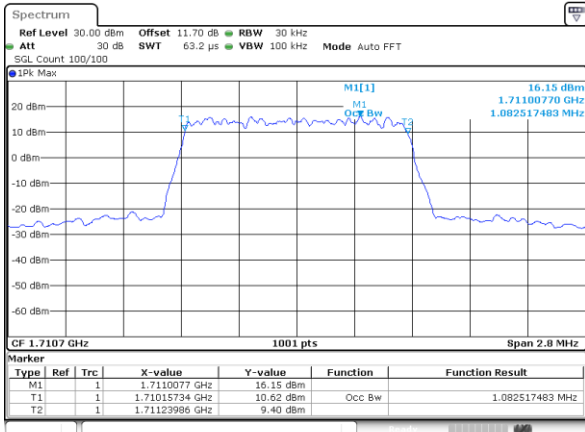
**Occupied Bandwidth**

Mode	LTE Band 4 : 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	1.08	1.10	2.71	2.72	4.48	4.49	9.05	9.01	13.40	13.52	17.90	17.86
Middle CH	1.09	1.09	2.72	2.72	4.49	4.49	8.99	9.03	13.46	13.52	17.90	17.78
Highest CH	1.09	1.09	2.72	2.71	4.48	4.52	8.99	8.99	13.46	13.52	17.94	17.90
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.73	-	4.51	-	9.01	-	13.49	-	17.90	-
Middle CH	1.09	-	2.72	-	4.51	-	9.05	-	13.40	-	17.90	-
Highest CH	1.09	-	2.73	-	4.50	-	8.99	-	13.43	-	17.94	-



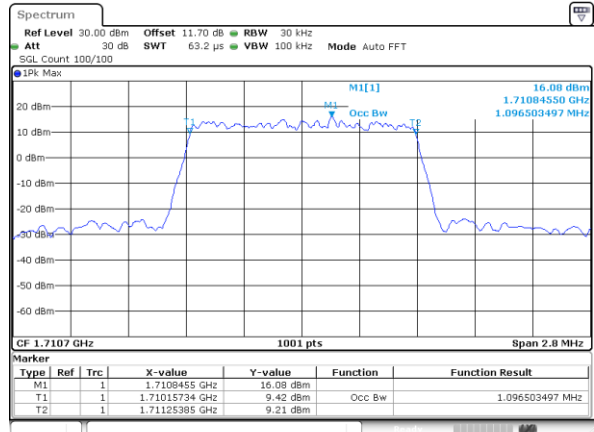
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



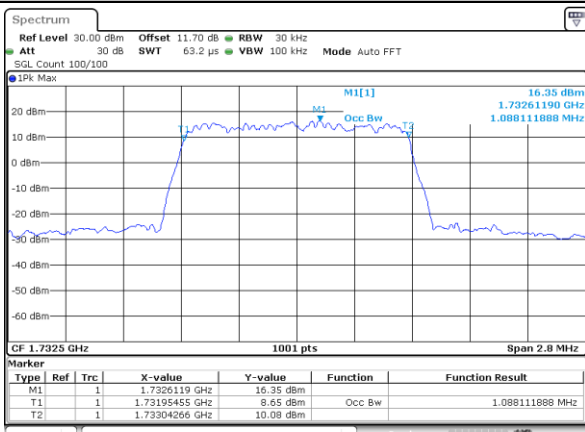
Date: 10.FEB.2020 20:13:19

Lowest Channel / 1.4MHz / 16QAM



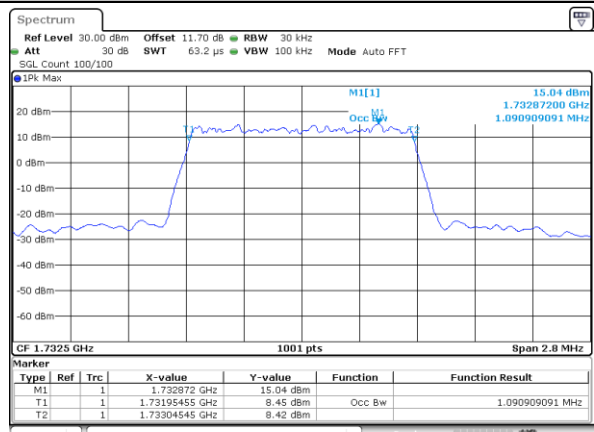
Date: 10.FEB.2020 20:13:33

Middle Channel / 1.4MHz / QPSK



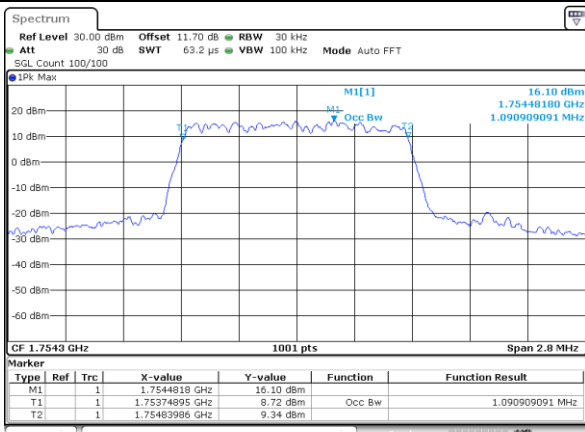
Date: 10.FEB.2020 20:20:22

Middle Channel / 1.4MHz / 16QAM



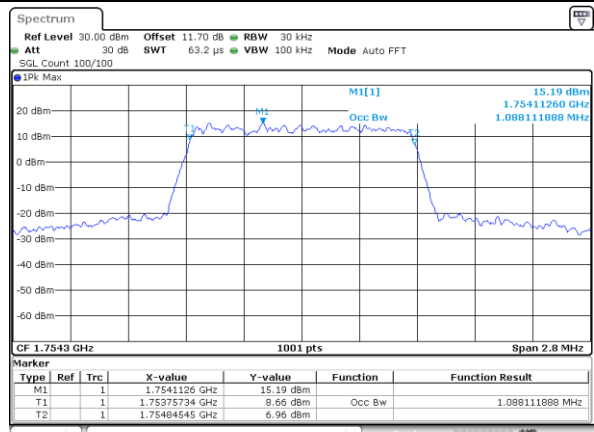
Date: 10.FEB.2020 20:20:35

Highest Channel / 1.4MHz / QPSK



Date: 10.FEB.2020 20:23:03

Highest Channel / 1.4MHz / 16QAM



Date: 10.FEB.2020 20:23:17