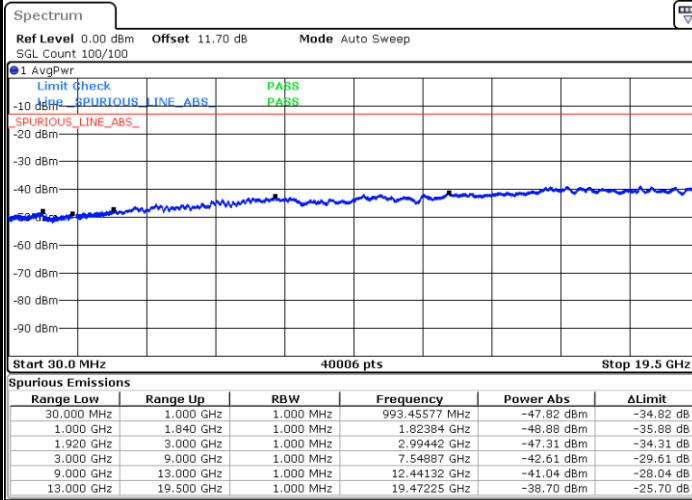




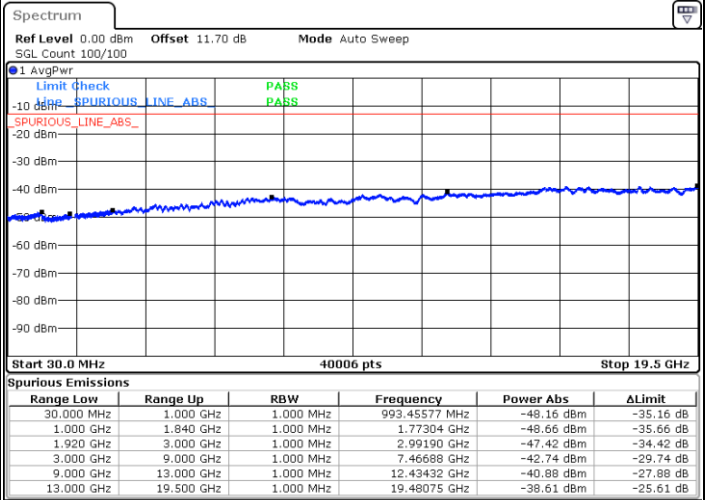
LTE Band 2 / 10MHz

Middle Channel / QPSK



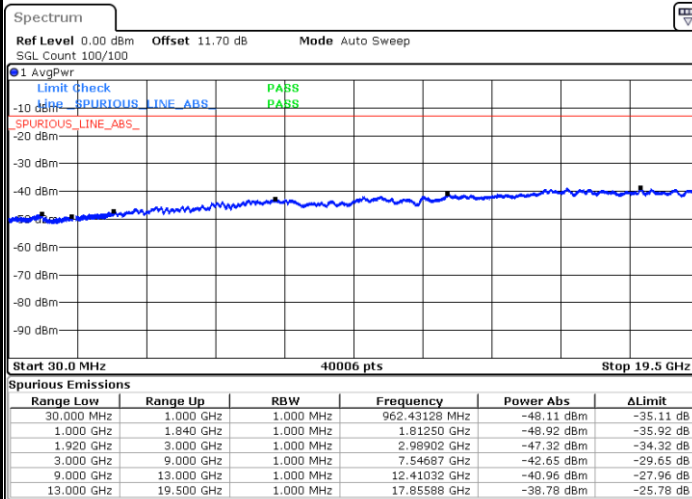
Date: 8 FEB 2020 04:52:49

Middle Channel / 16QAM



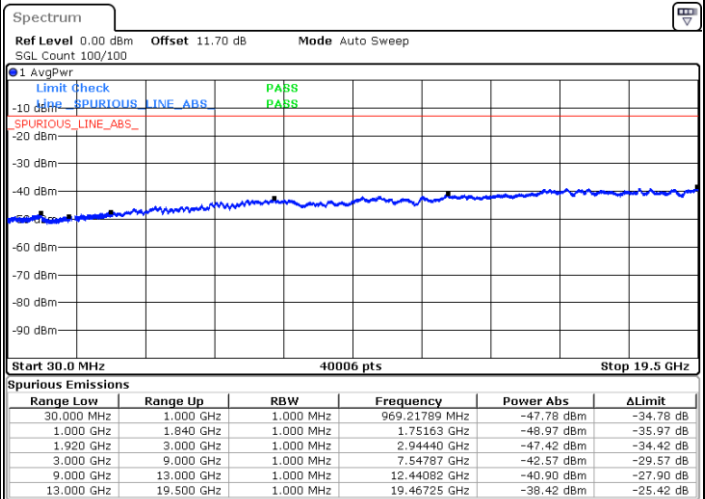
Date: 8 FEB 2020 04:53:29

Highest Channel / QPSK



Date: 8 FEB 2020 04:57:40

Highest Channel / 16QAM

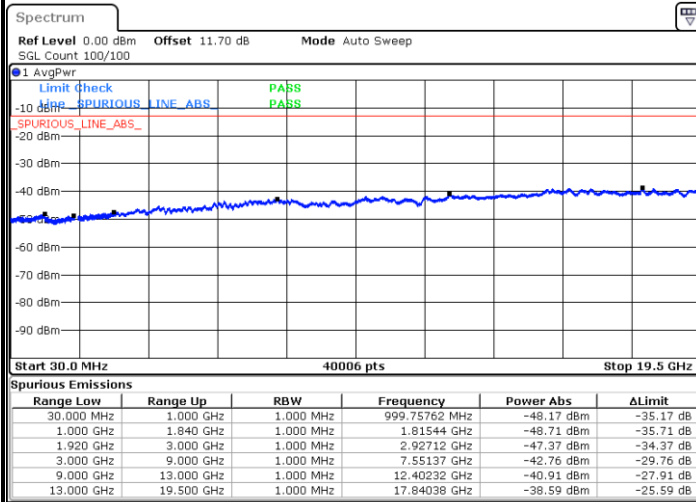


Date: 8 FEB 2020 04:58:21



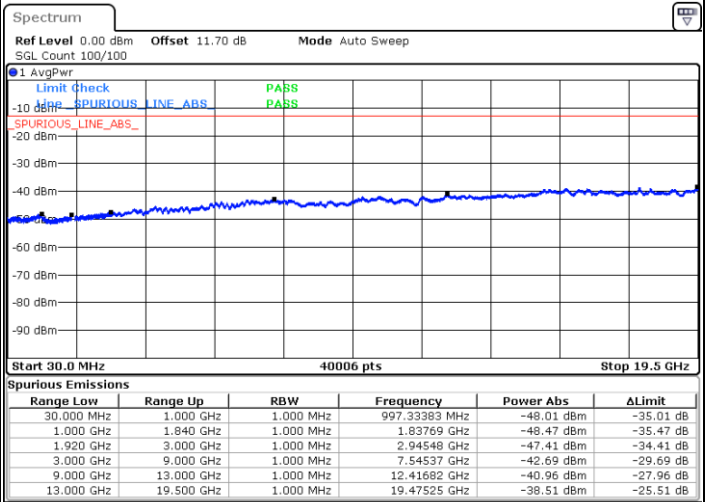
LTE Band 2 / 15MHz

Lowest Channel / QPSK



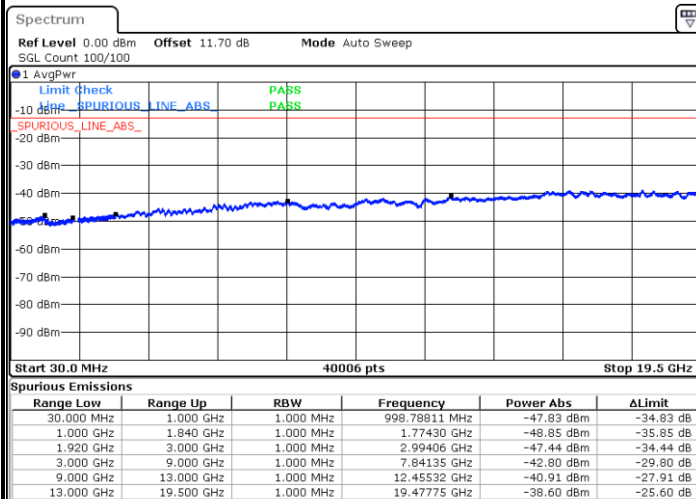
Date: 8 FEB 2020 05:02:33

Lowest Channel / 16QAM



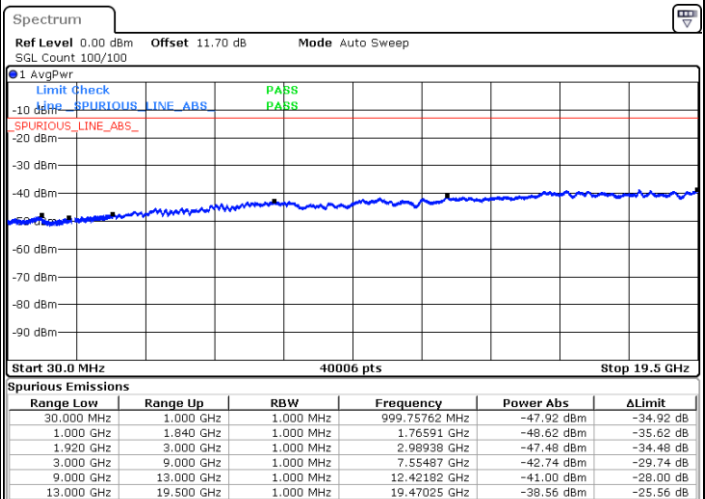
Date: 8 FEB 2020 05:03:14

Middle Channel / QPSK



Date: 8 FEB 2020 05:04:41

Middle Channel / 16QAM

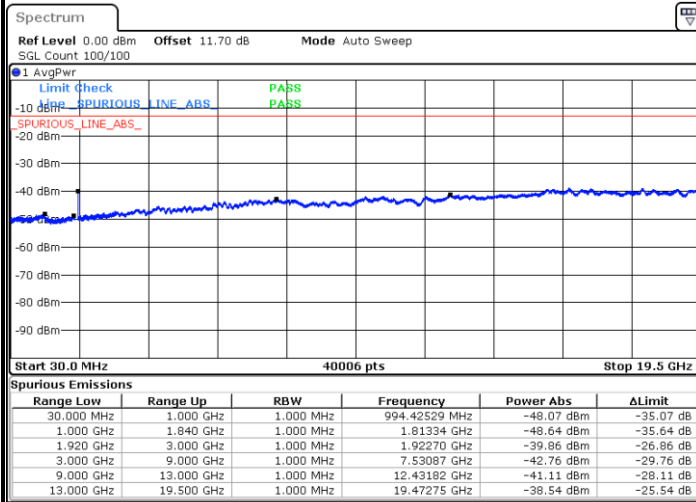


Date: 8 FEB 2020 05:05:21



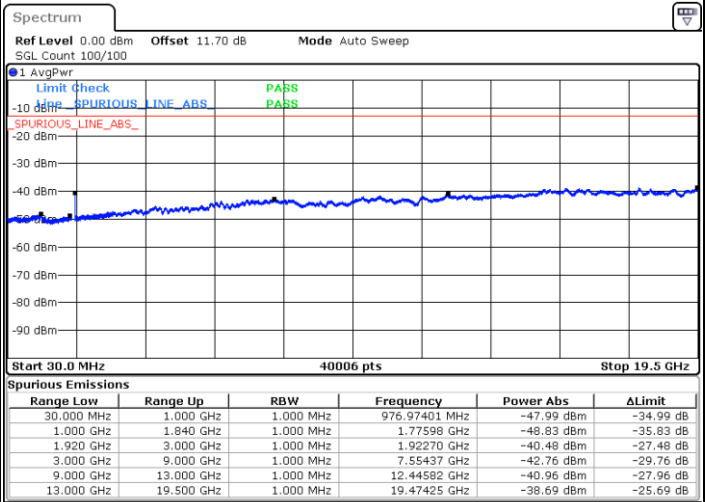
LTE Band 2 / 15MHz

Highest Channel / QPSK



Date: 8 FEB 2020 05:18:01

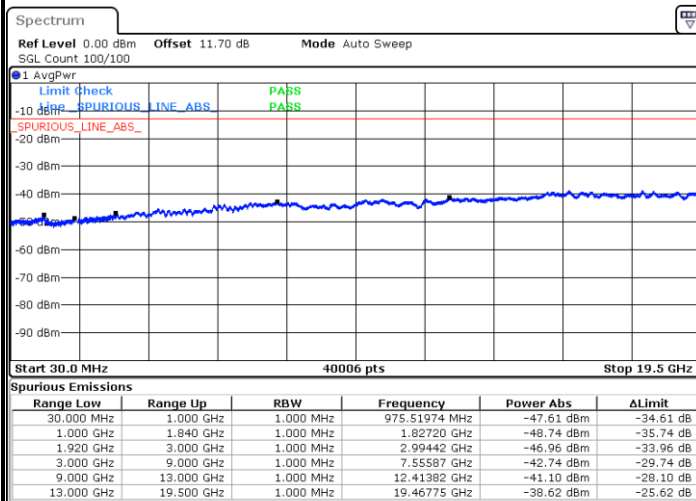
Highest Channel / 16QAM



Date: 8 FEB 2020 05:18:41

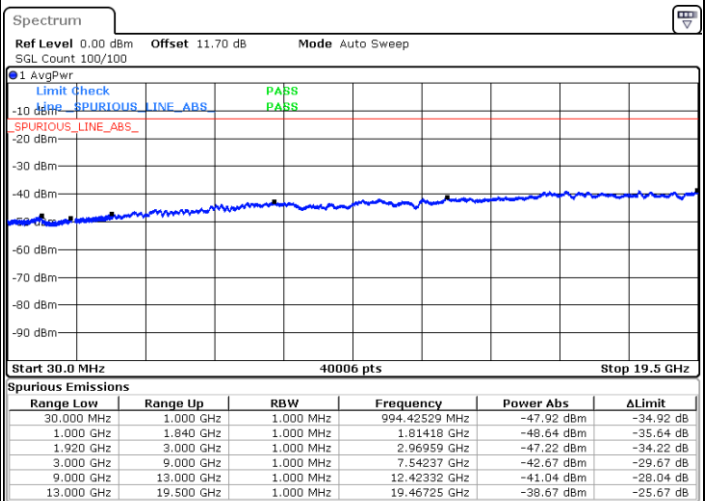
LTE Band 2 / 20MHz

Lowest Channel / QPSK



Date: 8 FEB 2020 05:22:54

Lowest Channel / 16QAM

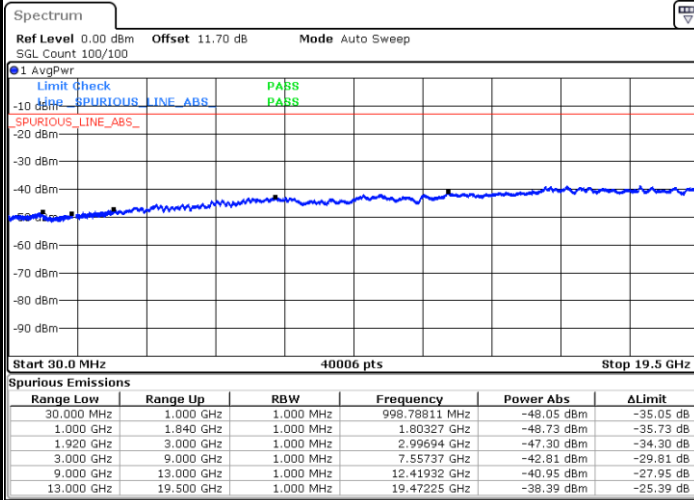


Date: 8 FEB 2020 05:23:34



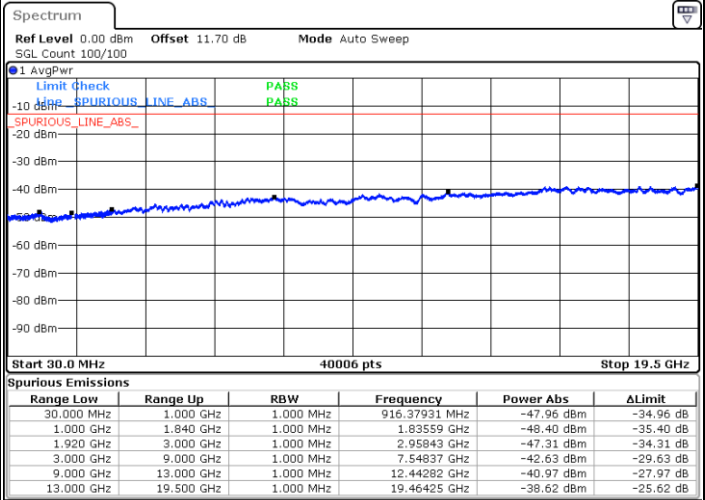
LTE Band 2 / 20MHz

Middle Channel / QPSK



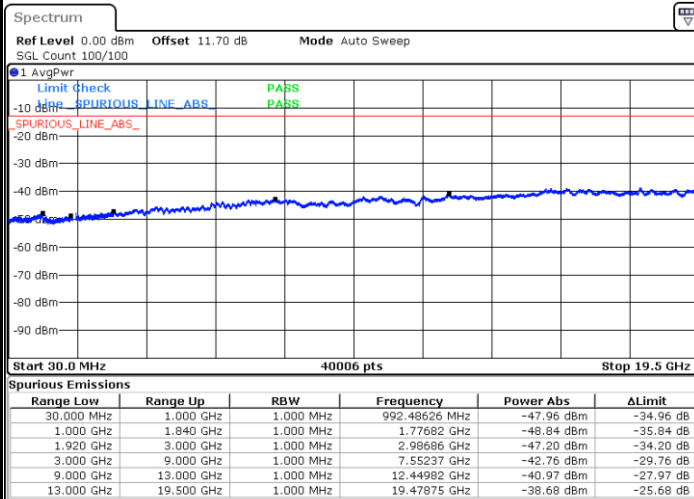
Date: 8 FEB 2020 05:25:01

Middle Channel / 16QAM



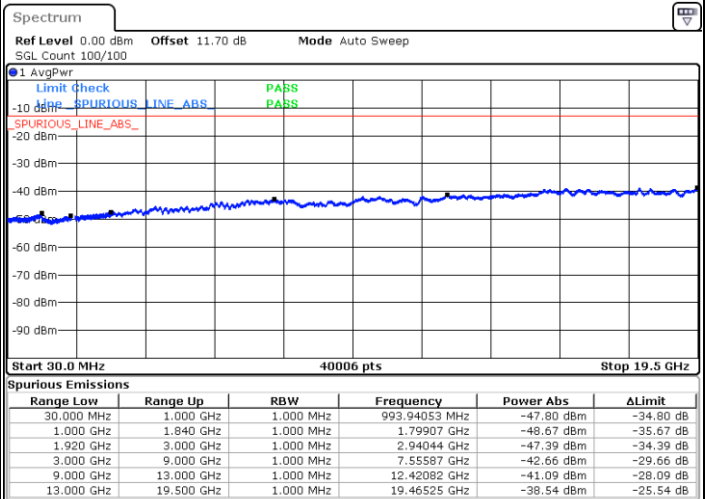
Date: 8 FEB 2020 05:25:41

Highest Channel / QPSK



Date: 8 FEB 2020 05:29:52

Highest Channel / 16QAM

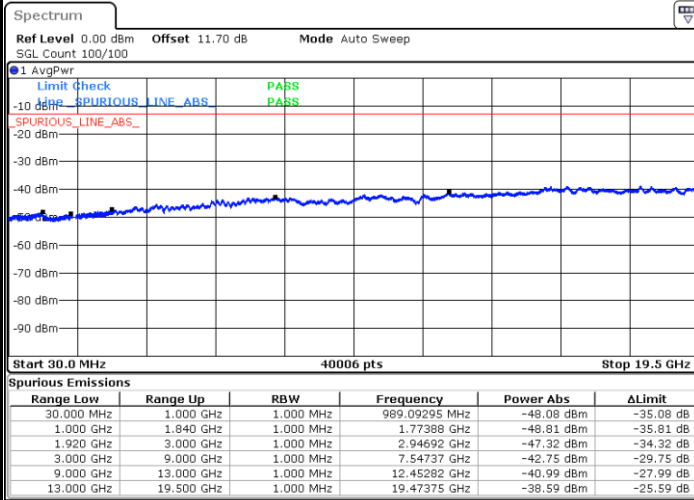


Date: 8 FEB 2020 05:30:33



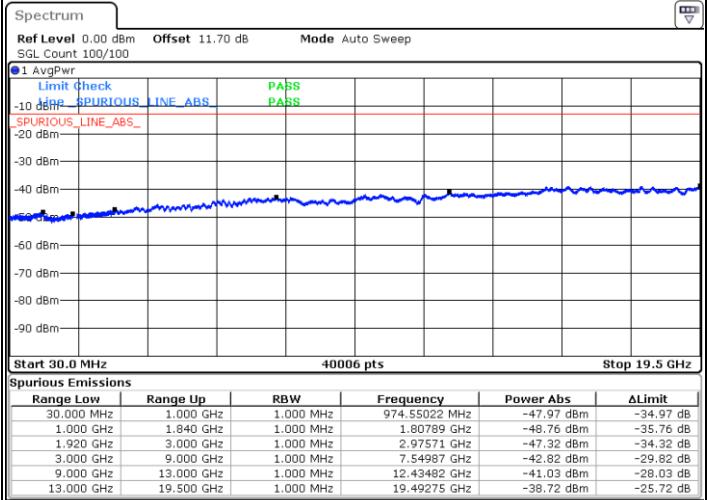
LTE Band 2 / 1.4MHz

Lowest Channel / 64QAM



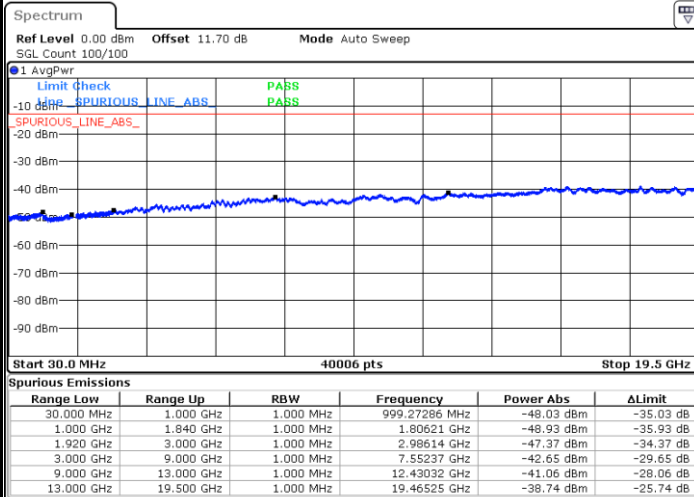
Date: 8.FEB.2020 06:11:19

Middle Channel / 64QAM



Date: 8.FEB.2020 06:12:23

Highest Channel / 64QAM

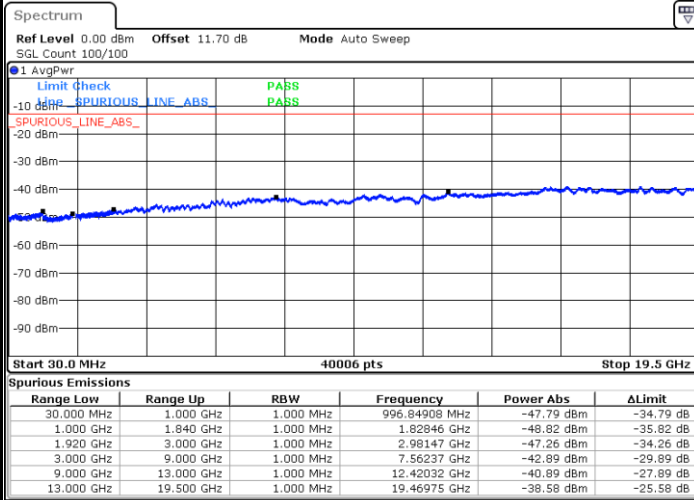


Date: 8.FEB.2020 06:15:35



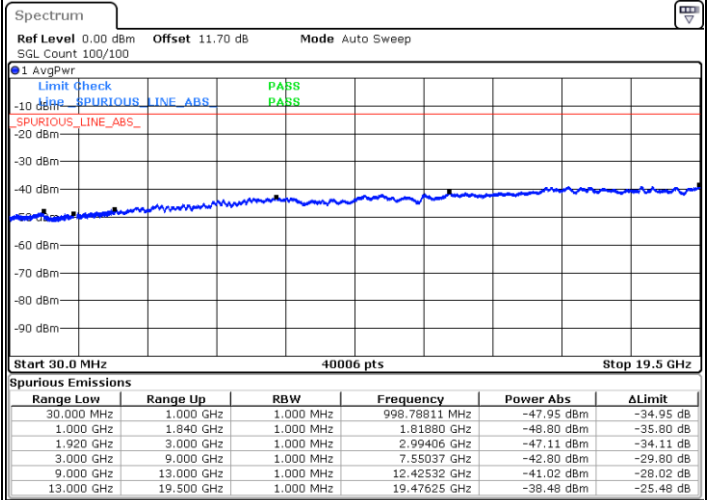
LTE Band 2 / 3MHz

Lowest Channel / 64QAM



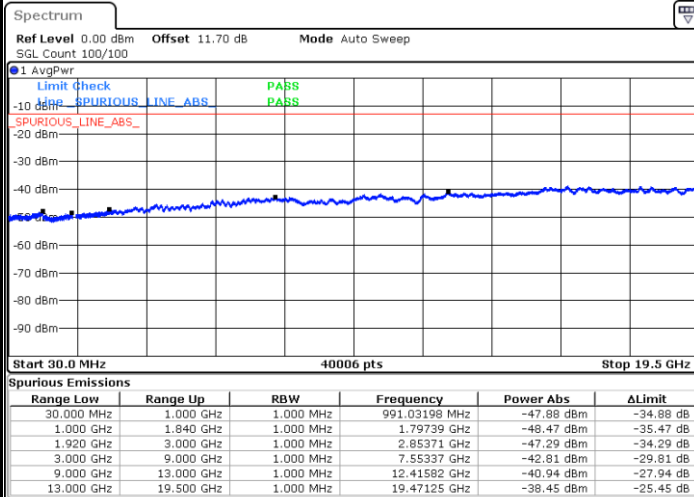
Date: 8 FEB 2020 05:33:00

Middle Channel / 64QAM



Date: 8 FEB 2020 05:34:04

Highest Channel / 64QAM

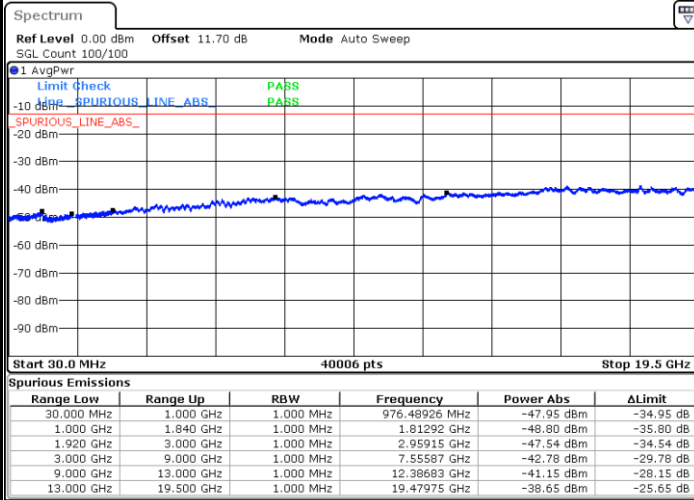


Date: 8 FEB 2020 05:36:30



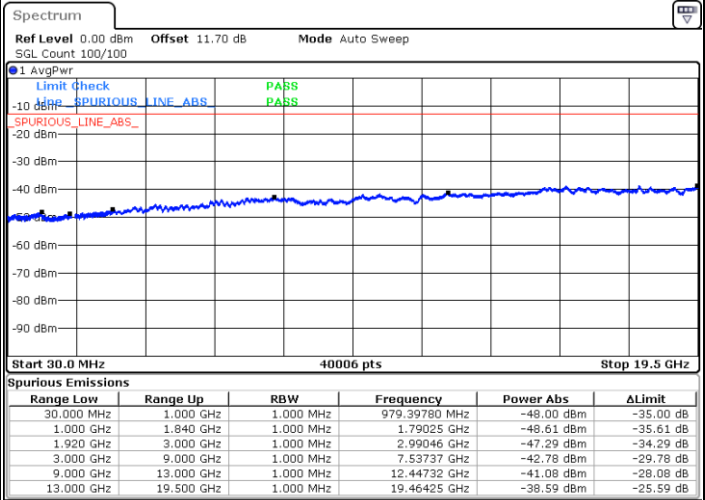
LTE Band 2 / 5MHz

Lowest Channel / 64QAM



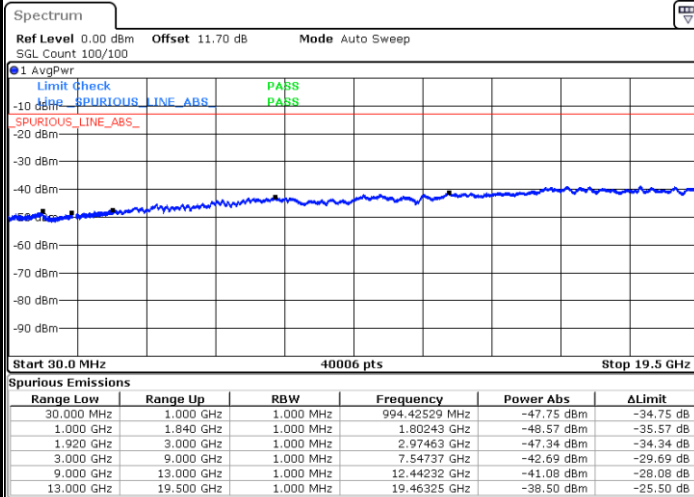
Date: 8 FEB 2020 05:38:56

Middle Channel / 64QAM



Date: 8 FEB 2020 05:40:00

Highest Channel / 64QAM

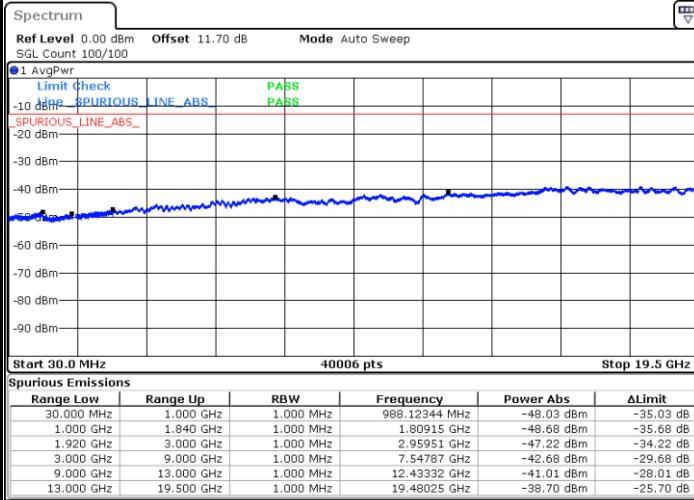


Date: 8 FEB 2020 05:42:26



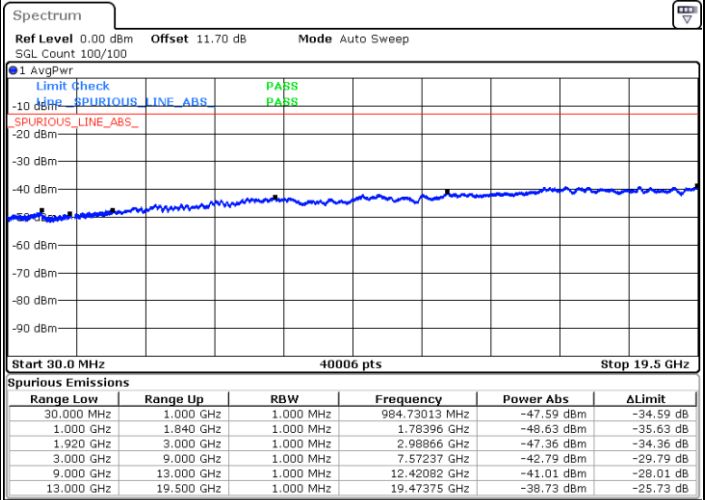
LTE Band 2 / 10MHz

Lowest Channel / 64QAM



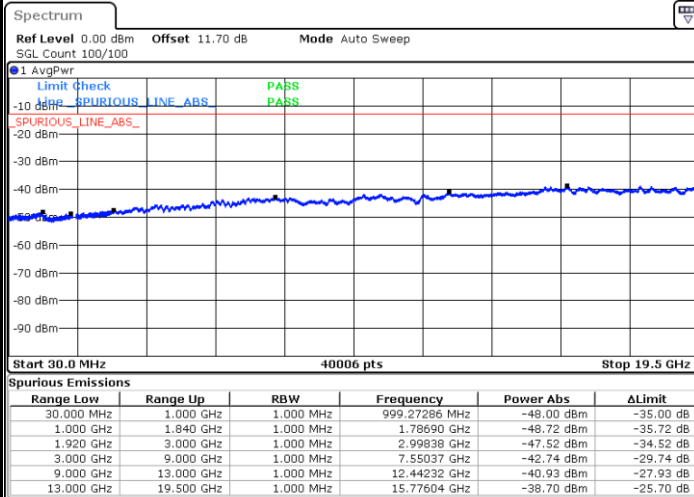
Date: 8 FEB 2020 05:44:52

Middle Channel / 64QAM



Date: 8 FEB 2020 05:45:56

Highest Channel / 64QAM

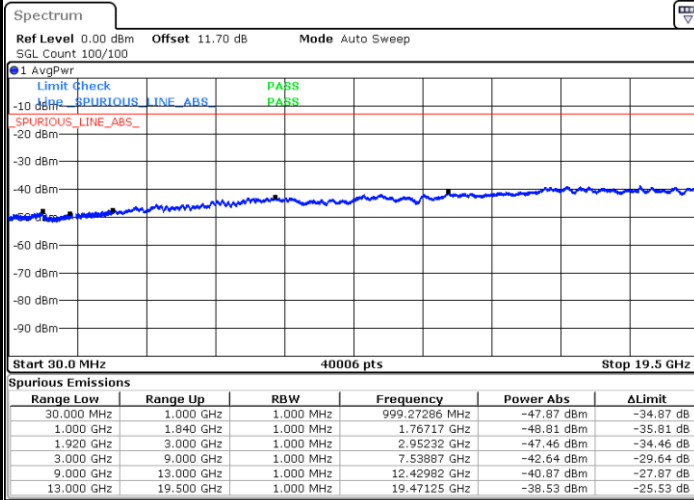


Date: 8 FEB 2020 05:48:22



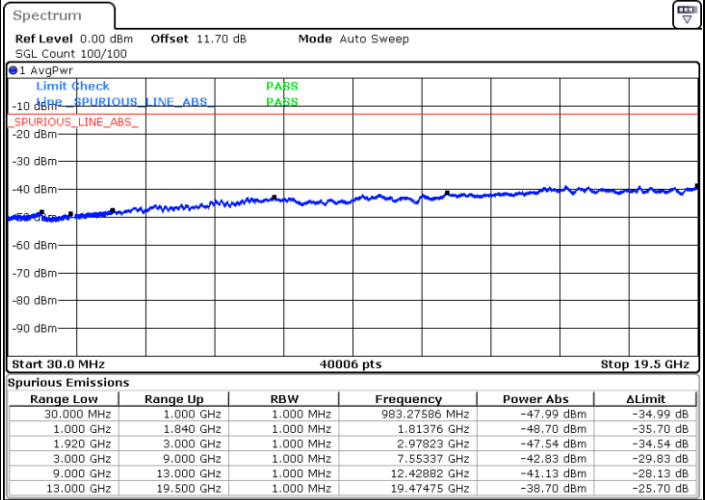
LTE Band 2 / 15MHz

Lowest Channel / 64QAM



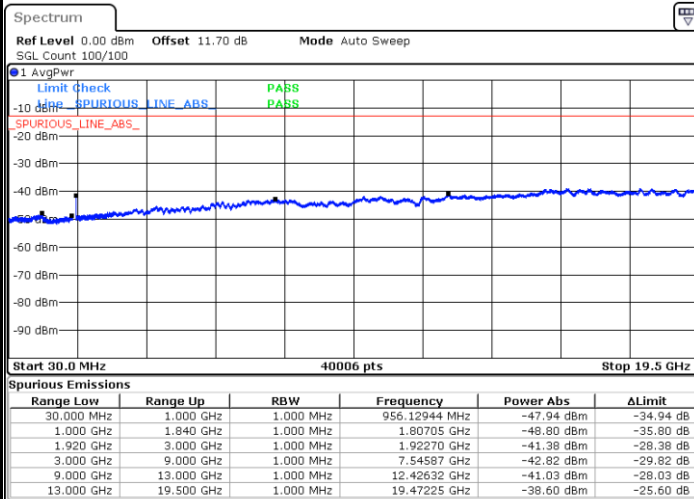
Date: 8.FEB.2020 05:50:48

Middle Channel / 64QAM



Date: 8.FEB.2020 05:51:52

Highest Channel / 64QAM

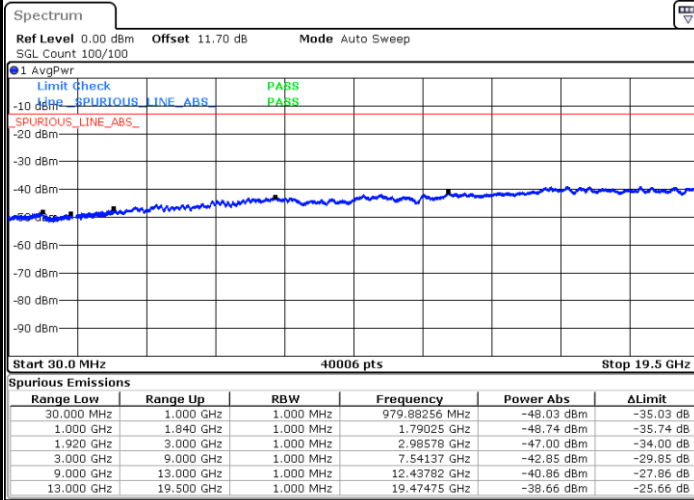


Date: 8.FEB.2020 05:54:17



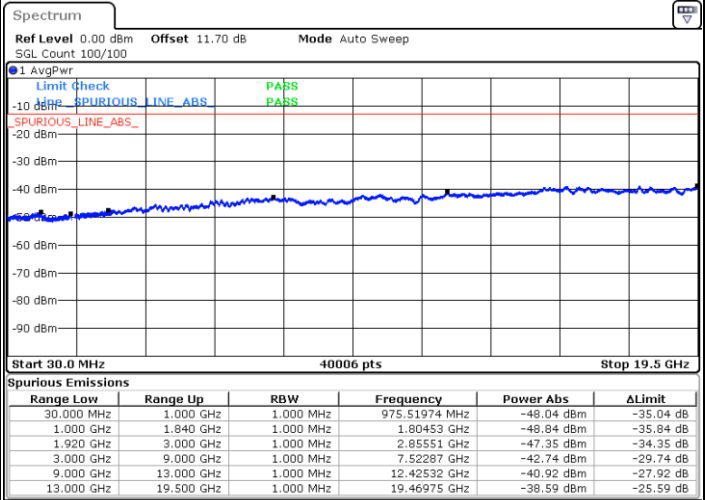
LTE Band 2 / 20MHz

Lowest Channel / 64QAM



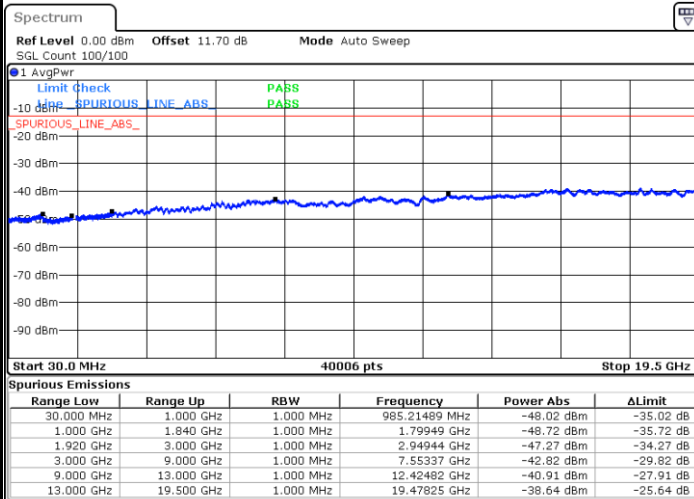
Date: 8.FEB.2020 05:56:44

Middle Channel / 64QAM



Date: 8.FEB.2020 05:57:47

Highest Channel / 64QAM



Date: 8.FEB.2020 06:00:13

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	0.0043	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0063	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0063	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0042	
-30	Normal Voltage	0.0021	
20	Maximum Voltage	0.0062	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0017	

Note:

1. Normal Voltage =4 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 4

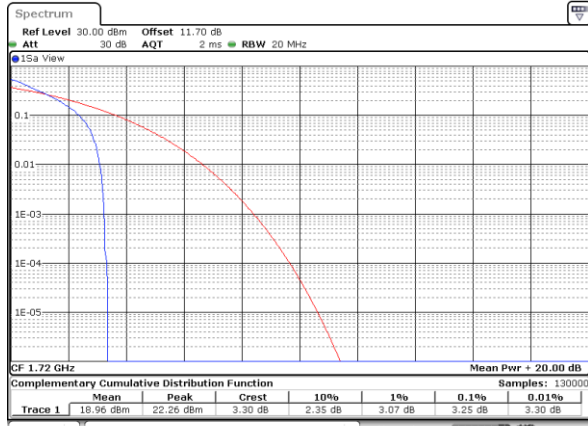
Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.25	5.07	4.29	6.03	PASS
Middle CH	4.99	5.10	5.62	6.09	
Highest CH	4.32	4.93	5.30	5.74	
Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.01	6.43	-	-	PASS
Middle CH	6.35	6.43	-	-	
Highest CH	5.86	6.12	-	-	

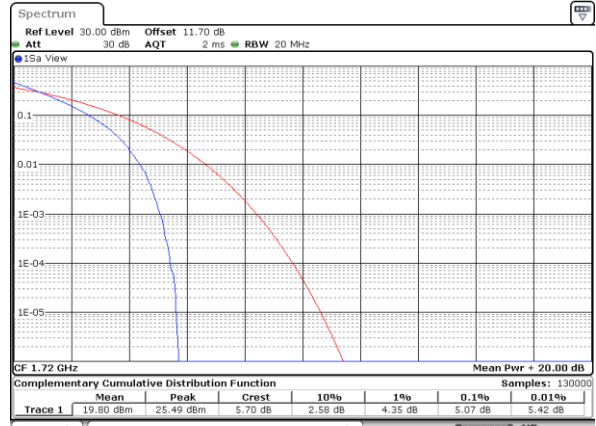


LTE Band 4 / 20MHz / QPSK

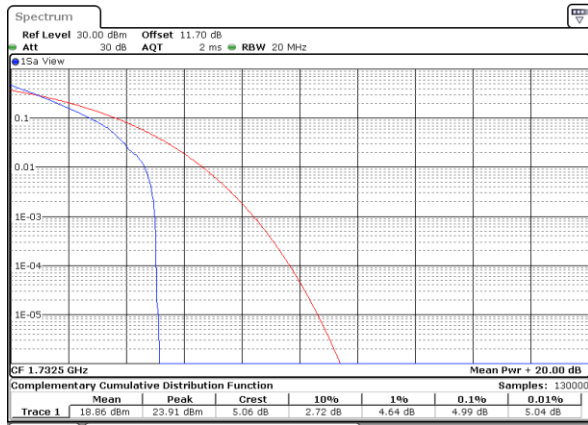
Lowest Channel / 1RB



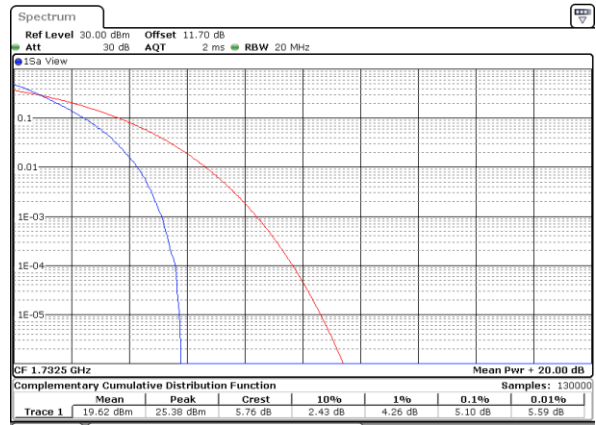
Lowest Channel / Full RB



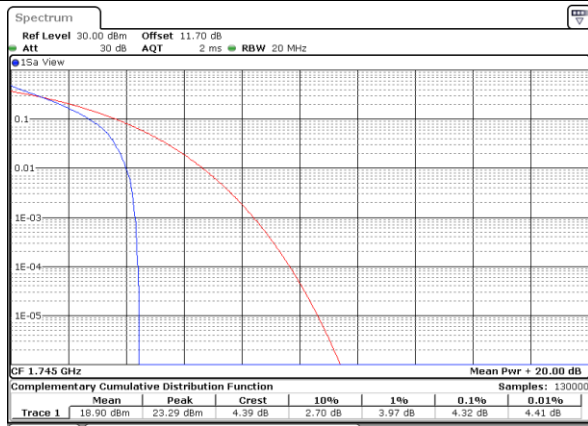
Middle Channel / 1RB



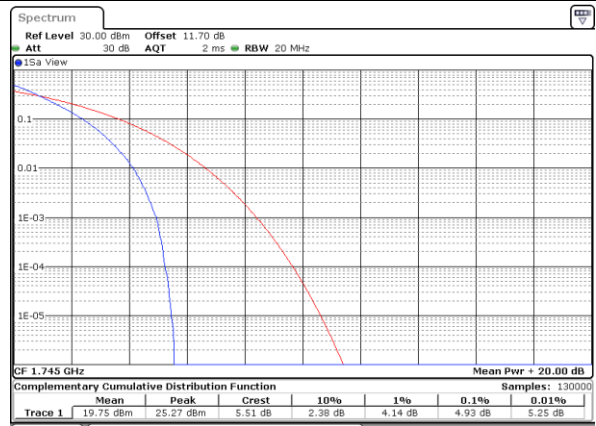
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





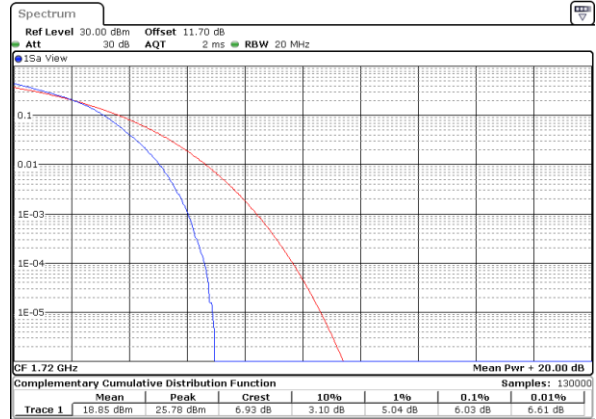
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



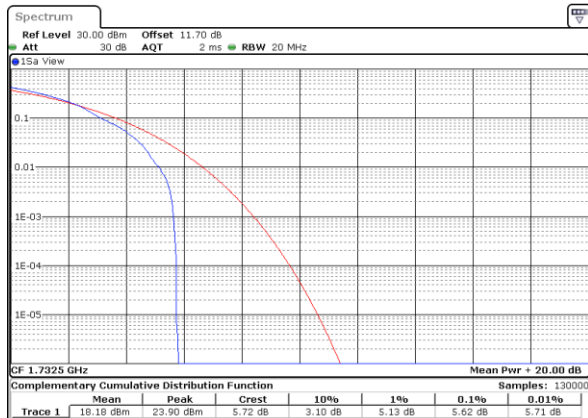
Date: 17 FEB 2020 18:37:54

Lowest Channel / Full RB



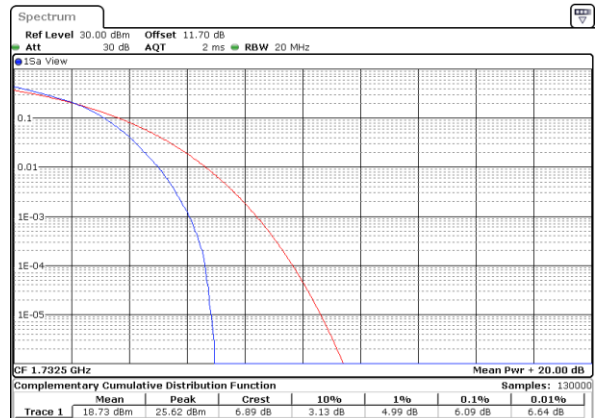
Date: 17 FEB 2020 18:38:13

Middle Channel / 1RB



Date: 17 FEB 2020 18:38:24

Middle Channel / Full RB



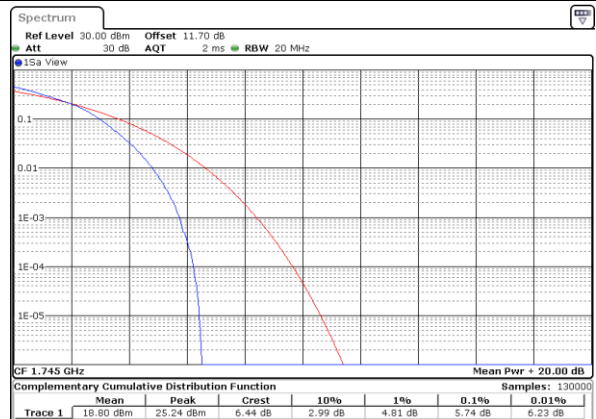
Date: 17 FEB 2020 18:38:48

Highest Channel / 1RB



Date: 17 FEB 2020 18:39:06

Highest Channel / Full RB

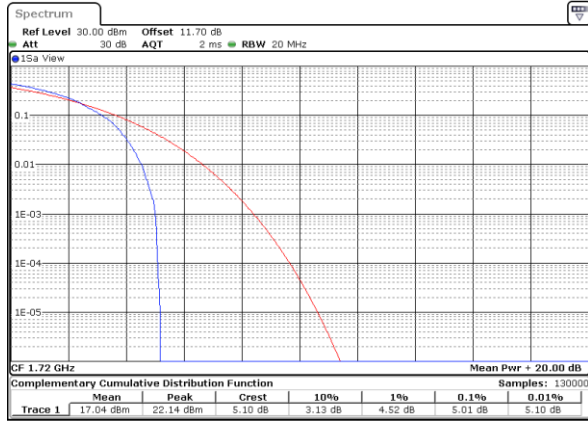


Date: 17 FEB 2020 18:40:15



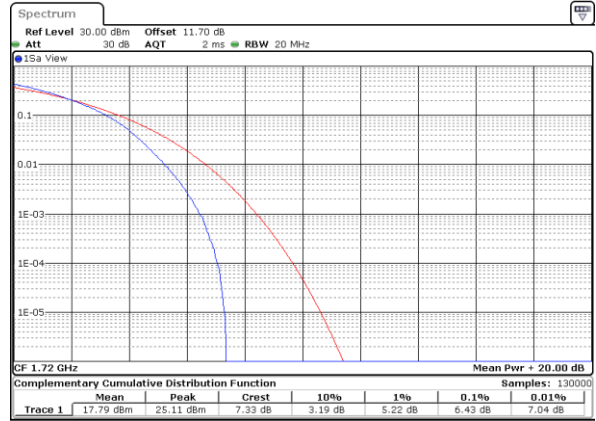
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



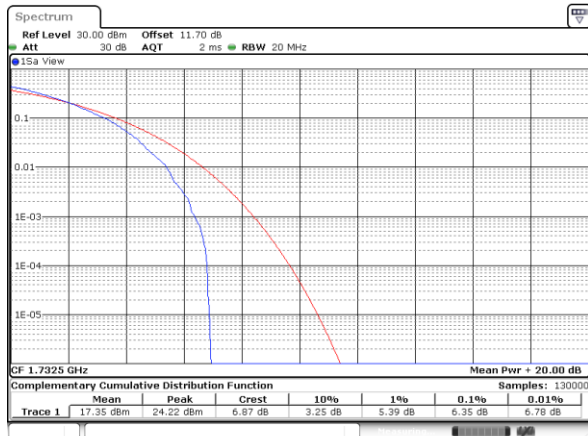
Date: 17 FEB 2020 18:43:04

Lowest Channel / Full RB



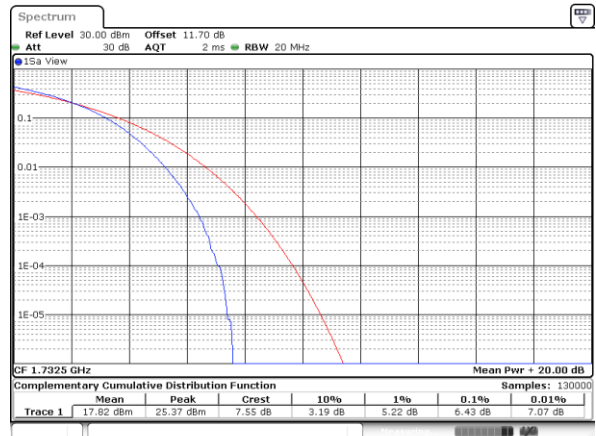
Date: 17 FEB 2020 18:43:15

Middle Channel / 1RB



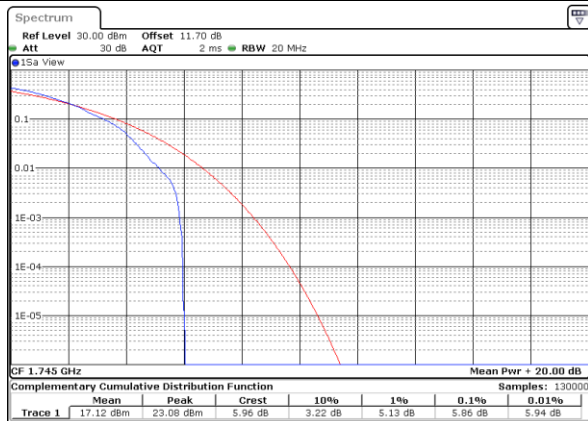
Date: 17 FEB 2020 18:45:34

Middle Channel / Full RB



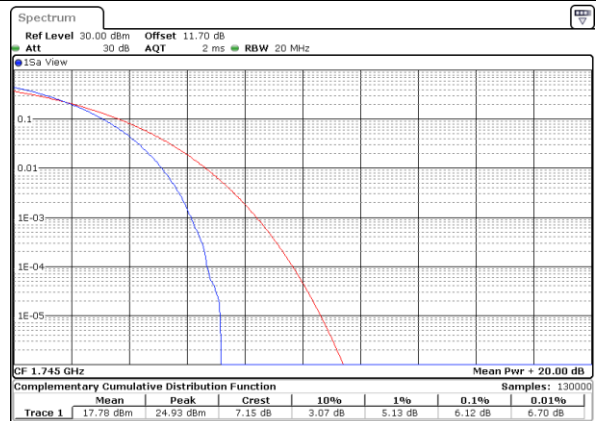
Date: 17 FEB 2020 18:45:46

Highest Channel / 1RB



Date: 17 FEB 2020 18:45:57

Highest Channel / Full RB



Date: 17 FEB 2020 18:46:08

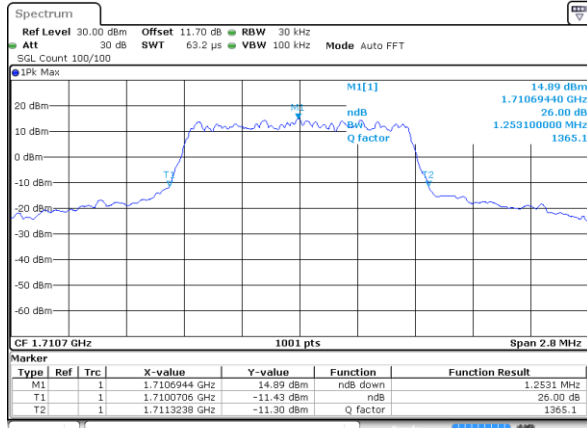
**26dB Bandwidth**

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	1.25	1.28	2.97	2.97	4.87	4.89	9.77	9.67	14.42	14.60	18.78	18.82
Middle CH	1.26	1.29	2.94	2.97	4.84	4.87	9.63	9.67	14.18	14.36	18.62	18.74
Highest CH	1.26	1.28	2.96	2.97	4.88	4.82	9.89	9.71	14.57	14.48	18.90	18.94
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.30	-	2.96	-	4.83	-	9.85	-	14.51	-	18.82	-
Middle CH	1.26	-	2.95	-	4.85	-	9.79	-	14.30	-	18.82	-
Highest CH	1.24	-	2.96	-	4.81	-	9.67	-	14.60	-	18.86	-



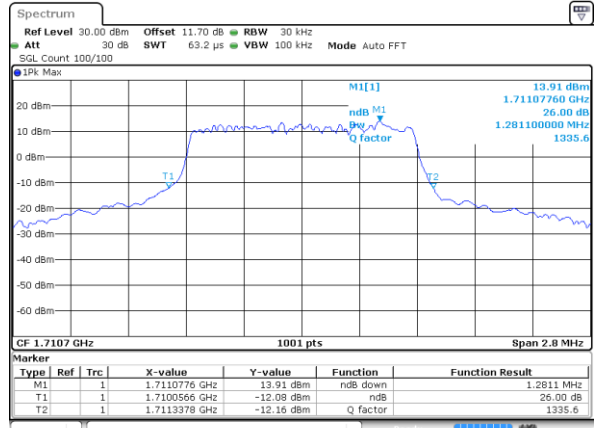
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



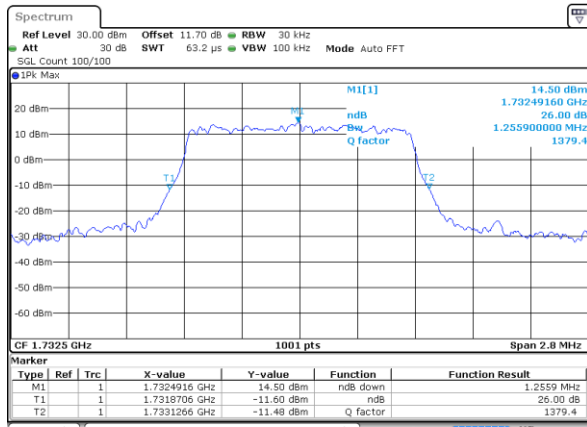
Date: 17 FEB 2020 15:23:38

Lowest Channel / 1.4MHz / 16QAM



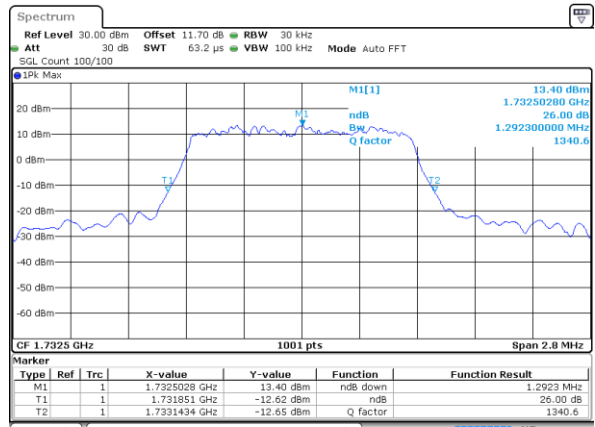
Date: 17 FEB 2020 15:23:50

Middle Channel / 1.4MHz / QPSK



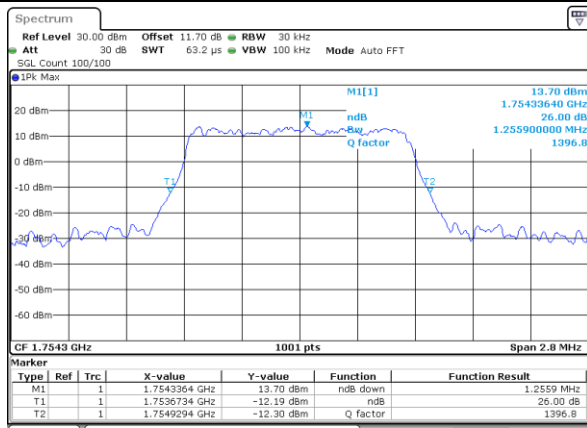
Date: 17 FEB 2020 15:30:02

Middle Channel / 1.4MHz / 16QAM



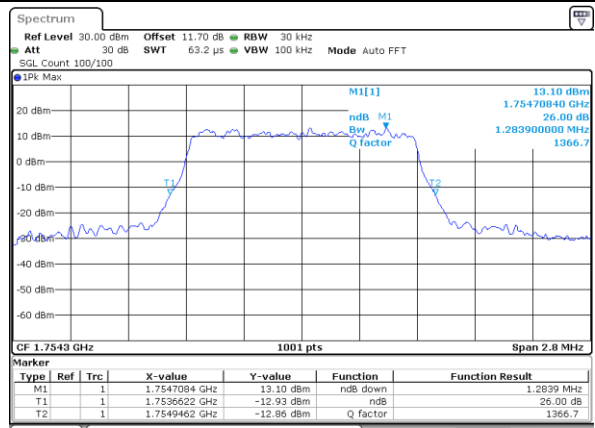
Date: 17 FEB 2020 15:30:13

Highest Channel / 1.4MHz / QPSK



Date: 17 FEB 2020 15:32:10

Highest Channel / 1.4MHz / 16QAM

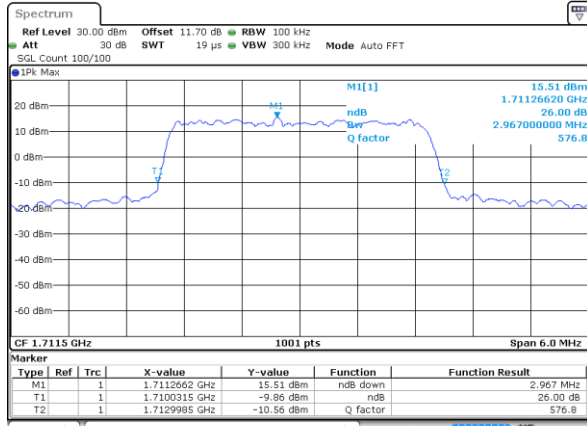


Date: 17 FEB 2020 15:32:22

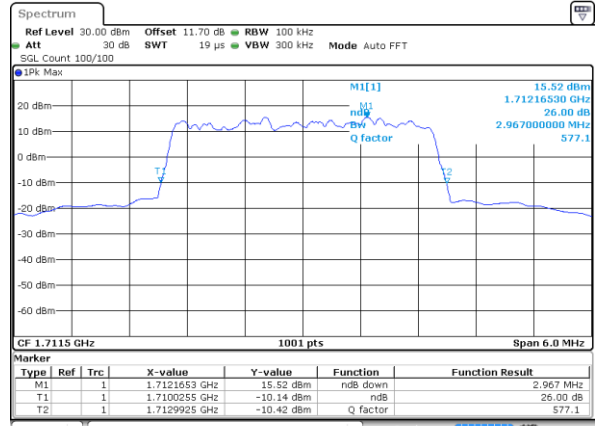


LTE Band 4

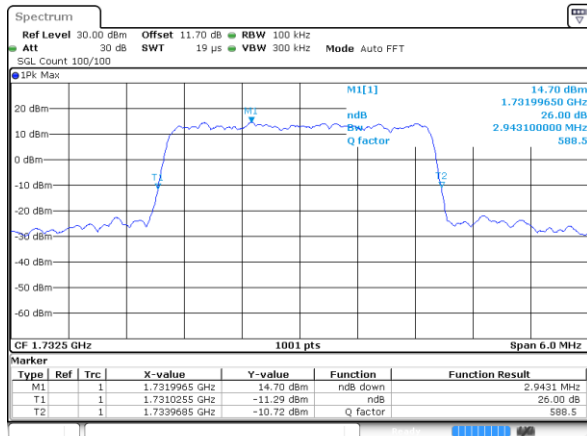
Lowest Channel / 3MHz / QPSK



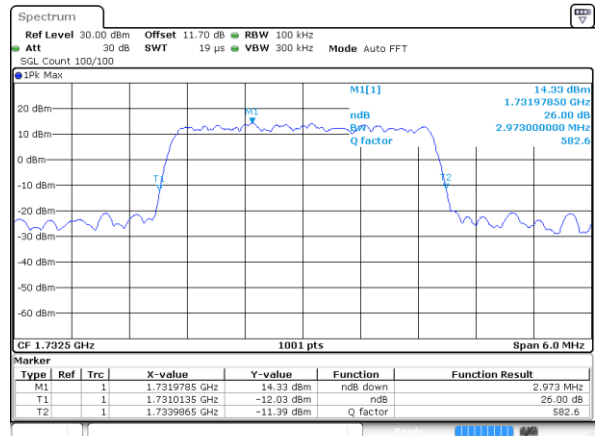
Lowest Channel / 3MHz / 16QAM



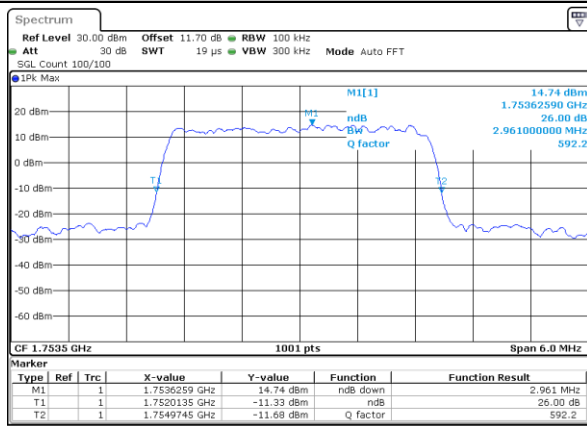
Middle Channel / 3MHz / QPSK



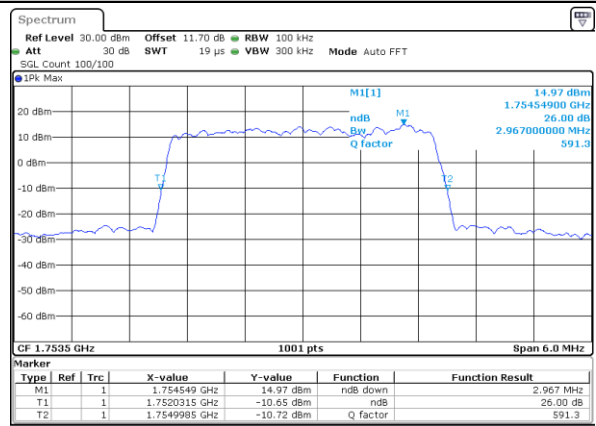
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



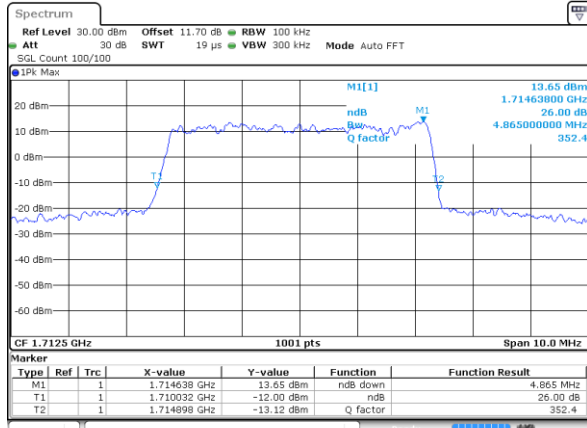
Highest Channel / 3MHz / 16QAM





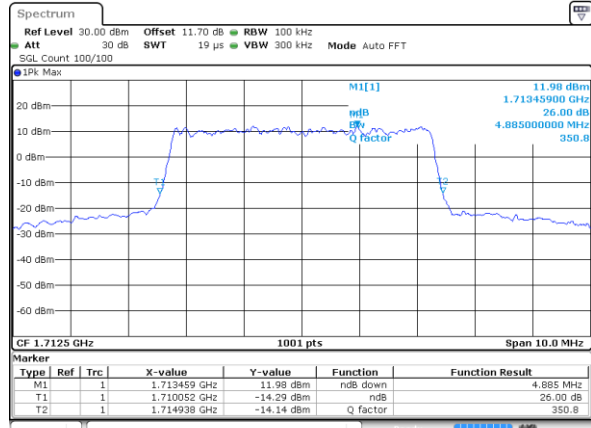
LTE Band 4

Lowest Channel / 5MHz / QPSK



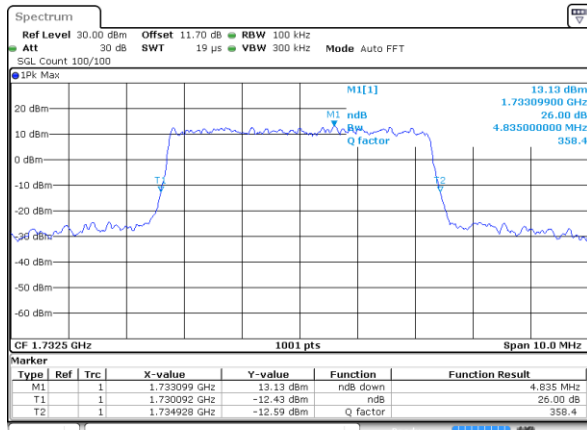
Date: 17 FEB 2020 16:15:13

Lowest Channel / 5MHz / 16QAM



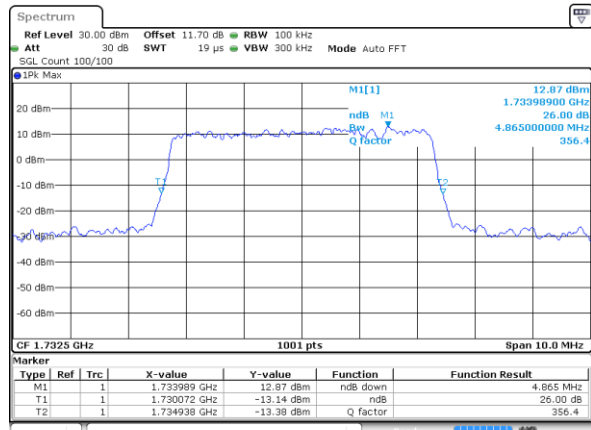
Date: 17 FEB 2020 16:15:25

Middle Channel / 5MHz / QPSK



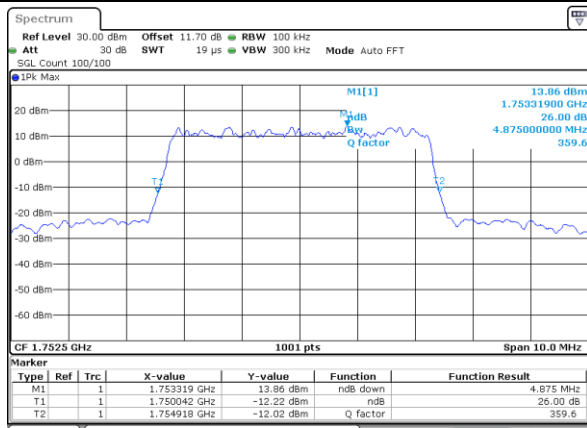
Date: 17 FEB 2020 16:21:25

Middle Channel / 5MHz / 16QAM



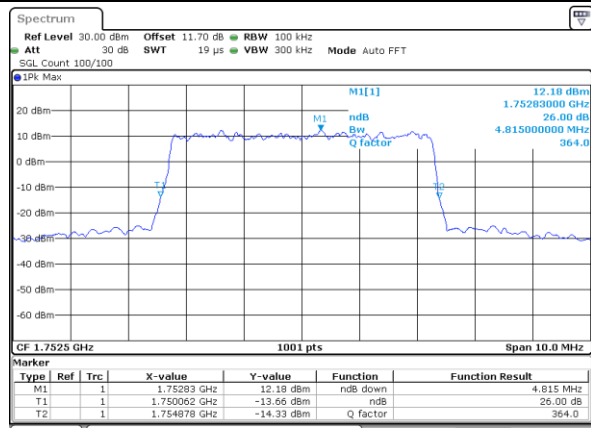
Date: 17 FEB 2020 16:21:37

Highest Channel / 5MHz / QPSK



Date: 17 FEB 2020 16:23:34

Highest Channel / 5MHz / 16QAM

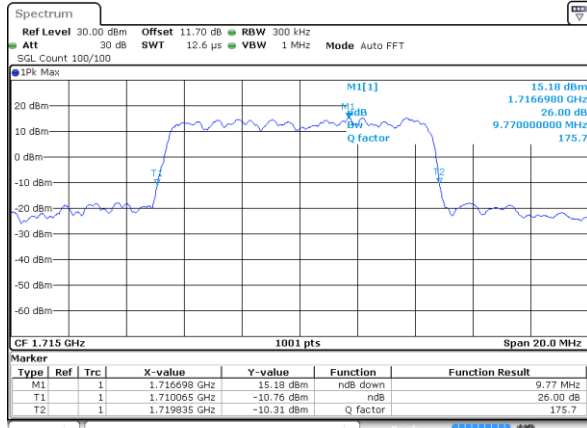


Date: 17 FEB 2020 16:23:46

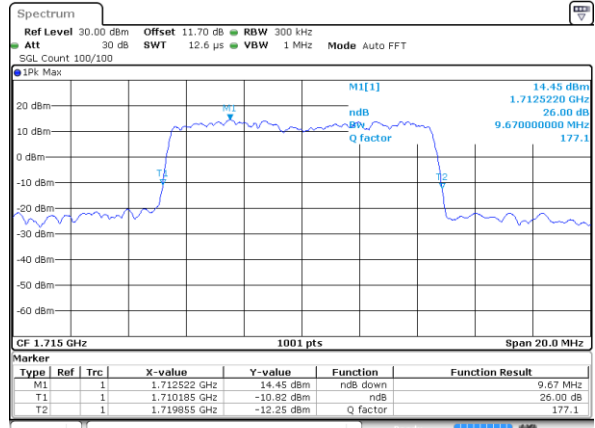


LTE Band 4

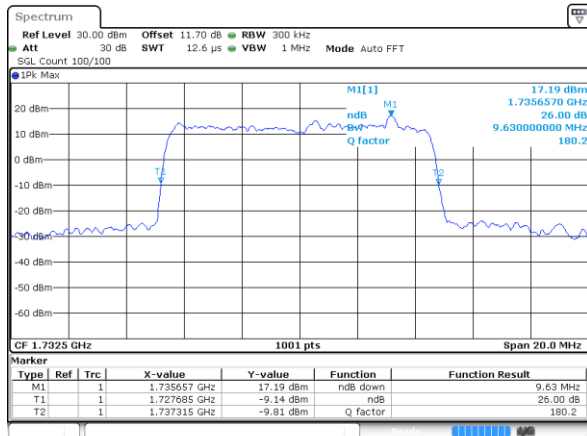
Lowest Channel / 10MHz / QPSK



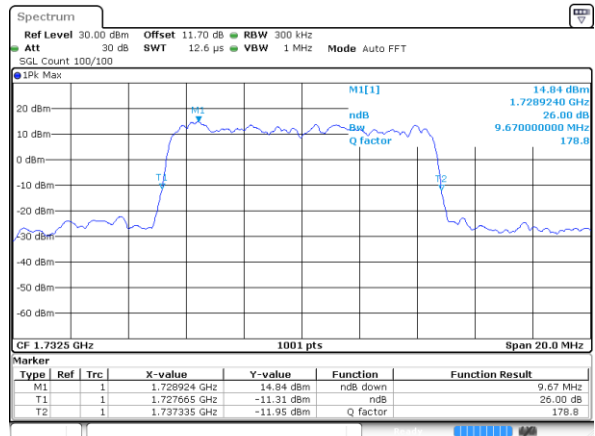
Lowest Channel / 10MHz / 16QAM



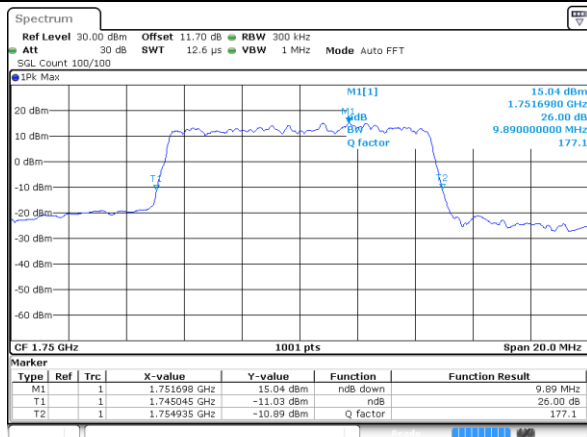
Middle Channel / 10MHz / QPSK



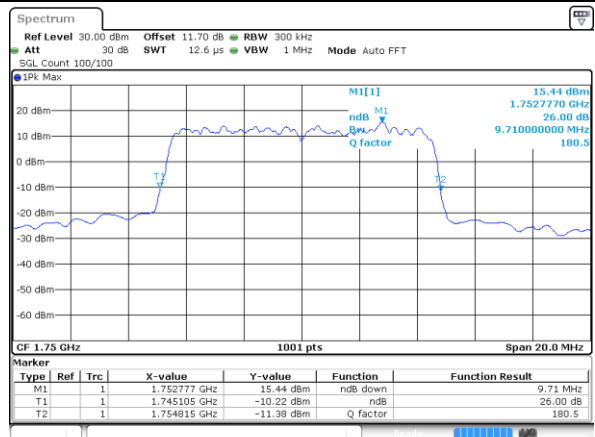
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



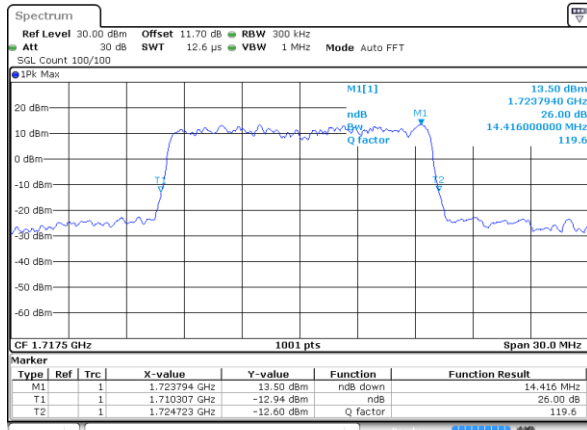
Highest Channel / 10MHz / 16QAM





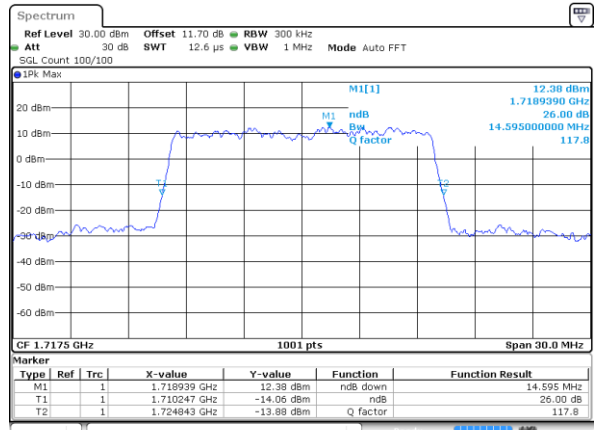
LTE Band 4

Lowest Channel / 15MHz / QPSK



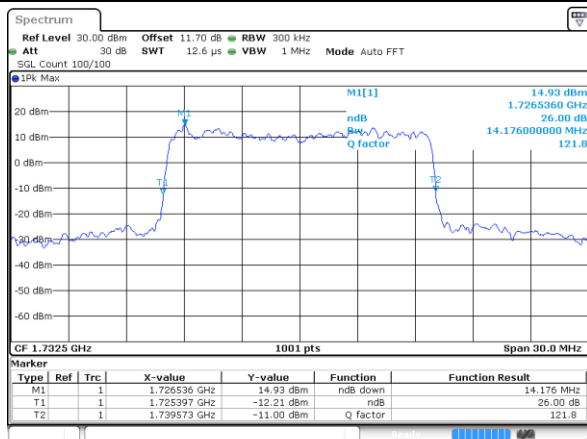
Date: 17 FEB 2020 16:51:38

Lowest Channel / 15MHz / 16QAM



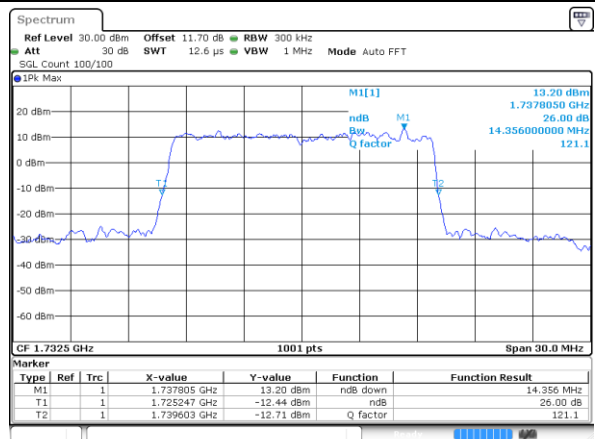
Date: 17 FEB 2020 16:51:50

Middle Channel / 15MHz / QPSK



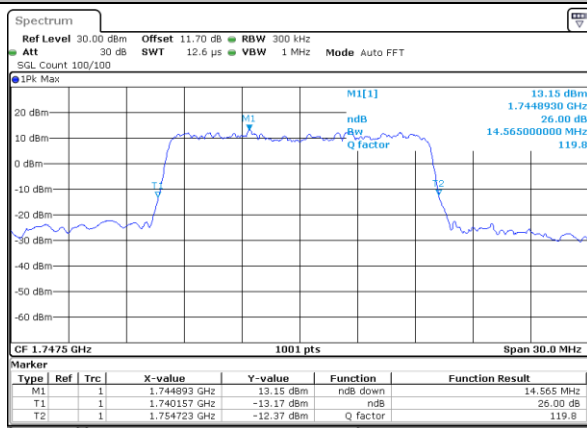
Date: 17 FEB 2020 16:57:50

Middle Channel / 15MHz / 16QAM



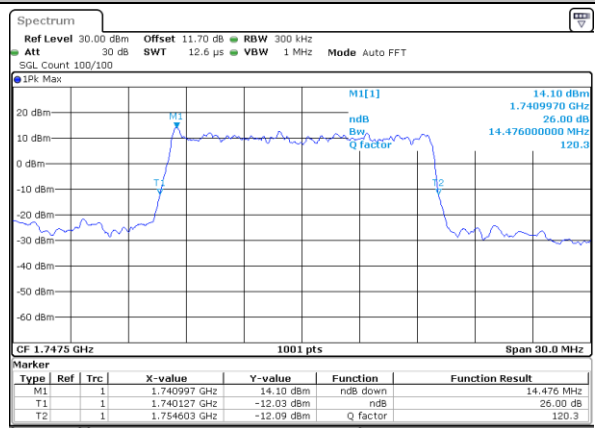
Date: 17 FEB 2020 16:58:01

Highest Channel / 15MHz / QPSK



Date: 17 FEB 2020 16:59:58

Highest Channel / 15MHz / 16QAM

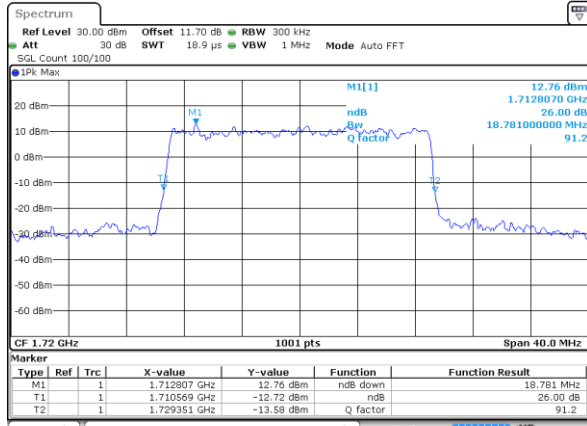


Date: 17 FEB 2020 17:00:10

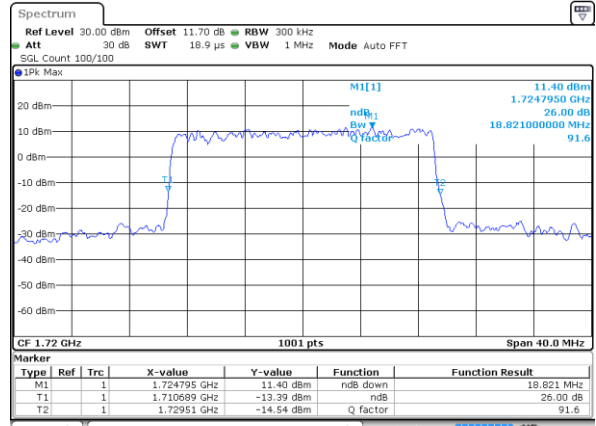


LTE Band 4

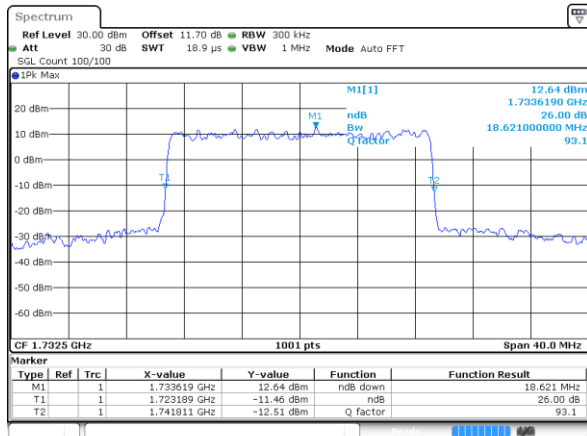
Lowest Channel / 20MHz / QPSK



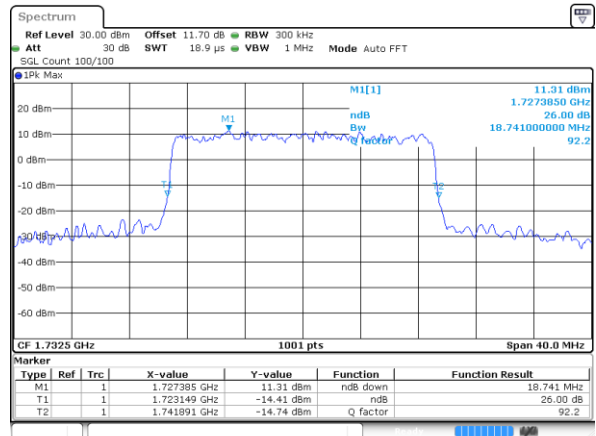
Lowest Channel / 20MHz / 16QAM



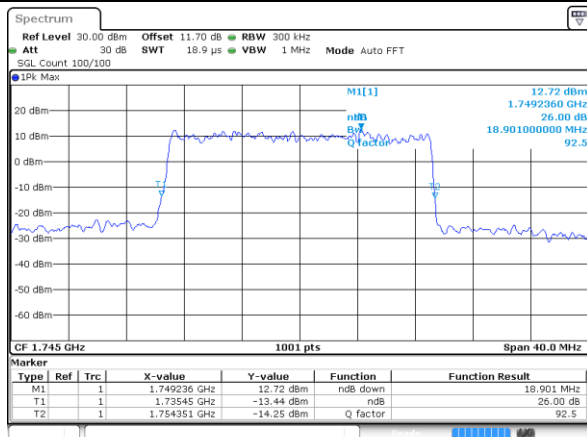
Middle Channel / 20MHz / QPSK



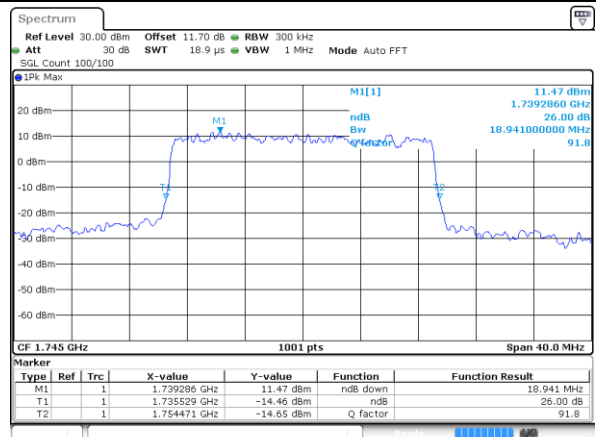
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



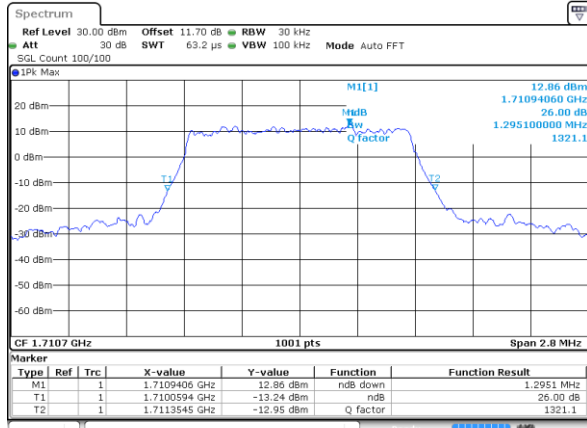
Highest Channel / 20MHz / 16QAM





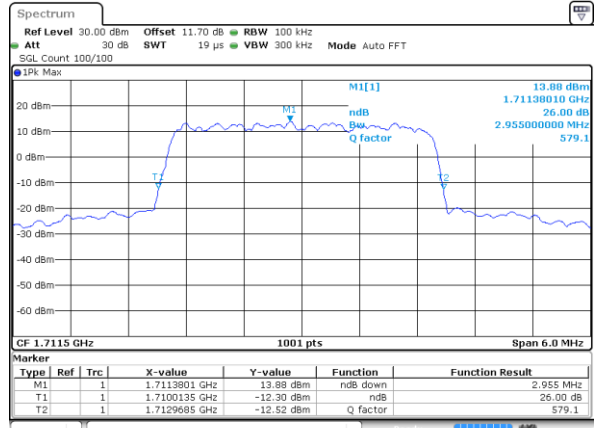
LTE Band 4

Lowest Channel / 1.4MHz / 64QAM



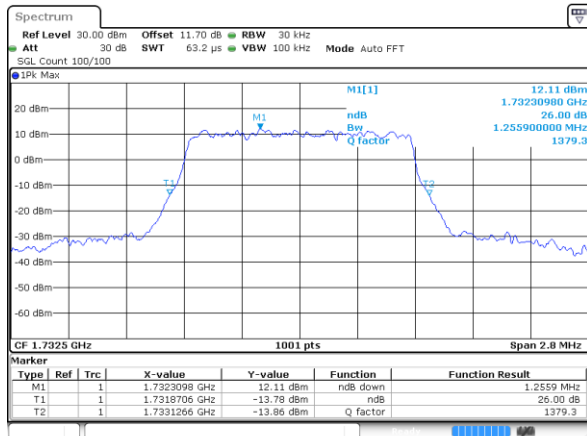
Date: 17 FEB 2020 15:38:24

Lowest Channel / 3MHz / 64QAM



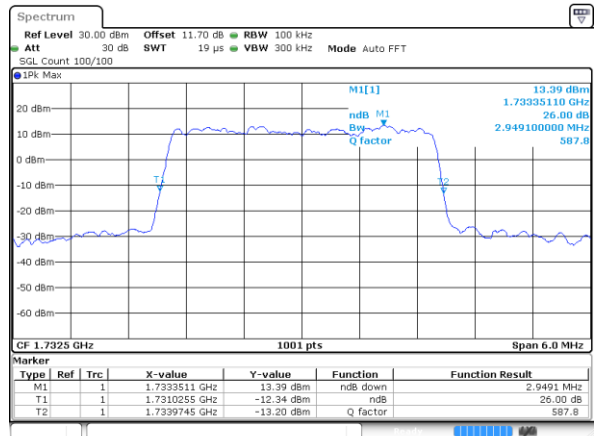
Date: 17 FEB 2020 16:00:27

Middle Channel / 1.4MHz / 64QAM



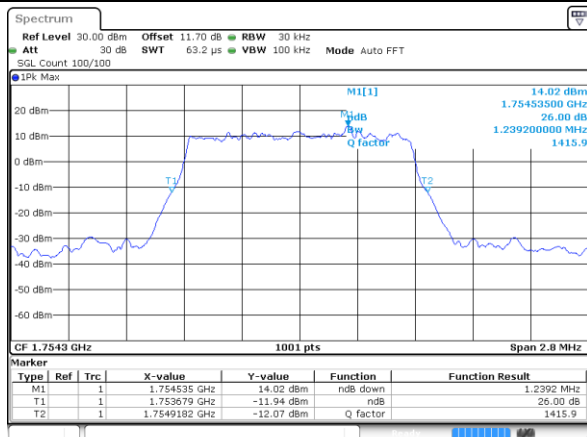
Date: 17 FEB 2020 15:41:35

Middle Channel / 3MHz / 64QAM



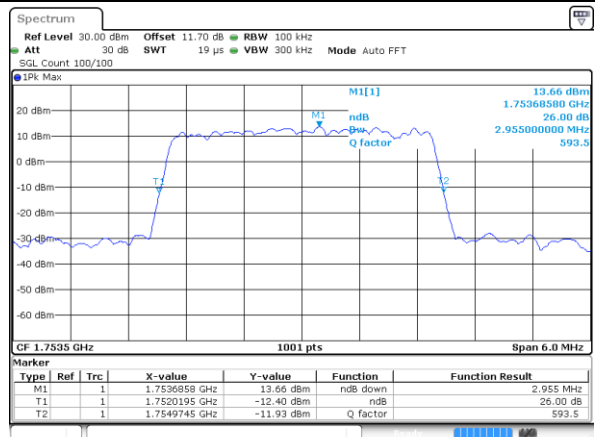
Date: 17 FEB 2020 16:03:32

Highest Channel / 1.4MHz / 64QAM



Date: 17 FEB 2020 15:42:40

Highest Channel / 3MHz / 64QAM

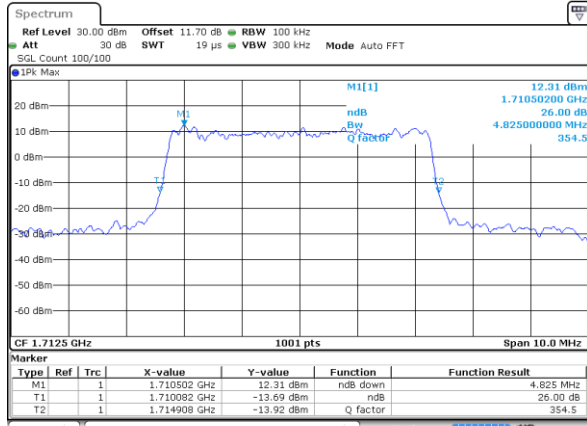


Date: 17 FEB 2020 16:04:37

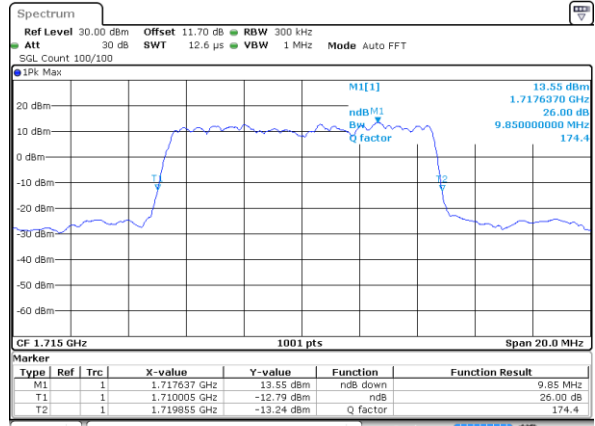


LTE Band 4

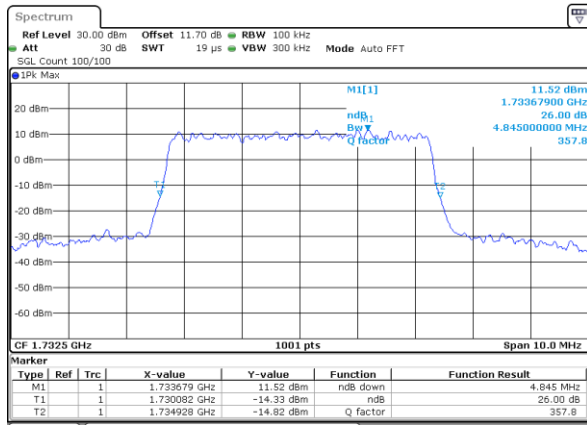
Lowest Channel / 5MHz / 64QAM



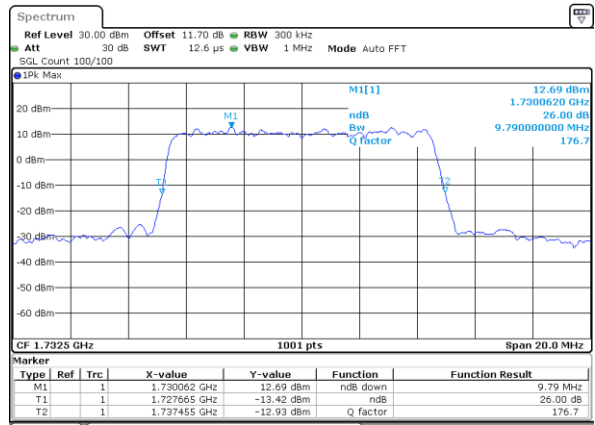
Lowest Channel / 10MHz / 64QAM



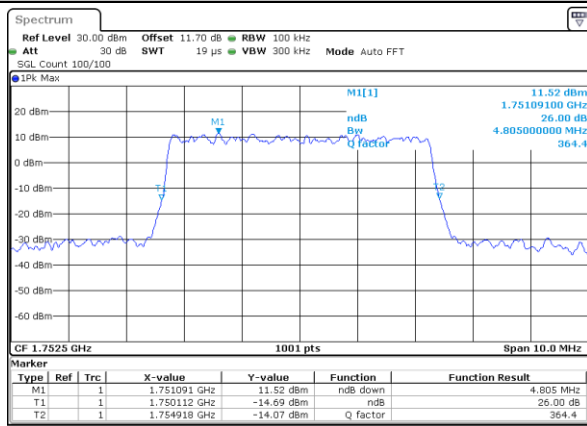
Middle Channel / 5MHz / 64QAM



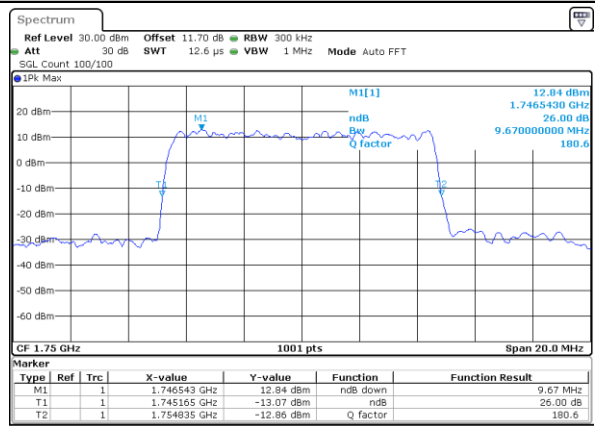
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



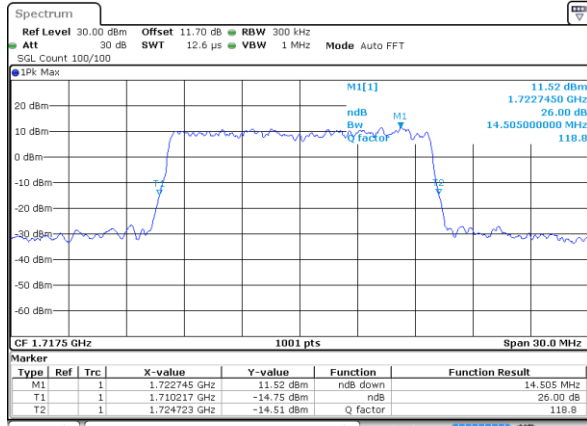
Highest Channel / 10MHz / 64QAM



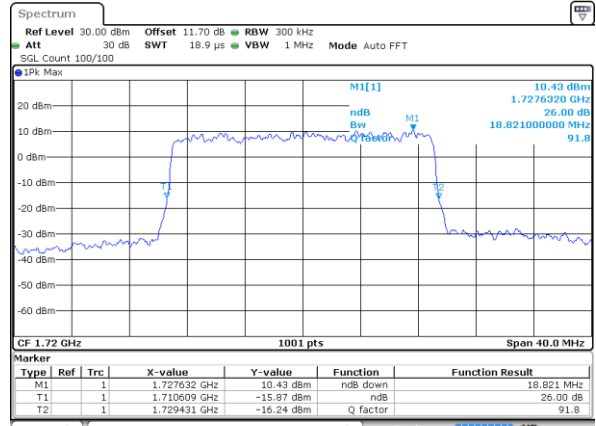


LTE Band 4

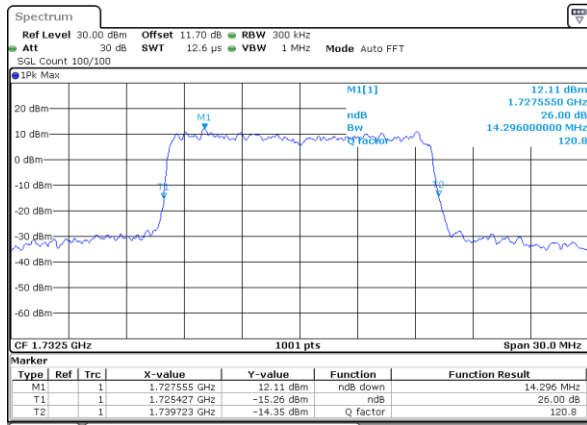
Lowest Channel / 15MHz / 64QAM



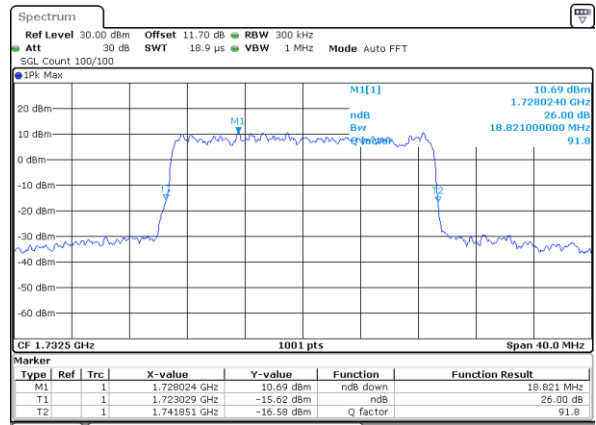
Lowest Channel / 20MHz / 64QAM



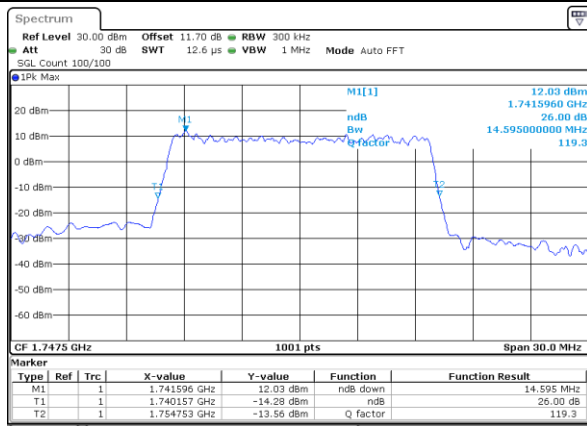
Middle Channel / 15MHz / 64QAM



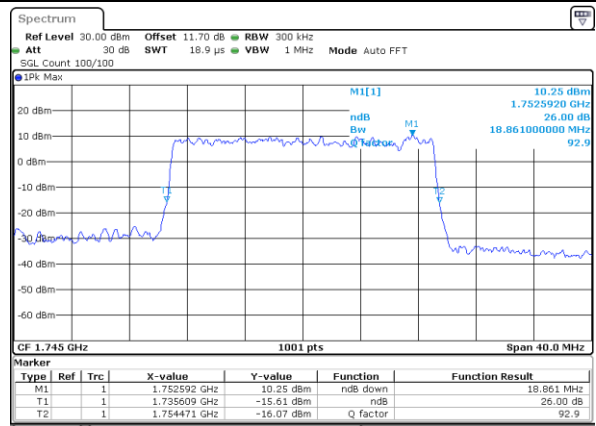
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM



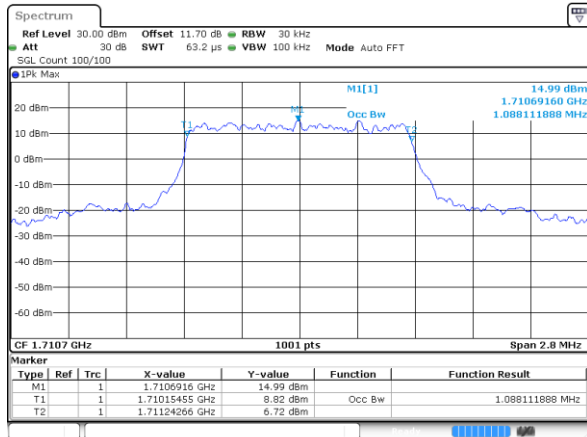
**Occupied Bandwidth**

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	1.09	1.09	2.70	2.73	4.49	4.48	9.03	9.05	13.46	13.46	17.94	17.90
Middle CH	1.09	1.08	2.70	2.71	4.49	4.48	9.03	9.05	13.46	13.43	17.86	17.86
Highest CH	1.10	1.09	2.72	2.69	4.49	4.48	9.03	9.03	13.46	13.43	17.86	17.94
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	-	2.70	-	4.49	-	9.13	-	13.46	-	17.86	-
Middle CH	1.09	-	2.72	-	4.47	-	8.99	-	13.43	-	17.90	-
Highest CH	1.10	-	2.72	-	4.49	-	9.01	-	13.46	-	17.90	-

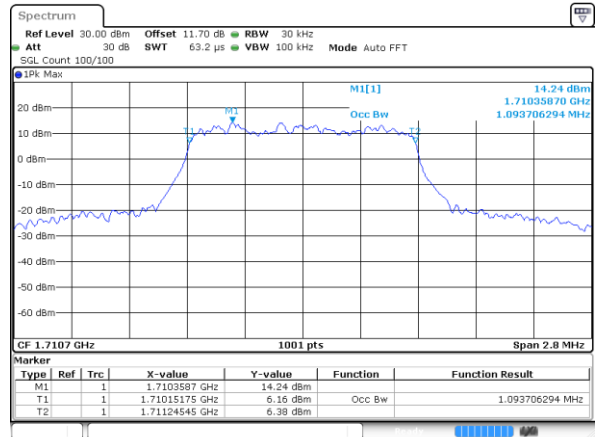


LTE Band 4

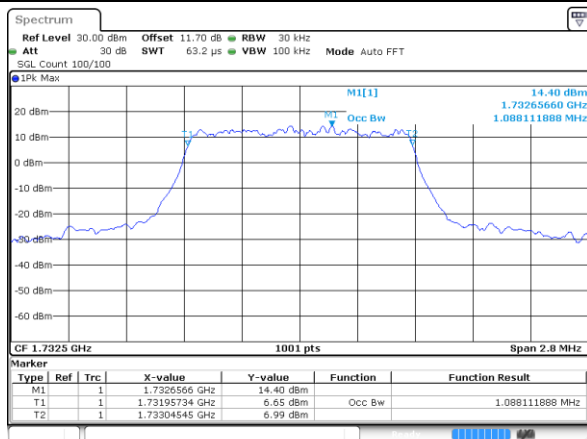
Lowest Channel / 1.4MHz / QPSK



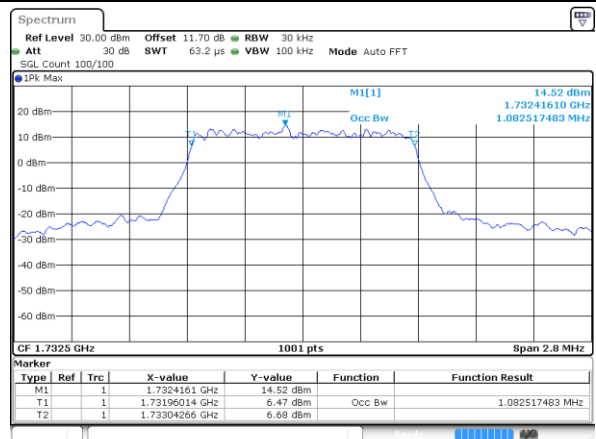
Lowest Channel / 1.4MHz / 16QAM



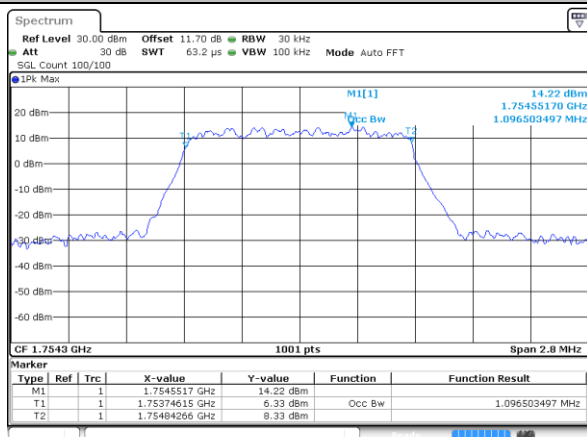
Middle Channel / 1.4MHz / QPSK



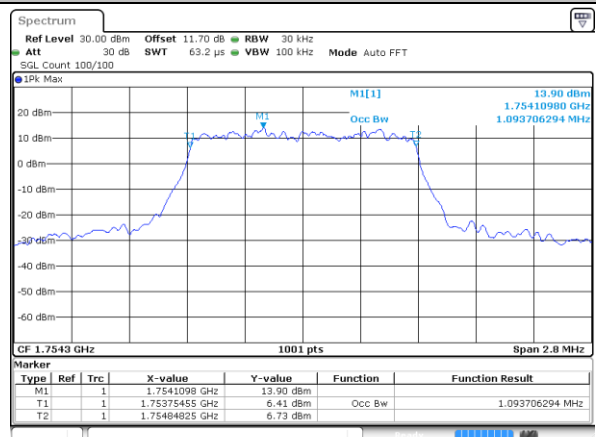
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



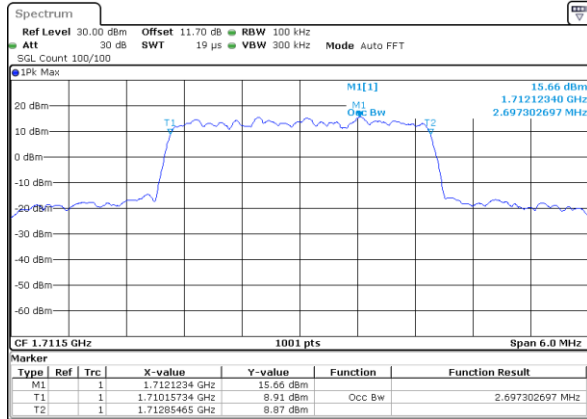
Highest Channel / 1.4MHz / 16QAM





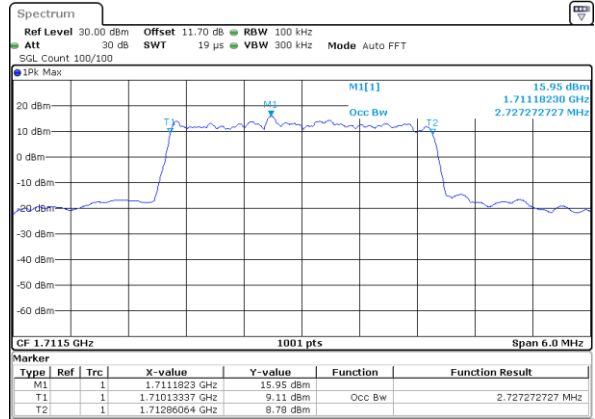
LTE Band 4

Lowest Channel / 3MHz / QPSK



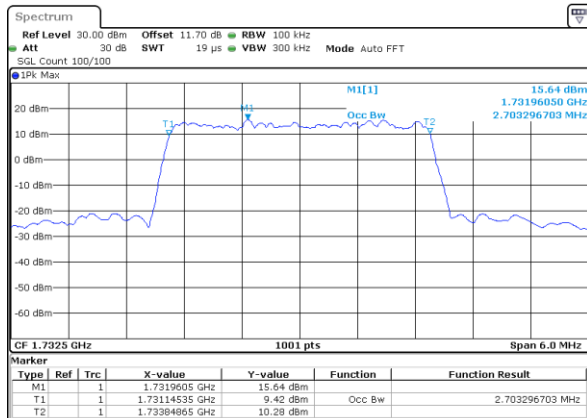
Date: 17 FEB 2020 15:45:41

Lowest Channel / 3MHz / 16QAM



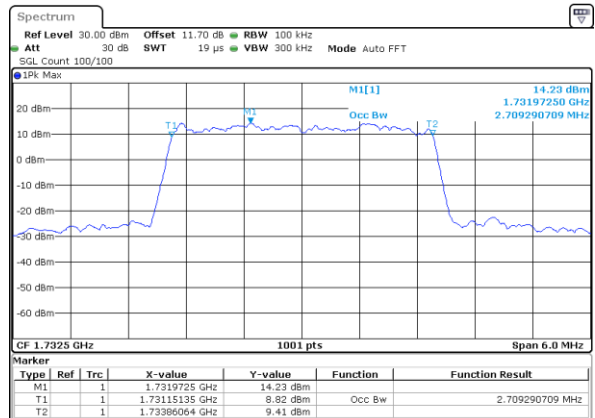
Date: 17 FEB 2020 15:45:53

Middle Channel / 3MHz / QPSK



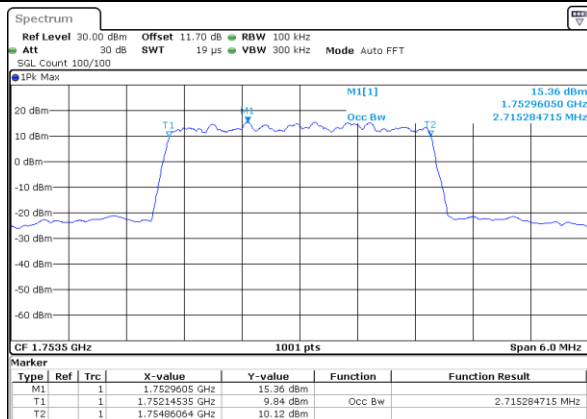
Date: 17 FEB 2020 15:51:54

Middle Channel / 3MHz / 16QAM



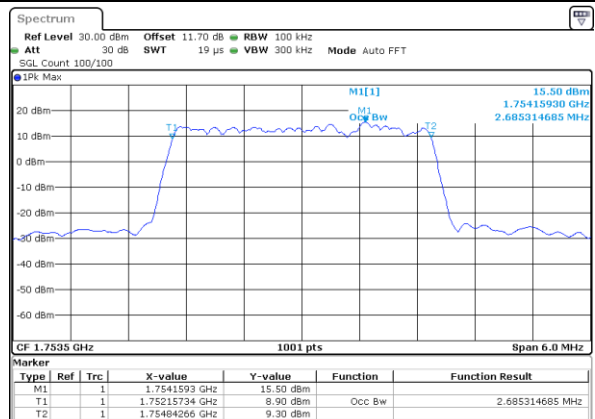
Date: 17 FEB 2020 15:52:05

Highest Channel / 3MHz / QPSK



Date: 17 FEB 2020 15:54:02

Highest Channel / 3MHz / 16QAM



Date: 17 FEB 2020 15:54:14