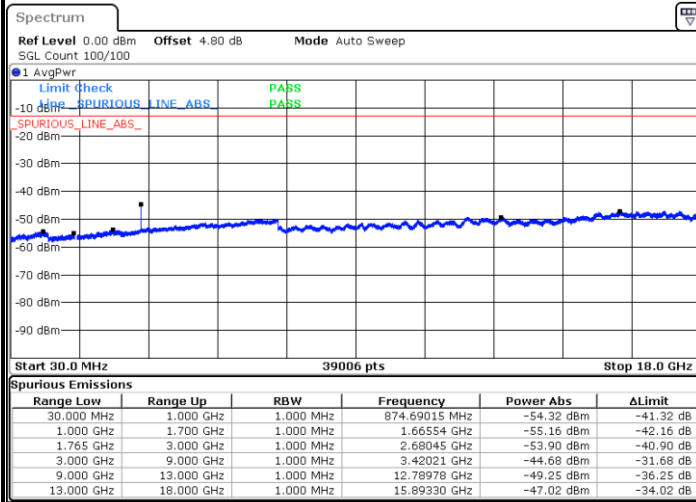




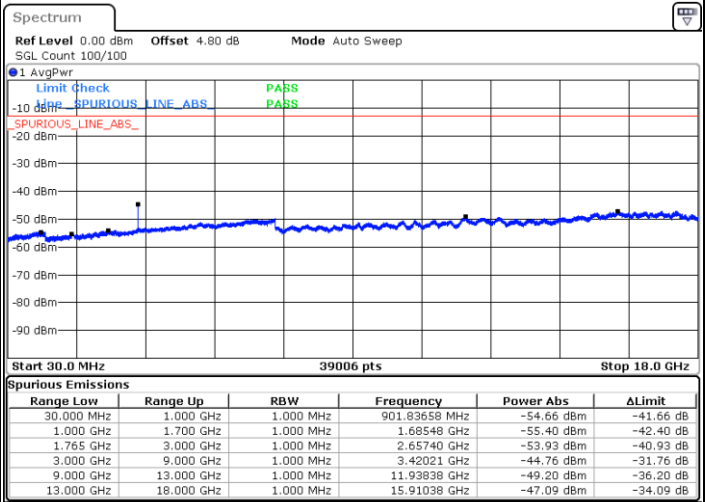
LTE Band 4 / 1.4MHz

Lowest Channel / QPSK



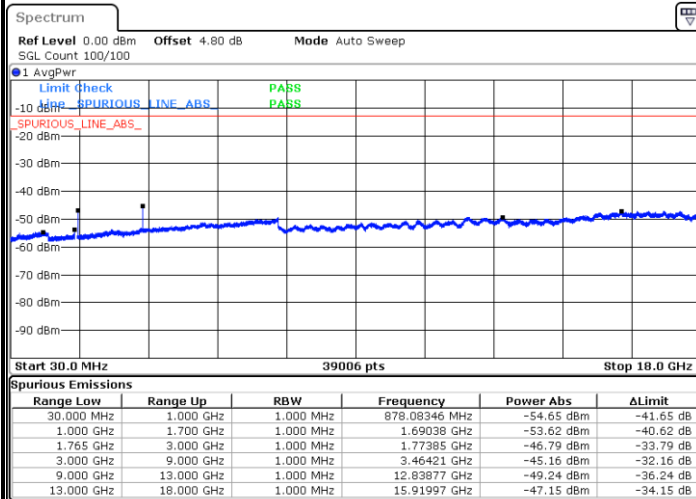
Date: 21 MAR 2020 10:45:11

Lowest Channel / 16QAM



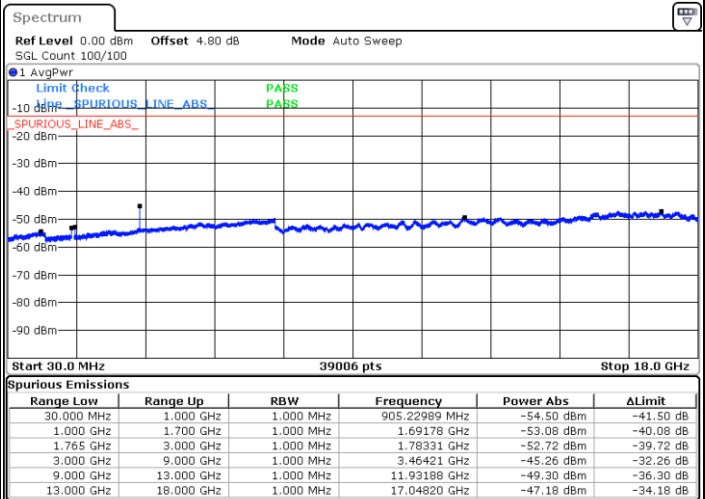
Date: 21 MAR 2020 10:46:05

Middle Channel / QPSK



Date: 21 MAR 2020 10:47:40

Middle Channel / 16QAM

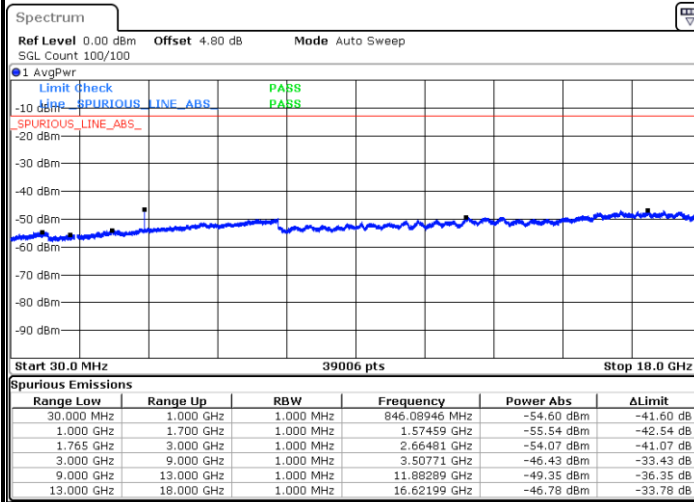


Date: 21 MAR 2020 10:48:35



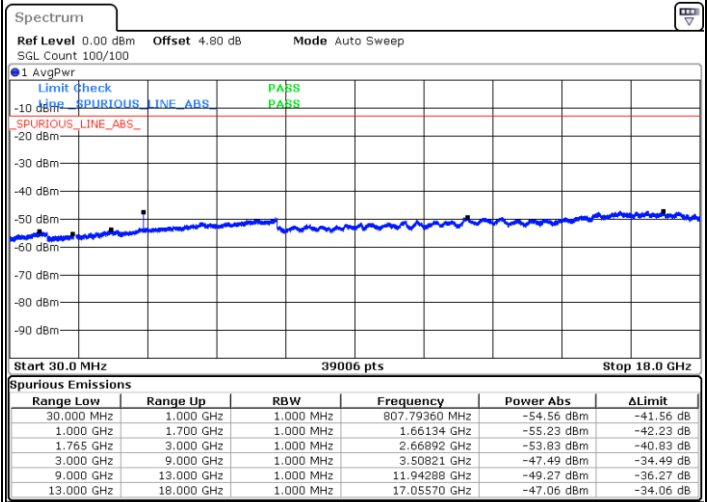
LTE Band 4 / 1.4MHz

Highest Channel / QPSK



Date: 21 MAR 2020 10:54:39

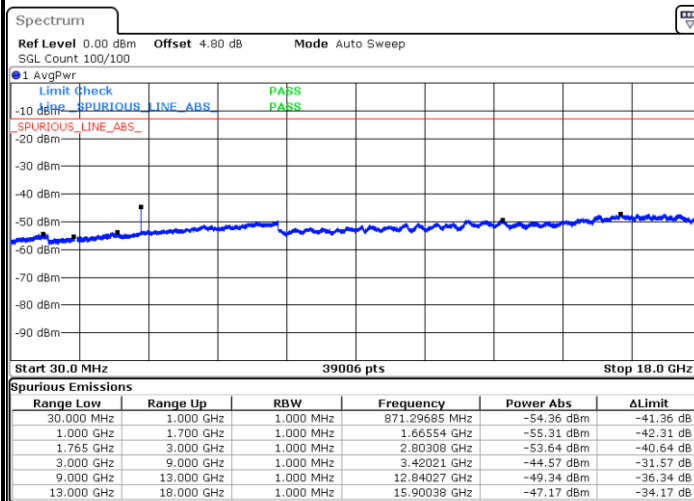
Highest Channel / 16QAM



Date: 21 MAR 2020 10:55:33

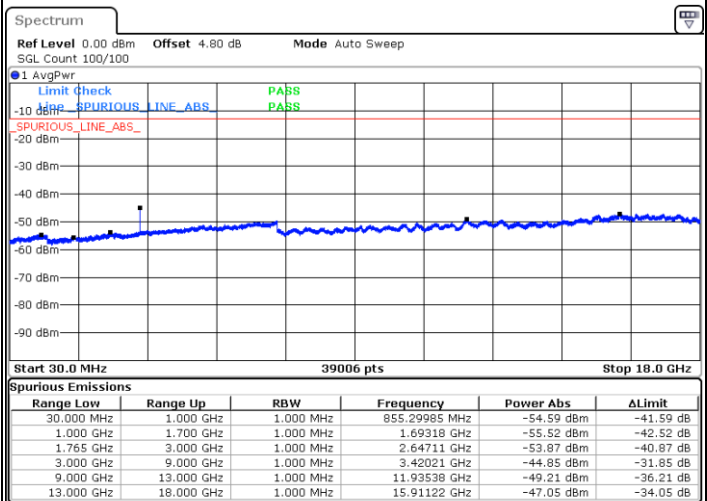
LTE Band 4 / 3MHz

Lowest Channel / QPSK



Date: 21 MAR 2020 11:01:38

Lowest Channel / 16QAM

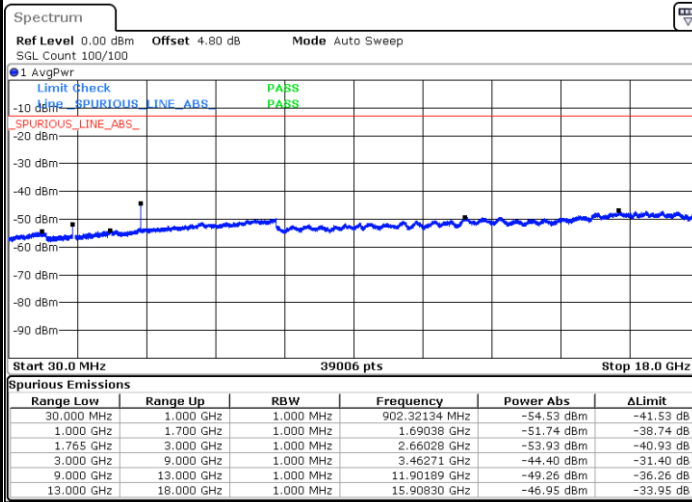


Date: 21 MAR 2020 11:02:32



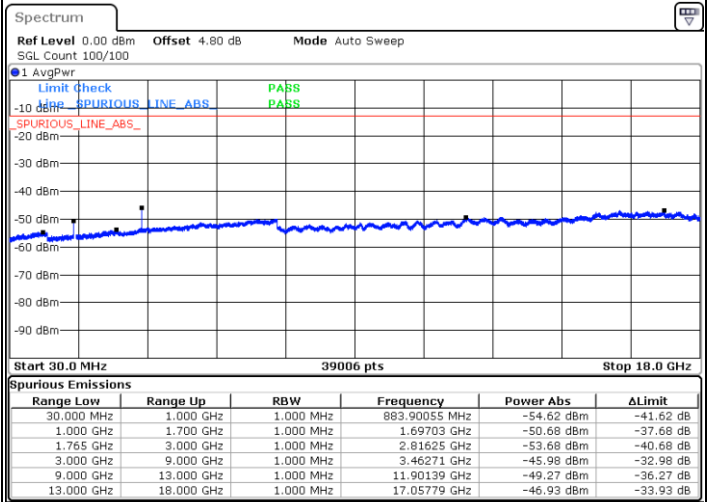
LTE Band 4 / 3MHz

Middle Channel / QPSK



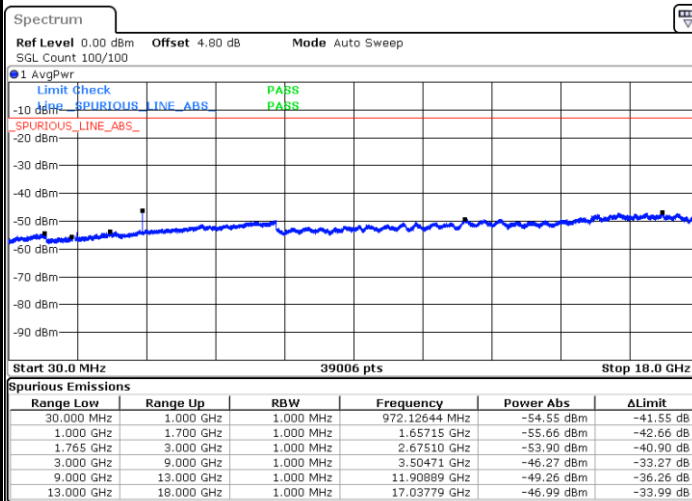
Date: 21 MAR 2020 11:04:07

Middle Channel / 16QAM



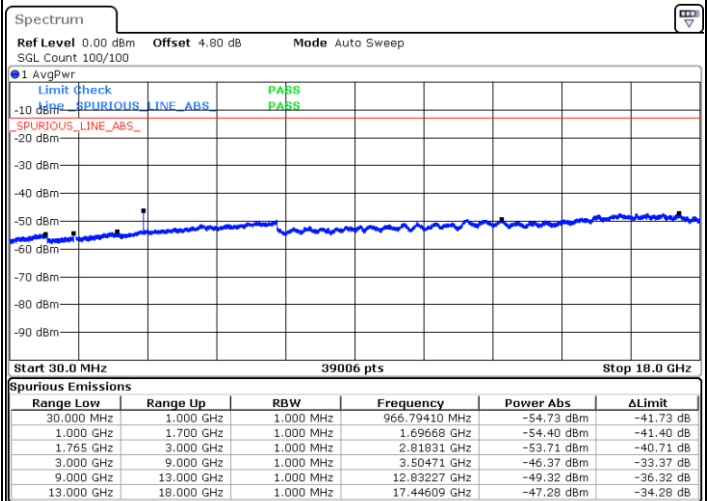
Date: 21 MAR 2020 11:05:01

Highest Channel / QPSK



Date: 21 MAR 2020 11:11:06

Highest Channel / 16QAM

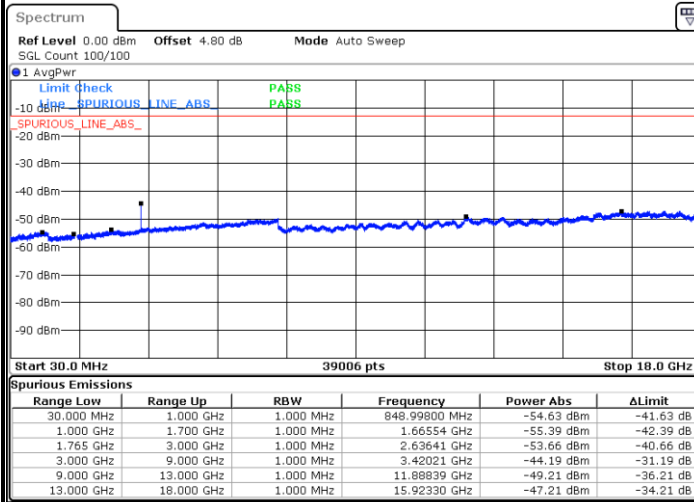


Date: 21 MAR 2020 11:12:00



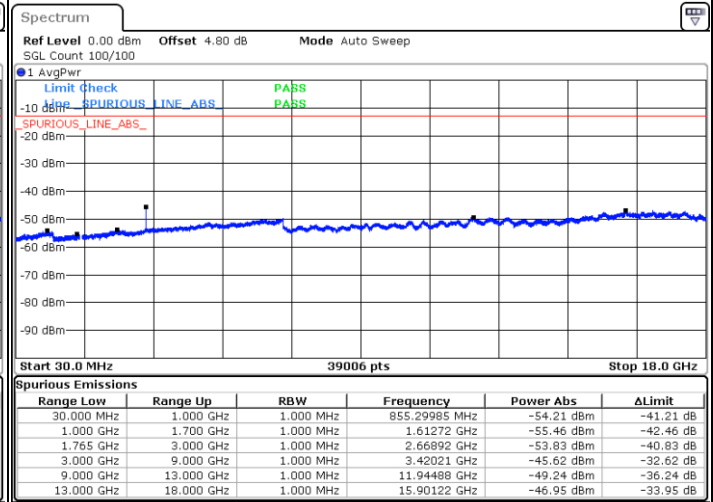
LTE Band 4 / 5MHz

Lowest Channel / QPSK



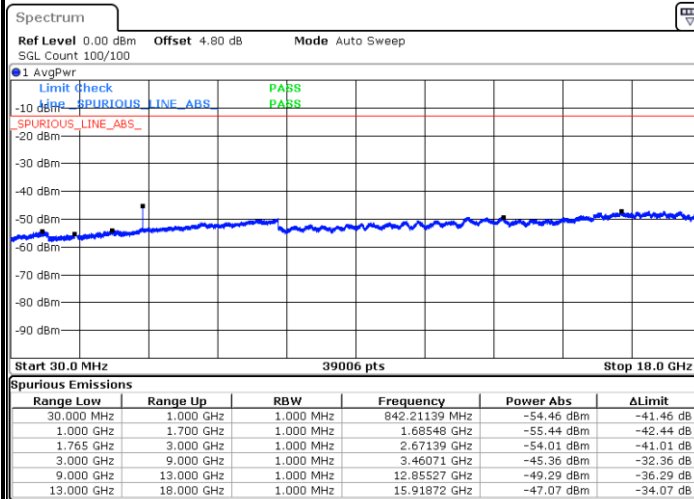
Date: 21 MAR 2020 11:18:05

Lowest Channel / 16QAM



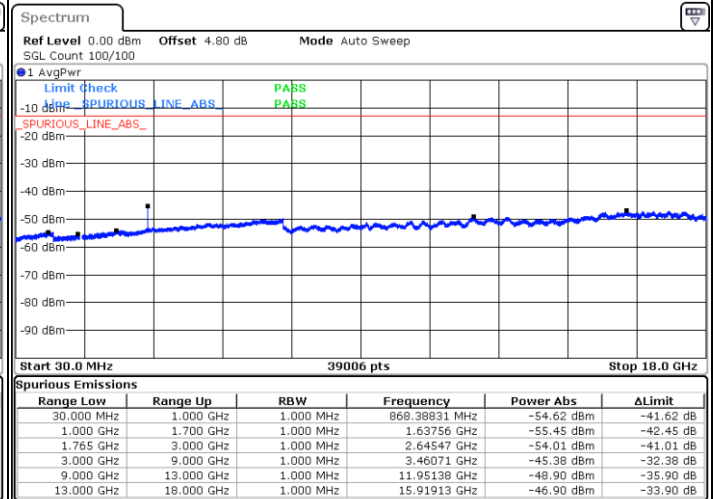
Date: 21 MAR 2020 11:18:59

Middle Channel / QPSK



Date: 21 MAR 2020 11:20:34

Middle Channel / 16QAM

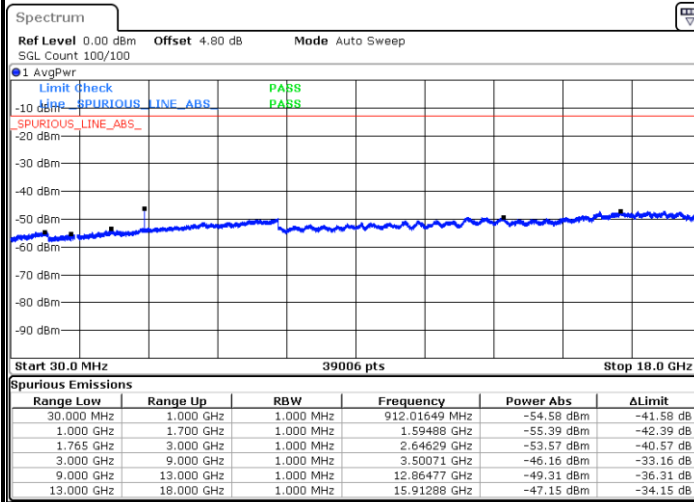


Date: 21 MAR 2020 11:21:28



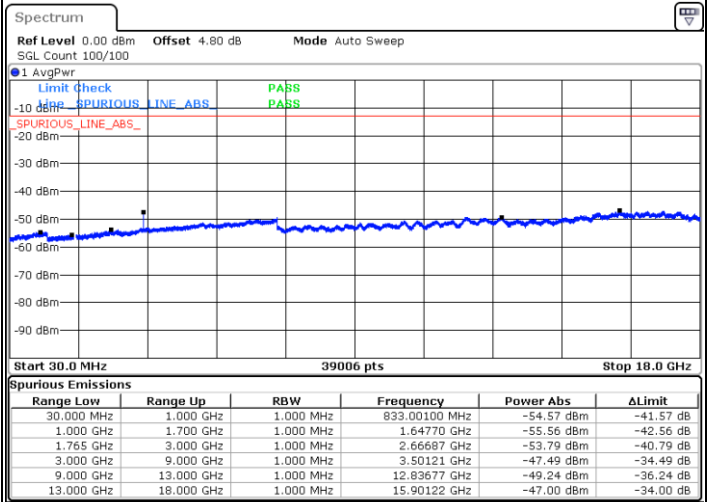
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 21 MAR 2020 11:27:33

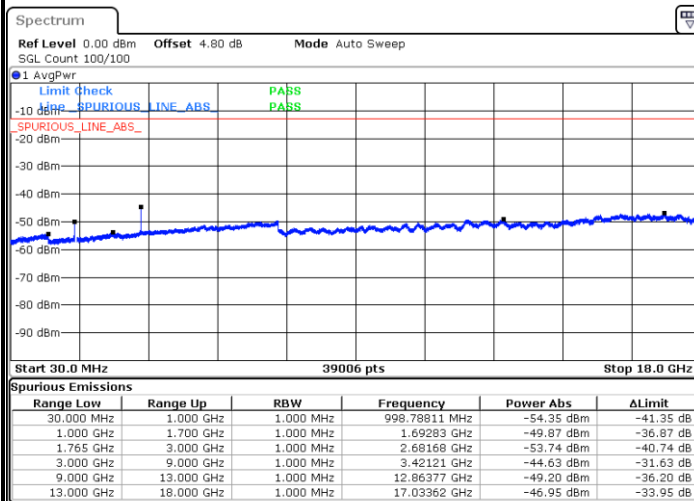
Highest Channel / 16QAM



Date: 21 MAR 2020 11:28:28

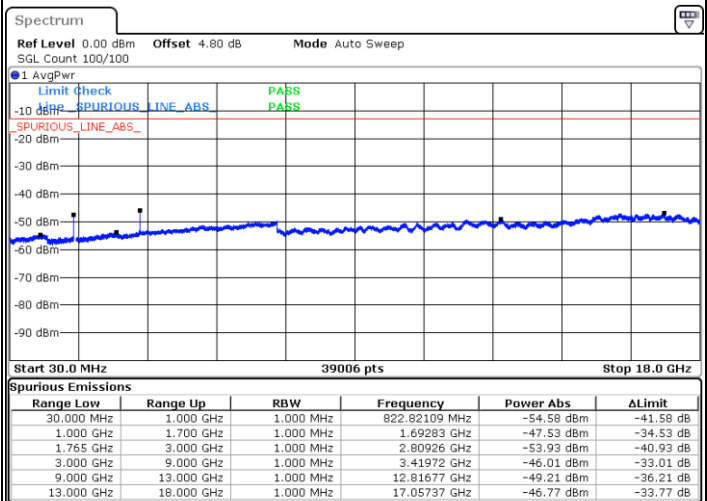
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 21 MAR 2020 11:34:32

Lowest Channel / 16QAM

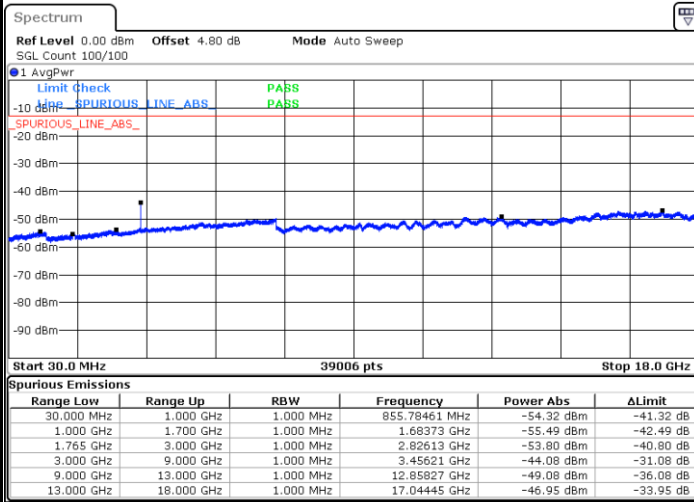


Date: 21 MAR 2020 11:35:27



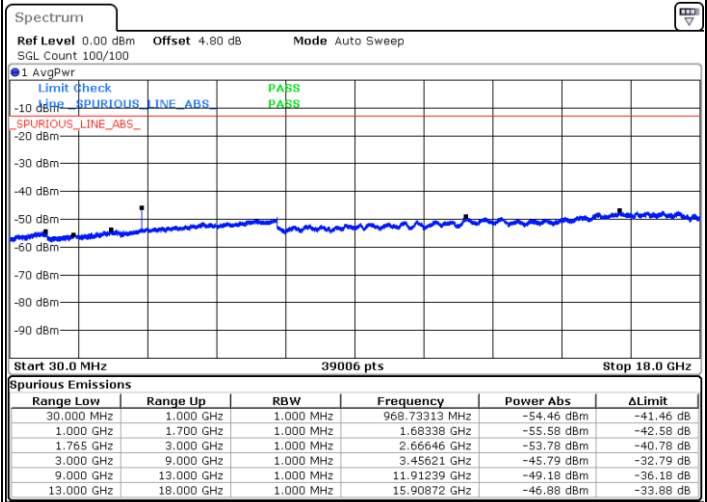
LTE Band 4 / 10MHz

Middle Channel / QPSK



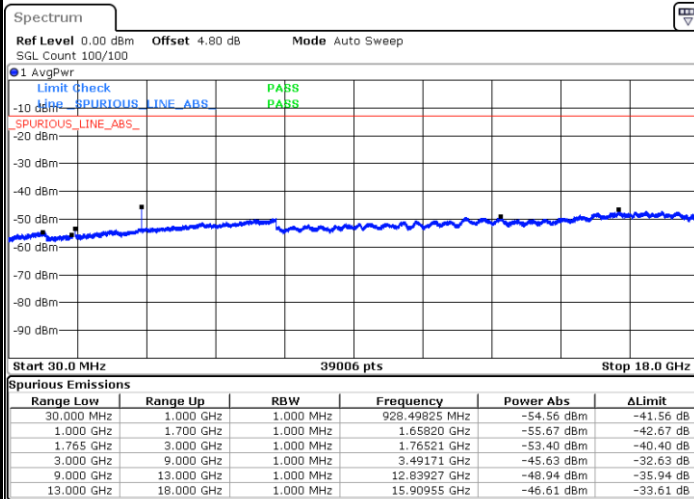
Date: 21 MAR 2020 11:37:01

Middle Channel / 16QAM



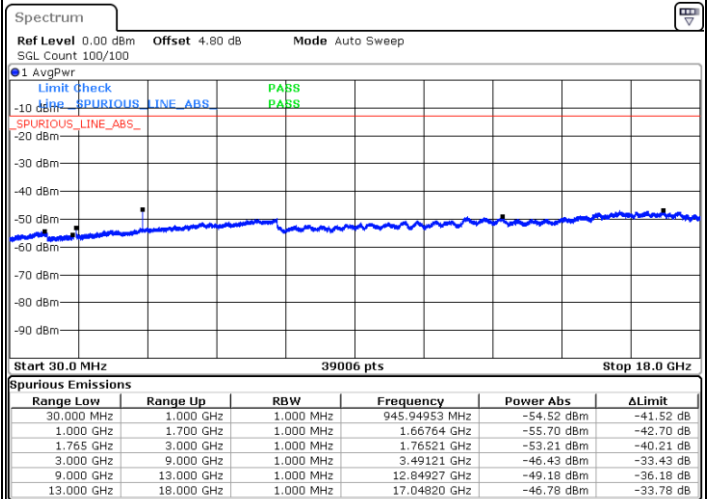
Date: 21 MAR 2020 11:37:56

Highest Channel / QPSK



Date: 21 MAR 2020 11:44:00

Highest Channel / 16QAM

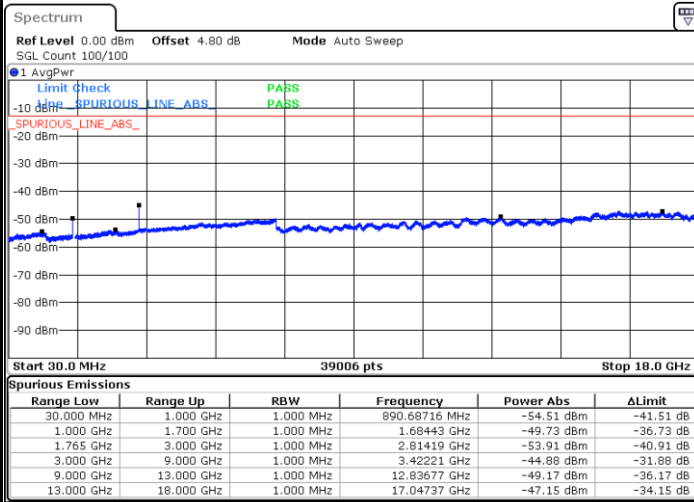


Date: 21 MAR 2020 11:44:55



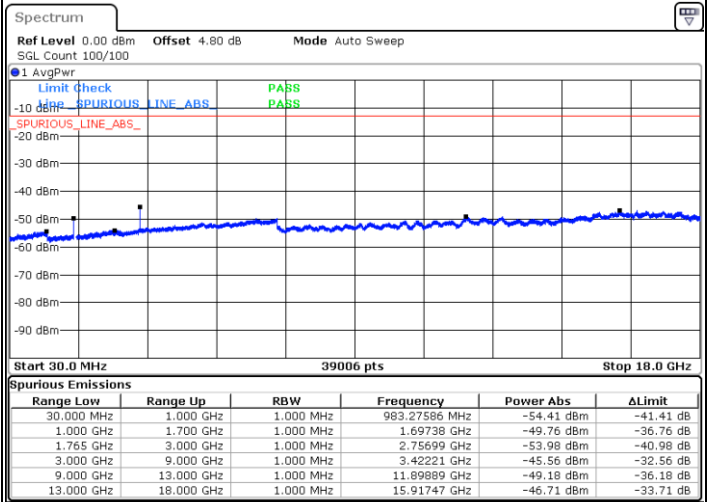
LTE Band 4 / 15MHz

Lowest Channel / QPSK



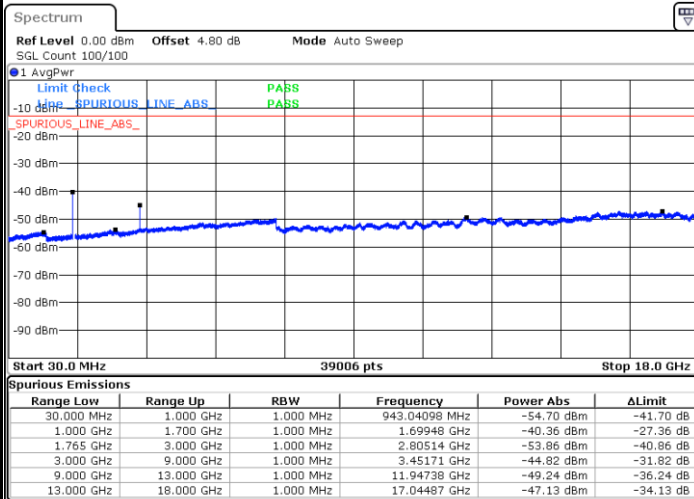
Date: 21 MAR 2020 11:50:59

Lowest Channel / 16QAM



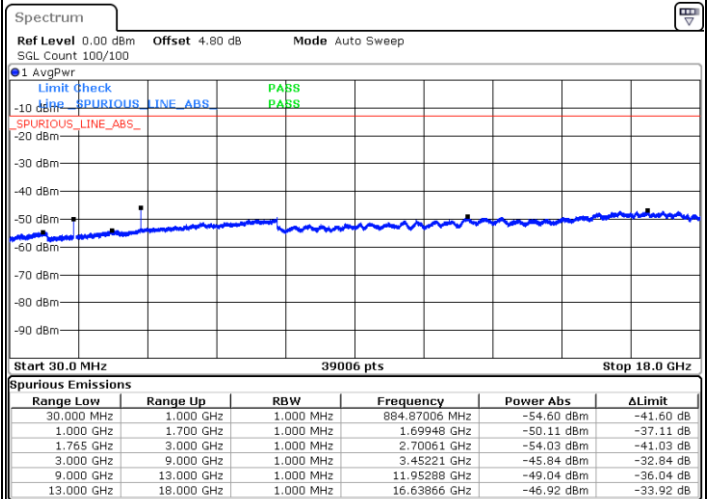
Date: 21 MAR 2020 11:51:53

Middle Channel / QPSK



Date: 21 MAR 2020 11:53:28

Middle Channel / 16QAM

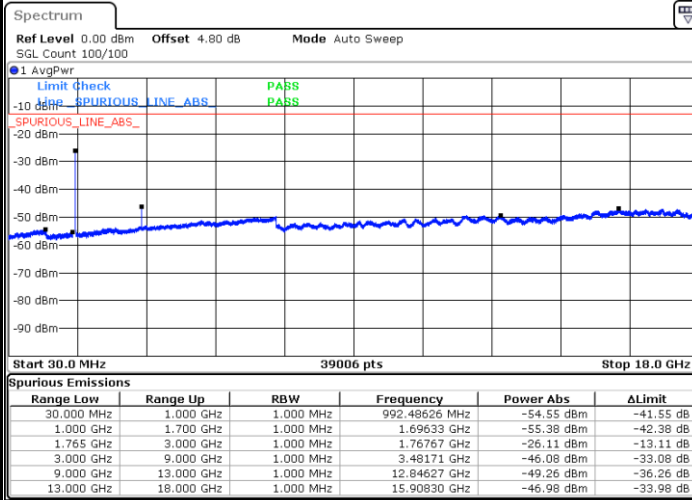


Date: 21 MAR 2020 11:54:22



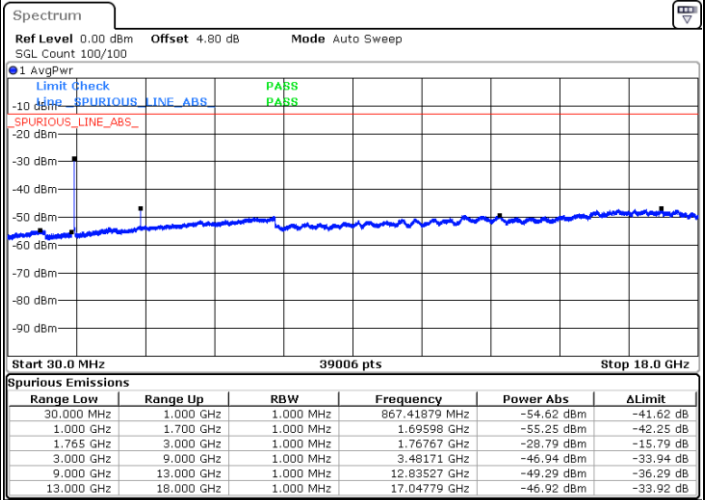
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 21 MAR 2020 12:00:27

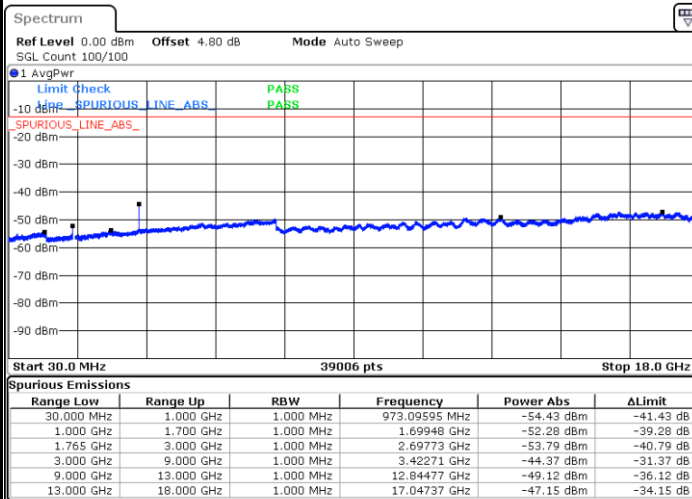
Highest Channel / 16QAM



Date: 21 MAR 2020 12:01:21

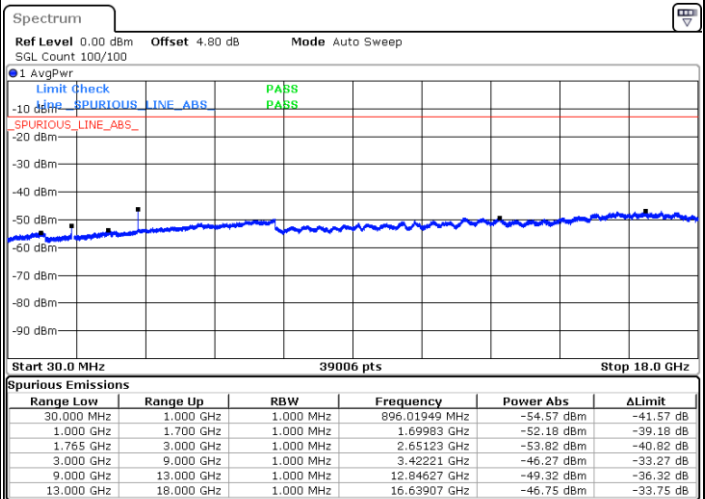
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 21 MAR 2020 12:07:26

Lowest Channel / 16QAM

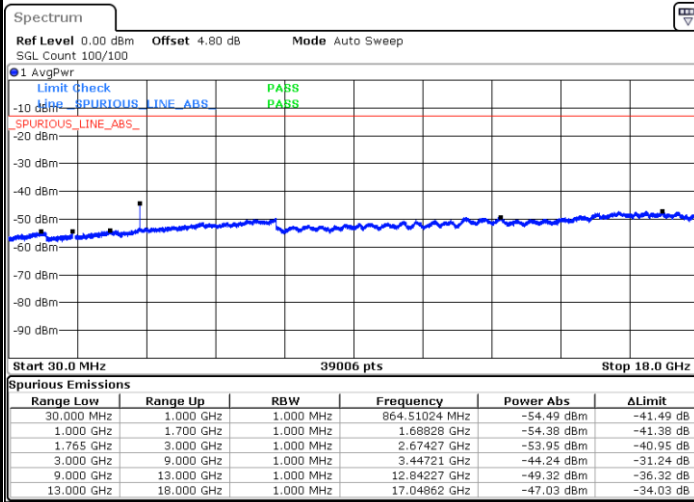


Date: 21 MAR 2020 12:08:20



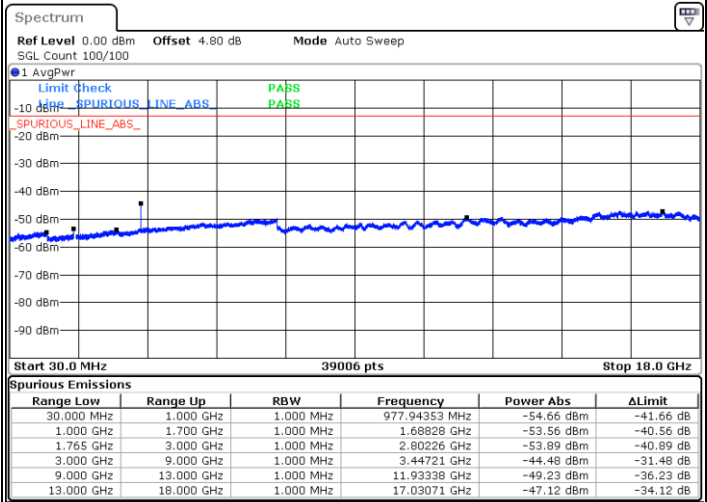
LTE Band 4 / 20MHz

Middle Channel / QPSK



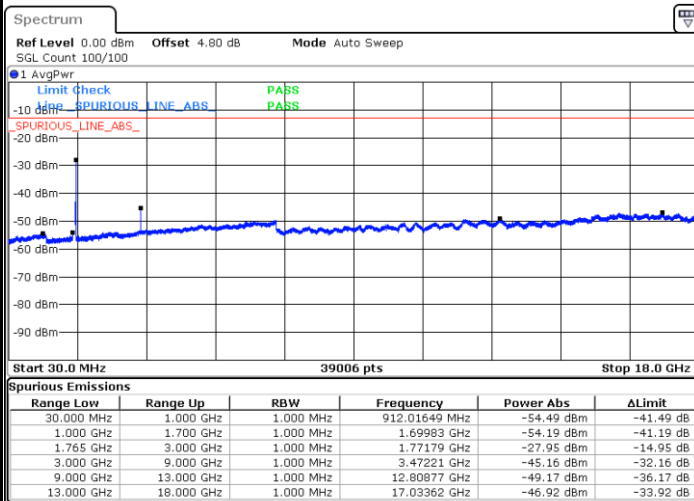
Date: 21 MAR 2020 12:09:55

Middle Channel / 16QAM



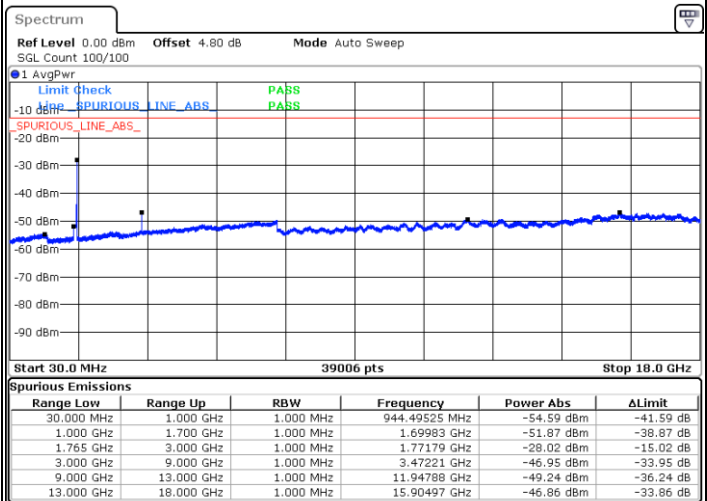
Date: 21 MAR 2020 12:10:49

Highest Channel / QPSK



Date: 21 MAR 2020 12:16:54

Highest Channel / 16QAM

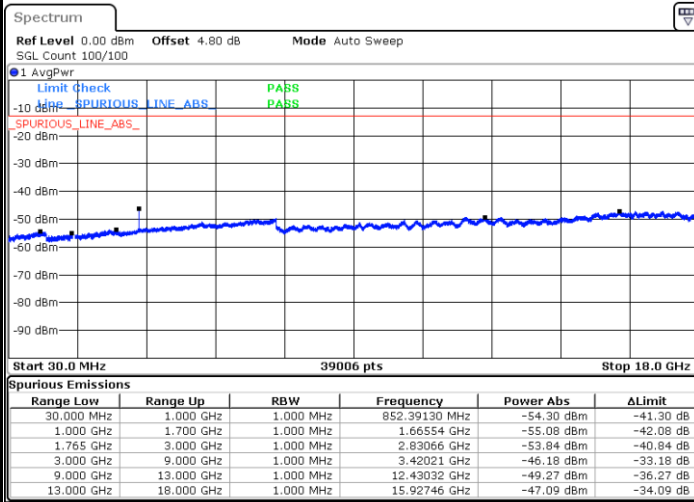


Date: 21 MAR 2020 12:17:48



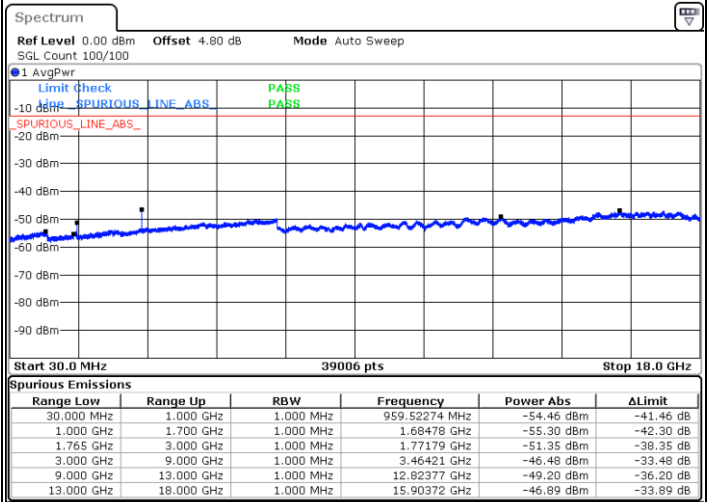
LTE Band 4 / 1.4MHz

Lowest Channel / 64QAM



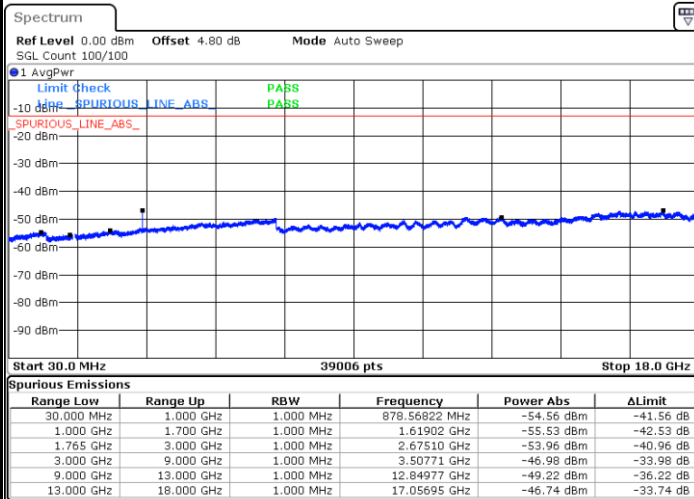
Date: 21 MAR 2020 12:56:13

Middle Channel / 64QAM



Date: 21 MAR 2020 12:57:28

Highest Channel / 64QAM

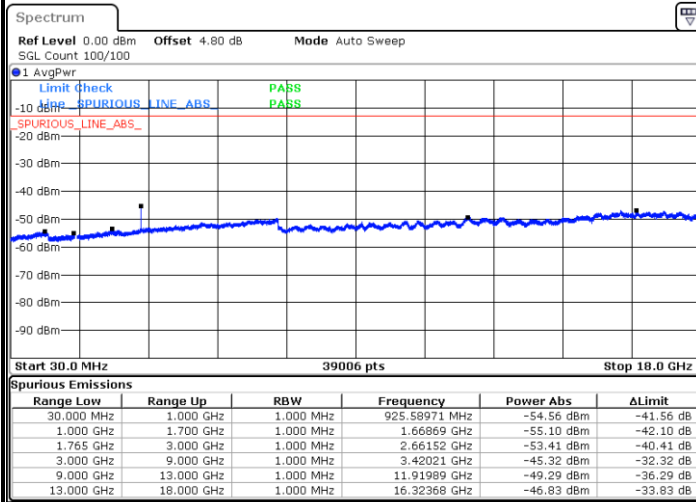


Date: 21 MAR 2020 13:00:57



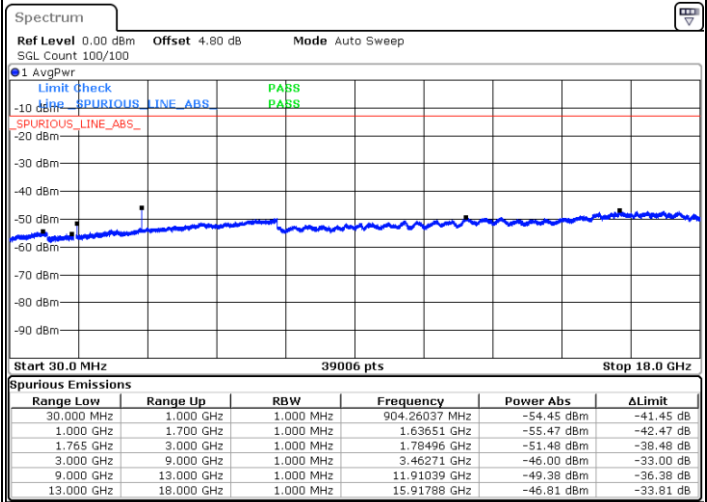
LTE Band 4 / 3MHz

Lowest Channel / 64QAM



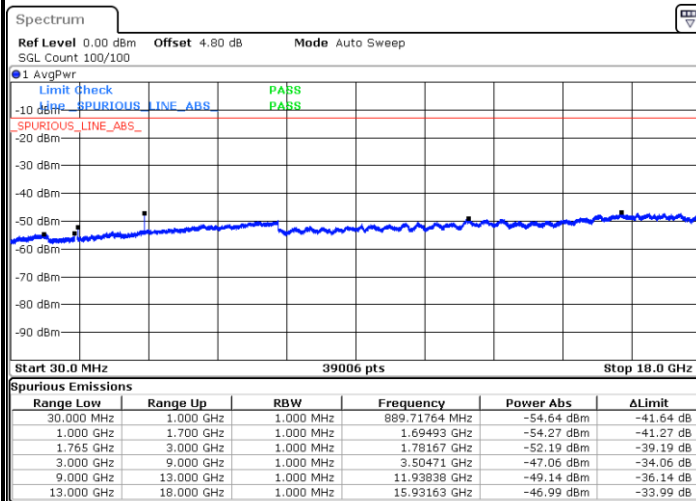
Date: 21 MAR 2020 13:04:27

Middle Channel / 64QAM



Date: 21 MAR 2020 13:05:41

Highest Channel / 64QAM

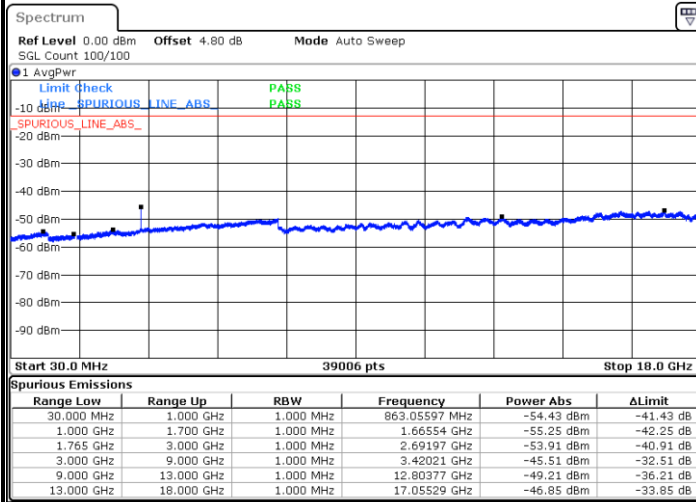


Date: 21 MAR 2020 13:09:10



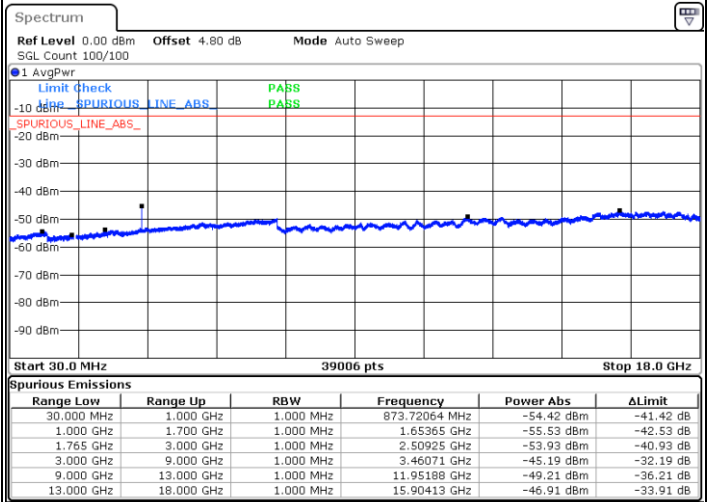
LTE Band 4 / 5MHz

Lowest Channel / 64QAM



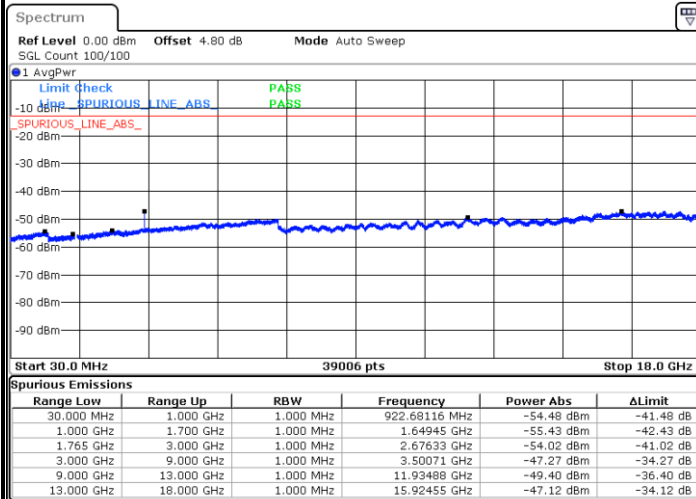
Date: 21 MAR 2020 13:12:40

Middle Channel / 64QAM



Date: 21 MAR 2020 13:13:54

Highest Channel / 64QAM

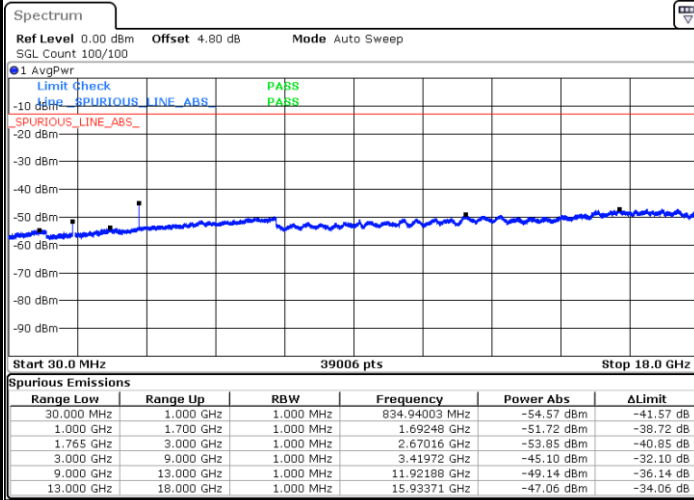


Date: 21 MAR 2020 13:17:24



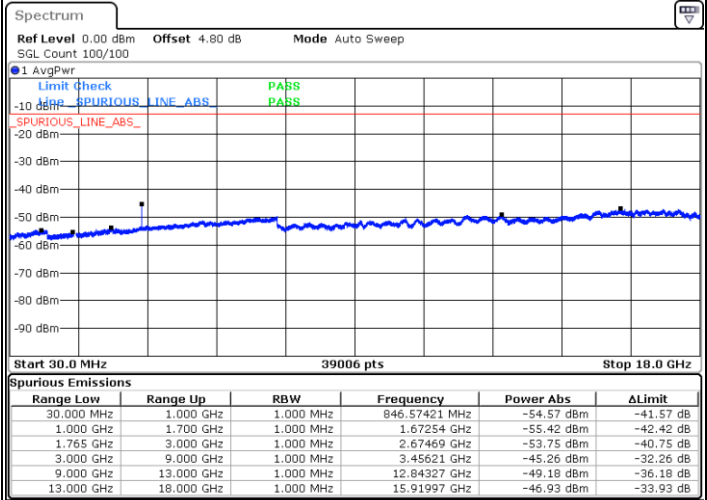
LTE Band 4 / 10MHz

Lowest Channel / 64QAM



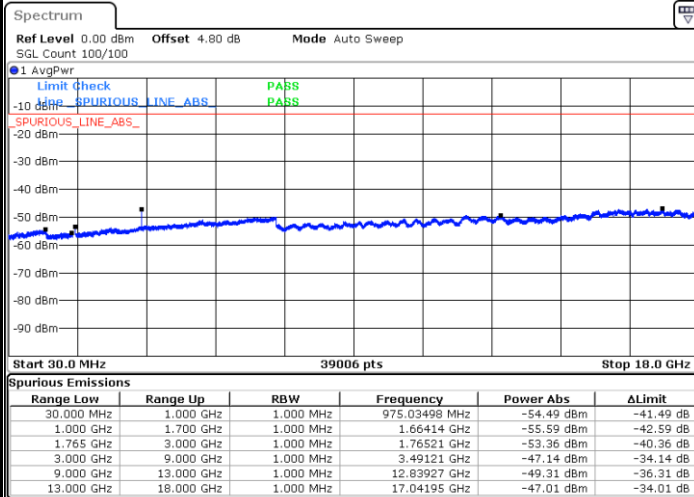
Date: 21 MAR 2020 13:20:53

Middle Channel / 64QAM



Date: 21 MAR 2020 13:22:08

Highest Channel / 64QAM

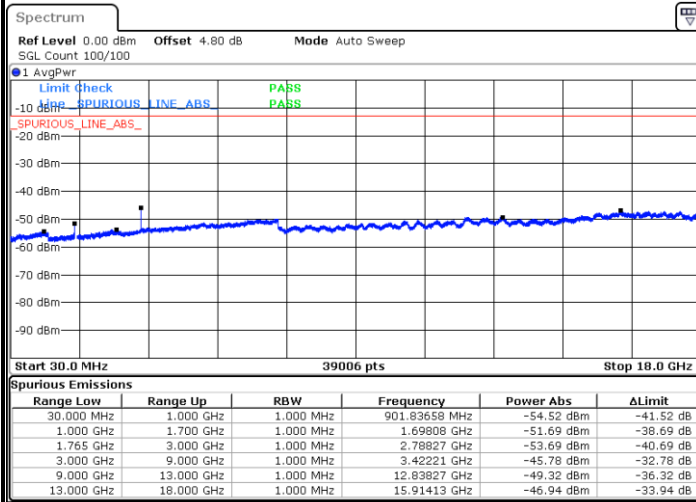


Date: 21 MAR 2020 13:25:37



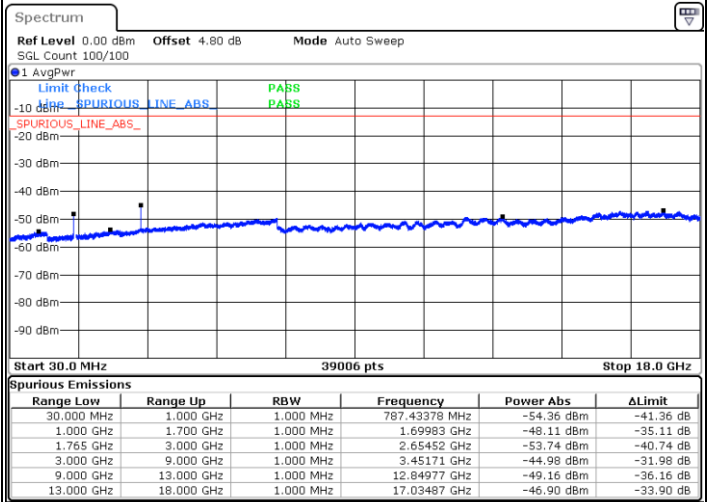
LTE Band 4 / 15MHz

Lowest Channel / 64QAM



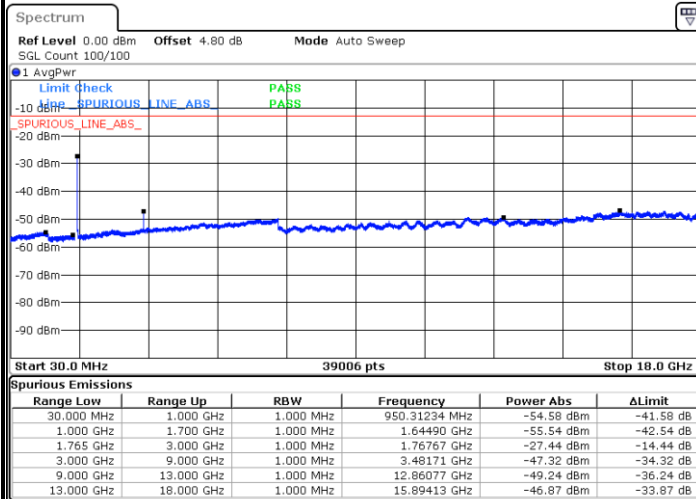
Date: 21 MAR 2020 13:29:07

Middle Channel / 64QAM



Date: 21 MAR 2020 13:30:22

Highest Channel / 64QAM

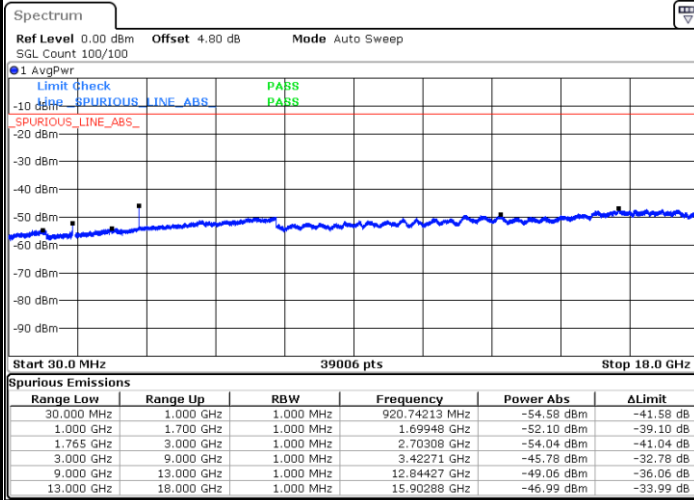


Date: 21 MAR 2020 13:33:51



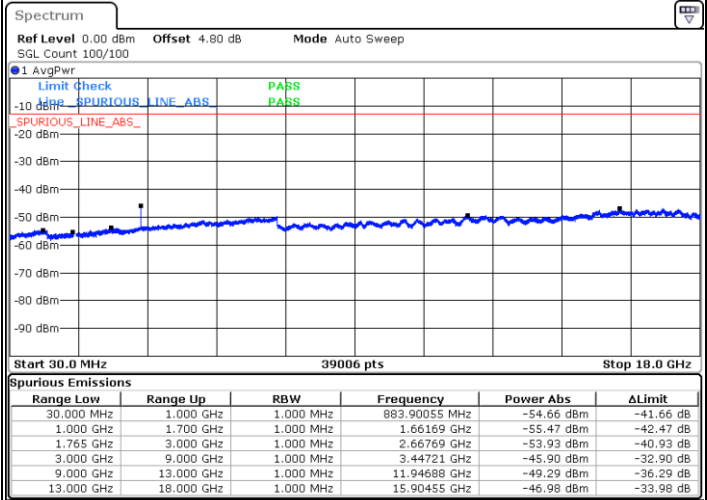
LTE Band 4 / 20MHz

Lowest Channel / 64QAM



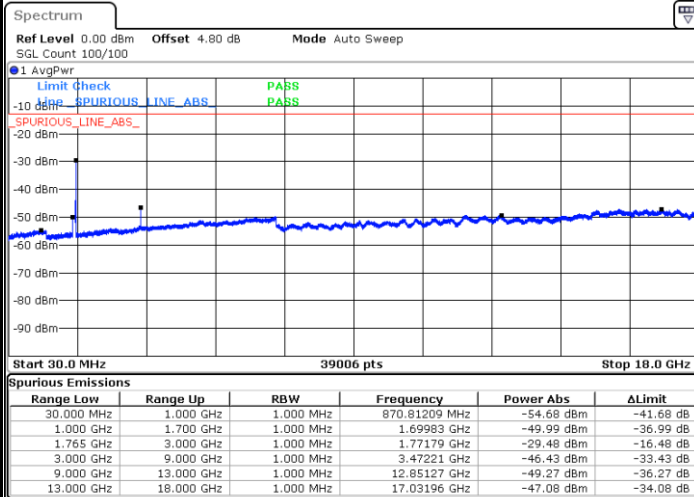
Date: 21 MAR 2020 13:37:21

Middle Channel / 64QAM



Date: 21 MAR 2020 13:38:35

Highest Channel / 64QAM



Date: 21 MAR 2020 13:42:05

Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0007	
30	Normal Voltage	0.0029	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0034	
20	Battery End Point	0.0028	

Note:

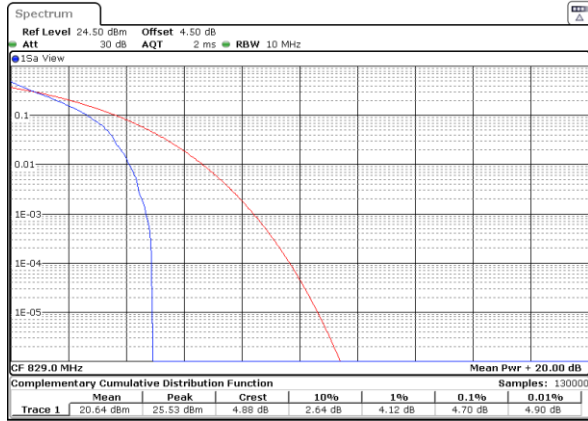
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



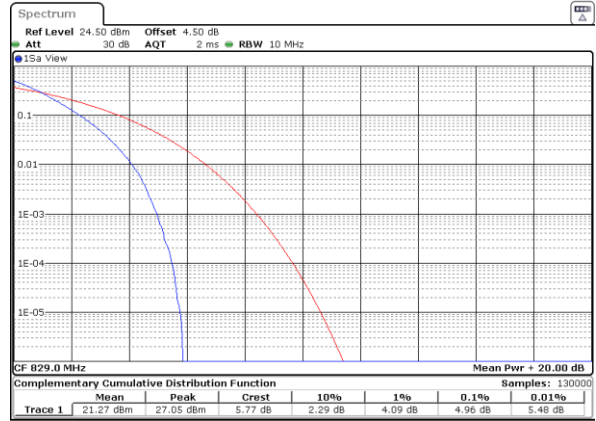
LTE Band 5

Peak-to-Average Ratio

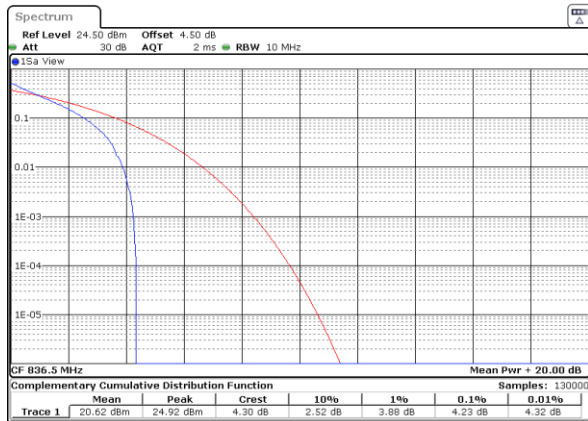
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.70	4.96	5.54	5.77	PASS
Middle CH	4.23	5.30	5.19	6.14	
Highest CH	4.87	5.22	5.94	6.17	
Mode	LTE Band 5 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.29	6.09	-	-	PASS
Middle CH	5.74	6.41	-	-	
Highest CH	6.43	6.29	-	-	

LTE Band 5 / 10MHz / QPSK
Lowest Channel / 1RB


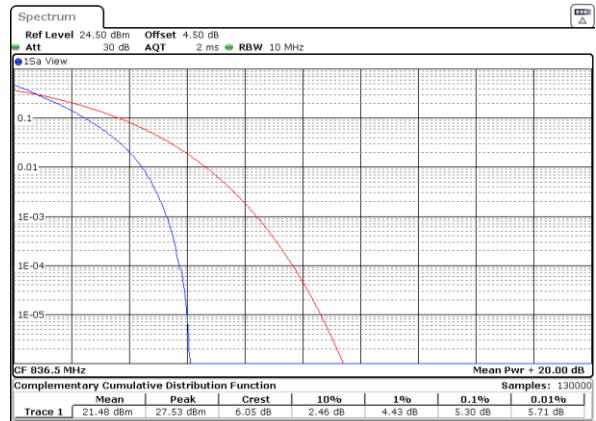
Date: 20 MAR 2020 20:26:28

Lowest Channel / Full RB


Date: 20 MAR 2020 20:26:37

Middle Channel / 1RB


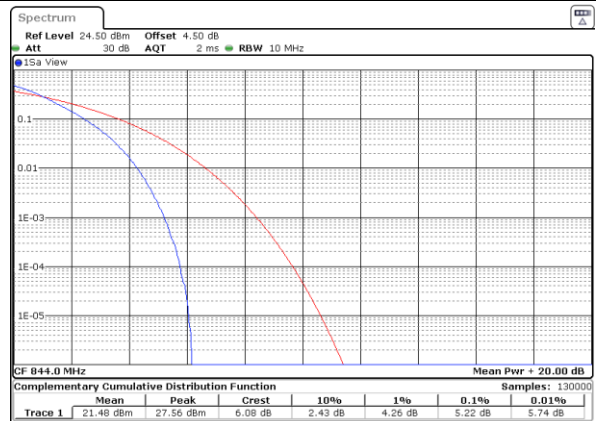
Date: 20 MAR 2020 20:26:19

Middle Channel / Full RB


Date: 20 MAR 2020 20:26:10

Highest Channel / 1RB


Date: 20 MAR 2020 20:25:50

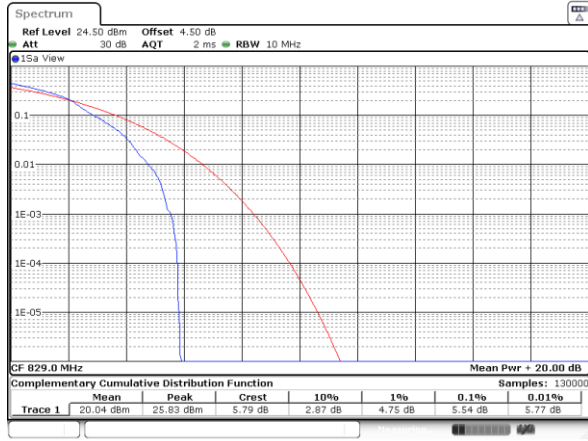
Highest Channel / Full RB


Date: 20 MAR 2020 20:26:00

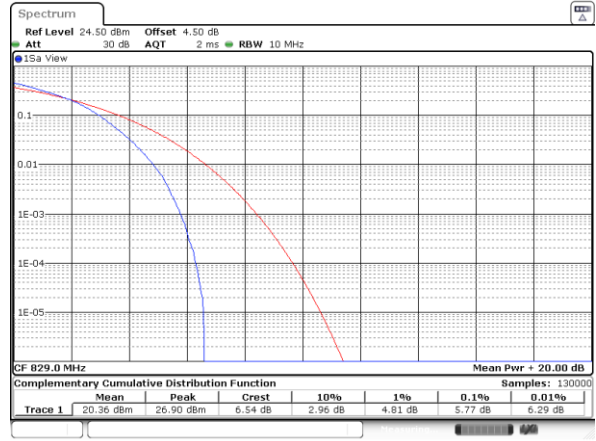


LTE Band 5 / 10MHz / 16QAM

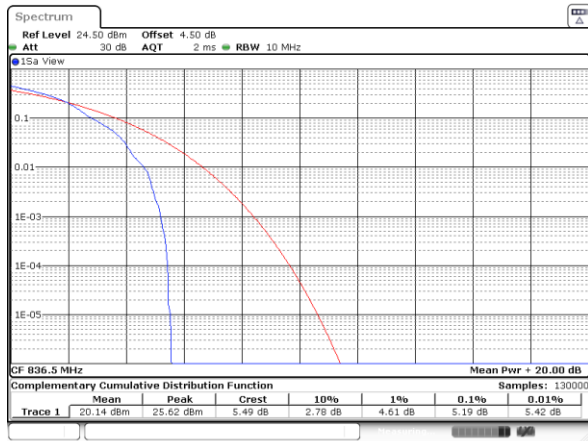
Lowest Channel / 1RB



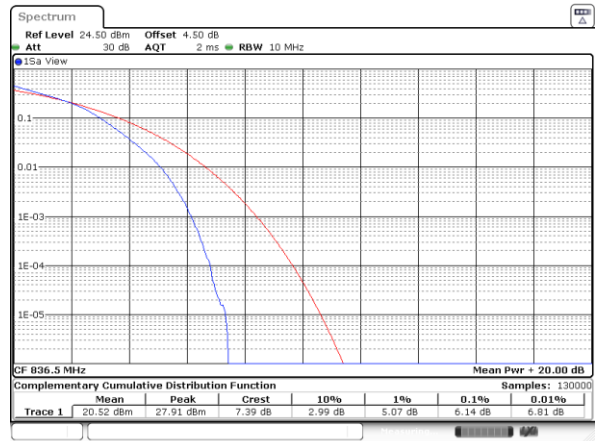
Lowest Channel / Full RB



Middle Channel / 1RB



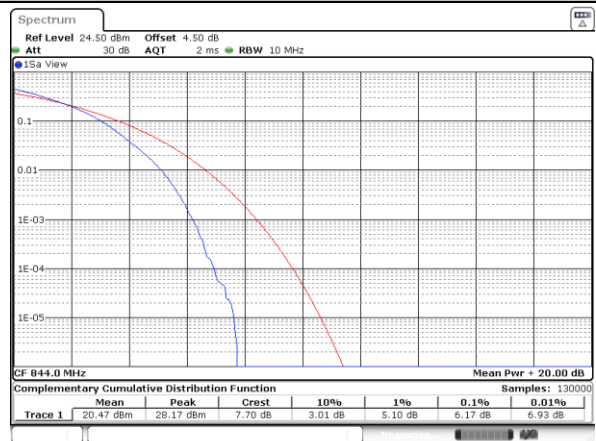
Middle Channel / Full RB



Highest Channel / 1RB



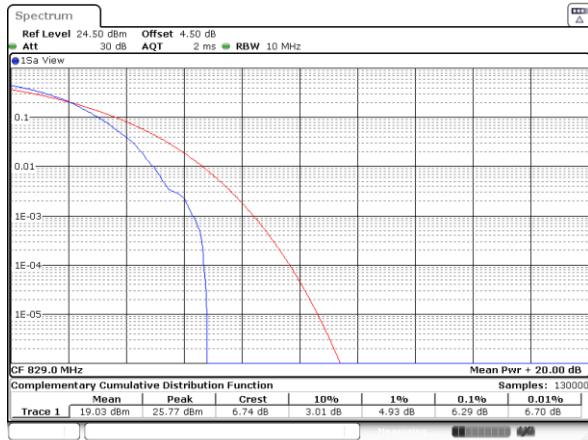
Highest Channel / Full RB



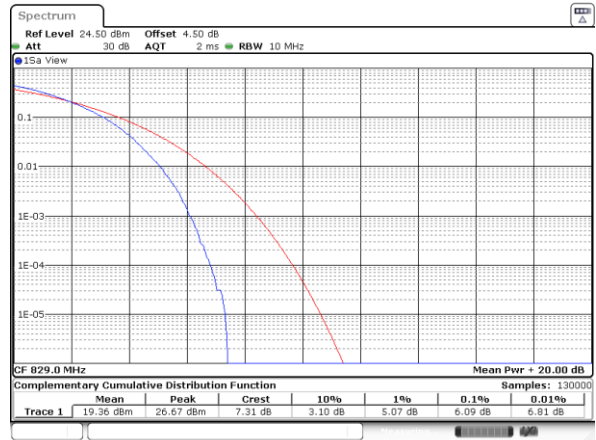


LTE Band 5 / 10MHz / 64QAM

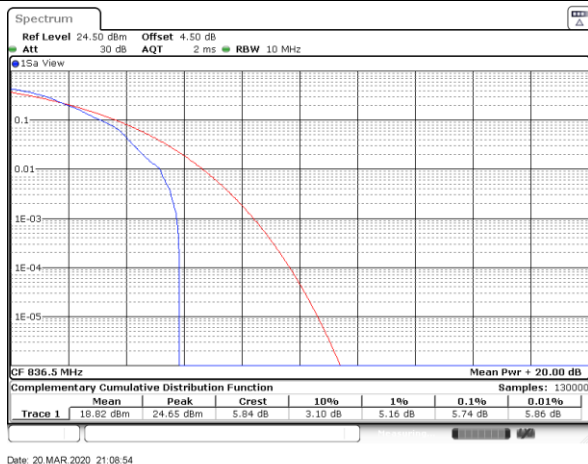
Lowest Channel / 1RB



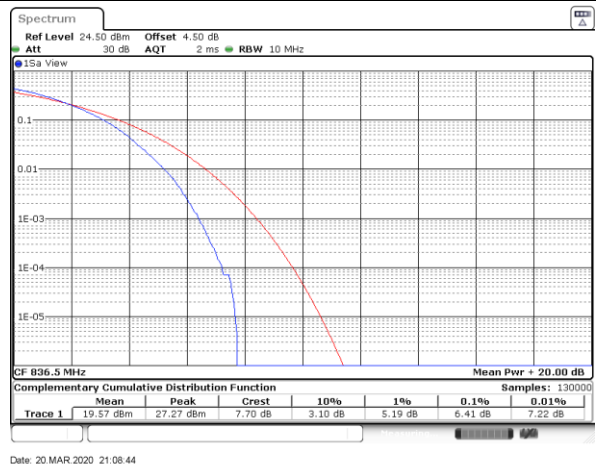
Lowest Channel / Full RB



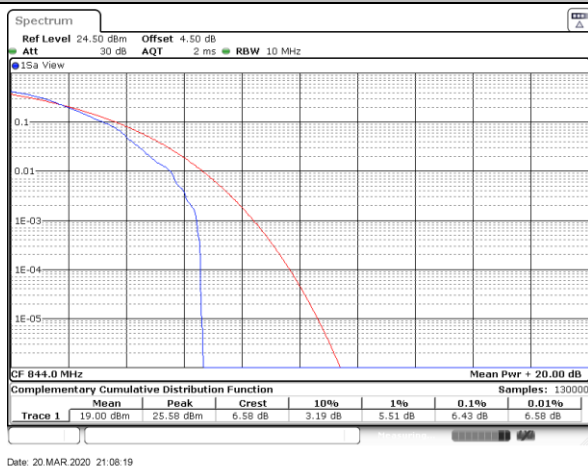
Middle Channel / 1RB



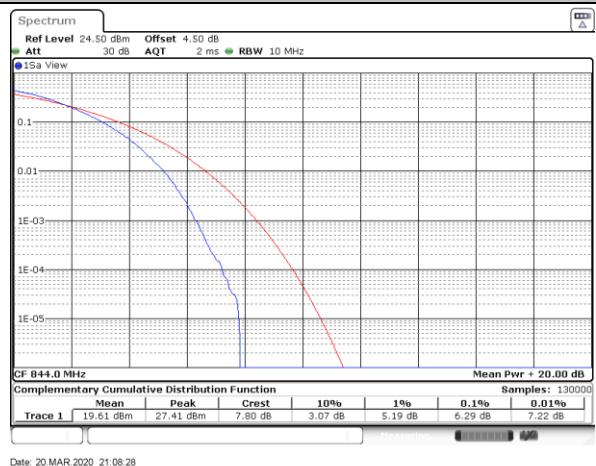
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



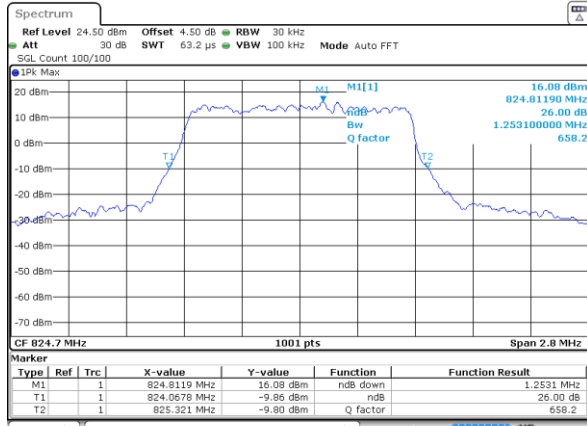
**26dB Bandwidth**

Mode	LTE Band 5 : 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	1.29	2.96	2.99	4.81	4.81	9.67	9.71	-	-	-	-
Middle CH	1.26	1.28	2.96	2.96	4.86	4.85	9.69	9.61	-	-	-	-
Highest CH	1.27	1.24	2.93	2.95	4.83	4.83	9.75	9.61	-	-	-	-
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.31	-	2.93	-	4.82	-	9.67	-	-	-	-	-
Middle CH	1.28	-	2.96	-	4.82	-	9.79	-	-	-	-	-
Highest CH	1.26	-	2.94	-	4.85	-	9.65	-	-	-	-	-



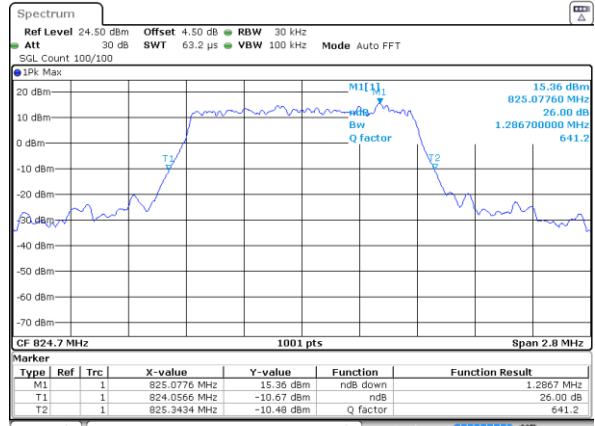
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



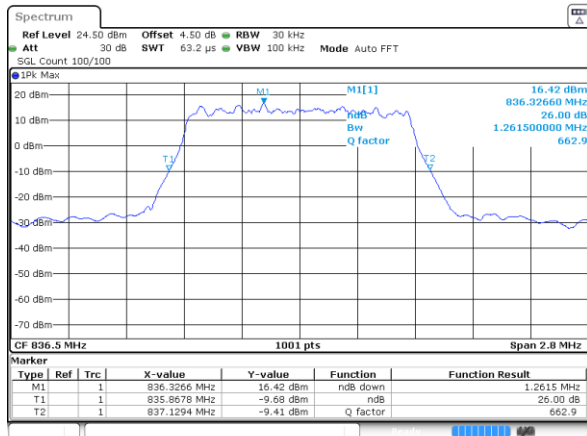
Date: 20 MAR 2020 19:02:48

Lowest Channel / 1.4MHz / 16QAM



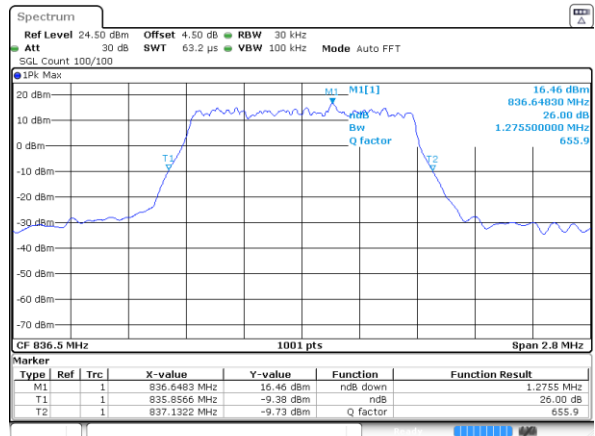
Date: 20 MAR 2020 19:02:38

Middle Channel / 1.4MHz / QPSK



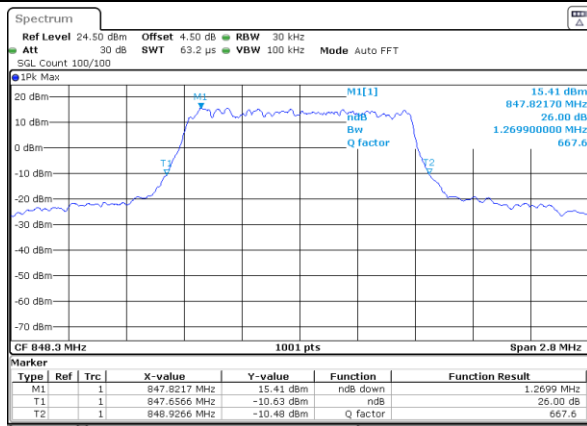
Date: 20 MAR 2020 19:12:14

Middle Channel / 1.4MHz / 16QAM



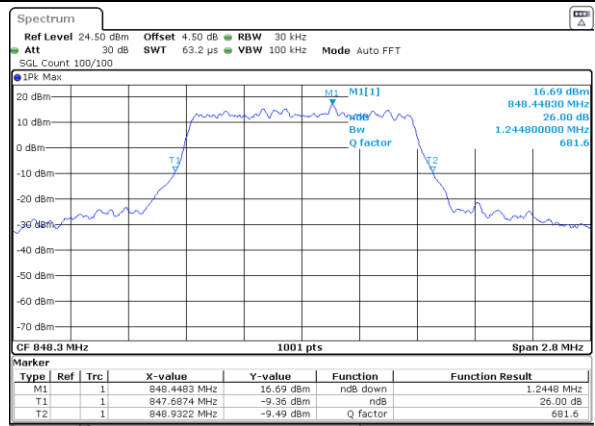
Date: 20 MAR 2020 19:12:24

Highest Channel / 1.4MHz / QPSK



Date: 20 MAR 2020 19:14:43

Highest Channel / 1.4MHz / 16QAM

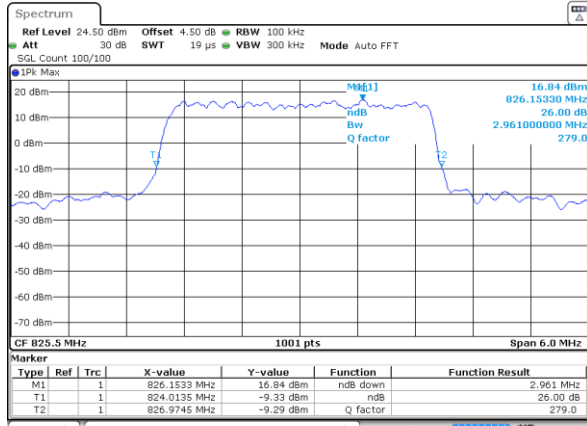


Date: 20 MAR 2020 19:14:53



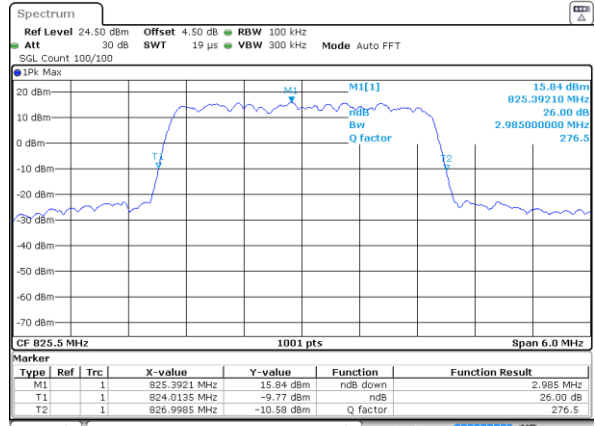
LTE Band 5

Lowest Channel / 3MHz / QPSK



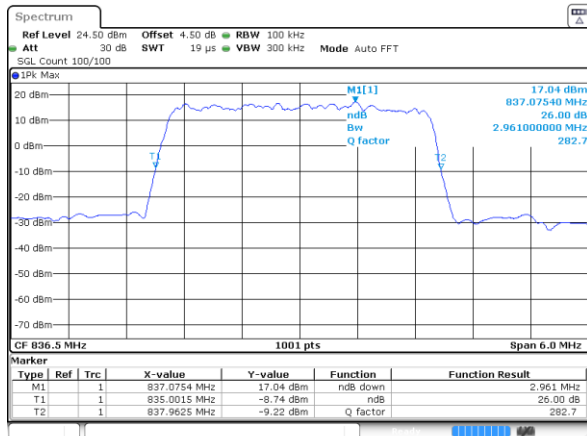
Date: 20 MAR 2020 19:23:41

Lowest Channel / 3MHz / 16QAM



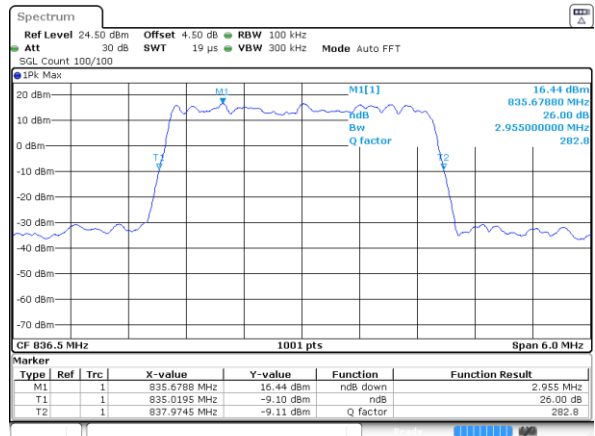
Date: 20 MAR 2020 19:23:51

Middle Channel / 3MHz / QPSK



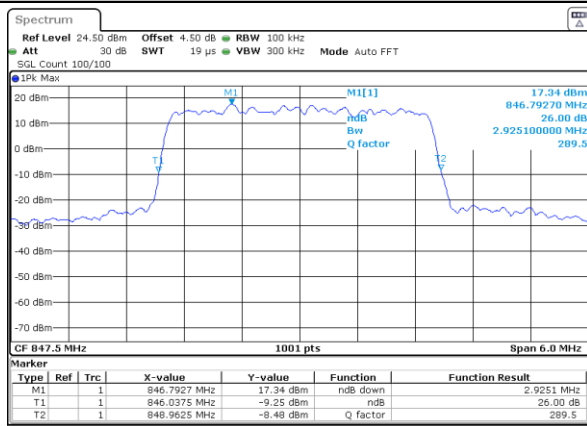
Date: 20 MAR 2020 19:32:39

Middle Channel / 3MHz / 16QAM



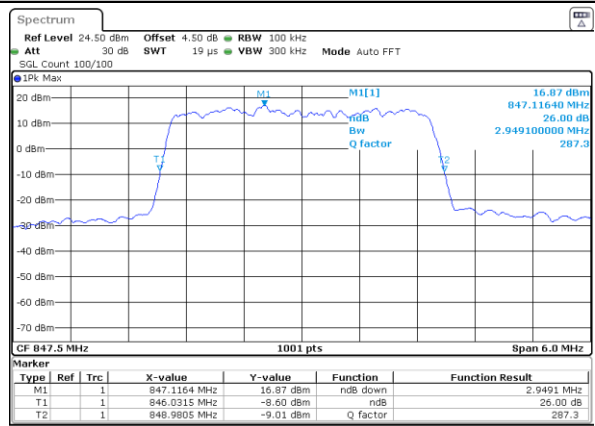
Date: 20 MAR 2020 19:32:49

Highest Channel / 3MHz / QPSK



Date: 20 MAR 2020 19:35:08

Highest Channel / 3MHz / 16QAM

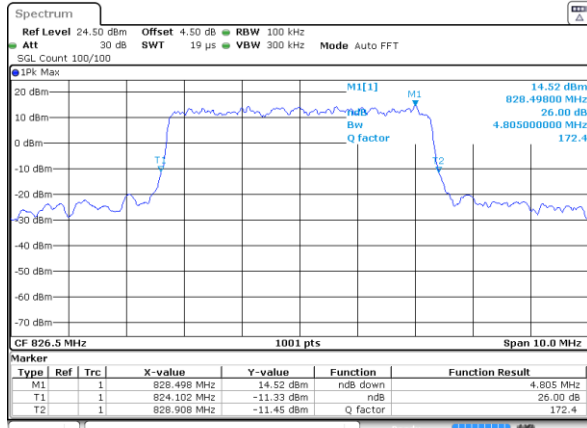


Date: 20 MAR 2020 19:35:18



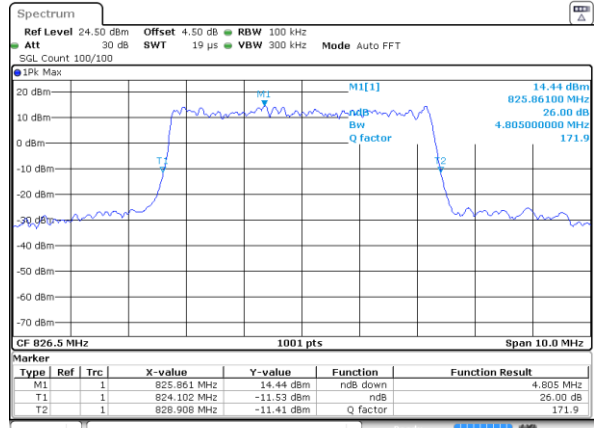
LTE Band 5

Lowest Channel / 5MHz / QPSK



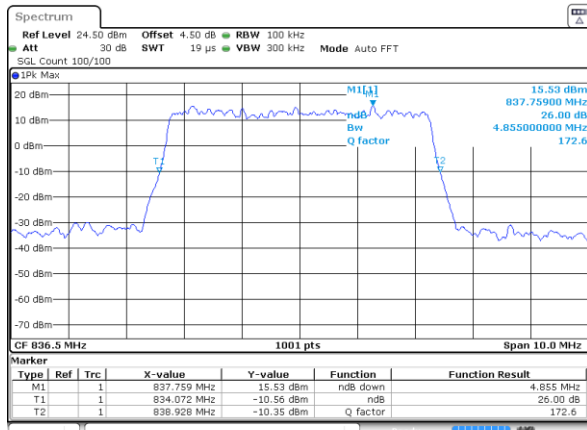
Date: 20 MAR 2020 19:44:06

Lowest Channel / 5MHz / 16QAM



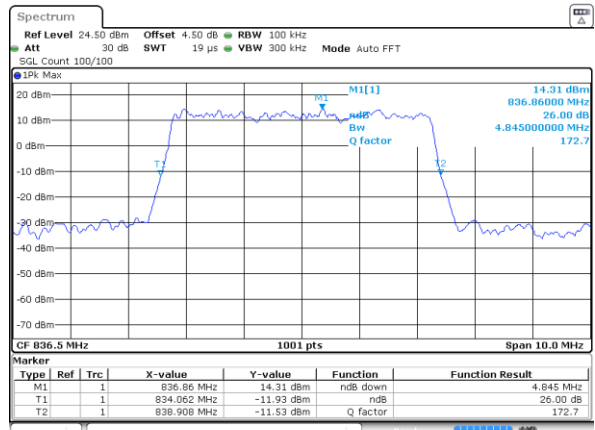
Date: 20 MAR 2020 19:44:16

Middle Channel / 5MHz / QPSK



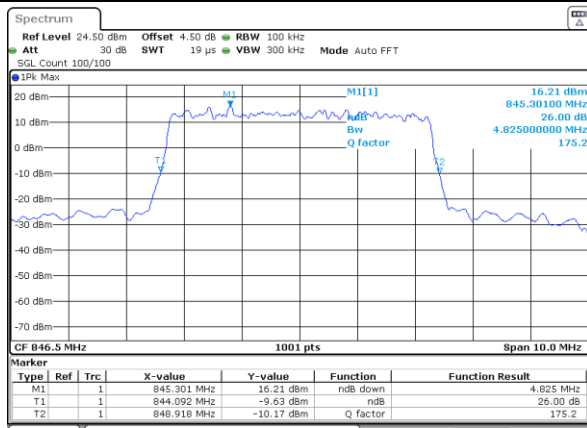
Date: 20 MAR 2020 19:53:05

Middle Channel / 5MHz / 16QAM



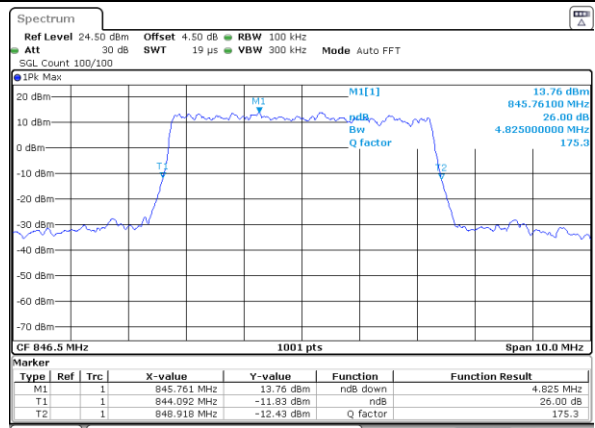
Date: 20 MAR 2020 19:53:15

Highest Channel / 5MHz / QPSK



Date: 20 MAR 2020 19:55:34

Highest Channel / 5MHz / 16QAM

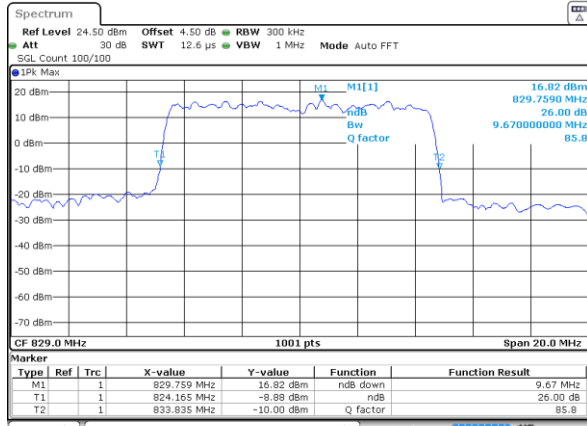


Date: 20 MAR 2020 19:55:44



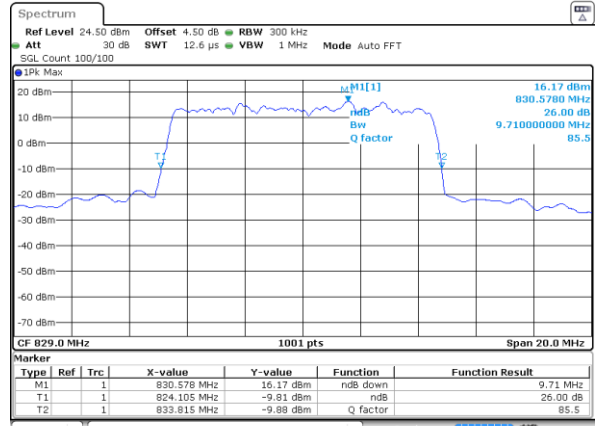
LTE Band 5

Lowest Channel / 10MHz / QPSK



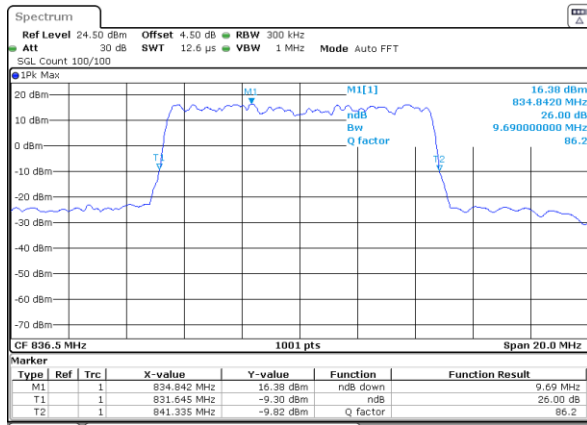
Date: 20 MAR 2020 20:04:32

Lowest Channel / 10MHz / 16QAM



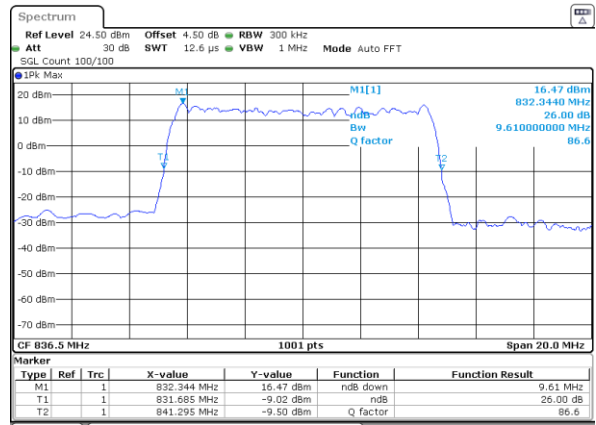
Date: 20 MAR 2020 20:04:42

Middle Channel / 10MHz / QPSK



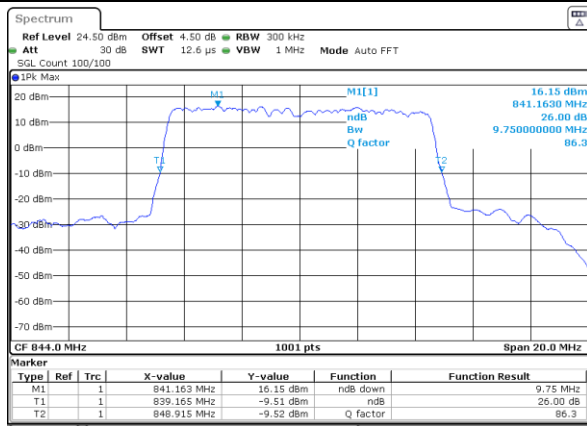
Date: 20 MAR 2020 20:13:31

Middle Channel / 10MHz / 16QAM



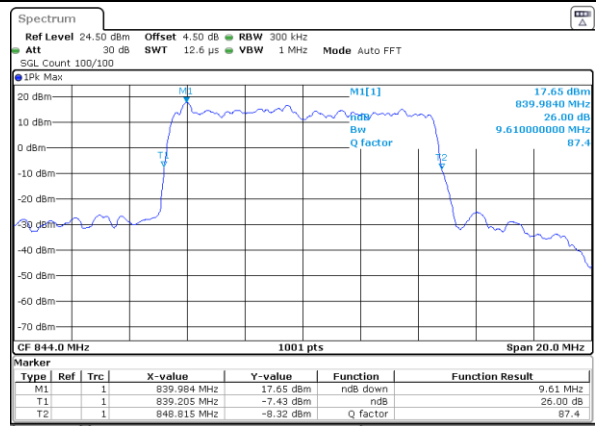
Date: 20 MAR 2020 20:13:41

Highest Channel / 10MHz / QPSK



Date: 20 MAR 2020 20:15:59

Highest Channel / 10MHz / 16QAM

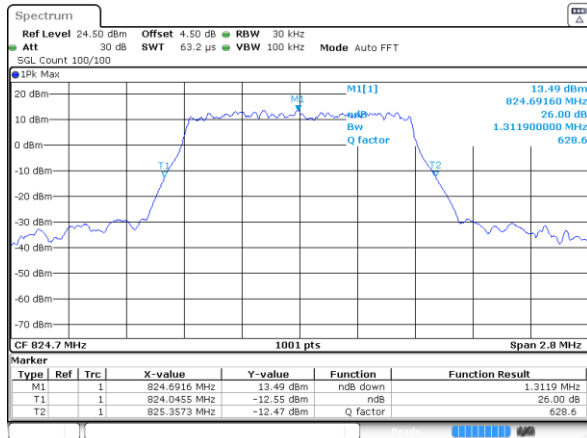


Date: 20 MAR 2020 20:16:09

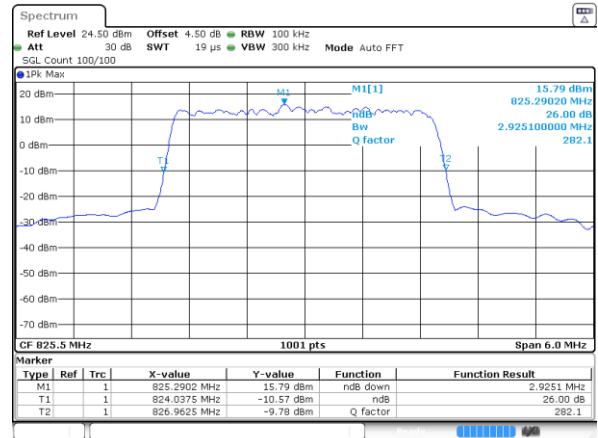


LTE Band 5

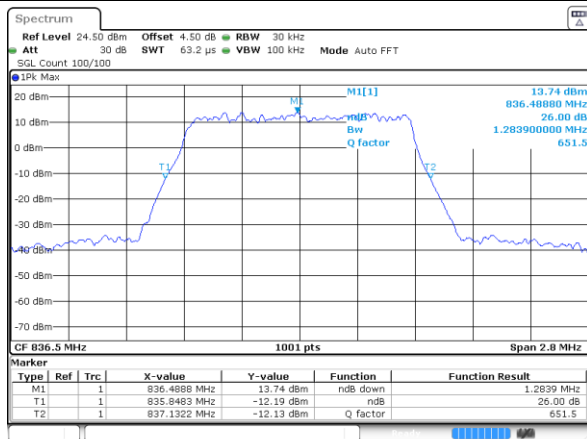
Lowest Channel / 1.4MHz / 64QAM



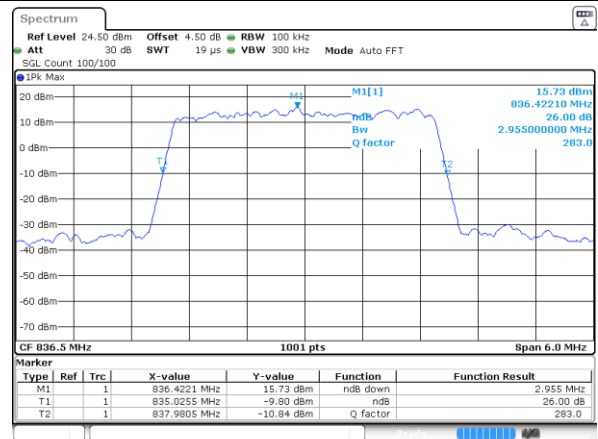
Lowest Channel / 3MHz / 64QAM



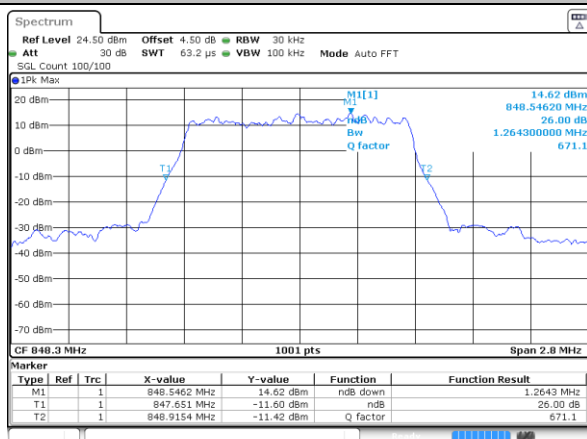
Middle Channel / 1.4MHz / 64QAM



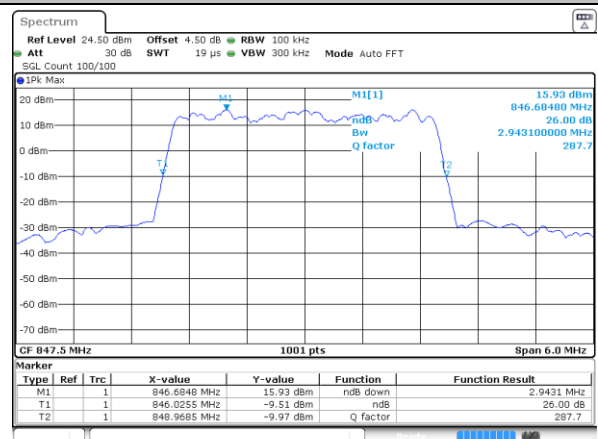
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM



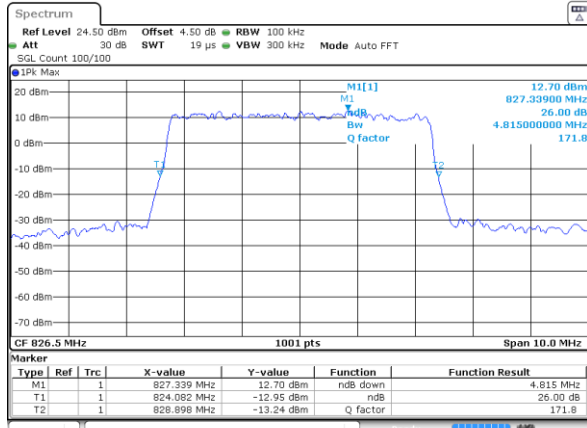
Highest Channel / 3MHz / 64QAM



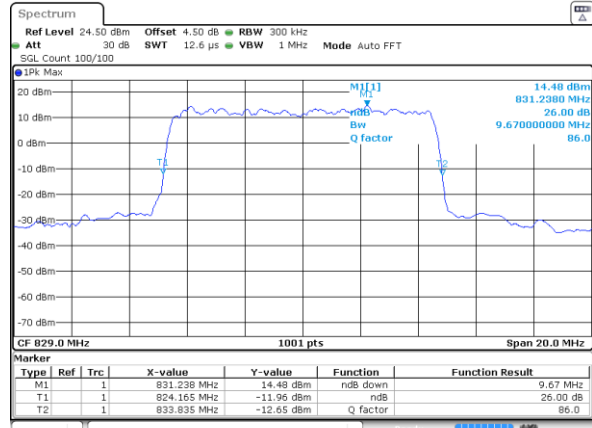


LTE Band 5

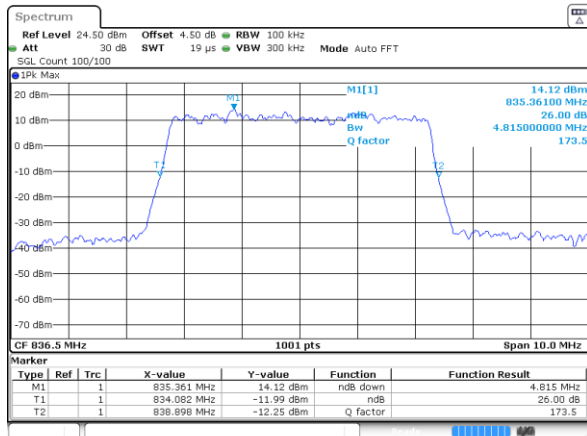
Lowest Channel / 5MHz / 64QAM



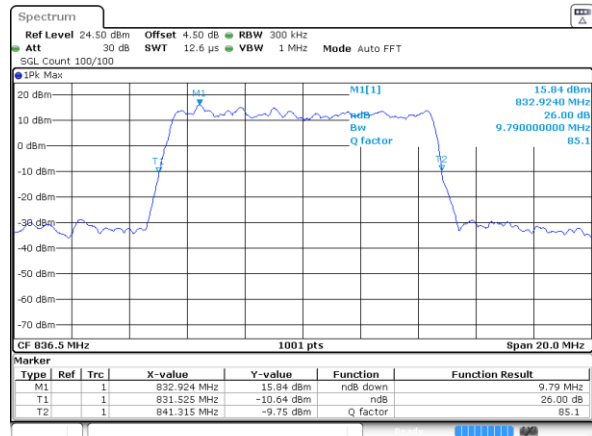
Lowest Channel / 10MHz / 64QAM



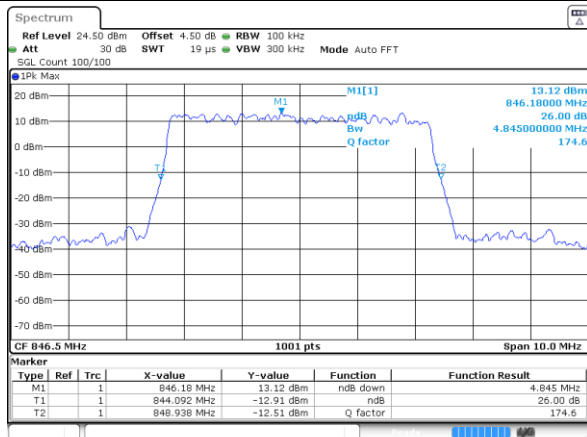
Middle Channel / 5MHz / 64QAM



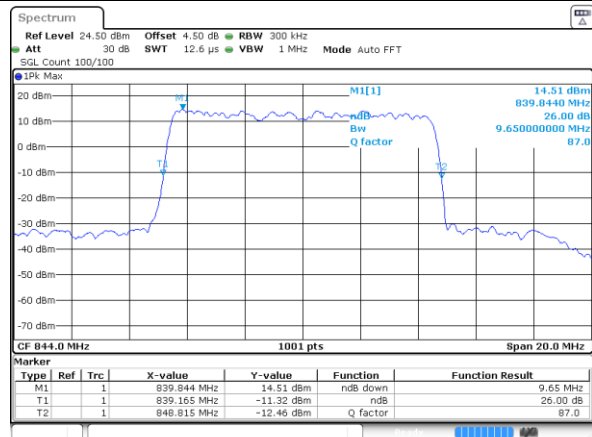
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



Highest Channel / 10MHz / 64QAM



**Occupied Bandwidth**

Mode	LTE Band 5 : 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	1.10	1.08	2.72	2.70	4.49	4.48	9.03	9.05	-	-	-	-
Middle CH	1.09	1.09	2.72	2.73	4.48	4.48	9.01	8.99	-	-	-	-
Highest CH	1.09	1.10	2.70	2.72	4.50	4.48	9.05	8.99	-	-	-	-
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.72	-	4.50	-	9.01	-	-	-	-	-
Middle CH	1.09	-	2.72	-	4.49	-	9.03	-	-	-	-	-
Highest CH	1.09	-	2.72	-	4.49	-	8.99	-	-	-	-	-