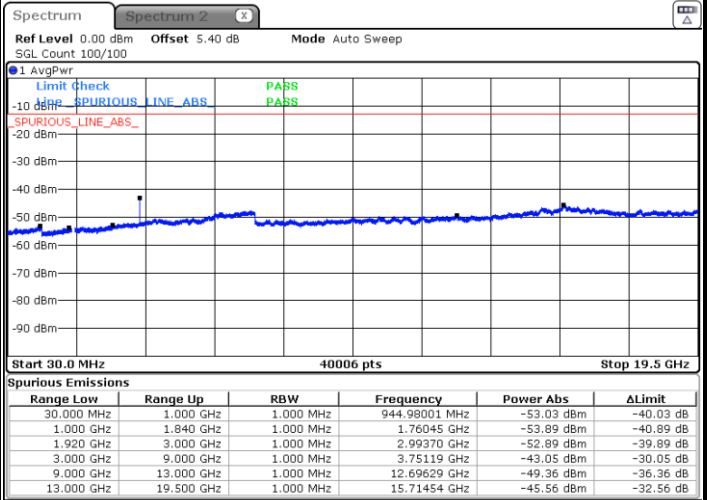
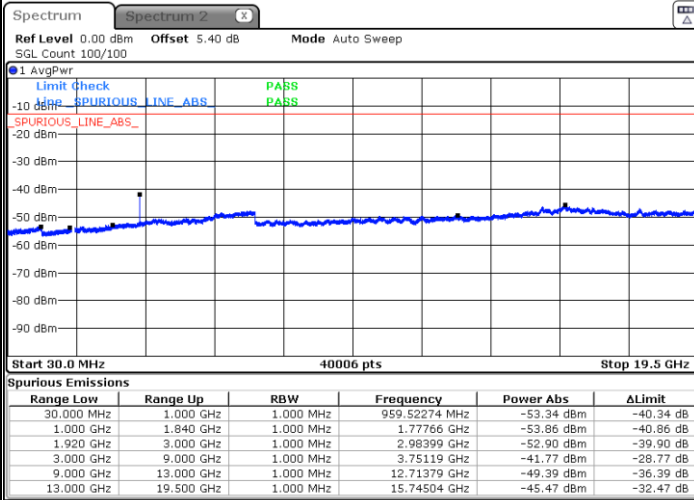




LTE Band 2 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

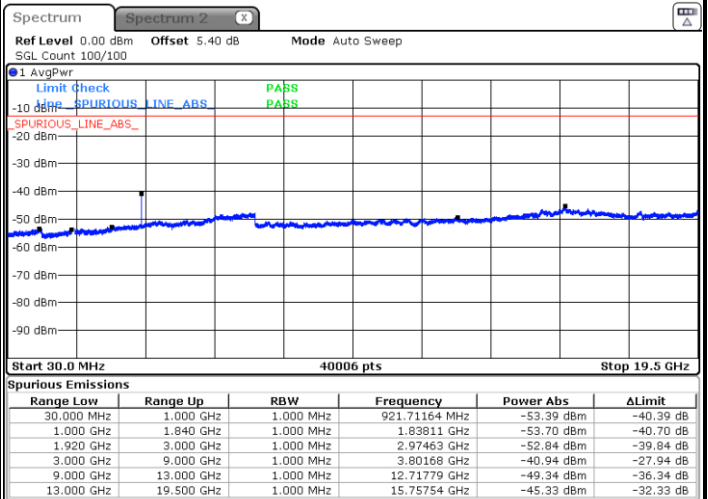
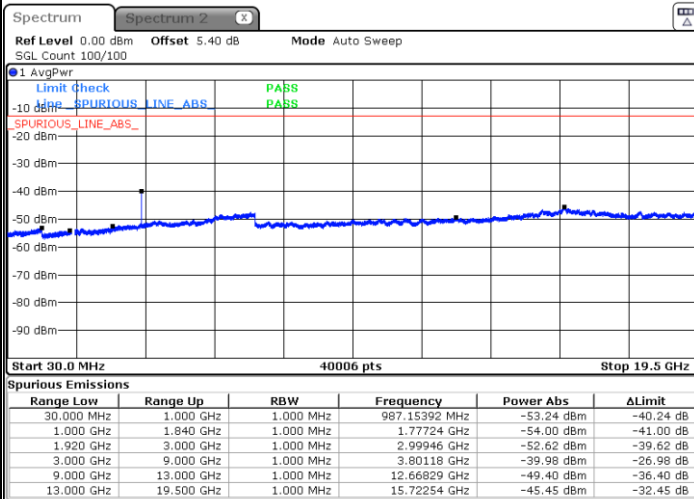


Date: 20 DEC.2019 16:02:40

Date: 20 DEC.2019 16:03:34

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 20 DEC.2019 16:09:38

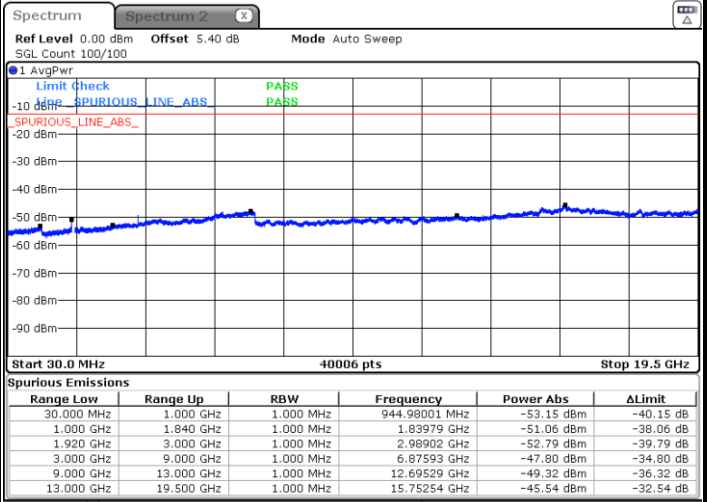
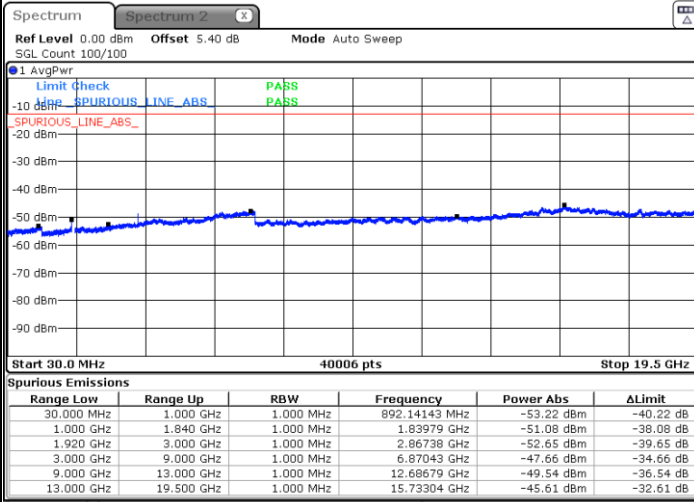
Date: 20 DEC.2019 16:10:32



LTE Band 2 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

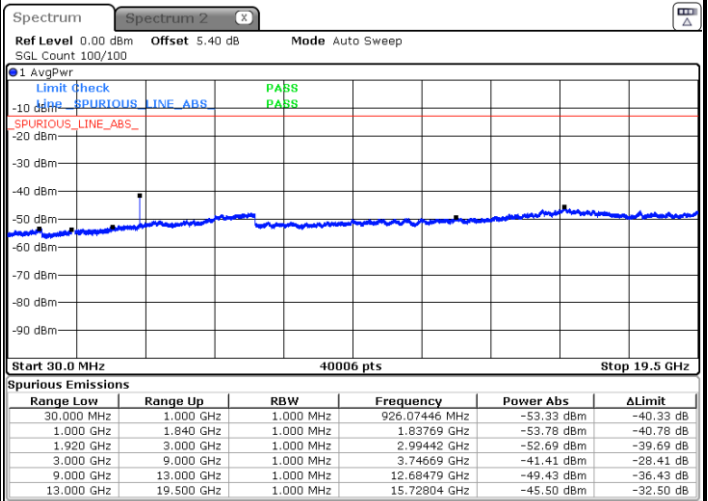
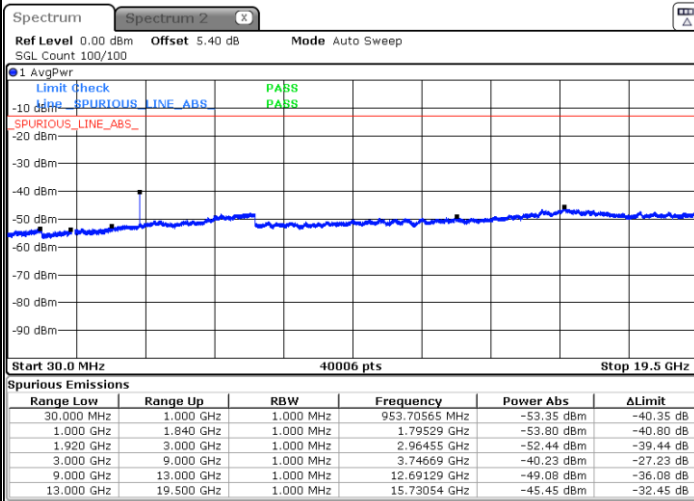


Date: 20 DEC.2019 16:16:36

Date: 20 DEC.2019 16:17:31

Middle Channel / QPSK

Middle Channel / 16QAM



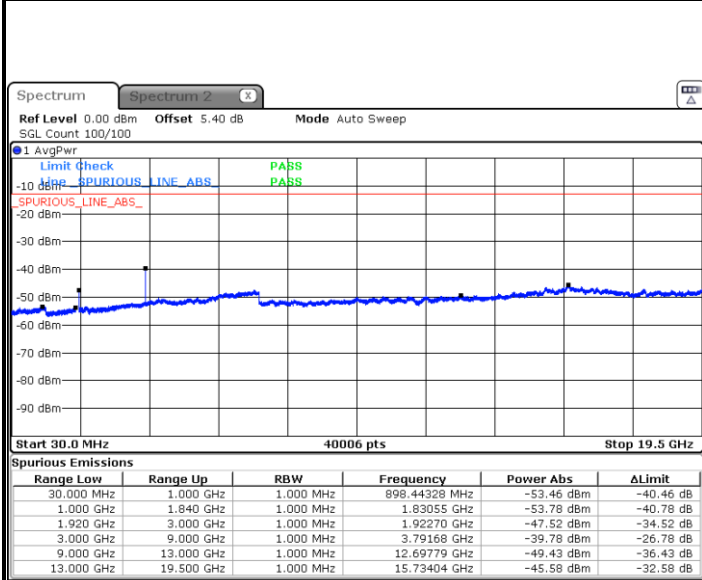
Date: 20 DEC.2019 16:19:05

Date: 20 DEC.2019 16:20:00



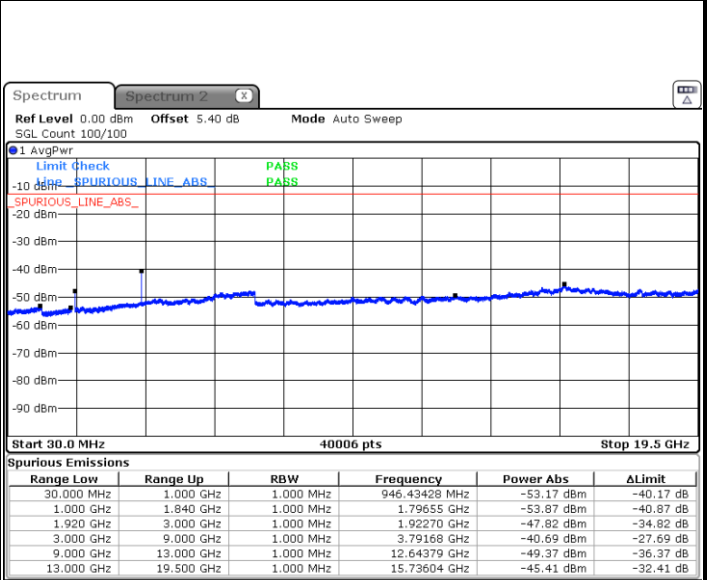
LTE Band 2 / 15MHz

Highest Channel / QPSK



Date: 20 DEC 2019 16:26:03

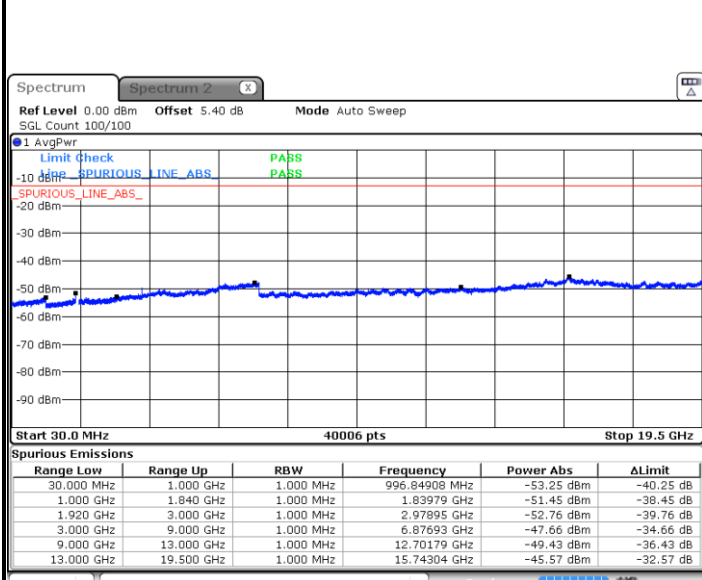
Highest Channel / 16QAM



Date: 20 DEC 2019 16:26:58

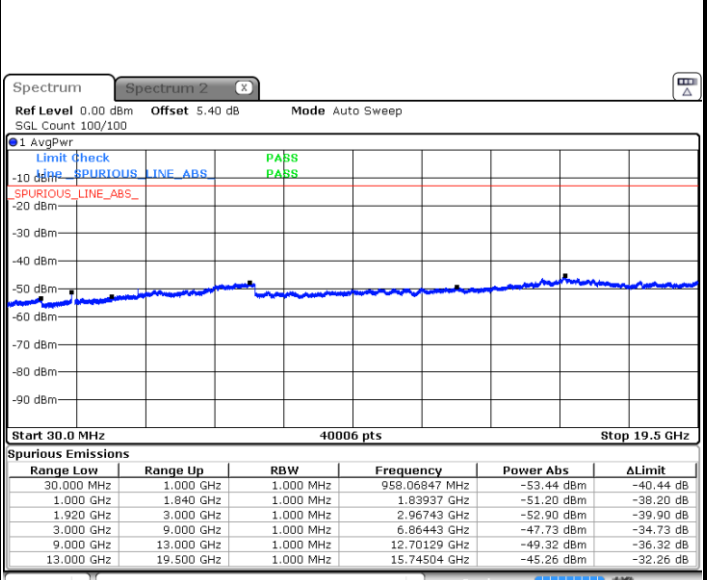
LTE Band 2 / 20MHz

Lowest Channel / QPSK



Date: 20 DEC 2019 16:33:02

Lowest Channel / 16QAM



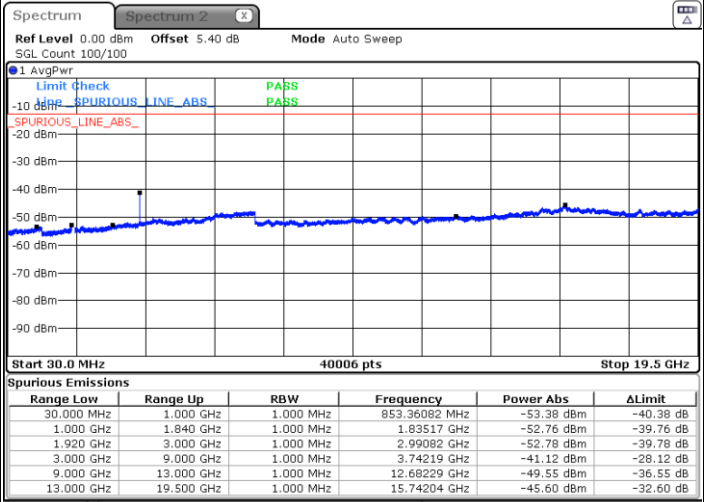
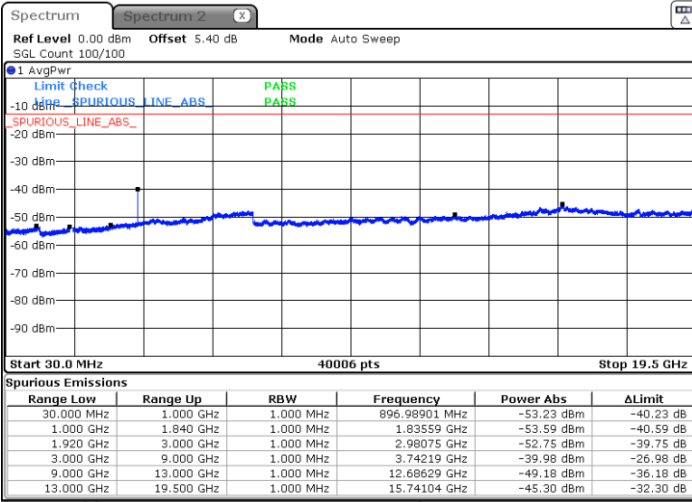
Date: 20 DEC 2019 16:33:56



LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

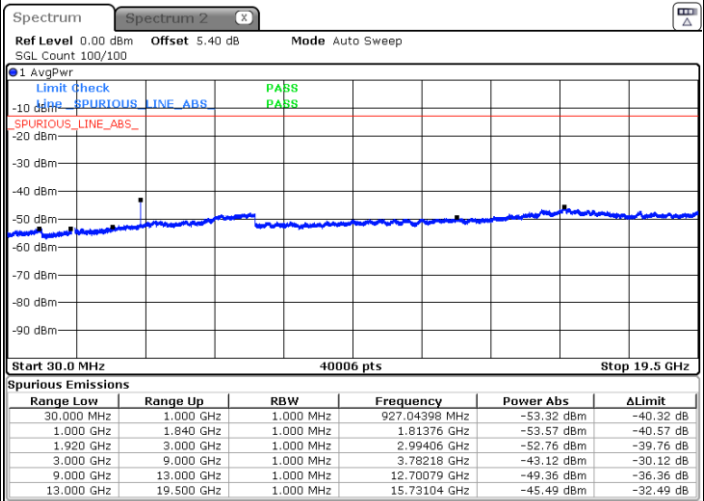
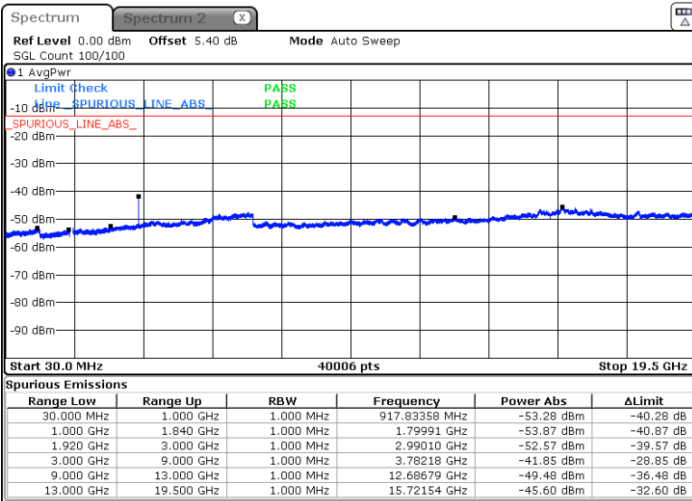


Date: 20 DEC.2019 16:35:31

Date: 20 DEC.2019 16:36:26

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 20 DEC.2019 16:42:30

Date: 20 DEC.2019 16:43:24

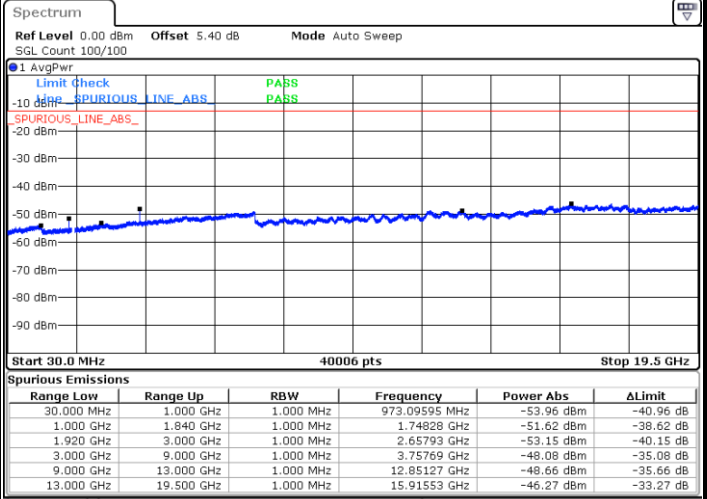
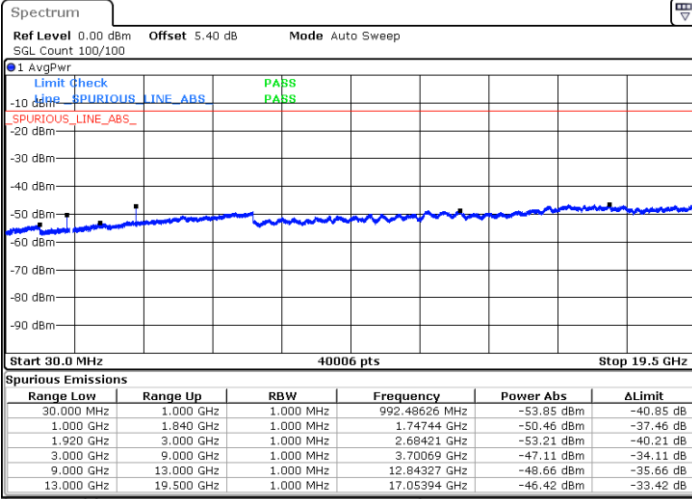




LTE Band 2 / 3MHz

Lowest Channel / 64QAM

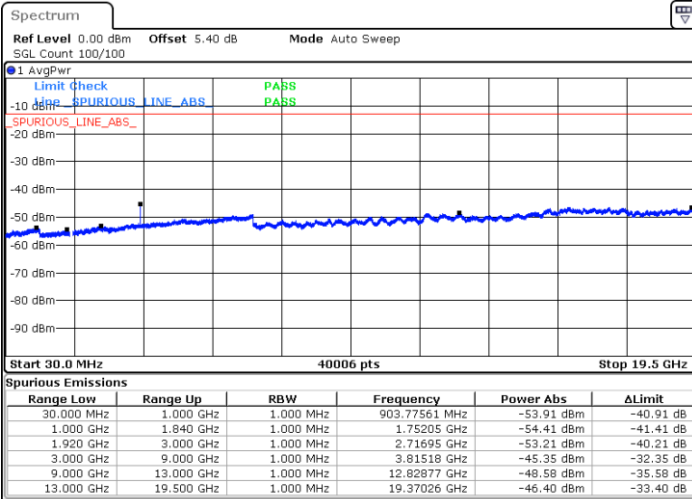
Middle Channel / 64QAM



Date: 22 DEC 2019 22:31:00

Date: 22 DEC 2019 22:31:44

Highest Channel / 64QAM

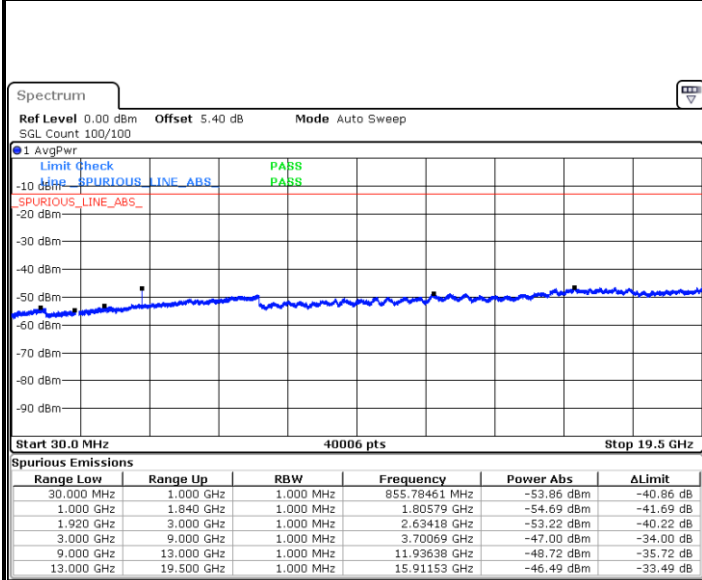


Date: 22 DEC 2019 22:32:31



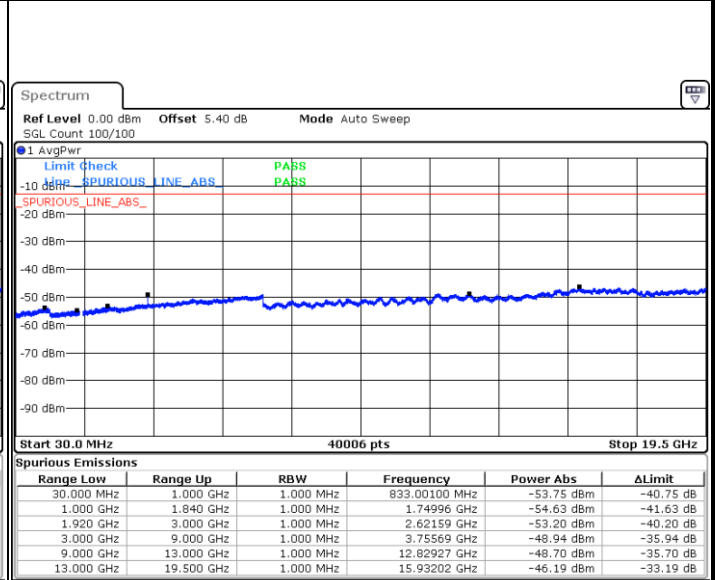
**LTE Band 2 / 5MHz**

**Lowest Channel / 64QAM**



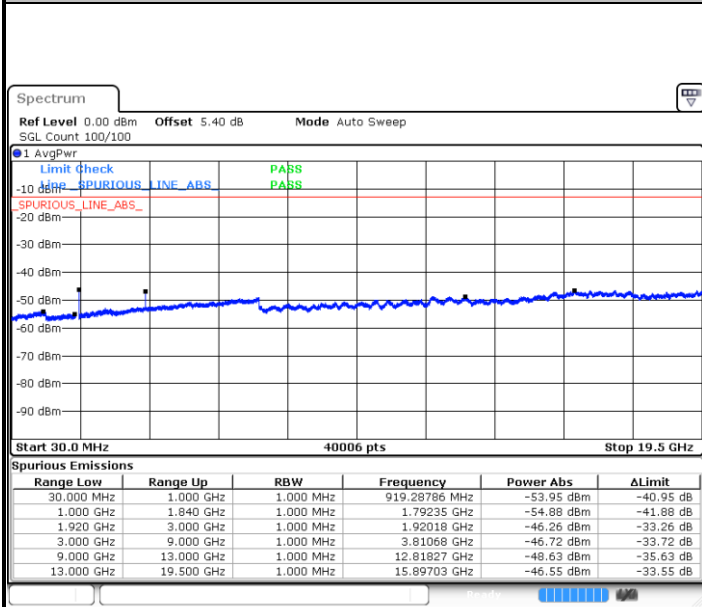
Date: 22 DEC 2019 22:33:31

**Middle Channel / 64QAM**

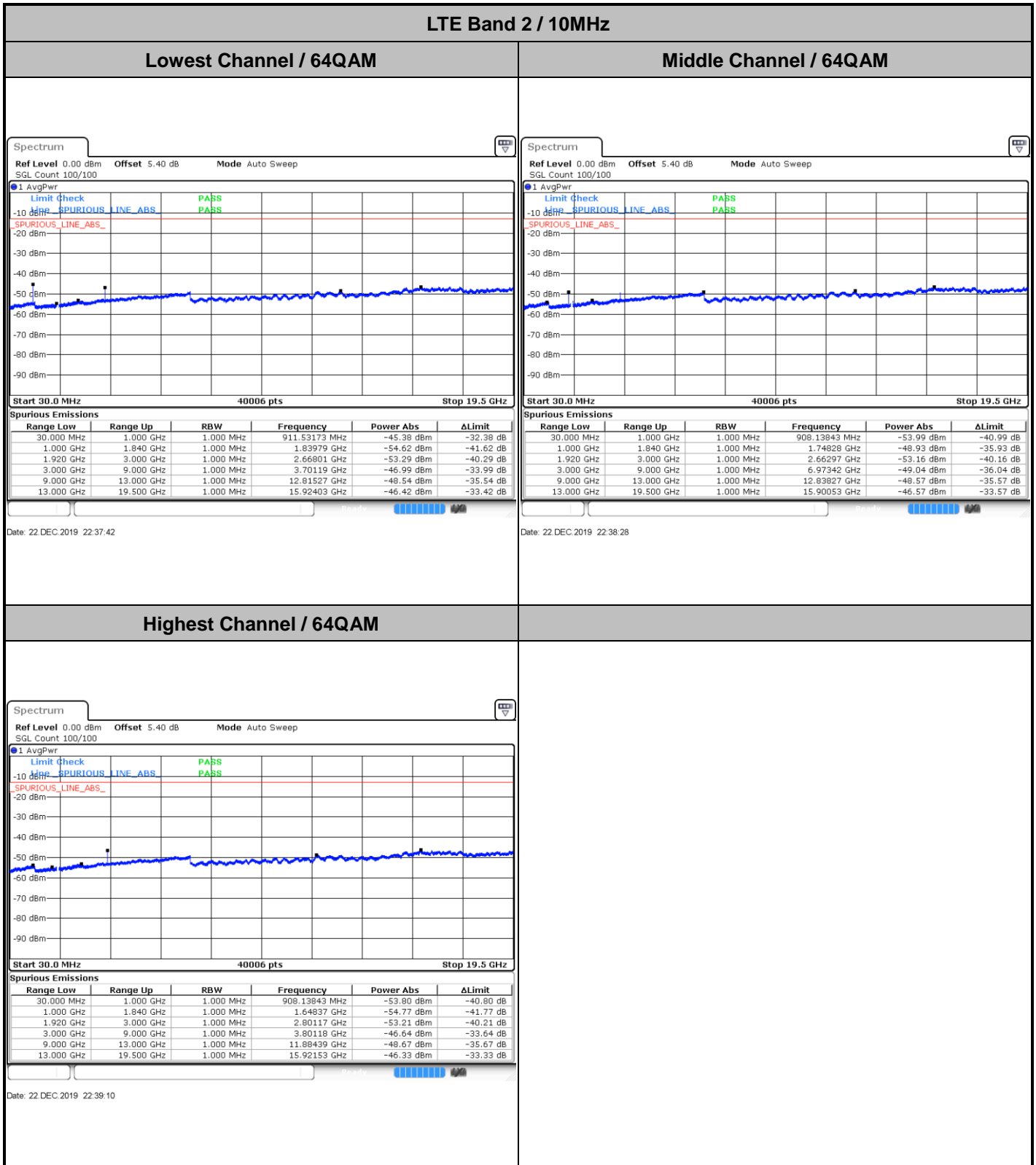


Date: 22 DEC 2019 22:34:23

**Highest Channel / 64QAM**



Date: 22 DEC 2019 22:36:57

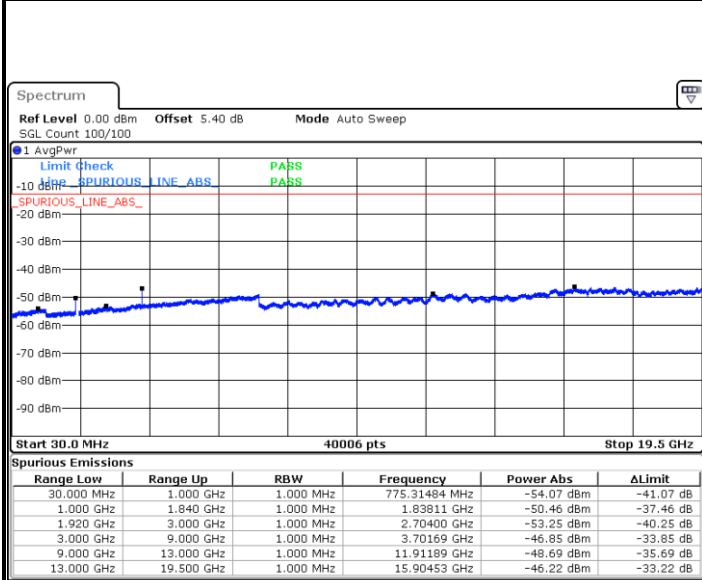






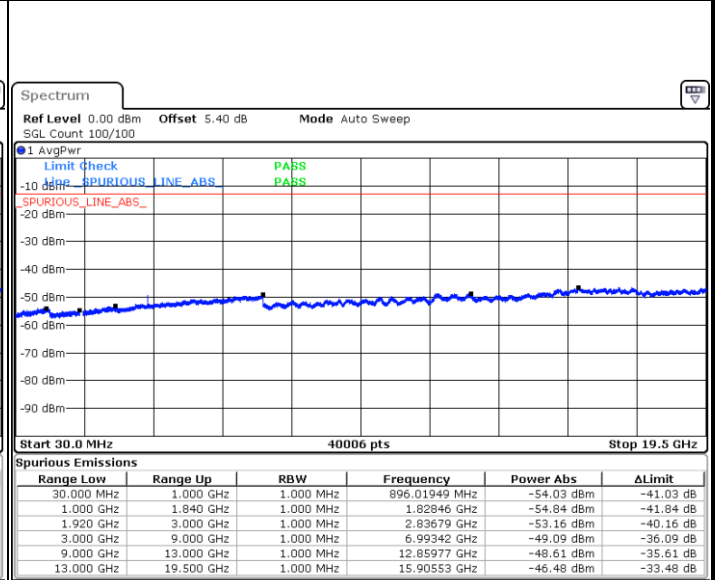
**LTE Band 2 / 15MHz**

**Lowest Channel / 64QAM**



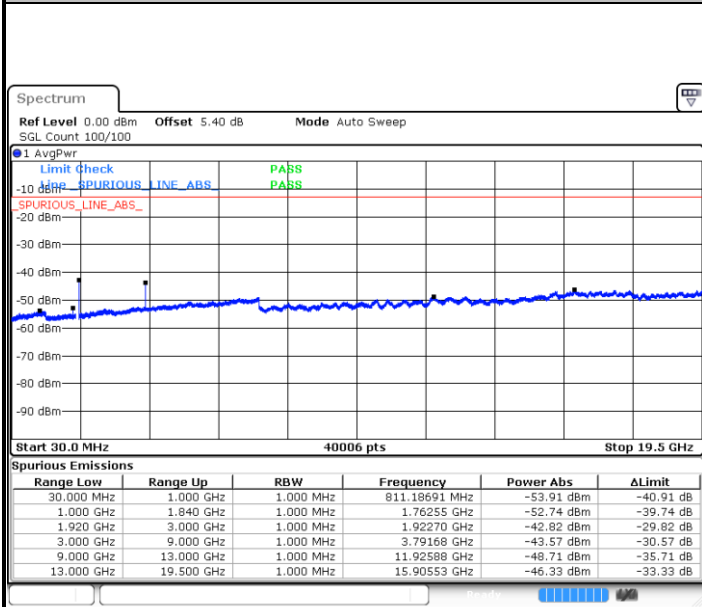
Date: 22 DEC 2019 22:39:59

**Middle Channel / 64QAM**



Date: 22 DEC 2019 22:40:41

**Highest Channel / 64QAM**



Date: 22 DEC 2019 22:41:23





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	0.0023	PASS
40	Normal Voltage	0.0020	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0023	
0	Normal Voltage	0.0019	
-10	Normal Voltage	0.0007	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0026	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 5

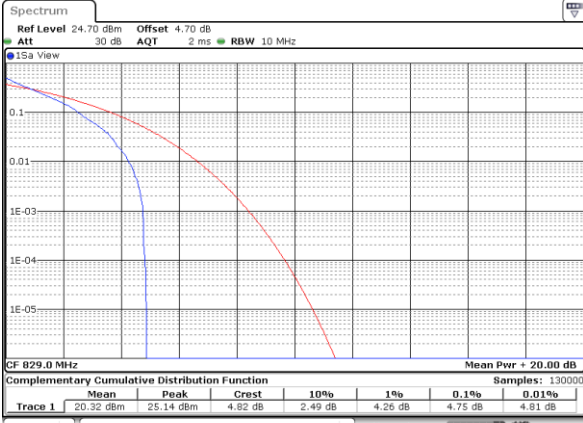
## Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.75	5.33	5.65	6.17	<b>PASS</b>
Middle CH	5.04	5.54	5.94	6.26	
Highest CH	4.81	5.59	5.86	6.38	
Mod.	64QAM		Limit: 13dB		
RB Size	1RB	Full RB	Result		
Lowest CH	6.41	6.55	<b>PASS</b>		
Middle CH	6.58	6.43			
Highest CH	6.20	6.78			



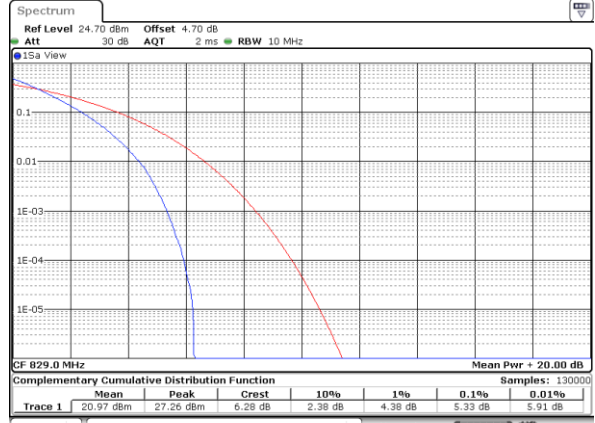
LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



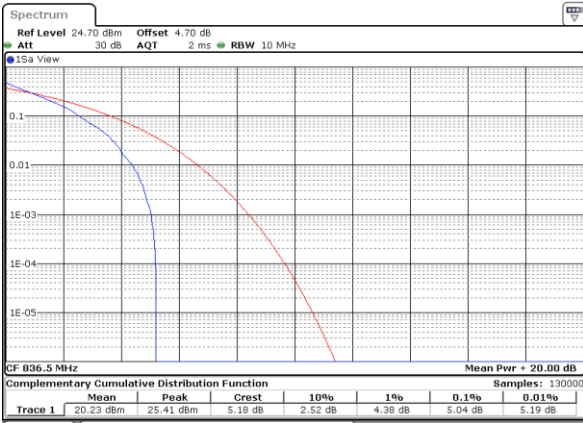
Date: 30 DEC 2019 11:21:12

Lowest Channel / Full RB



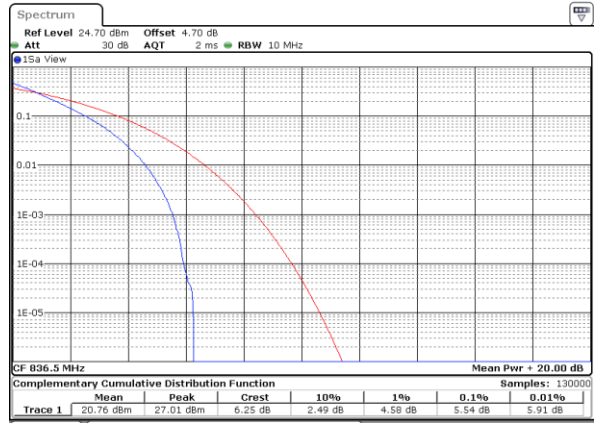
Date: 30 DEC 2019 11:21:22

Middle Channel / 1RB



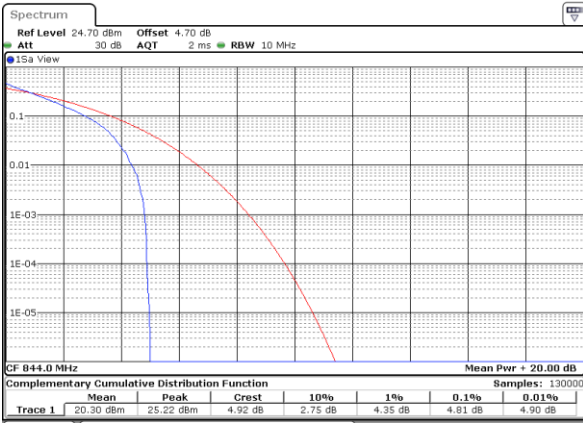
Date: 30 DEC 2019 11:21:02

Middle Channel / Full RB



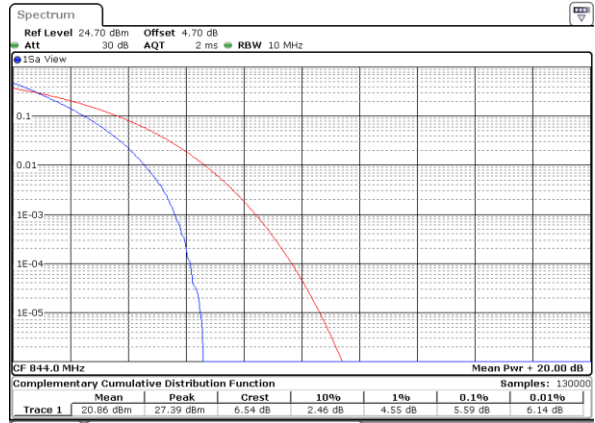
Date: 30 DEC 2019 11:20:53

Highest Channel / 1RB



Date: 30 DEC 2019 11:20:35

Highest Channel / Full RB

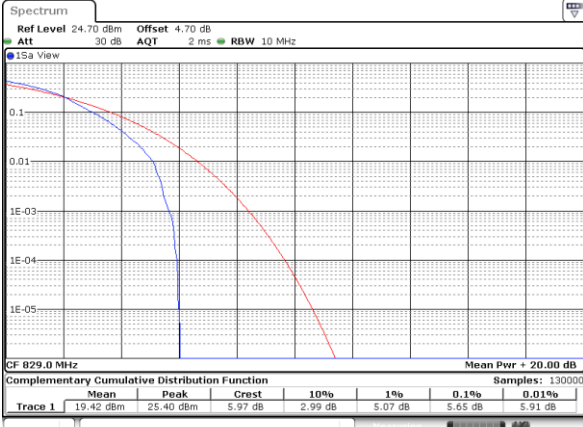


Date: 30 DEC 2019 11:20:44



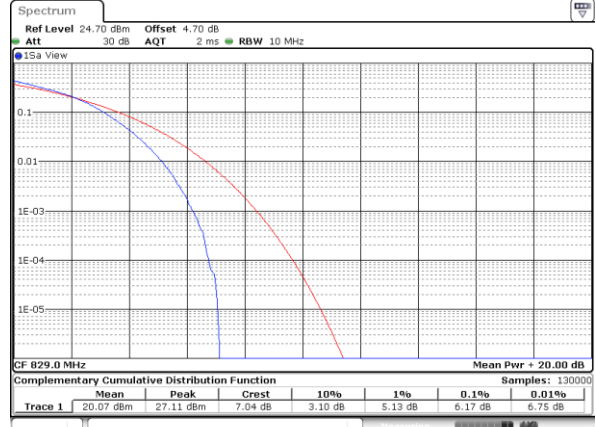
LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



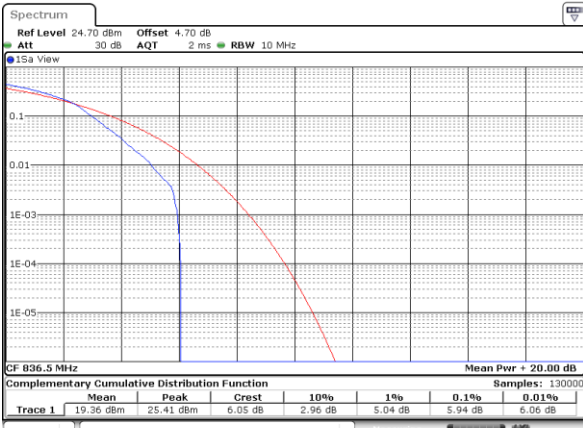
Date: 30 DEC 2019 11:19:40

Lowest Channel / Full RB



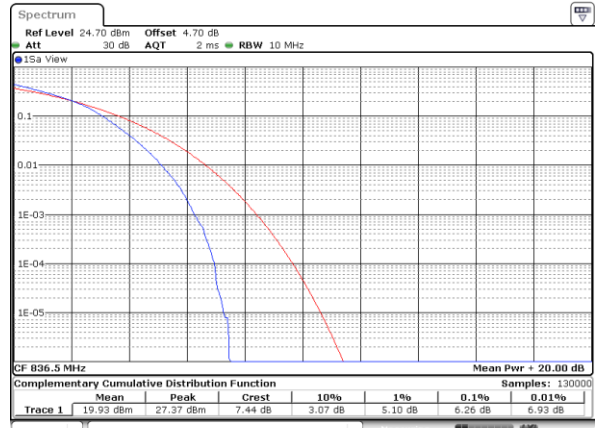
Date: 30 DEC 2019 11:19:49

Middle Channel / 1RB



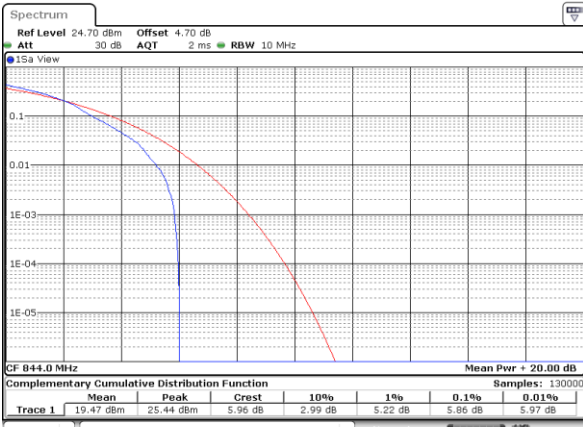
Date: 30 DEC 2019 11:19:58

Middle Channel / Full RB



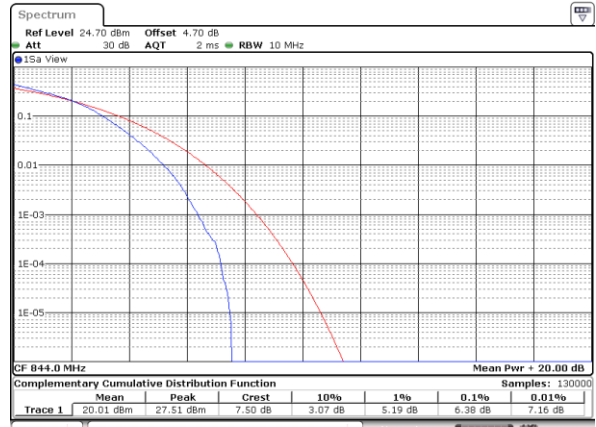
Date: 30 DEC 2019 11:20:07

Highest Channel / 1RB



Date: 30 DEC 2019 11:20:16

Highest Channel / Full RB

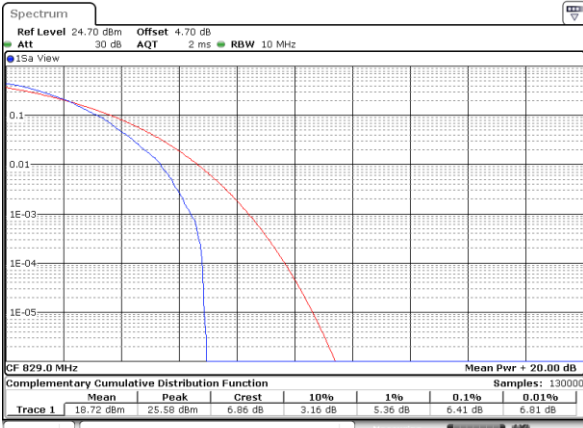


Date: 30 DEC 2019 11:20:26



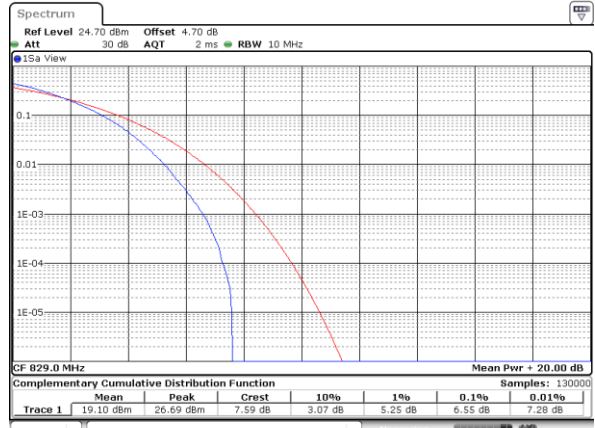
LTE Band 5 / 10MHz / 64QAM

Lowest Channel / 1RB



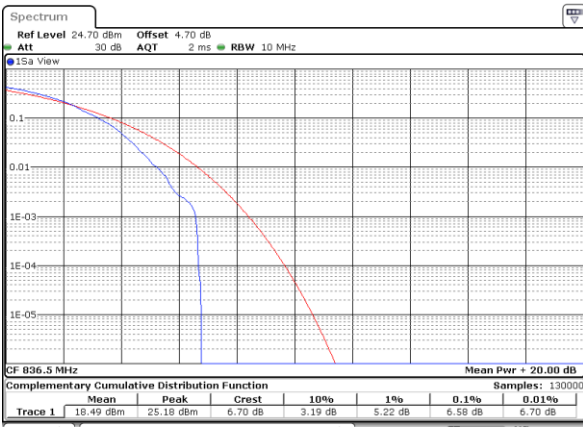
Date: 30 DEC 2019 12:00:40

Lowest Channel / Full RB



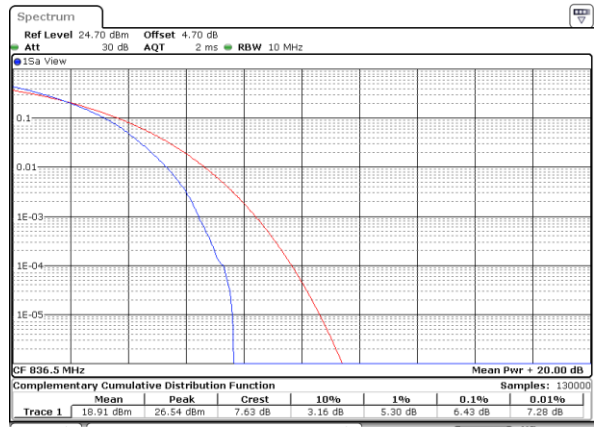
Date: 30 DEC 2019 12:00:49

Middle Channel / 1RB



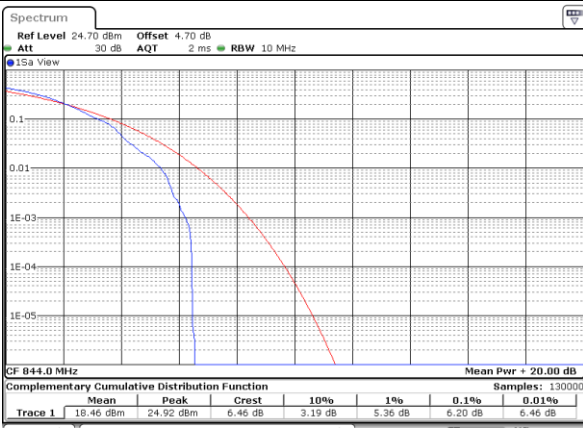
Date: 30 DEC 2019 12:00:31

Middle Channel / Full RB



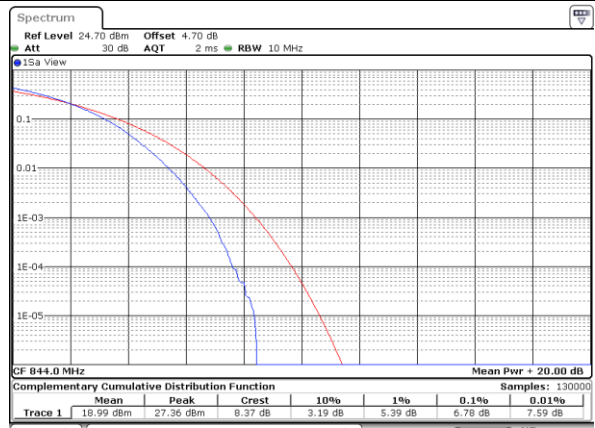
Date: 30 DEC 2019 12:00:22

Highest Channel / 1RB



Date: 30 DEC 2019 12:00:03

Highest Channel / Full RB



Date: 30 DEC 2019 12:00:12



**26dB Bandwidth**

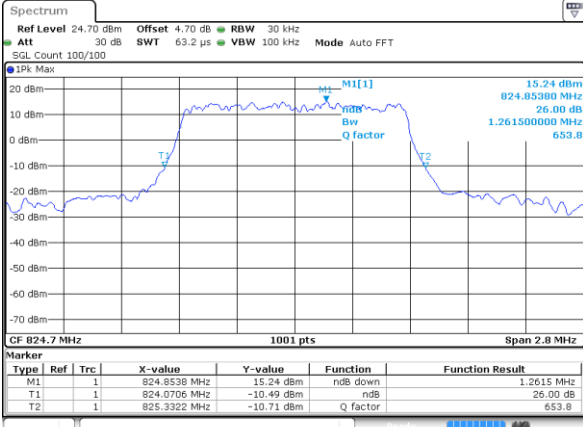
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.2615	1.3147	2.9371	2.979	4.845	4.835	9.85	9.75	-	-	-	-
Middle CH	1.2615	1.2895	2.955	2.961	4.865	4.825	9.65	9.67	-	-	-	-
Highest CH	1.2587	1.2923	2.9491	2.961	4.855	4.825	9.63	9.81	-	-	-	-
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		-		-	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	-	-	-	-
Lowest CH	1.2755	-	2.955	-	4.935	-	9.89	-	-	-	-	-
Middle CH	1.2727	-	2.9431	-	4.785	-	9.95	-	-	-	-	-
Highest CH	1.2923	-	2.9491	-	4.825	-	9.73	-	-	-	-	-





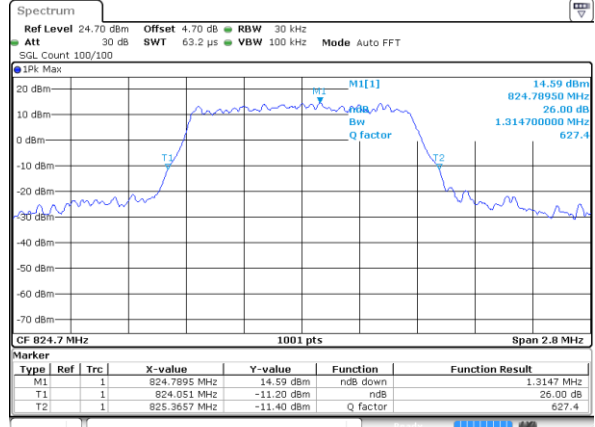
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



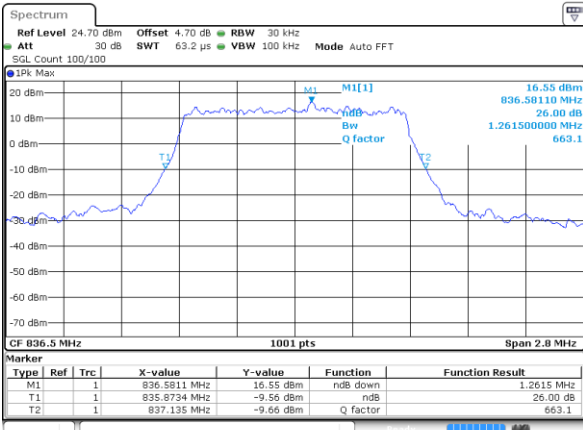
Date: 30 DEC 2019 09:58:11

Lowest Channel / 1.4MHz / 16QAM



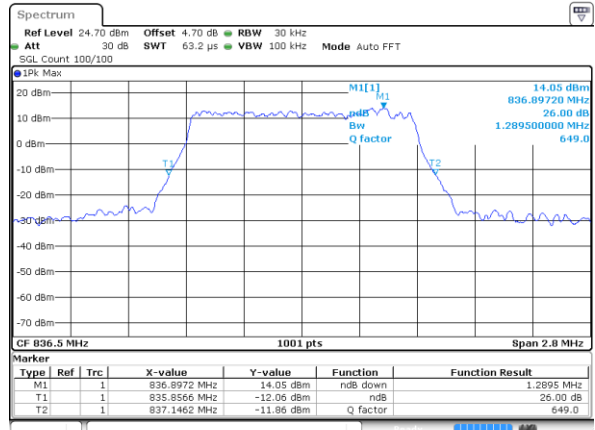
Date: 30 DEC 2019 09:58:01

Middle Channel / 1.4MHz / QPSK



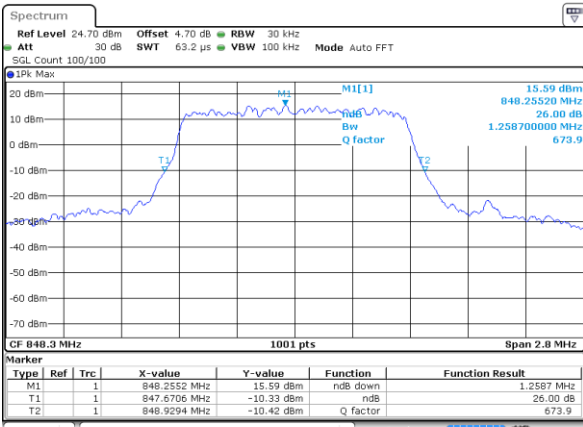
Date: 30 DEC 2019 10:06:08

Middle Channel / 1.4MHz / 16QAM



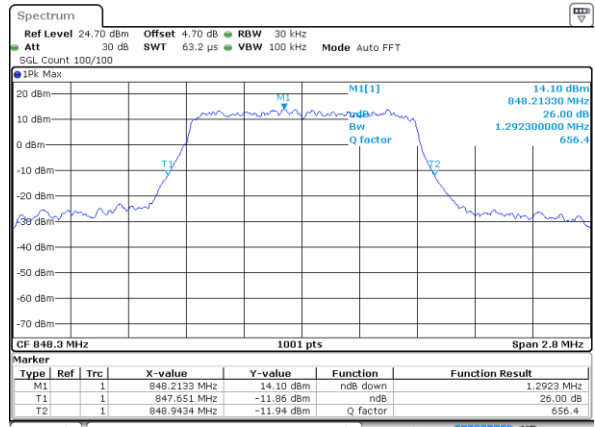
Date: 30 DEC 2019 10:06:18

Highest Channel / 1.4MHz / QPSK



Date: 30 DEC 2019 10:07:42

Highest Channel / 1.4MHz / 16QAM

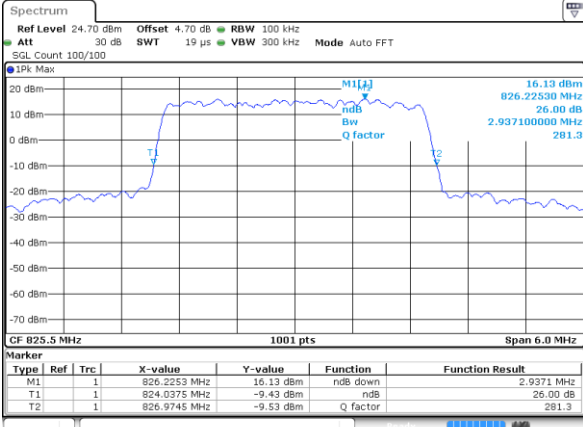


Date: 30 DEC 2019 10:07:52



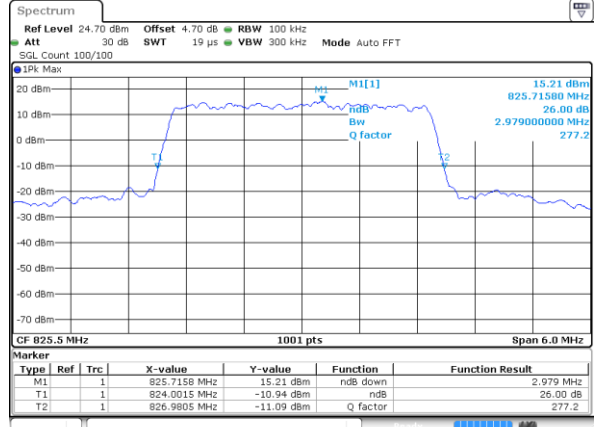
LTE Band 5

Lowest Channel / 3MHz / QPSK



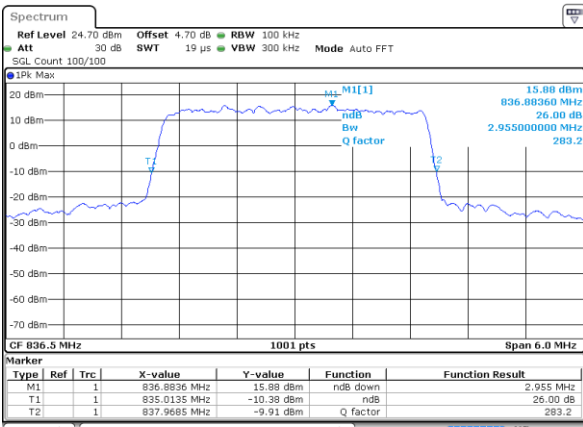
Date: 30 DEC 2019 10:16:43

Lowest Channel / 3MHz / 16QAM



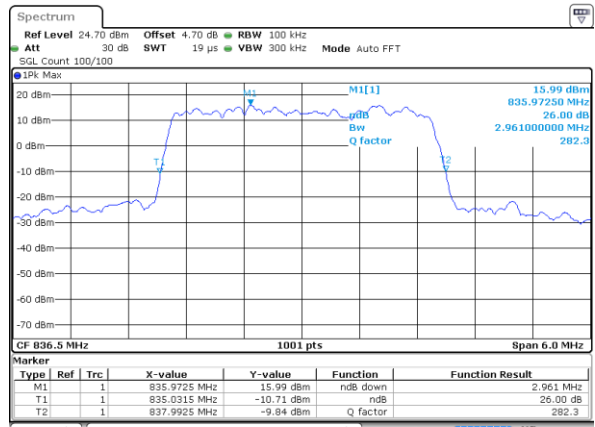
Date: 30 DEC 2019 10:16:53

Middle Channel / 3MHz / QPSK



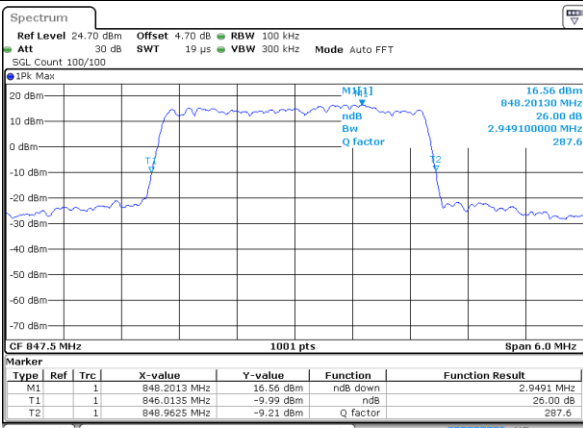
Date: 30 DEC 2019 10:25:44

Middle Channel / 3MHz / 16QAM



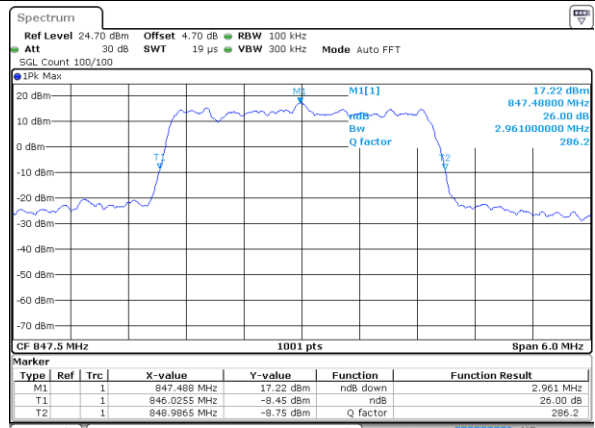
Date: 30 DEC 2019 10:25:54

Highest Channel / 3MHz / QPSK



Date: 30 DEC 2019 10:28:11

Highest Channel / 3MHz / 16QAM

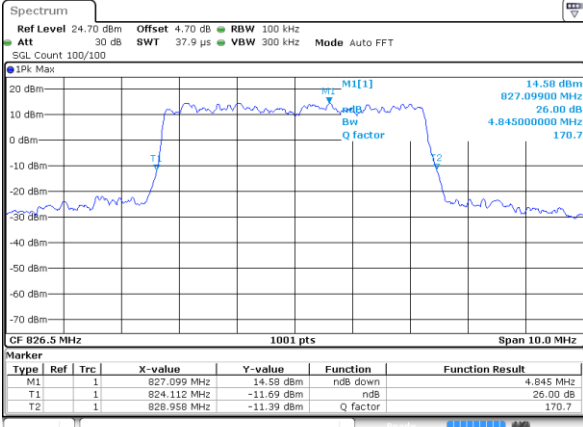


Date: 30 DEC 2019 10:28:20



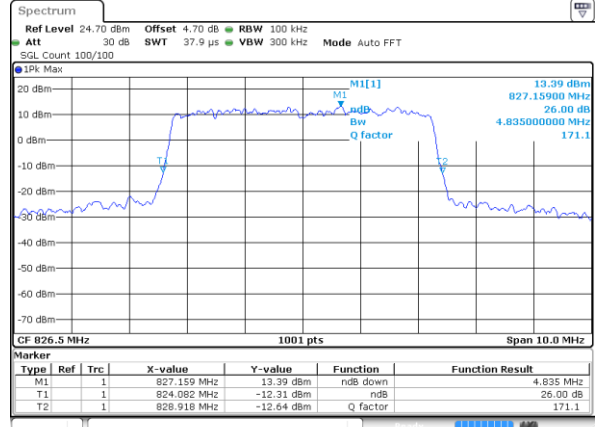
LTE Band 5

Lowest Channel / 5MHz / QPSK



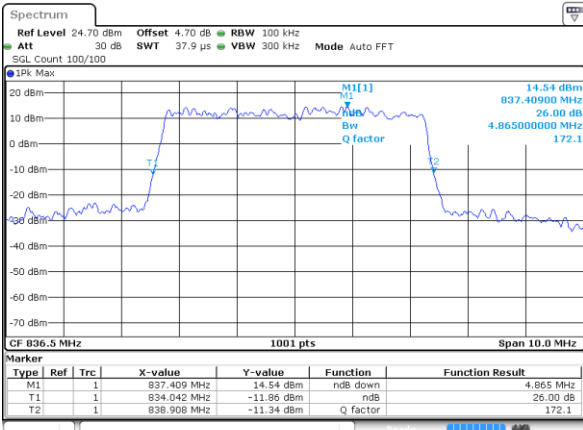
Date: 30 DEC 2019 10:37:12

Lowest Channel / 5MHz / 16QAM



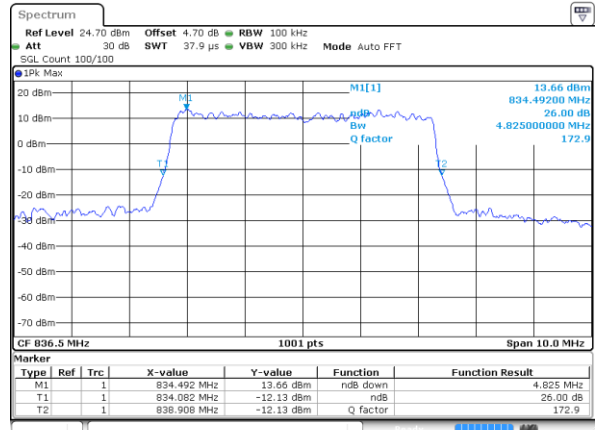
Date: 30 DEC 2019 10:37:22

Middle Channel / 5MHz / QPSK



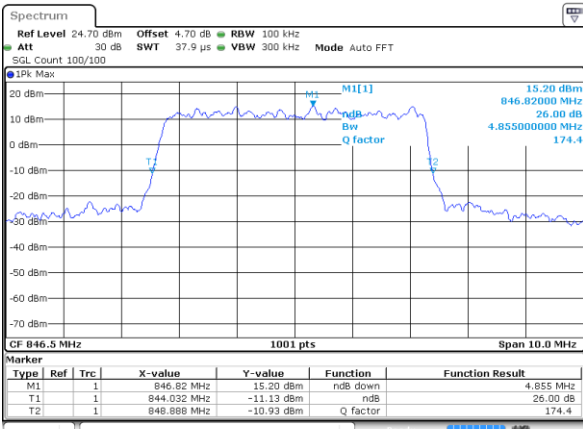
Date: 30 DEC 2019 10:46:13

Middle Channel / 5MHz / 16QAM



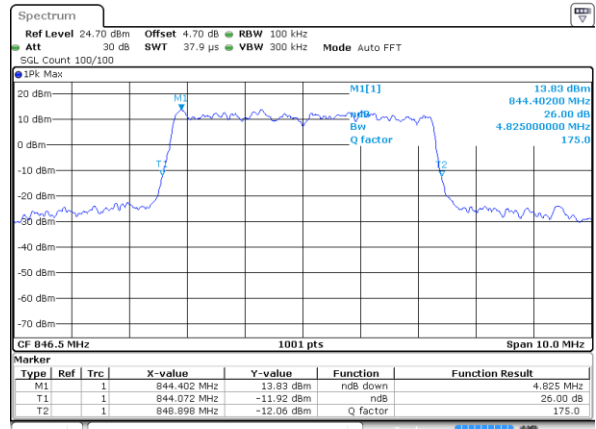
Date: 30 DEC 2019 10:46:23

Highest Channel / 5MHz / QPSK



Date: 30 DEC 2019 10:48:39

Highest Channel / 5MHz / 16QAM

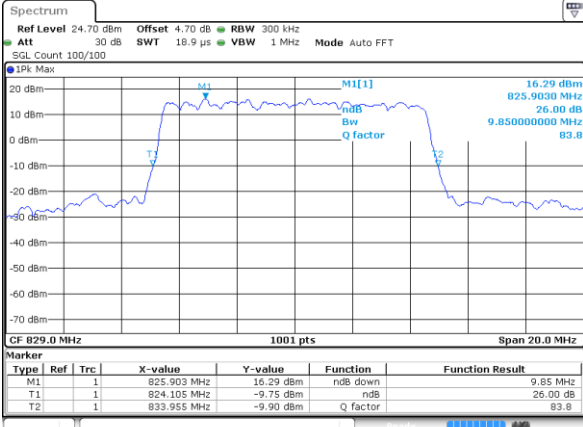


Date: 30 DEC 2019 10:48:49



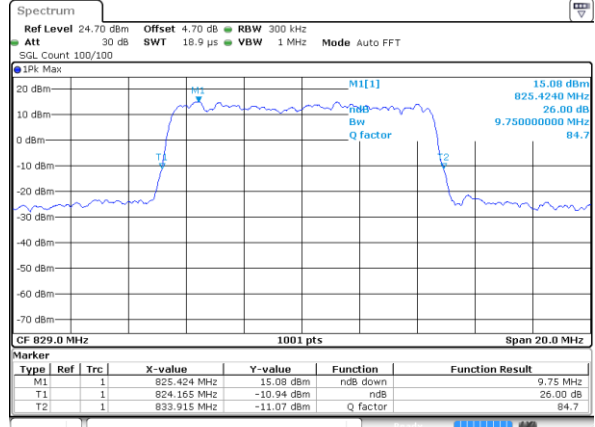
LTE Band 5

Lowest Channel / 10MHz / QPSK



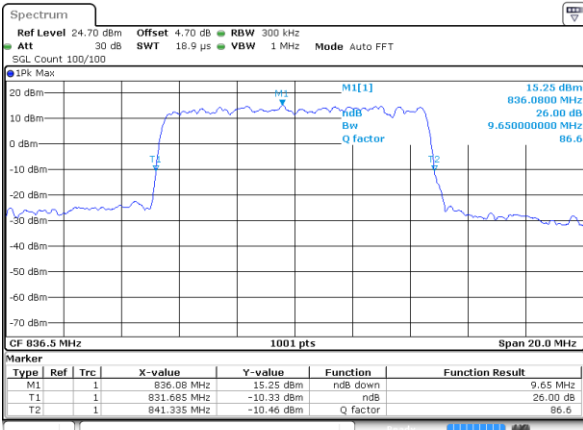
Date: 30 DEC 2019 10:57:40

Lowest Channel / 10MHz / 16QAM



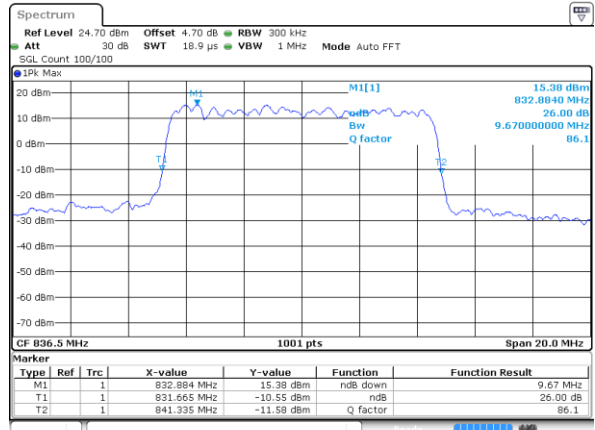
Date: 30 DEC 2019 10:57:50

Middle Channel / 10MHz / QPSK



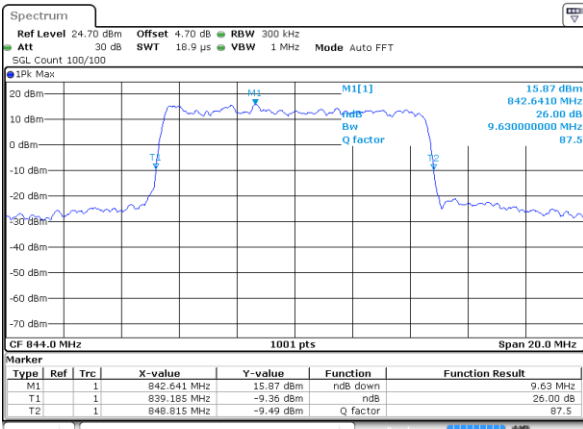
Date: 30 DEC 2019 11:06:41

Middle Channel / 10MHz / 16QAM



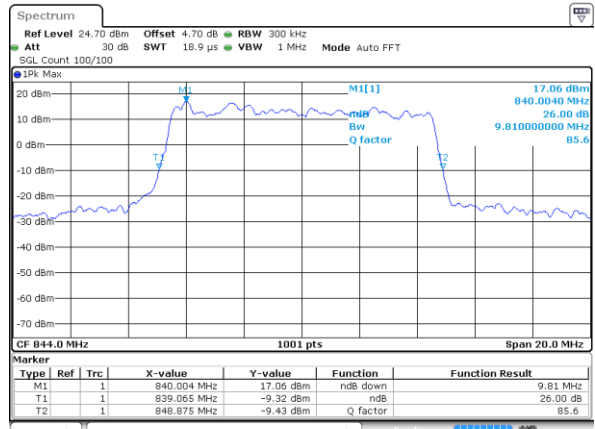
Date: 30 DEC 2019 11:06:51

Highest Channel / 10MHz / QPSK



Date: 30 DEC 2019 11:09:08

Highest Channel / 10MHz / 16QAM

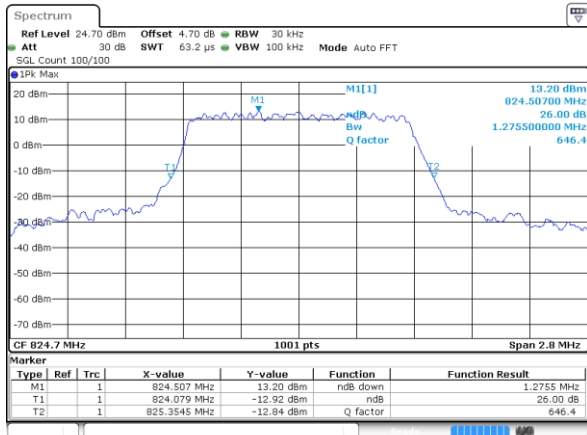


Date: 30 DEC 2019 11:09:18



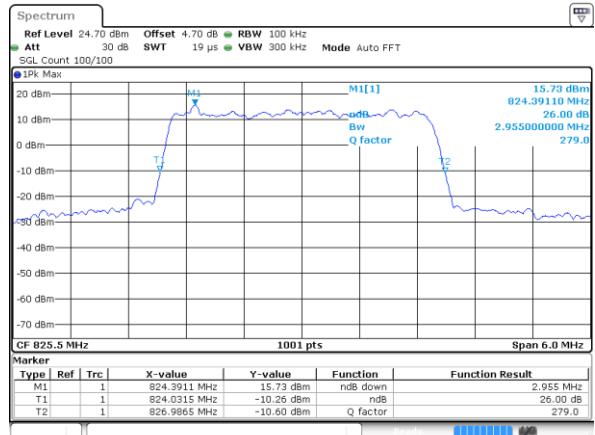
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



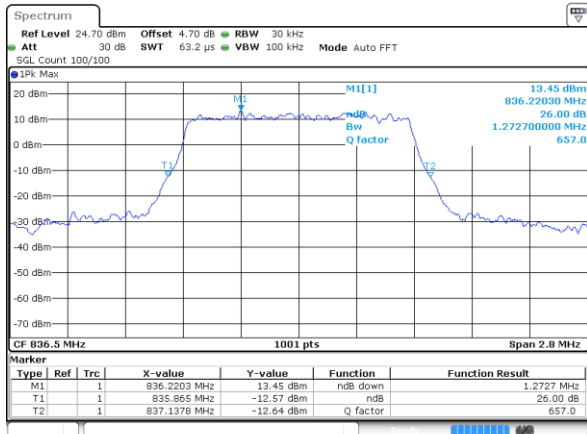
Date: 30 DEC 2019 12:01:21

Lowest Channel / 3MHz / 64QAM



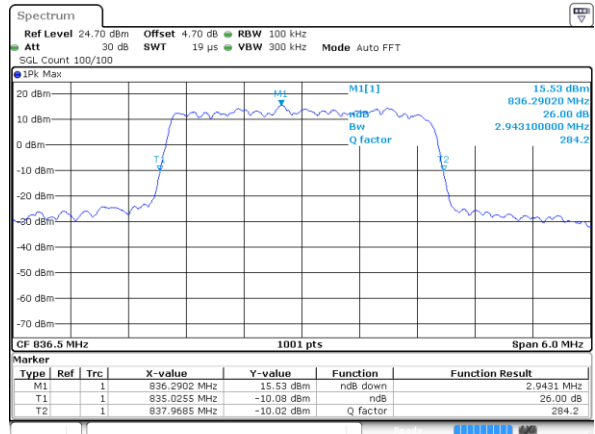
Date: 30 DEC 2019 11:29:58

Middle Channel / 1.4MHz / 64QAM



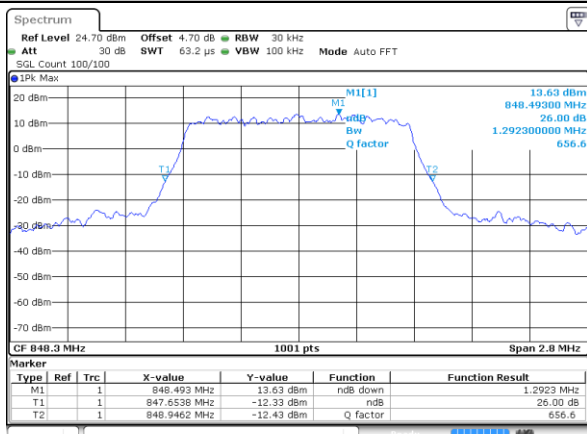
Date: 30 DEC 2019 11:25:08

Middle Channel / 3MHz / 64QAM



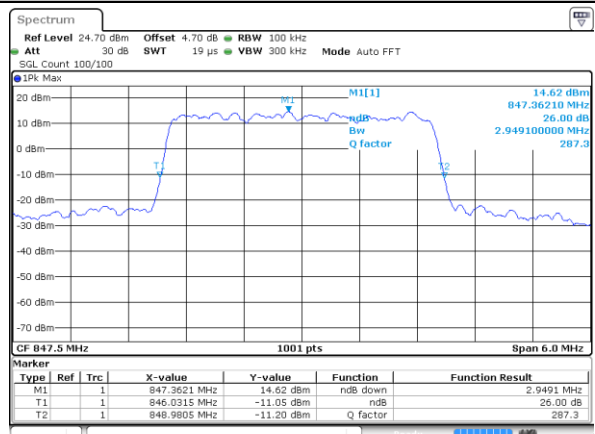
Date: 30 DEC 2019 11:25:22

Highest Channel / 1.4MHz / 64QAM



Date: 30 DEC 2019 11:25:28

Highest Channel / 3MHz / 64QAM

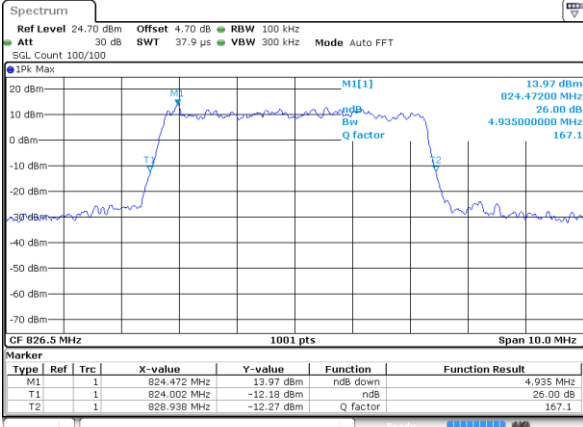


Date: 30 DEC 2019 11:35:42



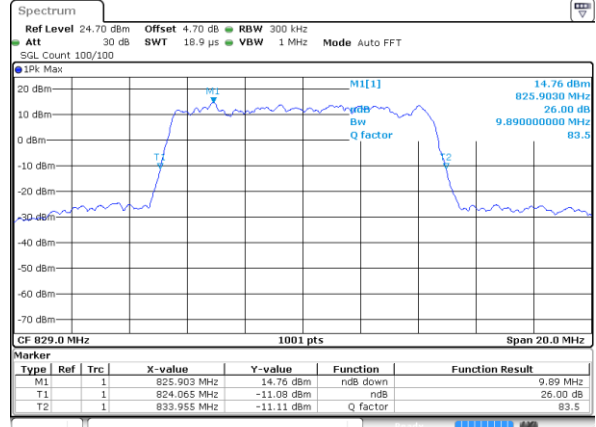
LTE Band 5

Lowest Channel / 5MHz / 64QAM



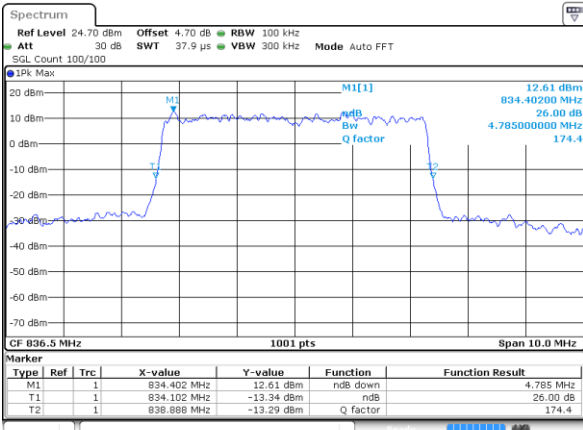
Date: 30 DEC 2019 11:40:13

Lowest Channel / 10MHz / 64QAM



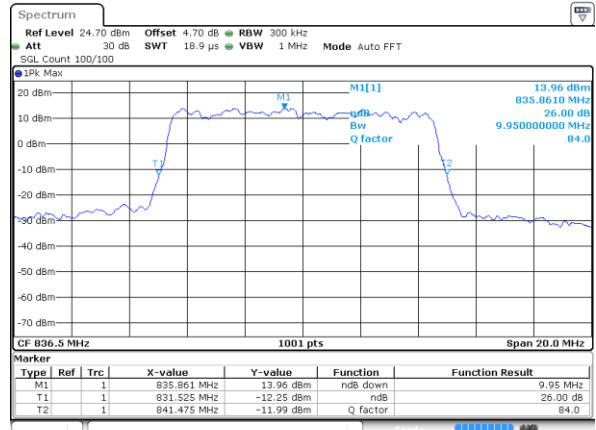
Date: 30 DEC 2019 11:50:27

Middle Channel / 5MHz / 64QAM



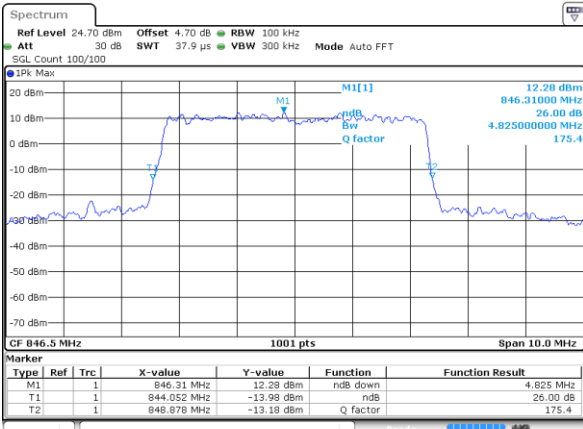
Date: 30 DEC 2019 11:45:37

Middle Channel / 10MHz / 64QAM



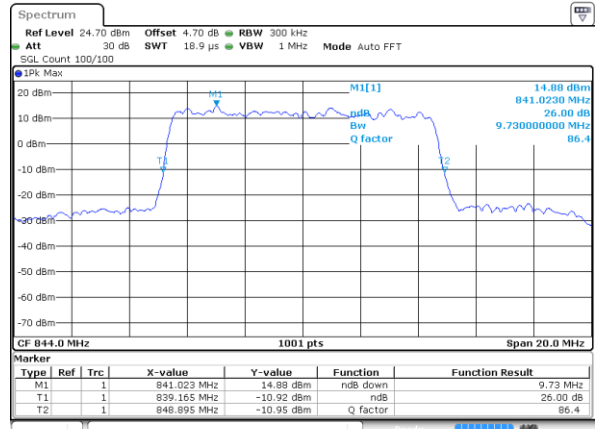
Date: 30 DEC 2019 11:55:51

Highest Channel / 5MHz / 64QAM



Date: 30 DEC 2019 11:45:57

Highest Channel / 10MHz / 64QAM



Date: 30 DEC 2019 11:56:11



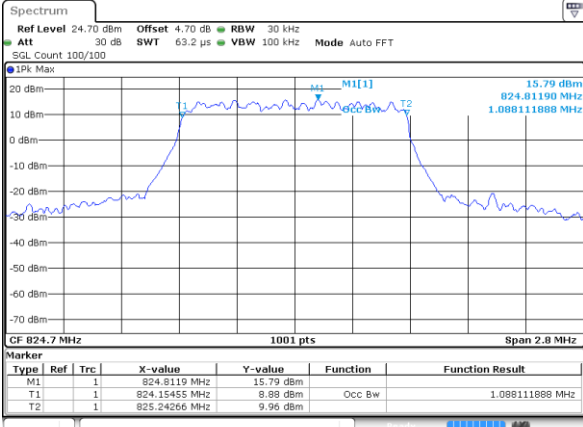
Occupied Bandwidth

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	1.09	1.10	2.71	2.69	4.48	4.47	9.03	9.05	-	-	-	-
Middle CH	1.09	1.10	2.71	2.71	4.50	4.51	9.09	9.05	-	-	-	-
Highest CH	1.09	1.09	2.69	2.72	4.50	4.47	9.09	9.03	-	-	-	-
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		-		-	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	-	-	-	-
Lowest CH	1.09	-	2.73	-	4.49	-	8.99	-	-	-	-	-
Middle CH	1.09	-	2.70	-	4.51	-	9.03	-	-	-	-	-
Highest CH	1.09	-	2.73	-	4.48	-	9.07	-	-	-	-	-



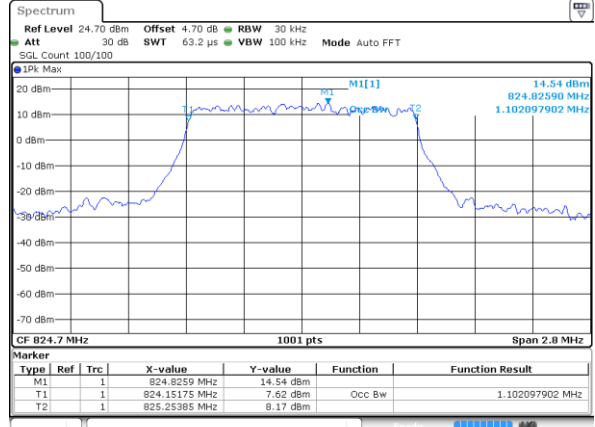
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



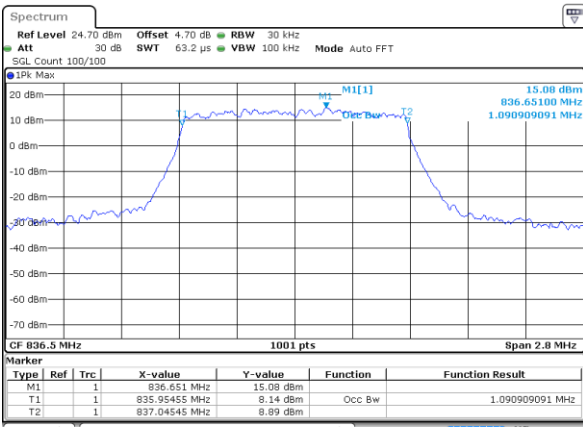
Date: 30 DEC 2019 09:57:41

Lowest Channel / 1.4MHz / 16QAM



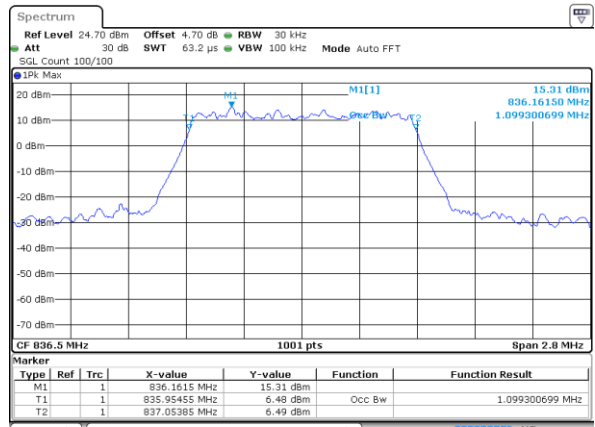
Date: 30 DEC 2019 09:57:51

Middle Channel / 1.4MHz / QPSK



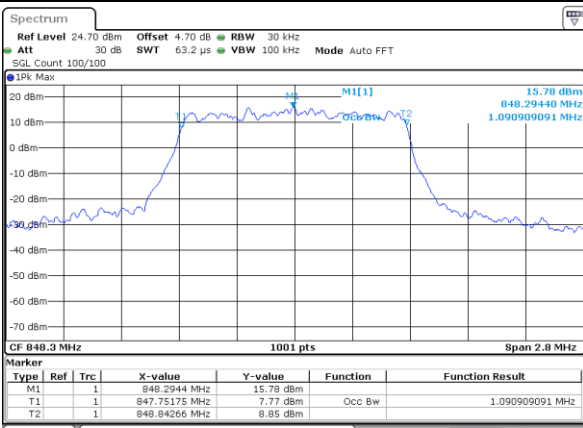
Date: 30 DEC 2019 10:05:49

Middle Channel / 1.4MHz / 16QAM



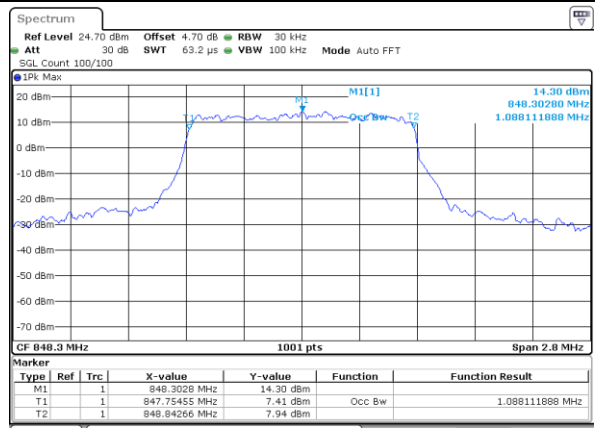
Date: 30 DEC 2019 10:05:59

Highest Channel / 1.4MHz / QPSK



Date: 30 DEC 2019 10:07:22

Highest Channel / 1.4MHz / 16QAM



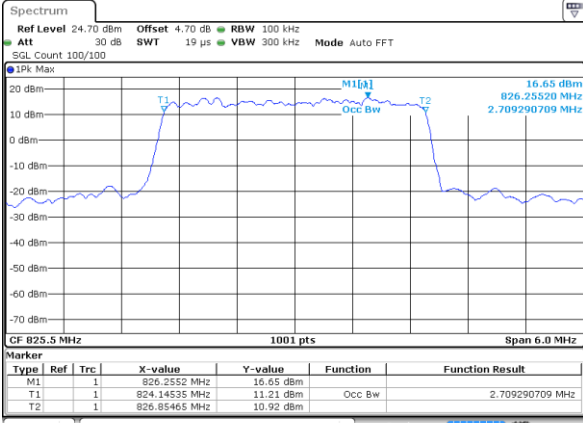
Date: 30 DEC 2019 10:07:32





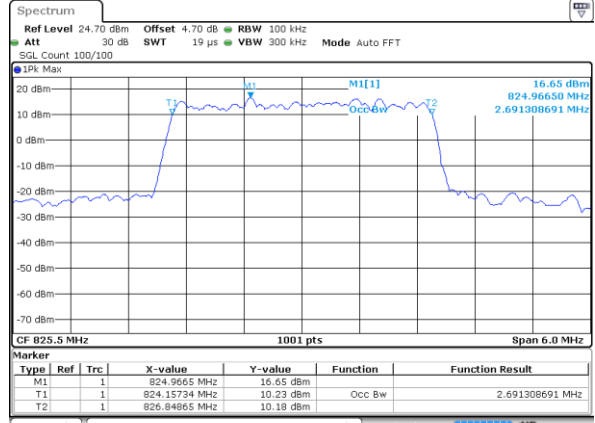
LTE Band 5

Lowest Channel / 3MHz / QPSK



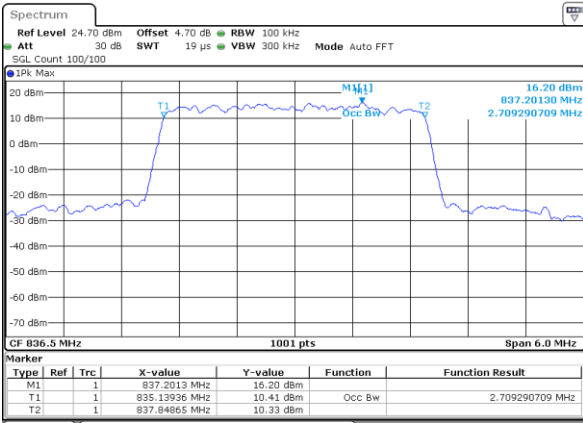
Date: 30 DEC 2019 10:16:23

Lowest Channel / 3MHz / 16QAM



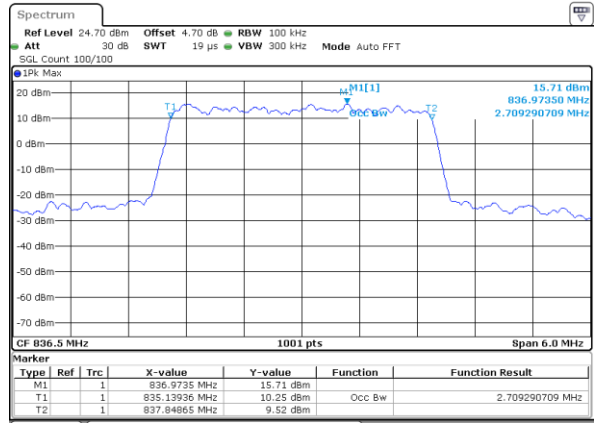
Date: 30 DEC 2019 10:16:33

Middle Channel / 3MHz / QPSK



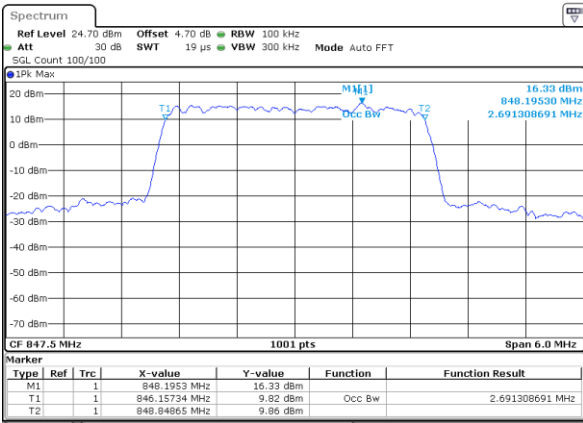
Date: 30 DEC 2019 10:25:24

Middle Channel / 3MHz / 16QAM



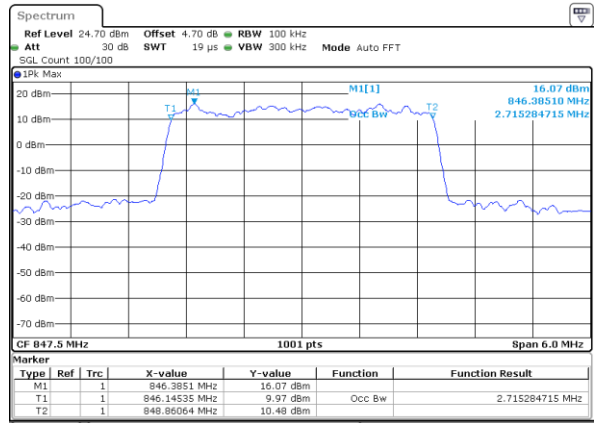
Date: 30 DEC 2019 10:25:34

Highest Channel / 3MHz / QPSK



Date: 30 DEC 2019 10:27:51

Highest Channel / 3MHz / 16QAM

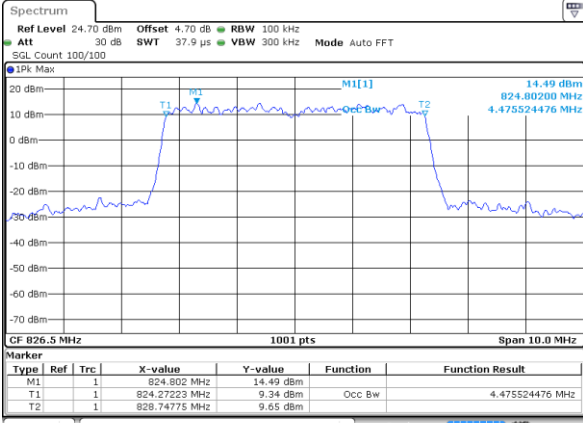


Date: 30 DEC 2019 10:28:01



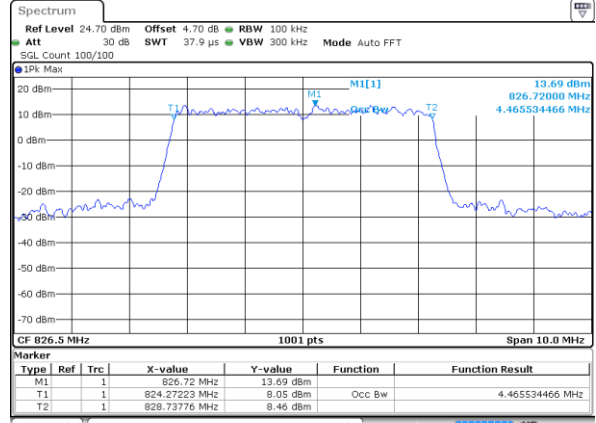
LTE Band 5

Lowest Channel / 5MHz / QPSK



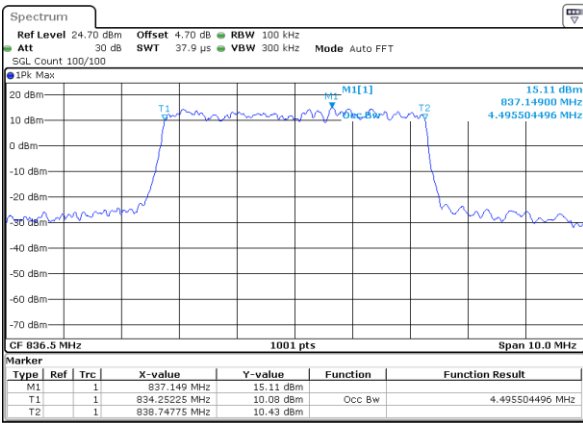
Date: 30 DEC 2019 10:36:52

Lowest Channel / 5MHz / 16QAM



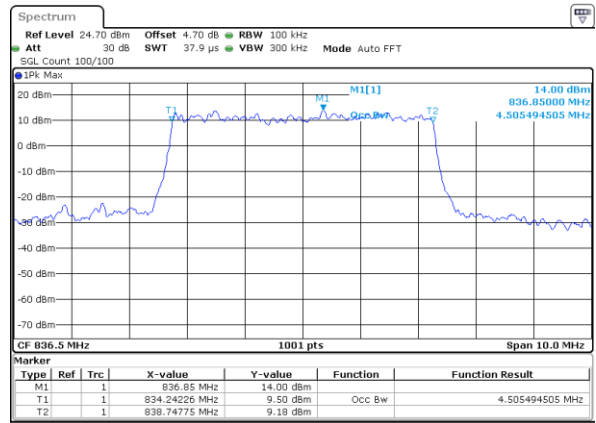
Date: 30 DEC 2019 10:37:02

Middle Channel / 5MHz / QPSK



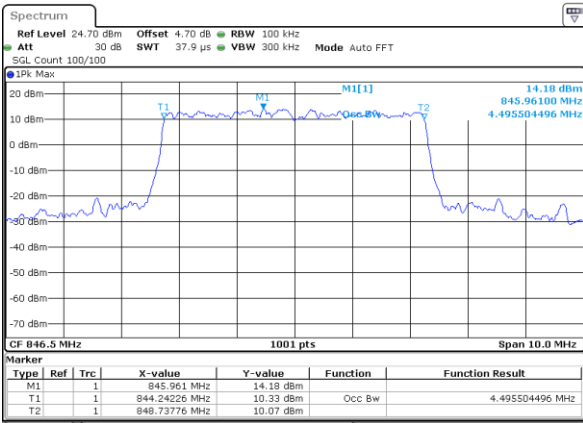
Date: 30 DEC 2019 10:45:53

Middle Channel / 5MHz / 16QAM



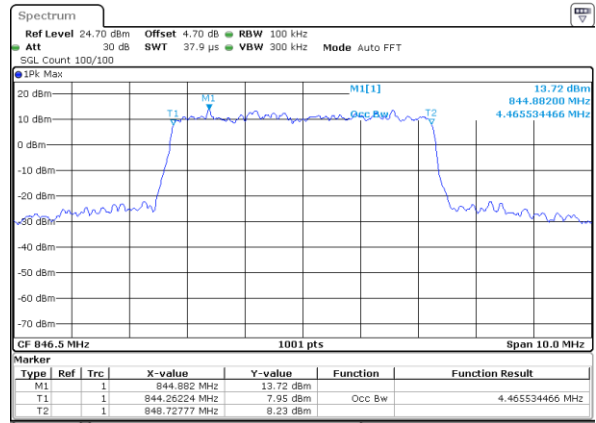
Date: 30 DEC 2019 10:46:03

Highest Channel / 5MHz / QPSK



Date: 30 DEC 2019 10:48:19

Highest Channel / 5MHz / 16QAM

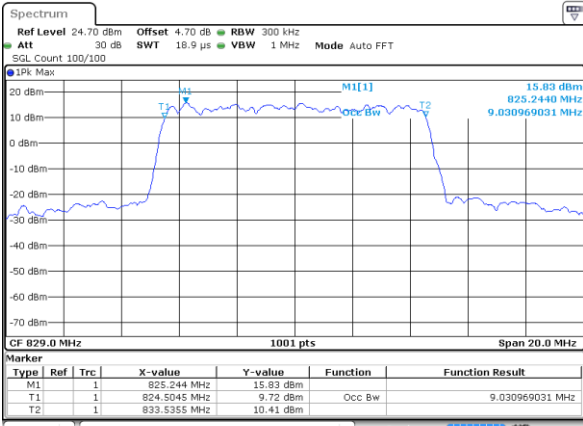


Date: 30 DEC 2019 10:48:29



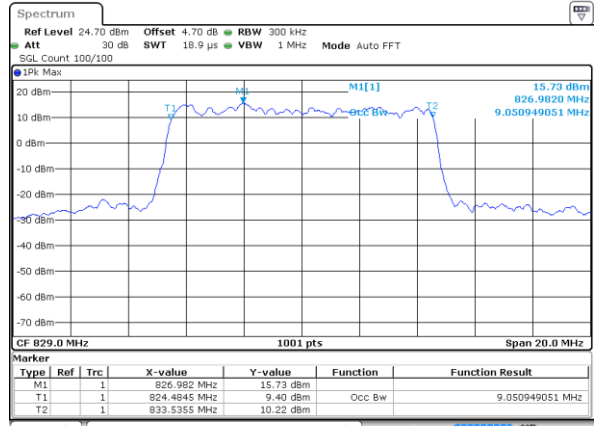
LTE Band 5

Lowest Channel / 10MHz / QPSK



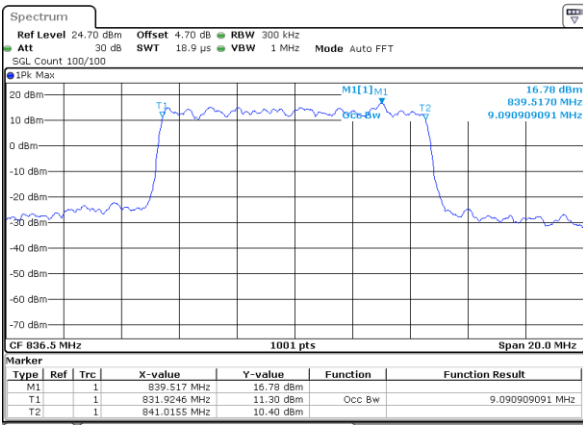
Date: 30 DEC 2019 10:57:20

Lowest Channel / 10MHz / 16QAM



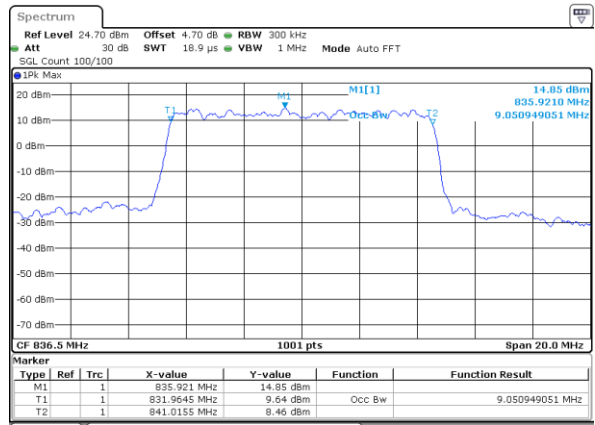
Date: 30 DEC 2019 10:57:30

Middle Channel / 10MHz / QPSK



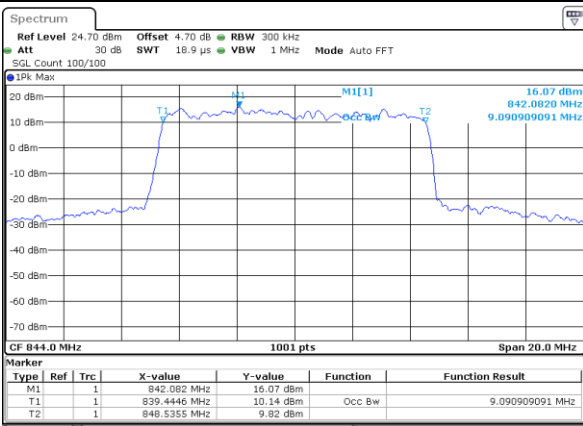
Date: 30 DEC 2019 11:06:21

Middle Channel / 10MHz / 16QAM



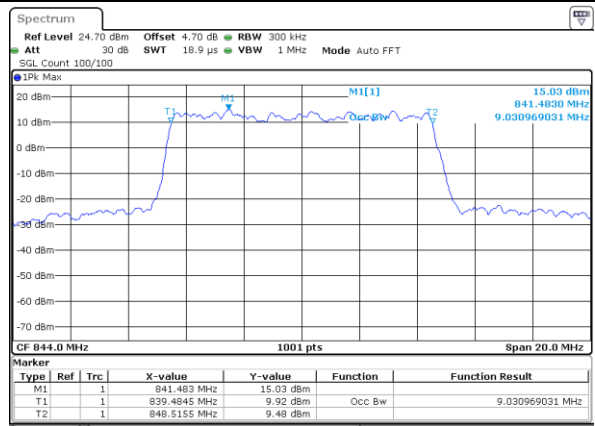
Date: 30 DEC 2019 11:06:31

Highest Channel / 10MHz / QPSK



Date: 30 DEC 2019 11:08:48

Highest Channel / 10MHz / 16QAM

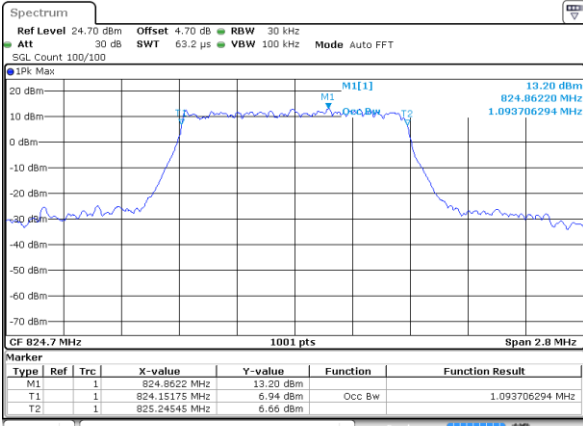


Date: 30 DEC 2019 11:08:58



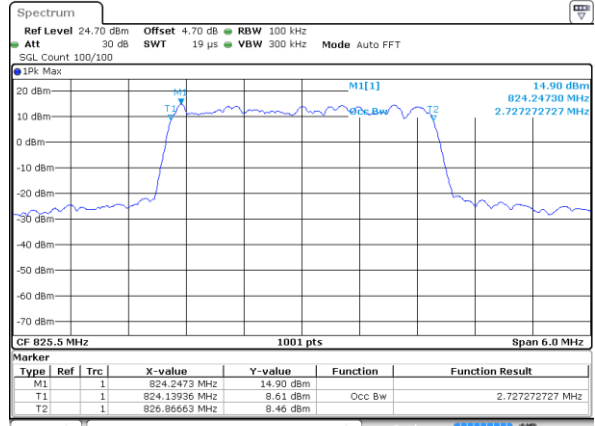
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



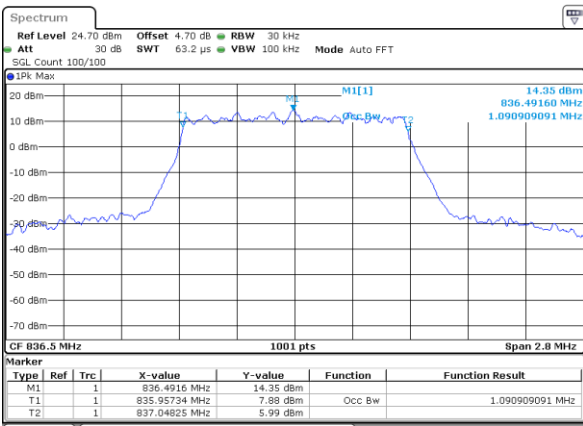
Date: 30 DEC 2019 12:01:11

Lowest Channel / 3MHz / 64QAM



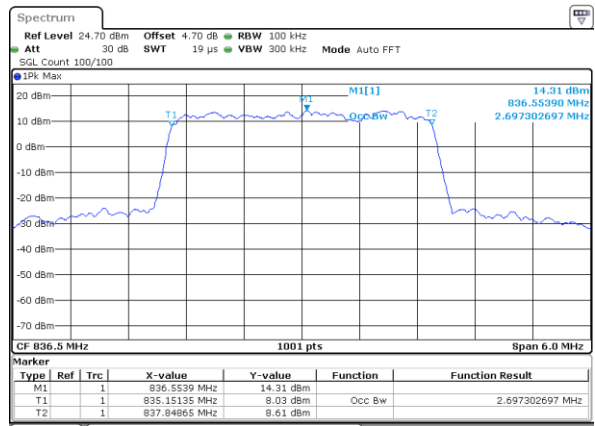
Date: 30 DEC 2019 11:29:48

Middle Channel / 1.4MHz / 64QAM



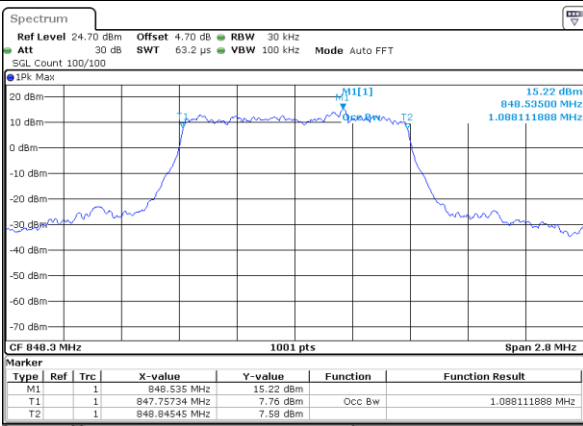
Date: 30 DEC 2019 11:24:58

Middle Channel / 3MHz / 64QAM



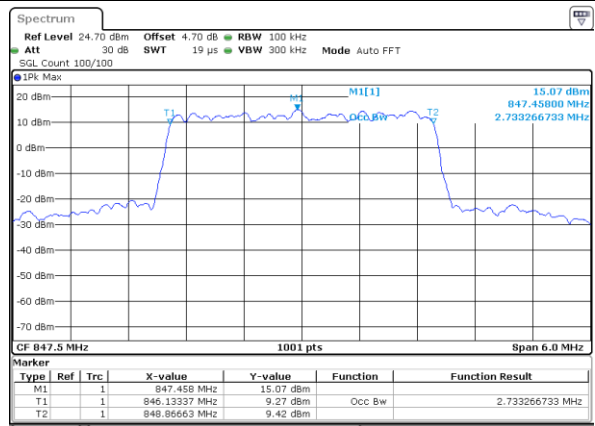
Date: 30 DEC 2019 11:35:12

Highest Channel / 1.4MHz / 64QAM



Date: 30 DEC 2019 11:25:18

Highest Channel / 3MHz / 64QAM



Date: 30 DEC 2019 11:35:32