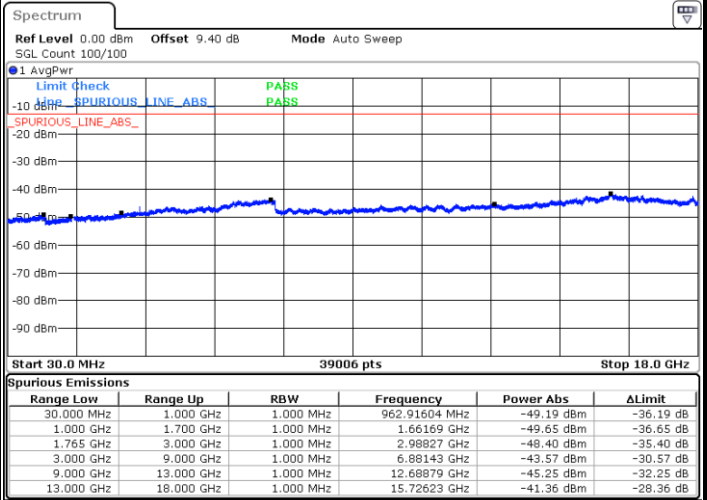
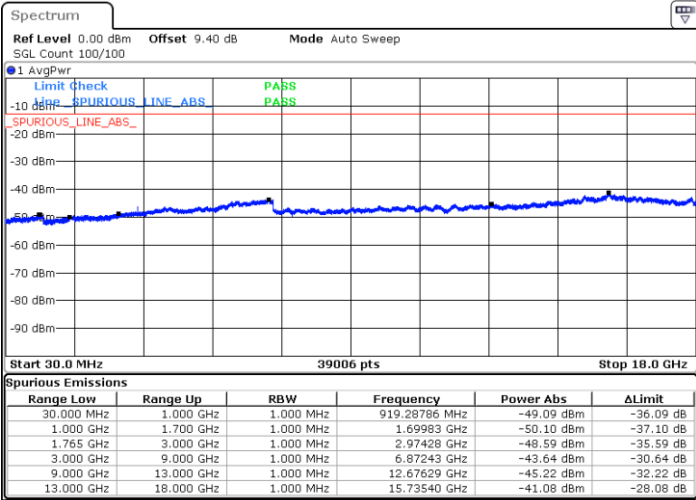




LTE Band 4 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

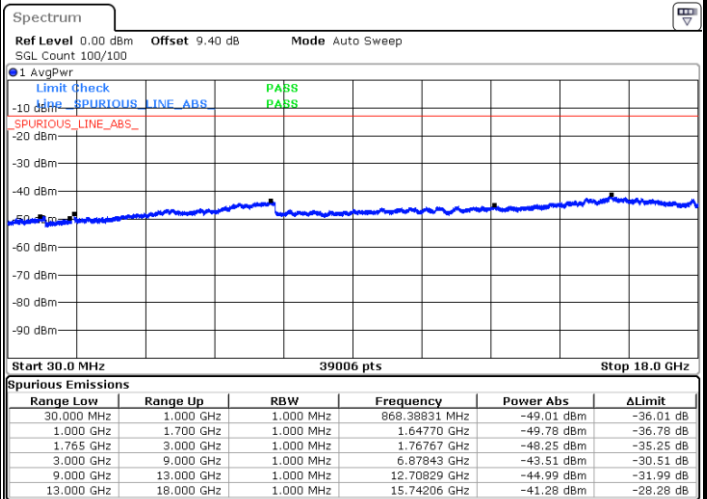
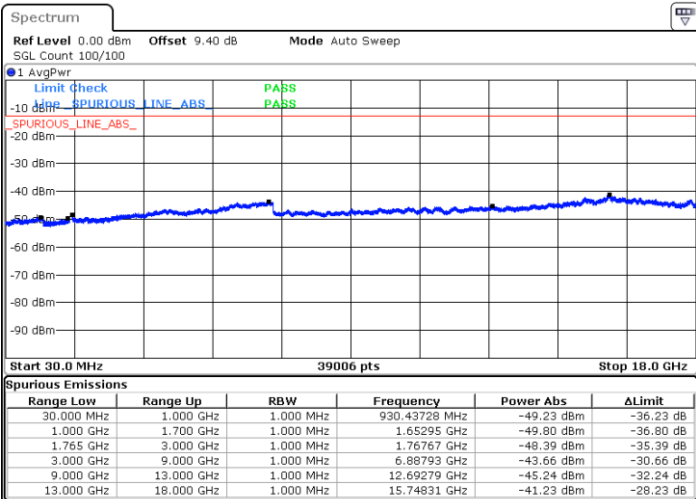


Date: 1.NOV.2019 16:37:10

Date: 1.NOV.2019 16:38:04

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 1.NOV.2019 16:44:08

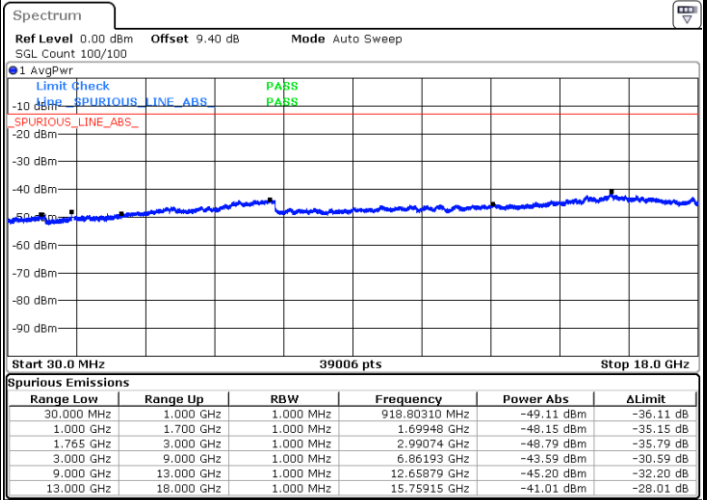
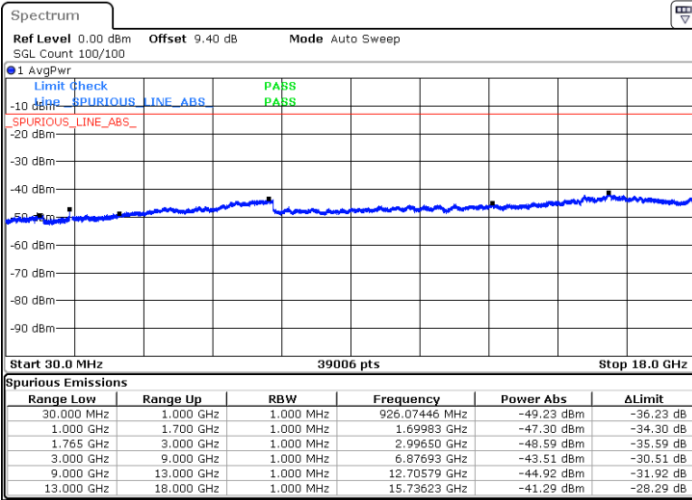
Date: 1.NOV.2019 16:45:03



LTE Band 4 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

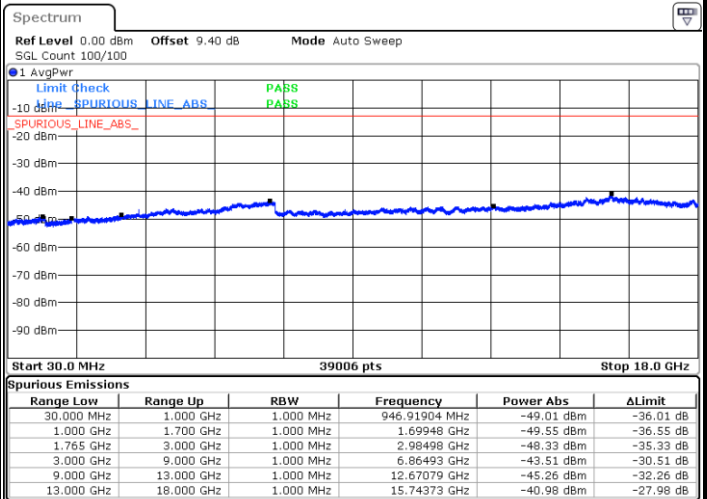
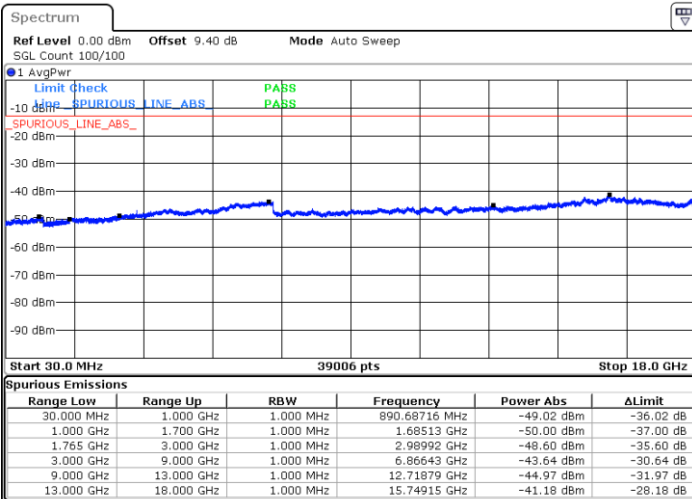


Date: 1.NOV.2019 16:51:07

Date: 1.NOV.2019 16:52:01

Middle Channel / QPSK

Middle Channel / 16QAM



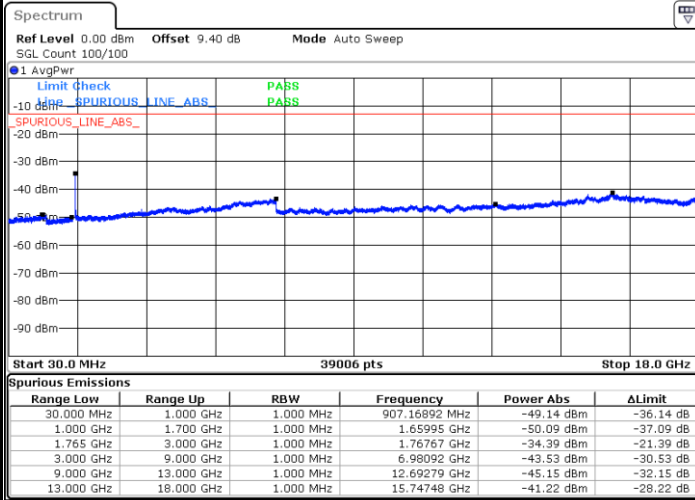
Date: 1.NOV.2019 16:53:36

Date: 1.NOV.2019 16:54:30



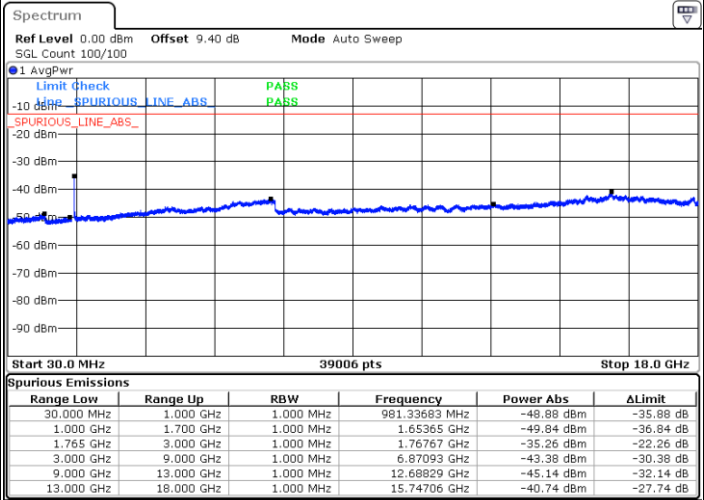
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 1.NOV.2019 17:00:34

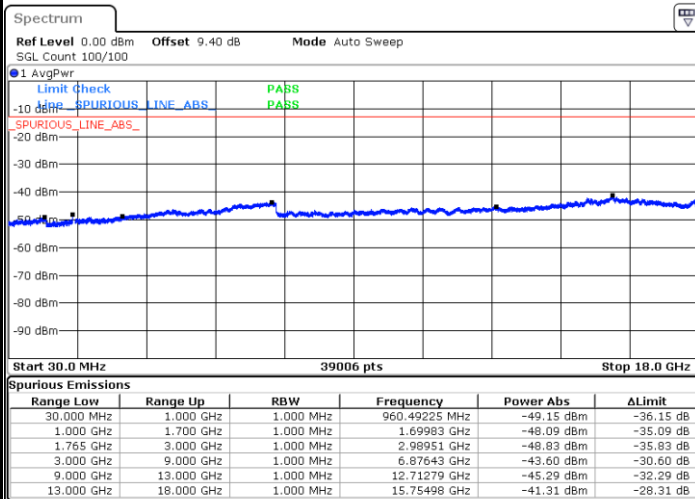
Highest Channel / 16QAM



Date: 1.NOV.2019 17:01:28

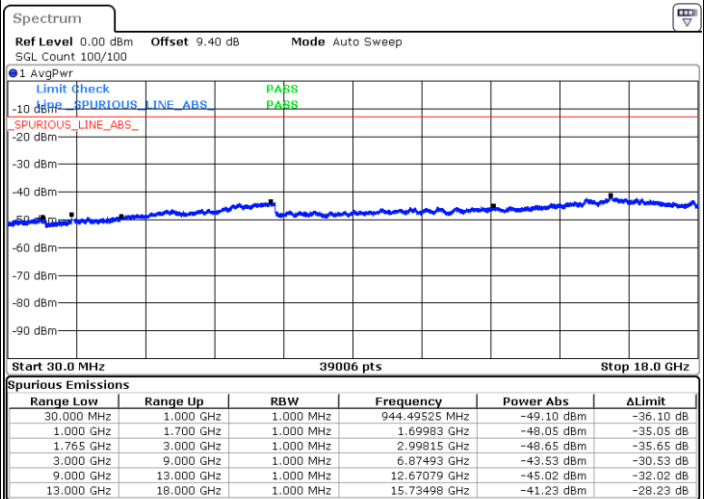
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 1.NOV.2019 17:24:32

Lowest Channel / 16QAM



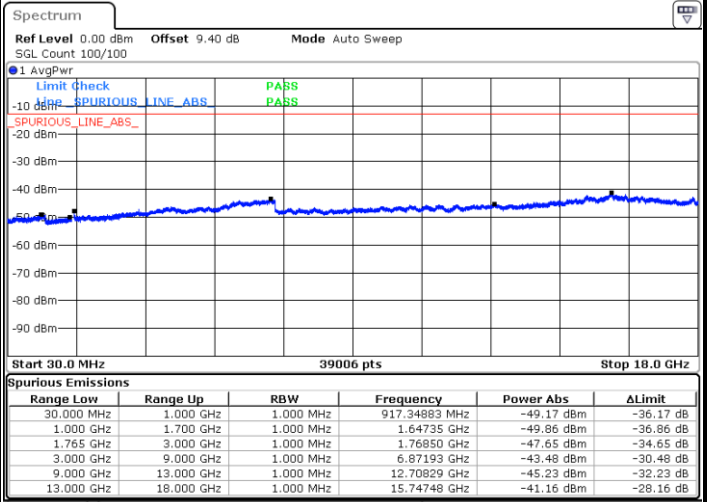
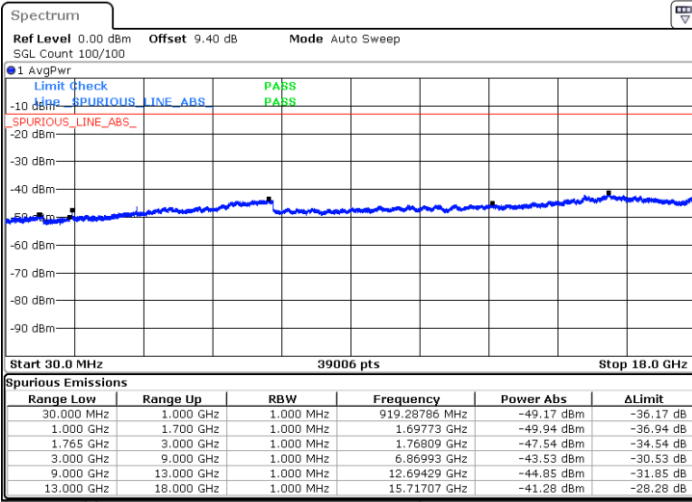
Date: 1.NOV.2019 17:25:27



LTE Band 4 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

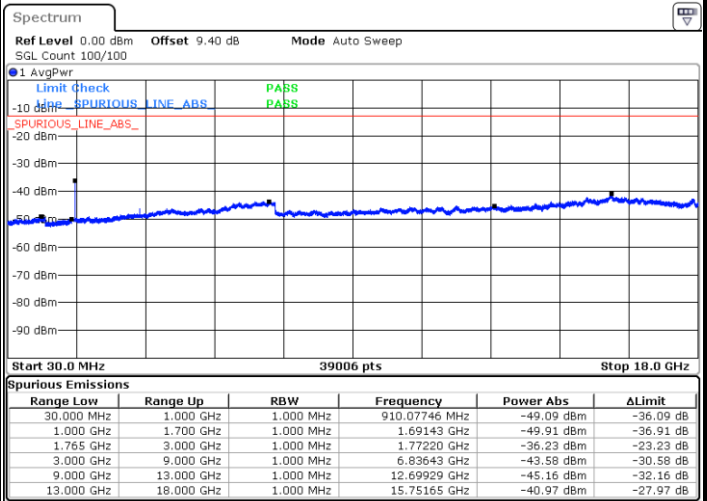
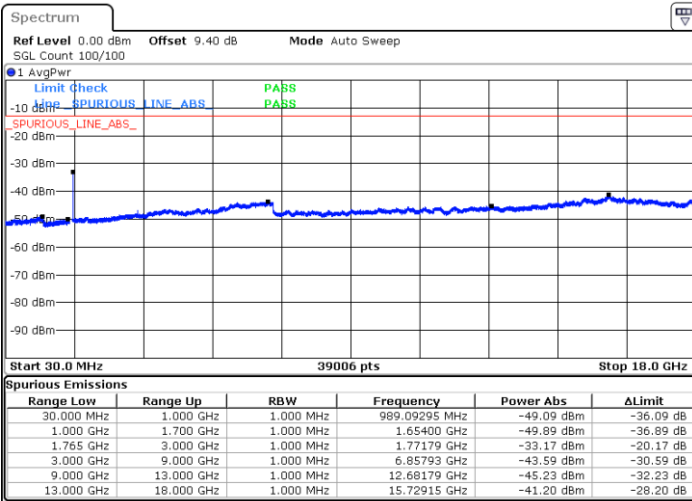


Date: 1.NOV.2019 17:27:01

Date: 1.NOV.2019 17:27:56

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 1.NOV.2019 17:34:00

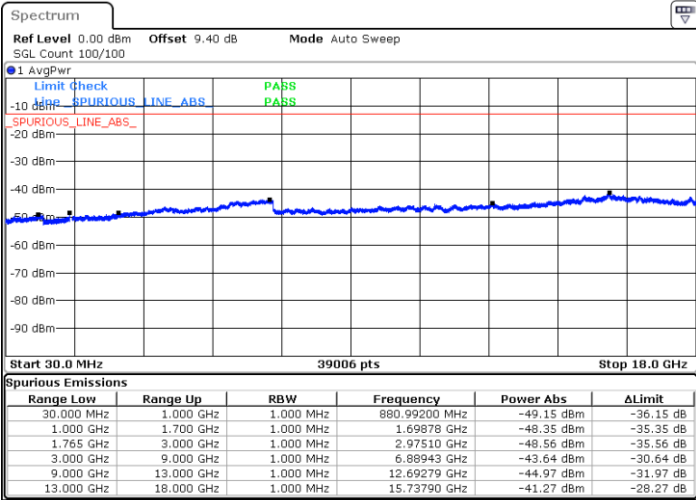
Date: 1.NOV.2019 17:34:54



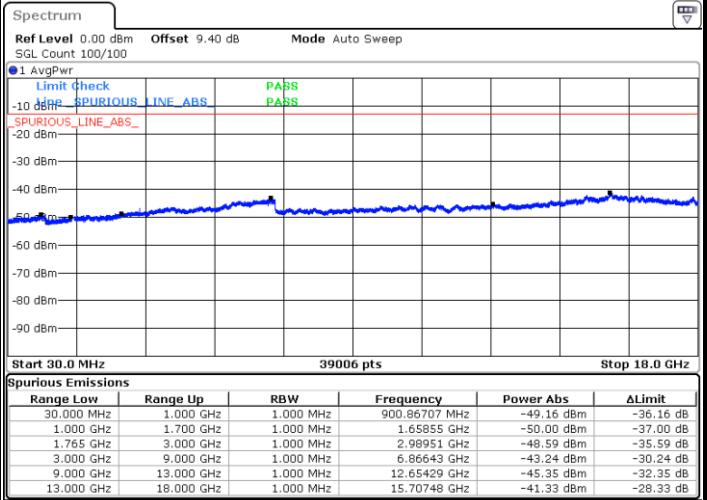
LTE Band 4 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

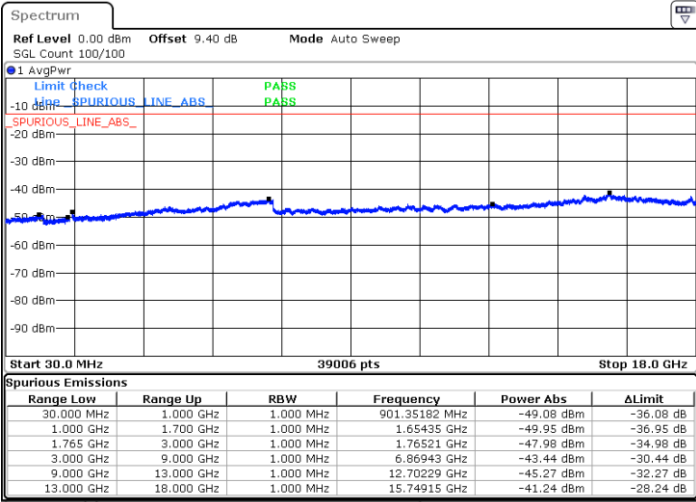


Date: 1.NOV.2019 17:38:24

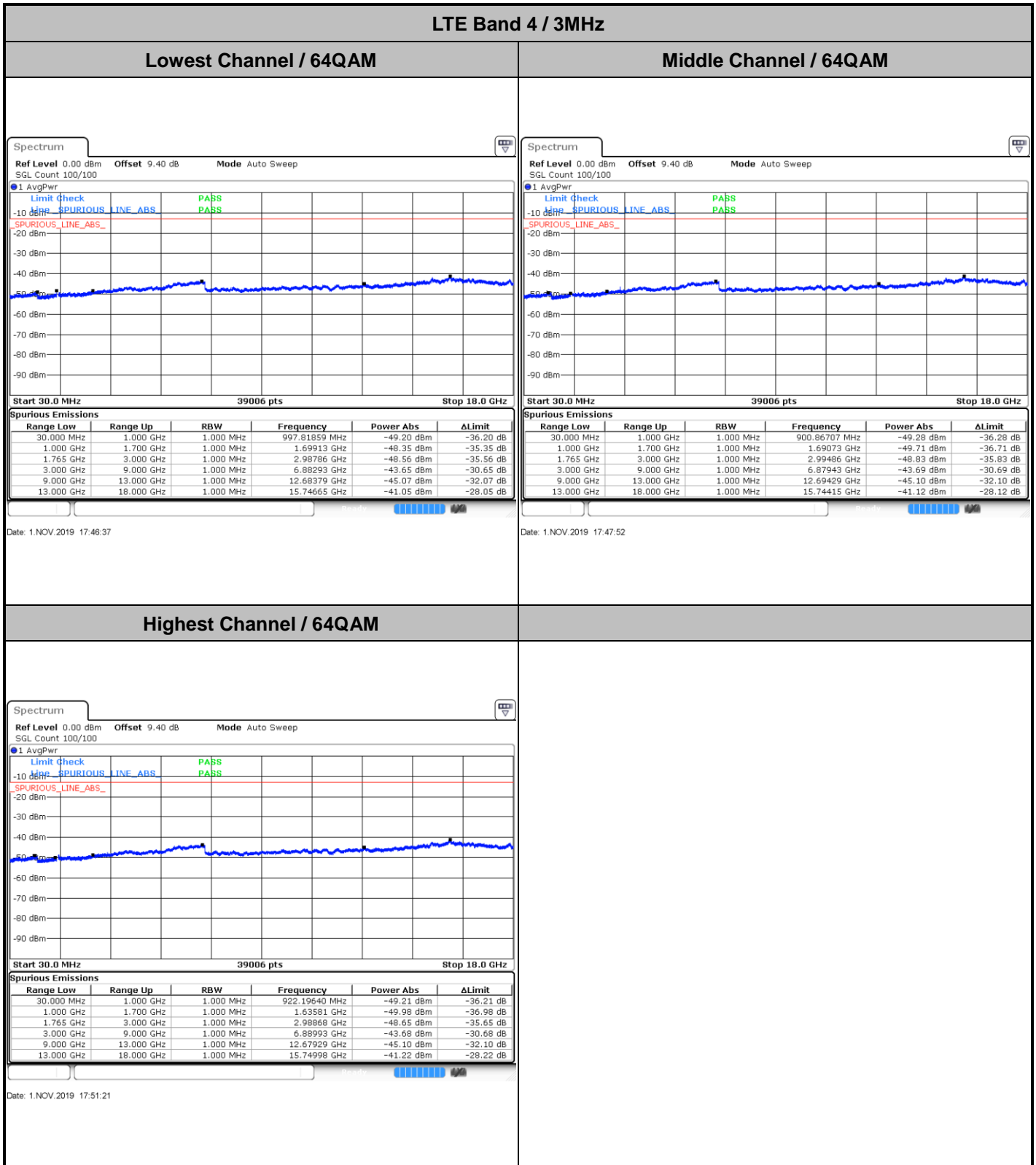


Date: 1.NOV.2019 17:39:38

Highest Channel / 64QAM



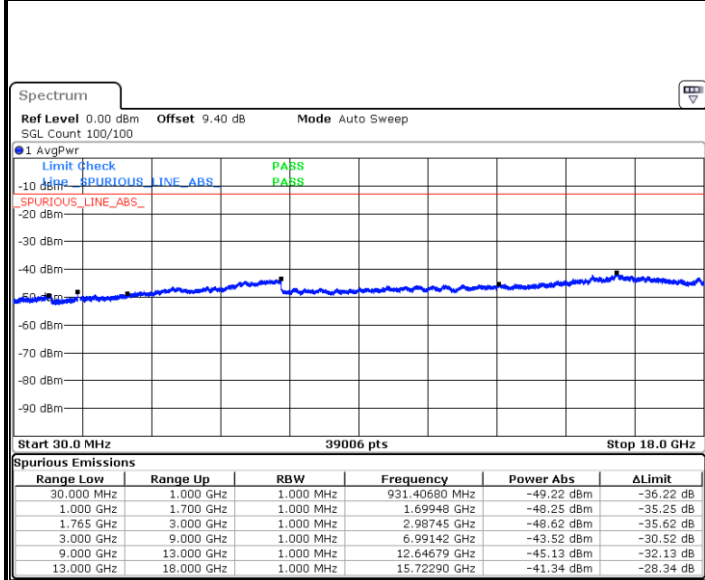
Date: 1.NOV.2019 17:43:08





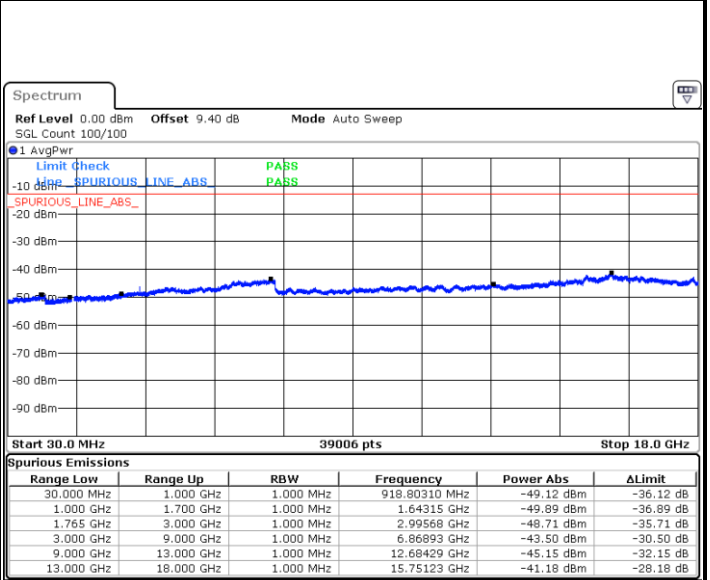
**LTE Band 4 / 5MHz**

**Lowest Channel / 64QAM**



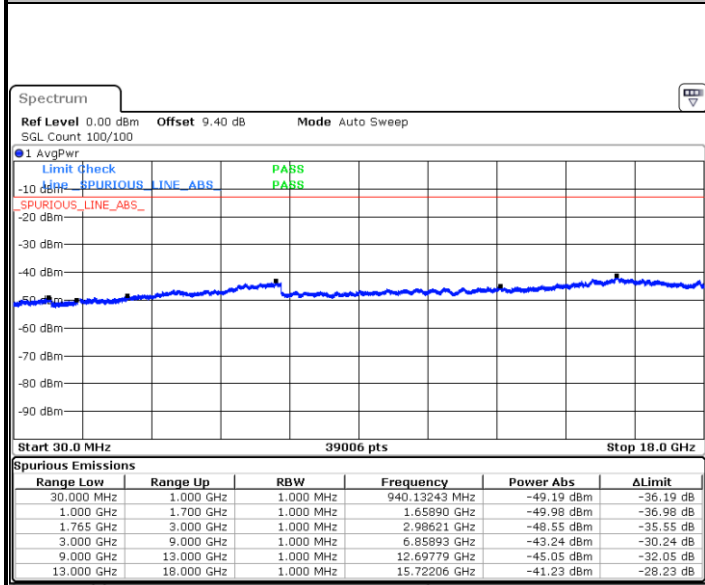
Date: 1.NOV.2019 17:54:50

**Middle Channel / 64QAM**



Date: 1.NOV.2019 17:56:06

**Highest Channel / 64QAM**



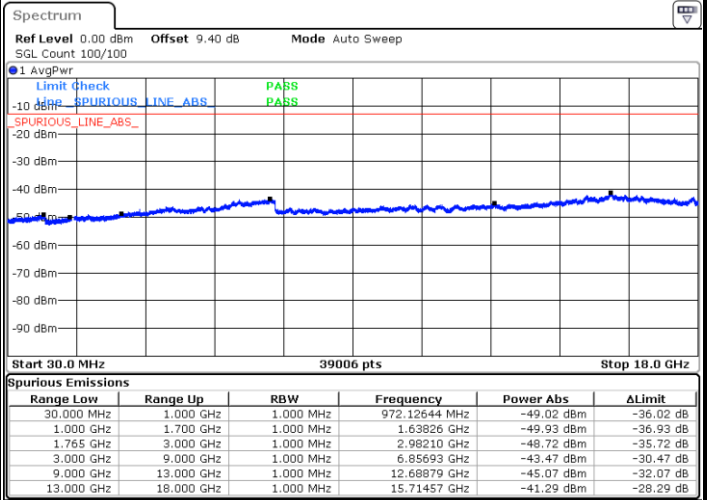
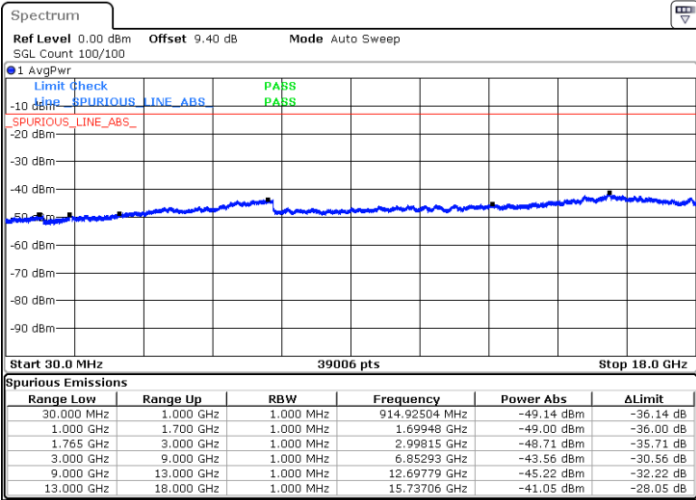
Date: 1.NOV.2019 17:59:35



LTE Band 4 / 10MHz

Lowest Channel / 64QAM

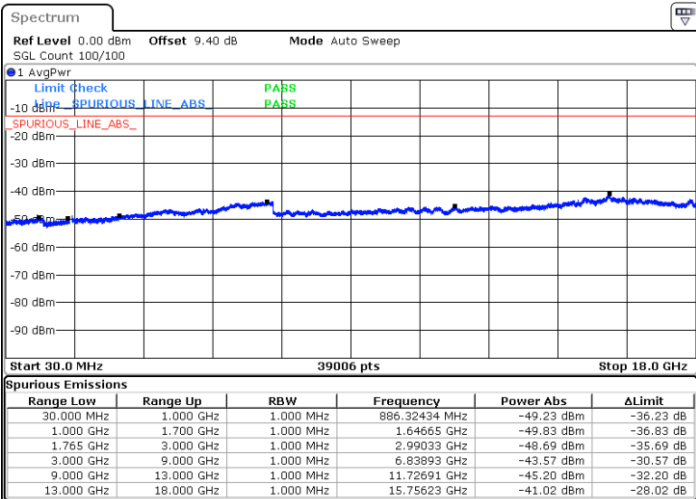
Middle Channel / 64QAM



Date: 1.NOV.2019 18:03:04

Date: 1.NOV.2019 18:04:18

Highest Channel / 64QAM

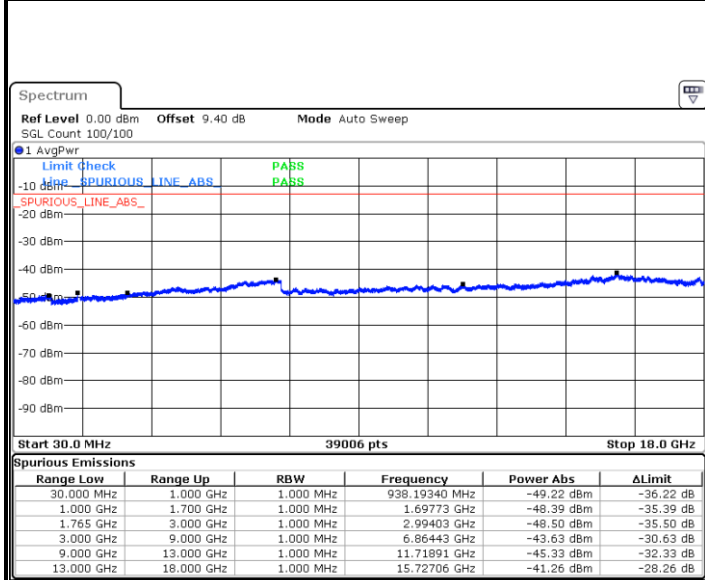


Date: 1.NOV.2019 18:07:47



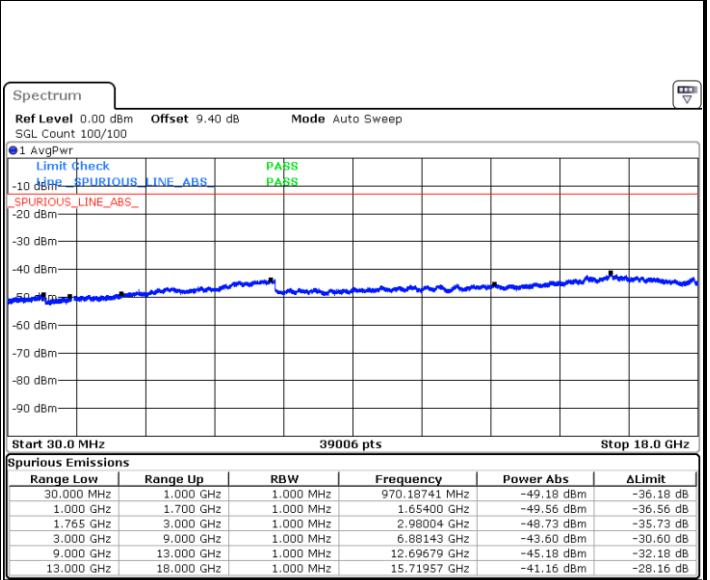
**LTE Band 4 / 15MHz**

**Lowest Channel / 64QAM**



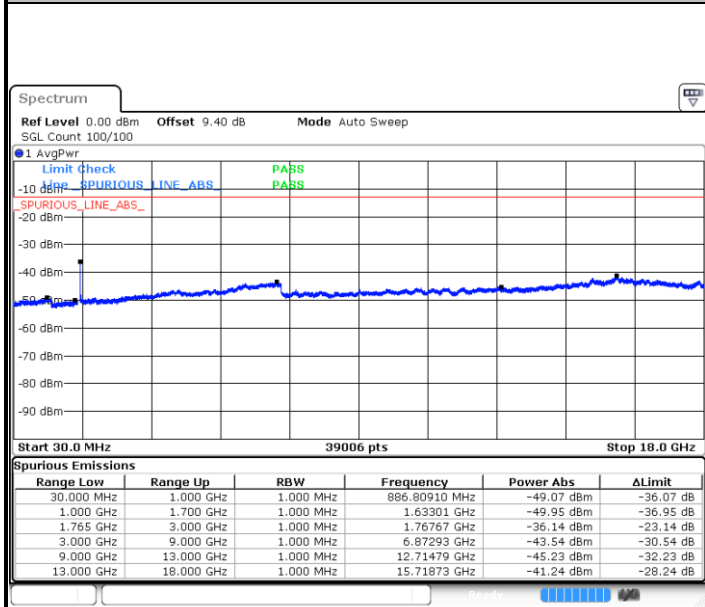
Date: 1.NOV.2019 18:11:17

**Middle Channel / 64QAM**



Date: 1.NOV.2019 18:12:31

**Highest Channel / 64QAM**



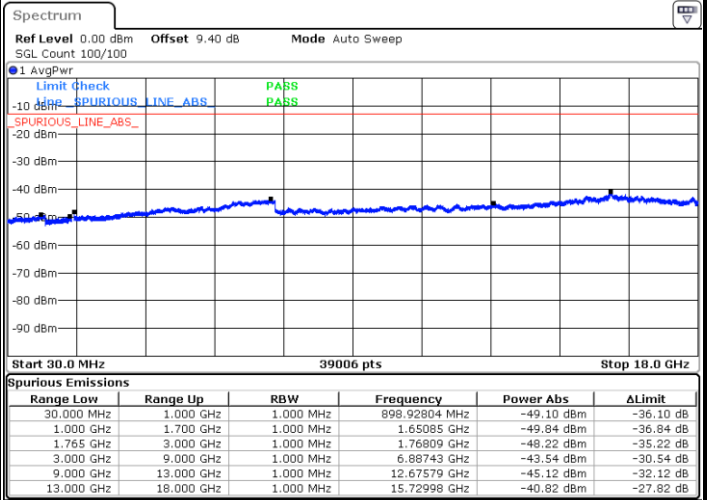
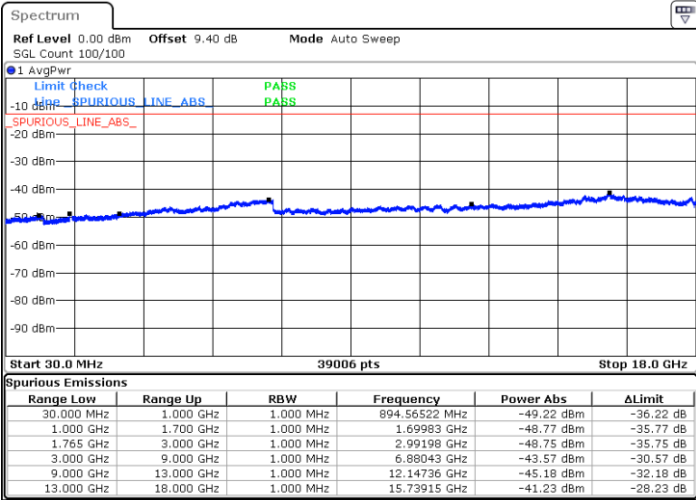
Date: 1.NOV.2019 18:16:00



LTE Band 4 / 20MHz

Lowest Channel / 64QAM

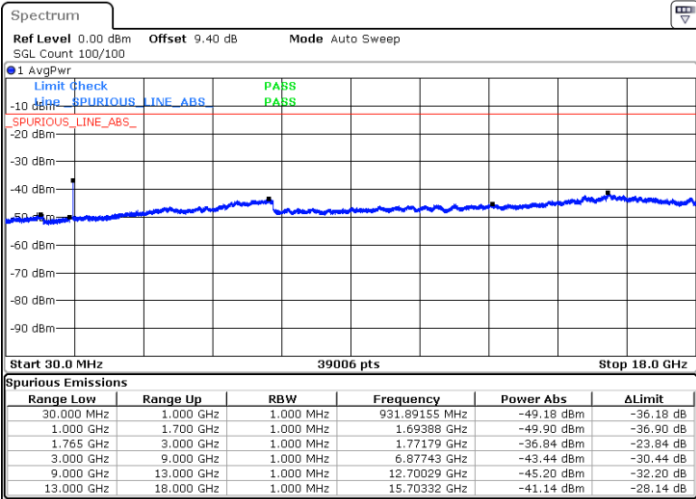
Middle Channel / 64QAM



Date: 1.NOV.2019 18:19:29

Date: 1.NOV.2019 18:20:44

Highest Channel / 64QAM



Date: 1.NOV.2019 18:24:13



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	0.0018	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0014	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0022	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0031	
20	Battery End Point	0.0006	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 5

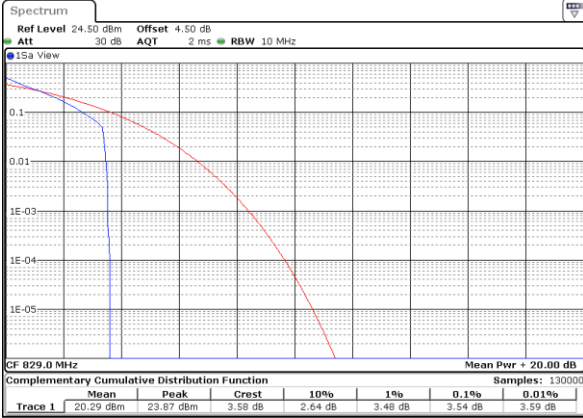
## Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.54	4.61	5.30	5.83	<b>PASS</b>
Middle CH	3.62	4.58	5.36	5.91	
Highest CH	3.59	4.75	4.96	6.00	
Mode	LTE Band 5 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.30	5.86			<b>PASS</b>
Middle CH	5.30	5.86			
Highest CH	5.10	6.00			



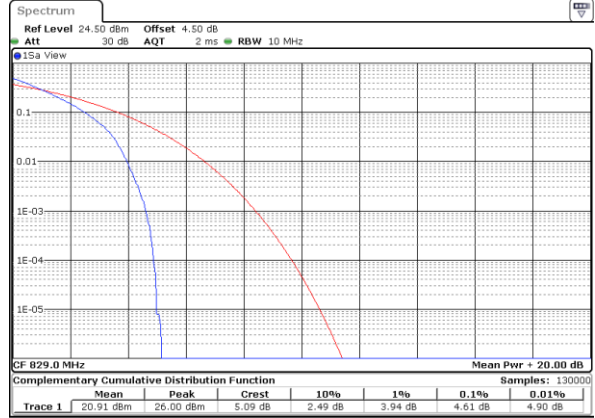
LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



Date: 1 NOV 2019 13:33:56

Lowest Channel / Full RB



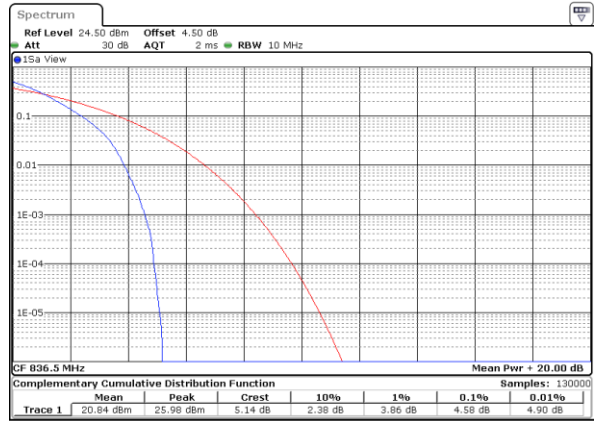
Date: 1 NOV 2019 13:34:06

Middle Channel / 1RB



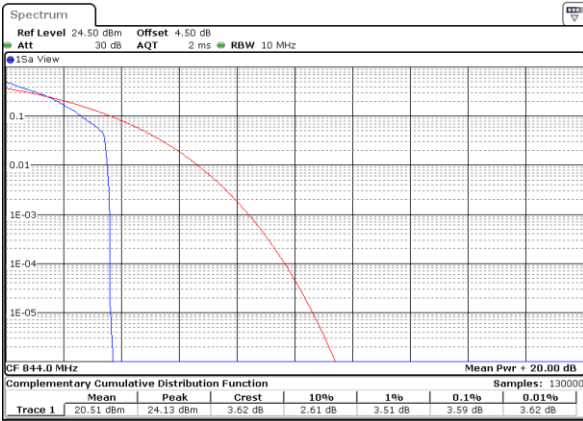
Date: 1 NOV 2019 13:34:39

Middle Channel / Full RB



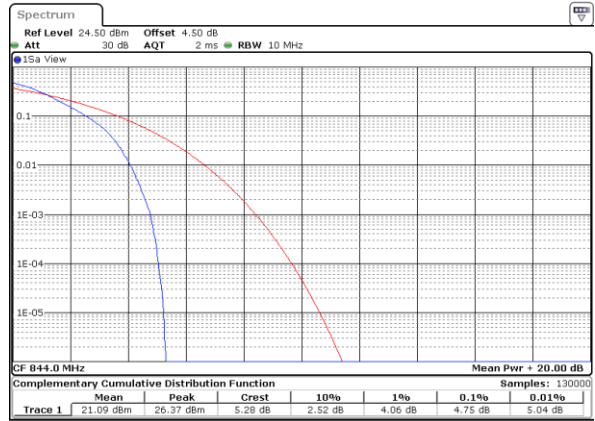
Date: 1 NOV 2019 13:34:29

Highest Channel / 1RB



Date: 1 NOV 2019 13:34:49

Highest Channel / Full RB



Date: 1 NOV 2019 13:34:58



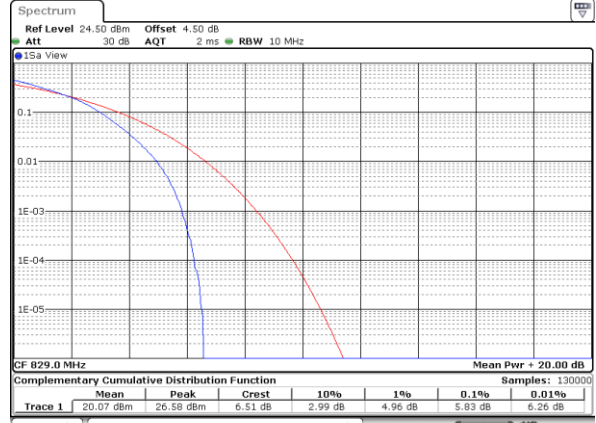
LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



Date: 1 NOV 2019 13:33:00

Lowest Channel / Full RB



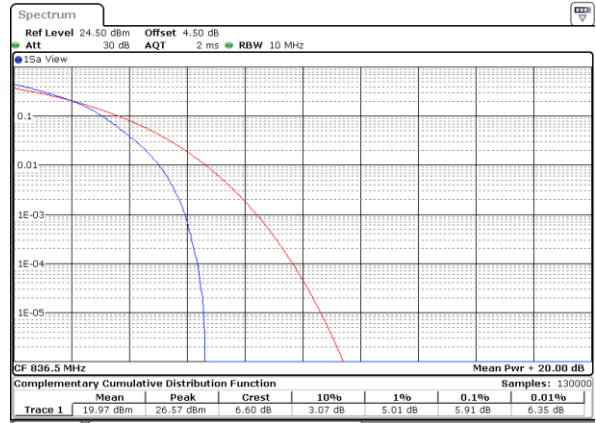
Date: 1 NOV 2019 13:33:09

Middle Channel / 1RB



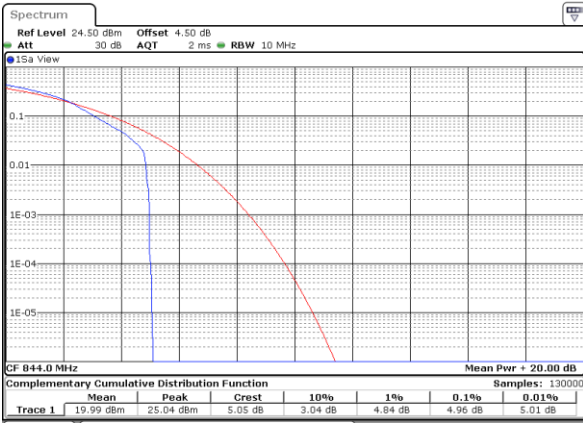
Date: 1 NOV 2019 13:33:19

Middle Channel / Full RB



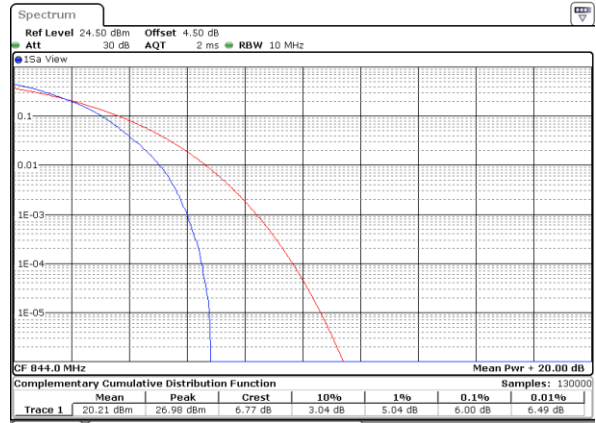
Date: 1 NOV 2019 13:33:28

Highest Channel / 1RB



Date: 1 NOV 2019 13:33:37

Highest Channel / Full RB



Date: 1 NOV 2019 13:33:47



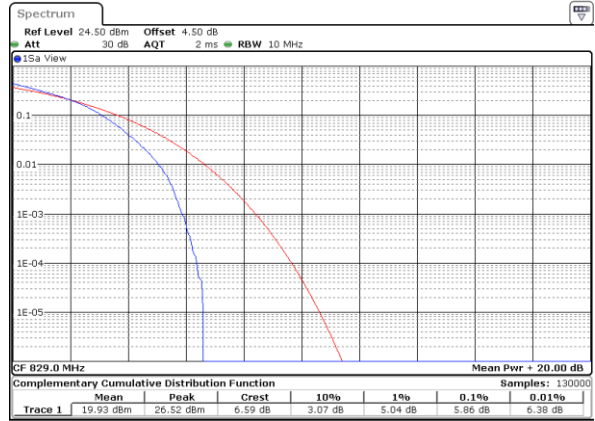
LTE Band 5 / 10MHz / 64QAM

Lowest Channel / 1RB



Date: 1 NOV 2019 14:20:14

Lowest Channel / Full RB



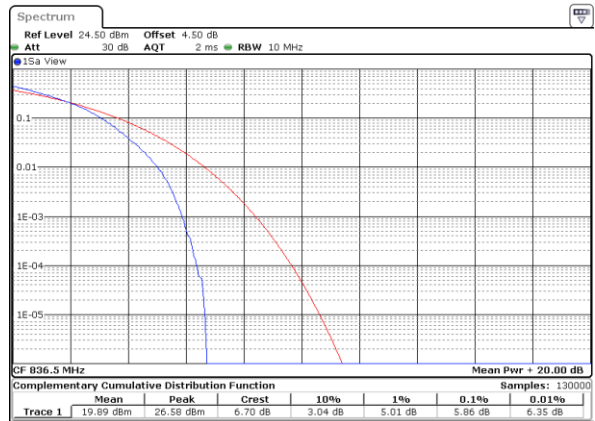
Date: 1 NOV 2019 14:20:24

Middle Channel / 1RB



Date: 1 NOV 2019 14:20:05

Middle Channel / Full RB



Date: 1 NOV 2019 14:19:56

Highest Channel / 1RB



Date: 1 NOV 2019 14:19:39

Highest Channel / Full RB



Date: 1 NOV 2019 14:19:47



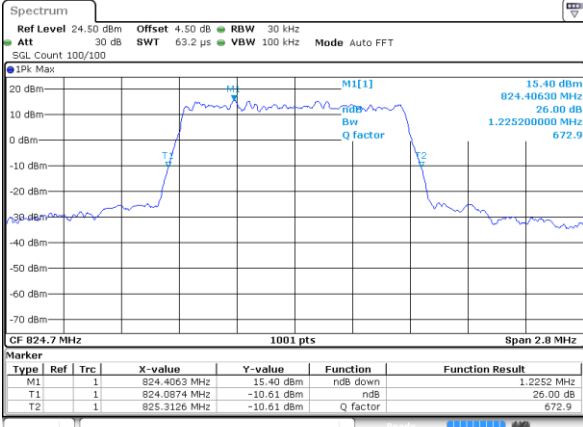
**26dB Bandwidth**

Mode	LTE Band 5 : 26dB BW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.2252	1.228	3.0569	3.033	4.925	4.935	9.77	9.85
Middle CH	1.2364	1.2252	2.991	2.961	4.885	4.845	9.71	9.73
Highest CH	1.2252	1.2392	3.045	3.039	4.895	4.945	9.69	9.67
Mode	LTE Band 5 : 26dB BW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.2336		3.0509		4.955		9.75	
Middle CH	1.2224		3.003		4.885		9.79	
Highest CH	1.2308		3.015		4.865		9.77	



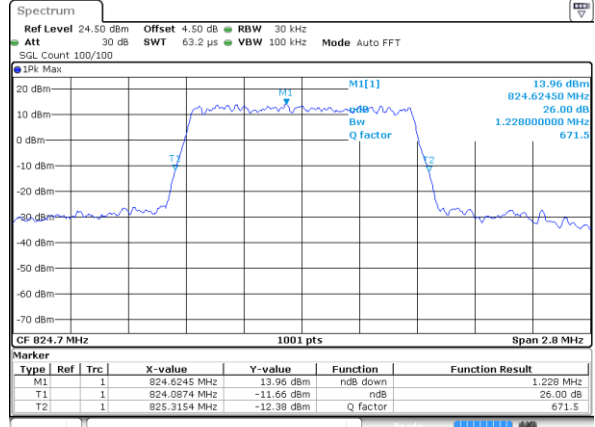
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



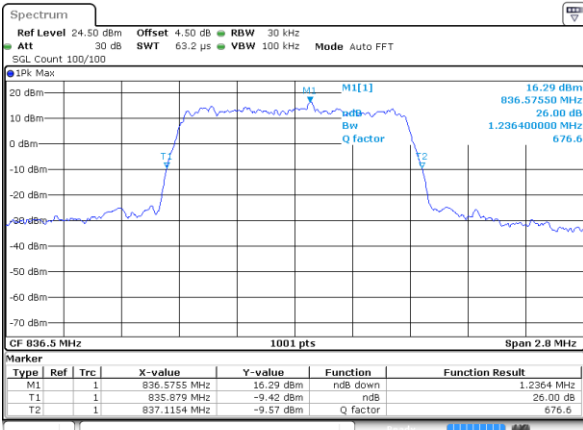
Date: 1 NOV 2019 12:50:45

Lowest Channel / 1.4MHz / 16QAM



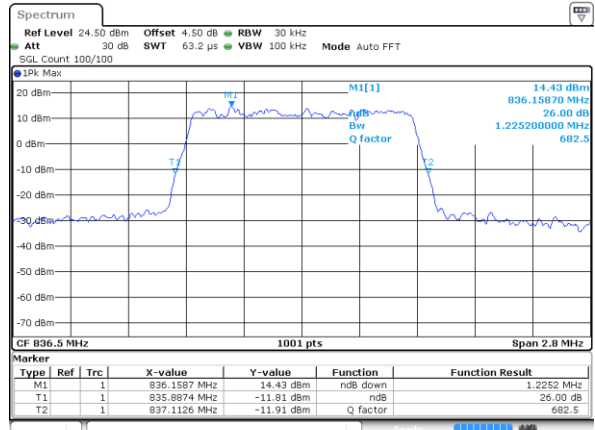
Date: 1 NOV 2019 12:50:35

Middle Channel / 1.4MHz / QPSK



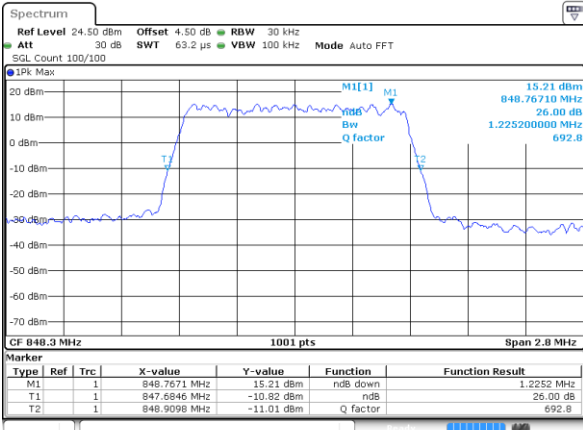
Date: 1 NOV 2019 12:53:04

Middle Channel / 1.4MHz / 16QAM



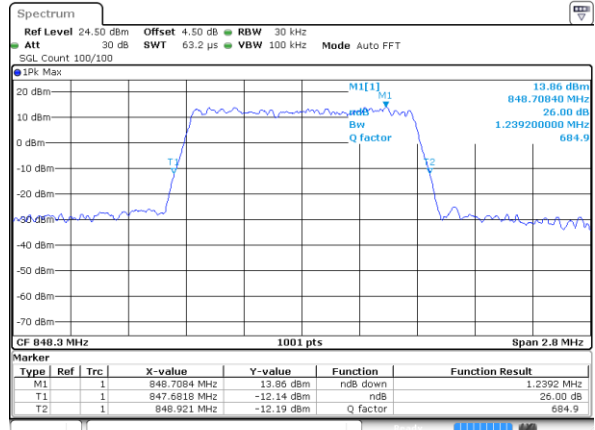
Date: 1 NOV 2019 12:53:14

Highest Channel / 1.4MHz / QPSK



Date: 1 NOV 2019 12:55:33

Highest Channel / 1.4MHz / 16QAM

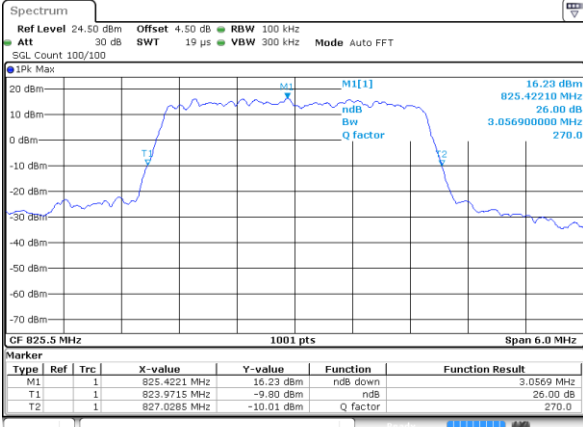


Date: 1 NOV 2019 12:55:43



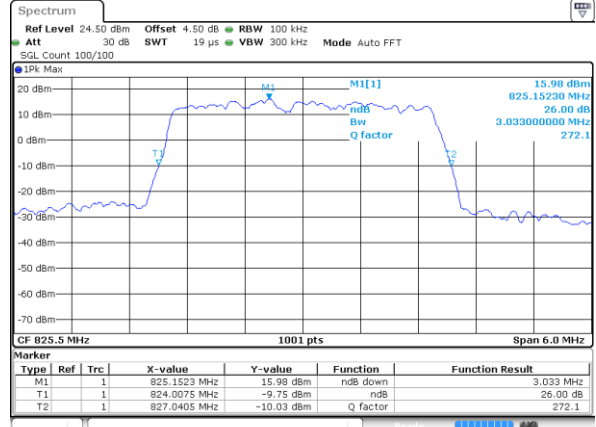
LTE Band 5

Lowest Channel / 3MHz / QPSK



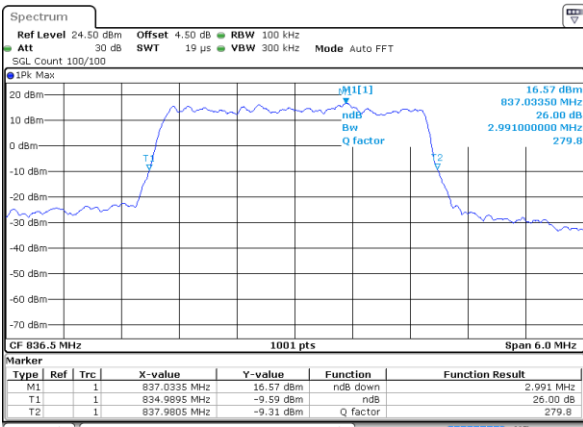
Date: 1 NOV 2019 12:58:01

Lowest Channel / 3MHz / 16QAM



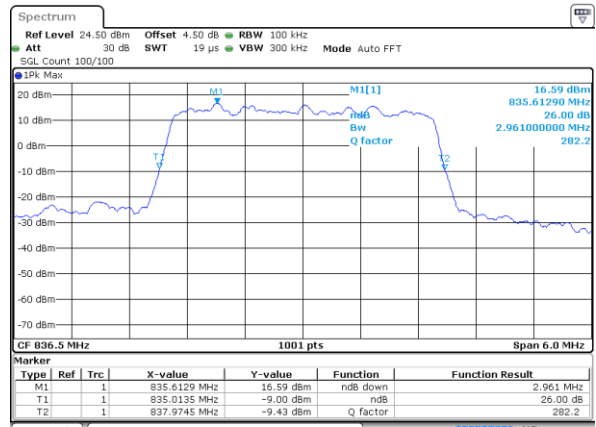
Date: 1 NOV 2019 12:58:11

Middle Channel / 3MHz / QPSK



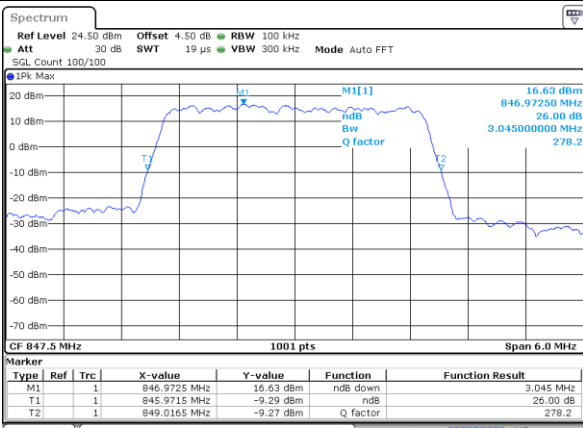
Date: 1 NOV 2019 13:00:29

Middle Channel / 3MHz / 16QAM



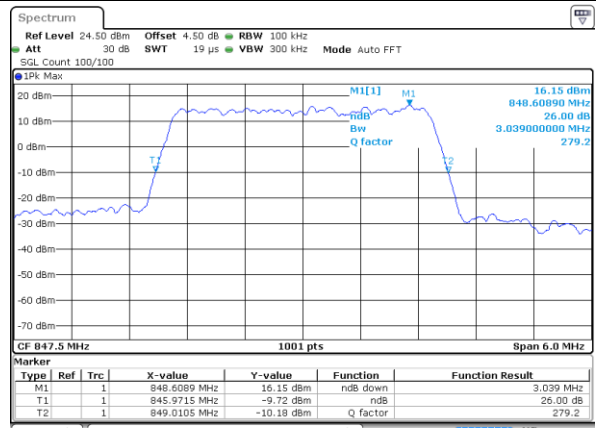
Date: 1 NOV 2019 13:00:39

Highest Channel / 3MHz / QPSK



Date: 1 NOV 2019 13:02:58

Highest Channel / 3MHz / 16QAM

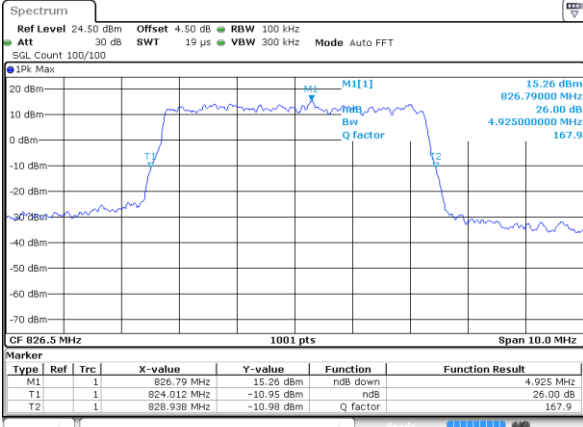


Date: 1 NOV 2019 13:03:08



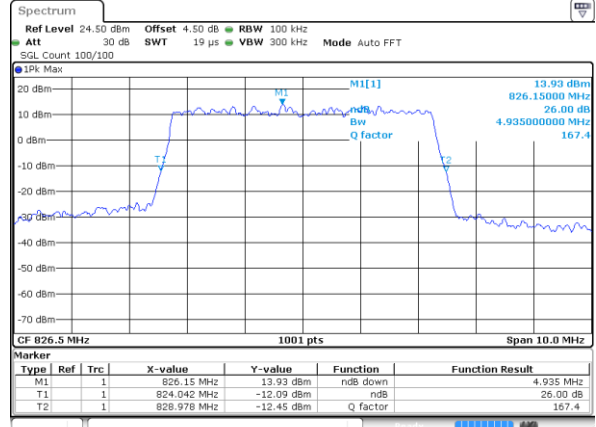
LTE Band 5

Lowest Channel / 5MHz / QPSK



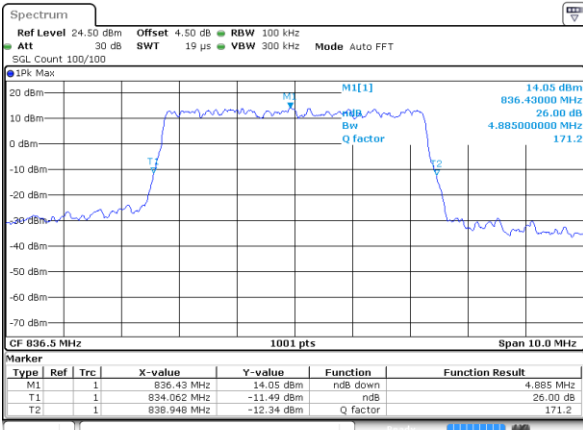
Date: 1 NOV 2019 13:05:26

Lowest Channel / 5MHz / 16QAM



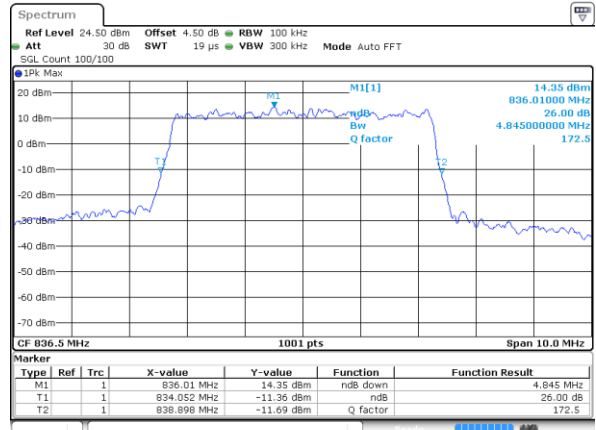
Date: 1 NOV 2019 13:05:36

Middle Channel / 5MHz / QPSK



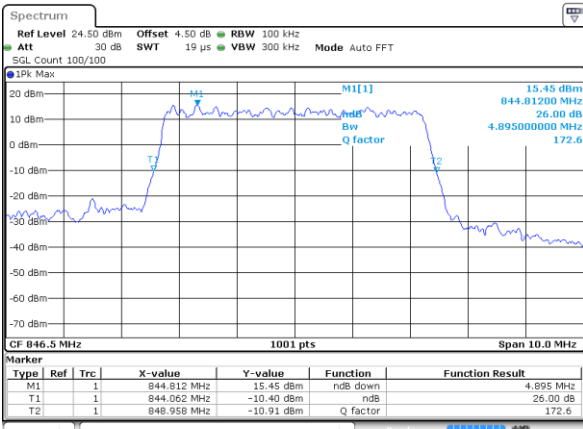
Date: 1 NOV 2019 13:07:54

Middle Channel / 5MHz / 16QAM



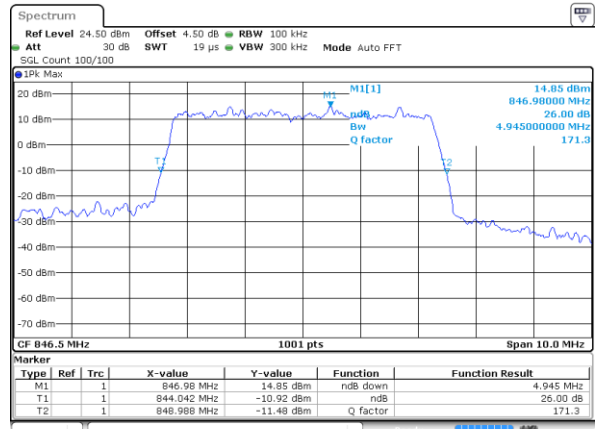
Date: 1 NOV 2019 13:08:04

Highest Channel / 5MHz / QPSK



Date: 1 NOV 2019 13:10:23

Highest Channel / 5MHz / 16QAM

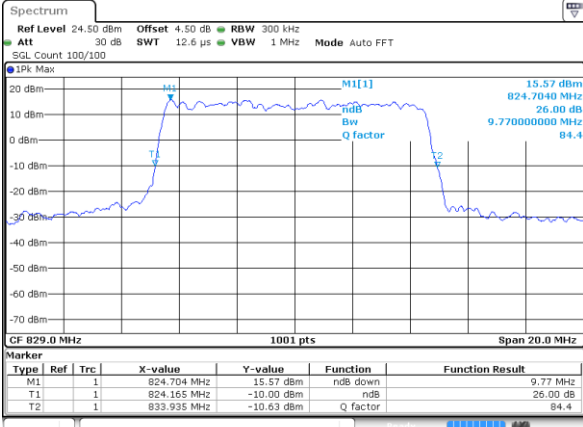


Date: 1 NOV 2019 13:10:33



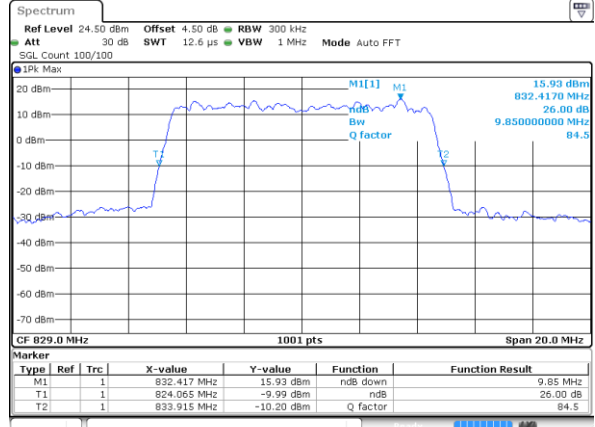
LTE Band 5

Lowest Channel / 10MHz / QPSK



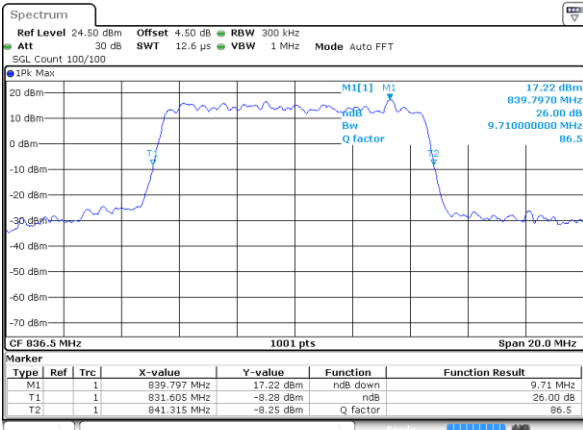
Date: 1 NOV 2019 13:12:53

Lowest Channel / 10MHz / 16QAM



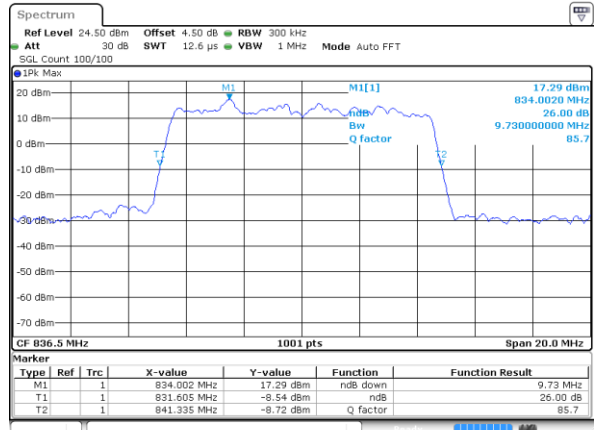
Date: 1 NOV 2019 13:13:03

Middle Channel / 10MHz / QPSK



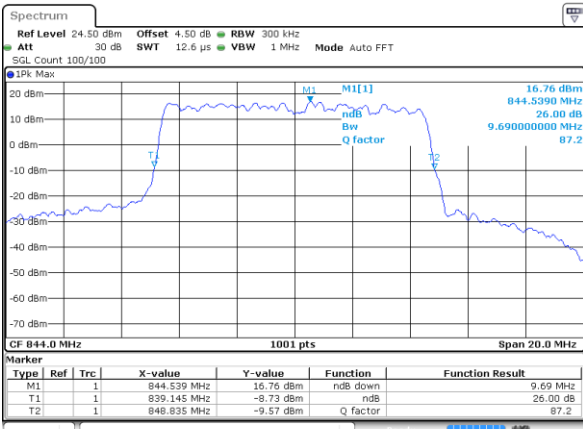
Date: 1 NOV 2019 13:15:22

Middle Channel / 10MHz / 16QAM



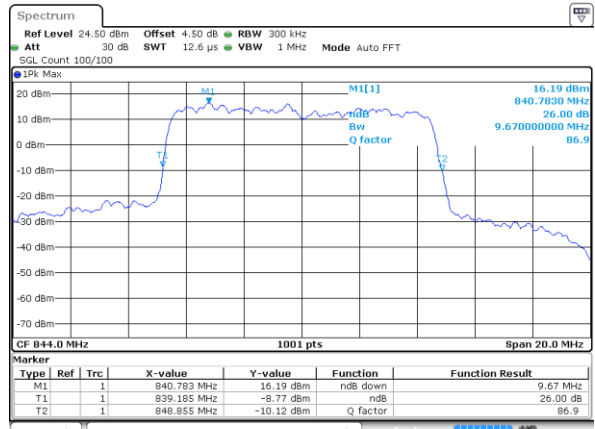
Date: 1 NOV 2019 13:15:32

Highest Channel / 10MHz / QPSK



Date: 1 NOV 2019 13:17:50

Highest Channel / 10MHz / 16QAM

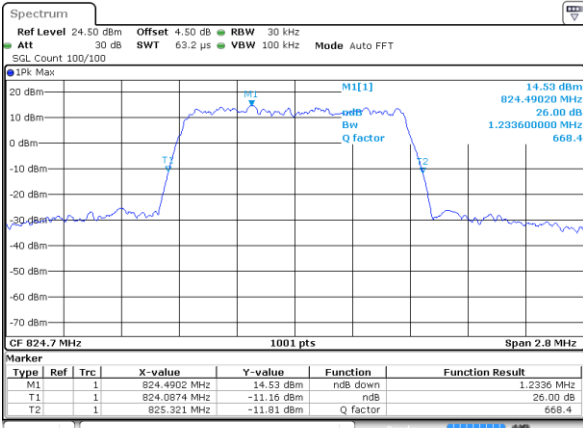


Date: 1 NOV 2019 13:18:00



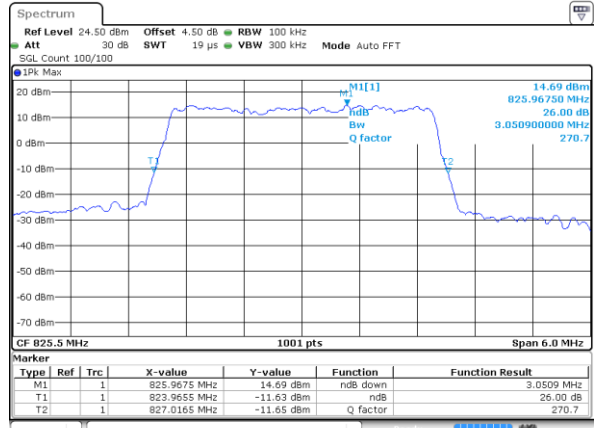
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



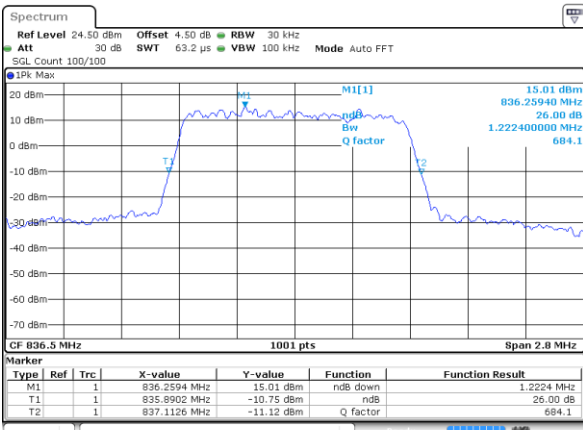
Date: 1 NOV 2019 13:35:18

Lowest Channel / 3MHz / 64QAM



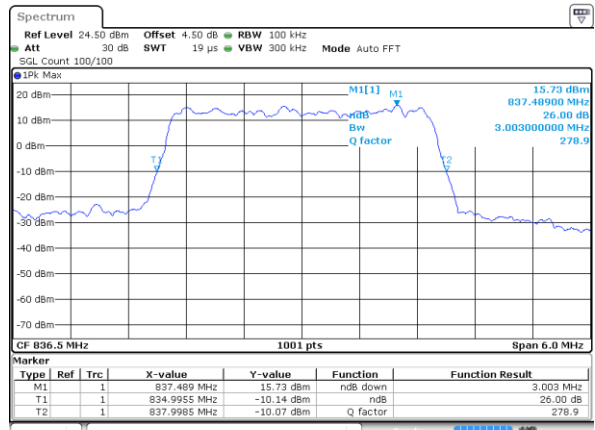
Date: 1 NOV 2019 13:45:30

Middle Channel / 1.4MHz / 64QAM



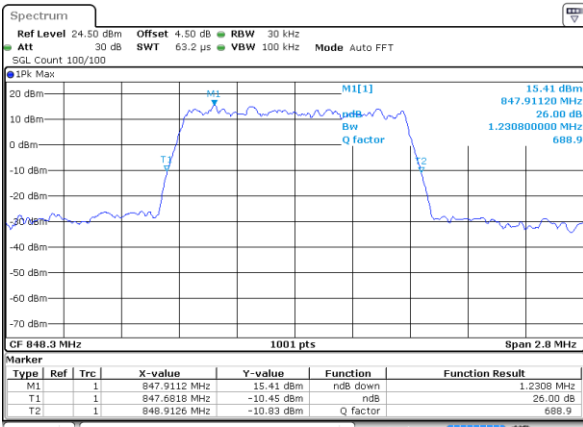
Date: 1 NOV 2019 13:40:41

Middle Channel / 3MHz / 64QAM



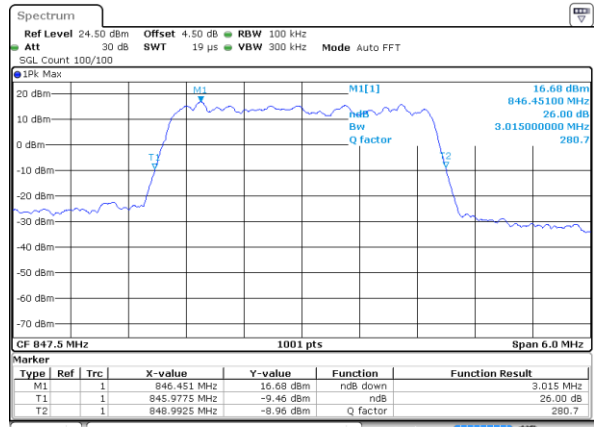
Date: 1 NOV 2019 13:50:53

Highest Channel / 1.4MHz / 64QAM



Date: 1 NOV 2019 13:41:01

Highest Channel / 3MHz / 64QAM

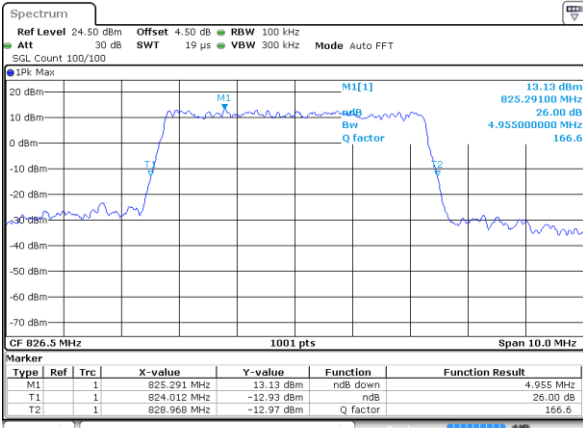


Date: 1 NOV 2019 13:51:13



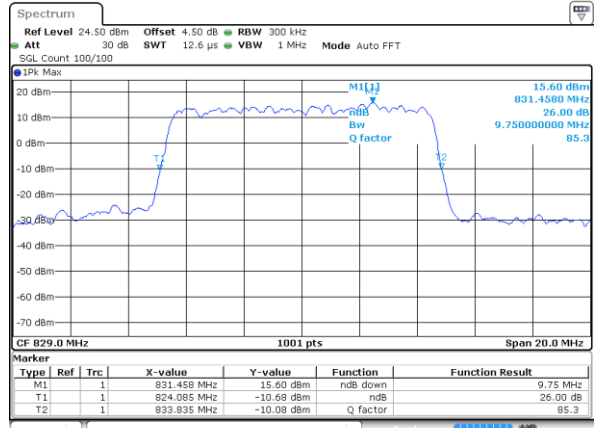
LTE Band 5

Lowest Channel / 5MHz / 64QAM



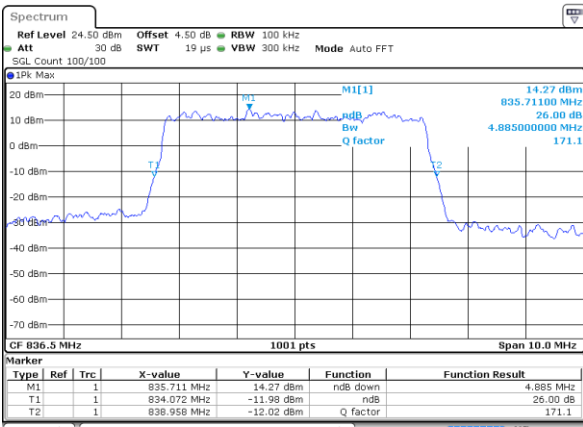
Date: 1 NOV 2019 13:55:43

Lowest Channel / 10MHz / 64QAM



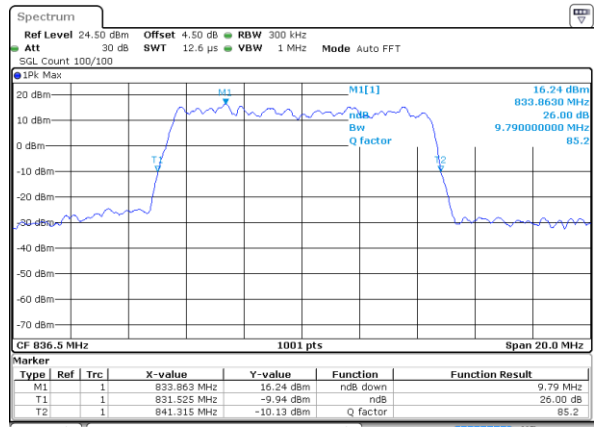
Date: 1 NOV 2019 14:05:56

Middle Channel / 5MHz / 64QAM



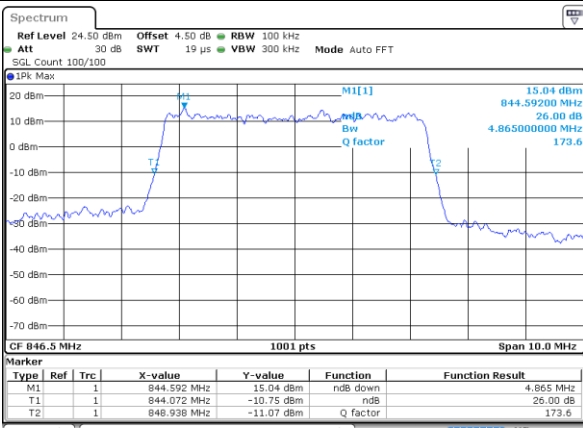
Date: 1 NOV 2019 14:01:07

Middle Channel / 10MHz / 64QAM



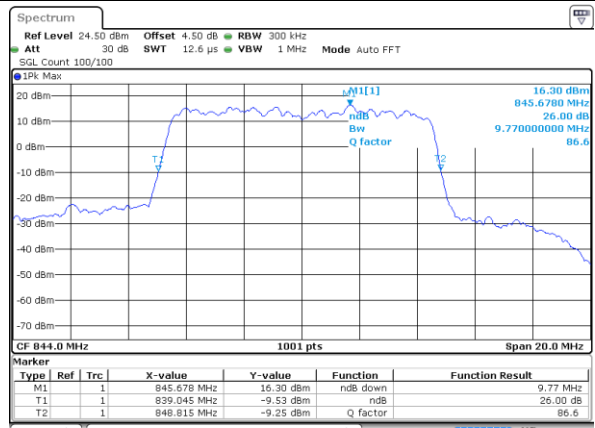
Date: 1 NOV 2019 14:11:19

Highest Channel / 5MHz / 64QAM



Date: 1 NOV 2019 14:01:27

Highest Channel / 10MHz / 64QAM



Date: 1 NOV 2019 14:11:40



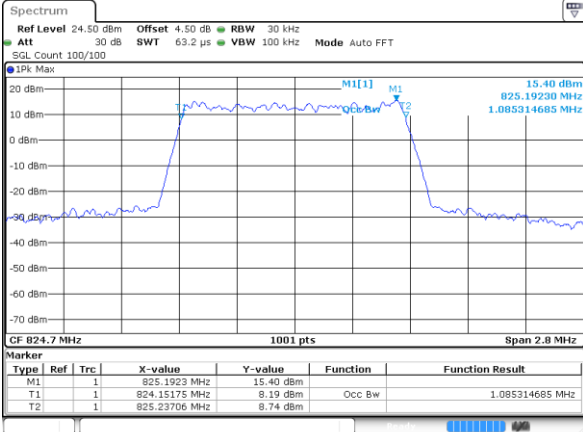
Occupied Bandwidth

Mode	LTE Band 5 : 99%OBW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.08	2.71	2.72	4.51	4.51	9.01	9.03
Middle CH	1.09	1.09	2.73	2.74	4.50	4.47	9.05	8.99
Highest CH	1.09	1.09	2.72	2.72	4.51	4.48	9.03	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		4.48		9.01	
Middle CH	1.09		2.73		4.51		9.07	
Highest CH	1.09		2.73		4.49		9.01	



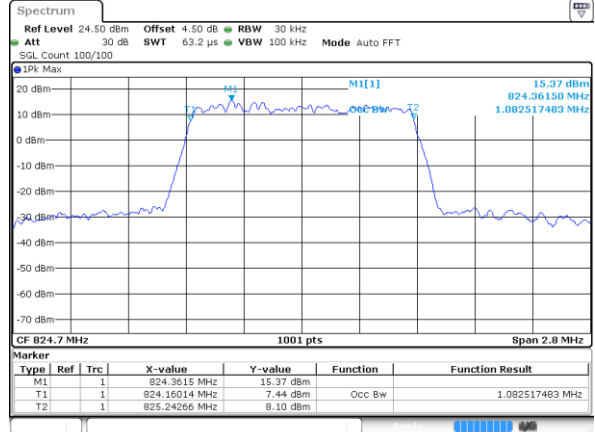
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



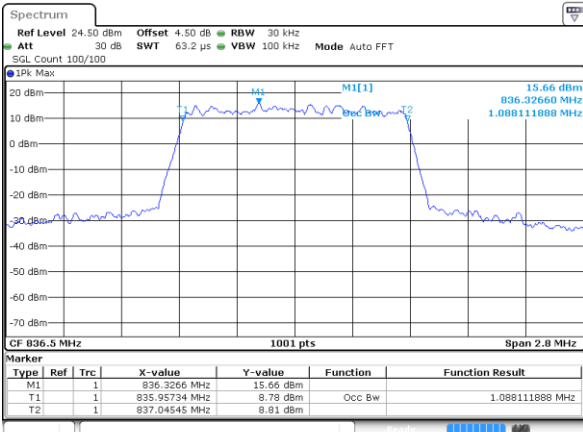
Date: 1 NOV 2019 12:50:16

Lowest Channel / 1.4MHz / 16QAM



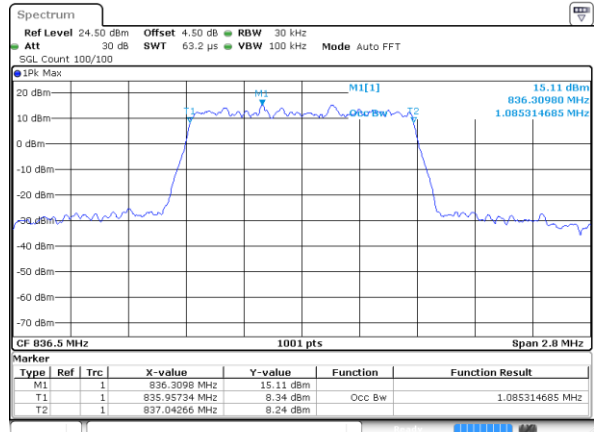
Date: 1 NOV 2019 12:50:26

Middle Channel / 1.4MHz / QPSK



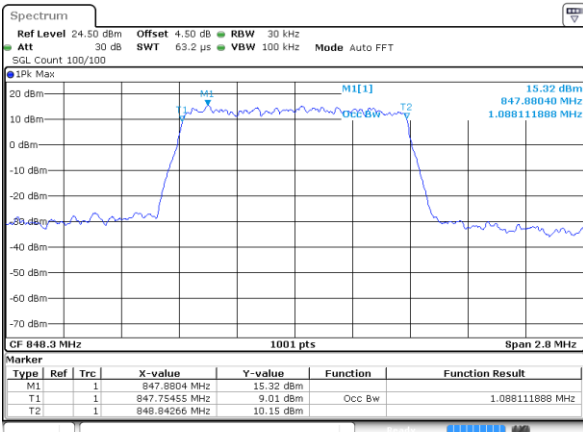
Date: 1 NOV 2019 12:52:44

Middle Channel / 1.4MHz / 16QAM



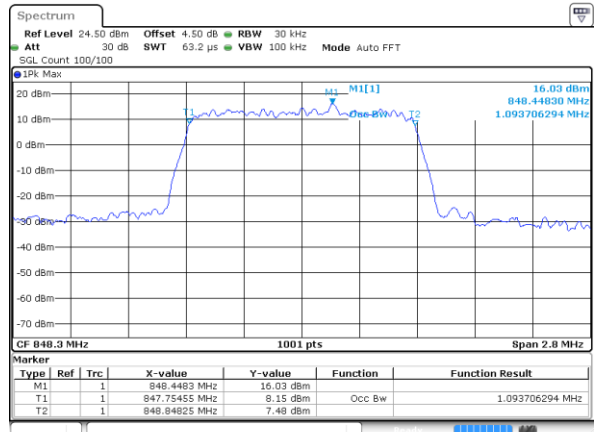
Date: 1 NOV 2019 12:52:54

Highest Channel / 1.4MHz / QPSK



Date: 1 NOV 2019 12:55:13

Highest Channel / 1.4MHz / 16QAM

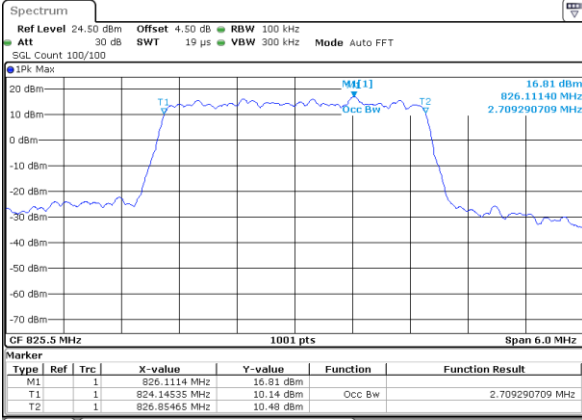


Date: 1 NOV 2019 12:55:23



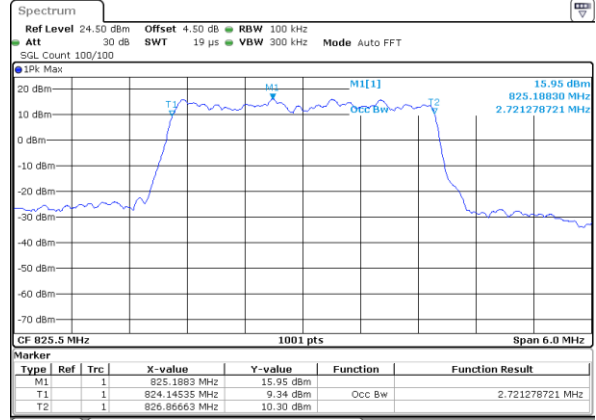
LTE Band 5

Lowest Channel / 3MHz / QPSK



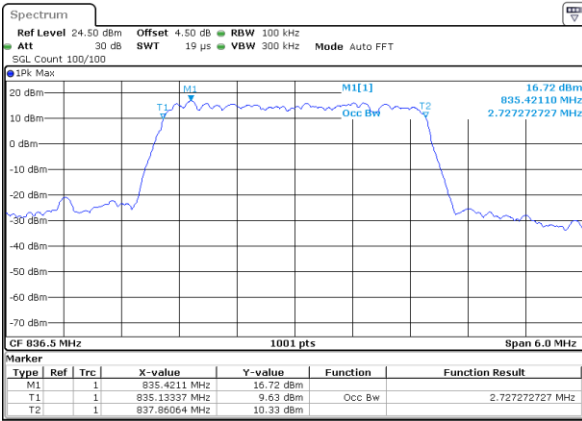
Date: 1 NOV 2019 12:57:41

Lowest Channel / 3MHz / 16QAM



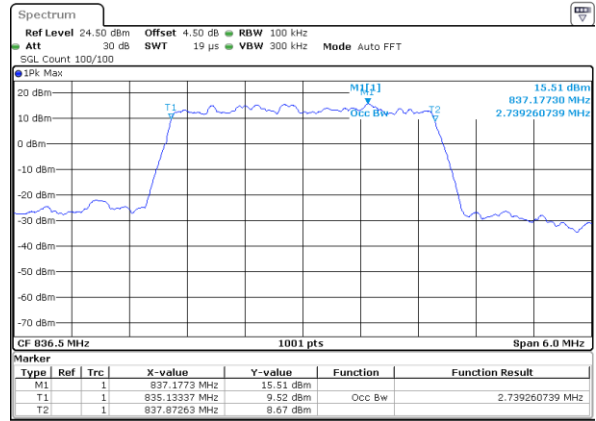
Date: 1 NOV 2019 12:57:51

Middle Channel / 3MHz / QPSK



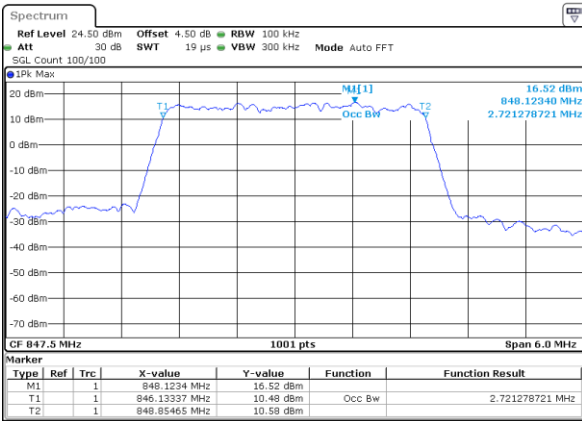
Date: 1 NOV 2019 13:00:09

Middle Channel / 3MHz / 16QAM



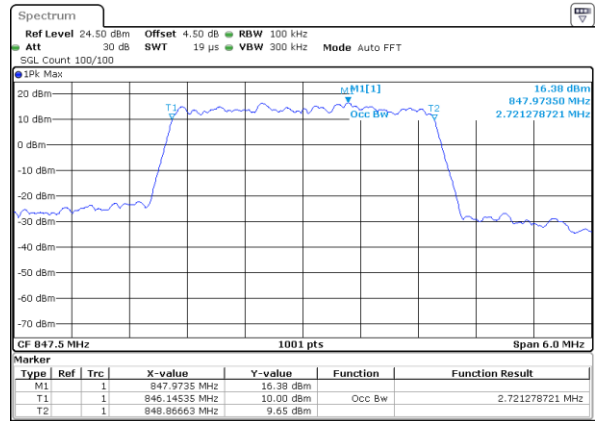
Date: 1 NOV 2019 13:00:19

Highest Channel / 3MHz / QPSK



Date: 1 NOV 2019 13:02:38

Highest Channel / 3MHz / 16QAM

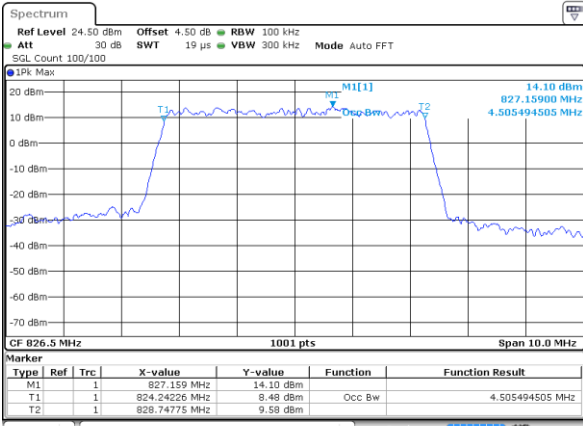


Date: 1 NOV 2019 13:02:48



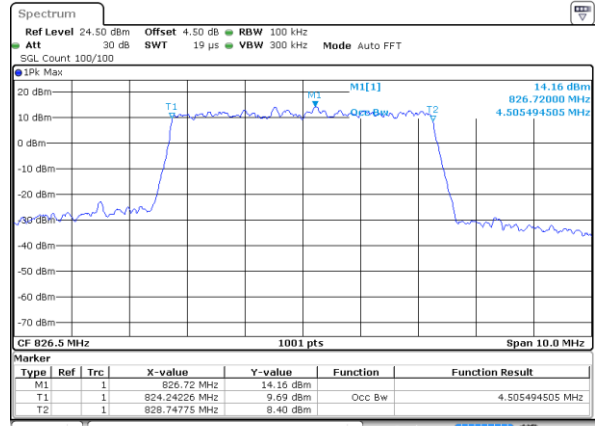
LTE Band 5

Lowest Channel / 5MHz / QPSK



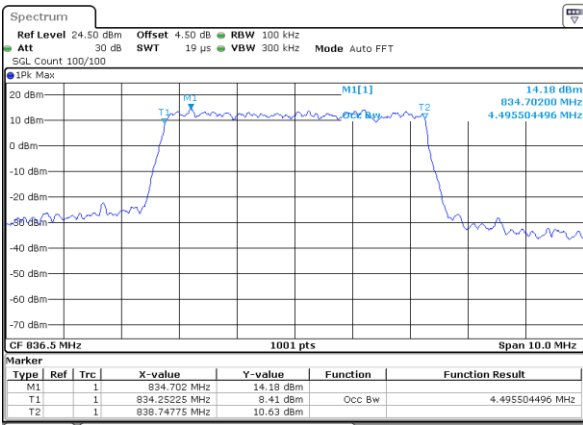
Date: 1 NOV 2019 13:05:06

Lowest Channel / 5MHz / 16QAM



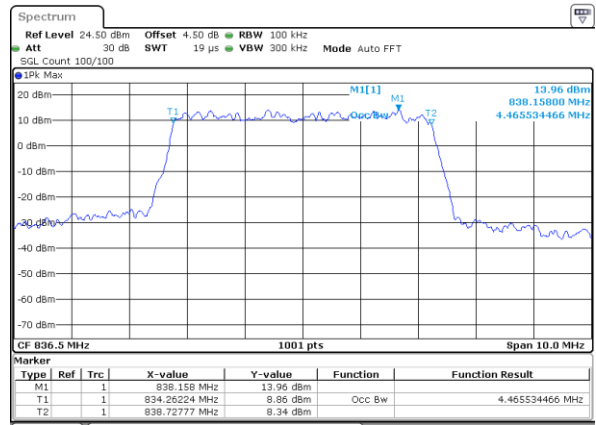
Date: 1 NOV 2019 13:05:16

Middle Channel / 5MHz / QPSK



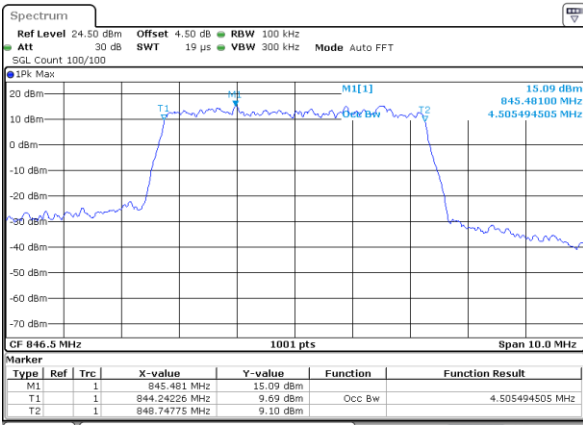
Date: 1 NOV 2019 13:07:34

Middle Channel / 5MHz / 16QAM



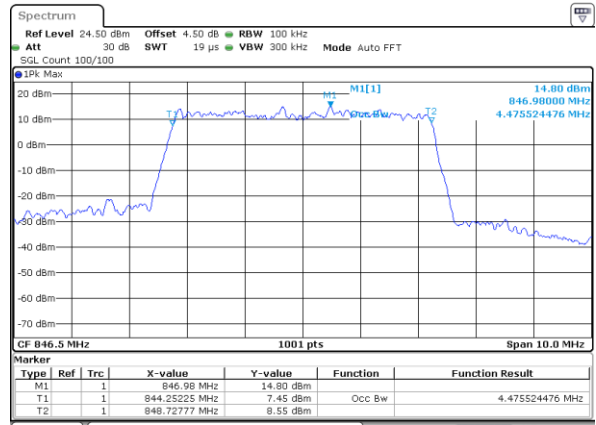
Date: 1 NOV 2019 13:07:44

Highest Channel / 5MHz / QPSK



Date: 1 NOV 2019 13:10:03

Highest Channel / 5MHz / 16QAM

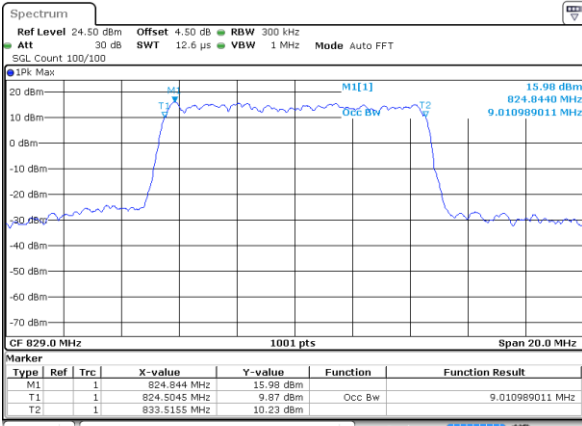


Date: 1 NOV 2019 13:10:14



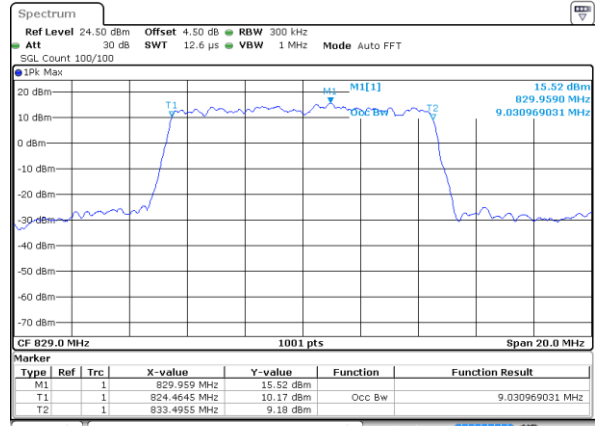
LTE Band 5

Lowest Channel / 10MHz / QPSK



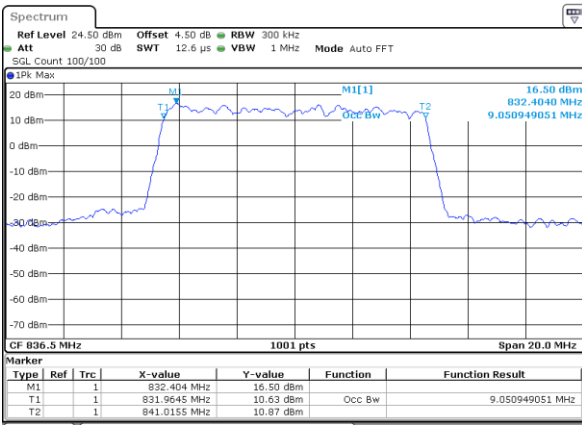
Date: 1 NOV 2019 13:12:32

Lowest Channel / 10MHz / 16QAM



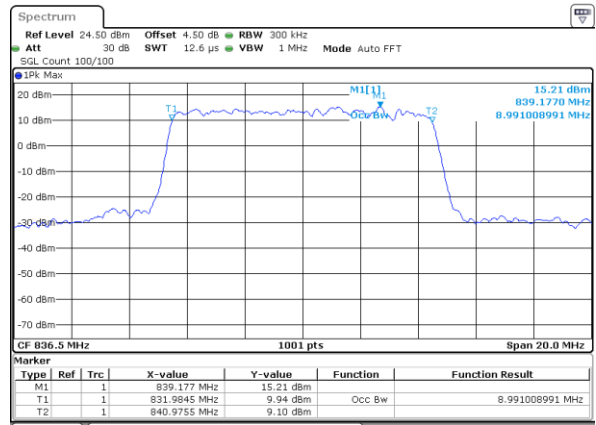
Date: 1 NOV 2019 13:12:43

Middle Channel / 10MHz / QPSK



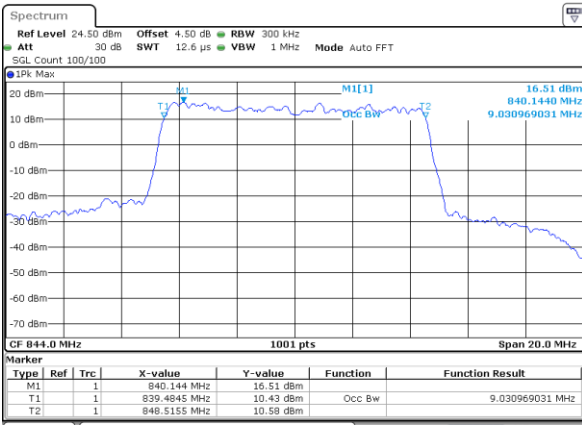
Date: 1 NOV 2019 13:15:01

Middle Channel / 10MHz / 16QAM



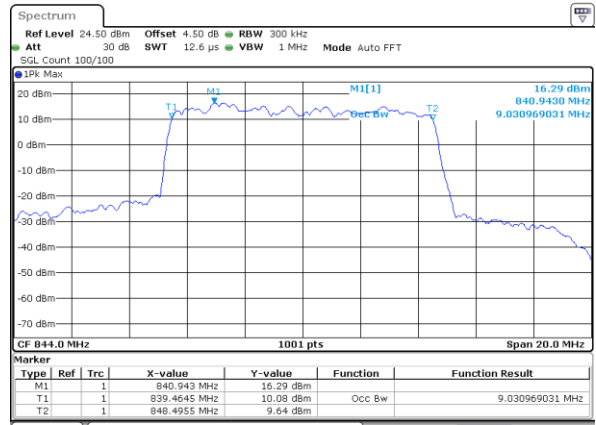
Date: 1 NOV 2019 13:15:12

Highest Channel / 10MHz / QPSK



Date: 1 NOV 2019 13:17:30

Highest Channel / 10MHz / 16QAM

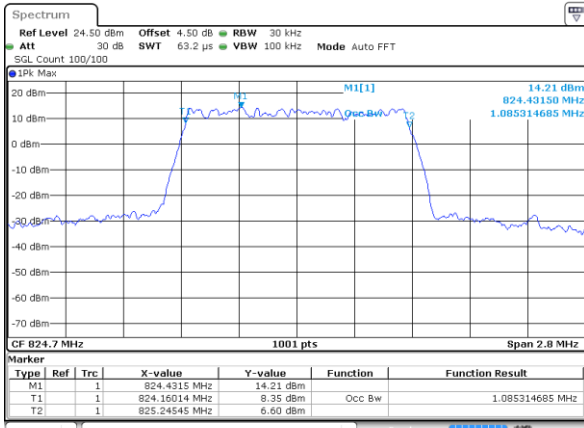


Date: 1 NOV 2019 13:17:40



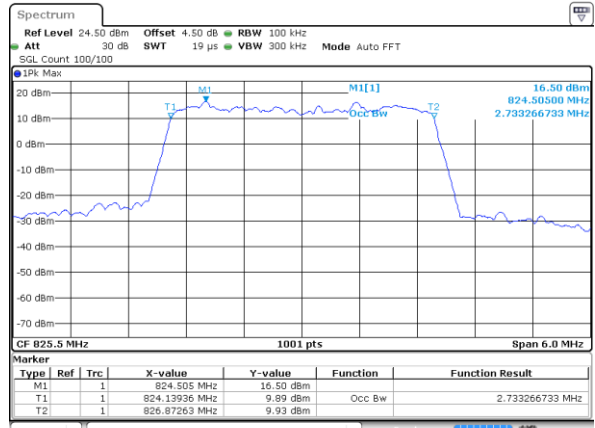
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



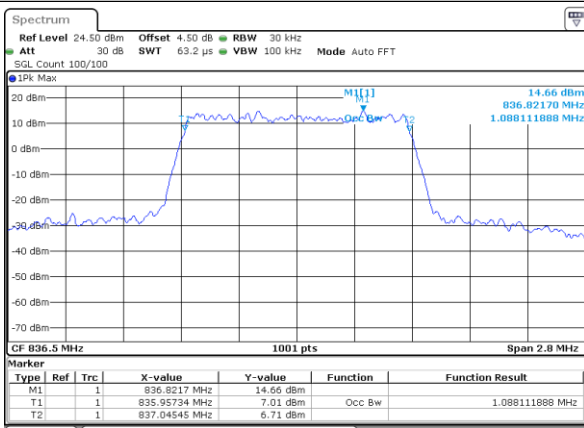
Date: 1.NOV.2019 13:35:08

Lowest Channel / 3MHz / 64QAM



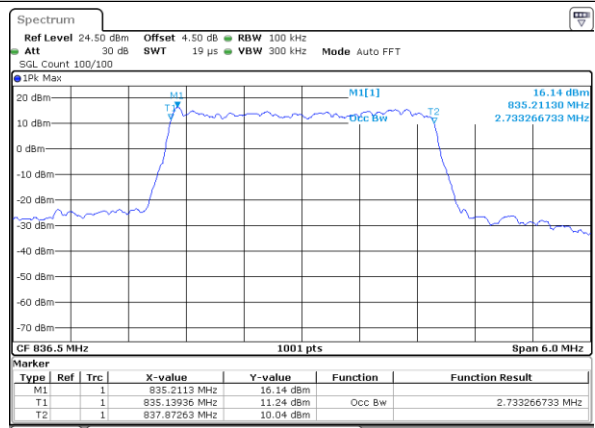
Date: 1.NOV.2019 13:45:20

Middle Channel / 1.4MHz / 64QAM



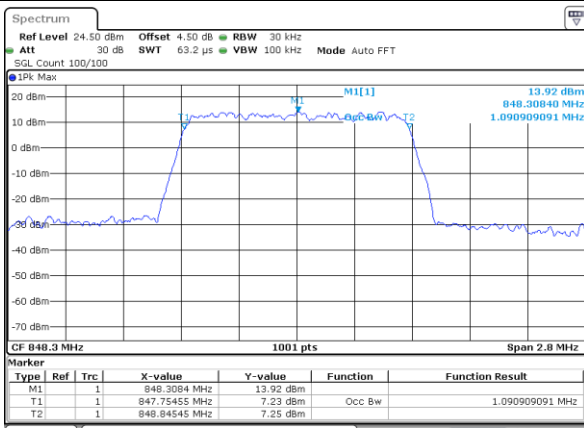
Date: 1.NOV.2019 13:40:31

Middle Channel / 3MHz / 64QAM



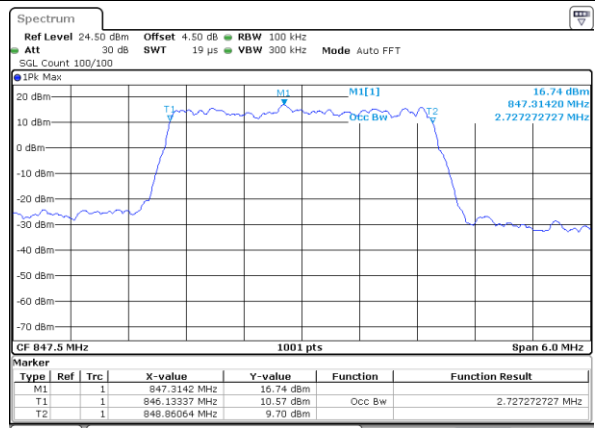
Date: 1.NOV.2019 13:50:43

Highest Channel / 1.4MHz / 64QAM



Date: 1.NOV.2019 13:40:51

Highest Channel / 3MHz / 64QAM



Date: 1.NOV.2019 13:51:03