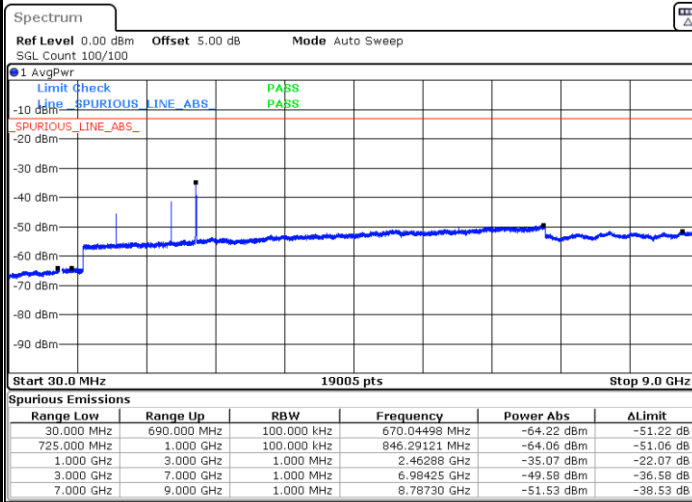




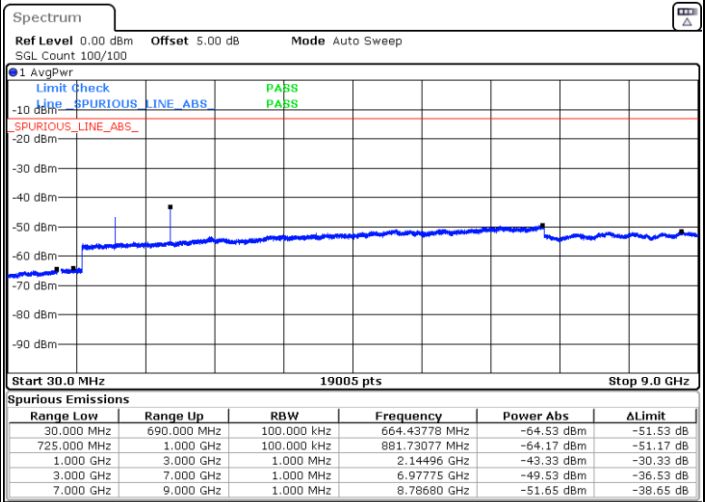
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 28 NOV 2019 17:59:04

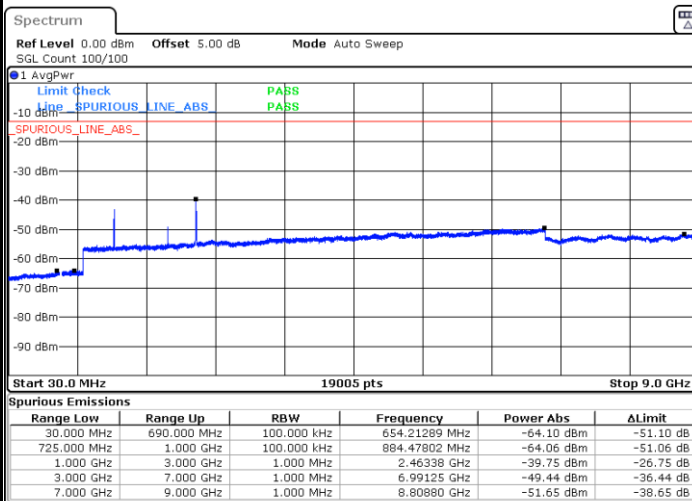
Highest Channel / 16QAM



Date: 28 NOV 2019 17:59:59

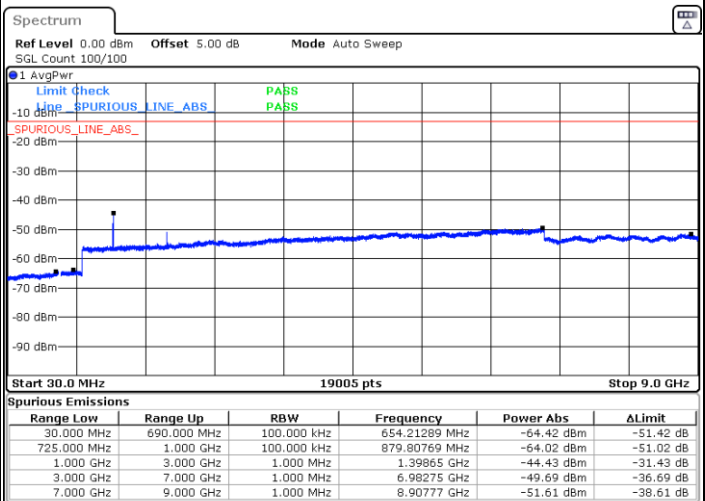
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 28 NOV 2019 18:11:55

Lowest Channel / 16QAM

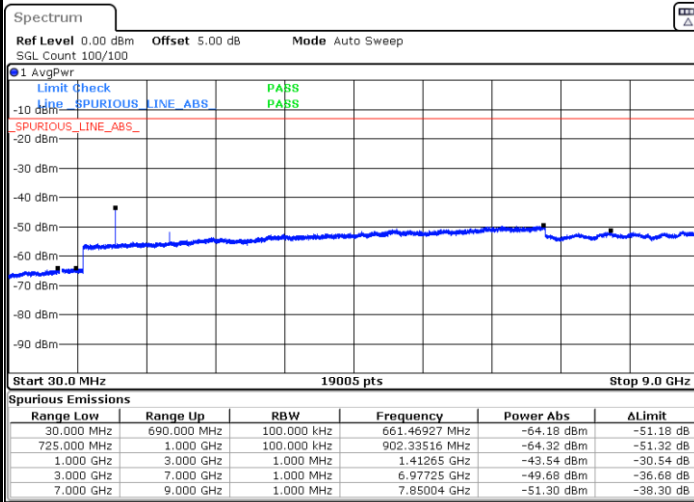


Date: 28 NOV 2019 18:12:49



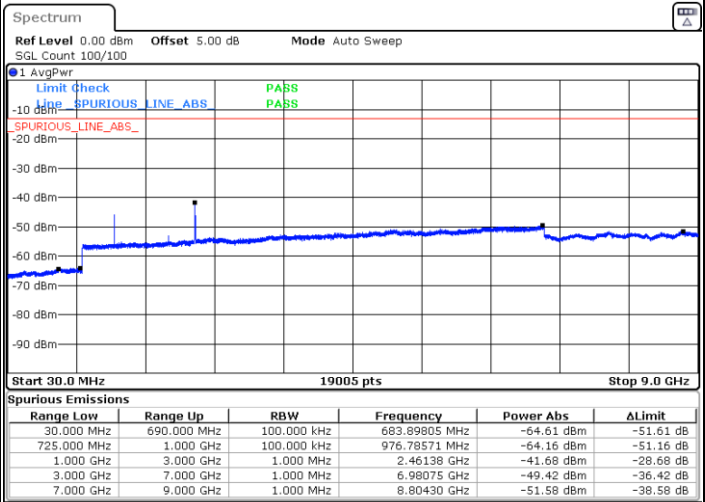
LTE Band 12 / 3MHz

Middle Channel / QPSK



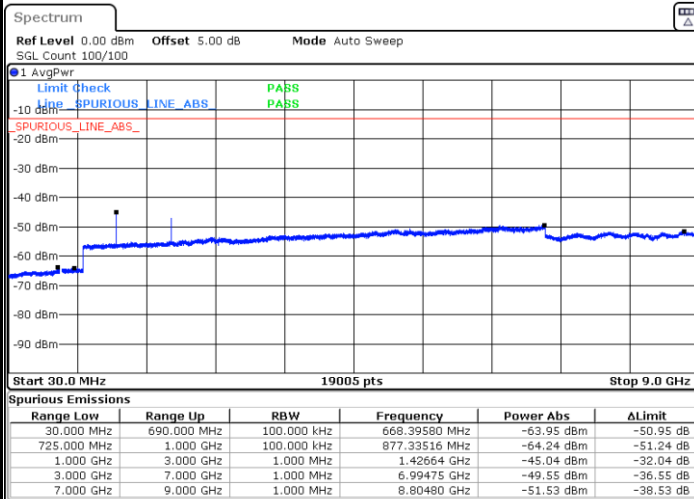
Date: 28 NOV 2019 18:14:38

Middle Channel / 16QAM



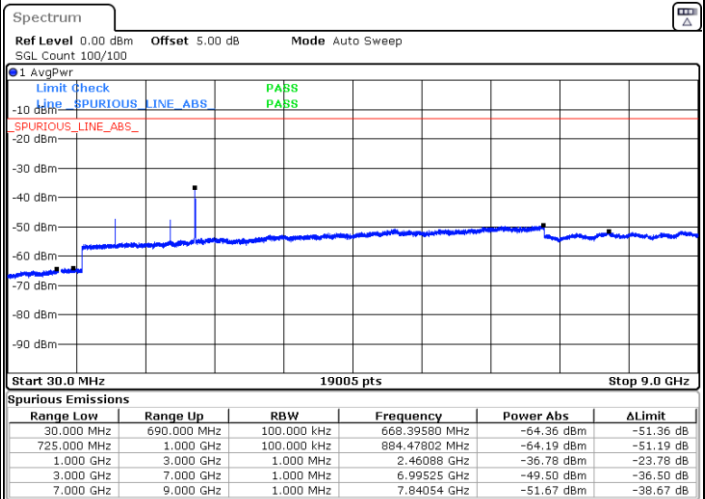
Date: 28 NOV 2019 18:13:44

Highest Channel / QPSK



Date: 28 NOV 2019 18:15:33

Highest Channel / 16QAM

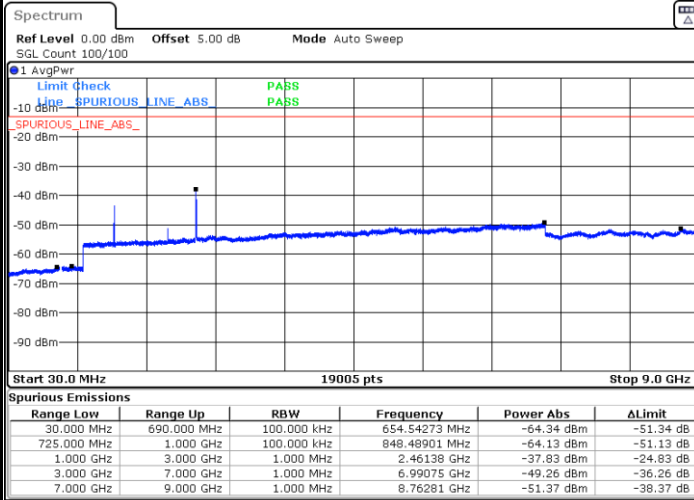


Date: 28 NOV 2019 18:16:28



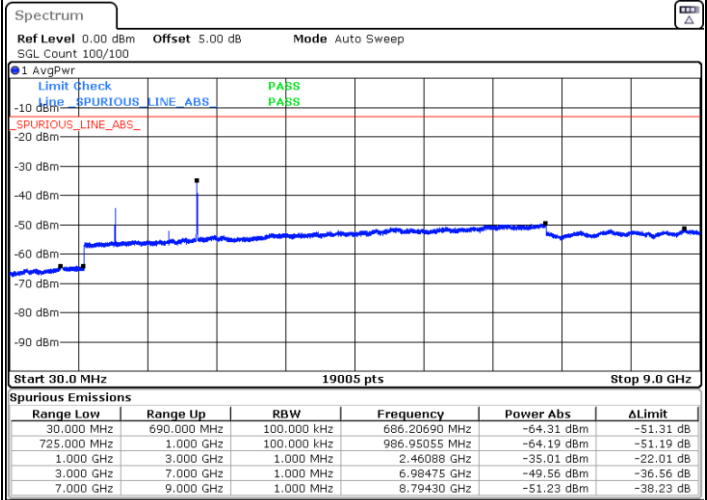
LTE Band 12 / 5MHz

Lowest Channel / QPSK



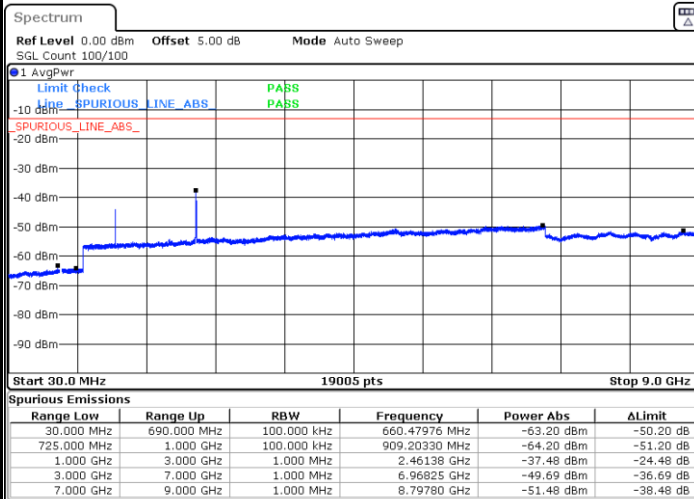
Date: 28 NOV 2019 18:28:23

Lowest Channel / 16QAM



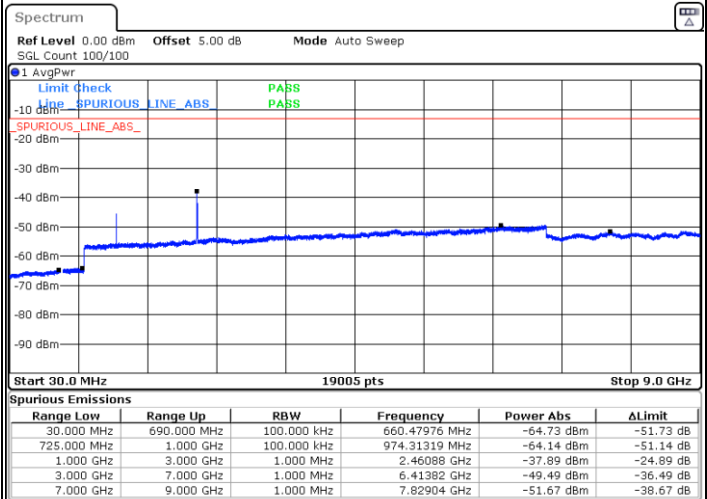
Date: 28 NOV 2019 18:29:18

Middle Channel / QPSK



Date: 28 NOV 2019 18:31:07

Middle Channel / 16QAM

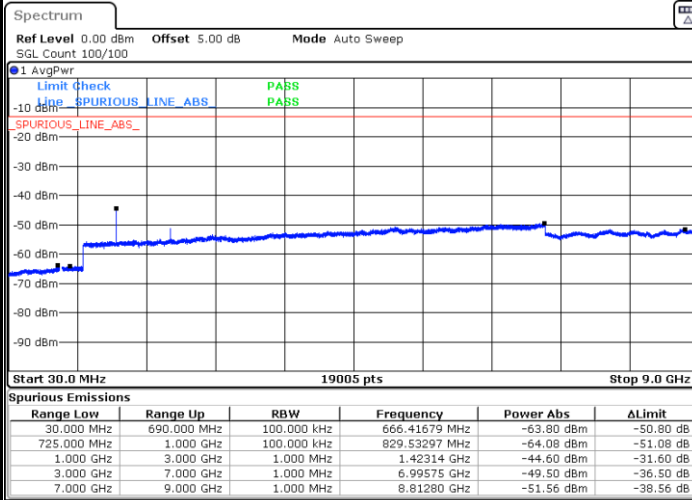


Date: 28 NOV 2019 18:30:13



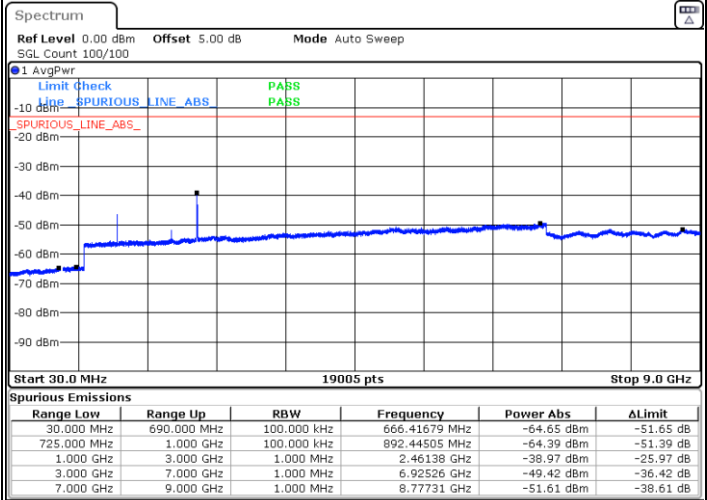
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 28 NOV 2019 18:32:02

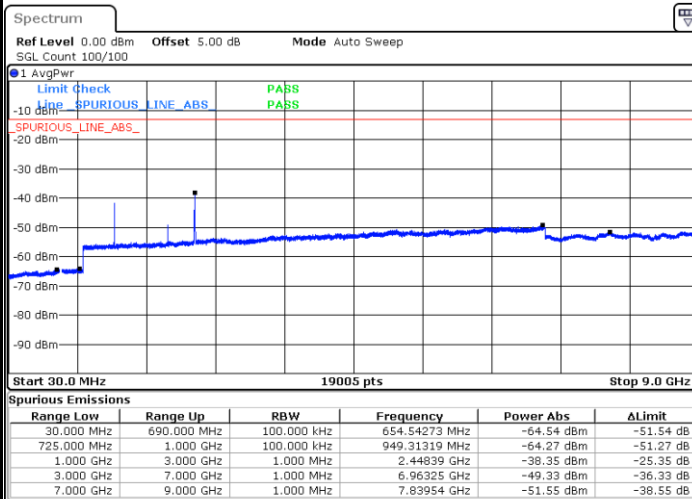
Highest Channel / 16QAM



Date: 28 NOV 2019 18:32:56

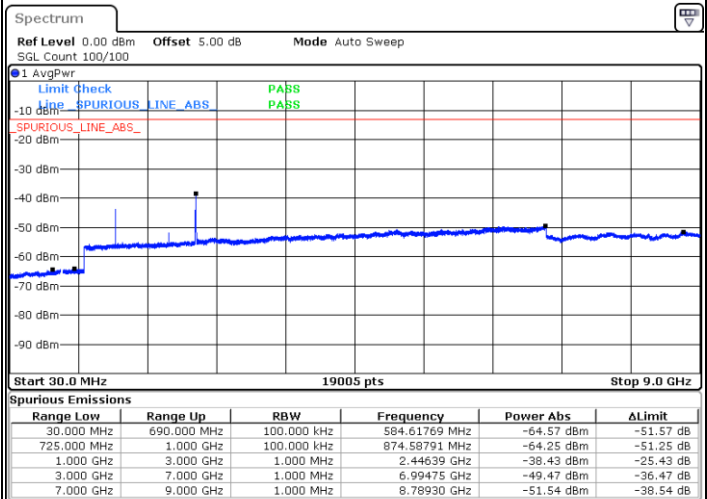
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 29 NOV 2019 08:50:42

Lowest Channel / 16QAM

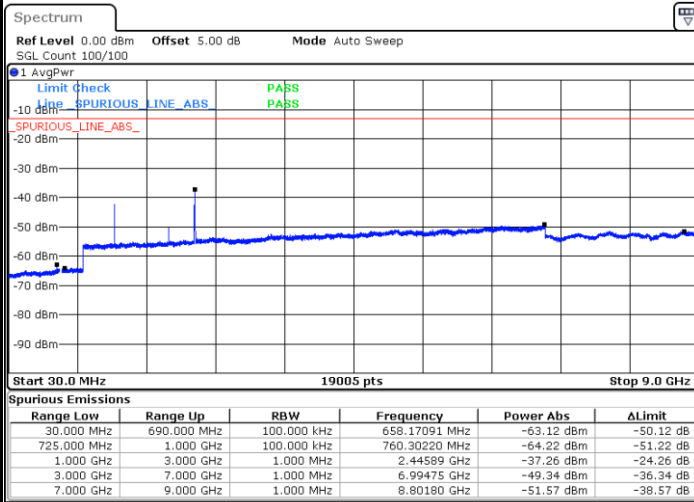


Date: 29 NOV 2019 08:51:36



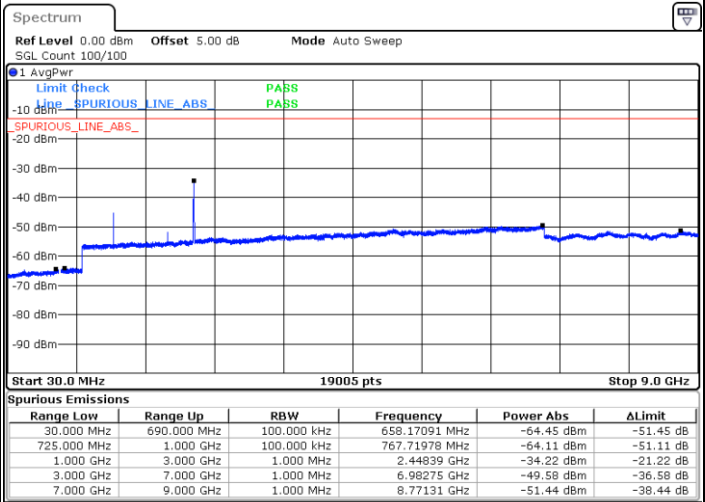
LTE Band 12 / 10MHz

Middle Channel / QPSK



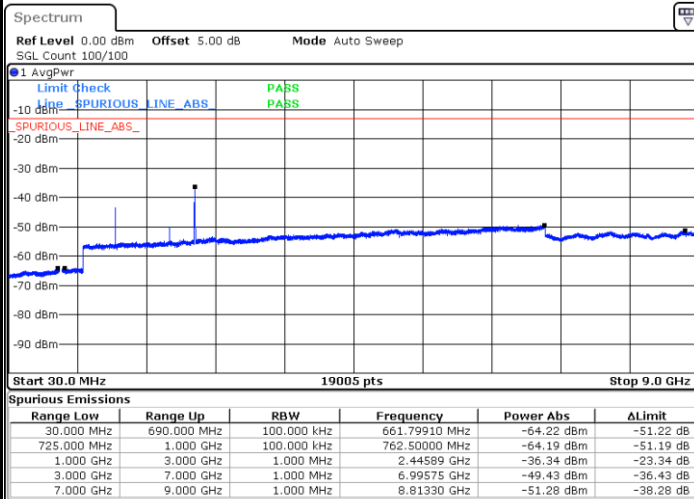
Date: 29 NOV 2019 08:53:25

Middle Channel / 16QAM



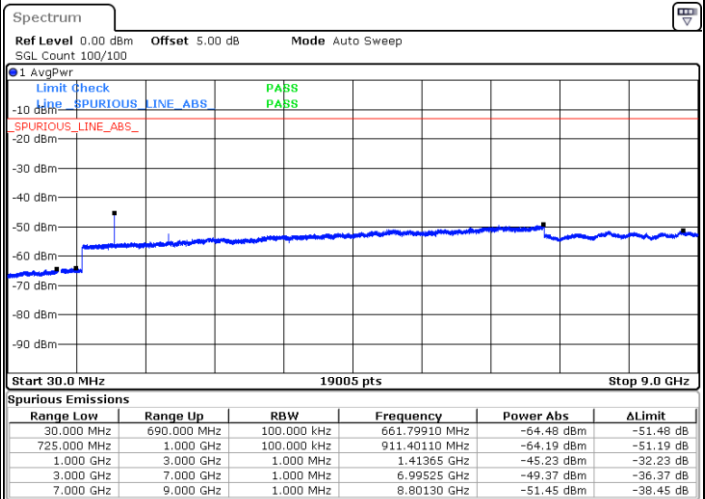
Date: 29 NOV 2019 08:52:31

Highest Channel / QPSK



Date: 29 NOV 2019 08:54:20

Highest Channel / 16QAM



Date: 29 NOV 2019 08:55:15

Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0012	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0033	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0058	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0045	
20	Normal Voltage	0.0052	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage =3.7 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 13

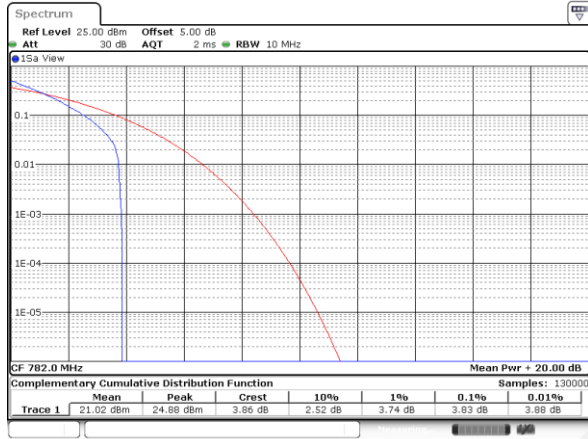
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.83	4.93	4.75	5.88	
Highest CH	-	-	-	-	

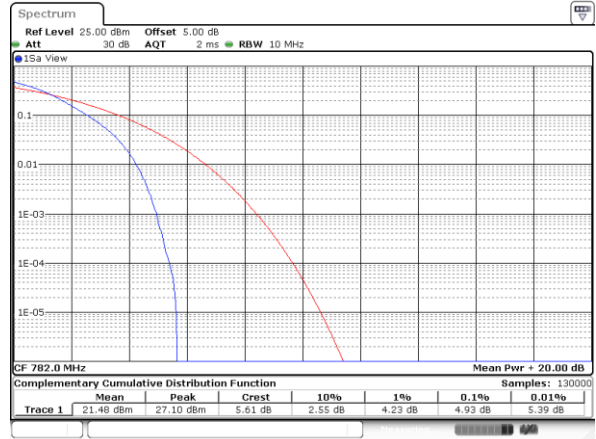


LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB

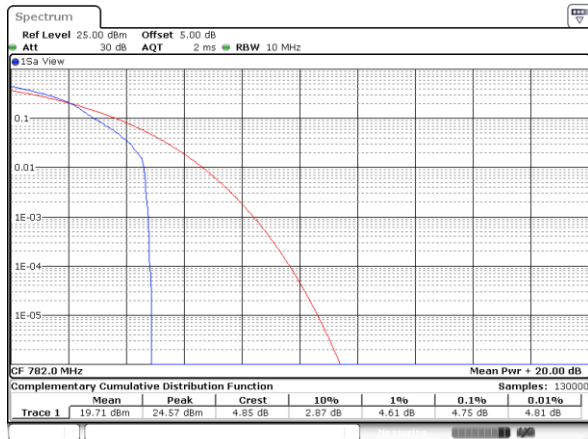


Middle Channel / Full RB

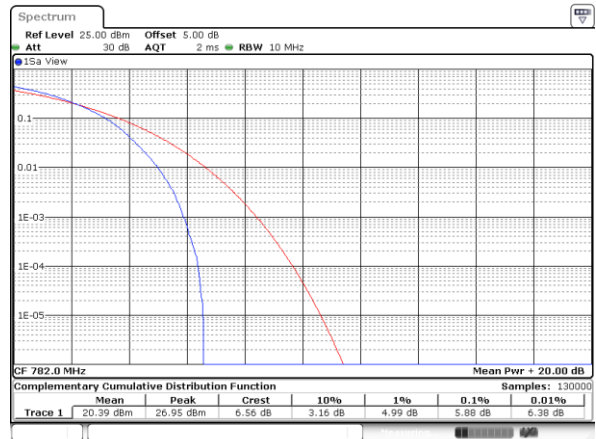


LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Middle Channel / Full RB



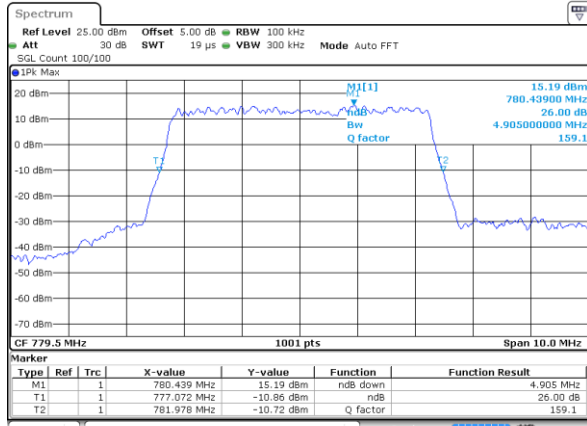
**26dB Bandwidth**

Mode	LTE Band 13 : 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	-	-	-	-	4.905	4.885	-	-	-	-	-	-
Middle CH	-	-	-	-	4.925	4.905	9.79	9.79	-	-	-	-
Highest CH	-	-	-	-	4.935	4.935	-	-	-	-	-	-



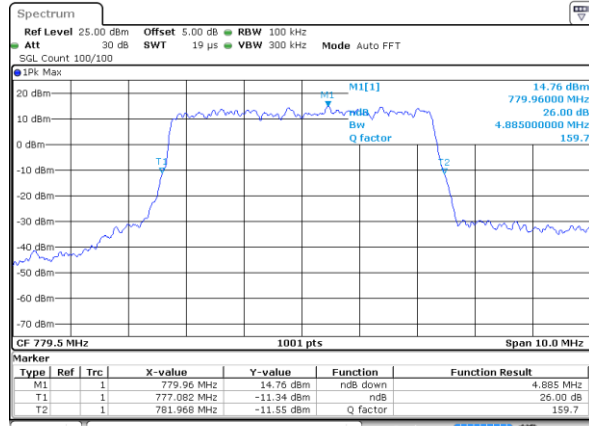
LTE Band 13

Lowest Channel / 5MHz / QPSK



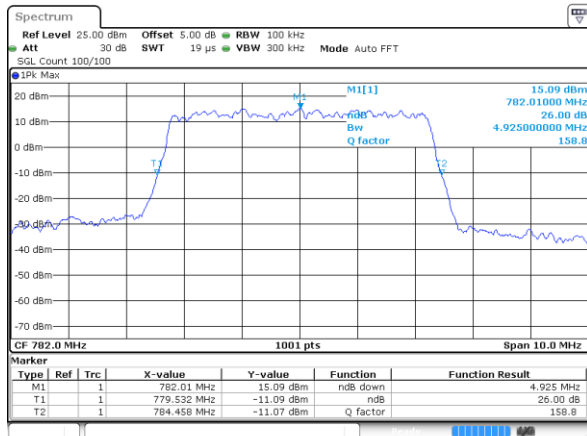
Date: 29 NOV 2019 10:35:28

Lowest Channel / 5MHz / 16QAM



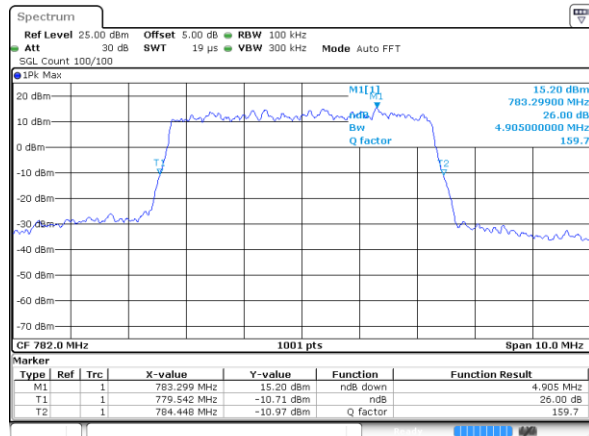
Date: 29 NOV 2019 10:35:38

Middle Channel / 5MHz / QPSK



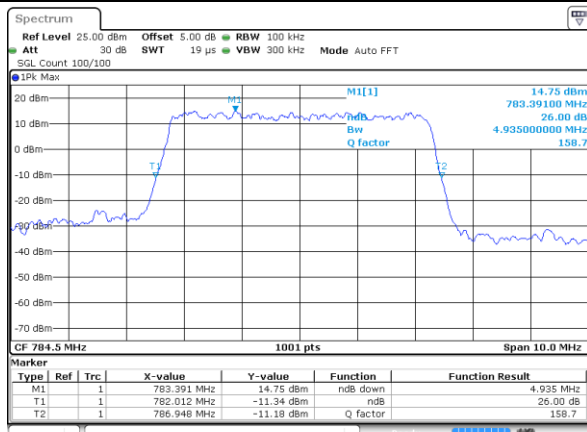
Date: 29 NOV 2019 10:44:28

Middle Channel / 5MHz / 16QAM



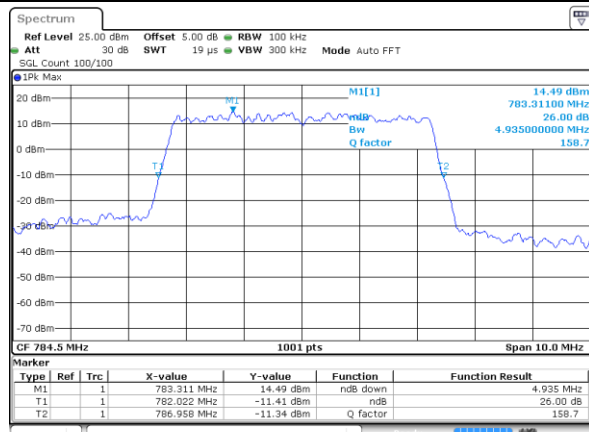
Date: 29 NOV 2019 10:44:38

Highest Channel / 5MHz / QPSK



Date: 29 NOV 2019 10:47:07

Highest Channel / 5MHz / 16QAM

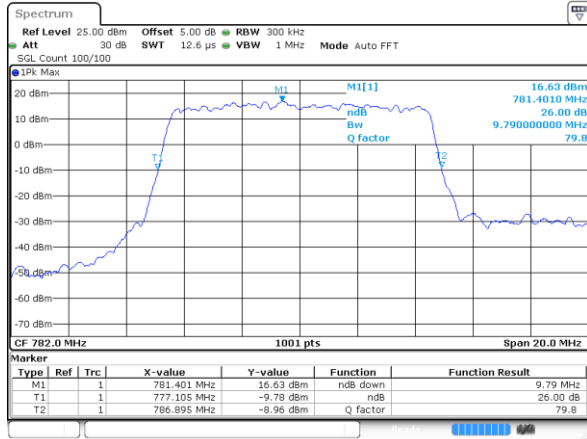


Date: 29 NOV 2019 10:46:57



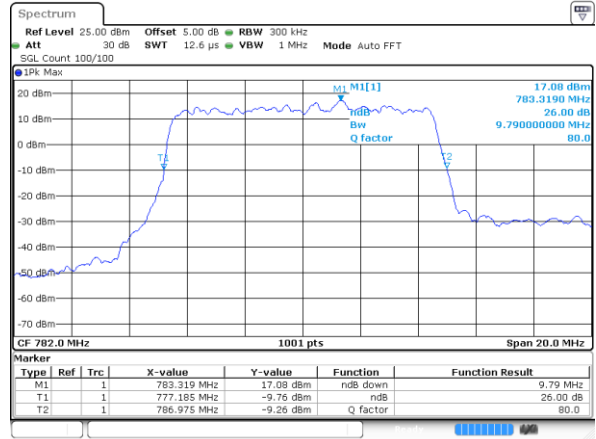
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 29 NOV 2019 10:57:55

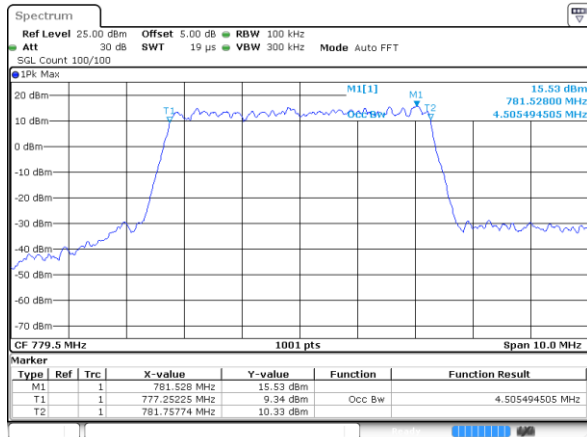
Middle Channel / 10MHz / 16QAM



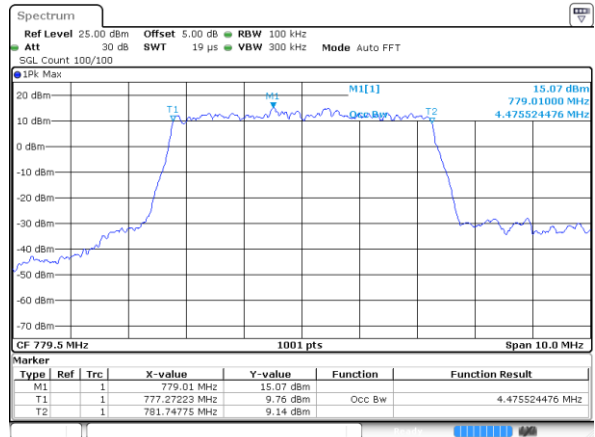
Date: 29 NOV 2019 10:57:45

**Occupied Bandwidth**

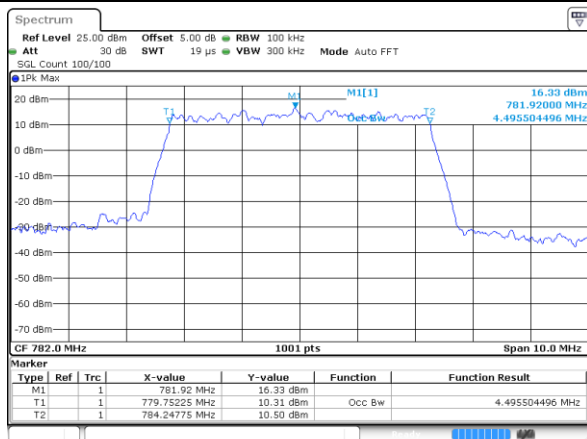
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.51	4.48	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.50	8.97	8.97	-	-	-	-
Highest CH	-	-	-	-	4.50	4.47	-	-	-	-	-	-

**LTE Band 13****Lowest Channel / 5MHz / QPSK**

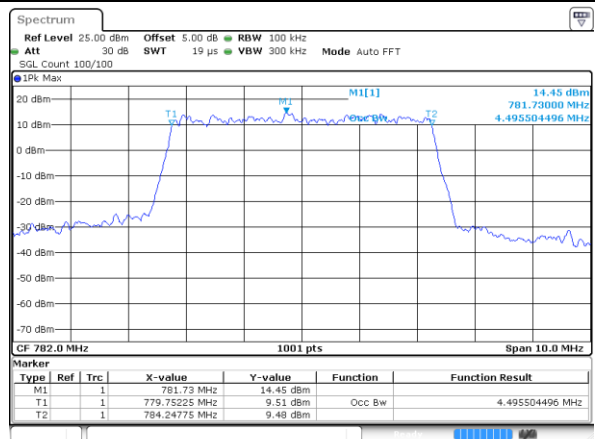
Date: 29 NOV 2019 10:35:58

Lowest Channel / 5MHz / 16QAM

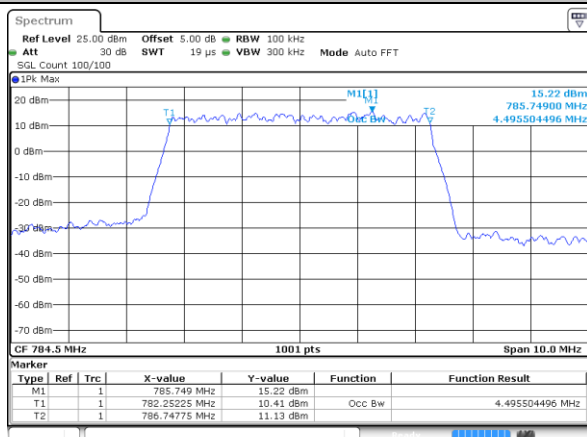
Date: 29 NOV 2019 10:35:48

Middle Channel / 5MHz / QPSK

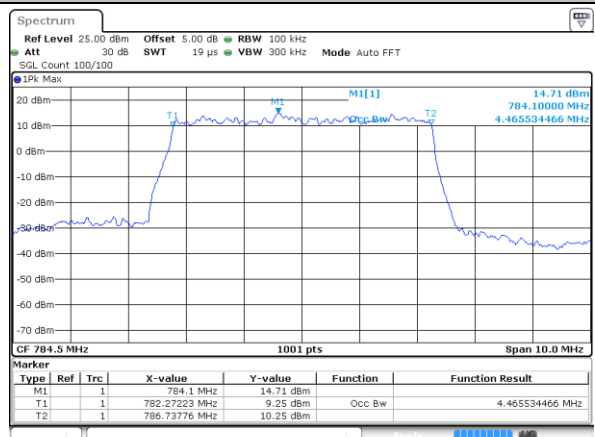
Date: 29 NOV 2019 10:44:48

Middle Channel / 5MHz / 16QAM

Date: 29 NOV 2019 10:44:58

Highest Channel / 5MHz / QPSK

Date: 29 NOV 2019 10:47:17

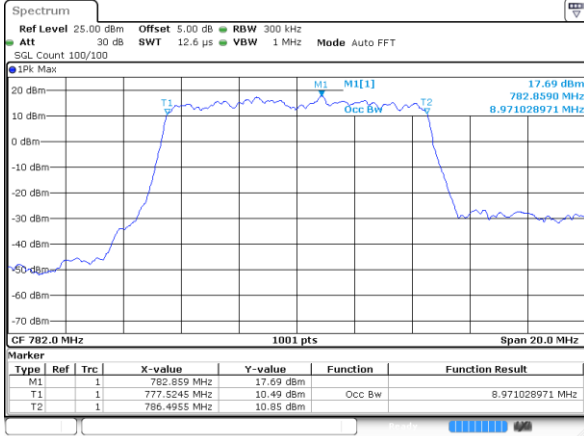
Highest Channel / 5MHz / 16QAM

Date: 29 NOV 2019 10:47:27



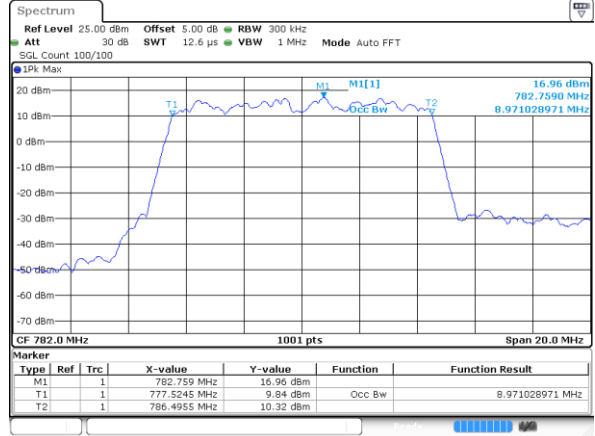
LTE Band 13

Middle Channel / 10MHz / QPSK

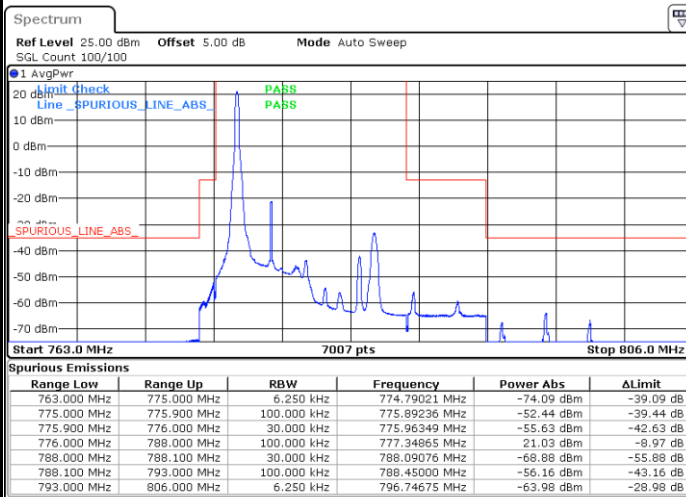
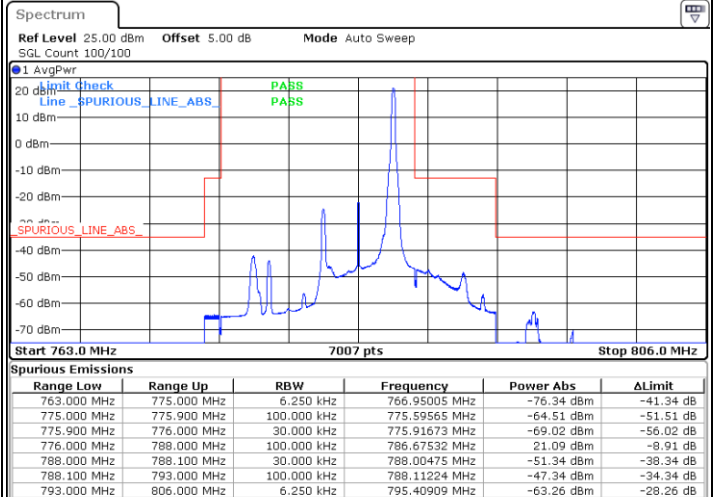
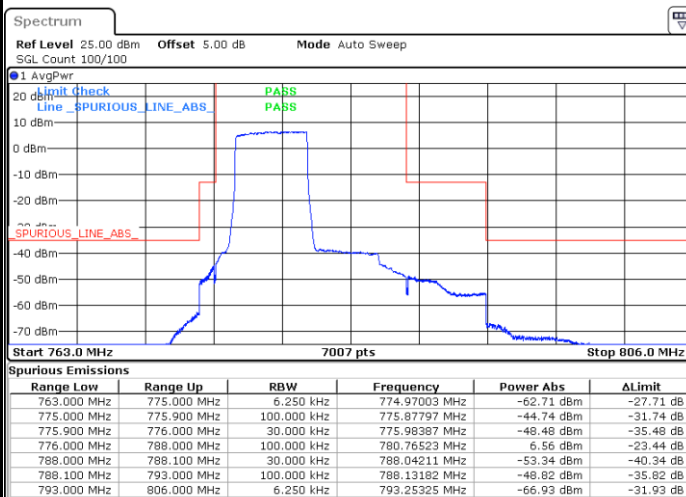
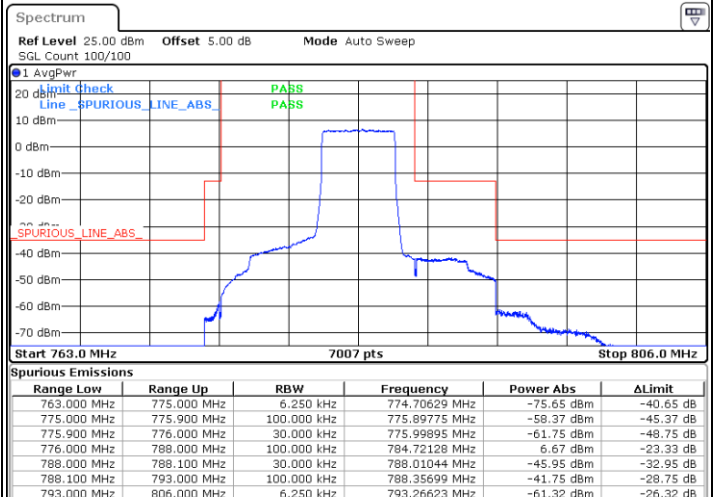


Date: 29 NOV 2019 10:58:05

Middle Channel / 10MHz / 16QAM



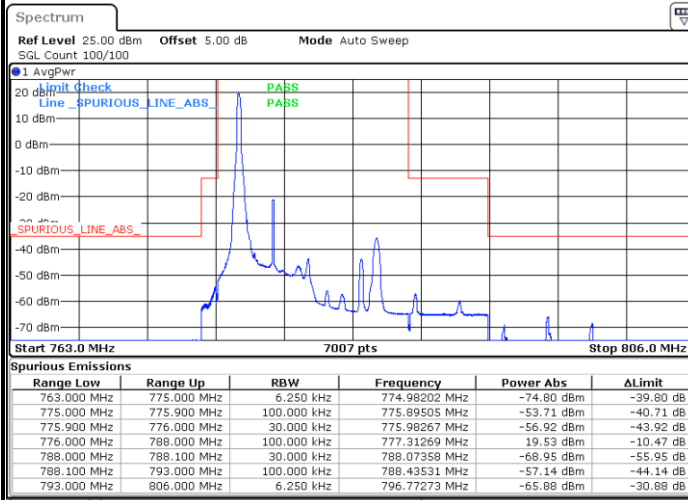
Date: 29 NOV 2019 10:58:15

**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**

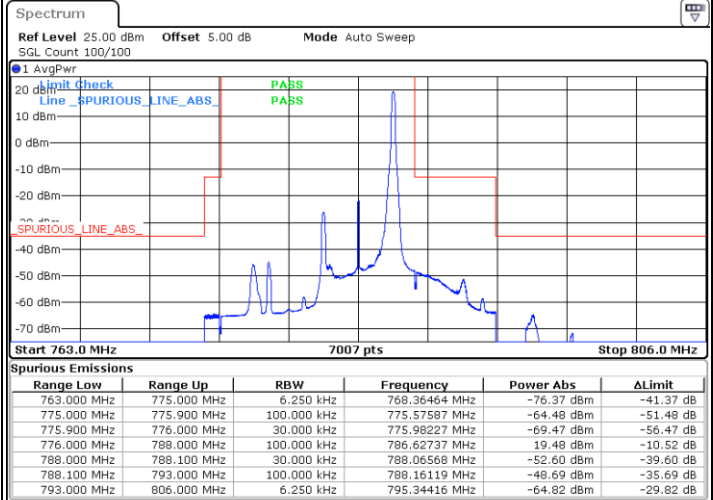


LTE Band 13 / 5MHz / 16QAM

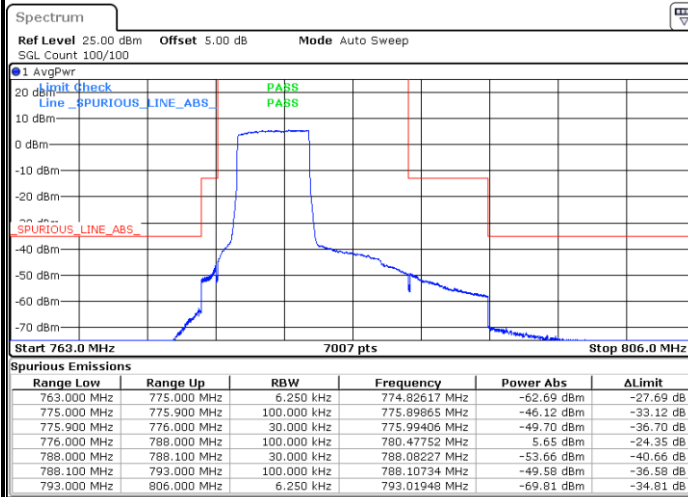
Lowest Band Edge / 1 RB



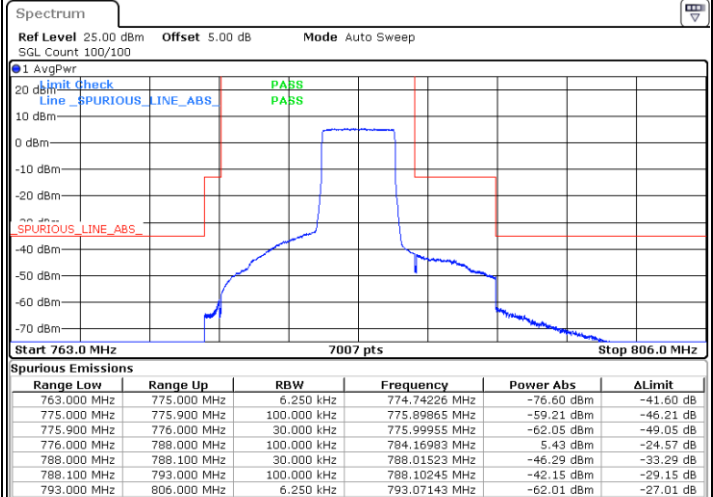
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



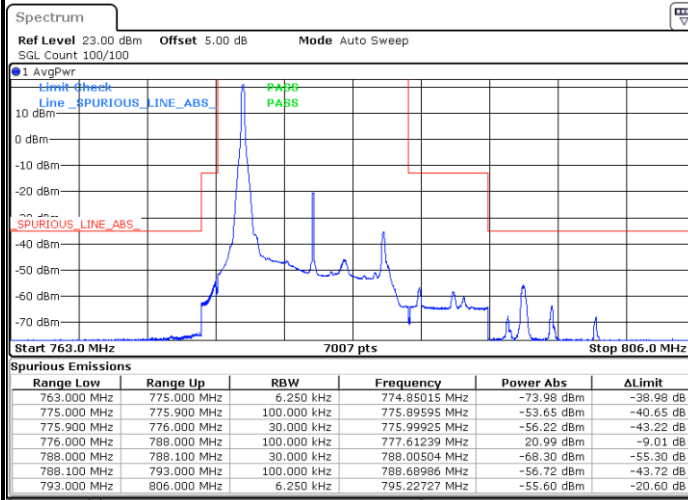
Highest Band Edge / Full RB





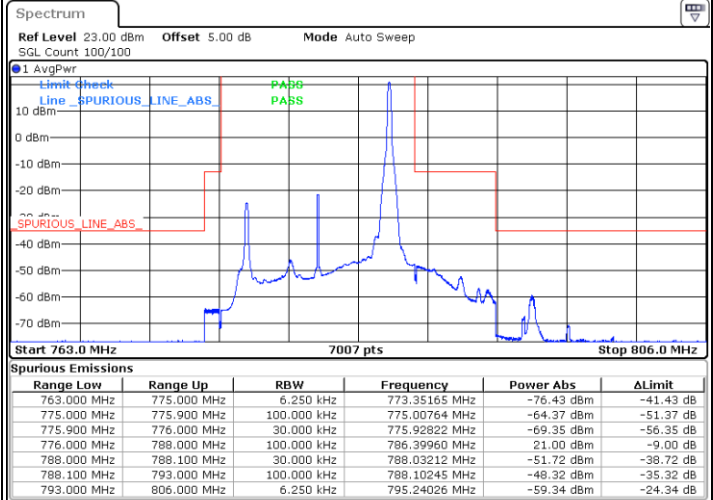
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



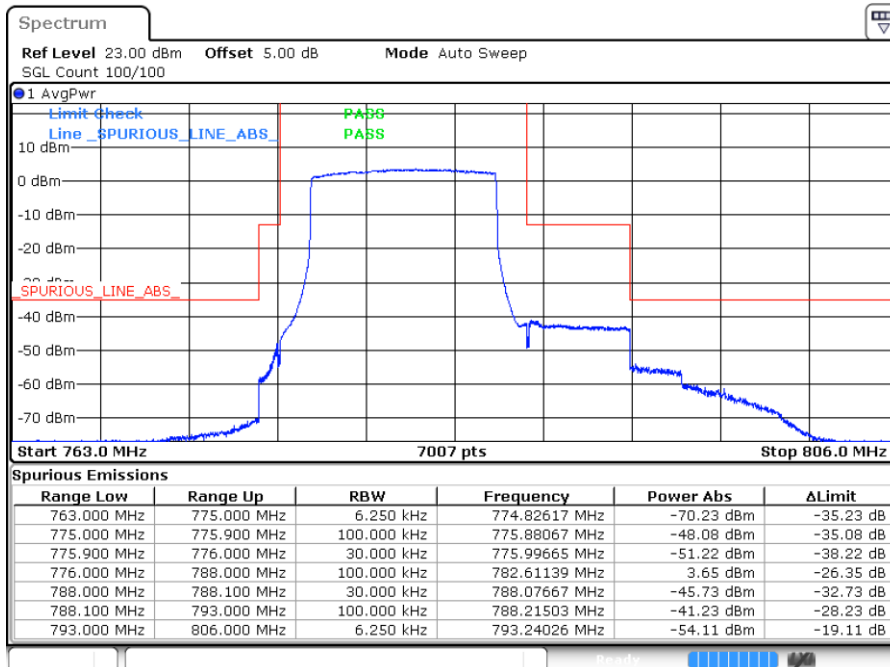
Date: 29 NOV 2019 11:01:31

Highest Band Edge / 1 RB



Date: 29 NOV 2019 11:08:02

Band Edge / Full RB

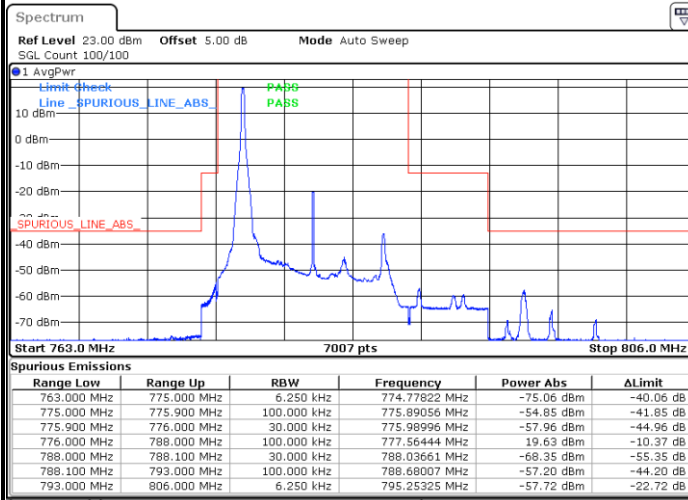


Date: 29 NOV 2019 11:03:09



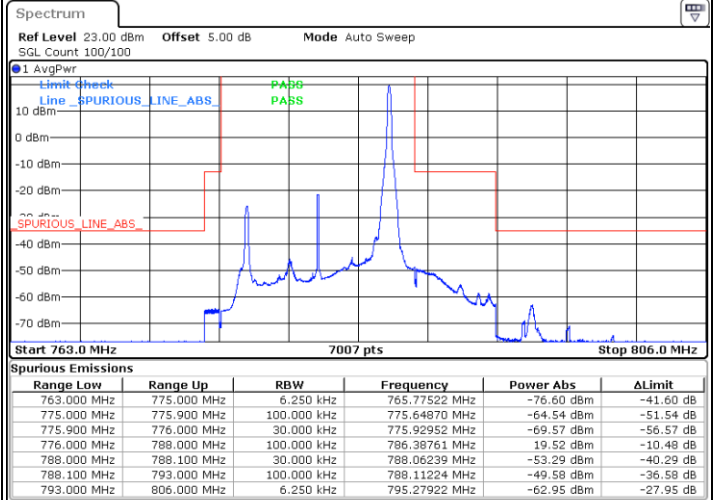
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



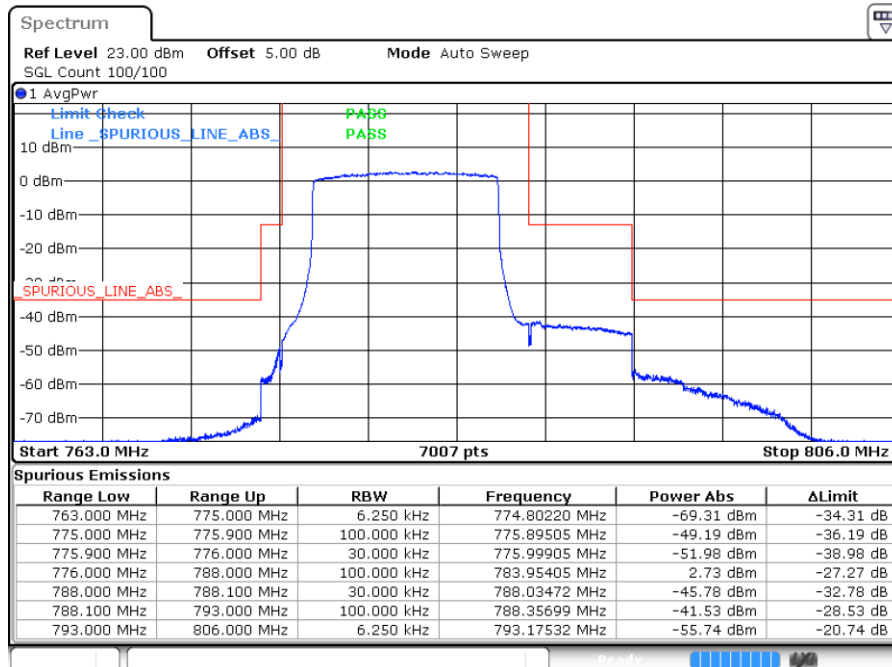
Date: 29 NOV 2019 10:59:53

Highest Band Edge / 1 RB



Date: 29 NOV 2019 11:06:24

Band Edge / Full RB



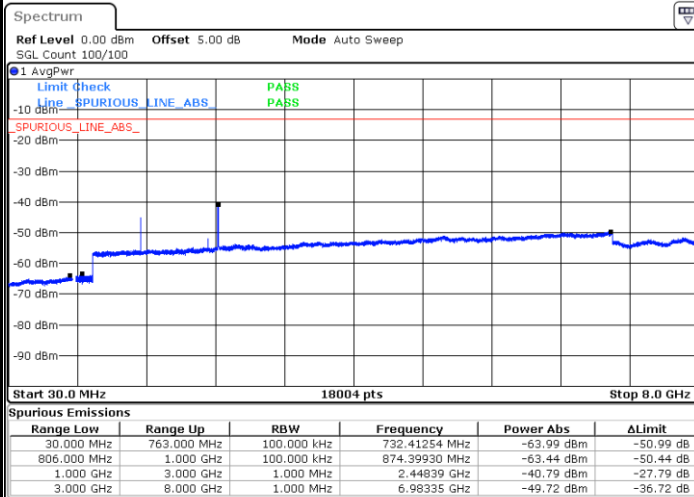
Date: 29 NOV 2019 11:04:46



Conducted Spurious Emission

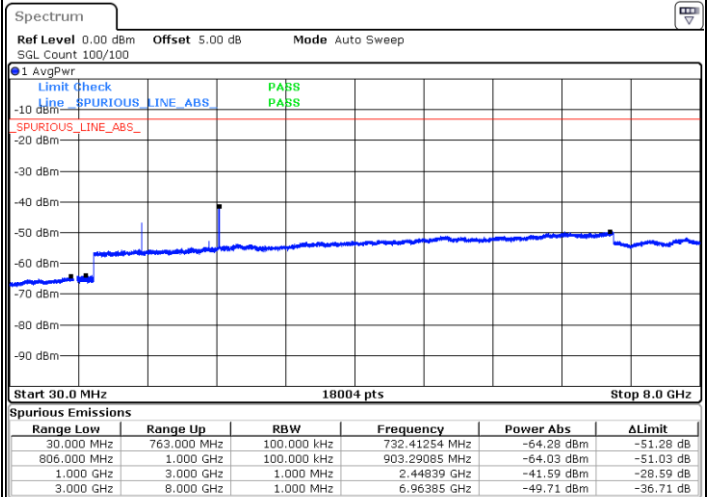
LTE Band 13 / 5MHz

Lowest Channel / QPSK



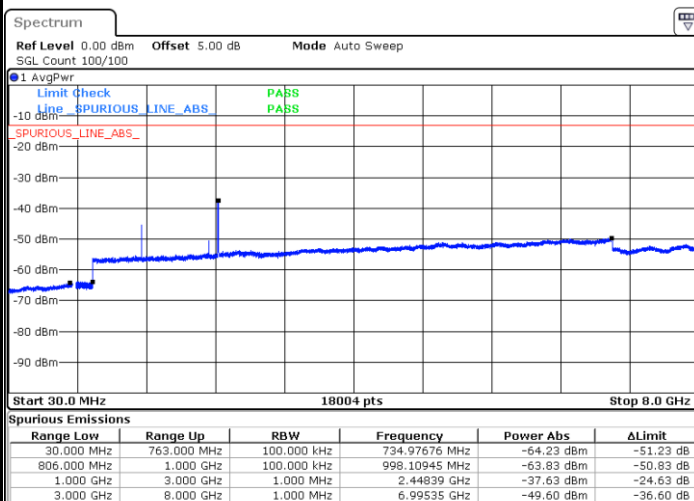
Date: 29 NOV 2019 10:44:17

Lowest Channel / 16QAM



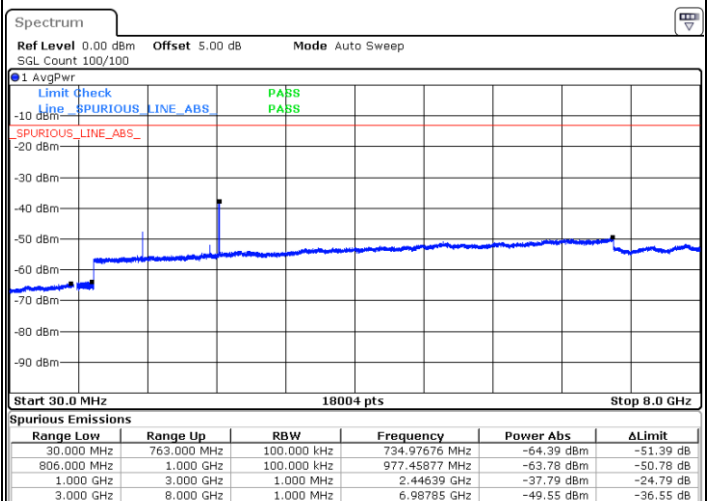
Date: 29 NOV 2019 10:43:23

Middle Channel / QPSK



Date: 29 NOV 2019 10:45:52

Middle Channel / 16QAM



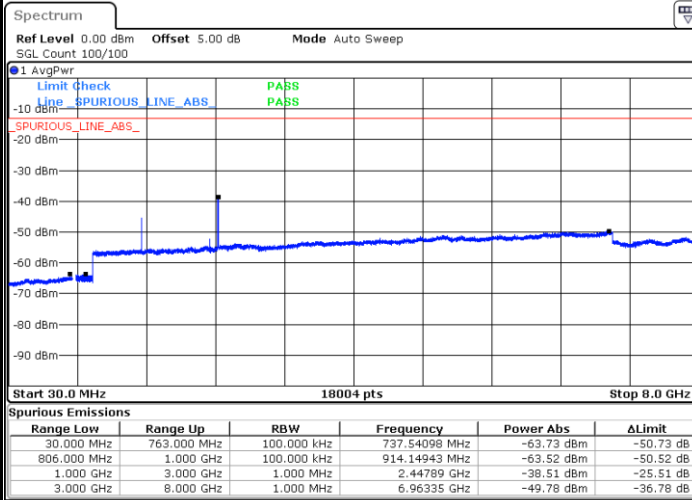
Date: 29 NOV 2019 10:46:46





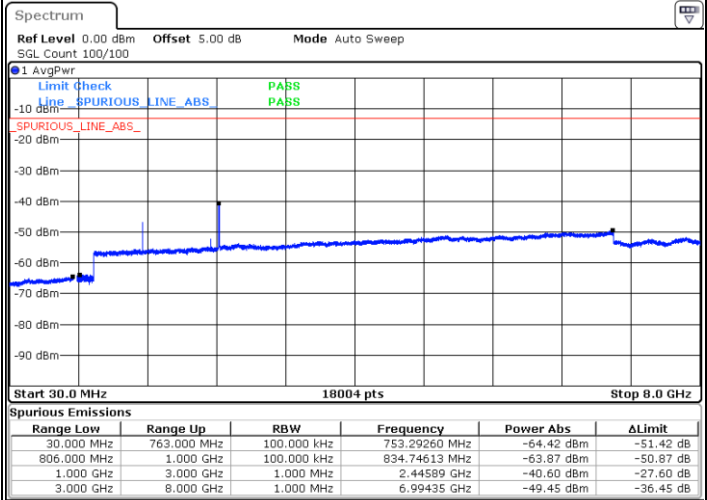
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 29 NOV 2019 10:55:46

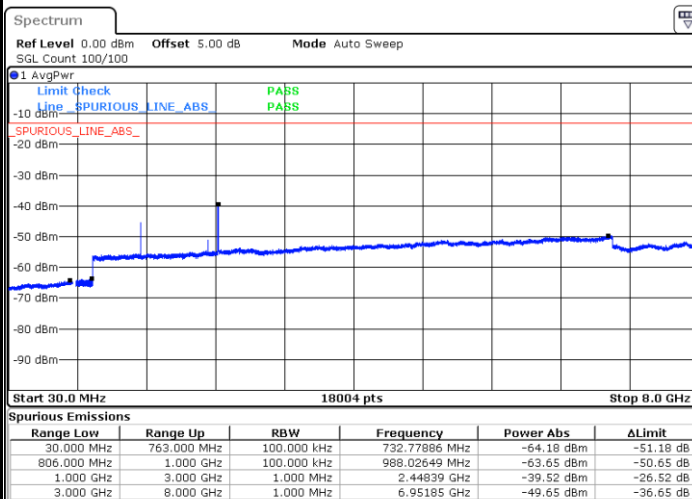
Highest Channel / 16QAM



Date: 29 NOV 2019 10:54:52

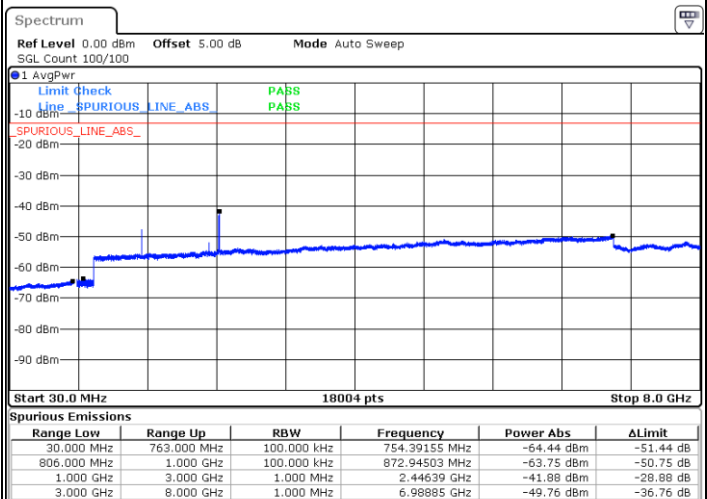
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 29 NOV 2019 10:56:40

Middle Channel / 16QAM



Date: 29 NOV 2019 10:57:34

Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0035	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0058	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0045	
20	Normal Voltage	0.0052	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage =3.7 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 25

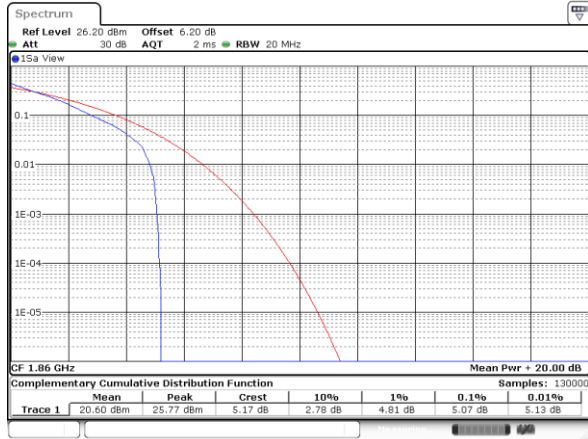
Peak-to-Average Ratio

Mode	LTE Band 25 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.07	5.19	5.94	6.29	PASS
Middle CH	4.96	4.99	5.83	6.09	
Highest CH	5.07	4.99	5.65	6.06	

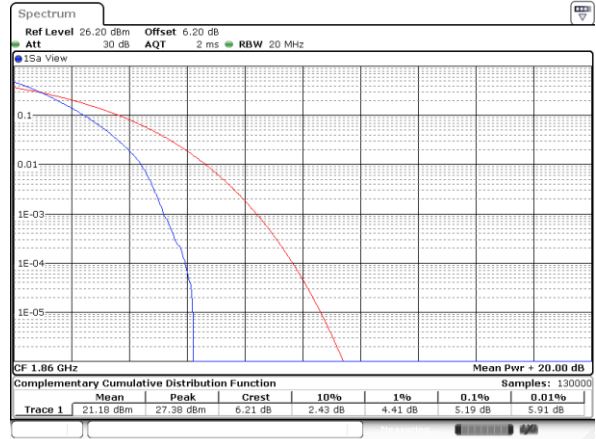


LTE Band 25 / 20MHz / QPSK

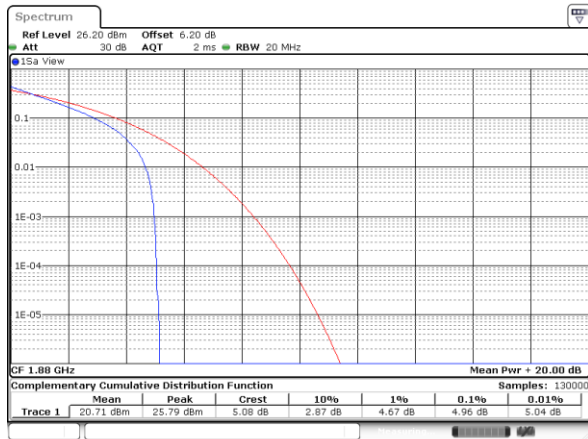
Lowest Channel / 1RB



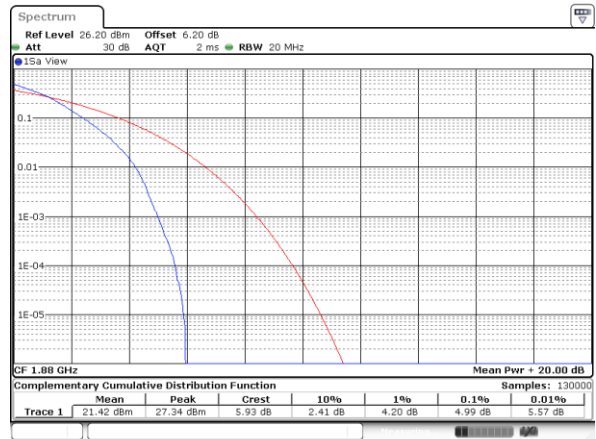
Lowest Channel / Full RB



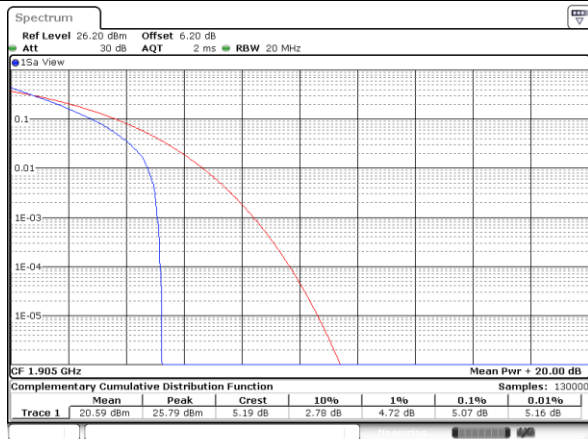
Middle Channel / 1RB



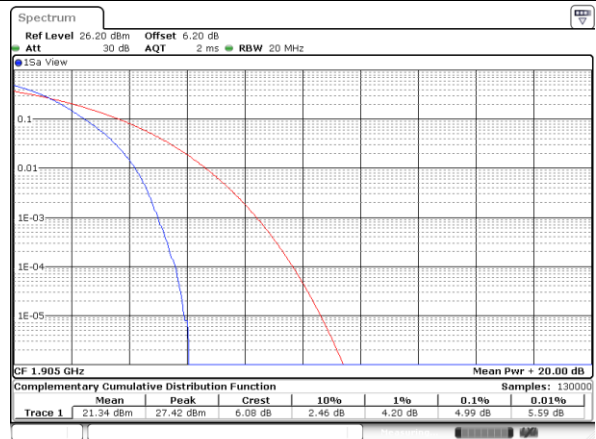
Middle Channel / Full RB



Highest Channel / 1RB



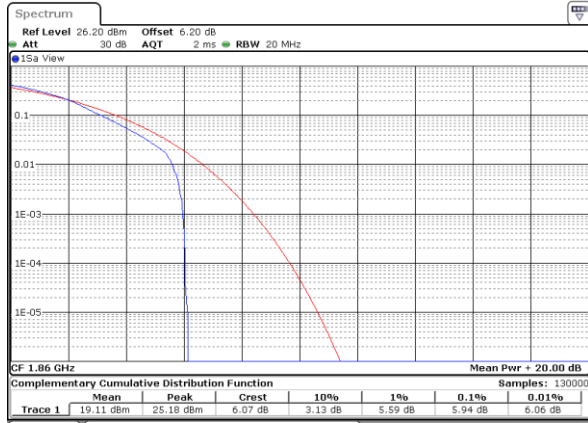
Highest Channel / Full RB





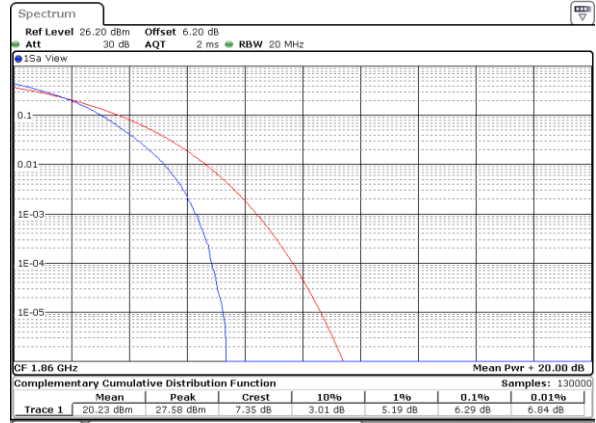
LTE Band 25 / 20MHz / 16QAM

Lowest Channel / 1RB



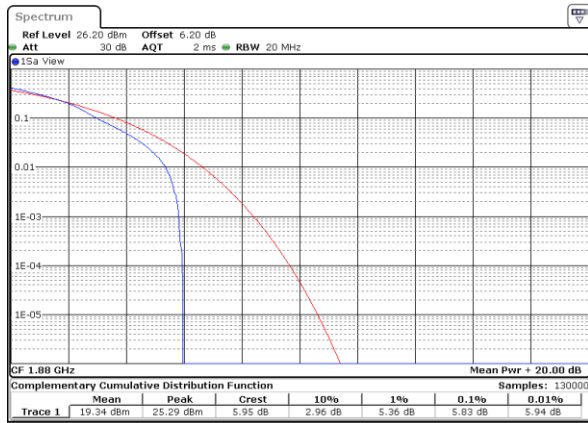
Date: 29 NOV 2019 13:47:48

Lowest Channel / Full RB



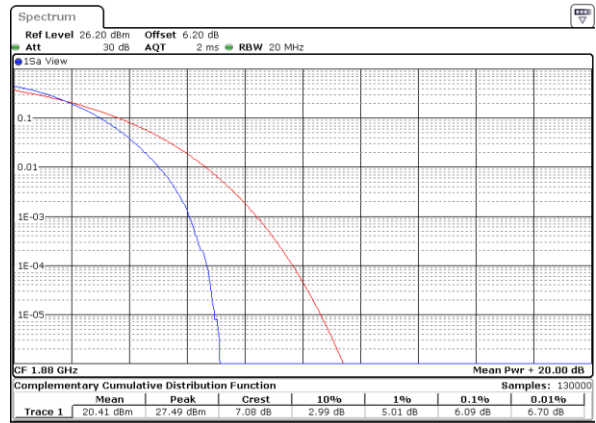
Date: 29 NOV 2019 13:47:59

Middle Channel / 1RB



Date: 29 NOV 2019 13:48:41

Middle Channel / Full RB



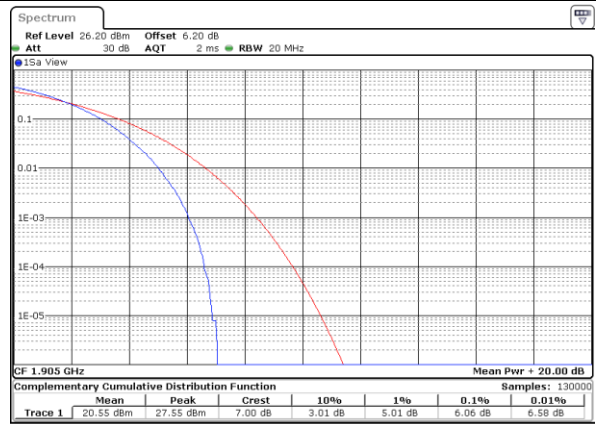
Date: 29 NOV 2019 13:48:30

Highest Channel / 1RB



Date: 29 NOV 2019 13:49:10

Highest Channel / Full RB



Date: 29 NOV 2019 13:49:20

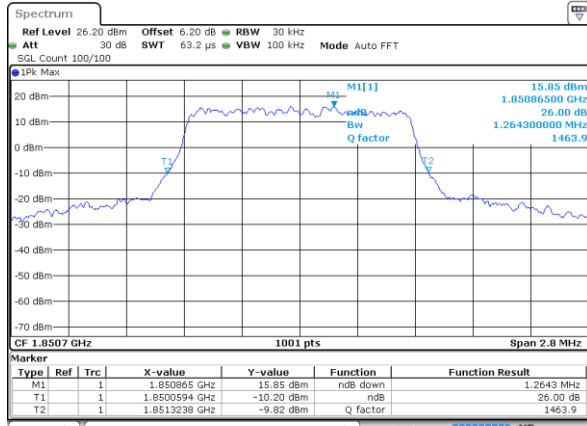
**26dB Bandwidth**

Mode	LTE Band 25 : 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	1.264	1.301	3.039	2.991	4.945	4.955	9.89	9.79	14.266	14.326	20.18	20.14
Middle CH	1.290	1.276	3.027	2.991	4.825	4.805	9.75	9.67	14.386	14.116	20.18	20.02
Highest CH	1.267	1.270	3.039	3.009	4.995	4.905	9.97	9.97	14.416	14.206	20.06	19.94



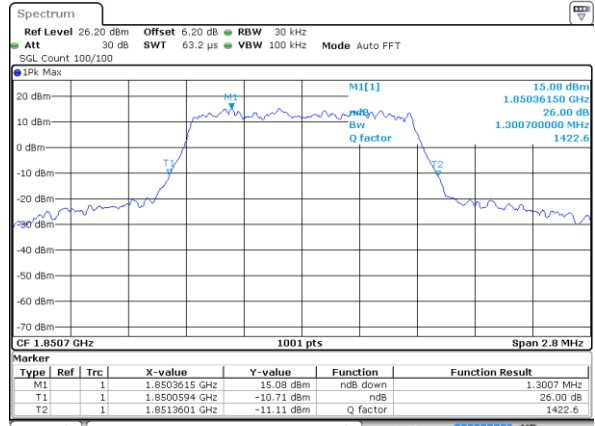
LTE Band 25

Lowest Channel / 1.4MHz / QPSK



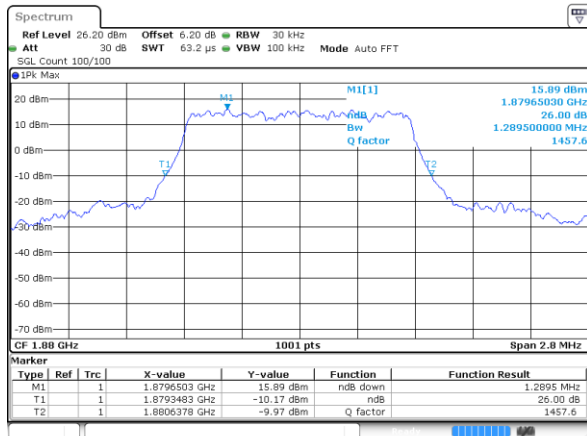
Date: 29 NOV 2019 11:37:24

Lowest Channel / 1.4MHz / 16QAM



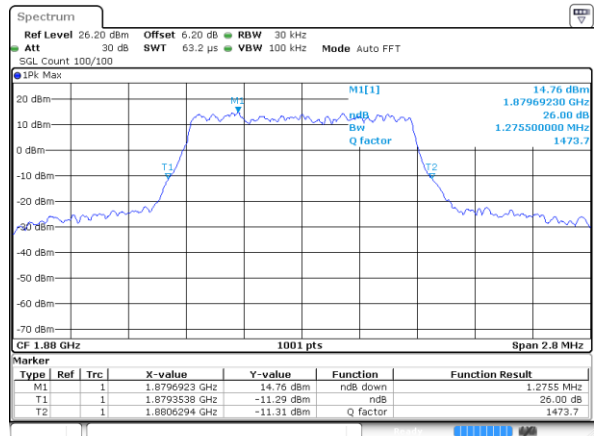
Date: 29 NOV 2019 11:37:45

Middle Channel / 1.4MHz / QPSK



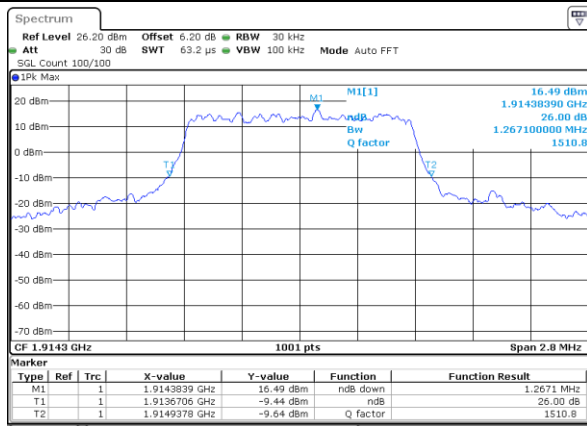
Date: 29 NOV 2019 11:38:25

Middle Channel / 1.4MHz / 16QAM



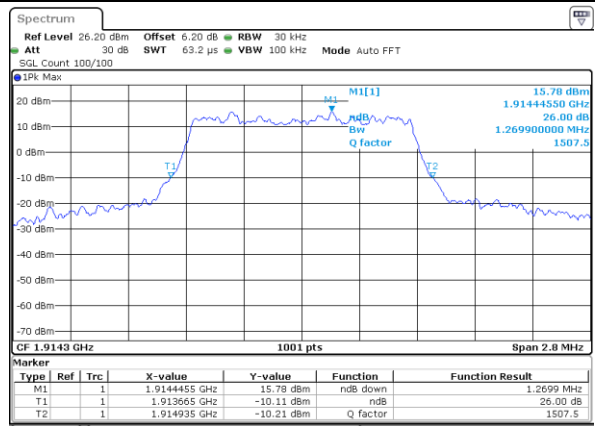
Date: 29 NOV 2019 11:38:45

Highest Channel / 1.4MHz / QPSK



Date: 29 NOV 2019 11:39:25

Highest Channel / 1.4MHz / 16QAM

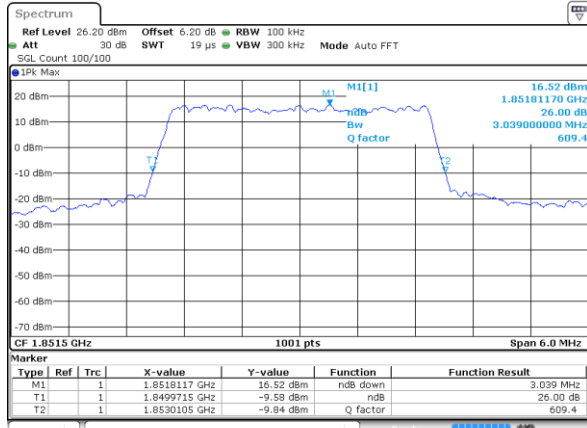


Date: 29 NOV 2019 11:39:46



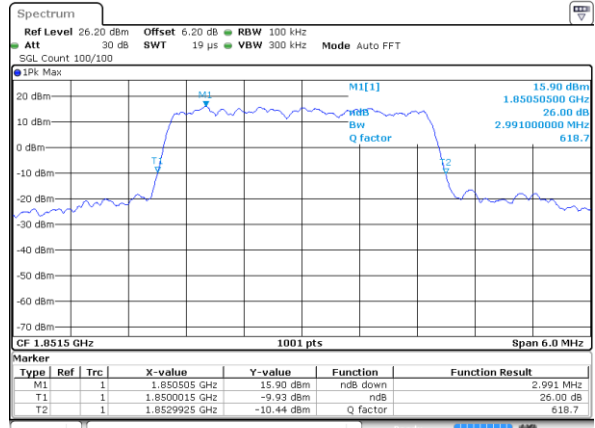
LTE Band 25

Lowest Channel / 3MHz / QPSK



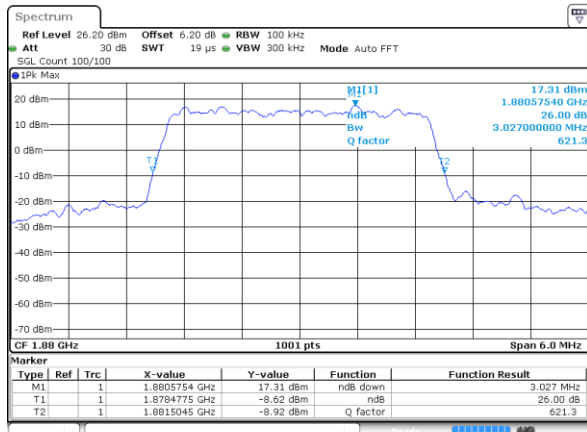
Date: 29 NOV 2019 12:01:40

Lowest Channel / 3MHz / 16QAM



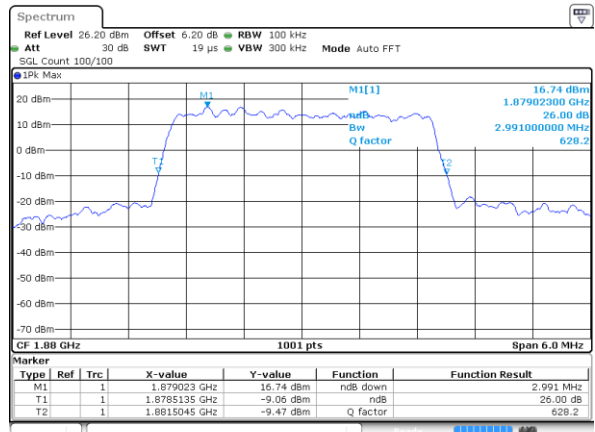
Date: 29 NOV 2019 12:02:01

Middle Channel / 3MHz / QPSK



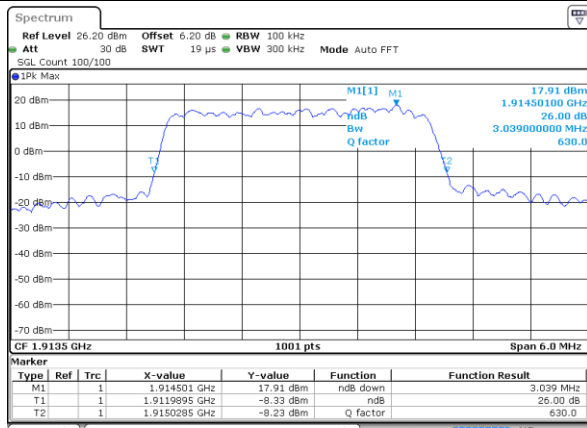
Date: 29 NOV 2019 12:02:21

Middle Channel / 3MHz / 16QAM



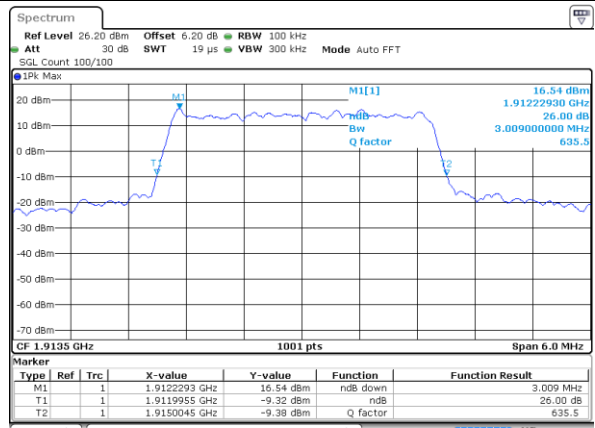
Date: 29 NOV 2019 12:02:41

Highest Channel / 3MHz / QPSK



Date: 29 NOV 2019 12:03:01

Highest Channel / 3MHz / 16QAM

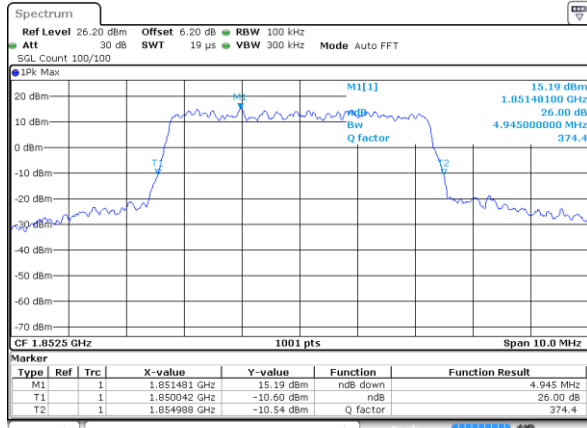


Date: 29 NOV 2019 12:03:21

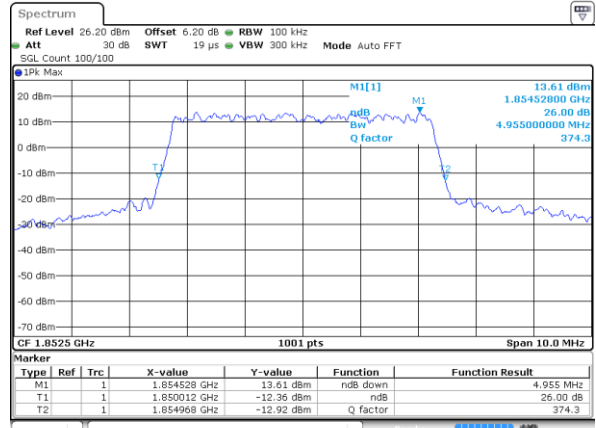


LTE Band 25

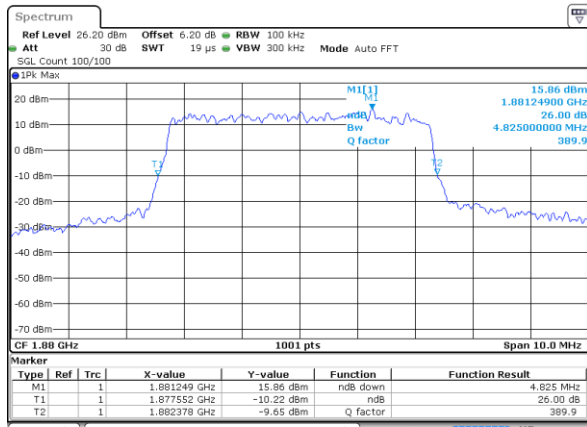
Lowest Channel / 5MHz / QPSK



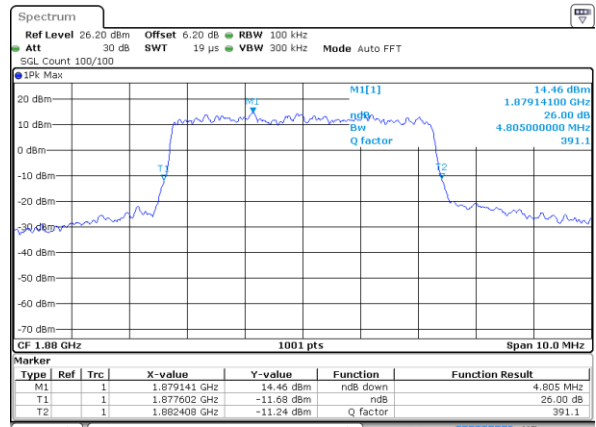
Lowest Channel / 5MHz / 16QAM



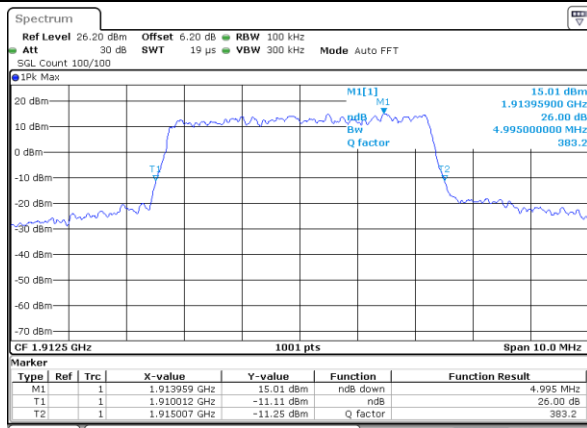
Middle Channel / 5MHz / QPSK



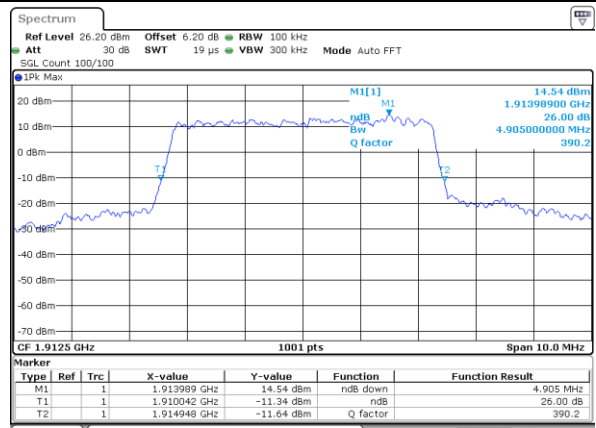
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



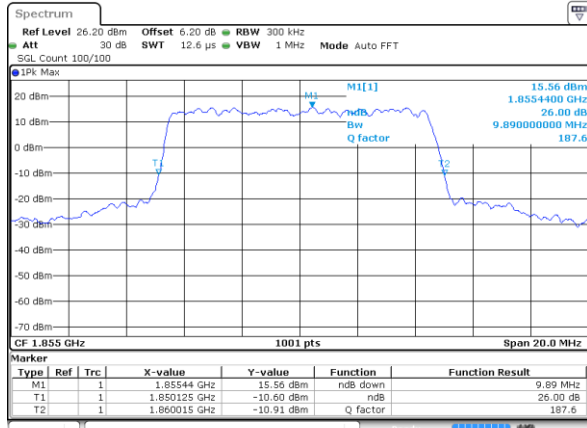
Highest Channel / 5MHz / 16QAM





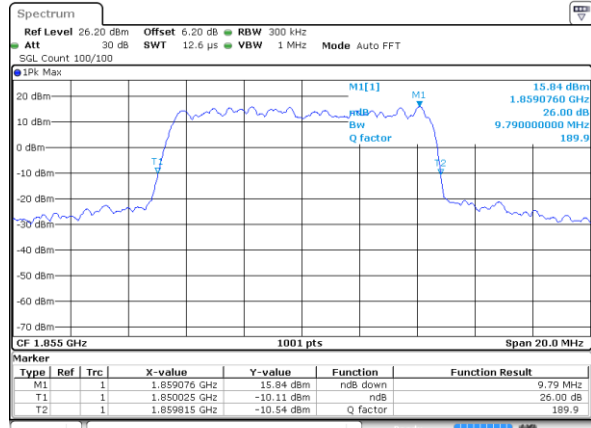
LTE Band 25

Lowest Channel / 10MHz / QPSK



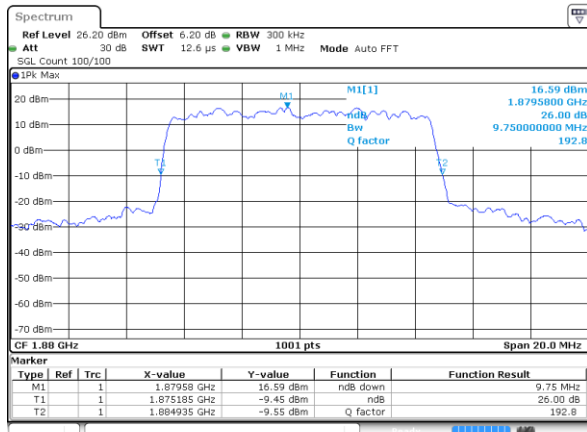
Date: 29 NOV 2019 12:34:42

Lowest Channel / 10MHz / 16QAM



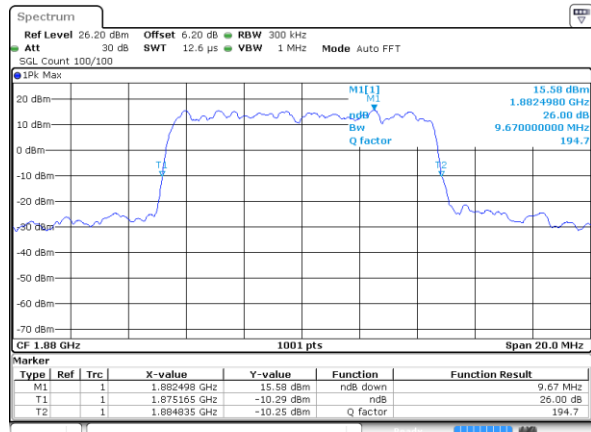
Date: 29 NOV 2019 12:35:02

Middle Channel / 10MHz / QPSK



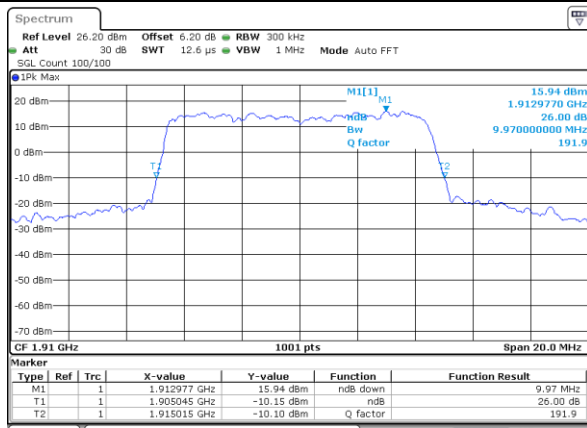
Date: 29 NOV 2019 12:43:51

Middle Channel / 10MHz / 16QAM



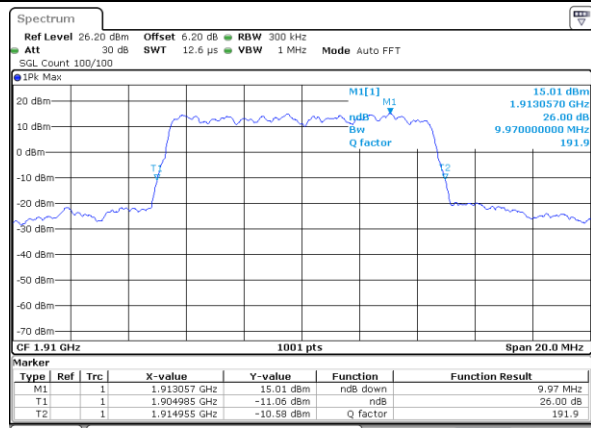
Date: 29 NOV 2019 12:43:31

Highest Channel / 10MHz / QPSK



Date: 29 NOV 2019 12:44:11

Highest Channel / 10MHz / 16QAM

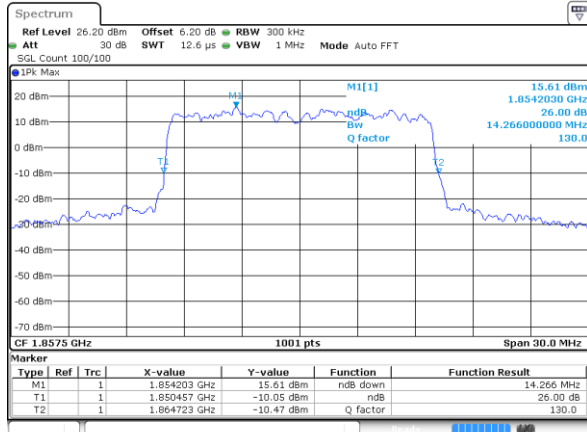


Date: 29 NOV 2019 12:44:31



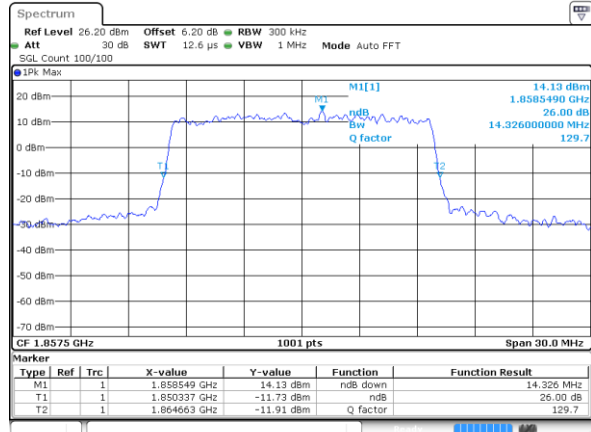
LTE Band 25

Lowest Channel / 15MHz / QPSK



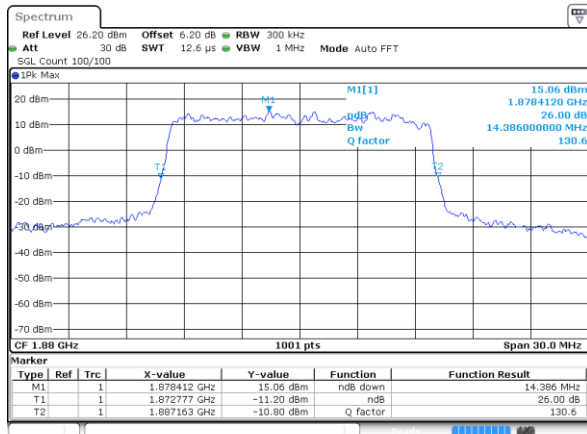
Date: 29 NOV 2019 12:51:11

Lowest Channel / 15MHz / 16QAM



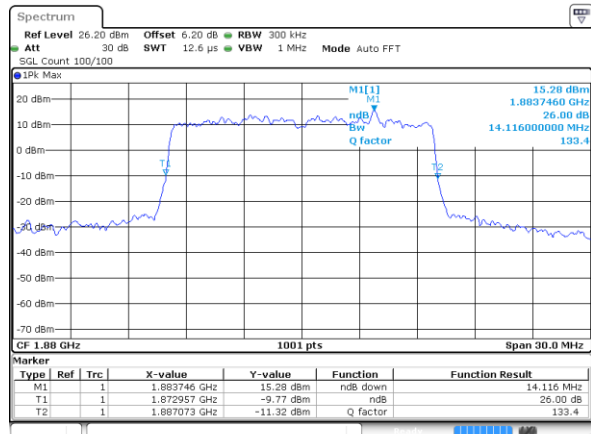
Date: 29 NOV 2019 12:51:31

Middle Channel / 15MHz / QPSK



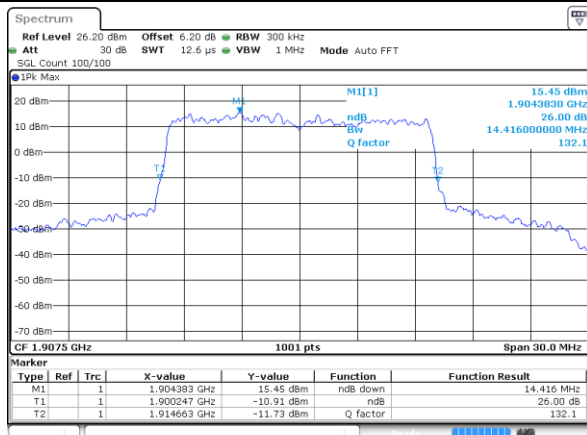
Date: 29 NOV 2019 13:00:20

Middle Channel / 15MHz / 16QAM



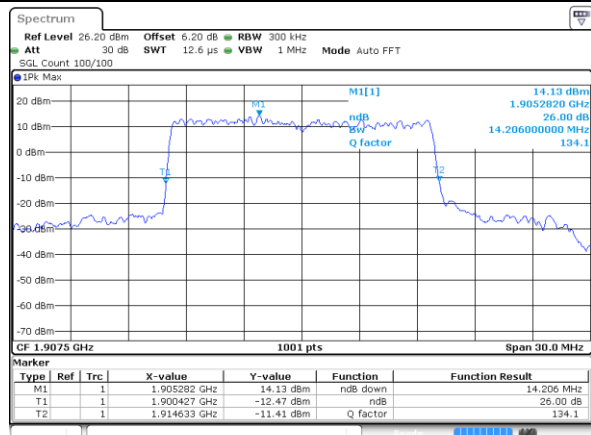
Date: 29 NOV 2019 13:00:00

Highest Channel / 15MHz / QPSK



Date: 29 NOV 2019 13:00:40

Highest Channel / 15MHz / 16QAM

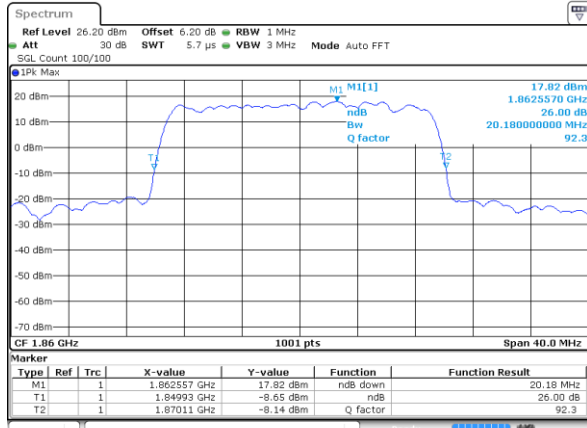


Date: 29 NOV 2019 13:01:00



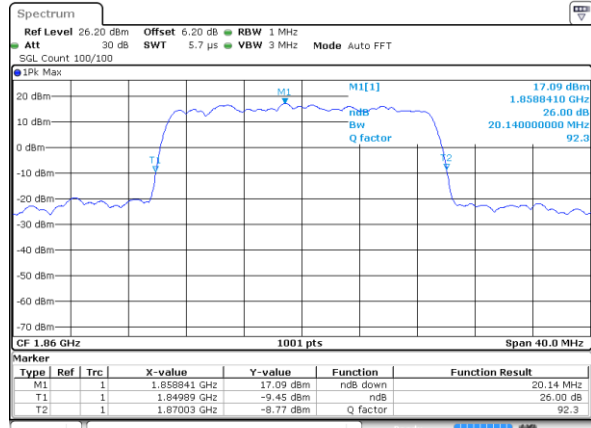
LTE Band 25

Lowest Channel / 20MHz / QPSK



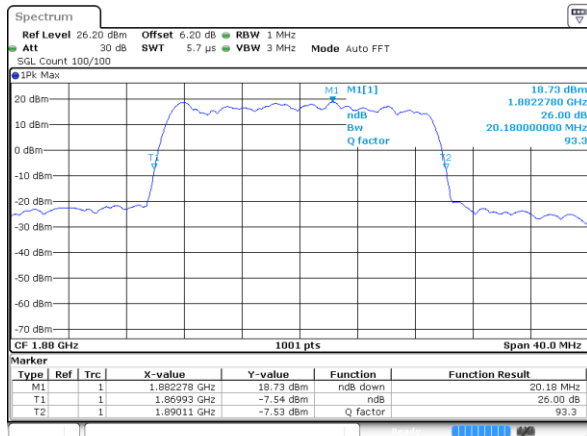
Date: 29 NOV 2019 13:07:41

Lowest Channel / 20MHz / 16QAM



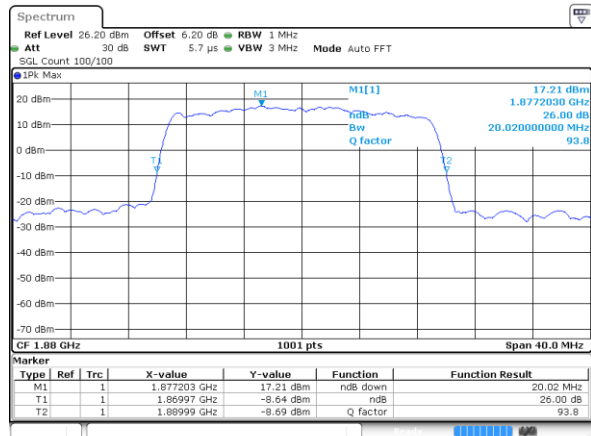
Date: 29 NOV 2019 13:08:01

Middle Channel / 20MHz / QPSK



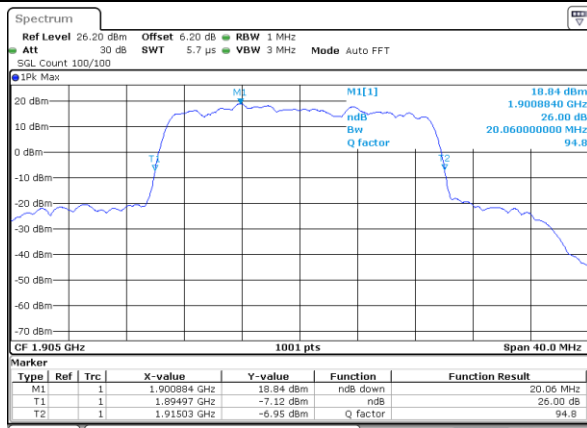
Date: 29 NOV 2019 13:16:51

Middle Channel / 20MHz / 16QAM



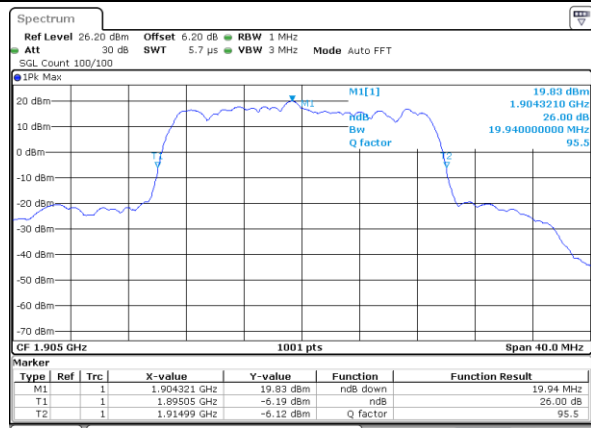
Date: 29 NOV 2019 13:16:31

Highest Channel / 20MHz / QPSK



Date: 29 NOV 2019 13:17:11

Highest Channel / 20MHz / 16QAM



Date: 29 NOV 2019 13:17:31

**Occupied Bandwidth**

Mode	LTE Band 25 : 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	1.09	2.72	2.72	4.48	4.49	8.99	8.97	13.49	13.43	18.34	18.38
Middle CH	1.09	1.09	2.72	2.73	4.50	4.50	8.99	8.99	13.37	13.31	18.14	18.22
Highest CH	1.10	1.09	2.73	2.70	4.52	4.49	9.05	9.07	13.46	13.43	18.30	18.26