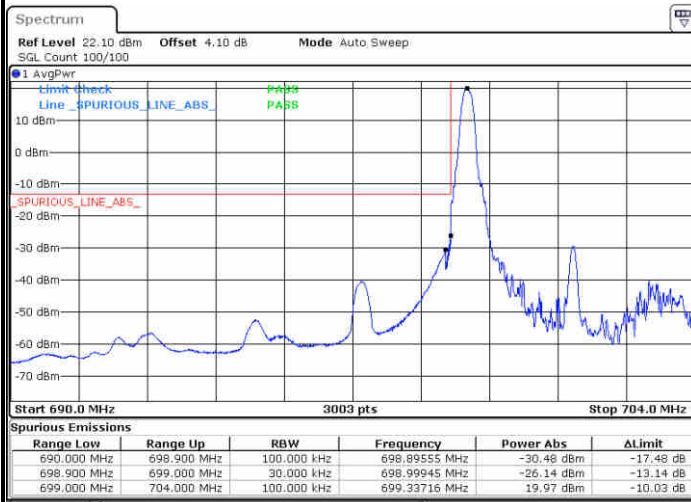




LTE Band 12 / 5MHz / 16QAM

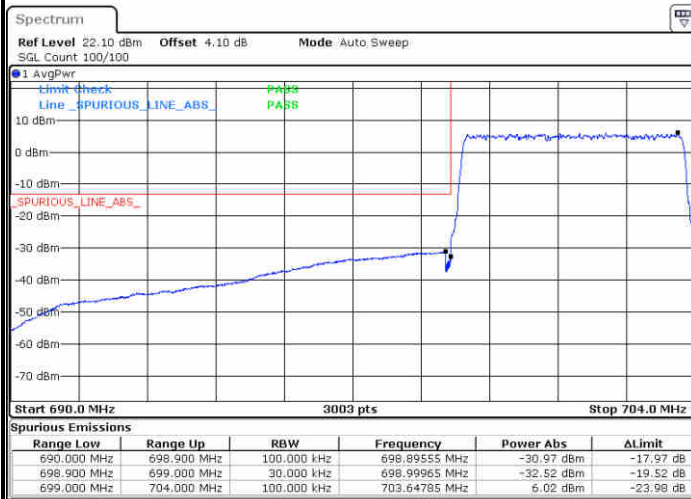
Lowest Band Edge / 1RB



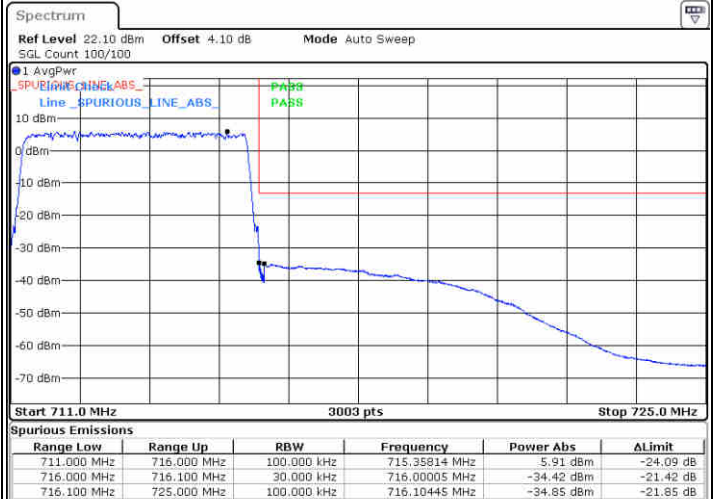
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



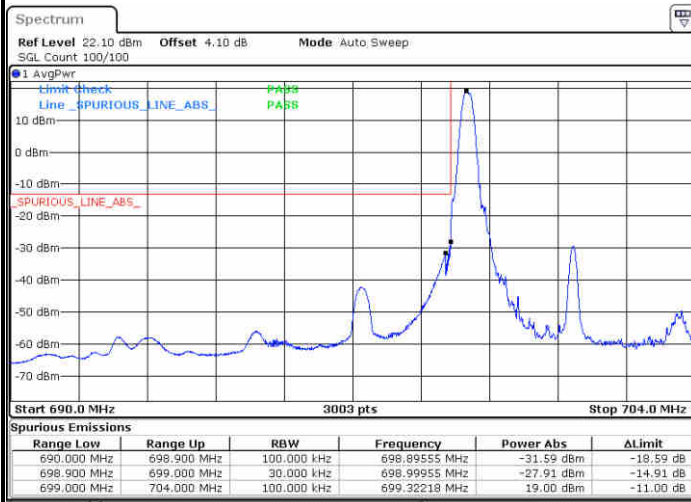
Highest Band Edge / Full RB



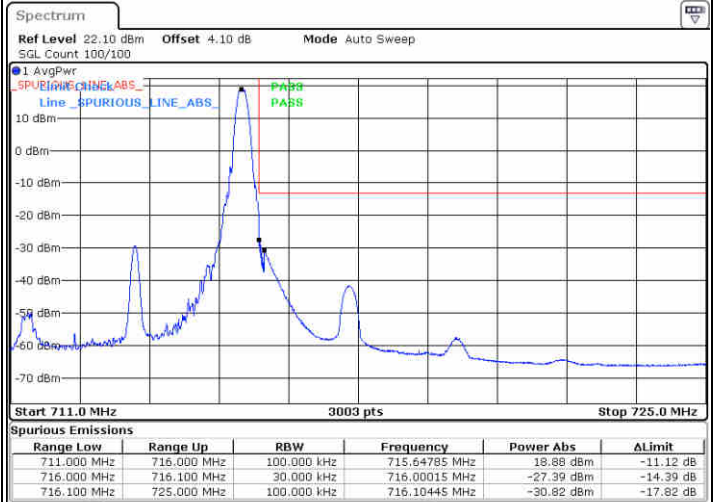


LTE Band 12 / 5MHz / 64QAM

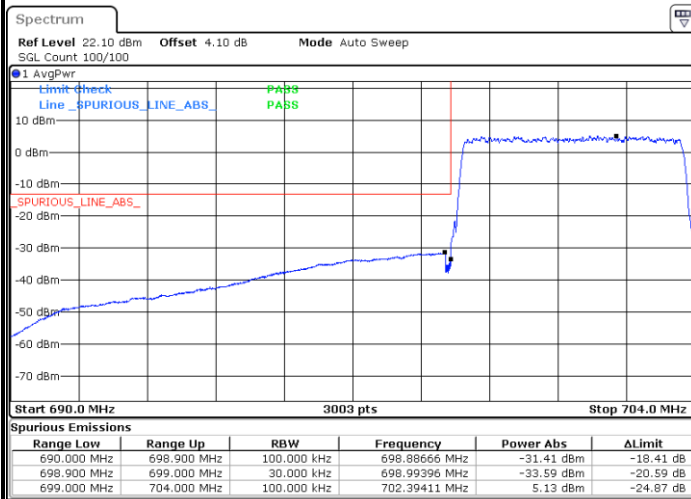
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



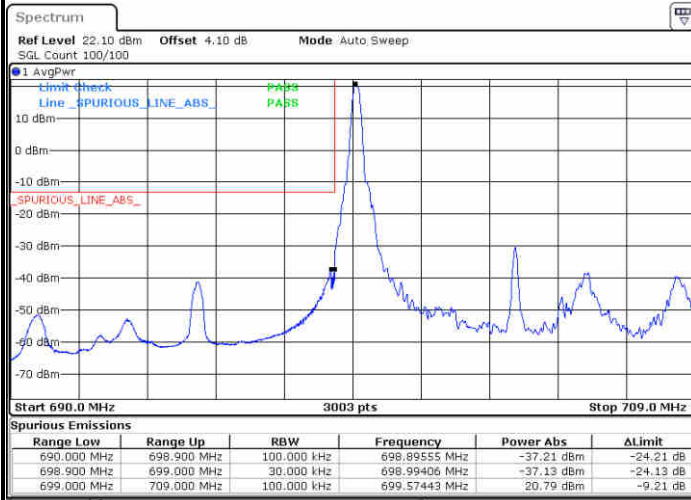
Highest Band Edge / Full RB



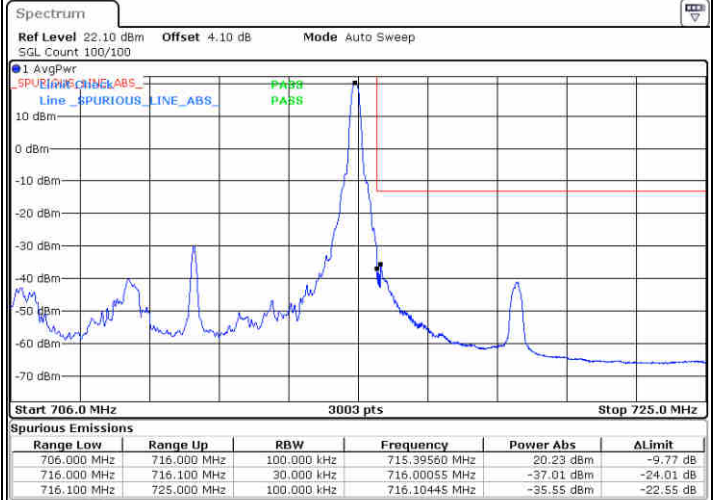


LTE Band 12 / 10MHz / QPSK

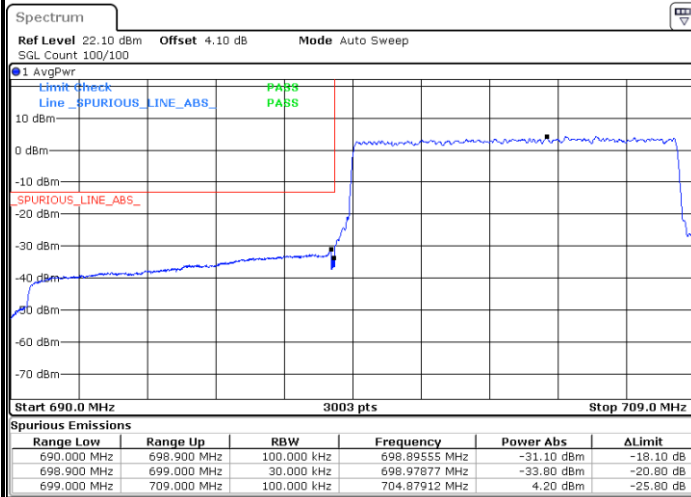
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



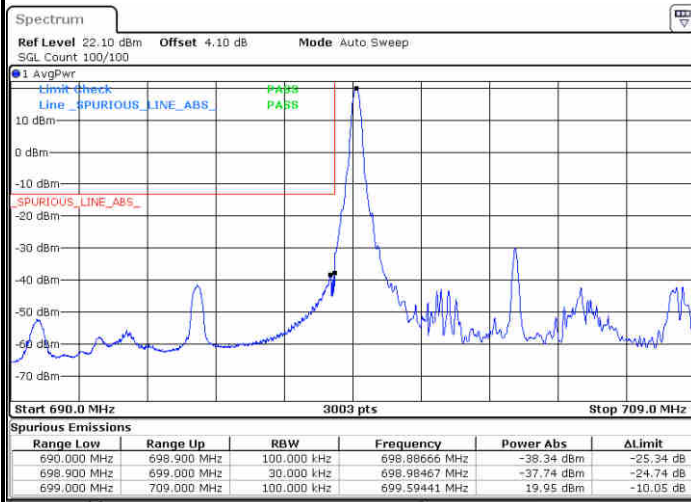
Highest Band Edge / Full RB



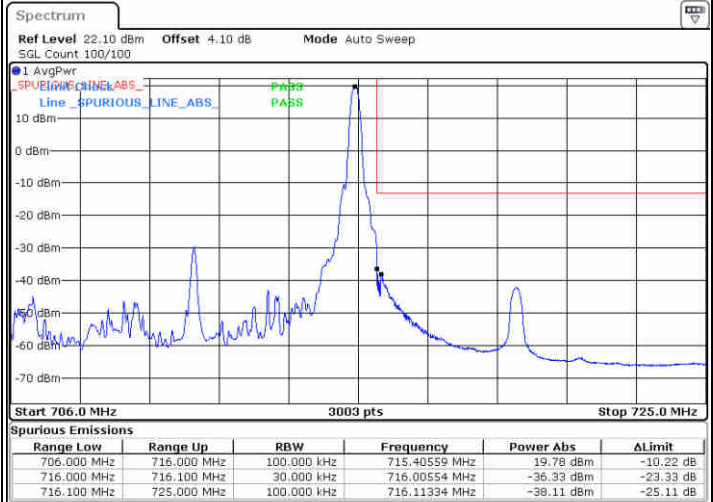


LTE Band 12 / 10MHz / 16QAM

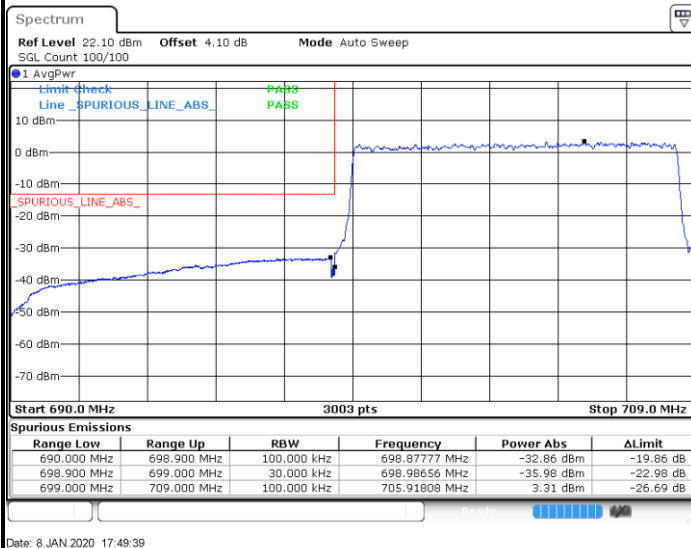
Lowest Band Edge / 1 RB



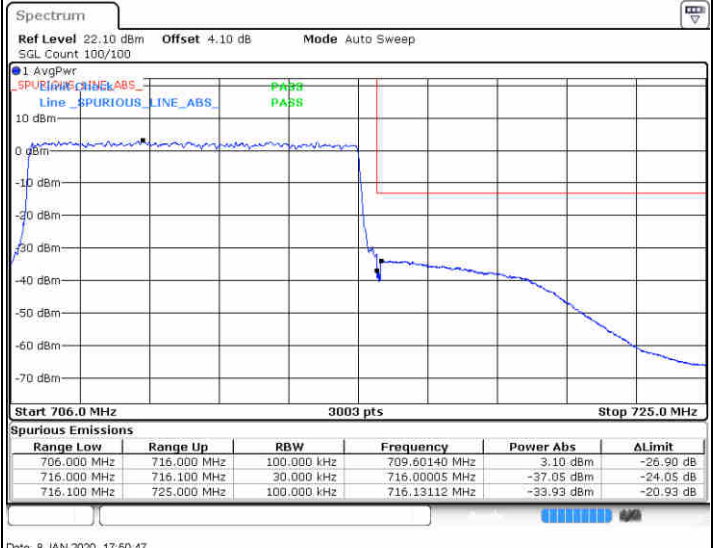
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



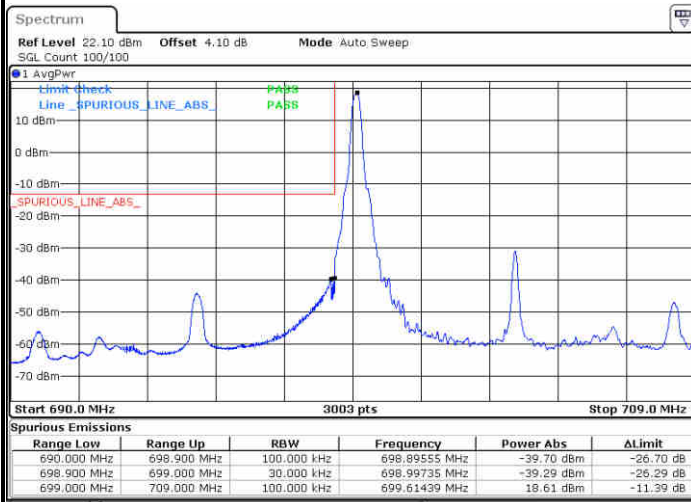
Highest Band Edge / Full RB



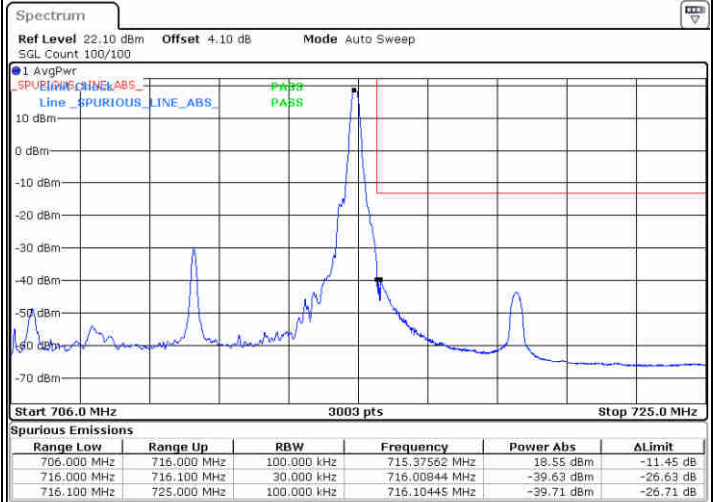


LTE Band 12 / 10MHz / 64QAM

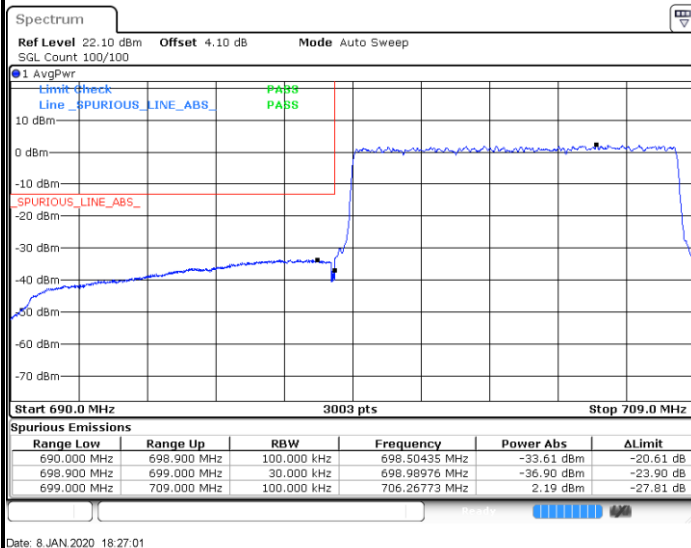
Lowest Band Edge / 1 RB



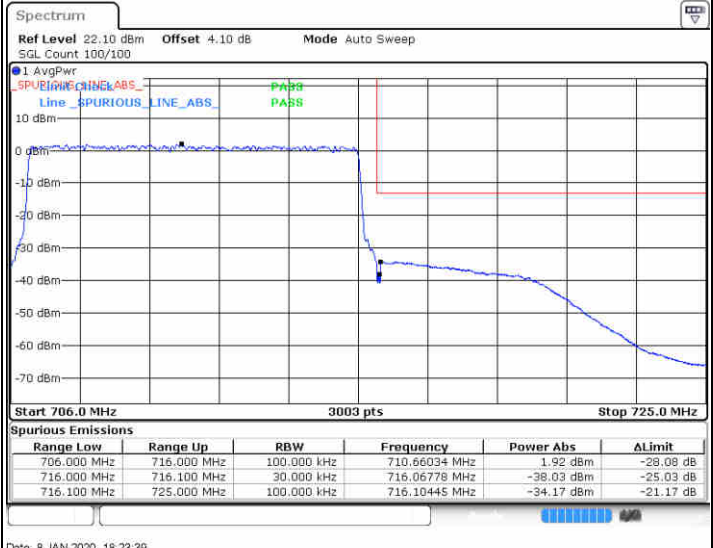
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

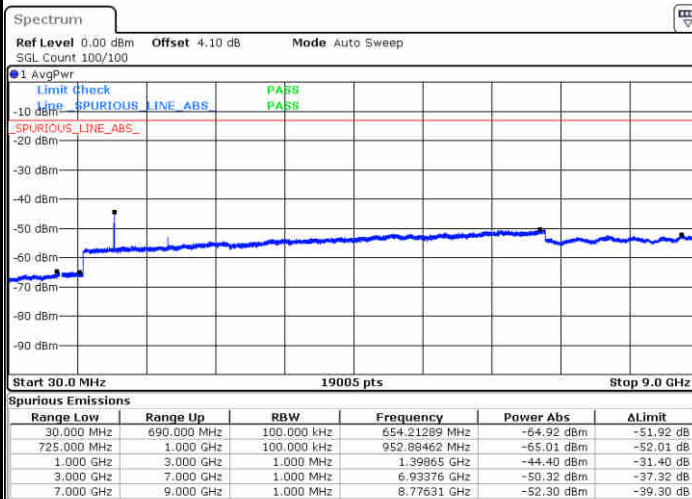




Conducted Spurious Emission

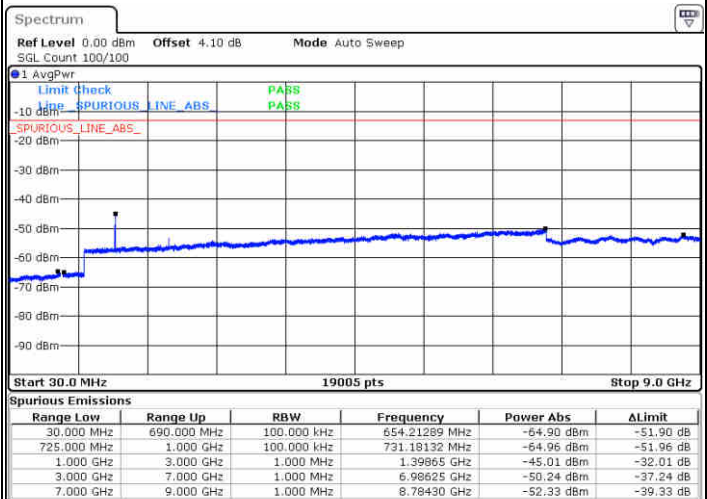
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



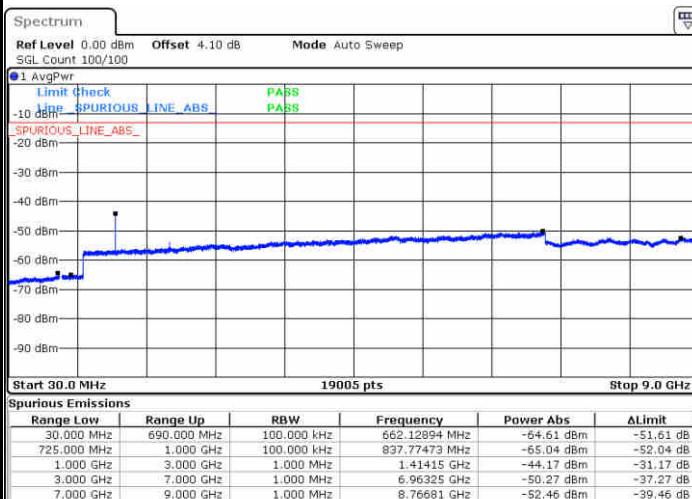
Date: 8 JAN 2020 16:54:02

Lowest Channel / 16QAM



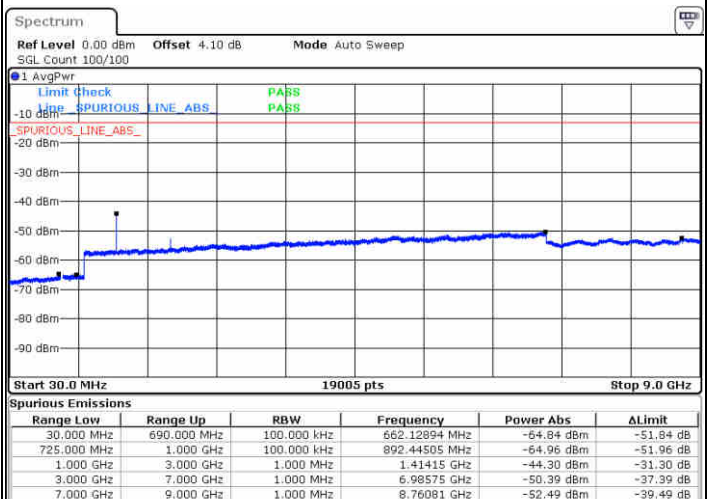
Date: 8 JAN 2020 16:54:56

Middle Channel / QPSK



Date: 8 JAN 2020 16:56:45

Middle Channel / 16QAM

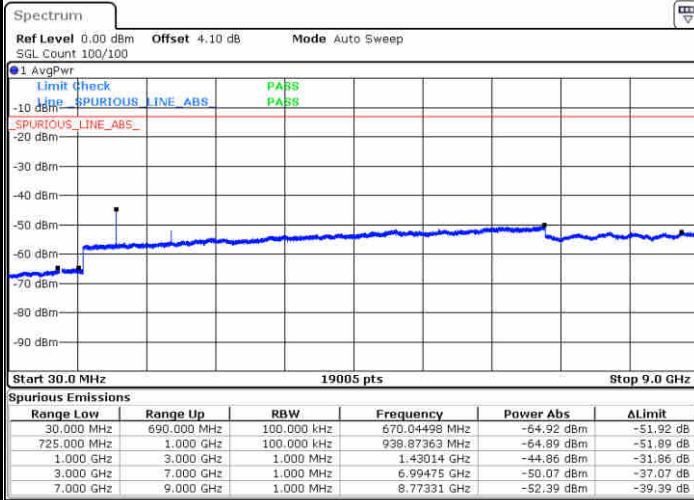


Date: 8 JAN 2020 16:55:50



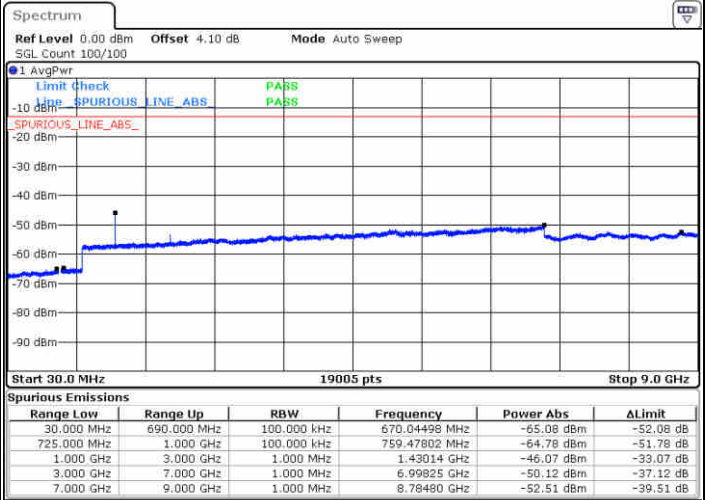
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 8 JAN 2020 16:57:39

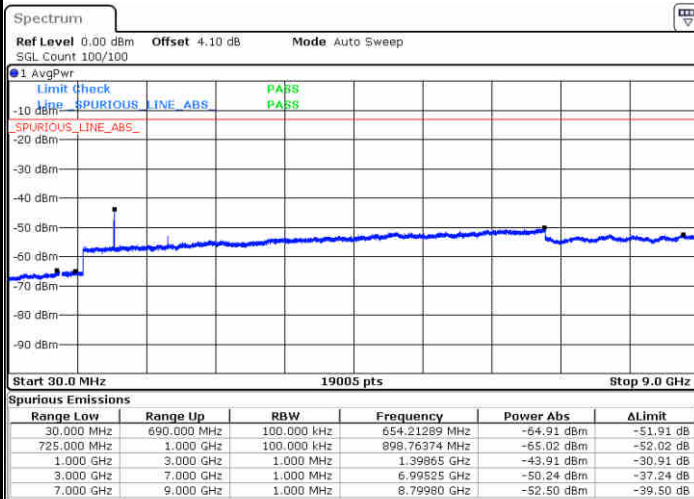
Highest Channel / 16QAM



Date: 8 JAN 2020 16:58:33

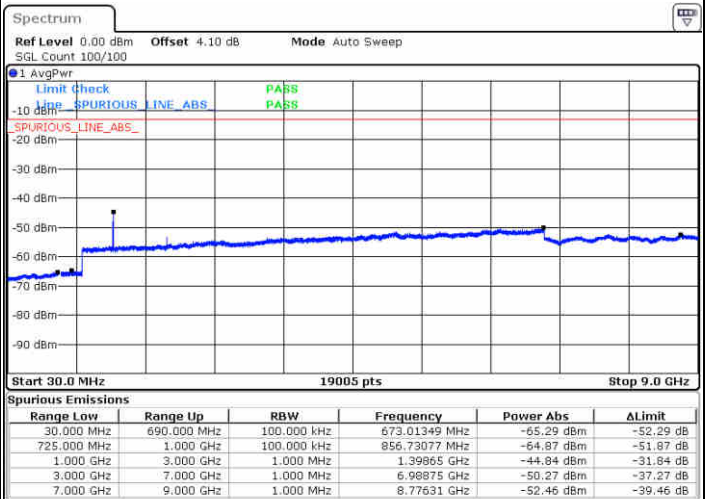
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 8 JAN 2020 16:48:22

Lowest Channel / 16QAM

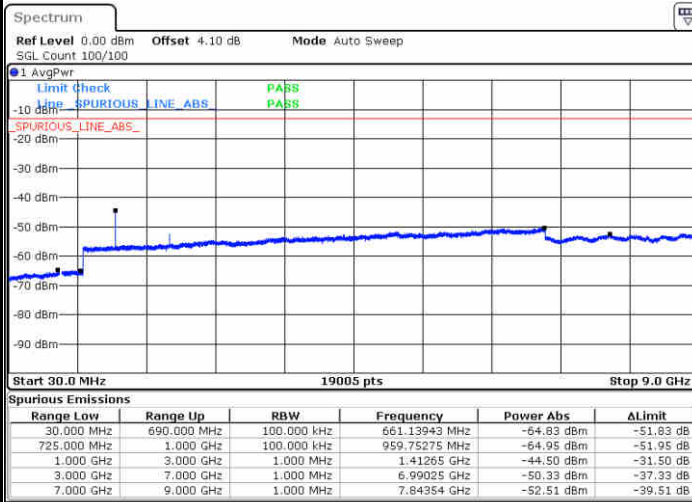


Date: 8 JAN 2020 17:10:28



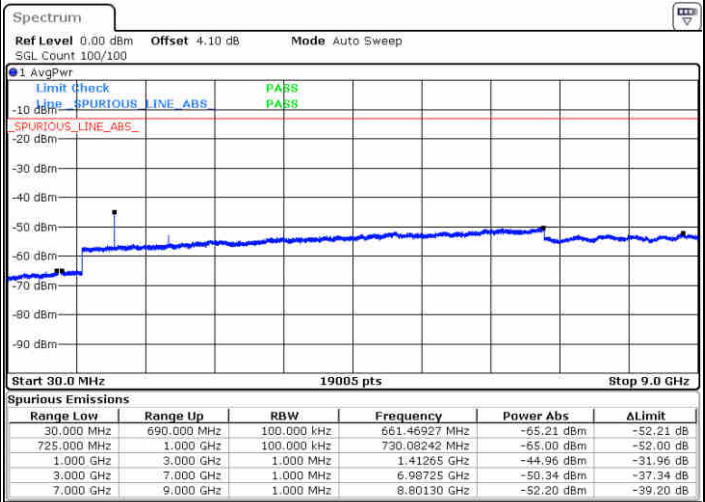
LTE Band 12 / 3MHz

Middle Channel / QPSK



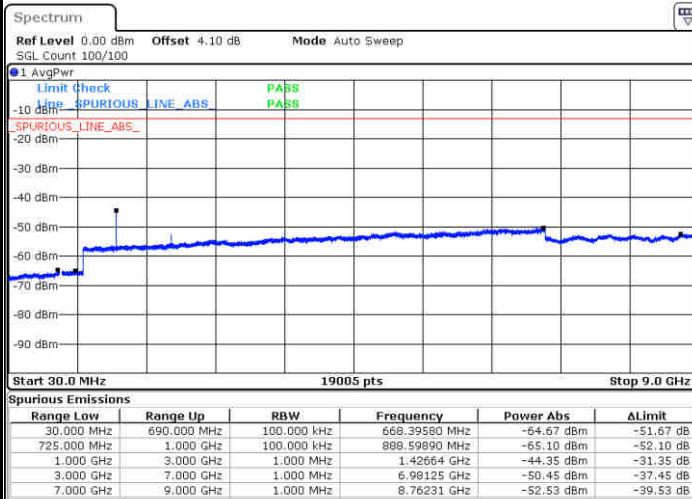
Date: 8 JAN 2020 16:49:07

Middle Channel / 16QAM



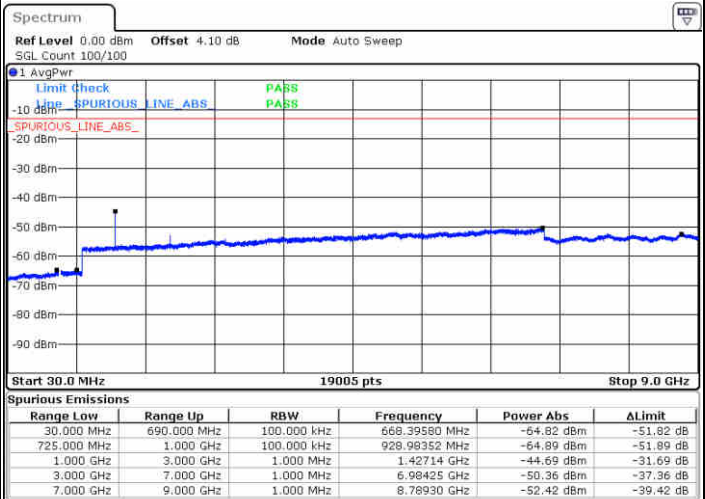
Date: 8 JAN 2020 17:11:22

Highest Channel / QPSK



Date: 8 JAN 2020 16:50:05

Highest Channel / 16QAM

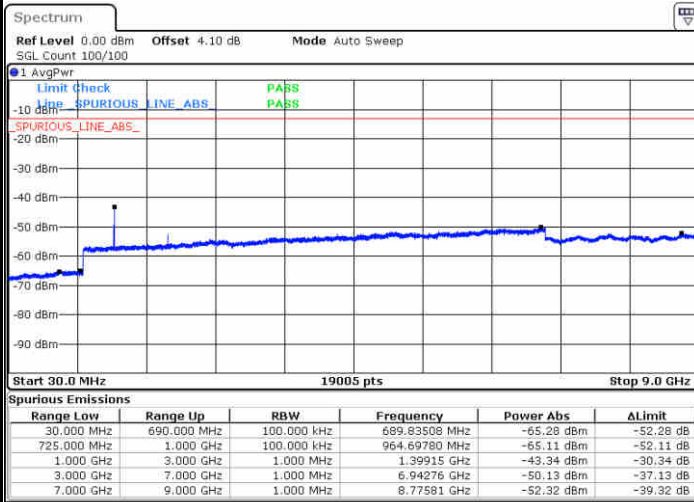


Date: 8 JAN 2020 17:12:16



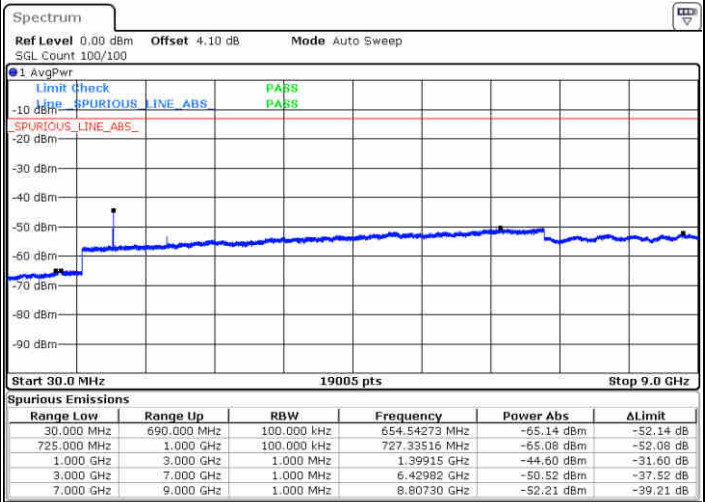
LTE Band 12 / 5MHz

Lowest Channel / QPSK



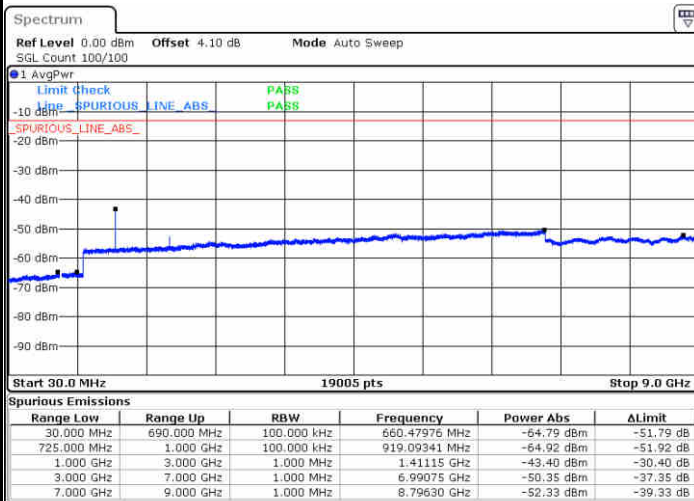
Date: 8 JAN 2020 17:24:11

Lowest Channel / 16QAM



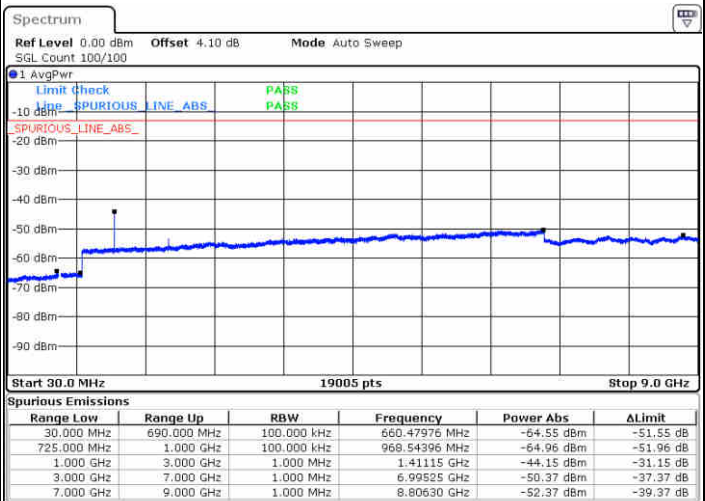
Date: 8 JAN 2020 17:25:05

Middle Channel / QPSK



Date: 8 JAN 2020 17:26:54

Middle Channel / 16QAM

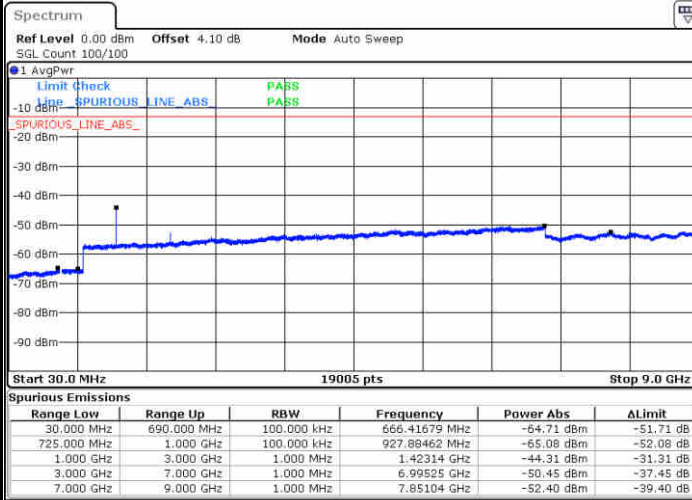


Date: 8 JAN 2020 17:25:59



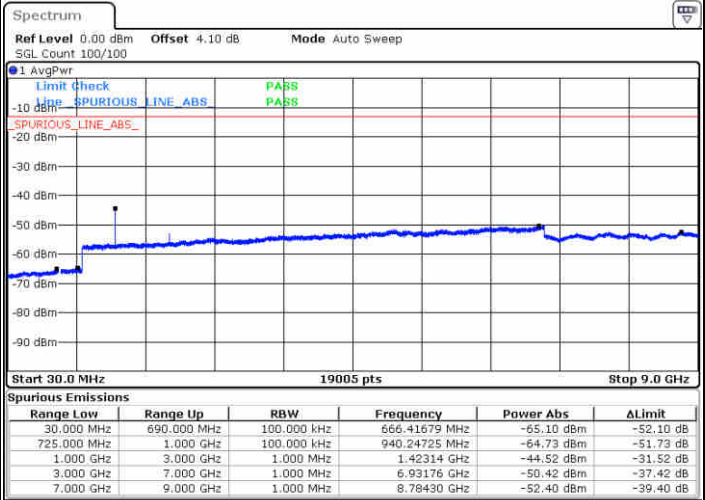
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 8 JAN 2020 17:27:48

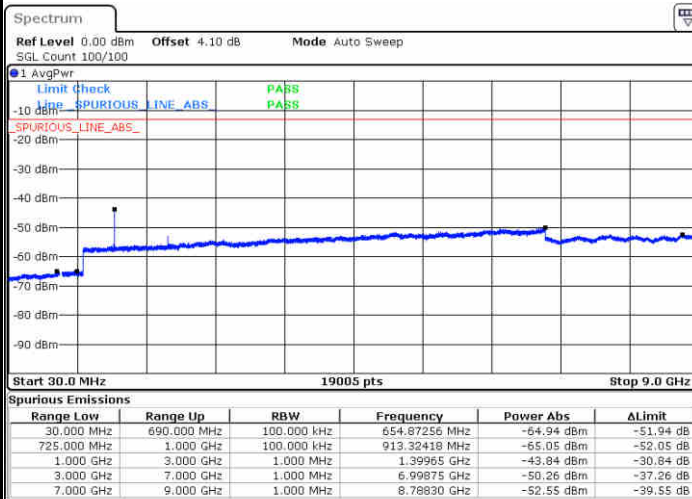
Highest Channel / 16QAM



Date: 8 JAN 2020 17:28:42

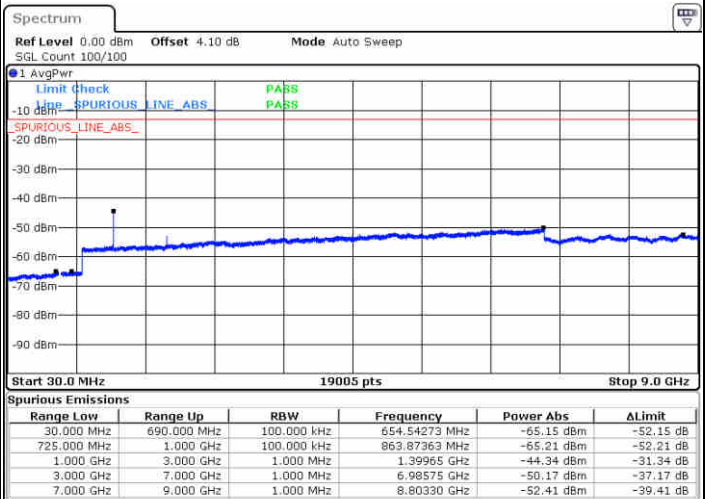
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 8 JAN 2020 17:40:37

Lowest Channel / 16QAM

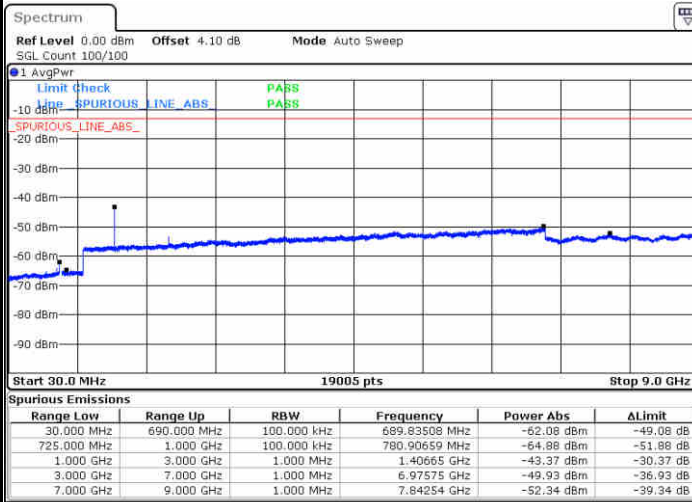


Date: 8 JAN 2020 17:41:31



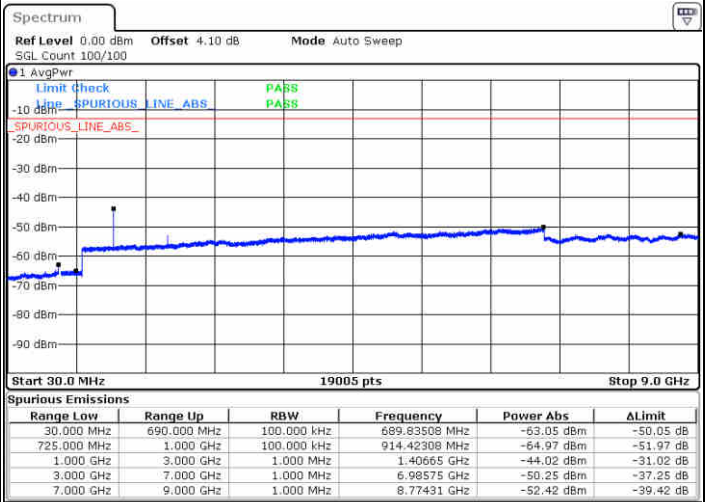
LTE Band 12 / 10MHz

Middle Channel / QPSK



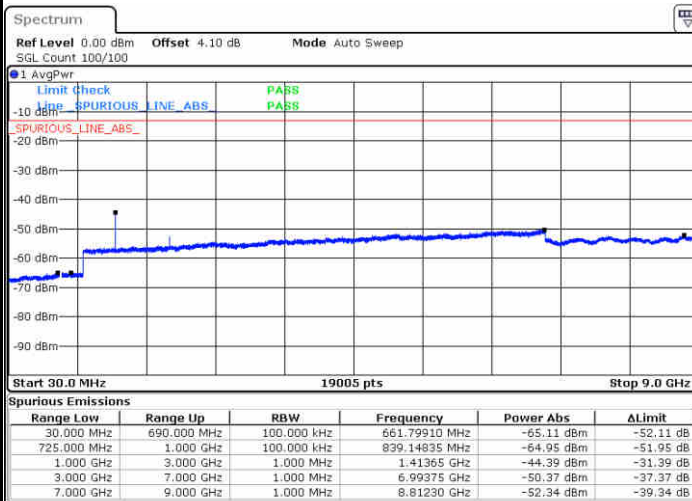
Date: 8 JAN 2020 17:43:20

Middle Channel / 16QAM



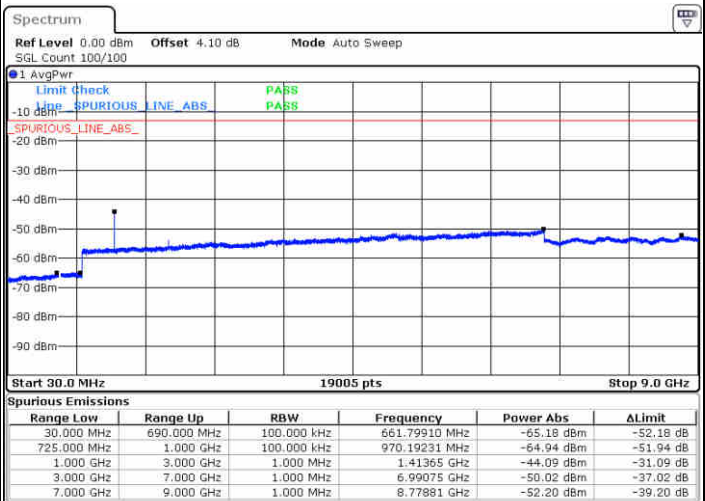
Date: 8 JAN 2020 17:42:25

Highest Channel / QPSK



Date: 8 JAN 2020 17:44:14

Highest Channel / 16QAM

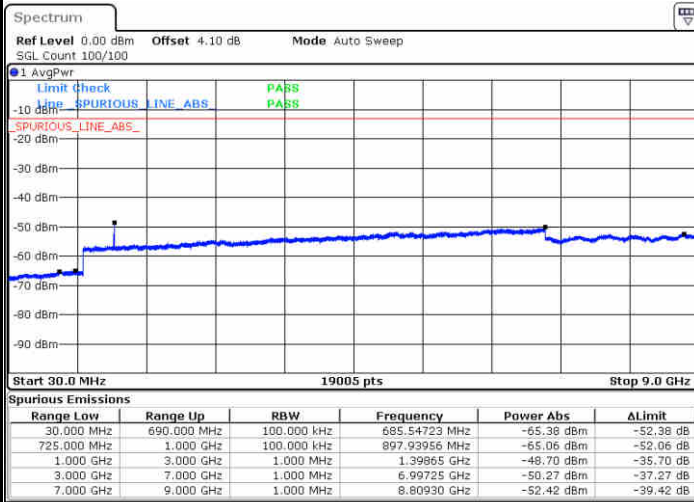


Date: 8 JAN 2020 17:45:08



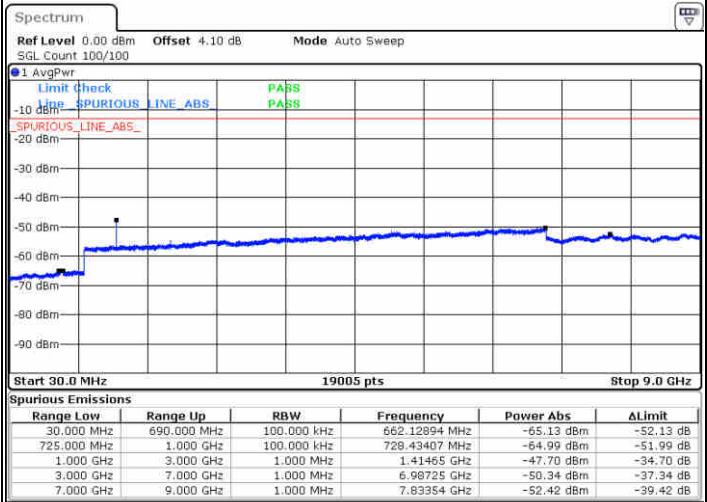
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



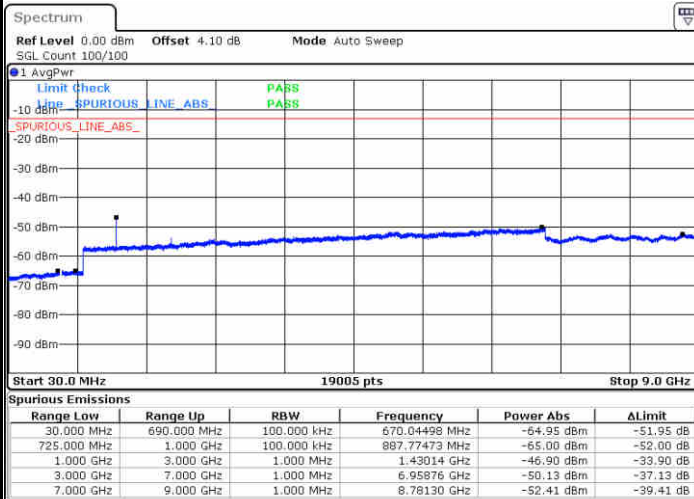
Date: 8 JAN 2020 18:00:33

Middle Channel / 64QAM



Date: 8 JAN 2020 18:01:27

Highest Channel / 64QAM

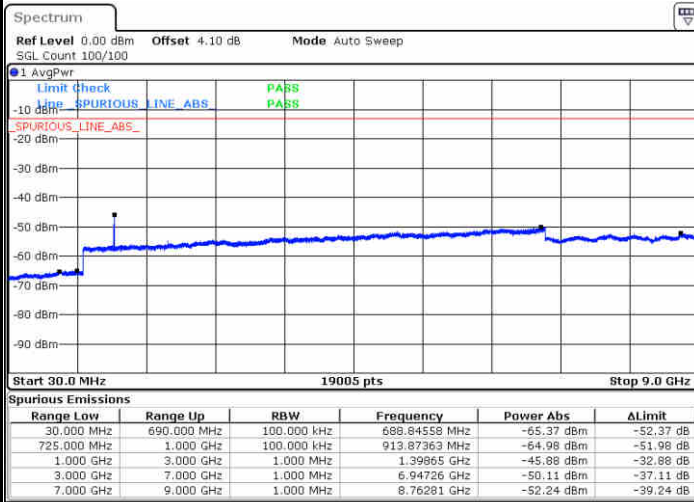


Date: 8 JAN 2020 18:02:21



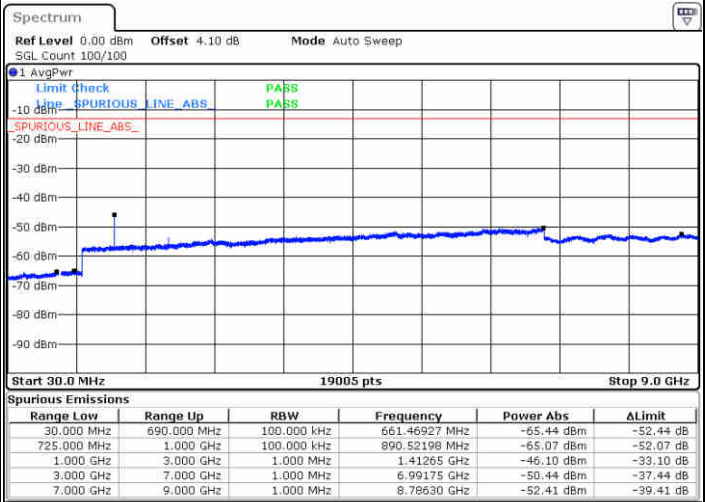
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



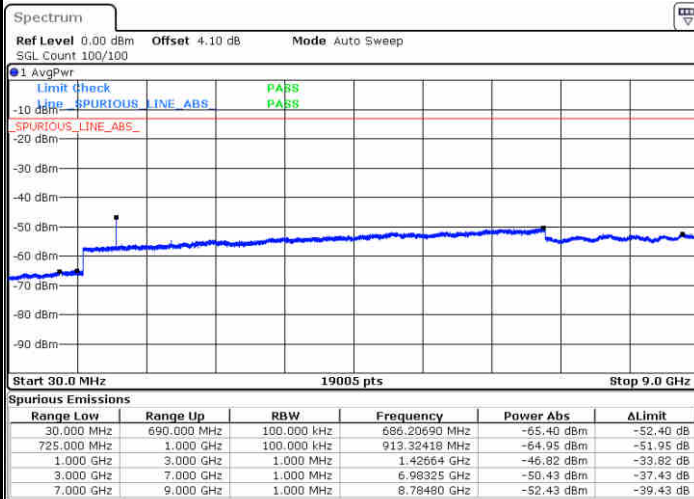
Date: 8 JAN 2020 18:03:16

Middle Channel / 64QAM



Date: 8 JAN 2020 18:04:10

Highest Channel / 64QAM

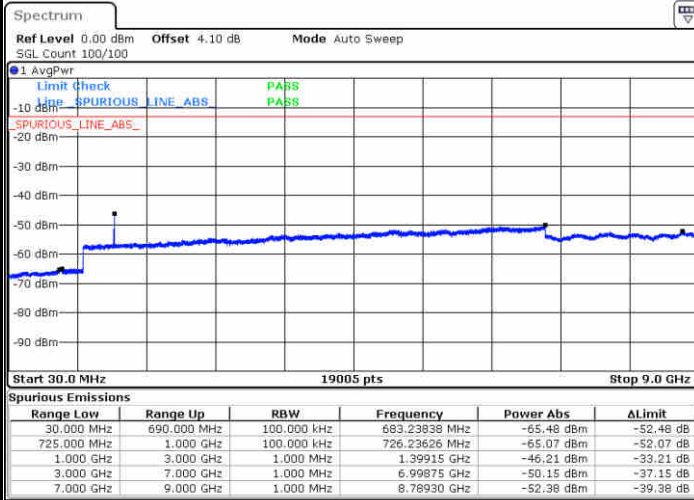


Date: 8 JAN 2020 18:05:04



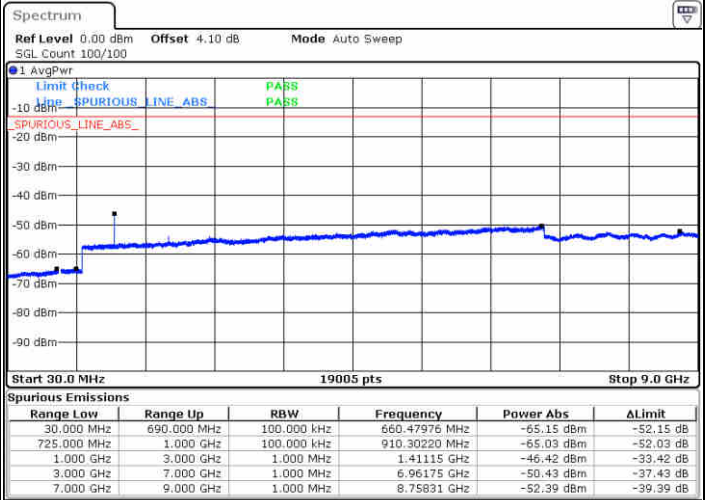
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



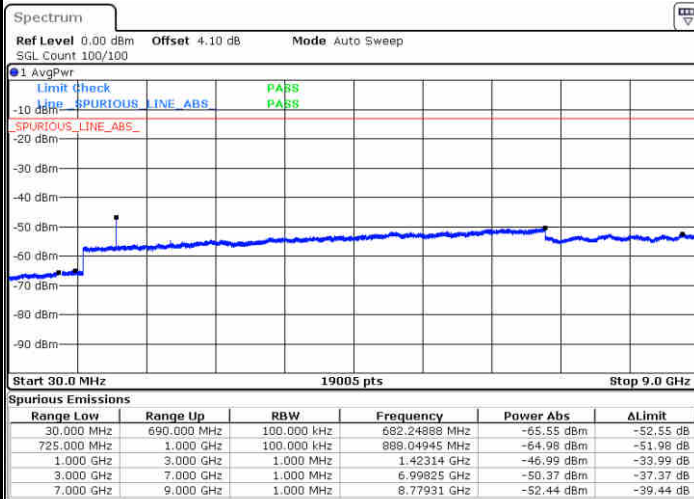
Date: 8 JAN 2020 18:16:59

Middle Channel / 64QAM



Date: 8 JAN 2020 18:17:53

Highest Channel / 64QAM

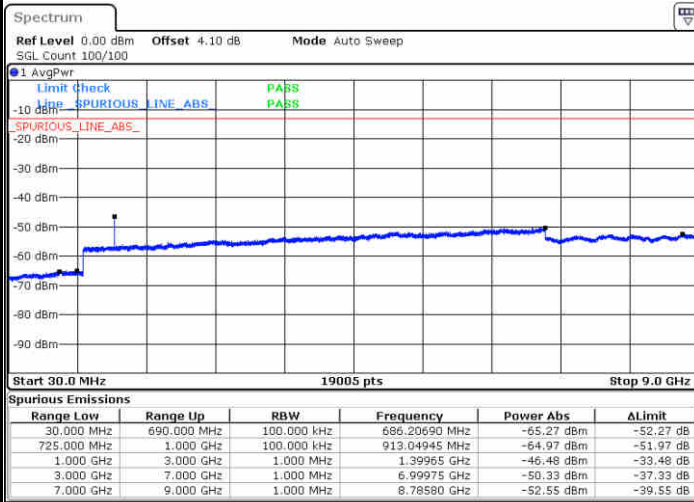


Date: 8 JAN 2020 18:18:47



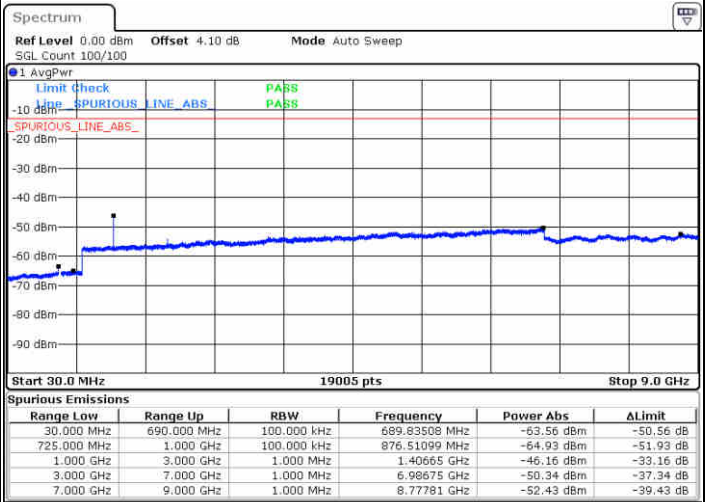
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



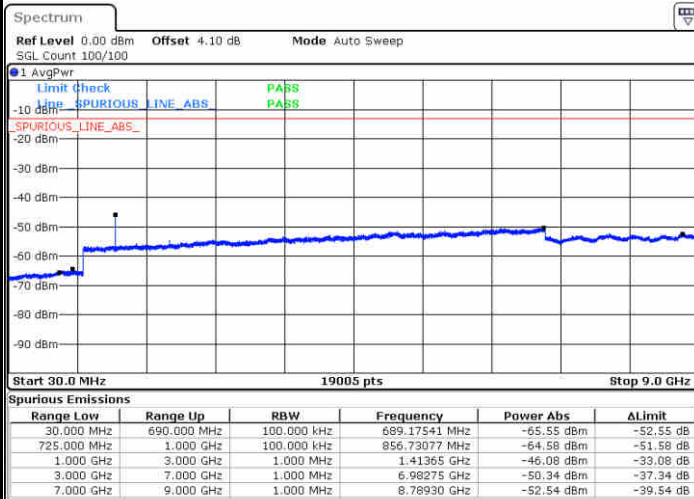
Date: 8 JAN 2020 18:19:42

Middle Channel / 64QAM



Date: 8 JAN 2020 18:20:36

Highest Channel / 64QAM



Date: 8 JAN 2020 18:21:30

**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	0.0021	PASS
40	Normal Voltage	0.0044	
30	Normal Voltage	0.0070	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0102	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0076	
-30	Normal Voltage	0.0068	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0007	
20	Battery End Point	0.0106	

Note:

1. Normal Voltage =12 V. ; Battery End Point (BEP) =4.5 V. ; Maximum Voltage =14 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 66

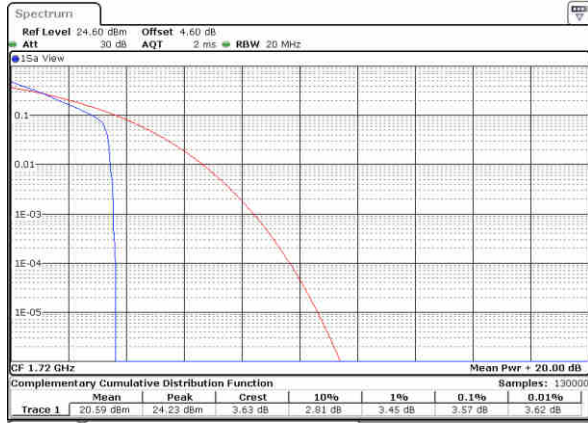
Peak-to-Average Ratio

Mode	LTE Band 66 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.57	4.49	4.49	5.83	PASS
Middle CH	3.48	4.20	5.33	5.45	
Highest CH	3.62	4.49	5.48	5.83	
Mode	LTE Band 66 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.42	6.43			PASS
Middle CH	6.17	6.17			
Highest CH	6.38	6.38			



LTE Band 66 / 20MHz / QPSK

Lowest Channel / 1RB



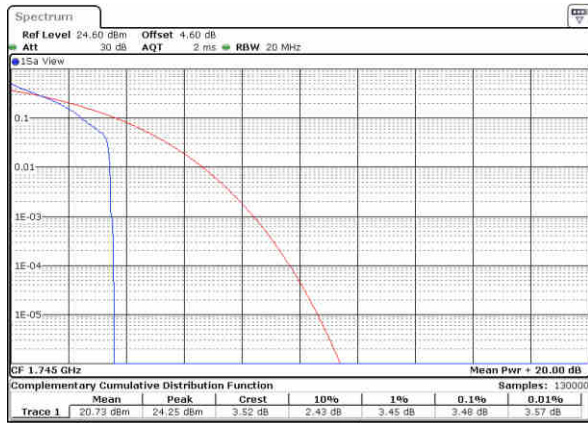
Date: 8 JAN 2020 19:57:26

Lowest Channel / Full RB



Date: 8 JAN 2020 19:58:34

Middle Channel / 1RB



Date: 8 JAN 2020 19:52:10

Middle Channel / Full RB



Date: 8 JAN 2020 19:51:57

Highest Channel / 1RB



Date: 8 JAN 2020 20:02:15

Highest Channel / Full RB

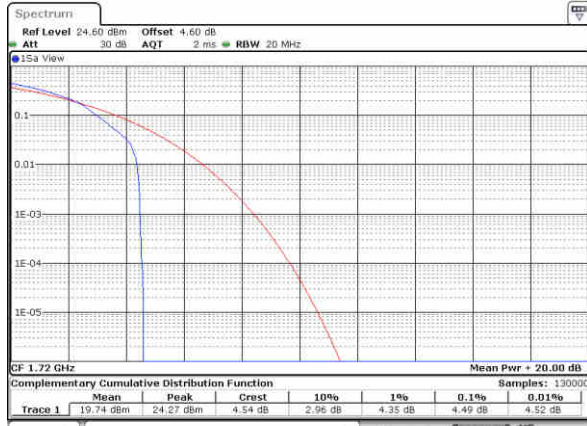


Date: 8 JAN 2020 20:01:38



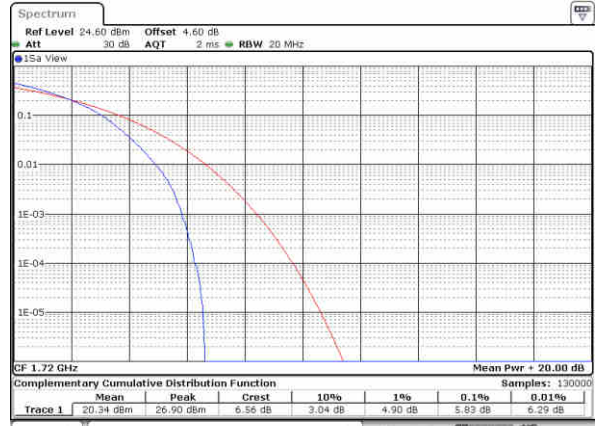
LTE Band 66 / 20MHz / 16QAM

Lowest Channel / 1RB



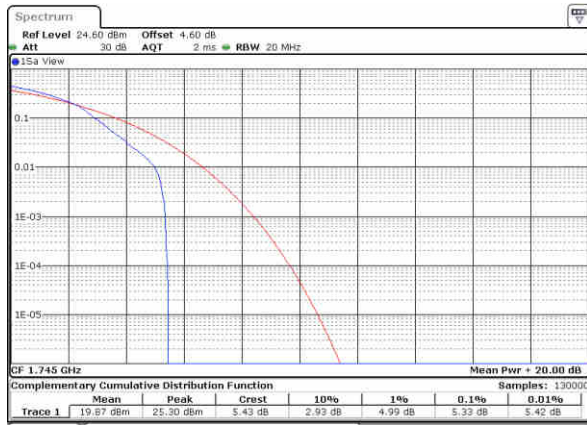
Date: 8 JAN 2020 19:56:28

Lowest Channel / Full RB



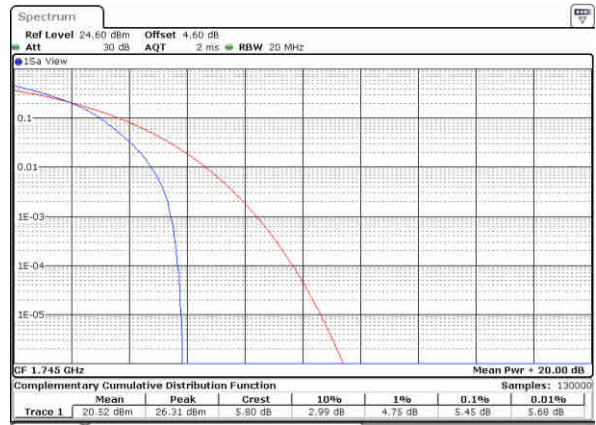
Date: 8 JAN 2020 19:59:12

Middle Channel / 1RB



Date: 8 JAN 2020 19:53:21

Middle Channel / Full RB



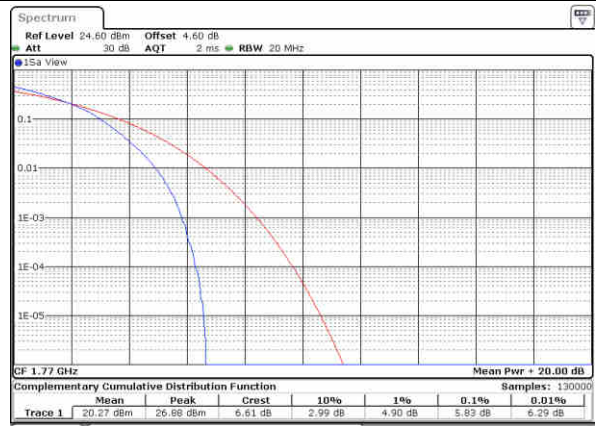
Date: 8 JAN 2020 19:51:45

Highest Channel / 1RB



Date: 8 JAN 2020 20:02:28

Highest Channel / Full RB

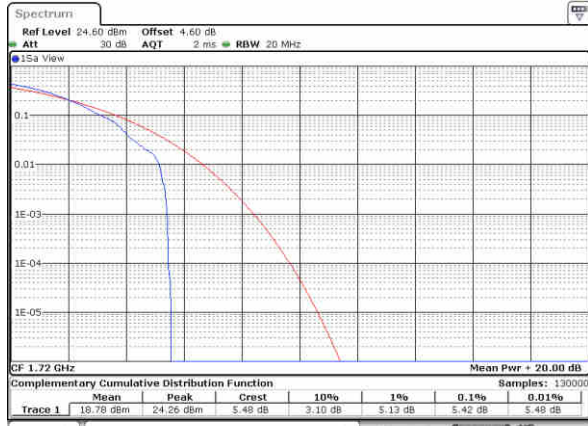


Date: 8 JAN 2020 20:01:04

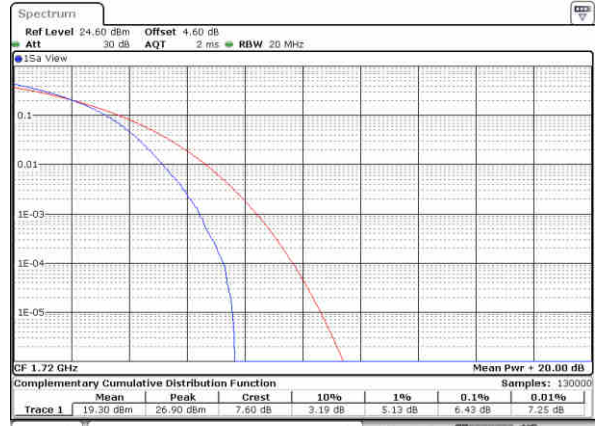


LTE Band 66 / 20MHz / 64QAM

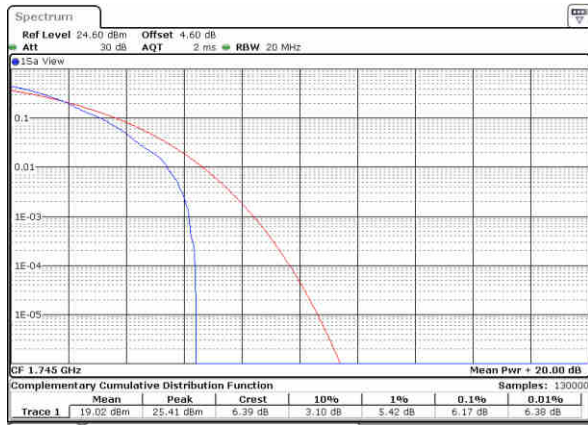
Lowest Channel / 1RB



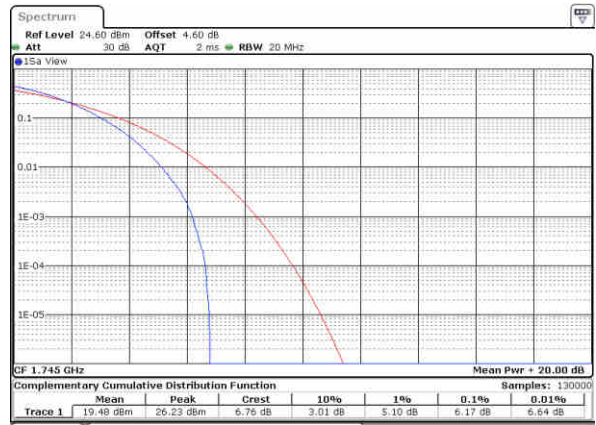
Lowest Channel / Full RB



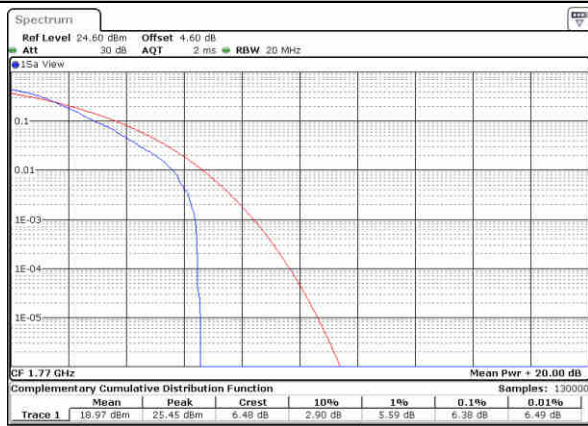
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



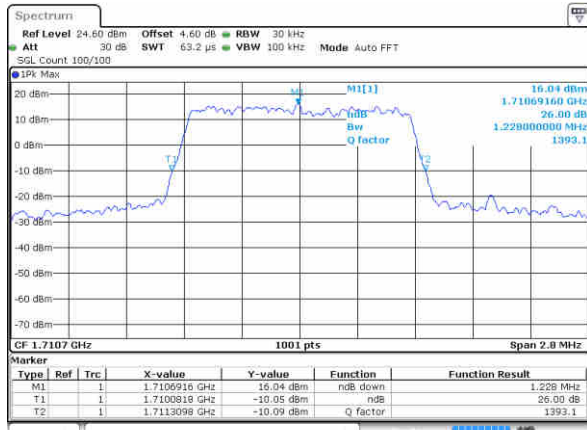
**26dB Bandwidth**

Mode	LTE Band 66 : 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	1.228	1.2364	2.985	3.009	4.895	4.925	9.79	9.71	14.595	14.356	20.26	20.22
Middle CH	1.2308	1.2392	2.979	3.0509	4.965	4.895	9.75	9.71	14.386	14.505	20.18	20.06
Highest CH	1.2336	1.2308	3.045	3.045	4.915	4.935	9.67	9.87	14.236	14.326	20.22	20.18
Mode	LTE Band 66 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.2224		3.003		4.885		9.93		14.236		20.18	
Middle CH	1.2252		3.0569		4.905		9.83		14.416		20.14	
Highest CH	1.2196		3.033		4.865		9.75		14.266		20.1	



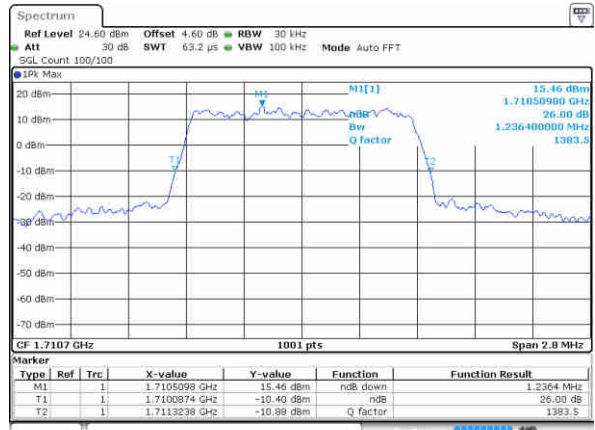
LTE Band 66

Lowest Channel / 1.4MHz / QPSK



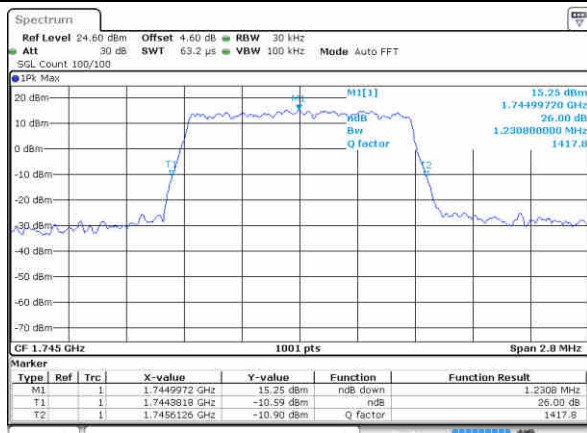
Date: 8 JAN 2020 20:40:05

Lowest Channel / 1.4MHz / 16QAM



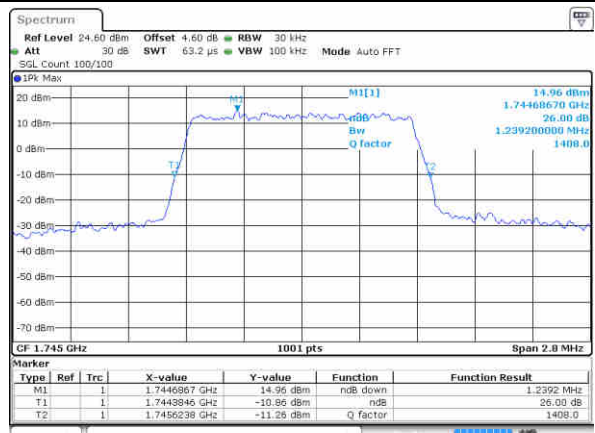
Date: 8 JAN 2020 20:40:23

Middle Channel / 1.4MHz / QPSK



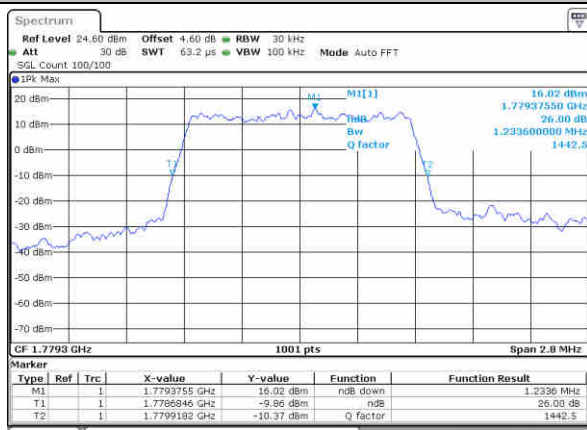
Date: 8 JAN 2020 20:33:25

Middle Channel / 1.4MHz / 16QAM



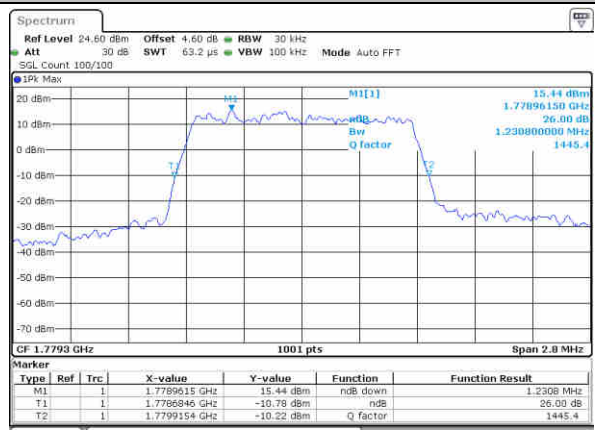
Date: 8 JAN 2020 20:33:47

Highest Channel / 1.4MHz / QPSK



Date: 8 JAN 2020 20:35:19

Highest Channel / 1.4MHz / 16QAM

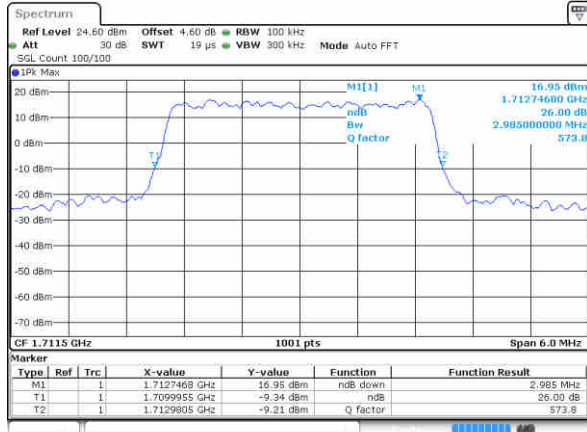


Date: 8 JAN 2020 20:35:02

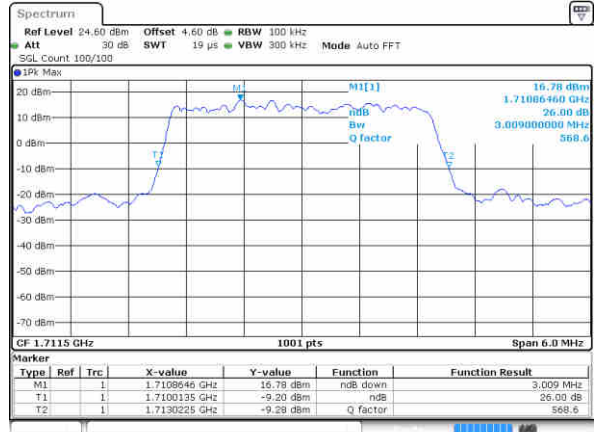


LTE Band 66

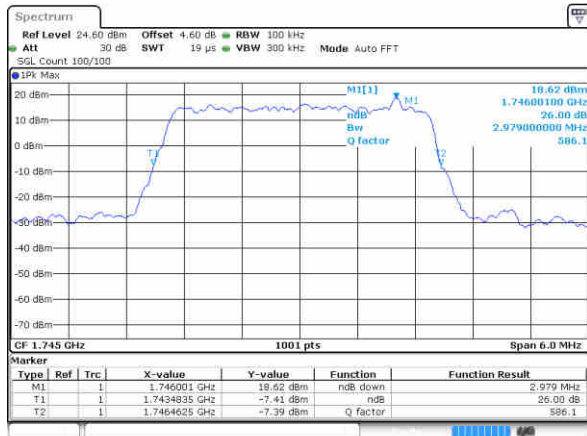
Lowest Channel / 3MHz / QPSK



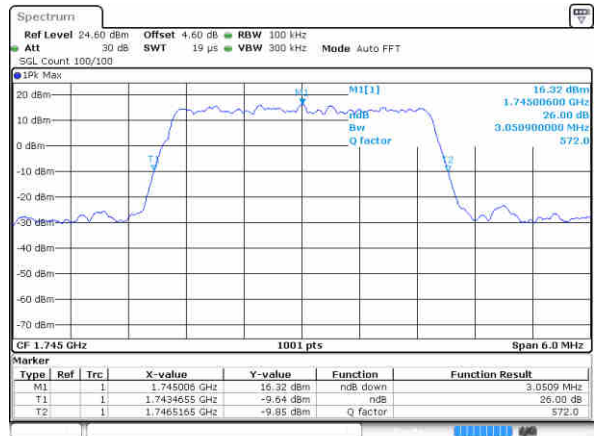
Lowest Channel / 3MHz / 16QAM



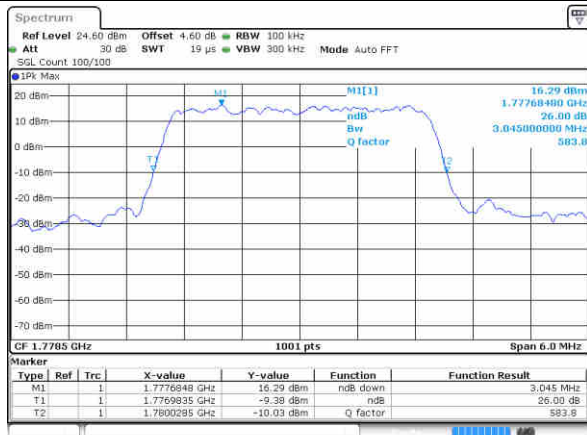
Middle Channel / 3MHz / QPSK



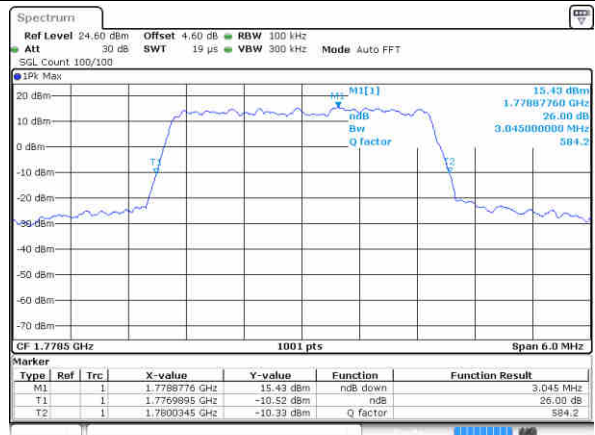
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



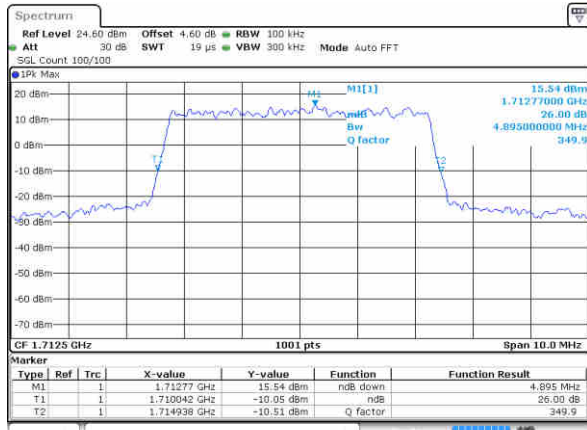
Highest Channel / 3MHz / 16QAM



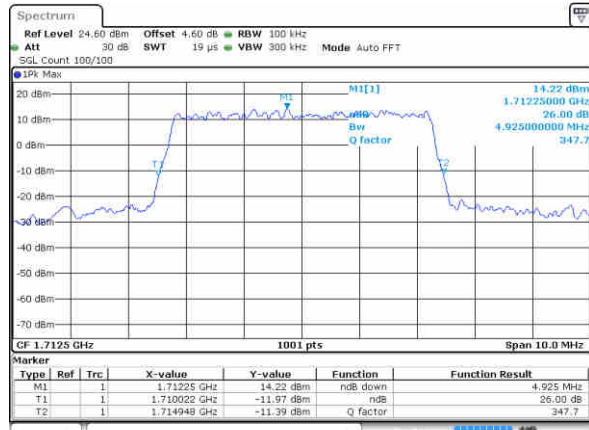


LTE Band 66

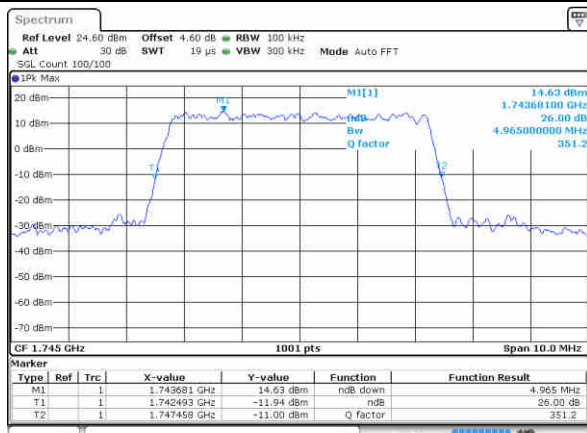
Lowest Channel / 5MHz / QPSK



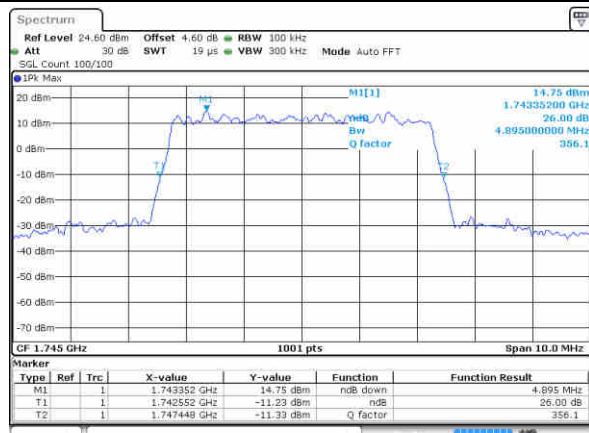
Lowest Channel / 5MHz / 16QAM



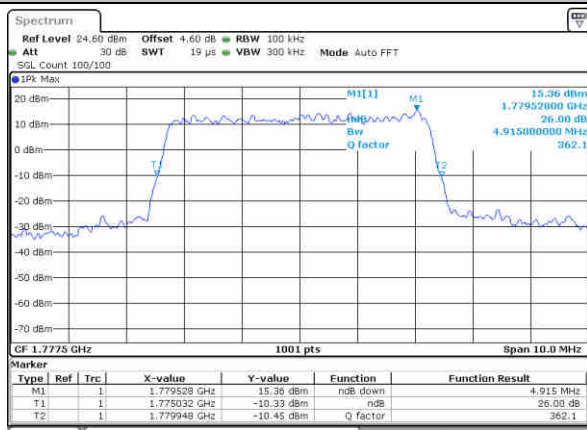
Middle Channel / 5MHz / QPSK



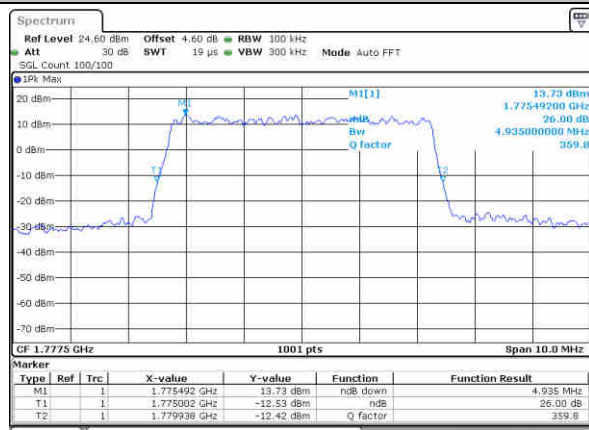
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



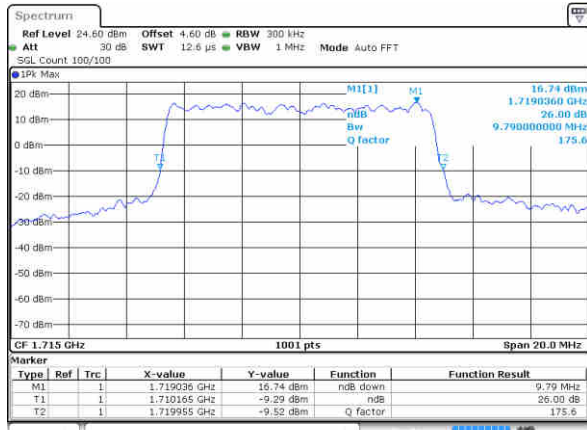
Highest Channel / 5MHz / 16QAM



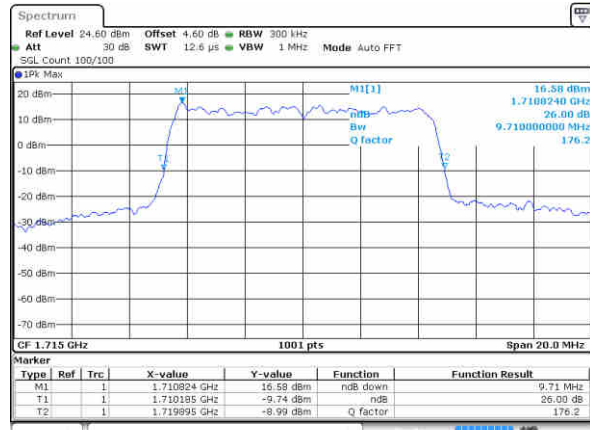


LTE Band 66

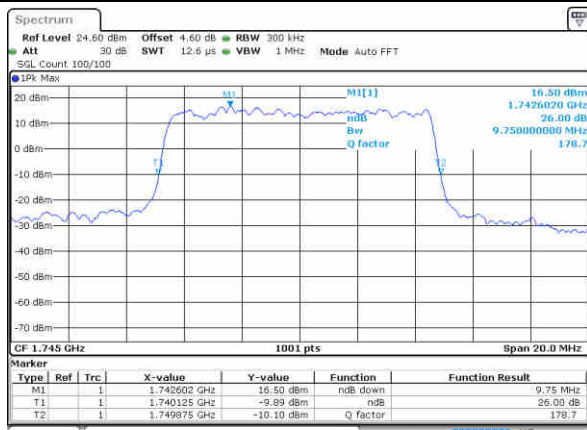
Lowest Channel / 10MHz / QPSK



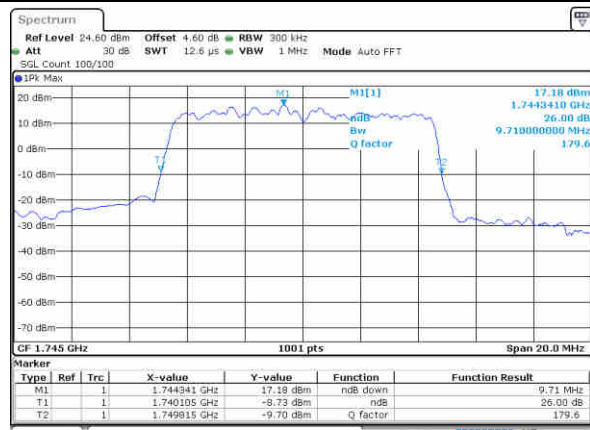
Lowest Channel / 10MHz / 16QAM



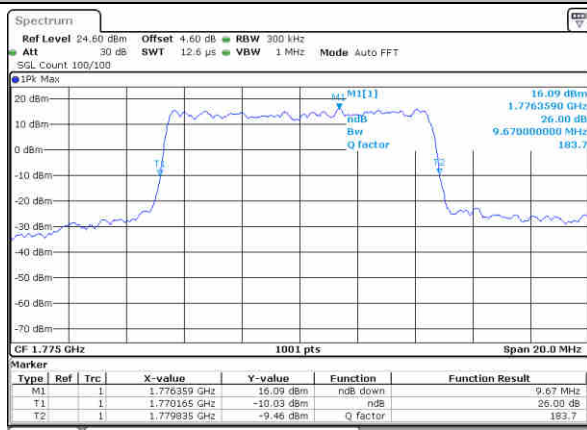
Middle Channel / 10MHz / QPSK



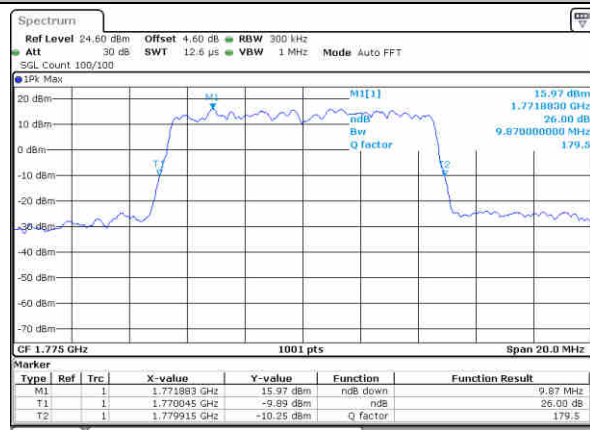
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



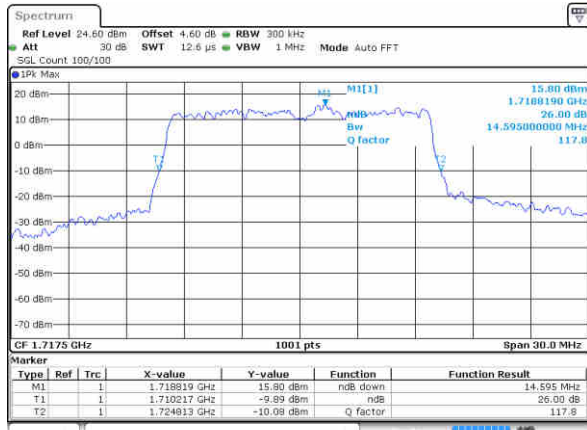
Highest Channel / 10MHz / 16QAM



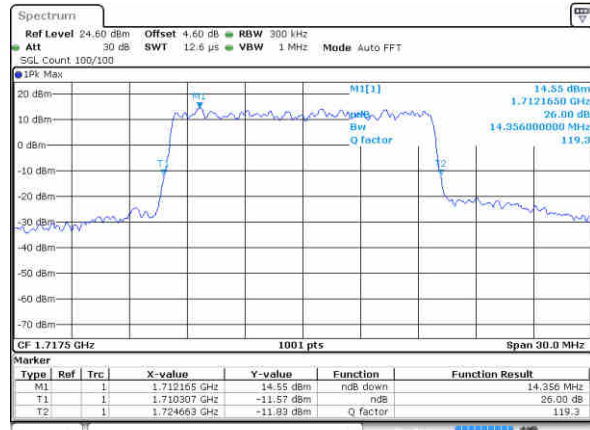


LTE Band 66

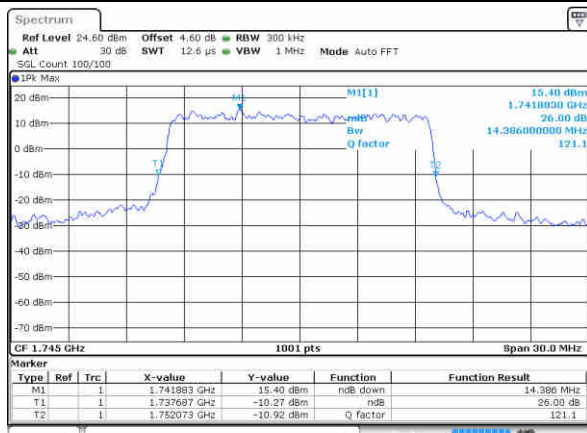
Lowest Channel / 15MHz / QPSK



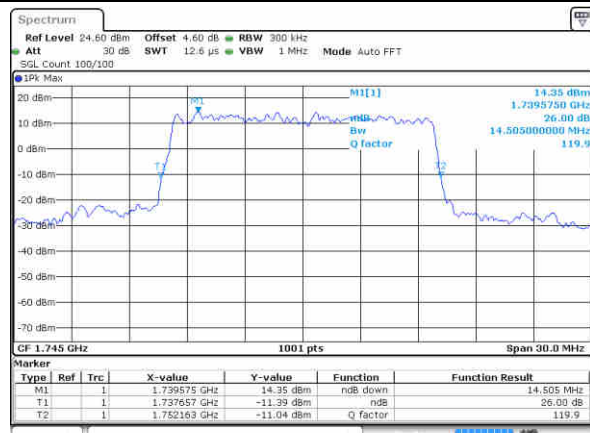
Lowest Channel / 15MHz / 16QAM



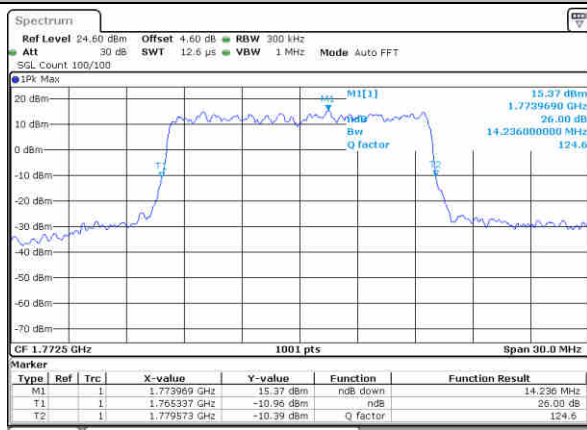
Middle Channel / 15MHz / QPSK



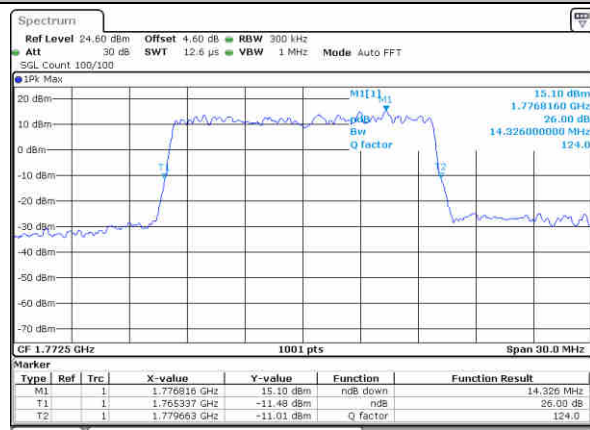
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



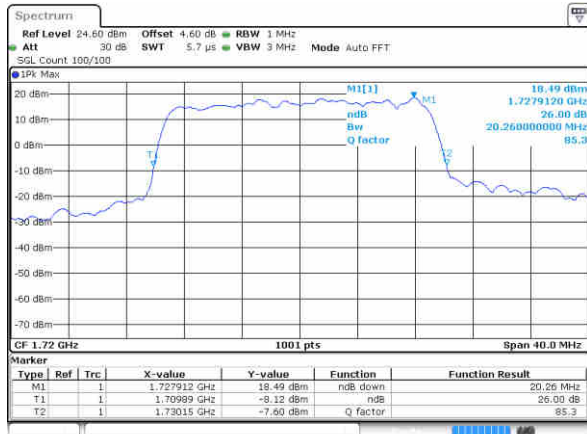
Highest Channel / 15MHz / 16QAM



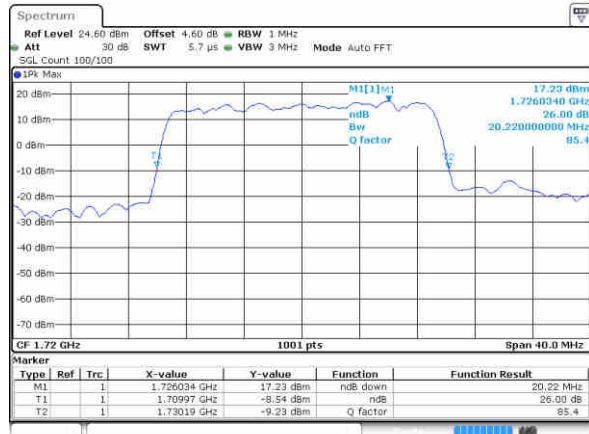


LTE Band 66

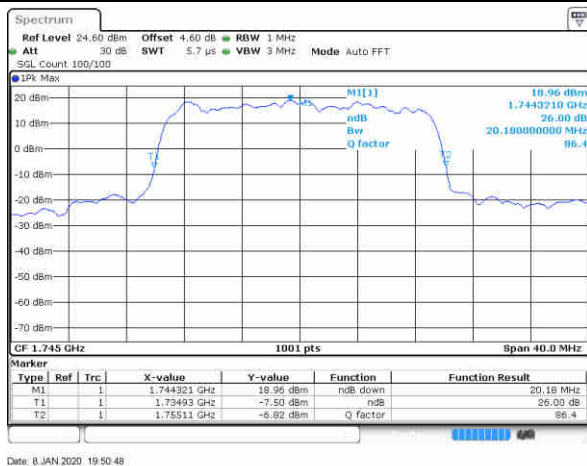
Lowest Channel / 20MHz / QPSK



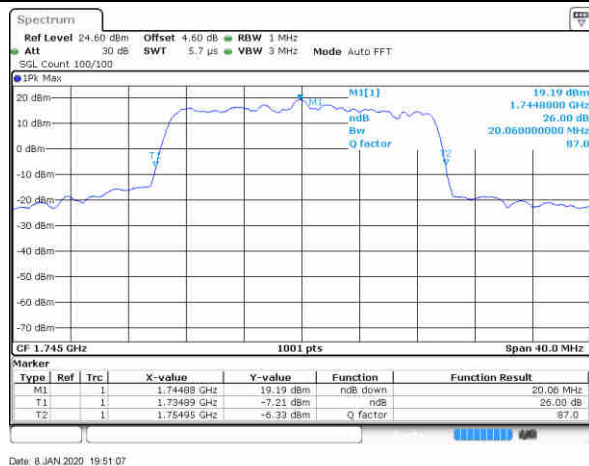
Lowest Channel / 20MHz / 16QAM



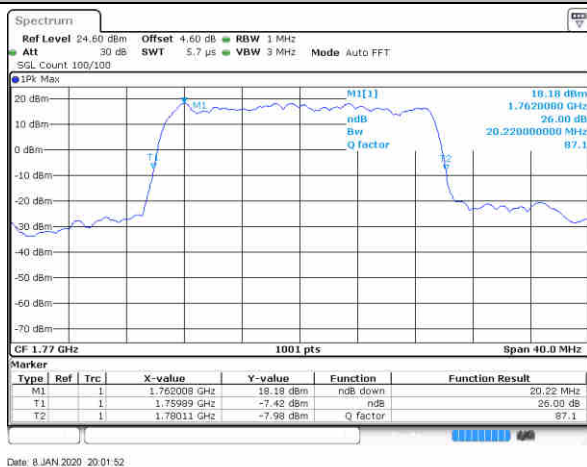
Middle Channel / 20MHz / QPSK



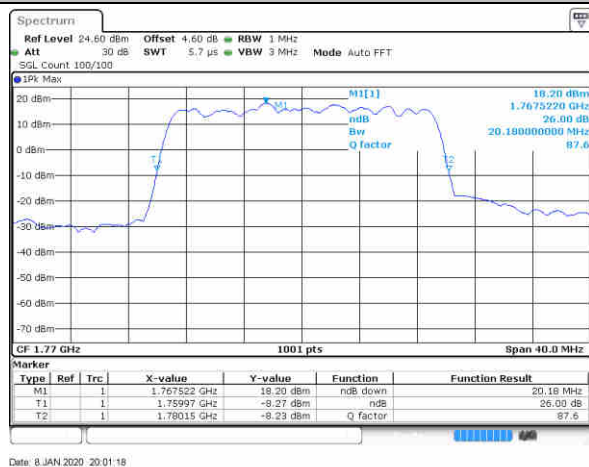
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



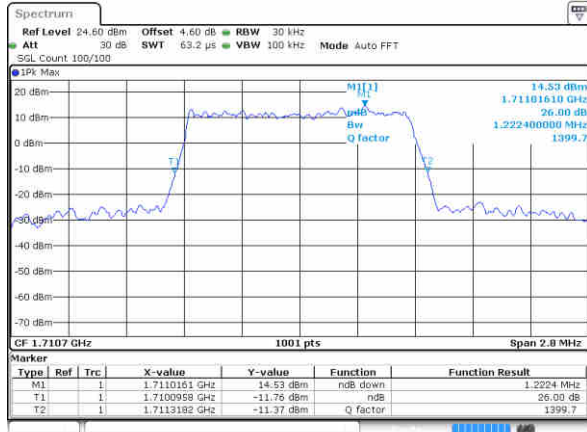
Highest Channel / 20MHz / 16QAM





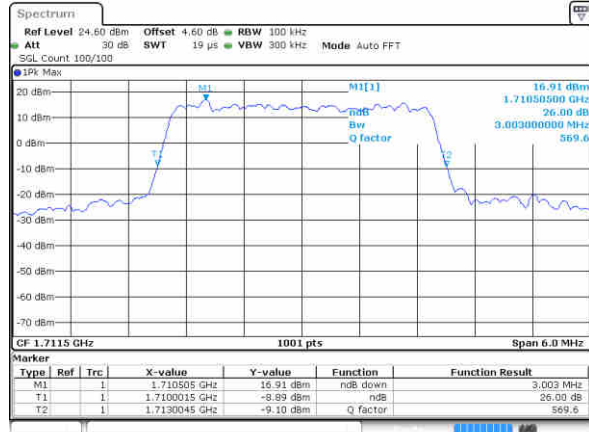
LTE Band 66

Lowest Channel / 1.4MHz / 64QAM



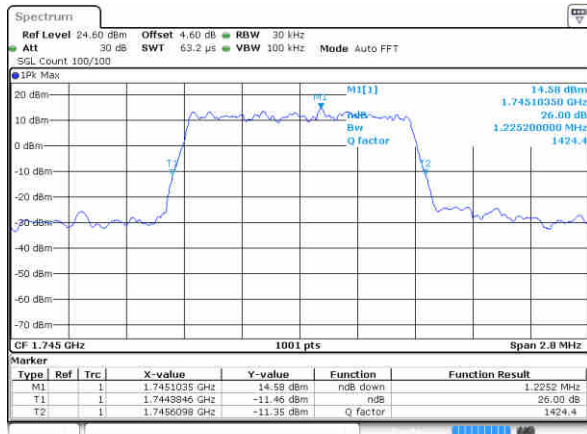
Date: 8 JAN 2020 20:40:46

Lowest Channel / 3MHz / 64QAM



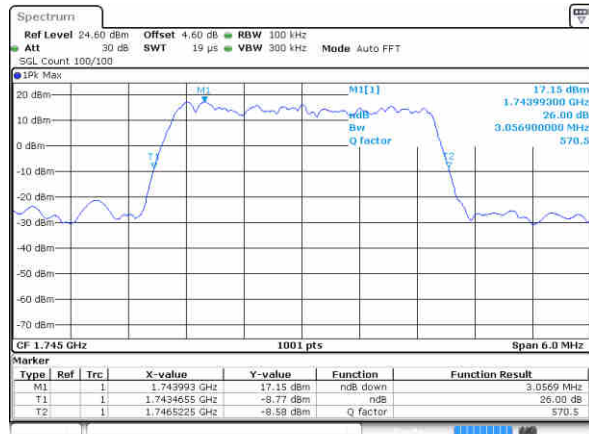
Date: 9 JAN 2020 09:30:29

Middle Channel / 20MHz / 64QAM



Date: 8 JAN 2020 20:34:07

Middle Channel / 3MHz / 64QAM



Date: 9 JAN 2020 09:30:34

Highest Channel / 20MHz / 64QAM



Date: 8 JAN 2020 20:34:38

Highest Channel / 3MHz / 64QAM

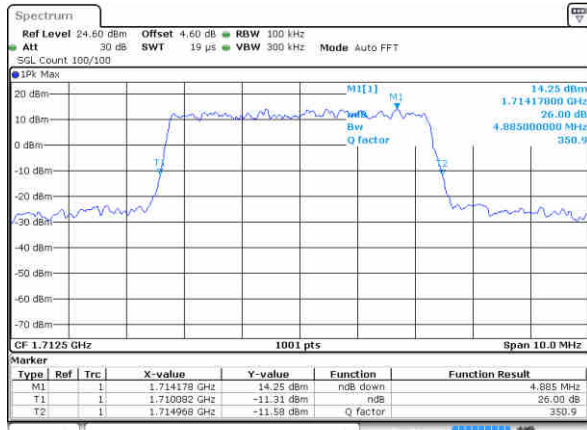


Date: 9 JAN 2020 09:31:32



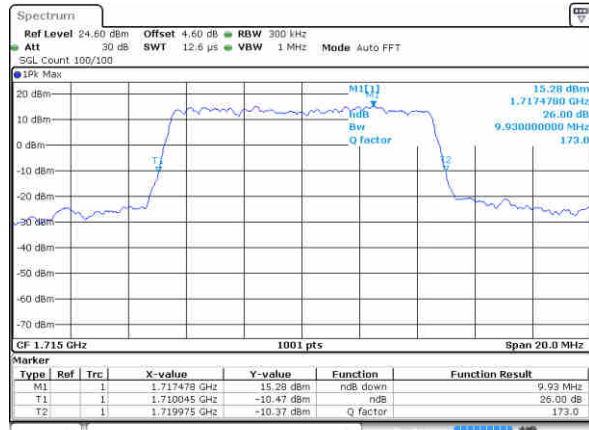
LTE Band 66

Lowest Channel / 5MHz / 64QAM



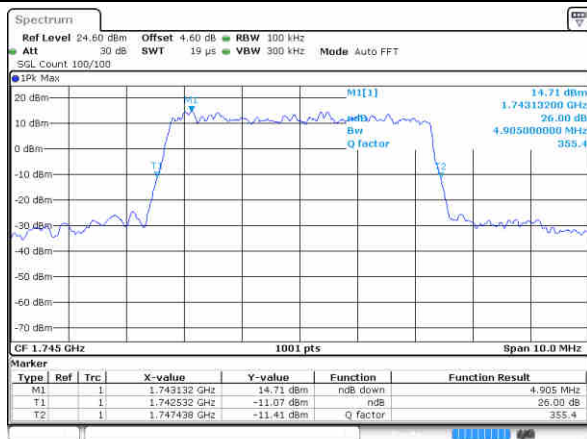
Date: 9 JAN 2020 09:50:29

Lowest Channel / 10MHz / 64QAM



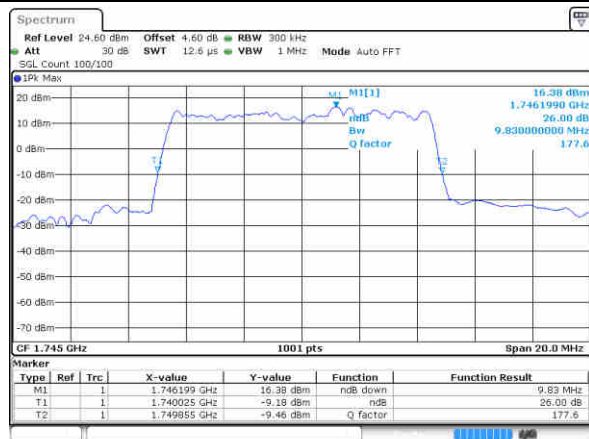
Date: 9 JAN 2020 10:15:14

Middle Channel / 5MHz / 64QAM



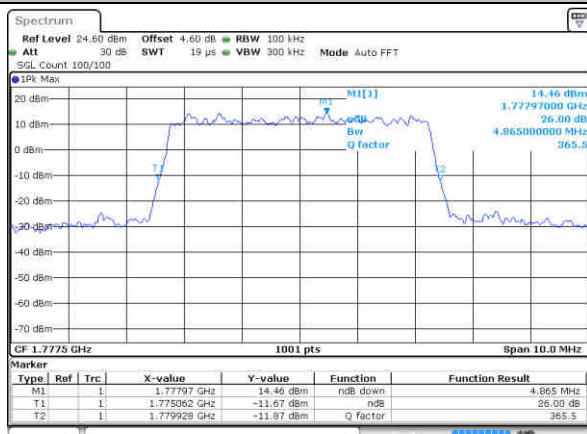
Date: 9 JAN 2020 09:43:28

Middle Channel / 10MHz / 64QAM



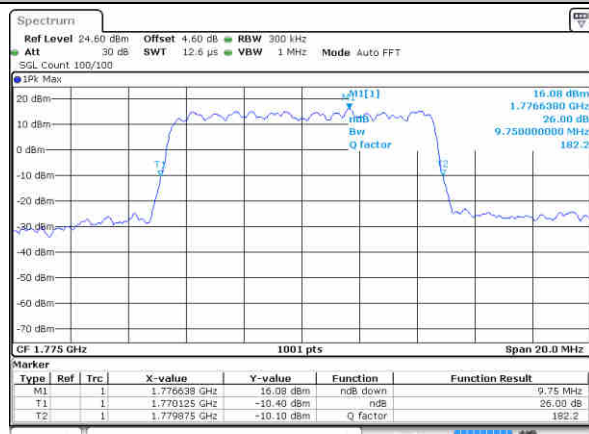
Date: 9 JAN 2020 09:56:18

Highest Channel / 5MHz / 64QAM



Date: 9 JAN 2020 09:54:10

Highest Channel / 10MHz / 64QAM

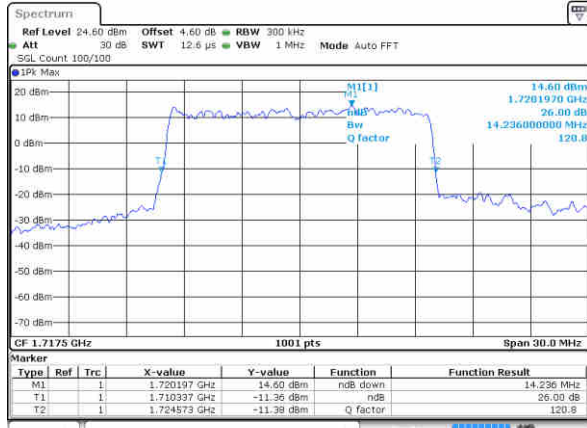


Date: 9 JAN 2020 10:15:54

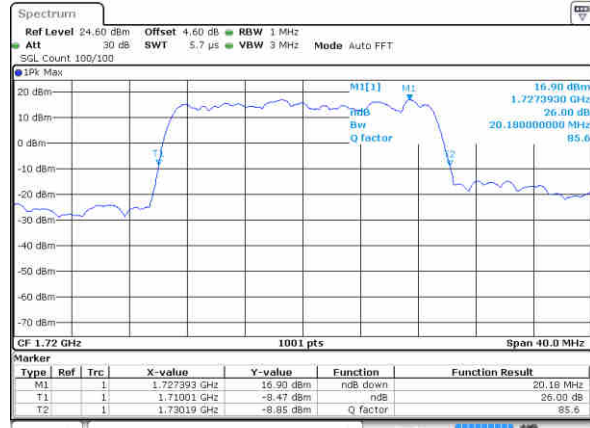


LTE Band 66

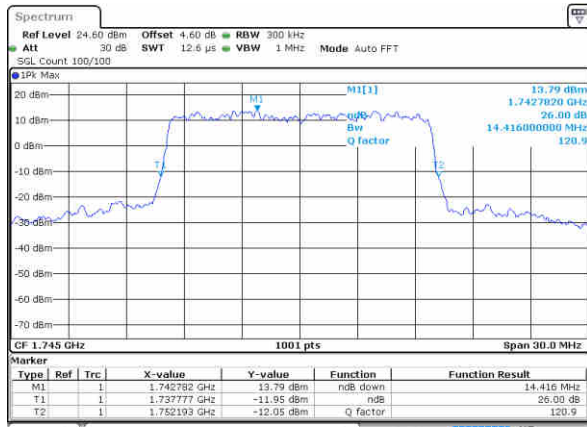
Lowest Channel / 15MHz / 64QAM



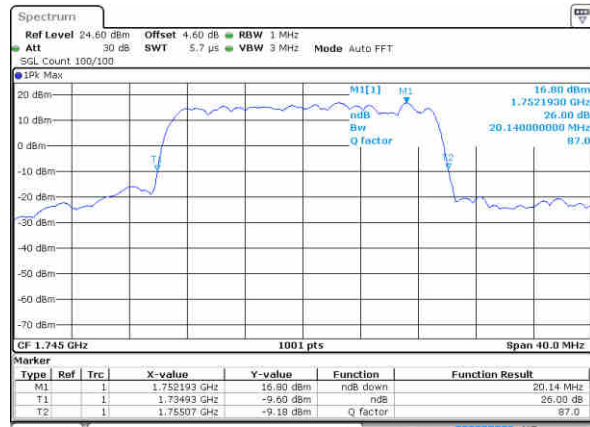
Lowest Channel / 20MHz / 64QAM



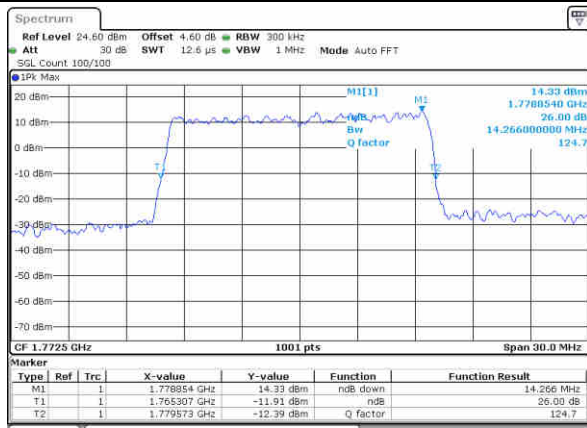
Middle Channel / 15MHz / 64QAM



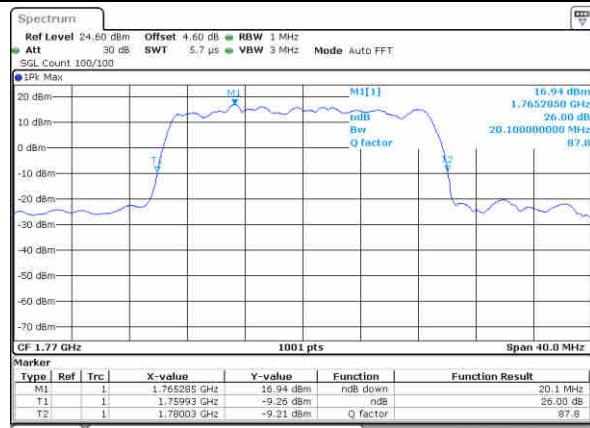
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM



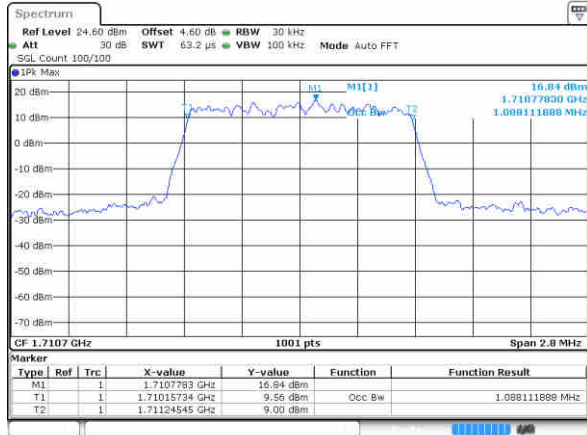
**Occupied Bandwidth**

Mode	LTE Band 66 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.73	2.72	4.50	4.50	9.03	8.95	13.43	13.37	18.22	18.42
Middle CH	1.08	1.10	2.73	2.70	4.51	4.48	9.01	8.97	13.46	13.43	18.38	18.26
Highest CH	1.09	1.10	2.71	2.73	4.48	4.48	9.01	9.03	13.46	13.49	18.38	18.54
Mode	LTE Band 66: 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09		2.73		4.50		8.99		13.52		18.46	
Middle CH	1.08		2.72		4.50		9.03		13.43		18.46	
Highest CH	1.09		2.73		4.47		9.01		13.49		18.30	

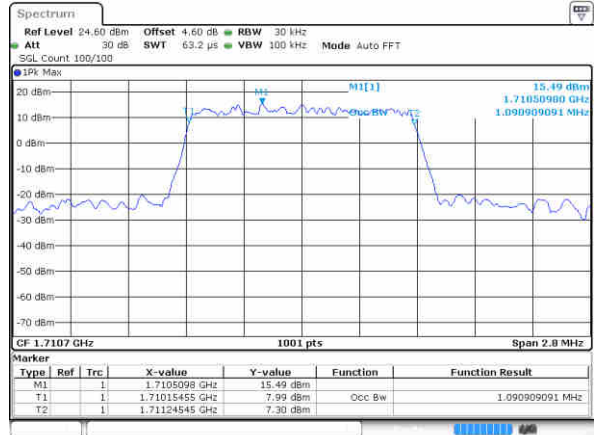


LTE Band 66

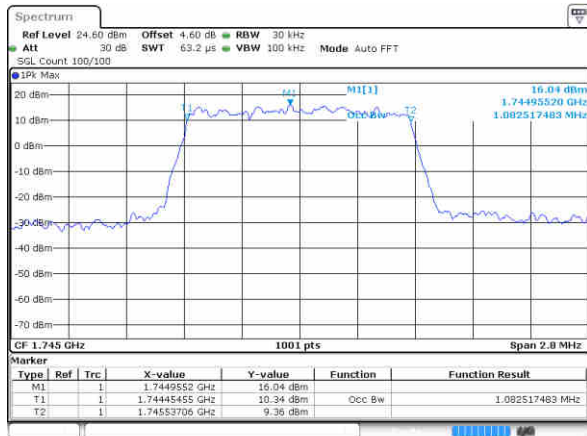
Lowest Channel / 1.4MHz / QPSK



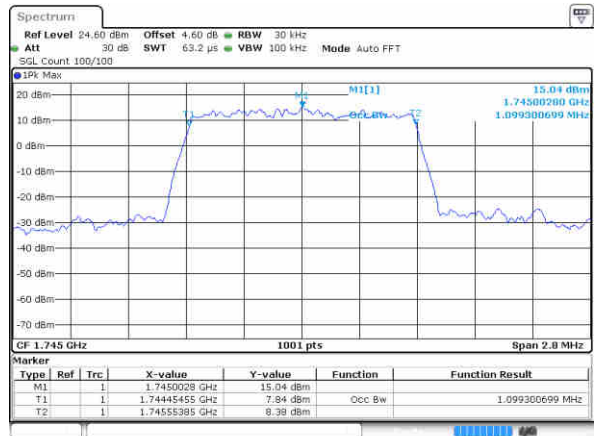
Lowest Channel / 1.4MHz / 16QAM



Middle Channel / 1.4MHz / QPSK



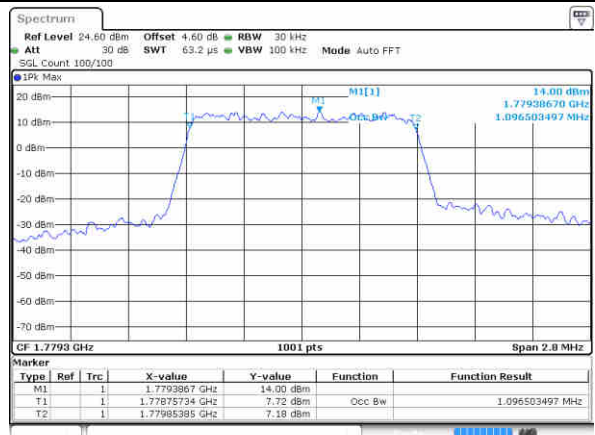
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



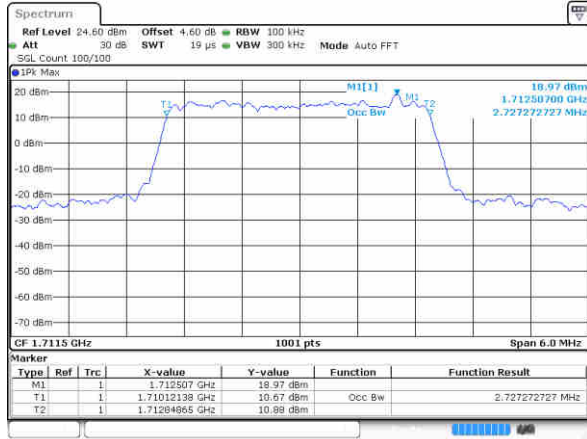
Highest Channel / 1.4MHz / 16QAM



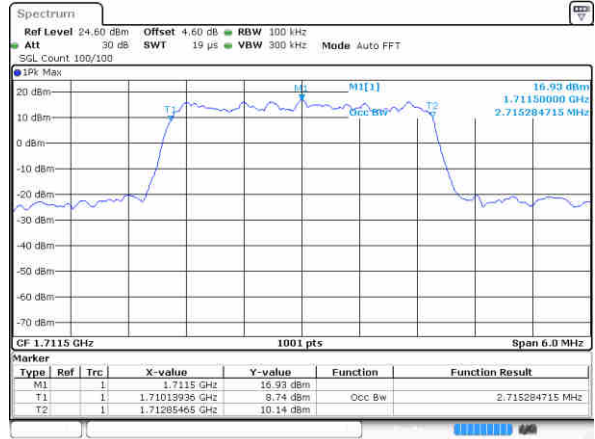


LTE Band 66

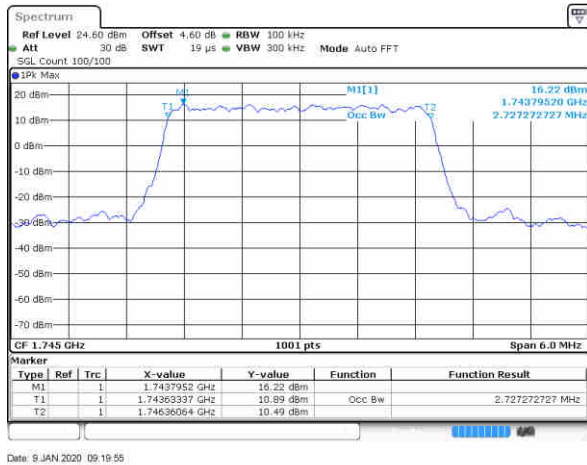
Lowest Channel / 3MHz / QPSK



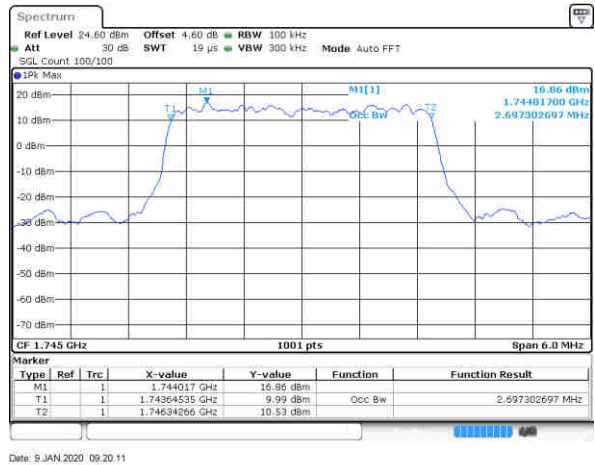
Lowest Channel / 3MHz / 16QAM



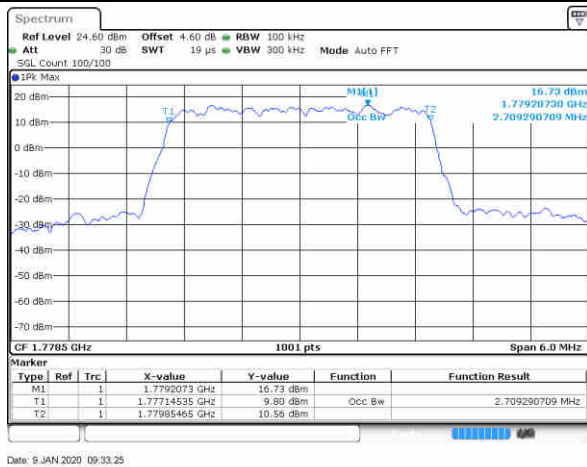
Middle Channel / 3MHz / QPSK



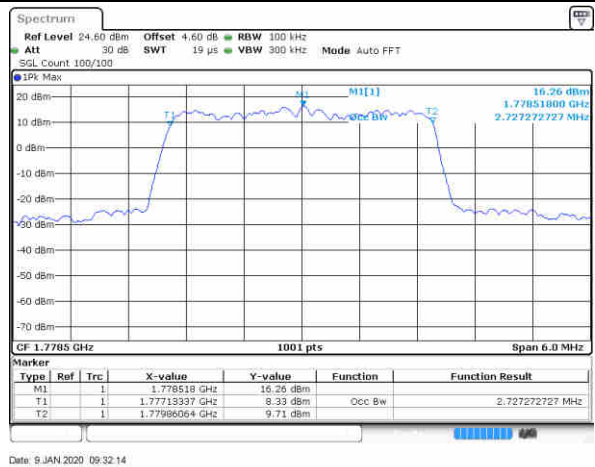
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



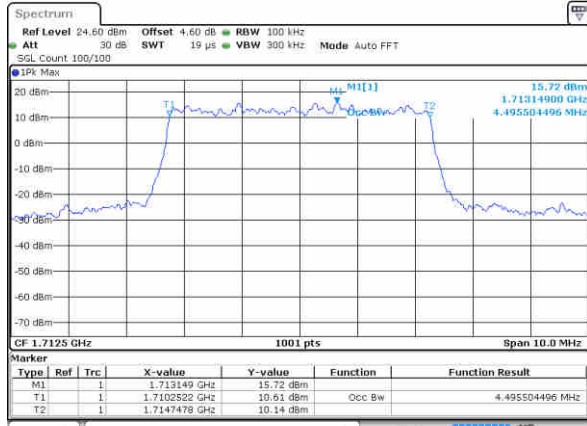
Highest Channel / 3MHz / 16QAM





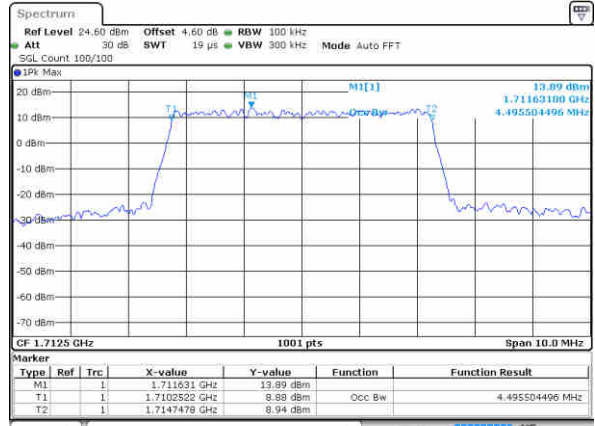
LTE Band 66

Lowest Channel / 5MHz / QPSK



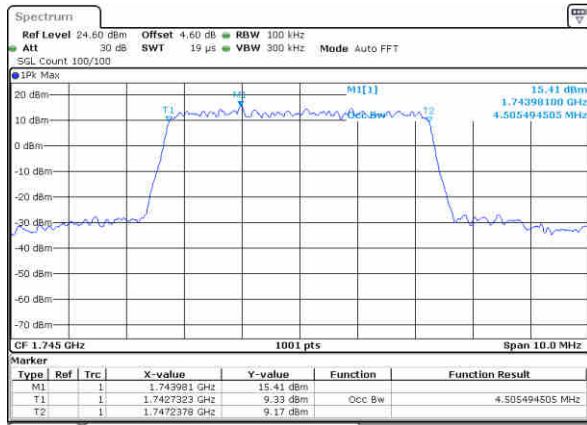
Date: 9 JAN 2020 09:51:29

Lowest Channel / 5MHz / 16QAM



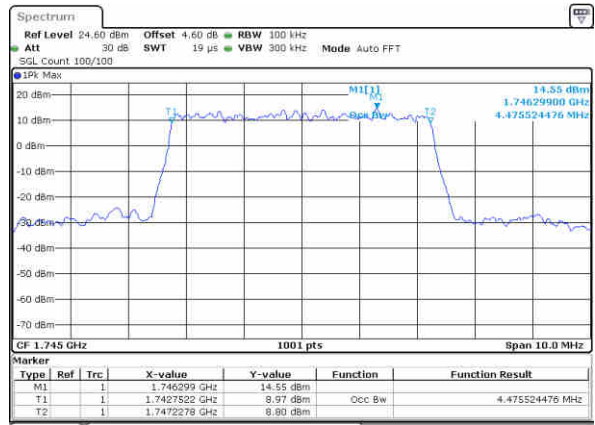
Date: 9 JAN 2020 09:51:19

Middle Channel / 5MHz / QPSK



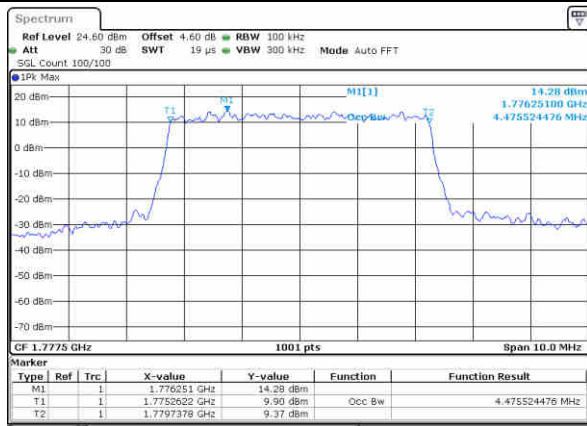
Date: 9 JAN 2020 09:42:03

Middle Channel / 5MHz / 16QAM



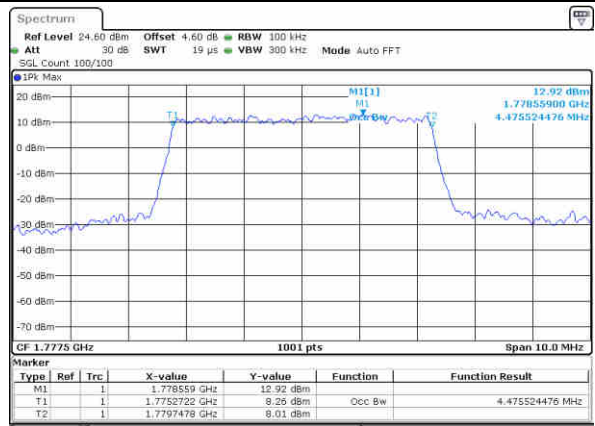
Date: 9 JAN 2020 09:43:06

Highest Channel / 5MHz / QPSK



Date: 9 JAN 2020 09:52:11

Highest Channel / 5MHz / 16QAM



Date: 9 JAN 2020 09:53:11