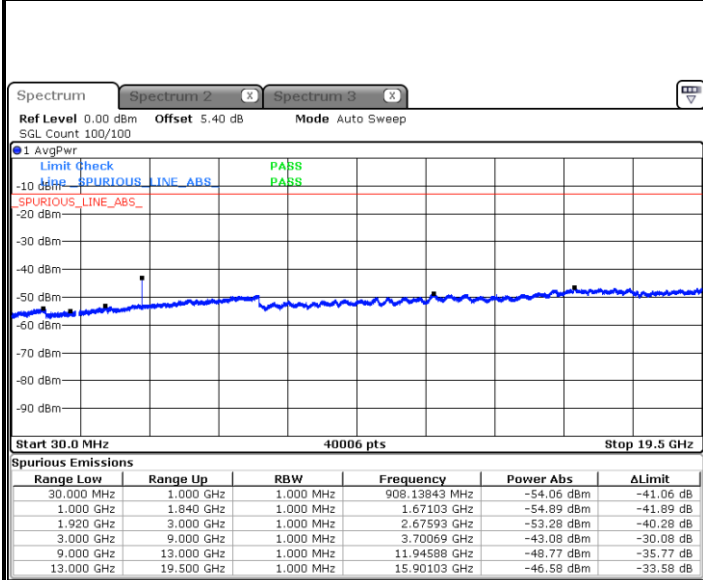




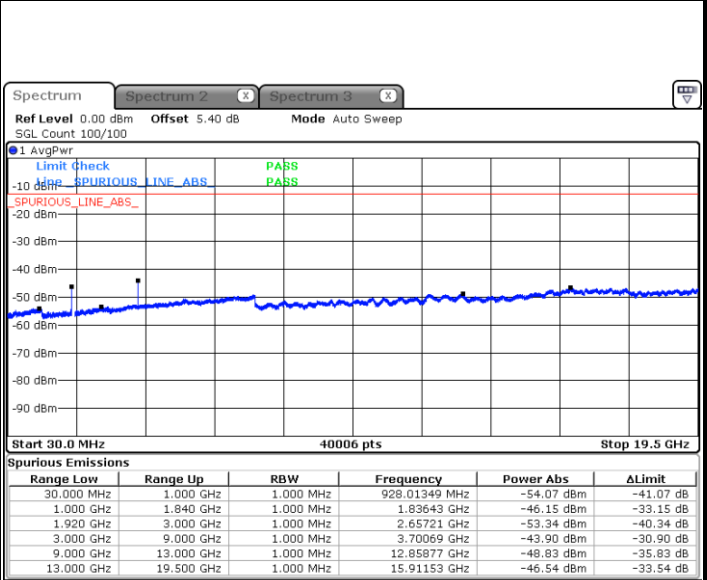
LTE Band 2 / 5MHz

Lowest Channel / QPSK



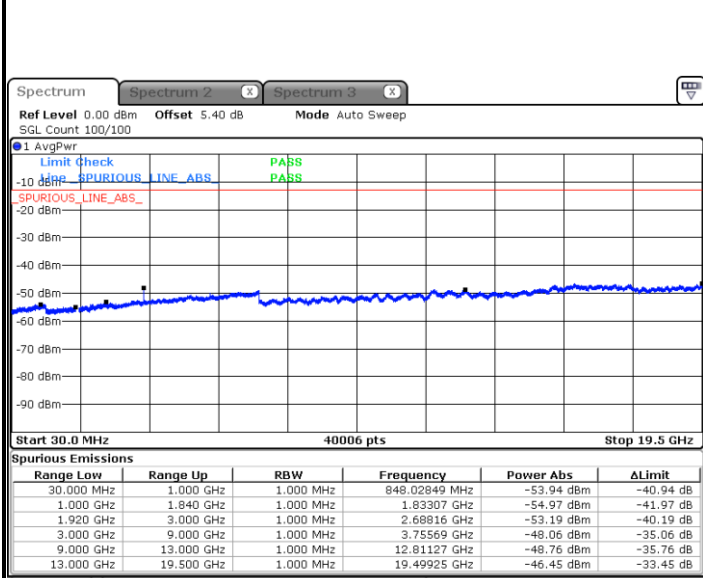
Date: 27.NOV.2019 19:43:09

Lowest Channel / 16QAM



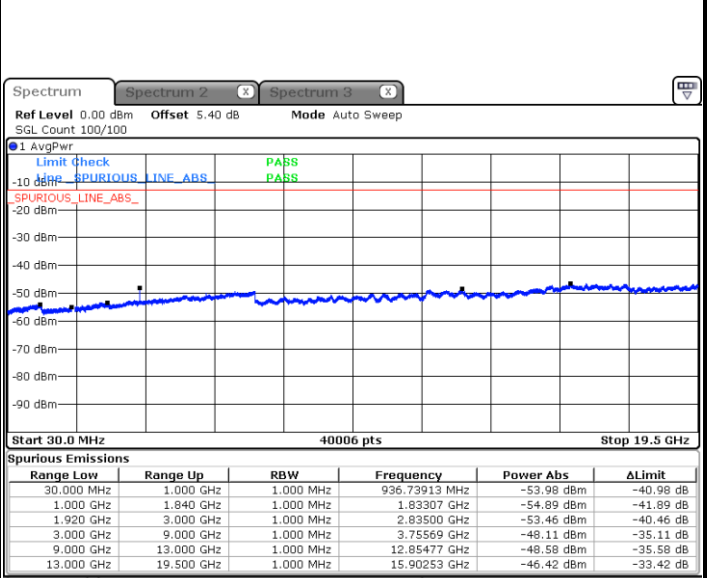
Date: 27.NOV.2019 19:44:04

Middle Channel / QPSK



Date: 27.NOV.2019 19:45:39

Middle Channel / 16QAM

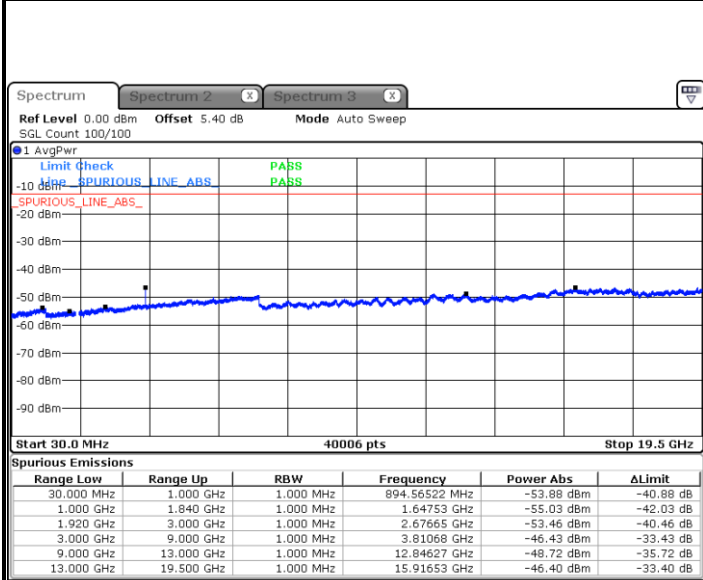


Date: 27.NOV.2019 19:46:34



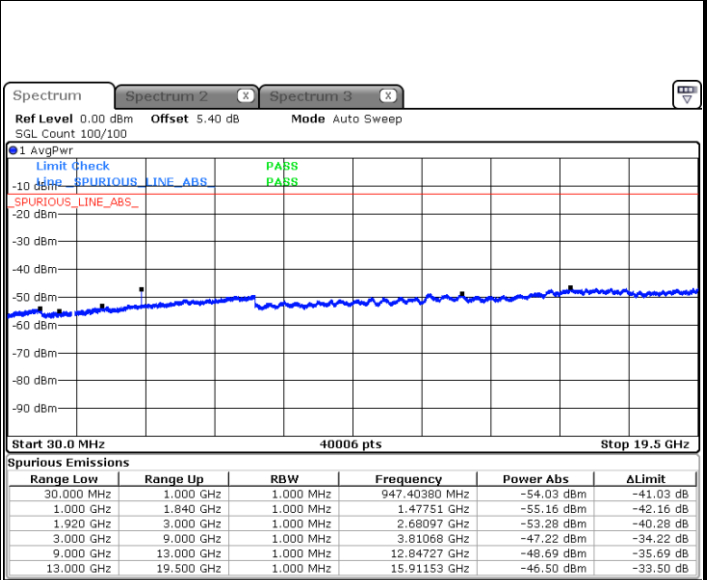
LTE Band 2 / 5MHz

Highest Channel / QPSK



Date: 27.NOV.2019 19:52:39

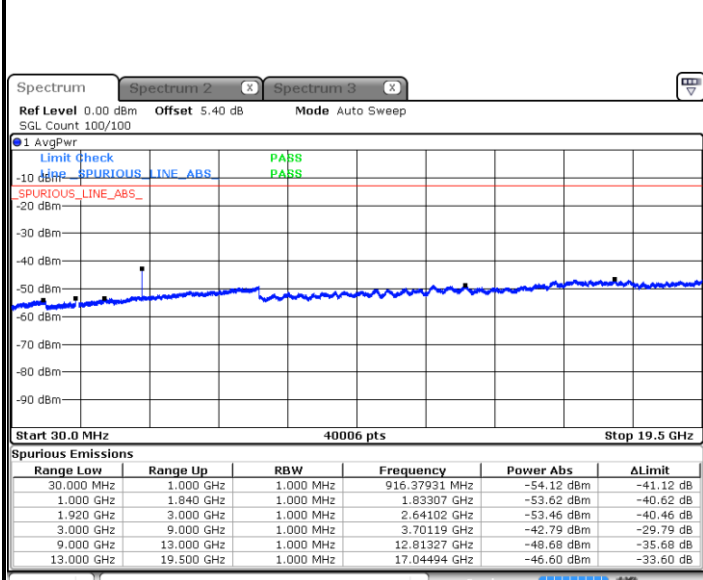
Highest Channel / 16QAM



Date: 27.NOV.2019 19:53:34

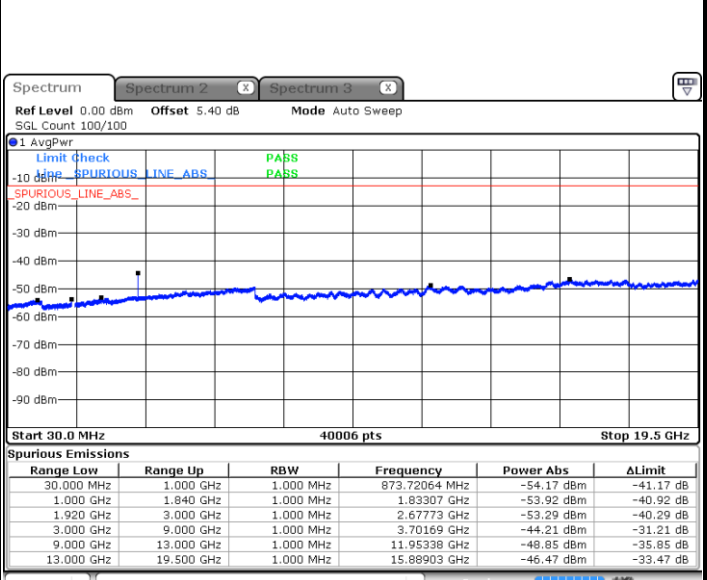
LTE Band 2 / 10MHz

Lowest Channel / QPSK



Date: 27.NOV.2019 19:59:39

Lowest Channel / 16QAM

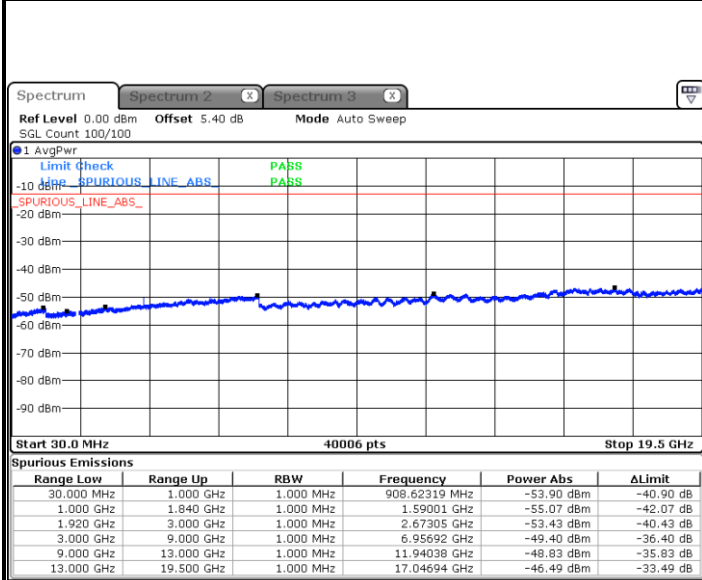


Date: 27.NOV.2019 20:00:34



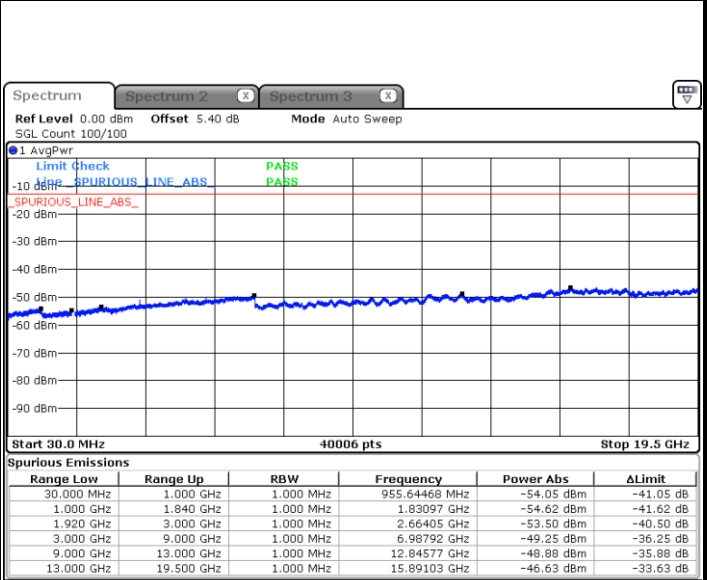
LTE Band 2 / 10MHz

Middle Channel / QPSK



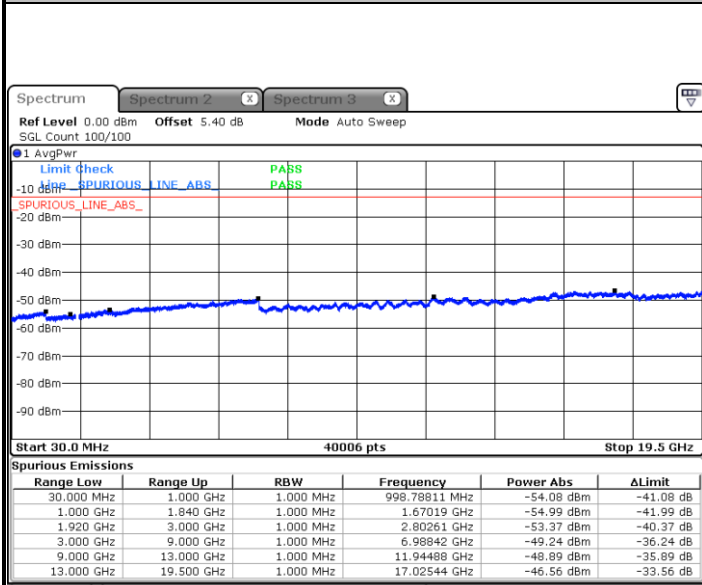
Date: 27.NOV.2019 20:02:10

Middle Channel / 16QAM



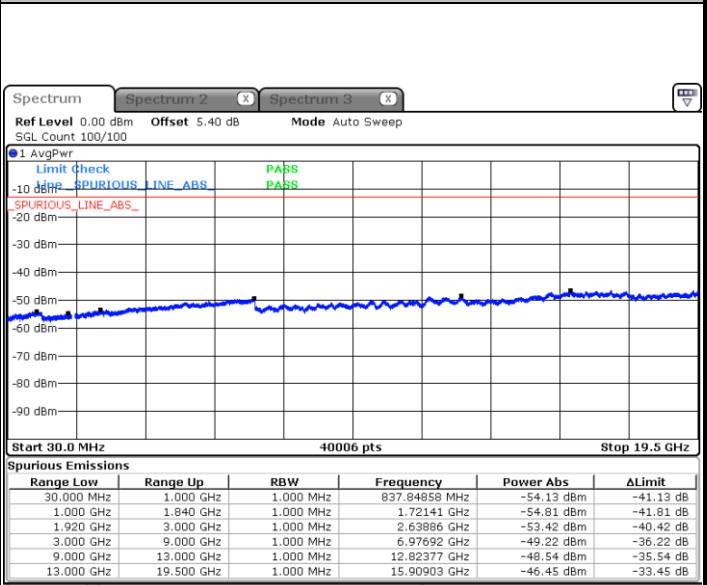
Date: 27.NOV.2019 20:03:04

Highest Channel / QPSK



Date: 27.NOV.2019 20:09:10

Highest Channel / 16QAM

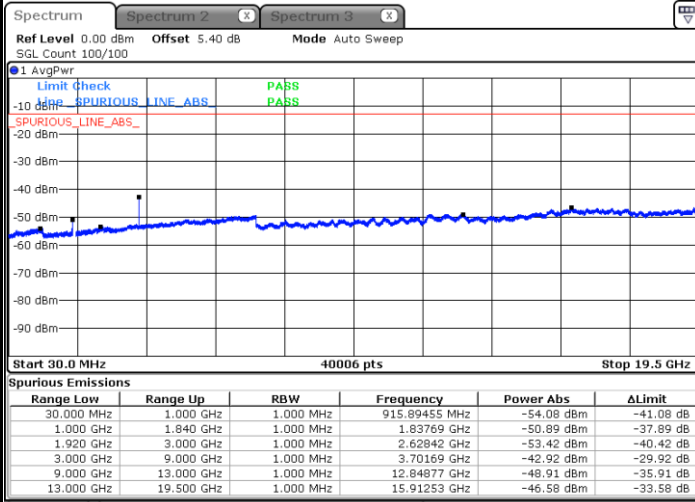


Date: 27.NOV.2019 20:10:04



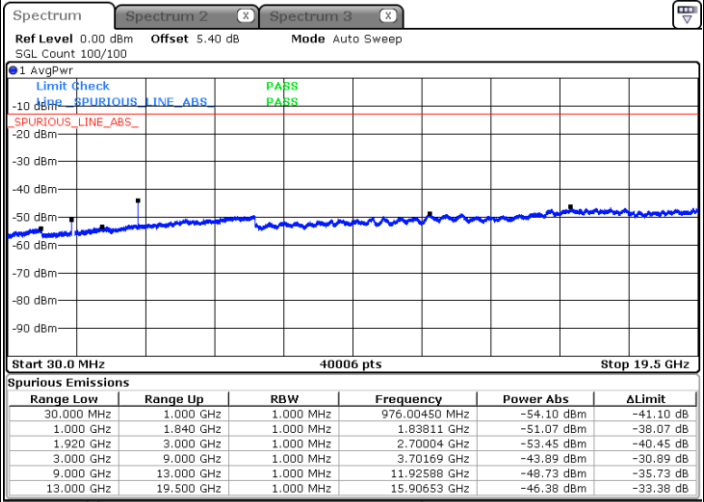
LTE Band 2 / 15MHz

Lowest Channel / QPSK



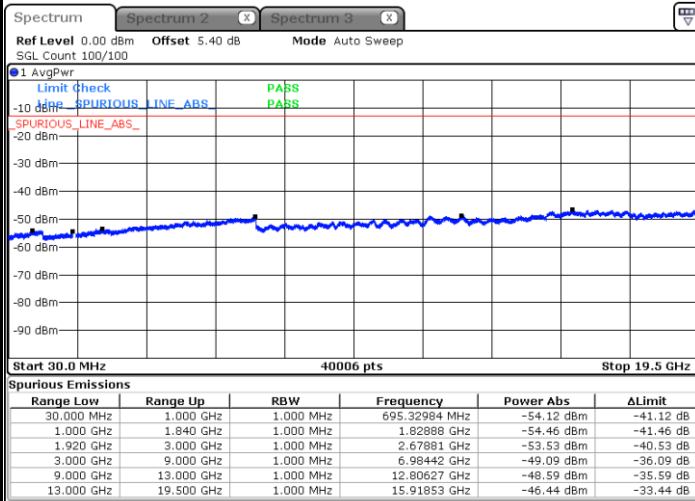
Date: 27.NOV.2019 20:16:09

Lowest Channel / 16QAM



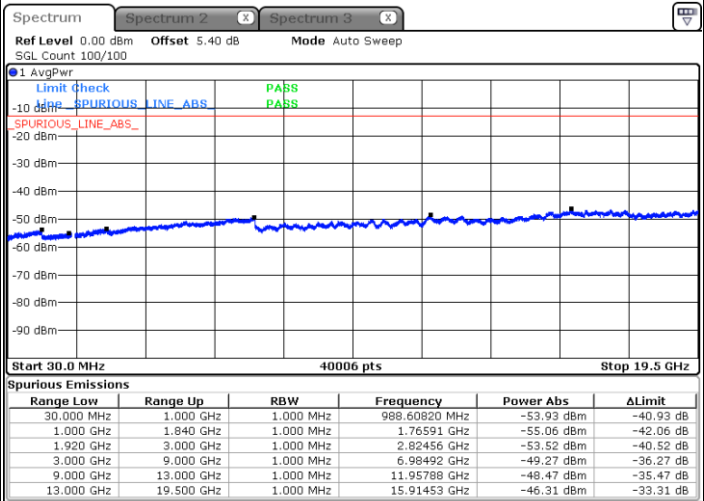
Date: 27.NOV.2019 20:17:04

Middle Channel / QPSK



Date: 27.NOV.2019 20:18:39

Middle Channel / 16QAM

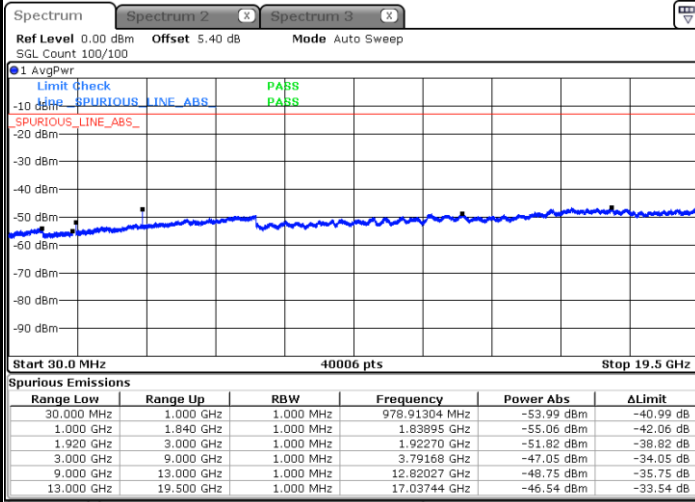


Date: 27.NOV.2019 20:19:34



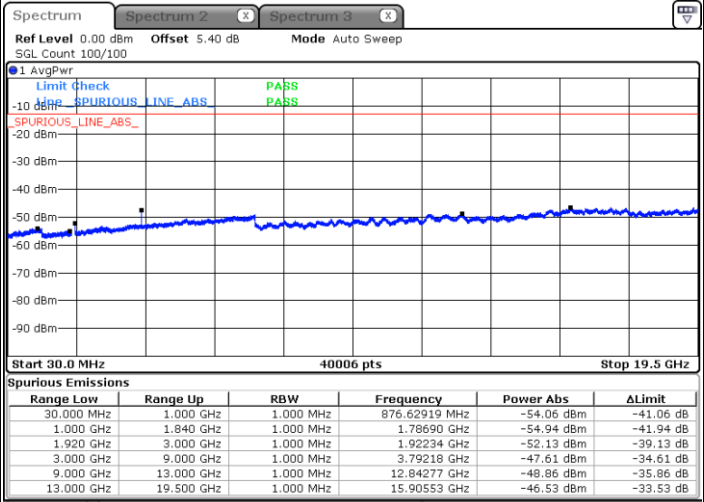
LTE Band 2 / 15MHz

Highest Channel / QPSK



Date: 27.NOV.2019 20:25:39

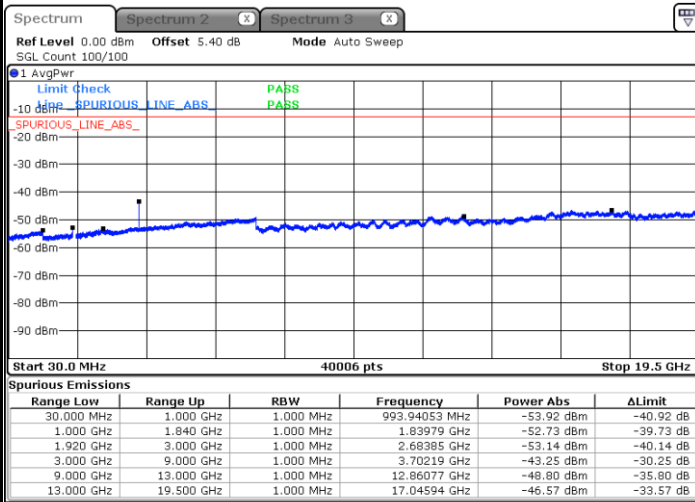
Highest Channel / 16QAM



Date: 27.NOV.2019 20:26:34

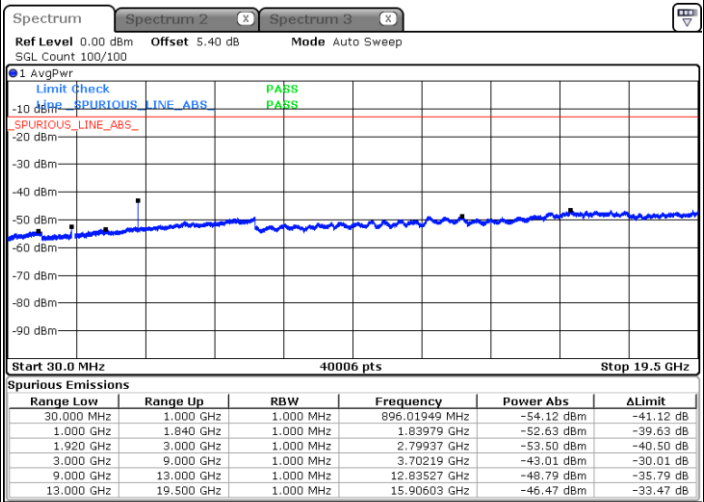
LTE Band 2 / 20MHz

Lowest Channel / QPSK



Date: 27.NOV.2019 20:32:39

Lowest Channel / 16QAM



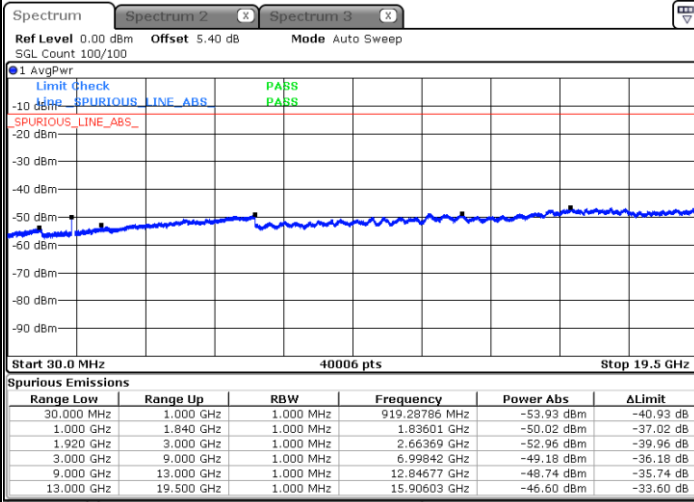
Date: 27.NOV.2019 20:33:34



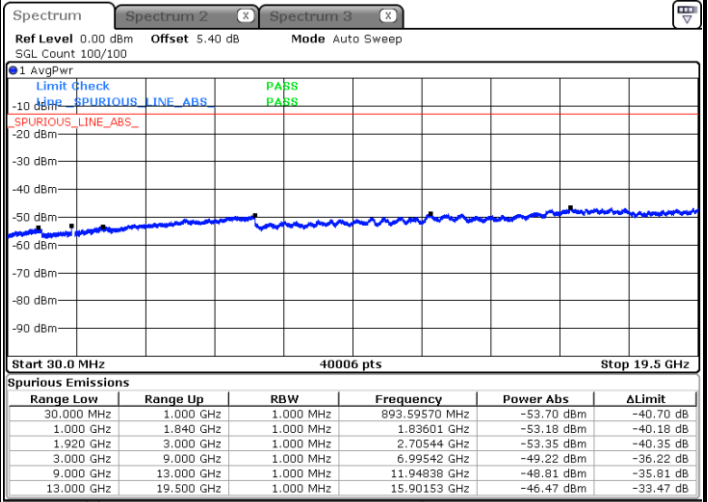
LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



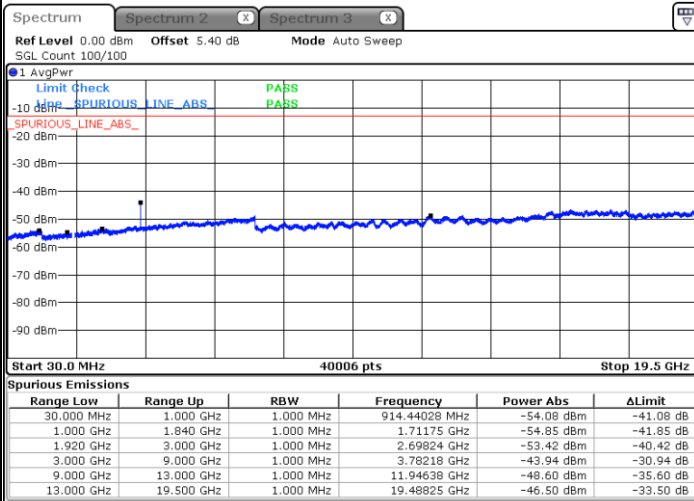
Date: 27.NOV.2019 20:35:09



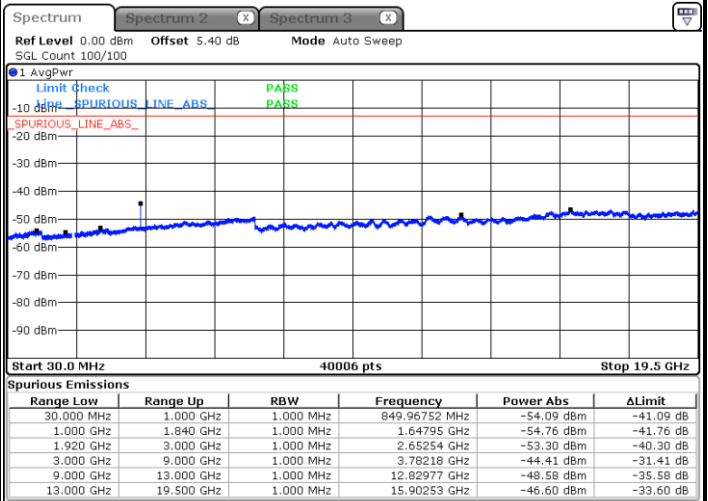
Date: 27.NOV.2019 20:36:04

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 27.NOV.2019 20:42:09

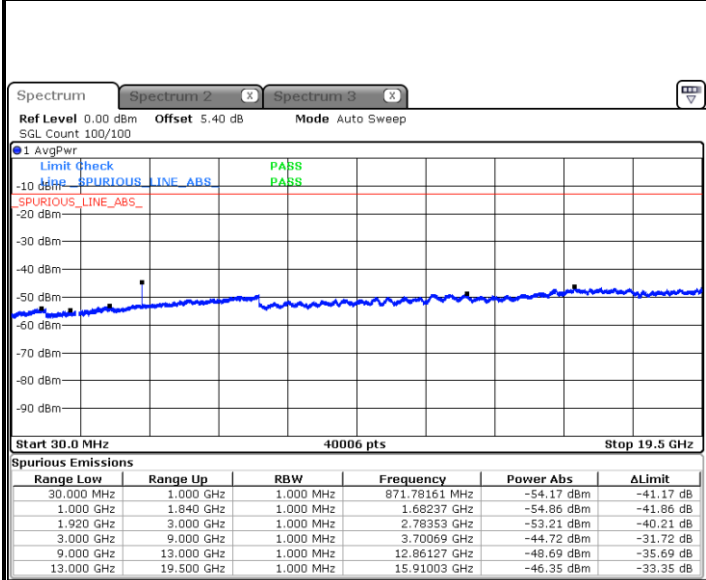


Date: 27.NOV.2019 20:43:04



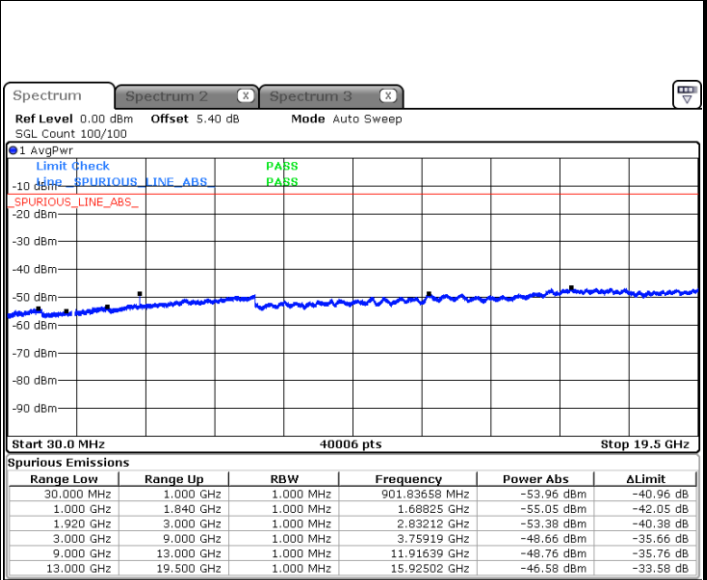
**LTE Band 2 / 1.4MHz**

**Lowest Channel / 64QAM**



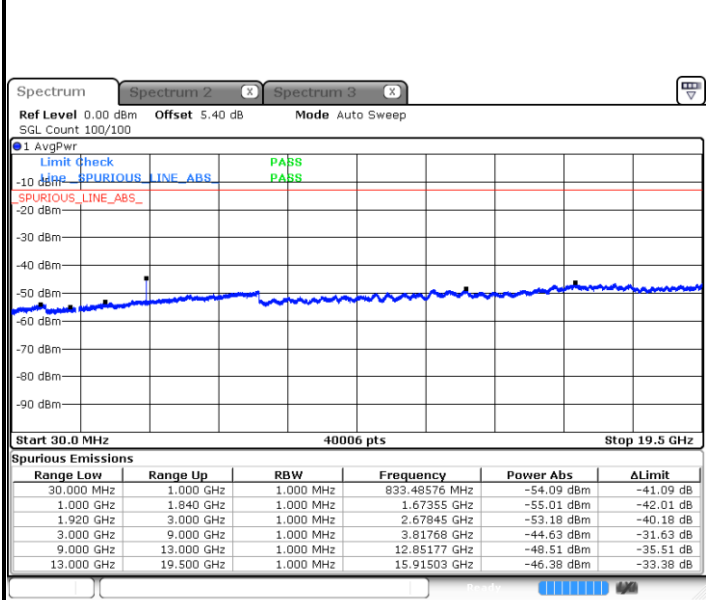
Date: 27.NOV.2019 21:17:03

**Middle Channel / 64QAM**



Date: 27.NOV.2019 21:17:58

**Highest Channel / 64QAM**

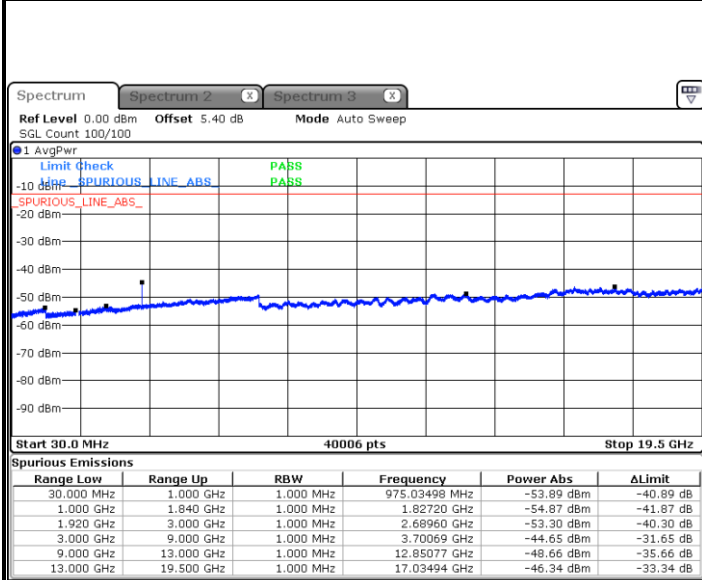


Date: 27.NOV.2019 21:18:53



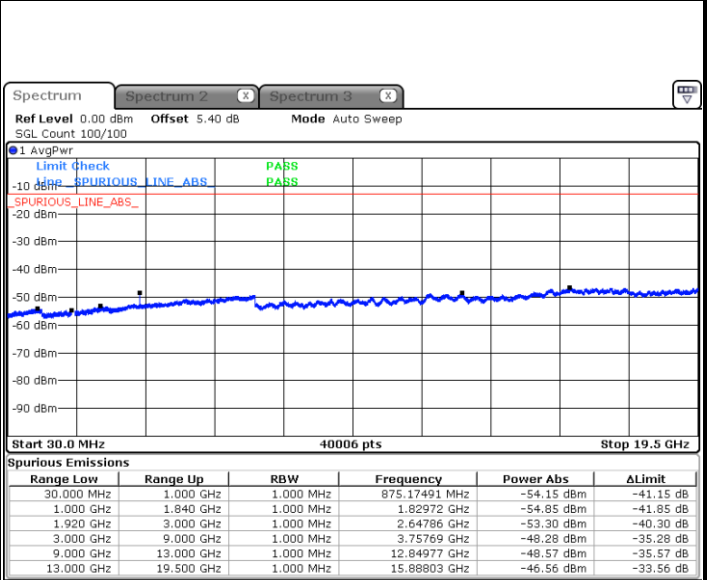
LTE Band 2 / 3MHz

Lowest Channel / 64QAM



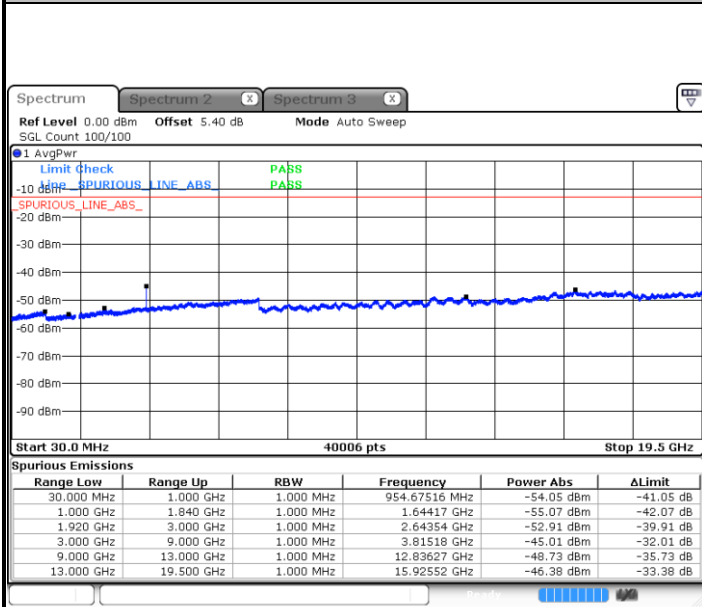
Date: 27.NOV.2019 21:19:48

Middle Channel / 64QAM



Date: 27.NOV.2019 21:20:43

Highest Channel / 64QAM



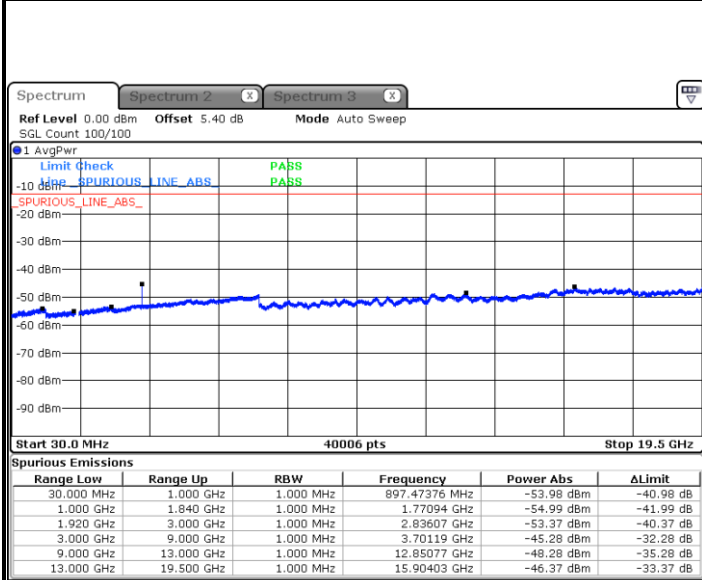
Date: 27.NOV.2019 21:21:38





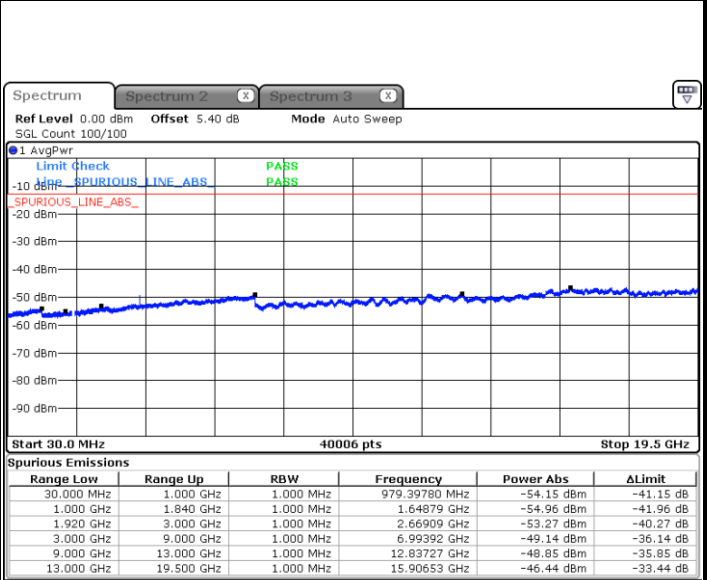
LTE Band 2 / 5MHz

Lowest Channel / 64QAM



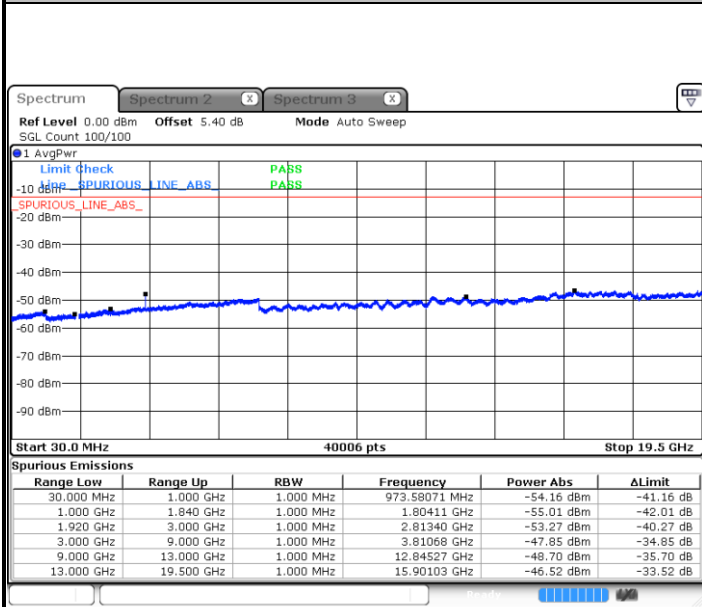
Date: 27.NOV.2019 21:22:33

Middle Channel / 64QAM



Date: 27.NOV.2019 21:23:27

Highest Channel / 64QAM



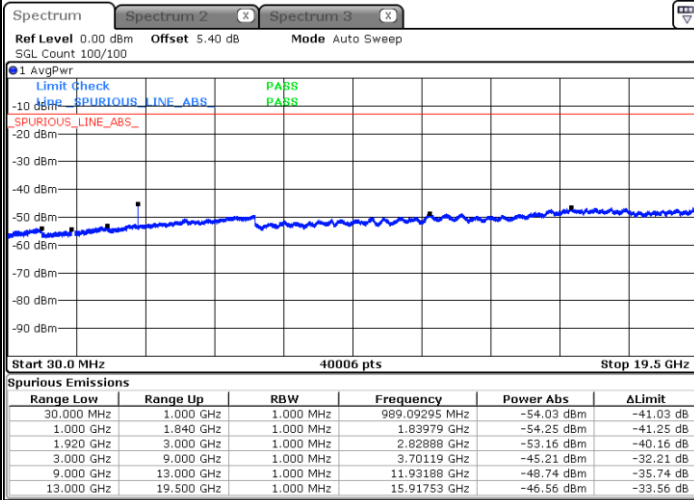
Date: 27.NOV.2019 21:24:22



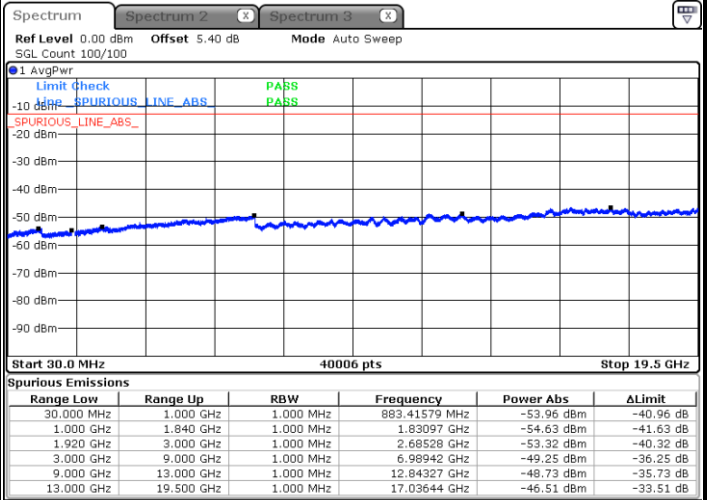
LTE Band 2 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

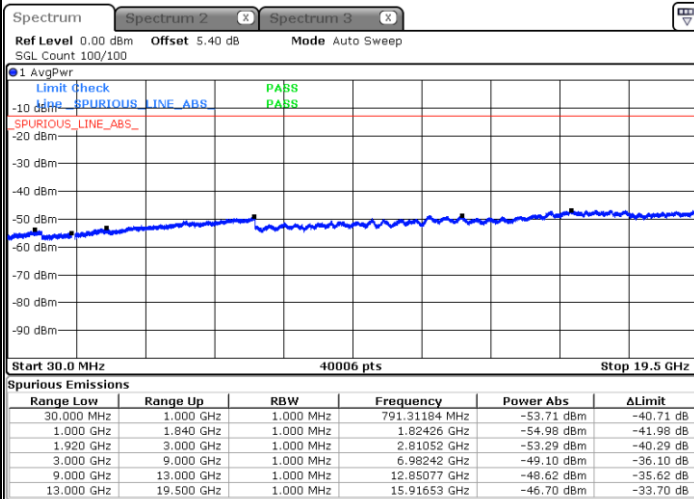


Date: 27.NOV.2019 21:25:17



Date: 27.NOV.2019 21:26:12

Highest Channel / 64QAM



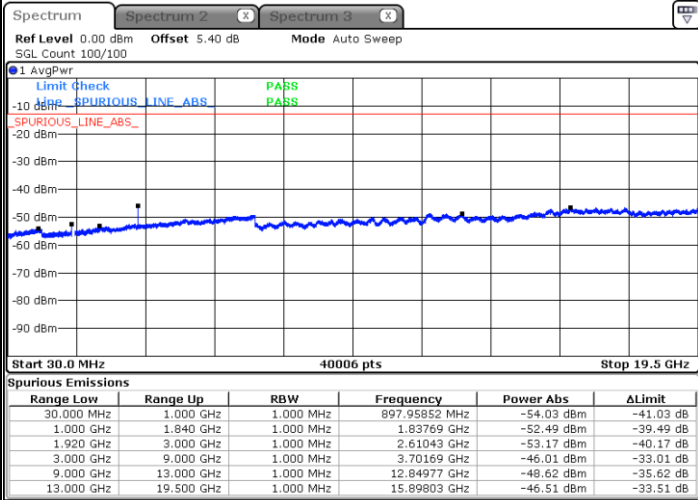
Date: 27.NOV.2019 21:27:06



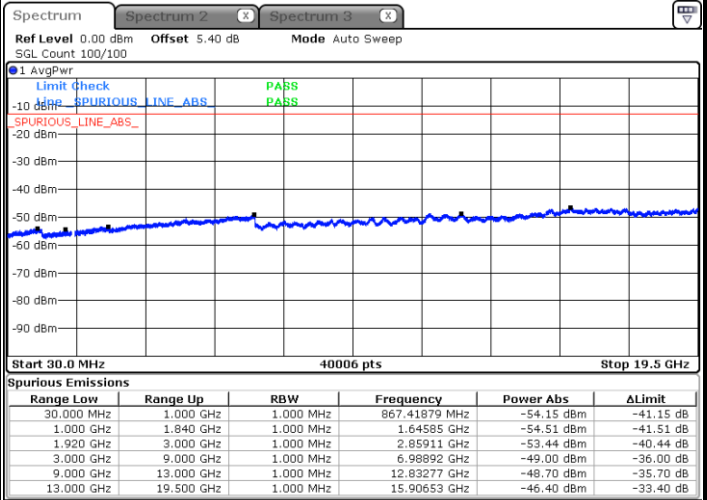
LTE Band 2 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

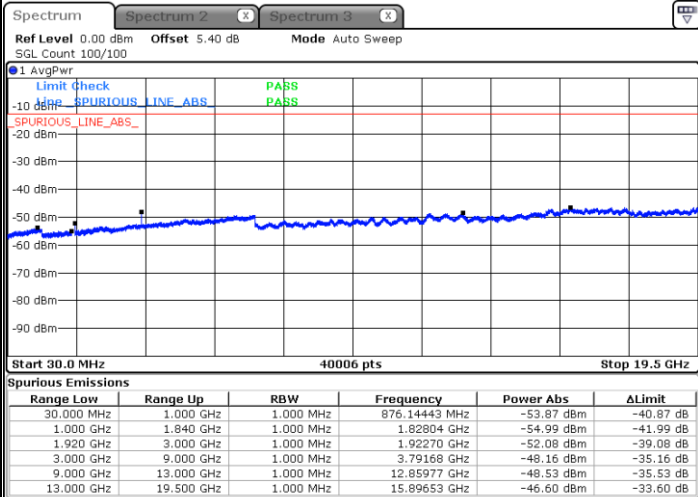


Date: 27.NOV.2019 21:28:01



Date: 27.NOV.2019 21:28:56

Highest Channel / 64QAM



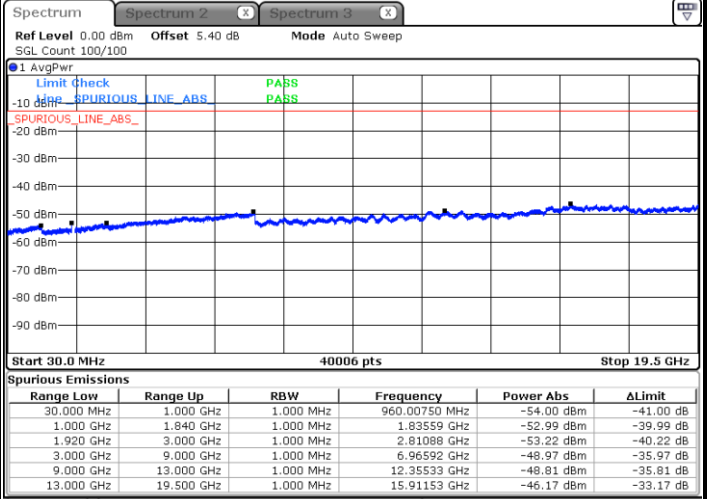
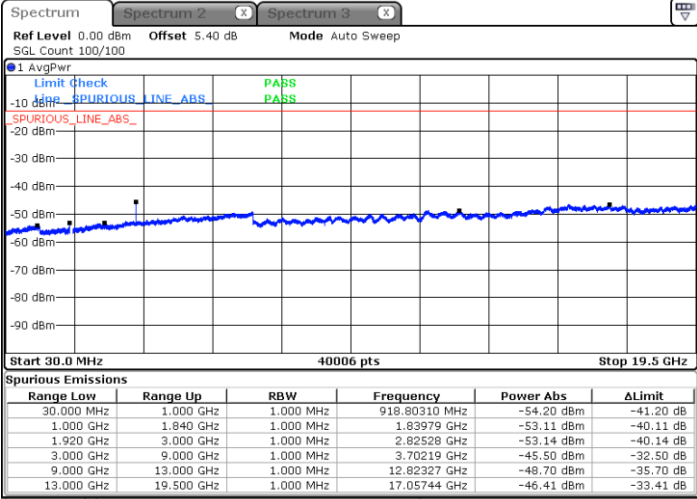
Date: 27.NOV.2019 21:29:51



LTE Band 2 / 20MHz

Lowest Channel / 64QAM

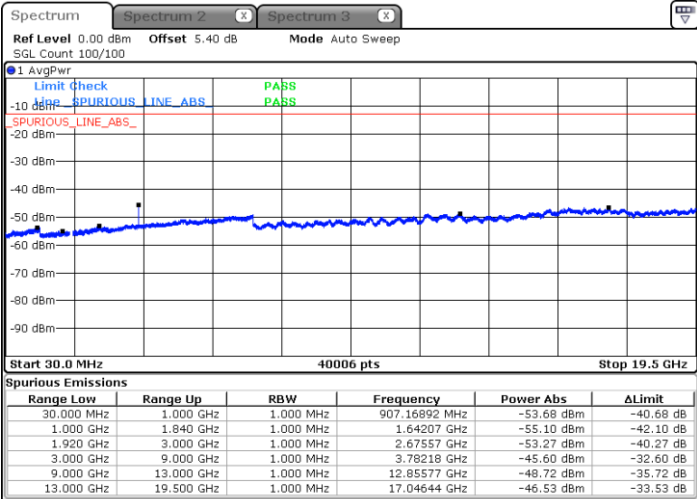
Middle Channel / 64QAM



Date: 27.NOV.2019 21:30:46

Date: 27.NOV.2019 21:31:40

Highest Channel / 64QAM



Date: 27.NOV.2019 21:32:35



Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0014	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0021	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0023	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0002	
20	Battery End Point	0.0017	

Note:

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



# LTE Band 4

## Peak-to-Average Ratio

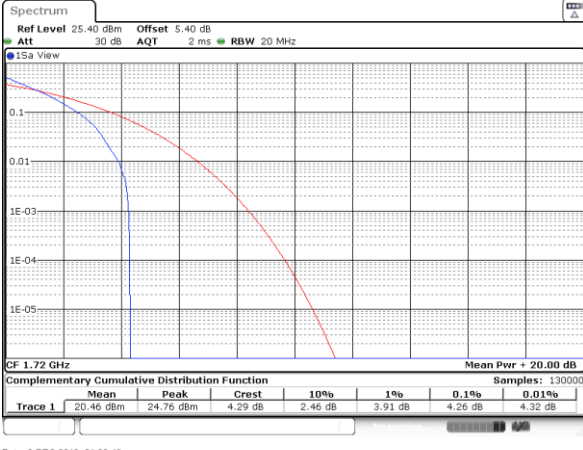
Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.26	4.58	5.13	5.42	PASS
Middle CH	4.03	4.72	5.04	5.65	
Highest CH	4.38	4.81	5.16	5.71	

Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.65	5.94			PASS
Middle CH	5.57	6.03			
Highest CH	5.91	6.12			



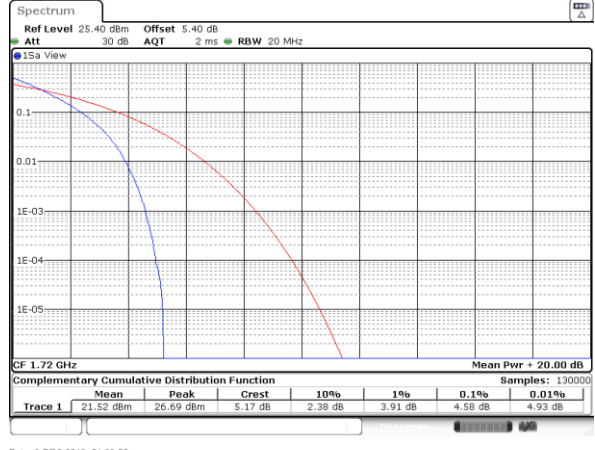
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



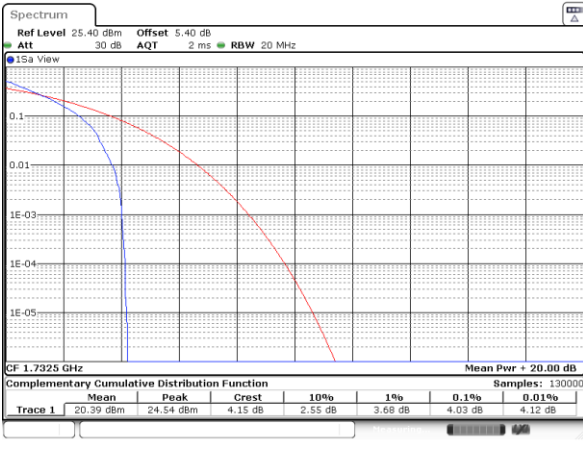
Date: 3 DEC 2019 21:39:46

Lowest Channel / Full RB



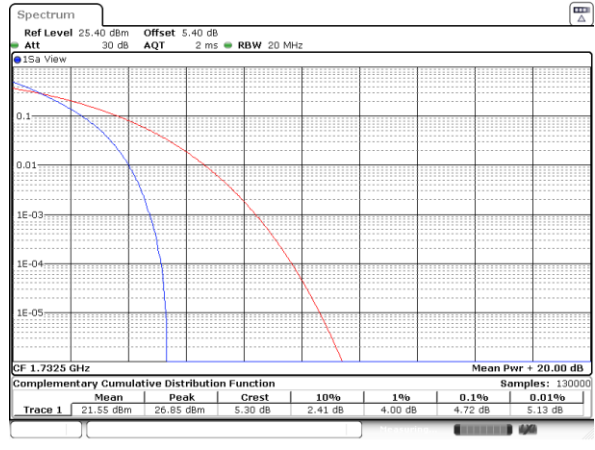
Date: 3 DEC 2019 21:39:55

Middle Channel / 1RB



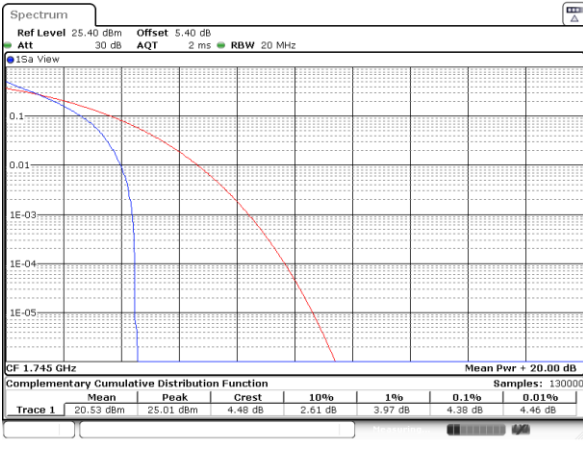
Date: 3 DEC 2019 21:40:30

Middle Channel / Full RB



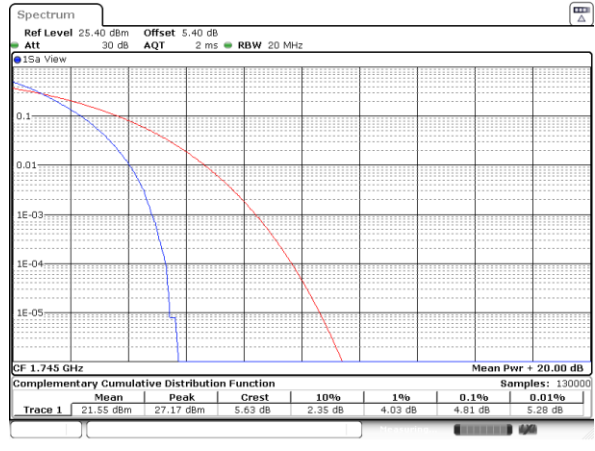
Date: 3 DEC 2019 21:40:20

Highest Channel / 1RB



Date: 3 DEC 2019 21:40:49

Highest Channel / Full RB

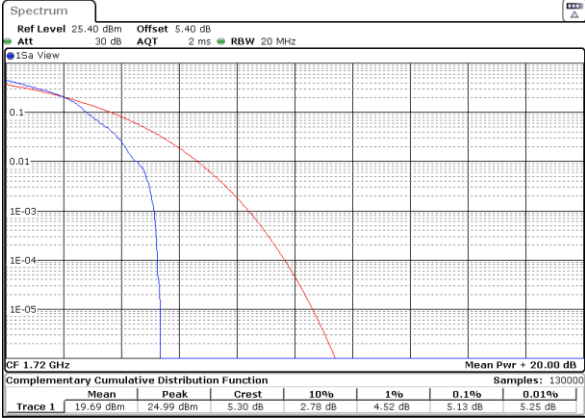


Date: 3 DEC 2019 21:40:58



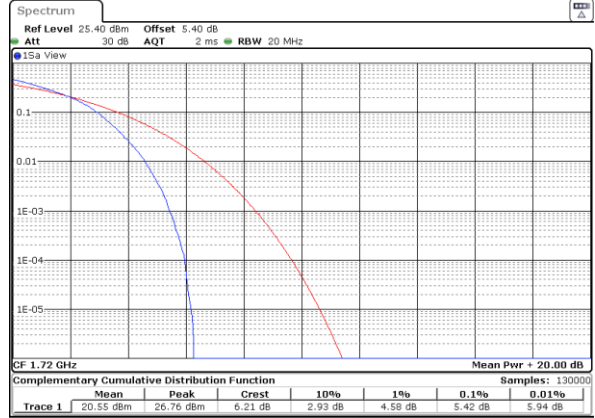
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



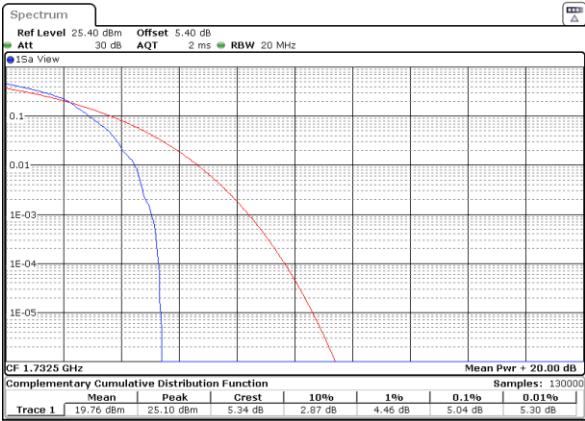
Date: 3 DEC 2019 21:38:49

Lowest Channel / Full RB



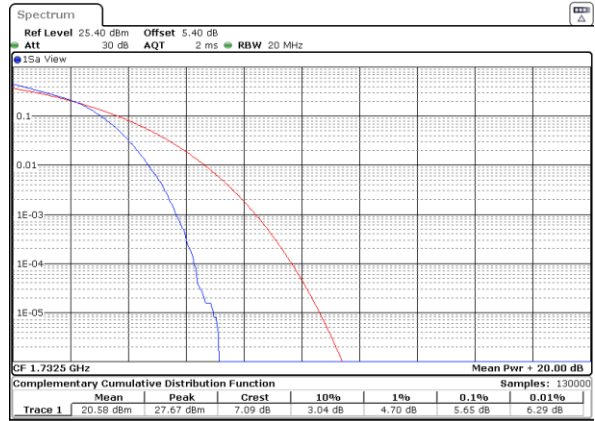
Date: 3 DEC 2019 21:39:00

Middle Channel / 1RB



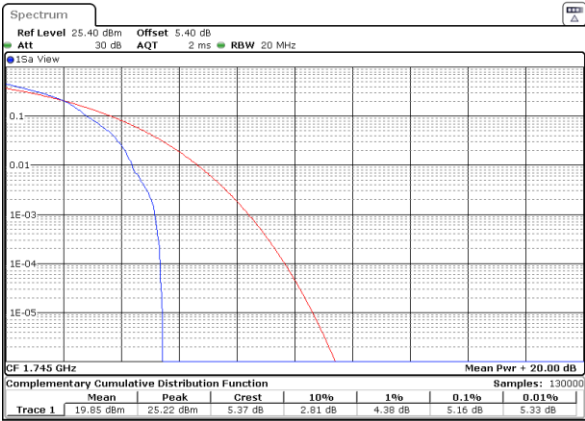
Date: 3 DEC 2019 21:39:09

Middle Channel / Full RB



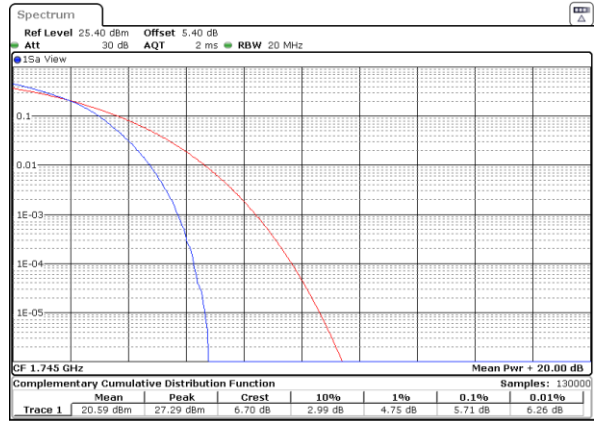
Date: 3 DEC 2019 21:39:18

Highest Channel / 1RB



Date: 3 DEC 2019 21:39:27

Highest Channel / Full RB



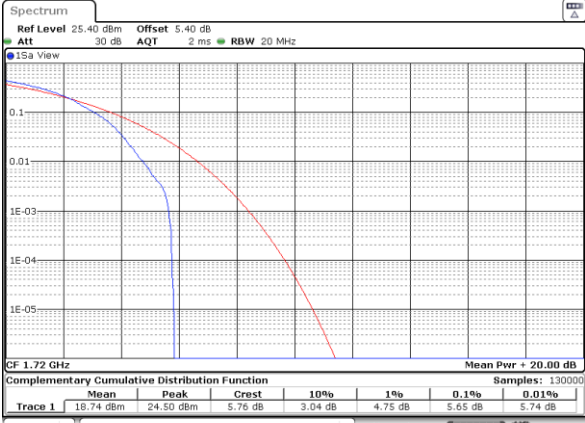
Date: 3 DEC 2019 21:39:37





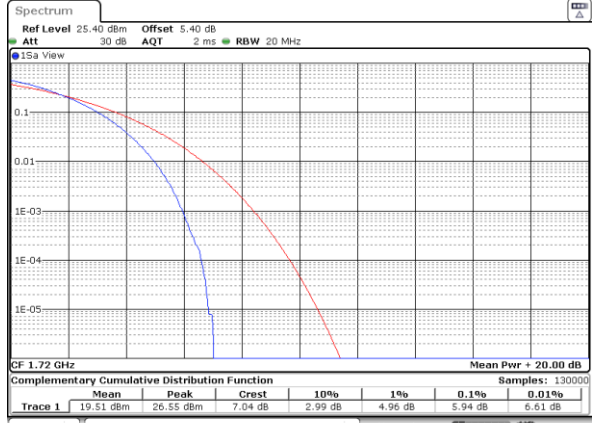
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



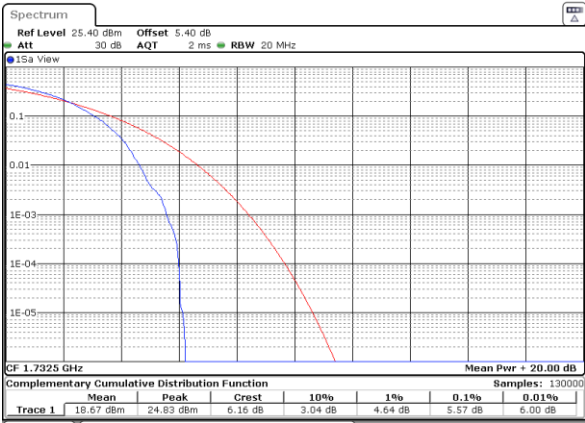
Date: 3 DEC 2019 21:37:53

Lowest Channel / Full RB



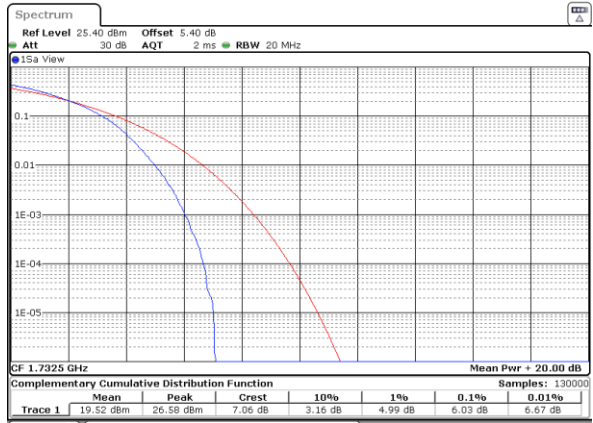
Date: 3 DEC 2019 21:38:05

Middle Channel / 1RB



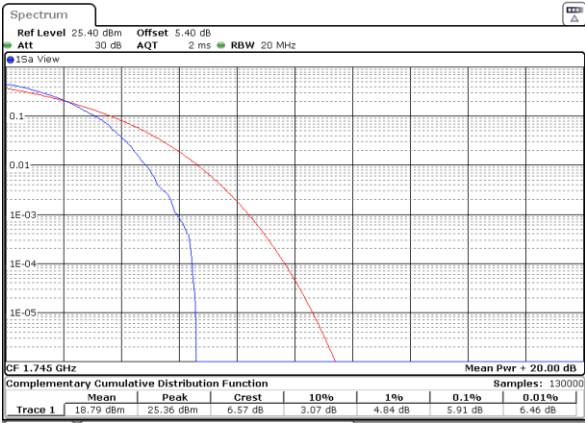
Date: 3 DEC 2019 21:38:13

Middle Channel / Full RB



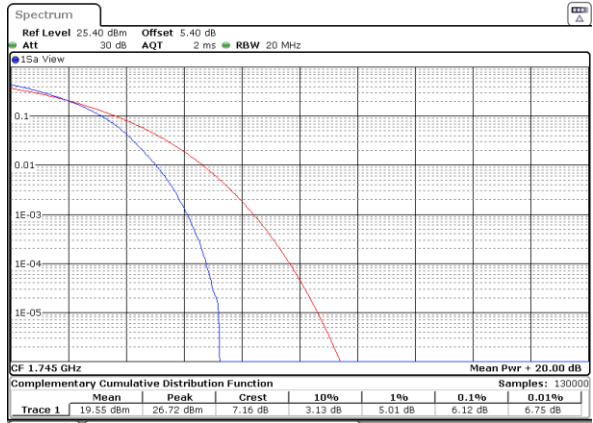
Date: 3 DEC 2019 21:38:22

Highest Channel / 1RB



Date: 3 DEC 2019 21:38:31

Highest Channel / Full RB



Date: 3 DEC 2019 21:38:41



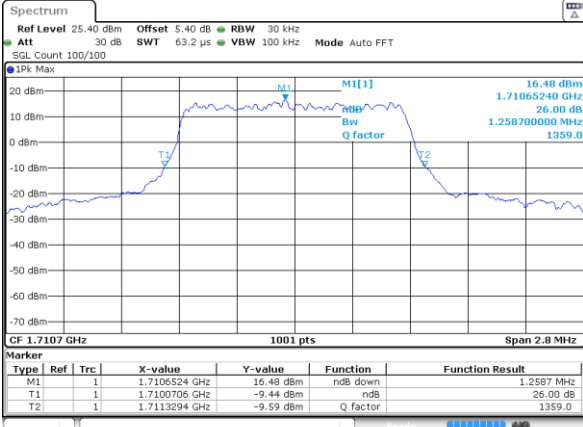
**26dB Bandwidth**

Mode	LTE Band 4 : 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	1.259	1.304	2.979	2.949	4.835	4.905	9.73	9.77	14.296	14.326	20.22	20.26
Middle CH	1.284	1.273	2.943	2.961	4.825	4.865	9.65	9.67	14.206	14.535	20.22	20.1
Highest CH	1.273	1.301	2.949	3.411	4.945	4.855	9.75	9.95	14.595	14.206	20.18	20.22
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.320		2.925		4.835		9.75		14.386		20.14	
Middle CH	1.281		2.937		4.885		9.91		14.446		20.18	
Highest CH	1.262		2.943		4.935		9.87		14.116		20.18	



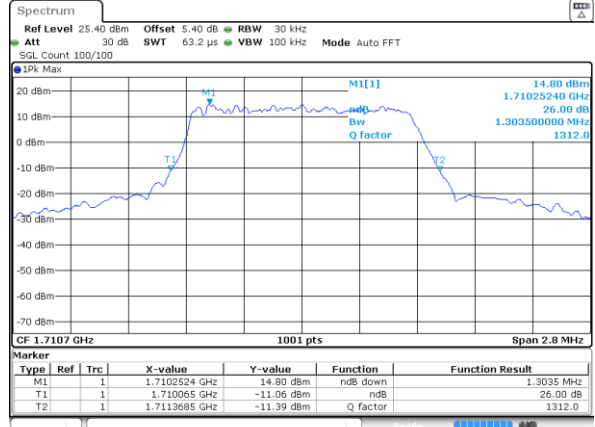
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



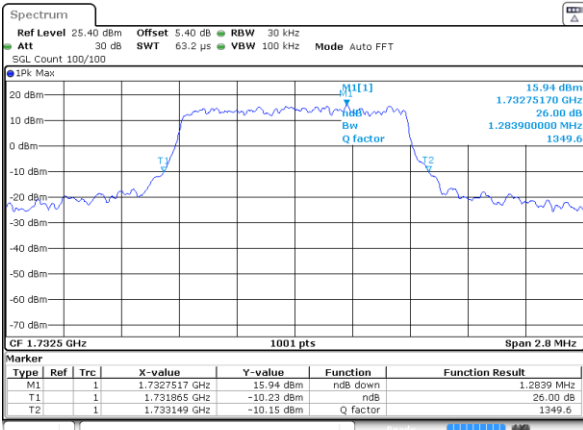
Date: 3.DEC.2019 18:36:03

Lowest Channel / 1.4MHz / 16QAM



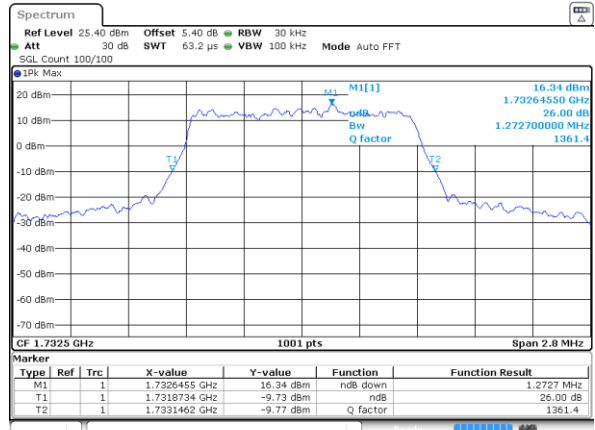
Date: 3.DEC.2019 18:36:13

Middle Channel / 1.4MHz / QPSK



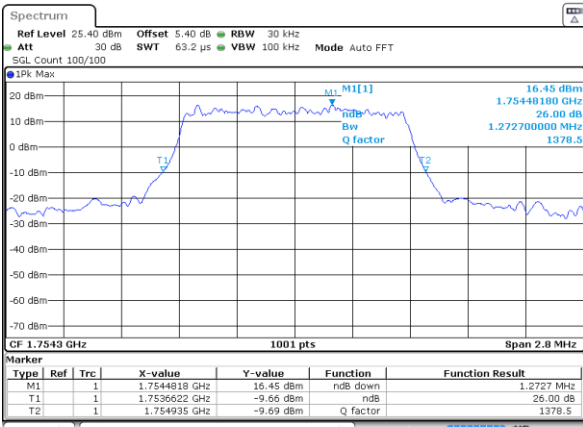
Date: 3.DEC.2019 18:43:02

Middle Channel / 1.4MHz / 16QAM



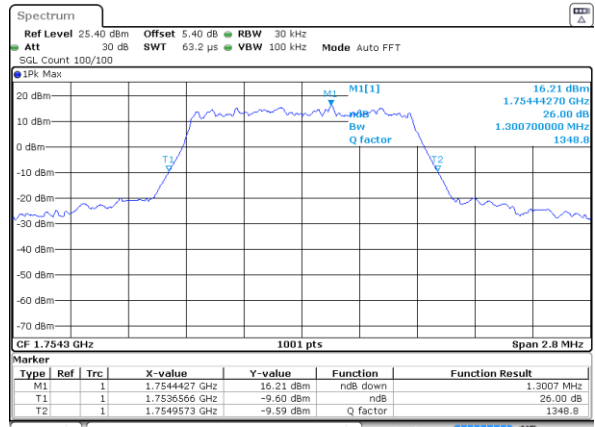
Date: 3.DEC.2019 18:43:12

Highest Channel / 1.4MHz / QPSK



Date: 3.DEC.2019 18:45:31

Highest Channel / 1.4MHz / 16QAM

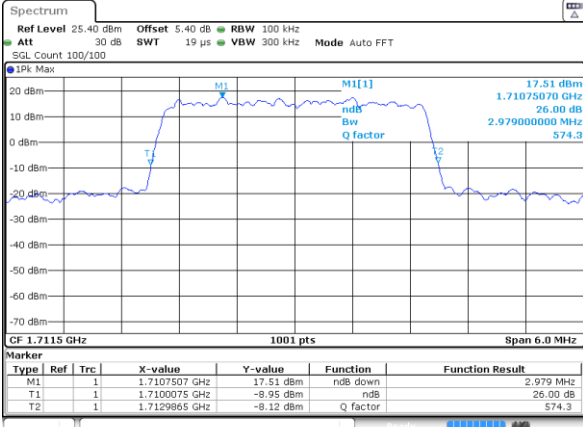


Date: 3.DEC.2019 18:45:41



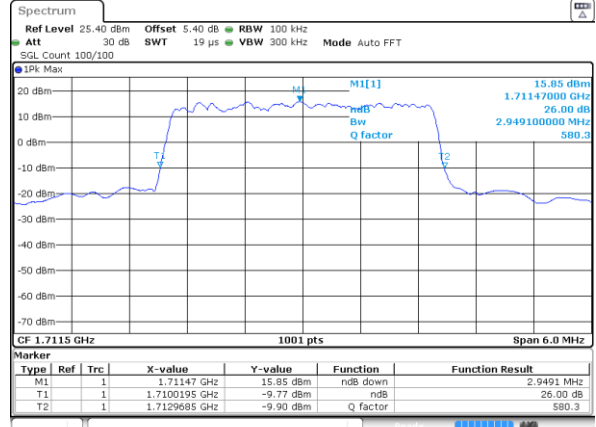
LTE Band 4

Lowest Channel / 3MHz / QPSK



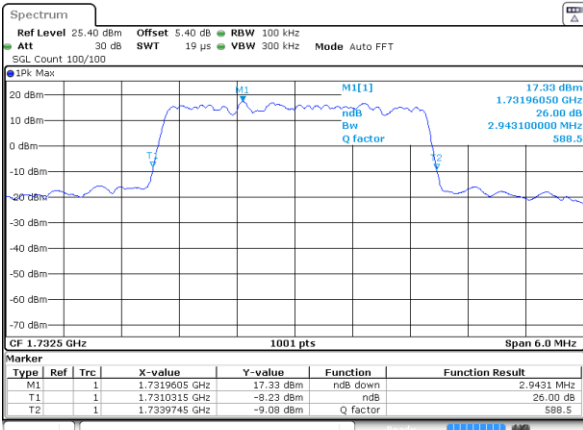
Date: 3 DEC 2019 18:52:30

Lowest Channel / 3MHz / 16QAM



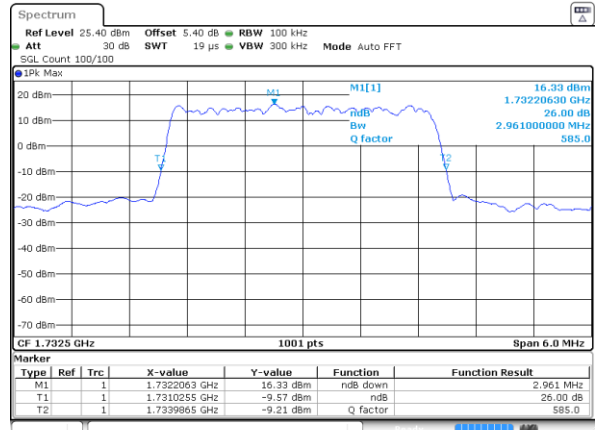
Date: 3 DEC 2019 18:52:40

Middle Channel / 3MHz / QPSK



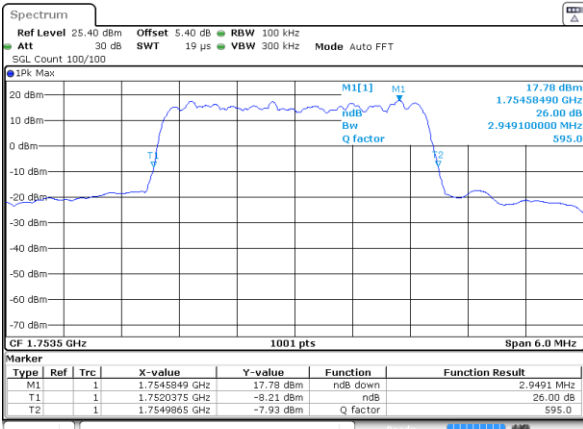
Date: 3 DEC 2019 18:59:29

Middle Channel / 3MHz / 16QAM



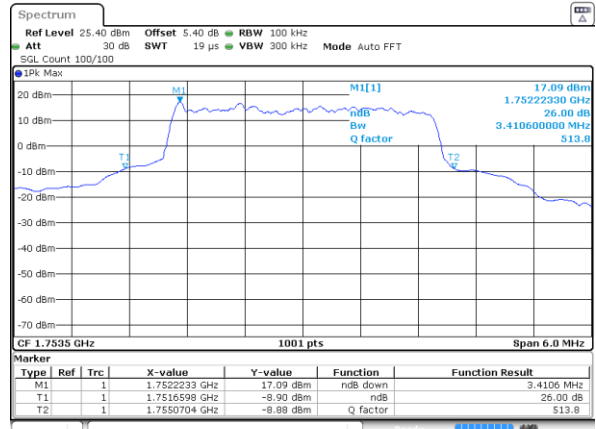
Date: 3 DEC 2019 18:59:39

Highest Channel / 3MHz / QPSK



Date: 3 DEC 2019 19:01:57

Highest Channel / 3MHz / 16QAM

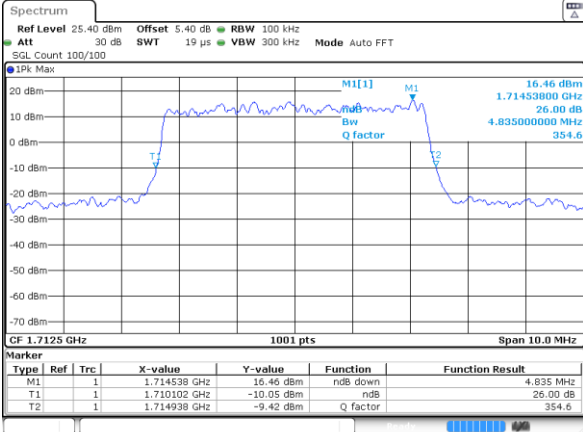


Date: 3 DEC 2019 19:02:07



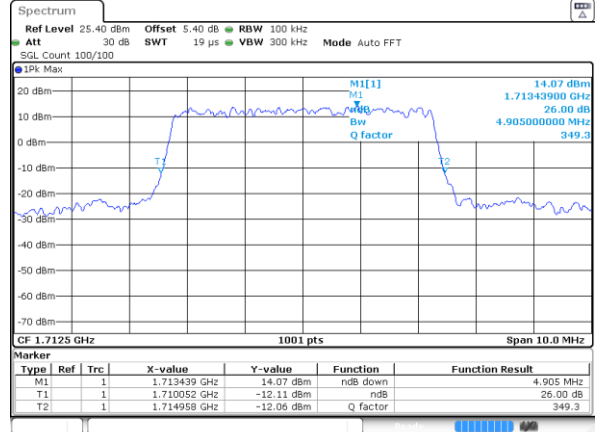
LTE Band 4

Lowest Channel / 5MHz / QPSK



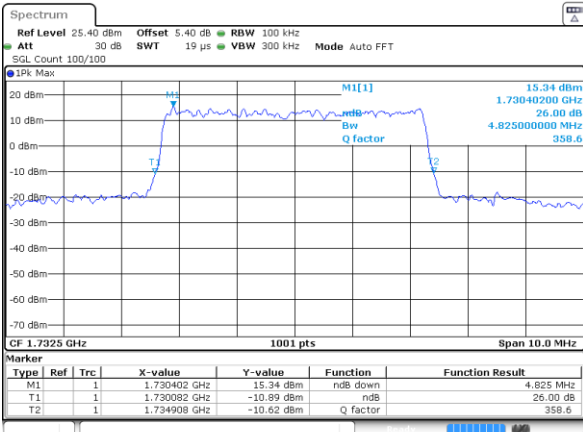
Date: 3 DEC 2019 19:08:56

Lowest Channel / 5MHz / 16QAM



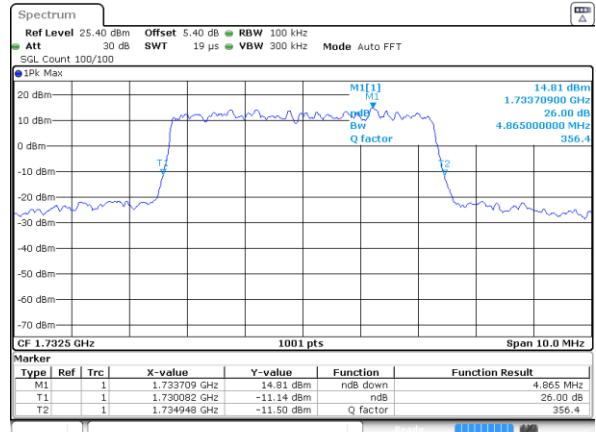
Date: 3 DEC 2019 19:09:06

Middle Channel / 5MHz / QPSK



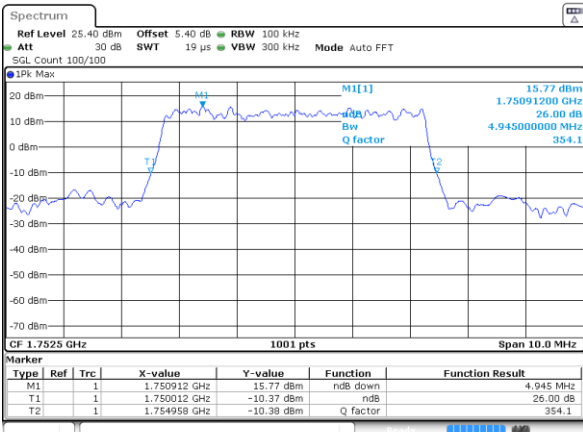
Date: 3 DEC 2019 19:15:55

Middle Channel / 5MHz / 16QAM



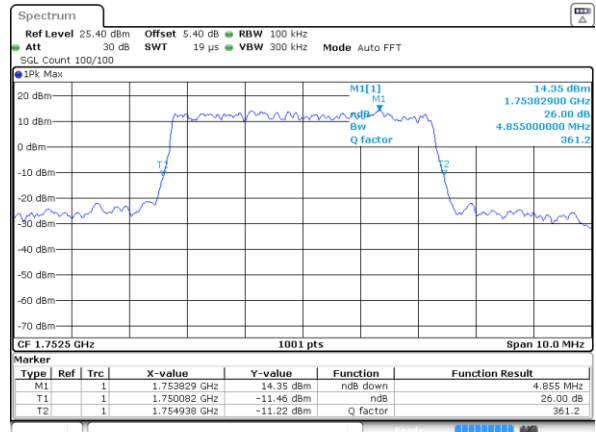
Date: 3 DEC 2019 19:16:05

Highest Channel / 5MHz / QPSK



Date: 3 DEC 2019 19:18:24

Highest Channel / 5MHz / 16QAM

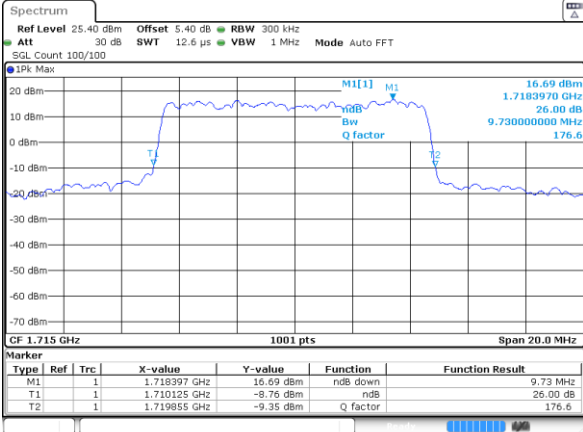


Date: 3 DEC 2019 19:18:34



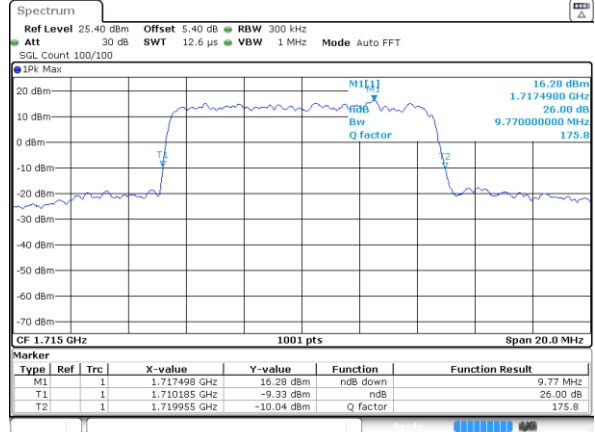
LTE Band 4

Lowest Channel / 10MHz / QPSK



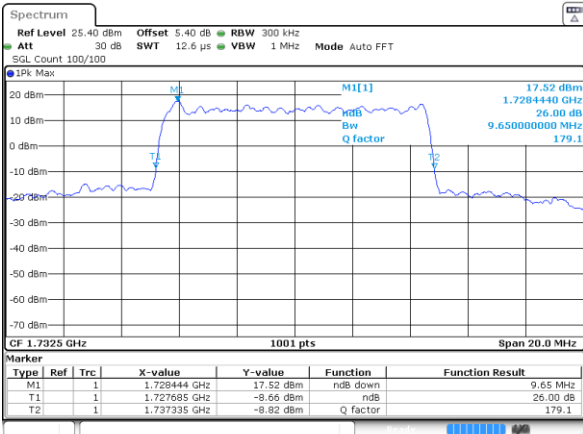
Date: 3 DEC 2019 19:25:23

Lowest Channel / 10MHz / 16QAM



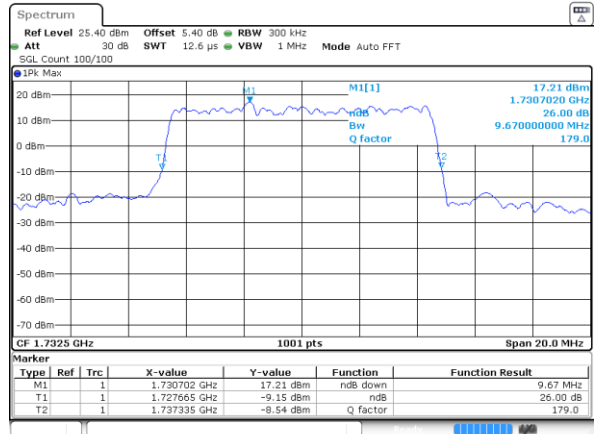
Date: 3 DEC 2019 19:25:33

Middle Channel / 10MHz / QPSK



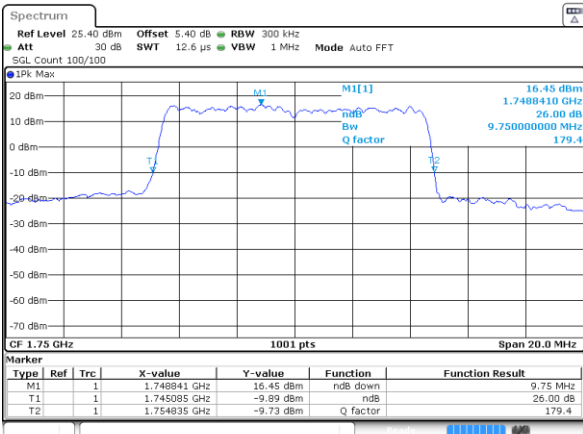
Date: 3 DEC 2019 19:32:23

Middle Channel / 10MHz / 16QAM



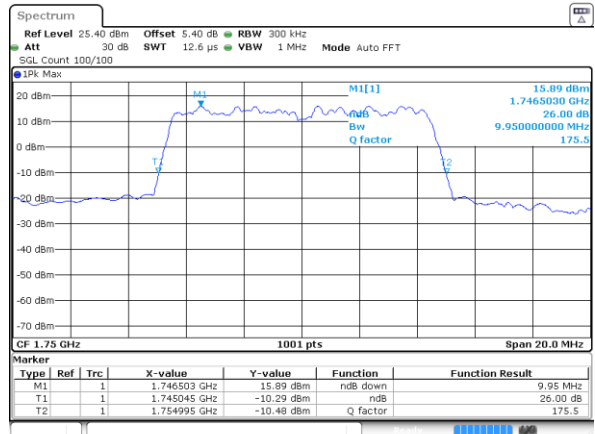
Date: 3 DEC 2019 19:32:33

Highest Channel / 10MHz / QPSK



Date: 3 DEC 2019 19:34:52

Highest Channel / 10MHz / 16QAM

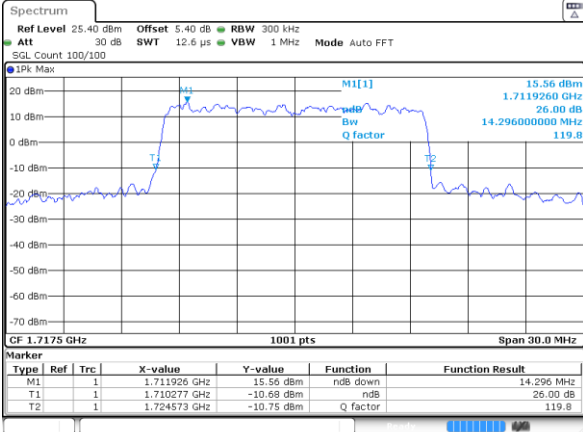


Date: 3 DEC 2019 19:35:02



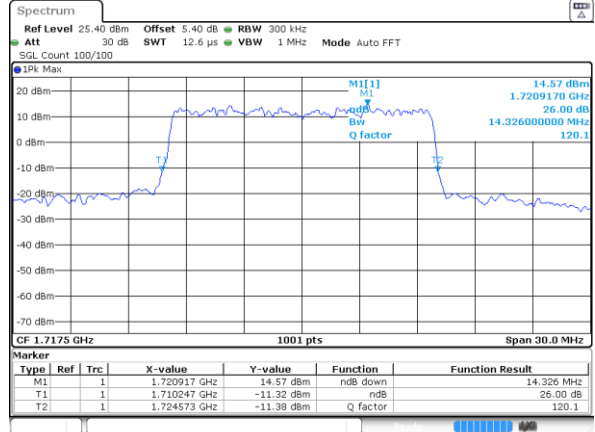
LTE Band 4

Lowest Channel / 15MHz / QPSK



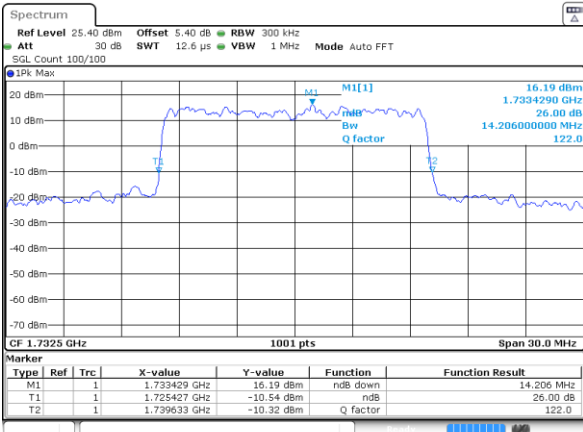
Date: 3.DEC.2019 19:47:21

Lowest Channel / 15MHz / 16QAM



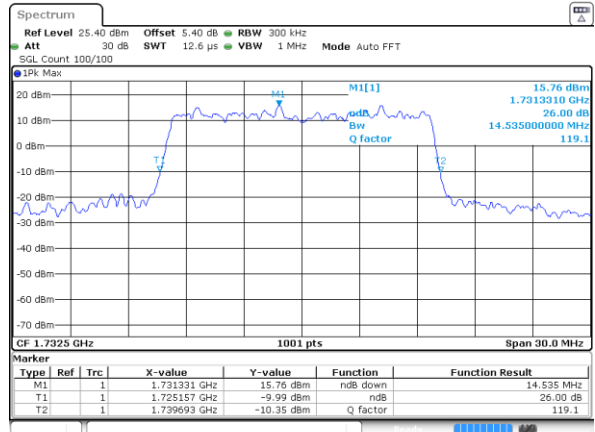
Date: 3.DEC.2019 19:47:31

Middle Channel / 15MHz / QPSK



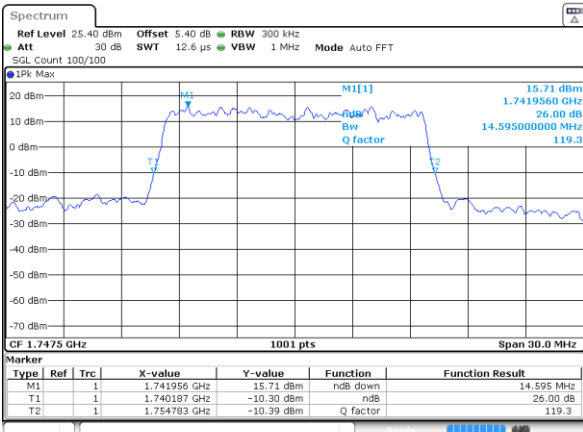
Date: 3.DEC.2019 19:54:19

Middle Channel / 15MHz / 16QAM



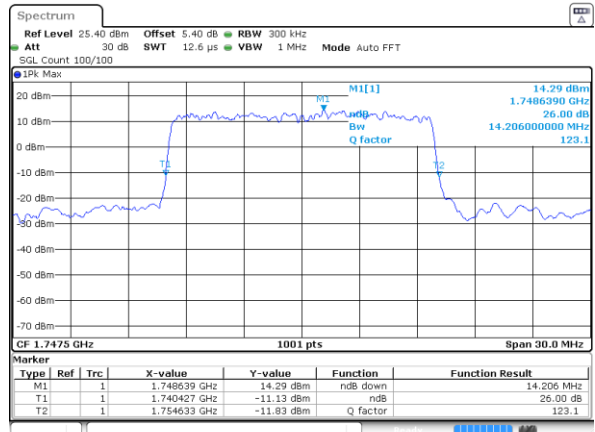
Date: 3.DEC.2019 19:54:30

Highest Channel / 15MHz / QPSK



Date: 3.DEC.2019 19:56:49

Highest Channel / 15MHz / 16QAM

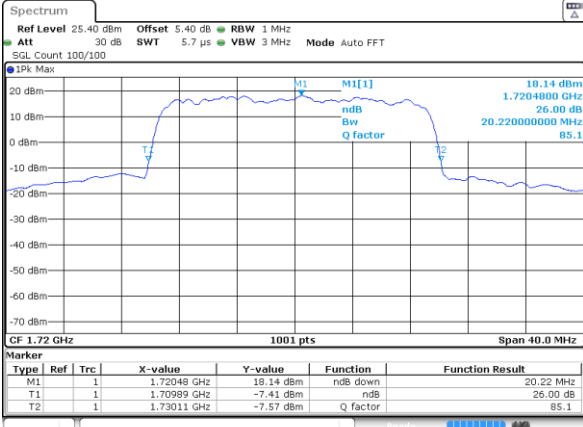


Date: 3.DEC.2019 19:56:59



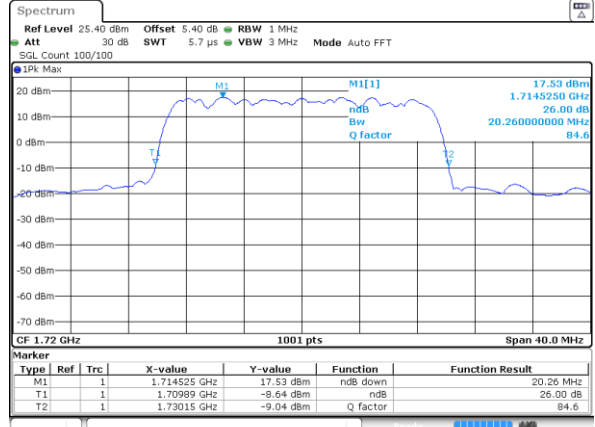
LTE Band 4

Lowest Channel / 20MHz / QPSK



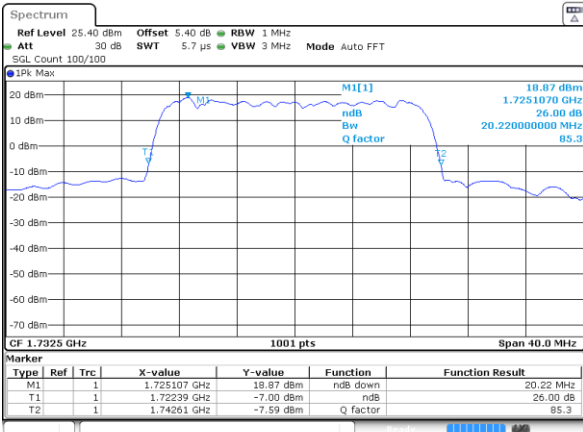
Date: 3.DEC.2019 20:03:48

Lowest Channel / 20MHz / 16QAM



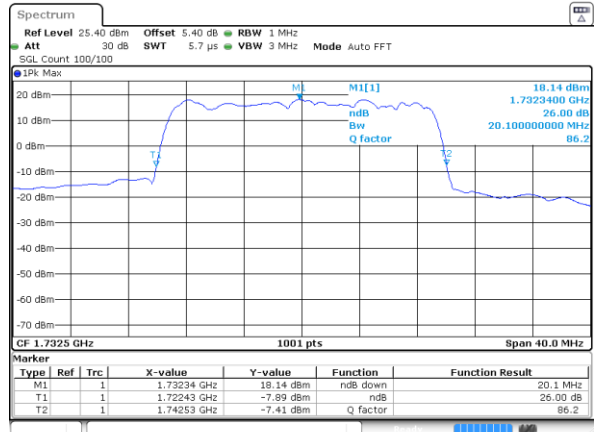
Date: 3.DEC.2019 20:03:58

Middle Channel / 20MHz / QPSK



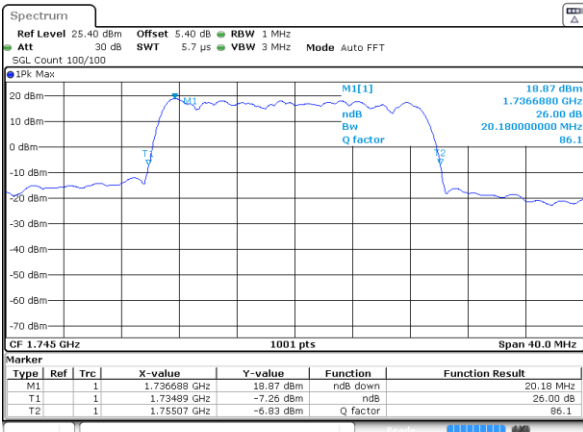
Date: 3.DEC.2019 20:10:47

Middle Channel / 20MHz / 16QAM



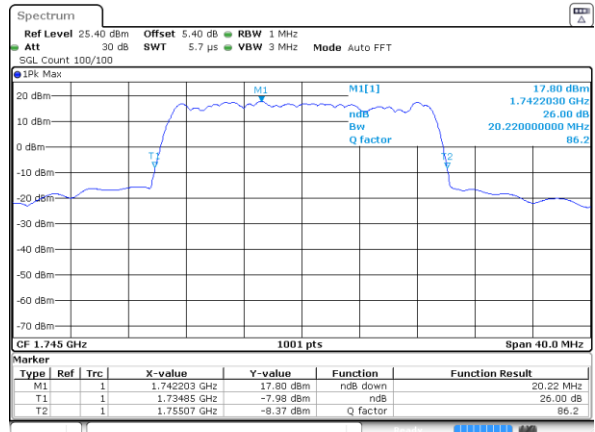
Date: 3.DEC.2019 20:10:57

Highest Channel / 20MHz / QPSK



Date: 3.DEC.2019 20:13:16

Highest Channel / 20MHz / 16QAM



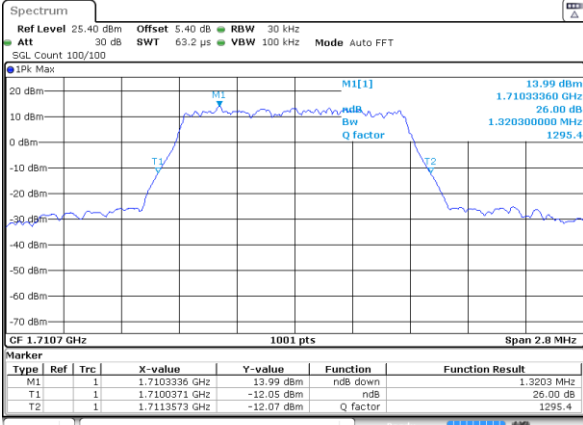
Date: 3.DEC.2019 20:13:26





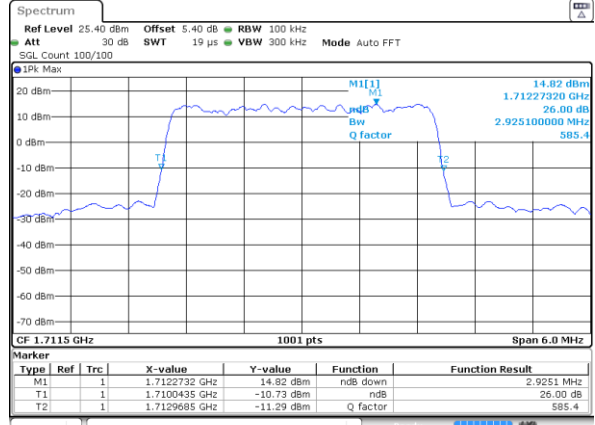
LTE Band 4

Lowest Channel / 1.4MHz / 64QAM



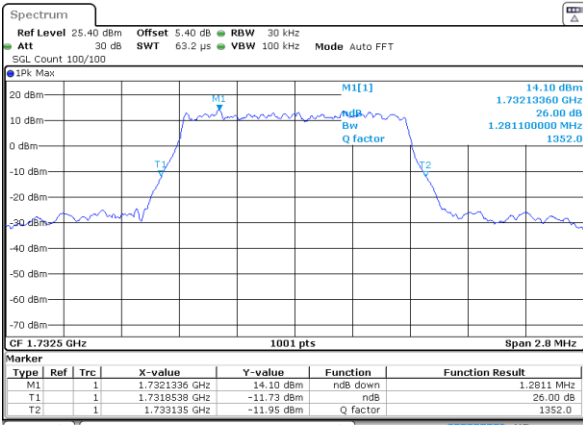
Date: 3 DEC 2019 20:43:21

Lowest Channel / 3MHz / 64QAM



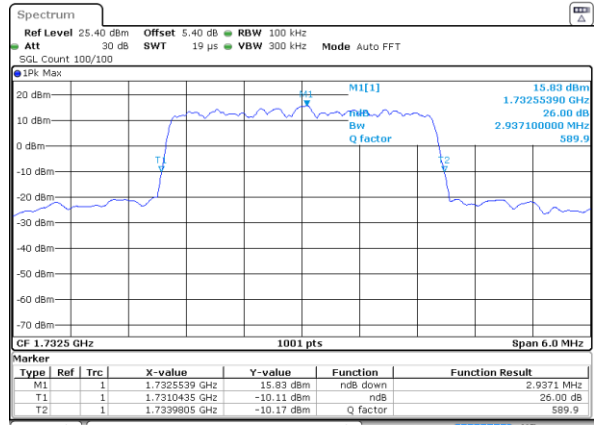
Date: 3 DEC 2019 20:51:36

Middle Channel / 1.4MHz / 64QAM



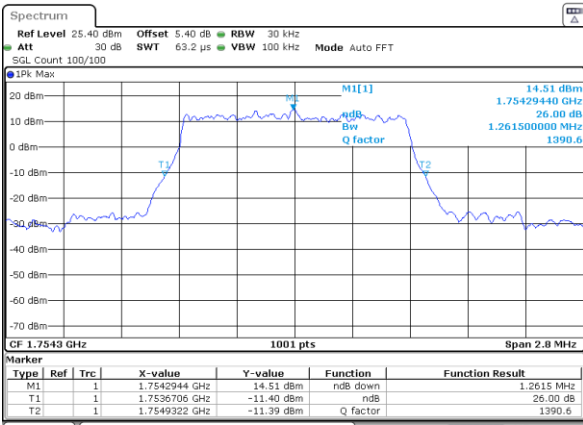
Date: 3 DEC 2019 20:46:51

Middle Channel / 3MHz / 64QAM



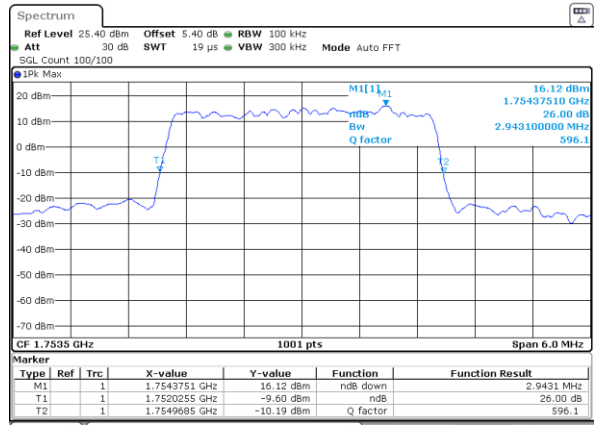
Date: 3 DEC 2019 20:55:05

Highest Channel / 1.4MHz / 64QAM



Date: 3 DEC 2019 20:48:06

Highest Channel / 3MHz / 64QAM

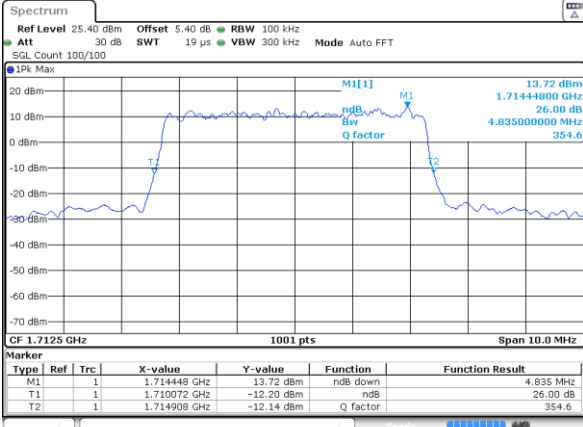


Date: 3 DEC 2019 20:56:20



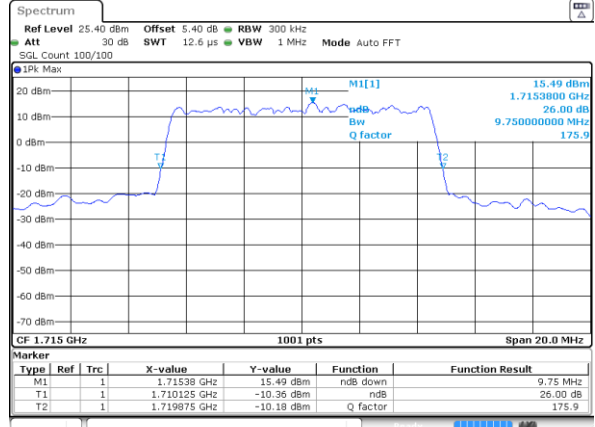
LTE Band 4

Lowest Channel / 5MHz / 64QAM



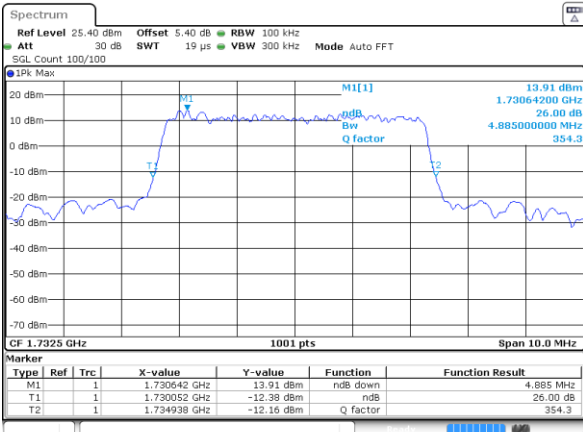
Date: 3 DEC 2019 20:59:50

Lowest Channel / 10MHz / 64QAM



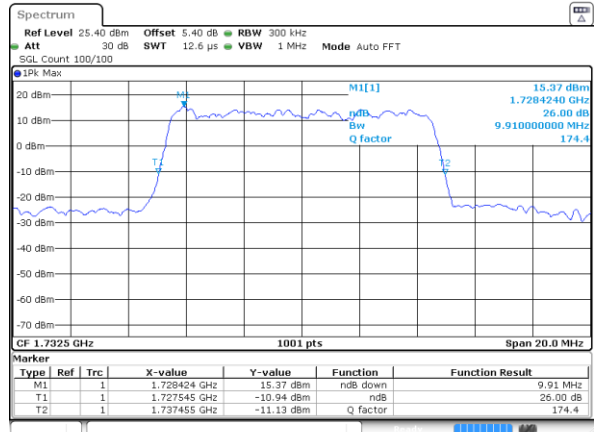
Date: 3 DEC 2019 21:08:05

Middle Channel / 5MHz / 64QAM



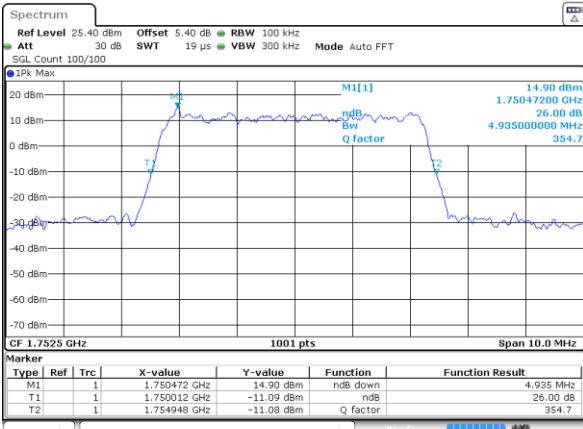
Date: 3 DEC 2019 21:03:20

Middle Channel / 10MHz / 64QAM



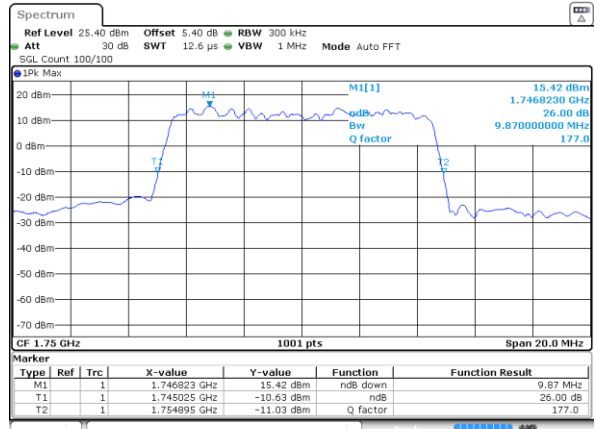
Date: 3 DEC 2019 21:11:36

Highest Channel / 5MHz / 64QAM



Date: 3 DEC 2019 21:04:35

Highest Channel / 10MHz / 64QAM



Date: 3 DEC 2019 21:12:51