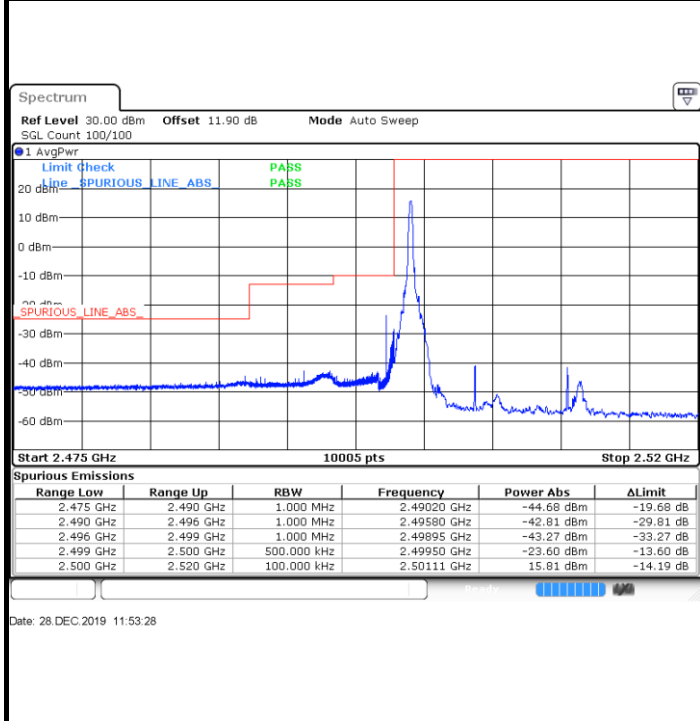


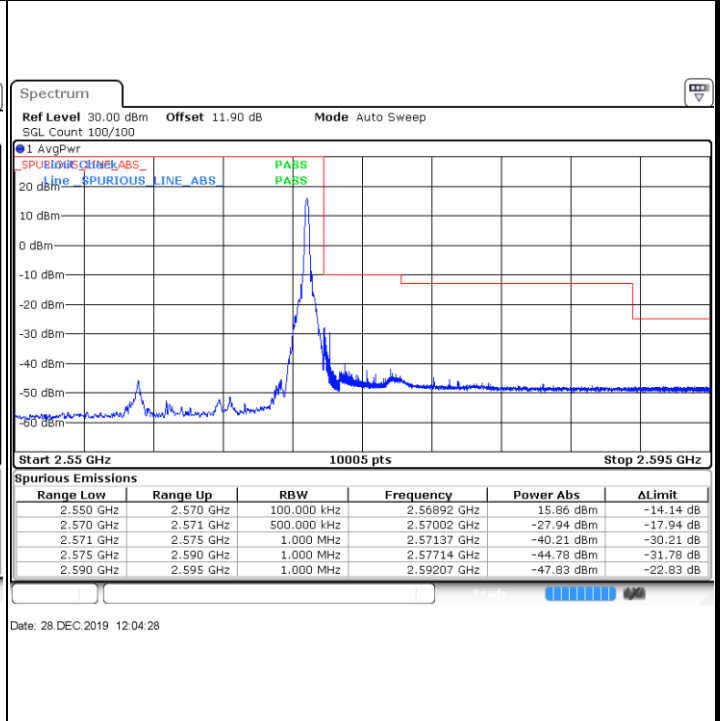


**LTE Band 7 / 20MHz / QPSK**

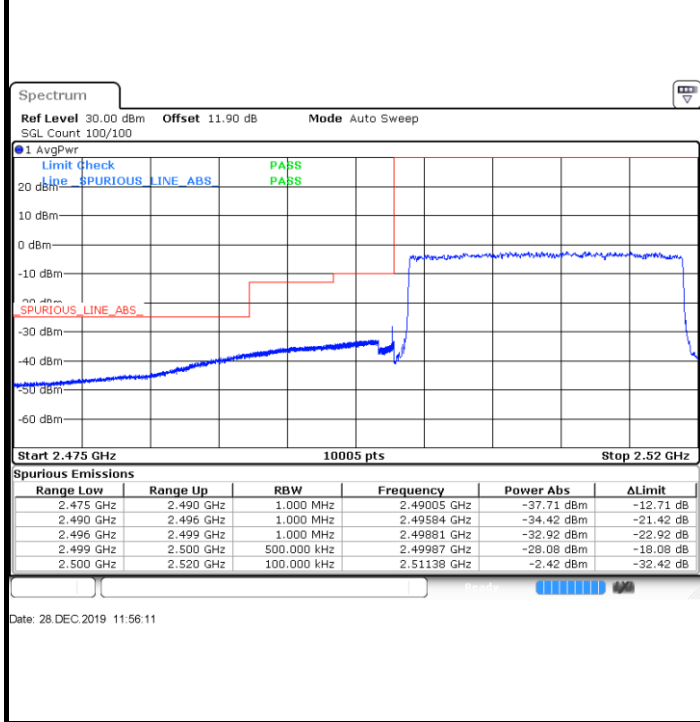
**Lowest Band Edge / 1 RB**



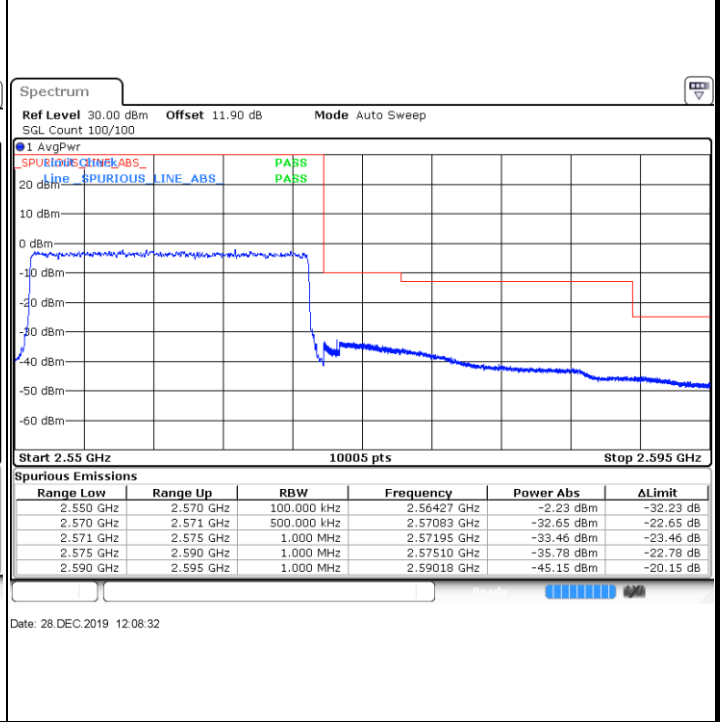
**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



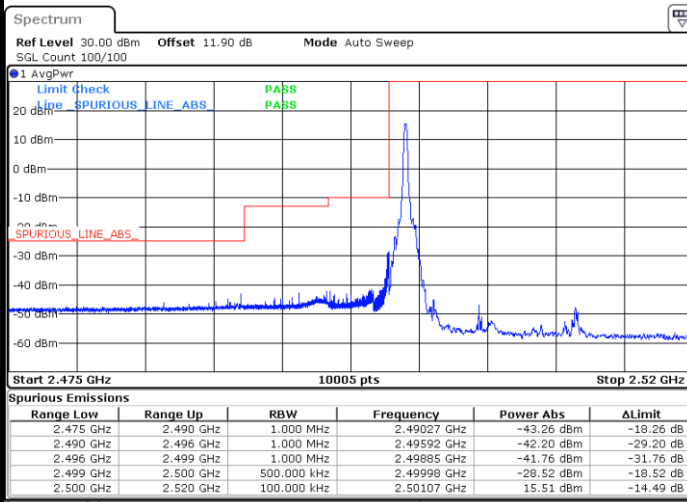
**Highest Band Edge / Full RB**





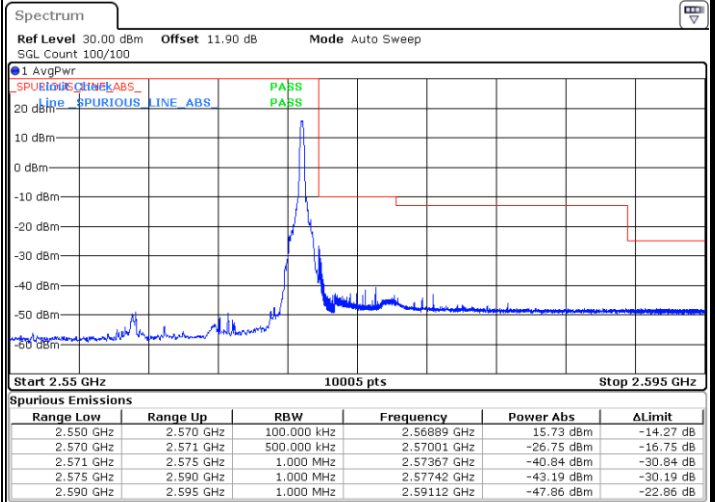
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1RB



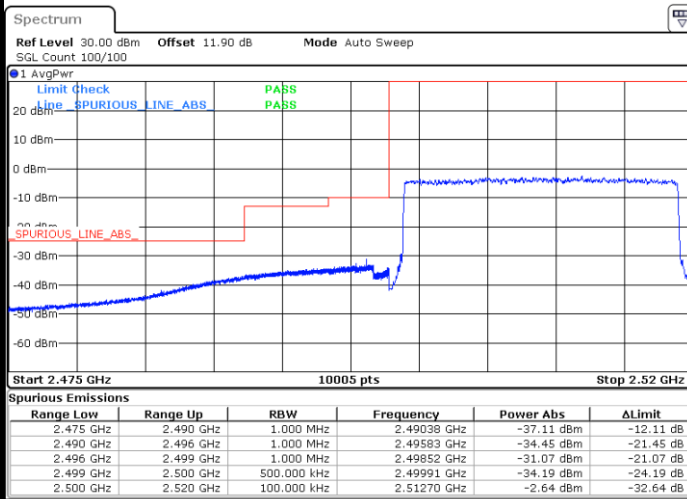
Date: 28 DEC 2019 11:54:50

Highest Band Edge / 1RB



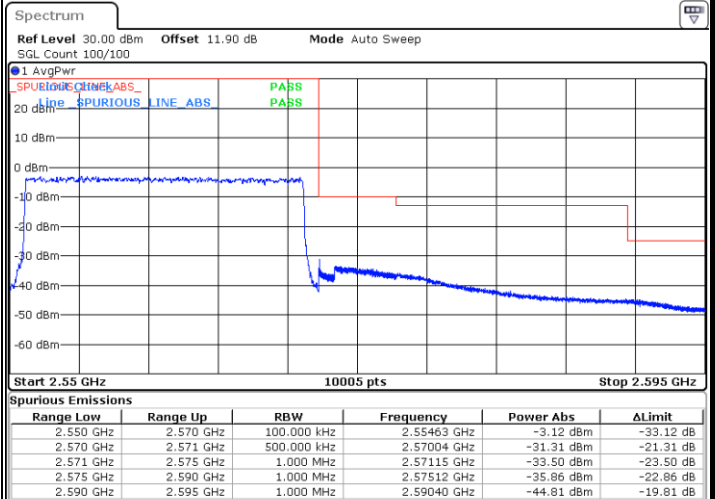
Date: 28 DEC 2019 12:05:49

Lowest Band Edge / Full RB



Date: 28 DEC 2019 11:57:33

Highest Band Edge / Full RB

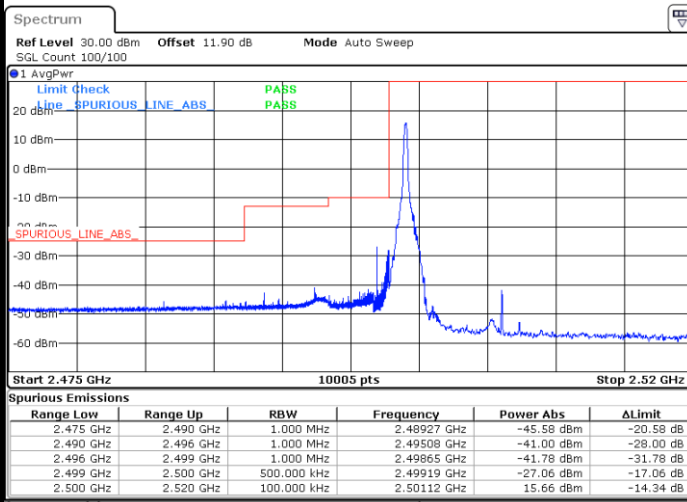


Date: 28 DEC 2019 12:07:11



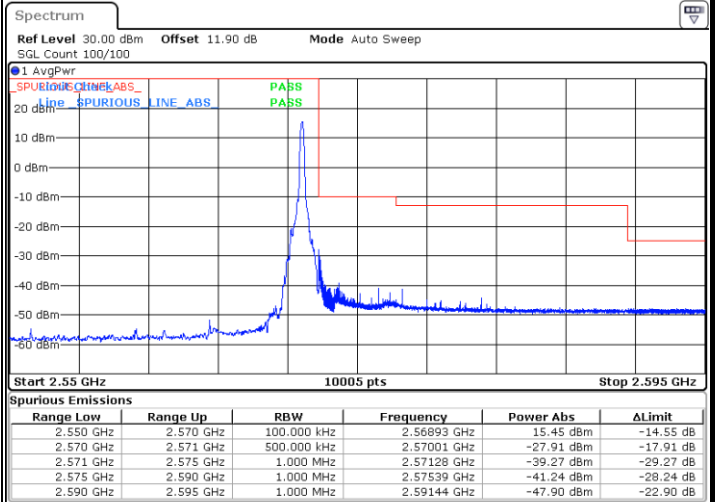
LTE Band 7 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



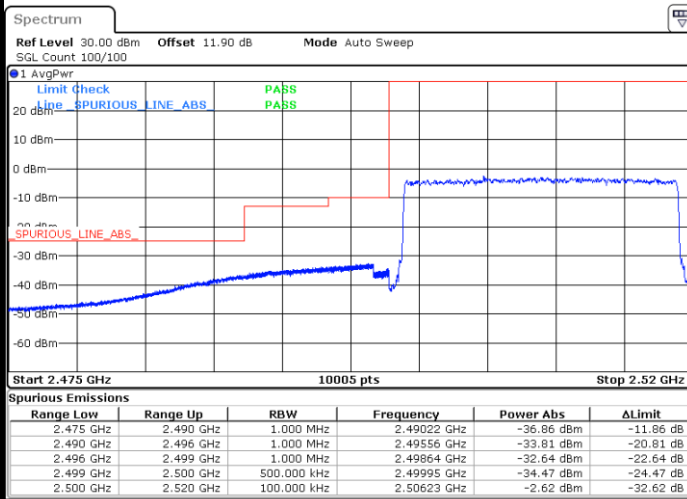
Date: 28 DEC 2019 12:12:18

Highest Band Edge / 1 RB



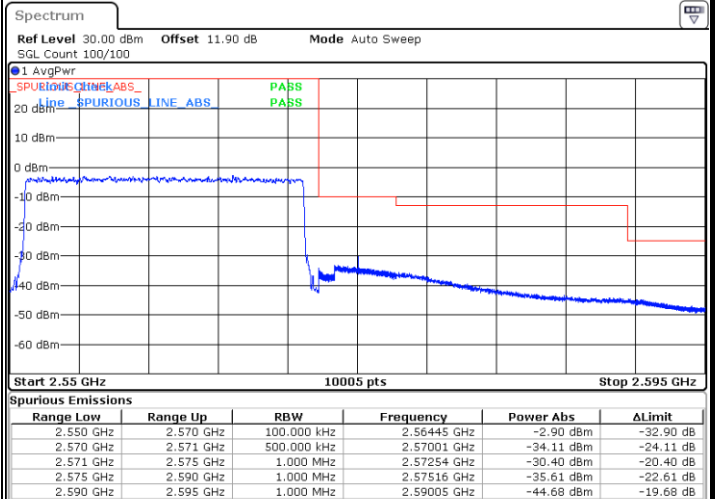
Date: 28 DEC 2019 12:17:48

Lowest Band Edge / Full RB



Date: 28 DEC 2019 12:13:40

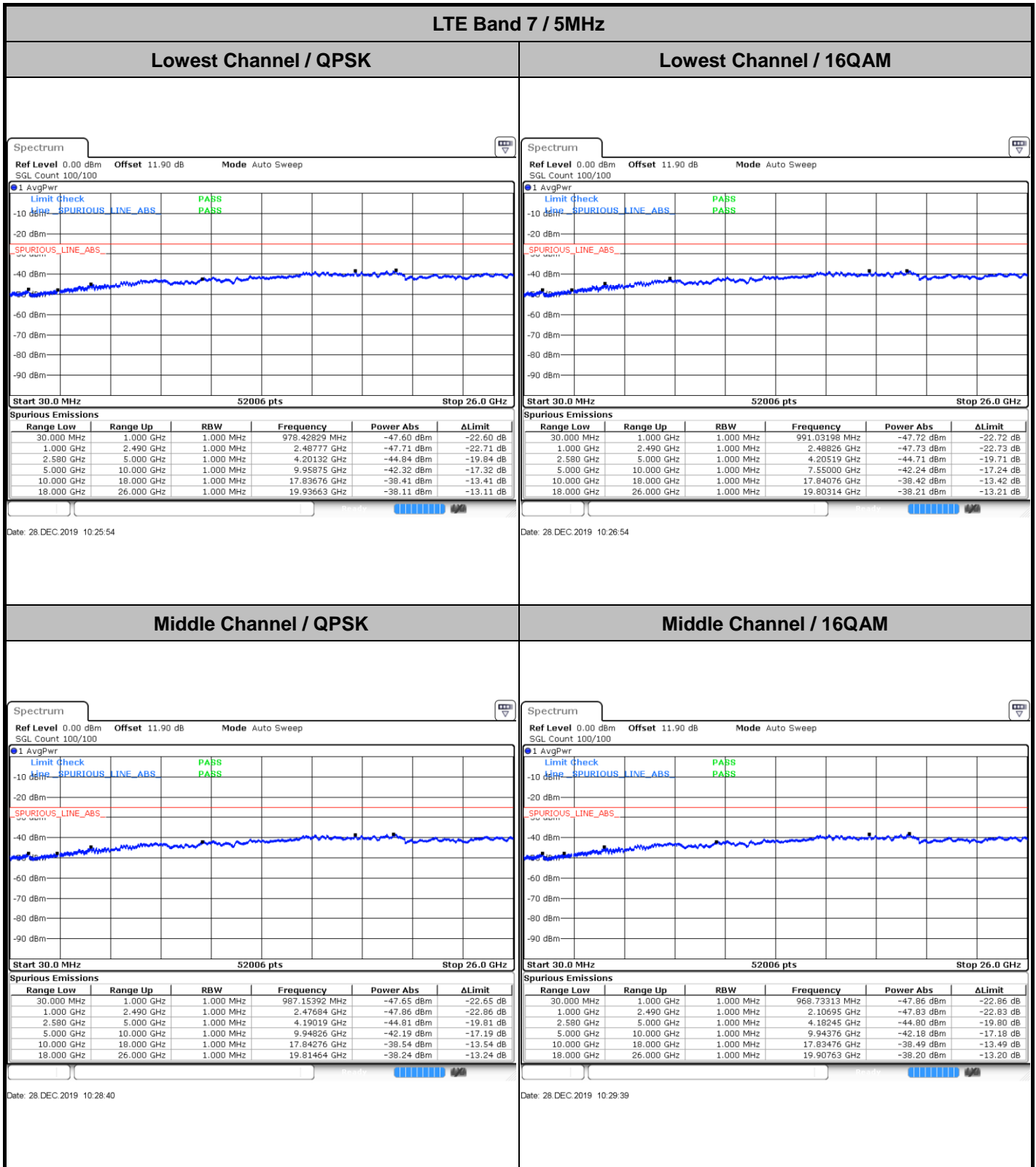
Highest Band Edge / Full RB



Date: 28 DEC 2019 12:19:09



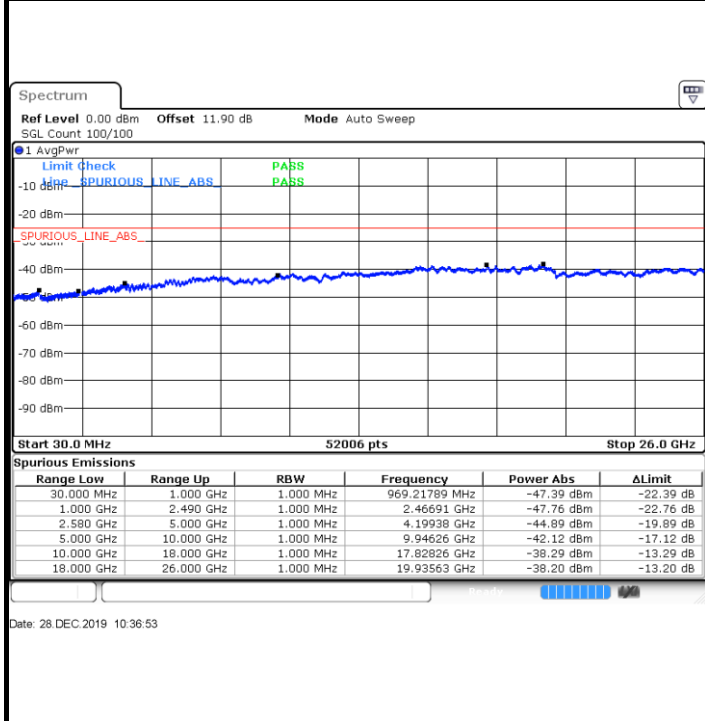
# Conducted Spurious Emission



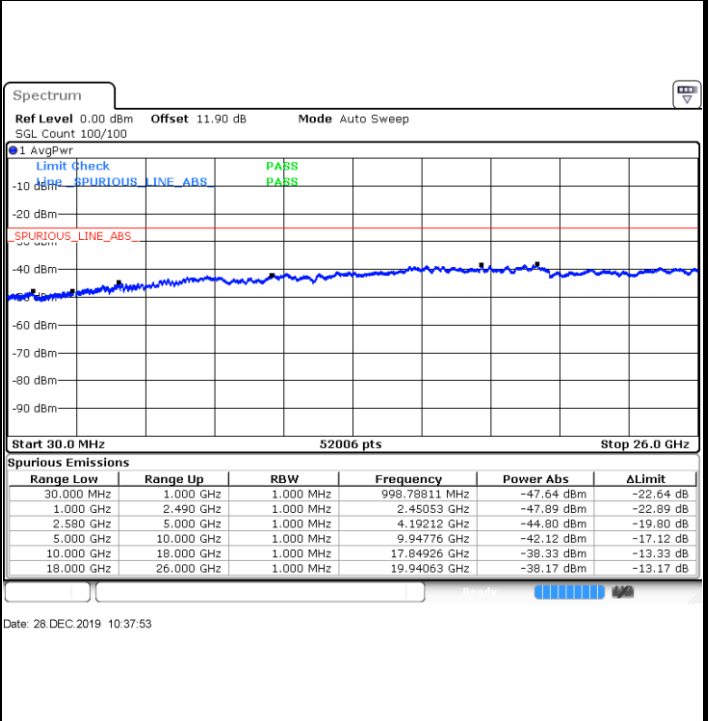


LTE Band 7 / 5MHz

Highest Channel / QPSK

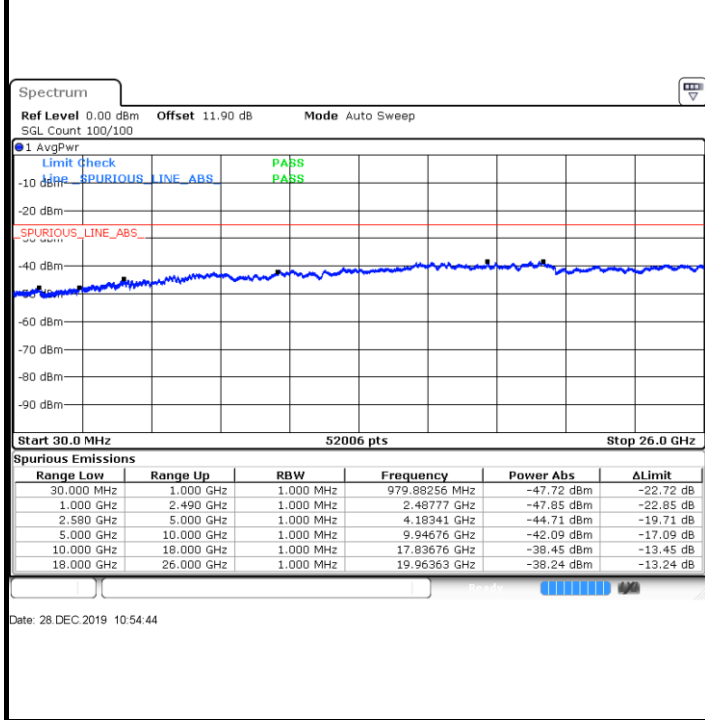


Highest Channel / 16QAM

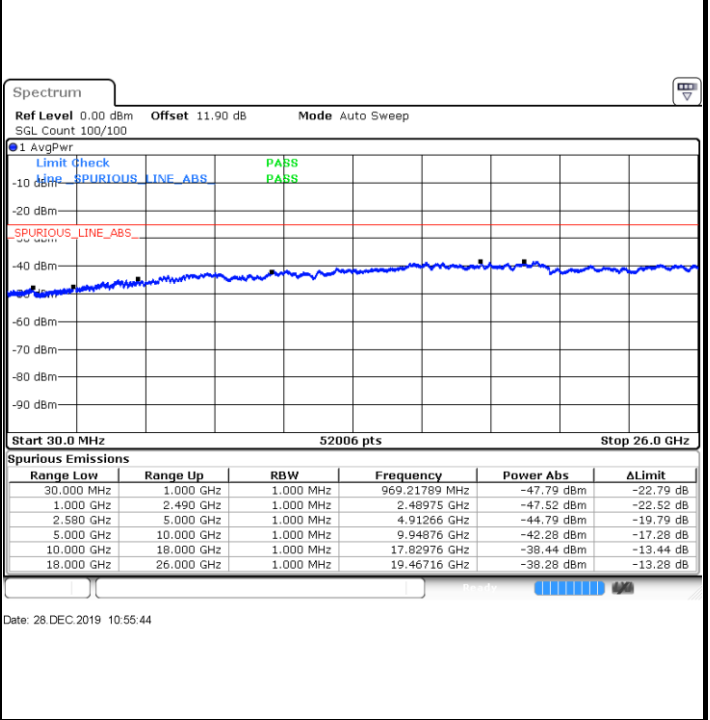


LTE Band 7 / 10MHz

Lowest Channel / QPSK



Lowest Channel / 16QAM

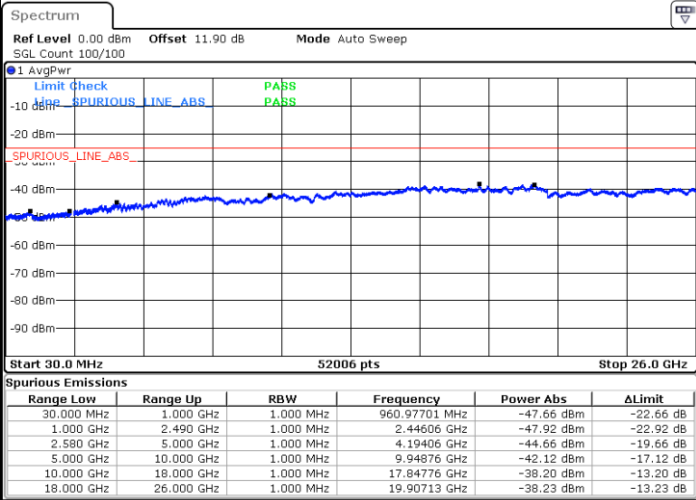




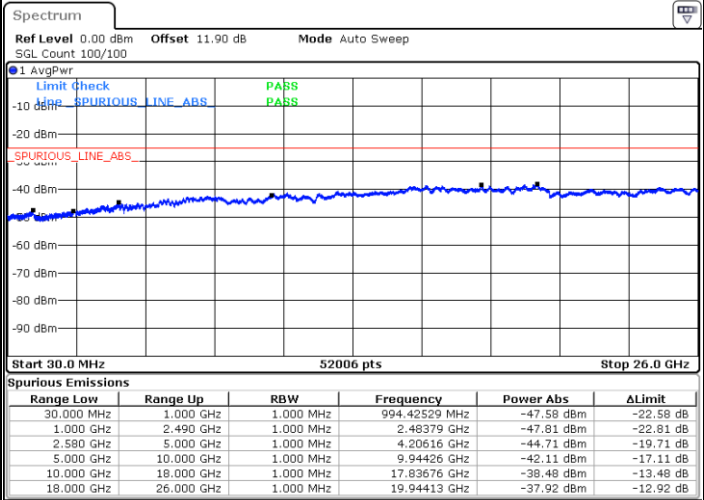
LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



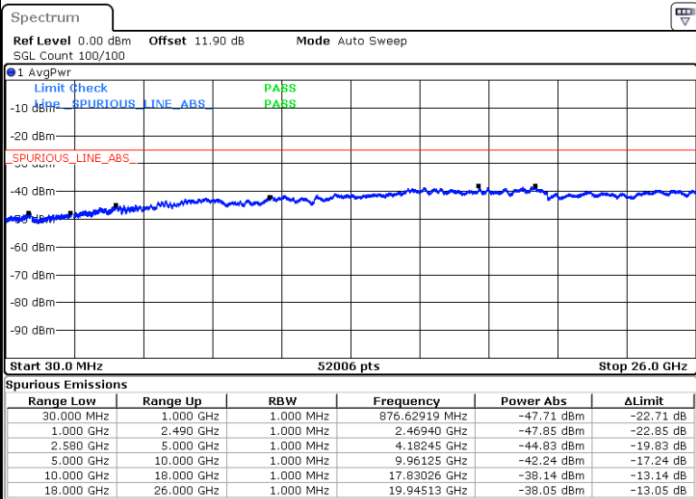
Date: 28 DEC 2019 10:57:30



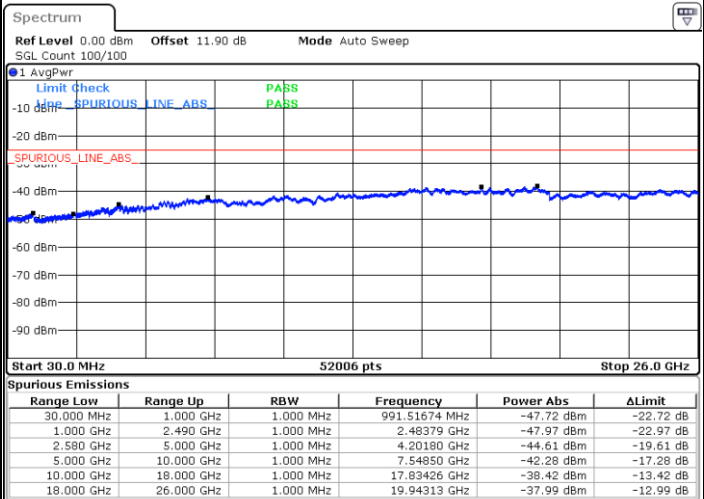
Date: 28 DEC 2019 10:58:30

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 28 DEC 2019 11:05:43



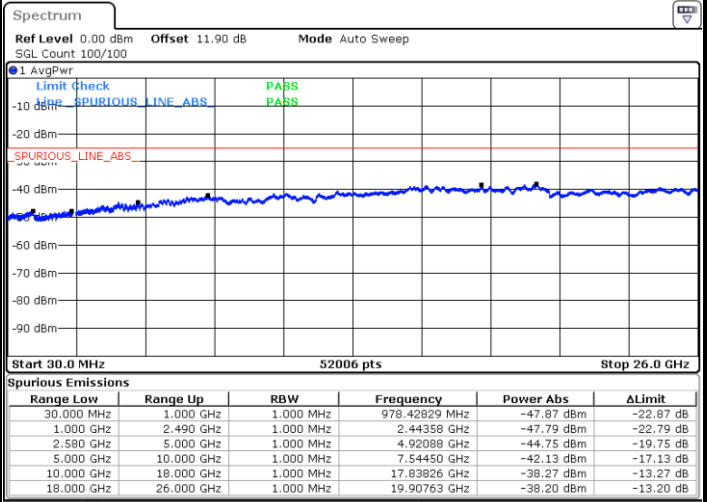
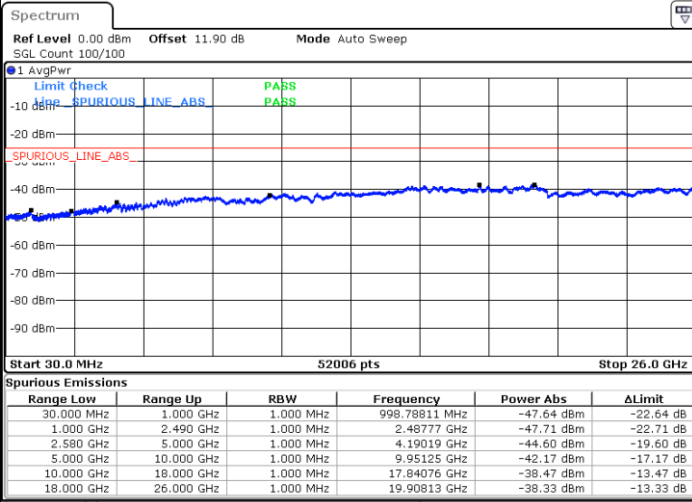
Date: 28 DEC 2019 11:06:44



LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

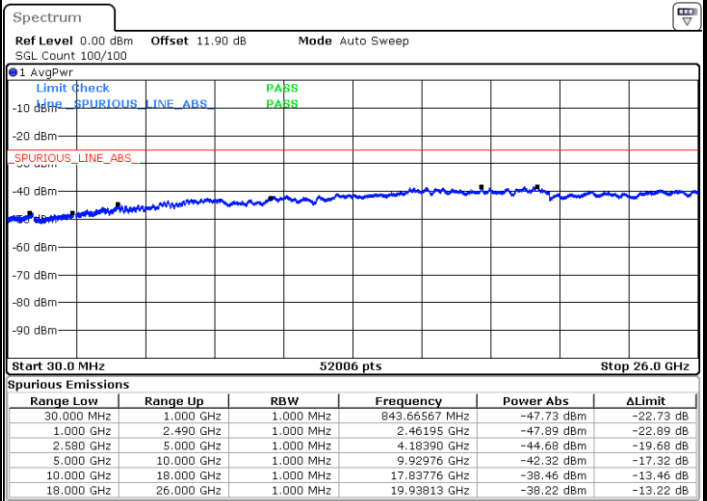
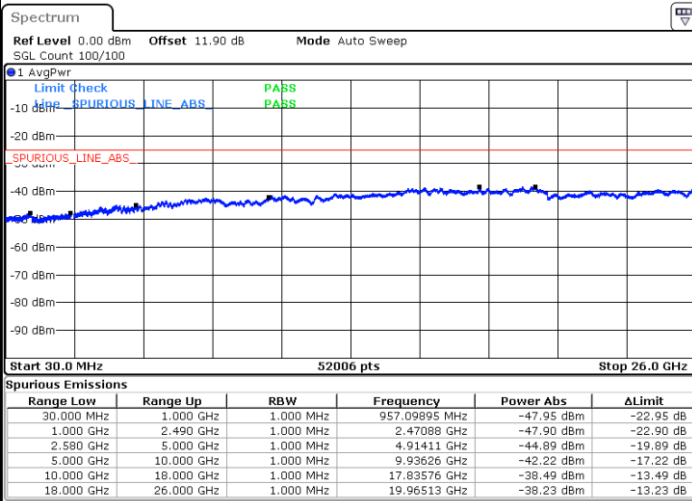


Date: 28 DEC.2019 11:29:42

Date: 28 DEC.2019 11:30:42

Middle Channel / QPSK

Middle Channel / 16QAM



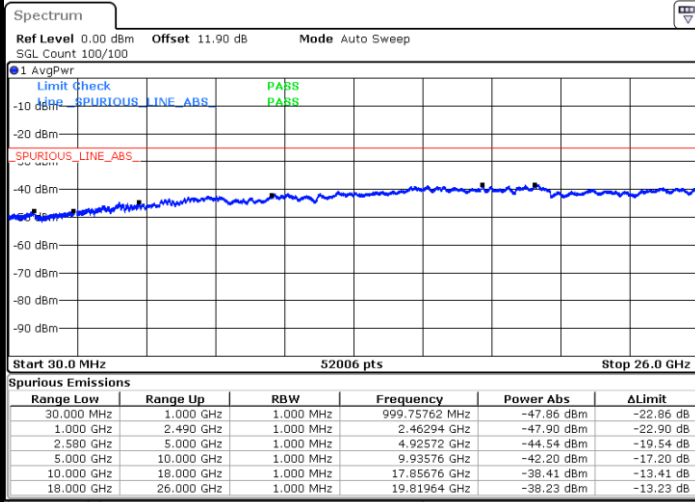
Date: 28 DEC.2019 11:32:28

Date: 28 DEC.2019 11:33:27



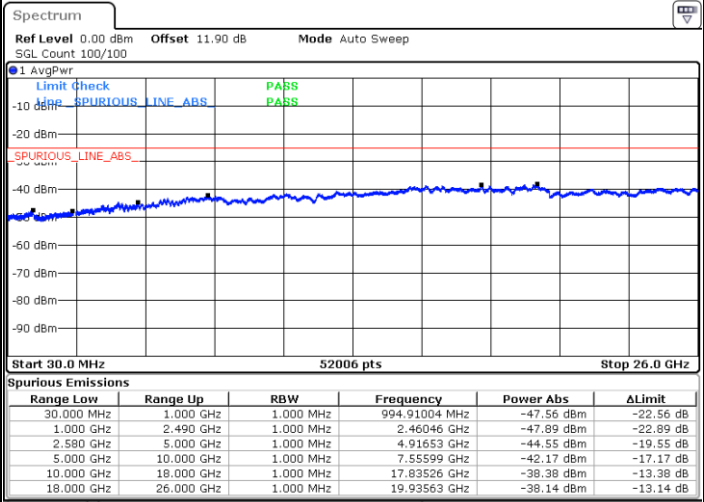
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 28 DEC 2019 11:40:41

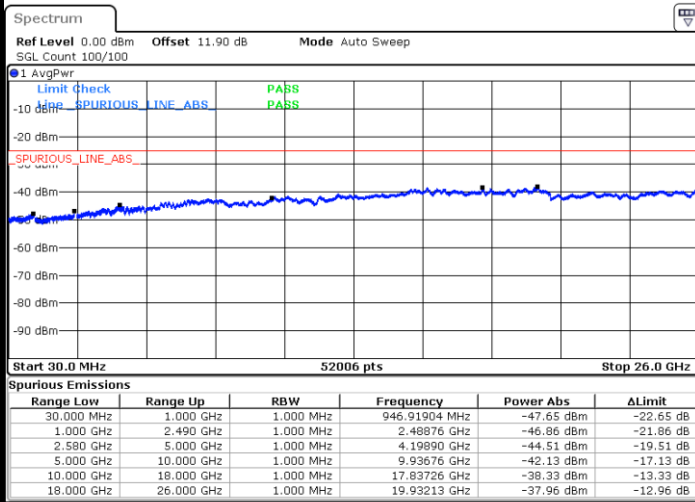
Highest Channel / 16QAM



Date: 28 DEC 2019 11:41:41

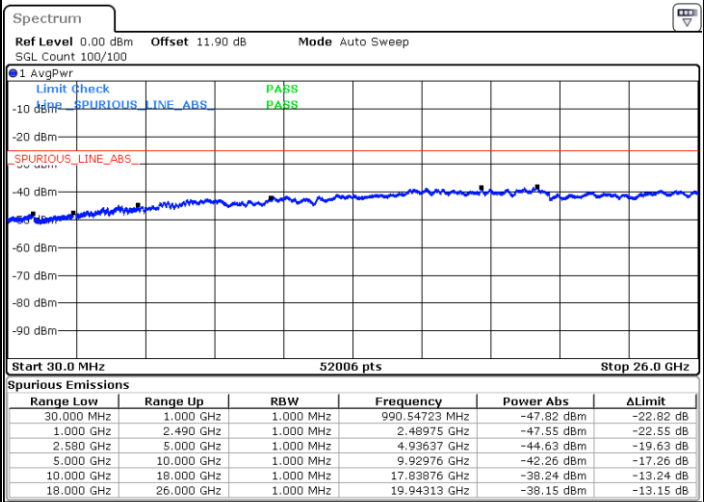
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 28 DEC 2019 11:58:34

Lowest Channel / 16QAM



Date: 28 DEC 2019 11:59:34

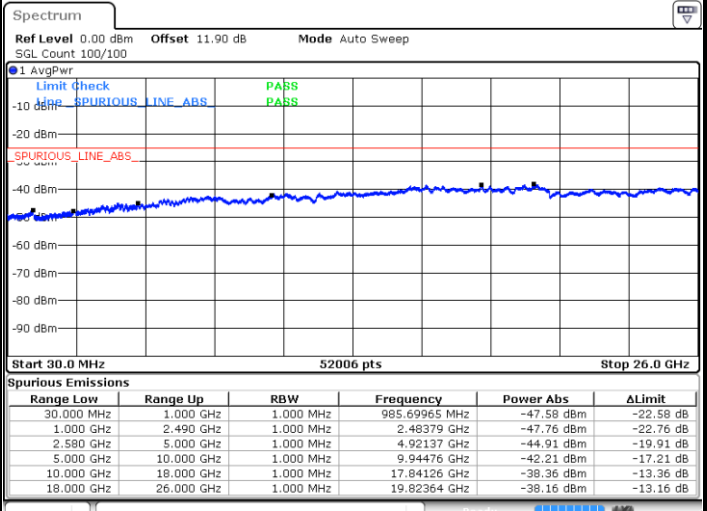
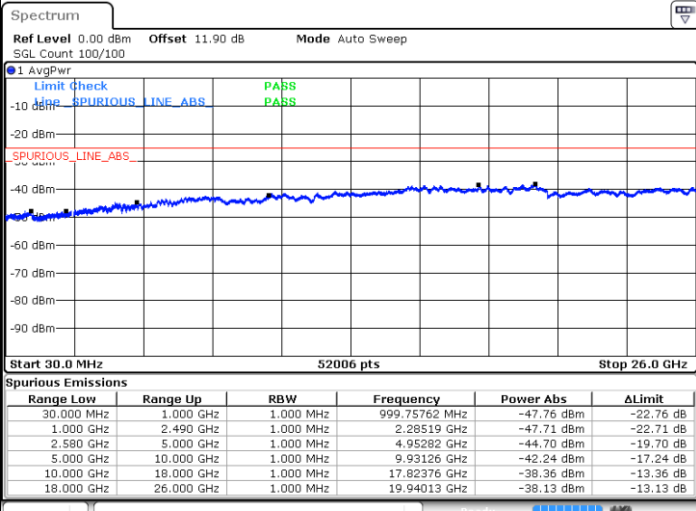




LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

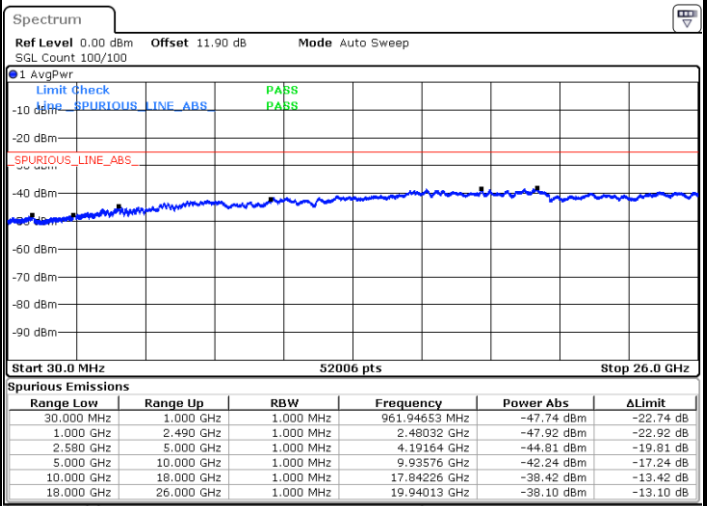
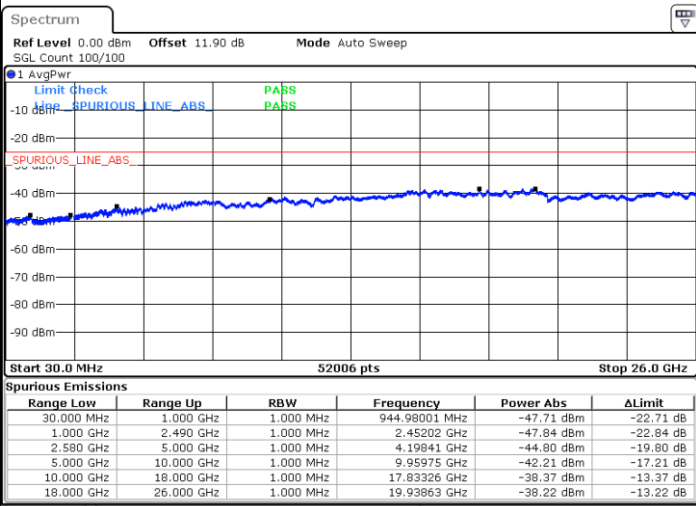


Date: 28 DEC.2019 12:01:20

Date: 28 DEC.2019 12:02:19

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 28 DEC.2019 12:09:33

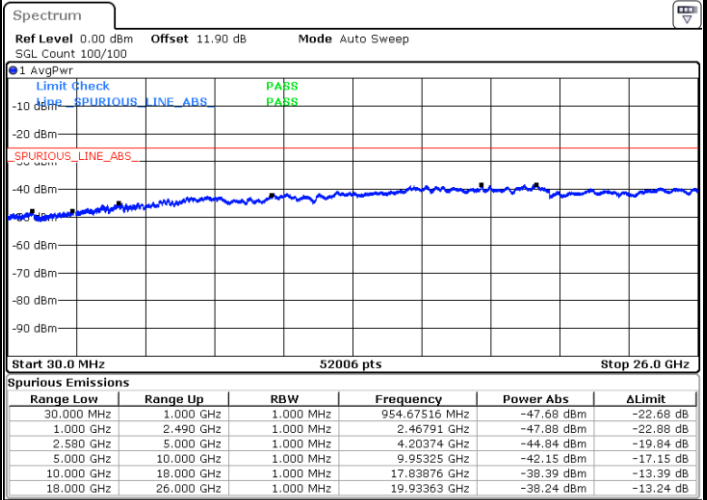
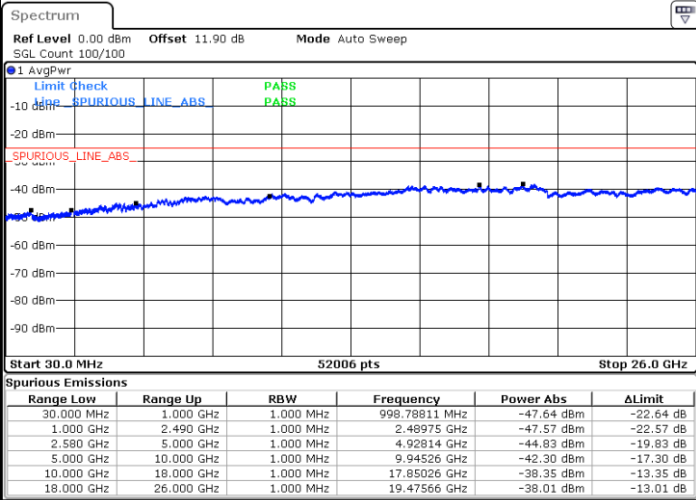
Date: 28 DEC.2019 12:10:33



LTE Band 7 / 5MHz

Lowest Channel / 64QAM

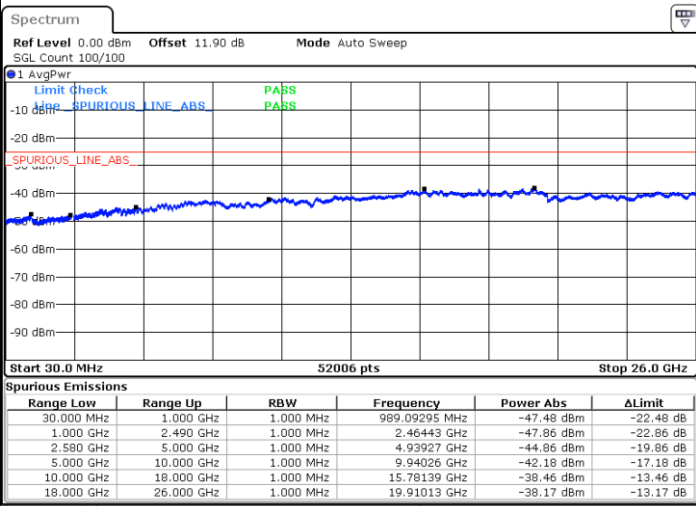
Middle Channel / 64QAM



Date: 28 DEC 2019 10:42:01

Date: 28 DEC 2019 10:43:23

Highest Channel / 64QAM



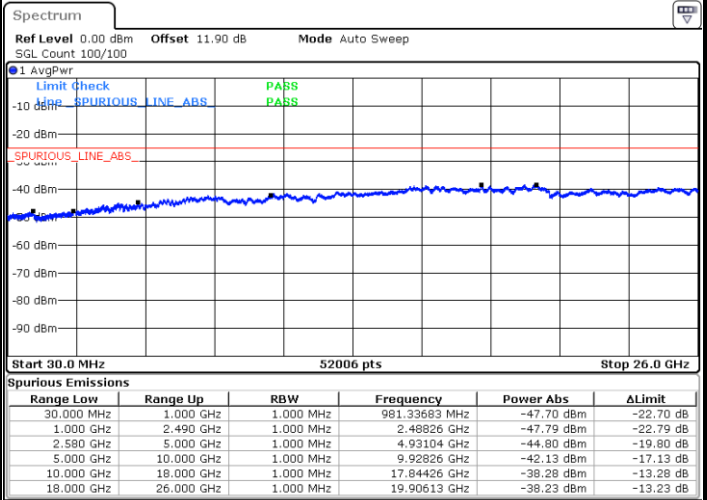
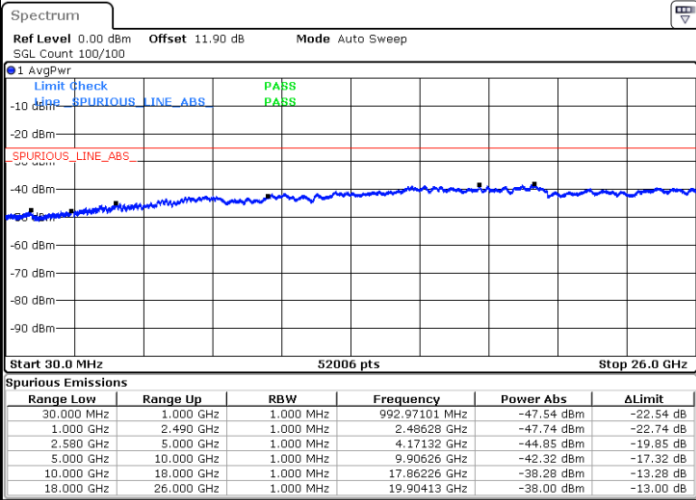
Date: 28 DEC 2019 10:47:30



LTE Band 7 / 10MHz

Lowest Channel / 64QAM

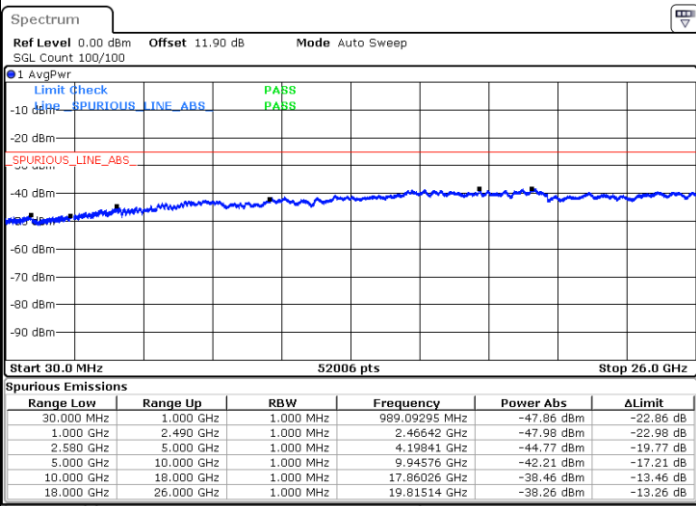
Middle Channel / 64QAM



Date: 28 DEC 2019 11:10:50

Date: 28 DEC 2019 11:18:19

Highest Channel / 64QAM



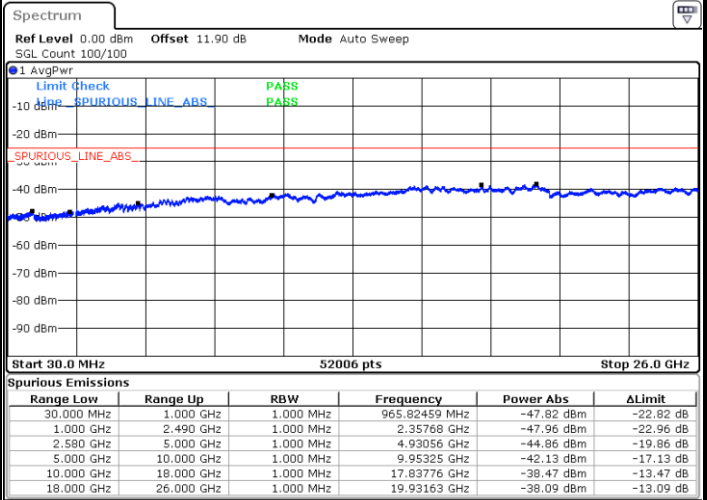
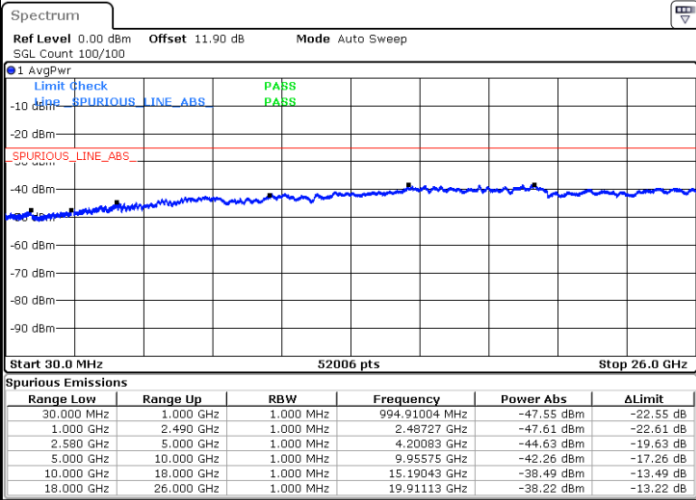
Date: 28 DEC 2019 11:22:26



LTE Band 7 / 15MHz

Lowest Channel / 64QAM

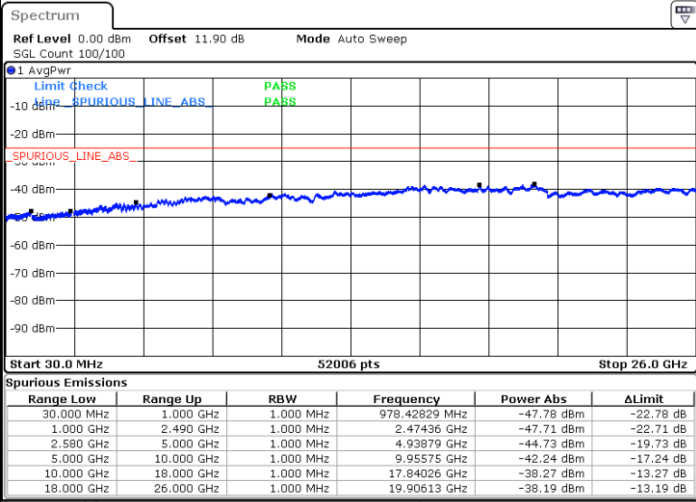
Middle Channel / 64QAM



Date: 28 DEC 2019 11:45:49

Date: 28 DEC 2019 11:47:11

Highest Channel / 64QAM



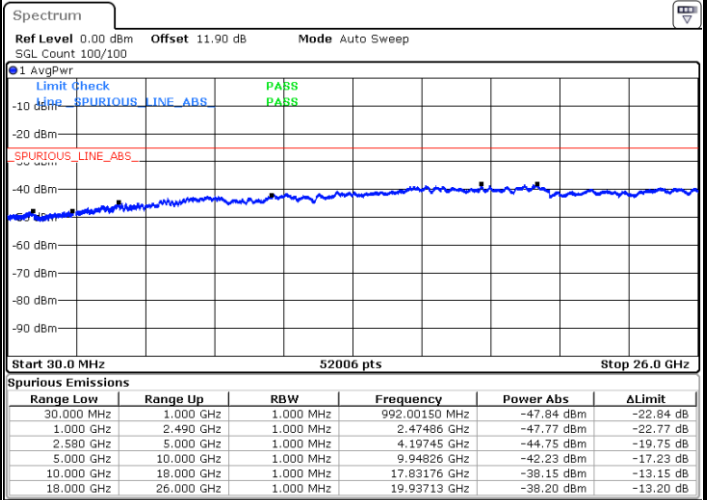
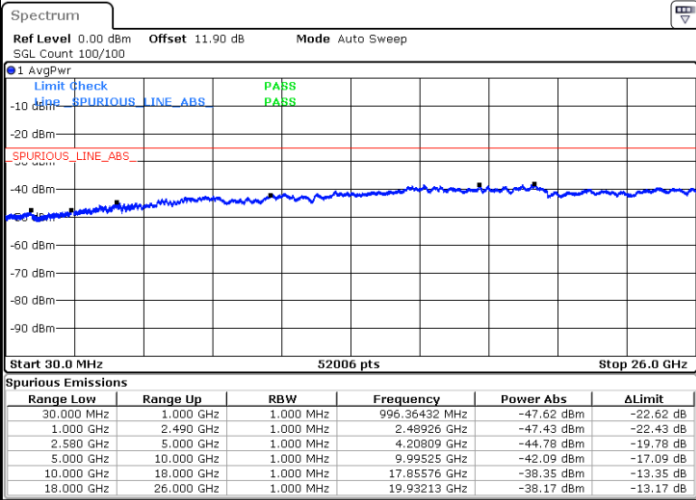
Date: 28 DEC 2019 11:51:18



LTE Band 7 / 20MHz

Lowest Channel / 64QAM

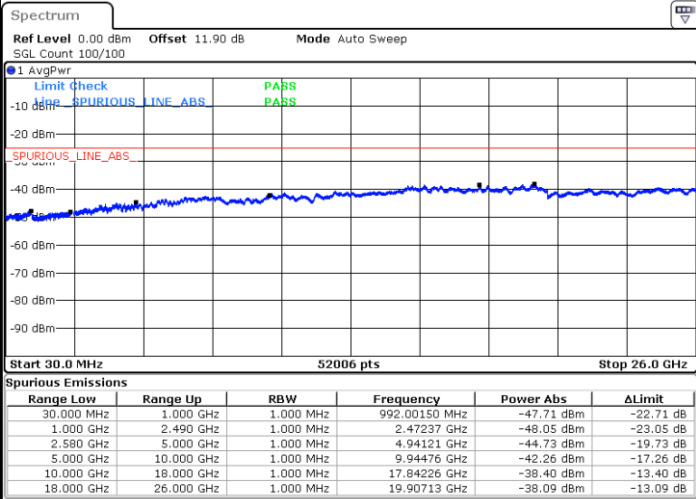
Middle Channel / 64QAM



Date: 28 DEC 2019 12:14:40

Date: 28 DEC 2019 12:16:03

Highest Channel / 64QAM



Date: 28 DEC 2019 12:20:10



Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0009	PASS
40	Normal Voltage	0.0001	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0022	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0033	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0007	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.65 V. ; Maximum Voltage =4.25 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 12

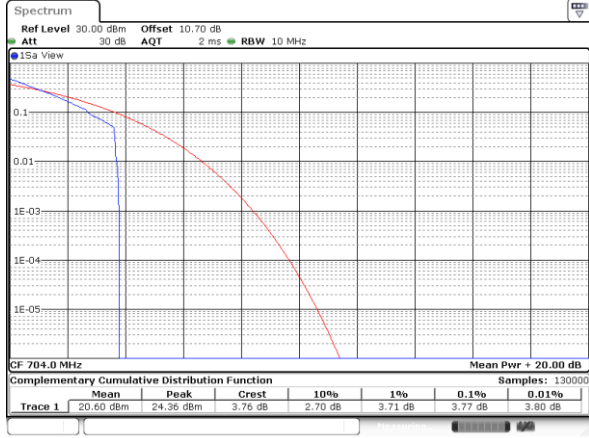
### Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.77	4.90	4.49	5.80	PASS
Middle CH	3.59	4.84	5.36	5.88	
Highest CH	3.51	4.90	5.04	5.77	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.71	6.35	-	-	PASS
Middle CH	6.64	6.35	-	-	
Highest CH	6.43	6.17	-	-	



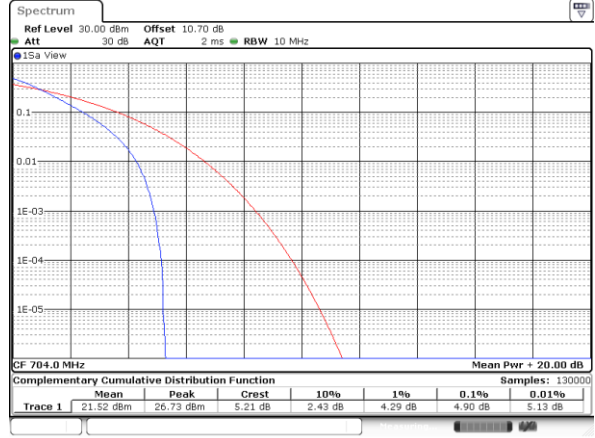
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



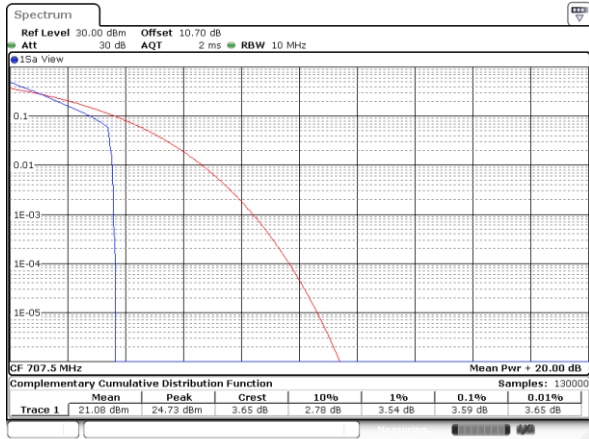
Date: 31.DEC.2019 13:33:45

Lowest Channel / Full RB



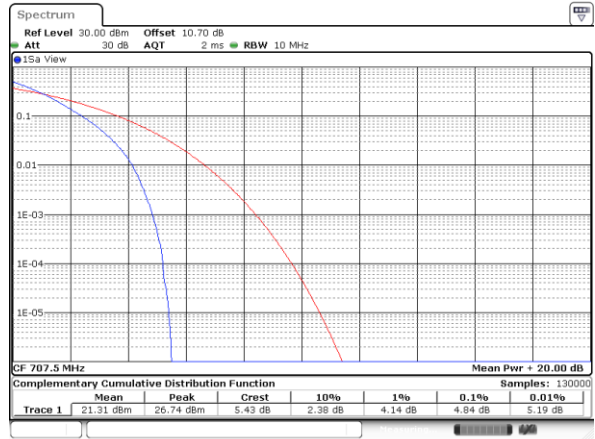
Date: 31.DEC.2019 13:33:31

Middle Channel / 1RB



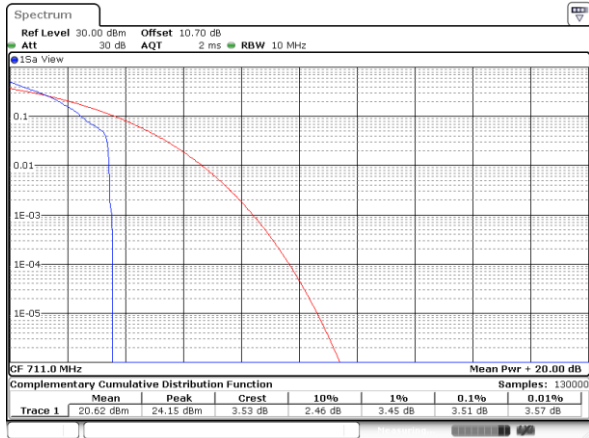
Date: 31.DEC.2019 13:33:59

Middle Channel / Full RB



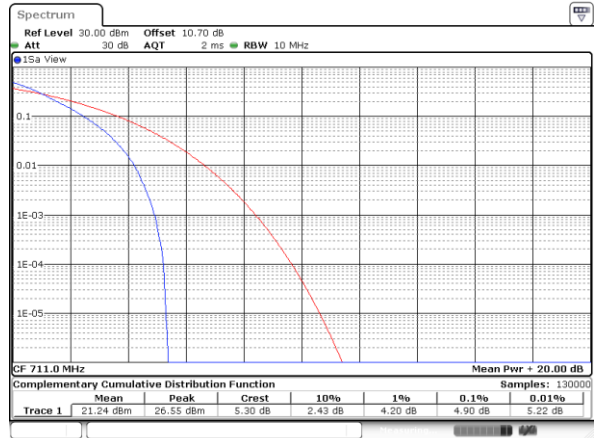
Date: 31.DEC.2019 13:34:12

Highest Channel / 1RB



Date: 31.DEC.2019 13:34:40

Highest Channel / Full RB



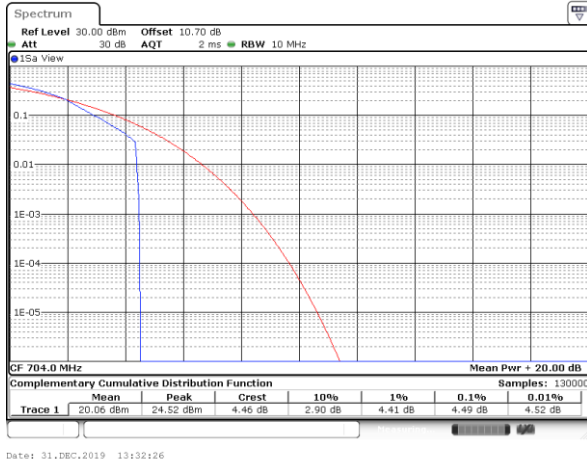
Date: 31.DEC.2019 13:34:26



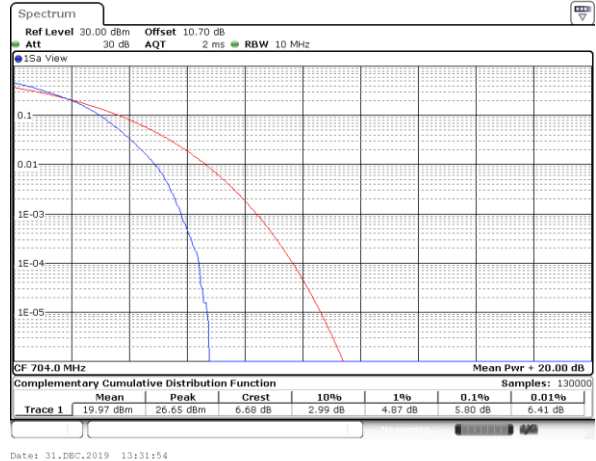


LTE Band 12 / 10MHz / 16QAM

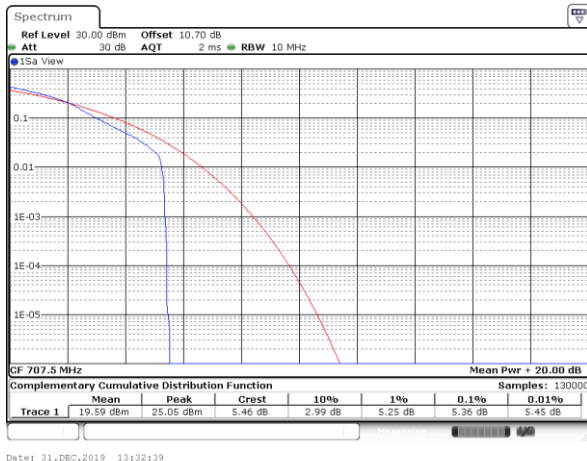
Lowest Channel / 1RB



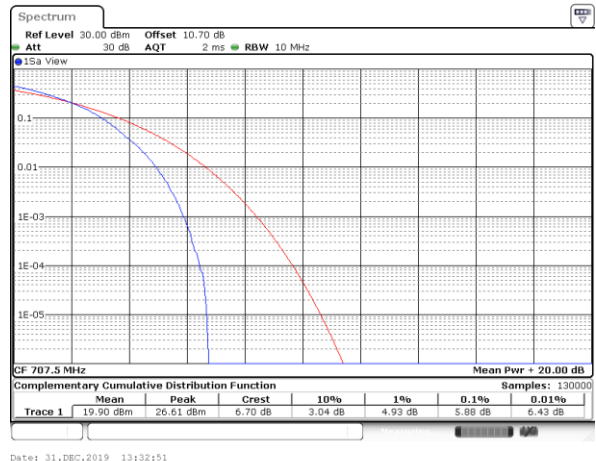
Lowest Channel / Full RB



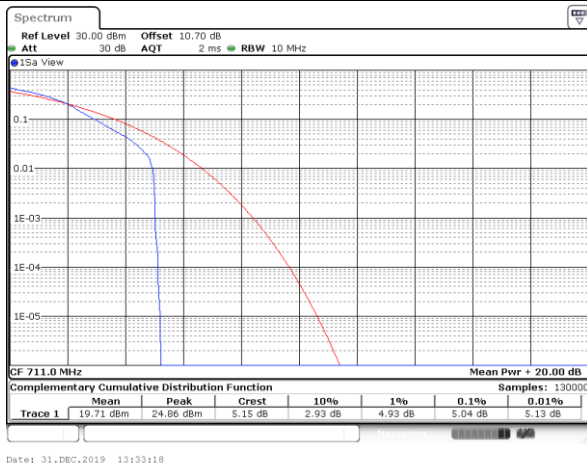
Middle Channel / 1RB



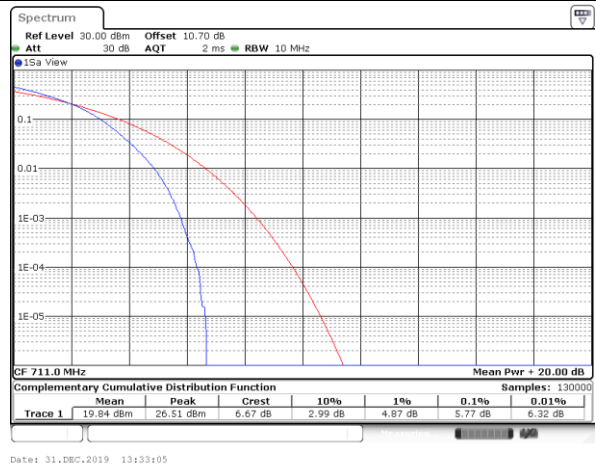
Middle Channel / Full RB



Highest Channel / 1RB



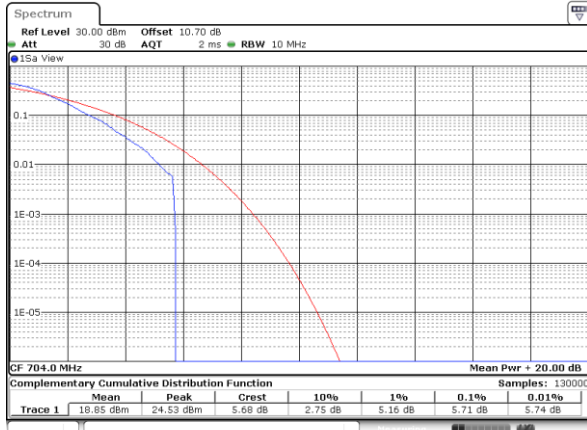
Highest Channel / Full RB





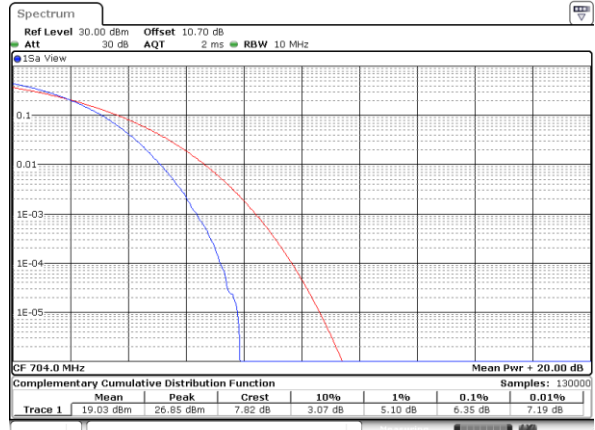
LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



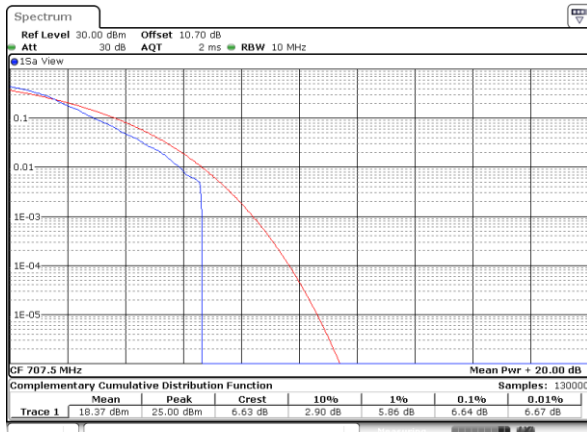
Date: 31.DEC.2019 13:30:18

Lowest Channel / Full RB



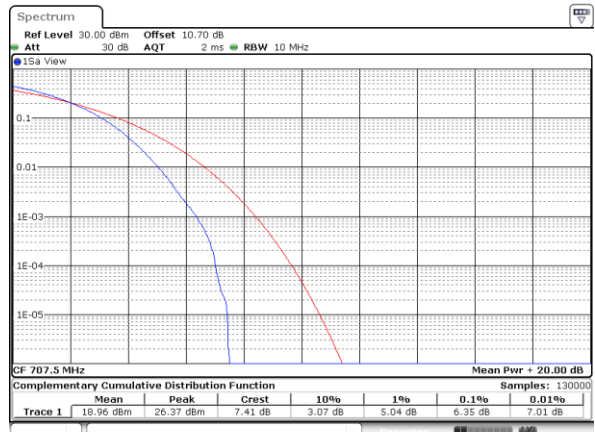
Date: 31.DEC.2019 13:30:04

Middle Channel / 1RB



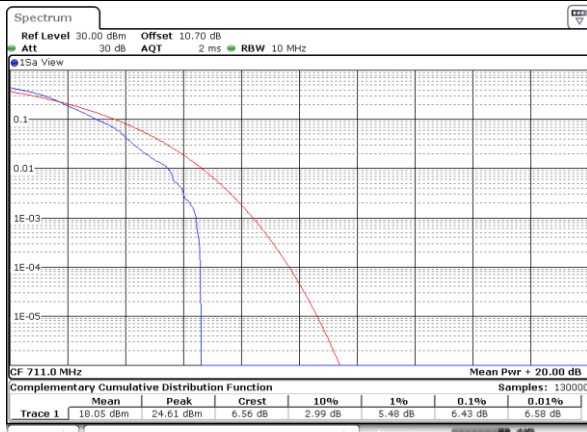
Date: 31.DEC.2019 13:30:31

Middle Channel / Full RB



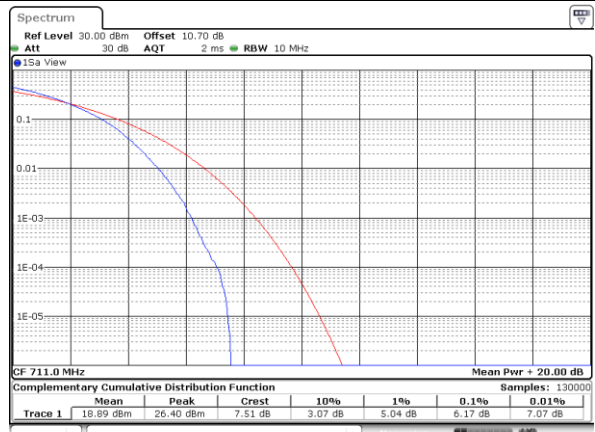
Date: 31.DEC.2019 13:30:44

Highest Channel / 1RB



Date: 31.DEC.2019 13:31:38

Highest Channel / Full RB



Date: 31.DEC.2019 13:30:59



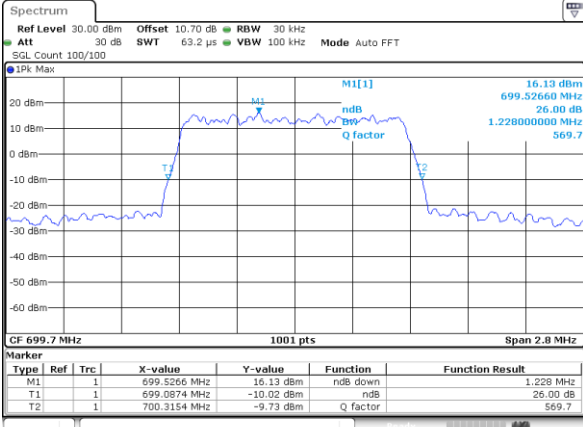
**26dB Bandwidth**

Mode	LTE Band 12 : 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	1.23	1.22	3.03	3.02	4.94	4.85	9.65	9.71	-	-	-	-
Middle CH	1.23	1.23	3.00	3.03	4.78	4.90	9.73	9.73	-	-	-	-
Highest CH	1.22	1.23	3.02	3.00	4.90	4.91	9.61	9.75	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.24	-	3.03	-	4.87	-	9.75	-	-	-	-	-
Middle CH	1.21	-	3.04	-	4.87	-	9.71	-	-	-	-	-
Highest CH	1.22	-	3.04	-	4.88	-	9.85	-	-	-	-	-



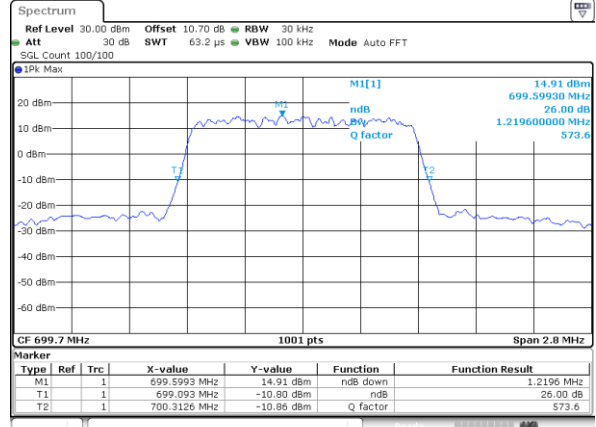
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



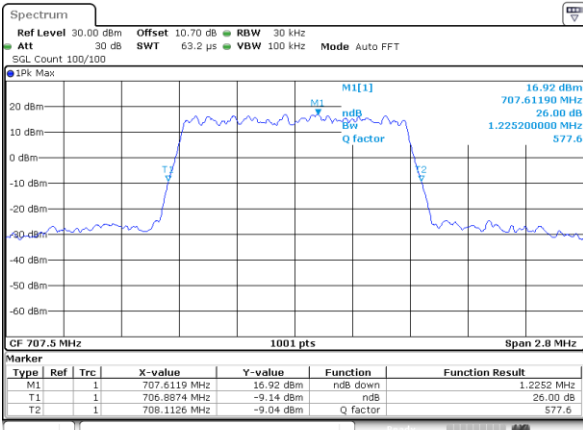
Date: 31. DEC. 2019 09:38:05

Lowest Channel / 1.4MHz / 16QAM



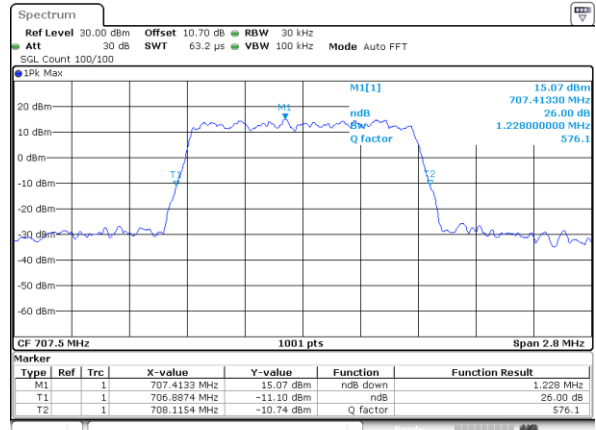
Date: 31. DEC. 2019 09:37:51

Middle Channel / 1.4MHz / QPSK



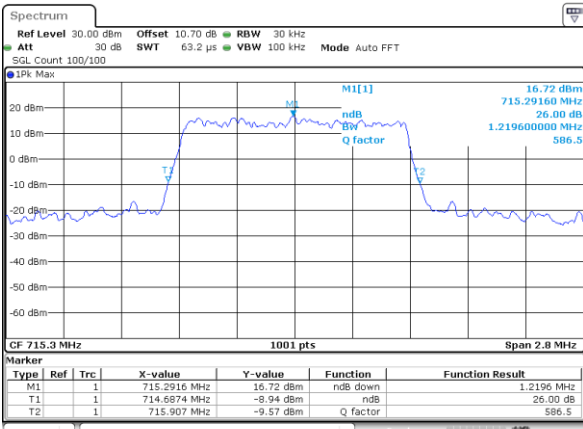
Date: 31. DEC. 2019 09:50:40

Middle Channel / 1.4MHz / 16QAM



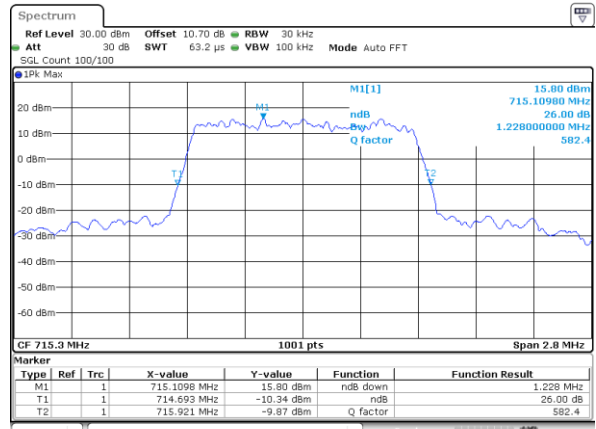
Date: 31. DEC. 2019 09:50:53

Highest Channel / 1.4MHz / QPSK



Date: 31. DEC. 2019 10:01:50

Highest Channel / 1.4MHz / 16QAM

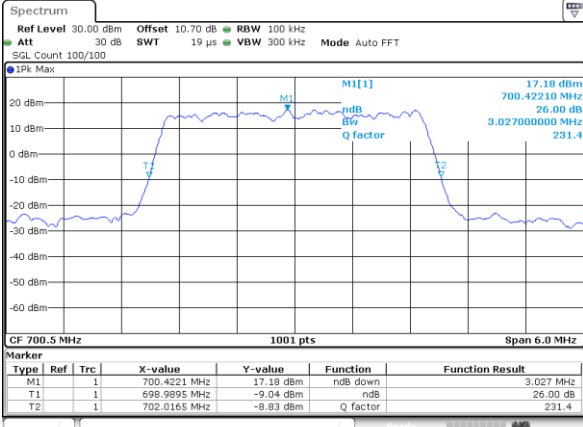


Date: 31. DEC. 2019 10:01:36



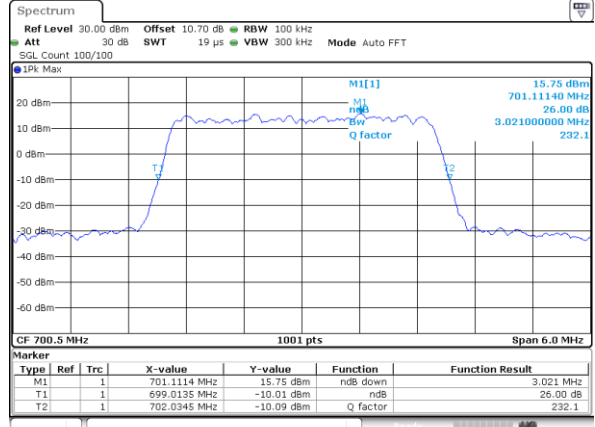
LTE Band 12

Lowest Channel / 3MHz / QPSK



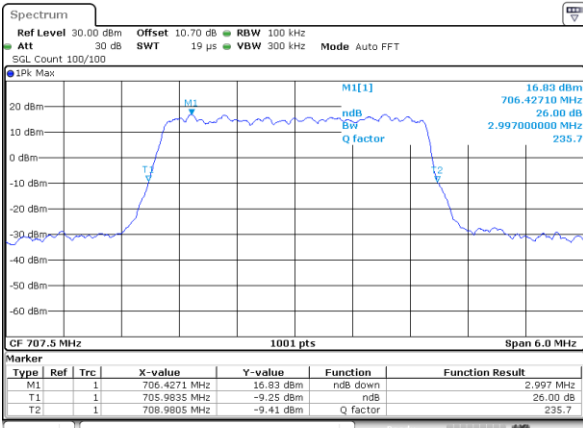
Date: 31. DEC. 2019 10:21:06

Lowest Channel / 3MHz / 16QAM



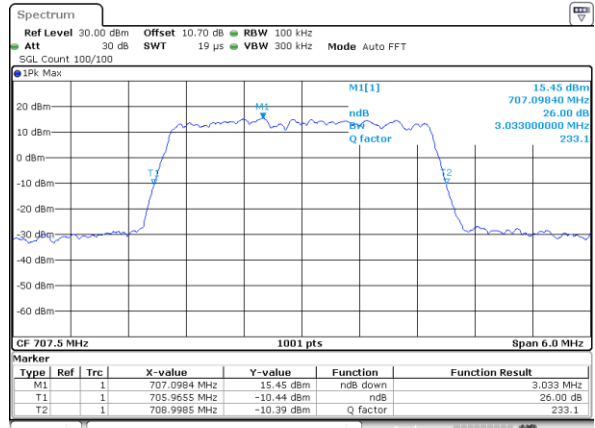
Date: 31. DEC. 2019 10:20:53

Middle Channel / 3MHz / QPSK



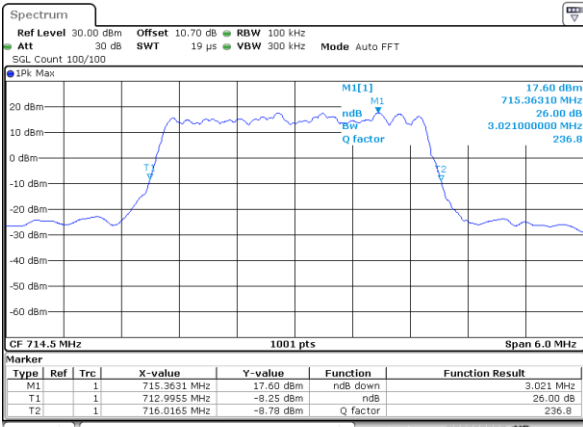
Date: 31. DEC. 2019 10:33:25

Middle Channel / 3MHz / 16QAM



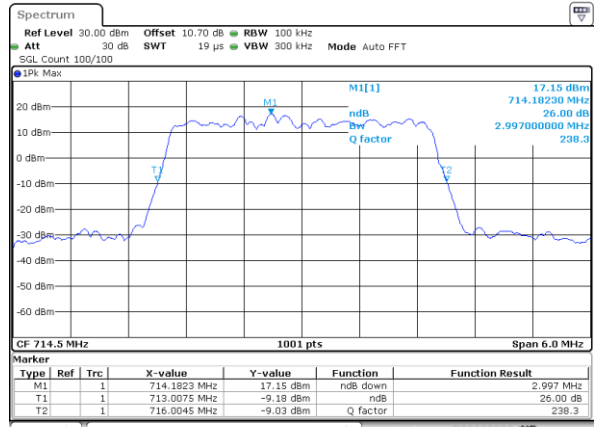
Date: 31. DEC. 2019 10:33:19

Highest Channel / 3MHz / QPSK



Date: 31. DEC. 2019 10:36:41

Highest Channel / 3MHz / 16QAM

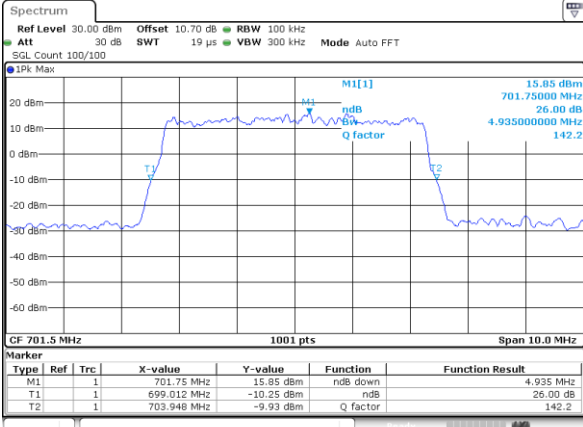


Date: 31. DEC. 2019 10:36:25



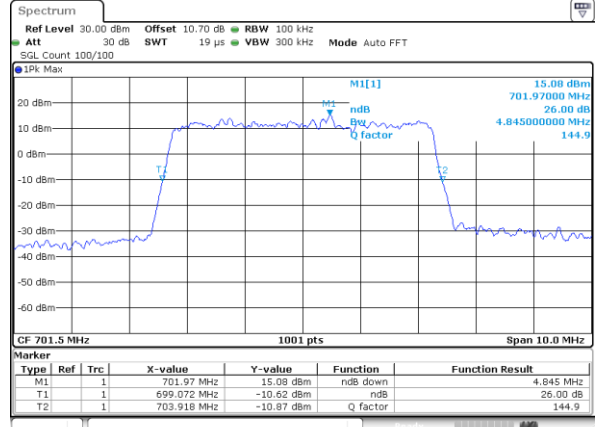
LTE Band 12

Lowest Channel / 5MHz / QPSK



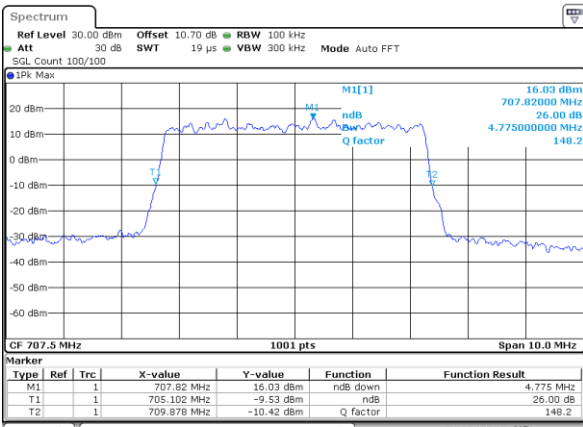
Date: 31.DEC.2019 11:07:35

Lowest Channel / 5MHz / 16QAM



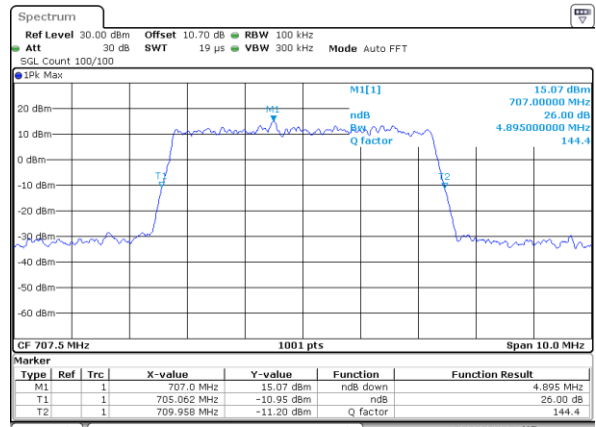
Date: 31.DEC.2019 11:07:22

Middle Channel / 5MHz / QPSK



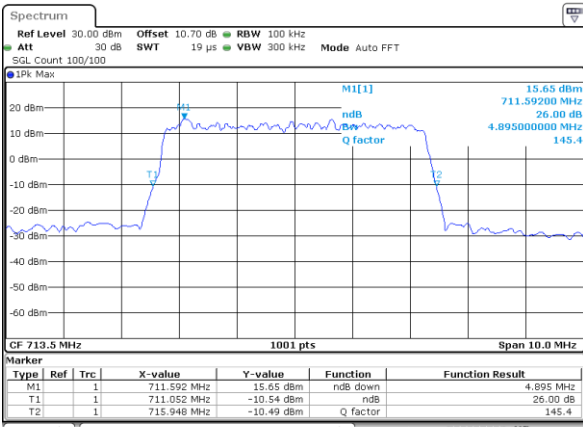
Date: 31.DEC.2019 11:15:45

Middle Channel / 5MHz / 16QAM



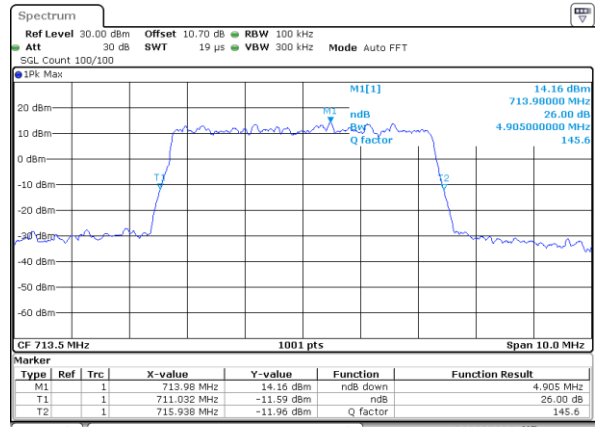
Date: 31.DEC.2019 11:15:58

Highest Channel / 5MHz / QPSK



Date: 31.DEC.2019 11:18:57

Highest Channel / 5MHz / 16QAM

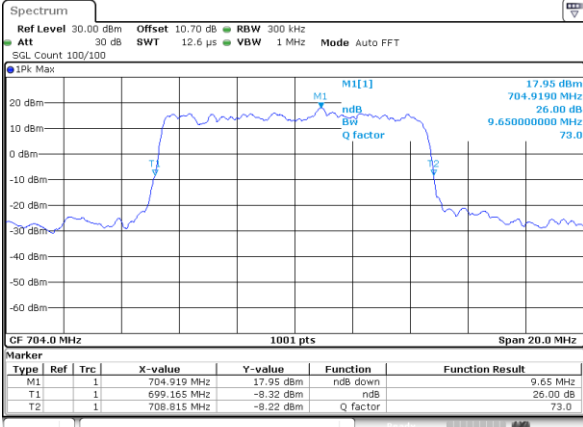


Date: 31.DEC.2019 11:18:44



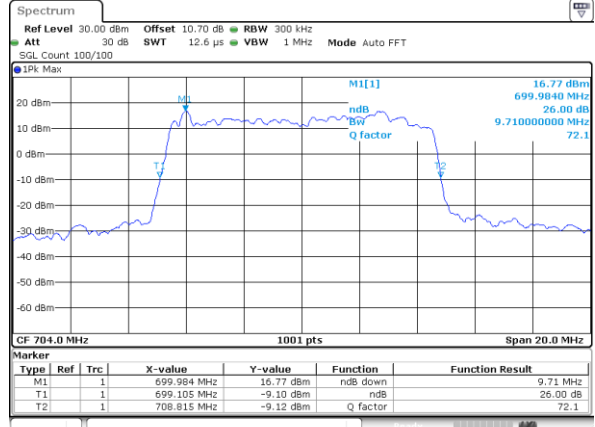
LTE Band 12

Lowest Channel / 10MHz / QPSK



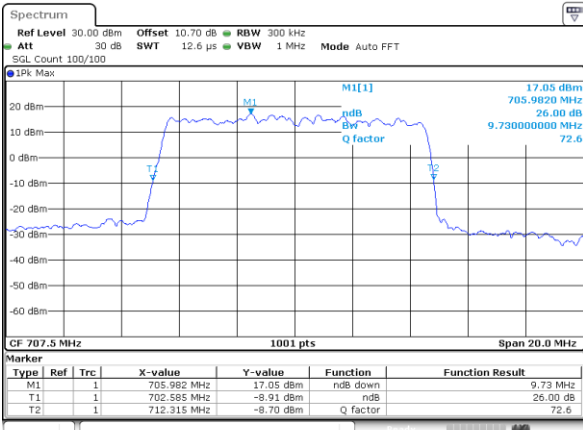
Date: 31.Dec.2019 11:27:23

Lowest Channel / 10MHz / 16QAM



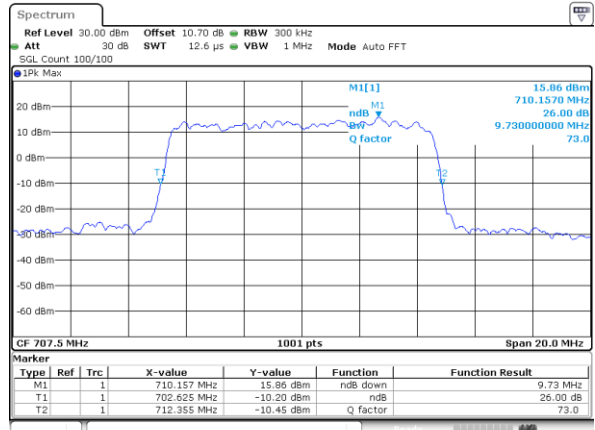
Date: 31.Dec.2019 11:27:09

Middle Channel / 10MHz / QPSK



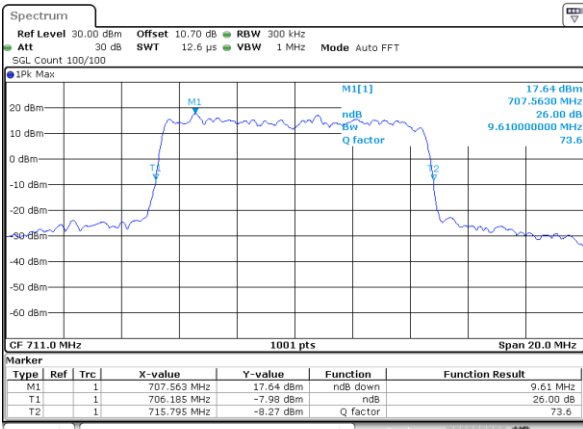
Date: 31.Dec.2019 11:57:11

Middle Channel / 10MHz / 16QAM



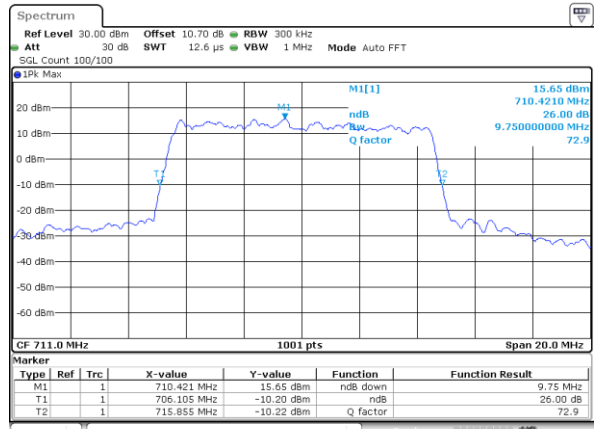
Date: 31.Dec.2019 11:57:24

Highest Channel / 10MHz / QPSK



Date: 31.Dec.2019 12:00:27

Highest Channel / 10MHz / 16QAM

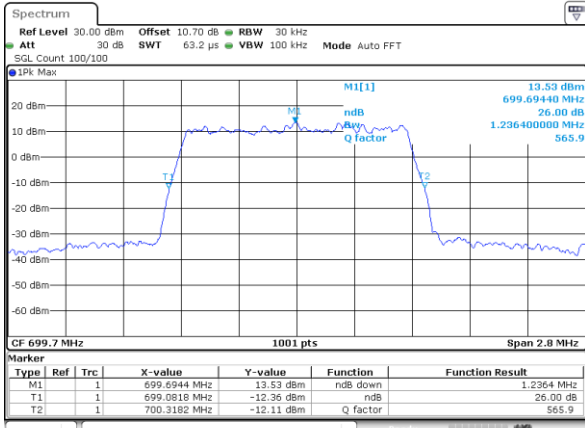


Date: 31.Dec.2019 12:00:12



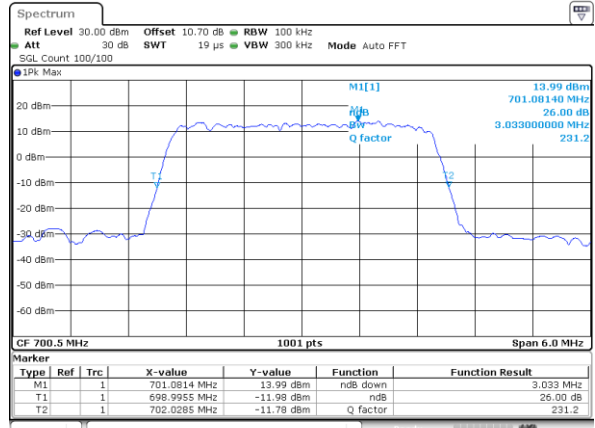
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



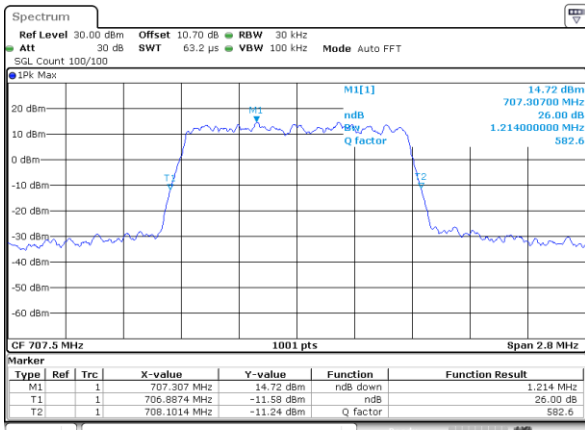
Date: 31. DEC. 2019 10:10:45

Lowest Channel / 3MHz / 64QAM



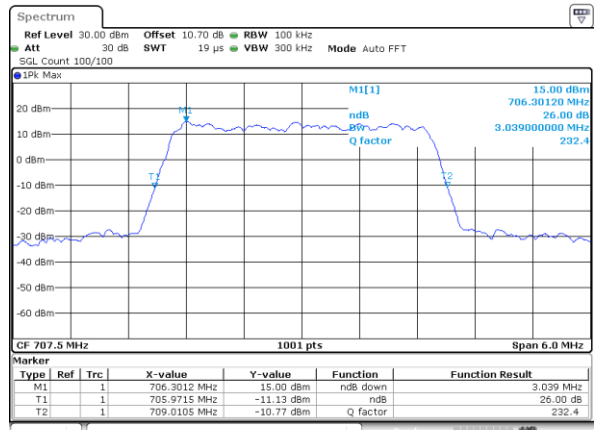
Date: 31. DEC. 2019 10:44:41

Middle Channel / 1.4MHz / 64QAM



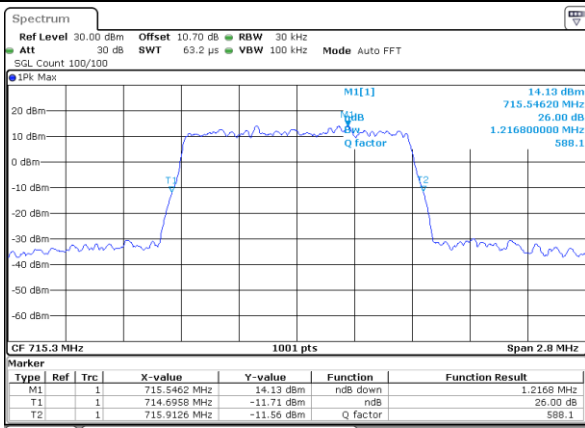
Date: 31. DEC. 2019 10:14:56

Middle Channel / 3MHz / 64QAM



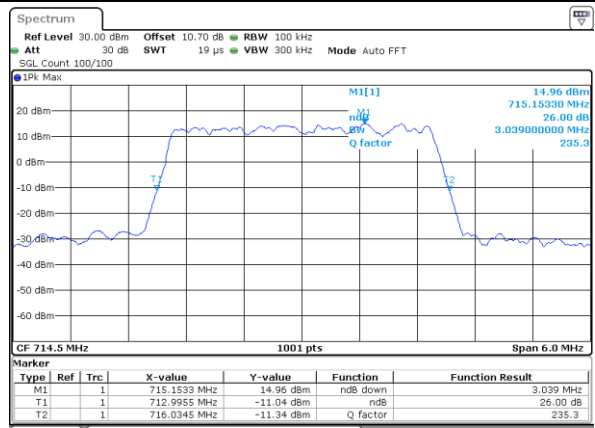
Date: 31. DEC. 2019 10:48:53

Highest Channel / 1.4MHz / 64QAM



Date: 31. DEC. 2019 10:16:26

Highest Channel / 3MHz / 64QAM



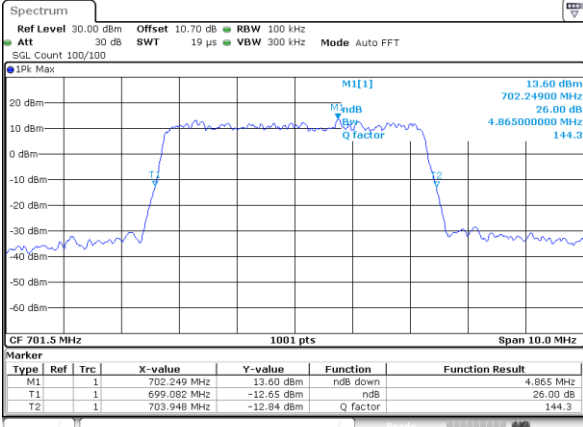
Date: 31. DEC. 2019 10:50:26





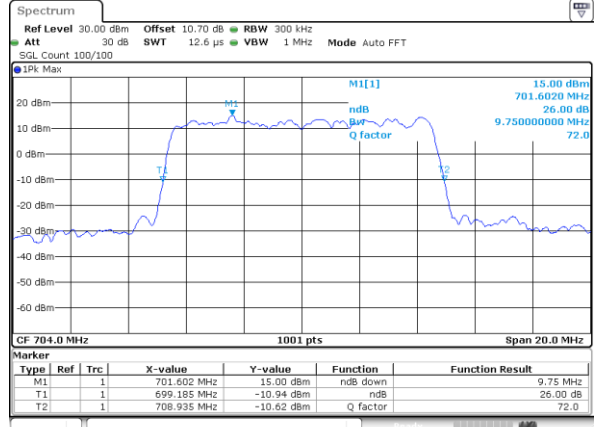
LTE Band 12

Lowest Channel / 5MHz / 64QAM



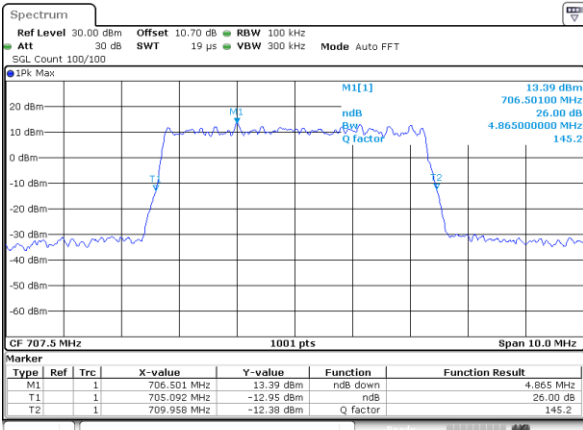
Date: 31. DEC. 2019 10:54:40

Lowest Channel / 10MHz / 64QAM



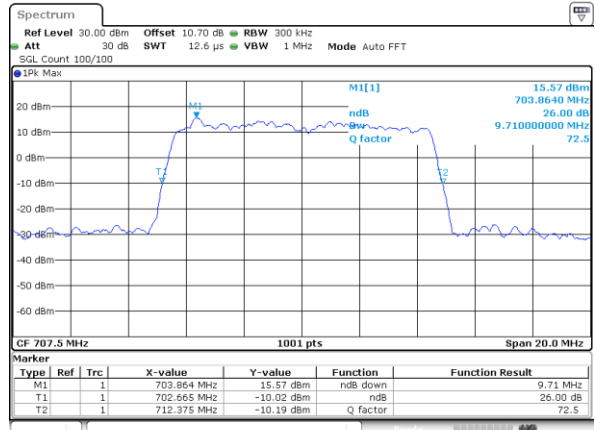
Date: 31. DEC. 2019 12:11:54

Middle Channel / 5MHz / 64QAM



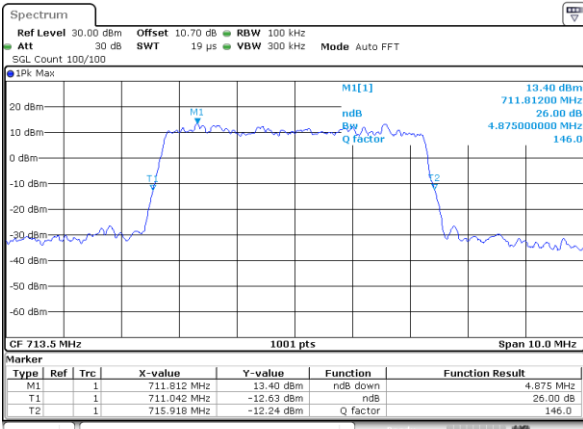
Date: 31. DEC. 2019 10:58:52

Middle Channel / 10MHz / 64QAM



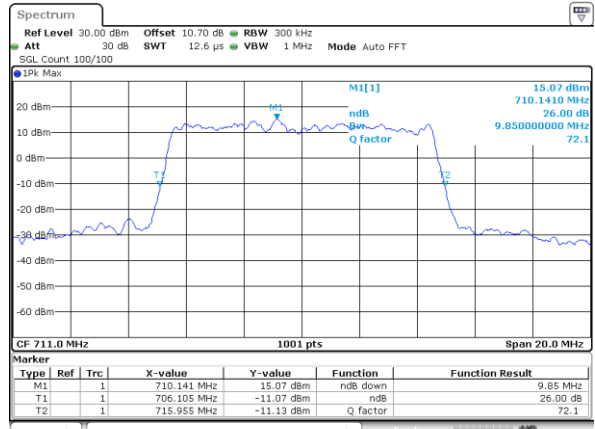
Date: 31. DEC. 2019 12:11:57

Highest Channel / 5MHz / 64QAM



Date: 31. DEC. 2019 11:02:53

Highest Channel / 10MHz / 64QAM



Date: 31. DEC. 2019 12:11:38



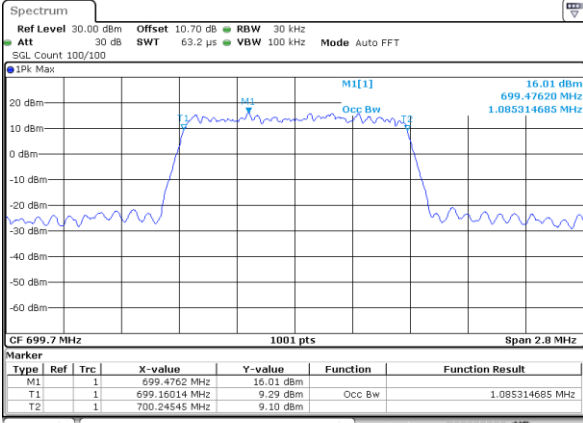
Occupied Bandwidth

Mode	LTE Band 12 : 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	2.72	2.70	4.49	4.50	9.03	9.01	-	-	-	-
Middle CH	1.09	1.10	2.70	2.69	4.50	4.51	9.03	8.99	-	-	-	-
Highest CH	1.09	1.09	2.73	2.73	4.51	4.49	9.03	9.01	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.72	-	4.49	-	9.01	-	-	-	-	-
Middle CH	1.09	-	2.70	-	4.49	-	8.99	-	-	-	-	-
Highest CH	1.08	-	2.72	-	4.48	-	9.07	-	-	-	-	-



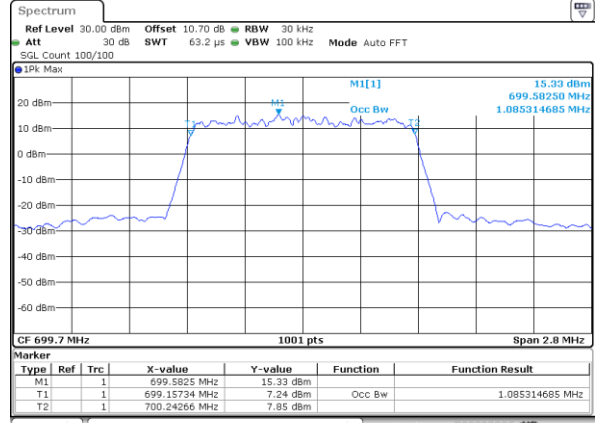
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



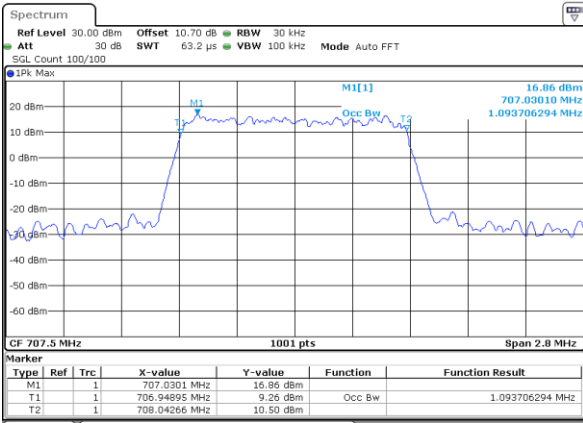
Date: 31.DEC.2019 09:37:24

Lowest Channel / 1.4MHz / 16QAM



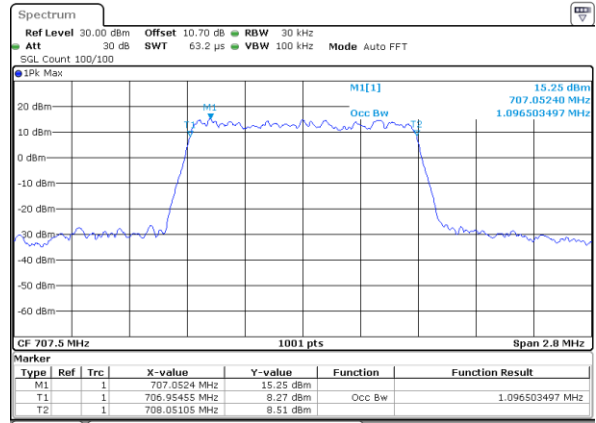
Date: 31.DEC.2019 09:37:38

Middle Channel / 1.4MHz / QPSK



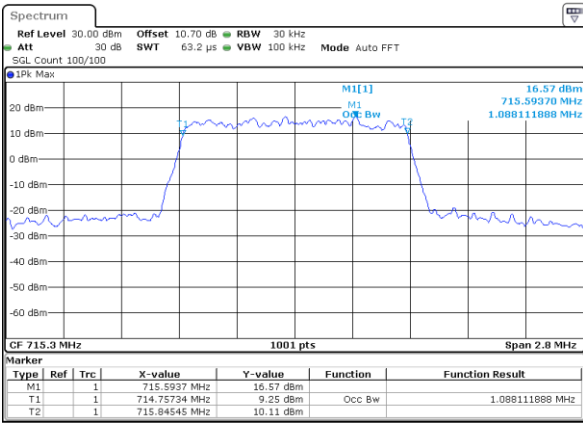
Date: 31.DEC.2019 09:50:27

Middle Channel / 1.4MHz / 16QAM



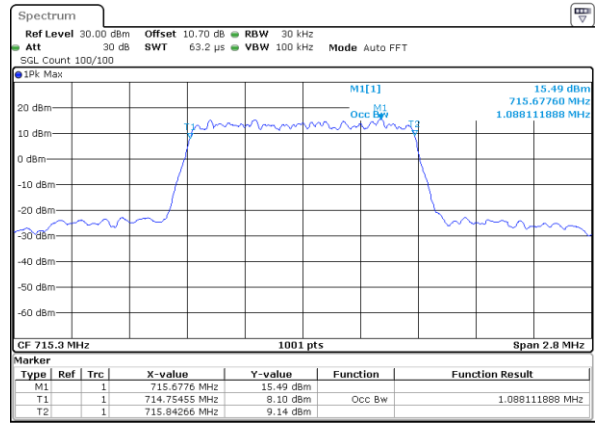
Date: 31.DEC.2019 09:50:12

Highest Channel / 1.4MHz / QPSK



Date: 31.DEC.2019 09:54:23

Highest Channel / 1.4MHz / 16QAM



Date: 31.DEC.2019 09:54:36