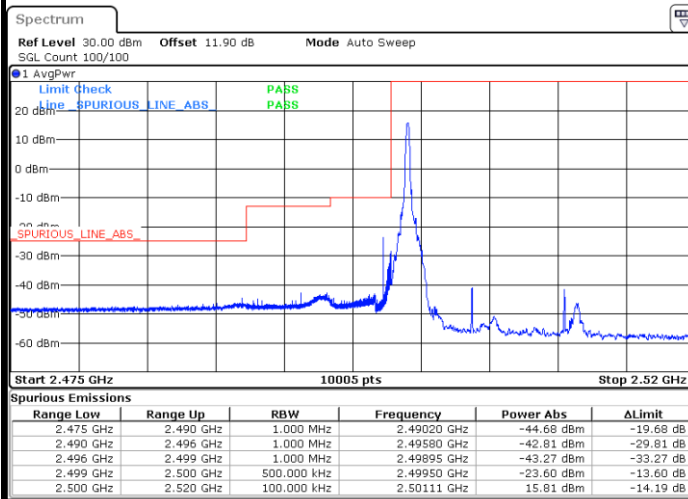


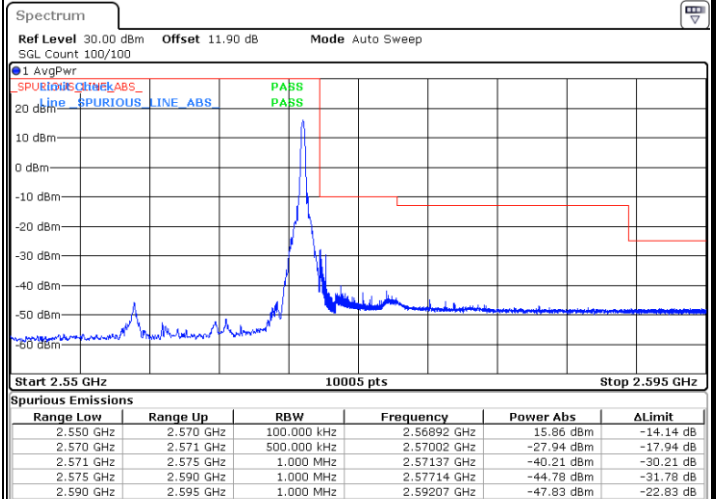


LTE Band 7 / 20MHz / QPSK

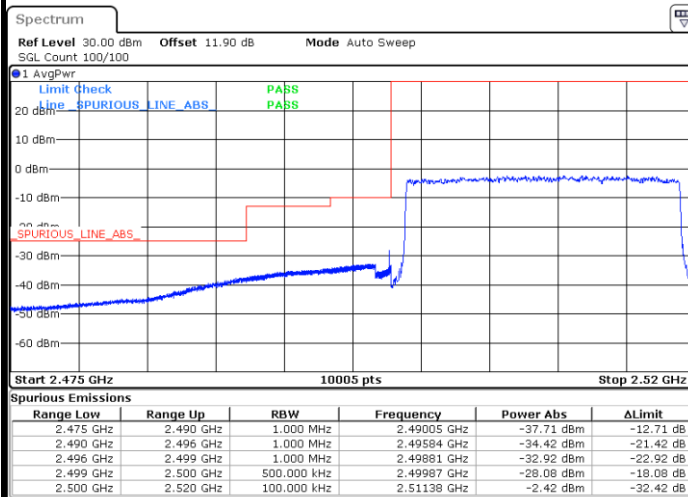
Lowest Band Edge / 1 RB



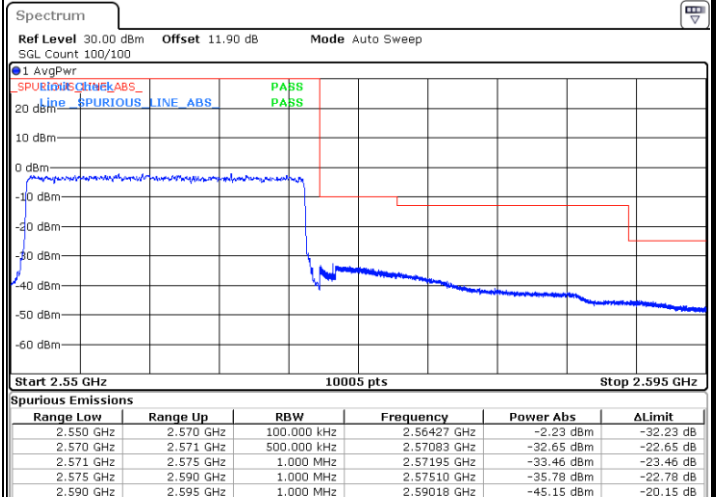
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



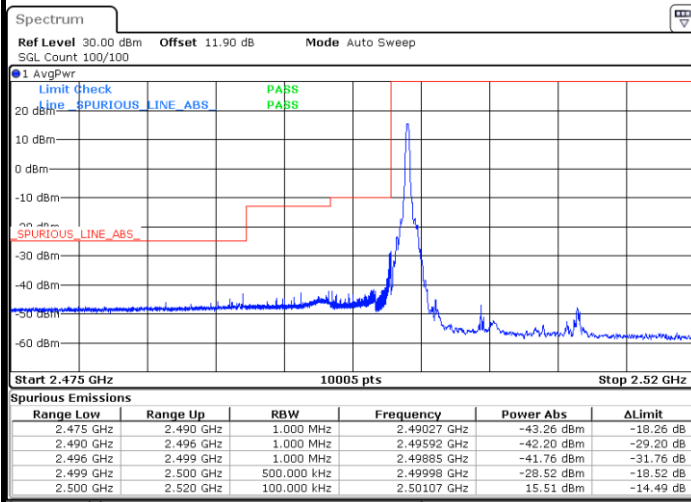
Highest Band Edge / Full RB



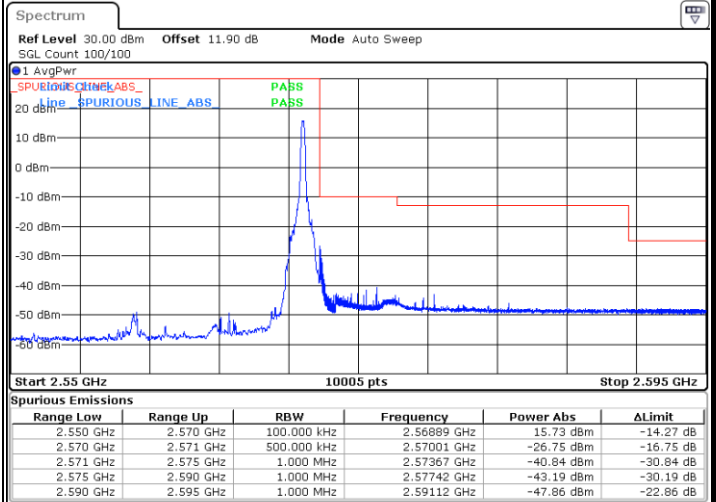


LTE Band 7 / 20MHz / 16QAM

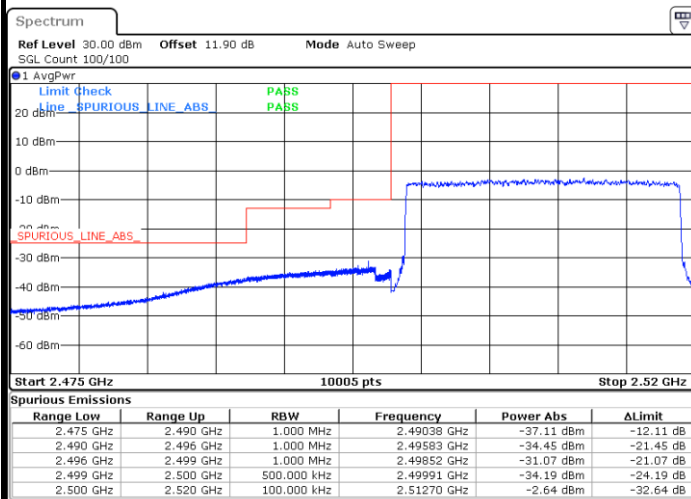
Lowest Band Edge / 1 RB



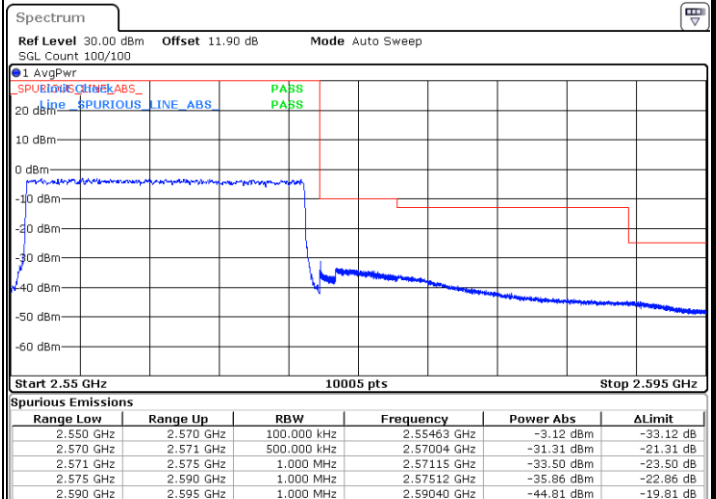
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



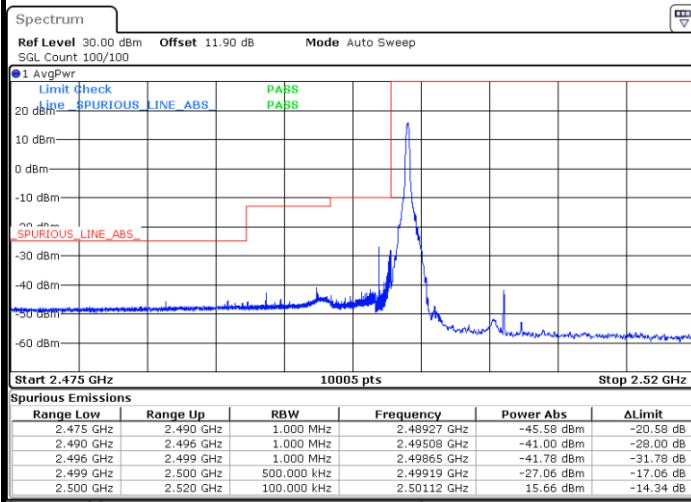
Highest Band Edge / Full RB



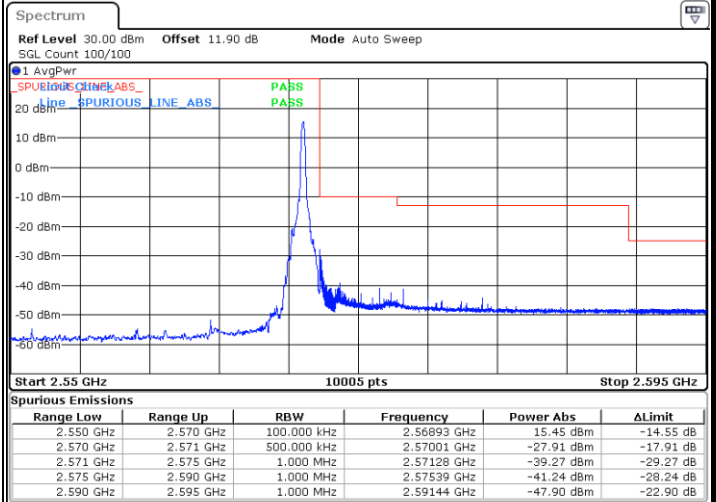


LTE Band 7 / 20MHz / 64QAM

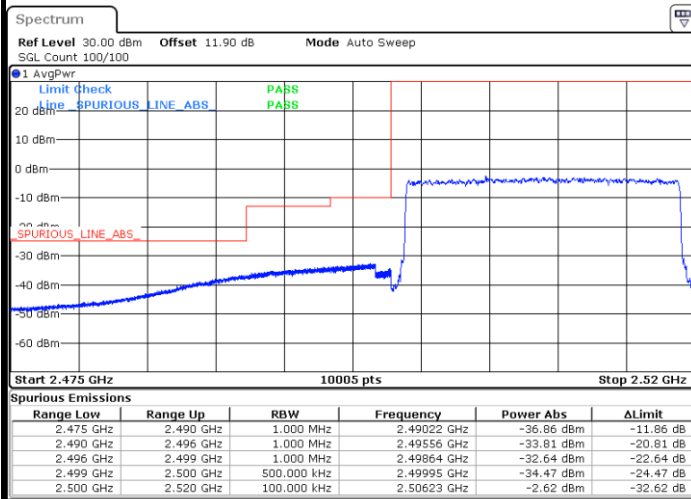
Lowest Band Edge / 1 RB



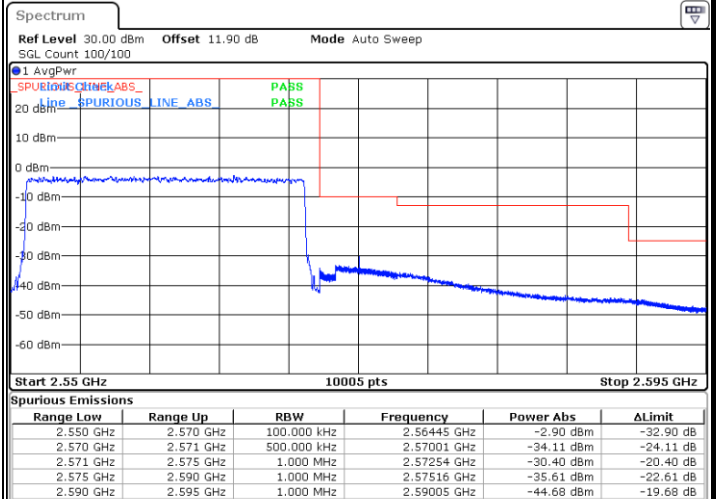
Highest Band Edge / 1 RB

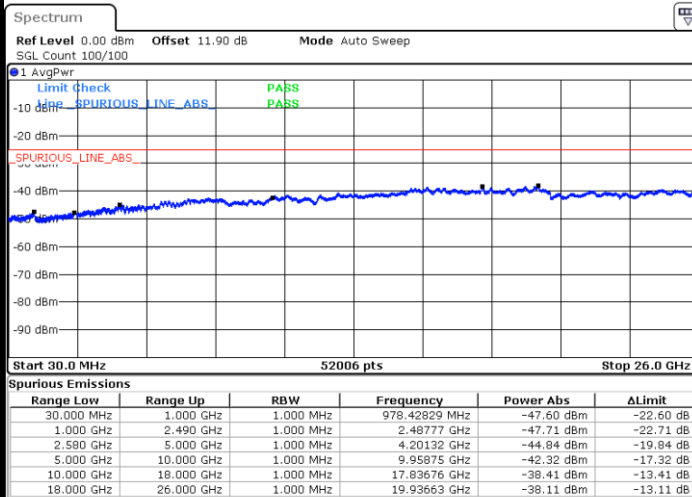


Lowest Band Edge / Full RB

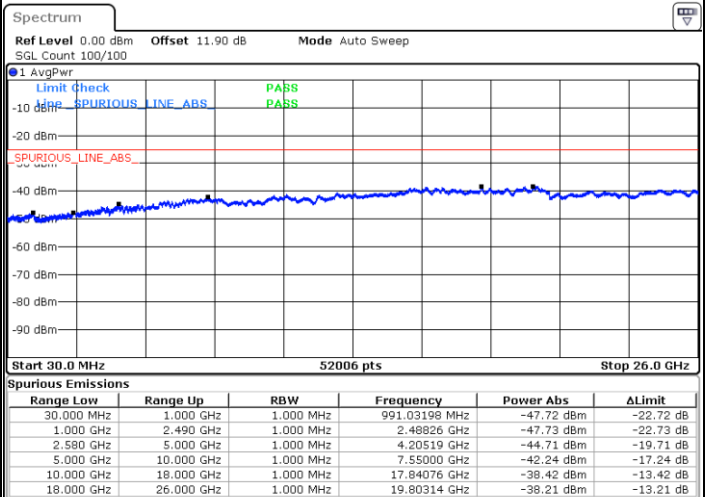


Highest Band Edge / Full RB

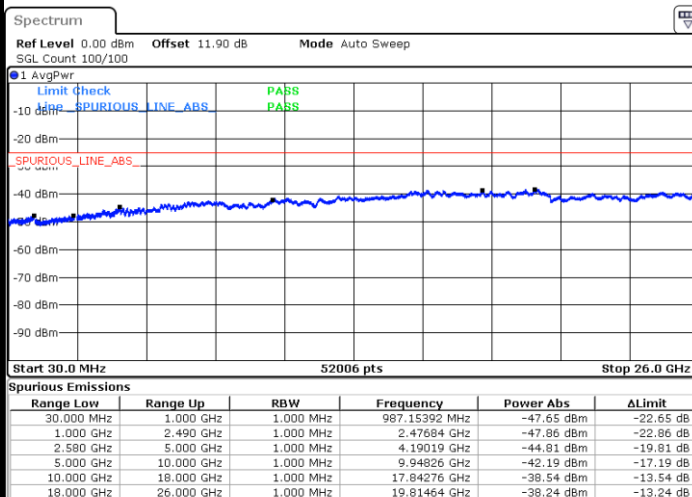


**Conducted Spurious Emission****LTE Band 7 / 5MHz****Lowest Channel / QPSK**

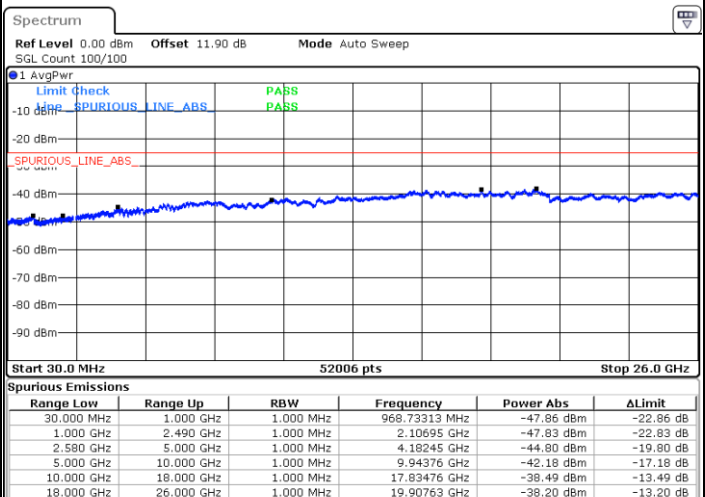
Date: 28 DEC 2019 10:25:54

Lowest Channel / 16QAM

Date: 28 DEC 2019 10:26:54

Middle Channel / QPSK

Date: 28 DEC 2019 10:28:40

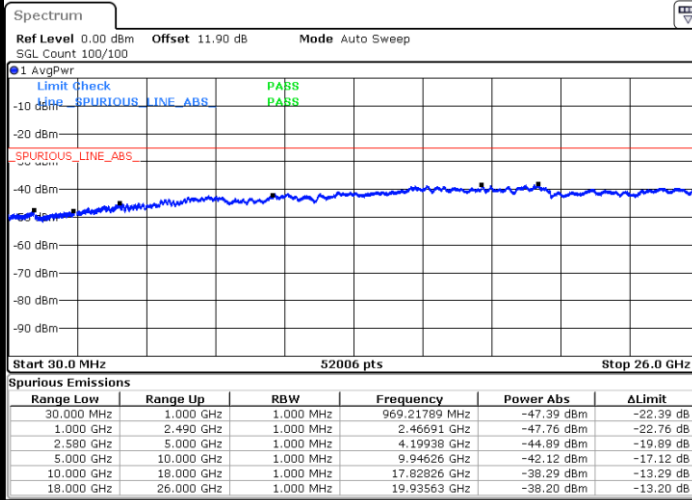
Middle Channel / 16QAM

Date: 28 DEC 2019 10:29:39



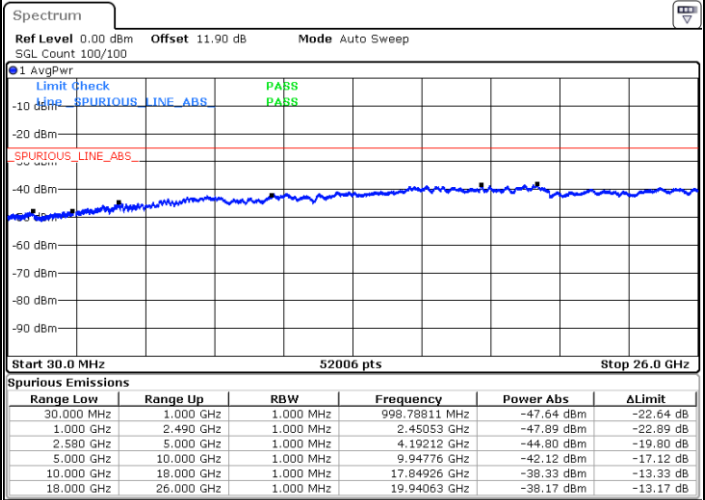
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 28 DEC 2019 10:36:53

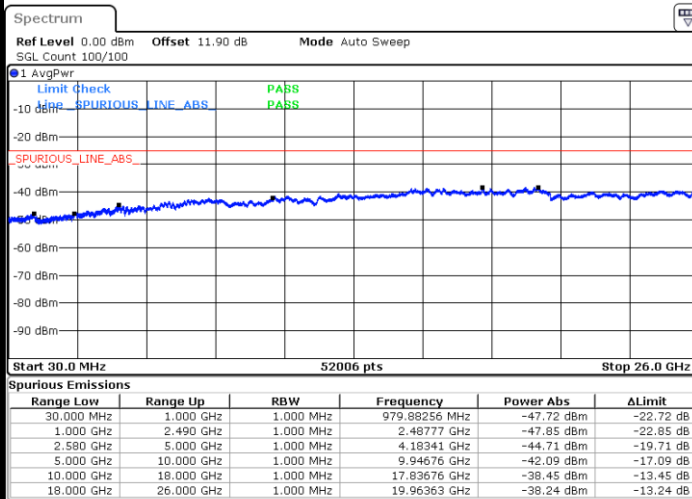
Highest Channel / 16QAM



Date: 28 DEC 2019 10:37:53

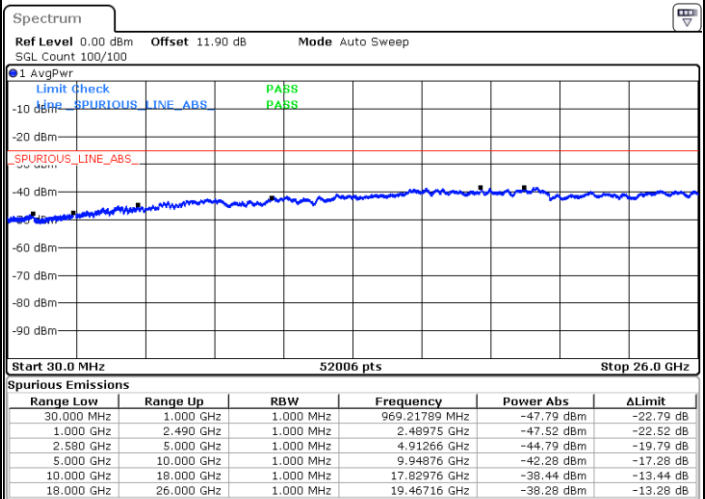
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 28 DEC 2019 10:54:44

Lowest Channel / 16QAM

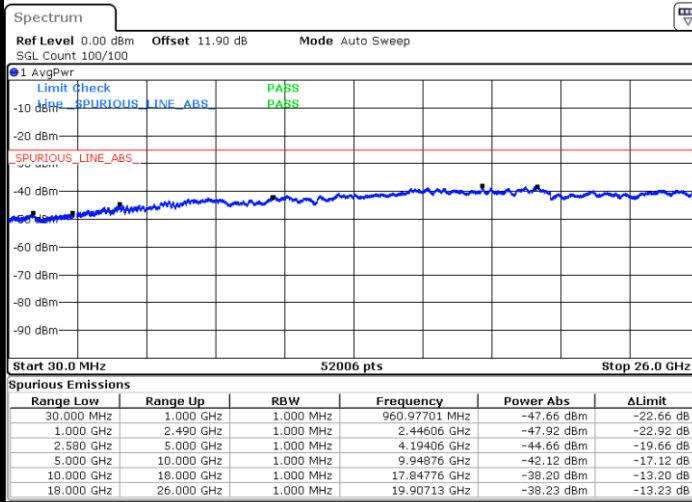


Date: 28 DEC 2019 10:55:44



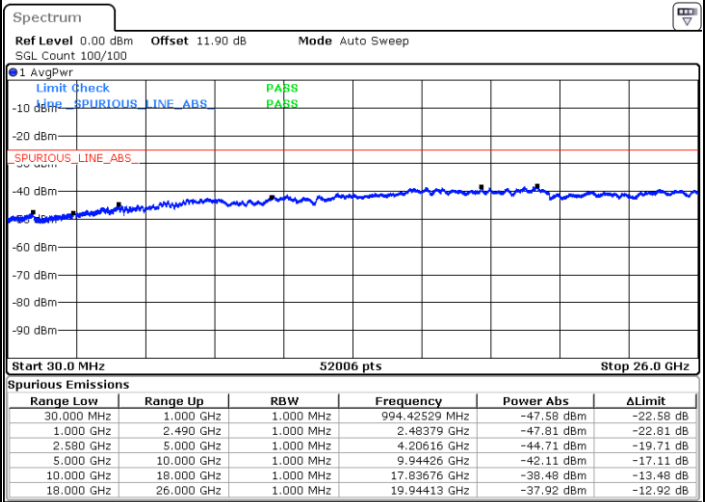
LTE Band 7 / 10MHz

Middle Channel / QPSK



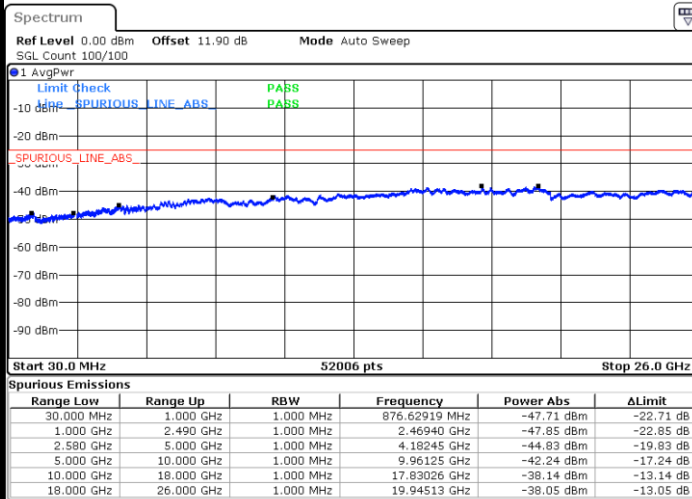
Date: 28 DEC 2019 10:57:30

Middle Channel / 16QAM



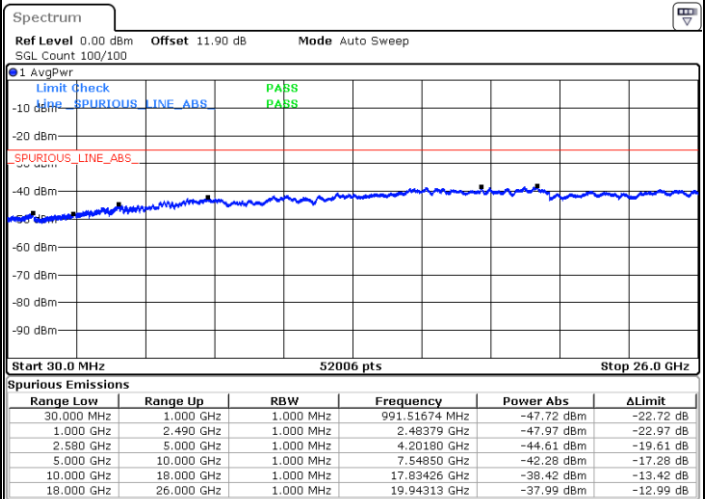
Date: 28 DEC 2019 10:58:30

Highest Channel / QPSK



Date: 28 DEC 2019 11:05:43

Highest Channel / 16QAM

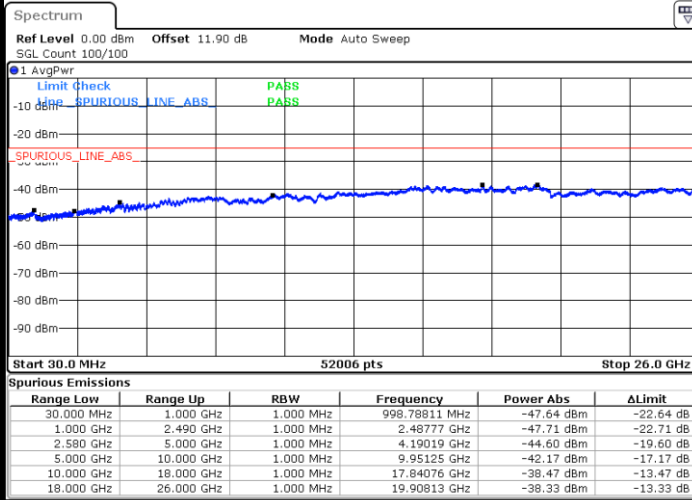


Date: 28 DEC 2019 11:06:44



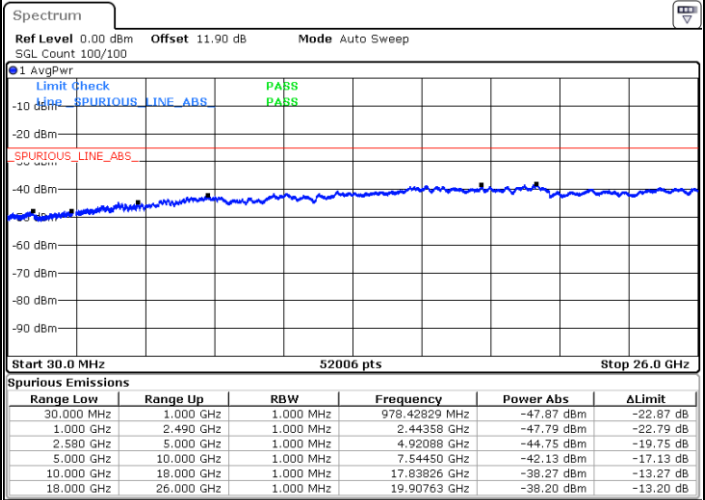
LTE Band 7 / 15MHz

Lowest Channel / QPSK



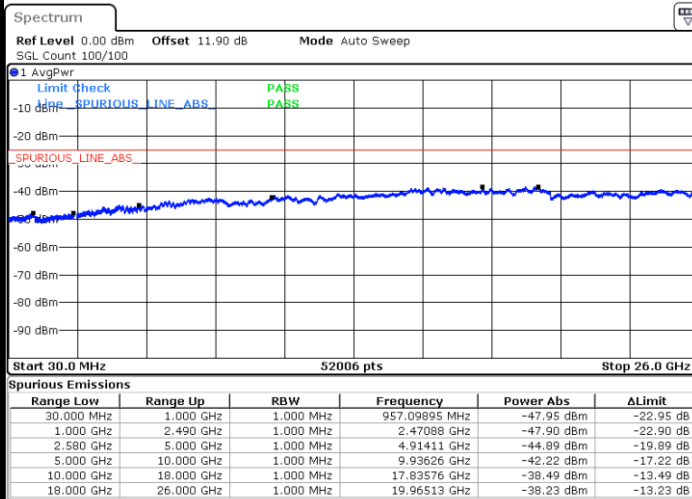
Date: 28 DEC 2019 11:29:42

Lowest Channel / 16QAM



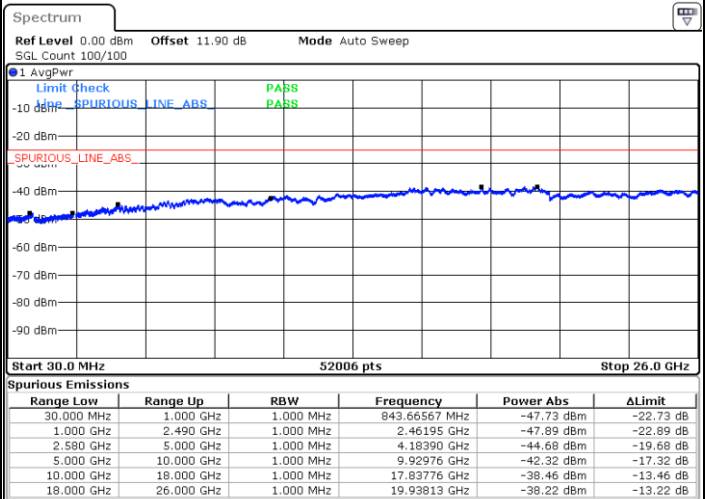
Date: 28 DEC 2019 11:30:42

Middle Channel / QPSK



Date: 28 DEC 2019 11:32:28

Middle Channel / 16QAM

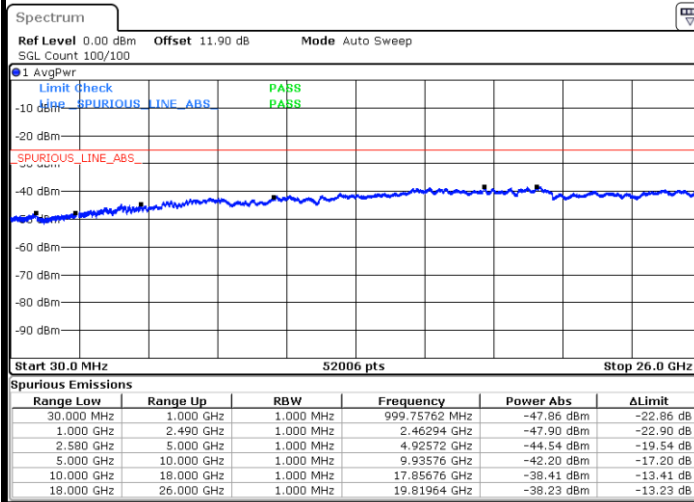


Date: 28 DEC 2019 11:33:27



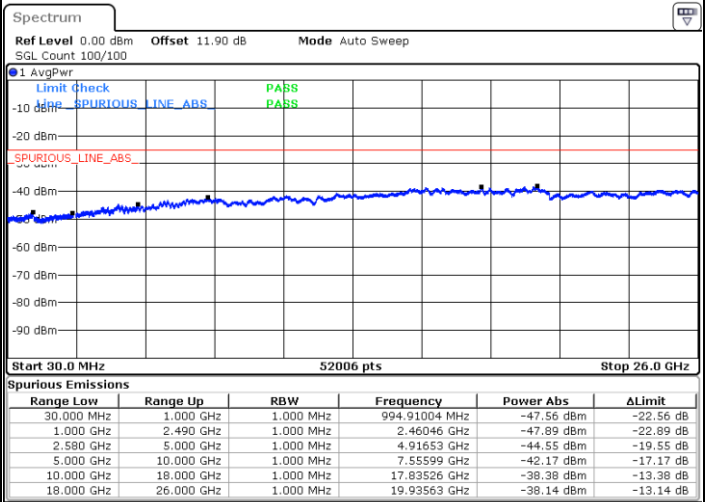
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 28 DEC 2019 11:40:41

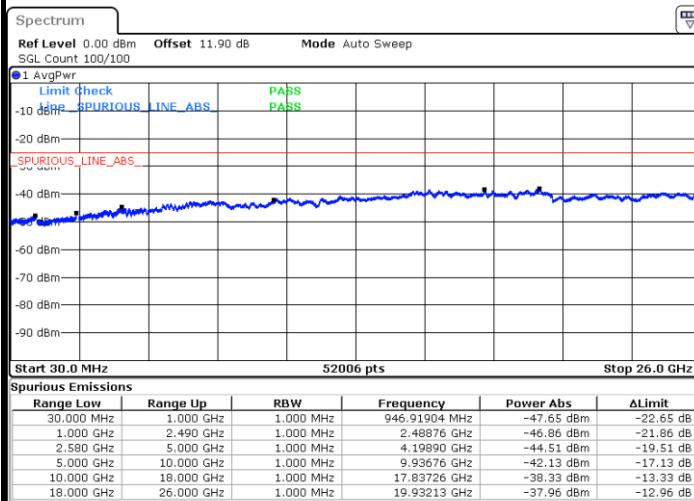
Highest Channel / 16QAM



Date: 28 DEC 2019 11:41:41

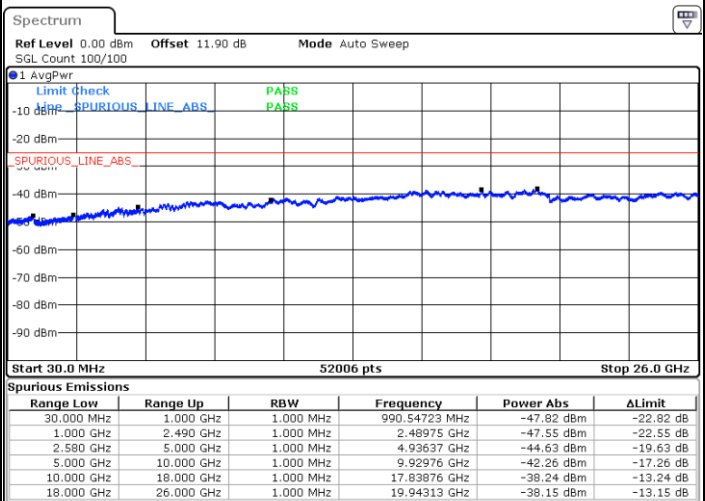
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 28 DEC 2019 11:58:34

Lowest Channel / 16QAM

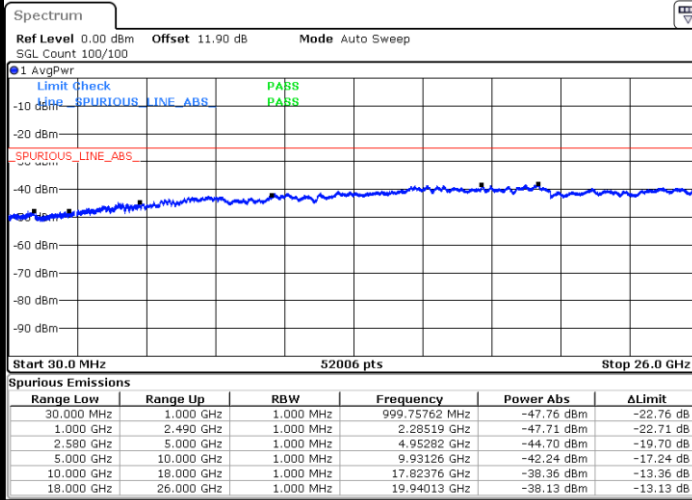


Date: 28 DEC 2019 11:59:34



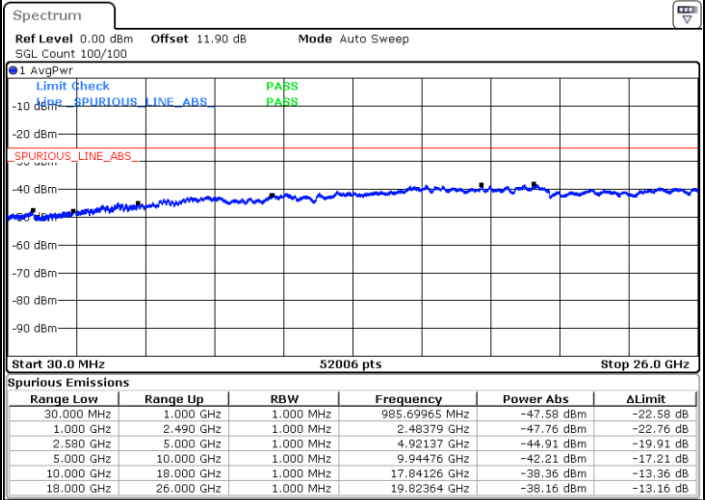
LTE Band 7 / 20MHz

Middle Channel / QPSK



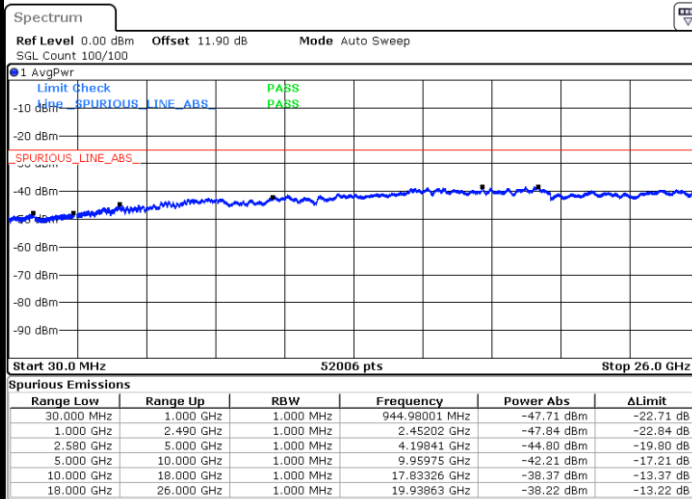
Date: 28 DEC 2019 12:01:20

Middle Channel / 16QAM



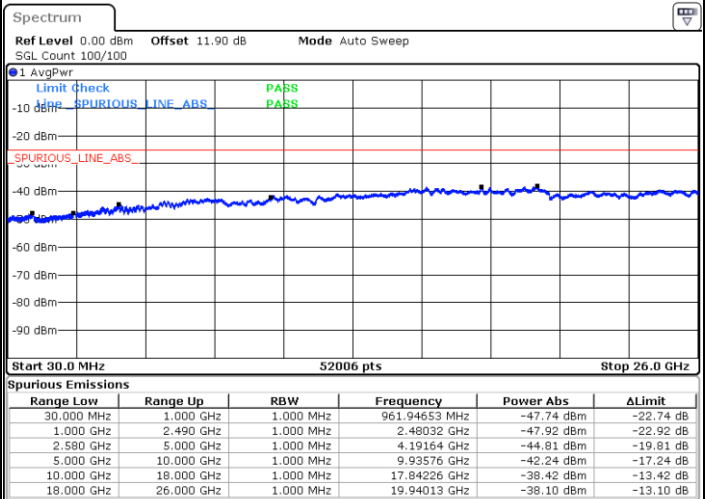
Date: 28 DEC 2019 12:02:19

Highest Channel / QPSK



Date: 28 DEC 2019 12:09:33

Highest Channel / 16QAM

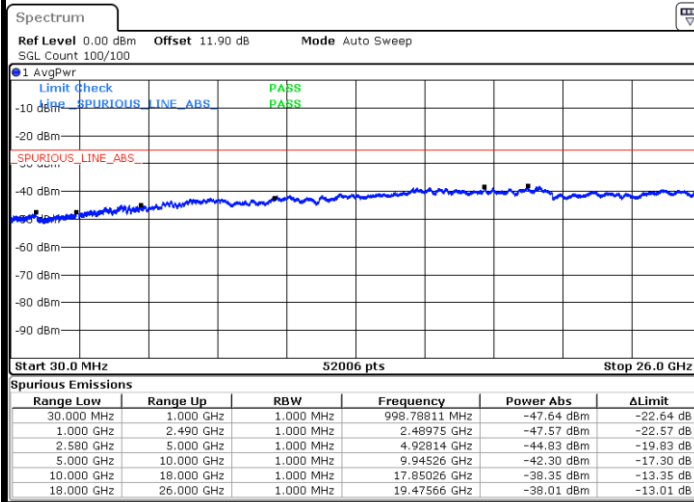


Date: 28 DEC 2019 12:10:33



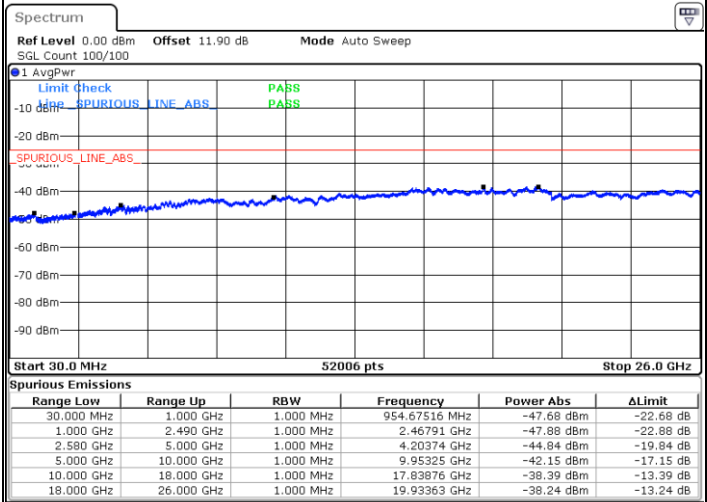
LTE Band 7 / 5MHz

Lowest Channel / 64QAM



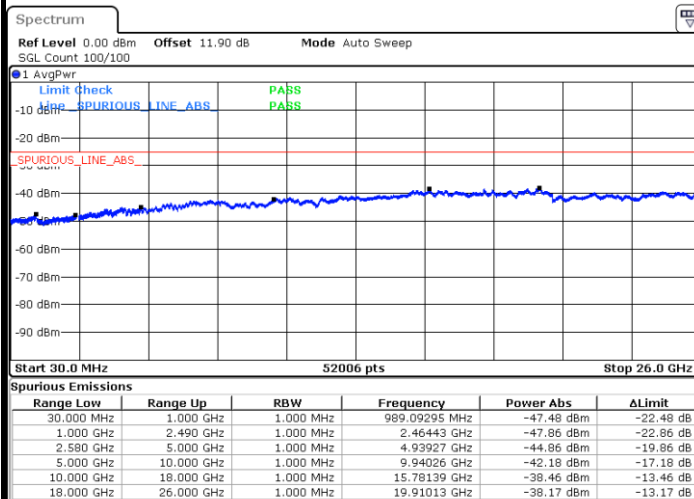
Date: 28 DEC 2019 10:42:01

Middle Channel / 64QAM



Date: 28 DEC 2019 10:43:23

Highest Channel / 64QAM

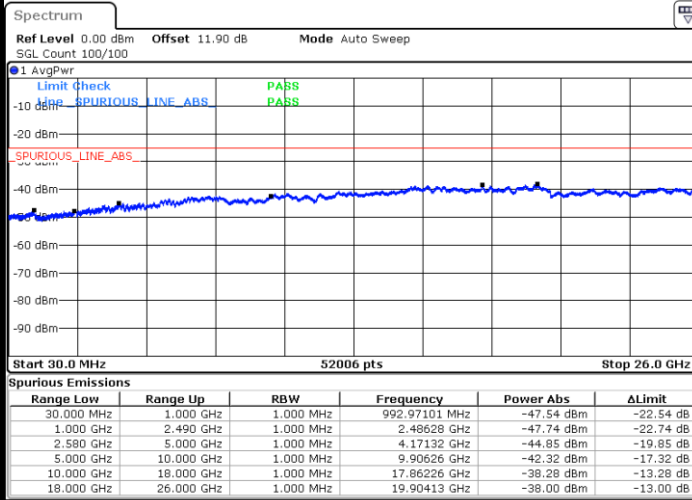


Date: 28 DEC 2019 10:47:30



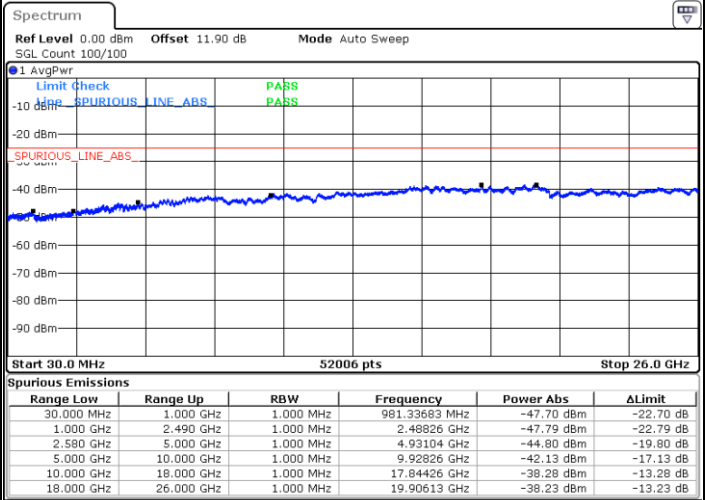
LTE Band 7 / 10MHz

Lowest Channel / 64QAM



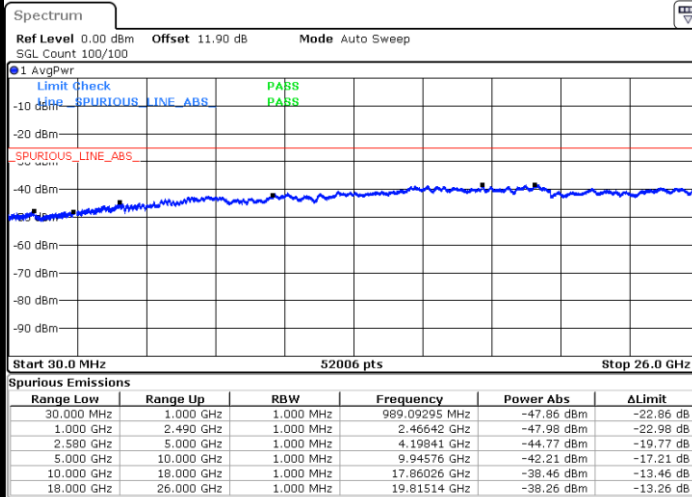
Date: 28 DEC 2019 11:10:50

Middle Channel / 64QAM



Date: 28 DEC 2019 11:18:19

Highest Channel / 64QAM

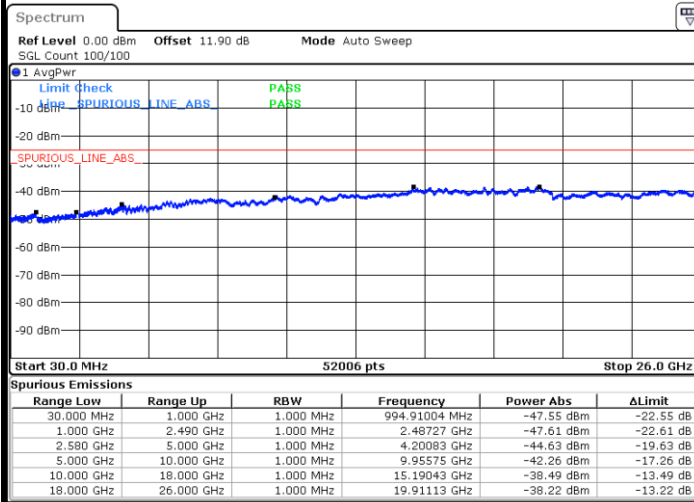


Date: 28 DEC 2019 11:22:26



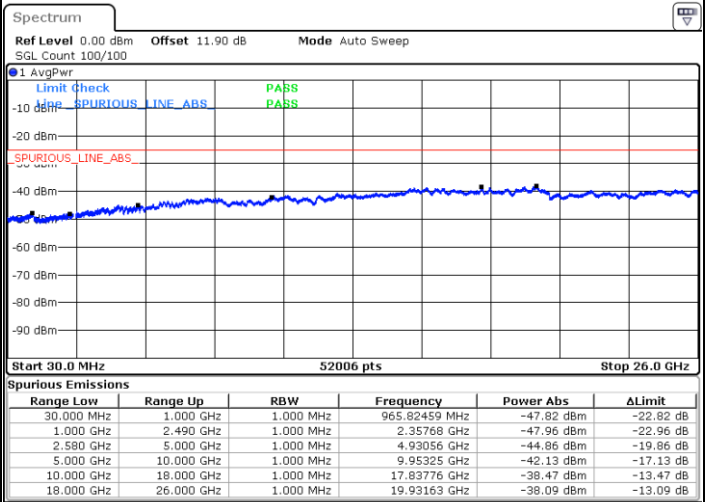
LTE Band 7 / 15MHz

Lowest Channel / 64QAM



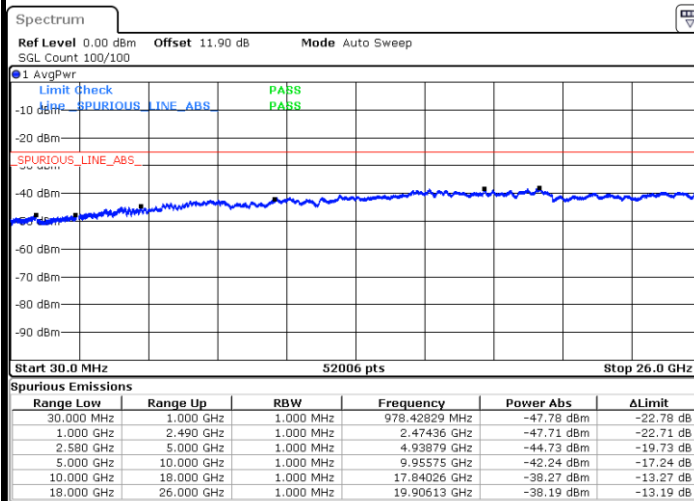
Date: 28 DEC 2019 11:45:49

Middle Channel / 64QAM



Date: 28 DEC 2019 11:47:11

Highest Channel / 64QAM

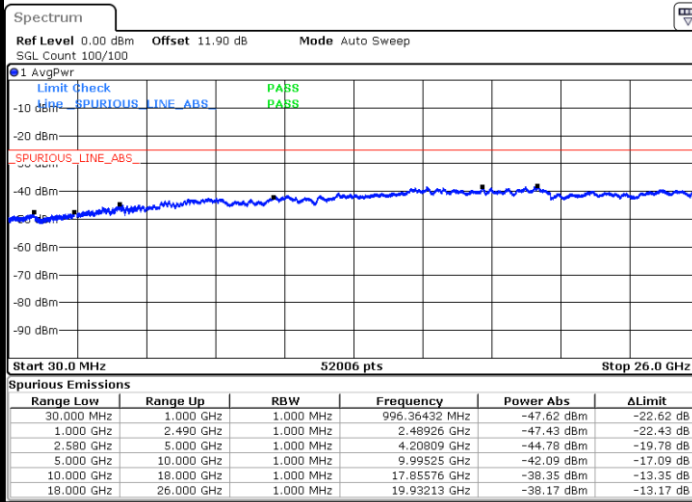


Date: 28 DEC 2019 11:51:18



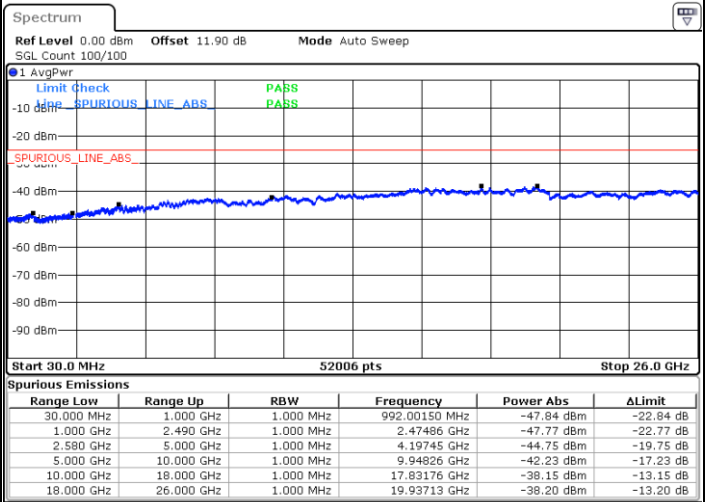
LTE Band 7 / 20MHz

Lowest Channel / 64QAM



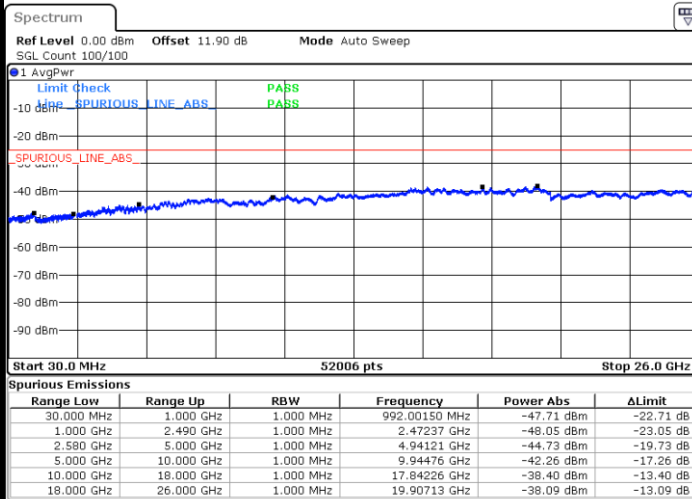
Date: 28 DEC 2019 12:14:40

Middle Channel / 64QAM



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.

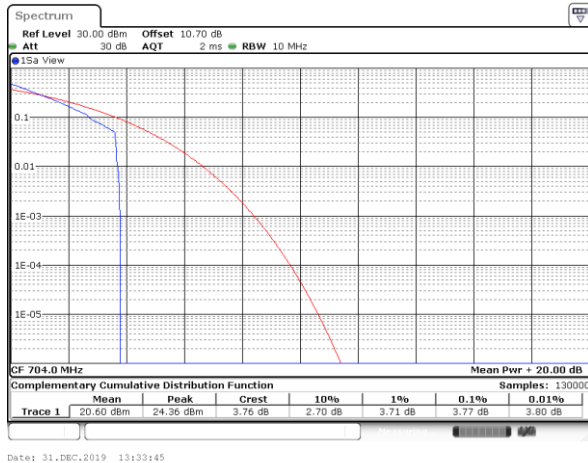
LTE Band 12

Peak-to-Average Ratio

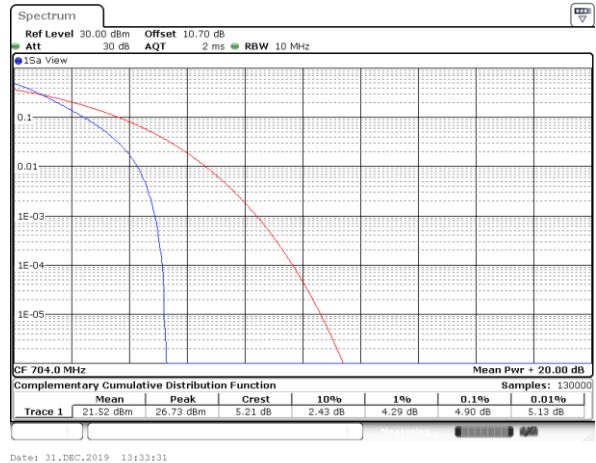
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.77	4.90	4.49	5.80	PASS
Middle CH	3.59	4.84	5.36	5.88	
Highest CH	3.51	4.90	5.04	5.77	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.71	6.35	-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

LTE Band 12 / 10MHz / QPSK

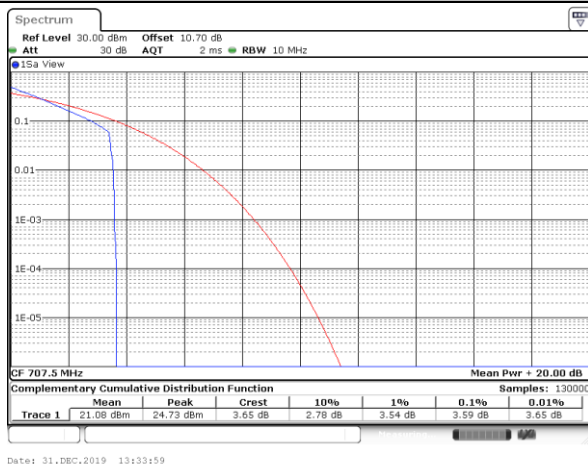
Lowest Channel / 1RB



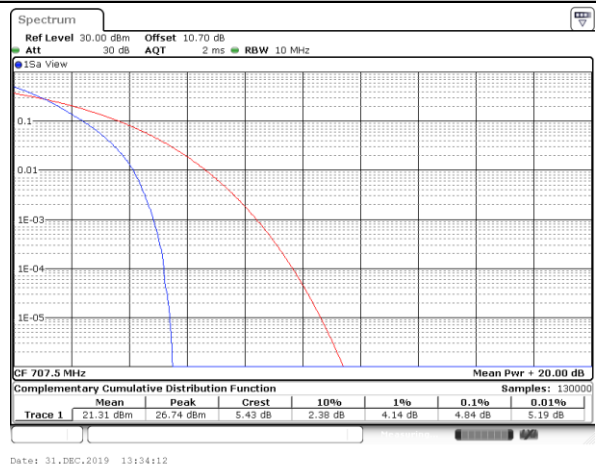
Lowest Channel / Full RB



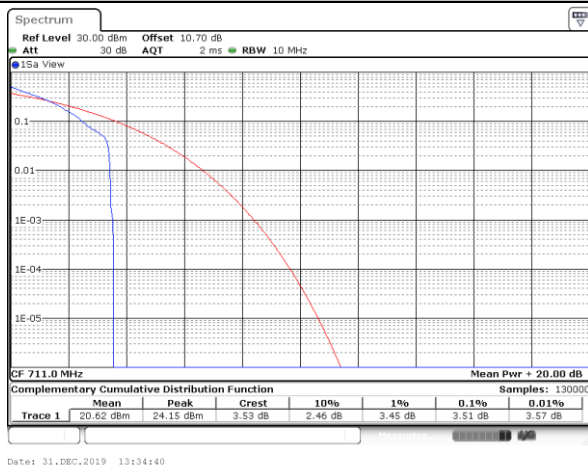
Middle Channel / 1RB



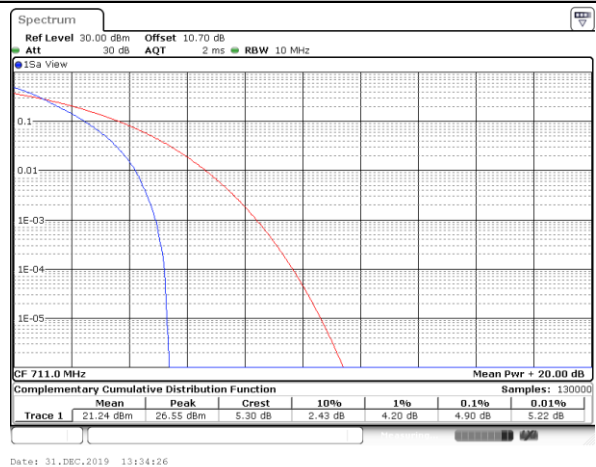
Middle Channel / Full RB

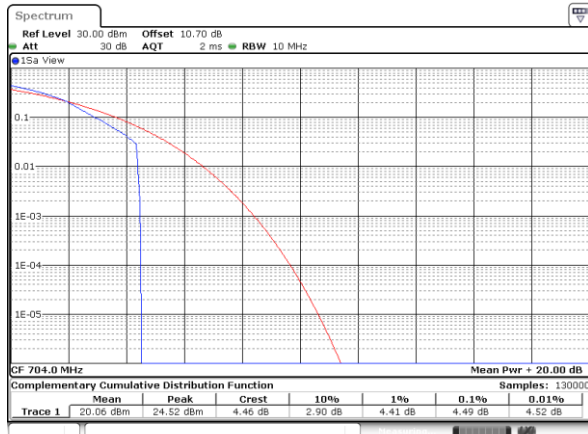
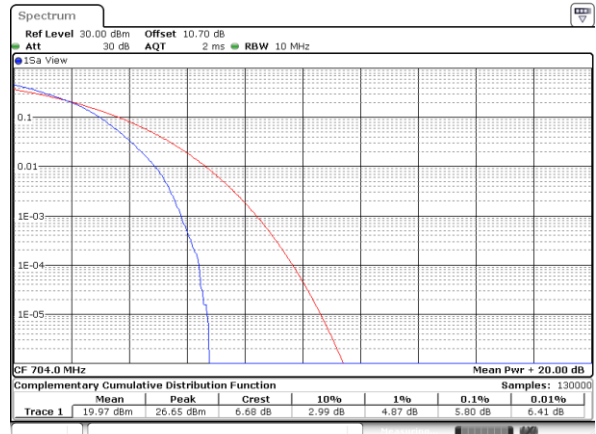
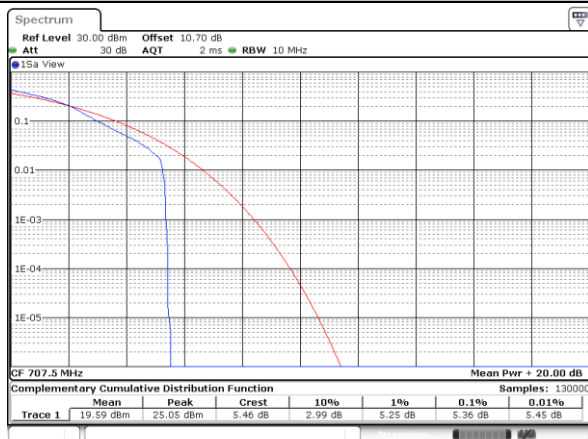
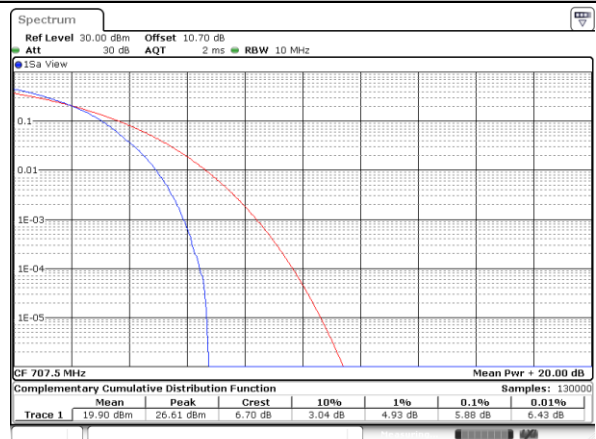
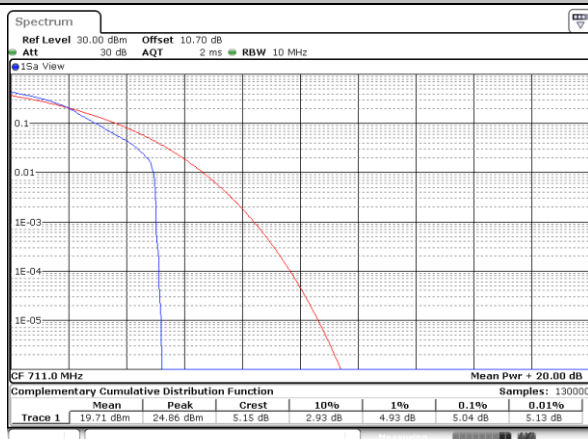
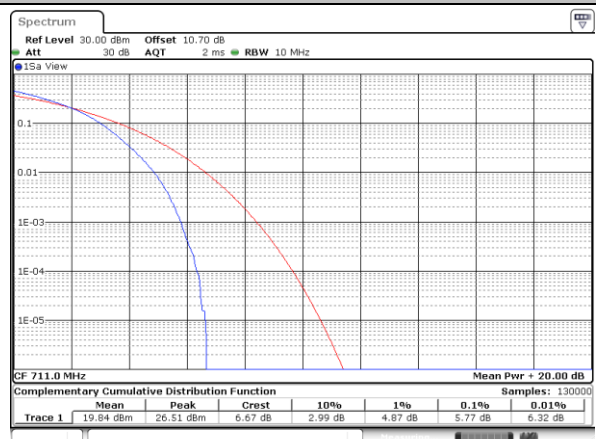


Highest Channel / 1RB



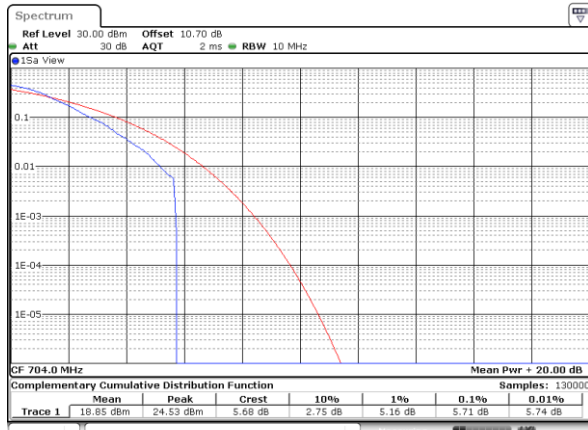
Highest Channel / Full RB



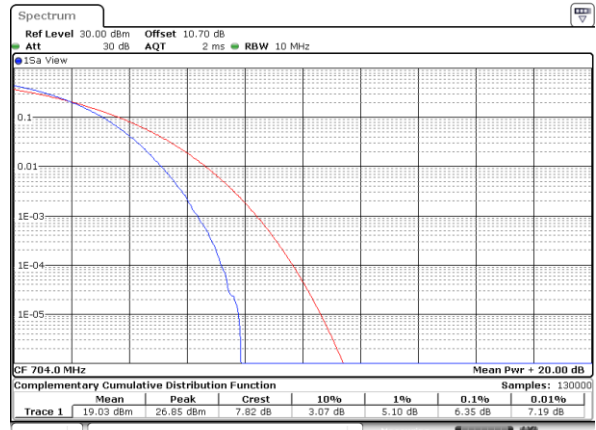
LTE Band 12 / 10MHz / 16QAM
Lowest Channel / 1RB

Lowest Channel / Full RB

Middle Channel / 1RB

Middle Channel / Full RB

Highest Channel / 1RB

Highest Channel / Full RB


LTE Band 12 / 10MHz / 64QAM

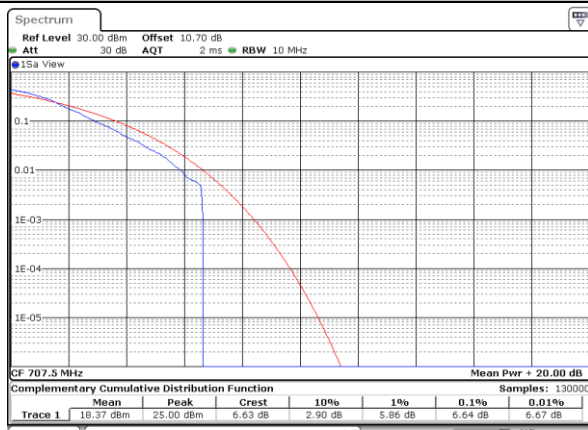
Lowest Channel / 1RB



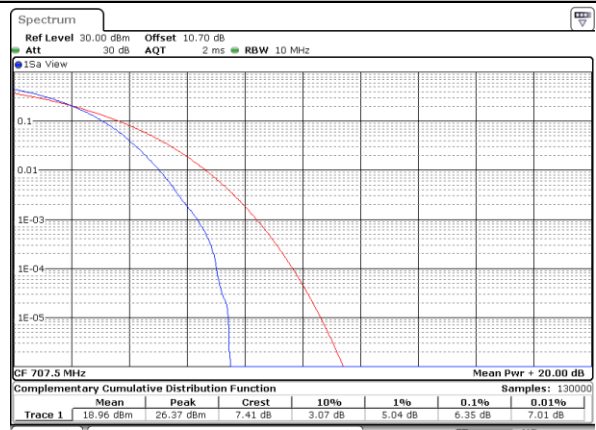
Lowest Channel / Full RB



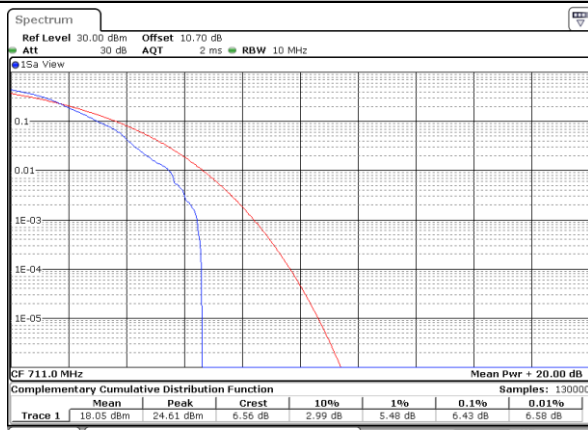
Middle Channel / 1RB



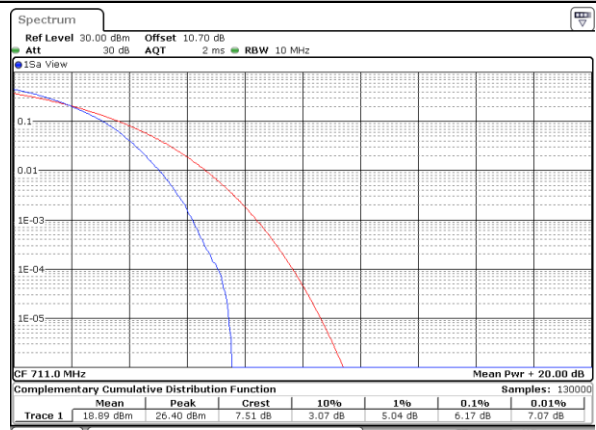
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



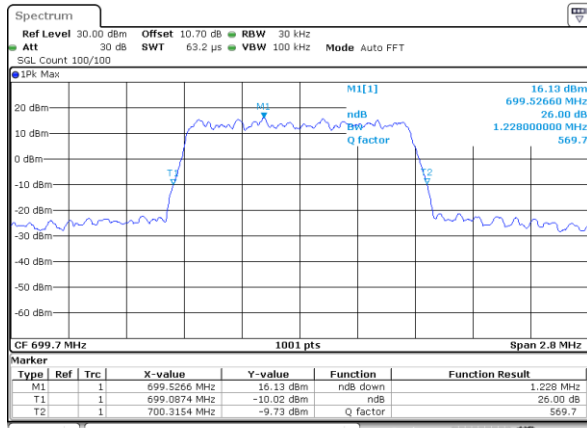
**26dB Bandwidth**

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	-	-	-	-	-



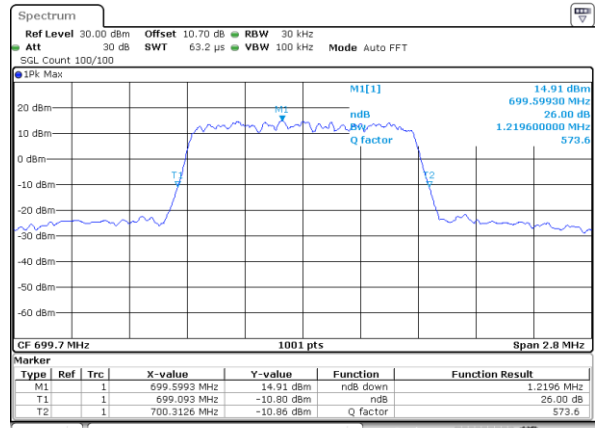
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



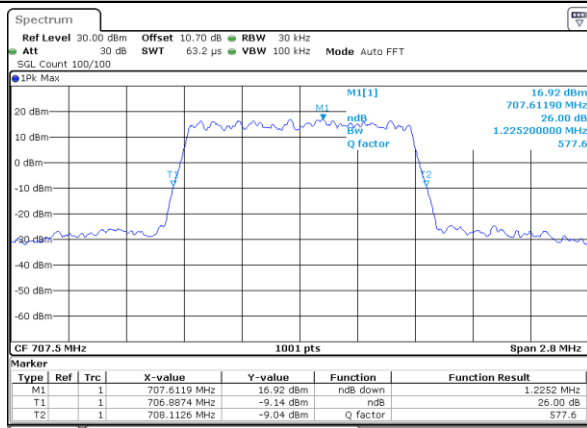
Date: 31.DEC.2019 09:38:05

Lowest Channel / 1.4MHz / 16QAM



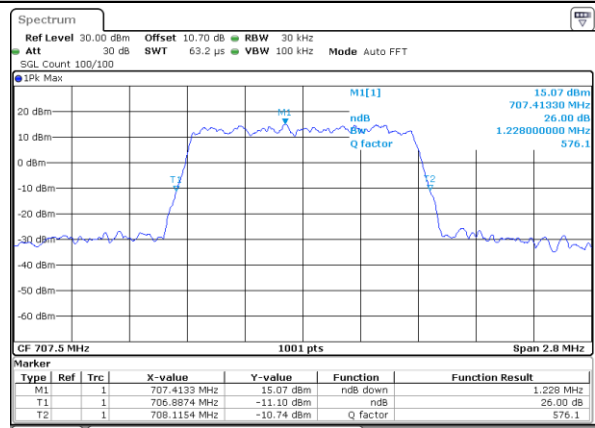
Date: 31.DEC.2019 09:37:51

Middle Channel / 1.4MHz / QPSK



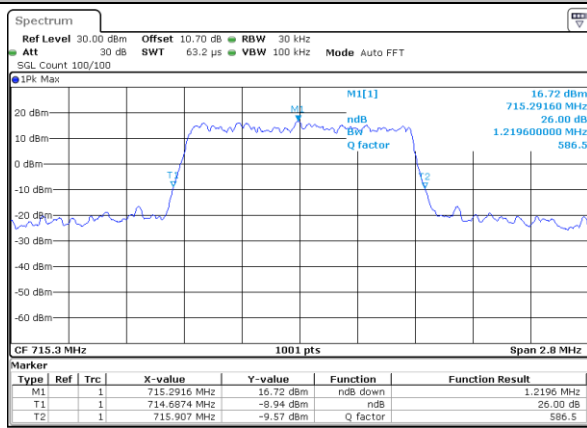
Date: 31.DEC.2019 09:58:40

Middle Channel / 1.4MHz / 16QAM



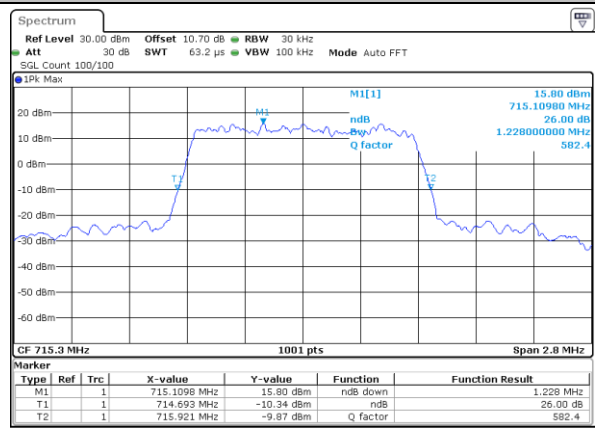
Date: 31.DEC.2019 09:50:53

Highest Channel / 1.4MHz / QPSK



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

Highest Channel / 1.4MHz / 16QAM

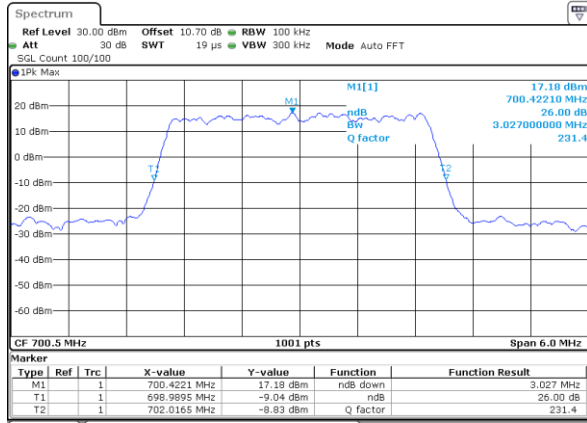


Date: 31.DEC.2019 10:01:36

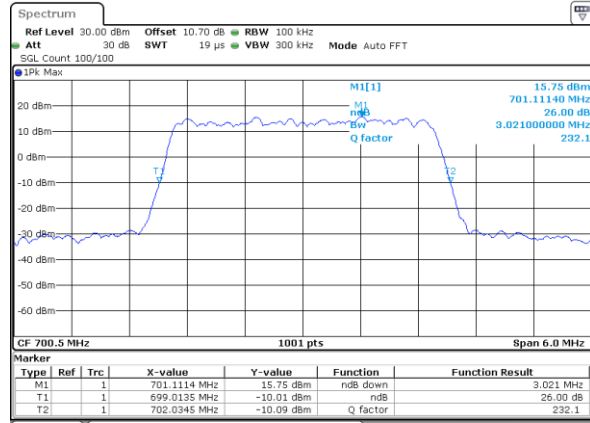


LTE Band 12

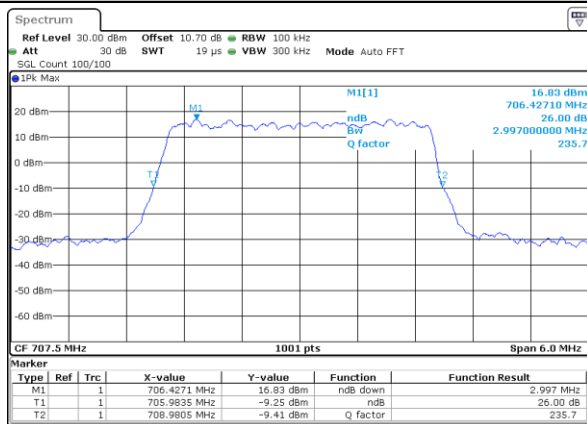
Lowest Channel / 3MHz / QPSK



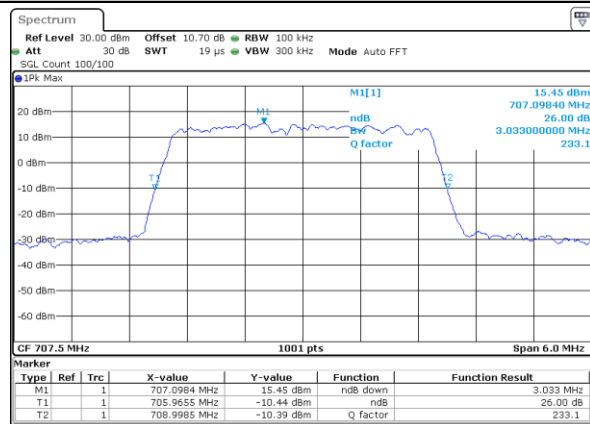
Lowest Channel / 3MHz / 16QAM



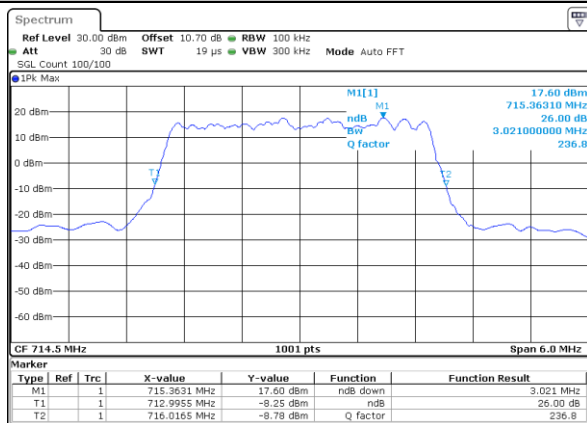
Middle Channel / 3MHz / QPSK



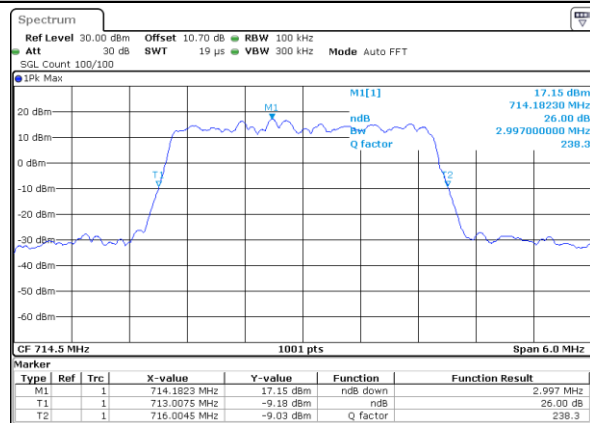
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



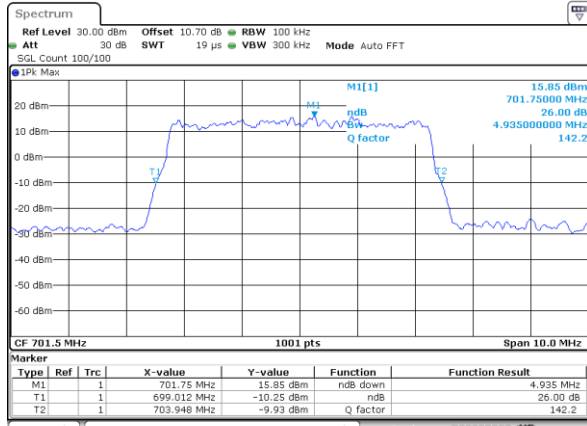
Highest Channel / 3MHz / 16QAM





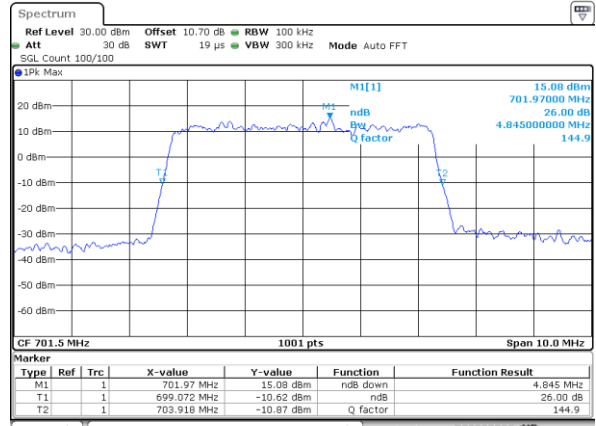
LTE Band 12

Lowest Channel / 5MHz / QPSK



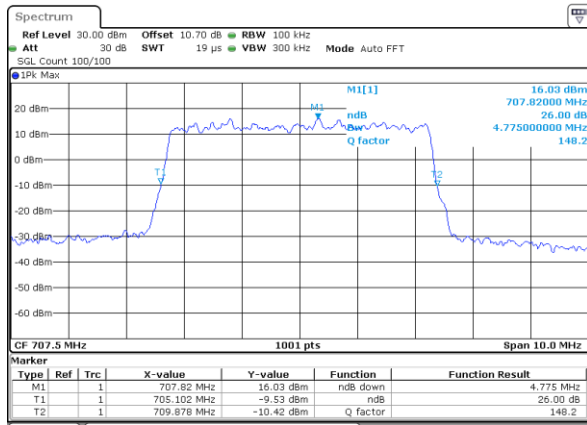
Date: 31.DEC.2019 11:07:35

Lowest Channel / 5MHz / 16QAM



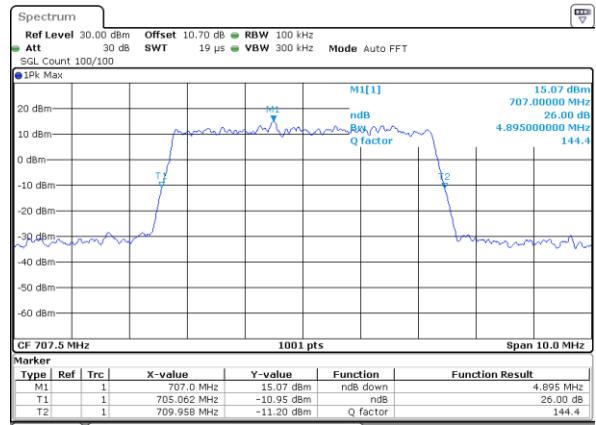
Date: 31.DEC.2019 11:07:22

Middle Channel / 5MHz / QPSK



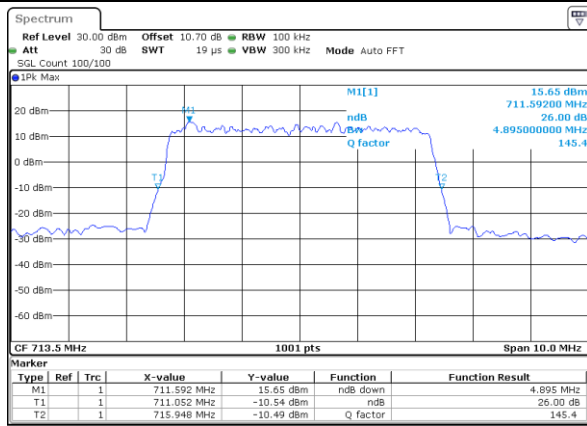
Date: 31.DEC.2019 11:15:45

Middle Channel / 5MHz / 16QAM



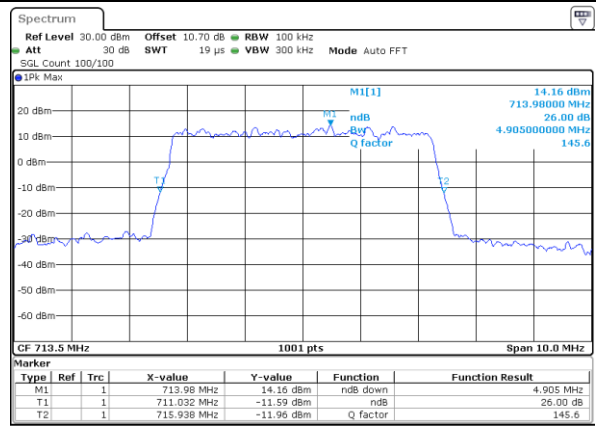
Date: 31.DEC.2019 11:15:58

Highest Channel / 5MHz / QPSK

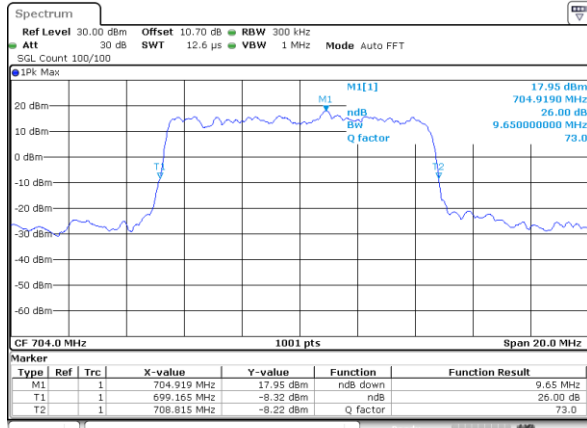


Date: 31.DEC.2019 11:18:57

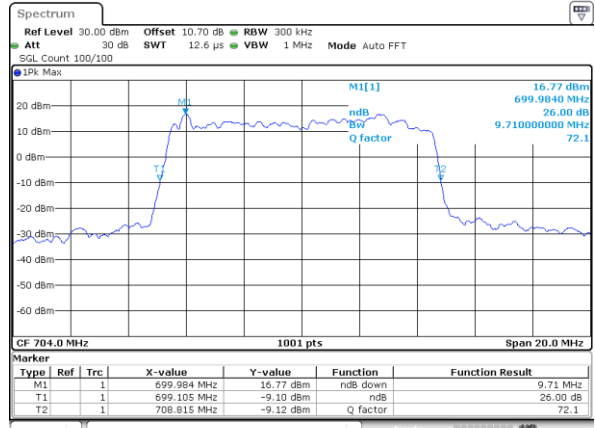
Highest Channel / 5MHz / 16QAM



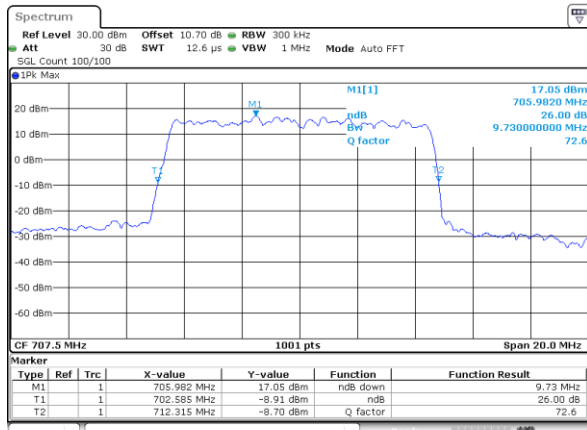
Date: 31.DEC.2019 11:18:44

LTE Band 12
Lowest Channel / 10MHz / QPSK


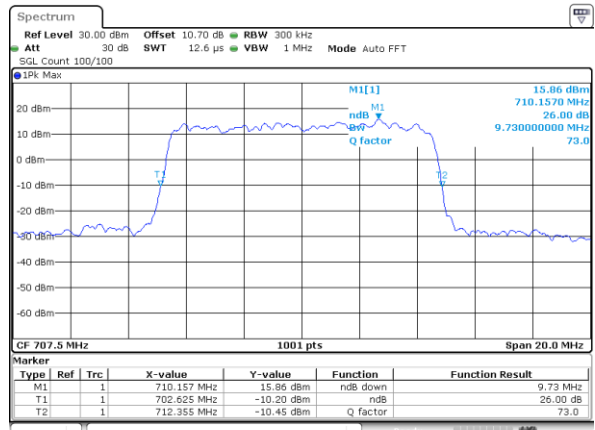
Date: 31.DEC.2019 11:27:23

Lowest Channel / 10MHz / 16QAM


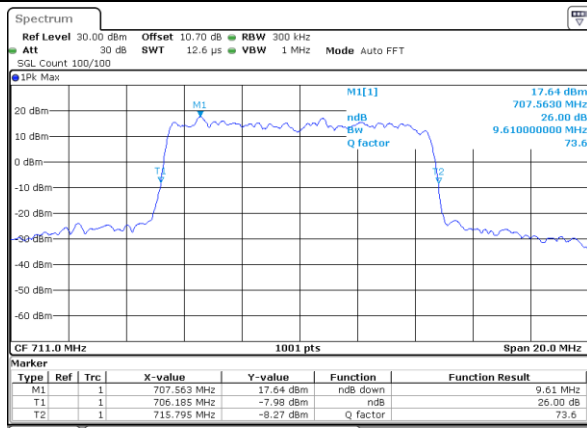
Date: 31.DEC.2019 11:27:09

Middle Channel / 10MHz / QPSK


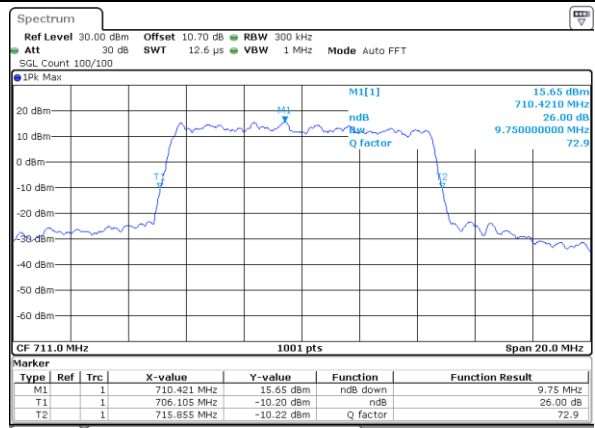
Date: 31.DEC.2019 11:57:11

Middle Channel / 10MHz / 16QAM


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

Highest Channel / 10MHz / QPSK


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

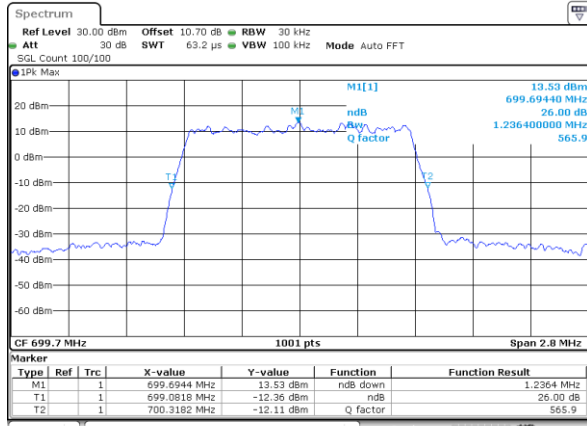
Highest Channel / 10MHz / 16QAM


Date: 31.DEC.2019 12:00:12



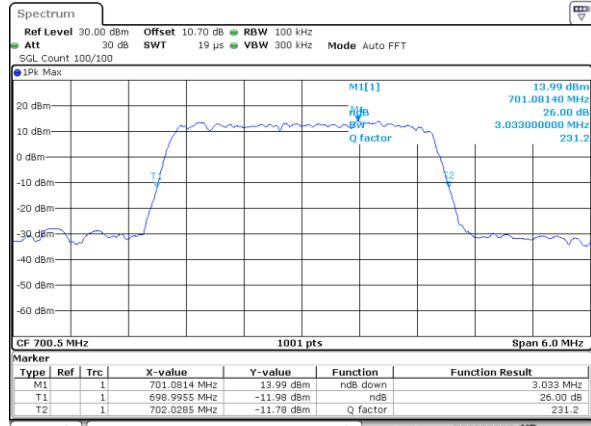
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



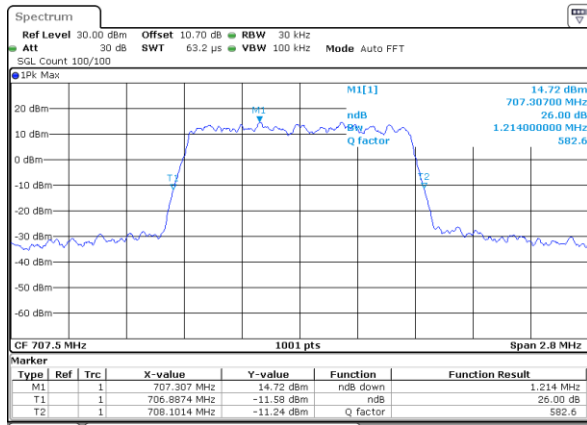
Date: 31.DEC.2019 10:10:45

Lowest Channel / 3MHz / 64QAM



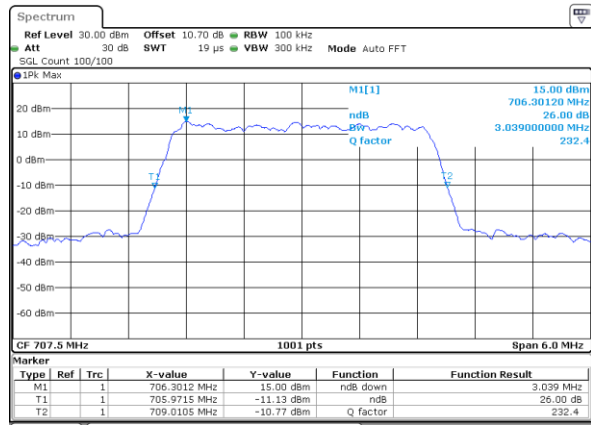
Date: 31.DEC.2019 10:44:41

Middle Channel / 1.4MHz / 64QAM



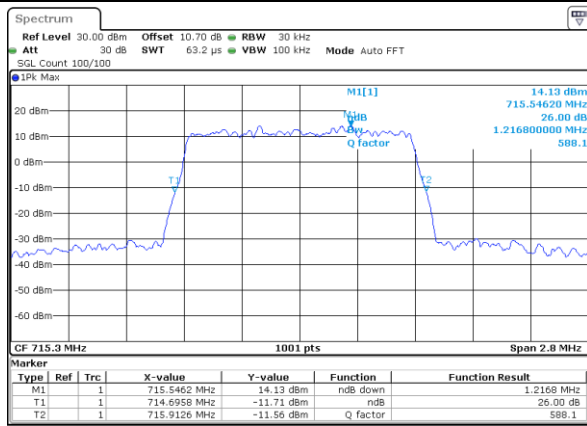
Date: 31.DEC.2019 10:14:56

Middle Channel / 3MHz / 64QAM



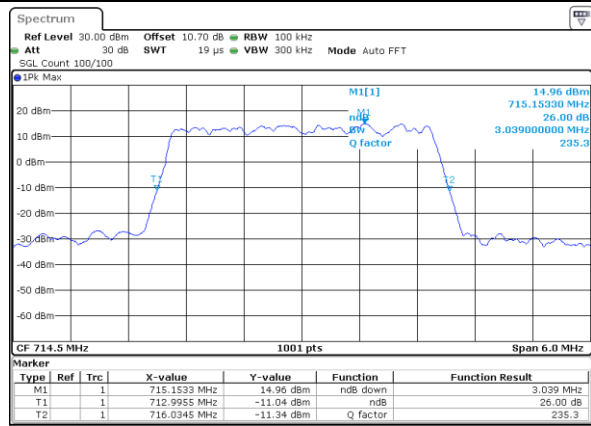
Date: 31.DEC.2019 10:48:53

Highest Channel / 1.4MHz / 64QAM



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

Highest Channel / 3MHz / 64QAM

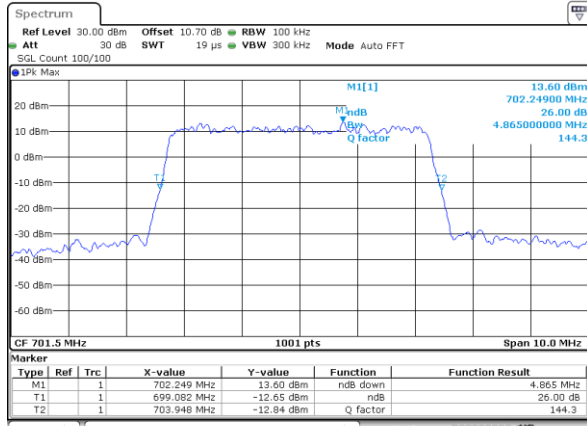


Date: 31.DEC.2019 10:50:26



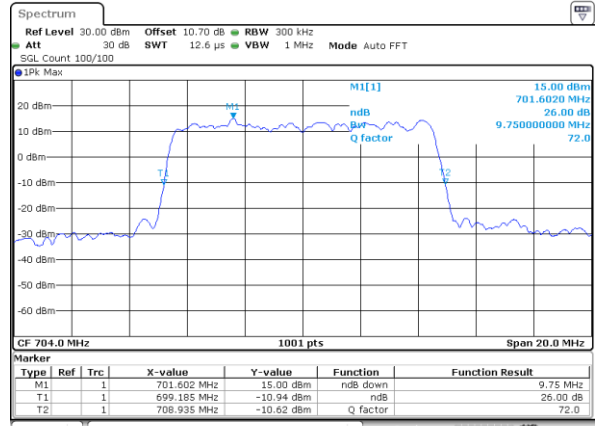
LTE Band 12

Lowest Channel / 5MHz / 64QAM



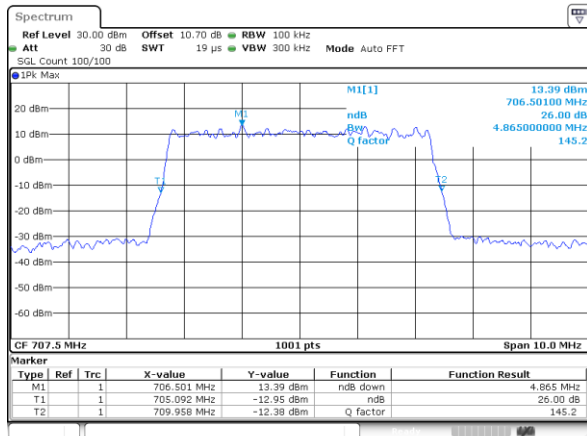
Date: 31.DEC.2019 10:54:40

Lowest Channel / 10MHz / 64QAM



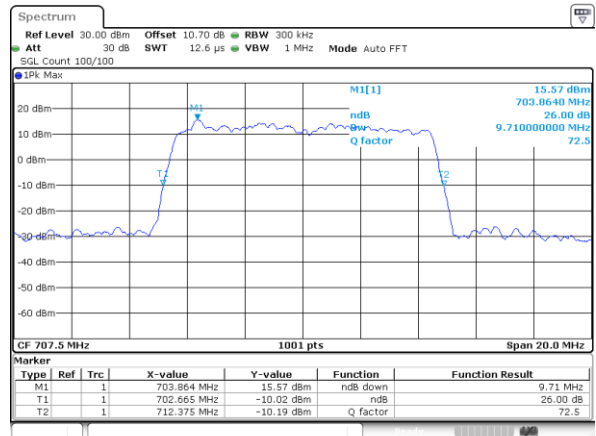
Date: 31.DEC.2019 12:10:54

Middle Channel / 5MHz / 64QAM



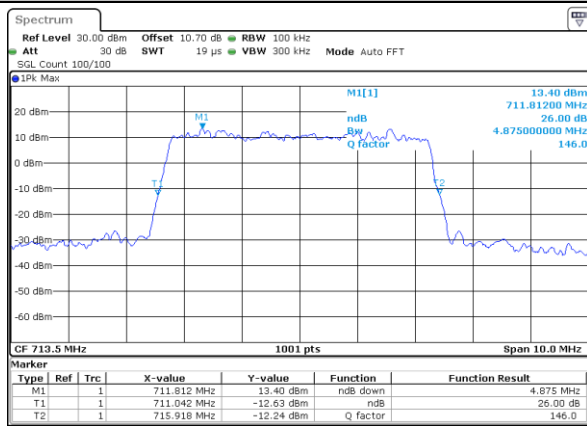
Date: 31.DEC.2019 10:58:52

Middle Channel / 10MHz / 64QAM



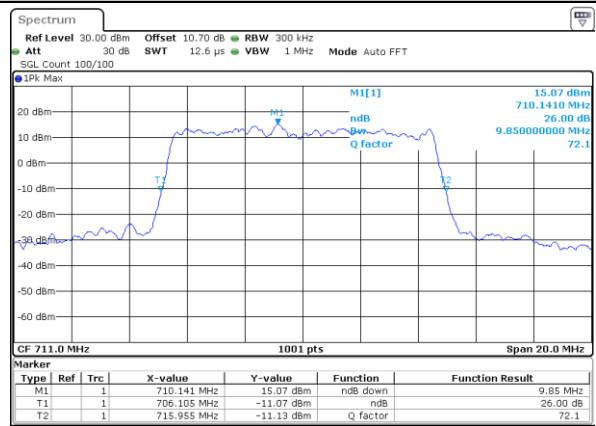
Date: 31.DEC.2019 12:15:07

Highest Channel / 5MHz / 64QAM



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

Highest Channel / 10MHz / 64QAM



Date: 31.DEC.2019 12:16:38

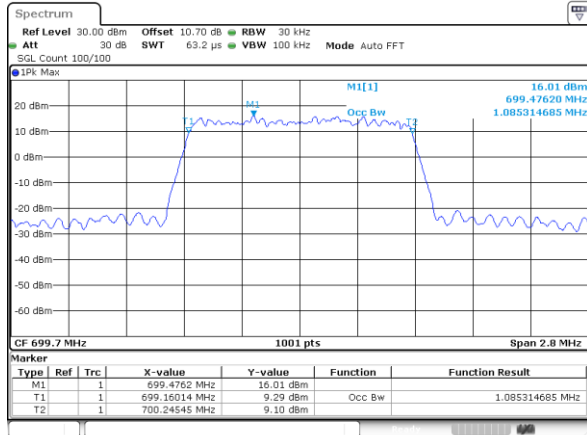
**Occupied Bandwidth**

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	-	-	-	-	-

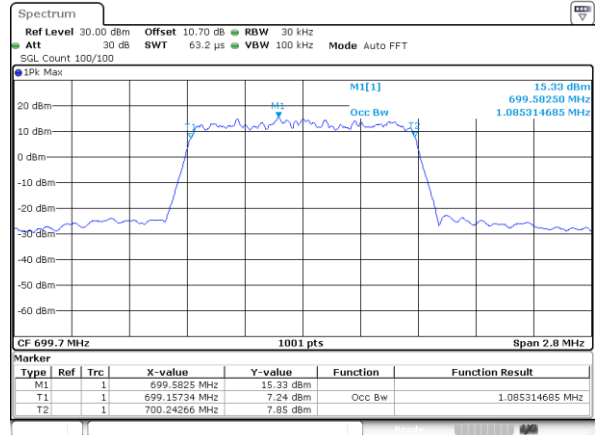


LTE Band 12

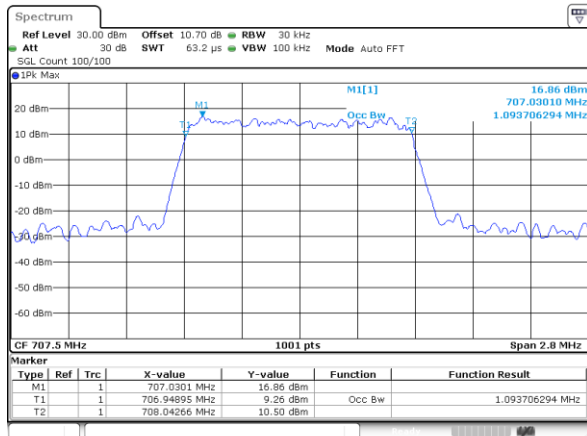
Lowest Channel / 1.4MHz / QPSK



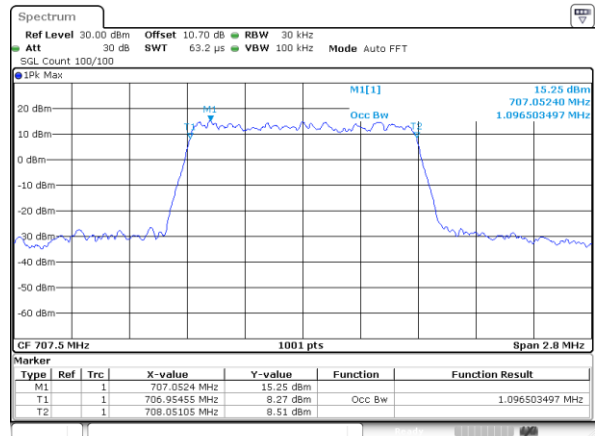
Lowest Channel / 1.4MHz / 16QAM



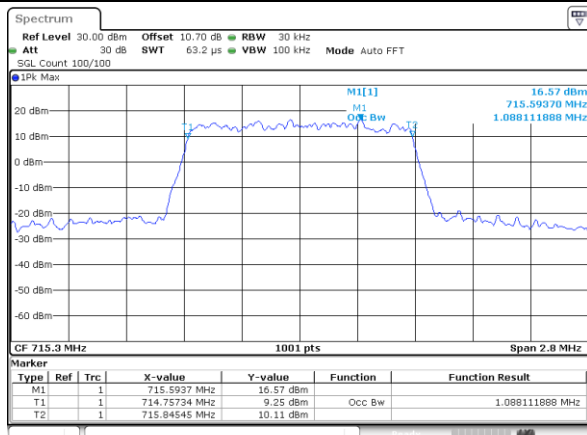
Middle Channel / 1.4MHz / QPSK



Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



Highest Channel / 1.4MHz / 16QAM

