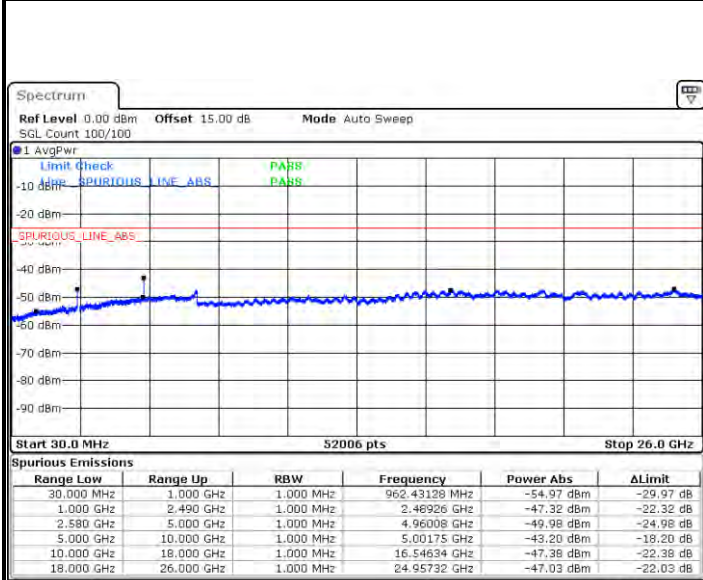




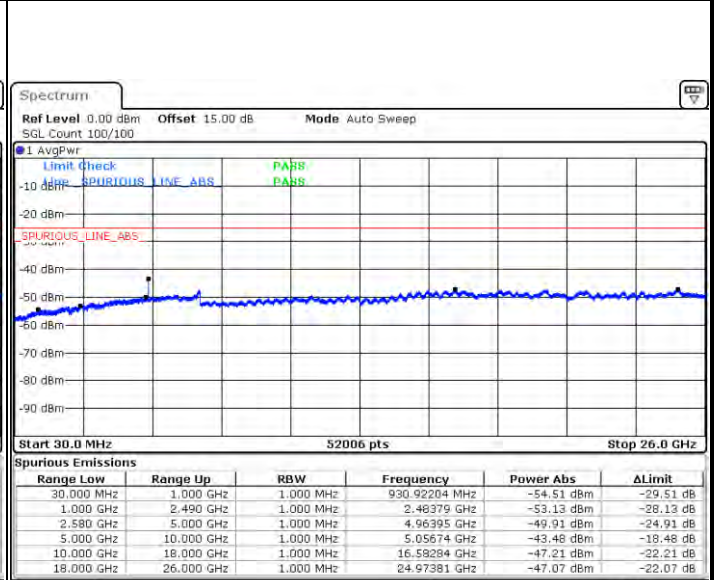
**LTE Band 7 / 15MHz**

**Lowest Channel / 64QAM**



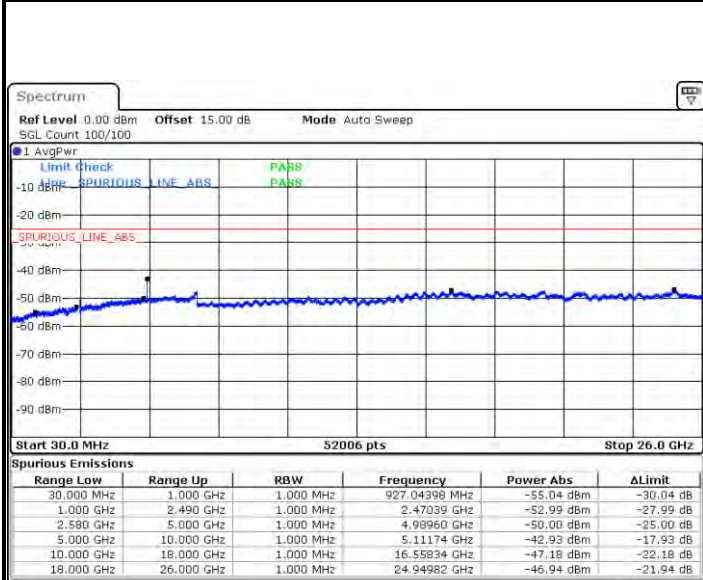
Date: 21.DEC.2020 03:23:07

**Middle Channel / 64QAM**



Date: 21.DEC.2020 03:31:49

**Highest Channel / 64QAM**



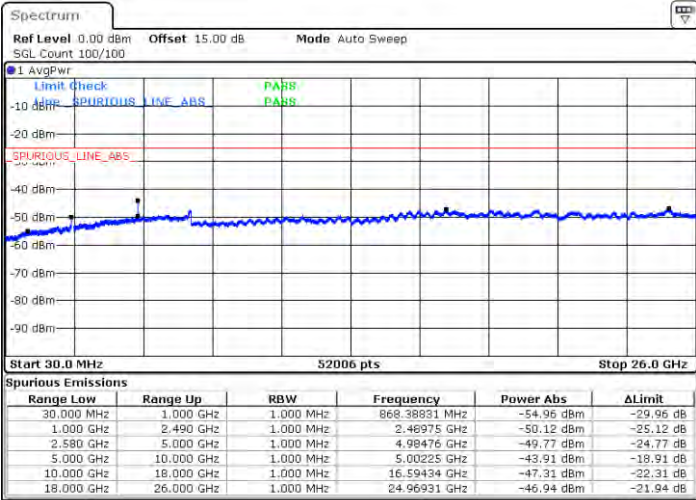
Date: 21.DEC.2020 03:40:31



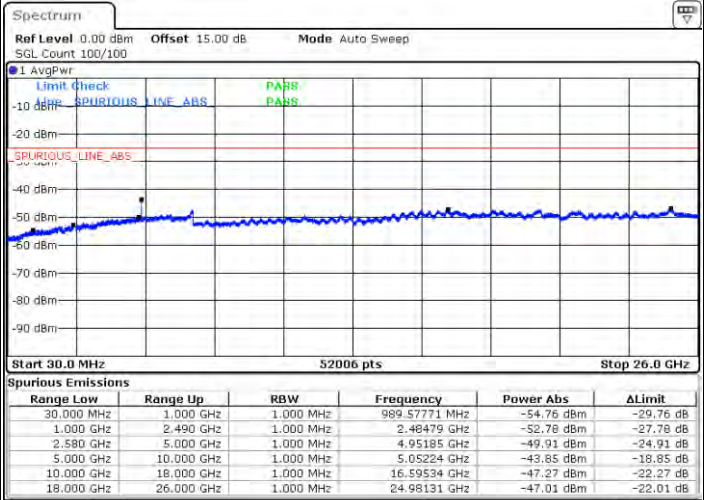
LTE Band 7 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

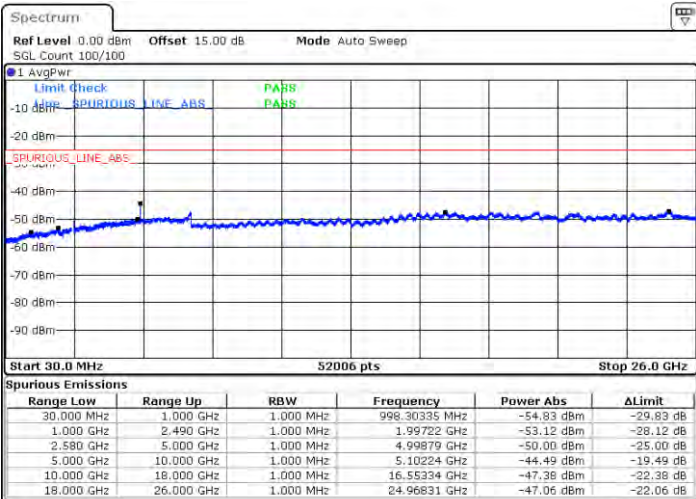


Date: 21.DEC.2020 04:05:42



Date: 21.DEC.2020 04:10:05

Highest Channel / 64QAM



Date: 21.DEC.2020 04:30:00



### 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	0.0010	PASS
40	Normal Voltage	0.0007	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0014	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0002	
20	Battery End Point	0.0015	

**Note:**

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.14 V. ; Maximum Voltage =4.4 V.
2. Note: 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	5.68	5.54	6.41	6.29	PASS
Middle CH	5.28	5.30	6.81	6.26	
Highest CH	5.91	5.48	7.10	6.20	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	7.07	6.41	-	-	PASS
Middle CH	7.04	6.52	-	-	
Highest CH	7.48	6.55	-	-	





LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



Date: 18.Dec.2020 02:30:43

Lowest Channel / Full RB



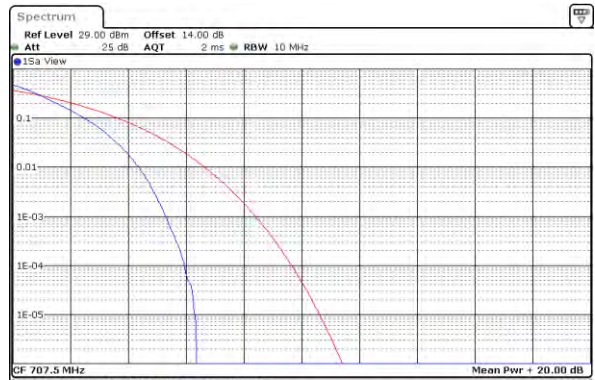
Date: 18.Dec.2020 02:30:32

Middle Channel / 1RB



Date: 18.Dec.2020 02:30:54

Middle Channel / Full RB



Date: 18.Dec.2020 02:31:05

Highest Channel / 1RB



Date: 18.Dec.2020 02:31:26

Highest Channel / Full RB

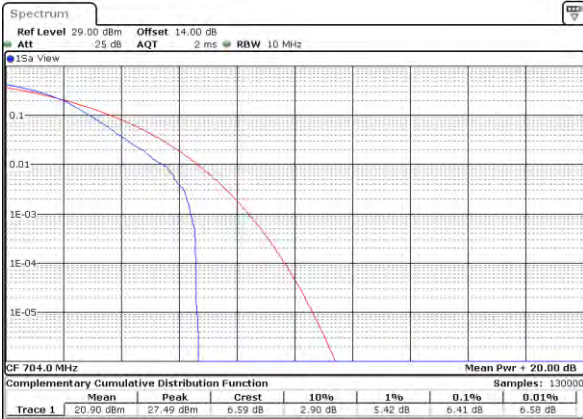


Date: 18.Dec.2020 02:31:15



LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



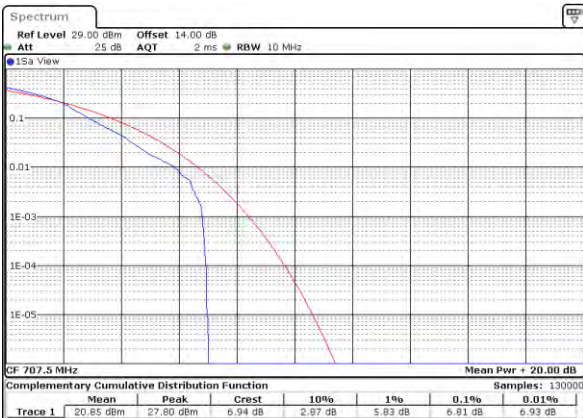
Date: 18.Dec.2020 02:129137

Lowest Channel / Full RB



Date: 18.Dec.2020 02:129136

Middle Channel / 1RB



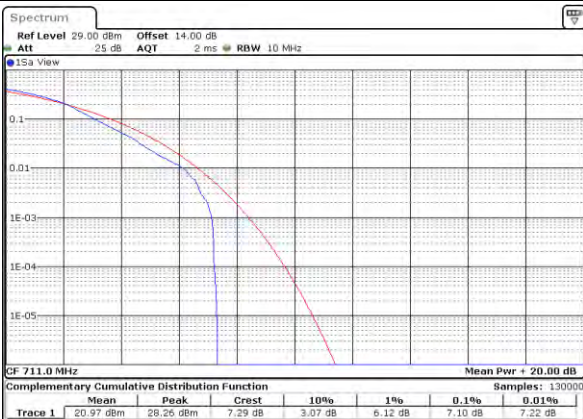
Date: 18.Dec.2020 02:129147

Middle Channel / Full RB



Date: 18.Dec.2020 02:129158

Highest Channel / 1RB



Date: 18.Dec.2020 02:129120

Highest Channel / Full RB



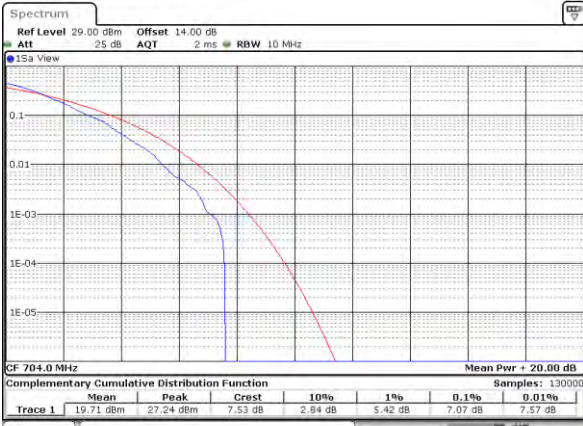
Date: 18.Dec.2020 02:129110





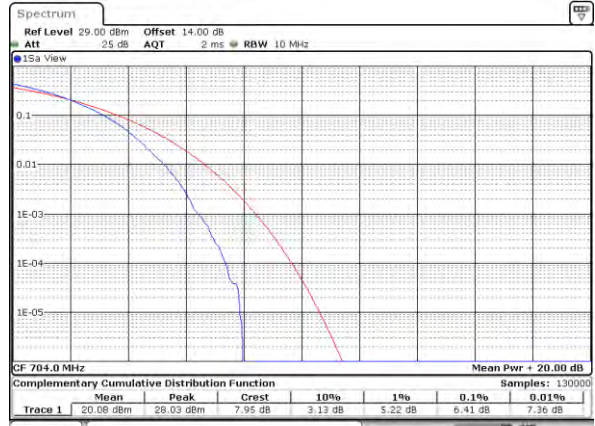
LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



Date: 18.Dec.2020 02:28:23

Lowest Channel / Full RB



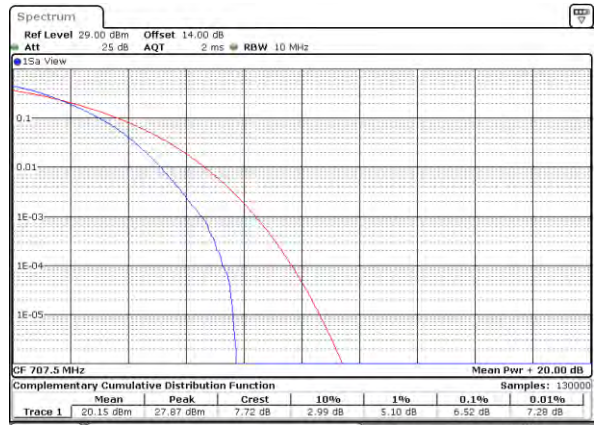
Date: 18.Dec.2020 02:28:12

Middle Channel / 1RB



Date: 18.Dec.2020 02:28:41

Middle Channel / Full RB



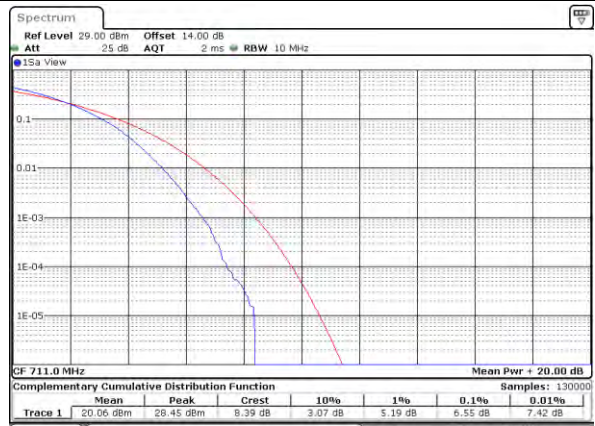
Date: 18.Dec.2020 02:28:52

Highest Channel / 1RB



Date: 18.Dec.2020 02:29:14

Highest Channel / Full RB



Date: 18.Dec.2020 02:29:03





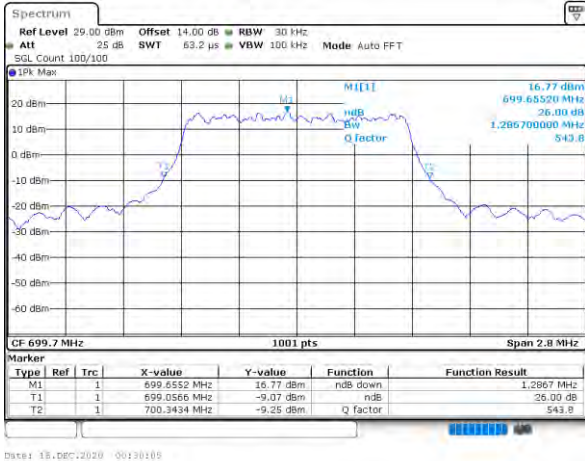
26dB Bandwidth

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	1.29	1.30	2.98	2.99	4.83	4.86	9.81	9.73	-	-	-	-
Middle CH	1.27	1.26	2.95	2.94	4.89	4.91	9.73	9.81	-	-	-	-
Highest CH	1.28	1.31	2.96	2.97	4.83	4.91	9.71	9.79	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.27	-	2.97	-	4.91	-	9.79	-	-	-	-	-
Middle CH	1.28	-	2.95	-	4.85	-	9.89	-	-	-	-	-
Highest CH	1.28	-	2.97	-	4.81	-	9.67	-	-	-	-	-



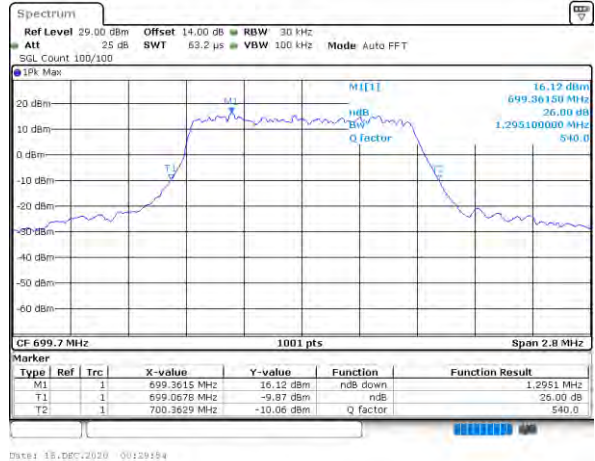
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



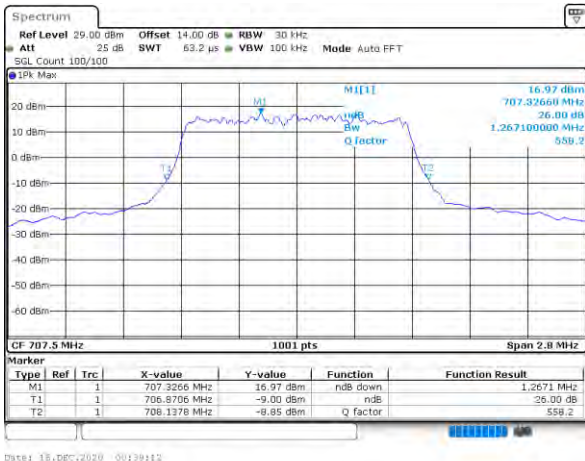
Date: 18.Dec.2020 00:30:05

Lowest Channel / 1.4MHz / 16QAM



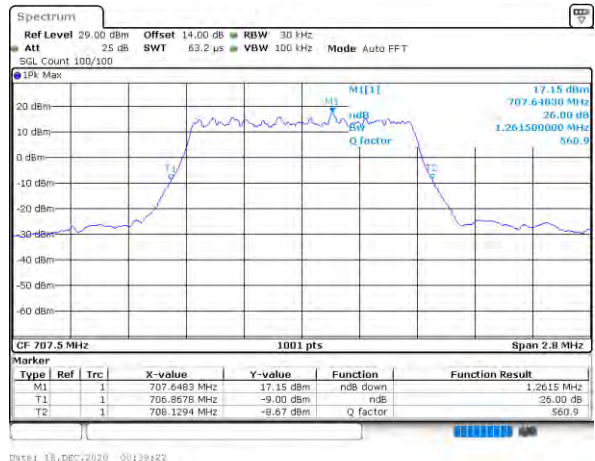
Date: 18.Dec.2020 00:29:54

Middle Channel / 1.4MHz / QPSK



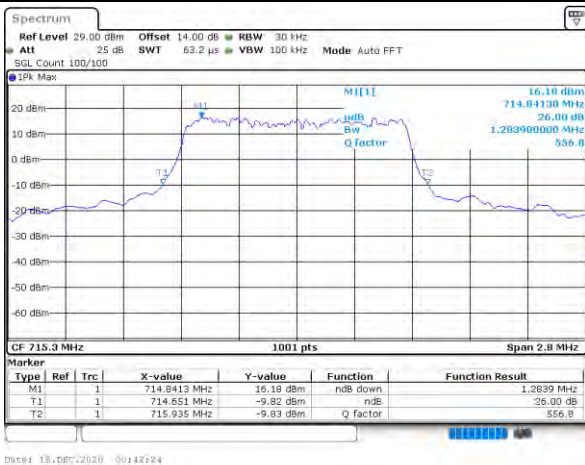
Date: 18.Dec.2020 00:39:12

Middle Channel / 1.4MHz / 16QAM



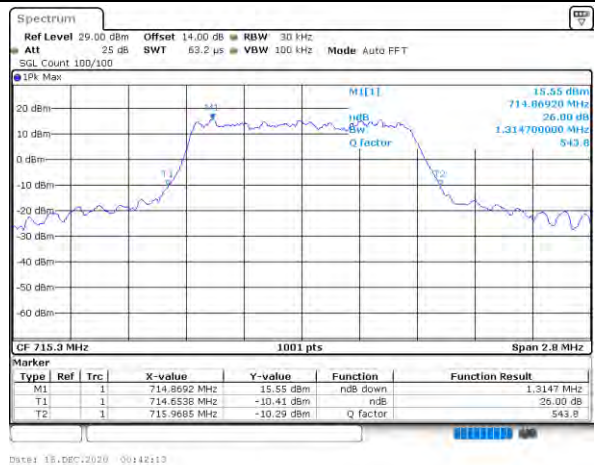
Date: 18.Dec.2020 00:39:42

Highest Channel / 1.4MHz / QPSK



Date: 18.Dec.2020 00:42:24

Highest Channel / 1.4MHz / 16QAM



Date: 18.Dec.2020 00:42:13



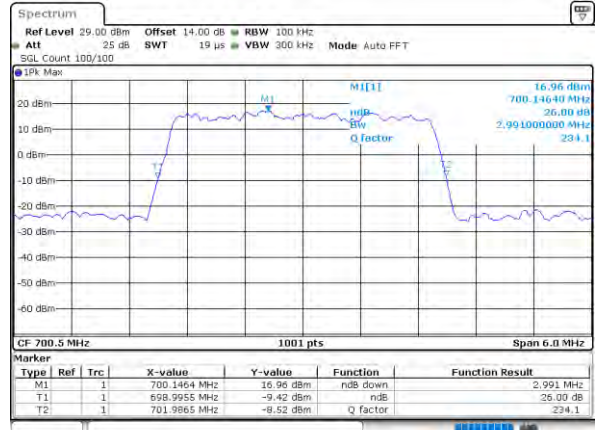
LTE Band 12

Lowest Channel / 3MHz / QPSK



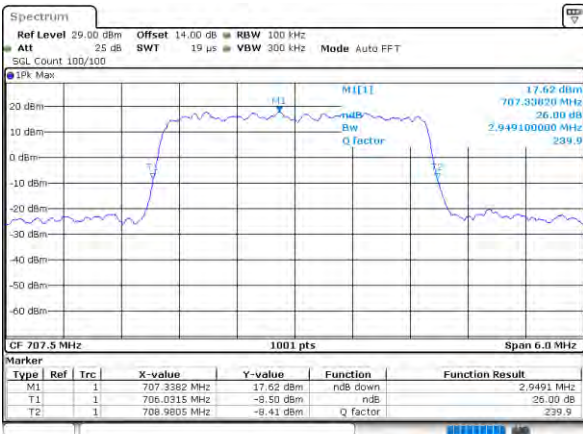
Date: 18.Dec.2020 01:06:28

Lowest Channel / 3MHz / 16QAM



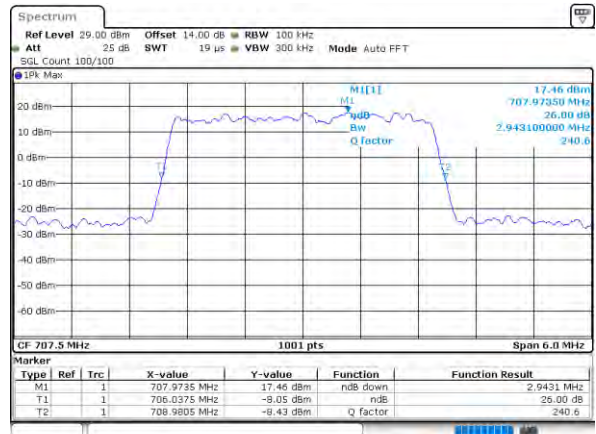
Date: 18.Dec.2020 01:06:17

Middle Channel / 3MHz / QPSK



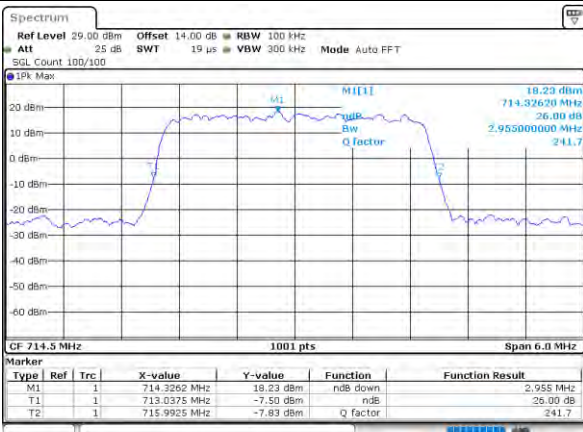
Date: 18.Dec.2020 01:13:54

Middle Channel / 3MHz / 16QAM



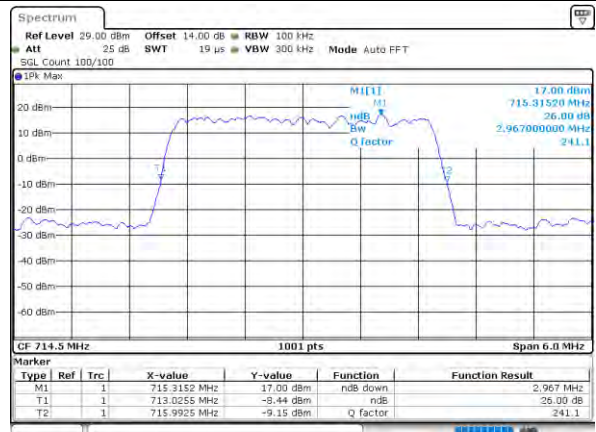
Date: 18.Dec.2020 01:14:05

Highest Channel / 3MHz / QPSK



Date: 18.Dec.2020 01:17:07

Highest Channel / 3MHz / 16QAM



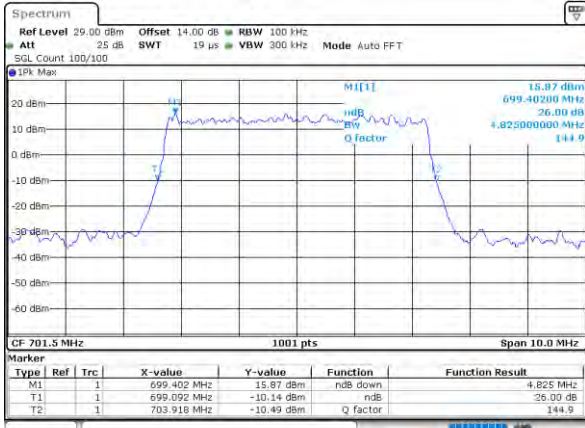
Date: 18.Dec.2020 01:16:56





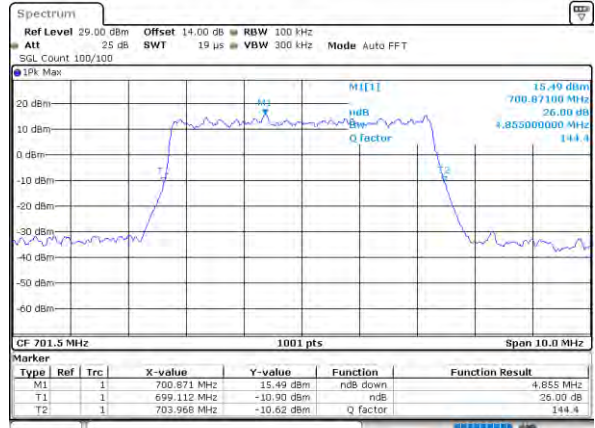
LTE Band 12

Lowest Channel / 5MHz / QPSK



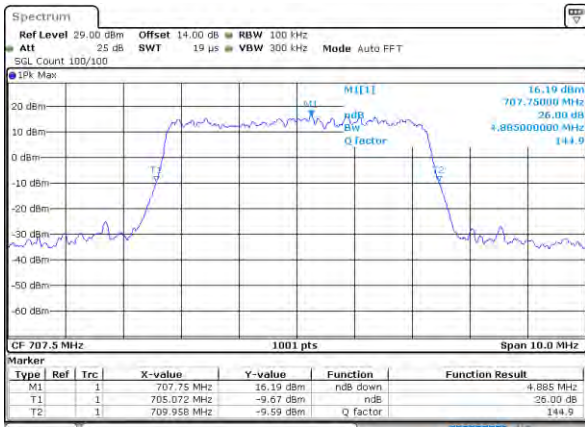
Date: 18.Dec.2020 01:43101

Lowest Channel / 5MHz / 16QAM



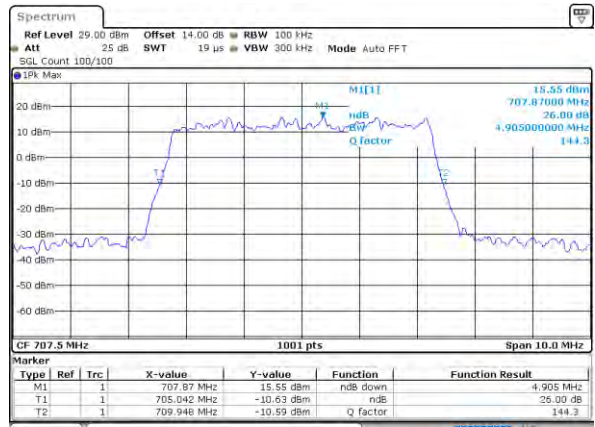
Date: 18.Dec.2020 01:42150

Middle Channel / 5MHz / QPSK



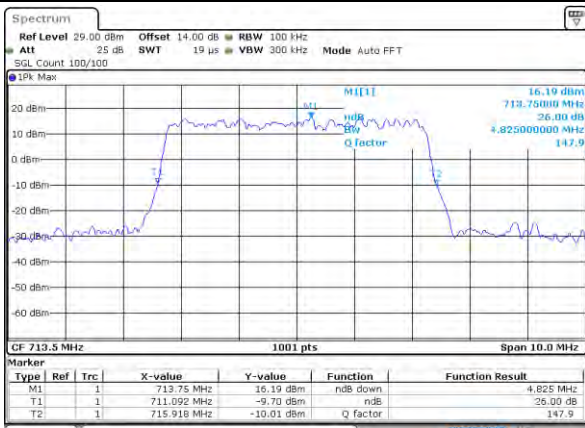
Date: 18.Dec.2020 01:58207

Middle Channel / 5MHz / 16QAM



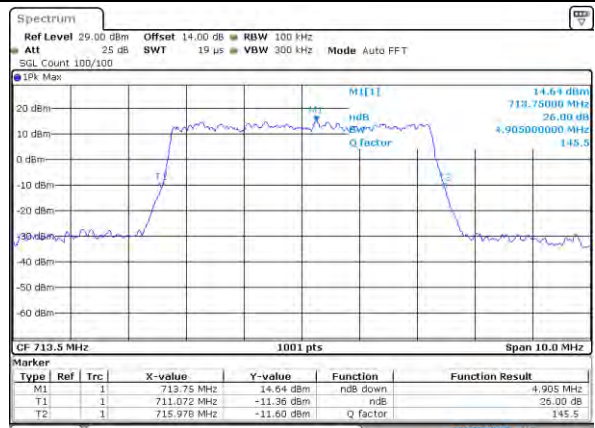
Date: 18.Dec.2020 01:58038

Highest Channel / 5MHz / QPSK



Date: 18.Dec.2020 01:53141

Highest Channel / 5MHz / 16QAM

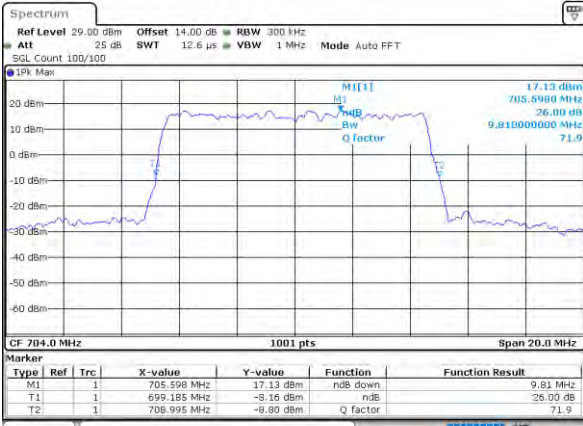


Date: 18.Dec.2020 01:53330



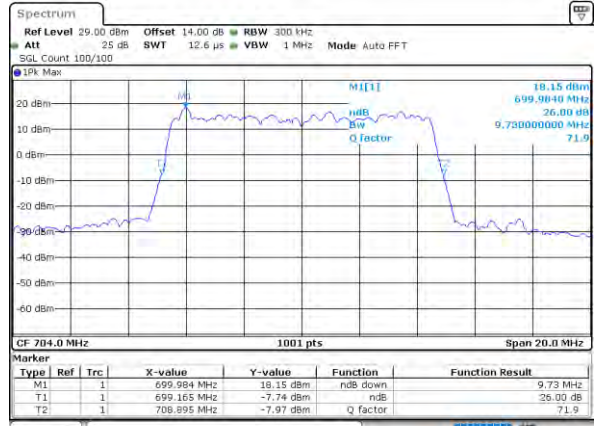
LTE Band 12

Lowest Channel / 10MHz / QPSK



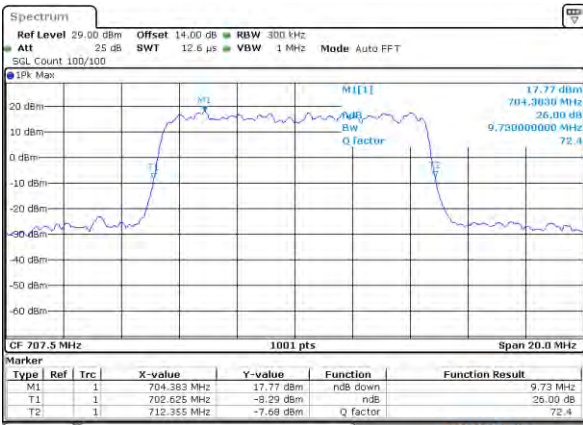
Date: 18.Dec.2020 02:10:11

Lowest Channel / 10MHz / 16QAM



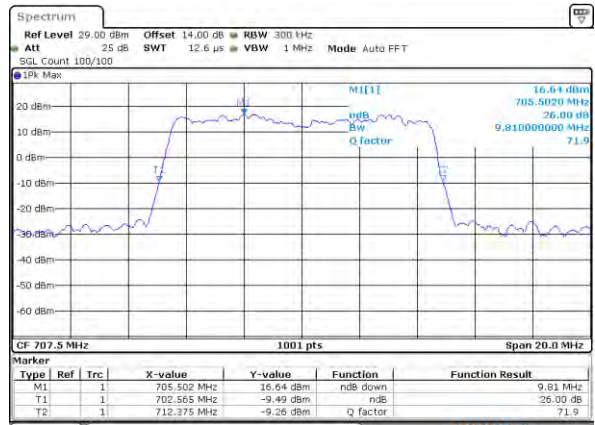
Date: 18.Dec.2020 02:10:17

Middle Channel / 10MHz / QPSK



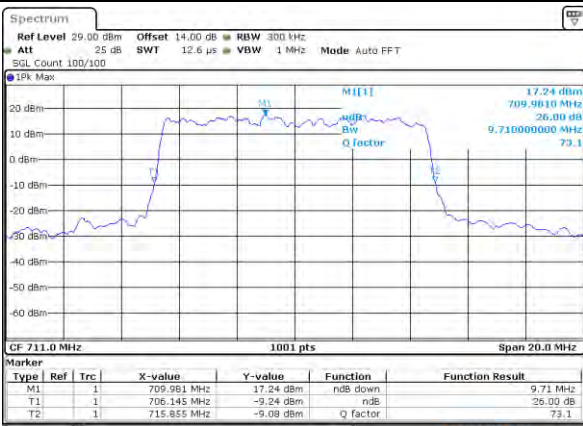
Date: 18.Dec.2020 02:10:44

Middle Channel / 10MHz / 16QAM



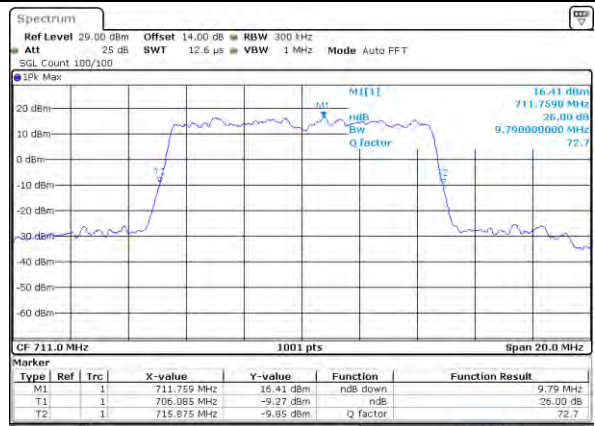
Date: 18.Dec.2020 02:10:55

Highest Channel / 10MHz / QPSK



Date: 18.Dec.2020 02:11:57

Highest Channel / 10MHz / 16QAM



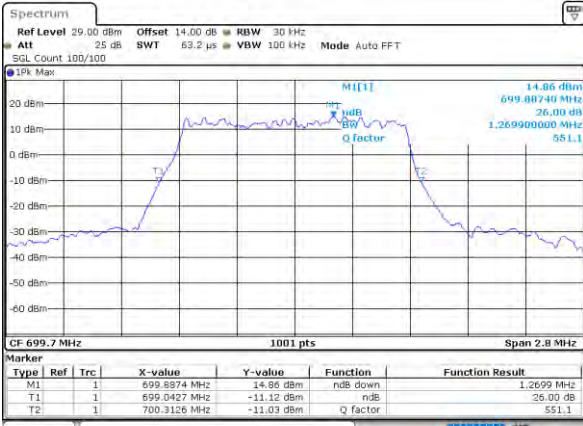
Date: 18.Dec.2020 02:11:46





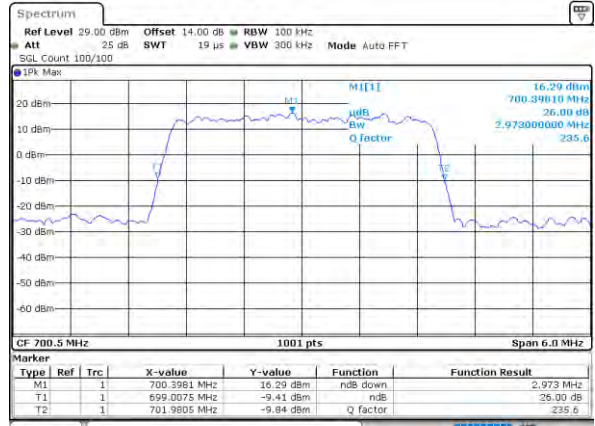
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



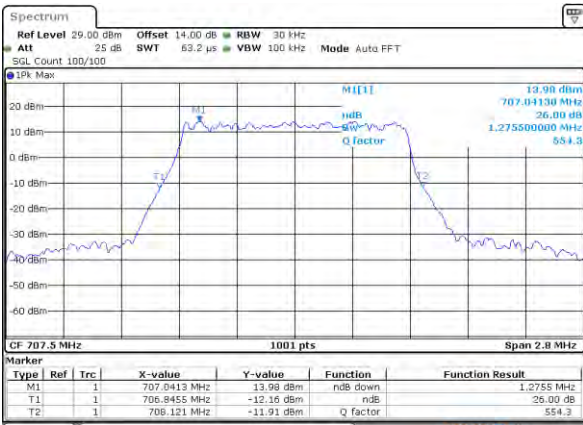
Date: 18.Dec.2020 00:51120

Lowest Channel / 3MHz / 64QAM



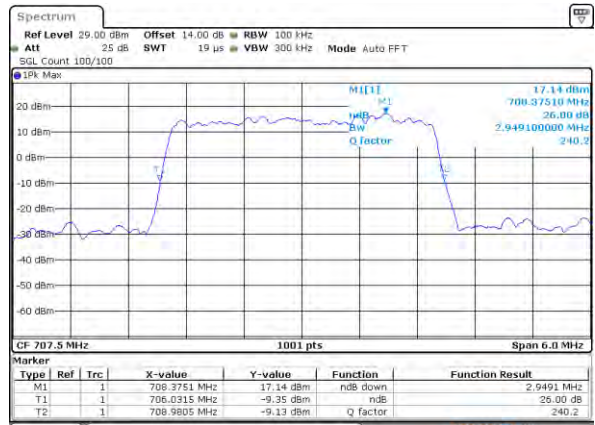
Date: 18.Dec.2020 01:14423

Middle Channel / 1.4MHz / 64QAM



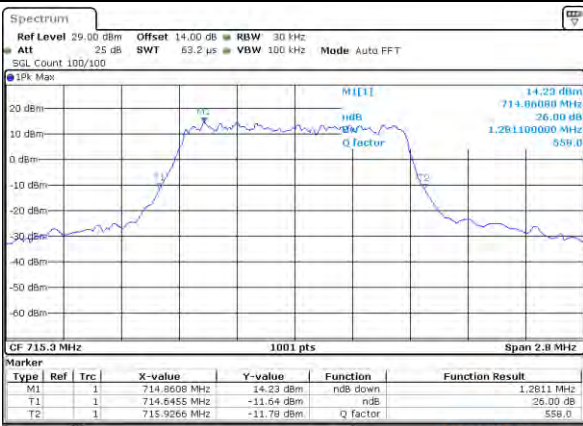
Date: 18.Dec.2020 00:55189

Middle Channel / 3MHz / 64QAM



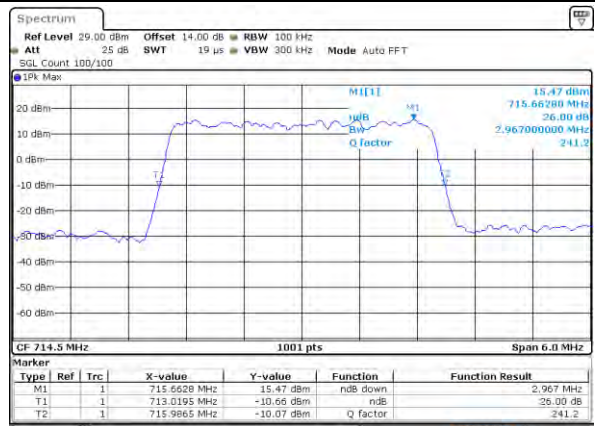
Date: 18.Dec.2020 01:12811

Highest Channel / 1.4MHz / 64QAM



Date: 18.Dec.2020 00:57130

Highest Channel / 3MHz / 64QAM



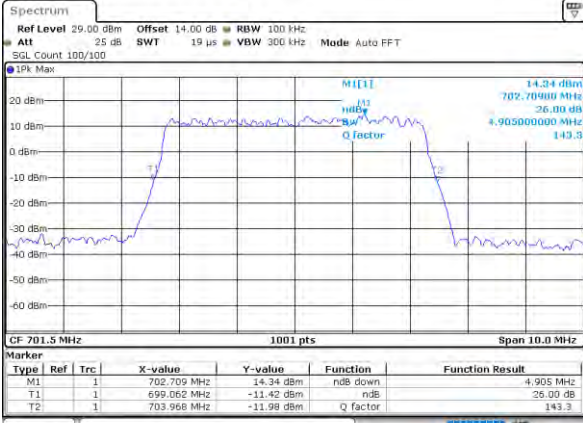
Date: 18.Dec.2020 01:12942





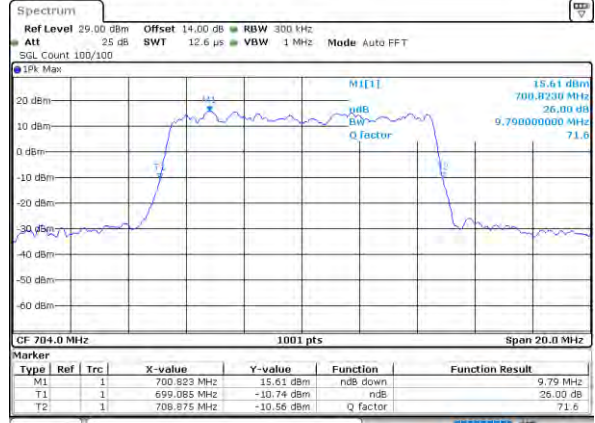
LTE Band 12

Lowest Channel / 5MHz / 64QAM



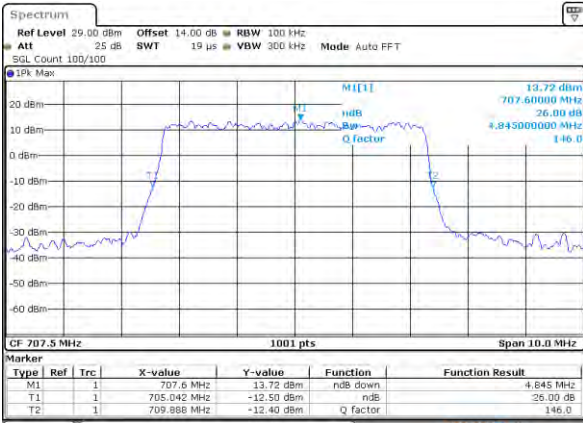
Date: 18.Dec.2020 01:33:31

Lowest Channel / 10MHz / 64QAM



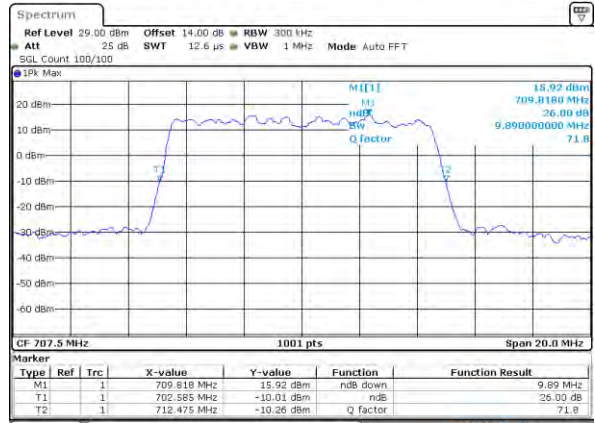
Date: 18.Dec.2020 02:11:13

Middle Channel / 5MHz / 64QAM



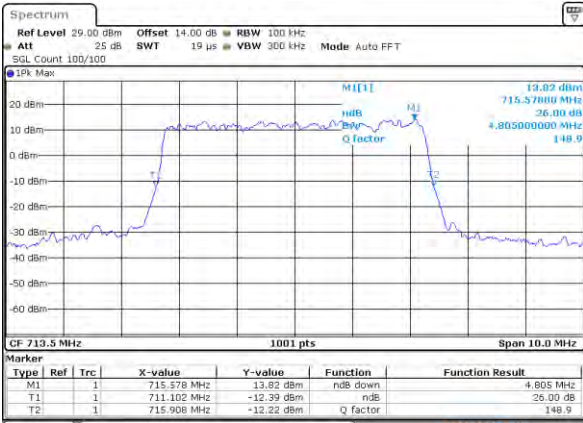
Date: 18.Dec.2020 01:37:19

Middle Channel / 10MHz / 64QAM



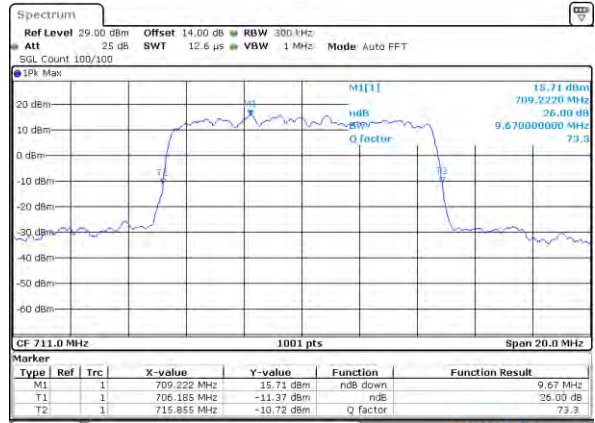
Date: 18.Dec.2020 02:12:02

Highest Channel / 5MHz / 64QAM



Date: 18.Dec.2020 01:38:50

Highest Channel / 10MHz / 64QAM



Date: 18.Dec.2020 02:14:53



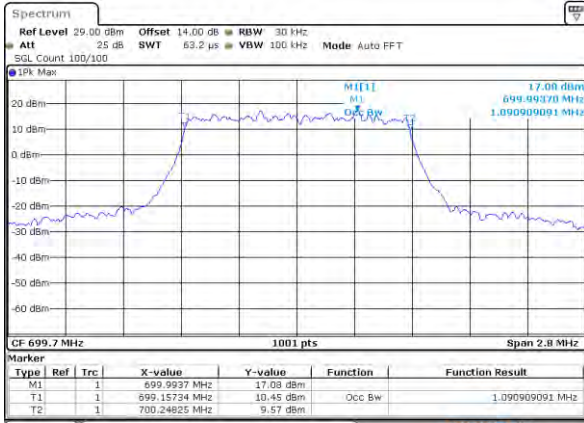
Occupied Bandwidth

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	1.10	2.74	2.73	4.49	4.48	9.05	9.01	-	-	-	-
Middle CH	1.08	1.09	2.72	2.72	4.50	4.48	9.07	8.99	-	-	-	-
Highest CH	1.09	1.09	2.72	2.72	4.50	4.49	9.05	9.05	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.10	-	2.73	-	4.49	-	8.99	-	-	-	-	-
Middle CH	1.09	-	2.72	-	4.50	-	9.03	-	-	-	-	-
Highest CH	1.10	-	2.73	-	4.49	-	9.03	-	-	-	-	-



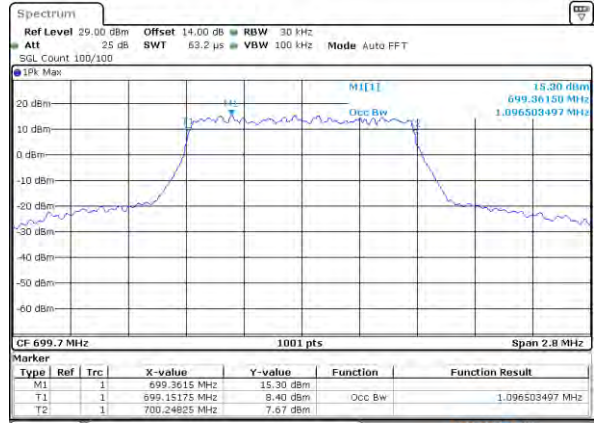
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



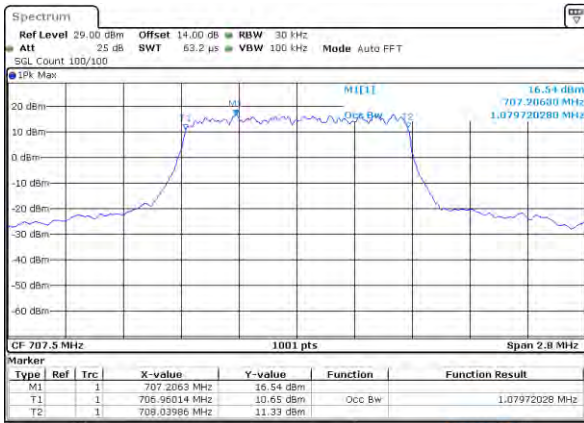
Date: 18.Dec.2020 00:29:32

Lowest Channel / 1.4MHz / 16QAM



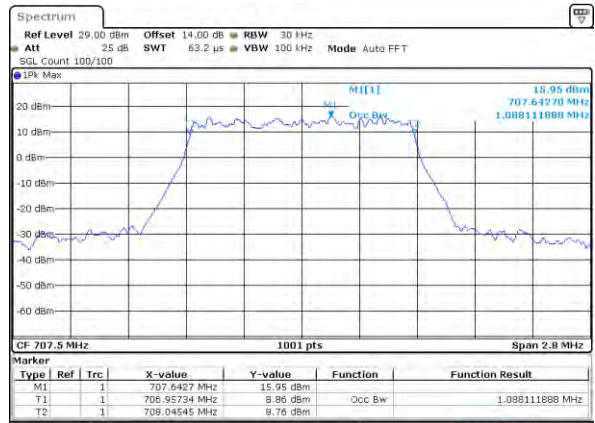
Date: 18.Dec.2020 00:29:43

Middle Channel / 1.4MHz / QPSK



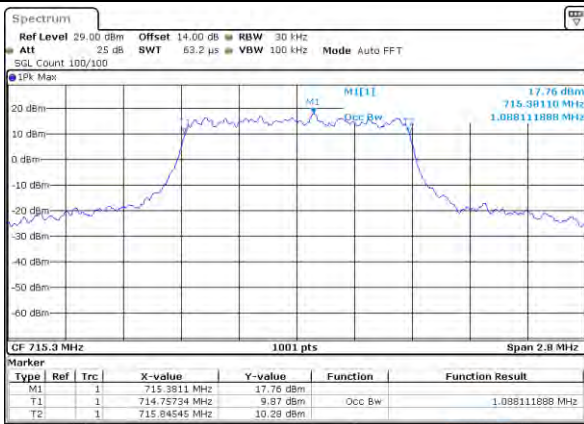
Date: 18.Dec.2020 00:39:01

Middle Channel / 1.4MHz / 16QAM



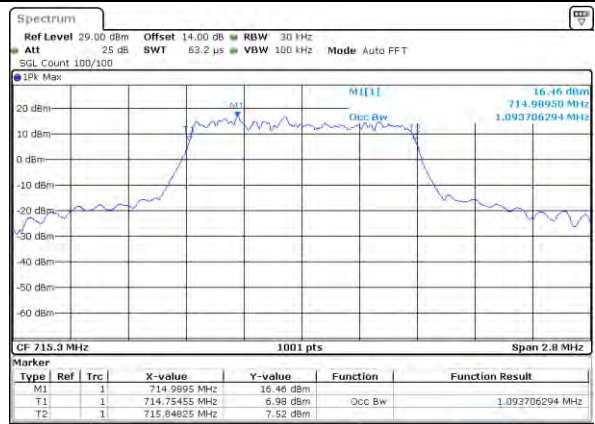
Date: 18.Dec.2020 00:39:50

Highest Channel / 1.4MHz / QPSK



Date: 18.Dec.2020 00:41:53

Highest Channel / 1.4MHz / 16QAM



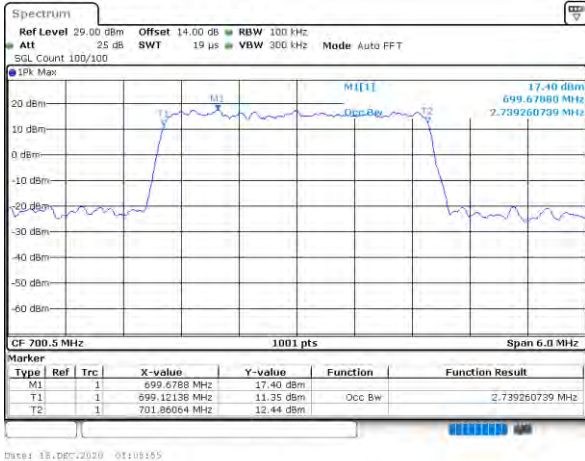
Date: 18.Dec.2020 00:42:02



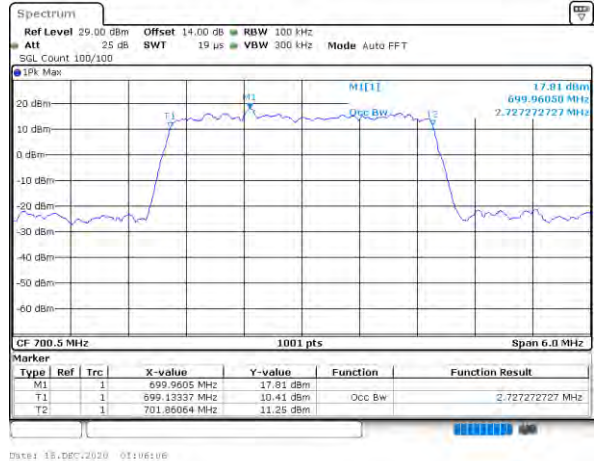


LTE Band 12

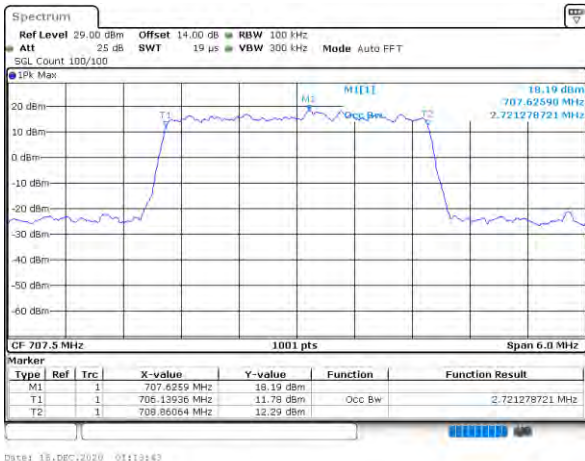
Lowest Channel / 3MHz / QPSK



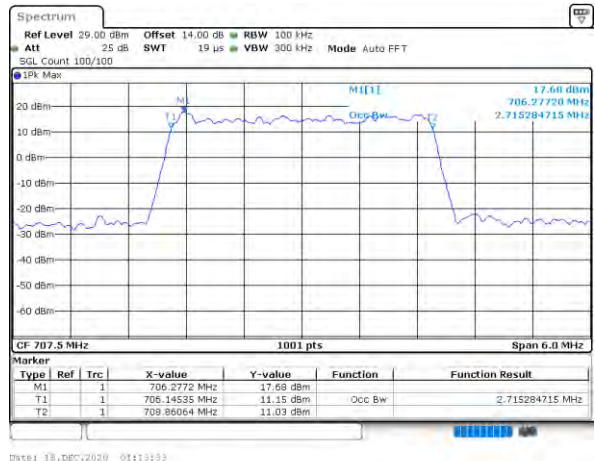
Lowest Channel / 3MHz / 16QAM



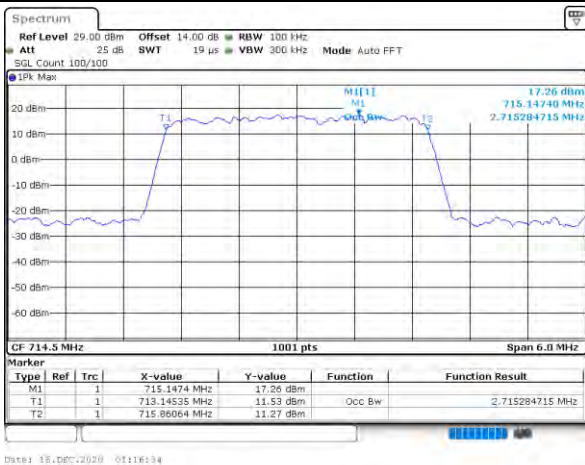
Middle Channel / 3MHz / QPSK



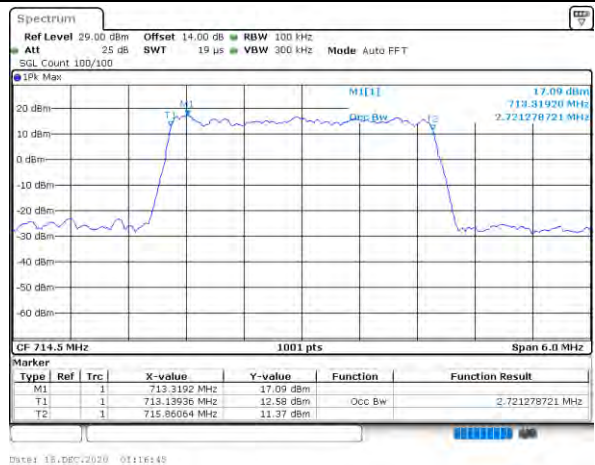
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



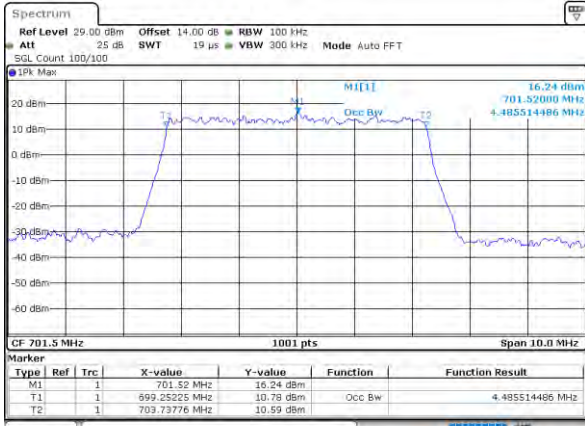
Highest Channel / 3MHz / 16QAM





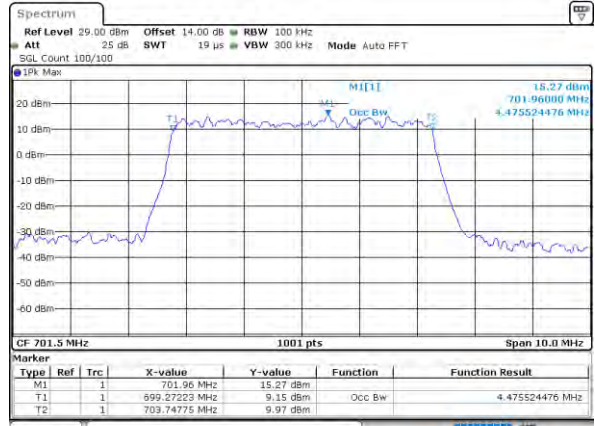
LTE Band 12

Lowest Channel / 5MHz / QPSK



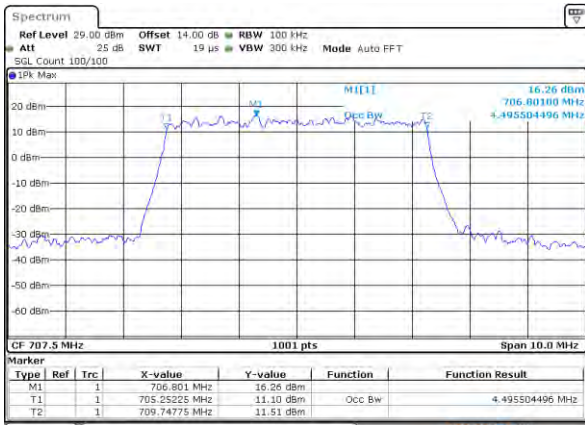
Date: 18.Dec.2020 01:42:28

Lowest Channel / 5MHz / 16QAM



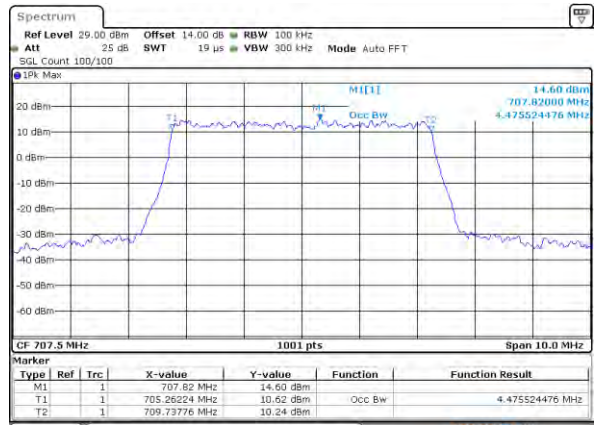
Date: 18.Dec.2020 01:42:39

Middle Channel / 5MHz / QPSK



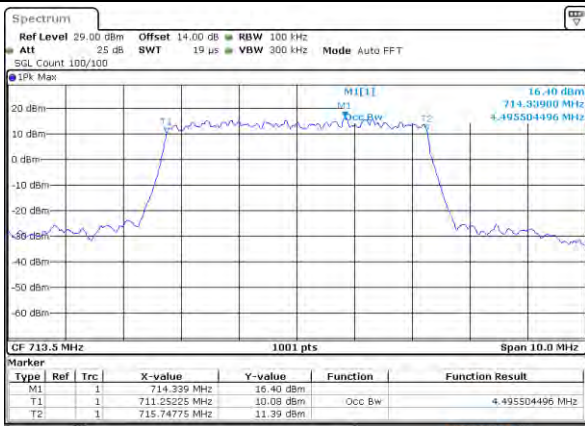
Date: 18.Dec.2020 01:58:17

Middle Channel / 5MHz / 16QAM



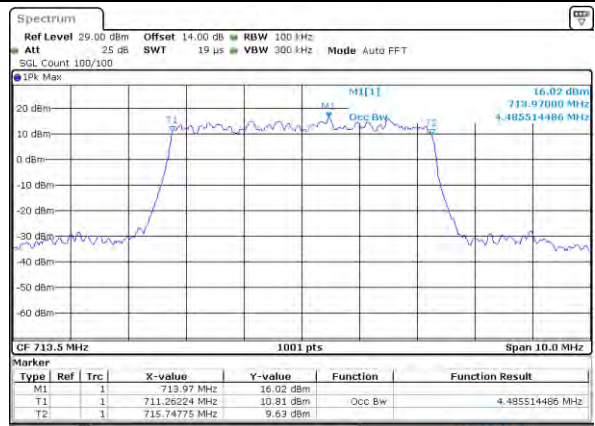
Date: 18.Dec.2020 01:58:06

Highest Channel / 5MHz / QPSK



Date: 18.Dec.2020 01:53:08

Highest Channel / 5MHz / 16QAM



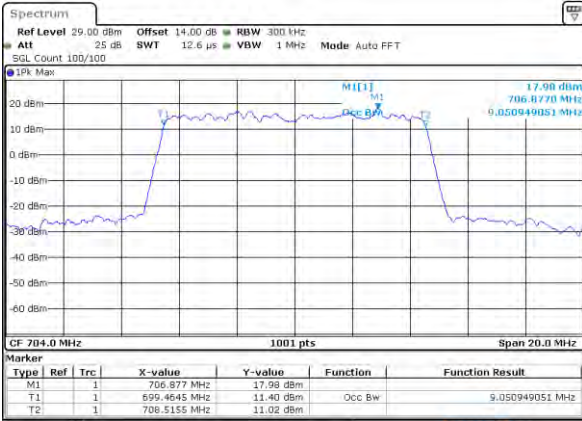
Date: 18.Dec.2020 01:53:13



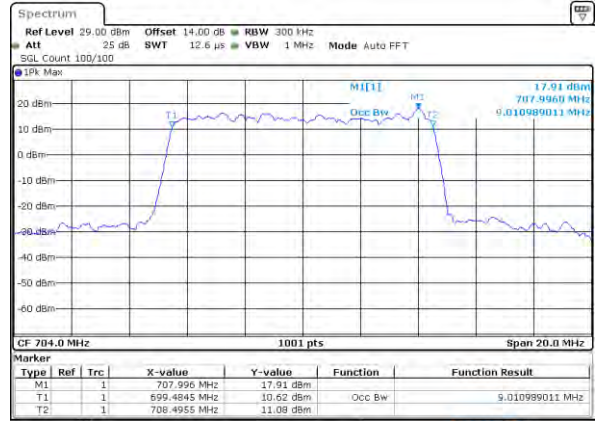


LTE Band 12

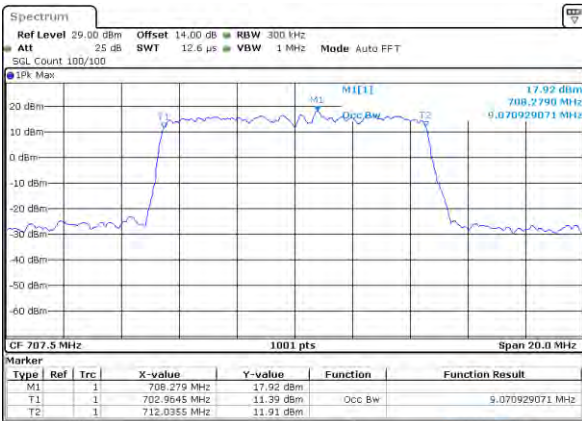
Lowest Channel / 10MHz / QPSK



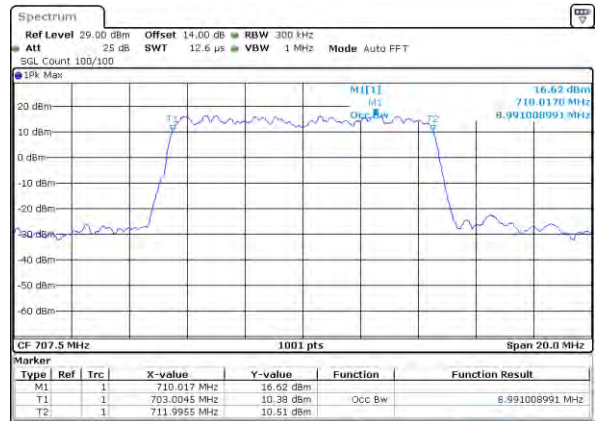
Lowest Channel / 10MHz / 16QAM



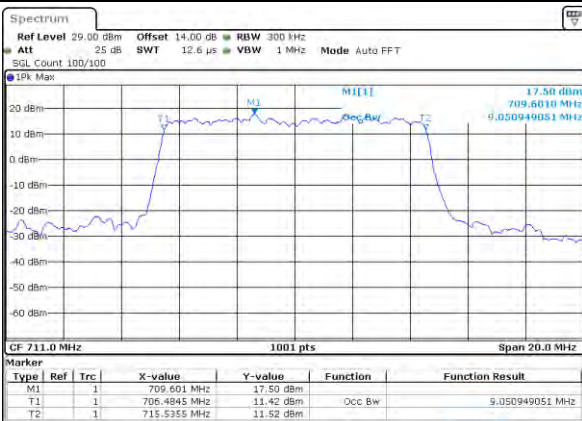
Middle Channel / 10MHz / QPSK



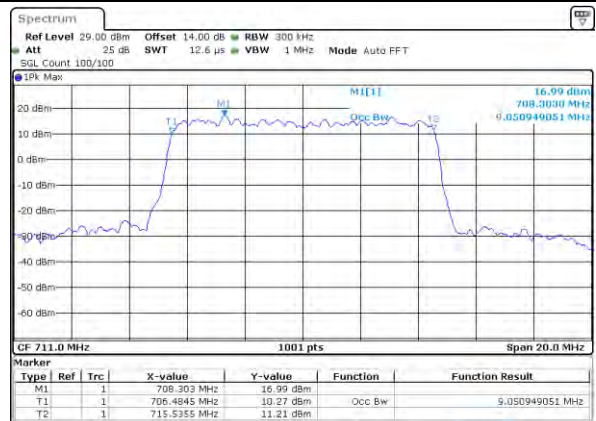
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

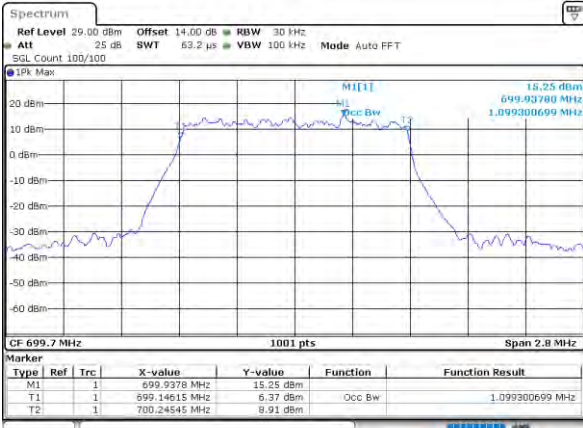






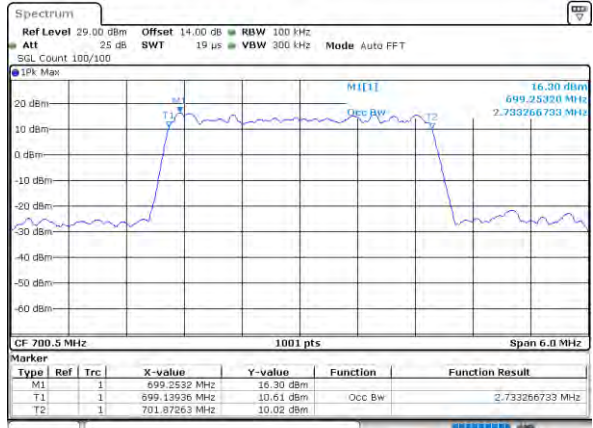
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



Date: 18.Dec.2020 00:51:00

Lowest Channel / 3MHz / 64QAM



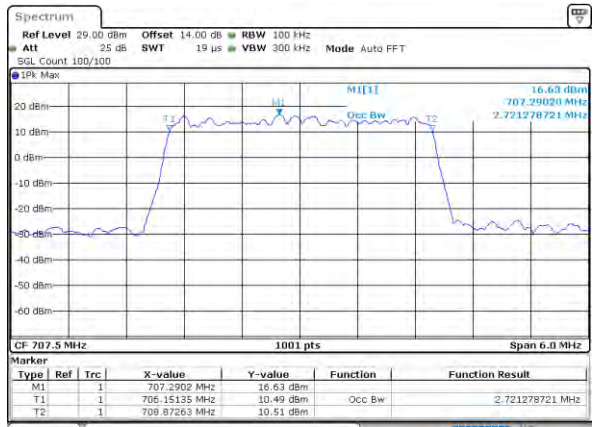
Date: 18.Dec.2020 01:14:12

Middle Channel / 1.4MHz / 64QAM



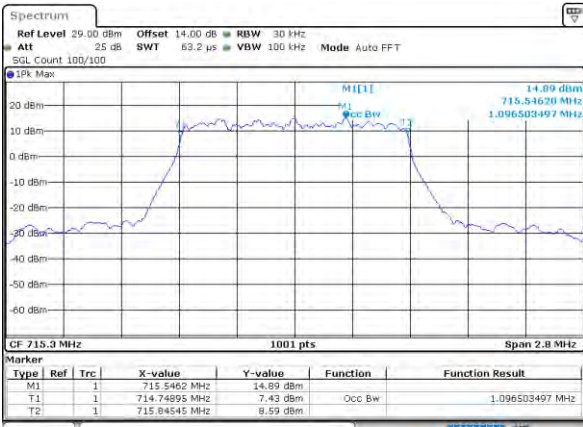
Date: 18.Dec.2020 00:55:40

Middle Channel / 3MHz / 64QAM



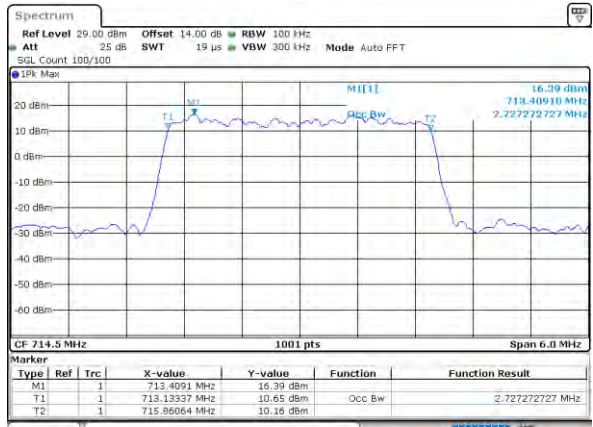
Date: 18.Dec.2020 01:20:00

Highest Channel / 1.4MHz / 64QAM



Date: 18.Dec.2020 00:57:19

Highest Channel / 3MHz / 64QAM

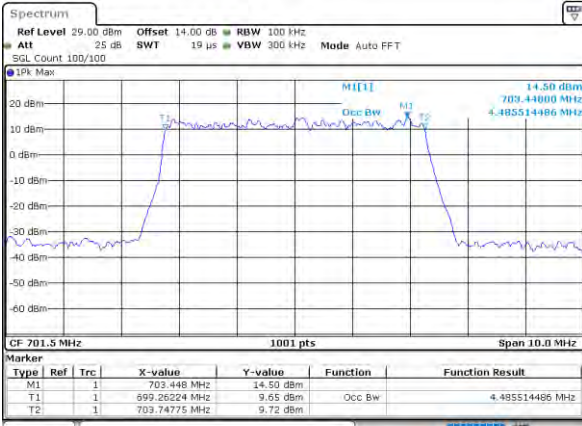


Date: 18.Dec.2020 01:29:31



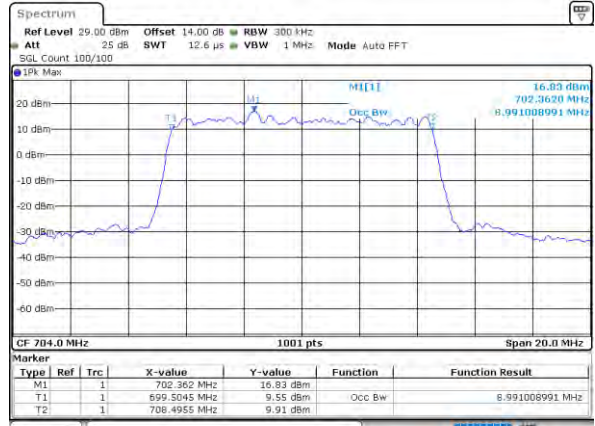
LTE Band 12

Lowest Channel / 5MHz / 64QAM



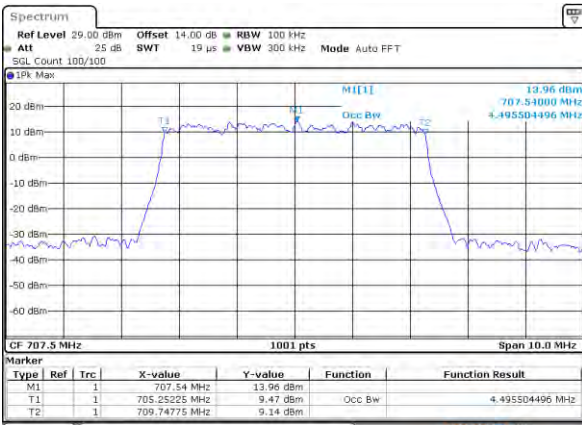
Date: 18.Dec.2020 01:33:20

Lowest Channel / 10MHz / 64QAM



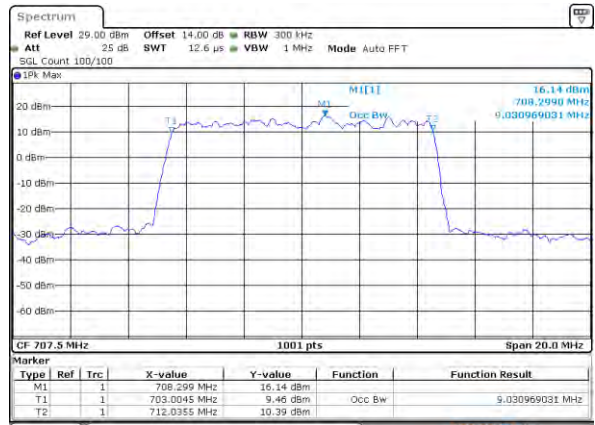
Date: 18.Dec.2020 02:11:02

Middle Channel / 5MHz / 64QAM



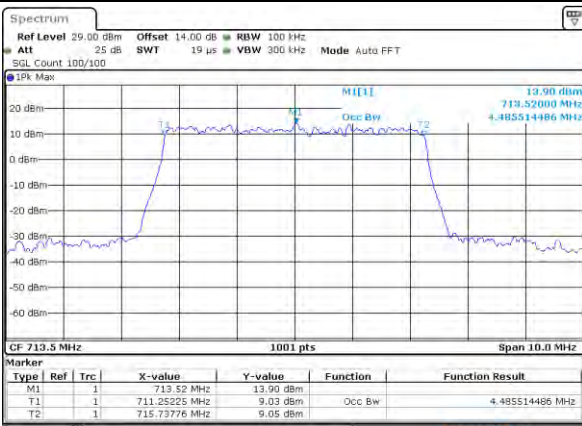
Date: 18.Dec.2020 01:37:00

Middle Channel / 10MHz / 64QAM



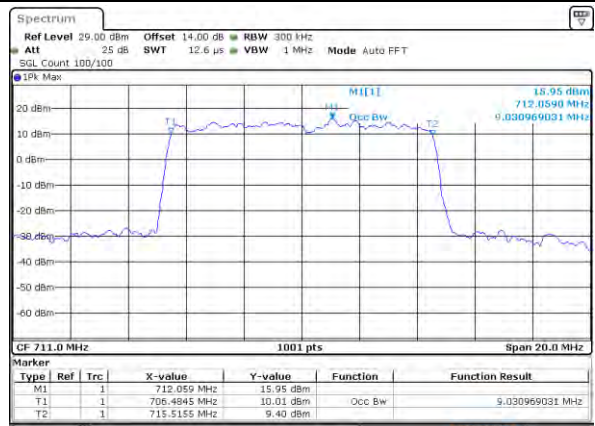
Date: 18.Dec.2020 02:22:51

Highest Channel / 5MHz / 64QAM



Date: 18.Dec.2020 01:38:30

Highest Channel / 10MHz / 64QAM



Date: 18.Dec.2020 02:14:22



**Conducted Band Edge**





LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1 RB



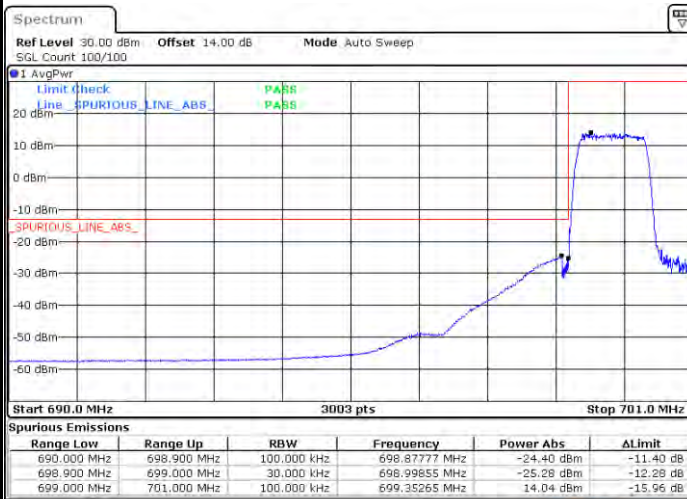
Date: 18.DEC.2020 09:36:20

Highest Band Edge / 1RB



Date: 18.DEC.2020 09:48:40

Lowest Band Edge / Full RB



Date: 18.DEC.2020 09:31:39

Highest Band Edge / Full RB



Date: 18.DEC.2020 09:43:55



LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



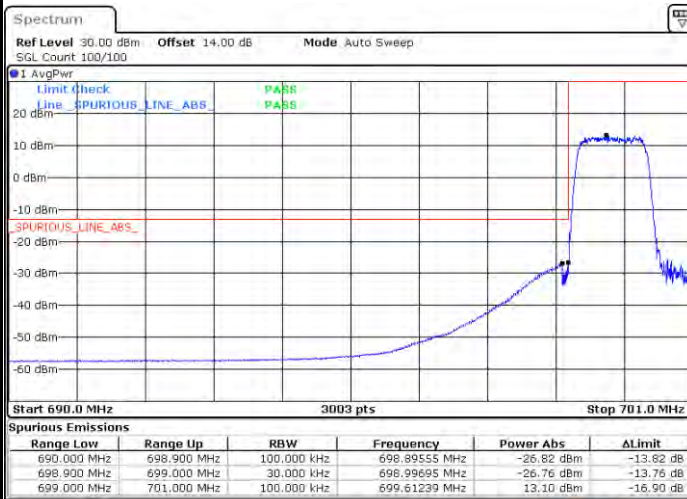
Date: 18.DEC.2020 00:30:47

Highest Band Edge / 1 RB



Date: 18.DEC.2020 00:47:06

Lowest Band Edge / Full RB



Date: 18.DEC.2020 00:33:13

Highest Band Edge / Full RB



Date: 18.DEC.2020 00:43:32





LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



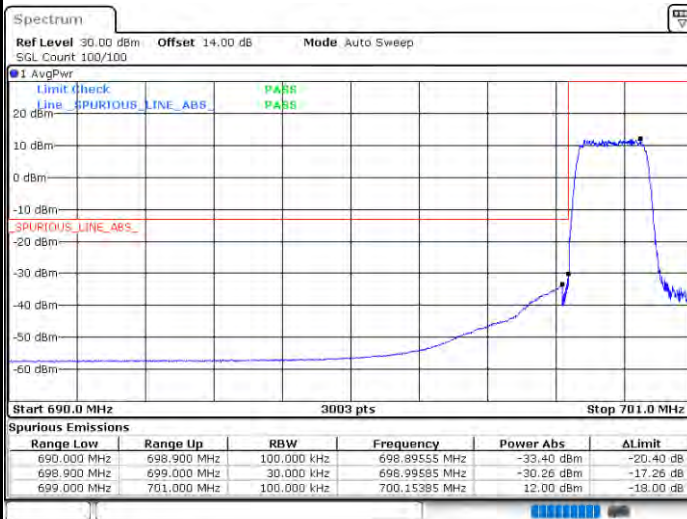
Date: 18.DEC.2020 00:15:28

Highest Band Edge / 1 RB



Date: 18.DEC.2020 00:10:37

Lowest Band Edge / Full RB



Date: 18.DEC.2020 00:15:54

Highest Band Edge / Full RB



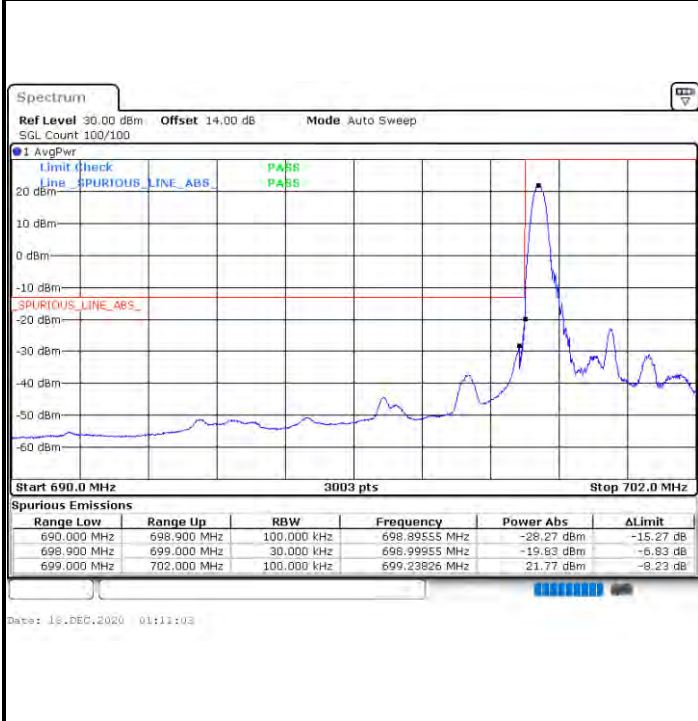
Date: 18.DEC.2020 00:15:03



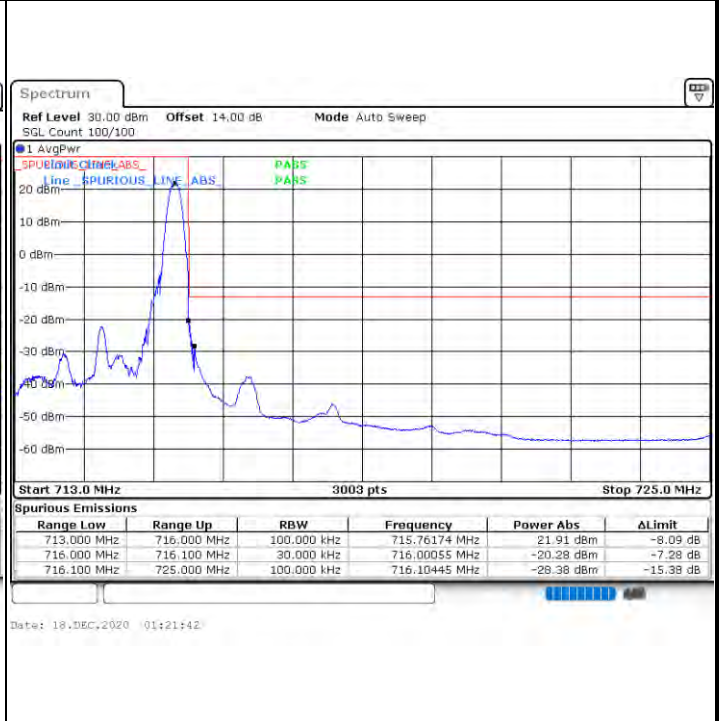


**LTE Band 12 / 3MHz / QPSK**

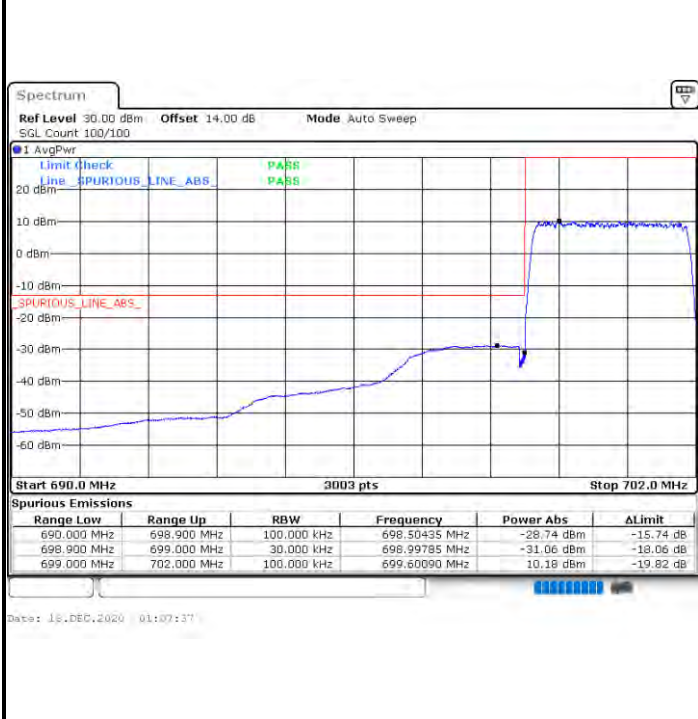
**Lowest Band Edge / 1RB**



**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



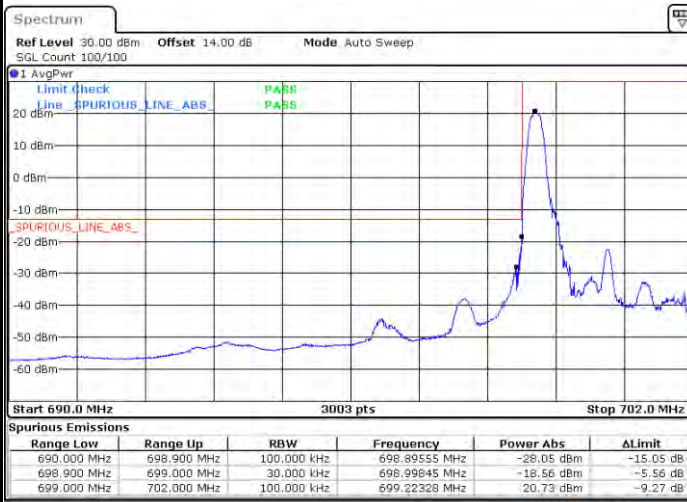
**Highest Band Edge / Full RB**





LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



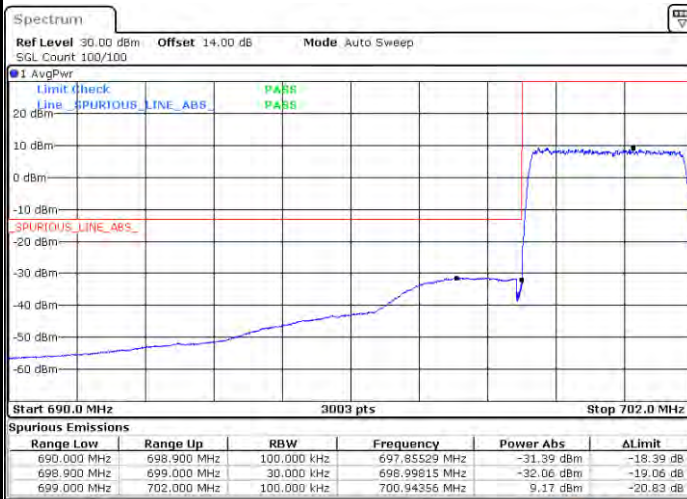
Date: 18.DEC.2020 01:09:54

Highest Band Edge / 1 RB



Date: 18.DEC.2020 01:20:53

Lowest Band Edge / Full RB



Date: 18.DEC.2020 01:08:46

Highest Band Edge / Full RB



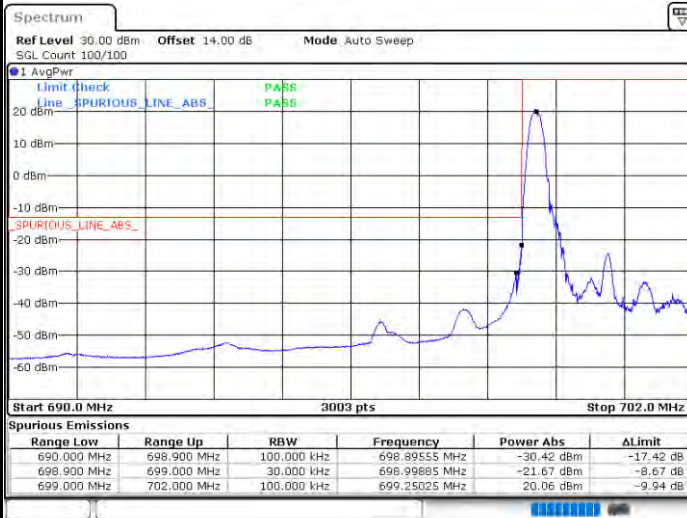
Date: 18.DEC.2020 01:19:25





LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



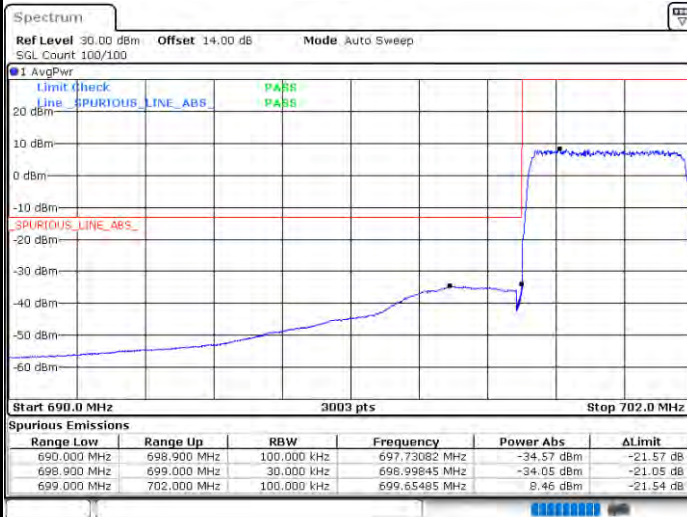
Date: 18.DEC.2020 01:26:40

Highest Band Edge / 1 RB



Date: 18.DEC.2020 01:32:00

Lowest Band Edge / Full RB



Date: 18.DEC.2020 01:29:31

Highest Band Edge / Full RB



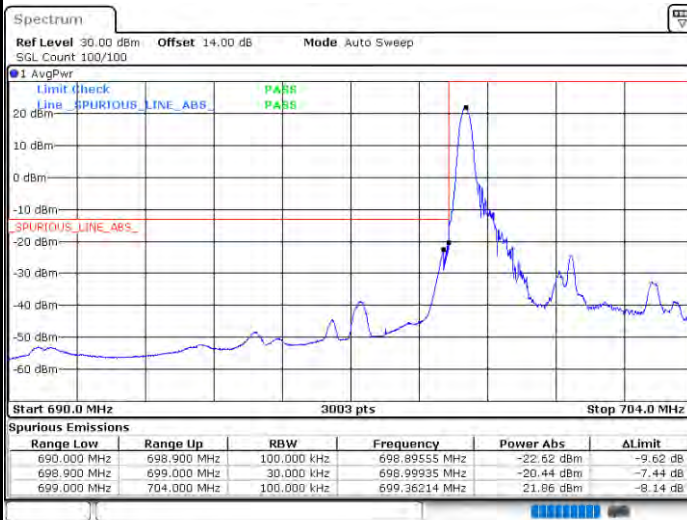
Date: 18.DEC.2020 01:30:51





LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



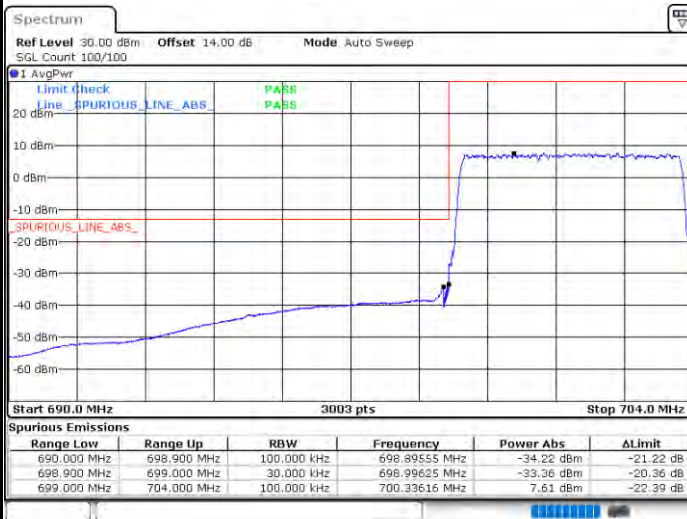
Date: 18.DEC.2020 01:47:36

Highest Band Edge / 1 RB



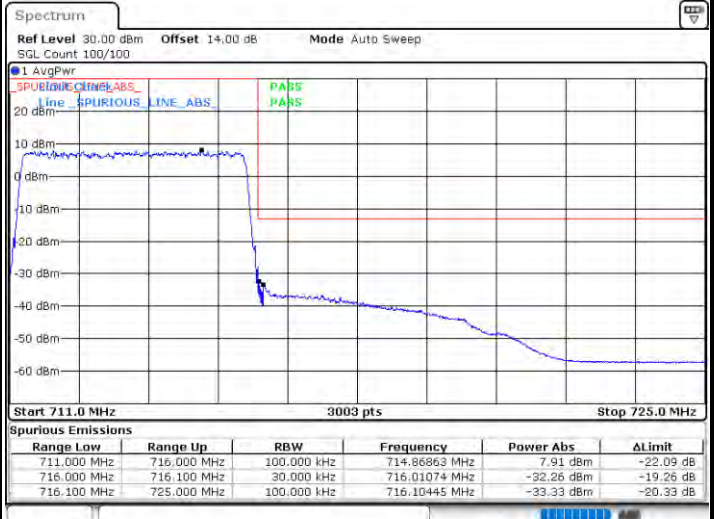
Date: 18.DEC.2020 01:57:07

Lowest Band Edge / Full RB



Date: 18.DEC.2020 01:48:10

Highest Band Edge / Full RB

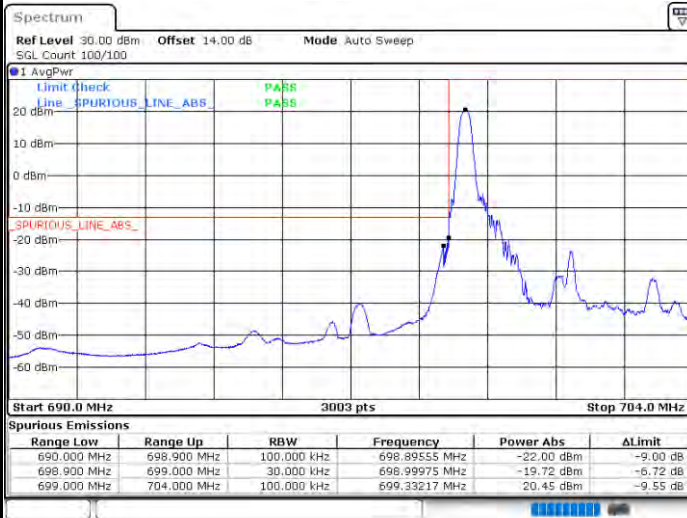


Date: 18.DEC.2020 01:54:49



LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



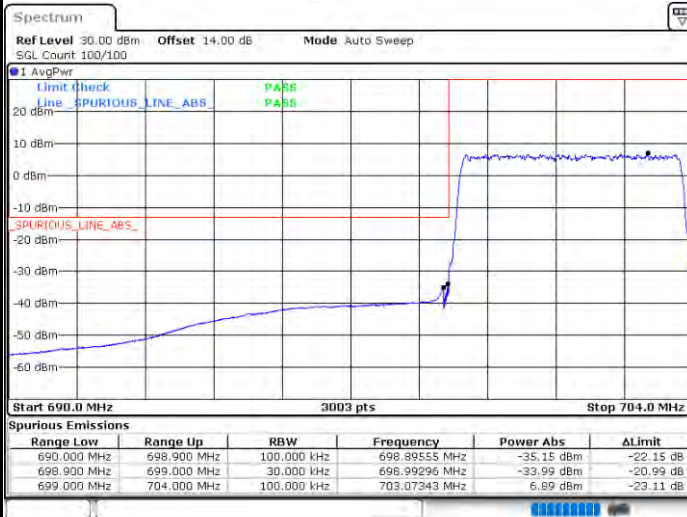
Date: 18.DEC.2020 01:46:27

Highest Band Edge / 1 RB



Date: 18.DEC.2020 01:58:16

Lowest Band Edge / Full RB



Date: 18.DEC.2020 01:49:19

Highest Band Edge / Full RB



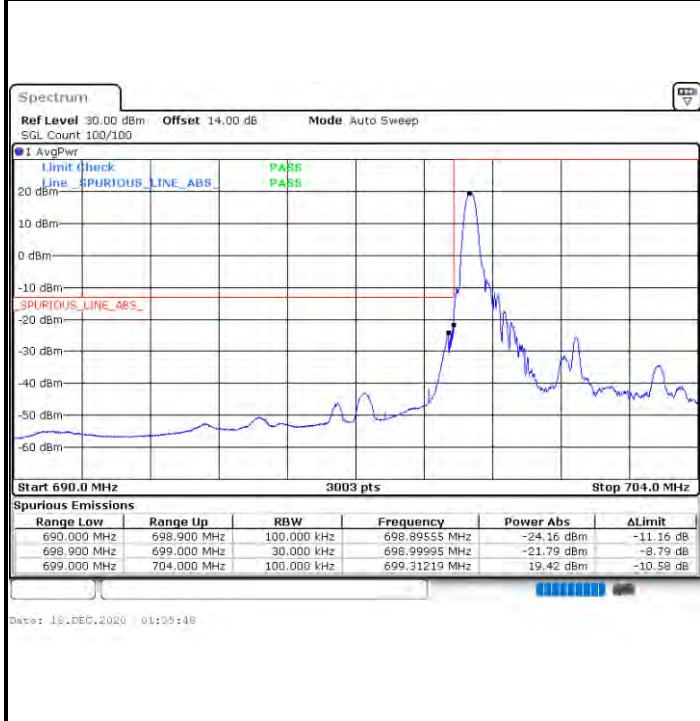
Date: 18.DEC.2020 01:53:58



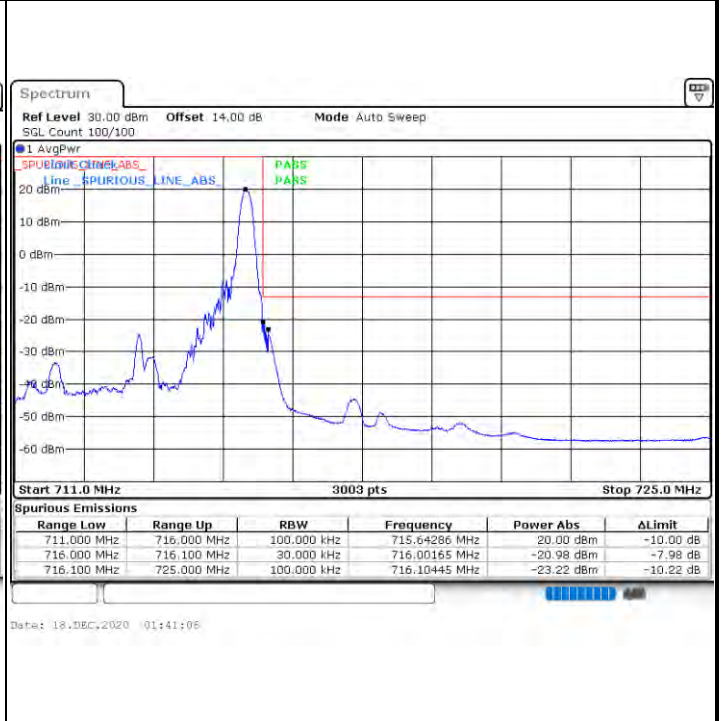


**LTE Band 12 / 5MHz / 64QAM**

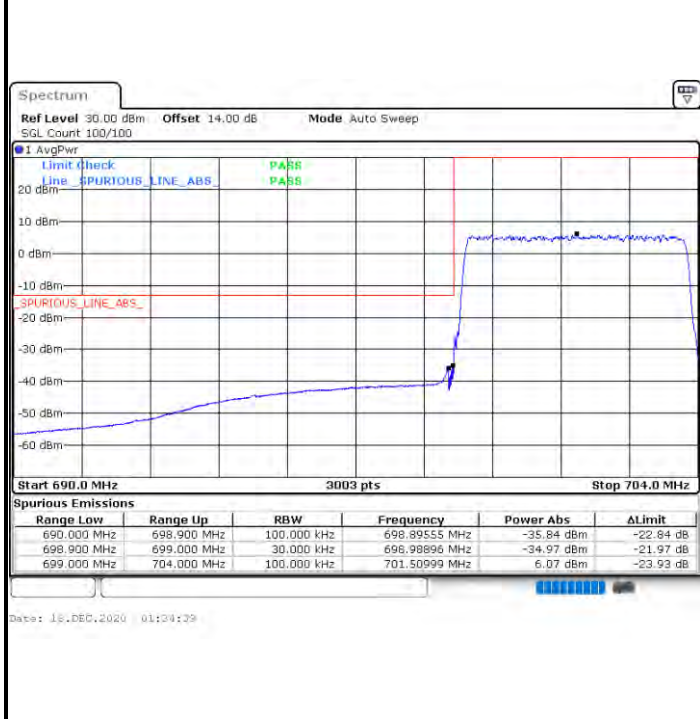
**Lowest Band Edge / 1RB**



**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



**Highest Band Edge / Full RB**

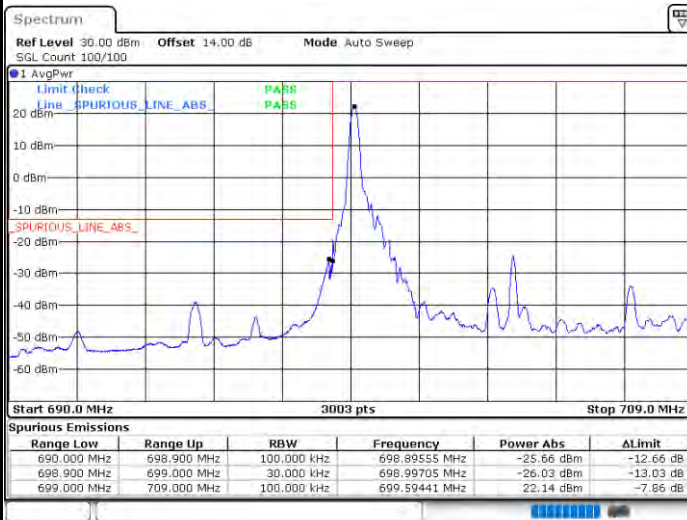






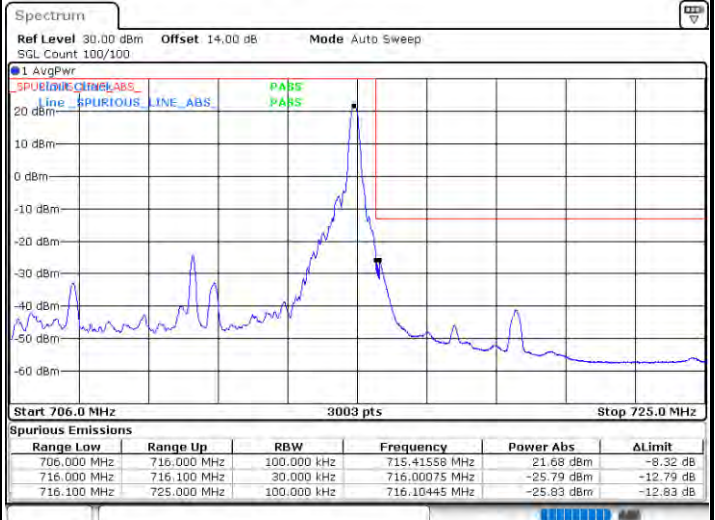
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



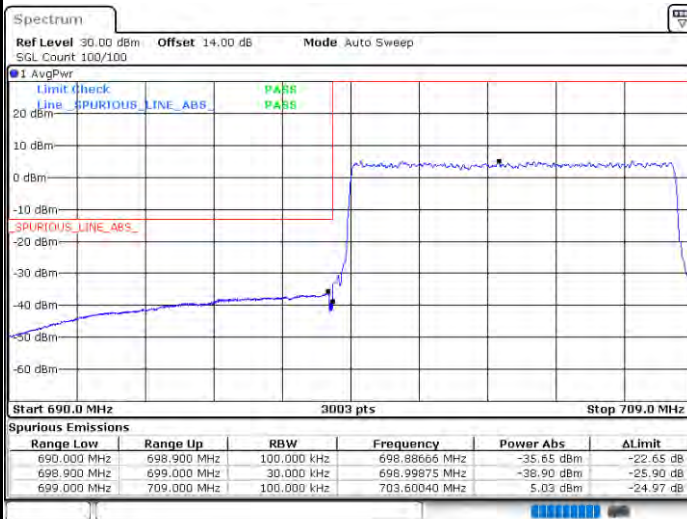
Date: 18.DEC.2020 02:09:53

Highest Band Edge / 1 RB



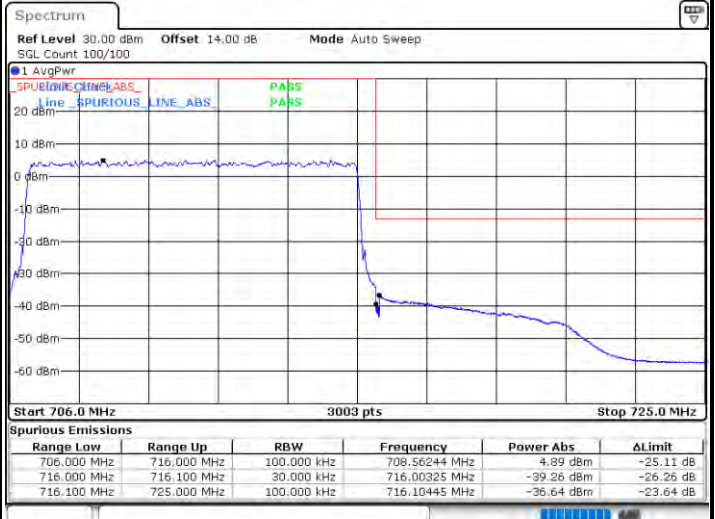
Date: 18.DEC.2020 02:11:53

Lowest Band Edge / Full RB



Date: 18.DEC.2020 02:12:21

Highest Band Edge / Full RB

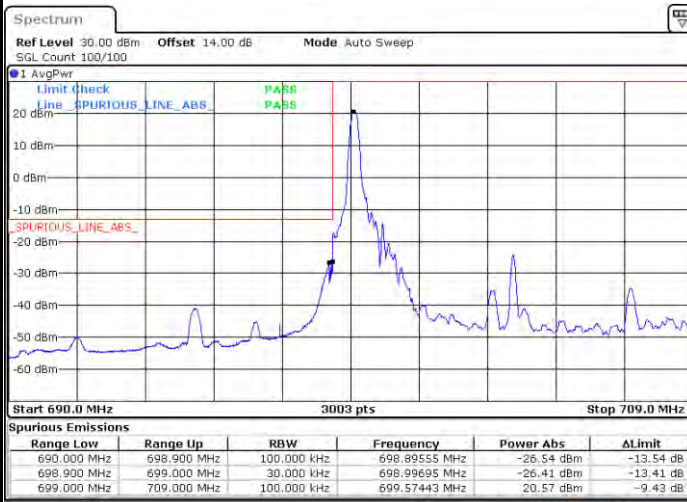


Date: 18.DEC.2020 02:13:06



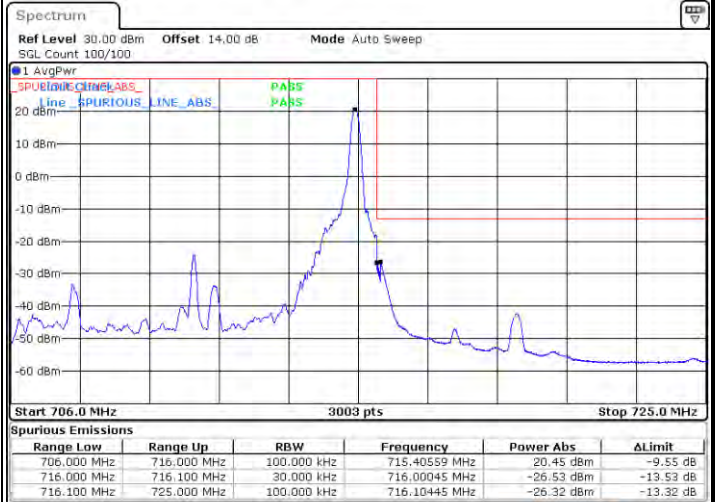
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



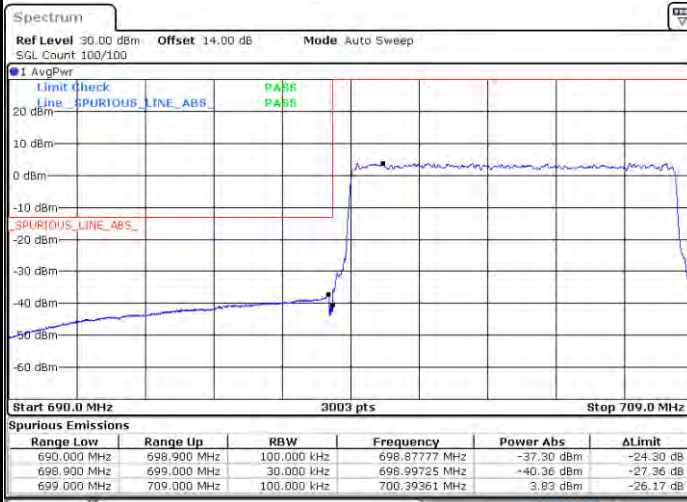
Date: 18.DEC.2020 02:04:45

Highest Band Edge / 1 RB



Date: 18.DEC.2020 02:15:24

Lowest Band Edge / Full RB



Date: 18.DEC.2020 02:03:18

Highest Band Edge / Full RB



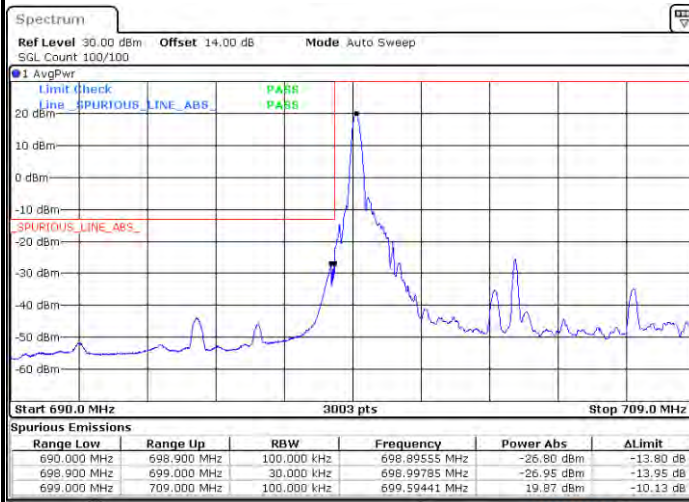
Date: 18.DEC.2020 02:14:15





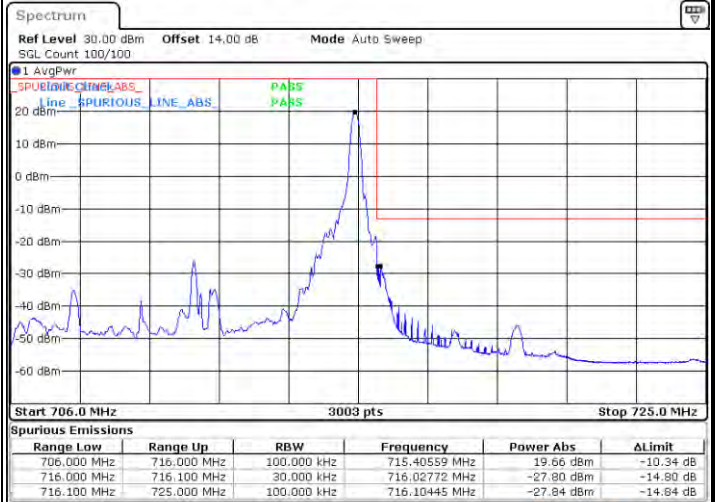
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



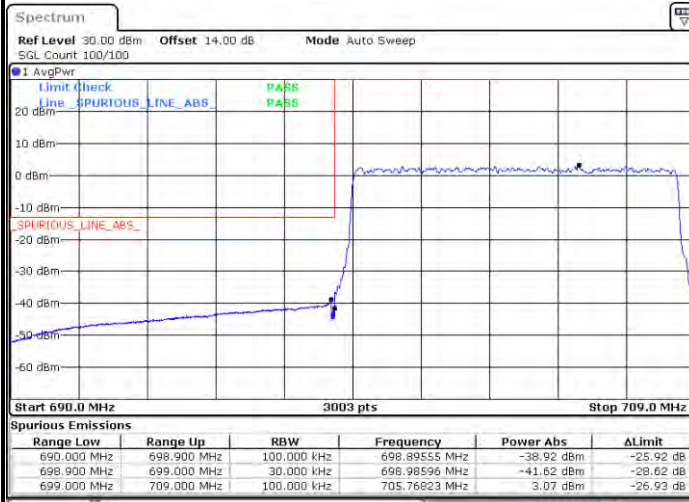
Date: 18.DEC.2020 02:21:31

Highest Band Edge / 1 RB



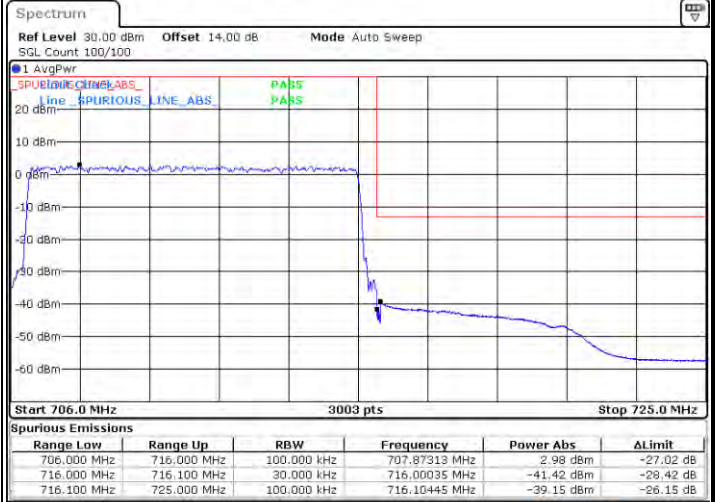
Date: 18.DEC.2020 02:26:50

Lowest Band Edge / Full RB



Date: 18.DEC.2020 02:20:22

Highest Band Edge / Full RB



Date: 18.DEC.2020 02:25:41





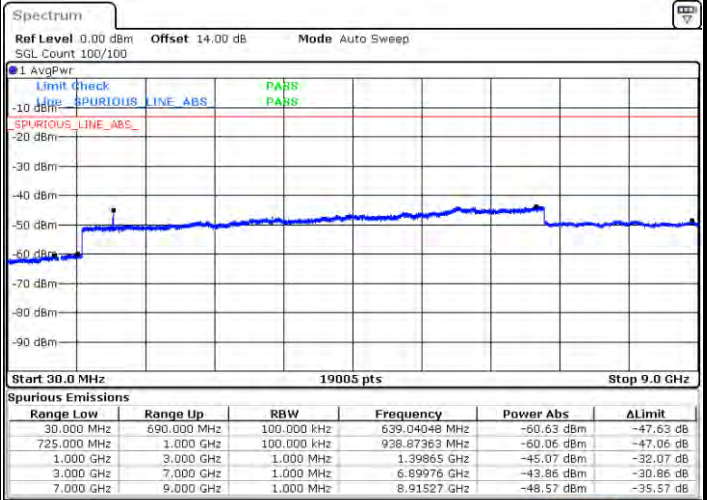
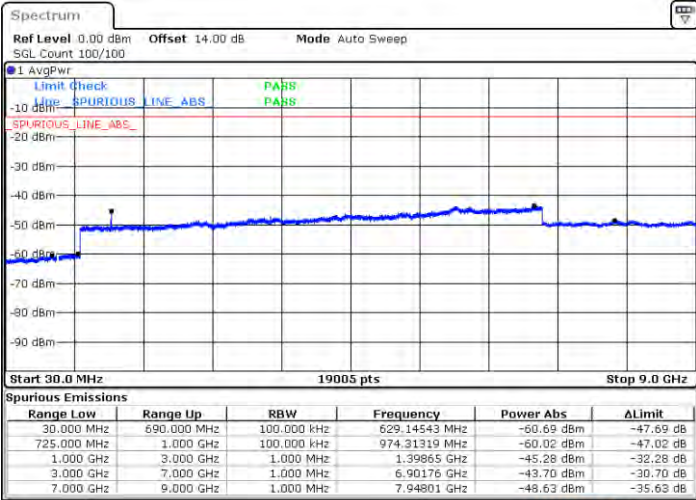
**Conducted Spurious Emission**



LTE Band 12 / 1.4MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

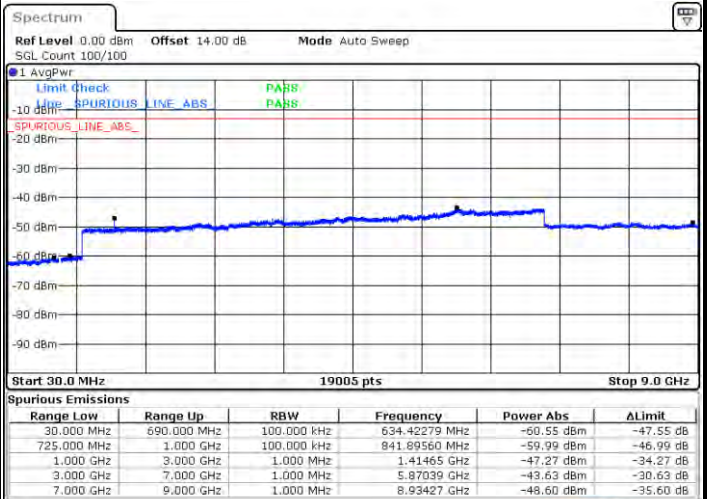
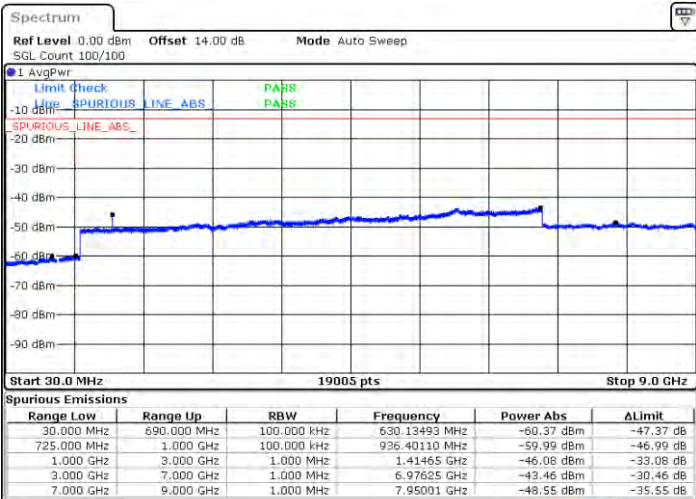


Date: 18.DEC.2020 00:37:30

Date: 18.DEC.2020 00:38:39

Middle Channel / QPSK

Middle Channel / 16QAM



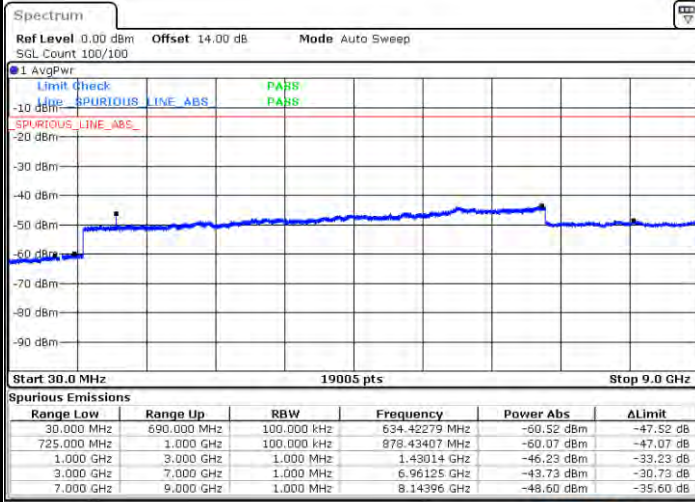
Date: 18.DEC.2020 00:41:41

Date: 18.DEC.2020 00:40:32



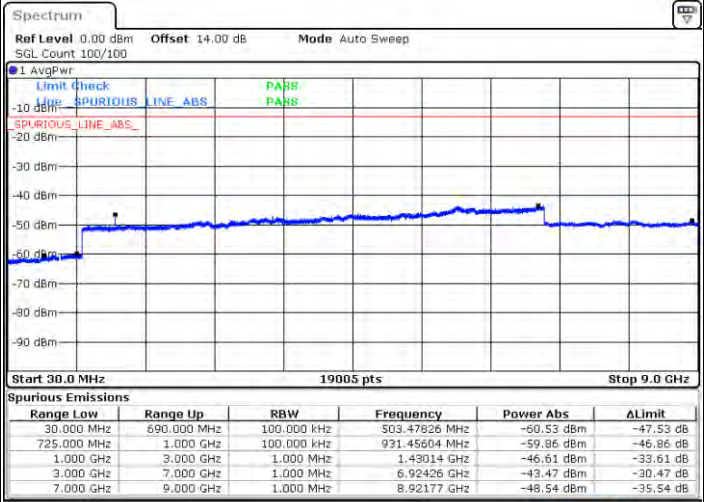
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 18.DEC.2020 00:49:49

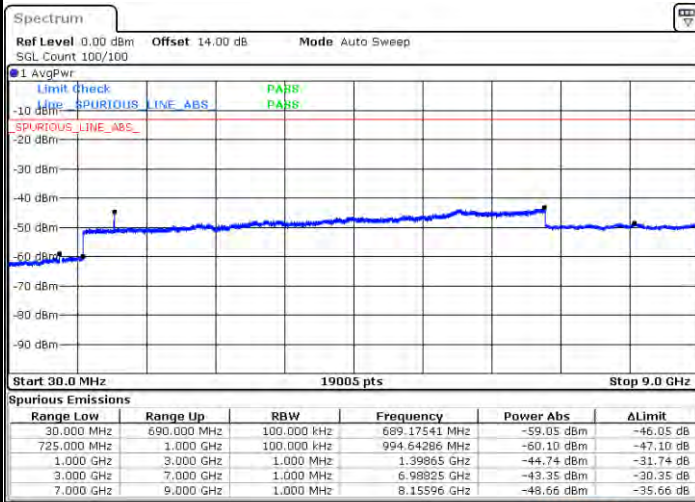
Highest Channel / 16QAM



Date: 18.DEC.2020 00:50:58

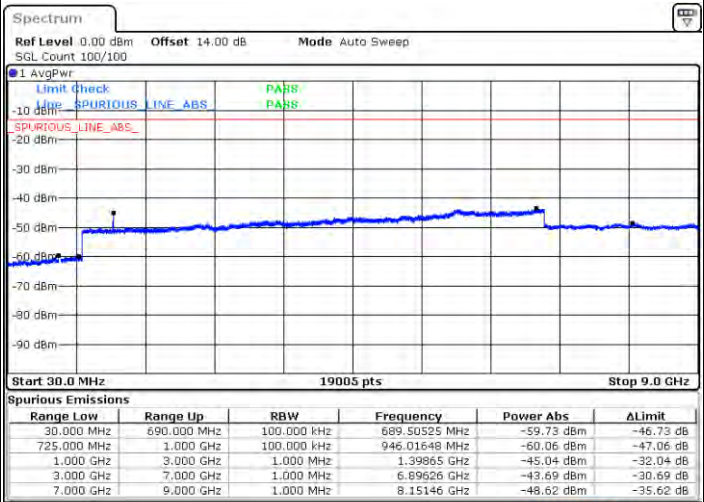
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 18.DEC.2020 01:12:19

Lowest Channel / 16QAM



Date: 18.DEC.2020 01:13:22

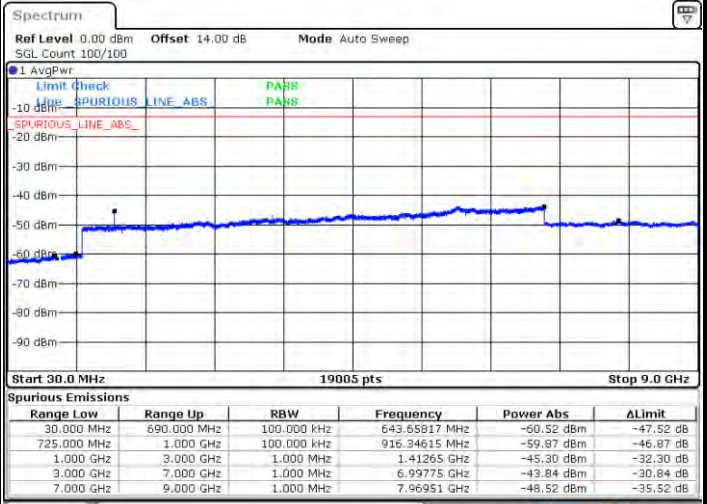
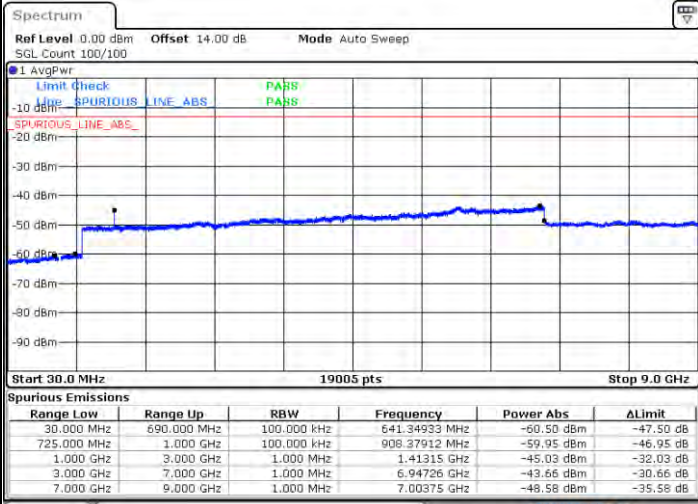




LTE Band 12 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

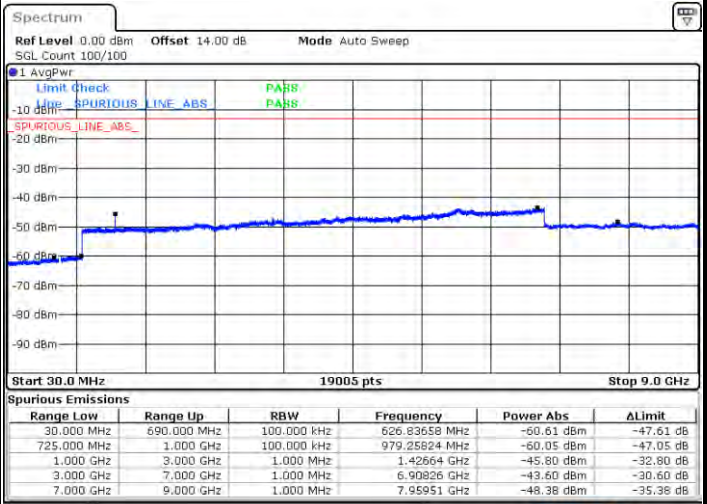
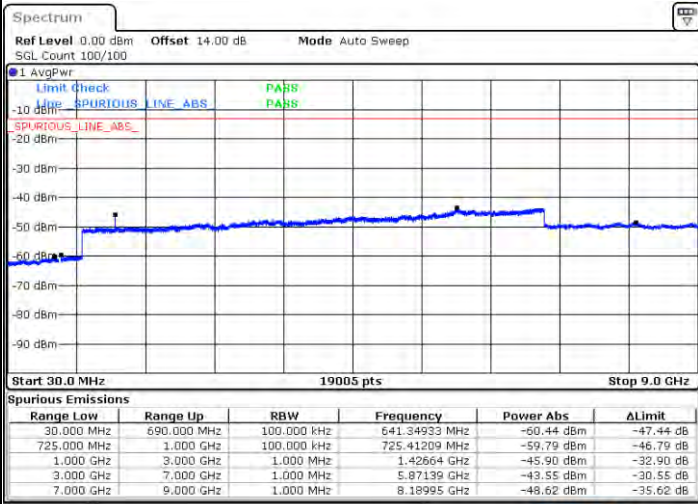


Date: 18.DEC.2020 01:16:24

Date: 18.DEC.2020 01:15:15

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 18.DEC.2020 01:22:52

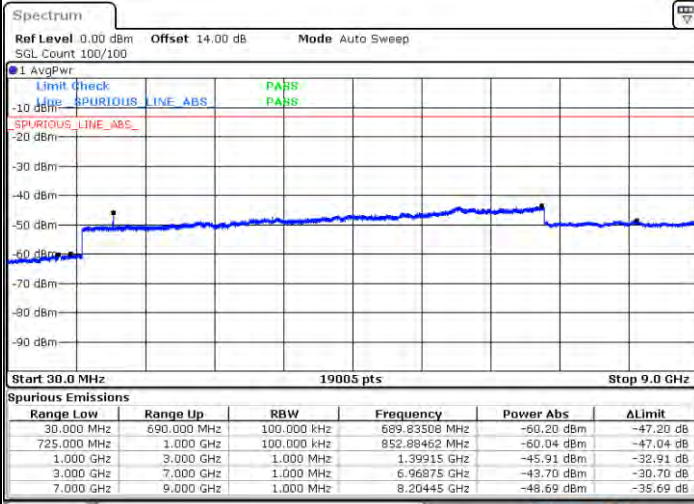
Date: 18.DEC.2020 01:24:01



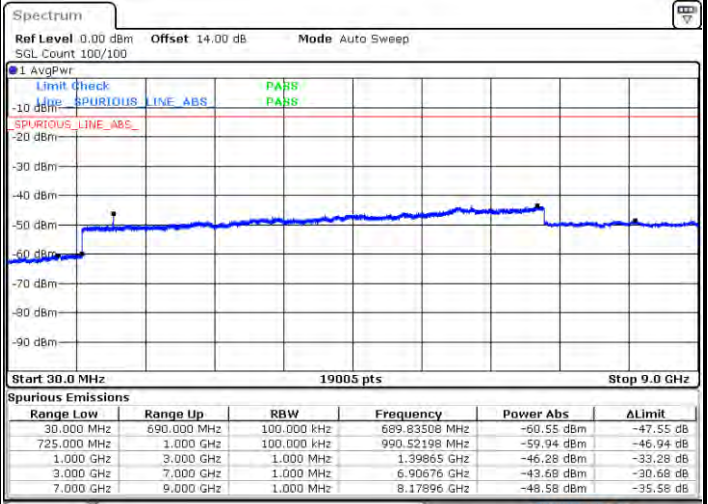
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



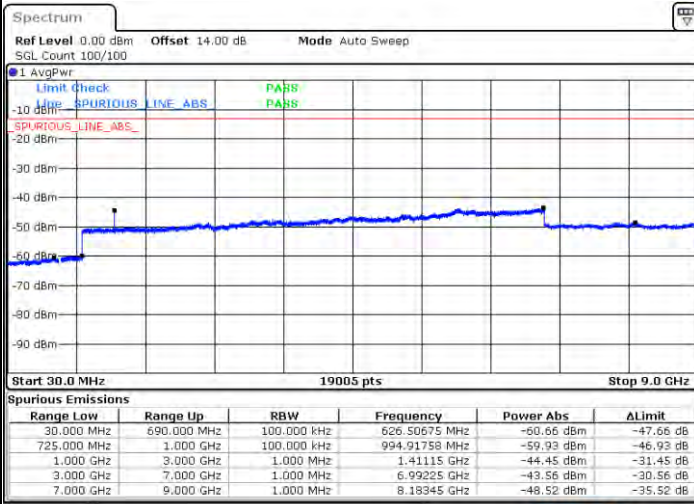
Date: 18.DEC.2020 01:48:46



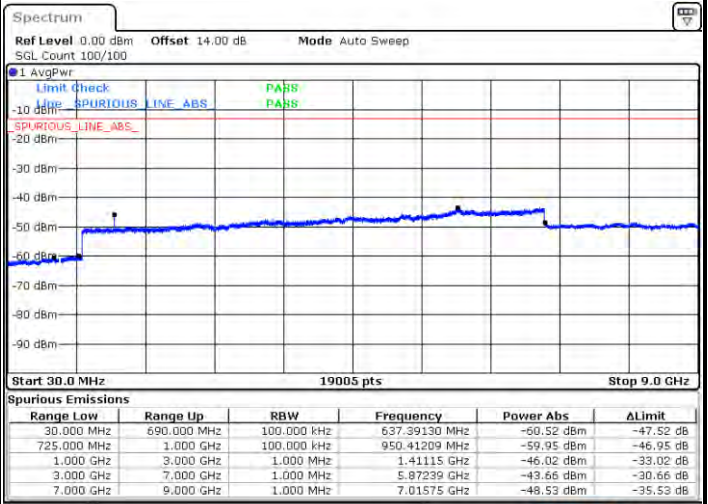
Date: 18.DEC.2020 01:48:55

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 18.DEC.2020 01:52:37

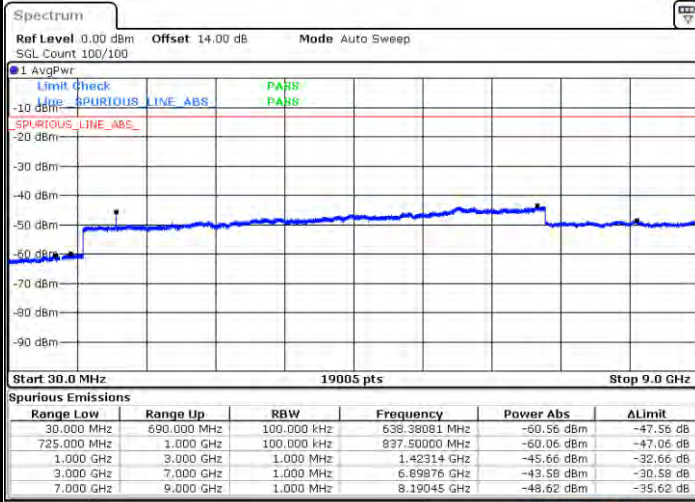


Date: 18.DEC.2020 01:51:46



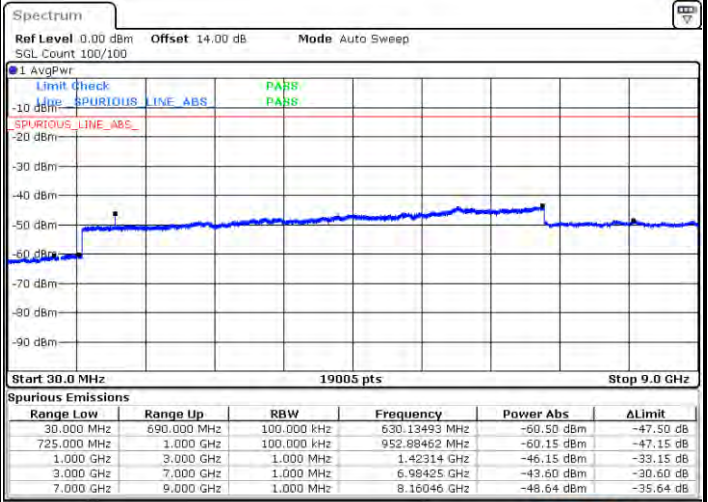
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 18.DEC.2020 02:00:35

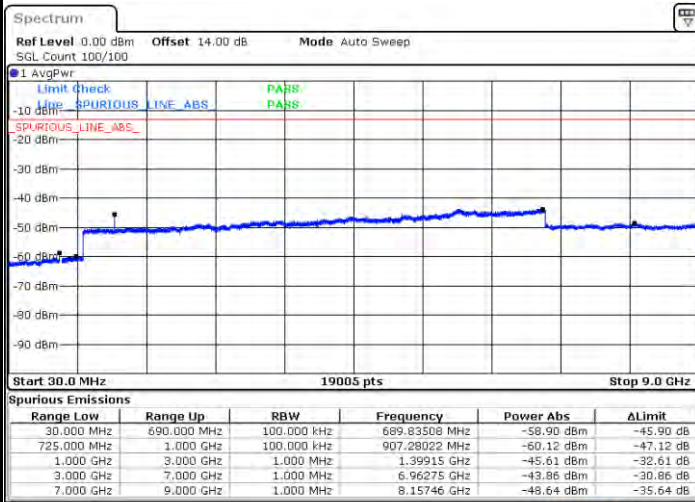
Highest Channel / 16QAM



Date: 18.DEC.2020 01:58:26

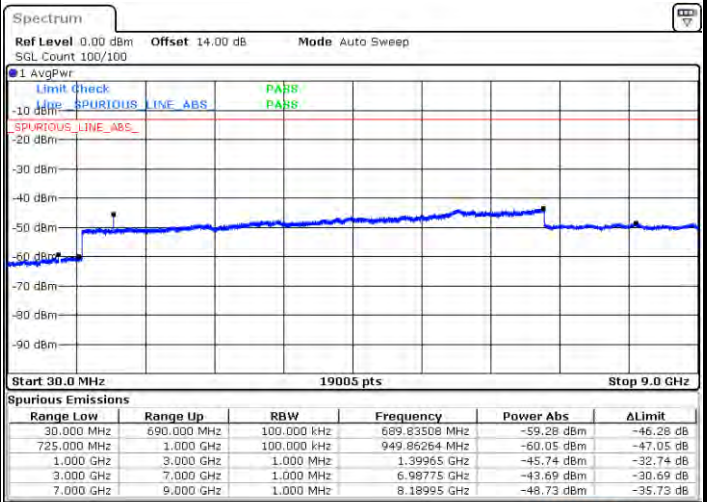
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 18.DEC.2020 02:07:09

Lowest Channel / 16QAM



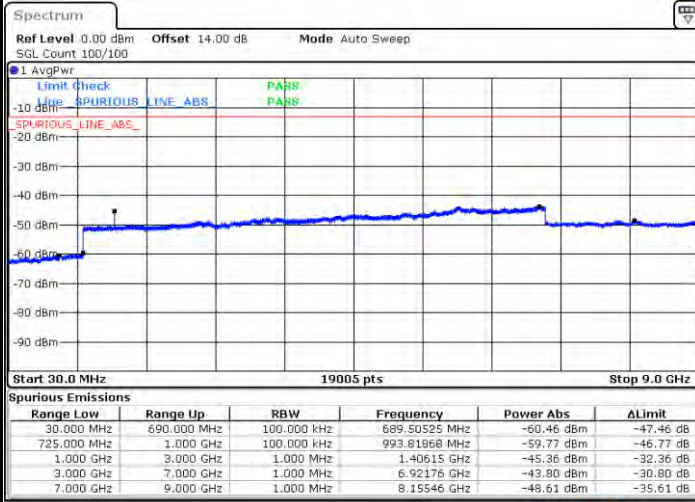
Date: 18.DEC.2020 02:08:12





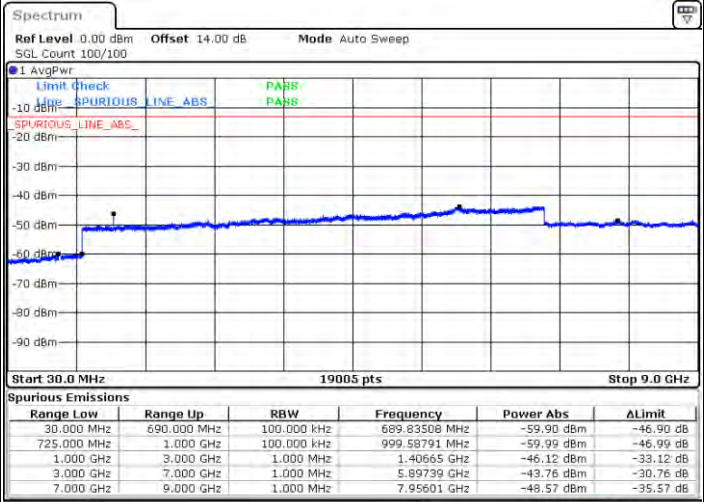
LTE Band 12 / 10MHz

Middle Channel / QPSK



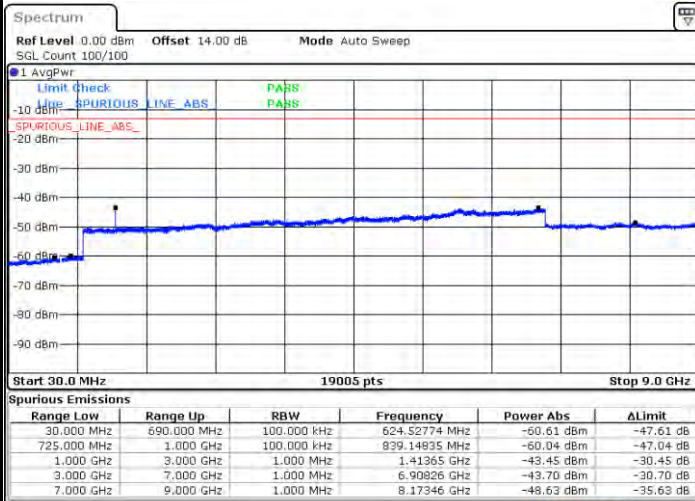
Date: 18.DEC.2020 02:11:14

Middle Channel / 16QAM



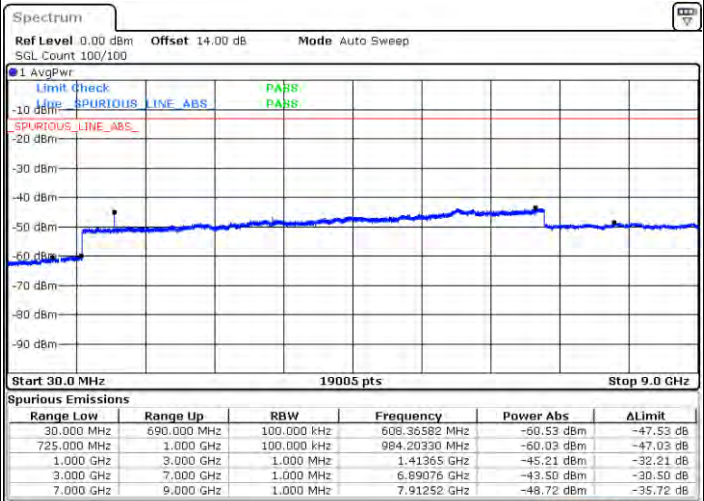
Date: 18.DEC.2020 02:10:05

Highest Channel / QPSK



Date: 18.DEC.2020 02:17:42

Highest Channel / 16QAM



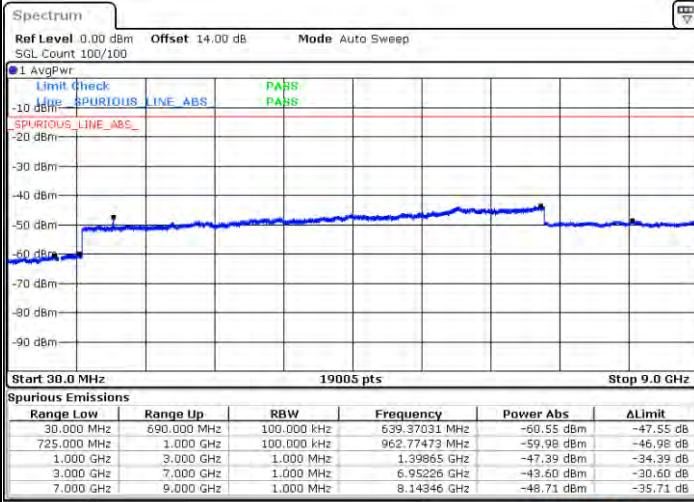
Date: 18.DEC.2020 02:18:51



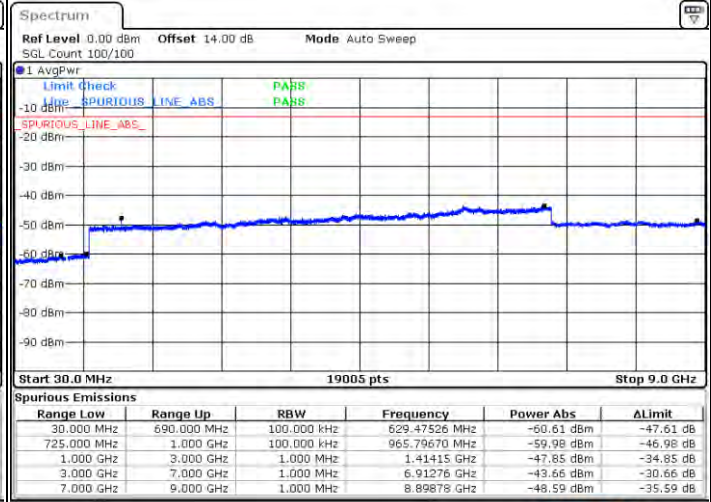
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

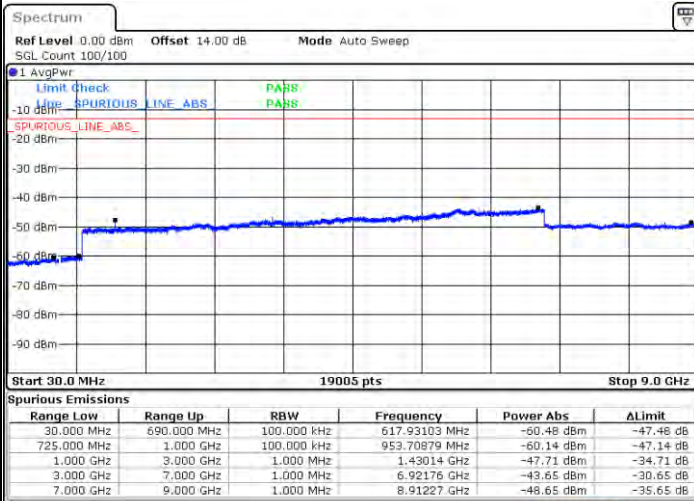


Date: 18.DEC.2020 00:55:37



Date: 18.DEC.2020 00:57:08

Highest Channel / 64QAM



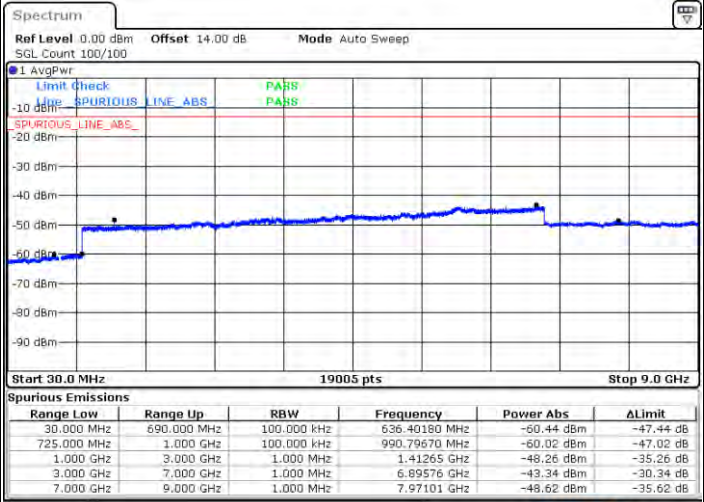
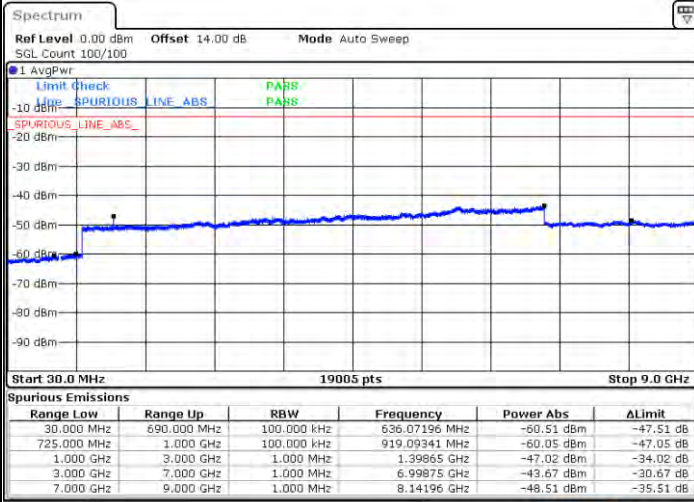
Date: 18.DEC.2020 01:01:47



LTE Band 12 / 3MHz

Lowest Channel / 64QAM

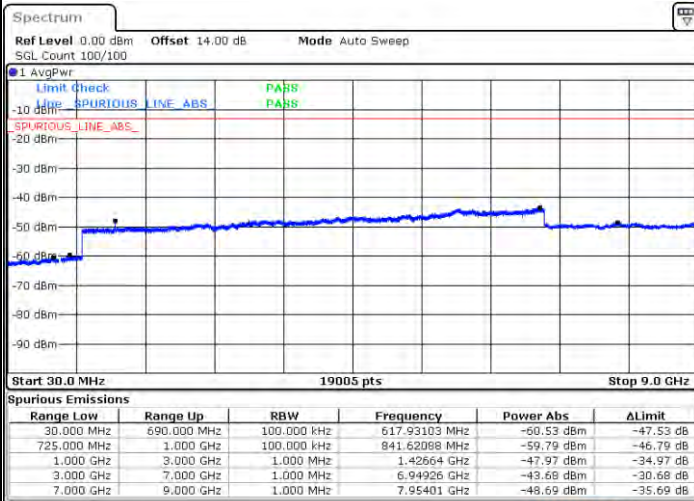
Middle Channel / 64QAM



Date: 18.DEC.2020 01:27:50

Date: 18.DEC.2020 01:28:20

Highest Channel / 64QAM



Date: 18.DEC.2020 01:33:09

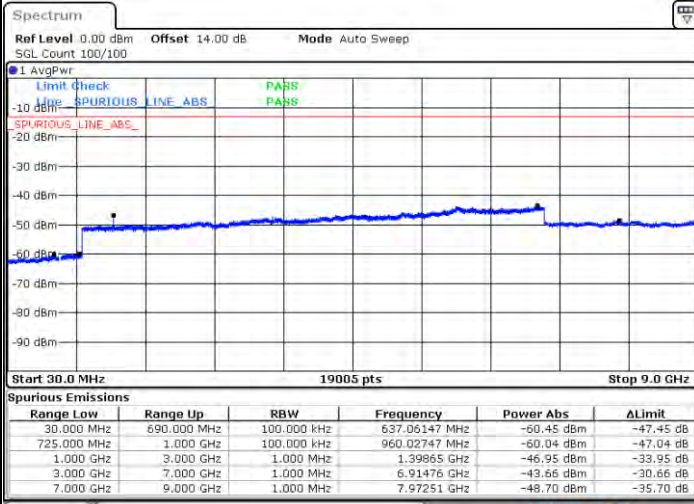




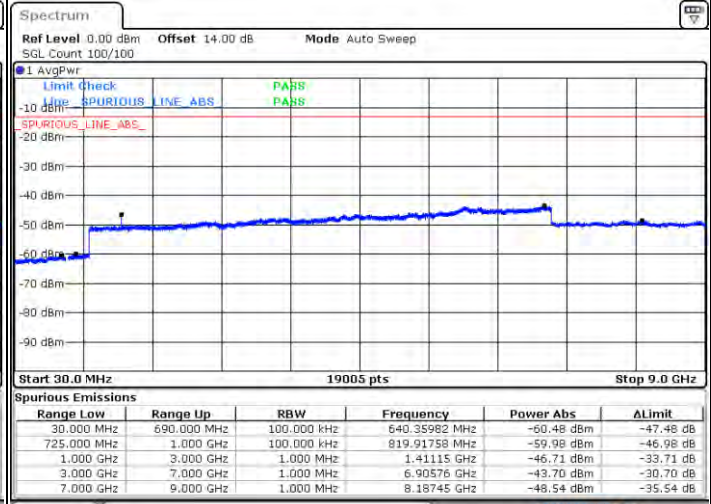
LTE Band 12 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

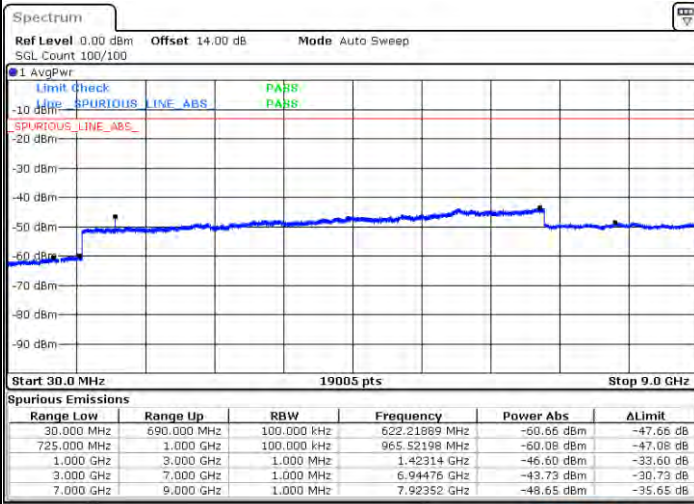


Date: 18.DEC.2020 01:36:56



Date: 18.DEC.2020 01:36:29

Highest Channel / 64QAM



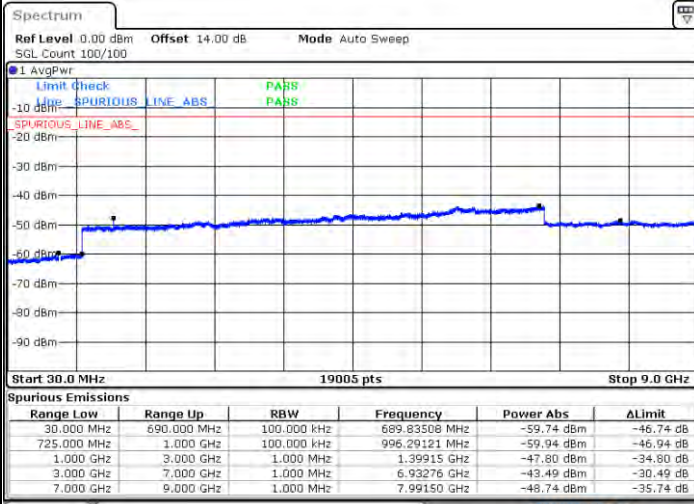
Date: 18.DEC.2020 01:42:10



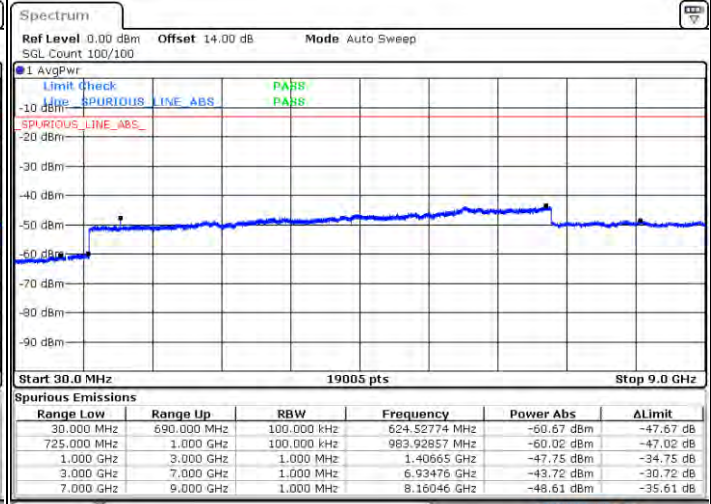
LTE Band 12 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

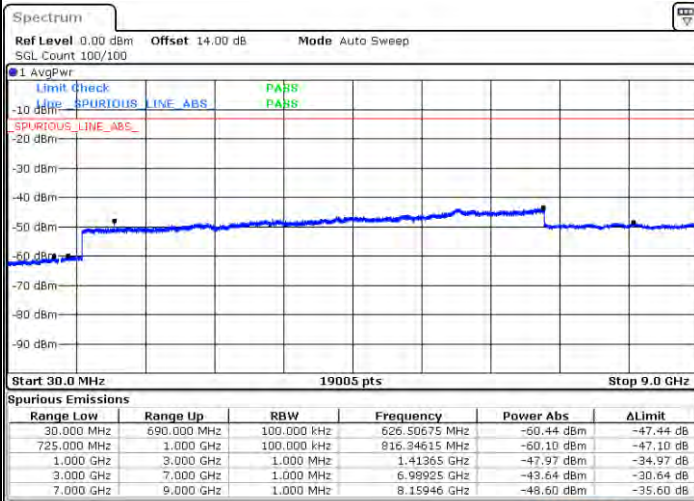


Date: 18.DEC.2020 02:22:40



Date: 18.DEC.2020 02:24:11

Highest Channel / 64QAM



Date: 18.DEC.2020 02:28:00



### Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0071	
30	Normal Voltage	0.0051	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0027	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0010	

**Note:**

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.14 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.





# LTE Band 13

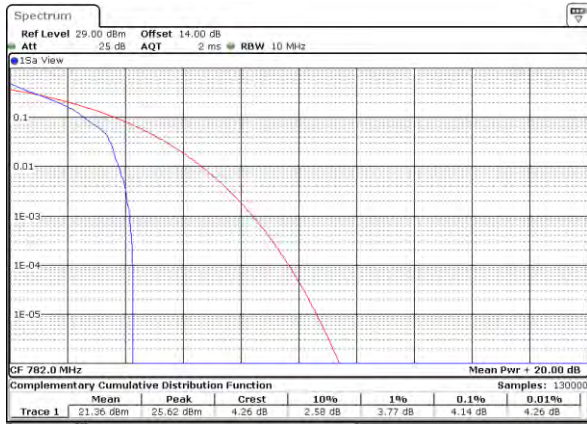
## Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	4.14	5.22	5.01	6.23	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.68	6.35	-	-	
Highest CH	-	-	-	-	



LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB



Date: 19\_DEC.2020 12:19:12

Middle Channel / Full RB



Date: 19\_DEC.2020 12:19:11

LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB



Date: 19\_DEC.2020 12:19:55

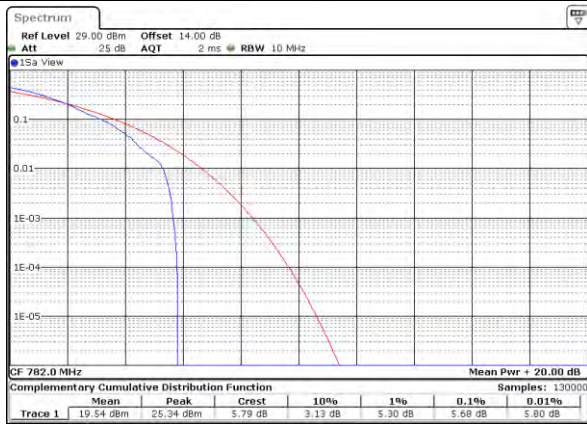
Middle Channel / Full RB



Date: 19\_DEC.2020 12:19:17

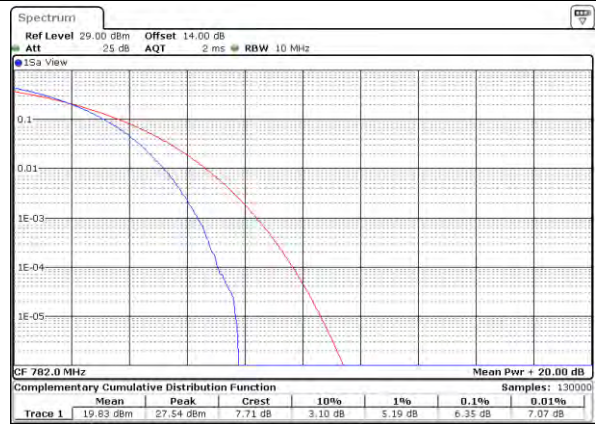
LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Date: 19\_DEC.2020 12:12:11

Middle Channel / Full RB



Date: 19\_DEC.2020 12:12:43



**26dB Bandwidth**

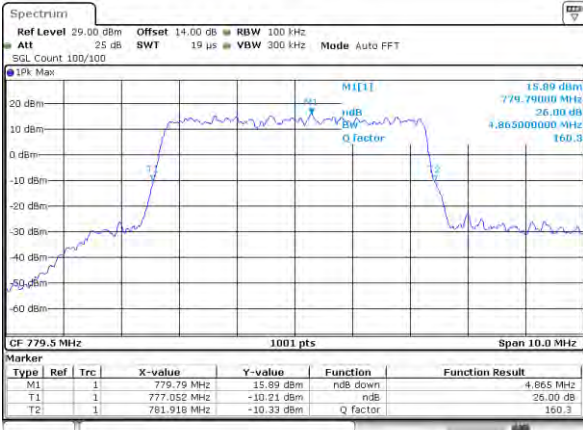
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.87	4.82	-	-	-	-	-	-
Middle CH	-	-	-	-	4.92	4.81	9.69	9.85	-	-	-	-
Highest CH	-	-	-	-	4.82	4.84	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.87	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.83	-	9.65	-	-	-	-	-
Highest CH	-	-	-	-	4.94	-	-	-	-	-	-	-





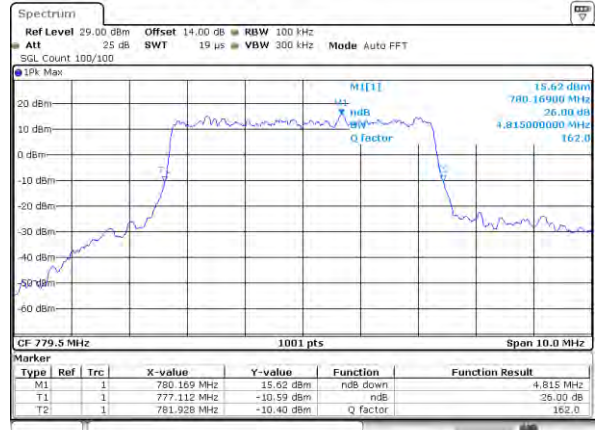
LTE Band 13

Lowest Channel / 5MHz / QPSK



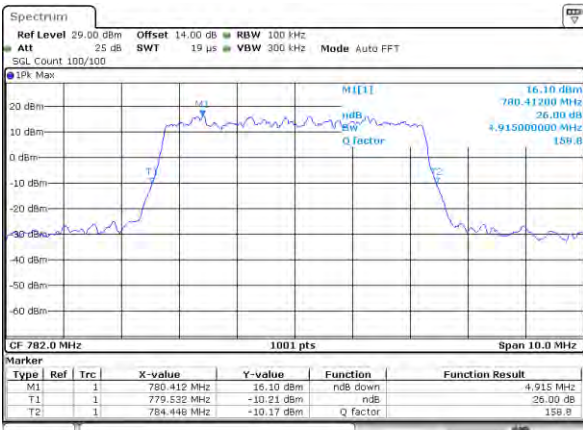
Date: 19.Dec.2020 11:13:16

Lowest Channel / 5MHz / 16QAM



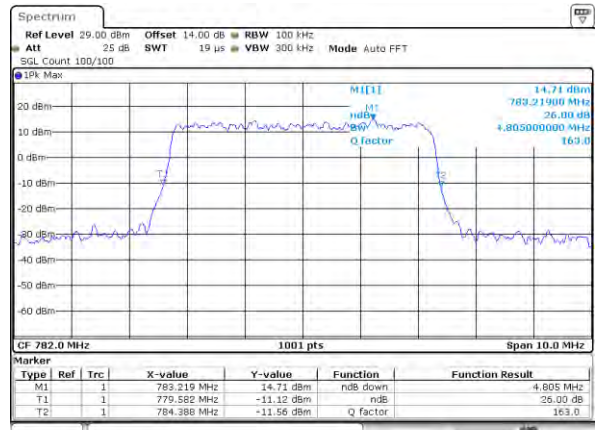
Date: 19.Dec.2020 11:13:05

Middle Channel / 5MHz / QPSK



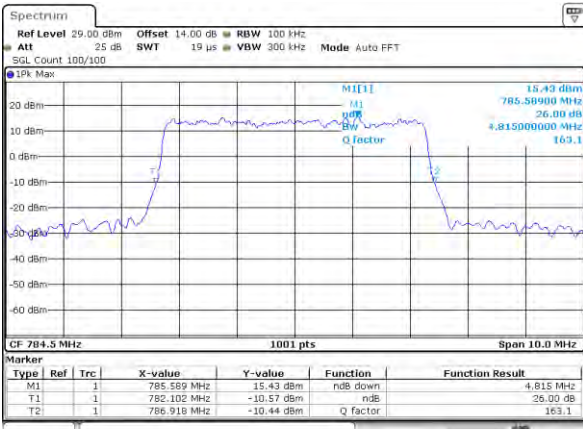
Date: 19.Dec.2020 11:24:58

Middle Channel / 5MHz / 16QAM



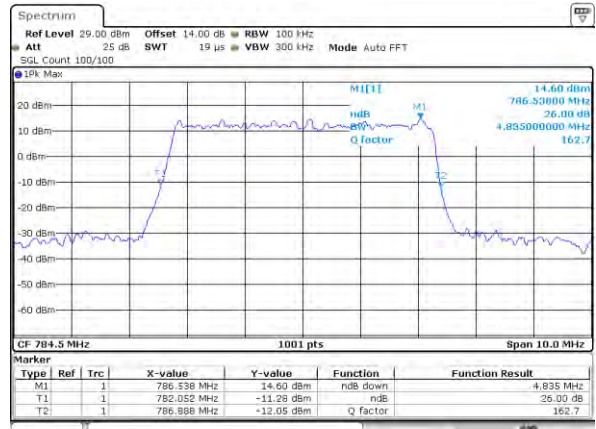
Date: 19.Dec.2020 11:25:09

Highest Channel / 5MHz / QPSK



Date: 19.Dec.2020 11:26:15

Highest Channel / 5MHz / 16QAM

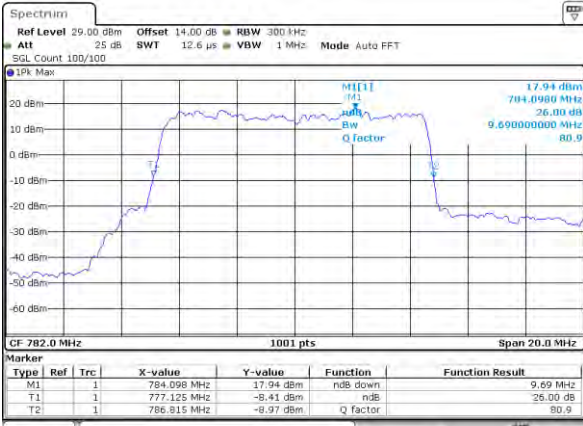


Date: 19.Dec.2020 11:26:04



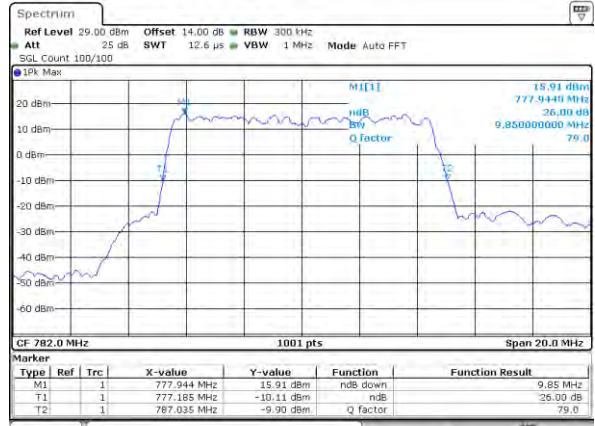
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 19, Dec 2020 11:58:53

Middle Channel / 10MHz / 16QAM

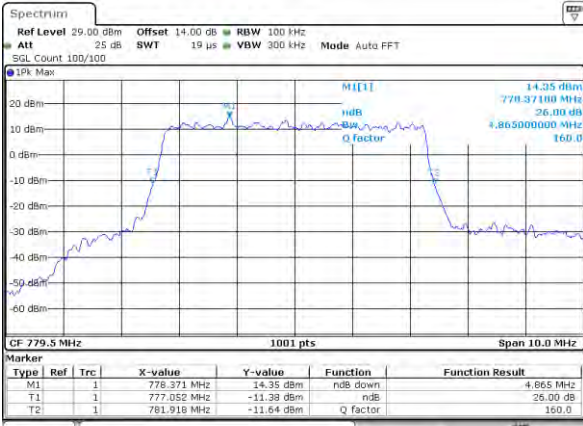


Date: 19, Dec 2020 11:58:42



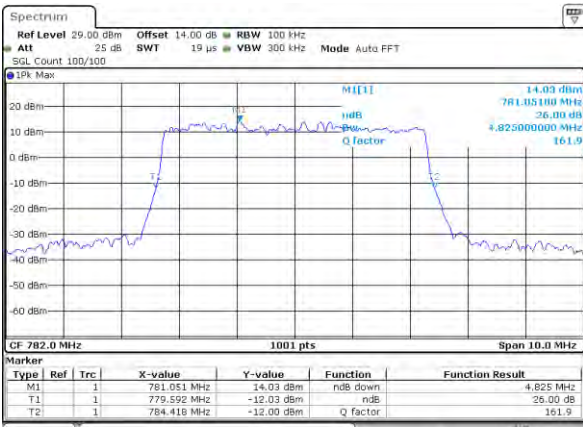
LTE Band 13

Lowest Channel / 5MHz / 64QAM



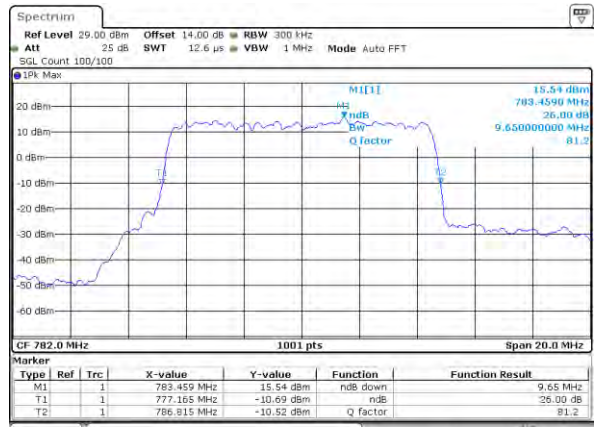
Date: 19, Dec 2020 11:33:46

Middle Channel / 5MHz / 64QAM



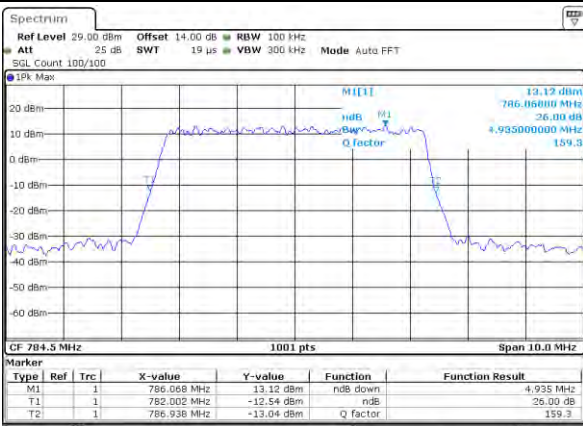
Date: 19, Dec 2020 11:41:42

Middle Channel / 10MHz / 64QAM



Date: 19, Dec 2020 12:11:42

Highest Channel / 5MHz / 64QAM



Date: 19, Dec 2020 11:42:15





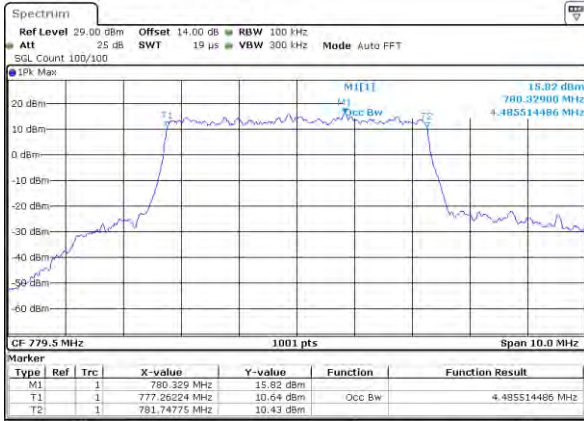
### Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.48	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.48	9.01	9.01	-	-	-	-
Highest CH	-	-	-	-	4.51	4.49	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.50	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.51	-	-	-	-	-	-	-



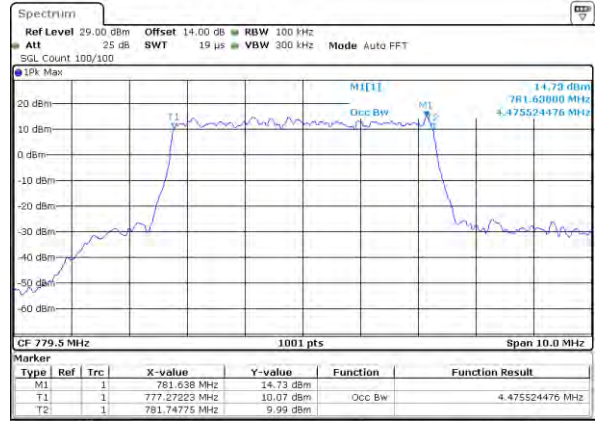
LTE Band 13

Lowest Channel / 5MHz / QPSK



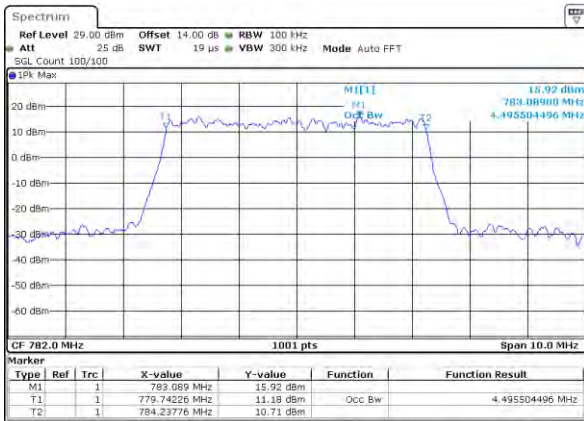
Date: 19.Dec.2020 11:13:10

Lowest Channel / 5MHz / 16QAM



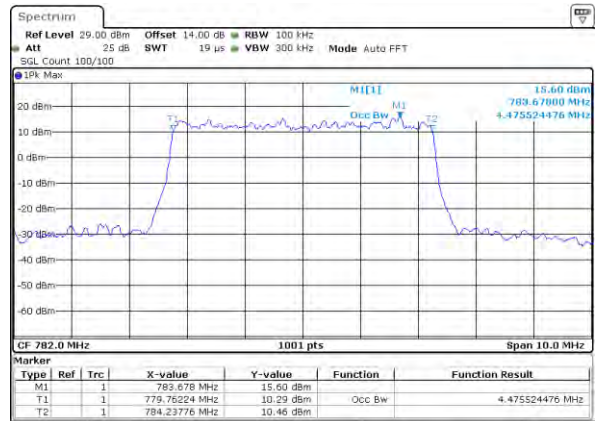
Date: 19.Dec.2020 11:13:14

Middle Channel / 5MHz / QPSK



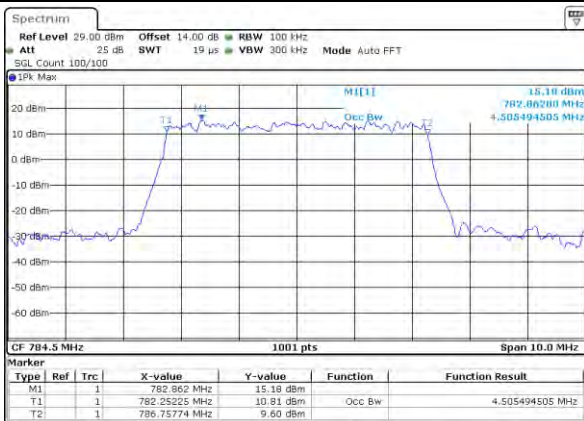
Date: 19.Dec.2020 11:13:11

Middle Channel / 5MHz / 16QAM



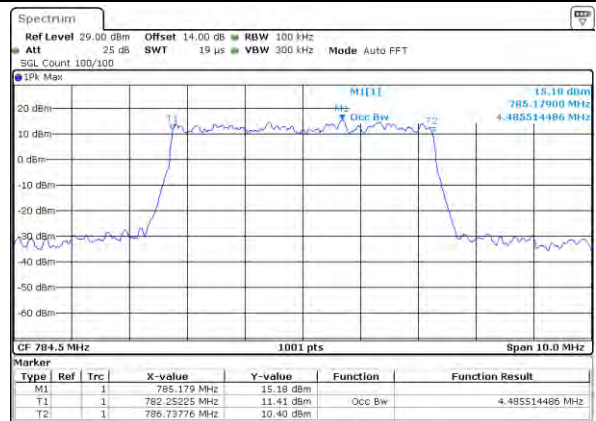
Date: 19.Dec.2020 11:13:10

Highest Channel / 5MHz / QPSK



Date: 19.Dec.2020 11:13:12

Highest Channel / 5MHz / 16QAM

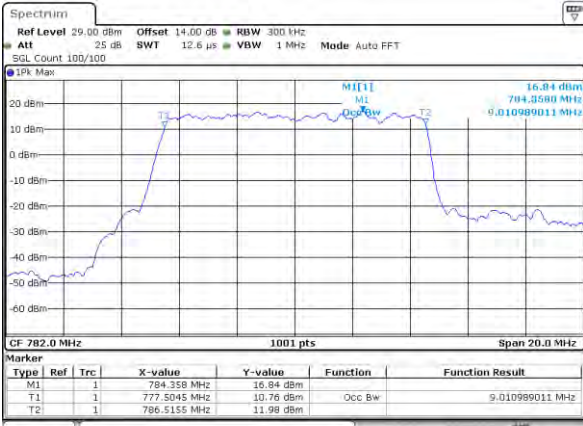


Date: 19.Dec.2020 11:13:13



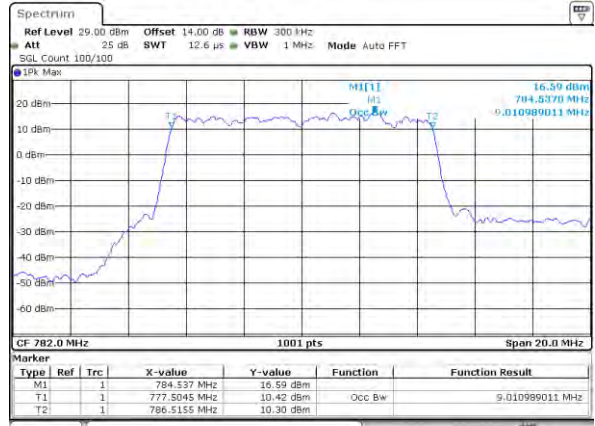
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 19, Dec, 2020 11:58:19

Middle Channel / 10MHz / 16QAM



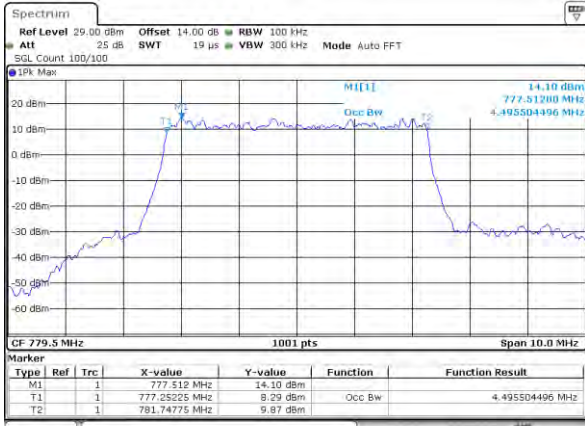
Date: 19, Dec, 2020 11:58:31



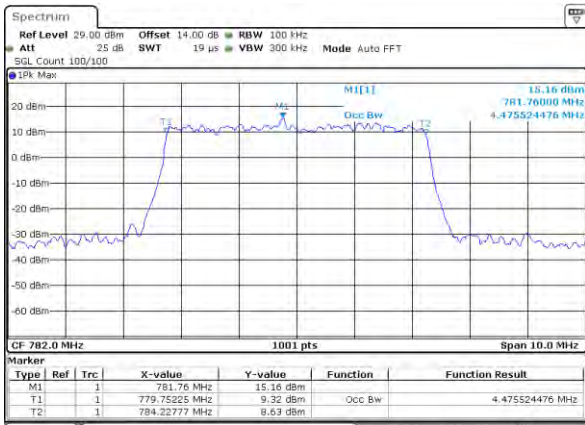


LTE Band 13

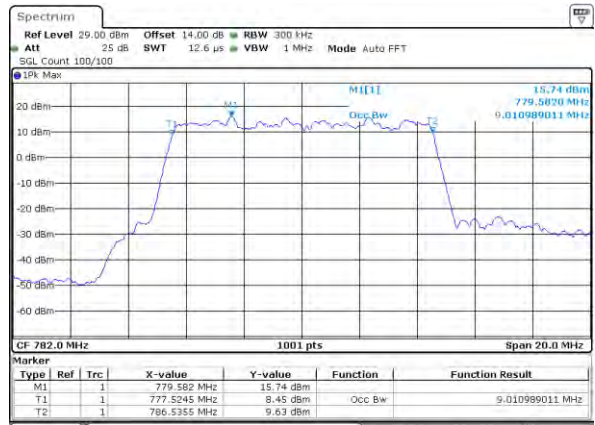
Lowest Channel / 5MHz / 64QAM



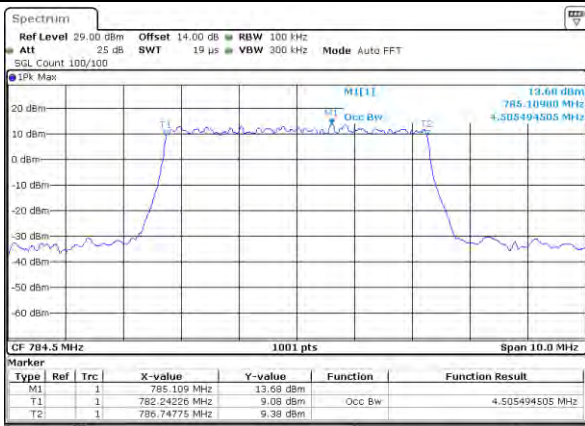
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM





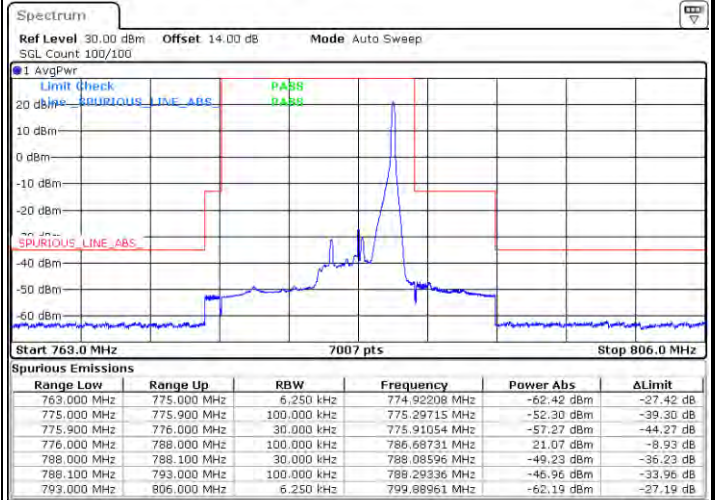
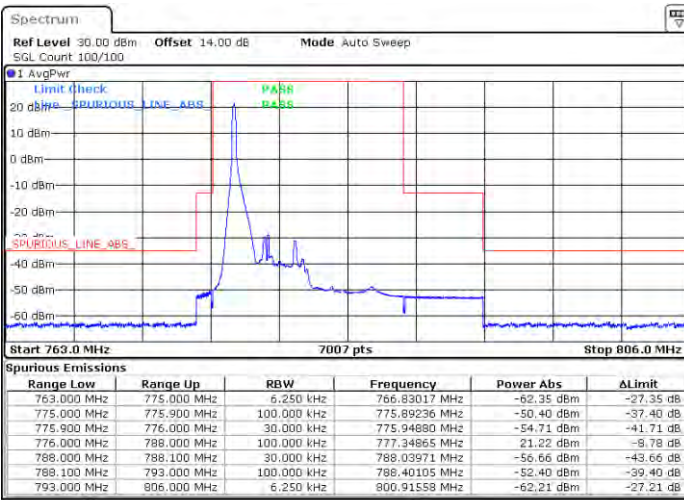
**Conducted Band Edge**



LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

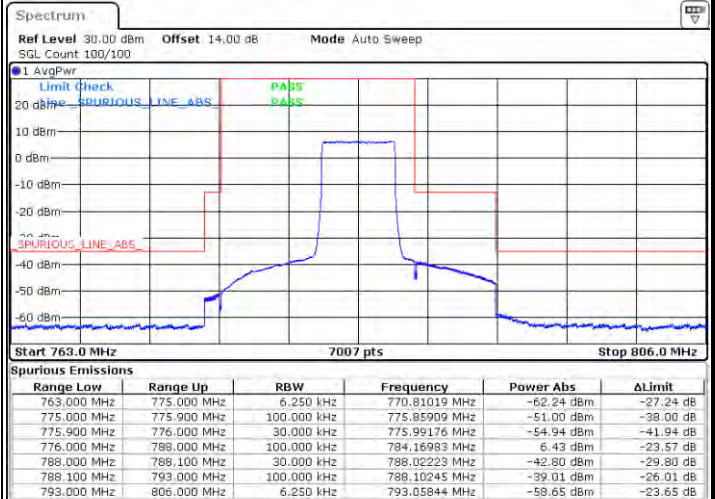
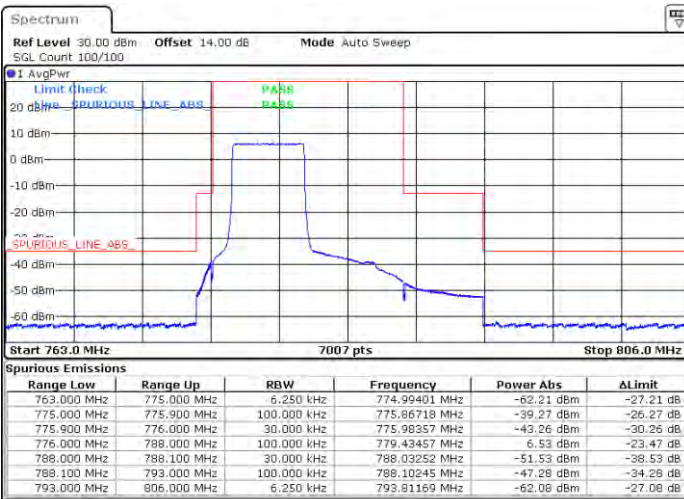


Date: 19.DEC.2020 11:20:00

Date: 19.DEC.2020 11:22:59

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 19.DEC.2020 11:18:57

Date: 19.DEC.2020 11:27:56

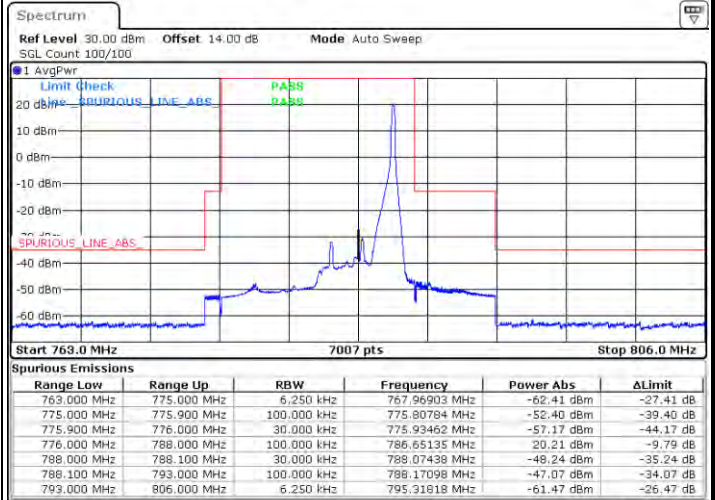
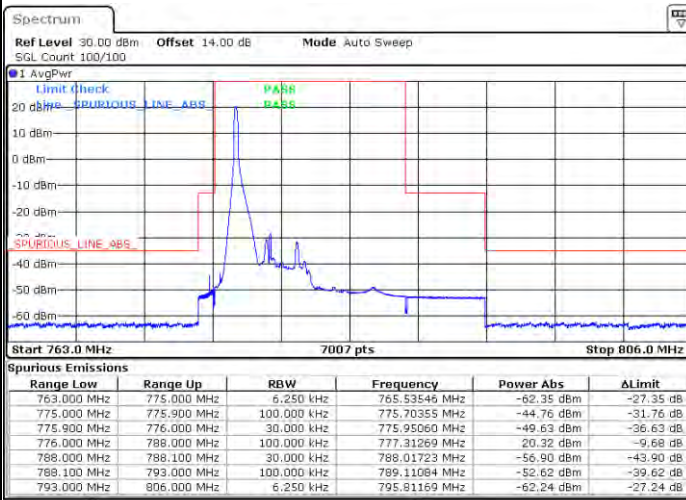




LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

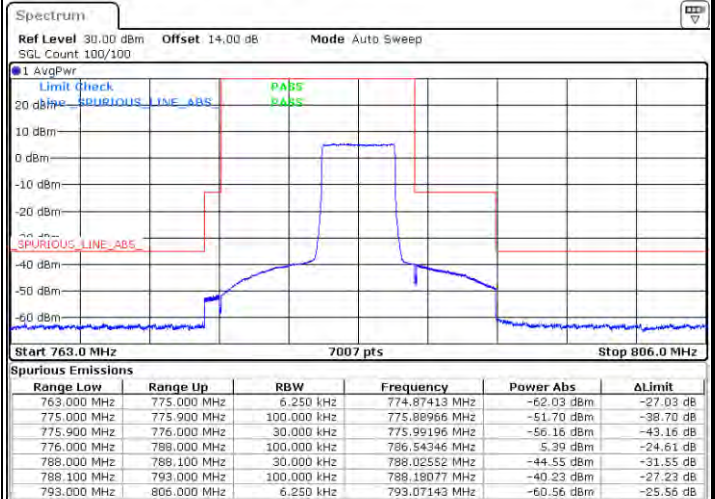
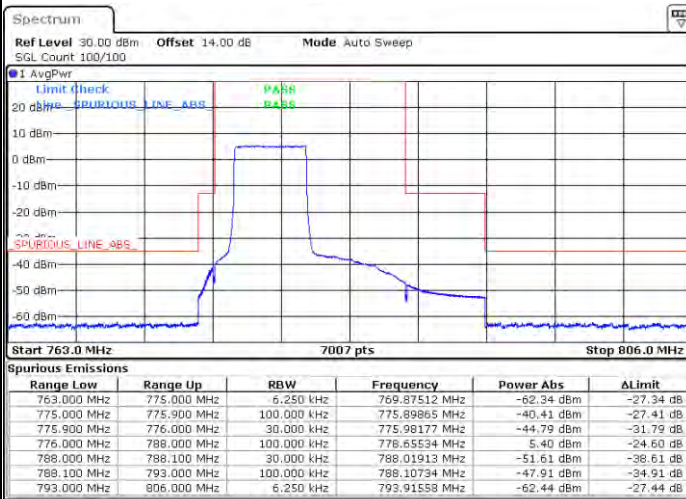


Date: 19.DEC.2020 11:18:19

Date: 19.DEC.2020 11:31:18

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 19.DEC.2020 11:16:37

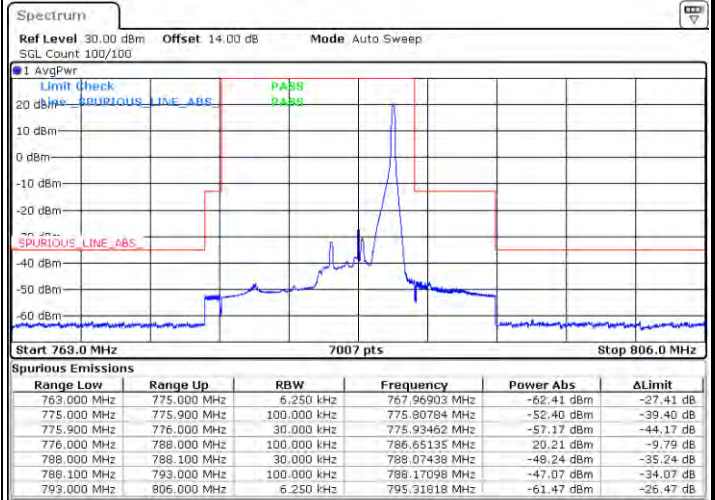
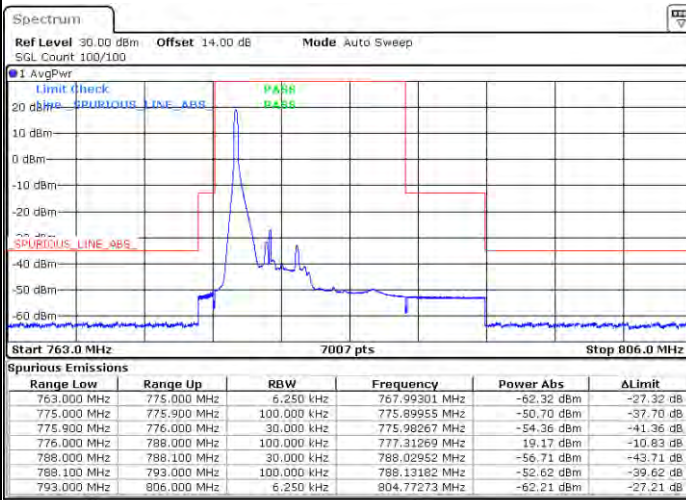
Date: 19.DEC.2020 11:29:37



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

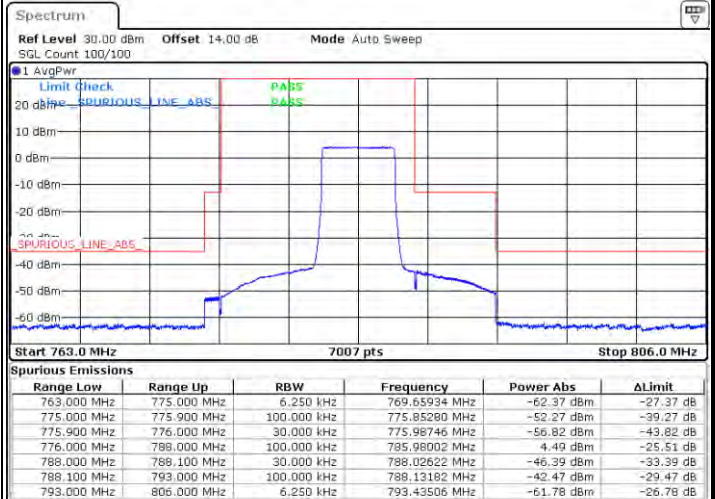
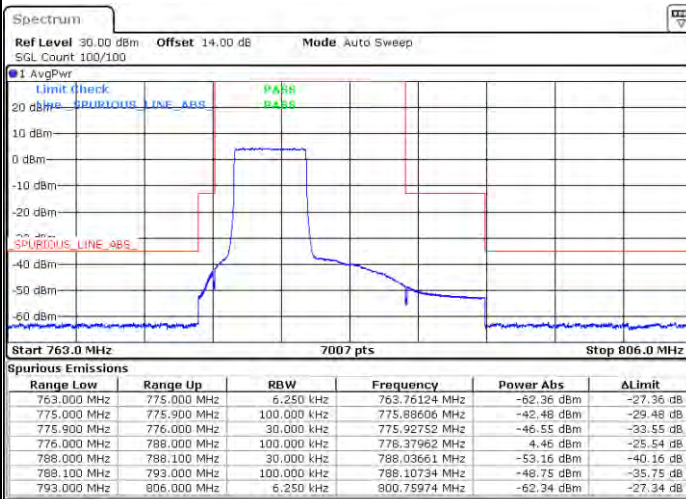


Date: 19.DEC.2020 11:29:07

Date: 19.DEC.2020 11:31:18

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 19.DEC.2020 11:37:26

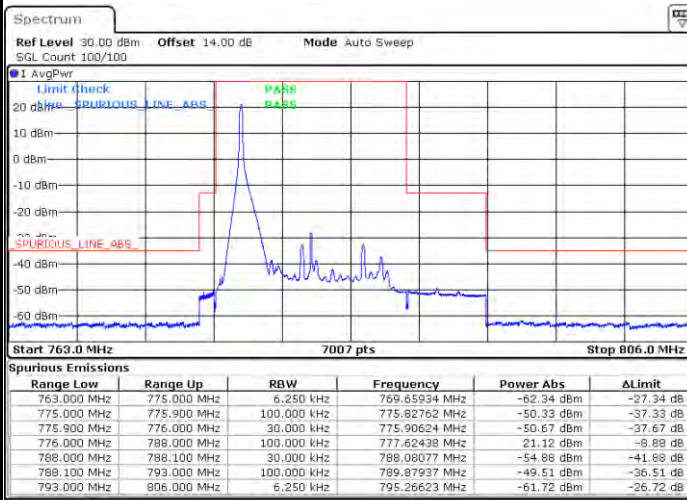
Date: 19.DEC.2020 11:43:56





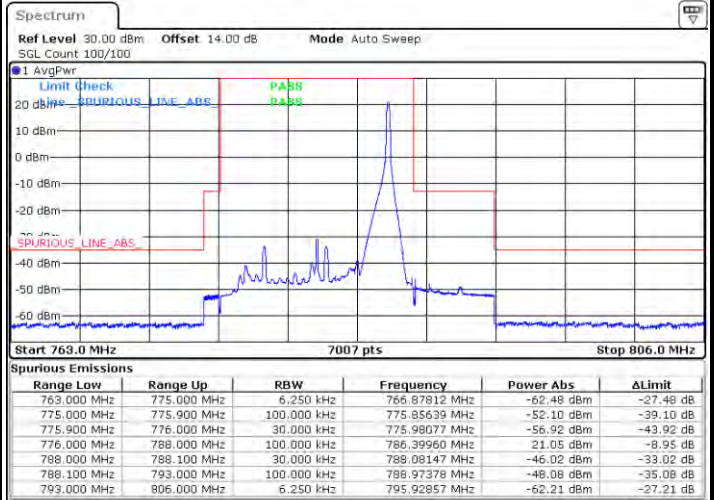
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



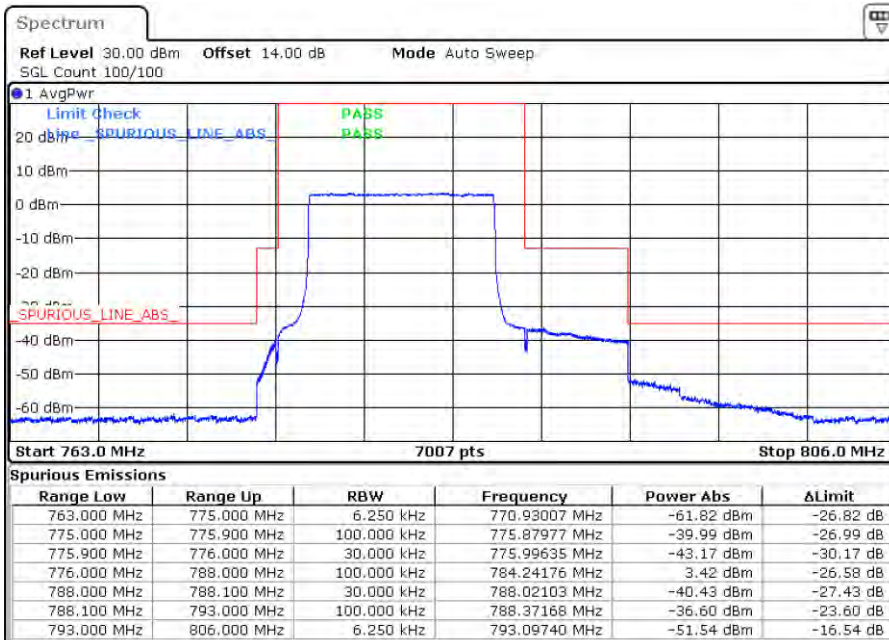
Date: 19 DEC 2020 12:05:14

Highest Band Edge / 1 RB



Date: 19 DEC 2020 12:07:15

Band Edge / Full RB



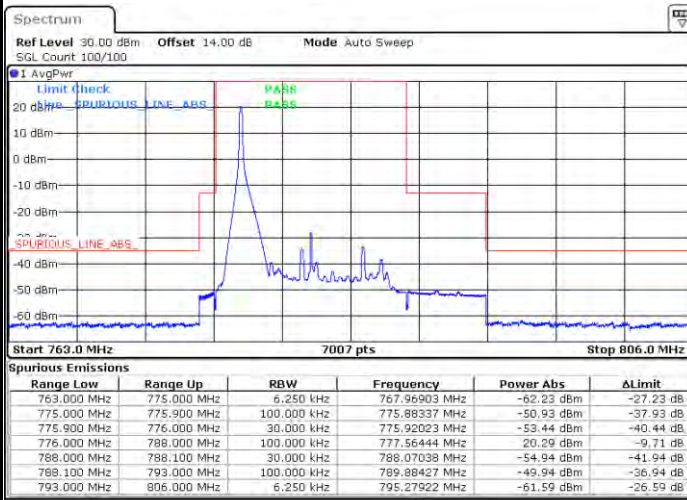
Date: 19 DEC 2020 12:00:33





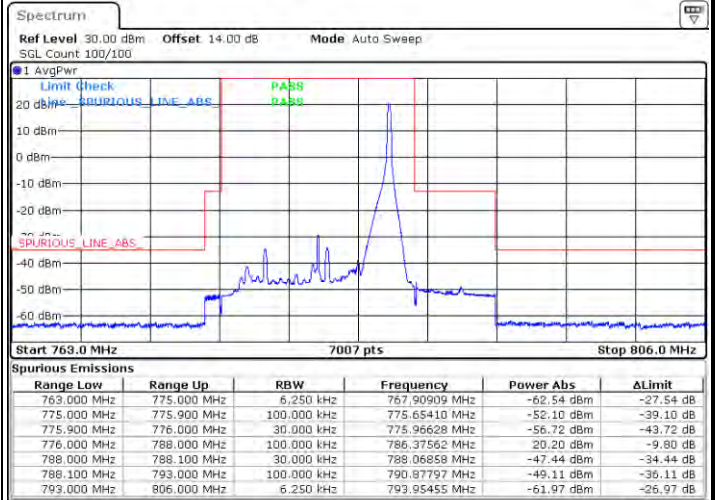
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



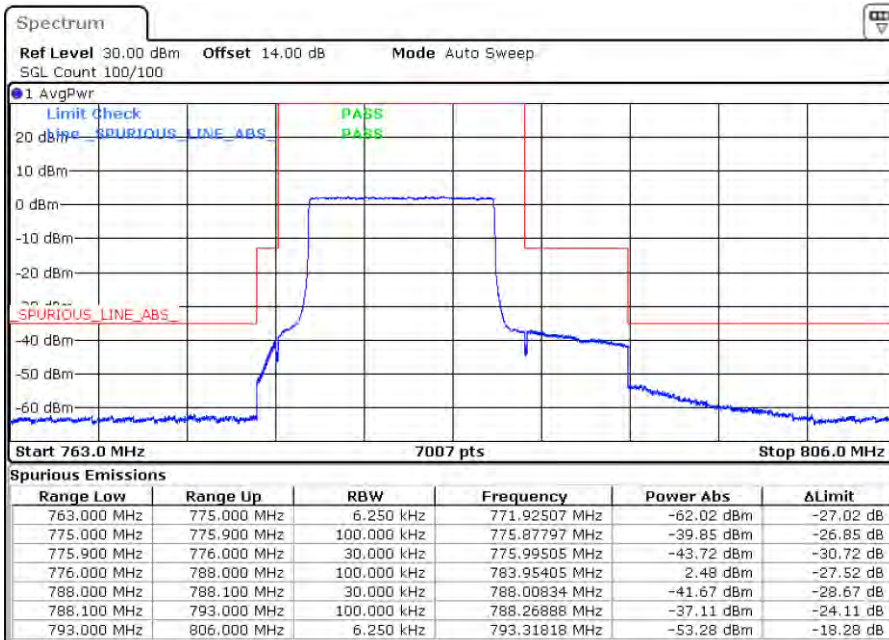
Date: 19.DEC.2020 12:03:54

Highest Band Edge / 1 RB



Date: 19.DEC.2020 12:08:56

Band Edge / Full RB



Date: 19.DEC.2020 12:02:13