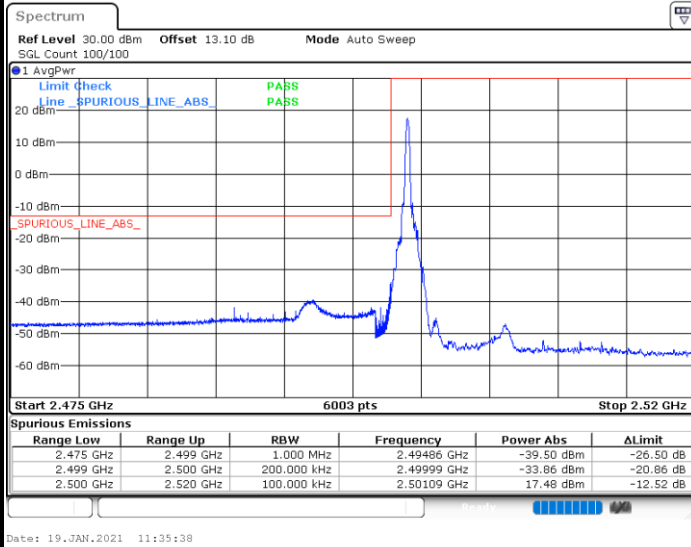


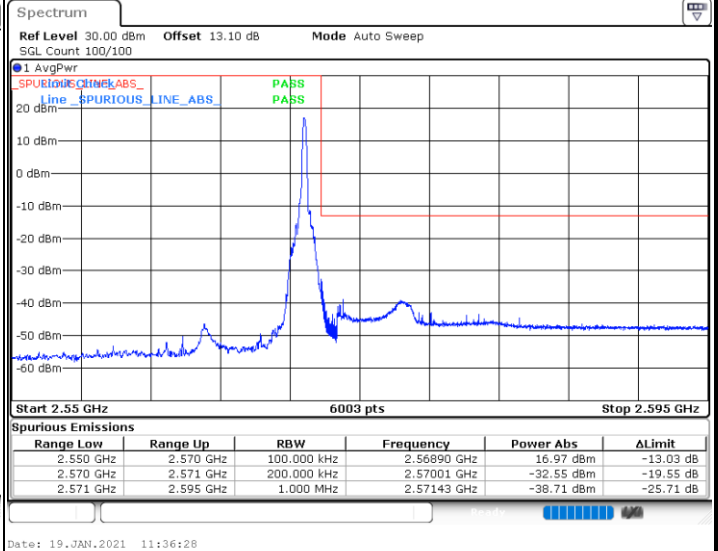


LTE Band 7 / 20MHz / 64QAM

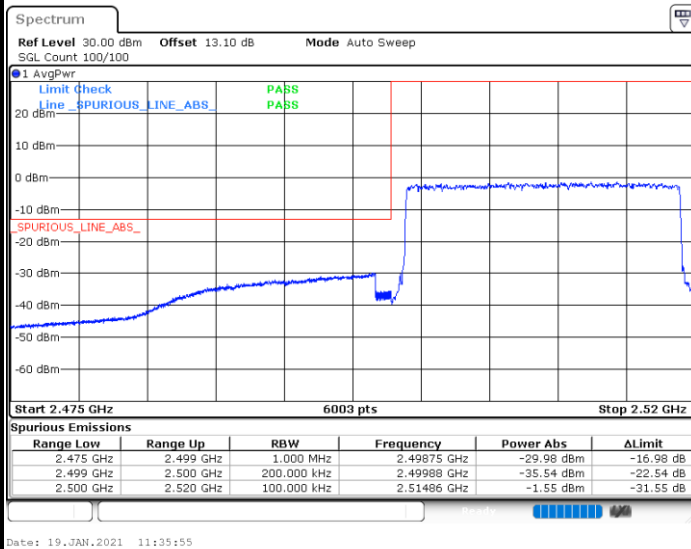
Lowest Band Edge / 1 RB



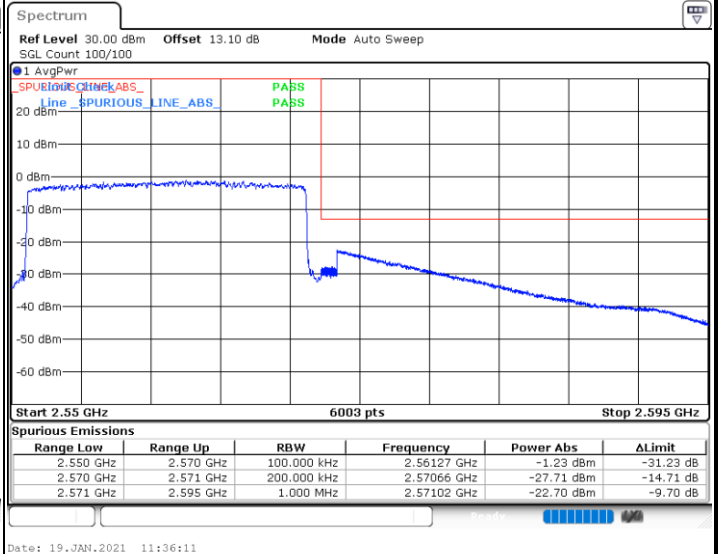
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

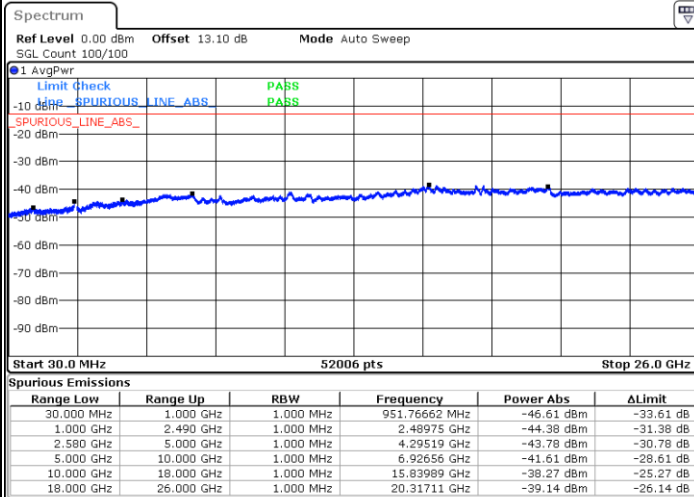




Conducted Spurious Emission

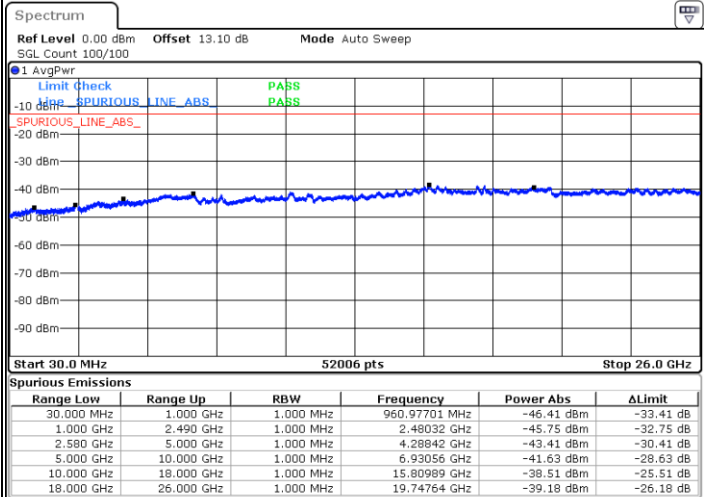
LTE Band 7 / 5MHz

Lowest Channel / QPSK



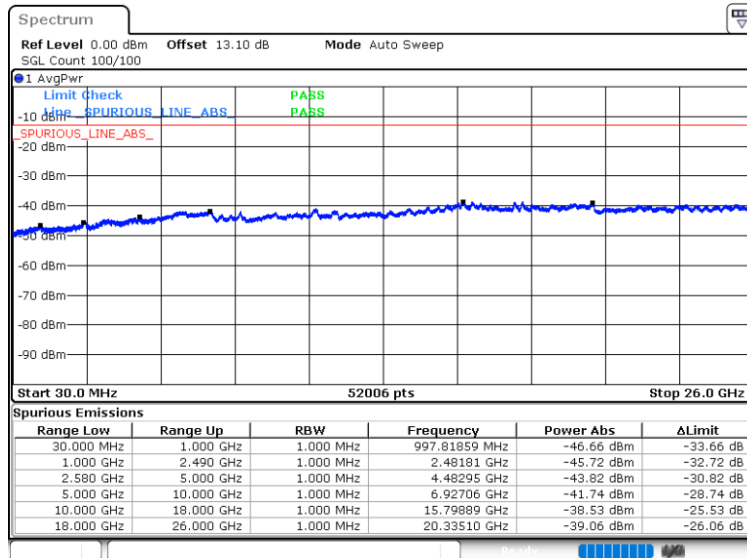
Date: 19.JAN.2021 11:22:09

Middle Channel / QPSK



Date: 19.JAN.2021 11:22:59

Highest Channel / QPSK

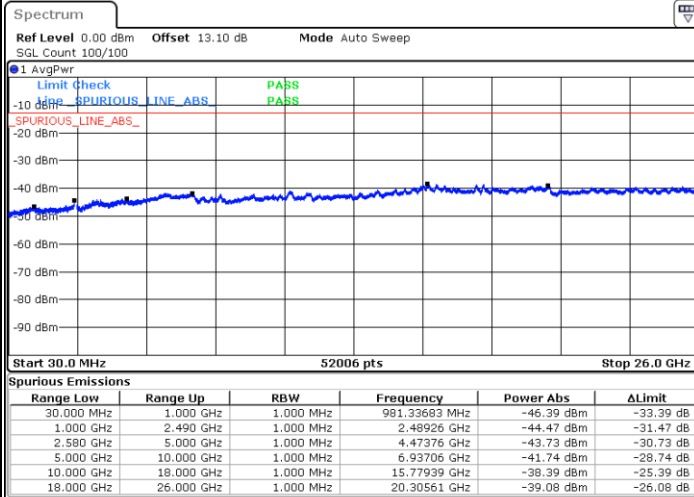


Date: 19.JAN.2021 11:23:50



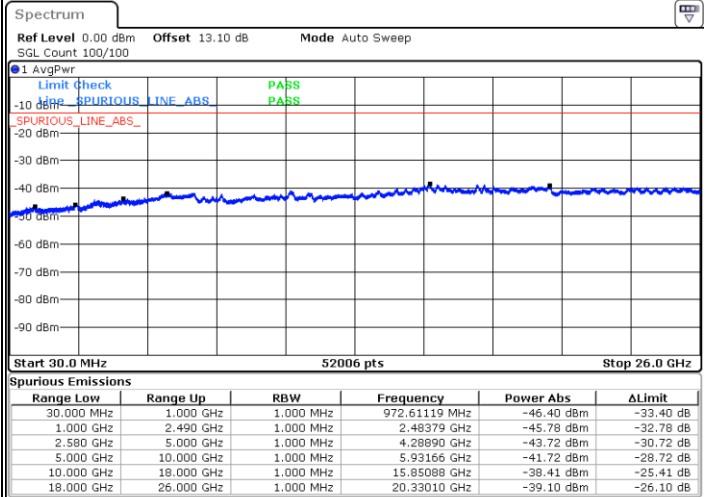
LTE Band 7 / 10MHz

Lowest Channel / QPSK



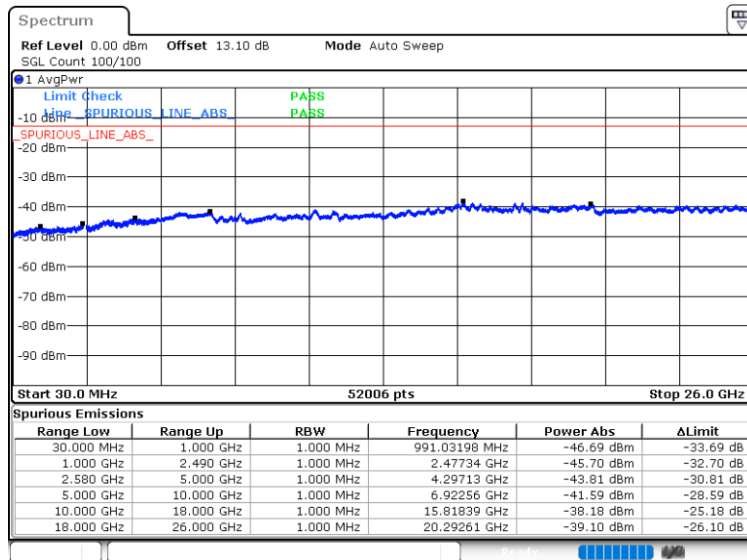
Date: 19.JAN.2021 11:24:43

Middle Channel / QPSK



Date: 19.JAN.2021 11:25:33

Highest Channel / QPSK

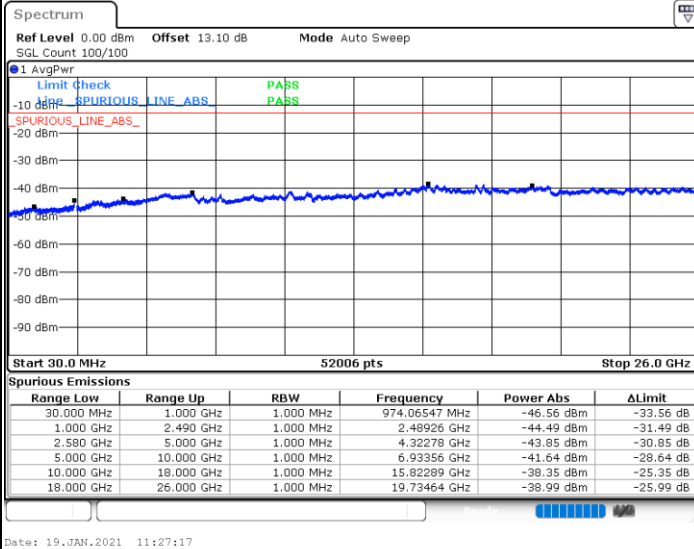


Date: 19.JAN.2021 11:26:24

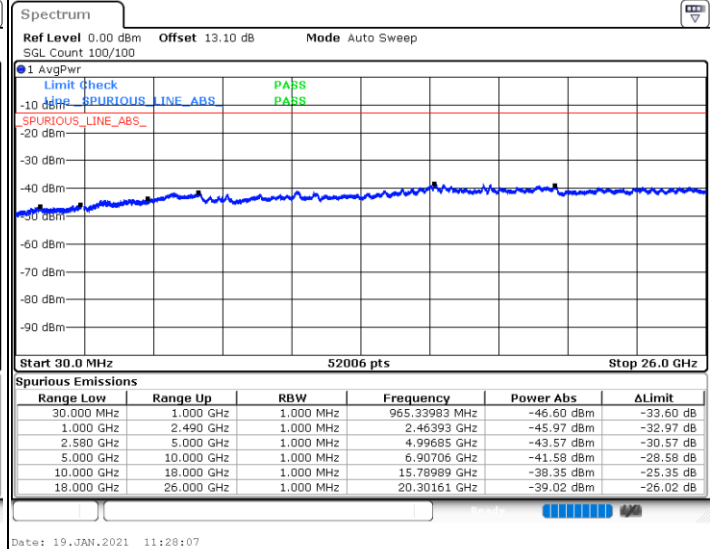


LTE Band 7 / 15MHz

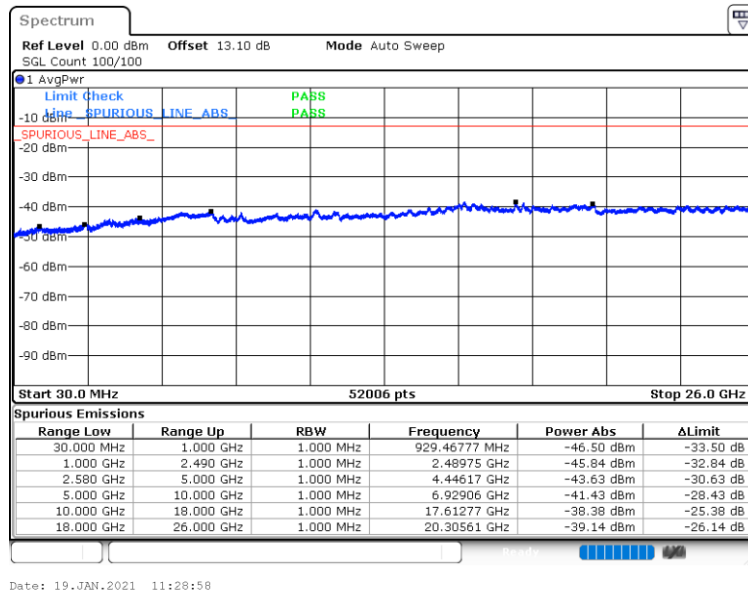
Lowest Channel / QPSK



Middle Channel / QPSK



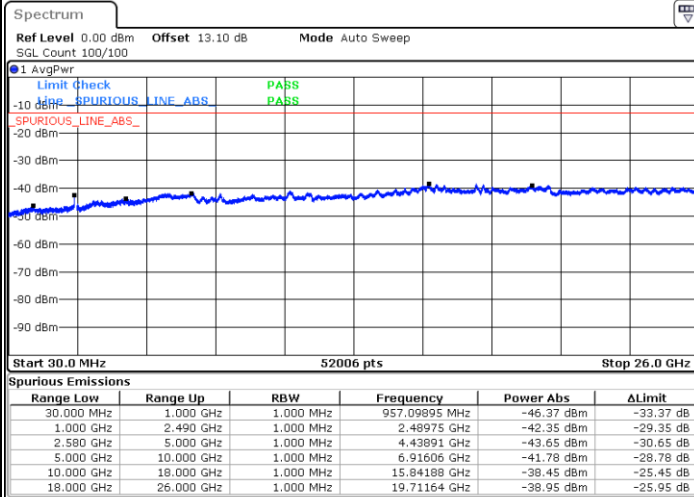
Highest Channel / QPSK





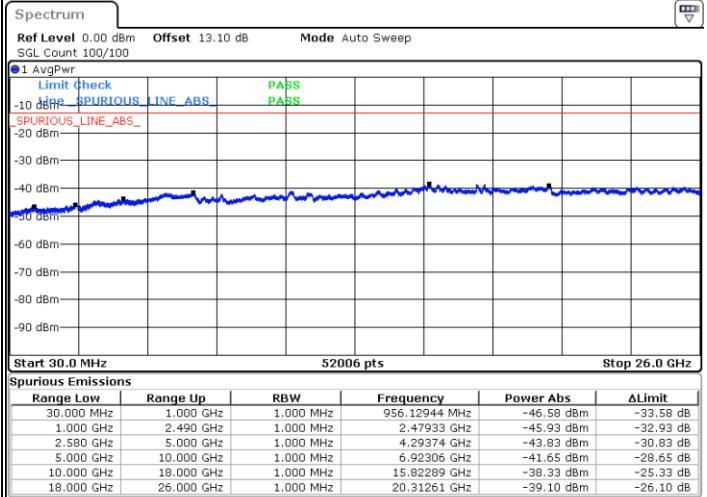
LTE Band 7 / 20MHz

Lowest Channel / QPSK



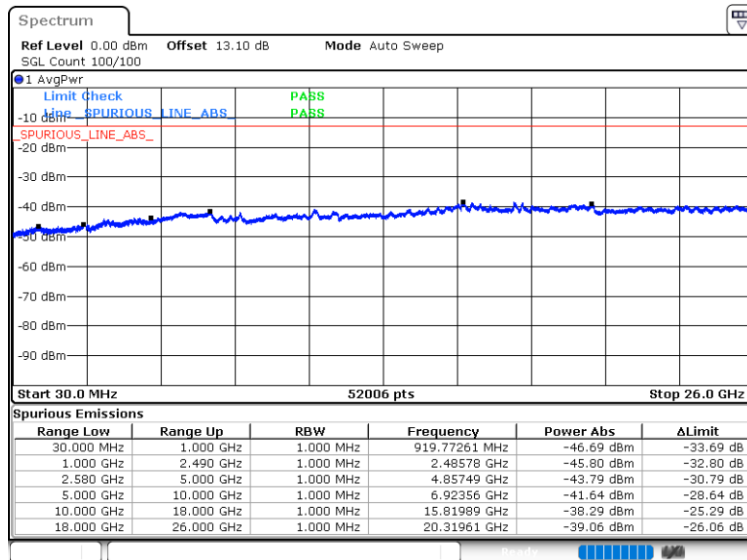
Date: 19.JAN.2021 11:29:51

Middle Channel / QPSK



Date: 19.JAN.2021 11:30:41

Highest Channel / QPSK



Date: 19.JAN.2021 11:31:32

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	0.0075	PASS
40	Normal Voltage	0.0084	
30	Normal Voltage	0.0071	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0077	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0084	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0084	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0079	

Note:

1. Normal Voltage =48 V. ; Battery End Point (BEP) =43 V. ; Maximum Voltage =53 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

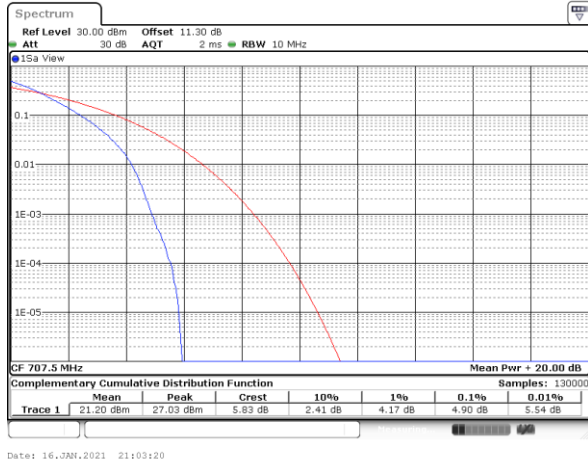
**LTE Band 12****Peak-to-Average Ratio**

Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.90	5.88	6.49	PASS



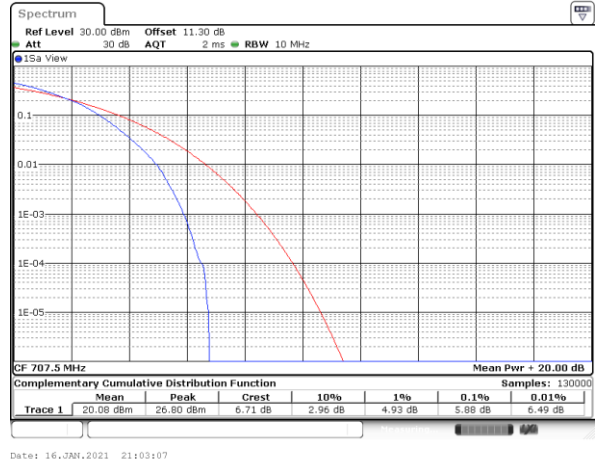
LTE Band 12 / 10MHz / QPSK

Middle Channel / Full RB



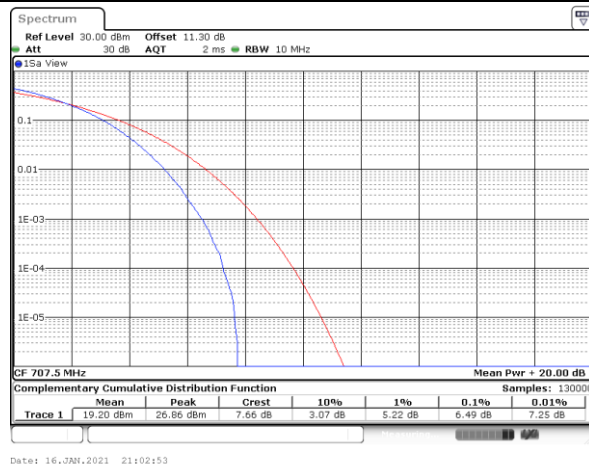
LTE Band 12 / 10MHz / 16QAM

Middle Channel / Full RB



LTE Band 12 / 10MHz / 64QAM

Middle Channel / Full RB



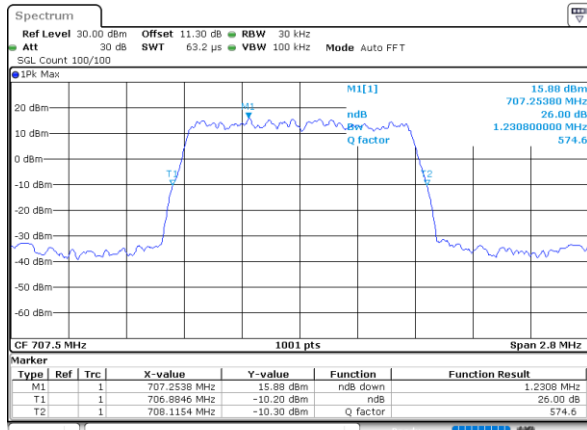
**26dB Bandwidth**

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
Middle CH	1.23	1.24	3.04	2.97	4.92	4.93	9.77	9.85	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-
Middle CH	1.22	-	3.03	-	4.89	-	9.63	-	-	-	-	-

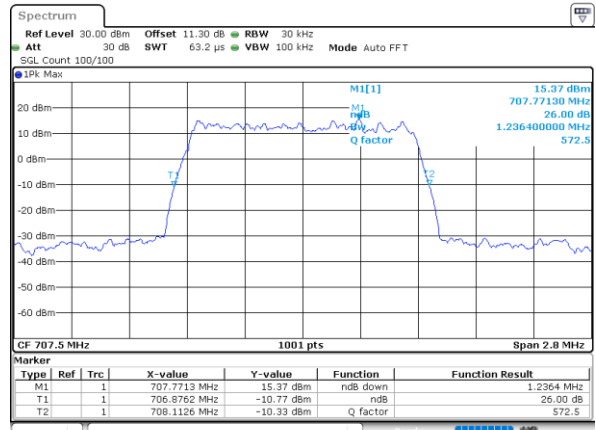


LTE Band 12

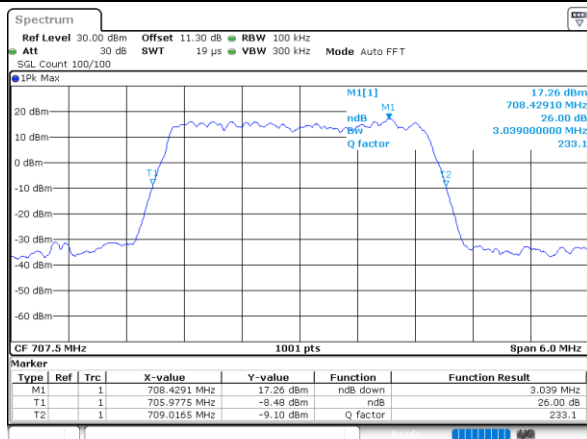
Middle Channel / 1.4MHz / QPSK



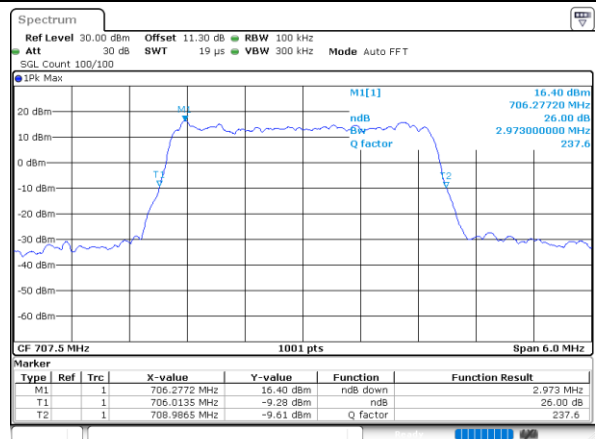
Middle Channel / 1.4MHz / 16QAM



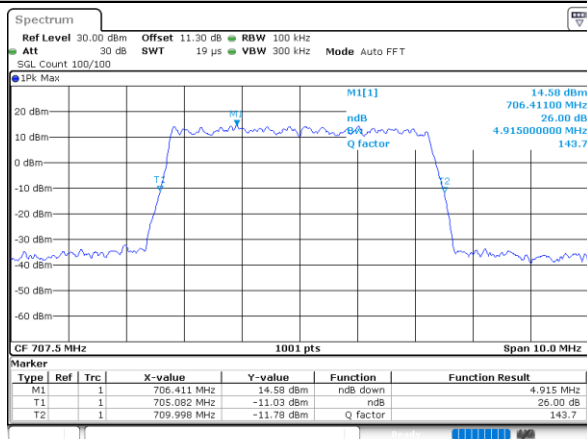
Middle Channel / 3MHz / QPSK



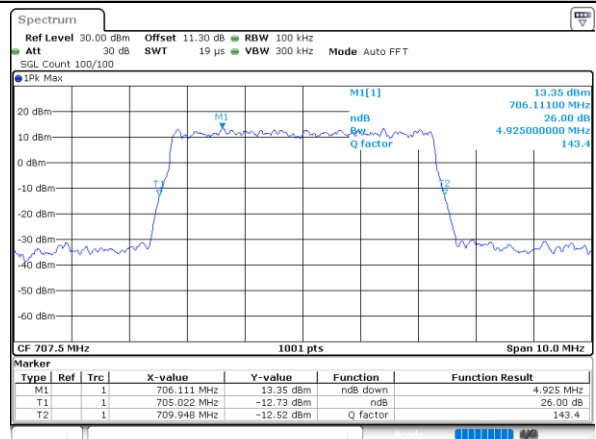
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK



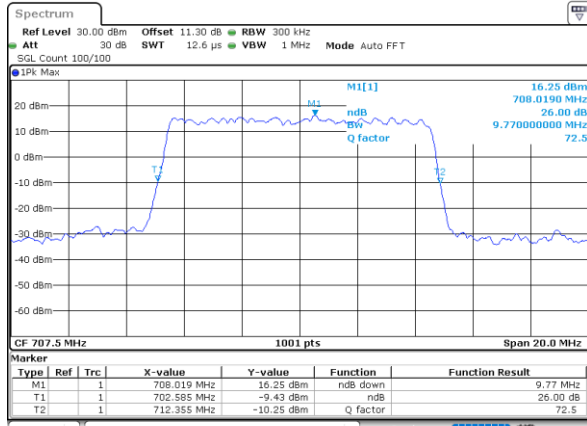
Middle Channel / 5MHz / 16QAM





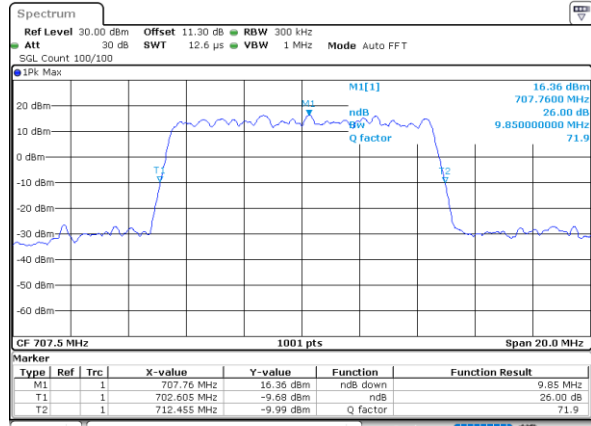
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 16.JAN.2021 20:56:41

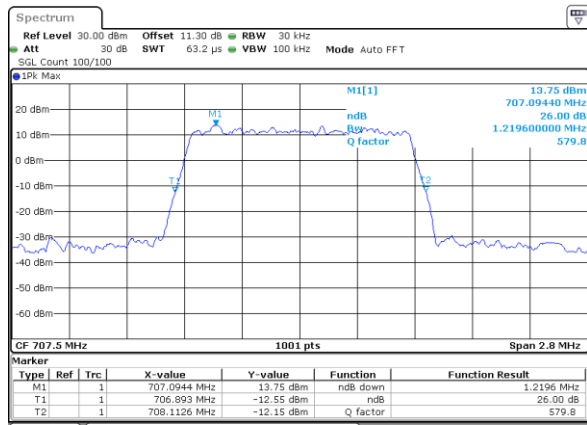
Middle Channel / 10MHz / 16QAM



Date: 16.JAN.2021 20:56:52

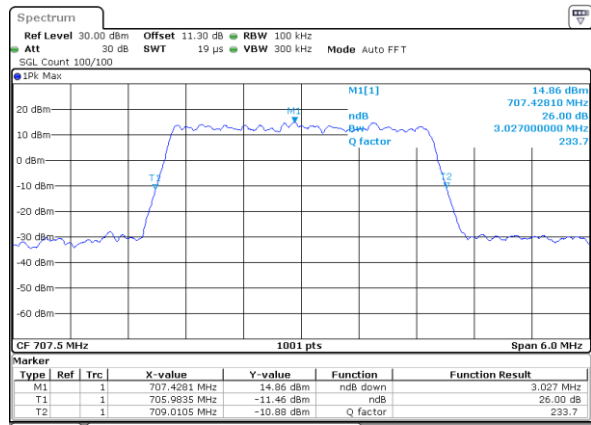
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



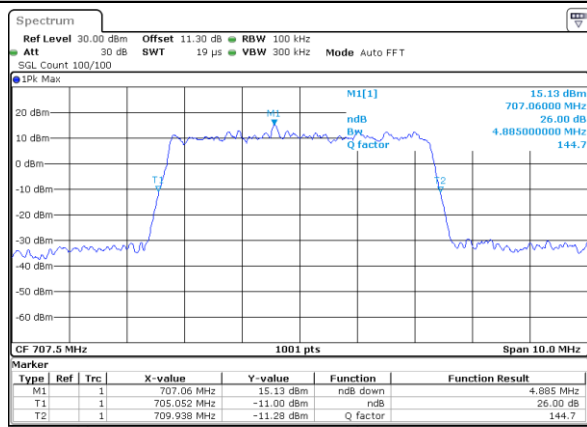
Date: 16.JAN.2021 20:34:33

Middle Channel / 3MHz / 64QAM



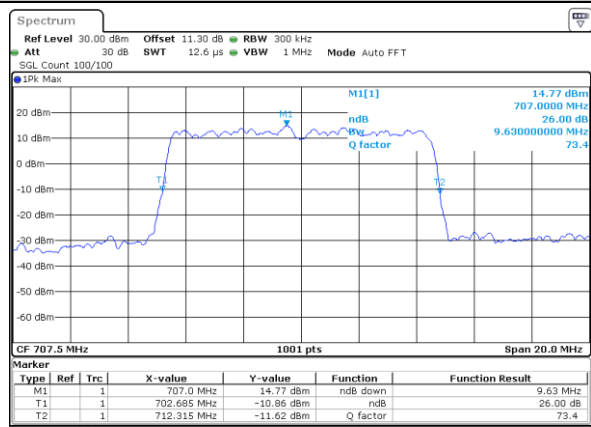
Date: 16.JAN.2021 20:43:29

Middle Channel / 5MHz / 64QAM



Date: 16.JAN.2021 20:46:02

Middle Channel / 10MHz / 64QAM



Date: 16.JAN.2021 21:01:10

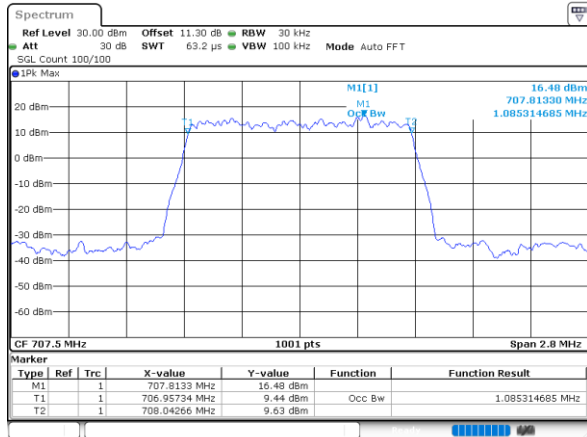
**Occupied Bandwidth**

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
Middle CH	1.09	1.09	2.72	2.73	4.49	4.47	8.97	9.03	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-
Middle CH	1.09	-	2.72	-	4.50	-	8.99	-	-	-	-	-

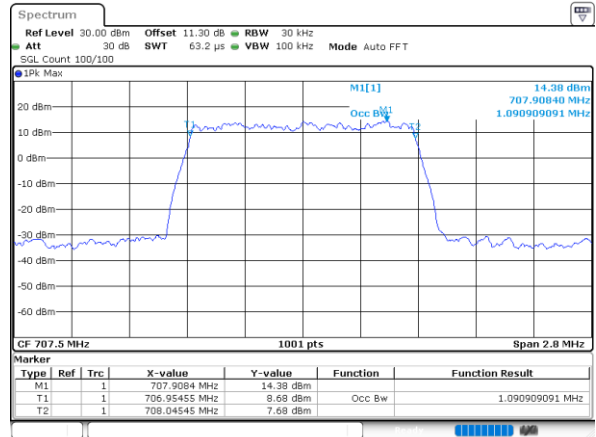


LTE Band 12

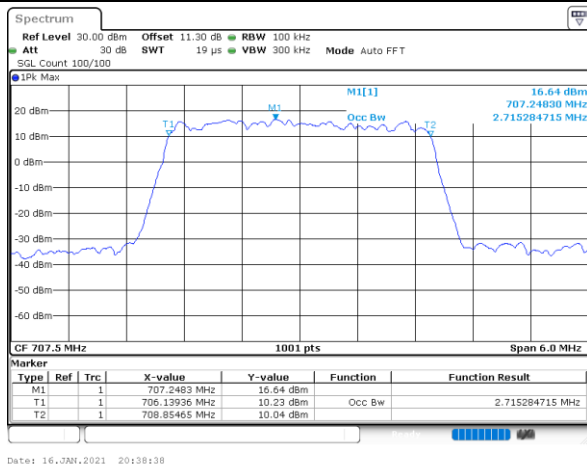
Middle Channel / 1.4MHz / QPSK



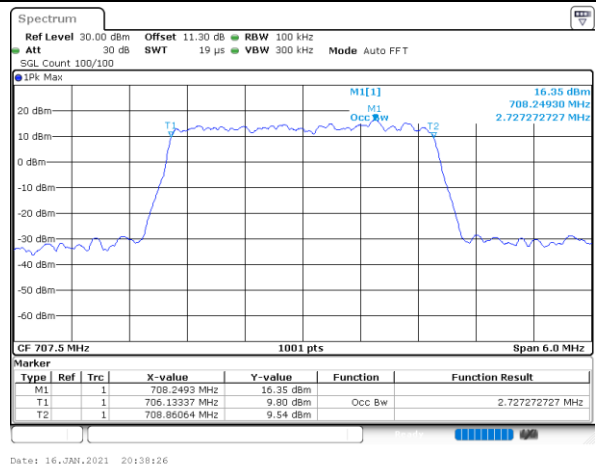
Middle Channel / 1.4MHz / 16QAM



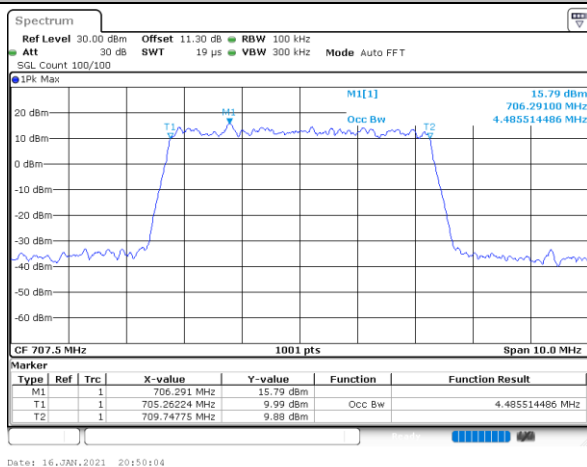
Middle Channel / 3MHz / QPSK



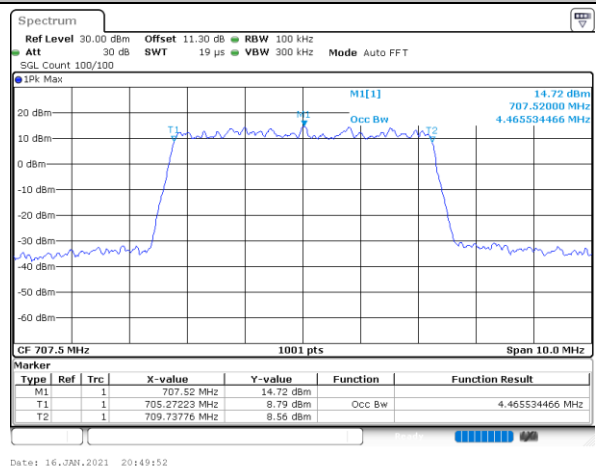
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK



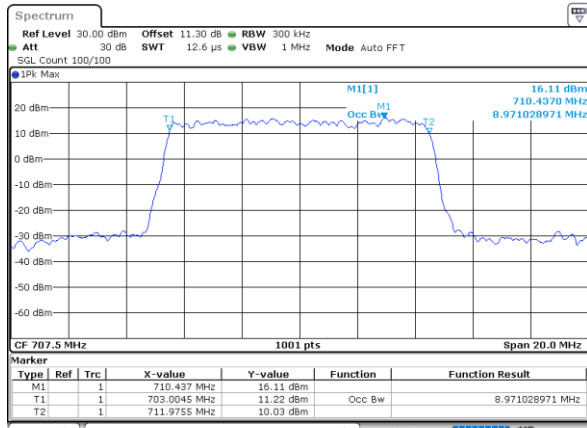
Middle Channel / 5MHz / 16QAM





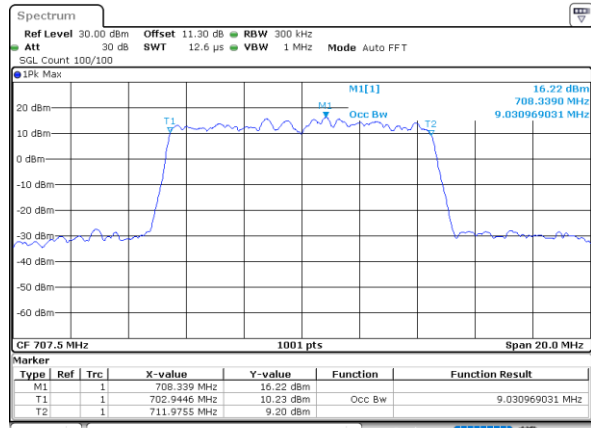
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 16, JAN, 2021 20:56:29

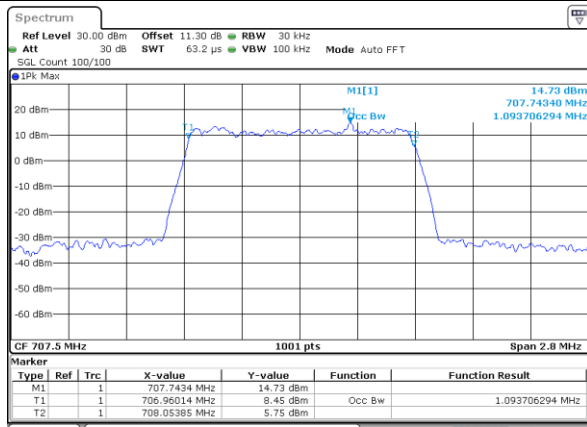
Middle Channel / 10MHz / 16QAM



Date: 16, JAN, 2021 20:56:18

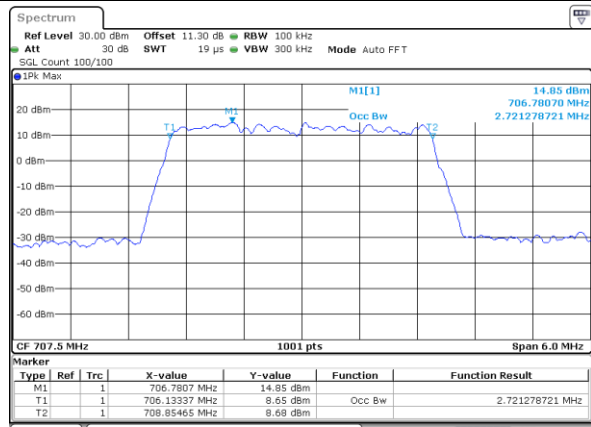
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



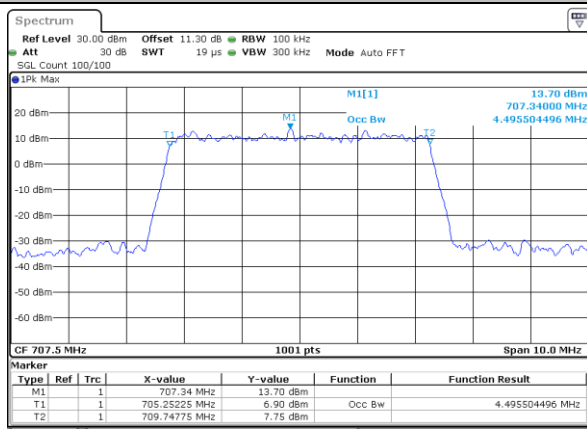
Date: 16, JAN, 2021 20:34:22

Middle Channel / 3MHz / 64QAM



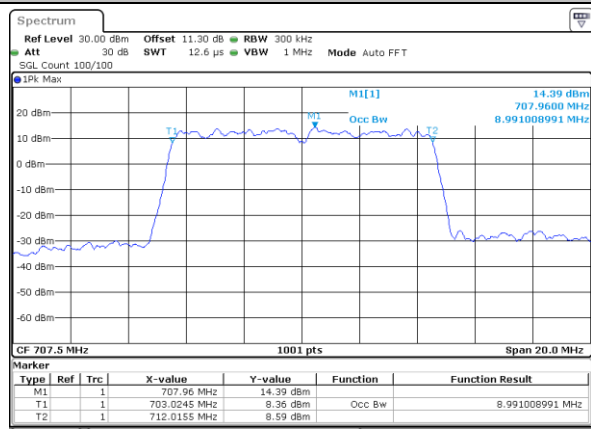
Date: 16, JAN, 2021 20:43:18

Middle Channel / 5MHz / 64QAM

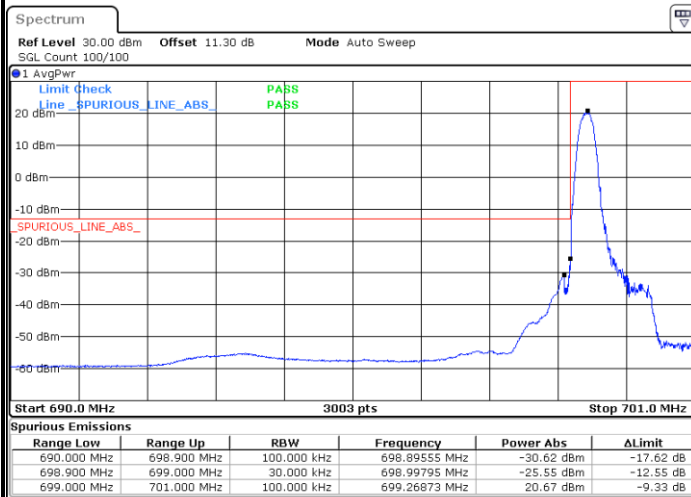
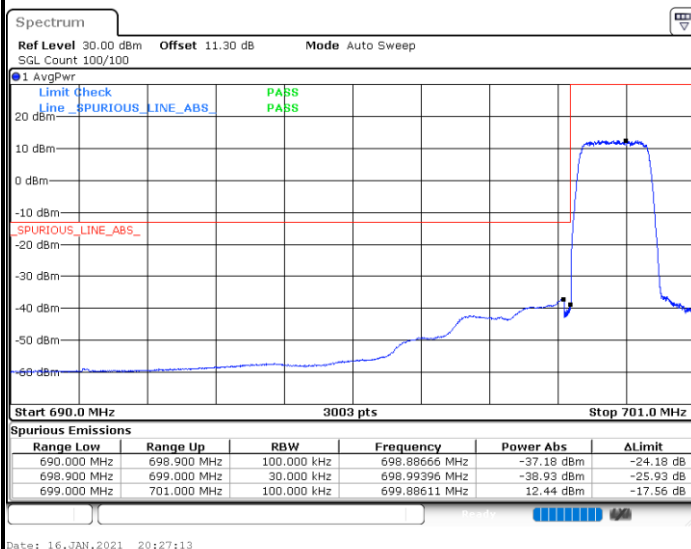
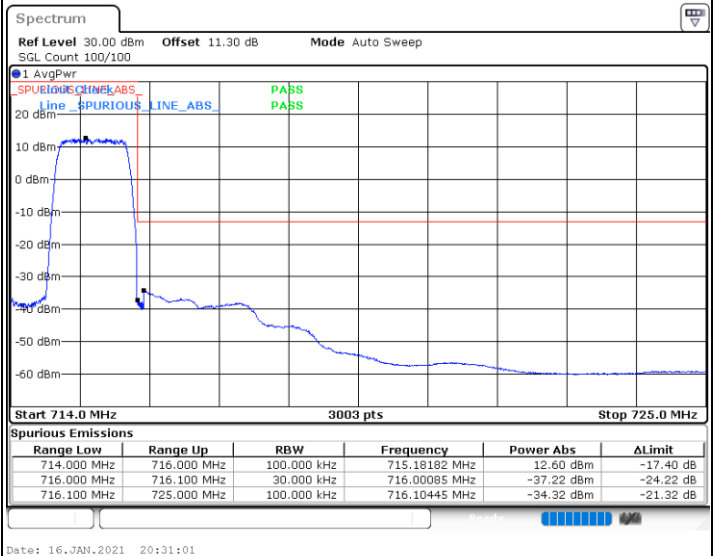


Date: 16, JAN, 2021 20:45:50

Middle Channel / 10MHz / 64QAM



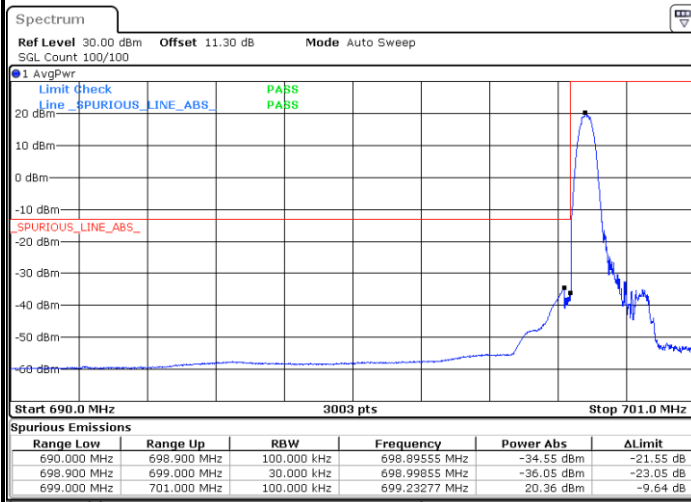
Date: 16, JAN, 2021 21:00:58

**Conducted Band Edge****LTE Band 12 / 1.4MHz / QPSK****Lowest Band Edge / 1RB****Highest Band Edge / 1RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**

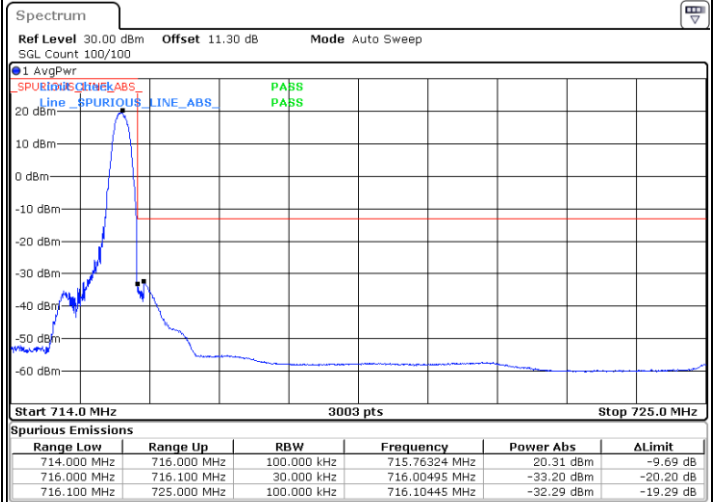


LTE Band 12 / 1.4MHz / 16QAM

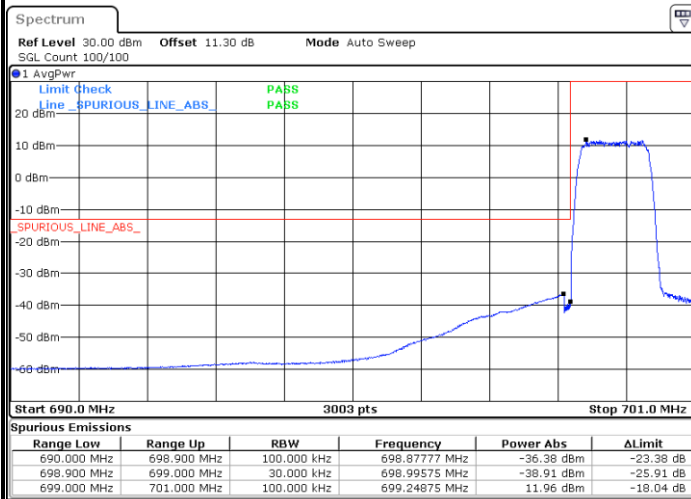
Lowest Band Edge / 1 RB



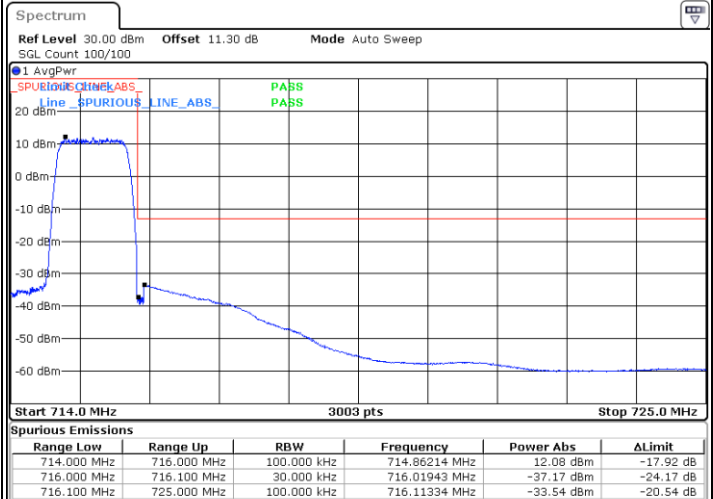
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



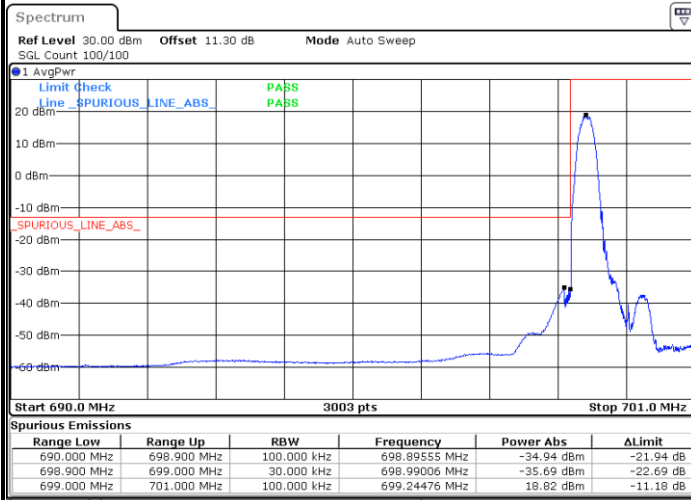
Highest Band Edge / Full RB





LTE Band 12 / 1.4MHz / 64QAM

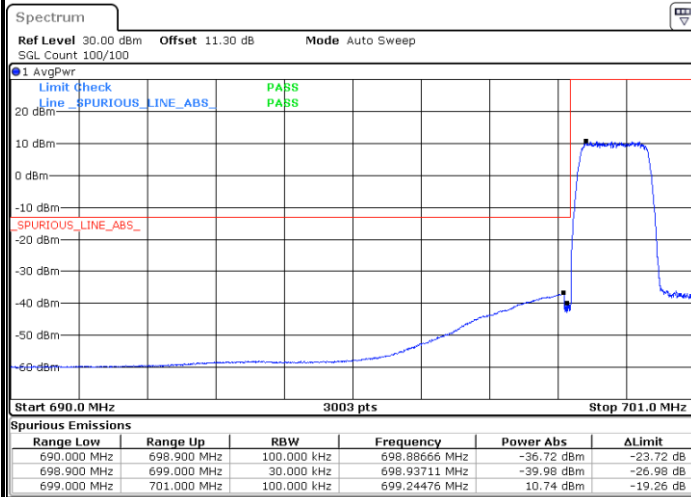
Lowest Band Edge / 1 RB



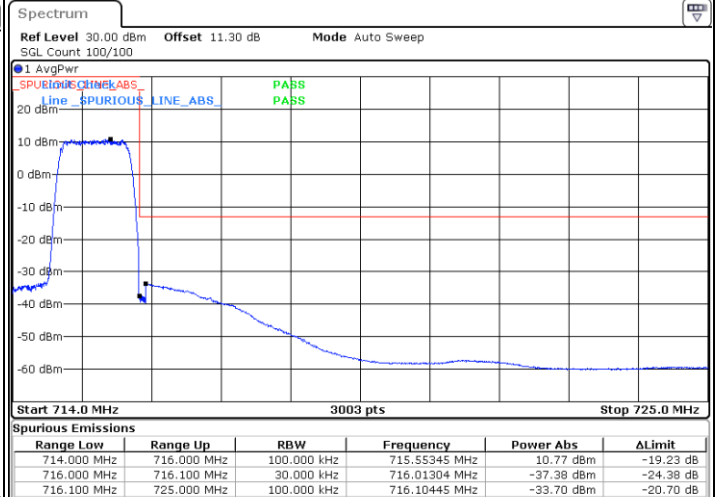
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



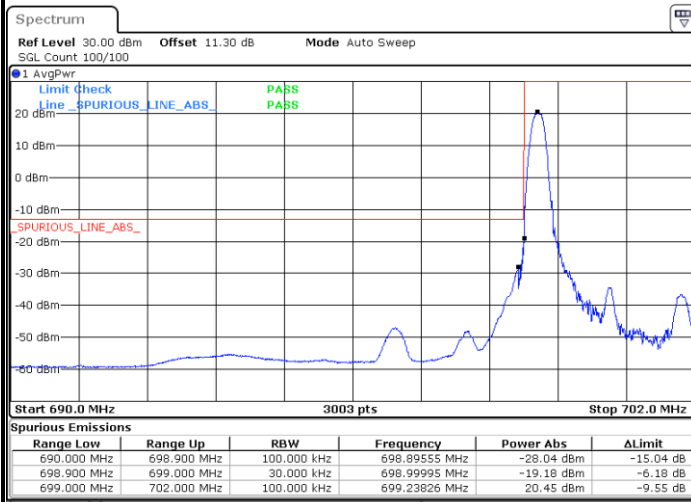
Highest Band Edge / Full RB



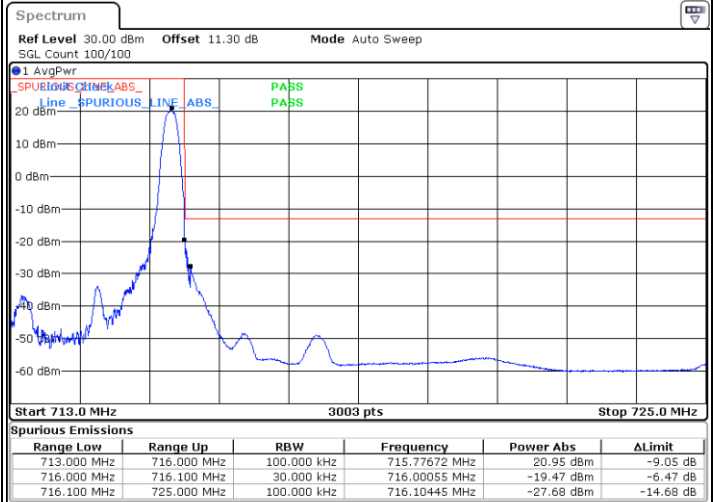


LTE Band 12 / 3MHz / QPSK

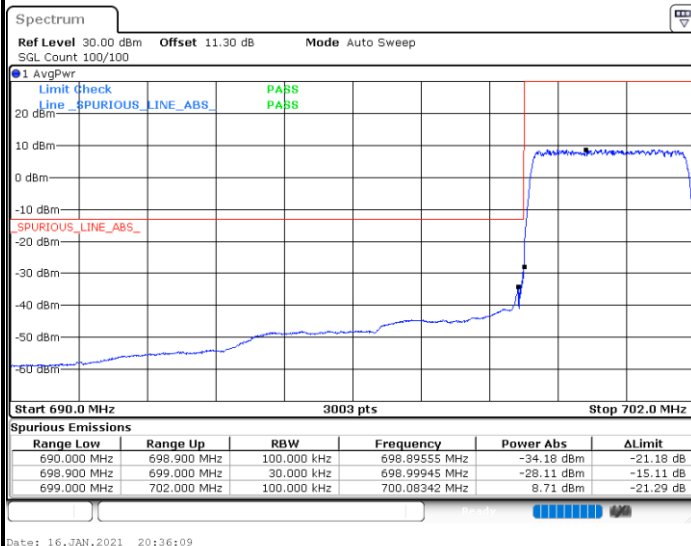
Lowest Band Edge / 1RB



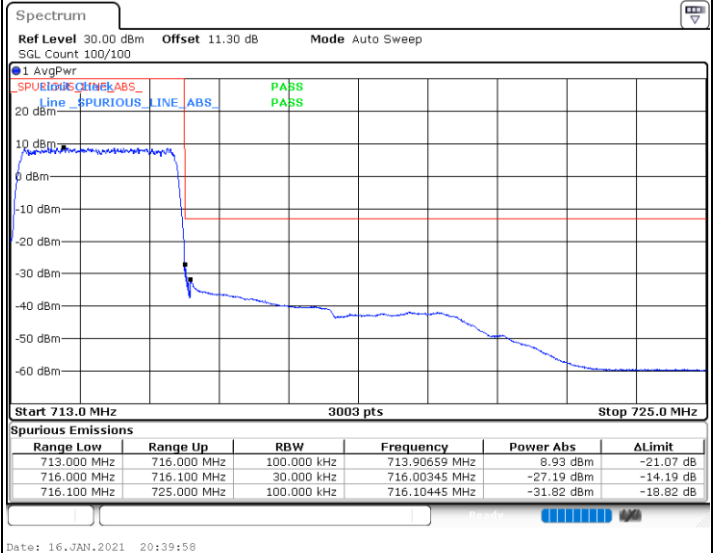
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



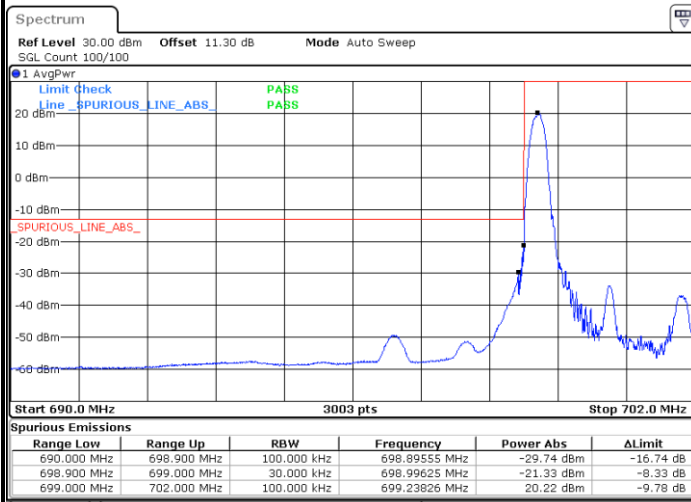
Highest Band Edge / Full RB



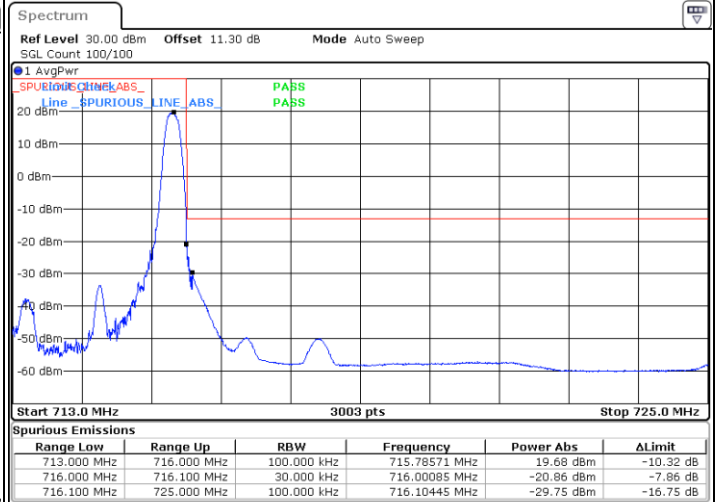


LTE Band 12 / 3MHz / 16QAM

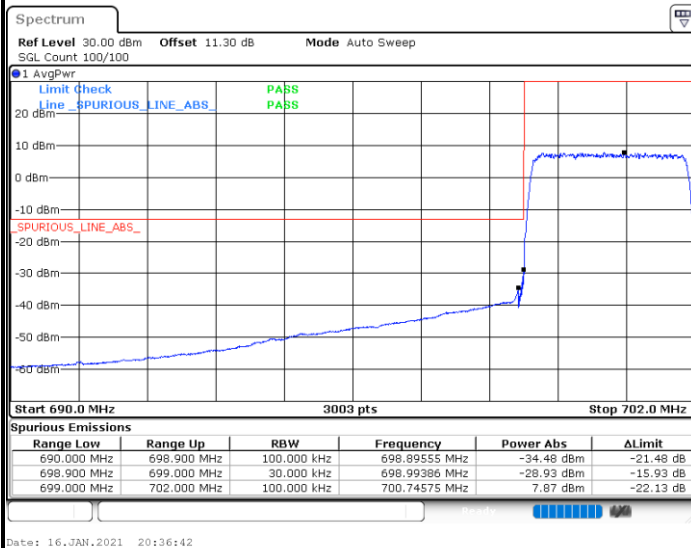
Lowest Band Edge / 1 RB



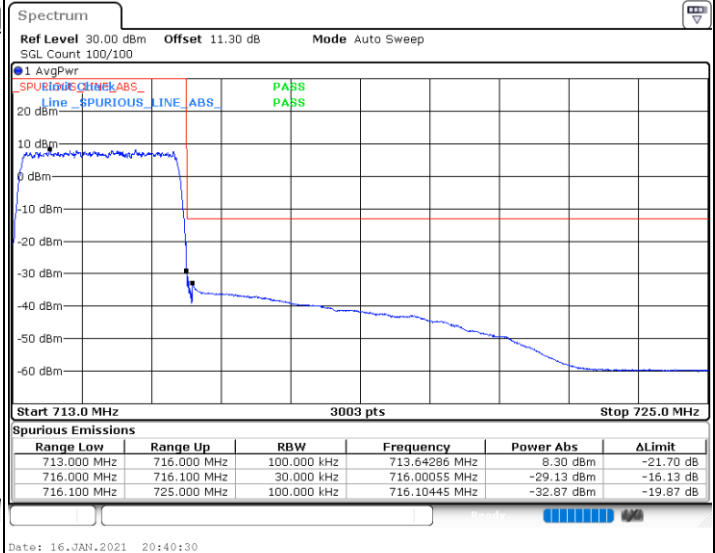
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



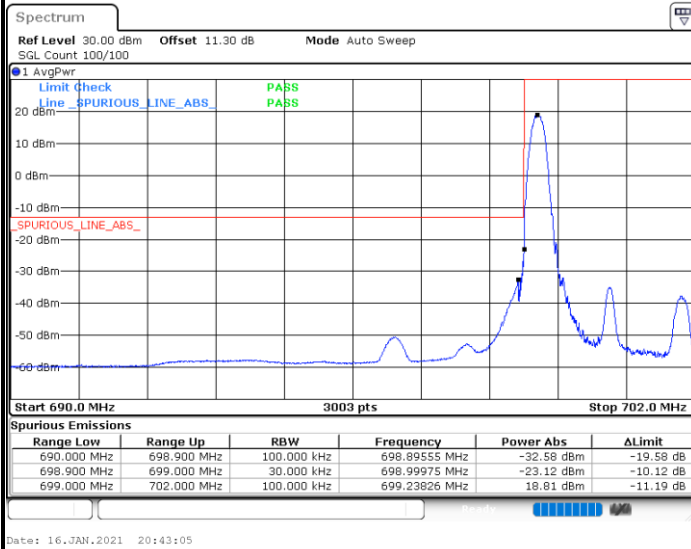
Highest Band Edge / Full RB



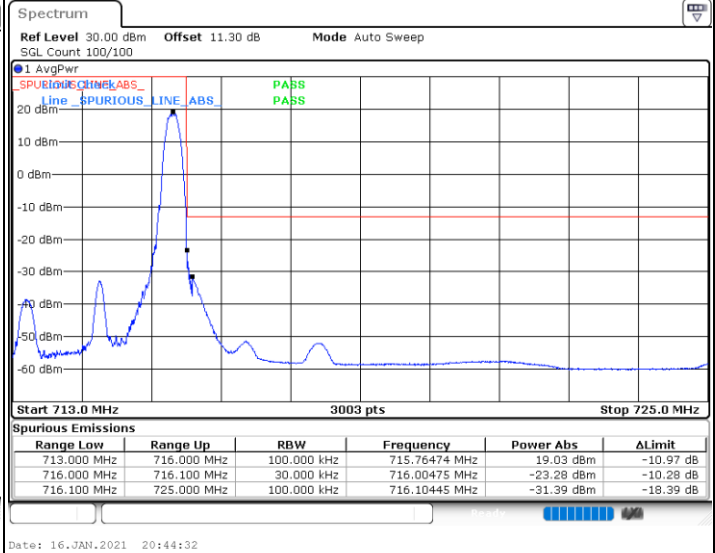


LTE Band 12 / 3MHz / 64QAM

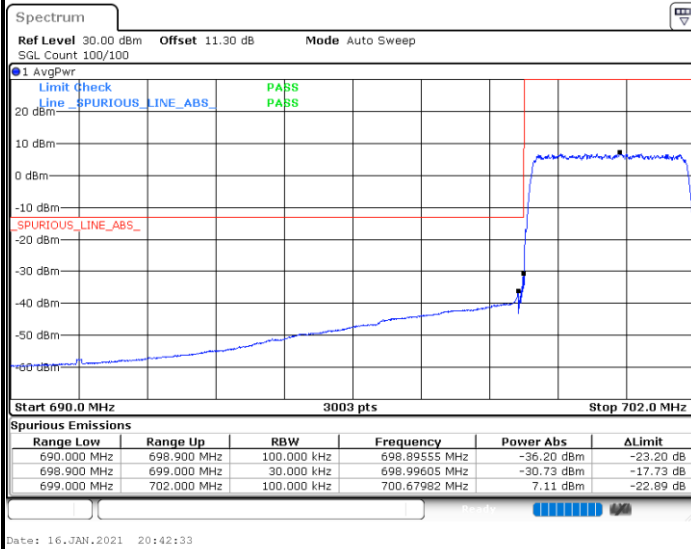
Lowest Band Edge / 1 RB



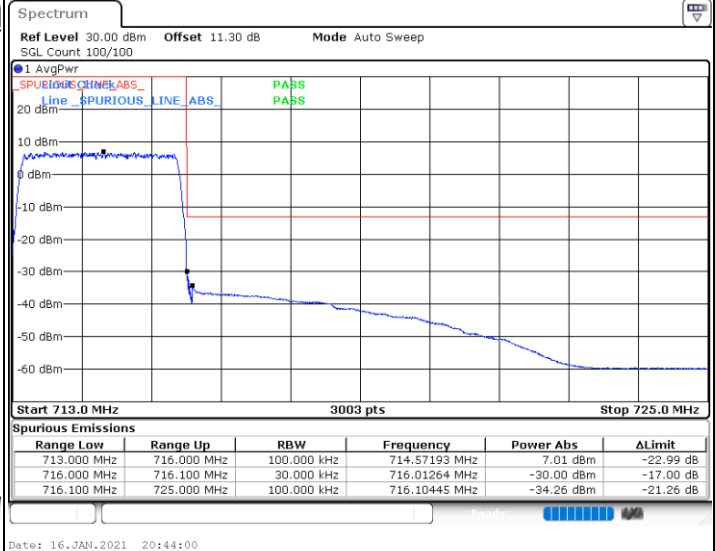
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



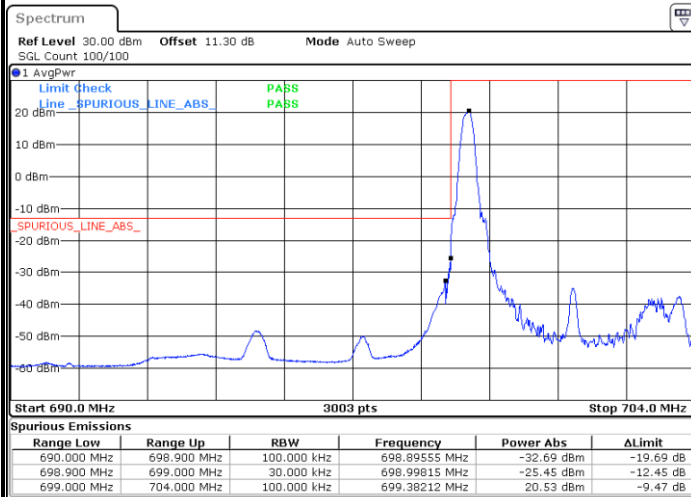
Highest Band Edge / Full RB



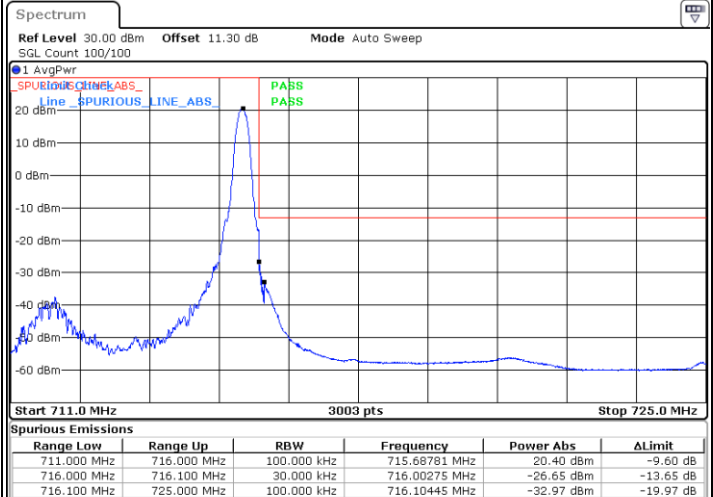


LTE Band 12 / 5MHz / QPSK

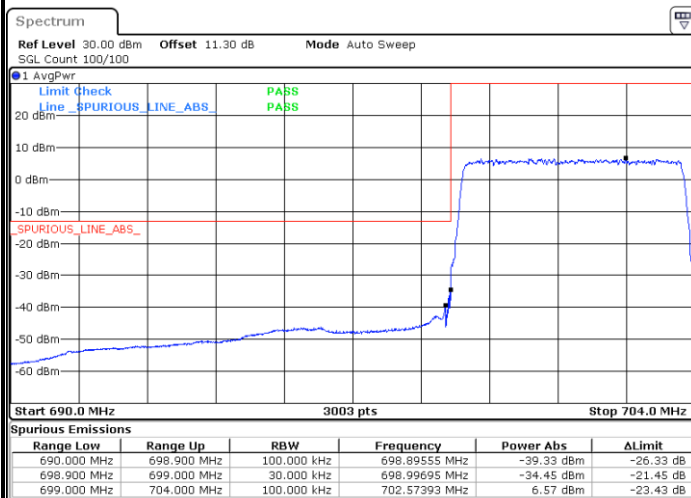
Lowest Band Edge / 1 RB



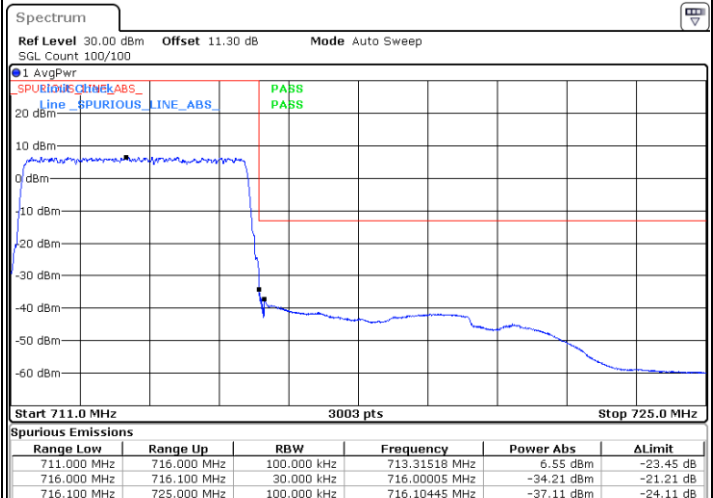
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



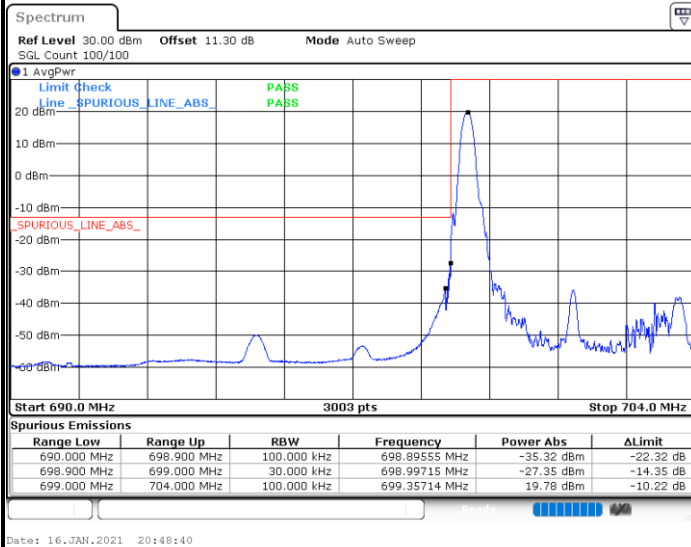
Highest Band Edge / Full RB



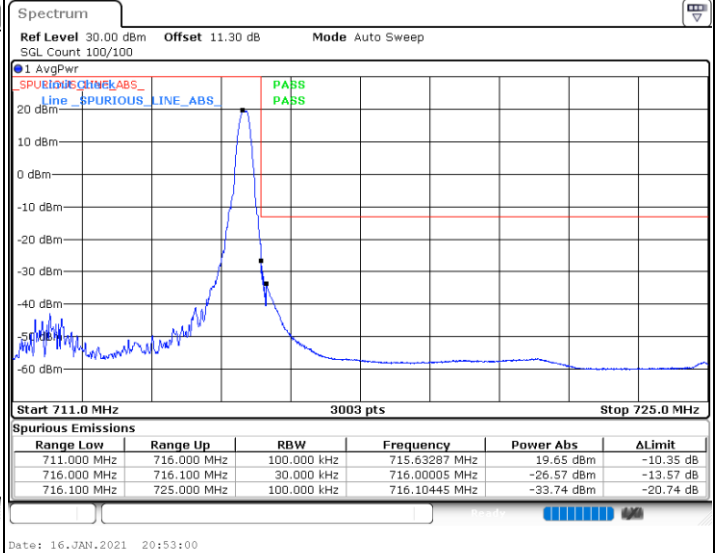


LTE Band 12 / 5MHz / 16QAM

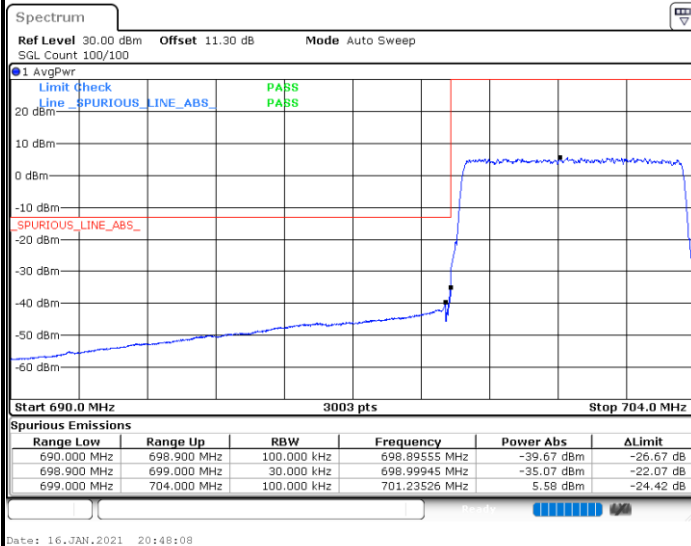
Lowest Band Edge / 1RB



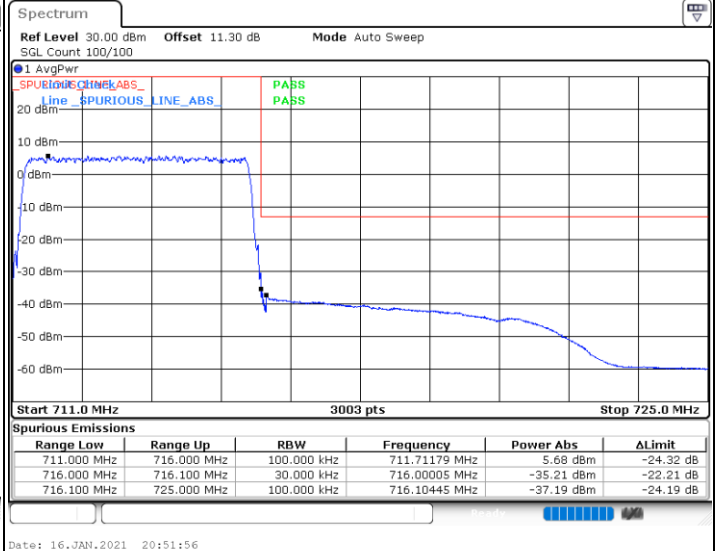
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



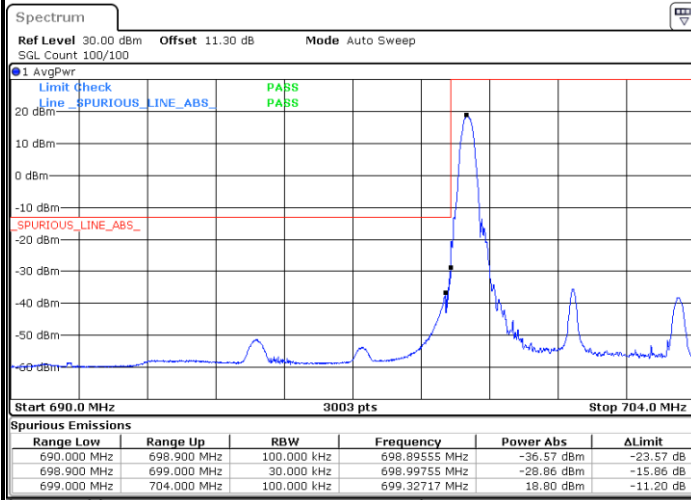
Highest Band Edge / Full RB



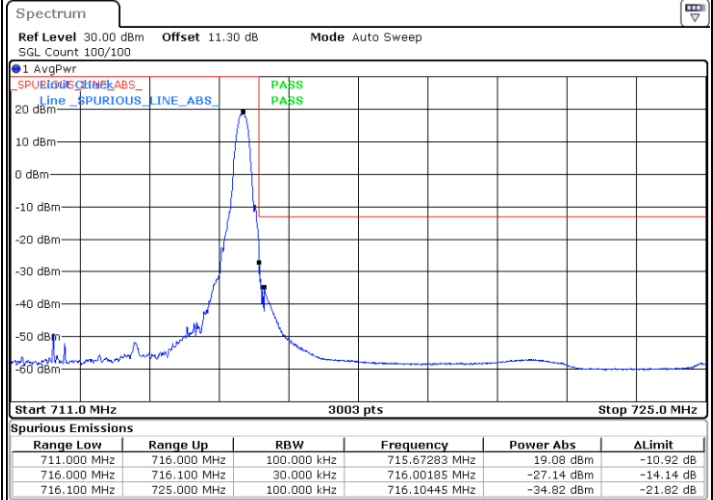


LTE Band 12 / 5MHz / 64QAM

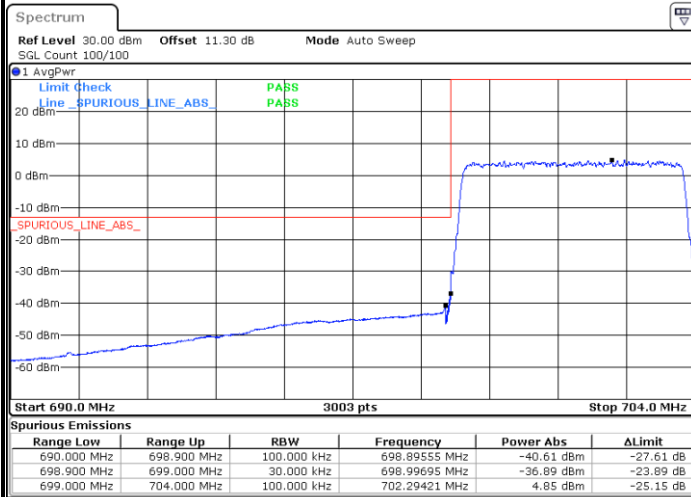
Lowest Band Edge / 1RB



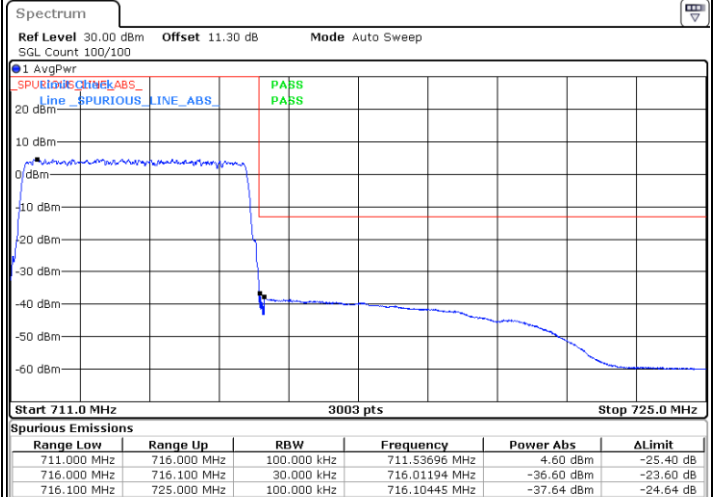
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



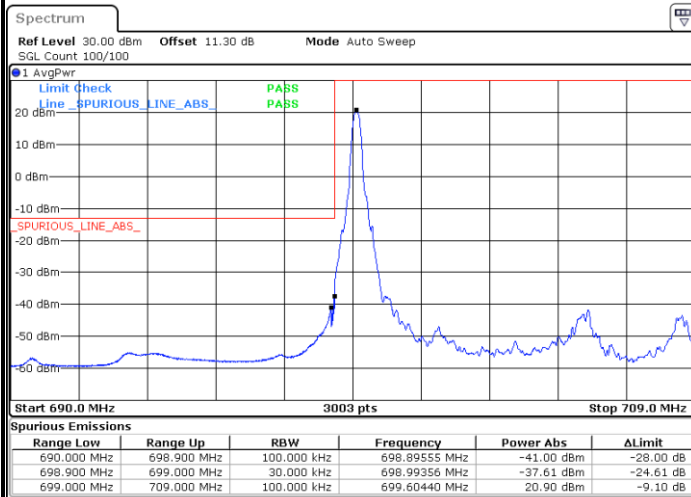
Highest Band Edge / Full RB



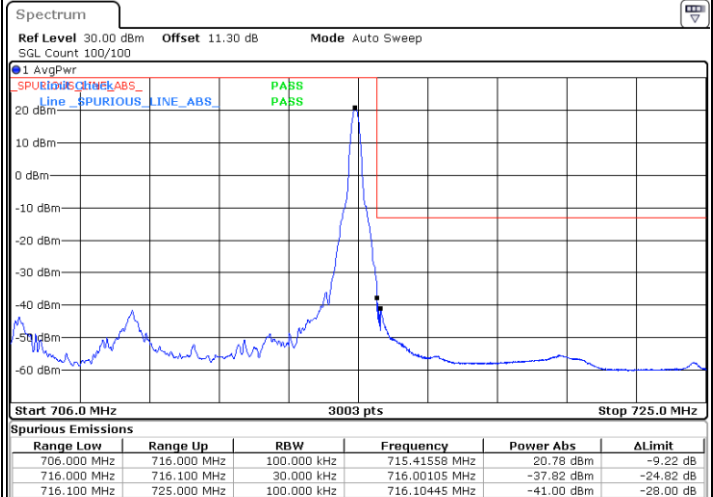


LTE Band 12 / 10MHz / QPSK

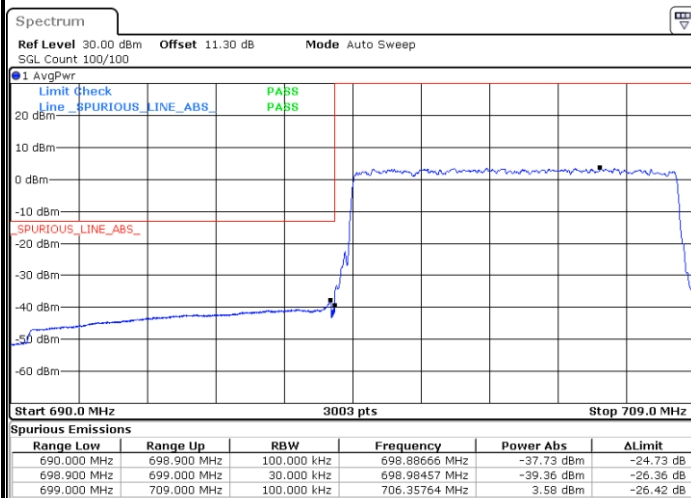
Lowest Band Edge / 1 RB



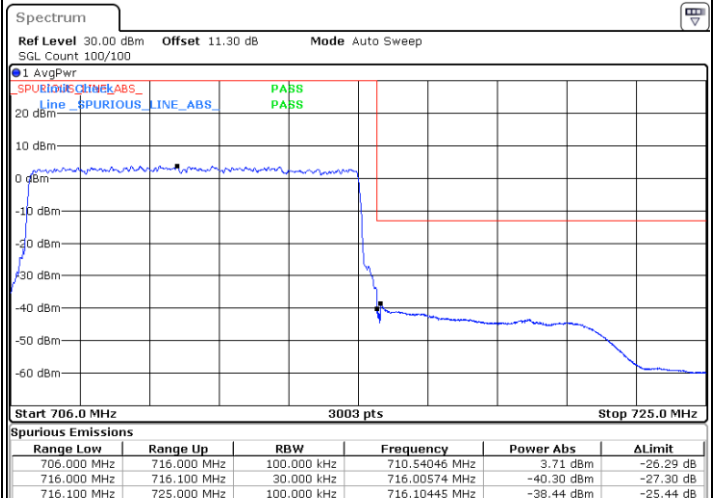
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



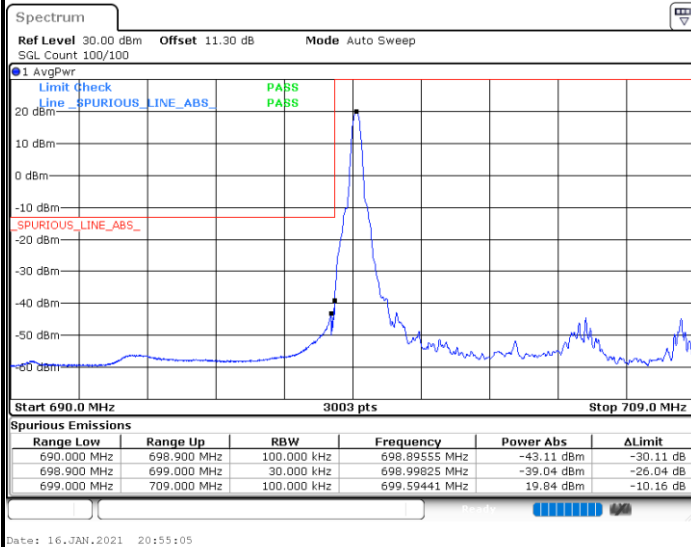
Highest Band Edge / Full RB



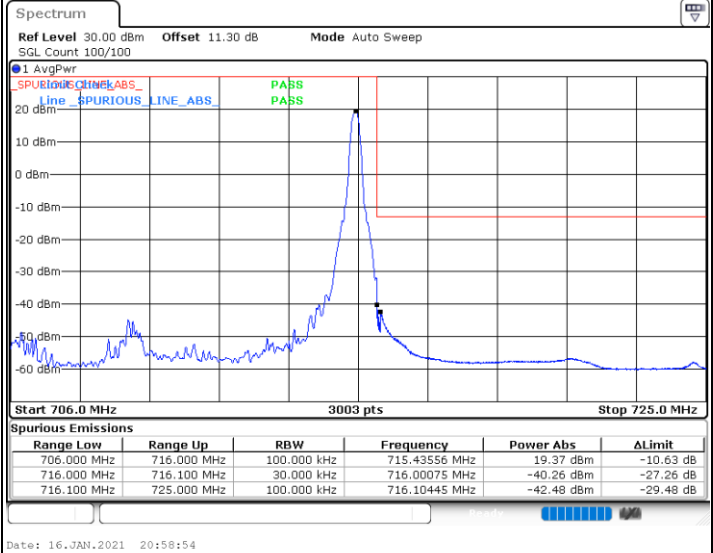


LTE Band 12 / 10MHz / 16QAM

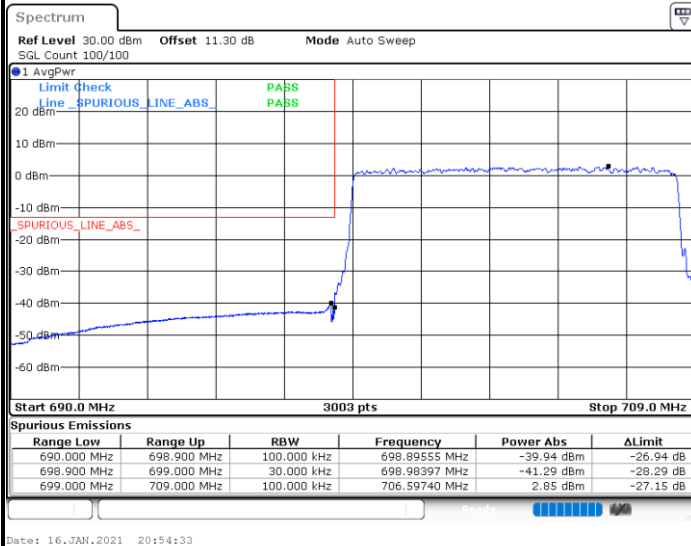
Lowest Band Edge / 1 RB



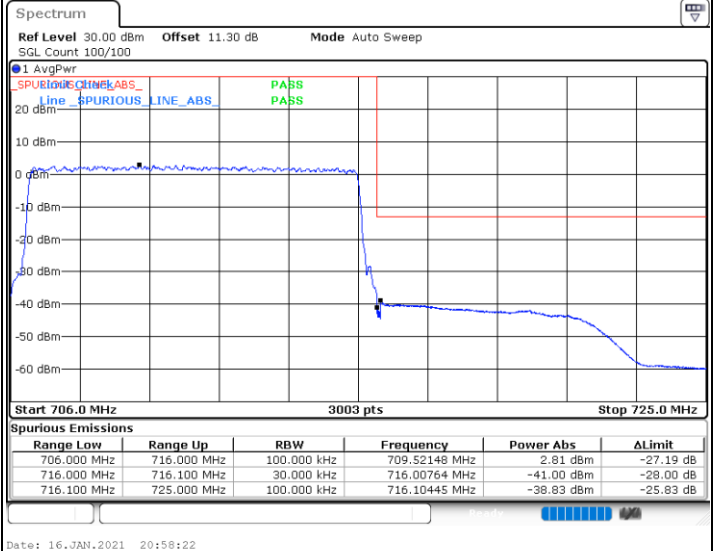
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



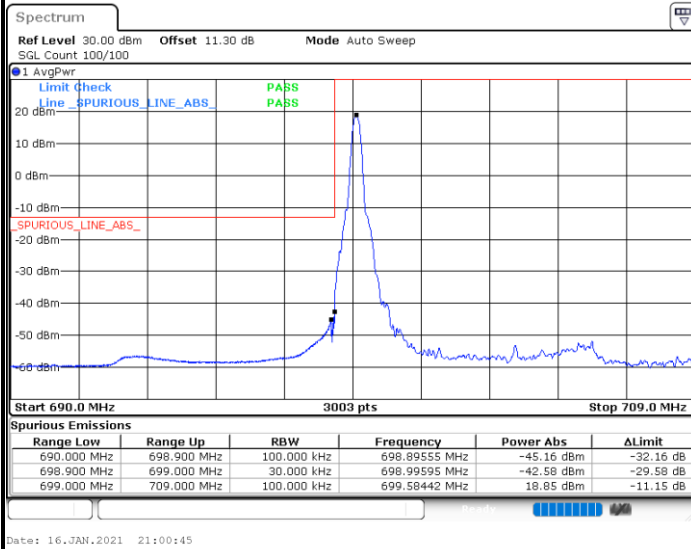
Highest Band Edge / Full RB



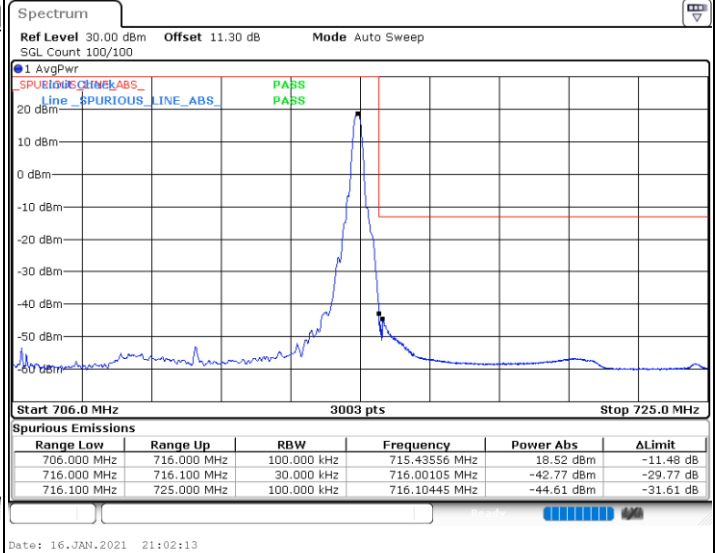


LTE Band 12 / 10MHz / 64QAM

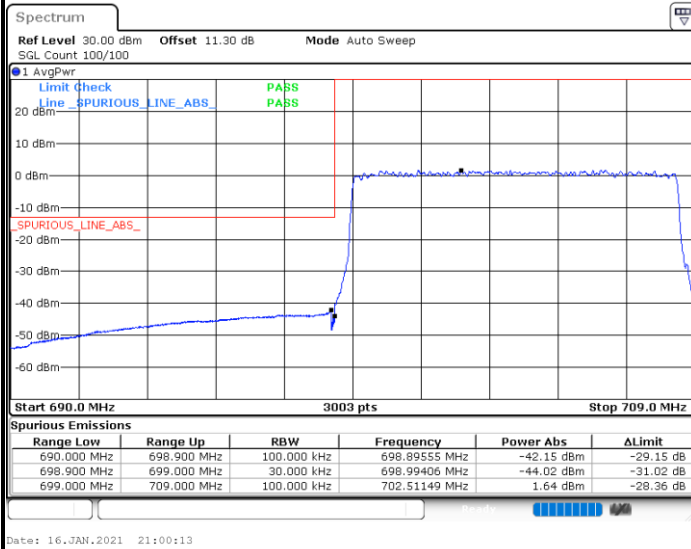
Lowest Band Edge / 1 RB



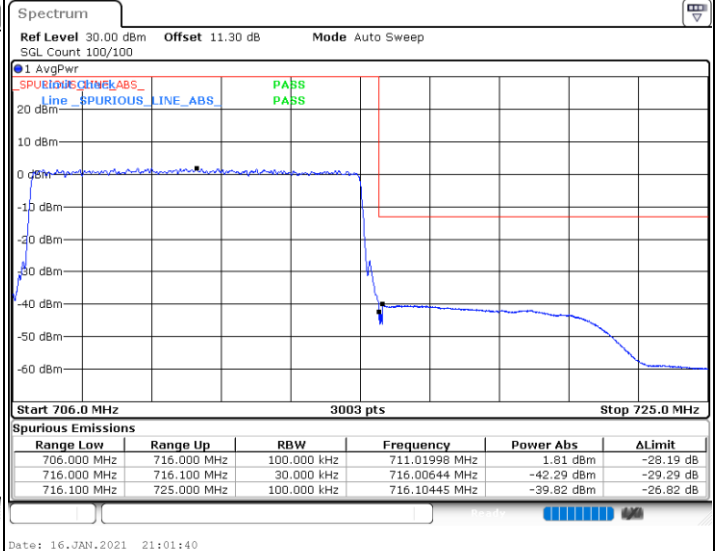
Highest Band Edge / 1 RB

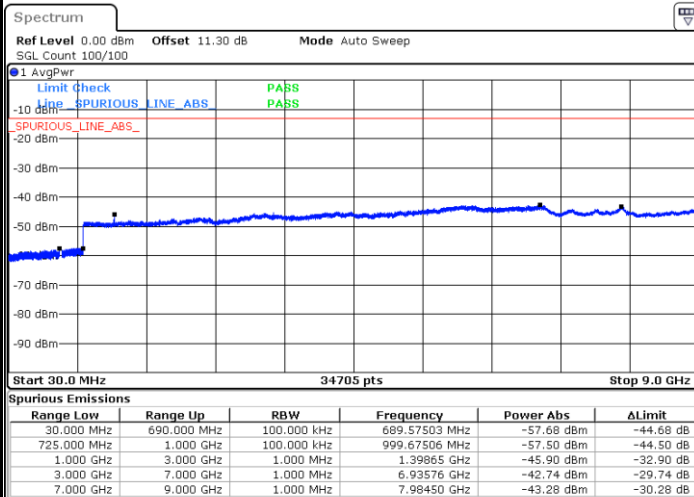


Lowest Band Edge / Full RB

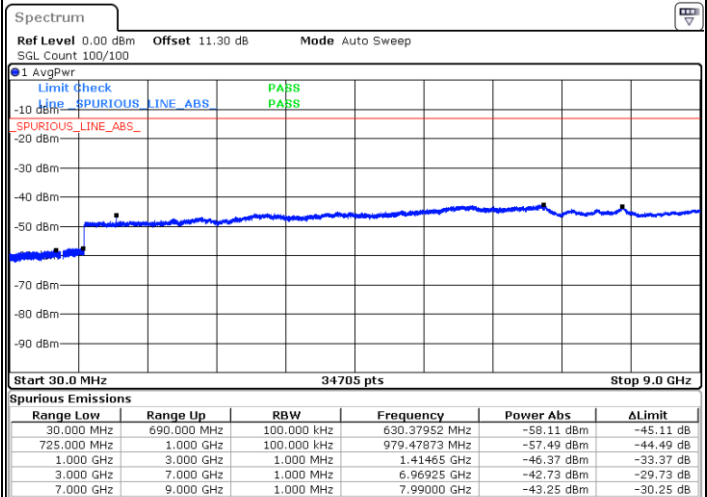


Highest Band Edge / Full RB

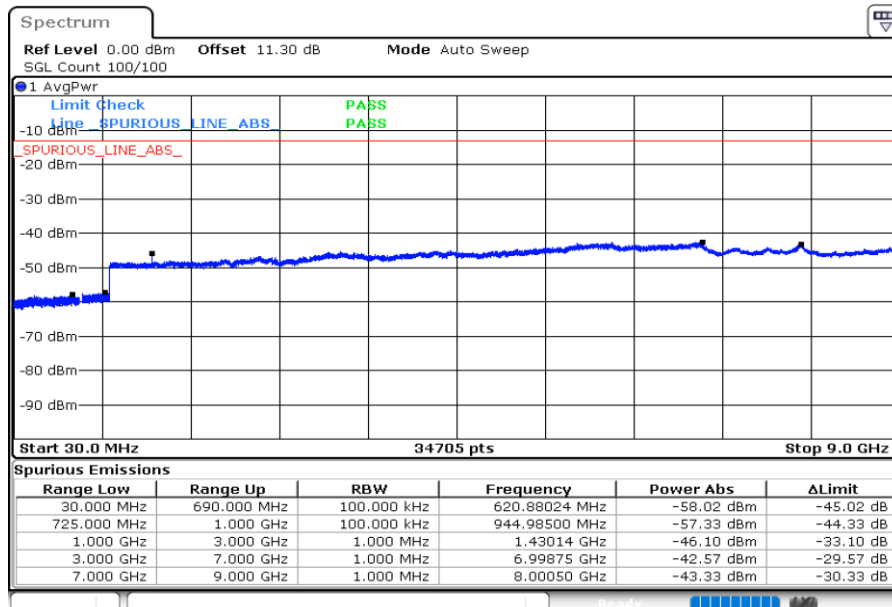


**Conducted Spurious Emission****LTE Band 12 / 1.4MHz****Lowest Channel / QPSK**

Date: 16.JAN.2021 20:29:16

Middle Channel / QPSK

Date: 16.JAN.2021 20:30:29

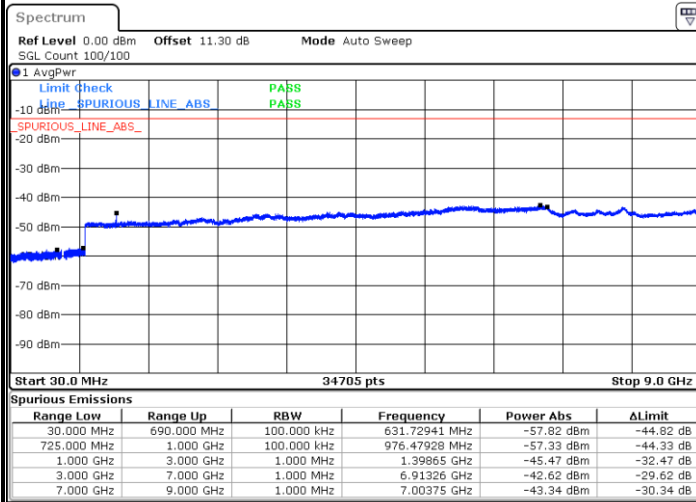
Highest Channel / QPSK

Date: 16.JAN.2021 20:33:04



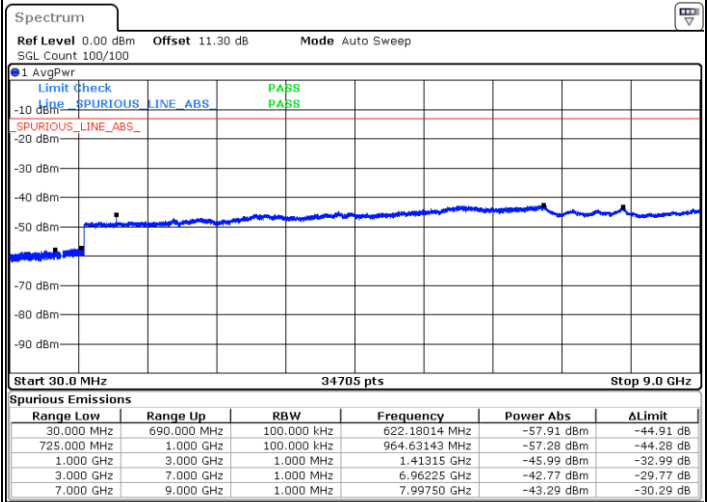
LTE Band 12 / 3MHz

Lowest Channel / QPSK



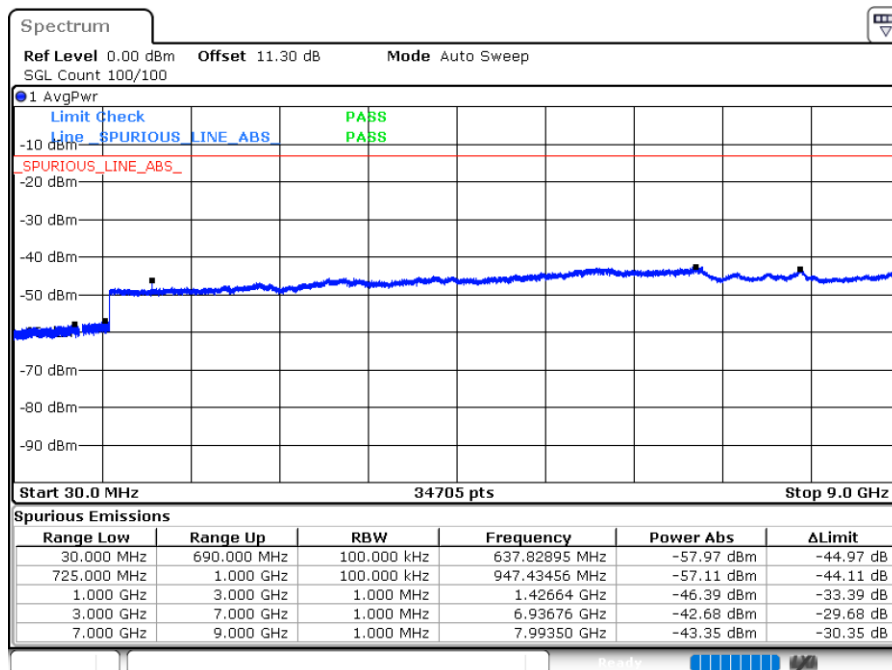
Date: 16.JAN.2021 20:38:13

Middle Channel / QPSK



Date: 16.JAN.2021 20:39:26

Highest Channel / QPSK

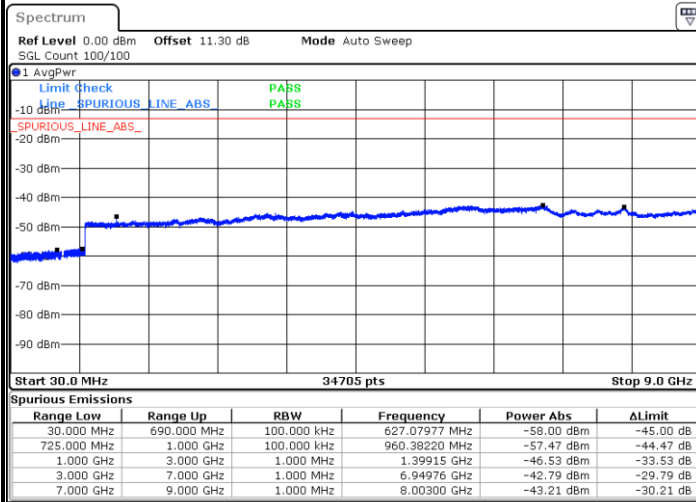


Date: 16.JAN.2021 20:42:01



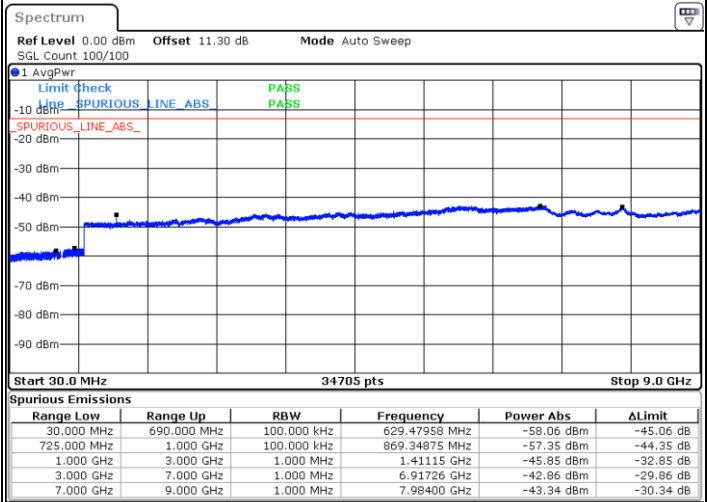
LTE Band 12 / 5MHz

Lowest Channel / QPSK



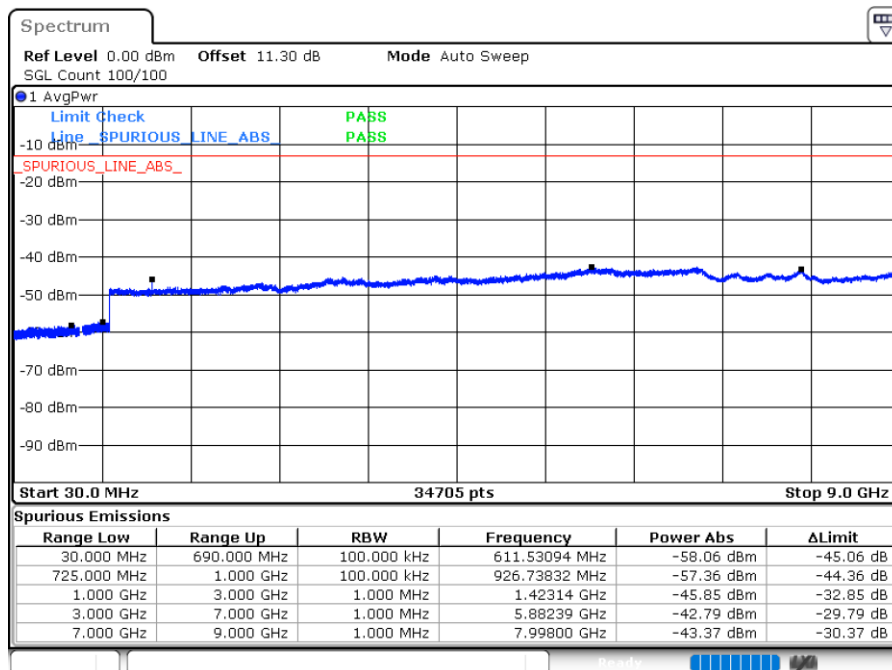
Date: 16.JAN.2021 20:49:39

Middle Channel / QPSK



Date: 16.JAN.2021 20:50:52

Highest Channel / QPSK

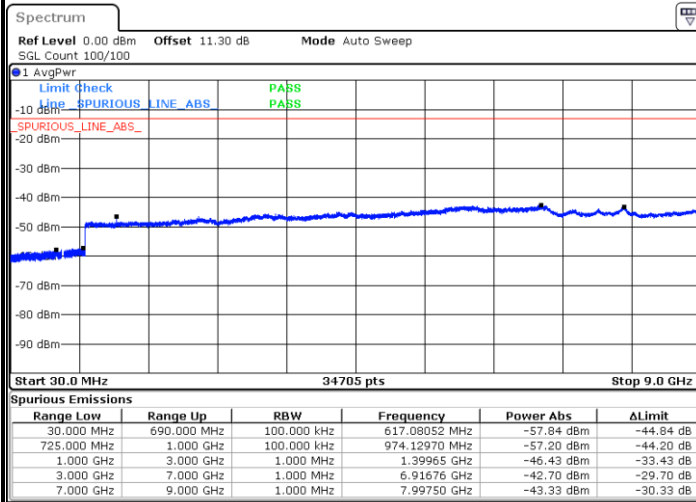


Date: 16.JAN.2021 20:53:26



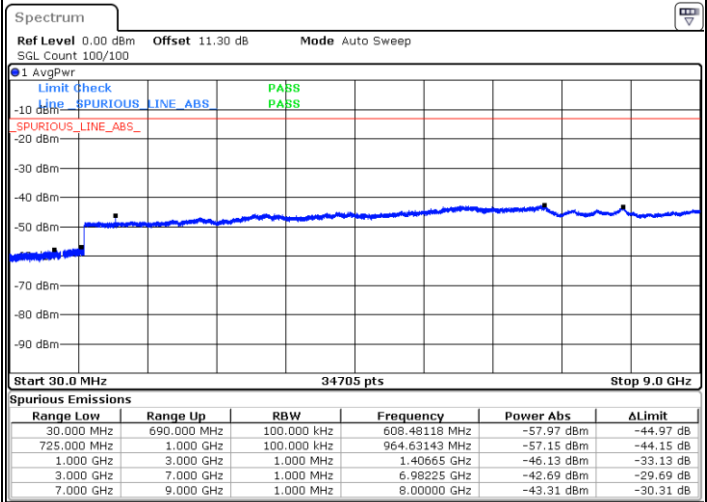
LTE Band 12 / 10MHz

Lowest Channel / QPSK



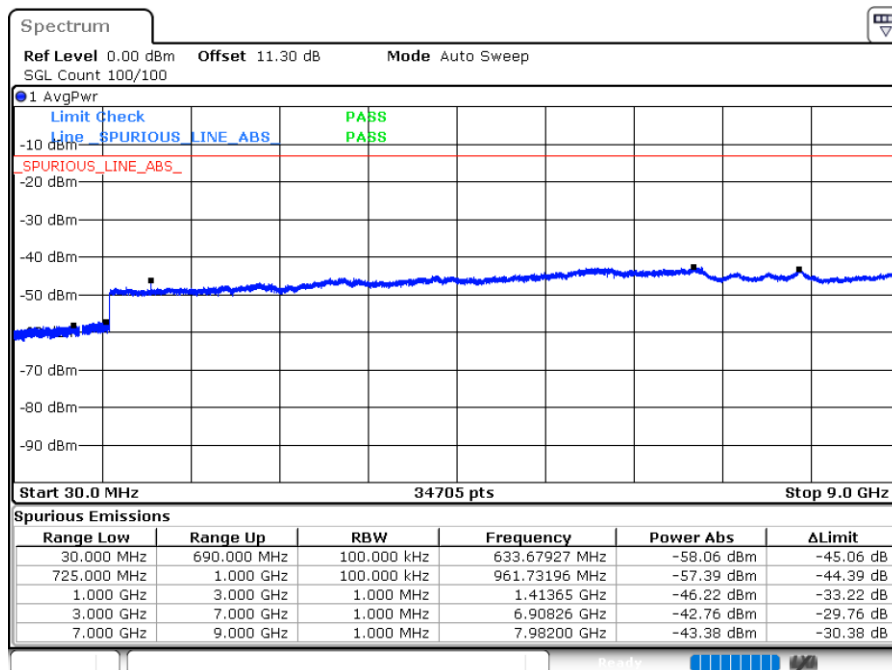
Date: 16.JAN.2021 20:56:05

Middle Channel / QPSK



Date: 16.JAN.2021 20:57:17

Highest Channel / QPSK



Date: 16.JAN.2021 21:04:01

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	0.0042	PASS
40	Normal Voltage	0.0023	
30	Normal Voltage	0.0198	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0174	
-10	Normal Voltage	0.0208	
-20	Normal Voltage	0.0030	
-30	Normal Voltage	0.0028	
20	Maximum Voltage	0.0045	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0054	

Note:

1. Normal Voltage =48 V. ; Battery End Point (BEP) =43 V. ; Maximum Voltage =53 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

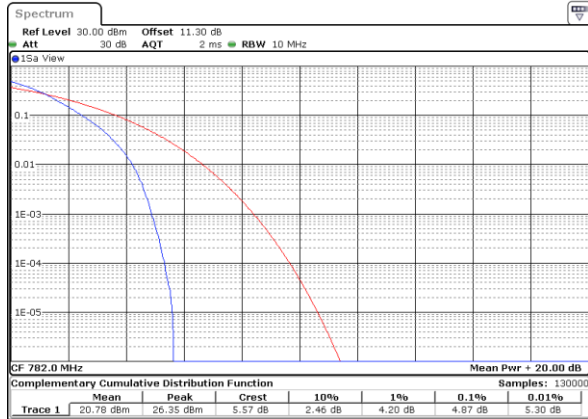
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.87	5.77	6.55	PASS



LTE Band 13 / 10MHz / QPSK

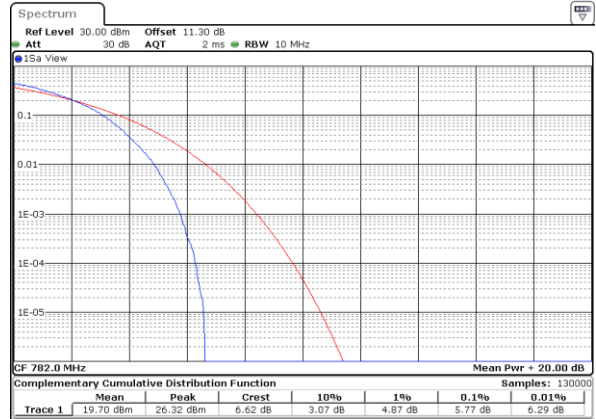
Middle Channel / Full RB



Date: 16.JAN.2021 22:18:23

LTE Band 13 / 10MHz / 16QAM

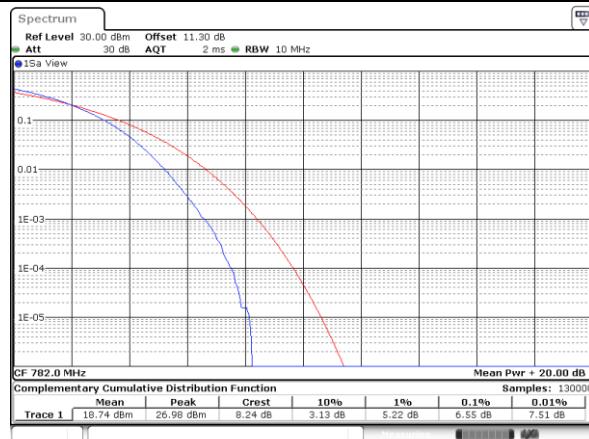
Middle Channel / Full RB



Date: 16.JAN.2021 22:18:10

LTE Band 13 / 10MHz / 64QAM

Middle Channel / Full RB



Date: 16.JAN.2021 22:17:55

**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
Middle CH	-	-	-	-	4.94	4.91	9.85	9.83	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-
Middle CH	-	-	-	-	4.87	-	9.75	-	-	-	-	-