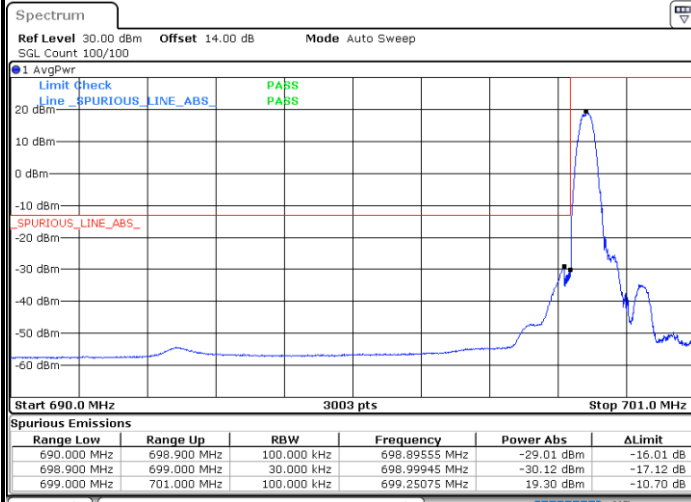


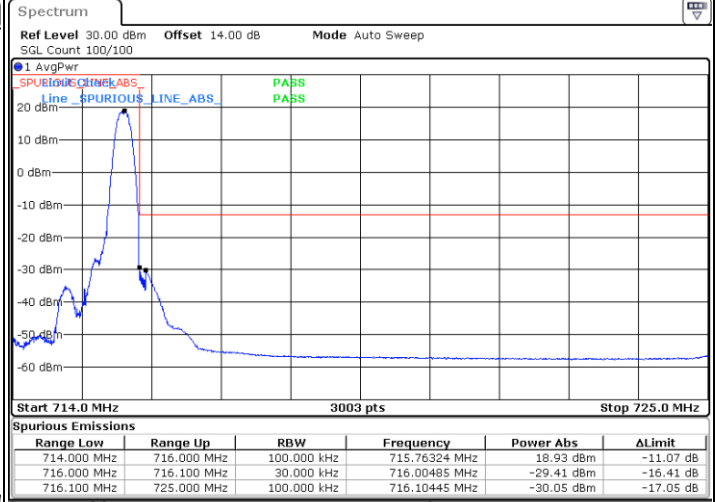


LTE Band 12 / 1.4MHz / 64QAM

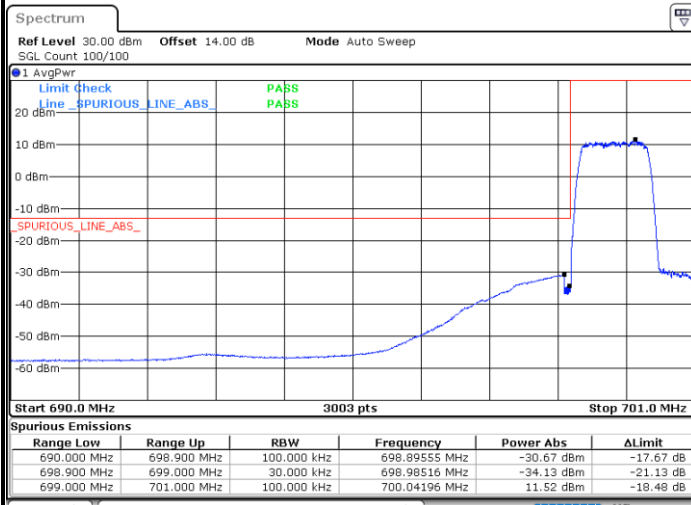
Lowest Band Edge / 1 RB



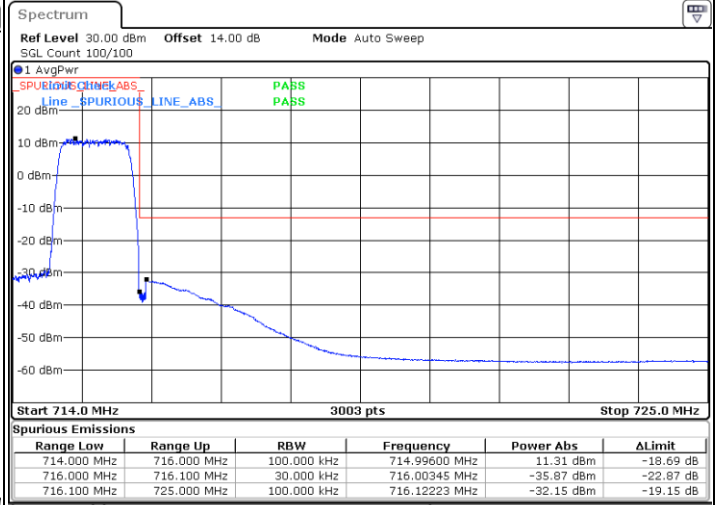
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



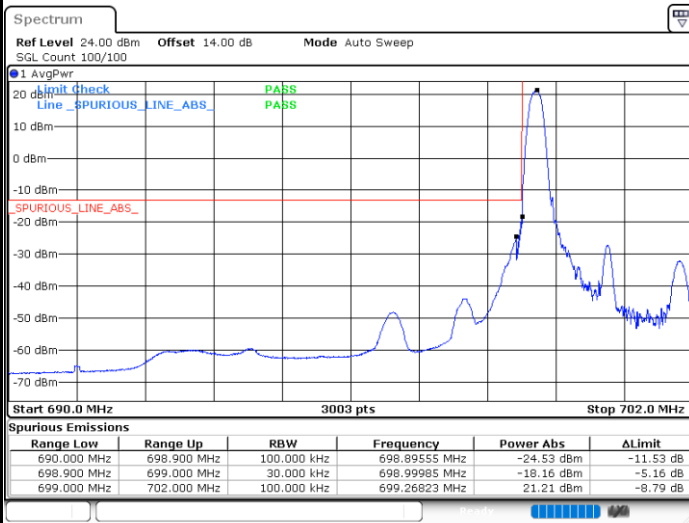
Highest Band Edge / Full RB



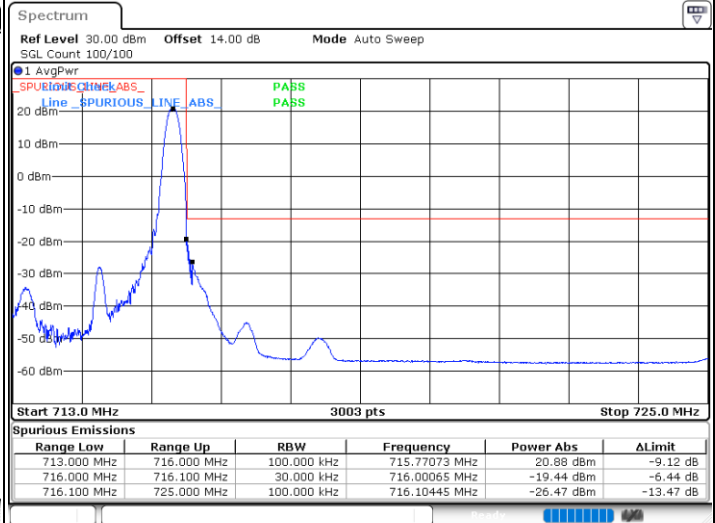


LTE Band 12 / 3MHz / QPSK

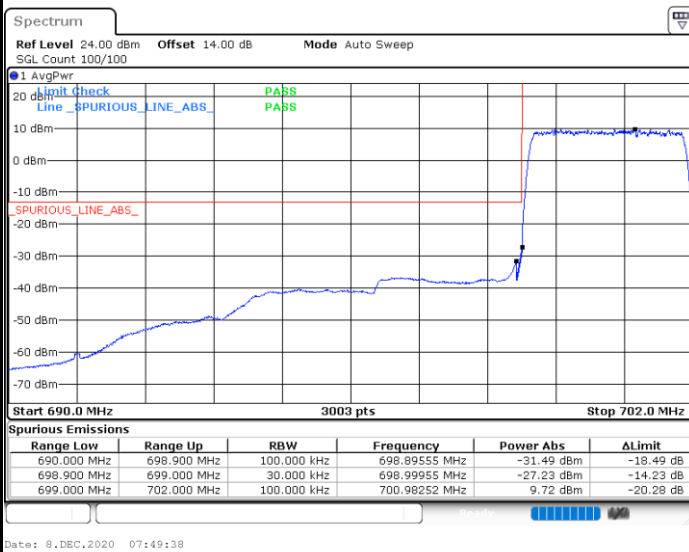
Lowest Band Edge / 1RB



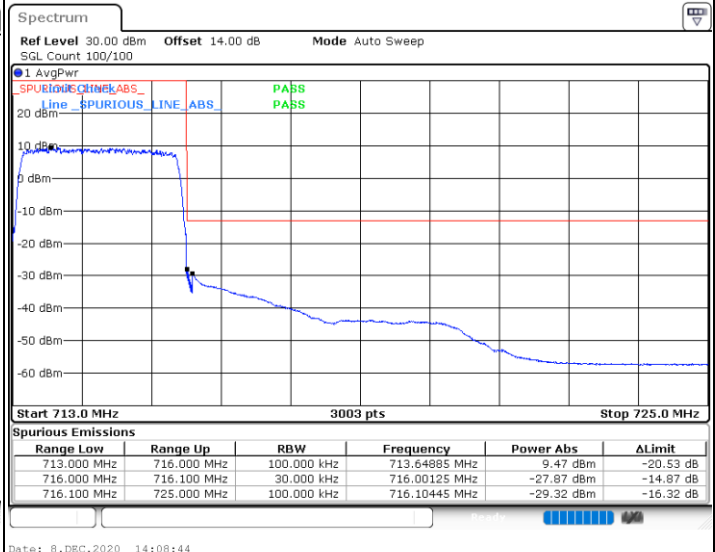
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



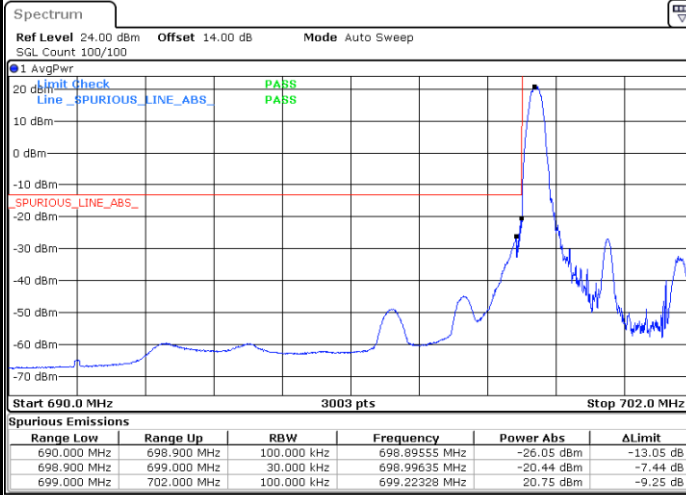
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / 16QAM

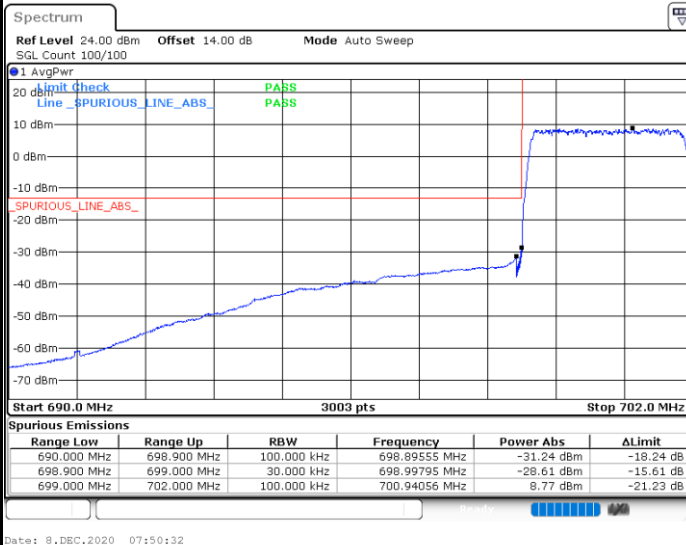
Lowest Band Edge / 1 RB



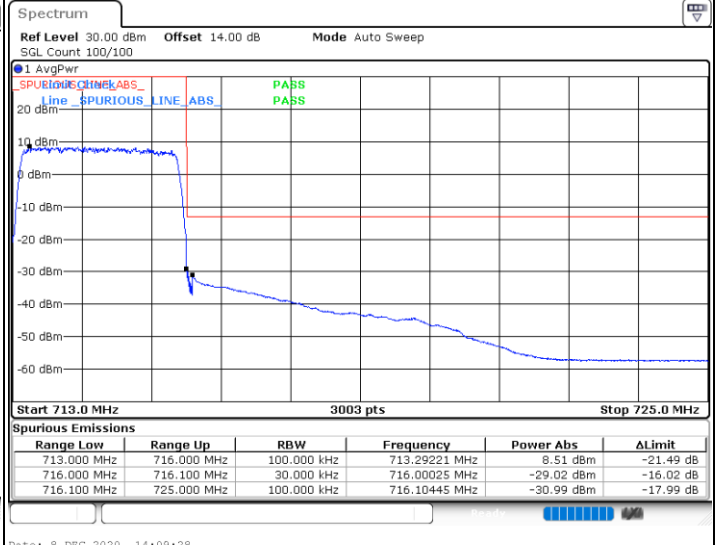
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



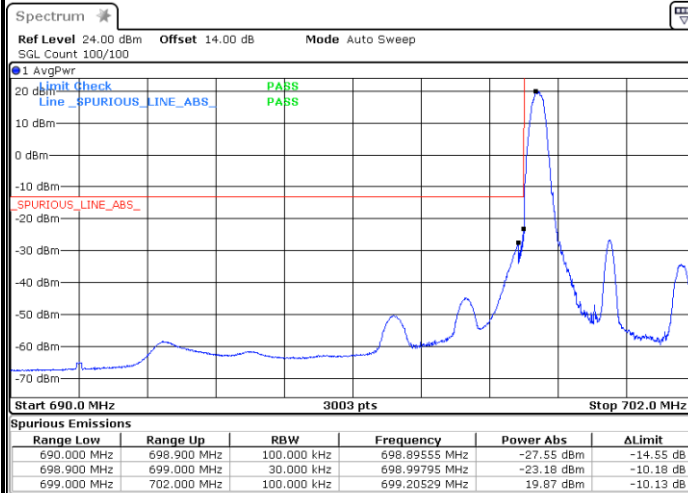
Highest Band Edge / Full RB



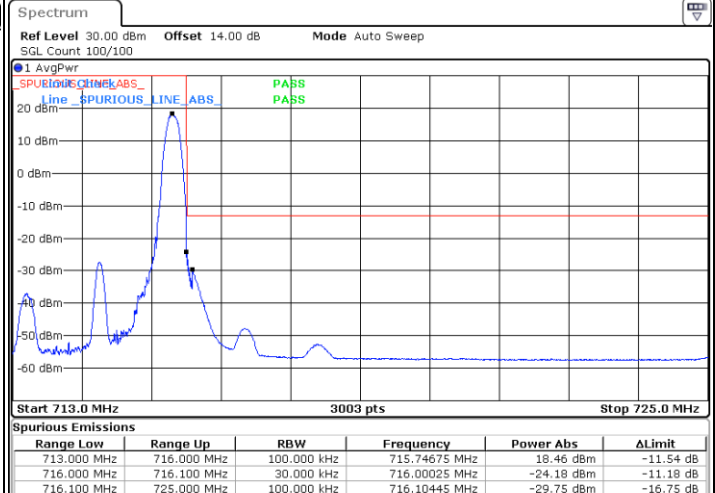


LTE Band 12 / 3MHz / 64QAM

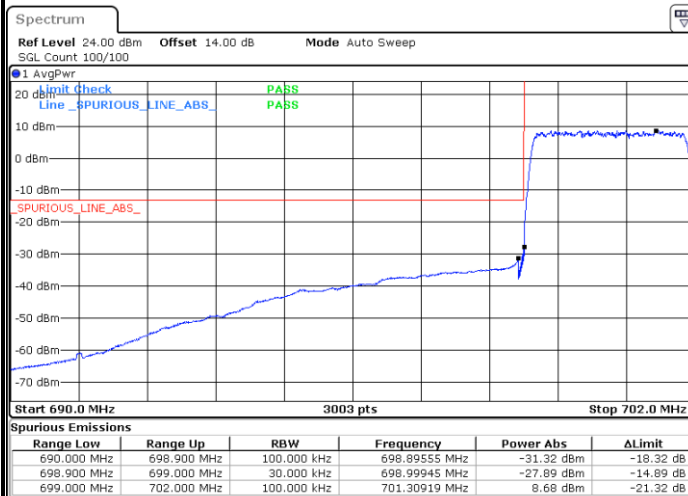
Lowest Band Edge / 1 RB



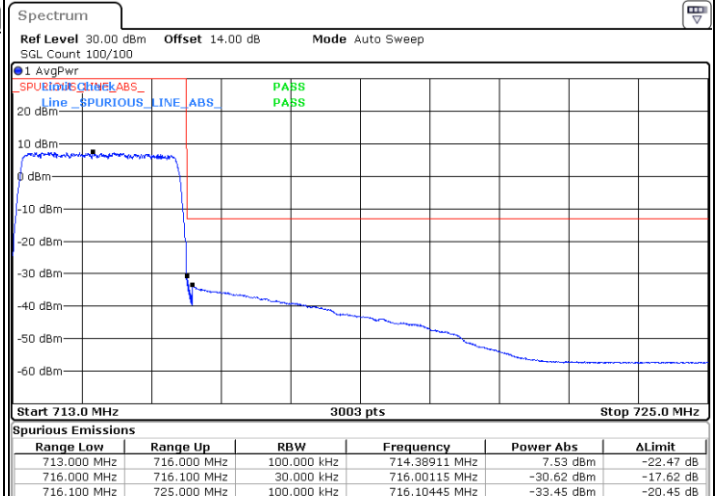
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



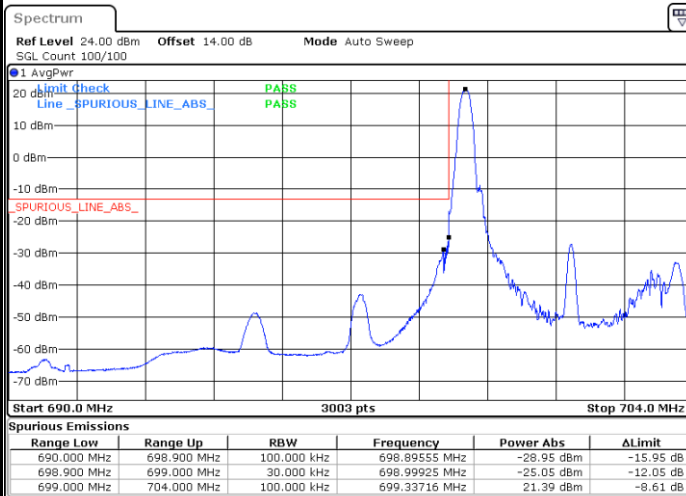
Highest Band Edge / Full RB



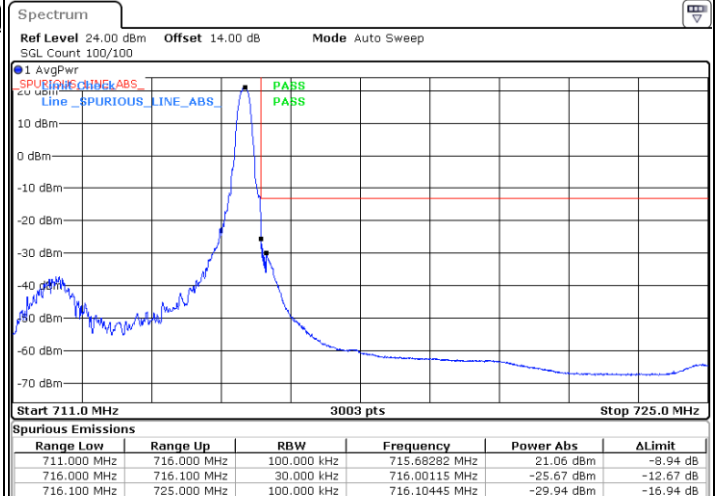


LTE Band 12 / 5MHz / QPSK

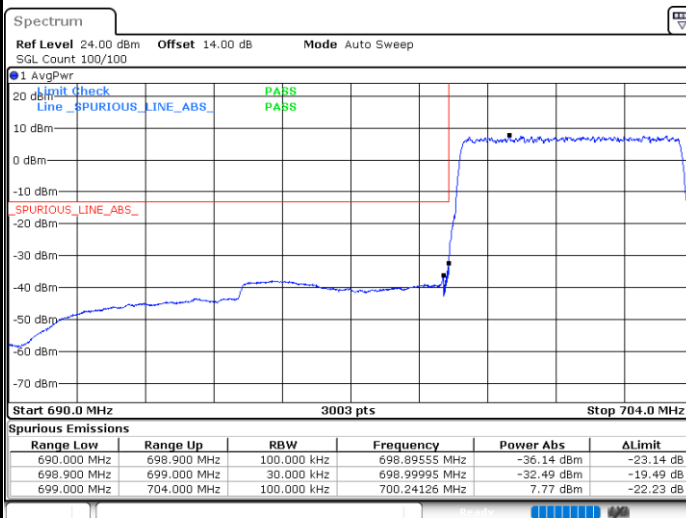
Lowest Band Edge / 1 RB



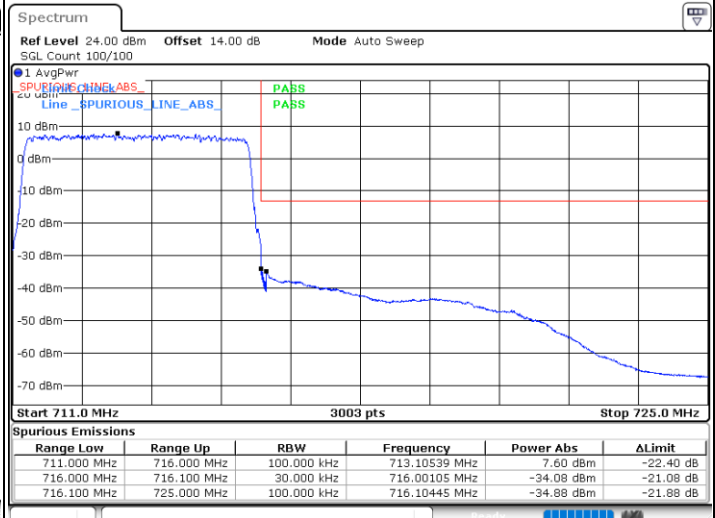
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



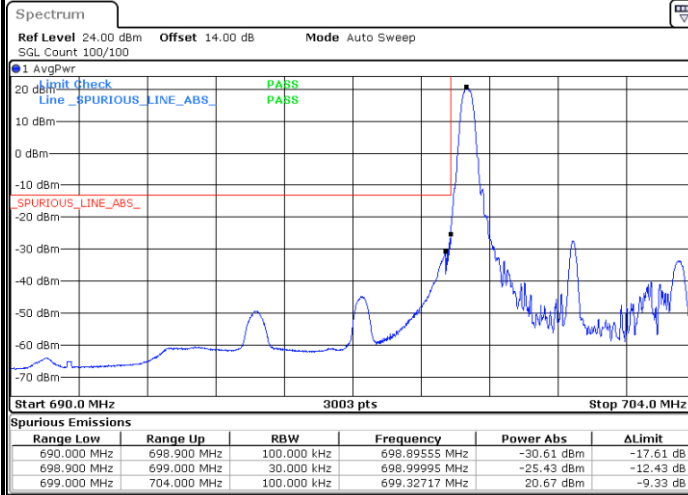
Highest Band Edge / Full RB



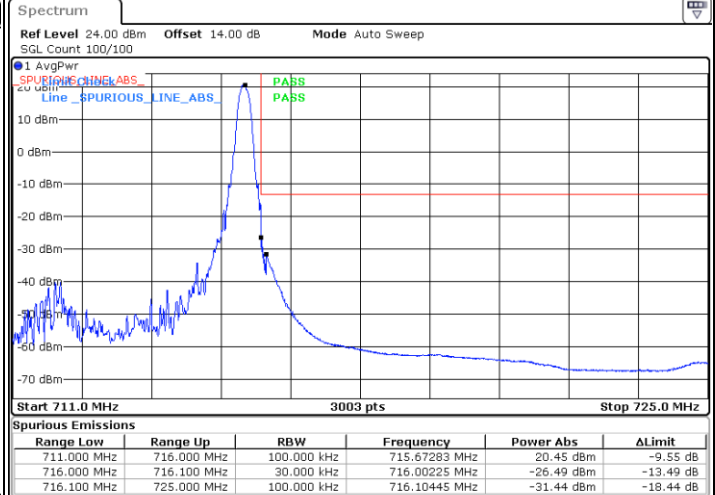


LTE Band 12 / 5MHz / 16QAM

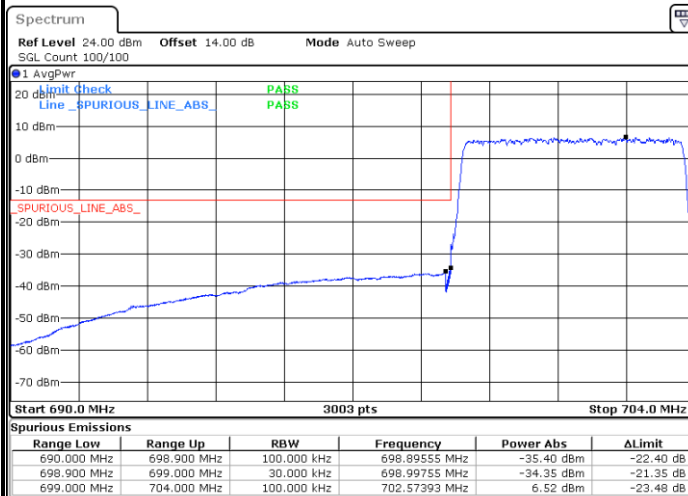
Lowest Band Edge / 1RB



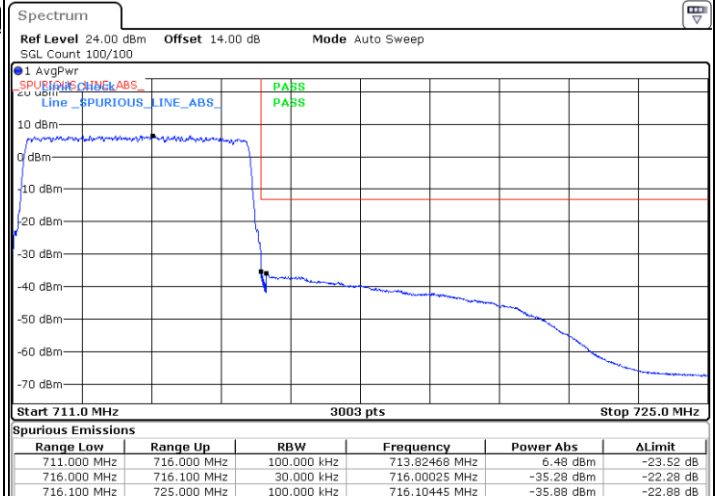
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



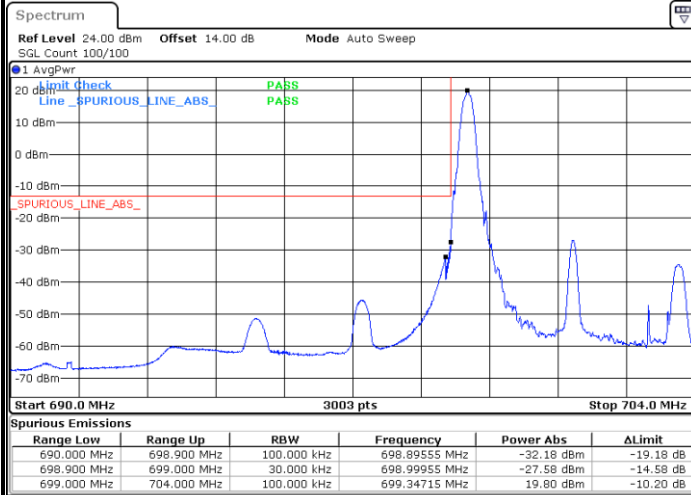
Highest Band Edge / Full RB



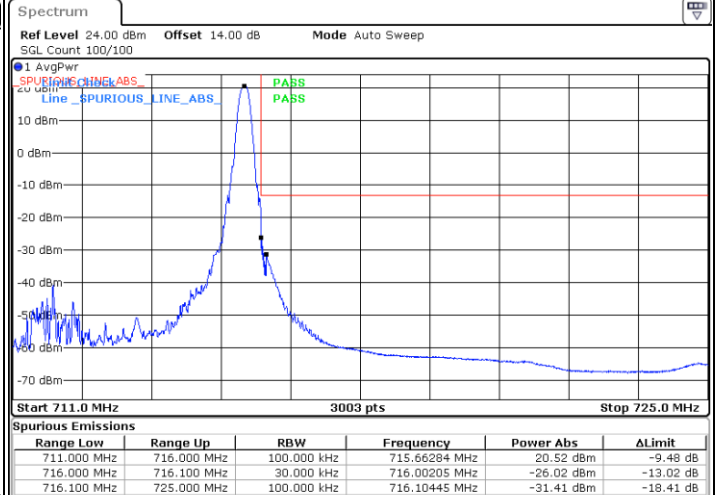


LTE Band 12 / 5MHz / 64QAM

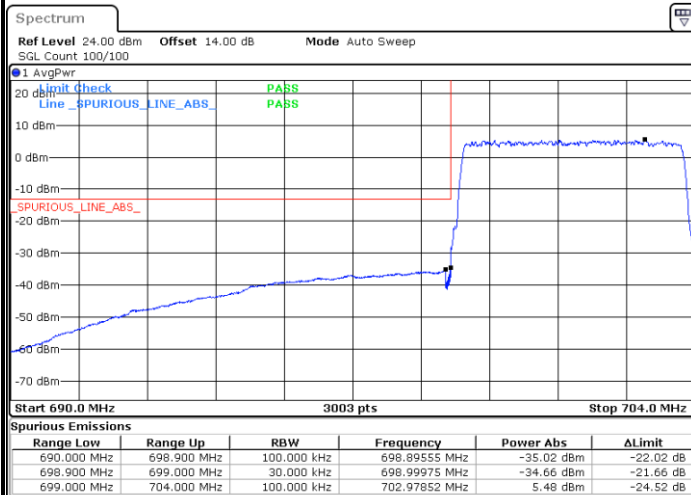
Lowest Band Edge / 1RB



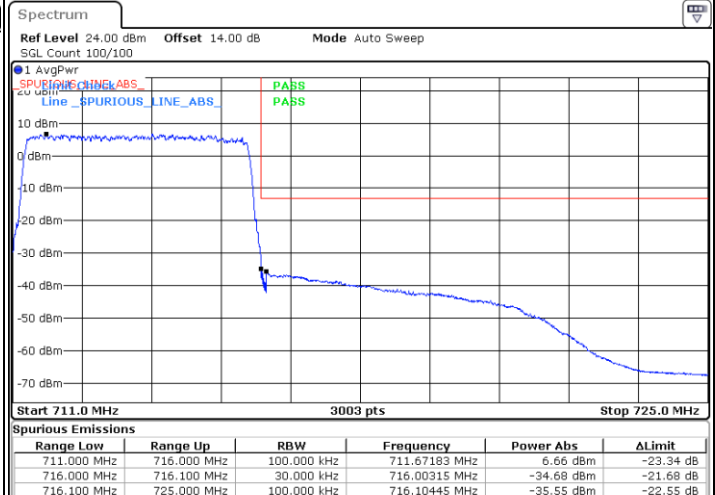
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



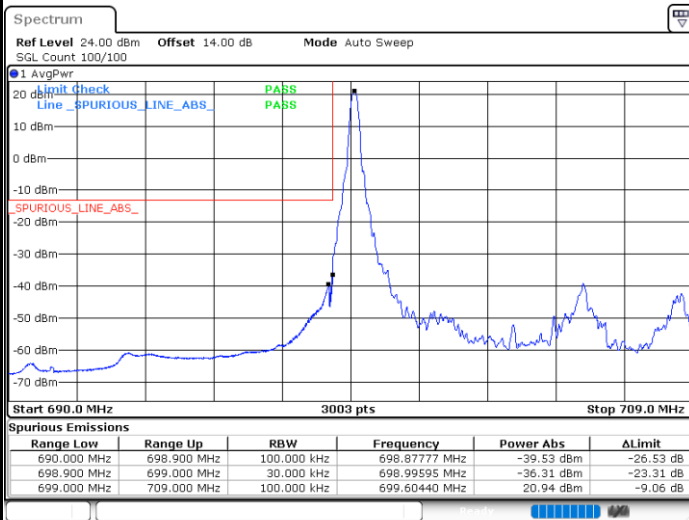
Highest Band Edge / Full RB



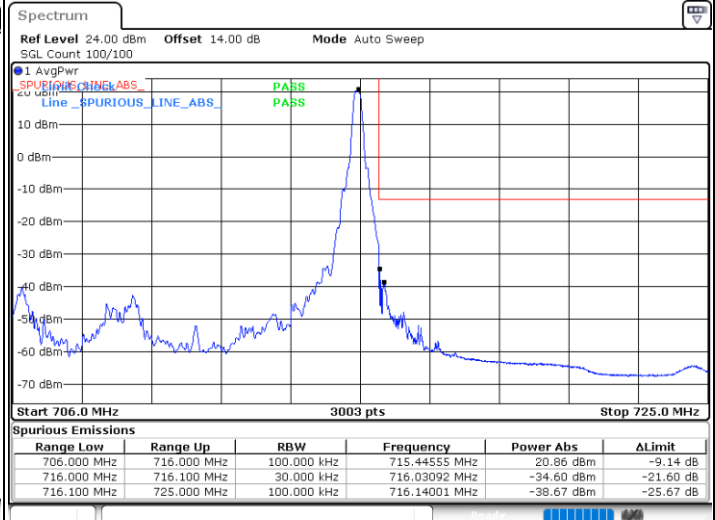


LTE Band 12 / 10MHz / QPSK

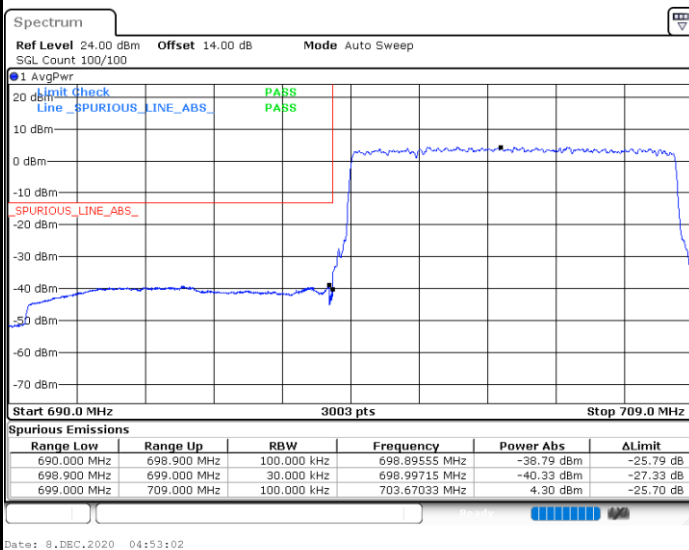
Lowest Band Edge / 1 RB



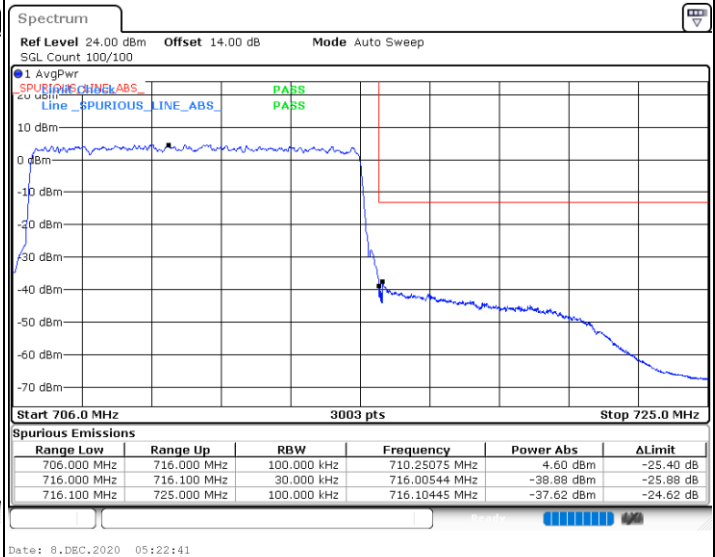
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



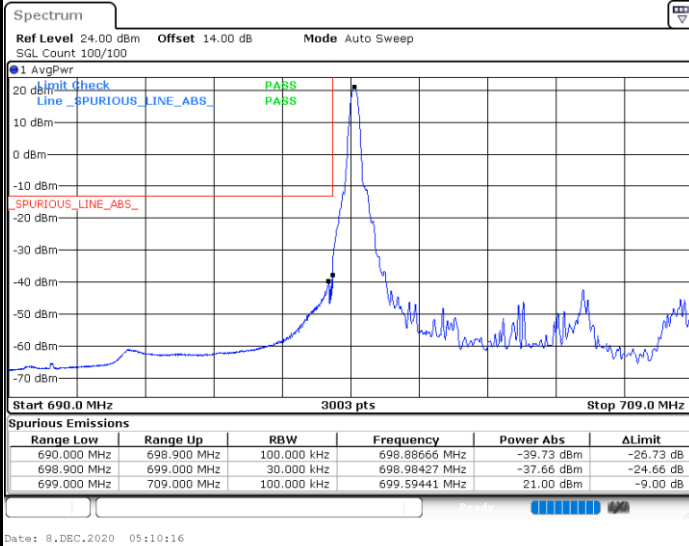
Highest Band Edge / Full RB



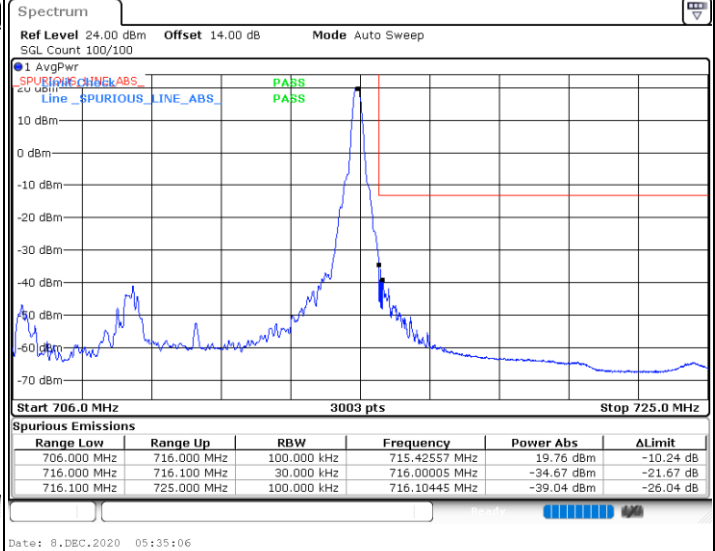


LTE Band 12 / 10MHz / 16QAM

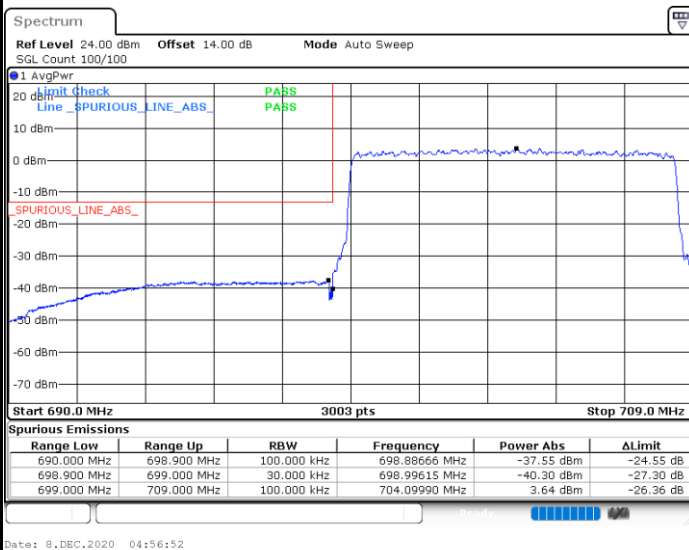
Lowest Band Edge / 1 RB



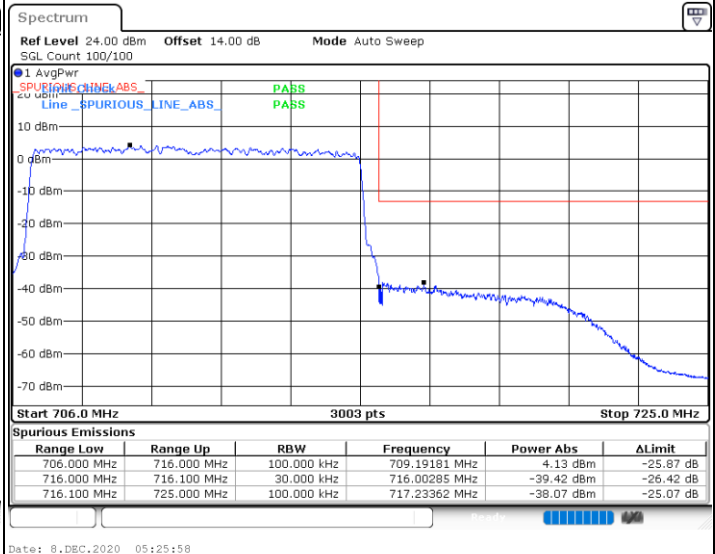
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



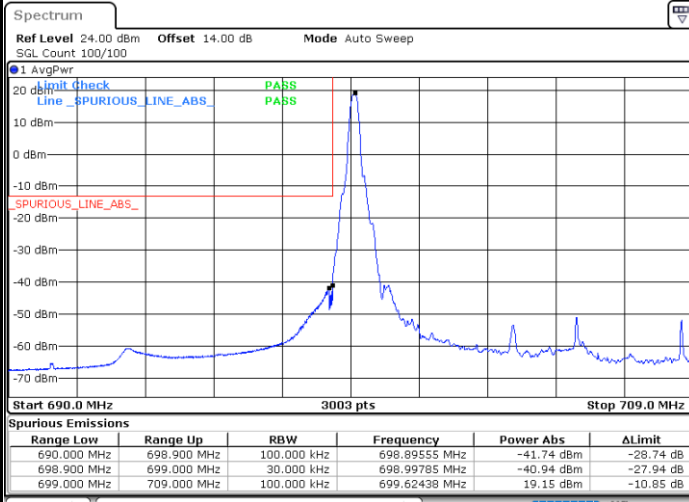
Highest Band Edge / Full RB



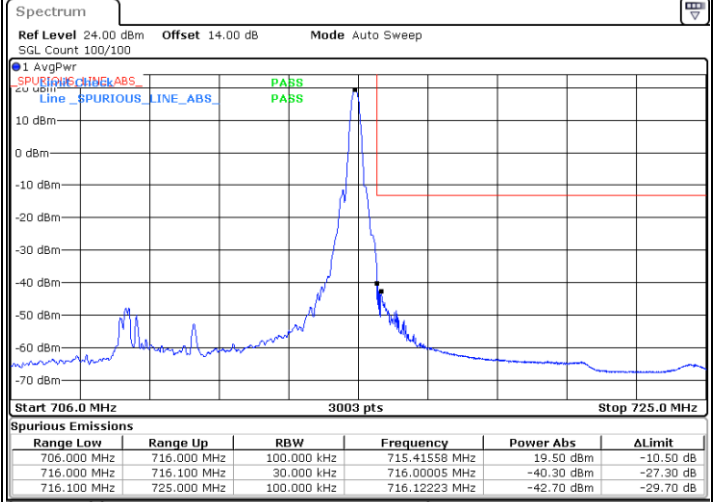


LTE Band 12 / 10MHz / 64QAM

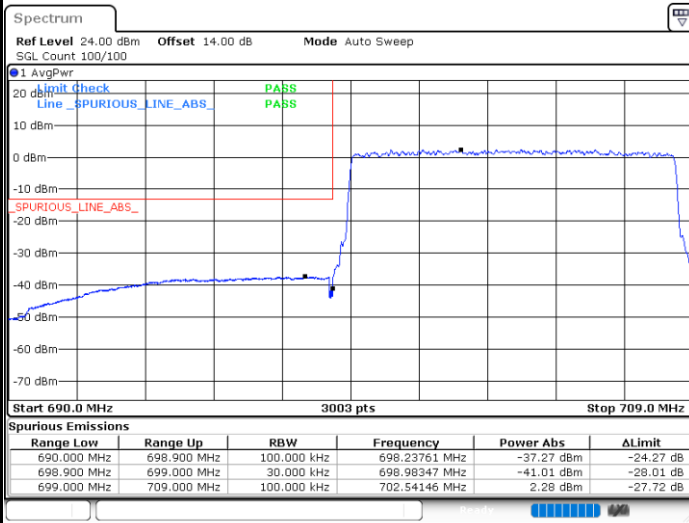
Lowest Band Edge / 1 RB



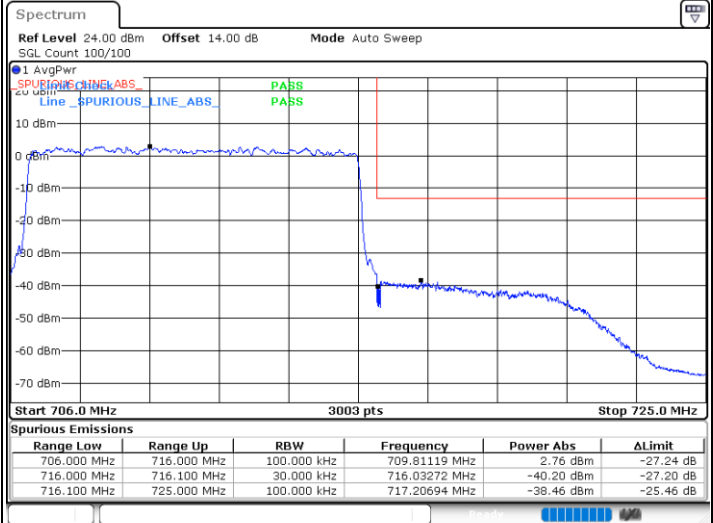
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

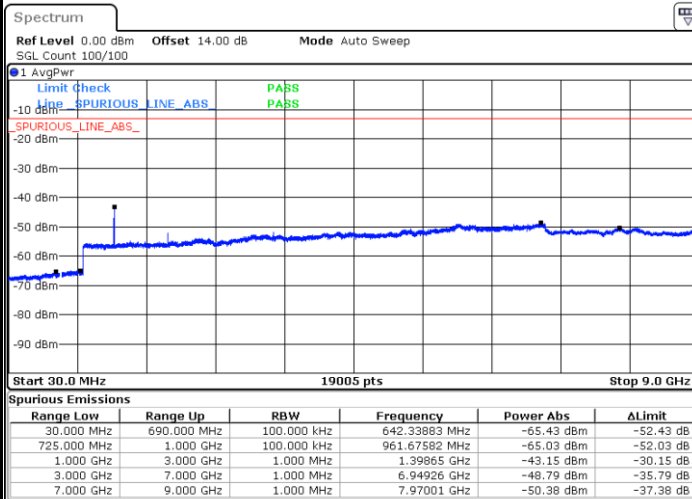




Conducted Spurious Emission

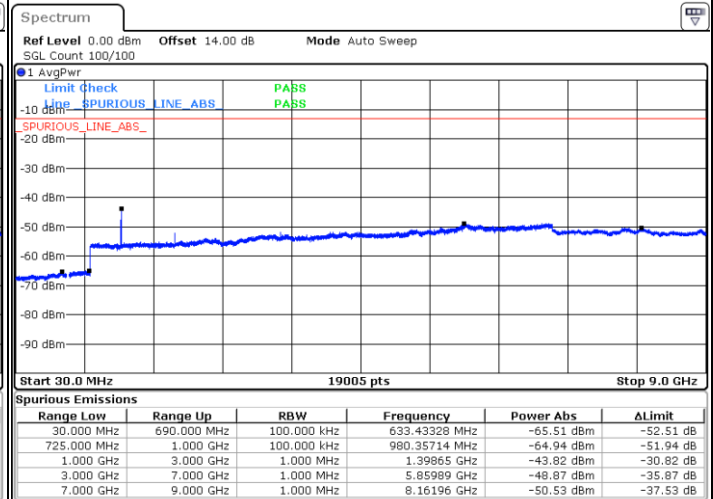
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



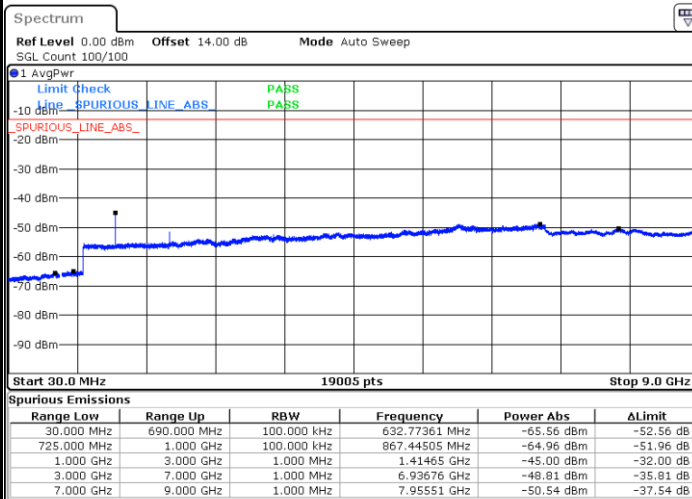
Date: 8.DEC.2020 14:24:13

Lowest Channel / 16QAM



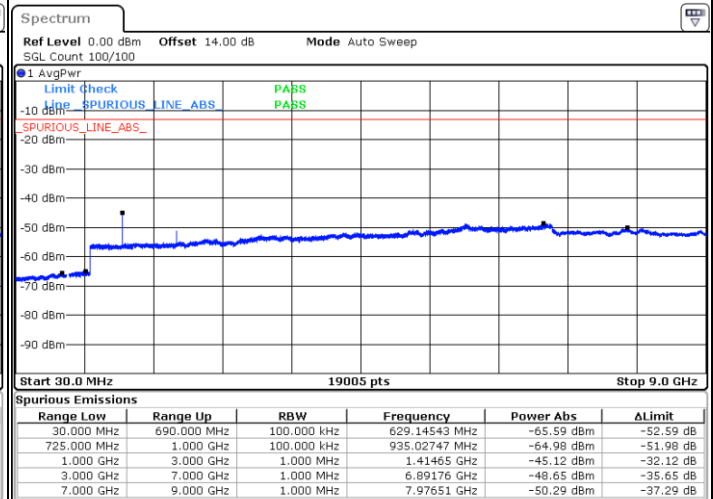
Date: 8.DEC.2020 14:24:37

Middle Channel / QPSK



Date: 8.DEC.2020 14:26:11

Middle Channel / 16QAM

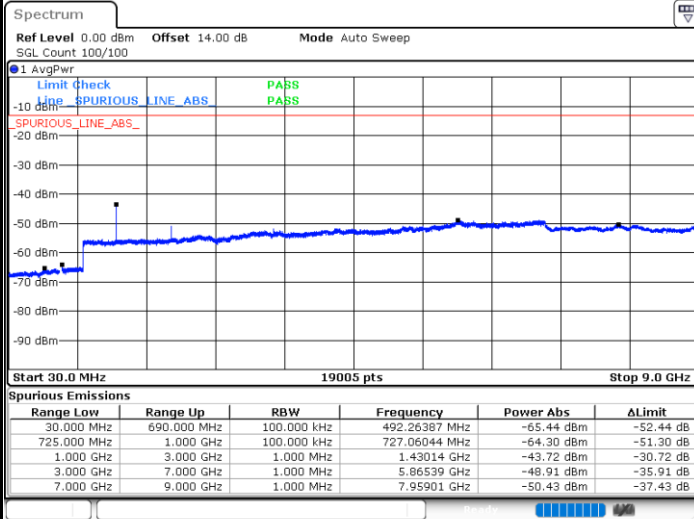


Date: 8.DEC.2020 14:25:47

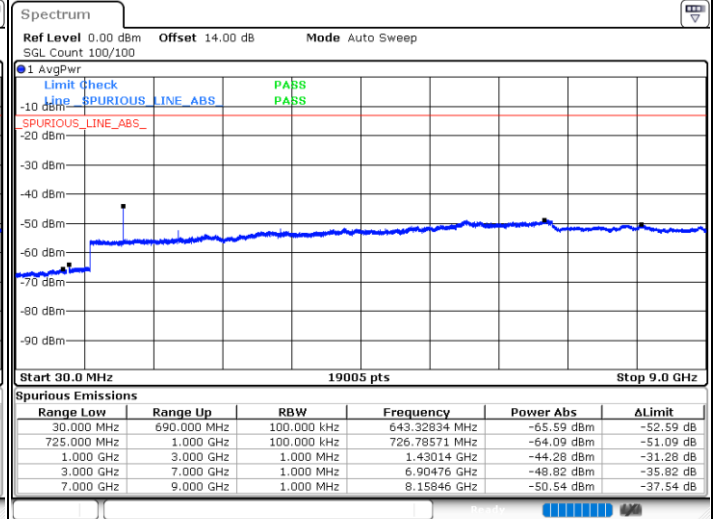


LTE Band 12 / 1.4MHz

Highest Channel / QPSK

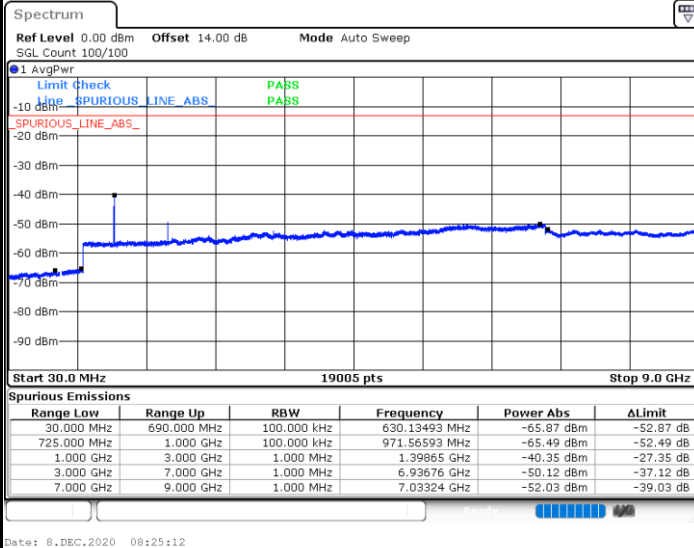


Highest Channel / 16QAM

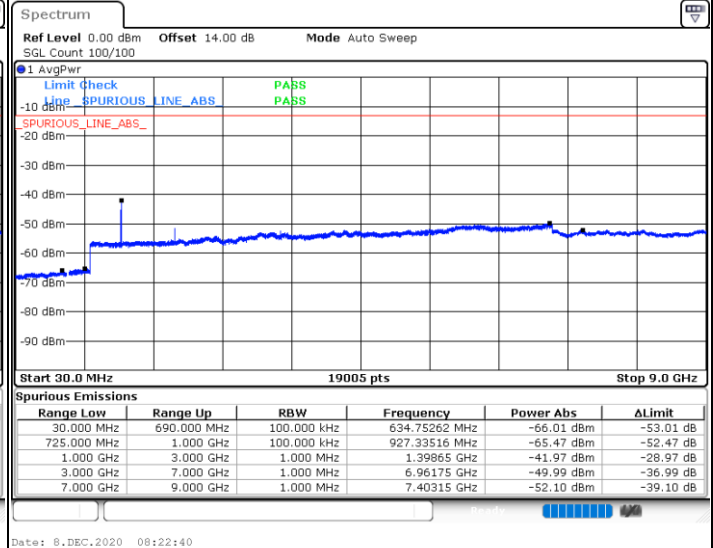


LTE Band 12 / 3MHz

Lowest Channel / QPSK



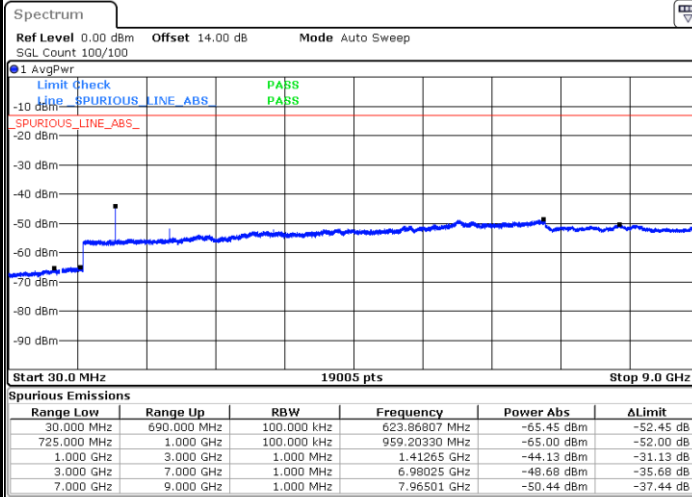
Lowest Channel / 16QAM





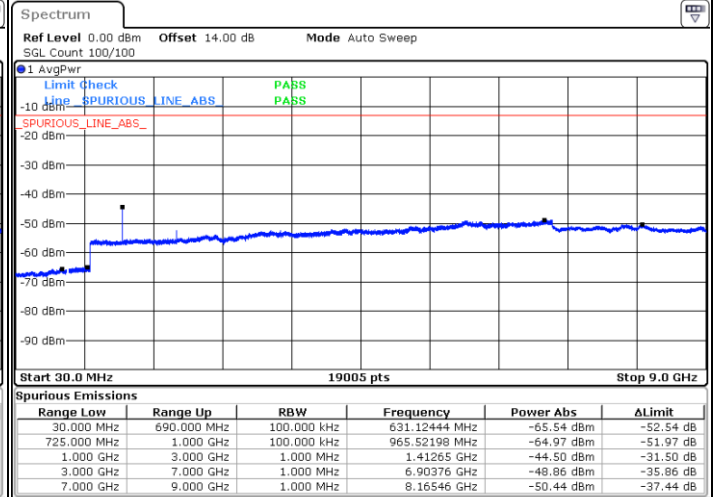
LTE Band 12 / 3MHz

Middle Channel / QPSK



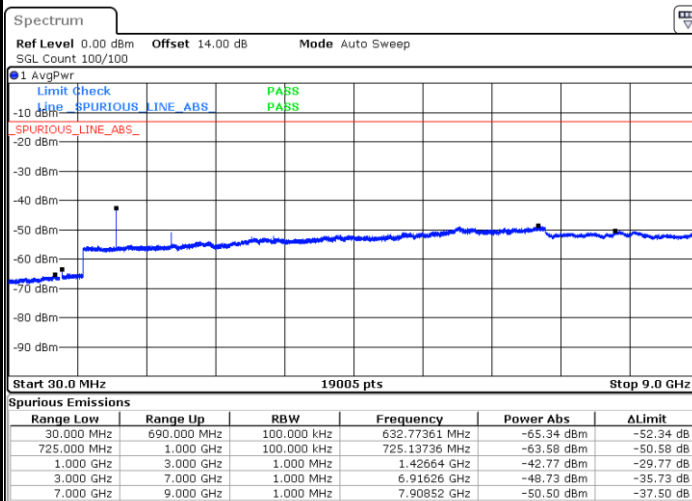
Date: 8.DEC.2020 14:07:15

Middle Channel / 16QAM



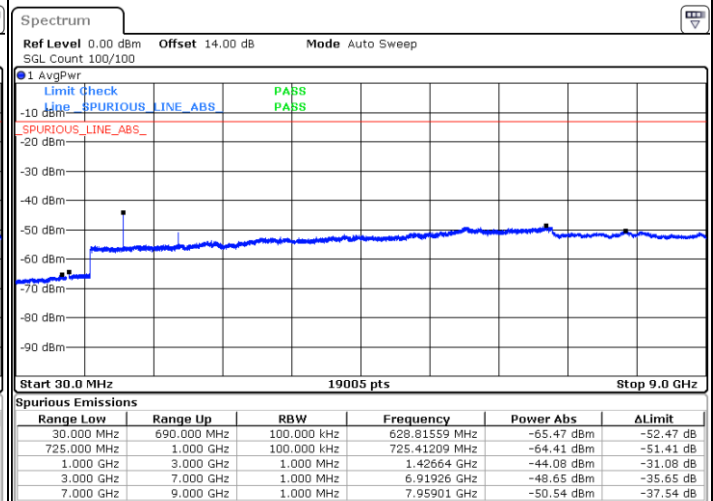
Date: 8.DEC.2020 14:06:51

Highest Channel / QPSK



Date: 8.DEC.2020 14:11:21

Highest Channel / 16QAM

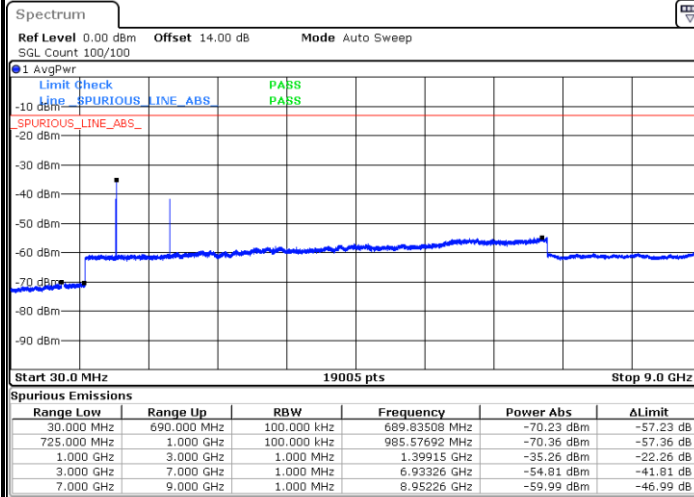


Date: 8.DEC.2020 14:11:46



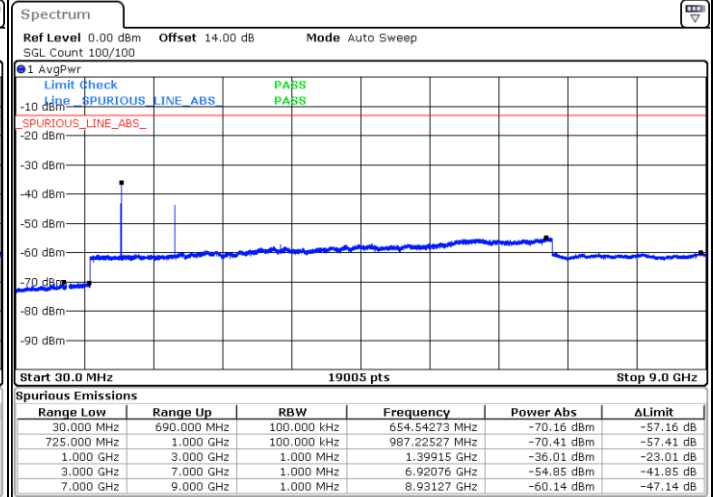
LTE Band 12 / 5MHz

Lowest Channel / QPSK



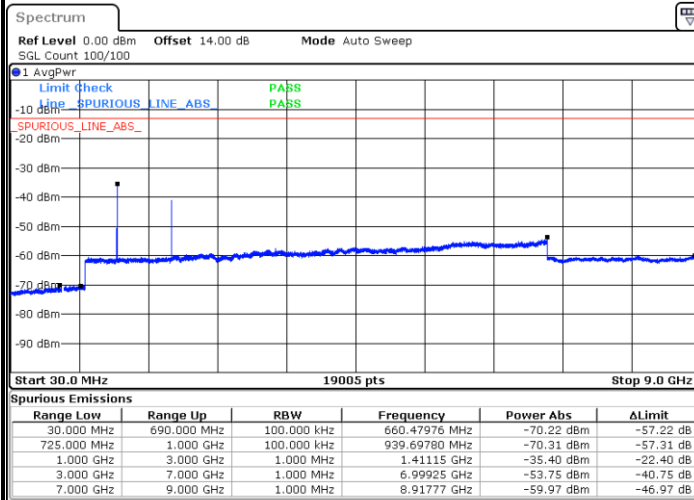
Date: 8.DEC.2020 05:49:50

Lowest Channel / 16QAM



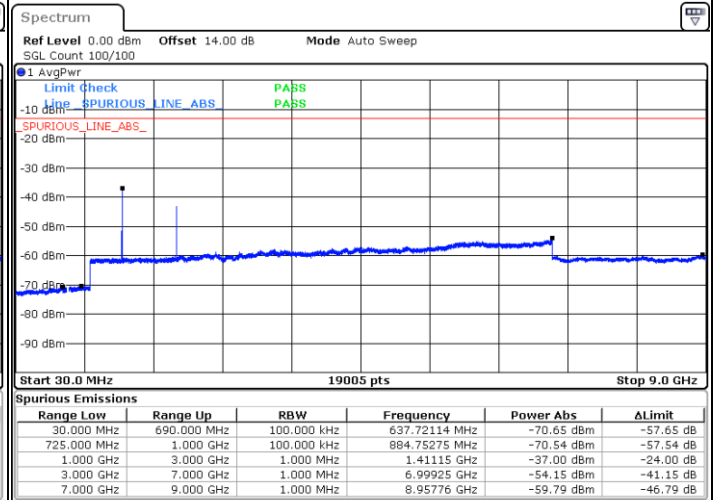
Date: 8.DEC.2020 05:52:22

Middle Channel / QPSK



Date: 8.DEC.2020 06:04:18

Middle Channel / 16QAM

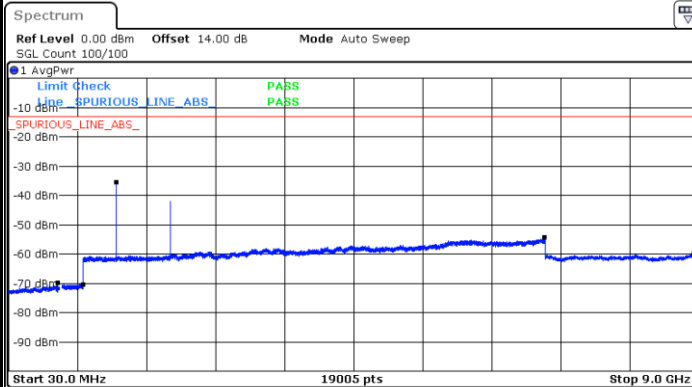


Date: 8.DEC.2020 06:02:43



LTE Band 12 / 5MHz

Highest Channel / QPSK

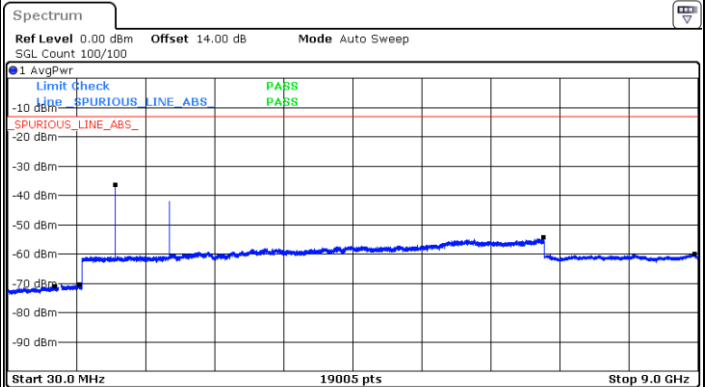


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	666.41679 MHz	-69.88 dBm	-56.88 dB
725.000 MHz	1.000 GHz	100.000 kHz	997.93956 MHz	-70.30 dBm	-57.30 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-35.67 dBm	-22.67 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98775 GHz	-54.18 dBm	-41.18 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.92927 GHz	-60.06 dBm	-47.06 dB

Date: 8.DEC.2020 07:44:28

Highest Channel / 16QAM



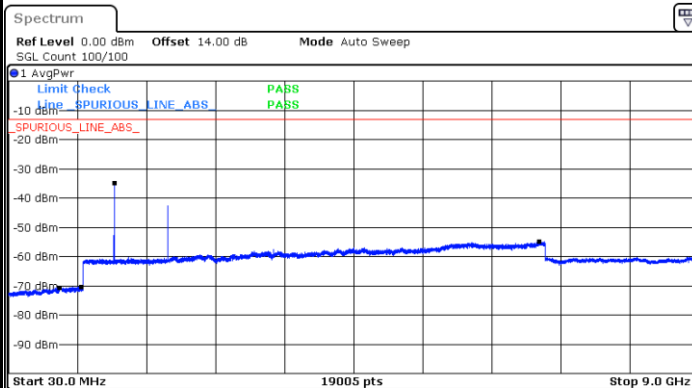
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	640.68966 MHz	-71.14 dBm	-58.14 dB
725.000 MHz	1.000 GHz	100.000 kHz	958.92857 MHz	-70.35 dBm	-57.35 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-36.43 dBm	-23.43 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98775 GHz	-54.23 dBm	-41.23 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95576 GHz	-60.04 dBm	-47.04 dB

Date: 8.DEC.2020 07:45:12

LTE Band 12 / 10MHz

Lowest Channel / QPSK

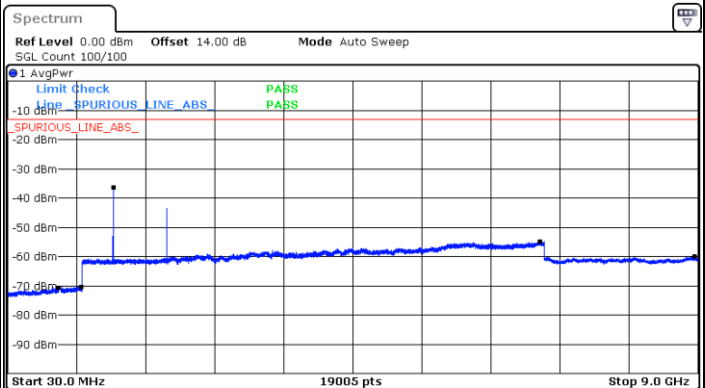


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	689.83508 MHz	-70.64 dBm	-57.64 dB
725.000 MHz	1.000 GHz	100.000 kHz	977.06044 MHz	-70.31 dBm	-57.31 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39965 GHz	-35.01 dBm	-22.01 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92276 GHz	-54.86 dBm	-41.86 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95626 GHz	-60.00 dBm	-47.00 dB

Date: 8.DEC.2020 05:13:30

Lowest Channel / 16QAM



Spurious Emissions

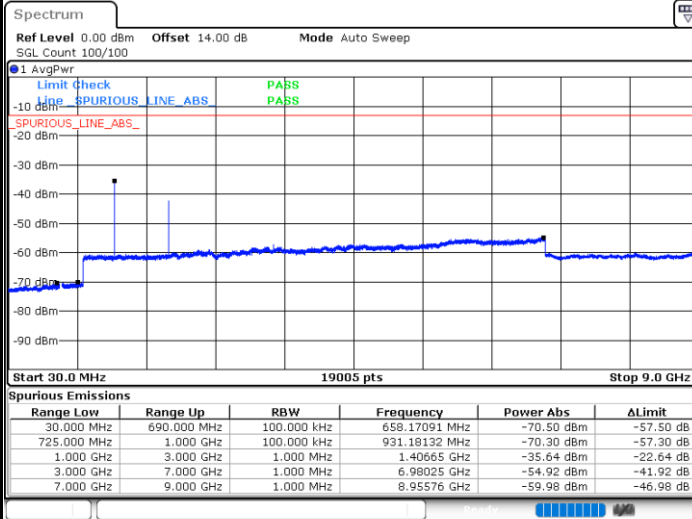
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	689.83508 MHz	-70.75 dBm	-57.75 dB
725.000 MHz	1.000 GHz	100.000 kHz	987.50000 MHz	-70.40 dBm	-57.40 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39965 GHz	-36.36 dBm	-23.36 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94326 GHz	-54.91 dBm	-41.91 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95476 GHz	-59.97 dBm	-46.97 dB

Date: 8.DEC.2020 05:10:59



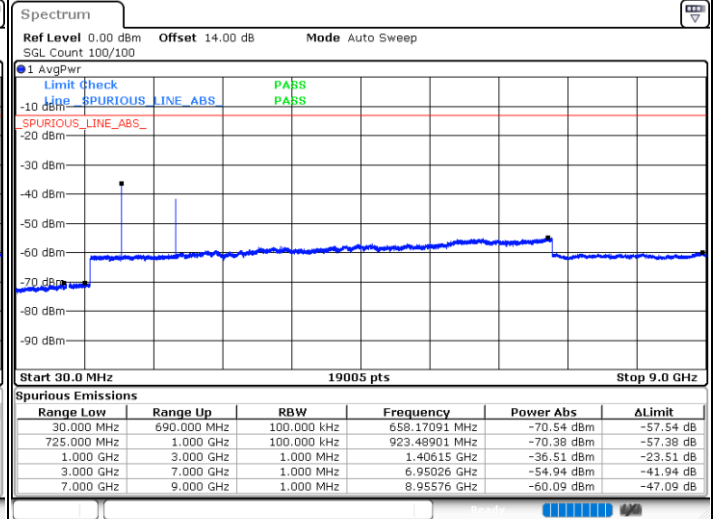
LTE Band 12 / 10MHz

Middle Channel / QPSK



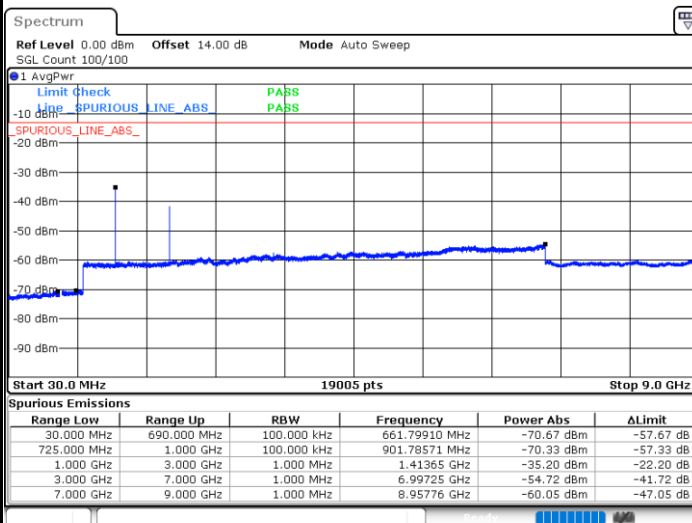
Date: 8.DEC.2020 05:18:50

Middle Channel / 16QAM



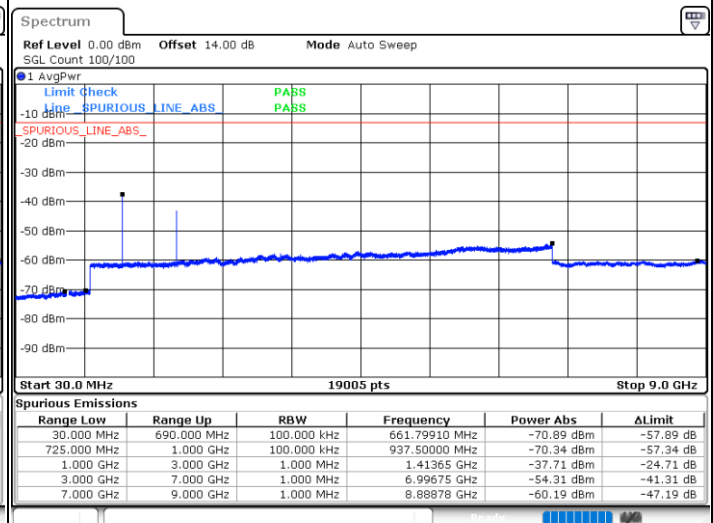
Date: 8.DEC.2020 05:17:54

Highest Channel / QPSK



Date: 8.DEC.2020 05:32:25

Highest Channel / 16QAM

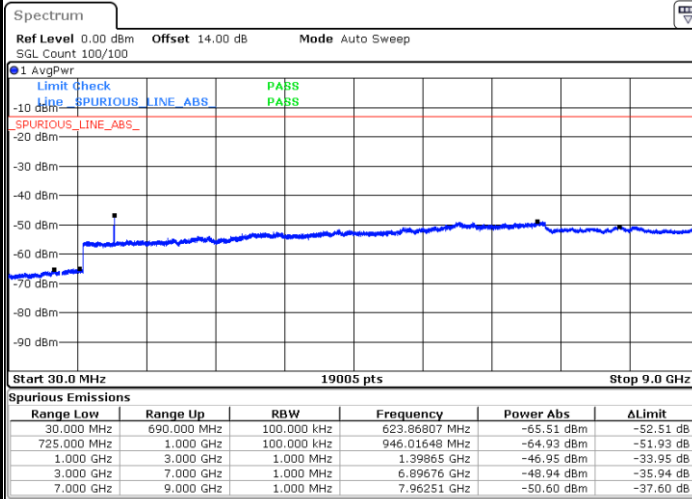


Date: 8.DEC.2020 05:31:29



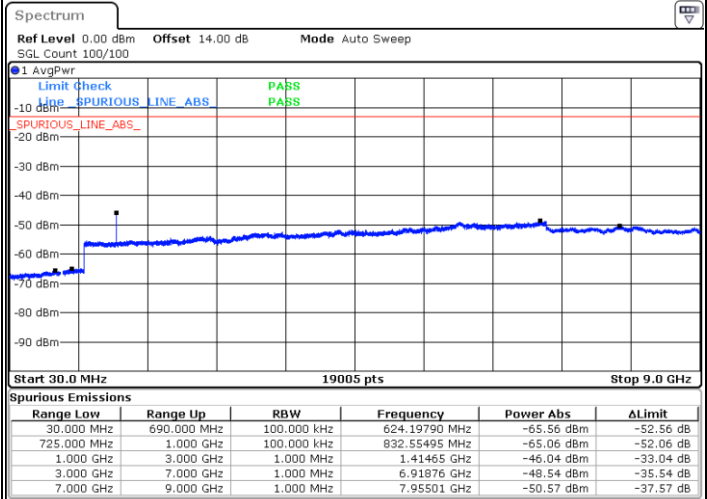
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



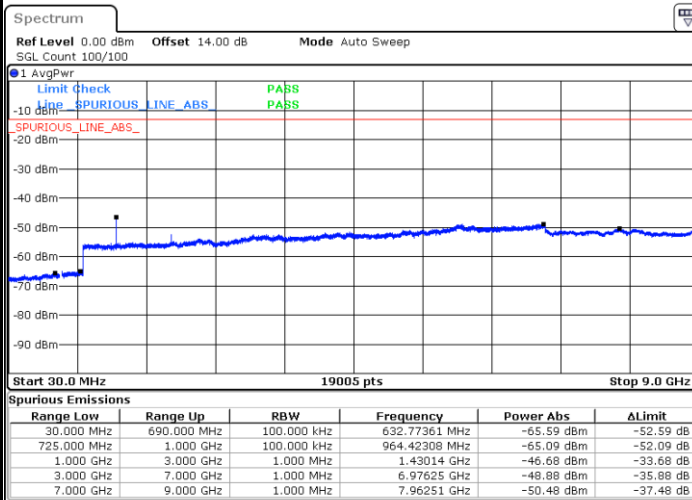
Date: 8.DEC.2020 14:36:14

Middle Channel / 64QAM



Date: 8.DEC.2020 14:37:01

Highest Channel / 64QAM

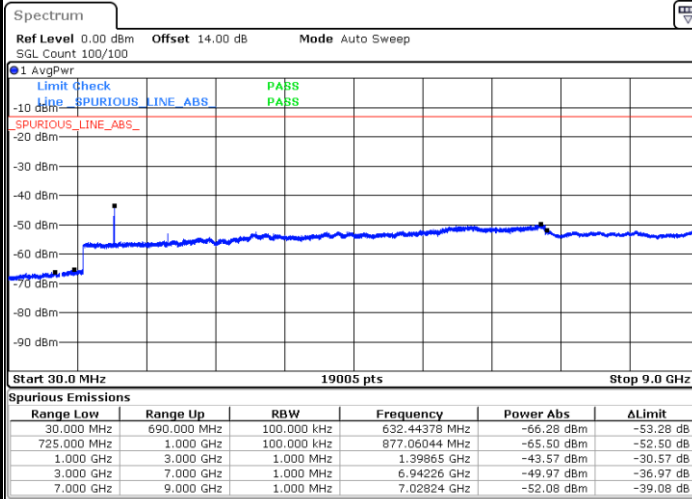


Date: 8.DEC.2020 14:39:16



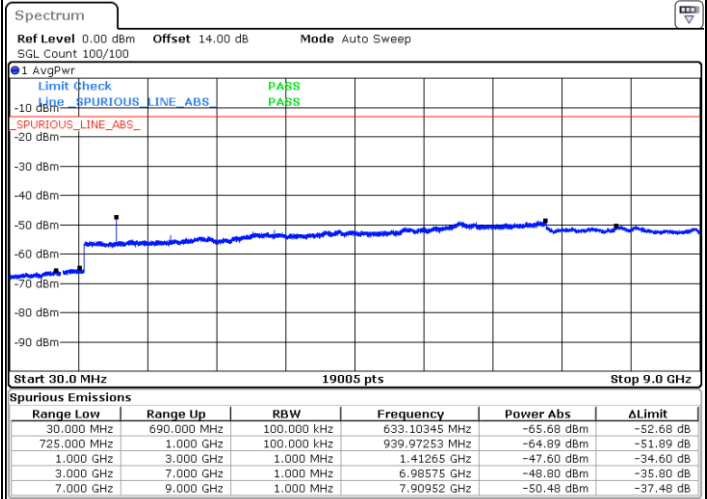
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



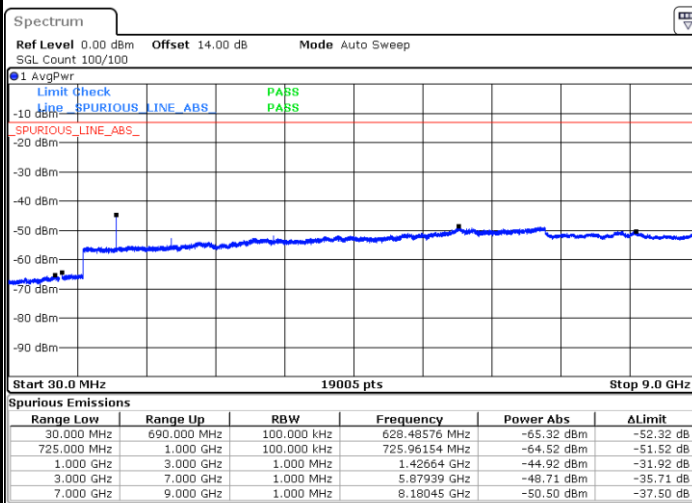
Date: 8.DEC.2020 08:20:46

Middle Channel / 64QAM



Date: 8.DEC.2020 14:13:42

Highest Channel / 64QAM

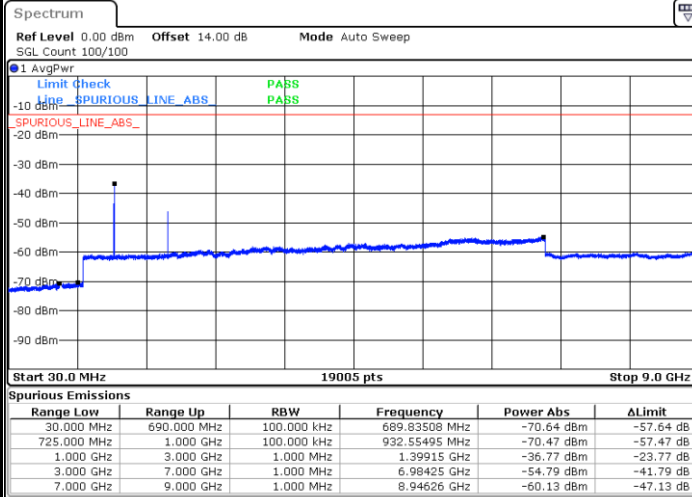


Date: 8.DEC.2020 14:15:57



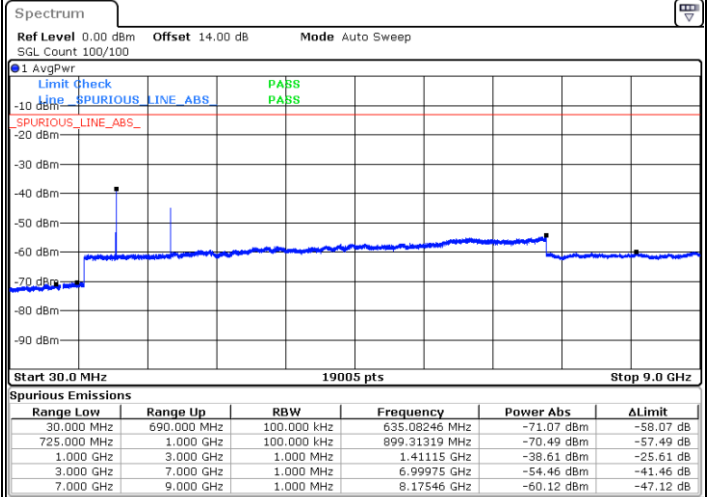
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



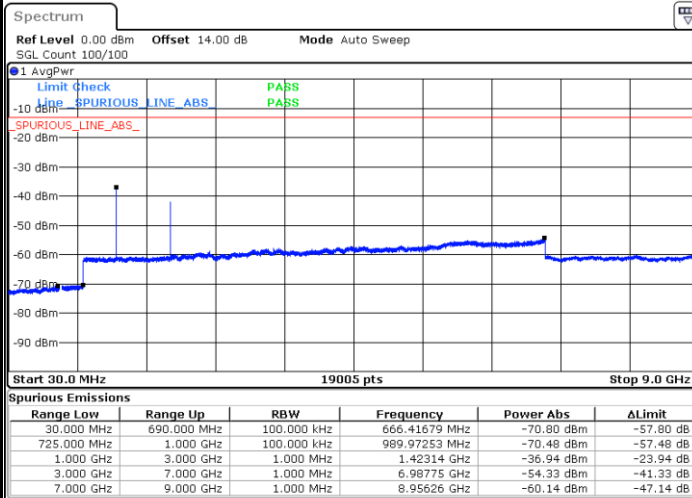
Date: 8.DEC.2020 05:54:40

Middle Channel / 64QAM



Date: 8.DEC.2020 06:01:12

Highest Channel / 64QAM

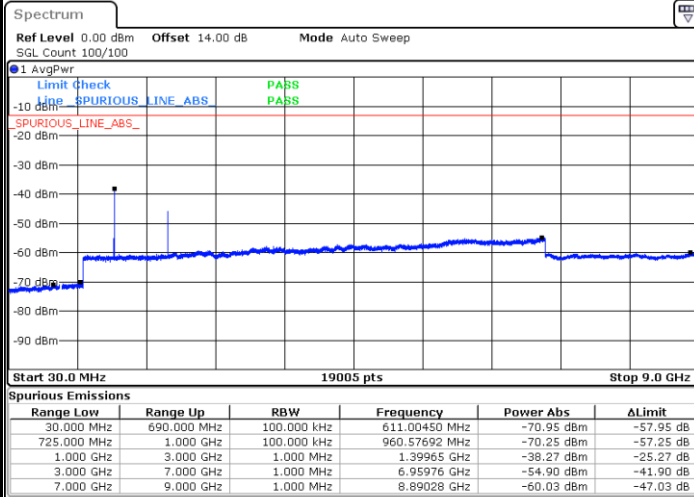


Date: 8.DEC.2020 07:46:01



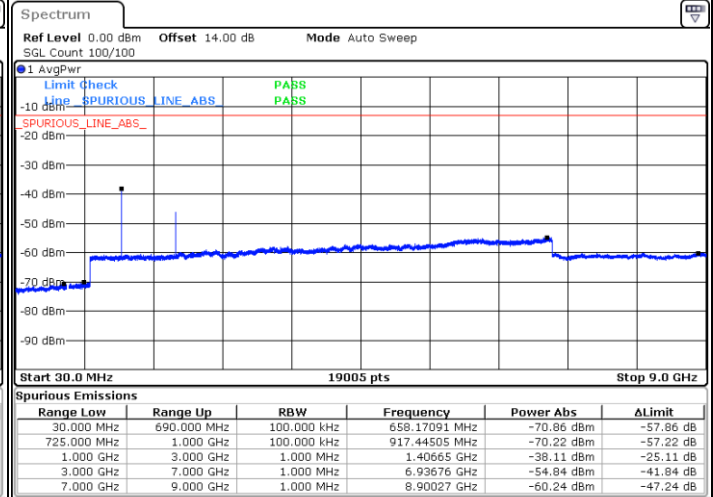
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



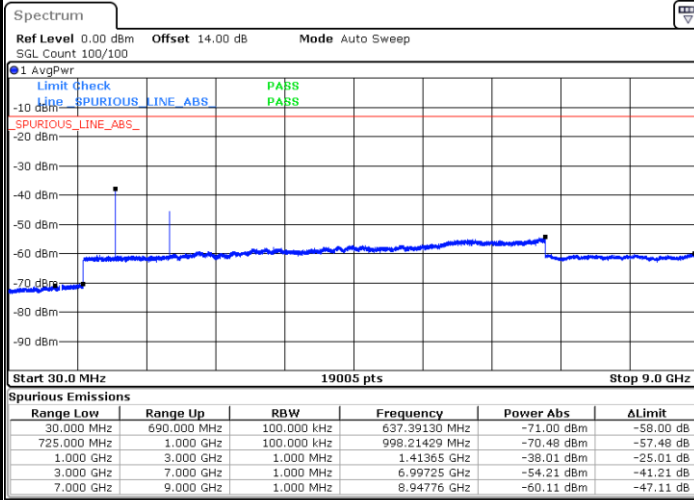
Date: 8.DEC.2020 05:08:41

Middle Channel / 64QAM



Date: 8.DEC.2020 05:16:37

Highest Channel / 64QAM



Date: 8.DEC.2020 05:30:02

**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	0.0010	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0031	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0033	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =7.74 V. ; Battery End Point (BEP) =7.2 V. ; Maximum Voltage =8.9 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

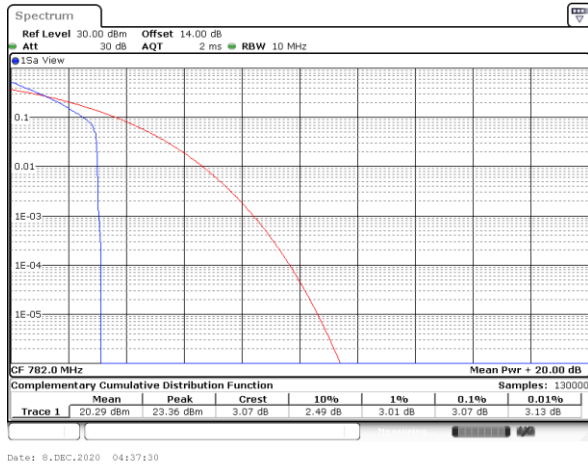
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.07	4.70	3.77	5.59	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.74	6.26	-	-	
Highest CH	-	-	-	-	

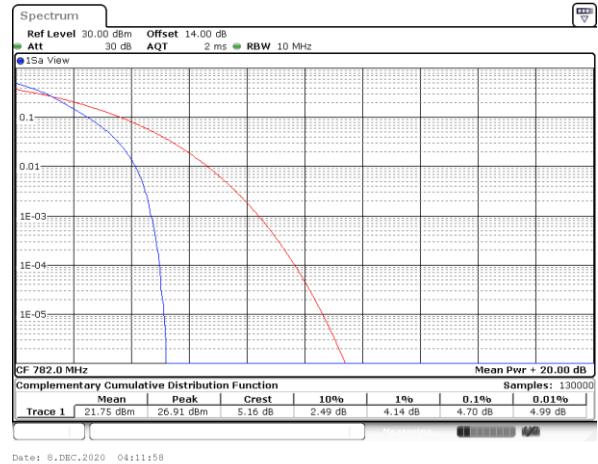


LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB

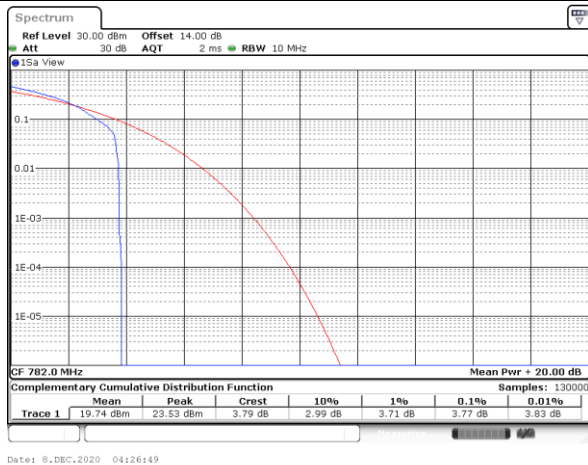


Middle Channel / Full RB

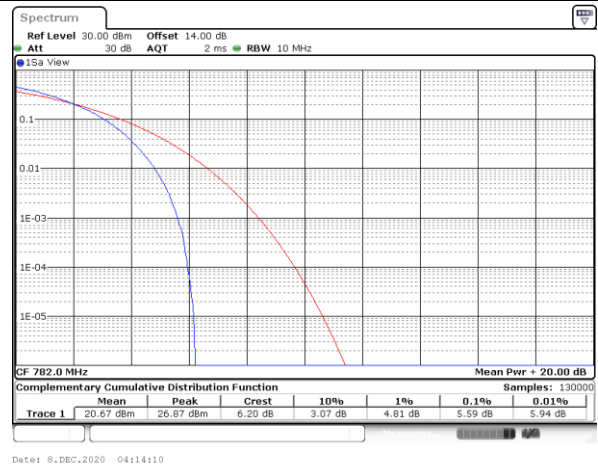


LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB

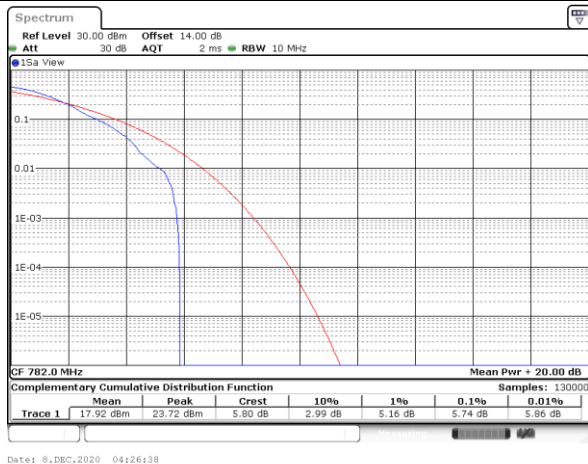


Middle Channel / Full RB

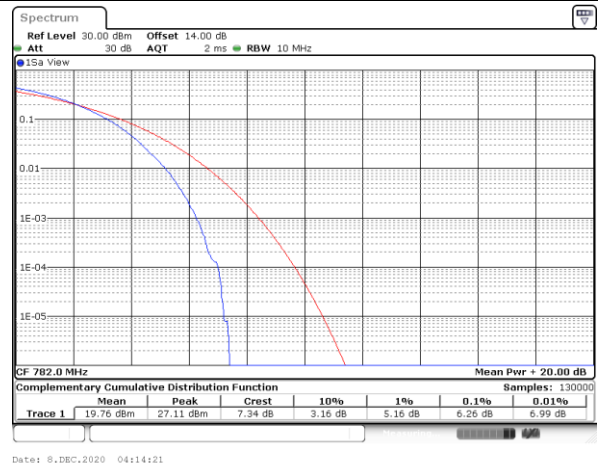


LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Middle Channel / Full RB



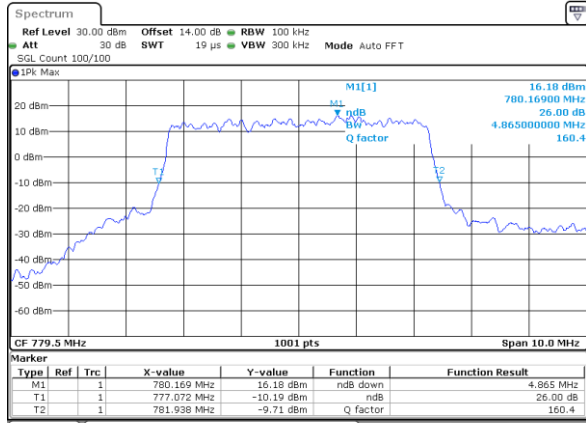
**26dB Bandwidth**

Mode	LTE Band 13 : 26dB BW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.87	4.82	-	-
Middle CH	-	-	-	-	4.87	4.81	9.85	9.83
Highest CH	-	-	-	-	4.87	5.00	-	-
Mode	LTE Band 13 : 26dB BW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.86	-	-	-
Middle CH	-	-	-	-	4.89	-	9.79	-
Highest CH	-	-	-	-	4.90	-	-	-

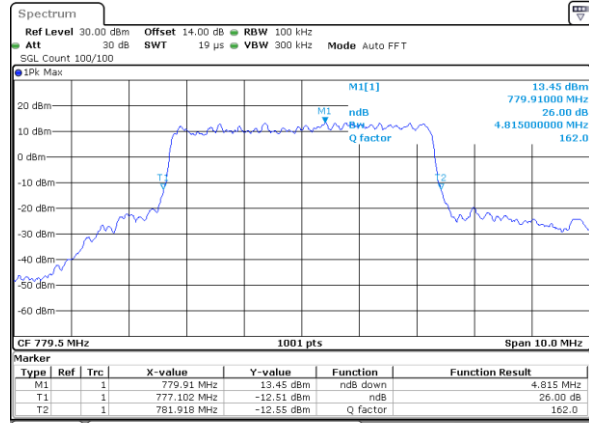


LTE Band 13

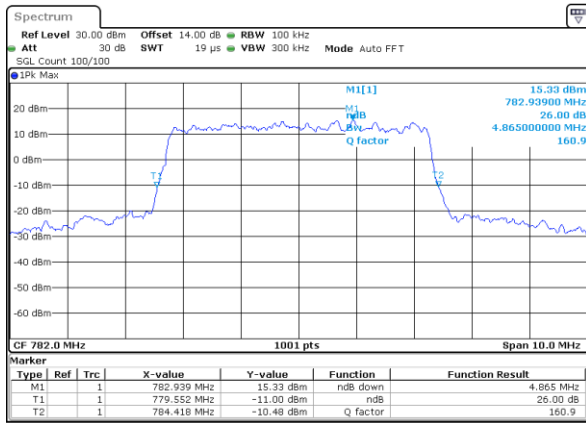
Lowest Channel / 5MHz / QPSK



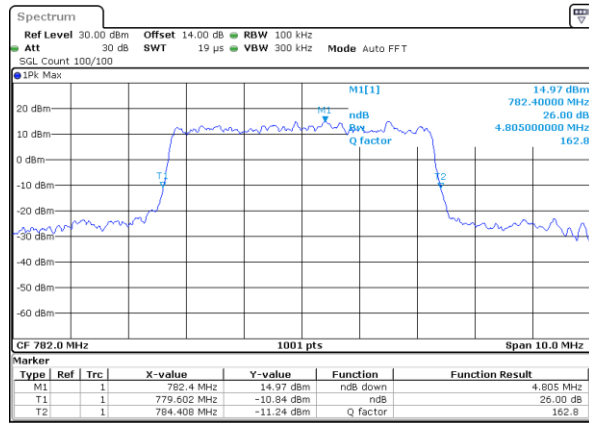
Lowest Channel / 5MHz / 16QAM



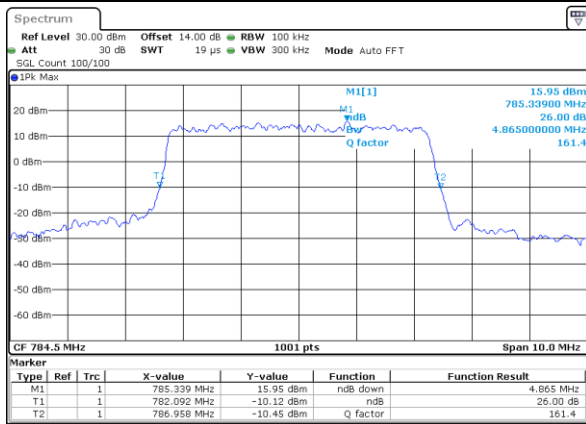
Middle Channel / 5MHz / QPSK



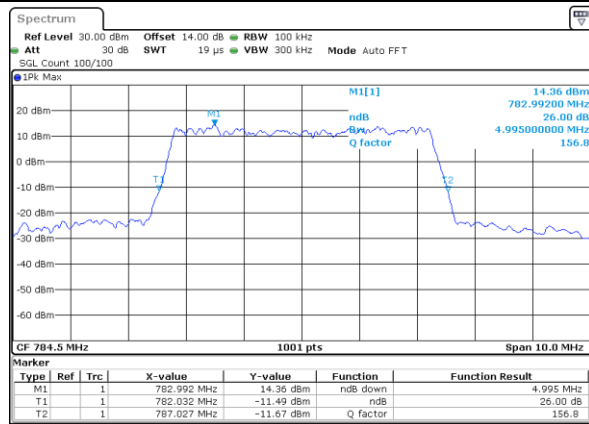
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



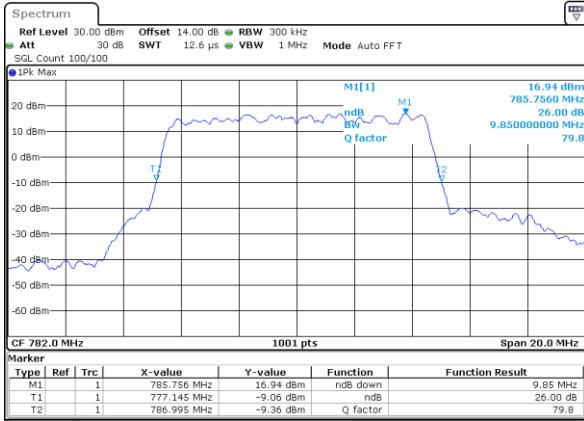
Highest Channel / 5MHz / 16QAM





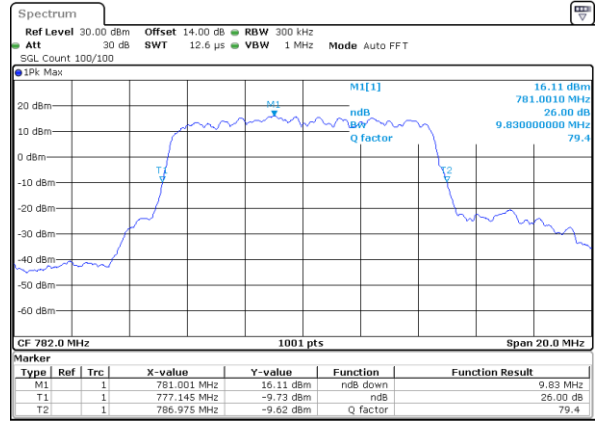
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 8,DEC,2020 04:09:05

Middle Channel / 10MHz / 16QAM

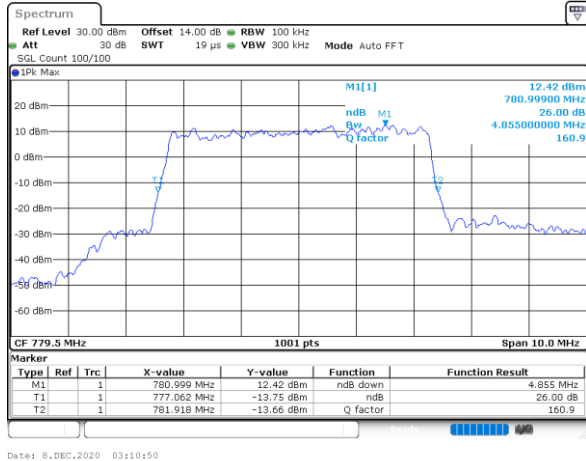


Date: 8,DEC,2020 04:12:15

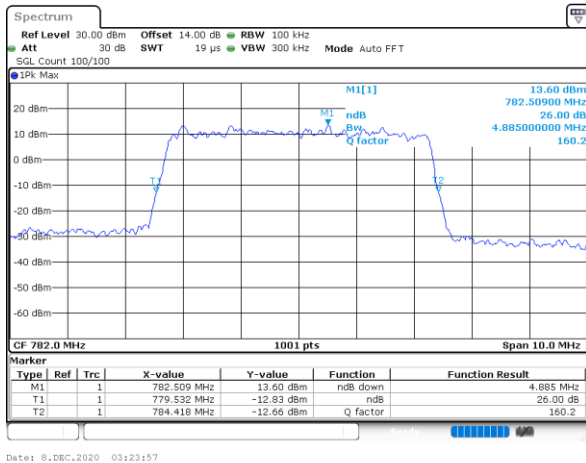


LTE Band 13

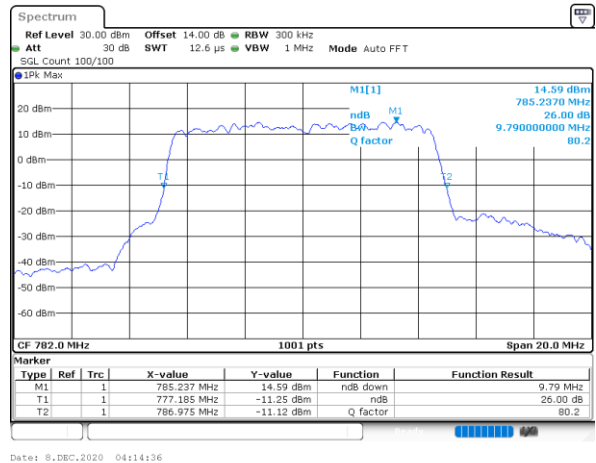
Lowest Channel / 5MHz / 64QAM



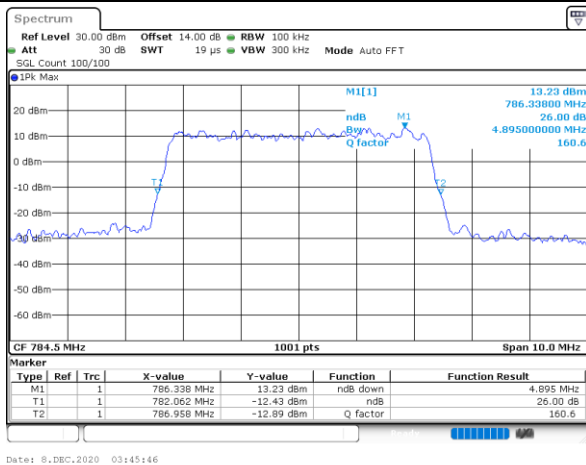
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



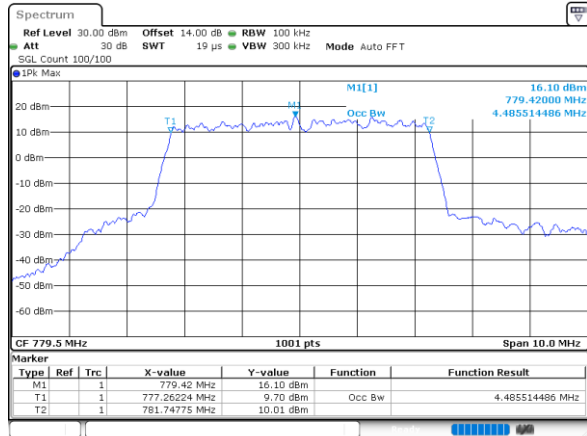
**Occupied Bandwidth**

Mode	LTE Band 13 : 99%OBW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.48	-	-
Middle CH	-	-	-	-	4.50	4.49	9.05	9.01
Highest CH	-	-	-	-	4.49	4.49	-	-
Mode	LTE Band 13 : 99%OBW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.50	-	-	-
Middle CH	-	-	-	-	4.49	-	9.03	-
Highest CH	-	-	-	-	4.54	-	-	-

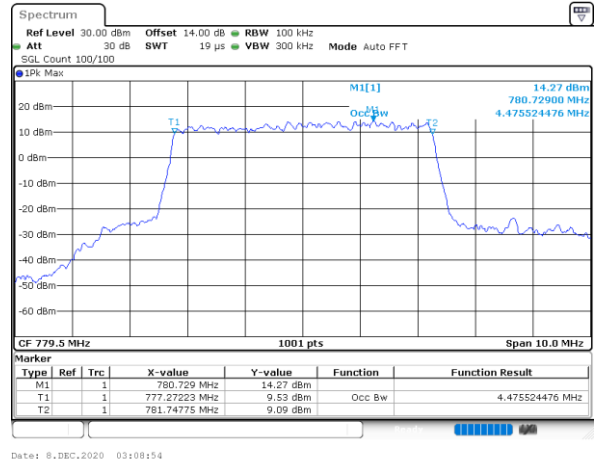


LTE Band 13

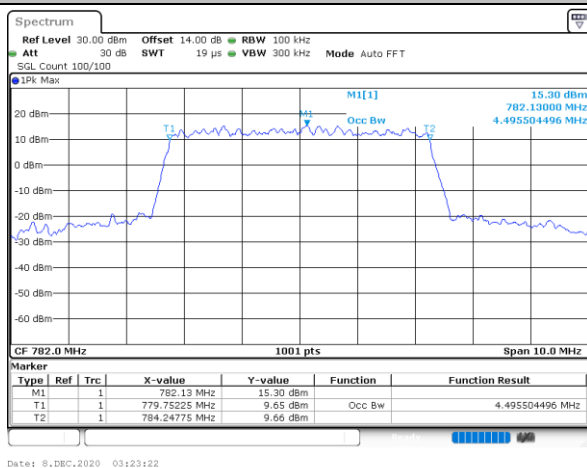
Lowest Channel / 5MHz / QPSK



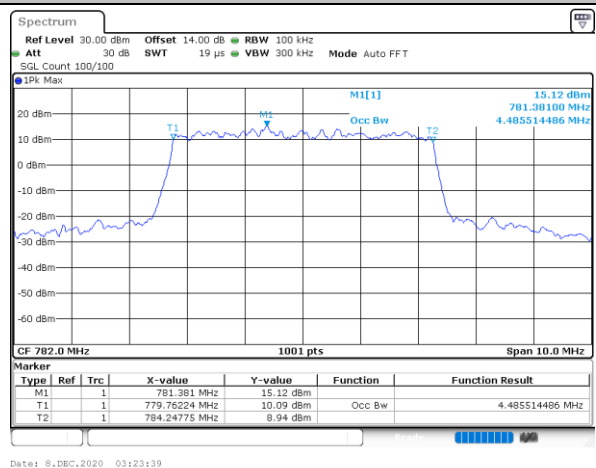
Lowest Channel / 5MHz / 16QAM



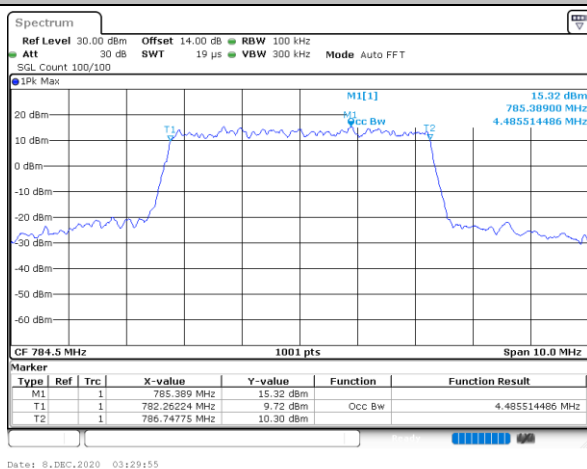
Middle Channel / 5MHz / QPSK



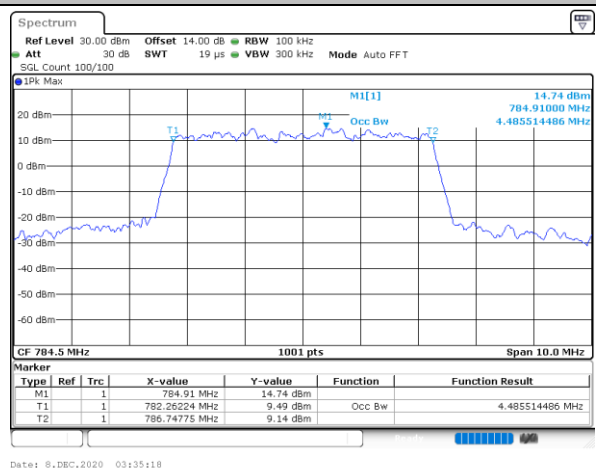
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



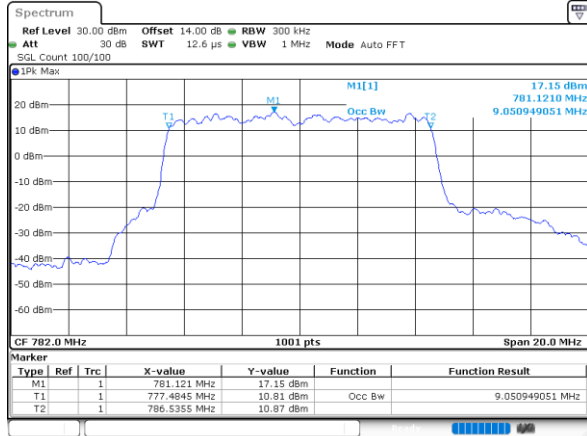
Highest Channel / 5MHz / 16QAM



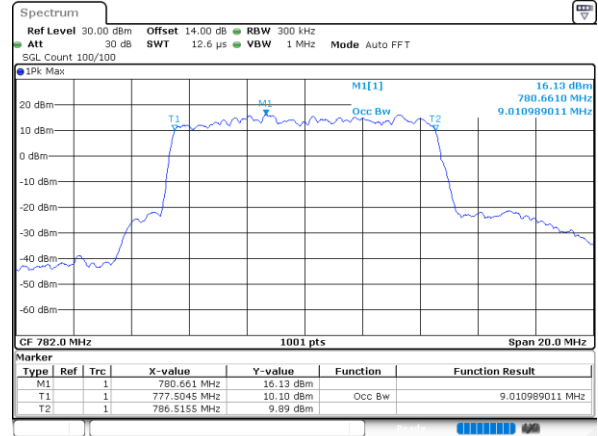


LTE Band 13

Middle Channel / 10MHz / QPSK



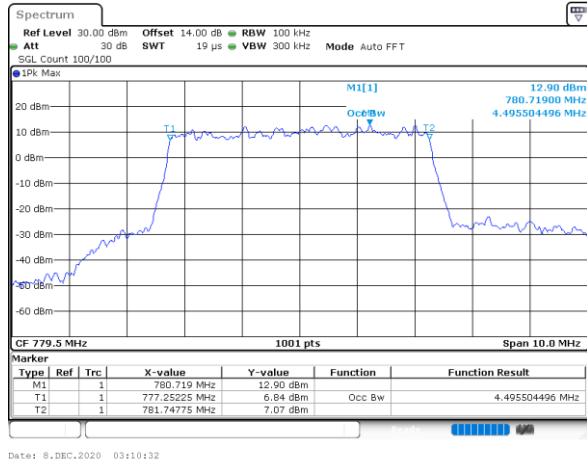
Middle Channel / 10MHz / 16QAM



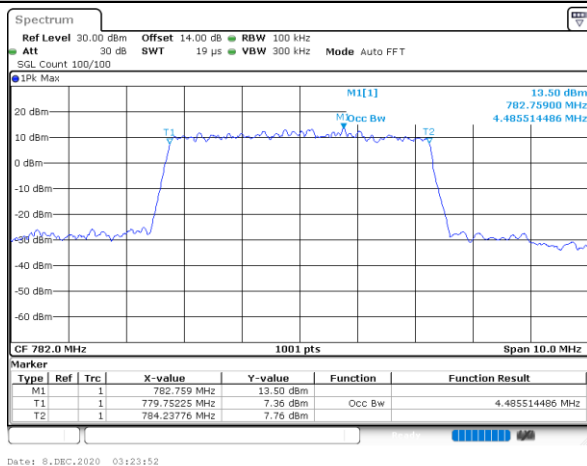


LTE Band 13

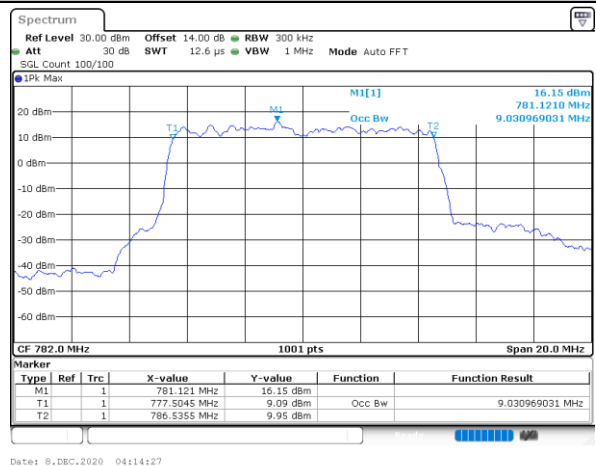
Lowest Channel / 5MHz / 64QAM



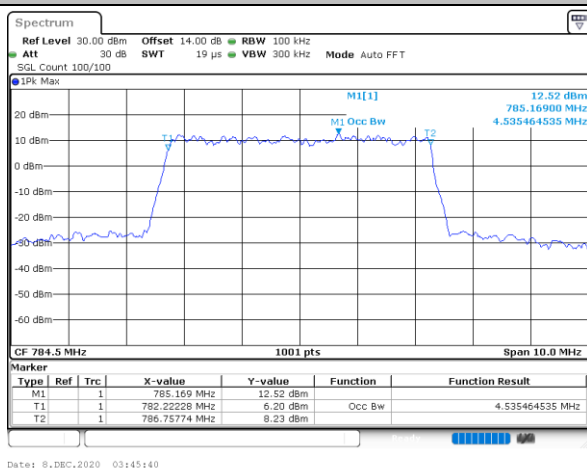
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

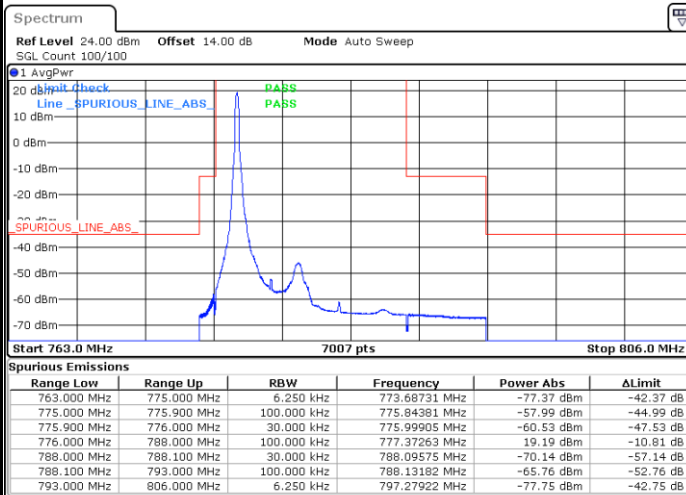




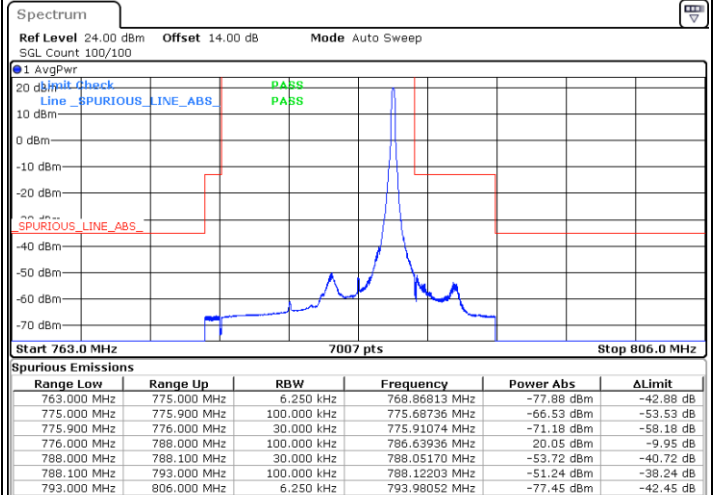
Conducted Band Edge

LTE Band 13 / 5MHz / QPSK

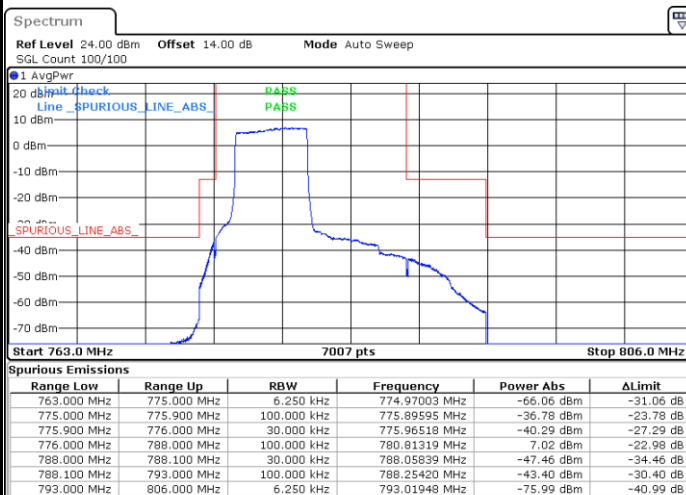
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

