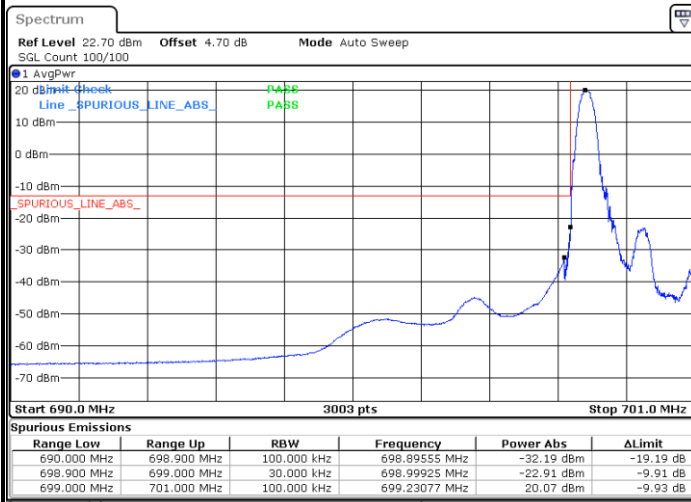




LTE Band 12 / 1.4MHz / 64QAM

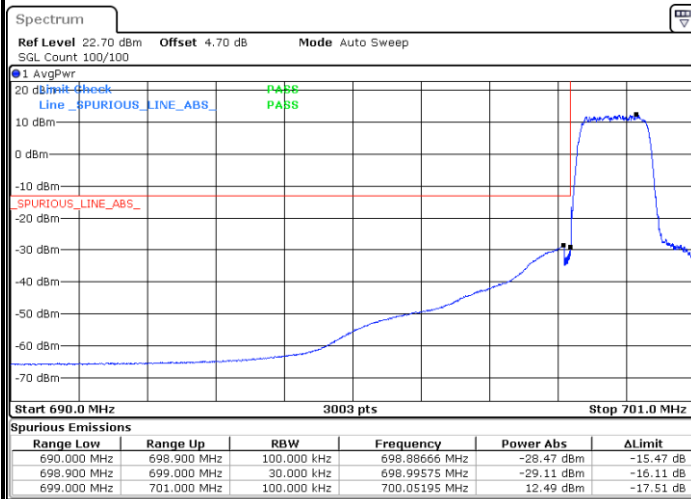
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



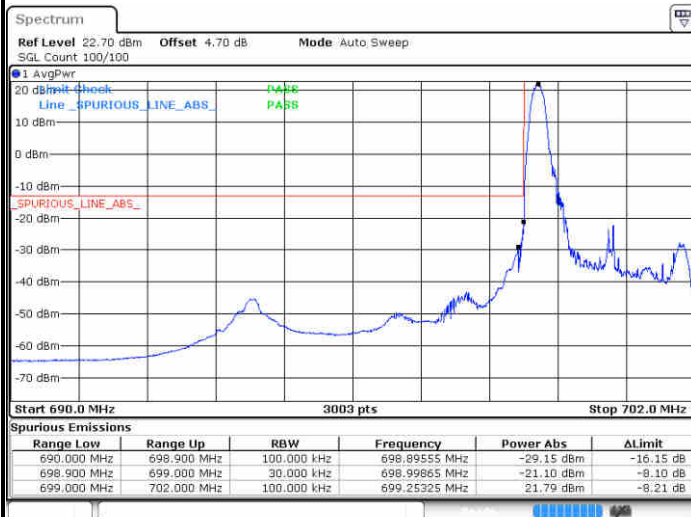
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / QPSK

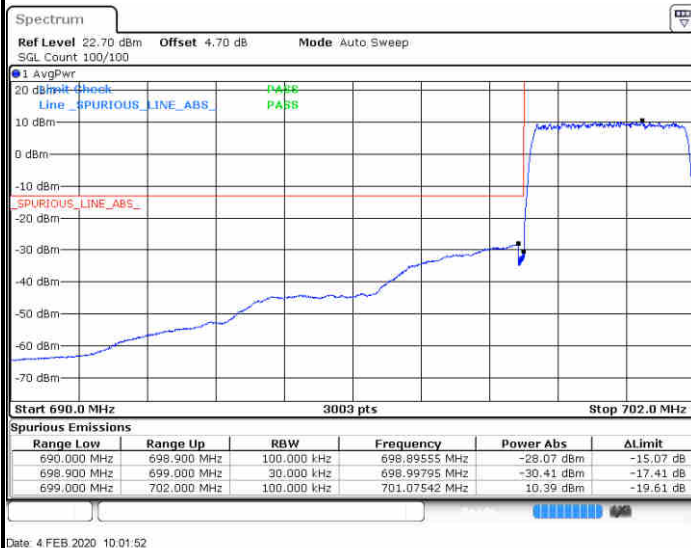
Lowest Band Edge / 1RB



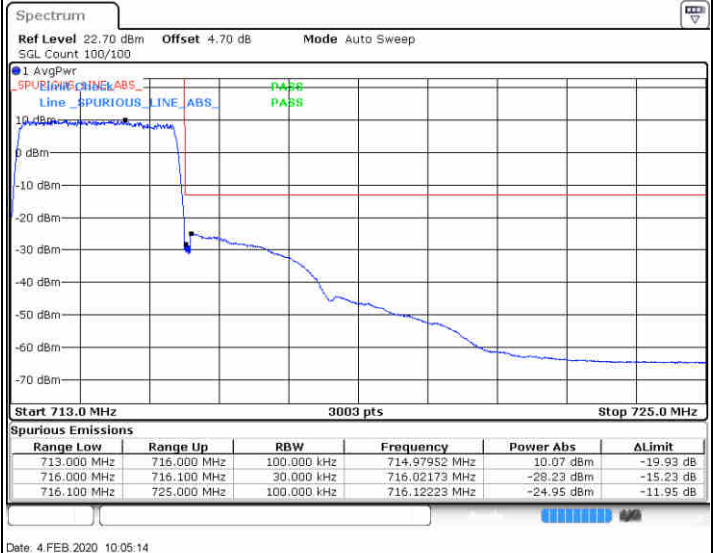
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



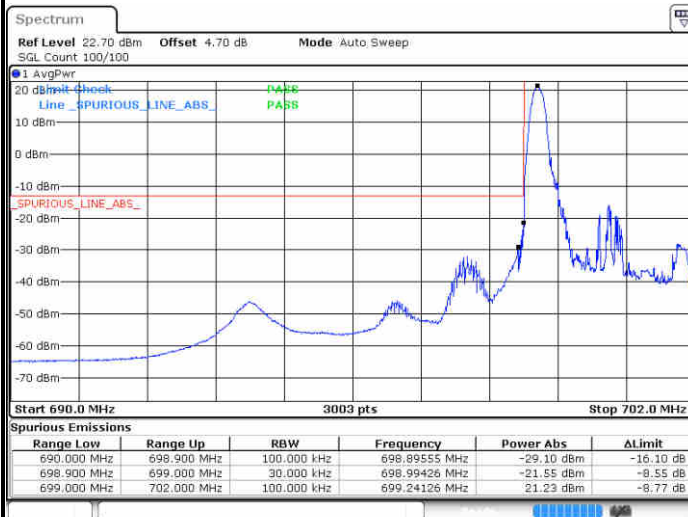
Highest Band Edge / Full RB



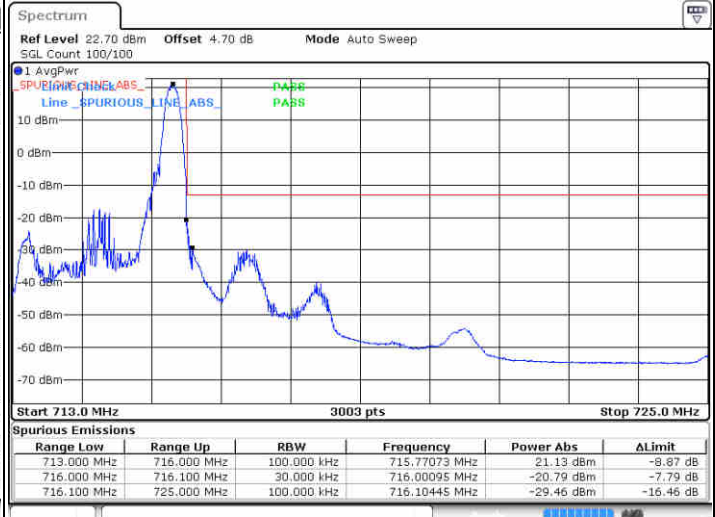


LTE Band 12 / 3MHz / 16QAM

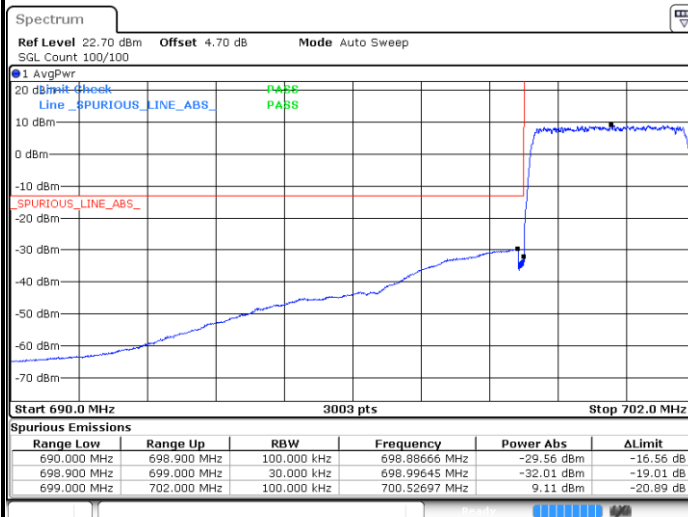
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



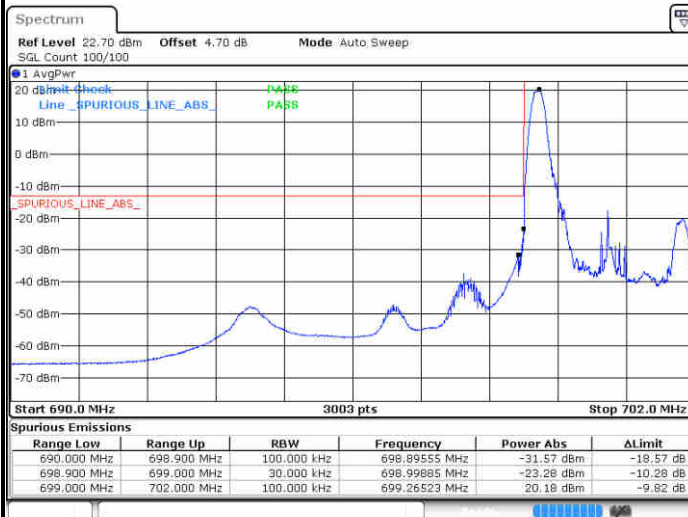
Highest Band Edge / Full RB



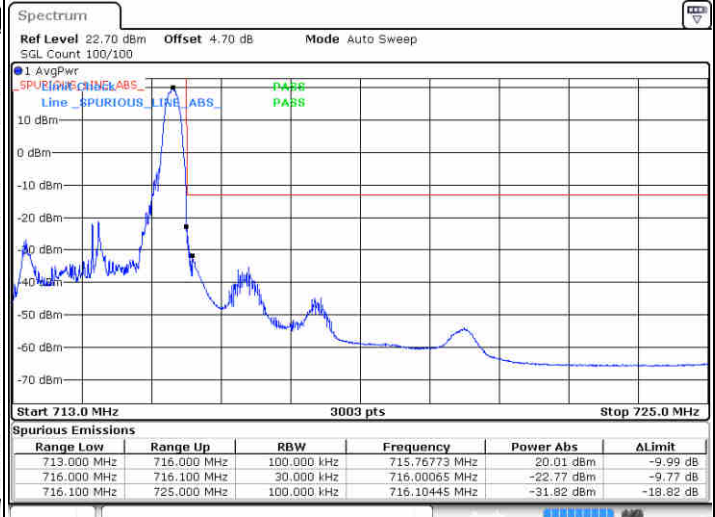


LTE Band 12 / 3MHz / 64QAM

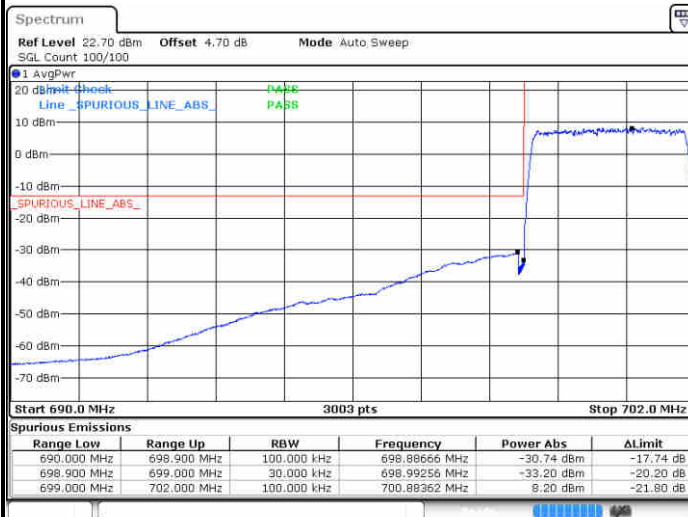
Lowest Band Edge / 1 RB



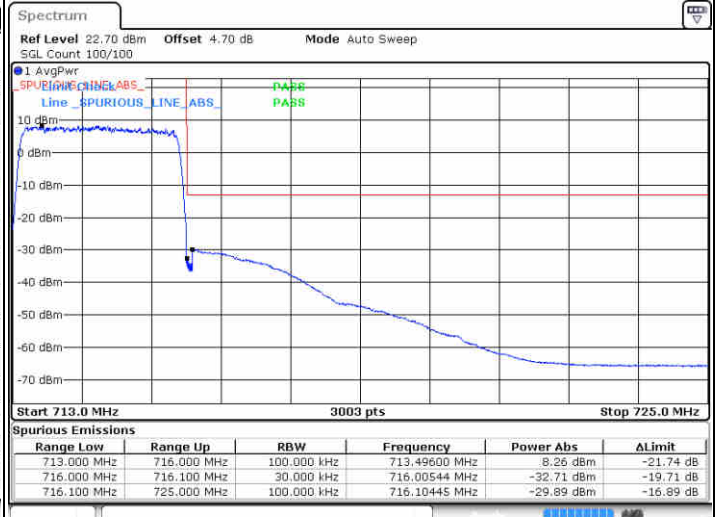
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



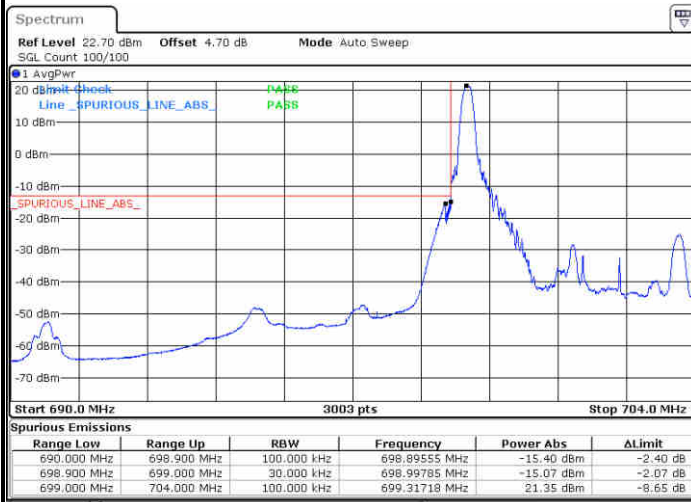
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / QPSK

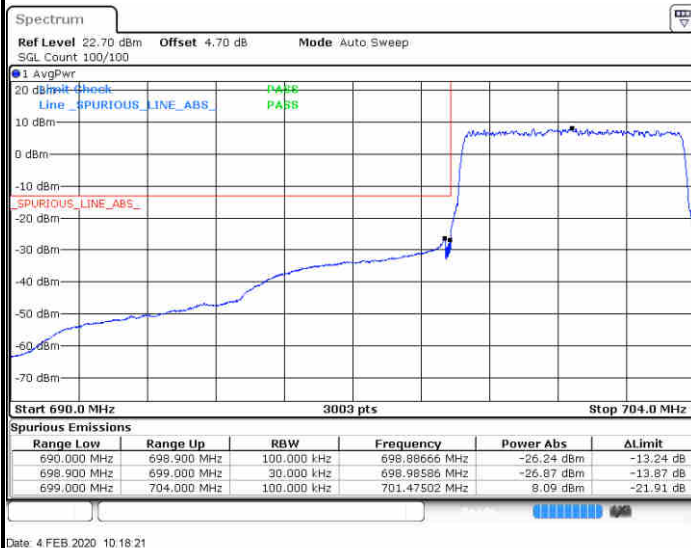
Lowest Band Edge / 1 RB



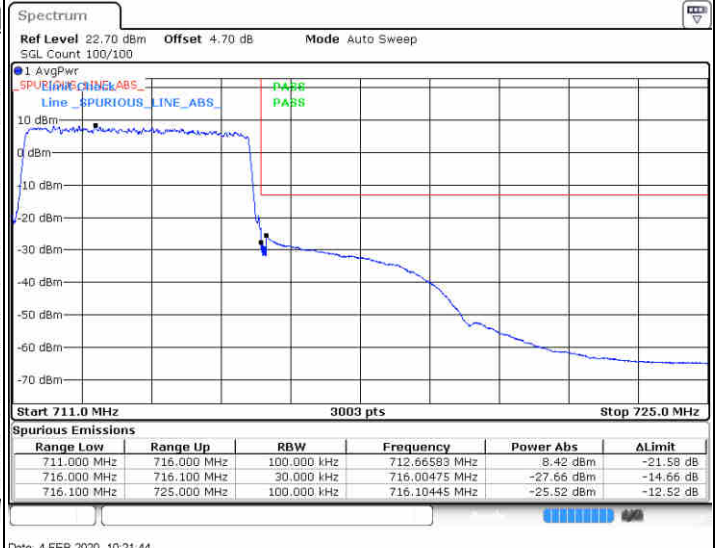
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



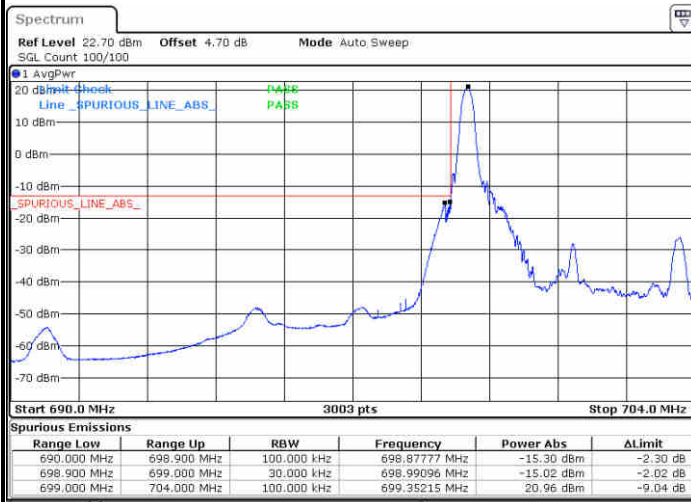
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / 16QAM

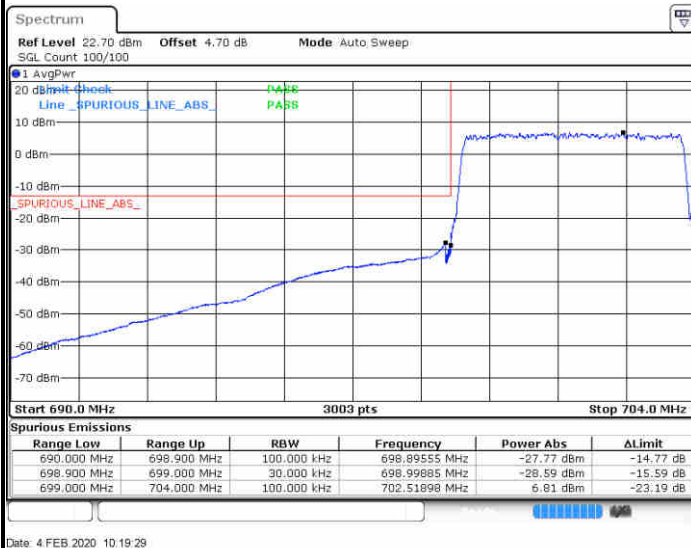
Lowest Band Edge / 1RB



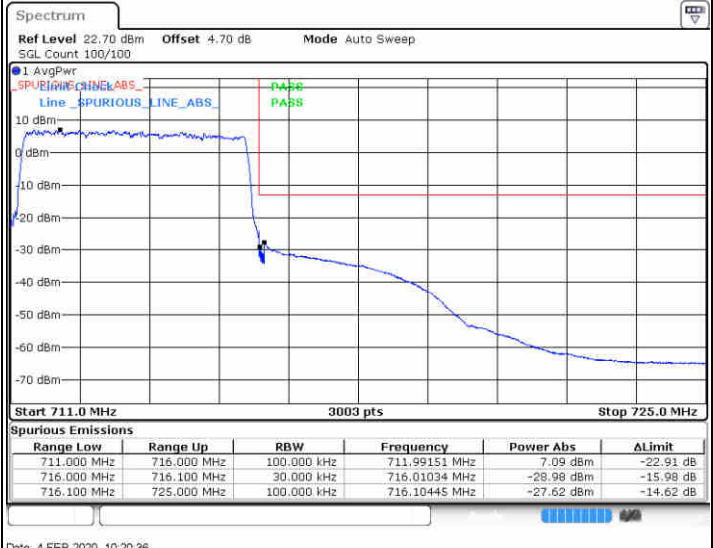
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



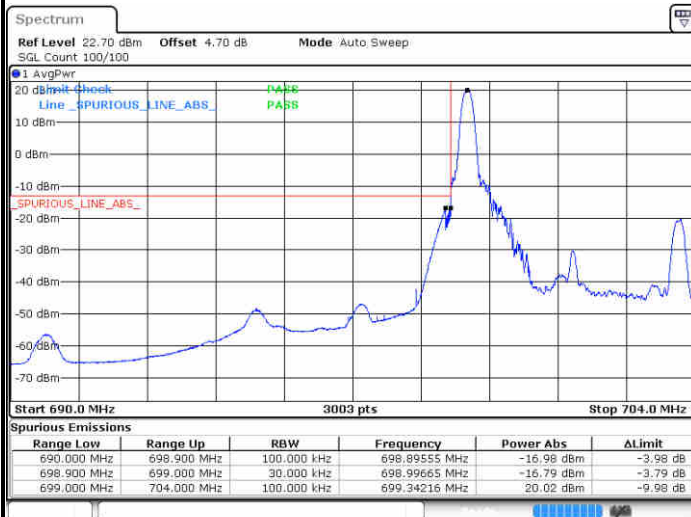
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / 64QAM

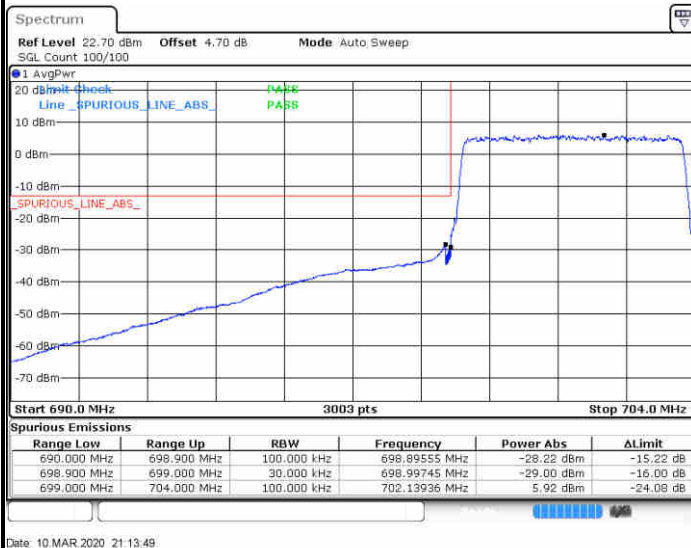
Lowest Band Edge / 1RB



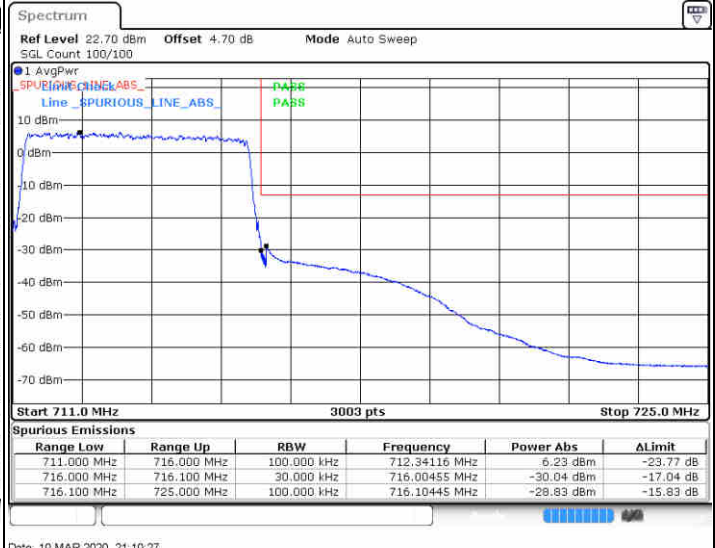
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



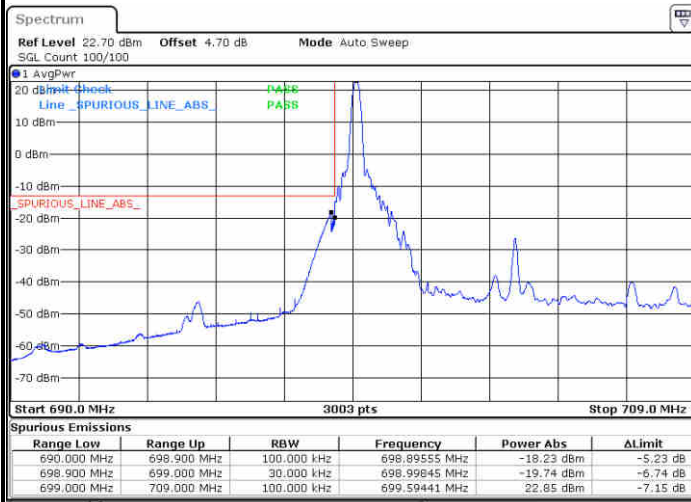
Highest Band Edge / Full RB



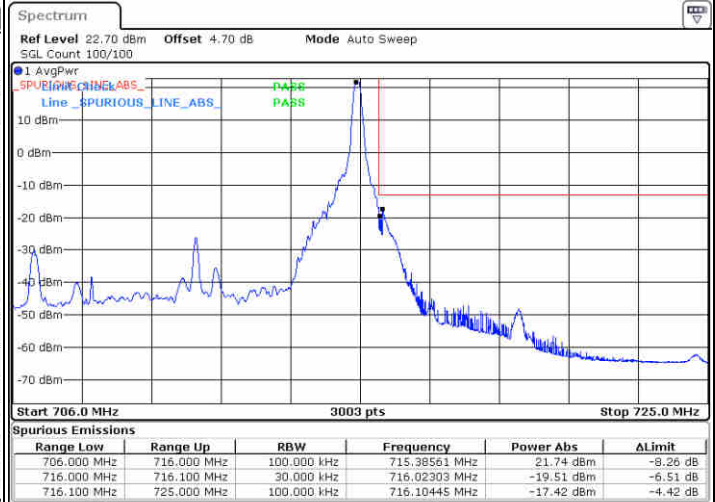


LTE Band 12 / 10MHz / QPSK

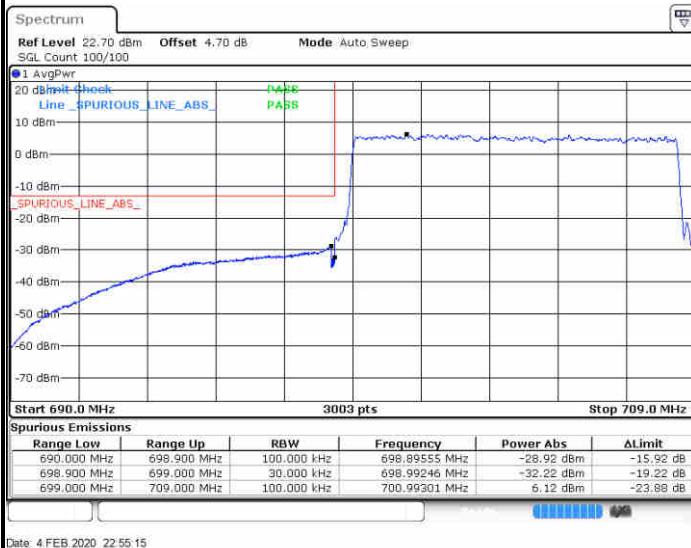
Lowest Band Edge / 1 RB



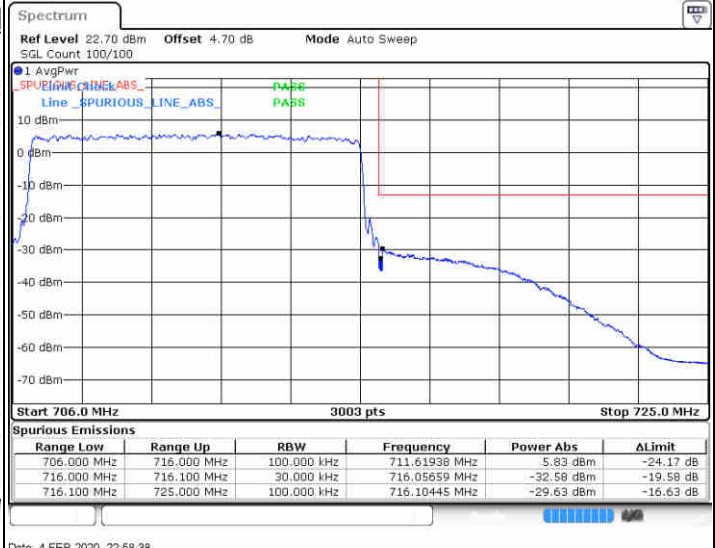
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



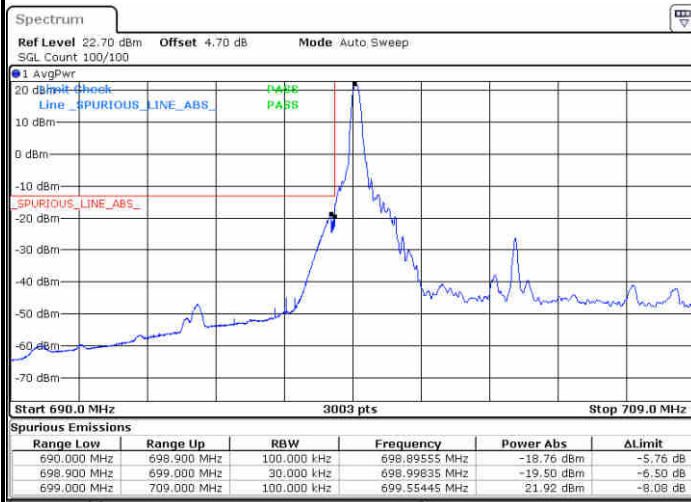
Highest Band Edge / Full RB



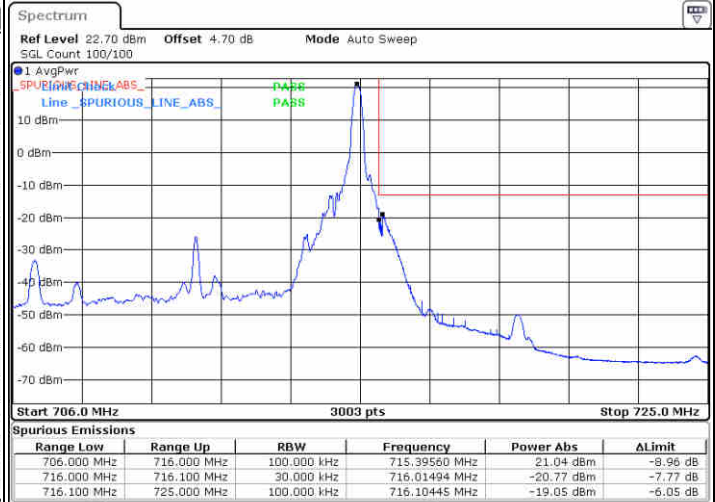


LTE Band 12 / 10MHz / 16QAM

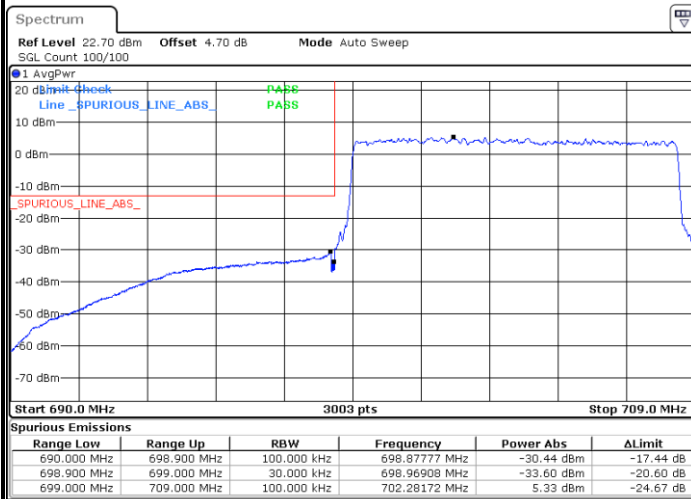
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



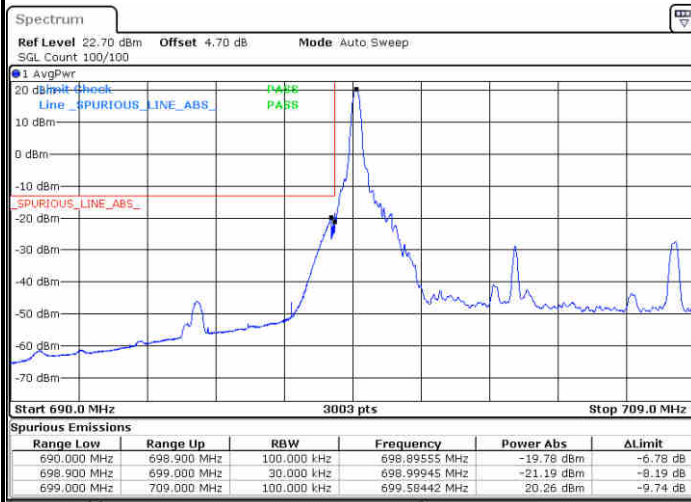
Highest Band Edge / Full RB





LTE Band 12 / 10MHz / 64QAM

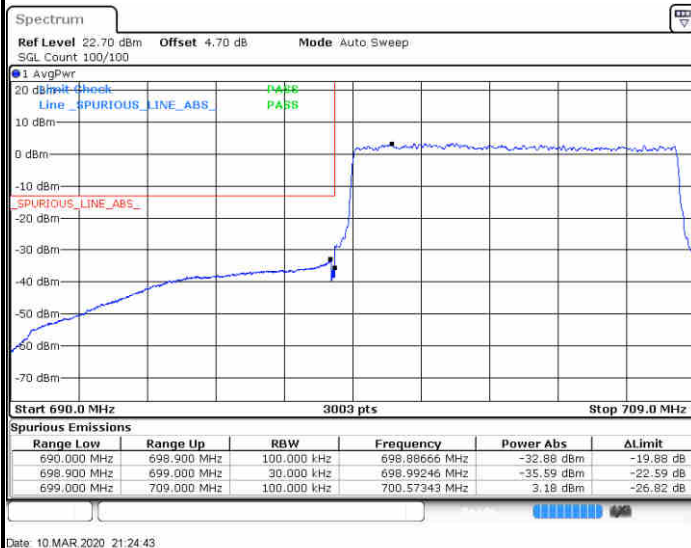
Lowest Band Edge / 1 RB



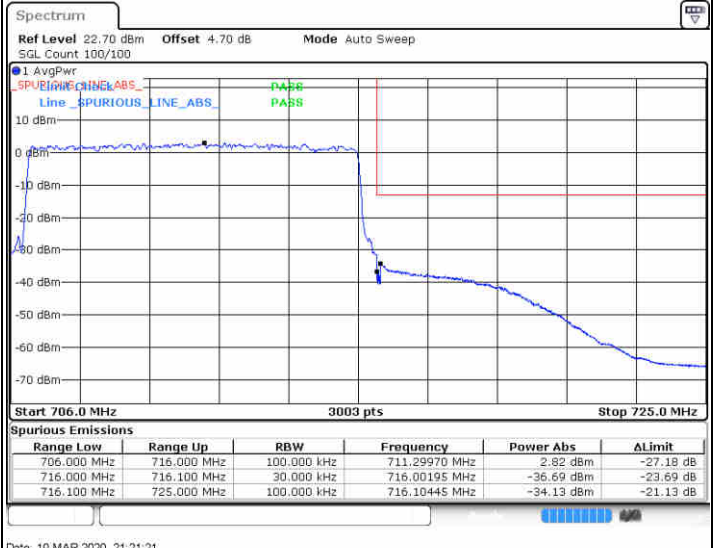
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

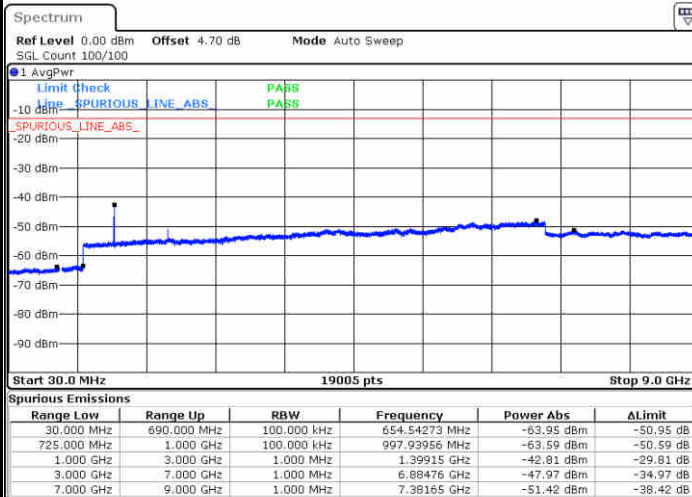




Conducted Spurious Emission

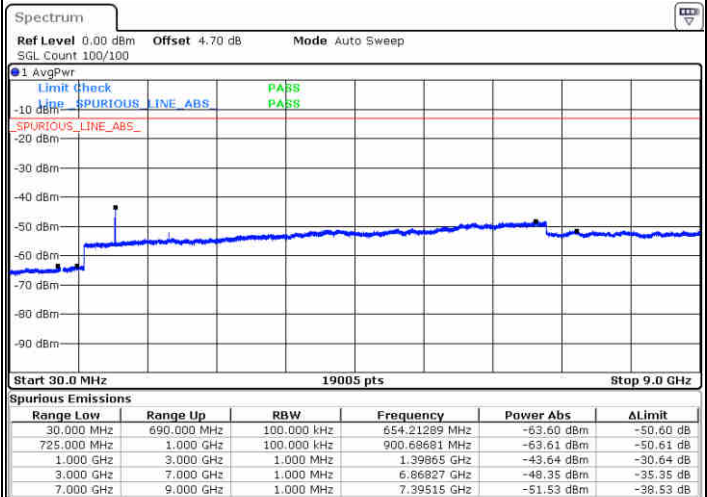
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



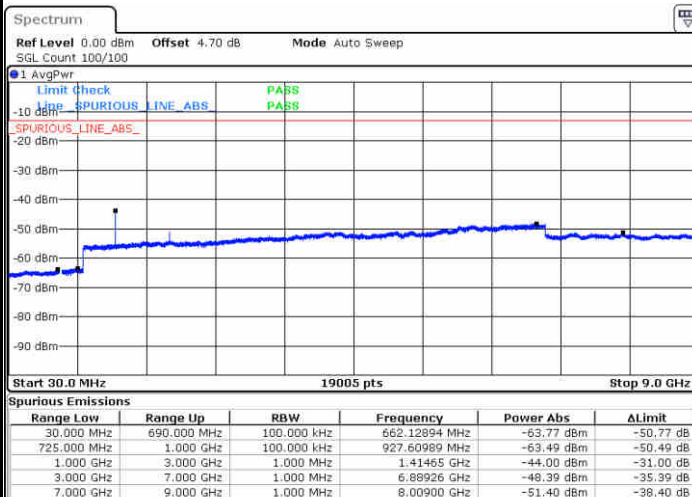
Date: 4 FEB 2020 09:37:26

Lowest Channel / 16QAM



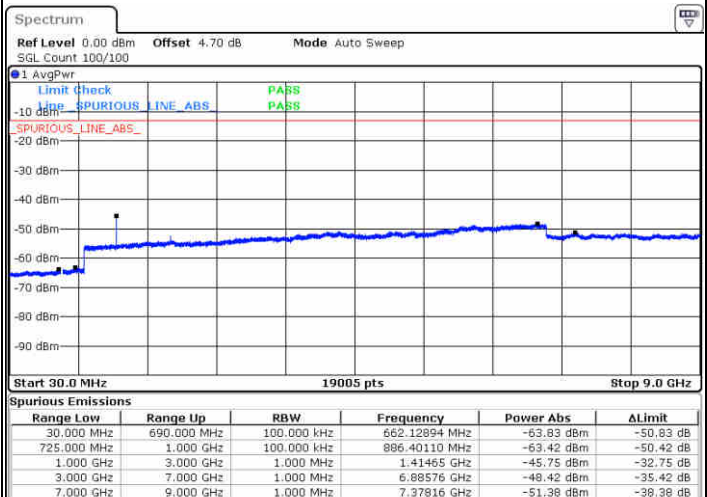
Date: 4 FEB 2020 09:38:21

Middle Channel / QPSK



Date: 4 FEB 2020 09:40:10

Middle Channel / 16QAM

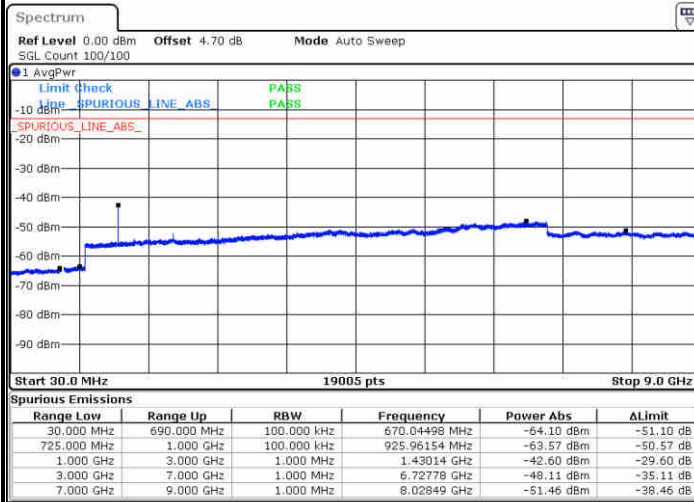


Date: 4 FEB 2020 09:39:16



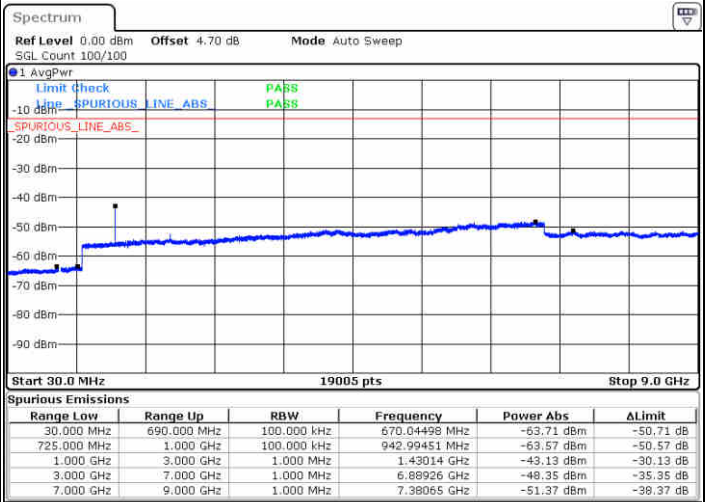
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 4 FEB 2020 09:41:05

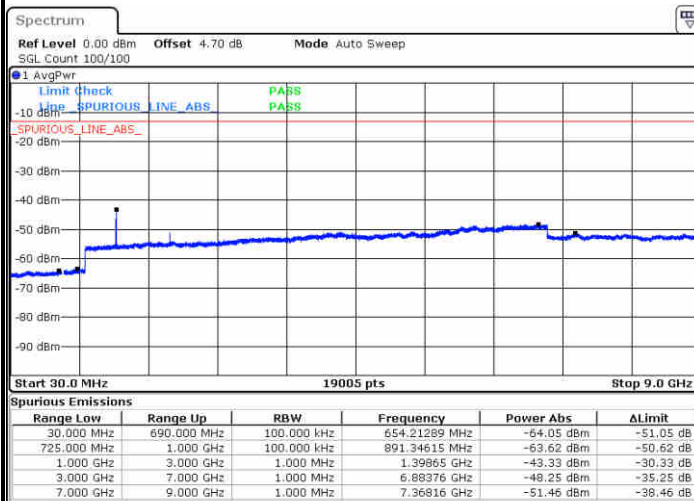
Highest Channel / 16QAM



Date: 4 FEB 2020 09:42:00

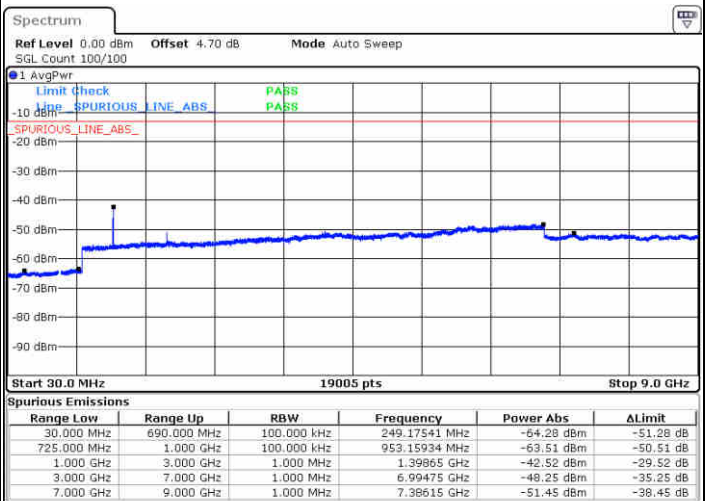
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 4 FEB 2020 09:53:55

Lowest Channel / 16QAM

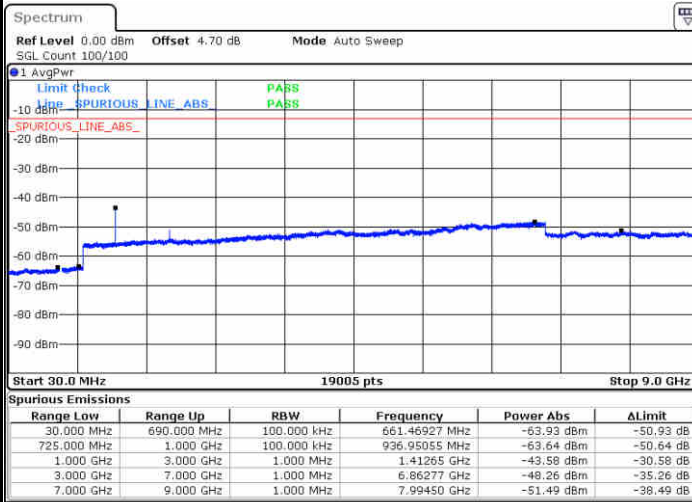


Date: 4 FEB 2020 09:54:49



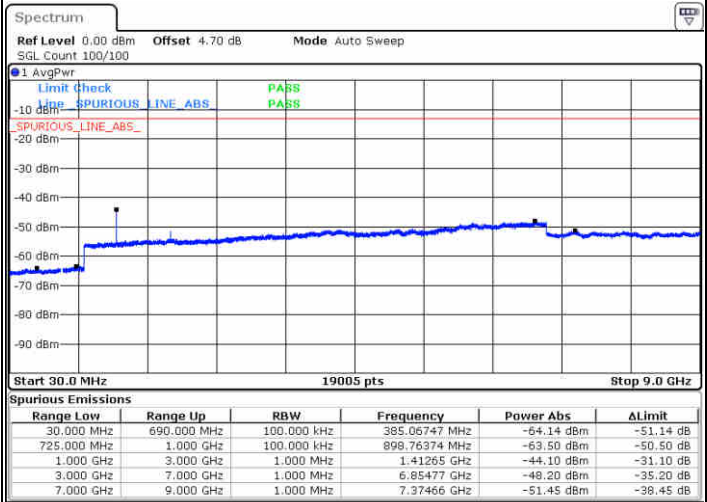
LTE Band 12 / 3MHz

Middle Channel / QPSK



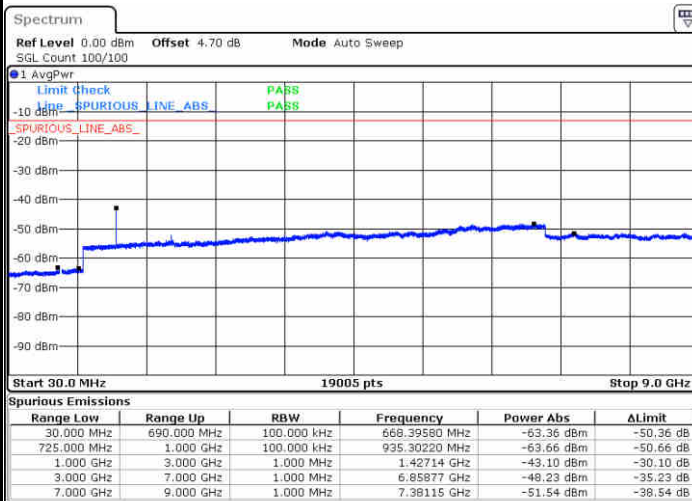
Date: 4 FEB 2020 09:56:39

Middle Channel / 16QAM



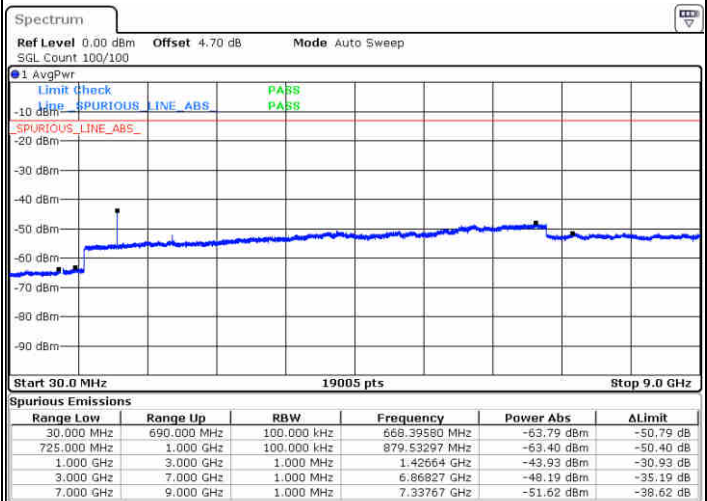
Date: 4 FEB 2020 09:55:44

Highest Channel / QPSK



Date: 4 FEB 2020 09:57:33

Highest Channel / 16QAM

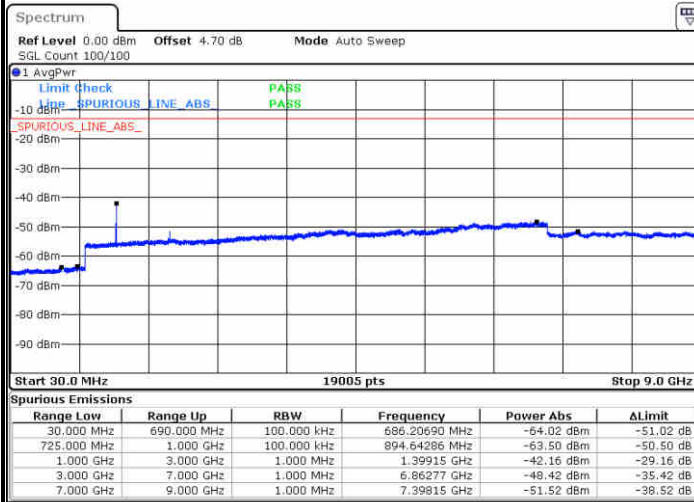


Date: 4 FEB 2020 09:58:28



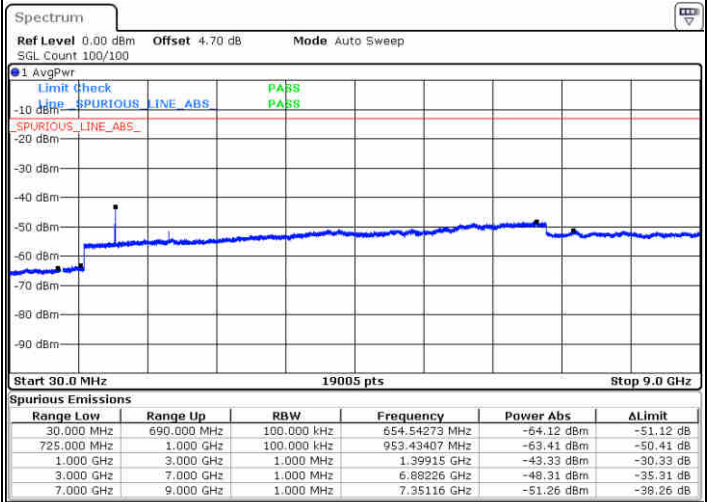
LTE Band 12 / 5MHz

Lowest Channel / QPSK



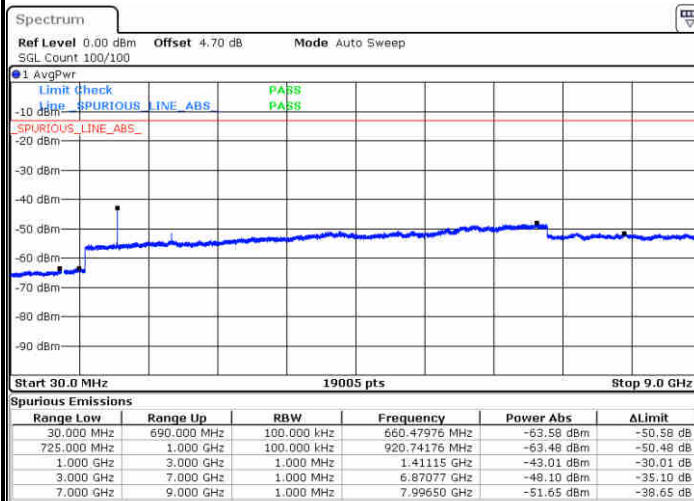
Date: 4 FEB 2020 10:10:24

Lowest Channel / 16QAM



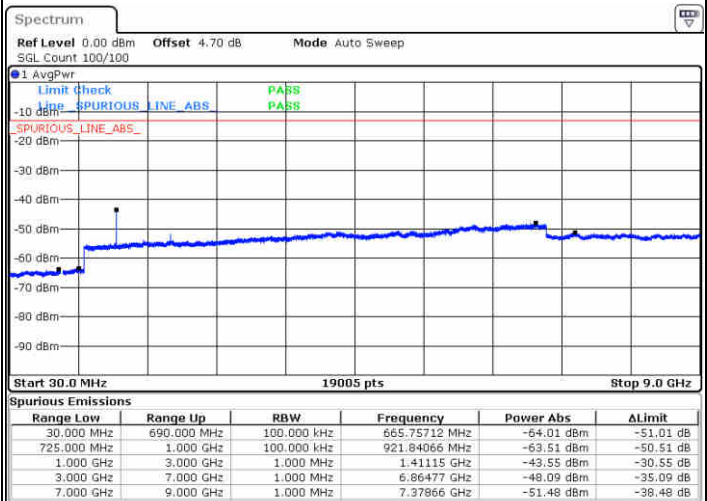
Date: 4 FEB 2020 10:11:19

Middle Channel / QPSK



Date: 4 FEB 2020 10:13:08

Middle Channel / 16QAM

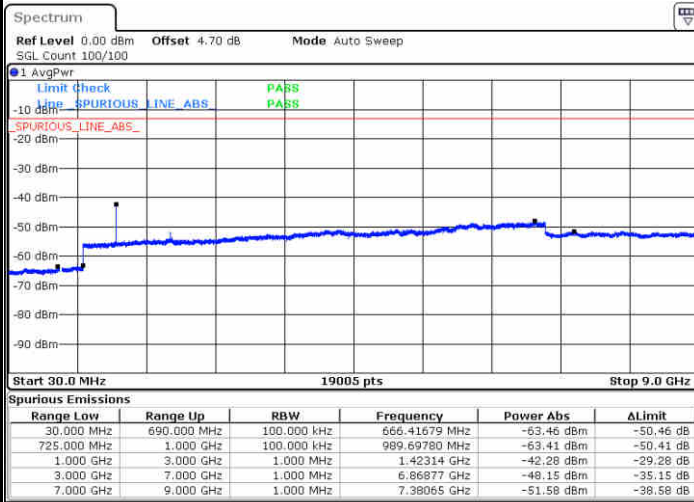


Date: 4 FEB 2020 10:12:14



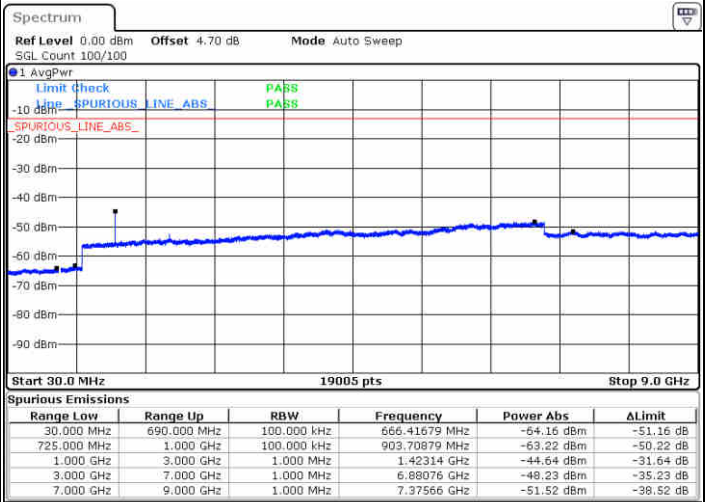
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 4 FEB 2020 10:14:03

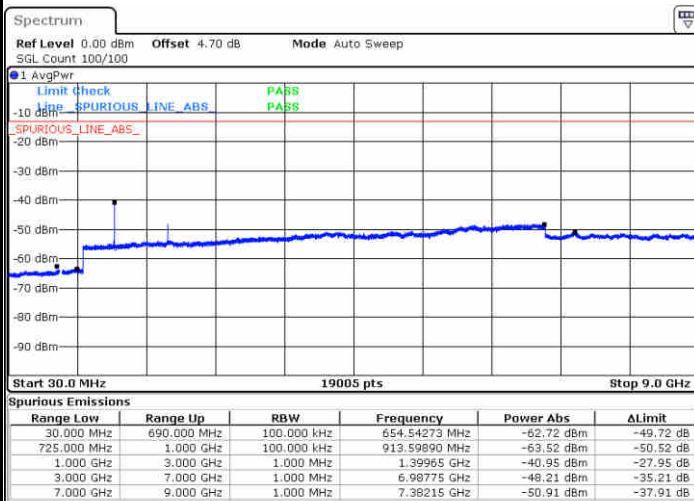
Highest Channel / 16QAM



Date: 4 FEB 2020 10:14:58

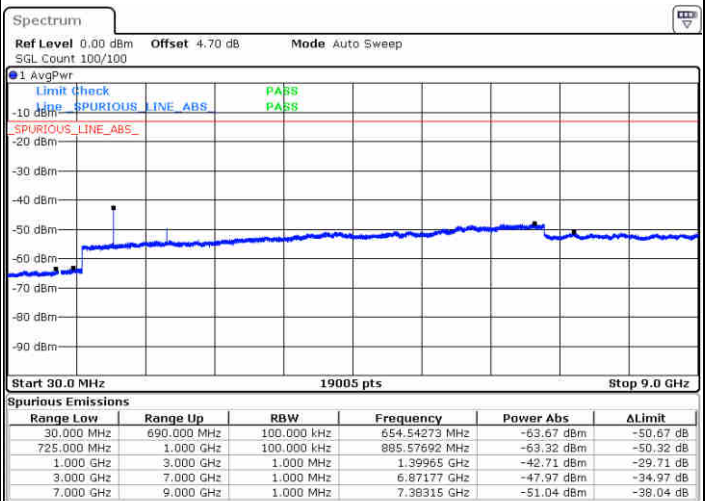
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 4 FEB 2020 22:47:18

Lowest Channel / 16QAM

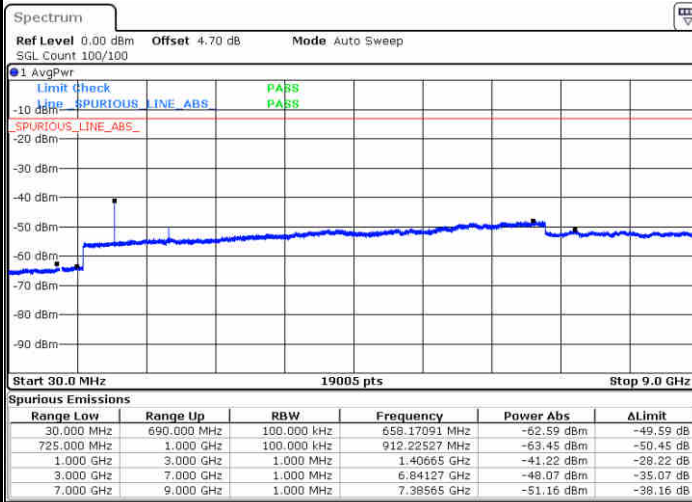


Date: 4 FEB 2020 22:48:13



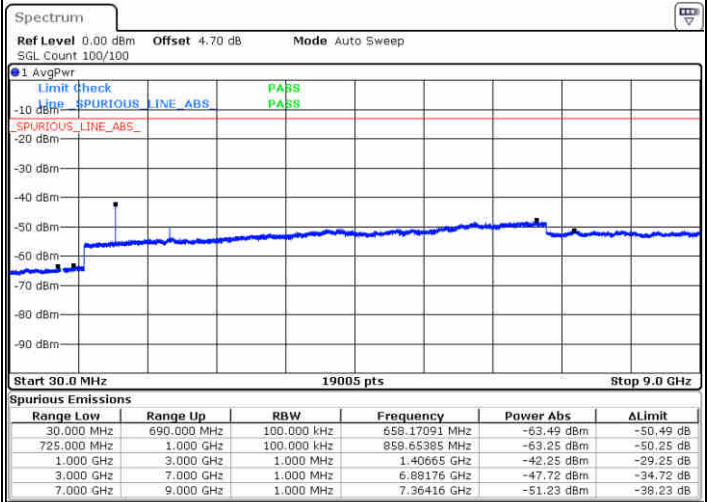
LTE Band 12 / 10MHz

Middle Channel / QPSK



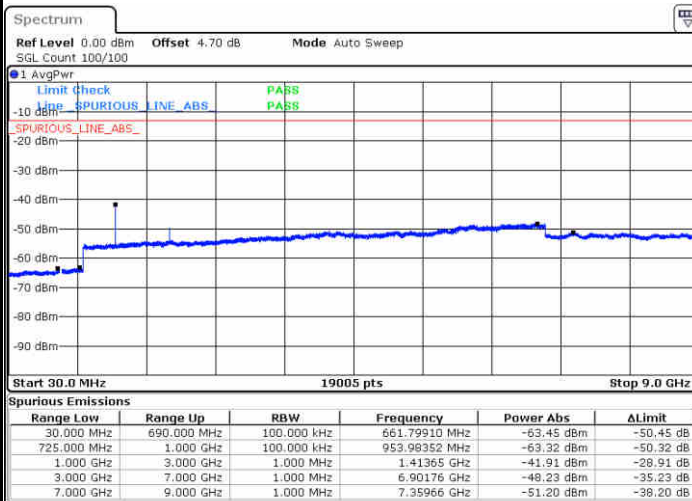
Date: 4 FEB 2020 22:50:02

Middle Channel / 16QAM



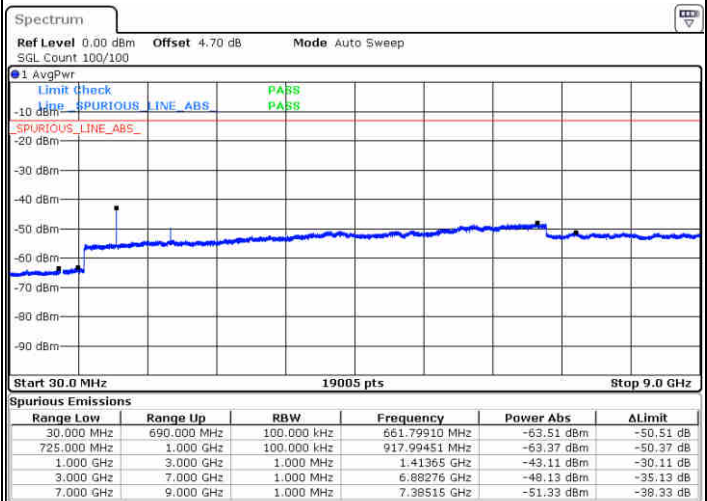
Date: 4 FEB 2020 22:49:08

Highest Channel / QPSK



Date: 4 FEB 2020 22:50:57

Highest Channel / 16QAM

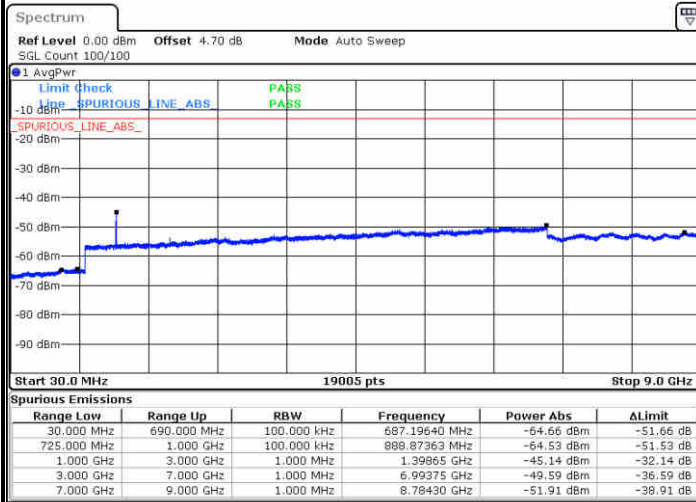


Date: 4 FEB 2020 22:51:52



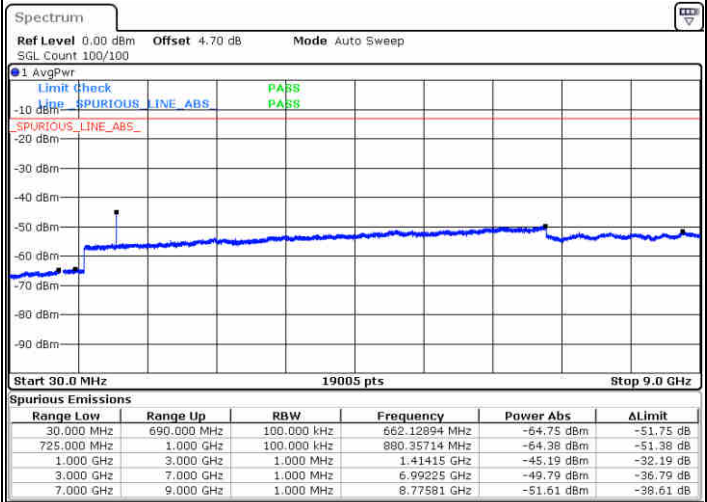
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



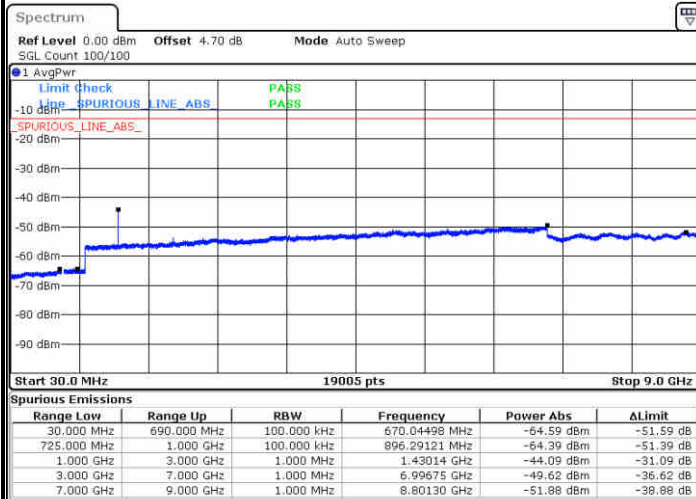
Date: 10 MAR 2020 20:58:18

Middle Channel / 64QAM



Date: 10 MAR 2020 20:58:12

Highest Channel / 64QAM

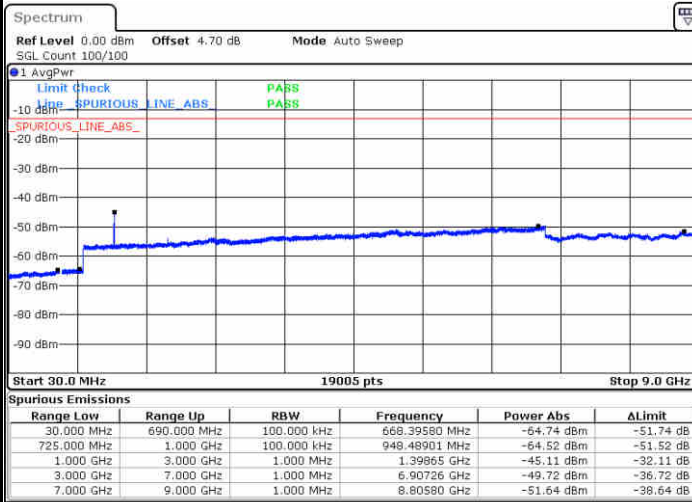


Date: 10 MAR 2020 21:00:07



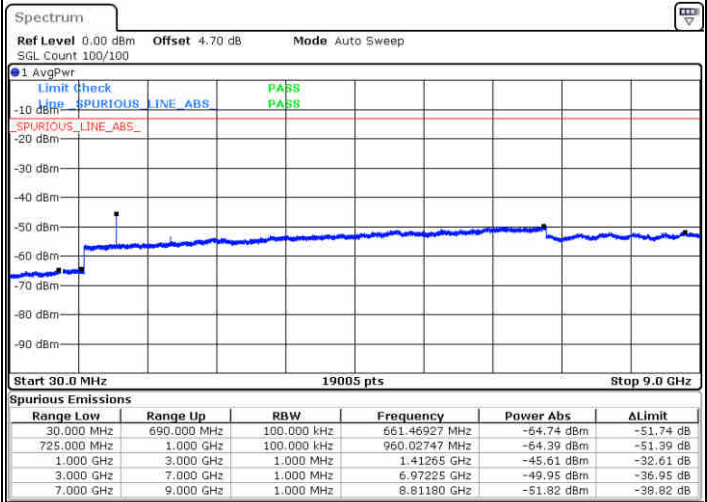
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



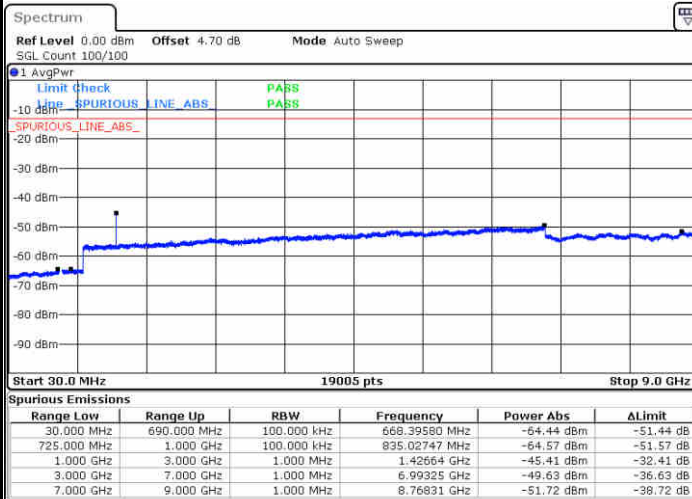
Date: 10 MAR 2020 21:01:01

Middle Channel / 64QAM



Date: 10 MAR 2020 21:01:55

Highest Channel / 64QAM

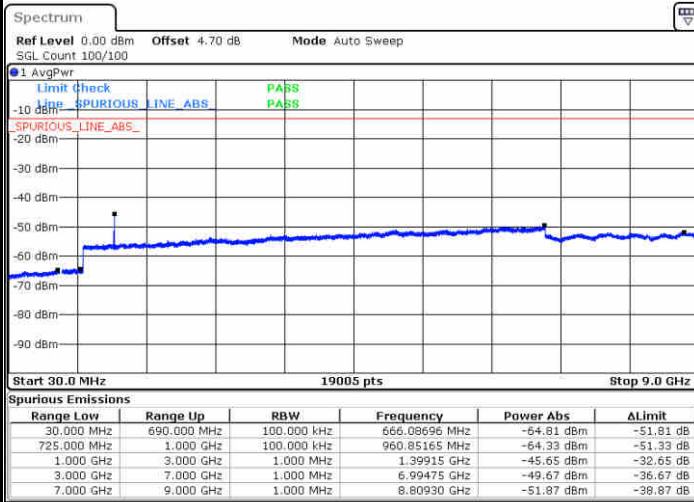


Date: 10 MAR 2020 21:02:50



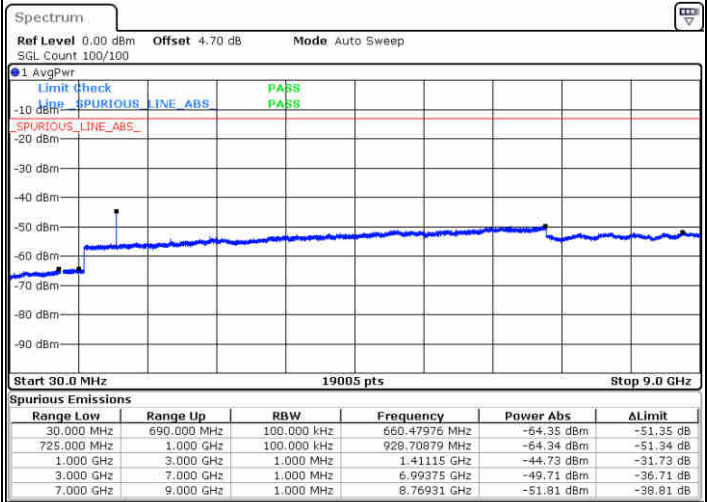
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



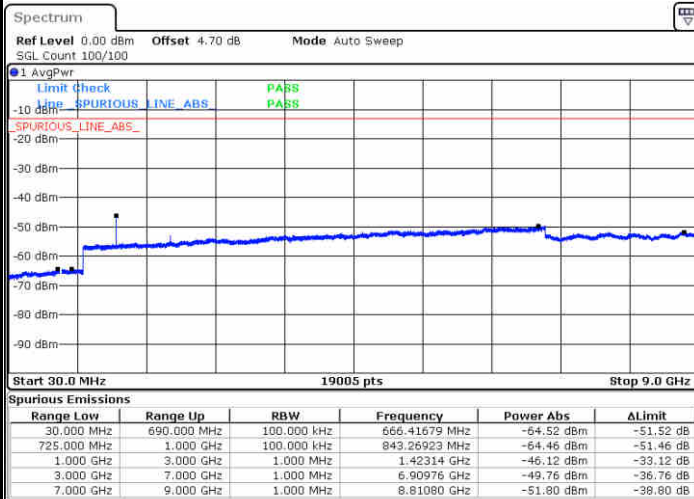
Date: 10 MAR 2020 21:14:42

Middle Channel / 64QAM



Date: 10 MAR 2020 21:15:36

Highest Channel / 64QAM

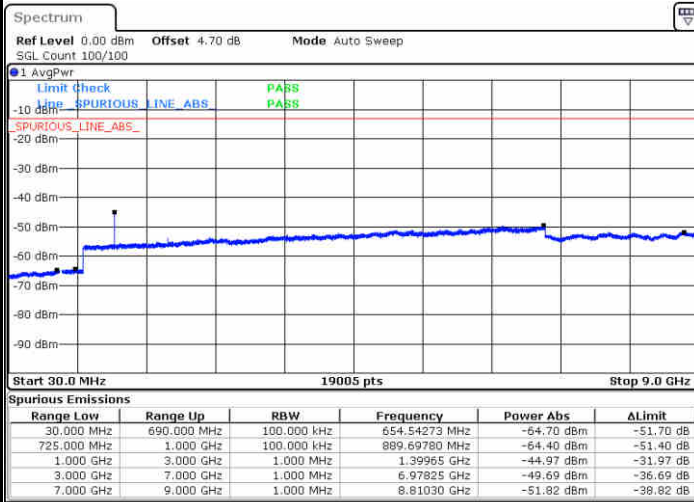


Date: 10 MAR 2020 21:16:31



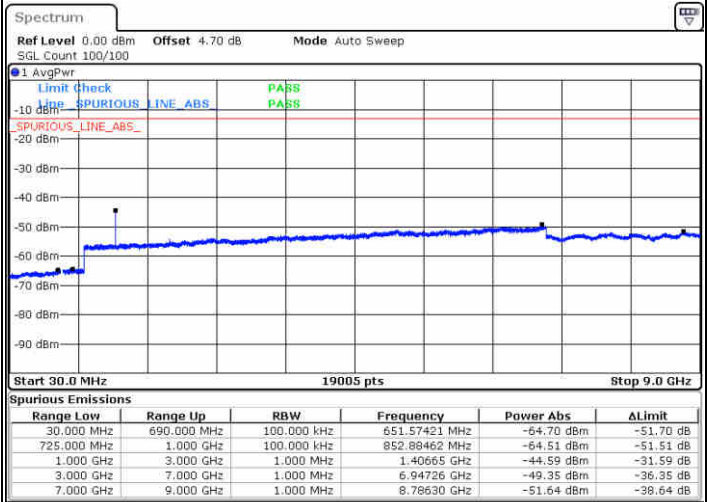
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



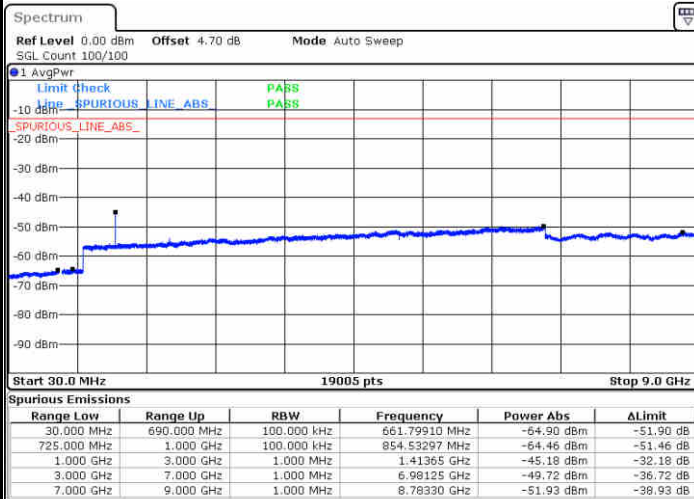
Date: 10 MAR 2020 21:17:25

Middle Channel / 64QAM



Date: 10 MAR 2020 21:18:19

Highest Channel / 64QAM



Date: 10 MAR 2020 21:19:14

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	0.0031	PASS
40	Normal Voltage	0.0055	
30	Normal Voltage	0.0071	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0068	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0082	
-30	Normal Voltage	0.0073	
20	Maximum Voltage	0.0083	
20	Normal Voltage	0.0020	
20	Battery End Point	0.0112	

Note:

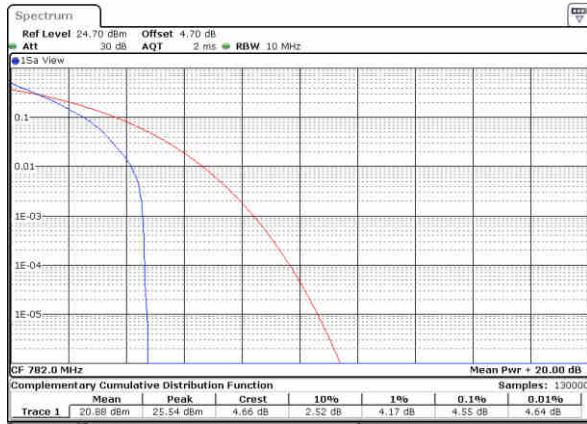
1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



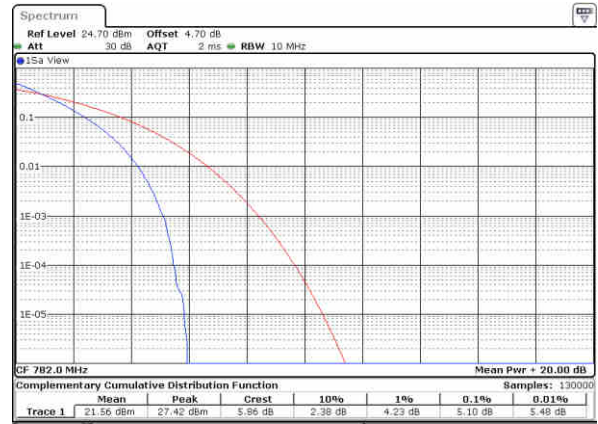
LTE Band 13

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	4.55	5.10	5.28	5.86	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	6.17	6.12	-	-	
Highest CH	-	-	-	-	

LTE Band 13 / 10MHz / QPSK
Middle Channel / 1RB


Date: 4 FEB 2020 09:33:06

Middle Channel / Full RB


Date: 4 FEB 2020 09:33:34

LTE Band 13 / 10MHz / 16QAM
Middle Channel / 1RB


Date: 4 FEB 2020 09:33:17

Middle Channel / Full RB


Date: 4 FEB 2020 09:33:25

LTE Band 13 / 10MHz / 64QAM
Middle Channel / 1RB


Date: 10 MAR 2020 21:53:44

Middle Channel / Full RB


Date: 10 MAR 2020 21:53:58

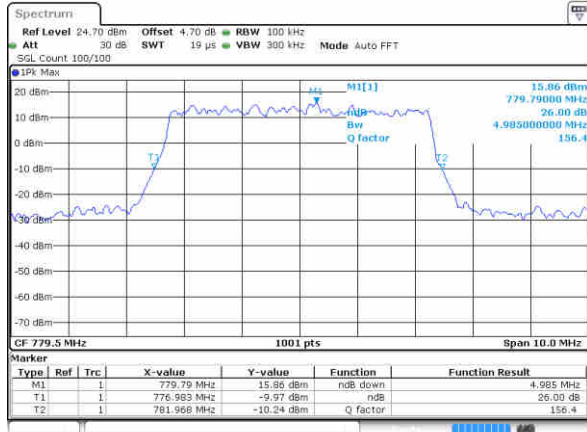
**26dB Bandwidth**

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	-	-	-	-	4.99	5.07	-	-	-	-	-	-
Middle CH	-	-	-	-	4.97	5.03	10.01	9.83	-	-	-	-
Highest CH	-	-	-	-	5.11	5.06	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	5.07	-	-	-	-	-	-	-
Middle CH	-	-	-	-	5.04	-	10.15	-	-	-	-	-
Highest CH	-	-	-	-	4.96	-	-	-	-	-	-	-



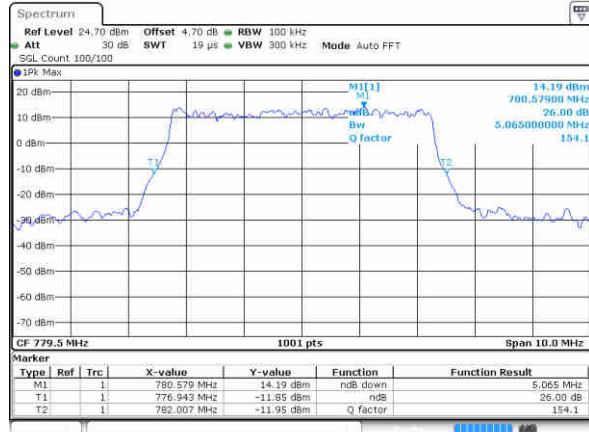
LTE Band 13

Lowest Channel / 5MHz / QPSK



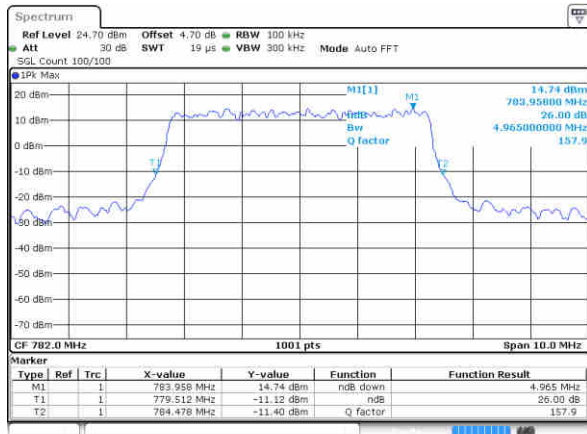
Date: 4 FEB 2020 08:46:09

Lowest Channel / 5MHz / 16QAM



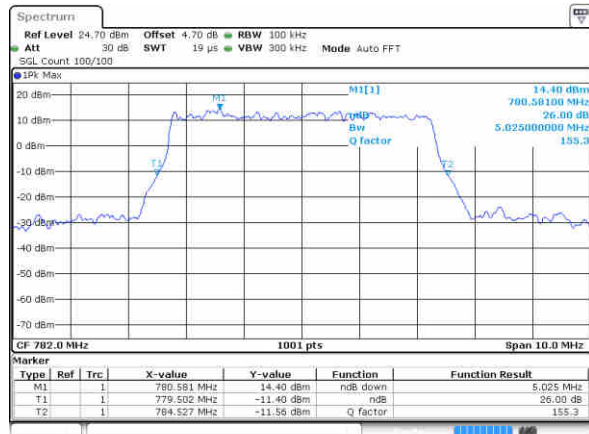
Date: 4 FEB 2020 08:46:19

Middle Channel / 5MHz / QPSK



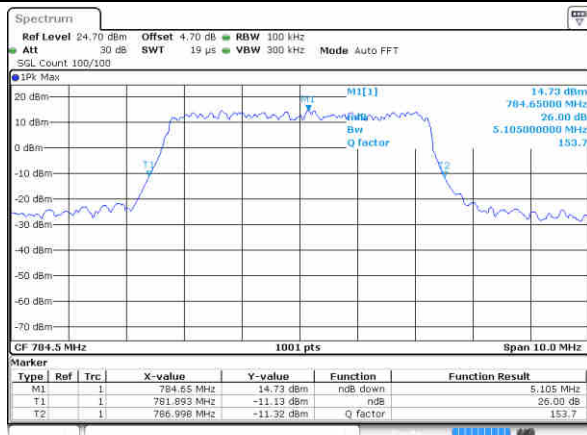
Date: 4 FEB 2020 08:55:08

Middle Channel / 5MHz / 16QAM



Date: 4 FEB 2020 08:55:16

Highest Channel / 5MHz / QPSK



Date: 4 FEB 2020 08:57:48

Highest Channel / 5MHz / 16QAM

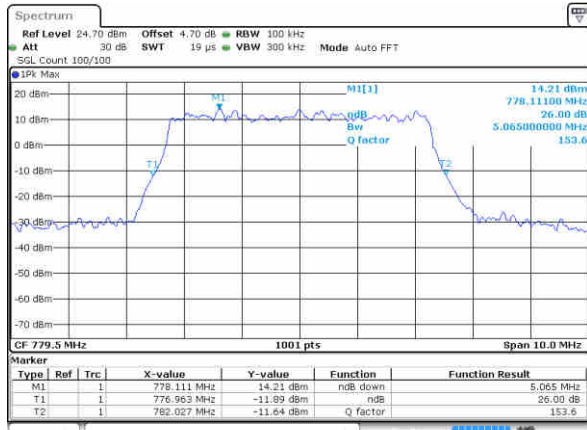


Date: 4 FEB 2020 08:57:37



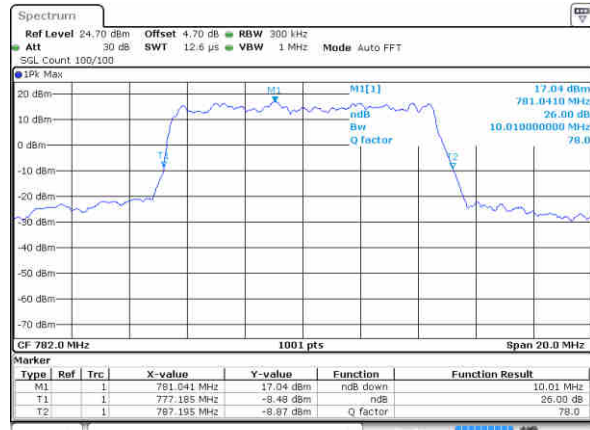
LTE Band 13

Lowest Channel / 5MHz / 64QAM



Date: 10 MAR 2020 21:31:57

Middle Channel / 10MHz / QPSK



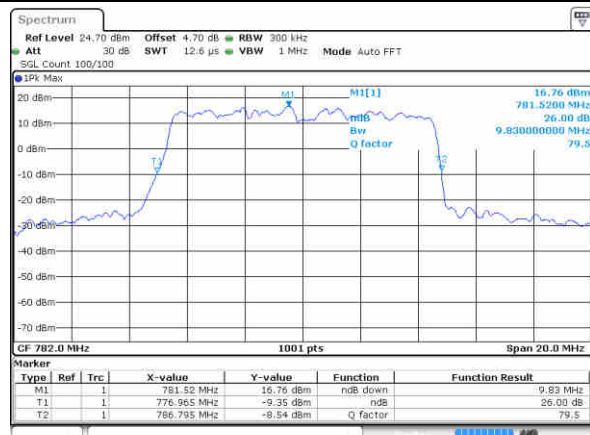
Date: 4 FEB 2020 09:08:36

Middle Channel / 5MHz / 64QAM



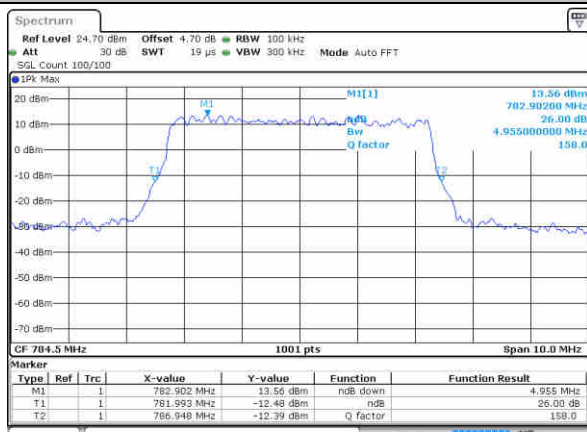
Date: 10 MAR 2020 21:32:07

Middle Channel / 10MHz / 16QAM



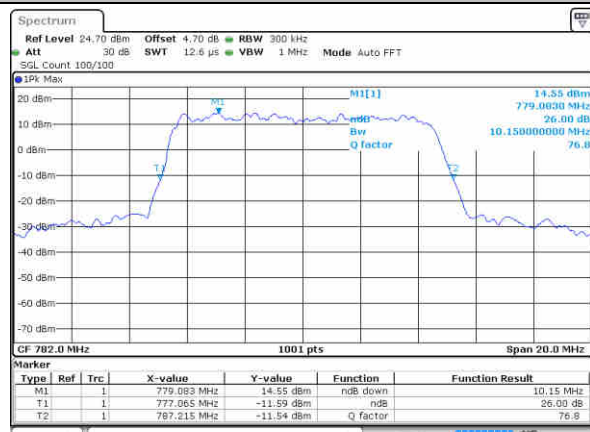
Date: 4 FEB 2020 09:08:26

Highest Channel / 5MHz / 64QAM



Date: 10 MAR 2020 21:32:17

Middle Channel / 10MHz / 64QAM



Date: 10 MAR 2020 21:41:49

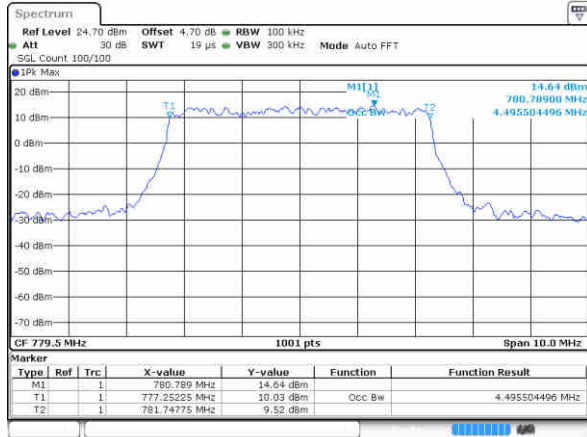
**Occupied Bandwidth**

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	-	-	-	-	4.50	4.49	-	-	-	-	-	-
Middle CH	-	-	-	-	4.51	4.52	9.15	9.03	-	-	-	-
Highest CH	-	-	-	-	4.50	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	-	-	-	-	4.51	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.51	-	9.05	-	-	-	-	-
Highest CH	-	-	-	-	4.53	-	-	-	-	-	-	-

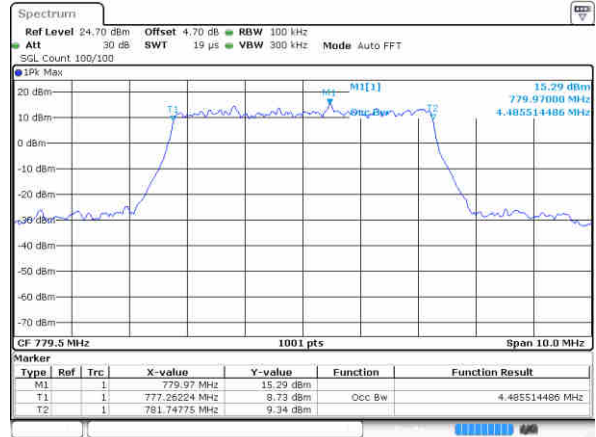


LTE Band 13

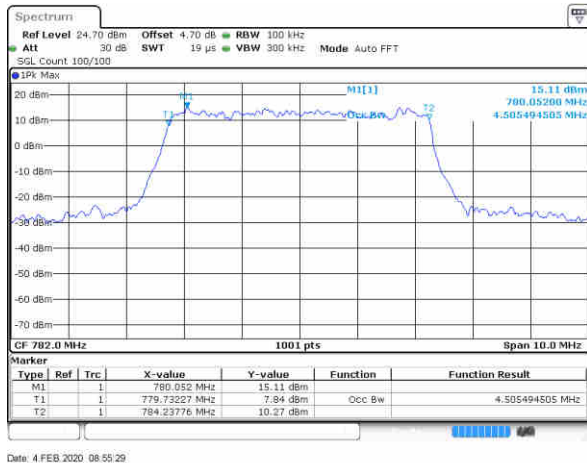
Lowest Channel / 5MHz / QPSK



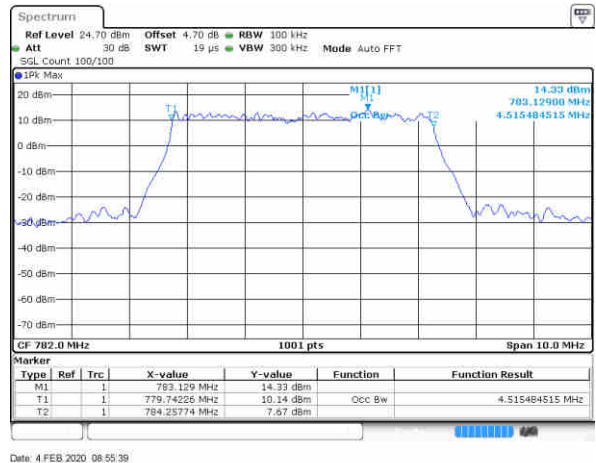
Lowest Channel / 5MHz / 16QAM



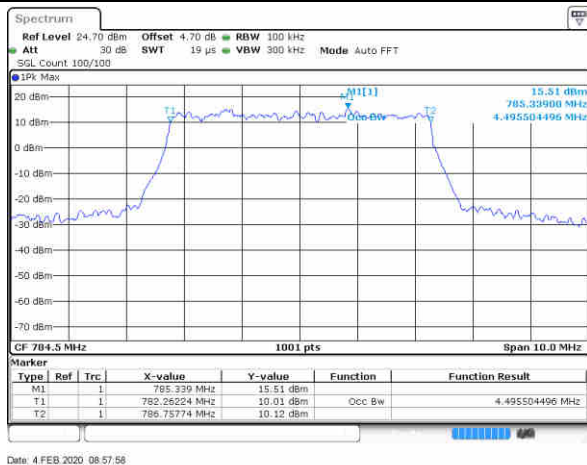
Middle Channel / 5MHz / QPSK



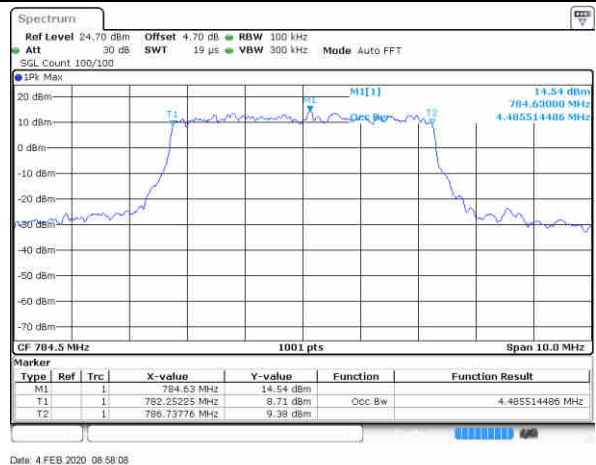
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



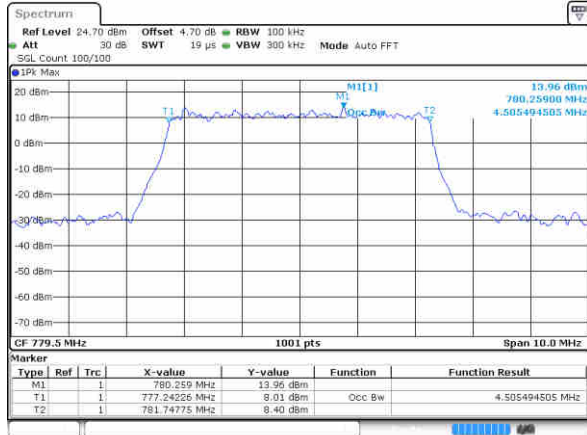
Highest Channel / 5MHz / 16QAM



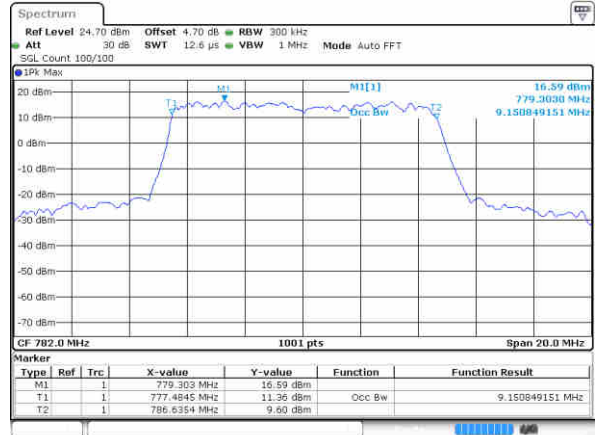


LTE Band 13

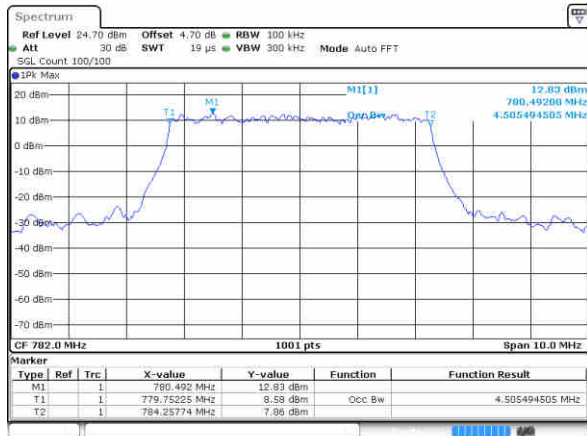
Lowest Channel / 5MHz / 64QAM



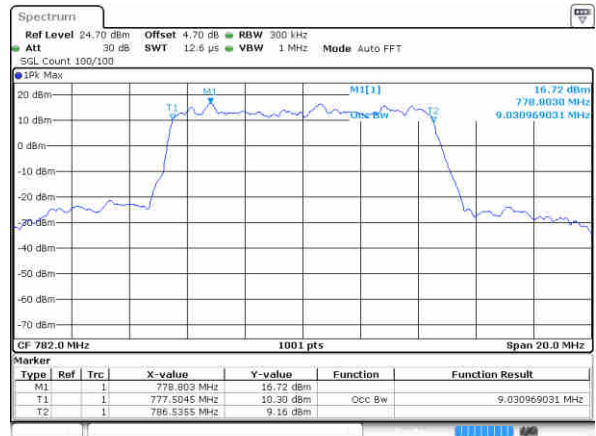
Middle Channel / 10MHz / QPSK



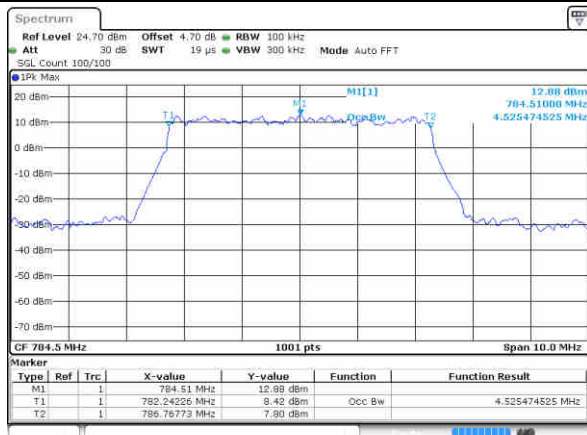
Middle Channel / 5MHz / 64QAM



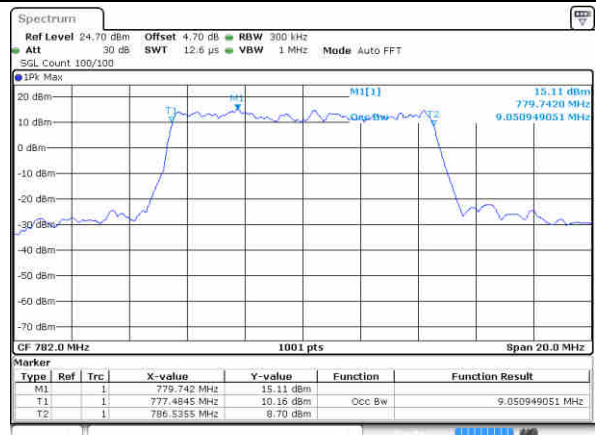
Middle Channel / 10MHz / 16QAM

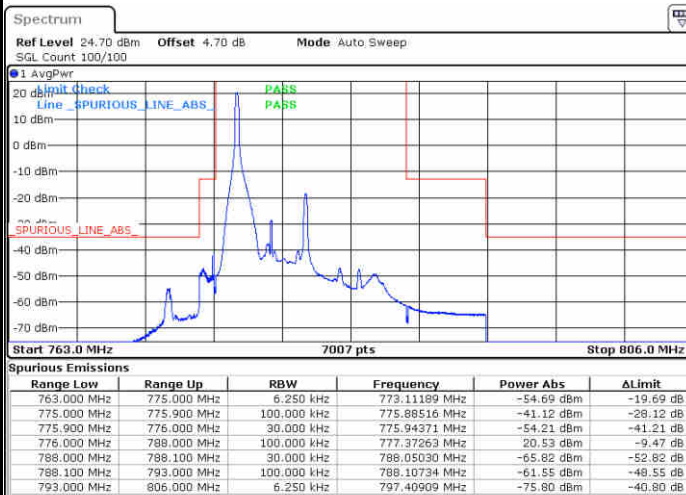


Highest Channel / 5MHz / 64QAM

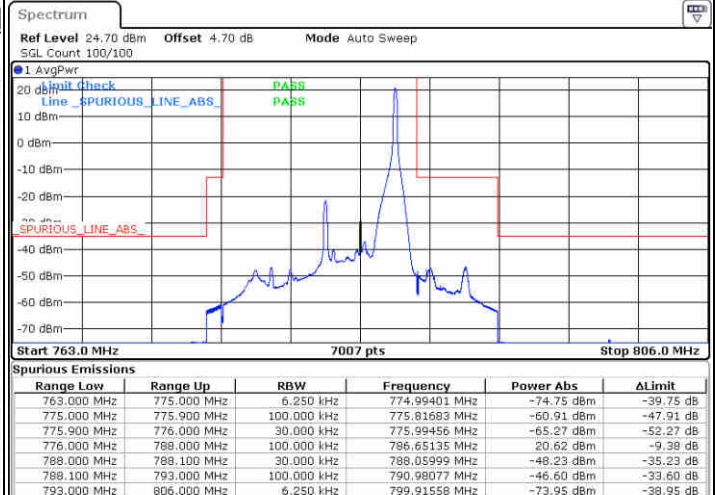


Middle Channel / 10MHz / 64QAM

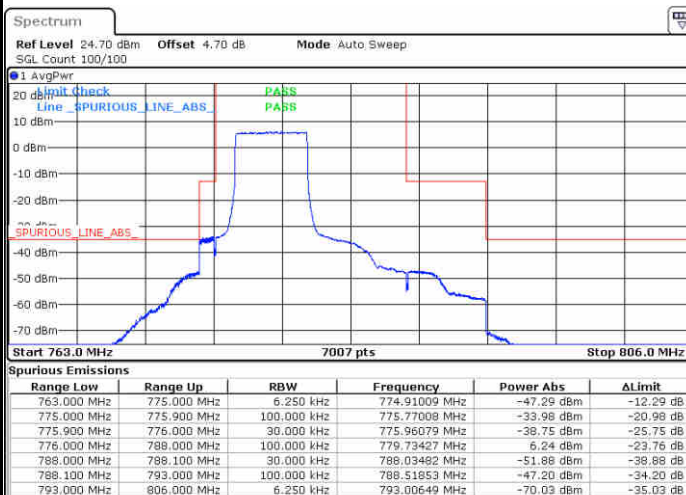


**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB**

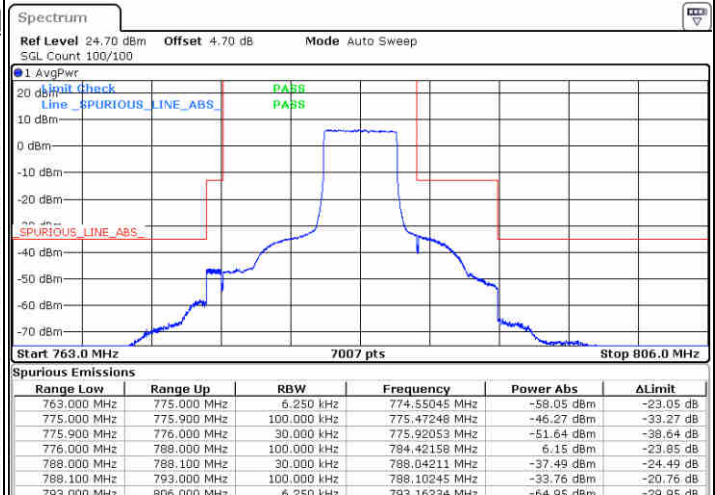
Date: 4 FEB 2020 08:51:32

Highest Band Edge / 1 RB

Date: 4 FEB 2020 09:03:01

Lowest Band Edge / Full RB

Date: 4 FEB 2020 08:49:54

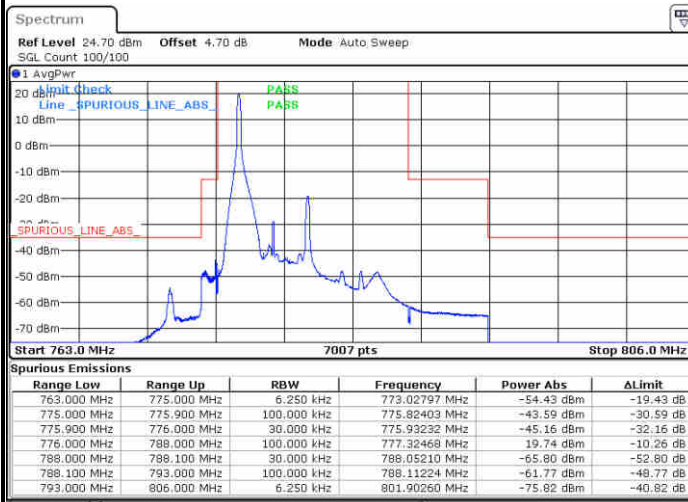
Highest Band Edge / Full RB

Date: 4 FEB 2020 09:01:23

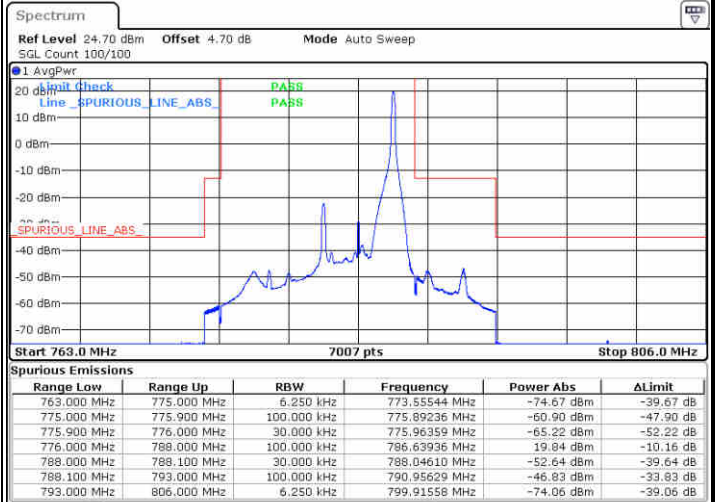


LTE Band 13 / 5MHz / 16QAM

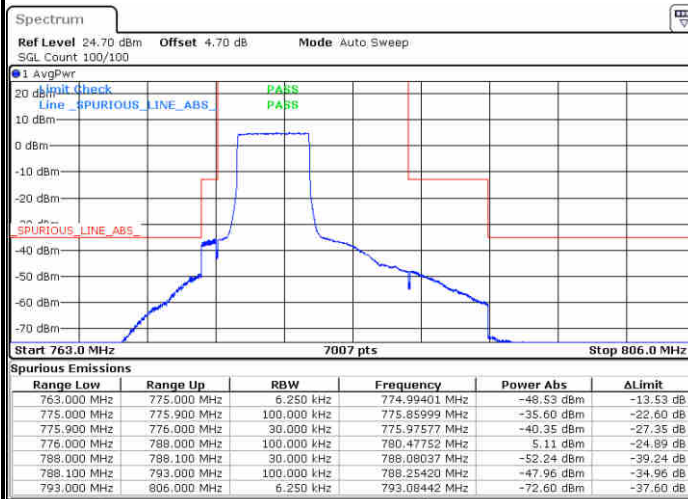
Lowest Band Edge / 1 RB



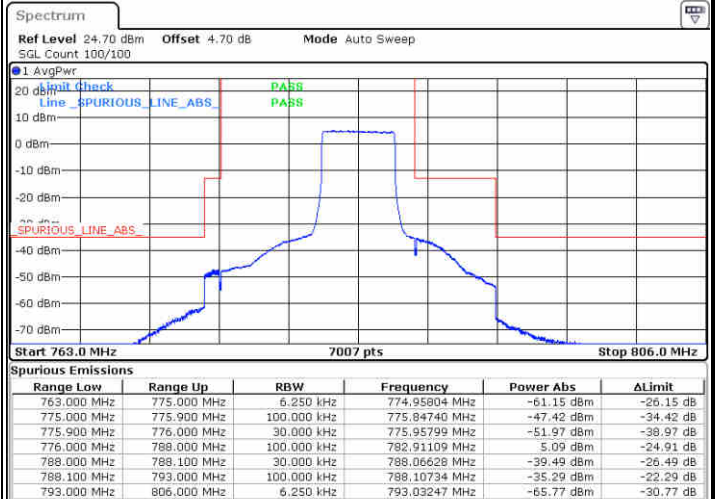
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



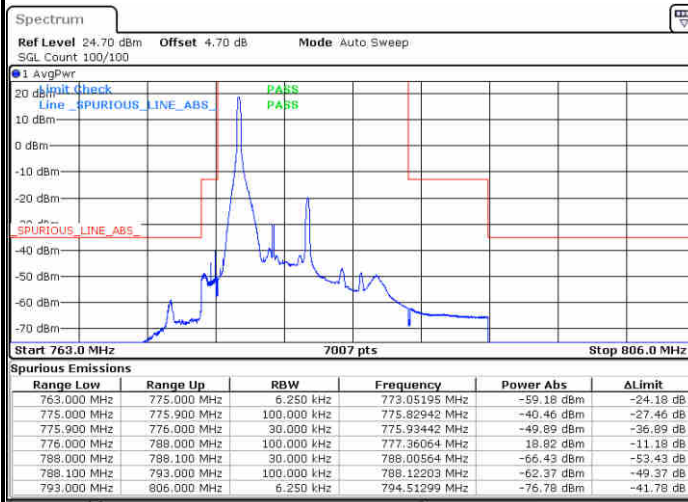
Highest Band Edge / Full RB





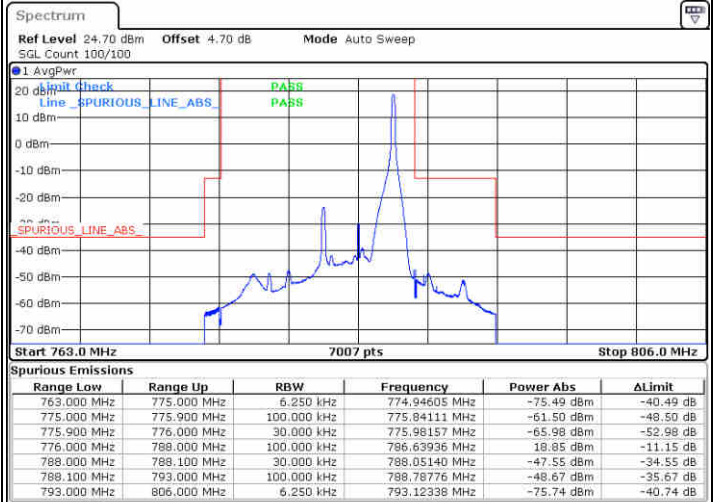
LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB



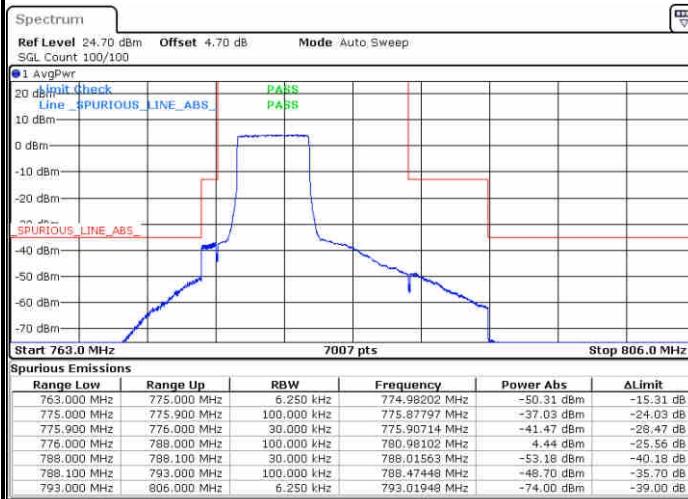
Date: 10.MAR.2020 21:33:55

Highest Band Edge / 1 RB



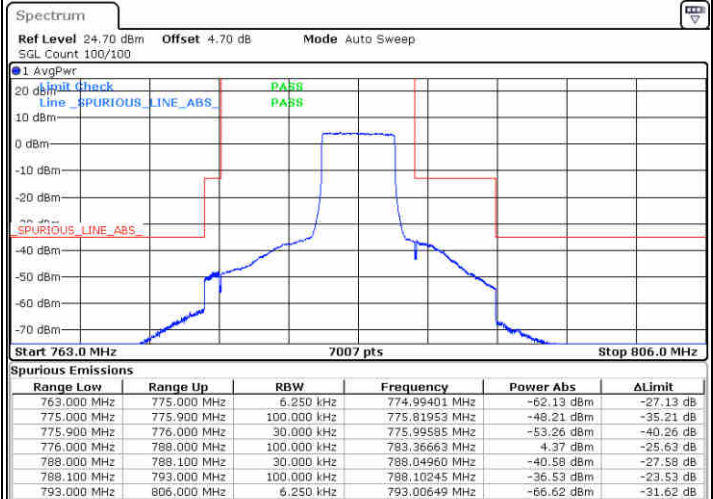
Date: 10.MAR.2020 21:38:47

Lowest Band Edge / Full RB



Date: 10.MAR.2020 21:35:32

Highest Band Edge / Full RB

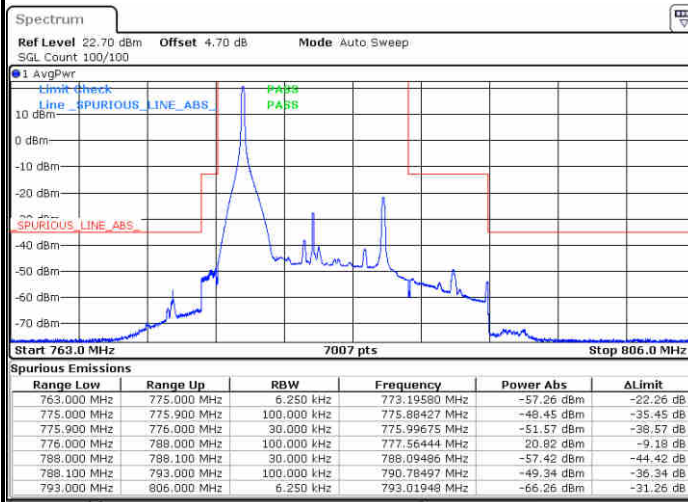


Date: 10.MAR.2020 21:37:10

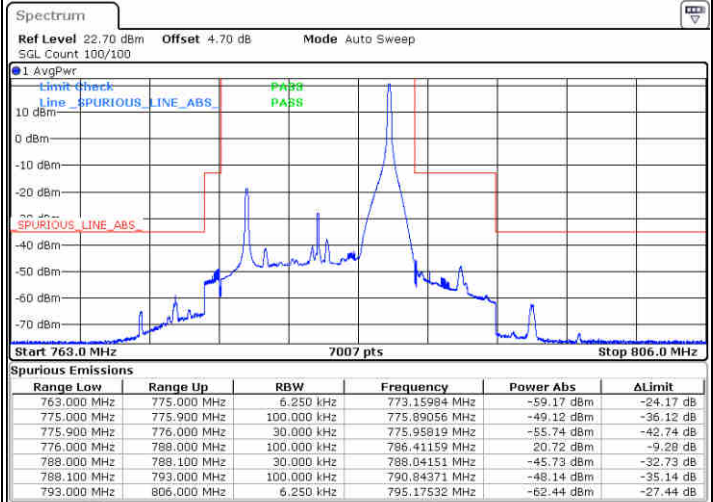


LTE Band 13 / 10MHz / QPSK

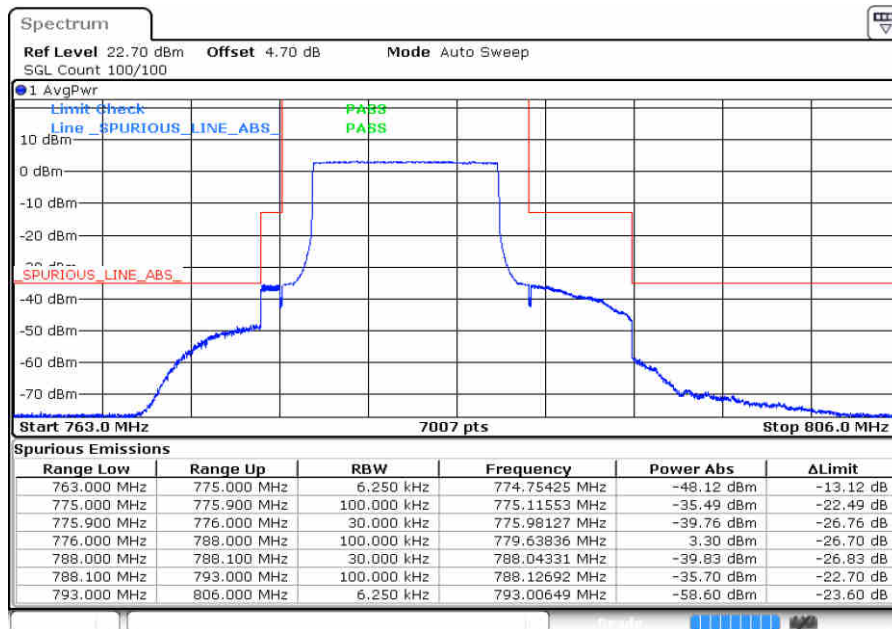
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



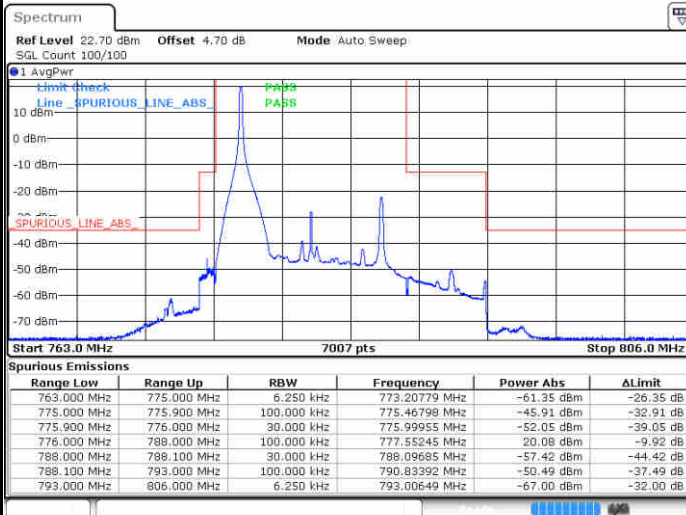
Band Edge / Full RB



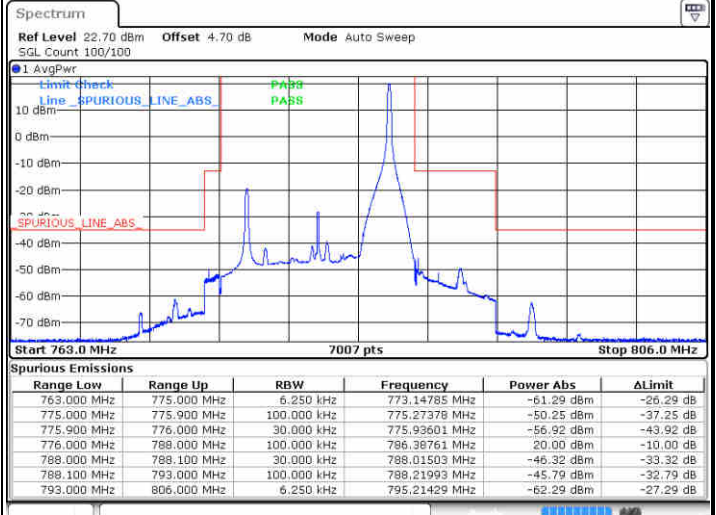


LTE Band 13 / 10MHz / 16QAM

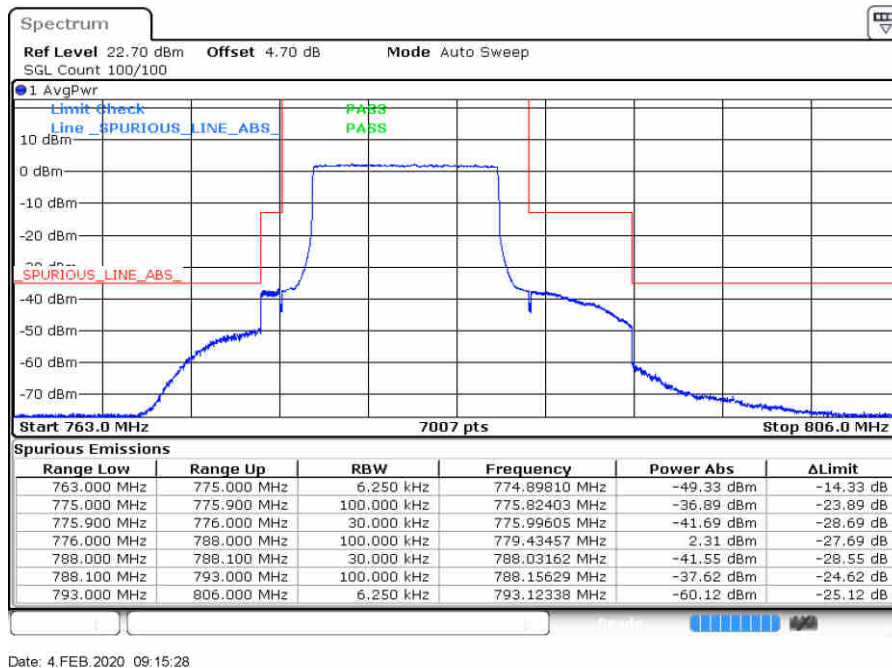
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



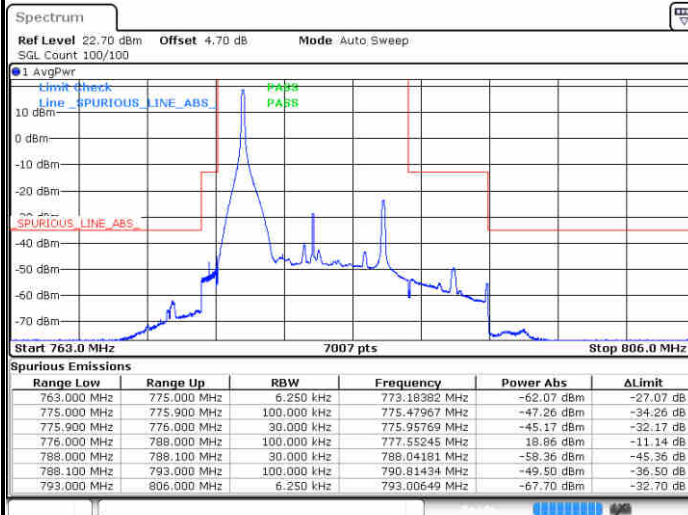
Band Edge / Full RB



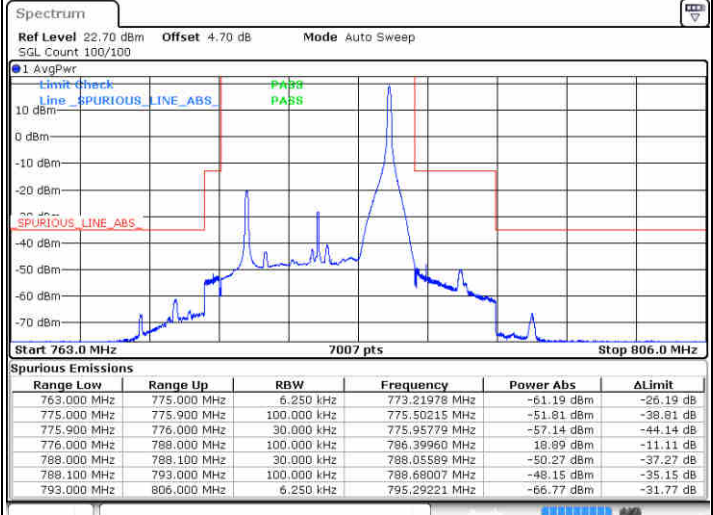


LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Band Edge / Full RB

