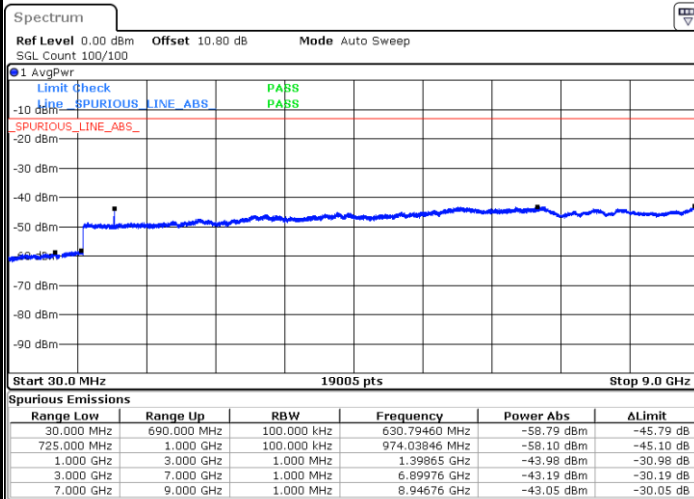




Conducted Spurious Emission

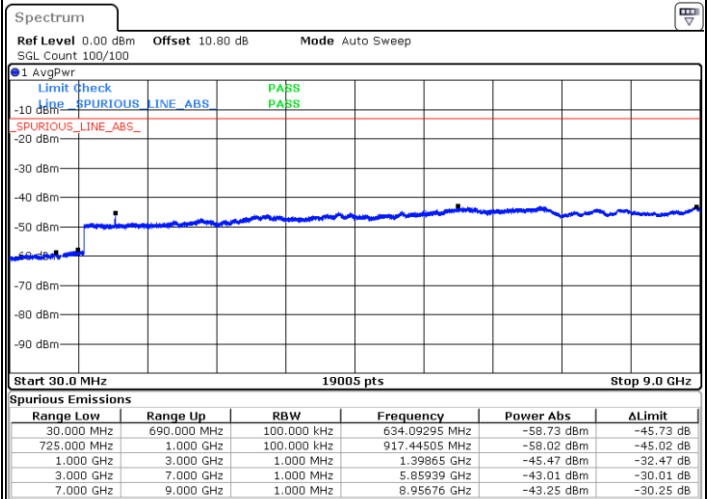
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



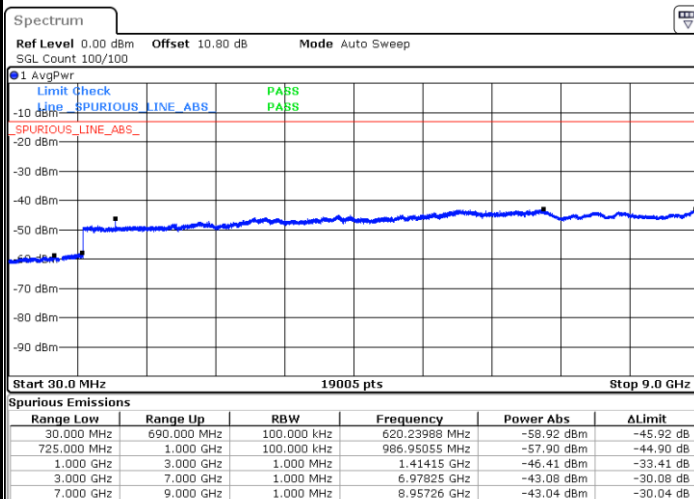
Date: 18.JUL.2020 14:19:40

Lowest Channel / 16QAM



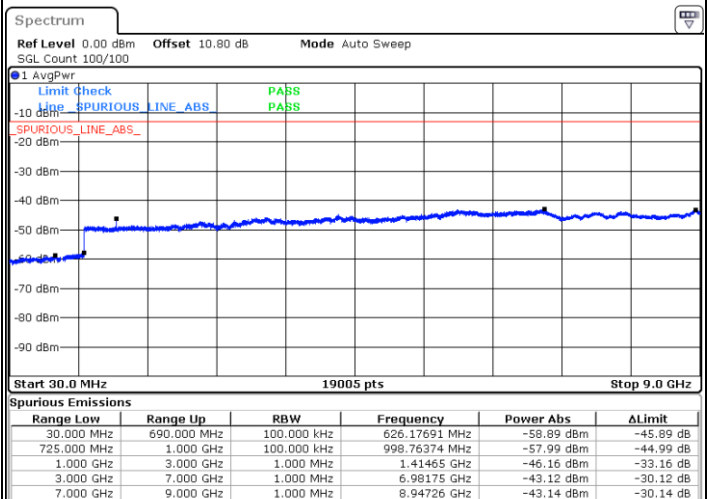
Date: 18.JUL.2020 14:21:00

Middle Channel / QPSK



Date: 18.JUL.2020 14:16:26

Middle Channel / 16QAM

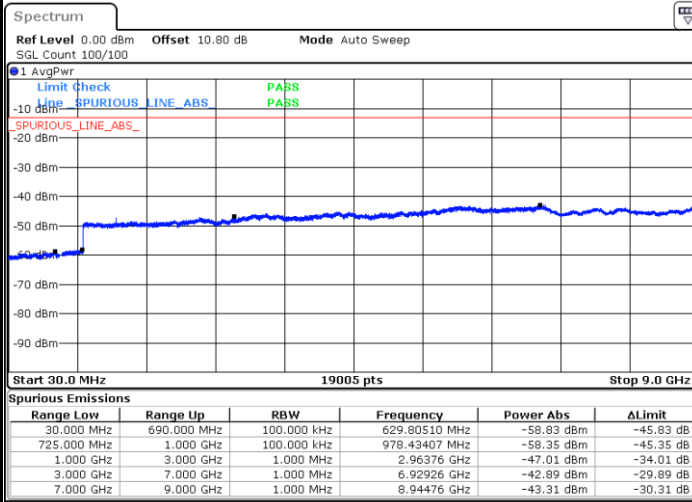


Date: 18.JUL.2020 14:17:08



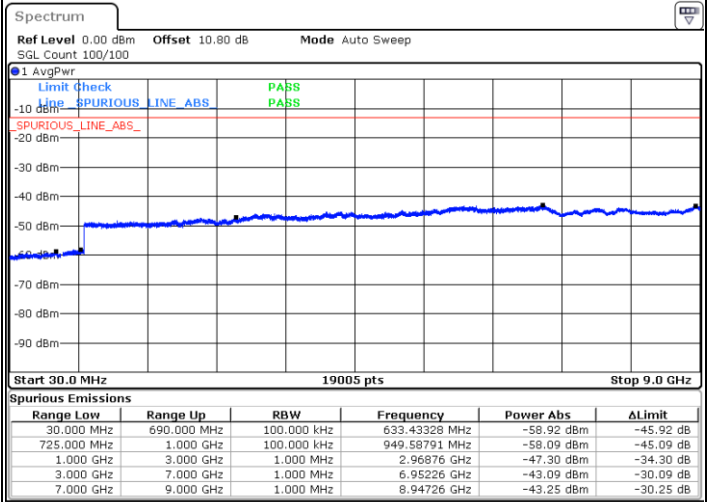
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 18.JUL.2020 14:22:56

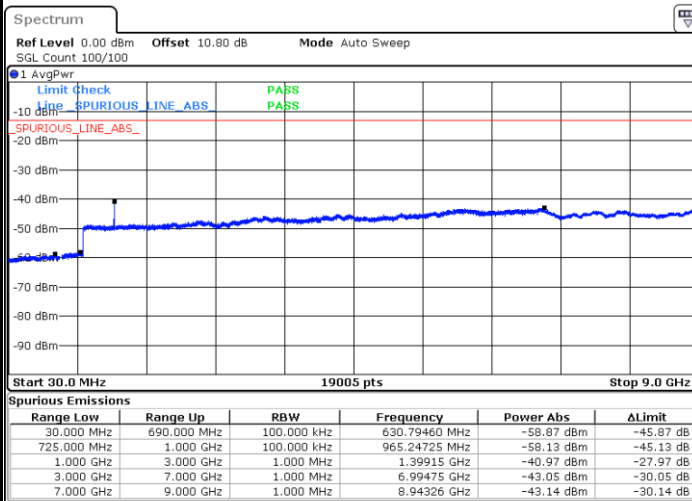
Highest Channel / 16QAM



Date: 18.JUL.2020 14:25:04

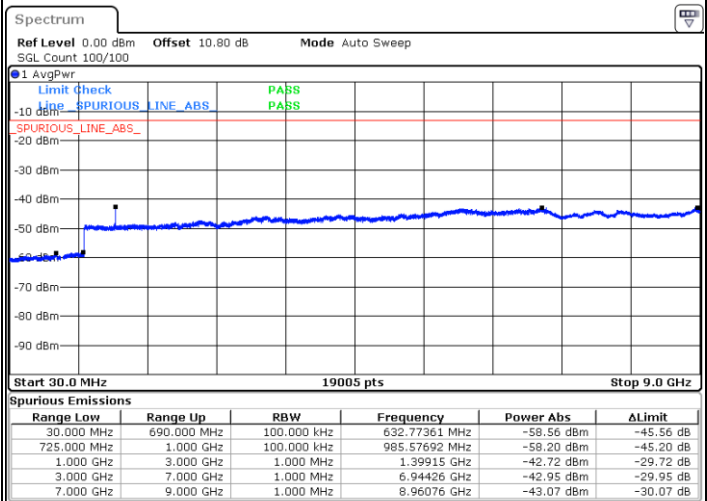
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 18.JUL.2020 14:31:08

Lowest Channel / 16QAM

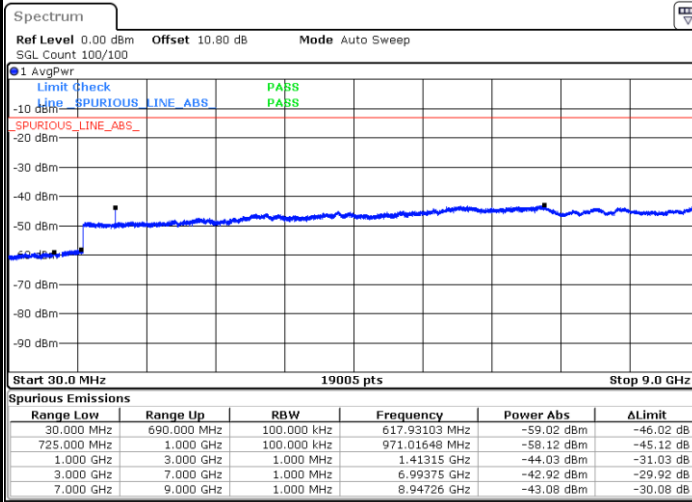


Date: 18.JUL.2020 14:33:27



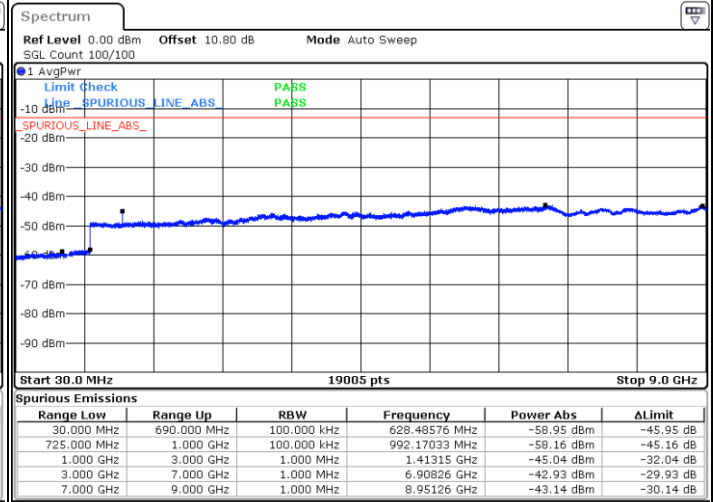
LTE Band 12 / 3MHz

Middle Channel / QPSK



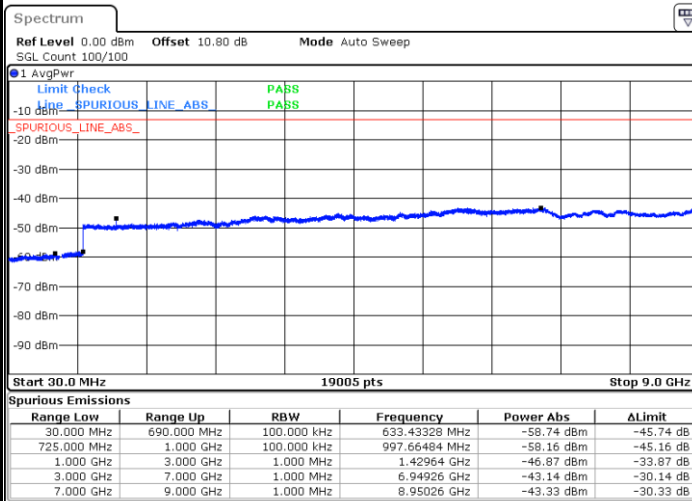
Date: 18.JUL.2020 14:27:44

Middle Channel / 16QAM



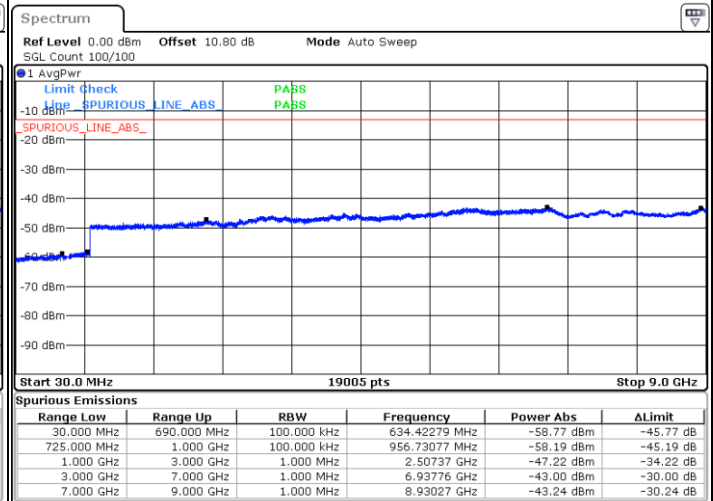
Date: 18.JUL.2020 14:28:23

Highest Channel / QPSK



Date: 18.JUL.2020 14:35:18

Highest Channel / 16QAM

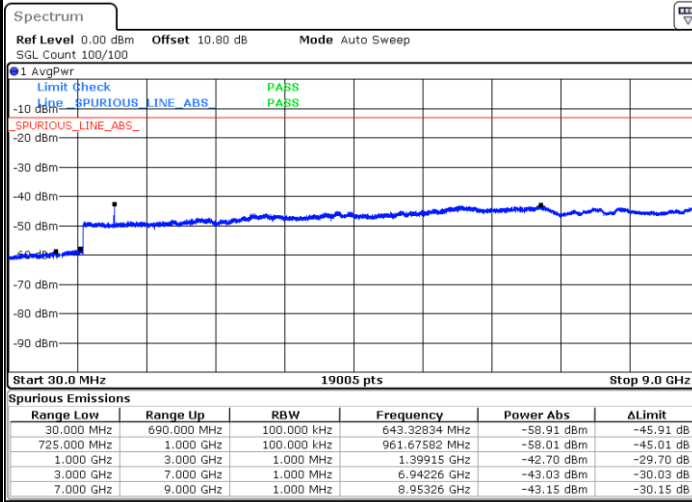


Date: 18.JUL.2020 14:37:32



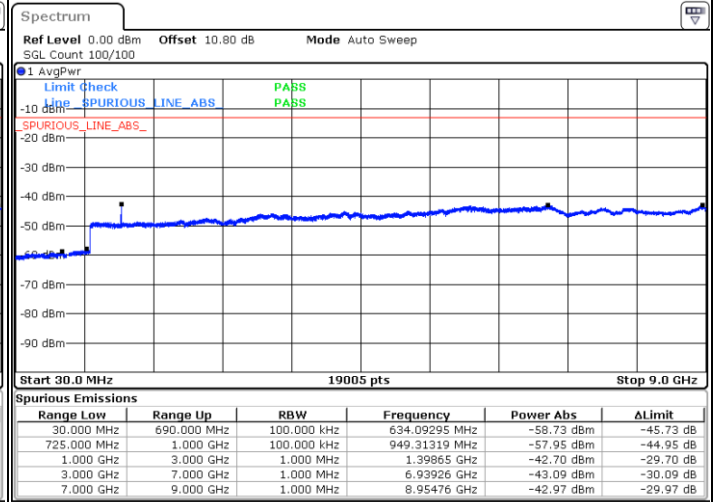
LTE Band 12 / 5MHz

Lowest Channel / QPSK



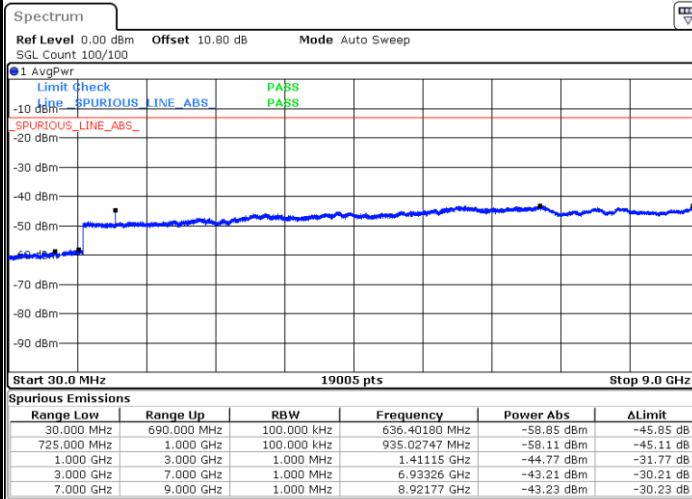
Date: 18.JUL.2020 14:44:23

Lowest Channel / 16QAM



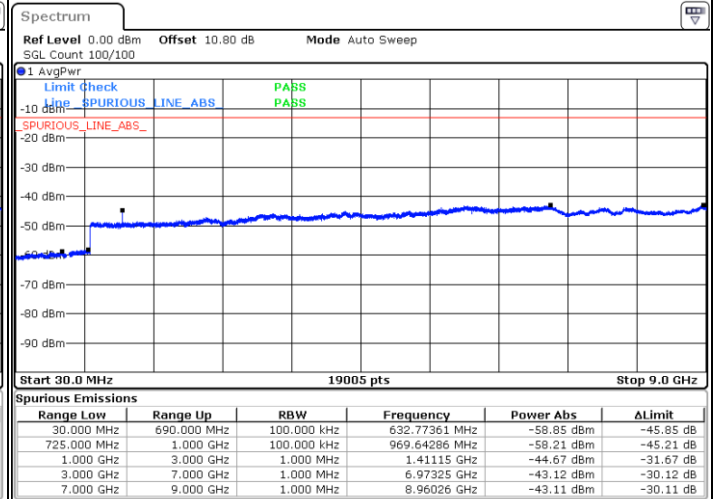
Date: 18.JUL.2020 14:45:46

Middle Channel / QPSK



Date: 18.JUL.2020 14:42:23

Middle Channel / 16QAM

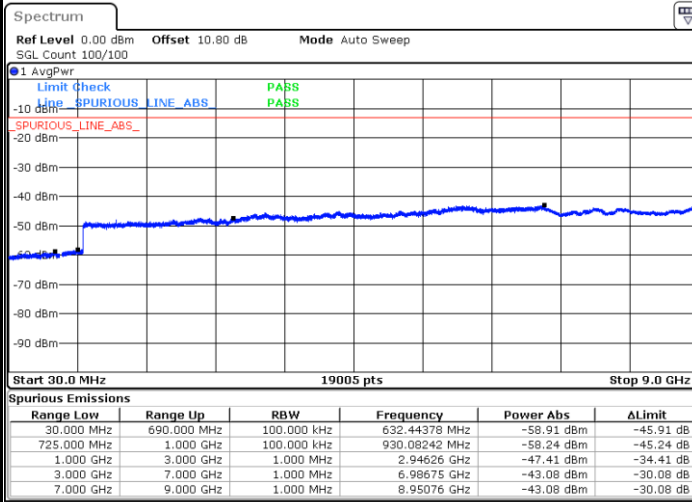


Date: 18.JUL.2020 14:40:27



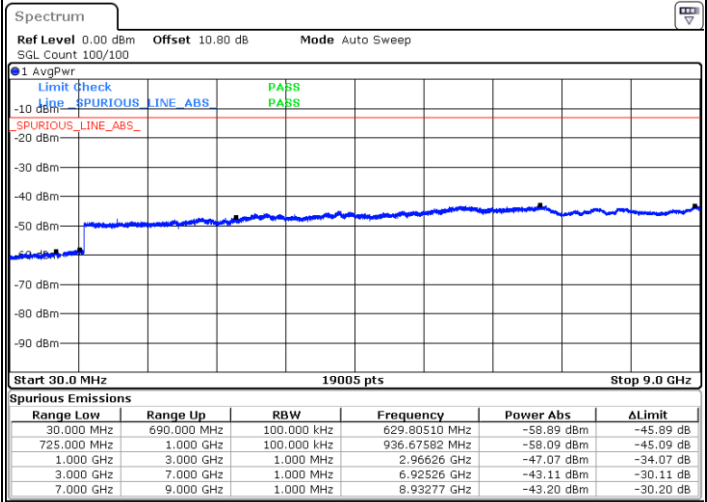
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 18.JUL.2020 14:47:40

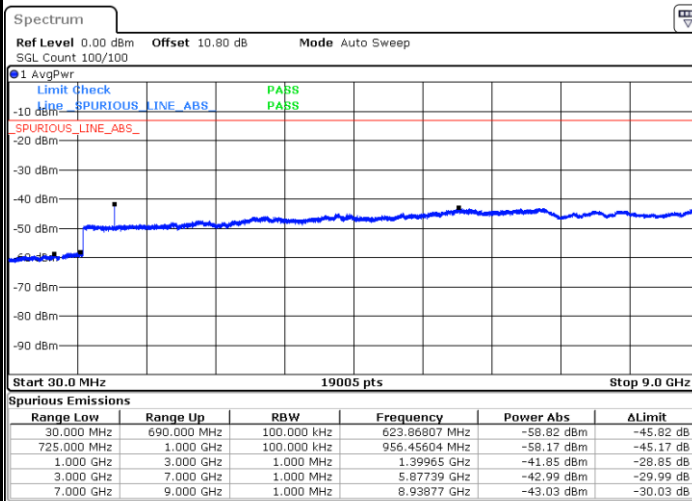
Highest Channel / 16QAM



Date: 18.JUL.2020 14:49:34

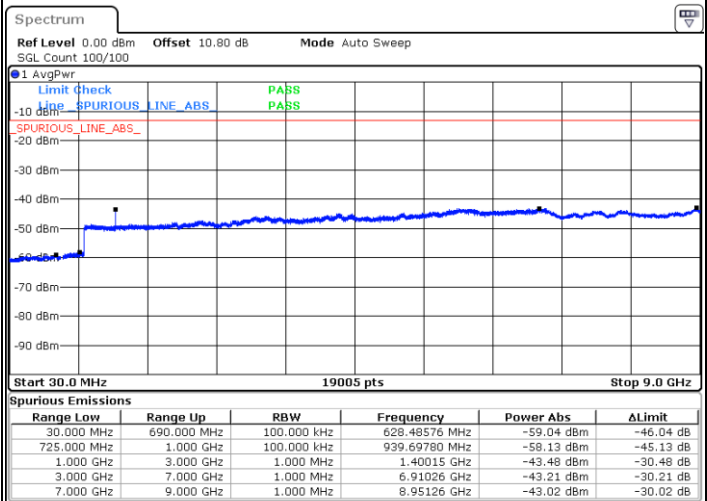
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 18.JUL.2020 14:07:53

Lowest Channel / 16QAM

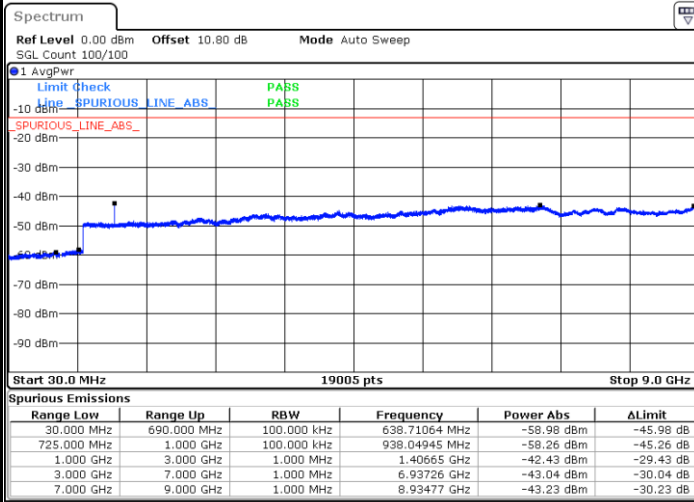


Date: 18.JUL.2020 14:09:28



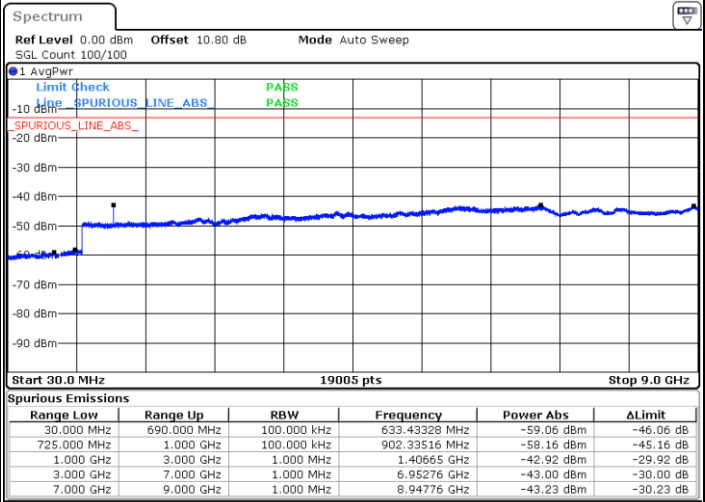
LTE Band 12 / 10MHz

Middle Channel / QPSK



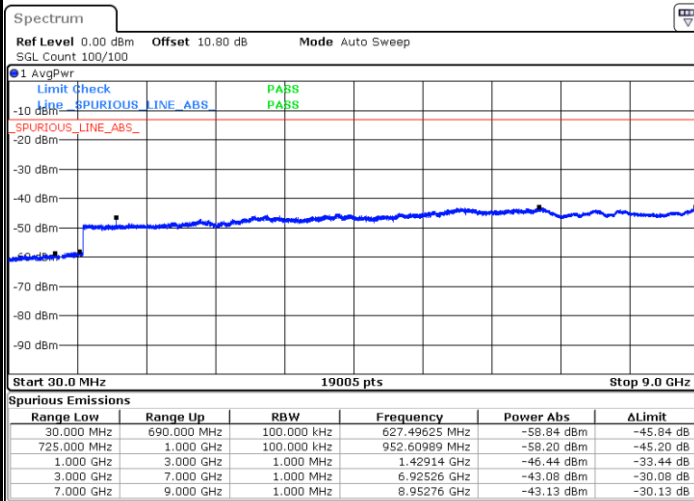
Date: 18.JUL.2020 14:02:24

Middle Channel / 16QAM



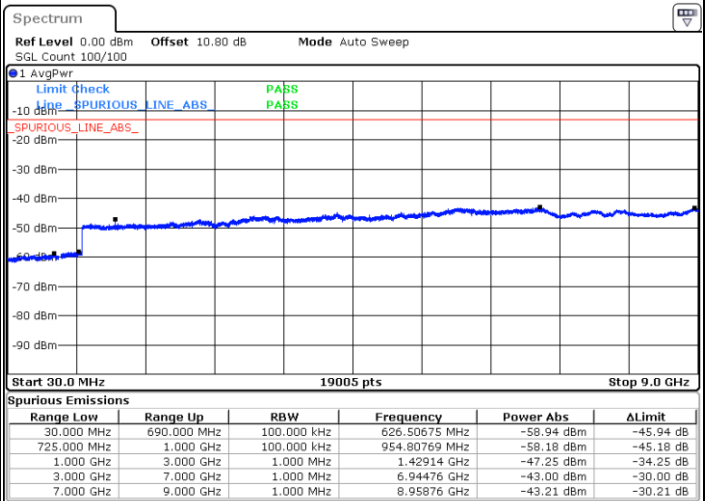
Date: 18.JUL.2020 14:03:03

Highest Channel / QPSK



Date: 18.JUL.2020 14:11:47

Highest Channel / 16QAM



Date: 18.JUL.2020 14:14:19

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	0.0254	PASS
40	Normal Voltage	0.0242	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0302	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0259	
-20	Normal Voltage	0.0277	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0252	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0236	

Note:

1. Normal Voltage =3.6 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =3.7 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

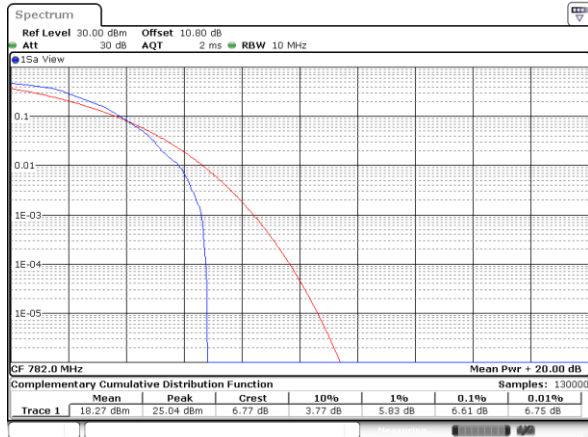
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	6.61	8.29	7.04	6.72	
Highest CH	-	-	-	-	

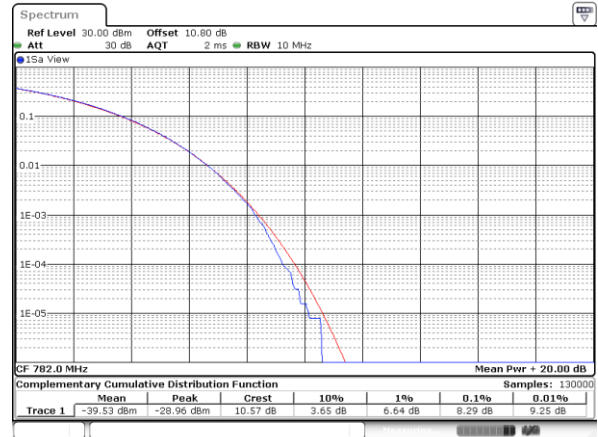


LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB

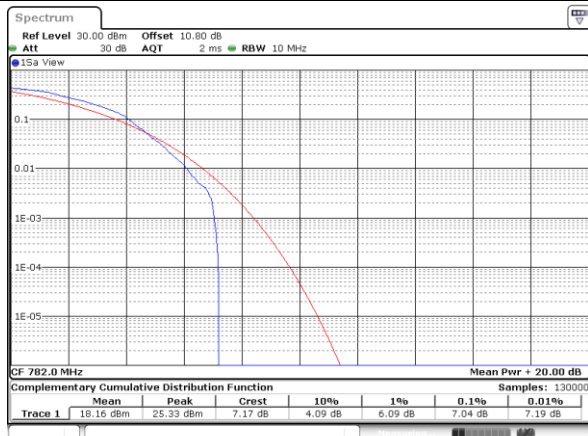


Middle Channel / Full RB

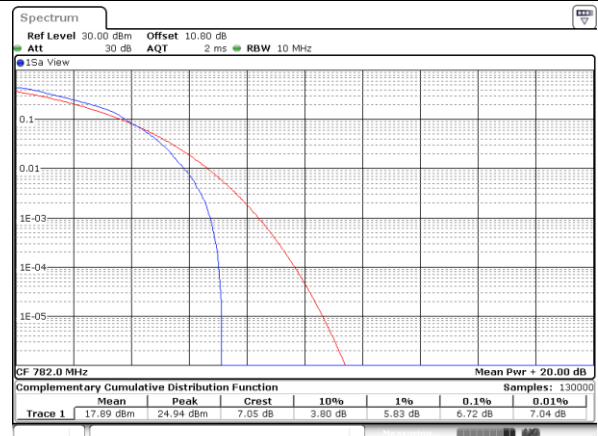


LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Middle Channel / Full RB



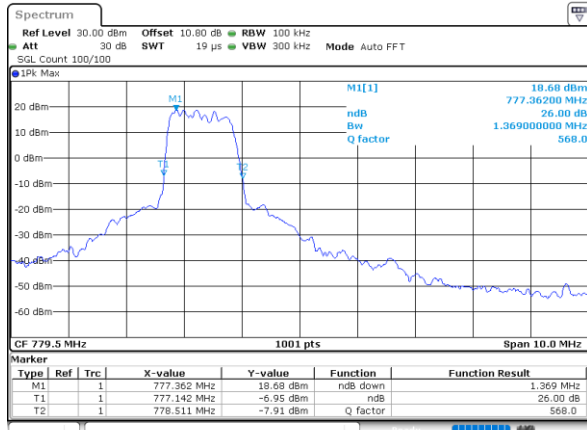
**26dB Bandwidth**

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	-	-	-	-	1.37	1.20	-	-	-	-	-	-
Middle CH	-	-	-	-	1.40	1.41	1.76	1.72	-	-	-	-
Highest CH	-	-	-	-	1.42	1.34	-	-	-	-	-	-



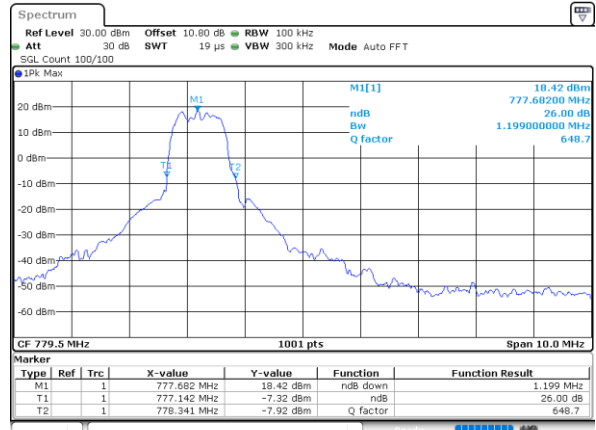
LTE Band 13

Lowest Channel / 5MHz / QPSK



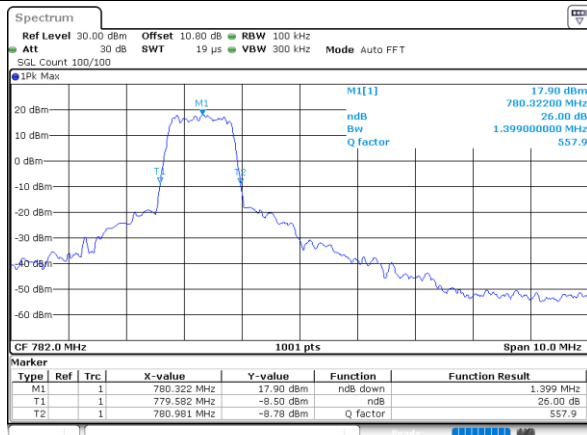
Date: 18.JUL.2020 15:03:21

Lowest Channel / 5MHz / 16QAM



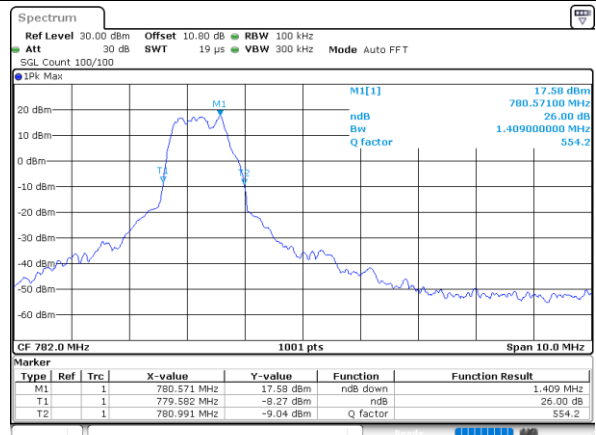
Date: 21.JUL.2020 13:45:05

Middle Channel / 5MHz / QPSK



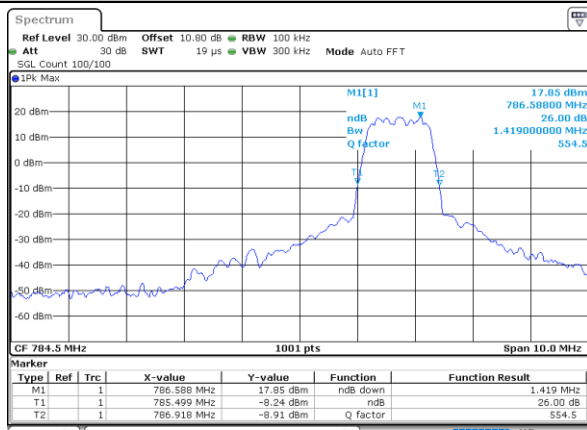
Date: 18.JUL.2020 14:53:04

Middle Channel / 5MHz / 16QAM



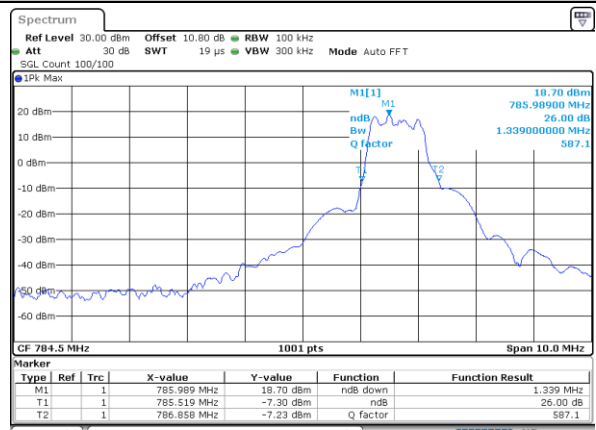
Date: 21.JUL.2020 13:43:13

Highest Channel / 5MHz / QPSK



Date: 18.JUL.2020 15:37:48

Highest Channel / 5MHz / 16QAM

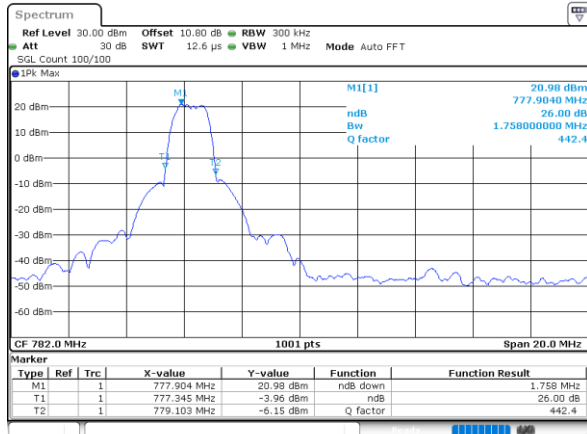


Date: 21.JUL.2020 13:48:58

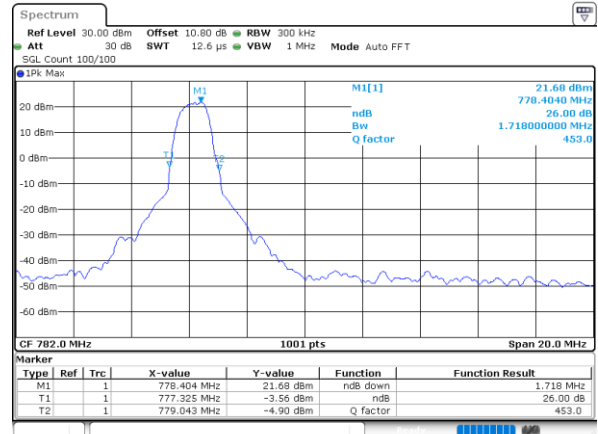


LTE Band 13

Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM



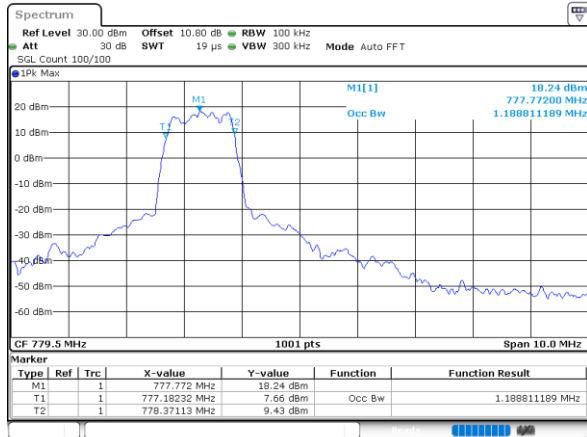
**Occupied Bandwidth**

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	-	-	-	-	1.19	1.02	-	-	-	-	-	-
Middle CH	-	-	-	-	1.18	1.04	1.42	1.30	-	-	-	-
Highest CH	-	-	-	-	1.19	1.04	-	-	-	-	-	-

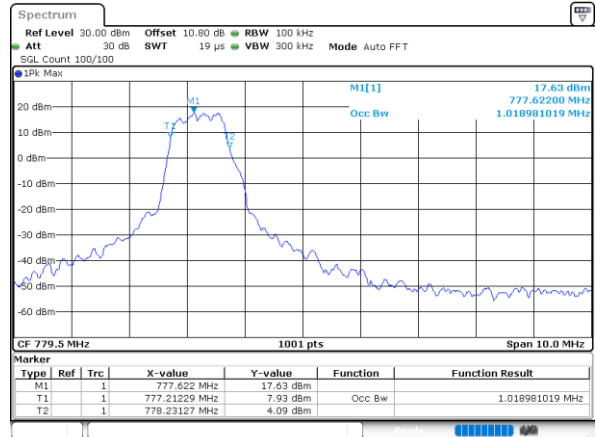


LTE Band 13

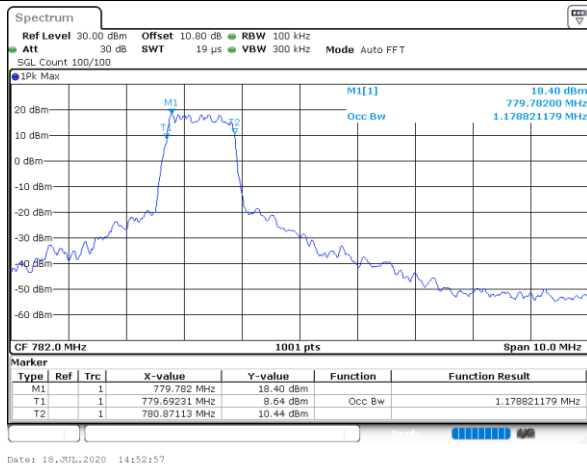
Lowest Channel / 5MHz / QPSK



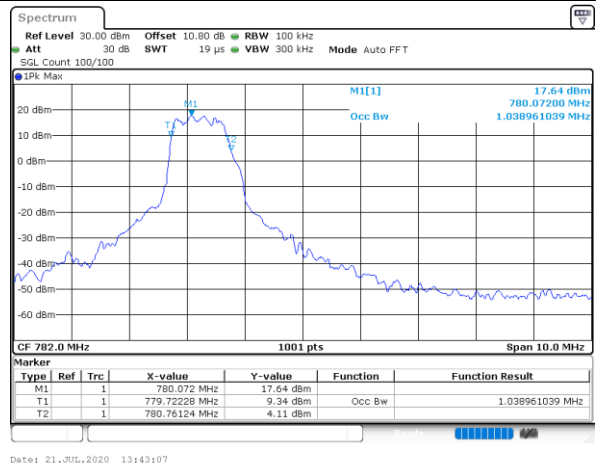
Lowest Channel / 5MHz / 16QAM



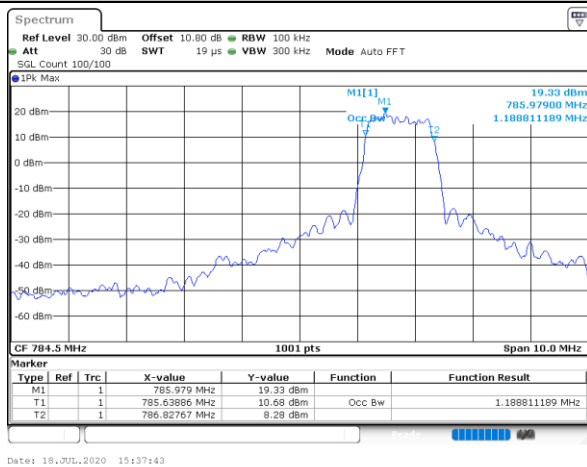
Middle Channel / 5MHz / QPSK



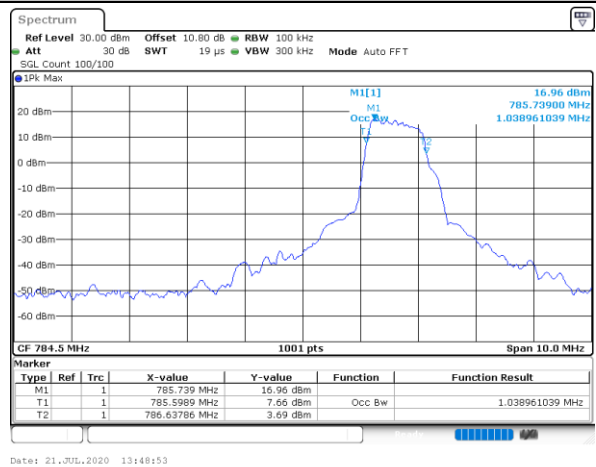
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



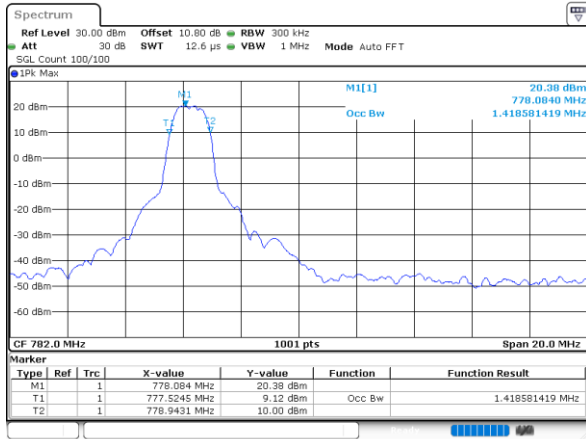
Highest Channel / 5MHz / 16QAM



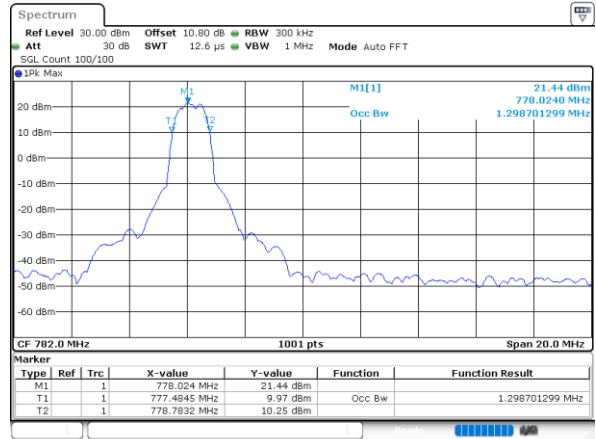


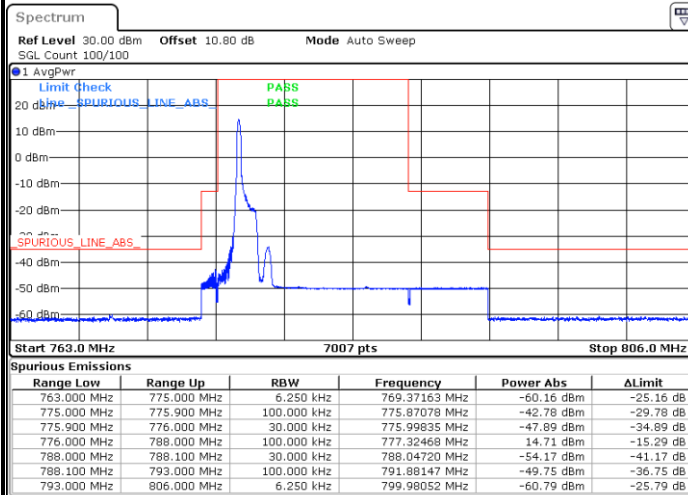
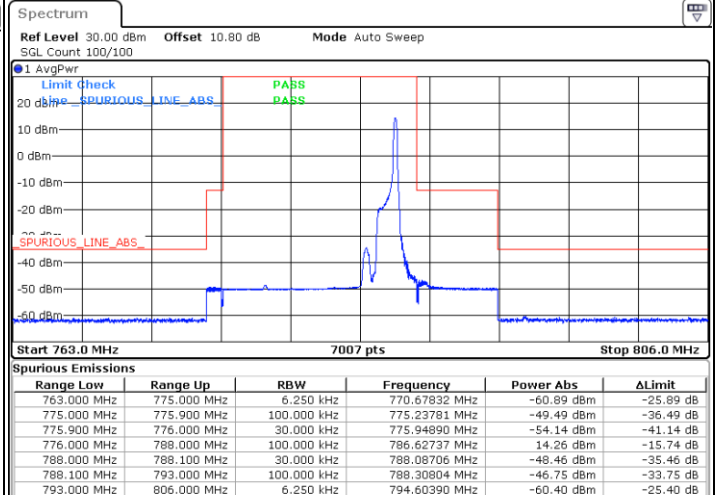
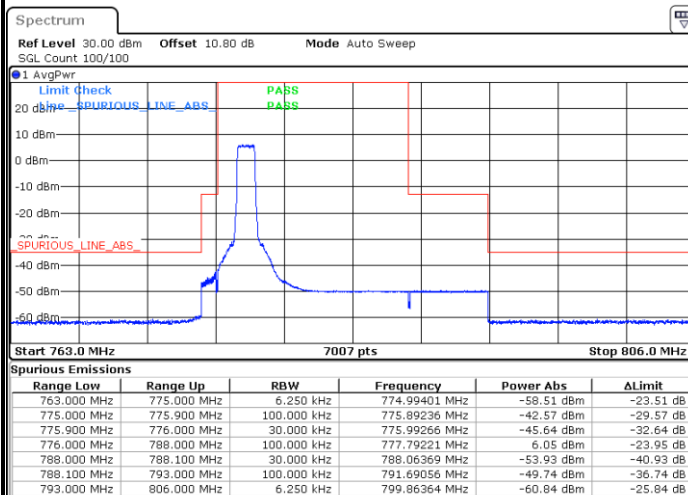
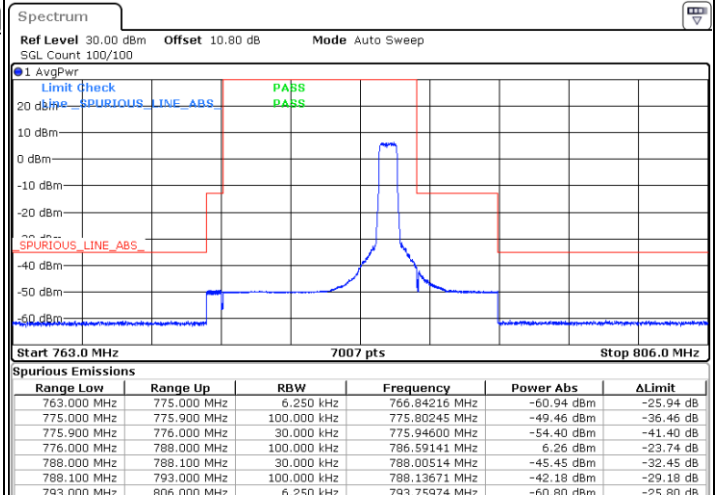
LTE Band 13

Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM

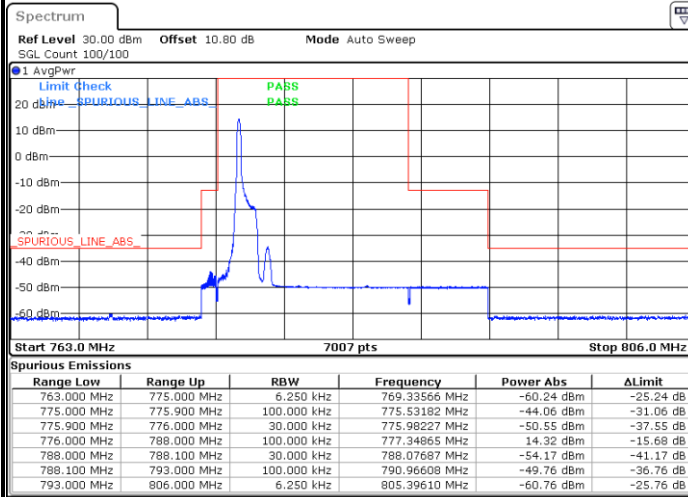


**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**

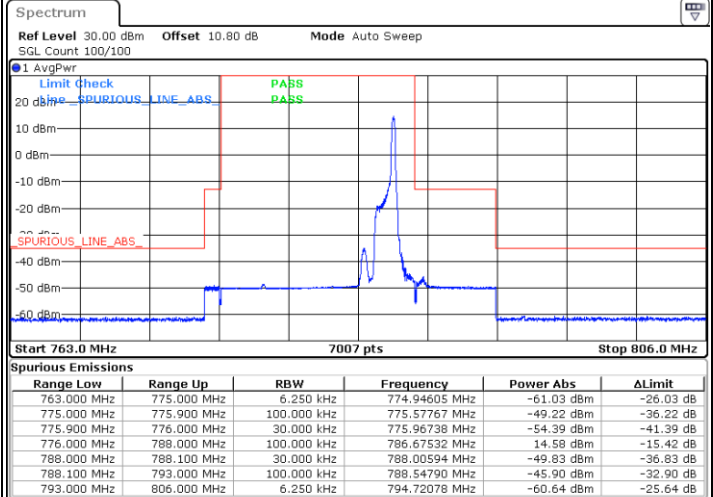


LTE Band 13 / 5MHz / 16QAM

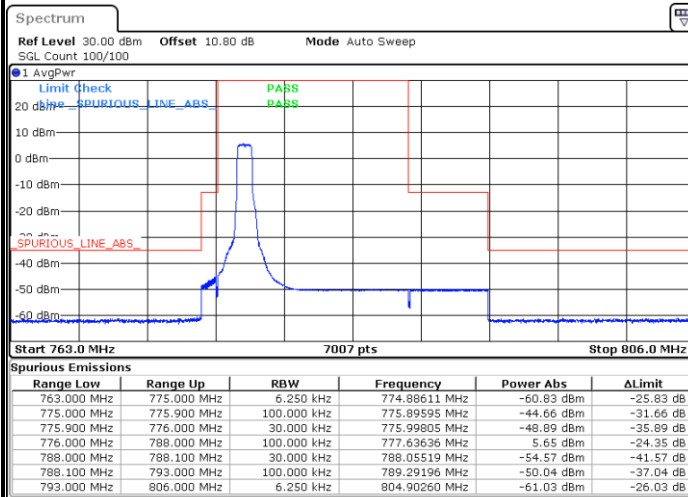
Lowest Band Edge /1 RB



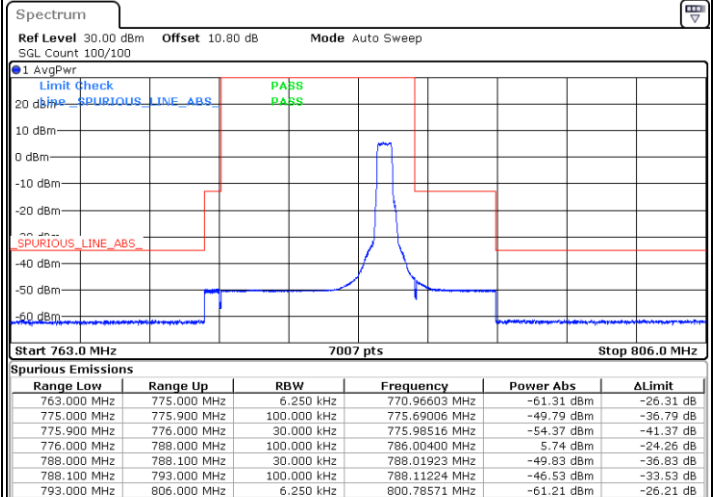
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



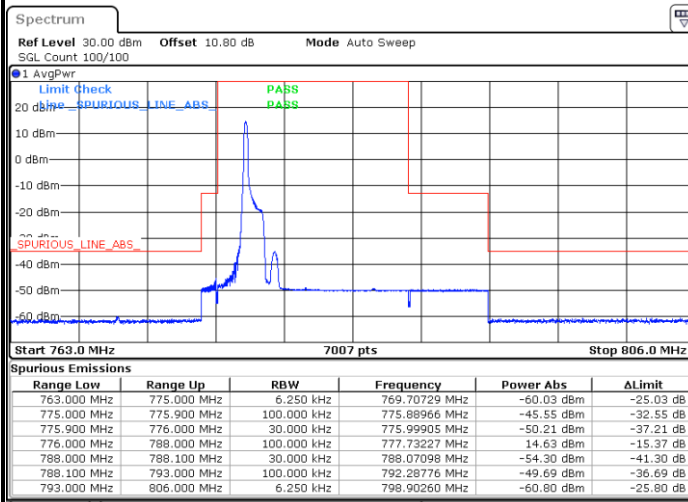
Highest Band Edge / Full RB





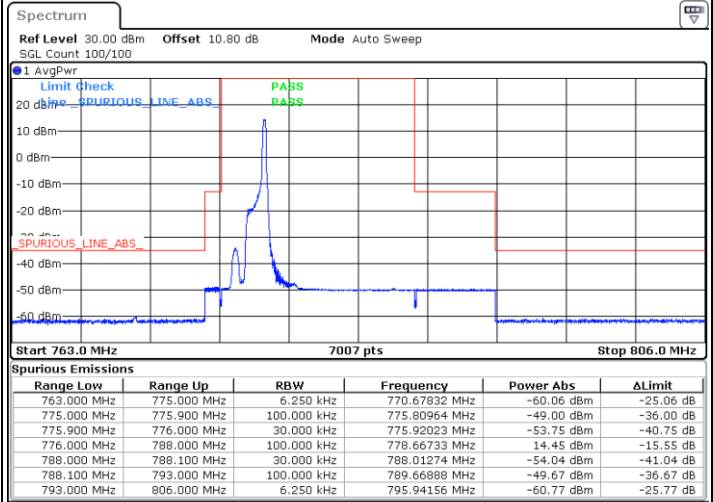
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



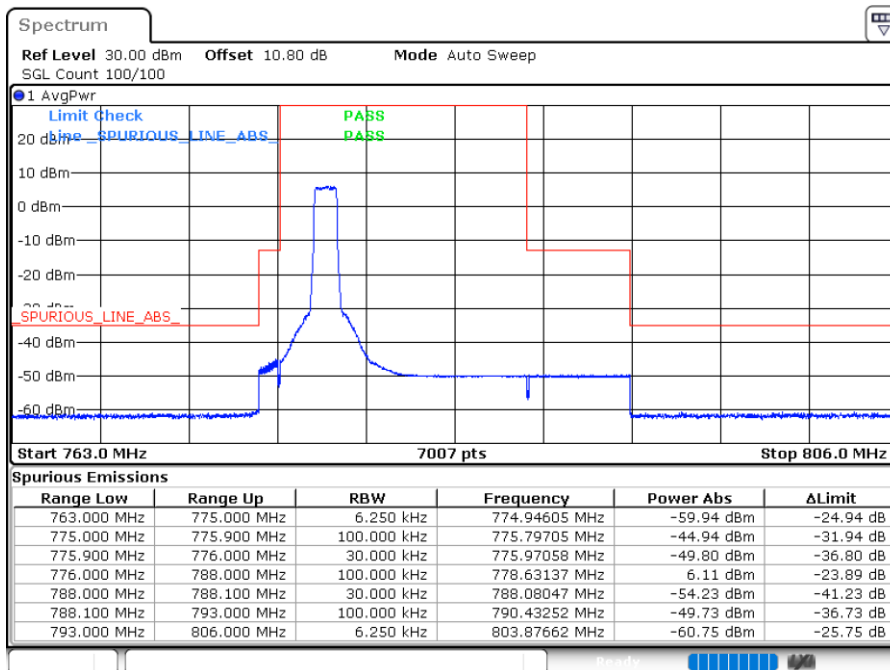
Date: 18.JUL.2020 15:53:04

Highest Band Edge / 1 RB



Date: 18.JUL.2020 15:56:41

Band Edge / Full RB

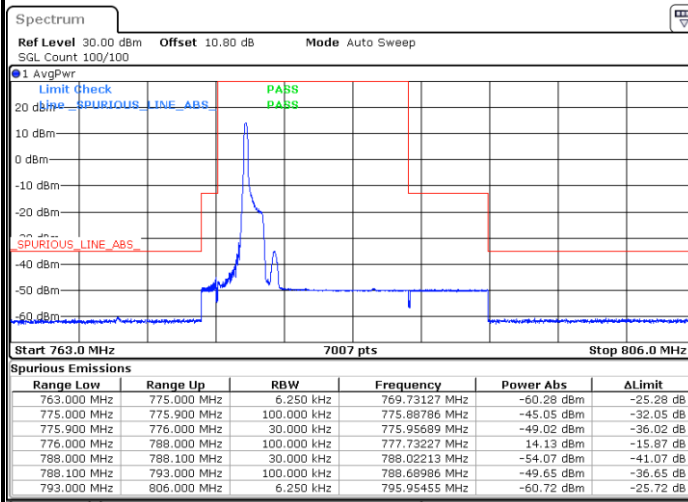


Date: 18.JUL.2020 15:49:57



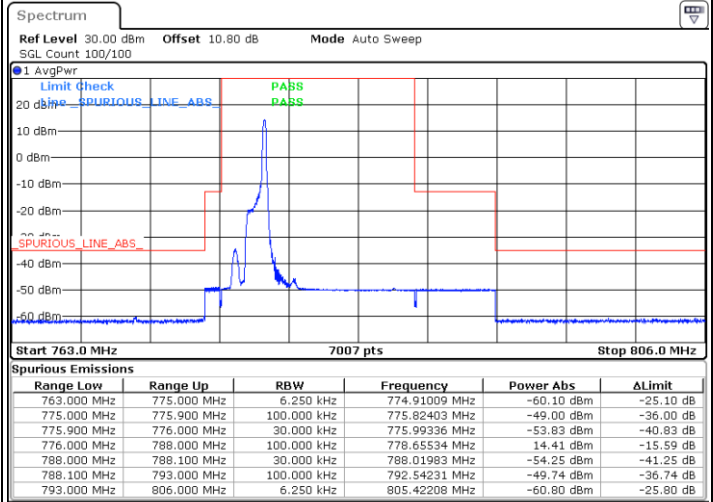
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



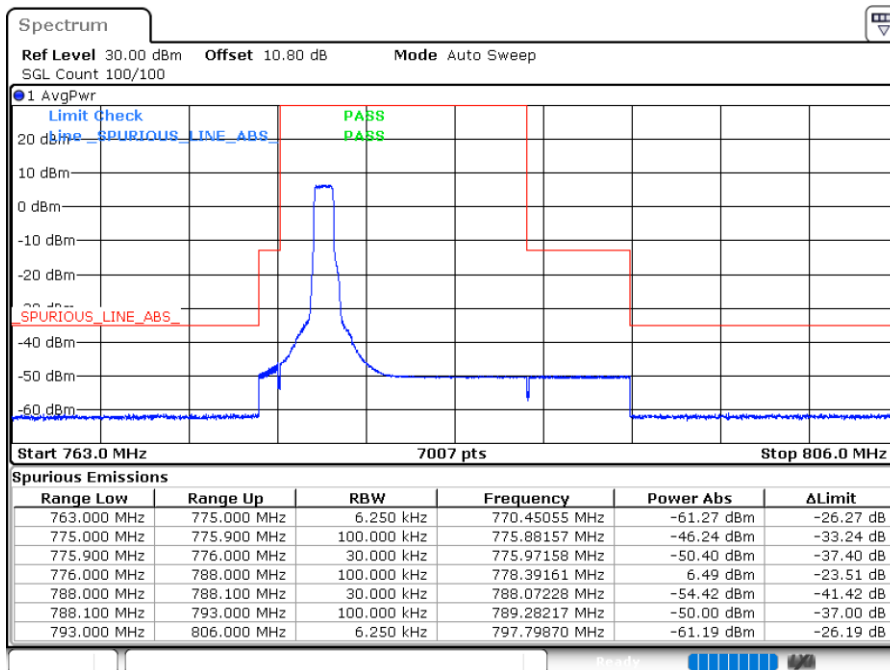
Date: 18.JUL.2020 15:59:02

Highest Band Edge / 1 RB



Date: 18.JUL.2020 16:02:29

Band Edge / Full RB



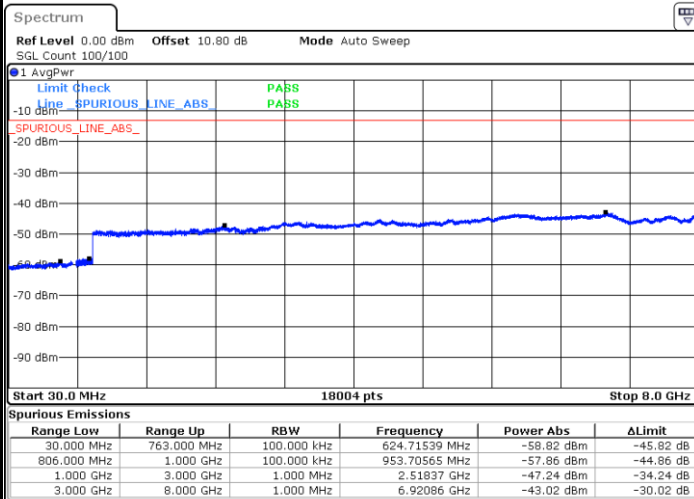
Date: 21.JUL.2020 11:43:33



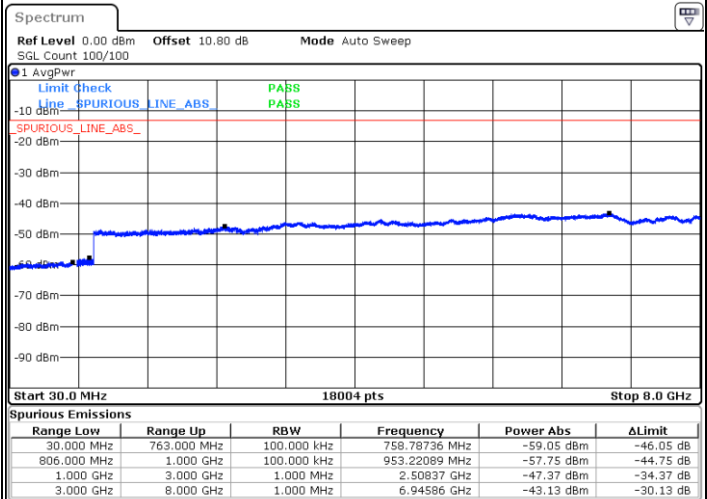
Conducted Spurious Emission

LTE Band 13 / 5MHz

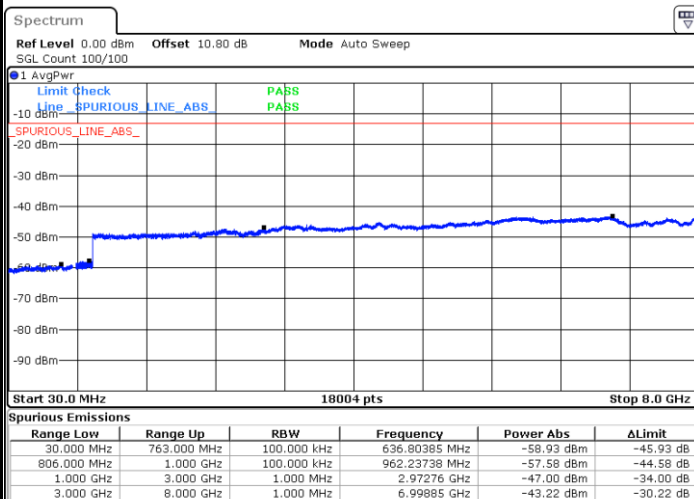
Lowest Channel / QPSK



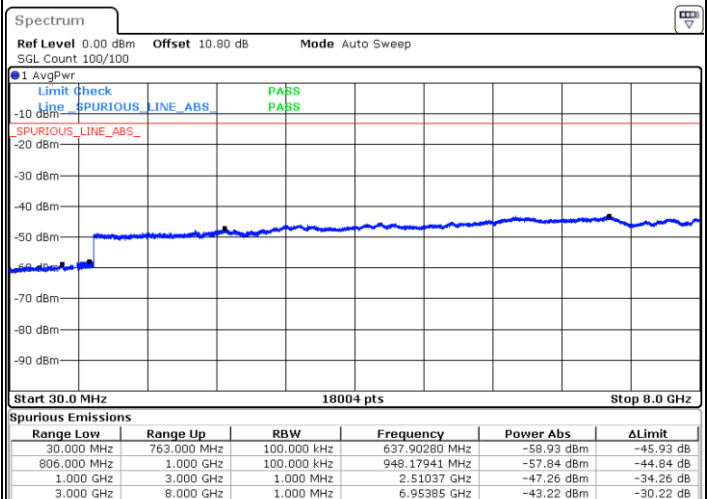
Lowest Channel / 16QAM



Middle Channel / QPSK



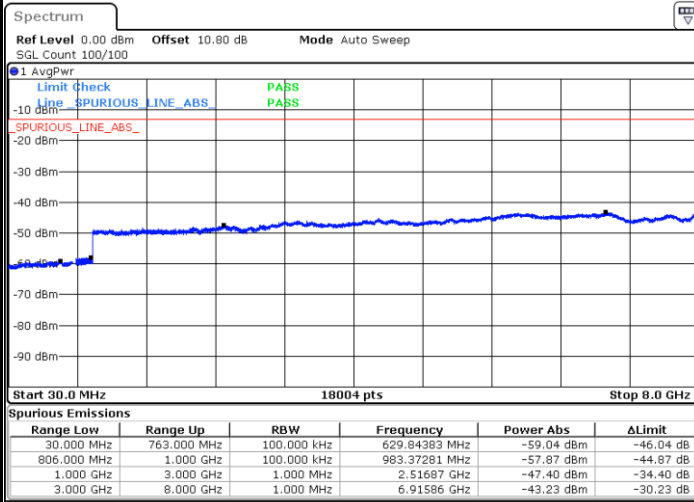
Middle Channel / 16QAM





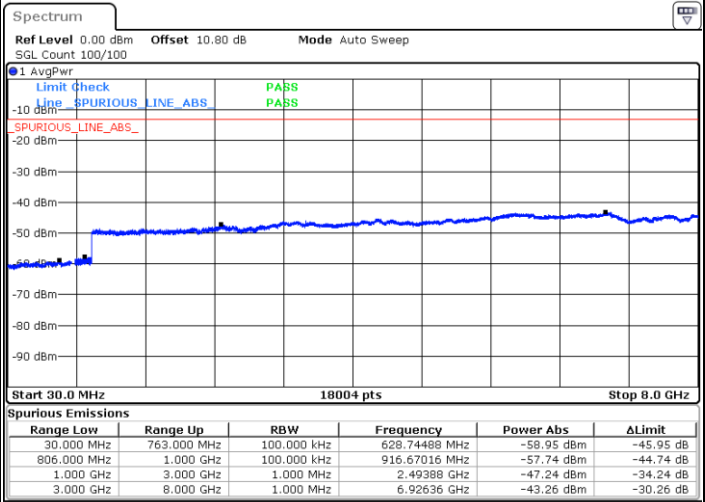
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 18.JUL.2020 15:40:43

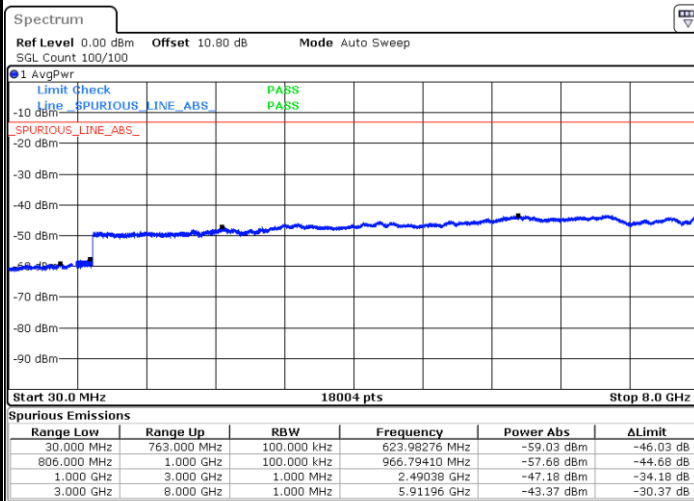
Highest Channel / 16QAM



Date: 18.JUL.2020 15:44:22

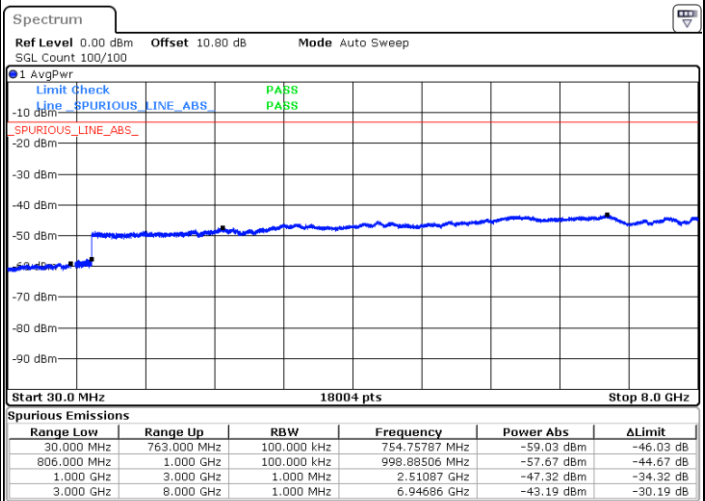
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 18.JUL.2020 15:51:44

Middle Channel / 16QAM



Date: 18.JUL.2020 15:57:51

Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0008	PASS
40	Normal Voltage	0.0031	
30	Normal Voltage	0.0020	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0130	
0	Normal Voltage	0.0137	
-10	Normal Voltage	0.0125	
-20	Normal Voltage	0.0035	
-30	Normal Voltage	0.0146	
20	Maximum Voltage	0.0027	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0125	

Note:

1. Normal Voltage =3.6 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =3.7 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 17

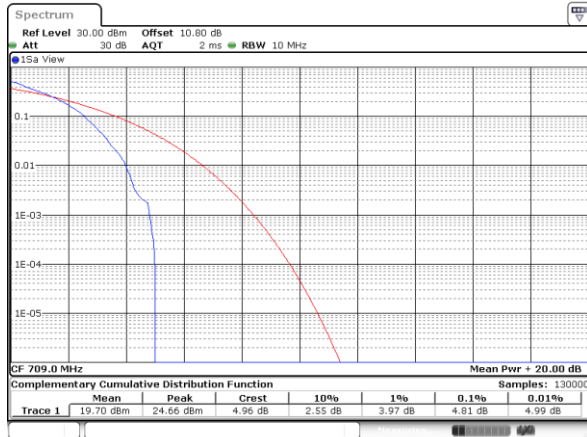
Peak-to-Average Ratio

Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.81	8.52	8.35	5.88	PASS
Middle CH	4.49	5.51	8.38	8.43	
Highest CH	4.14	6.32	7.39	8.72	

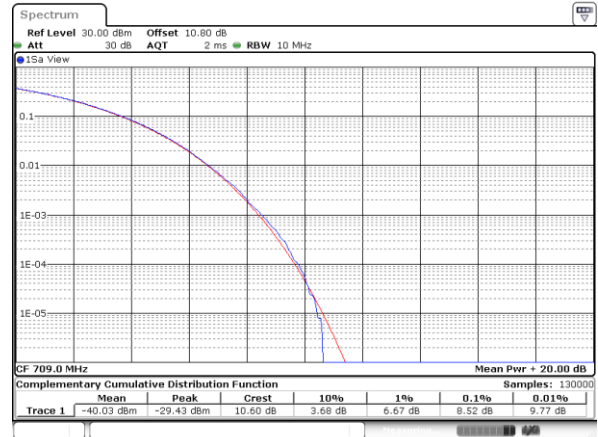


LTE Band 17 / 10MHz / QPSK

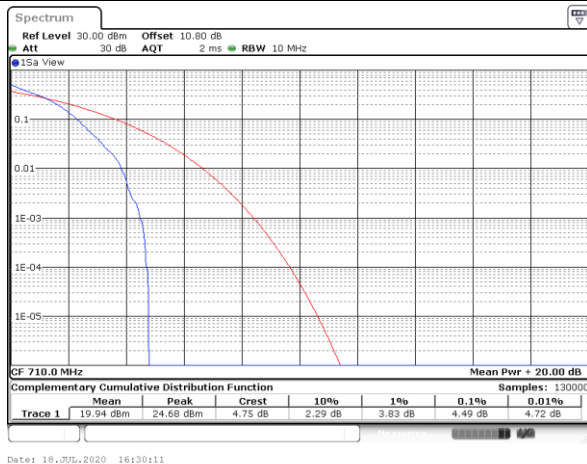
Lowest Channel / 1RB



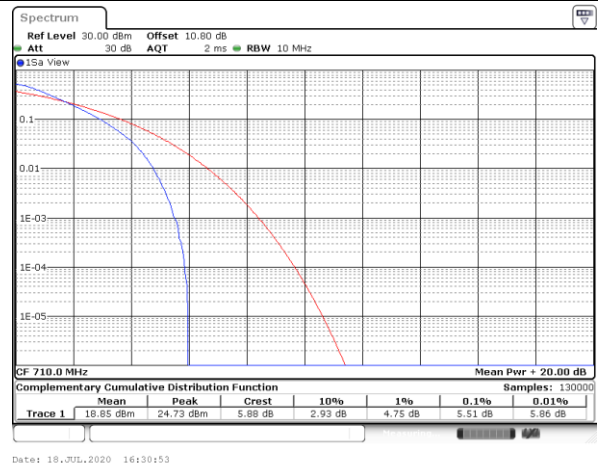
Lowest Channel / Full RB



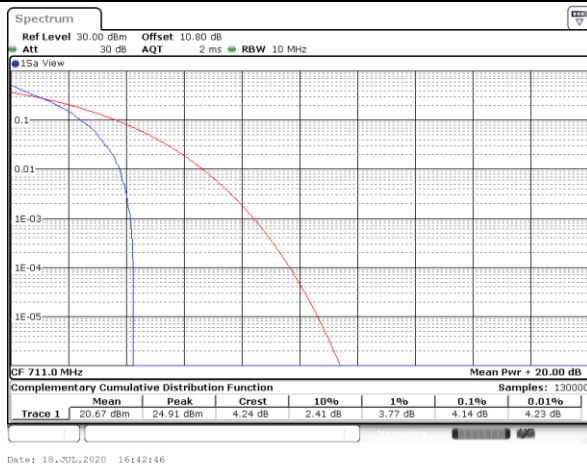
Middle Channel/ 1RB



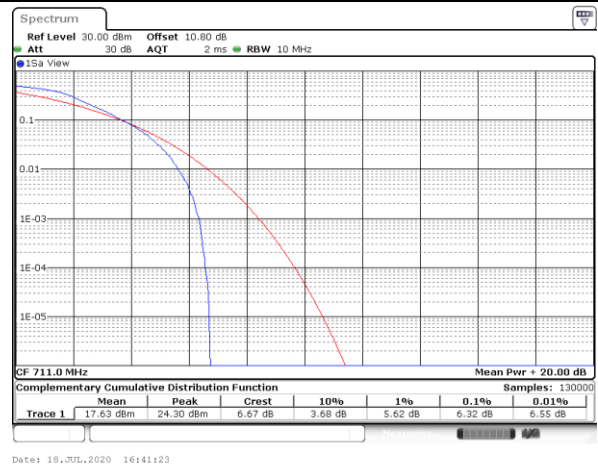
Middle Channel / Full RB



Highest Channel/ 1RB



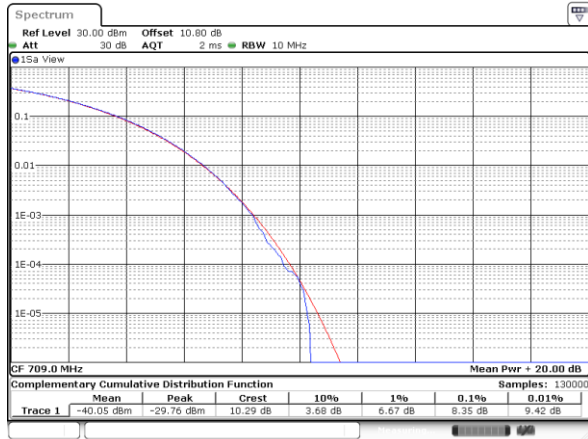
Highest Channel / Full RB



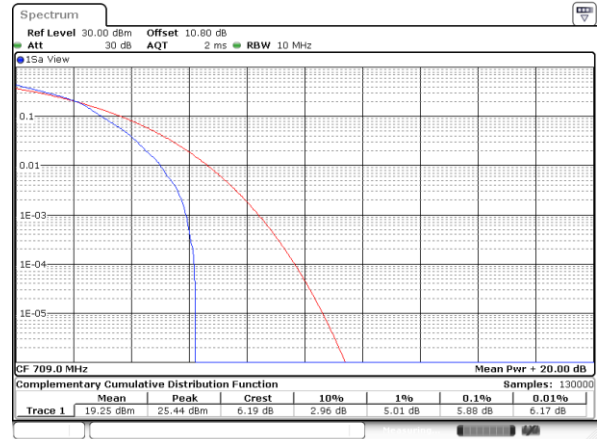


LTE Band 17 / 10MHz / 16QAM

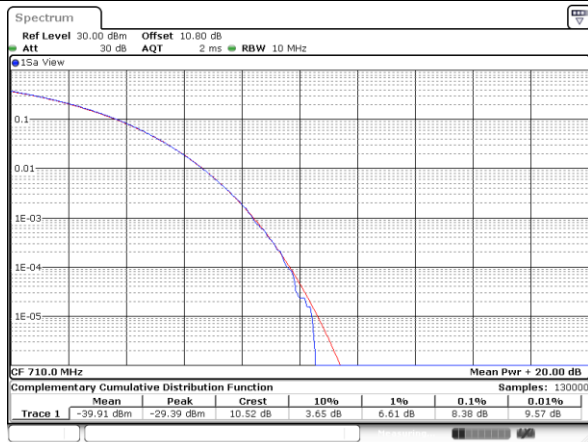
Lowest Channel / 1RB



Lowest Channel / Full RB



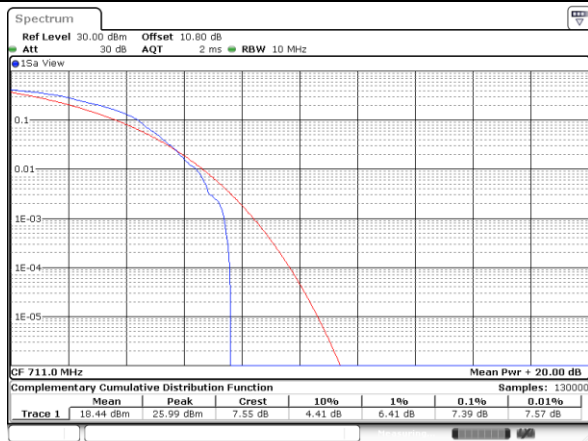
Middle Channel/ 1RB



Middle Channel / Full RB



Highest Channel/ 1RB



Highest Channel / Full RB



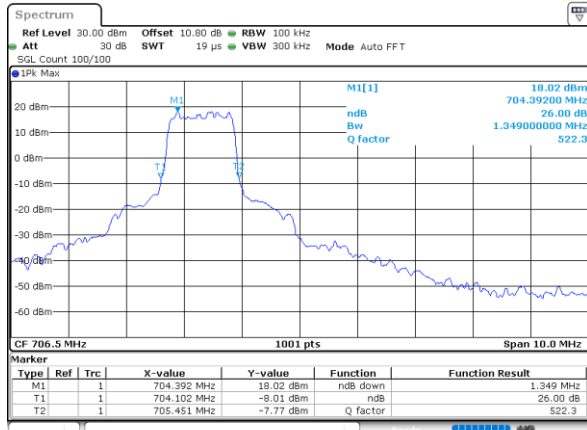
**26dB Bandwidth**

Mode	LTE Band 17 : 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	-	-	-	-	1.35	1.33	1.76	1.70	-	-	-	-
Middle CH	-	-	-	-	1.33	1.35	1.80	1.74	-	-	-	-
Highest CH	-	-	-	-	1.40	1.33	1.80	1.76	-	-	-	-



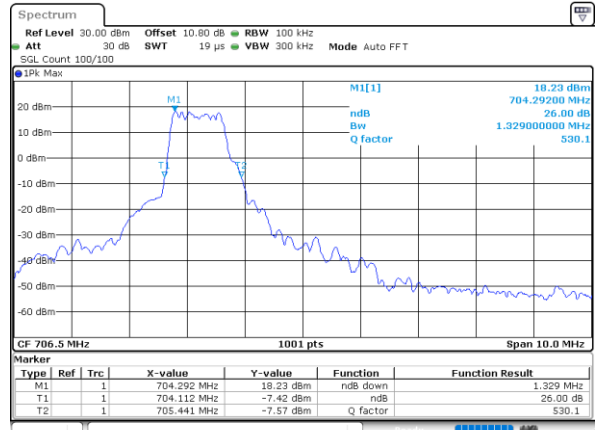
LTE Band 17

Lowest Channel / 5MHz / QPSK



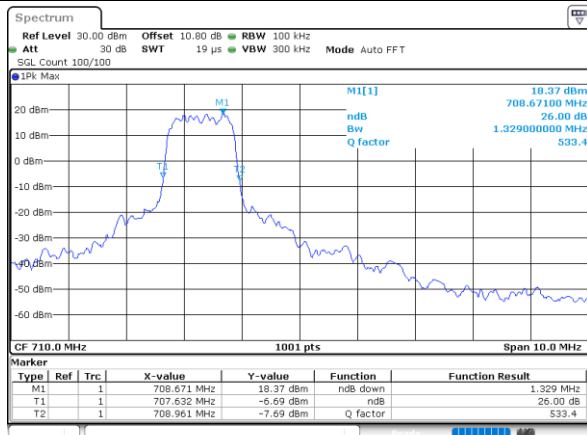
Date: 18.JUL.2020 16:13:42

Lowest Channel / 5MHz / 16QAM



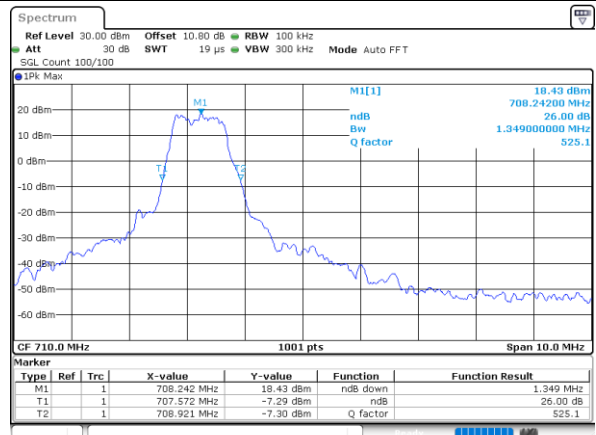
Date: 21.JUL.2020 13:53:28

Middle Channel / 5MHz / QPSK



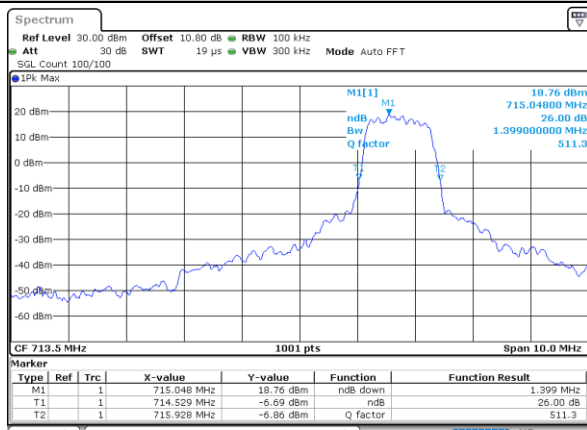
Date: 18.JUL.2020 16:07:19

Middle Channel / 5MHz / 16QAM



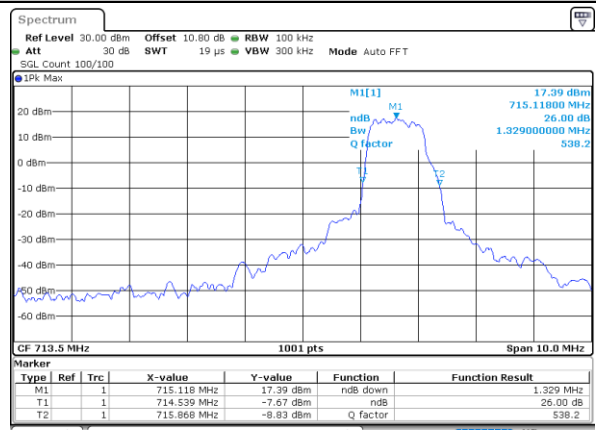
Date: 21.JUL.2020 13:53:04

Highest Channel / 5MHz / QPSK



Date: 18.JUL.2020 16:19:57

Highest Channel / 5MHz / 16QAM

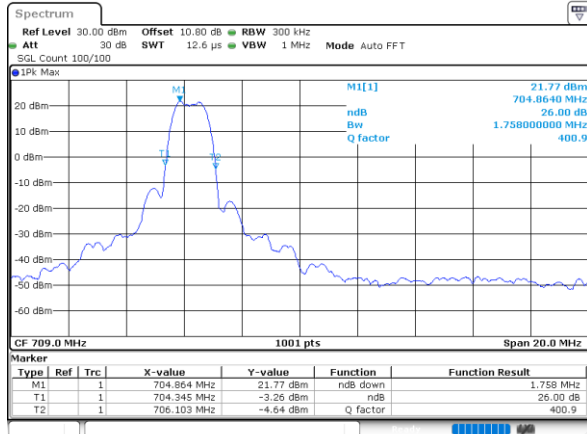


Date: 21.JUL.2020 13:54:37

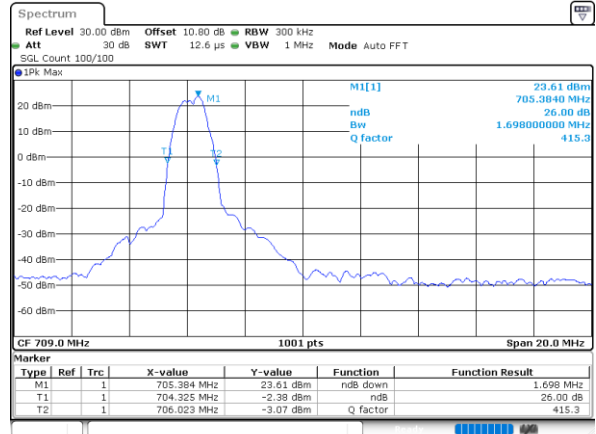


LTE Band 17

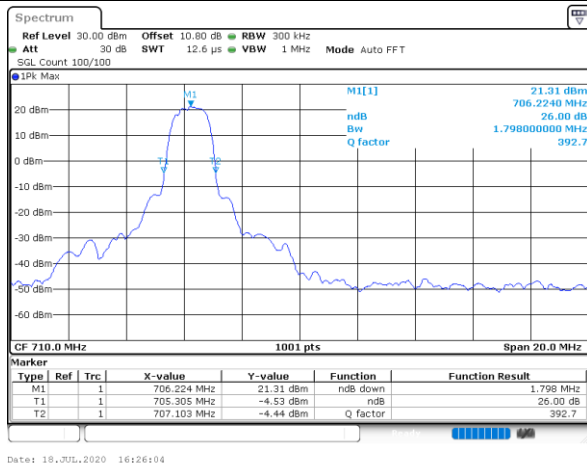
Lowest Channel / 10MHz / QPSK



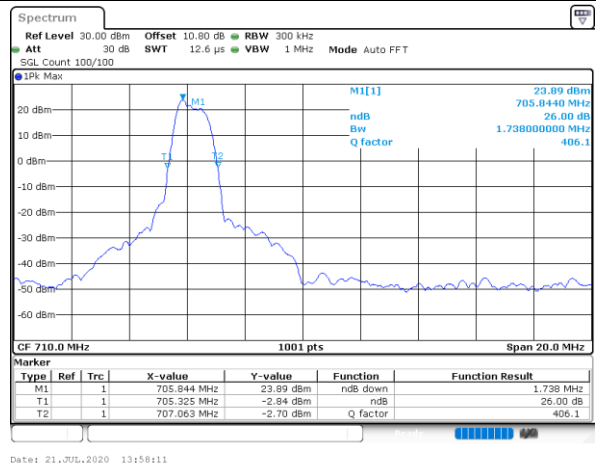
Lowest Channel / 10MHz / 16QAM



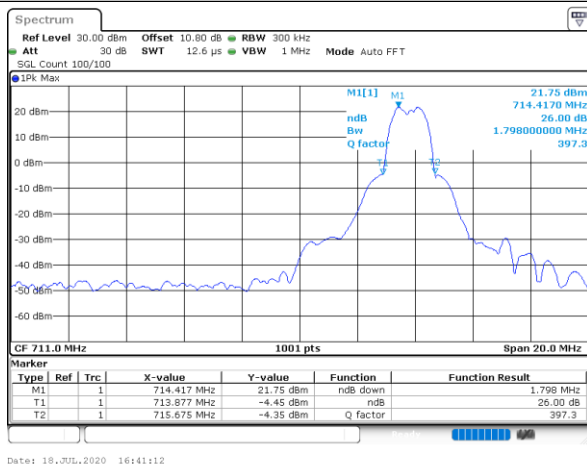
Middle Channel / 10MHz / QPSK



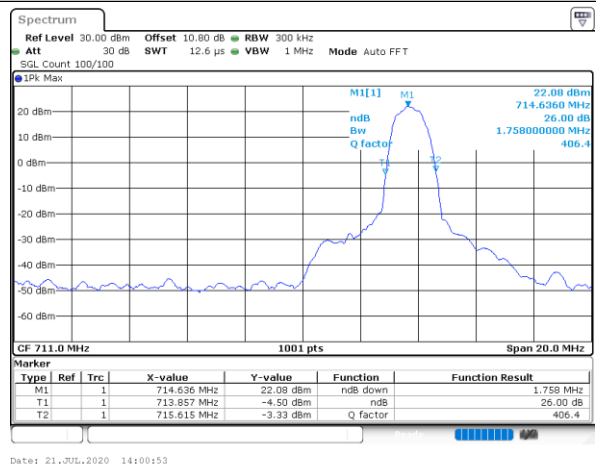
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM



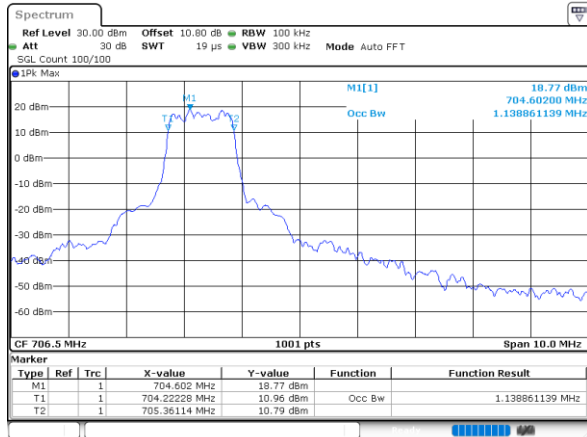
**Occupied Bandwidth**

Mode	LTE Band 17 : 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	-	-	-	-	1.14	1.02	1.48	1.32	-	-	-	-
Middle CH	-	-	-	-	1.22	1.13	1.50	1.28	-	-	-	-
Highest CH	-	-	-	-	1.18	1.06	1.46	1.32	-	-	-	-

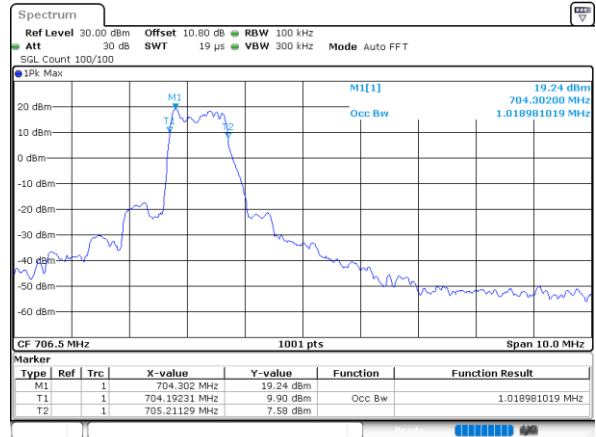


LTE Band 17

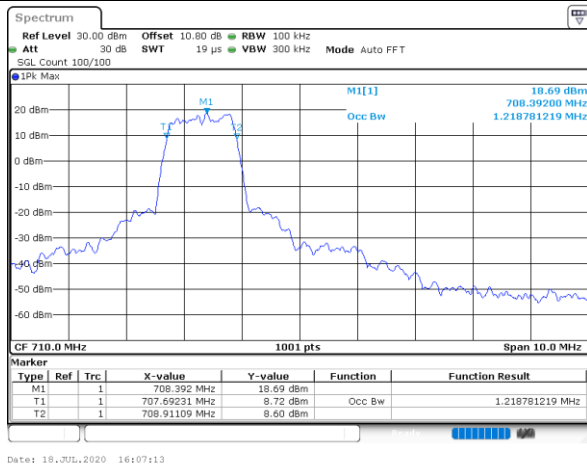
Lowest Channel / 5MHz / QPSK



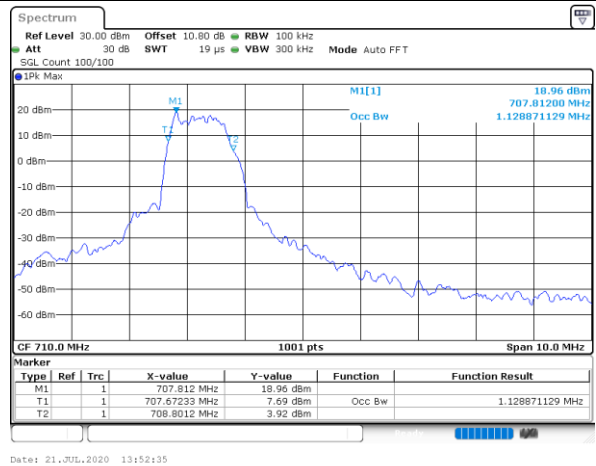
Lowest Channel / 5MHz / 16QAM



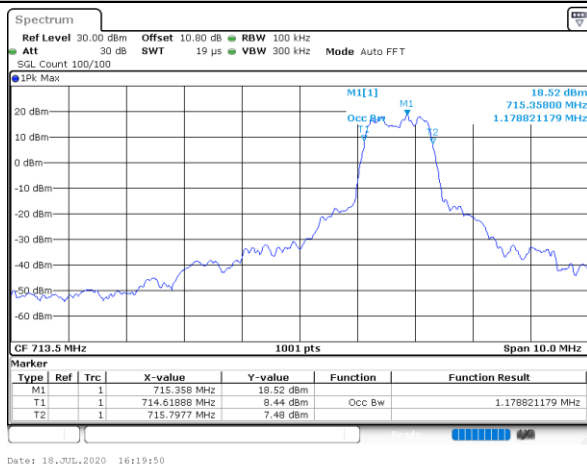
Middle Channel / 5MHz / QPSK



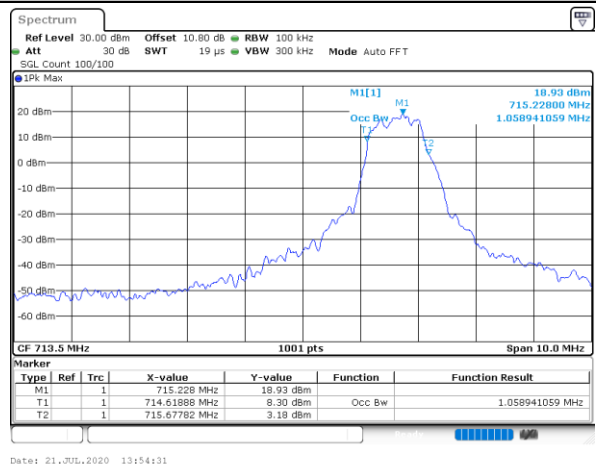
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



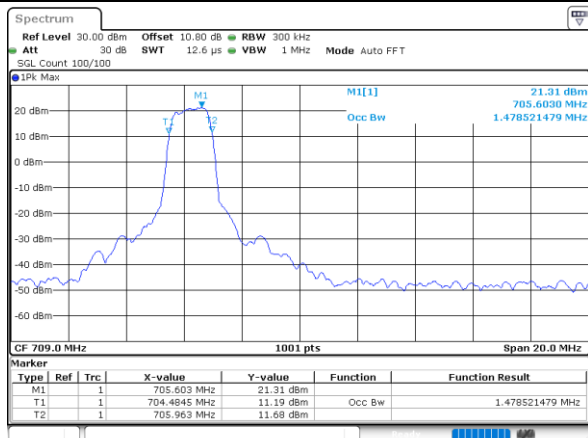
Highest Channel / 5MHz / 16QAM



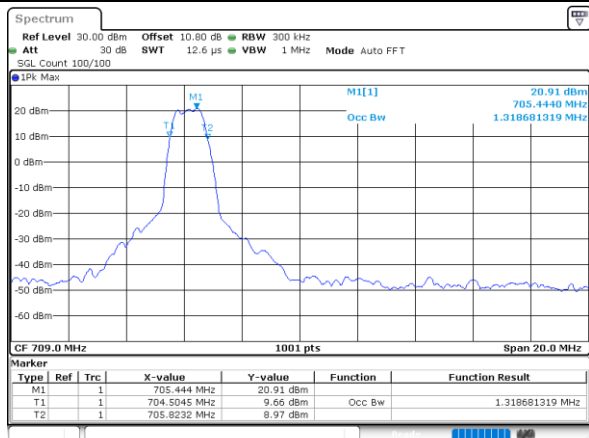


LTE Band 17

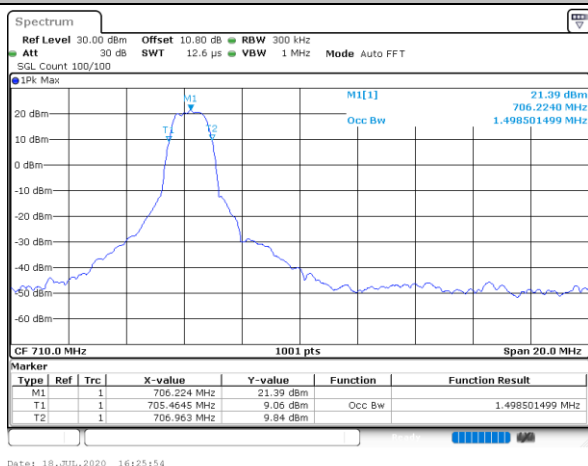
Lowest Channel / 10MHz / QPSK



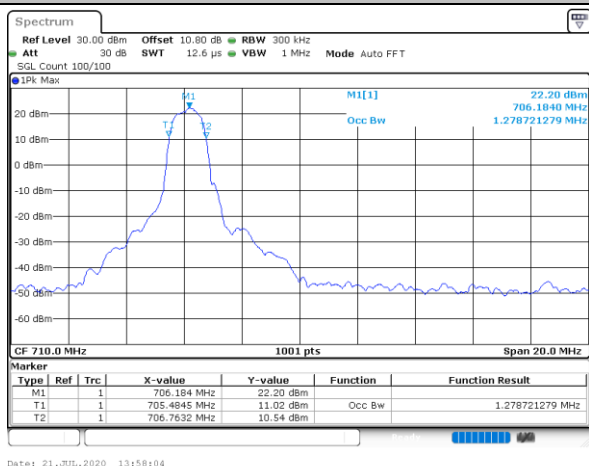
Lowest Channel / 10MHz / 16QAM



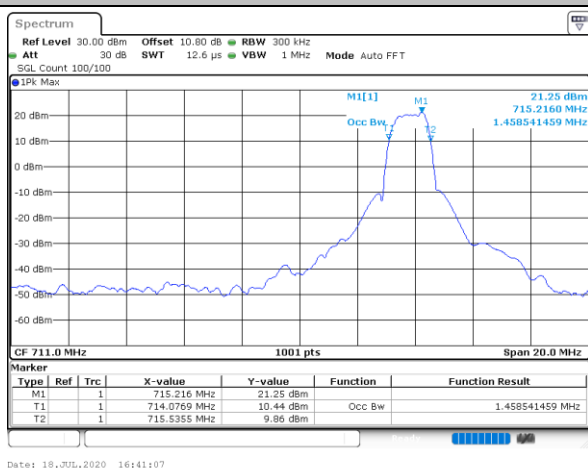
Middle Channel / 10MHz / QPSK



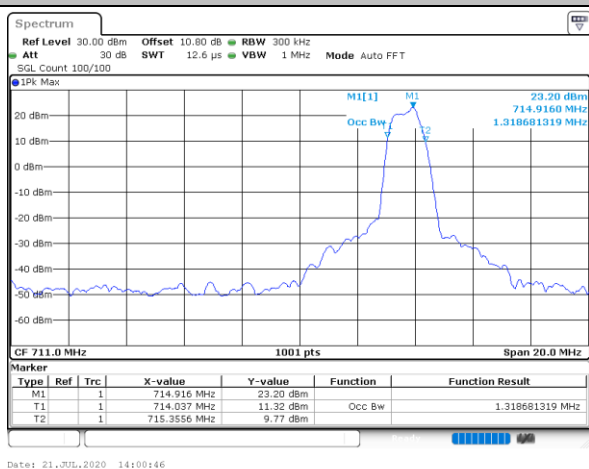
Middle Channel / 10MHz / 16QAM

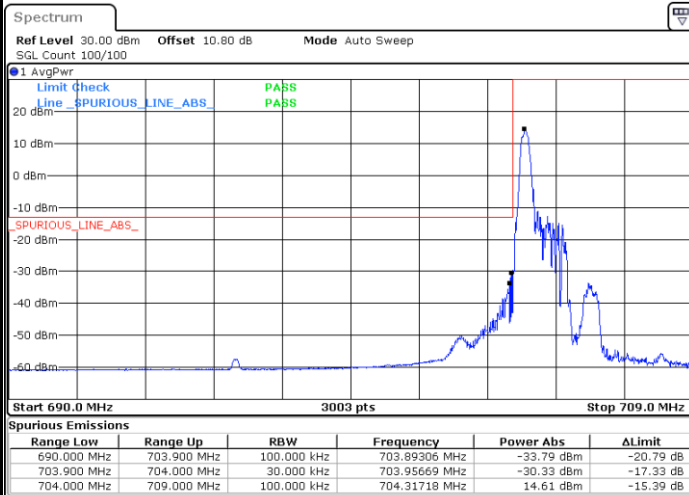
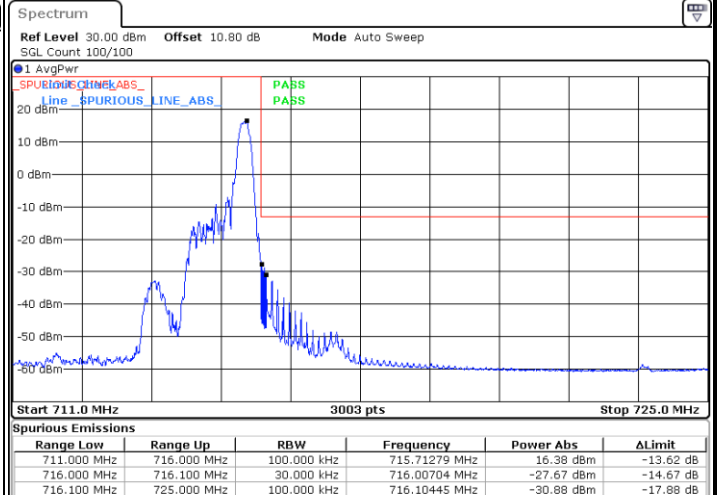
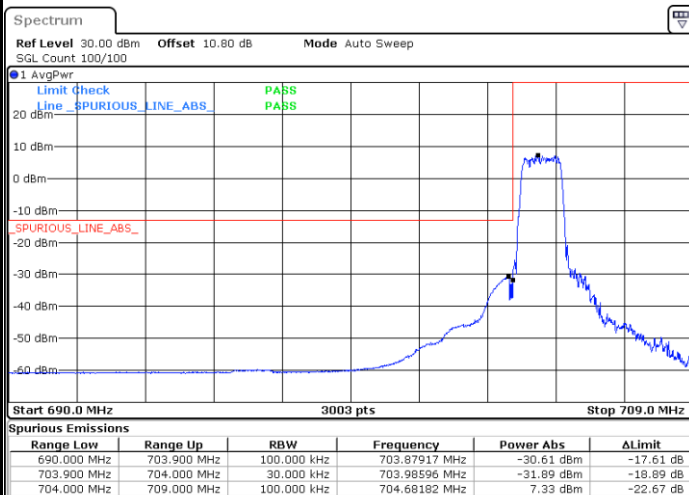


Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM



**Conducted Band Edge****LTE Band 17 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**