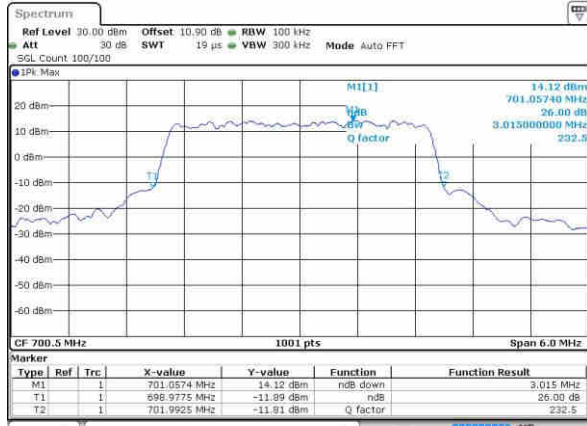


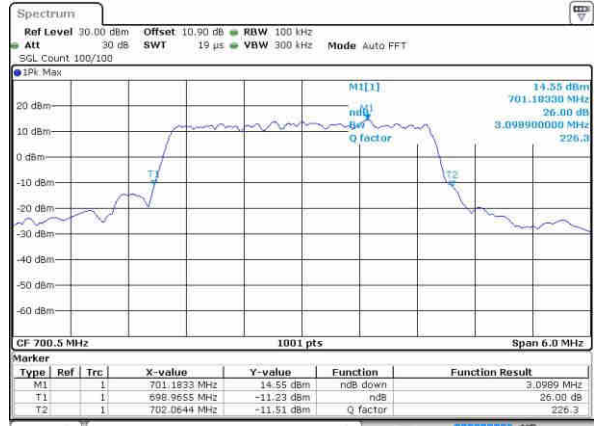


LTE Band 12

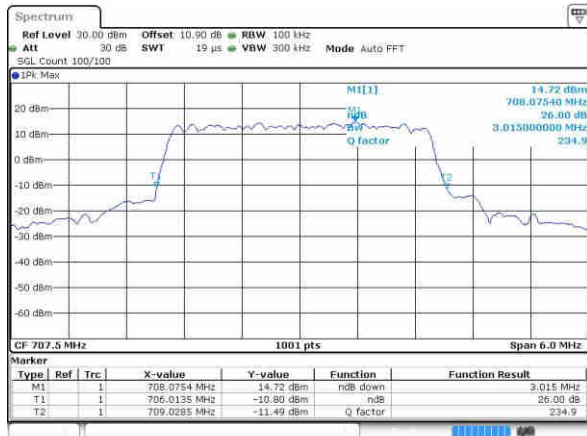
Lowest Channel / 3MHz / QPSK



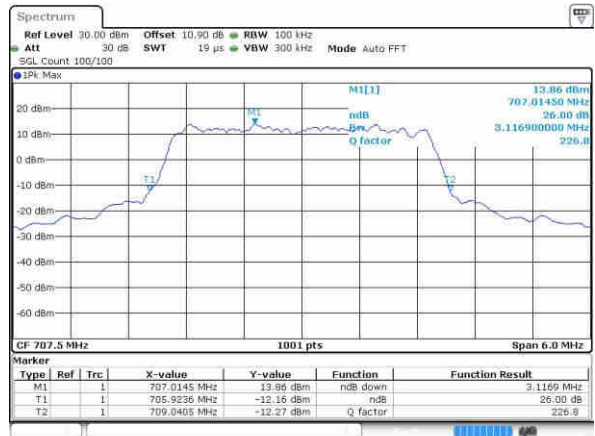
Lowest Channel / 3MHz / 16QAM



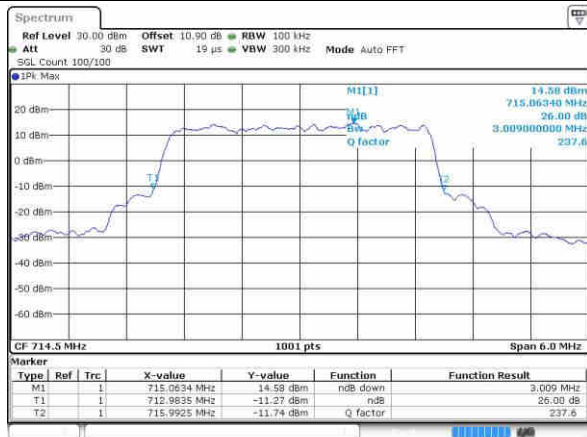
Middle Channel / 3MHz / QPSK



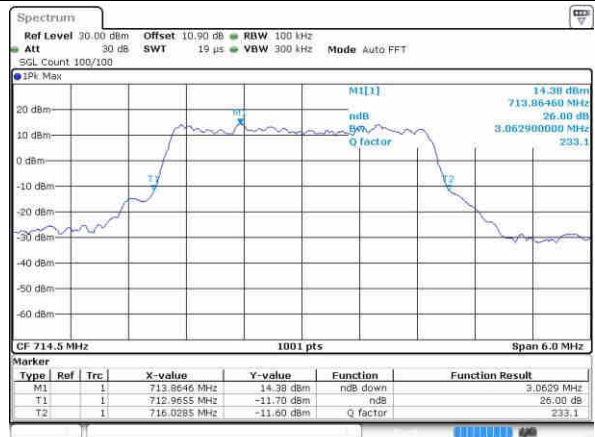
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



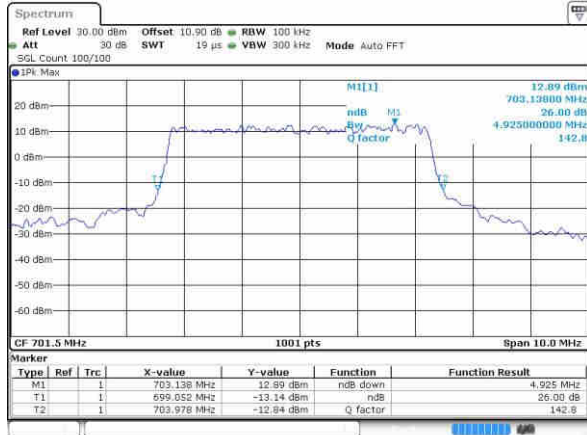
Highest Channel / 3MHz / 16QAM



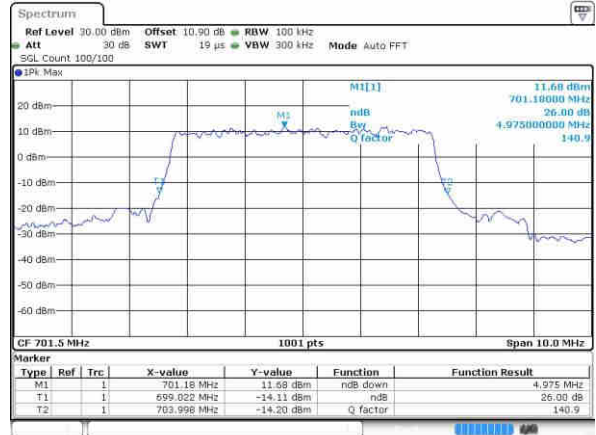


LTE Band 12

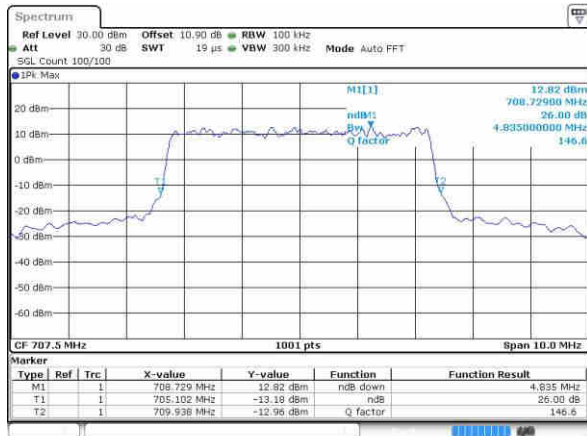
Lowest Channel / 5MHz / QPSK



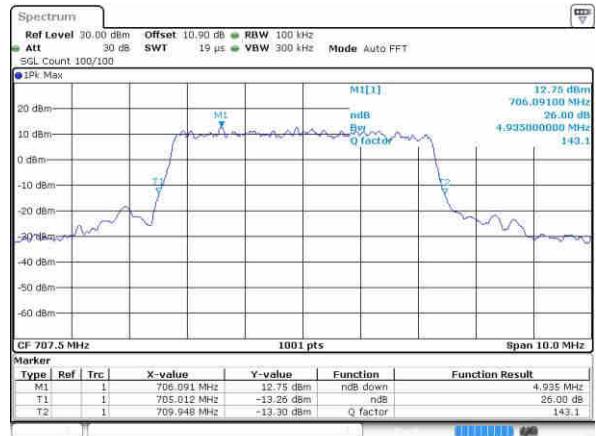
Lowest Channel / 5MHz / 16QAM



Middle Channel / 5MHz / QPSK



Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



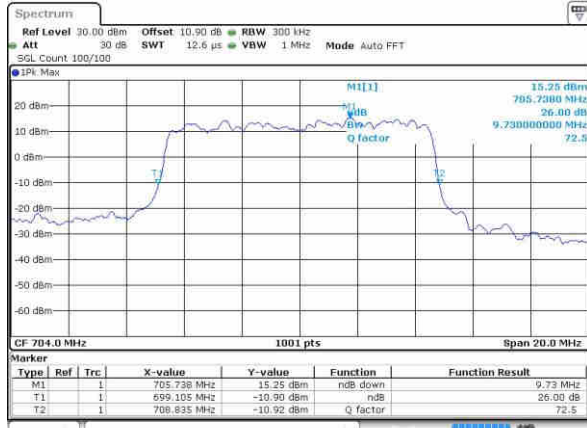
Highest Channel / 5MHz / 16QAM





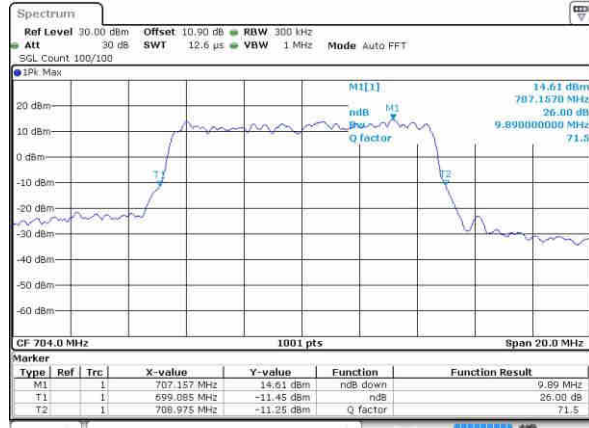
LTE Band 12

Lowest Channel / 10MHz / QPSK



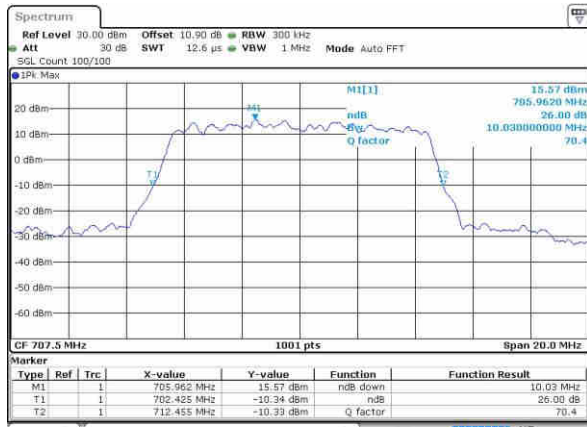
Date: 18 JAN 2019 17:18:59

Lowest Channel / 10MHz / 16QAM



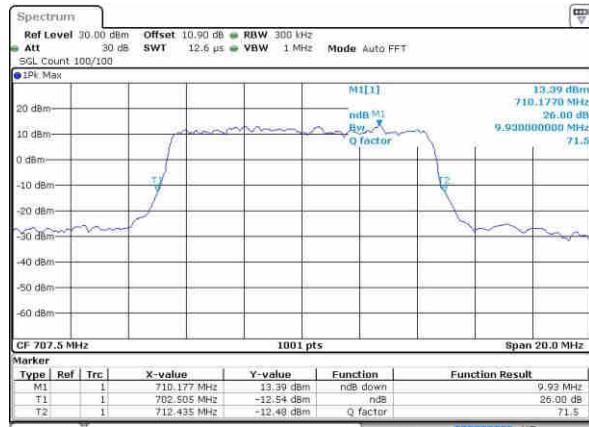
Date: 18 JAN 2019 17:18:48

Middle Channel / 10MHz / QPSK



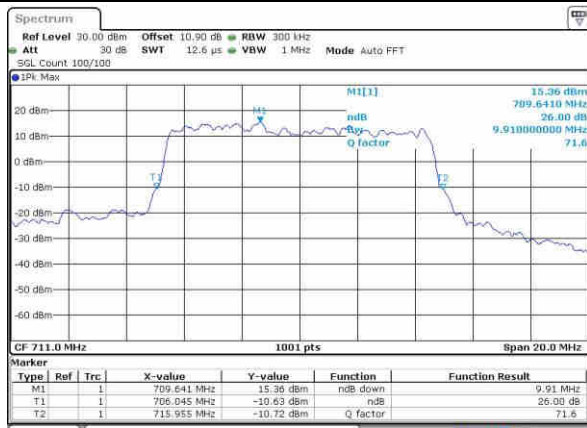
Date: 18 JAN 2019 17:25:34

Middle Channel / 10MHz / 16QAM



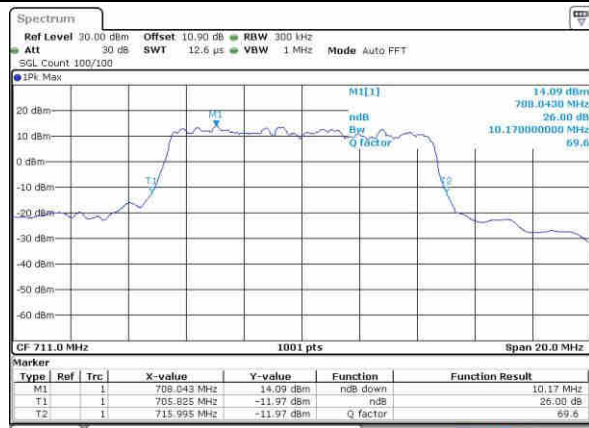
Date: 18 JAN 2019 17:25:46

Highest Channel / 10MHz / QPSK



Date: 18 JAN 2019 17:28:32

Highest Channel / 10MHz / 16QAM



Date: 18 JAN 2019 17:28:20

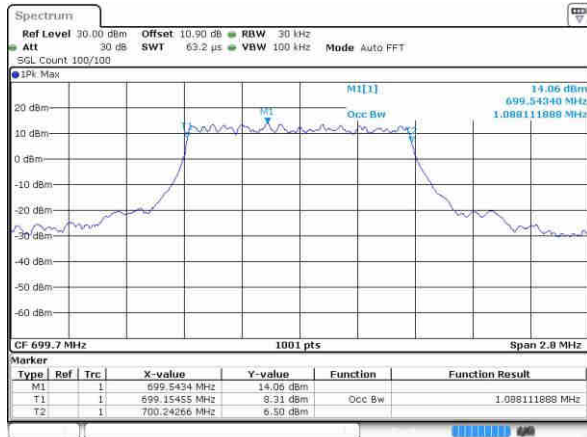
**Occupied Bandwidth**

Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.1	2.73	2.72	4.47	4.48	9.03	9.01	-	-	-	-
Middle CH	1.09	1.1	2.72	2.72	4.47	4.49	8.99	8.95	-	-	-	-
Highest CH	1.11	1.09	2.74	2.75	4.5	4.5	9.21	9.09	-	-	-	-

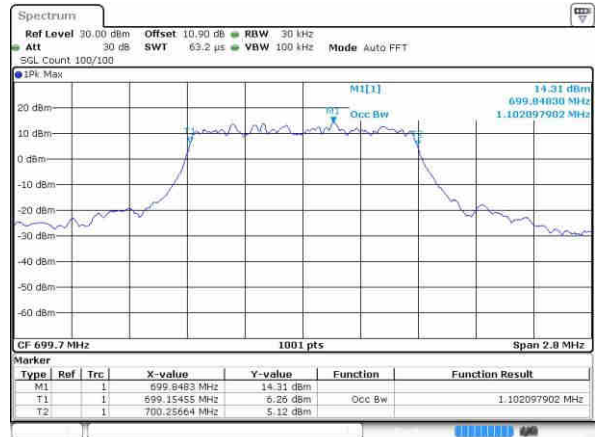


LTE Band 12

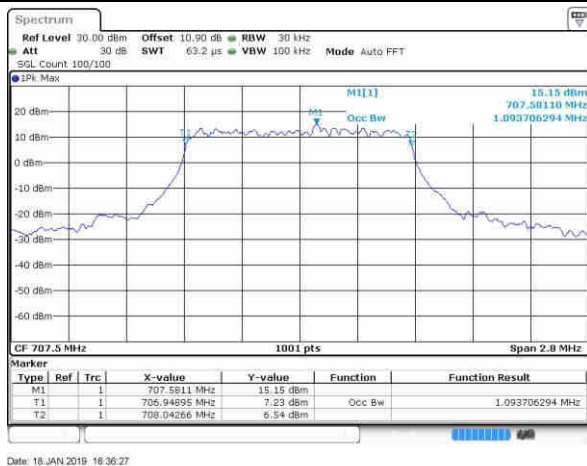
Lowest Channel / 1.4MHz / QPSK



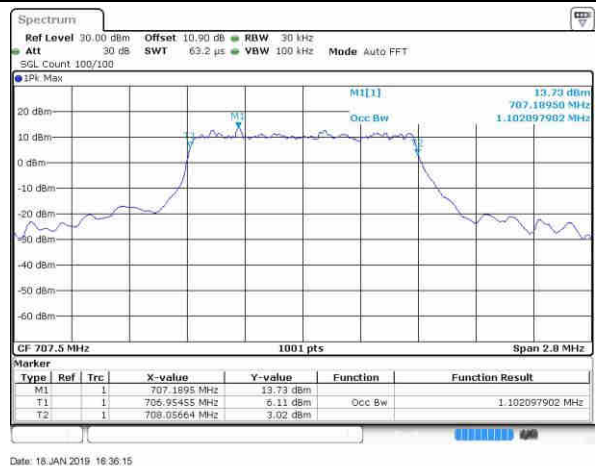
Lowest Channel / 1.4MHz / 16QAM



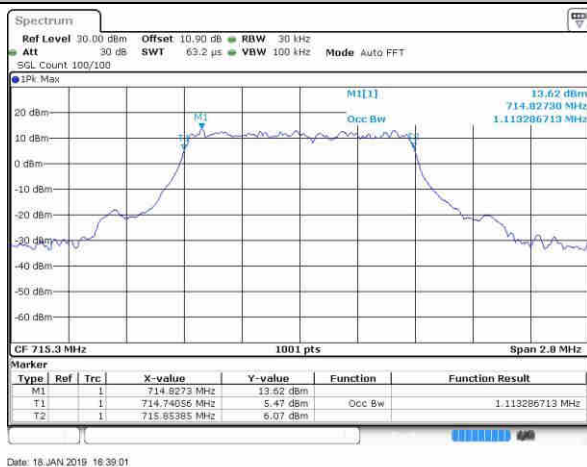
Middle Channel / 1.4MHz / QPSK



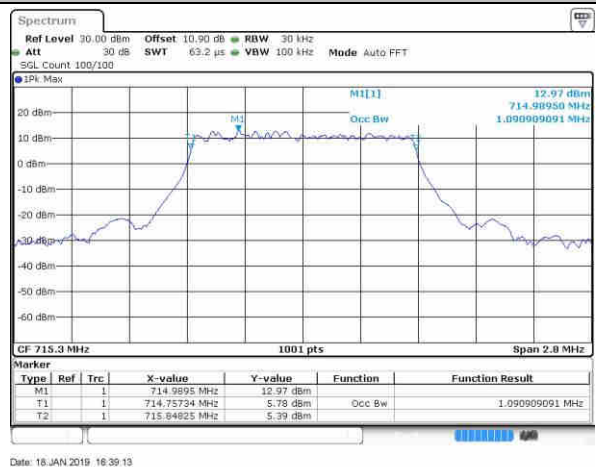
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



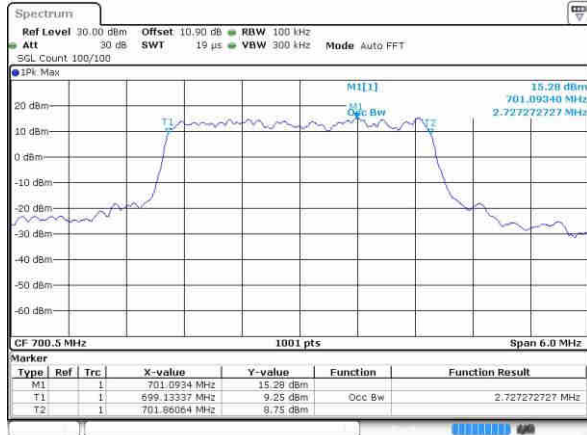
Highest Channel / 1.4MHz / 16QAM





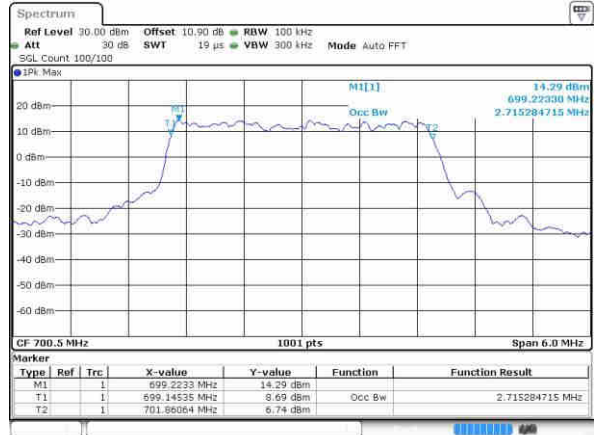
LTE Band 12

Lowest Channel / 3MHz / QPSK



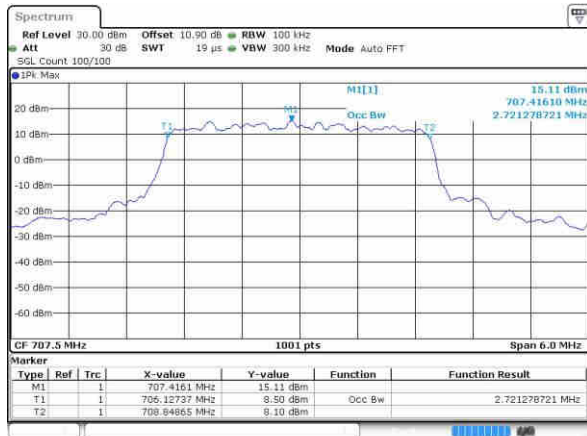
Date: 18 JAN 2019 16:45:47

Lowest Channel / 3MHz / 16QAM



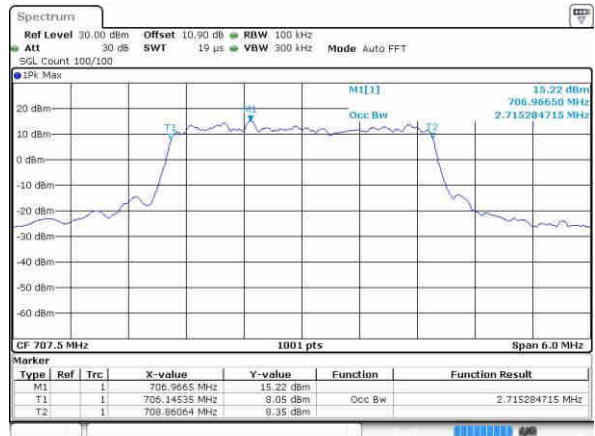
Date: 18 JAN 2019 16:45:59

Middle Channel / 3MHz / QPSK



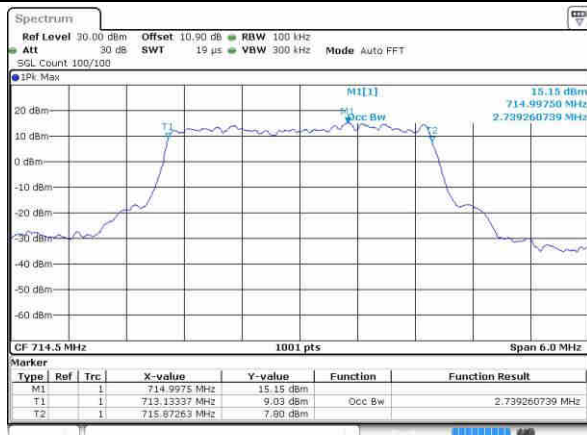
Date: 18 JAN 2019 16:52:45

Middle Channel / 3MHz / 16QAM



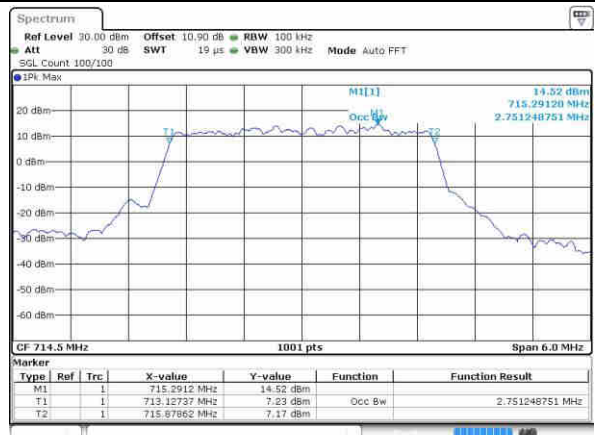
Date: 18 JAN 2019 16:52:34

Highest Channel / 3MHz / QPSK



Date: 18 JAN 2019 16:55:20

Highest Channel / 3MHz / 16QAM

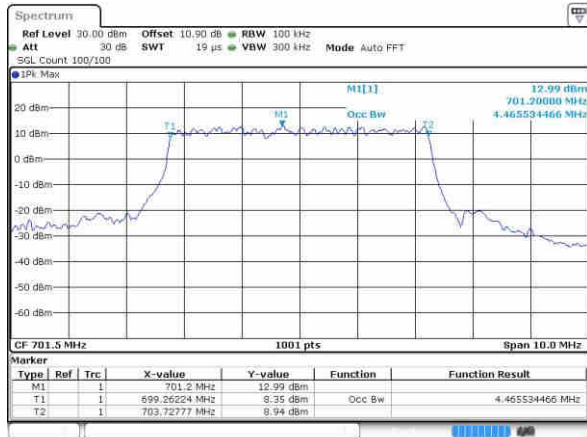


Date: 18 JAN 2019 16:55:31



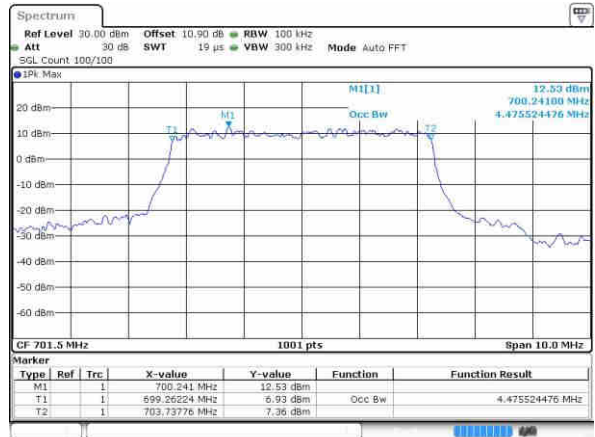
LTE Band 12

Lowest Channel / 5MHz / QPSK



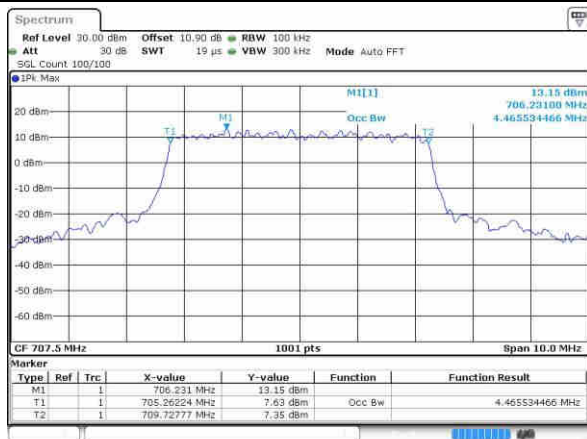
Date: 18 JAN 2019 17:02:06

Lowest Channel / 5MHz / 16QAM



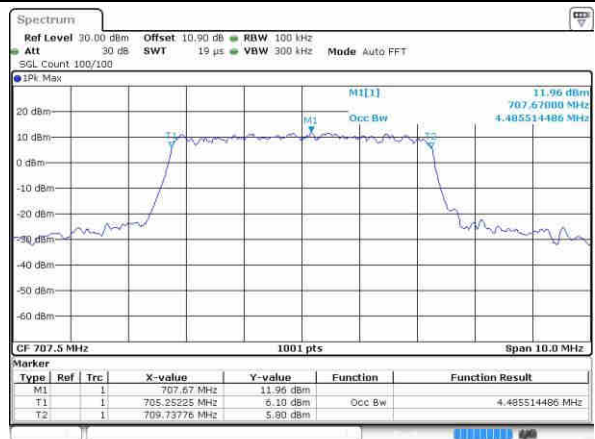
Date: 18 JAN 2019 17:02:18

Middle Channel / 5MHz / QPSK



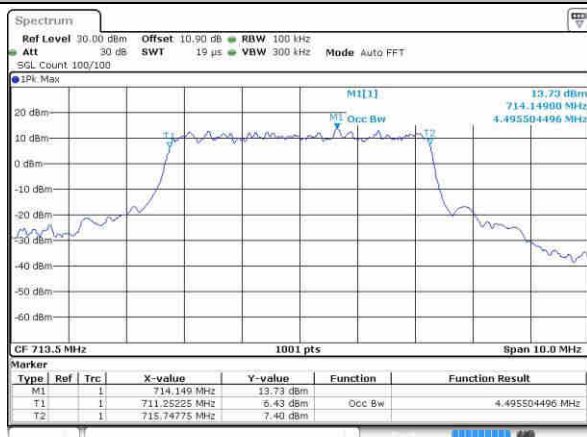
Date: 18 JAN 2019 17:09:04

Middle Channel / 5MHz / 16QAM



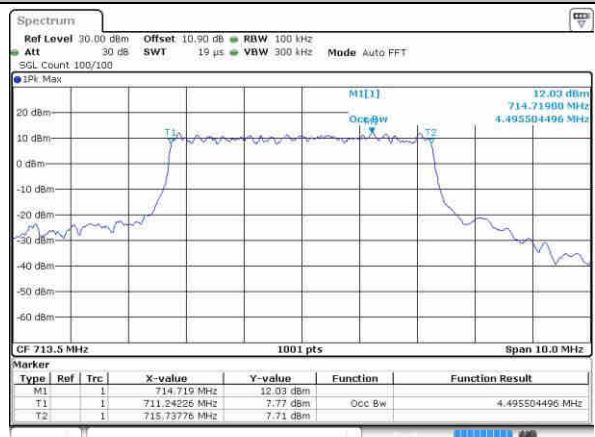
Date: 18 JAN 2019 17:06:53

Highest Channel / 5MHz / QPSK



Date: 18 JAN 2019 17:11:39

Highest Channel / 5MHz / 16QAM

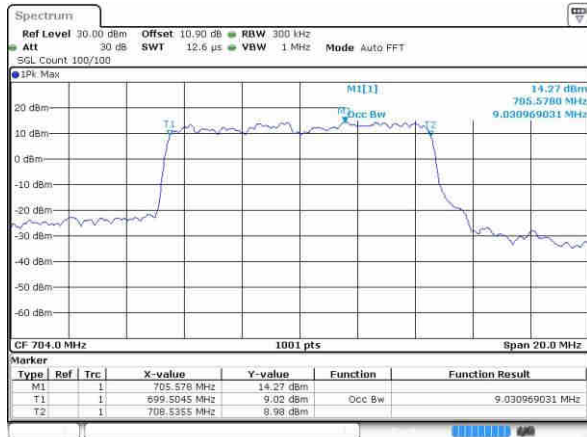


Date: 18 JAN 2019 17:11:50

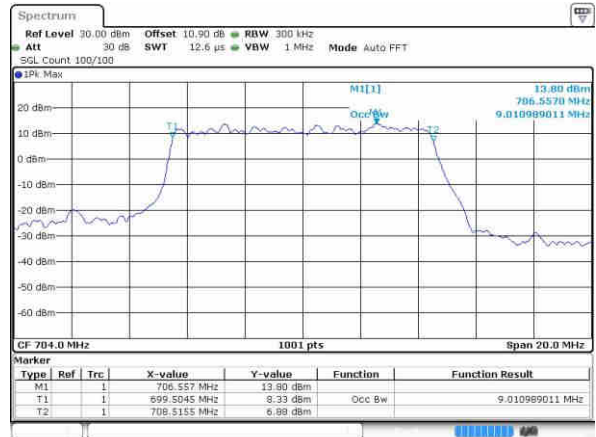


LTE Band 12

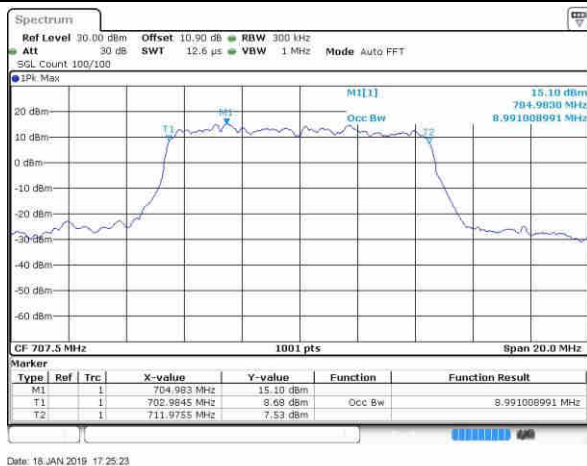
Lowest Channel / 10MHz / QPSK



Lowest Channel / 10MHz / 16QAM



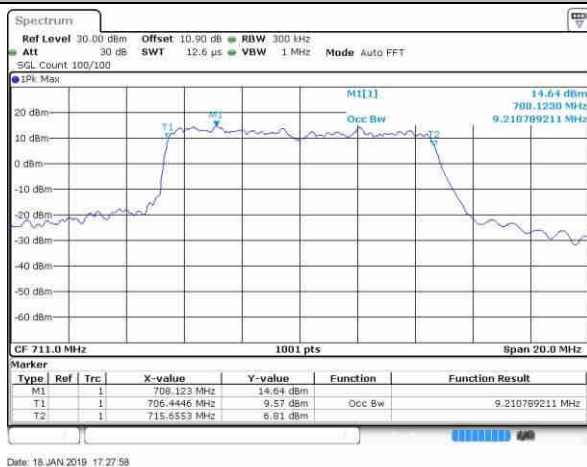
Middle Channel / 10MHz / QPSK



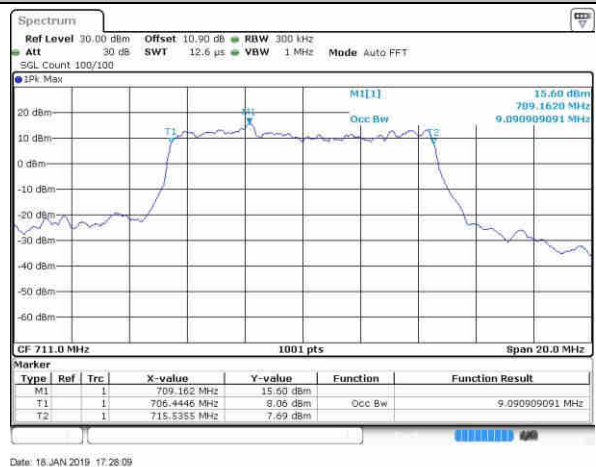
Middle Channel / 10MHz / 16QAM

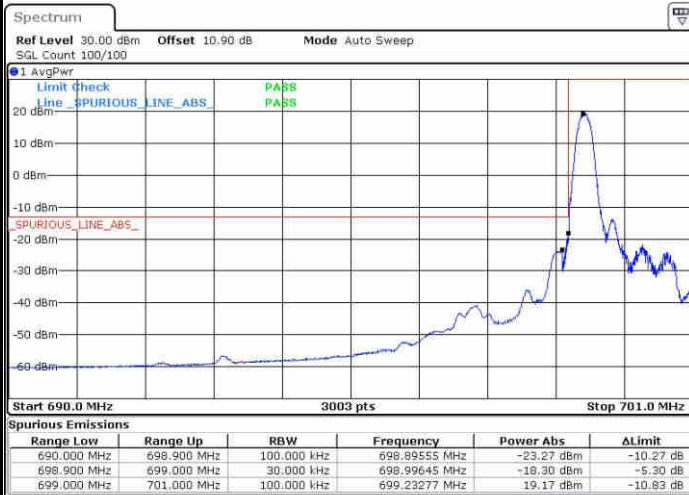


Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

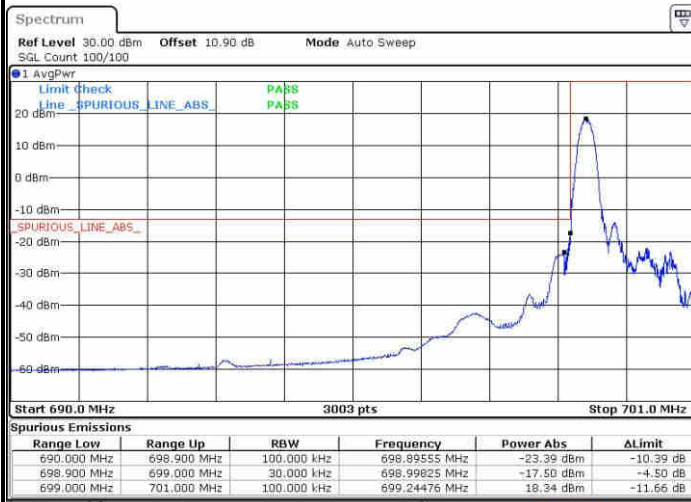


**Conducted Band Edge****LTE Band 12 / 1.4MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**



LTE Band 12 / 1.4MHz / 16QAM

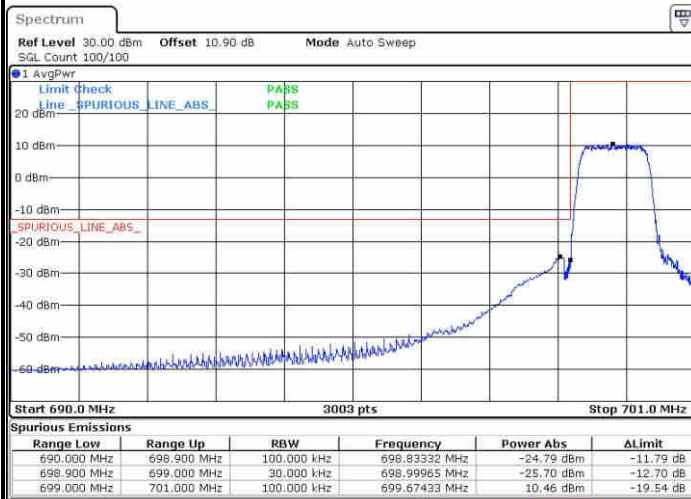
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



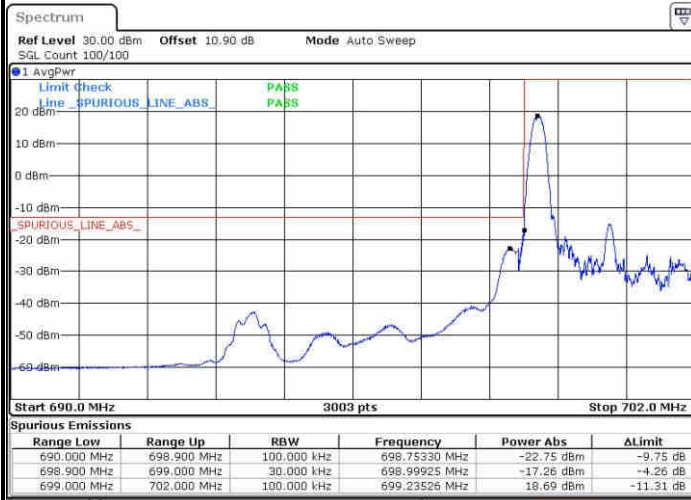
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



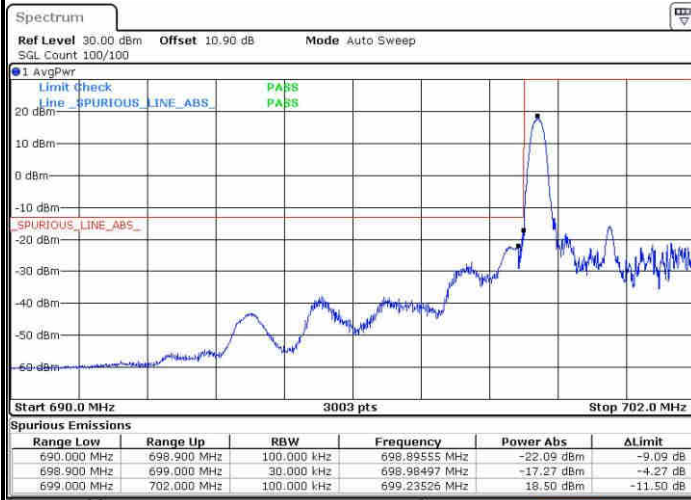
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



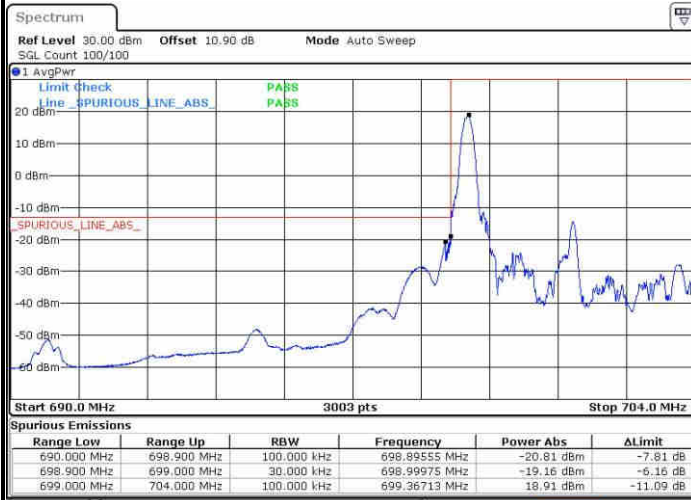
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / QPSK

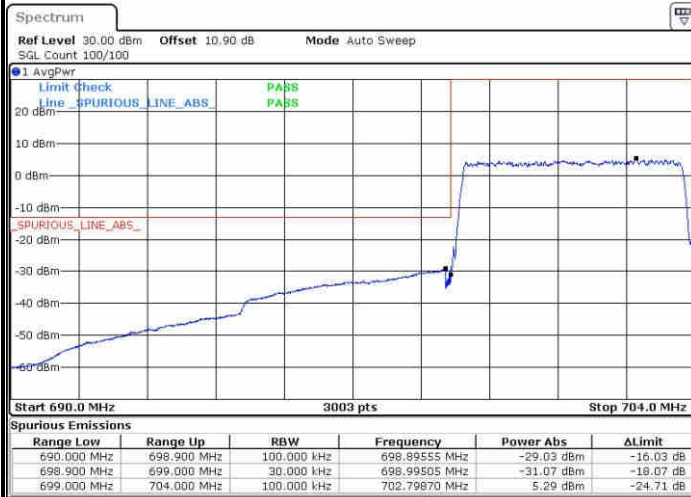
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



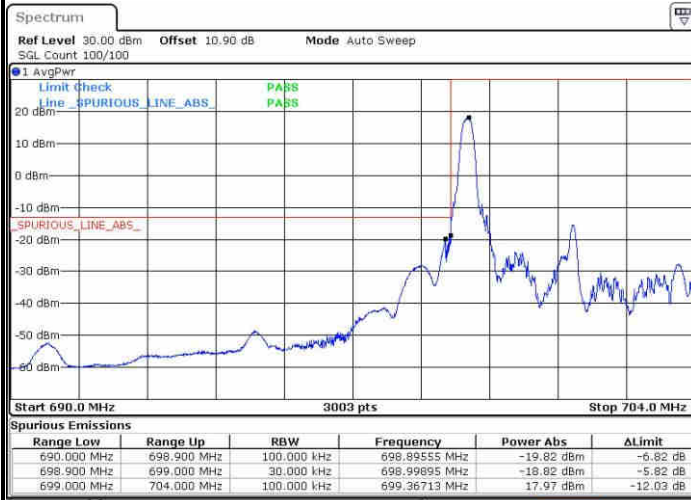
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



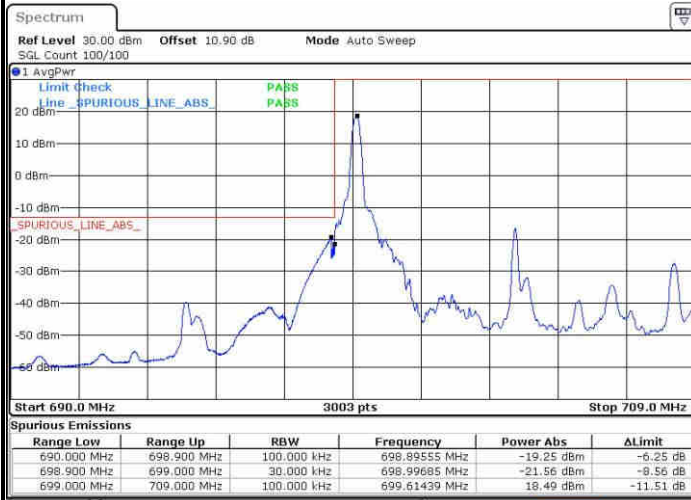
Highest Band Edge / Full RB



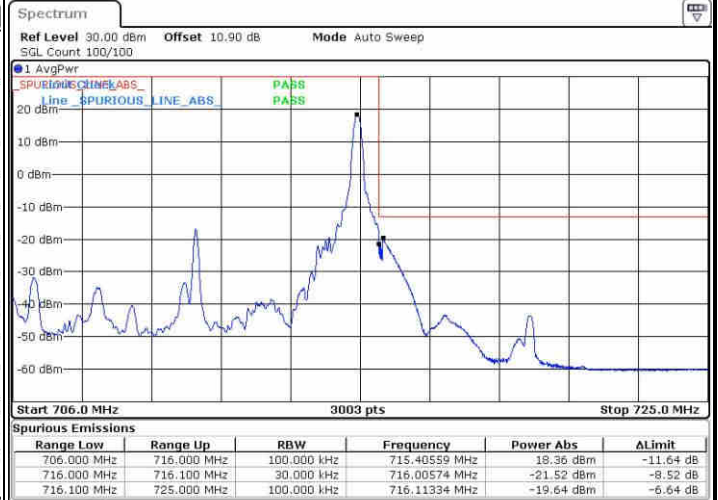


LTE Band 12 / 10MHz / QPSK

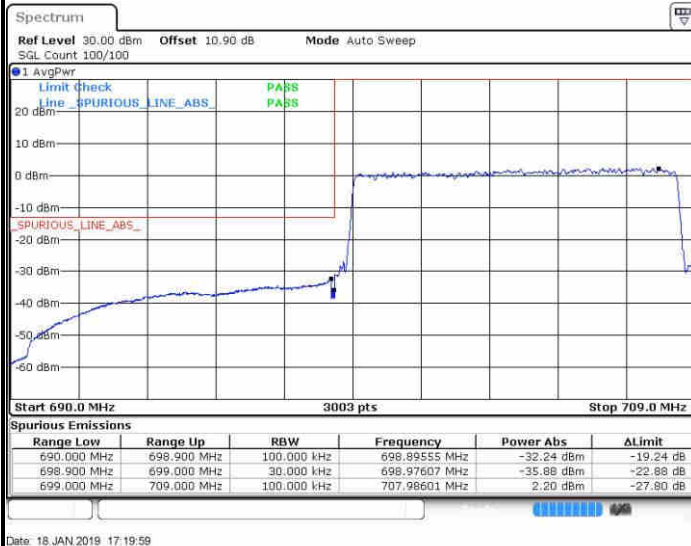
Lowest Band Edge / 1 RB



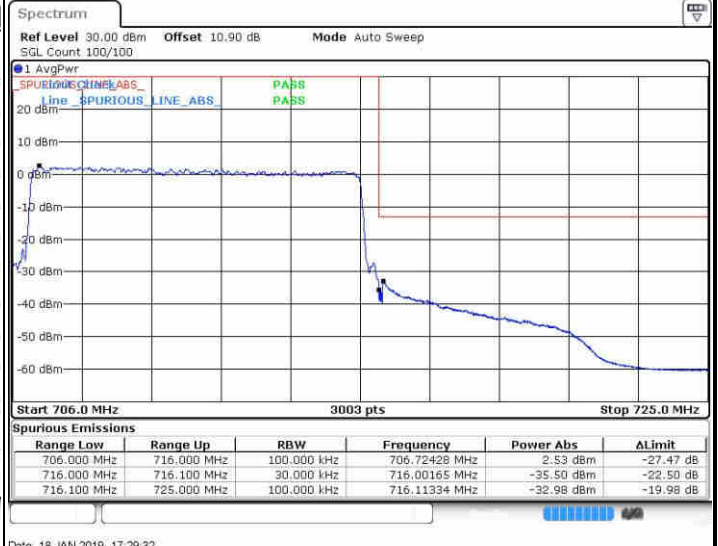
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



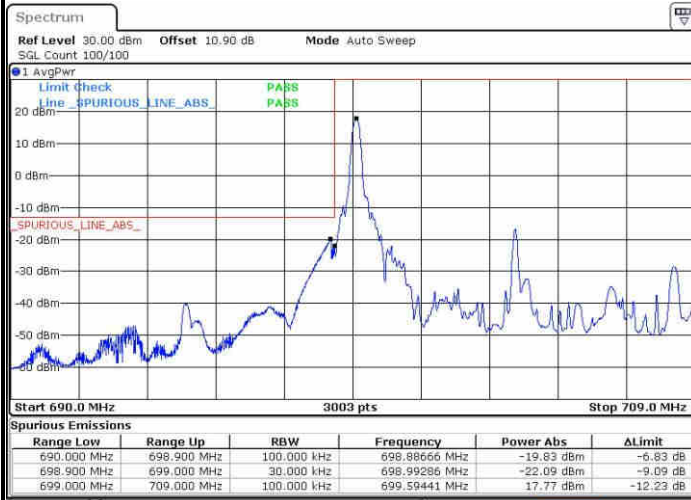
Highest Band Edge / Full RB



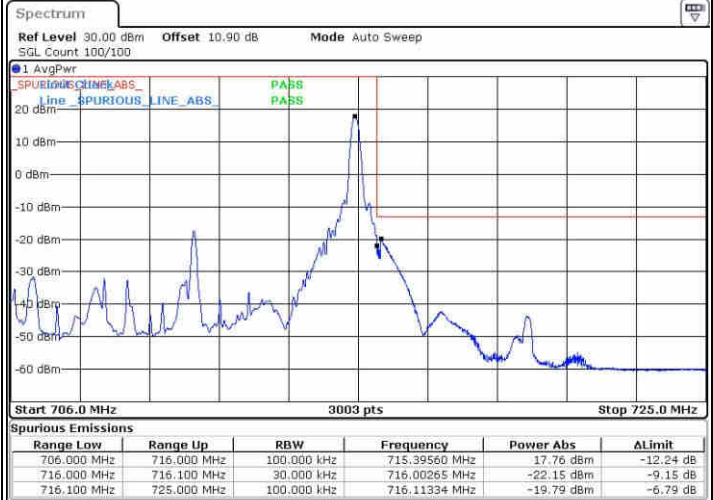


LTE Band 12 / 10MHz / 16QAM

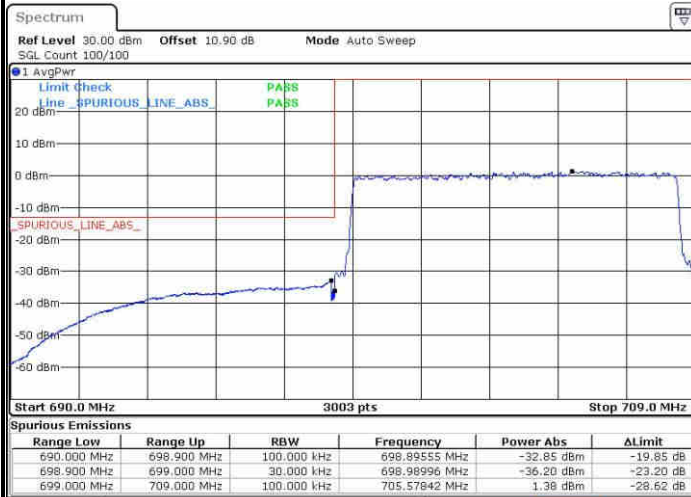
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

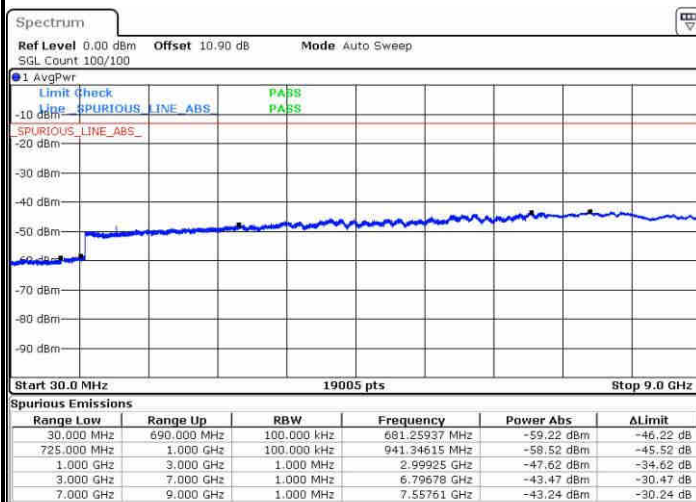




Conducted Spurious Emission

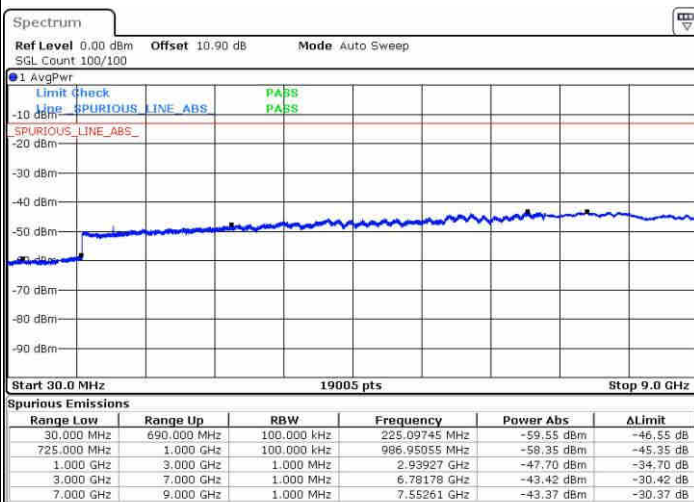
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



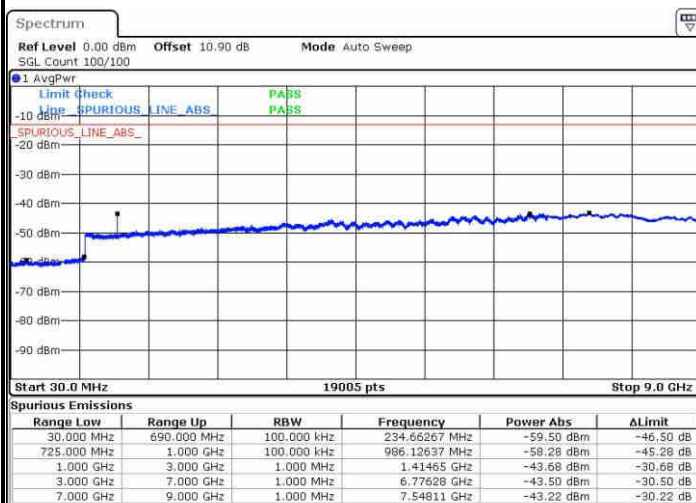
Date: 18 JAN 2019 16:35:04

Lowest Channel / 16QAM



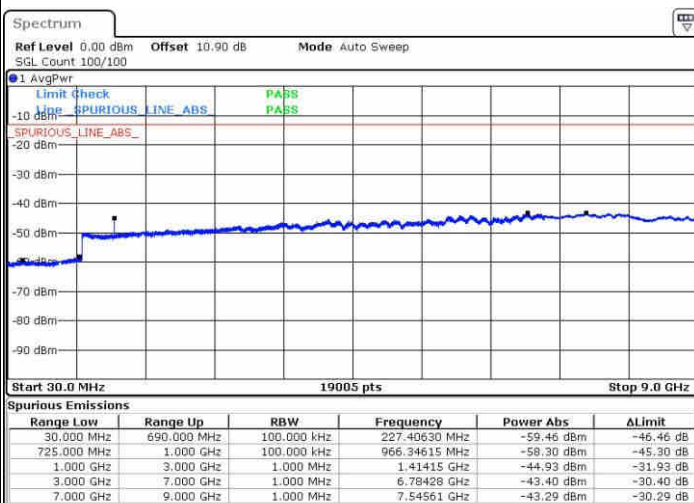
Date: 18 JAN 2019 16:36:04

Middle Channel / QPSK



Date: 18 JAN 2019 16:38:50

Middle Channel / 16QAM

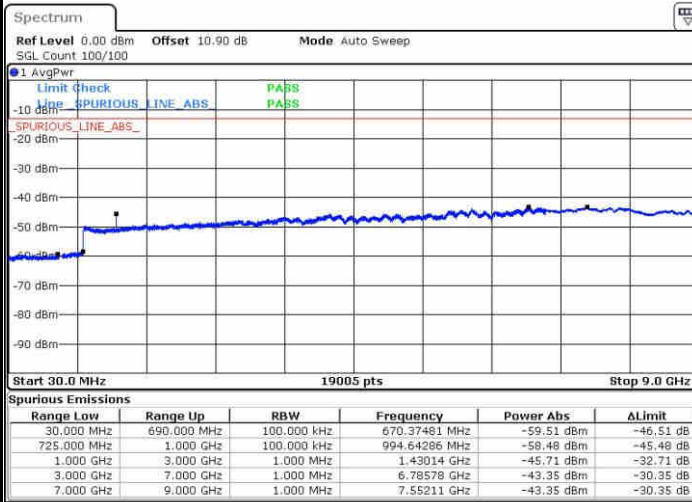


Date: 18 JAN 2019 16:37:50



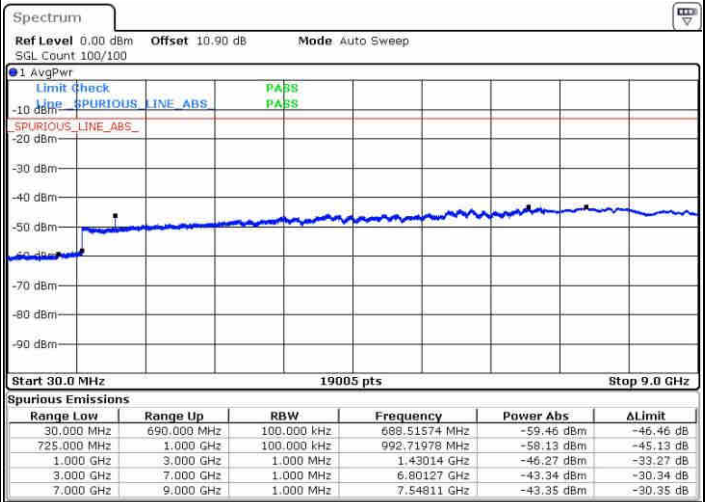
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 18 JAN 2019 16:44:36

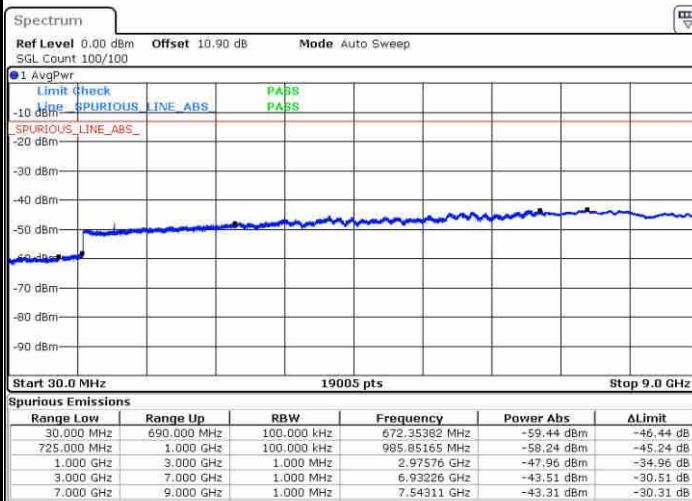
Highest Channel / 16QAM



Date: 18 JAN 2019 16:45:36

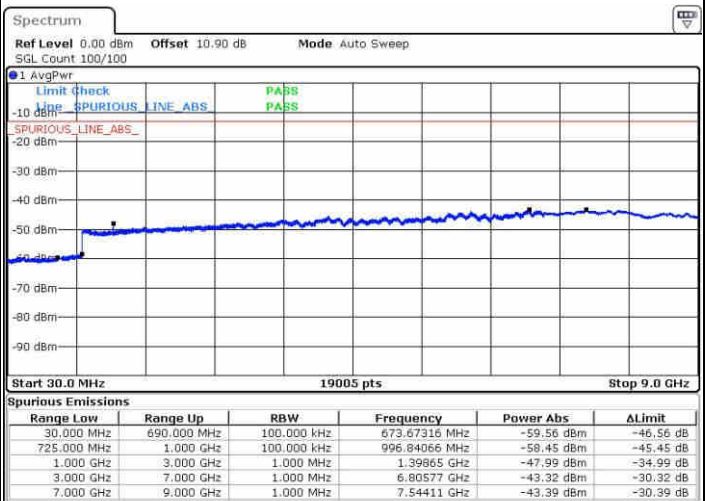
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 18 JAN 2019 16:51:22

Lowest Channel / 16QAM

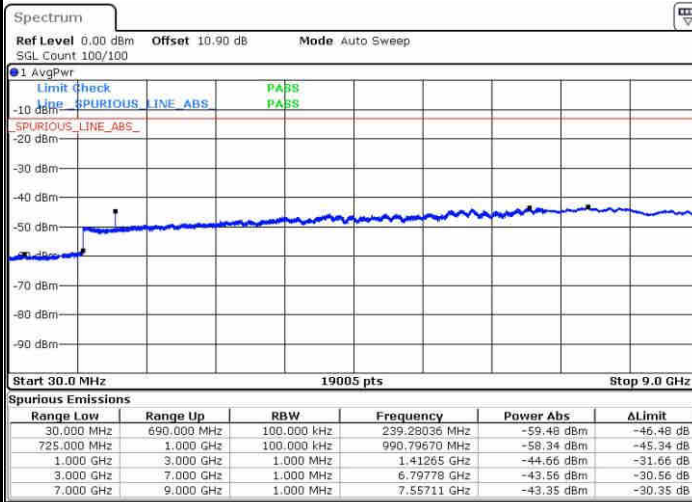


Date: 18 JAN 2019 16:52:23



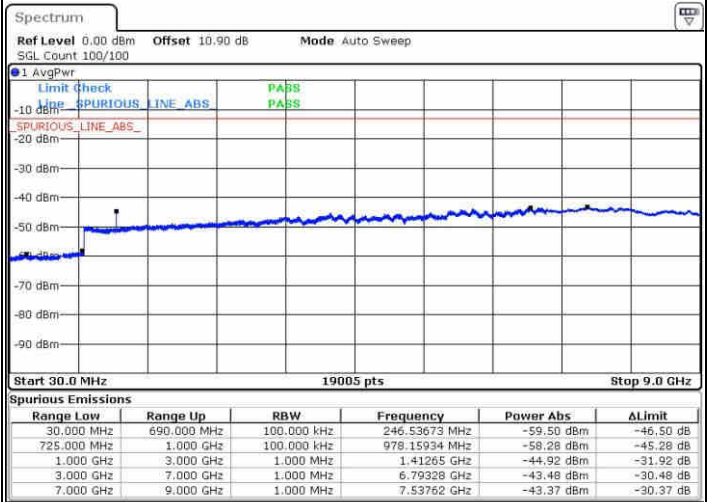
LTE Band 12 / 3MHz

Middle Channel / QPSK



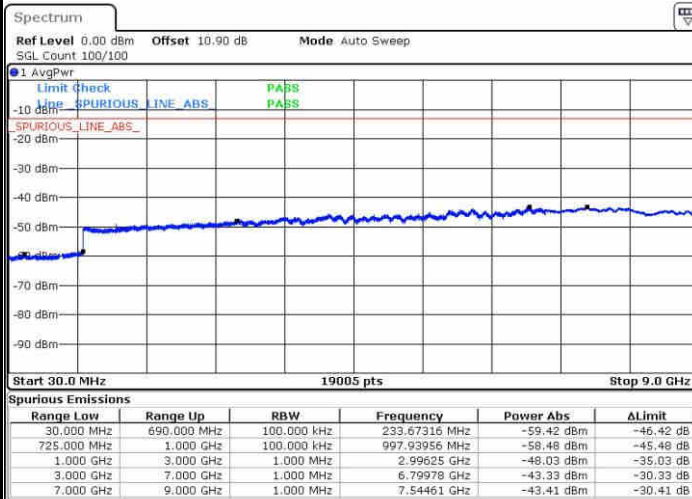
Date: 18 JAN 2019 16:55:09

Middle Channel / 16QAM



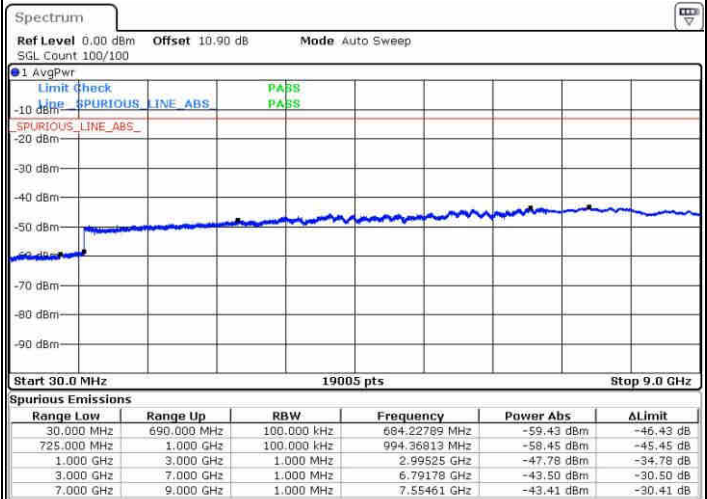
Date: 18 JAN 2019 16:54:09

Highest Channel / QPSK



Date: 18 JAN 2019 17:00:55

Highest Channel / 16QAM

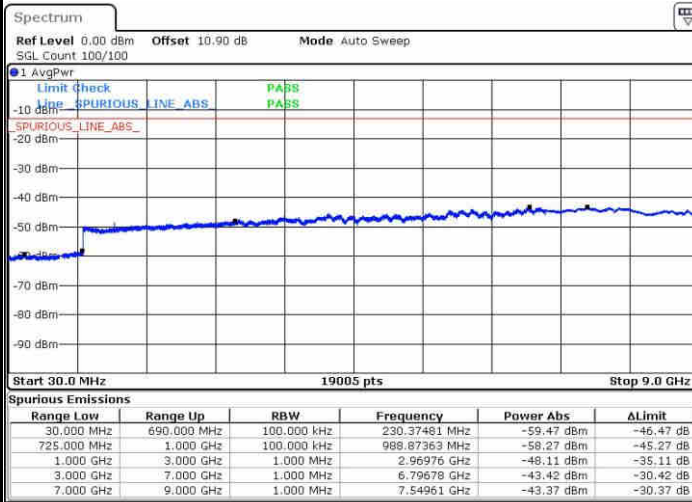


Date: 18 JAN 2019 17:01:55



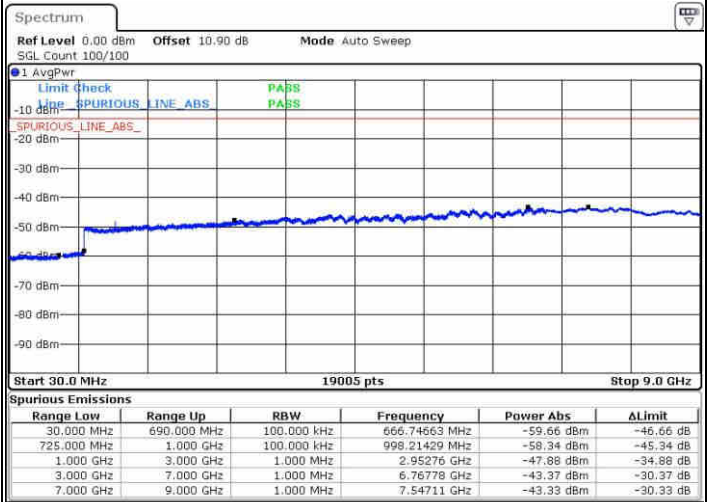
LTE Band 12 / 5MHz

Lowest Channel / QPSK



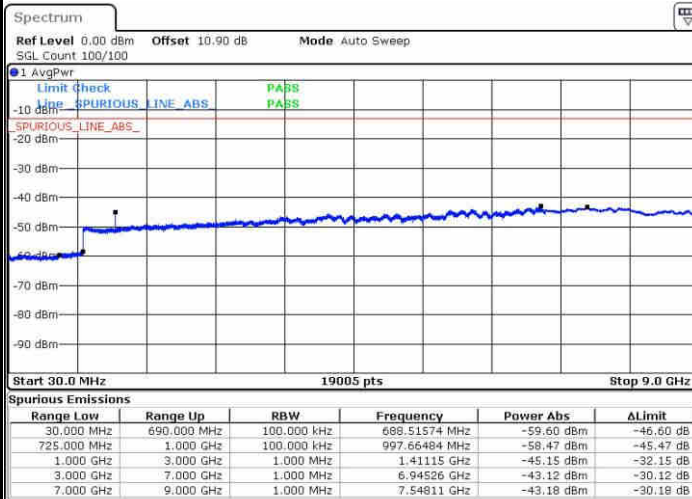
Date: 18 JAN 2019 17:07:42

Lowest Channel / 16QAM



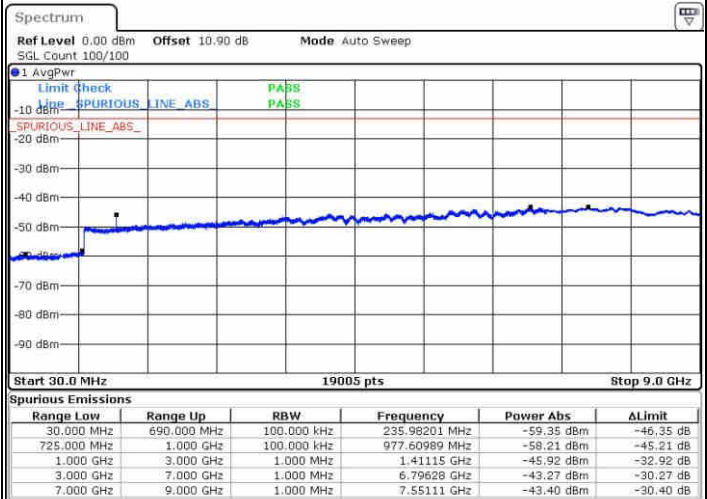
Date: 18 JAN 2019 17:08:42

Middle Channel / QPSK



Date: 18 JAN 2019 17:11:27

Middle Channel / 16QAM

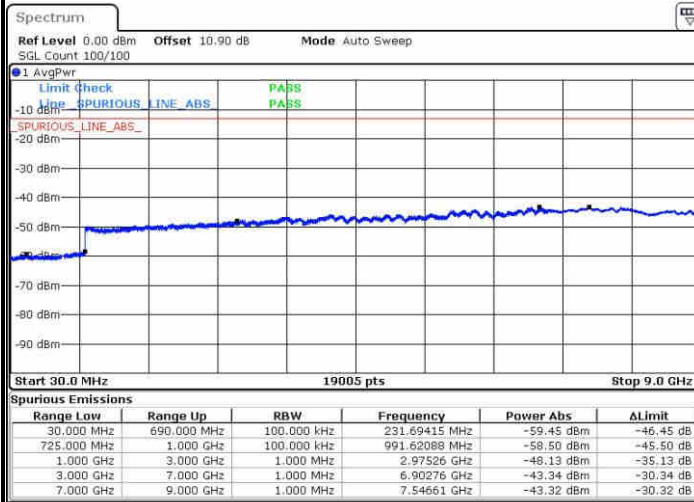


Date: 18 JAN 2019 17:10:27



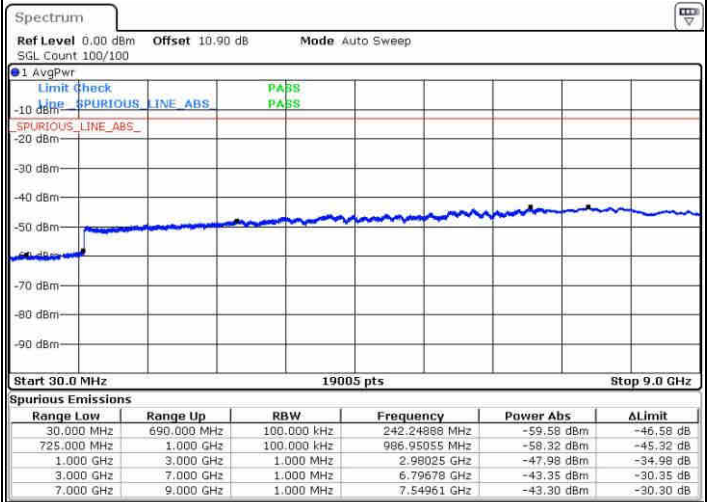
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 18 JAN 2019 17:18:14

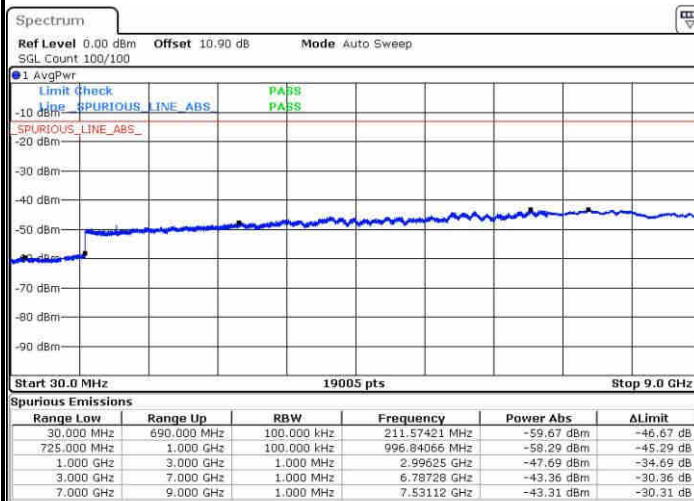
Highest Channel / 16QAM



Date: 18 JAN 2019 17:17:14

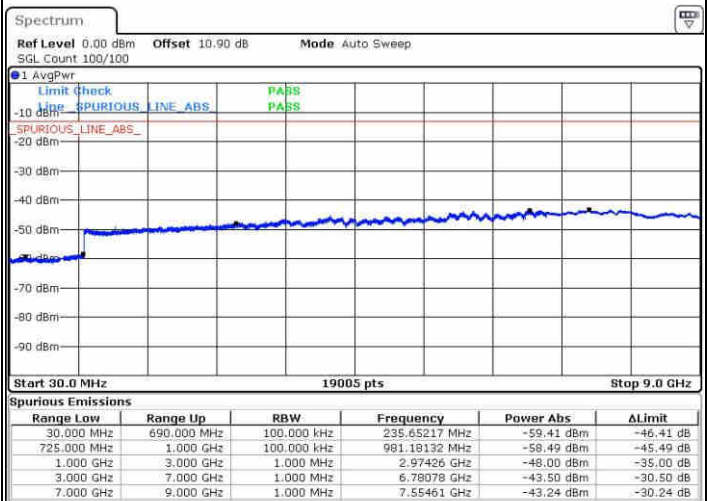
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 18 JAN 2019 17:24:00

Lowest Channel / 16QAM

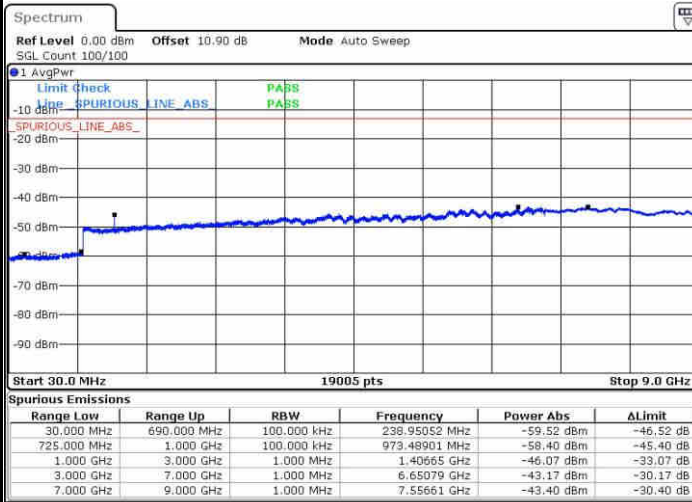


Date: 18 JAN 2019 17:25:00



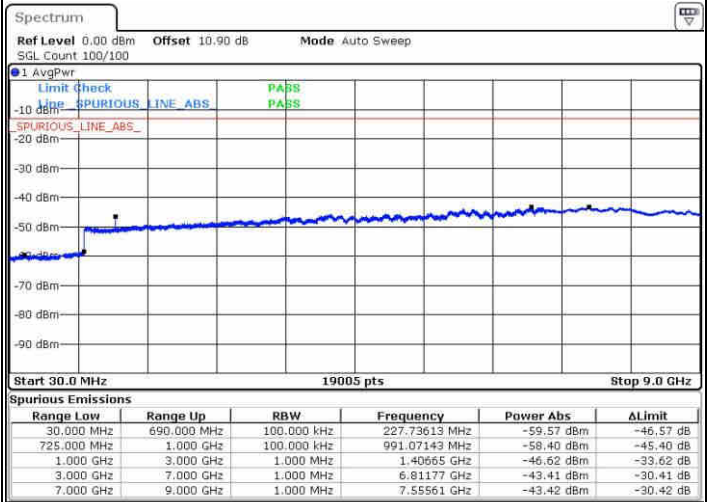
LTE Band 12 / 10MHz

Middle Channel / QPSK



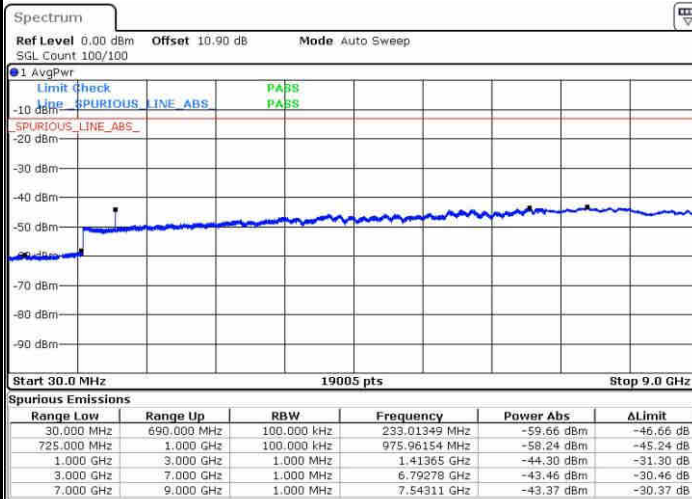
Date: 18 JAN 2019 17:27:46

Middle Channel / 16QAM



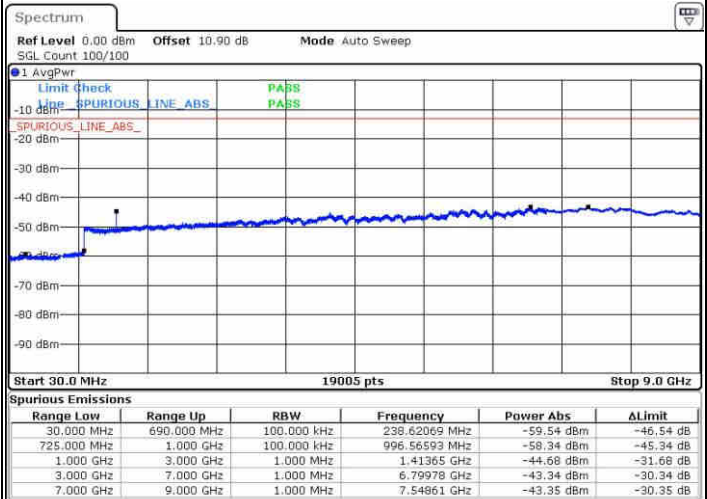
Date: 18 JAN 2019 17:26:46

Highest Channel / QPSK



Date: 18 JAN 2019 17:33:32

Highest Channel / 16QAM



Date: 18 JAN 2019 17:34:33

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	0.0114	PASS
40	Normal Voltage	0.0113	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0119	
-20	Normal Voltage	0.0129	
-30	Normal Voltage	0.0127	
20	Maximum Voltage	0.0110	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0103	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



<Ant. 2>

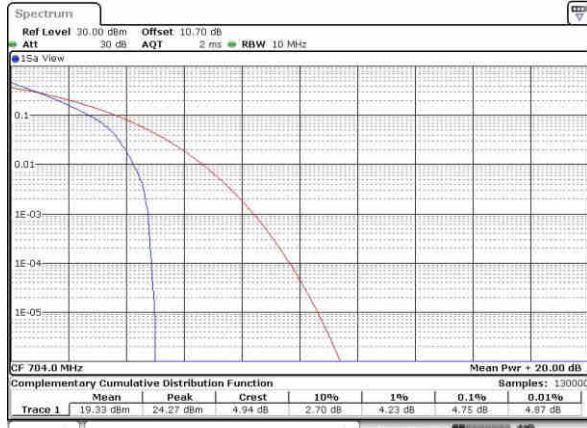
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.75	5.57	5.59	6.14	PASS
Middle CH	5.59	5.04	6.72	5.86	
Highest CH	4.72	5.16	5.48	6	

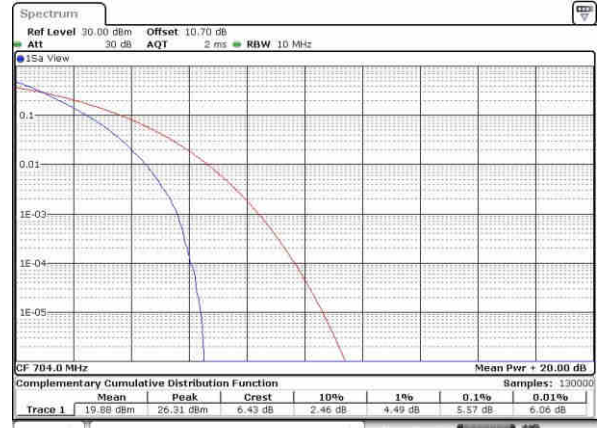


LTE Band 12 / 10MHz / QPSK

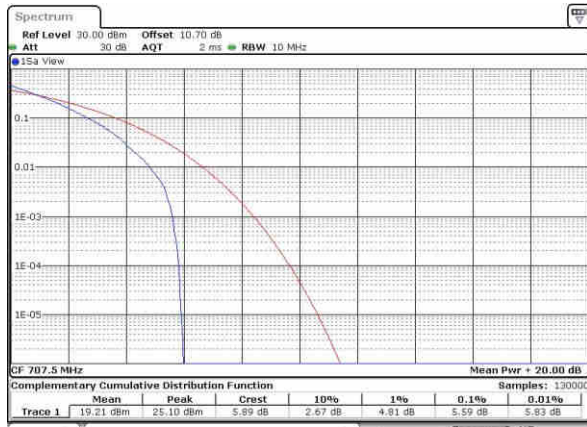
Lowest Channel / 1RB



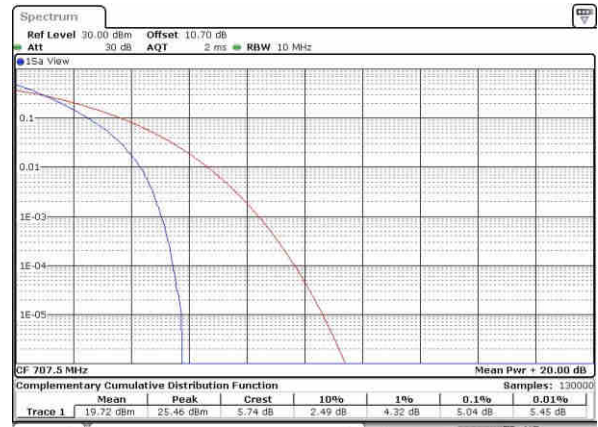
Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



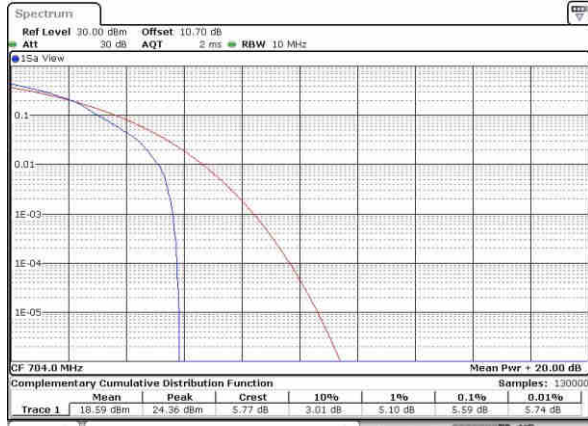
Highest Channel / Full RB





LTE Band 12 / 10MHz / 16QAM

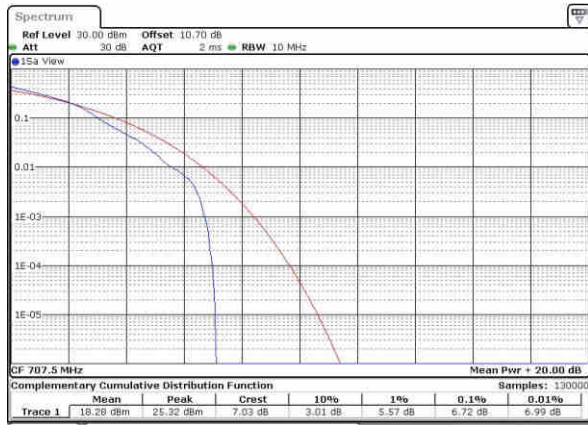
Lowest Channel / 1RB



Lowest Channel / Full RB



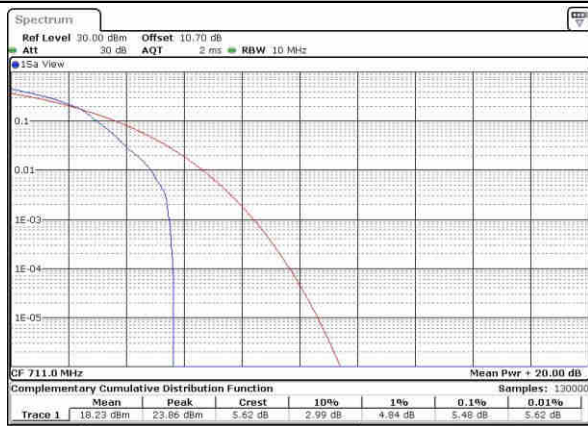
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



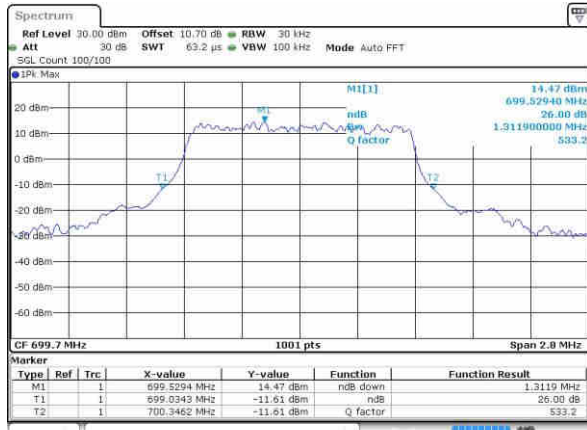
**26dB Bandwidth**

Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.31	1.29	3.03	2.98	5.01	4.86	9.91	10.19	-	-	-	-
Middle CH	1.31	1.31	3.01	3.10	5.01	4.89	10.19	10.29	-	-	-	-
Highest CH	1.29	1.32	3.06	3.08	5.01	4.95	10.45	10.33	-	-	-	-



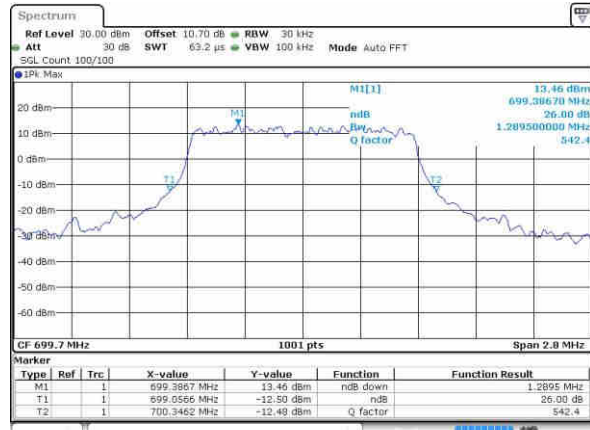
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



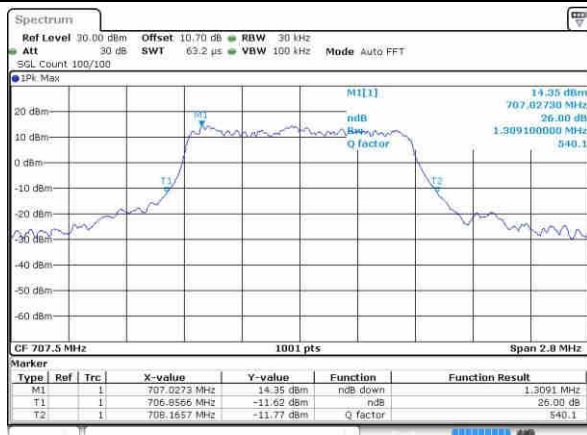
Date: 17 JAN 2019 15:36:54

Lowest Channel / 1.4MHz / 16QAM



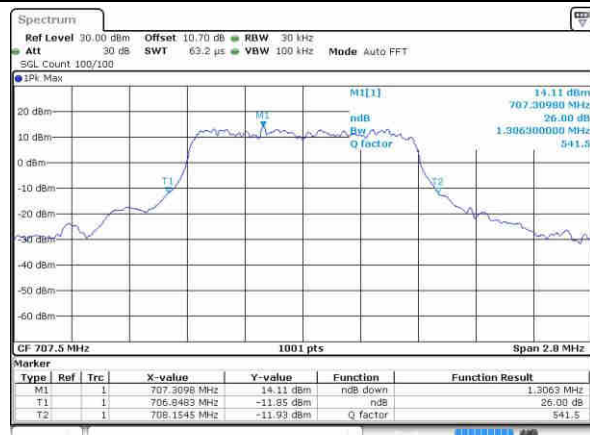
Date: 17 JAN 2019 15:36:42

Middle Channel / 1.4MHz / QPSK



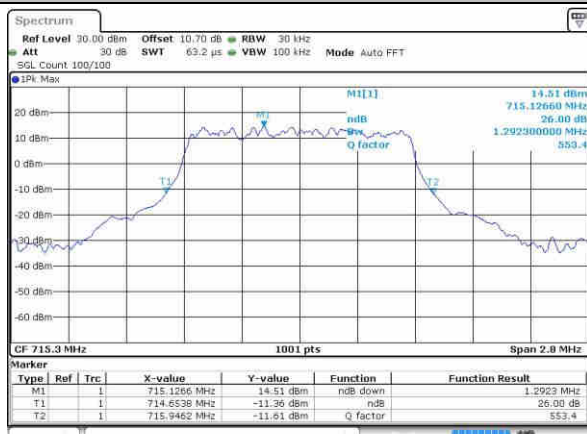
Date: 17 JAN 2019 15:43:29

Middle Channel / 1.4MHz / 16QAM



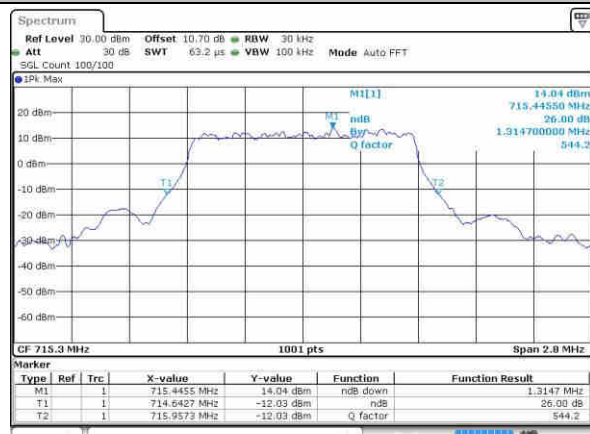
Date: 17 JAN 2019 15:43:40

Highest Channel / 1.4MHz / QPSK



Date: 17 JAN 2019 15:46:27

Highest Channel / 1.4MHz / 16QAM

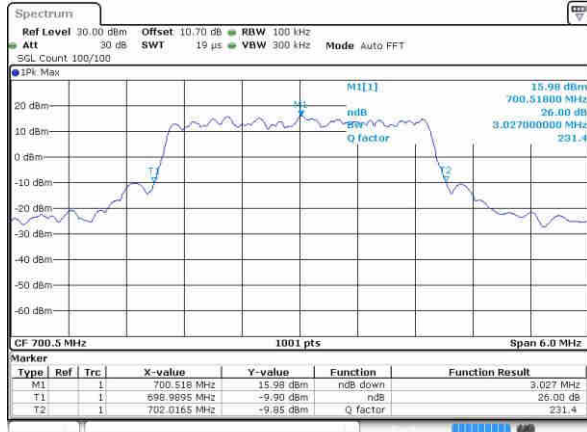


Date: 17 JAN 2019 15:46:15

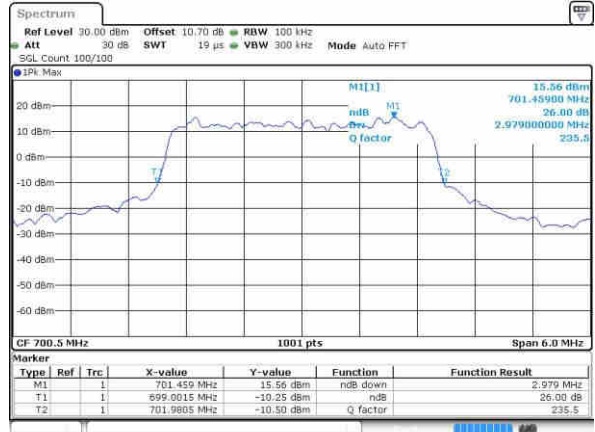


LTE Band 12

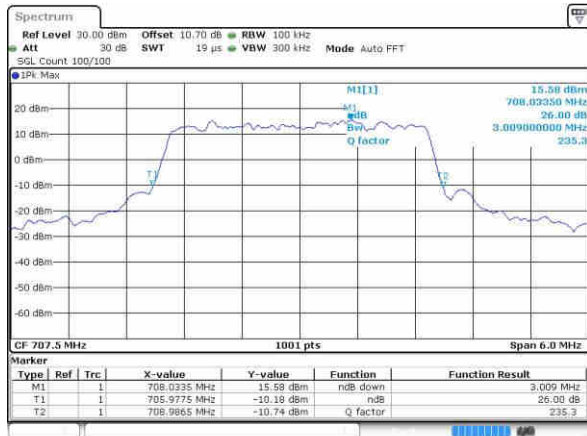
Lowest Channel / 3MHz / QPSK



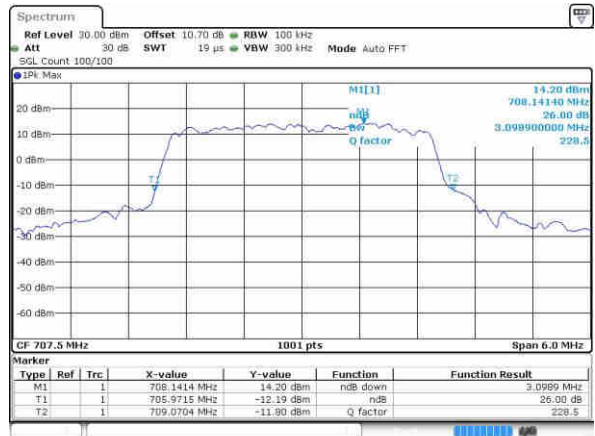
Lowest Channel / 3MHz / 16QAM



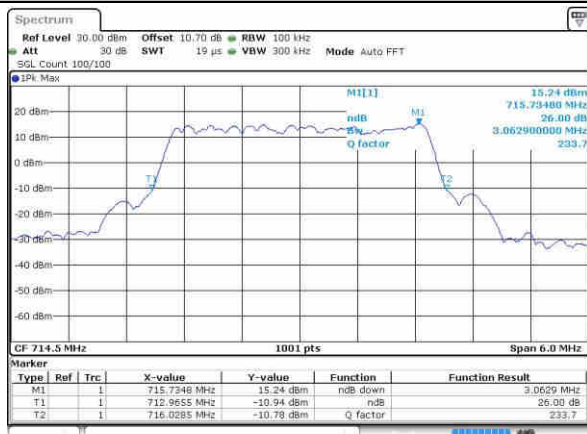
Middle Channel / 3MHz / QPSK



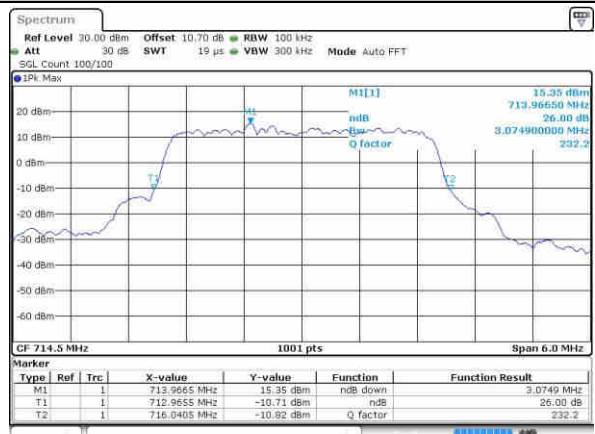
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



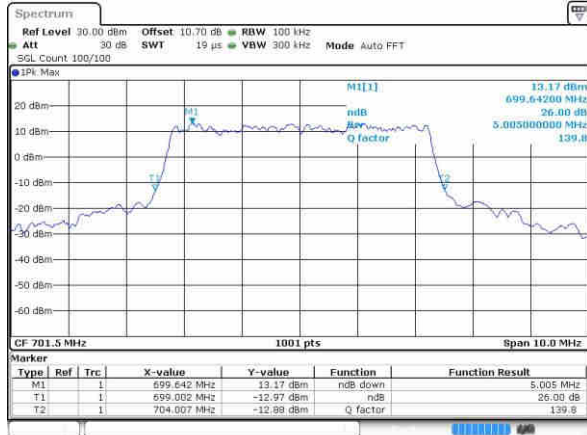
Highest Channel / 3MHz / 16QAM



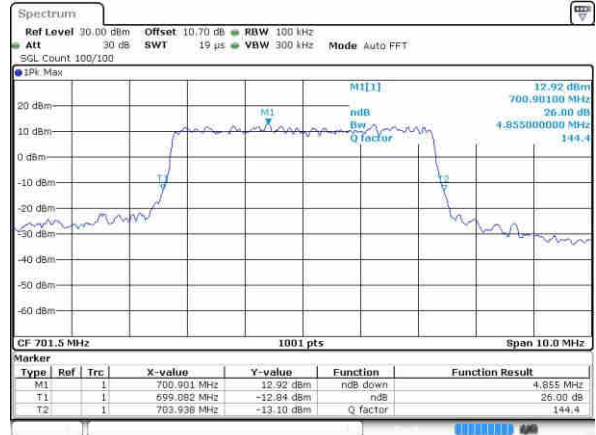


LTE Band 12

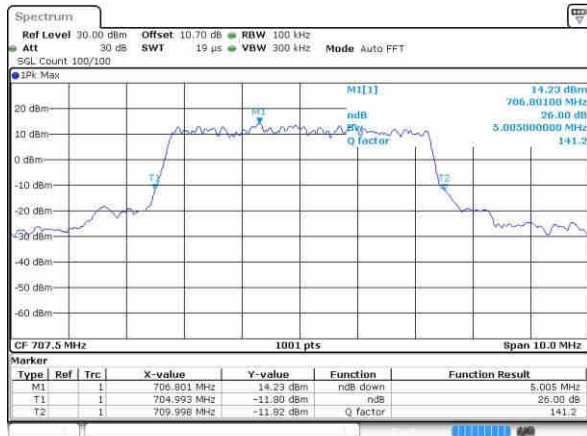
Lowest Channel / 5MHz / QPSK



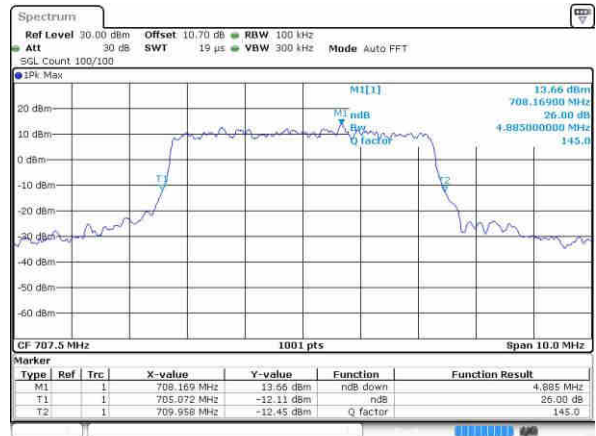
Lowest Channel / 5MHz / 16QAM



Middle Channel / 5MHz / QPSK



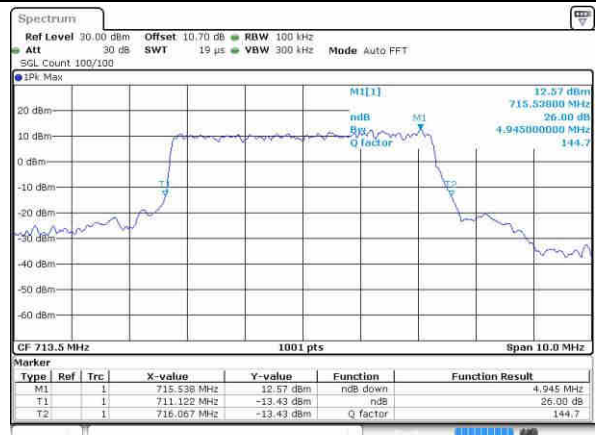
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



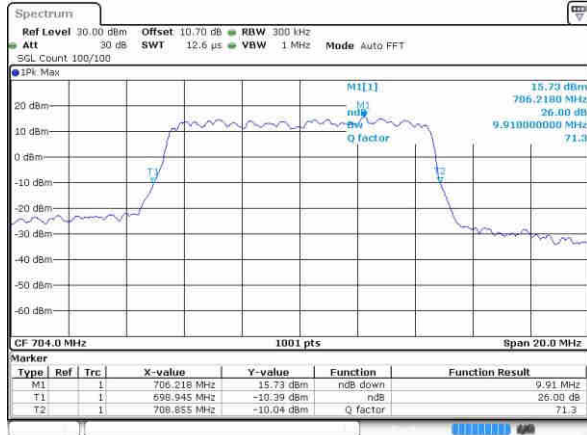
Highest Channel / 5MHz / 16QAM





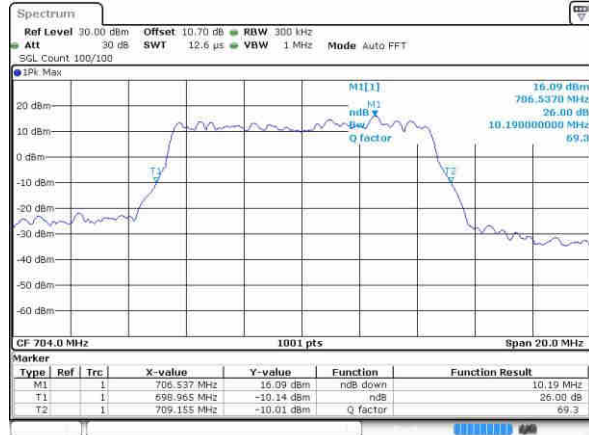
LTE Band 12

Lowest Channel / 10MHz / QPSK



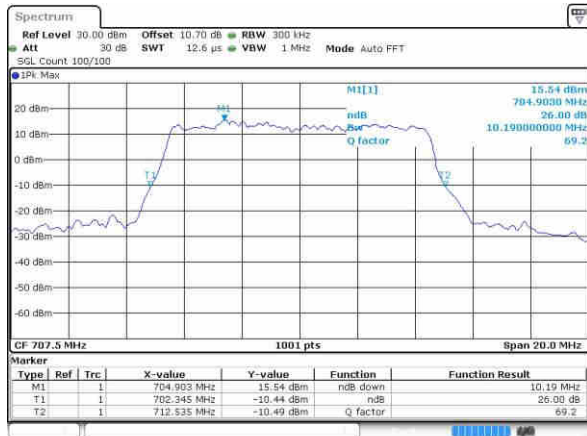
Date: 17 JAN 2019 15:20:35

Lowest Channel / 10MHz / 16QAM



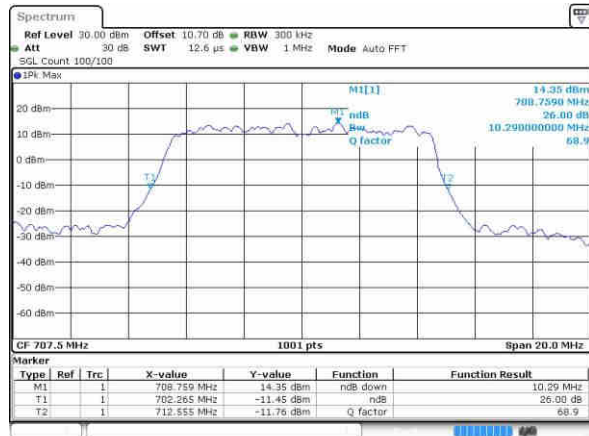
Date: 17 JAN 2019 15:20:24

Middle Channel / 10MHz / QPSK



Date: 17 JAN 2019 15:27:10

Middle Channel / 10MHz / 16QAM



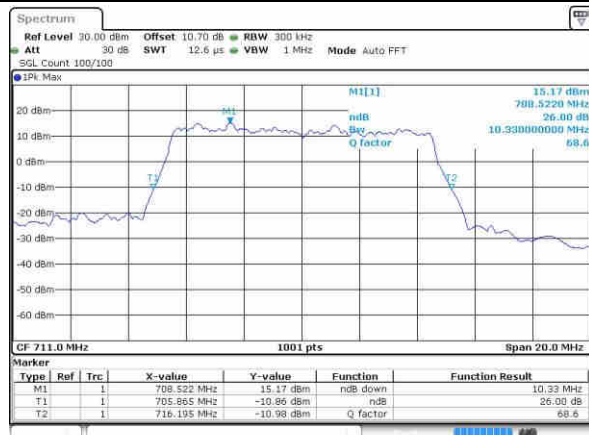
Date: 17 JAN 2019 15:27:22

Highest Channel / 10MHz / QPSK



Date: 17 JAN 2019 15:30:07

Highest Channel / 10MHz / 16QAM



Date: 17 JAN 2019 15:29:58



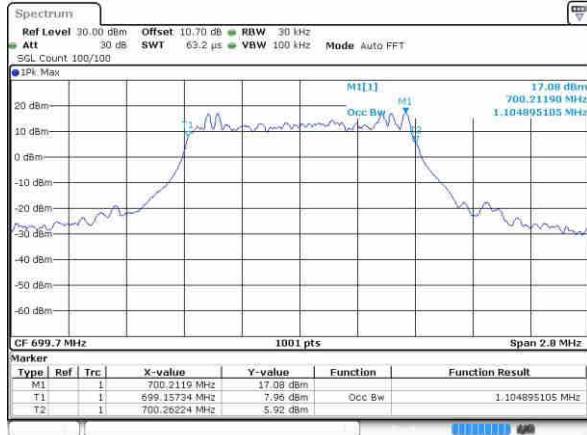
Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.1	1.1	2.73	2.72	4.51	4.48	9.05	9.01	-	-	-	-
Middle CH	1.1	1.09	2.74	2.72	4.47	4.48	9.01	9.03	-	-	-	-
Highest CH	1.09	1.1	2.72	2.73	4.49	4.5	9.03	9.01	-	-	-	-

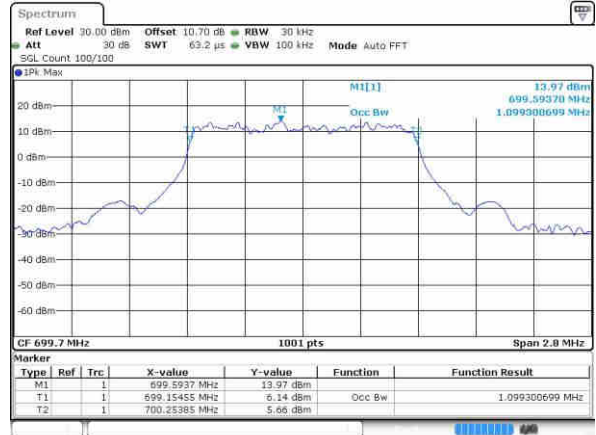


LTE Band 12

Lowest Channel / 1.4MHz / QPSK



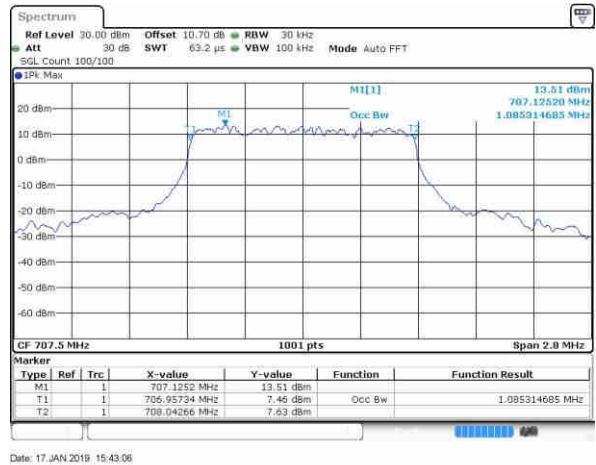
Lowest Channel / 1.4MHz / 16QAM



Middle Channel / 1.4MHz / QPSK



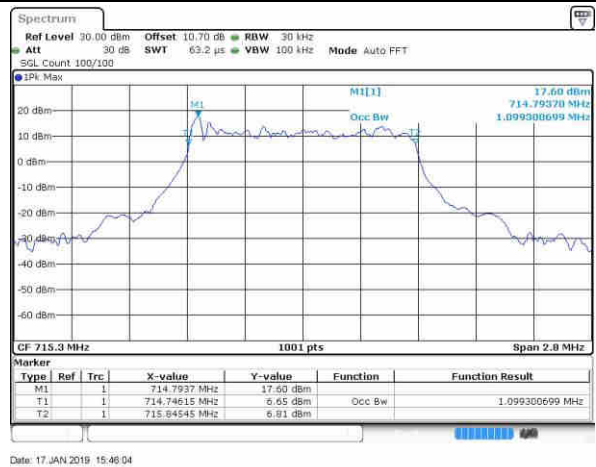
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



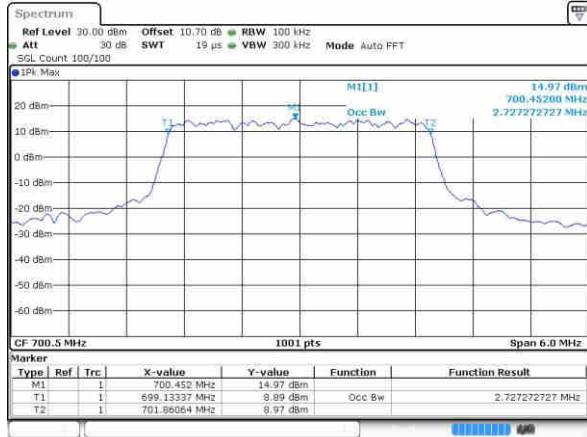
Highest Channel / 1.4MHz / 16QAM



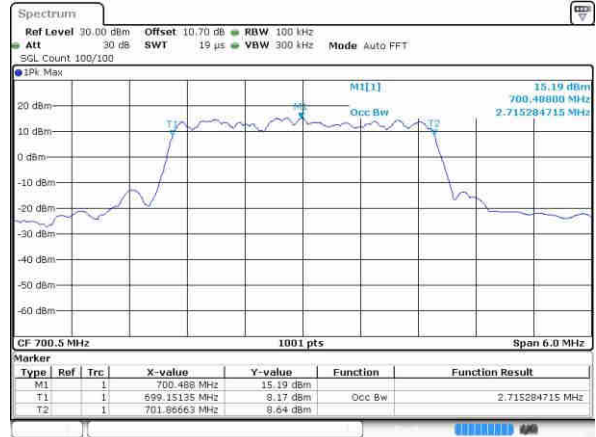


LTE Band 12

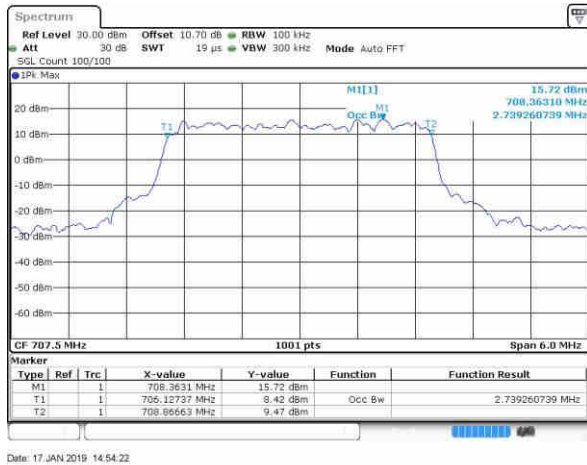
Lowest Channel / 3MHz / QPSK



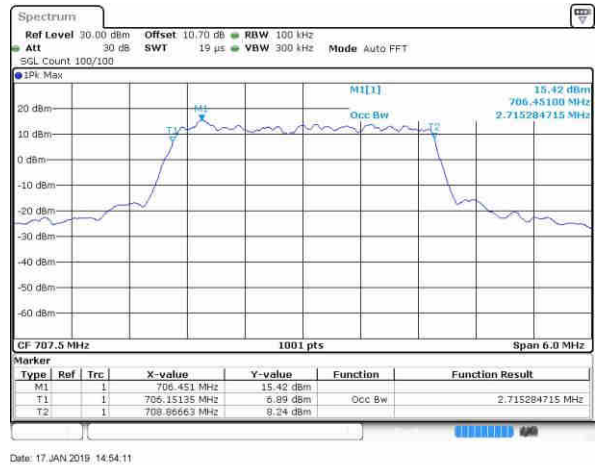
Lowest Channel / 3MHz / 16QAM



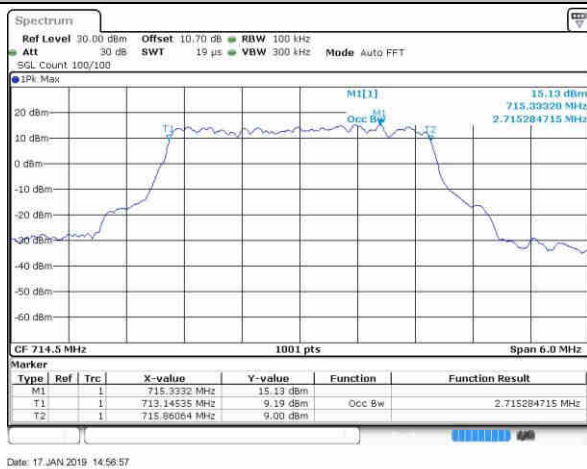
Middle Channel / 3MHz / QPSK



Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



Highest Channel / 3MHz / 16QAM

