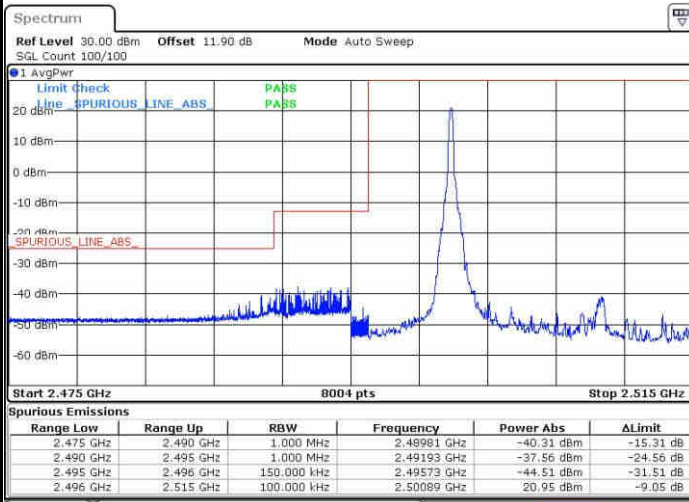


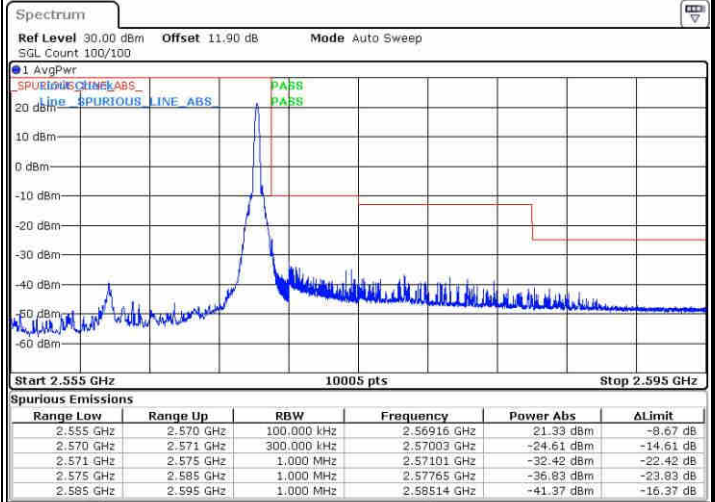


LTE Band 7 / 15MHz / QPSK

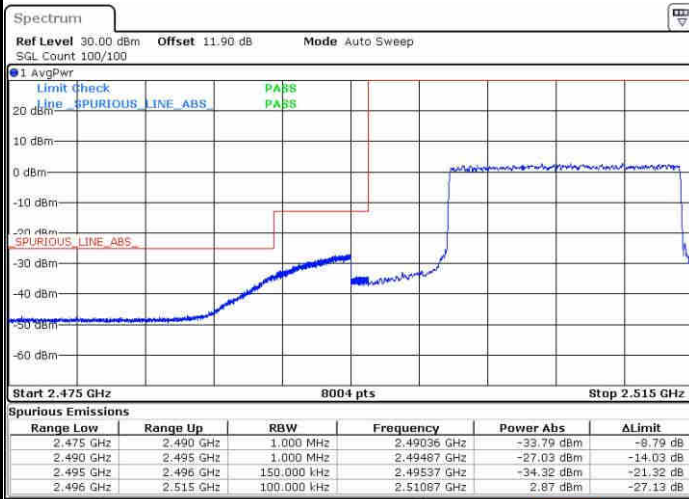
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



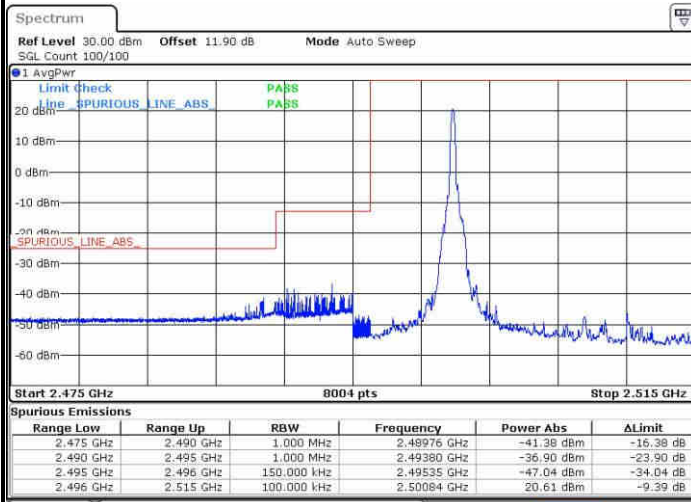
Highest Band Edge / Full RB



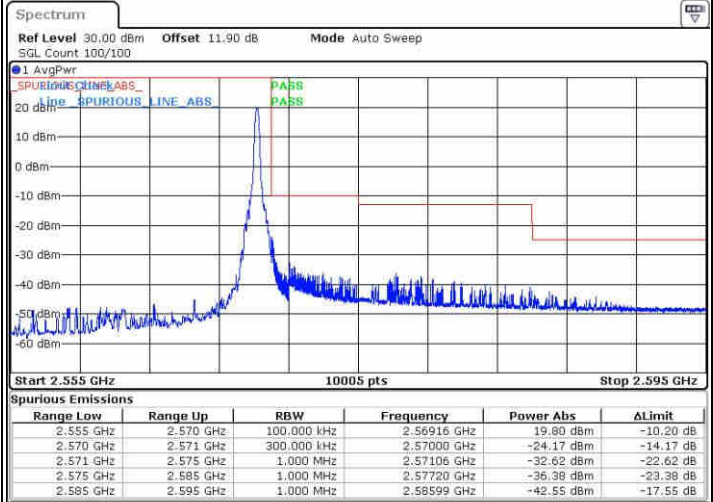


LTE Band 7 / 15MHz / 16QAM

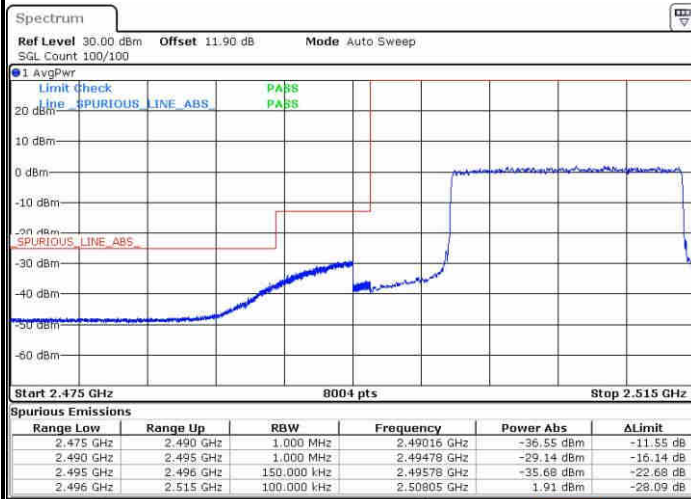
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



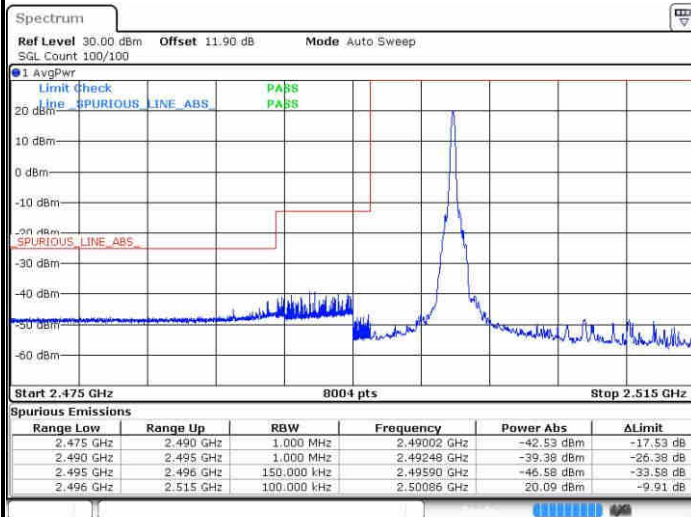
Highest Band Edge / Full RB



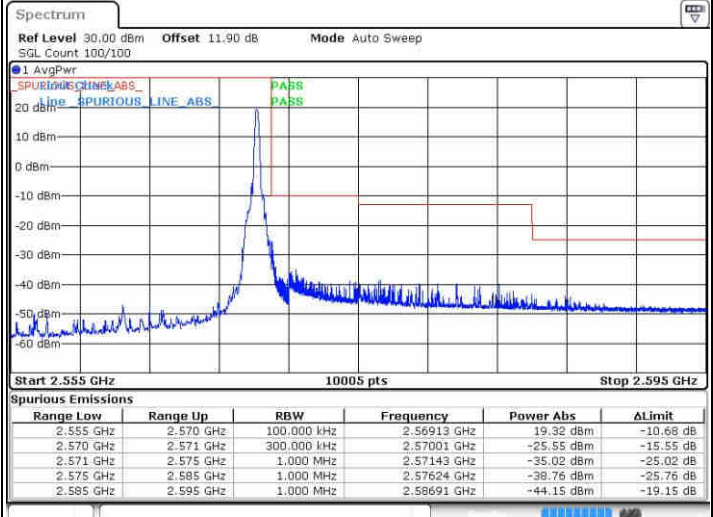


LTE Band 7 / 15MHz / 64QAM

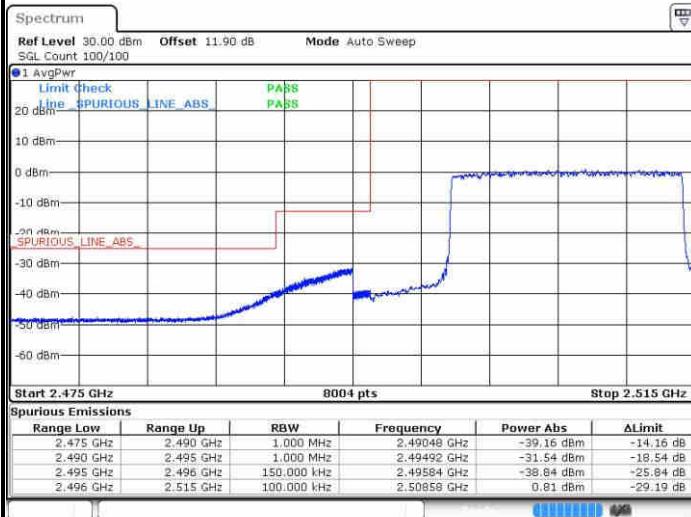
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



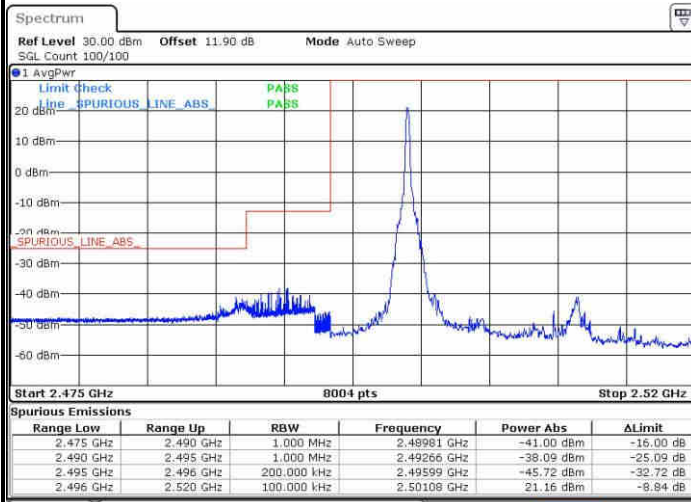
Highest Band Edge / Full RB



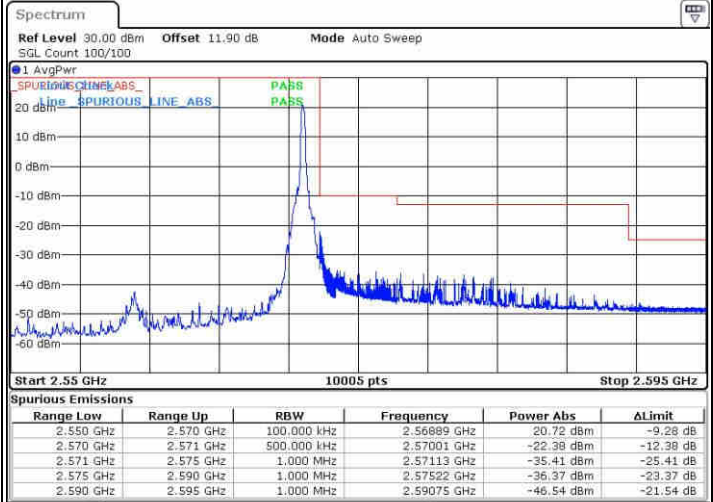


LTE Band 7 / 20MHz / QPSK

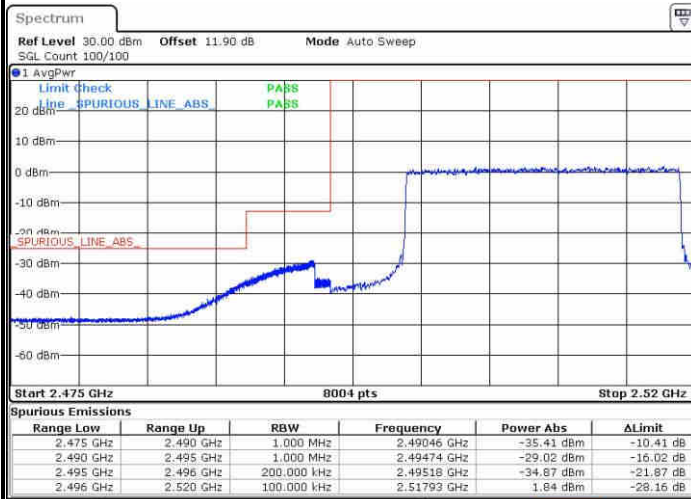
Lowest Band Edge / 1 RB



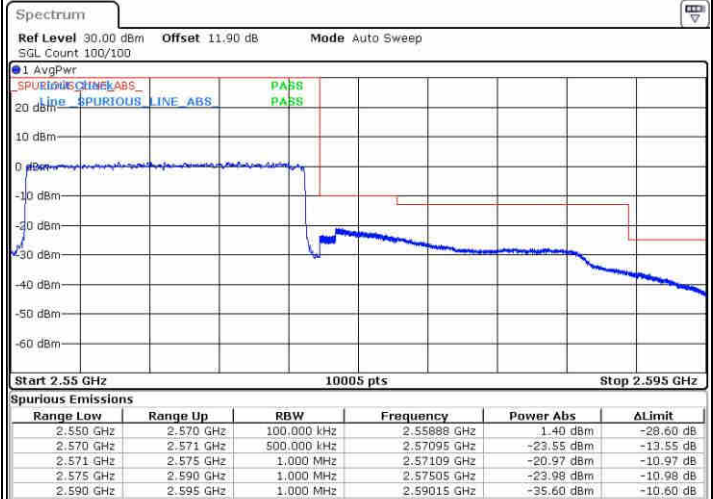
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



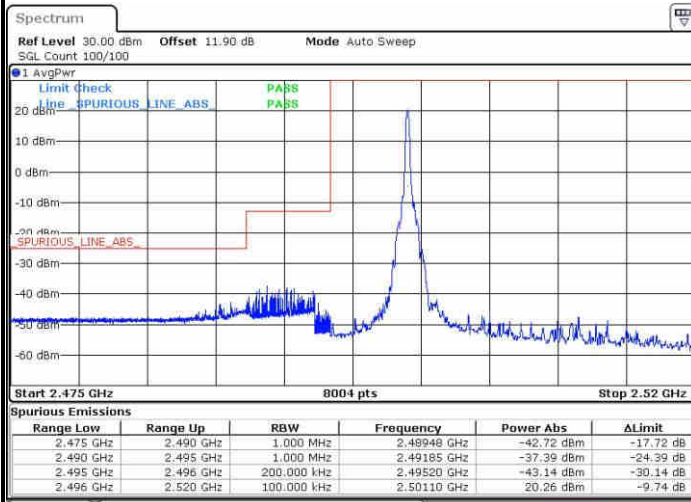
Highest Band Edge / Full RB



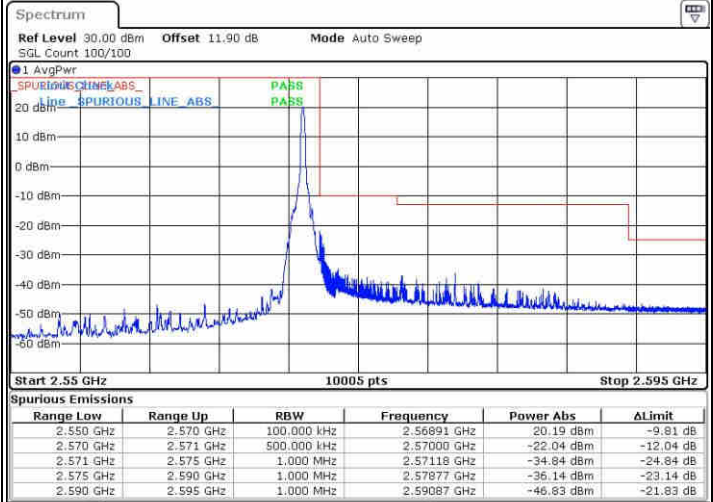


LTE Band 7 / 20MHz / 16QAM

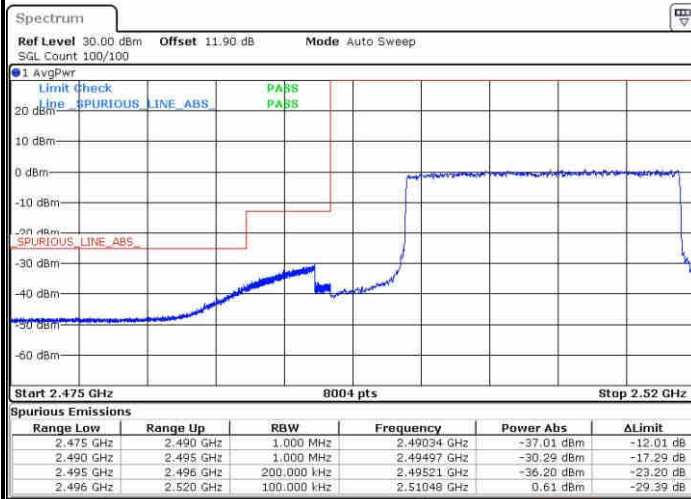
Lowest Band Edge / 1 RB



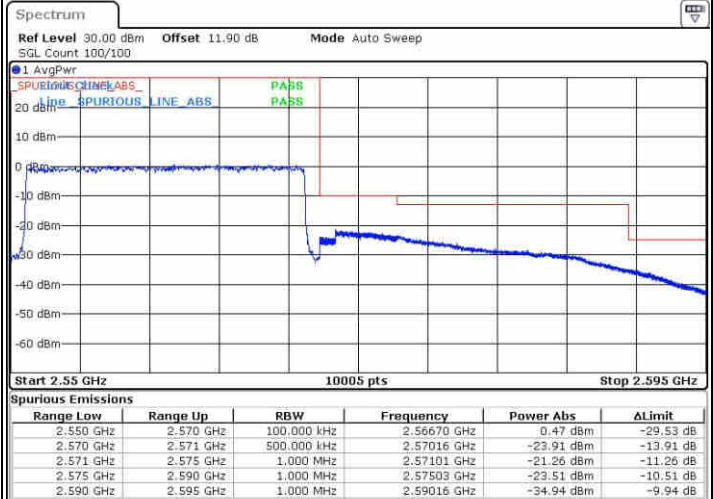
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



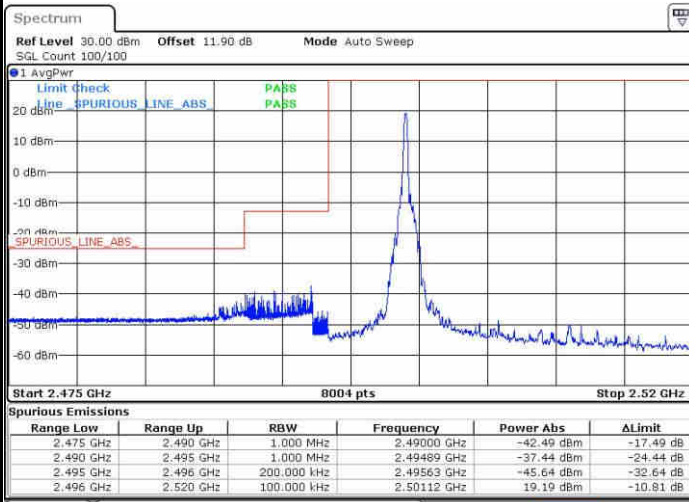
Highest Band Edge / Full RB





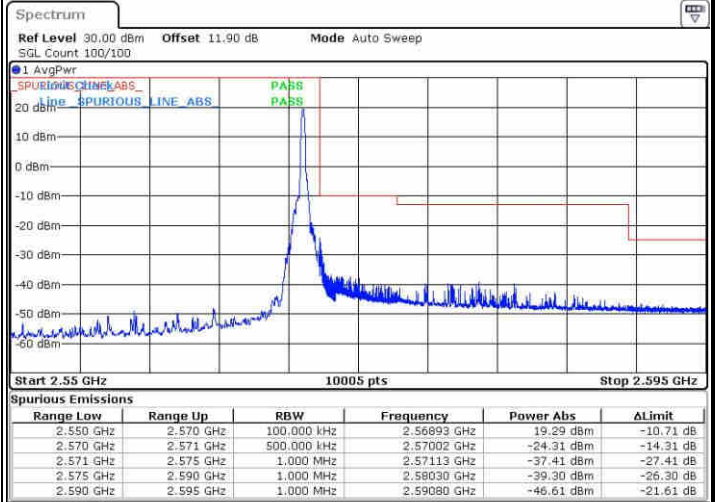
LTE Band 7 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



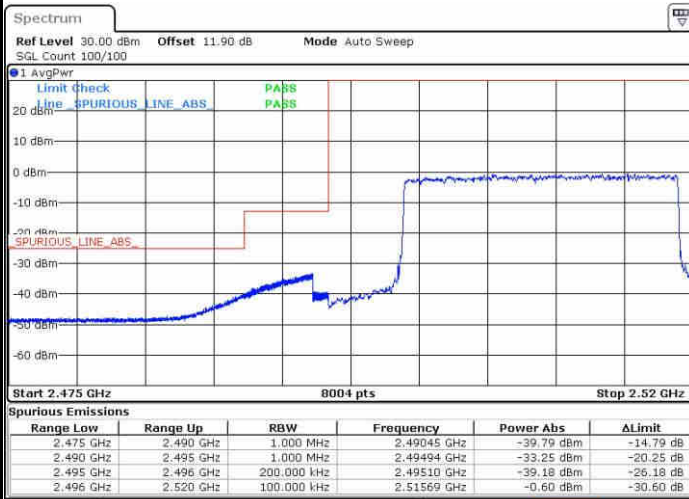
Date: 12 APR 2019 09:49:53

Highest Band Edge / 1 RB



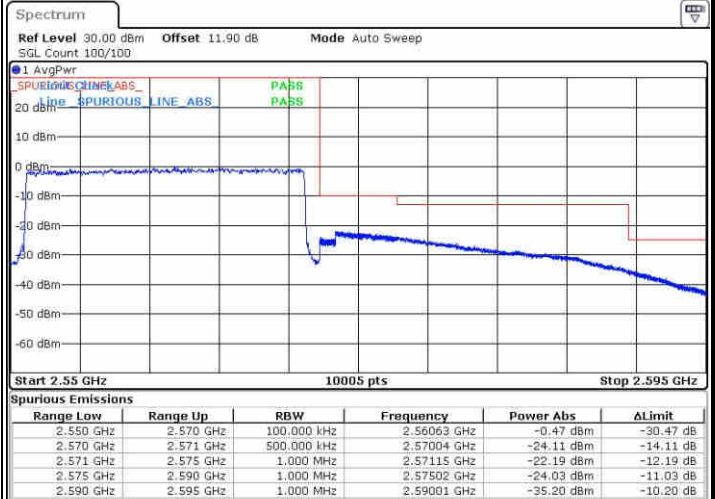
Date: 12 APR 2019 09:53:11

Lowest Band Edge / Full RB



Date: 12 APR 2019 09:50:25

Highest Band Edge / Full RB



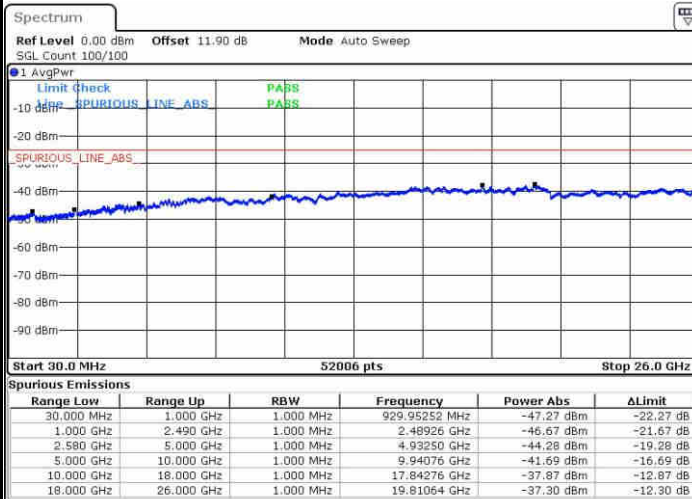
Date: 12 APR 2019 09:53:43



Conducted Spurious Emission

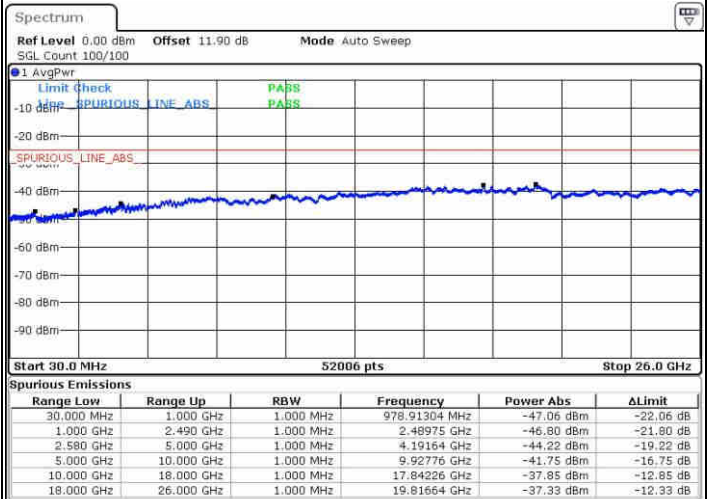
LTE Band 7 / 5MHz

Lowest Channel / QPSK



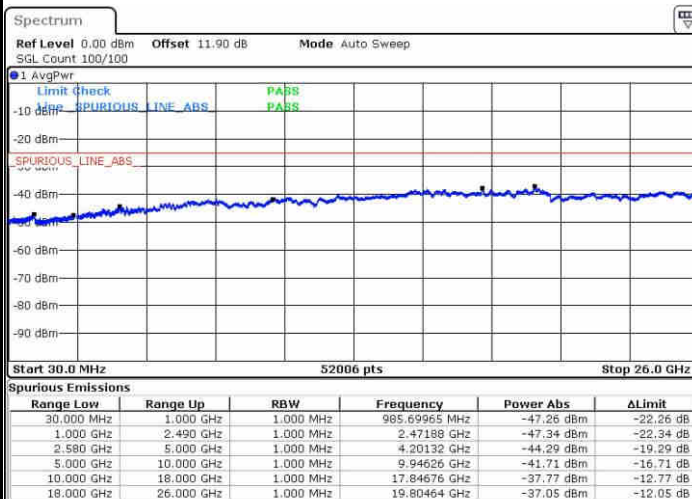
Date: 9 APR 2019 02:59:11

Lowest Channel / 16QAM



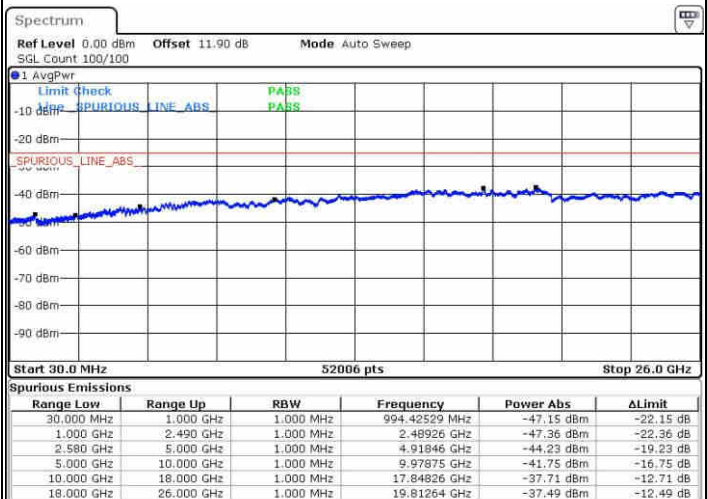
Date: 9 APR 2019 02:59:55

Middle Channel / QPSK



Date: 9 APR 2019 03:01:26

Middle Channel / 16QAM

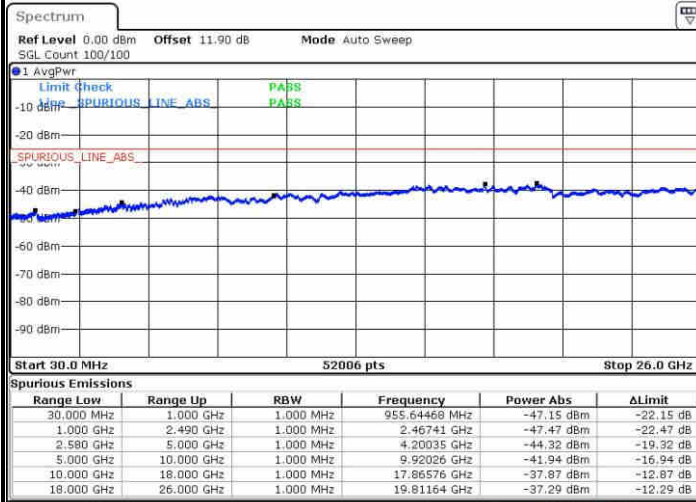


Date: 9 APR 2019 03:02:09



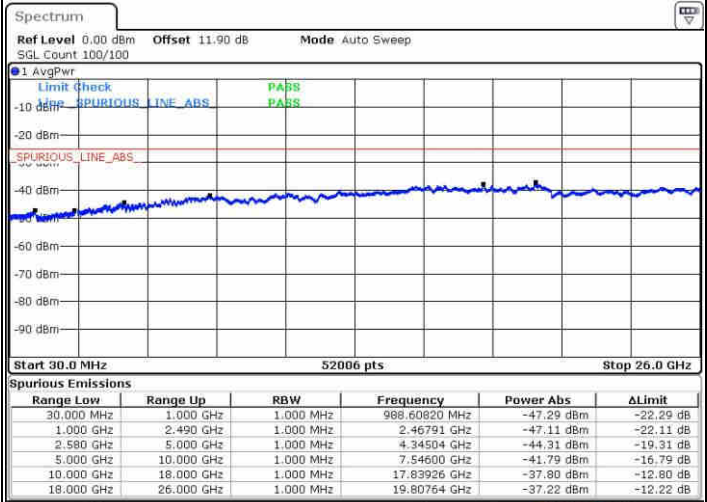
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 9 APR 2019 03:06:09

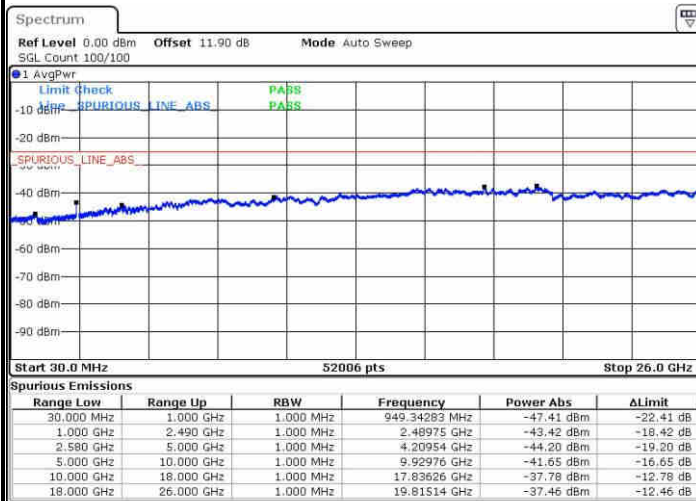
Highest Channel / 16QAM



Date: 9 APR 2019 03:06:53

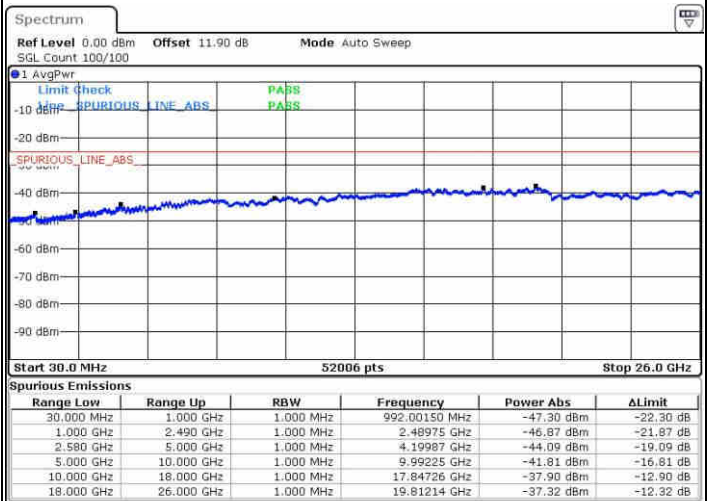
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 9 APR 2019 03:16:43

Lowest Channel / 16QAM

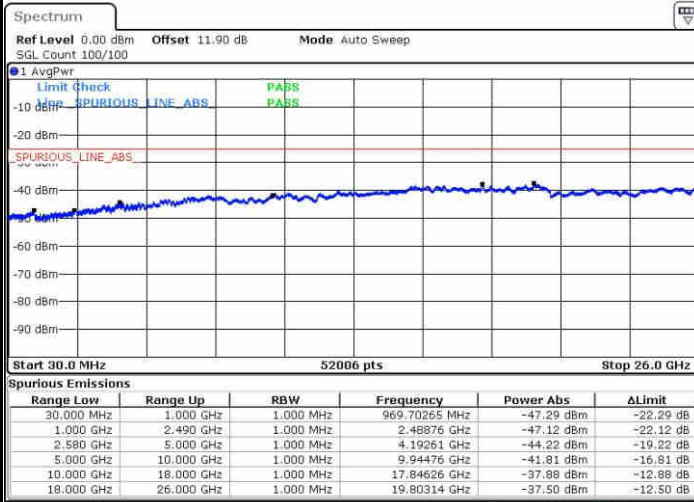


Date: 9 APR 2019 03:17:27



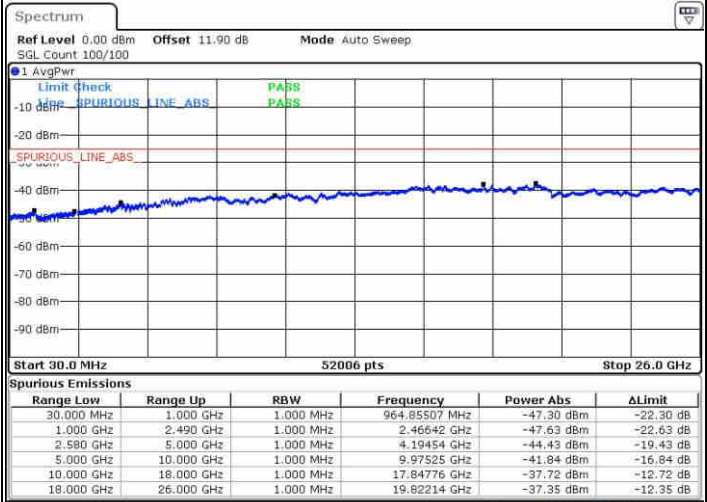
LTE Band 7 / 10MHz

Middle Channel / QPSK



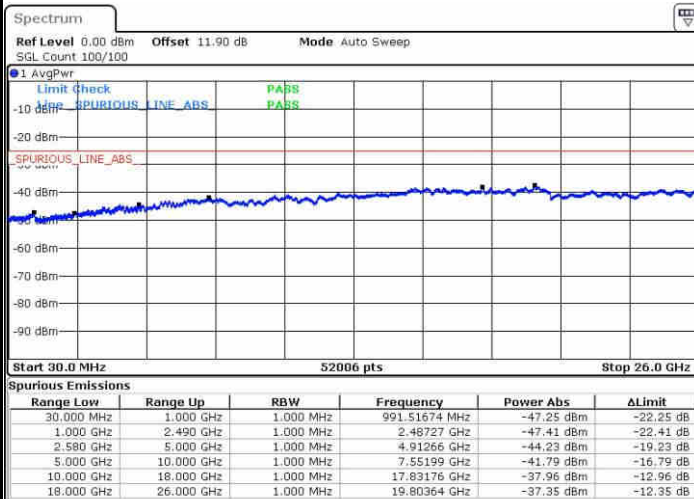
Date: 9 APR 2019 03:18:58

Middle Channel / 16QAM



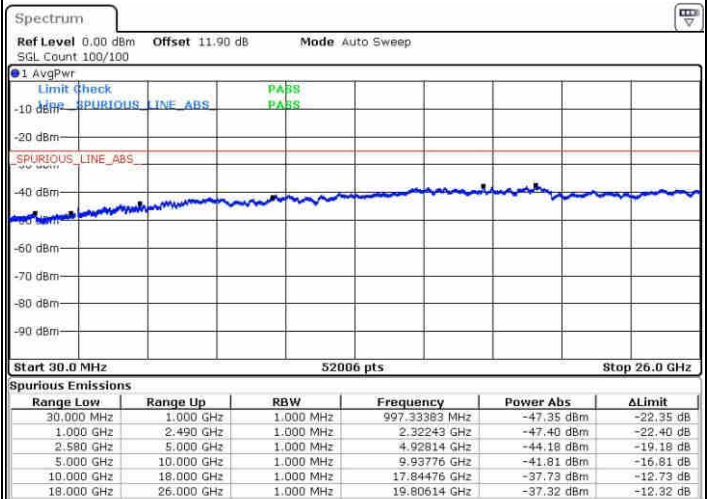
Date: 9 APR 2019 03:19:41

Highest Channel / QPSK



Date: 9 APR 2019 03:23:41

Highest Channel / 16QAM

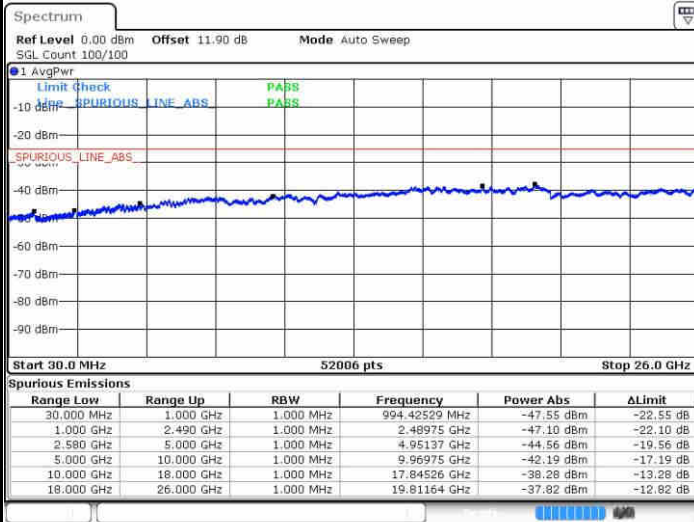


Date: 9 APR 2019 03:24:25



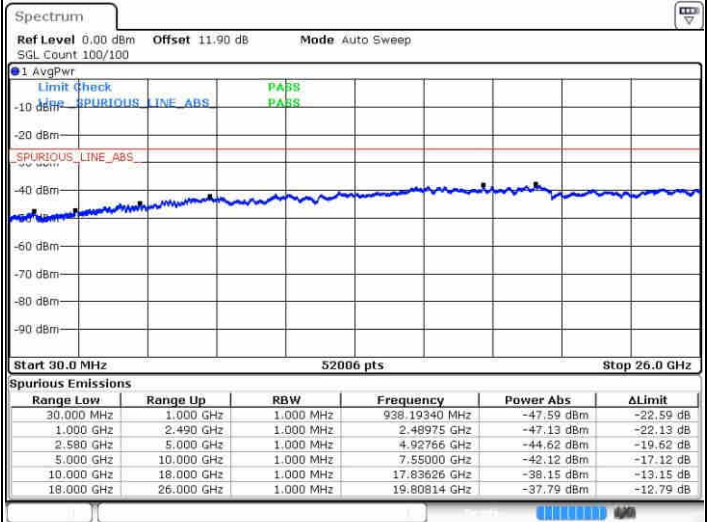
LTE Band 7 / 15MHz

Lowest Channel / QPSK



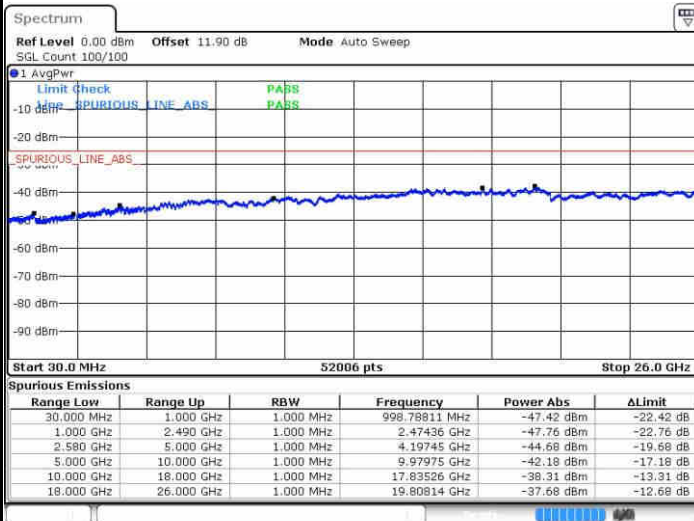
Date: 12 APR 2019 09:19:43

Lowest Channel / 16QAM



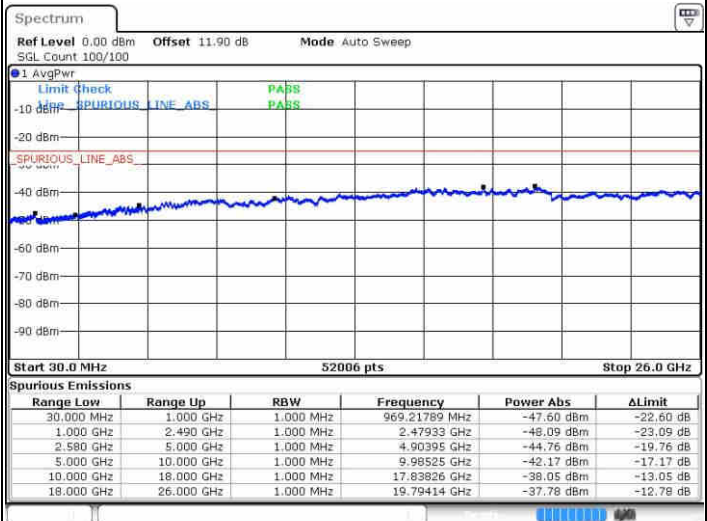
Date: 12 APR 2019 09:20:27

Middle Channel / QPSK



Date: 12 APR 2019 09:21:58

Middle Channel / 16QAM

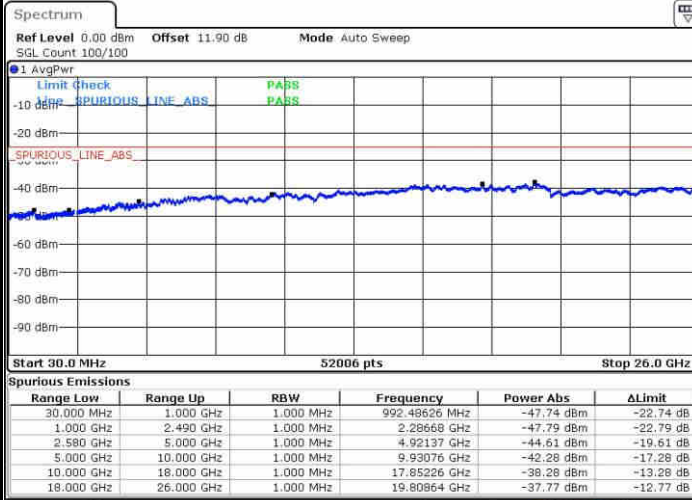


Date: 12 APR 2019 09:22:42



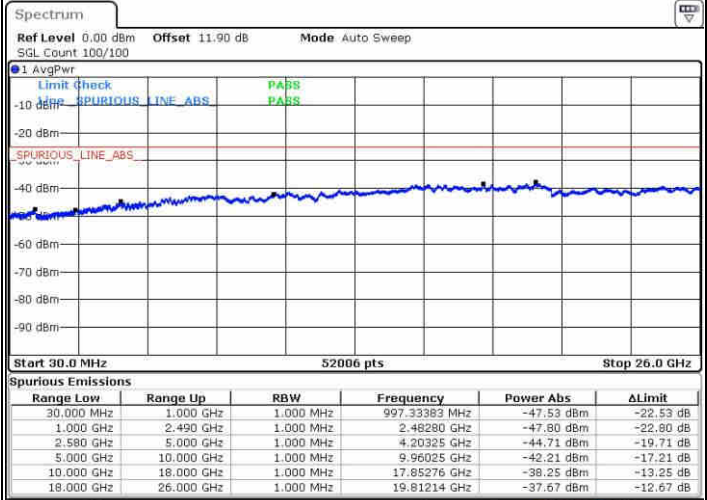
LTE Band 7 / 15MHz

Highest Channel / QPSK



Date: 12 APR 2019 09:26:22

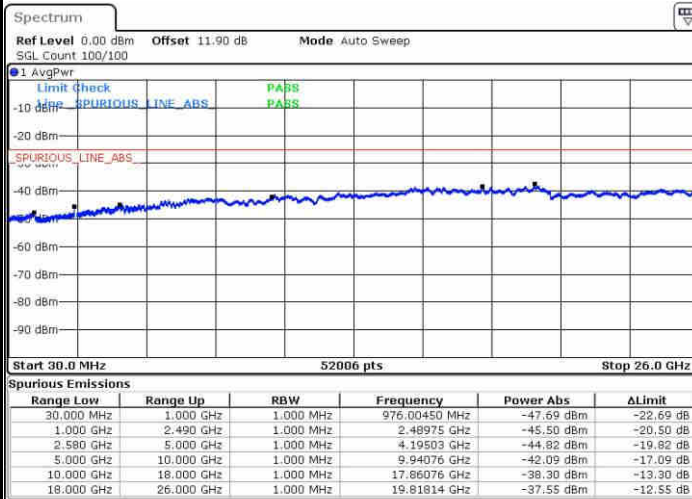
Highest Channel / 16QAM



Date: 12 APR 2019 09:27:06

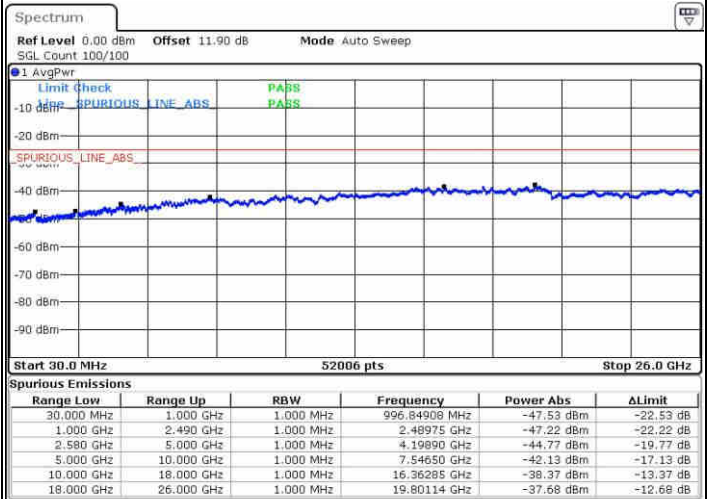
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 12 APR 2019 09:41:35

Lowest Channel / 16QAM

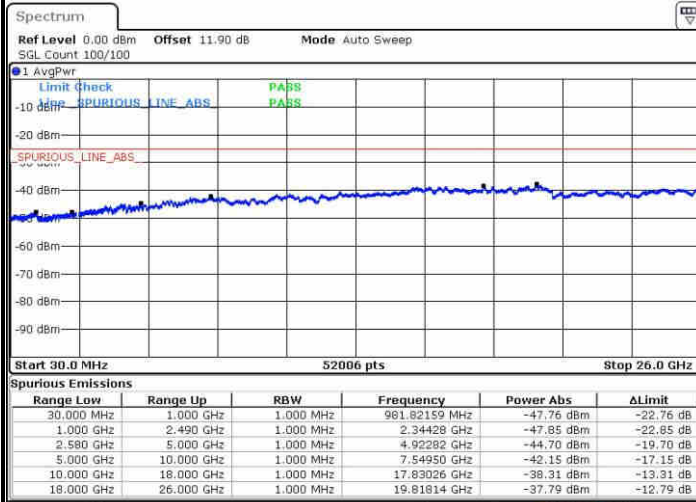


Date: 12 APR 2019 09:42:19



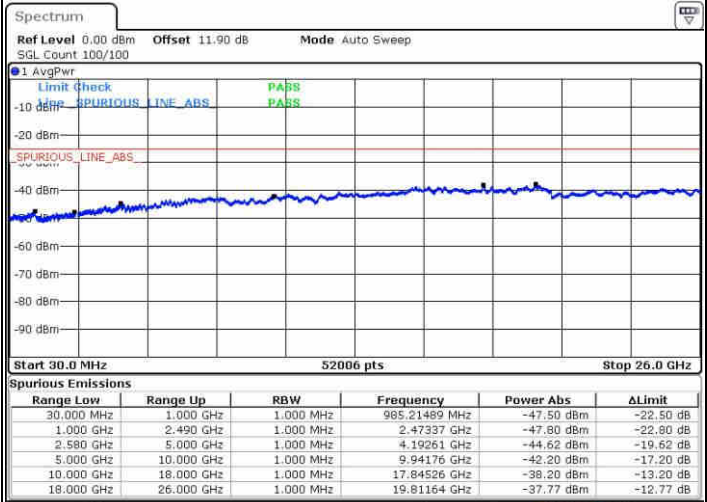
LTE Band 7 / 20MHz

Middle Channel / QPSK



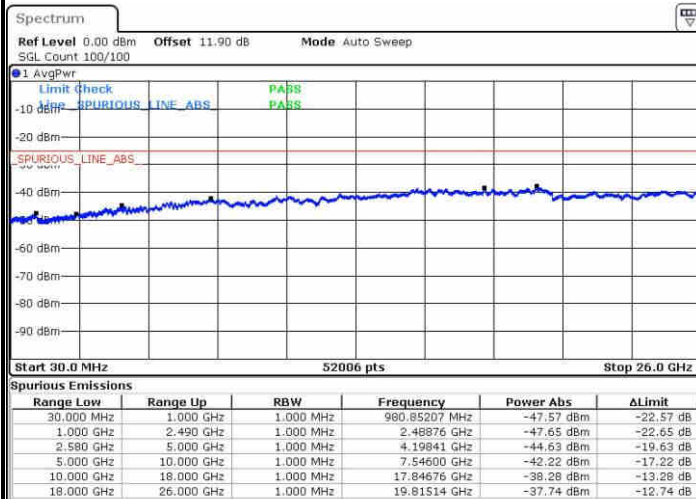
Date: 12 APR 2019 09:43:50

Middle Channel / 16QAM



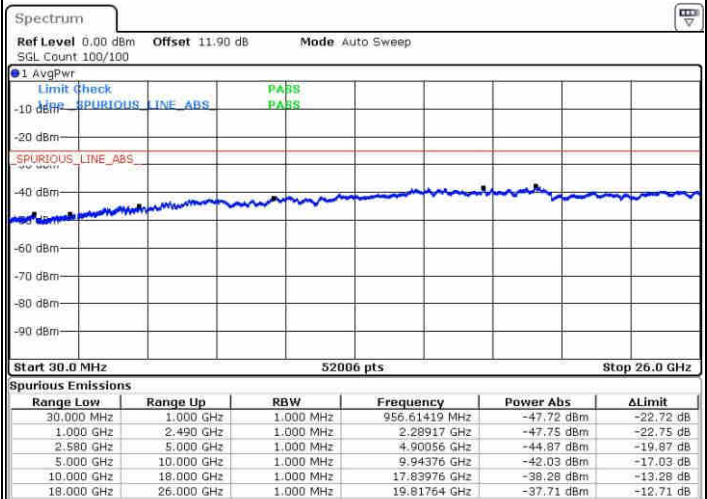
Date: 12 APR 2019 09:44:33

Highest Channel / QPSK



Date: 12 APR 2019 09:48:13

Highest Channel / 16QAM

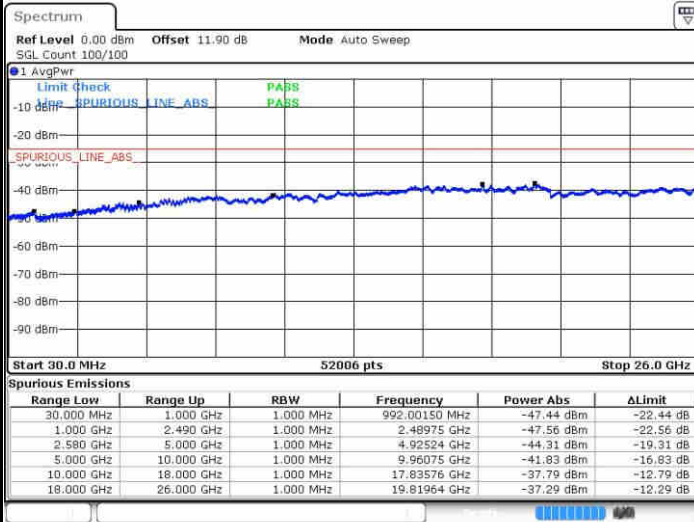


Date: 12 APR 2019 09:48:57



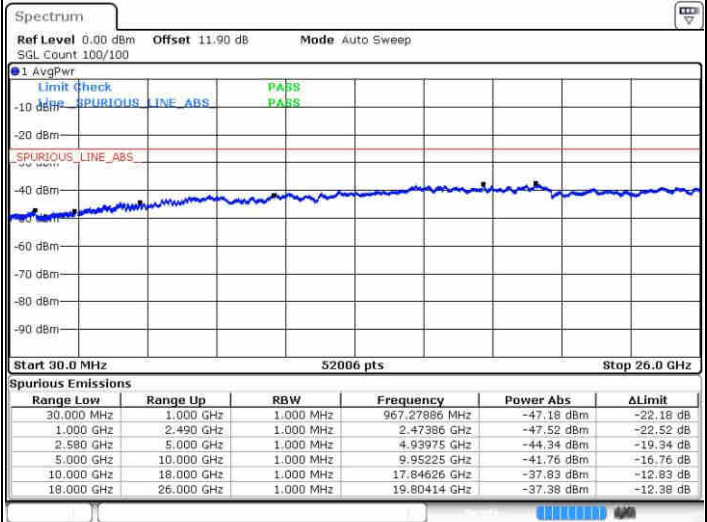
LTE Band 7 / 5MHz

Lowest Channel / 64QAM



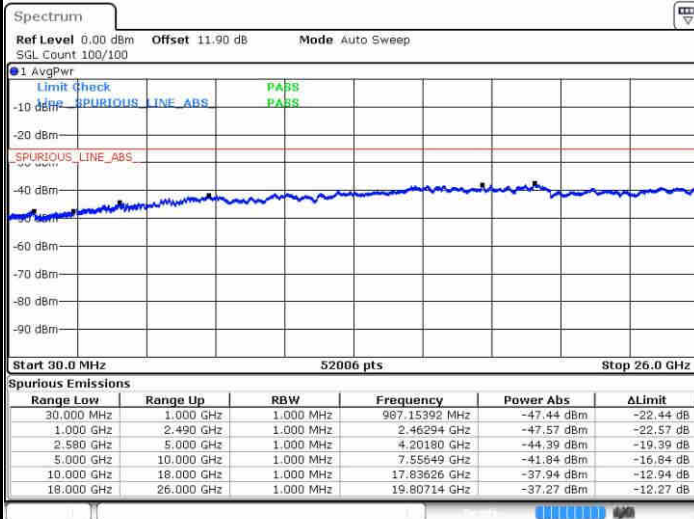
Date: 9 APR 2019 03:09:14

Middle Channel / 64QAM



Date: 9 APR 2019 03:10:21

Highest Channel / 64QAM

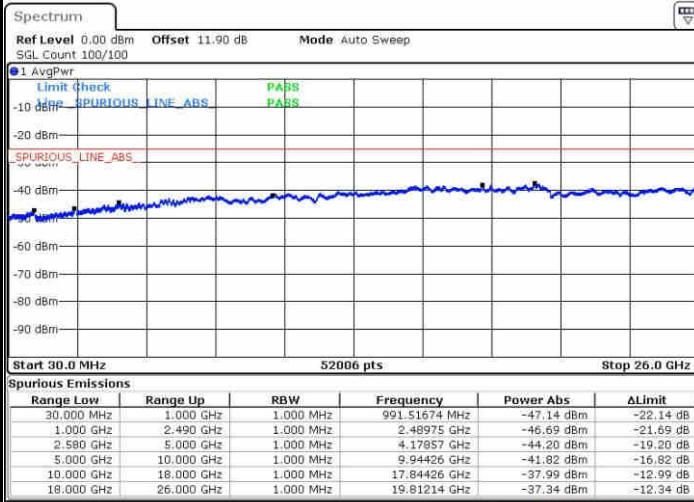


Date: 9 APR 2019 03:12:43



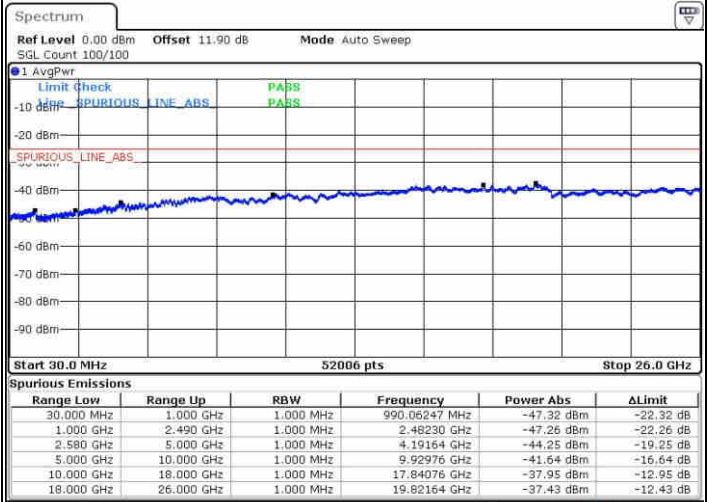
LTE Band 7 / 10MHz

Lowest Channel / 64QAM



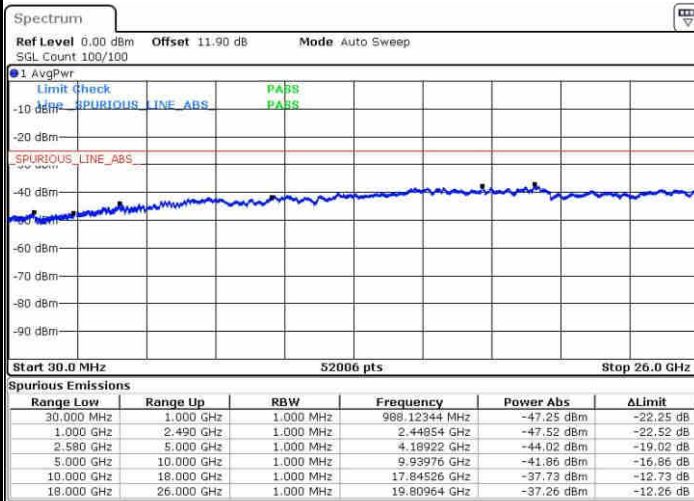
Date: 9 APR 2019 03:26:47

Middle Channel / 64QAM



Date: 9 APR 2019 03:27:54

Highest Channel / 64QAM

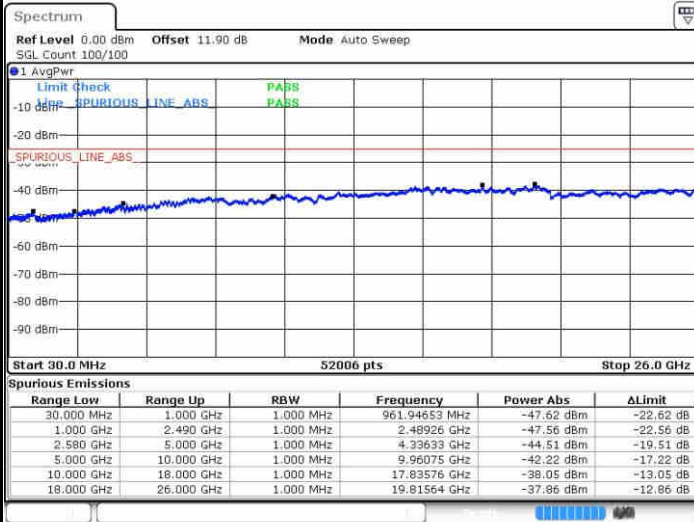


Date: 9 APR 2019 03:30:16



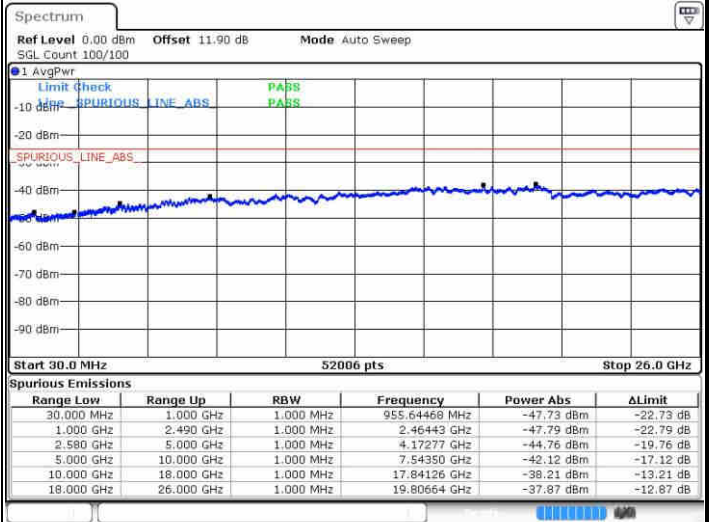
LTE Band 7 / 15MHz

Lowest Channel / 64QAM



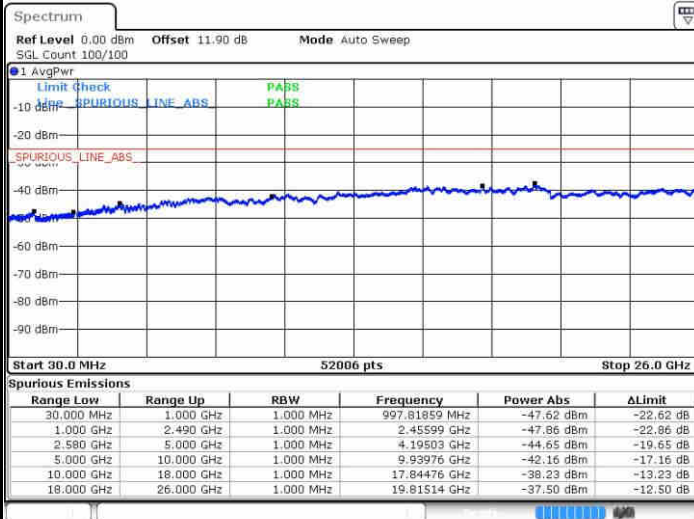
Date: 12 APR 2019 09:29:20

Middle Channel / 64QAM



Date: 12 APR 2019 09:30:27

Highest Channel / 64QAM

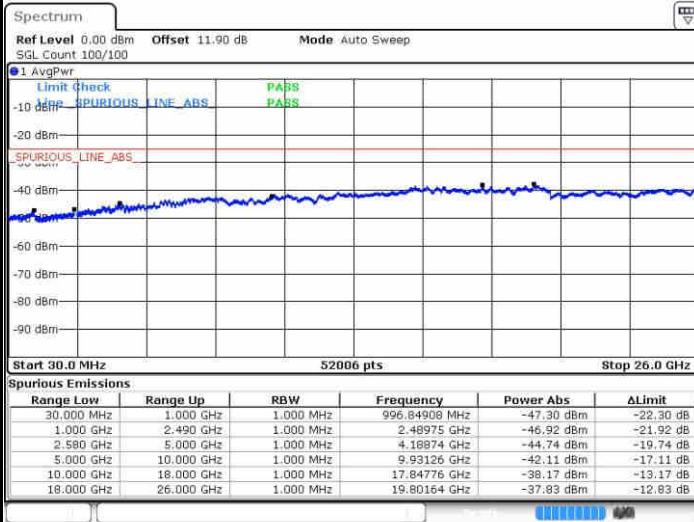


Date: 12 APR 2019 09:32:39



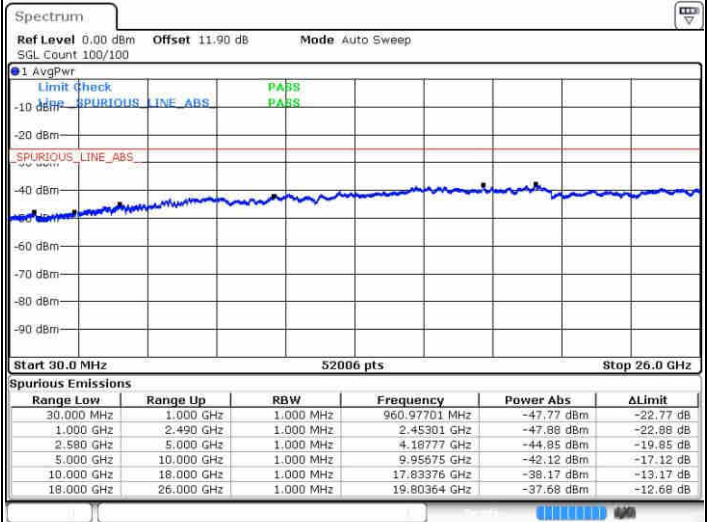
LTE Band 7 / 20MHz

Lowest Channel / 64QAM



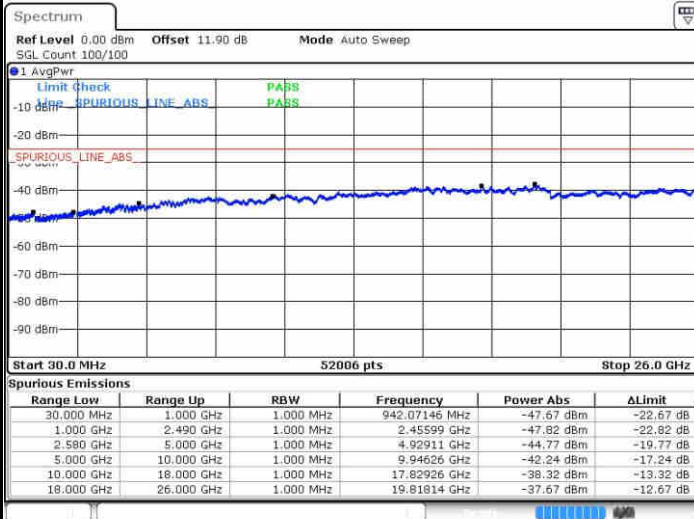
Date: 12 APR 2019 09:51:09

Middle Channel / 64QAM



Date: 12 APR 2019 09:52:16

Highest Channel / 64QAM



Date: 12 APR 2019 09:54:27

Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0000	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0030	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0018	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 12

Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	4.96	3.97	5.86	PASS
Middle CH	3.62	4.93	4.20	5.86	
Highest CH	3.62	5.25	3.91	5.94	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	4.55	5.86	-	-	PASS
Middle CH	4.52	5.91	-	-	
Highest CH	4.49	5.91	-	-	

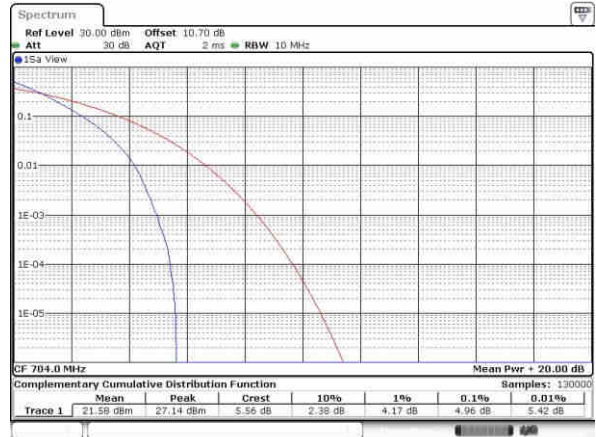


LTE Band 12 / 10MHz / QPSK

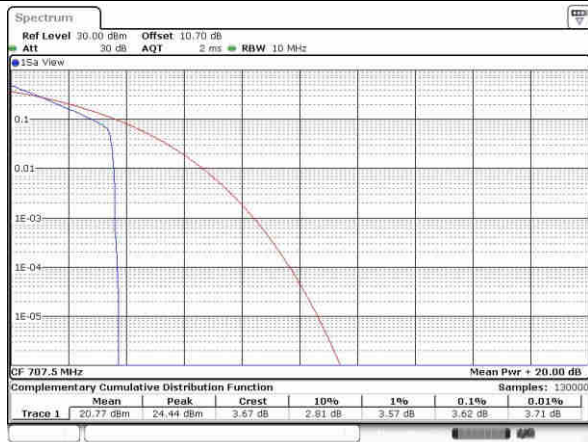
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



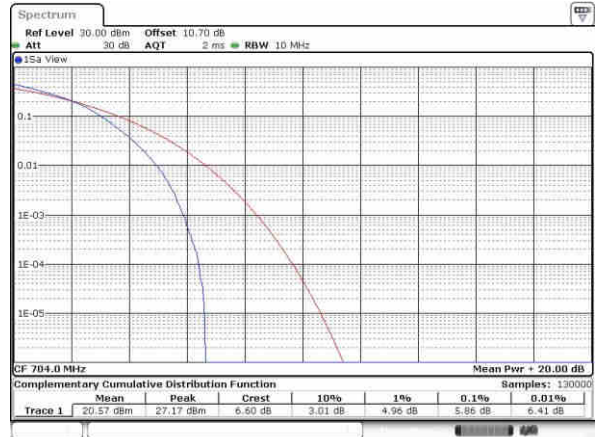


LTE Band 12 / 10MHz / 16QAM

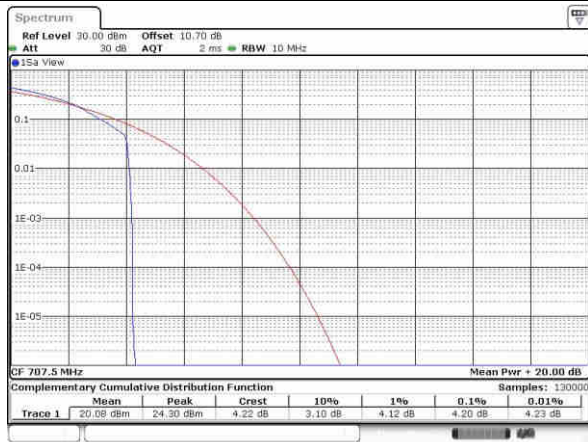
Lowest Channel / 1RB



Lowest Channel / Full RB



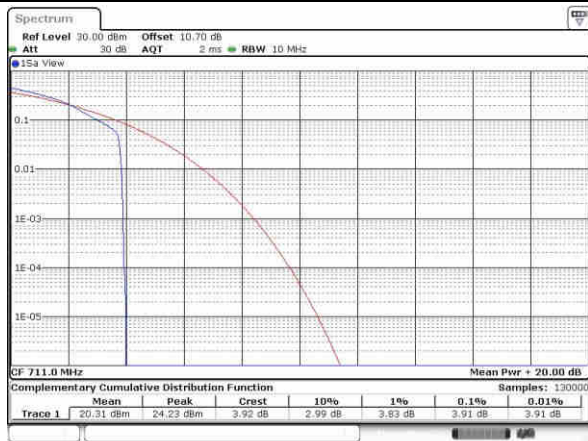
Middle Channel / 1RB



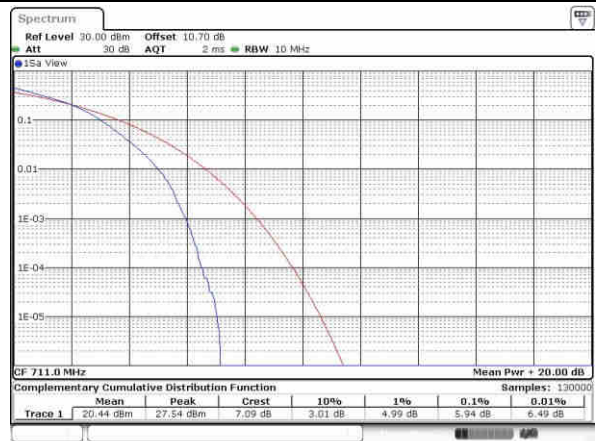
Middle Channel / Full RB



Highest Channel / 1RB



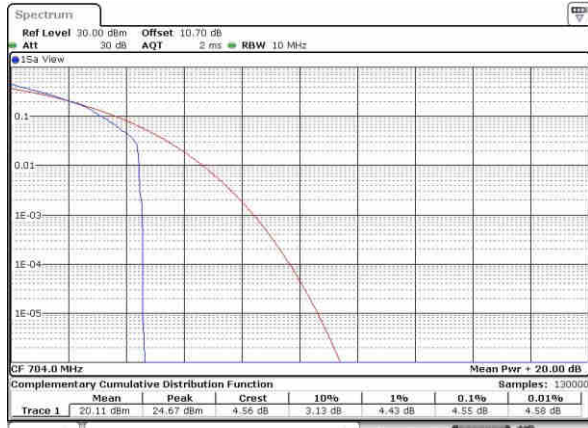
Highest Channel / Full RB



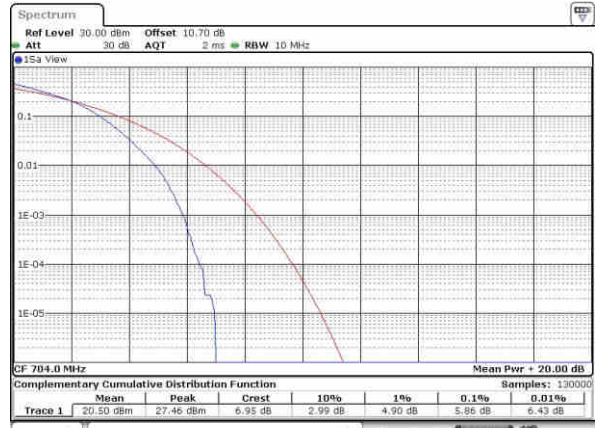


LTE Band 12 / 10MHz / 64QAM

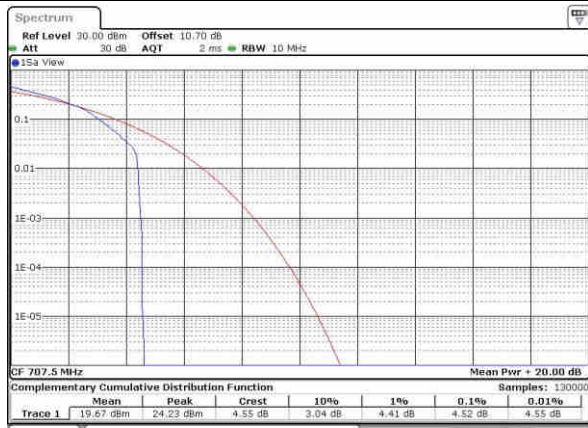
Lowest Channel / 1RB



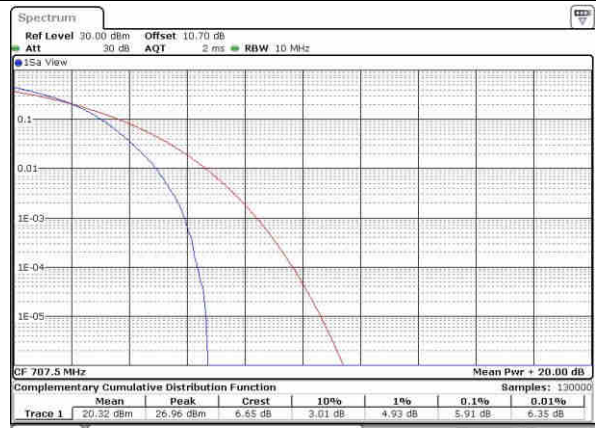
Lowest Channel / Full RB



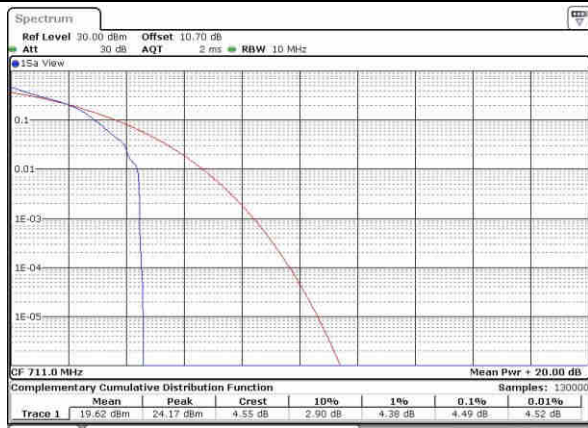
Middle Channel / 1RB



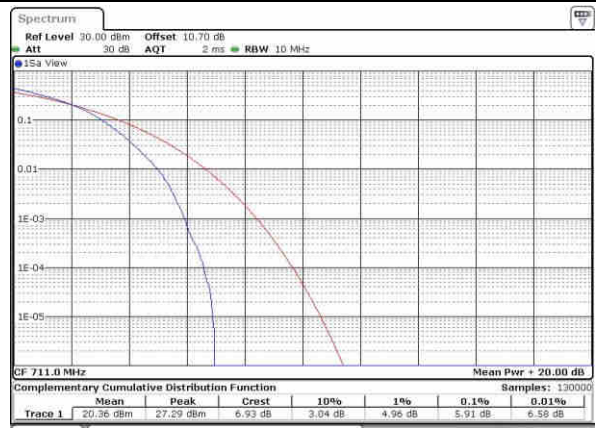
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



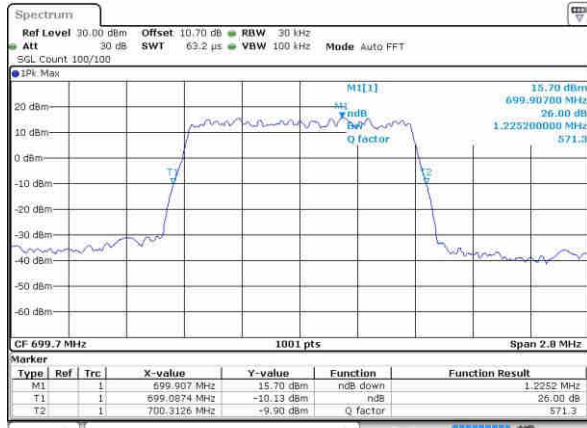
**26dB Bandwidth**

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	1.23	1.23	3.01	2.98	4.83	4.89	9.71	9.73	-	-	-	-
Middle CH	1.24	1.22	3.03	3.00	4.81	4.91	9.85	9.81	-	-	-	-
Highest CH	1.22	1.21	3.05	2.95	4.88	4.90	9.73	9.81	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.22	-	3.04	-	4.95	-	9.71	-	-	-	-	-
Middle CH	1.23	-	3.03	-	4.87	-	9.75	-	-	-	-	-
Highest CH	1.22	-	3.00	-	4.84	-	9.69	-	-	-	-	-

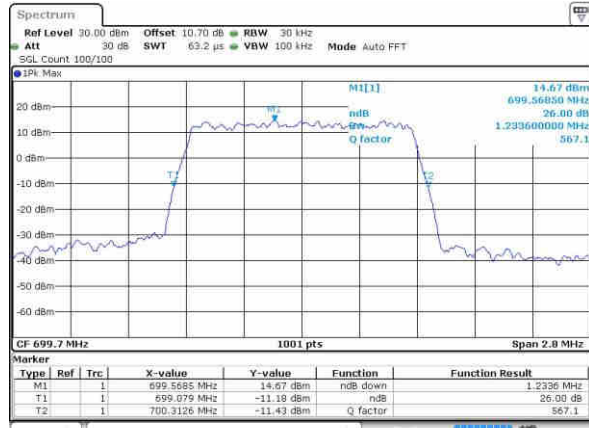


LTE Band 12

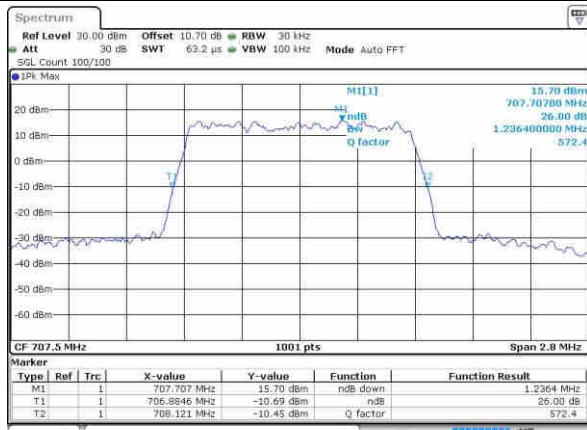
Lowest Channel / 1.4MHz / QPSK



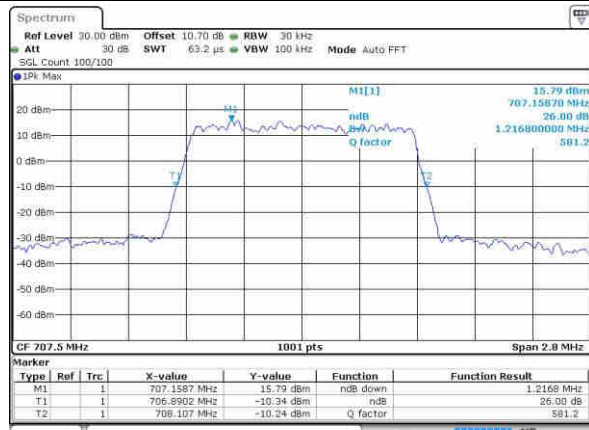
Lowest Channel / 1.4MHz / 16QAM



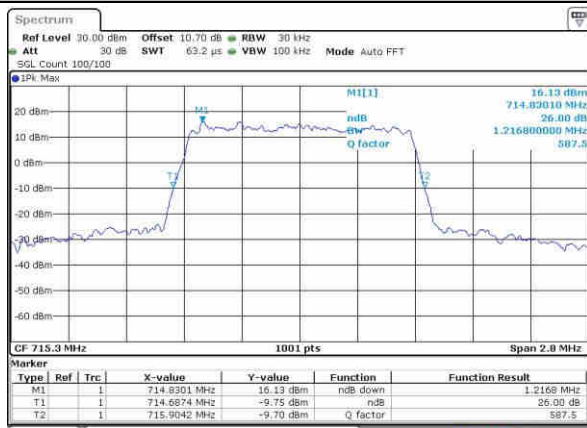
Middle Channel / 1.4MHz / QPSK



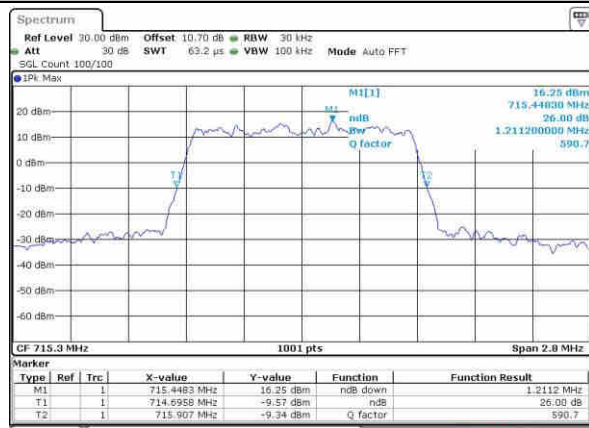
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



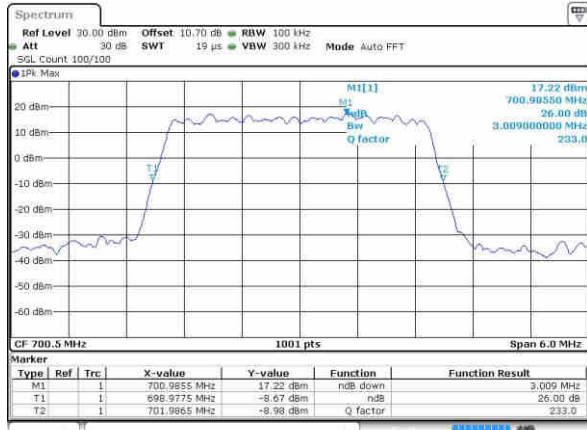
Highest Channel / 1.4MHz / 16QAM



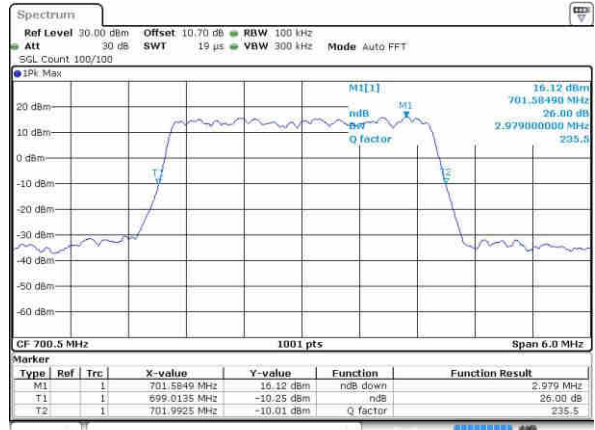


LTE Band 12

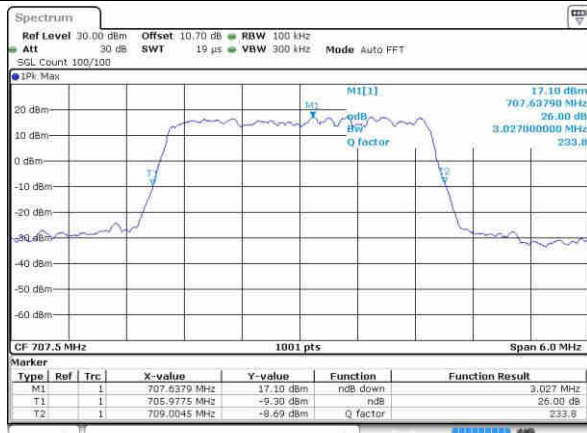
Lowest Channel / 3MHz / QPSK



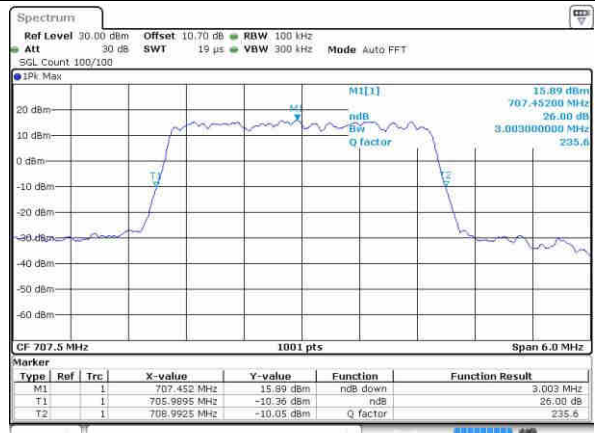
Lowest Channel / 3MHz / 16QAM



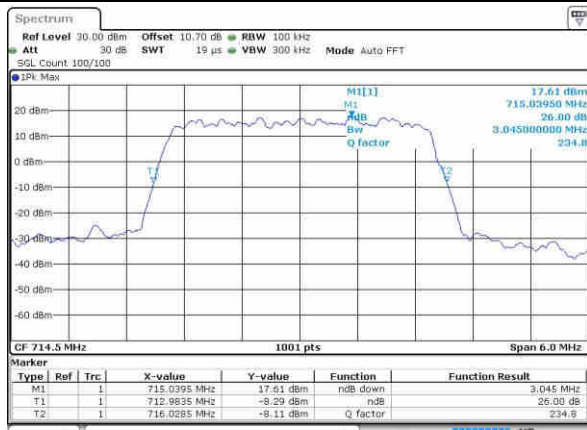
Middle Channel / 3MHz / QPSK



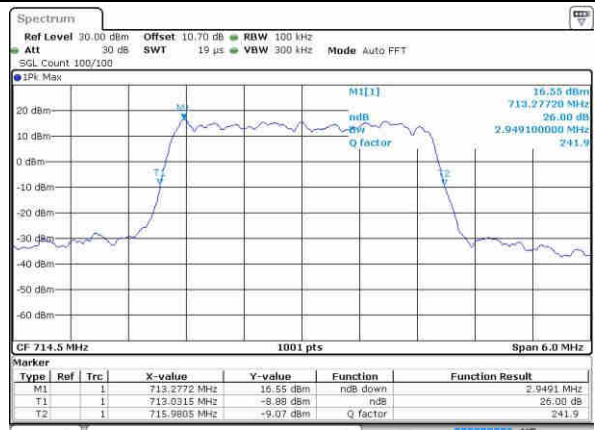
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



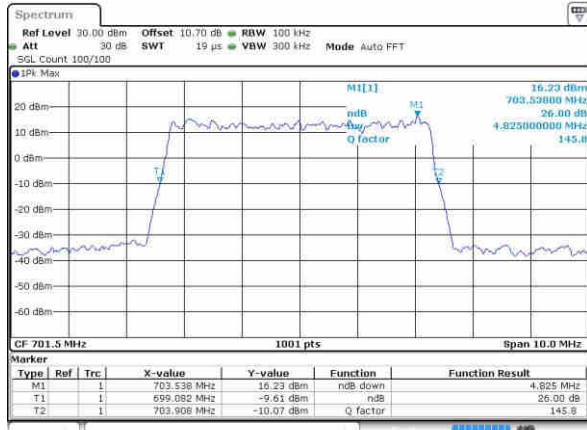
Highest Channel / 3MHz / 16QAM



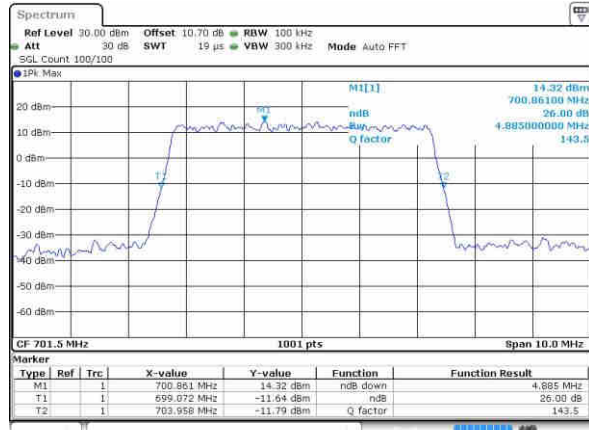


LTE Band 12

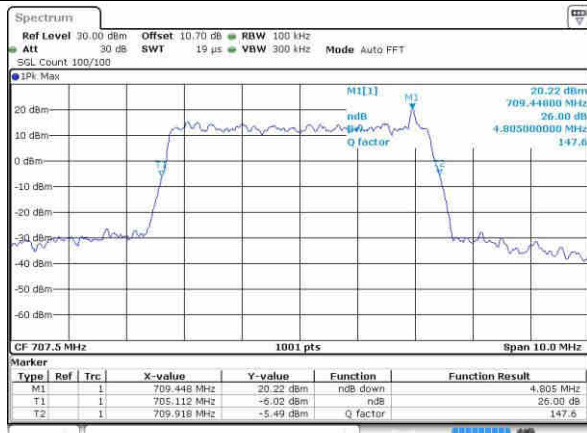
Lowest Channel / 5MHz / QPSK



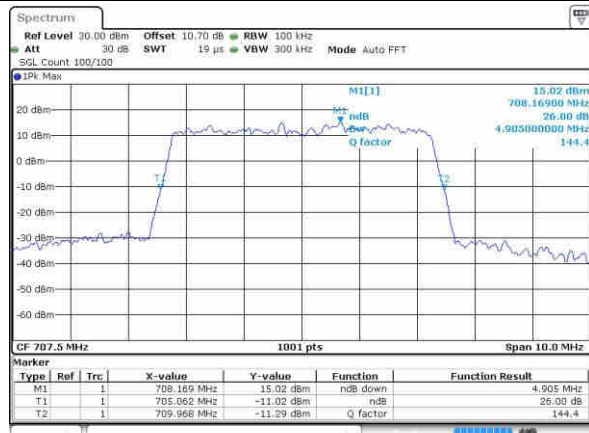
Lowest Channel / 5MHz / 16QAM



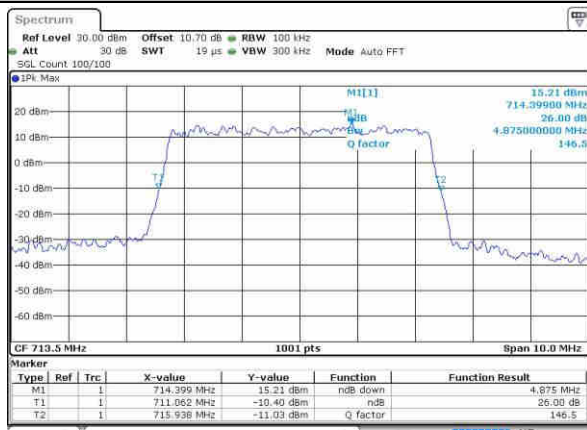
Middle Channel / 5MHz / QPSK



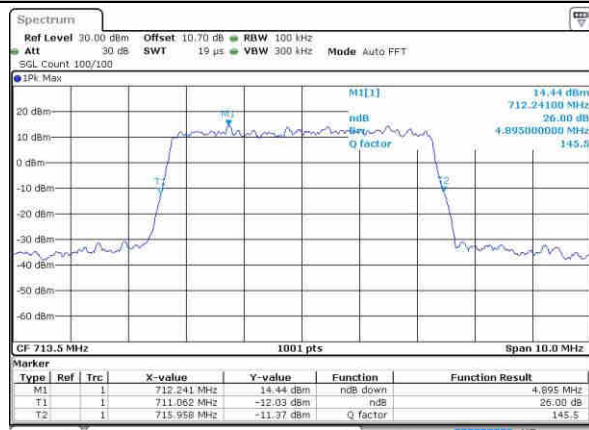
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



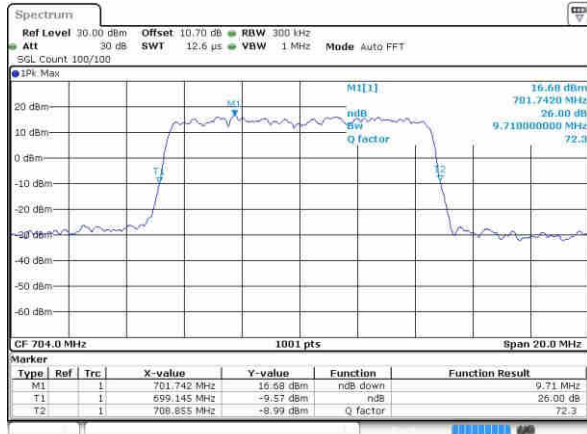
Highest Channel / 5MHz / 16QAM



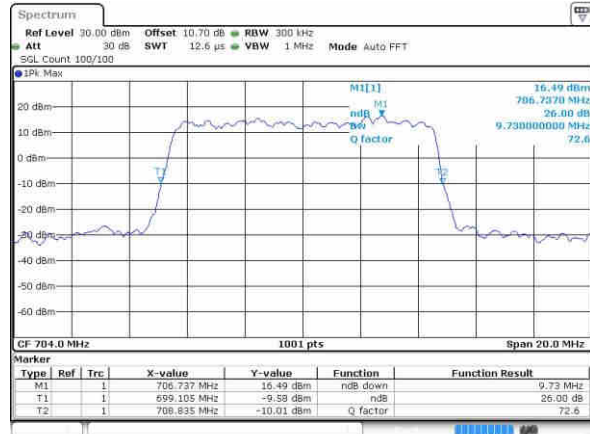


LTE Band 12

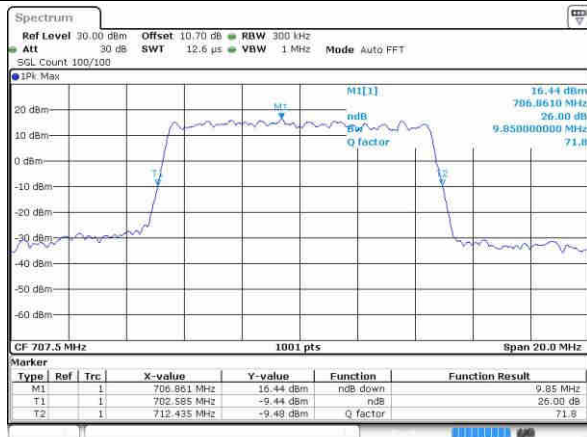
Lowest Channel / 10MHz / QPSK



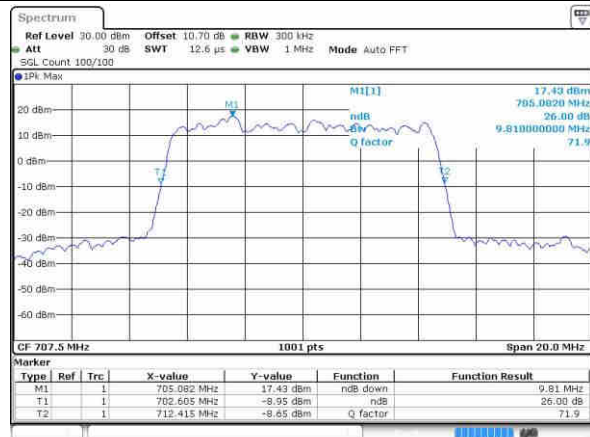
Lowest Channel / 10MHz / 16QAM



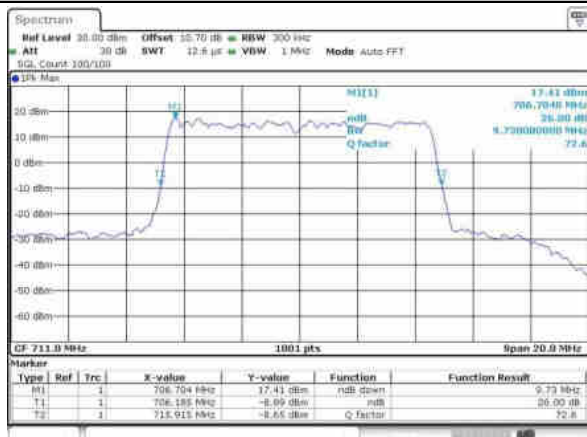
Middle Channel / 10MHz / QPSK



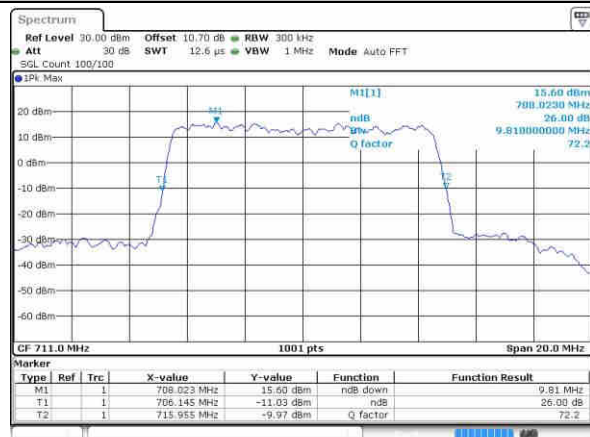
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



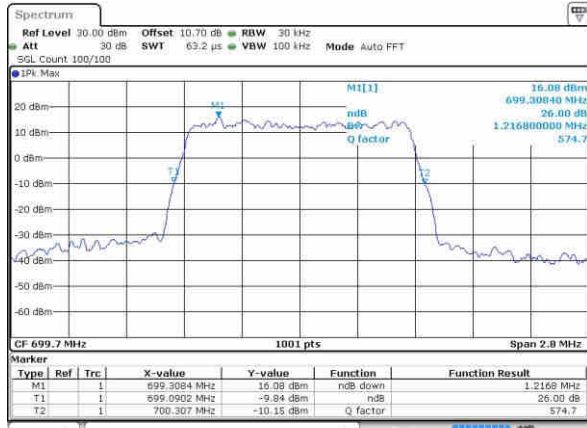
Highest Channel / 10MHz / 16QAM



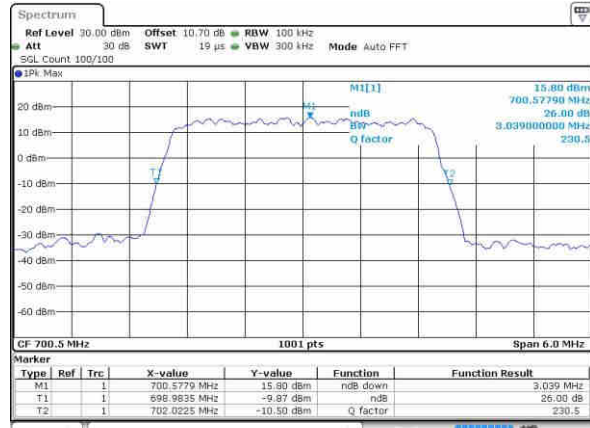


LTE Band 12

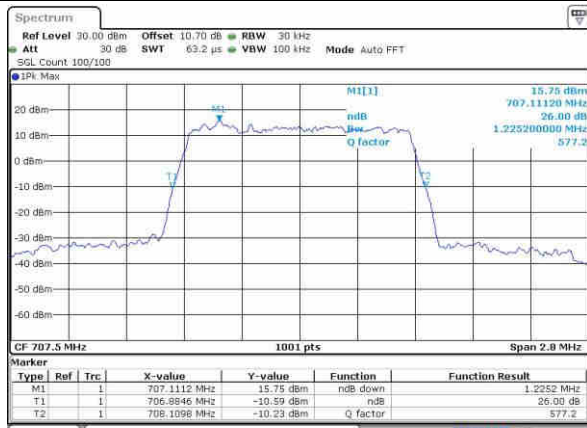
Lowest Channel / 1.4MHz / 64QAM



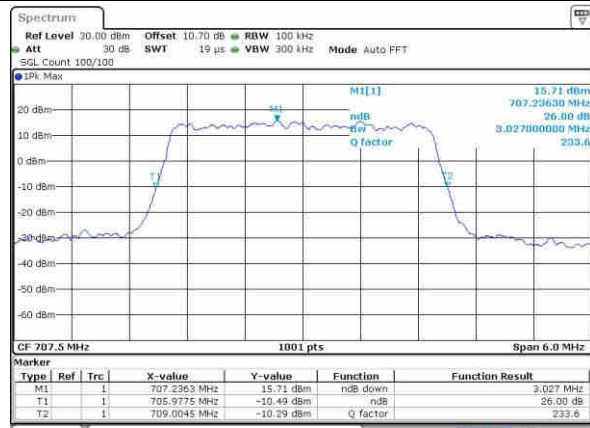
Lowest Channel / 3MHz / 64QAM



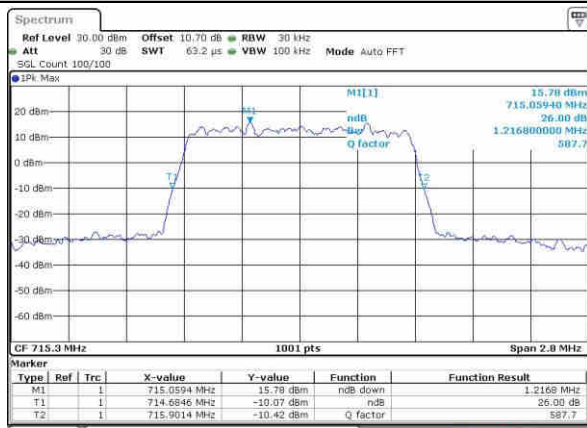
Middle Channel / 1.4MHz / 64QAM



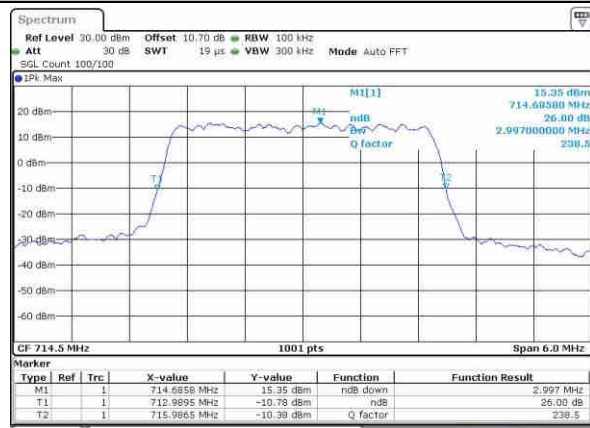
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM



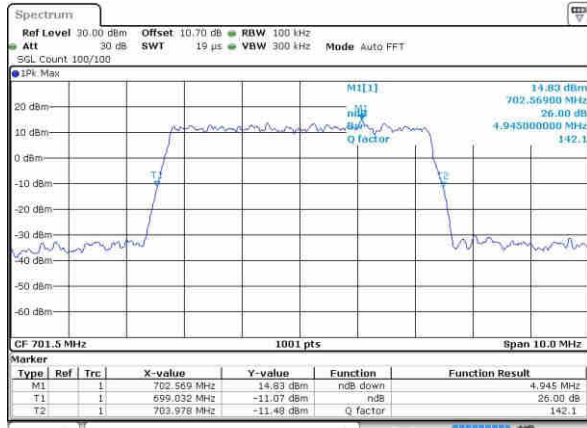
Highest Channel / 3MHz / 64QAM



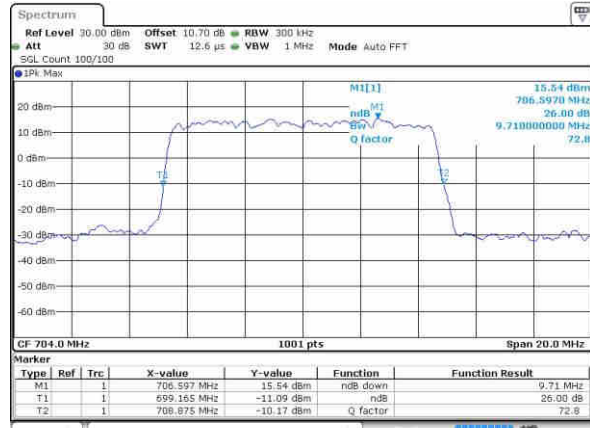


LTE Band 12

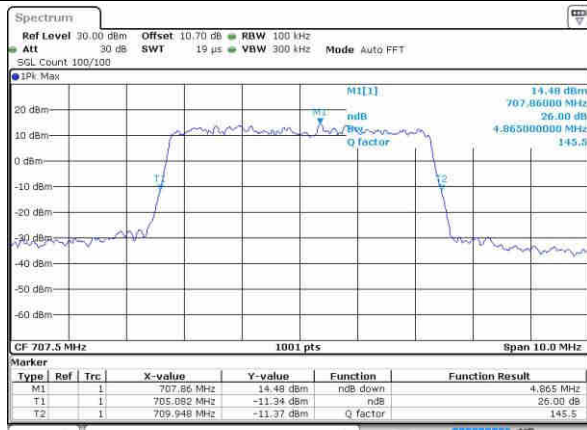
Lowest Channel / 5MHz / 64QAM



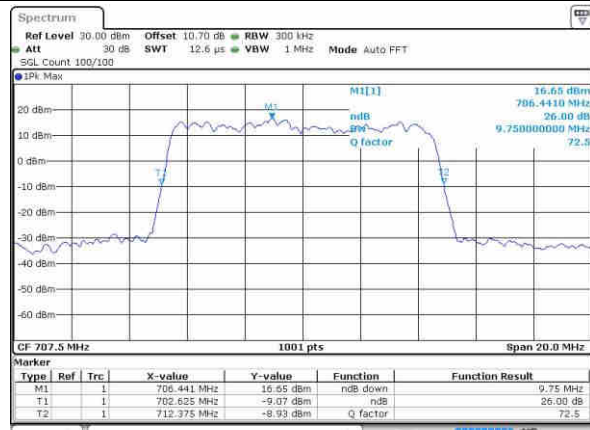
Lowest Channel / 10MHz / 64QAM



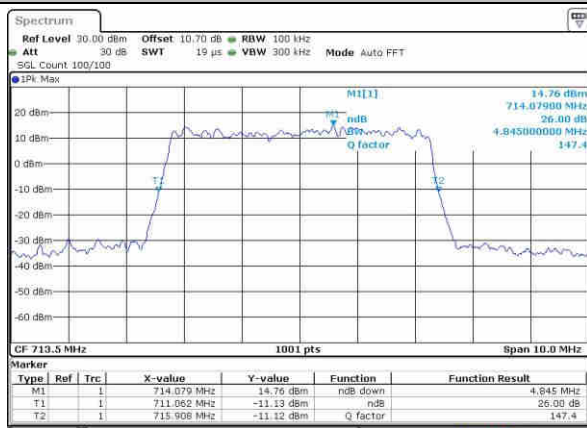
Middle Channel / 5MHz / 64QAM



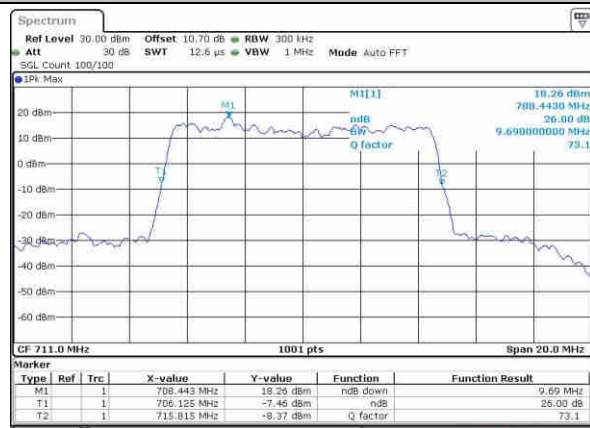
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



Highest Channel / 10MHz / 64QAM



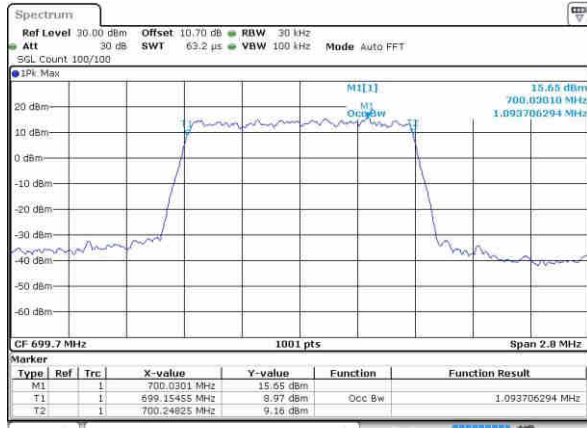
**Occupied Bandwidth**

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	1.09	2.71	2.7	4.51	4.5	9.03	9.03	-	-	-	-
Middle CH	1.09	1.09	2.7	2.73	4.51	4.51	9.03	8.99	-	-	-	-
Highest CH	1.08	1.08	2.73	2.73	4.49	4.48	9.05	8.97	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.71	-	4.51	-	8.99	-	-	-	-	-
Middle CH	1.09	-	2.72	-	4.47	-	8.97	-	-	-	-	-
Highest CH	1.09	-	2.71	-	4.47	-	8.99	-	-	-	-	-

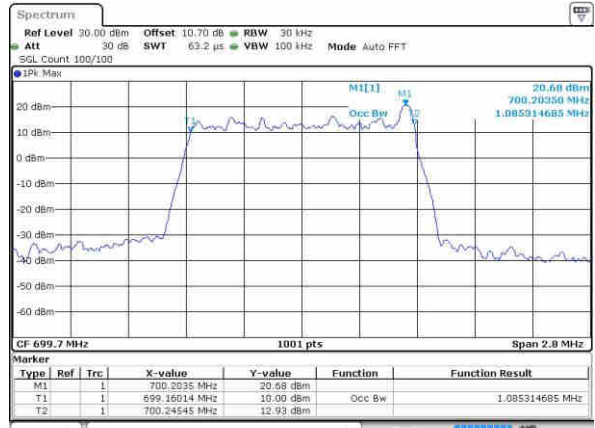


LTE Band 12

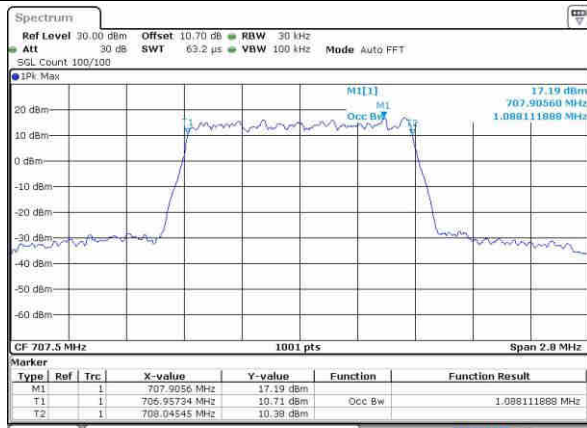
Lowest Channel / 1.4MHz / QPSK



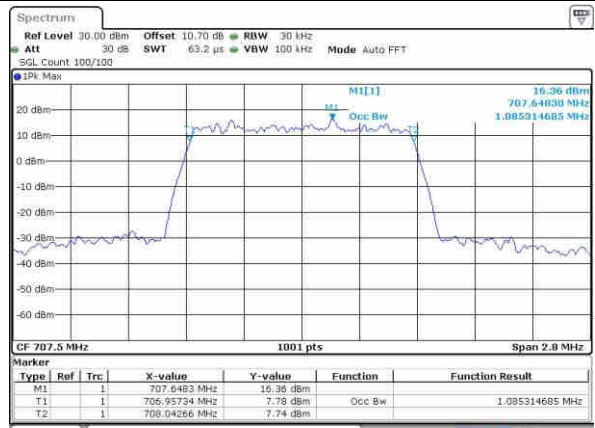
Lowest Channel / 1.4MHz / 16QAM



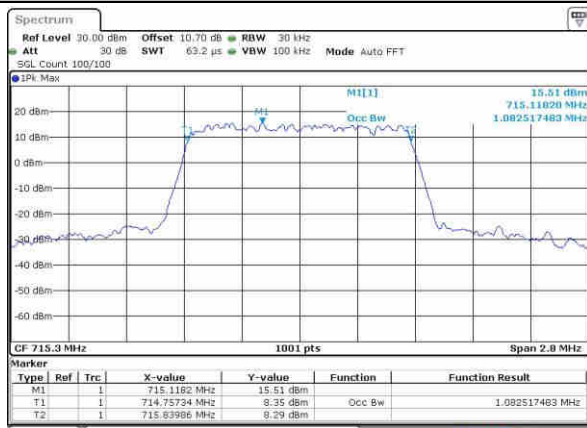
Middle Channel / 1.4MHz / QPSK



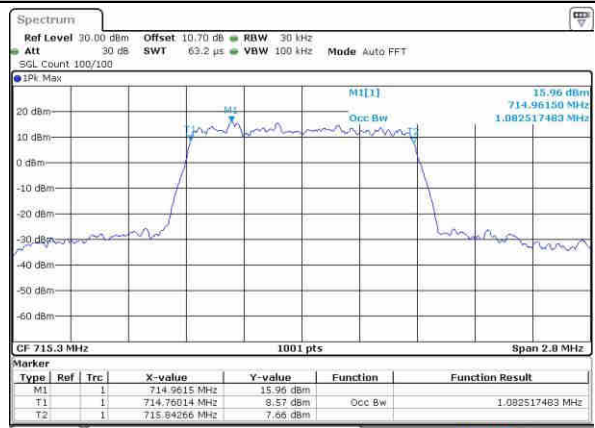
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



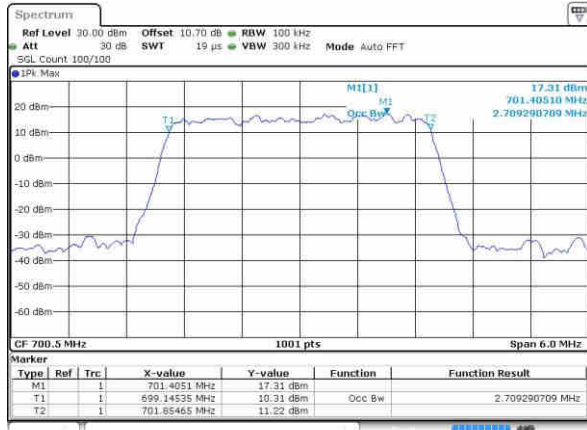
Highest Channel / 1.4MHz / 16QAM



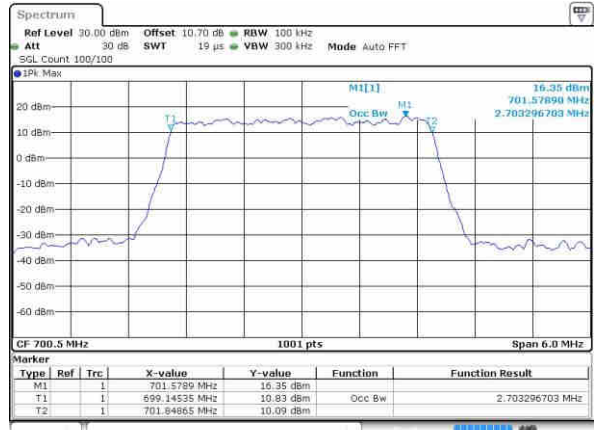


LTE Band 12

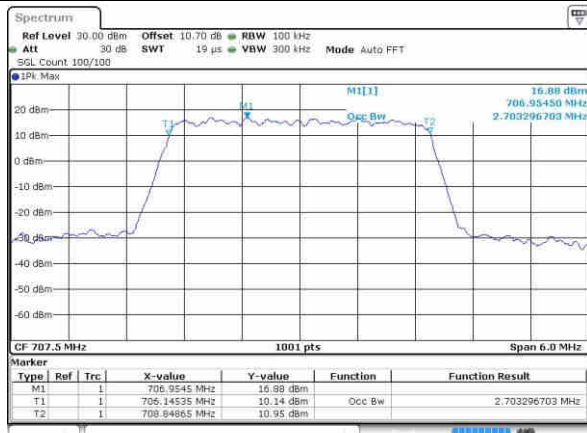
Lowest Channel / 3MHz / QPSK



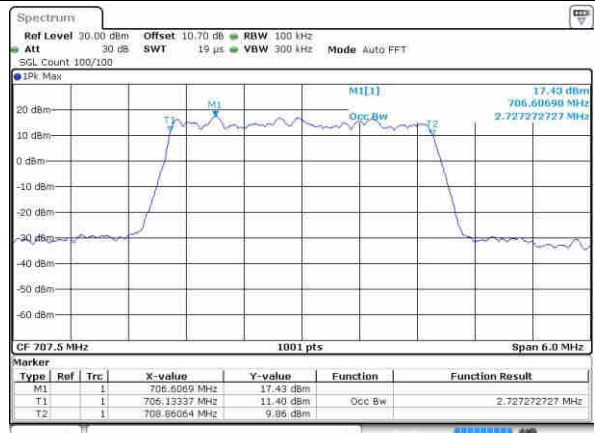
Lowest Channel / 3MHz / 16QAM



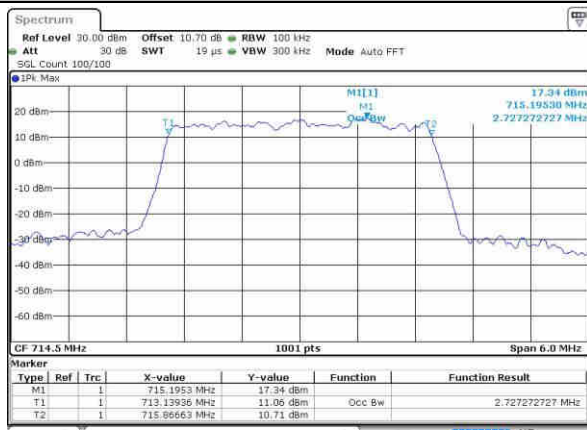
Middle Channel / 3MHz / QPSK



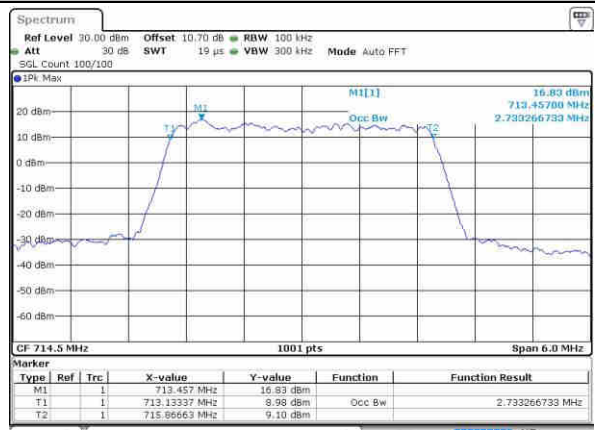
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



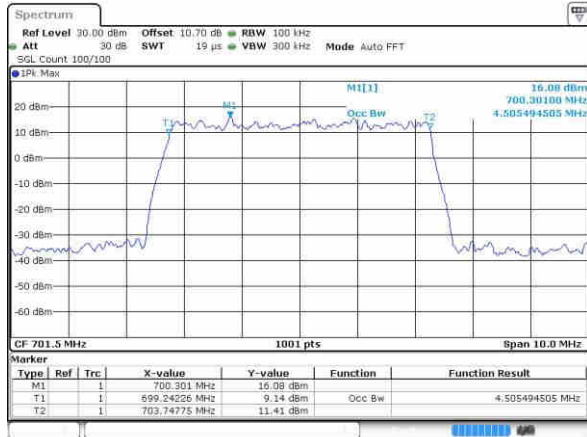
Highest Channel / 3MHz / 16QAM



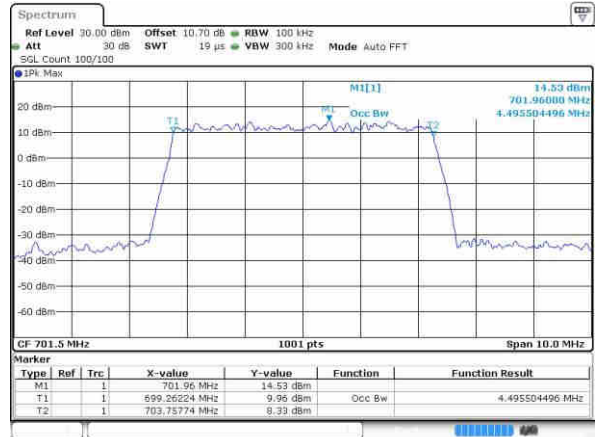


LTE Band 12

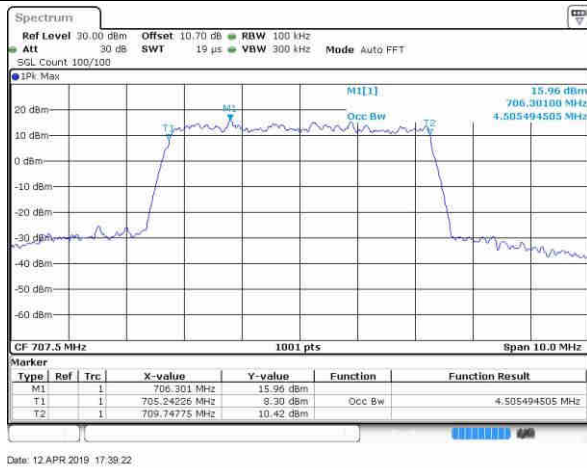
Lowest Channel / 5MHz / QPSK



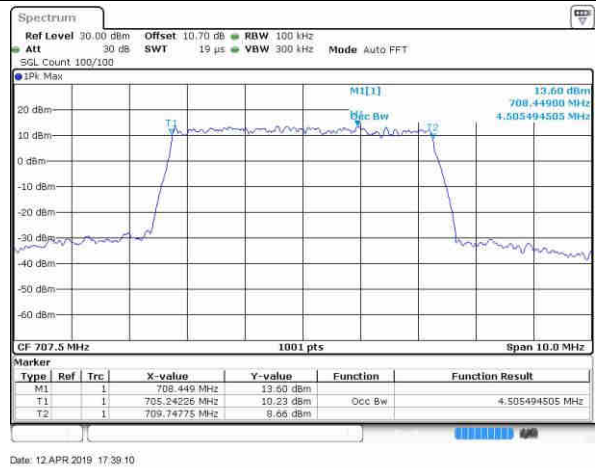
Lowest Channel / 5MHz / 16QAM



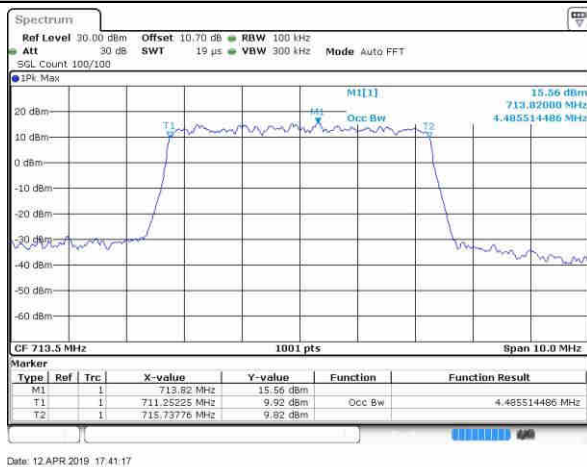
Middle Channel / 5MHz / QPSK



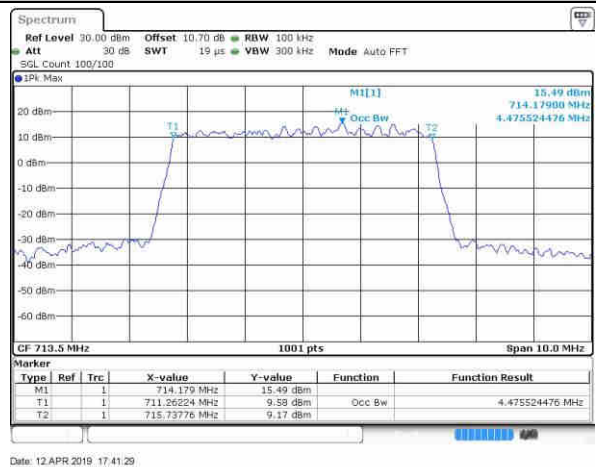
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



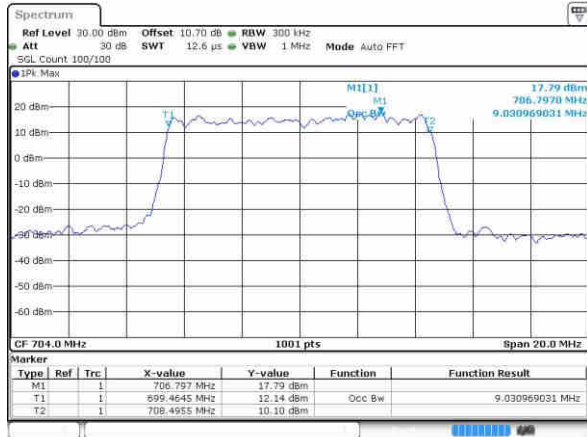
Highest Channel / 5MHz / 16QAM



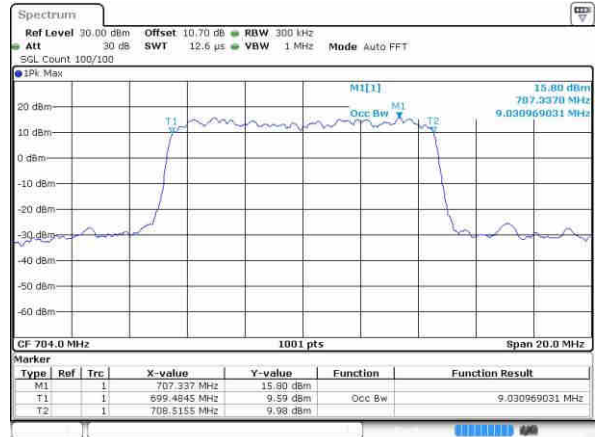


LTE Band 12

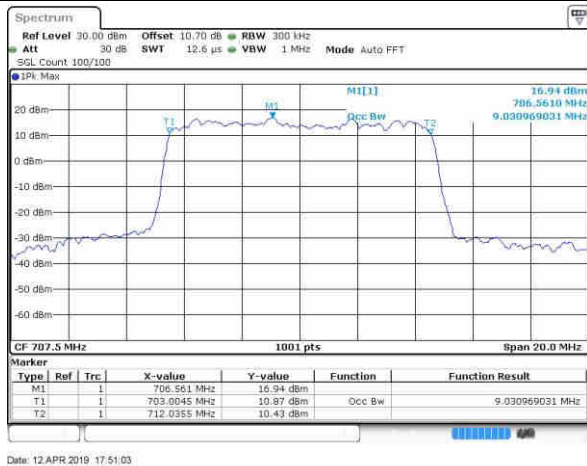
Lowest Channel / 10MHz / QPSK



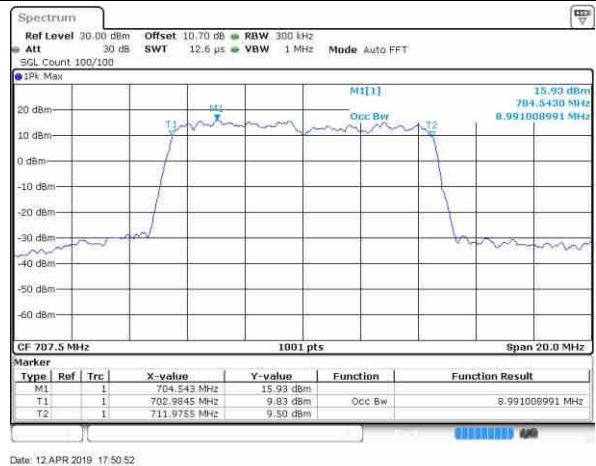
Lowest Channel / 10MHz / 16QAM



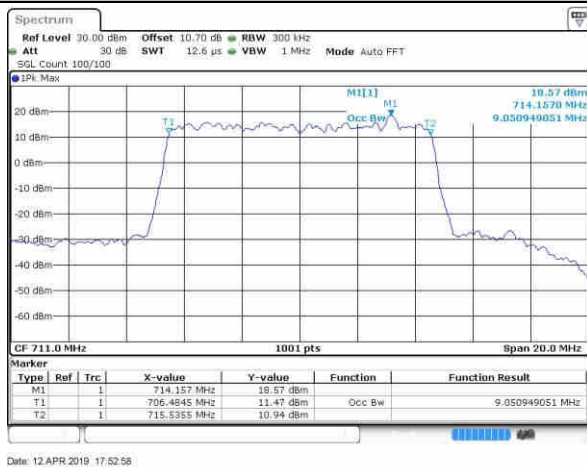
Middle Channel / 10MHz / QPSK



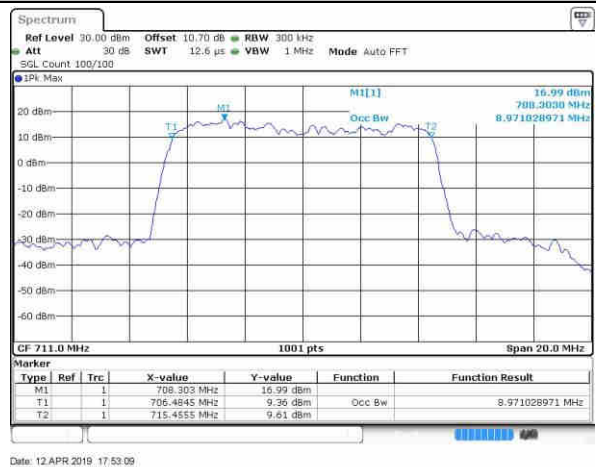
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



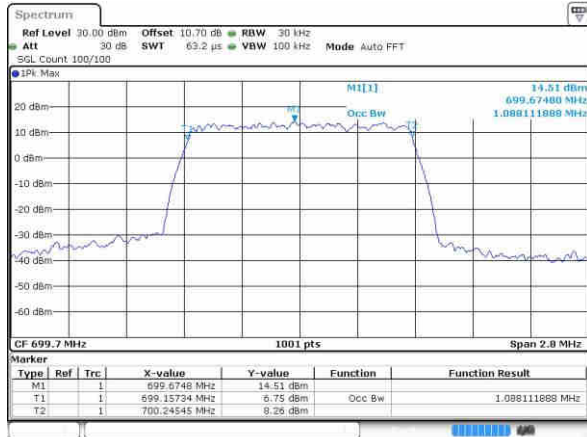
Highest Channel / 10MHz / 16QAM



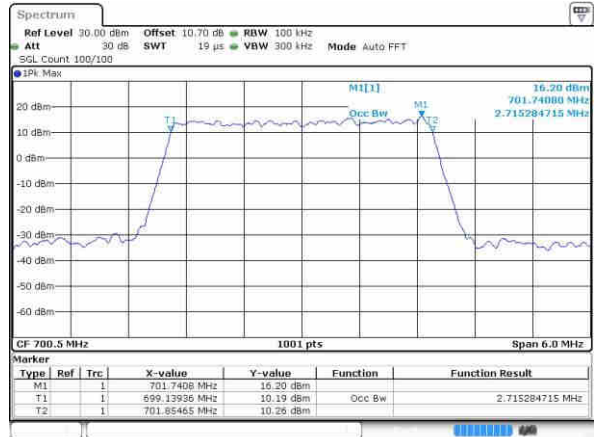


LTE Band 12

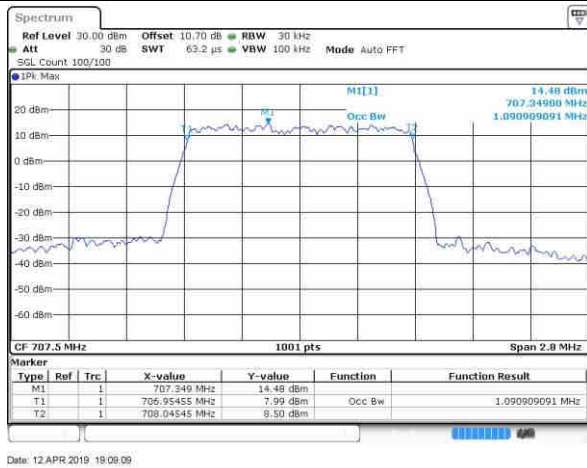
Lowest Channel / 1.4MHz / 64QAM



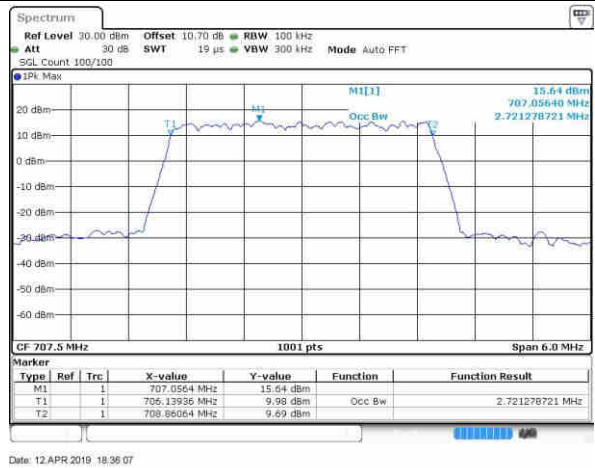
Lowest Channel / 3MHz / 64QAM



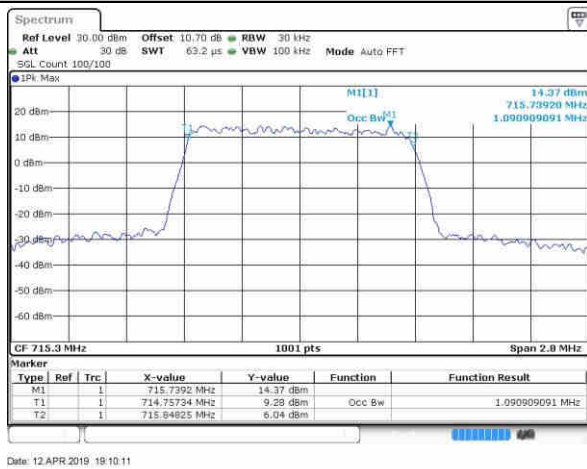
Middle Channel / 1.4MHz / 64QAM



Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM



Highest Channel / 3MHz / 64QAM

