



LTE Band 4

Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.2	4.84	5.04	5.83	PASS
Middle CH	4.14	4.7	4.99	5.74	
Highest CH	3.71	4.75	4.46	5.77	



LTE Band 4 / 20MHz / QPSK

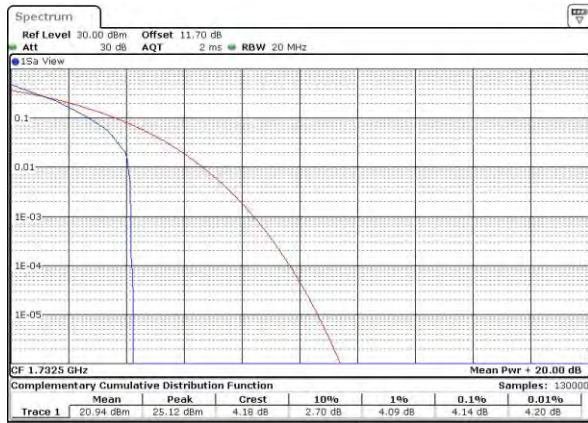
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



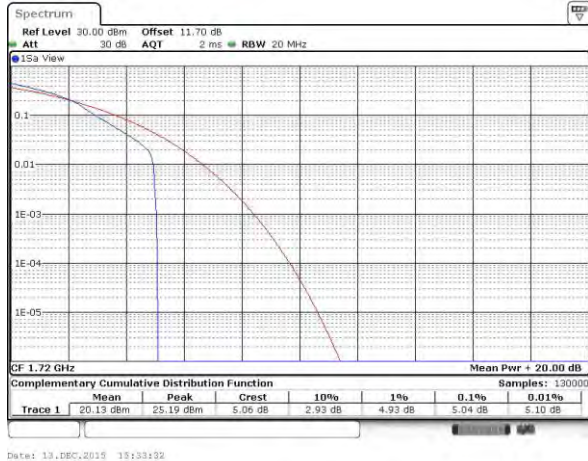
Highest Channel / Full RB



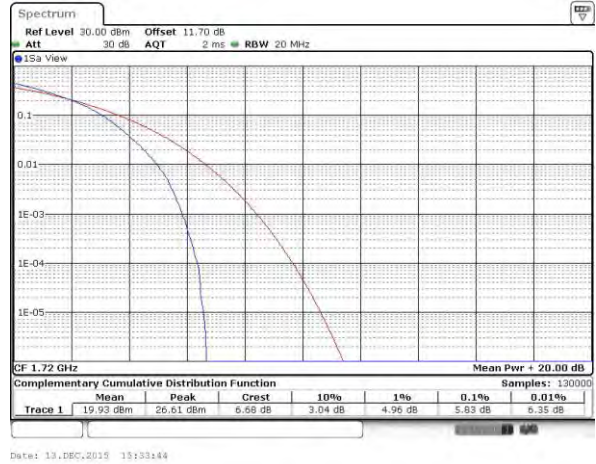


LTE Band 4 / 20MHz / 16QAM

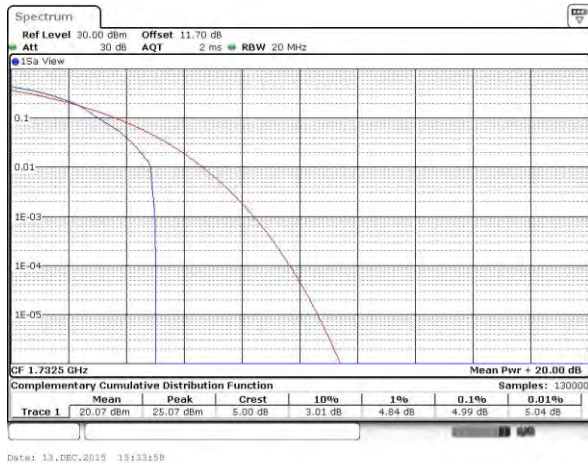
Lowest Channel / 1RB



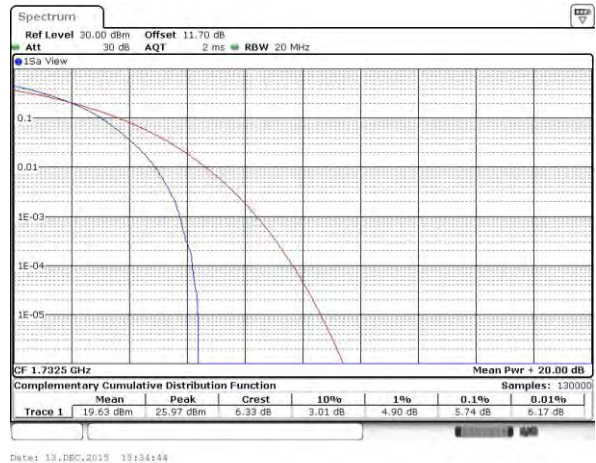
Lowest Channel / Full RB



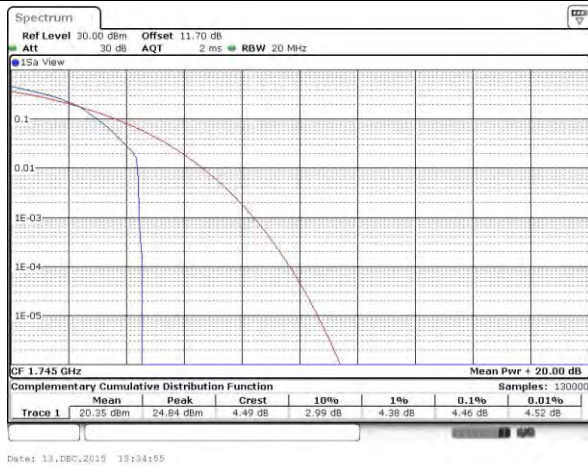
Middle Channel / 1RB



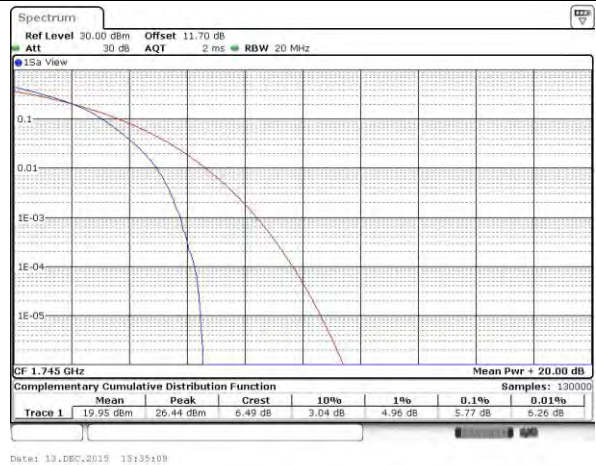
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





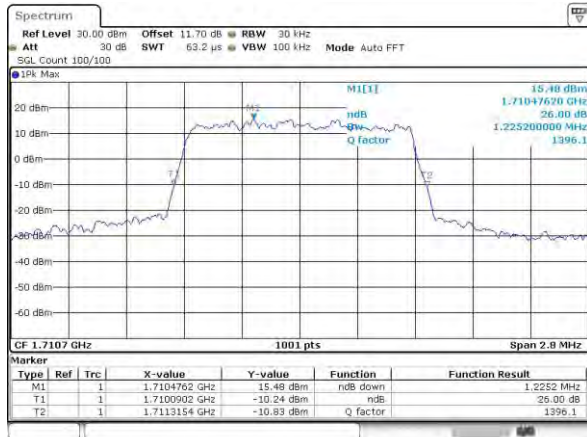
26dB Bandwidth

Mode	LTE Band 4 : 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	3.05	4.92	4.91	9.77	9.87	14.54	14.69	20.18	20.22
Middle CH	1.23	1.24	3.05	2.96	4.97	4.91	9.77	9.73	14.18	14.6	20.06	20.18
Highest CH	1.22	1.24	3	3.01	4.92	4.92	9.71	9.83	14.39	14.33	20.22	20.18

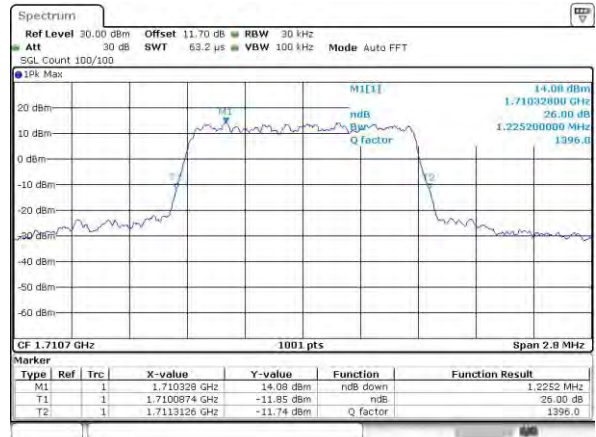


LTE Band 4

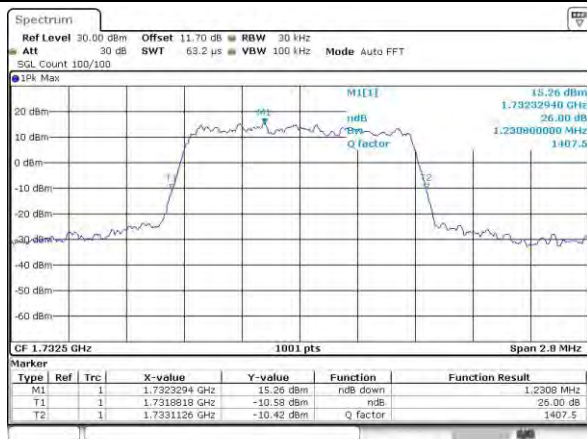
Lowest Channel / 1.4MHz / QPSK



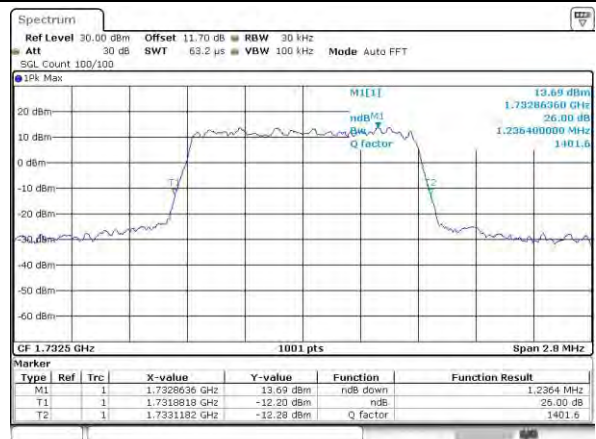
Lowest Channel / 1.4MHz / 16QAM



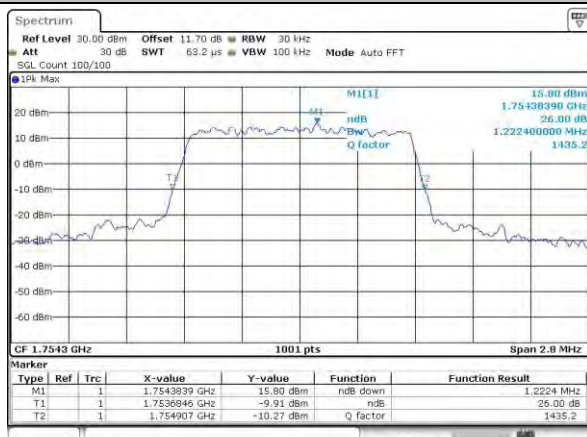
Middle Channel / 1.4MHz / QPSK



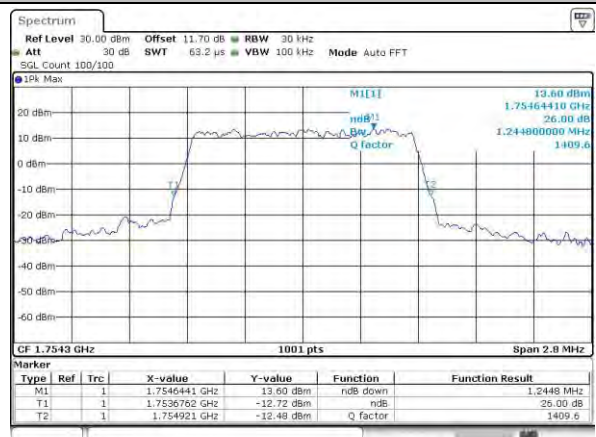
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



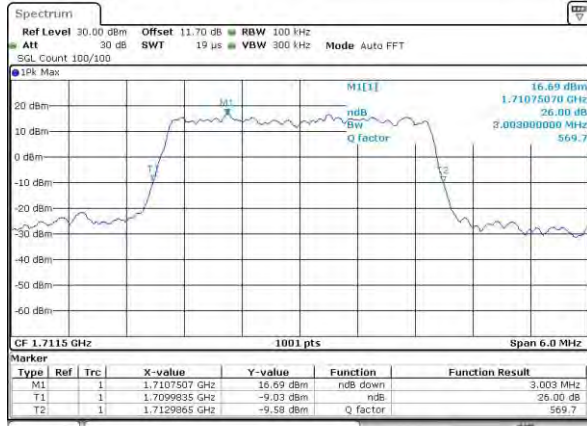
Highest Channel / 1.4MHz / 16QAM





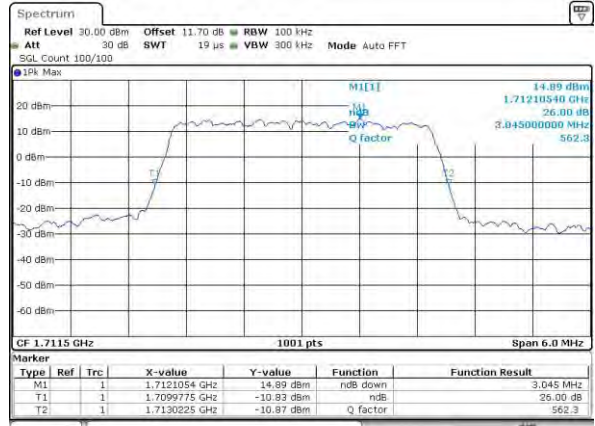
LTE Band 4

Lowest Channel / 3MHz / QPSK



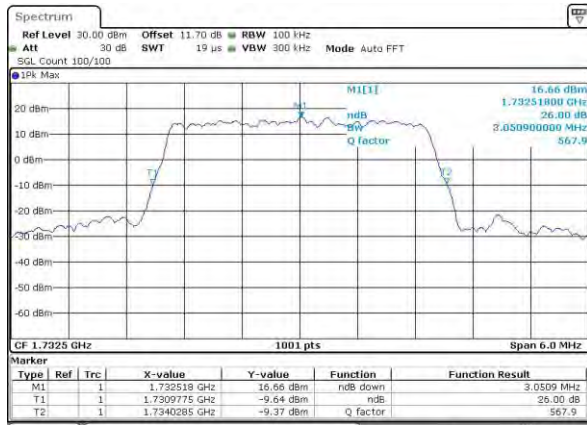
Date: 13.DEC.2018 13:28:16

Lowest Channel / 3MHz / 16QAM



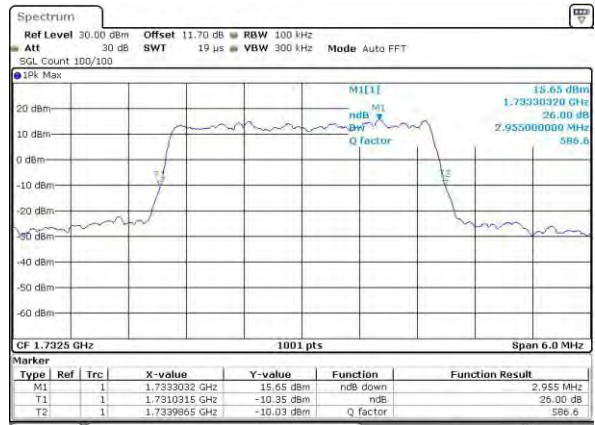
Date: 13.DEC.2018 13:29:17

Middle Channel / 3MHz / QPSK



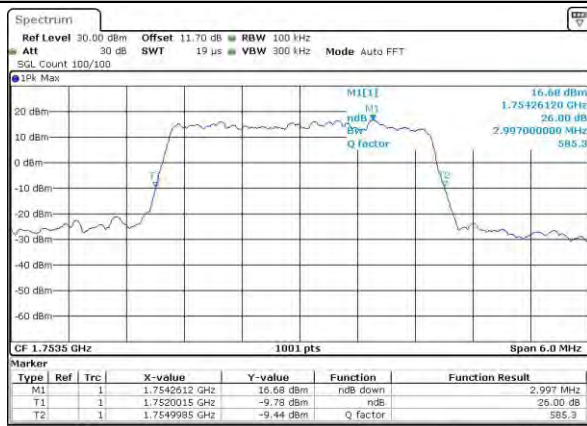
Date: 13.DEC.2018 13:33:07

Middle Channel / 3MHz / 16QAM



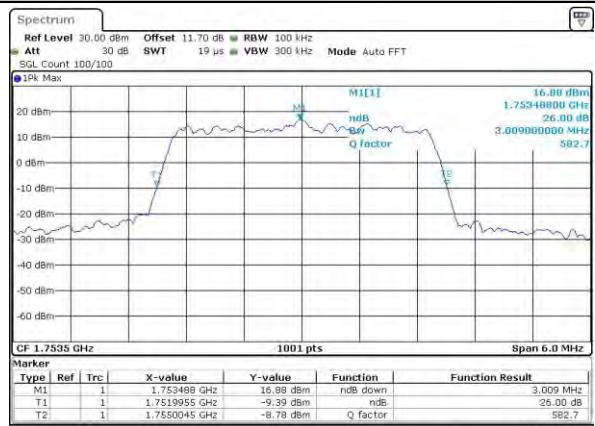
Date: 13.DEC.2018 13:33:10

Highest Channel / 3MHz / QPSK



Date: 13.DEC.2018 13:35:50

Highest Channel / 3MHz / 16QAM

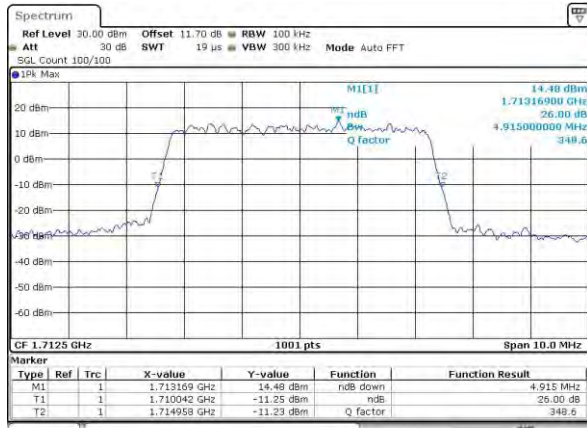


Date: 13.DEC.2018 13:36:02



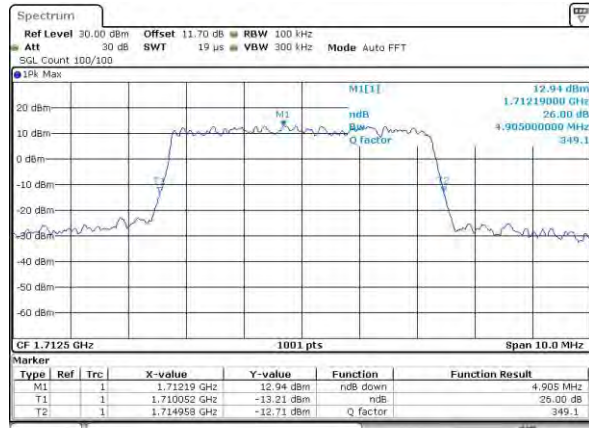
LTE Band 4

Lowest Channel / 5MHz / QPSK



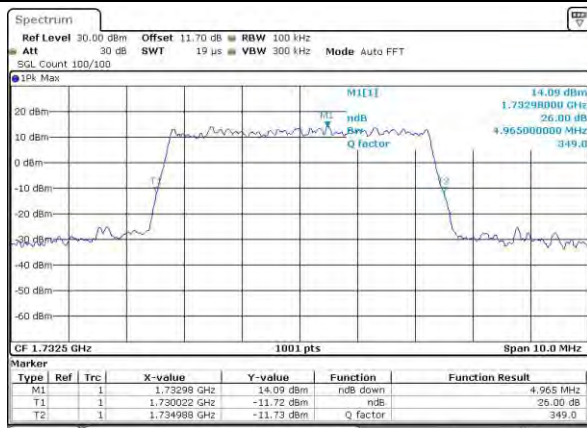
Date: 13.DEC.2018 13:43:12

Lowest Channel / 5MHz / 16QAM



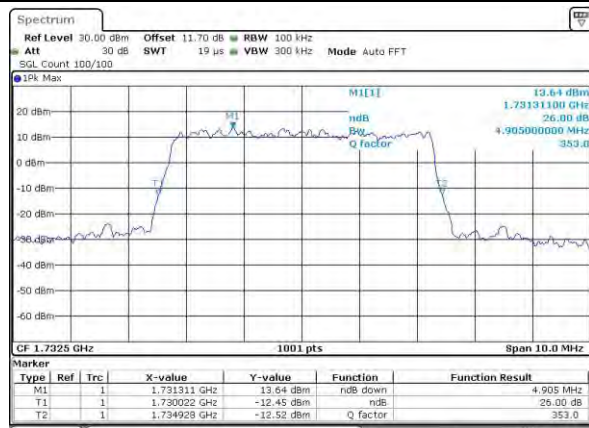
Date: 13.DEC.2018 13:43:23

Middle Channel / 5MHz / QPSK



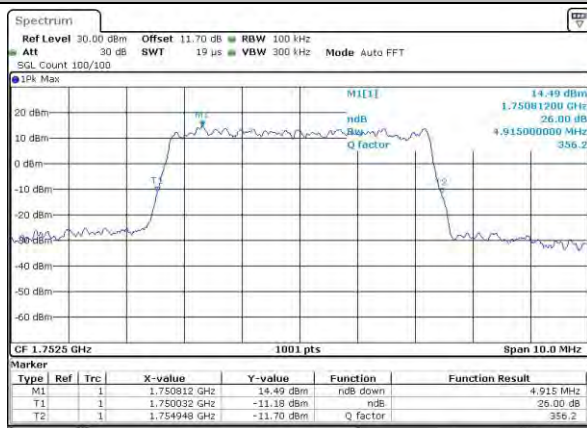
Date: 13.DEC.2018 13:43:32

Middle Channel / 5MHz / 16QAM



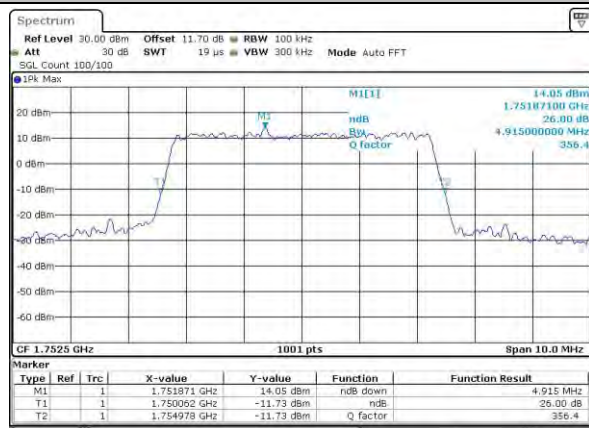
Date: 13.DEC.2018 13:43:44

Highest Channel / 5MHz / QPSK



Date: 13.DEC.2018 13:43:16

Highest Channel / 5MHz / 16QAM

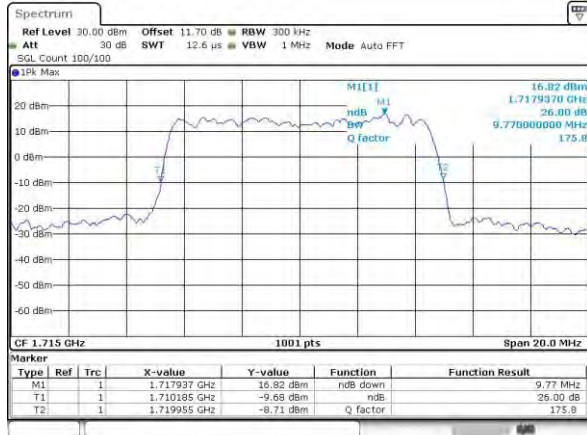


Date: 13.DEC.2018 13:43:27

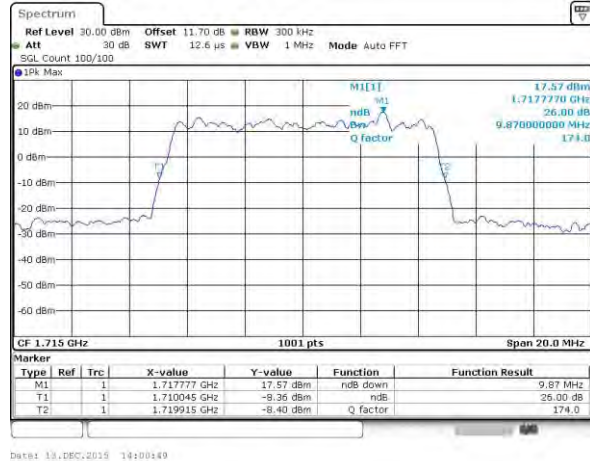


LTE Band 4

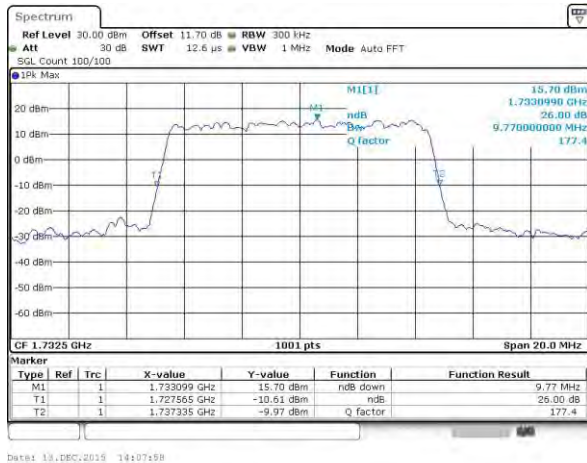
Lowest Channel / 10MHz / QPSK



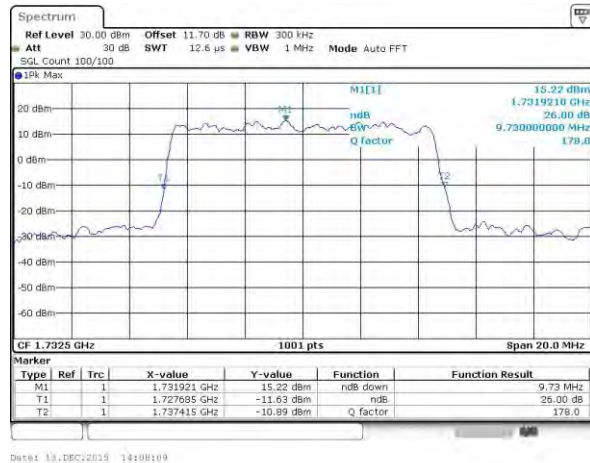
Lowest Channel / 10MHz / 16QAM



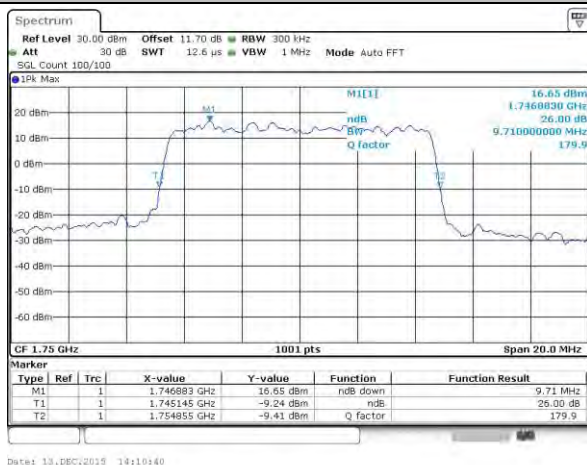
Middle Channel / 10MHz / QPSK



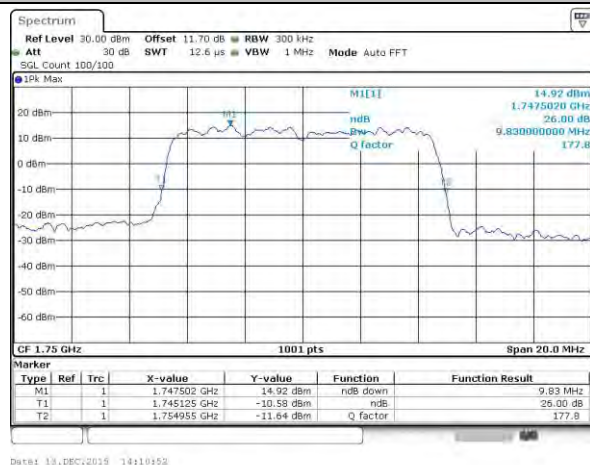
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



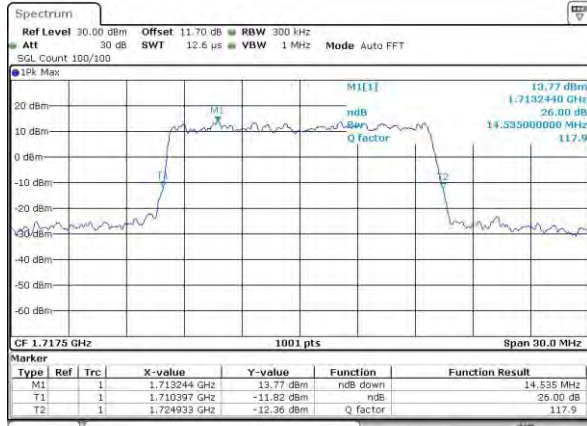
Highest Channel / 10MHz / 16QAM





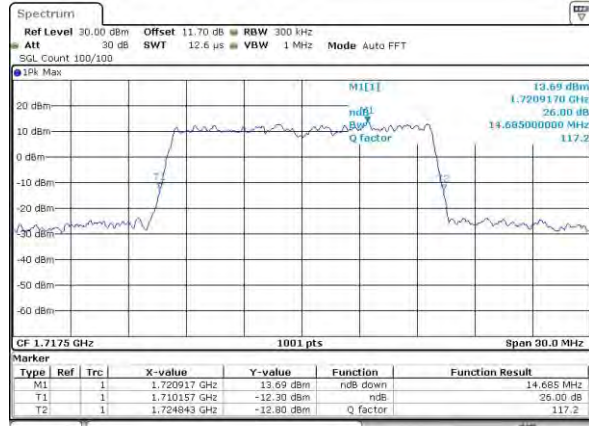
LTE Band 4

Lowest Channel / 15MHz / QPSK



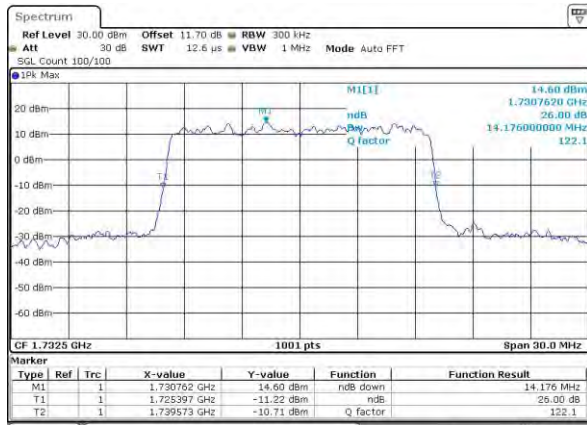
Date: 13.DEC.2019 14:23:29

Lowest Channel / 15MHz / 16QAM



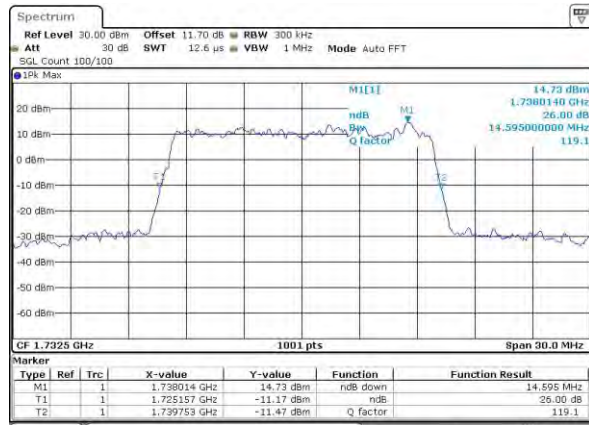
Date: 13.DEC.2019 14:23:35

Middle Channel / 15MHz / QPSK



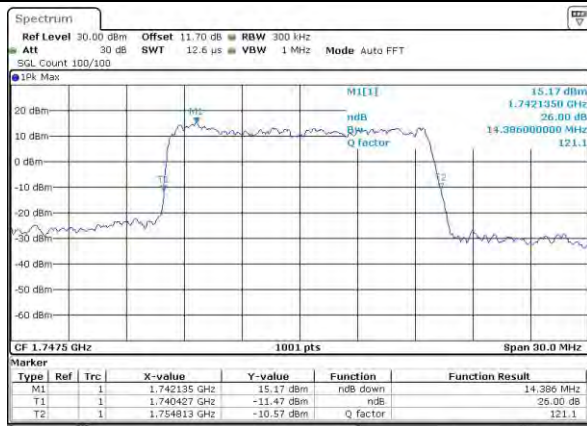
Date: 13.DEC.2019 14:36:40

Middle Channel / 15MHz / 16QAM



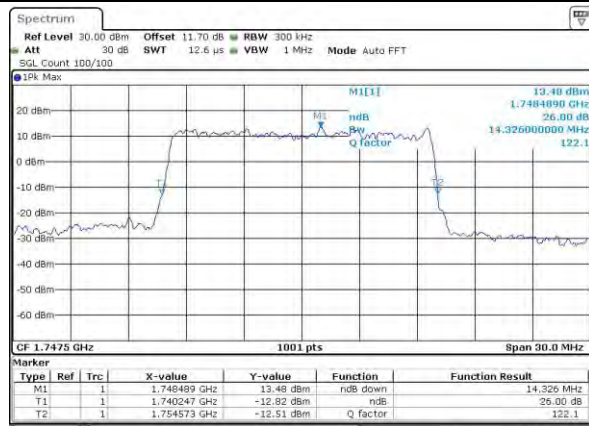
Date: 13.DEC.2019 14:36:56

Highest Channel / 15MHz / QPSK



Date: 13.DEC.2019 14:33:29

Highest Channel / 15MHz / 16QAM

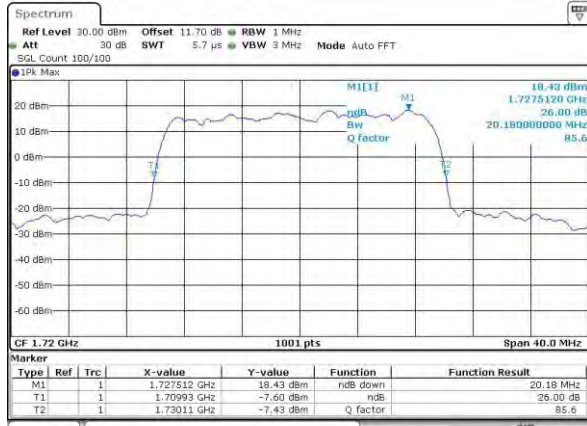


Date: 13.DEC.2019 14:33:39

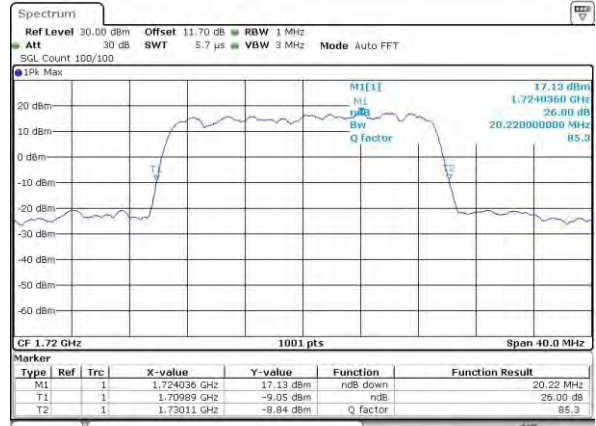


LTE Band 4

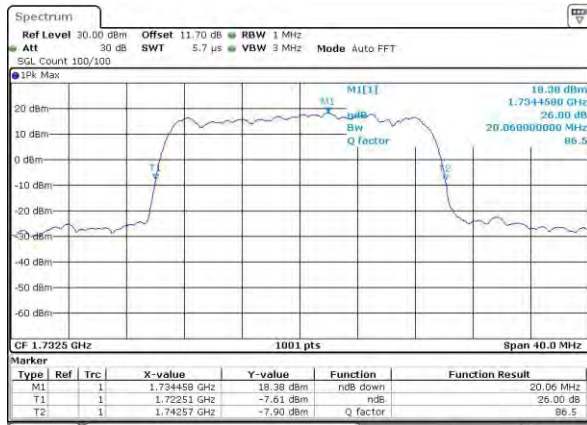
Lowest Channel / 20MHz / QPSK



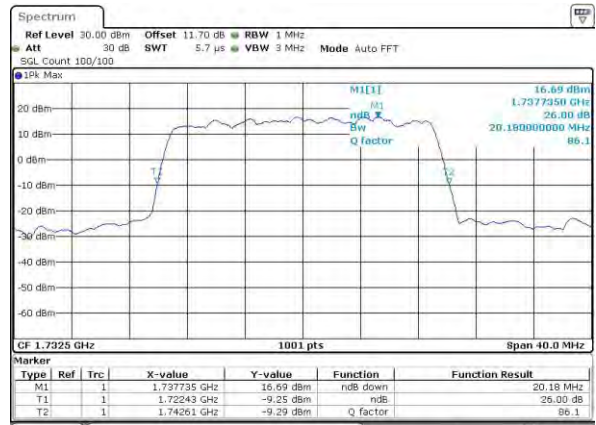
Lowest Channel / 20MHz / 16QAM



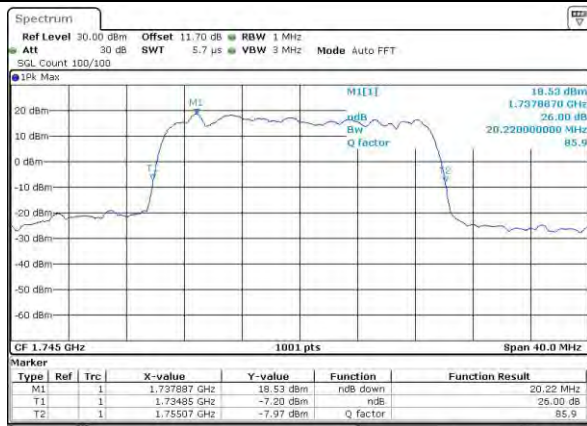
Middle Channel / 20MHz / QPSK



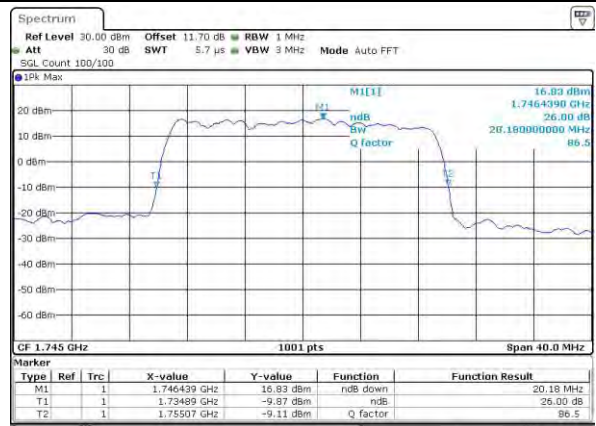
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM





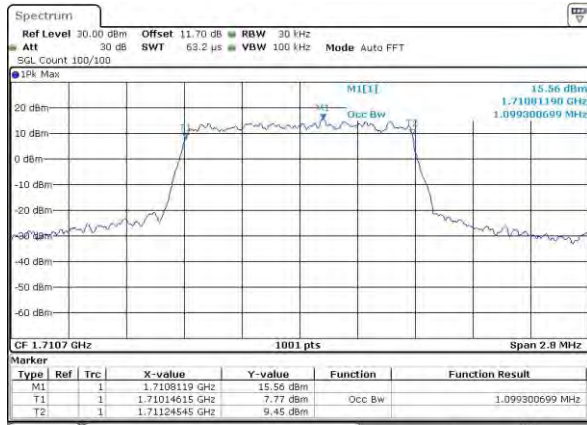
Occupied Bandwidth

Mode	LTE Band 4 : 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	1.09	2.71	2.72	4.52	4.49	9.01	9.03	13.52	13.46	18.46	18.5
Middle CH	1.09	1.08	2.72	2.73	4.47	4.49	9.01	8.97	13.46	13.43	18.3	18.22
Highest CH	1.08	1.09	2.7	2.72	4.48	4.49	8.99	8.99	13.46	13.37	18.42	18.5



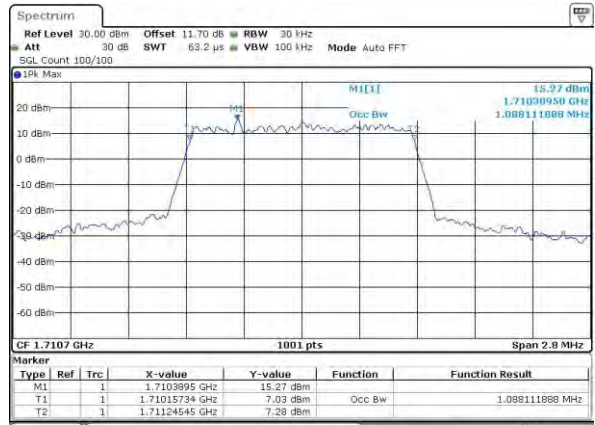
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



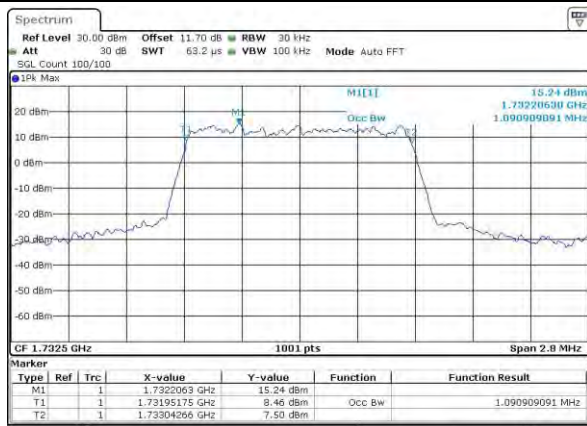
Date: 13 DEC 2018 18:37:15

Lowest Channel / 1.4MHz / 16QAM



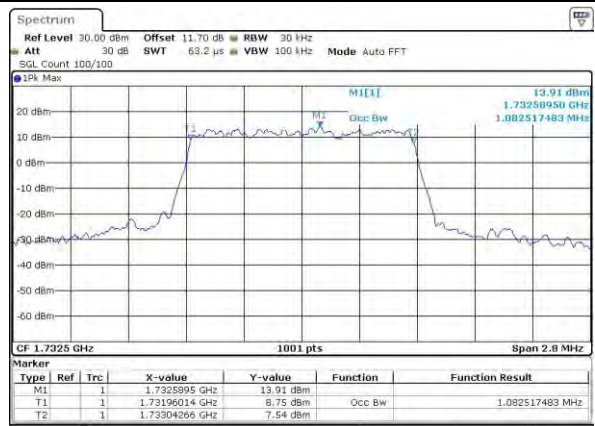
Date: 13 DEC 2018 18:13:10

Middle Channel / 1.4MHz / QPSK



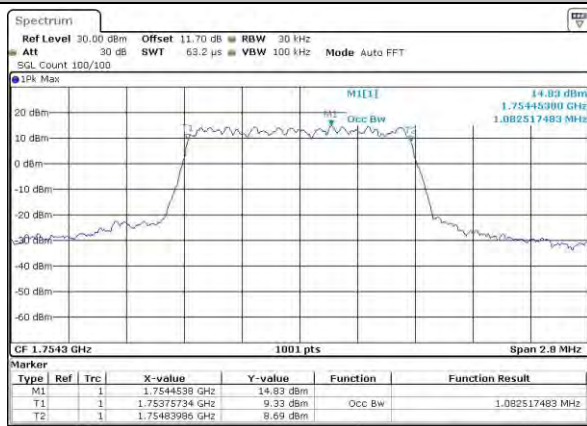
Date: 13 DEC 2018 18:28:19

Middle Channel / 1.4MHz / 16QAM



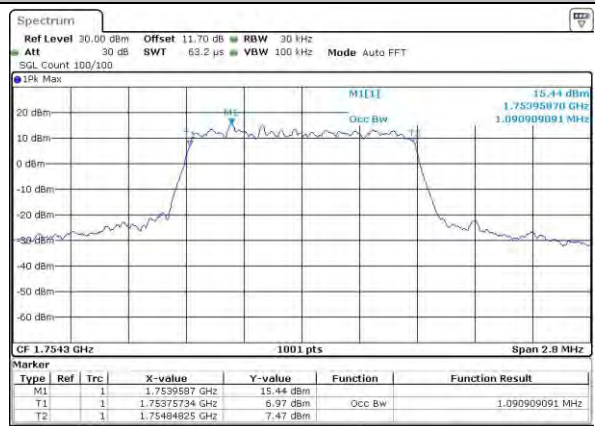
Date: 13 DEC 2018 18:28:18

Highest Channel / 1.4MHz / QPSK



Date: 13 DEC 2018 18:23:02

Highest Channel / 1.4MHz / 16QAM

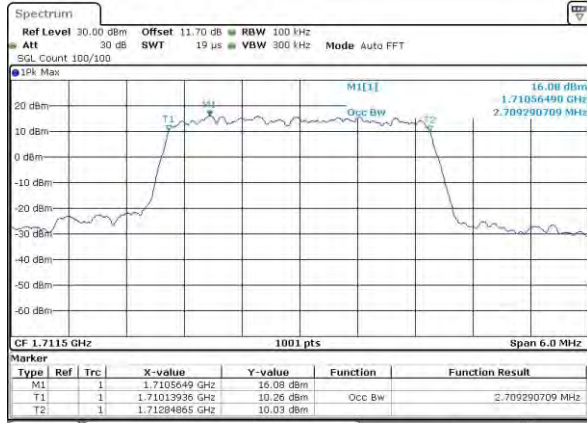


Date: 13 DEC 2018 18:23:14

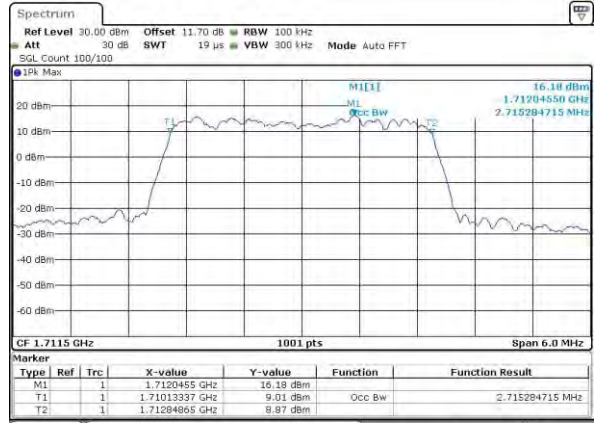


LTE Band 4

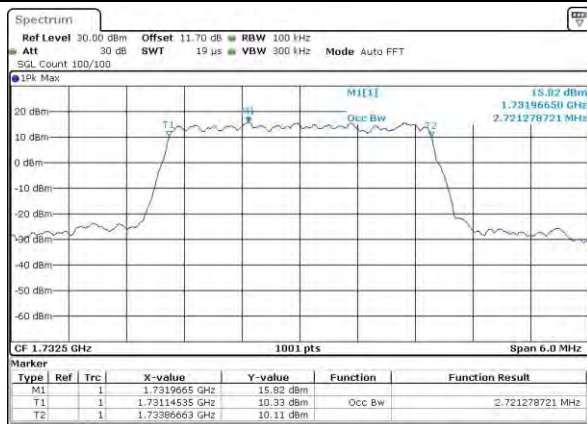
Lowest Channel / 3MHz / QPSK



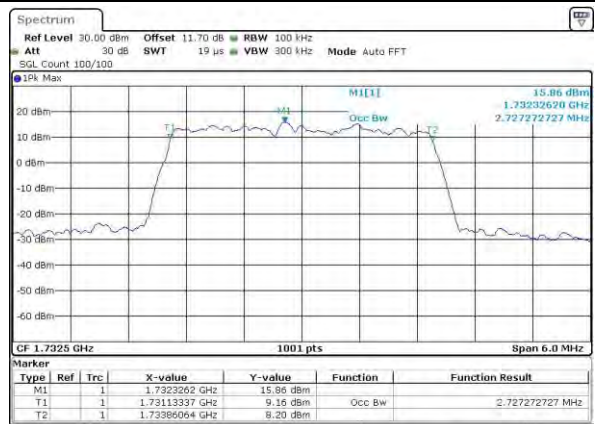
Lowest Channel / 3MHz / 16QAM



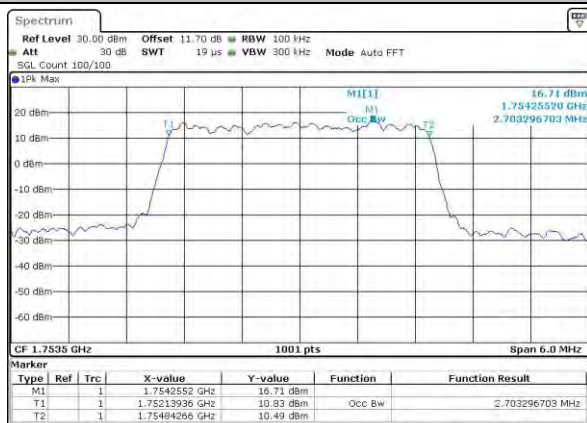
Middle Channel / 3MHz / QPSK



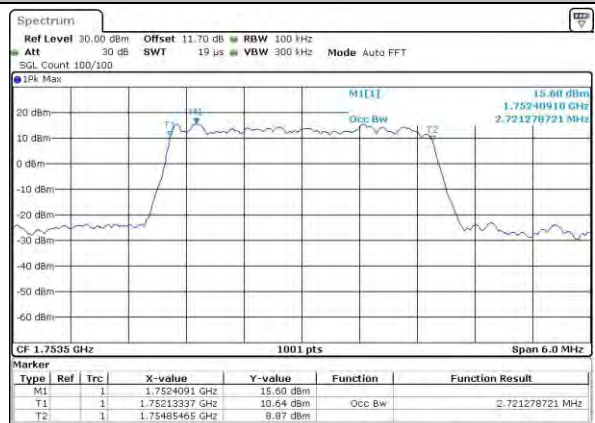
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



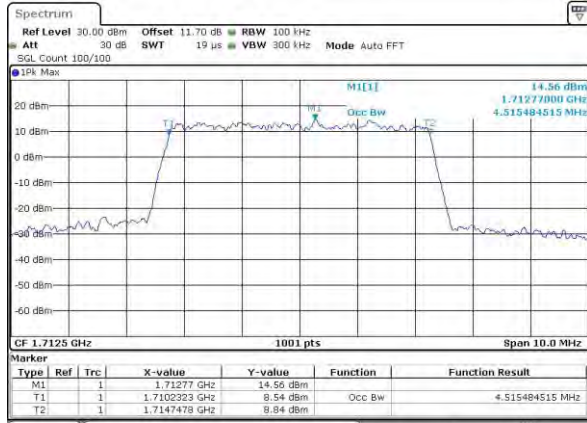
Highest Channel / 3MHz / 16QAM



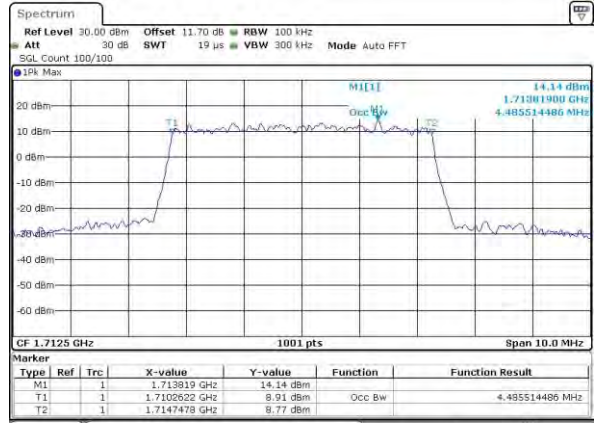


LTE Band 4

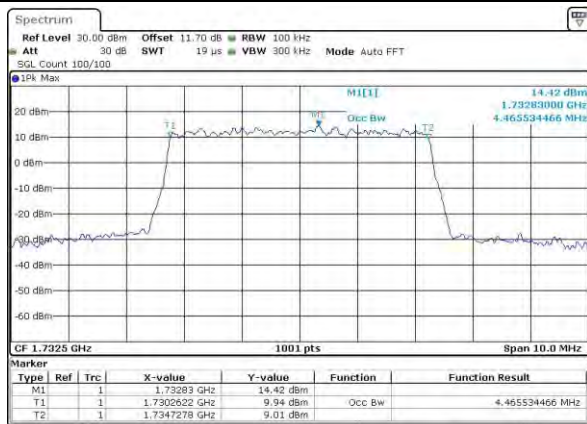
Lowest Channel / 5MHz / QPSK



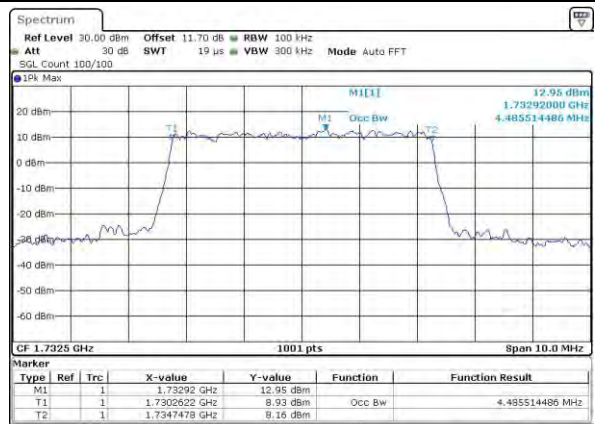
Lowest Channel / 5MHz / 16QAM



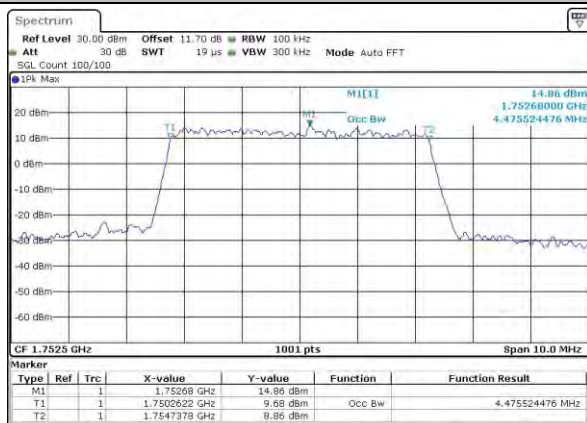
Middle Channel / 5MHz / QPSK



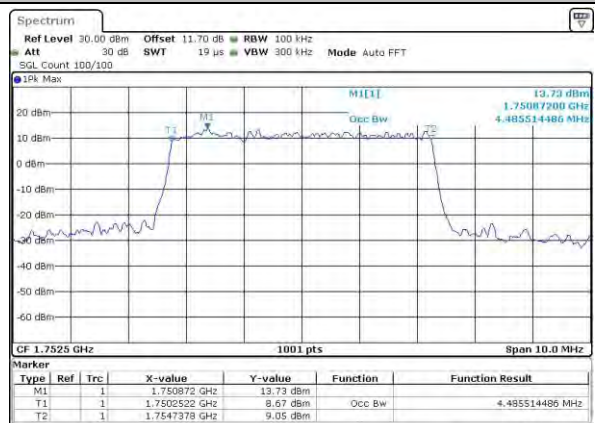
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



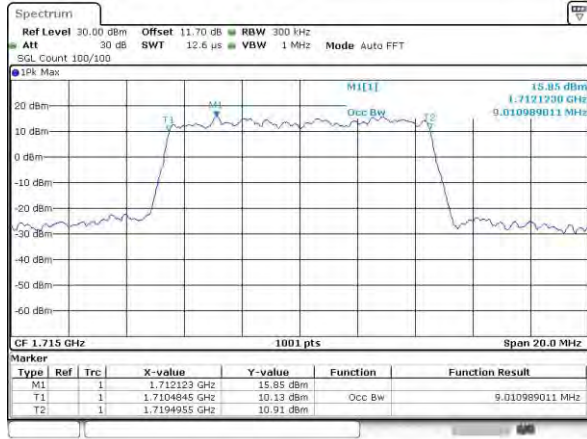
Highest Channel / 5MHz / 16QAM



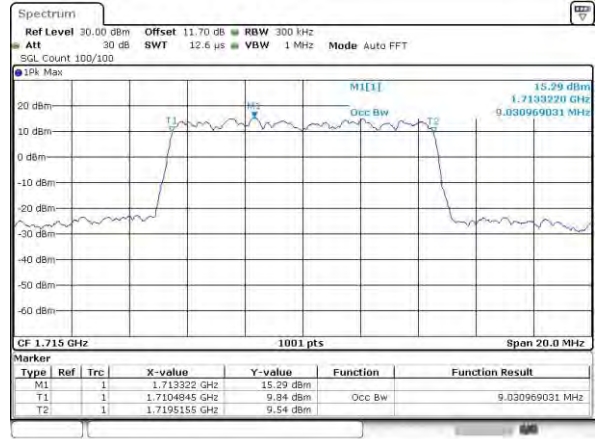


LTE Band 4

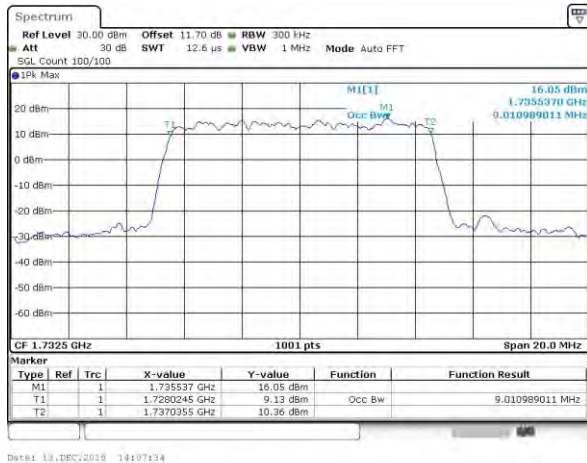
Lowest Channel / 10MHz / QPSK



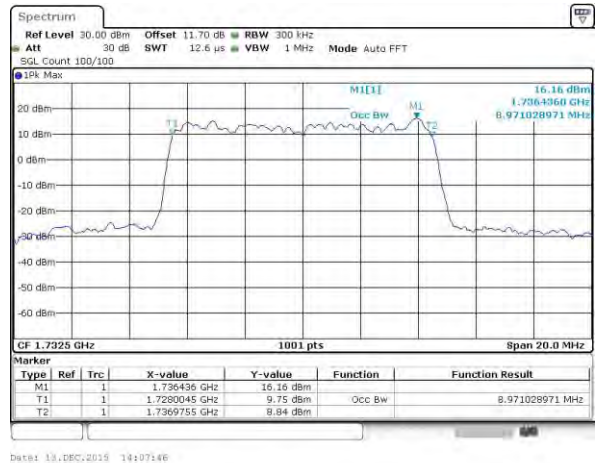
Lowest Channel / 10MHz / 16QAM



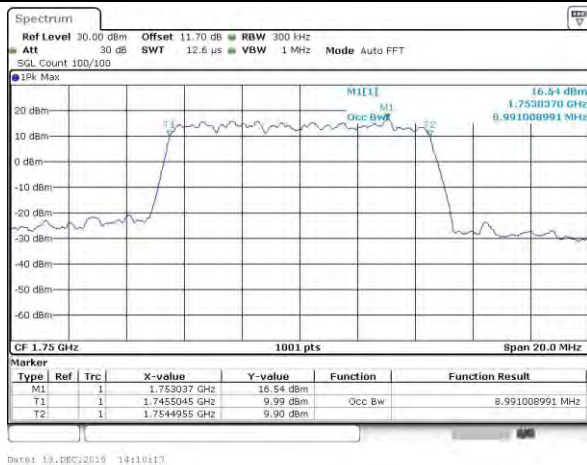
Middle Channel / 10MHz / QPSK



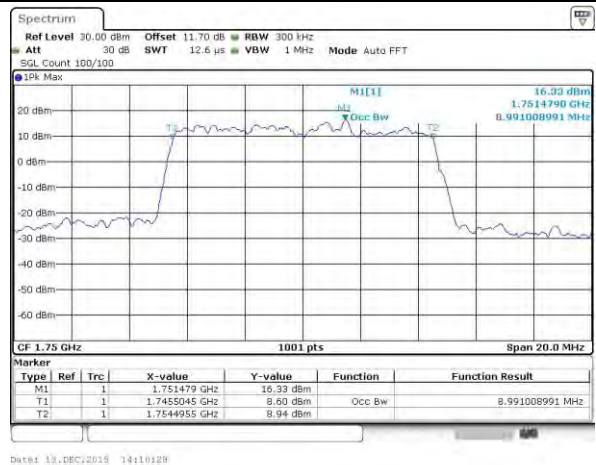
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



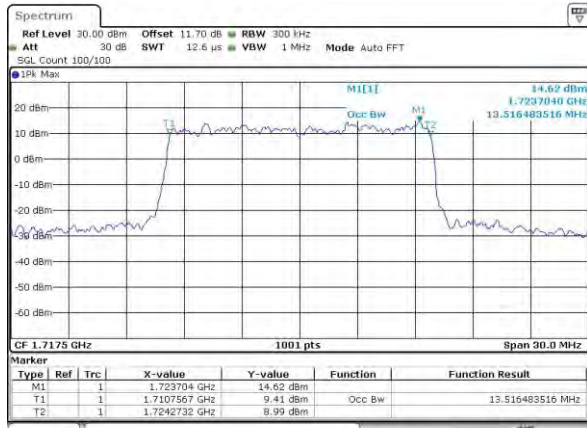
Highest Channel / 10MHz / 16QAM



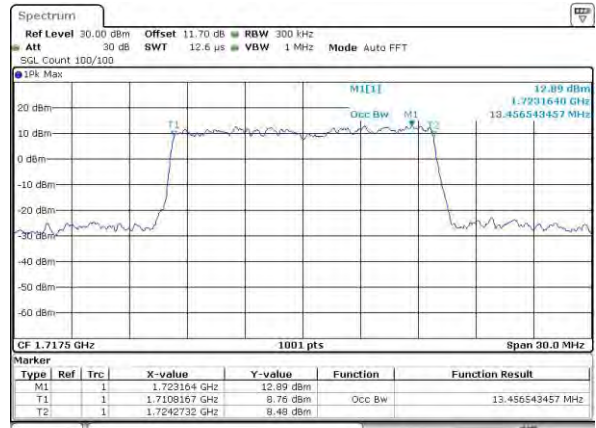


LTE Band 4

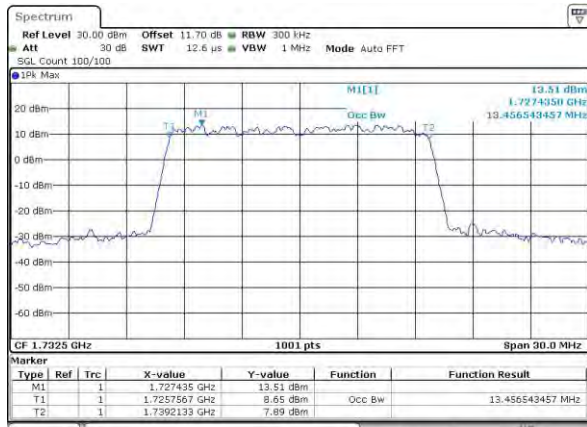
Lowest Channel / 15MHz / QPSK



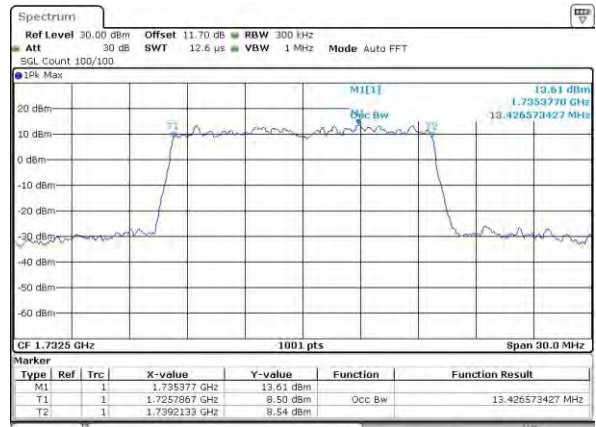
Lowest Channel / 15MHz / 16QAM



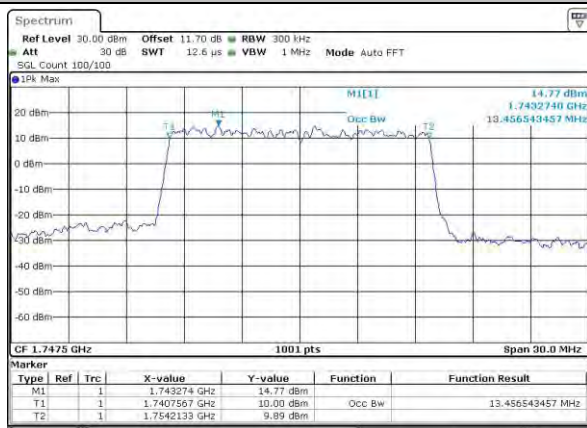
Middle Channel / 15MHz / QPSK



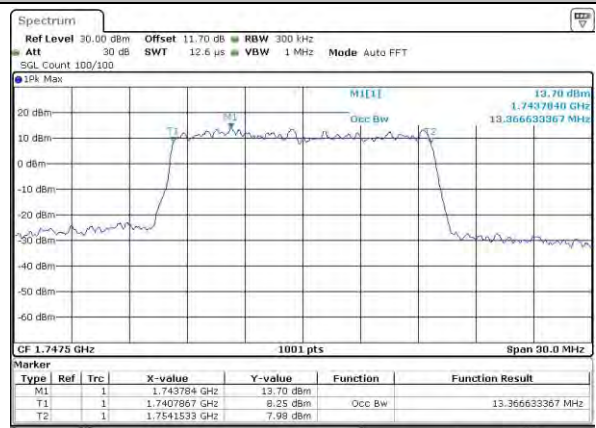
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



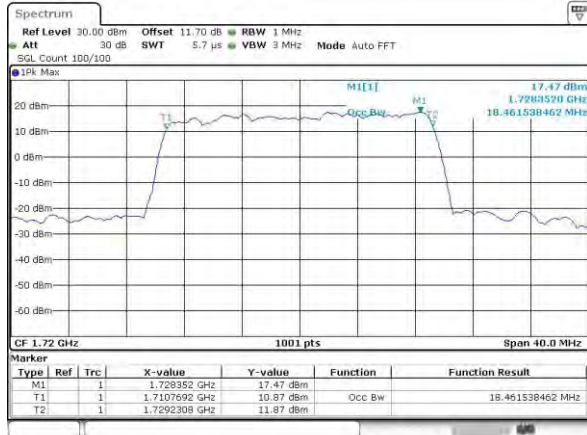
Highest Channel / 15MHz / 16QAM



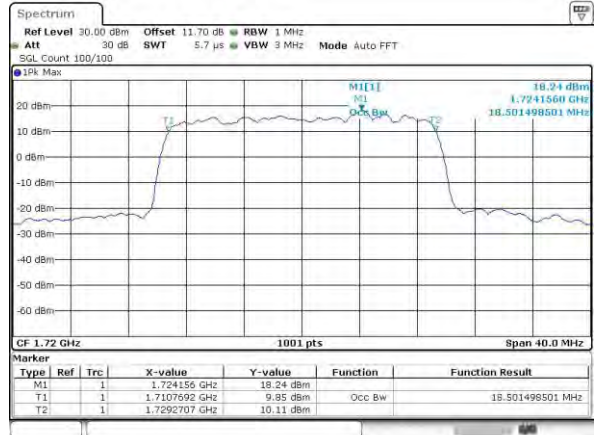


LTE Band 4

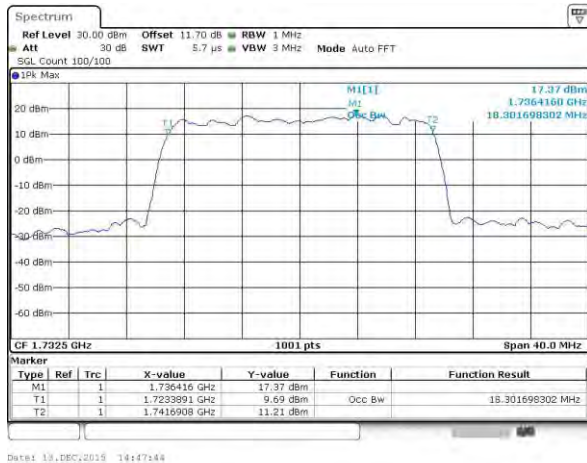
Lowest Channel / 20MHz / QPSK



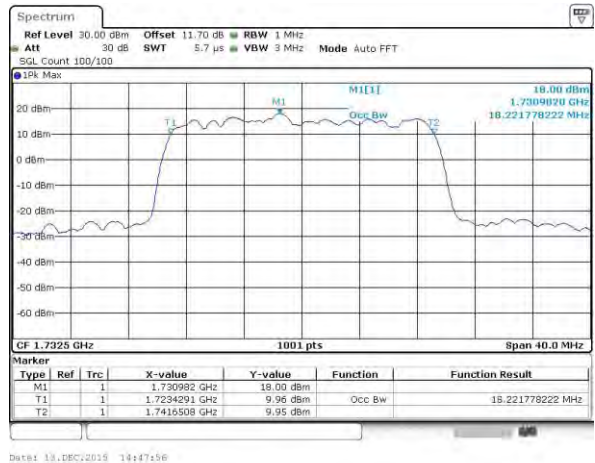
Lowest Channel / 20MHz / 16QAM



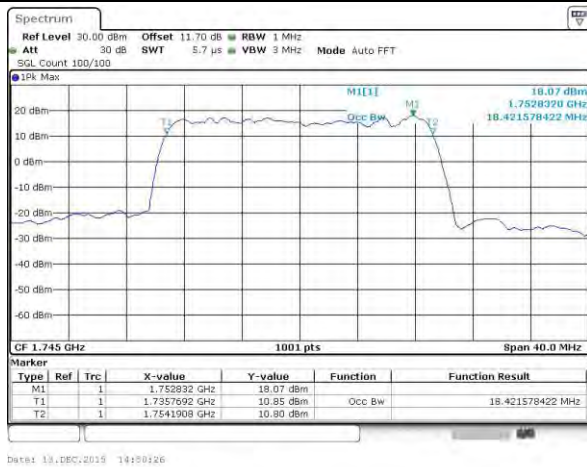
Middle Channel / 20MHz / QPSK



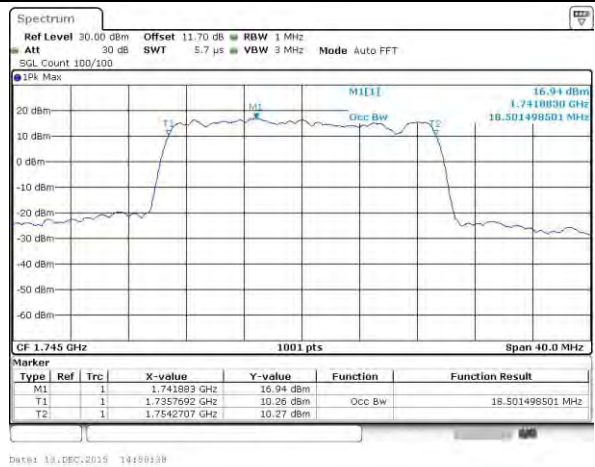
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM



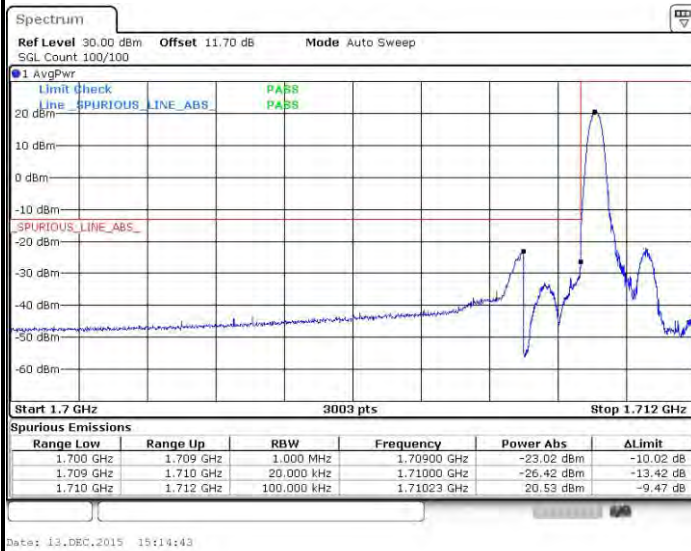


Conducted Band Edge

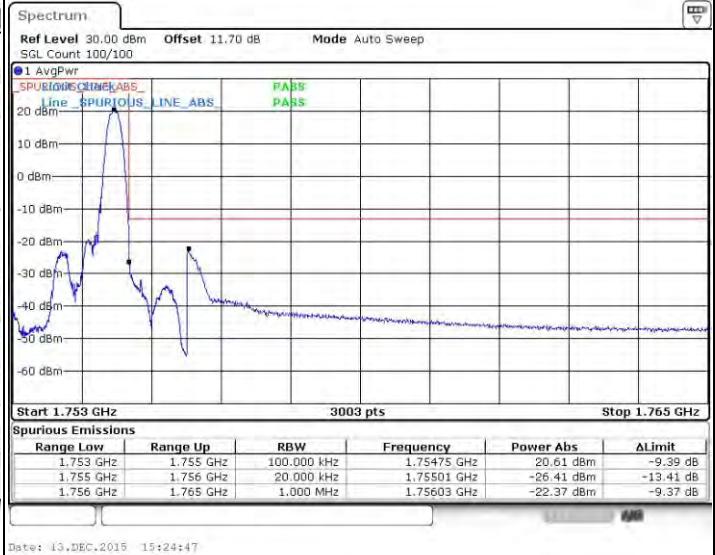


LTE Band 4 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



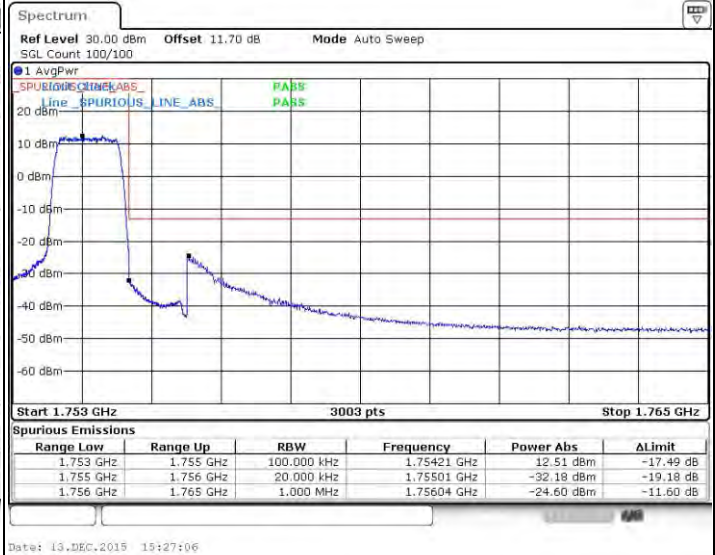
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



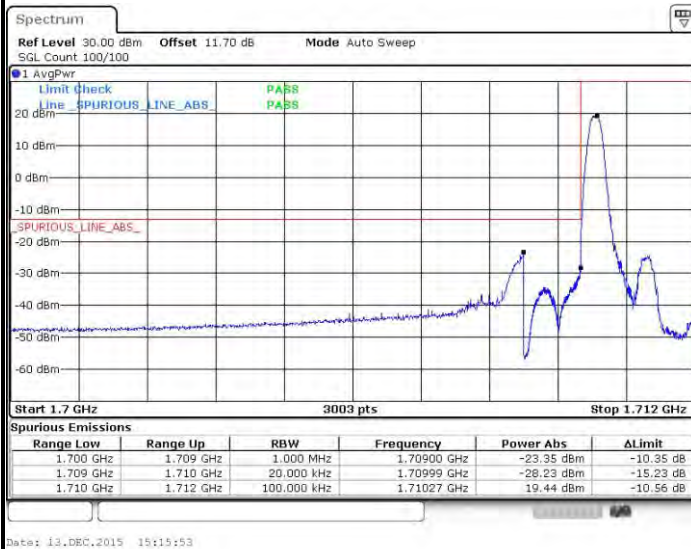
Highest Band Edge / Full RB



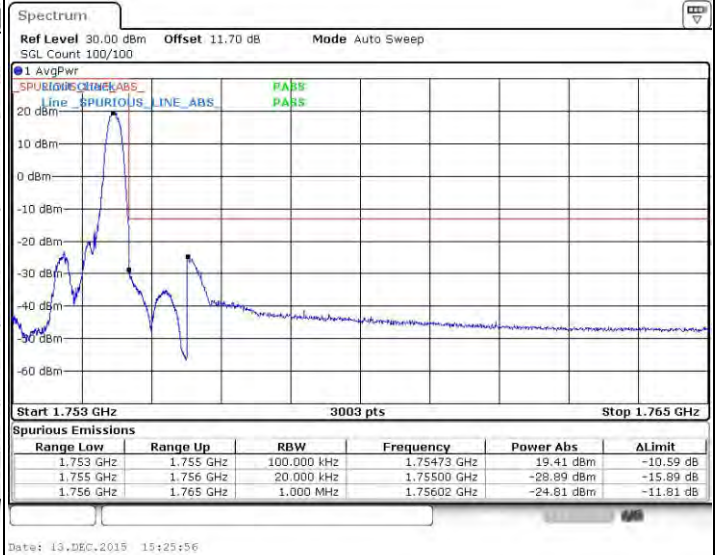


LTE Band 4 / 1.4MHz / 16QAM

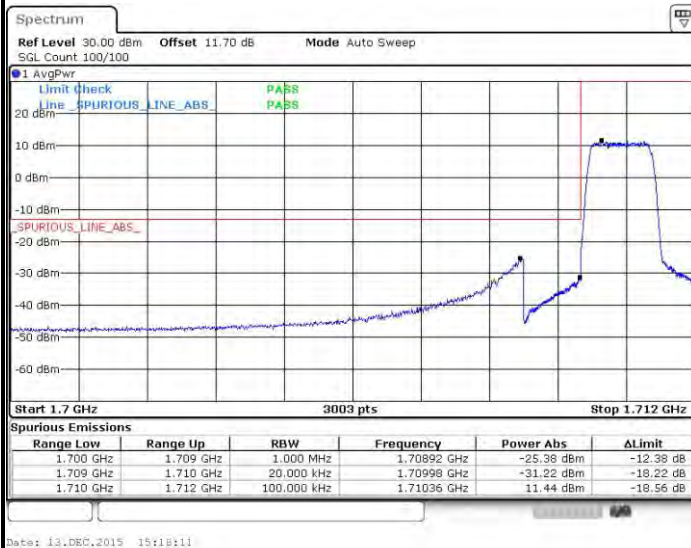
Lowest Band Edge / 1 RB



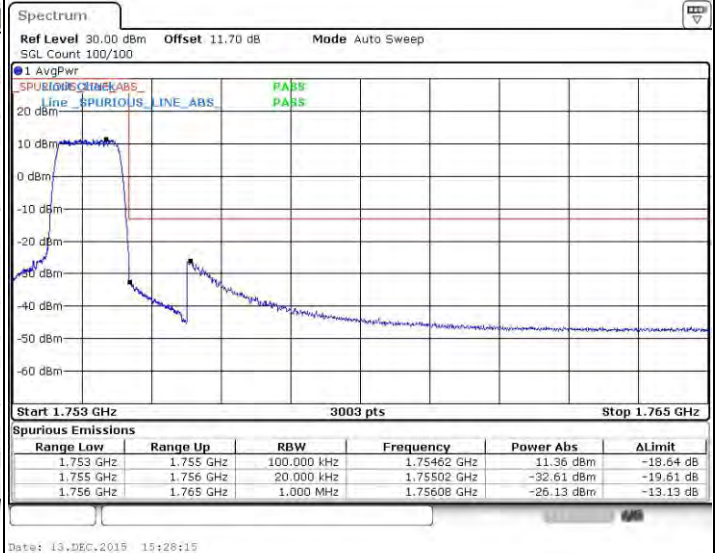
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



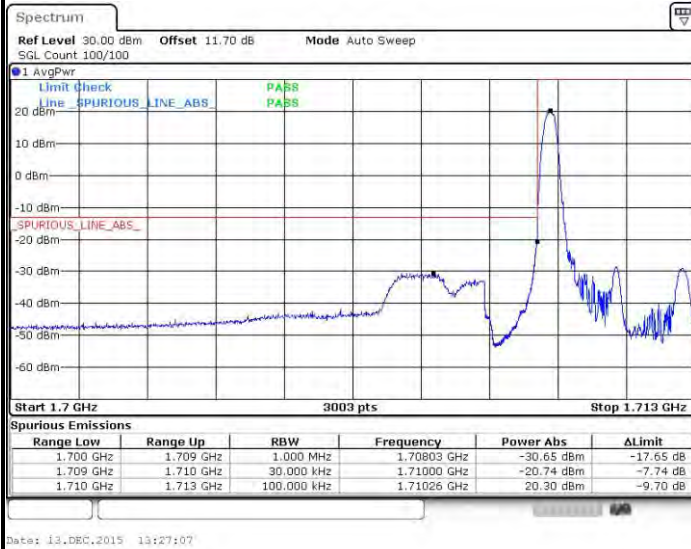
Highest Band Edge / Full RB



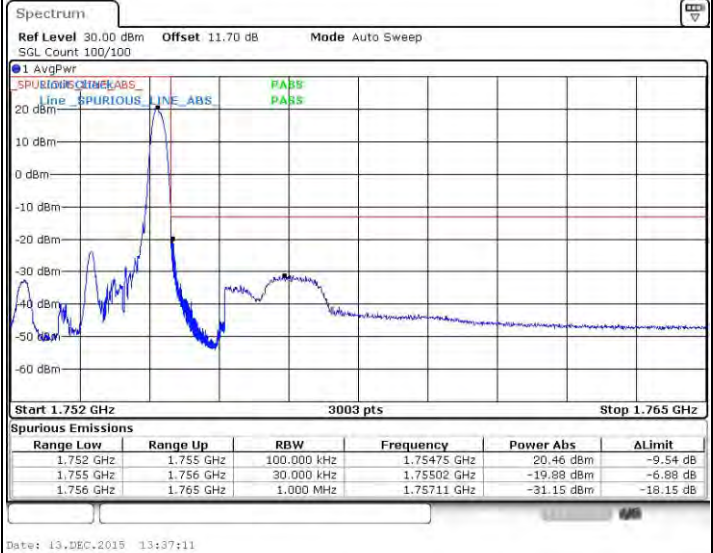


LTE Band 4 / 3MHz / QPSK

Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



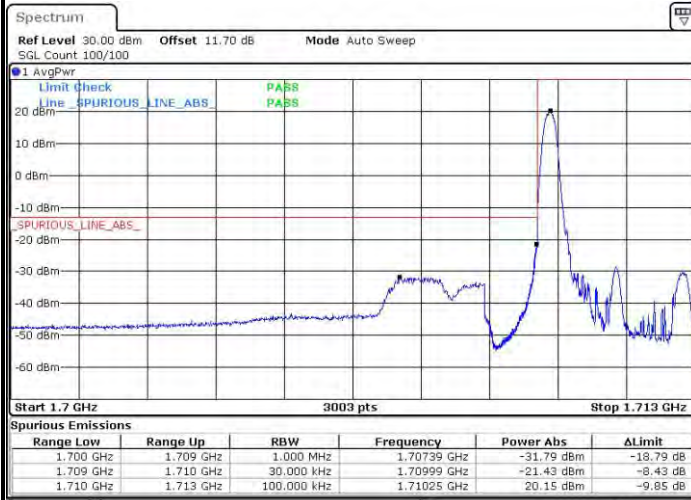
Highest Band Edge / Full RB



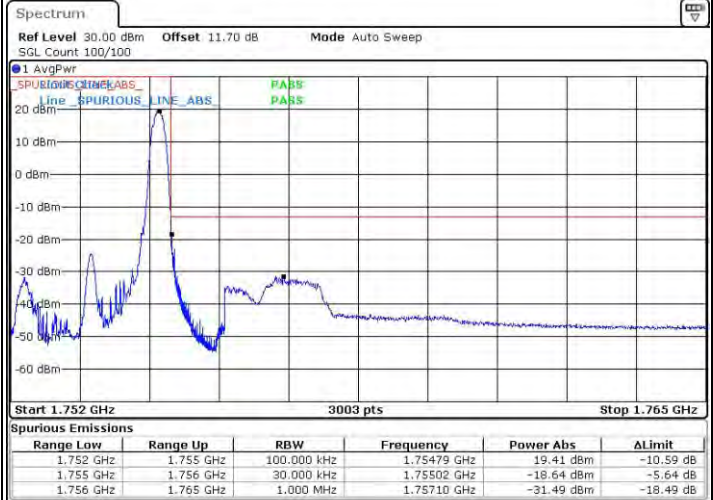


LTE Band 4 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



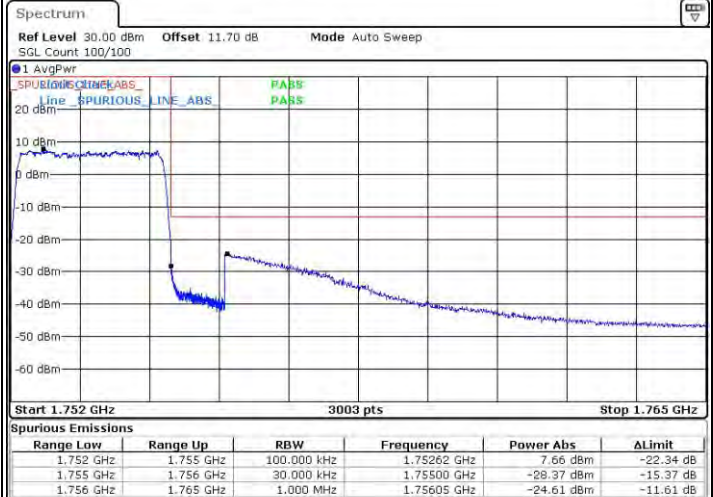
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



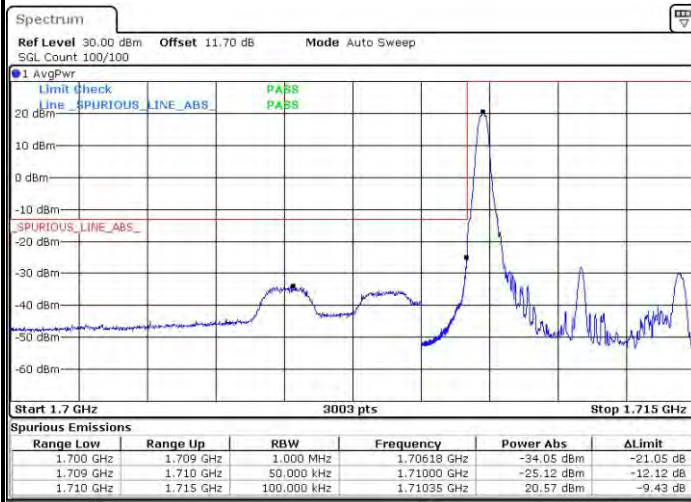
Highest Band Edge / Full RB





LTE Band 4 / 5MHz / QPSK

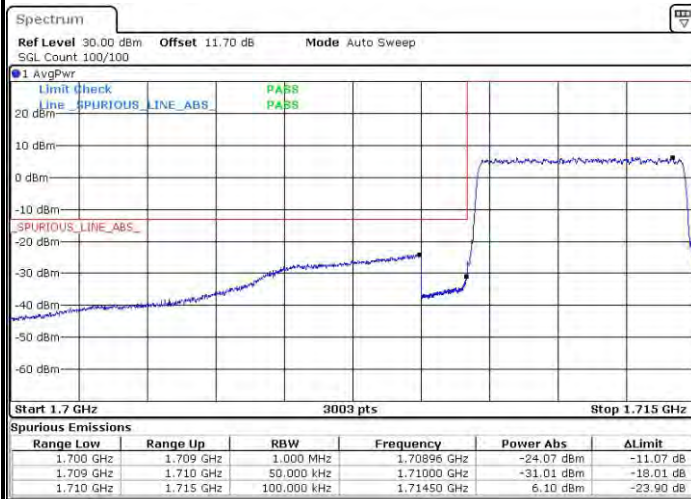
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



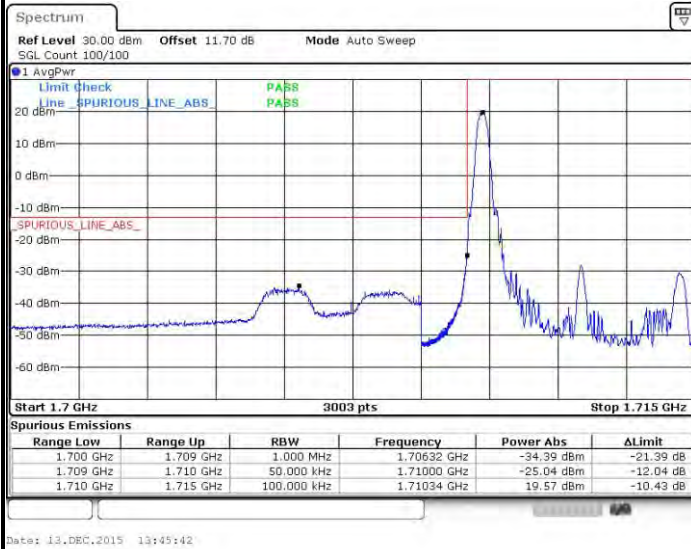
Highest Band Edge / Full RB



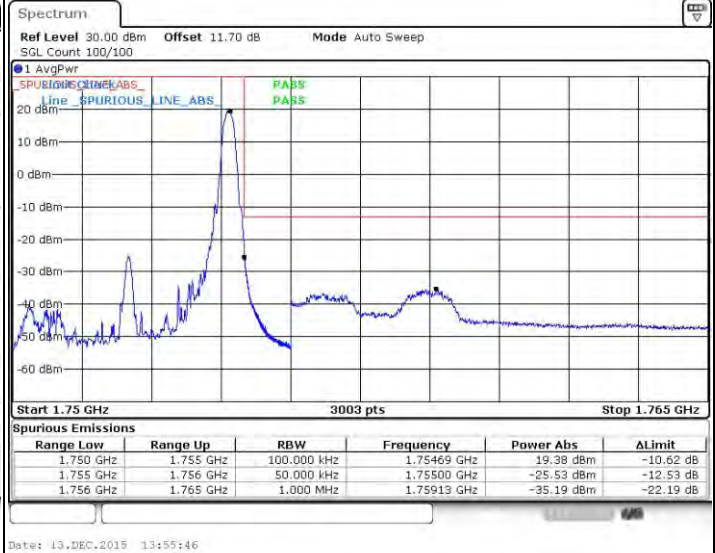


LTE Band 4 / 5MHz / 16QAM

Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



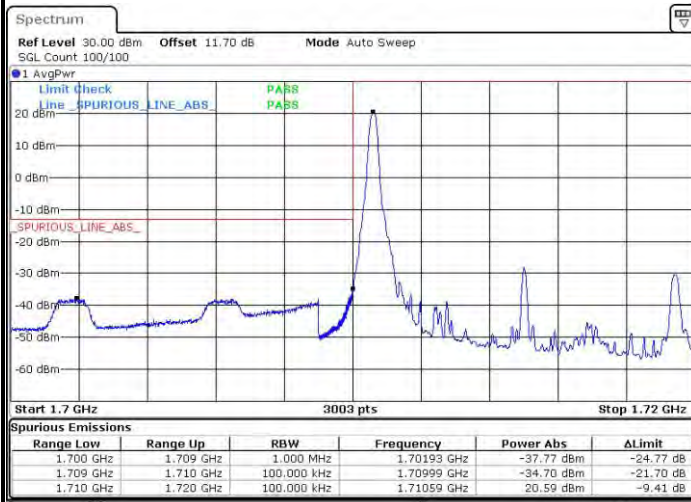
Highest Band Edge / Full RB



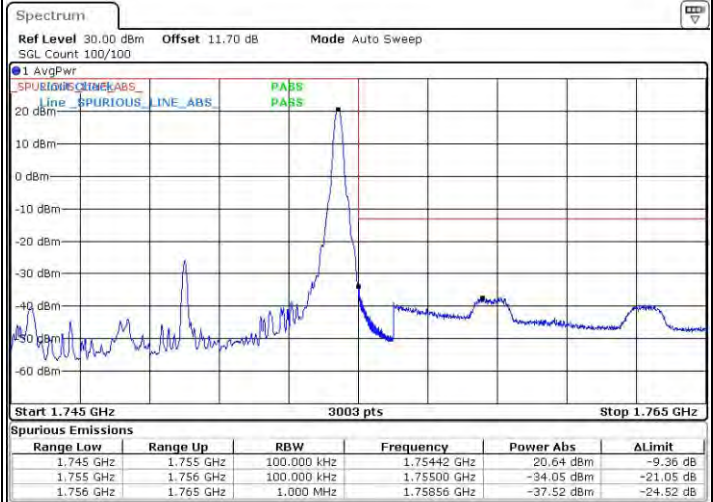


LTE Band 4 / 10MHz / QPSK

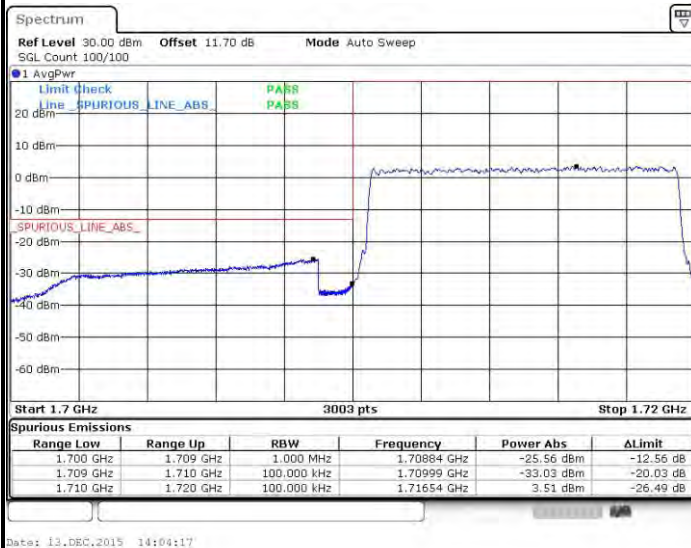
Lowest Band Edge / 1 RB



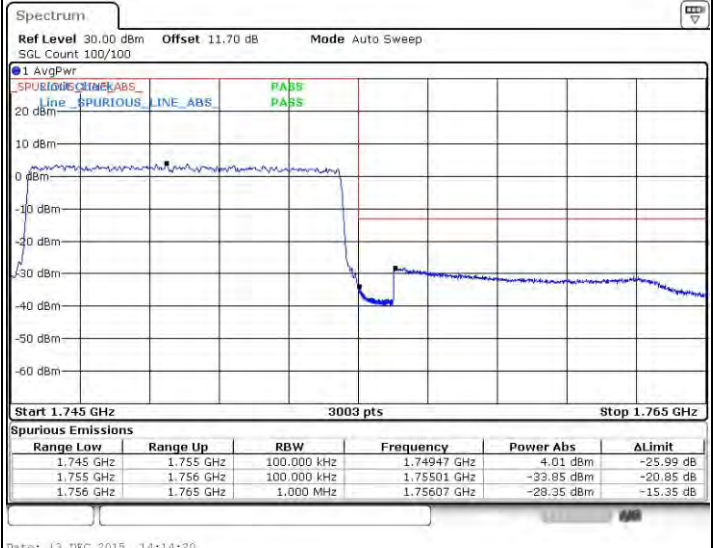
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



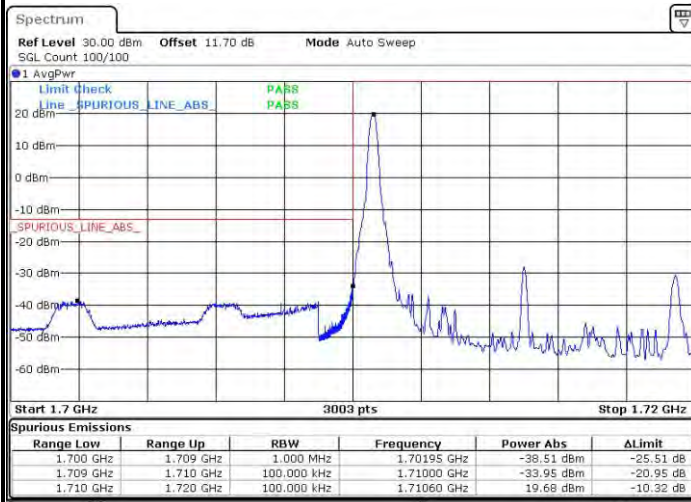
Highest Band Edge / Full RB



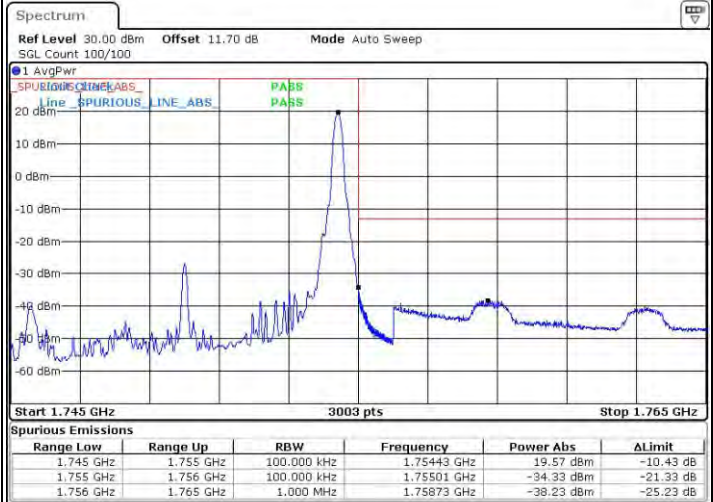


LTE Band 4 / 10MHz / 16QAM

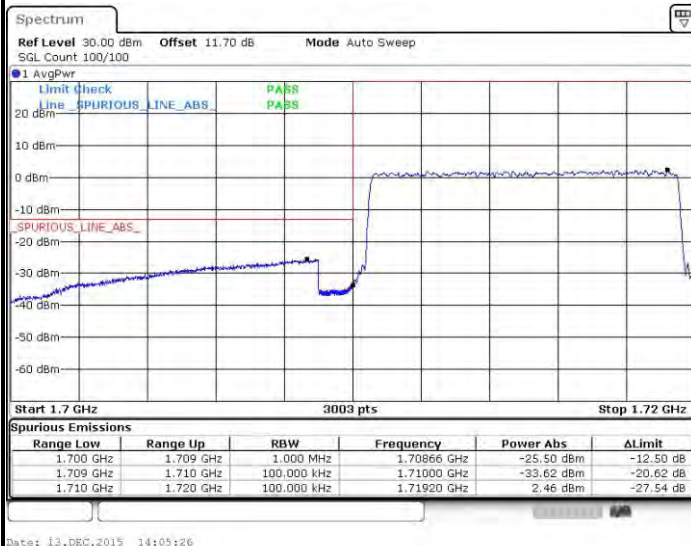
Lowest Band Edge / 1 RB



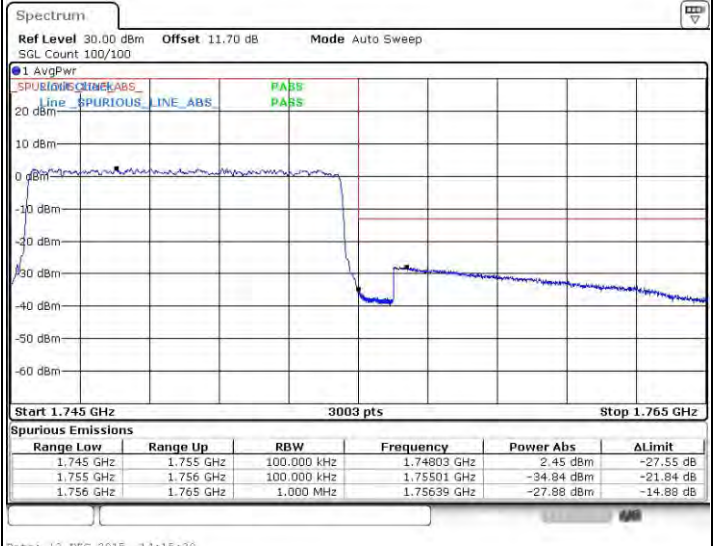
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



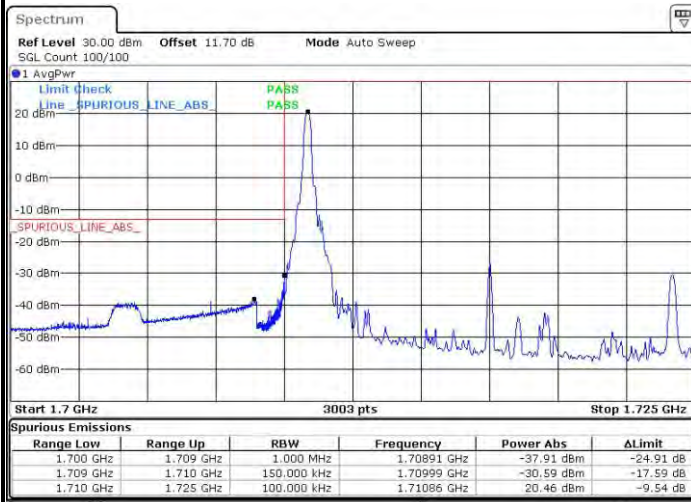
Highest Band Edge / Full RB



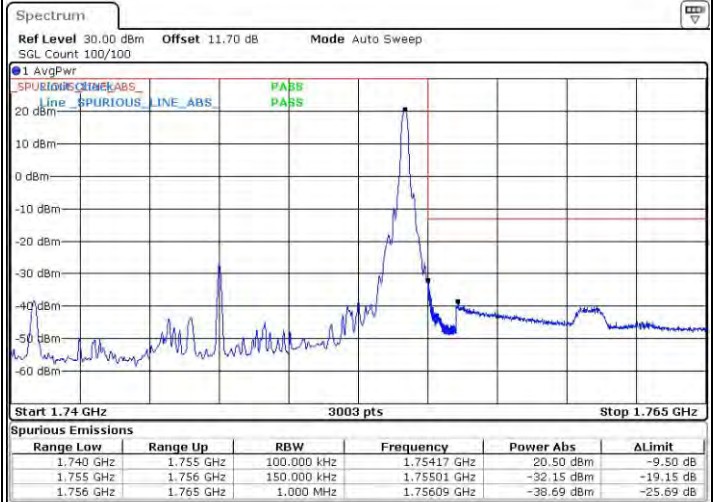


LTE Band 4 / 15MHz / QPSK

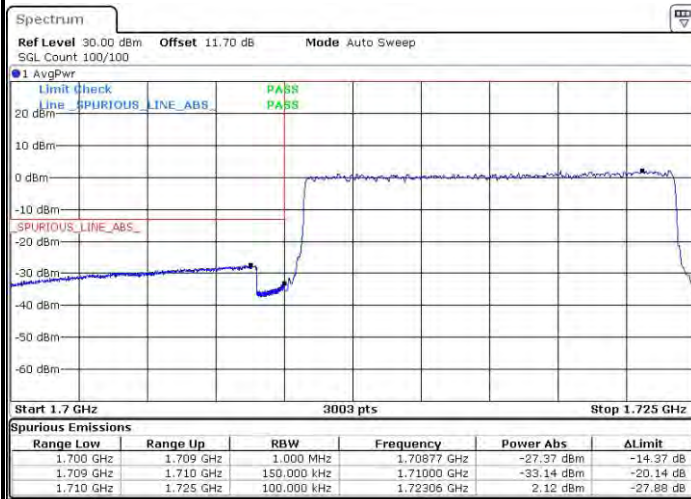
Lowest Band Edge / 1 RB



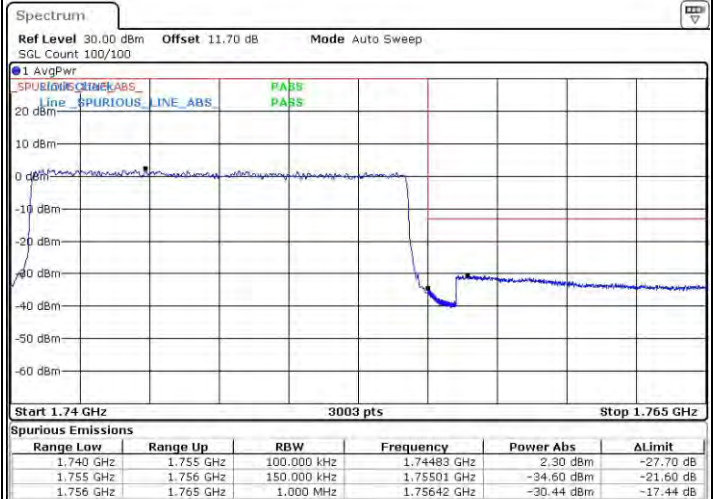
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



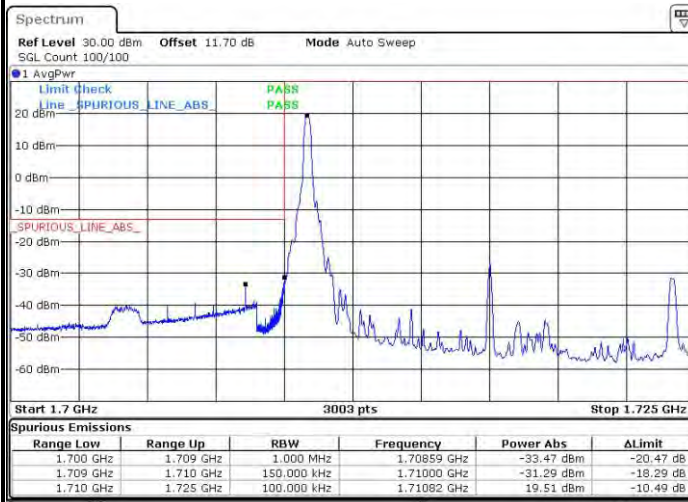
Highest Band Edge / Full RB





LTE Band 4 / 15MHz / 16QAM

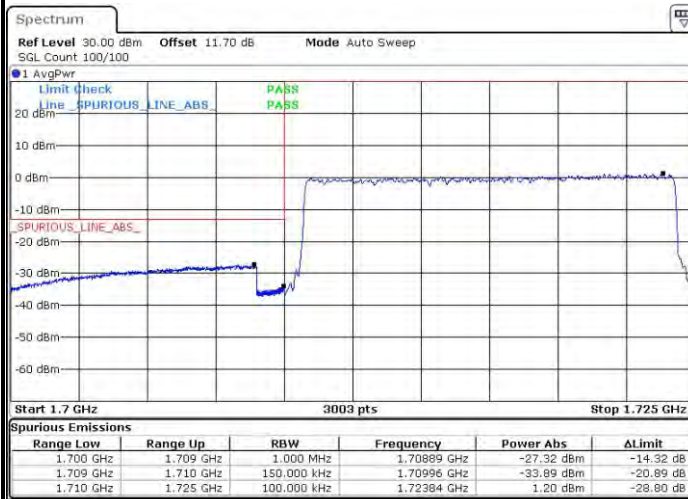
Lowest Band Edge / 1 RB



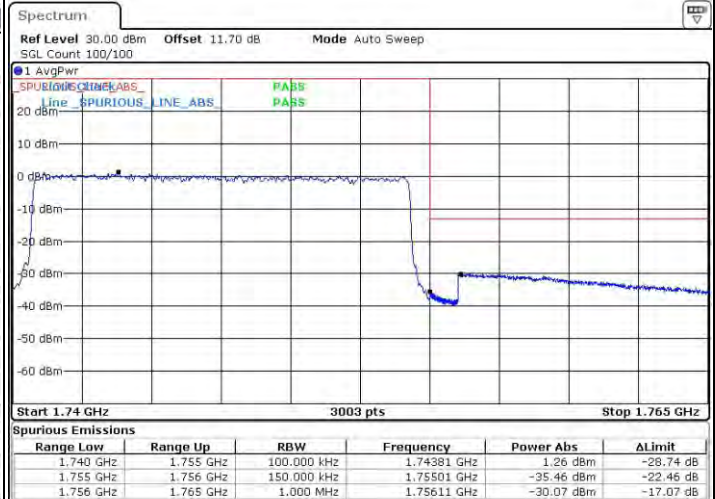
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



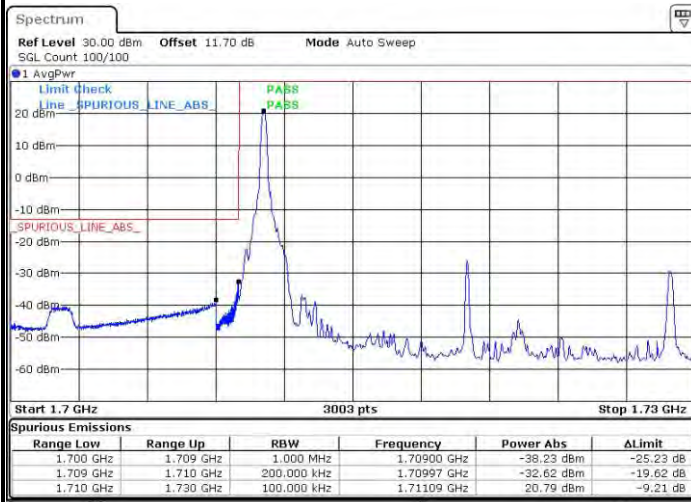
Highest Band Edge / Full RB



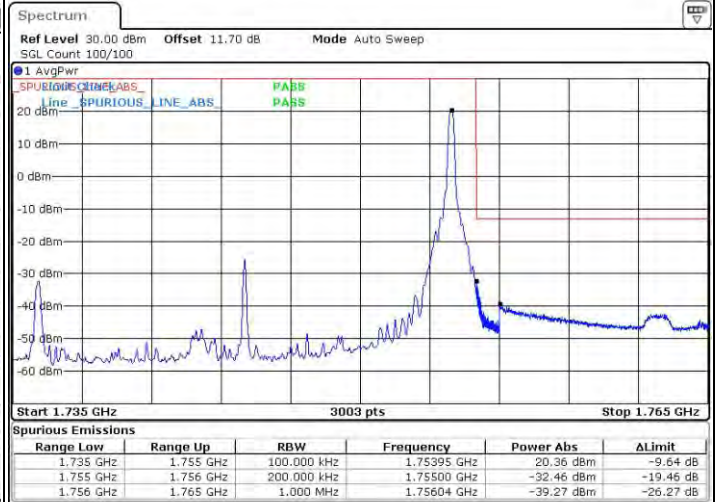


LTE Band 4 / 20MHz / QPSK

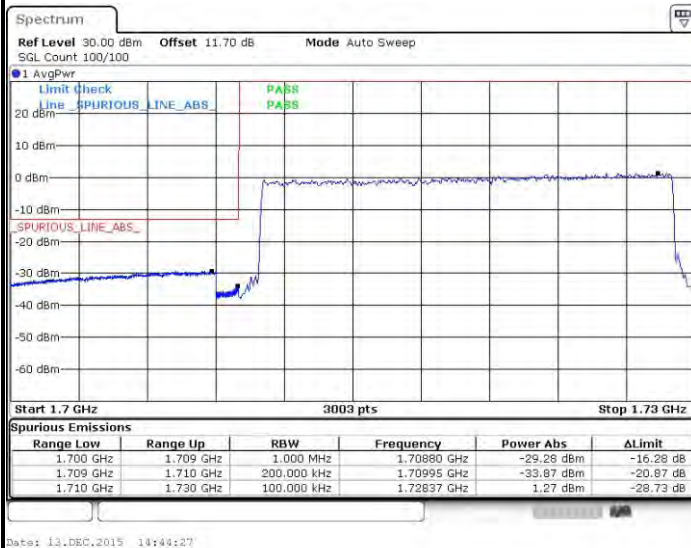
Lowest Band Edge / 1 RB



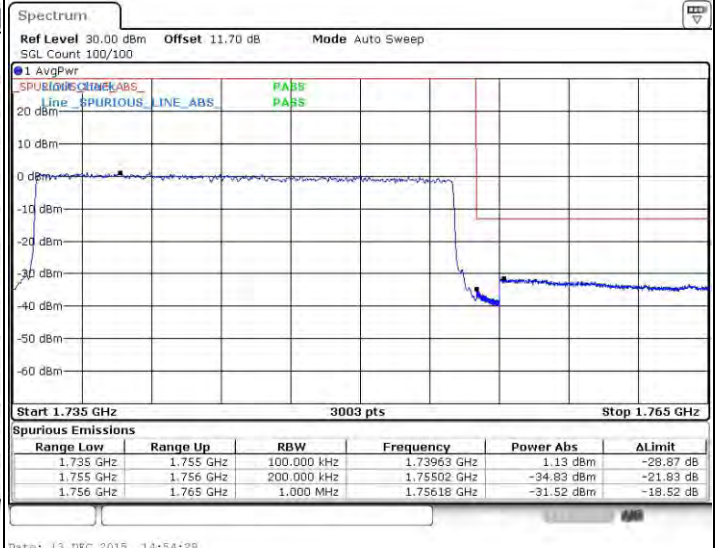
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



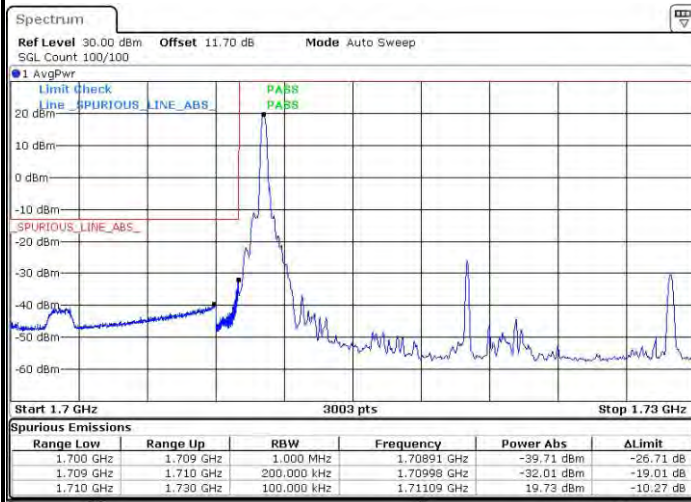
Highest Band Edge / Full RB



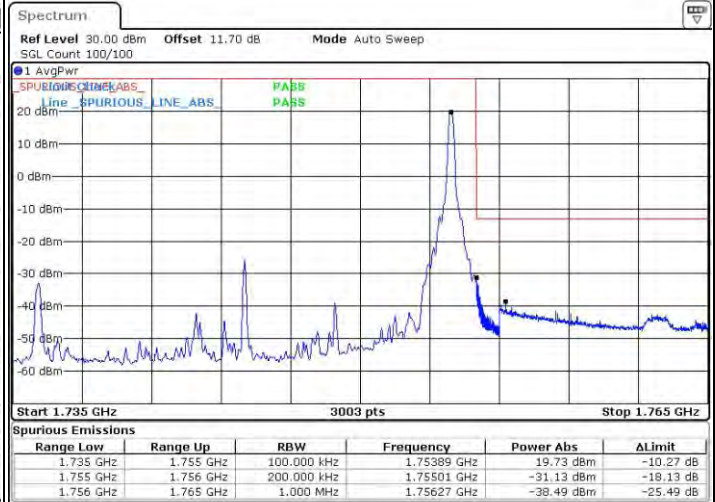


LTE Band 4 / 20MHz / 16QAM

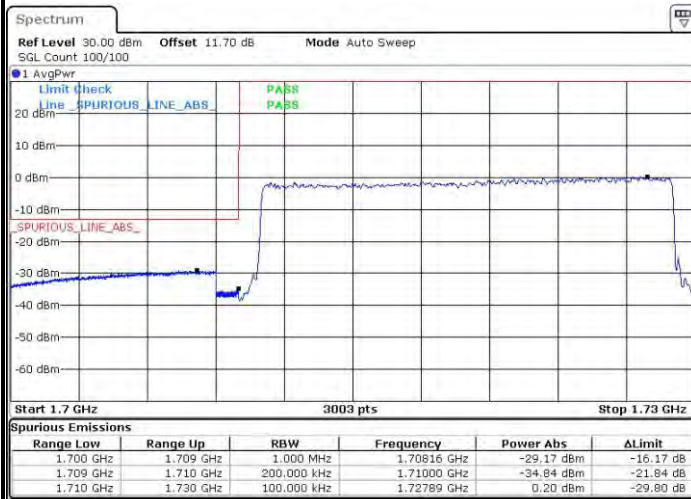
Lowest Band Edge / 1 RB



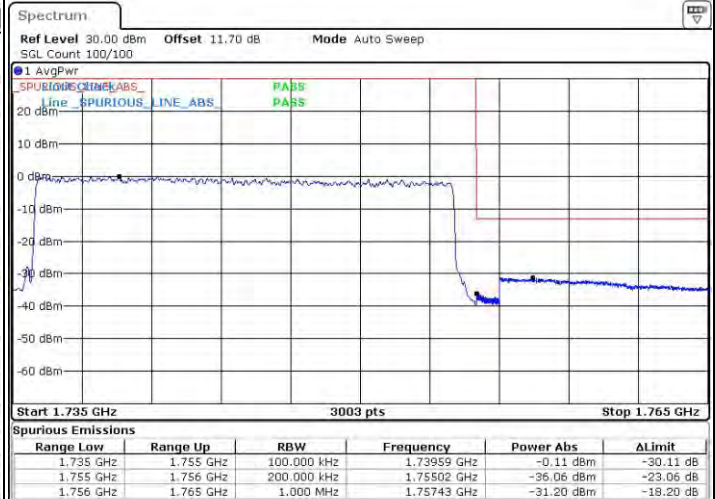
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



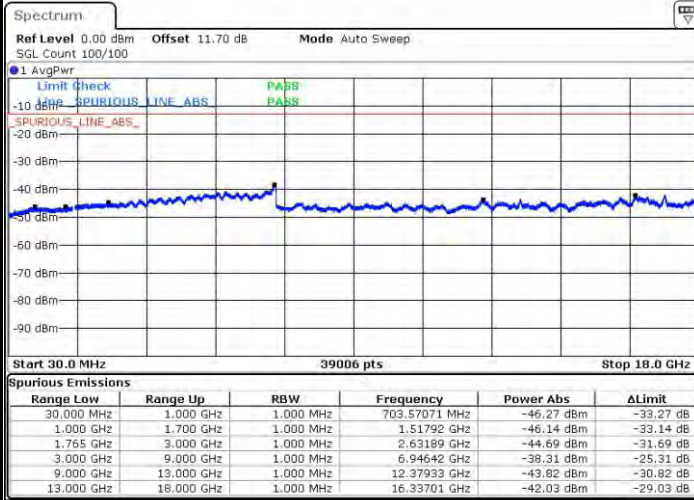


Conducted Spurious Emission



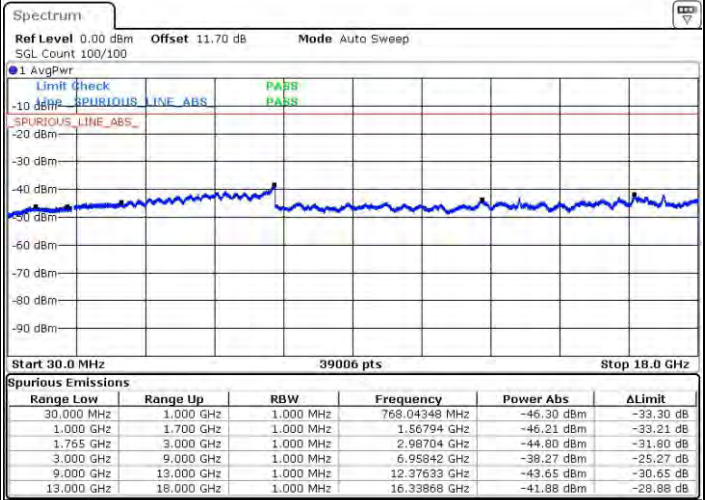
LTE Band 4 / 1.4MHz

Lowest Channel / QPSK



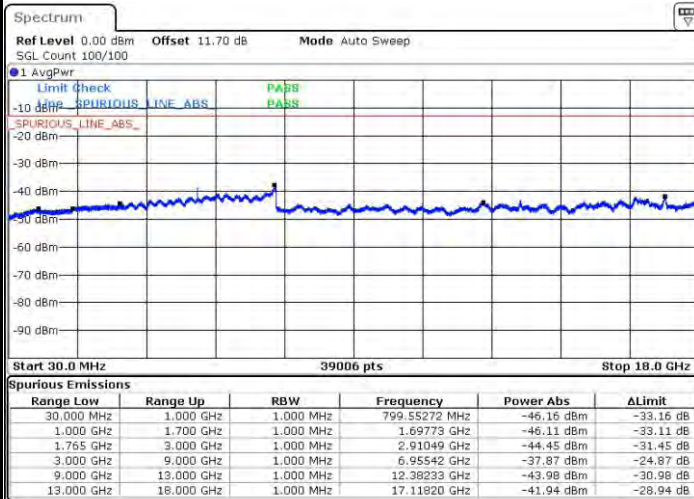
Date: 18.DEC.2015 15:19:08

Lowest Channel / 16QAM



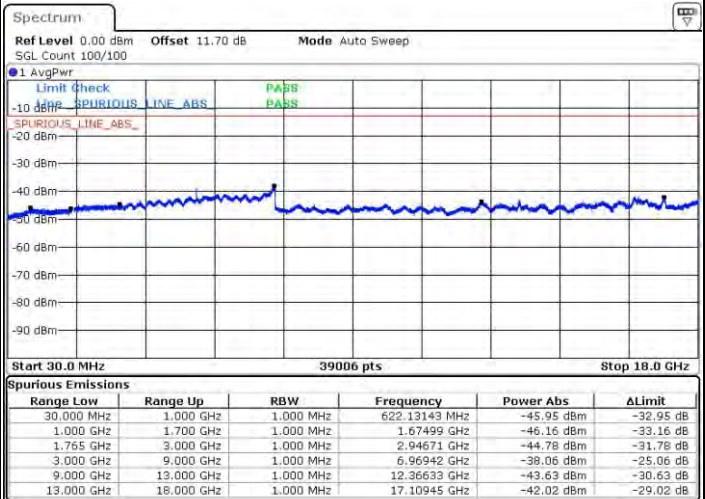
Date: 18.DEC.2015 15:20:06

Middle Channel / QPSK



Date: 18.DEC.2015 15:21:51

Middle Channel / 16QAM

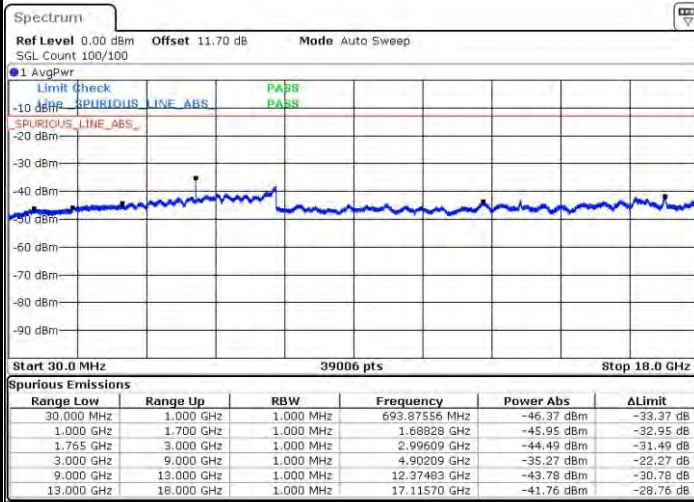


Date: 18.DEC.2015 15:22:49



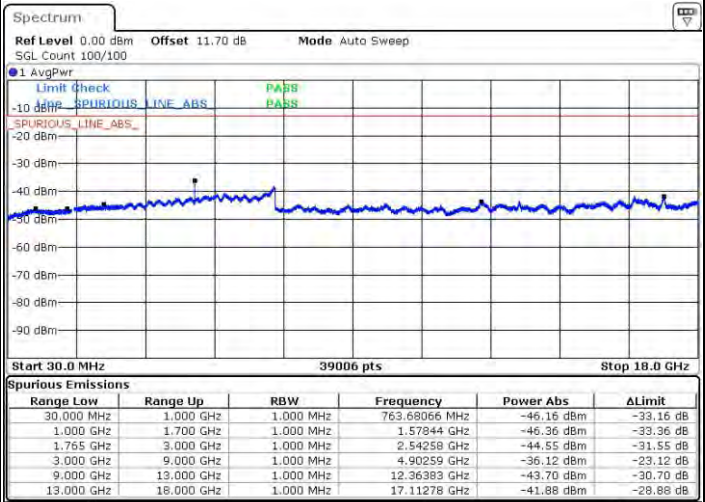
LTE Band 4 / 1.4MHz

Highest Channel / QPSK



Date: 18.DEC.2015 15:29:12

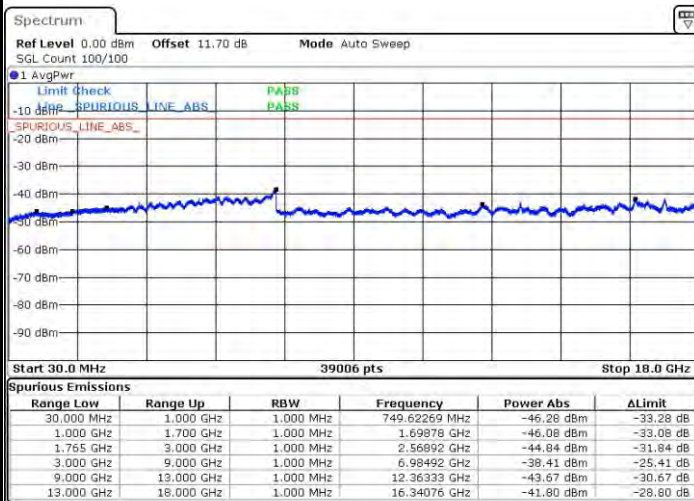
Highest Channel / 16QAM



Date: 18.DEC.2015 15:30:10

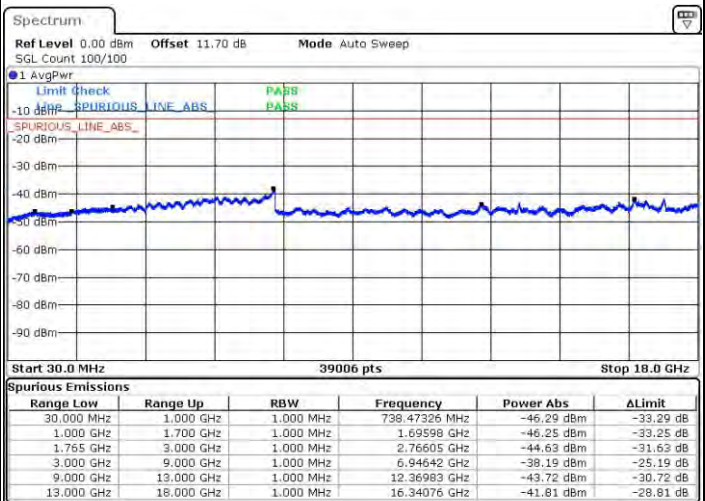
LTE Band 4 / 3MHz

Lowest Channel / QPSK



Date: 18.DEC.2015 13:31:32

Lowest Channel / 16QAM

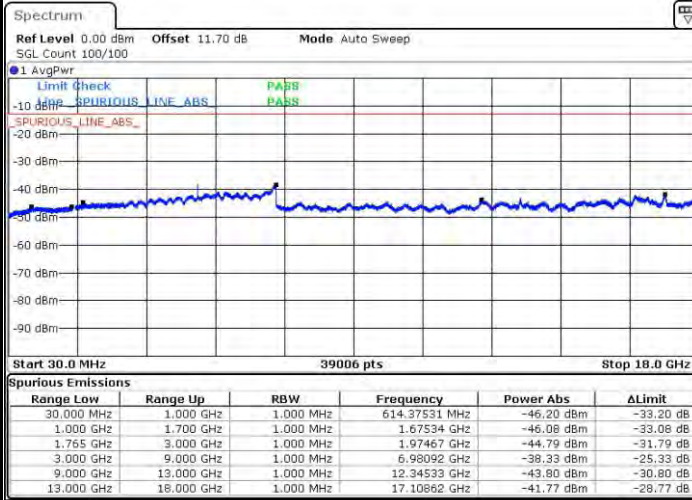


Date: 18.DEC.2015 13:32:31



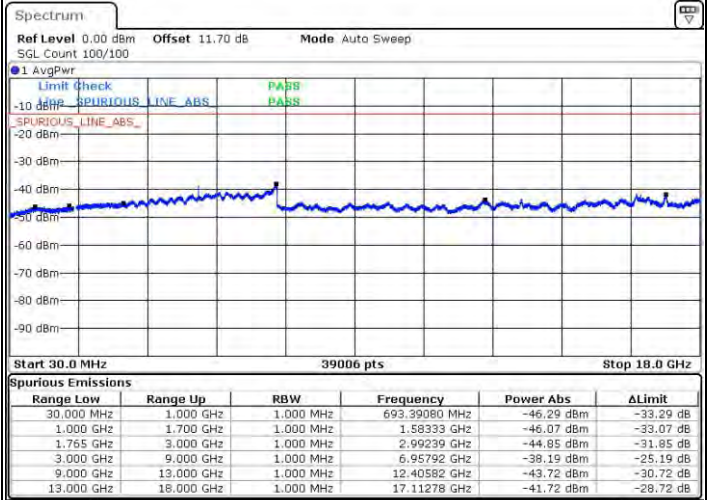
LTE Band 4 / 3MHz

Middle Channel / QPSK



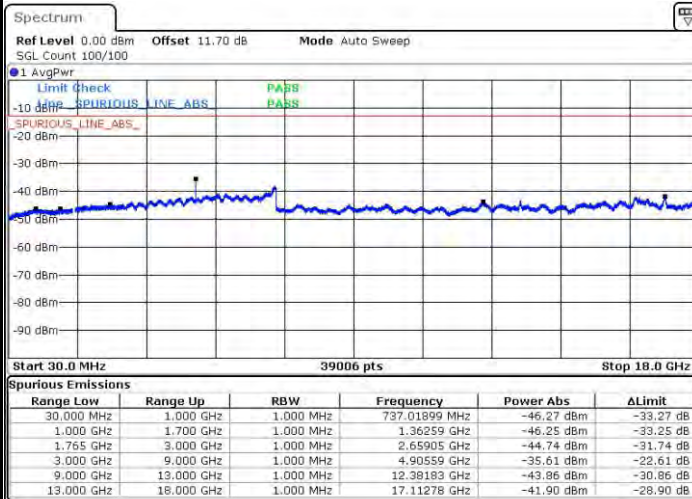
Date: 18.DEC.2015 13:34:16

Middle Channel / 16QAM



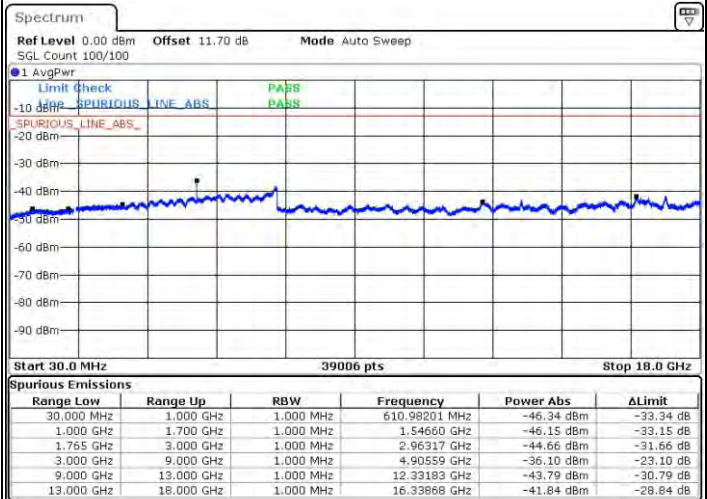
Date: 18.DEC.2015 13:35:14

Highest Channel / QPSK



Date: 18.DEC.2015 13:41:37

Highest Channel / 16QAM

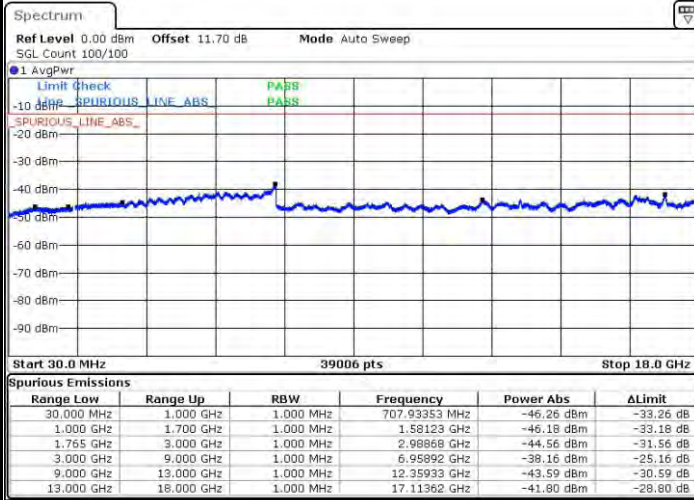


Date: 18.DEC.2015 13:42:35



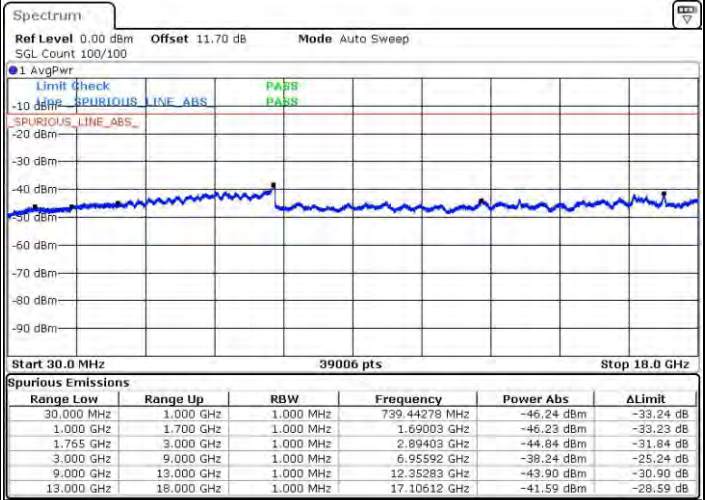
LTE Band 4 / 5MHz

Lowest Channel / QPSK



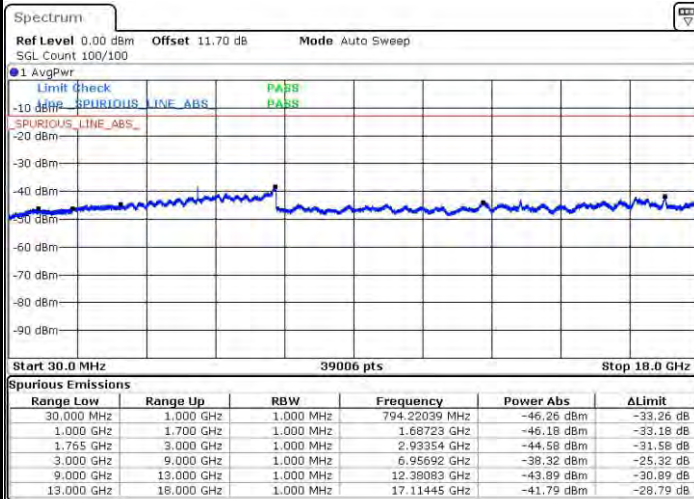
Date: 13.DEC.2015 13:48:58

Lowest Channel / 16QAM



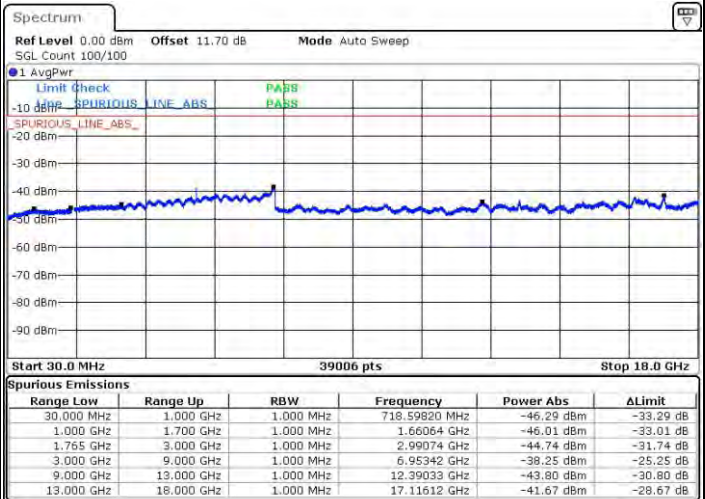
Date: 13.DEC.2015 13:49:56

Middle Channel / QPSK



Date: 13.DEC.2015 13:51:41

Middle Channel / 16QAM

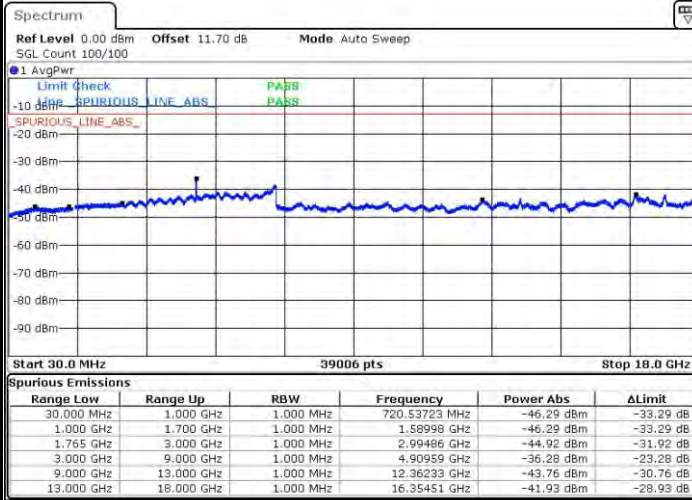


Date: 13.DEC.2015 13:52:39



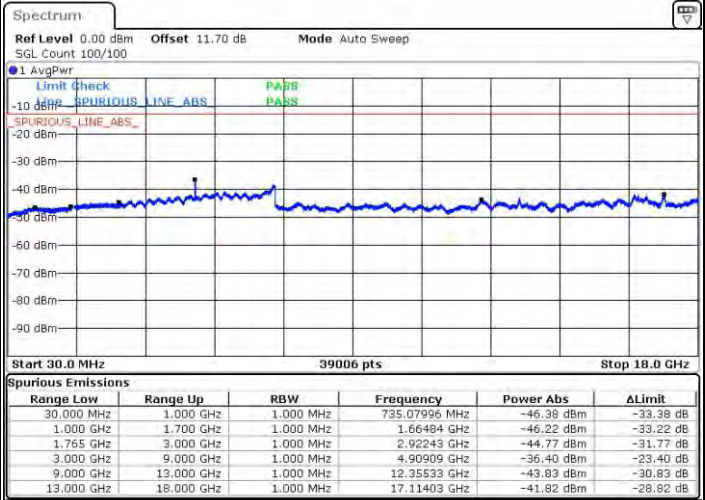
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 18.DEC.2015 13:59:02

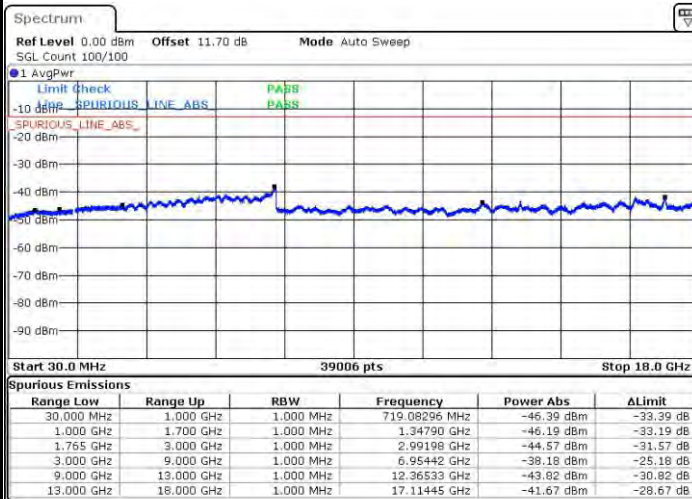
Highest Channel / 16QAM



Date: 18.DEC.2015 14:00:01

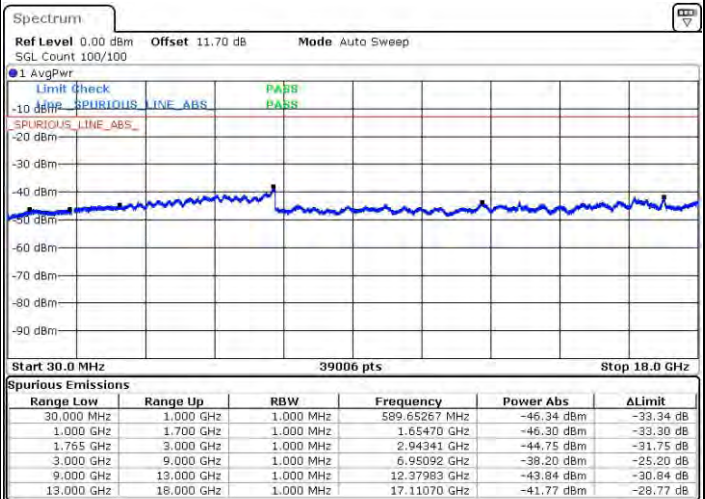
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 18.DEC.2015 14:06:23

Lowest Channel / 16QAM

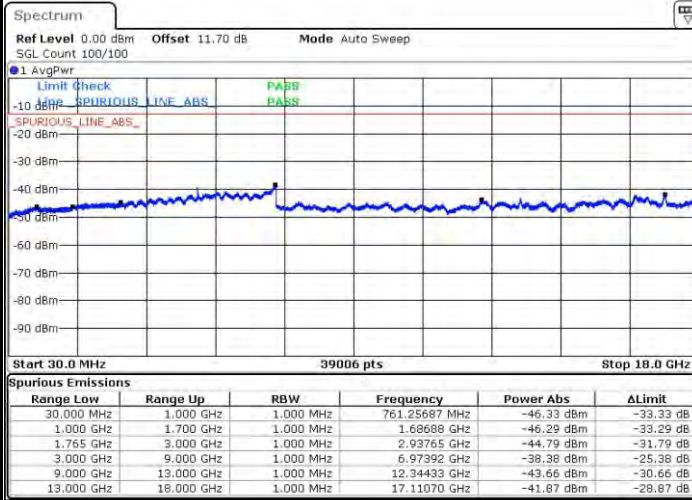


Date: 18.DEC.2015 14:07:21



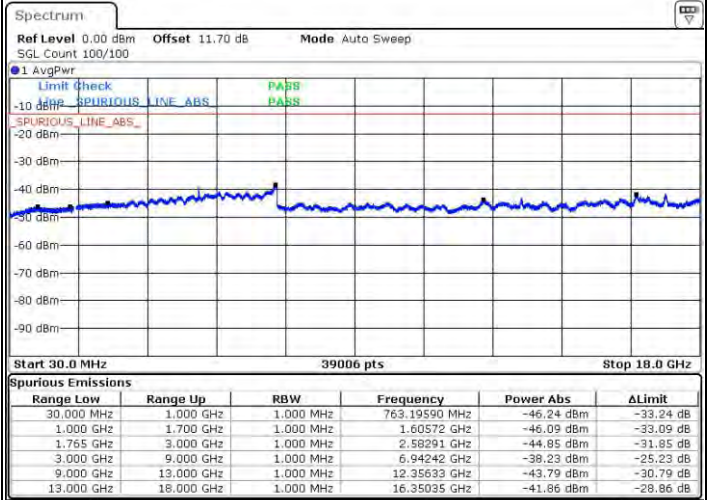
LTE Band 4 / 10MHz

Middle Channel / QPSK



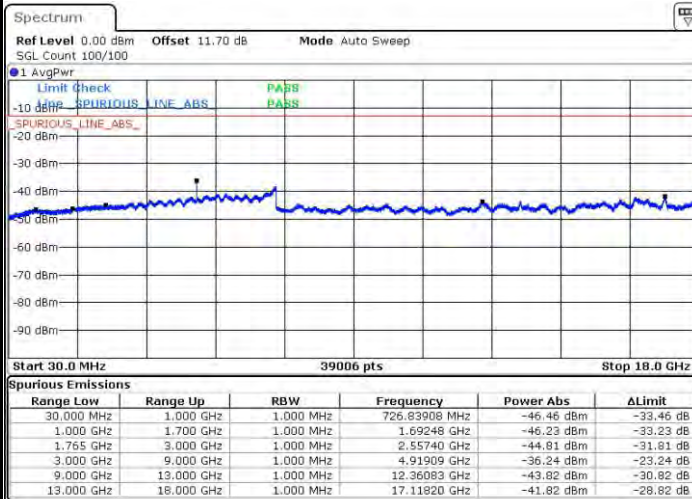
Date: 13.DEC.2015 14:09:06

Middle Channel / 16QAM



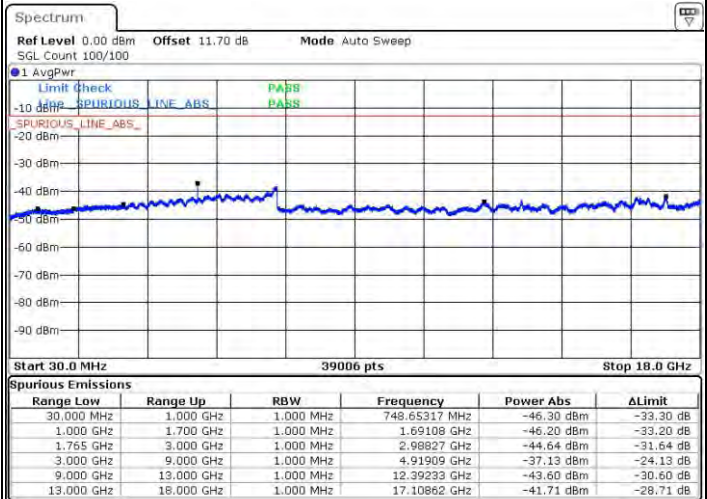
Date: 13.DEC.2015 14:10:04

Highest Channel / QPSK



Date: 13.DEC.2015 14:16:27

Highest Channel / 16QAM

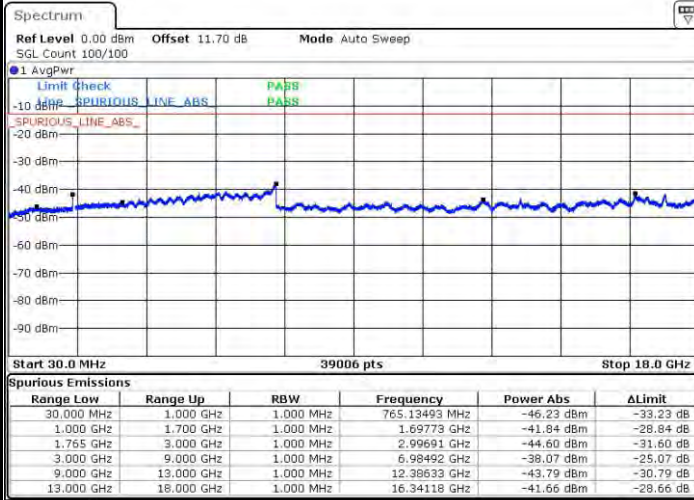


Date: 13.DEC.2015 14:17:25



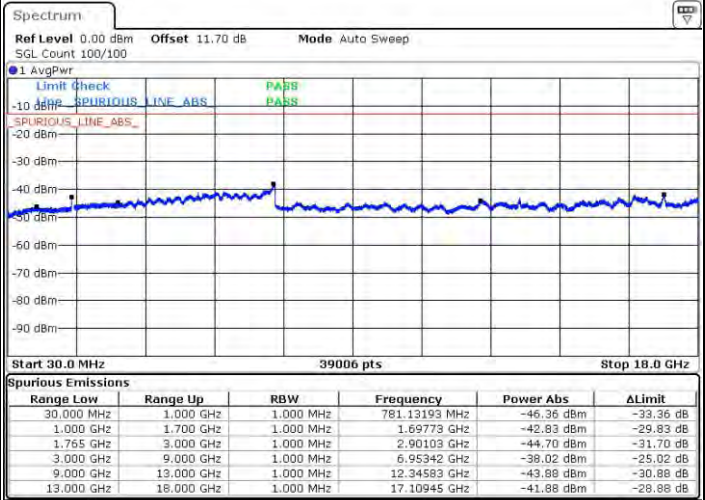
LTE Band 4 / 15MHz

Lowest Channel / QPSK



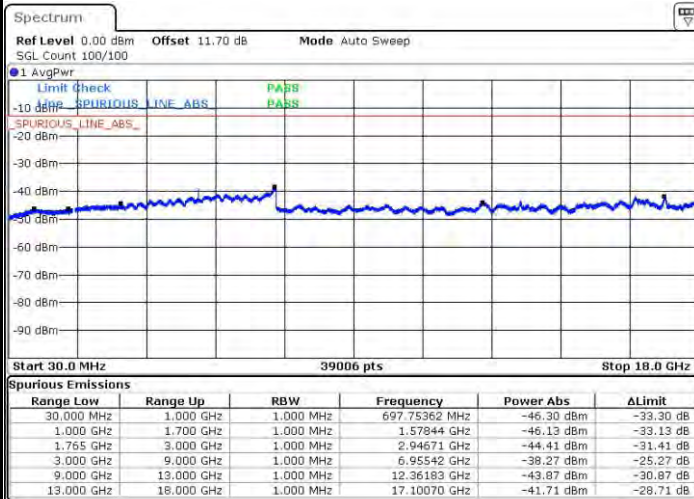
Date: 18.DEC.2015 14:29:11

Lowest Channel / 16QAM



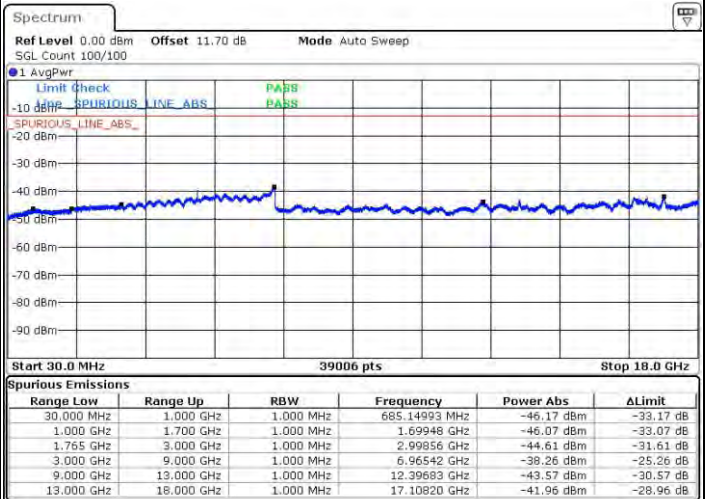
Date: 18.DEC.2015 14:30:09

Middle Channel / QPSK



Date: 18.DEC.2015 14:31:54

Middle Channel / 16QAM

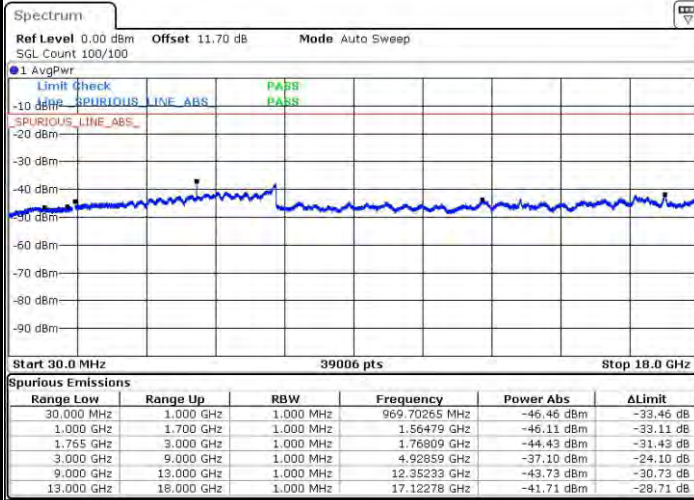


Date: 18.DEC.2015 14:32:52



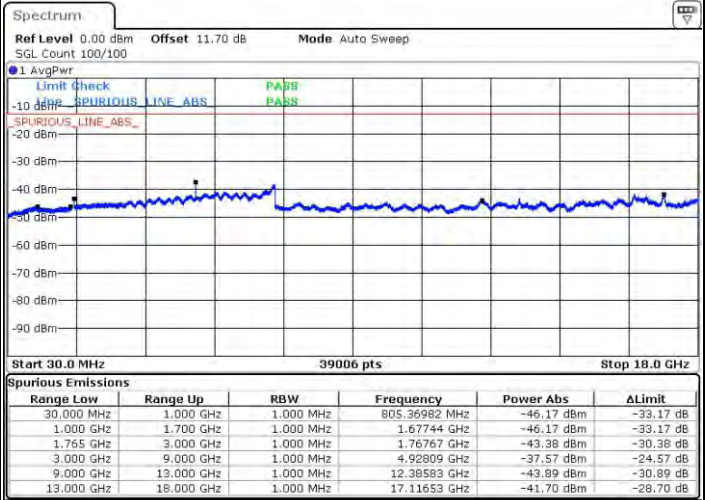
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 18.DEC.2015 14:39:14

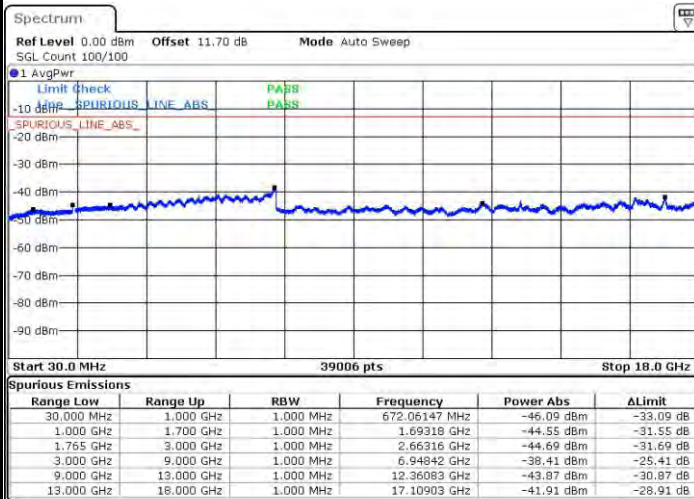
Highest Channel / 16QAM



Date: 18.DEC.2015 14:40:11

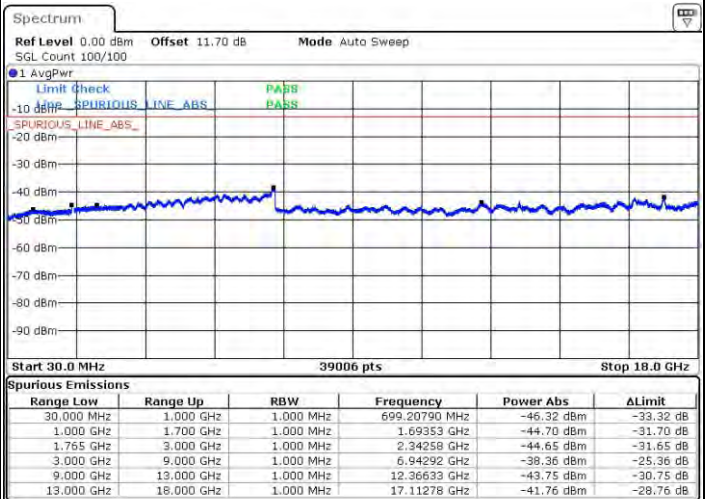
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 18.DEC.2015 14:46:38

Lowest Channel / 16QAM

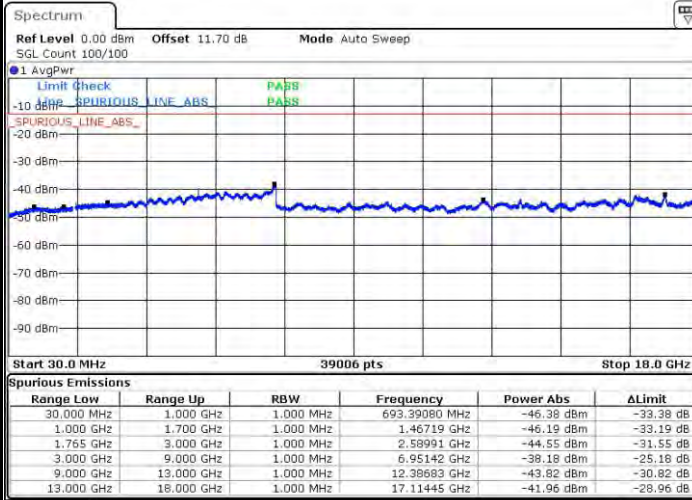


Date: 18.DEC.2015 14:47:31



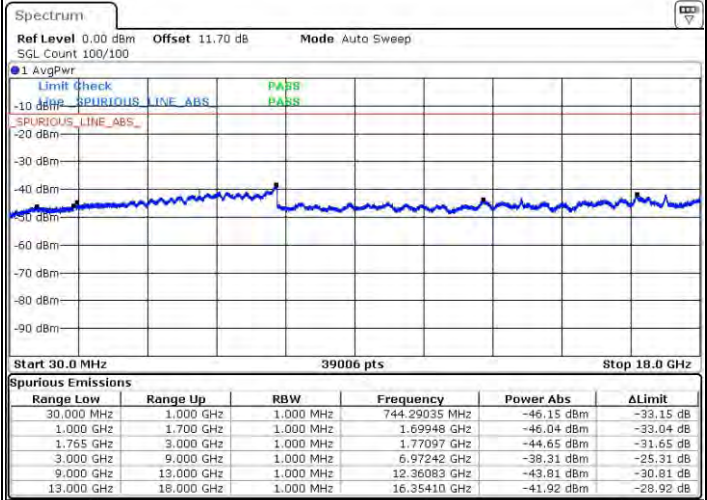
LTE Band 4 / 20MHz

Middle Channel / QPSK



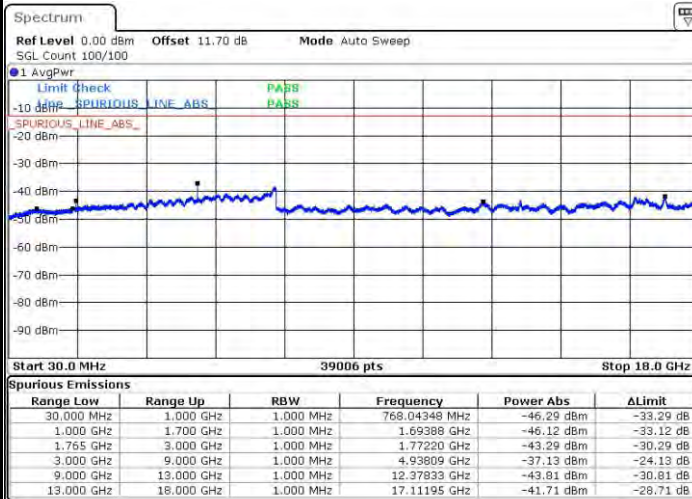
Date: 13.DEC.2015 14:49:16

Middle Channel / 16QAM



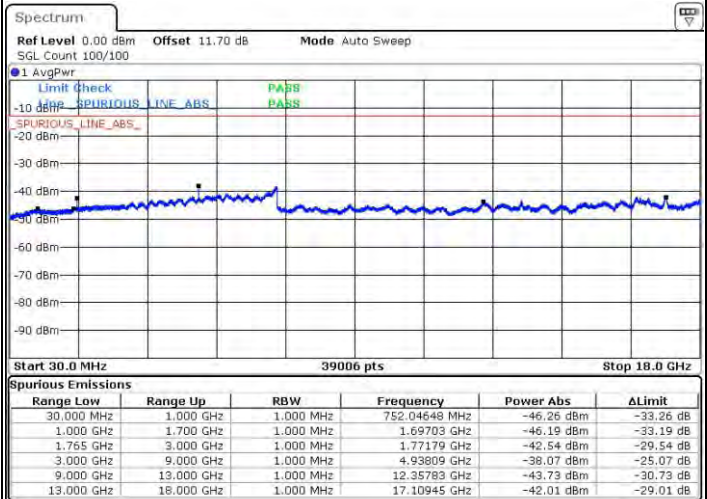
Date: 13.DEC.2015 14:50:14

Highest Channel / QPSK



Date: 13.DEC.2015 14:56:36

Highest Channel / 16QAM



Date: 13.DEC.2015 14:57:34

Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0002	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0015	
-20	Normal Voltage	0.0006	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block.