



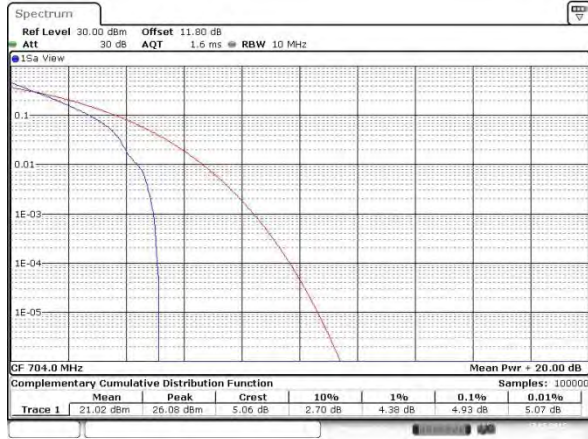
LTE Band 12

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	4.93	5.54	5.65	6.64	PASS
Middle CH	5.39	5.54	6.29	6.46	
Highest CH	4.38	5.68	5.48	6.49	

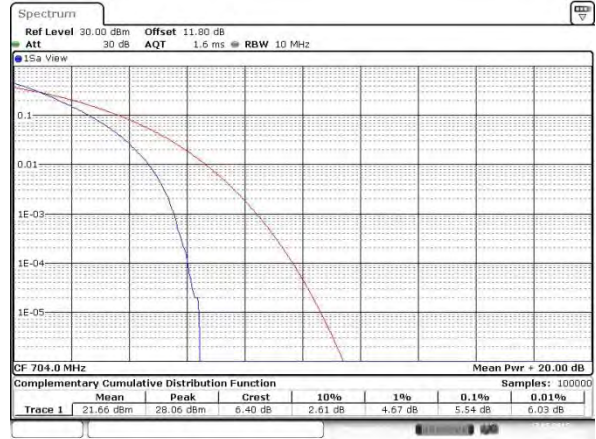
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



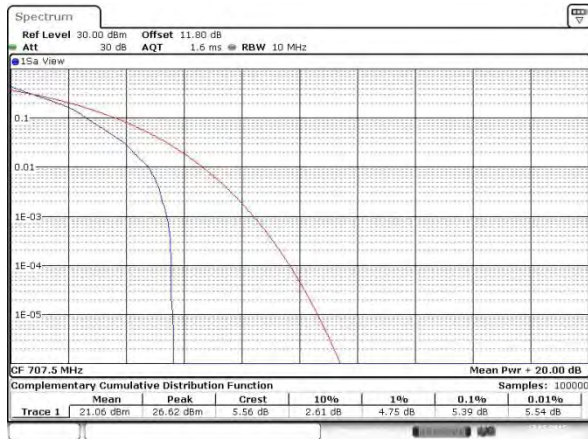
Date: 17 MAY 2015 01:43:45

Lowest Channel / Full RB



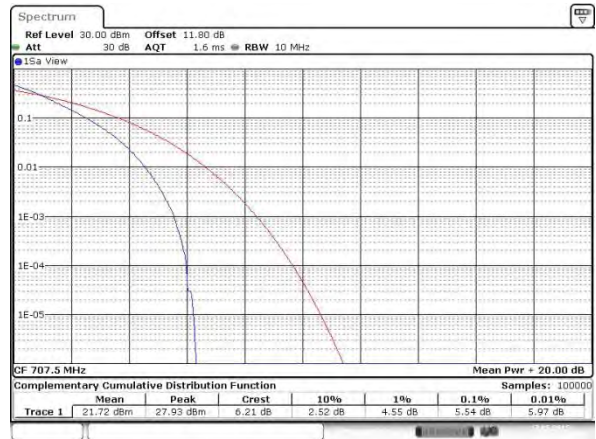
Date: 17 MAY 2015 01:43:03

Middle Channel / 1RB



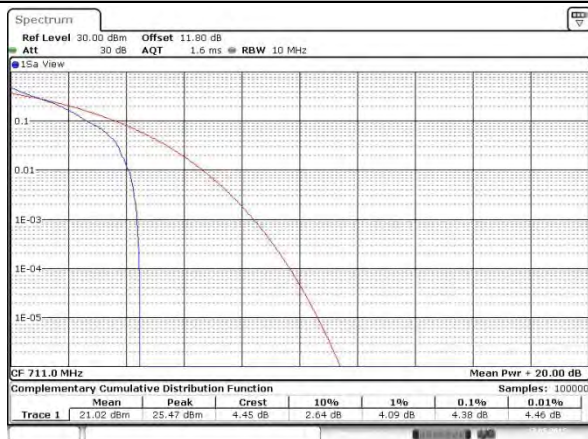
Date: 17 MAY 2015 01:44:44

Middle Channel / Full RB



Date: 17 MAY 2015 01:44:56

Highest Channel / 1RB



Date: 17 MAY 2015 01:45:19

Highest Channel / Full RB



Date: 17 MAY 2015 01:45:08

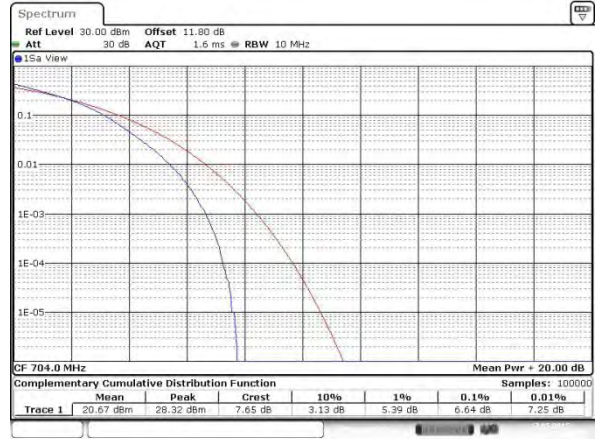
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



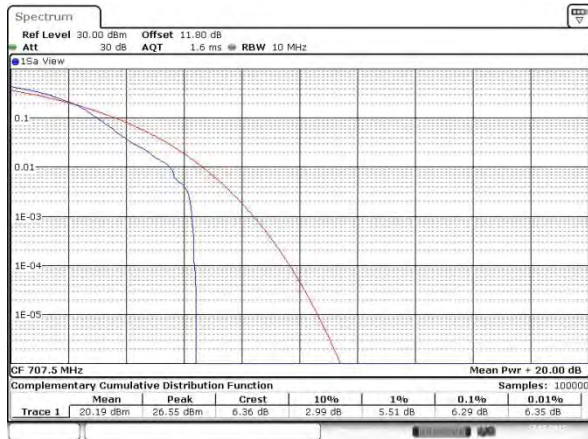
Date: 17 MAY 2015 01:41:52

Lowest Channel / Full RB



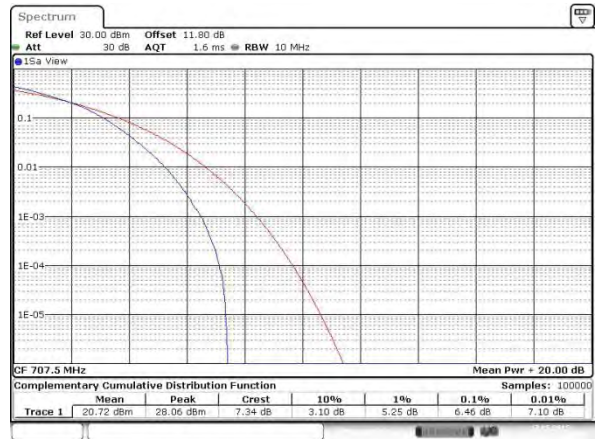
Date: 17 MAY 2015 01:41:41

Middle Channel / 1RB



Date: 17 MAY 2015 01:42:03

Middle Channel / Full RB



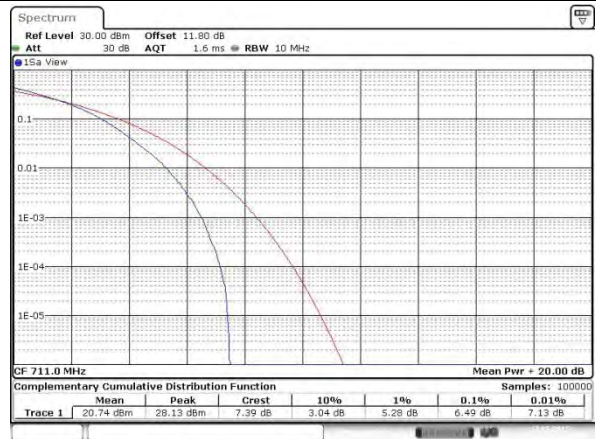
Date: 17 MAY 2015 01:42:14

Highest Channel / 1RB



Date: 17 MAY 2015 01:42:38

Highest Channel / Full RB



Date: 17 MAY 2015 01:42:27



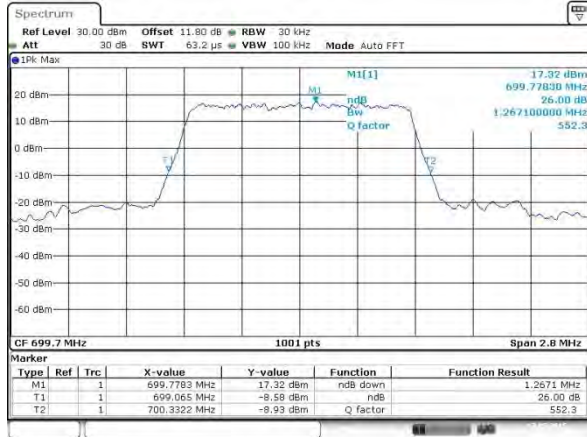
26dB Bandwidth

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	1.27	1.27	3.03	3.03	5.06	5.06	9.95	9.97	-	-	-	-
Middle CH	1.26	1.27	3.03	3.03	5.06	5.09	9.99	9.97	-	-	-	-
Highest CH	1.27	1.27	3.03	3.03	5.08	5.05	9.97	9.97	-	-	-	-



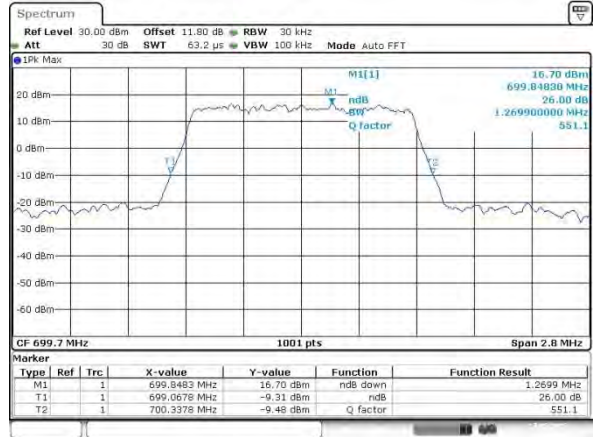
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



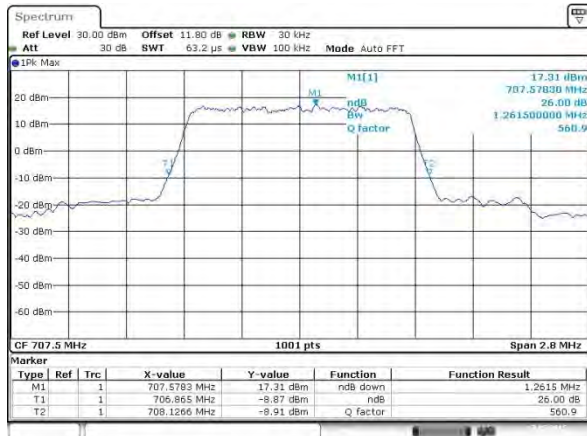
Date: 17 MAY 2015 01:21:03

Lowest Channel / 1.4MHz / 16QAM



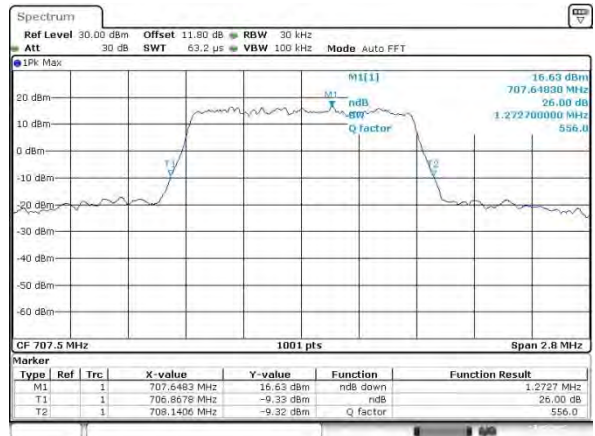
Date: 17 MAY 2015 01:20:50

Middle Channel / 1.4MHz / QPSK



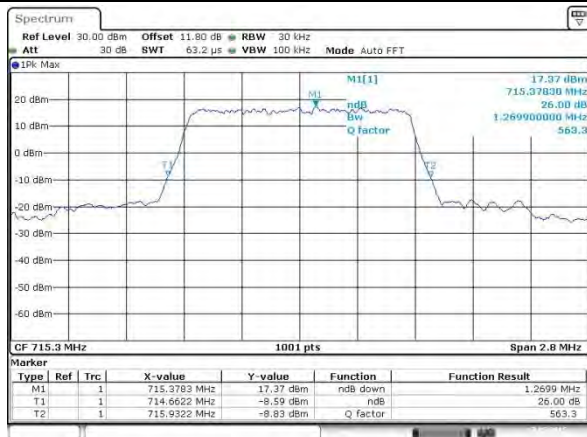
Date: 17 MAY 2015 01:28:36

Middle Channel / 1.4MHz / 16QAM



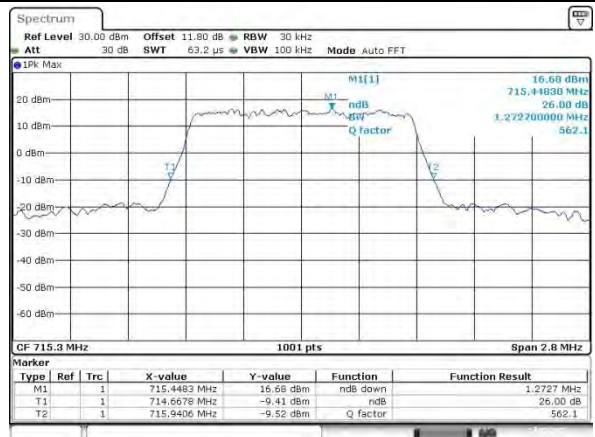
Date: 17 MAY 2015 01:28:49

Highest Channel / 1.4MHz / QPSK



Date: 17 MAY 2015 01:31:55

Highest Channel / 1.4MHz / 16QAM

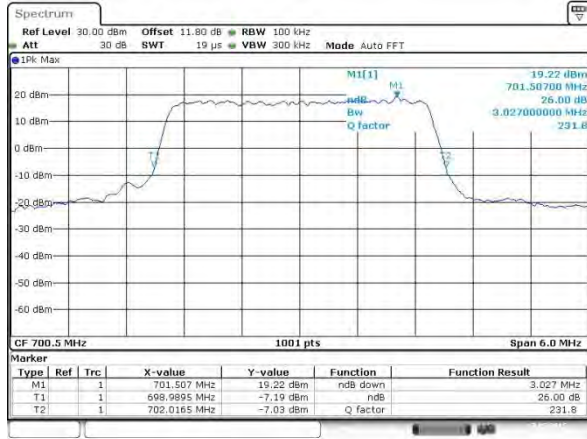


Date: 17 MAY 2015 01:31:43

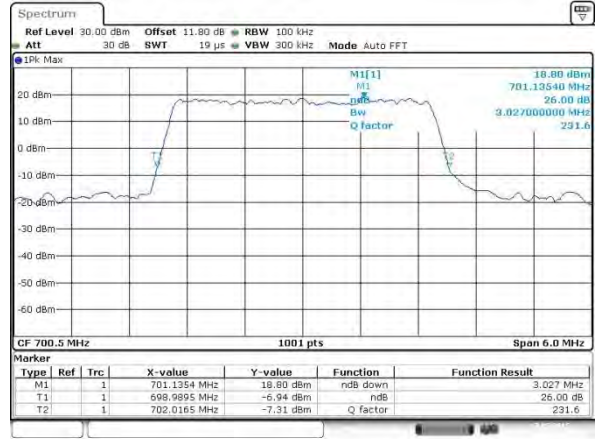


LTE Band 12

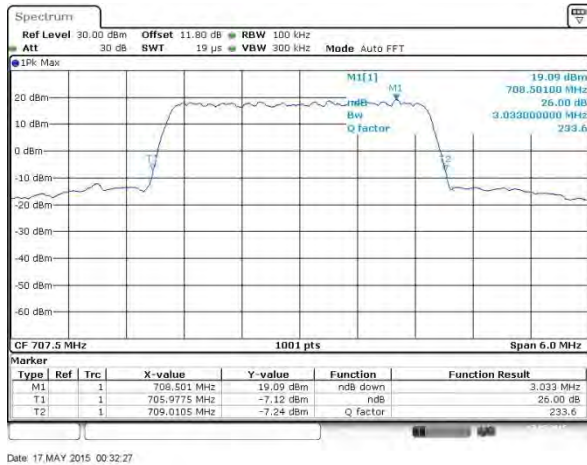
Lowest Channel / 3MHz / QPSK



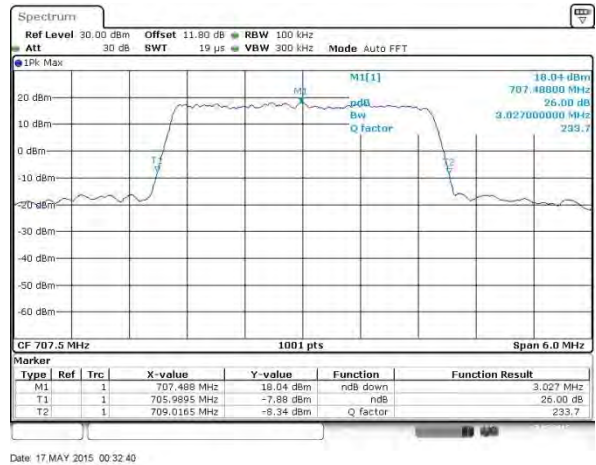
Lowest Channel / 3MHz / 16QAM



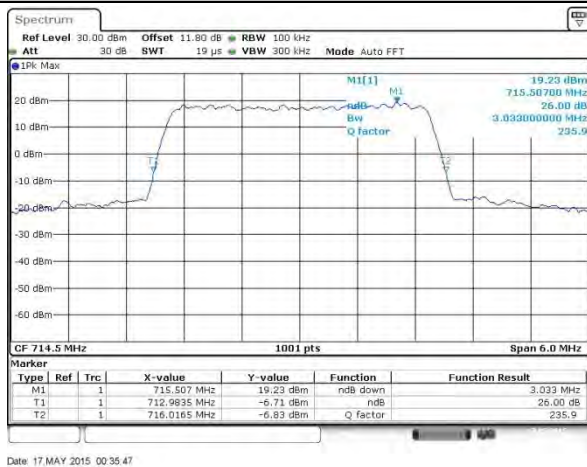
Middle Channel / 3MHz / QPSK



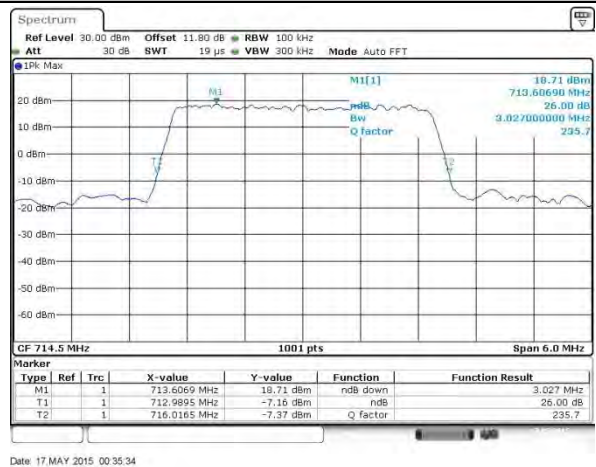
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



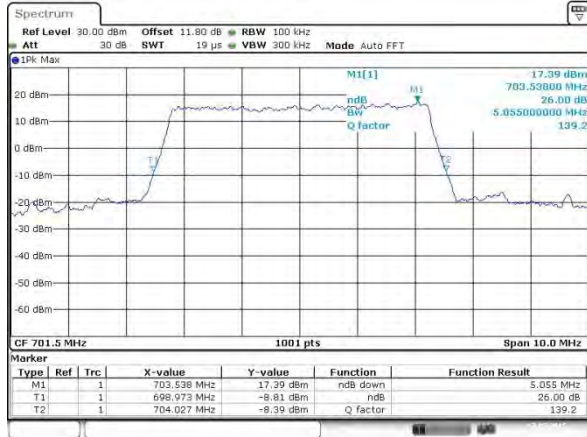
Highest Channel / 3MHz / 16QAM



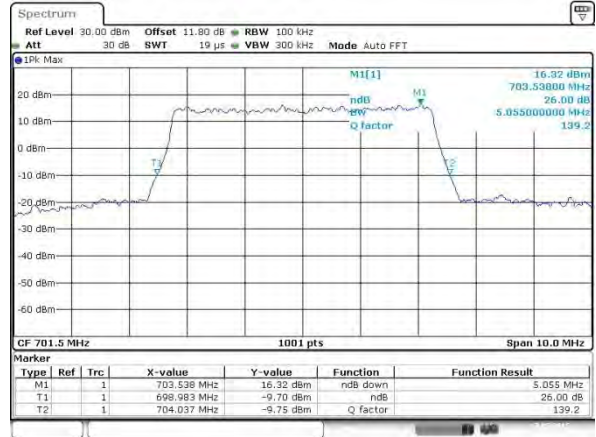


LTE Band 12

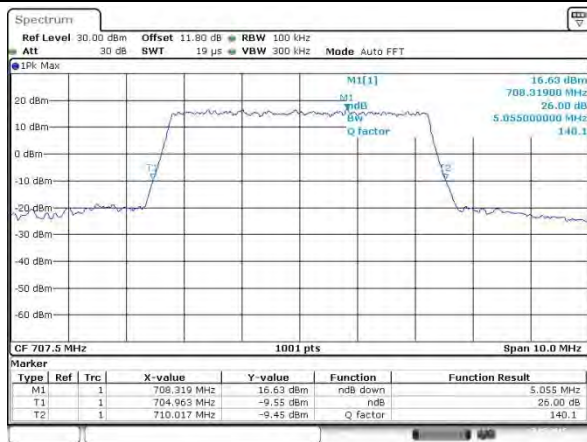
Lowest Channel / 5MHz / QPSK



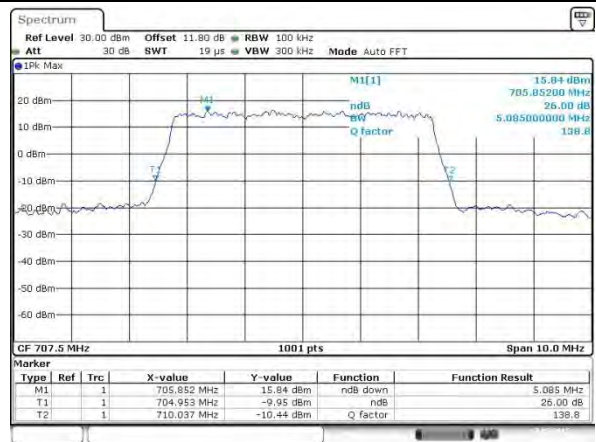
Lowest Channel / 5MHz / 16QAM



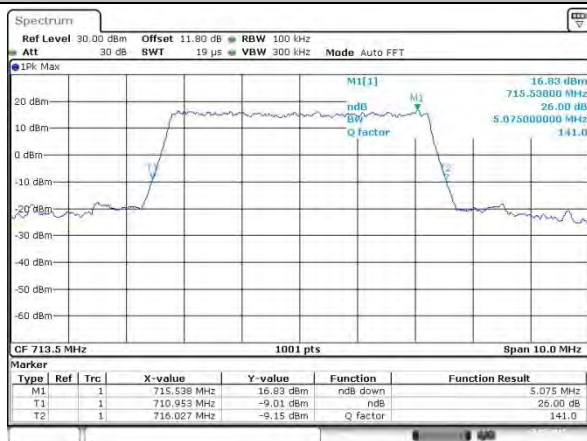
Middle Channel / 5MHz / QPSK



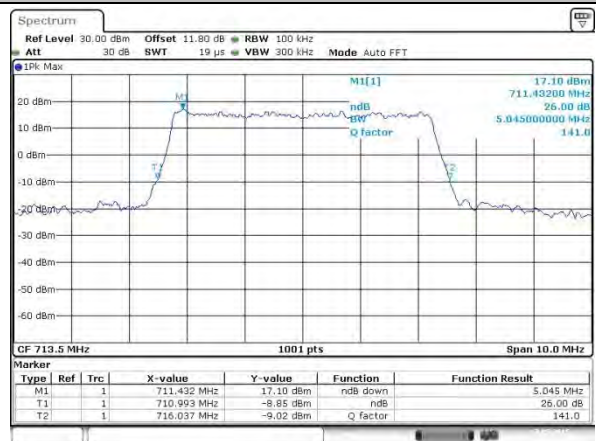
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



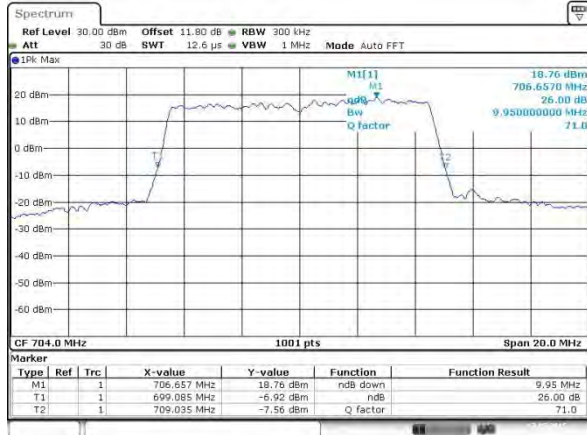
Highest Channel / 5MHz / 16QAM



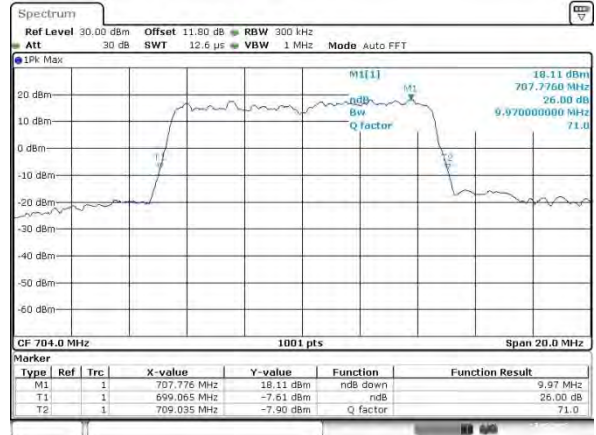


LTE Band 12

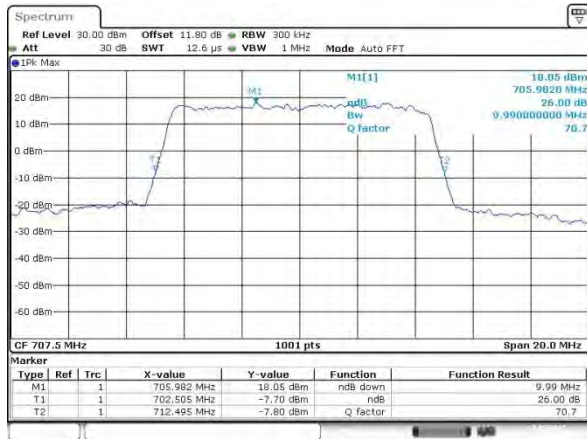
Lowest Channel / 10MHz / QPSK



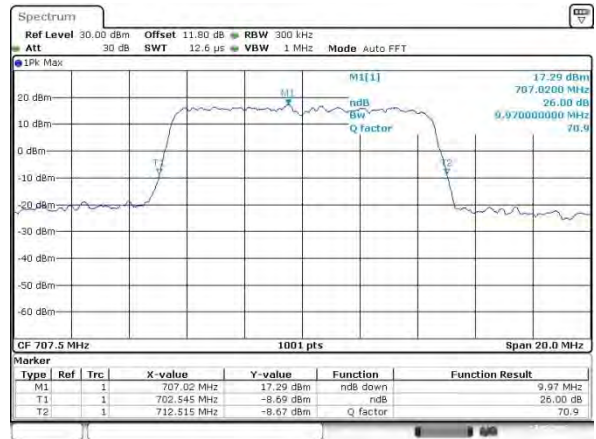
Lowest Channel / 10MHz / 16QAM



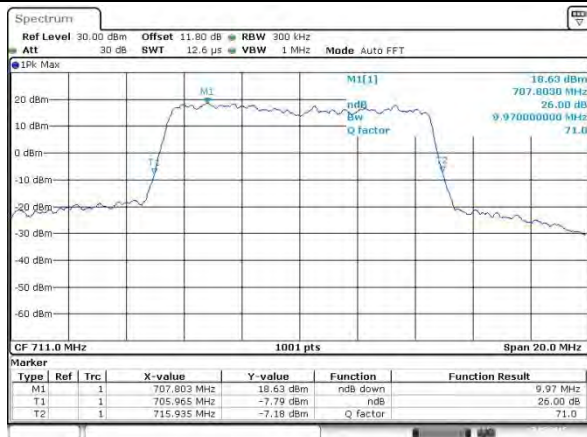
Middle Channel / 10MHz / QPSK



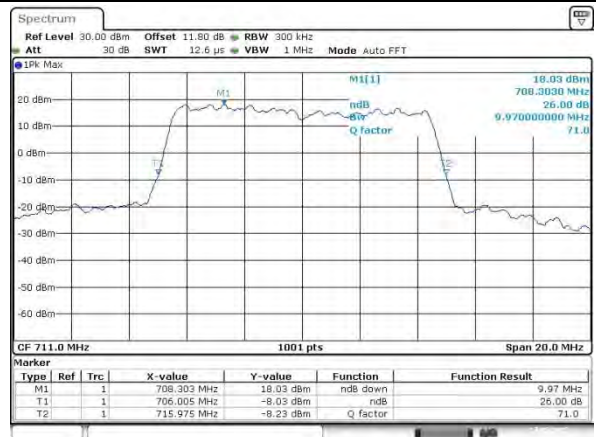
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM





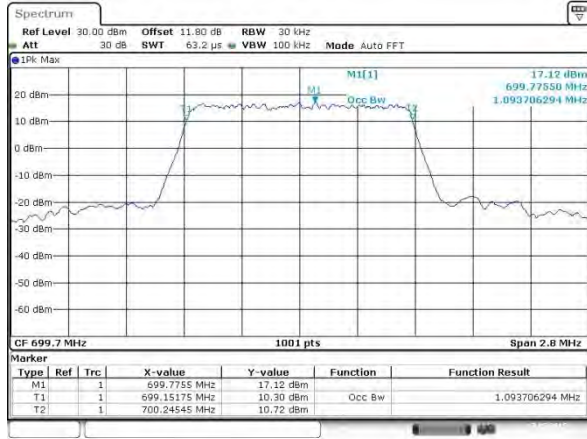
Occupied Bandwidth

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	2.72	2.73	4.51	4.51	9.07	9.01	-	-	-	-
Middle CH	1.09	1.1	2.72	2.72	4.5	4.5	9.05	8.99	-	-	-	-
Highest CH	1.09	1.1	2.71	2.72	4.52	4.51	9.05	9.03	-	-	-	-



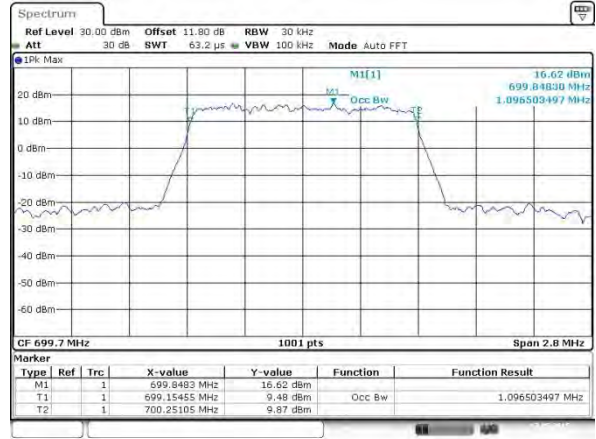
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



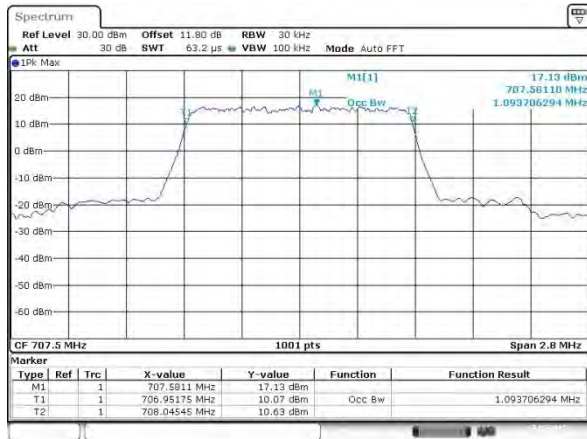
Date: 17 MAY 2015 01:20:27

Lowest Channel / 1.4MHz / 16QAM



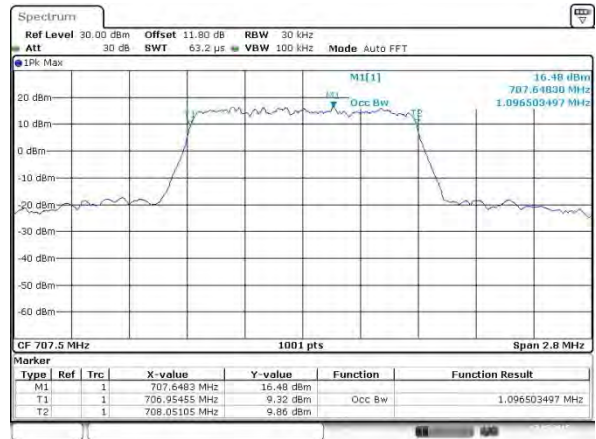
Date: 17 MAY 2015 01:20:38

Middle Channel / 1.4MHz / QPSK



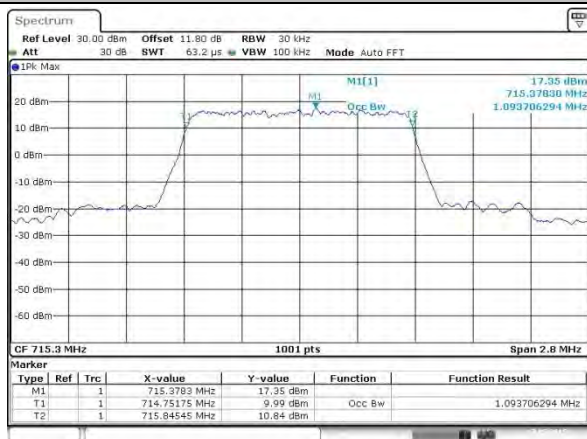
Date: 17 MAY 2015 01:28:23

Middle Channel / 1.4MHz / 16QAM



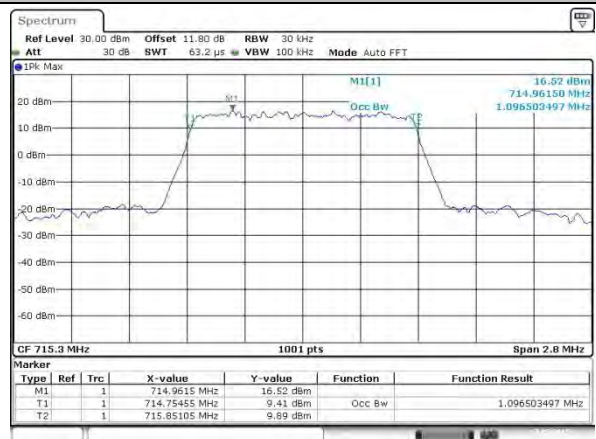
Date: 17 MAY 2015 01:28:13

Highest Channel / 1.4MHz / QPSK



Date: 17 MAY 2015 01:31:19

Highest Channel / 1.4MHz / 16QAM

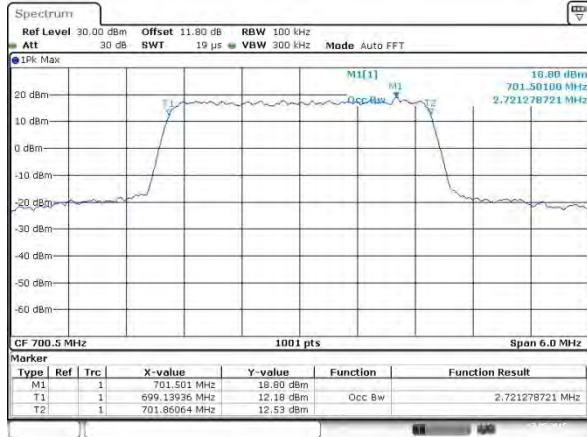


Date: 17 MAY 2015 01:31:30

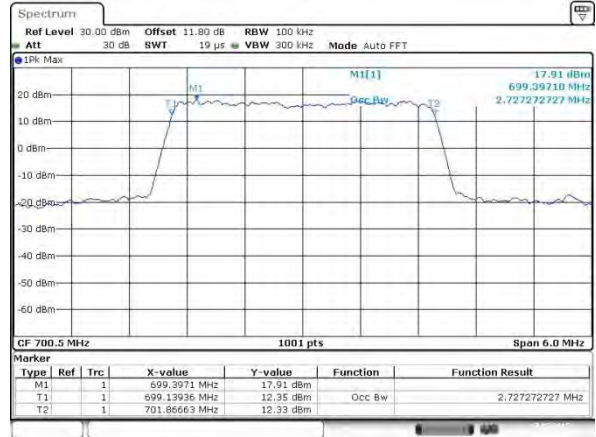


LTE Band 12

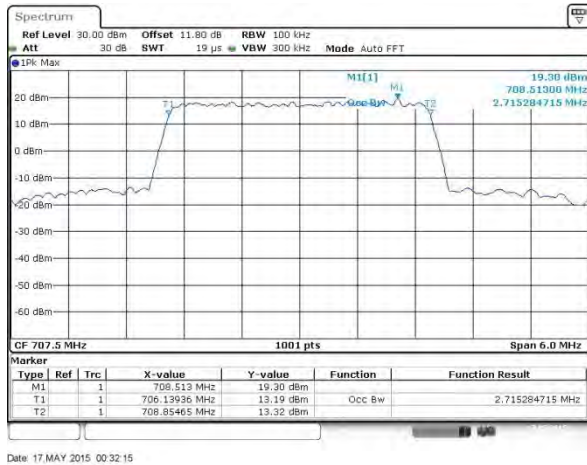
Lowest Channel / 3MHz / QPSK



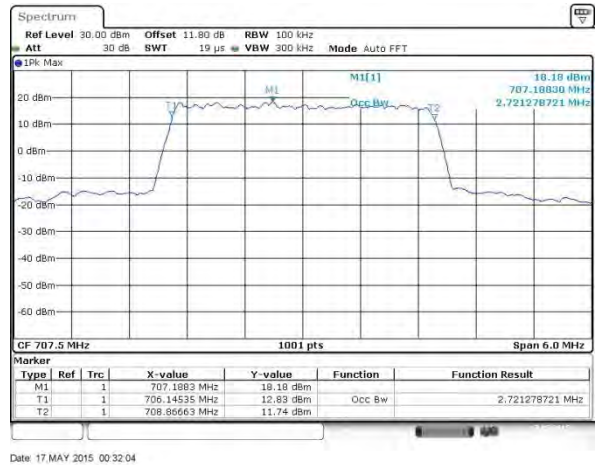
Lowest Channel / 3MHz / 16QAM



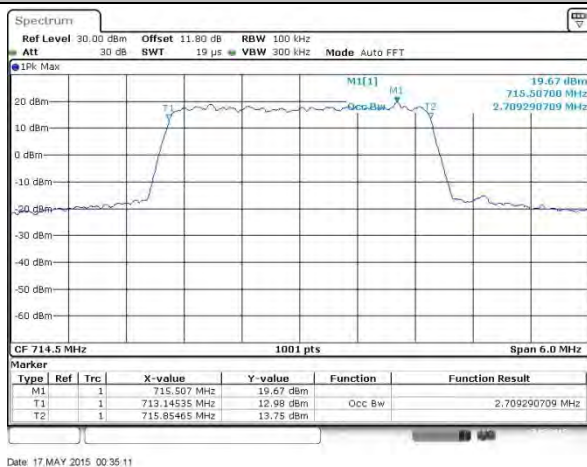
Middle Channel / 3MHz / QPSK



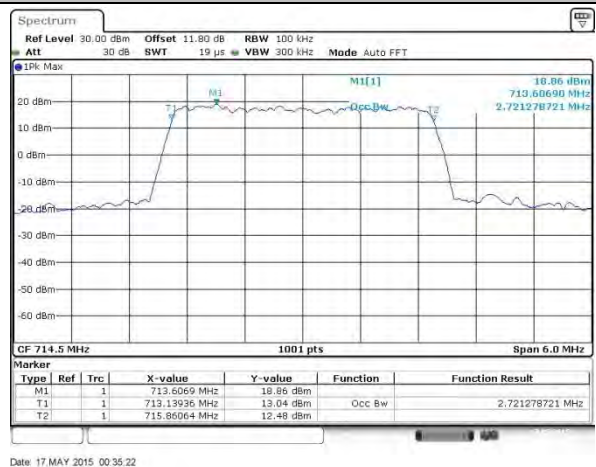
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



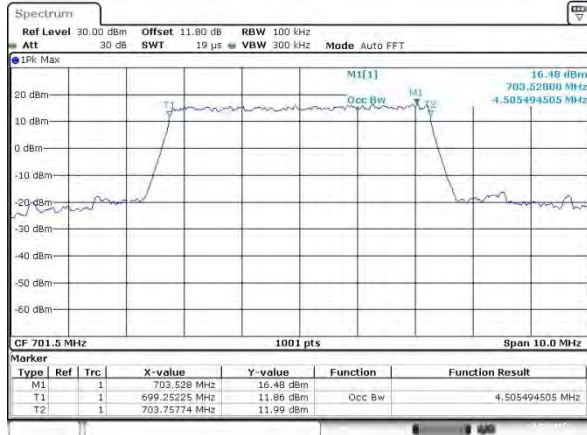
Highest Channel / 3MHz / 16QAM



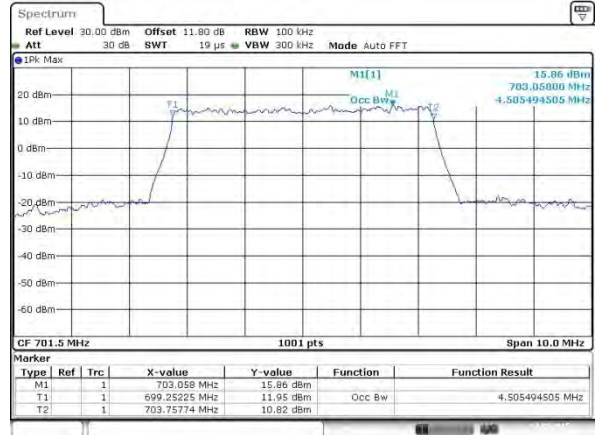


LTE Band 12

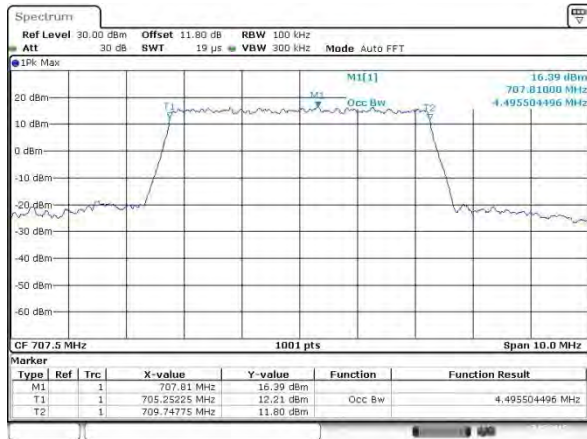
Lowest Channel / 5MHz / QPSK



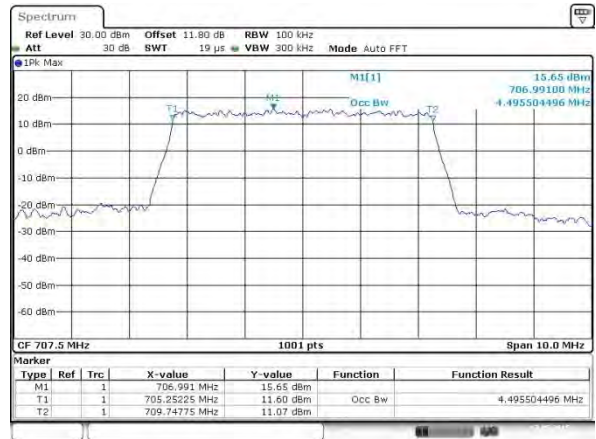
Lowest Channel / 5MHz / 16QAM



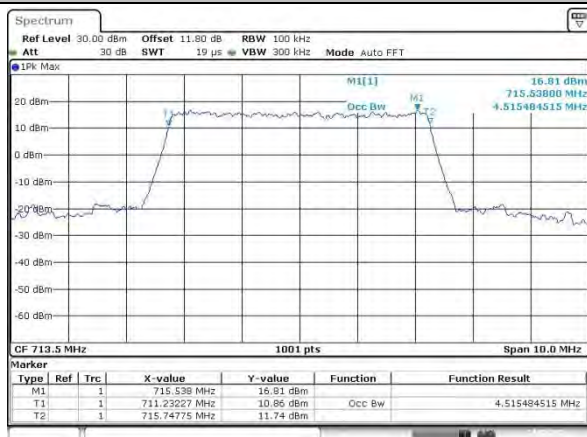
Middle Channel / 5MHz / QPSK



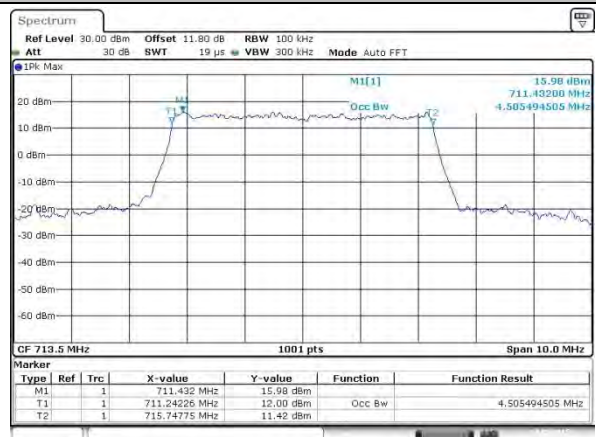
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



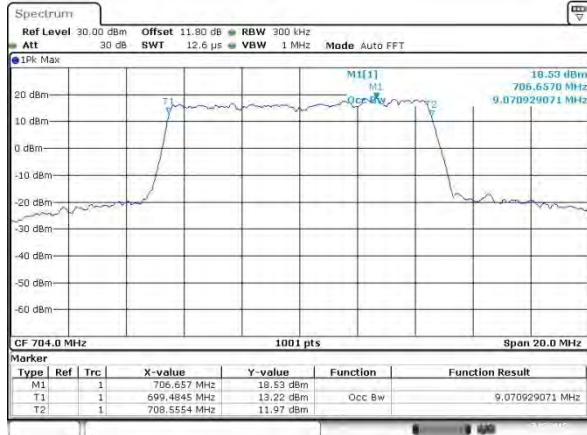
Highest Channel / 5MHz / 16QAM



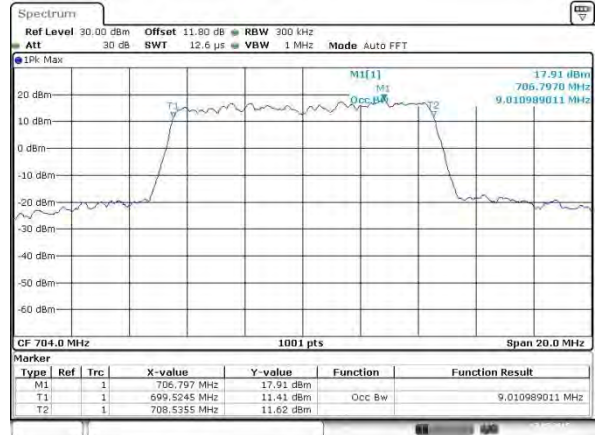


LTE Band 12

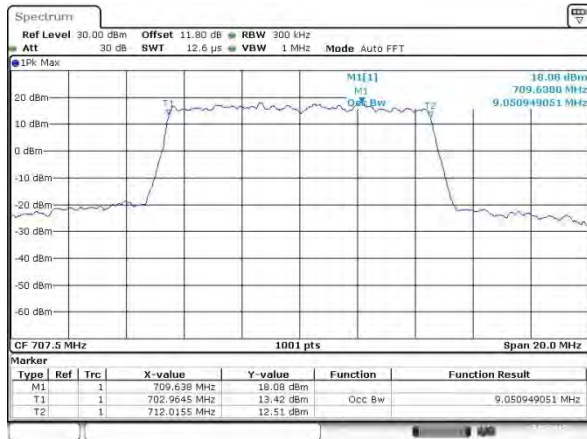
Lowest Channel / 10MHz / QPSK



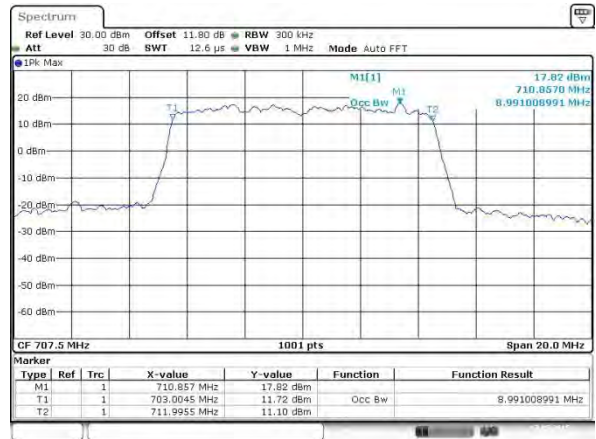
Lowest Channel / 10MHz / 16QAM



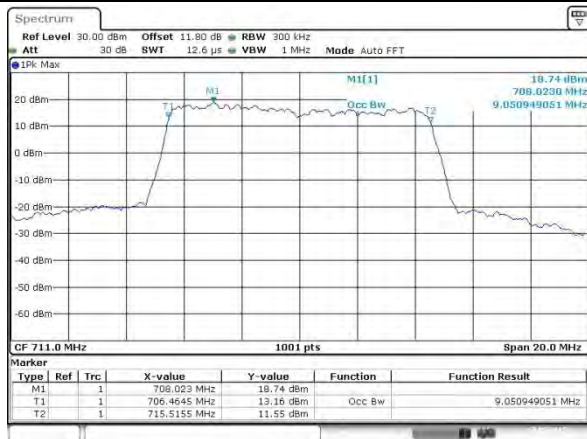
Middle Channel / 10MHz / QPSK



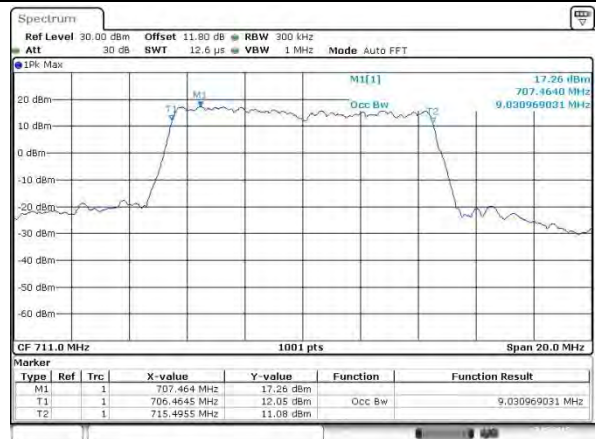
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM





Conducted Band Edge



LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1RB



Lowest Band Edge / Full RB



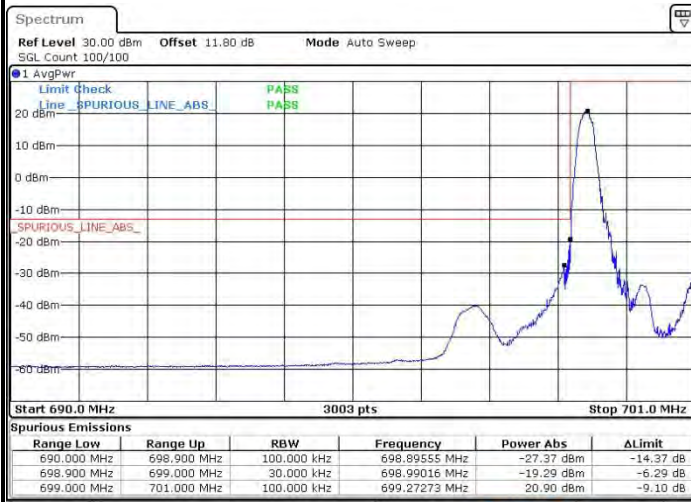
Highest Band Edge / Full RB





LTE Band 12 / 1.4MHz / 16QAM

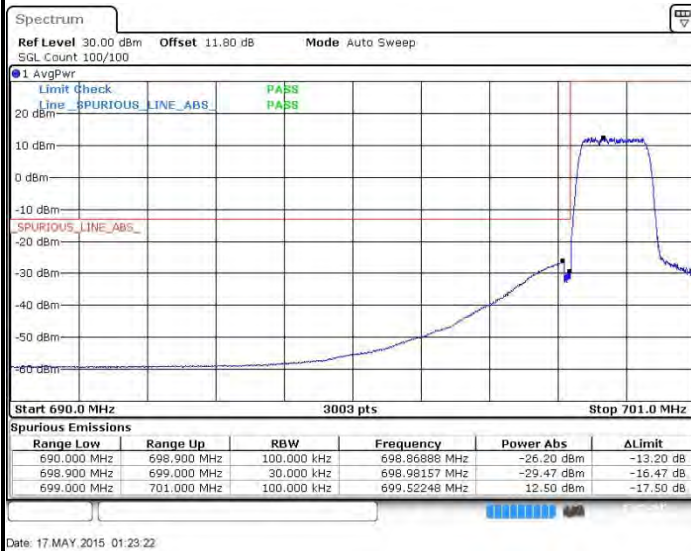
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



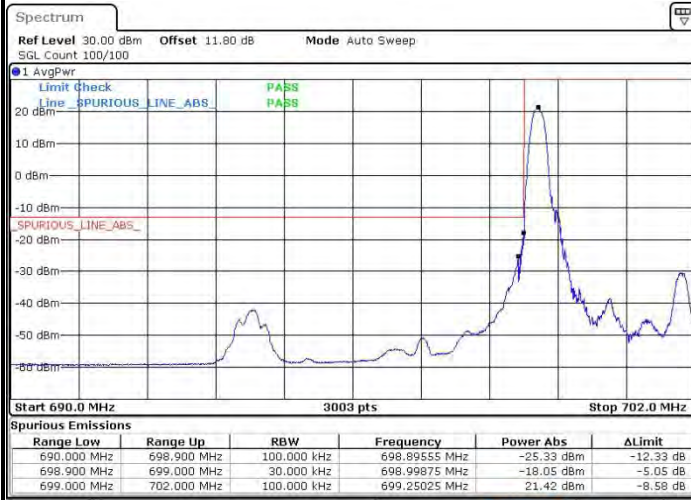
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / QPSK

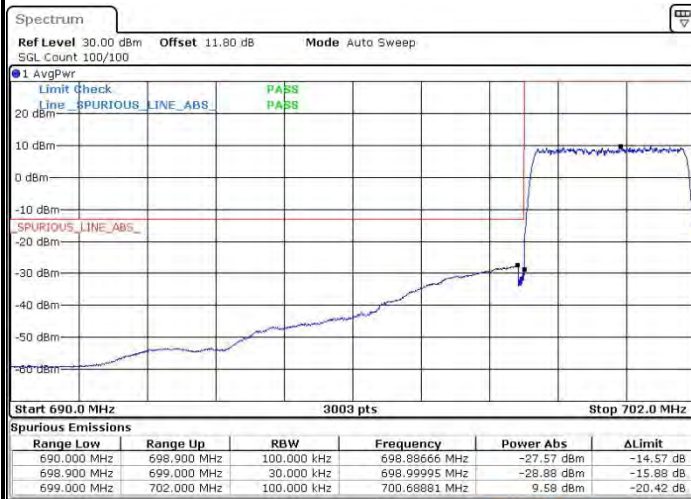
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



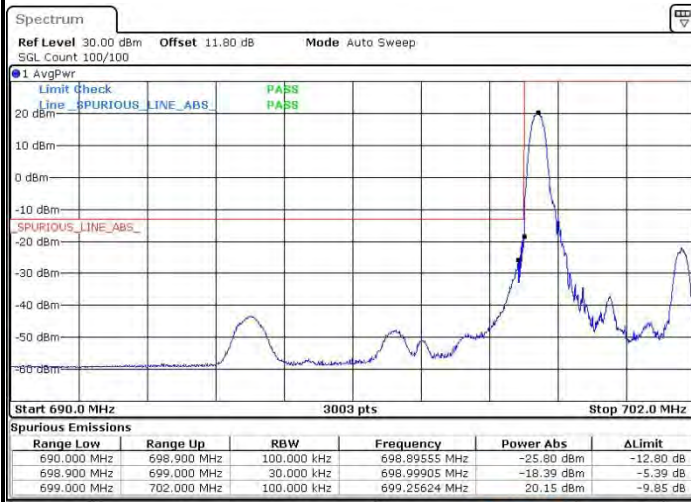
Highest Band Edge / Full RB



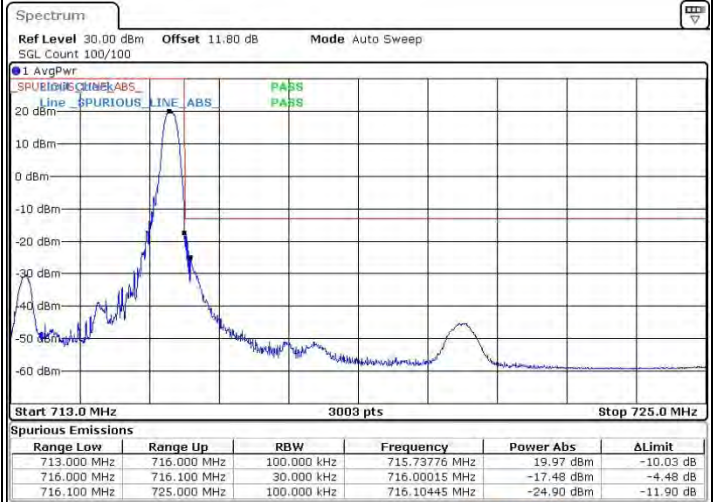


LTE Band 12 / 3MHz / 16QAM

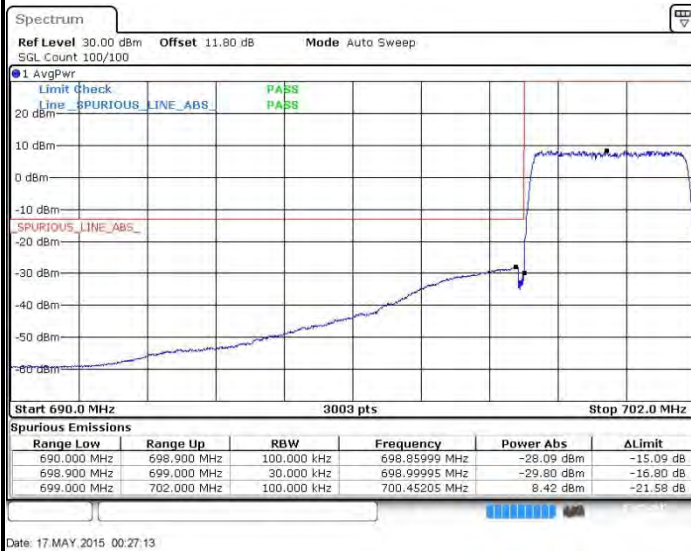
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



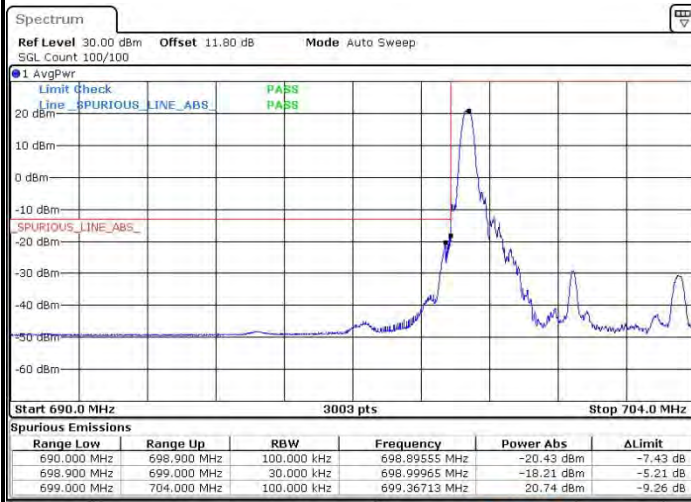
Highest Band Edge / Full RB



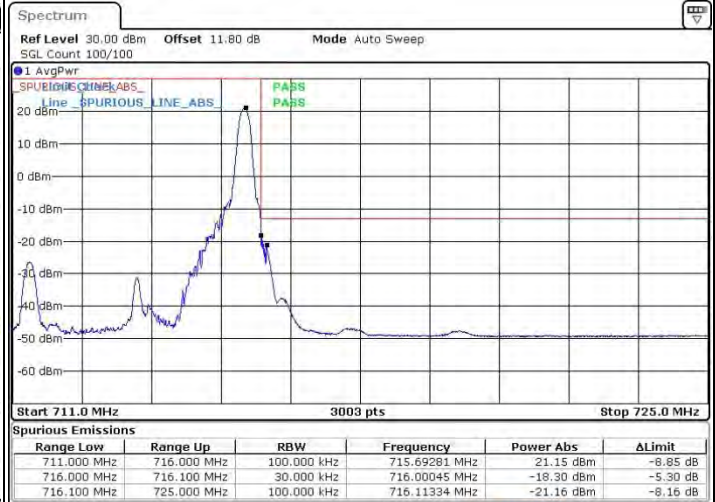


LTE Band 12 / 5MHz / QPSK

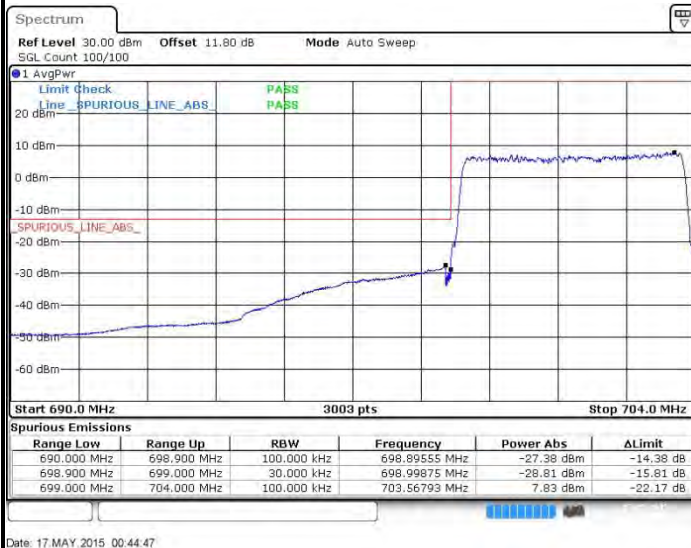
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



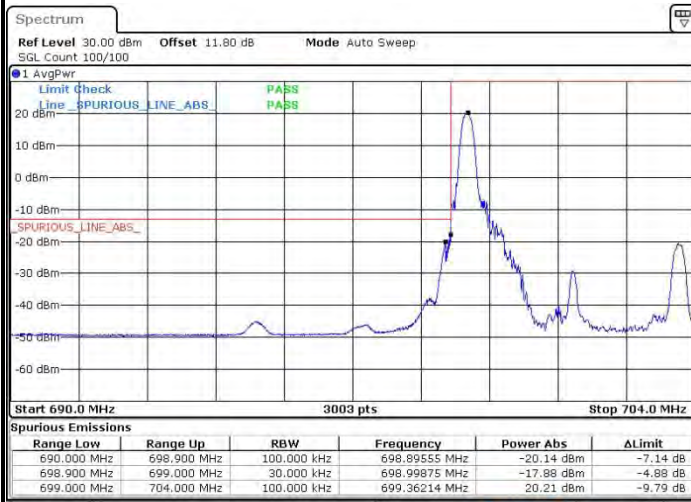
Highest Band Edge / Full RB





LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



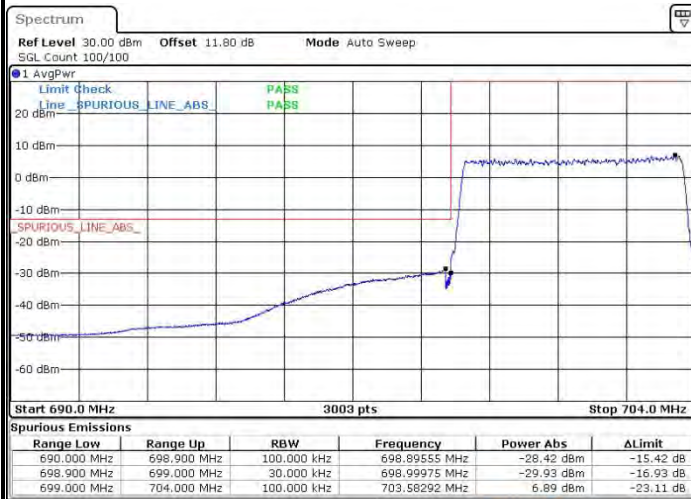
Date: 17 MAY 2015 00:47:07

Highest Band Edge / 1 RB



Date: 17 MAY 2015 00:59:09

Lowest Band Edge / Full RB



Date: 17 MAY 2015 00:45:57

Highest Band Edge / Full RB

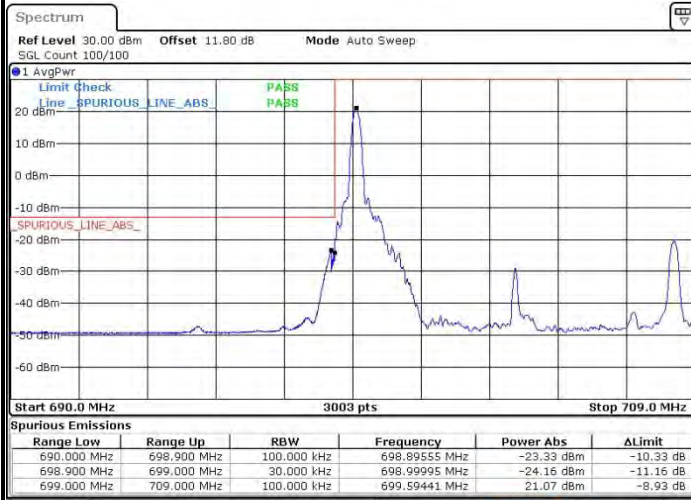


Date: 17 MAY 2015 00:56:49

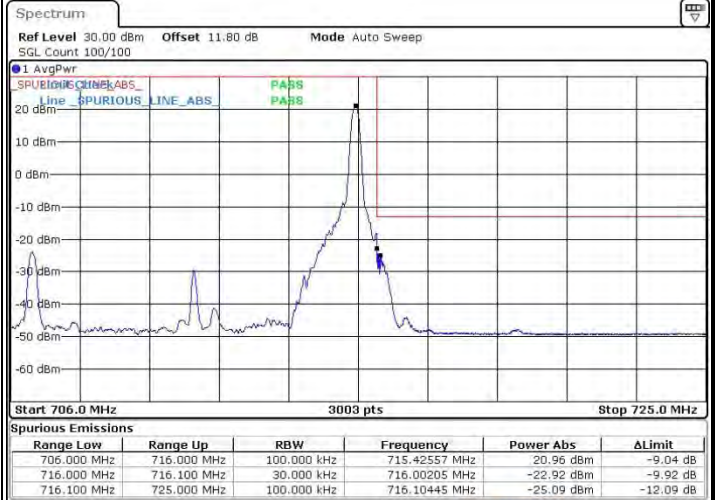


LTE Band 12 / 10MHz / QPSK

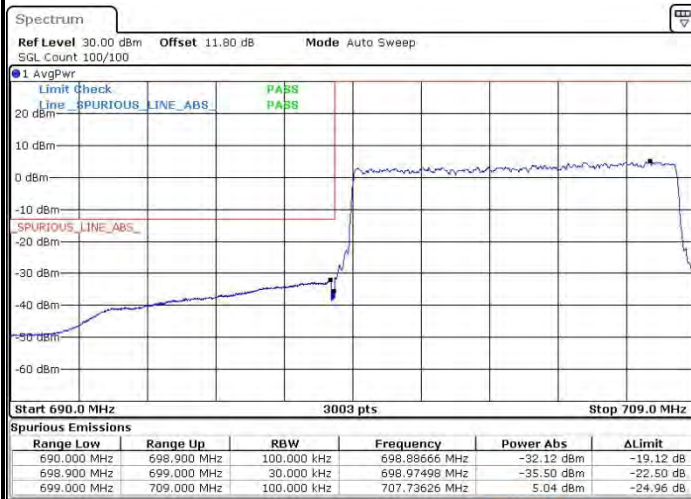
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



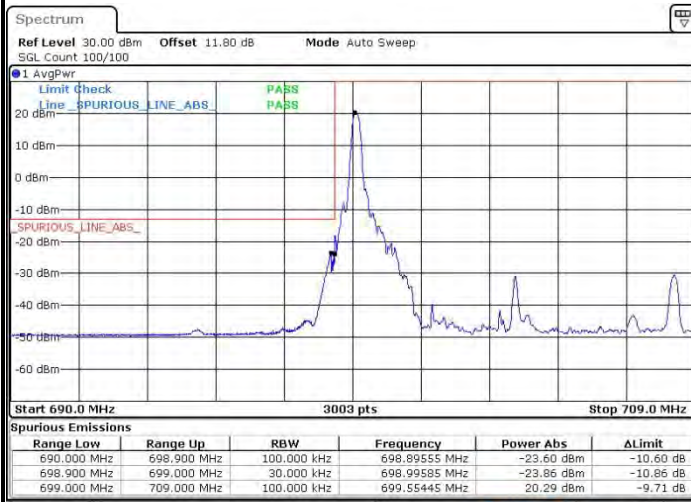
Highest Band Edge / Full RB



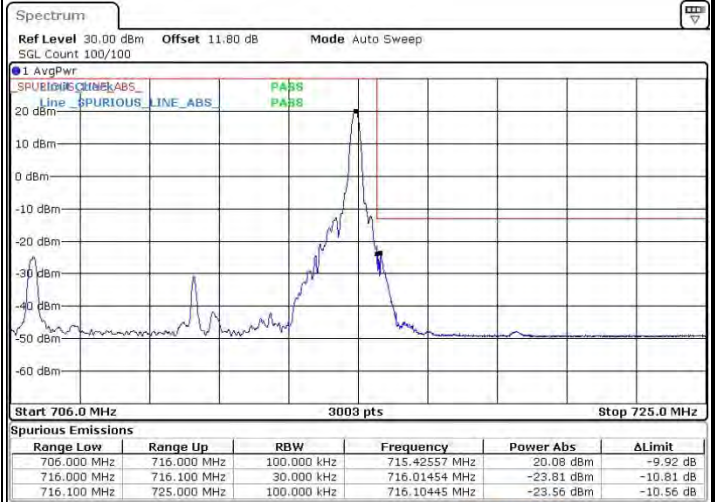


LTE Band 12 / 10MHz / 16QAM

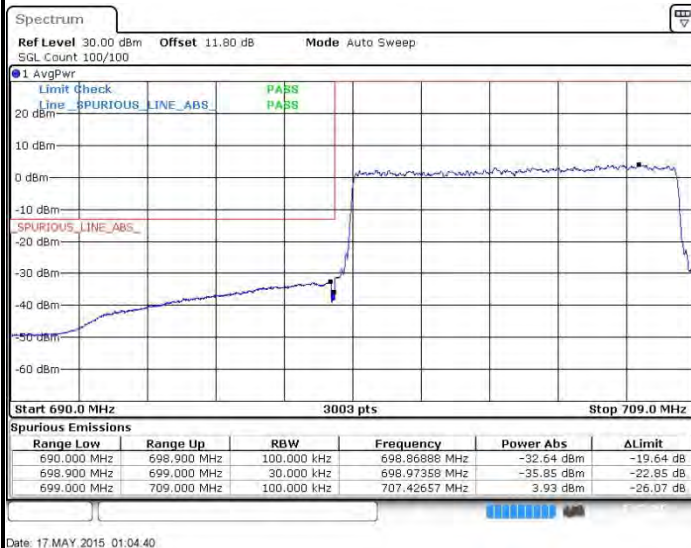
Lowest Band Edge / 1 RB



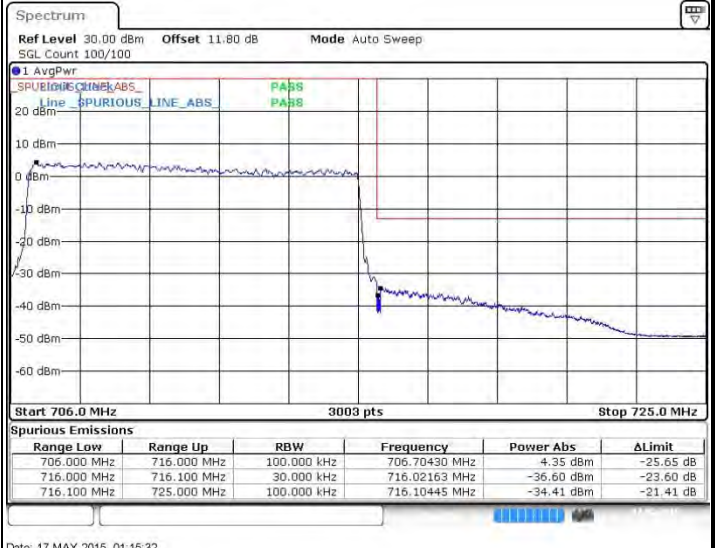
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



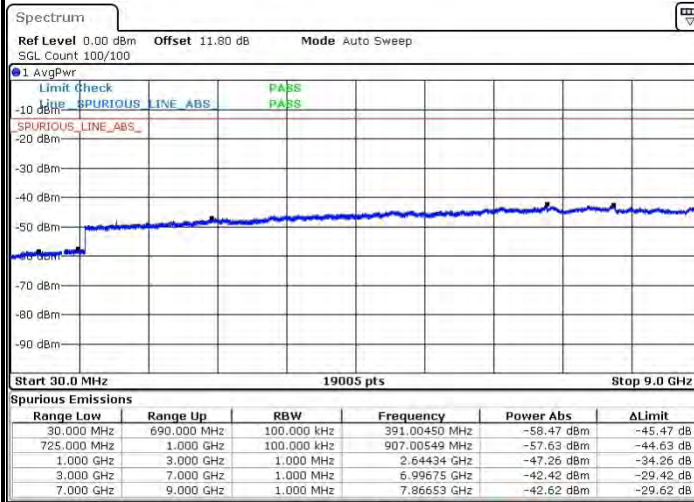


Conducted Spurious Emission



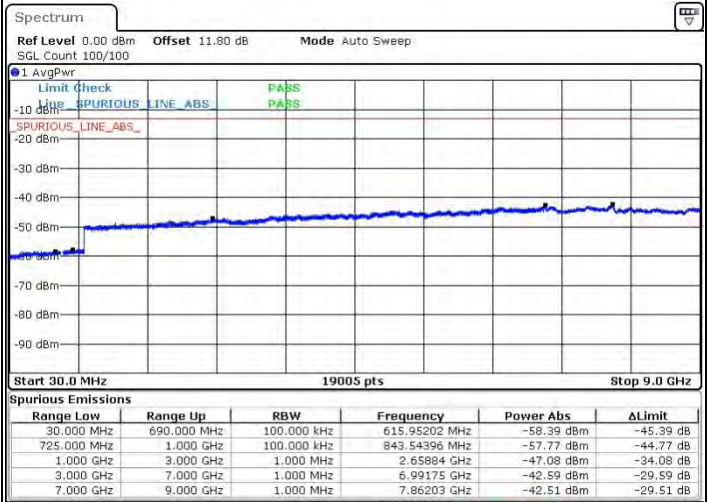
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



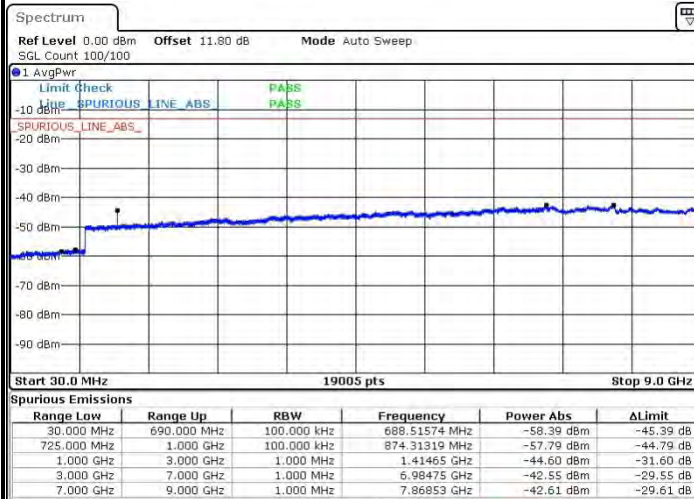
Date: 17 MAY 2015 01:26:52

Lowest Channel / 16QAM



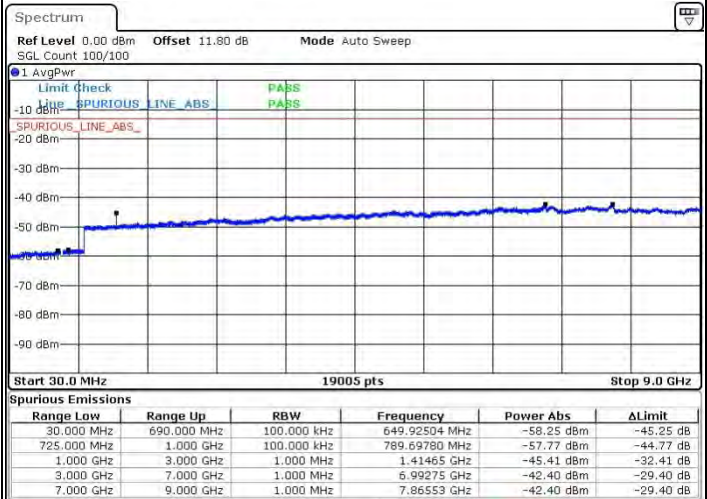
Date: 17 MAY 2015 01:28:02

Middle Channel / QPSK



Date: 17 MAY 2015 01:31:08

Middle Channel / 16QAM

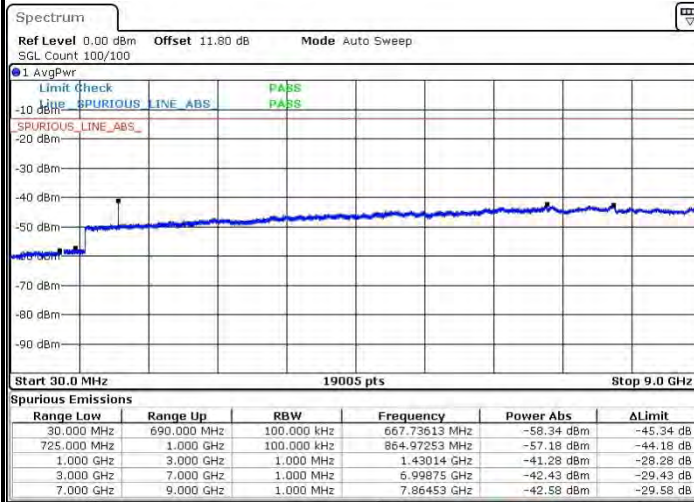


Date: 17 MAY 2015 01:29:58



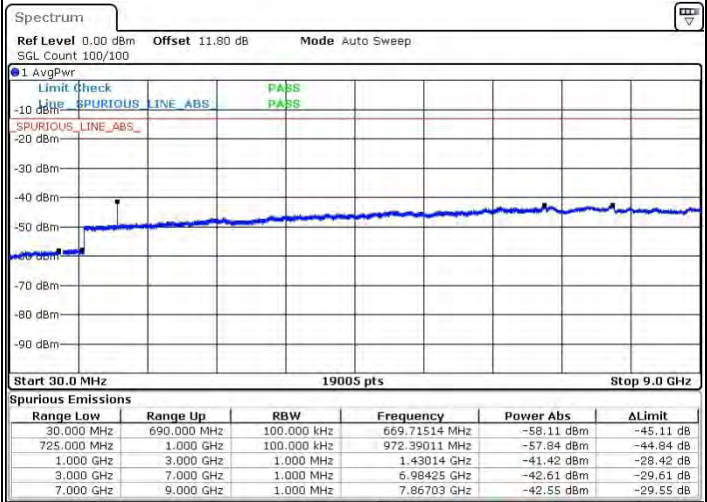
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 17 MAY 2015 01:37:44

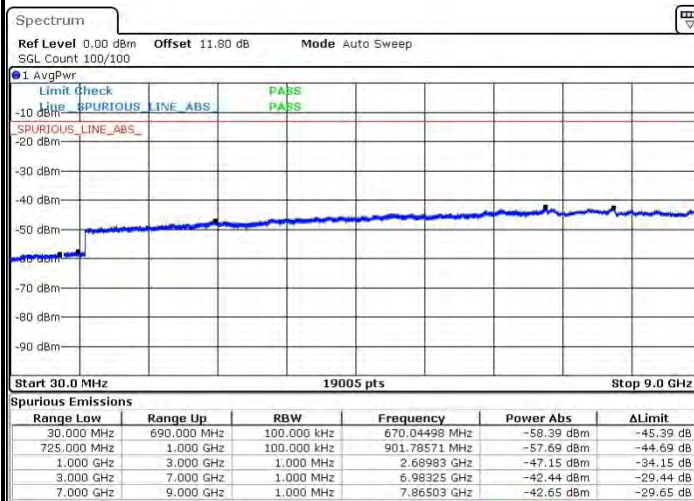
Highest Channel / 16QAM



Date: 17 MAY 2015 01:38:54

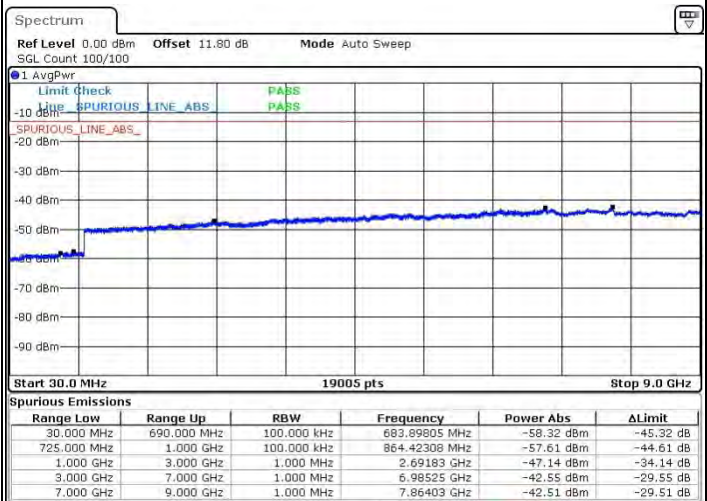
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 17 MAY 2015 00:30:43

Lowest Channel / 16QAM

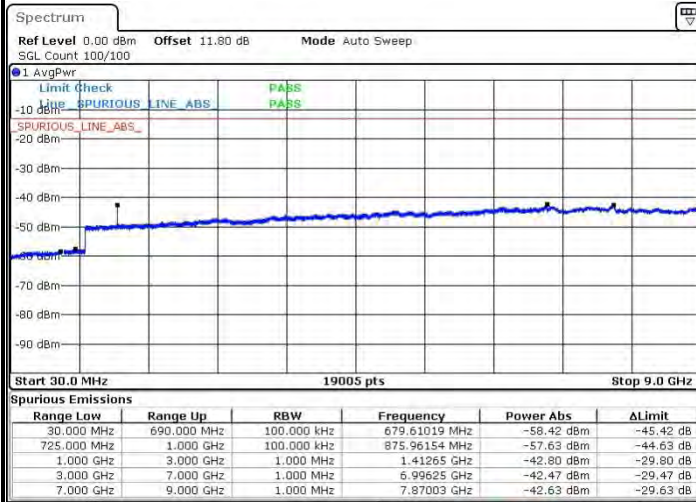


Date: 17 MAY 2015 00:31:53



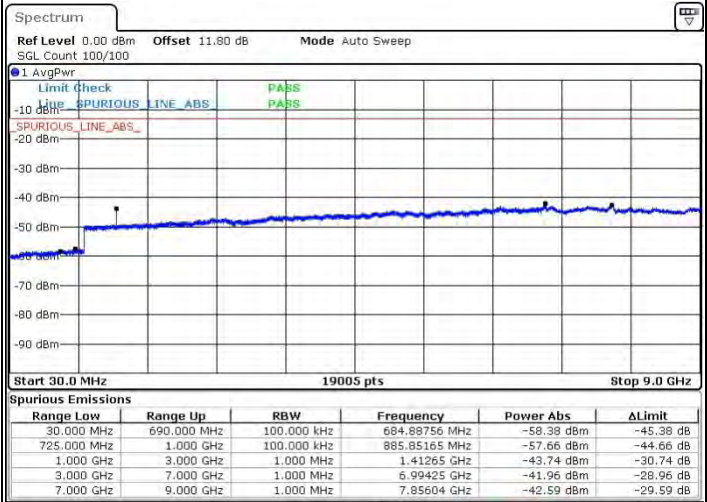
LTE Band 12 / 3MHz

Middle Channel / QPSK



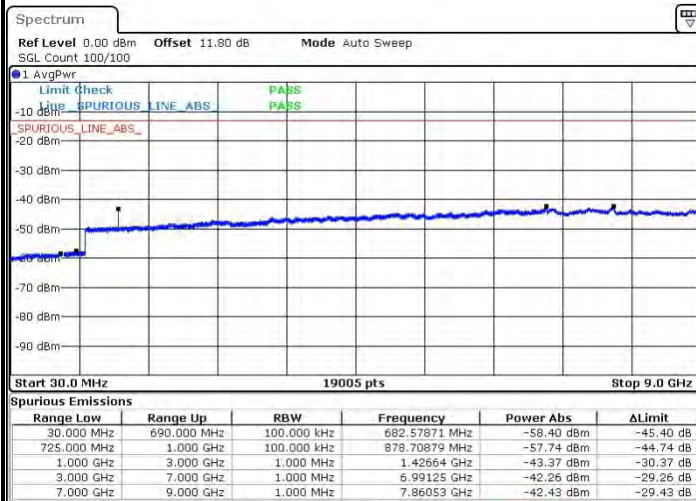
Date: 17 MAY 2015 00:35:00

Middle Channel / 16QAM



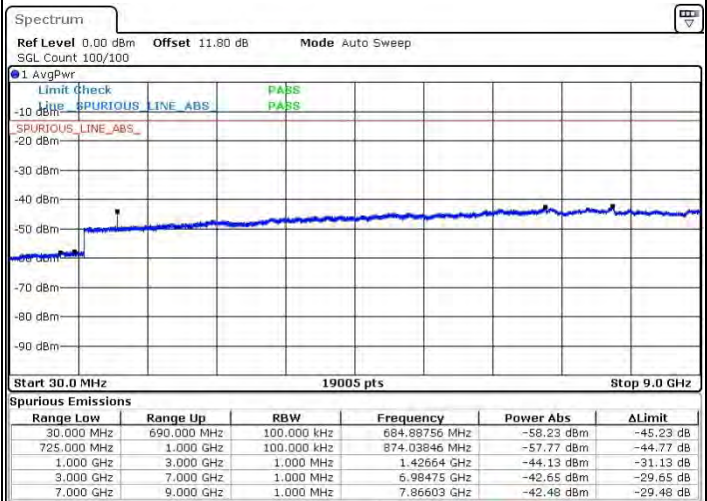
Date: 17 MAY 2015 00:33:50

Highest Channel / QPSK



Date: 17 MAY 2015 00:41:37

Highest Channel / 16QAM

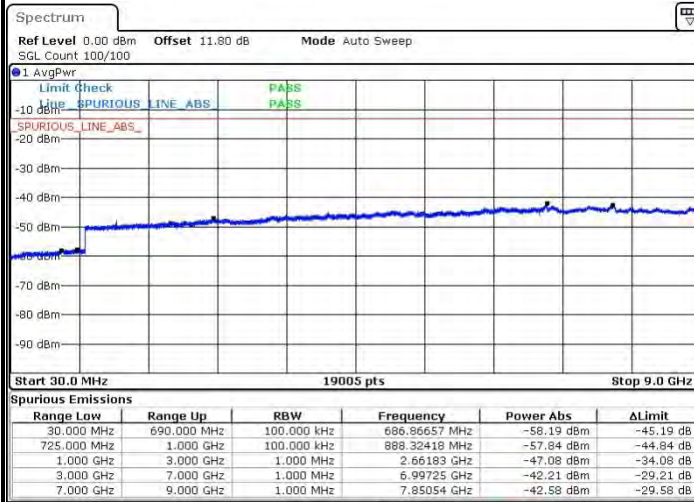


Date: 17 MAY 2015 00:42:47



LTE Band 12 / 5MHz

Lowest Channel / QPSK



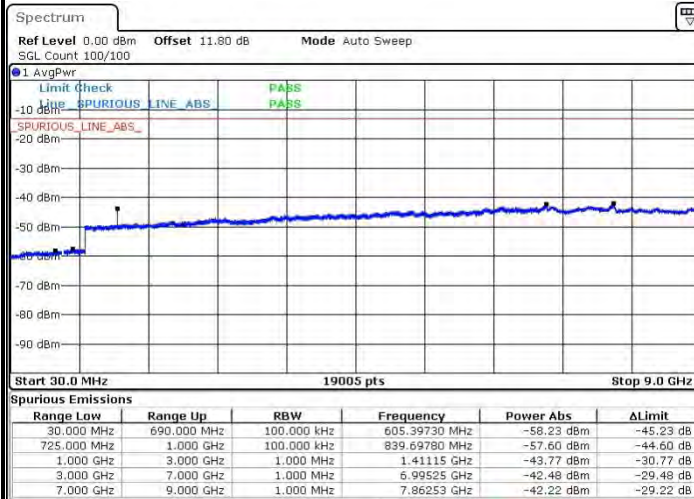
Date: 17 MAY 2015 00:49:27

Lowest Channel / 16QAM



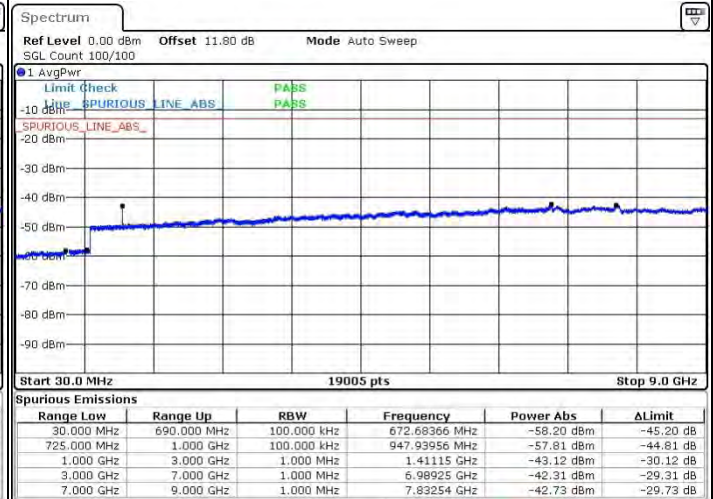
Date: 17 MAY 2015 00:50:37

Middle Channel / QPSK



Date: 17 MAY 2015 00:53:43

Middle Channel / 16QAM

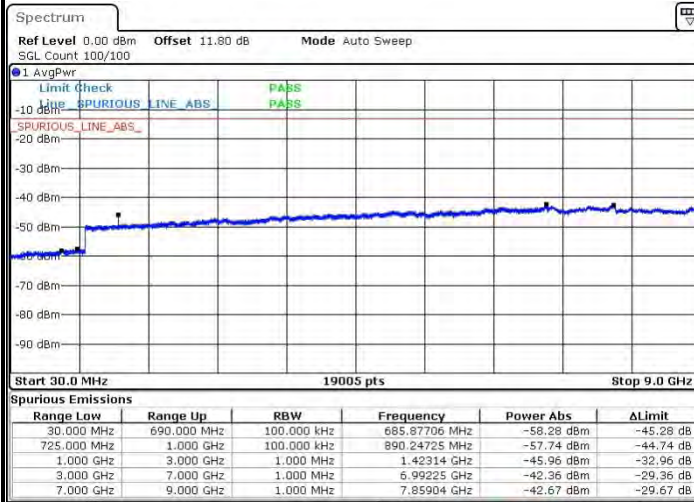


Date: 17 MAY 2015 00:52:33



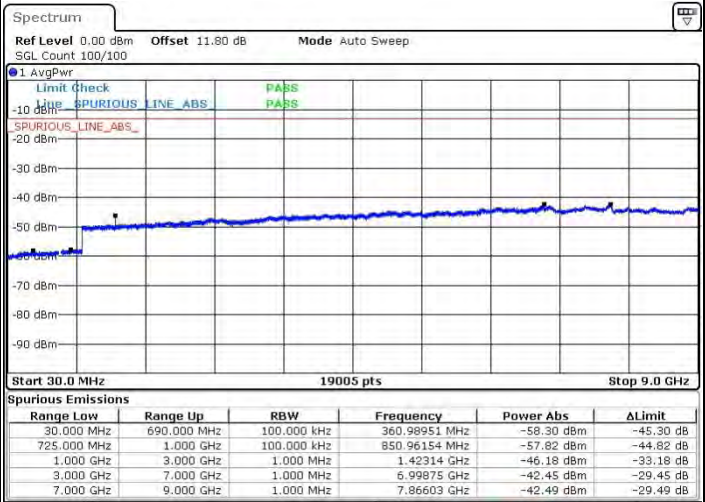
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 17 MAY 2015 01:01:30

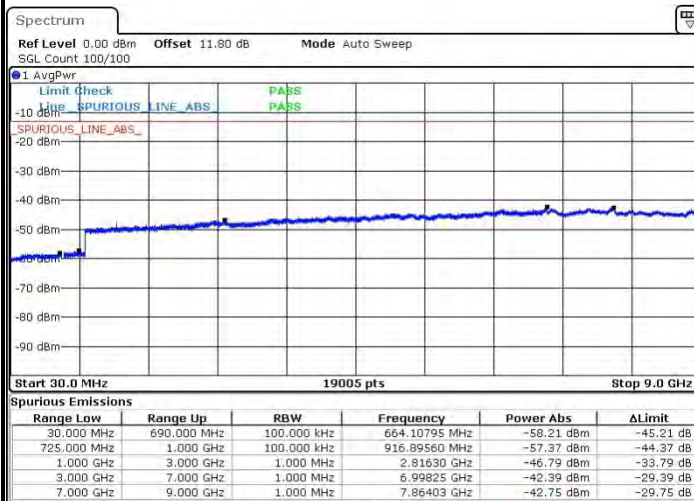
Highest Channel / 16QAM



Date: 17 MAY 2015 01:00:19

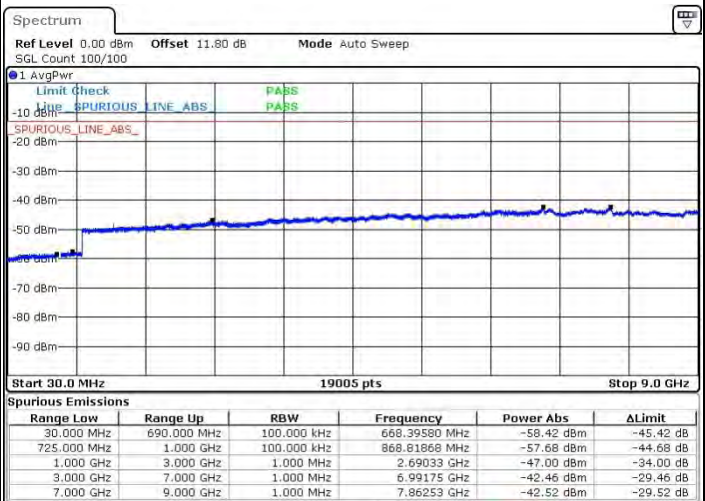
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 17 MAY 2015 01:08:10

Lowest Channel / 16QAM

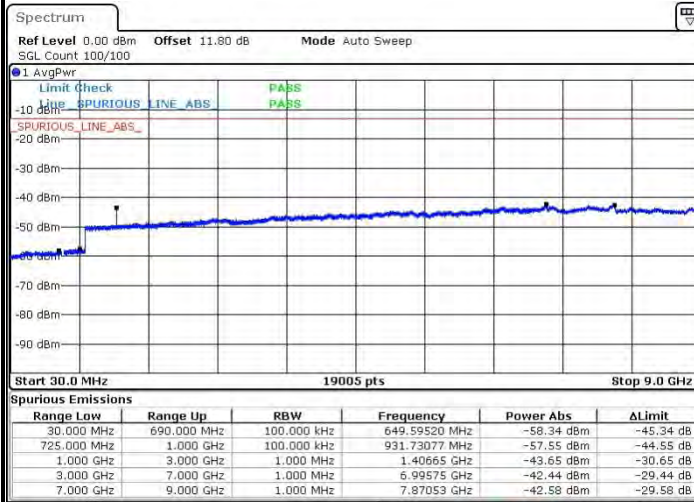


Date: 17 MAY 2015 01:09:20



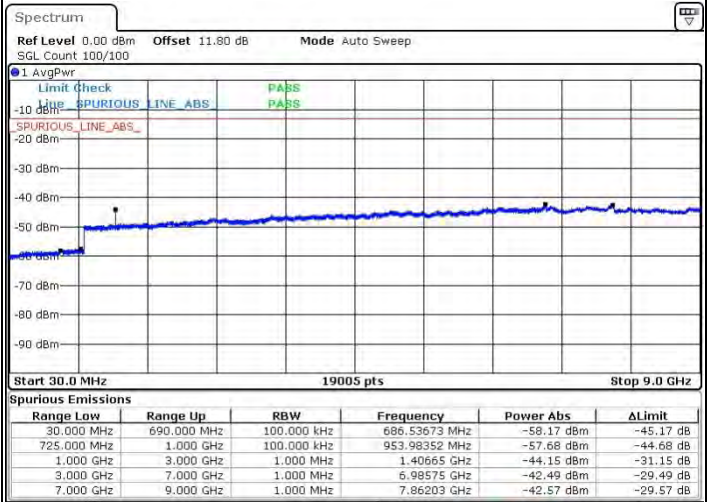
LTE Band 12 / 10MHz

Middle Channel / QPSK



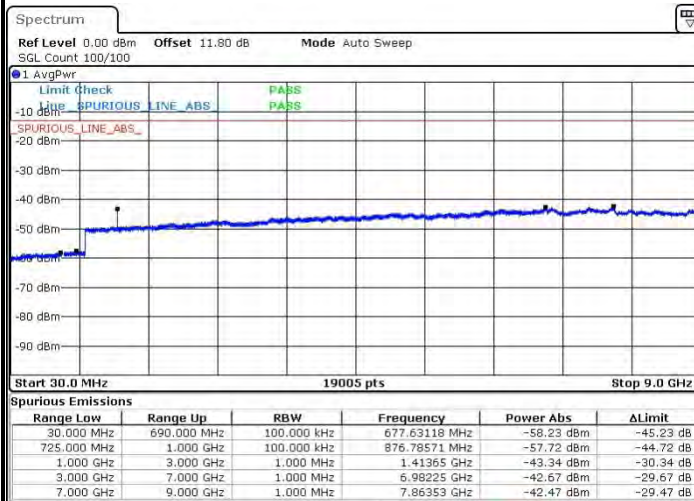
Date: 17 MAY 2015 01:12:26

Middle Channel / 16QAM



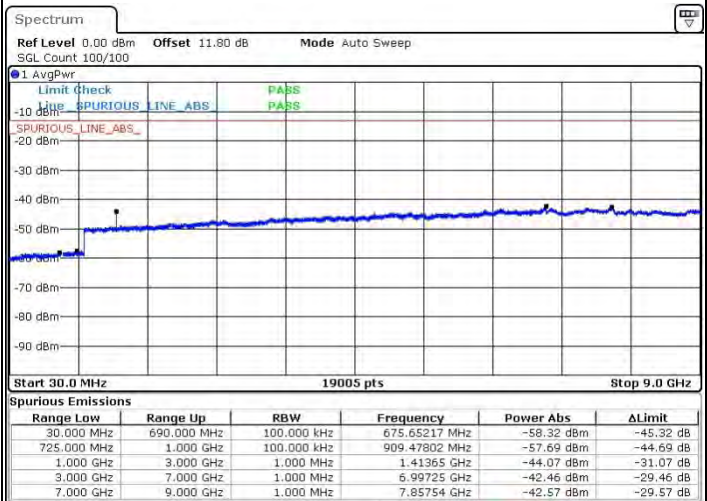
Date: 17 MAY 2015 01:11:16

Highest Channel / QPSK



Date: 17 MAY 2015 01:19:02

Highest Channel / 16QAM



Date: 17 MAY 2015 01:20:12

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	0.0003	PASS
40	Normal Voltage	0.0141	
30	Normal Voltage	0.0146	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0134	
-10	Normal Voltage	0.0021	
-20	Normal Voltage	0.0131	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0127	
20	Normal Voltage	0.0146	
20	Battery End Point	0.0144	

Note:

1. Normal Voltage = 3.7V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.1 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 5MHz	Within Band
		Frequency Offset (Δf) (Hz)	Result
50	Normal Voltage	0.2	PASS
40	Normal Voltage	10	
30	Normal Voltage	10.3	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	0.4	
0	Normal Voltage	9.5	
-10	Normal Voltage	1.5	
-20	Normal Voltage	9.3	
-30	Normal Voltage	1.2	
20	Maximum Voltage	9	
20	Normal Voltage	10.3	
20	Battery End Point	10.2	

$|\text{MAX}(\Delta f)| = 10.3\text{Hz}$

Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	699.108495	$\geq 698 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	715.891505	$\leq 716 \text{ MHz}$	



LTE Band 13

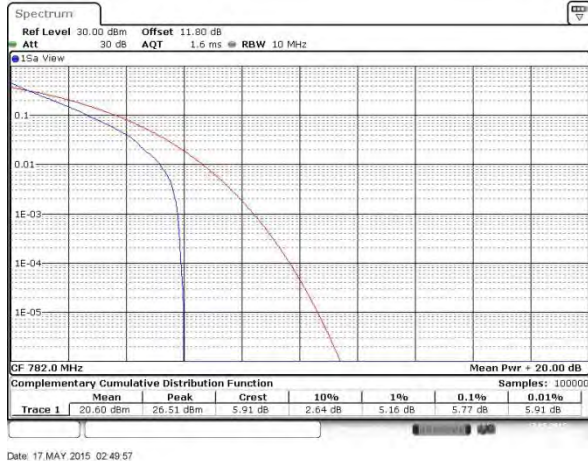
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.77	5.51	5.94	6.12	
Highest CH	-	-	-	-	

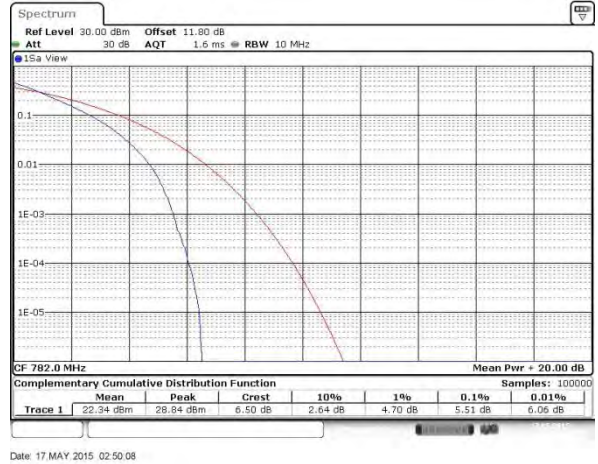


LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB

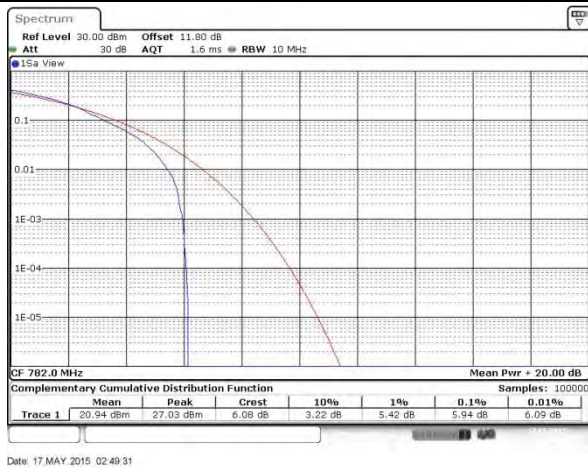


Middle Channel / Full RB

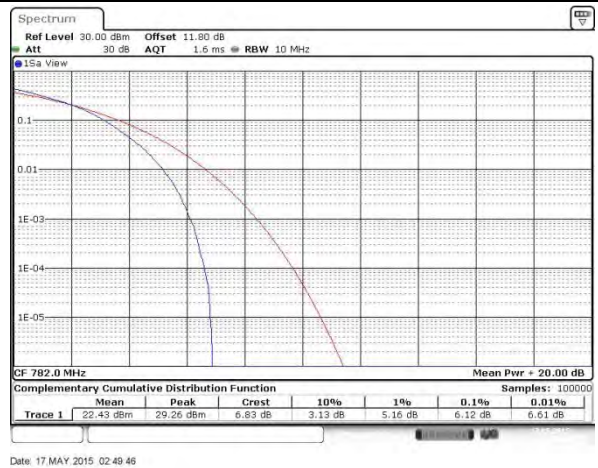


LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Middle Channel / Full RB





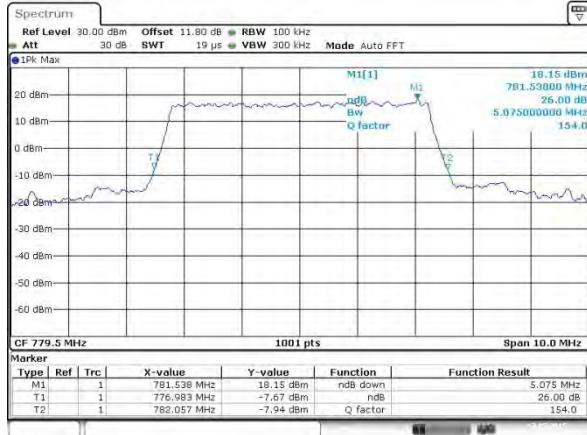
26dB Bandwidth

Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	5.08	5.09	-	-	-	-	-	-
Middle CH	-	-	-	-	5.09	5.11	10.01	9.99	-	-	-	-
Highest CH	-	-	-	-	5.07	5.04	-	-	-	-	-	-

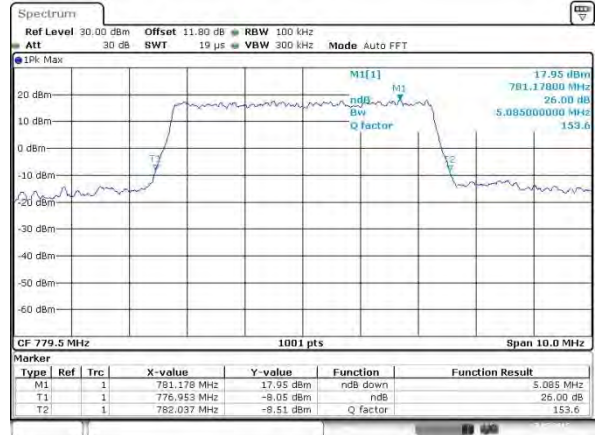


LTE Band 13

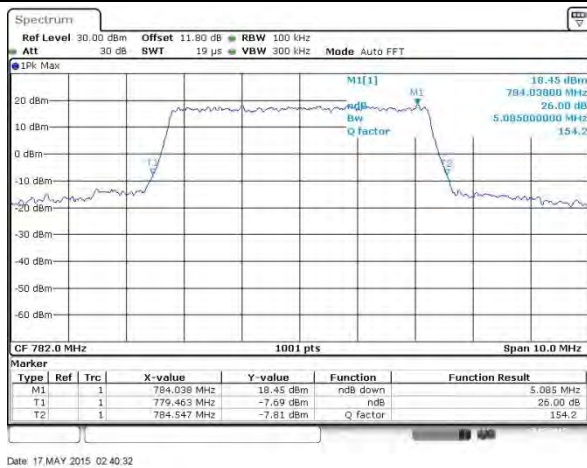
Lowest Channel / 5MHz / QPSK



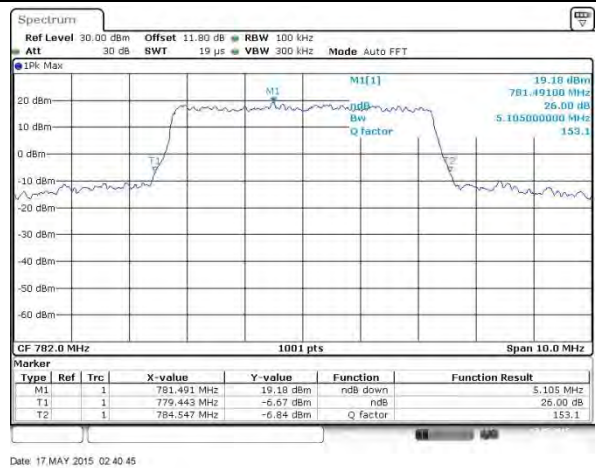
Lowest Channel / 5MHz / 16QAM



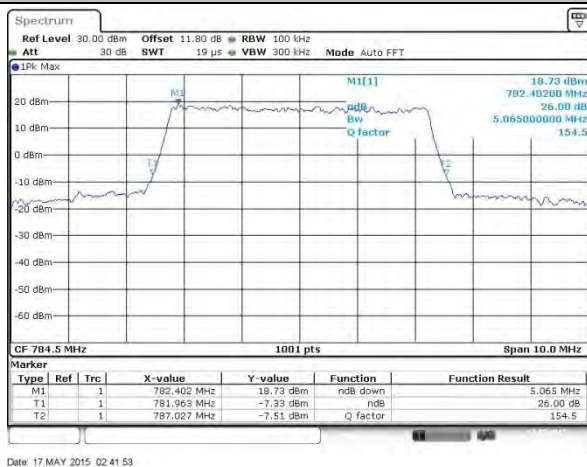
Middle Channel / 5MHz / QPSK



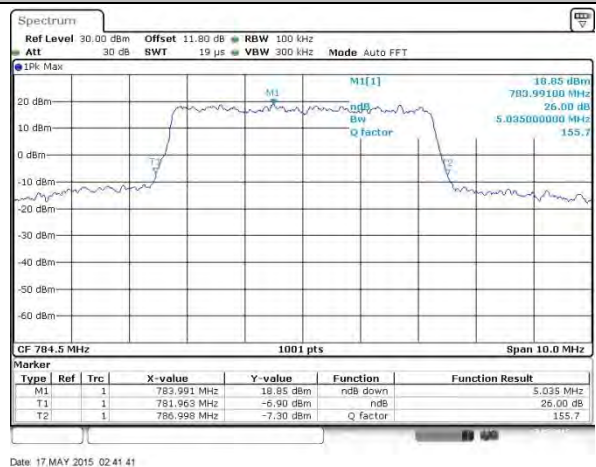
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



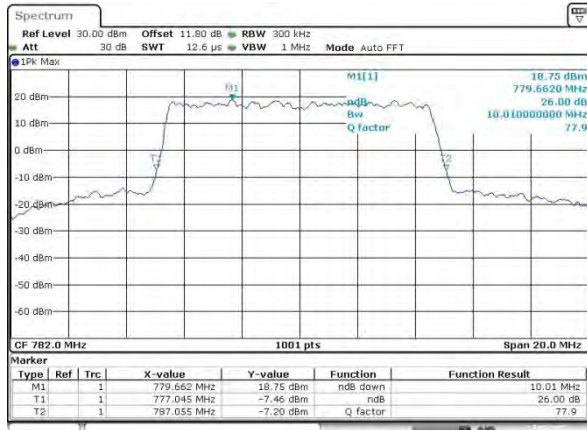
Highest Channel / 5MHz / 16QAM





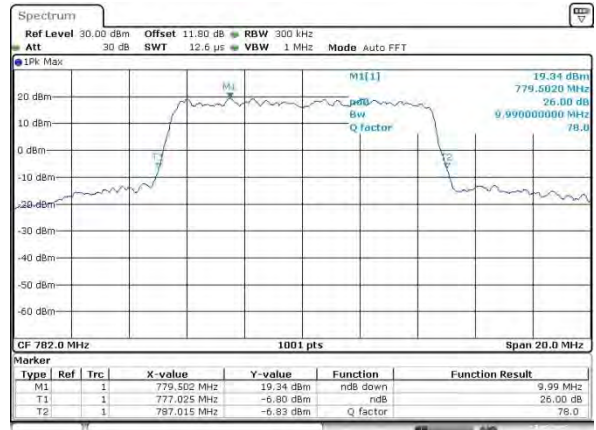
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 17 MAY 2015 02:45:04

Middle Channel / 10MHz / 16QAM



Date: 17 MAY 2015 02:44:51



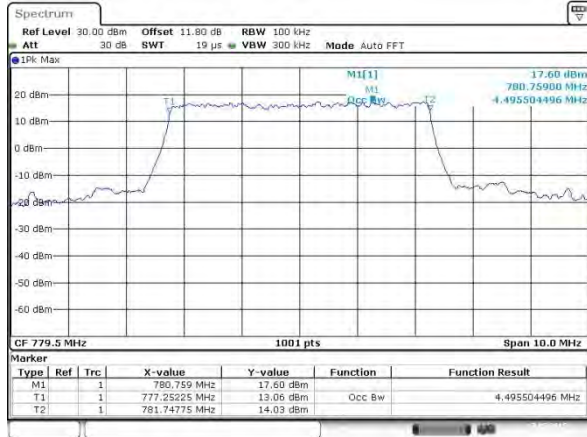
Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.5	4.51	-	-	-	-	-	-
Middle CH	-	-	-	-	4.51	4.52	9.05	9.03	-	-	-	-
Highest CH	-	-	-	-	4.52	4.52	-	-	-	-	-	-

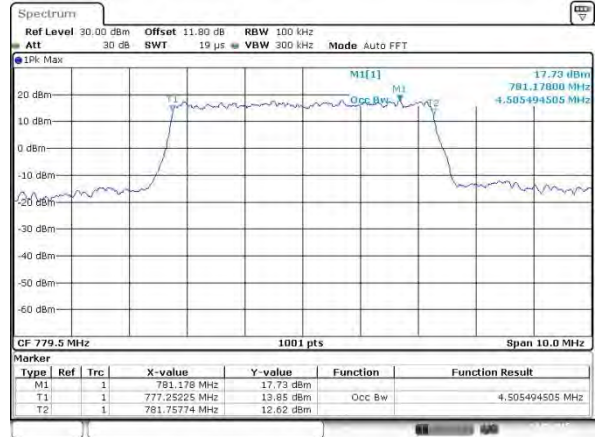


LTE Band 13

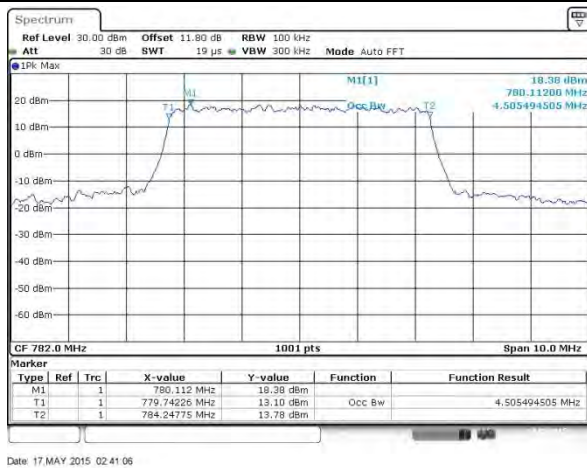
Lowest Channel / 5MHz / QPSK



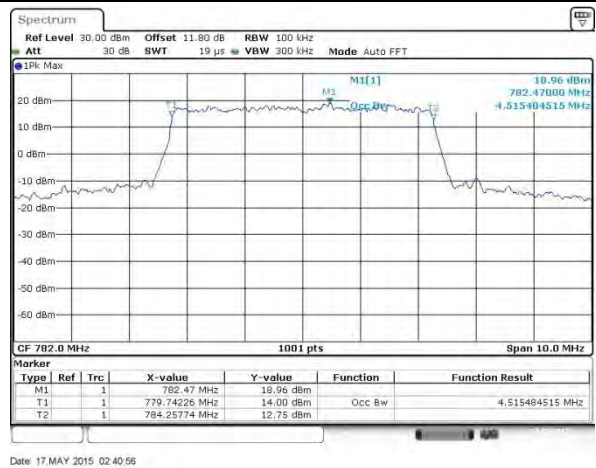
Lowest Channel / 5MHz / 16QAM



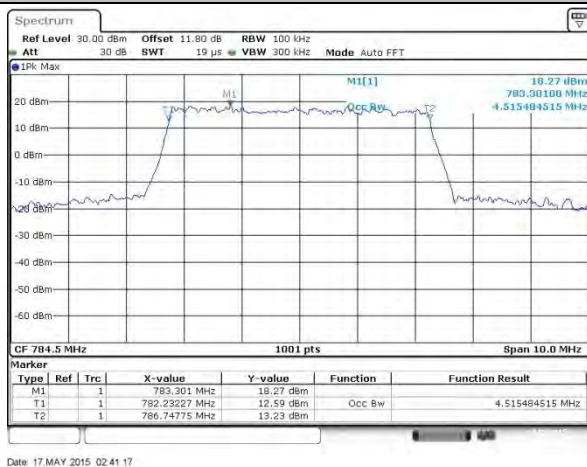
Middle Channel / 5MHz / QPSK



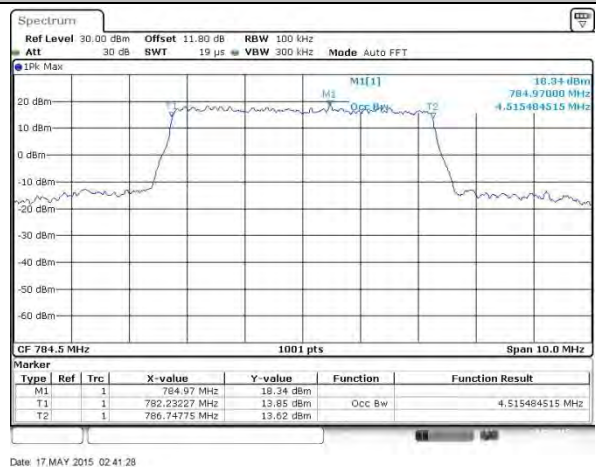
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



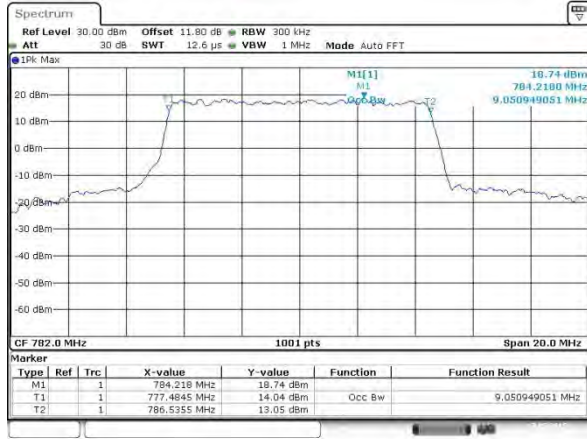
Highest Channel / 5MHz / 16QAM



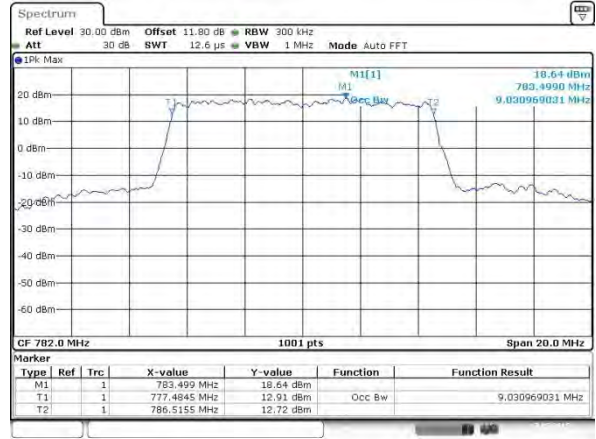


LTE Band 13

Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM



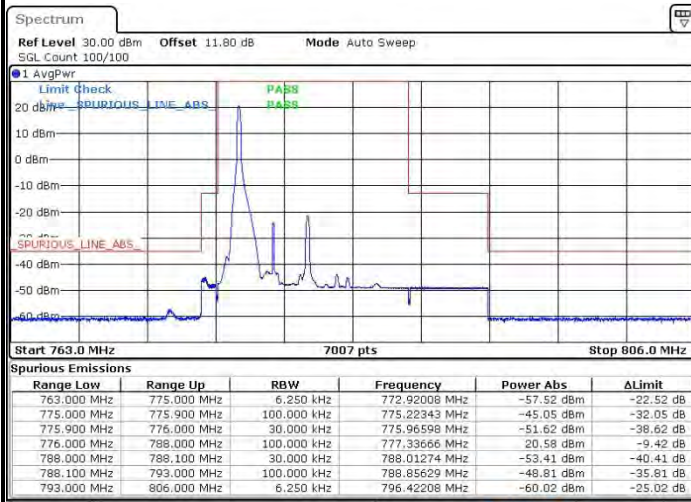


Conducted Band Edge

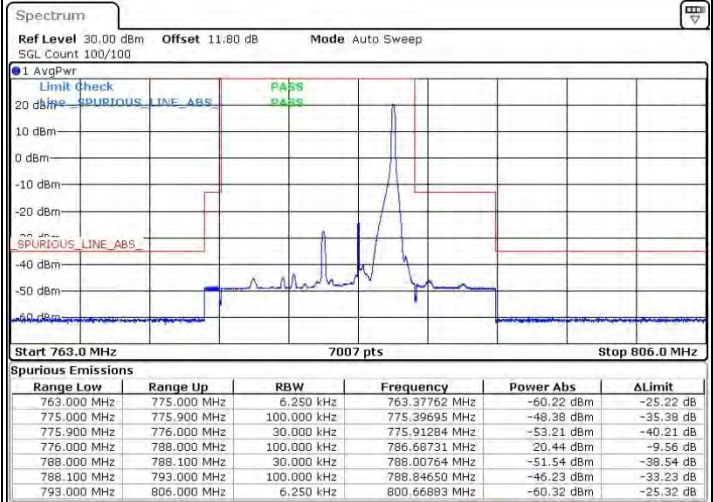


LTE Band 13 / 5MHz / QPSK

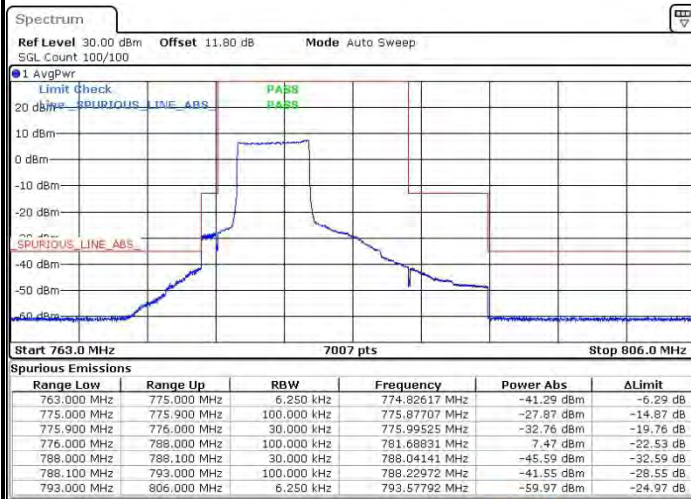
Lowest Band Edge / 1 RB



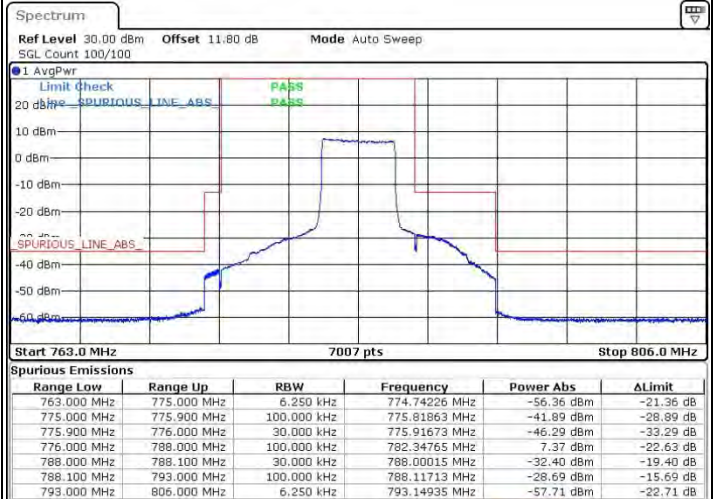
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



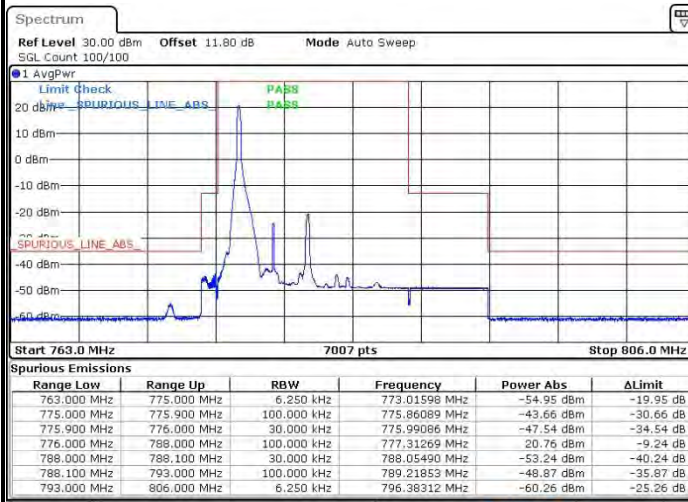
Highest Band Edge / Full RB



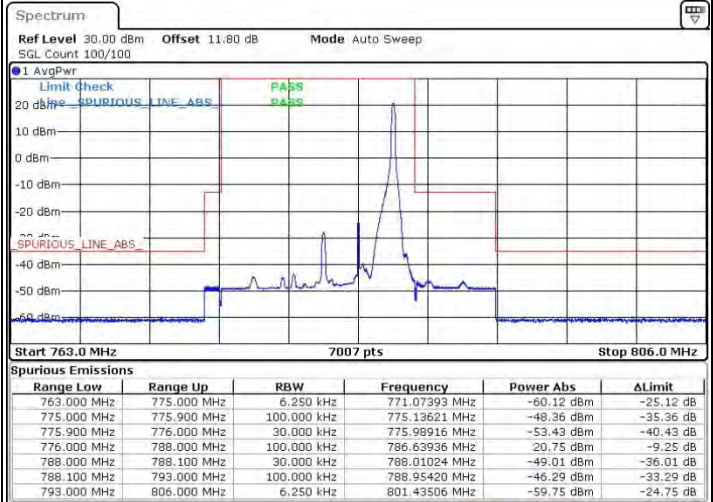


LTE Band 13 / 5MHz / 16QAM

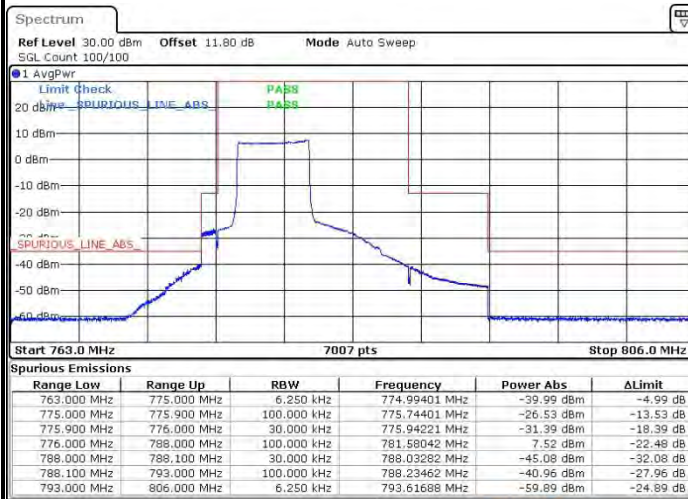
Lowest Band Edge / 1 RB



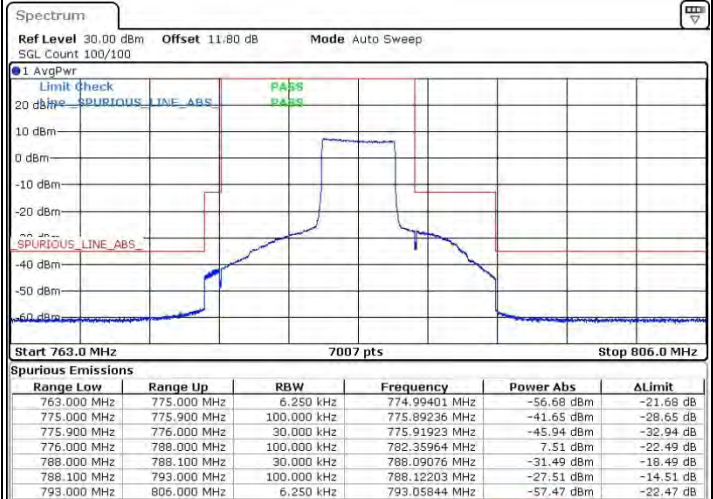
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



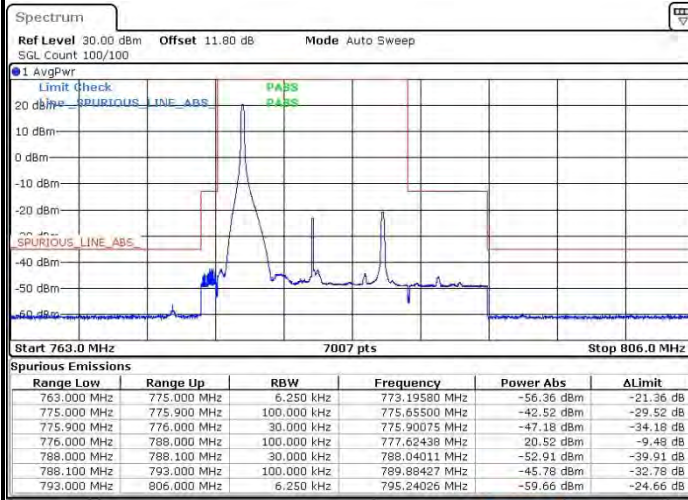
Highest Band Edge / Full RB





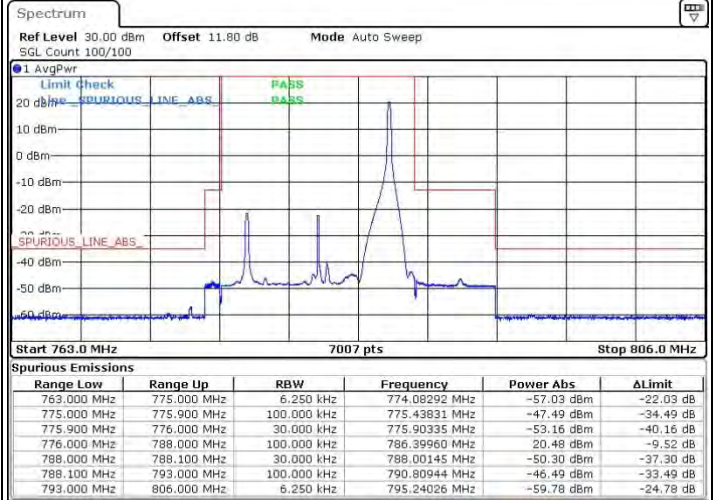
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



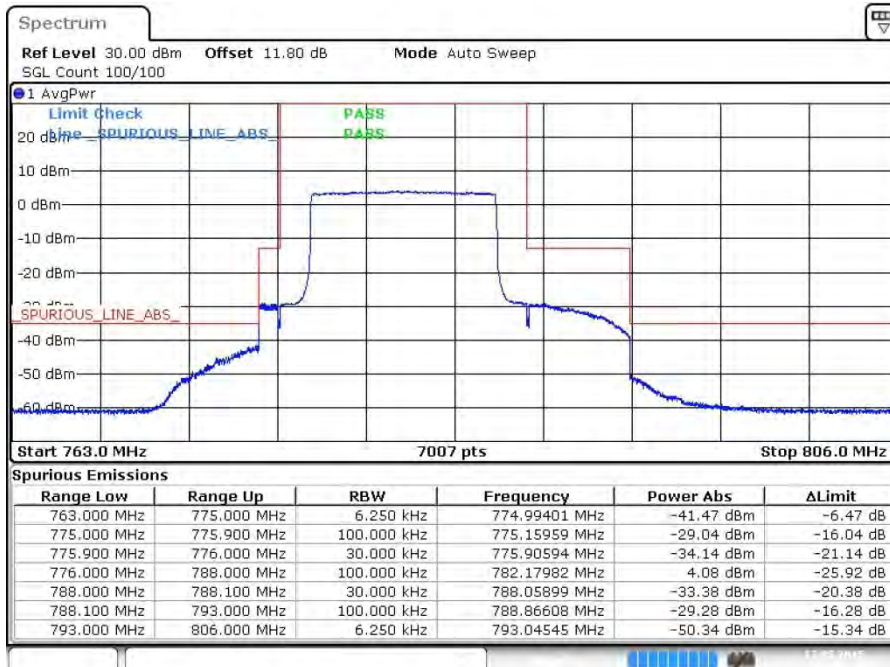
Date: 17 MAY 2015 03:04:48

Highest Band Edge / 1 RB



Date: 17 MAY 2015 03:05:58

Band Edge / Full RB

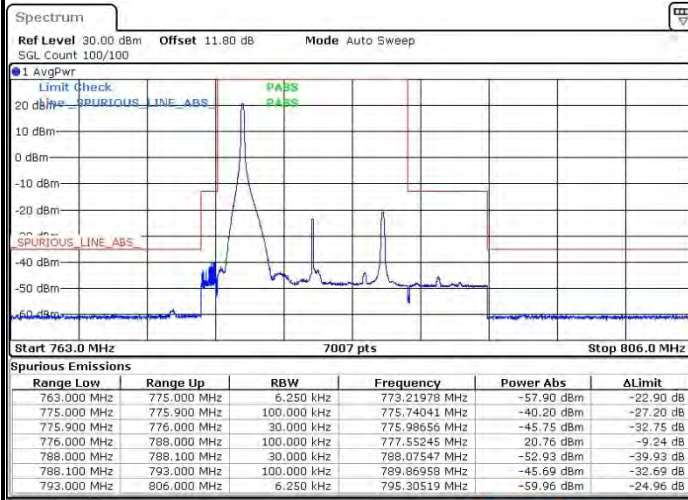


Date: 17 MAY 2015 03:01:18



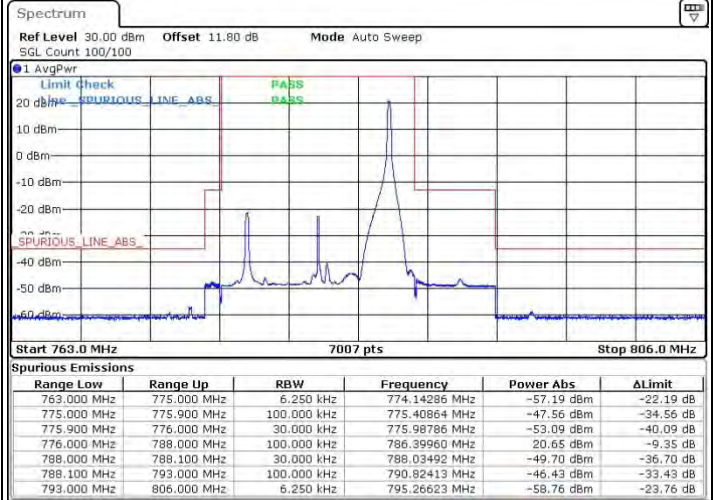
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



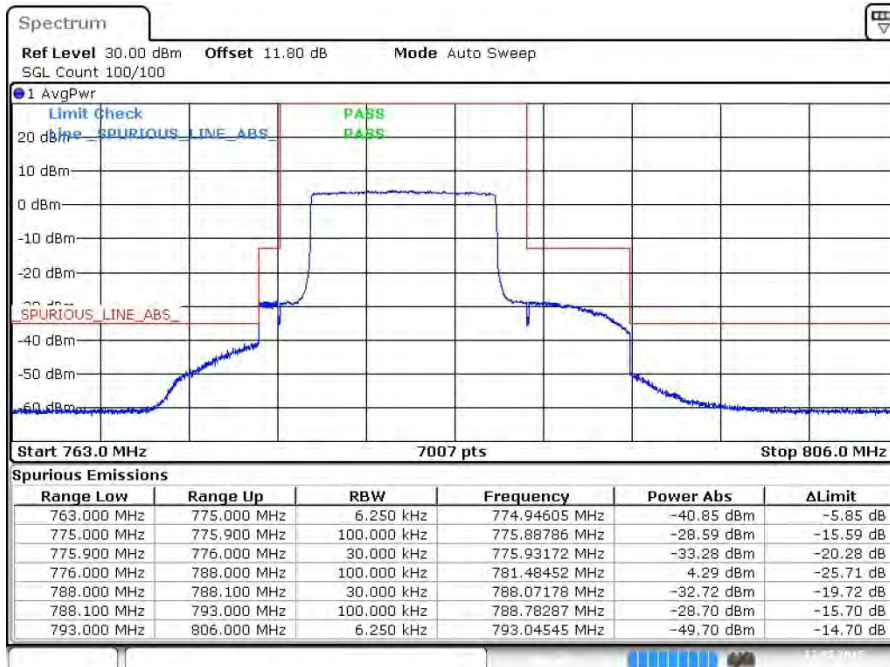
Date: 17 MAY 2015 03:03:38

Highest Band Edge / 1 RB



Date: 17 MAY 2015 03:07:08

Band Edge / Full RB

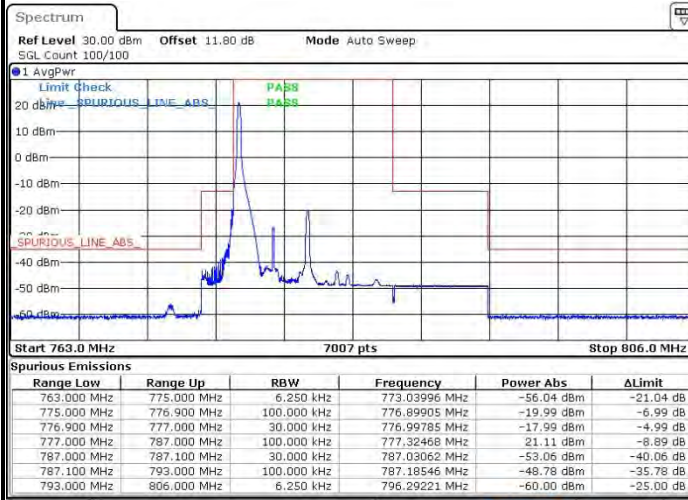


Date: 17 MAY 2015 03:02:28



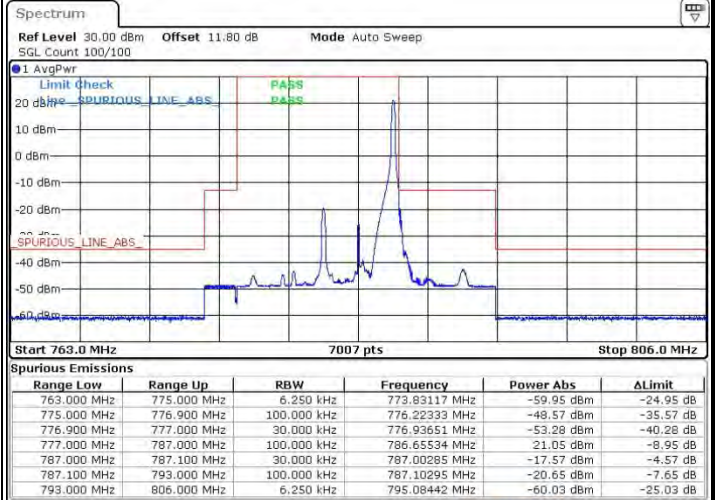
IC LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB



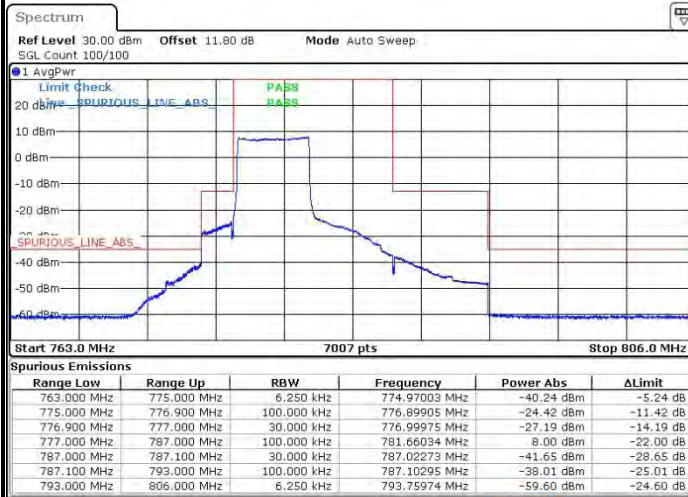
Date: 17 MAY 2015 07:28:48

Highest Band Edge / 1 RB



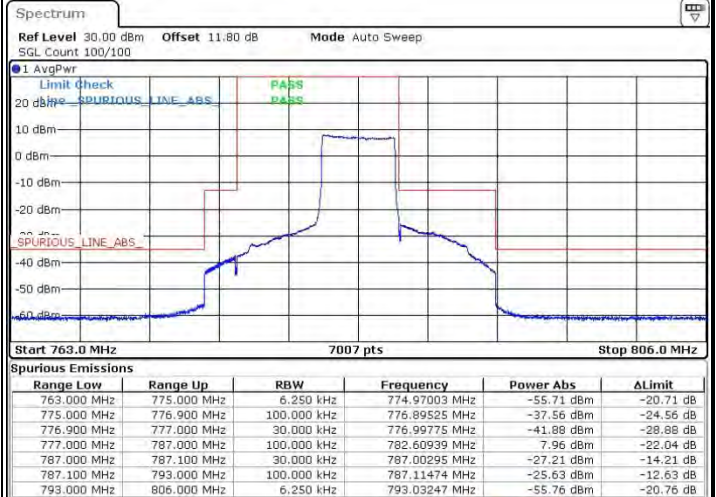
Date: 17 MAY 2015 07:37:58

Lowest Band Edge / Full RB



Date: 17 MAY 2015 07:25:03

Highest Band Edge / Full RB

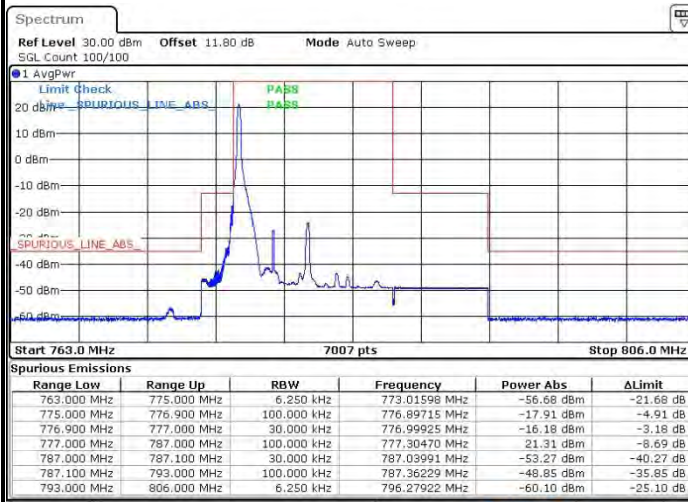


Date: 17 MAY 2015 07:40:17

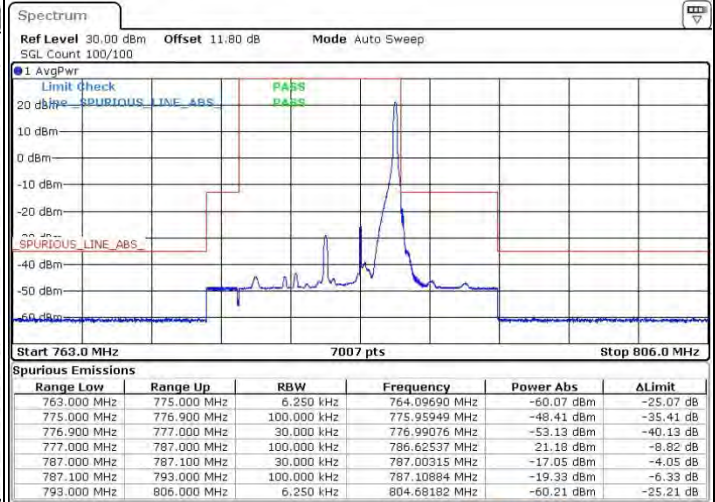


IC LTE Band 13 / 5MHz / 16QAM

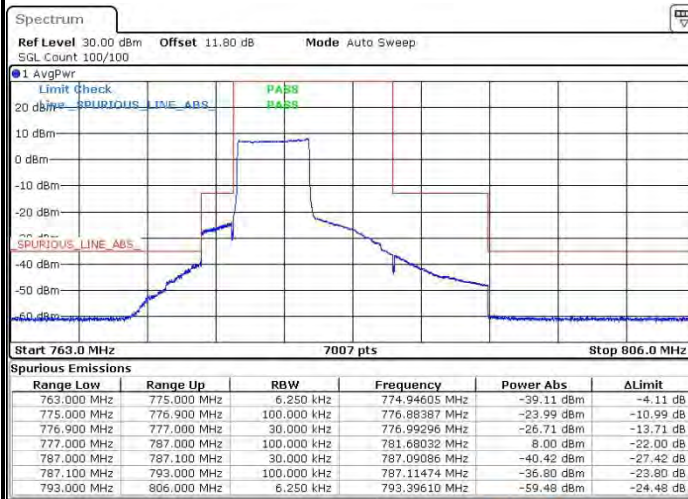
Lowest Band Edge / 1 RB



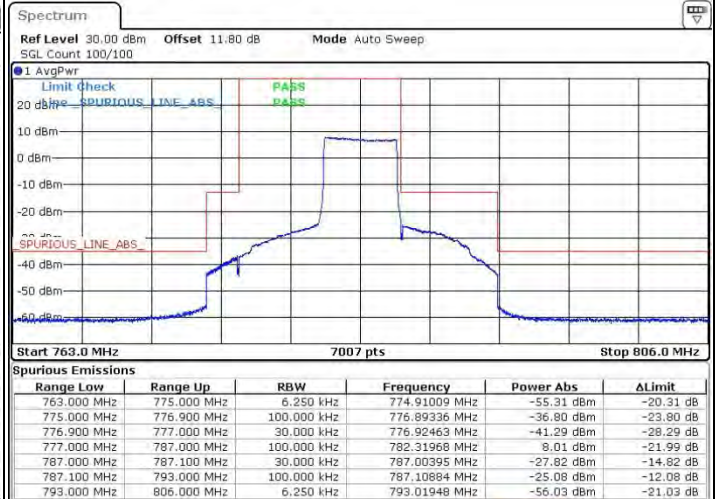
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



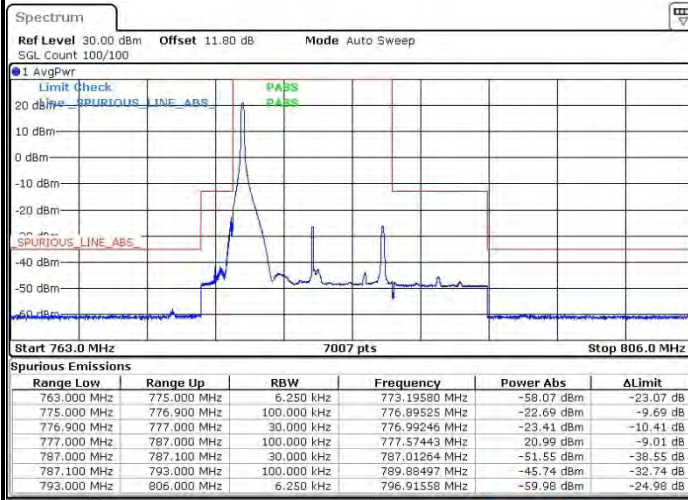
Highest Band Edge / Full RB





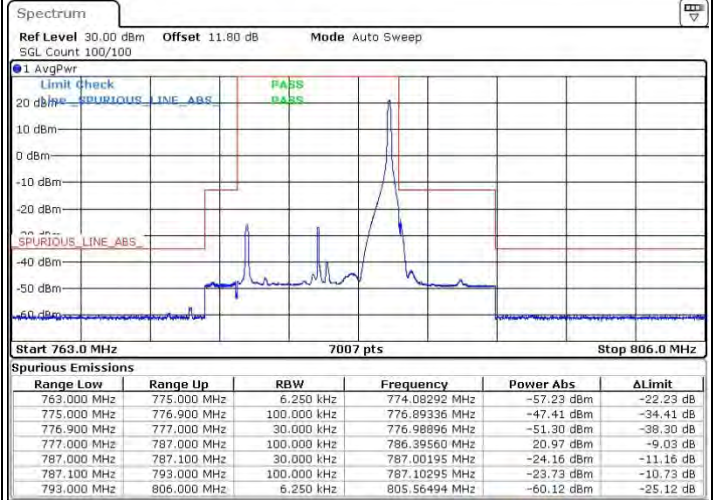
IC LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



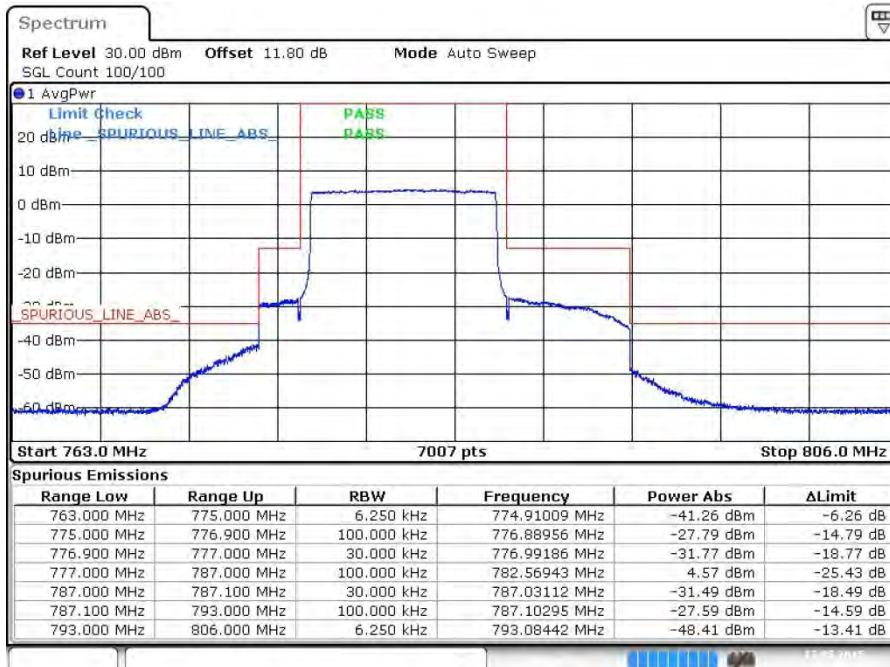
Date: 17 MAY 2015 07:58:59

Highest Band Edge / 1 RB



Date: 17 MAY 2015 08:05:18

Band Edge / Full RB

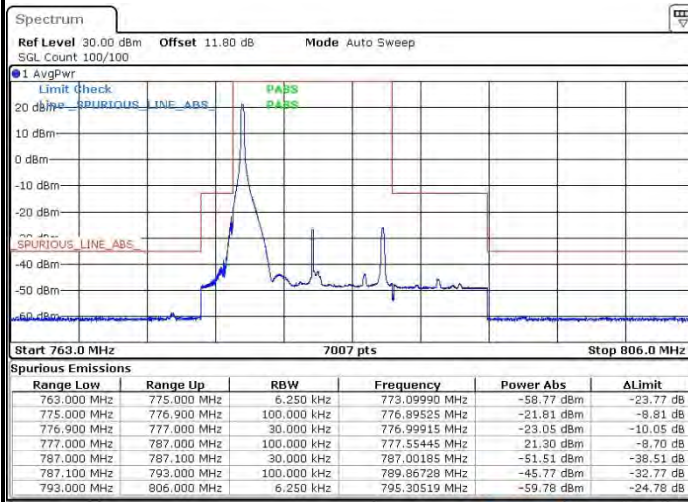


Date: 17 MAY 2015 07:57:50



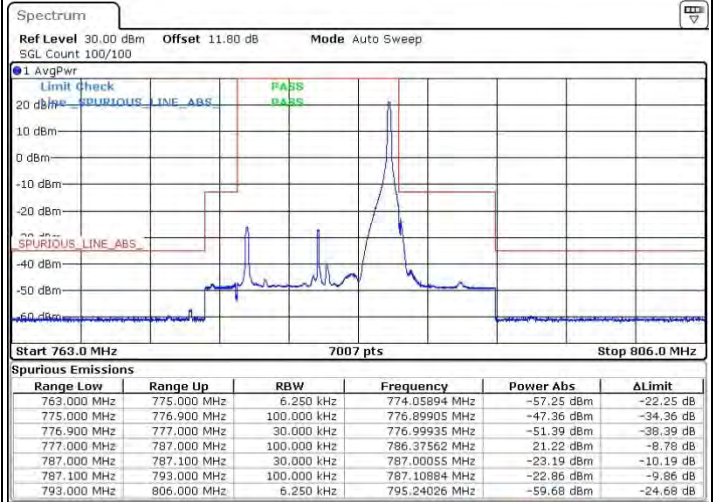
IC LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



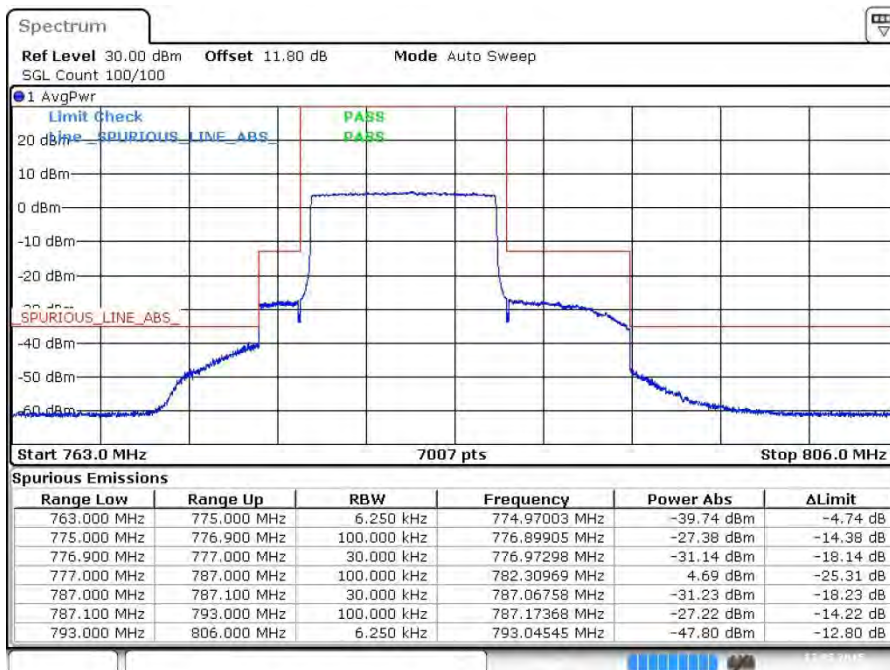
Date: 17 MAY 2015 08:01:46

Highest Band Edge / 1 RB



Date: 17 MAY 2015 08:03:24

Band Edge / Full RB



Date: 17 MAY 2015 07:52:55

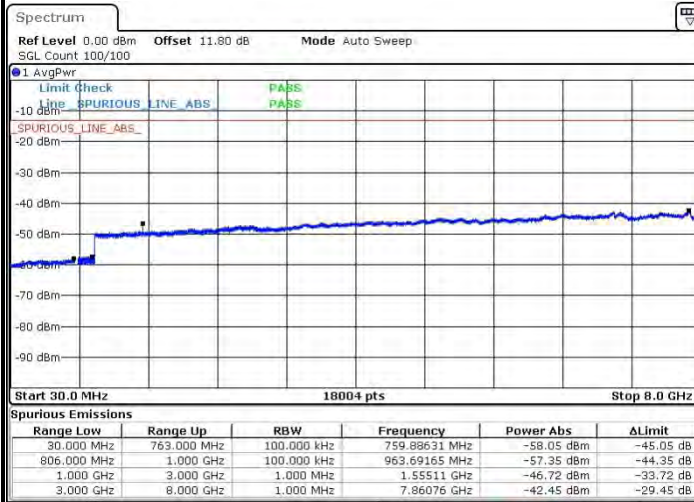


Conducted Spurious Emission



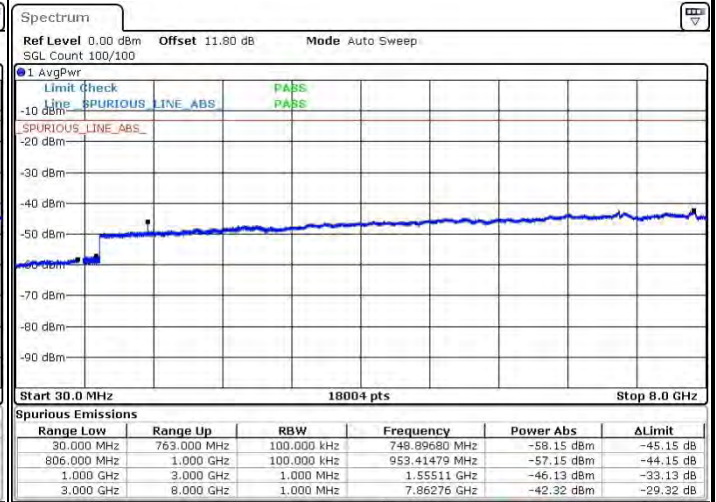
LTE Band 13 / 5MHz

Lowest Channel / QPSK



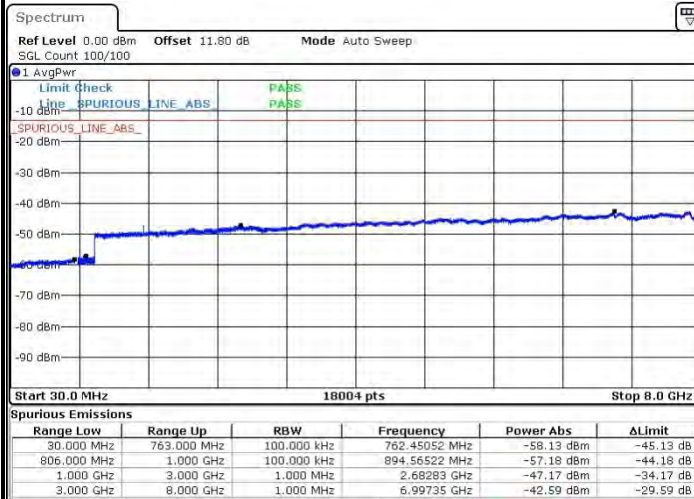
Date: 17 MAY 2015 02:36:50

Lowest Channel / 16QAM



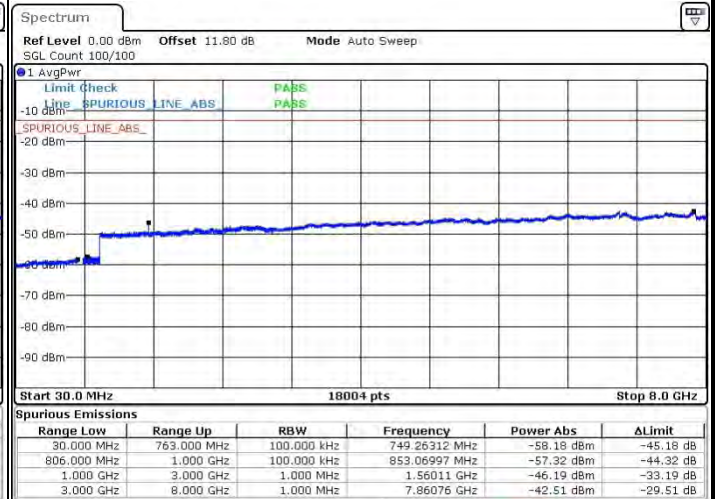
Date: 17 MAY 2015 02:38:00

Middle Channel / QPSK



Date: 17 MAY 2015 02:40:19

Middle Channel / 16QAM

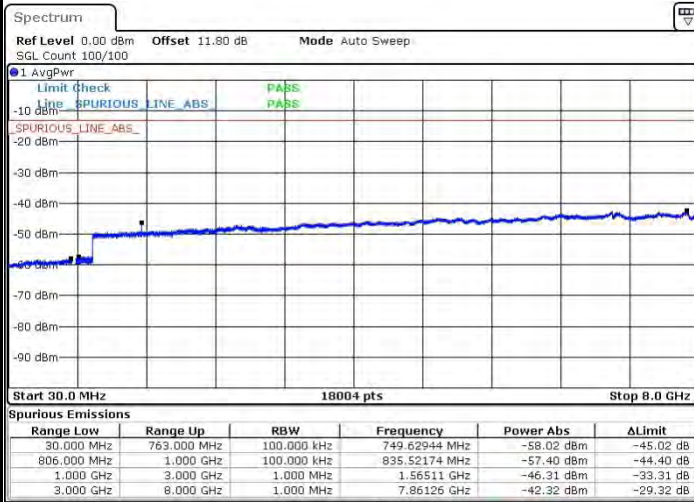


Date: 17 MAY 2015 02:39:10



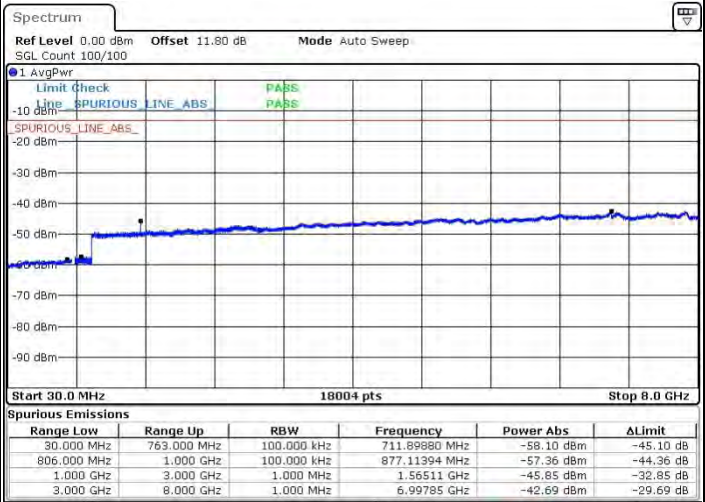
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 17 MAY 2015 02:43:03

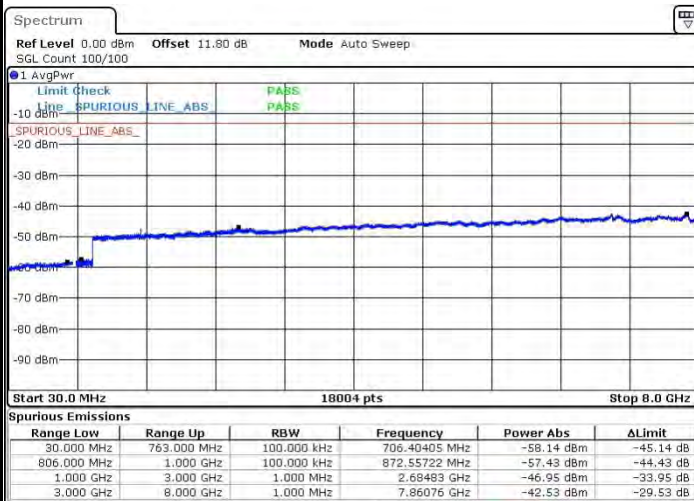
Highest Channel / 16QAM



Date: 17 MAY 2015 02:44:12

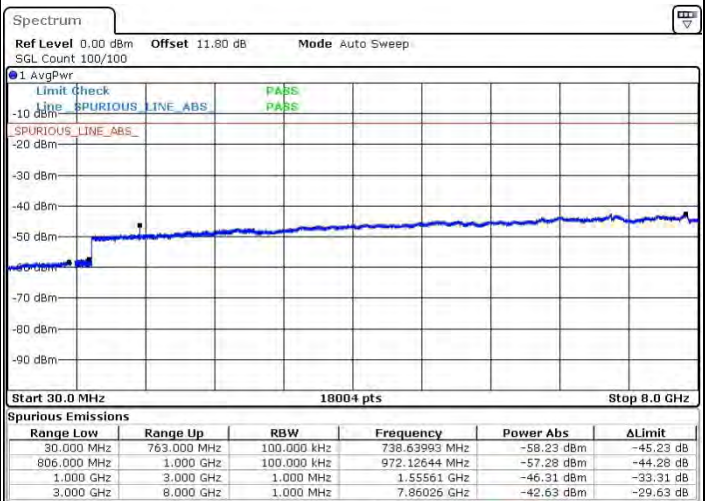
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 17 MAY 2015 02:47:23

Middle Channel / 16QAM



Date: 17 MAY 2015 02:46:13

Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0026	PASS
40	Normal Voltage	0.0001	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0010	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0006	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0022	

Note:

1. Normal Voltage = 3.7V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.1V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 5MHz	Within Band
		Frequency Offset (Δf) (Hz)	Result
50	Normal Voltage	2	PASS
40	Normal Voltage	0.1	
30	Normal Voltage	1.9	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	1.1	
0	Normal Voltage	0.8	
-10	Normal Voltage	0.9	
-20	Normal Voltage	0.5	
-30	Normal Voltage	1.5	
20	Maximum Voltage	-0.1	
20	Normal Voltage	0	
20	Battery End Point	1.7	

$|\text{MAX}(\Delta f)| = 2\text{Hz}$

Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	777.129994	$\geq 777 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	786.870006	$\leq 787 \text{ MHz}$	