



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	3.88	4.99	5.42	6	PASS
Middle CH	4.29	4.87	4.93	6	
Highest CH	4.03	4.78	5.22	5.83	

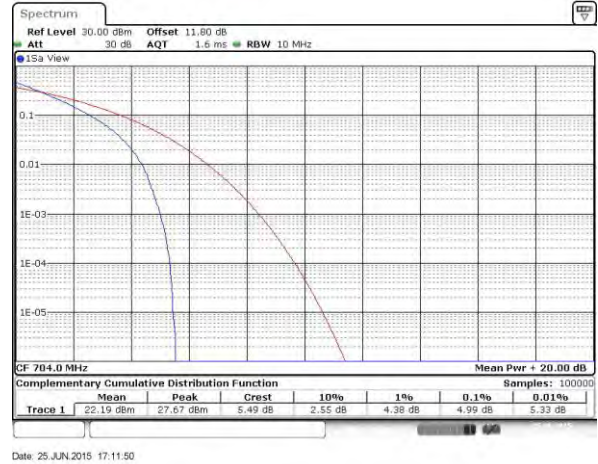


LTE Band 12 / 10MHz / QPSK

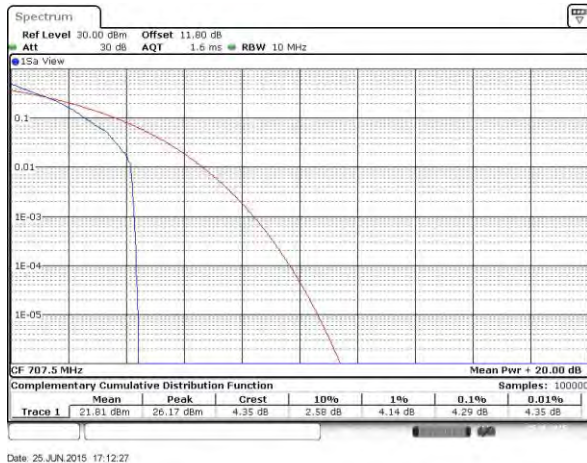
Lowest Channel / 1RB



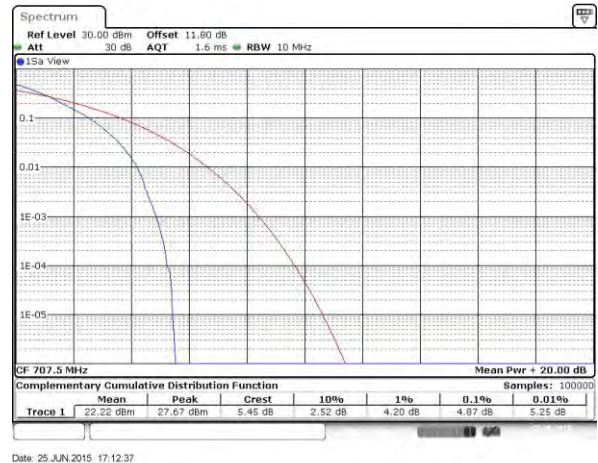
Lowest Channel / Full RB



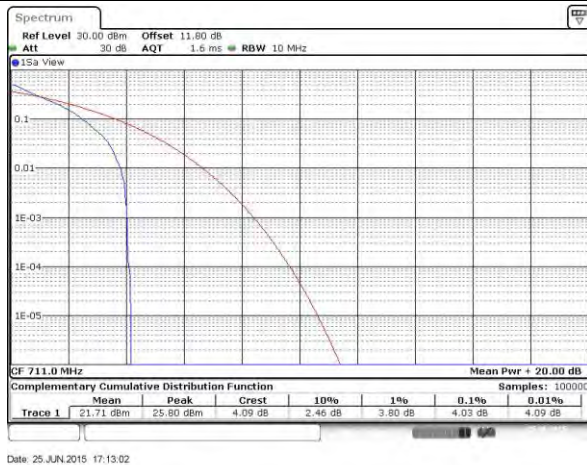
Middle Channel / 1RB



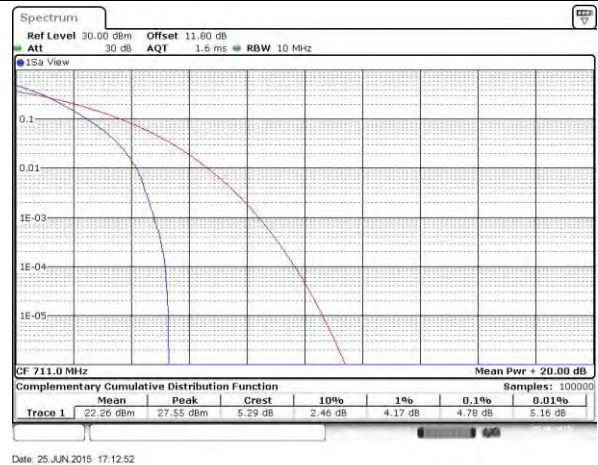
Middle Channel / Full RB



Highest Channel / 1RB



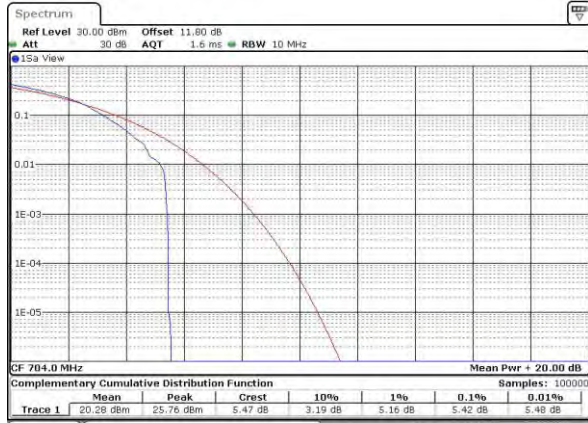
Highest Channel / Full RB



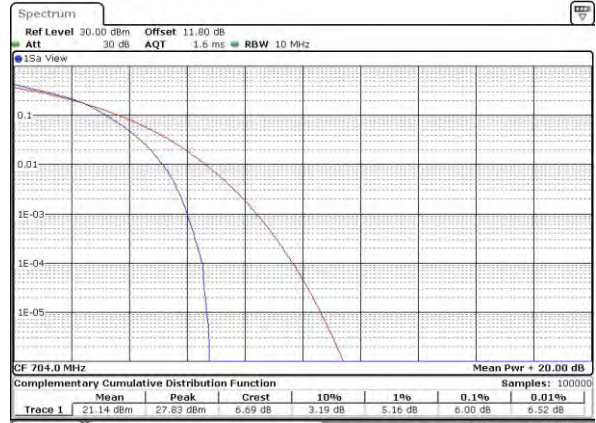


LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



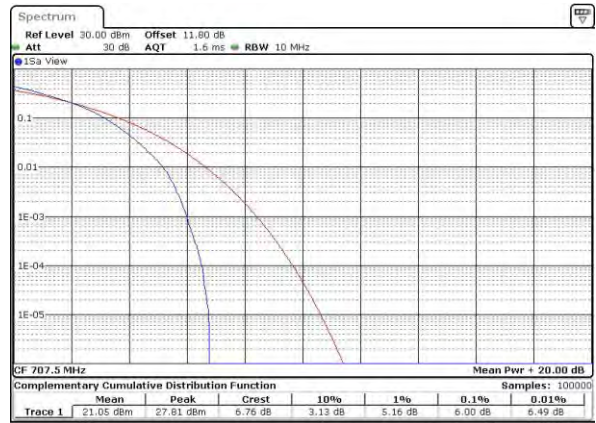
Lowest Channel / Full RB



Middle Channel / 1RB



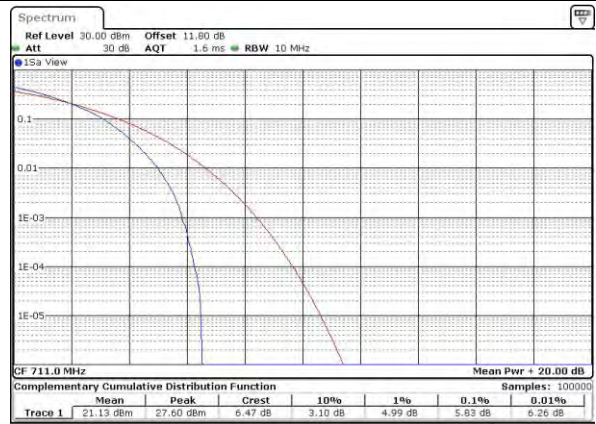
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





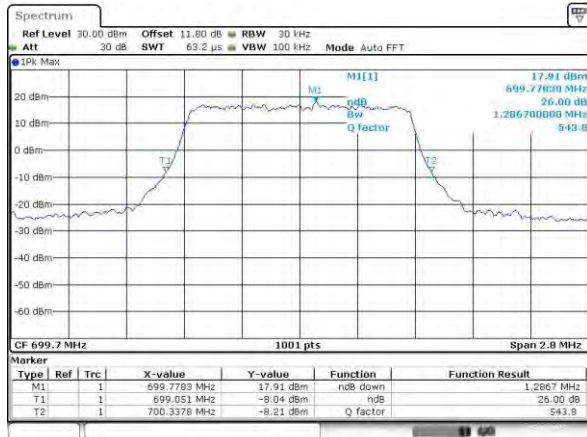
26dB Bandwidth

Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.29	1.3	3.05	2.97	5.05	5.06	10.01	10.09	-	-	-	-
Middle CH	1.28	1.3	3.04	3.05	5	5.05	9.93	9.99	-	-	-	-
Highest CH	1.28	1.3	3.05	3.06	5.07	5.08	10.03	9.99	-	-	-	-

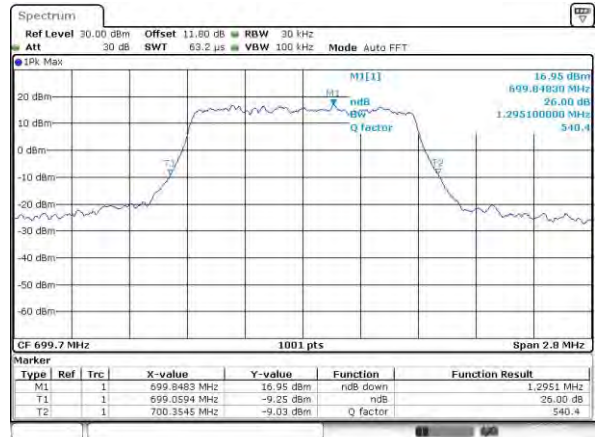


LTE Band 12

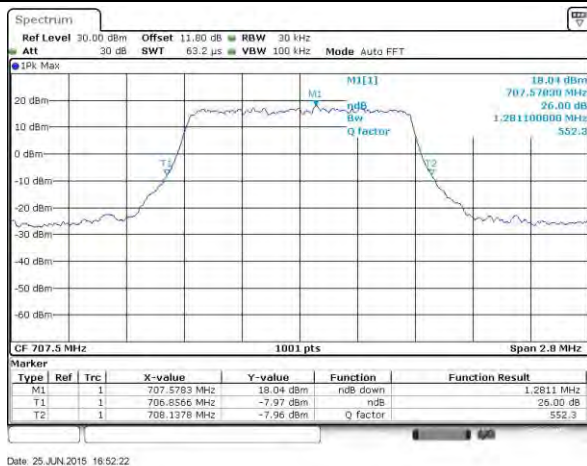
Lowest Channel / 1.4MHz / QPSK



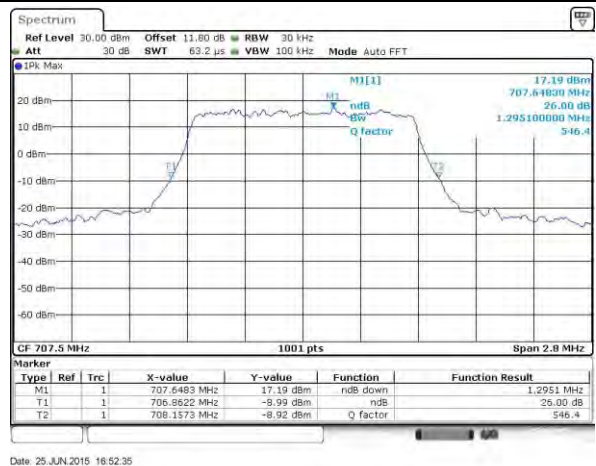
Lowest Channel / 1.4MHz / 16QAM



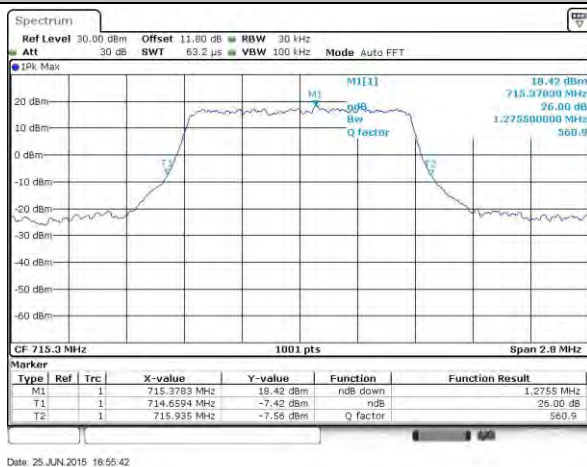
Middle Channel / 1.4MHz / QPSK



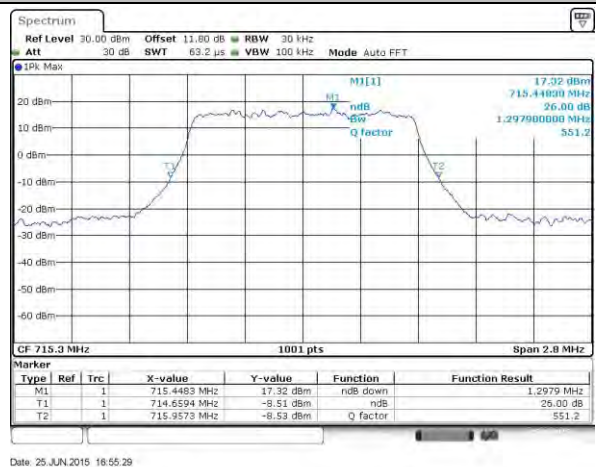
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



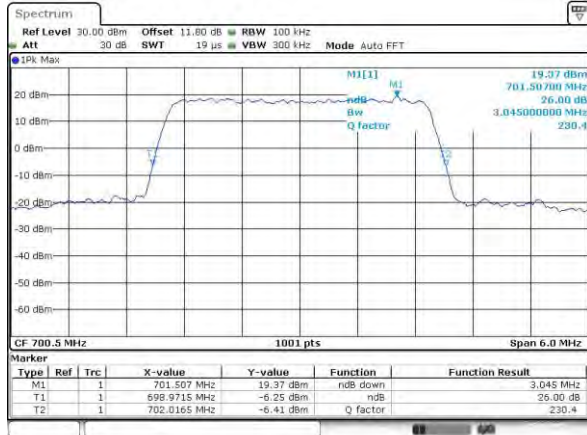
Highest Channel / 1.4MHz / 16QAM



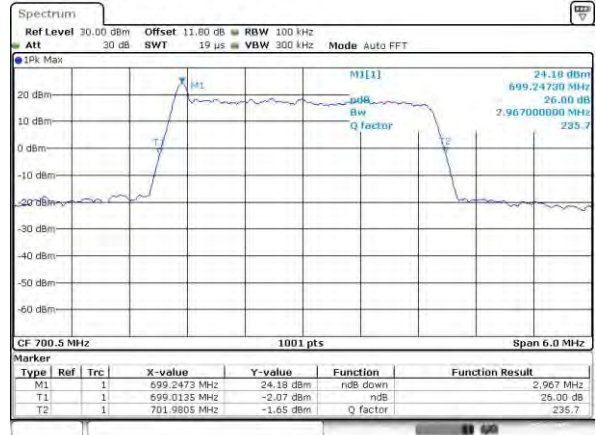


LTE Band 12

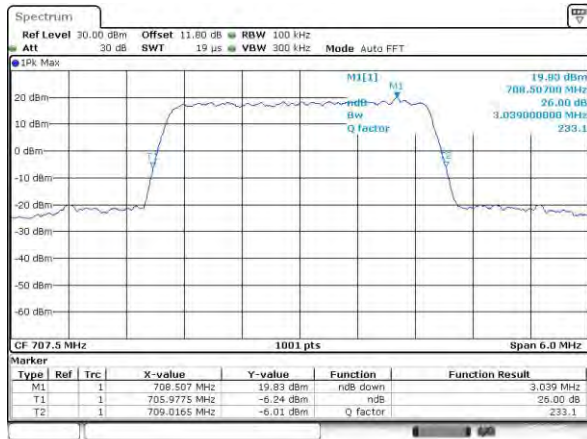
Lowest Channel / 3MHz / QPSK



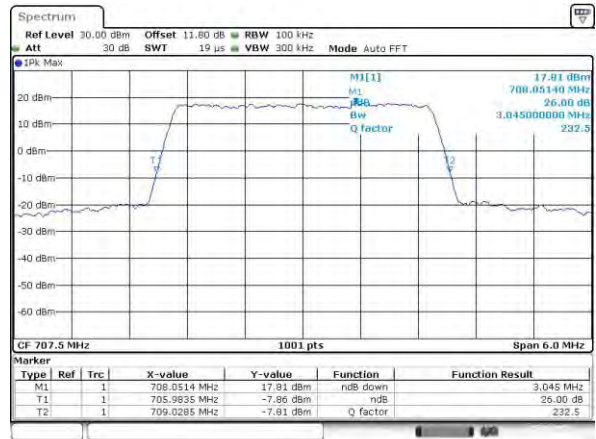
Lowest Channel / 3MHz / 16QAM



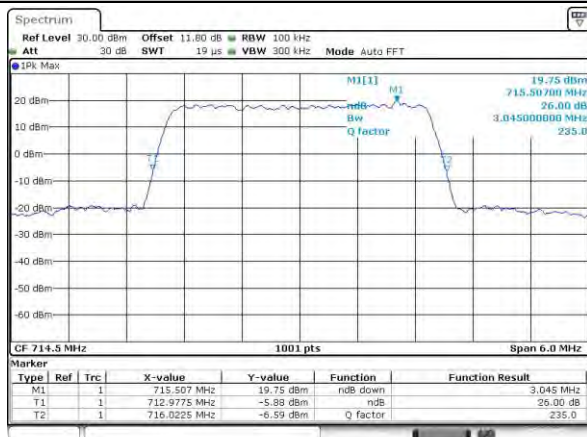
Middle Channel / 3MHz / QPSK



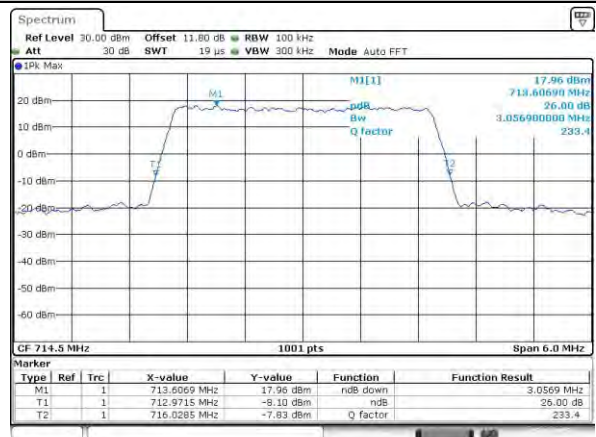
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



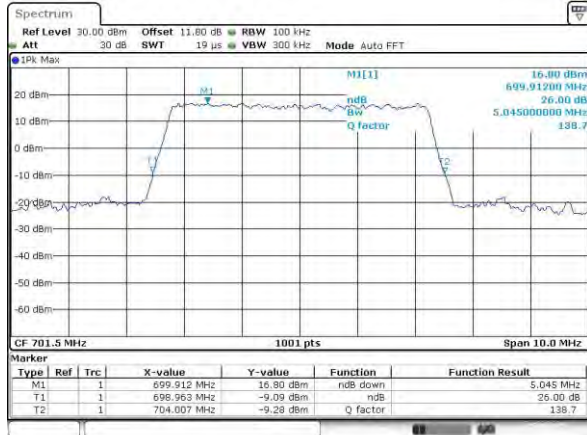
Highest Channel / 3MHz / 16QAM



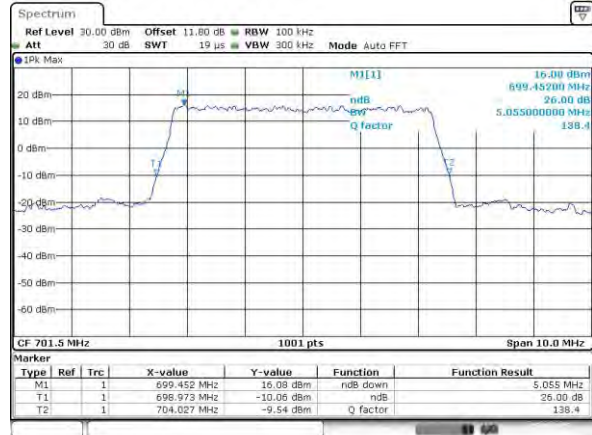


LTE Band 12

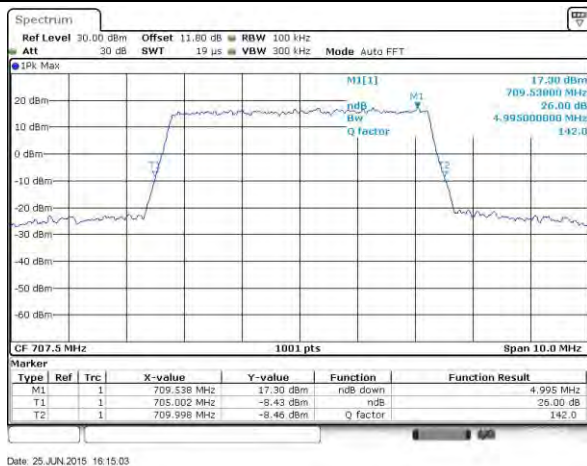
Lowest Channel / 5MHz / QPSK



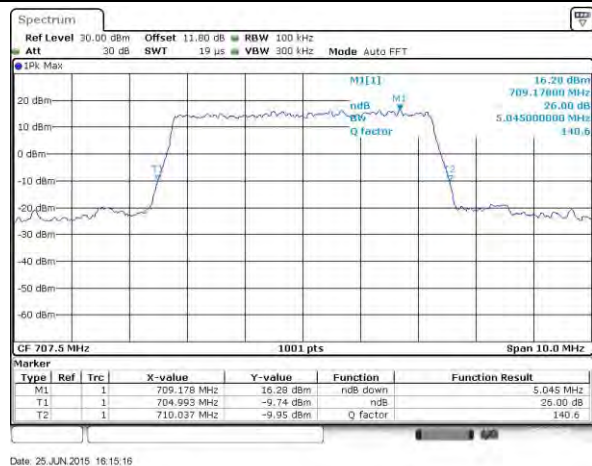
Lowest Channel / 5MHz / 16QAM



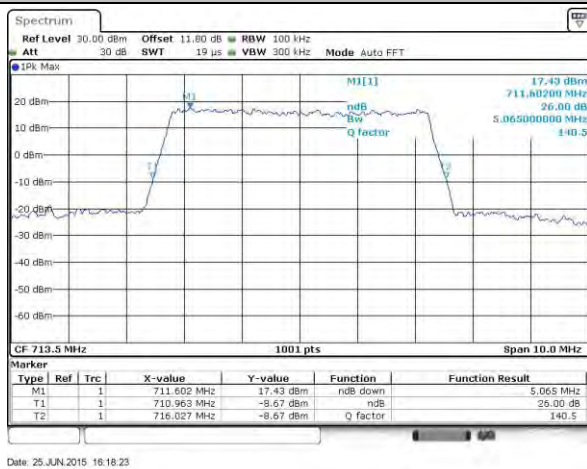
Middle Channel / 5MHz / QPSK



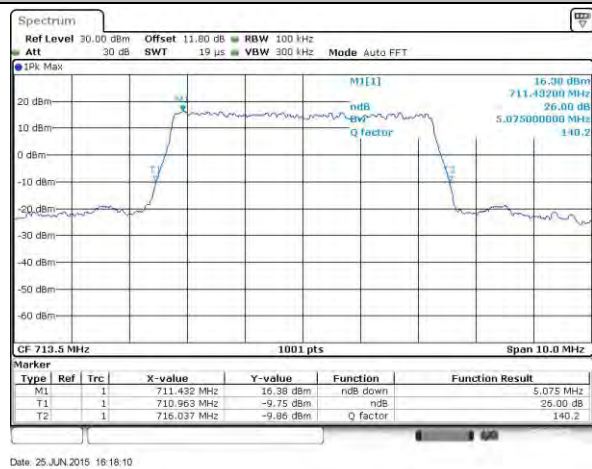
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



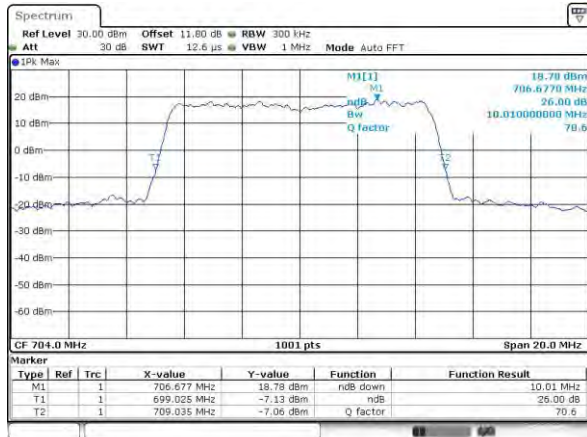
Highest Channel / 5MHz / 16QAM



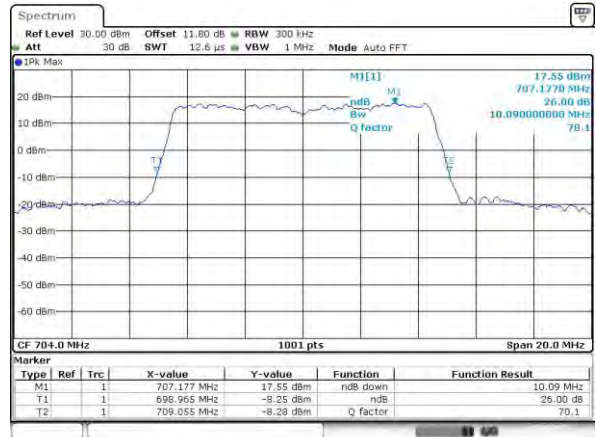


LTE Band 12

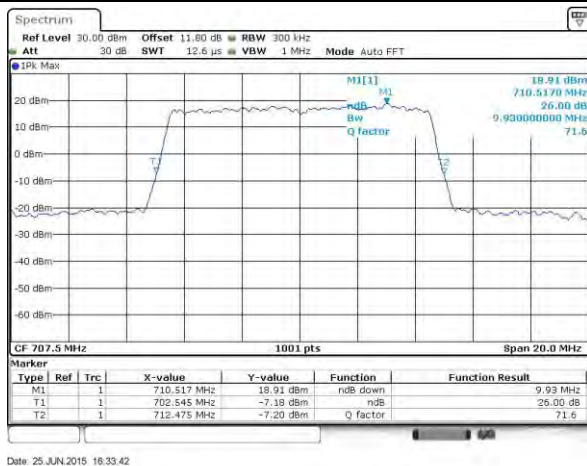
Lowest Channel / 10MHz / QPSK



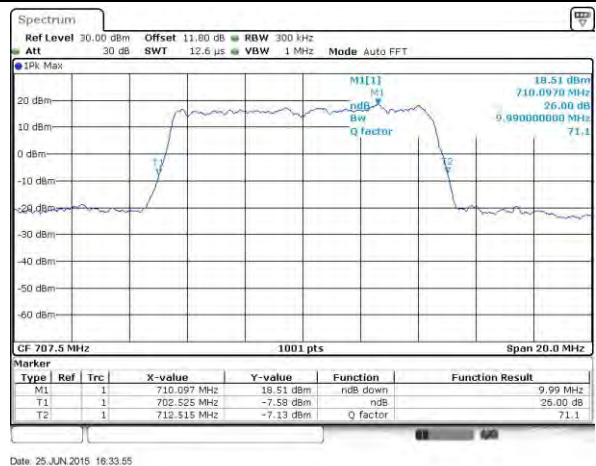
Lowest Channel / 10MHz / 16QAM



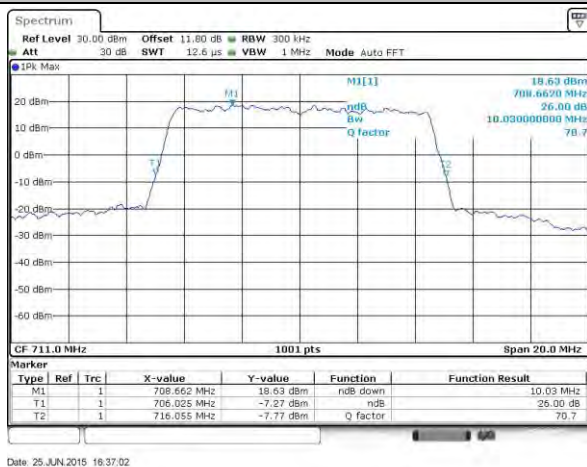
Middle Channel / 10MHz / QPSK



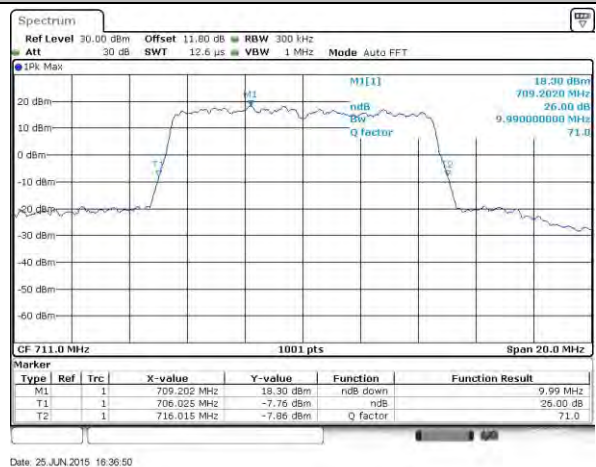
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



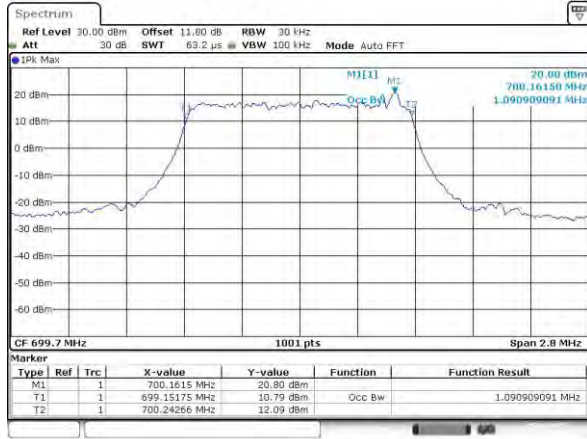
Highest Channel / 10MHz / 16QAM



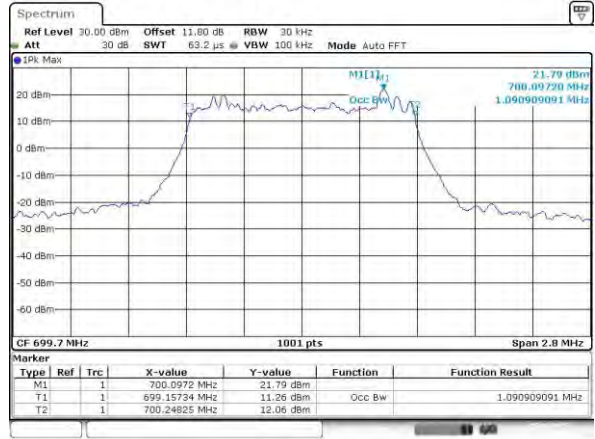


Occupied Bandwidth

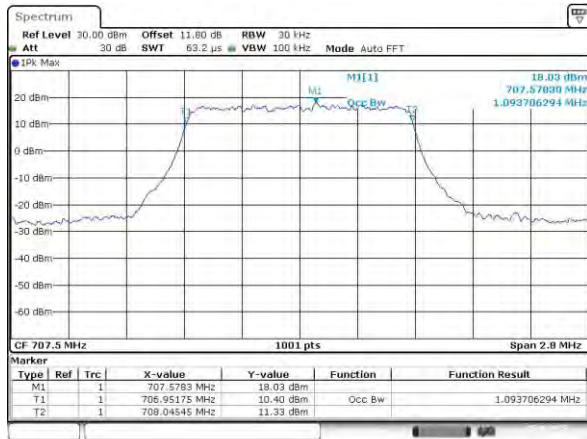
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.73	2.73	4.5	4.51	9.09	9.03	-	-	-	-
Middle CH	1.09	1.09	2.72	2.73	4.5	4.5	9.01	9.01	-	-	-	-
Highest CH	1.09	1.1	2.73	2.74	4.51	4.51	9.01	9.03	-	-	-	-

LTE Band 12
Lowest Channel / 1.4MHz / QPSK


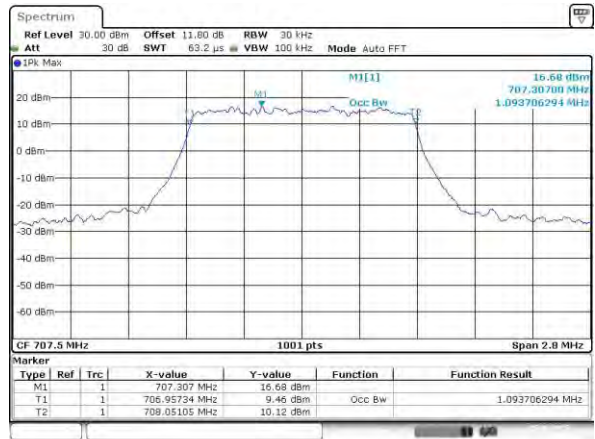
Date: 25 JUN 2015 16:44:13

Lowest Channel / 1.4MHz / 16QAM


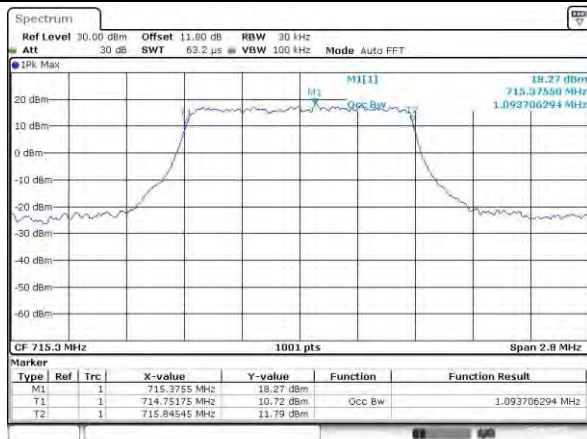
Date: 25 JUN 2015 16:44:23

Middle Channel / 1.4MHz / QPSK


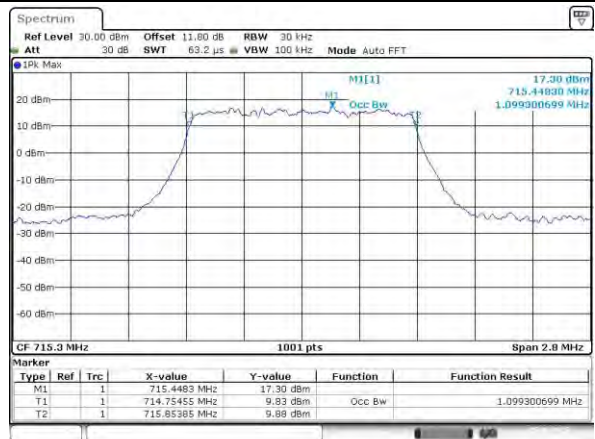
Date: 25 JUN 2015 16:52:05

Middle Channel / 1.4MHz / 16QAM


Date: 25 JUN 2015 16:51:59

Highest Channel / 1.4MHz / QPSK


Date: 25 JUN 2015 16:55:06

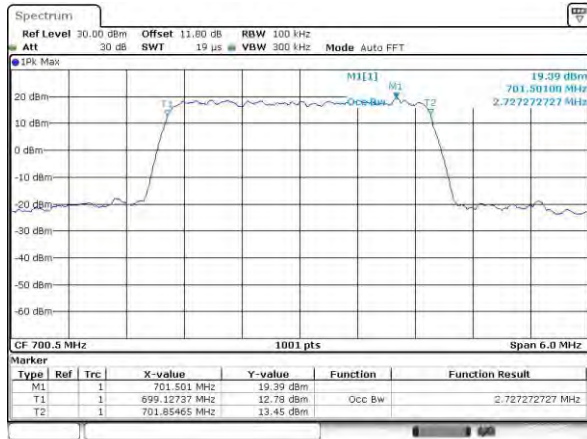
Highest Channel / 1.4MHz / 16QAM


Date: 25 JUN 2015 16:55:16

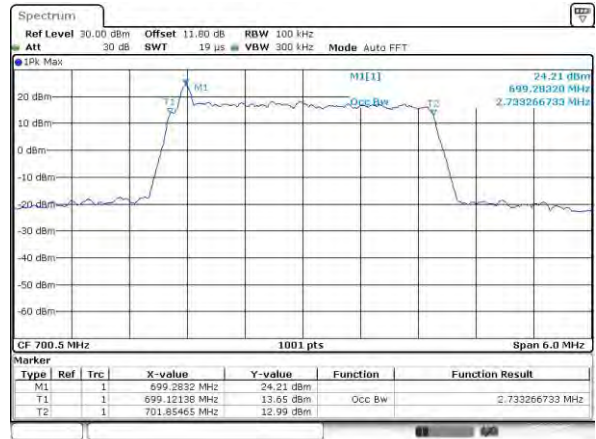


LTE Band 12

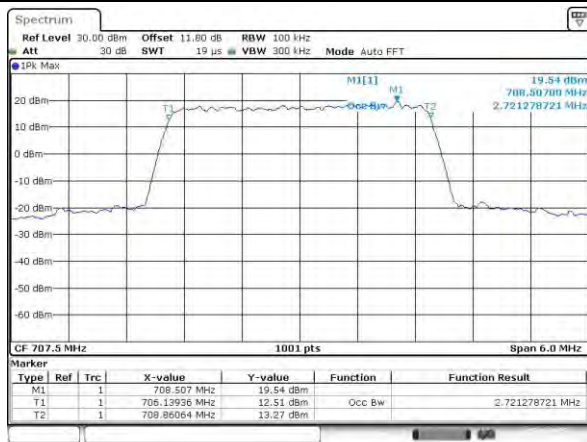
Lowest Channel / 3MHz / QPSK



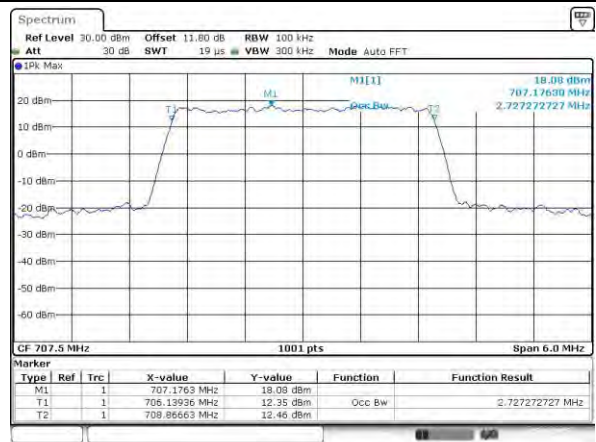
Lowest Channel / 3MHz / 16QAM



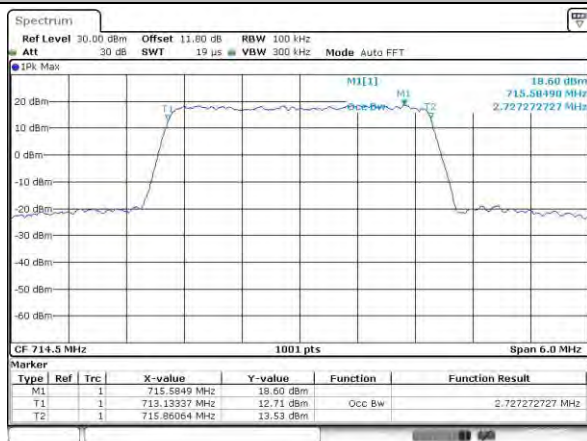
Middle Channel / 3MHz / QPSK



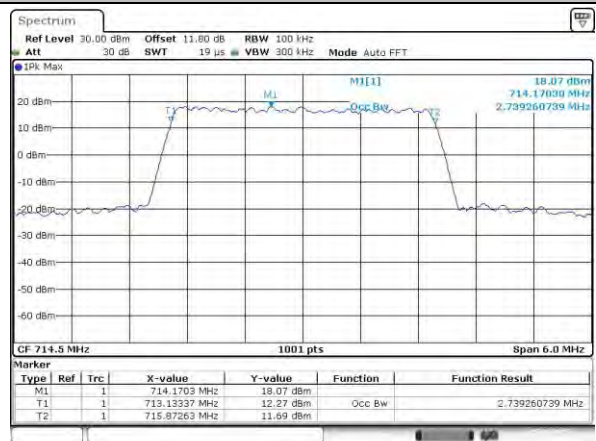
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



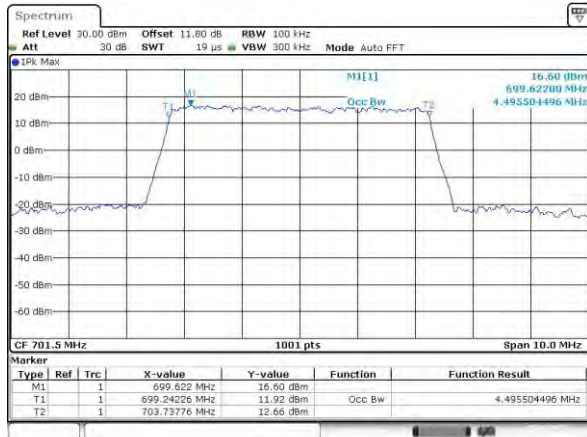
Highest Channel / 3MHz / 16QAM



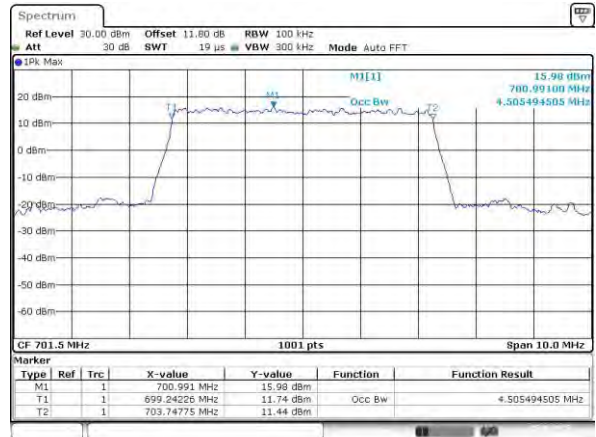


LTE Band 12

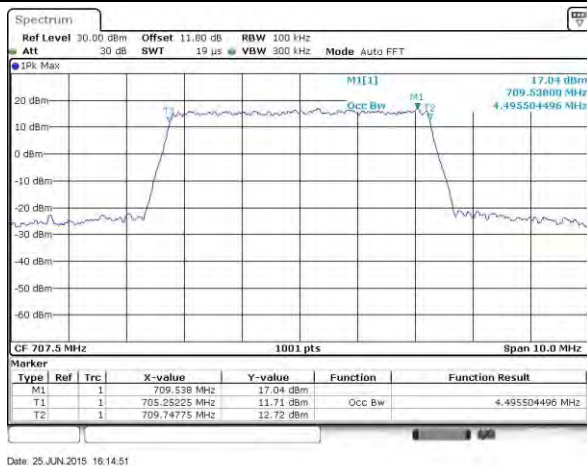
Lowest Channel / 5MHz / QPSK



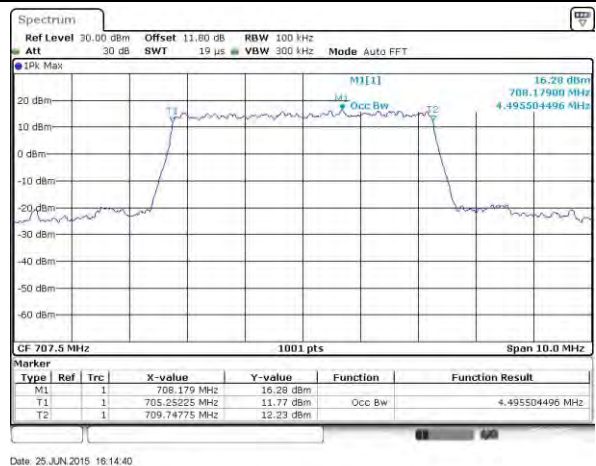
Lowest Channel / 5MHz / 16QAM



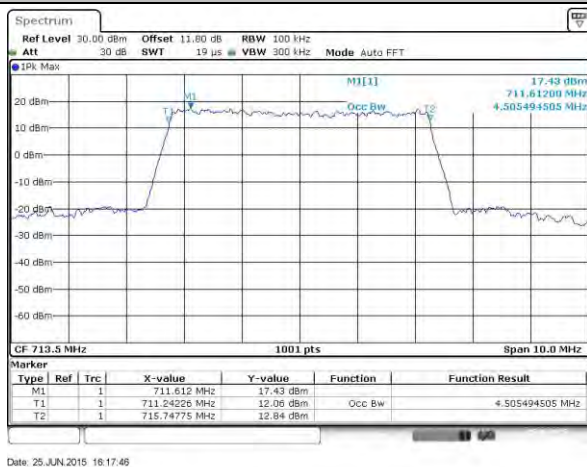
Middle Channel / 5MHz / QPSK



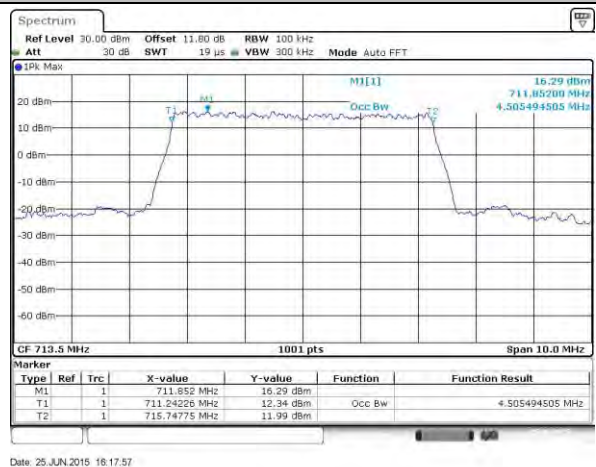
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



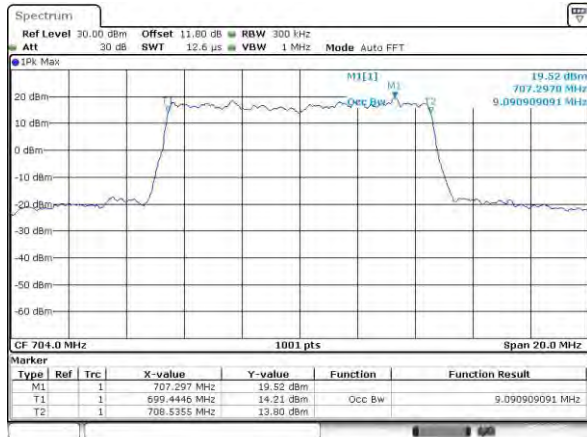
Highest Channel / 5MHz / 16QAM



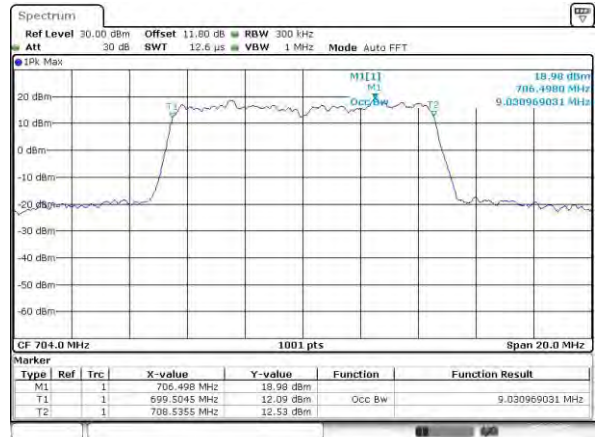


LTE Band 12

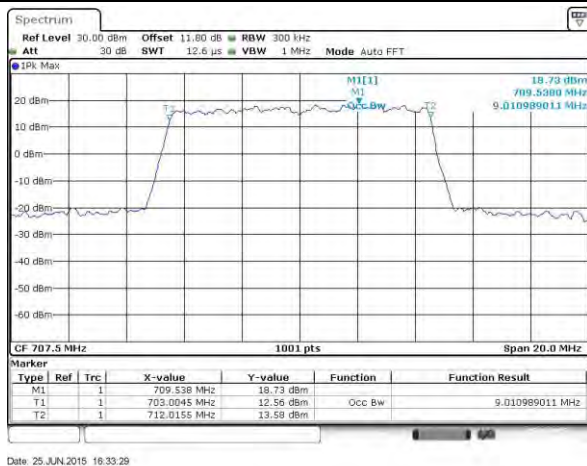
Lowest Channel / 10MHz / QPSK



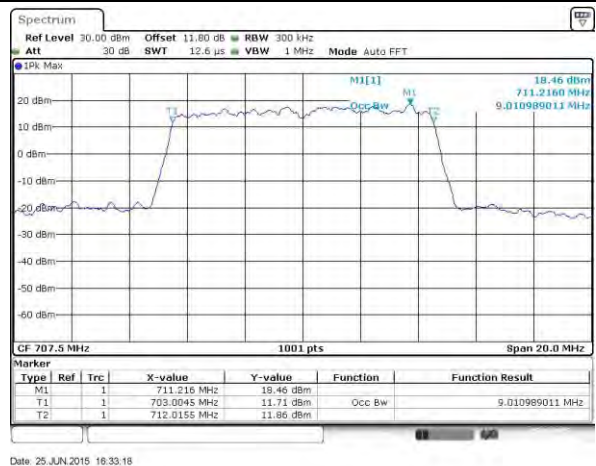
Lowest Channel / 10MHz / 16QAM



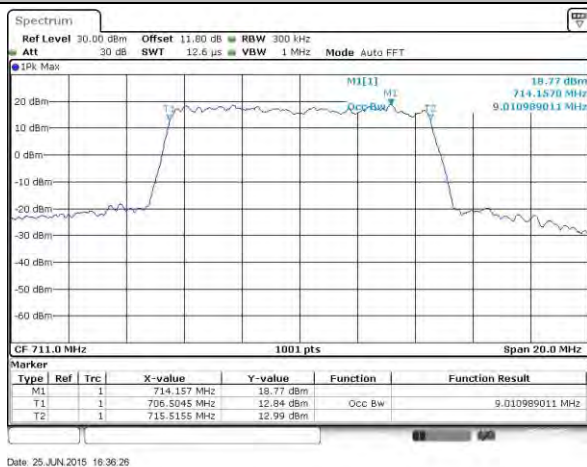
Middle Channel / 10MHz / QPSK



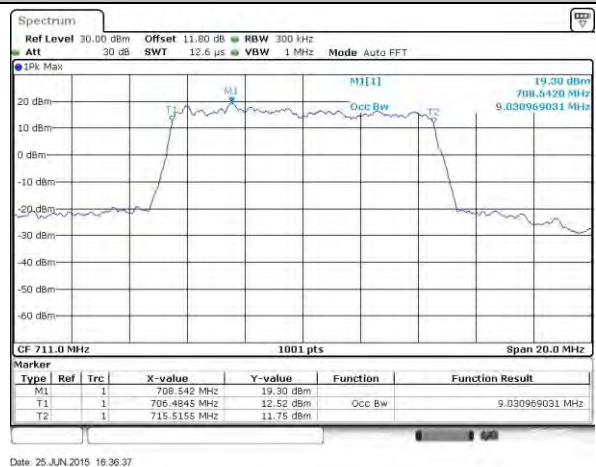
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM





Conducted Band Edge



LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1 RB



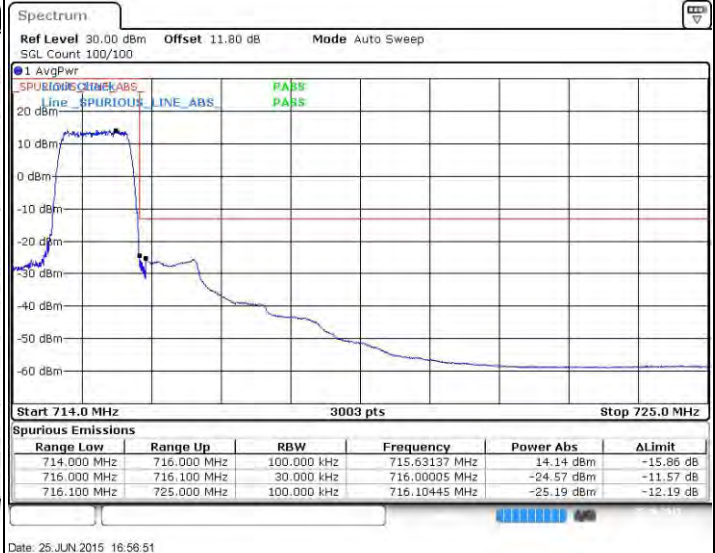
Highest Band Edge / 1RB



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



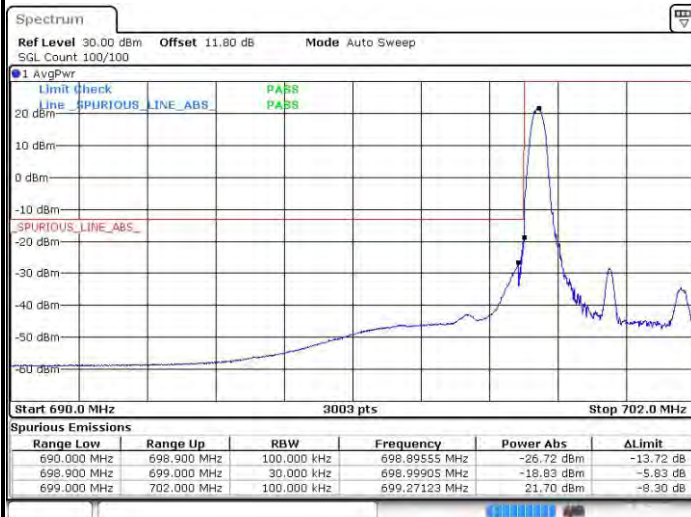
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / QPSK

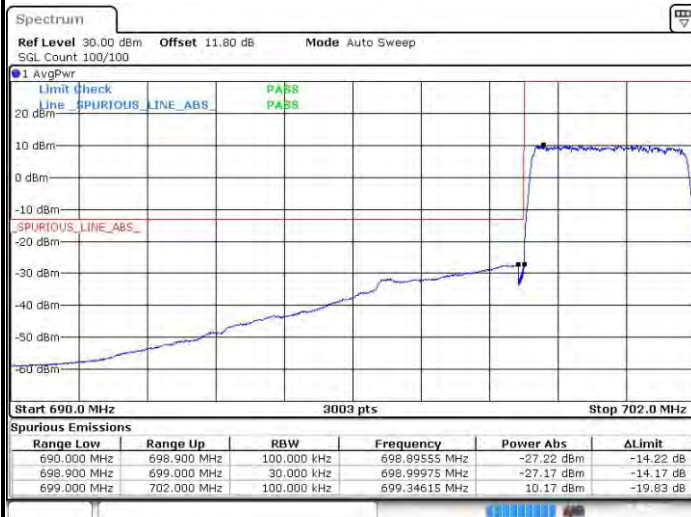
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



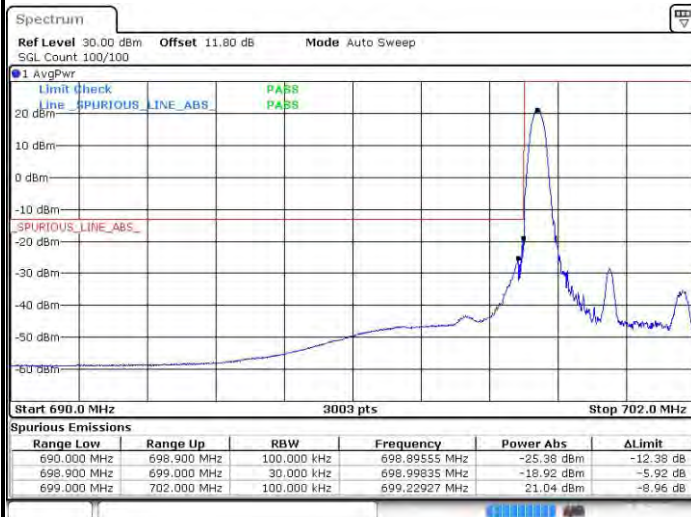
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / 16QAM

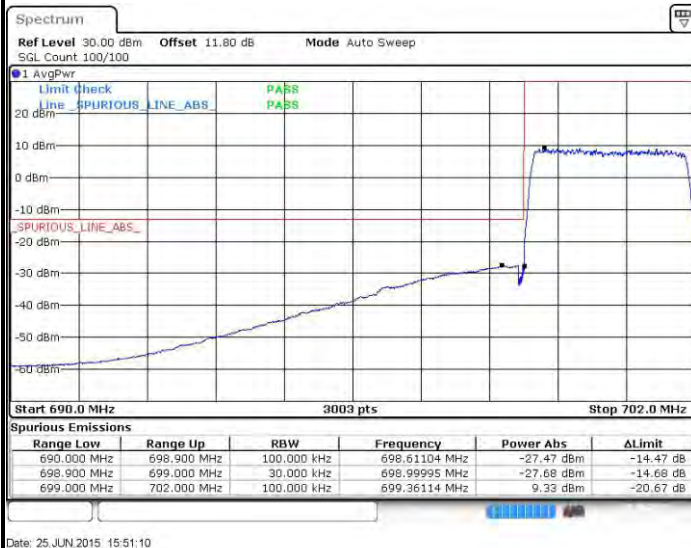
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



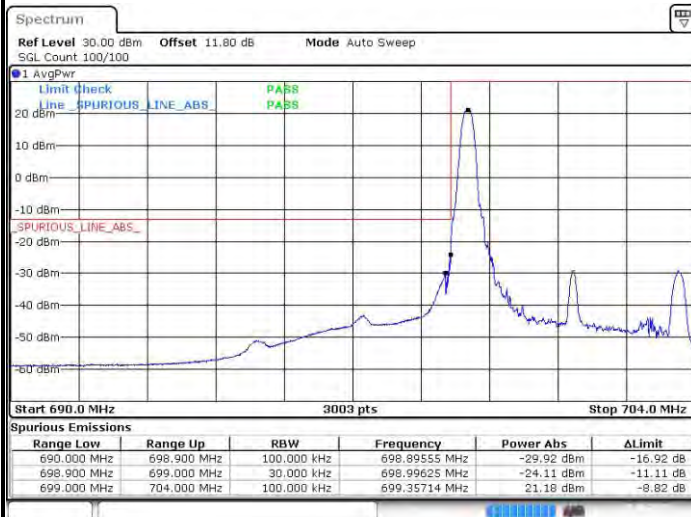
Highest Band Edge / Full RB



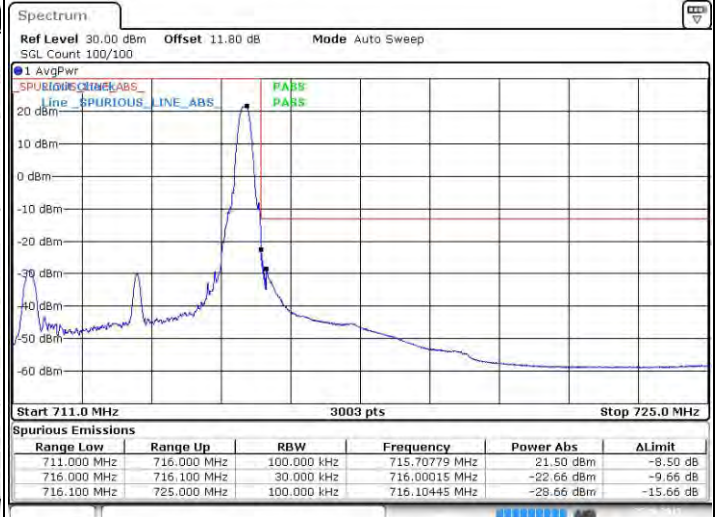


LTE Band 12 / 5MHz / QPSK

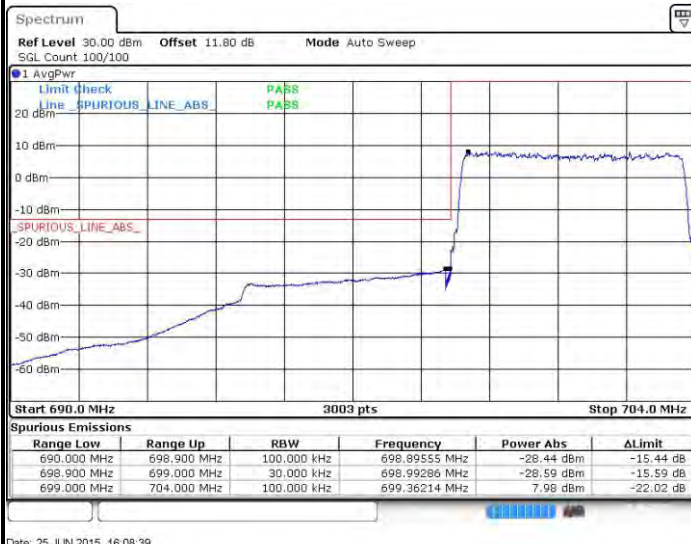
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



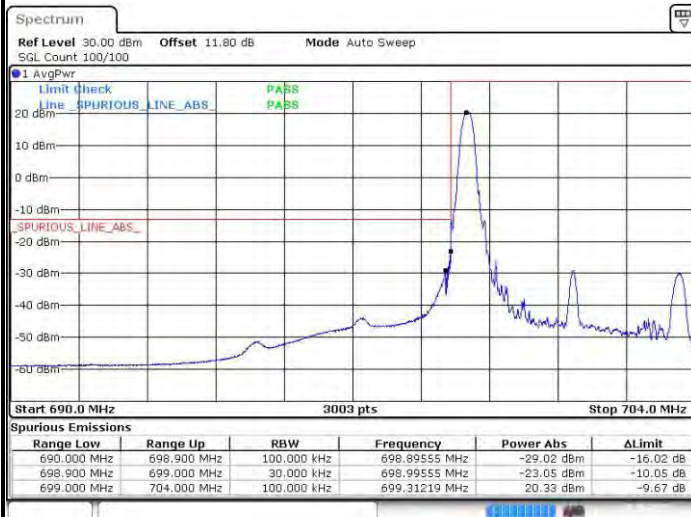
Highest Band Edge / Full RB



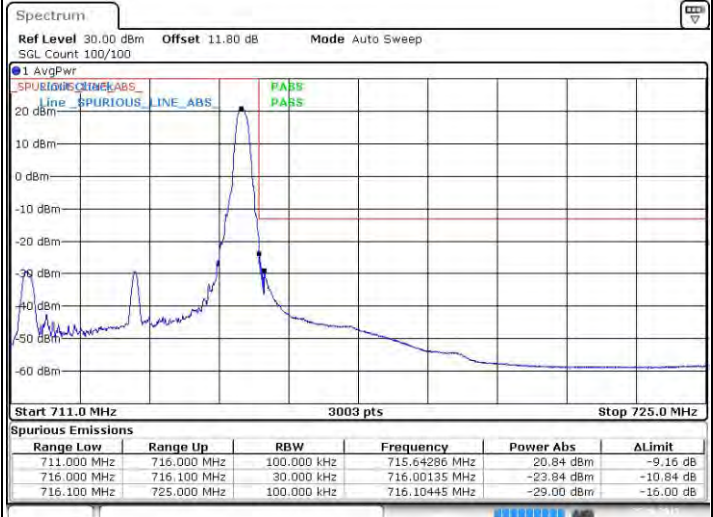


LTE Band 12 / 5MHz / 16QAM

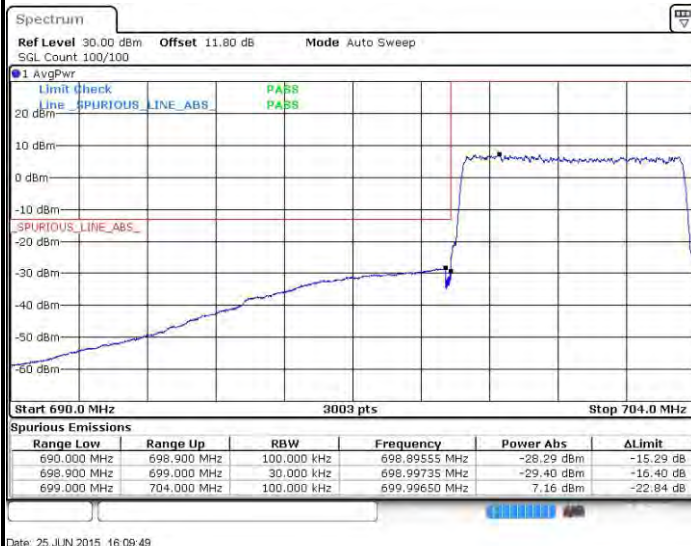
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



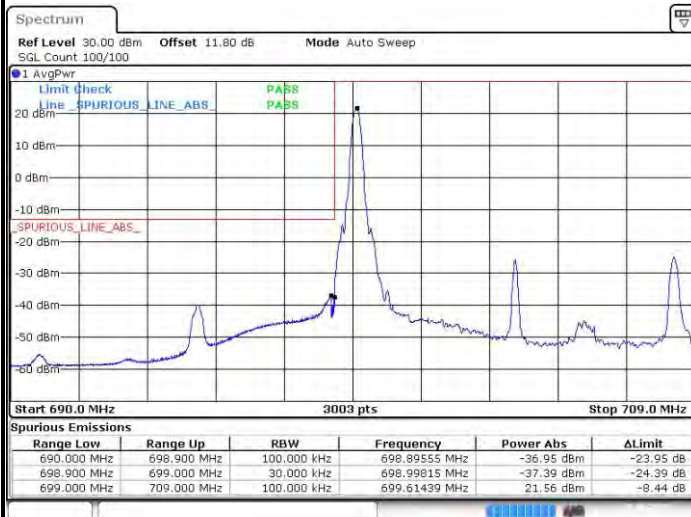
Highest Band Edge / Full RB



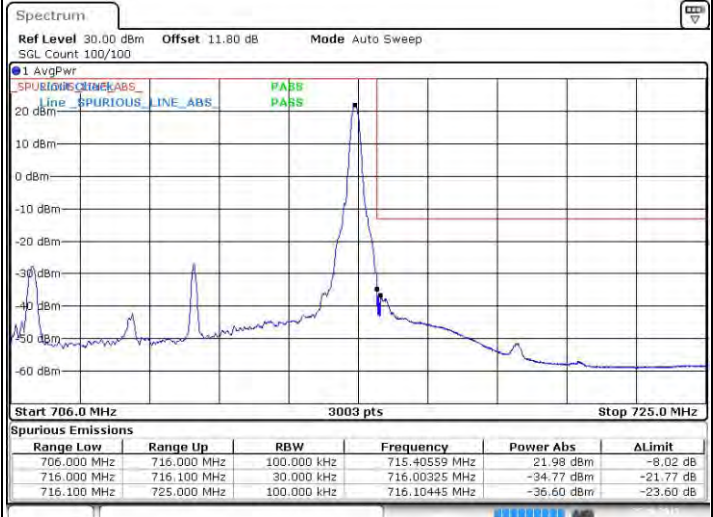


LTE Band 12 / 10MHz / QPSK

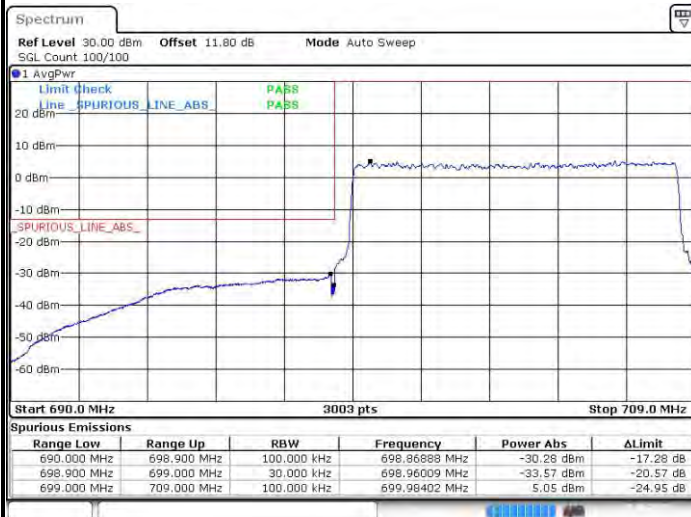
Lowest Band Edge / 1 RB



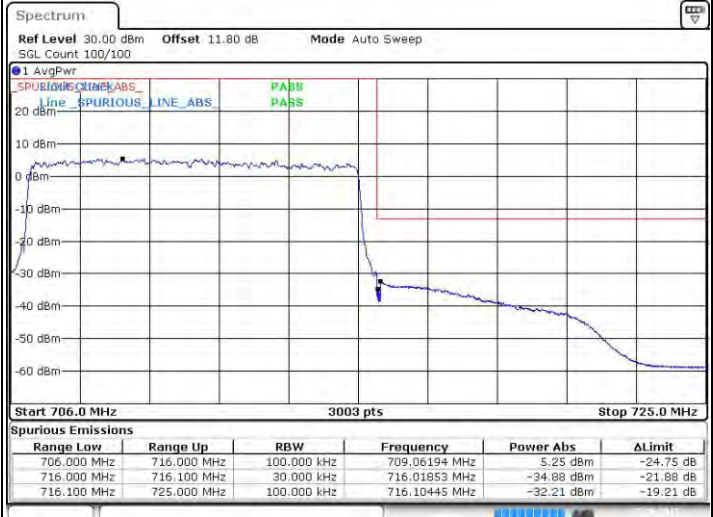
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



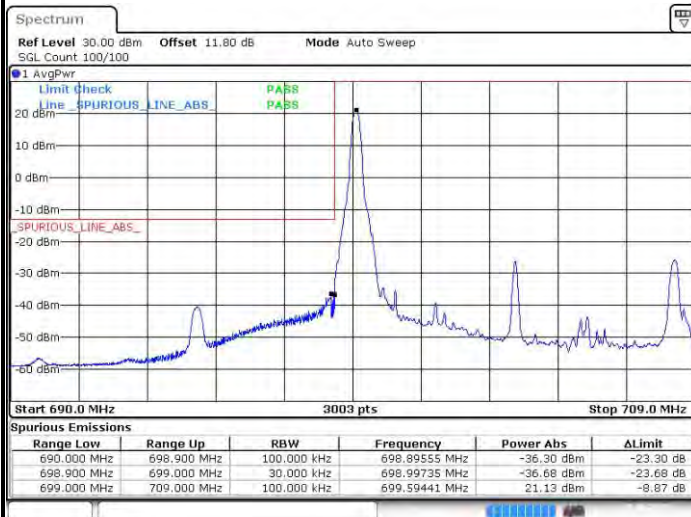
Highest Band Edge / Full RB



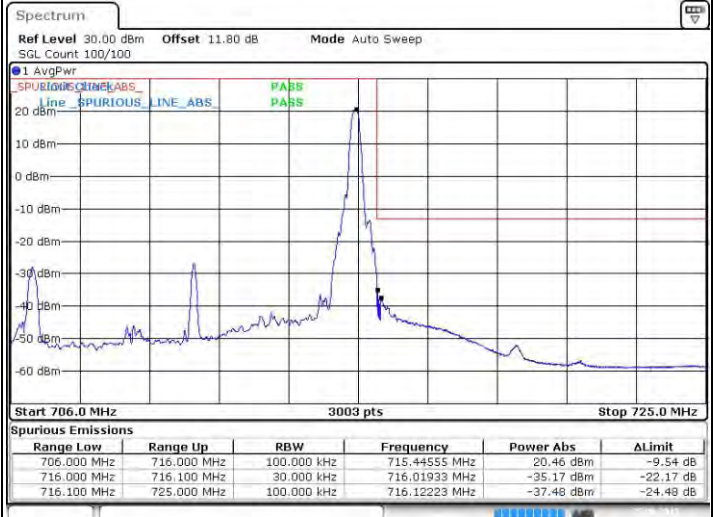


LTE Band 12 / 10MHz / 16QAM

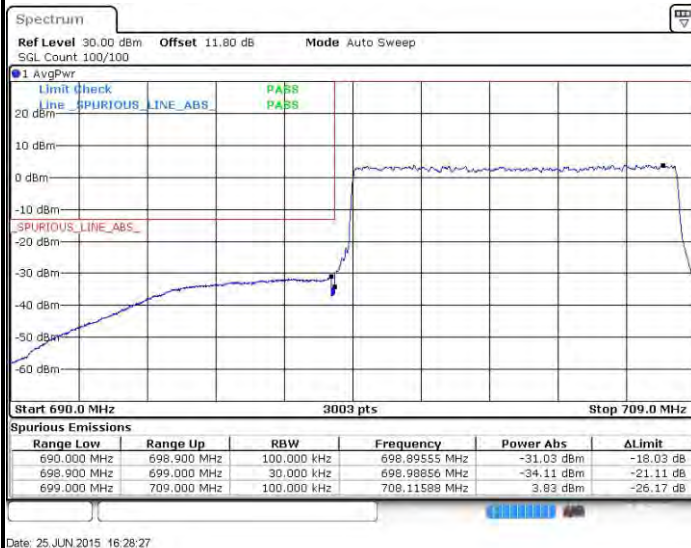
Lowest Band Edge / 1 RB



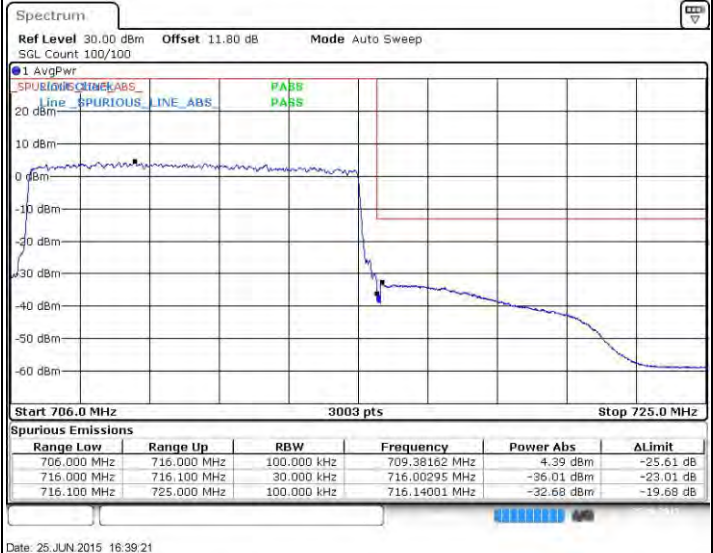
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



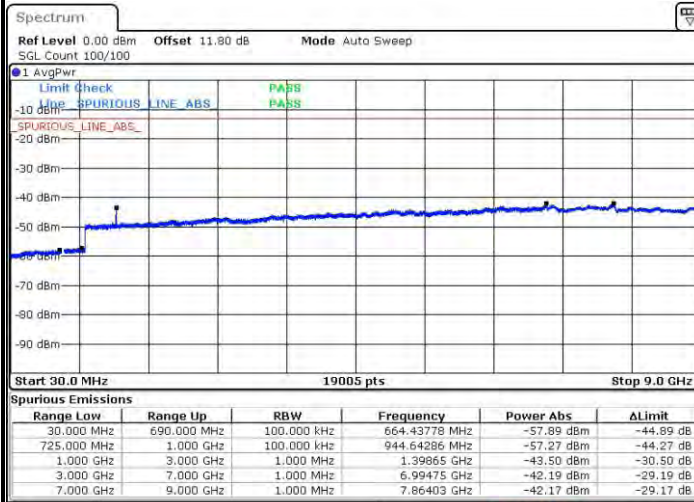


Conducted Spurious Emission



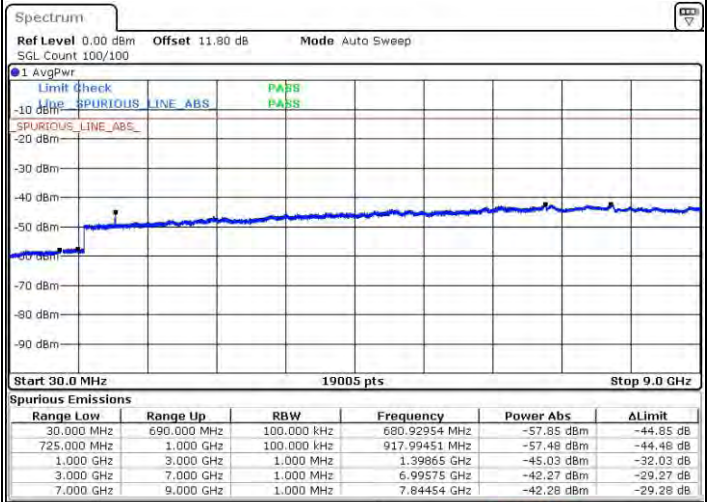
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



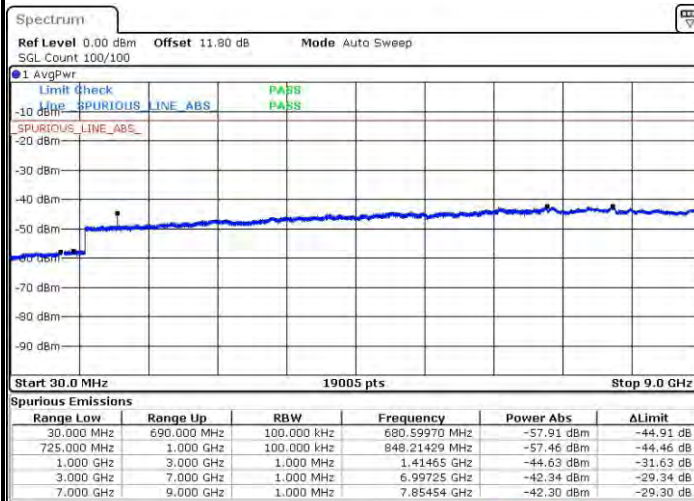
Date: 25 JUN 2015 16:50:38

Lowest Channel / 16QAM



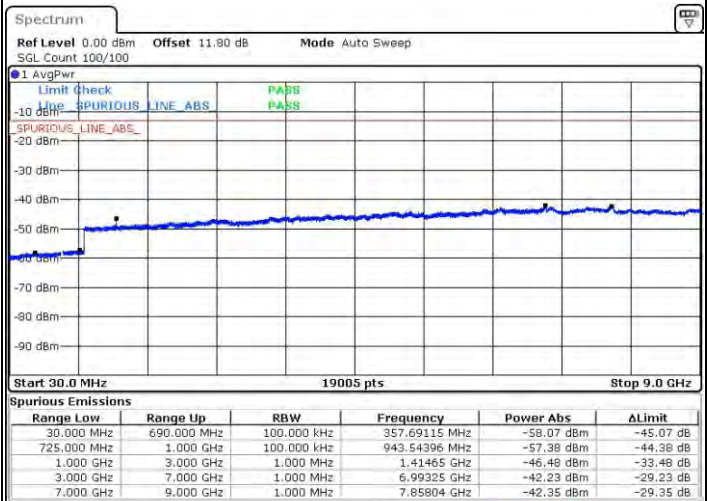
Date: 25 JUN 2015 16:51:48

Middle Channel / QPSK



Date: 25 JUN 2015 16:54:55

Middle Channel / 16QAM

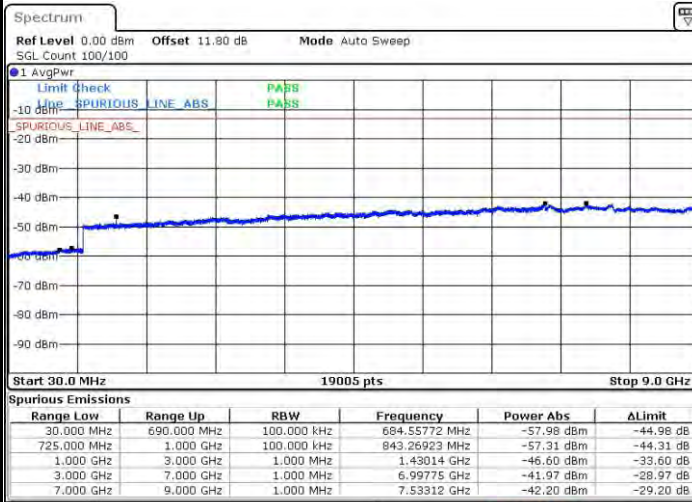


Date: 25 JUN 2015 16:53:45



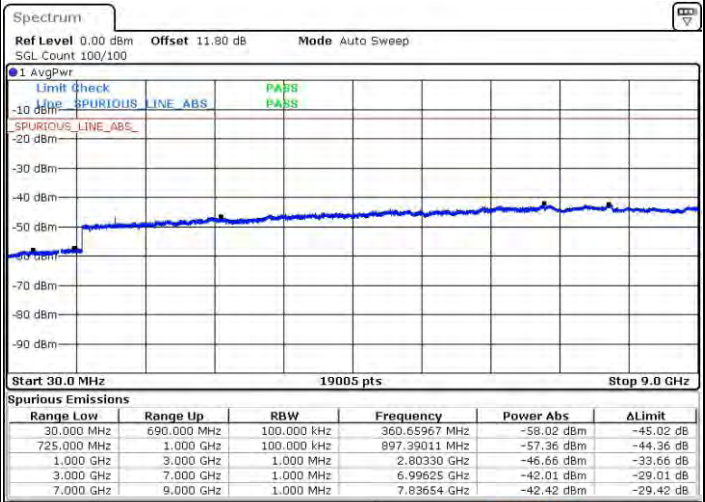
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 25 JUN 2015 17:01:31

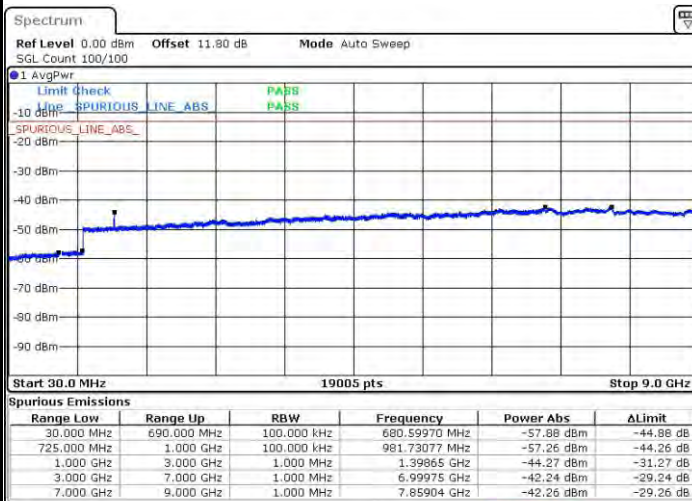
Highest Channel / 16QAM



Date: 25 JUN 2015 17:02:41

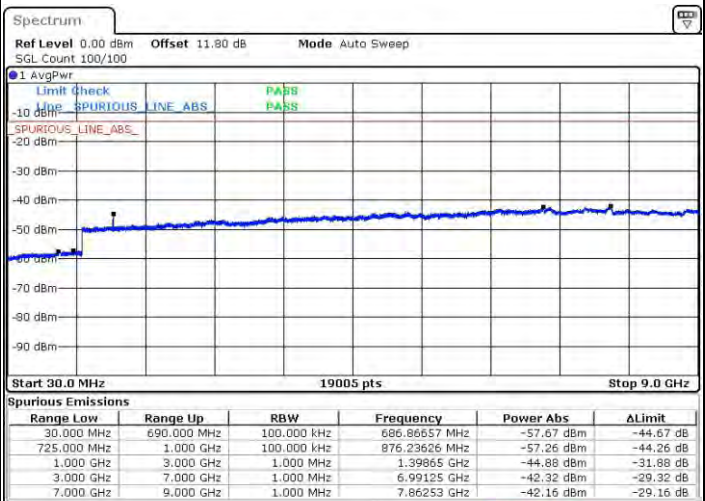
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 25 JUN 2015 15:54:40

Lowest Channel / 16QAM

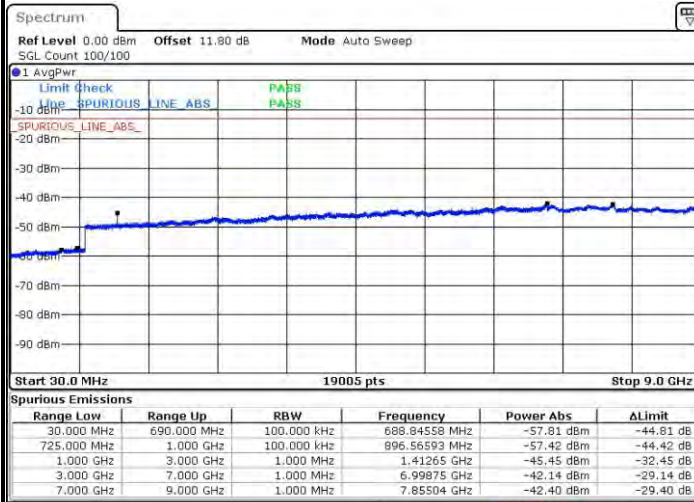


Date: 25 JUN 2015 15:55:50



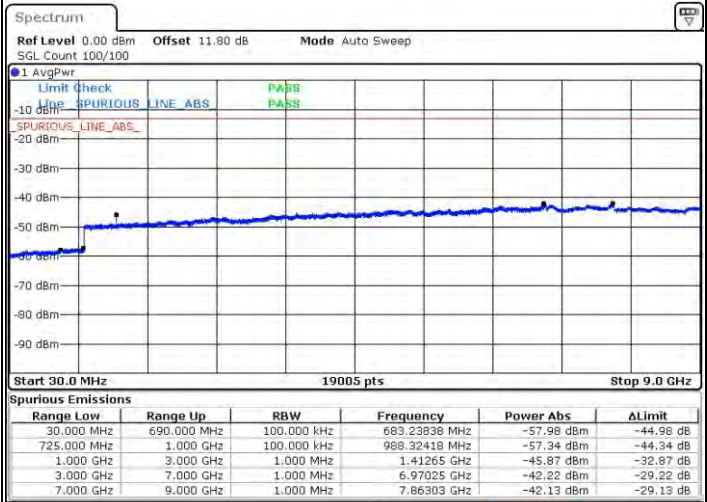
LTE Band 12 / 3MHz

Middle Channel / QPSK



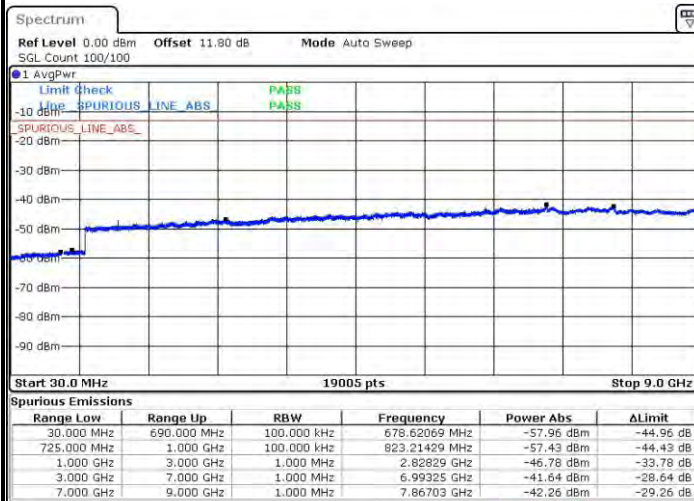
Date: 25 JUN 2015 15:58:56

Middle Channel / 16QAM



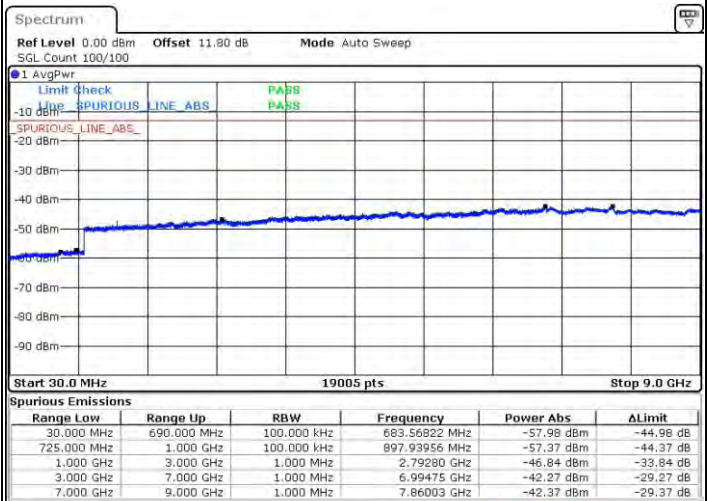
Date: 25 JUN 2015 15:57:46

Highest Channel / QPSK



Date: 25 JUN 2015 16:05:33

Highest Channel / 16QAM

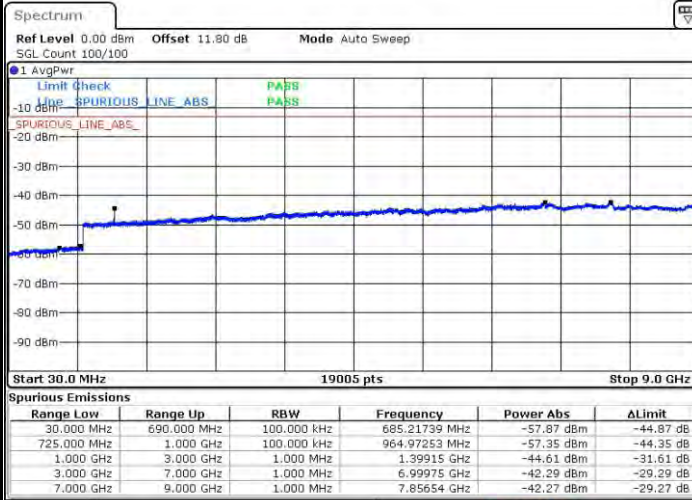


Date: 25 JUN 2015 16:06:43

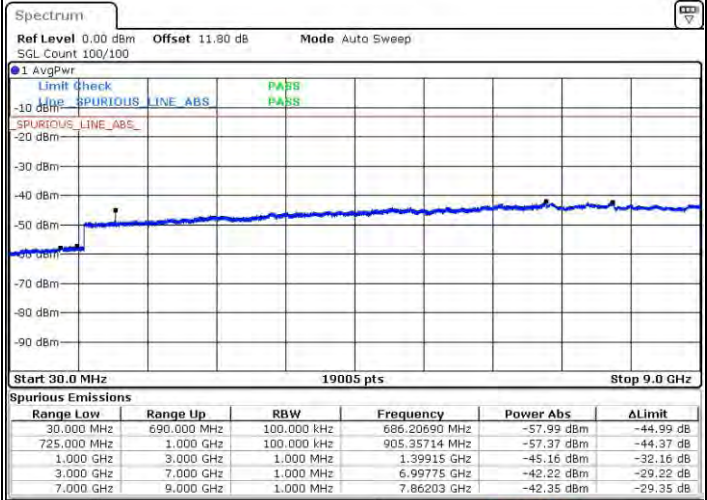


LTE Band 12 / 5MHz

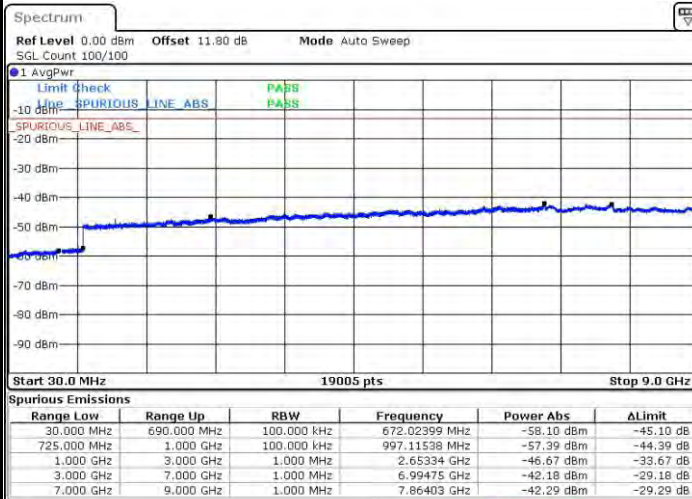
Lowest Channel / QPSK



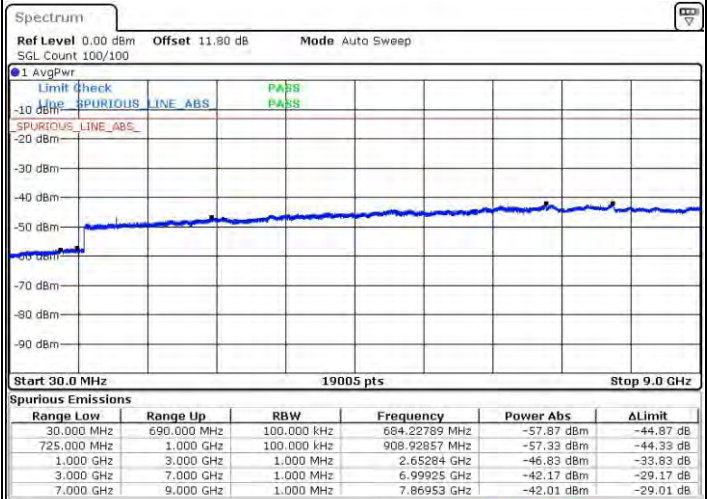
Lowest Channel / 16QAM



Middle Channel / QPSK



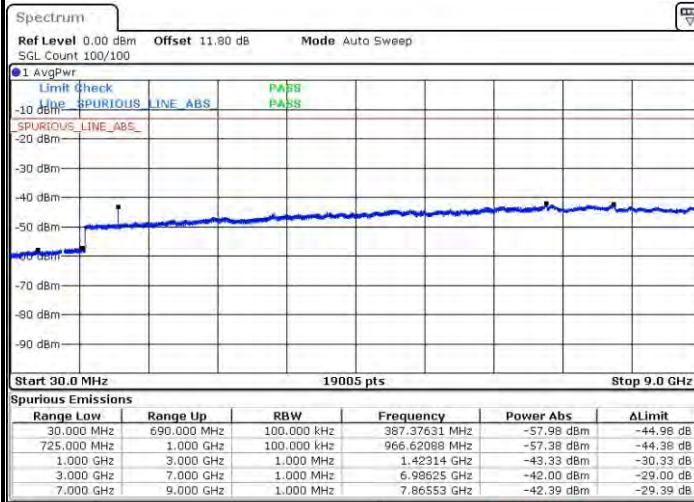
Middle Channel / 16QAM





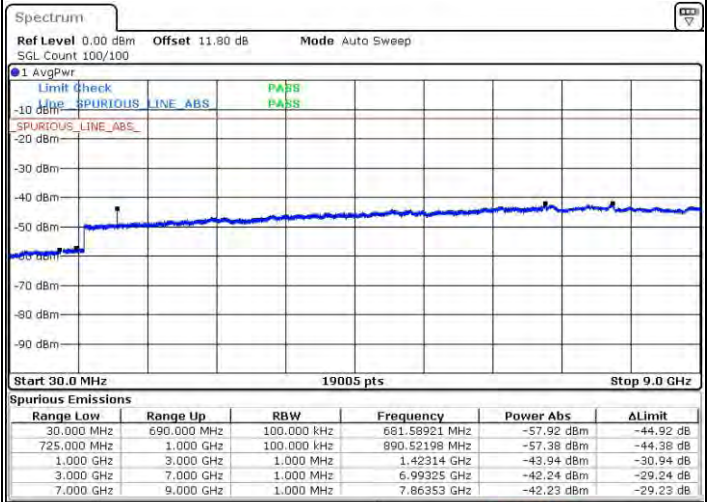
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 25 JUN 2015 16:25:21

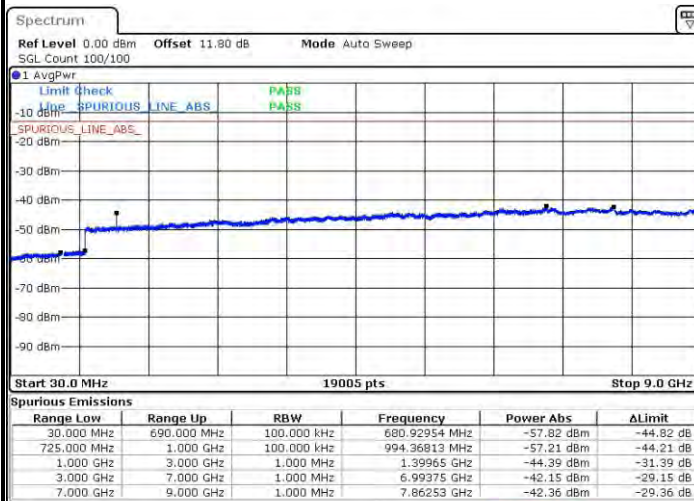
Highest Channel / 16QAM



Date: 25 JUN 2015 16:24:11

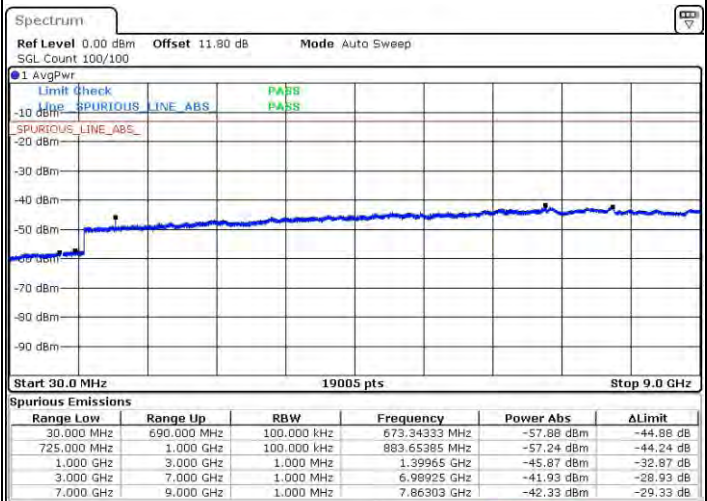
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 25 JUN 2015 16:31:57

Lowest Channel / 16QAM

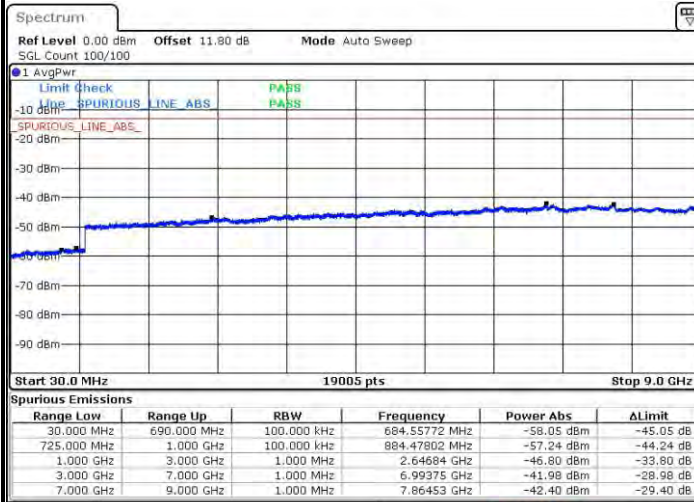


Date: 25 JUN 2015 16:33:07



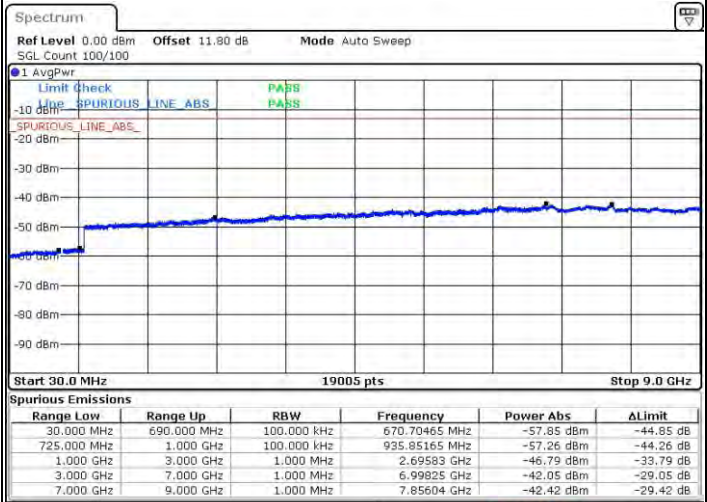
LTE Band 12 / 10MHz

Middle Channel / QPSK



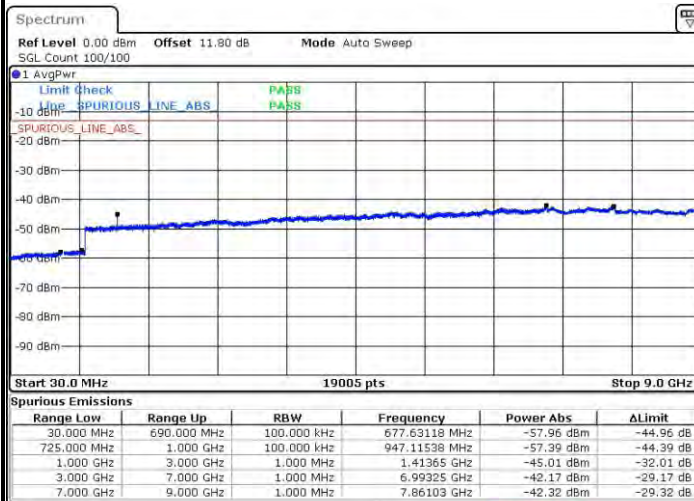
Date: 25 JUN 2015 16:36:15

Middle Channel / 16QAM



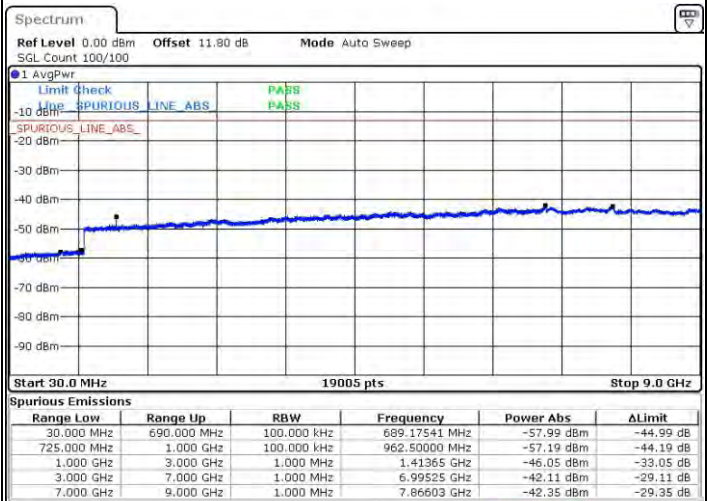
Date: 25 JUN 2015 16:35:05

Highest Channel / QPSK



Date: 25 JUN 2015 16:42:52

Highest Channel / 16QAM



Date: 25 JUN 2015 16:44:02

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	0.0082	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0076	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0082	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0079	
-30	Normal Voltage	0.0073	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0086	

Note:

1. Normal Voltage = 3.9V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage =4.35 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	5.8	PASS
40	Normal Voltage	0.8	
30	Normal Voltage	5.4	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	5.8	
0	Normal Voltage	0.5	
-10	Normal Voltage	-0.4	
-20	Normal Voltage	5.6	
-30	Normal Voltage	5.2	
20	Maximum Voltage	1	
20	Normal Voltage	0	
20	Battery End Point	6.1	

$|\text{MAX}(\Delta f)|$ 6.1= Hz

Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	699.099994	$\geq 698 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	715.896006	$\leq 716 \text{ MHz}$	