



LTE Band 7

Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.12	4.84	4.93	5.83	PASS
Middle CH	4.12	4.96	5.13	6.03	
Highest CH	3.74	4.81	4.55	5.71	



LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



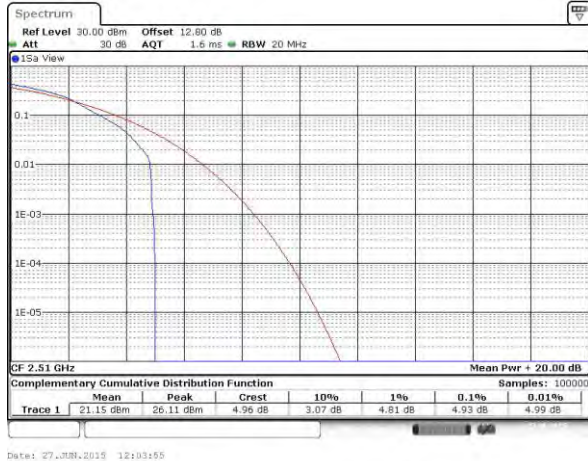
Highest Channel / Full RB



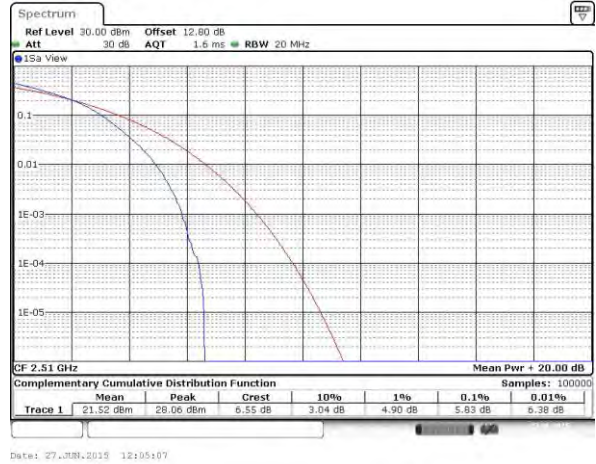


LTE Band 7 / 20MHz / 16QAM

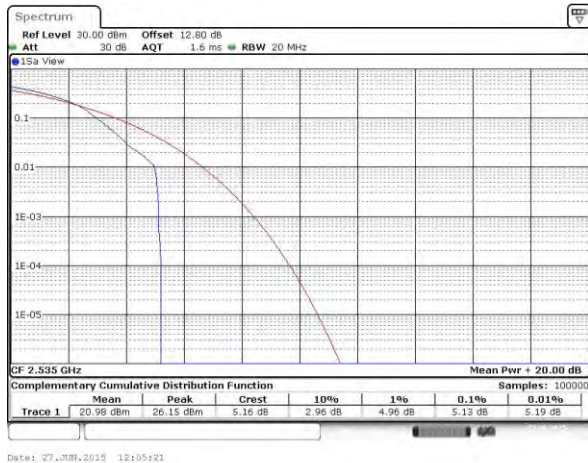
Lowest Channel / 1RB



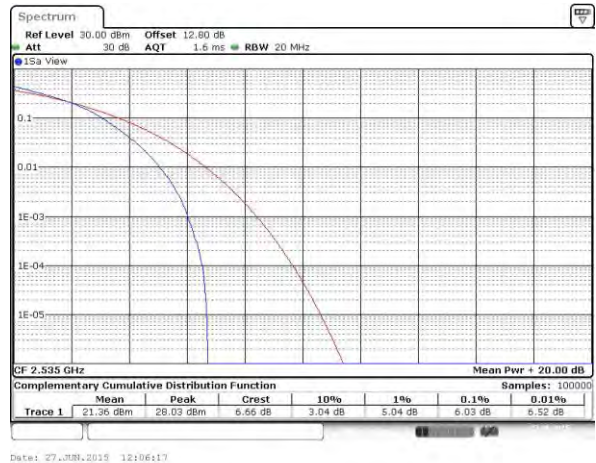
Lowest Channel / Full RB



Middle Channel / 1RB



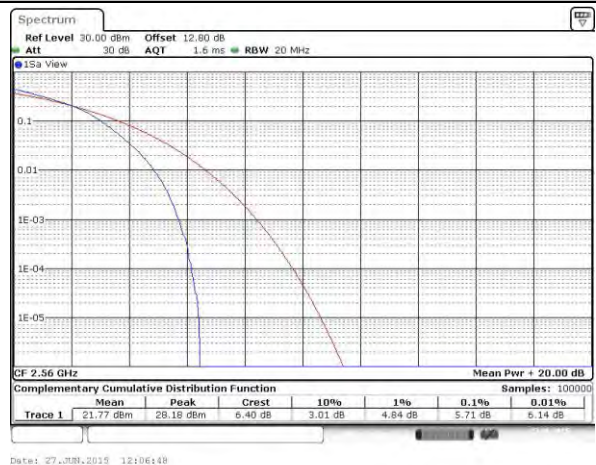
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





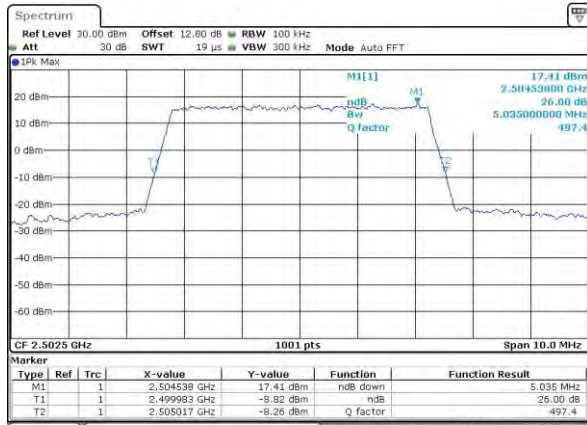
26dB Bandwidth

Mode	LTE Band 7 : 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	-	-	-	-	5.04	5.04	9.97	9.91	14.63	14.87	20.42	20.26
Middle CH	-	-	-	-	5.04	5.06	10.03	9.91	14.6	14.66	20.38	20.46
Highest CH	-	-	-	-	5.04	5.05	10.07	9.95	14.75	14.66	20.3	20.3

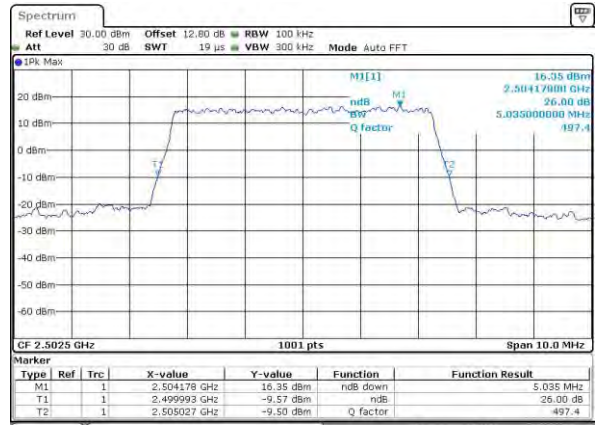


LTE Band 7

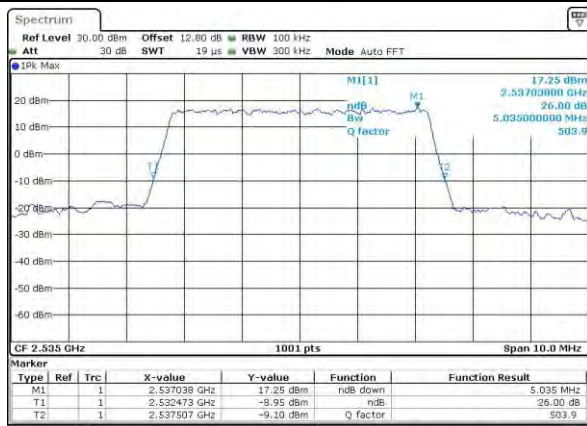
Lowest Channel / 5MHz / QPSK



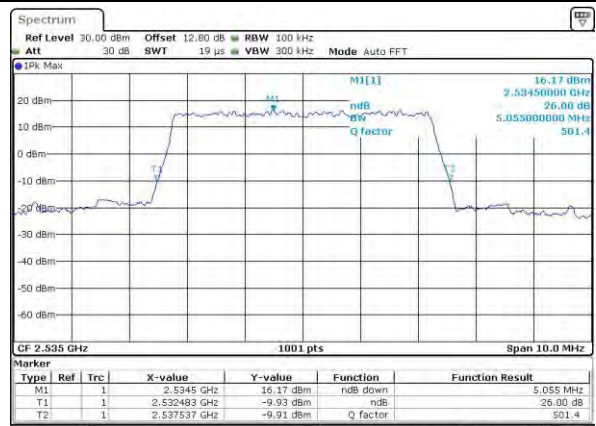
Lowest Channel / 5MHz / 16QAM



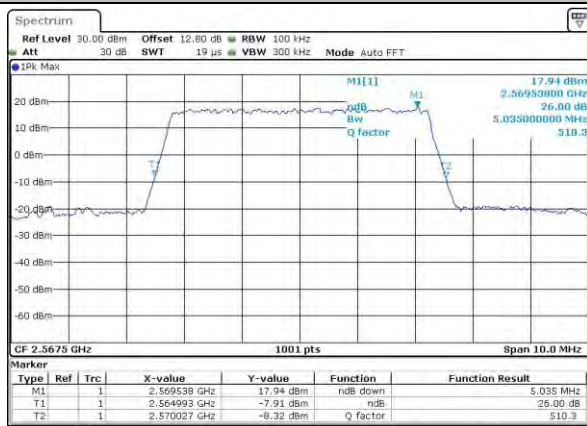
Middle Channel / 5MHz / QPSK



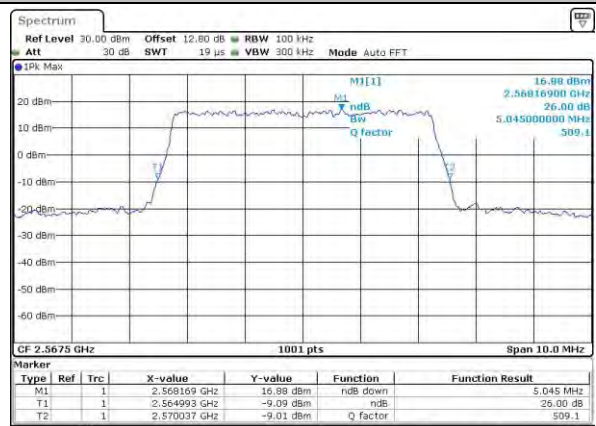
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



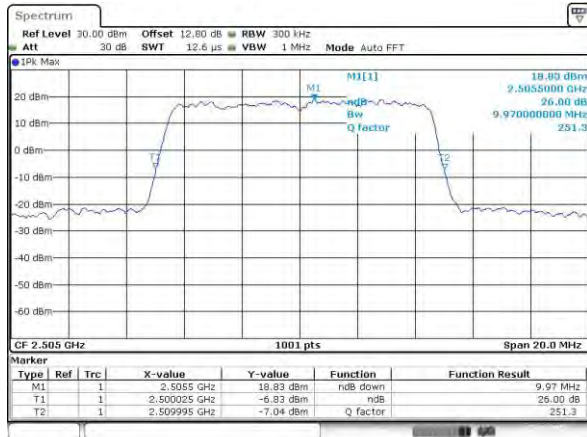
Highest Channel / 5MHz / 16QAM



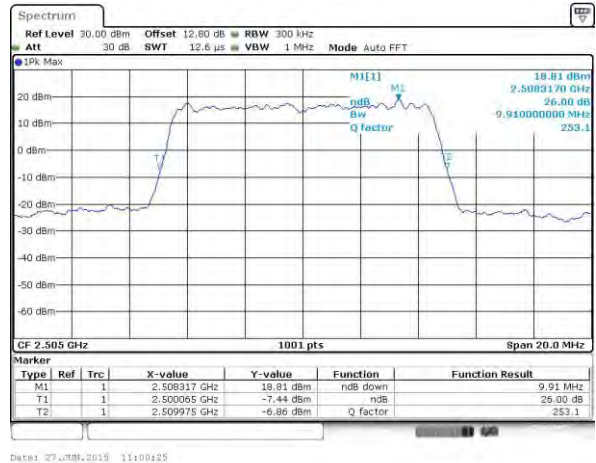


LTE Band 7

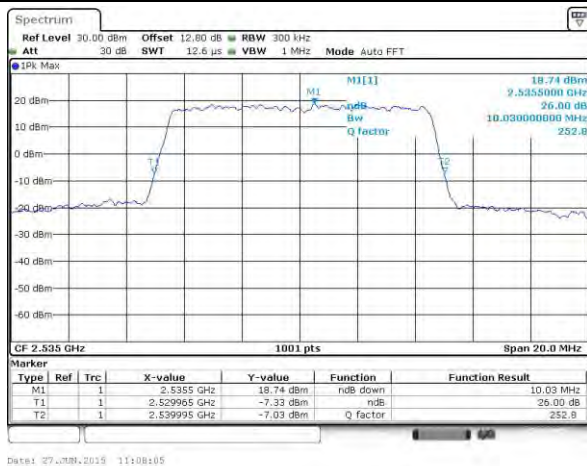
Lowest Channel / 10MHz / QPSK



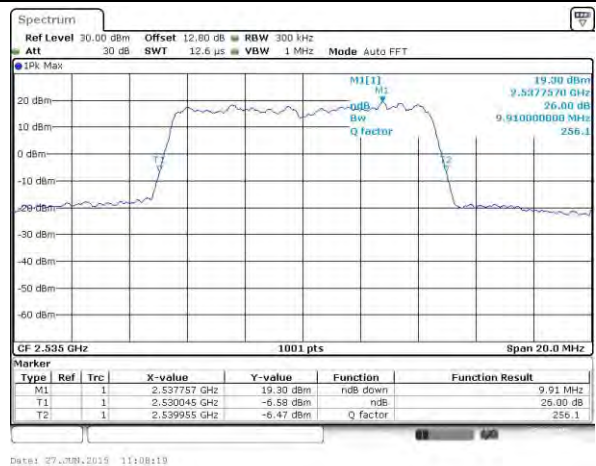
Lowest Channel / 10MHz / 16QAM



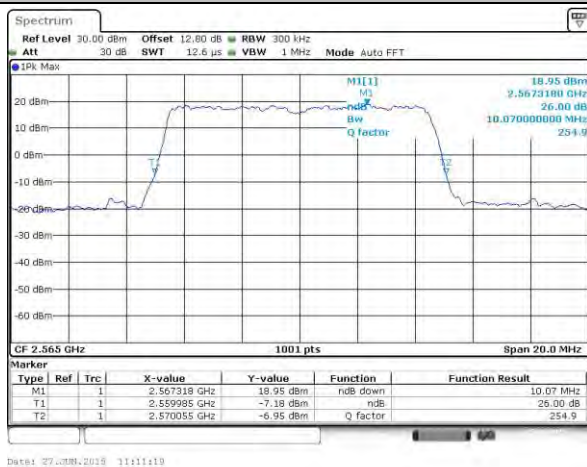
Middle Channel / 10MHz / QPSK



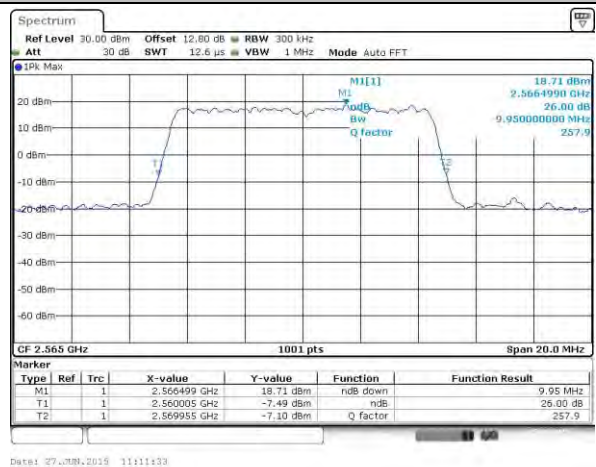
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



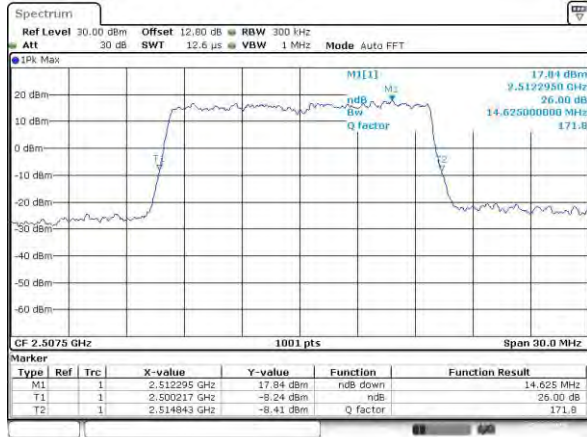
Highest Channel / 10MHz / 16QAM



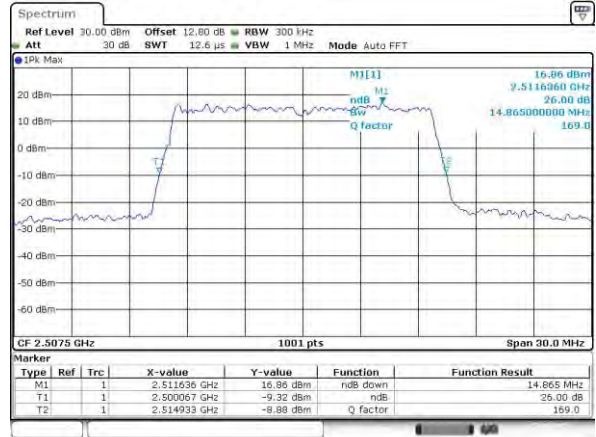


LTE Band 7

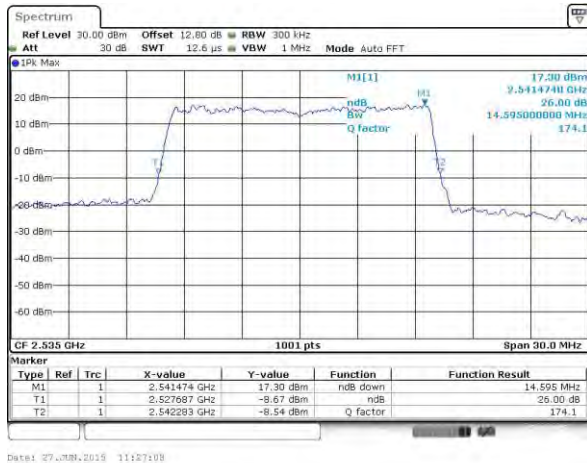
Lowest Channel / 15MHz / QPSK



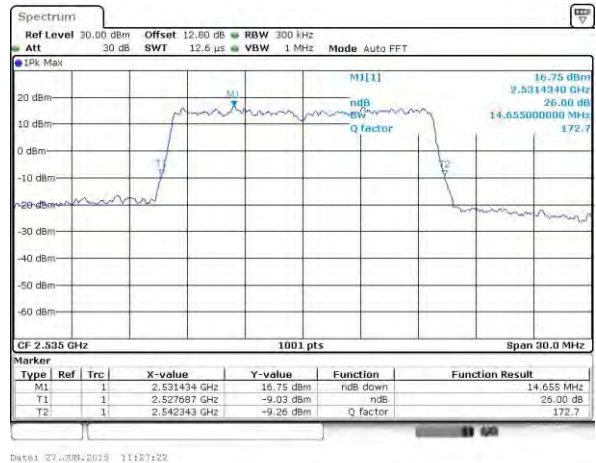
Lowest Channel / 15MHz / 16QAM



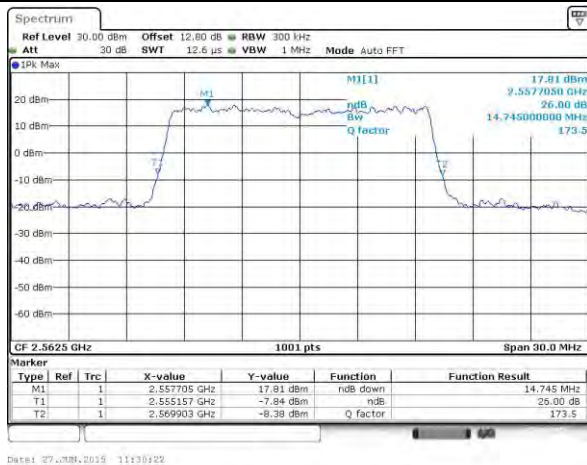
Middle Channel / 15MHz / QPSK



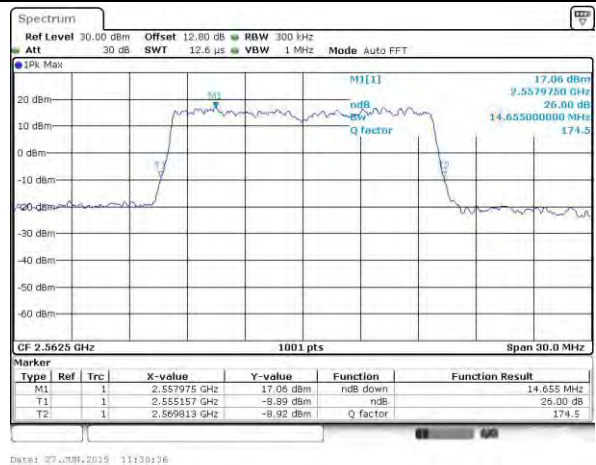
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



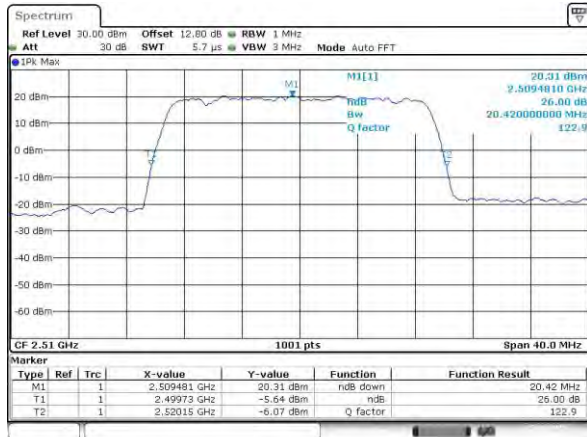
Highest Channel / 15MHz / 16QAM



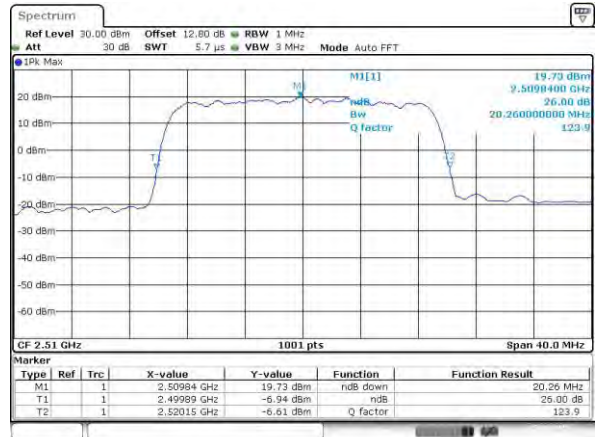


LTE Band 7

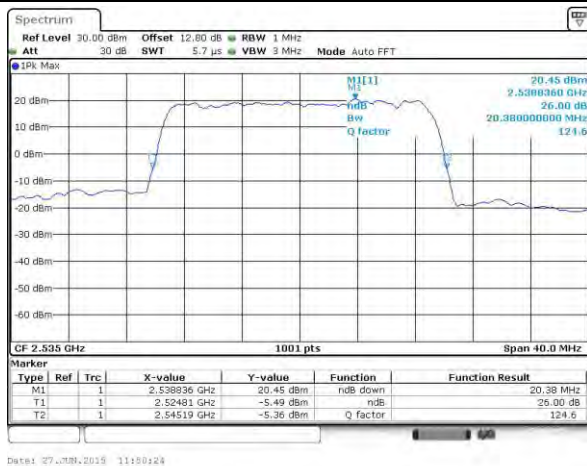
Lowest Channel / 20MHz / QPSK



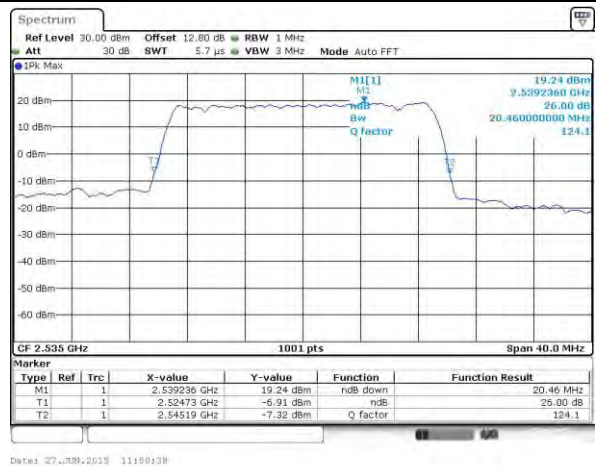
Lowest Channel / 20MHz / 16QAM



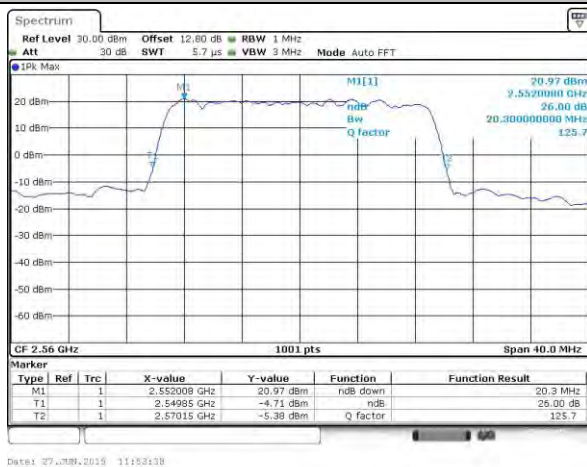
Middle Channel / 20MHz / QPSK



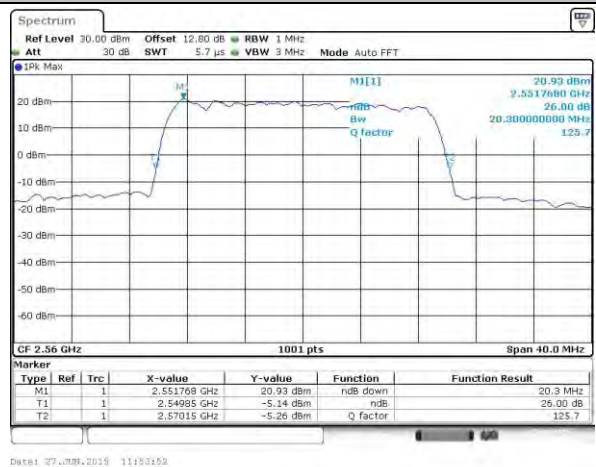
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM



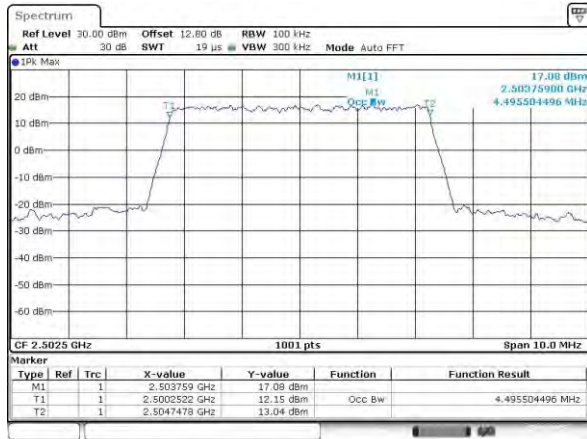
**Occupied Bandwidth**

Mode	LTE Band 7 : 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	4.5	9.05	8.99	13.46	13.46	18.3	18.38
Middle CH	-	-	-	-	4.51	4.5	9.07	9.01	13.46	13.52	18.3	18.54
Highest CH	-	-	-	-	4.5	4.51	9.07	9.07	13.52	13.49	18.38	18.42

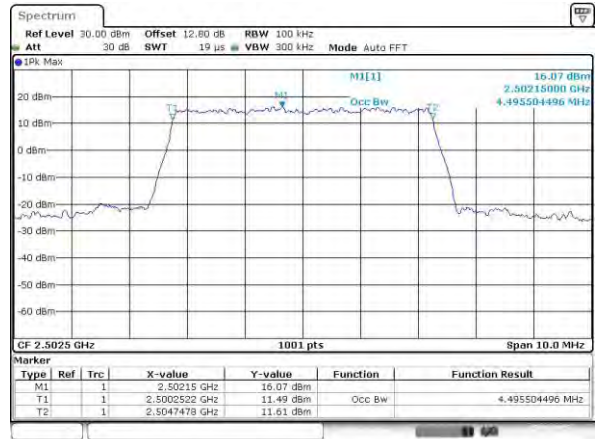


LTE Band 7

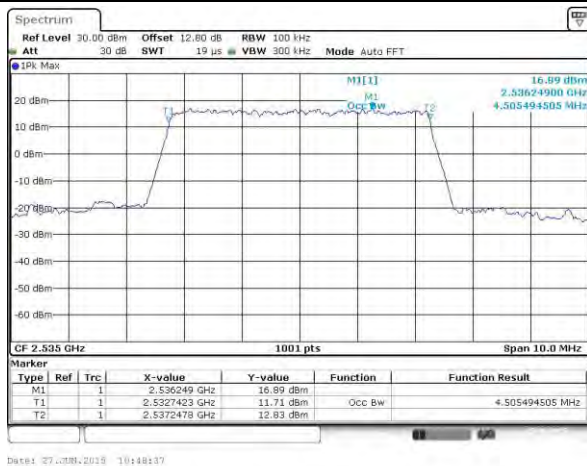
Lowest Channel / 5MHz / QPSK



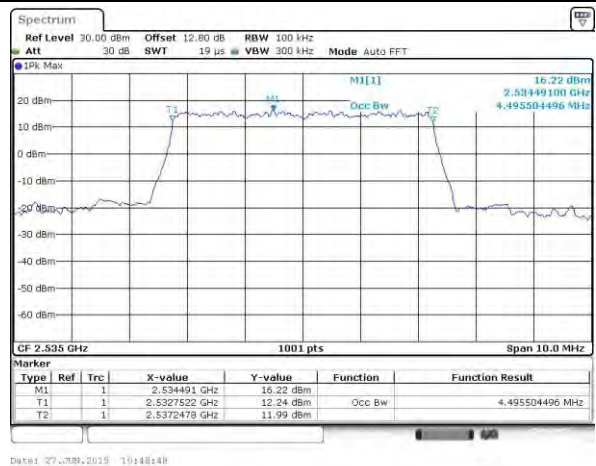
Lowest Channel / 5MHz / 16QAM



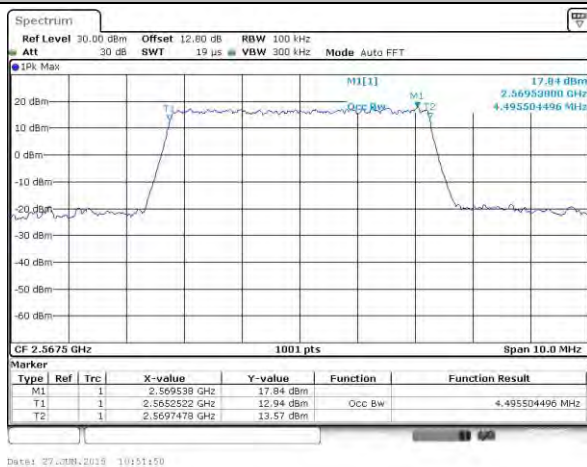
Middle Channel / 5MHz / QPSK



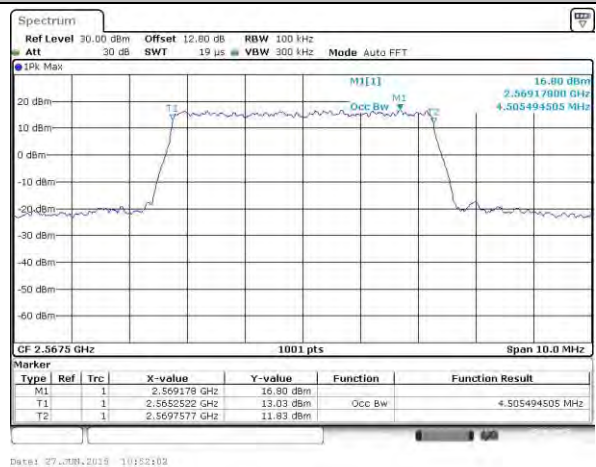
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



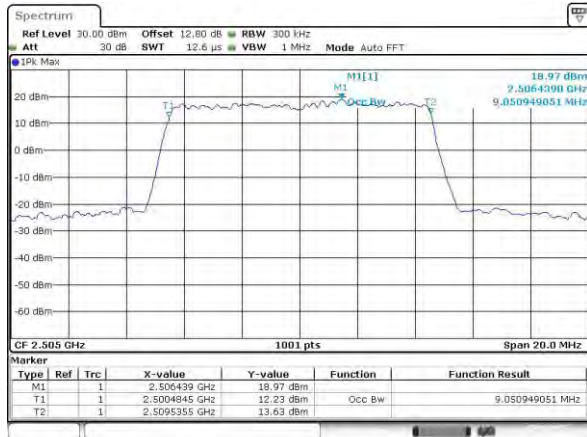
Highest Channel / 5MHz / 16QAM



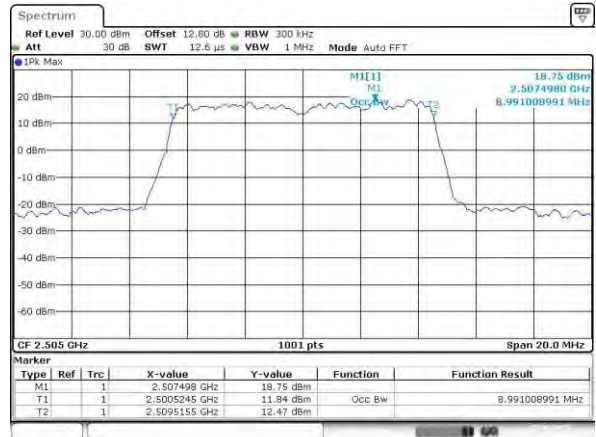


LTE Band 7

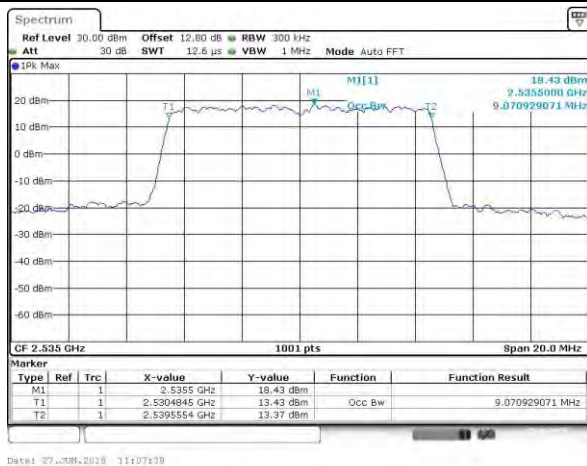
Lowest Channel / 10MHz / QPSK



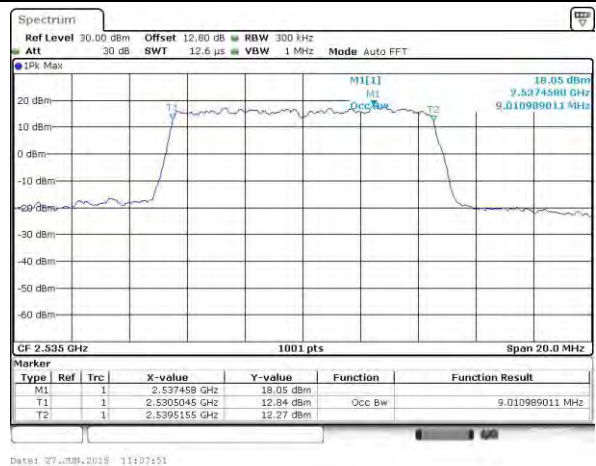
Lowest Channel / 10MHz / 16QAM



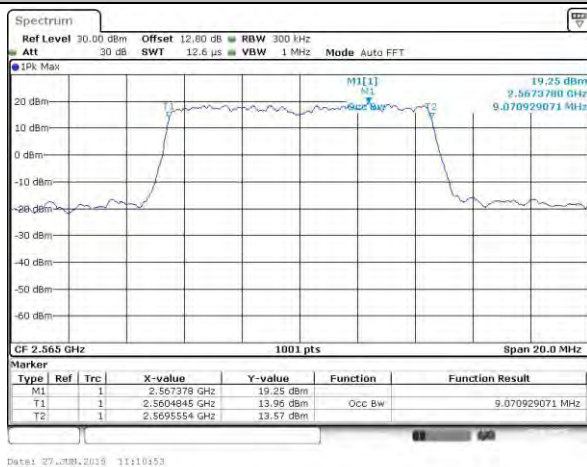
Middle Channel / 10MHz / QPSK



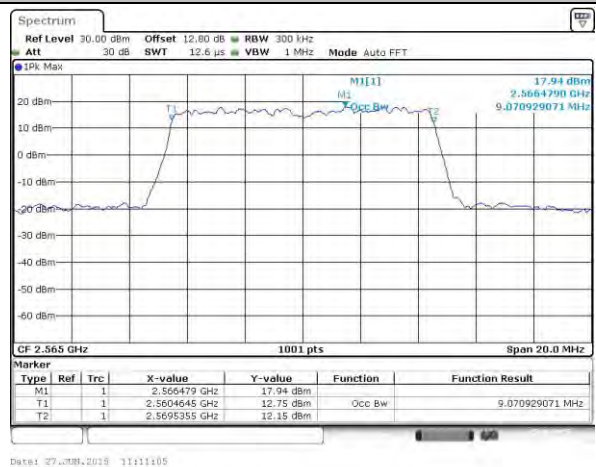
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



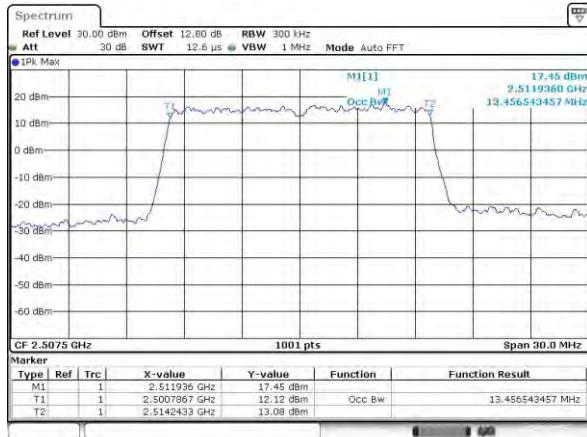
Highest Channel / 10MHz / 16QAM



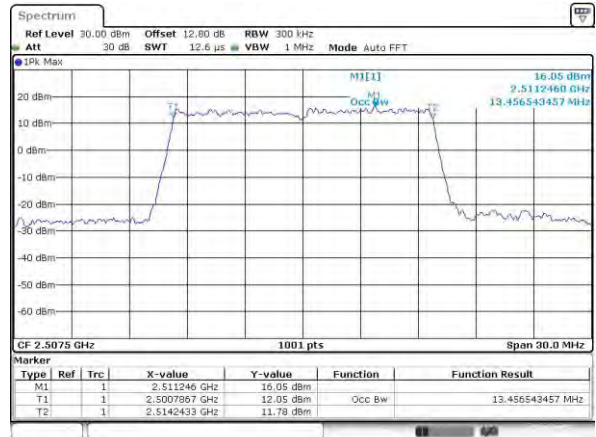


LTE Band 7

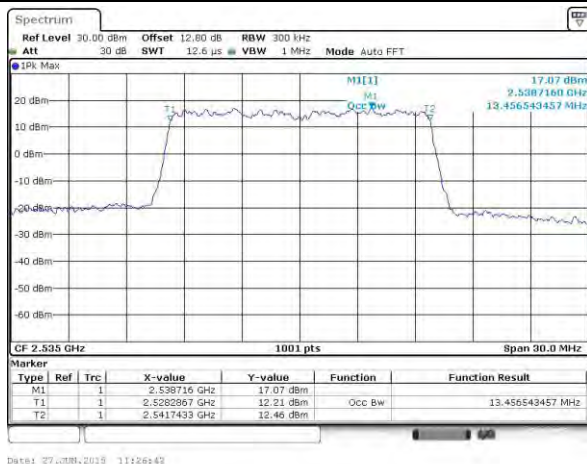
Lowest Channel / 15MHz / QPSK



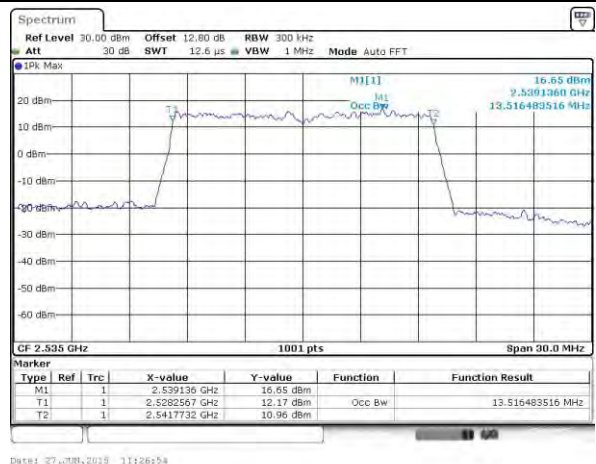
Lowest Channel / 15MHz / 16QAM



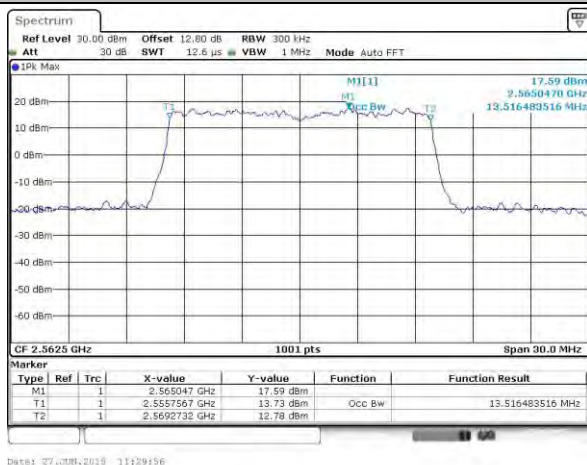
Middle Channel / 15MHz / QPSK



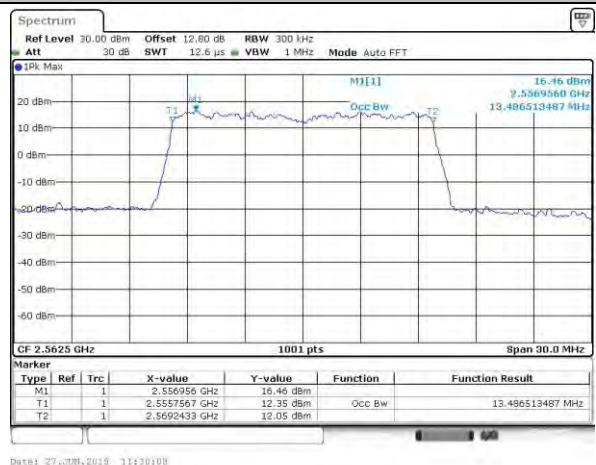
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



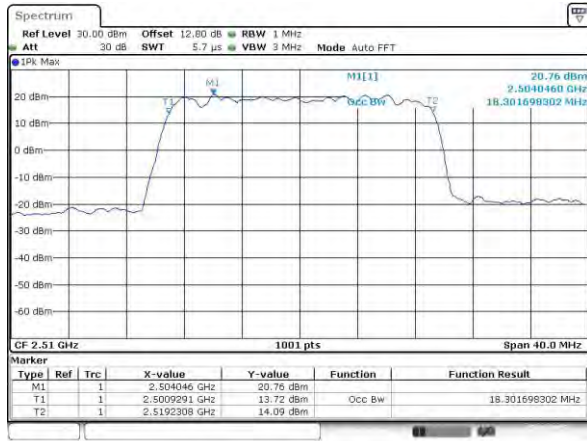
Highest Channel / 15MHz / 16QAM



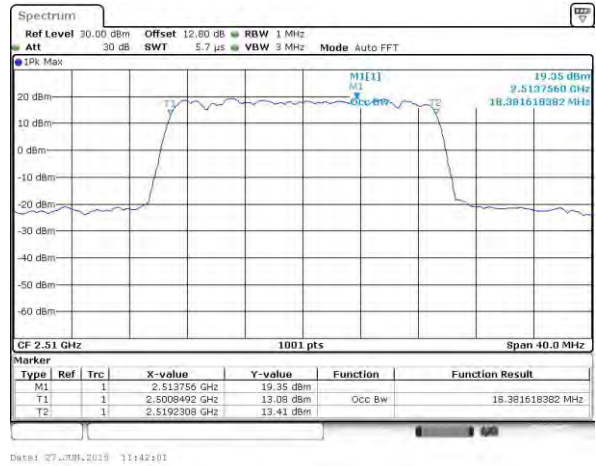


LTE Band 7

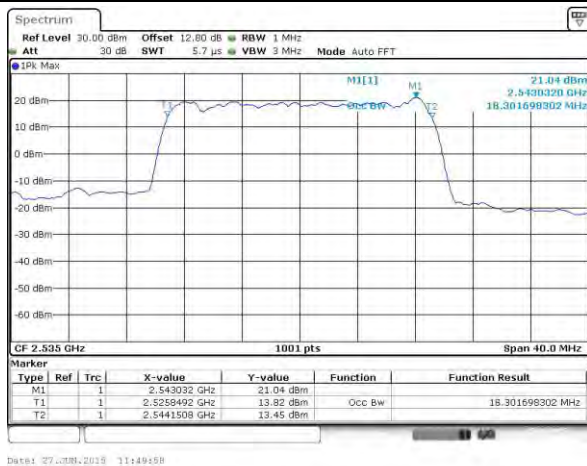
Lowest Channel / 20MHz / QPSK



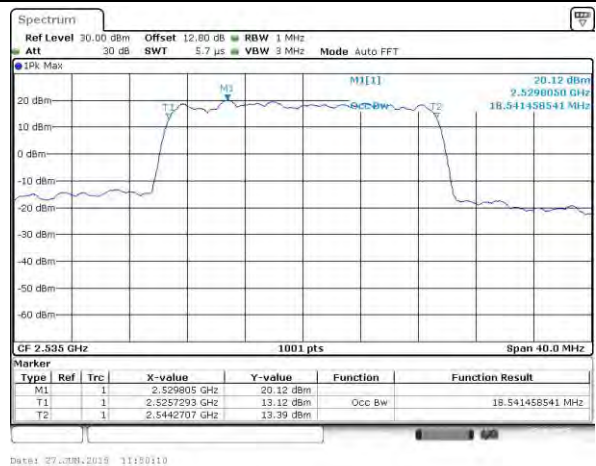
Lowest Channel / 20MHz / 16QAM



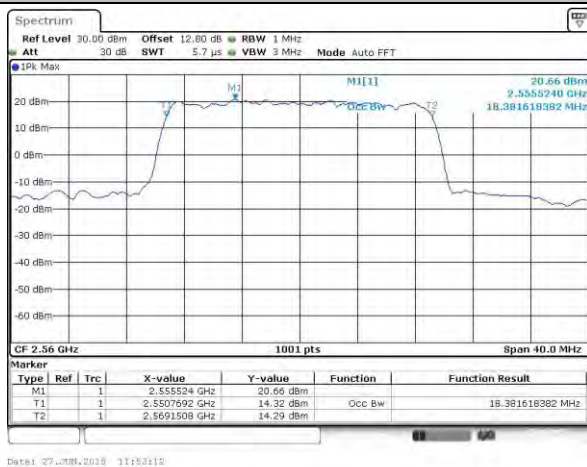
Middle Channel / 20MHz / QPSK



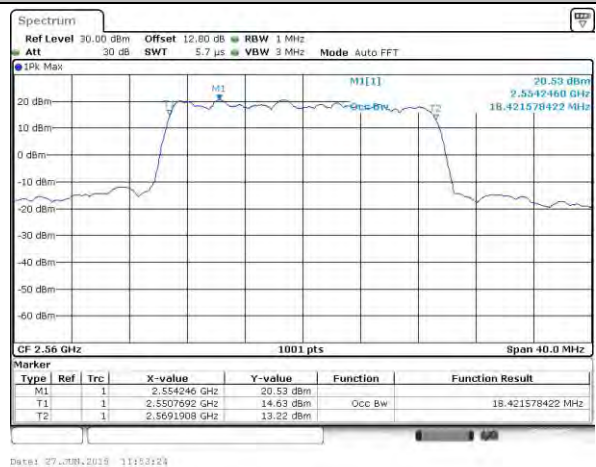
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM



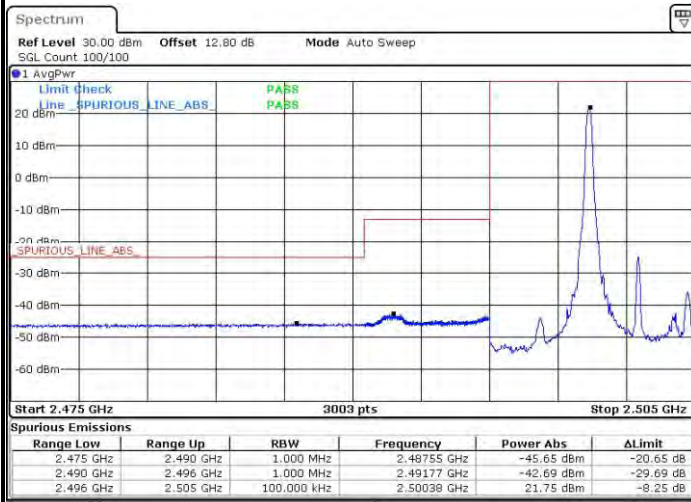


Conducted Band Edge



LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB



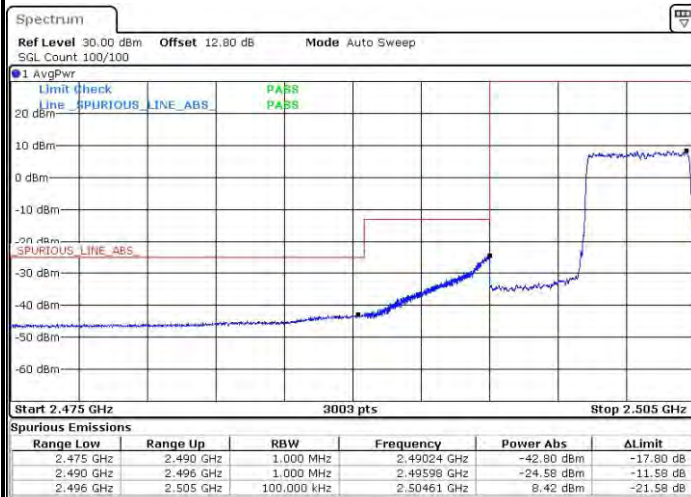
Date: 27.JUN.2015 10:42:32

Highest Band Edge / 1 RB



Date: 27.JUN.2015 10:53:40

Lowest Band Edge / Full RB



Date: 27.JUN.2015 10:44:52

Highest Band Edge / Full RB

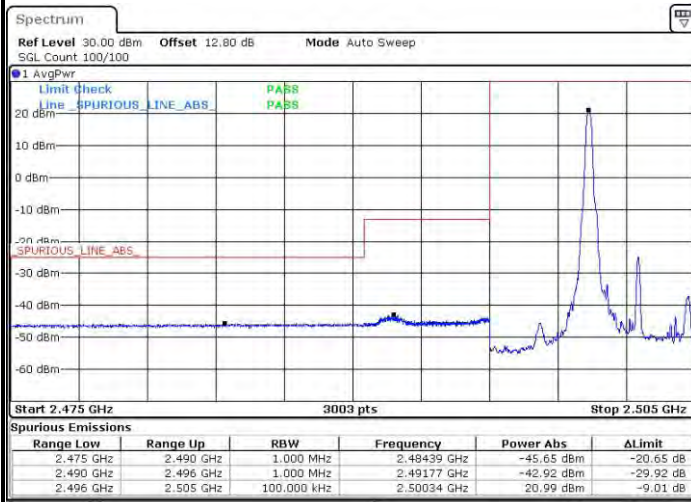


Date: 27.JUN.2015 10:56:01



LTE Band 7 / 5MHz / 16QAM

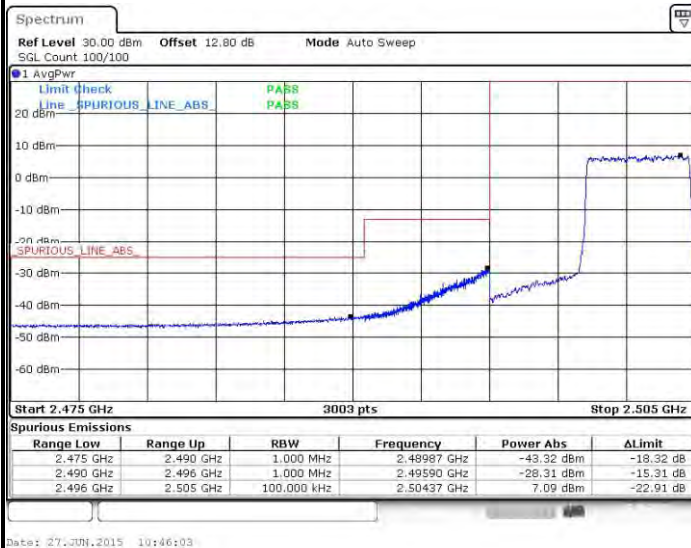
Lowest Band Edge / 1 RB



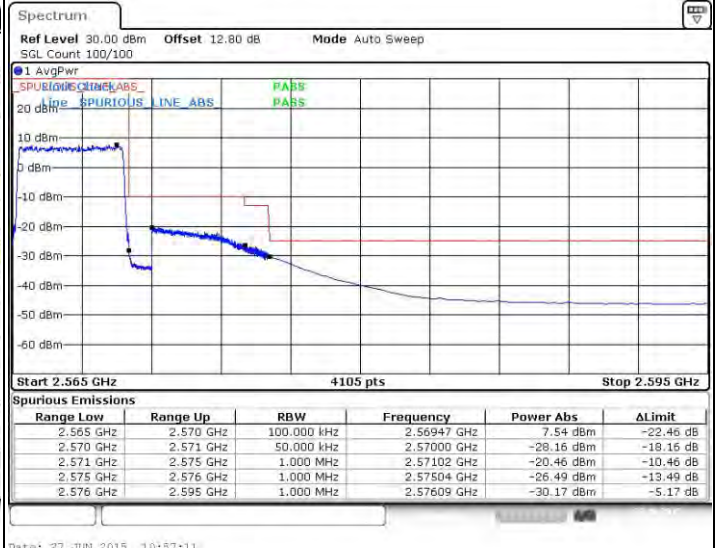
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



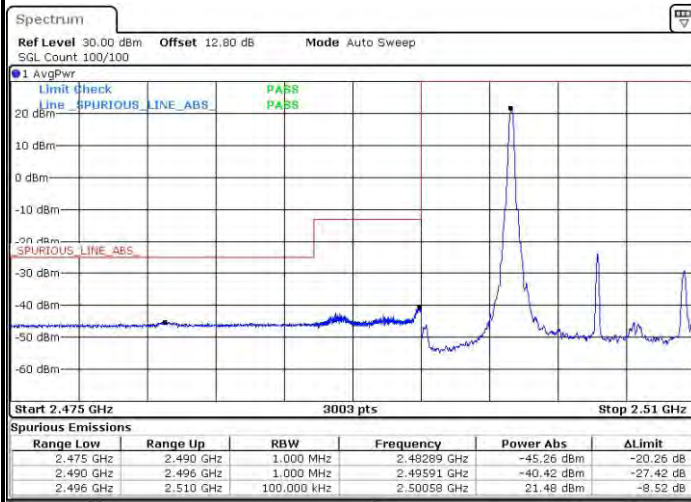
Highest Band Edge / Full RB





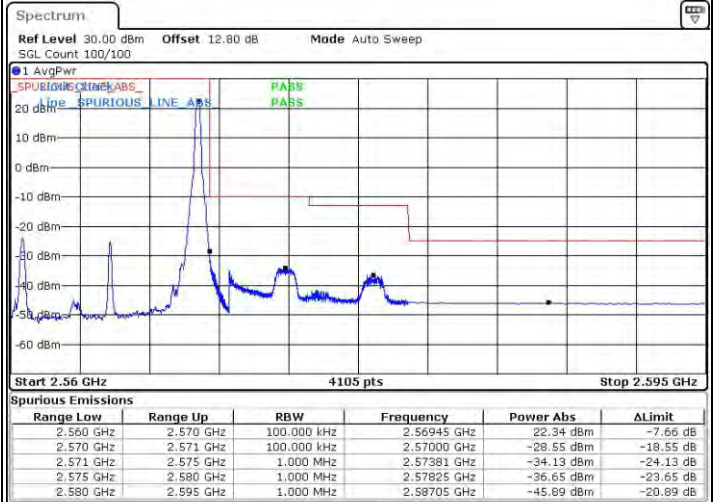
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



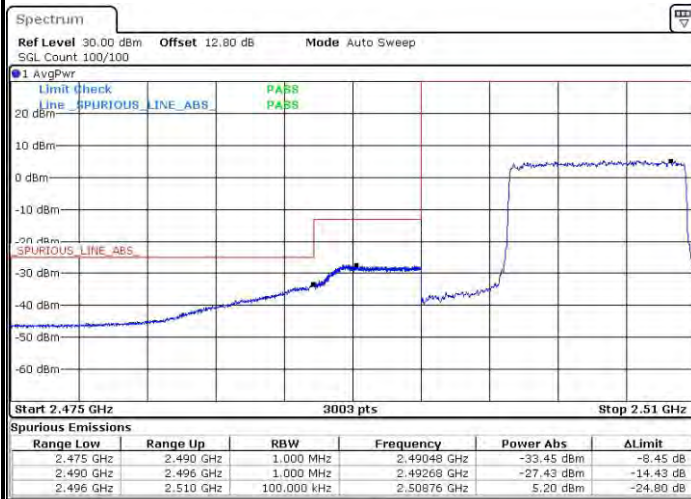
Date: 27.JUN.2015 11:01:35

Highest Band Edge / 1 RB



Date: 27.JUN.2015 11:12:43

Lowest Band Edge / Full RB



Date: 27.JUN.2015 11:03:55

Highest Band Edge / Full RB

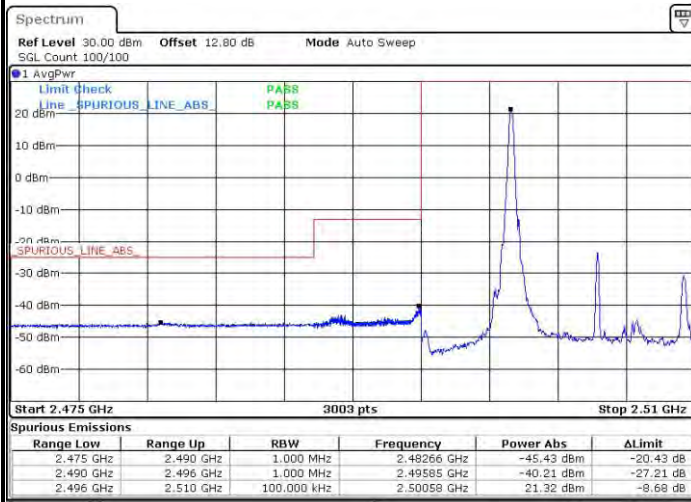


Date: 27.JUN.2015 11:13:03

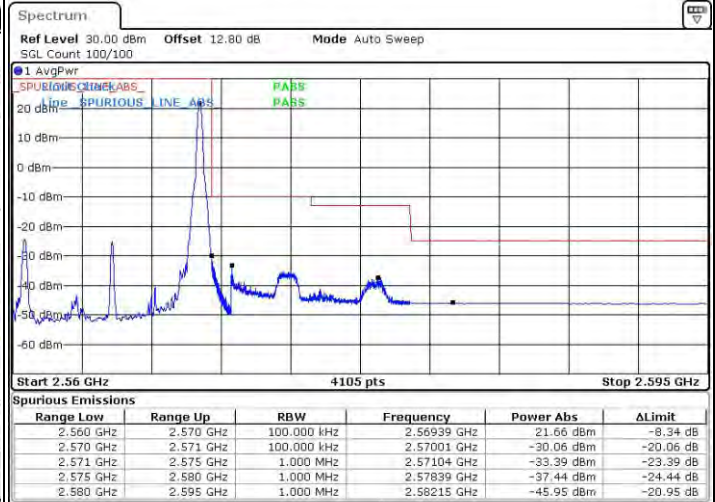


LTE Band 7 / 10MHz / 16QAM

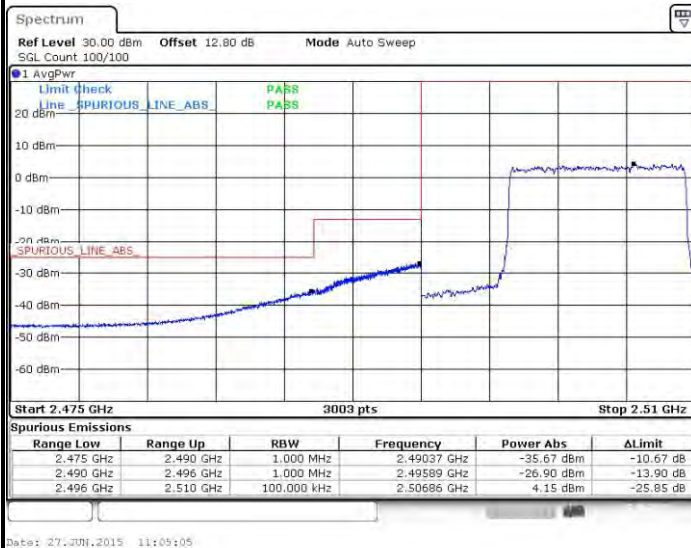
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



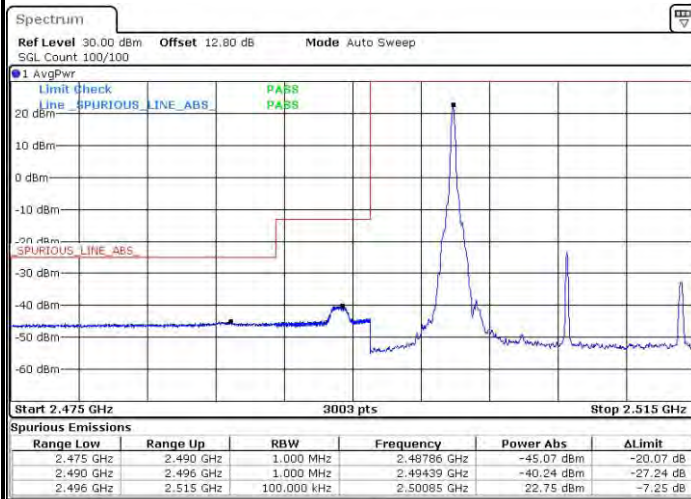
Highest Band Edge / Full RB



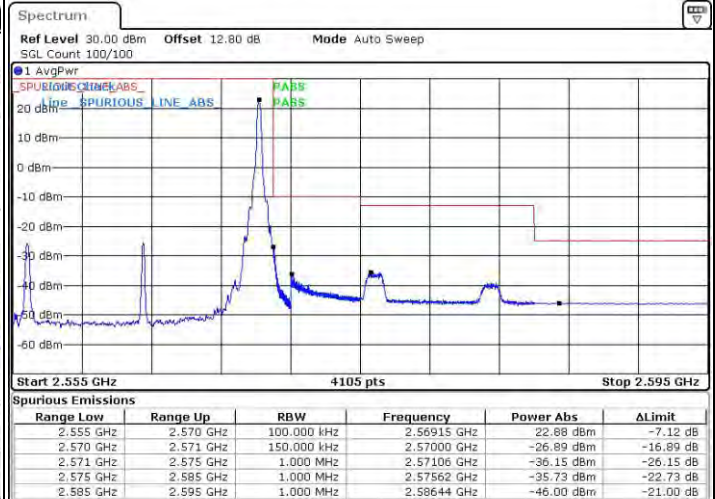


LTE Band 7 / 15MHz / QPSK

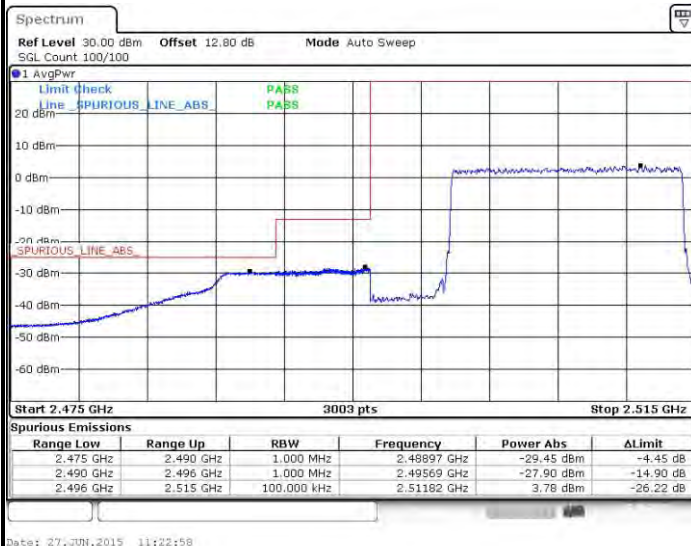
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



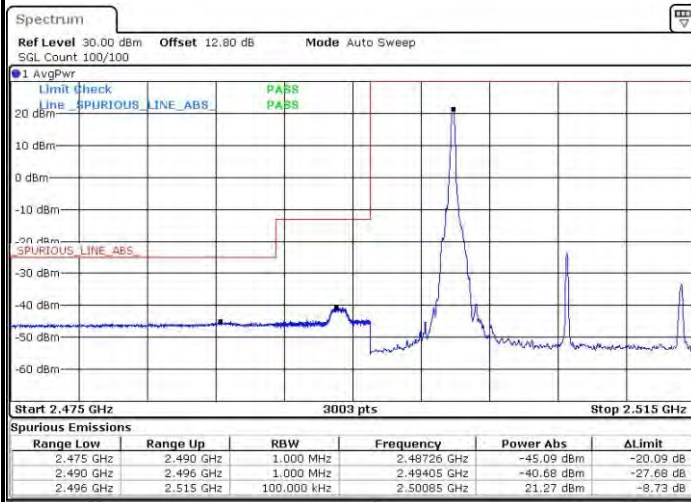
Highest Band Edge / Full RB





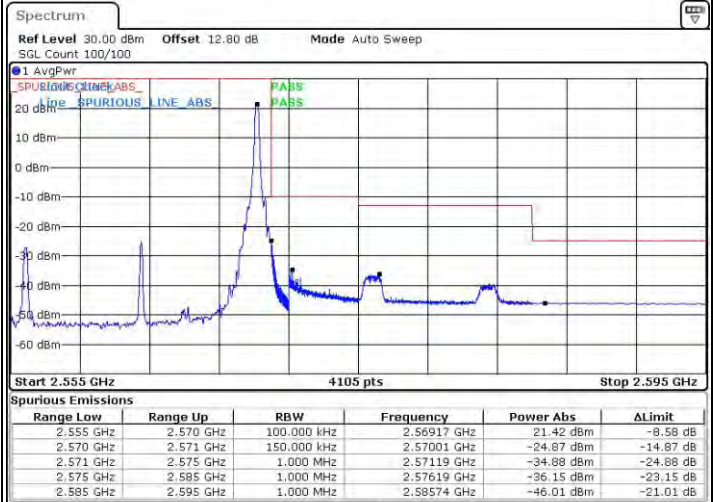
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



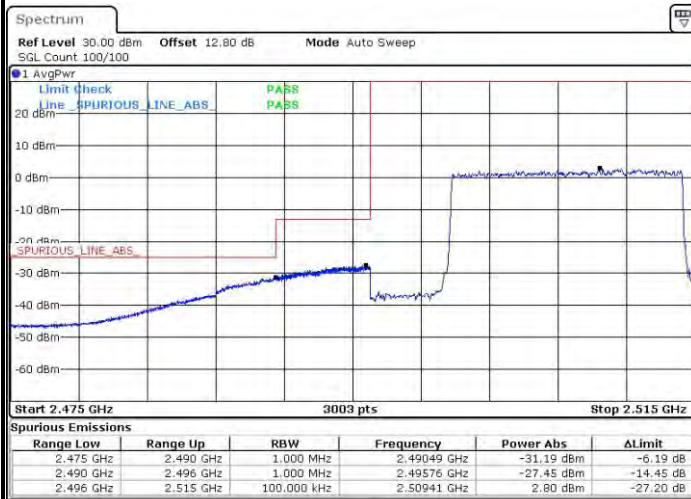
Date: 27.JUN.2015 11:21:47

Highest Band Edge / 1 RB



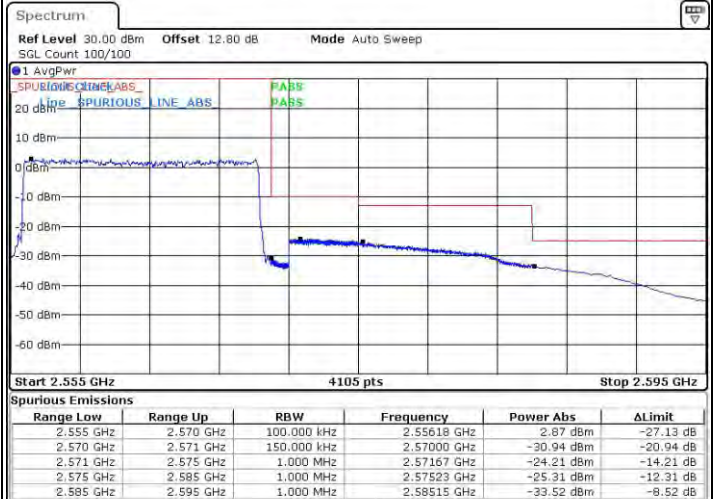
Date: 27.JUN.2015 11:32:56

Lowest Band Edge / Full RB



Date: 27.JUN.2015 11:24:08

Highest Band Edge / Full RB

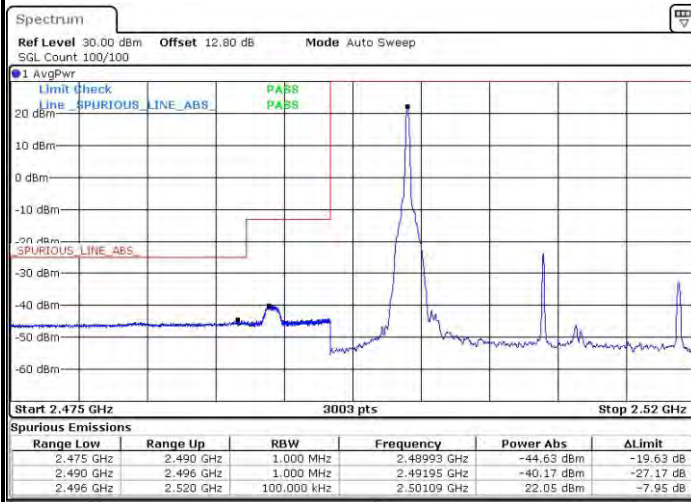


Date: 27.JUN.2015 11:33:16

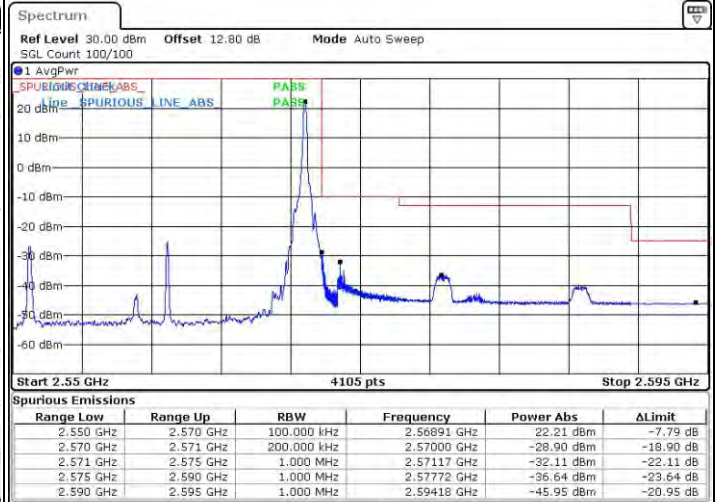


LTE Band 7 / 20MHz / QPSK

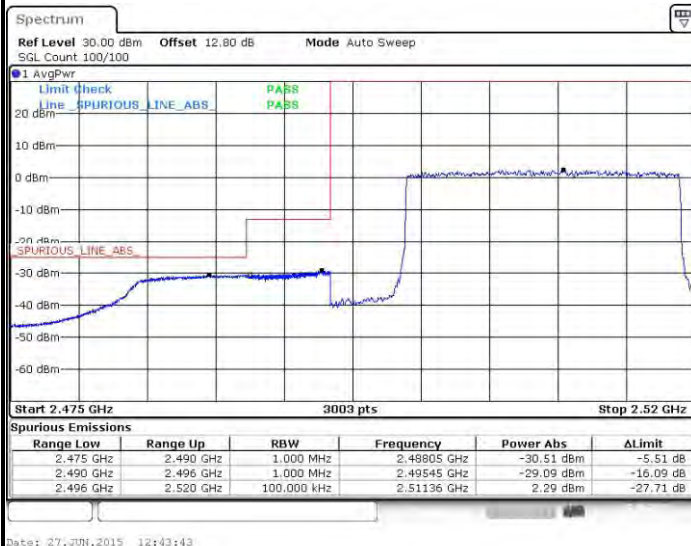
Lowest Band Edge / 1 RB



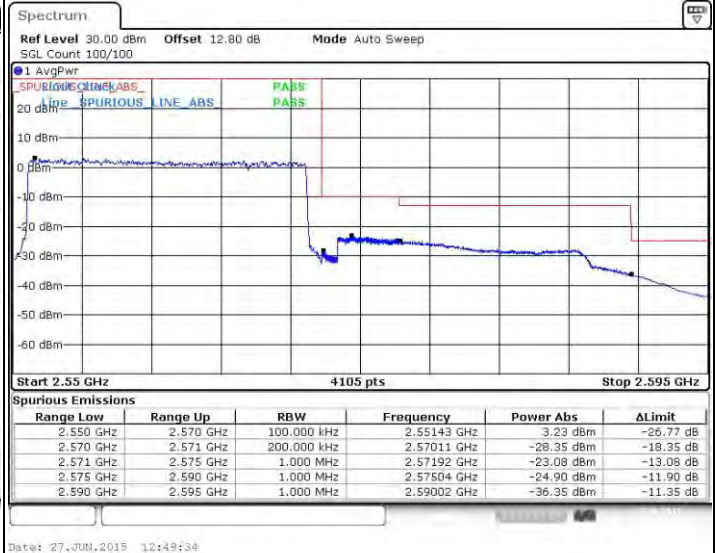
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



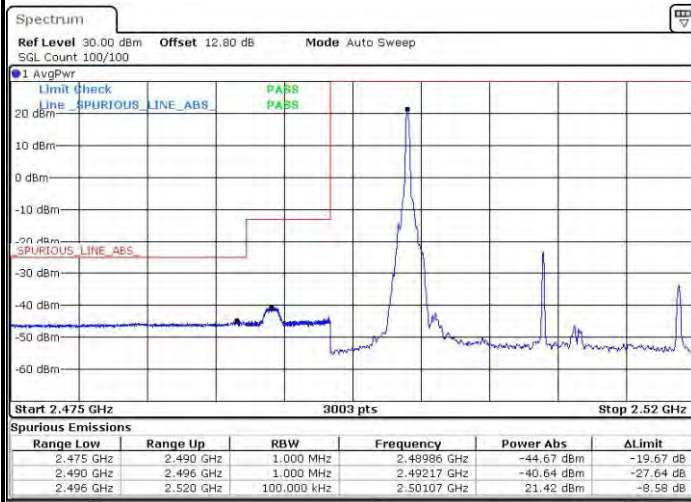
Highest Band Edge / Full RB



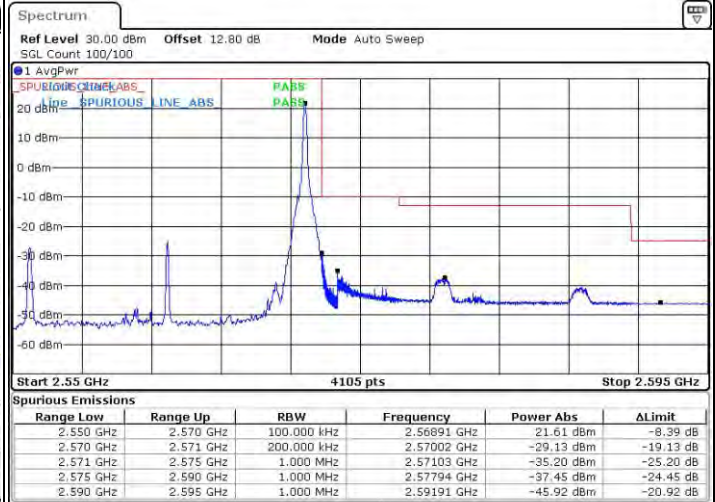


LTE Band 7 / 20MHz / 16QAM

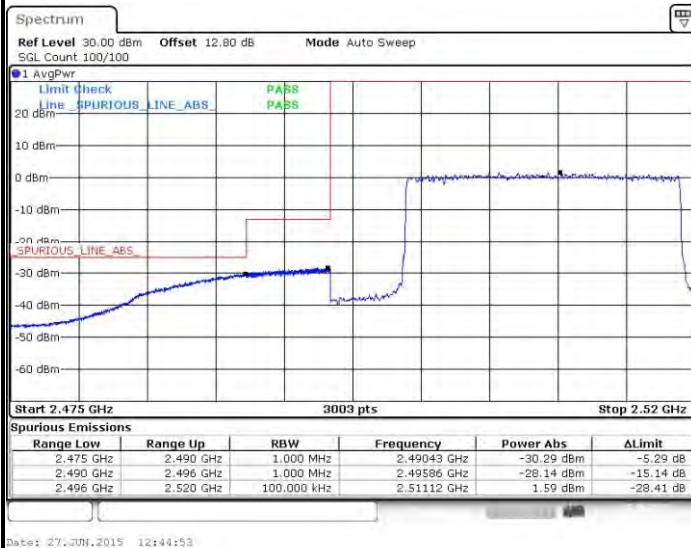
Lowest Band Edge / 1 RB



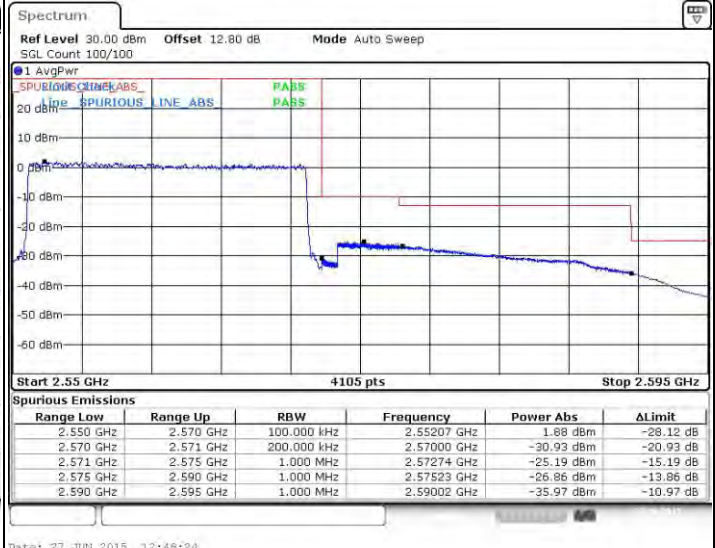
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



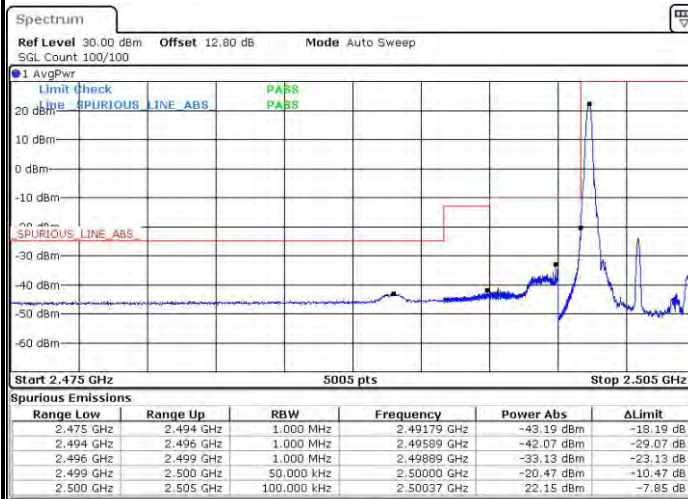
Highest Band Edge / Full RB





LTE Band 7 / 5MHz / QPSK (IC)

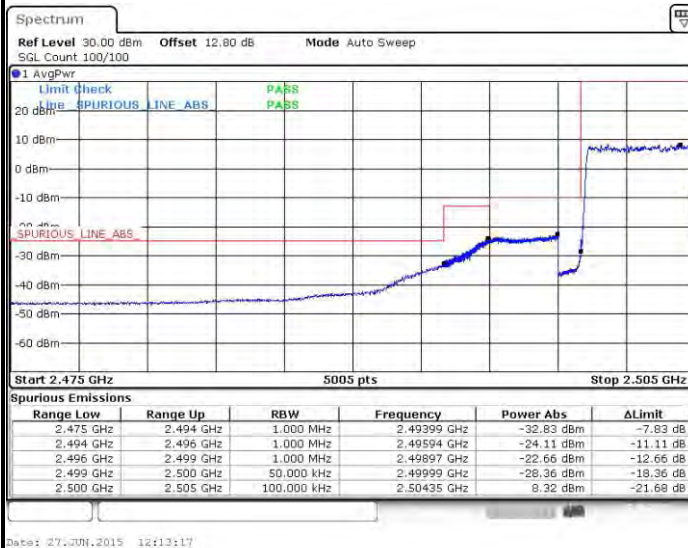
Lowest Band Edge / 1 RB



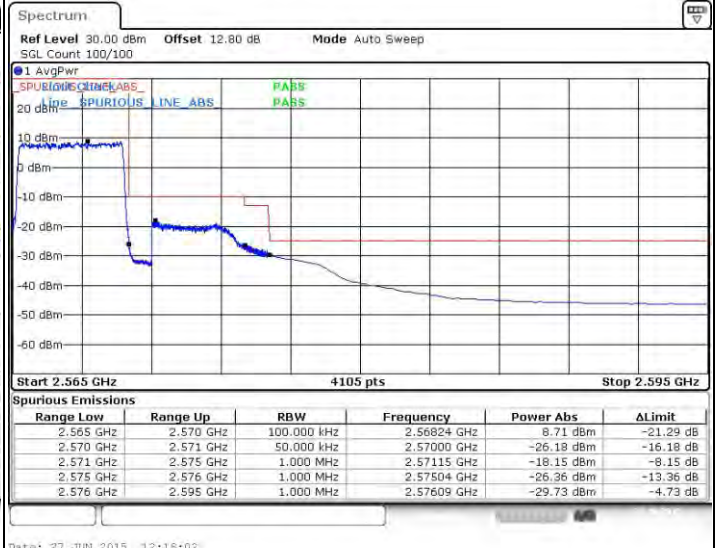
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



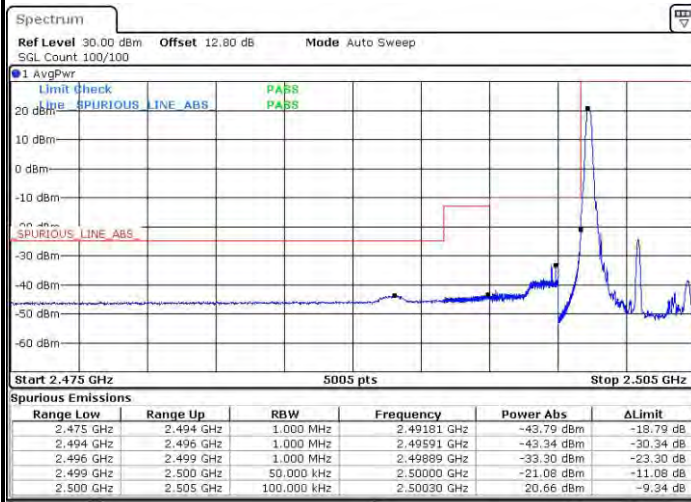
Highest Band Edge / Full RB





LTE Band 7 / 5MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



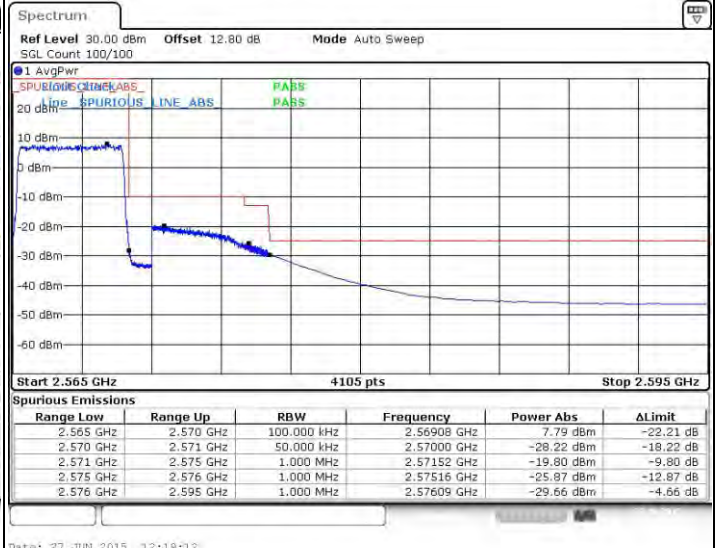
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



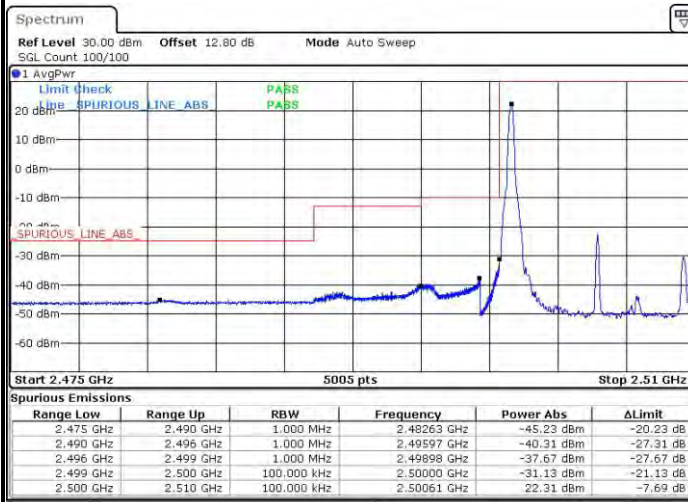
Highest Band Edge / Full RB



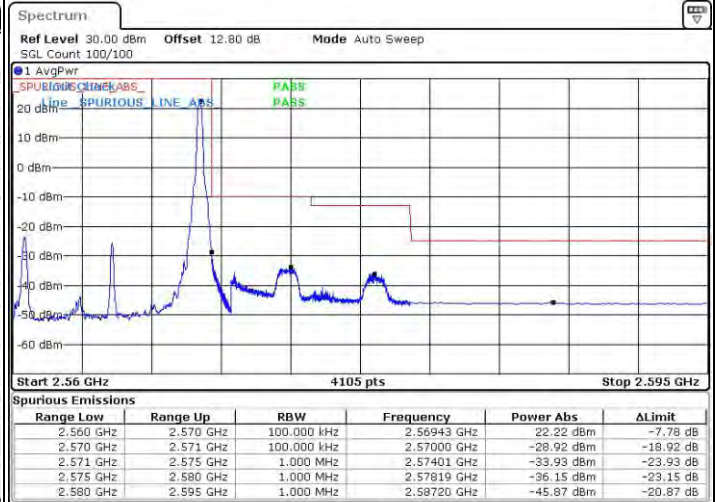


LTE Band 7 / 10MHz / QPSK (IC)

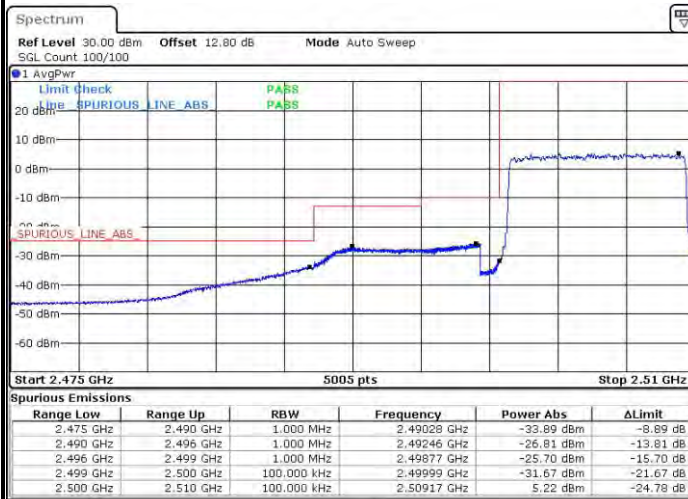
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



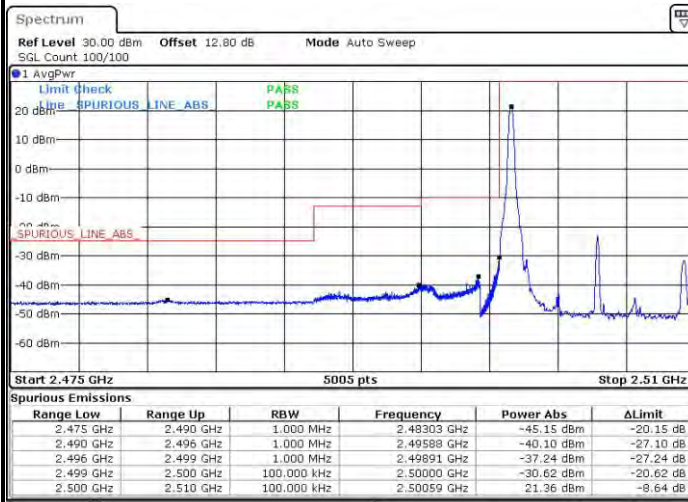
Highest Band Edge / Full RB



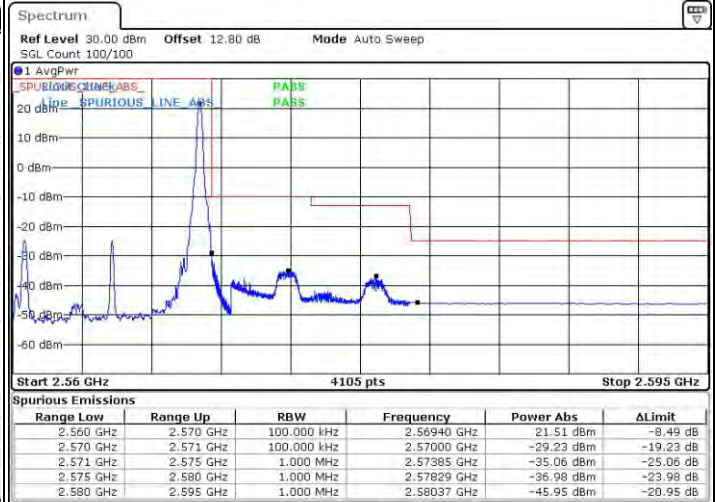


LTE Band 7 / 10MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



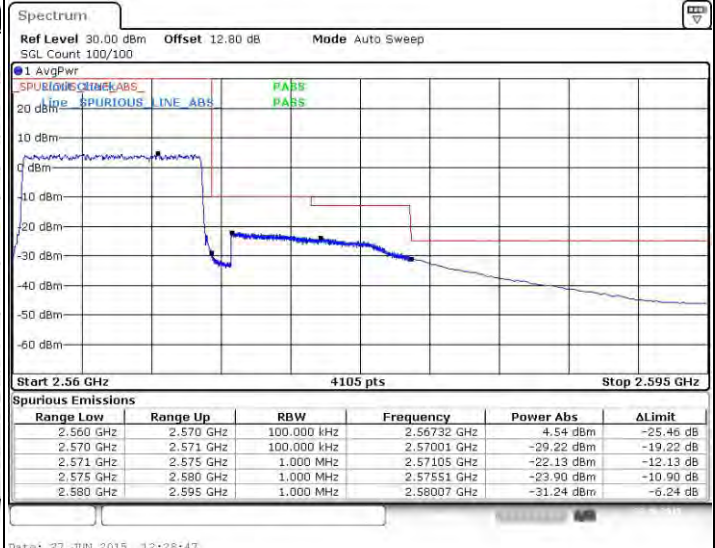
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



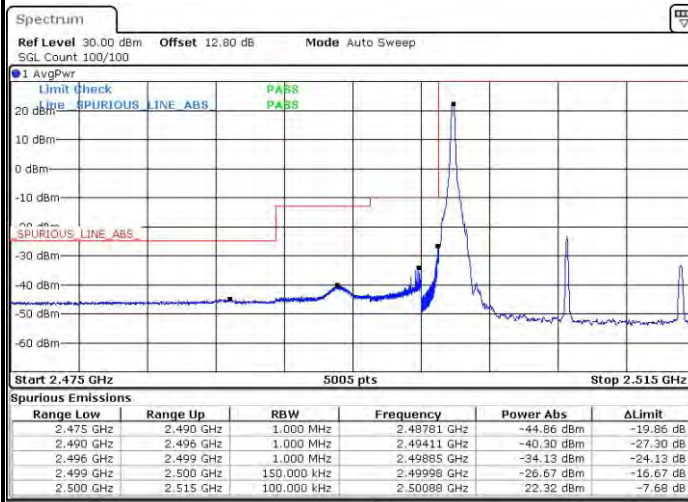
Highest Band Edge / Full RB



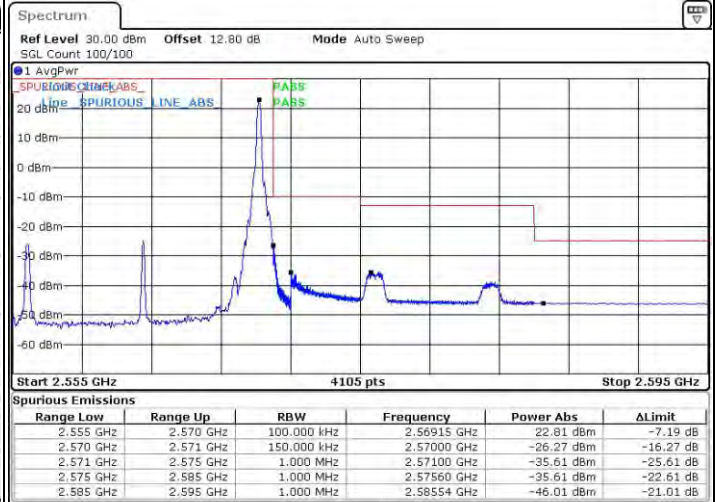


LTE Band 7 / 15MHz / QPSK (IC)

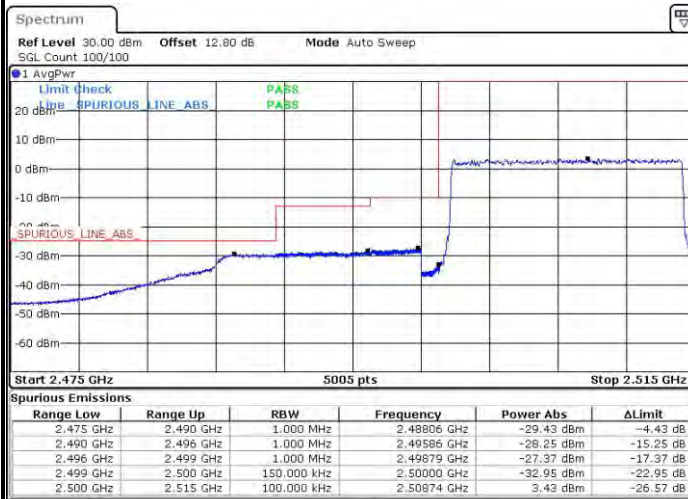
Lowest Band Edge / 1 RB



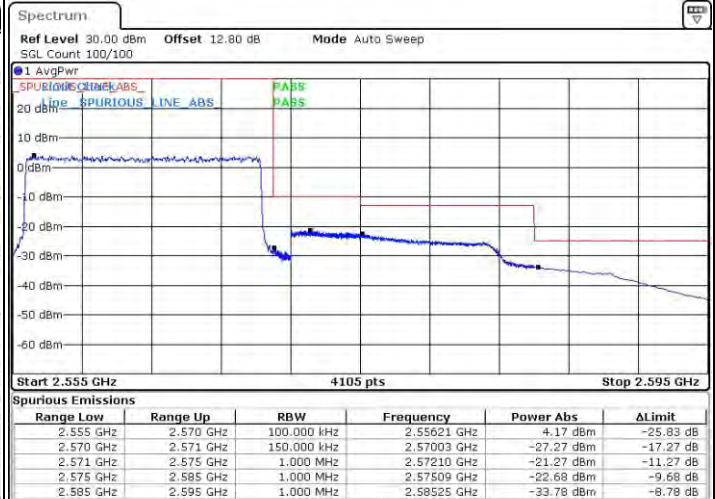
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



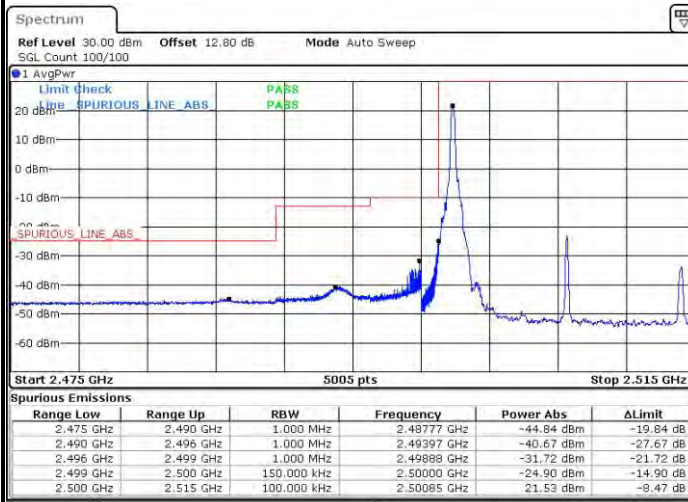
Highest Band Edge / Full RB



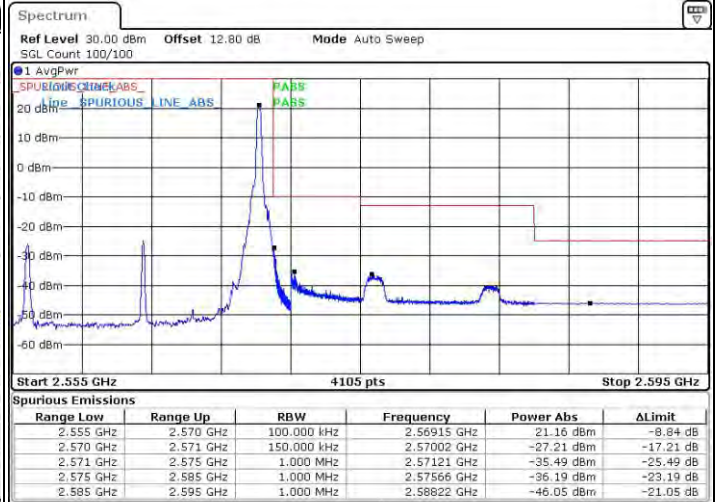


LTE Band 7 / 15MHz / 16QAM (IC)

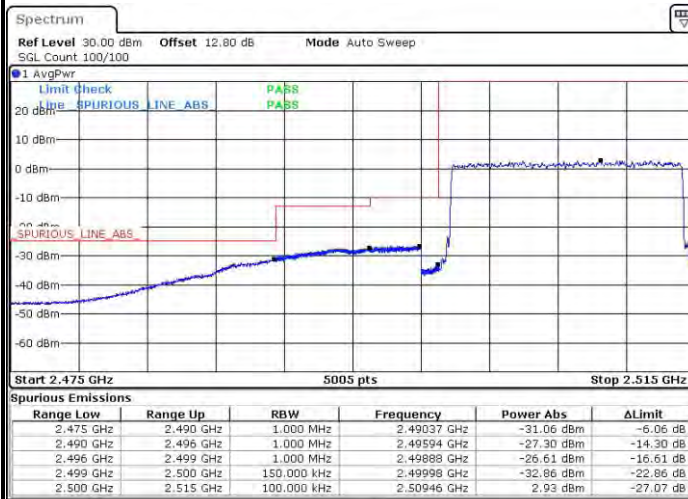
Lowest Band Edge / 1 RB



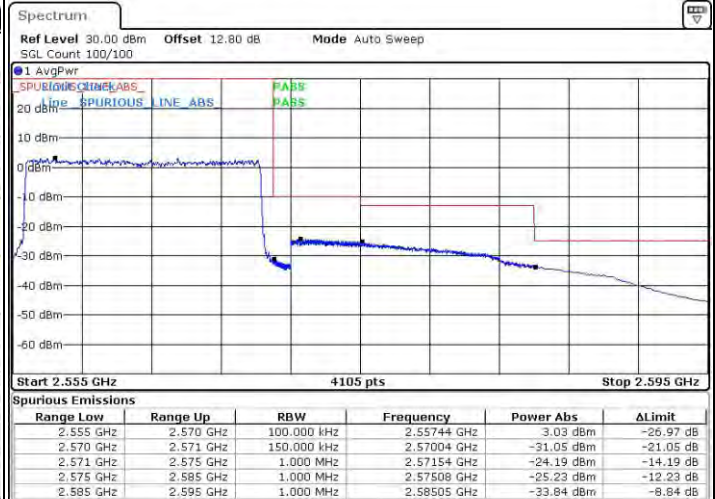
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



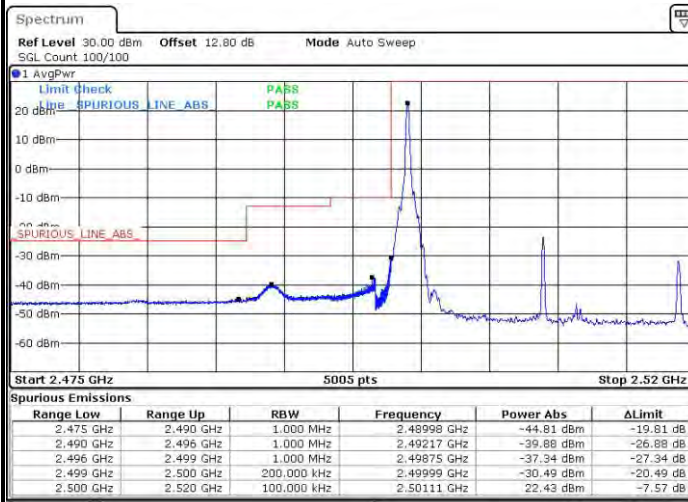
Highest Band Edge / Full RB



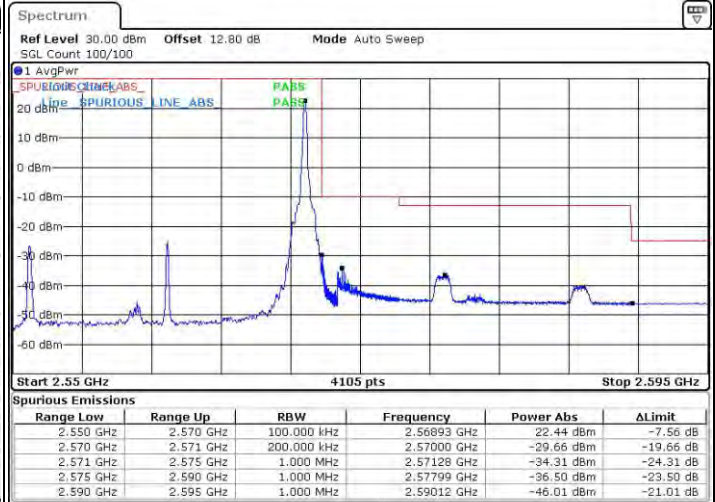


LTE Band 7 / 20MHz / QPSK (IC)

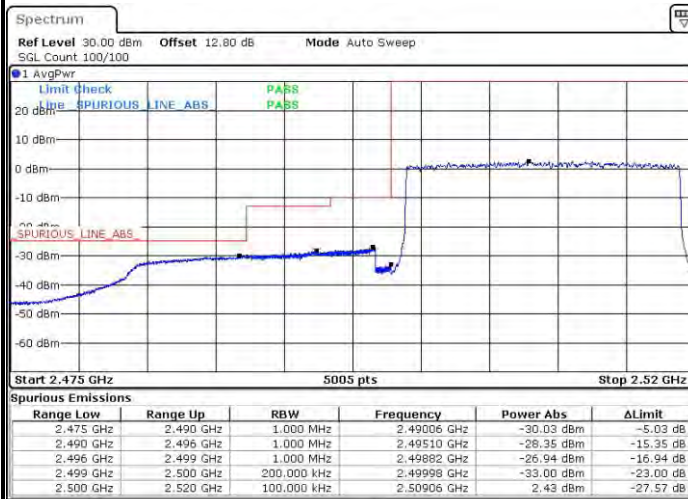
Lowest Band Edge / 1 RB



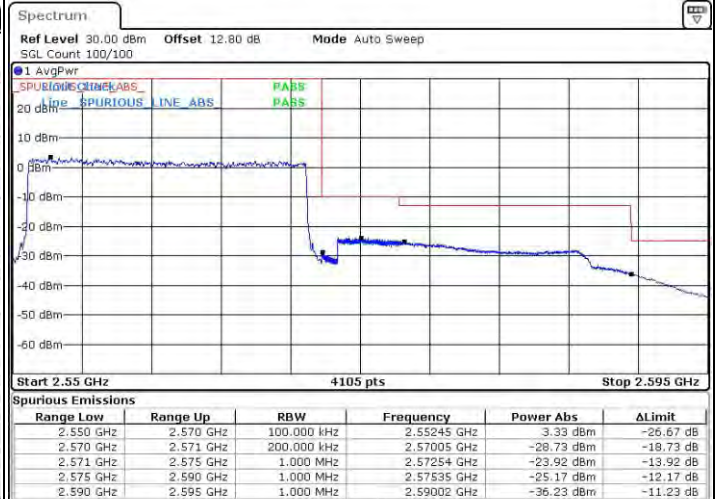
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



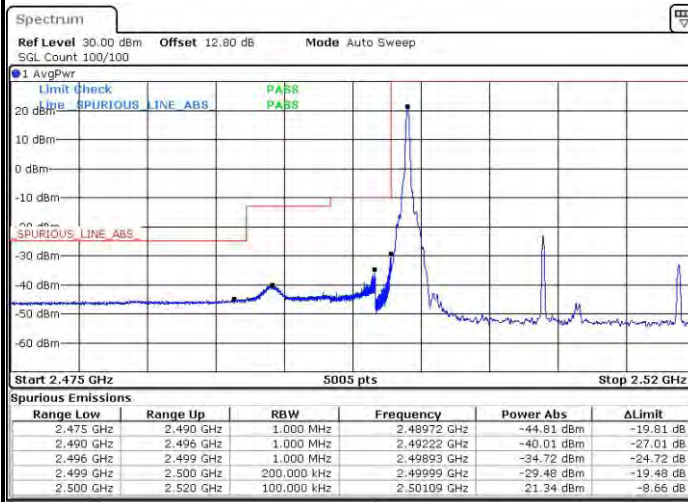
Highest Band Edge / Full RB





LTE Band 7 / 20MHz / 16QAM (IC)

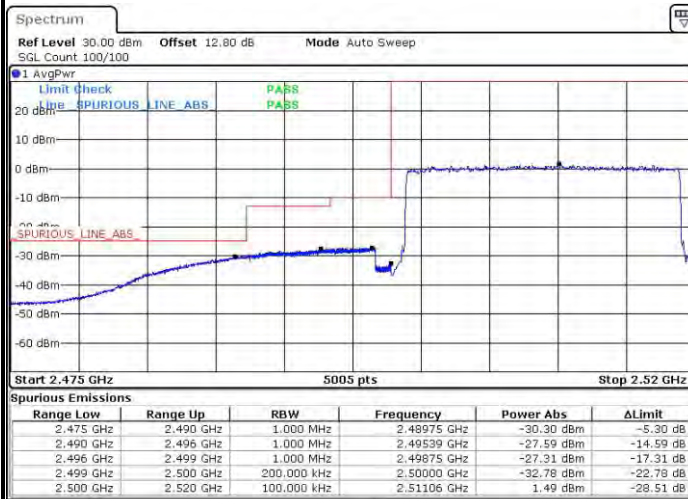
Lowest Band Edge / 1 RB



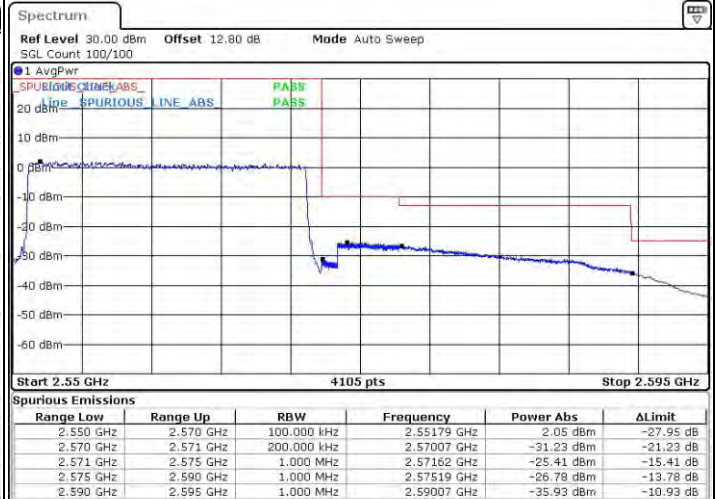
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



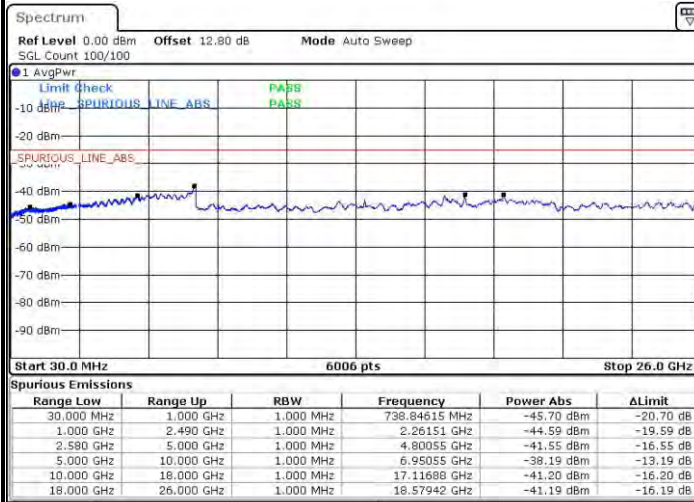


Conducted Spurious Emission



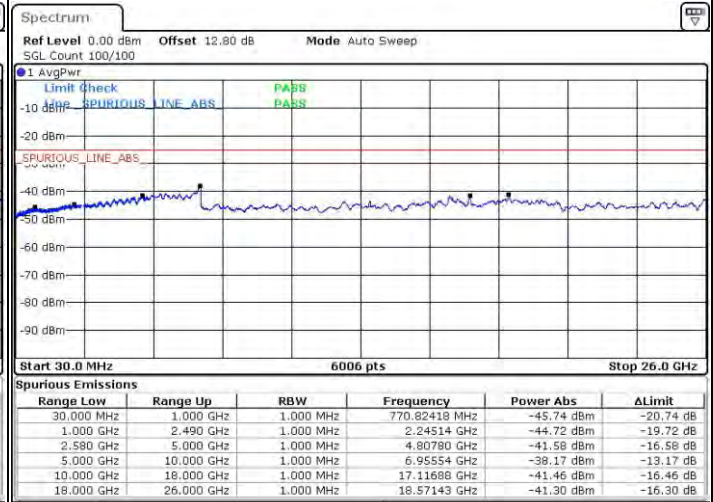
LTE Band 7 / 5MHz

Lowest Channel / QPSK



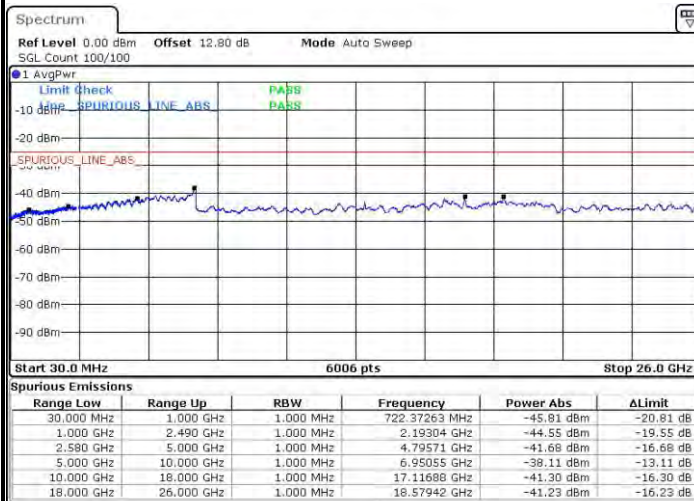
Date: 27.JUN.2015 10:47:13

Lowest Channel / 16QAM



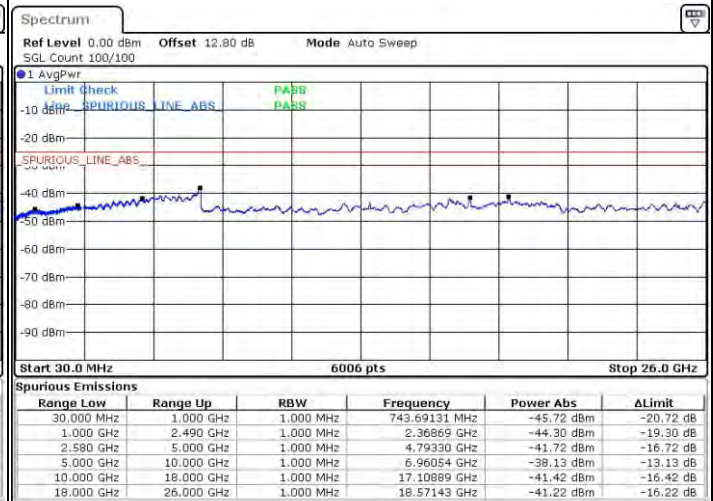
Date: 27.JUN.2015 10:48:24

Middle Channel / QPSK



Date: 27.JUN.2015 10:50:27

Middle Channel / 16QAM

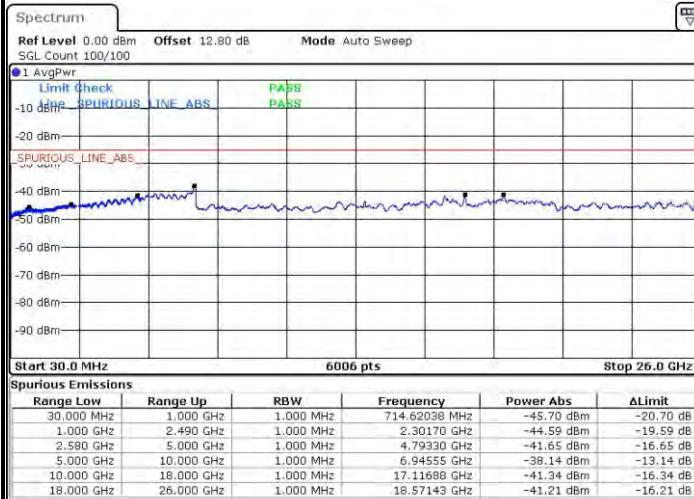


Date: 27.JUN.2015 10:51:38



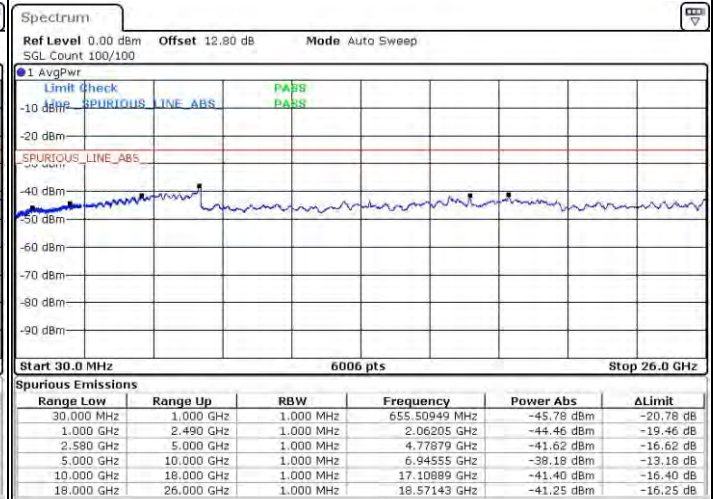
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 27.JUN.2015 10:58:22

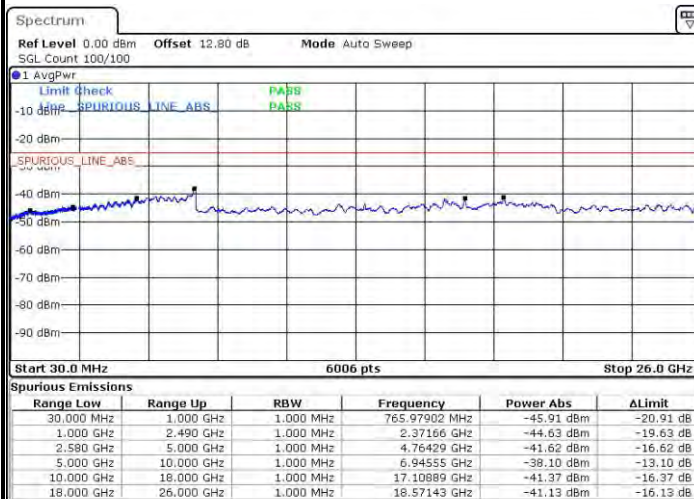
Highest Channel / 16QAM



Date: 27.JUN.2015 10:59:33

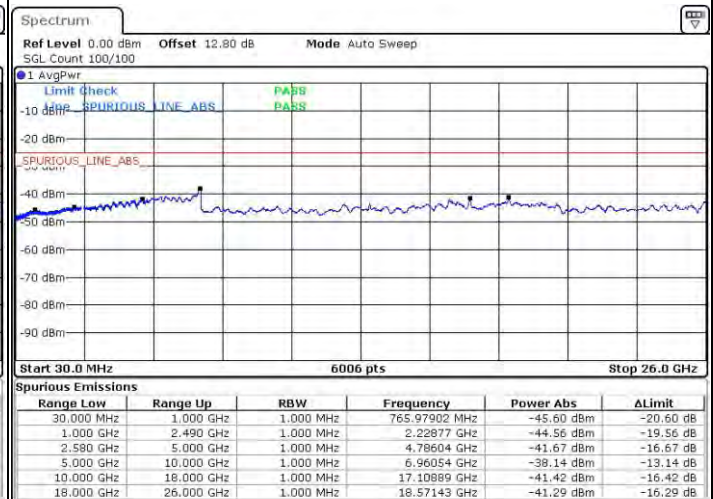
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 27.JUN.2015 11:06:16

Lowest Channel / 16QAM

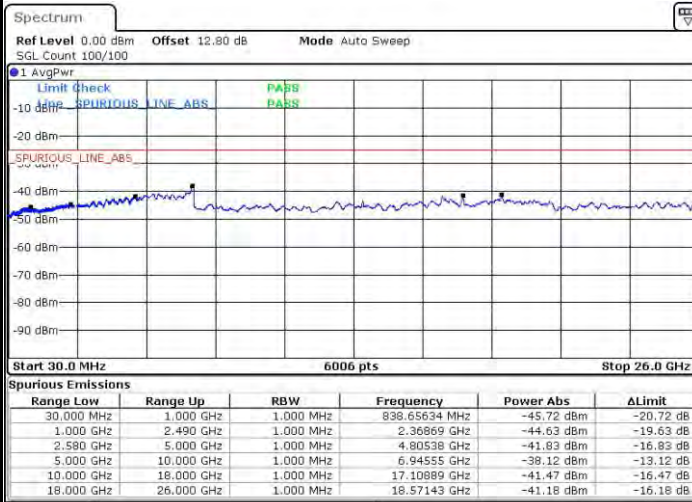


Date: 27.JUN.2015 11:07:27



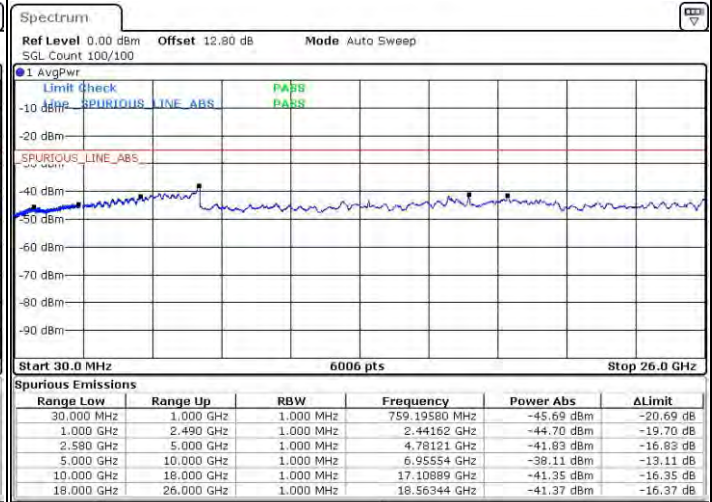
LTE Band 7 / 10MHz

Middle Channel / QPSK



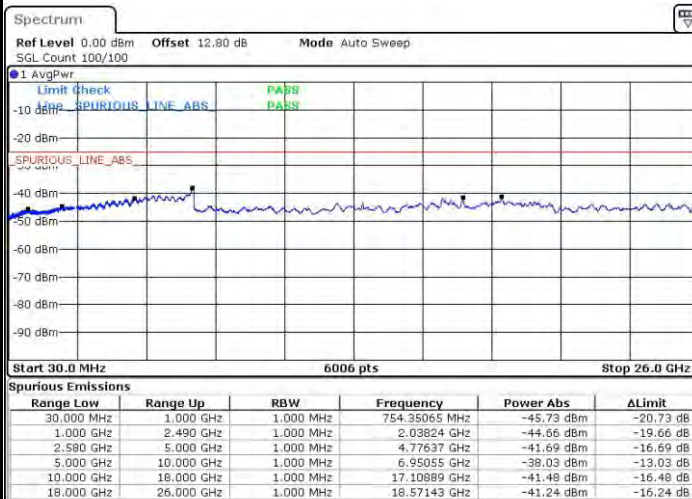
Date: 27.JUN.2015 11:09:30

Middle Channel / 16QAM



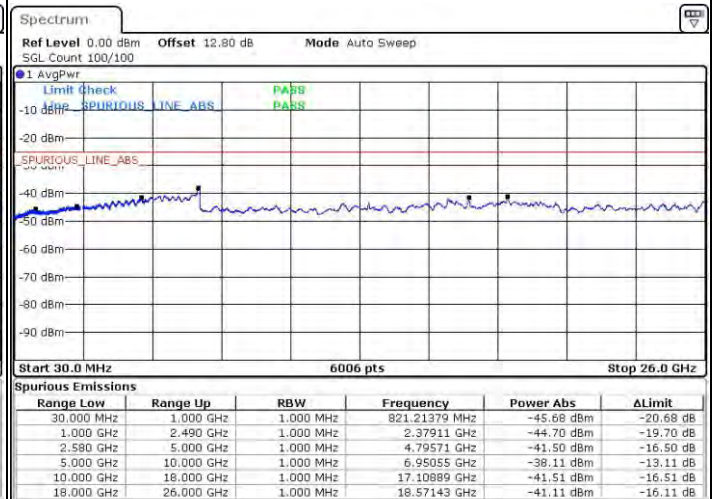
Date: 27.JUN.2015 11:10:43

Highest Channel / QPSK



Date: 27.JUN.2015 11:17:29

Highest Channel / 16QAM

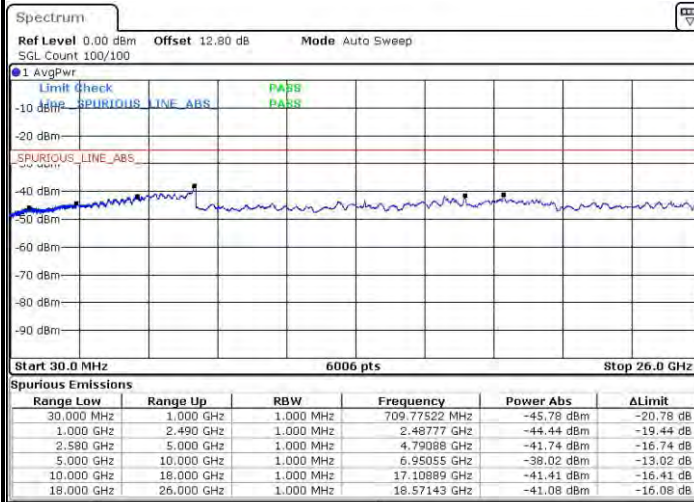


Date: 27.JUN.2015 11:18:35



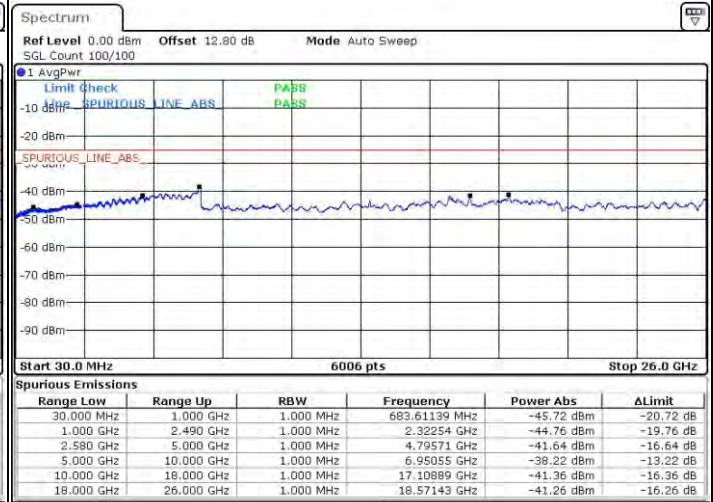
LTE Band 7 / 15MHz

Lowest Channel / QPSK



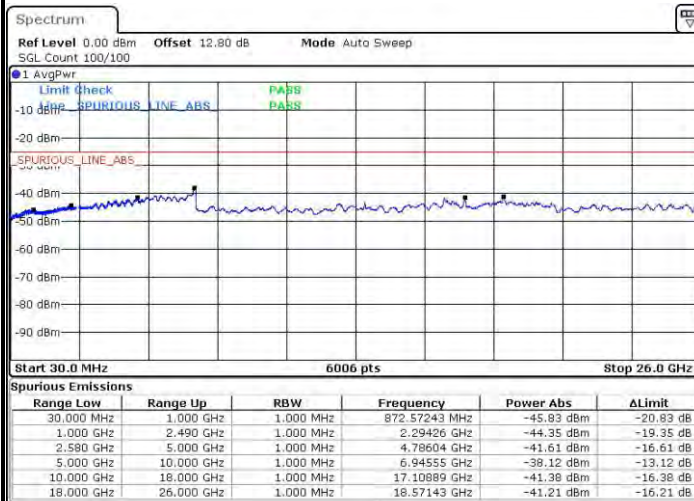
Date: 27.JUN.2015 11:25:19

Lowest Channel / 16QAM



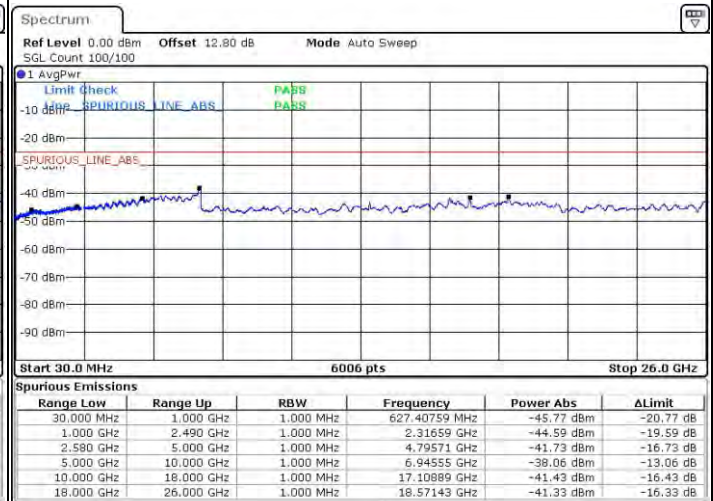
Date: 27.JUN.2015 11:26:30

Middle Channel / QPSK



Date: 27.JUN.2015 11:28:33

Middle Channel / 16QAM

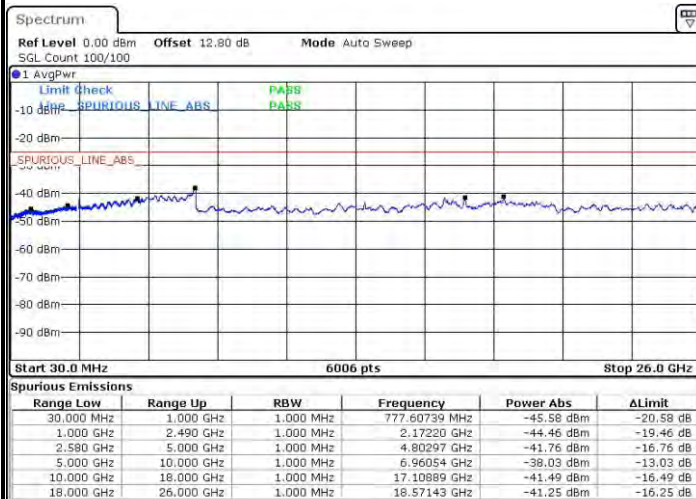


Date: 27.JUN.2015 11:28:43



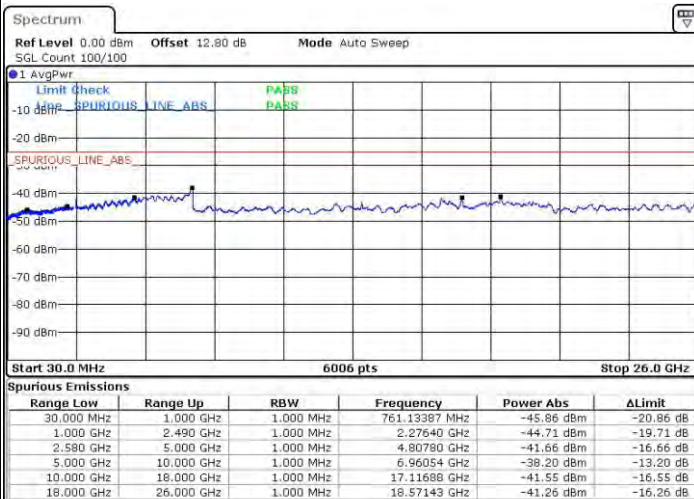
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 27.JUN.2015 11:36:27

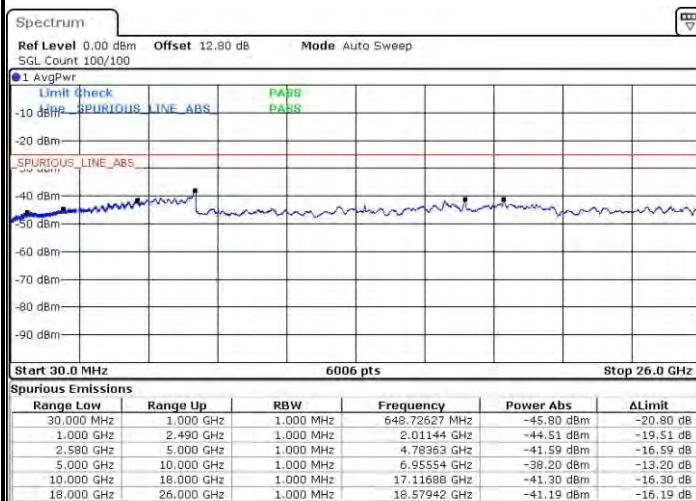
Highest Channel / 16QAM



Date: 27.JUN.2015 11:37:38

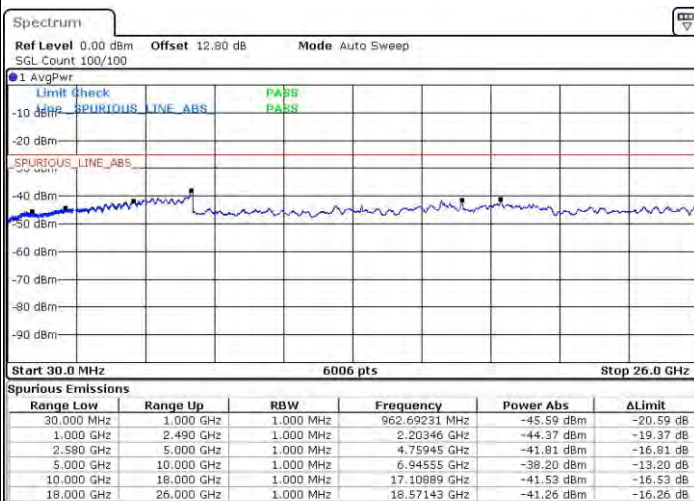
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 27.JUN.2015 11:48:35

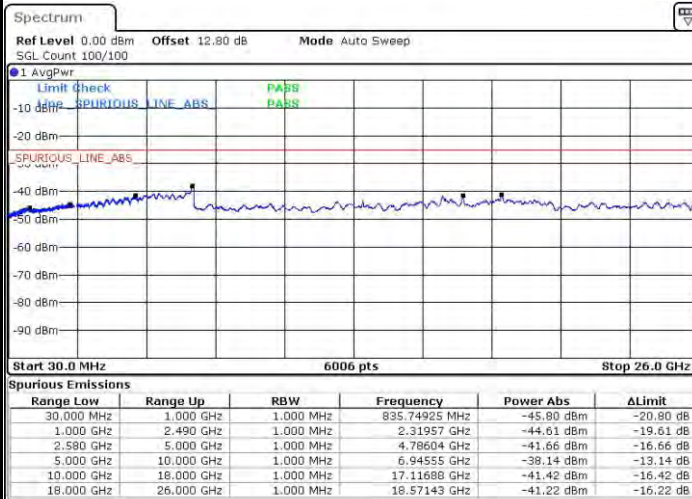
Lowest Channel / 16QAM



Date: 27.JUN.2015 11:49:46

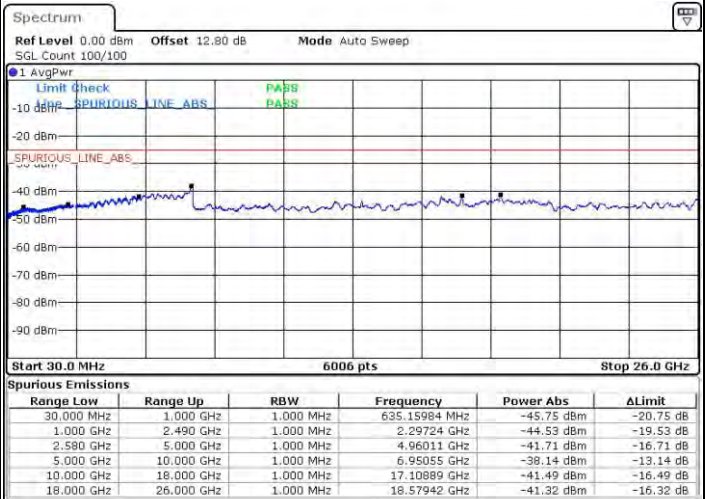
LTE Band 7 / 20MHz

Middle Channel / QPSK



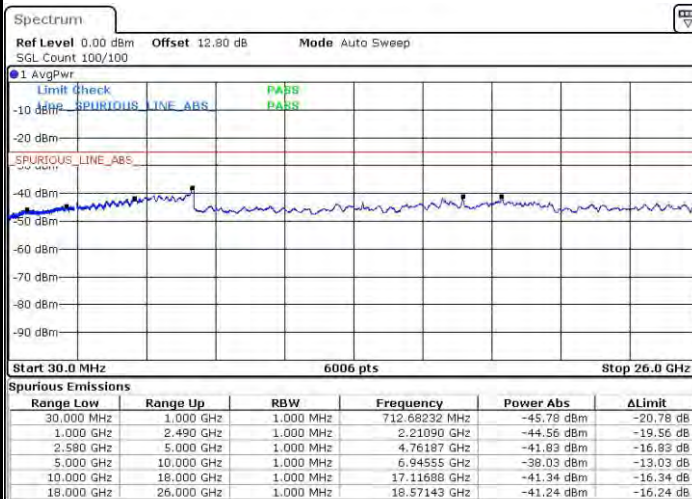
Date: 27.JUN.2015 11:51:49

Middle Channel / 16QAM



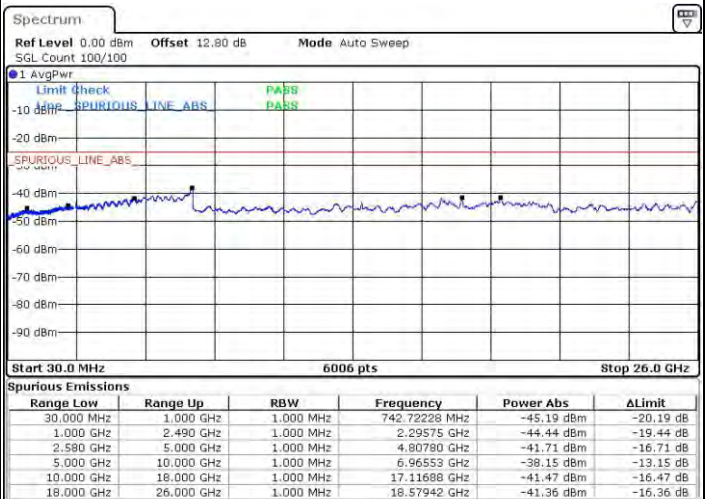
Date: 27.JUN.2015 11:52:59

Highest Channel / QPSK



Date: 27.JUN.2015 11:59:43

Highest Channel / 16QAM



Date: 27.JUN.2015 12:00:54

Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0044	PASS
40	Normal Voltage	0.0047	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0019	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0056	

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 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 5MHz	Within Band
		Frequency Offset (Δf) (Hz)	Result
50	Normal Voltage	11.1	PASS
40	Normal Voltage	11.9	
30	Normal Voltage	2.9	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	-1.2	
0	Normal Voltage	-0.2	
-10	Normal Voltage	-5.8	
-20	Normal Voltage	-3.2	
-30	Normal Voltage	0.9	
20	Maximum Voltage	-4.9	
20	Normal Voltage	0	
20	Battery End Point	14.3	

$|\text{MAX}(\Delta f)|$ 14.3= Hz

Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	2500.139986	≥ 2500 MHz	PASS
$f_H + \text{MAX}(\Delta f) $	2569.860014	≤ 2570 MHz	