



LTE Band 7

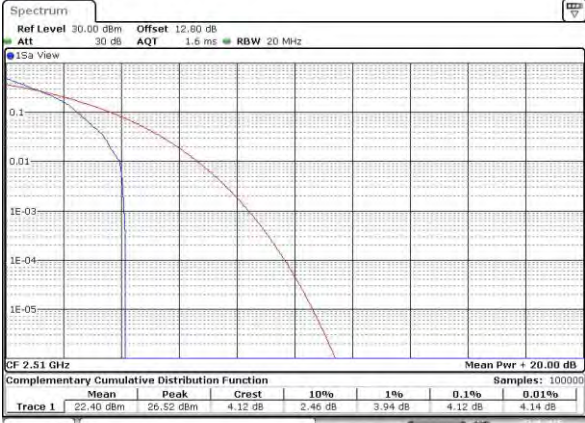
Peak-to-Average Ratio

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	



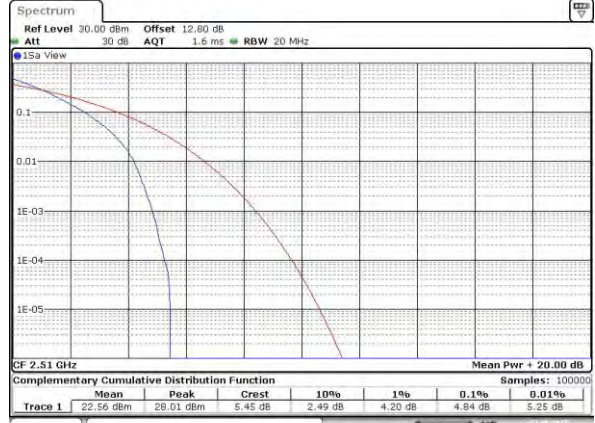
LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 27_JUN.2015 12:07:13

Lowest Channel / Full RB



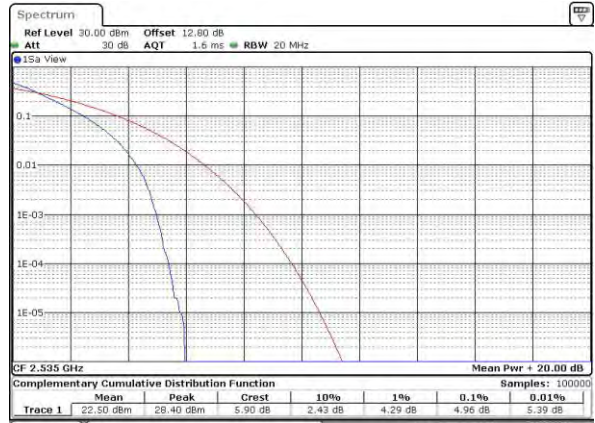
Date: 27_JUN.2015 12:08:12

Middle Channel / 1RB



Date: 27_JUN.2015 12:08:26

Middle Channel / Full RB



Date: 27_JUN.2015 12:08:38

Highest Channel / 1RB



Date: 27_JUN.2015 12:08:56

Highest Channel / Full RB

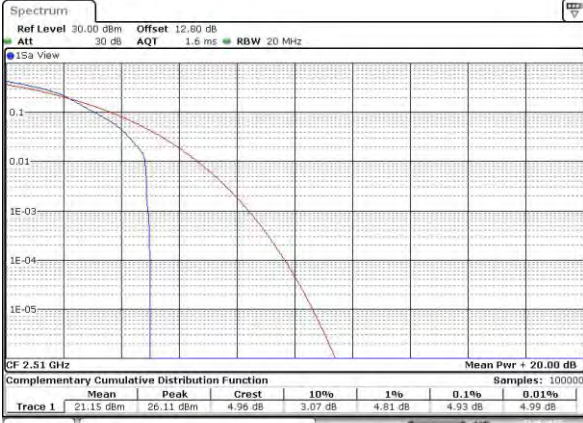


Date: 27_JUN.2015 12:09:09



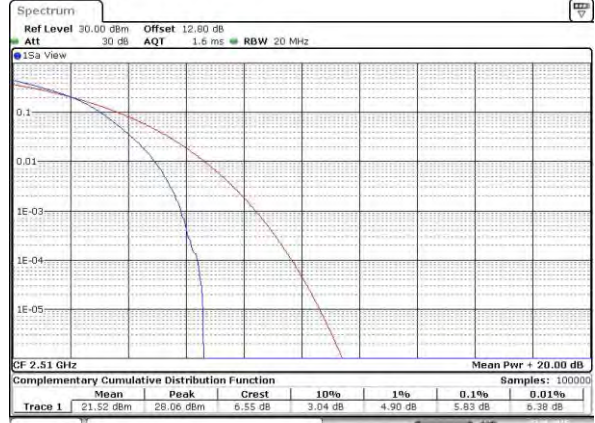
LTE Band 7 / 20MHz / 16QAM

Lowest Channel / 1RB



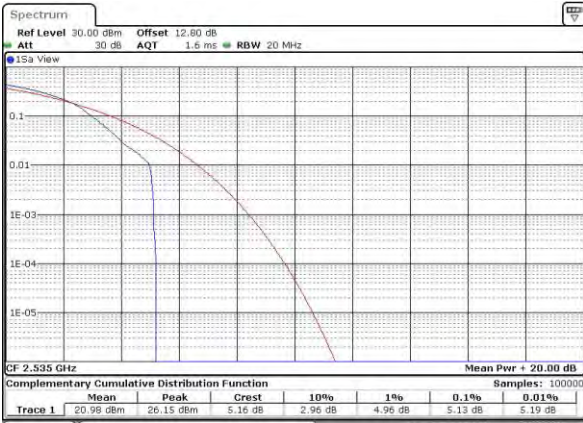
Date: 27_JUN_2015 12:03:55

Lowest Channel / Full RB



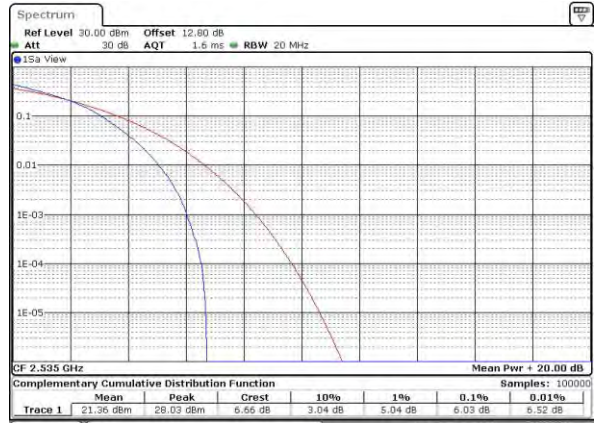
Date: 27_JUN_2015 12:05:07

Middle Channel / 1RB



Date: 27_JUN_2015 12:05:03

Middle Channel / Full RB



Date: 27_JUN_2015 12:06:17

Highest Channel / 1RB



Date: 27_JUN_2015 12:06:32

Highest Channel / Full RB



Date: 27_JUN_2015 12:06:48



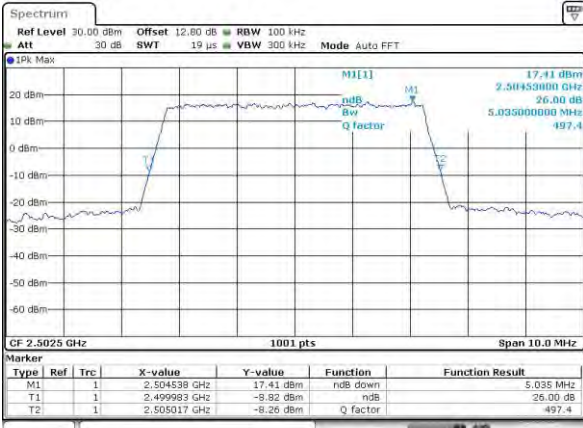
26dB Bandwidth

Mode	LTE Band 7 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	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



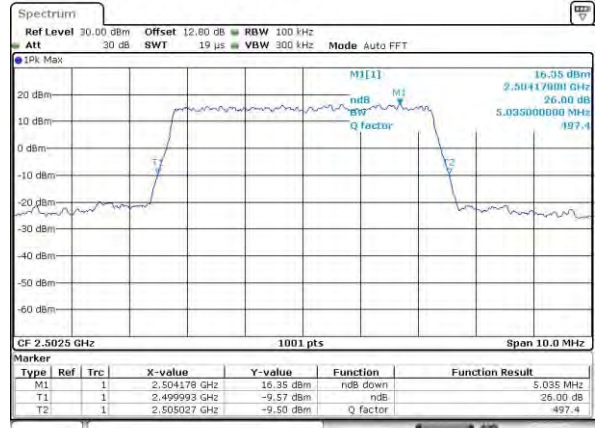
LTE Band 7

Lowest Channel / 5MHz / QPSK



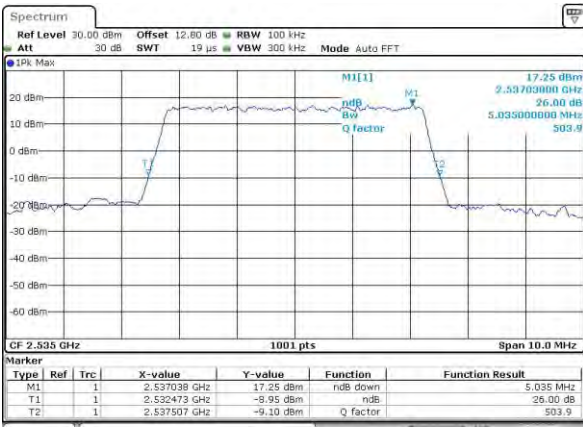
Date: 27-Jun-2015 10:41:08

Lowest Channel / 5MHz / 16QAM



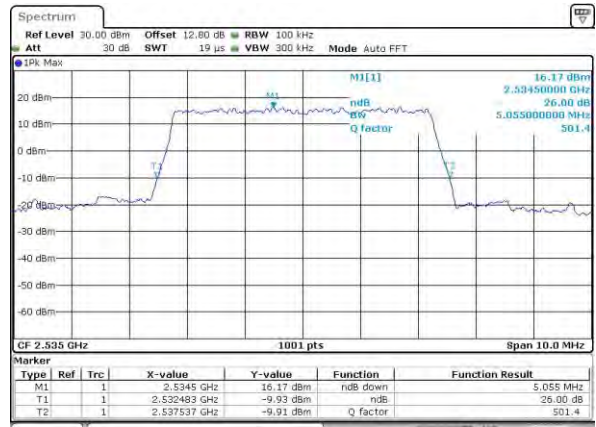
Date: 27-Jun-2015 10:41:22

Middle Channel / 5MHz / QPSK



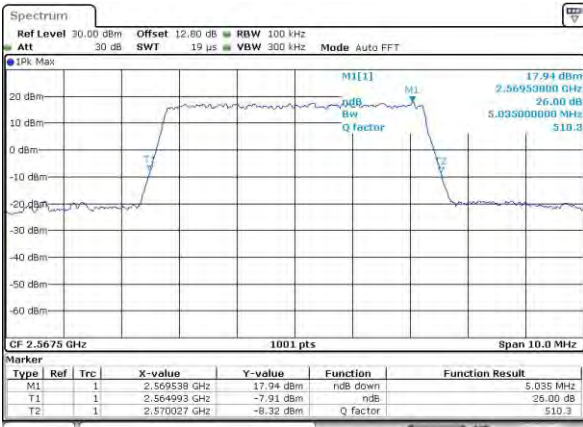
Date: 27-Jun-2015 10:49:03

Middle Channel / 5MHz / 16QAM



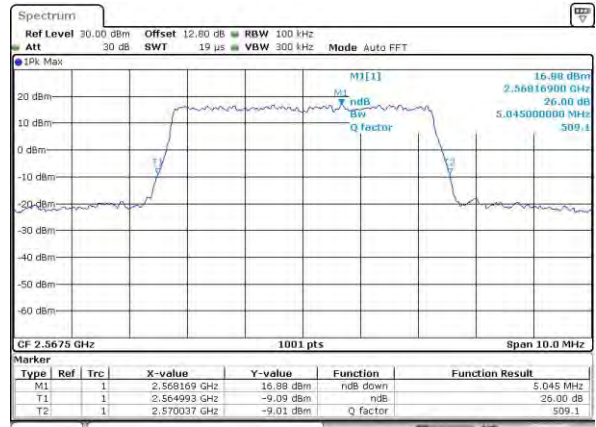
Date: 27-Jun-2015 10:49:16

Highest Channel / 5MHz / QPSK



Date: 27-Jun-2015 10:52:16

Highest Channel / 5MHz / 16QAM

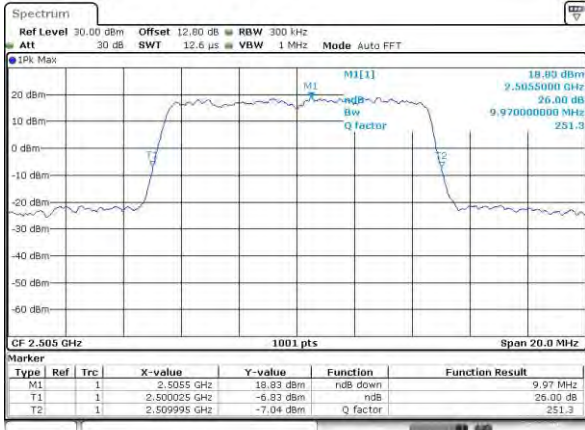


Date: 27-Jun-2015 10:52:31



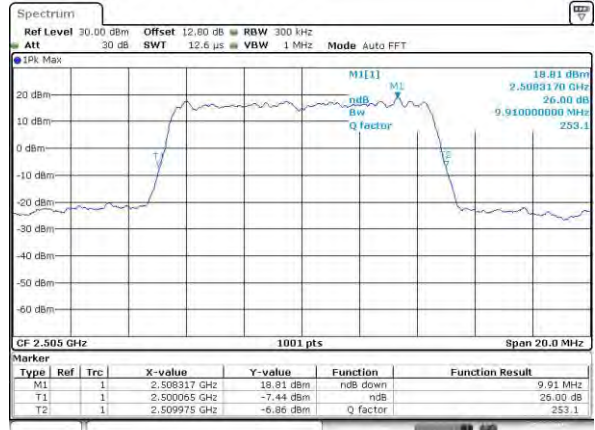
LTE Band 7

Lowest Channel / 10MHz / QPSK



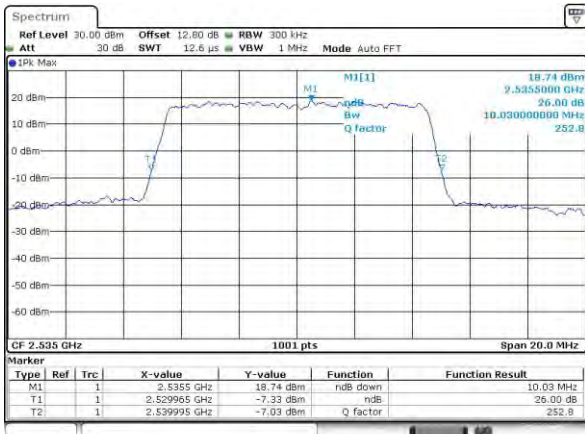
Date: 27-Jun-2018 11:08:11

Lowest Channel / 10MHz / 16QAM



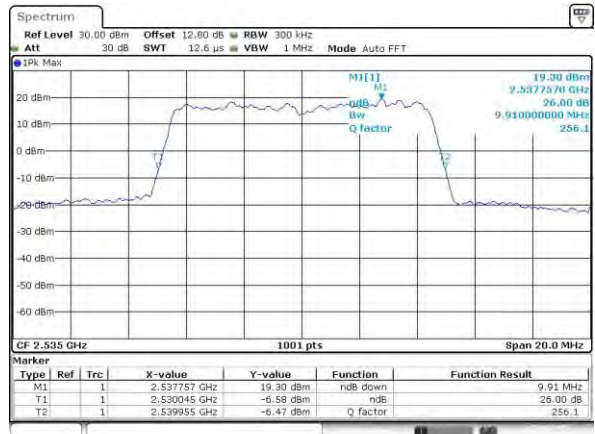
Date: 27-Jun-2018 11:08:25

Middle Channel / 10MHz / QPSK



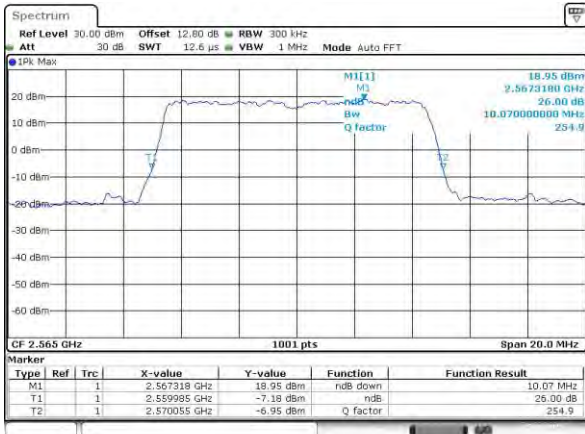
Date: 27-Jun-2018 11:08:05

Middle Channel / 10MHz / 16QAM



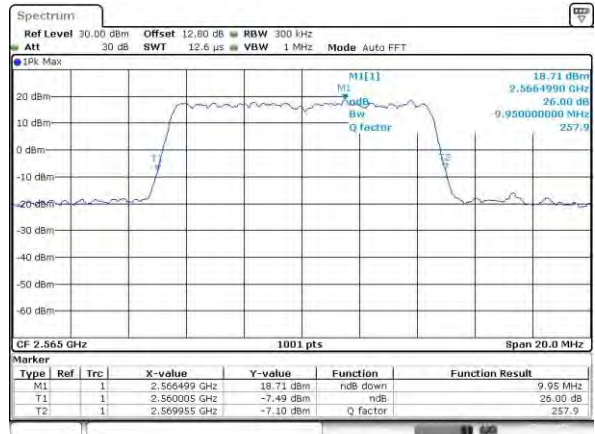
Date: 27-Jun-2018 11:08:19

Highest Channel / 10MHz / QPSK



Date: 27-Jun-2018 11:11:19

Highest Channel / 10MHz / 16QAM

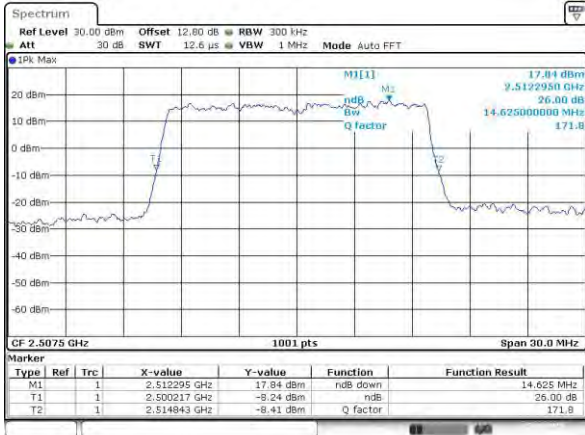


Date: 27-Jun-2018 11:11:33



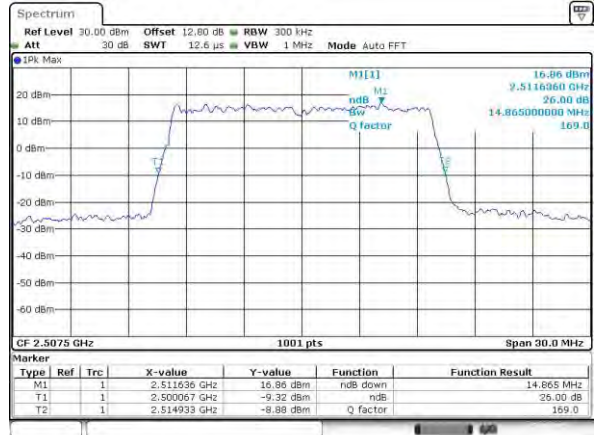
LTE Band 7

Lowest Channel / 15MHz / QPSK



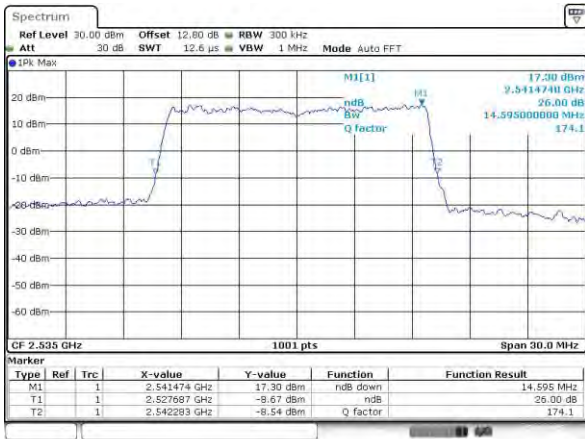
Date: 27-Jun-2018 11:19:14

Lowest Channel / 15MHz / 16QAM



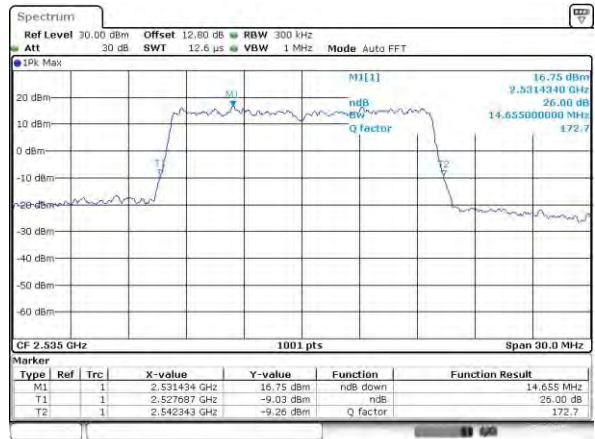
Date: 27-Jun-2018 11:19:29

Middle Channel / 15MHz / QPSK



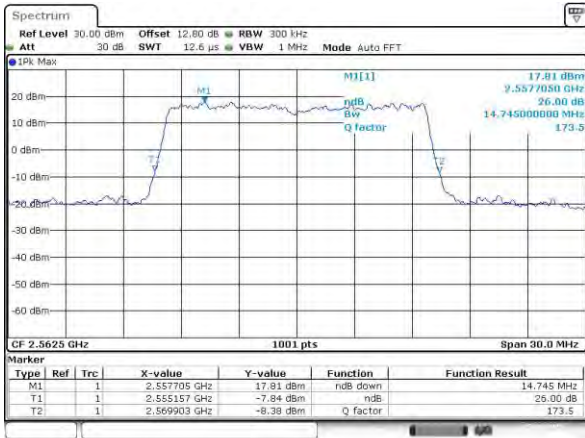
Date: 27-Jun-2018 11:27:08

Middle Channel / 15MHz / 16QAM



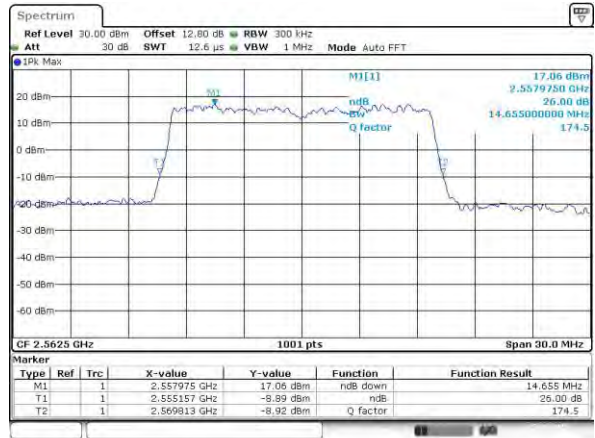
Date: 27-Jun-2018 11:27:22

Highest Channel / 15MHz / QPSK



Date: 27-Jun-2018 11:30:22

Highest Channel / 15MHz / 16QAM

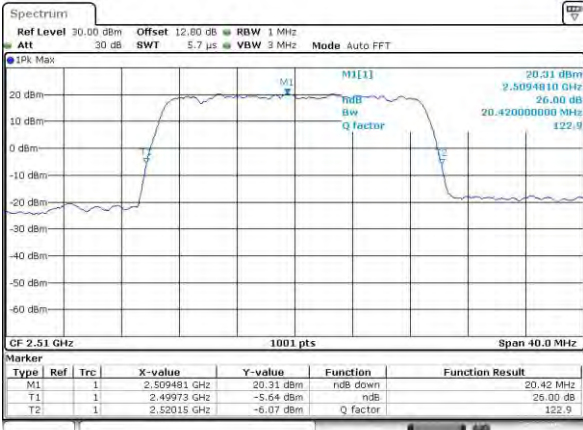


Date: 27-Jun-2018 11:30:36



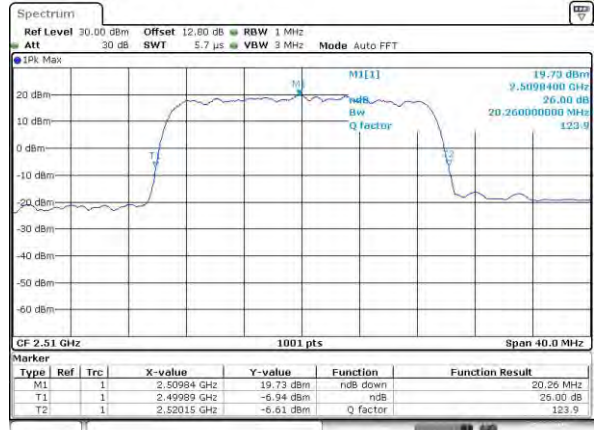
LTE Band 7

Lowest Channel / 20MHz / QPSK



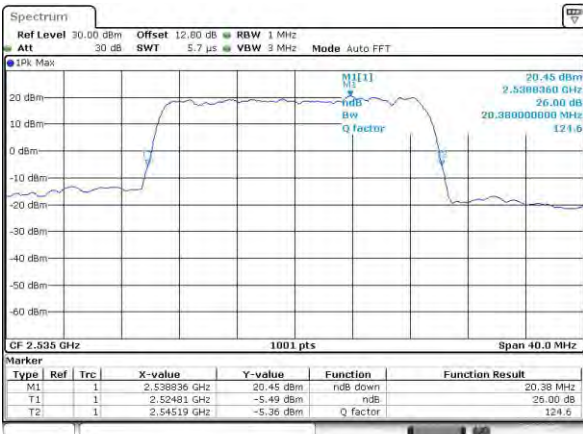
Date: 27-Jun-2015 11:42:15

Lowest Channel / 20MHz / 16QAM



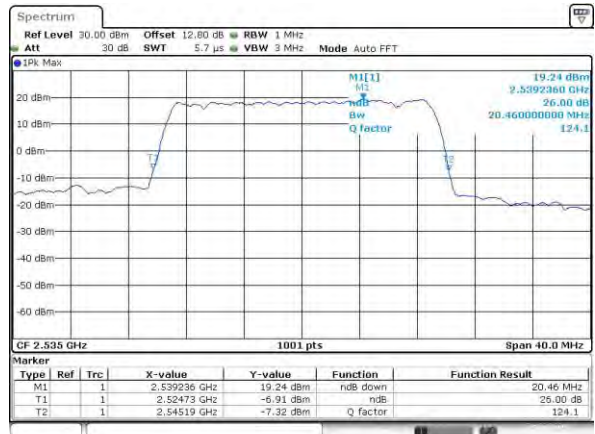
Date: 27-Jun-2015 11:42:29

Middle Channel / 20MHz / QPSK



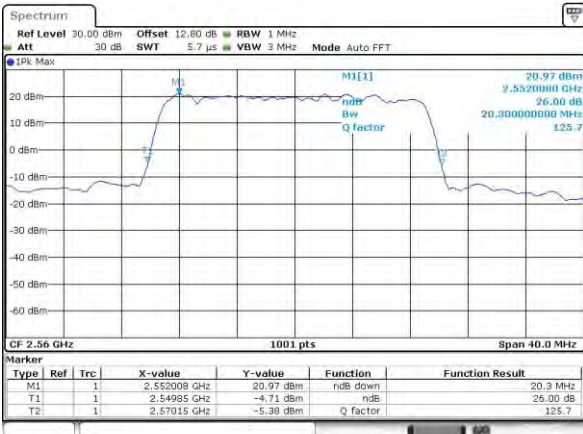
Date: 27-Jun-2015 11:50:24

Middle Channel / 20MHz / 16QAM



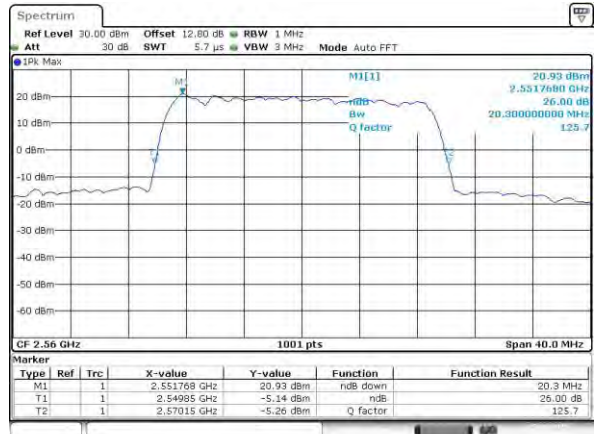
Date: 27-Jun-2015 11:50:38

Highest Channel / 20MHz / QPSK



Date: 27-Jun-2015 11:53:38

Highest Channel / 20MHz / 16QAM



Date: 27-Jun-2015 11:53:52



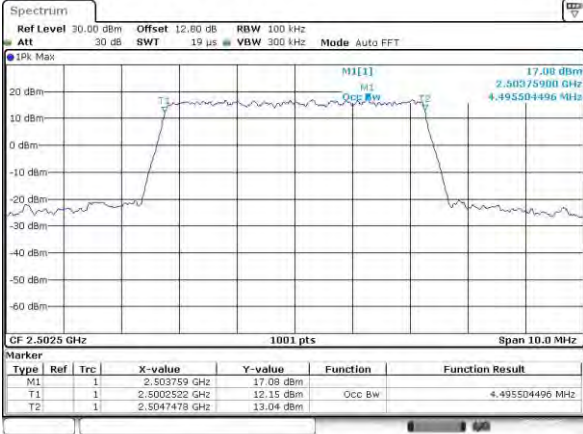
Occupied Bandwidth

Mode	LTE Band 7 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	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



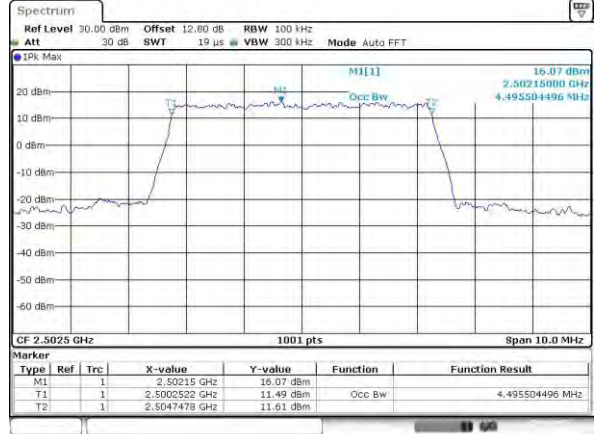
LTE Band 7

Lowest Channel / 5MHz / QPSK



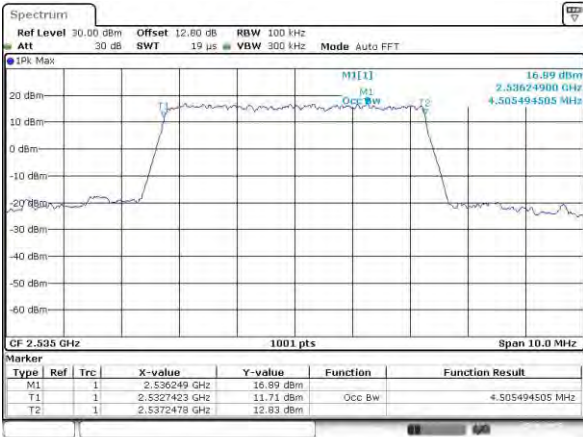
Date: 27-Jun-2018 10:40:43

Lowest Channel / 5MHz / 16QAM



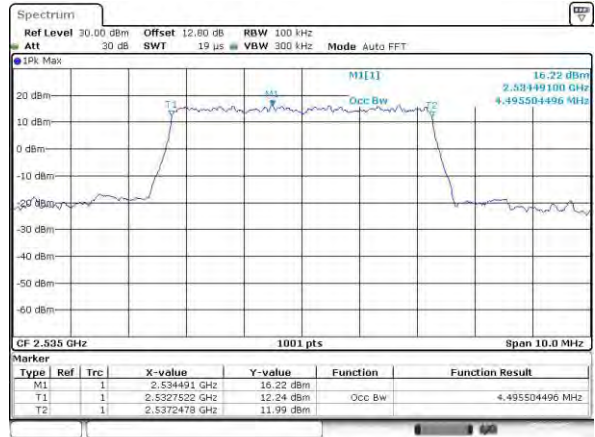
Date: 27-Jun-2018 10:40:54

Middle Channel / 5MHz / QPSK



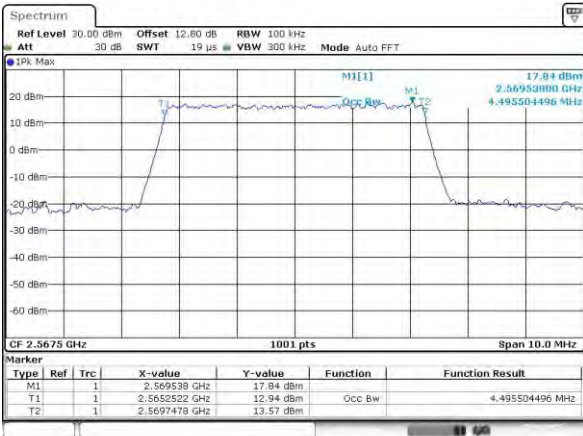
Date: 27-Jun-2018 10:48:37

Middle Channel / 5MHz / 16QAM



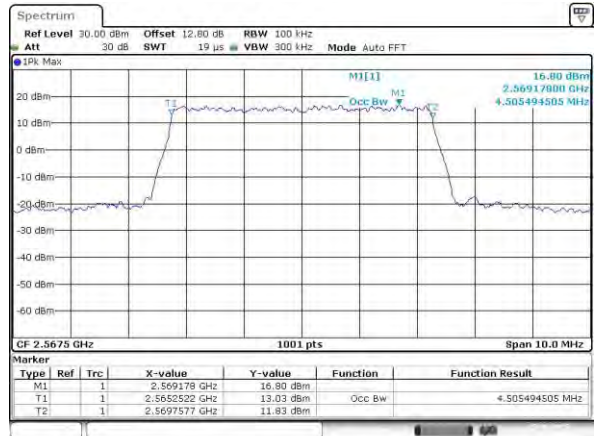
Date: 27-Jun-2018 10:48:48

Highest Channel / 5MHz / QPSK



Date: 27-Jun-2018 10:51:50

Highest Channel / 5MHz / 16QAM

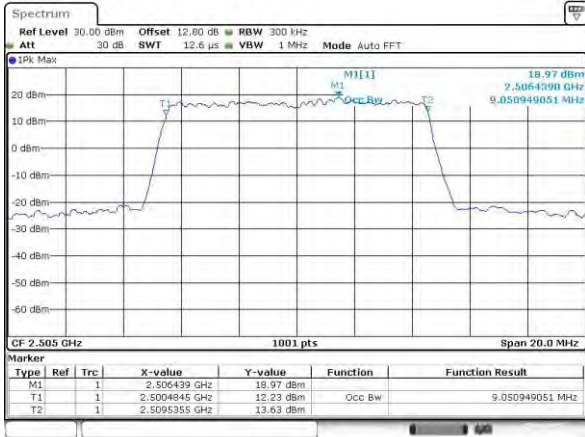


Date: 27-Jun-2018 10:52:02



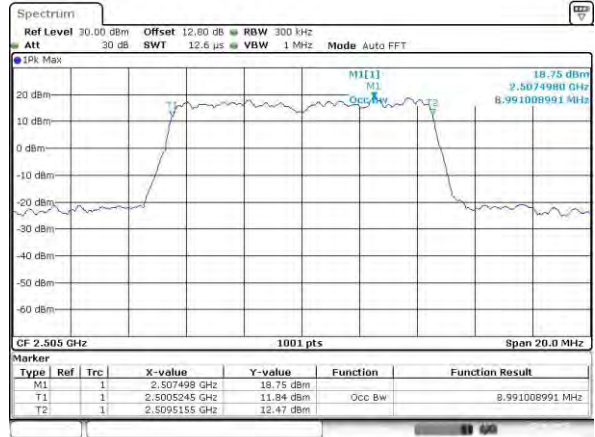
LTE Band 7

Lowest Channel / 10MHz / QPSK



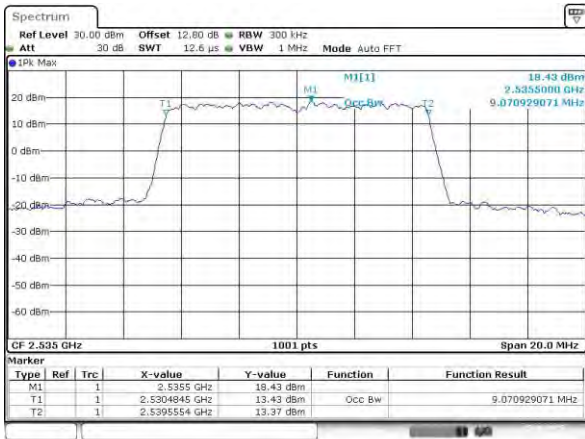
Date: 27-Jun-2018 10:59:45

Lowest Channel / 10MHz / 16QAM



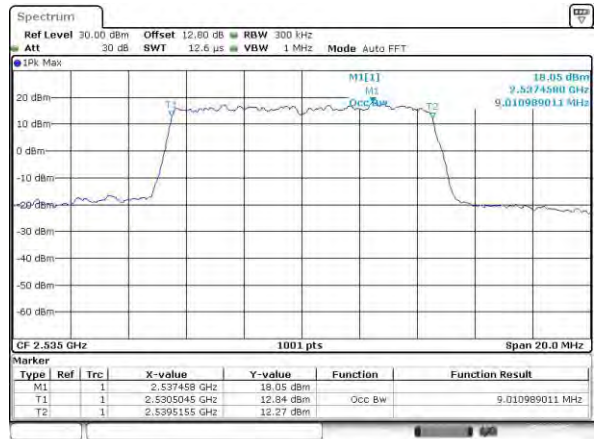
Date: 27-Jun-2018 10:59:57

Middle Channel / 10MHz / QPSK



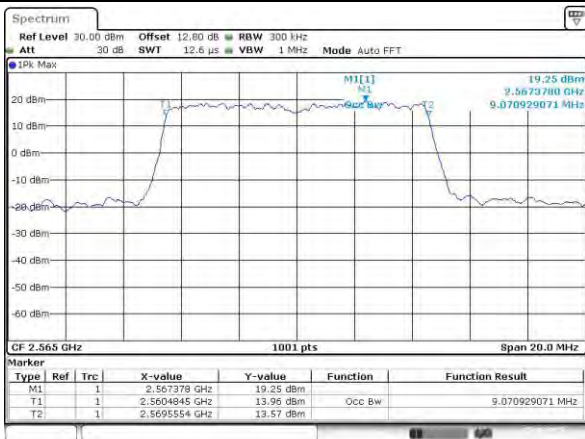
Date: 27-Jun-2018 11:07:39

Middle Channel / 10MHz / 16QAM



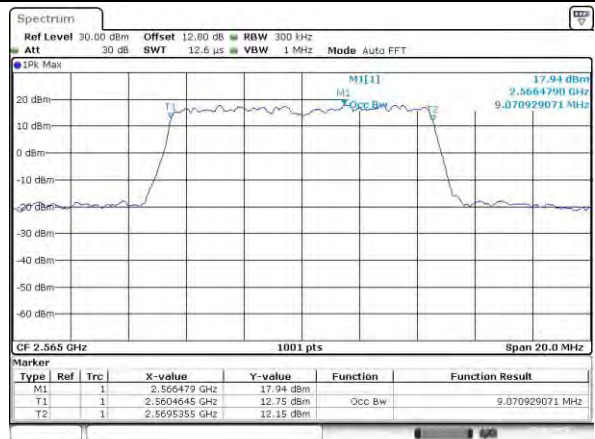
Date: 27-Jun-2018 11:07:51

Highest Channel / 10MHz / QPSK



Date: 27-Jun-2018 11:10:53

Highest Channel / 10MHz / 16QAM

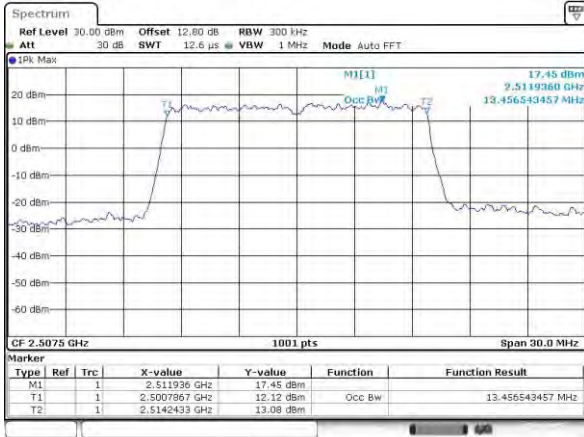


Date: 27-Jun-2018 11:11:05



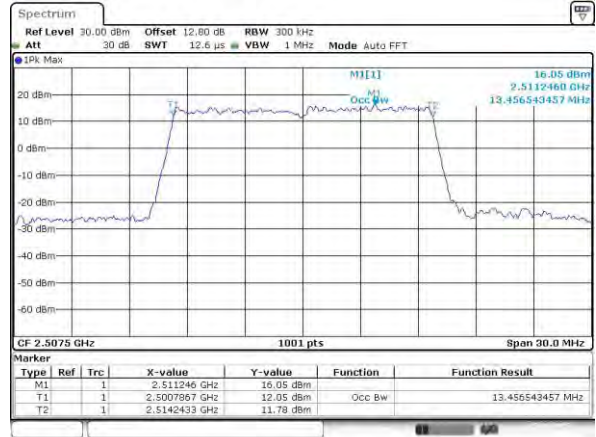
LTE Band 7

Lowest Channel / 15MHz / QPSK



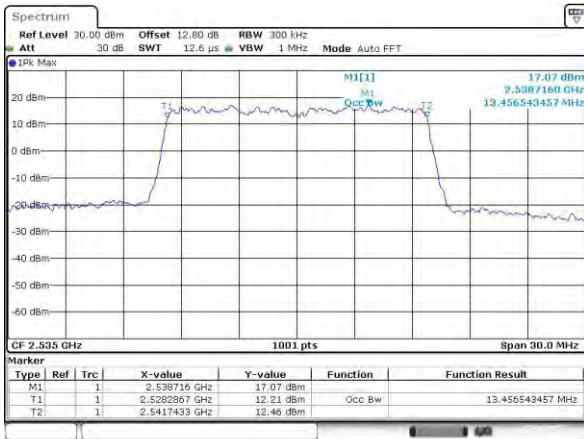
Date: 27-Jun-2018 11:18:48

Lowest Channel / 15MHz / 16QAM



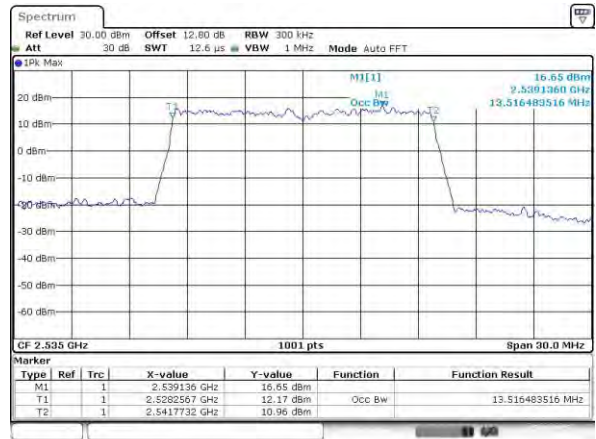
Date: 27-Jun-2018 11:19:00

Middle Channel / 15MHz / QPSK



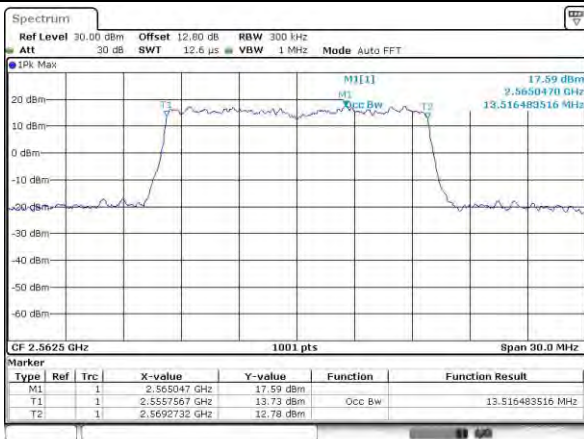
Date: 27-Jun-2018 11:26:47

Middle Channel / 15MHz / 16QAM



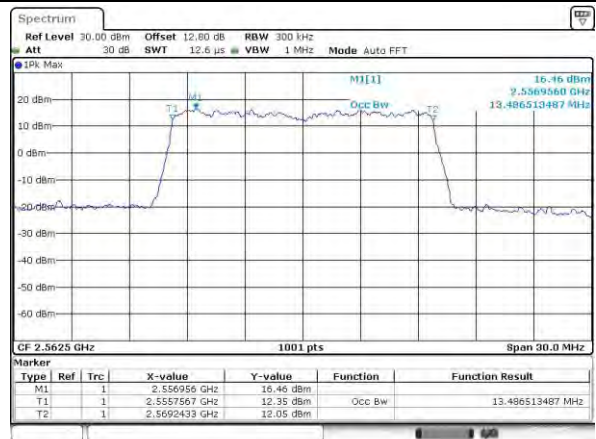
Date: 27-Jun-2018 11:26:58

Highest Channel / 15MHz / QPSK



Date: 27-Jun-2018 11:29:56

Highest Channel / 15MHz / 16QAM

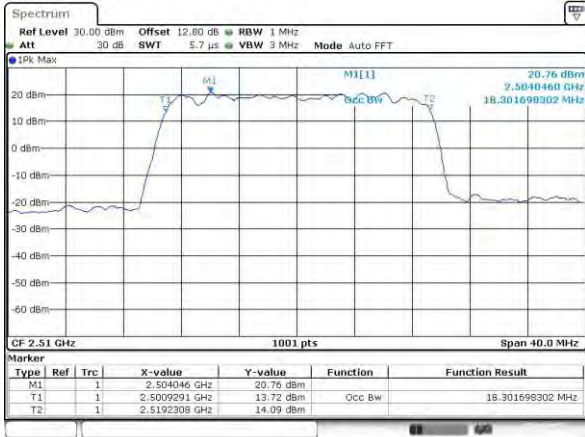


Date: 27-Jun-2018 11:30:09



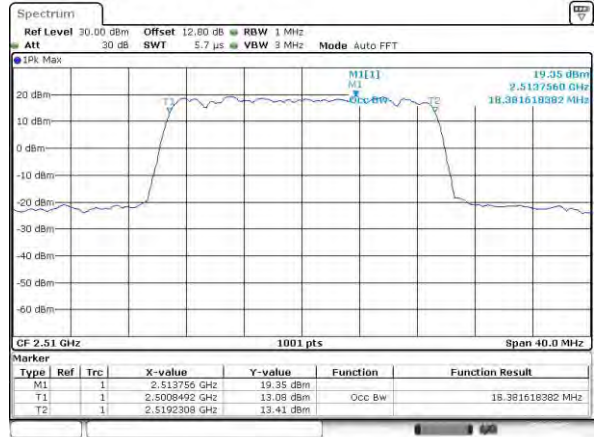
LTE Band 7

Lowest Channel / 20MHz / QPSK



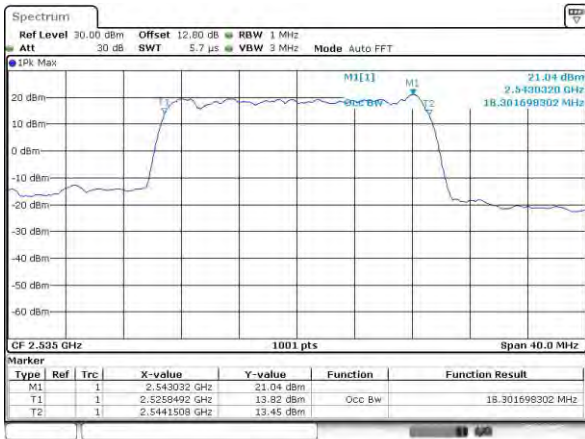
Date: 27-Jun-2018 11:41:10

Lowest Channel / 20MHz / 16QAM



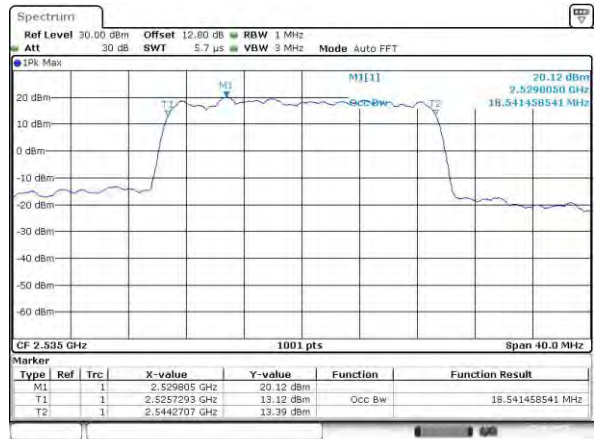
Date: 27-Jun-2018 11:42:01

Middle Channel / 20MHz / QPSK



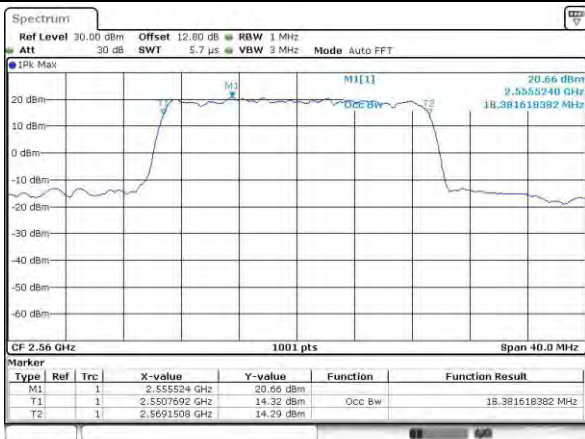
Date: 27-Jun-2018 11:49:08

Middle Channel / 20MHz / 16QAM



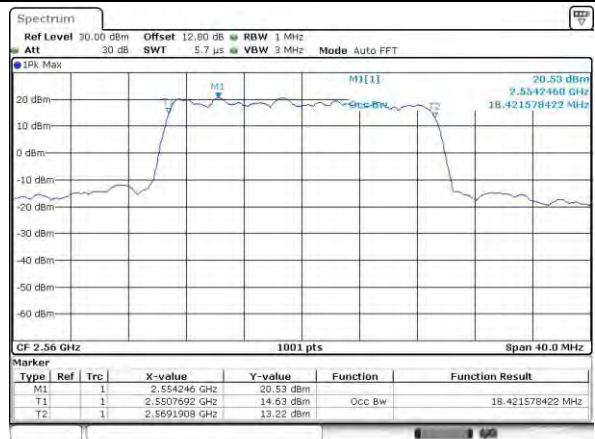
Date: 27-Jun-2018 11:50:10

Highest Channel / 20MHz / QPSK



Date: 27-Jun-2018 11:53:12

Highest Channel / 20MHz / 16QAM



Date: 27-Jun-2018 11:53:22

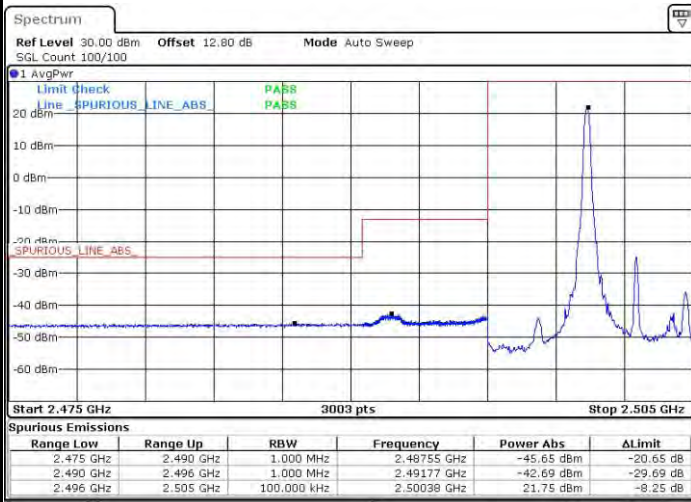


Conducted Band Edge



LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB



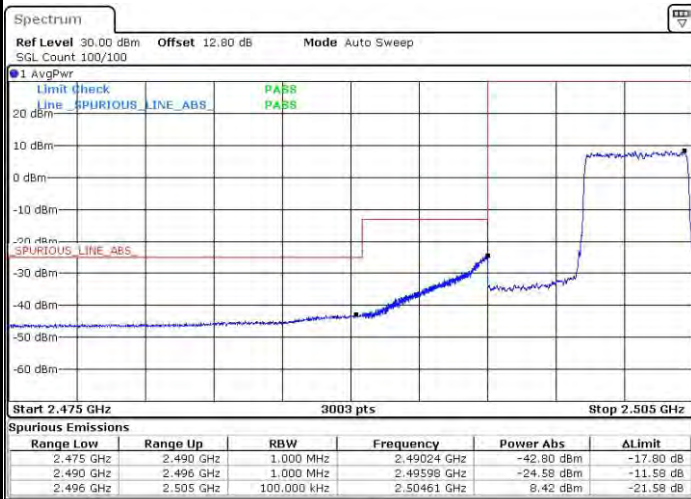
Date: 27 JUN 2015 10:42:32

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

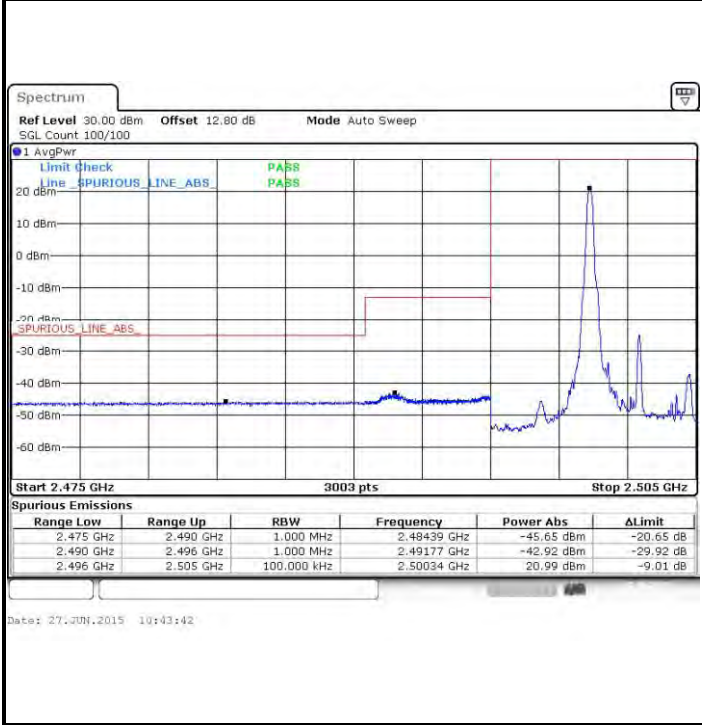


Date: 27 JUN 2015 10:56:01



LTE Band 7 / 5MHz / 16QAM

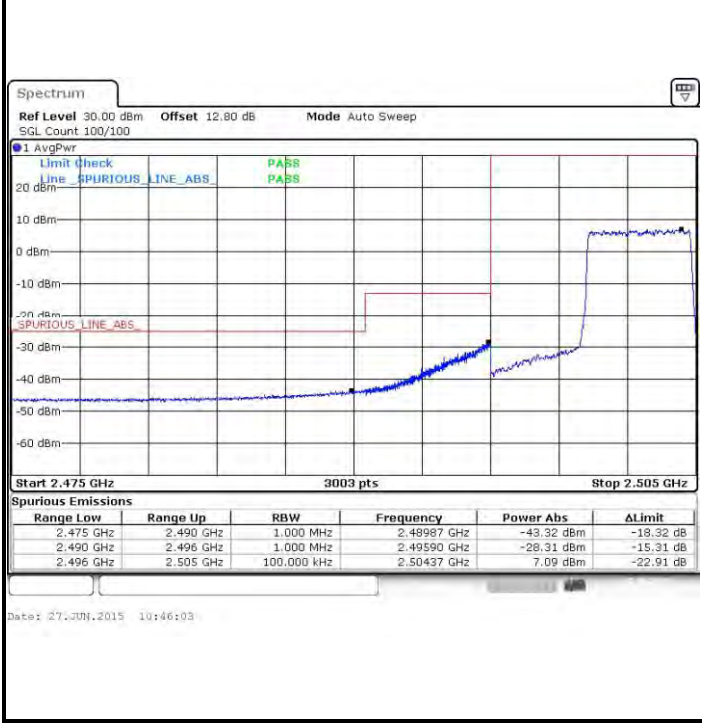
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



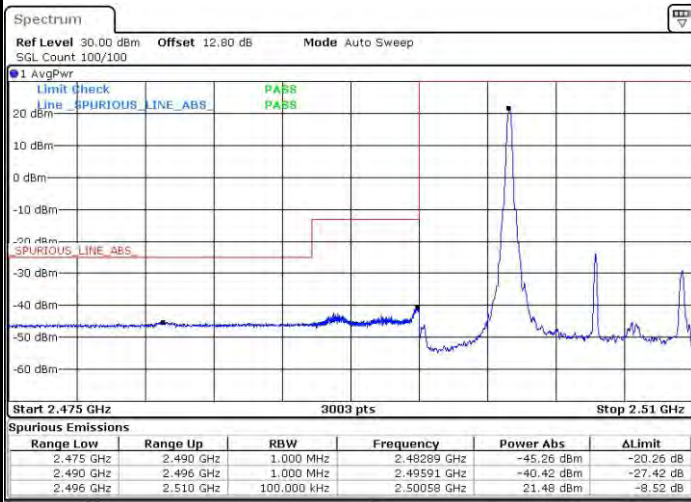
Highest Band Edge / Full RB





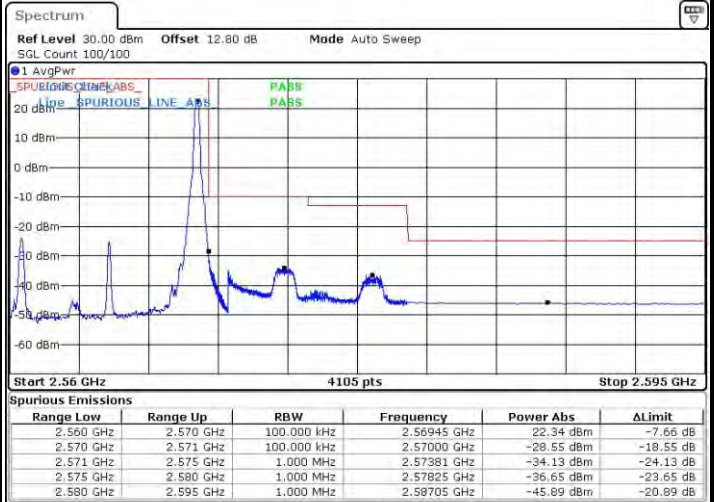
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



Date: 27 JUN 2015 11:01:35

Highest Band Edge / 1 RB



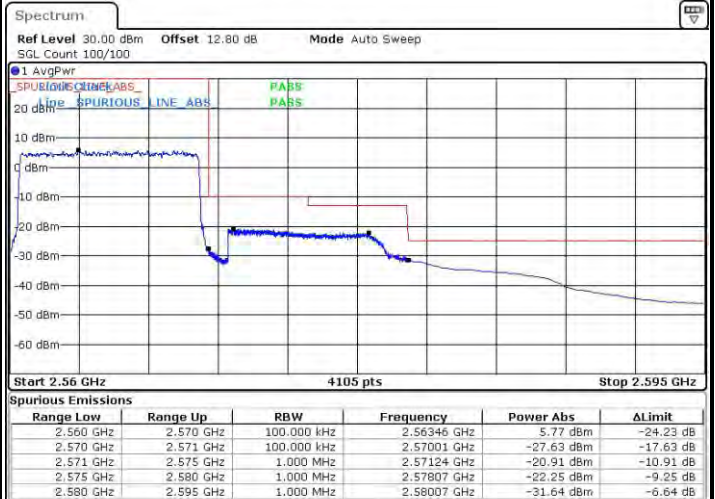
Date: 27 JUN 2015 11:12:43

Lowest Band Edge / Full RB



Date: 27 JUN 2015 11:03:55

Highest Band Edge / Full RB

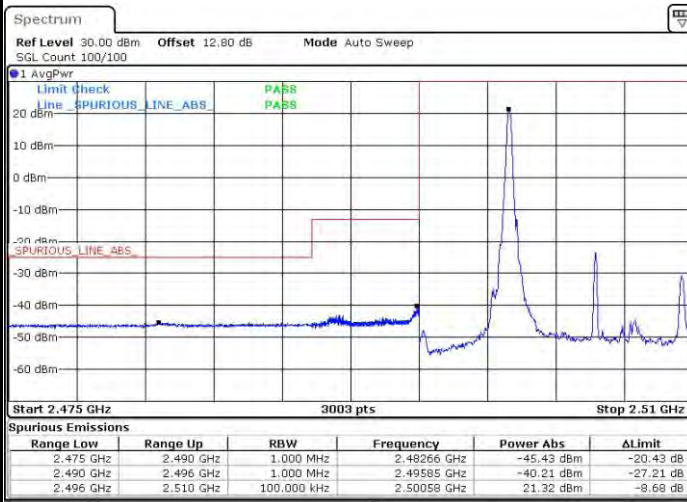


Date: 27 JUN 2015 11:13:03



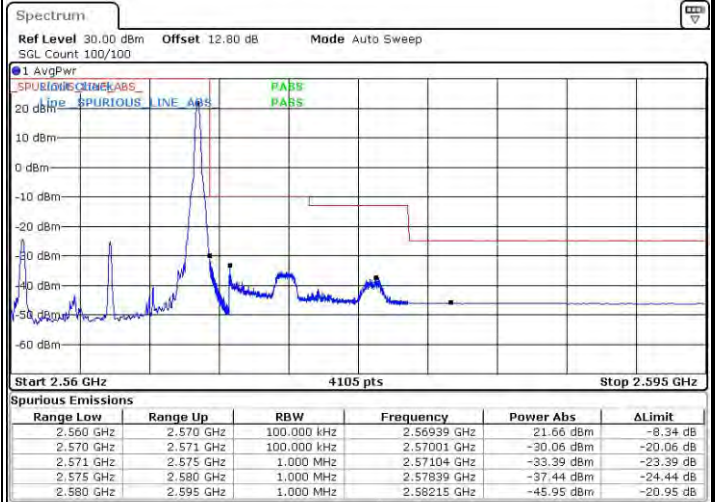
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



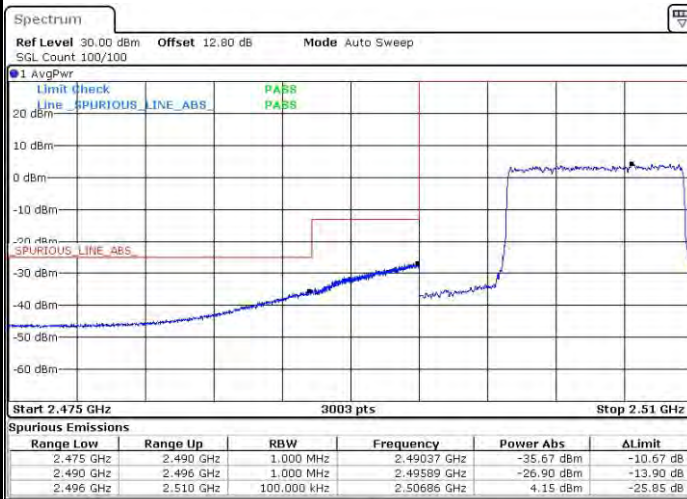
Date: 27 JUN 2015 11:02:45

Highest Band Edge / 1 RB



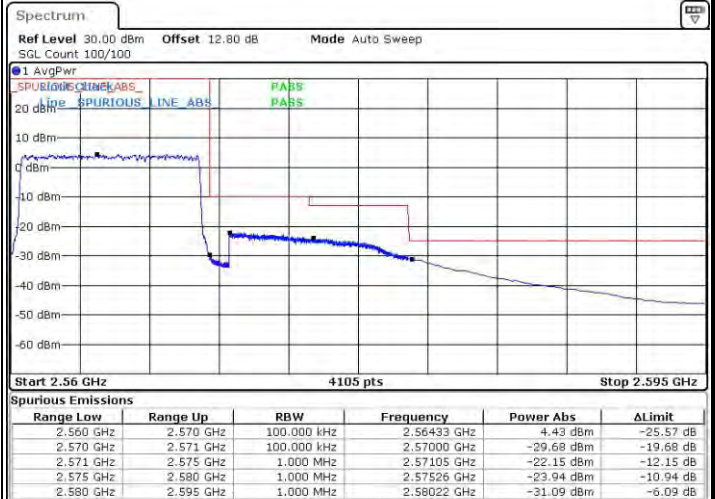
Date: 27 JUN 2015 11:13:53

Lowest Band Edge / Full RB



Date: 27 JUN 2015 11:09:05

Highest Band Edge / Full RB

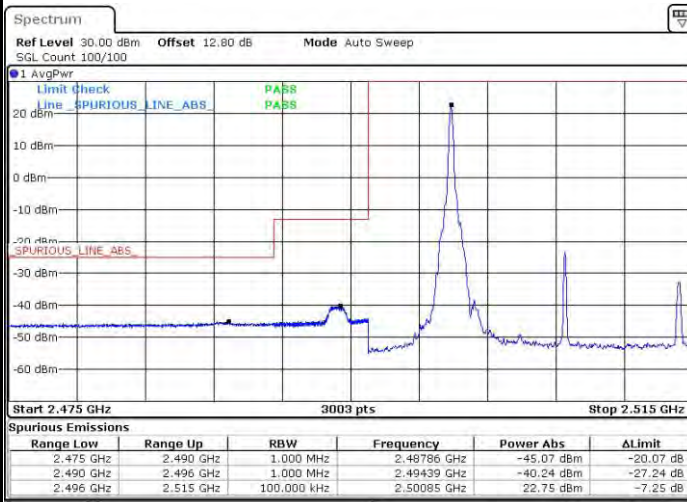


Date: 27 JUN 2015 11:16:14



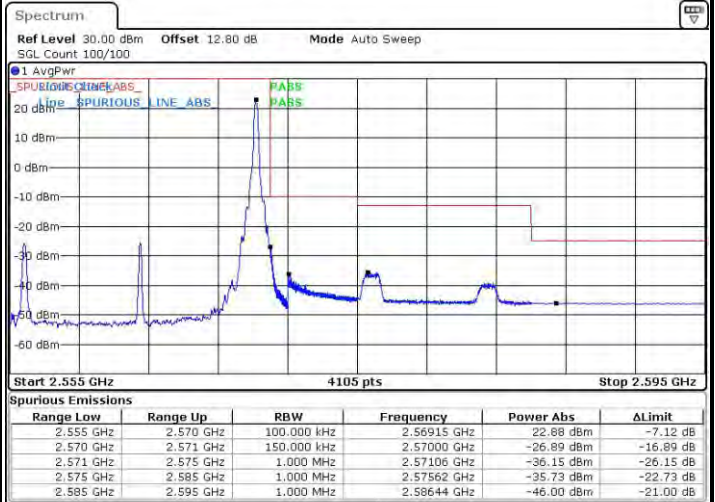
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



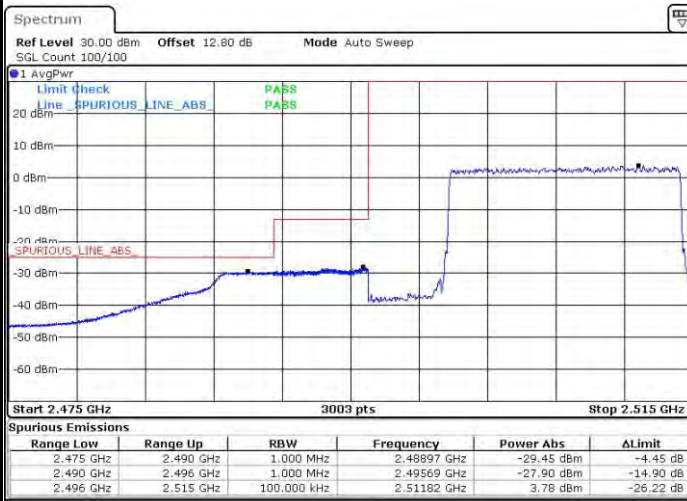
Date: 27.JUN.2015 11:20:37

Highest Band Edge / 1 RB



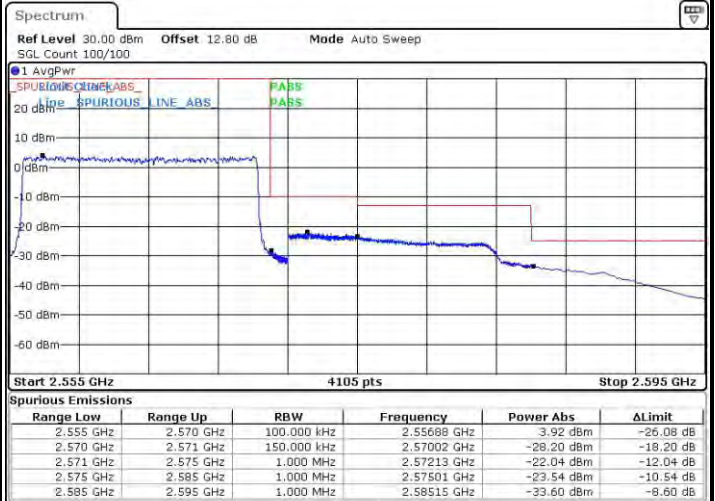
Date: 27.JUN.2015 11:31:46

Lowest Band Edge / Full RB



Date: 27.JUN.2015 11:22:58

Highest Band Edge / Full RB

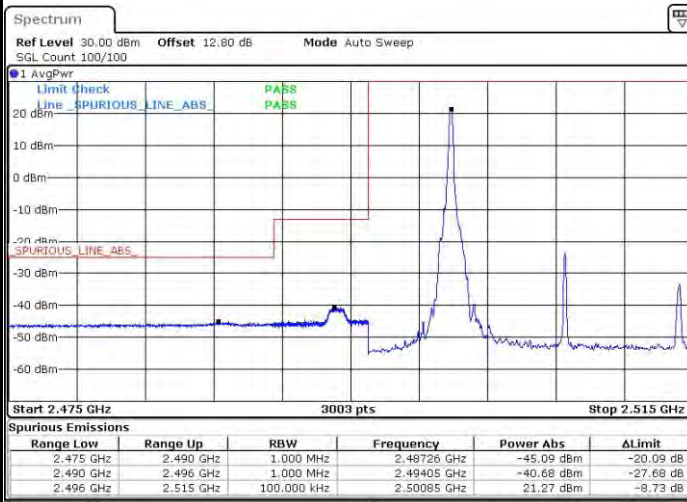


Date: 27.JUN.2015 11:34:06



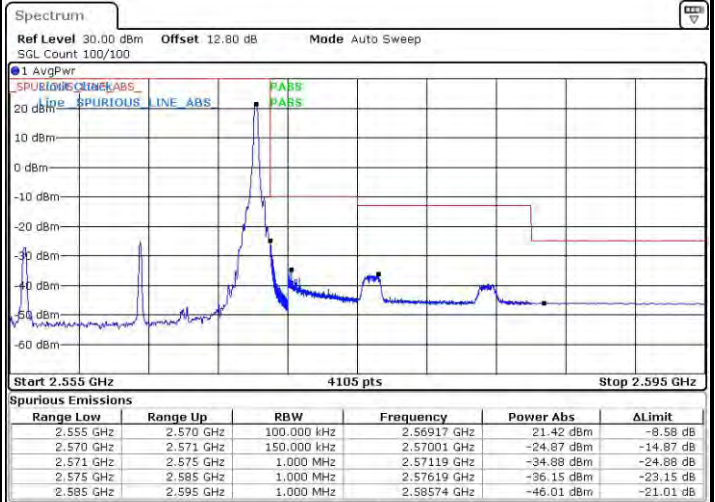
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



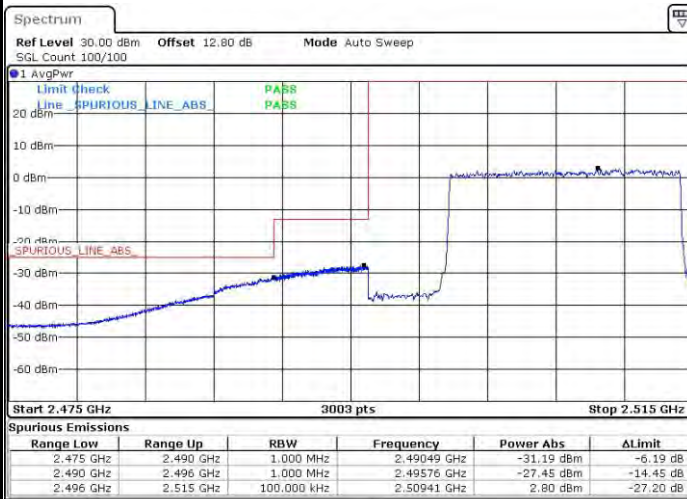
Date: 27.JUN.2015 11:21:47

Highest Band Edge / 1 RB



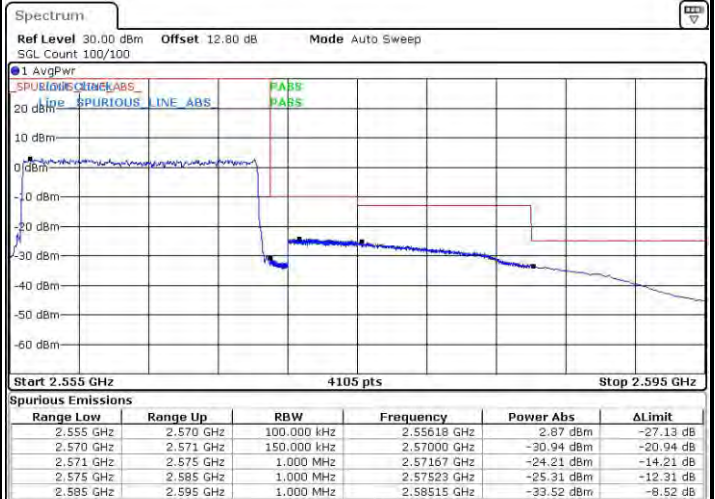
Date: 27.JUN.2015 11:32:56

Lowest Band Edge / Full RB



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

Highest Band Edge / Full RB



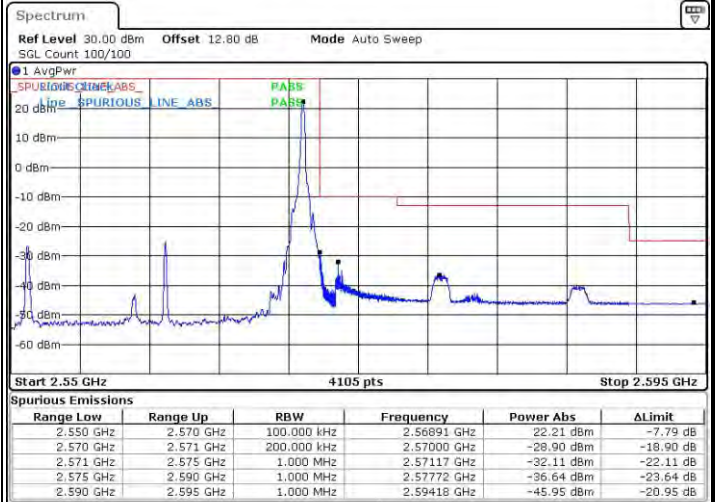
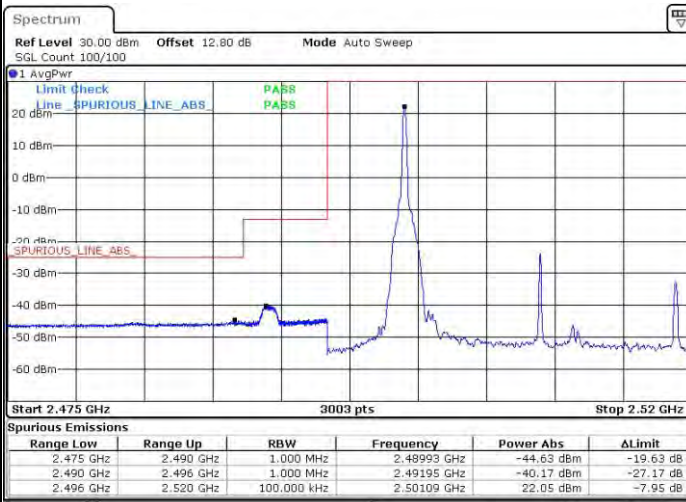
Date: 27.JUN.2015 11:35:16



LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

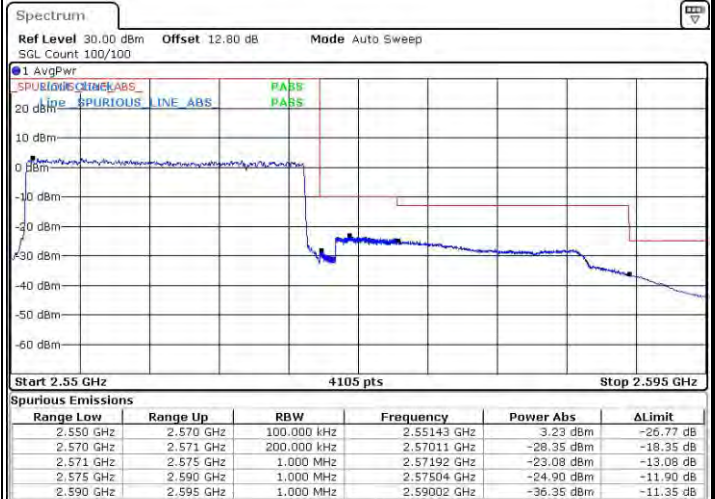
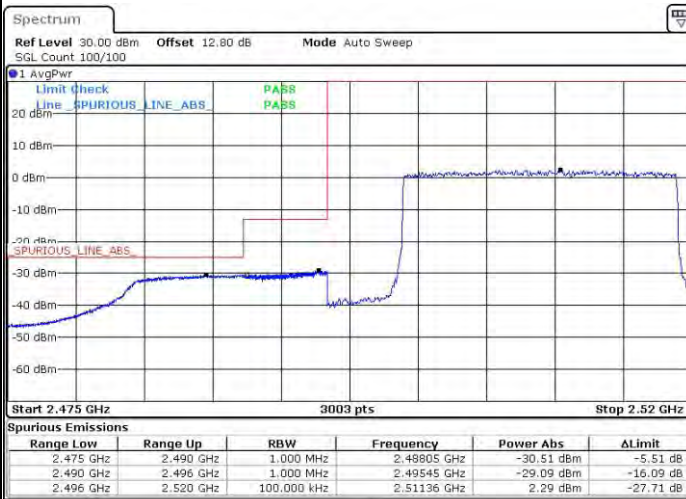


Date: 27 JUN 2015 12:41:23

Date: 27 JUN 2015 12:46:04

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



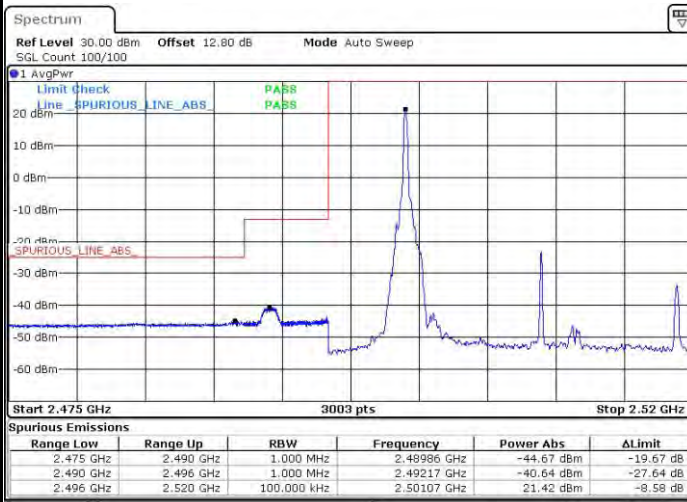
Date: 27 JUN 2015 12:43:43

Date: 27 JUN 2015 12:49:34



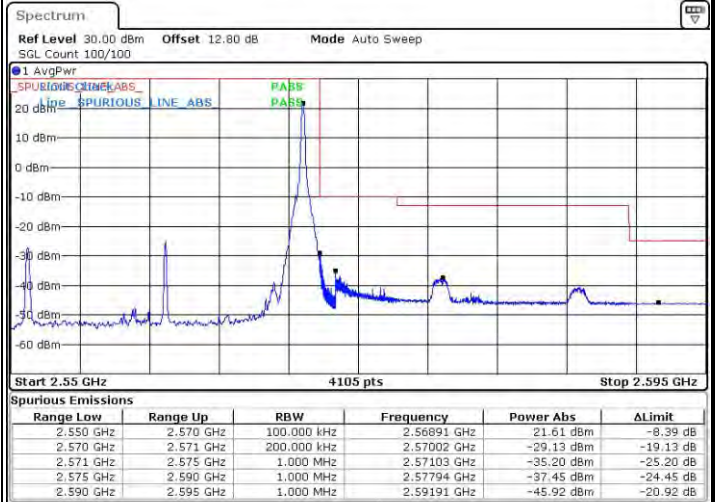
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



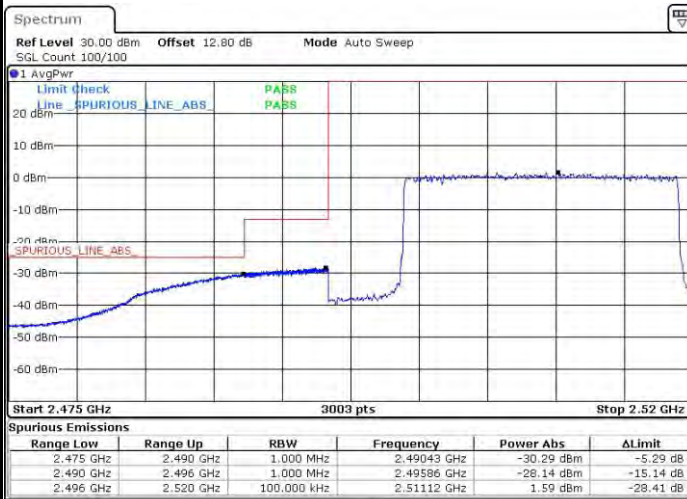
Date: 27 JUN 2015 12:42:33

Highest Band Edge / 1RB



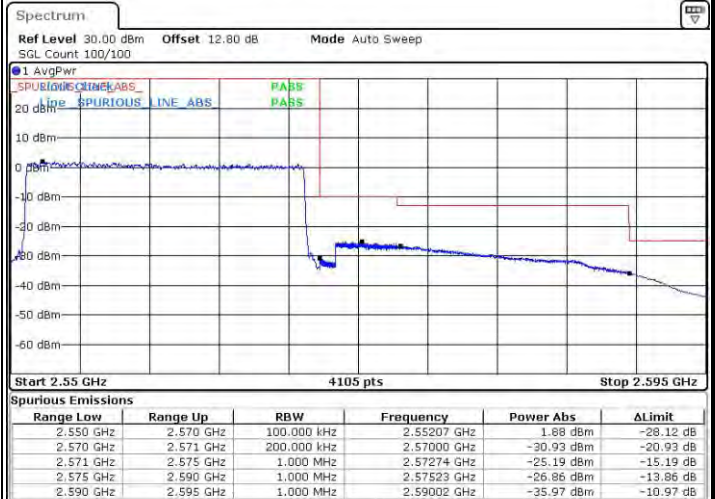
Date: 27 JUN 2015 12:47:14

Lowest Band Edge / Full RB



Date: 27 JUN 2015 12:44:53

Highest Band Edge / Full RB



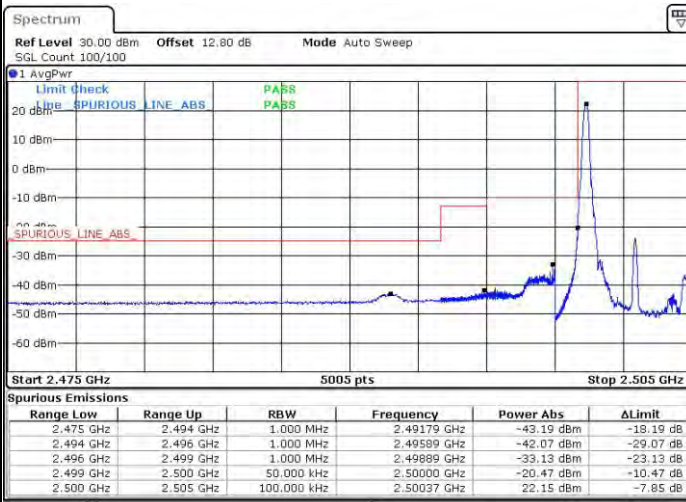
Date: 27 JUN 2015 12:46:24



LTE Band 7 / 5MHz / QPSK (IC)

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



Date: 27.JUN.2015 12:10:49

Date: 27.JUN.2015 12:15:41

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



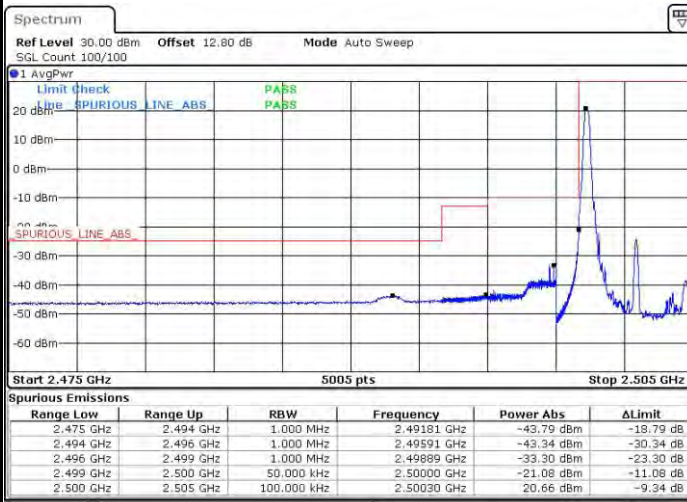
Date: 27.JUN.2015 12:13:17

Date: 27.JUN.2015 12:18:02



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

Lowest Band Edge / 1 RB



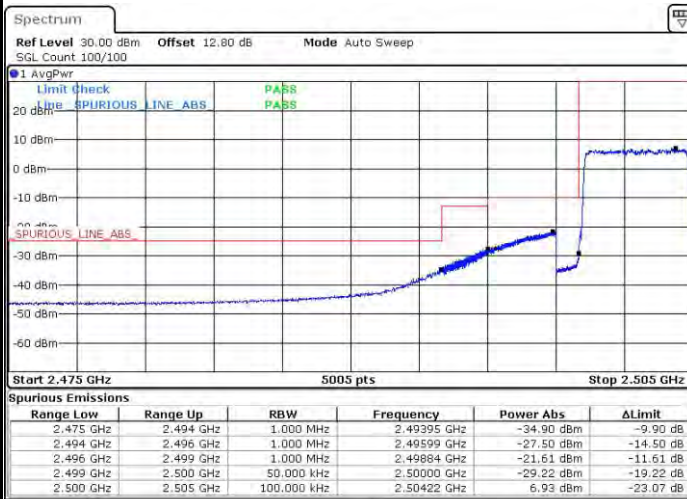
Date: 27.JUN.2015 12:12:03

Highest Band Edge / 1 RB



Date: 27.JUN.2015 12:16:51

Lowest Band Edge / Full RB



Date: 27.JUN.2015 12:14:30

Highest Band Edge / Full RB

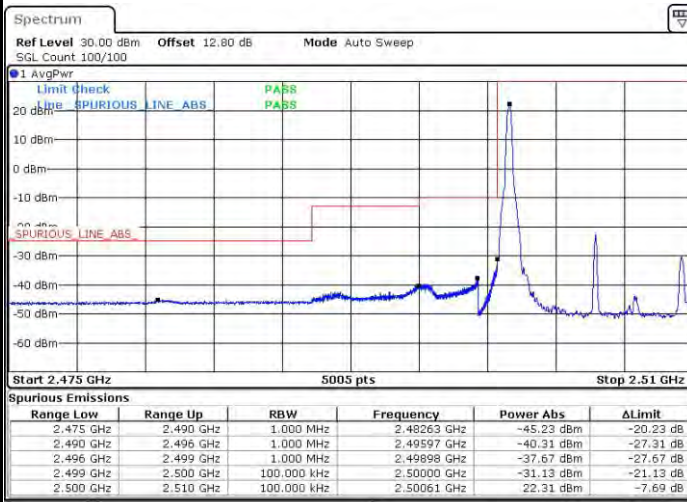


Date: 27.JUN.2015 12:19:12



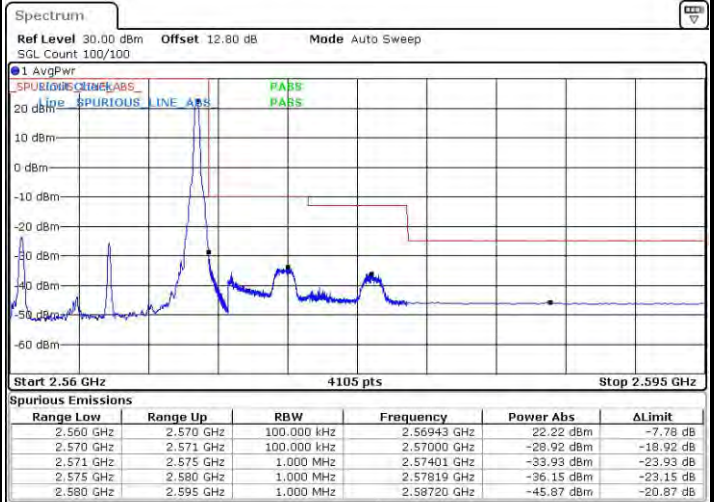
LTE Band 7 / 10MHz / QPSK (IC)

Lowest Band Edge / 1 RB



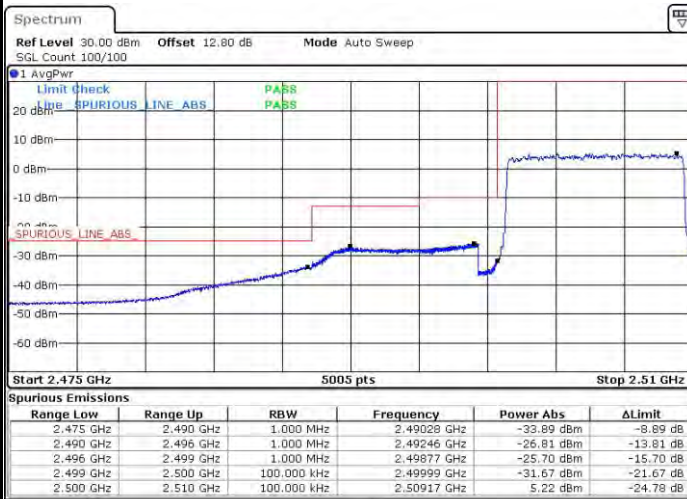
Date: 27 JUN 2015 12:20:25

Highest Band Edge / 1 RB



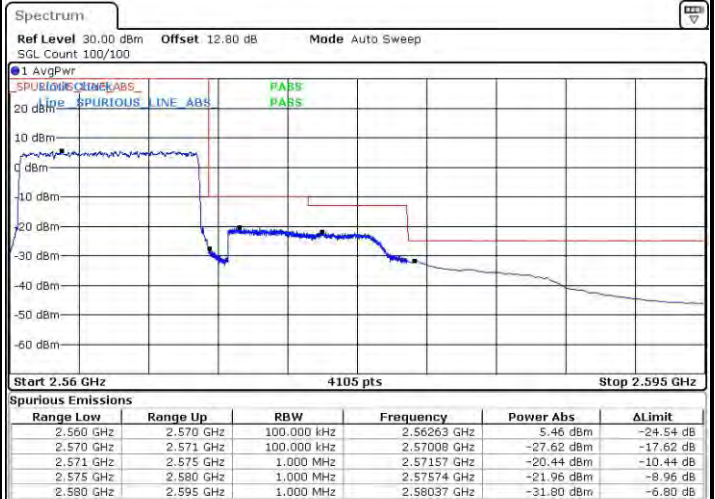
Date: 27 JUN 2015 12:25:17

Lowest Band Edge / Full RB



Date: 27 JUN 2015 12:22:52

Highest Band Edge / Full RB



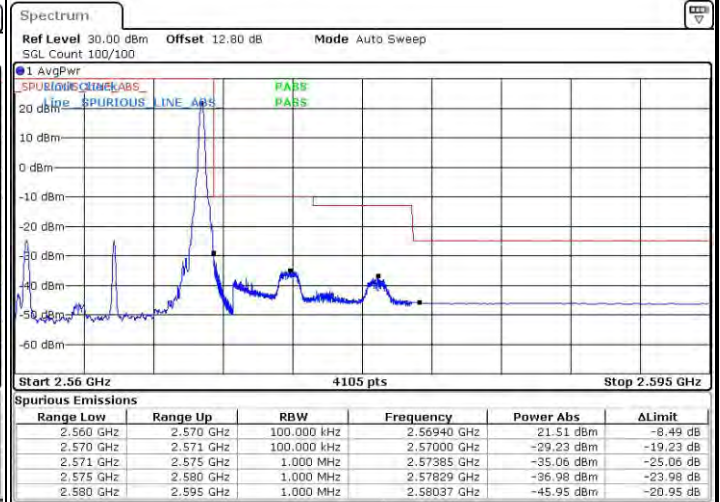
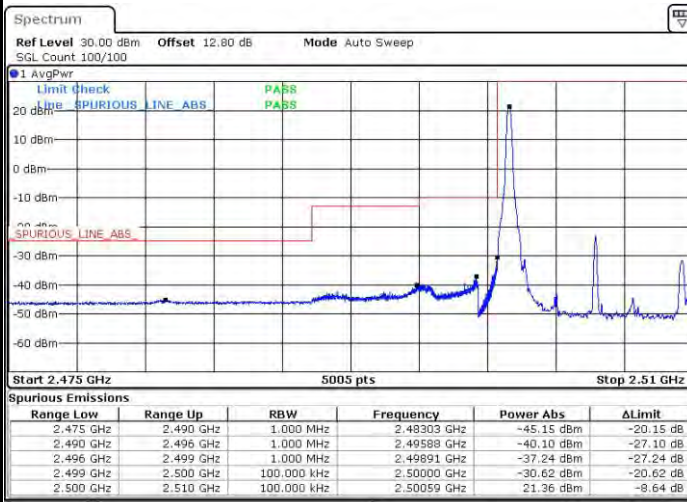
Date: 27 JUN 2015 12:27:37



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

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

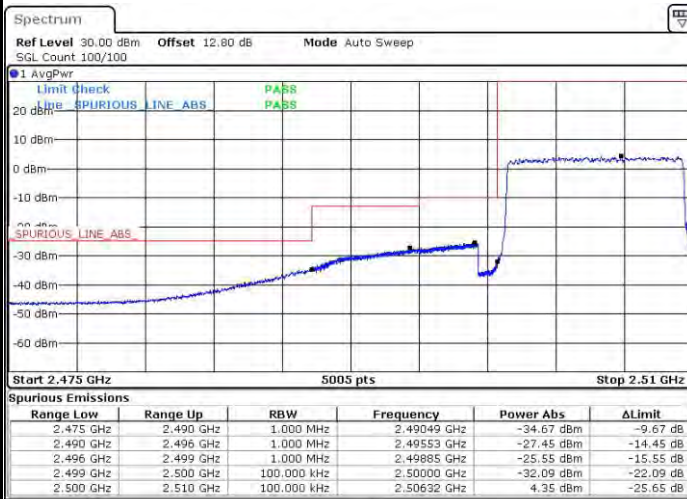


Date: 27 JUN 2015 12:21:39

Date: 27 JUN 2015 12:26:27

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



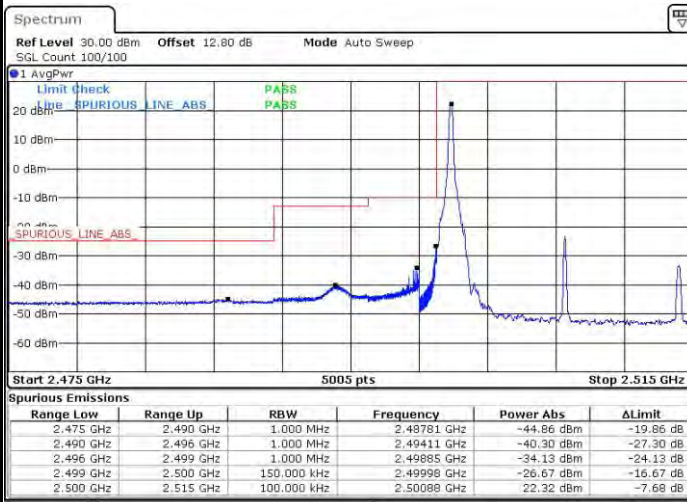
Date: 27 JUN 2015 12:24:06

Date: 27 JUN 2015 12:28:47

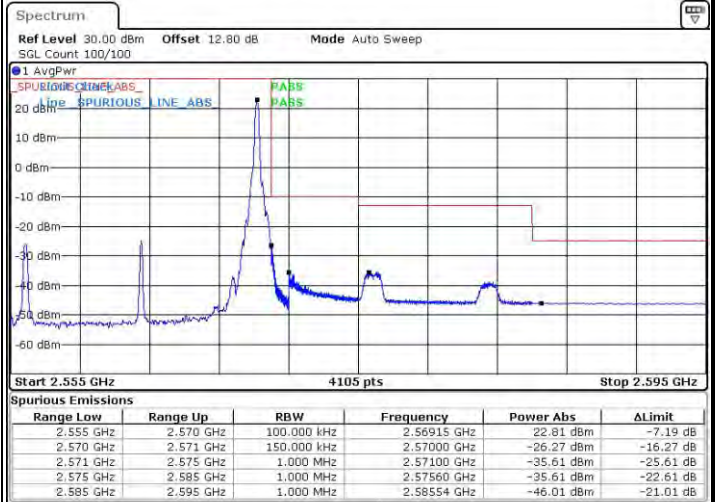


LTE Band 7 / 15MHz / QPSK (IC)

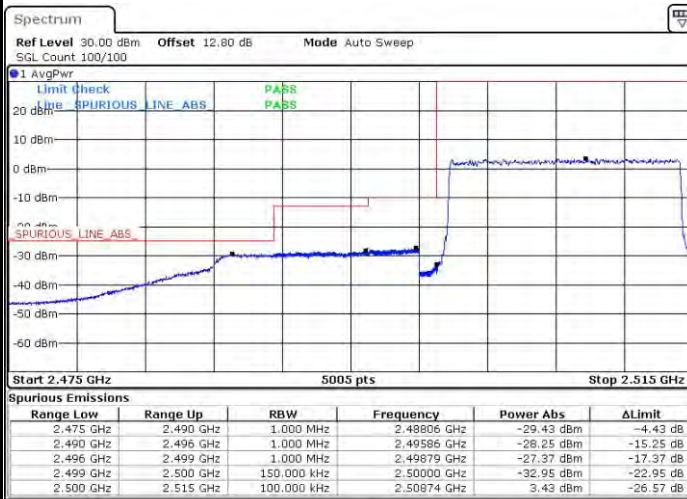
Lowest Band Edge / 1 RB



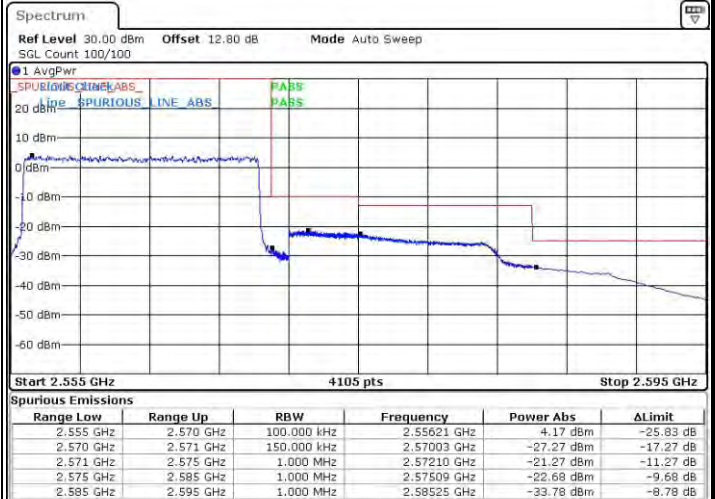
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



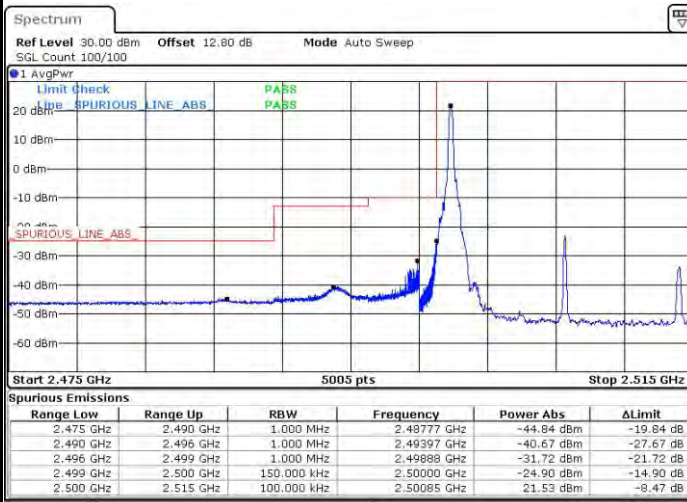
Highest Band Edge / Full RB





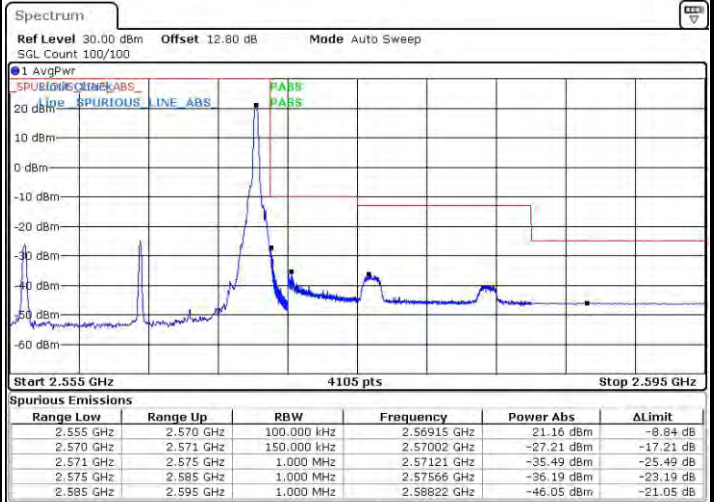
LTE Band 7 / 15MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



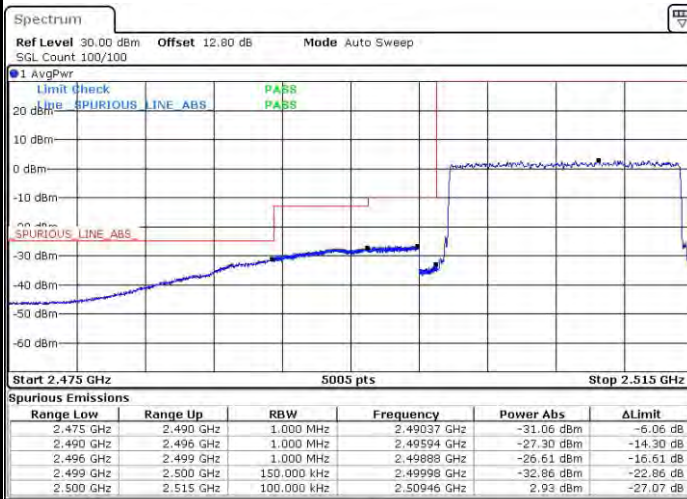
Date: 27 JUN 2015 12:31:14

Highest Band Edge / 1 RB



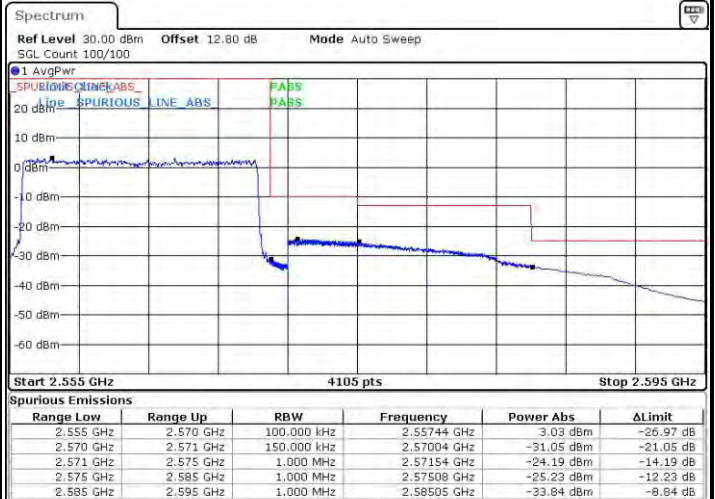
Date: 27 JUN 2015 12:36:02

Lowest Band Edge / Full RB



Date: 27 JUN 2015 12:33:41

Highest Band Edge / Full RB

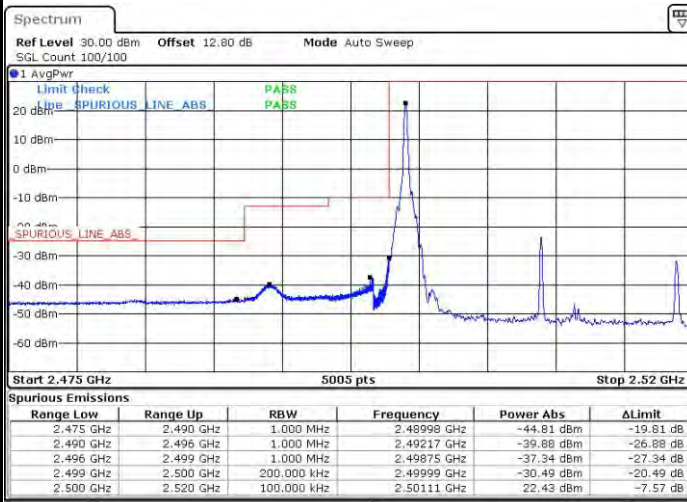


Date: 27 JUN 2015 12:36:22



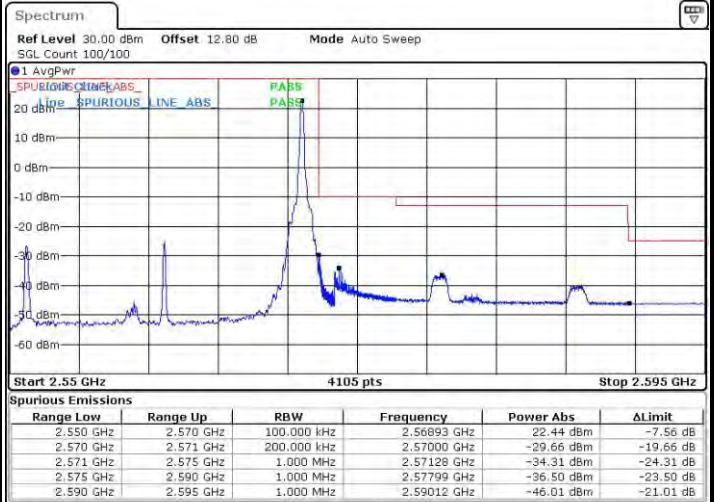
LTE Band 7 / 20MHz / QPSK (IC)

Lowest Band Edge / 1 RB



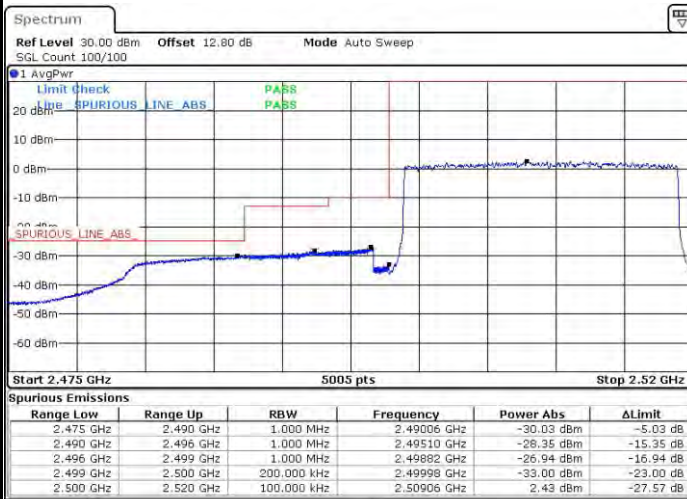
Date: 27.JUN.2015 11:43:42

Highest Band Edge / 1 RB



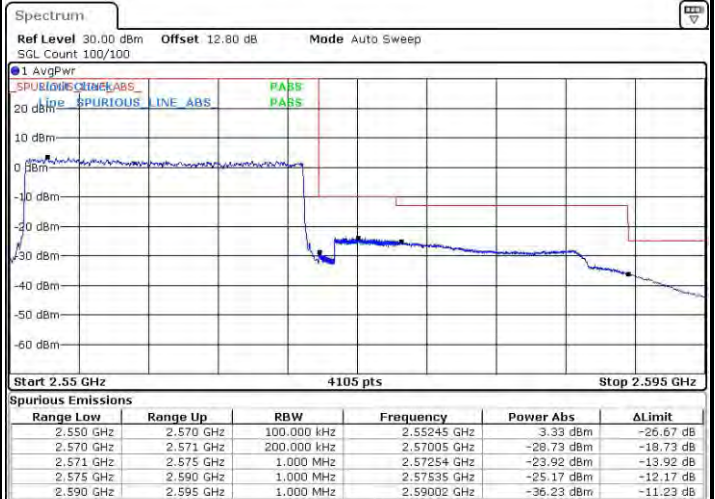
Date: 27.JUN.2015 11:55:02

Lowest Band Edge / Full RB



Date: 27.JUN.2015 11:46:10

Highest Band Edge / Full RB

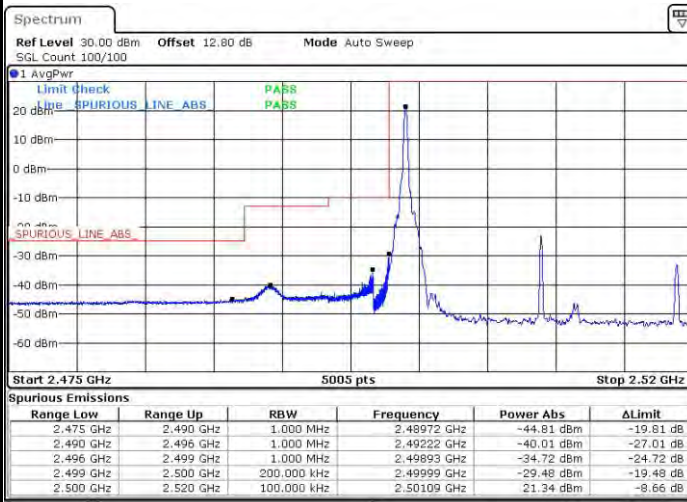


Date: 27.JUN.2015 11:58:32



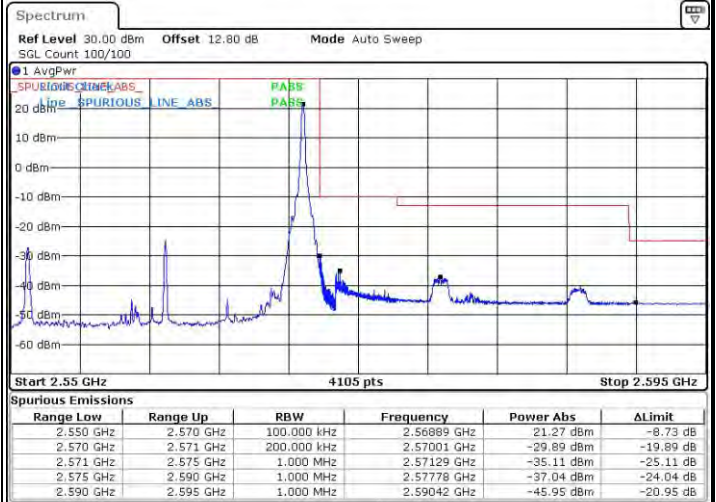
LTE Band 7 / 20MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



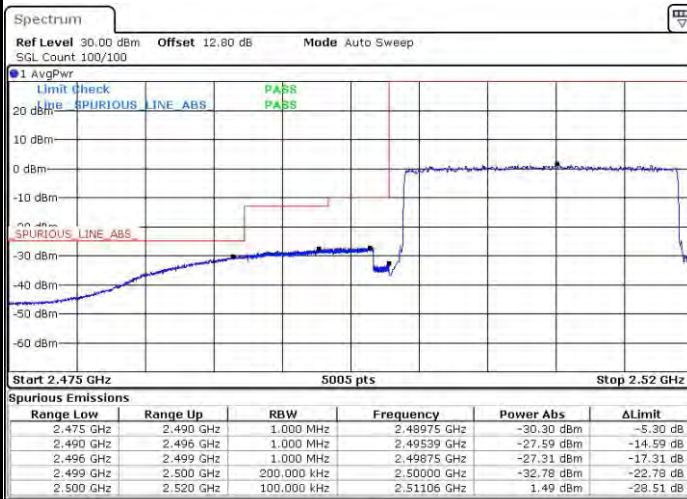
Date: 27.JUN.2015 11:44:56

Highest Band Edge / 1RB



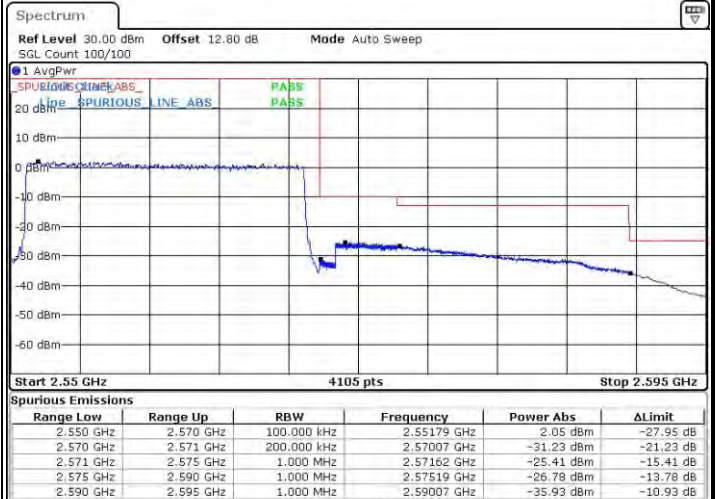
Date: 27.JUN.2015 11:56:12

Lowest Band Edge / Full RB



Date: 27.JUN.2015 11:47:24

Highest Band Edge / Full RB



Date: 27.JUN.2015 11:57:22



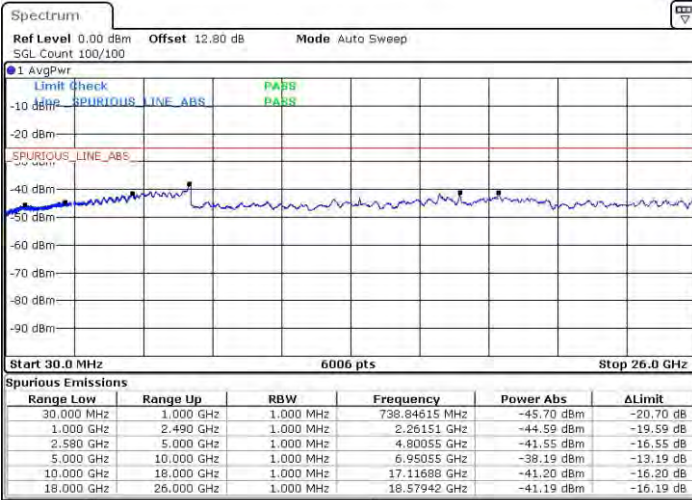
Conducted Spurious Emission



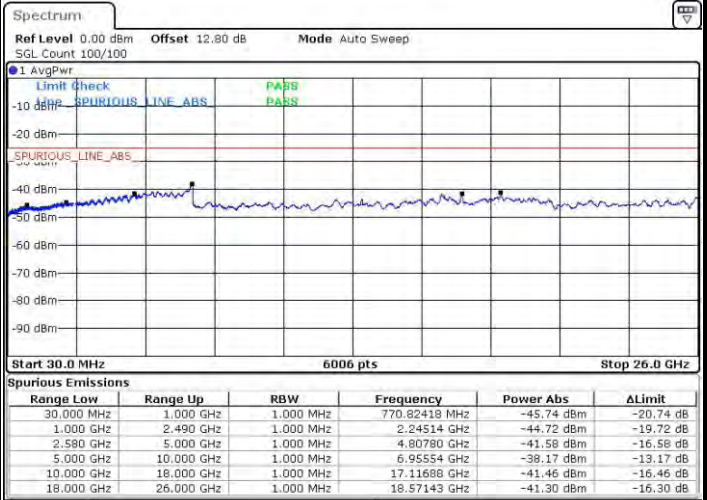
LTE Band 7 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



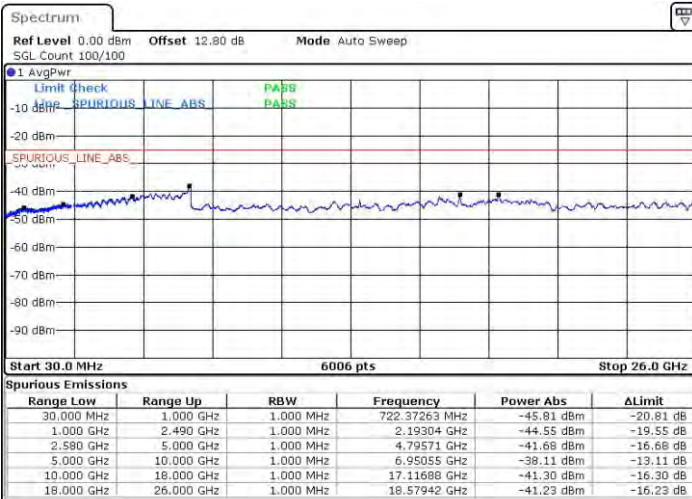
Date: 27.JUN.2015 10:47:13



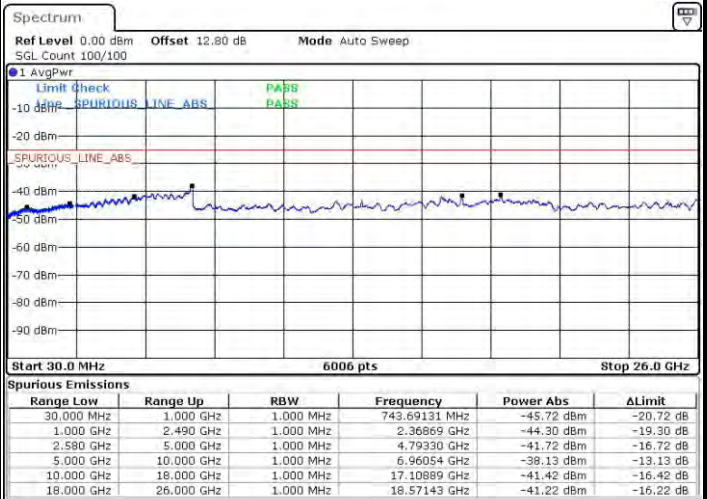
Date: 27.JUN.2015 10:48:24

Middle Channel / QPSK

Middle Channel / 16QAM



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

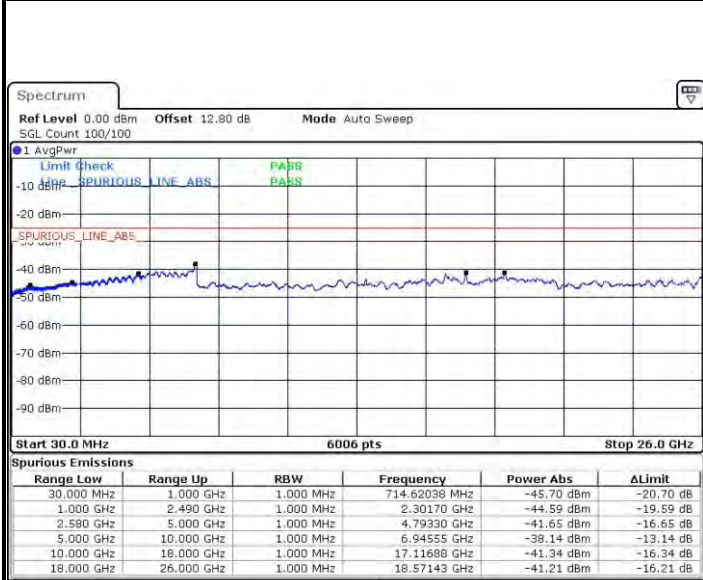


Date: 27.JUN.2015 10:51:38



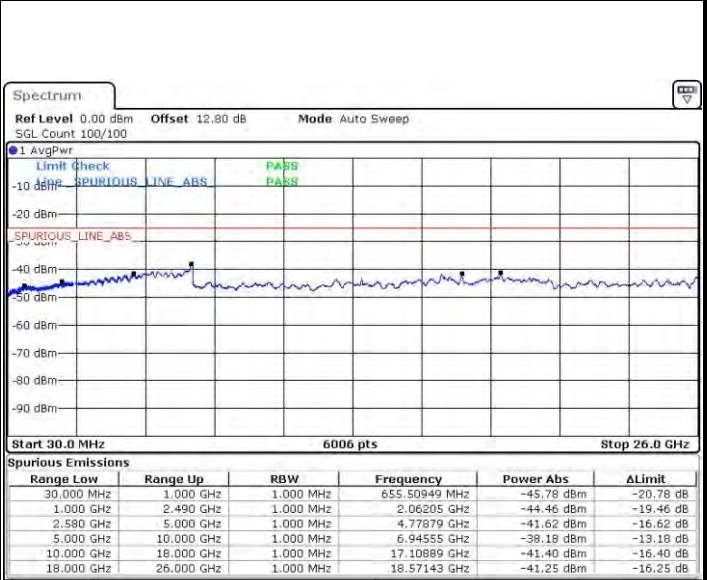
LTE Band 7 / 5MHz

Highest Channel / QPSK



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

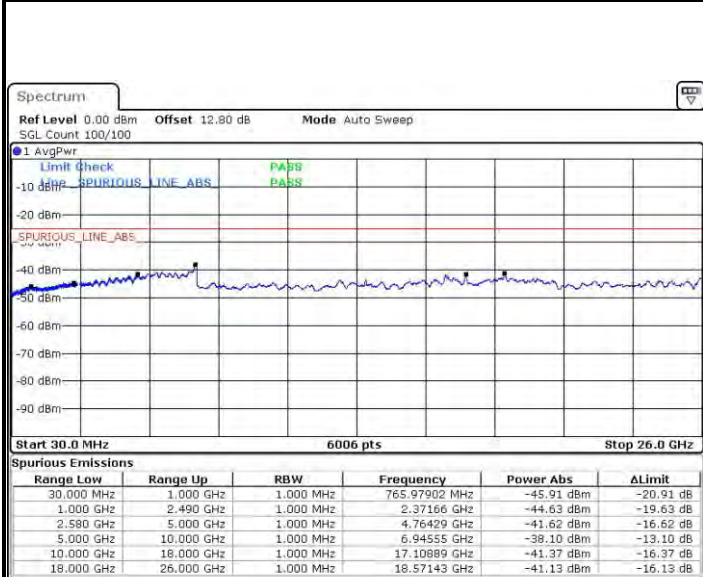
Highest Channel / 16QAM



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

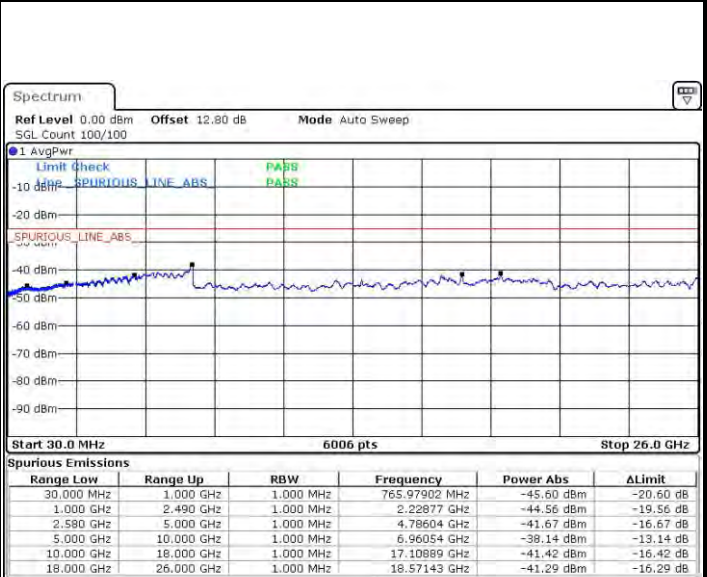
LTE Band 7 / 10MHz

Lowest Channel / QPSK



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

Lowest Channel / 16QAM



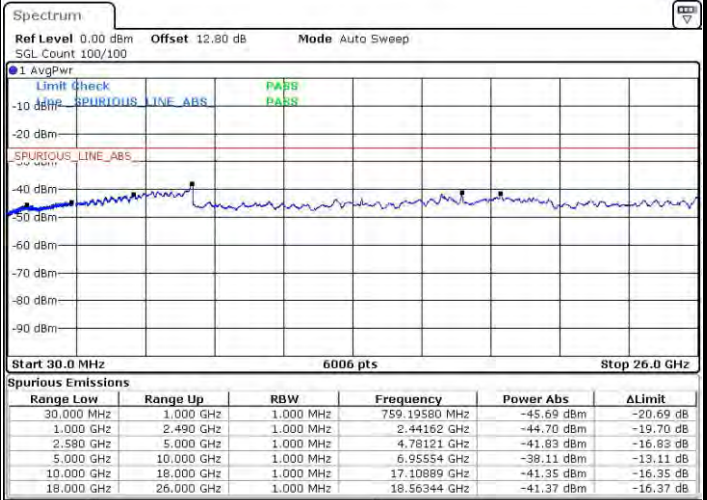
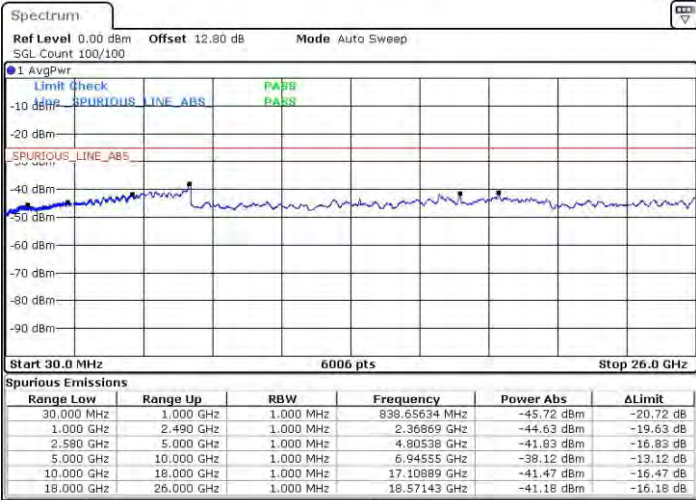
Date: 27.JUN.2015 11:07:27



LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

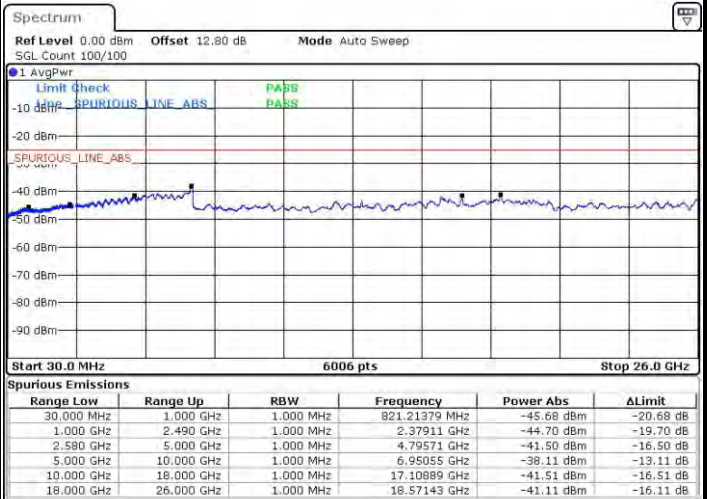
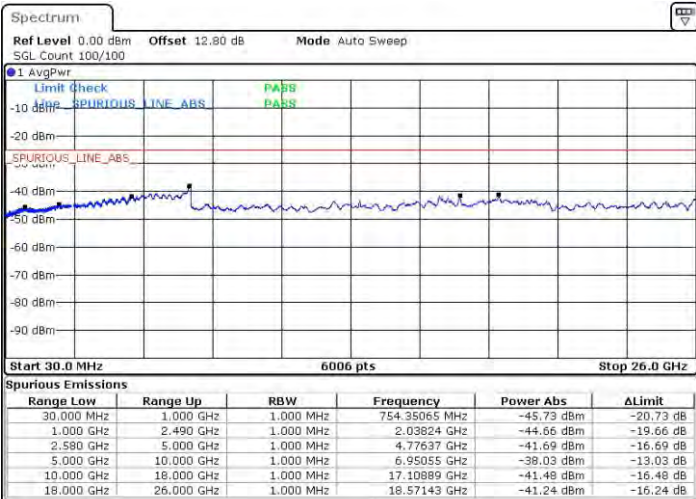


Date: 27.JUN.2015 11:09:30

Date: 27.JUN.2015 11:10:41

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 27.JUN.2015 11:17:24

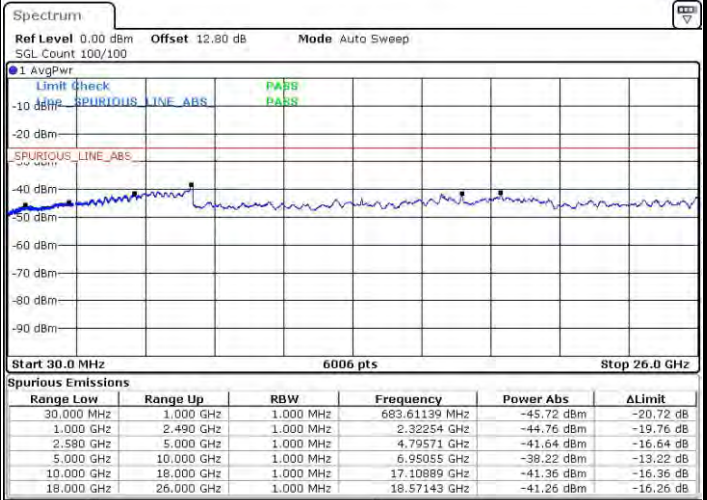
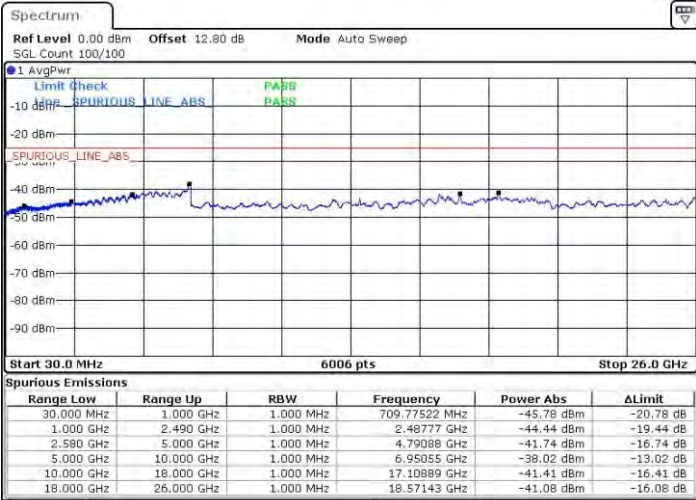
Date: 27.JUN.2015 11:18:35



LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

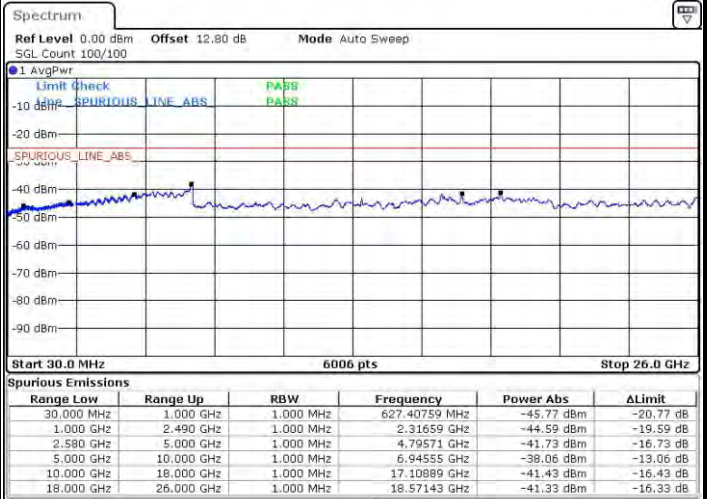
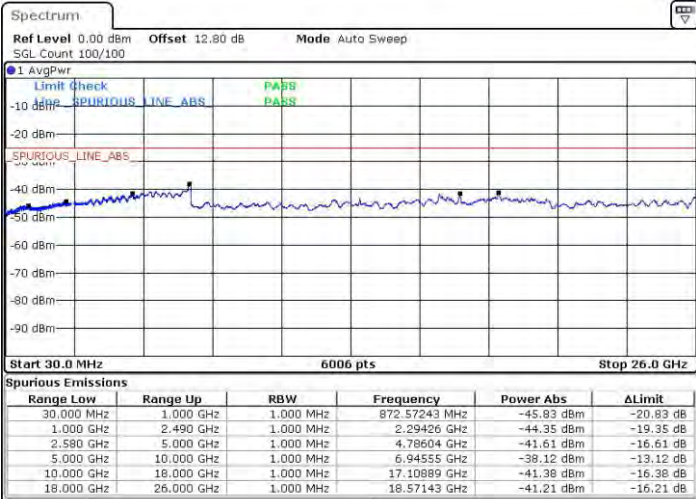


Date: 27.JUN.2015 11:25:18

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

Middle Channel / QPSK

Middle Channel / 16QAM



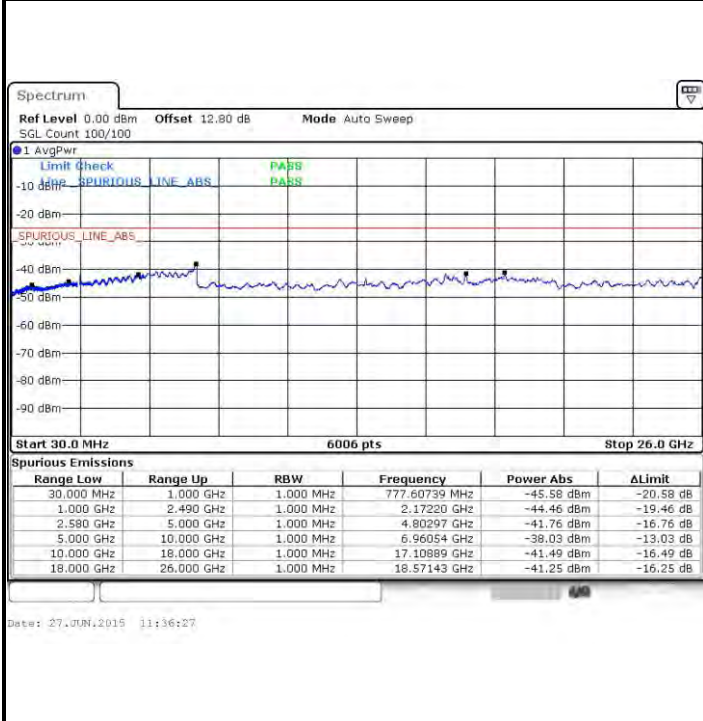
Date: 27.JUN.2015 11:28:33

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

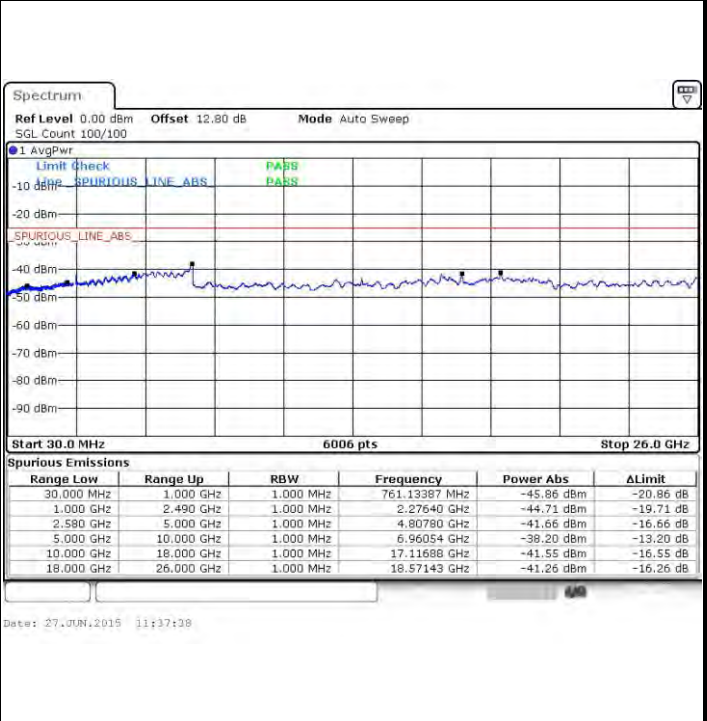


LTE Band7 / 15MHz

Highest Channel / QPSK

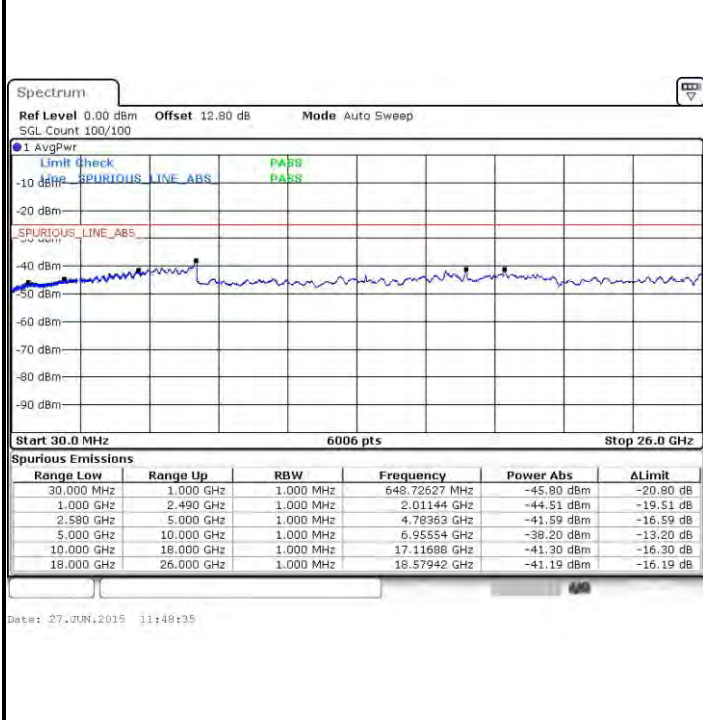


Highest Channel / 16QAM



LTE Band 7 / 20MHz

Lowest Channel / QPSK



Lowest Channel / 16QAM

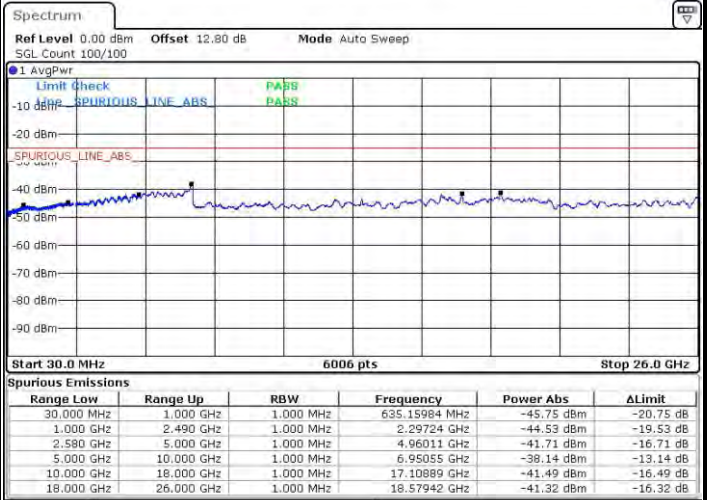
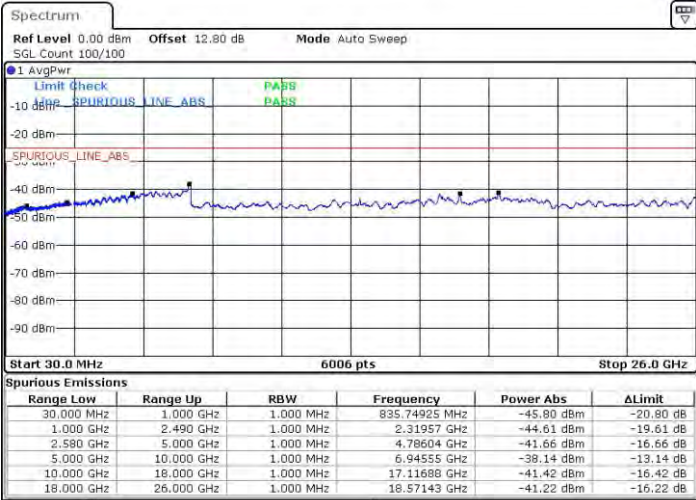




LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

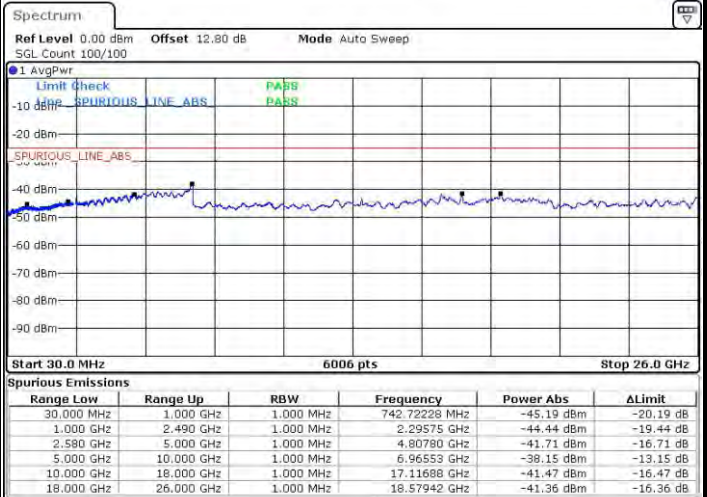
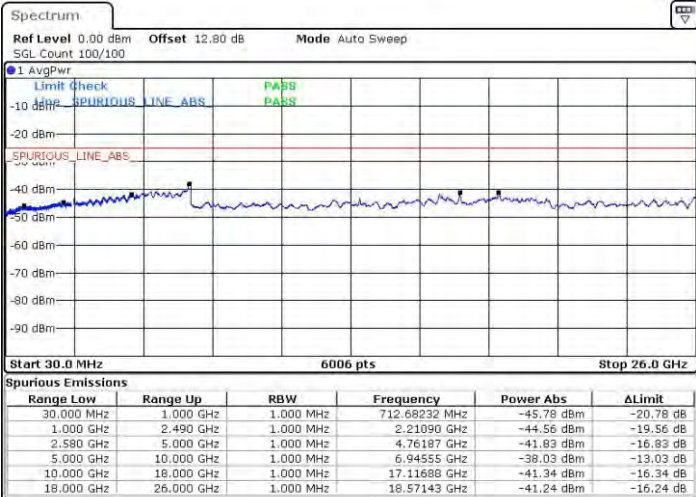


Date: 27.JUN.2015 11:51:48

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

Highest Channel / QPSK

Highest Channel / 16QAM



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

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	