



## LTE Band 4

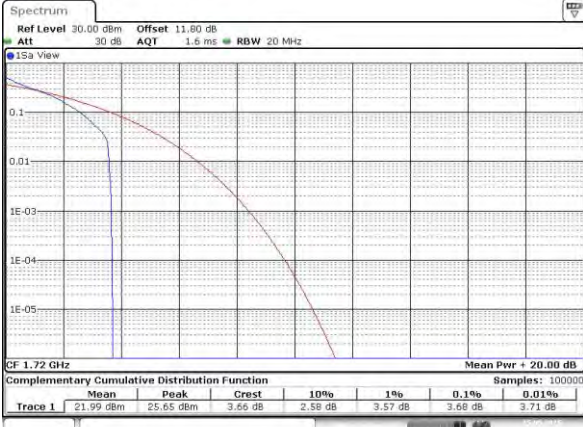
### Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.68	4.17	4.84	4.99	PASS
Middle CH	3.42	4.2	3.97	5.28	
Highest CH	3.57	4.2	4.49	5.33	



LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



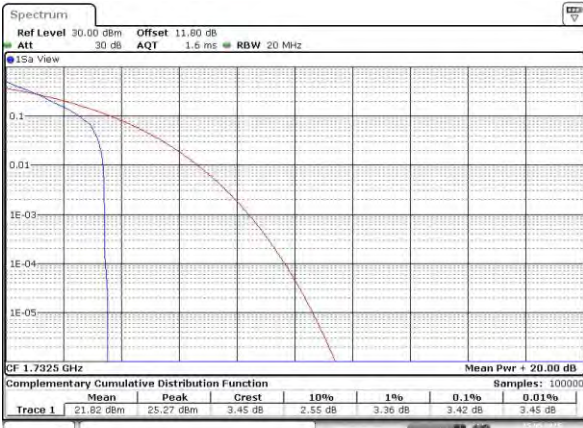
Date: 15 MAY 2015 17:05:36

Lowest Channel / Full RB



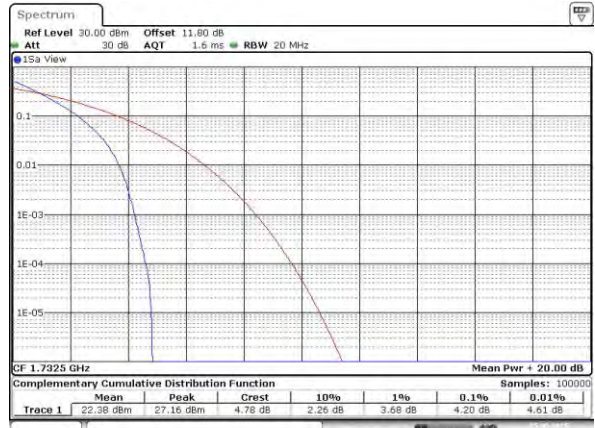
Date: 15 MAY 2015 17:05:52

Middle Channel / 1RB



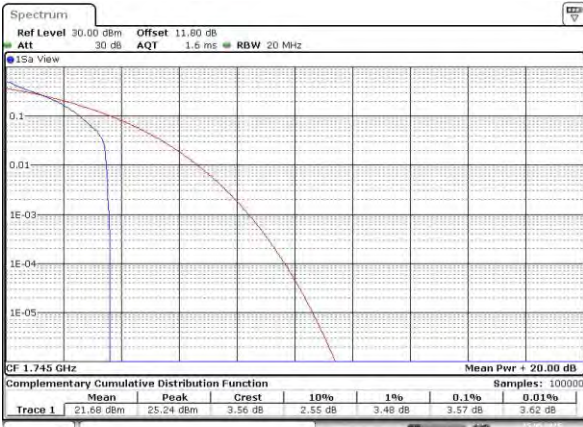
Date: 15 MAY 2015 17:06:08

Middle Channel / Full RB



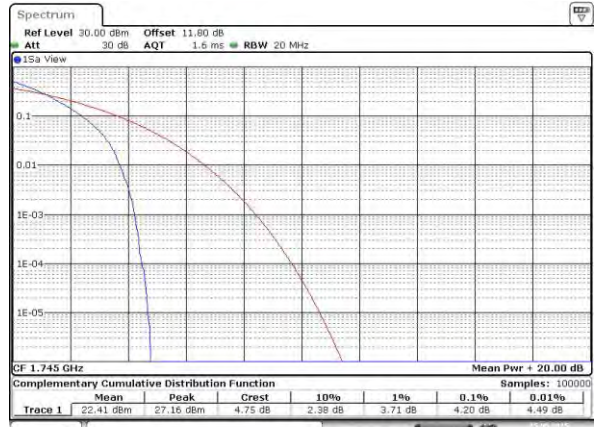
Date: 15 MAY 2015 17:06:30

Highest Channel / 1RB



Date: 15 MAY 2015 17:06:48

Highest Channel / Full RB



Date: 15 MAY 2015 17:07:02



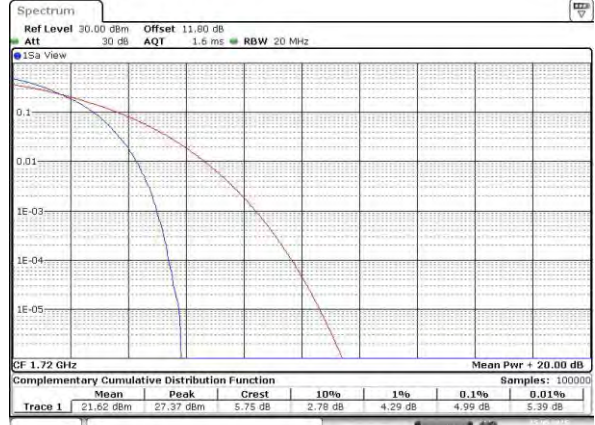
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



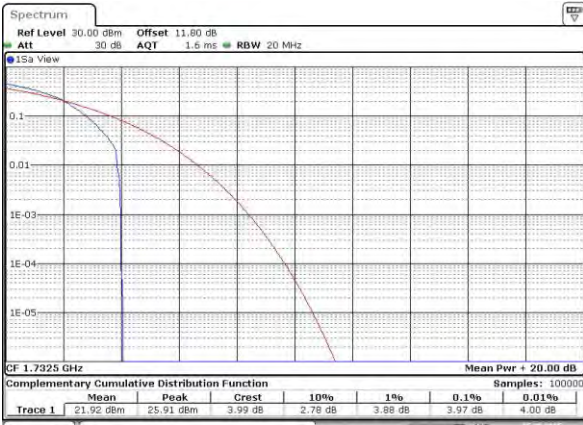
Date: 15 MAY.2015 17:02:18

Lowest Channel / Full RB



Date: 15 MAY.2015 17:02:34

Middle Channel / 1RB



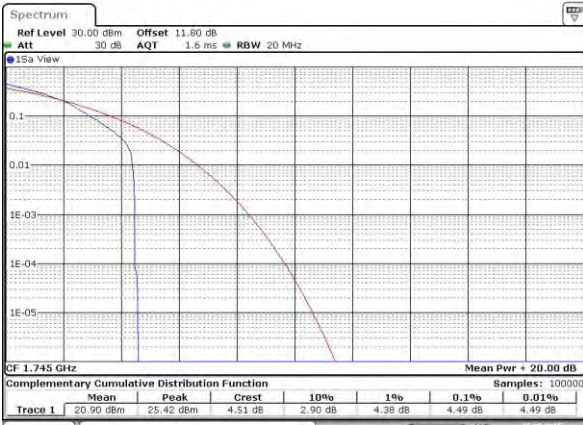
Date: 15 MAY.2015 17:03:02

Middle Channel / Full RB



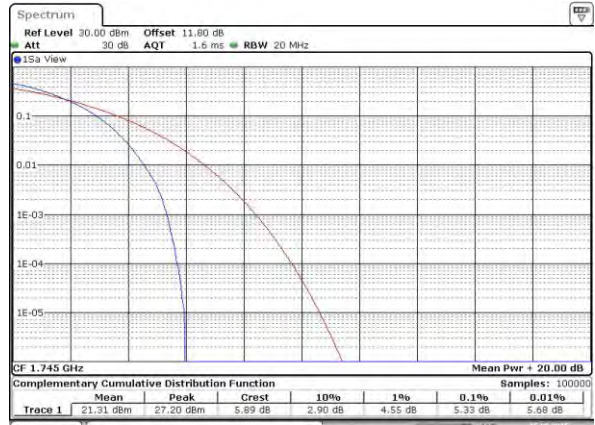
Date: 15 MAY.2015 17:03:23

Highest Channel / 1RB



Date: 15 MAY.2015 17:04:06

Highest Channel / Full RB



Date: 15 MAY.2015 17:04:53



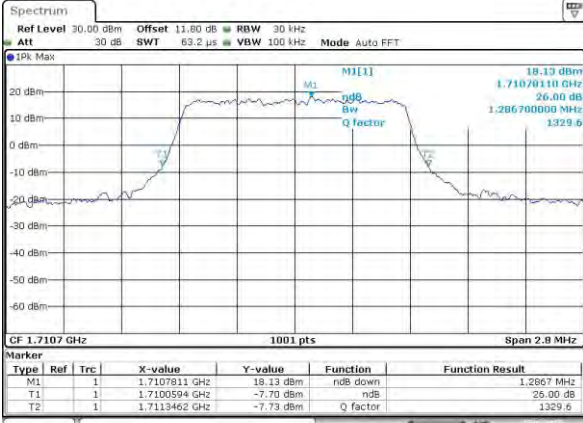
**26dB Bandwidth**

Mode	LTE Band 4 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.29	1.31	3.06	3.04	5.04	5.05	10.01	10.05	14.75	14.60	20.26	20.26
Middle CH	1.31	1.32	3.07	3.06	5.09	5.08	9.91	10.03	14.84	14.75	20.66	20.30
Highest CH	1.33	1.33	3.06	3.06	5.06	5.07	10.01	9.97	14.78	14.75	20.38	20.22



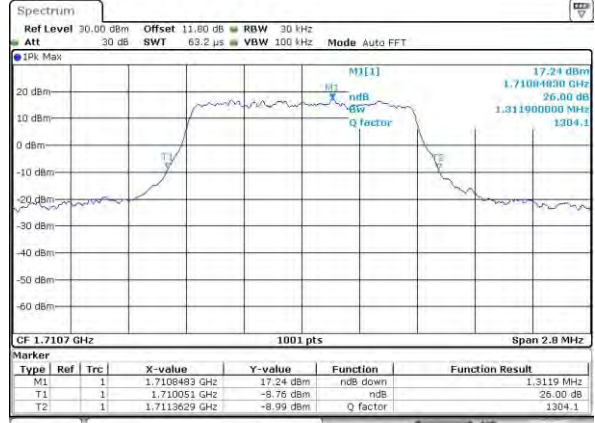
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



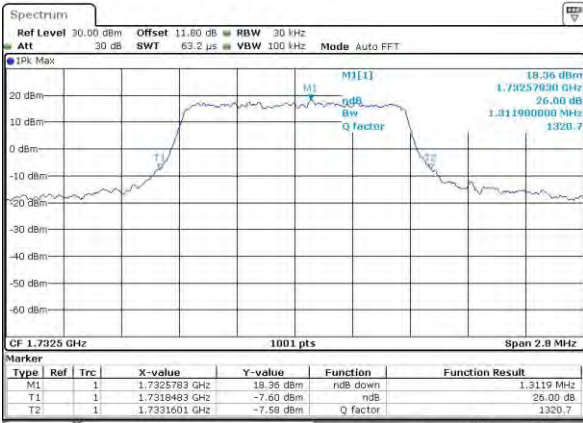
Date: 15 MAY 2015 16:13:25

Lowest Channel / 1.4MHz / 16QAM



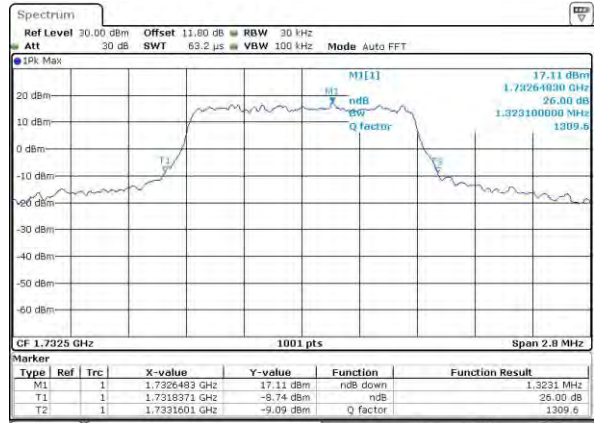
Date: 15 MAY 2015 16:13:37

Middle Channel / 1.4MHz / QPSK



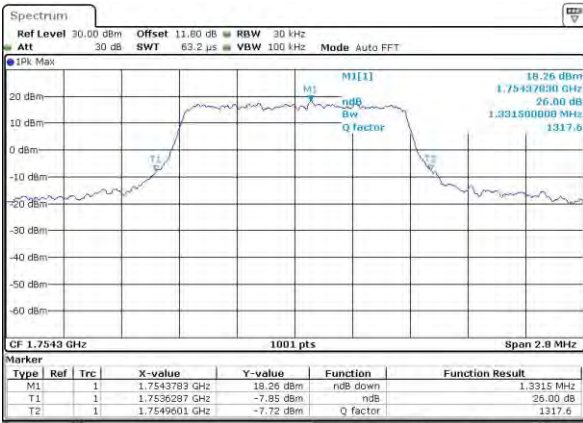
Date: 15 MAY 2015 16:49:21

Middle Channel / 1.4MHz / 16QAM



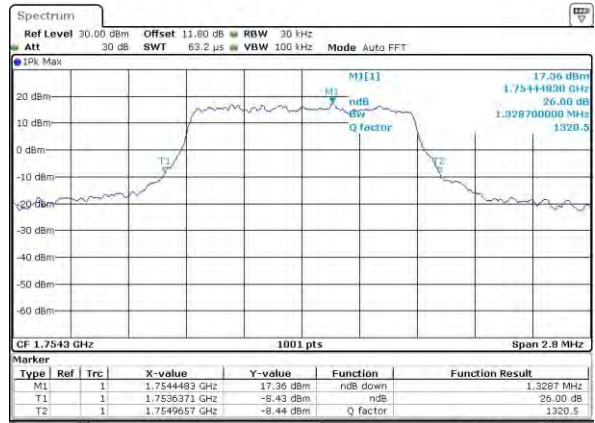
Date: 15 MAY 2015 16:49:34

Highest Channel / 1.4MHz / QPSK



Date: 15 MAY 2015 16:52:29

Highest Channel / 1.4MHz / 16QAM

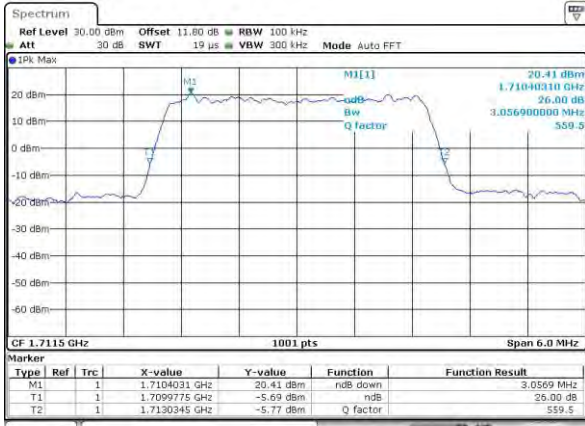


Date: 15 MAY 2015 16:52:42



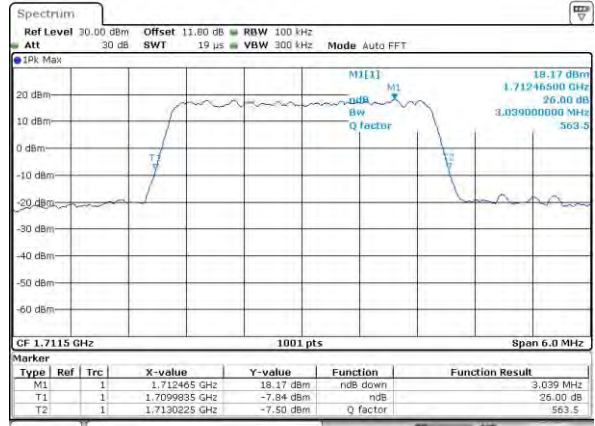
LTE Band 4

Lowest Channel / 3MHz / QPSK



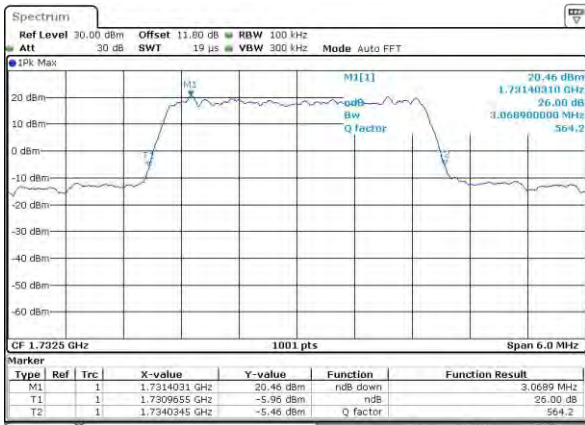
Date: 15 MAY 2015 14:31:16

Lowest Channel / 3MHz / 16QAM



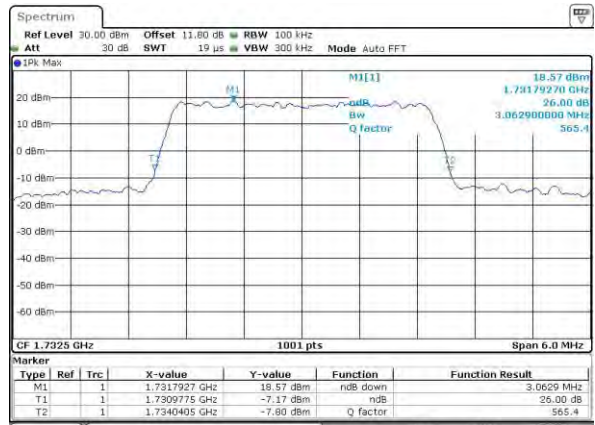
Date: 15 MAY 2015 14:31:28

Middle Channel / 3MHz / QPSK



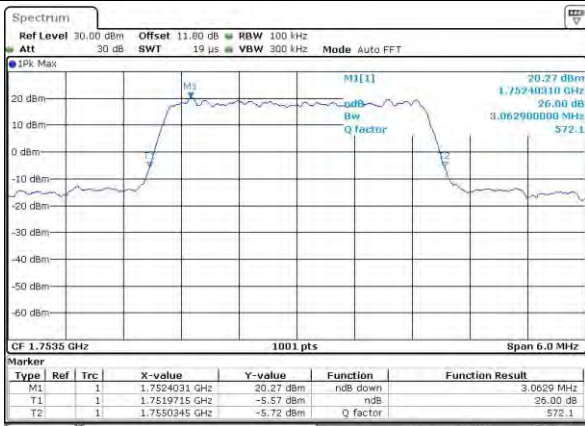
Date: 15 MAY 2015 14:39:03

Middle Channel / 3MHz / 16QAM



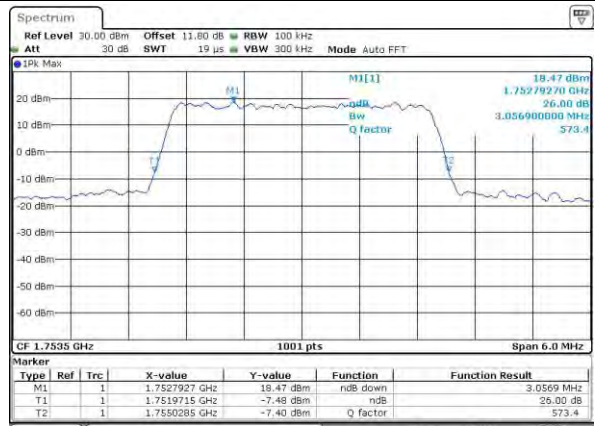
Date: 15 MAY 2015 14:39:16

Highest Channel / 3MHz / QPSK



Date: 15 MAY 2015 14:42:11

Highest Channel / 3MHz / 16QAM

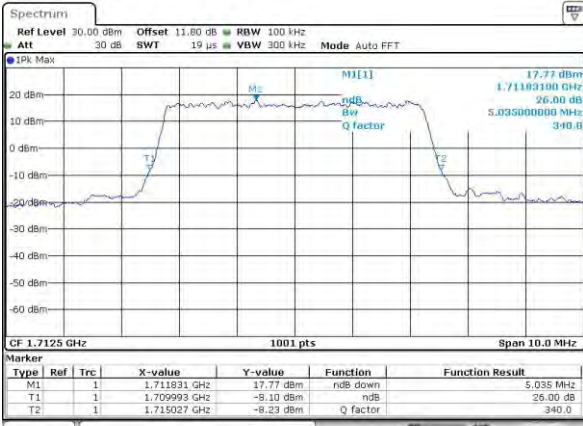


Date: 15 MAY 2015 14:42:24



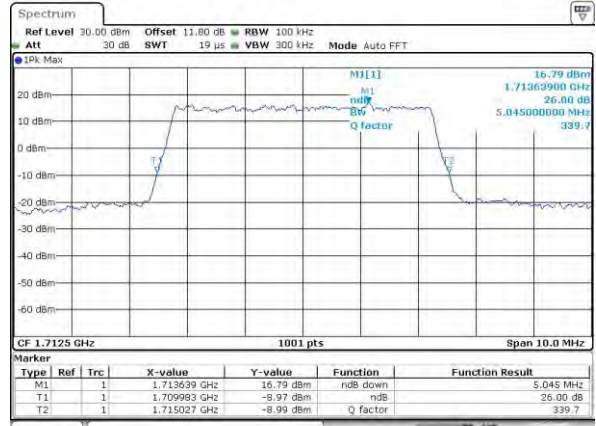
LTE Band 4

Lowest Channel / 5MHz / QPSK



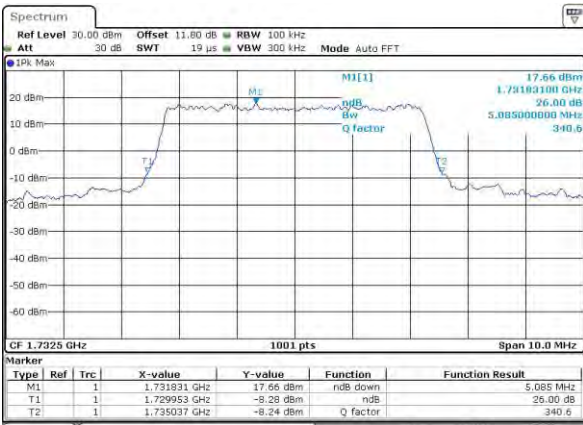
Date: 15 MAY 2015 14:50:00

Lowest Channel / 5MHz / 16QAM



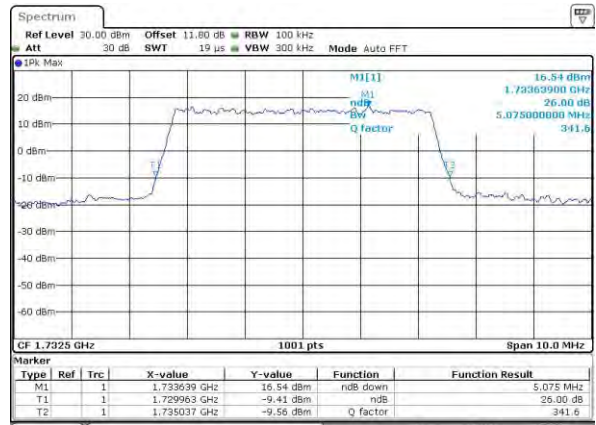
Date: 15 MAY 2015 14:50:12

Middle Channel / 5MHz / QPSK



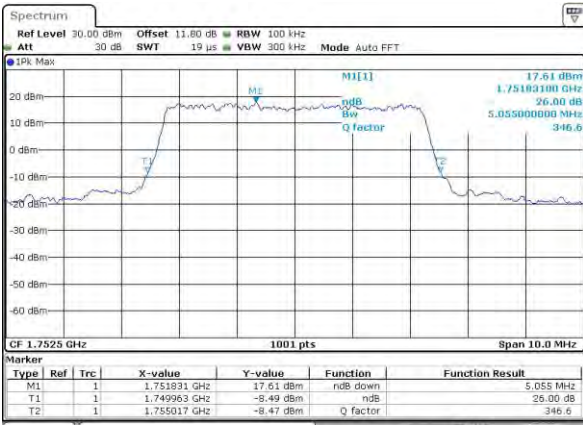
Date: 15 MAY 2015 14:57:47

Middle Channel / 5MHz / 16QAM



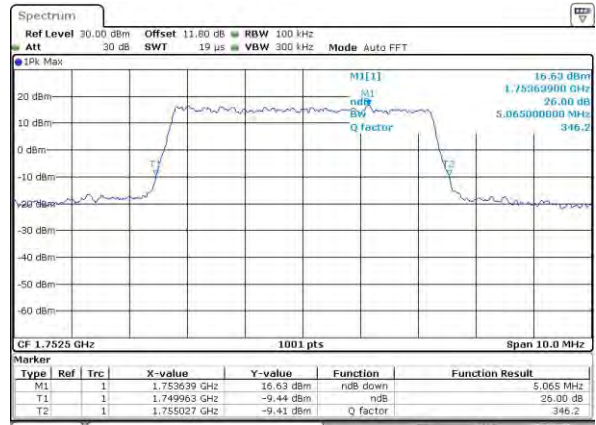
Date: 15 MAY 2015 14:58:00

Highest Channel / 5MHz / QPSK



Date: 15 MAY 2015 15:00:55

Highest Channel / 5MHz / 16QAM

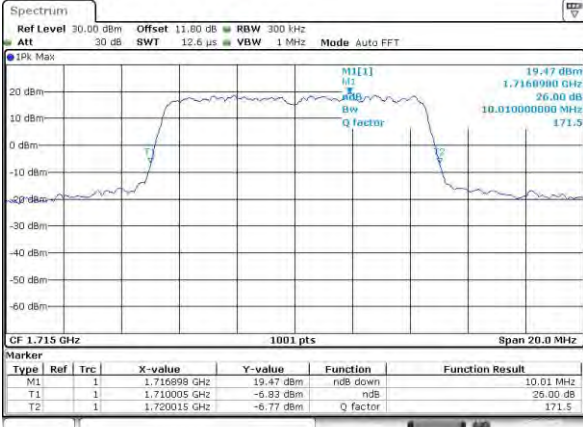


Date: 15 MAY 2015 15:01:08



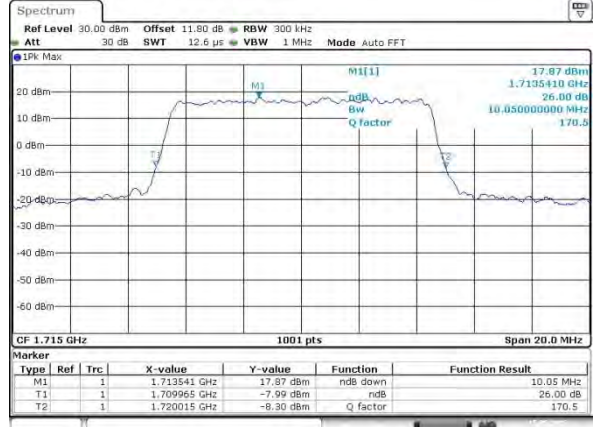
LTE Band 4

Lowest Channel / 10MHz / QPSK



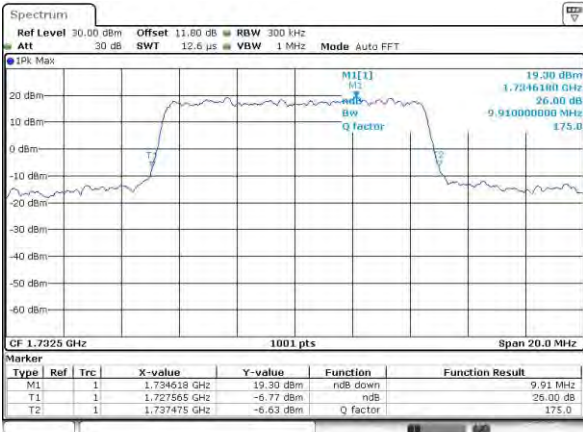
Date: 15 MAY 2015 15:08:42

Lowest Channel / 10MHz / 16QAM



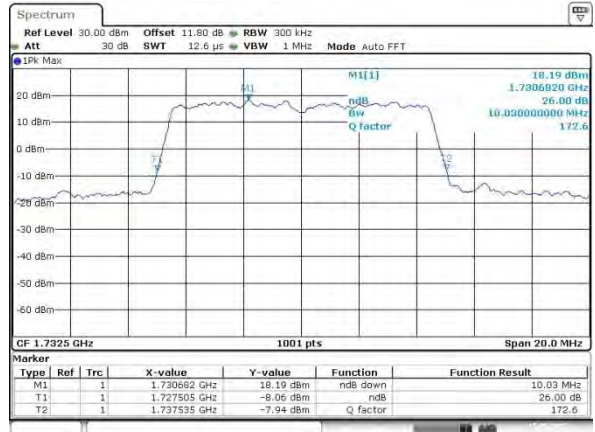
Date: 15 MAY 2015 15:08:55

Middle Channel / 10MHz / QPSK



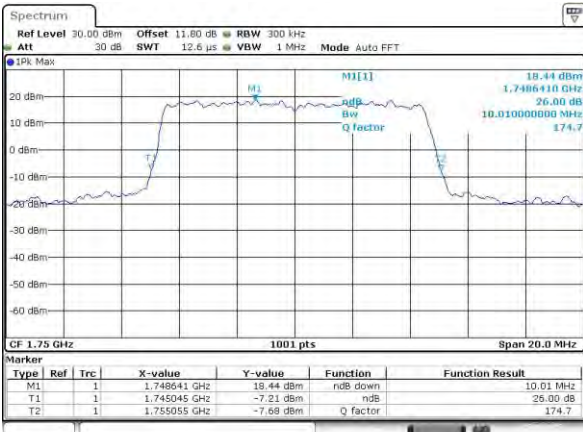
Date: 15 MAY 2015 15:24:47

Middle Channel / 10MHz / 16QAM



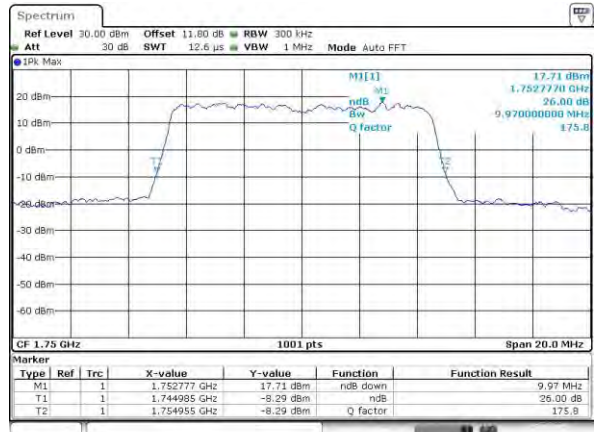
Date: 15 MAY 2015 15:25:00

Highest Channel / 10MHz / QPSK



Date: 15 MAY 2015 15:27:56

Highest Channel / 10MHz / 16QAM



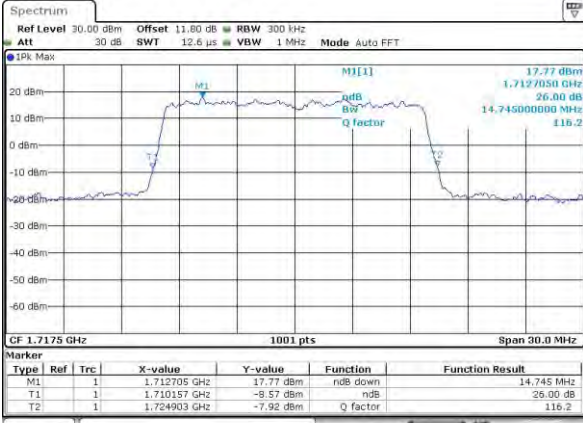
Date: 15 MAY 2015 15:28:09





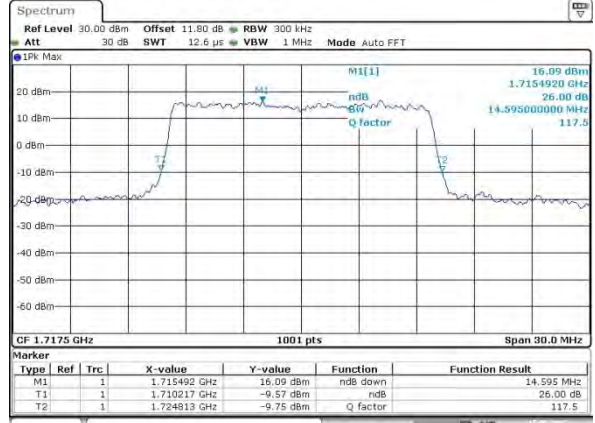
LTE Band 4

Lowest Channel / 15MHz / QPSK



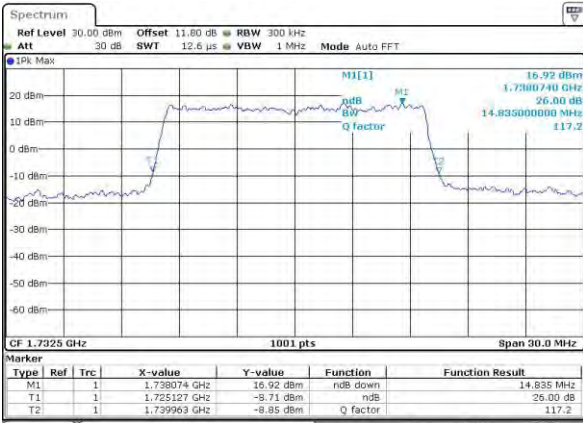
Date: 15 MAY 2015 15:35:48

Lowest Channel / 15MHz / 16QAM



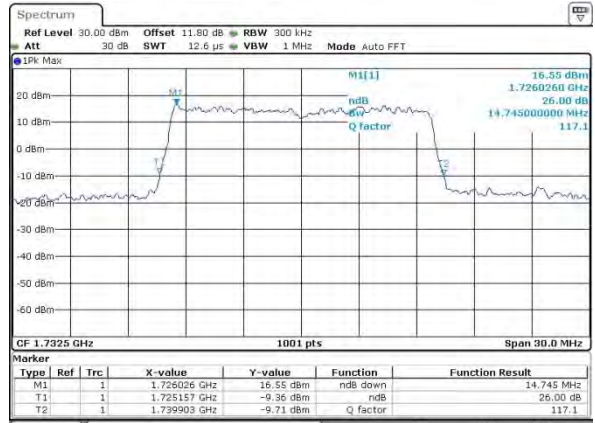
Date: 15 MAY 2015 15:36:01

Middle Channel / 15MHz / QPSK



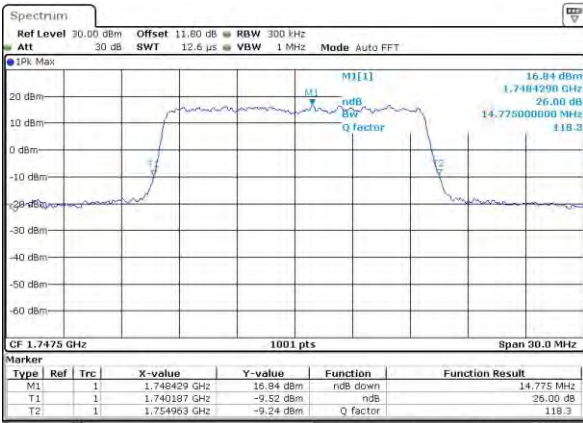
Date: 15 MAY 2015 15:43:38

Middle Channel / 15MHz / 16QAM



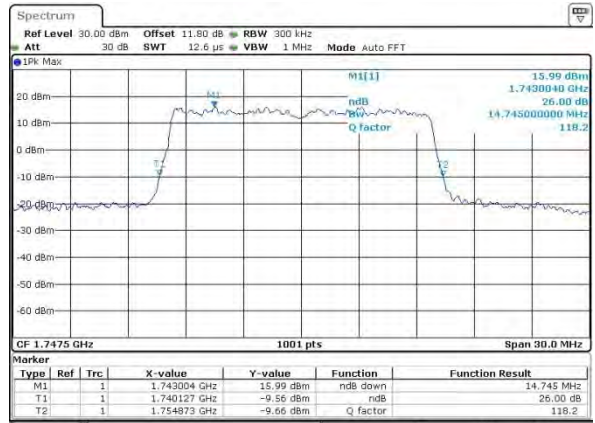
Date: 15 MAY 2015 15:43:51

Highest Channel / 15MHz / QPSK



Date: 15 MAY 2015 15:46:46

Highest Channel / 15MHz / 16QAM

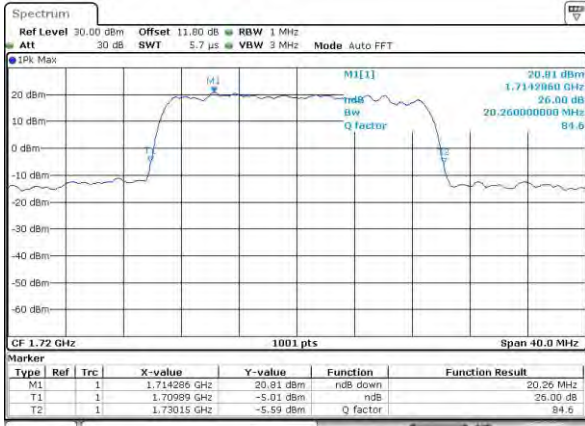


Date: 15 MAY 2015 15:46:59



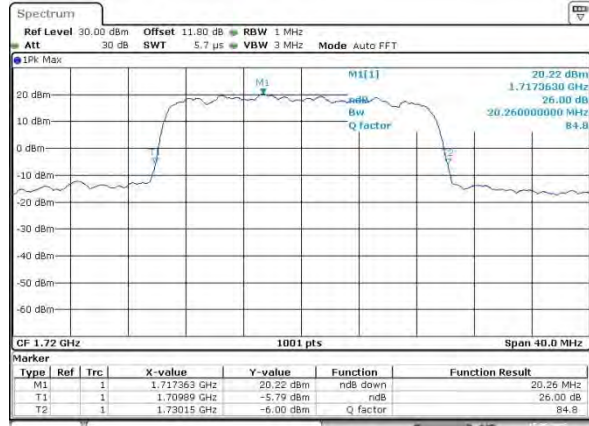
LTE Band 4

Lowest Channel / 20MHz / QPSK



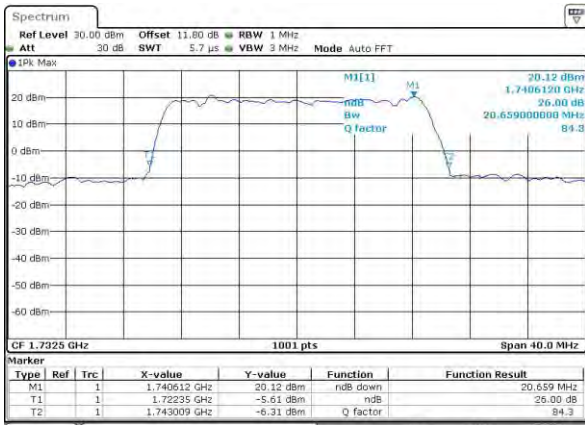
Date: 15 MAY 2015 15:54:39

Lowest Channel / 20MHz / 16QAM



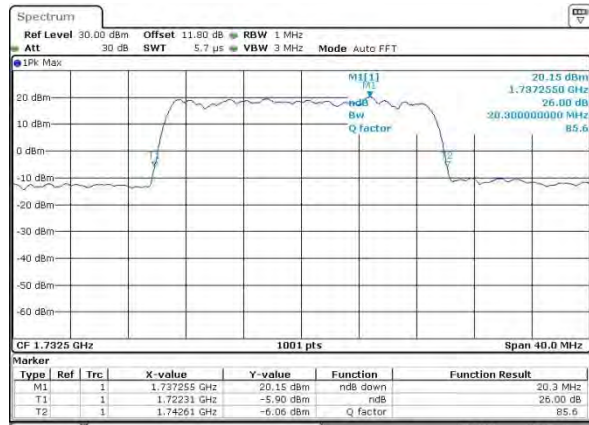
Date: 15 MAY 2015 15:54:51

Middle Channel / 20MHz / QPSK



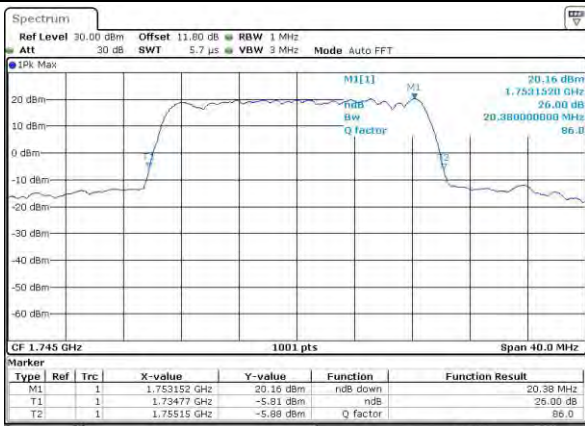
Date: 15 MAY 2015 16:02:26

Middle Channel / 20MHz / 16QAM



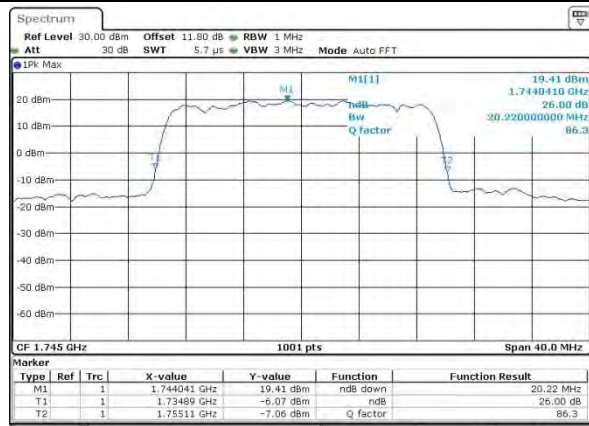
Date: 15 MAY 2015 16:02:39

Highest Channel / 20MHz / QPSK



Date: 15 MAY 2015 16:05:34

Highest Channel / 20MHz / 16QAM



Date: 15 MAY 2015 16:05:46



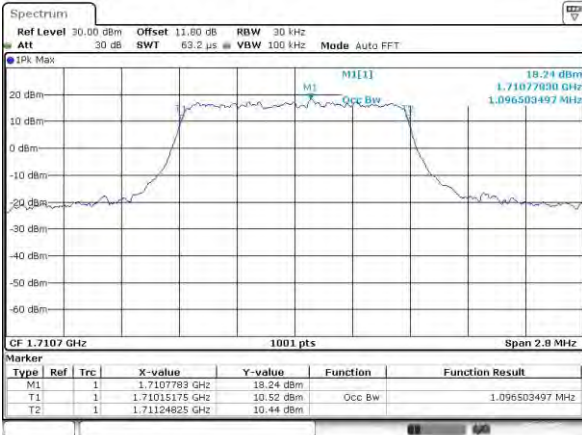
### Occupied Bandwidth

Mode	LTE Band 4 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.1	1.1	2.72	2.74	4.51	4.52	9.03	9.03	13.52	13.46	18.26	18.26
Middle CH	1.1	1.1	2.73	2.72	4.52	4.53	9.07	9.01	13.52	13.46	18.5	18.42
Highest CH	1.1	1.1	2.73	2.73	4.51	4.53	9.05	8.99	13.46	13.46	18.3	18.5



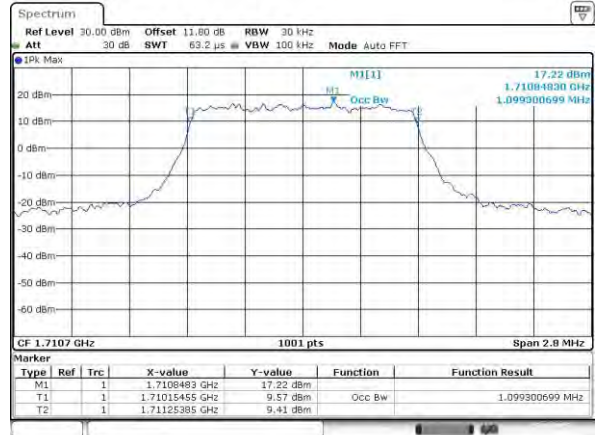
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



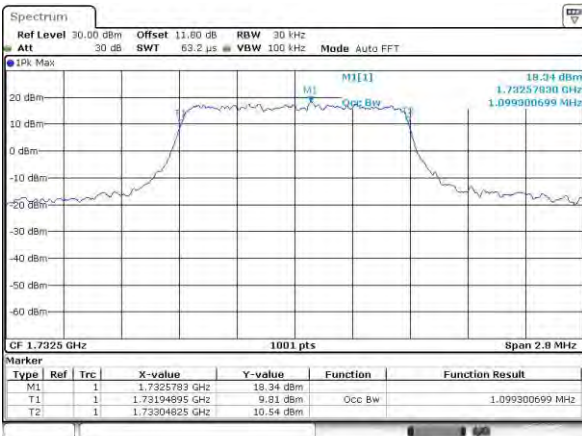
Date: 15 MAY 2015 16:13:01

Lowest Channel / 1.4MHz / 16QAM



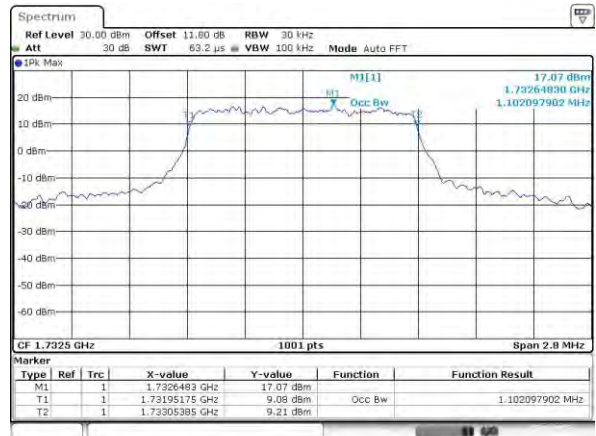
Date: 15 MAY 2015 16:13:12

Middle Channel / 1.4MHz / QPSK



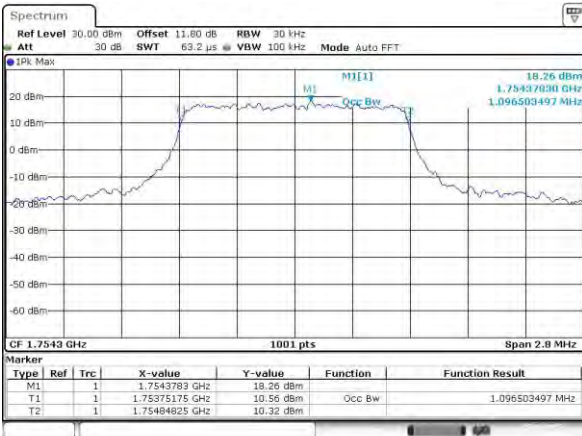
Date: 15 MAY 2015 16:48:57

Middle Channel / 1.4MHz / 16QAM



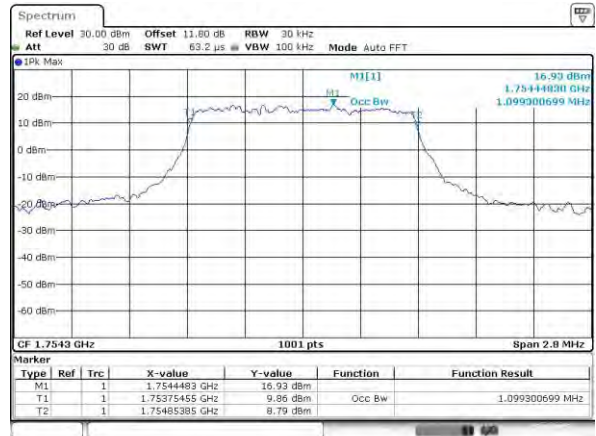
Date: 15 MAY 2015 16:49:08

Highest Channel / 1.4MHz / QPSK



Date: 15 MAY 2015 16:52:06

Highest Channel / 1.4MHz / 16QAM

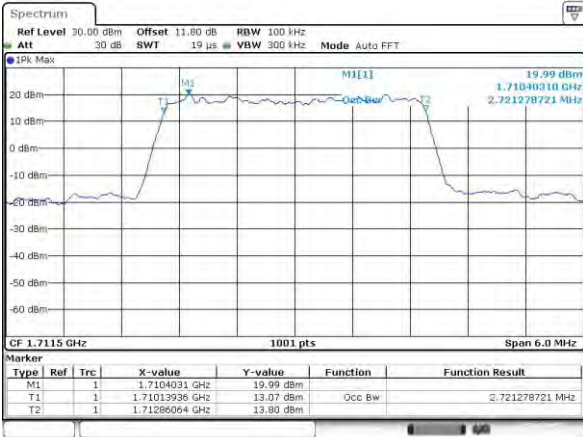


Date: 15 MAY 2015 16:52:17



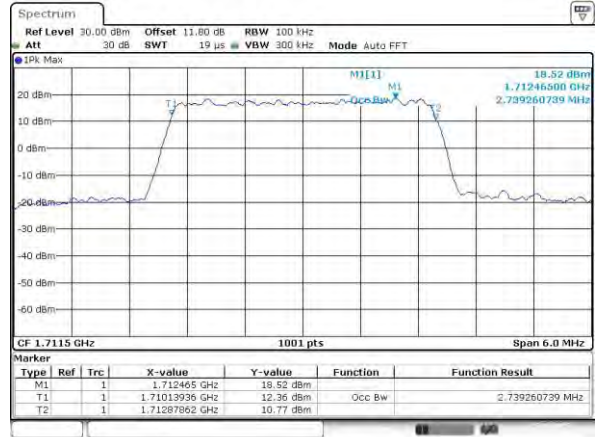
LTE Band 4

Lowest Channel / 3MHz / QPSK



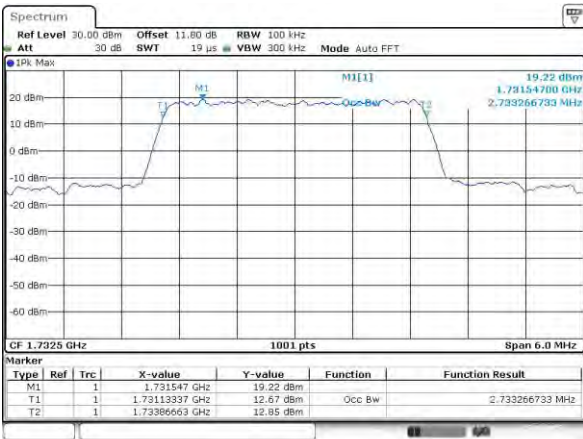
Date: 15 MAY 2015 14:30:52

Lowest Channel / 3MHz / 16QAM



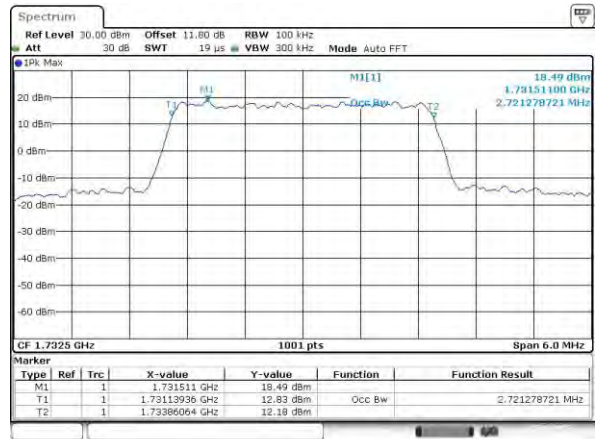
Date: 15 MAY 2015 14:31:03

Middle Channel / 3MHz / QPSK



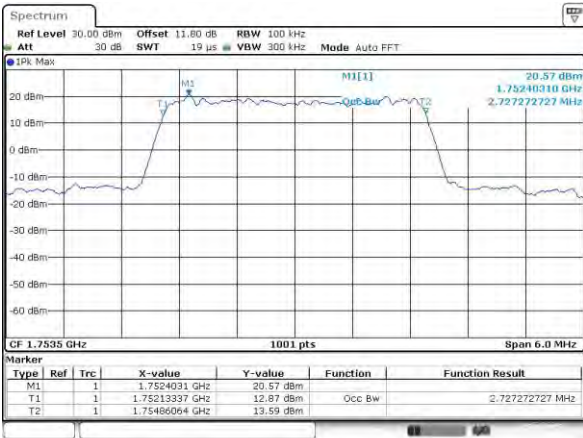
Date: 15 MAY 2015 14:38:39

Middle Channel / 3MHz / 16QAM



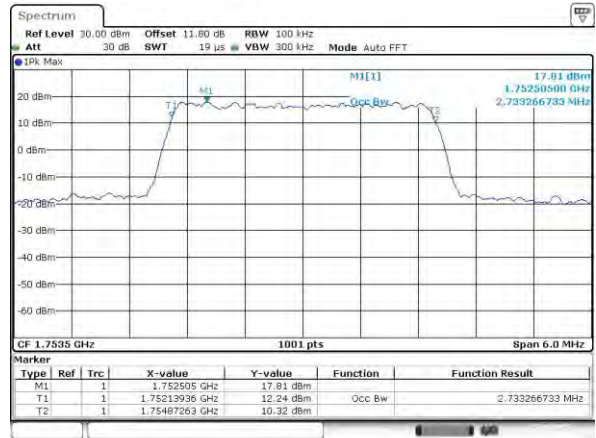
Date: 15 MAY 2015 14:38:50

Highest Channel / 3MHz / QPSK



Date: 15 MAY 2015 14:41:48

Highest Channel / 3MHz / 16QAM

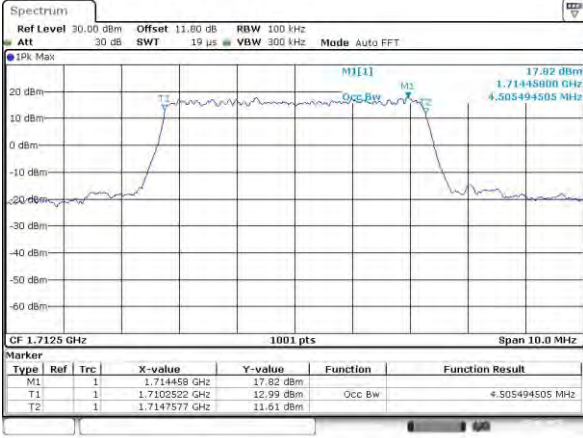


Date: 15 MAY 2015 14:41:59



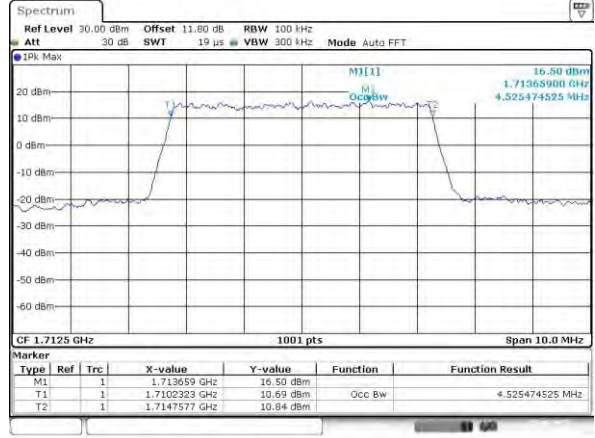
LTE Band 4

Lowest Channel / 5MHz / QPSK



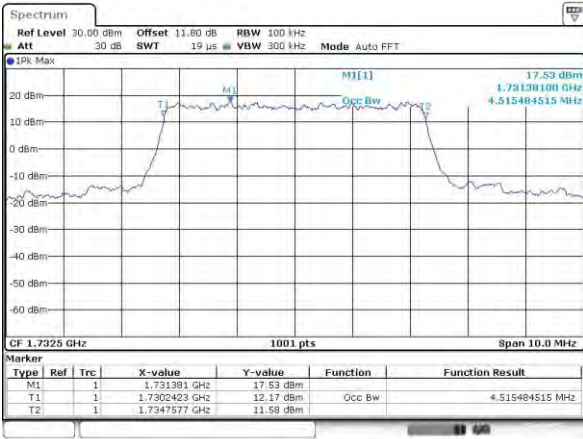
Date: 15 MAY 2015 14:48:36

Lowest Channel / 5MHz / 16QAM



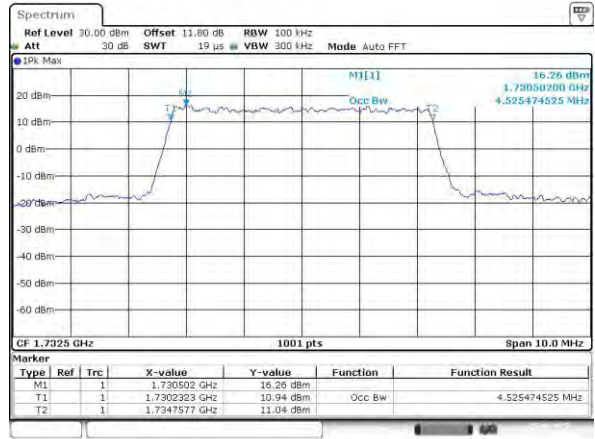
Date: 15 MAY 2015 14:48:47

Middle Channel / 5MHz / QPSK



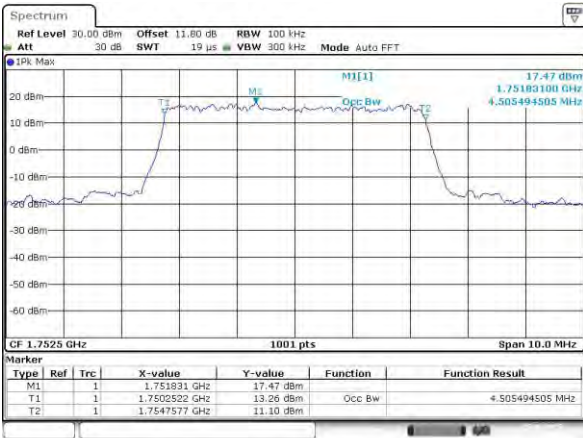
Date: 15 MAY 2015 14:57:23

Middle Channel / 5MHz / 16QAM



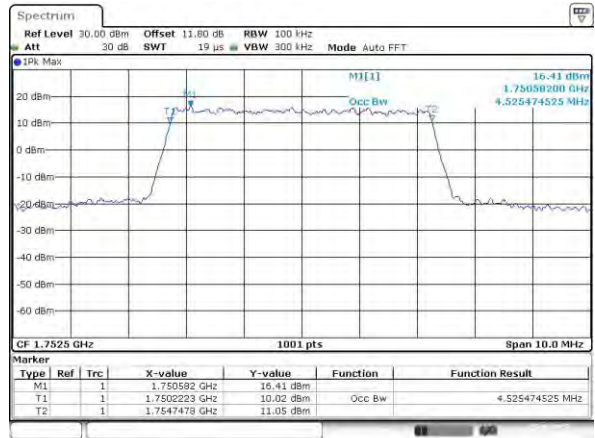
Date: 15 MAY 2015 14:57:34

Highest Channel / 5MHz / QPSK



Date: 15 MAY 2015 15:00:31

Highest Channel / 5MHz / 16QAM

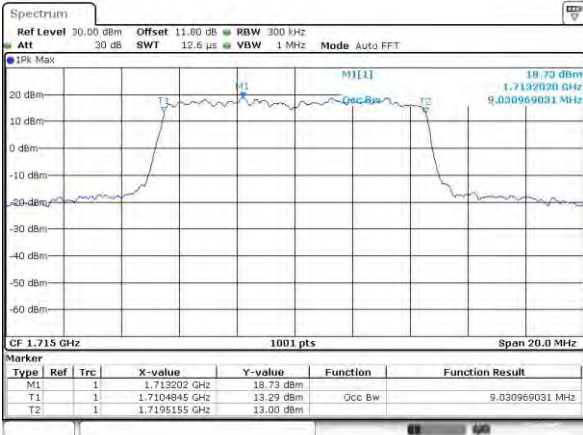


Date: 15 MAY 2015 15:00:42



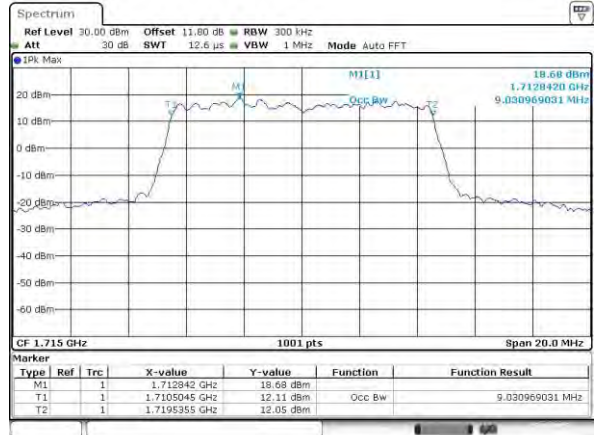
LTE Band 4

Lowest Channel / 10MHz / QPSK



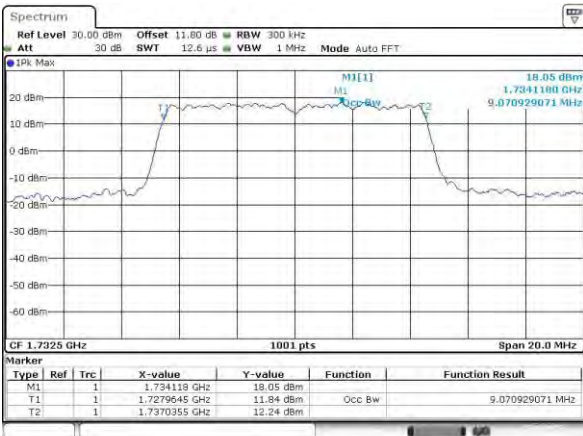
Date: 15 MAY 2015 15:08:19

Lowest Channel / 10MHz / 16QAM



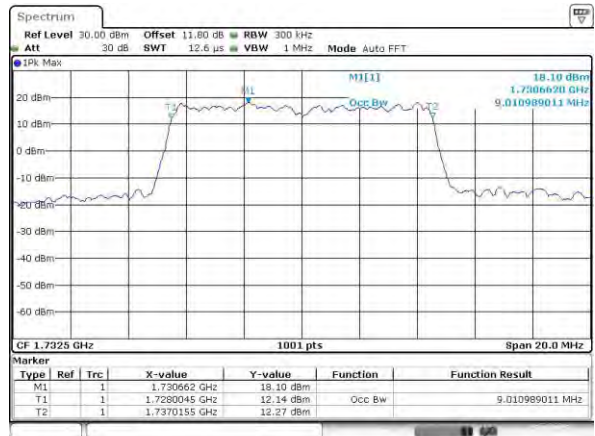
Date: 15 MAY 2015 15:08:29

Middle Channel / 10MHz / QPSK



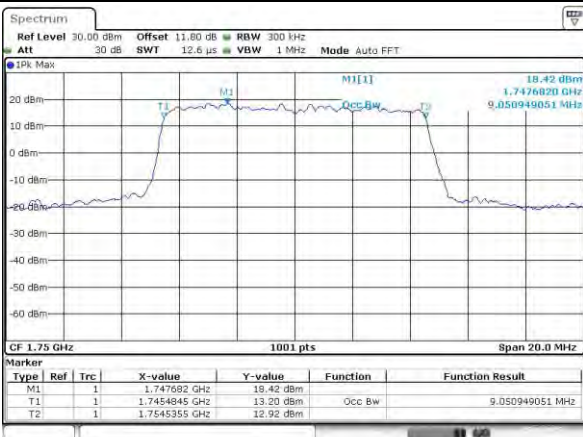
Date: 15 MAY 2015 15:24:24

Middle Channel / 10MHz / 16QAM



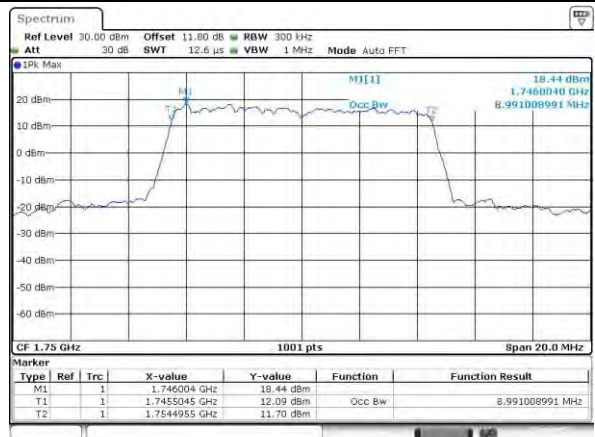
Date: 15 MAY 2015 15:24:34

Highest Channel / 10MHz / QPSK



Date: 15 MAY 2015 15:27:32

Highest Channel / 10MHz / 16QAM

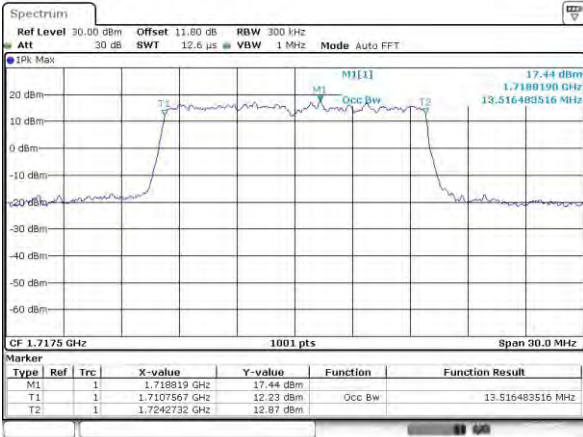


Date: 15 MAY 2015 15:27:43



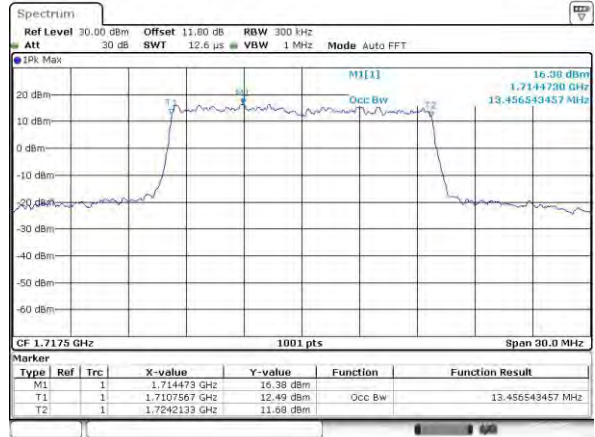
LTE Band 4

Lowest Channel / 15MHz / QPSK



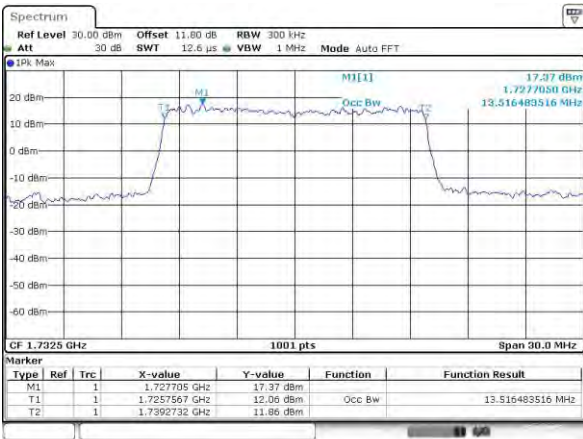
Date: 15 MAY 2015 15:35:25

Lowest Channel / 15MHz / 16QAM



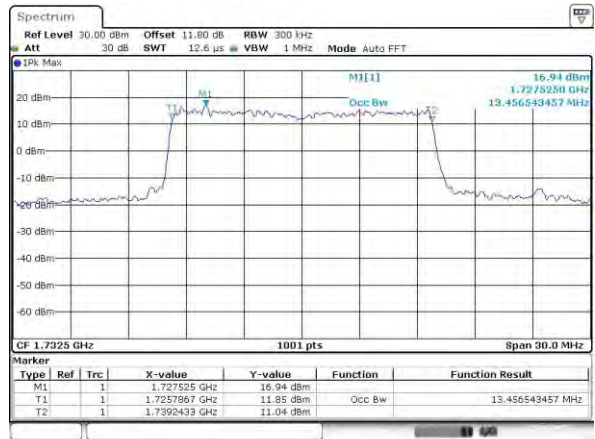
Date: 15 MAY 2015 15:35:36

Middle Channel / 15MHz / QPSK



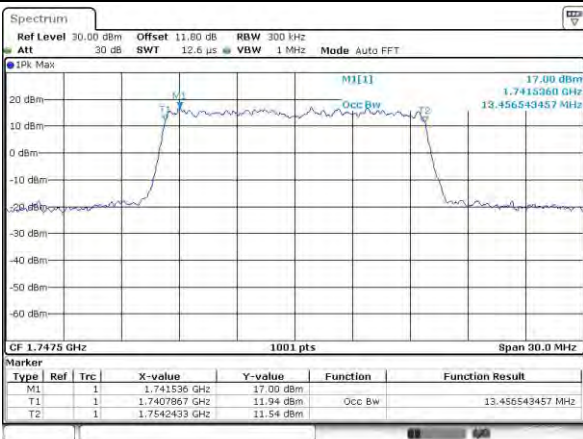
Date: 15 MAY 2015 15:43:13

Middle Channel / 15MHz / 16QAM



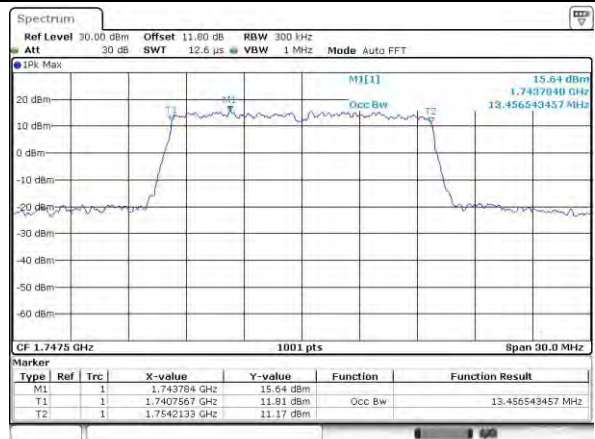
Date: 15 MAY 2015 15:43:24

Highest Channel / 15MHz / QPSK



Date: 15 MAY 2015 15:46:22

Highest Channel / 15MHz / 16QAM



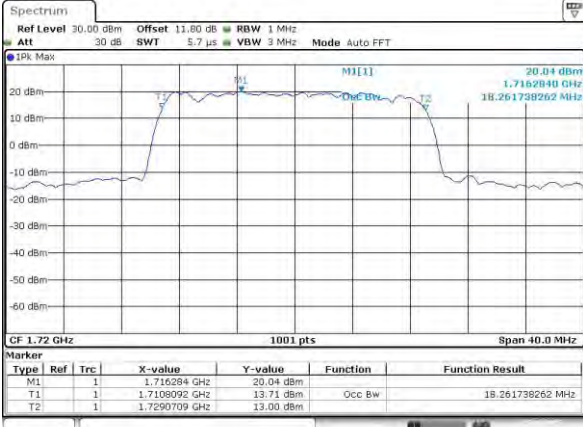
Date: 15 MAY 2015 15:46:33





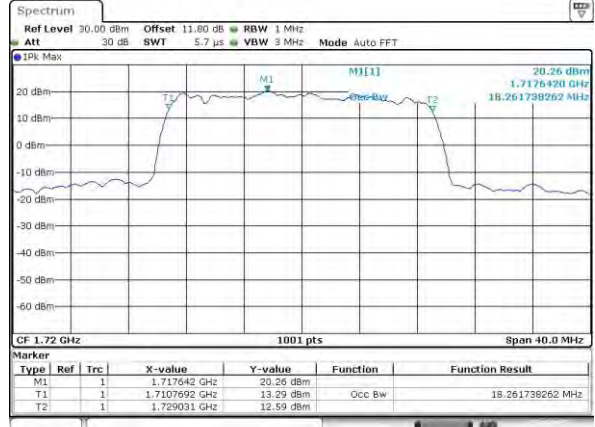
LTE Band 4

Lowest Channel / 20MHz / QPSK



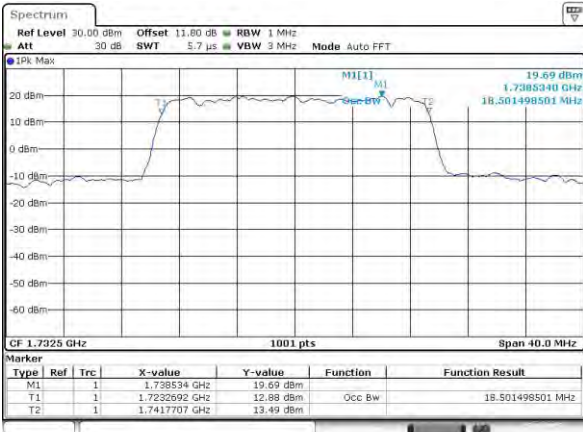
Date: 15 MAY 2015 15:54:15

Lowest Channel / 20MHz / 16QAM



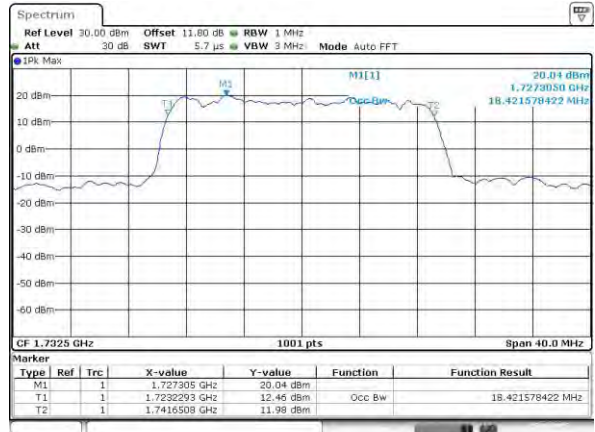
Date: 15 MAY 2015 15:54:26

Middle Channel / 20MHz / QPSK



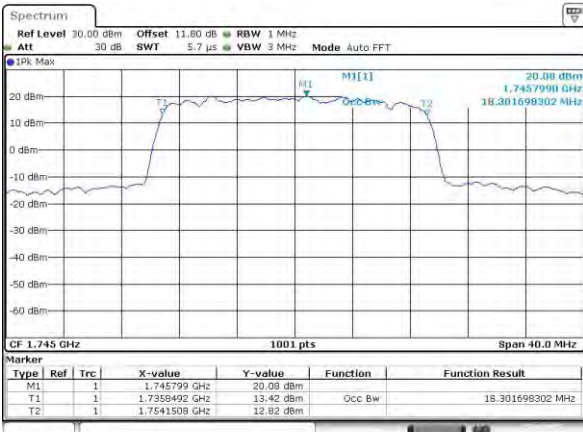
Date: 15 MAY 2015 16:02:03

Middle Channel / 20MHz / 16QAM



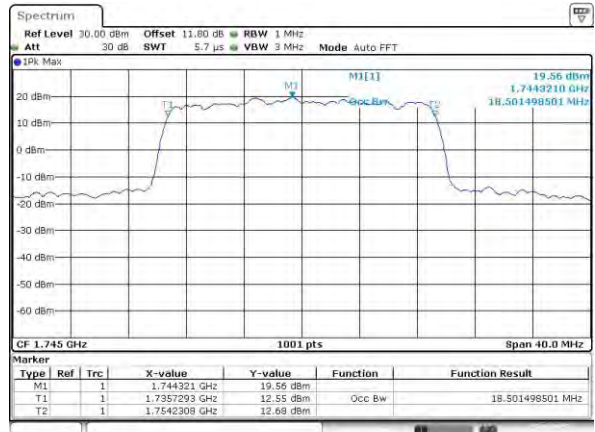
Date: 15 MAY 2015 16:02:13

Highest Channel / 20MHz / QPSK



Date: 15 MAY 2015 16:05:10

Highest Channel / 20MHz / 16QAM



Date: 15 MAY 2015 16:05:21



**Conducted Band Edge**



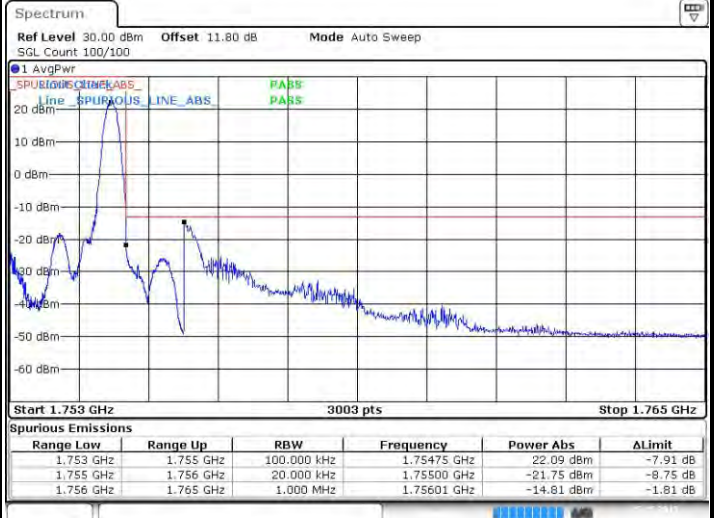
LTE Band 4 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



Date: 15.MAY.2015 16:14:46

Highest Band Edge / 1RB



Date: 15.MAY.2015 16:53:51

Lowest Band Edge / Full RB



Date: 15.MAY.2015 16:17:06

Highest Band Edge / Full RB



Date: 15.MAY.2015 16:56:11



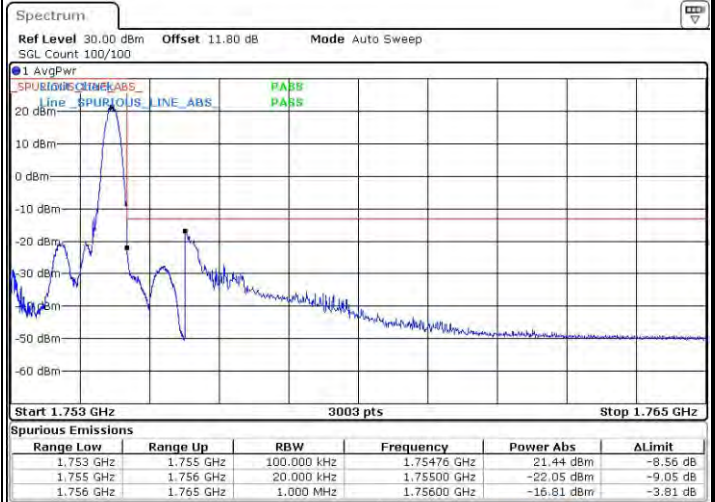
LTE Band 4 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



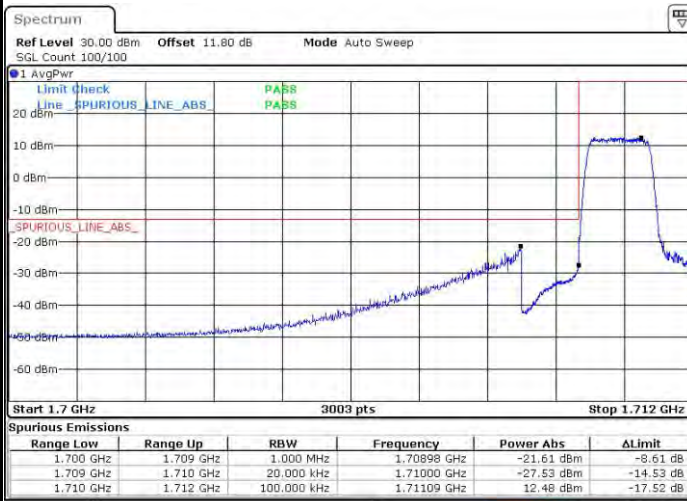
Date: 15.MAY.2015 16:15:56

Highest Band Edge / 1 RB



Date: 15.MAY.2015 16:55:01

Lowest Band Edge / Full RB



Date: 15.MAY.2015 16:46:24

Highest Band Edge / Full RB

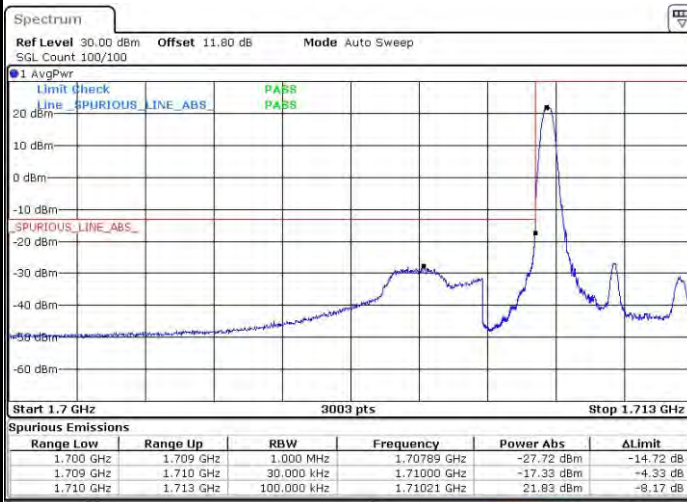


Date: 15.MAY.2015 16:57:21



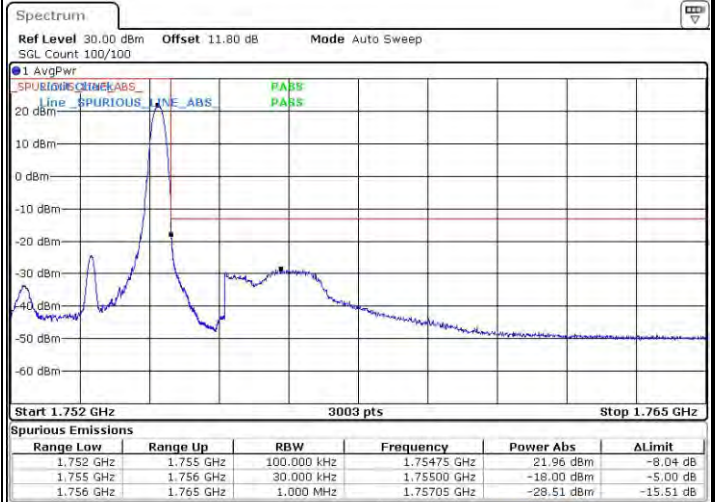
LTE Band 4 / 3MHz / QPSK

Lowest Band Edge / 1RB



Date: 15.MAY.2015 14:32:37

Highest Band Edge / 1 RB



Date: 15.MAY.2015 14:43:33

Lowest Band Edge / Full RB



Date: 15.MAY.2015 14:34:57

Highest Band Edge / Full RB



Date: 15.MAY.2015 14:45:54



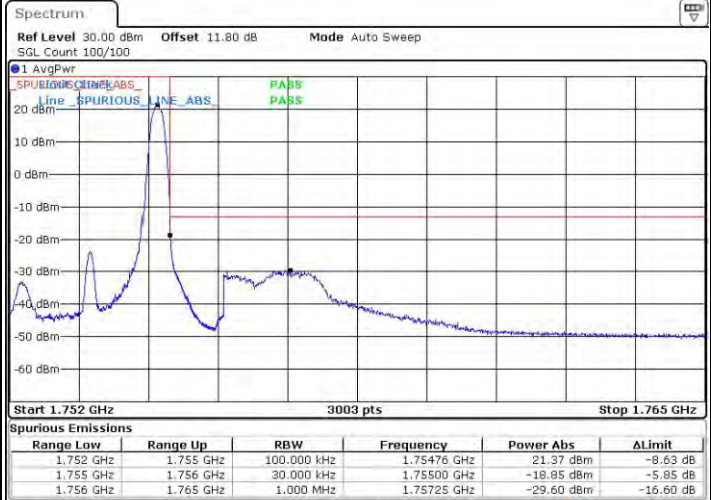
LTE Band 4 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 15.MAY.2015 14:33:47

Highest Band Edge / 1 RB



Date: 15.MAY.2015 14:44:44

Lowest Band Edge / Full RB



Date: 15.MAY.2015 14:36:07

Highest Band Edge / Full RB

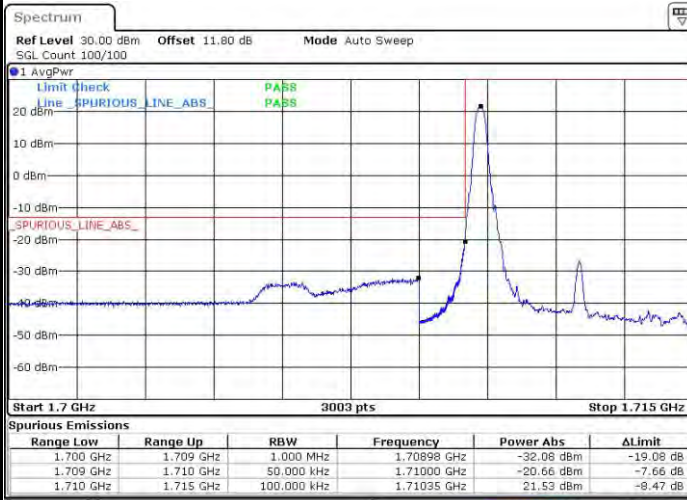


Date: 15.MAY.2015 14:47:04



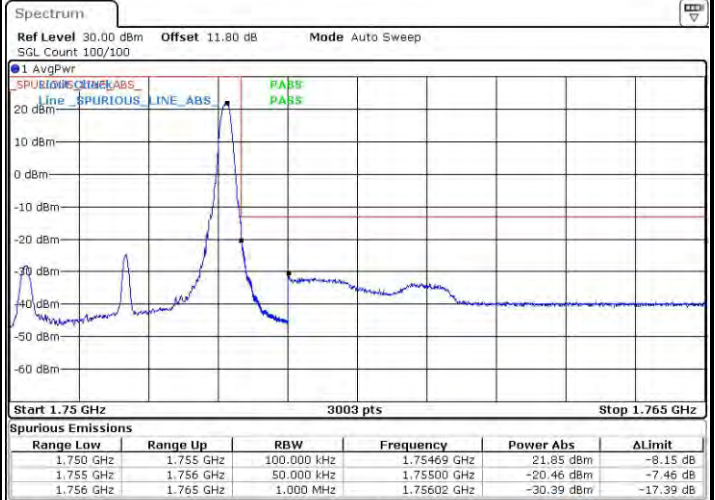
LTE Band 4 / 5MHz / QPSK

Lowest Band Edge / 1 RB



Date: 15.MAY.2015 14:51:21

Highest Band Edge / 1 RB



Date: 15.MAY.2015 15:02:17

Lowest Band Edge / Full RB



Date: 15.MAY.2015 14:53:41

Highest Band Edge / Full RB

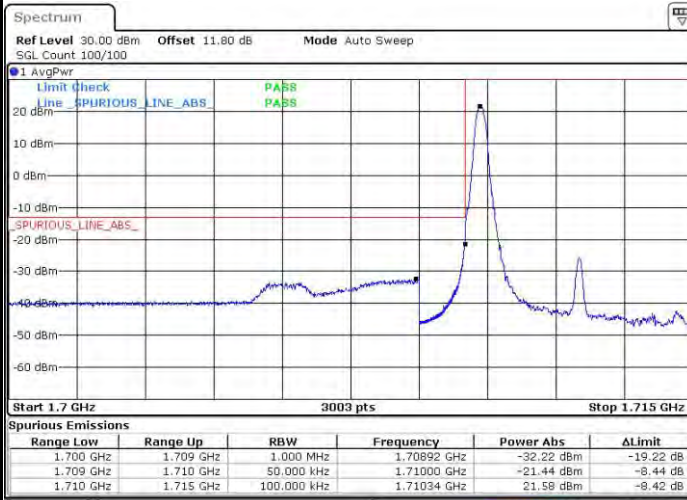


Date: 15.MAY.2015 15:04:36



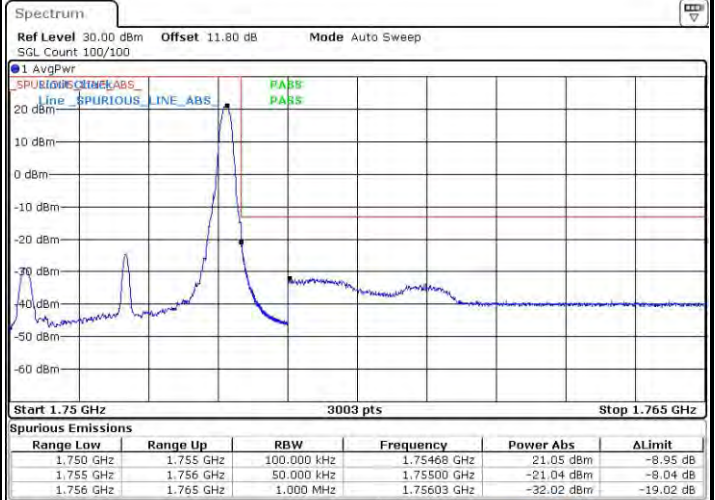
LTE Band 4 / 5MHz / 16QAM

Lowest Band Edge / 1RB



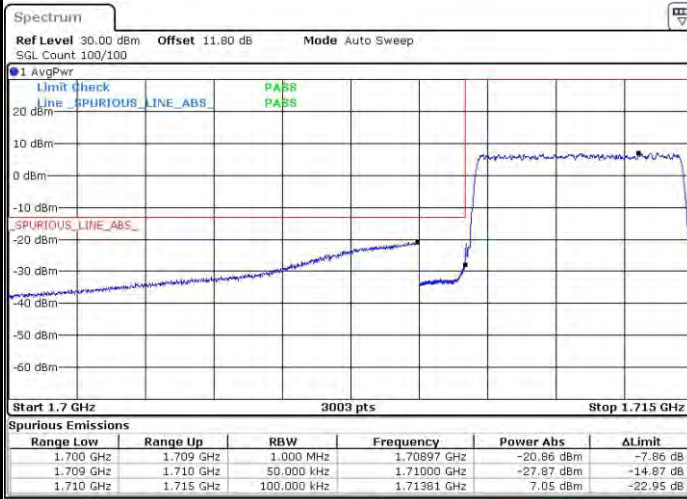
Date: 15.MAY.2015 14:52:31

Highest Band Edge / 1 RB



Date: 15.MAY.2015 15:03:27

Lowest Band Edge / Full RB



Date: 15.MAY.2015 14:54:51

Highest Band Edge / Full RB



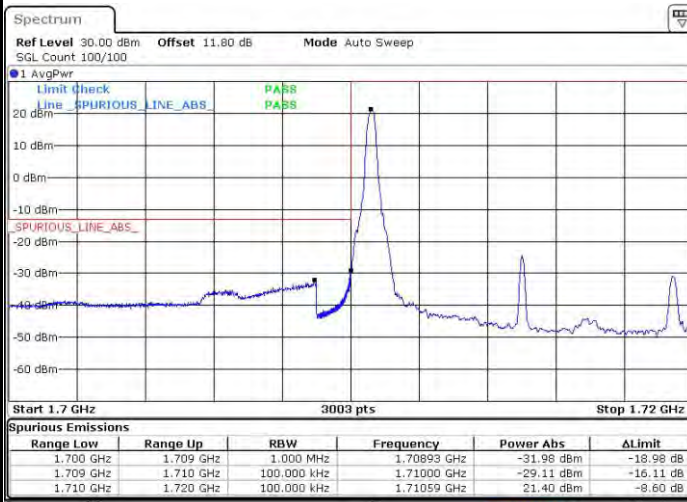
Date: 15.MAY.2015 15:05:46





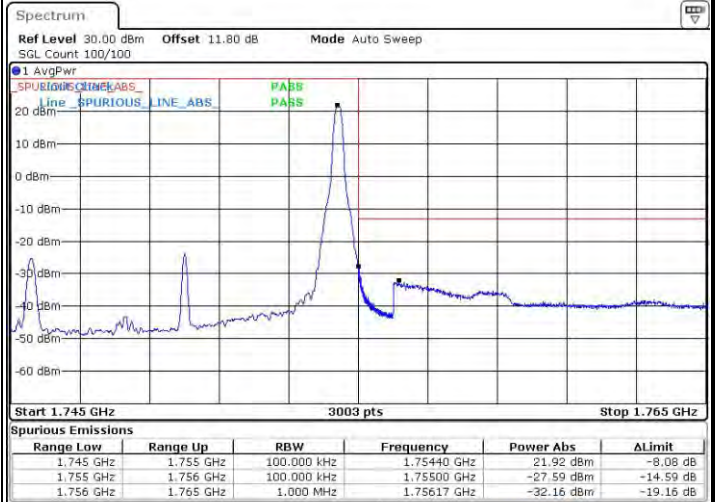
LTE Band 4 / 10MHz / QPSK

Lowest Band Edge / 1 RB



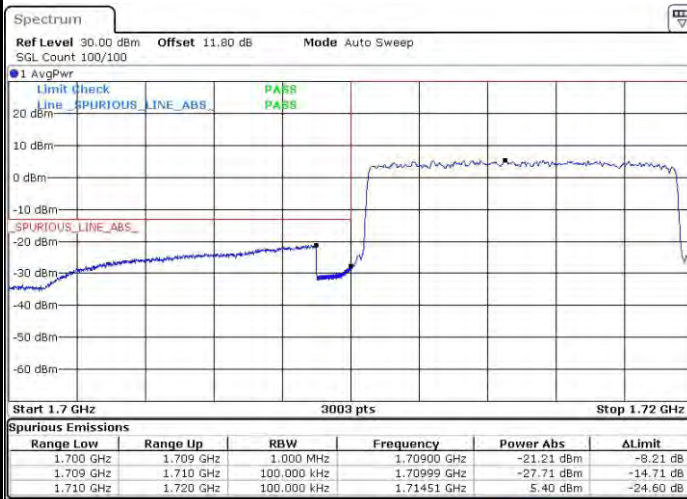
Date: 15.MAY.2015 15:10:04

Highest Band Edge / 1 RB



Date: 15.MAY.2015 15:29:18

Lowest Band Edge / Full RB



Date: 15.MAY.2015 15:20:41

Highest Band Edge / Full RB

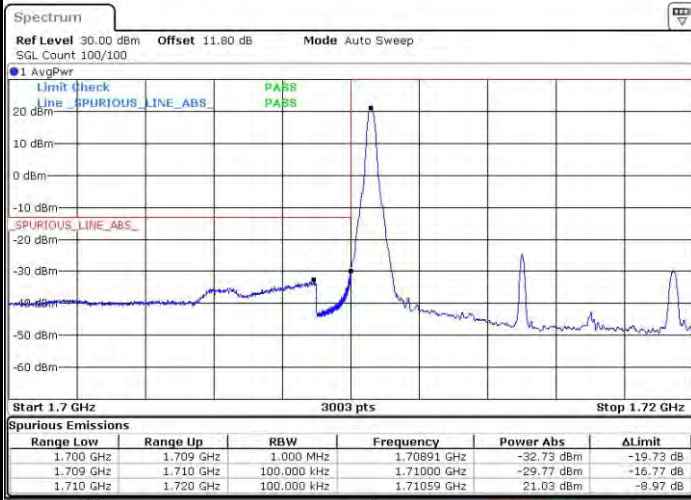


Date: 15.MAY.2015 15:31:38



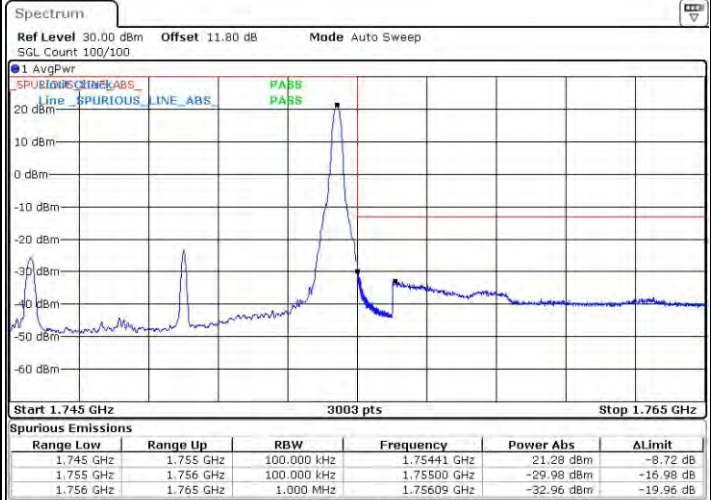
LTE Band 4 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



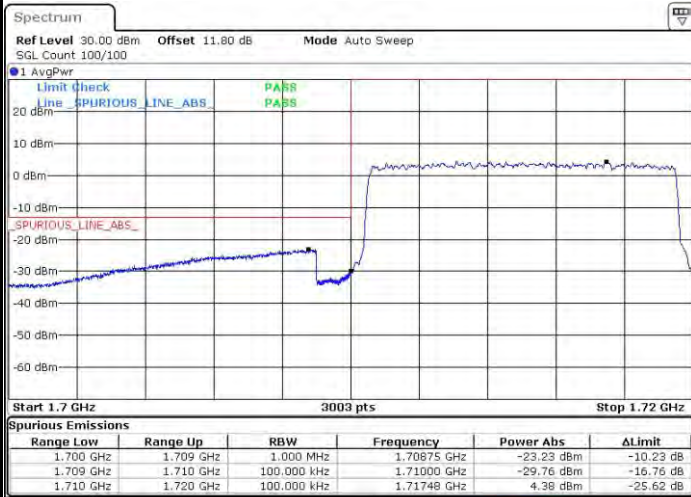
Date: 15.MAY.2015 15:19:31

Highest Band Edge / 1 RB



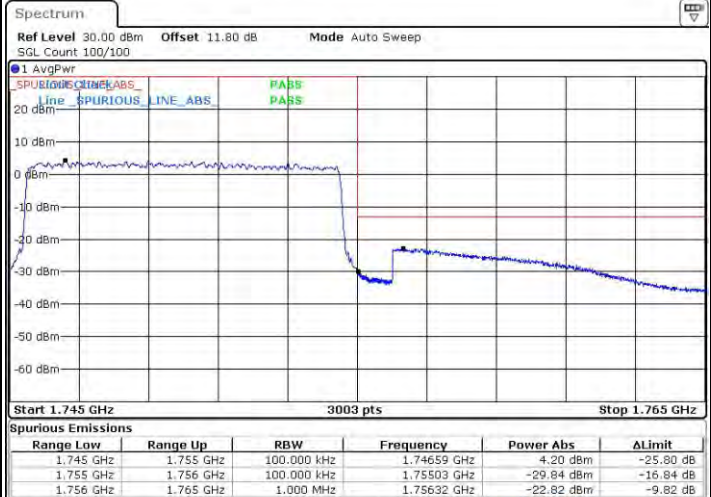
Date: 15.MAY.2015 15:30:28

Lowest Band Edge / Full RB



Date: 15.MAY.2015 15:21:51

Highest Band Edge / Full RB

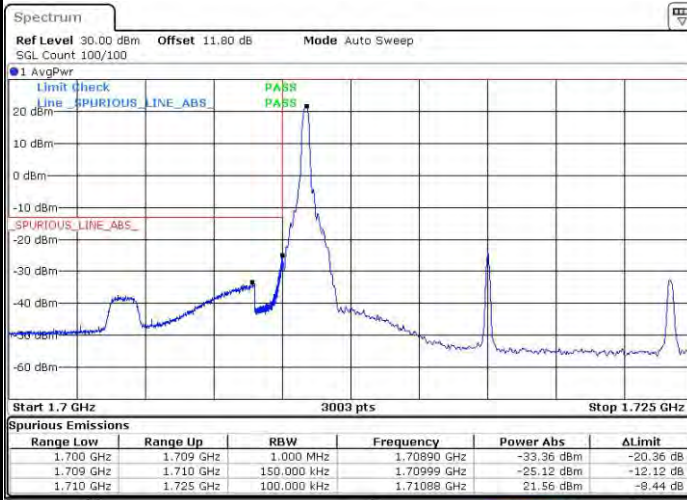


Date: 15.MAY.2015 15:32:48



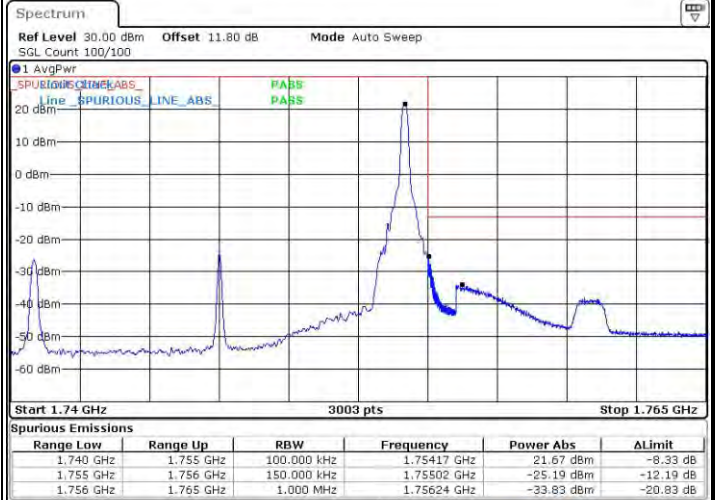
LTE Band 4 / 15MHz / QPSK

Lowest Band Edge / 1 RB



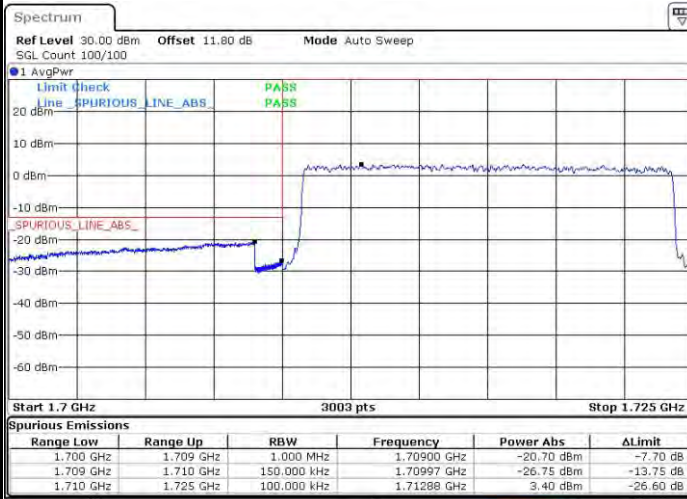
Date: 15.MAY.2015 15:37:10

Highest Band Edge / 1 RB



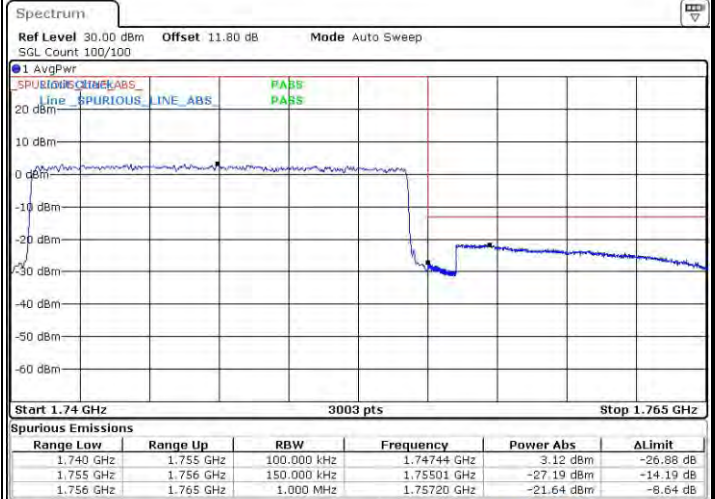
Date: 15.MAY.2015 15:48:08

Lowest Band Edge / Full RB



Date: 15.MAY.2015 15:39:30

Highest Band Edge / Full RB

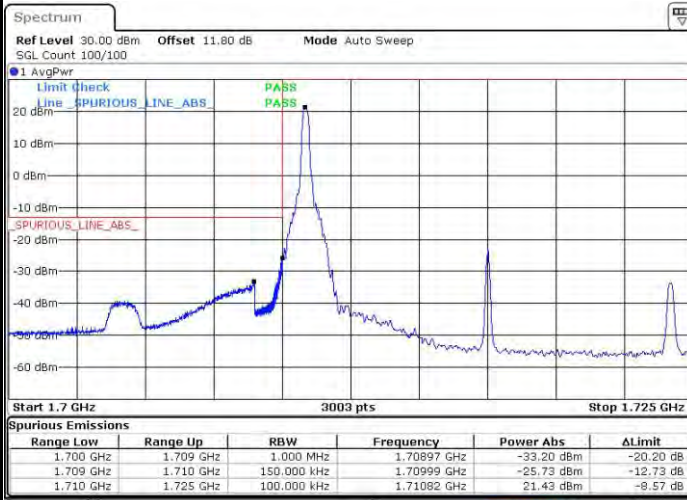


Date: 15.MAY.2015 15:50:28



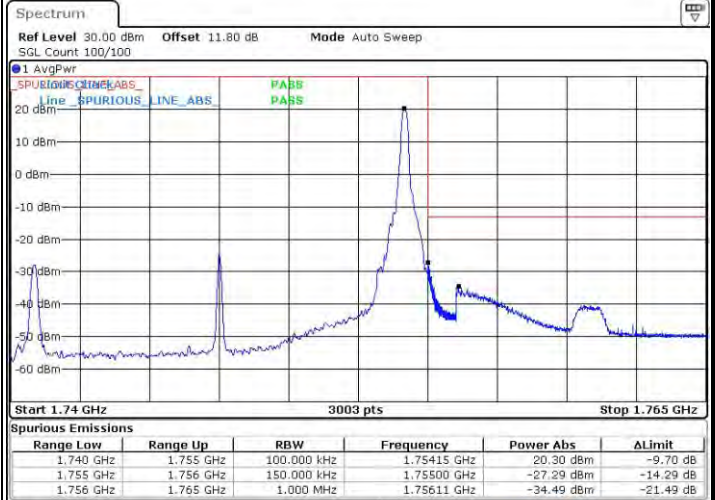
LTE Band 4 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



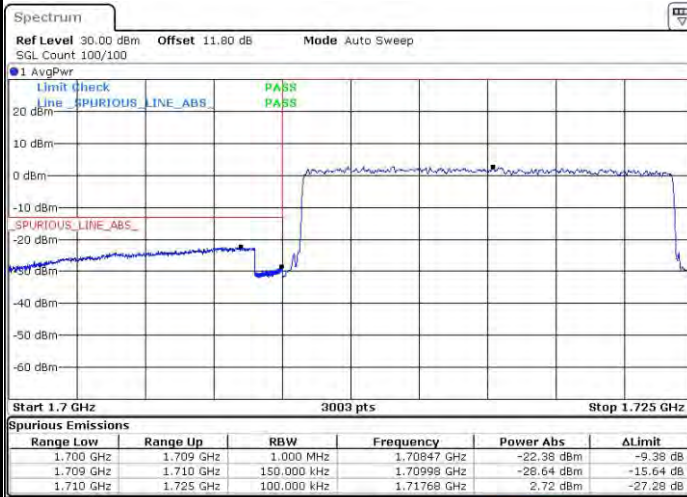
Date: 15.MAY.2015 15:38:20

Highest Band Edge / 1 RB



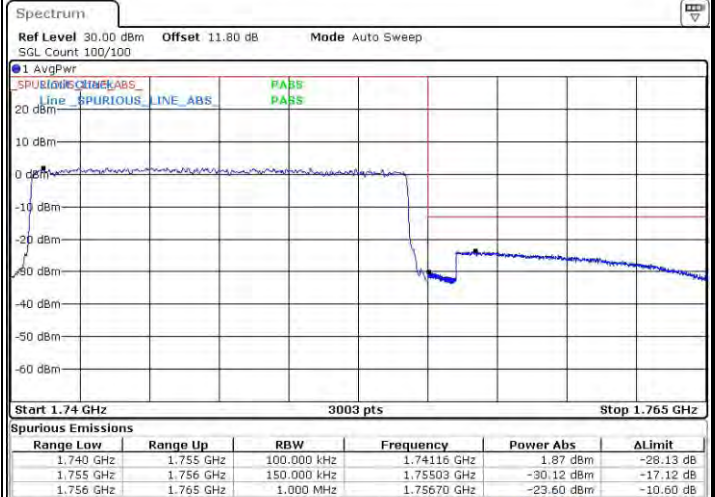
Date: 15.MAY.2015 15:49:18

Lowest Band Edge / Full RB



Date: 15.MAY.2015 15:40:40

Highest Band Edge / Full RB

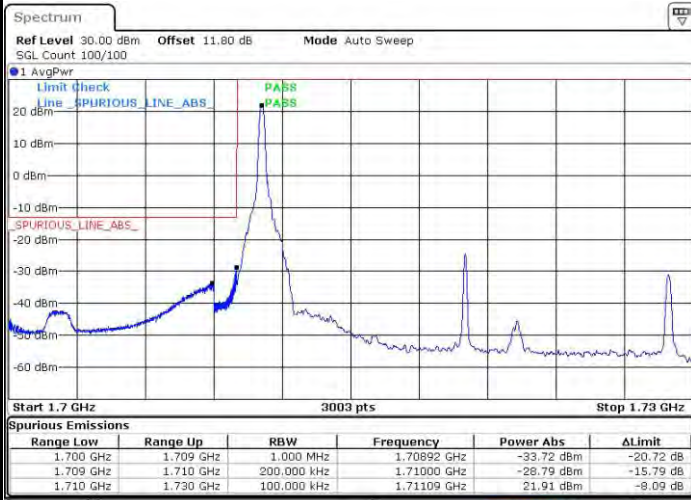


Date: 15.MAY.2015 15:51:38



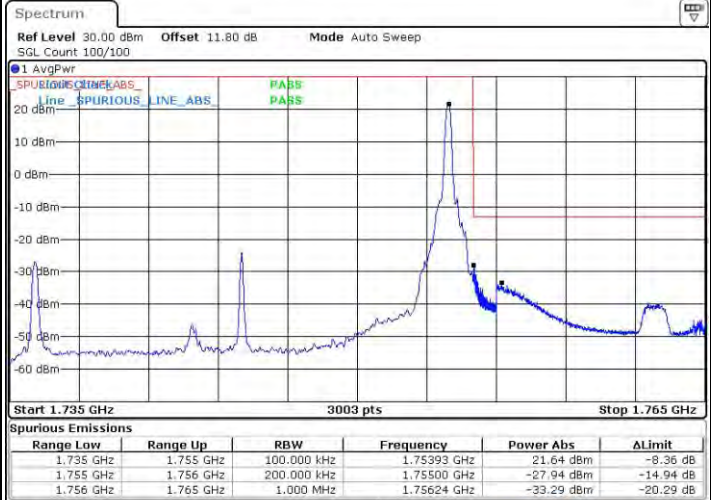
LTE Band 4 / 20MHz / QPSK

Lowest Band Edge / 1 RB



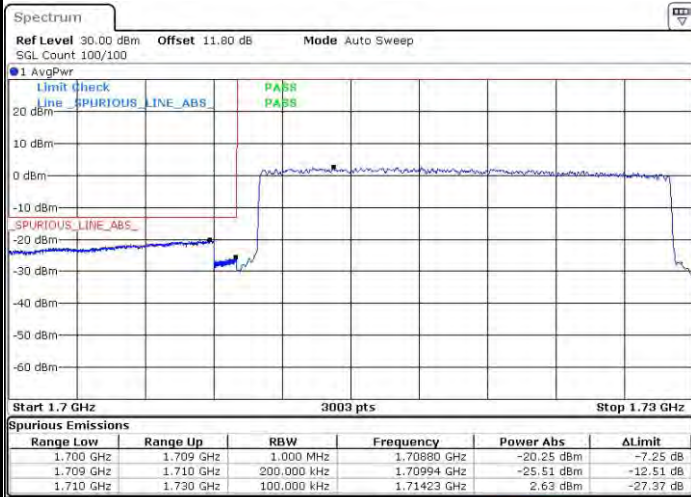
Date: 15.MAY.2015 15:56:00

Highest Band Edge / 1 RB



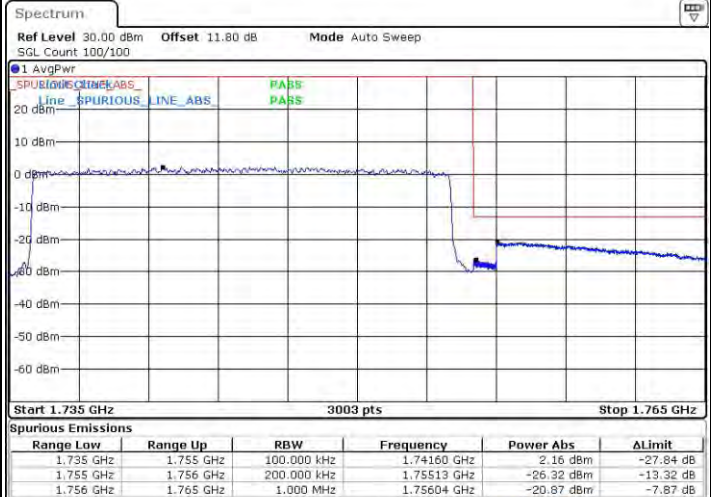
Date: 15.MAY.2015 18:06:55

Lowest Band Edge / Full RB



Date: 15.MAY.2015 15:58:20

Highest Band Edge / Full RB

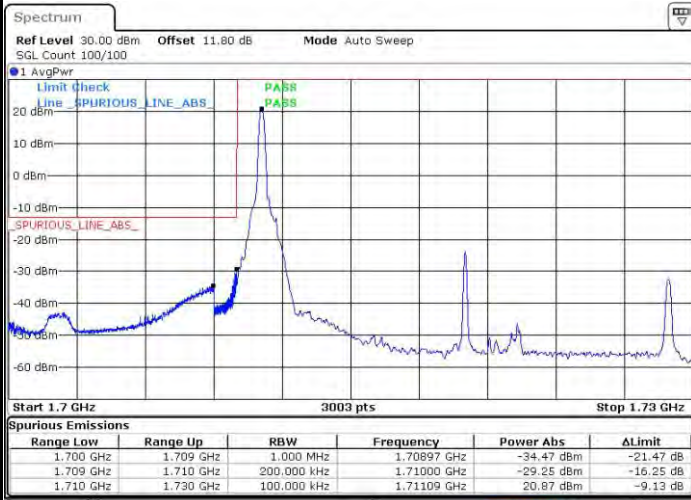


Date: 15.MAY.2015 18:09:15



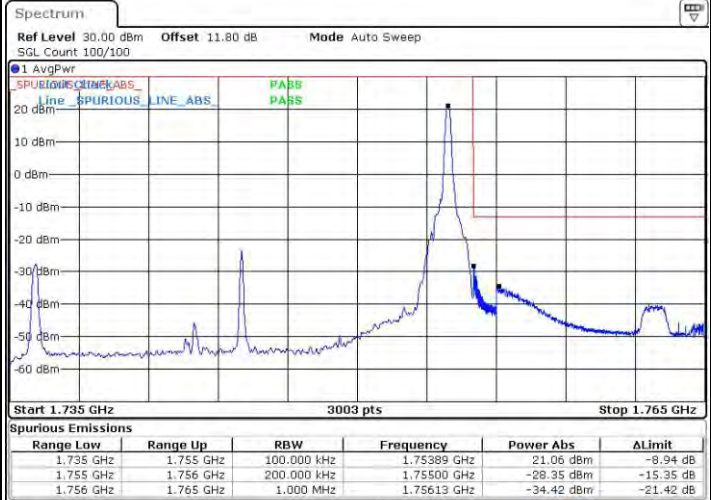
LTE Band 4 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



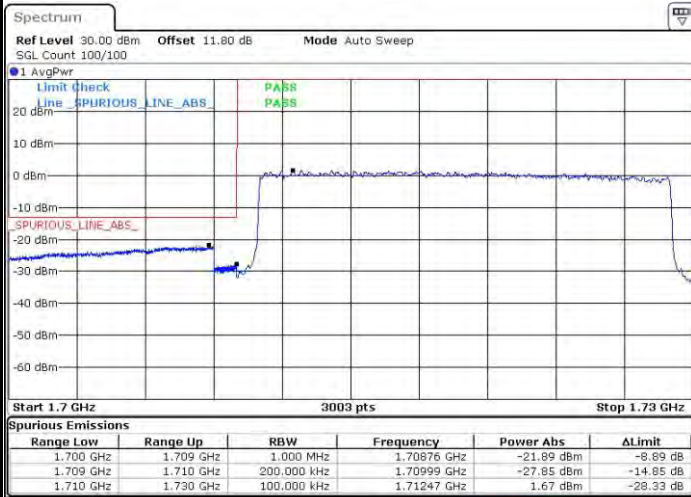
Date: 15.MAY.2015 15:57:10

Highest Band Edge / 1 RB



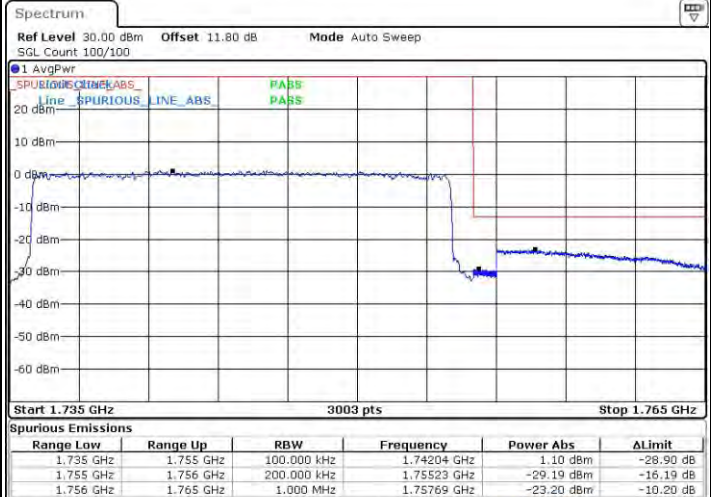
Date: 15.MAY.2015 16:08:05

Lowest Band Edge / Full RB



Date: 15.MAY.2015 15:59:30

Highest Band Edge / Full RB



Date: 15.MAY.2015 16:10:25



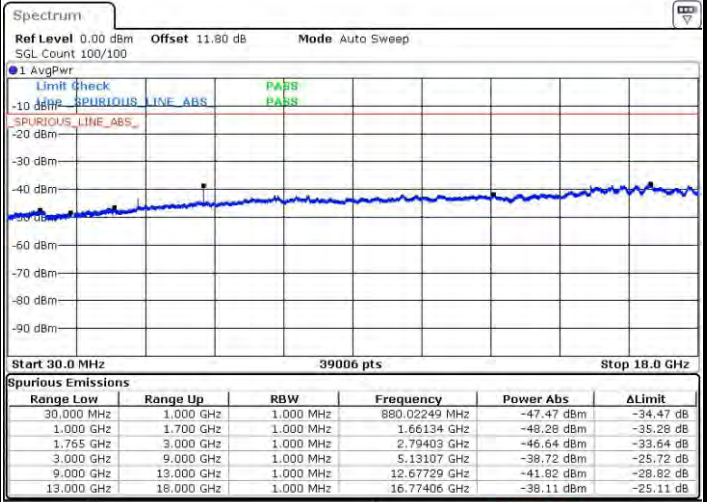
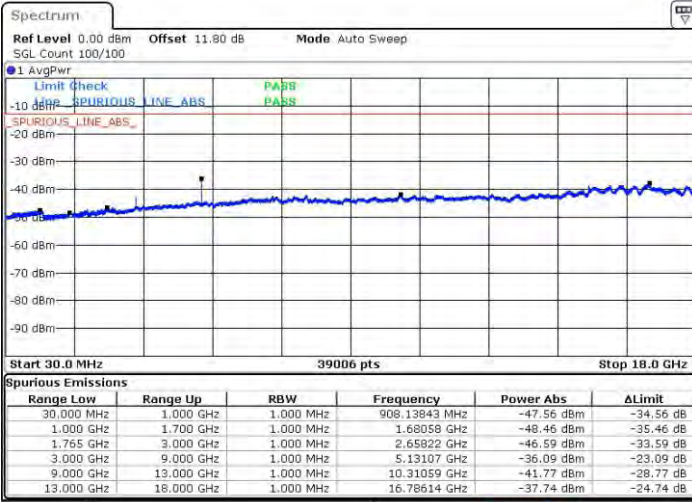
**Conducted Spurious Emission**



LTE Band 4 / 1.4MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

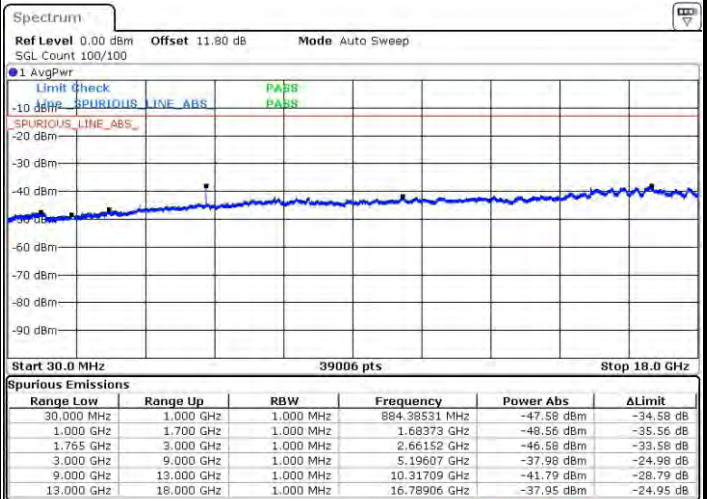
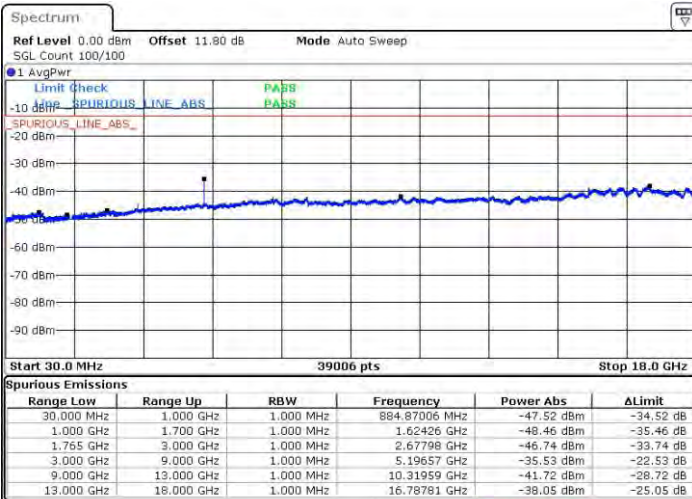


Date: 15.MAY.2015 16:47:35

Date: 15.MAY.2015 16:48:46

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 15.MAY.2015 16:50:44

Date: 15.MAY.2015 16:51:54

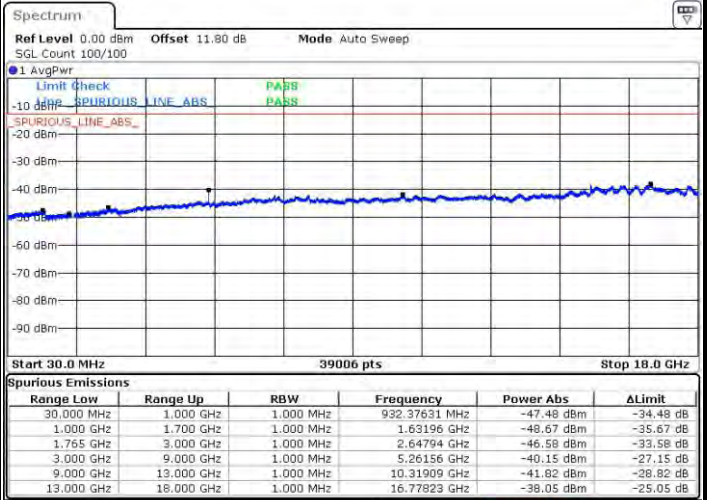
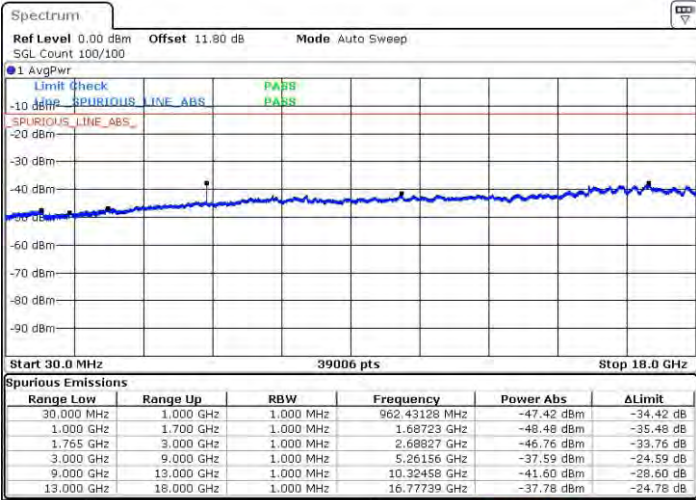




LTE Band 4 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



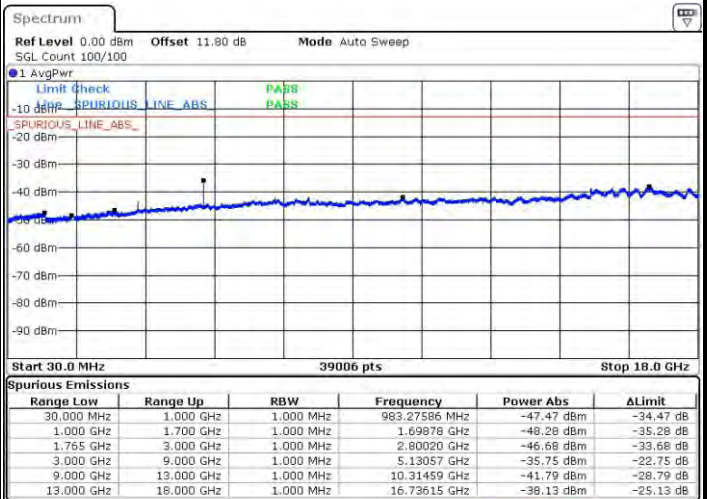
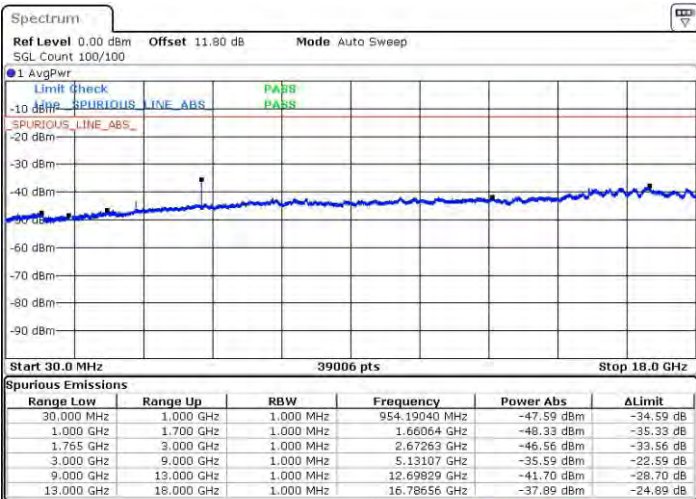
Date: 15.MAY.2015 16:58:32

Date: 15.MAY.2015 16:58:42

LTE Band 4 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 15.MAY.2015 14:37:18

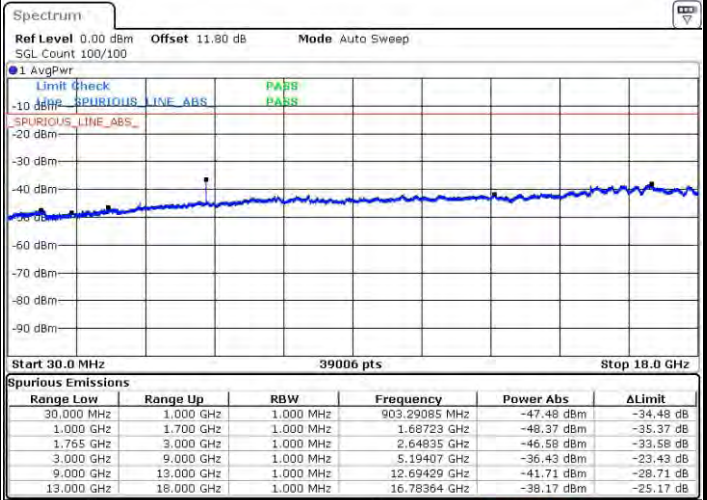
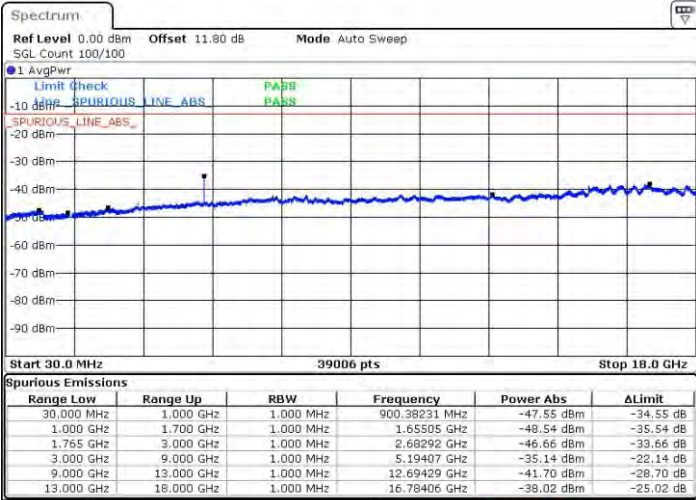
Date: 15.MAY.2015 14:38:28



LTE Band 4 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

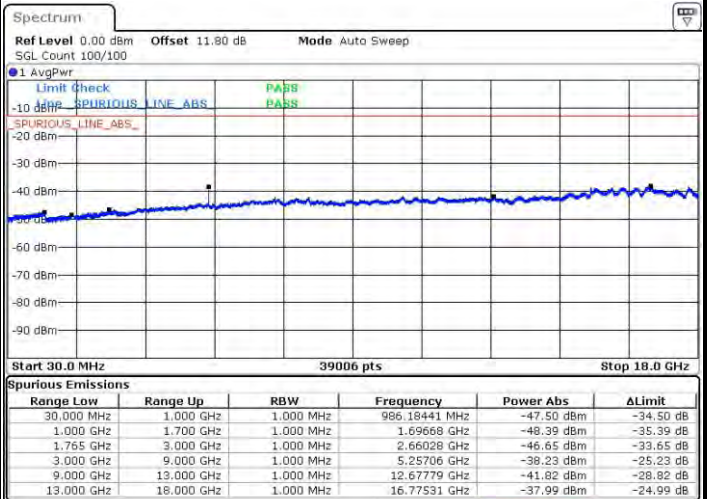
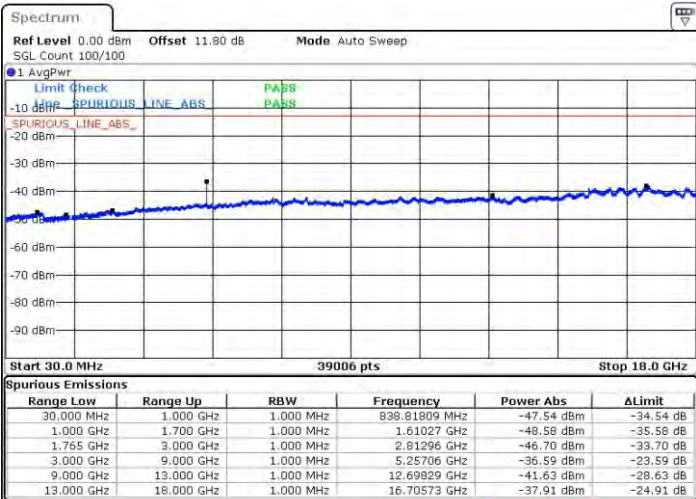


Date: 15.MAY.2015 14:40:26

Date: 15.MAY.2015 14:41:36

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 15.MAY.2015 14:48:14

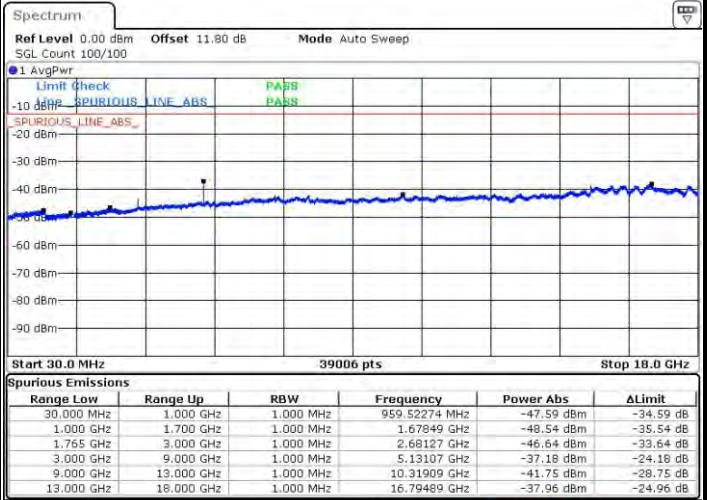
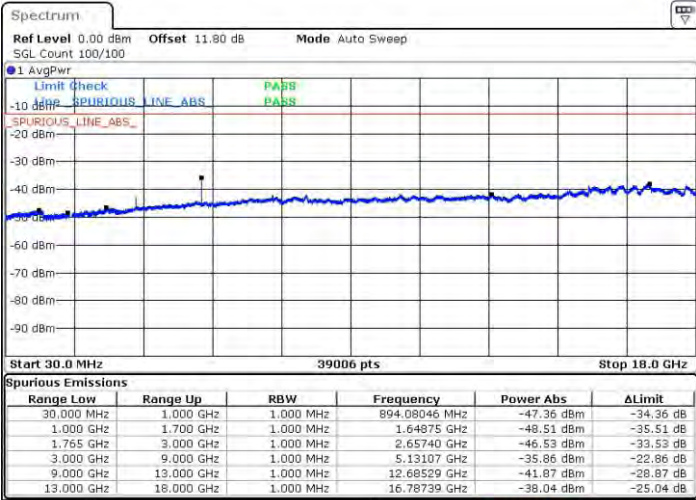
Date: 15.MAY.2015 14:49:25



LTE Band 4 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

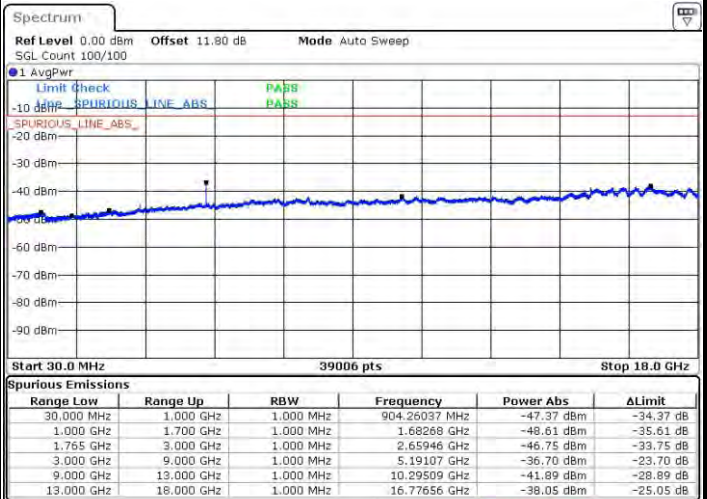
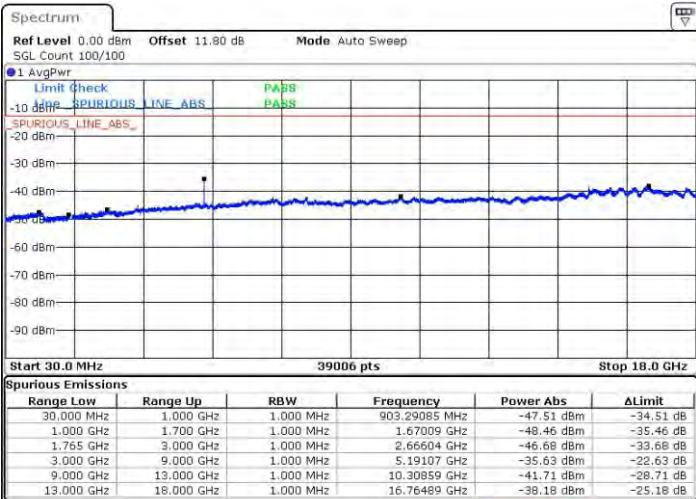


Date: 15.MAY.2015 14:56:01

Date: 15.MAY.2015 14:57:12

Middle Channel / QPSK

Middle Channel / 16QAM



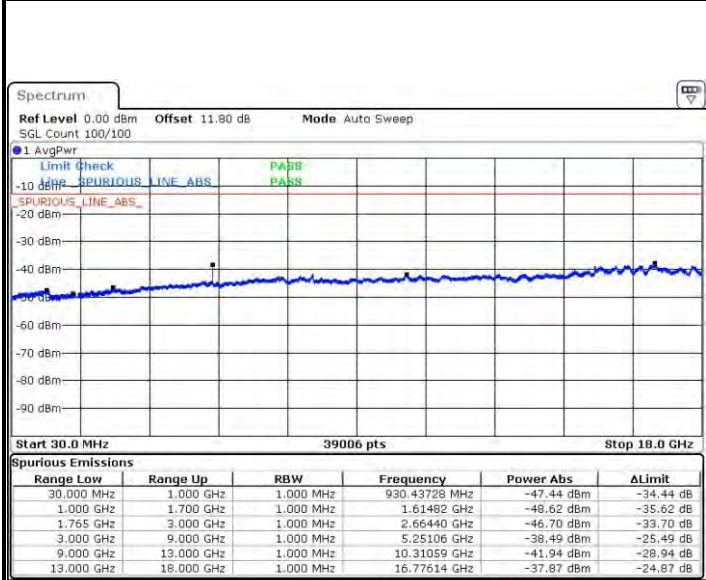
Date: 15.MAY.2015 14:59:09

Date: 15.MAY.2015 15:00:20



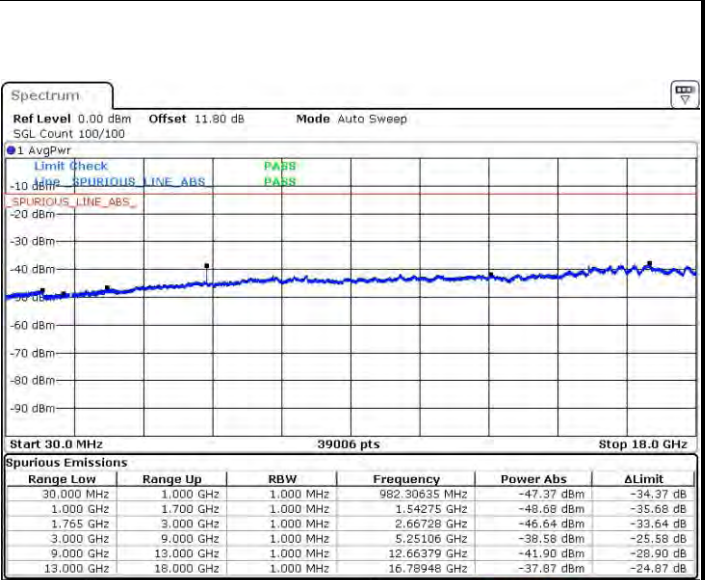
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 15.MAY.2015 15:06:57

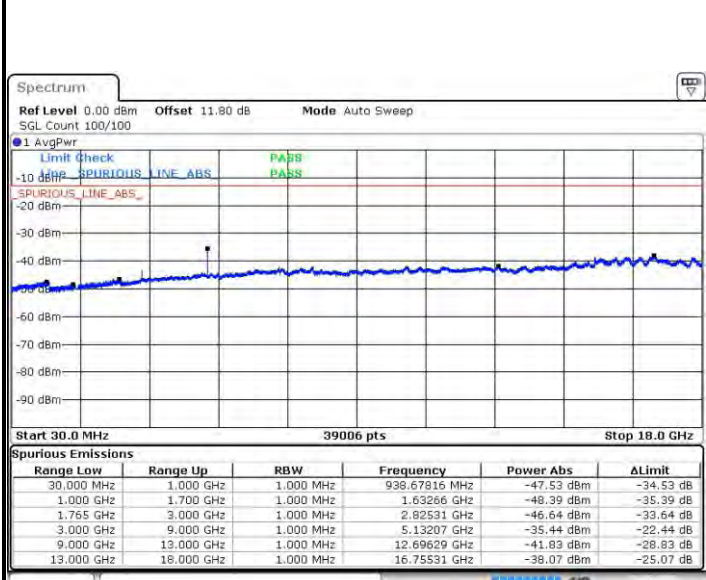
Highest Channel / 16QAM



Date: 15.MAY.2015 15:08:08

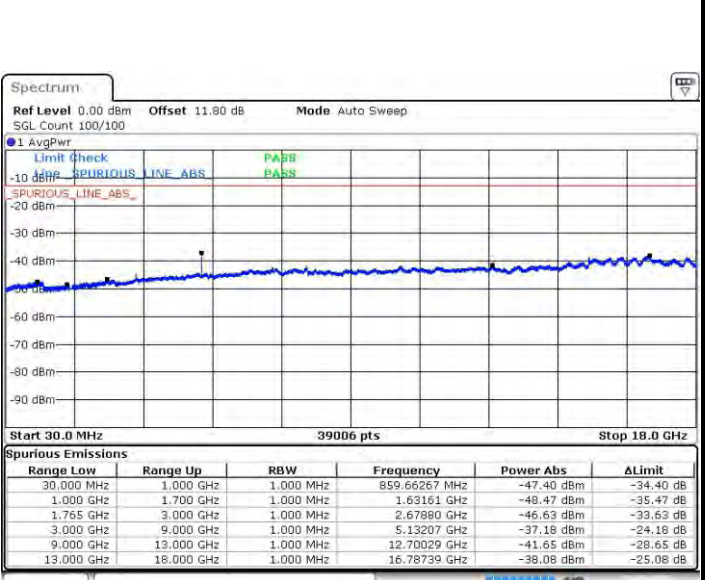
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 15.MAY.2015 15:23:02

Lowest Channel / 16QAM



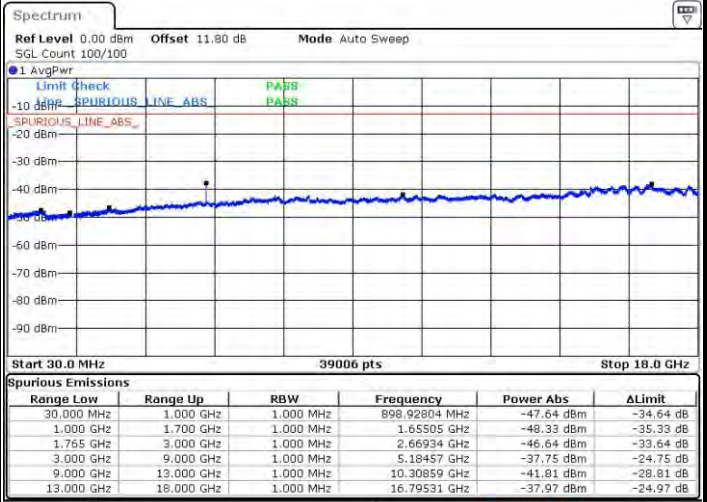
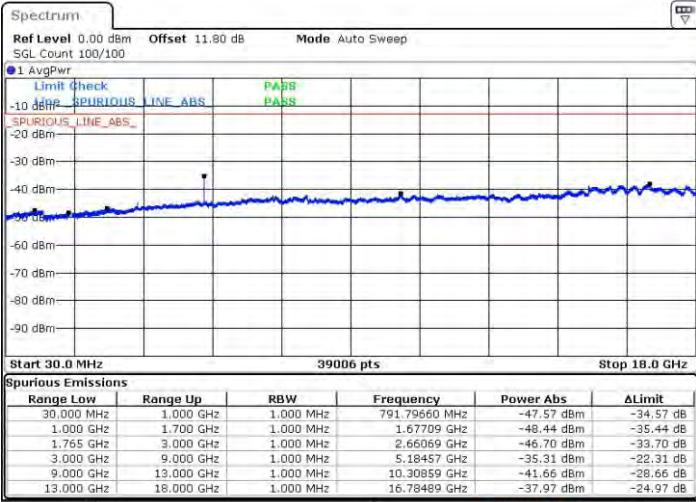
Date: 15.MAY.2015 15:24:12



LTE Band 4 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

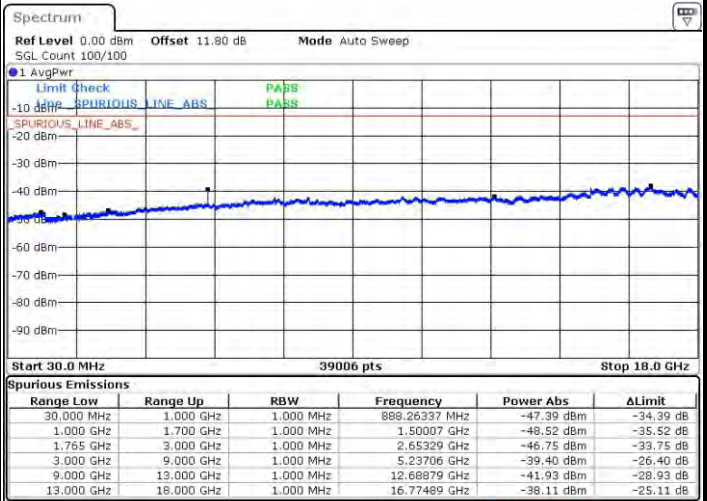
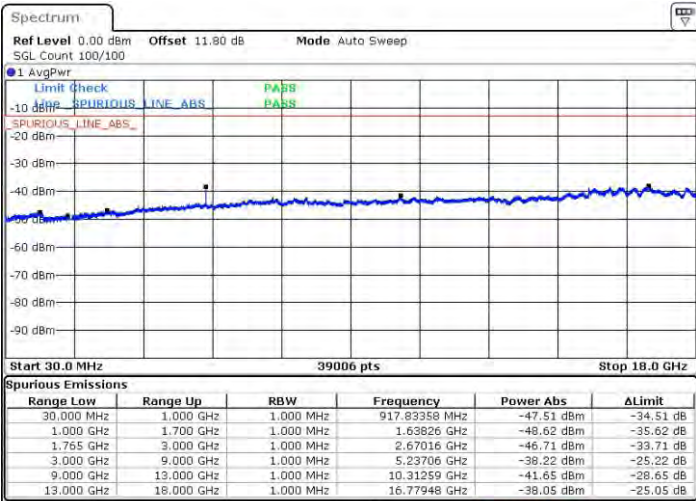


Date: 15.MAY.2015 15:26:10

Date: 15.MAY.2015 15:27:20

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 15.MAY.2015 15:33:58

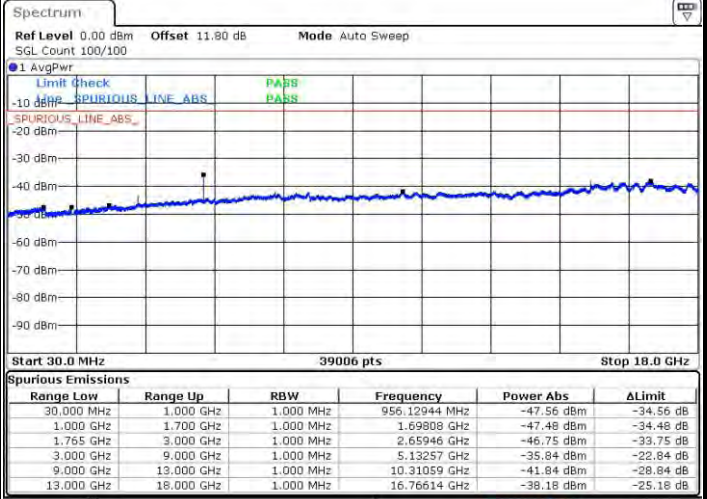
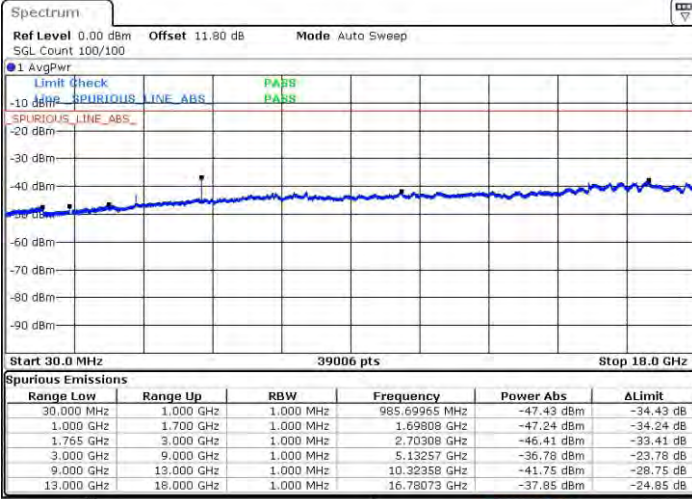
Date: 15.MAY.2015 15:35:09



LTE Band 4 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

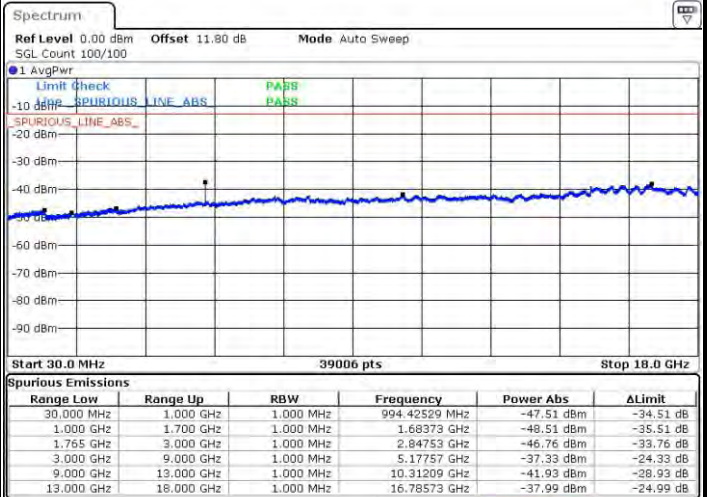
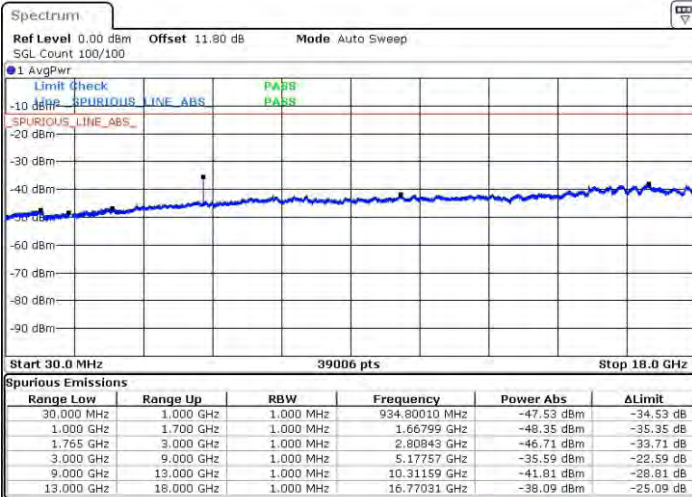


Date: 15.MAY.2015 15:41:51

Date: 15.MAY.2015 15:43:01

Middle Channel / QPSK

Middle Channel / 16QAM



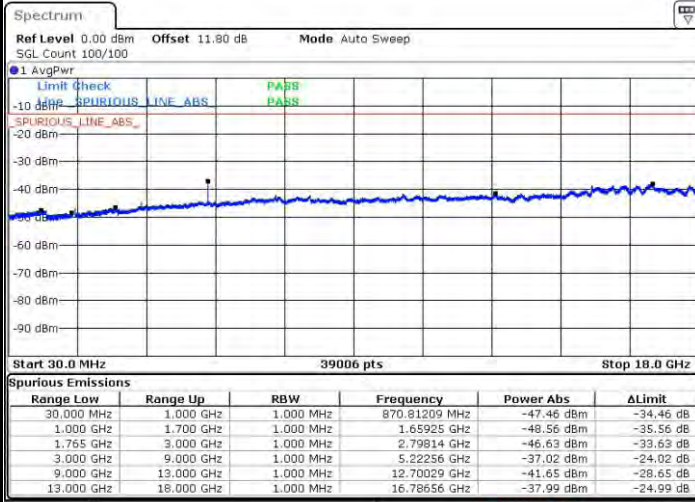
Date: 15.MAY.2015 15:45:00

Date: 15.MAY.2015 15:46:11



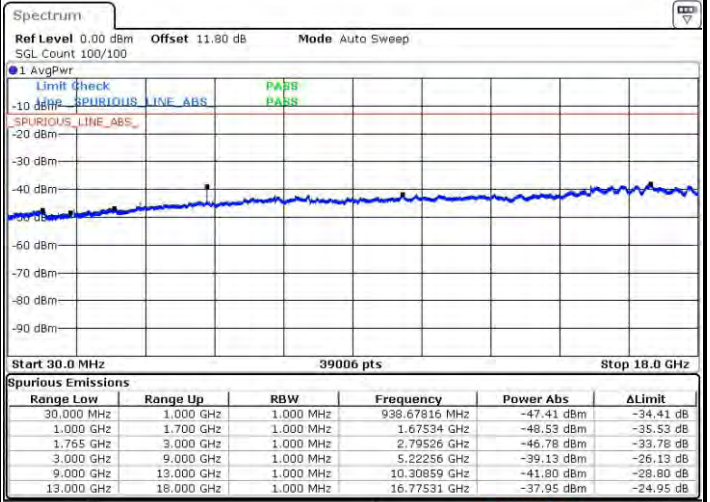
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 15.MAY.2015 15:52:49

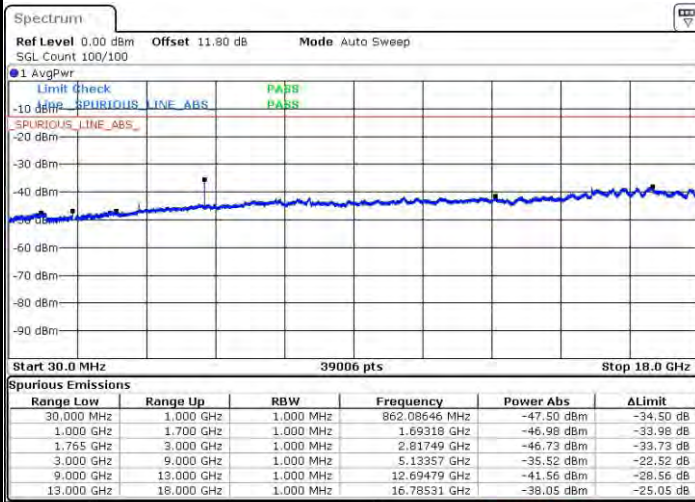
Highest Channel / 16QAM



Date: 15.MAY.2015 15:53:59

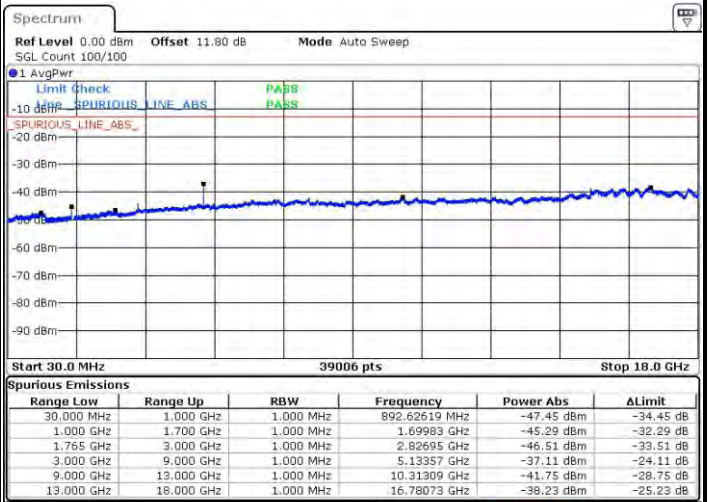
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 15.MAY.2015 16:00:41

Lowest Channel / 16QAM



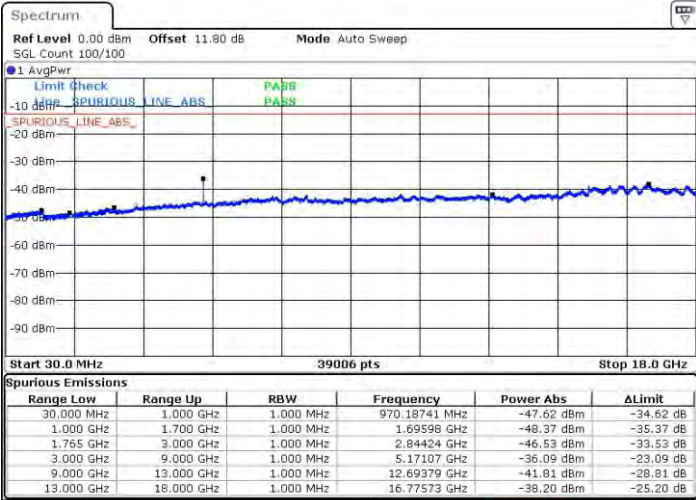
Date: 15.MAY.2015 16:01:51



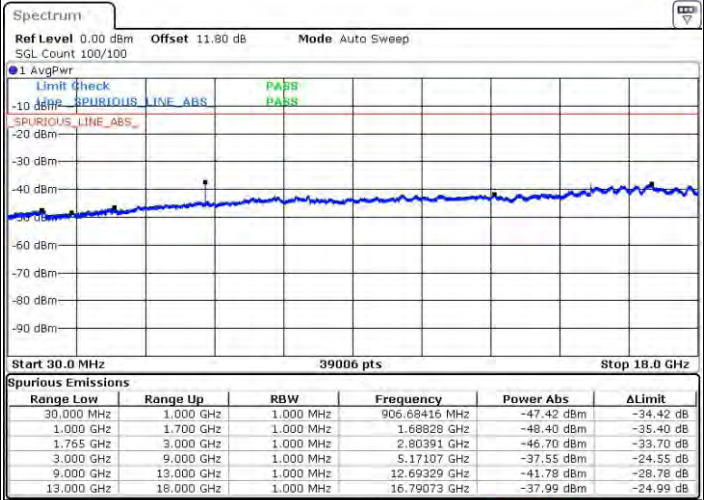
LTE Band 4 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



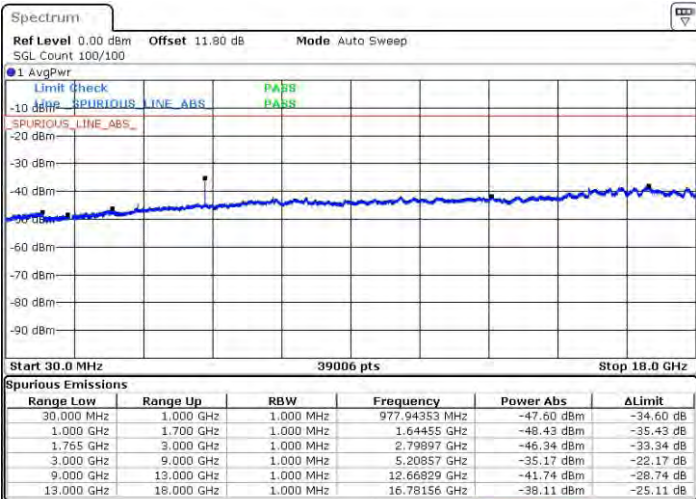
Date: 15.MAY.2015 16:03:48



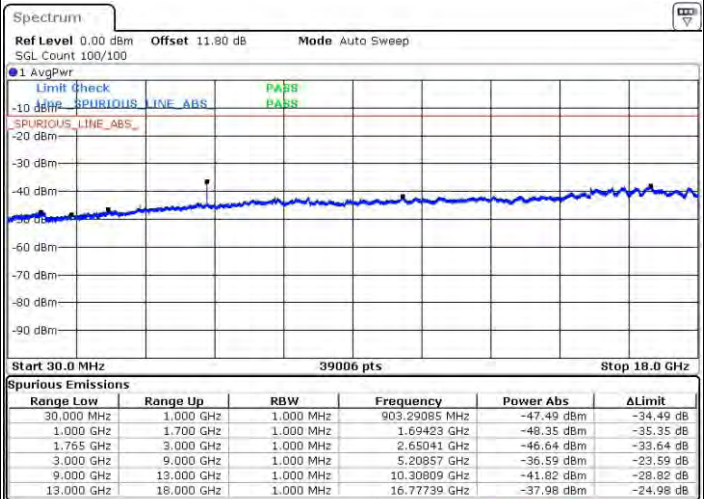
Date: 15.MAY.2015 16:04:59

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 15.MAY.2015 16:11:35



Date: 15.MAY.2015 16:12:46





Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0046	
30	Normal Voltage	0.0053	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0046	
0	Normal Voltage	0.0002	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0046	
20	Maximum Voltage	0.0054	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0001	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 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.