



LTE Band 7

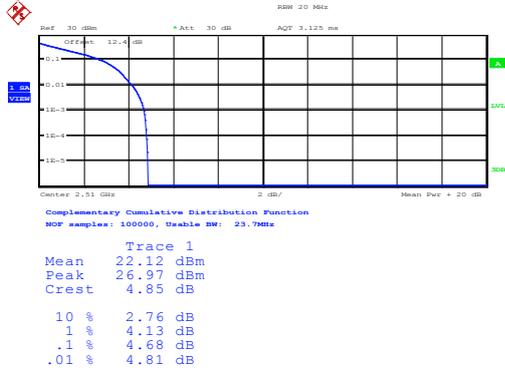
Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.68	5.48	5.29	6.31	PASS
Middle CH	5.06	5.64	5.77	6.51	
Highest CH	4.65	5.42	5.35	6.41	



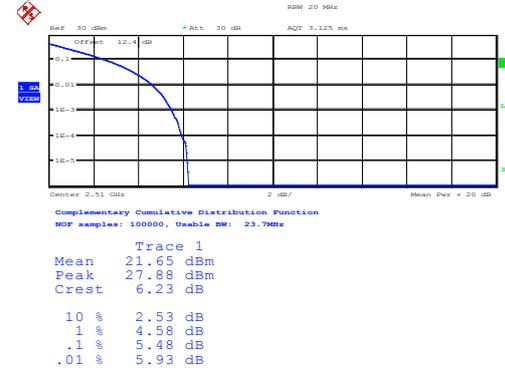
LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



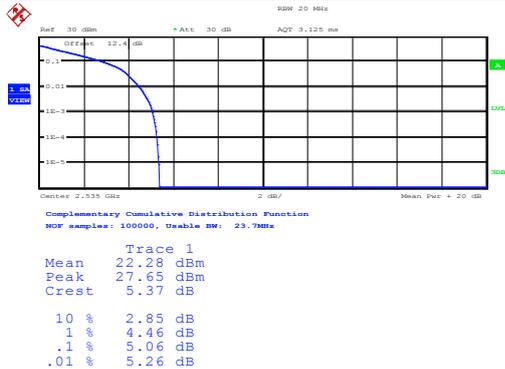
Date: 29.JAN.2015 00:53:25

Lowest Channel / Full RB



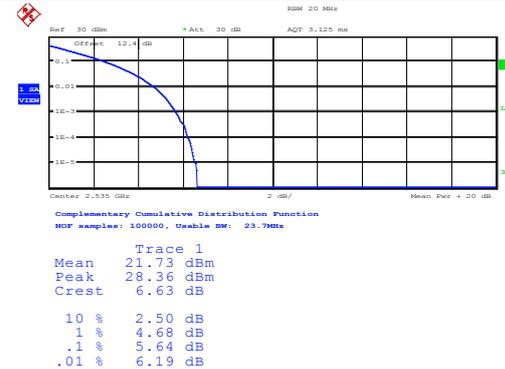
Date: 29.JAN.2015 00:53:36

Middle Channel / 1RB



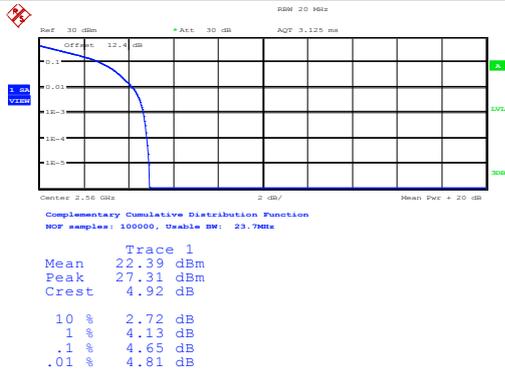
Date: 29.JAN.2015 00:53:48

Middle Channel / Full RB



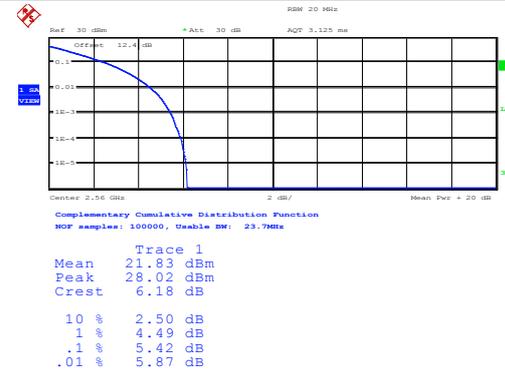
Date: 29.JAN.2015 00:54:02

Highest Channel / 1RB



Date: 29.JAN.2015 00:54:22

Highest Channel / Full RB

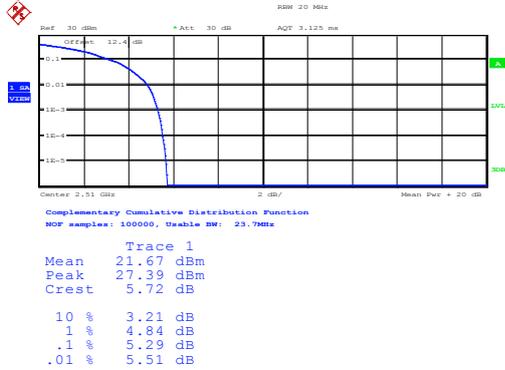


Date: 29.JAN.2015 00:54:40



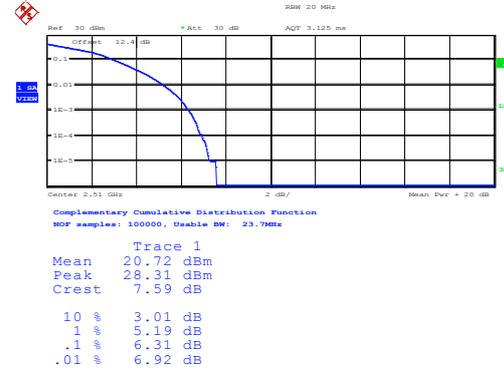
LTE Band 7 / 20MHz / 16QAM

Lowest Channel / 1RB



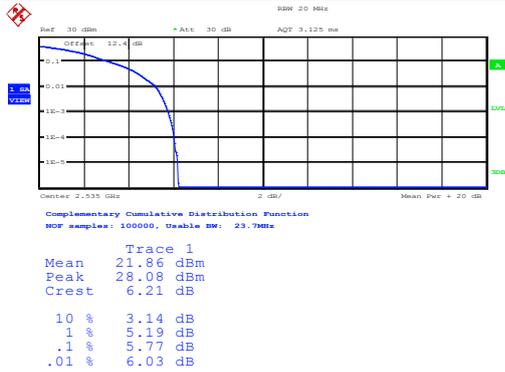
Date: 29.JAN.2015 00:51:28

Lowest Channel / Full RB



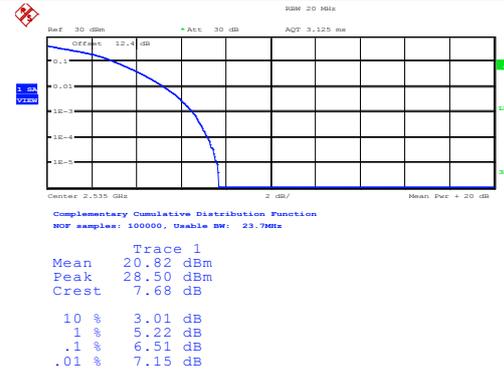
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Middle Channel / 1RB



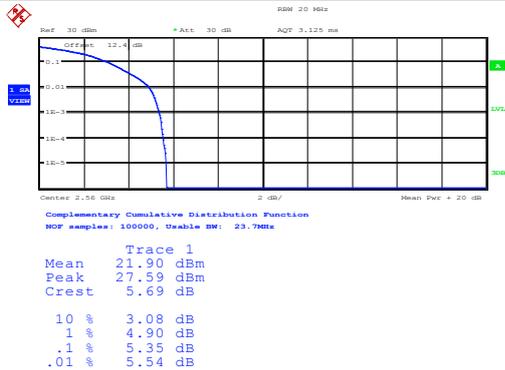
Date: 29.JAN.2015 00:51:52

Middle Channel / Full RB



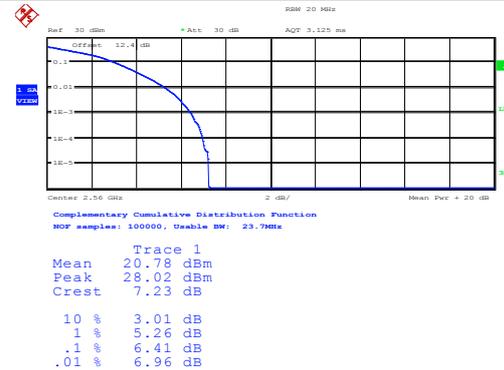
Date: 29.JAN.2015 00:52:11

Highest Channel / 1RB



Date: 29.JAN.2015 00:52:40

Highest Channel / Full RB



Date: 29.JAN.2015 00:53:02



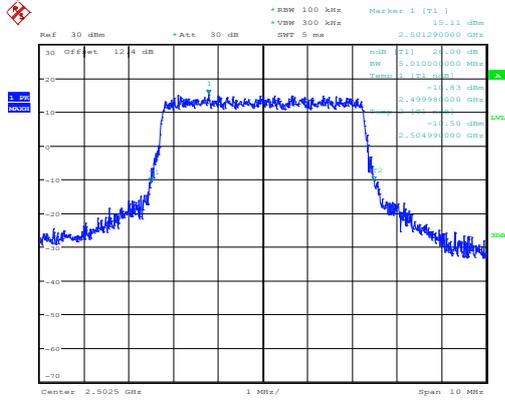
26dB Bandwidth

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	-	-	-	-	5.01	4.98	10.36	10.28	15.33	14.85	21.52	21.48
Middle CH	-	-	-	-	5.01	4.9	10.4	10.32	15	15.3	21.52	21.56
Highest CH	-	-	-	-	4.93	5	10.28	10.2	15.21	15.33	21.56	21.52

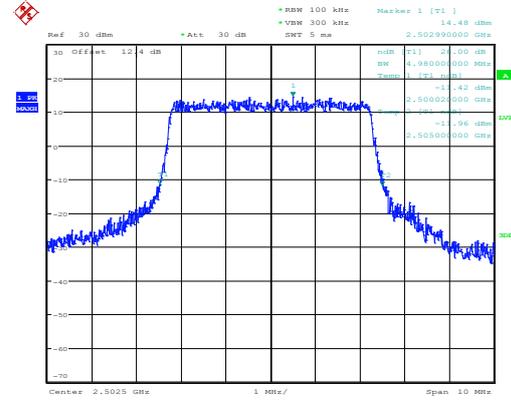


LTE Band 7

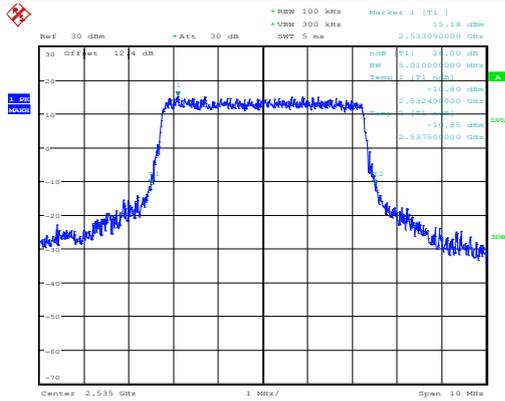
Lowest Channel / 5MHz / QPSK



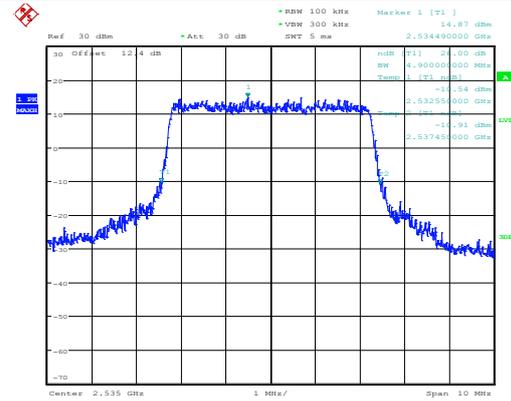
Lowest Channel / 5MHz / 16QAM



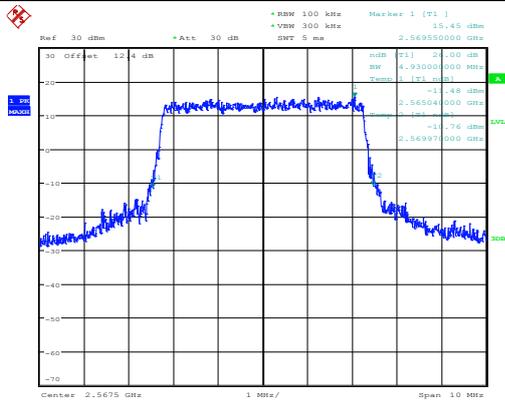
Middle Channel / 5MHz / QPSK



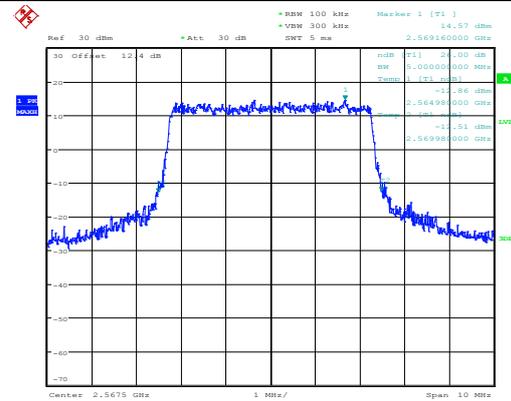
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



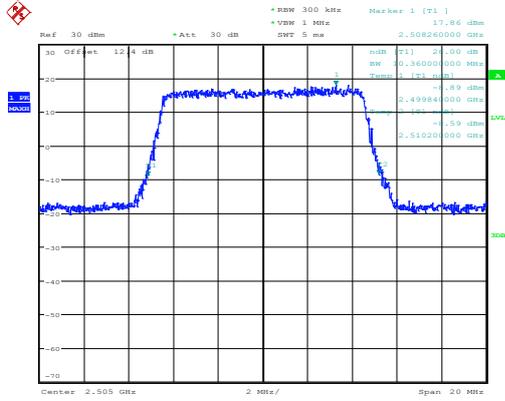
Highest Channel / 5MHz / 16QAM





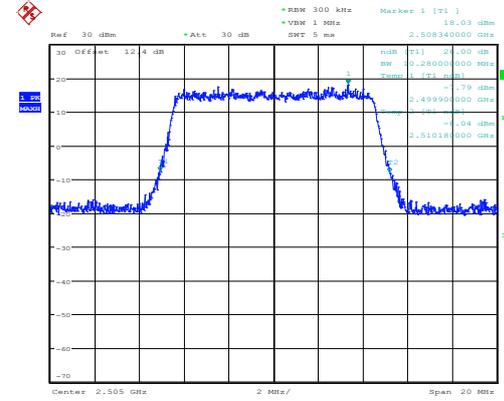
LTE Band 7

Lowest Channel / 10MHz / QPSK



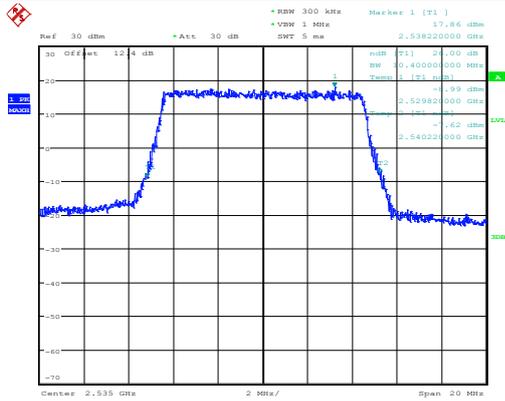
Date: 28.JAN.2015 23:55:50

Lowest Channel / 10MHz / 16QAM



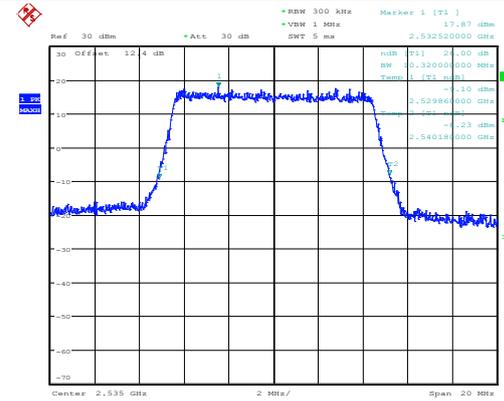
Date: 28.JAN.2015 23:56:04

Middle Channel / 10MHz / QPSK



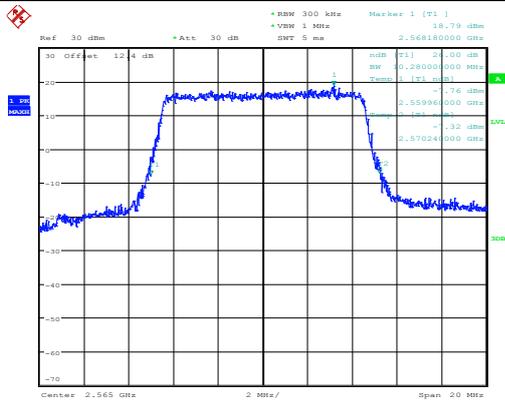
Date: 29.JAN.2015 00:03:42

Middle Channel / 10MHz / 16QAM



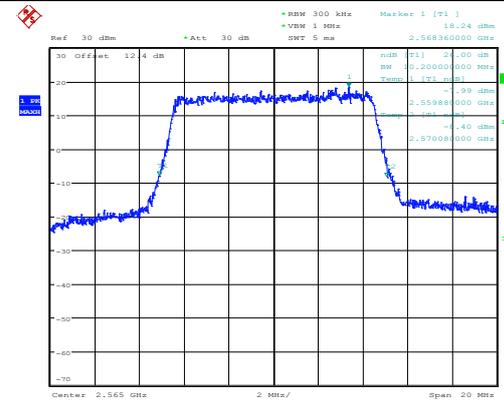
Date: 29.JAN.2015 00:03:56

Highest Channel / 10MHz / QPSK



Date: 29.JAN.2015 00:06:53

Highest Channel / 10MHz / 16QAM

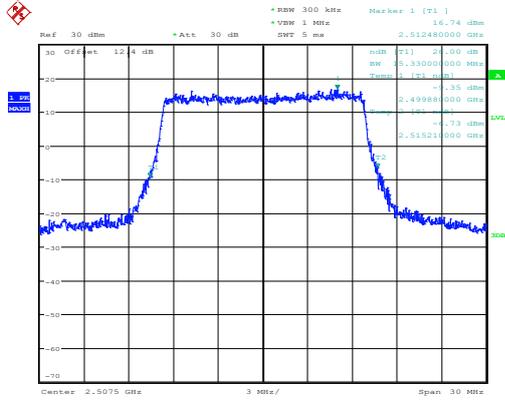


Date: 29.JAN.2015 00:07:05



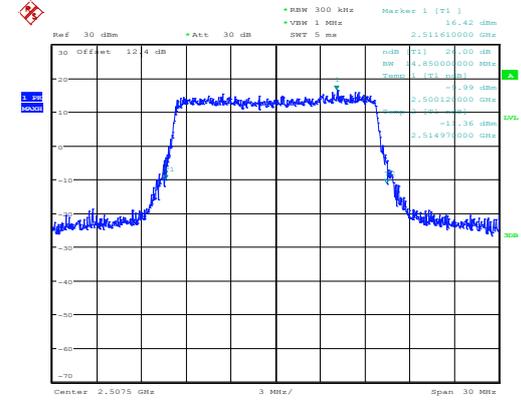
LTE Band 7

Lowest Channel / 15MHz / QPSK



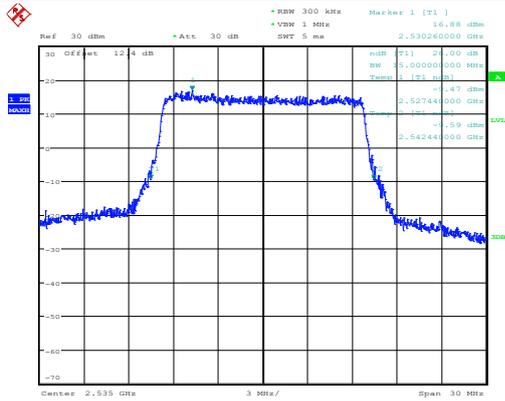
Date: 29.JAN.2015 00:14:37

Lowest Channel / 15MHz / 16QAM



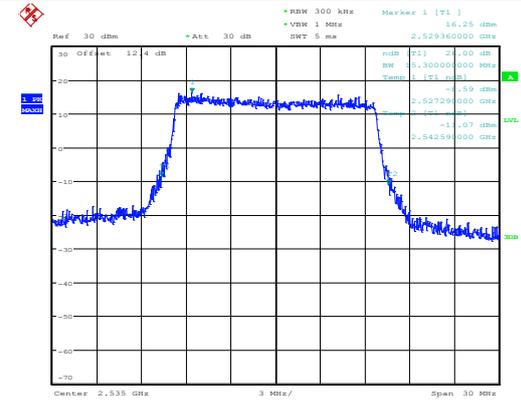
Date: 29.JAN.2015 00:14:50

Middle Channel / 15MHz / QPSK



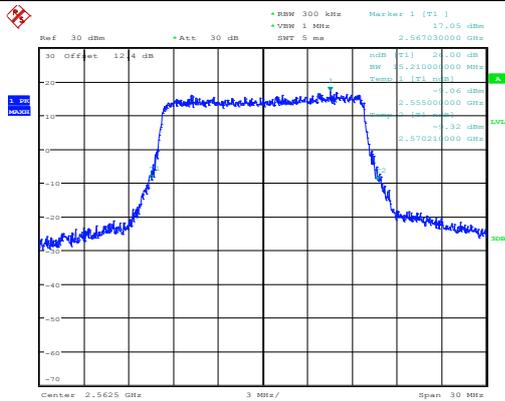
Date: 29.JAN.2015 00:22:21

Middle Channel / 15MHz / 16QAM



Date: 29.JAN.2015 00:22:34

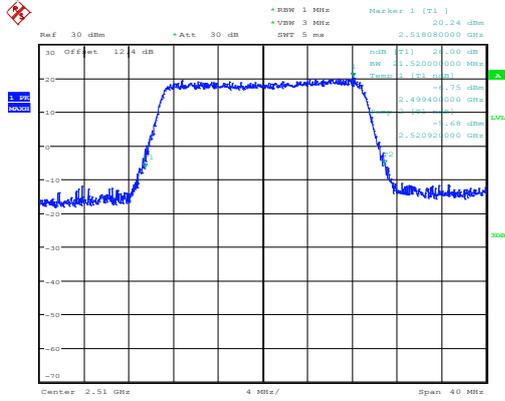
Highest Channel / 15MHz / QPSK





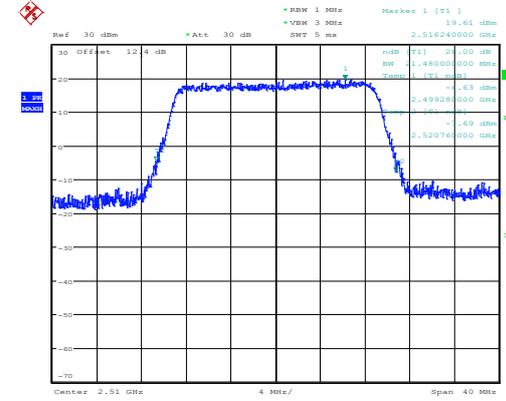
LTE Band 7

Lowest Channel / 20MHz / QPSK



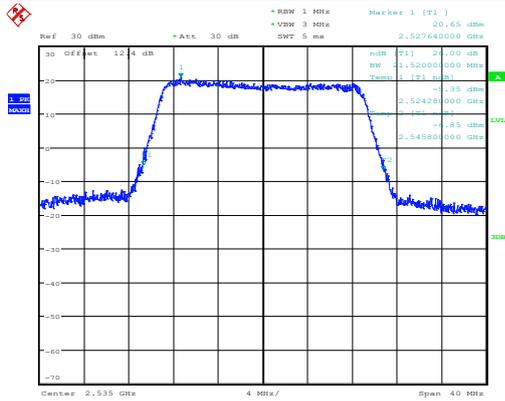
Date: 29 JAN 2015 00:33:12

Lowest Channel / 20MHz / 16QAM



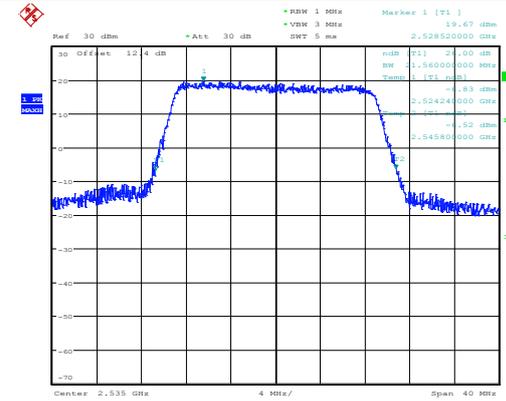
Date: 29 JAN 2015 00:33:25

Middle Channel / 20MHz / QPSK



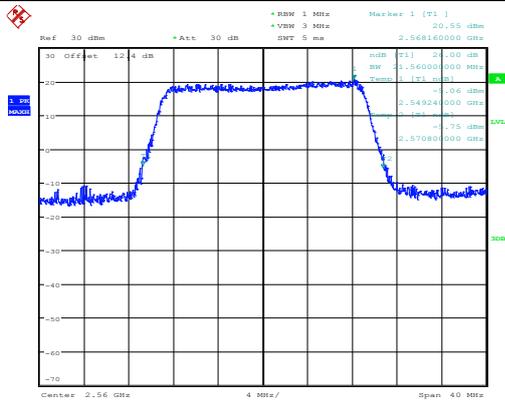
Date: 29 JAN 2015 00:40:56

Middle Channel / 20MHz / 16QAM



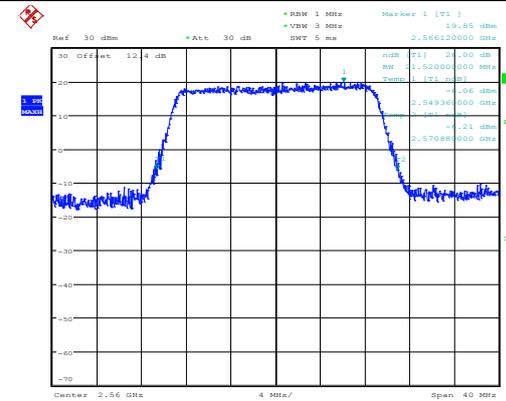
Date: 29 JAN 2015 00:41:09

Highest Channel / 20MHz / QPSK



Date: 29 JAN 2015 00:44:03

Highest Channel / 20MHz / 16QAM



Date: 29 JAN 2015 00:44:16



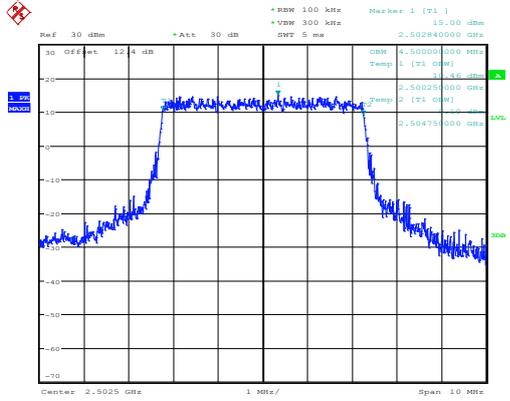
Occupied Bandwidth

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	9.1	9.08	13.53	13.53	18.64	18.64
Middle CH	-	-	-	-	4.5	4.49	9.1	9.08	13.5	13.53	18.6	18.6
Highest CH	-	-	-	-	4.51	4.5	9.12	9.08	13.47	13.5	18.64	18.6



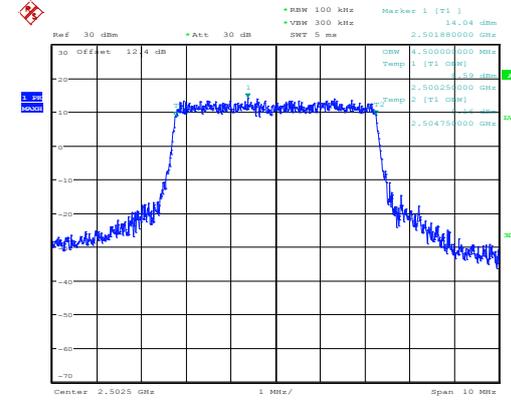
LTE Band 7

Lowest Channel / 5MHz / QPSK



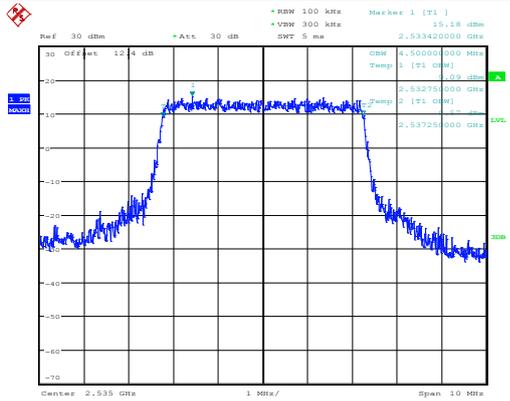
Date: 28.JAN.2015 23:36:36

Lowest Channel / 5MHz / 16QAM



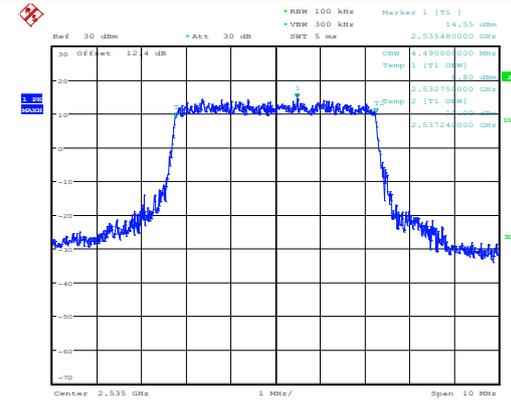
Date: 28.JAN.2015 23:36:49

Middle Channel / 5MHz / QPSK



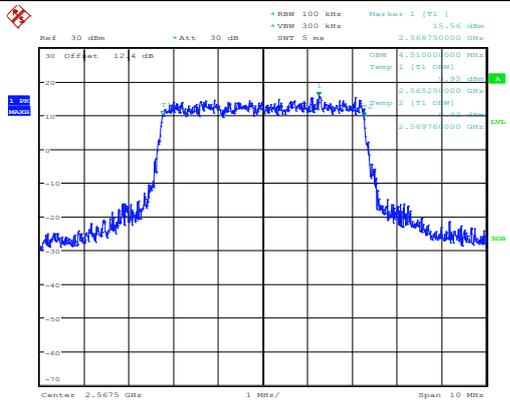
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Middle Channel / 5MHz / 16QAM



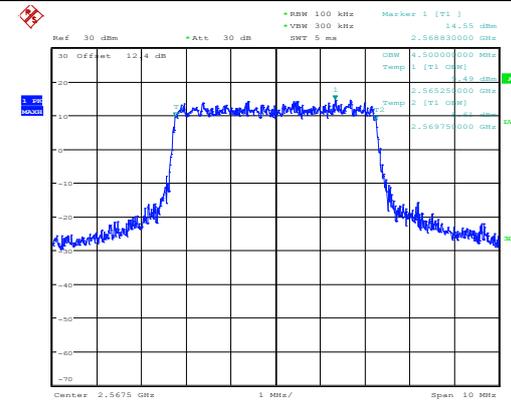
Date: 28.JAN.2015 23:44:33

Highest Channel / 5MHz / QPSK



Date: 28.JAN.2015 23:47:29

Highest Channel / 5MHz / 16QAM

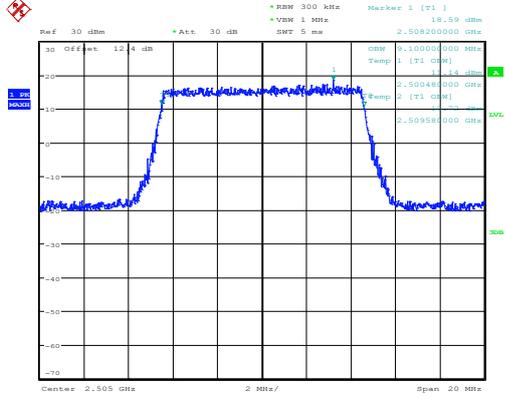


Date: 28.JAN.2015 23:47:40

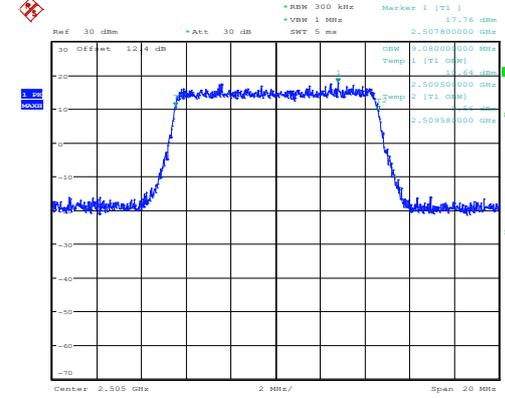


LTE Band 7

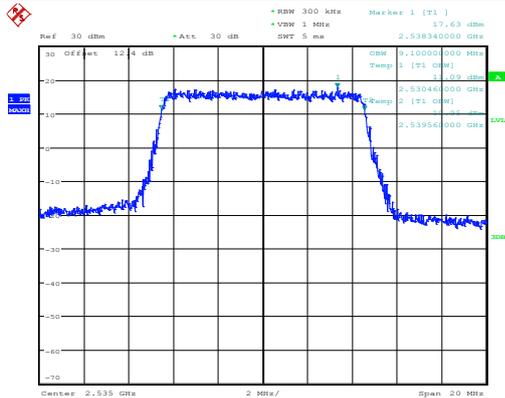
Lowest Channel / 10MHz / QPSK



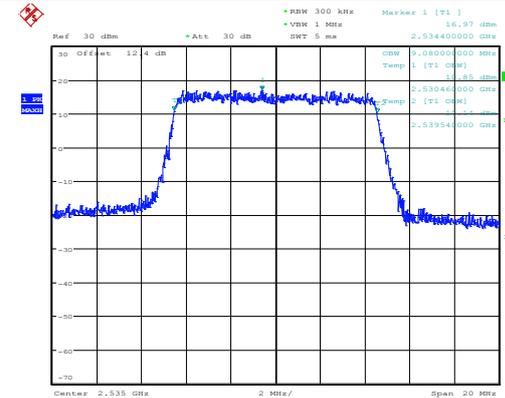
Lowest Channel / 10MHz / 16QAM



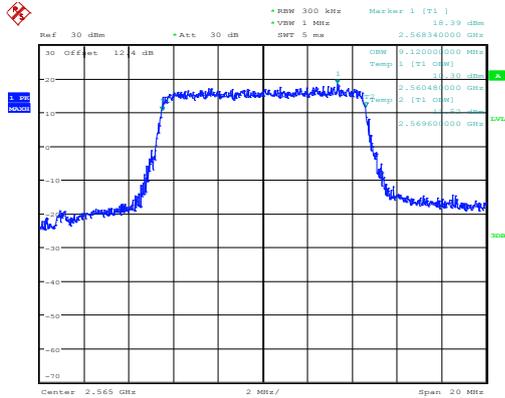
Middle Channel / 10MHz / QPSK



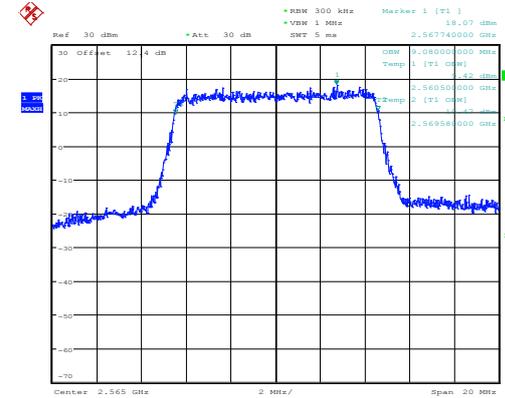
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



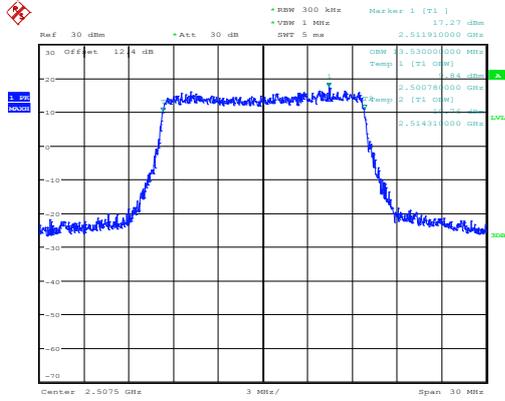
Highest Channel / 10MHz / 16QAM





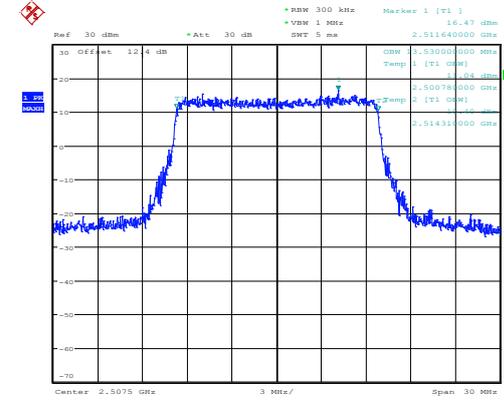
LTE Band 7

Lowest Channel / 15MHz / QPSK



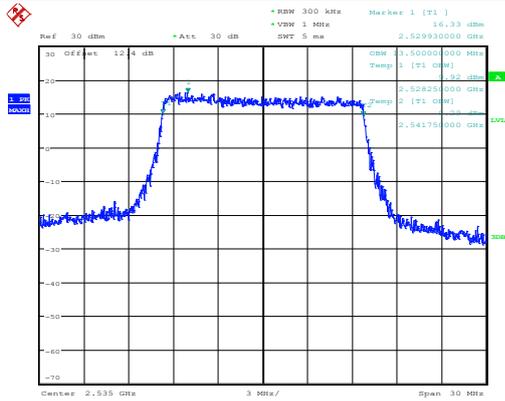
Date: 29.JAN.2015 00:14:13

Lowest Channel / 15MHz / 16QAM



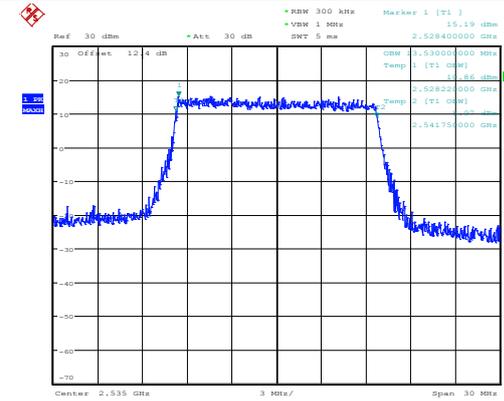
Date: 29.JAN.2015 00:14:24

Middle Channel / 15MHz / QPSK



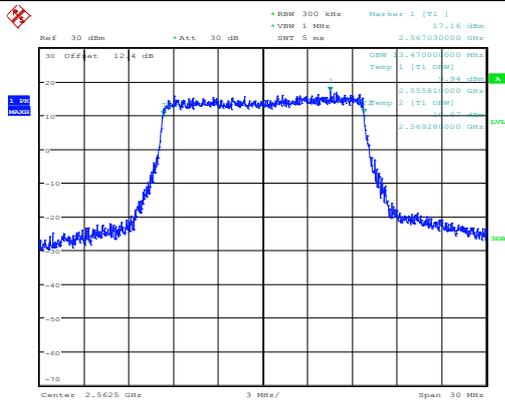
Date: 29.JAN.2015 00:21:58

Middle Channel / 15MHz / 16QAM



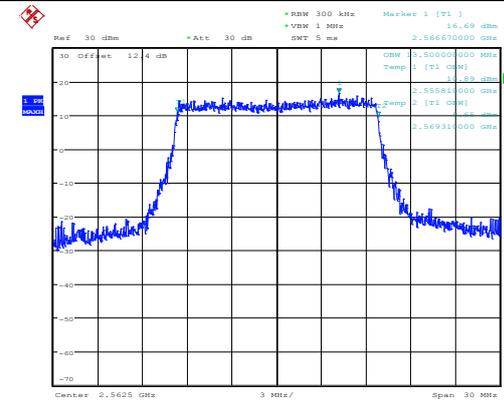
Date: 29.JAN.2015 00:22:09

Highest Channel / 15MHz / QPSK



Date: 29.JAN.2015 00:25:04

Highest Channel / 15MHz / 16QAM

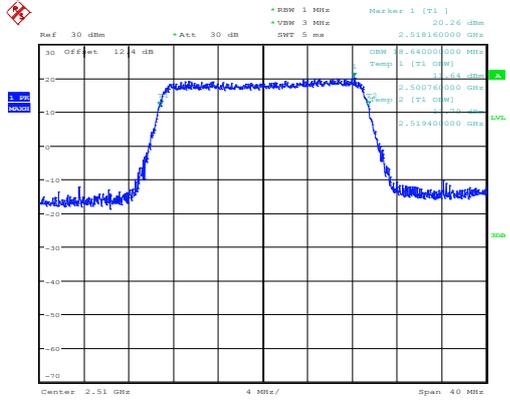


Date: 29.JAN.2015 00:25:15



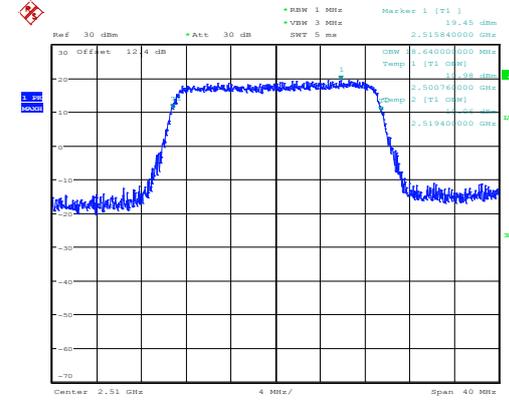
LTE Band 7

Lowest Channel / 20MHz / QPSK



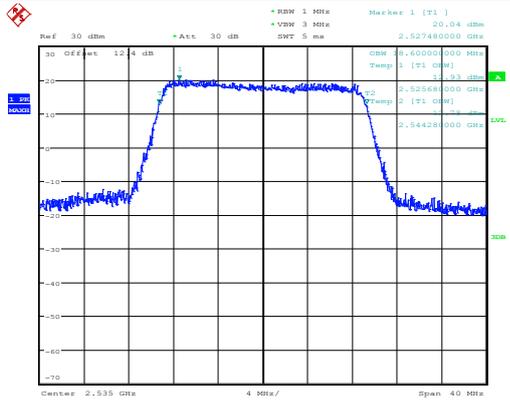
Date: 29.JAN.2015 00:32:49

Lowest Channel / 20MHz / 16QAM



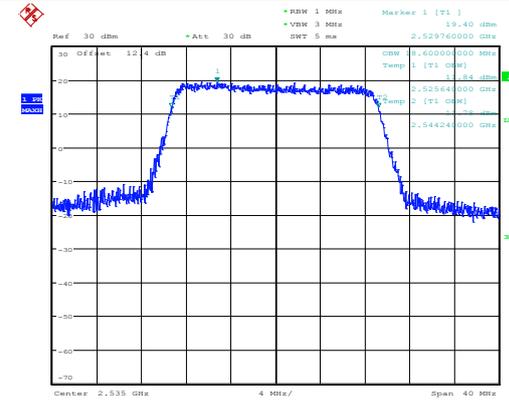
Date: 29.JAN.2015 00:33:00

Middle Channel / 20MHz / QPSK



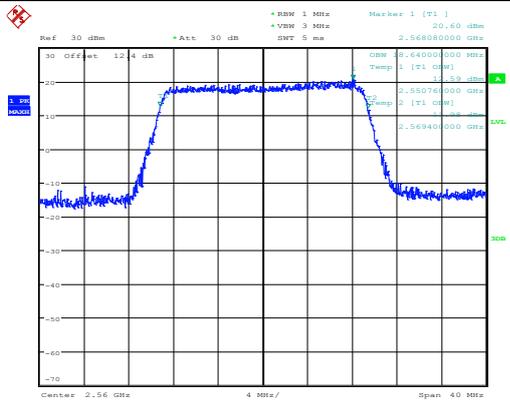
Date: 29.JAN.2015 00:40:33

Middle Channel / 20MHz / 16QAM



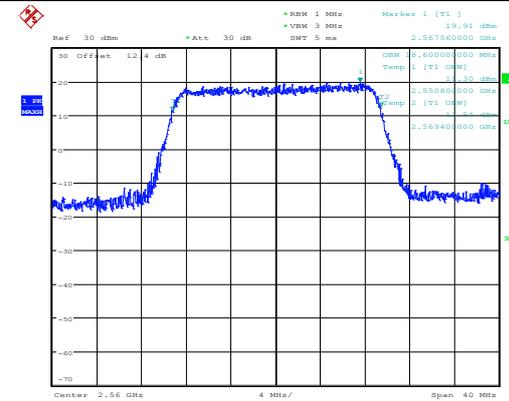
Date: 29.JAN.2015 00:40:44

Highest Channel / 20MHz / QPSK



Date: 29.JAN.2015 00:43:39

Highest Channel / 20MHz / 16QAM



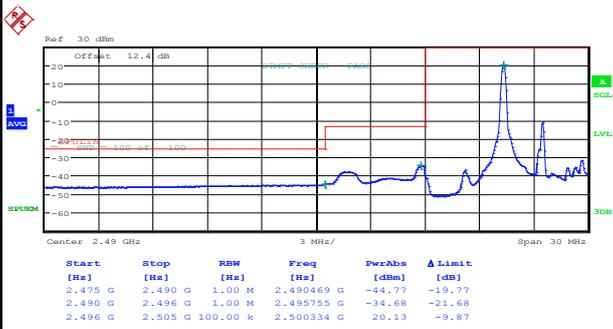
Date: 29.JAN.2015 00:43:50



Conducted Band Edge

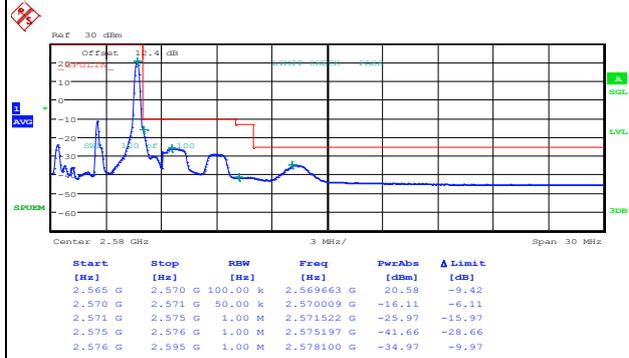
LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB



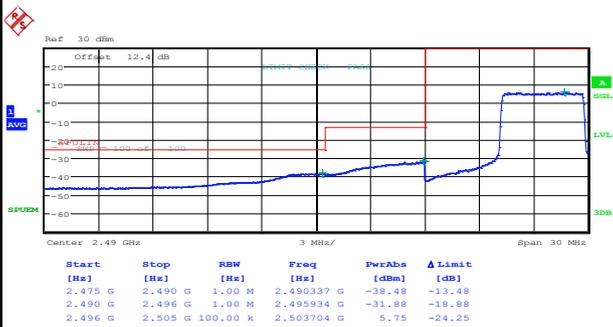
Date: 29.JAN.2015 20:23:16

Highest Band Edge / 1 RB



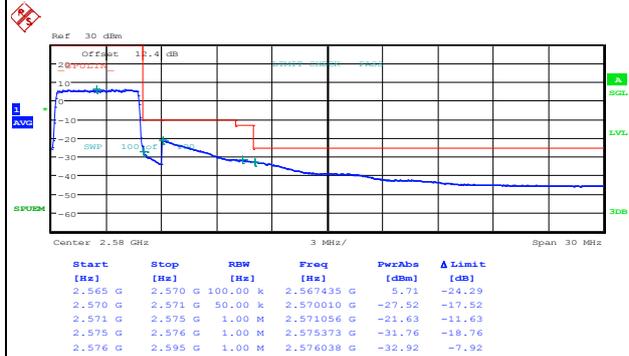
Date: 29.JAN.2015 20:27:59

Lowest Band Edge / Full RB



Date: 29.JAN.2015 20:25:38

Highest Band Edge / Full RB

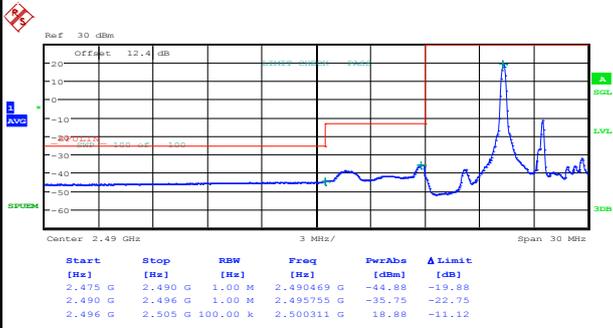


Date: 29.JAN.2015 20:30:20



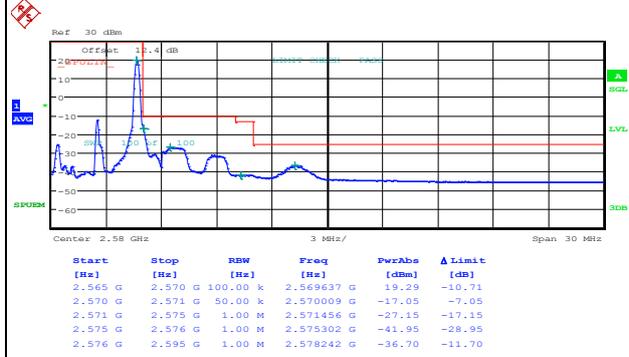
LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 29.JAN.2015 20:24:27

Highest Band Edge / 1 RB



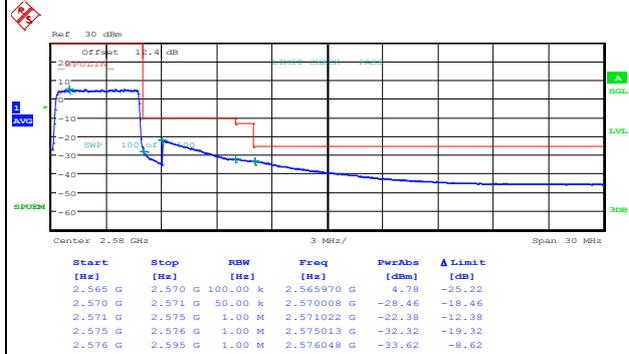
Date: 29.JAN.2015 20:29:09

Lowest Band Edge / Full RB



Date: 29.JAN.2015 20:26:48

Highest Band Edge / Full RB

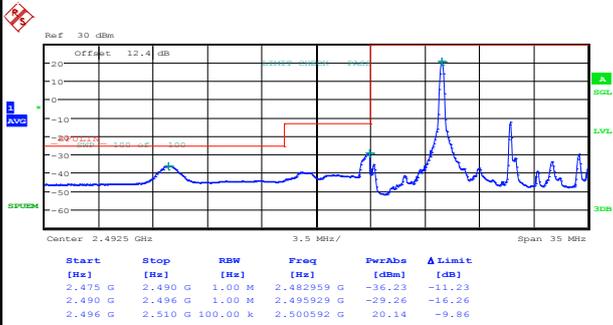


Date: 29.JAN.2015 20:31:30



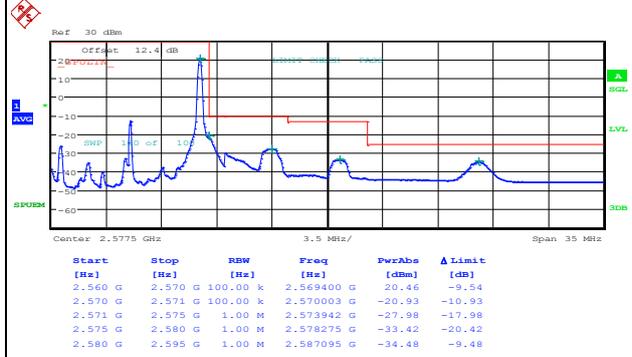
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



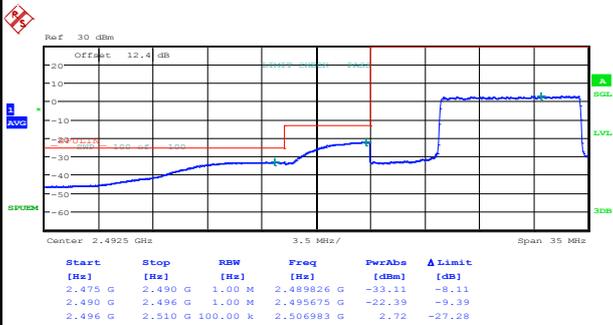
Date: 29.JAN.2015 20:32:41

Highest Band Edge / 1 RB



Date: 29.JAN.2015 20:37:22

Lowest Band Edge / Full RB



Date: 29.JAN.2015 20:35:02

Highest Band Edge / Full RB

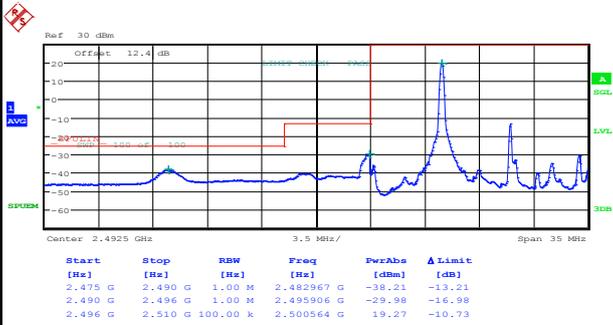


Date: 29.JAN.2015 20:39:43



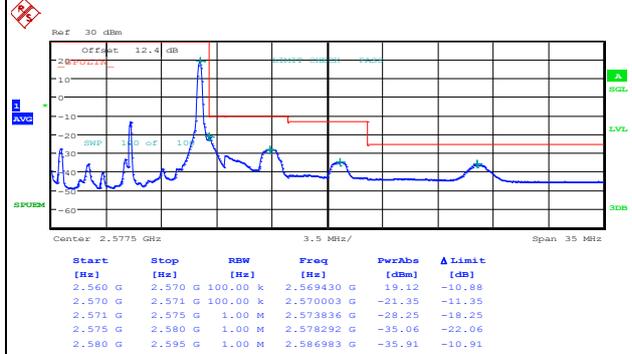
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



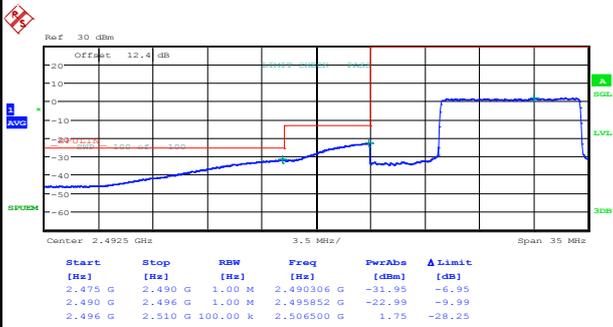
Date: 29.JAN.2015 20:33:51

Highest Band Edge / 1 RB



Date: 29.JAN.2015 20:38:33

Lowest Band Edge / Full RB



Date: 29.JAN.2015 20:36:12

Highest Band Edge / Full RB

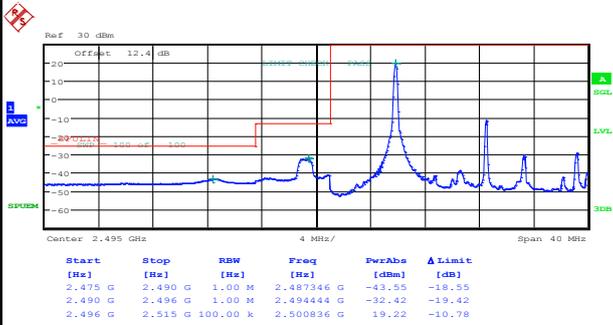


Date: 29.JAN.2015 20:40:54



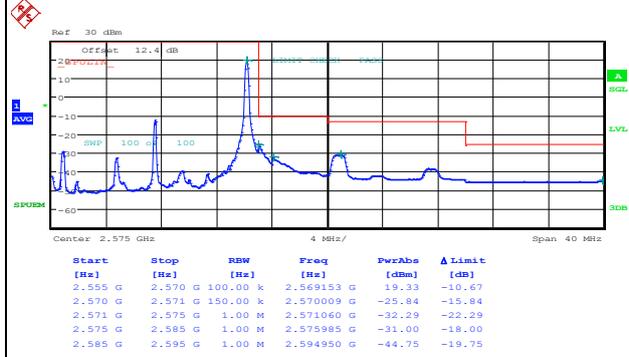
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



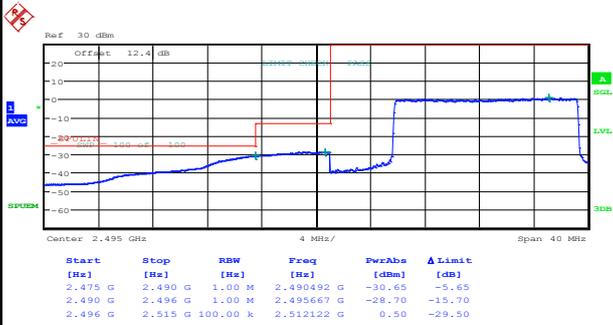
Date: 29.JAN.2015 01:18:55

Highest Band Edge / 1 RB



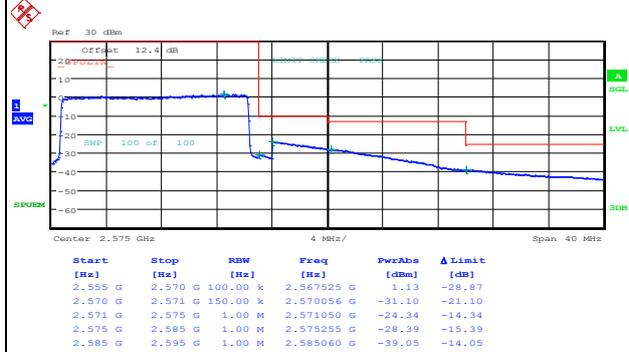
Date: 29.JAN.2015 01:23:35

Lowest Band Edge / Full RB



Date: 29.JAN.2015 01:21:15

Highest Band Edge / Full RB

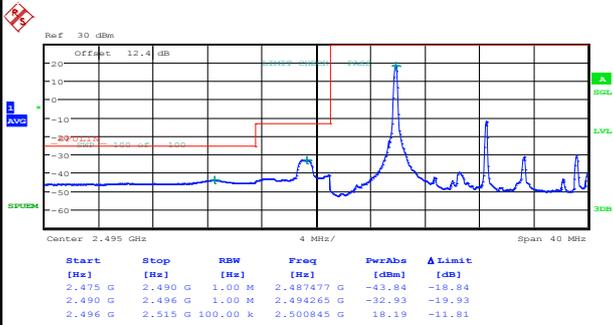


Date: 29.JAN.2015 01:25:55



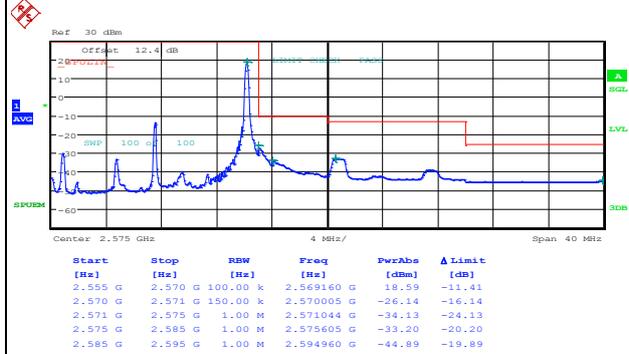
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



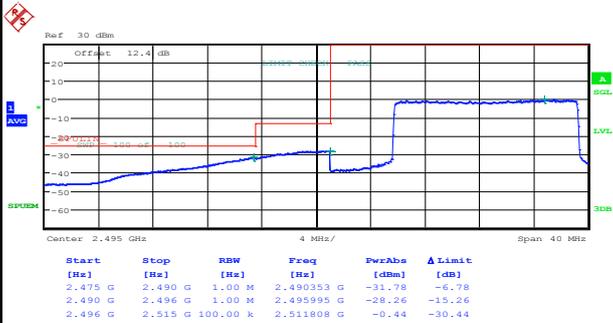
Date: 29.JAN.2015 01:20:05

Highest Band Edge / 1 RB



Date: 29.JAN.2015 01:24:45

Lowest Band Edge / Full RB



Date: 29.JAN.2015 01:22:25

Highest Band Edge / Full RB

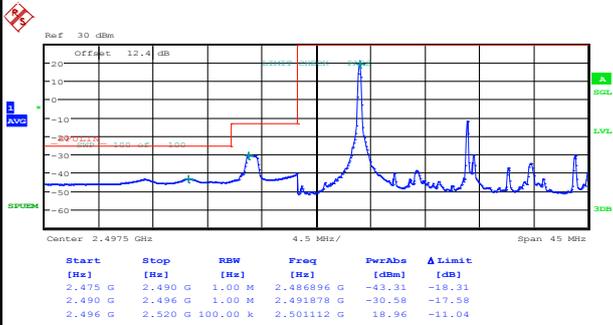


Date: 29.JAN.2015 01:27:05



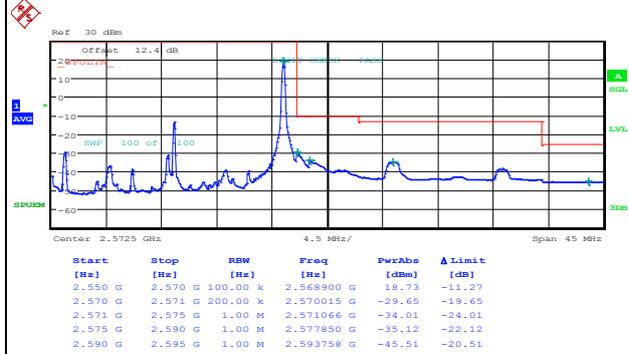
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB



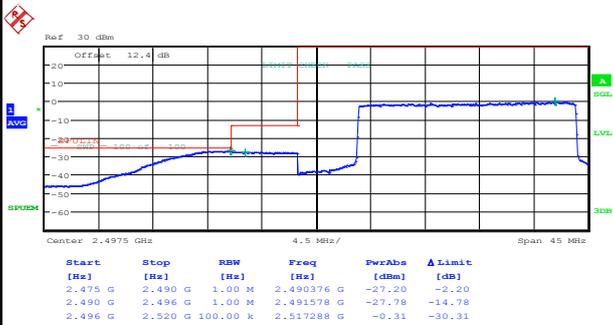
Date: 29.JAN.2015 01:28:15

Highest Band Edge / 1 RB



Date: 29.JAN.2015 01:32:55

Lowest Band Edge / Full RB



Date: 29.JAN.2015 01:30:35

Highest Band Edge / Full RB

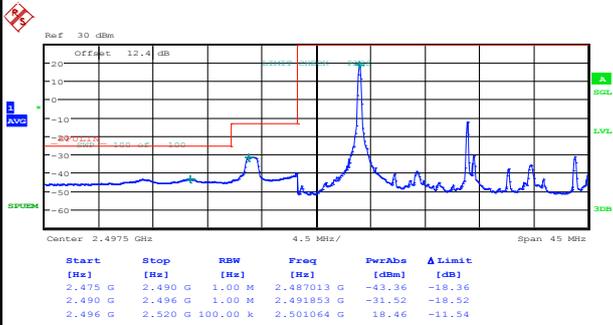


Date: 29.JAN.2015 01:36:25



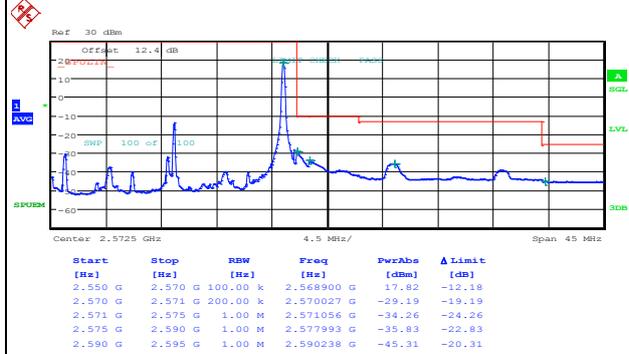
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



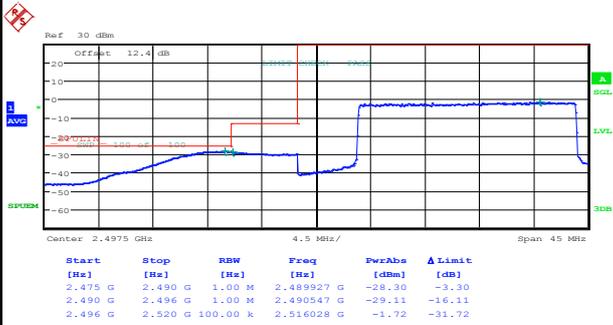
Date: 29.JAN.2015 01:29:25

Highest Band Edge / 1RB



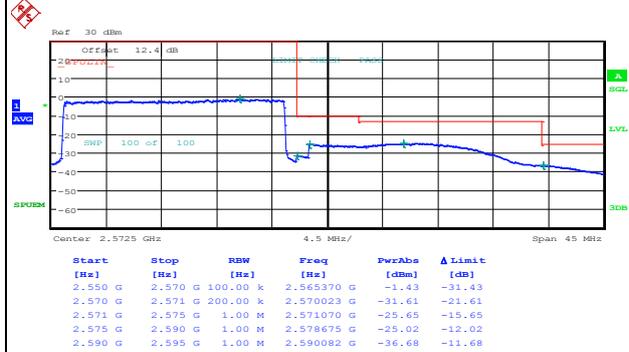
Date: 29.JAN.2015 01:34:05

Lowest Band Edge / Full RB



Date: 29.JAN.2015 01:31:45

Highest Band Edge / Full RB

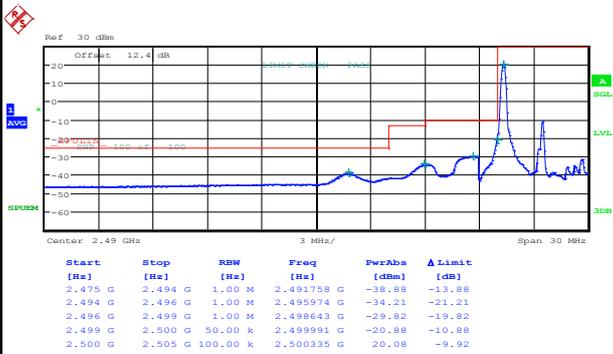


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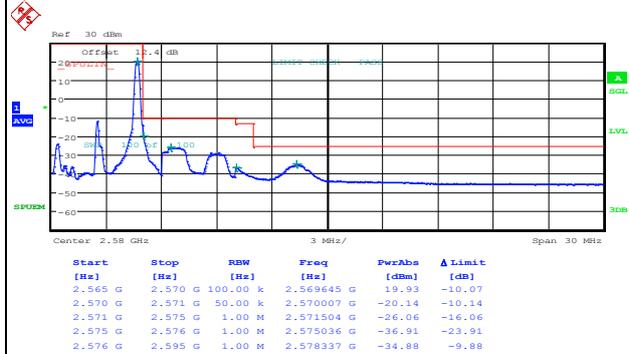
LTE Band 7 / 5MHz / QPSK (IC)

Lowest Band Edge / 1 RB



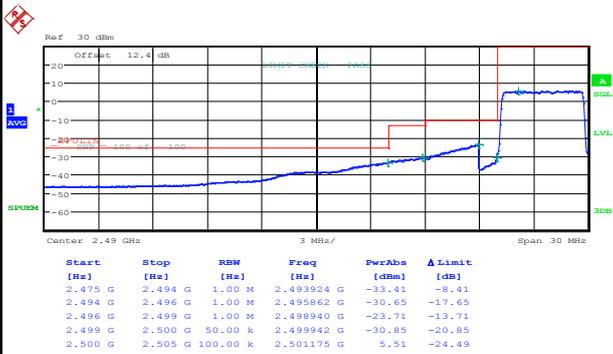
Date: 29.JAN.2015 19:58:43

Highest Band Edge / 1 RB



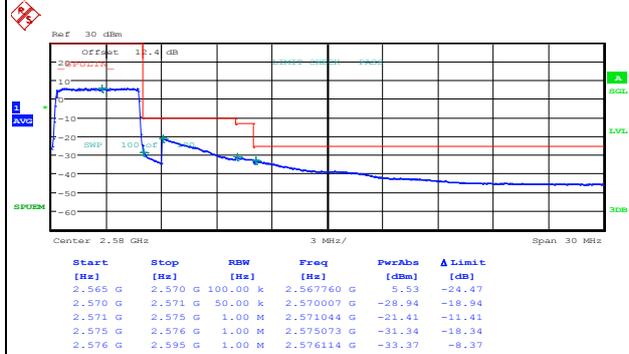
Date: 29.JAN.2015 20:03:23

Lowest Band Edge / Full RB



Date: 29.JAN.2015 20:01:03

Highest Band Edge / Full RB

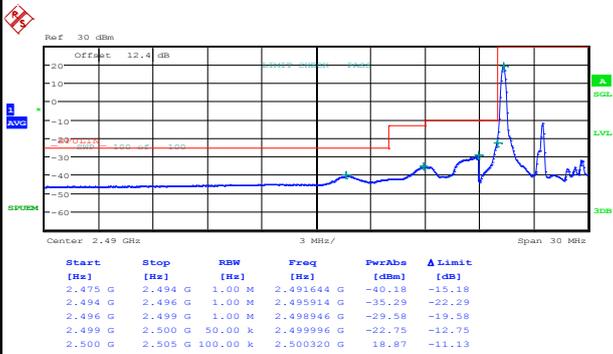


Date: 29.JAN.2015 20:05:43



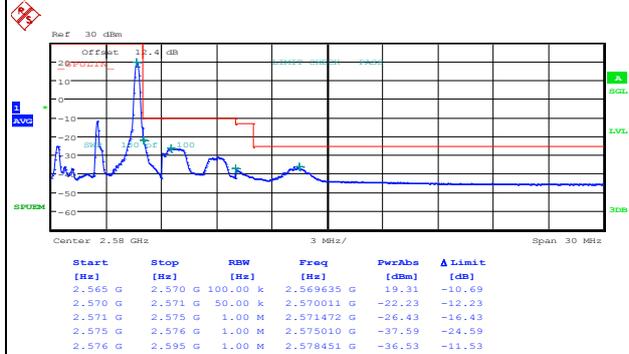
LTE Band 7 / 5MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



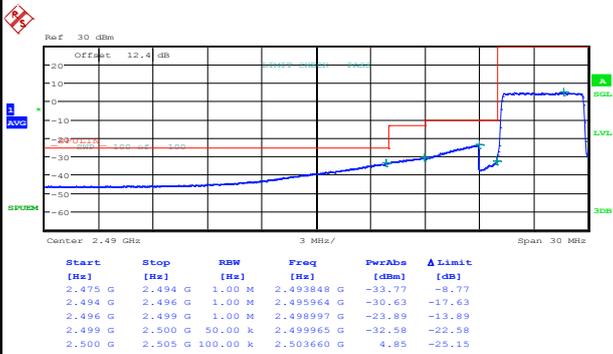
Date: 29.JAN.2015 19:59:53

Highest Band Edge / 1 RB



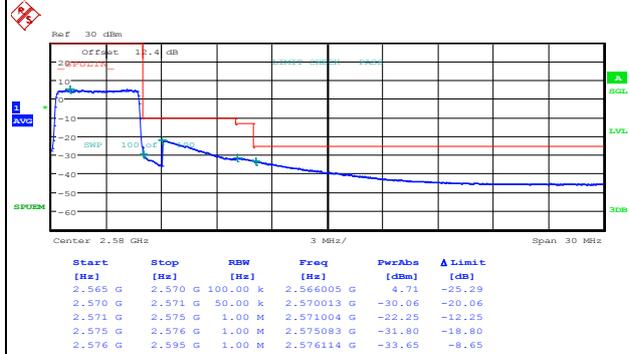
Date: 29.JAN.2015 20:04:33

Lowest Band Edge / Full RB



Date: 29.JAN.2015 20:02:13

Highest Band Edge / Full RB

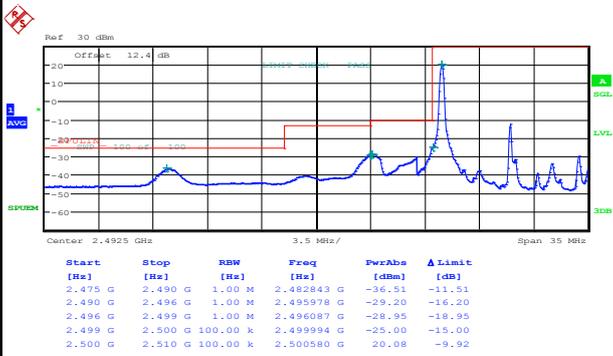


Date: 29.JAN.2015 20:06:53



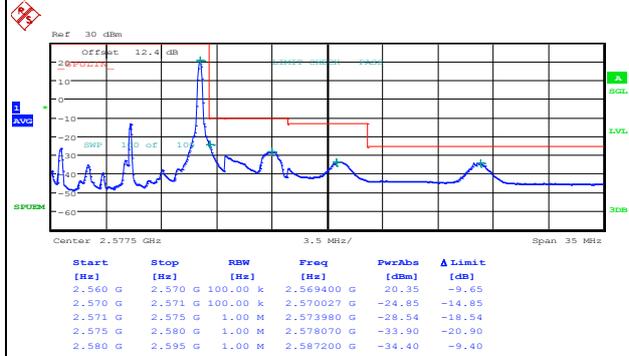
LTE Band 7 / 10MHz / QPSK (IC)

Lowest Band Edge / 1 RB



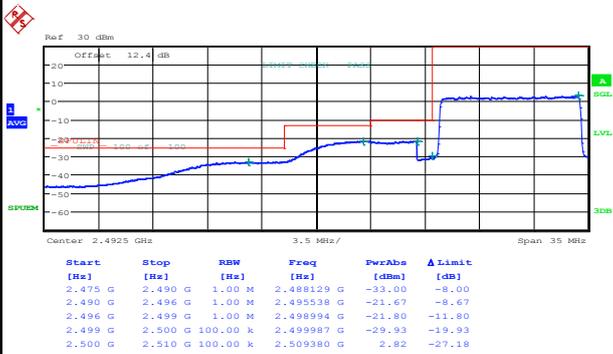
Date: 29.JAN.2015 20:08:03

Highest Band Edge / 1 RB



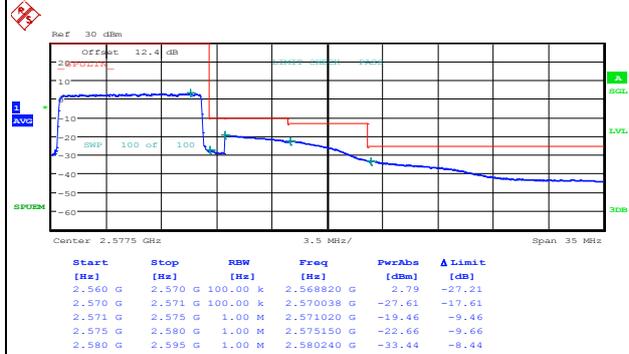
Date: 29.JAN.2015 20:12:43

Lowest Band Edge / Full RB



Date: 29.JAN.2015 20:10:23

Highest Band Edge / Full RB



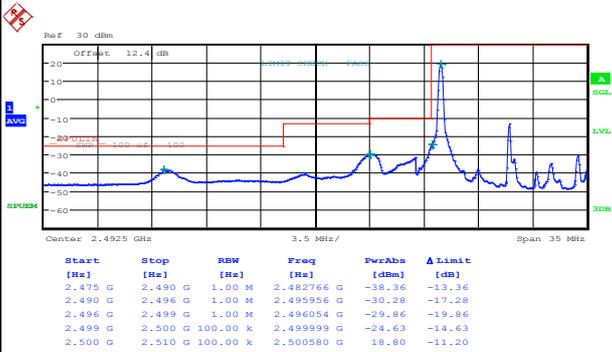
Date: 29.JAN.2015 20:15:03



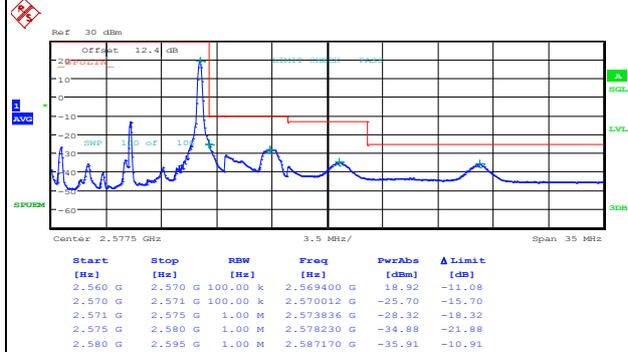
LTE Band 7 / 10MHz / 16QAM (IC)

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



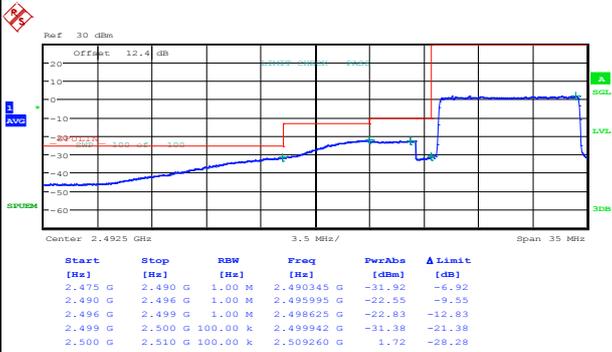
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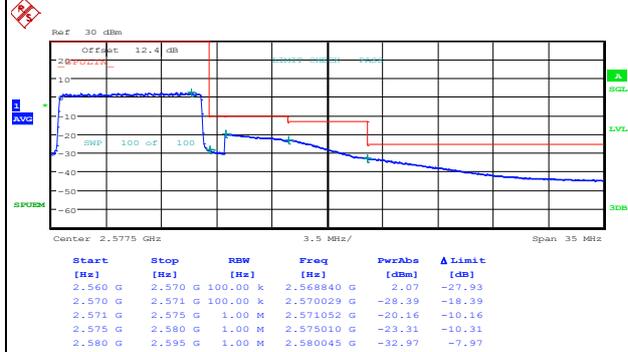
Date: 29.JAN.2015 20:13:53

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29.JAN.2015 20:11:33

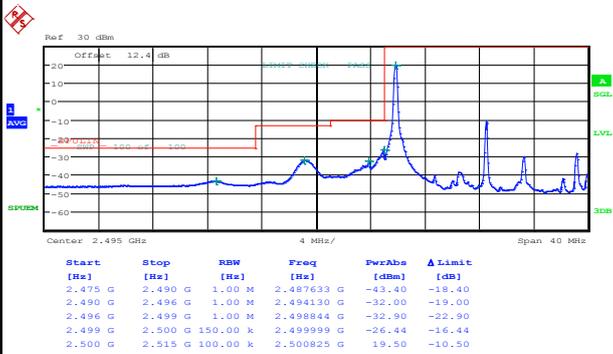


Date: 29.JAN.2015 20:16:13



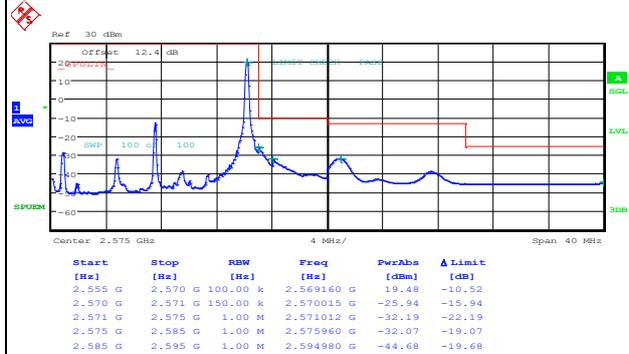
LTE Band 7 / 15MHz / QPSK (IC)

Lowest Band Edge / 1 RB



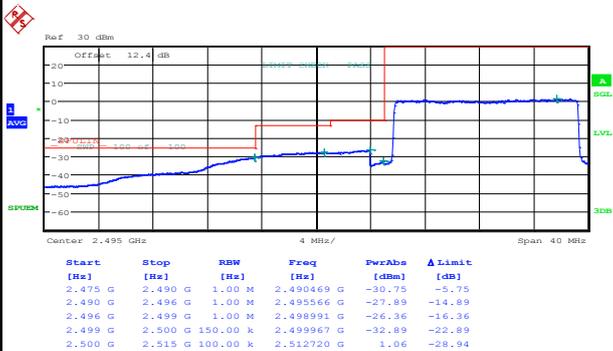
Date: 29.JAN.2015 00:15:59

Highest Band Edge / 1 RB



Date: 29.JAN.2015 00:26:50

Lowest Band Edge / Full RB



Date: 29.JAN.2015 00:18:18

Highest Band Edge / Full RB

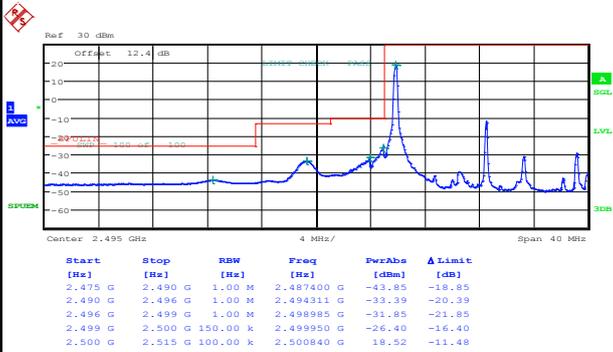


Date: 29.JAN.2015 00:29:09



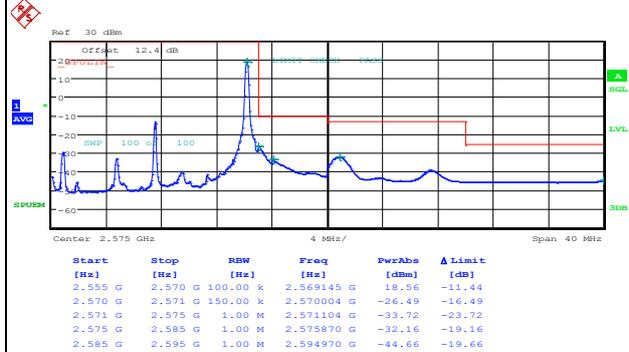
LTE Band 7 / 15MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



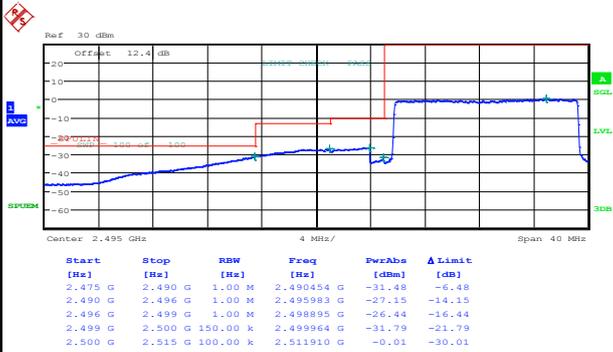
Date: 29.JAN.2015 00:17:09

Highest Band Edge / 1 RB



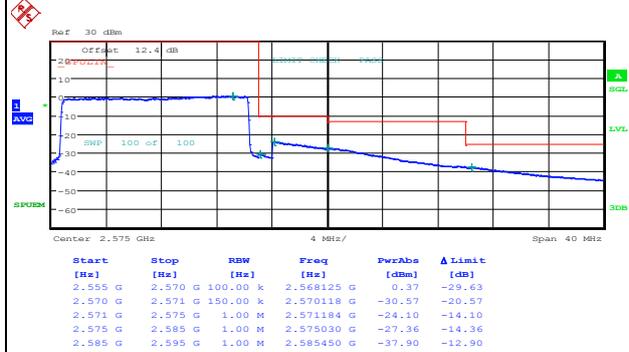
Date: 29.JAN.2015 00:28:00

Lowest Band Edge / Full RB



Date: 29.JAN.2015 00:19:28

Highest Band Edge / Full RB

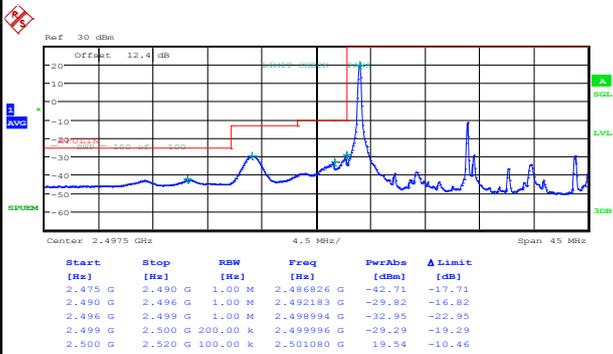


Date: 29.JAN.2015 00:30:19



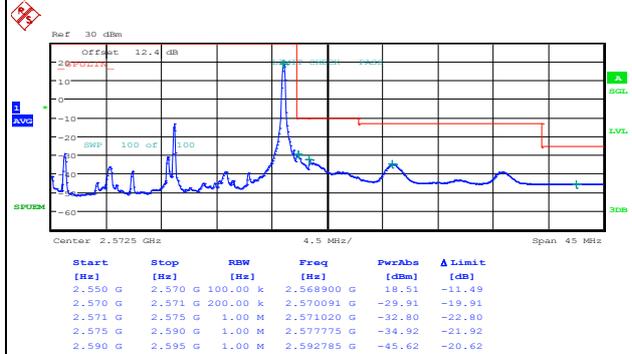
LTE Band 7 / 20MHz / QPSK (IC)

Lowest Band Edge / 1 RB



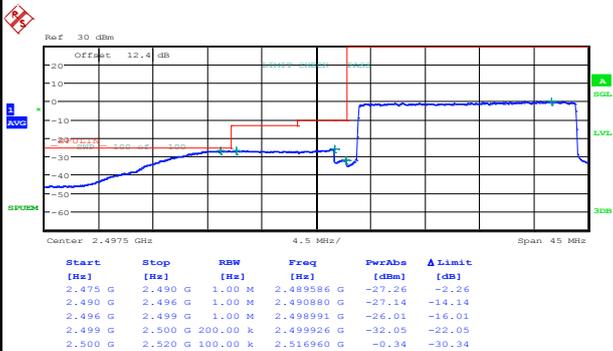
Date: 29.JAN.2015 00:34:34

Highest Band Edge / 1 RB



Date: 29.JAN.2015 00:45:25

Lowest Band Edge / Full RB



Date: 29.JAN.2015 00:36:53

Highest Band Edge / Full RB

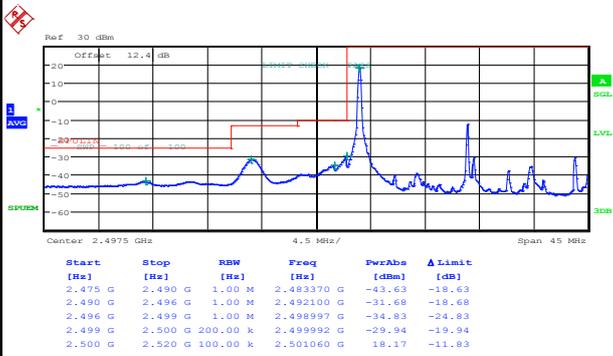


Date: 29.JAN.2015 00:48:53



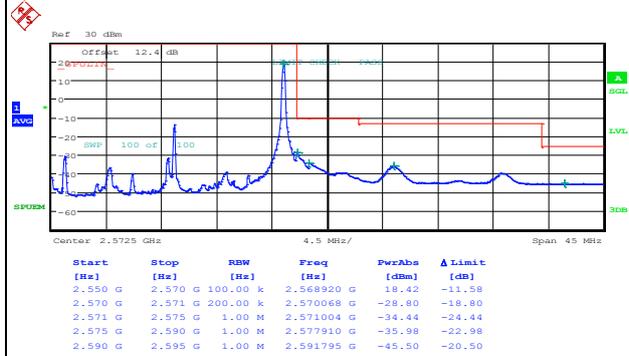
LTE Band 7 / 20MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



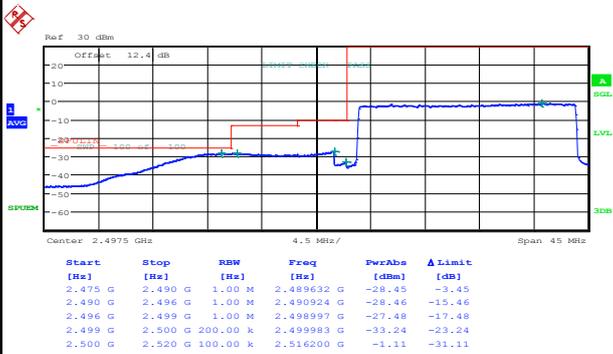
Date: 29.JAN.2015 00:35:44

Highest Band Edge / 1RB



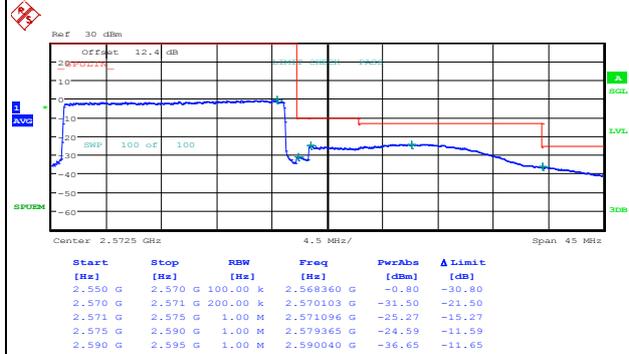
Date: 29.JAN.2015 00:46:35

Lowest Band Edge / Full RB



Date: 29.JAN.2015 00:38:03

Highest Band Edge / Full RB



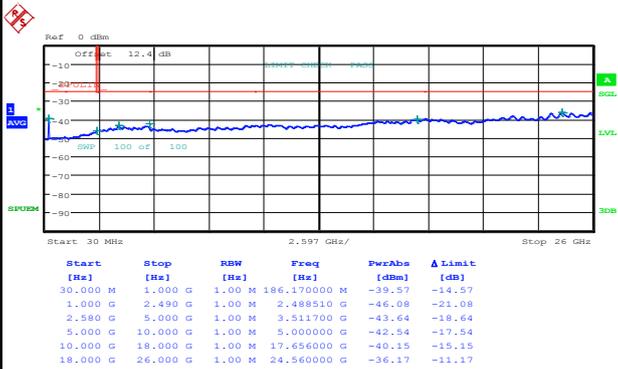
Date: 29.JAN.2015 00:47:44



Conducted Spurious Emission

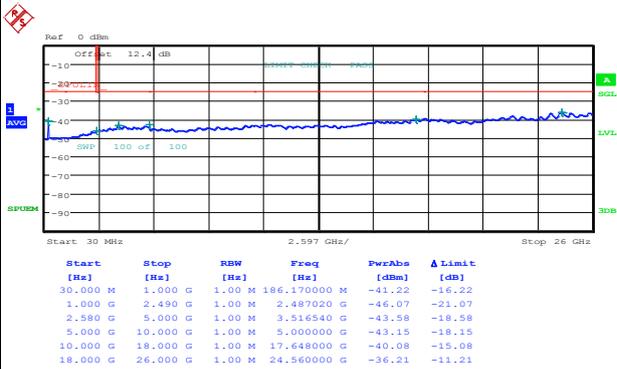
LTE Band 7 / 5MHz

Lowest Channel / QPSK



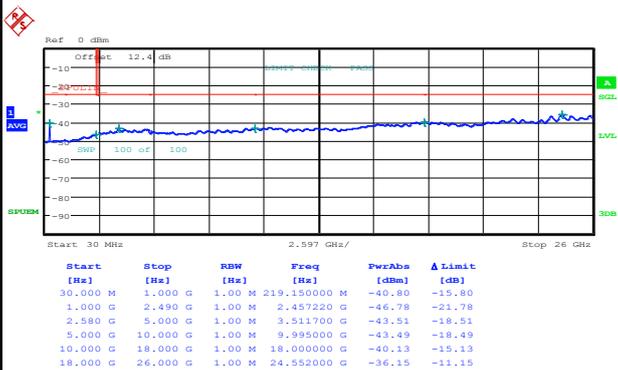
Date: 28.JAN.2015 23:43:02

Lowest Channel / 16QAM



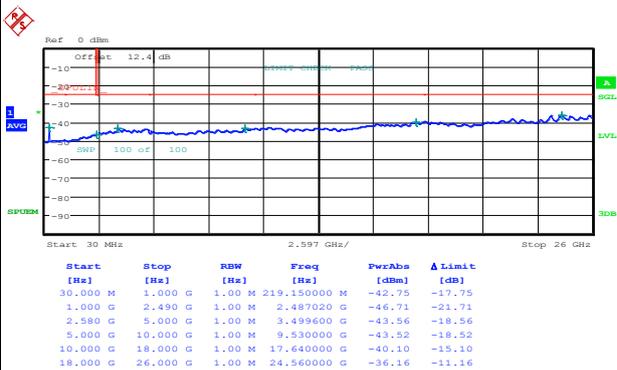
Date: 28.JAN.2015 23:44:11

Middle Channel / QPSK



Date: 28.JAN.2015 23:46:08

Middle Channel / 16QAM

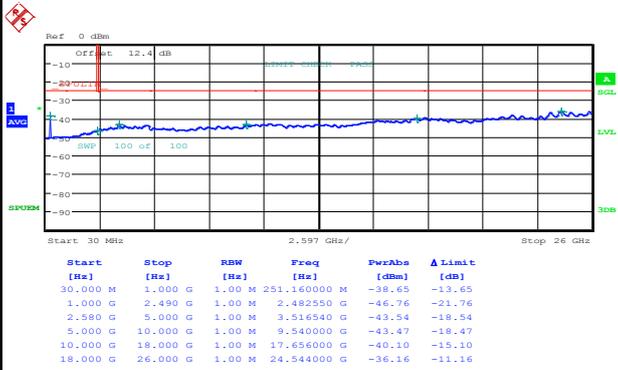


Date: 28.JAN.2015 23:47:18



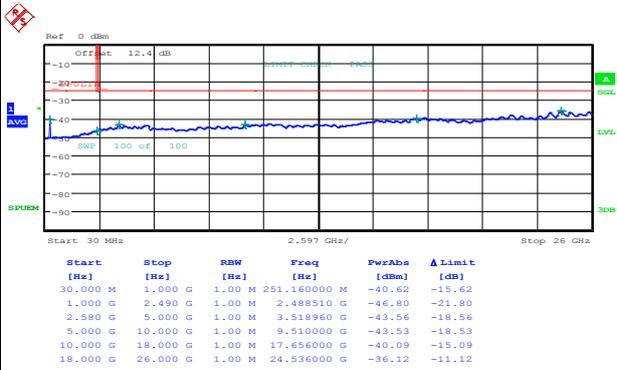
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 28.JAN.2015 23:53:54

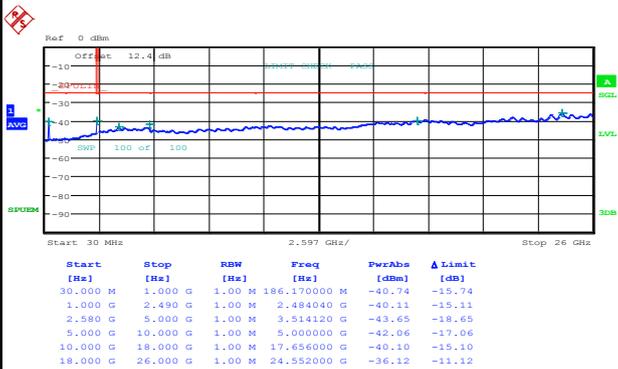
Highest Channel / 16QAM



Date: 28.JAN.2015 23:55:07

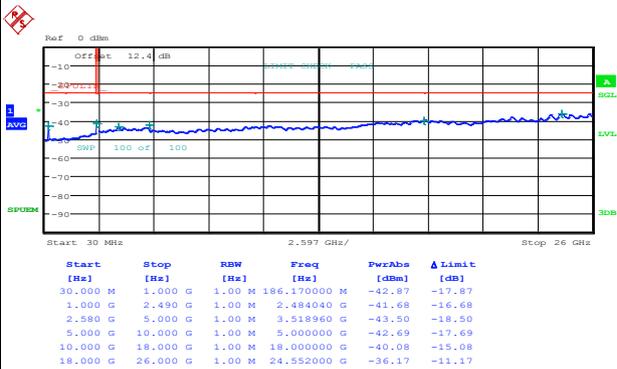
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 29.JAN.2015 00:01:54

Lowest Channel / 16QAM



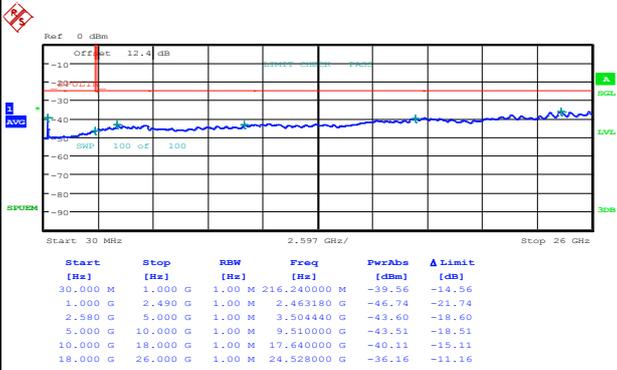
Date: 29.JAN.2015 00:03:04



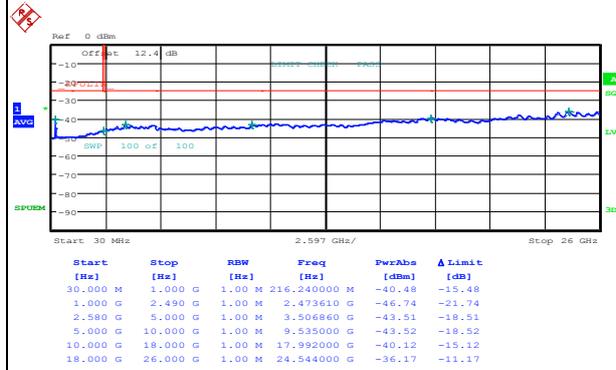
LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



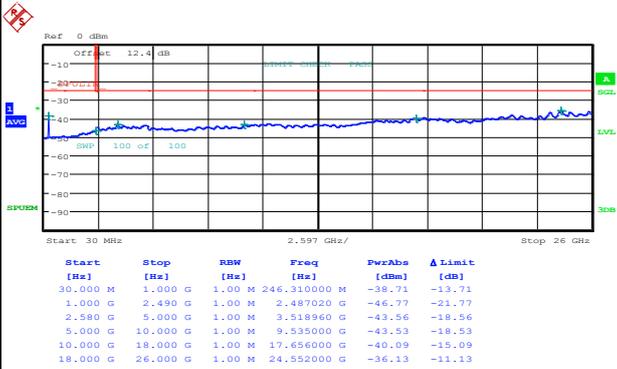
Date: 29.JAN.2015 00:05:06



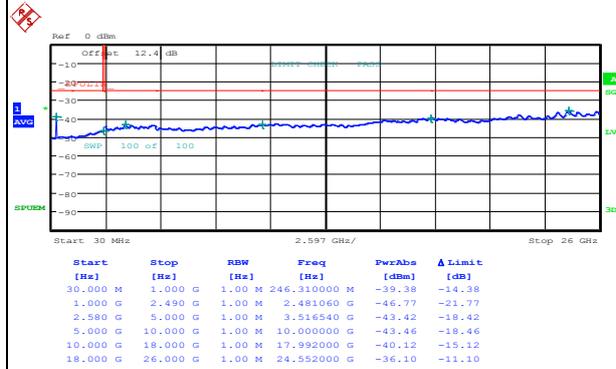
Date: 29.JAN.2015 00:06:17

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 29.JAN.2015 00:12:53



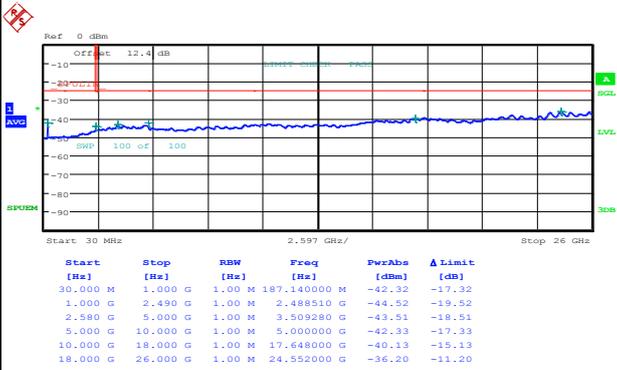
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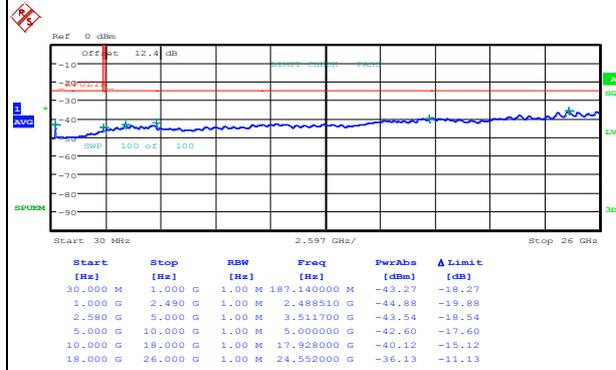
LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



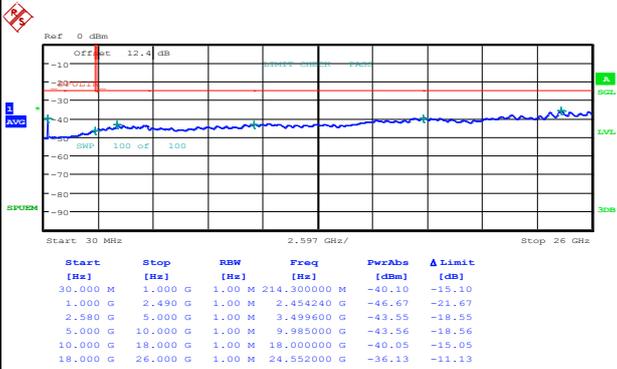
Date: 29.JAN.2015 00:20:37



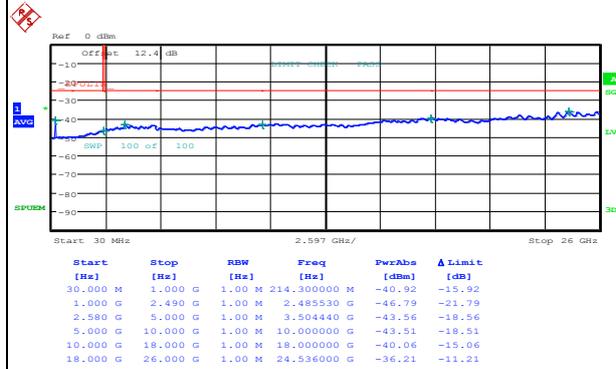
Date: 29.JAN.2015 00:21:47

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 29.JAN.2015 00:23:43

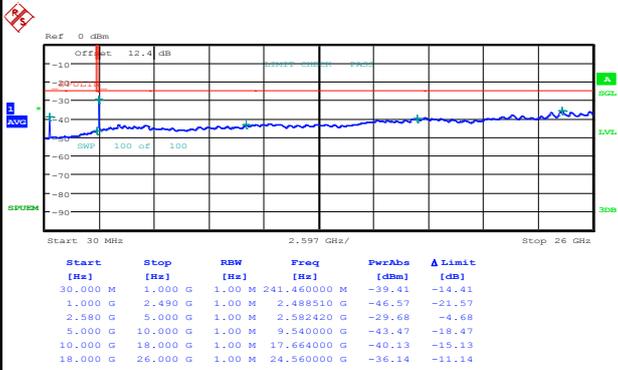


Date: 29.JAN.2015 00:24:53



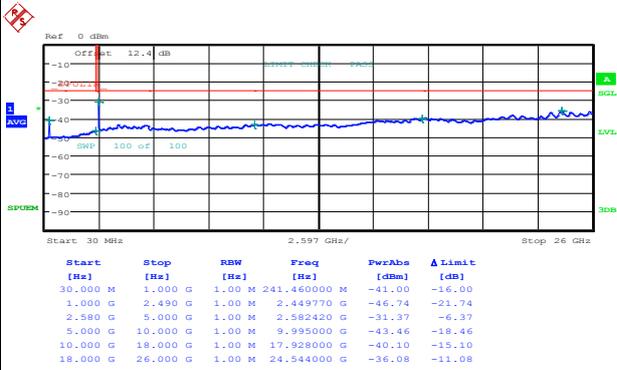
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 29.JAN.2015 00:31:28

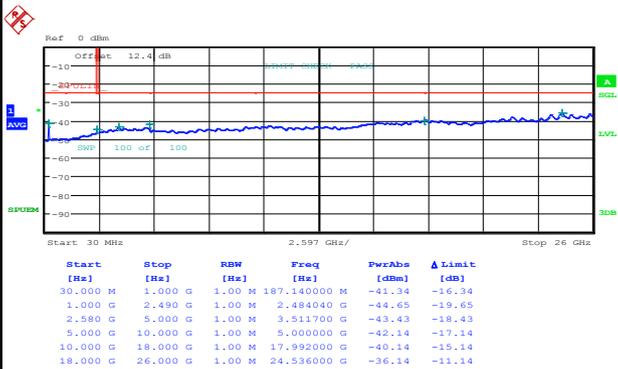
Highest Channel / 16QAM



Date: 29.JAN.2015 00:32:38

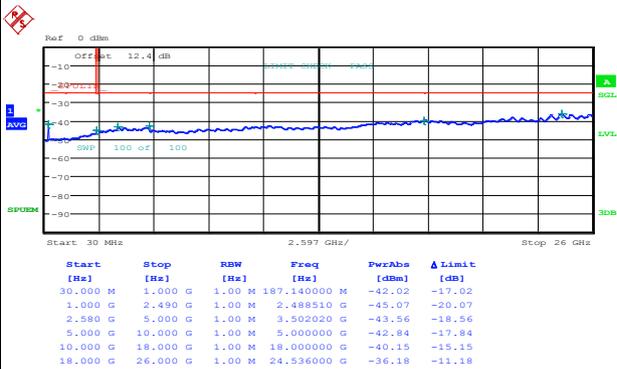
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 29.JAN.2015 00:39:12

Lowest Channel / 16QAM



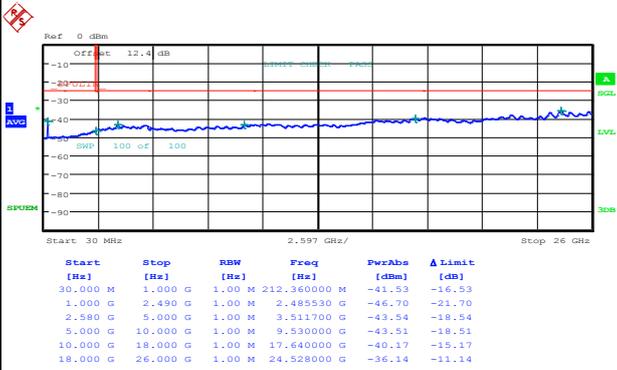
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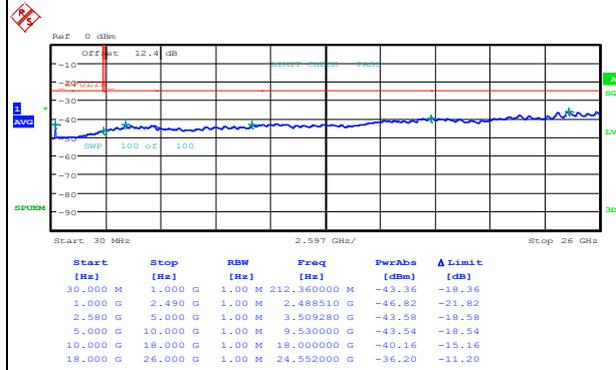
LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



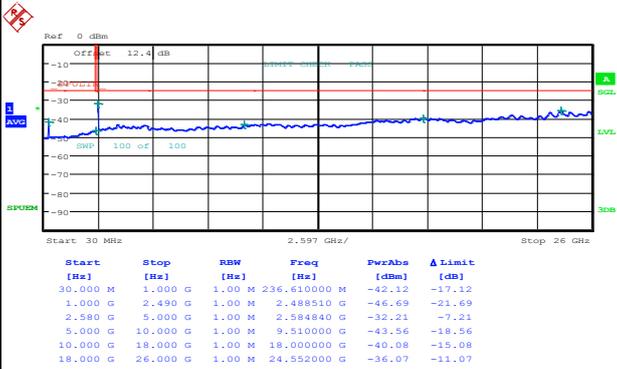
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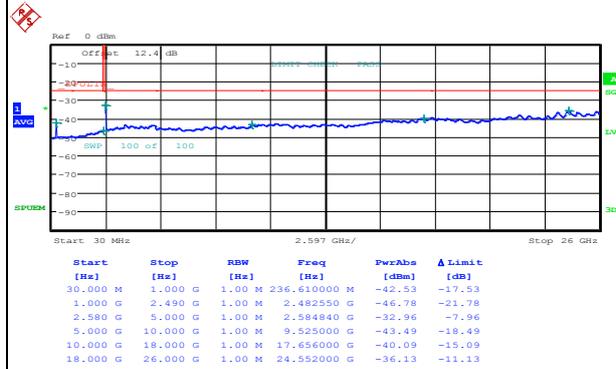
Date: 29.JAN.2015 00:43:28

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 29.JAN.2015 00:50:03



Date: 29.JAN.2015 00:51:12



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	0.0131	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0122	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0118	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0010	
-30	Normal Voltage	0.0139	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0132	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 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	-33.1	PASS
40	Normal Voltage	-0.7	
30	Normal Voltage	-30.9	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	-1.6	
0	Normal Voltage	-30	
-10	Normal Voltage	-1.1	
-20	Normal Voltage	-2.5	
-30	Normal Voltage	-35.3	
20	Maximum Voltage	-0.8	
20	Normal Voltage	0	
20	Battery End Point	-33.4	

$|\text{MAX}(\Delta f)| = 35.3 \text{ Hz}$

Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	2500.149982	$\geq 2500 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	2569.850019	$\leq 2570 \text{ MHz}$	