



LTE Band 7

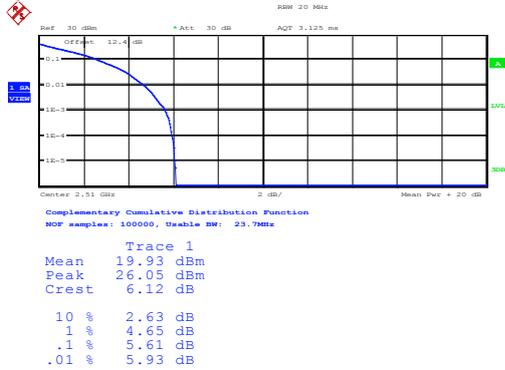
Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.61	5.77	6.79	6.63	PASS
Middle CH	5.35	6.09	6.60	6.76	
Highest CH	5.77	5.64	5.99	6.31	



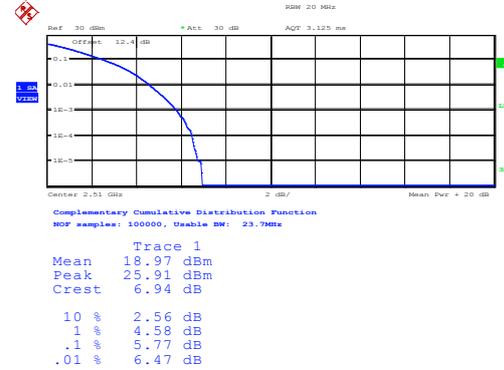
LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



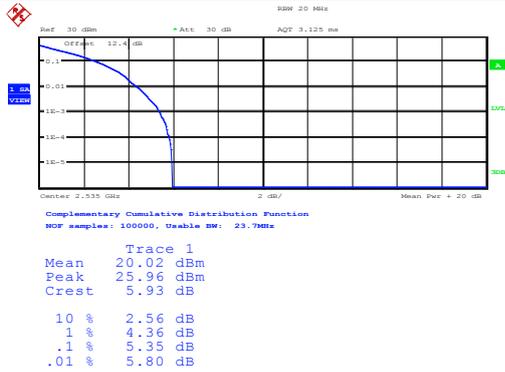
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Lowest Channel / Full RB



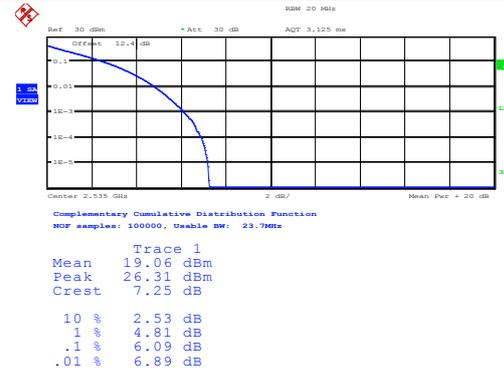
Date: 13.FEB.2015 22:11:52

Middle Channel / 1RB



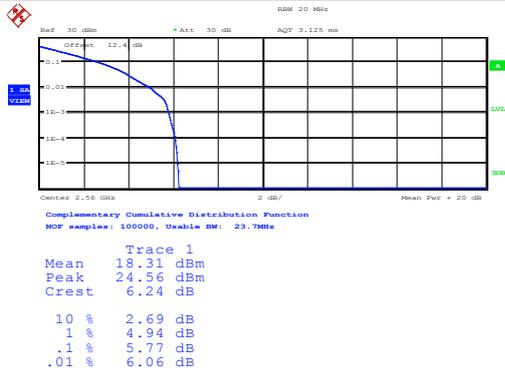
Date: 13.FEB.2015 22:12:04

Middle Channel / Full RB



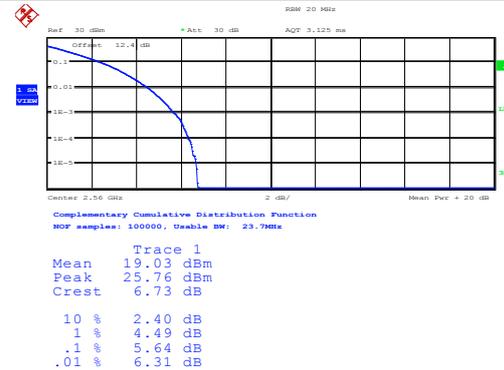
Date: 13.FEB.2015 22:12:17

Highest Channel / 1RB



Date: 13.FEB.2015 22:20:32

Highest Channel / Full RB

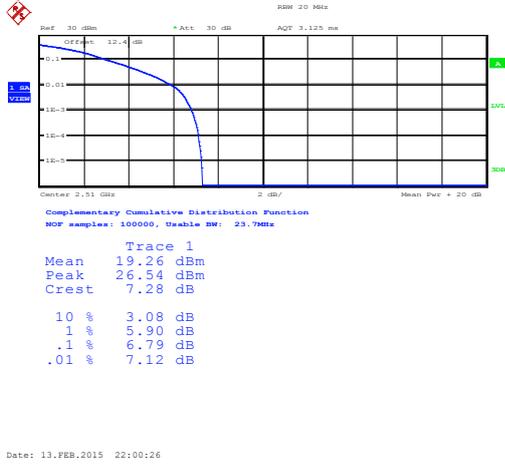


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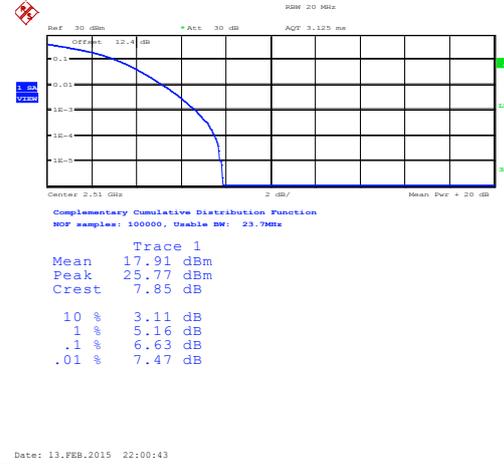


LTE Band 7 / 20MHz / 16QAM

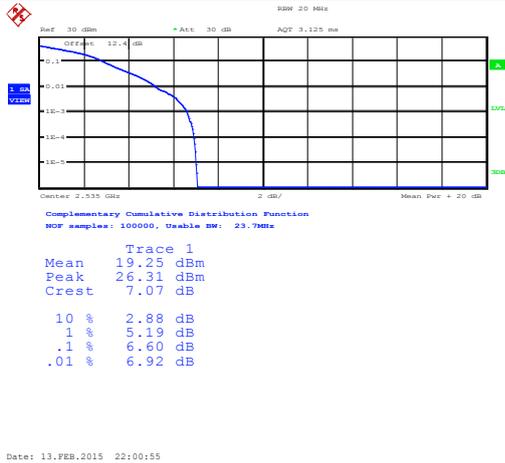
Lowest Channel / 1RB



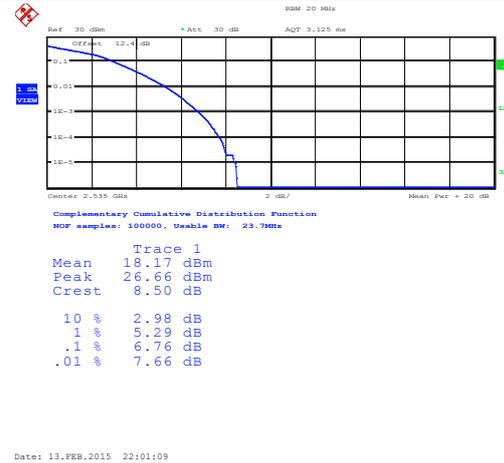
Lowest Channel / Full RB



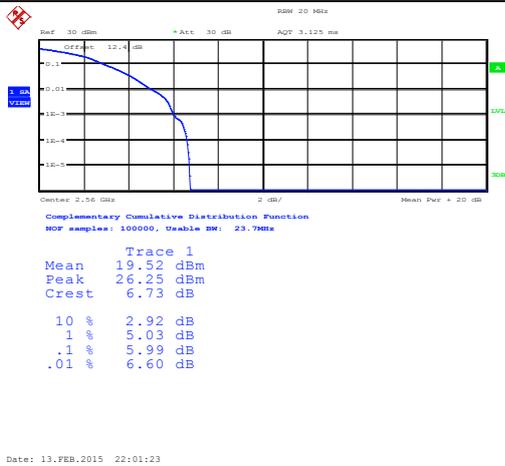
Middle Channel / 1RB



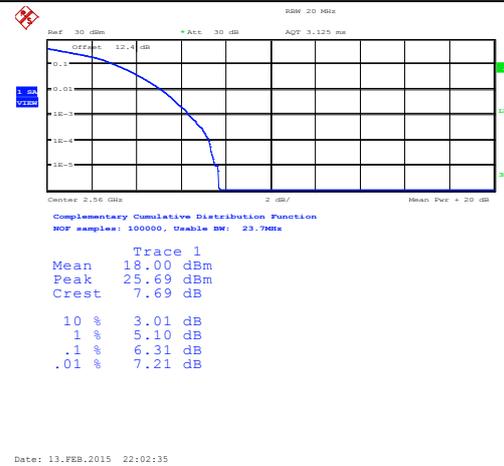
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





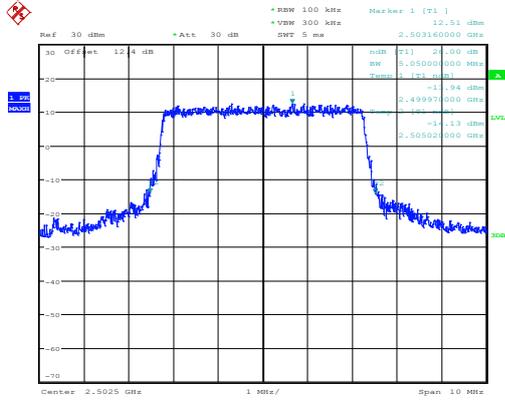
26dB Bandwidth

Mode	LTE Band 7 : 26dB BW(MHz)											
	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	-	-	-	-	5.05	5.00	10.32	10.16	15.24	15.24	21.56	21.56
Middle CH	-	-	-	-	5.00	5.02	10.12	10.22	15.42	15.69	21.76	21.76
Highest CH	-	-	-	-	4.91	4.99	10.38	10.28	15.39	15.54	21.72	21.56



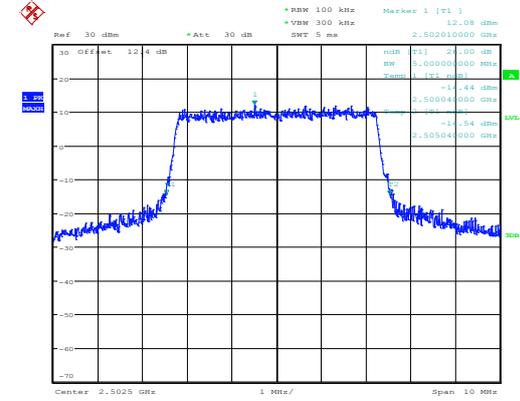
LTE Band 7

Lowest Channel / 5MHz / QPSK



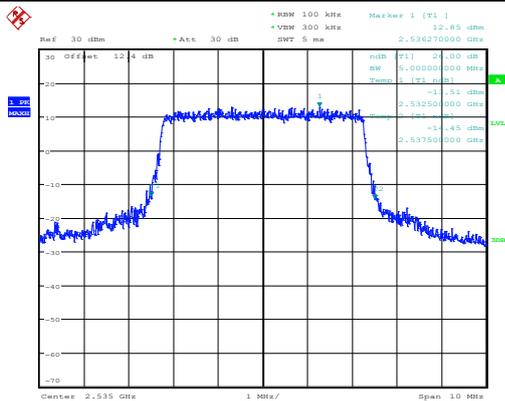
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Lowest Channel / 5MHz / 16QAM



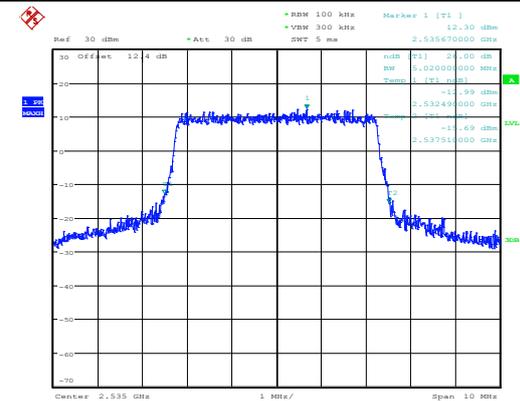
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Middle Channel / 5MHz / QPSK



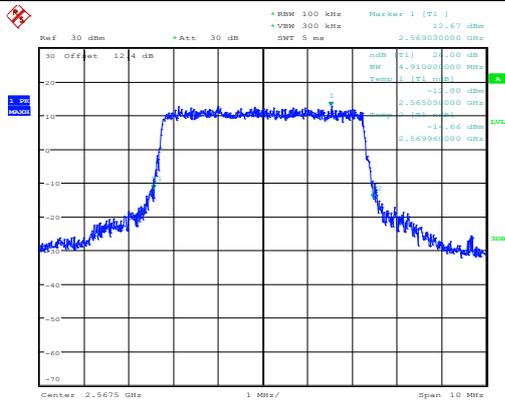
Date: 13.FEB.2015 20:51:50

Middle Channel / 5MHz / 16QAM



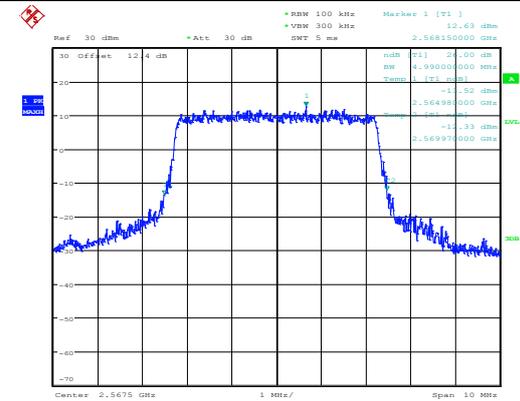
Date: 13.FEB.2015 20:52:03

Highest Channel / 5MHz / QPSK



Date: 13.FEB.2015 20:54:56

Highest Channel / 5MHz / 16QAM

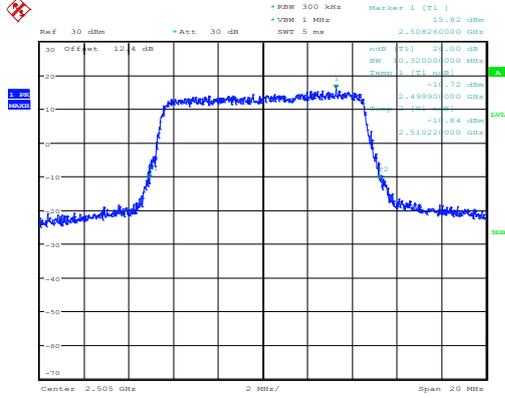


Date: 13.FEB.2015 20:55:09



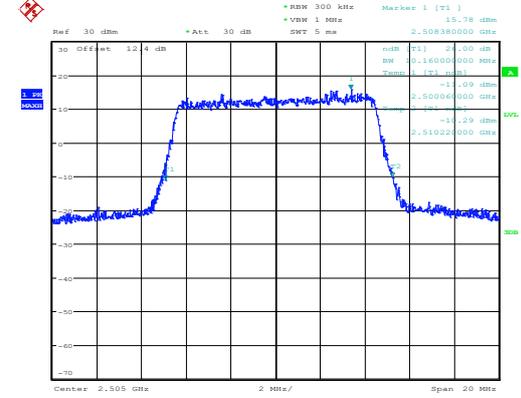
LTE Band 7

Lowest Channel / 10MHz / QPSK



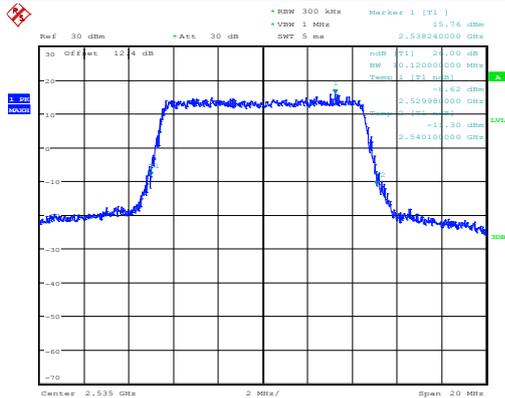
Date: 13.FEB.2015 21:02:42

Lowest Channel / 10MHz / 16QAM



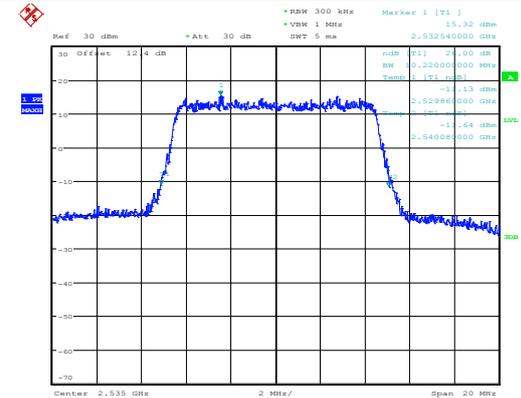
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Middle Channel / 10MHz / QPSK



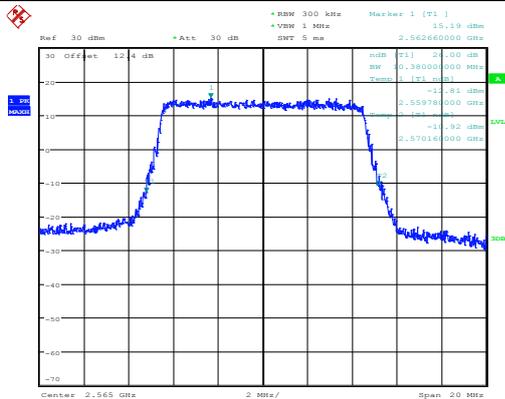
Date: 13.FEB.2015 21:10:27

Middle Channel / 10MHz / 16QAM



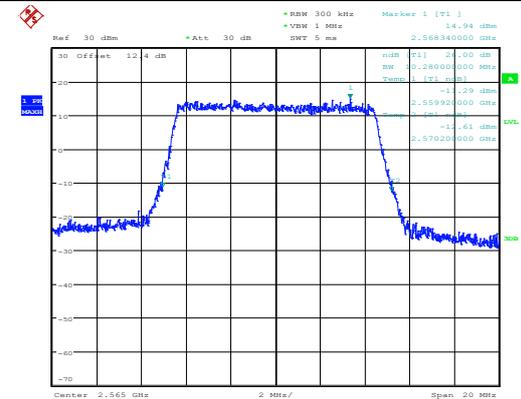
Date: 13.FEB.2015 21:10:40

Highest Channel / 10MHz / QPSK



Date: 13.FEB.2015 21:13:33

Highest Channel / 10MHz / 16QAM

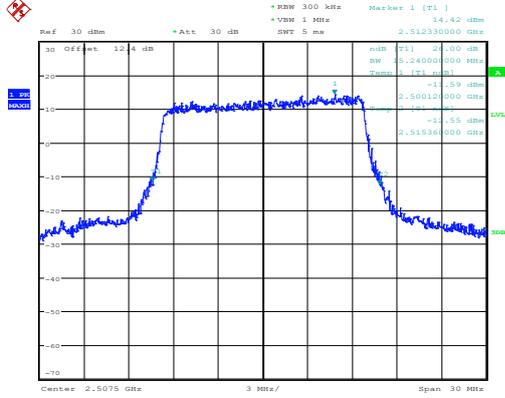


Date: 13.FEB.2015 21:13:46



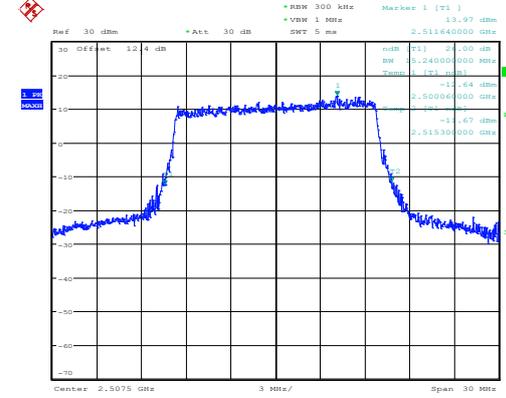
LTE Band 7

Lowest Channel / 15MHz / QPSK



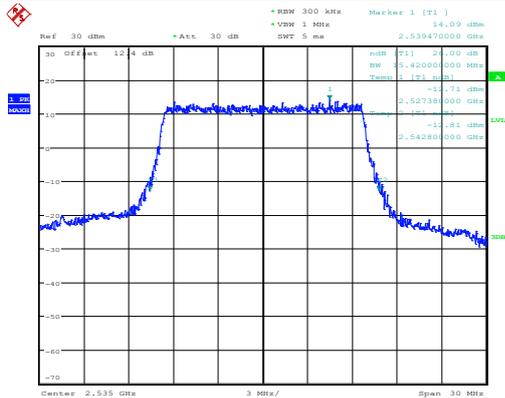
Date: 13.FEB.2015 21:21:19

Lowest Channel / 15MHz / 16QAM



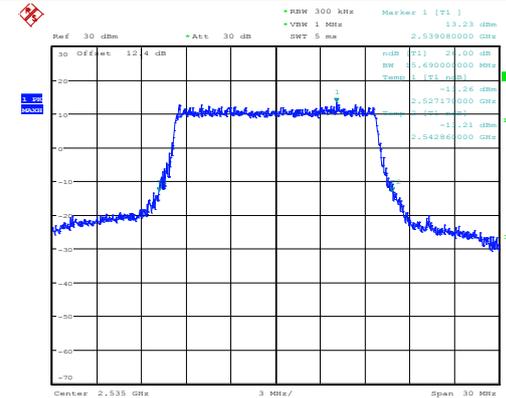
Date: 13.FEB.2015 21:21:31

Middle Channel / 15MHz / QPSK



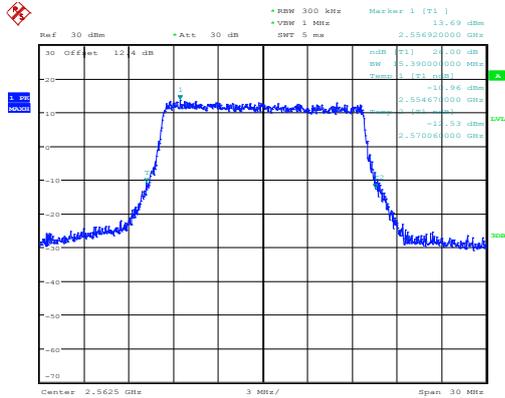
Date: 13.FEB.2015 21:29:04

Middle Channel / 15MHz / 16QAM



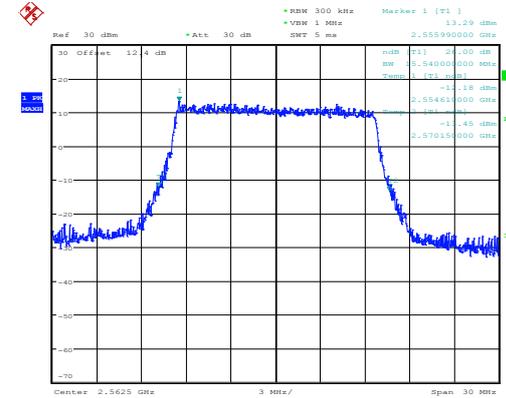
Date: 13.FEB.2015 21:29:17

Highest Channel / 15MHz / QPSK



Date: 13.FEB.2015 21:32:11

Highest Channel / 15MHz / 16QAM

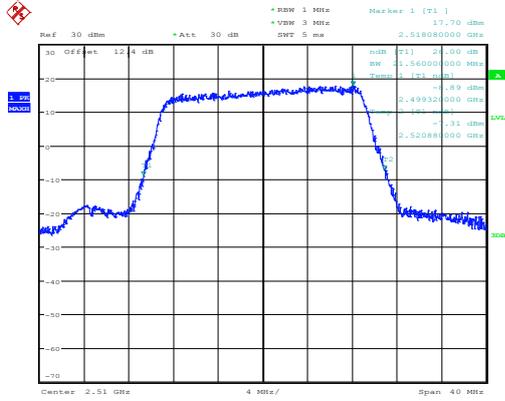


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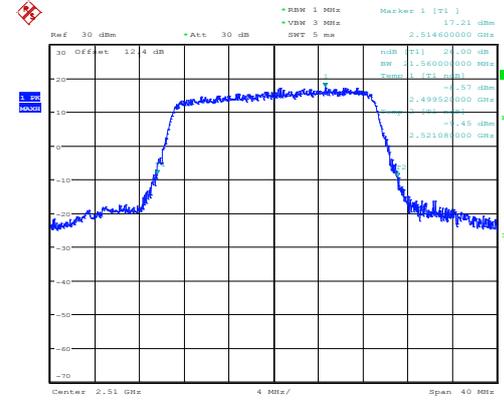
LTE Band 7

Lowest Channel / 20MHz / QPSK



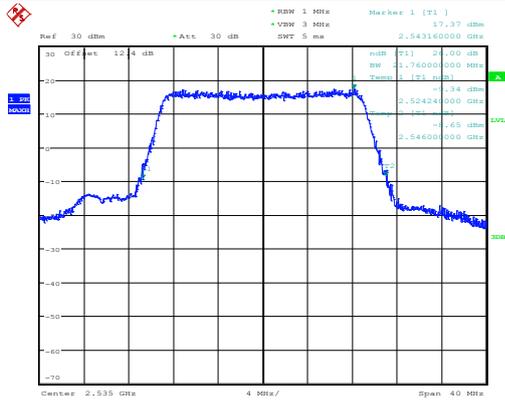
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Lowest Channel / 20MHz / 16QAM



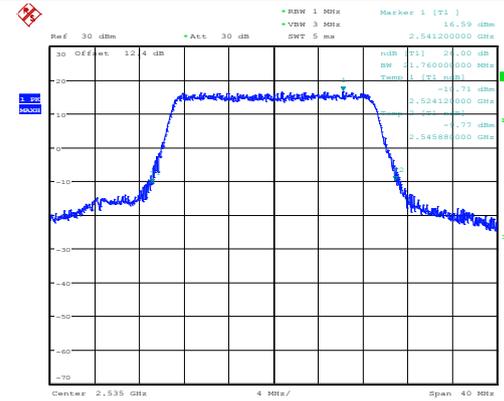
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Middle Channel / 20MHz / QPSK



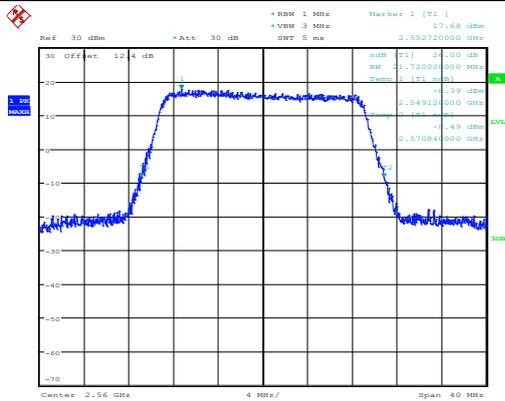
Date: 13.FEB.2015 21:47:41

Middle Channel / 20MHz / 16QAM



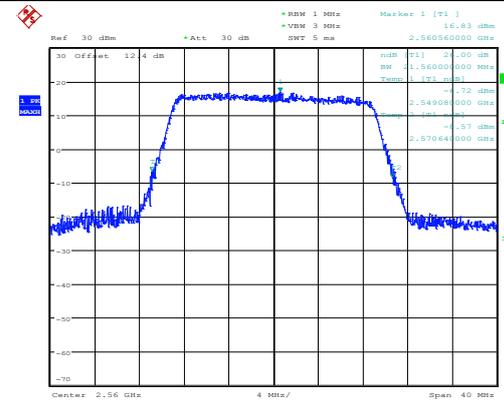
Date: 13.FEB.2015 21:47:54

Highest Channel / 20MHz / QPSK



Date: 13.FEB.2015 21:50:47

Highest Channel / 20MHz / 16QAM



Date: 13.FEB.2015 21:51:00



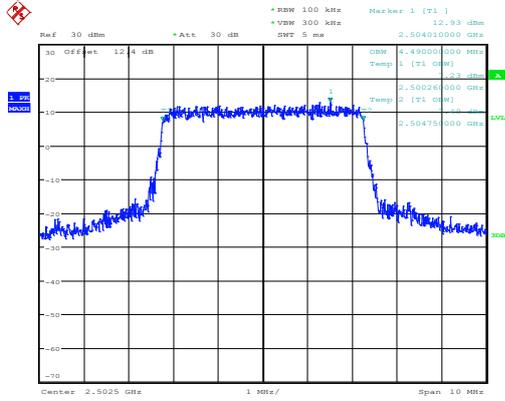
Occupied Bandwidth

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	-	-	-	-	4.49	4.50	9.10	9.08	13.50	13.53	18.52	18.52
Middle CH	-	-	-	-	4.50	4.50	9.12	9.08	13.53	13.53	18.68	18.68
Highest CH	-	-	-	-	4.49	4.50	9.08	9.04	13.53	13.53	18.56	18.52



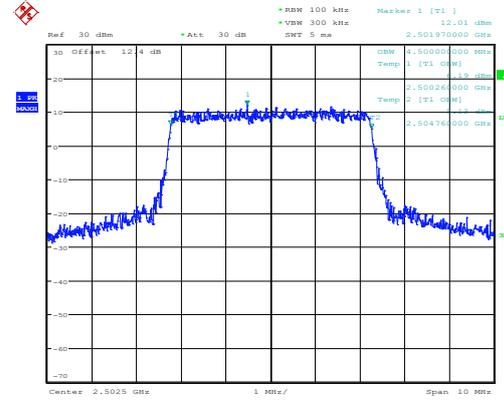
LTE Band 7

Lowest Channel / 5MHz / QPSK



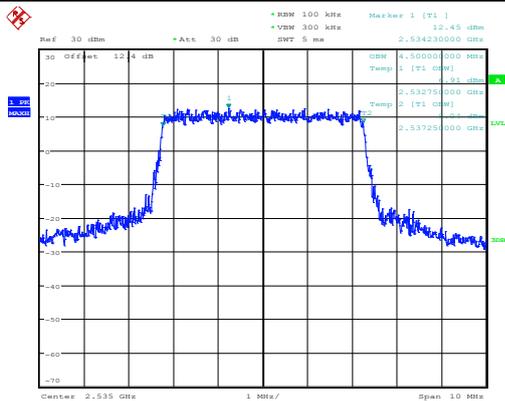
Date: 13.FEB.2015 20:43:41

Lowest Channel / 5MHz / 16QAM



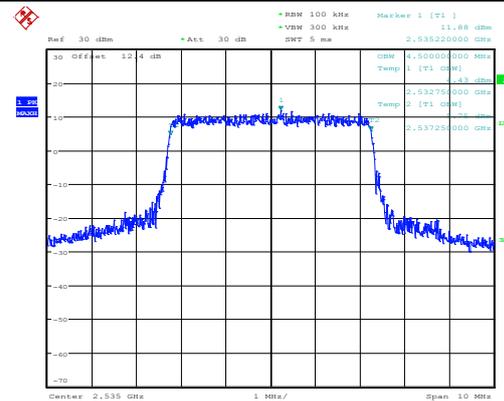
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Middle Channel / 5MHz / QPSK



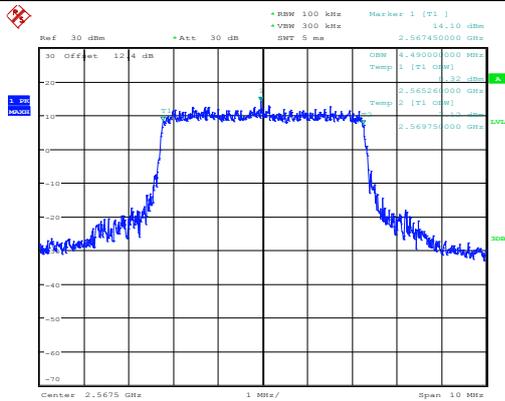
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Middle Channel / 5MHz / 16QAM



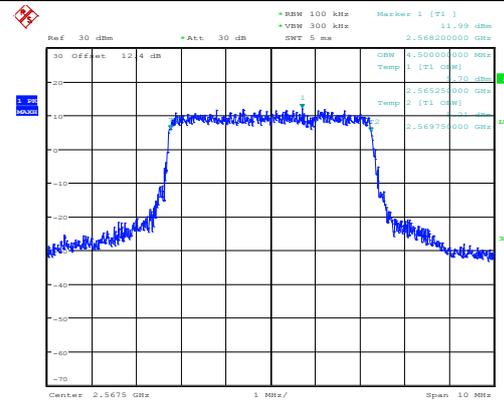
Date: 13.FEB.2015 20:51:37

Highest Channel / 5MHz / QPSK



Date: 13.FEB.2015 20:54:33

Highest Channel / 5MHz / 16QAM

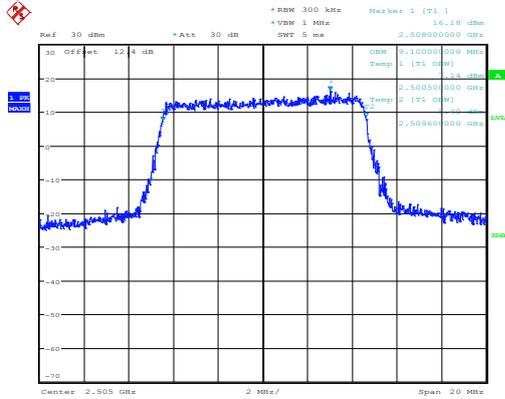


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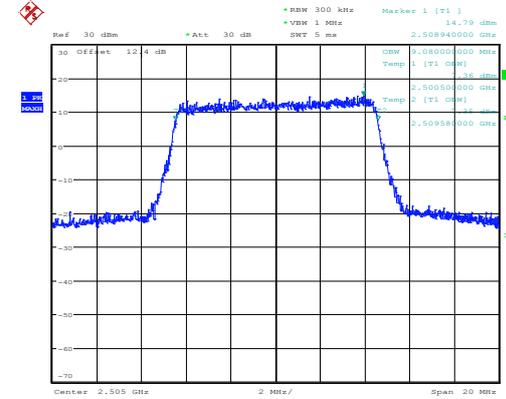
LTE Band 7

Lowest Channel / 10MHz / QPSK



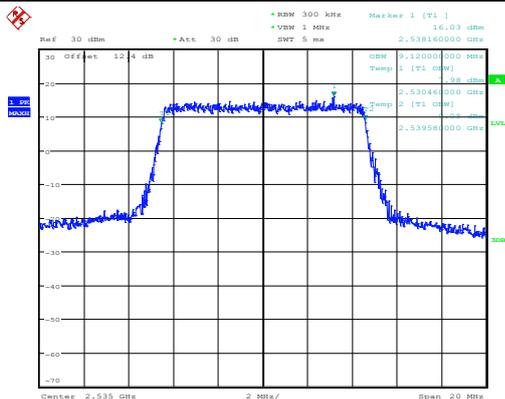
Date: 13.FEB.2015 21:02:19

Lowest Channel / 10MHz / 16QAM



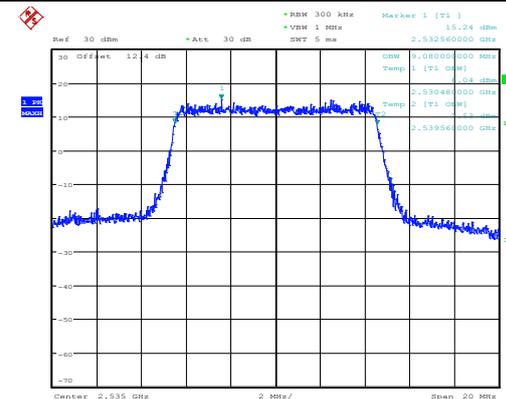
Date: 13.FEB.2015 21:02:29

Middle Channel / 10MHz / QPSK



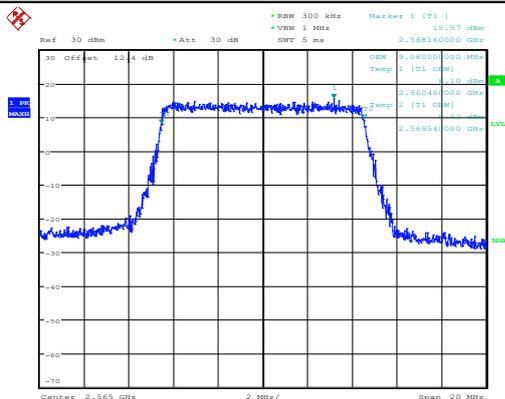
Date: 13.FEB.2015 21:10:04

Middle Channel / 10MHz / 16QAM



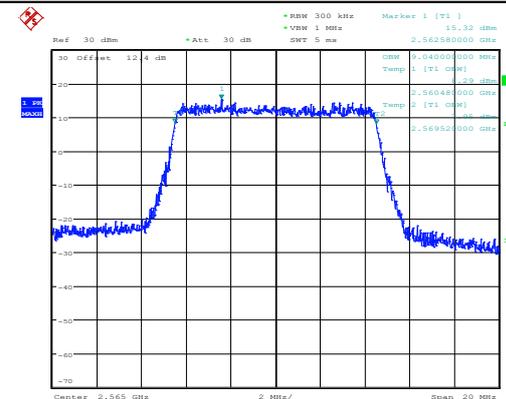
Date: 13.FEB.2015 21:10:14

Highest Channel / 10MHz / QPSK



Date: 13.FEB.2015 21:13:10

Highest Channel / 10MHz / 16QAM

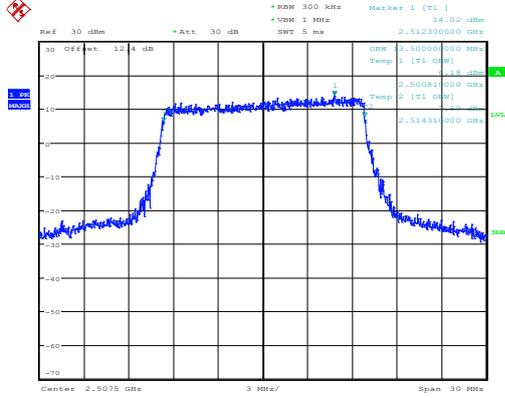


Date: 13.FEB.2015 21:13:20



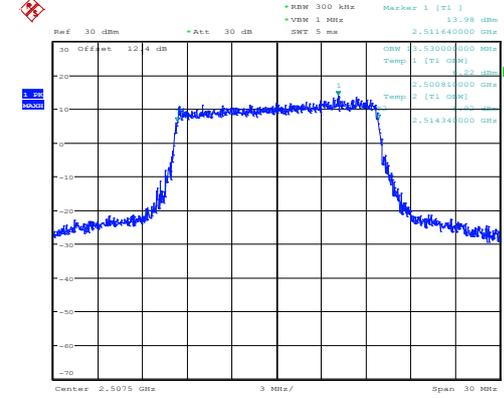
LTE Band 7

Lowest Channel / 15MHz / QPSK



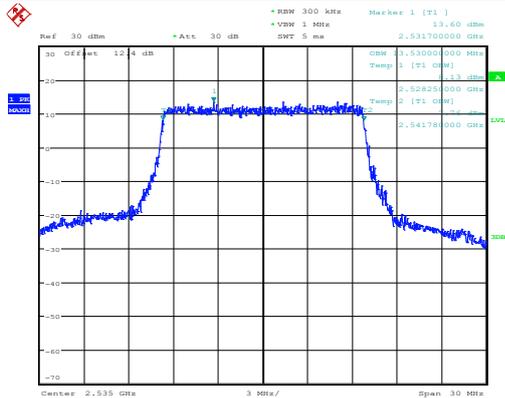
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Lowest Channel / 15MHz / 16QAM



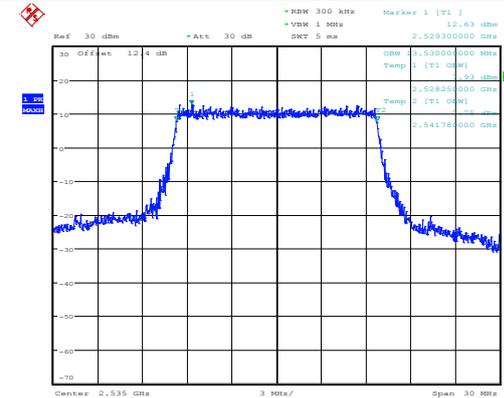
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Middle Channel / 15MHz / QPSK



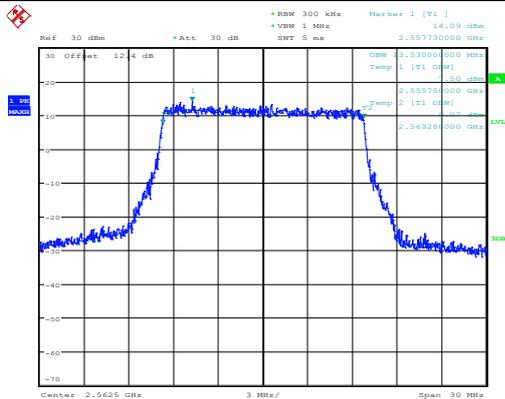
Date: 13.FEB.2015 21:28:41

Middle Channel / 15MHz / 16QAM



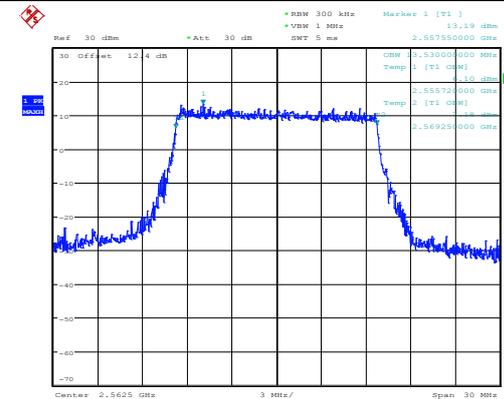
Date: 13.FEB.2015 21:28:52

Highest Channel / 15MHz / QPSK



Date: 13.FEB.2015 21:31:47

Highest Channel / 15MHz / 16QAM

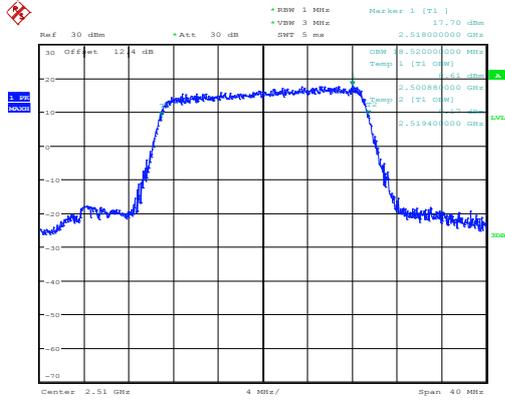


Date: 13.FEB.2015 21:31:58



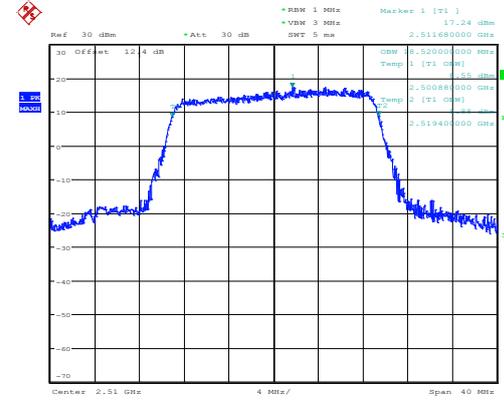
LTE Band 7

Lowest Channel / 20MHz / QPSK



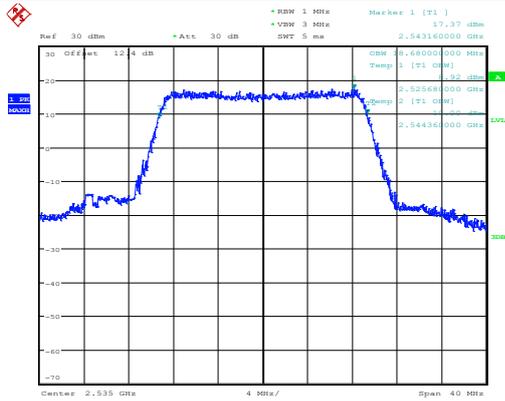
Date: 13.FEB.2015 21:39:33

Lowest Channel / 20MHz / 16QAM



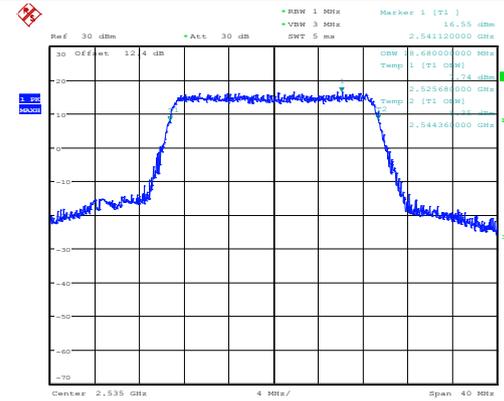
Date: 13.FEB.2015 21:39:43

Middle Channel / 20MHz / QPSK



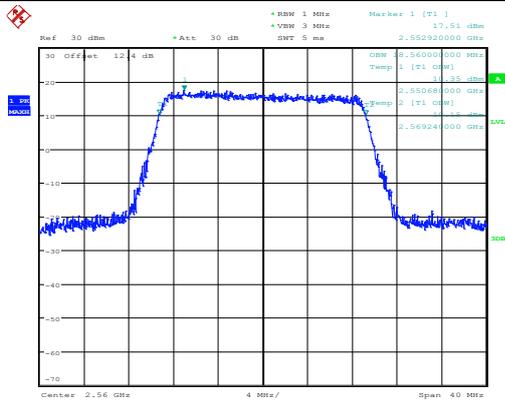
Date: 13.FEB.2015 21:47:18

Middle Channel / 20MHz / 16QAM



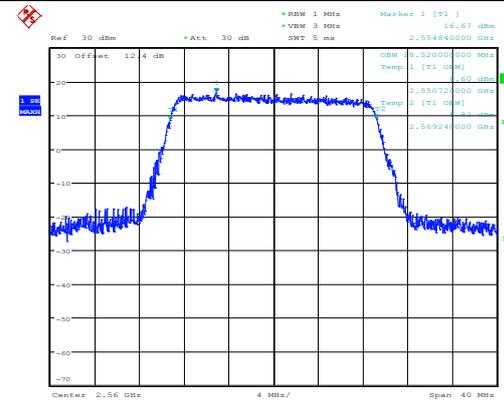
Date: 13.FEB.2015 21:47:28

Highest Channel / 20MHz / QPSK



Date: 13.FEB.2015 21:50:24

Highest Channel / 20MHz / 16QAM



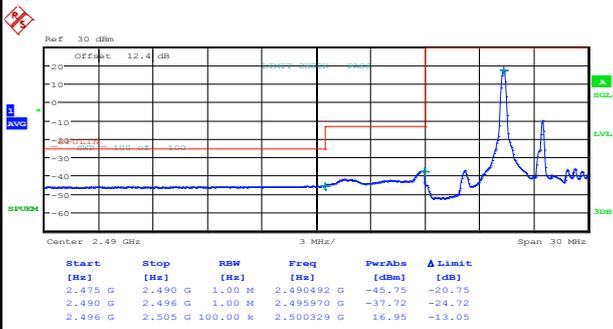
Date: 13.FEB.2015 21:50:34



Conducted Band Edge

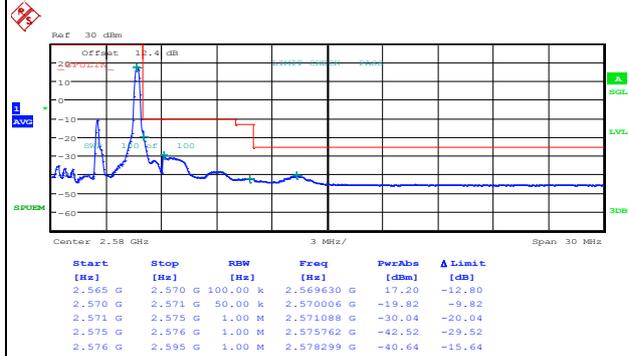
LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB



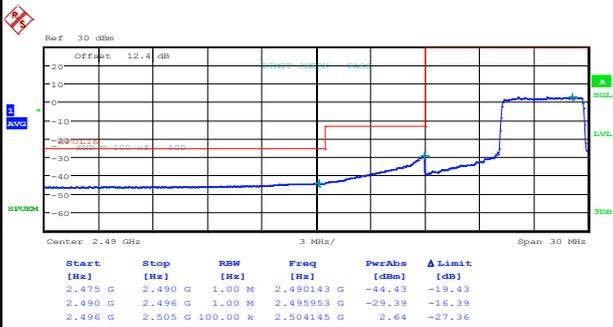
Date: 13.FEB.2015 22:23:09

Highest Band Edge / 1 RB



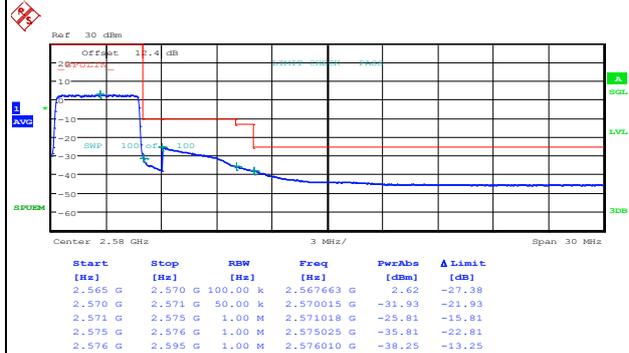
Date: 13.FEB.2015 22:27:48

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:25:29

Highest Band Edge / Full RB

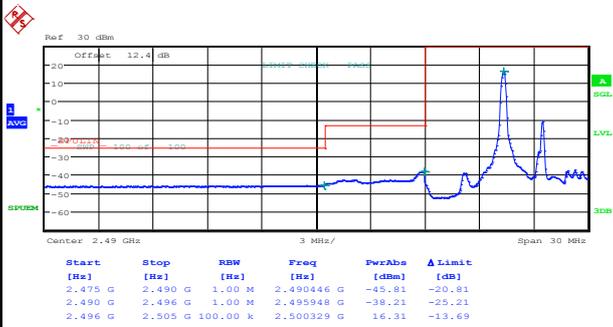


Date: 13.FEB.2015 22:30:08



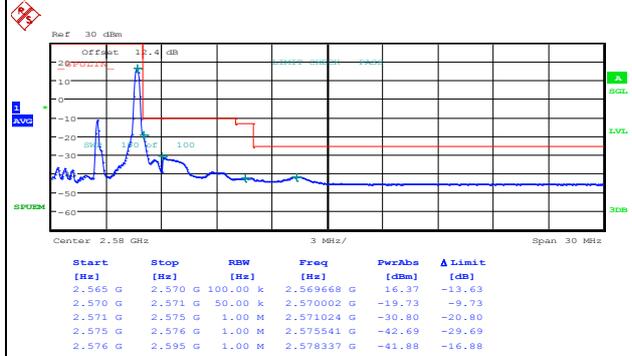
LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



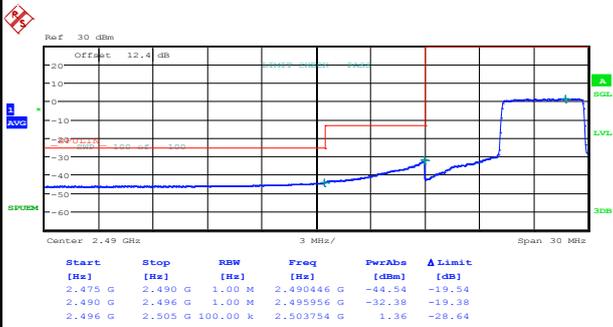
Date: 13.FEB.2015 22:24:19

Highest Band Edge / 1 RB



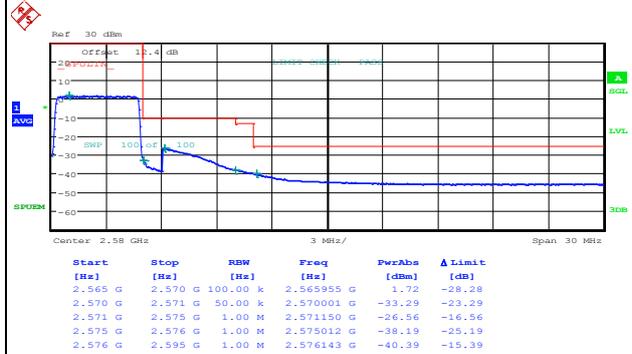
Date: 13.FEB.2015 22:28:58

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:26:38

Highest Band Edge / Full RB

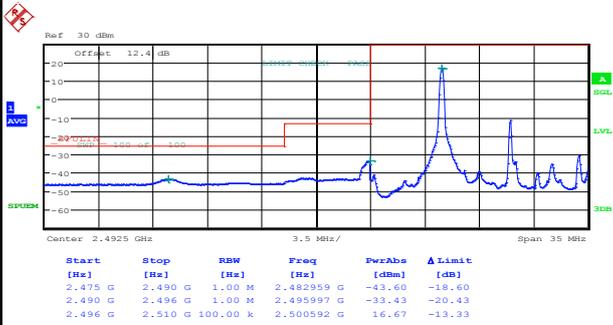


Date: 13.FEB.2015 22:31:19



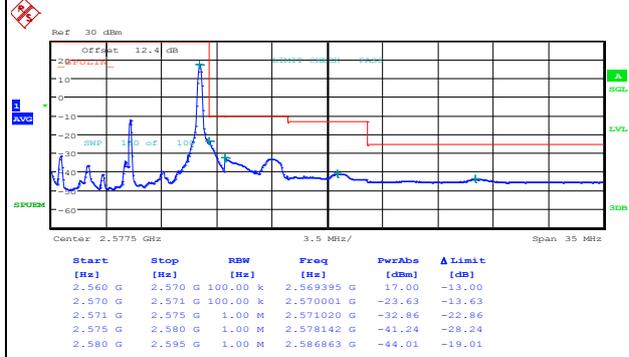
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



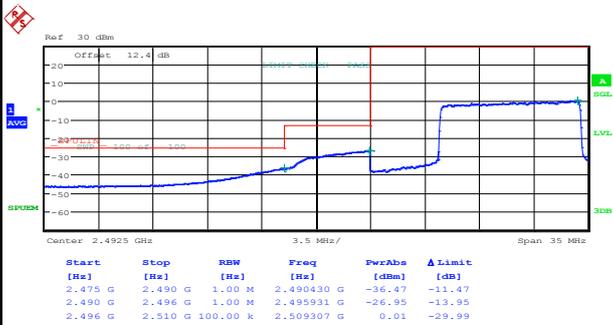
Date: 13.FEB.2015 22:32:29

Highest Band Edge / 1 RB



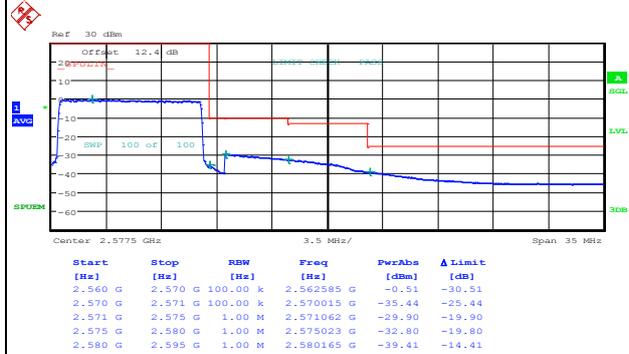
Date: 13.FEB.2015 22:37:09

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:34:49

Highest Band Edge / Full RB

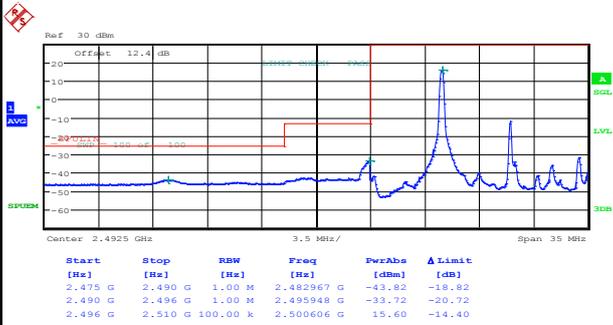


Date: 13.FEB.2015 22:39:29



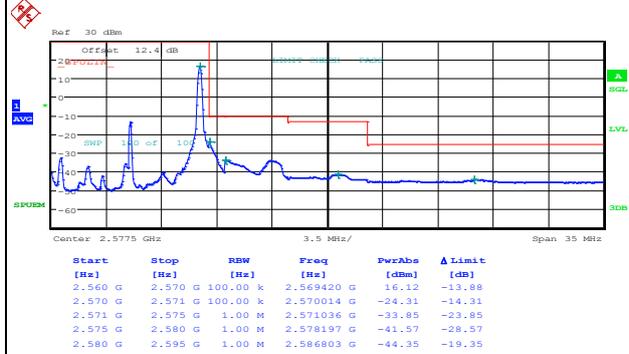
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



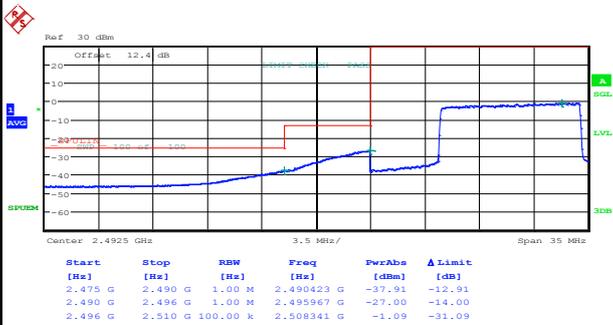
Date: 13.FEB.2015 22:33:39

Highest Band Edge / 1 RB



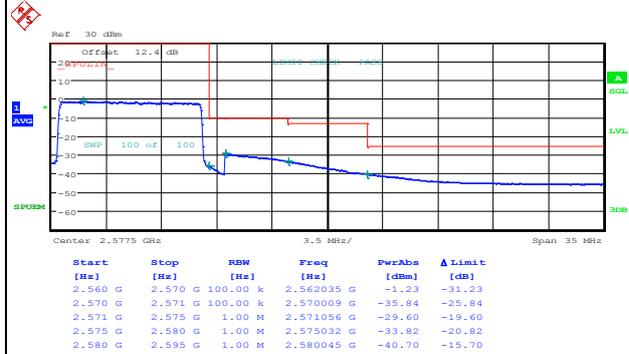
Date: 13.FEB.2015 22:38:19

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:35:59

Highest Band Edge / Full RB

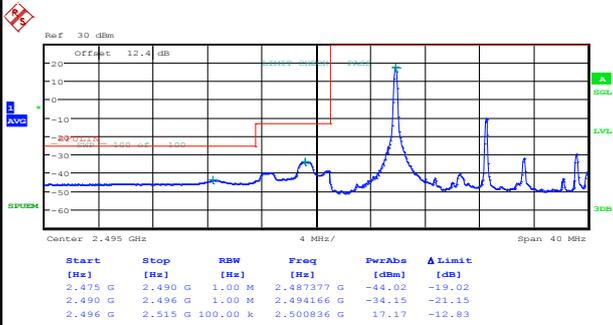


Date: 13.FEB.2015 22:40:39



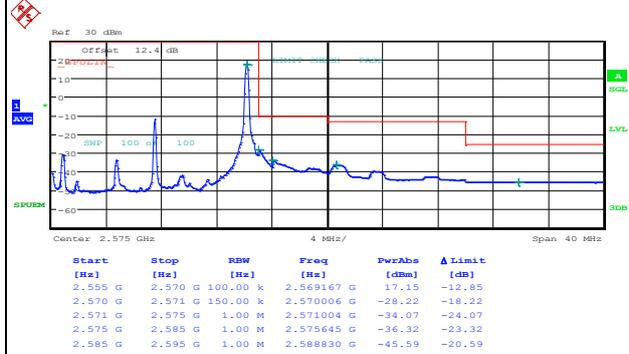
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



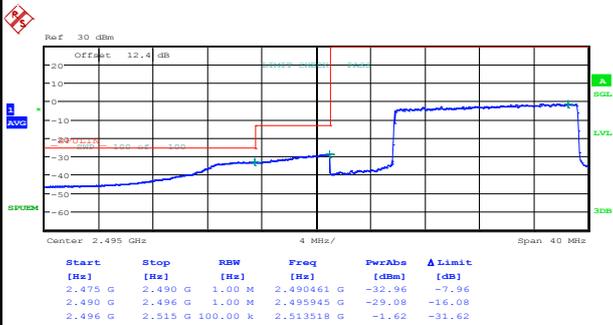
Date: 13.FEB.2015 22:41:49

Highest Band Edge / 1 RB



Date: 13.FEB.2015 22:46:29

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:44:09

Highest Band Edge / Full RB

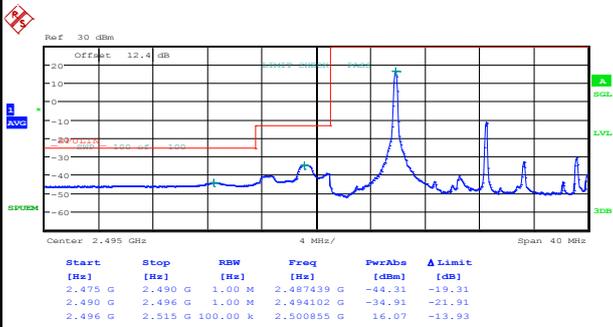


Date: 13.FEB.2015 22:48:49



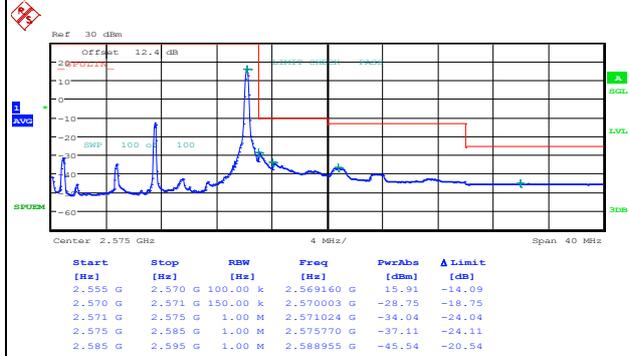
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



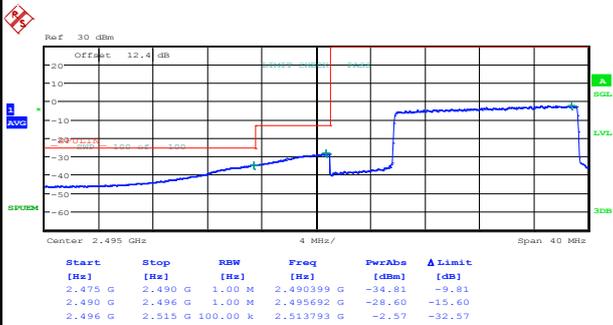
Date: 13.FEB.2015 22:42:59

Highest Band Edge / 1 RB



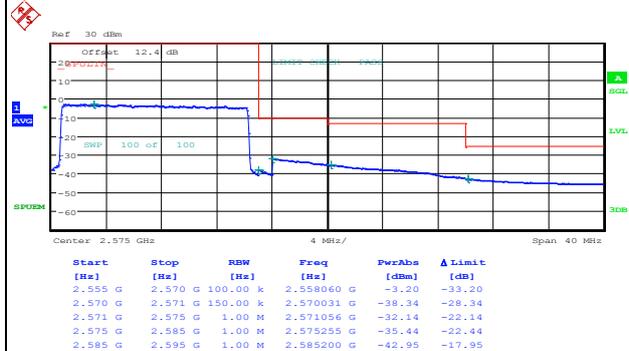
Date: 13.FEB.2015 22:47:39

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:45:19

Highest Band Edge / Full RB

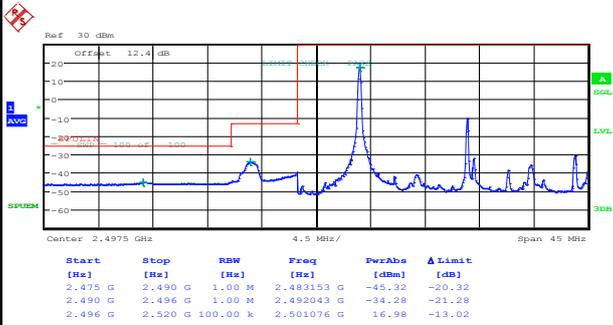


Date: 13.FEB.2015 22:49:59



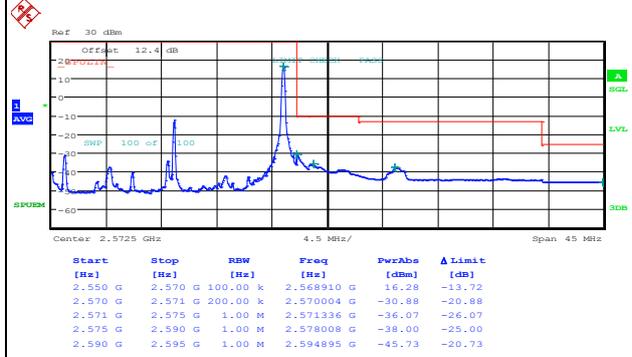
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB



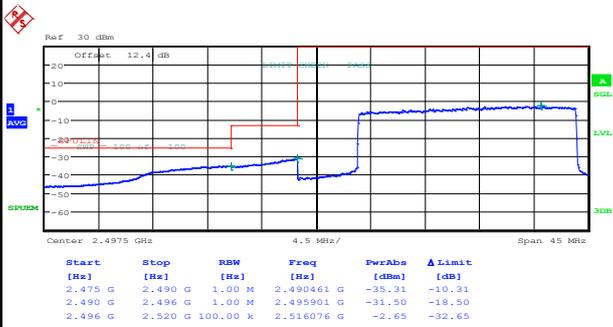
Date: 13.FEB.2015 22:51:09

Highest Band Edge / 1 RB



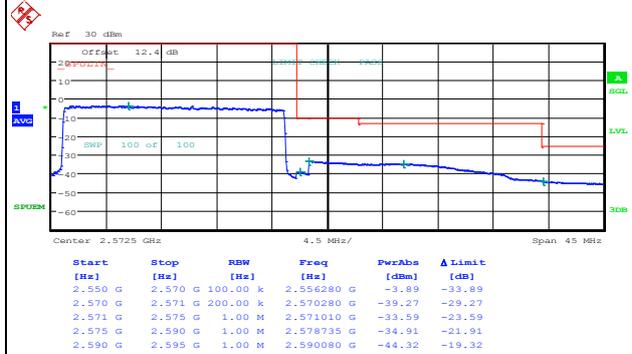
Date: 13.FEB.2015 22:55:49

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:53:29

Highest Band Edge / Full RB

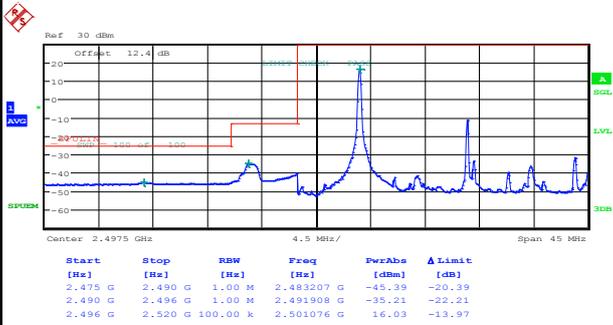


Date: 13.FEB.2015 22:59:19



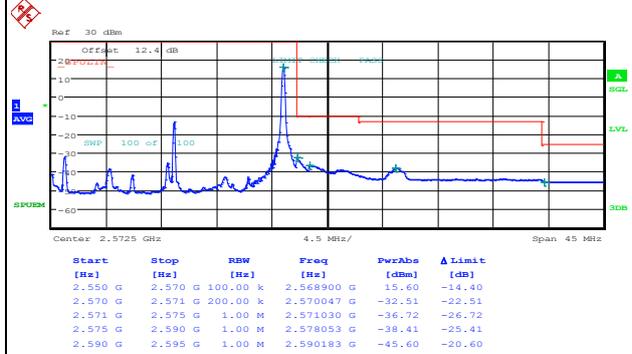
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



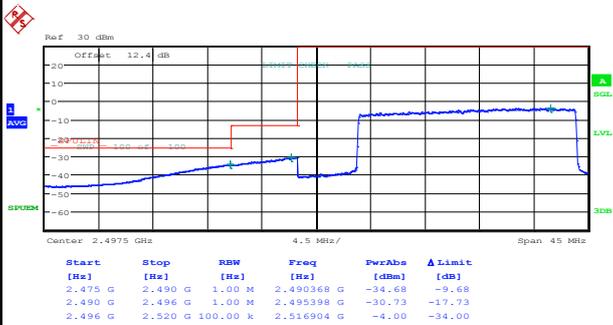
Date: 13.FEB.2015 22:52:19

Highest Band Edge / 1RB



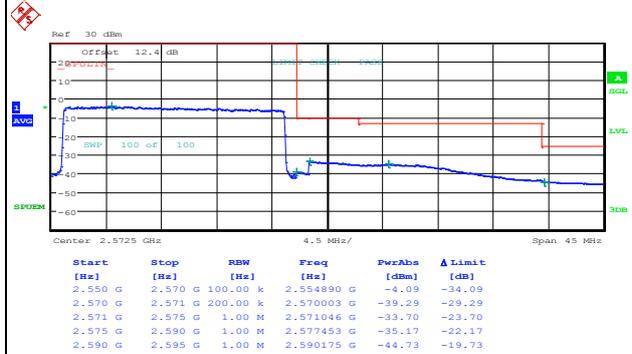
Date: 13.FEB.2015 22:56:59

Lowest Band Edge / Full RB



Date: 13.FEB.2015 22:54:39

Highest Band Edge / Full RB

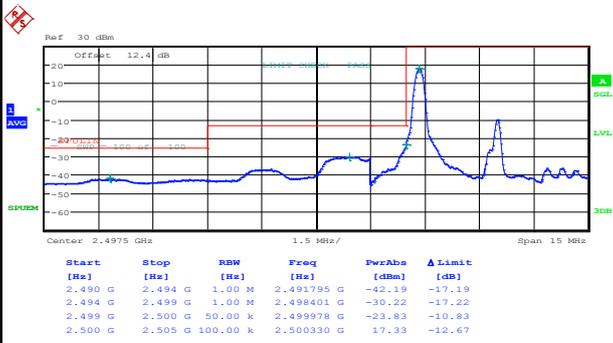


Date: 13.FEB.2015 22:58:09



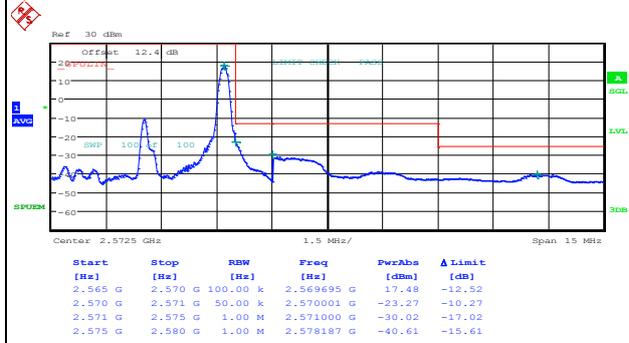
LTE Band 7 / 5MHz / QPSK (IC)

Lowest Band Edge / 1 RB



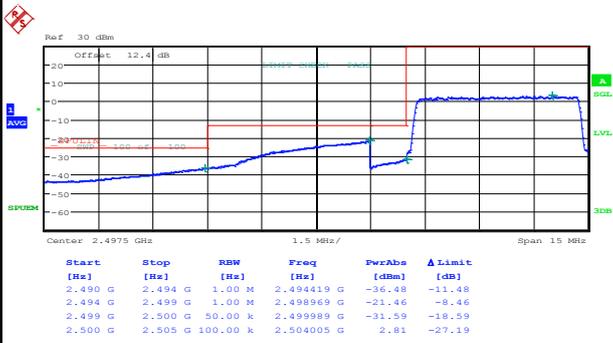
Date: 13.FEB.2015 20:45:27

Highest Band Edge / 1 RB



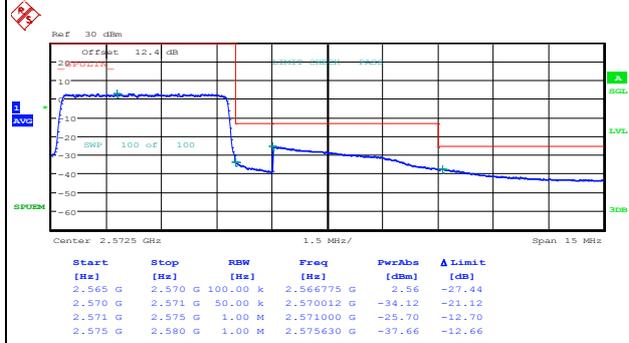
Date: 13.FEB.2015 20:56:19

Lowest Band Edge / Full RB



Date: 13.FEB.2015 20:47:47

Highest Band Edge / Full RB

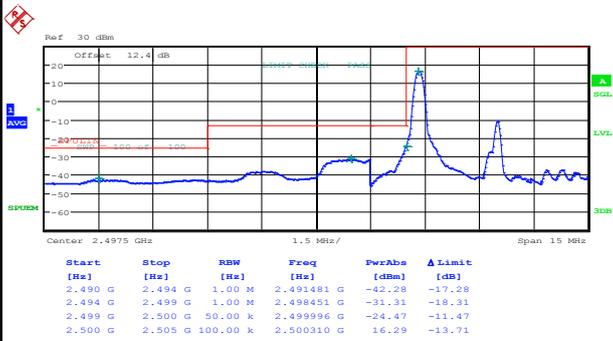


Date: 13.FEB.2015 20:58:38



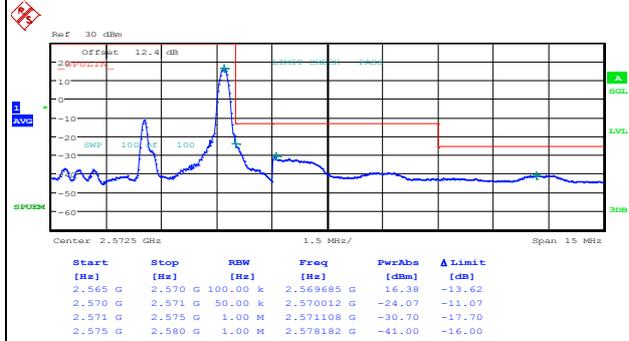
LTE Band 7 / 5MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



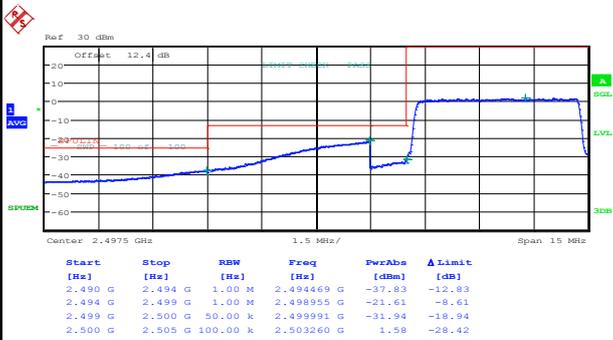
Date: 13.FEB.2015 20:46:37

Highest Band Edge / 1 RB



Date: 13.FEB.2015 20:57:28

Lowest Band Edge / Full RB



Date: 13.FEB.2015 20:48:56

Highest Band Edge / Full RB

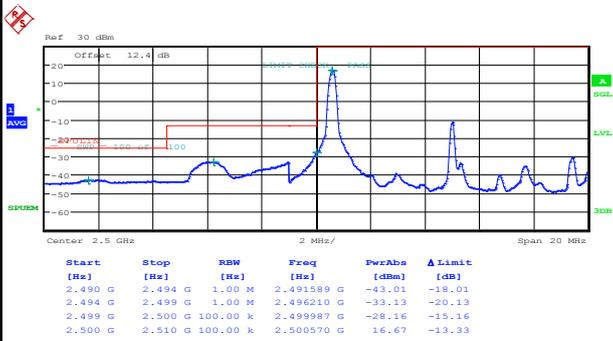


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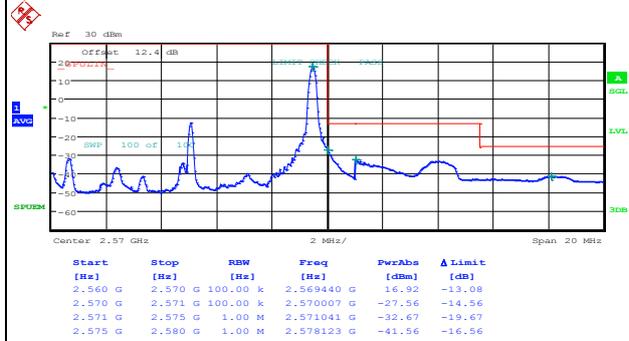
LTE Band 7 / 10MHz / QPSK (IC)

Lowest Band Edge / 1 RB



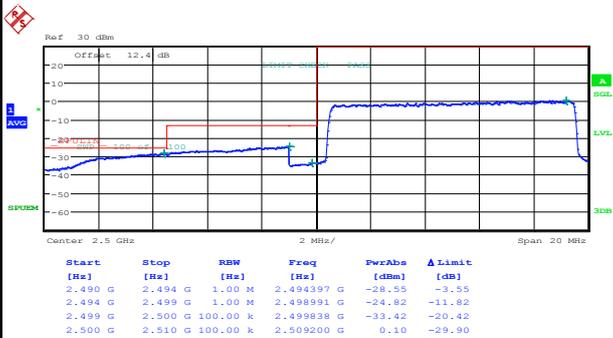
Date: 13.FEB.2015 21:04:04

Highest Band Edge / 1 RB



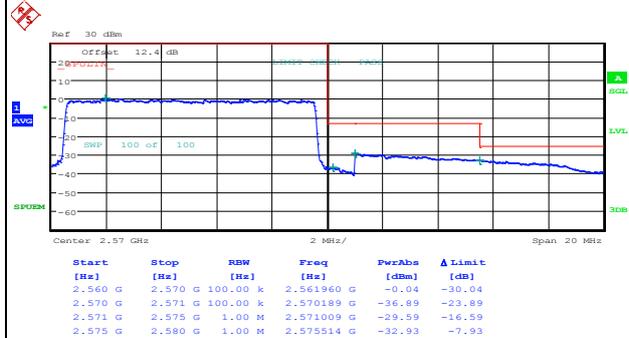
Date: 13.FEB.2015 21:14:56

Lowest Band Edge / Full RB



Date: 13.FEB.2015 21:06:24

Highest Band Edge / Full RB

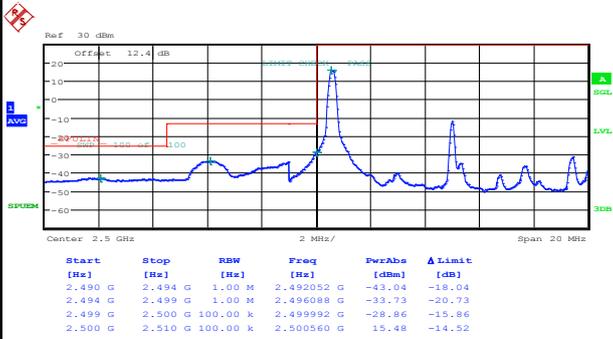


Date: 13.FEB.2015 21:17:15



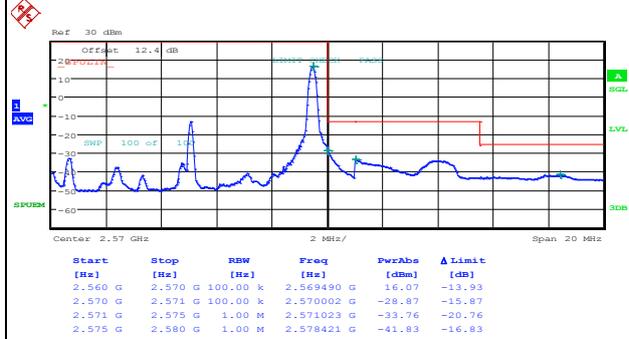
LTE Band 7 / 10MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



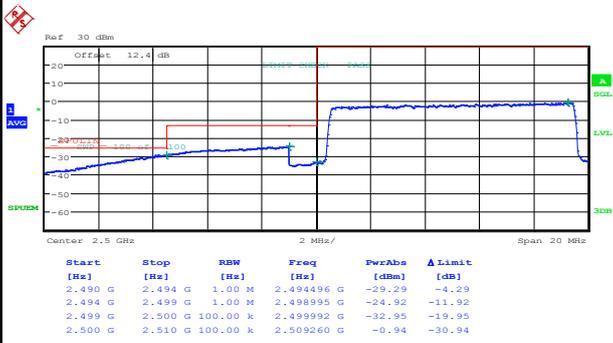
Date: 13.FEB.2015 21:05:14

Highest Band Edge / 1 RB



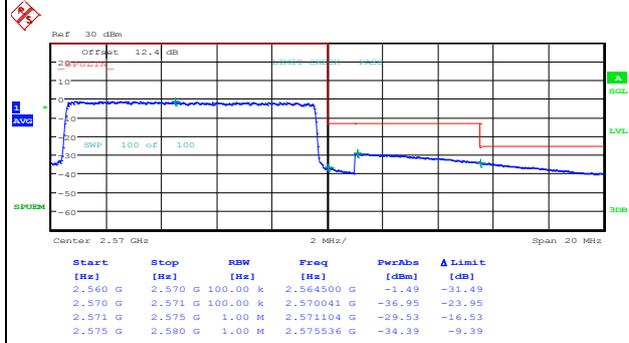
Date: 13.FEB.2015 21:16:05

Lowest Band Edge / Full RB



Date: 13.FEB.2015 21:07:34

Highest Band Edge / Full RB

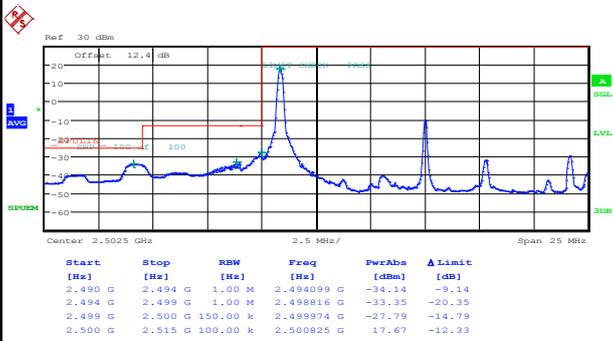


Date: 13.FEB.2015 21:18:25



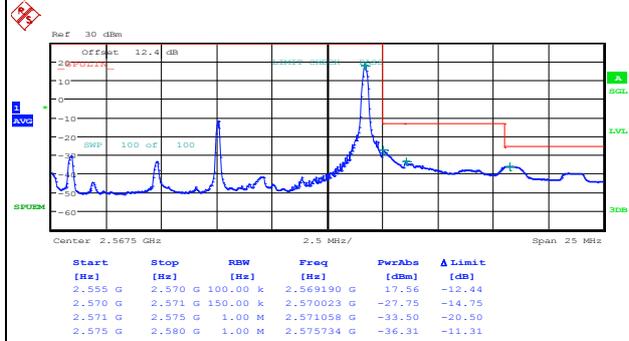
LTE Band 7 / 15MHz / QPSK (IC)

Lowest Band Edge / 1 RB



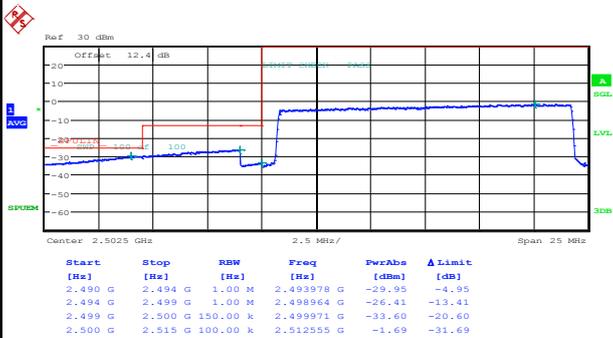
Date: 13.FEB.2015 21:22:41

Highest Band Edge / 1 RB



Date: 13.FEB.2015 21:33:33

Lowest Band Edge / Full RB



Date: 13.FEB.2015 21:25:00

Highest Band Edge / Full RB

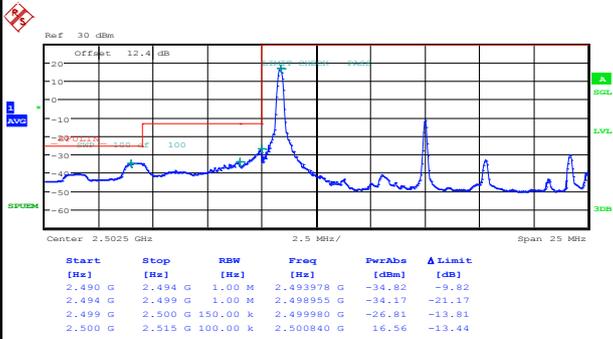


Date: 13.FEB.2015 21:35:52



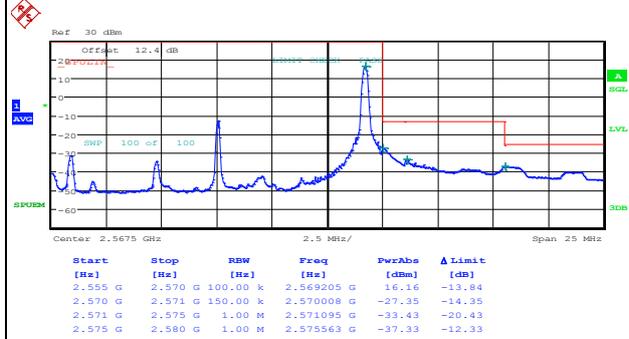
LTE Band 7 / 15MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



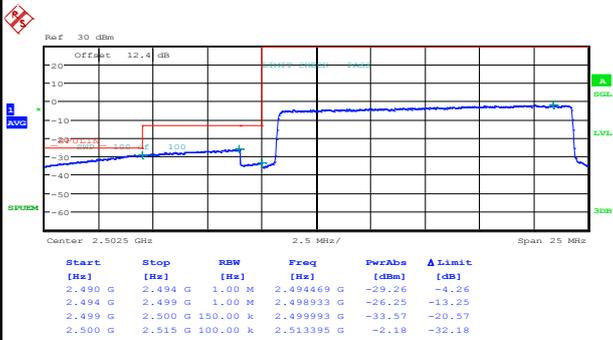
Date: 13.FEB.2015 21:23:51

Highest Band Edge / 1 RB



Date: 13.FEB.2015 21:34:43

Lowest Band Edge / Full RB



Date: 13.FEB.2015 21:26:10

Highest Band Edge / Full RB

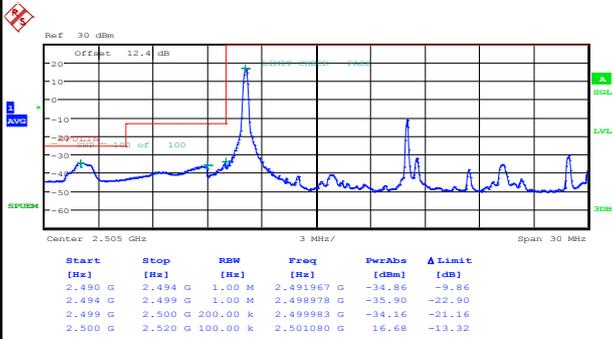


Date: 13.FEB.2015 21:37:02



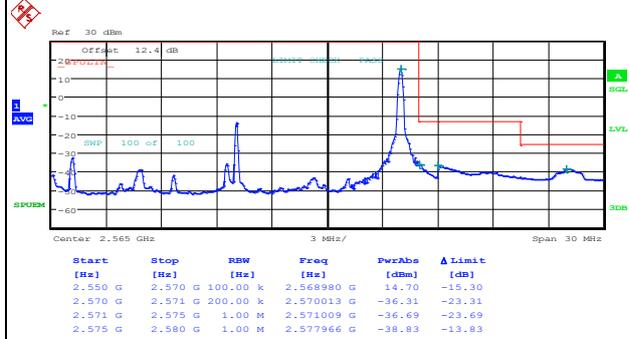
LTE Band 7 / 20MHz / QPSK (IC)

Lowest Band Edge / 1 RB



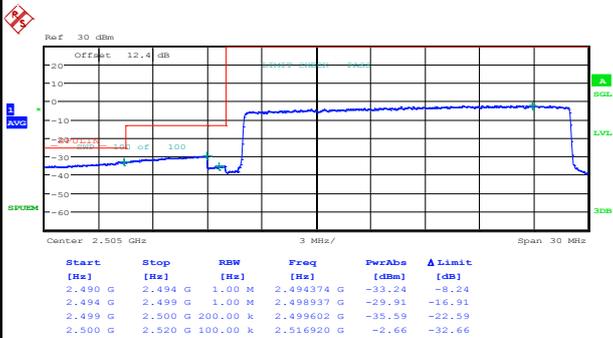
Date: 13.FEB.2015 21:41:19

Highest Band Edge / 1 RB



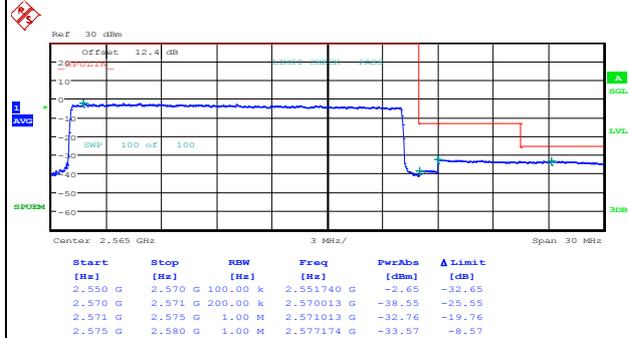
Date: 13.FEB.2015 21:52:09

Lowest Band Edge / Full RB



Date: 13.FEB.2015 21:43:38

Highest Band Edge / Full RB

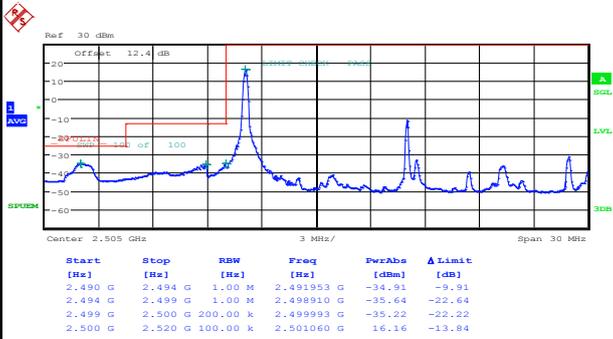


Date: 13.FEB.2015 21:55:37



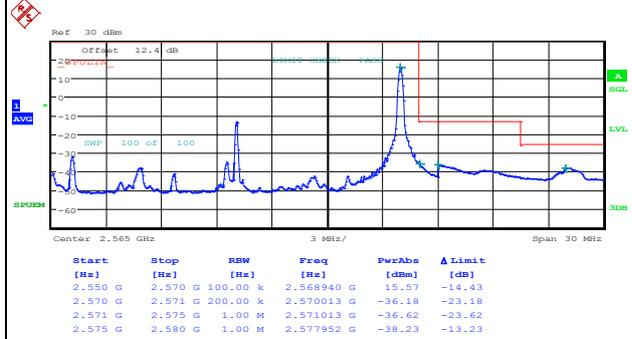
LTE Band 7 / 20MHz / 16QAM (IC)

Lowest Band Edge / 1 RB



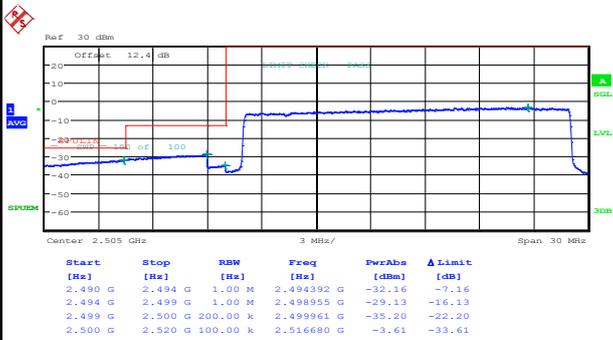
Date: 13.FEB.2015 21:42:28

Highest Band Edge / 1RB



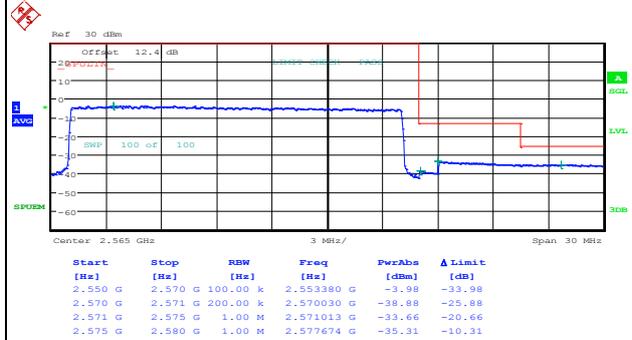
Date: 13.FEB.2015 21:53:18

Lowest Band Edge / Full RB



Date: 13.FEB.2015 21:44:47

Highest Band Edge / Full RB



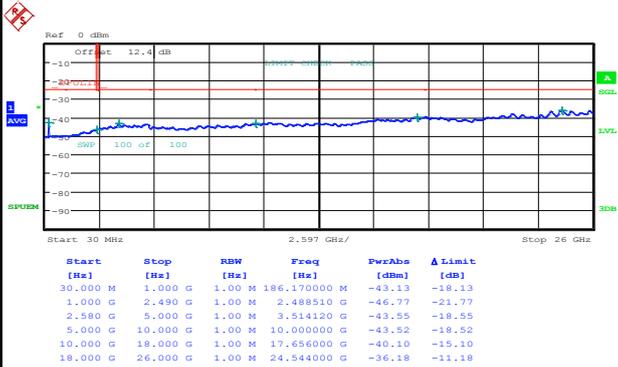
Date: 13.FEB.2015 21:54:28



Conducted Spurious Emission

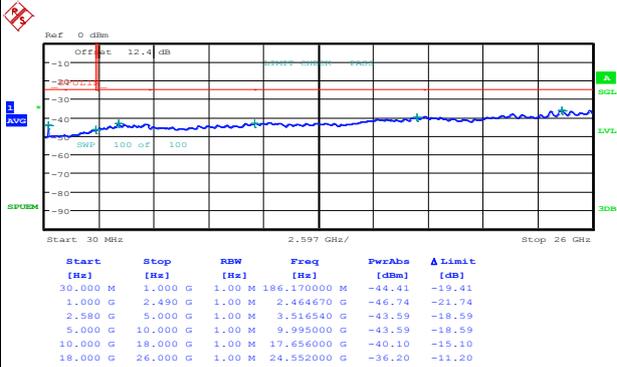
LTE Band 7 / 5MHz

Lowest Channel / QPSK



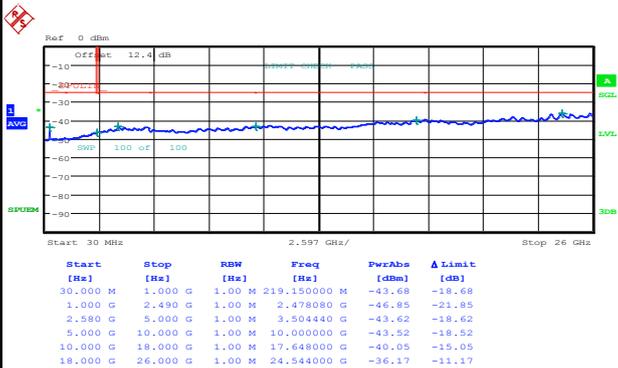
Date: 13.FEB.2015 20:50:06

Lowest Channel / 16QAM



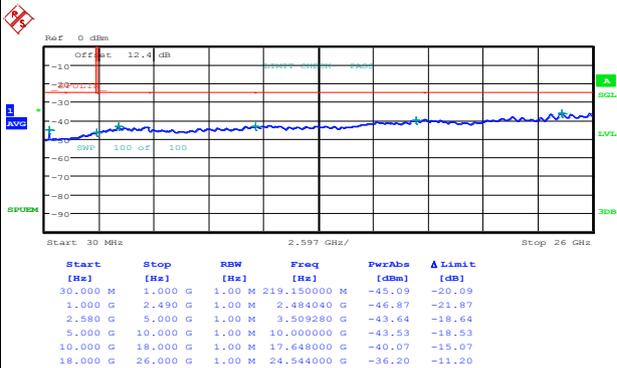
Date: 13.FEB.2015 20:51:15

Middle Channel / QPSK



Date: 13.FEB.2015 20:53:12

Middle Channel / 16QAM

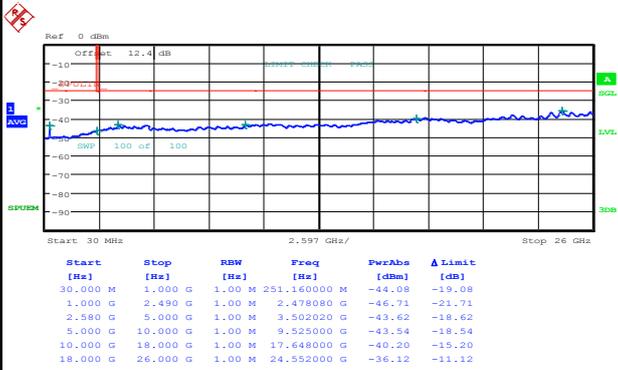


Date: 13.FEB.2015 20:54:21



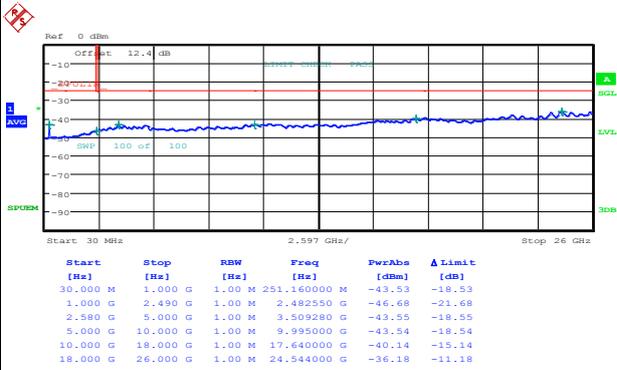
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 13.FEB.2015 21:00:58

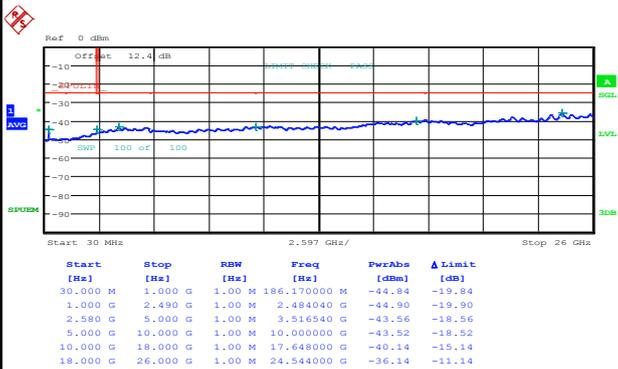
Highest Channel / 16QAM



Date: 13.FEB.2015 21:02:07

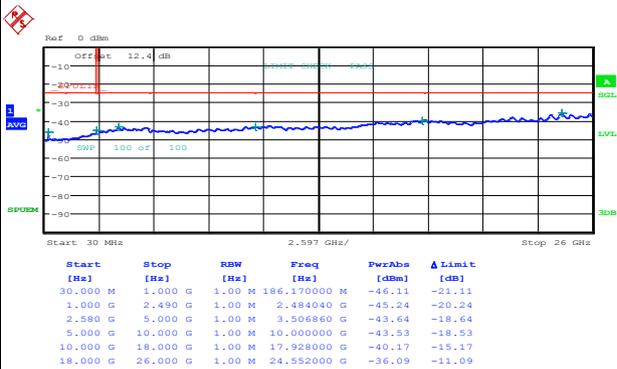
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 13.FEB.2015 21:08:43

Lowest Channel / 16QAM



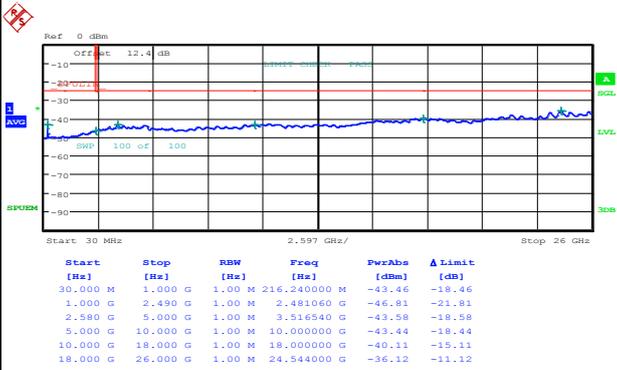
Date: 13.FEB.2015 21:09:52



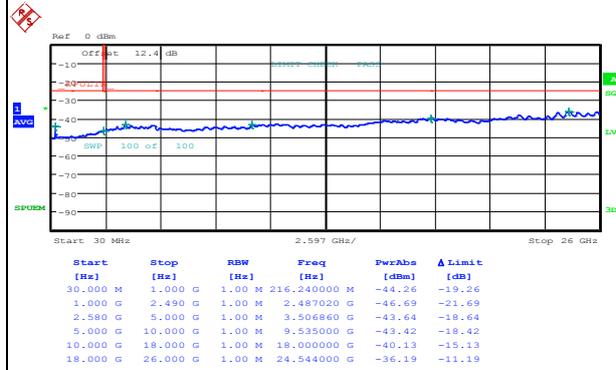
LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



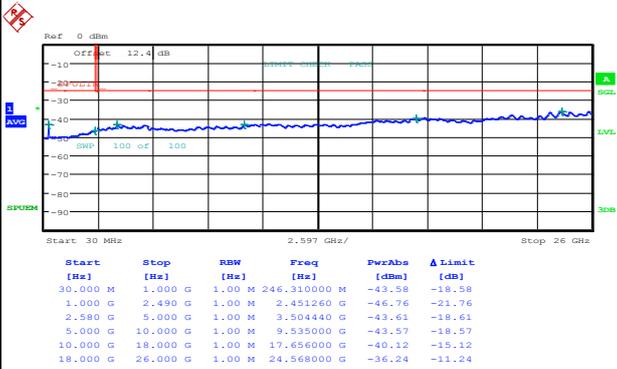
Date: 13.FEB.2015 21:11:49



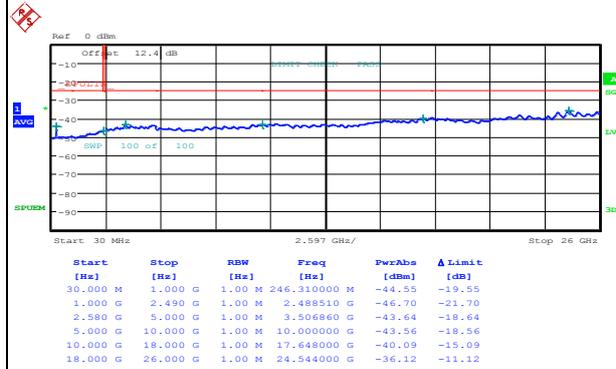
Date: 13.FEB.2015 21:12:59

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 13.FEB.2015 21:19:35



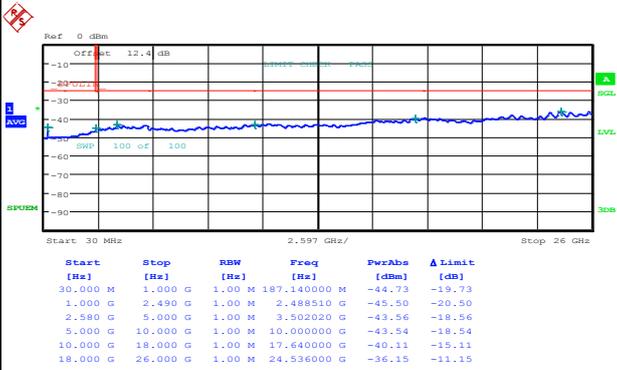
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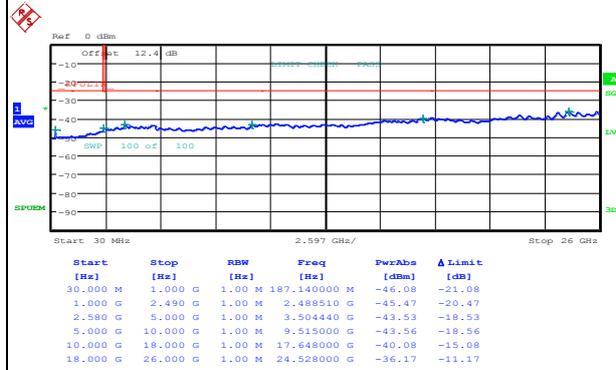
LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



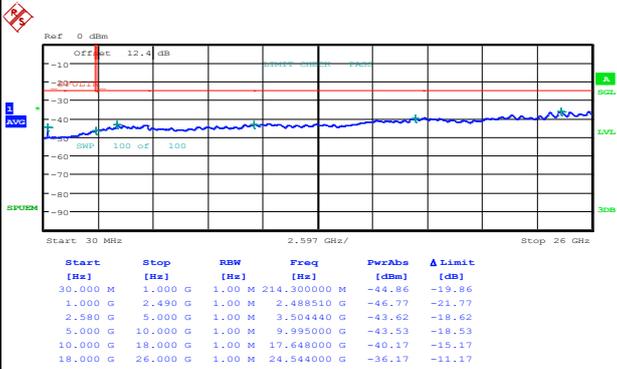
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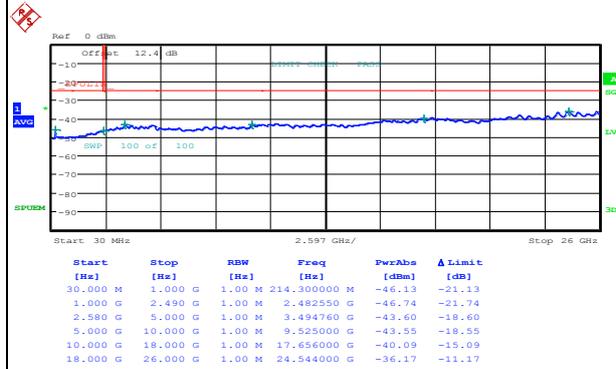
Date: 13.FEB.2015 21:28:29

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 13.FEB.2015 21:30:26



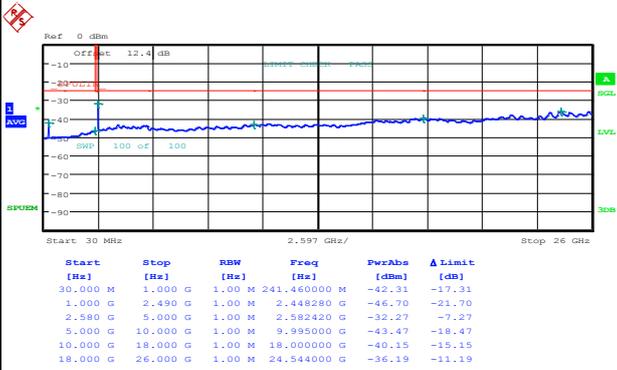
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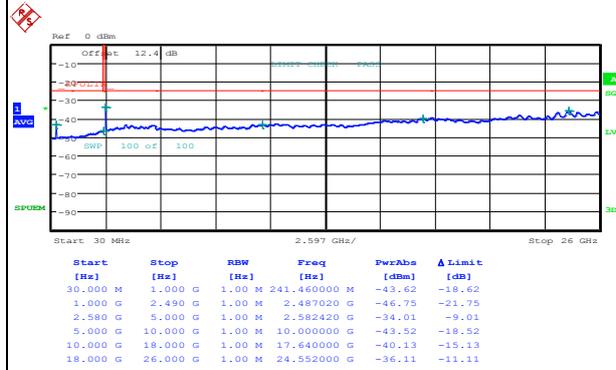
LTE Band7 / 15MHz

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 13.FEB.2015 21:38:12

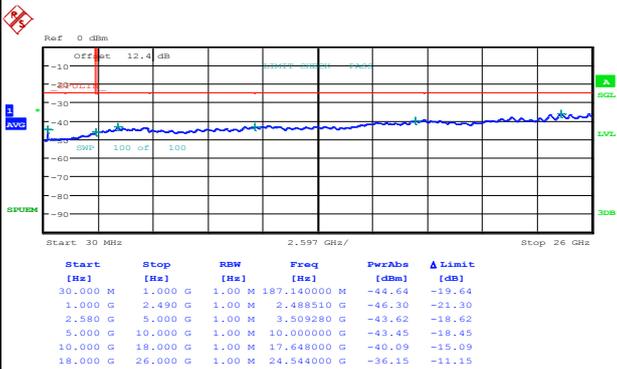


Date: 13.FEB.2015 21:39:21

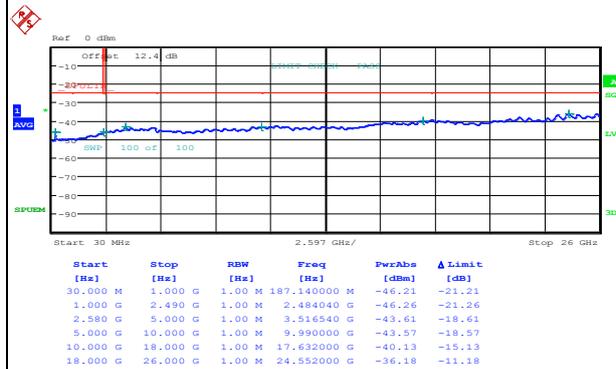
LTE Band 7 / 20MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 13.FEB.2015 21:45:57



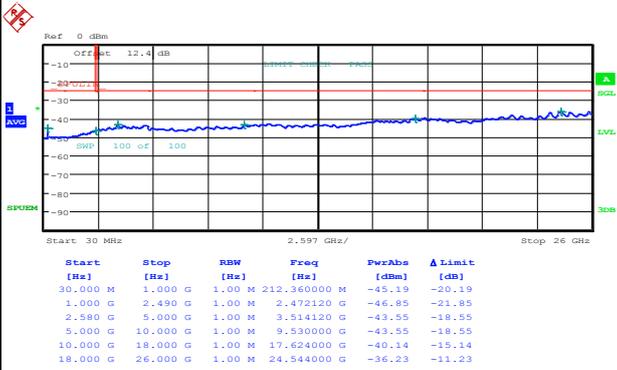
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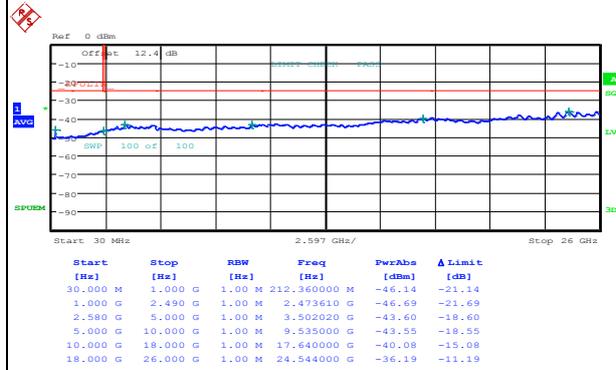
LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



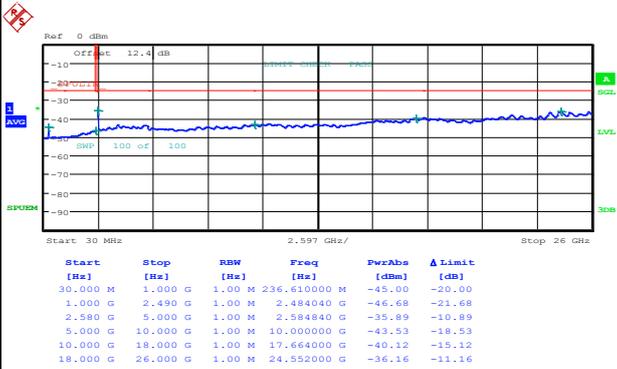
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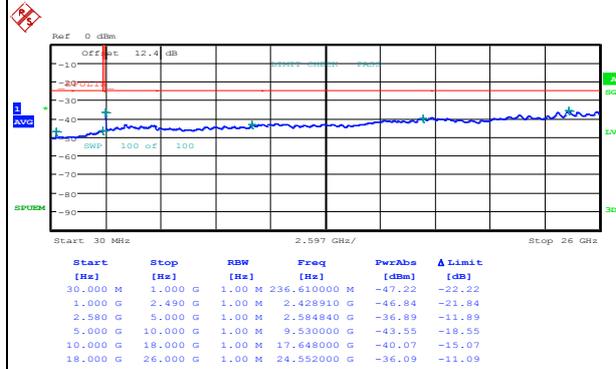
Date: 13.FEB.2015 21:50:13

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 13.FEB.2015 21:56:46



Date: 13.FEB.2015 21:57:56



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	0.0004	PASS
40	Normal Voltage	0.0133	
30	Normal Voltage	0.0145	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0160	
-20	Normal Voltage	0.0142	
-30	Normal Voltage	0.0164	
20	Maximum Voltage	0.0149	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0154	

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.



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	0.9	PASS
40	Normal Voltage	-33.6	
30	Normal Voltage	-36.8	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	0.7	
0	Normal Voltage	-1.2	
-10	Normal Voltage	-40.6	
-20	Normal Voltage	-36.1	
-30	Normal Voltage	-41.5	
20	Maximum Voltage	-37.8	
20	Normal Voltage	0	
20	Battery End Point	-39	

$|\text{MAX}(\Delta f)| = 41.5 \text{ Hz}$

Frequency Stability	Frequency (MHz)	Limit Line	Result
fL - $ \text{MAX}(\Delta f) $	2500.167976	$\geq 2500 \text{ MHz}$	PASS
fH + $ \text{MAX}(\Delta f) $	2569.835024	$\leq 2570 \text{ MHz}$	