Appendix F. LTE Spectrum Plots For Different RB Allocations

Operation Band	Bandwidth	Modulation	RB Size/Offset	OBW99%(MHZ)
Band 2	20MHz	QPSK	1RB / Offset 0	2.96
			1RB / Offset 99	2.96
			50RB / Offset 25	10.24
			100RB / Offset 0	18.72
		16QAM	1RB / Offset 0	3.04
			1RB / Offset 99	2.96
			50RB / Offset 25	10.16
			100RB / Offset 0	18.80
	15MHz	QPSK	1RB / Offset 0	1.14
			1RB / Offset 74	1.08
			36RB / Offset 18	6.72
			75RB / Offset 0	13.50
		16QAM	1RB / Offset 0	1.14
			1RB / Offset 74	1.08
			36RB / Offset 18	6.78
			75RB / Offset 0	13.62
	10MHz	QPSK	1RB / Offset 0	0.96
			1RB / Offset 49	0.96
			25RB / Offset 13	4.80
			50RB / Offset 0	9.16
		16QAM	1RB / Offset 0	0.96
			1RB / Offset 49	0.96
			25RB / Offset 13	4.88
			50RB / Offset 0	9.12
	5MHz	QPSK	1RB / Offset 0	0.44
			1RB / Offset 24	0.46
			12RB / Offset 6	2.28
			25RB / Offset 0	4.50
		16QAM	1RB / Offset 0	0.46
			1RB / Offset 24	0.44
			12RB / Offset 6	2.26
			25RB / Offset 0	4.52
	3MHz	QPSK	1RB / Offset 0	0.41
			1RB / Offset 14	0.41
			8RB / Offset 4	1.58
			15RB / Offset 0	2.74
		16QAM	1RB / Offset 0	0.41
			1RB / Offset 14	0.40
			8RB / Offset 4	1.58
			15RB / Offset 0	2.74
	1.4MHz	QPSK	1RB / Offset 0	0.27
			1RB / Offset 5	0.28
			3RB / Offset 2	0.63
			6RB / Offset 0	1.10
		16QAM	1RB / Offset 0	0.28
			1RB / Offset 5	0.28
			3RB / Offset 2	0.60
			6RB / Offset 0	1.10

Operation Band	Bandwidth	Modulation	RB Size/Offset	OBW99%(MHZ)
Band 4	20MHz	QPSK	1RB / Offset 0	3.04
			1RB / Offset 99	3.04
			50RB / Offset 25	10.32
			100RB / Offset 0	18.72
		16QAM	1RB / Offset 0	3.12
			1RB / Offset 99	3.12
			50RB / Offset 25	10.16
			100RB / Offset 0	18.72
	15MHz	QPSK	1RB / Offset 0	1.14
			1RB / Offset 74	1.08
			36RB / Offset 18	6.72
			75RB / Offset 0	13.50
		16QAM	1RB / Offset 0	1.14
			1RB / Offset 74	1.14
			36RB / Offset 18	6.78
			75RB / Offset 0	13.56
	10MHz	QPSK	1RB / Offset 0	1.00
			1RB / Offset 49	1.00
			25RB / Offset 13	4.84
			50RB / Offset 0	9.16
		16QAM	1RB / Offset 0	0.96
			1RB / Offset 49	1.00
			25RB / Offset 13	4.88
			50RB / Offset 0	9.16
	5MHz	QPSK	1RB / Offset 0	0.48
			1RB / Offset 24	0.46
			12RB / Offset 6	2.28
			25RB / Offset 0	4.52
		16QAM	1RB / Offset 0	0.54
			1RB / Offset 24	0.52
			12RB / Offset 6	2.26
			25RB / Offset 0	4.52
	3MHz	QPSK	1RB / Offset 0	0.41
			1RB / Offset 14	0.42
			8RB / Offset 4	1.58
			15RB / Offset 0	2.72
		16QAM	1RB / Offset 0	0.42
			1RB / Offset 14	0.43
			8RB / Offset 4	1.61
			15RB / Offset 0	2.74
	1.4MHz	QPSK	1RB / Offset 0	0.27
			1RB / Offset 5	0.27
			3RB / Offset 2	0.64
			6RB / Offset 0	1.10
		16QAM	1RB / Offset 0	0.28
			1RB / Offset 5	0.28
			3RB / Offset 2	0.62
			6RB / Offset 0	1.10

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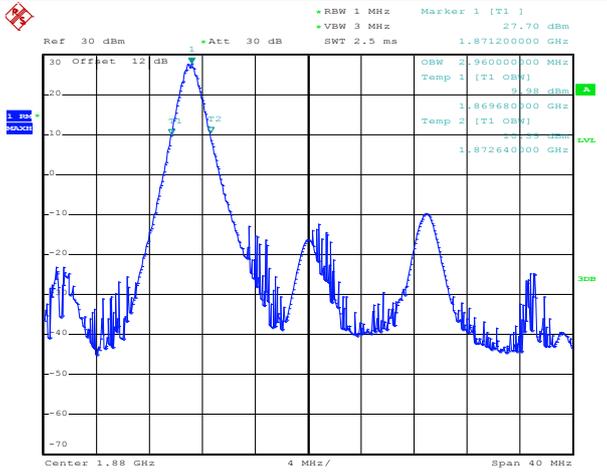
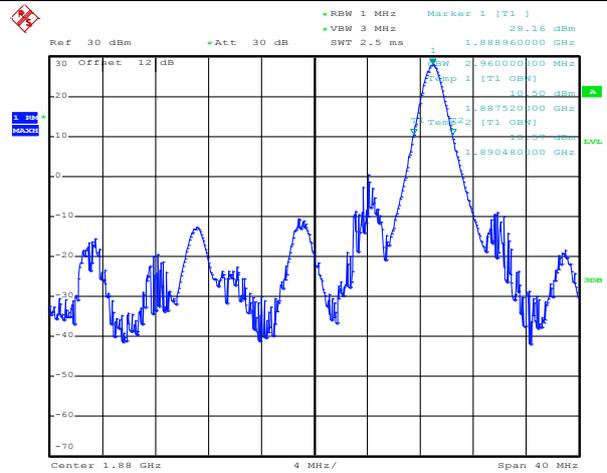Date: 10.FEB.2012 17:28:24

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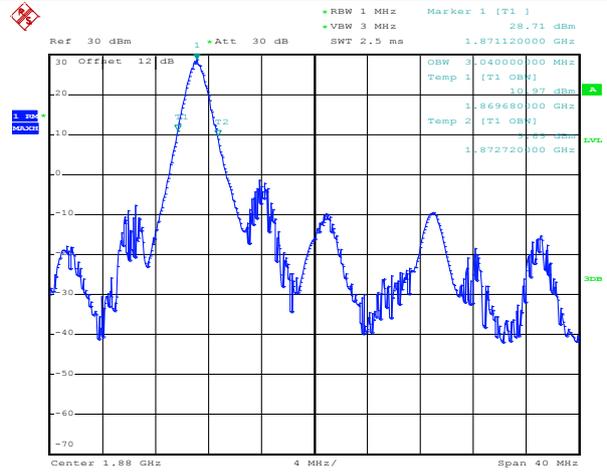
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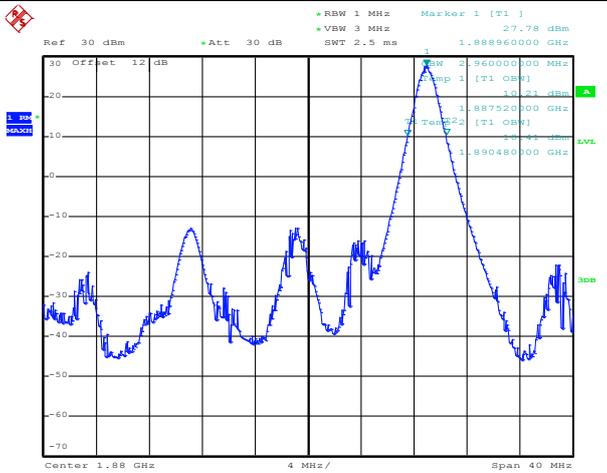
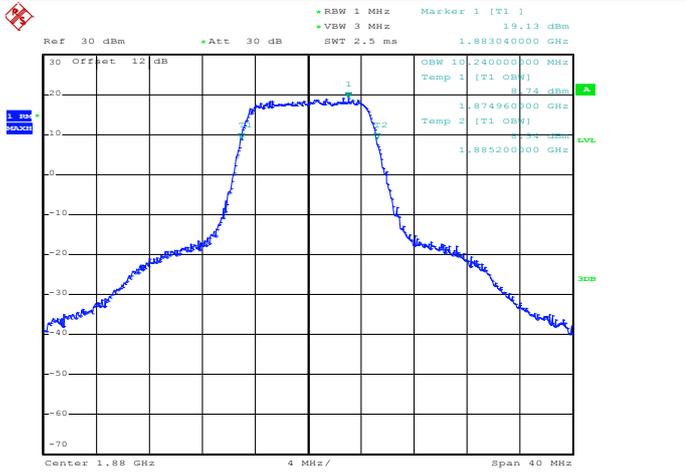Date: 10.FEB.2012 17:28:42

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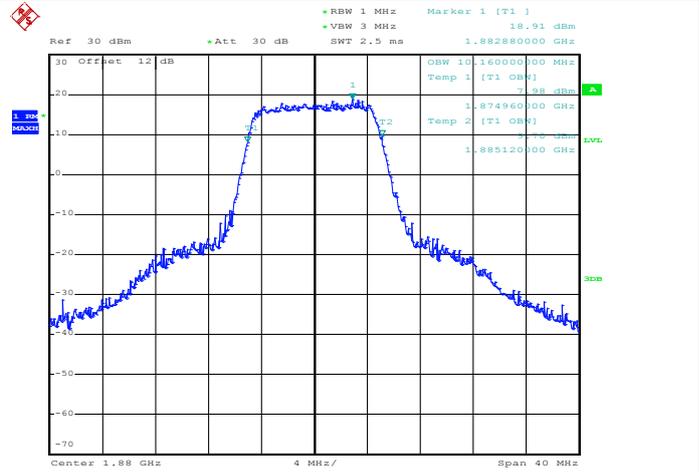Date: 10.FEB.2012 17:29:36

1RB Size, RB Offset 99, 16QAM

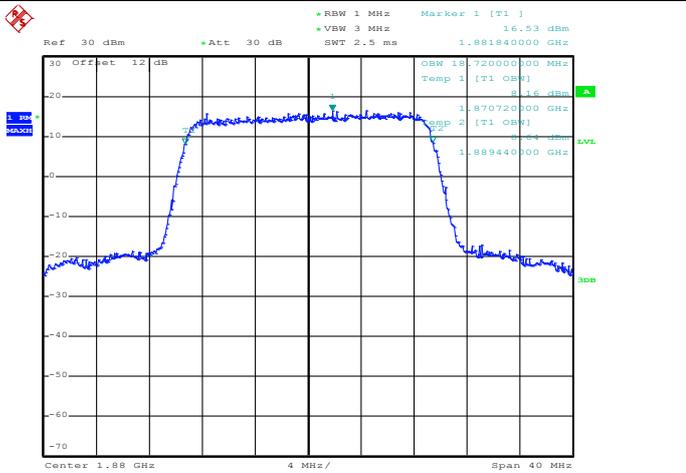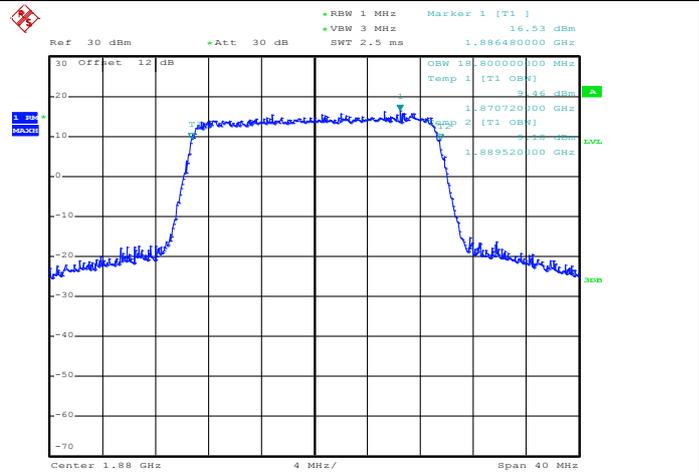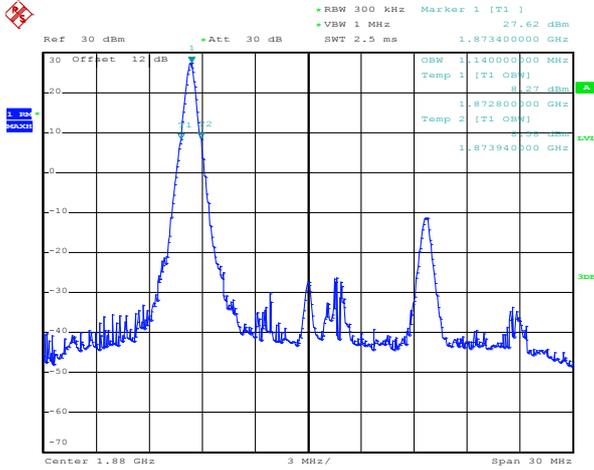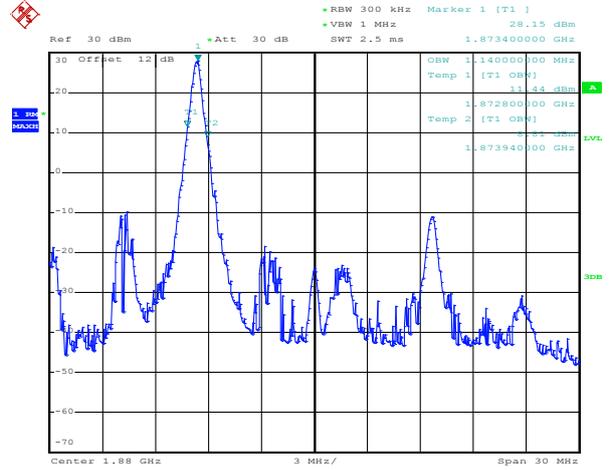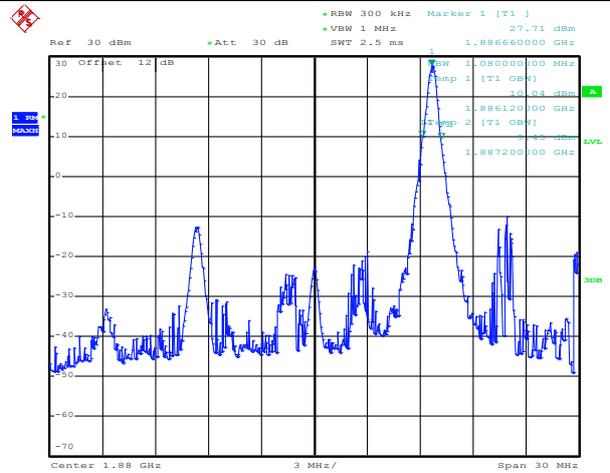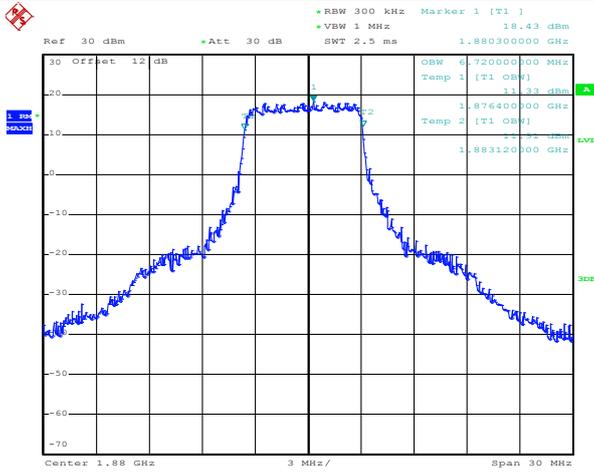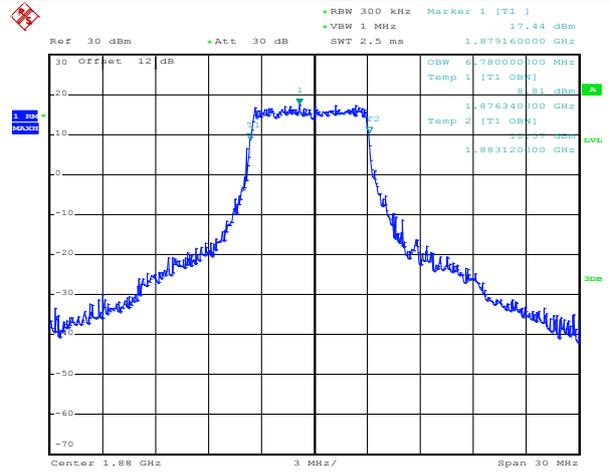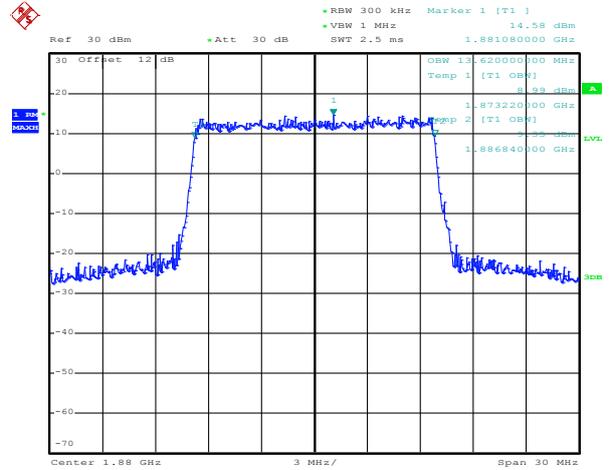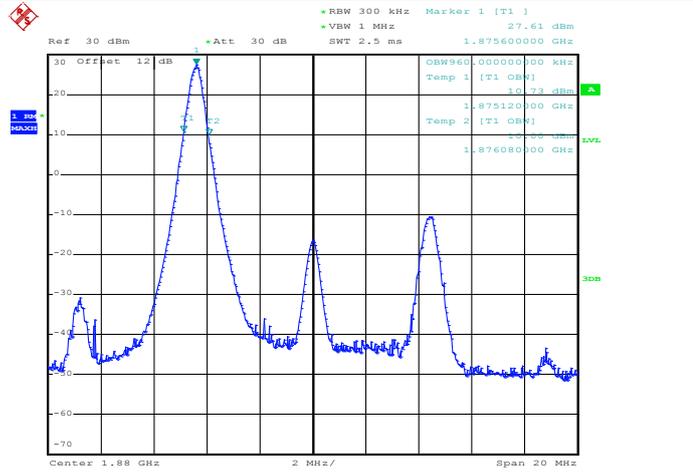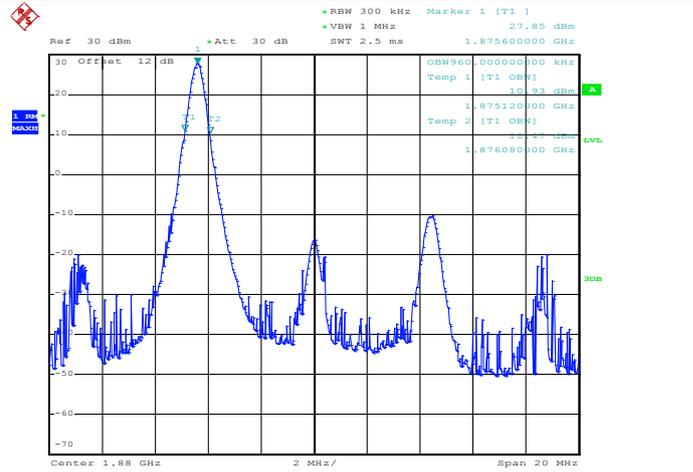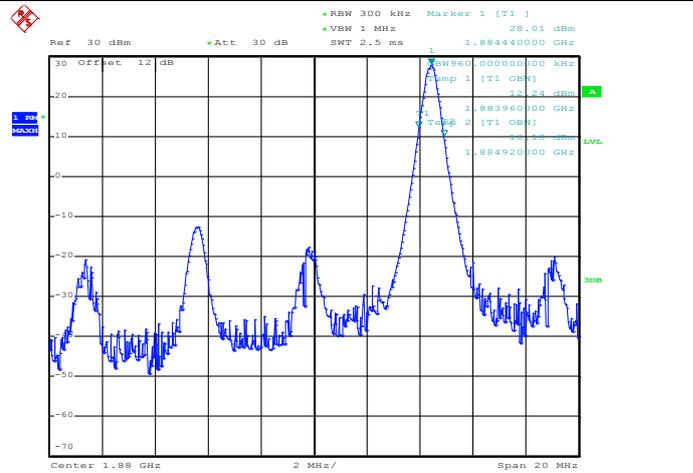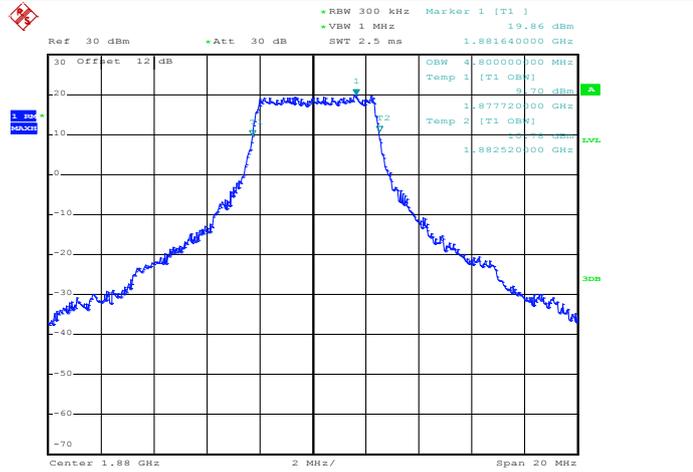*SPORTON INTERNATIONAL INC.*
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Band 2
Bandwidth 20M

Date: 10.FEB.2012 17:27:22

50RB Size, RB Offset 25, QPSK

Date: 10.FEB.2012 17:27:37

50RB Size, RB Offset 25, 16QAM

Date: 10.FEB.2012 17:30:12

100RB Size, RB Offset 0, QPSK

Date: 10.FEB.2012 17:29:57

100RB Size, RB Offset 0, 16QAM

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Band 2

Bandwidth 15M

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Date: 10.FEB.2012 16:57:49

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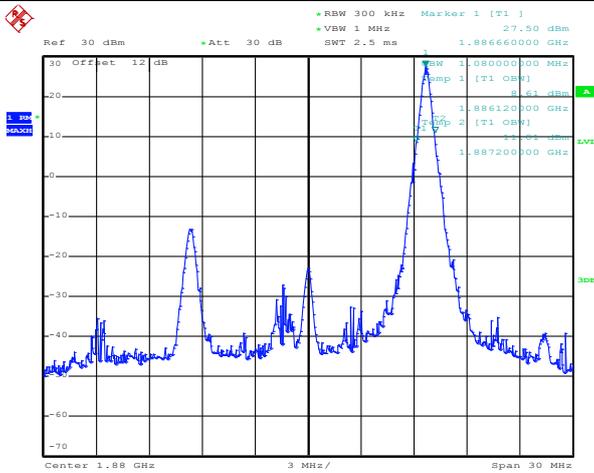
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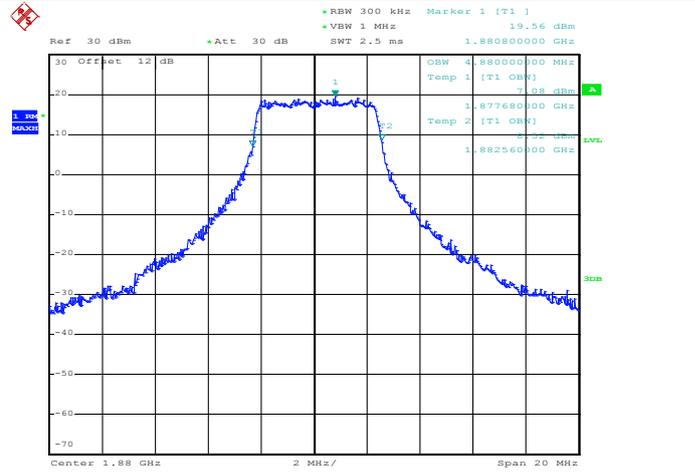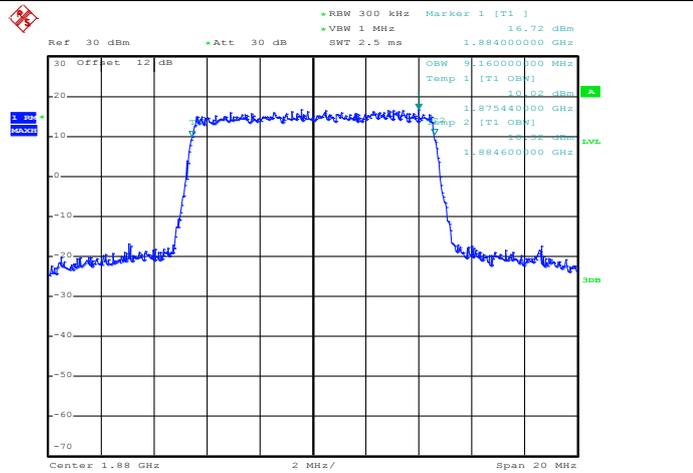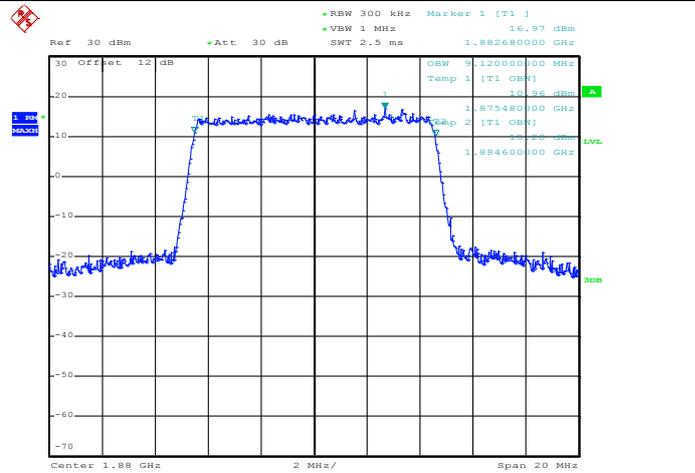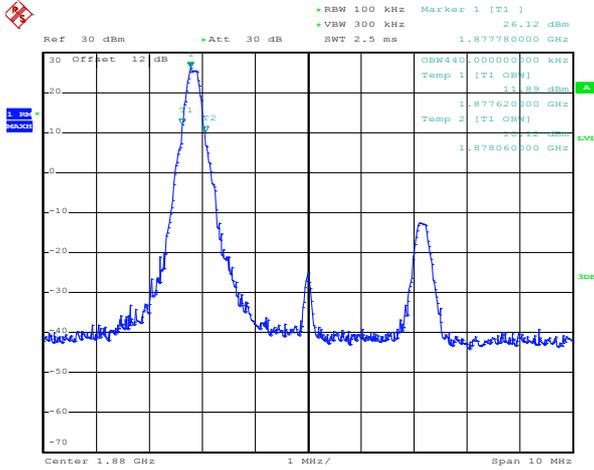Date: 10.FEB.2012 16:58:29

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Band 2
Bandwidth 15M

Date: 10.FEB.2012 16:59:17

36RB Size, RB Offset 18, QPSK

Date: 10.FEB.2012 16:59:30

36RB Size, RB Offset 18, 16QAM
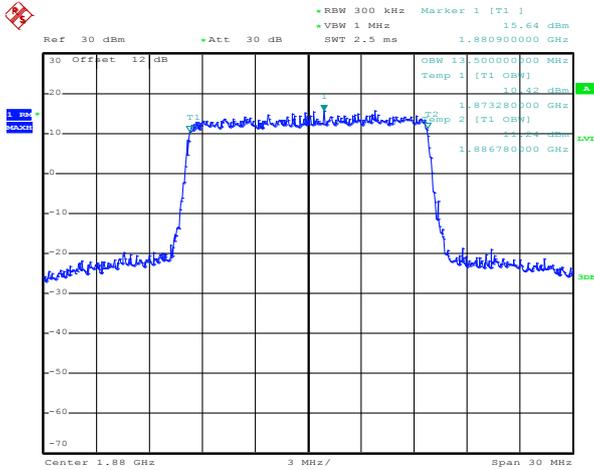
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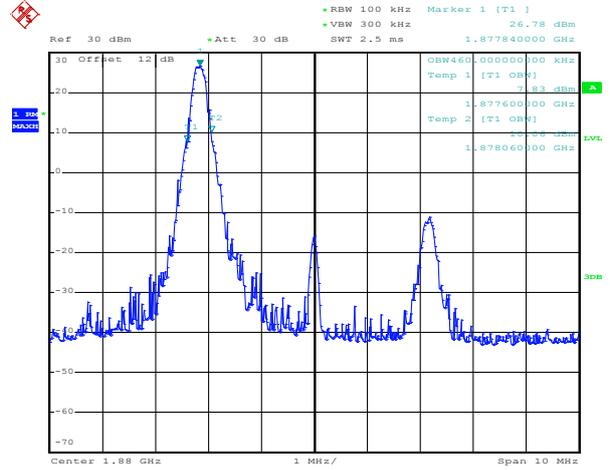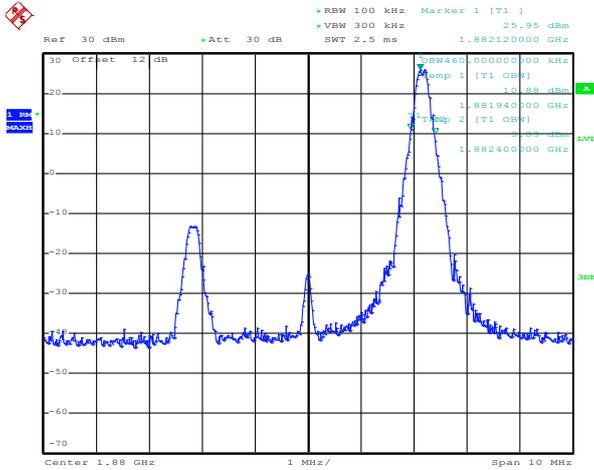
Date: 10.FEB.2012 16:56:30

75RB Size, RB Offset 0, 16QAM

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Band 2
Bandwidth 10M

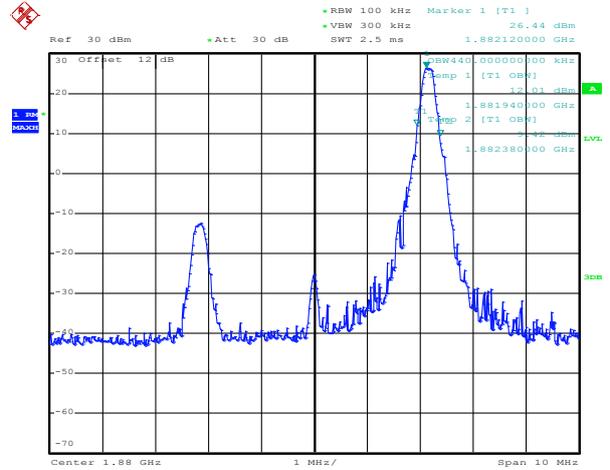Date: 10.FEB.2012 16:26:54

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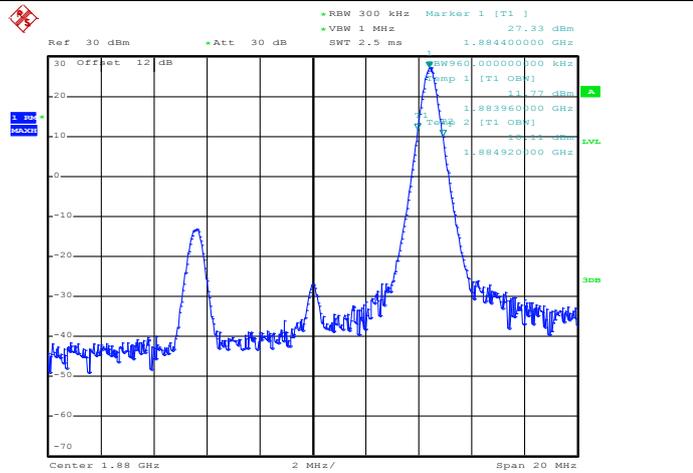
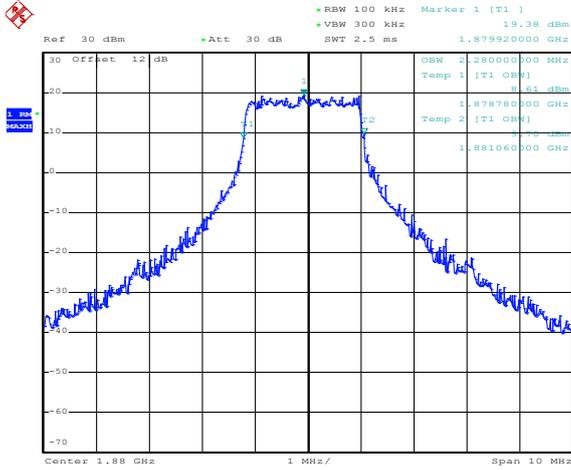Date: 10.FEB.2012 16:28:02

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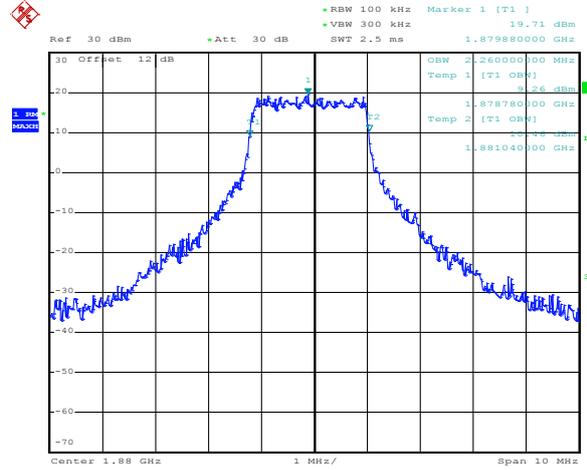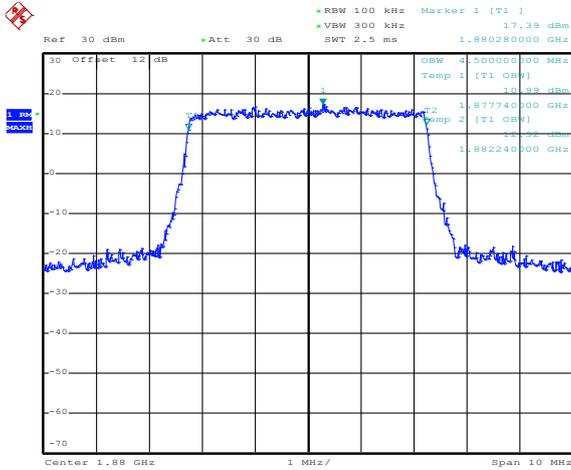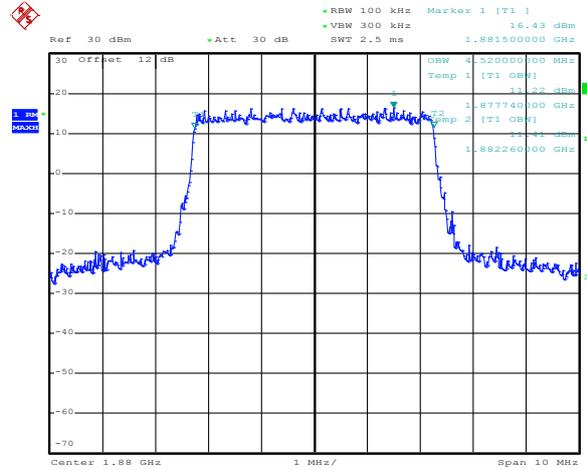

Date: 10.FEB.2012 16:28:59

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Band 2
Bandwidth 10M

Date: 10.FEB.2012 16:31:59

25RB Size, RB Offset 13, QPSK

Date: 10.FEB.2012 16:30:32

25RB Size, RB Offset 13, 16QAM

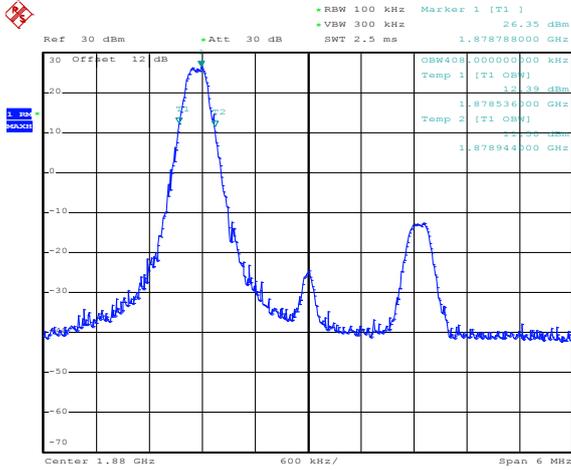
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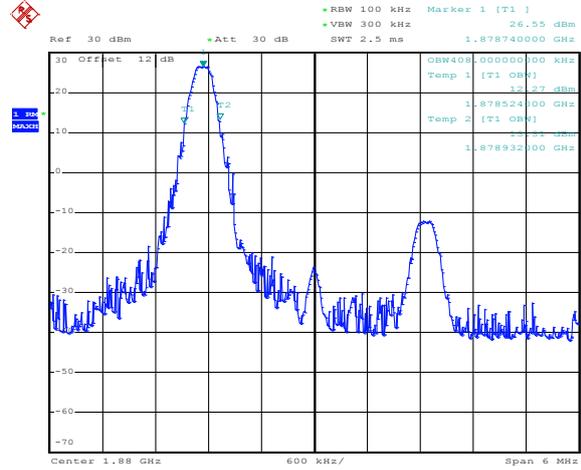

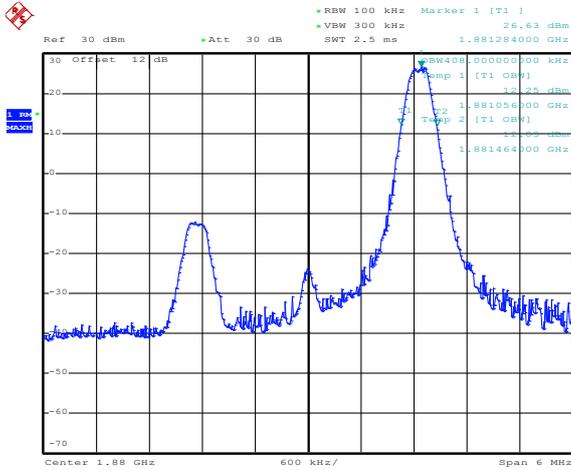Date: 10.FEB.2012 16:26:06

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Band 2
Bandwidth 5M

Date: 10.FEB.2012 15:40:14

1RB Size, RB Offset 0, QPSK

Date: 10.FEB.2012 15:40:00
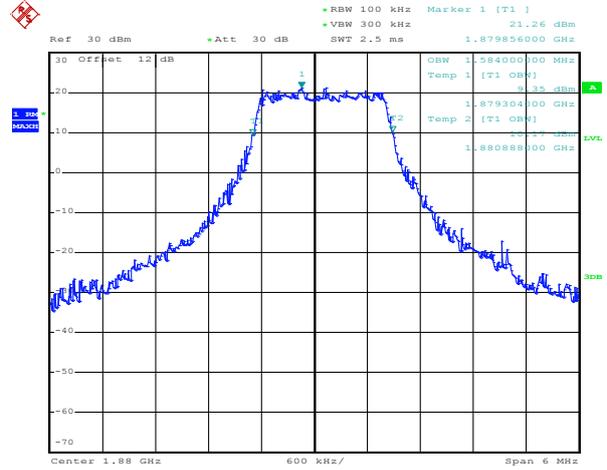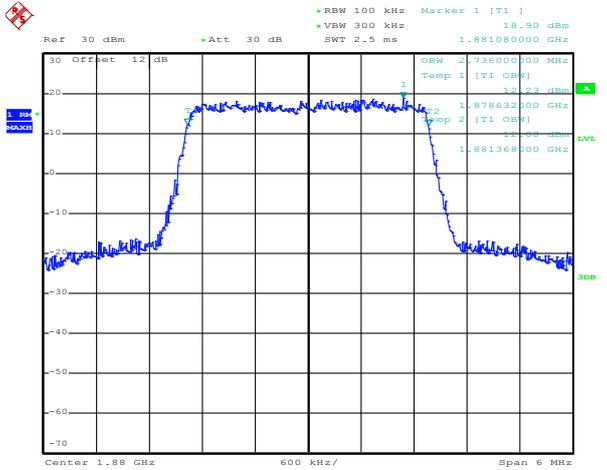
1RB Size, RB Offset 0, 16QAM

Date: 10.FEB.2012 15:40:31

1RB Size, RB Offset 24, QPSK

Date: 10.FEB.2012 15:40:49

1RB Size, RB Offset 24, 16QAM

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Band 2
Bandwidth 5M

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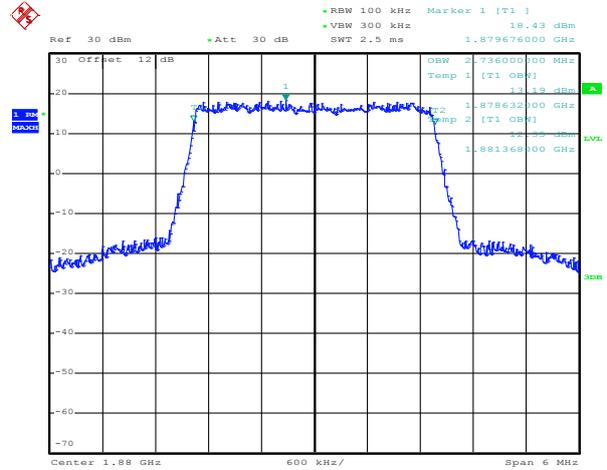
12RB Size, RB Offset 6, QPSK

Date: 10.FEB.2012 15:41:23

12RB Size, RB Offset 6, 16QAM
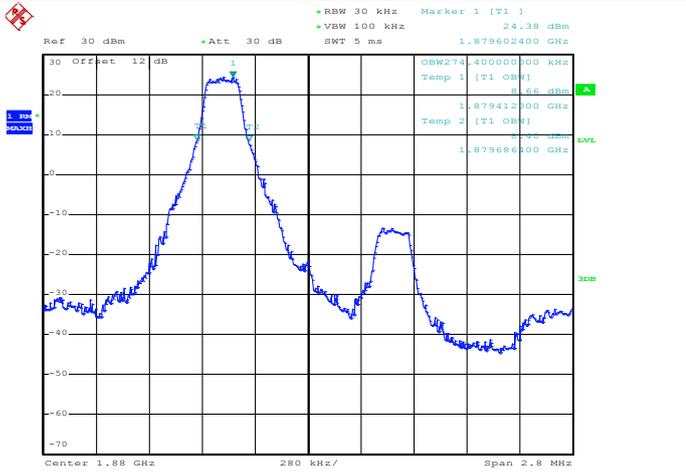

Date: 10.FEB.2012 15:39:27

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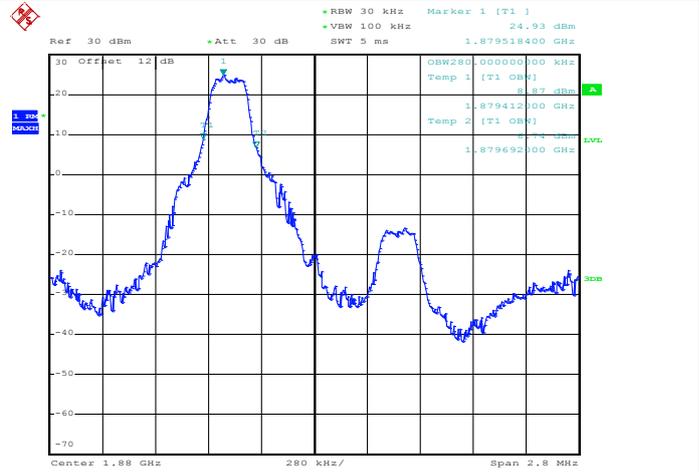

Date: 10.FEB.2012 15:39:43

25RB Size, RB Offset 0, 16QAM

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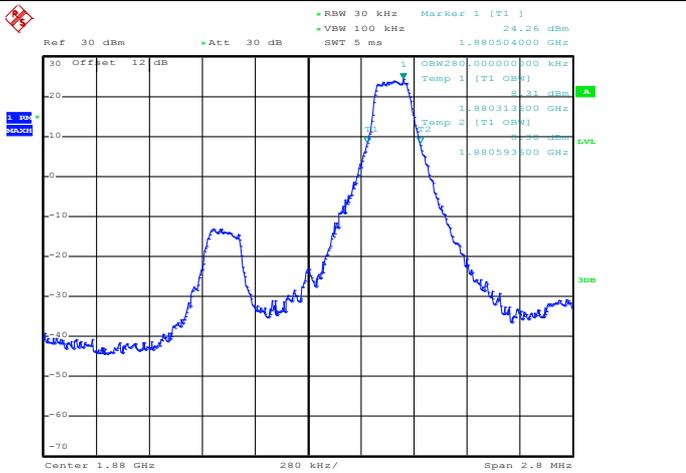## Band 2

Bandwidth 3M

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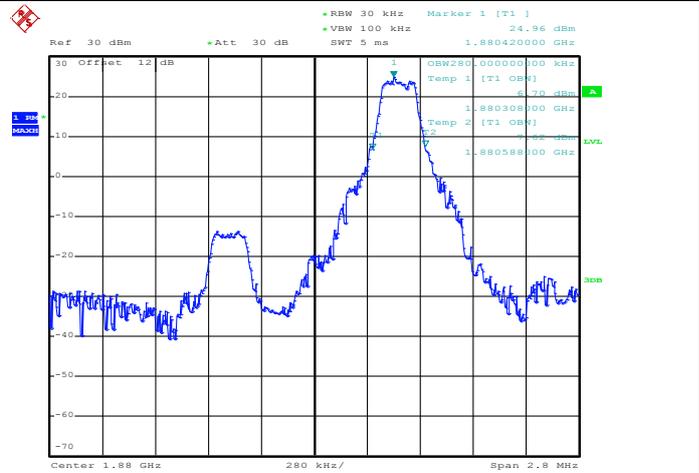1RB Size, RB Offset 0, QPSK

Date: 10.FEB.2012 15:33:14

1RB Size, RB Offset 0, 16QAM

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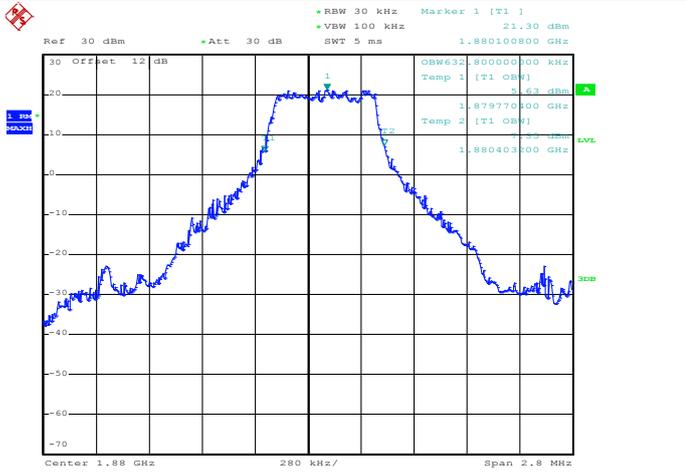
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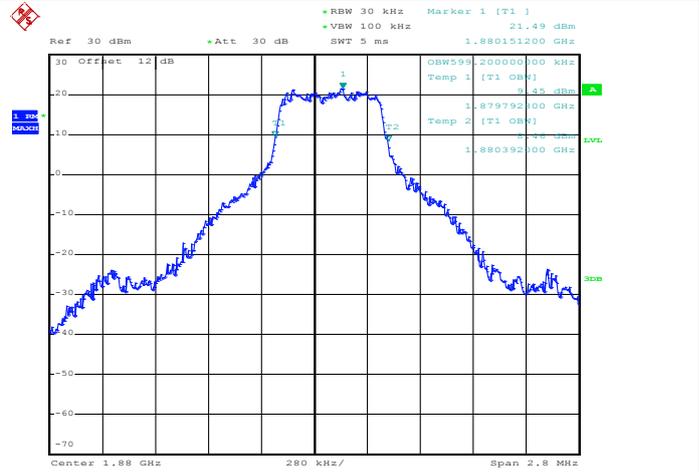
1RB Size, RB Offset 14, 16QAM

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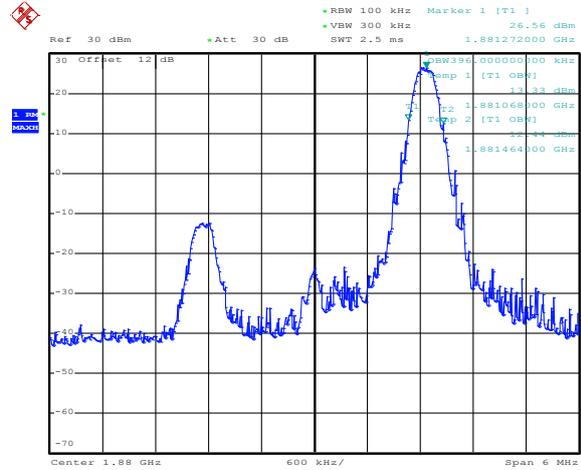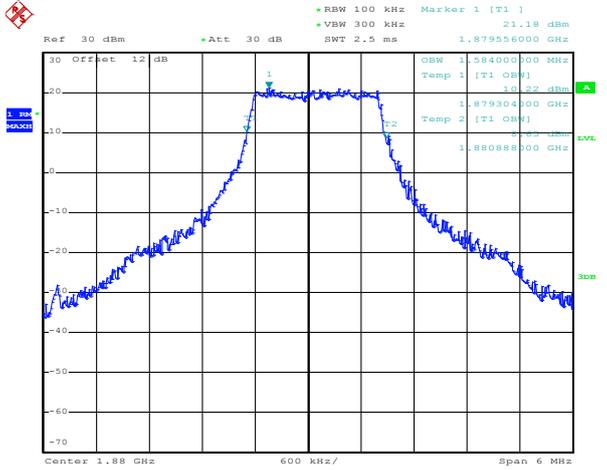
Band 2
Bandwidth 3M

Date: 10.FEB.2012 15:35:07

8RB Size, RB Offset 4, QPSK

Date: 10.FEB.2012 15:34:47

8RB Size, RB Offset 4, 16QAM

Date: 10.FEB.2012 15:33:55

15RB Size, RB Offset 0, QPSK

Date: 10.FEB.2012 15:34:21

15RB Size, RB Offset 0, 16QAM

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Band 2

Bandwidth 1.4M

Date: 10.FEB.2012 15:07:08
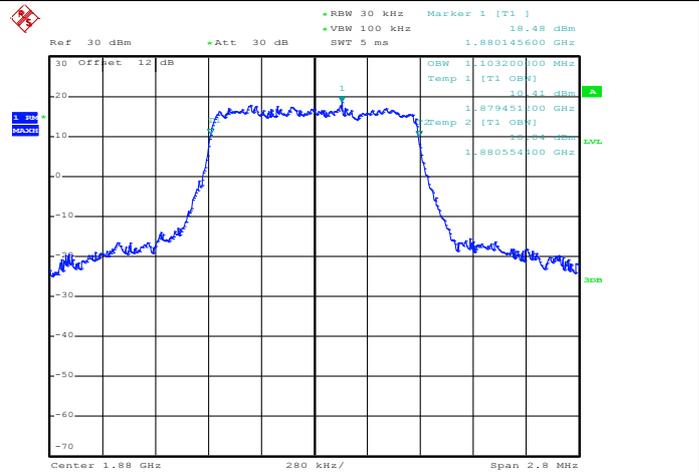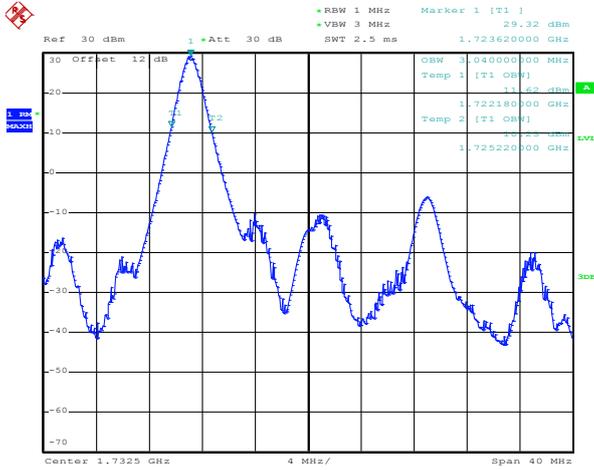
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Date: 10.FEB.2012 15:06:48

1RB Size, RB Offset 0, 16QAM

Date: 10.FEB.2012 15:07:39

1RB Size, RB Offset 5, QPSK

Date: 10.FEB.2012 15:08:26
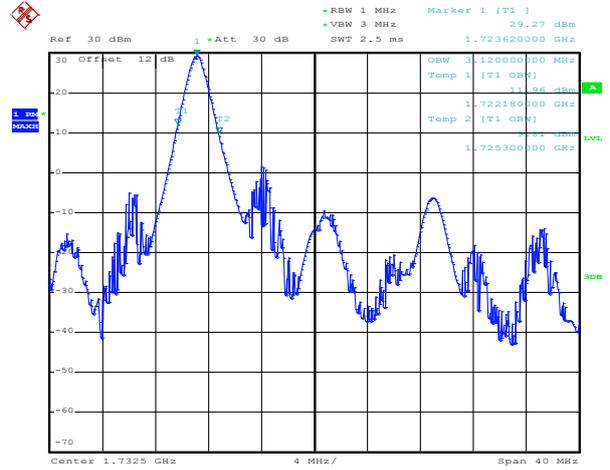
1RB Size, RB Offset 5, 16QAM

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Band 2
Bandwidth 1.4M

Date: 10.FEB.2012 15:09:19

3RB Size, RB Offset 2, QPSK

Date: 10.FEB.2012 15:08:58

3RB Size, RB Offset 2, 16QAM
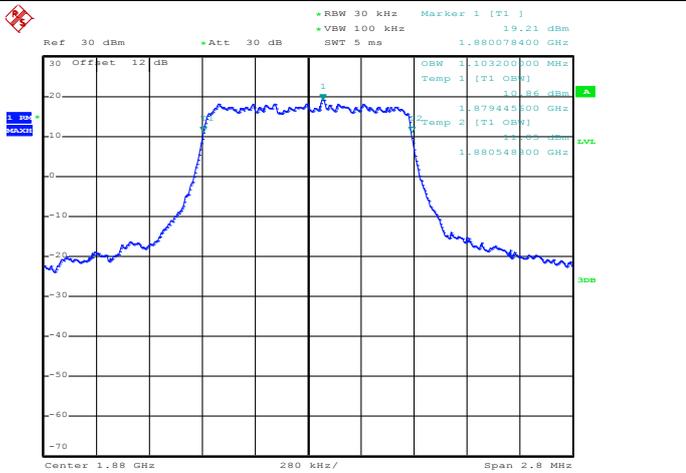
Date: 10.FEB.2012 15:05:29

6RB Size, RB Offset 0, QPSK

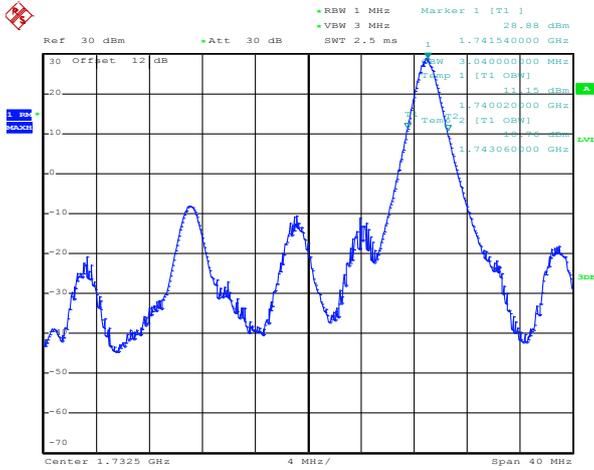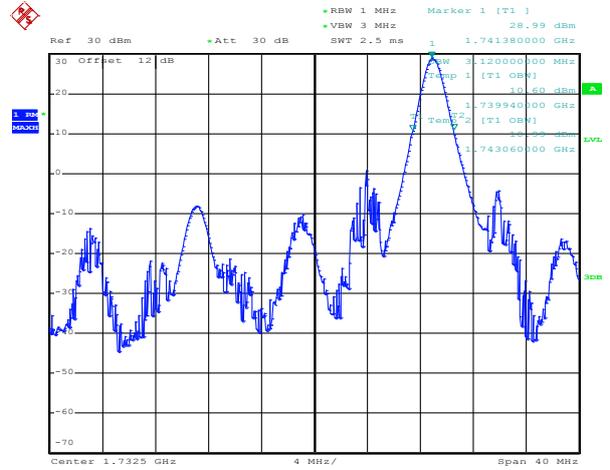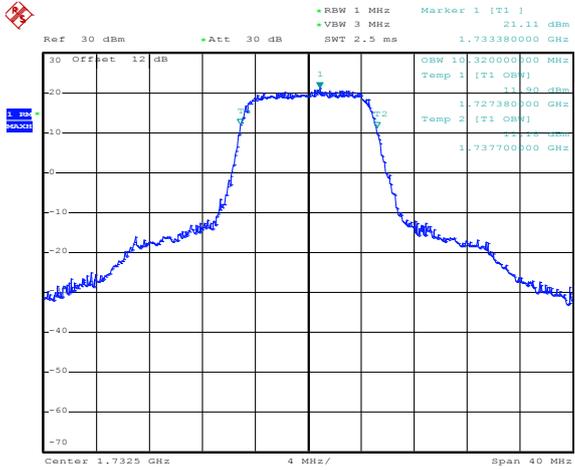Date: 10.FEB.2012 15:06:06

6RB Size, RB Offset 0, 16QAM

SPORTON INTERNATIONAL INC.
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Bandwidth 20M

Date: 11.FEB.2012 16:13:31

1RB Size, RB Offset 0, QPSK

Date: 11.FEB.2012 16:14:08

1RB Size, RB Offset 0, 16QAM

Date: 11.FEB.2012 16:14:40

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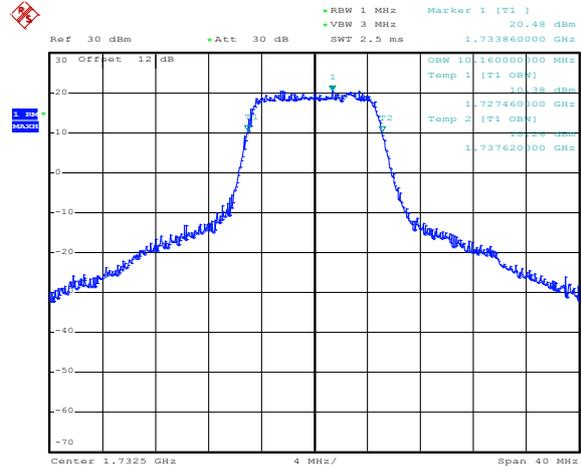Date: 11.FEB.2012 16:15:04

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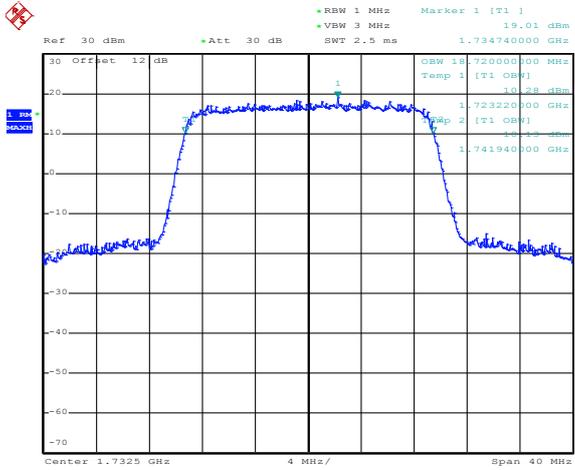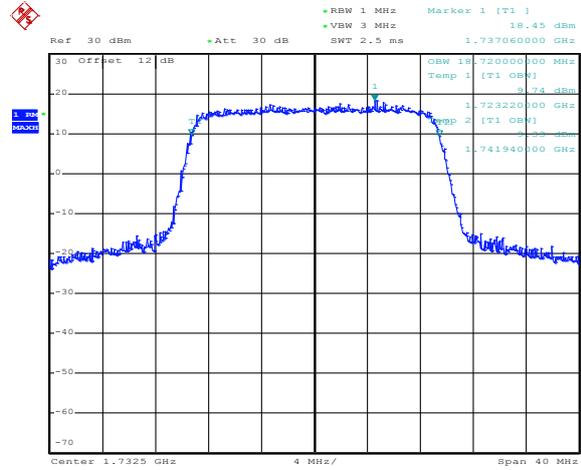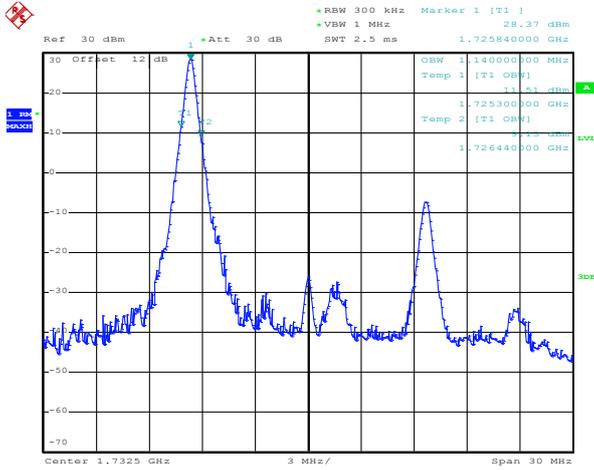***SPORTON INTERNATIONAL INC.***
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FAX : 886-3-328-4978
FCC ID : Q78-ZTEN910

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Date: 11.FEB.2012 16:15:52

50RB Size, RB Offset 25, QPSK

Date: 11.FEB.2012 16:16:17

50RB Size, RB Offset 25, 16QAM

Date: 11.FEB.2012 16:17:03

100RB Size, RB Offset 0, QPSK

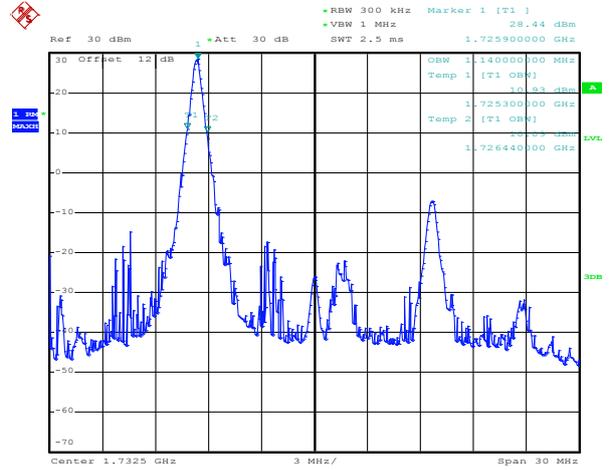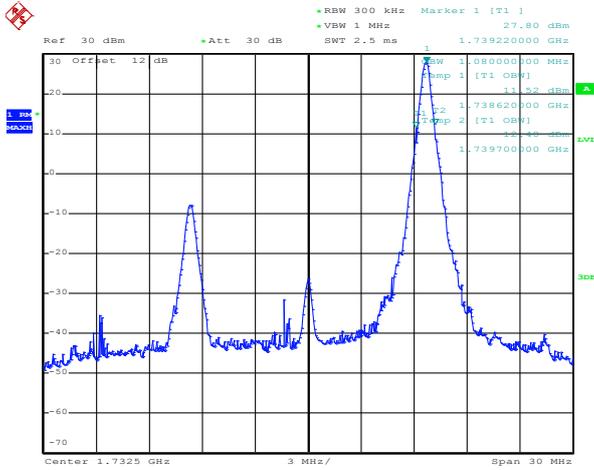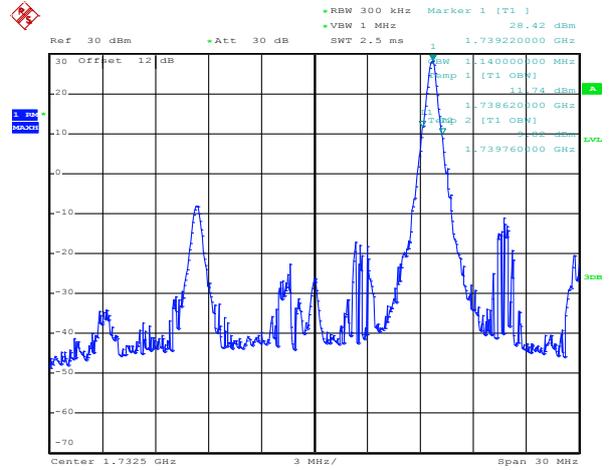Date: 11.FEB.2012 16:17:31

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Bandwidth 15M

Date: 11.FEB.2012 16:02:57

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Date: 11.FEB.2012 16:05:15

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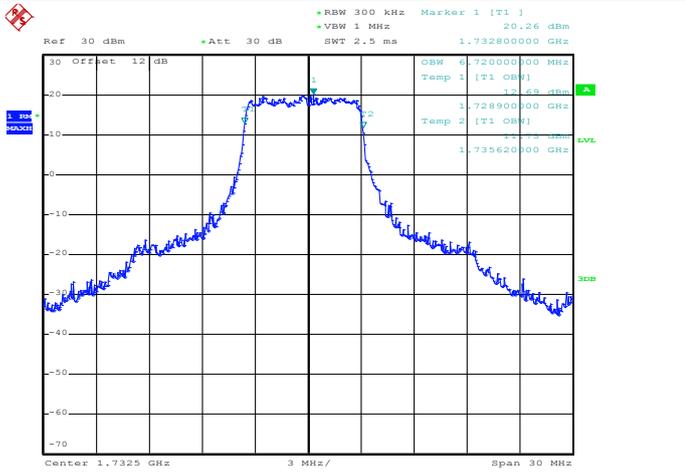Date: 11.FEB.2012 16:05:43

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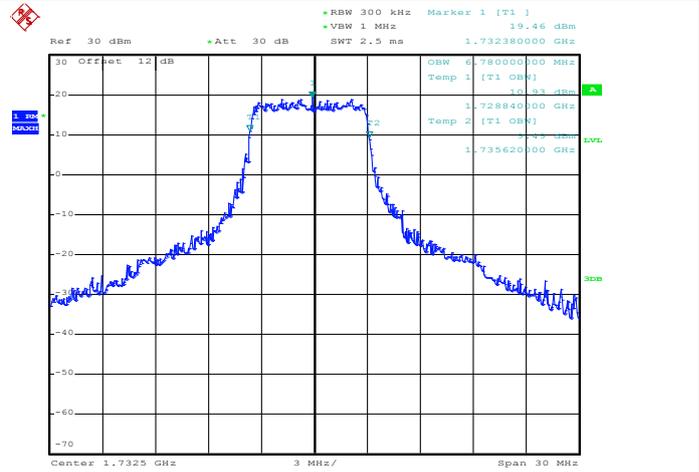Date: 11.FEB.2012 16:06:10

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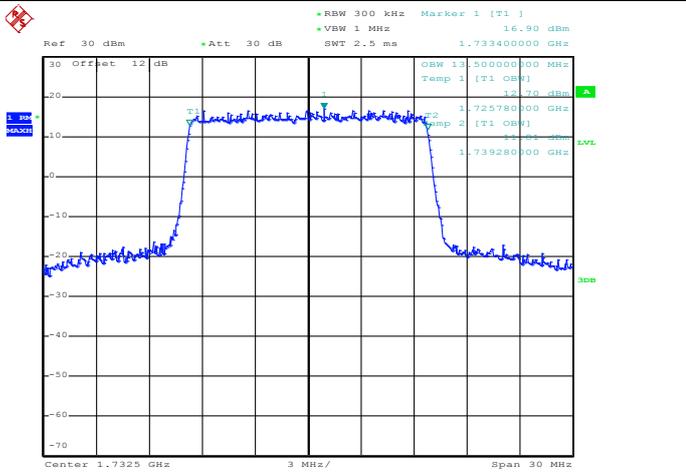*SPORTON INTERNATIONAL INC.*
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Bandwidth 15M

Date: 11.FEB.2012 16:08:10

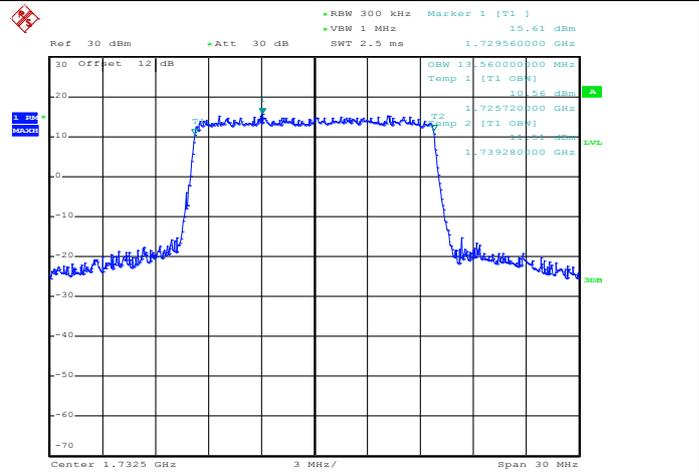36RB Size, RB Offset 18, QPSK

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36RB Size, RB Offset 18, 16QAM

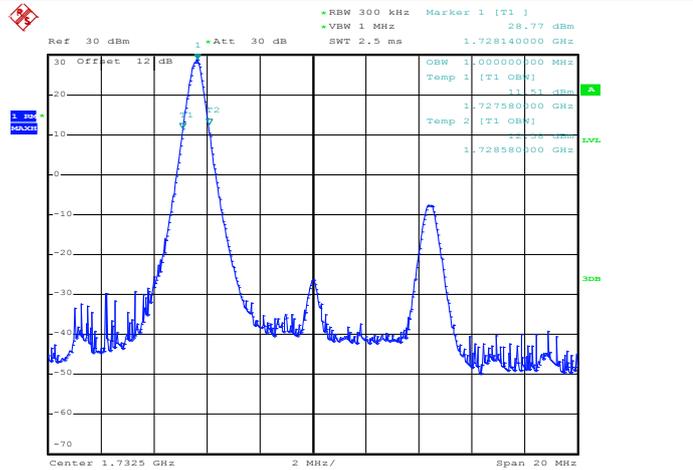Date: 11.FEB.2012 16:09:06

75RB Size, RB Offset 0, QPSK

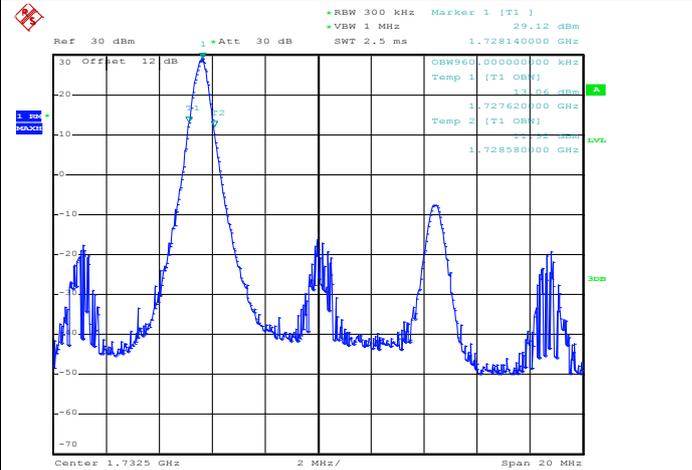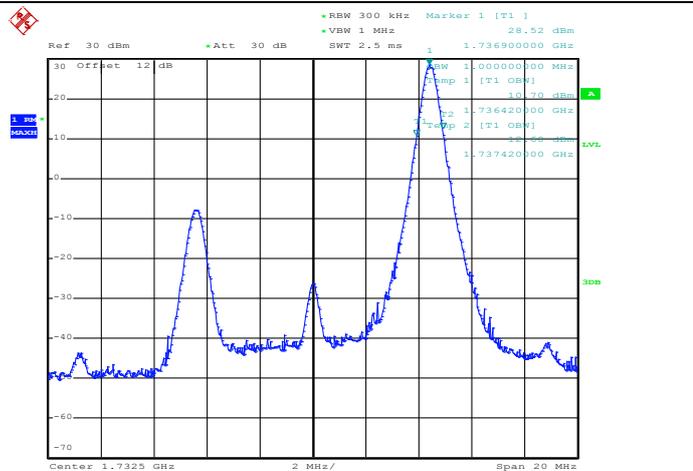Date: 11.FEB.2012 16:10:18

75RB Size, RB Offset 0, 16QAM

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Bandwidth 10M

Date: 11.FEB.2012 15:54:48

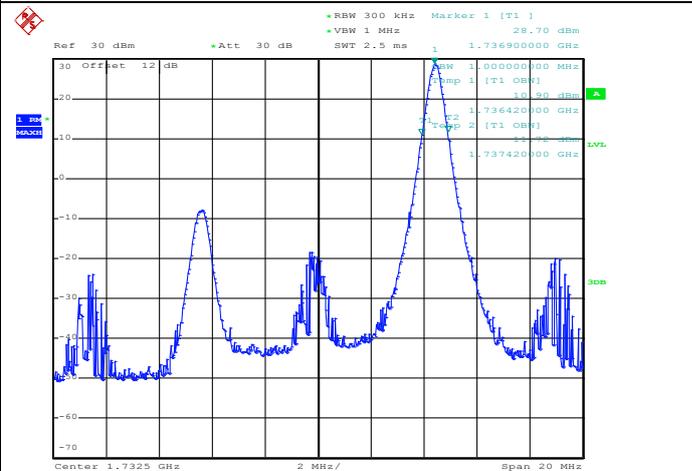1RB Size, RB Offset 0, QPSK

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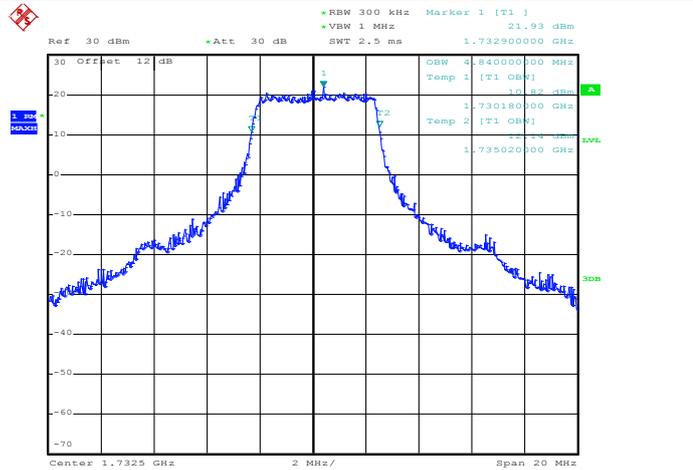Date: 11.FEB.2012 15:55:48

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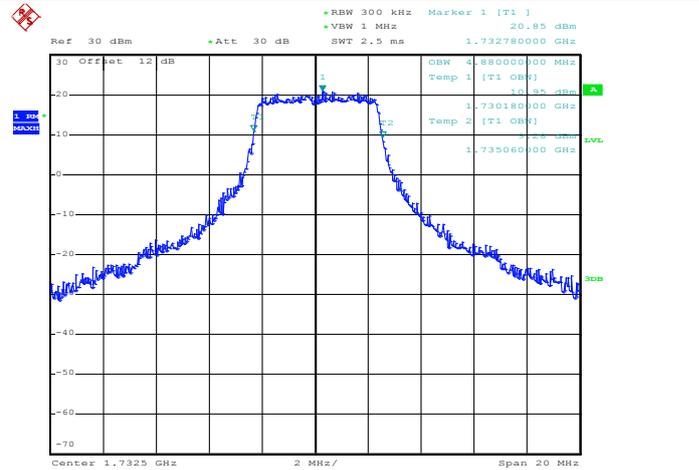Date: 11.FEB.2012 15:56:09

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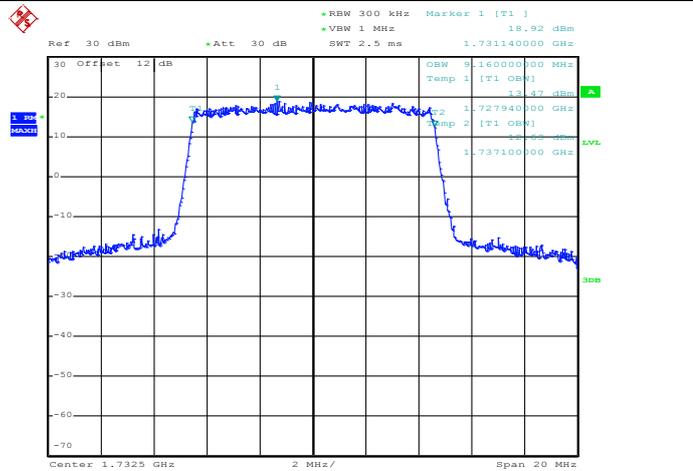
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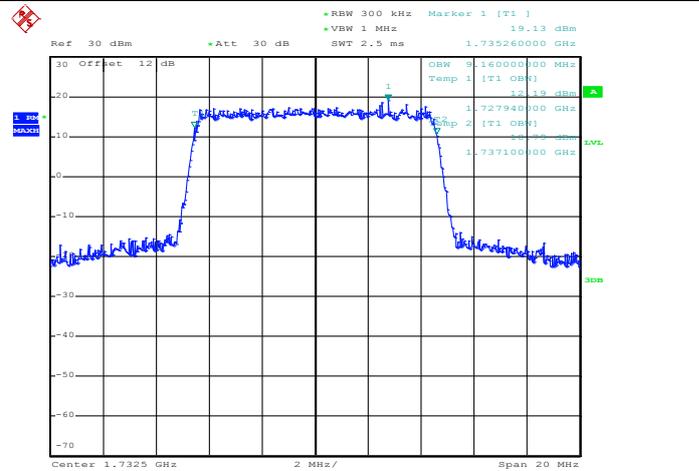
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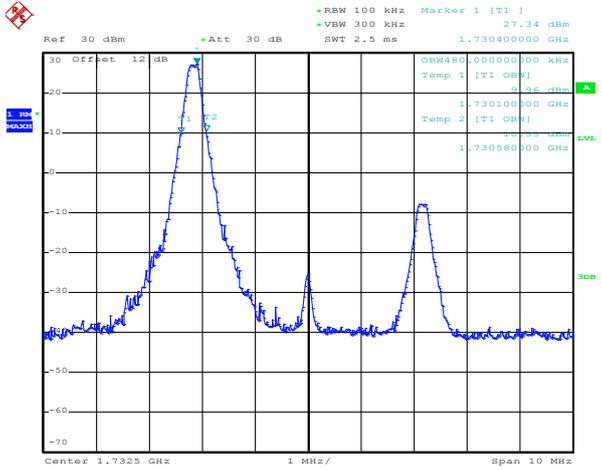Date: 11.FEB.2012 15:58:21

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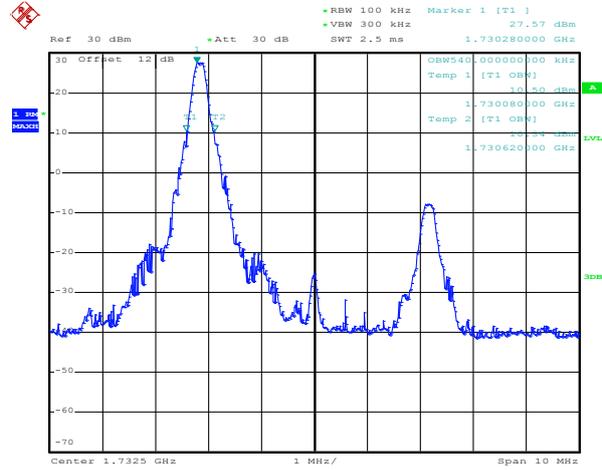Date: 11.FEB.2012 15:58:52

50RB Size, RB Offset 0, 16QAM

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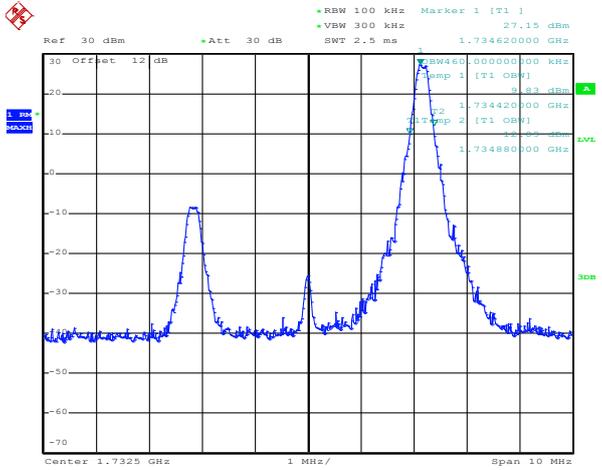| Band 4 |
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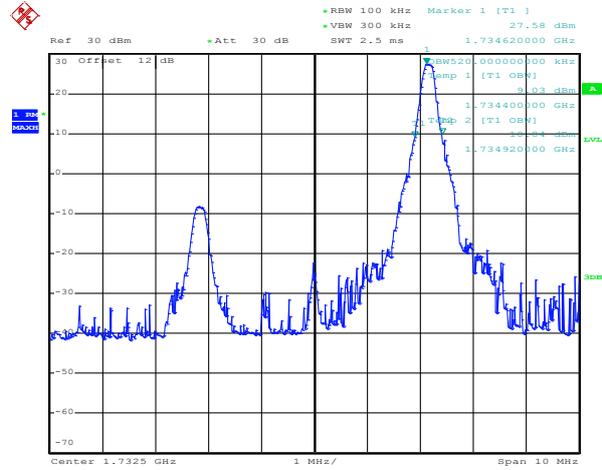1RB Size, RB Offset 0, QPSK

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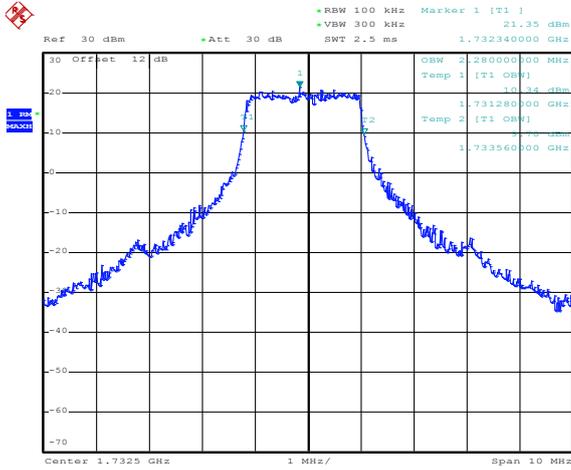Date: 11.FEB.2012 15:44:40

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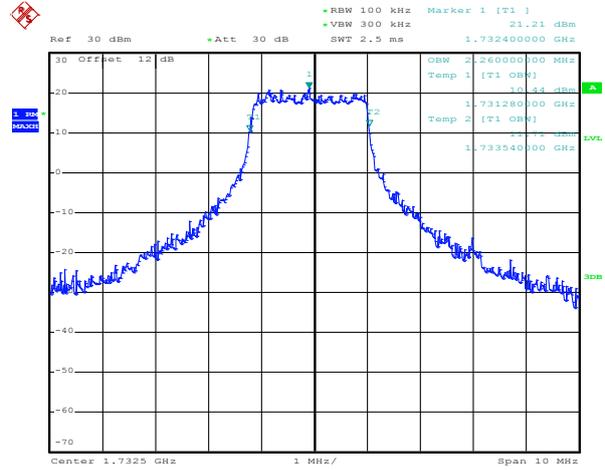Date: 11.FEB.2012 15:45:51

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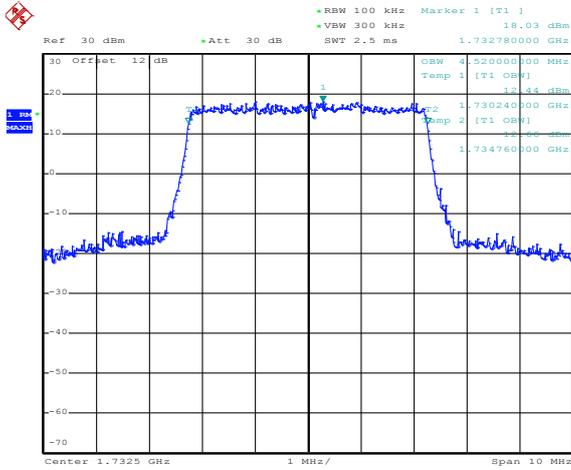| **Band 4** |
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| Bandwidth 5M |

Date: 11.FEB.2012 15:47:06
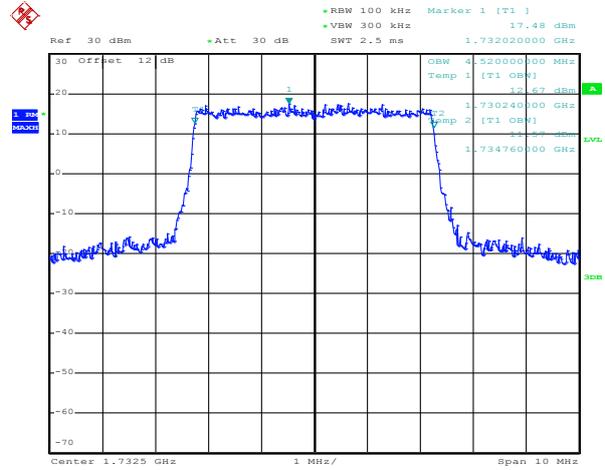
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12RB Size, RB Offset 6, 16QAM

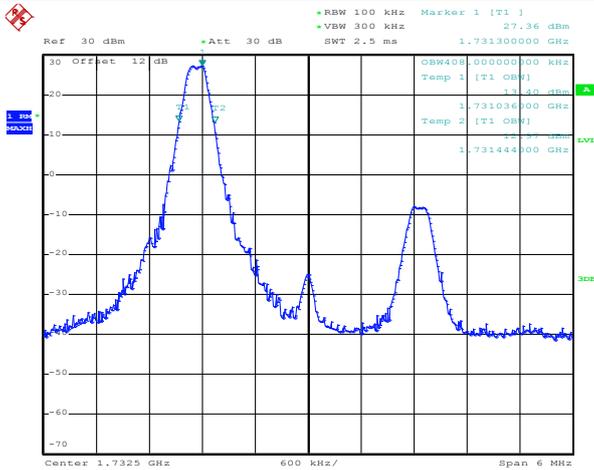Date: 11.FEB.2012 15:48:29

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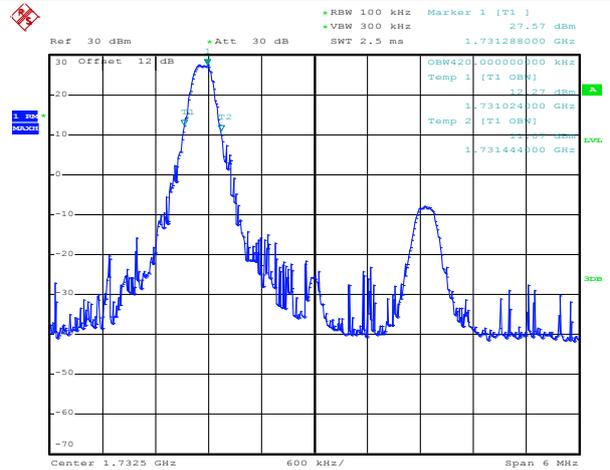Date: 11.FEB.2012 15:48:56

25RB Size, RB Offset 0, 16QAM

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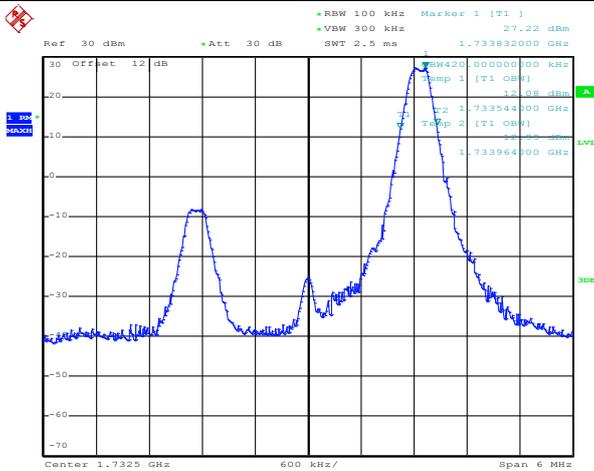| Band 4 |
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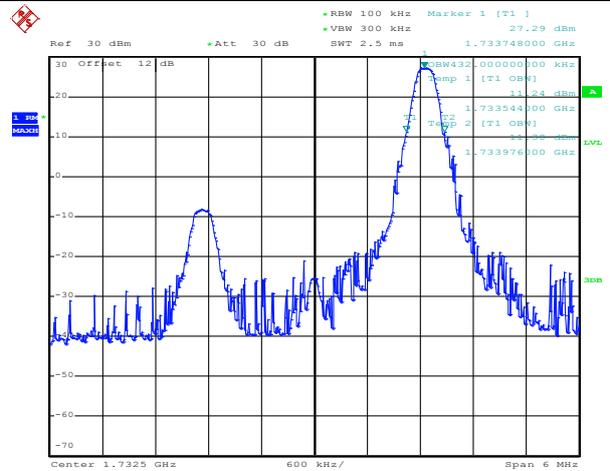1RB Size, RB Offset 0, QPSK

Date: 11.FEB.2012 15:34:27

1RB Size, RB Offset 0, 16QAM

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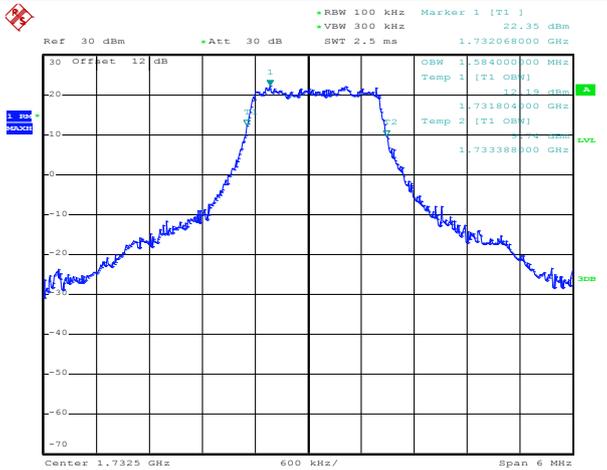
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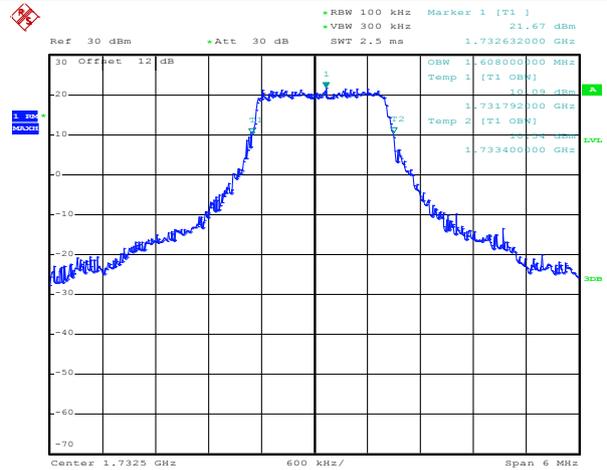
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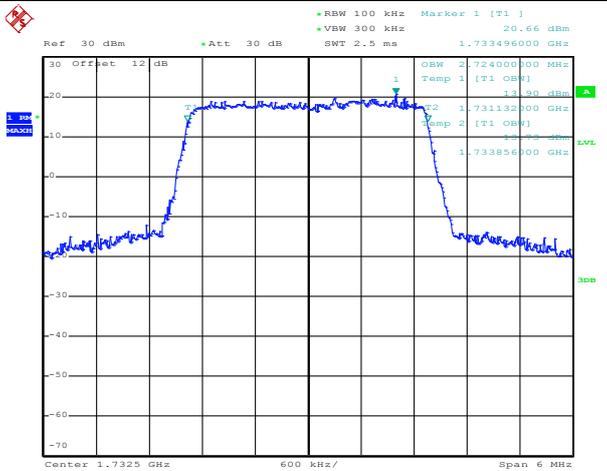| Band 4 |
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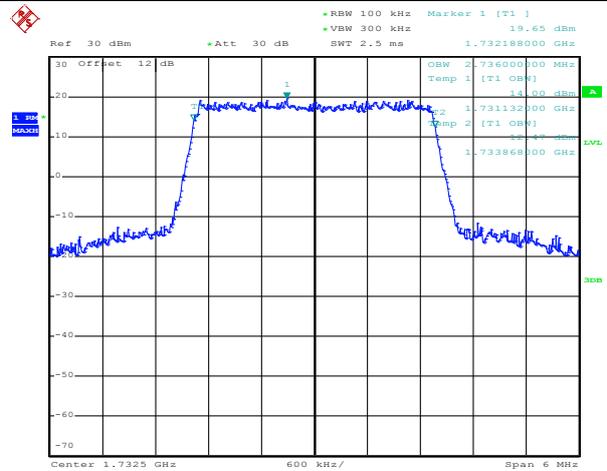
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Date: 11.FEB.2012 15:37:14

8RB Size, RB Offset 4, 16QAM

Date: 11.FEB.2012 15:37:45
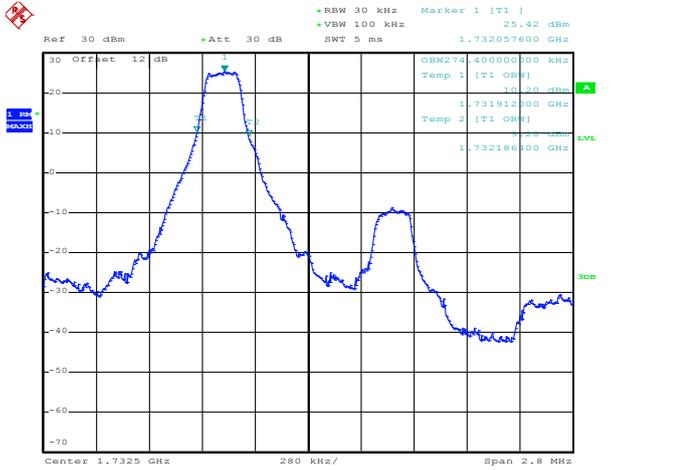
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Date: 11.FEB.2012 15:38:23
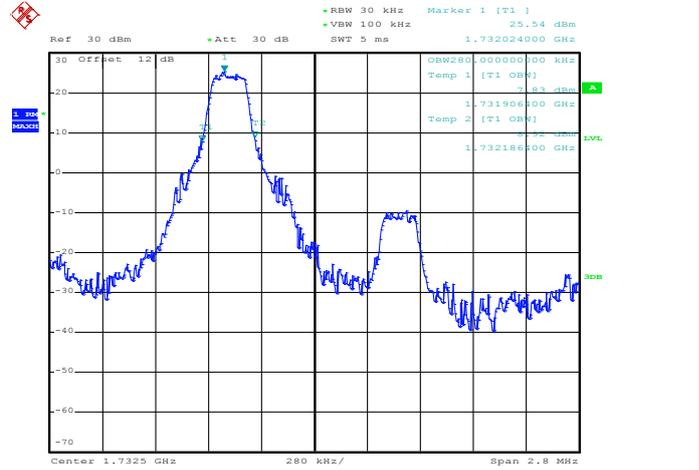
15RB Size, RB Offset 0, 16QAM

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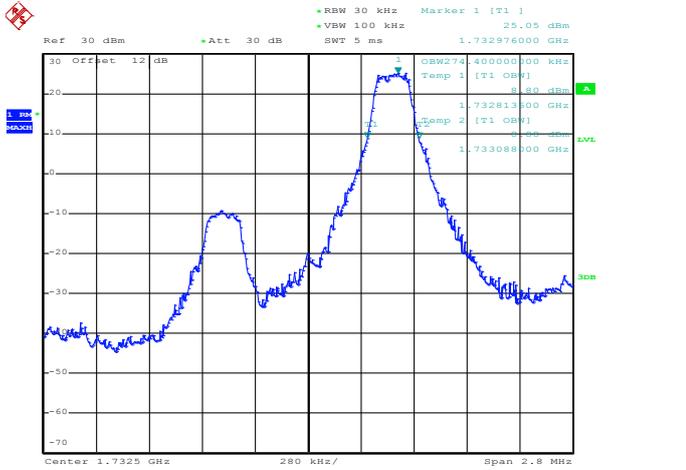| **Band 4** |
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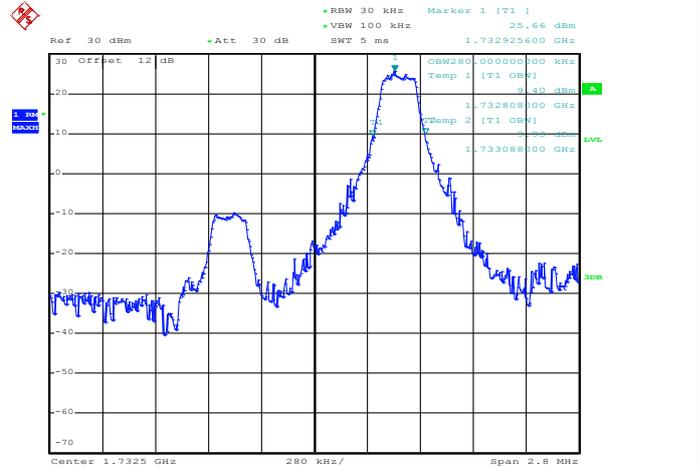1RB Size, RB Offset 0, QPSK

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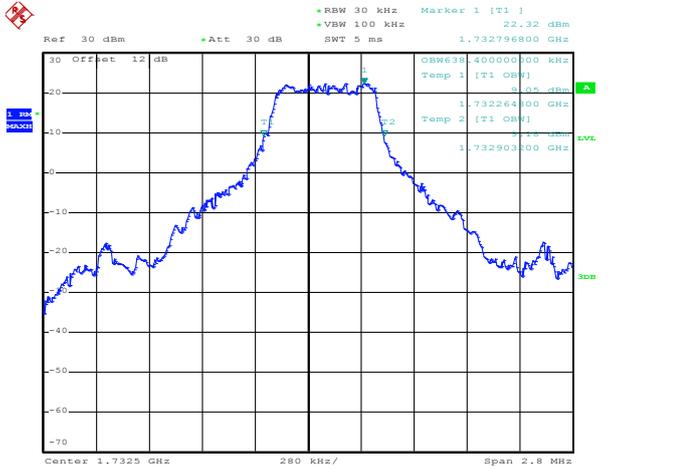Date: 11.FEB.2012 15:28:15

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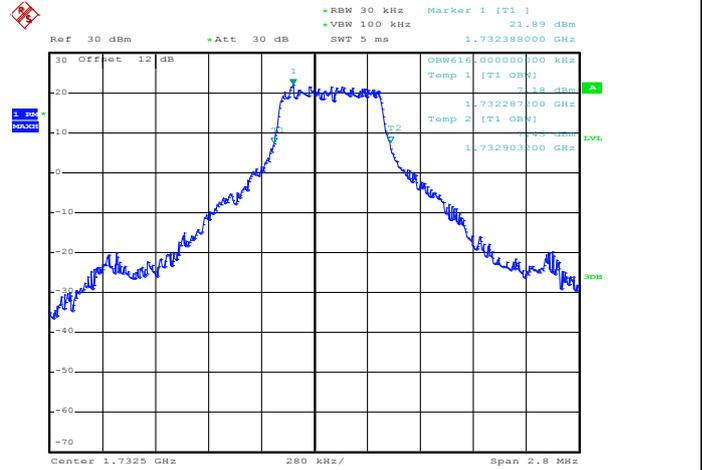
1RB Size, RB Offset 5, 16QAM

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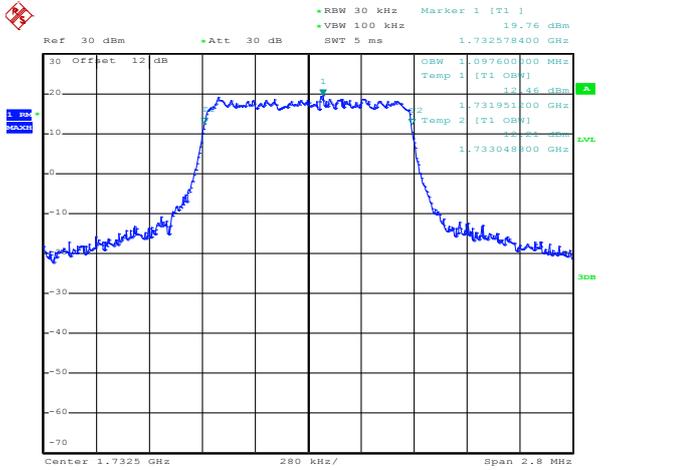| Band 4 |
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| Bandwidth 1.4M |

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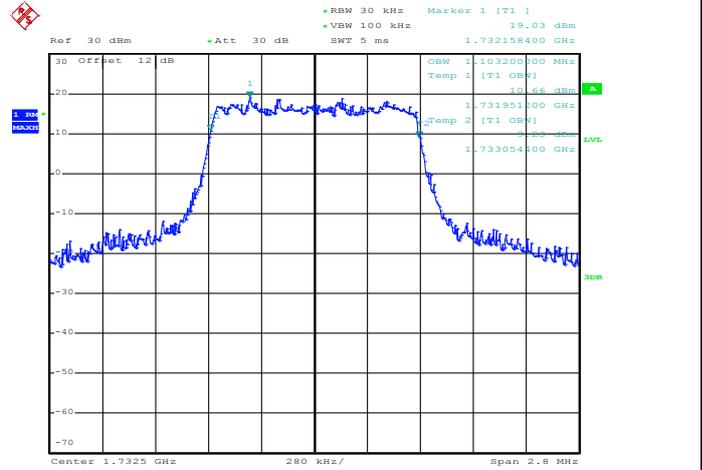3RB Size, RB Offset 2, QPSK

Date: 11.FEB.2012 15:30:02

3RB Size, RB Offset 2, 16QAM

Date: 11.FEB.2012 15:30:53

6RB Size, RB Offset 0, QPSK

Date: 11.FEB.2012 15:31:10

6RB Size, RB Offset 0, 16QAM

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