



## 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        |

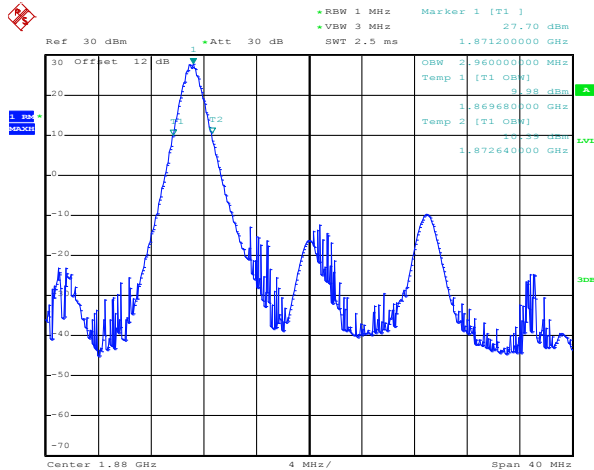


| Operation Band | Bandwidth | Modulation | RB Size/Offset   | OBW99%(MHZ) |
|----------------|-----------|------------|------------------|-------------|
| Band 4         | 20MHz     | QPSK       | 1RB / Offset 0   | 3.04        |
|                |           |            | 1RB / Offset 99  | 3.04        |
|                |           |            | 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        |



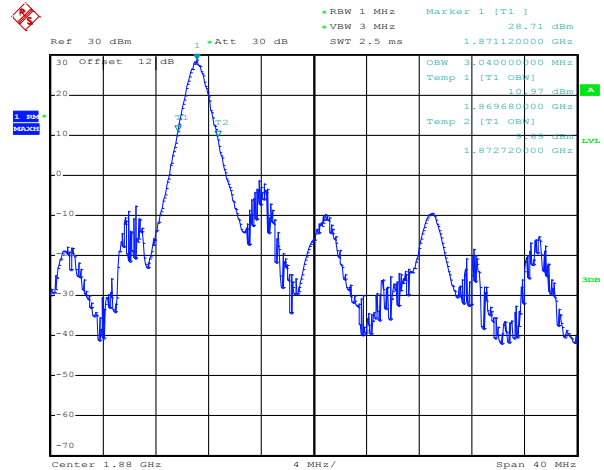
Band 2

Bandwidth 20M



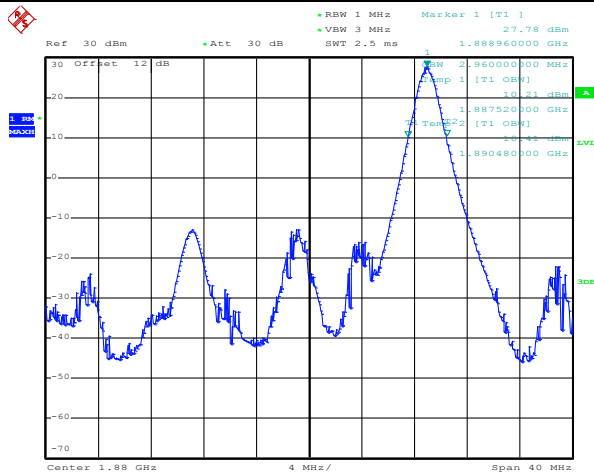
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1RB Size, RB Offset 0, QPSK



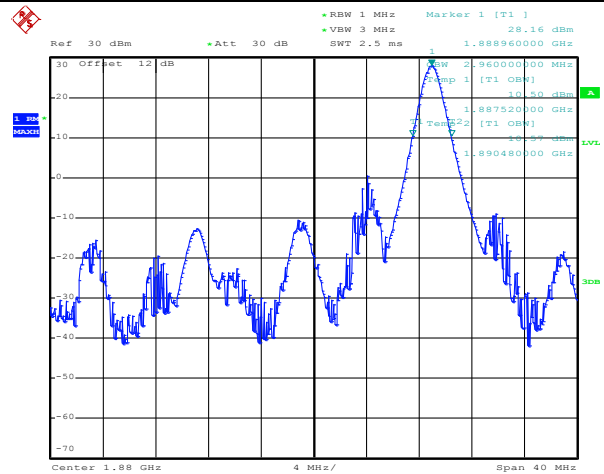
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1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 99, QPSK



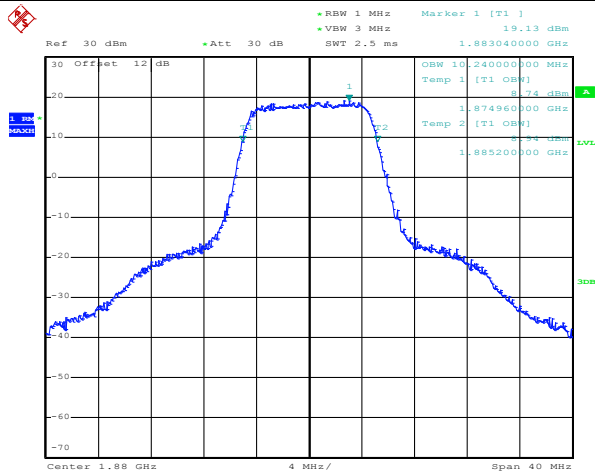
Date: 10.FEB.2012 17:29:36

1RB Size, RB Offset 99, 16QAM



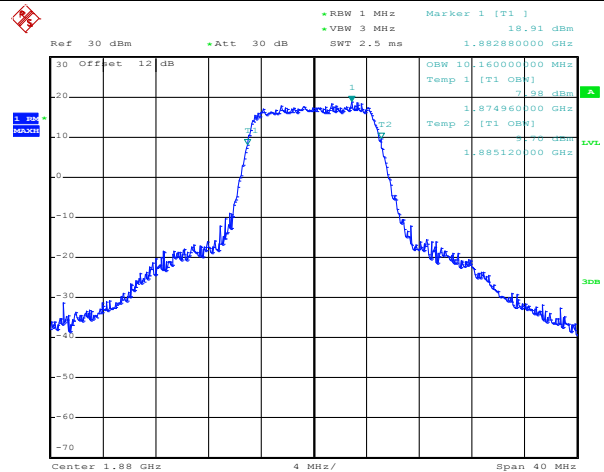
Band 2

Bandwidth 20M



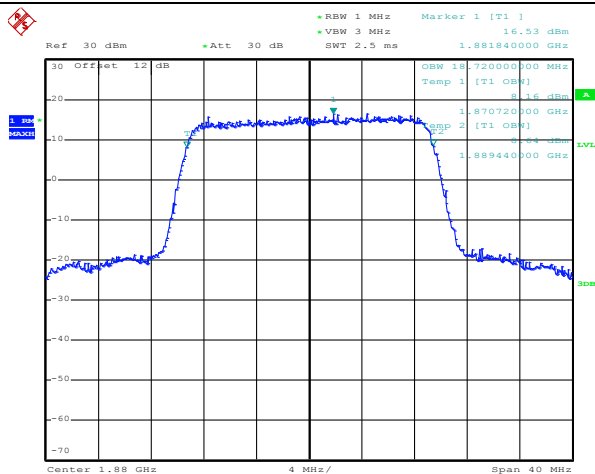
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50RB Size, RB Offset 25, QPSK



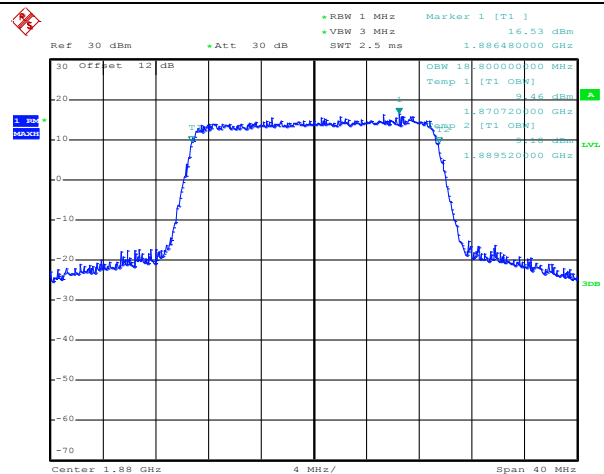
Date: 10.FEB.2012 17:27:37

50RB Size, RB Offset 25, 16QAM



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

100RB Size, RB Offset 0, QPSK



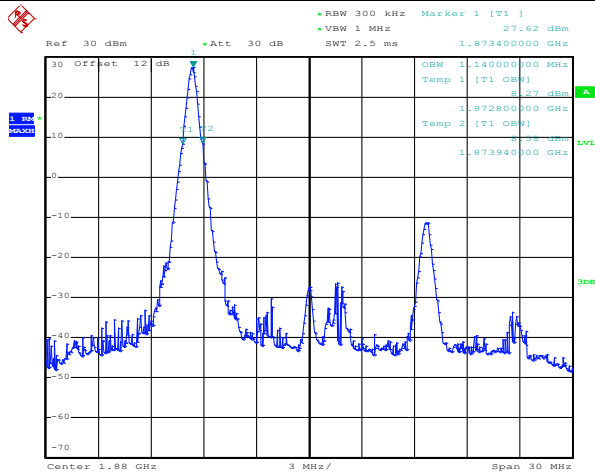
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100RB Size, RB Offset 0, 16QAM



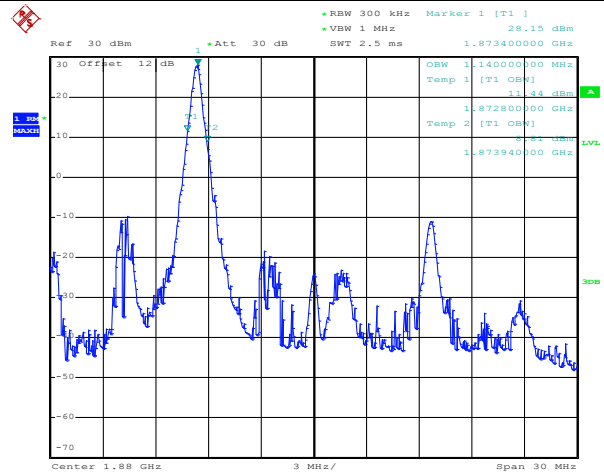
Band 2

Bandwidth 15M



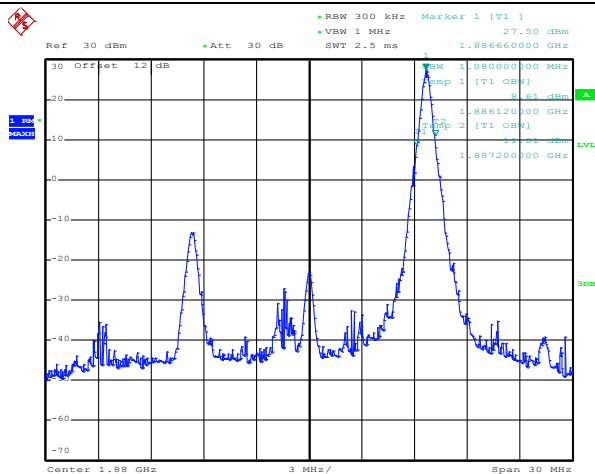
Date: 10.FEB.2012 16:57:08

1RB Size, RB Offset 0, QPSK



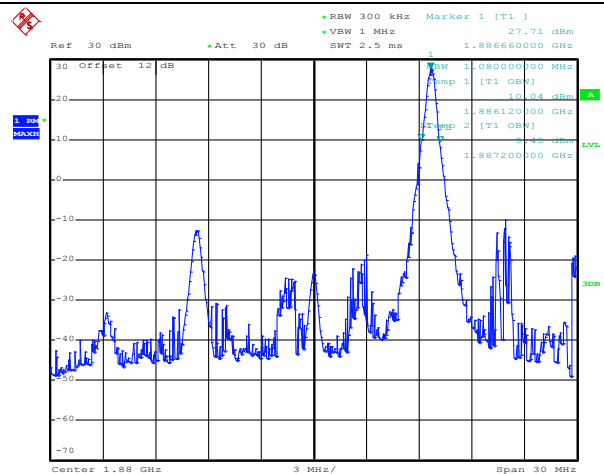
Date: 10.FEB.2012 16:57:49

1RB Size, RB Offset 0, 16QAM



Date: 10.FEB.2012 16:58:46

1RB Size, RB Offset 74, QPSK



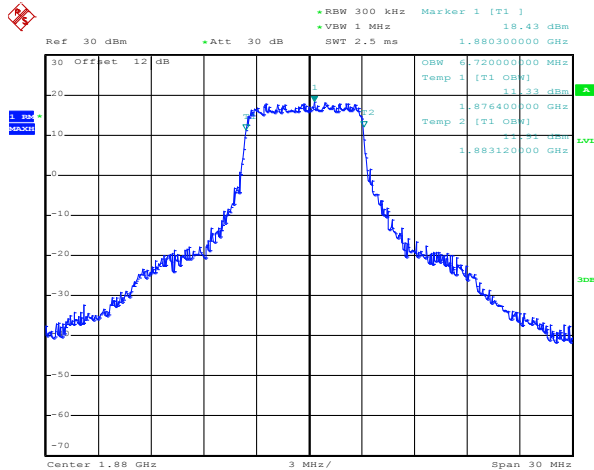
Date: 10.FEB.2012 16:58:29

1RB Size, RB Offset 74, 16QAM



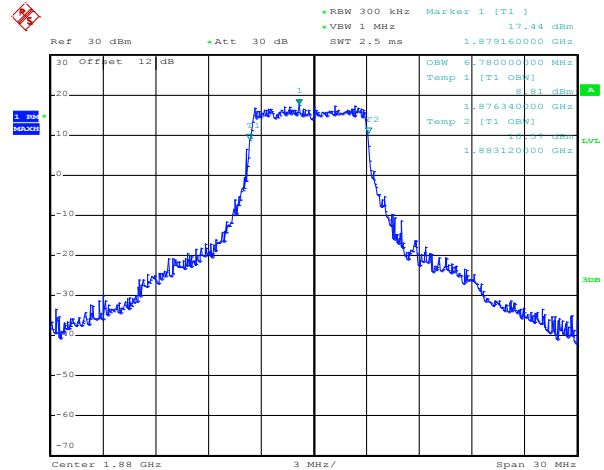
Band 2

Bandwidth 15M



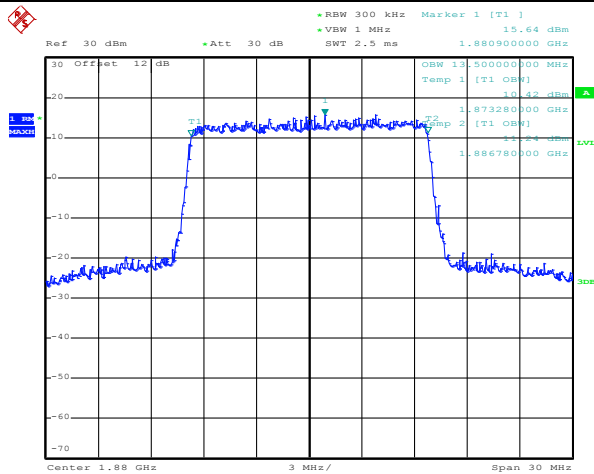
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36RB Size, RB Offset 18, QPSK



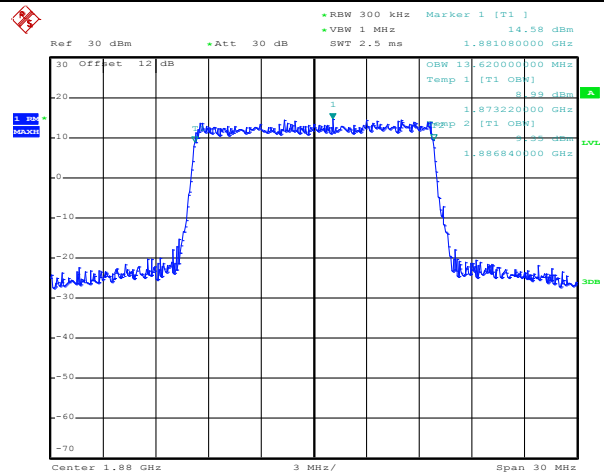
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36RB Size, RB Offset 18, 16QAM



Date: 10.FEB.2012 16:56:43

75RB Size, RB Offset 0, QPSK



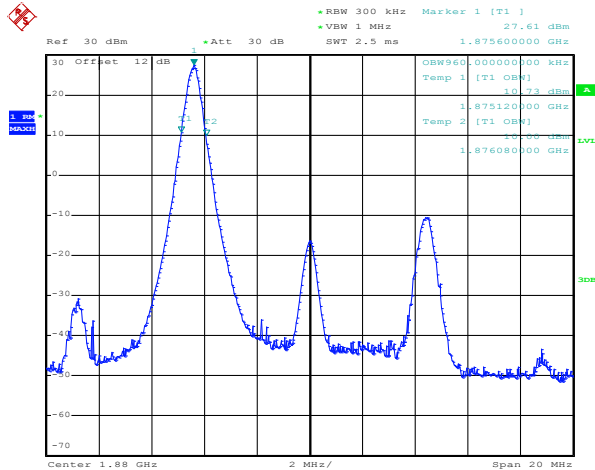
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75RB Size, RB Offset 0, 16QAM



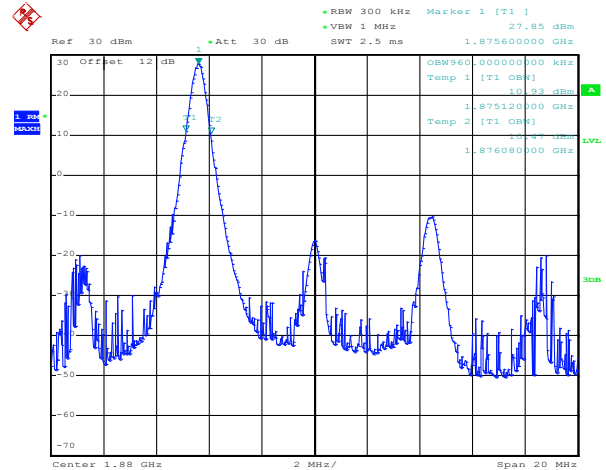
Band 2

Bandwidth 10M



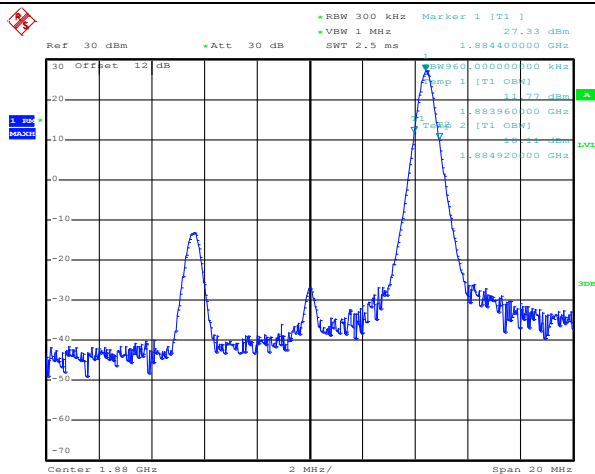
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1RB Size, RB Offset 0, QPSK



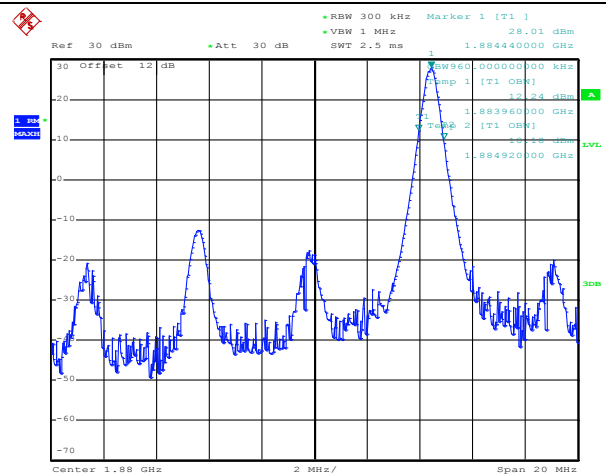
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1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 49, QPSK



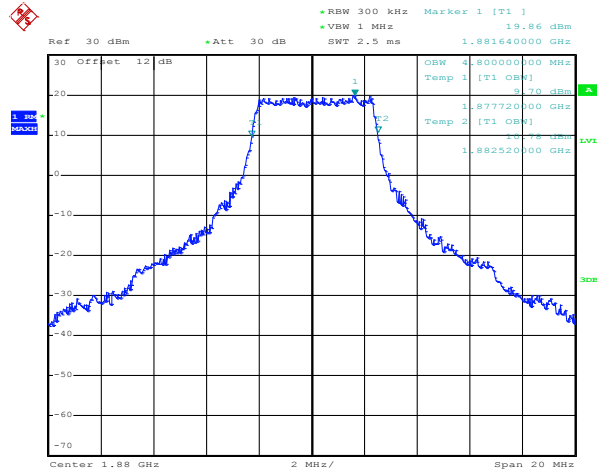
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1RB Size, RB Offset 49, 16QAM



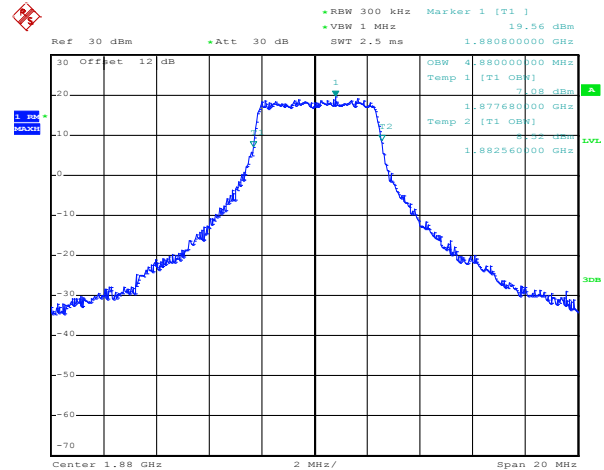
Band 2

Bandwidth 10M



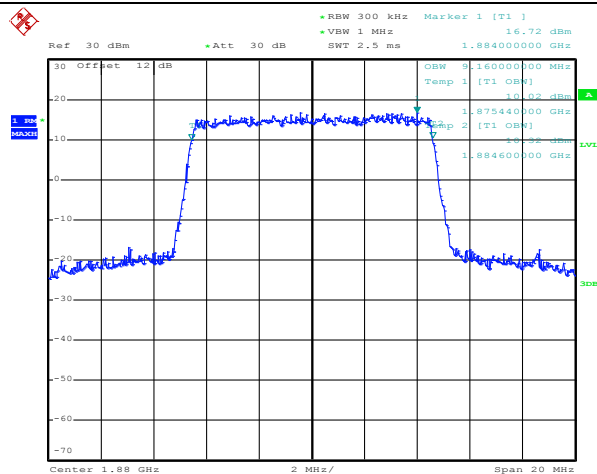
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25RB Size, RB Offset 13, QPSK



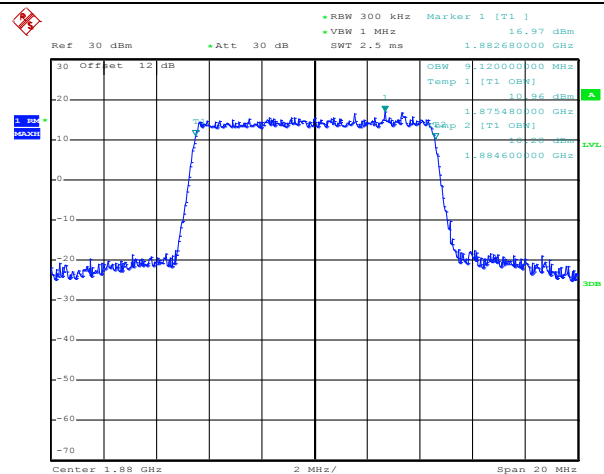
Date: 10.FEB.2012 16:30:32

25RB Size, RB Offset 13, 16QAM



Date: 10.FEB.2012 16:25:43

50RB Size, RB Offset 0, QPSK



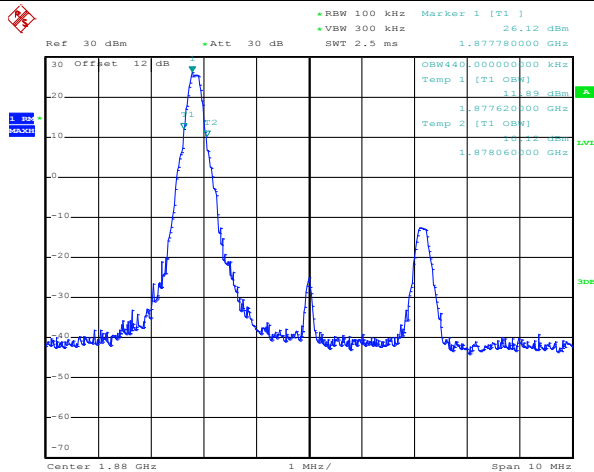
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50RB Size, RB Offset 0, 16QAM



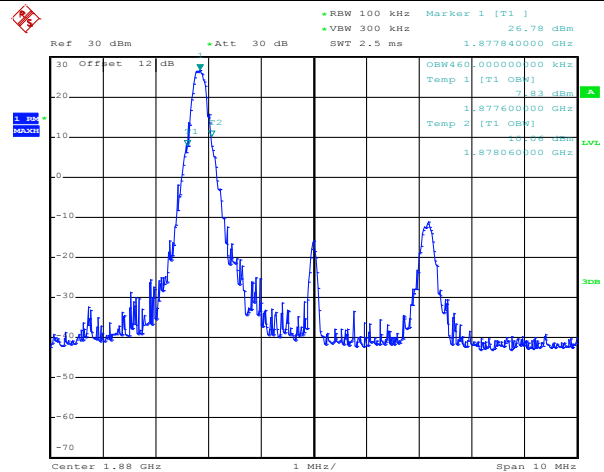
Band 2

Bandwidth 5M



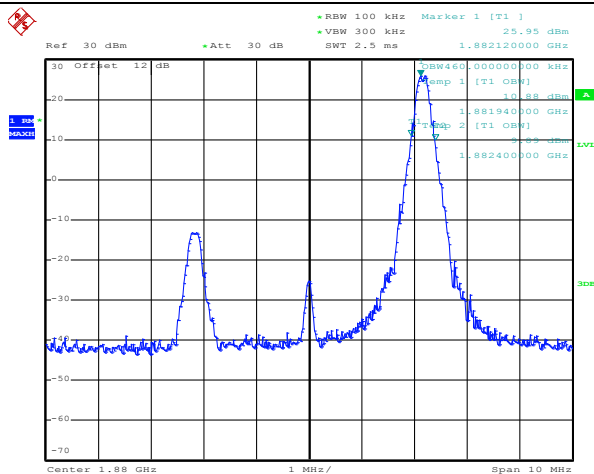
Date: 10.FEB.2012 15:40:14

1RB Size, RB Offset 0, QPSK



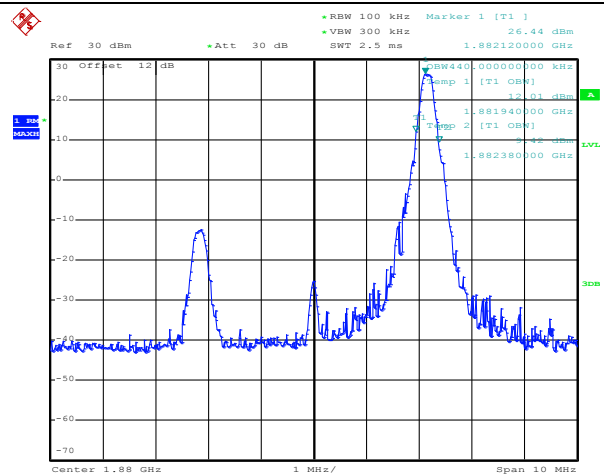
Date: 10.FEB.2012 15:40:00

1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 24, QPSK

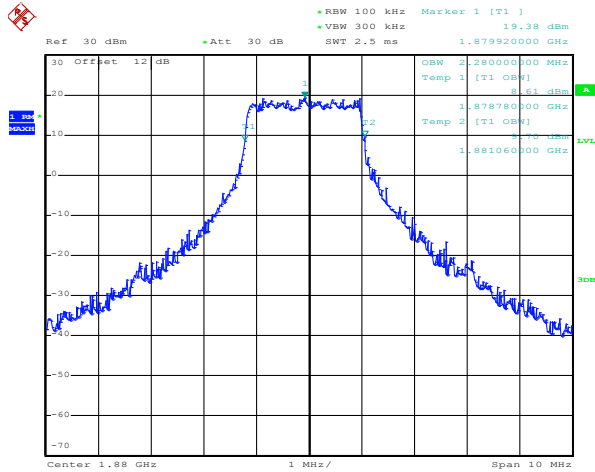


Date: 10.FEB.2012 15:40:49

1RB Size, RB Offset 24, 16QAM

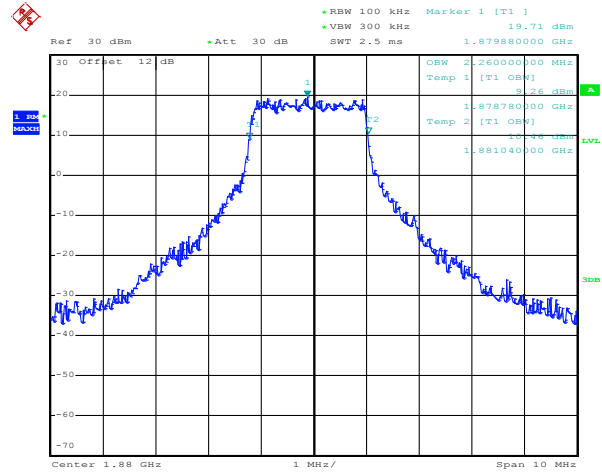
## Band 2

Bandwidth 5M



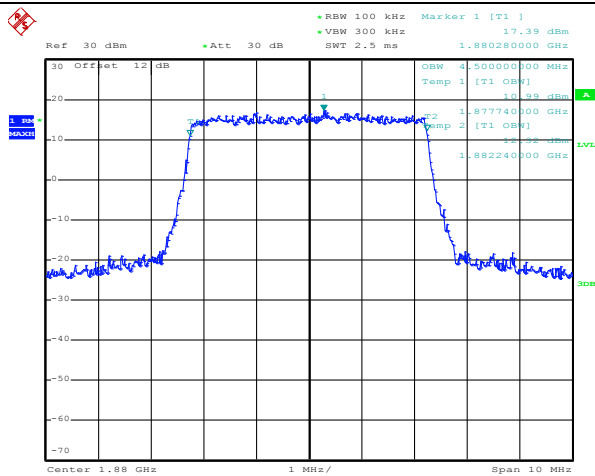
Date: 10.FEB.2012 15:41:45

12RB Size, RB Offset 6, QPSK



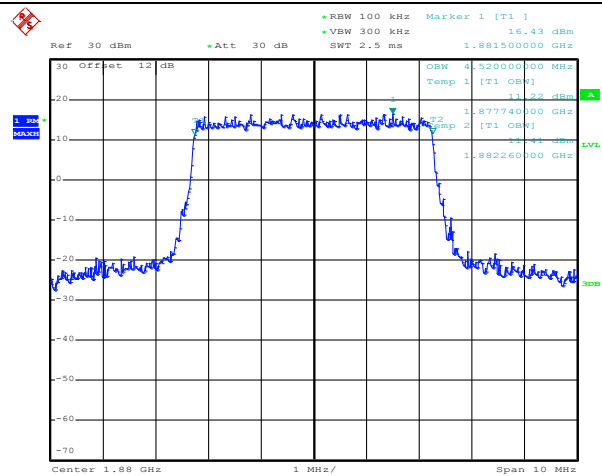
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12RB Size, RB Offset 6, 16QAM



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

25RB Size, RB Offset 0, QPSK

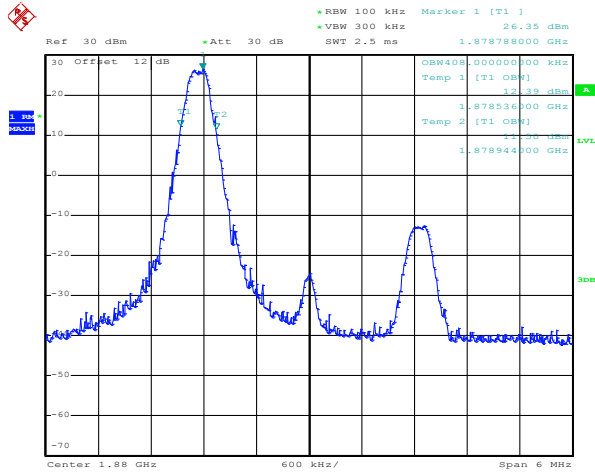


Date: 10.FEB.2012 15:39:43

25RB Size, RB Offset 0, 16QAM

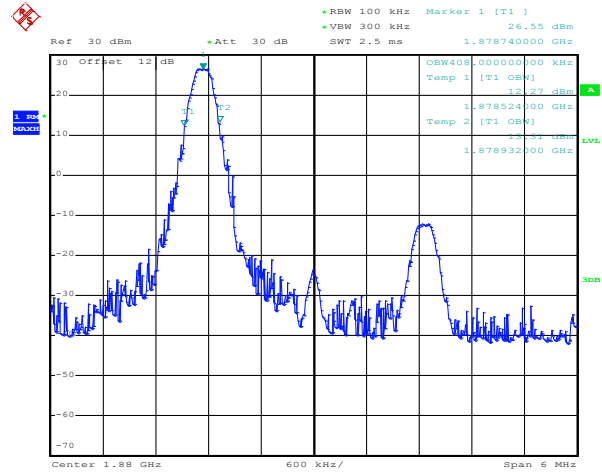
## Band 2

Bandwidth 3M



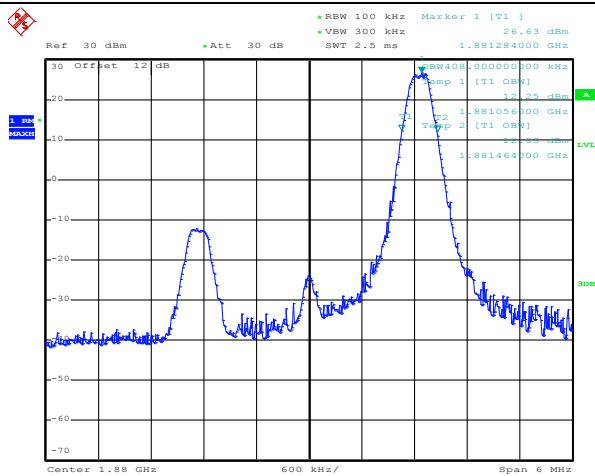
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1RB Size, RB Offset 0, QPSK



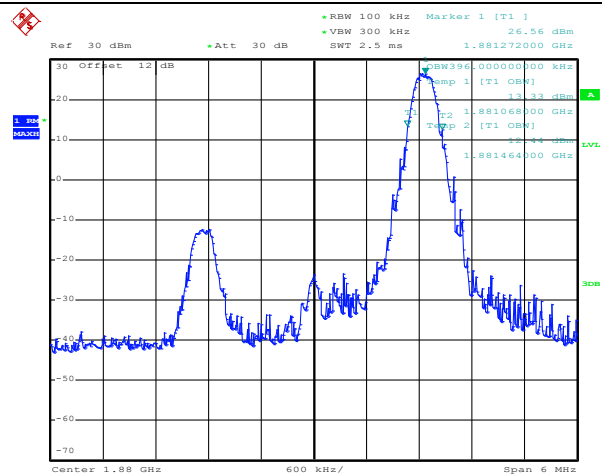
Date: 10.FEB.2012 15:33:14

1RB Size, RB Offset 0, 16QAM



Date: 10.FEB.2012 15:32:37

1RB Size, RB Offset 14, QPSK



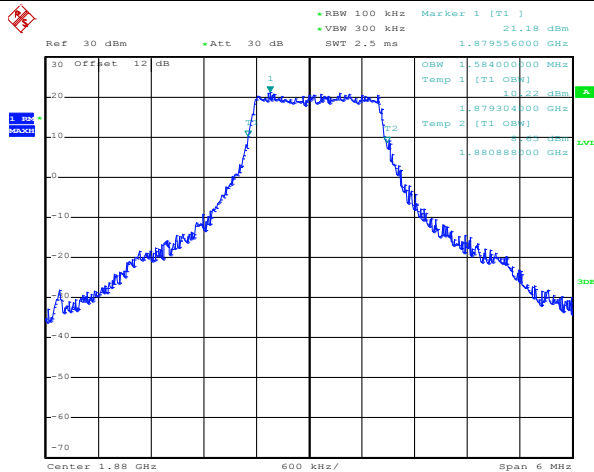
Date: 10.FEB.2012 15:32:55

1RB Size, RB Offset 14, 16QAM



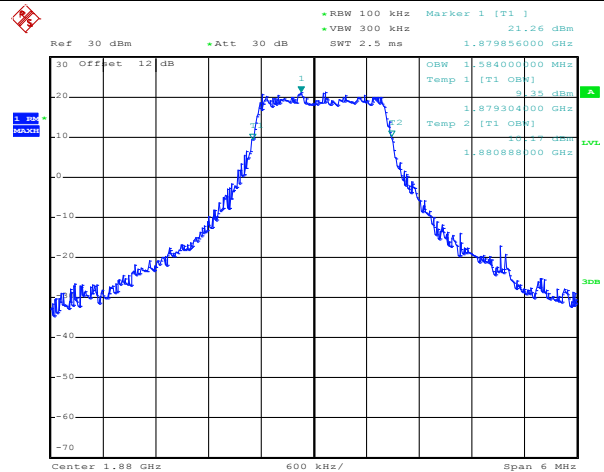
Band 2

Bandwidth 3M



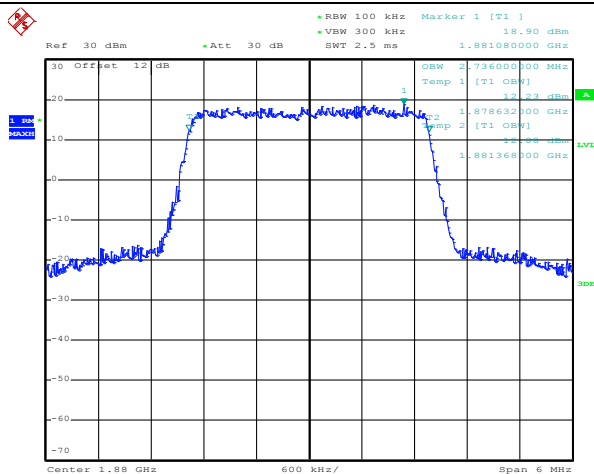
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8RB Size, RB Offset 4, QPSK



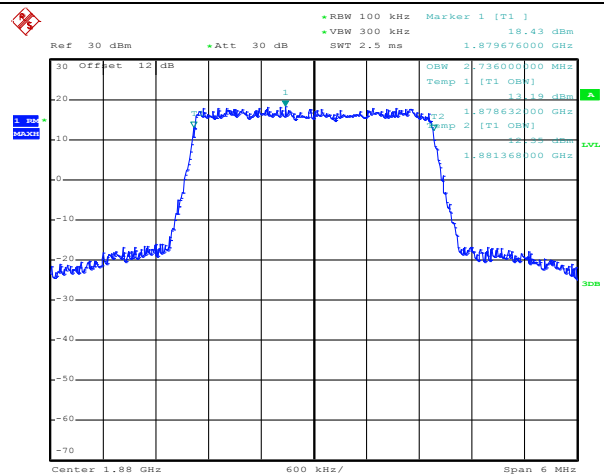
Date: 10.FEB.2012 15:34:47

8RB Size, RB Offset 4, 16QAM



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

15RB Size, RB Offset 0, QPSK



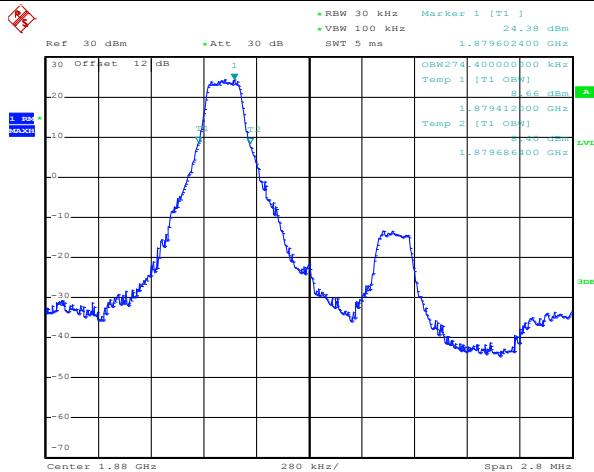
Date: 10.FEB.2012 15:34:21

15RB Size, RB Offset 0, 16QAM



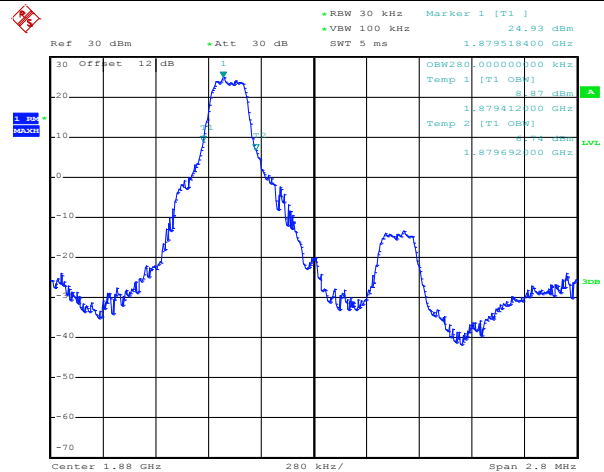
Band 2

Bandwidth 1.4M



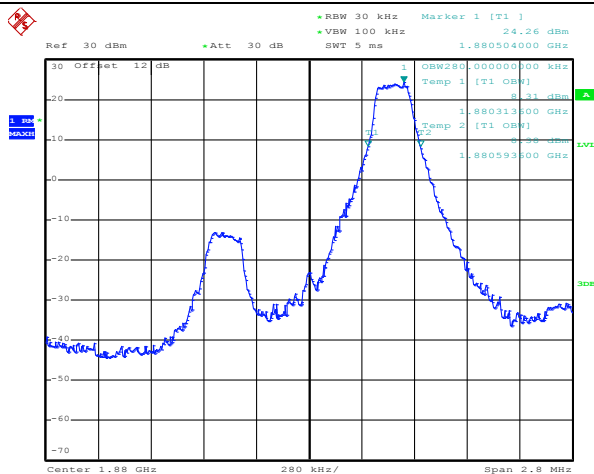
Date: 10.FEB.2012 15:07:08

1RB Size, RB Offset 0, QPSK



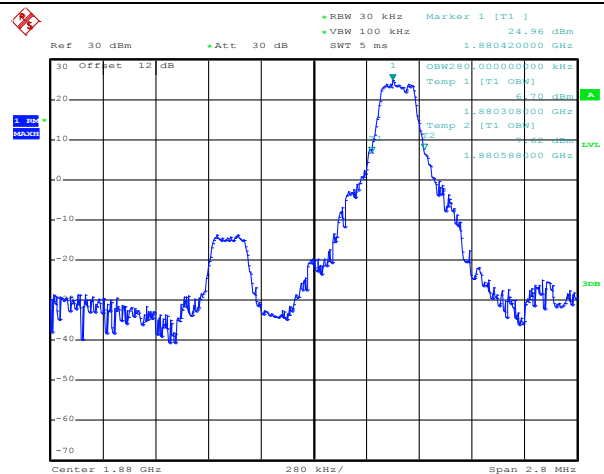
Date: 10.FEB.2012 15:06:48

1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 5, QPSK



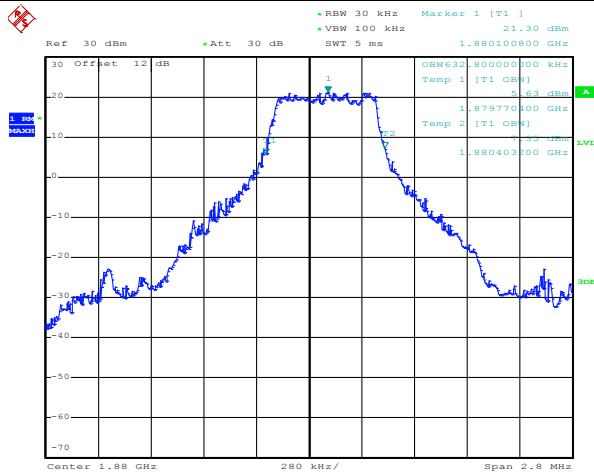
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1RB Size, RB Offset 5, 16QAM



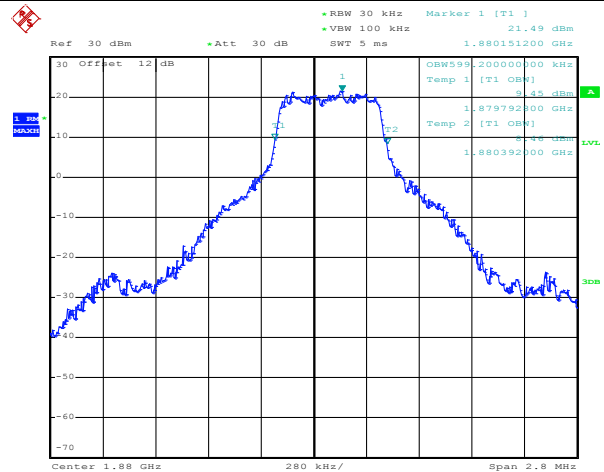
Band 2

Bandwidth 1.4M



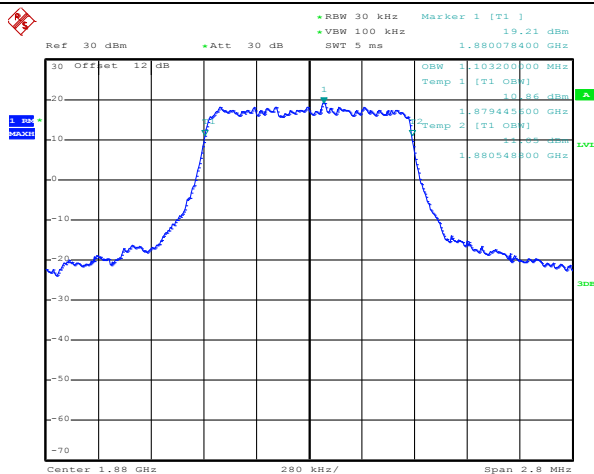
Date: 10.FEB.2012 15:09:19

3RB Size, RB Offset 2, QPSK



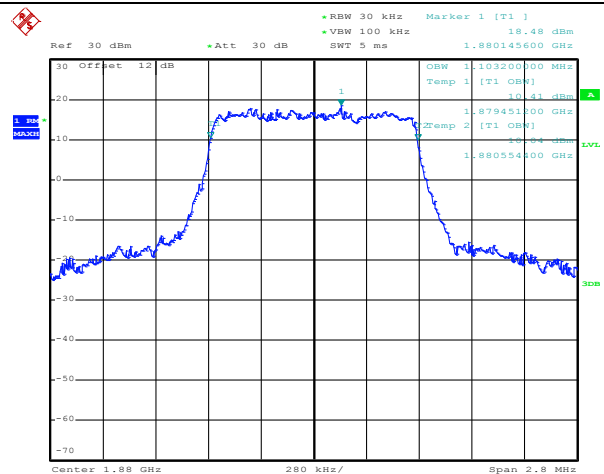
Date: 10.FEB.2012 15:08:58

3RB Size, RB Offset 2, 16QAM



Date: 10.FEB.2012 15:05:29

6RB Size, RB Offset 0, QPSK



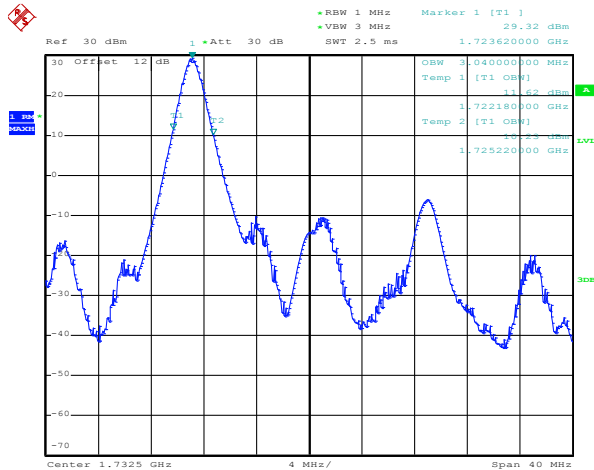
Date: 10.FEB.2012 15:06:06

6RB Size, RB Offset 0, 16QAM



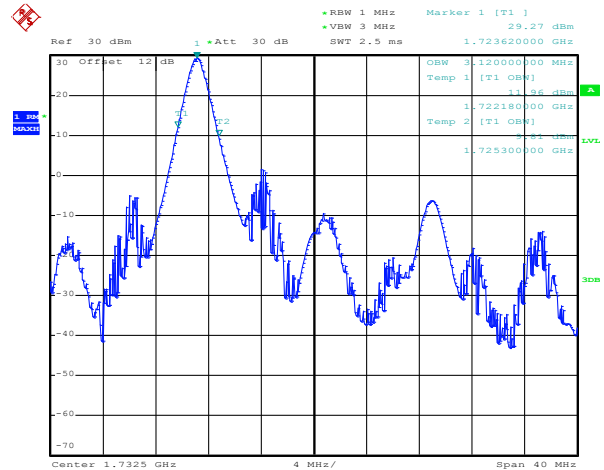
Band 4

Bandwidth 20M



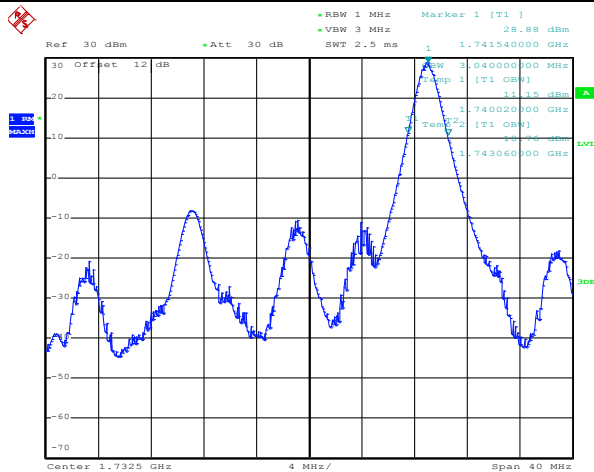
Date: 11.FEB.2012 16:13:31

1RB Size, RB Offset 0, QPSK



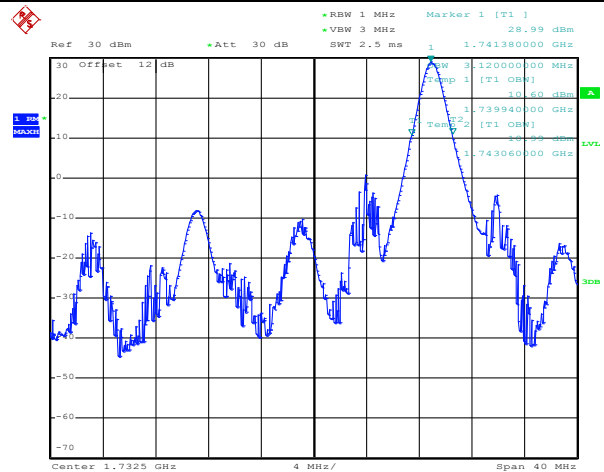
Date: 11.FEB.2012 16:14:08

1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 99, QPSK



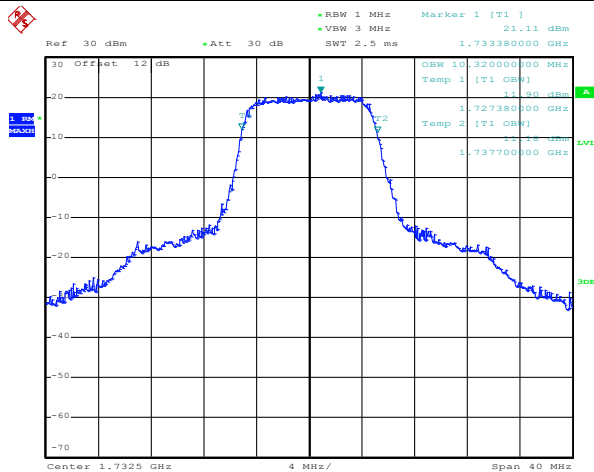
Date: 11.FEB.2012 16:15:04

1RB Size, RB Offset 99, 16QAM



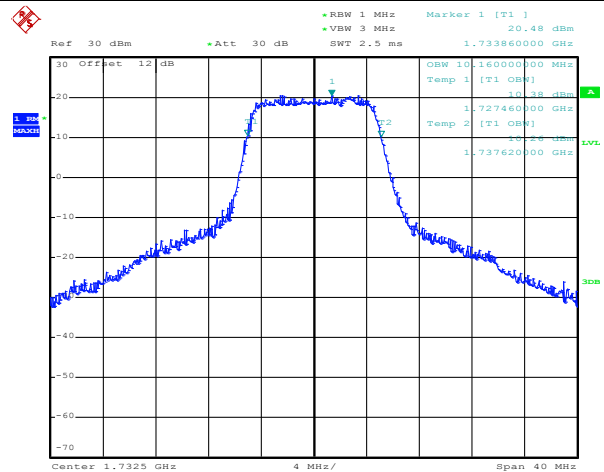
Band 4

Bandwidth 20M



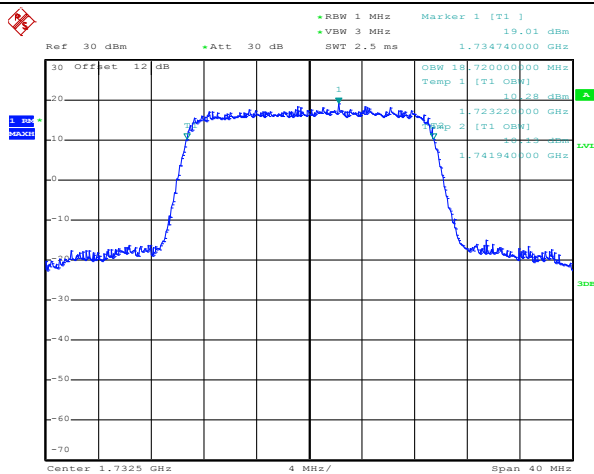
Date: 11.FEB.2012 16:15:52

50RB Size, RB Offset 25, QPSK



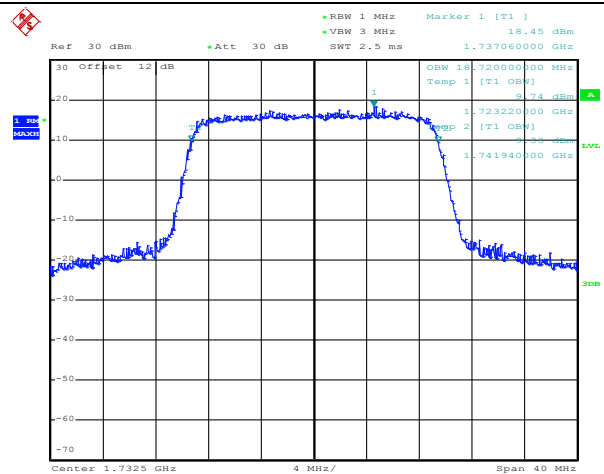
Date: 11.FEB.2012 16:16:17

50RB Size, RB Offset 25, 16QAM



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

100RB Size, RB Offset 0, QPSK

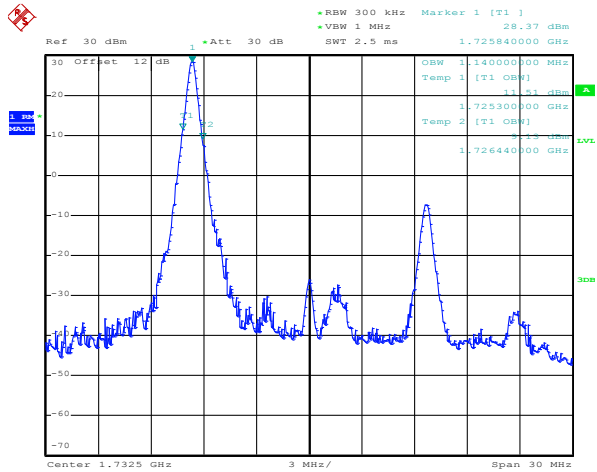


Date: 11.FEB.2012 16:17:31

100RB Size, RB Offset 0, 16QAM

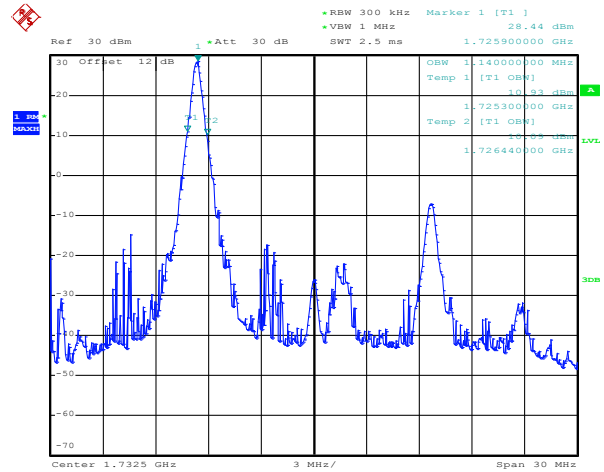
## Band 4

Bandwidth 15M



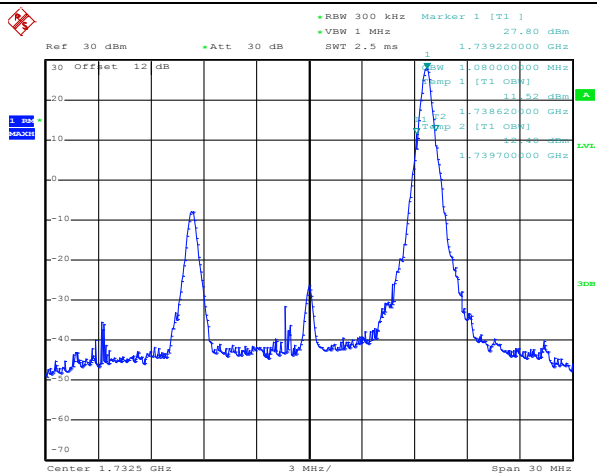
Date: 11.FEB.2012 16:02:57

1RB Size, RB Offset 0, QPSK



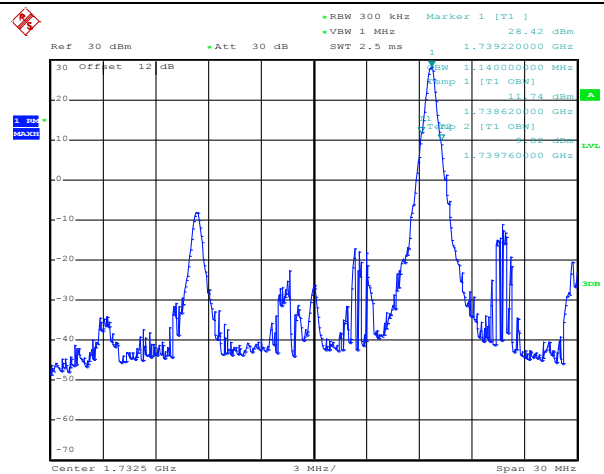
Date: 11.FEB.2012 16:05:15

1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 74, QPSK



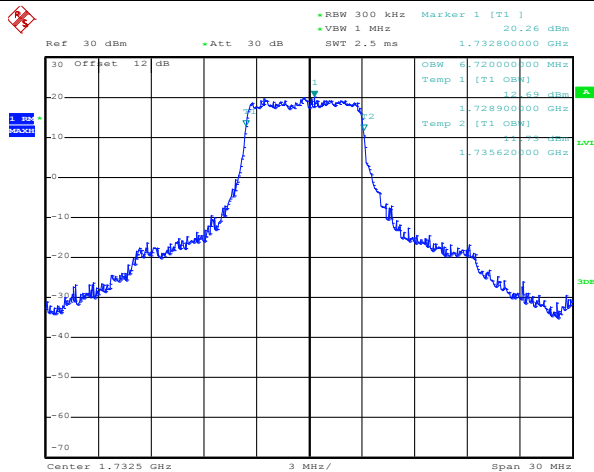
Date: 11.FEB.2012 16:06:10

1RB Size, RB Offset 74, 16QAM



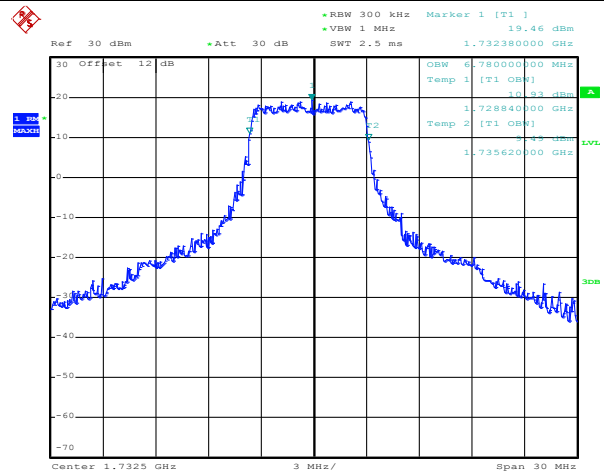
Band 4

Bandwidth 15M



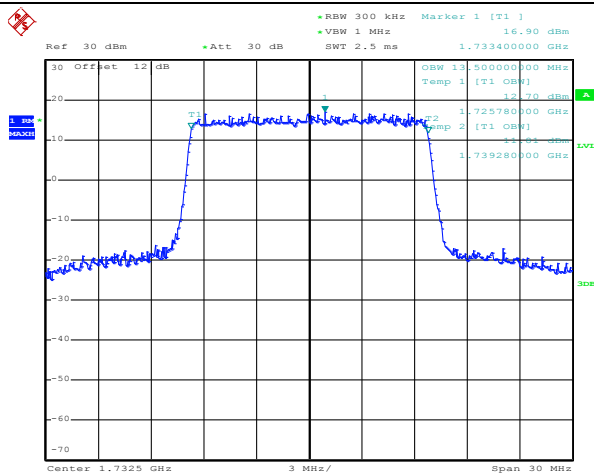
Date: 11.FEB.2012 16:08:10

36RB Size, RB Offset 18, QPSK



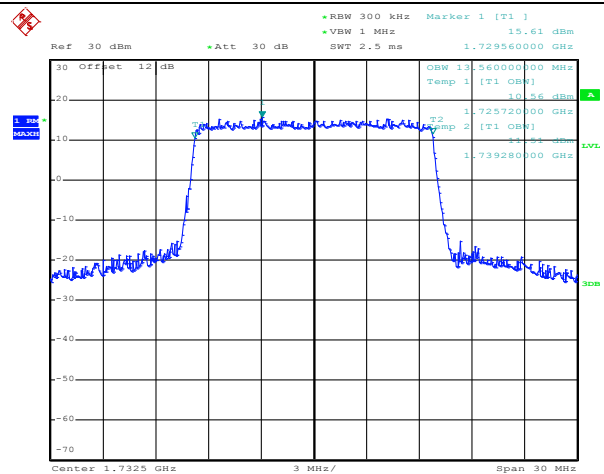
Date: 11.FEB.2012 16:08:30

36RB Size, RB Offset 18, 16QAM



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

75RB Size, RB Offset 0, QPSK



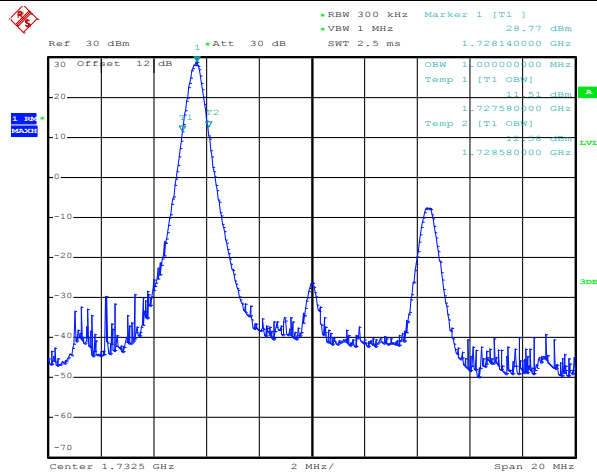
Date: 11.FEB.2012 16:10:18

75RB Size, RB Offset 0, 16QAM



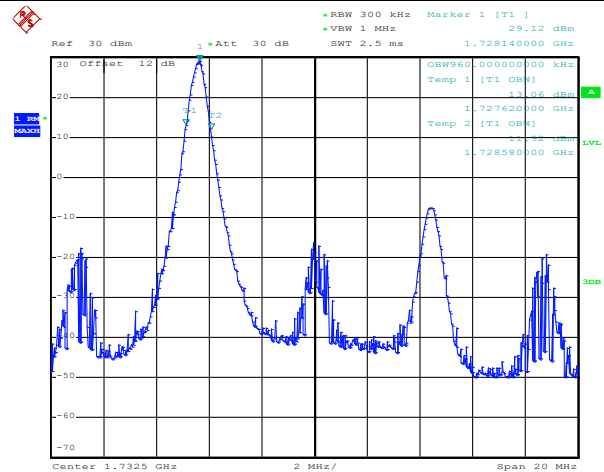
Band 4

Bandwidth 10M



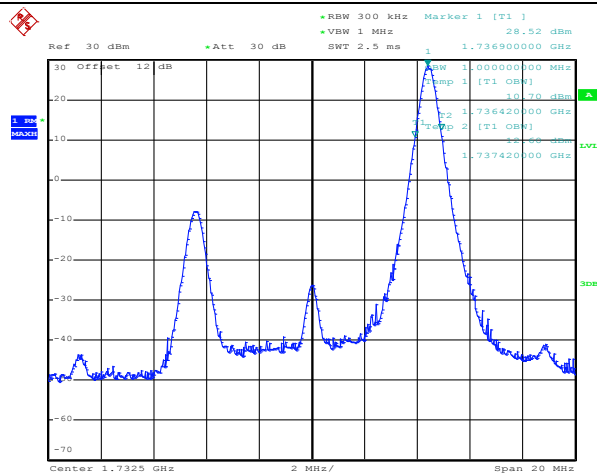
Date: 11.FEB.2012 15:54:48

1RB Size, RB Offset 0, QPSK



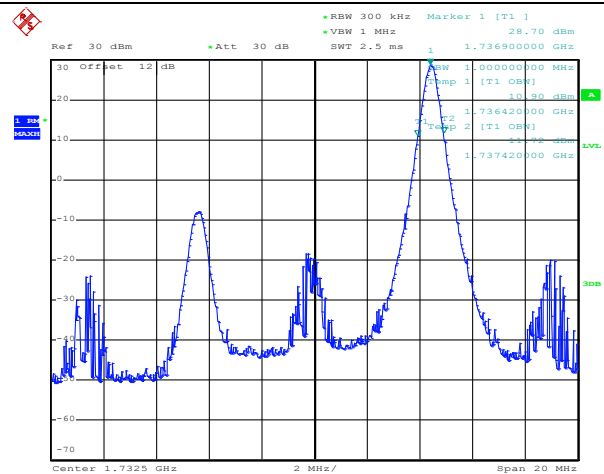
Date: 11.FEB.2012 15:55:10

1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 49, QPSK



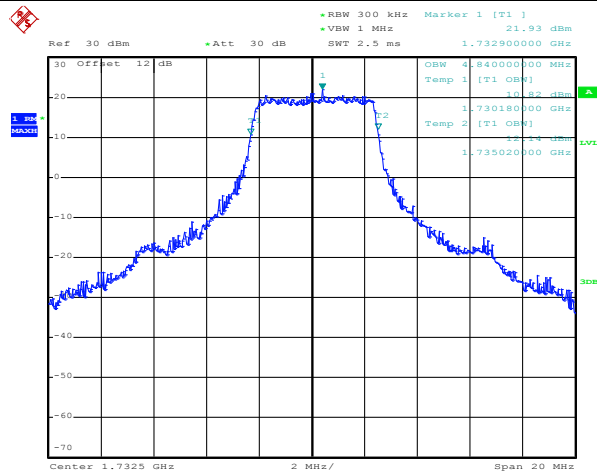
Date: 11.FEB.2012 15:56:09

1RB Size, RB Offset 49, 16QAM



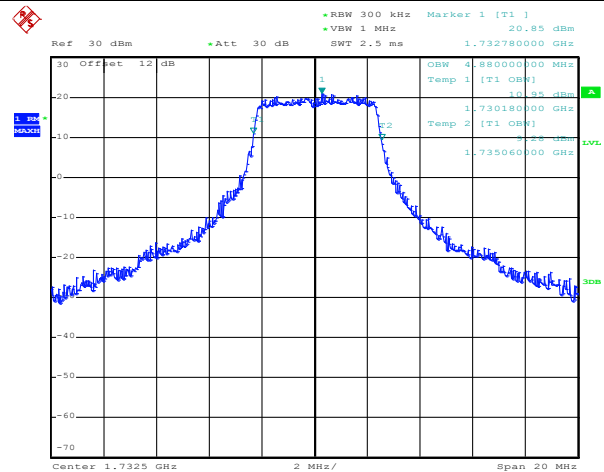
Band 4

Bandwidth 10M



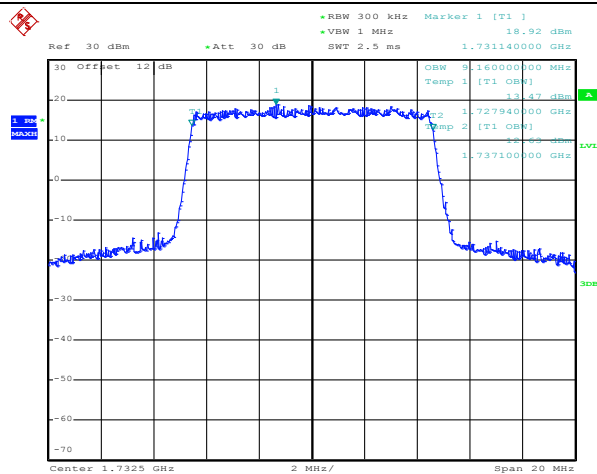
Date: 11.FEB.2012 15:56:41

25RB Size, RB Offset 13, QPSK



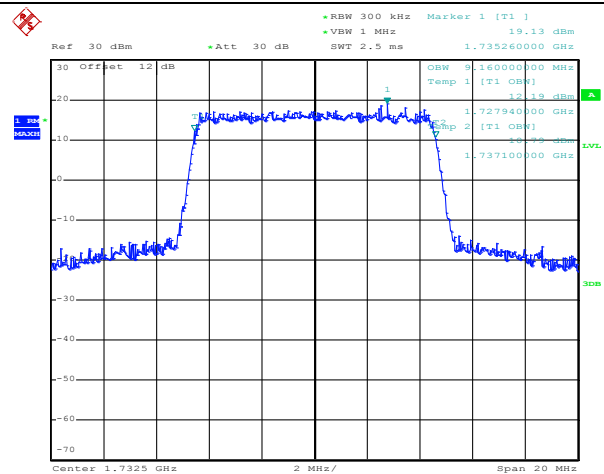
Date: 11.FEB.2012 15:57:31

25RB Size, RB Offset 13, 16QAM



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

50RB Size, RB Offset 0, QPSK



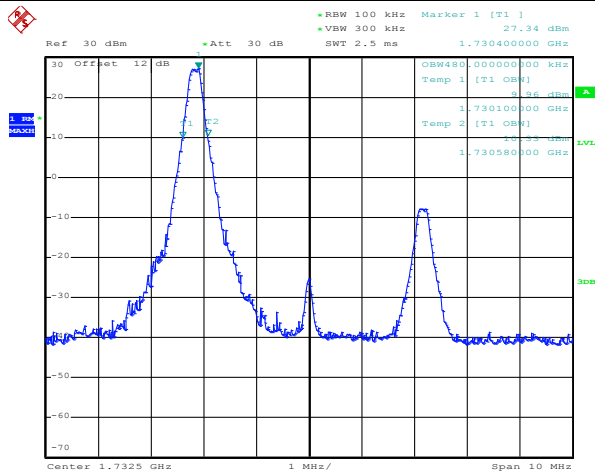
Date: 11.FEB.2012 15:58:52

50RB Size, RB Offset 0, 16QAM

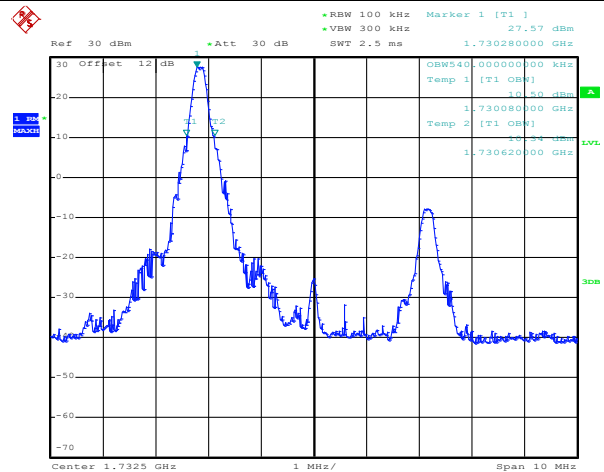


Band 4

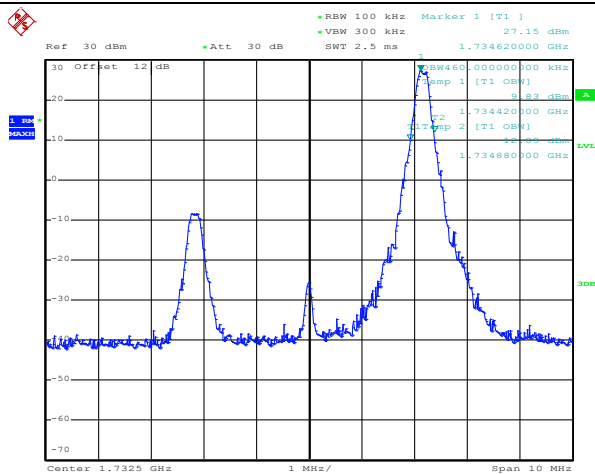
Bandwidth 5M



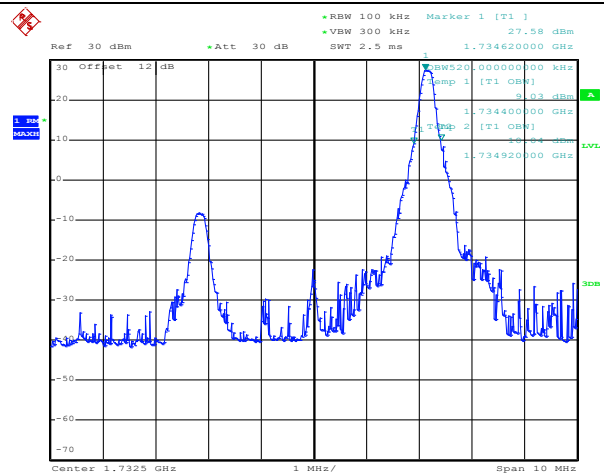
1RB Size, RB Offset 0, QPSK



1RB Size, RB Offset 0, 16QAM



1RB Size, RB Offset 24, QPSK

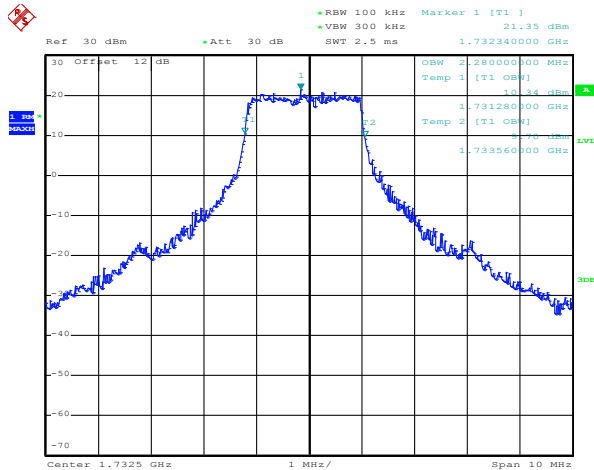


1RB Size, RB Offset 24, 16QAM



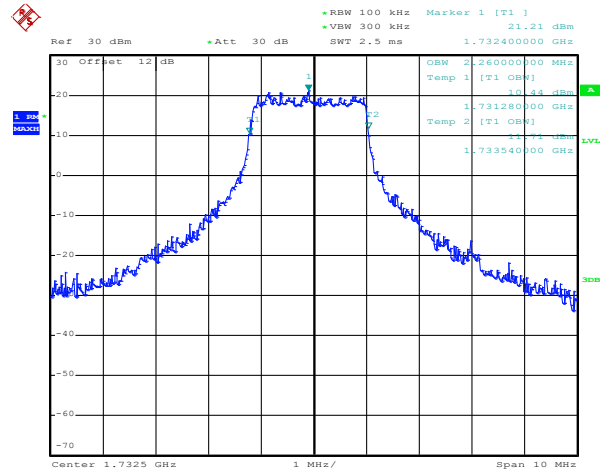
Band 4

Bandwidth 5M



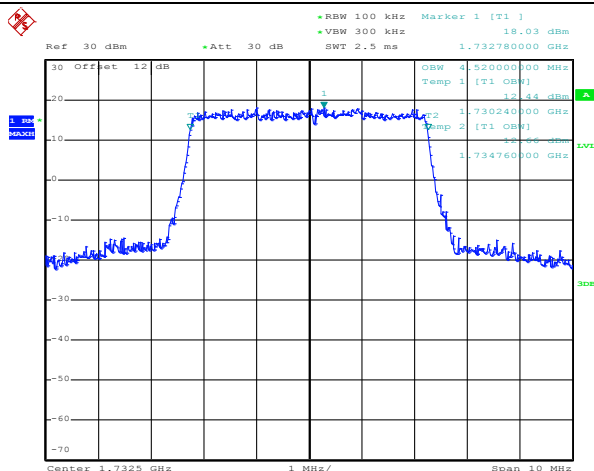
Date: 11.FEB.2012 15:47:06

12RB Size, RB Offset 6, QPSK



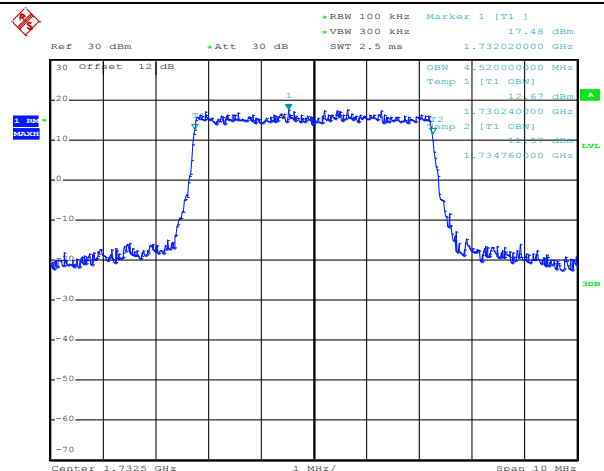
Date: 11.FEB.2012 15:47:45

12RB Size, RB Offset 6, 16QAM



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

25RB Size, RB Offset 0, QPSK



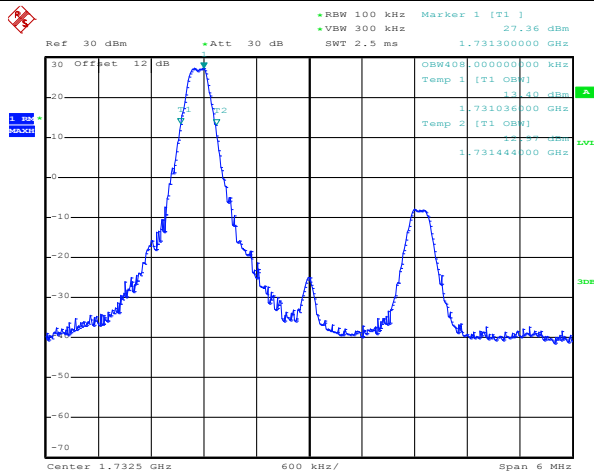
Date: 11.FEB.2012 15:48:56

25RB Size, RB Offset 0, 16QAM



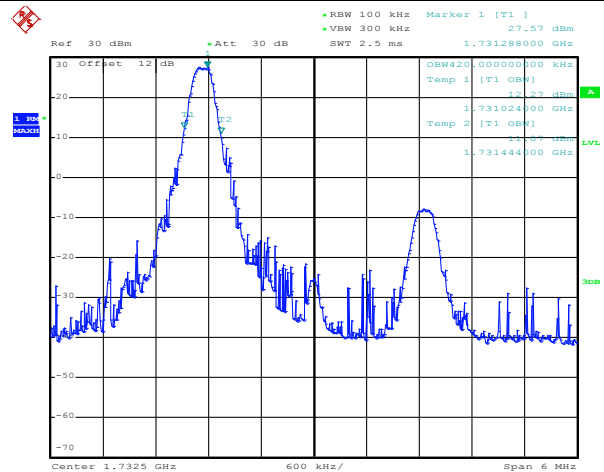
Band 4

Bandwidth 3M



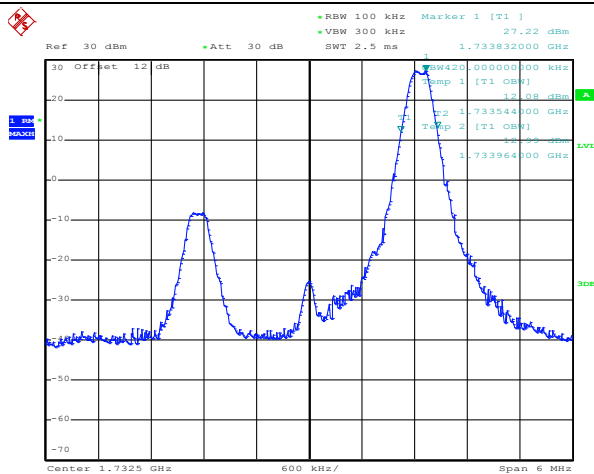
Date: 11.FEB.2012 15:34:01

1RB Size, RB Offset 0, QPSK



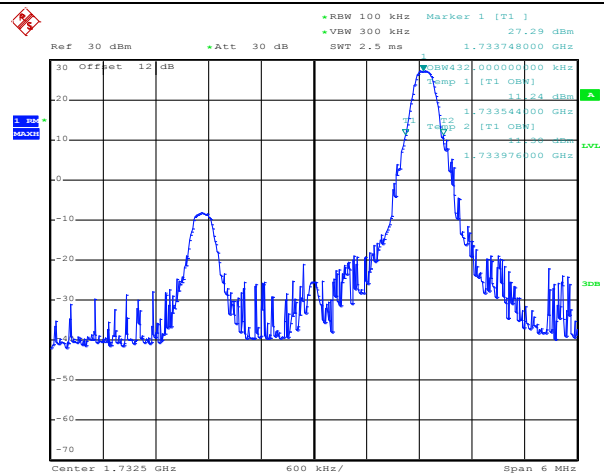
Date: 11.FEB.2012 15:34:27

1RB Size, RB Offset 0, 16QAM



Date: 11.FEB.2012 15:35:09

1RB Size, RB Offset 14, QPSK



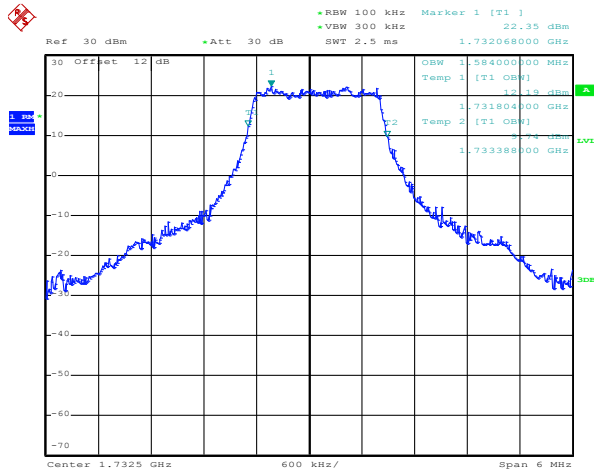
Date: 11.FEB.2012 15:35:40

1RB Size, RB Offset 14, 16QAM



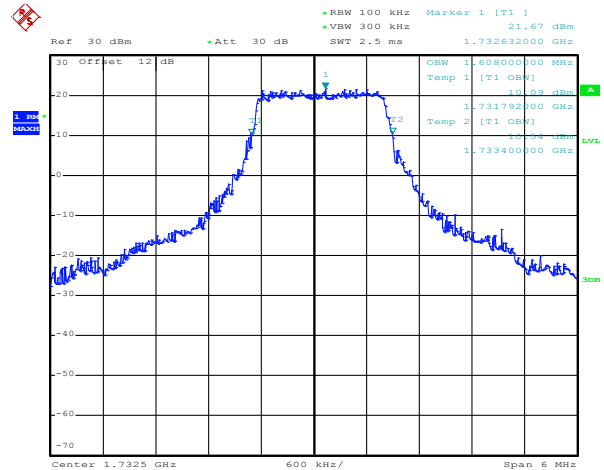
Band 4

Bandwidth 3M



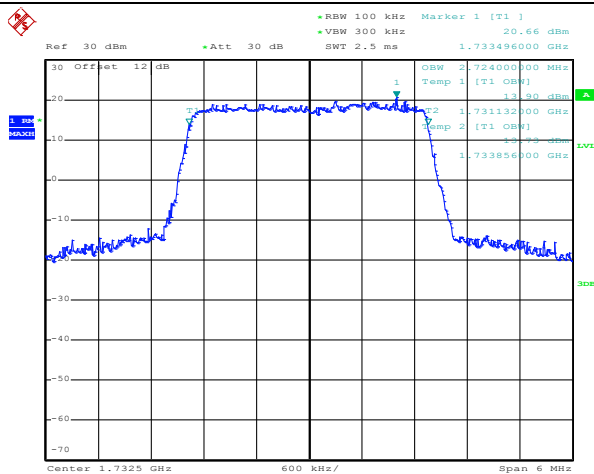
Date: 11.FEB.2012 15:36:47

8RB Size, RB Offset 4, QPSK



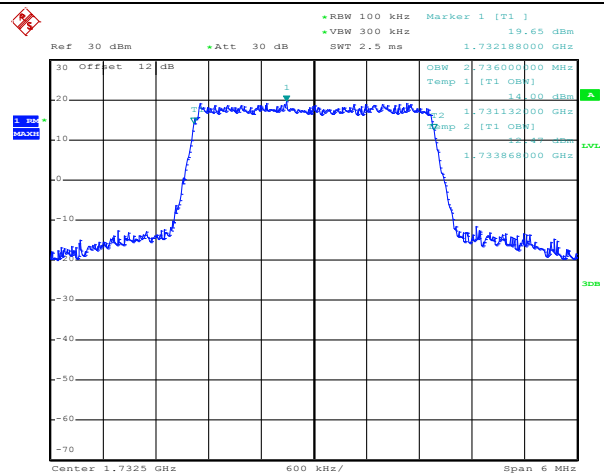
Date: 11.FEB.2012 15:37:14

8RB Size, RB Offset 4, 16QAM



Date: 11.FEB.2012 15:37:45

15RB Size, RB Offset 0, QPSK



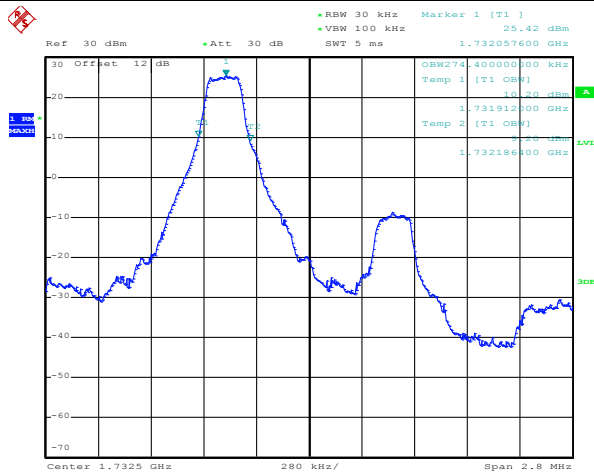
Date: 11.FEB.2012 15:38:23

15RB Size, RB Offset 0, 16QAM



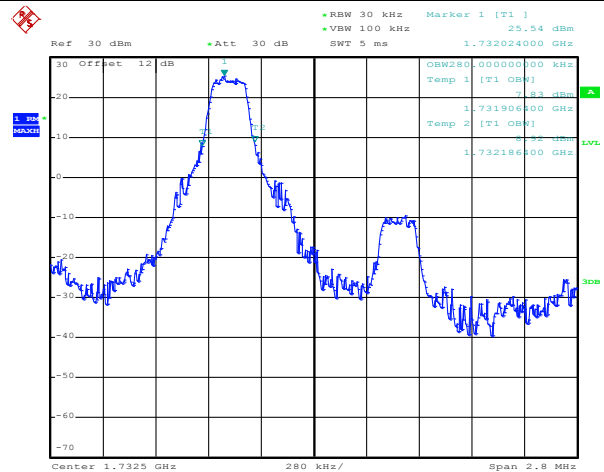
Band 4

Bandwidth 1.4M



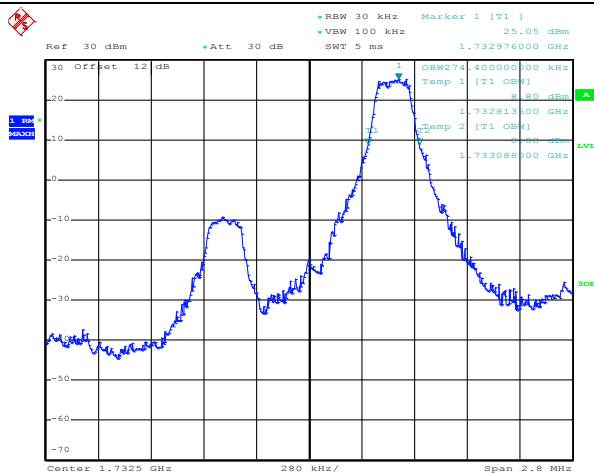
Date: 11.FEB.2012 15:26:58

1RB Size, RB Offset 0, QPSK



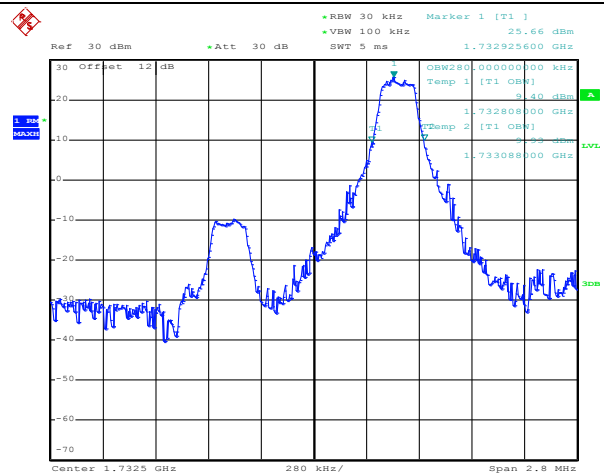
Date: 11.FEB.2012 15:27:50

1RB Size, RB Offset 0, 16QAM



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

1RB Size, RB Offset 5, QPSK



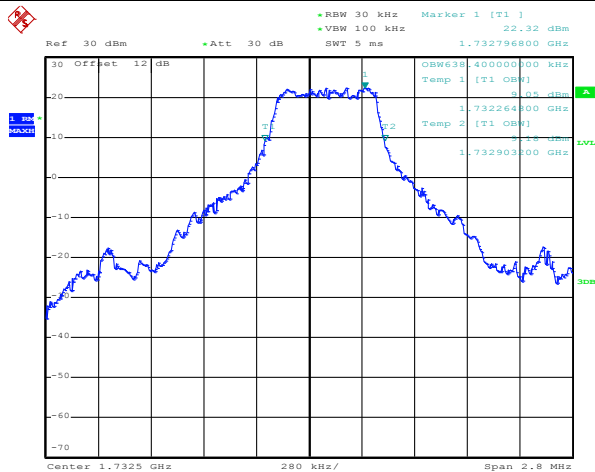
Date: 11.FEB.2012 15:28:42

1RB Size, RB Offset 5, 16QAM



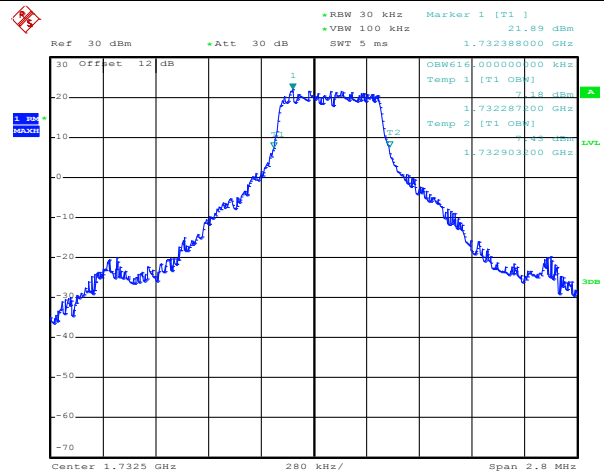
Band 4

Bandwidth 1.4M



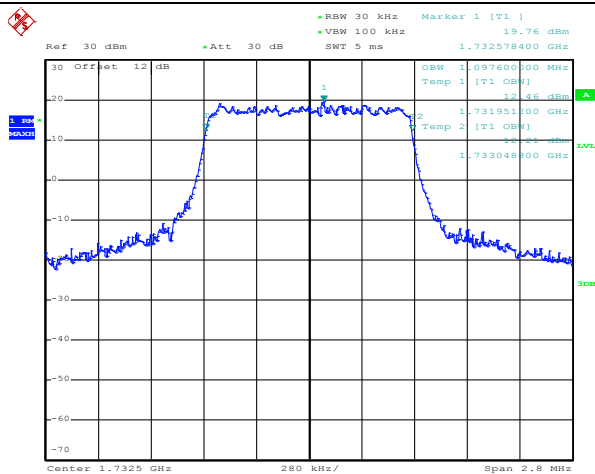
Date: 11.FEB.2012 15:29:43

3RB Size, RB Offset 2, QPSK



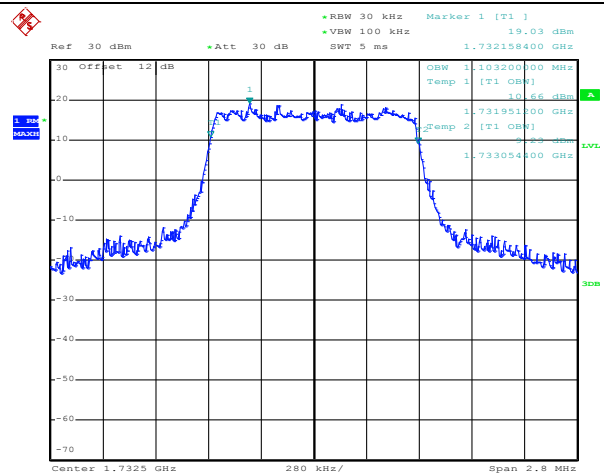
Date: 11.FEB.2012 15:30:02

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