Appendix C

Occupied Bandwidth
According to FCC Part 2.1049 & Part 22 Subpart H

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Result Table

NOTE: All relevant operation modes have been tested, and the full RB data is included in this report.

Table 1 Measurement Results CDMA&EVDO

Test Mode	RF Channel	Occupied Bandwidth [MHz]	Verdict
TM1	B	1.28	Pass
	M	1.28	Pass
	T	1.28	Pass
TM3	B	1.28	Pass
	M	1.28	Pass
	T	1.28	Pass
Subtype 0	B	1.28	Pass
	M	1.27	Pass
	T	1.27	Pass
Subtype 2	B	1.28	Pass
	M	1.27	Pass
	T	1.27	Pass

Table 2 Measurement Results (LTE) BAND 5

Test Mode	Carrier Conf.	RF Ch.	Occupied Bandwidth [MHz]	Verdict
TM4	1.4 MHz	B	1.09	Pass
		M	1.09	Pass
		T	1.09	Pass
	3 MHz	B	2.70	Pass
		M	2.70	Pass
		T	2.70	Pass
	5 MHz	B	4.49	Pass
		M	4.47	Pass
		T	4.49	Pass
	10 MHz	B	8.92	Pass
		M	8.97	Pass
		T	8.94	Pass
TM5	1.4 MHz	B	1.10	Pass
		M	1.10	Pass
		T	1.09	Pass
	3 MHz	B	2.69	Pass
		M	2.69	Pass
		T	2.68	Pass
	5 MHz	B	4.49	Pass
		M	4.50	Pass
		T	4.49	Pass
	10 MHz	B	8.89	Pass
		M	8.97	Pass
		T	8.92	Pass

1 For CDMA 800

1.1 Test Mode = TM1

1.1.1.1 Channel = B


```
                                          * RBW  30 kHz          Marker 1 [T1 ]
                                          * VBW  300 kHz                  18.61 dBm
        Ref  35 dBm            Att   25 dB   SWT  20 ms          824.707211538 MHz

           Offset   16.1 dB                            OBW   1.276442308 MHz
         30                                            Temp 1 [T1 OBW]
                                                               12.31 dBm          A
         20                                            824.065384615 MHz
                                                       Temp 2 [T1 OBW]
         10                                                    12.62 dBm         LVL
                                                       825.341826923 MHz
          0

        -10

        -20                                                                      3DB

        -30

        -40

        -50

        -60

        Center  824.7 MHz              450 kHz/                Span  4.5 MHz
```
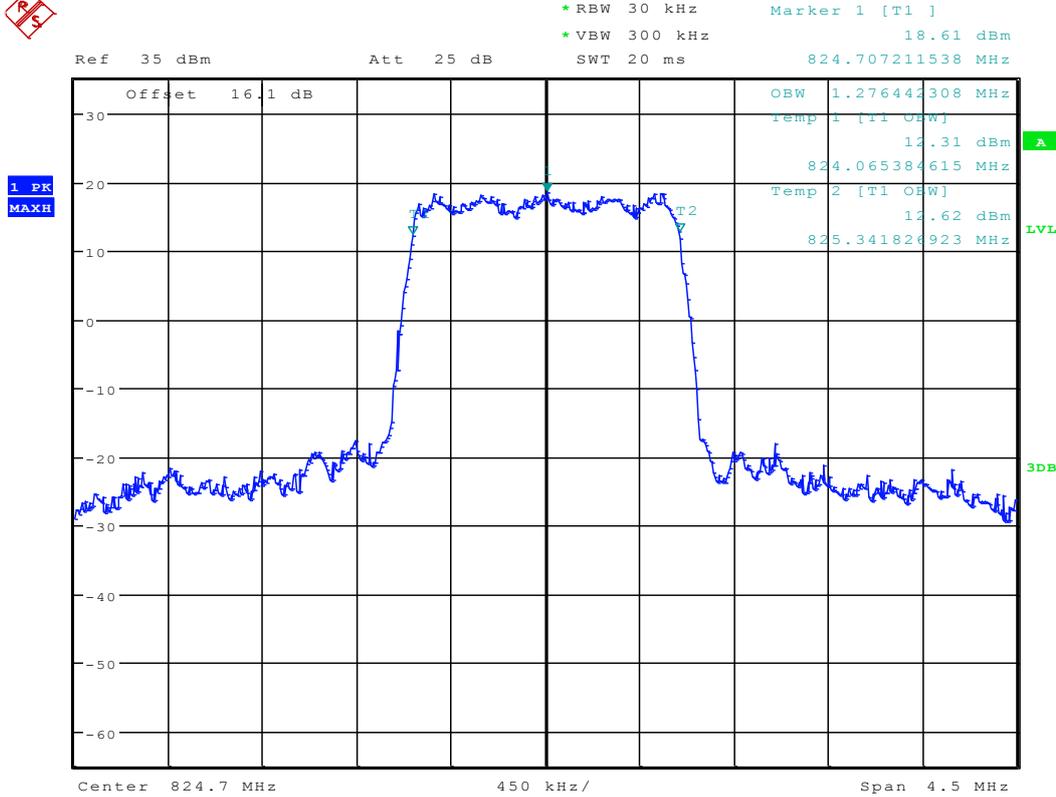
Date: 13.APR.2012 23:06:21

1.1.1.2 Channel = M

Date: 13.APR.2012 23:06:34

1.1.1.3 Channel = T


```
                                          * RBW  30 kHz        Marker 1 [T1 ]
                                          * VBW  300 kHz                19.21 dBm
        Ref  35 dBm           Att  25 dB   SWT  20 ms         848.273942308 MHz

              Offset  16.1 dB                                 OBW  1.283653846 MHz
          30                                                  Temp 1 [T1 OBW]
                                                                      11.06 dBm     A
          20                                      1                847.668173077 MHz
                                                                 Temp 2 [T1 OBW]
          10                                                          11.86 dBm    LVL
                                                                 848.951826923 MHz
           0

         -10

         -20                                                                      3DB

         -40

         -50

         -60

      Center  848.31 MHz              450 kHz/              Span  4.5 MHz
```

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1.2   Test Mode = TM3

1.2.1.1 Channel = B

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1.2.1.2 Channel = M


```
                                    * RBW  30 kHz       Marker 1 [T1 ]
                                    * VBW  300 kHz                      19.49 dBm
      Ref   35 dBm        Att   25 dB   SWT  20 ms       836.217115385 MHz

        Offset   16.1 dB                            OBW  1.276442308 MHz
      30                                            Temp 1 [T1 OBW]
                                                                      10.53 dBm    A
 1 PK                                                     835.885384615 MHz
 MAXH   20                      1                    Temp 2 [T1 OBW]
                                                                      11.08 dBm    LVL
      10                                                  837.161826923 MHz

       0

     -10

     -20                                                                          3DB

     -30

     -40

     -50

     -60

      Center  836.52 MHz           450 kHz/              Span  4.5 MHz
```

Date: 13.APR.2012 23:07:17

1.2.1.3 Channel = T
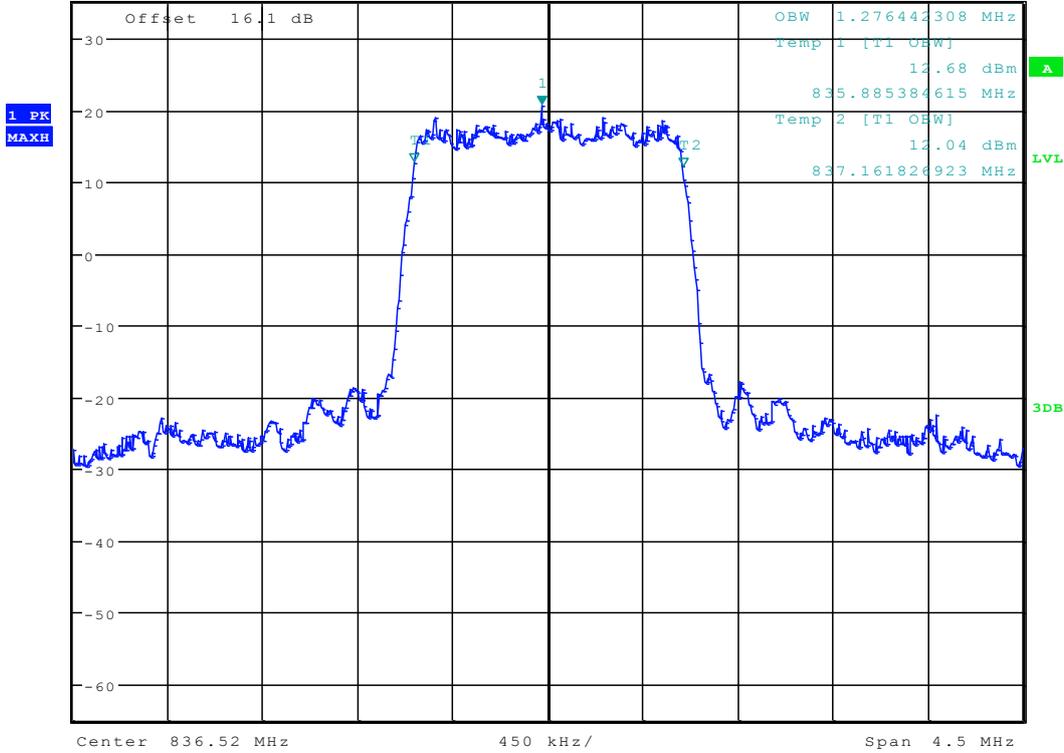
```
                                    * RBW  30 kHz      Marker 1 [T1 ]
                                    * VBW  300 kHz                19.52 dBm
      Ref   35 dBm        Att   25 dB   SWT  20 ms     847.783557692 MHz

      Offset   16.1 dB                        OBW  1.276442308 MHz
  -30                                         Temp 1 [T1 OBW]
                                                         11.49 dBm    A
                              1                 847.675384615 MHz
  -20                                         Temp 2 [T1 OBW]
                                                         11.60 dBm   LVL
  -10                                           848.951826923 MHz

    0

  -10

  -20                                                                3DB

  -30

  -40

  -50

  -60

  Center  848.31 MHz       450 kHz/          Span  4.5 MHz
```
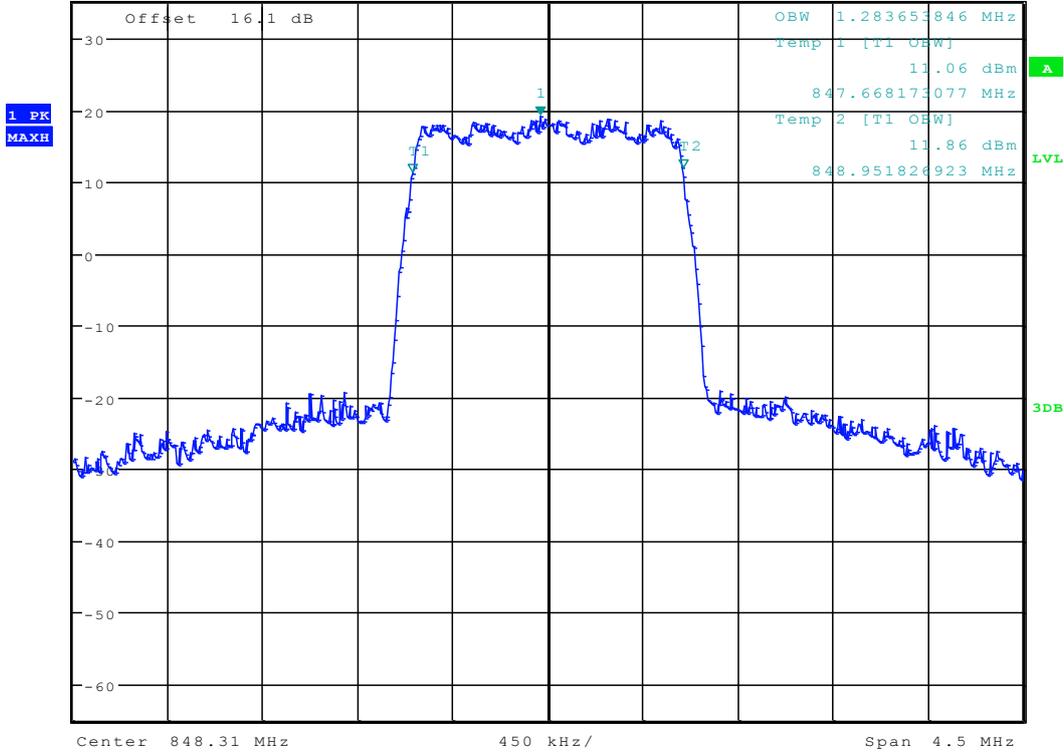
Date: 13.APR.2012 23:07:31

2   For EVDO 800

2.1   Test Mode = Subtype 0

2.1.1.1 Channel = B

Date: 13.APR.2012 23:42:05

2.1.1.2 Channel = M


```
                                    * RBW  30 kHz        Marker 1 [T1 ]
                                    * VBW  300 kHz                    19.39 dBm
      Ref   35 dBm        Att  25 dB   SWT 20 ms          836.862548077 MHz

          Offset  16.1 dB                                OBW  1.274038462 MHz
    -30                                                  Temp 1 [T1 OBW]
                                                                     10.91 dBm      A
    -20                                                   835.882980769 MHz
  1 PK                                          1         Temp 2 [T1 OBW]
  MAXH                                                                11.73 dBm     LVL
     10                                                    837.157019231 MHz
      0
    -10
                                                                                  3DB
    -20
    -30
    -40
    -50
    -60

      Center  836.52 MHz         375 kHz/              Span 3.75 MHz
```
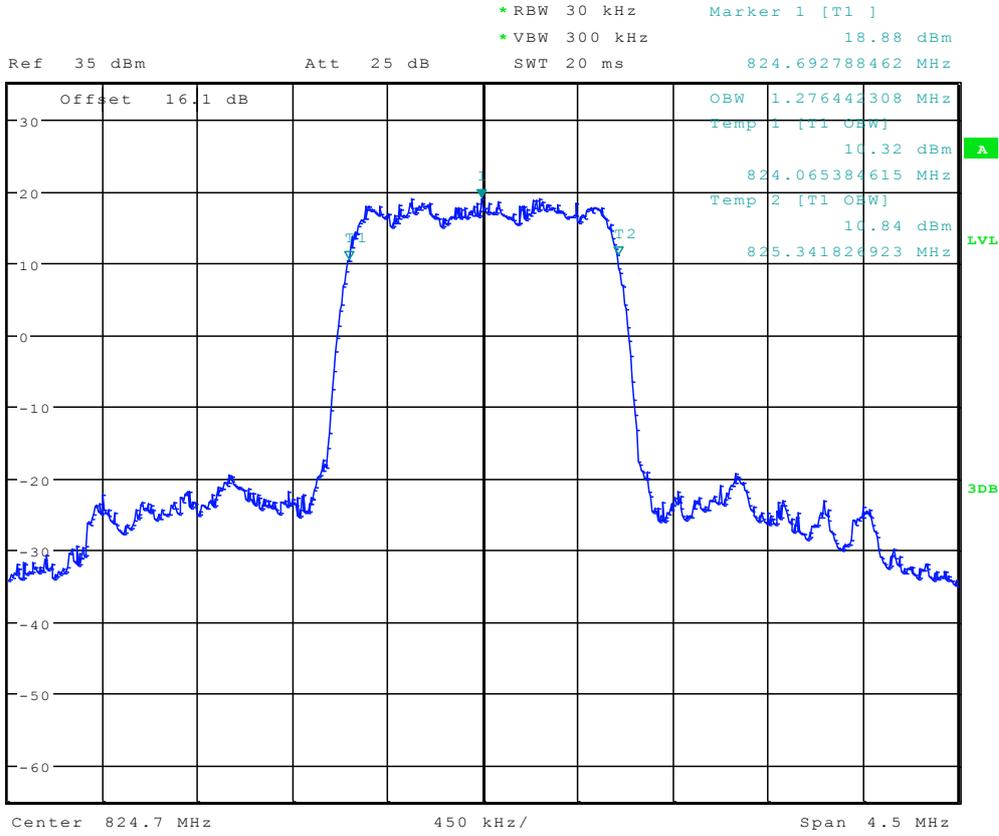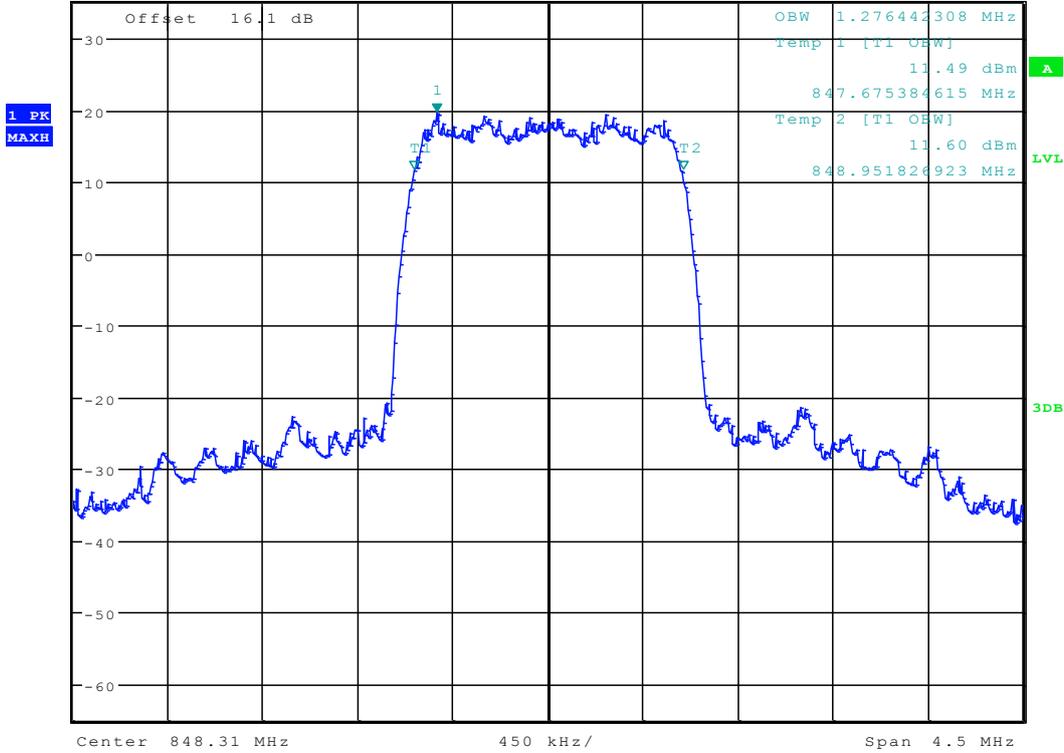
Date: 13.APR.2012 23:42:19

2.1.1.3 Channel = T

Date: 13.APR.2012 23:42:33

2.2 Test Mode = Subtype 2

2.2.1.1 Channel = B

Date: 13.APR.2012 23:48:42

2.2.1.2 Channel = M


```
                                        * RBW  30 kHz      Marker 1 [T1 ]
                                        * VBW  300 kHz                19.35 dBm
Ref   35 dBm           Att   25 dB      SWT  20 ms         836.171442308 MHz
      Offset   16.1 dB                                     OBW  1.274038462 MHz
 30                                                        Temp 1 [T1 OBW]
                                                                     10.20 dBm  [A]
 20                        1                               835.882980769 MHz
                                                          Temp 2 [T1 OBW]
 10                  T1                            T2               9.74 dBm   LVL
                                                          837.157019231 MHz
  0

-10

-20                                                                          3DB

-30

-40

-50

-60
Center  836.52 MHz               375 kHz/              Span  3.75 MHz
```
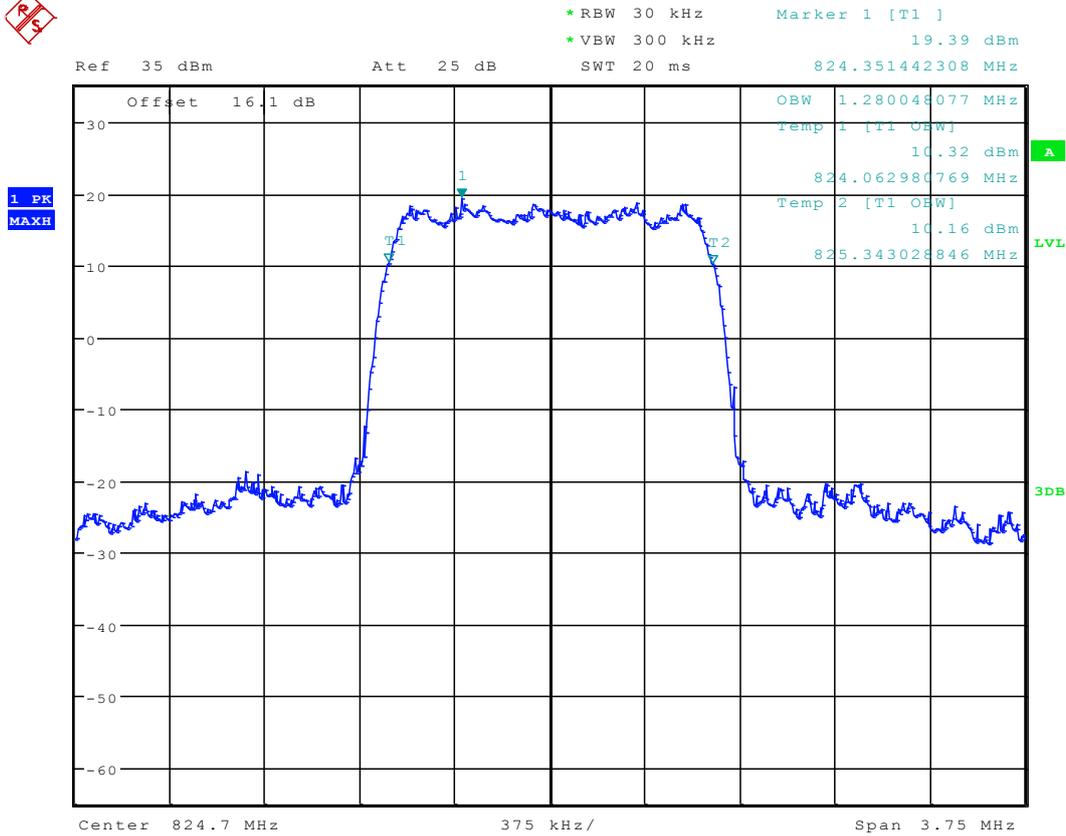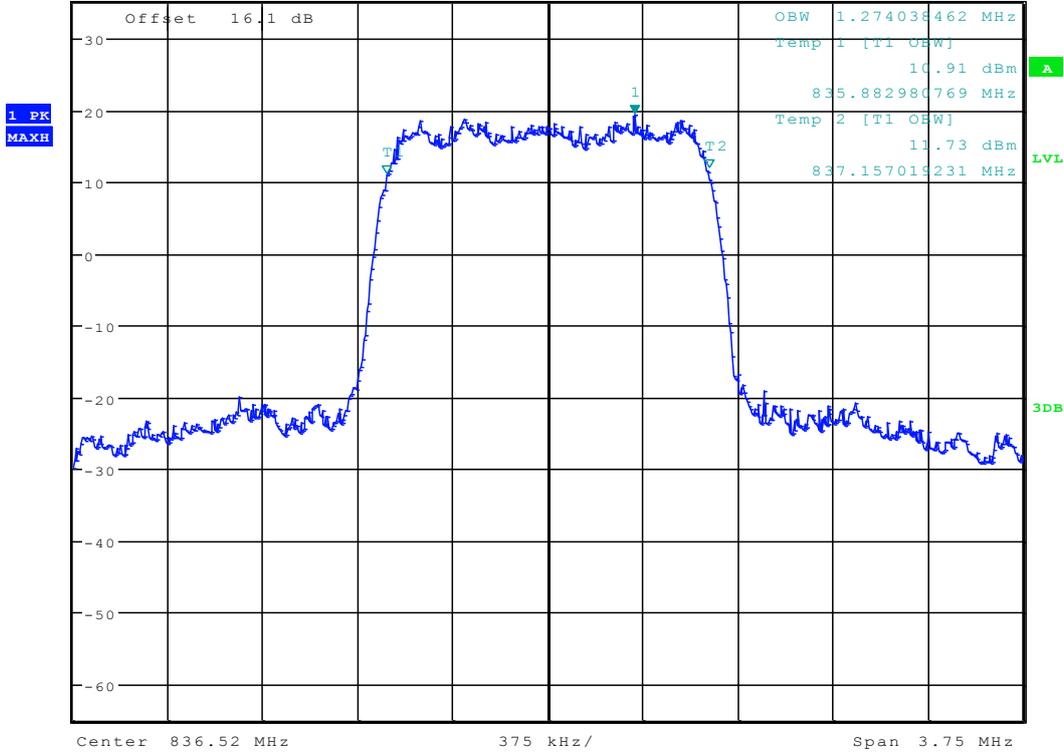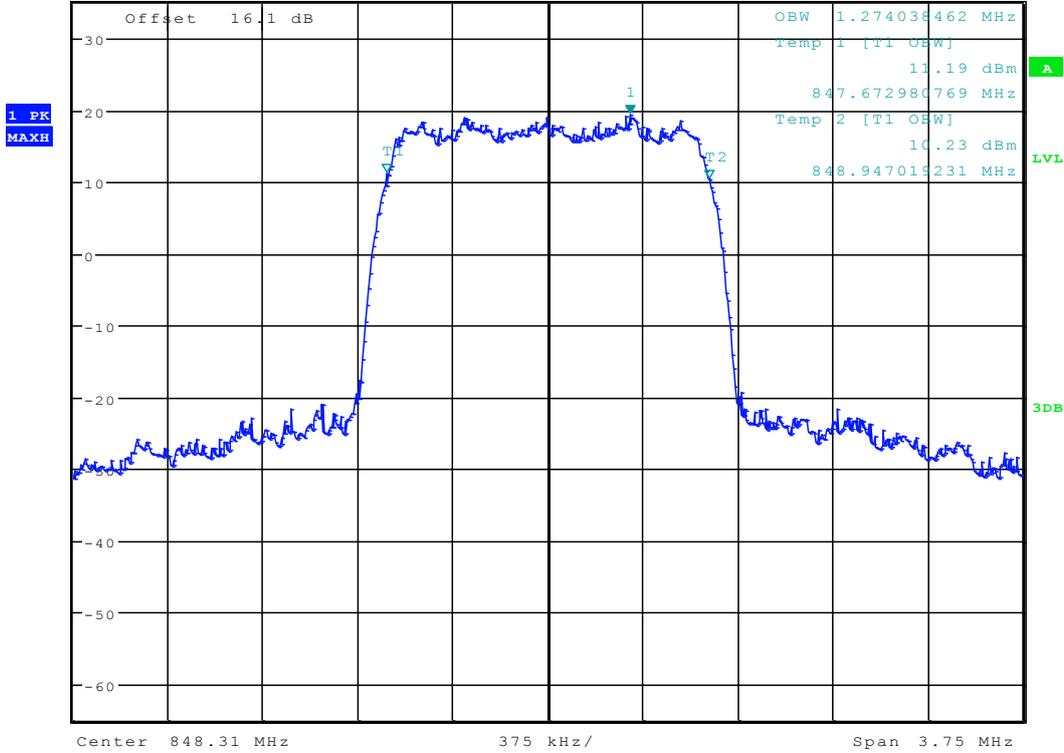
Date: 13.APR.2012   23:48:54

2.2.1.3 Channel = T


```
                                             * RBW  30 kHz        Marker 1 [T1 ]
                                             * VBW  300 kHz                    18.85 dBm
        Ref   35 dBm             Att   25 dB   SWT  20 ms          848.646538462 MHz

           Offset   16.1 dB                                    OBW  1.274038462 MHz
        30                                                     Temp 1 [T1 OBW]
                                                                             10.10 dBm     A
                                                                 847.672980769 MHz
        20                                          1           Temp 2 [T1 OBW]
 1 PK                                                                         11.60 dBm
 MAXH                                          T1       T2      848.947019231 MHz   LVL
        10

         0

       -10

       -20                                                                        3DB

       -30

       -40

       -50

       -60

        Center  848.31 MHz            375 kHz/                      Span  3.75 MHz
```
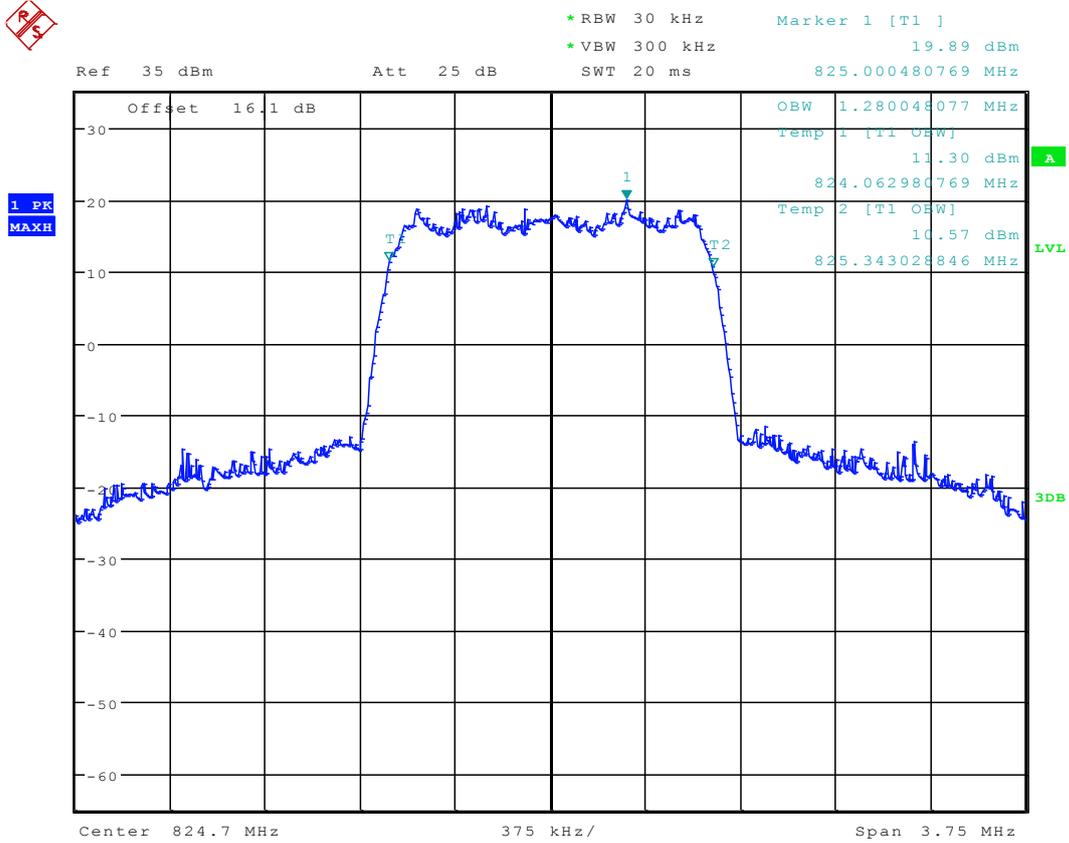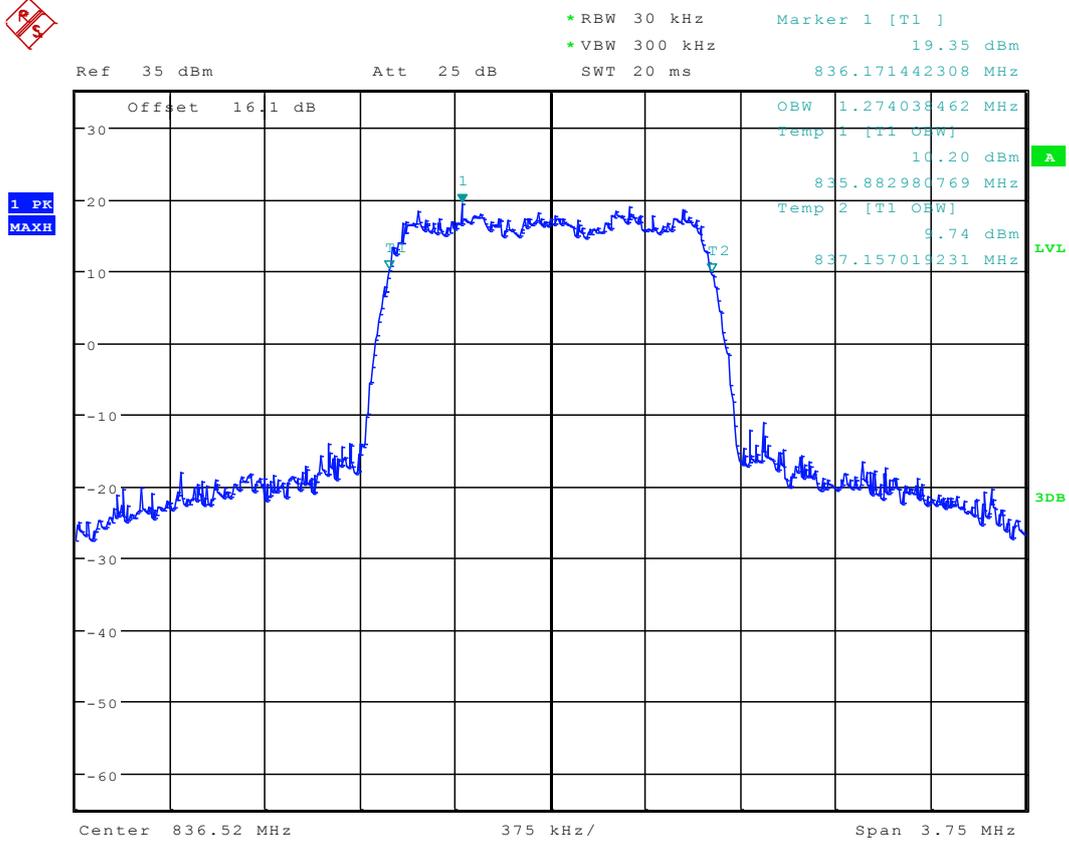
Date: 13.APR.2012 23:49:06

3   For Band 5

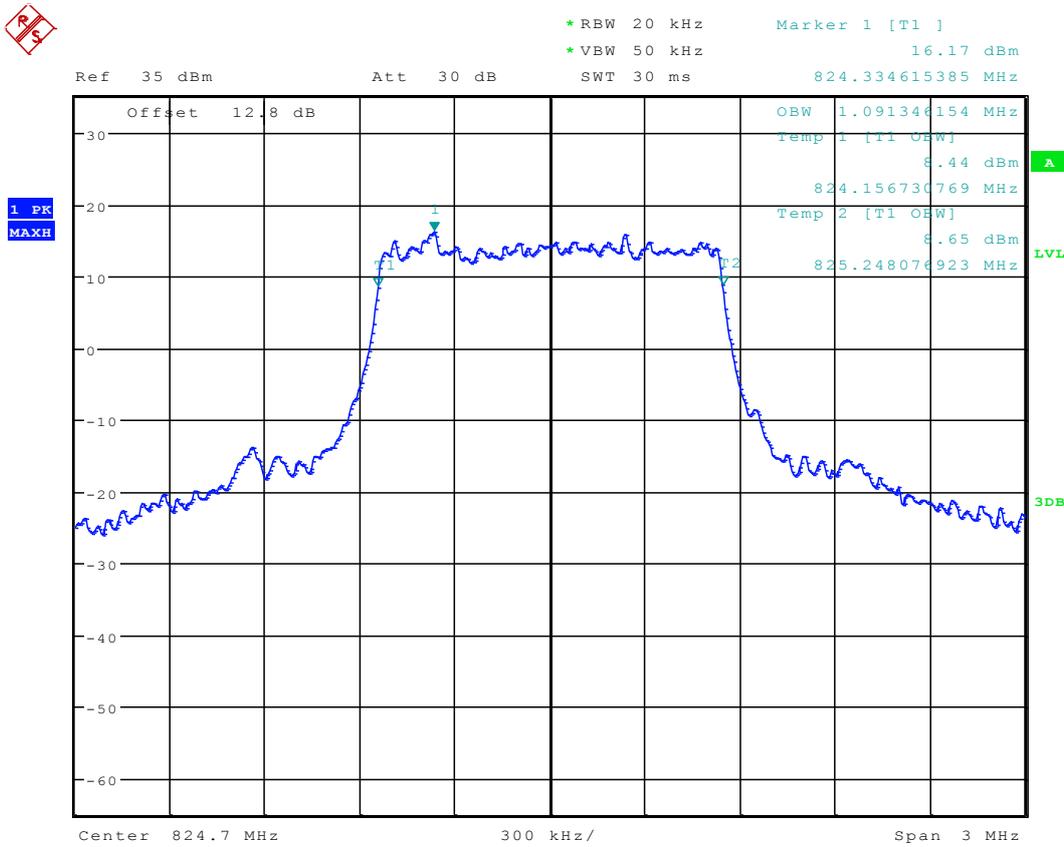## 3.1   Test Mode=TM4

3.1.1   Channel Bandwidth = Lowest (1.4 MHz)

3.1.1.1 Channel = B
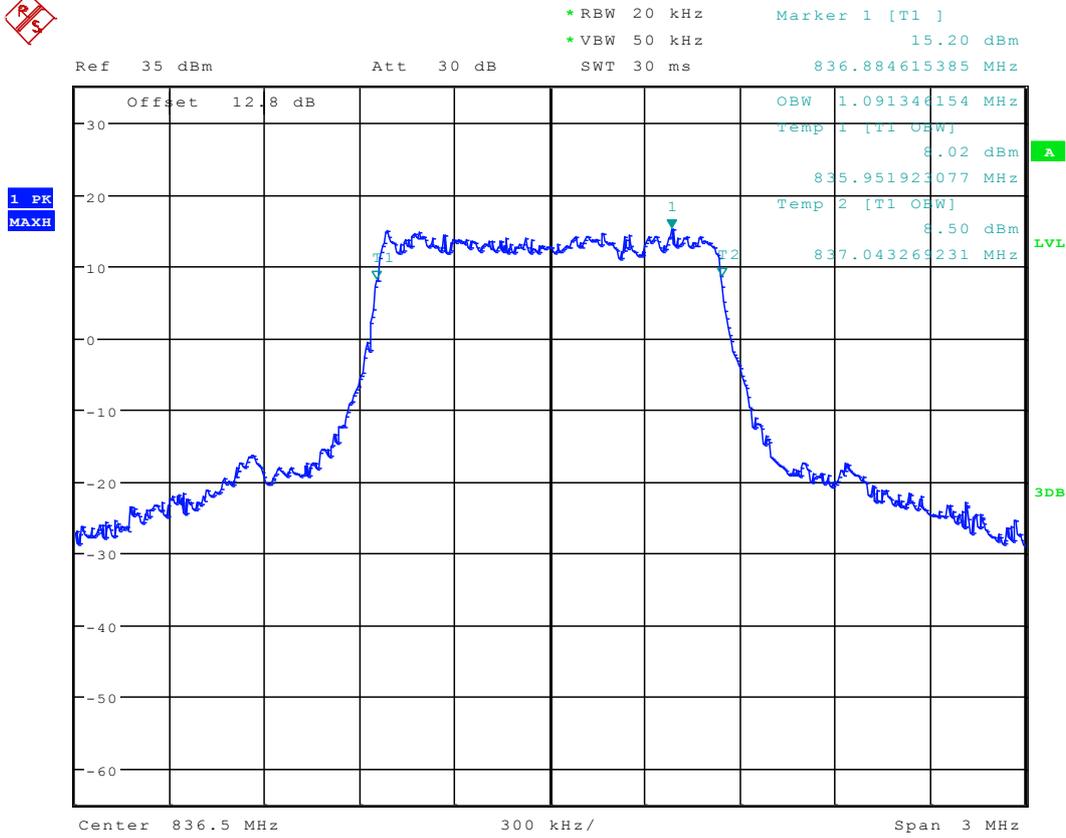
3.1.1.1.1 QPSK/full RBs

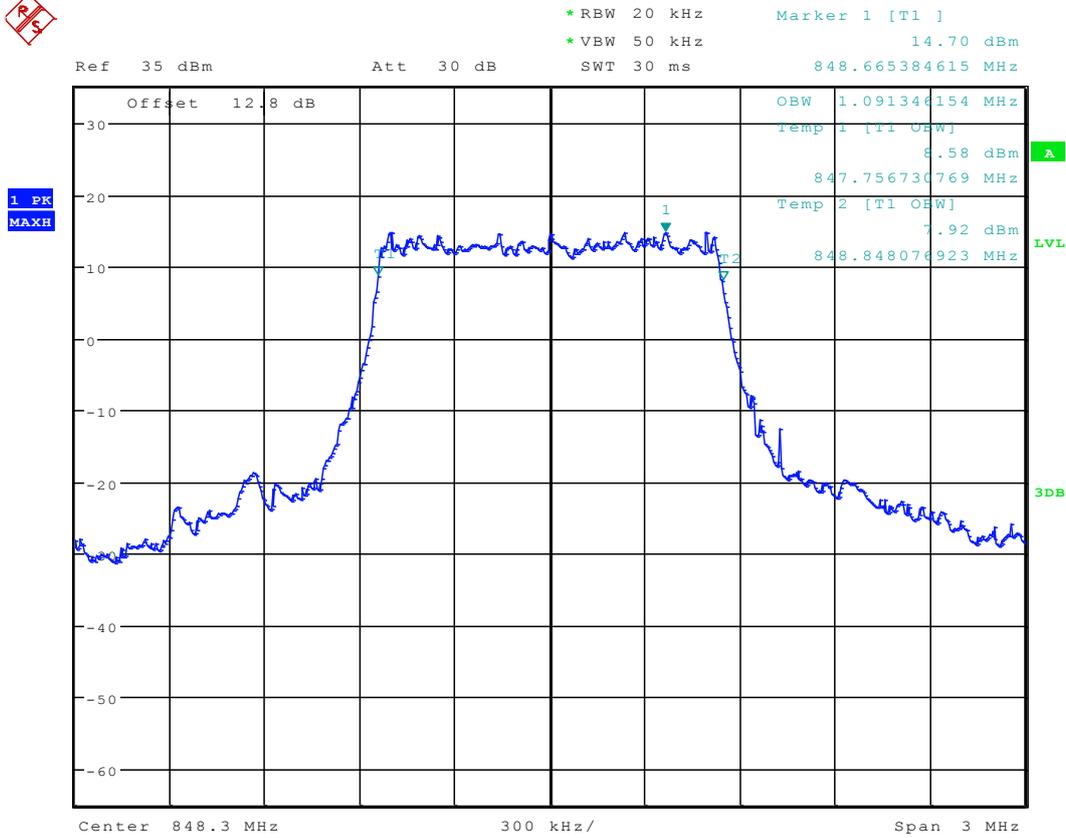Date: 18.APR.2012 11:01:57

3.1.1.2 Channel =M

3.1.1.2.1 QPSK/full RBs

Date: 18.APR.2012 11:04:27
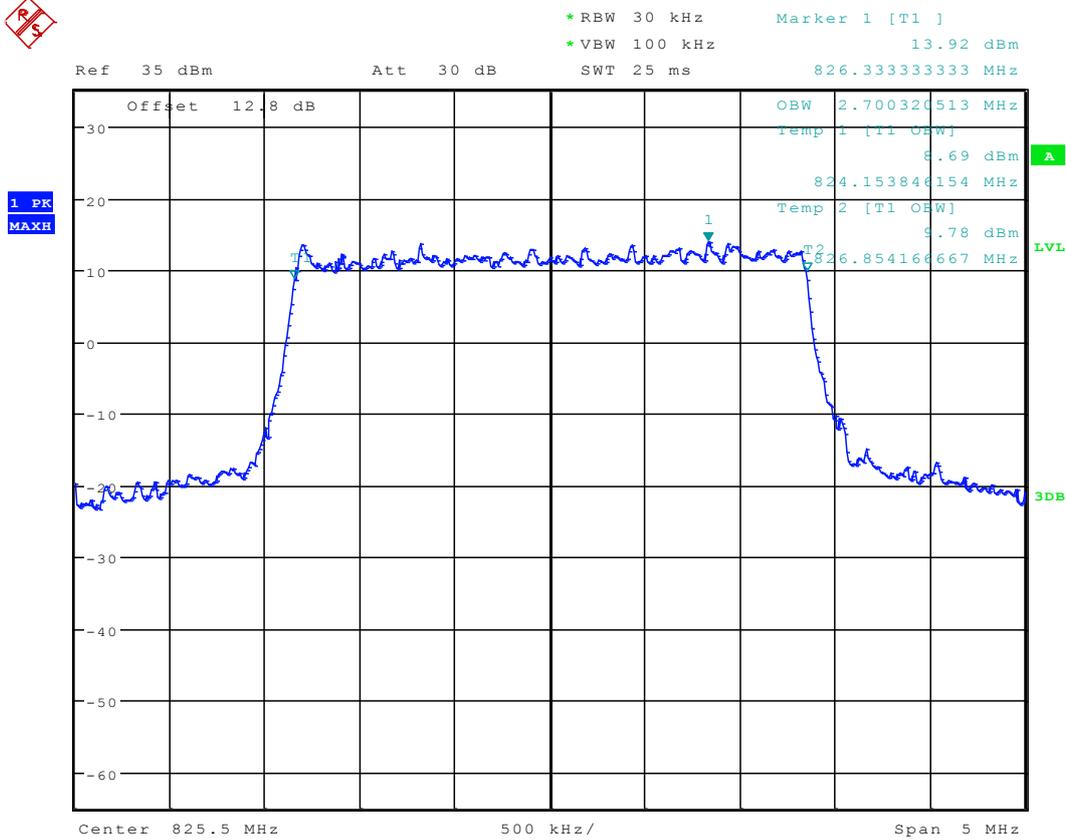
3.1.1.3 Channel =T

3.1.1.3.1 QPSK/full RBs


```
                                      * RBW  20 kHz        Marker 1 [T1 ]
                                      * VBW  50 kHz                  14.70 dBm
        Ref   35 dBm      Att  30 dB    SWT  30 ms         848.665384615 MHz
                                                     OBW  1.091346154 MHz
        Offset   12.8 dB                             Temp 1 [T1 OBW]
   -30                                                         8.58 dBm    A
                                                          847.756730769 MHz
1 PK    -20                                           Temp 2 [T1 OBW]
MAXH                                           1               7.92 dBm    LVL
                                                          848.848076923 MHz
        -10

          0

        -10

        -20                                                              3DB

        -40

        -50

        -60

    Center  848.3 MHz            300 kHz/                    Span  3 MHz
```

Date: 18.APR.2012 11:05:43

3.1.2 Channel Bandwidth = 3 MHz

3.1.2.1 Channel = B

3.1.2.1.1 QPSK/full RBs

Date: 18.APR.2012 11:08:11

3.1.2.2 Channel =M

3.1.2.2.1 QPSK/full RBs


```
                                         * RBW  30 kHz      Marker 1 [T1 ]
                                         * VBW  100 kHz              13.88 dBm
          Ref   35 dBm        Att  30 dB   SWT  25 ms       836.996794872 MHz
            Offset   12.8 dB                             OBW  2.700320513 MHz
          -30                                            Temp 1 [T1 OBW]
                                                                  8.24 dBm    A
          -20                                            835.145833333 MHz
                                                         Temp 2 [T1 OBW]
                                                                  8.25 dBm   LVL
          -10                                            837.846153846 MHz
            0
          --10
          --20                                                               3DB
          --30
          --40
          --50
          --60
          Center  836.5 MHz          500 kHz/                Span  5 MHz
```

Date: 18.APR.2012 11:11:04

3.1.2.3 Channel =T

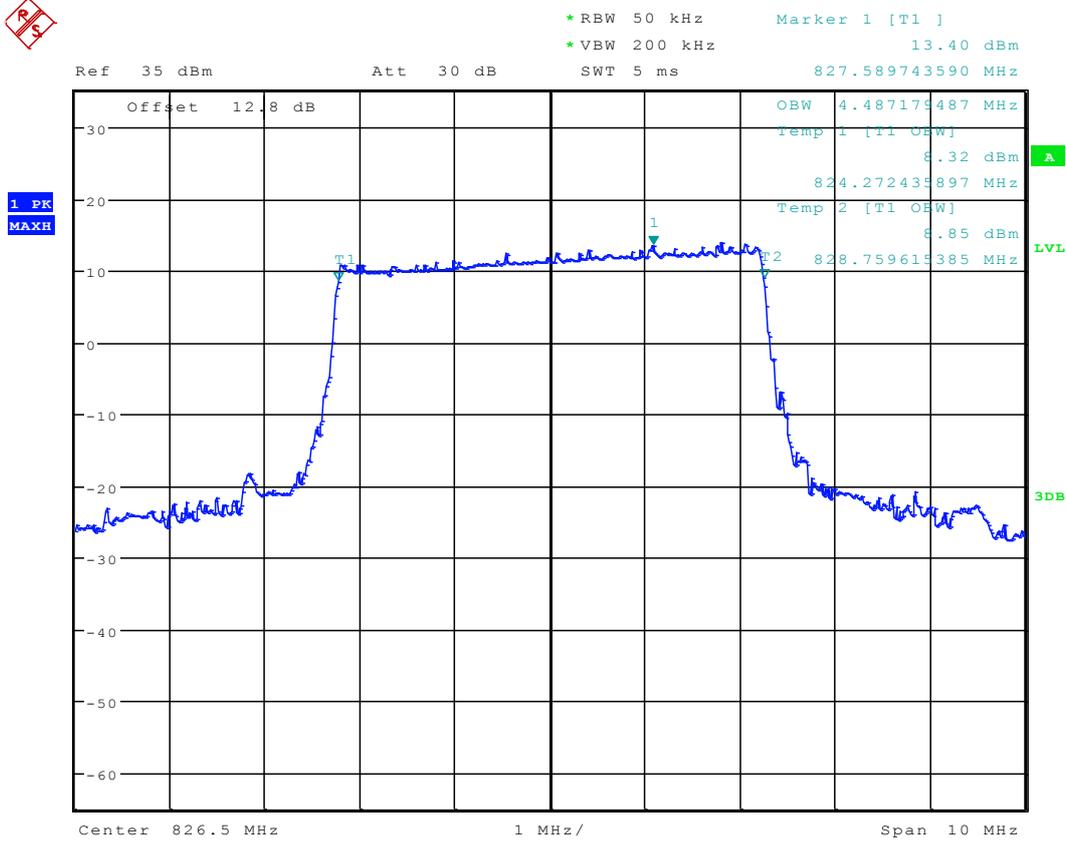## 3.1.2.3.1 QPSK/full RBs
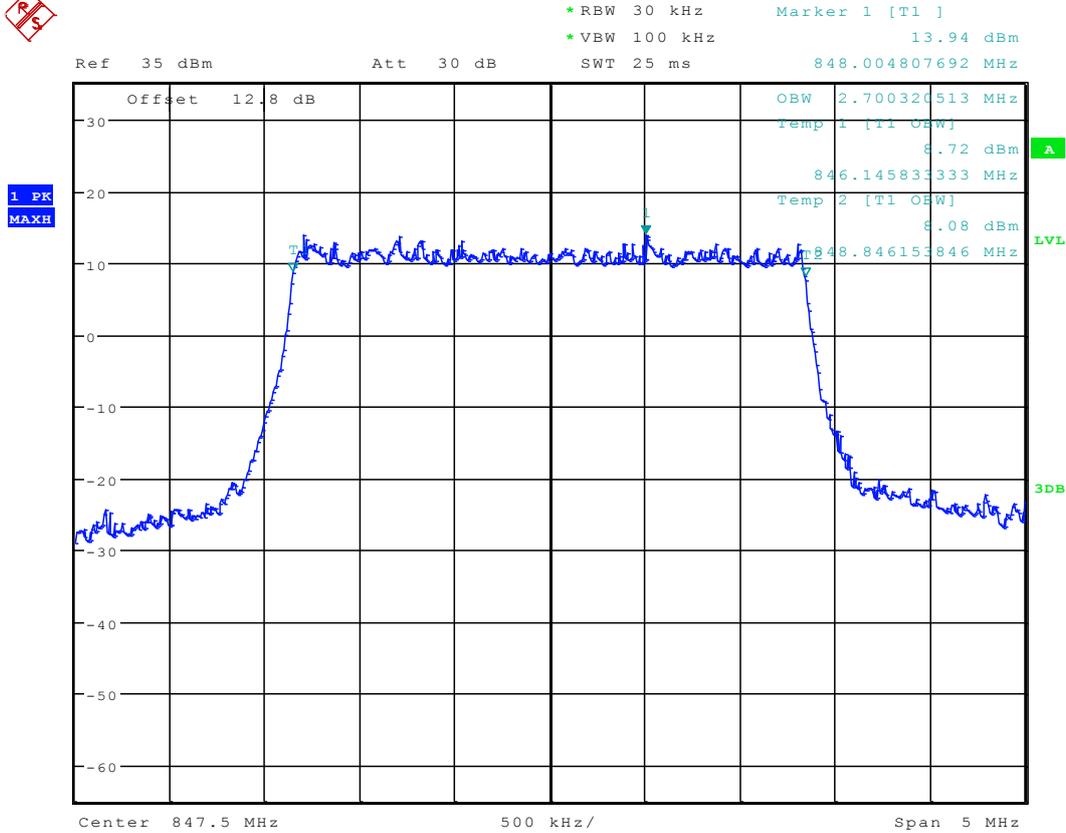
Date: 18.APR.2012 11:12:47

3.1.3 Channel Bandwidth = 5 MHz
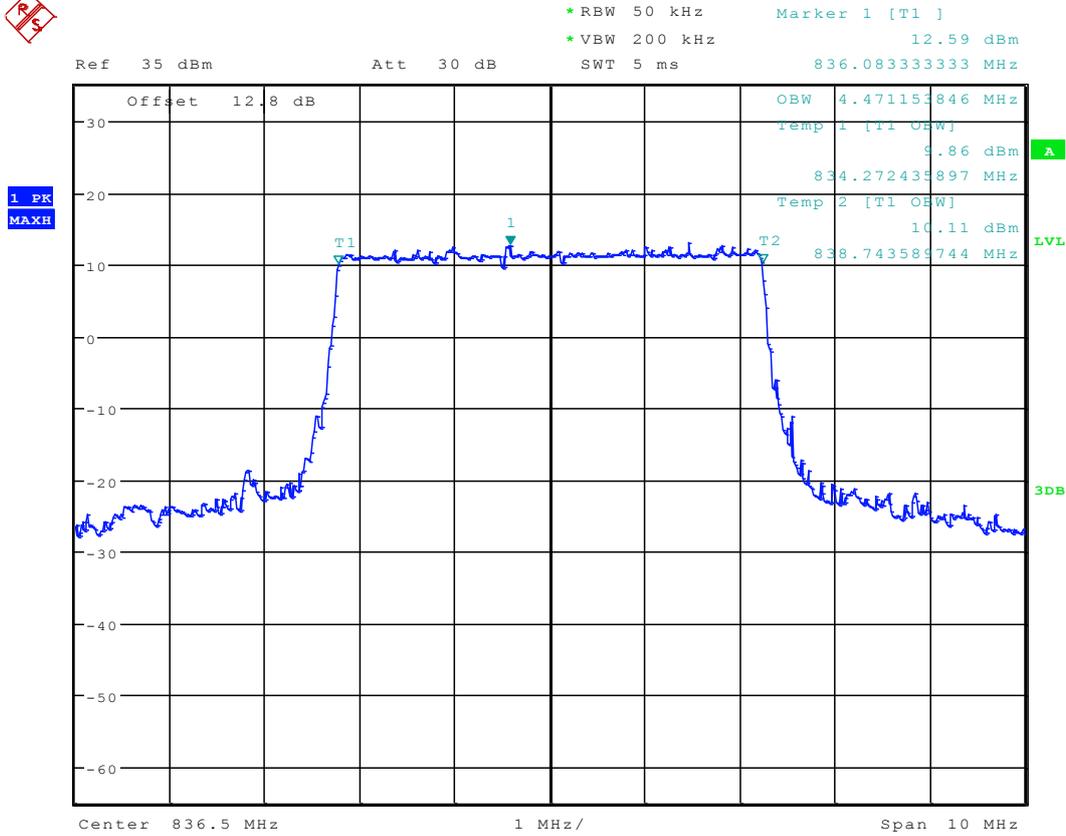
3.1.3.1 Channel = B

3.1.3.1.1 QPSK/full RBs

Date: 18.APR.2012 11:15:53

3.1.3.2 Channel =M

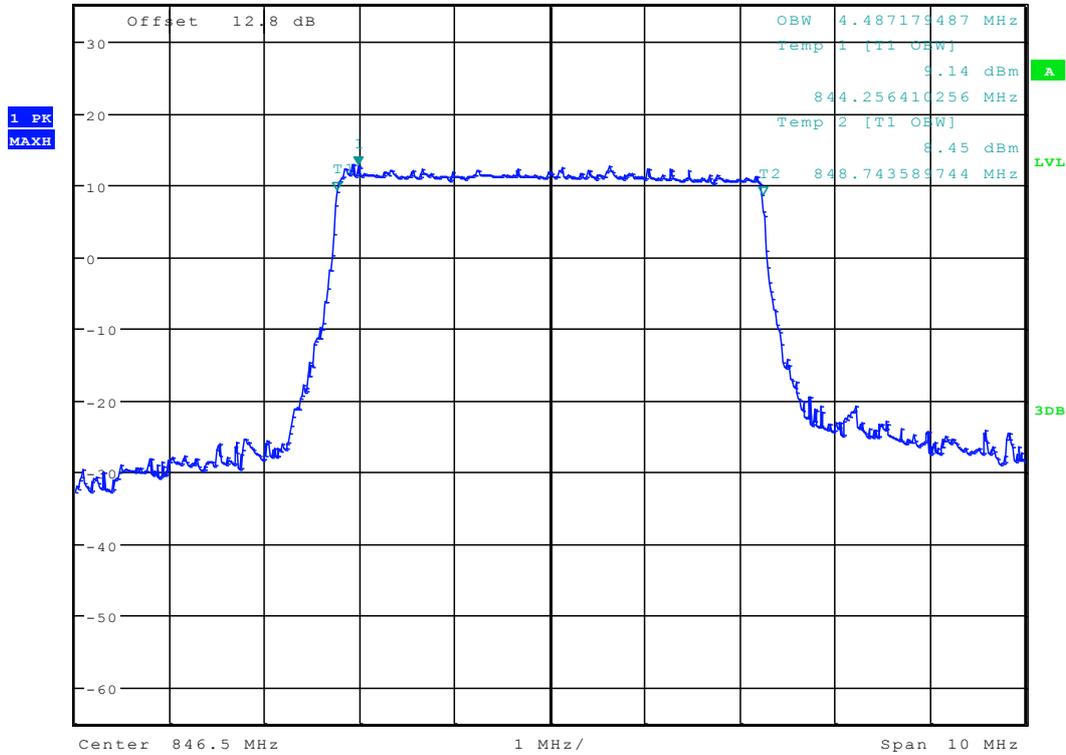### 3.1.3.2.1 QPSK/full RBs


```
                              * RBW  50 kHz        Marker 1 [T1 ]
                              * VBW 200 kHz                 12.59 dBm
    Ref   35 dBm      Att  30 dB    SWT 5 ms       836.083333333 MHz
    Offset  12.8 dB                         OBW  4.471153846 MHz
  -30                                       Temp 1 [T1 OBW]
                                                    9.86 dBm      A
  -20                                          834.272435897 MHz
1 PK                                          Temp 2 [T1 OBW]
MAXH                                                10.11 dBm    LVL
  -10                                          838.743589744 MHz
    0
  -10
  -20                                                            3DB
  -30
  -40
  -50
  -60
    Center  836.5 MHz           1 MHz/            Span  10 MHz
```
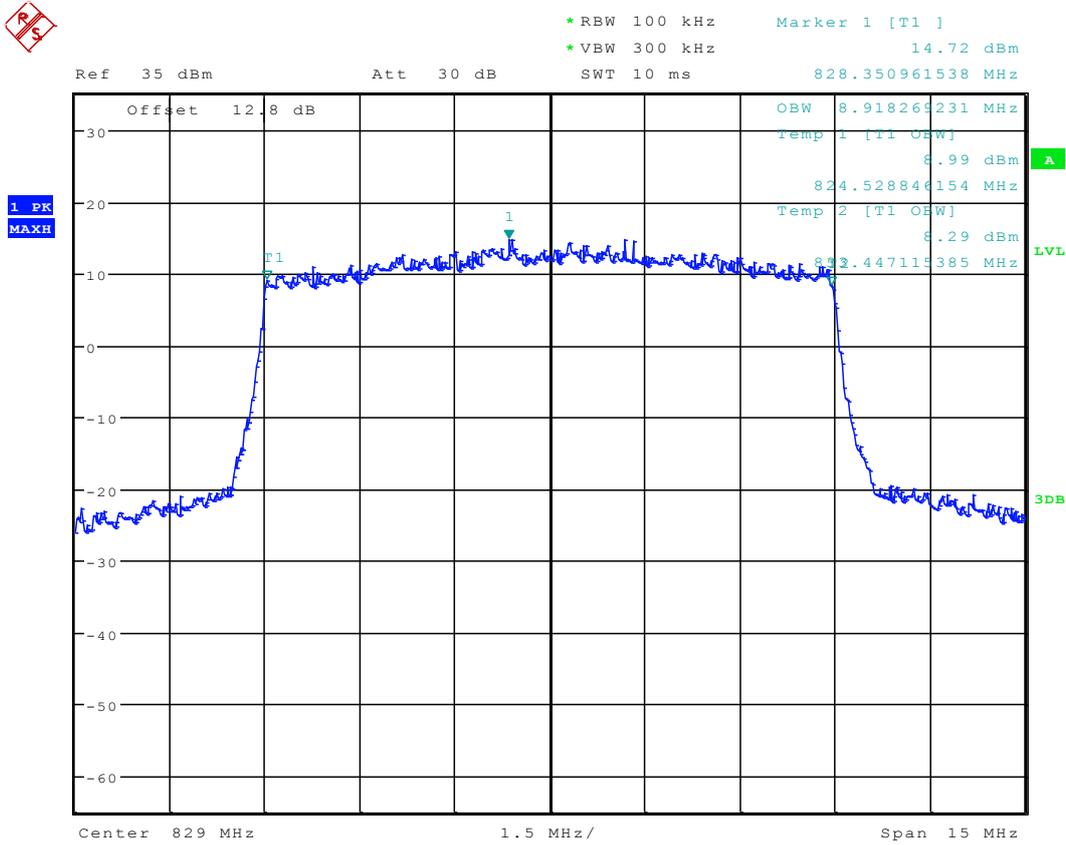
Date: 18.APR.2012 11:18:32

3.1.3.3 Channel =T

3.1.3.3.1 QPSK/full RBs

Date: 18.APR.2012 11:19:27

3.1.4 Channel Bandwidth = 10 MHz

3.1.4.1 Channel = B

3.1.4.1.1 QPSK/full RBs

Date: 18.APR.2012 11:22:08

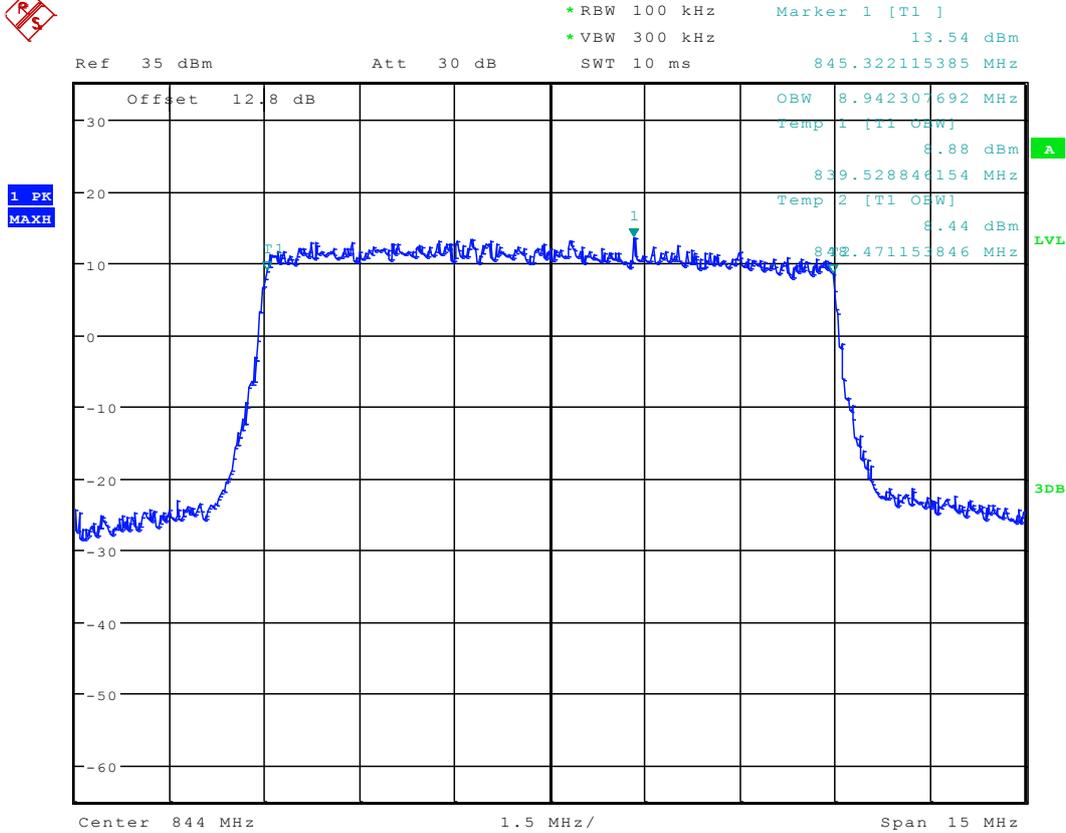## 3.1.4.2 Channel =M

3.1.4.2.1 QPSK/full RBs


```
                                    * RBW  100 kHz      Marker 1 [T1 ]
                                    * VBW  300 kHz                    14.03 dBm
Ref   35 dBm          Att  30 dB    SWT 10 ms           837.822115385 MHz
                                                   OBW  8.966346154 MHz
    Offset   12.8 dB                               Temp 1 [T1 OBW]
                                                                 9.13 dBm    A
                                                        832.028846154 MHz
                                                   Temp 2 [T1 OBW]
                                                                 8.96 dBm   LVL
                                                        840.995192308 MHz
                                                                            3DB

Center  836.5 MHz              1.5 MHz/              Span  15 MHz
```
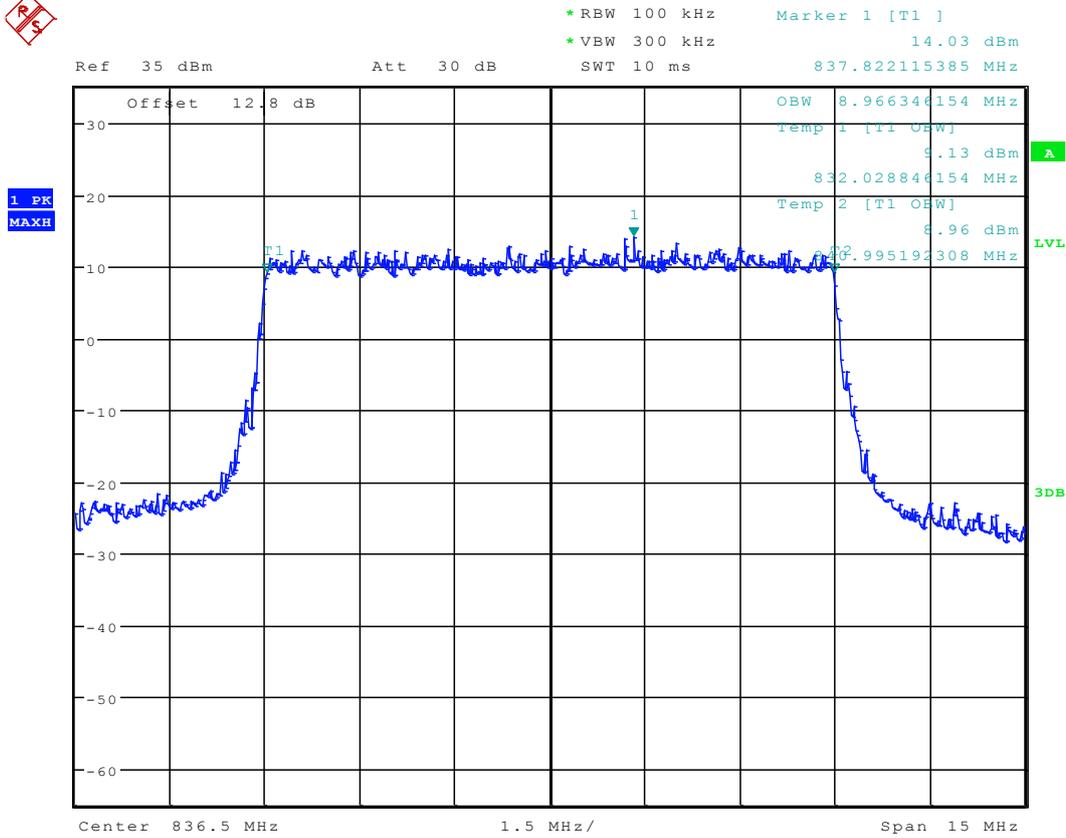
Date: 18.APR.2012 11:24:05

3.1.4.3 Channel =T

3.1.4.3.1 QPSK/full RBs

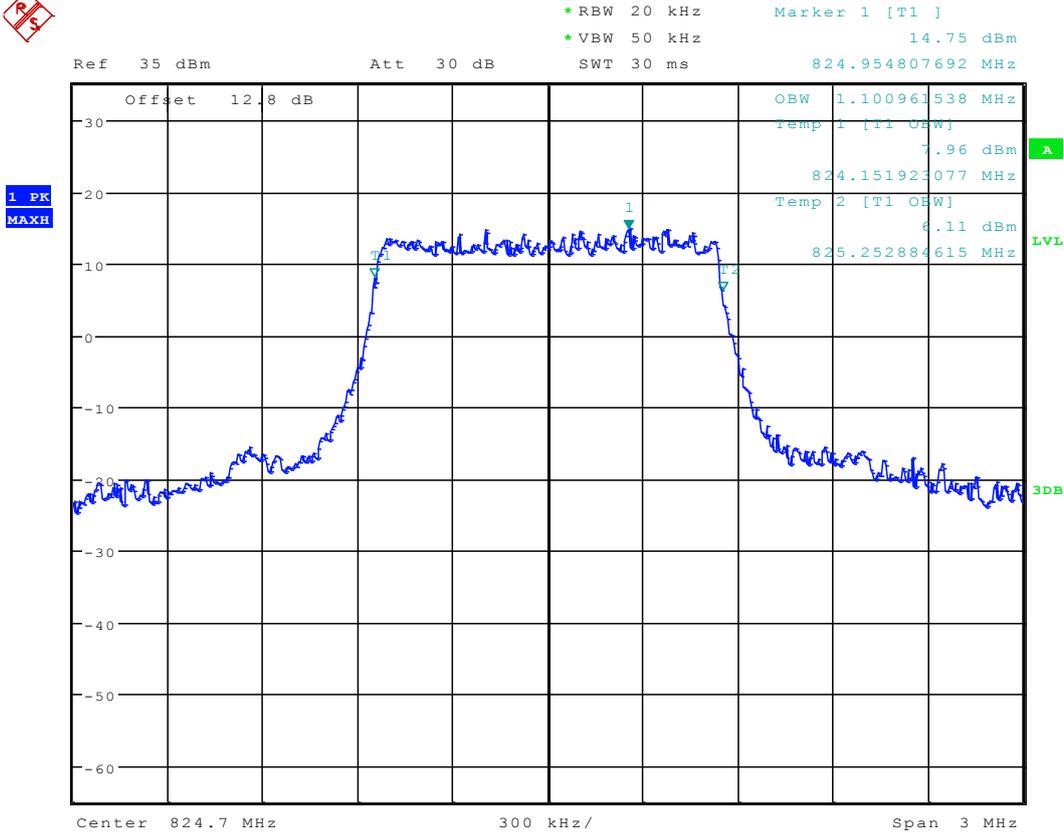Date: 18.APR.2012 11:25:18

3.2 Test Mode=TM5

3.2.1 Channel Bandwidth = Lowest (1.4 MHz)

3.2.1.1 Channel = B

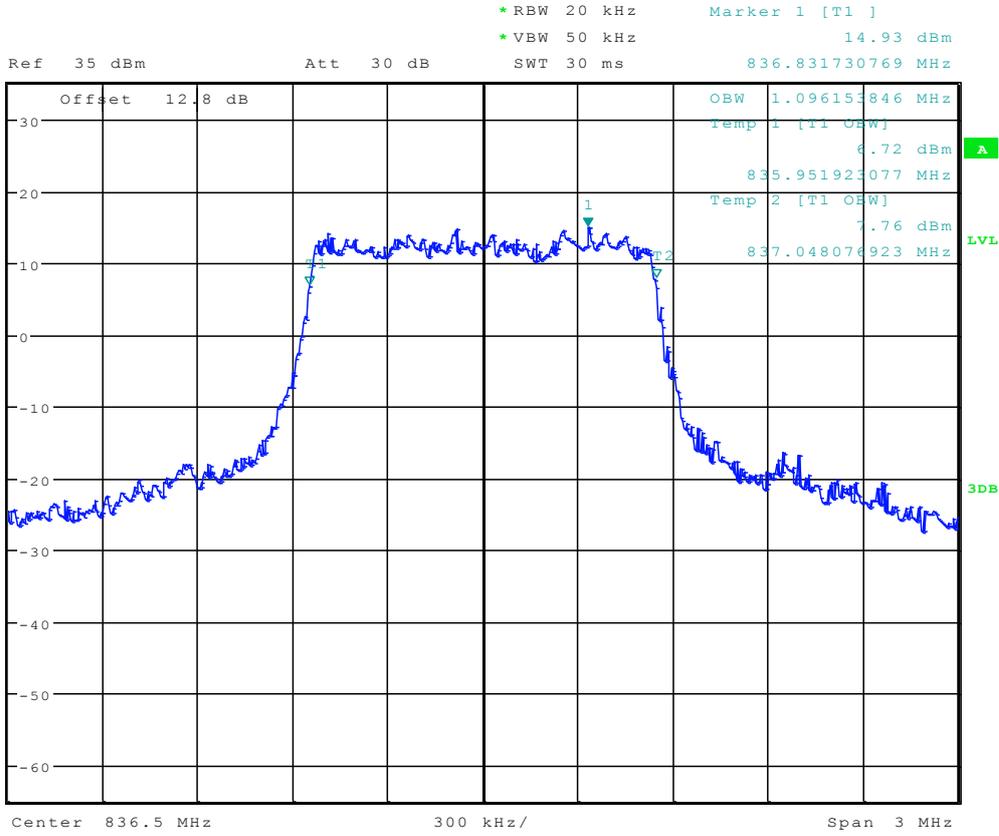##### 3.2.1.1.1 16QAM/full RBs

Date: 18.APR.2012 11:02:37

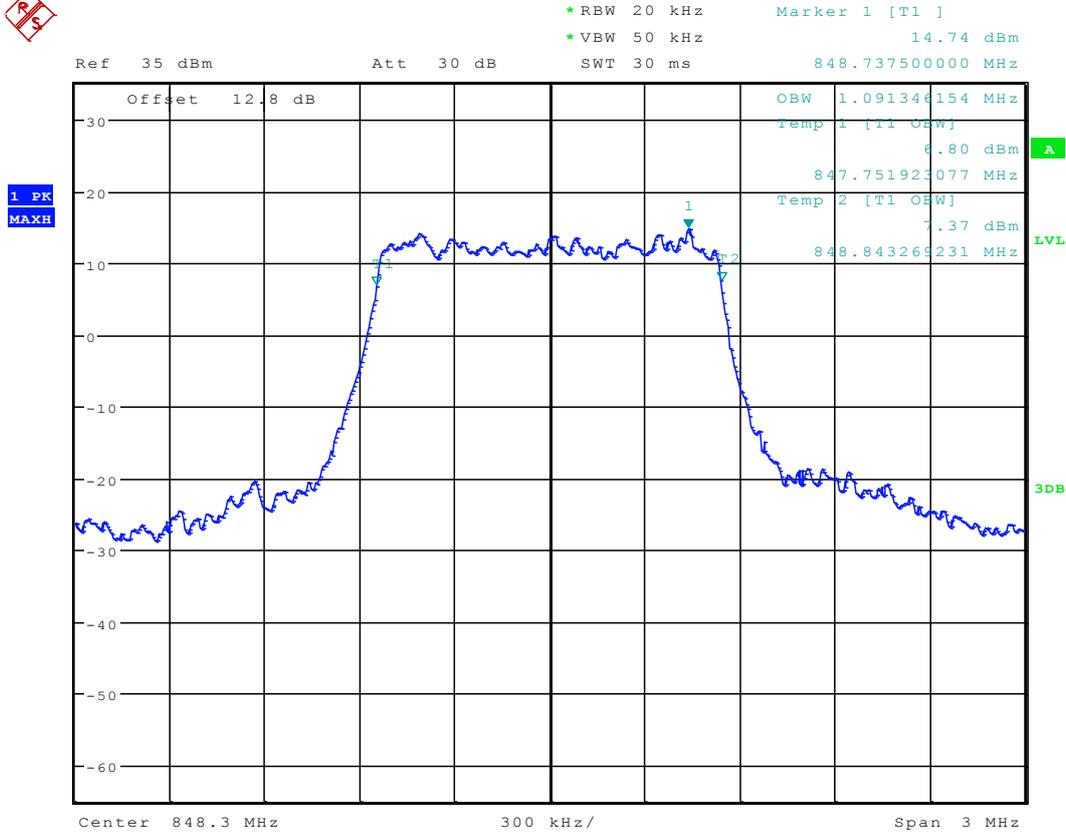## 3.2.1.2 Channel =M

3.2.1.2.1 16QAM /full RBs

Date: 18.APR.2012 11:03:49
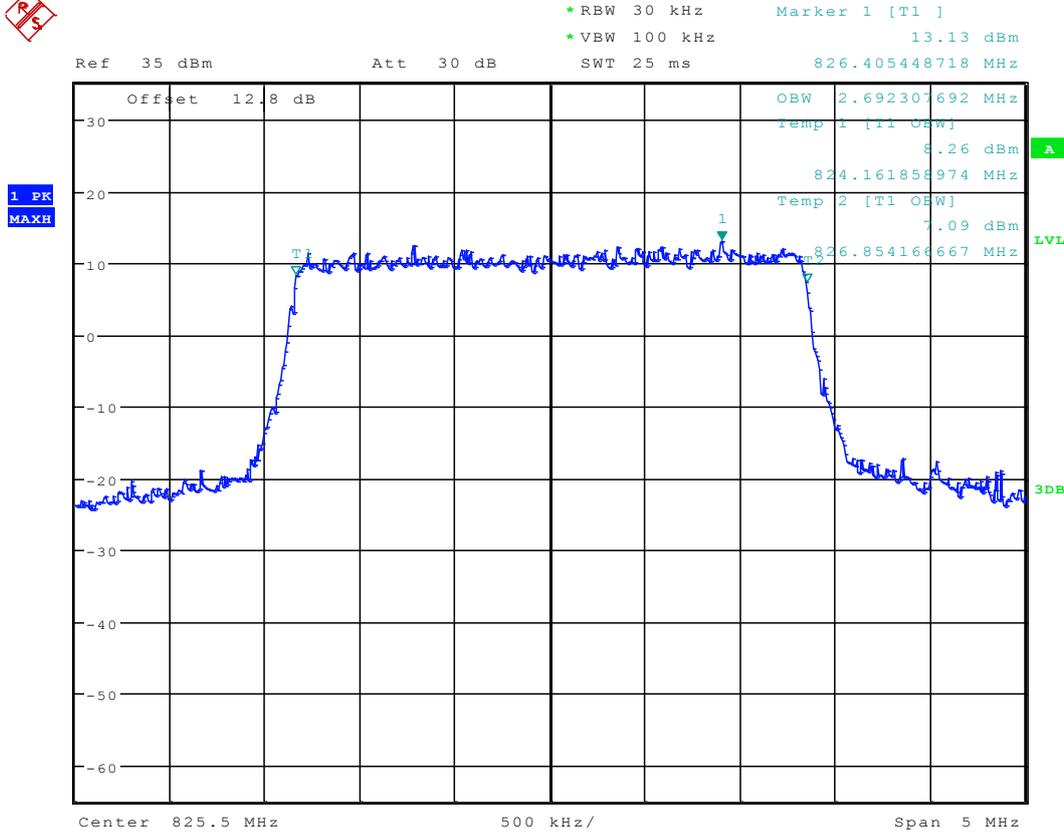
3.2.1.3 Channel =T

3.2.1.3.1 16QAM /full RBs


```
                                    *RBW  20 kHz      Marker 1 [T1 ]
                                    *VBW  50 kHz                 14.74 dBm
     Ref   35 dBm       Att  30 dB   SWT 30 ms        848.737500000 MHz
                                                  OBW  1.091346154 MHz
         Offset  12.8 dB                          Temp 1 [T1 OBW]
                                                             6.80 dBm
                                                  847.751923077 MHz
                                                  Temp 2 [T1 OBW]
                                                             7.37 dBm
                                                  848.843269231 MHz
```

Date: 18.APR.2012 11:06:25

3.2.2 Channel Bandwidth = 3 MHz

3.2.2.1 Channel = B

3.2.2.1.1 16QAM /full RBs

Date: 18.APR.2012 11:08:34

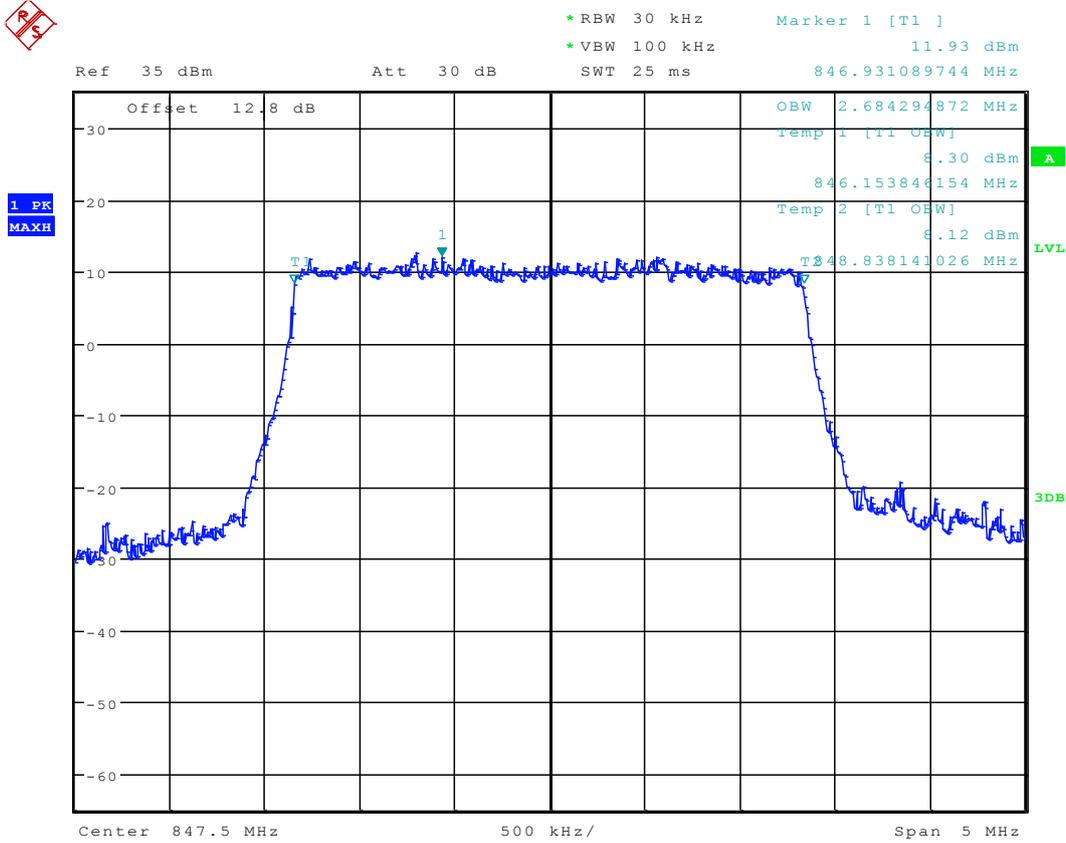## 3.2.2.2 Channel =M

3.2.2.2.1 16QAM /full RBs


```
                                    *RBW  30 kHz       Marker 1 [T1 ]
                                    *VBW  100 kHz               12.27 dBm
      Ref   35 dBm       Att   30 dB    SWT  25 ms       837.060897436 MHz

          Offset   12.8 dB                              OBW  2.692307692 MHz
      -30                                               Temp 1 [T1 OBW]
                                                                 7.73 dBm    A
1 PK  -20                                               835.153846154 MHz
MAXH                                                    Temp 2 [T1 OBW]
                                                                 7.14 dBm   LVL
      -10                                               837.846153846 MHz

        0

      -10

      -20                                                                  3DB

      -30

      -40

      -50

      -60

      Center  836.5 MHz              500 kHz/              Span  5 MHz
```
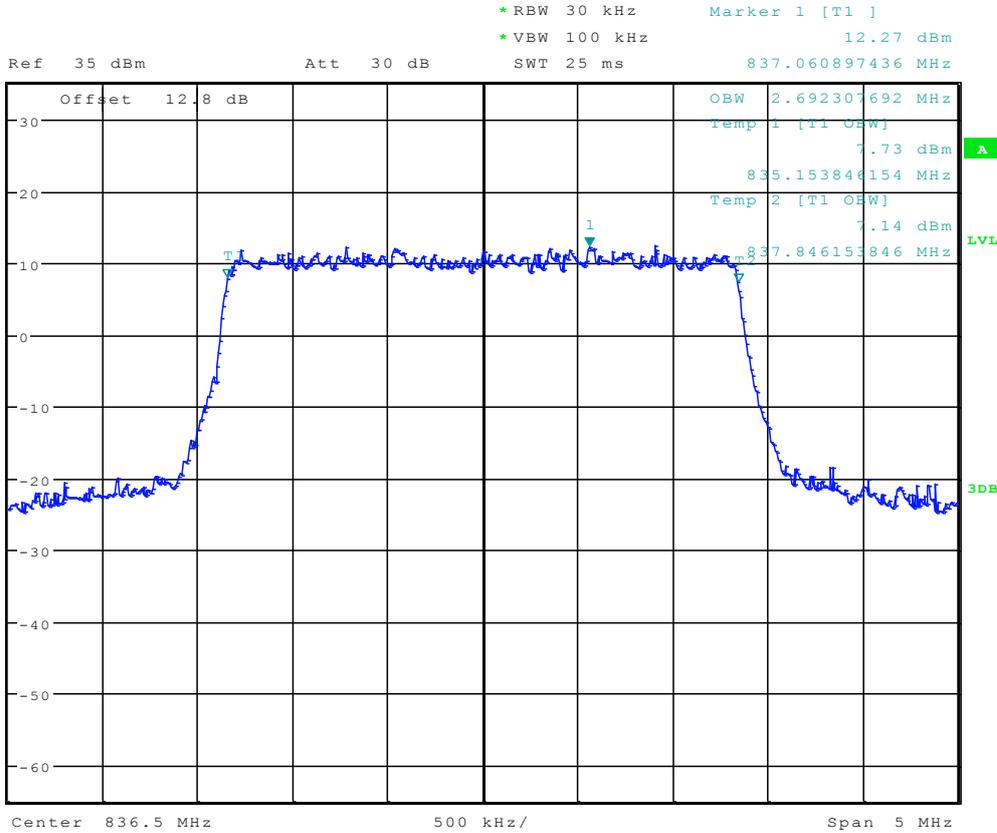
Date: 18.APR.2012 11:10:35

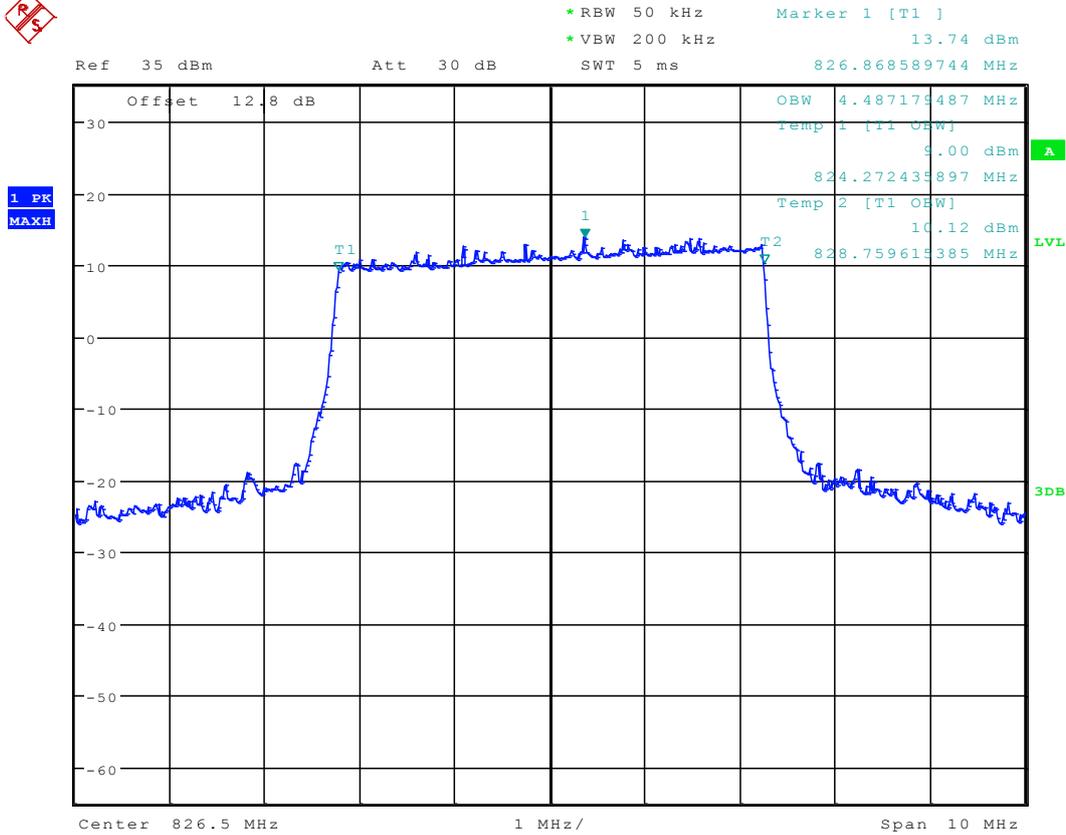### 3.2.2.3 Channel =T

3.2.2.3.1 16QAM /full RBs

Date: 18.APR.2012 11:13:05

3.2.3 Channel Bandwidth = 5 MHz
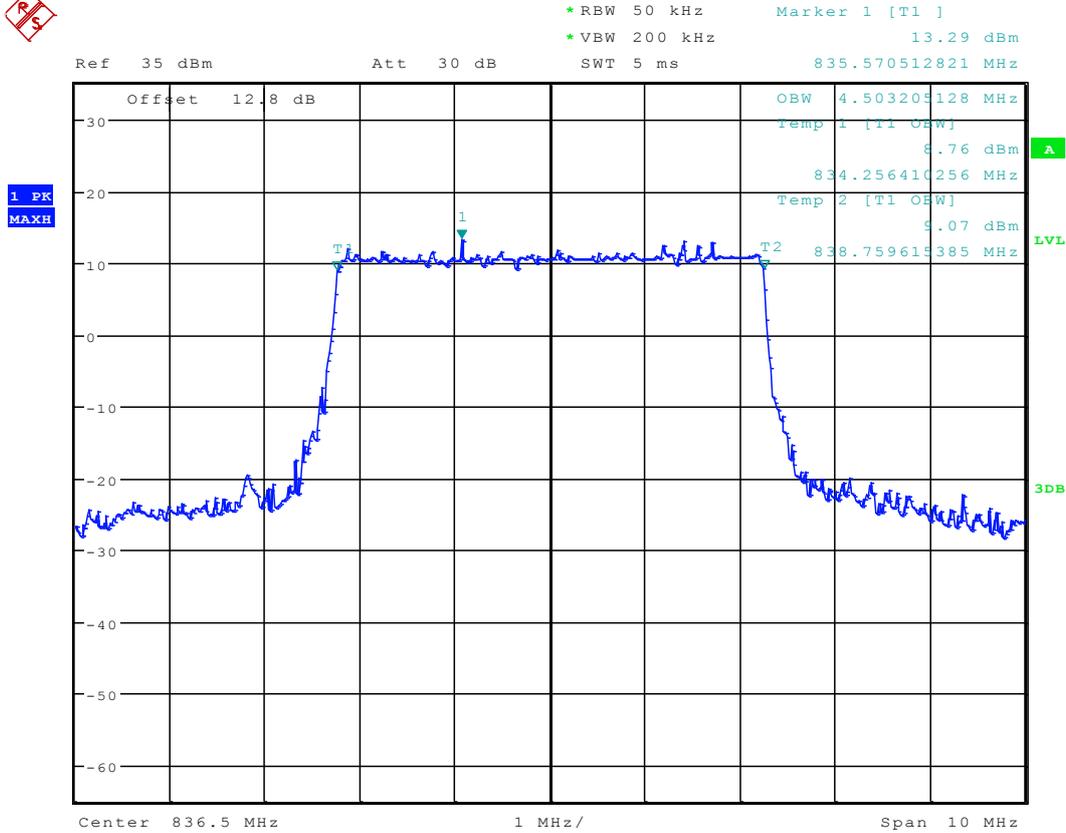
3.2.3.1 Channel = B

3.2.3.1.1 16QAM /full RBs

Date: 18.APR.2012 11:16:22

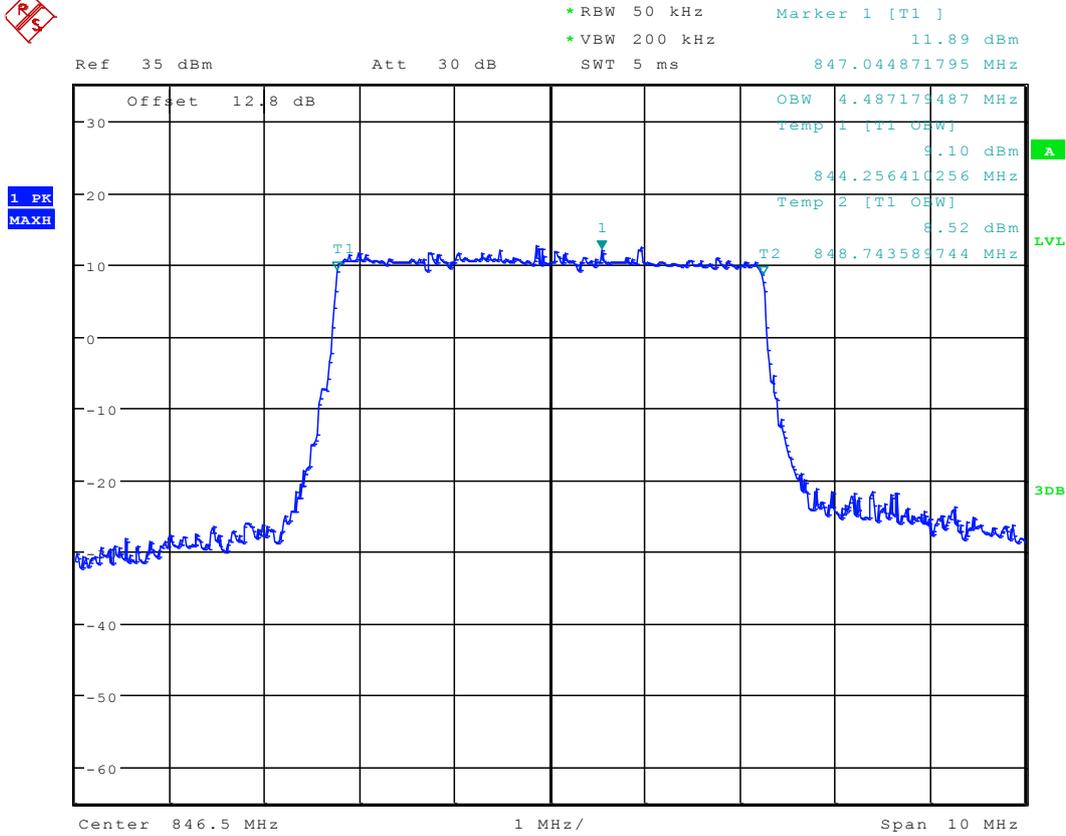## 3.2.3.2 Channel =M

3.2.3.2.1 16QAM /full RBs

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3.2.3.3 Channel =T
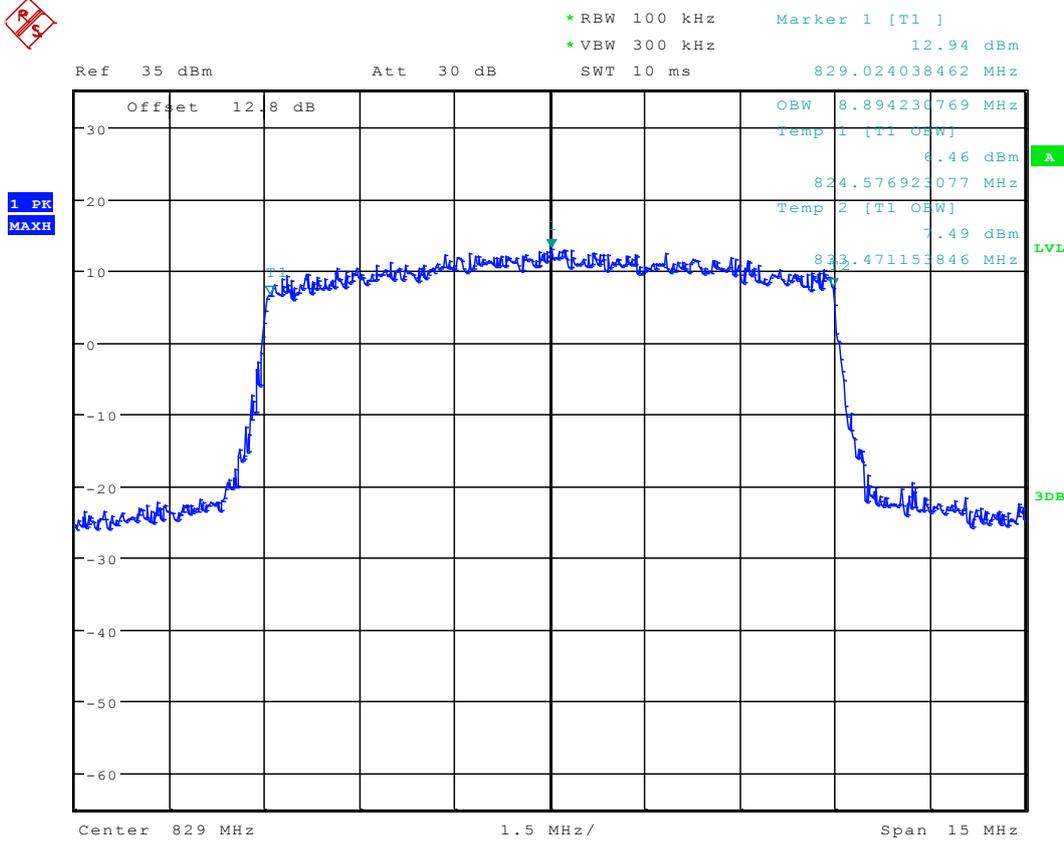
3.2.3.3.1 16QAM /full RBs

Date: 18.APR.2012 11:20:04

3.2.4 Channel Bandwidth = 10 MHz

3.2.4.1 Channel = B
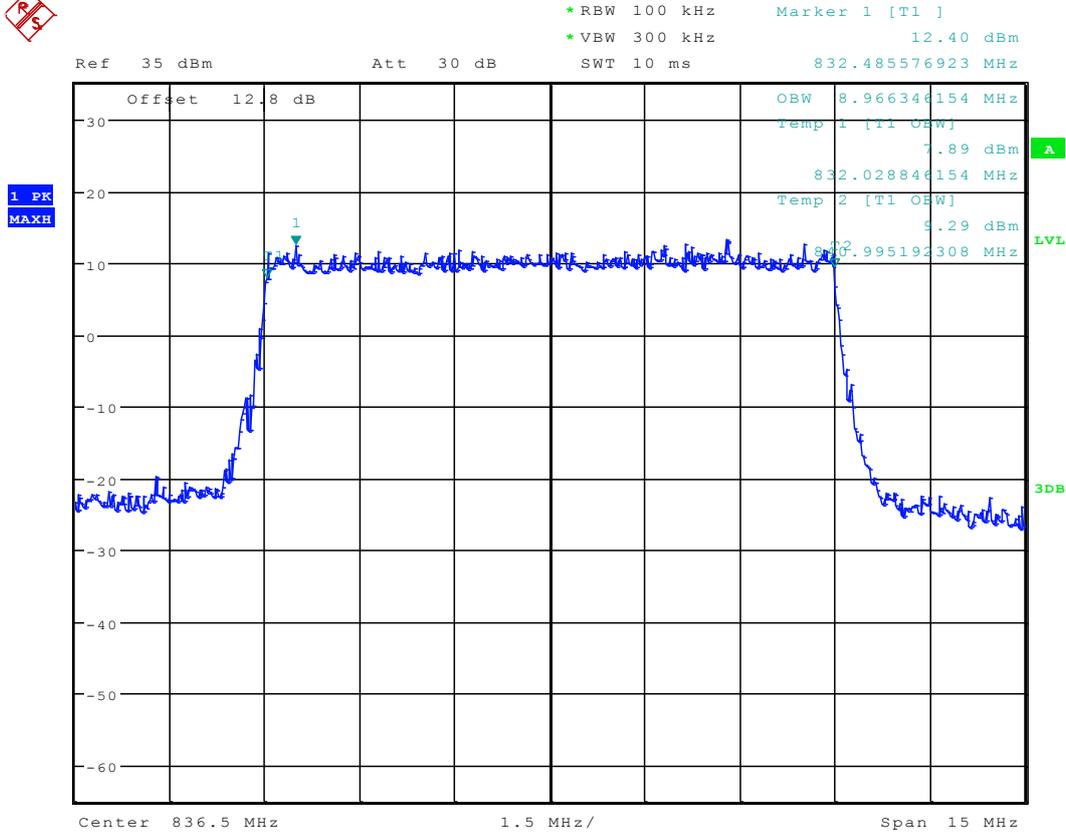
3.2.4.1.1 16QAM /full RBs

Date: 18.APR.2012 11:22:30
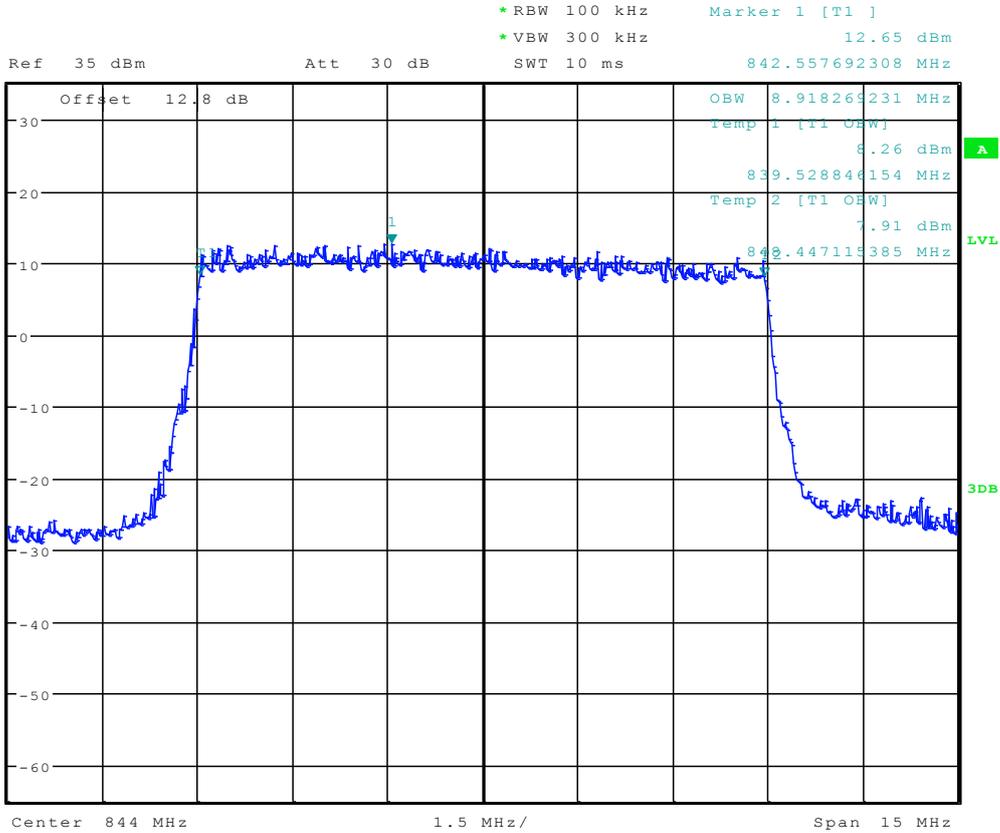
3.2.4.2 Channel =M

3.2.4.2.1 16QAM /full RBs

Date: 18.APR.2012 11:23:39

3.2.4.3 Channel =T

3.2.4.3.1 16QAM /full RBs


```
                                    * RBW  100 kHz      Marker 1 [T1 ]
                                    * VBW  300 kHz                  12.65 dBm
         Ref   35 dBm      Att  30 dB    SWT 10 ms       842.557692308 MHz
          Offset  12.8 dB                       OBW  8.918269231 MHz
                                                Temp 1 [T1 OBW]
                                                             8.26 dBm
                                                839.528846154 MHz
                                                Temp 2 [T1 OBW]
                                                             7.91 dBm
                                                842.447115385 MHz
```

Date: 18.APR.2012 11:25:47

--END--