Appendix 1

Test Results

Disturbance Voltage on AC Mains
Mode 1: Sink Mode

TUV Rheinland Hong Kong Limited

Continuous Disturbance

Test Information

EUT Name:	Avantwave BT Music Transceiver
Serial Number:	BHA200(00091021024-001)
Test Description:	FCC part 15 Class B
Operating Conditions:	Sink Mode
Operator Name:	Samuel Ku
Comment:	100V 60Hz
Description	CE L1

Conducted Emission (FCC-P.15) - Class B

Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)
0.180000	43.9	25.1
0.246000	39.7	23.2
0.306000	38.2	25.6
1.332000	42.9	34.5

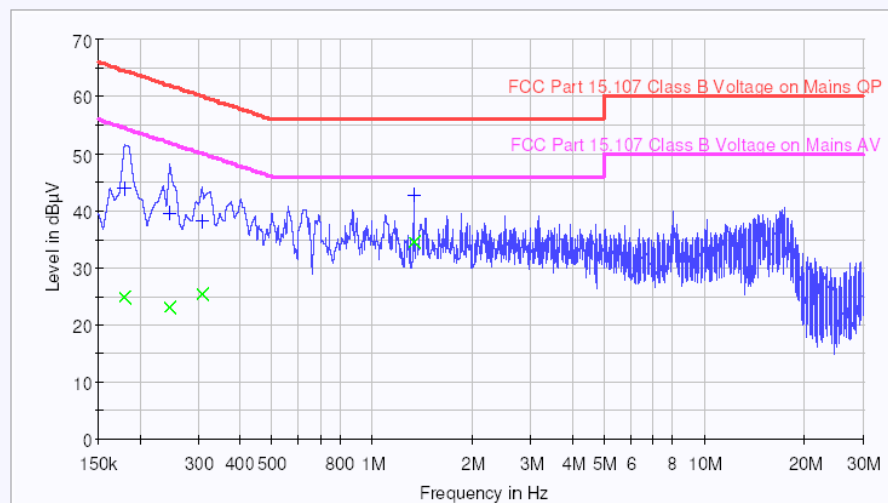30/10/2009   10:35:29
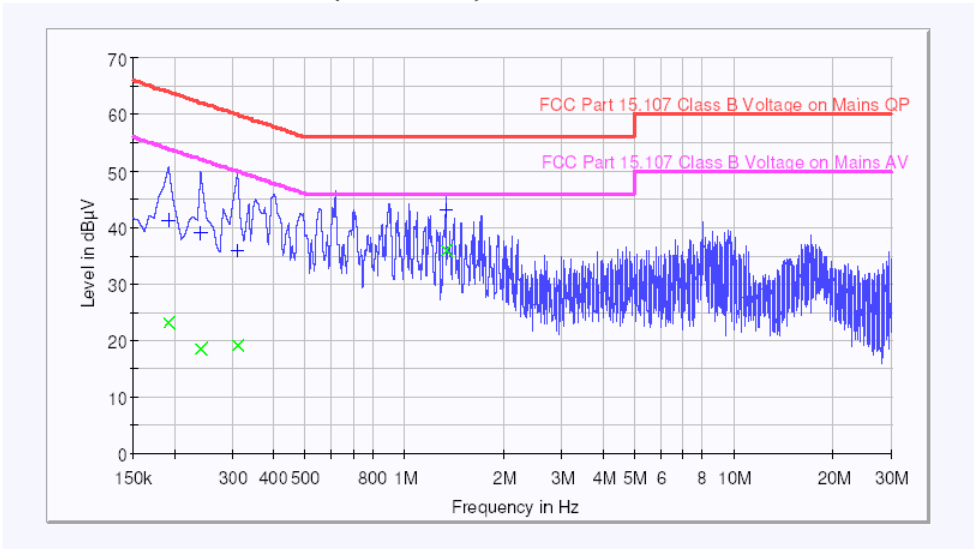
Continuous Disturbance

Test Information

EUT Name: Avantwave BT Music Transceiver
Serial Number: BHA200(00091021024-001)
Test Description: FCC part 15 Class B
Operating Conditions: Sink Mode
Operator Name: Samuel Ku
Comment: 100V 60Hz
Description   CE N

Conducted Emission   (FCC-P.15) - Class B

Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)
0.192000	41.3	23.2
0.240000	39.1	18.8
0.312000	36.1	19.1
1.332000	43.1	35.9

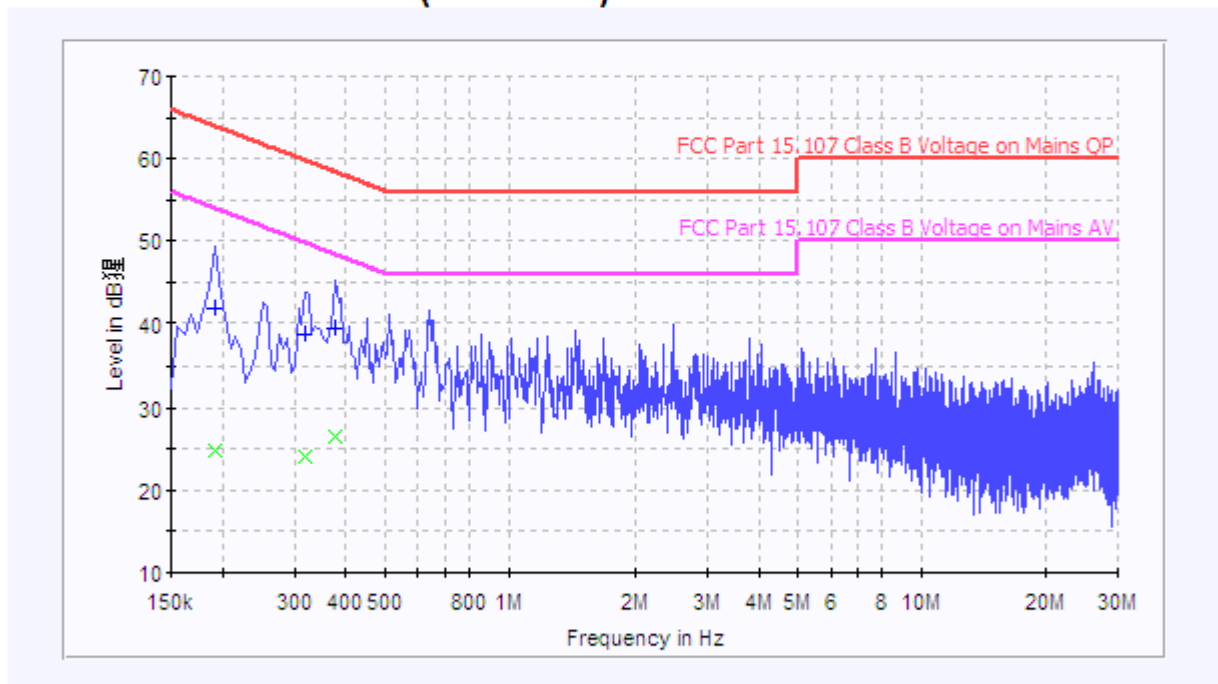30/10/2009   10:43:25

Mode 2: Source Mode

Continuous Disturbance

Test Information

EUT Name:	Avantwave BT Music Transceiver
Serial Number:	BHA 200(00090929100-002)
Test Description:	FCC Part 15 Class B
Operating Conditions:	Audio Source Mode
Operator Name:	Samuel Ku
Comment:	100V 60Hz
Description:	CE L1

Conducted Emission (FCC-P.15) - Class B

Result Table_Single

Frequency (MHz)	QuasiPeak (dBμ)	Average (dBμ)
0.192000	41.9	24.7
0.318000	38.6	24.1
0.378000	39.4	26.4

Continuous Disturbance

Test Information

EUT Name:	Avantwave BT Music Transceiver
Serial Number:	BHA 200(00090929100-002)
Test Description:	FCC Part 15 Class B
Operating Conditions:	Audio Source Mode
Operator Name:	Samuel Ku
Comment:	100V 60Hz
Description	CE N

Conducted Emission   (FCC-P.15) - Class B
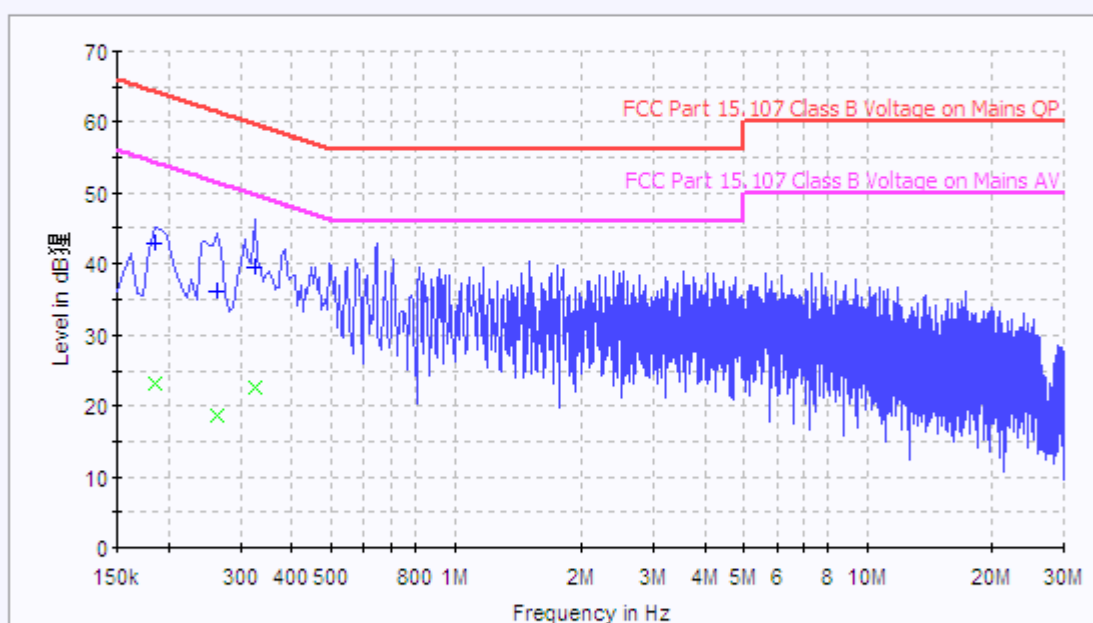
Result Table_Single

Frequency (MHz)	QuasiPeak (dB猩)	Average (dB猩)
0.324000	39.4	22.6
0.264000	35.9	18.6
0.186000	42.9	23.1

Carrier Frequency Separation

MARKER 1			RBW 100 kHz	Marker 1 [T1]
2.440988 GHz			VBW 300 kHz	2.38 dBm
Ref 20 dBm	*Att 30 dB		SWT 2.5 ms	2.440988000 GHz

Center 2.441 GHz   300 kHz/   Span 3 MHz
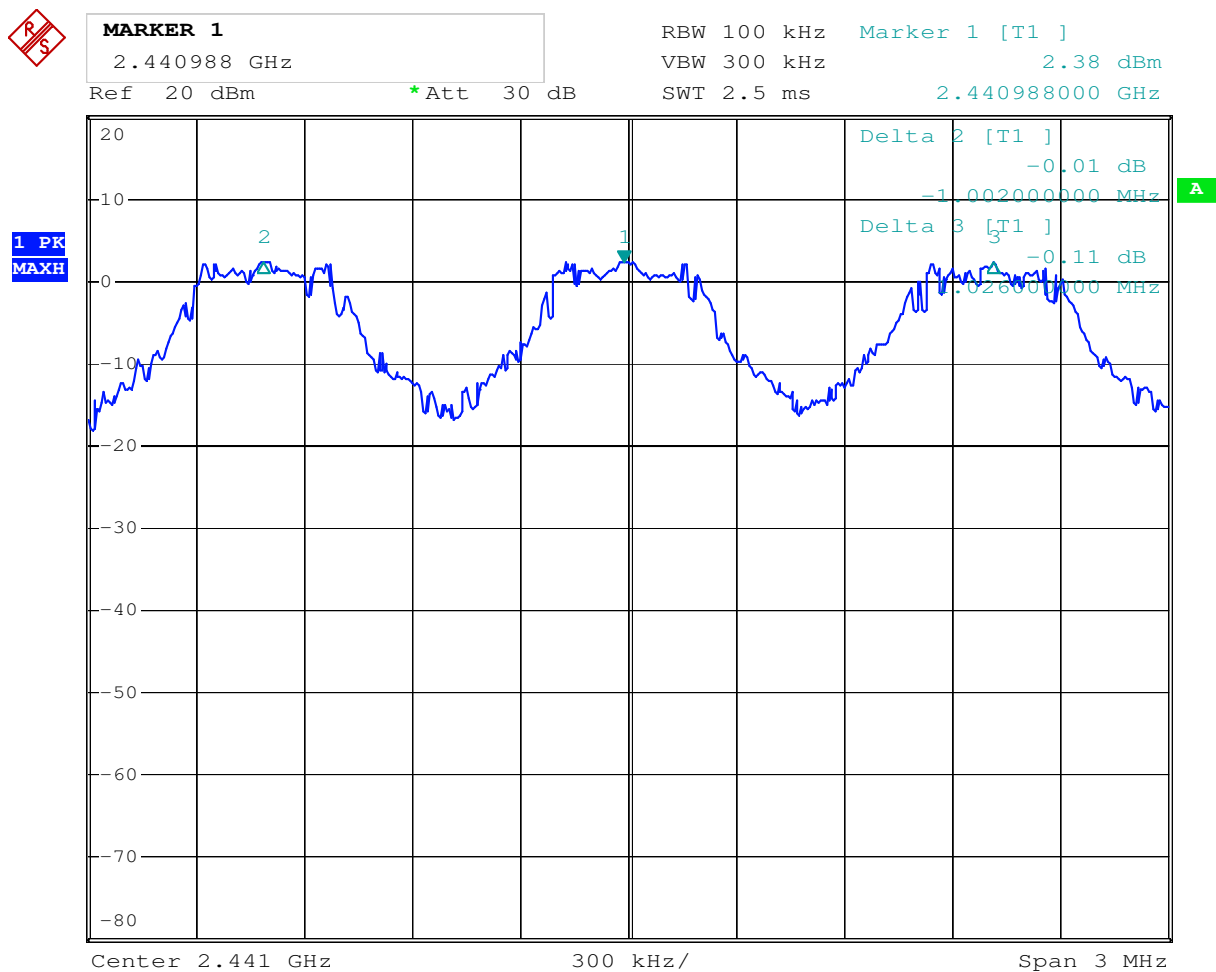
Date: 30.SEP.2009 16:20:37

Number of hopping channels
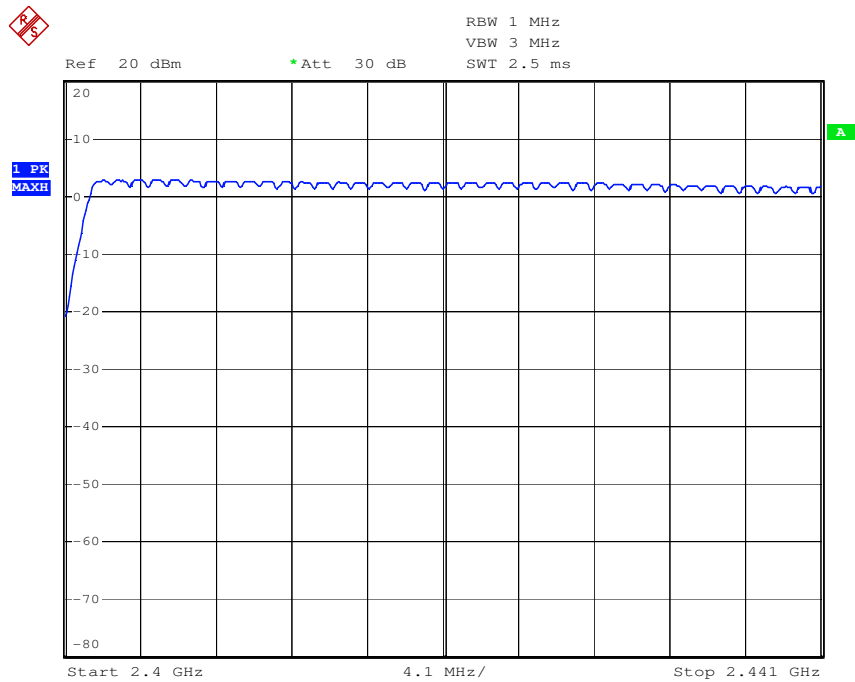
Date: 30.SEP.2009 16:22:37
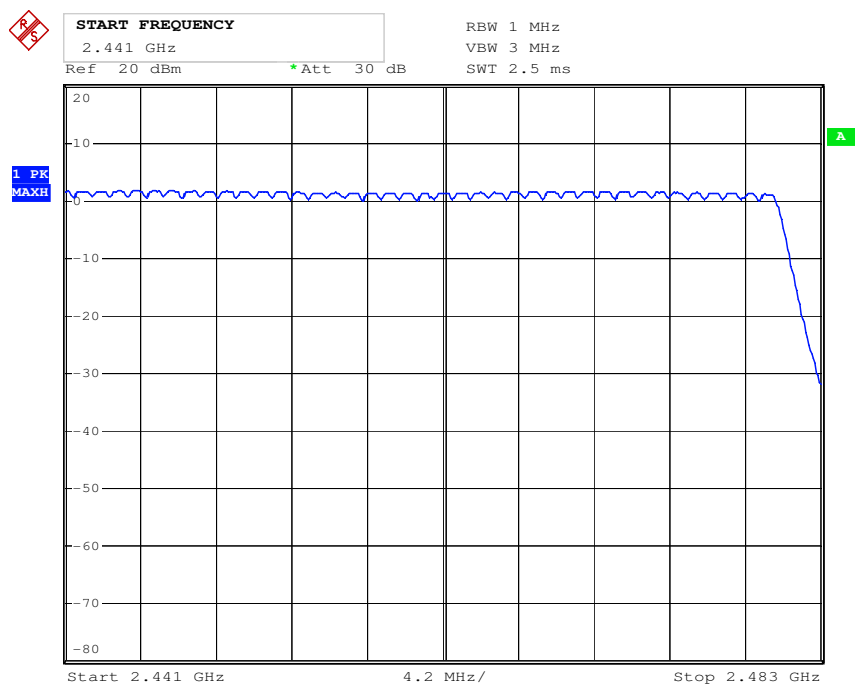
Date: 30.SEP.2009 16:23:50

Dwell Time


```
                SWEEP TIME                    RBW 1 MHz
                31.6 s                        VBW 3 MHz
          Ref  20 dBm          *Att  30 dB    SWT 31.6 s
```

Center 2.441 GHz   3.16 s/
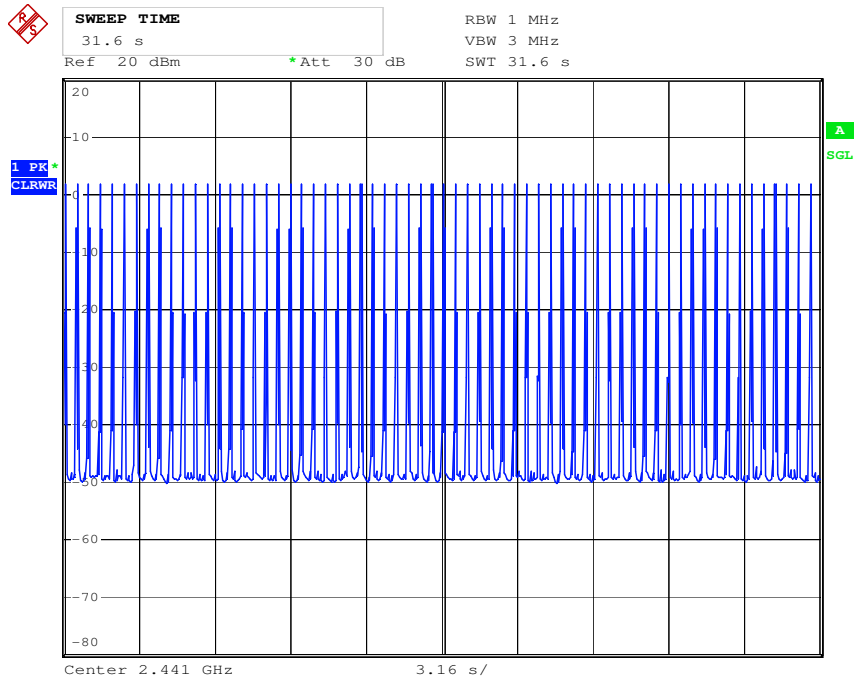
Date: 30.SEP.2009 16:25:58

```
        MARKER 1                        RBW 1 MHz      Marker 1 [T1 ]
         3 µs                           VBW 3 MHz                  1.62 dBm
        Ref  20 dBm          *Att  30 dB    SWT 4 ms              3.000000 µs
```
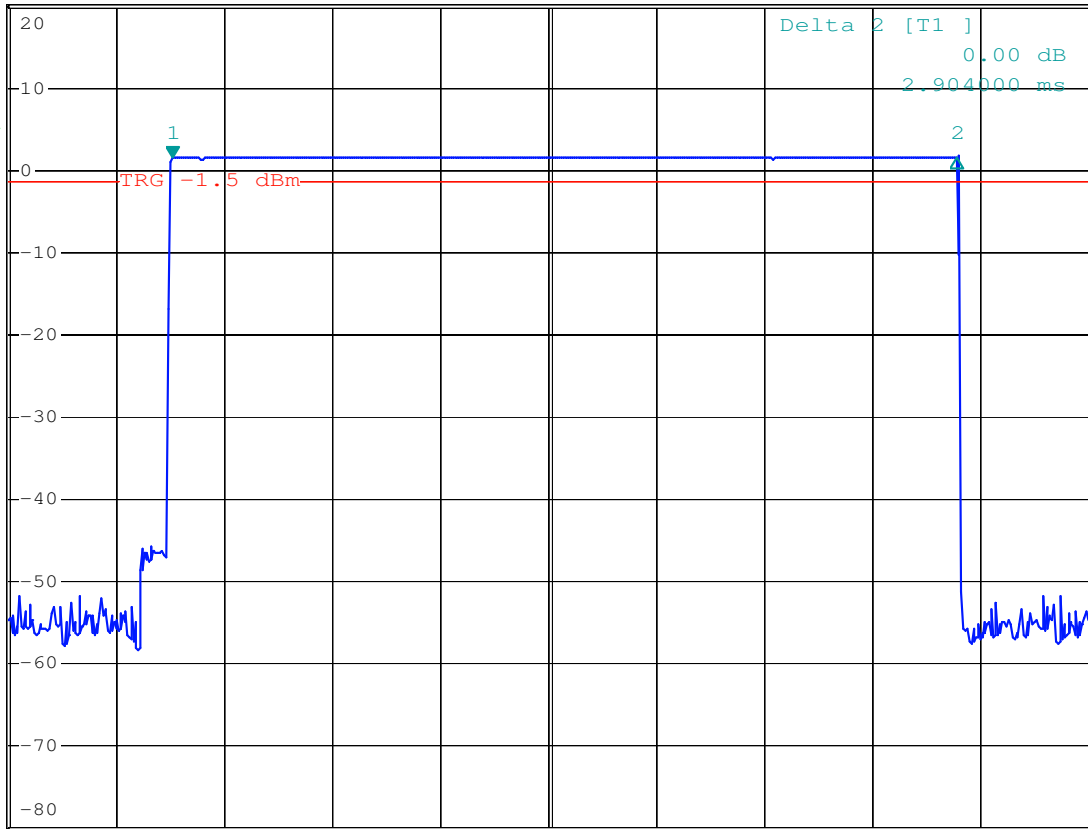
Center 2.441 GHz   400 µs/

Date: 30.SEP.2009 16:29:36

20dB Bandwidth

Modulation: 8 DPSK
Tx frequency: 2402MHz

MARKER 1		*RBW 30 kHz	Marker 1 [T1]
2.401994 GHz		VBW 100 kHz	1.85 dBm
Ref 20 dBm	*Att 30 dB	SWT 5 ms	2.401994000 GHz

Delta 2 [T1]
-20.45 dB
630.000000000 kHz
Delta 3 [T1]
-20.69 dB
-642.000000000 kHz

Center 2.402 GHz   300 kHz/   Span 3 MHz
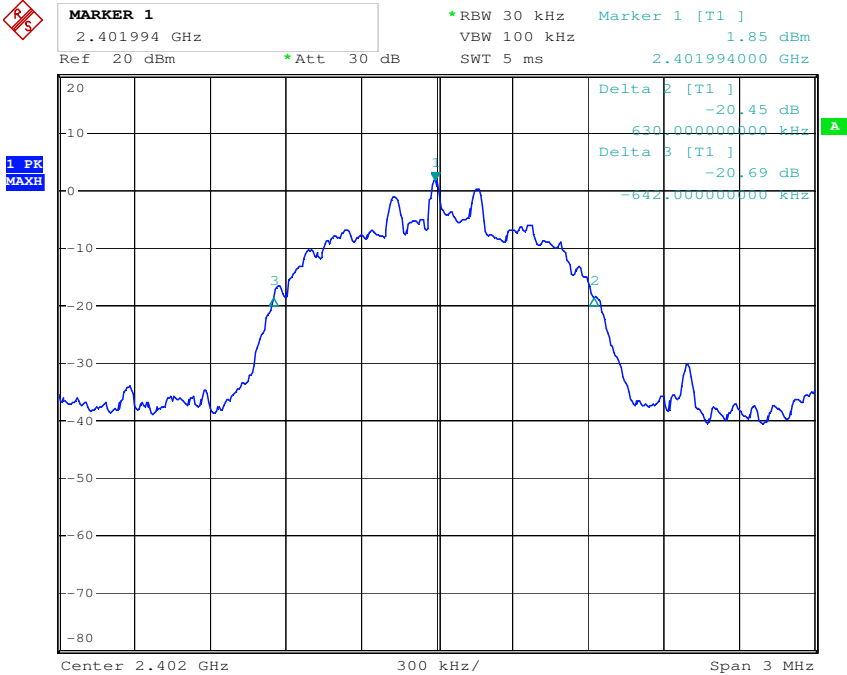
Date: 30.SEP.2009 16:34:22

Modulation: 8 DPSK
Tx frequency: 2441MHz

MARKER 1		*RBW 30 kHz	Marker 1 [T1]
2.440988 GHz		VBW 100 kHz	0.82 dBm
Ref 20 dBm	*Att 30 dB	SWT 5 ms	2.440988000 GHz

Delta 2 [T1]
-20.70 dB
630.000000000 kHz
Delta 3 [T1]
-20.46 dB
-642.000000000 kHz

Center 2.441 GHz   300 kHz/   Span 3 MHz

Date: 30.SEP.2009 16:35:49

Modulation: 8 DPSK
Tx frequency: 2480MHz

MARKER 1
2.479994 GHz
Ref 20 dBm   *Att 30 dB

*RBW 30 kHz   Marker 1 [T1]
VBW 100 kHz   -0.15 dBm
SWT 5 ms   2.479994000 GHz

Delta 2 [T1]
                    -19.79 dB
618.000000000 kHz

Delta 3 [T1]
                    -20.37 dB
-648.000000000 kHz

Center 2.48 GHz   300 kHz/   Span 3 MHz

Date: 30.SEP.2009 16:39:37

Modulation: GFSK
Tx frequency: 2402MHz

MARKER 1
2.401988 GHz
Ref 20 dBm   *Att 30 dB

*RBW 30 kHz   Marker 1 [T1]
VBW 100 kHz   3.25 dBm
SWT 5 ms   2.401988000 GHz

Delta 2 [T1]
                    -20.19 dB
486.000000000 kHz

Delta 3 [T1]
                    -20.42 dB
-450.000000000 kHz

Center 2.402 GHz   300 kHz/   Span 3 MHz
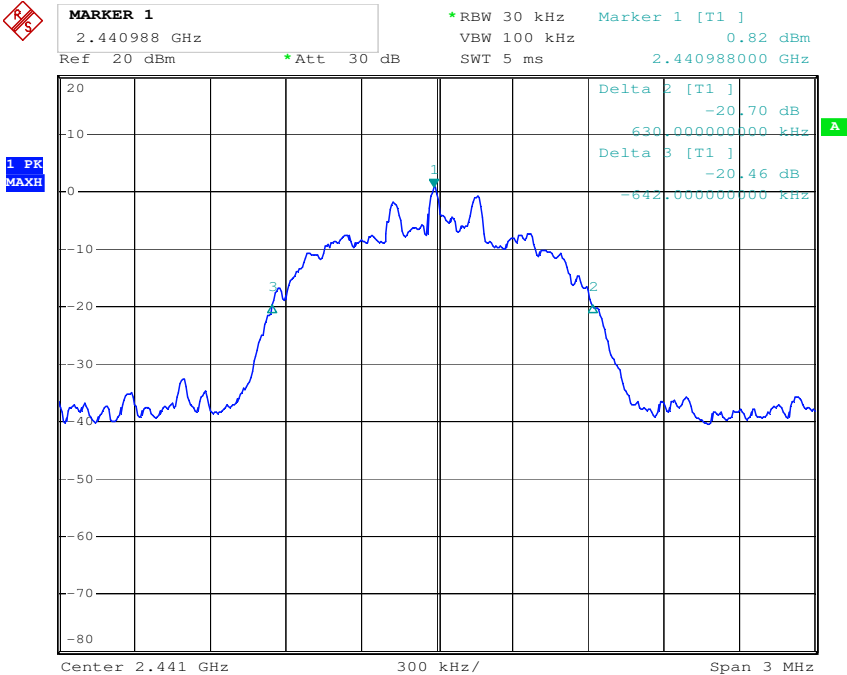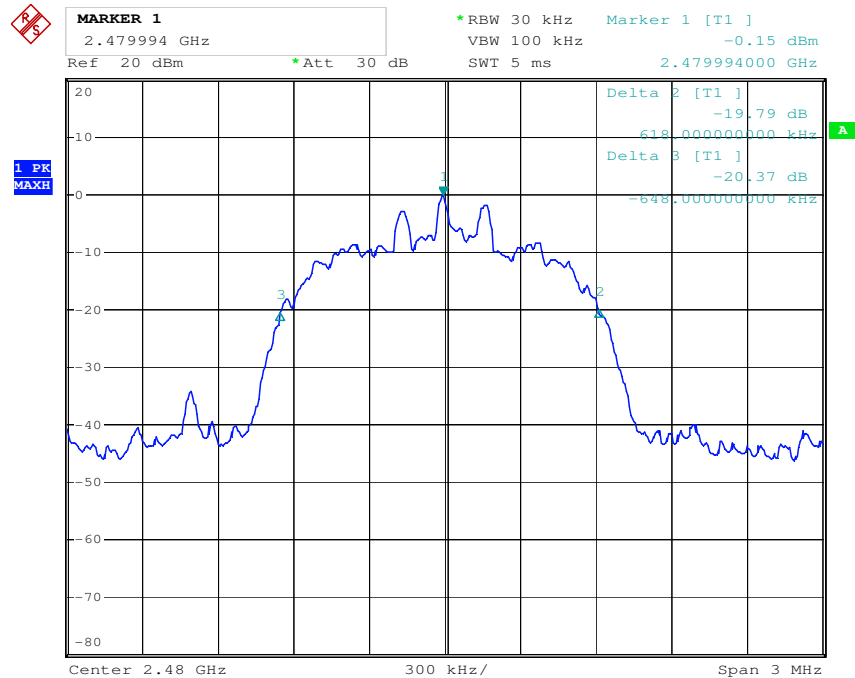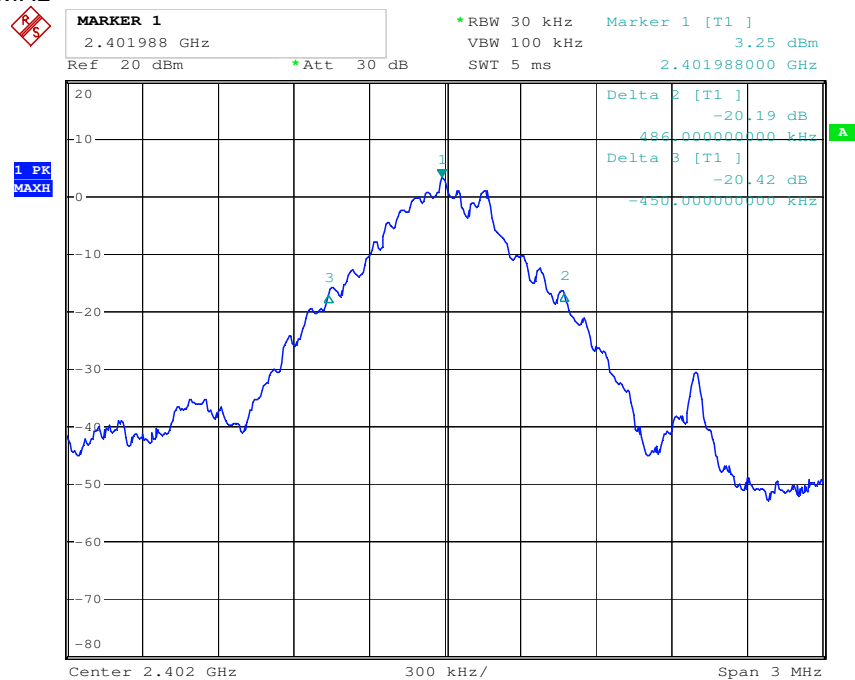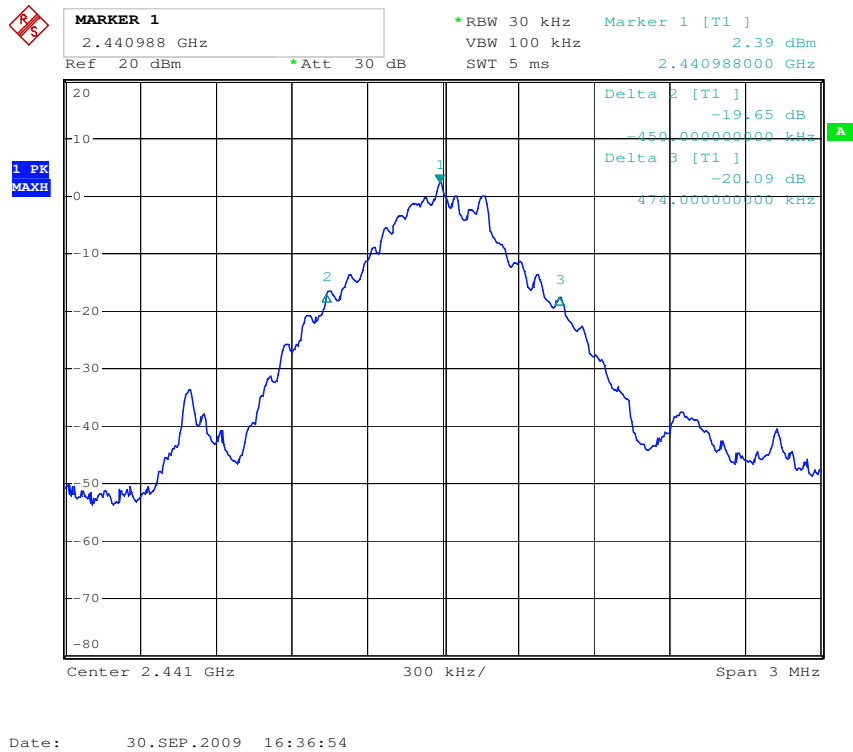
Date: 30.SEP.2009 16:32:30

Modulation: GFSK
Tx frequency: 2441MHz

Date: 30.SEP.2009 16:36:54

Modulation: GFSK
Tx frequency: 2480MHz

Date: 30.SEP.2009 16:38:07
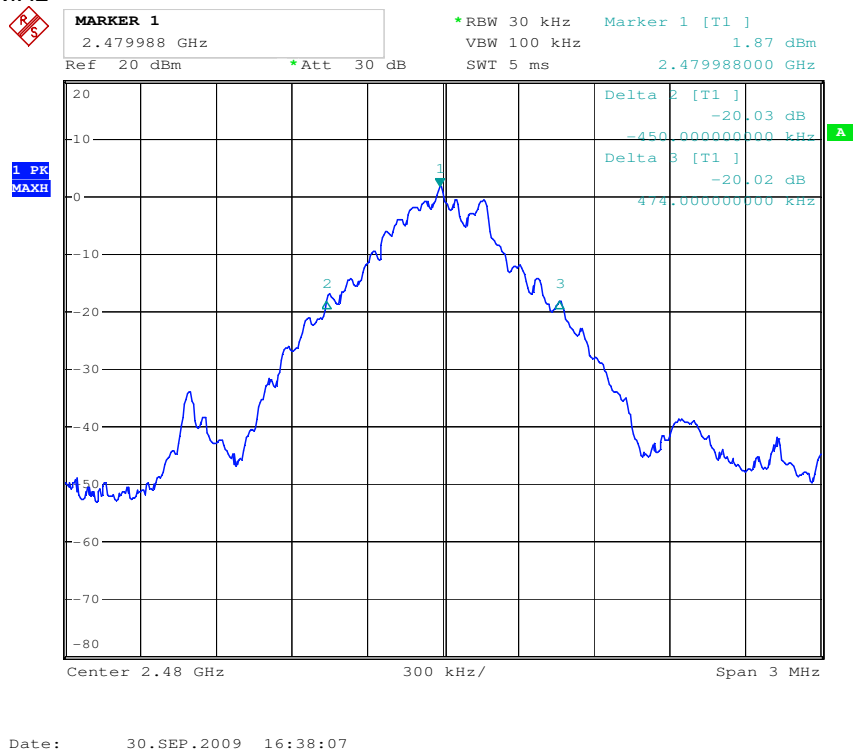
Peak Output Power

Modulation: GFSK
Tx frequency: 2402MHz

MARKER 1		*RBW 3 MHz	Marker 1 [T1]
2.40189 GHz		VBW 10 MHz	2.70 dBm
Ref 20 dBm	*Att 30 dB	SWT 2.5 ms	2.401890000 GHz

Center 2.402 GHz   500 kHz/   Span 5 MHz
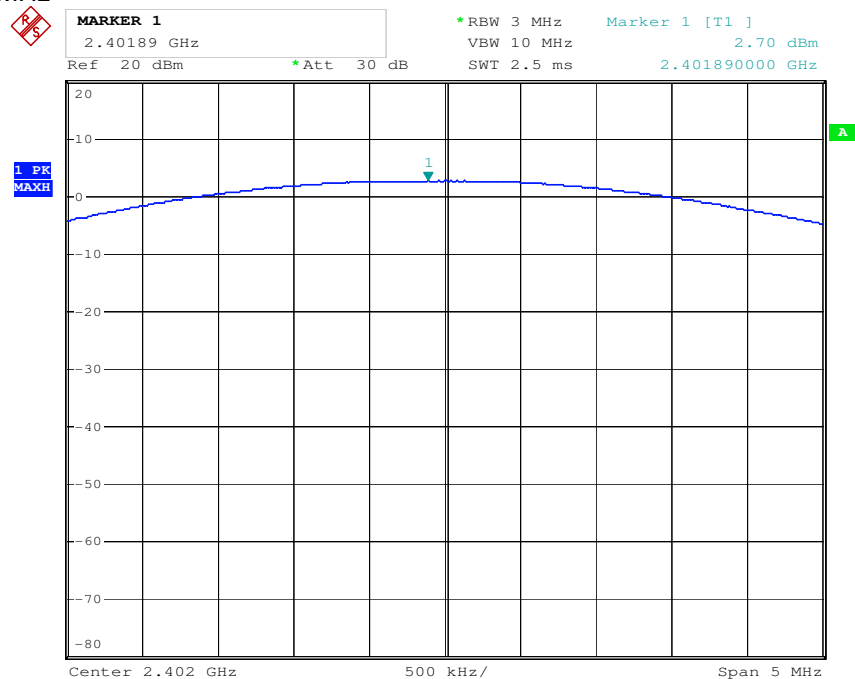
Date: 30.SEP.2009 16:50:15

Modulation: GFSK
Tx frequency: 2441MHz

MARKER 1		*RBW 3 MHz	Marker 1 [T1]
2.4408 GHz		VBW 10 MHz	1.69 dBm
Ref 20 dBm	*Att 30 dB	SWT 2.5 ms	2.440800000 GHz

Center 2.441 GHz   500 kHz/   Span 5 MHz
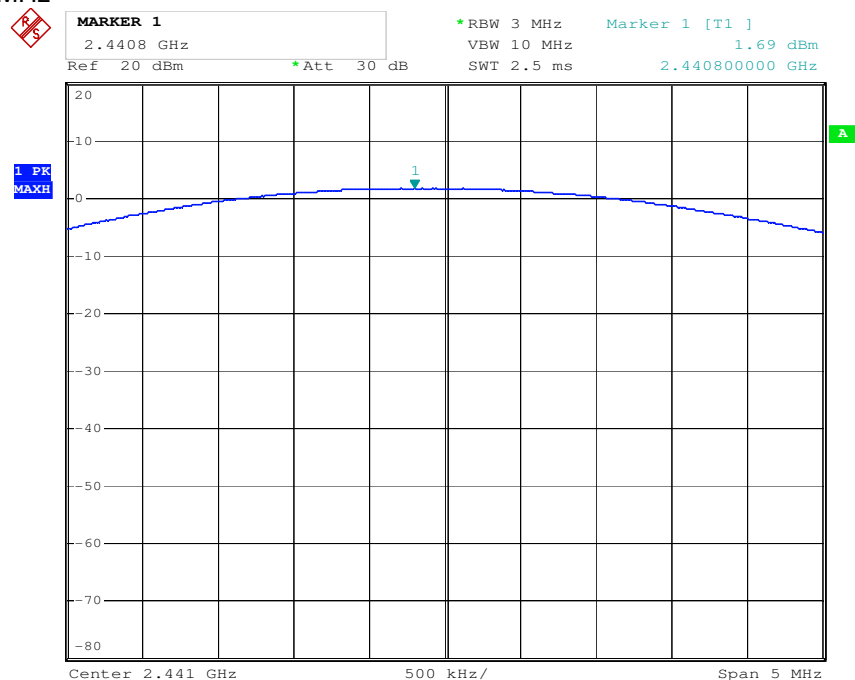
Date: 30.SEP.2009 16:46:35

Modulation: GFSK
Tx frequency: 2480MHz

```
MARKER 1                              *RBW 3 MHz      Marker 1 [T1 ]
 2.4798 GHz                            VBW 10 MHz               1.20 dBm
Ref  20 dBm          *Att  30 dB      SWT 2.5 ms       2.479800000 GHz
```

20	
10	A
1 PK MAXH	
0	
-10	
-20	
-30	
-40	
-50	
-60	
-70	
-80	

```
Center 2.48 GHz            500 kHz/              Span 5 MHz
```
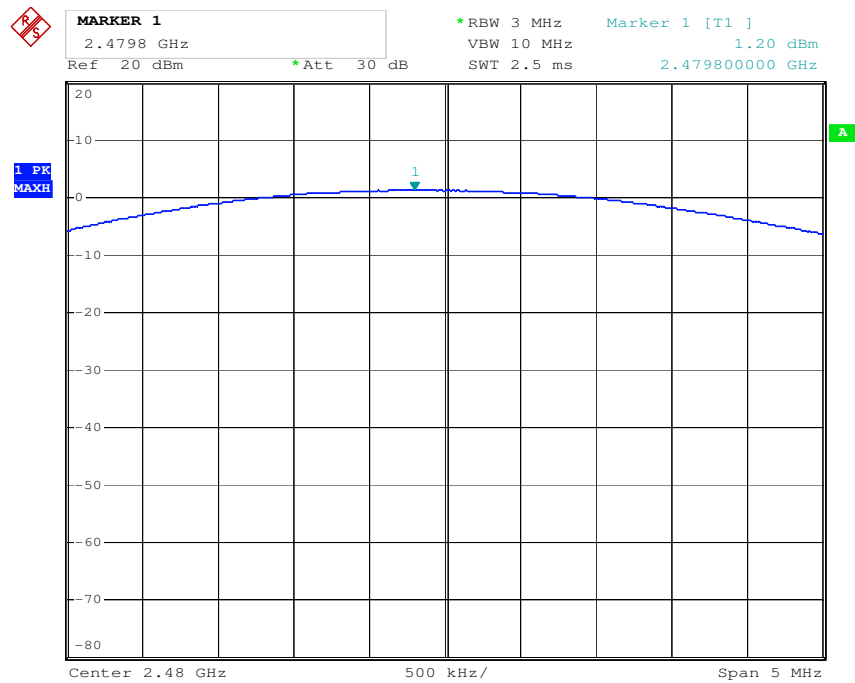
Date: 30.SEP.2009 16:45:52

Modulation: Pi/4 DQPSK
Tx frequency: 2402MHz

```
MARKER 1                              *RBW 3 MHz      Marker 1 [T1 ]
 2.40198 GHz                           VBW 10 MHz               1.75 dBm
Ref  20 dBm          *Att  30 dB      SWT 2.5 ms       2.401980000 GHz
```

20	
10	A
1 PK MAXH	
0	
-10	
-20	
-30	
-40	
-50	
-60	
-70	
-80	

```
Center 2.402 GHz           500 kHz/              Span 5 MHz
```
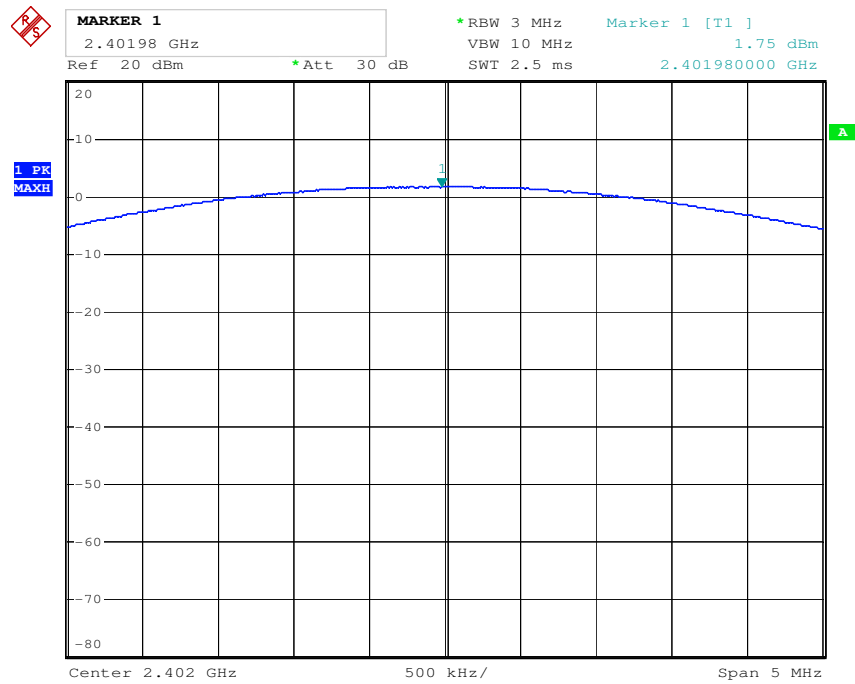
Date: 30.SEP.2009 16:49:22

Modulation: Pi/4 DQPSK
Tx frequency: 2441MHz

MARKER 1				*RBW 3 MHz	Marker 1 [T1]	
2.44068 GHz				VBW 10 MHz		0.71 dBm
Ref 20 dBm		*Att 30 dB		SWT 2.5 ms		2.440680000 GHz

```
  20
  10                                                                    A
1 PK
MAXH                        1
   0
 -10
 -20
 -30
 -40
 -50
 -60
 -70
 -80
Center 2.441 GHz            500 kHz/                      Span 5 MHz
```
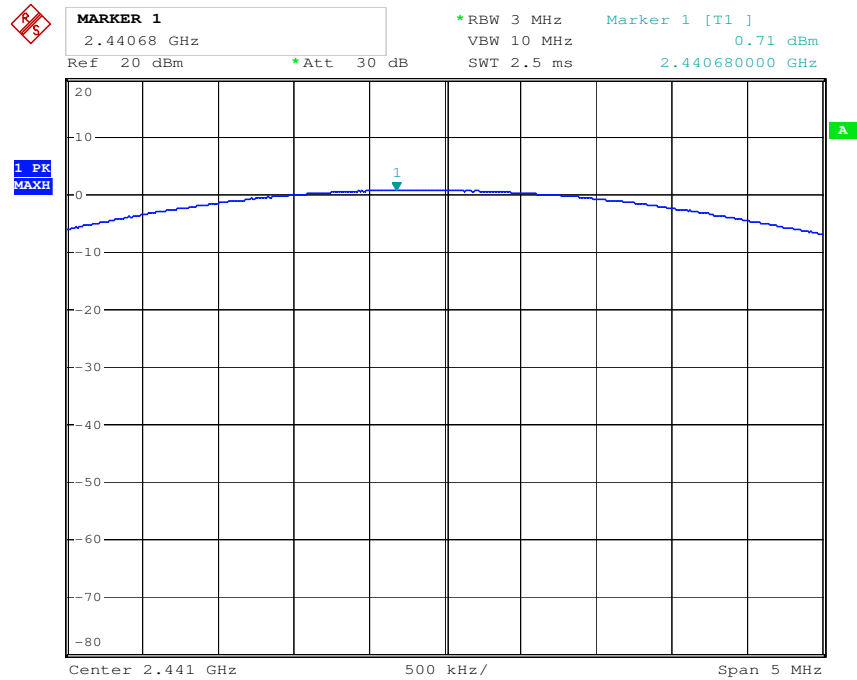
Date: 30.SEP.2009 16:47:25

Modulation: Pi/4 DQPSK
Tx frequency: 2480MHz

MARKER 1				*RBW 3 MHz	Marker 1 [T1]	
2.47975 GHz				VBW 10 MHz		-0.05 dBm
Ref 20 dBm		*Att 30 dB		SWT 2.5 ms		2.479750000 GHz

```
  20
  10                                                                    A
1 PK
MAXH                        1
   0
 -10
 -20
 -30
 -40
 -50
 -60
 -70
 -80
Center 2.48 GHz             500 kHz/                      Span 5 MHz
```
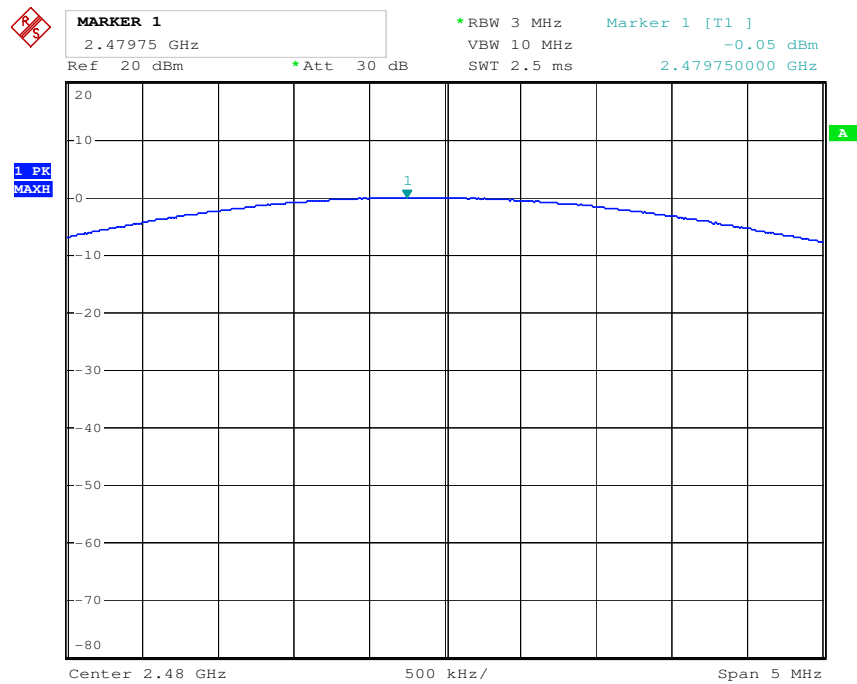
Date: 30.SEP.2009 16:45:05

Modulation: 8 DPSK
Tx frequency: 2402MHz

```
MARKER 1                              *RBW 3 MHz     Marker 1 [T1 ]
 2.40184 GHz                           VBW 10 MHz              1.99 dBm
Ref  20 dBm          *Att  30 dB       SWT 2.5 ms      2.401840000 GHz
```



```
Center 2.402 GHz            500 kHz/              Span 5 MHz
```
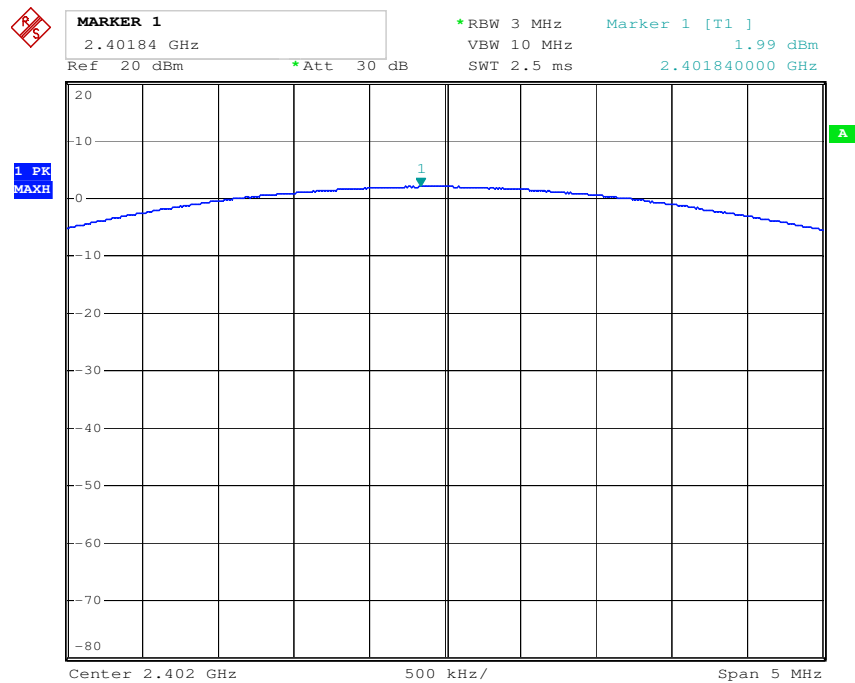
Date: 30.SEP.2009 16:48:43

Modulation: 8 DPSK
Tx frequency: 2441MHz

```
MARKER 1                              *RBW 3 MHz     Marker 1 [T1 ]
 2.44092 GHz                           VBW 10 MHz              0.86 dBm
Ref  20 dBm          *Att  30 dB       SWT 2.5 ms      2.440920000 GHz
```



```
Center 2.441 GHz            500 kHz/              Span 5 MHz
```
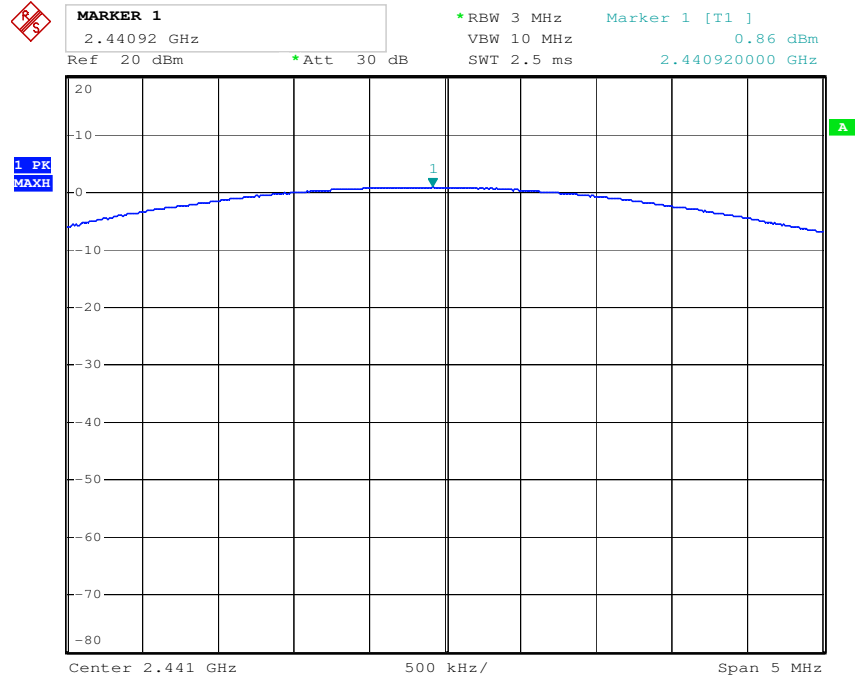
Date: 30.SEP.2009 16:47:54

Modulation: 8 DPSK
Tx frequency: 2480MHz

MARKER 1			*RBW 3 MHz	Marker 1 [T1]
2.47978 GHz			VBW 10 MHz	0.22 dBm
Ref 20 dBm		*Att 30 dB	SWT 2.5 ms	2.479780000 GHz

```
 20
 10                                                                    A
1 PK
MAXH
  0                          1
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.48 GHz              500 kHz/              Span 5 MHz
```
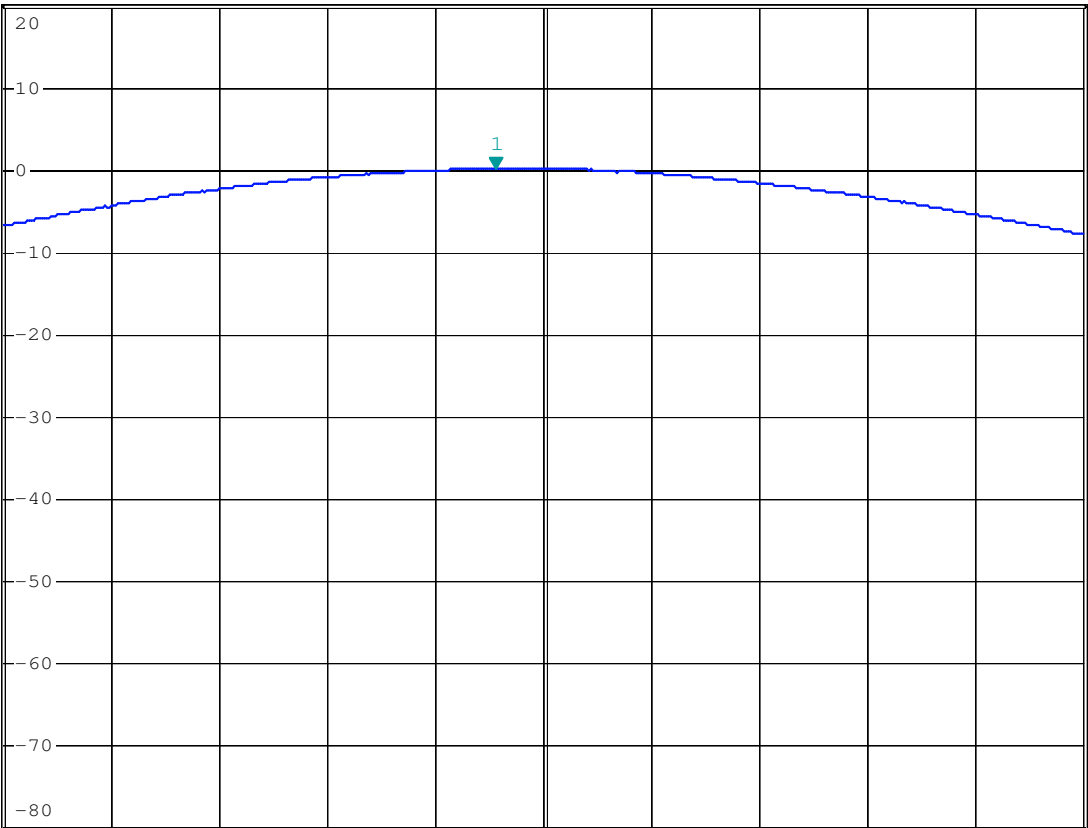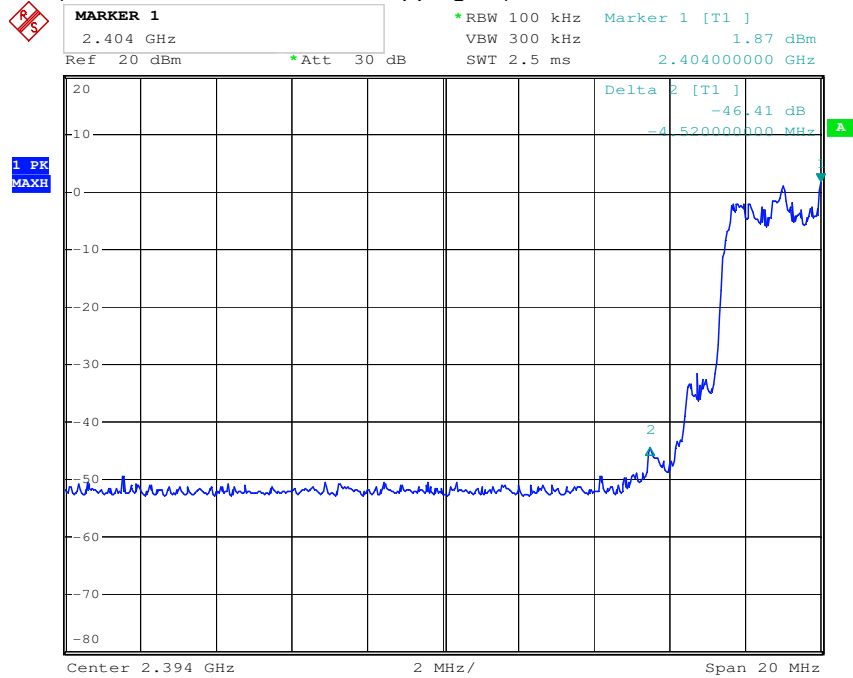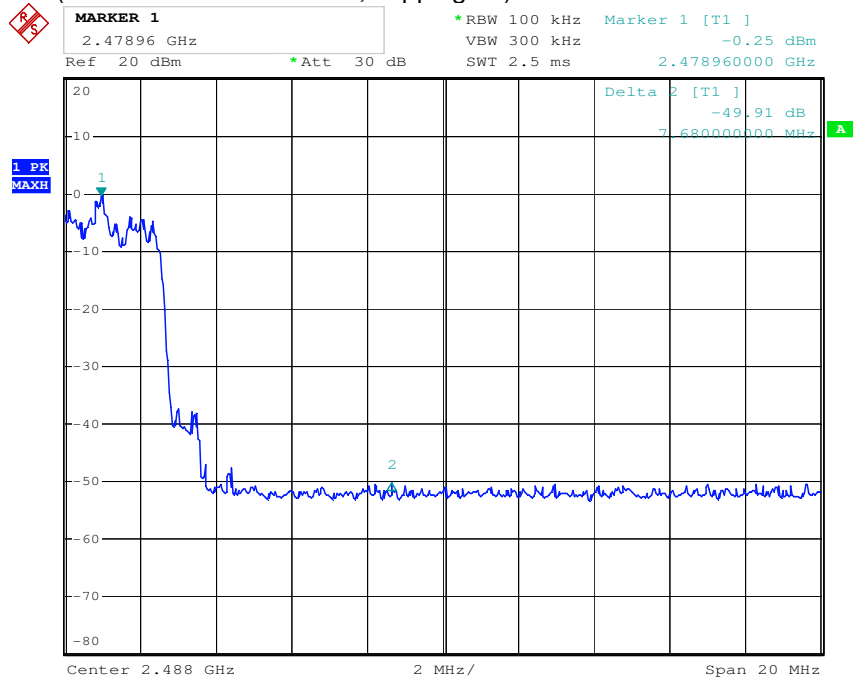
Date: 30.SEP.2009 16:43:36

Band Edge Compliance
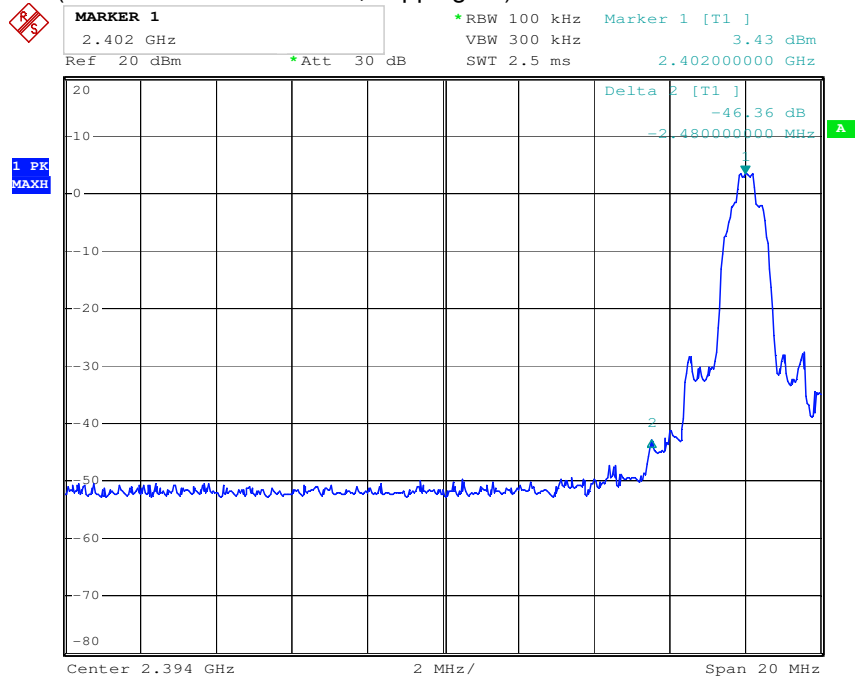
Tx frequency: 2402MHz (conducted measurement; hopping on)

Tx frequency: 2480MHz (conducted measurement; hopping on)

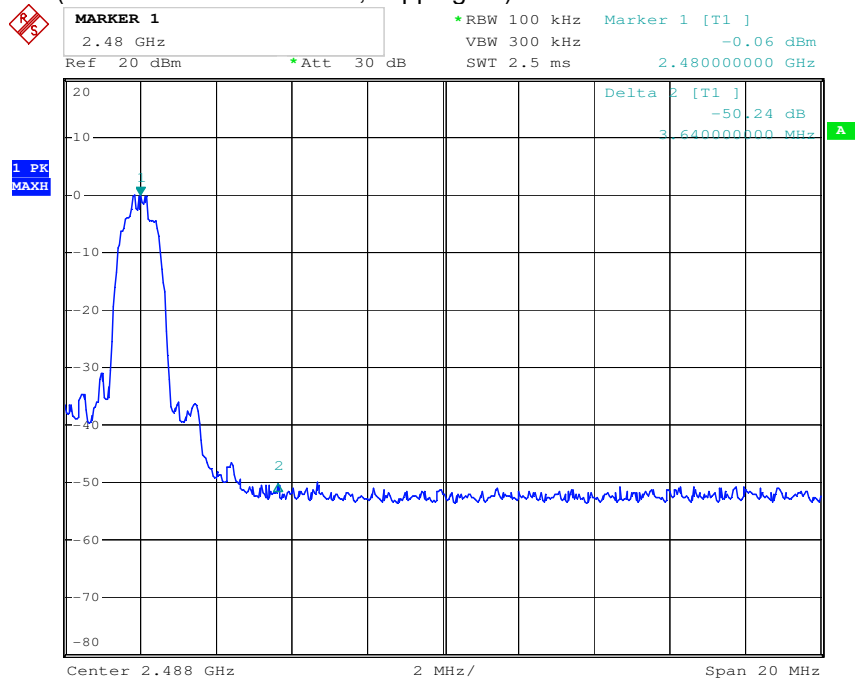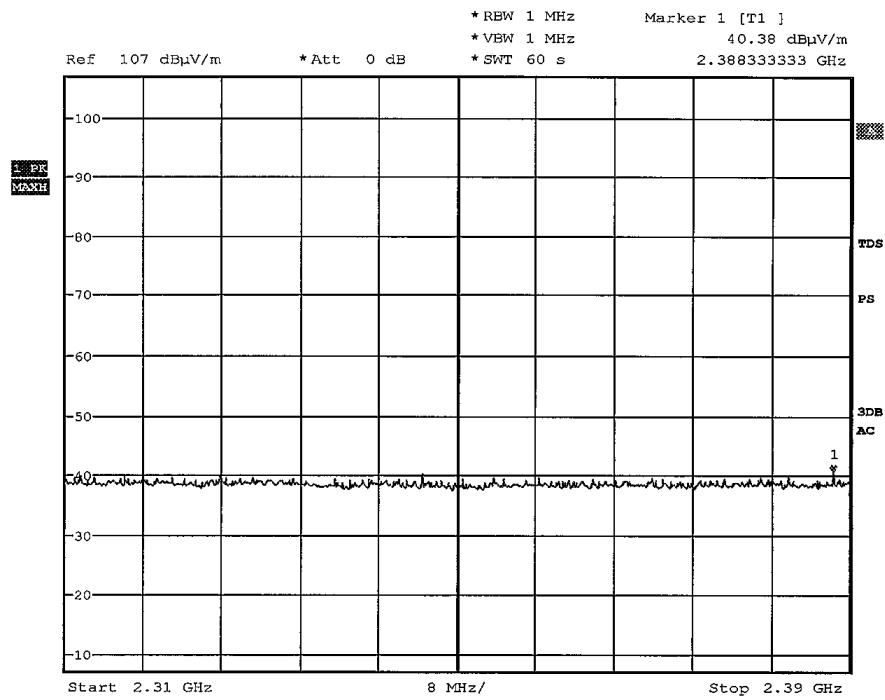Tx frequency: 2402MHz (conducted measurement; hopping off)

```
   R                MARKER 1                          *RBW 100 kHz   Marker 1 [T1 ]
   S                2.402 GHz                           VBW 300 kHz              3.43 dBm
                    Ref  20 dBm        *Att  30 dB      SWT 2.5 ms        2.402000000 GHz

        20                                                    Delta 2 [T1 ]
                                                                          -46.36 dB      A
        10                                                         -2.480000000 MHz
  1 PK
  MAXH   0

       -10

       -20

       -30

       -40
                                                         2
       -50

       -60

       -70

       -80
          Center 2.394 GHz              2 MHz/                     Span 20 MHz
```

Date: 30.SEP.2009 16:54:27

Tx frequency: 2480MHz (conducted measurement; hopping off)

```
   R                MARKER 1                          *RBW 100 kHz   Marker 1 [T1 ]
   S                2.48 GHz                            VBW 300 kHz             -0.06 dBm
                    Ref  20 dBm        *Att  30 dB      SWT 2.5 ms        2.480000000 GHz

        20                                                    Delta 2 [T1 ]
                                                                          -50.24 dB      A
        10                                                          3.640000000 MHz
  1 PK
  MAXH   0

       -10

       -20

       -30

       -40
                            2
       -50

       -60

       -70

       -80
          Center 2.488 GHz              2 MHz/                     Span 20 MHz
```

Date: 30.SEP.2009 17:01:16

Tx frequency: 2402MHz (radiated measurement)


```
                                          *RBW  1 MHz        Marker 1 [T1 ]
                                          *VBW  1 MHz              40.38 dBµV/m
        Ref   107 dBµV/m       *Att  0 dB *SWT  60 s         2.388333333 GHz

        ┌100┐
 1 PK   ├ 90┤
 MAXH   ├ 80┤                                                          TDS
        ├ 70┤                                                          PS
        ├ 60┤
        ├ 50┤                                                          3DB
        ├ 40┤                                                      1   AC
        ├ 30┤
        ├ 20┤
        └ 10┘
        Start  2.31 GHz              8 MHz/              Stop  2.39 GHz
```

AVANTAVE / RHA200/ 00090929100/ VERT. /2402MHz
Date: 6.OCT.2009 11:23:34

```
                                    * RBW  1 MHz        Marker 1 [T1 ]
                                    * VBW  1 MHz             40.07 dBµV/m
   Ref   107 dBµV/m      * Att   0 dB   * SWT  60 s        2.328333333 GHz
```
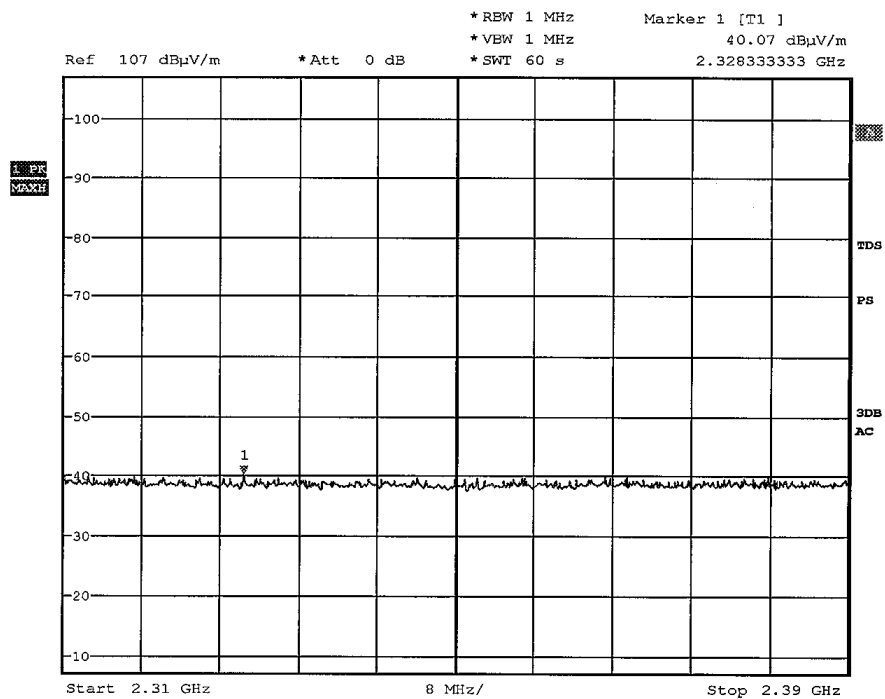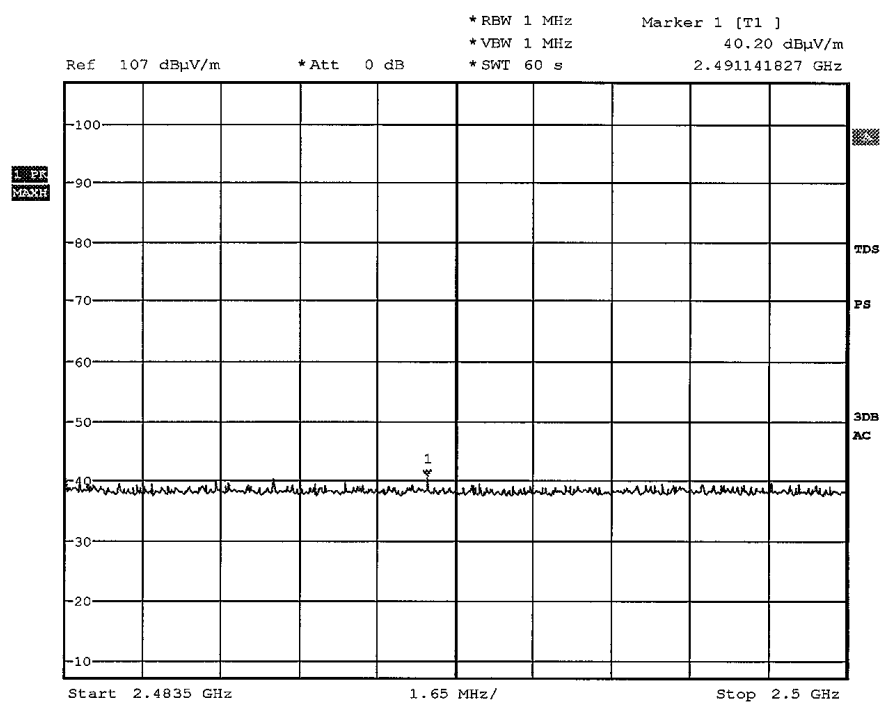
AVANTAVE / RHA200/ 00090929100/ HORI. /2402MHz
Date: 6.OCT.2009 11:22:05

Tx frequency: 2480MHz (radiated measurement)


```
                                              * RBW  1 MHz        Marker 1 [T1 ]
                                              * VBW  1 MHz             40.04 dBµV/m
            Ref   107 dBµV/m       * Att  0 dB  * SWT  60 s         2.489581731 GHz
```
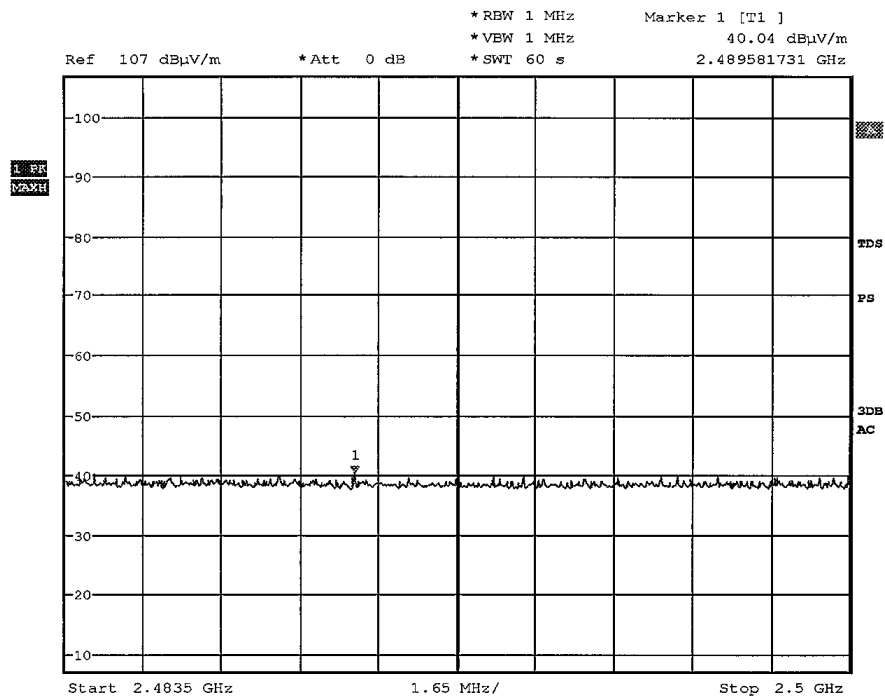
AVANTAVE / RHA200/ 00090929100/ VERT. /2480MHz
Date: 6.OCT.2009 11:48:32

```
                                          *RBW  1 MHz      Marker 1 [T1 ]
                                          *VBW  1 MHz           40.20 dBµV/m
      Ref   107 dBµV/m        *Att   0 dB  *SWT  60 s       2.491141827 GHz
```

AVANTAVE / RHA200/ 00090929100/ HORI. /2480MHz
Date: 6.OCT.2009 11:49:45

Spurious Emissions - Conducted

Tx frequency: 2402MHz

Tx frequency: 2441MHz

Tx frequency: 2480MHz

MARKER 1		*RBW 100 kHz	Marker 1 [T1]
2.475 GHz		VBW 300 kHz	−0.19 dBm
Ref 20 dBm	*Att 30 dB	*SWT 60 s	2.475000000 GHz

Marker 2 [T1]
−40.88 dBm
1.650000000 GHz

Marker 3 [T1]
−44.74 dBm
4.950000000 GHz

1 PK
MAXH

A

Start 0 Hz   2.5 GHz/   Stop 25 GHz

Date: 30.SEP.2009 17:51:48