Chip Antenna

Test Mode	Hopping Mode
Number of Hopping Channel	79


```
                                    *RBW 100 kHz   Marker 2 [T1 ]
                                    *VBW 100 kHz            22.49 dBm
        Ref  30 dBm      *Att  40 dB  SWT 10 ms      2.480000000 GHz

        30  Offset  1 dB                    Marker 1 [T1 ]
                                                       23.46  dBm        A
                                                              Hz
1 PK
MAXH                                                                     LVL



    -10

    -20
                                                                         3DB
    -30

    -40

    -50

    -60

    -70
    Start 2.4 GHz          8.35 MHz/         Stop 2.4835 GHz
```
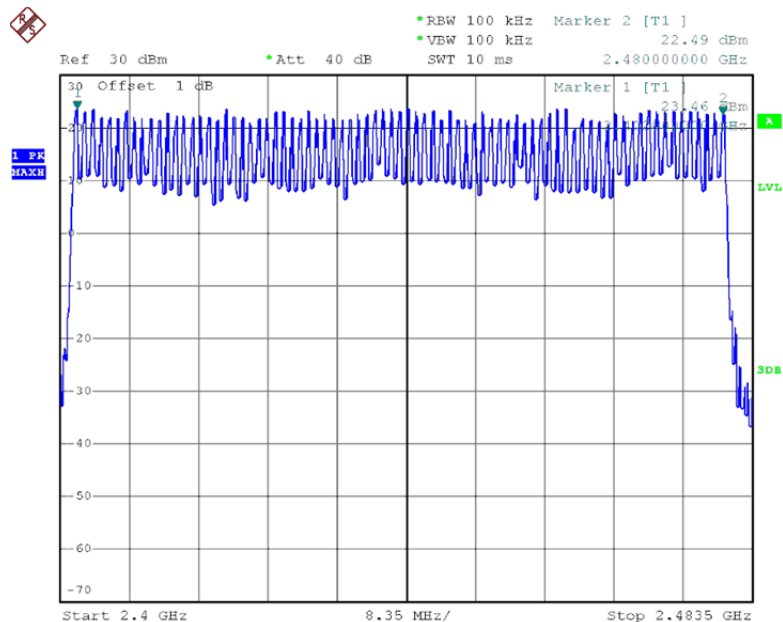
Date: 10.MAR.2015 18:40:23

ATTACHMENT F - AVERAGE TIME OF OCCUPANCY

Dipole Antenna

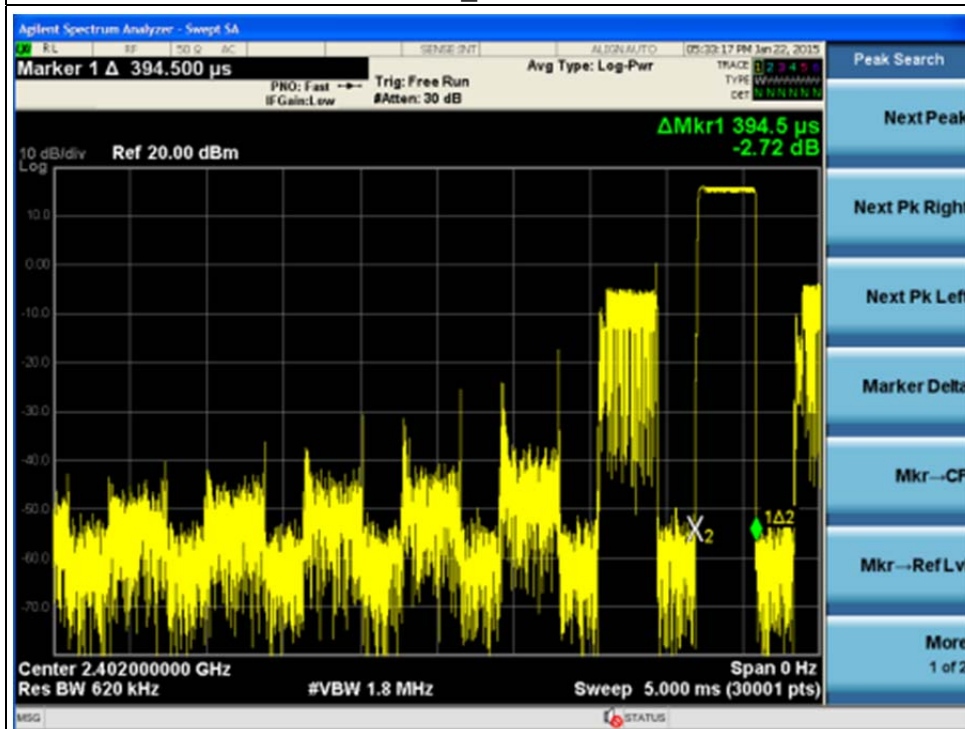| Test Mode: Hopping Mode			
Number of transmission in a 31.6(79Hopping*0.4)	Length of transmission time (msec)	Result (msec)	Limit (msec)
(6/0.316) *31.6=600 times **Note1**	0.3945	236.7	400

Note1: 6 times of occupied channels per 0.316 seconds

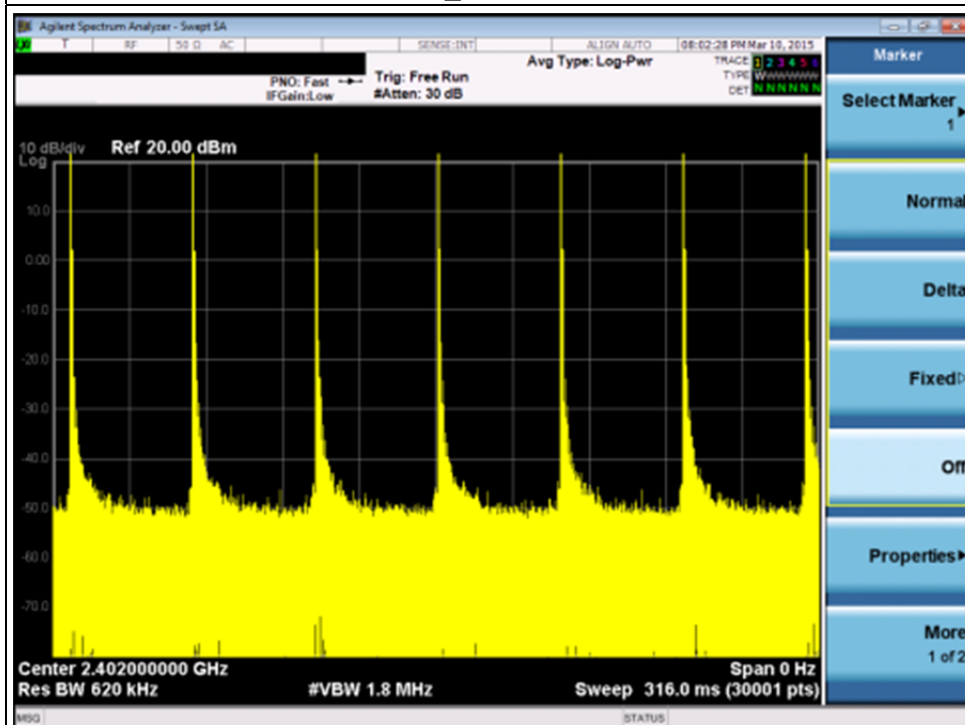|	Results
Measured cycle (sec)	79 CH*0.4=31.6
The total number of frequency-hopping 0.316 seconds	((6/0.316)*31.6)=600
The number of occupied channels 0.316 seconds	600/31.6=18.987 (number/sec)
occupied time for each channel(1)	0.3945 ms
The total number of channels occupied within one cycle (2)	((6/0.316)*31.6)=600 times
The average time of occupancy within one cycle(1)*(2)	236.7 msec
LIMIT (msec)	400msec

CH01_Dwell Time

CH01_ON Time

Chip Antenna

Test Mode: Hopping Mode			
Number of transmission in a 31.6(79Hopping*0.4)	**Length of transmission time (msec)**	**Result (msec)**	**Limit (msec)**
(7/0.316) *31.6=700 times **Note1**	0.397	277.9	400

Note1: 7 times of occupied channels per 0.316 seconds

	Results
Measured cycle (sec)	79 CH*0.4=31.6
The total number of frequency-hopping 0.316 seconds	((7/0.316)*31.6)=700
The number of occupied channels 0.316 seconds	700/31.6=22.15 (number/sec)
occupied time for each channel(1)	0.397 ms
The total number of channels occupied within one cycle (2)	((7/0.316)*31.6)=700 times
The average time of occupancy within one cycle(1)*(2)	277.9 msec
LIMIT (msec)	400msec

CH01_Dwell Time

CH01_ON Time
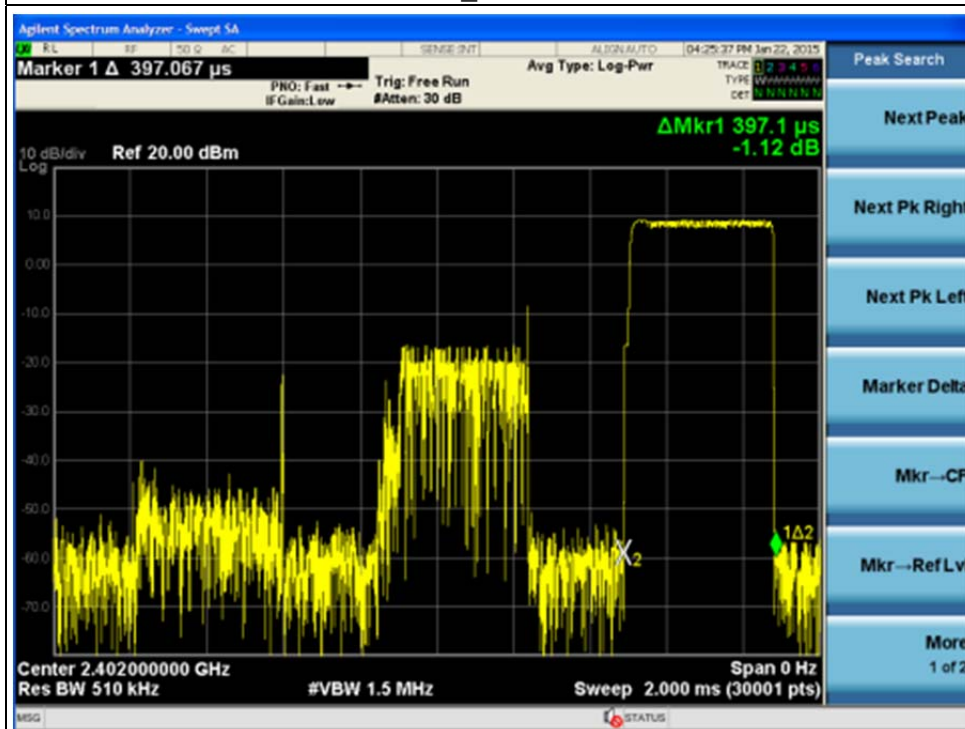
ATTACHMENT G - HOPPING CHANNEL SEPARATION MEASUREMENT

Dipole Antenna

Test Mode: Hopping on _CH01/39/79

Frequency (MHz)	Channel Separation (MHz)	20dB Bandwidth (MHz)	Test Result
2402	0.996	0.868	Complies
2440	0.996	0.868	Complies
2480	1.035	0.880	Complies

CH01

CH39

CH79

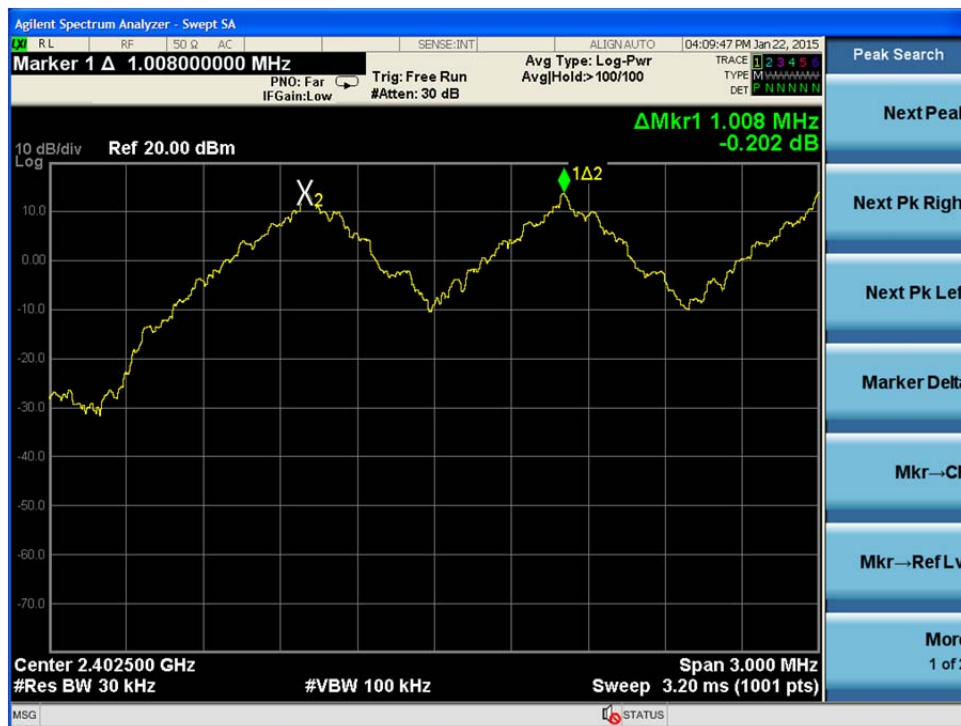**Chip Antenna**

Test Mode: Hopping on _CH01/39/79

Frequency (MHz)	Channel Separation (MHz)	20dB Bandwidth (MHz)	Test Result
2402	1.008	0.888	Complies
2440	1.002	0.858	Complies
2480	0.978	0.860	Complies

CH01

CH39
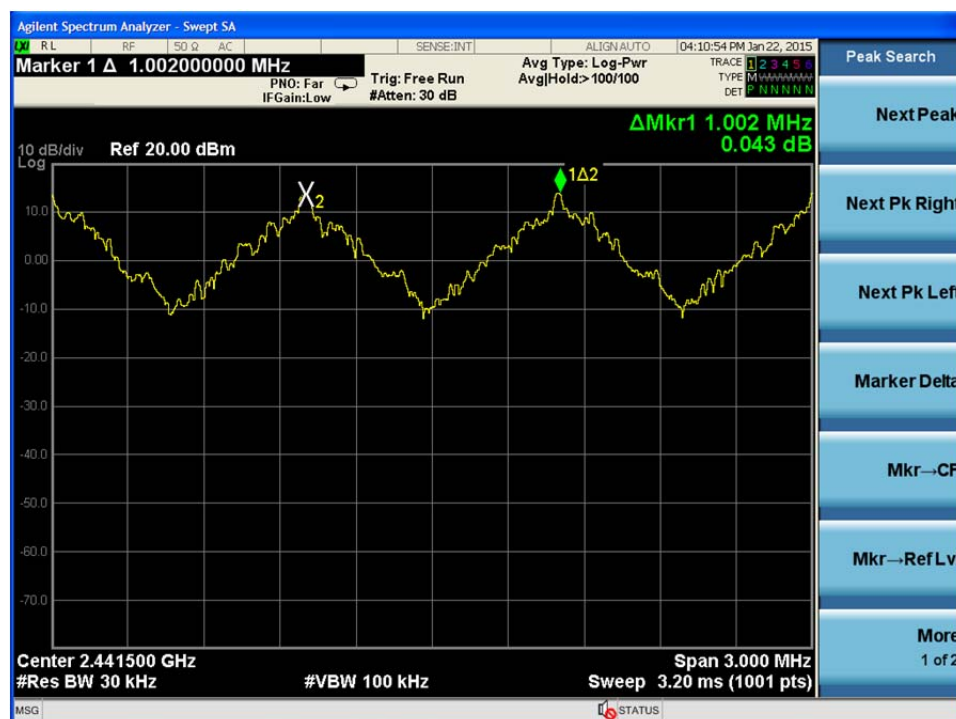
CH79

ATTACHMENT H - BANDWIDTH

Dipole Antenna

Test Mode: 1Mbps_CH01/39/79

Frequency (MHz)	20dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	0.868	0.878	500	Complies
2440	0.868	0.878	500	Complies
2480	0.880	0.880	500	Complies

CH01

Date: 8.APR.2015 14:40:05

CH39

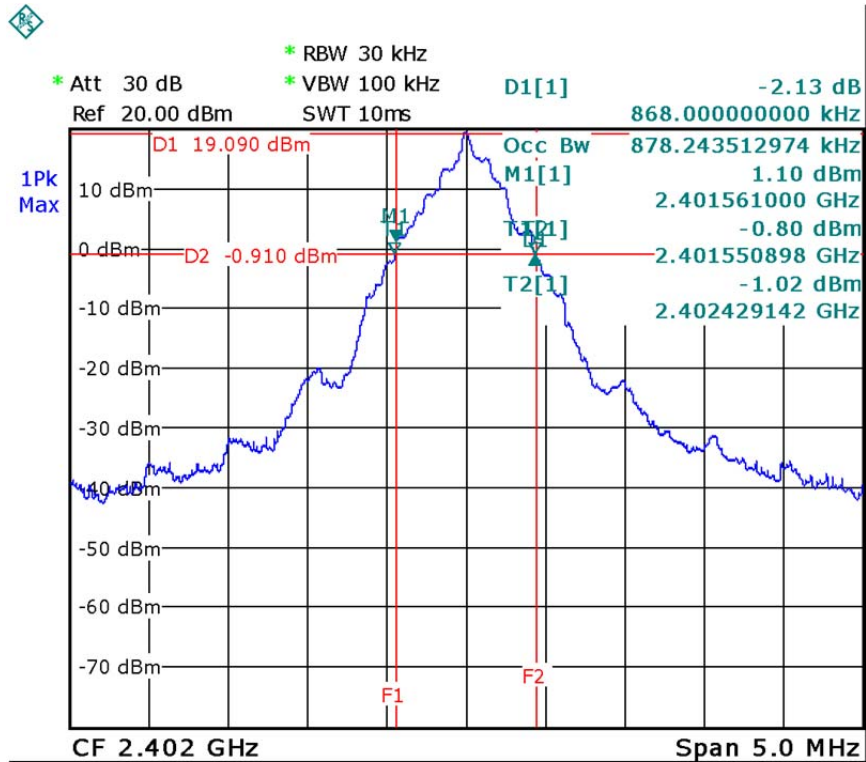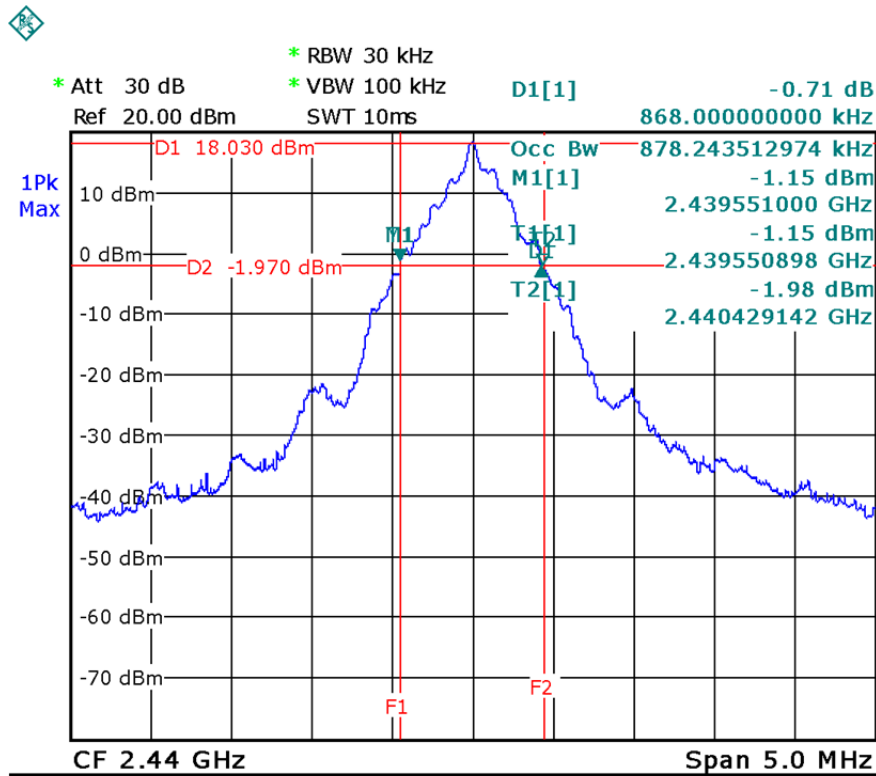Date: 8.APR.2015 14:44:05

CH79
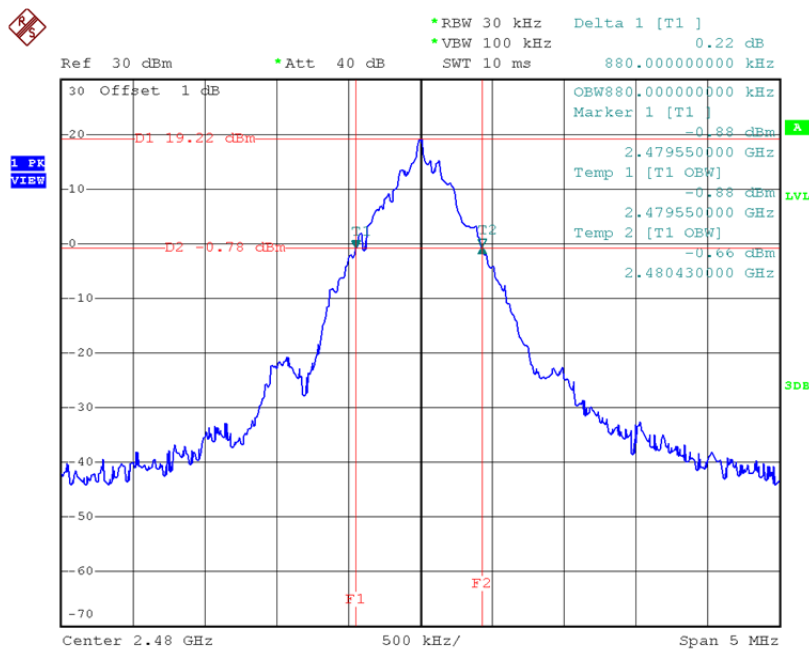
Date: 14.APR.2015 20:27:58

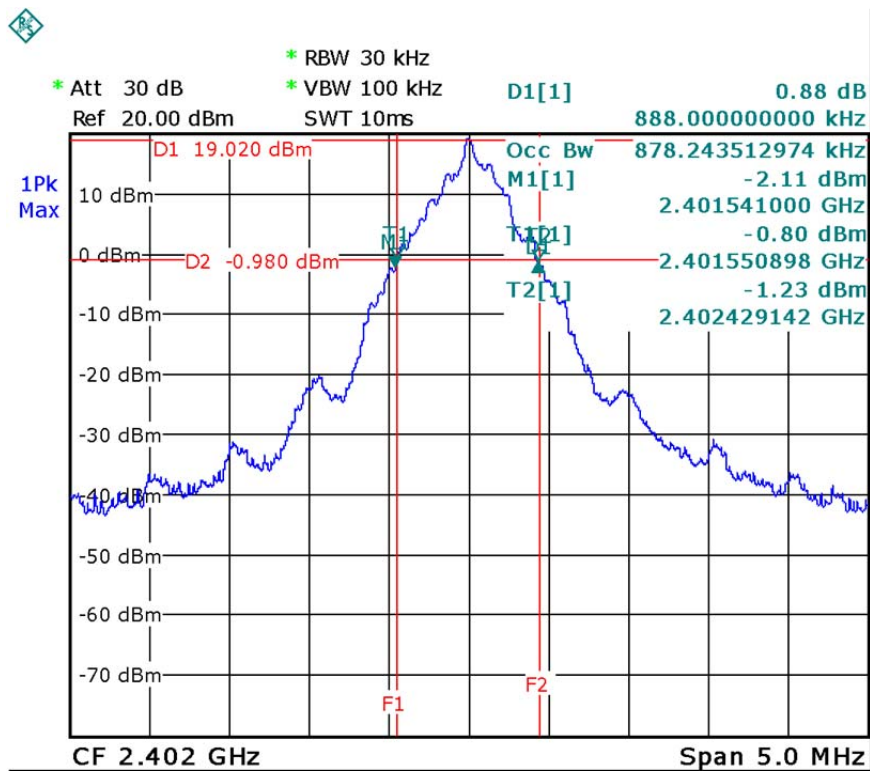**Chip Antenna**

Test Mode: 1Mbps_CH01/39/79

Frequency (MHz)	20dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	0.888	0.878	500	Complies
2440	0.858	0.858	500	Complies
2480	0.860	0.870	500	Complies

CH01

Date: 8.APR.2015 14:49:05

CH39


```
           * RBW 30 kHz        D1[1]                    1.30 dB
  *Att  30 dB    * VBW 100 kHz                  858.000000000 kHz
   Ref  20.00 dBm      SWT 10ms     Occ Bw    858.283433134 kHz
          D1 19.880 dBm          M1[1]                 -1.30 dBm
1Pk                                            2.439551000 GHz
View    10 dBm                    T1[1]                 1.54 dBm
                                               2.439560878 GHz
   0 dBm    D2 -0.120 dBm         T2[1]                 -0.14 dBm
                                               2.440419162 GHz
  -10 dBm

  -20 dBm

  -30 dBm

  -40 dBm

  -50 dBm

  -60 dBm

  -70 dBm
                    F1          F2

  CF 2.44 GHz                            Span 5.0 MHz
```
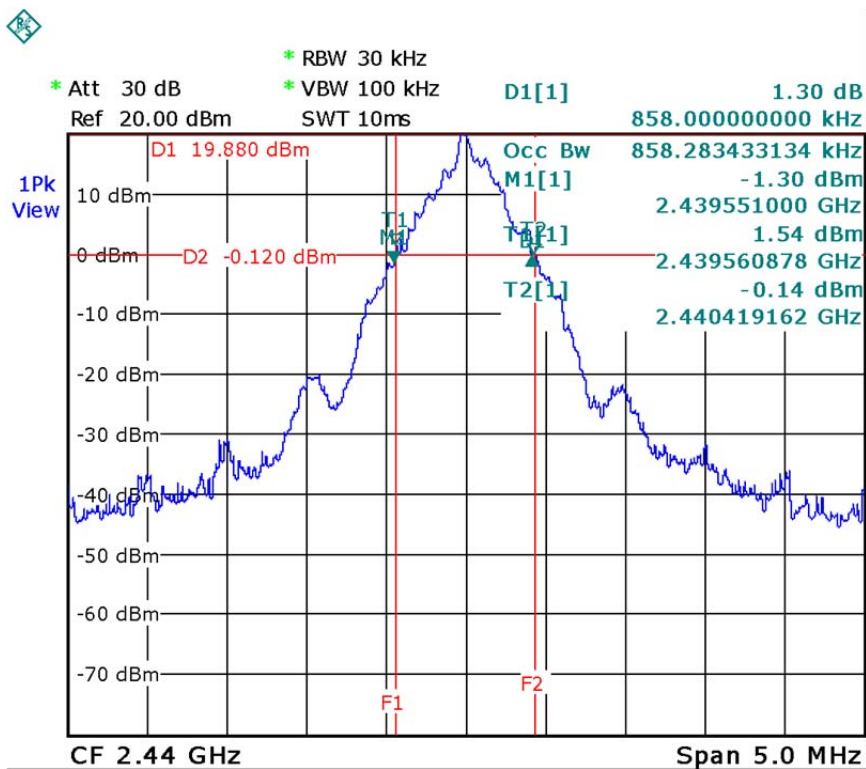
Date: 8.APR.2015 14:51:20

CH79


```
                        *RBW 30 kHz    Delta 1 [T1 ]
                        *VBW 100 kHz              -0.17 dB
   Ref  30 dBm   *Att  40 dB   SWT 10 ms     860.000000000 kHz
  30 Offset  1 dB              OBW 870.000000000 kHz
                              Marker 1 [T1 ]
   -20    D1 19.2 dBm                         -0.27 dBm
1 PK                                      2.479560000 GHz
VIEW                                      Temp 1 [T1 OBW]
   -10                                        -0.27 dBm
                                          2.479560000 GHz
    0     D2 -0.8 dBm    T1       T2      Temp 2 [T1 OBW]
                                              -0.65 dBm
   -10                                    2.480430000 GHz

   -20

   -30

   -40

   -50

   -60

   -70
                    F1          F2

  Center 2.48 GHz        500 kHz/        Span 5 MHz
```
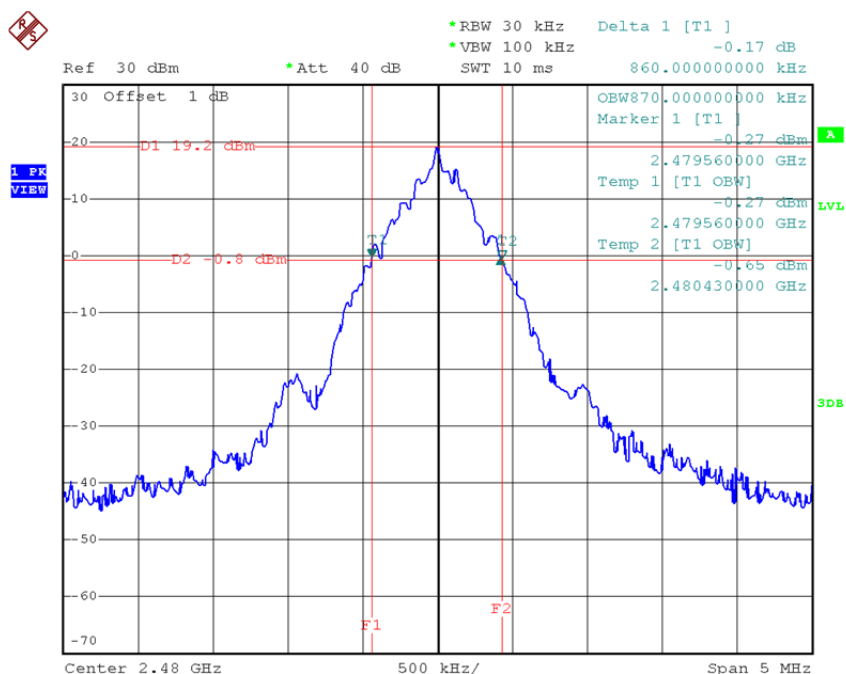
Date: 14.APR.2015 20:27:17

ATTACHMENT I - PEAK OUTPUT POWER

Dipole Antenna

Test Mode: 1Mbps_CH01/39/79

| Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2402	23.53	0.2254	30.00	1.00	Complies
2440	23.16	0.2070	30.00	1.00	Complies
2480	20.18	0.1042	30.00	1.00	Complies

Chip Antenna

Test Mode: 1Mbps_CH01/39/79

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2402	23.50	0.2239	30.00	1.00	Complies
2440	23.35	0.2163	30.00	1.00	Complies
2480	20.41	0.1099	30.00	1.00	Complies

ATTACHMENT J - ANTENNA CONDUCTED SPURIOUS EMISSION
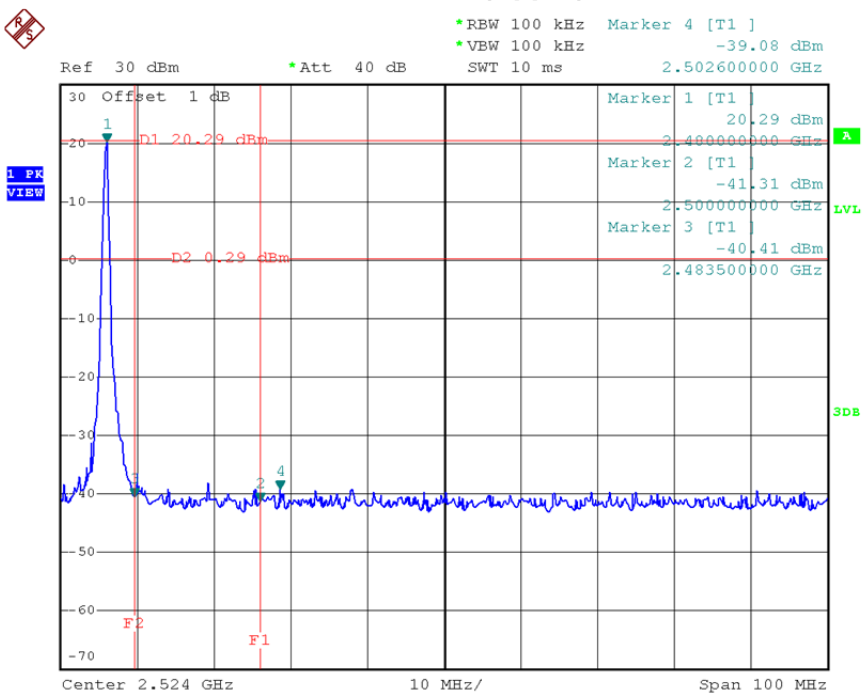
Dipole Antenna

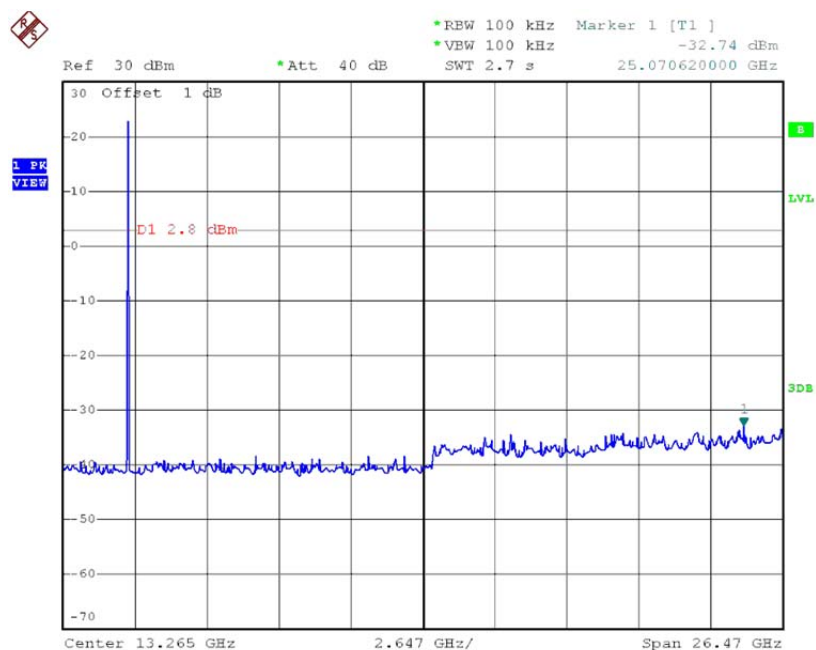### CH01(Lower)
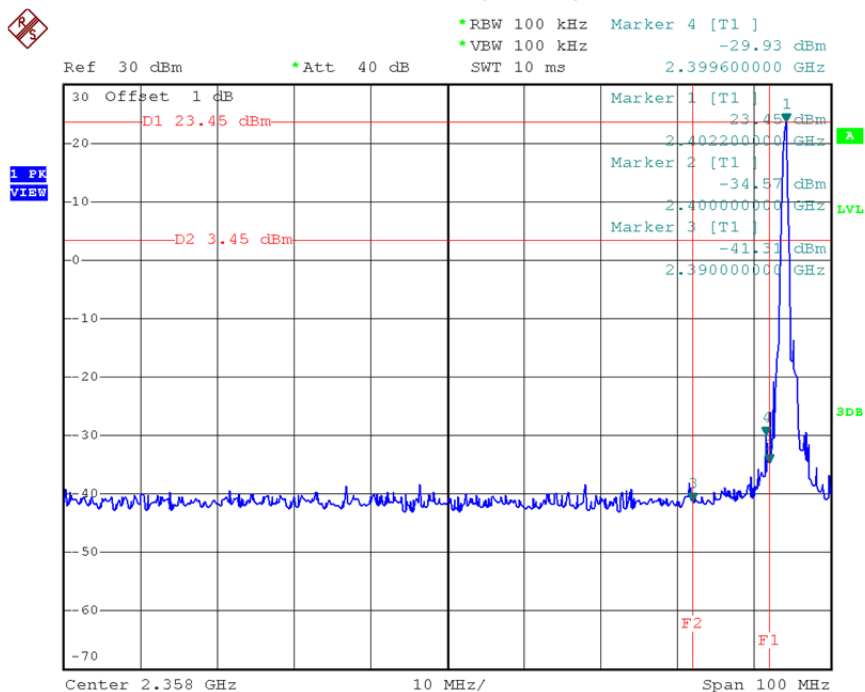
Date: 10.MAR.2015 18:43:19

CH79 (Upper)

Date: 14.APR.2015 20:23:29

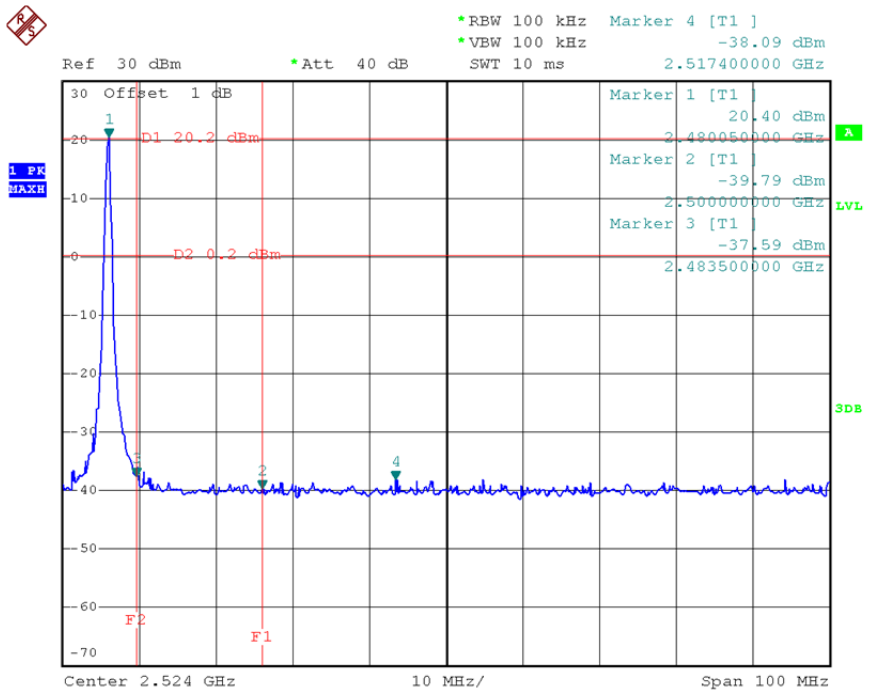## CH01 (1GHz～10th Harmonic)

CH01 (1GHz～10th Harmonic)

```
                                          *RBW 100 kHz   Marker 1 [T1 ]
                                          *VBW 100 kHz            -33.26 dBm
       Ref  30 dBm          *Att  40 dB   SWT 2.7 s       24.964740000 GHz
       30  Offset  1 dB
                                                                        B
-20
1 PK
VIEW  -10
                                                                       LVL
      0   D1 -0.49 dBm

-10

-20
                                                                       3DB
-30                                                               1
-50

-60

-70
       Center 13.265 GHz           2.647 GHz/           Span 26.47 GHz
```
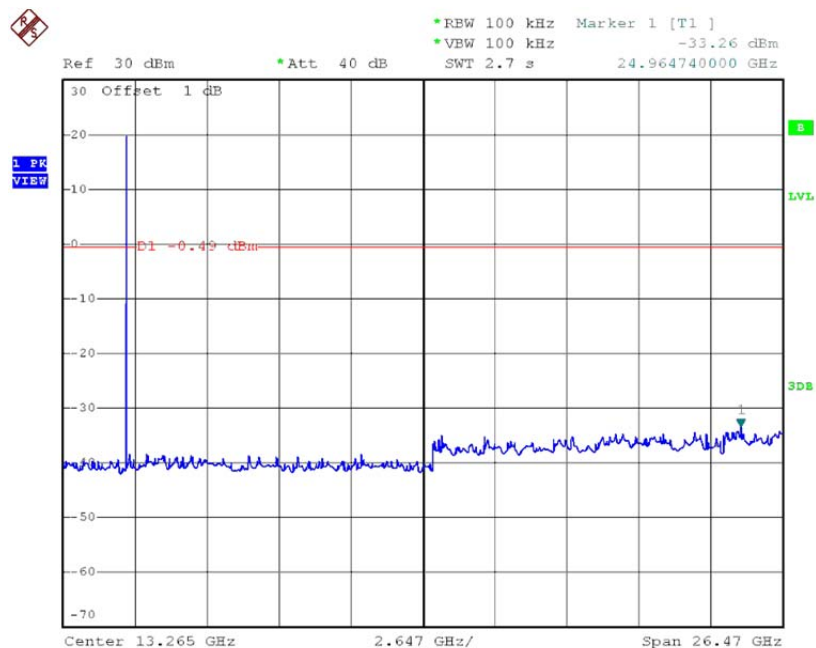
Date: 10.MAR.2015 18:42:25

CH39(1GHz～10th Harmonic)

```
                                          *RBW 100 kHz   Marker 1 [T1 ]
                                          *VBW 100 kHz            -32.74 dBm
       Ref  30 dBm          *Att  40 dB   SWT 2.7 s       25.070620000 GHz
       30  Offset  1 dB
                                                                        B
-20
1 PK
VIEW  -10
                                                                       LVL
      D1 2.8 dBm
-0

-10

-20
                                                                       3DB
-30                                                               1
-50

-60

-70
       Center 13.265 GHz           2.647 GHz/           Span 26.47 GHz
```

Date: 10.MAR.2015 18:44:09

CH79 (1GHz～10th Harmonic)

```
                              *RBW 100 kHz   Marker 1 [T1 ]
                              *VBW 100 kHz            -33.18 dBm
  Ref  30 dBm      *Att  40 dB   SWT 2.7 s      26.288240000 GHz
  30 Offset  1 dB                                              A
 -20
                                                              LVL
 -10

  0          D1 -0.41 dBm

 -10

 -20
                                                              3DB
 -30

 -40

 -50

 -60

 -70
  Start 30 MHz           2.647 GHz/        Stop 26.5 GHz
```
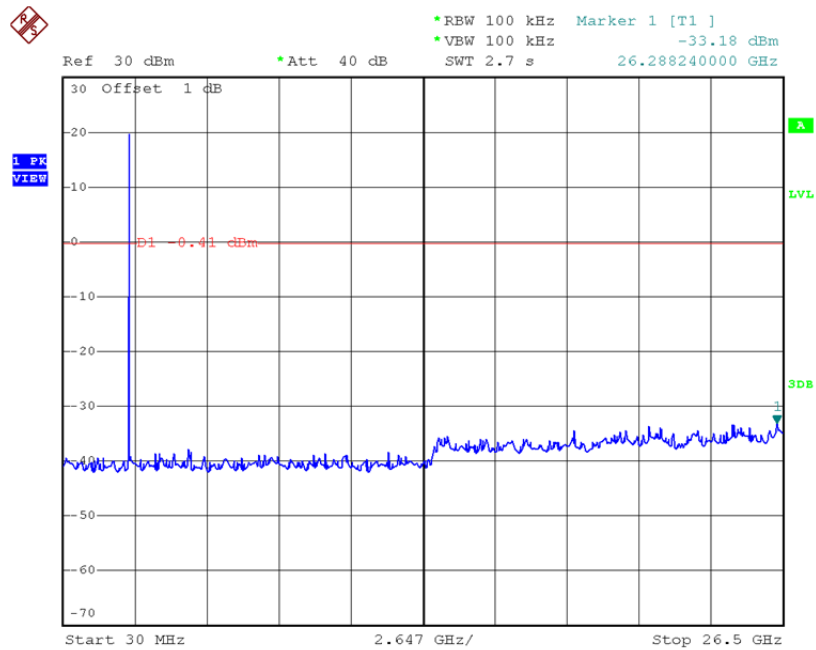
Date: 14.APR.2015 20:25:16

Chip Antenna

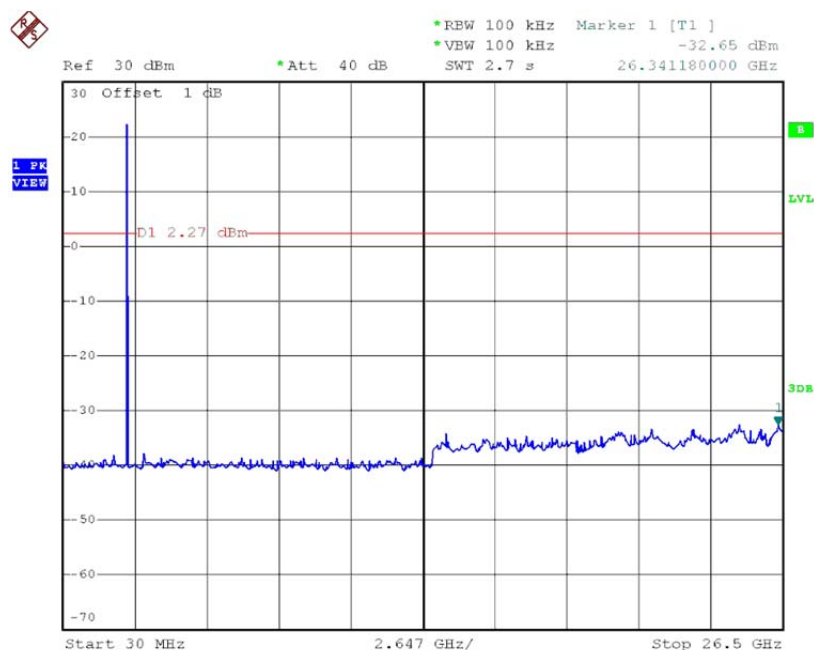## CH01(Lower)
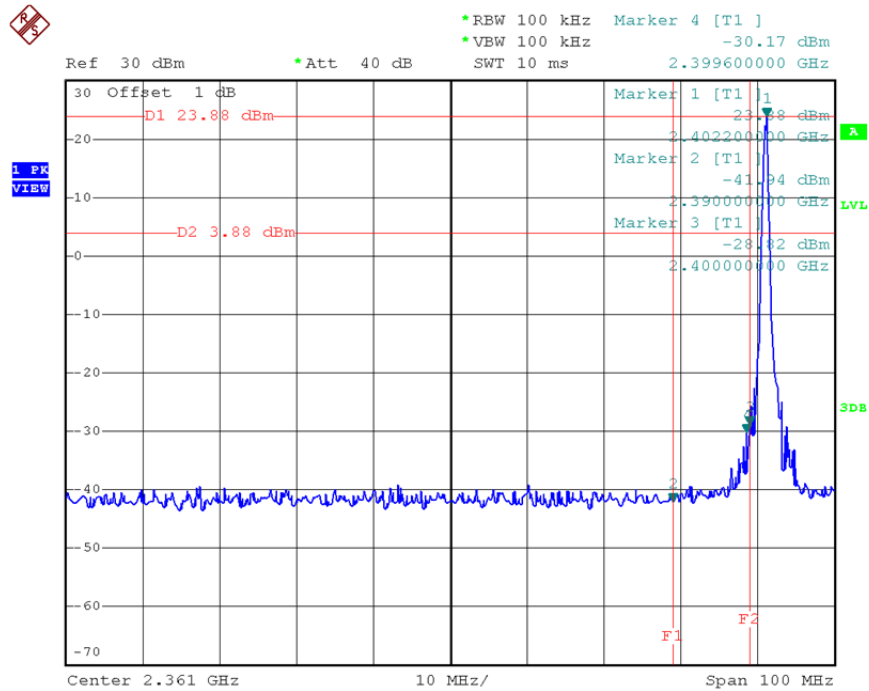
Date: 10.MAR.2015 18:25:29

CH79 (Upper)

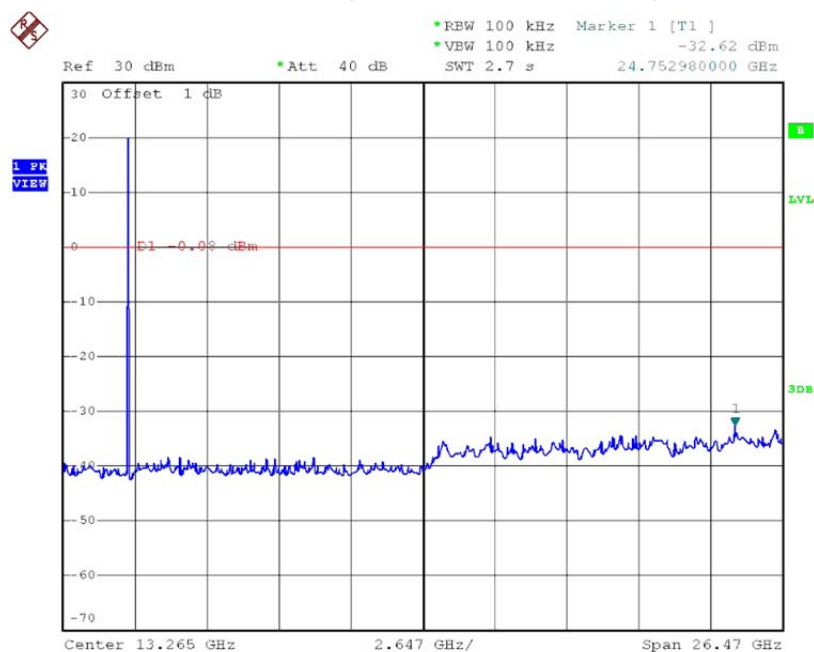

Date: 14.APR.2015 20:23:00

CH01 (1GHz～10th Harmonic)

Date: 10.MAR.2015 18:26:56

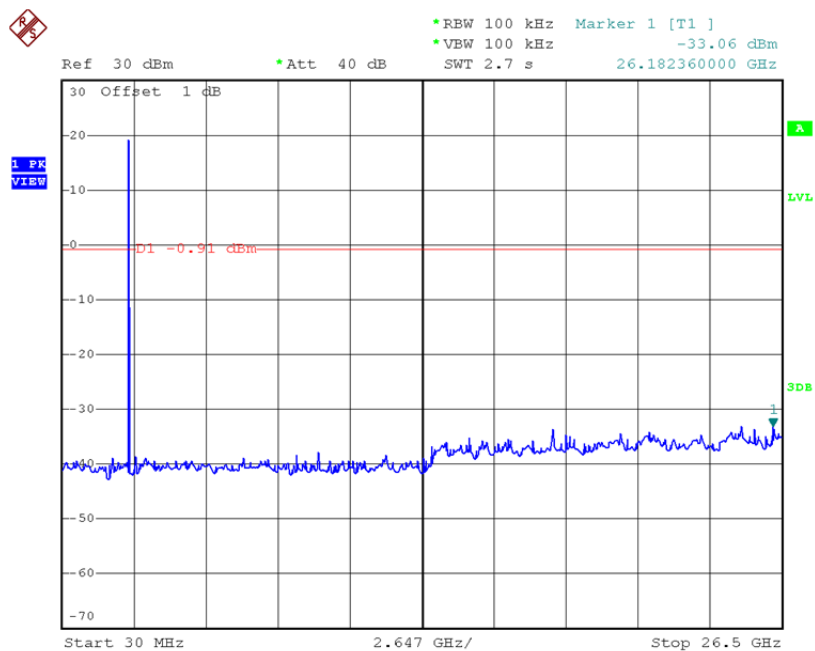## CH39(1GHz～10th Harmonic)

Date: 10.MAR.2015 18:28:07

CH79 (1GHz～10th Harmonic)

Date: 14.APR.2015 20:24:46