

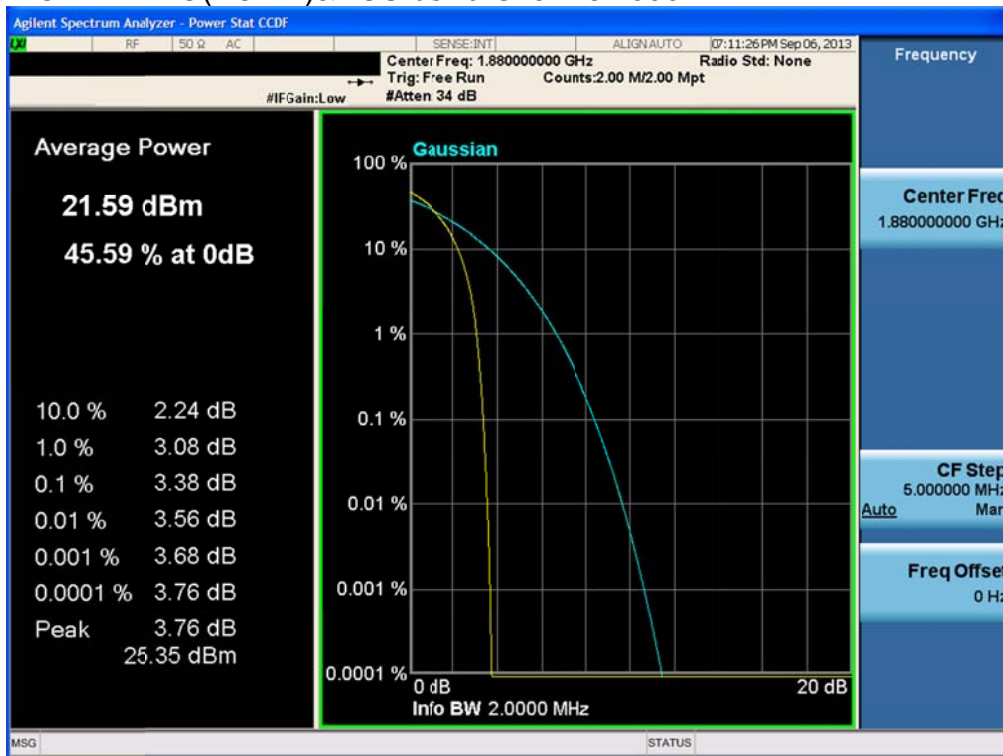
8. TEST PLOTS

8.1 Peak to Average Ratio

CDMA 1x & PCS band Channel: 600

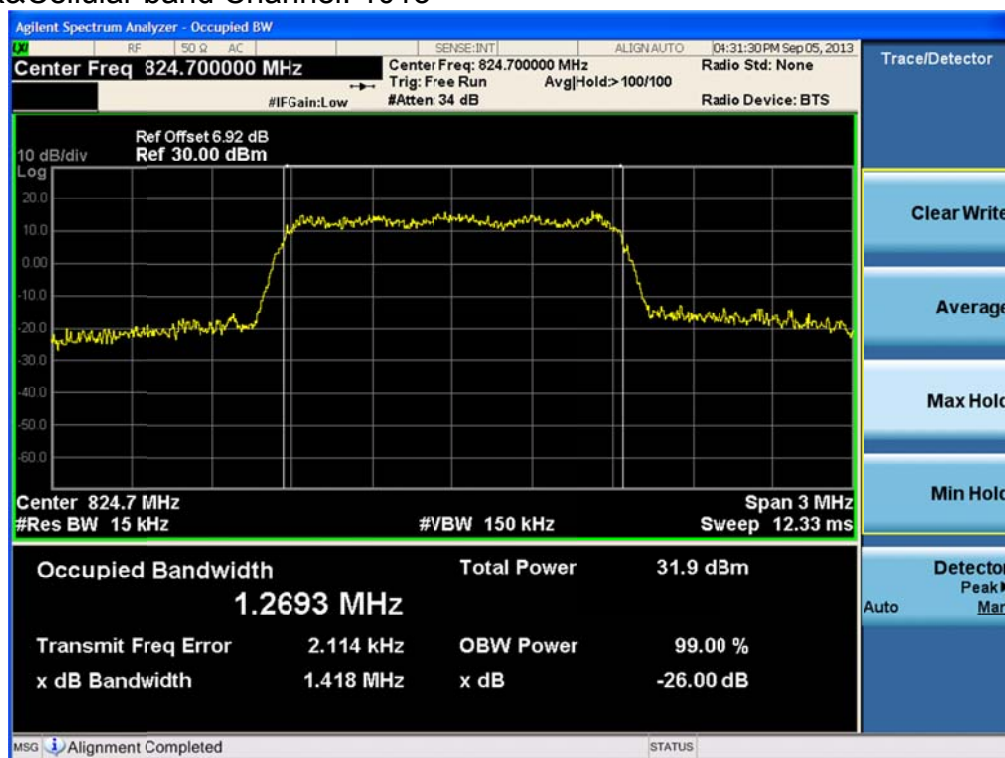


CDMA EVDO 1x EVDO(Rv. A)&PCS band Channel: 600

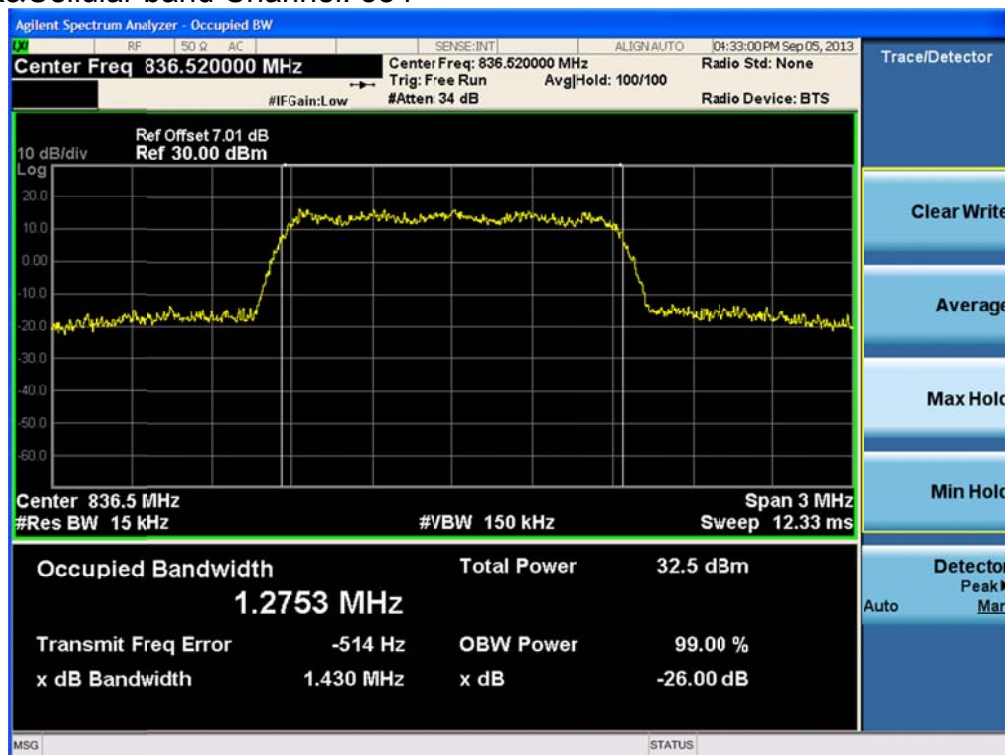


8.2 Occupied Bandwidth 99 % Bandwidth

CDMA 1x&Cellular band Channel: 1013



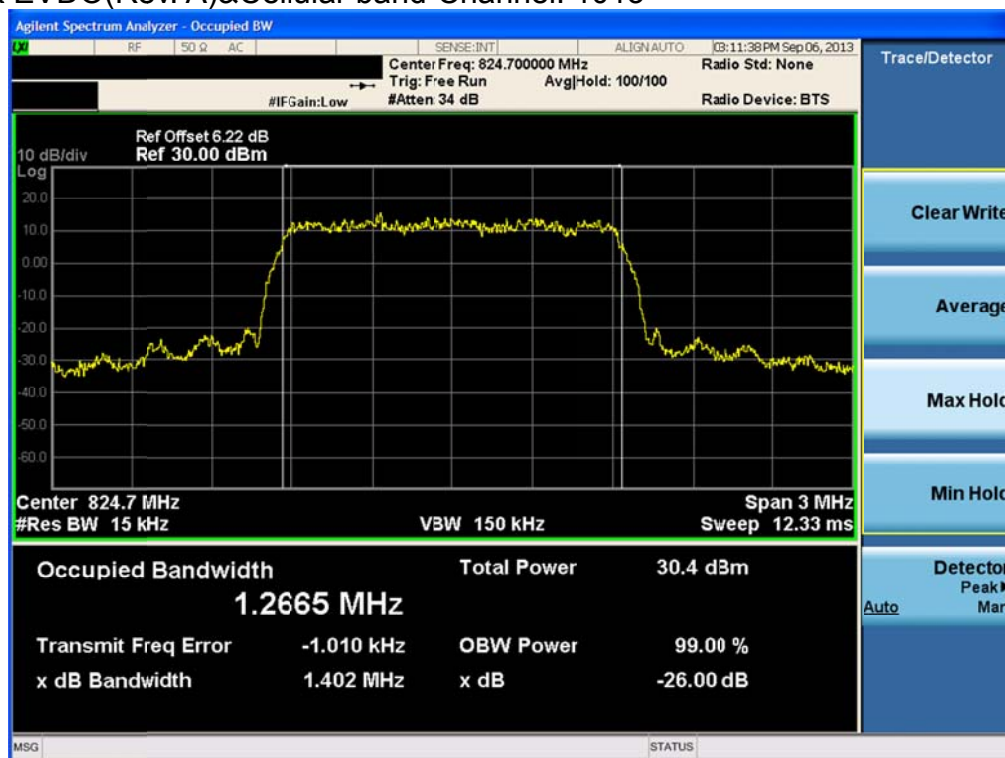
CDMA 1x&Cellular band Channel: 384



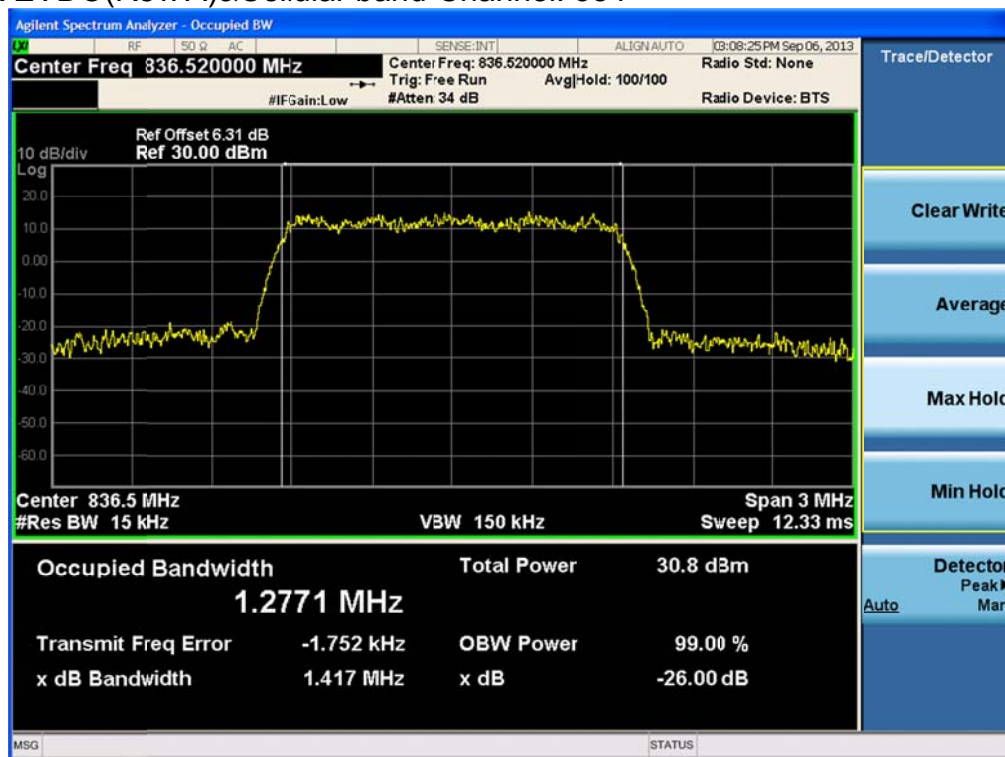
CDMA 1x&Cellular band Channel: 777



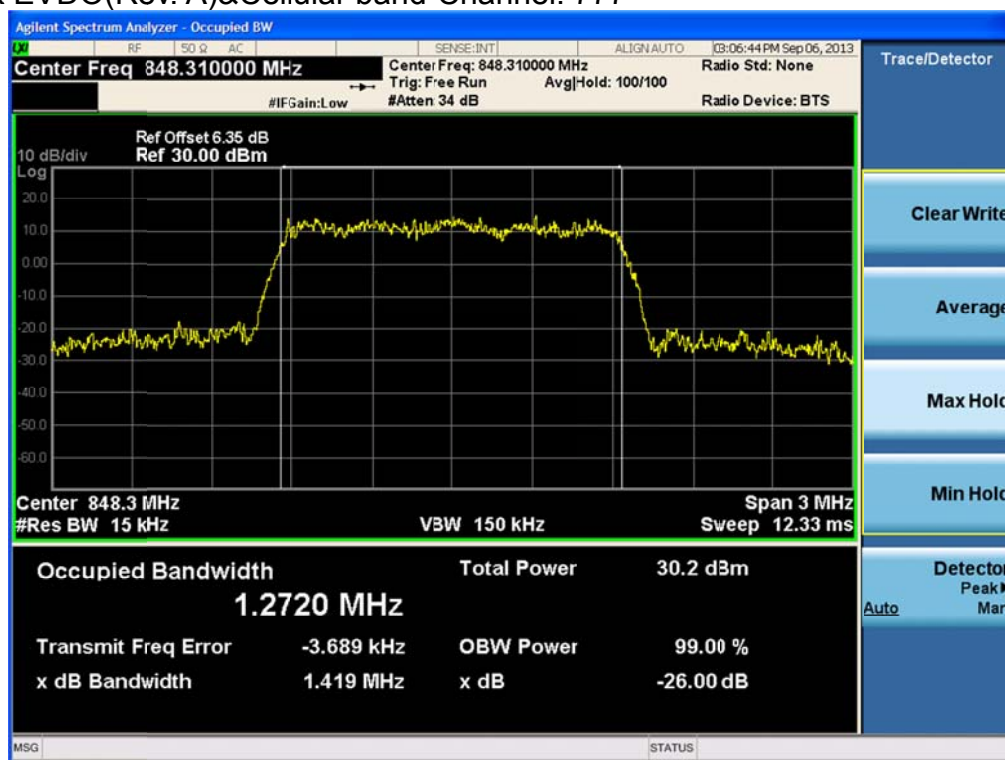
CDMA 1x EVDO(Rcv. A)&Cellular band Channel: 1013



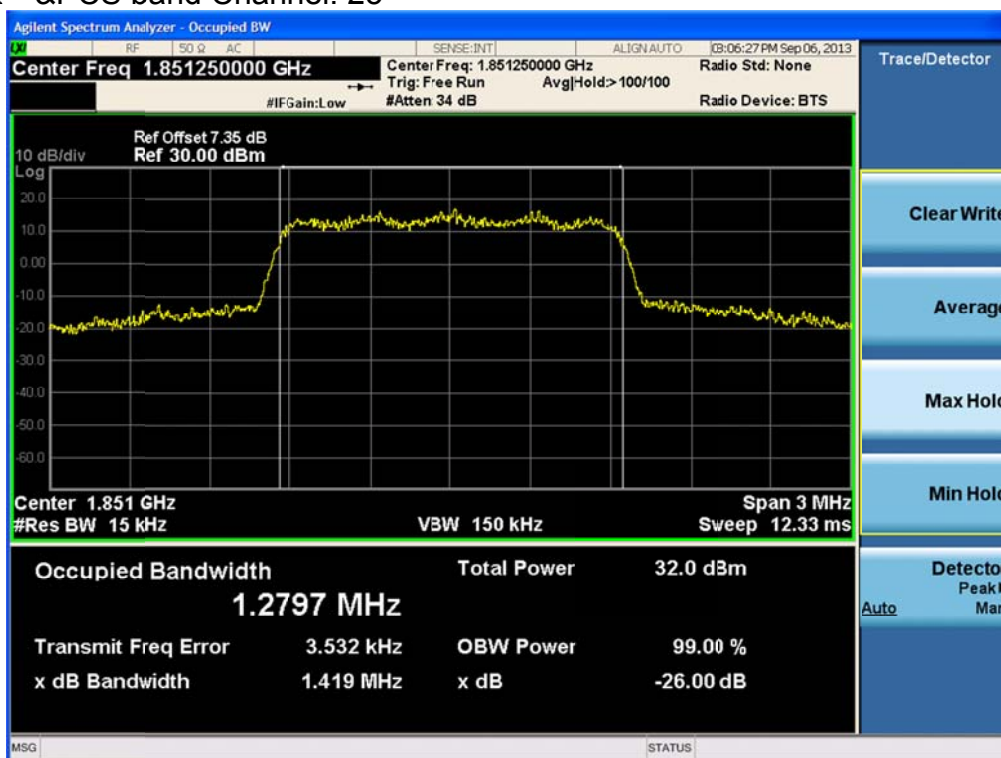
CDMA 1x EVDO(Rcv. A)&Cellular band Channel: 384



CDMA 1x EVDO(Rv. A)&Cellular band Channel: 777



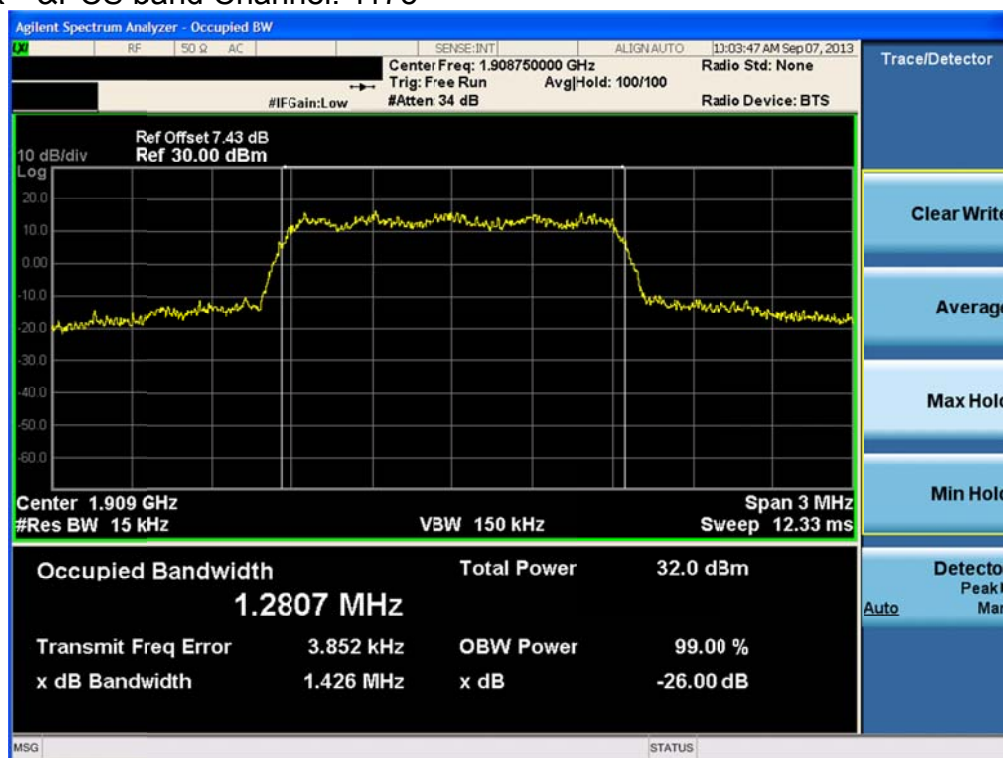
CDMA 1x & PCS band Channel: 25



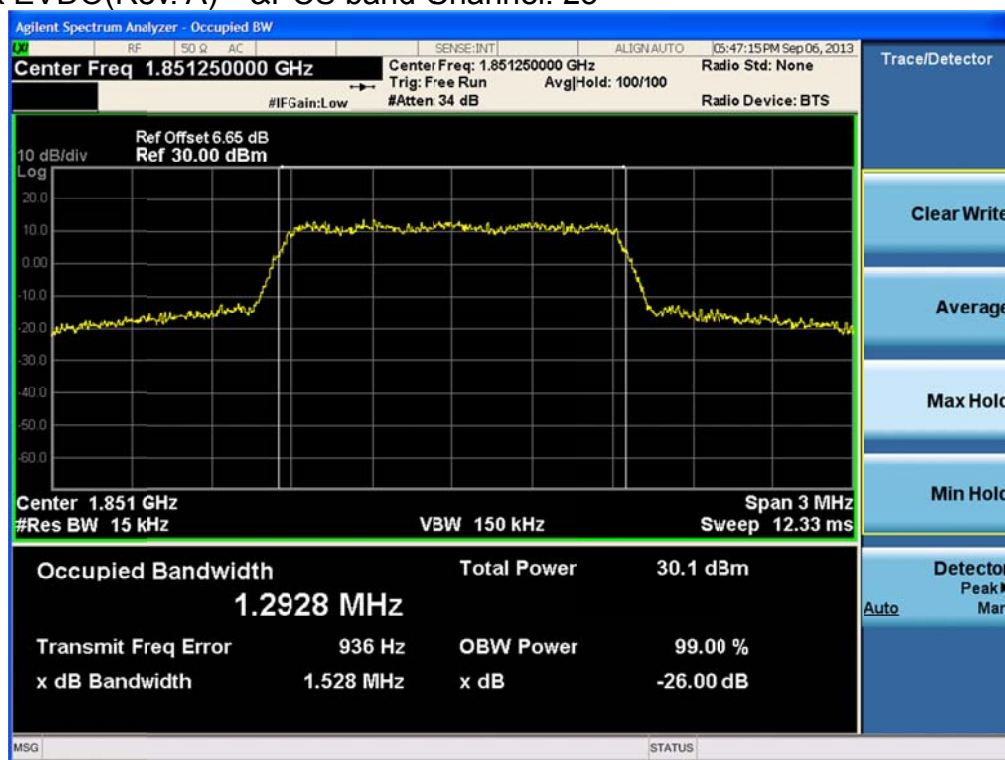
CDMA 1x & PCS band Channel: 600



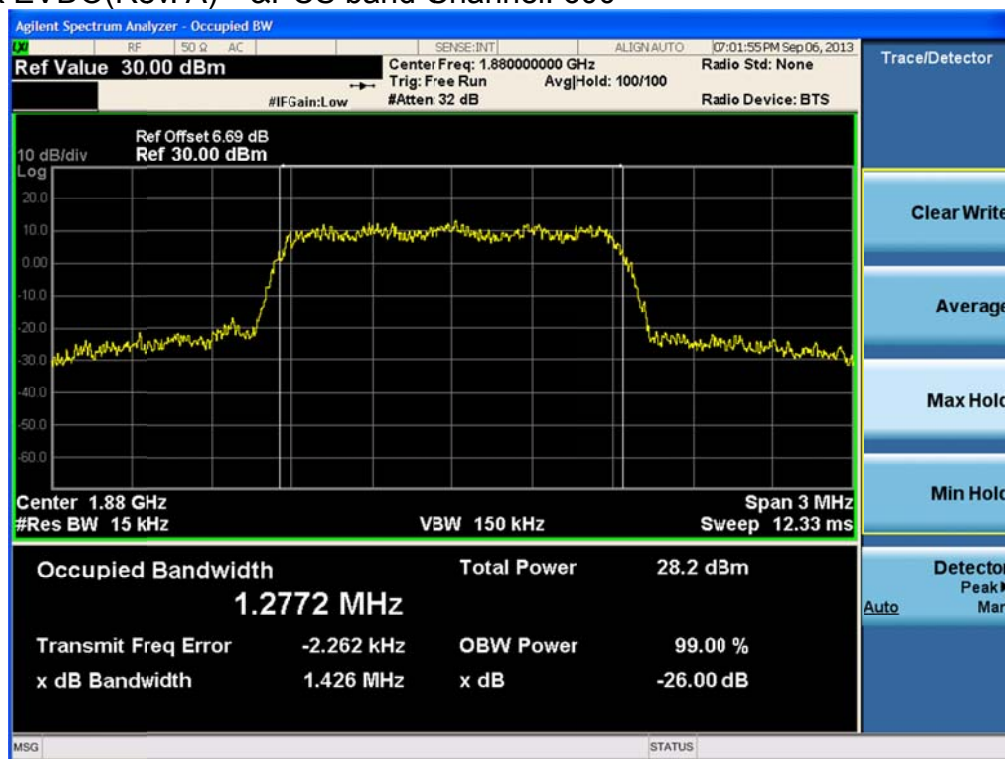
CDMA 1x & PCS band Channel: 1175



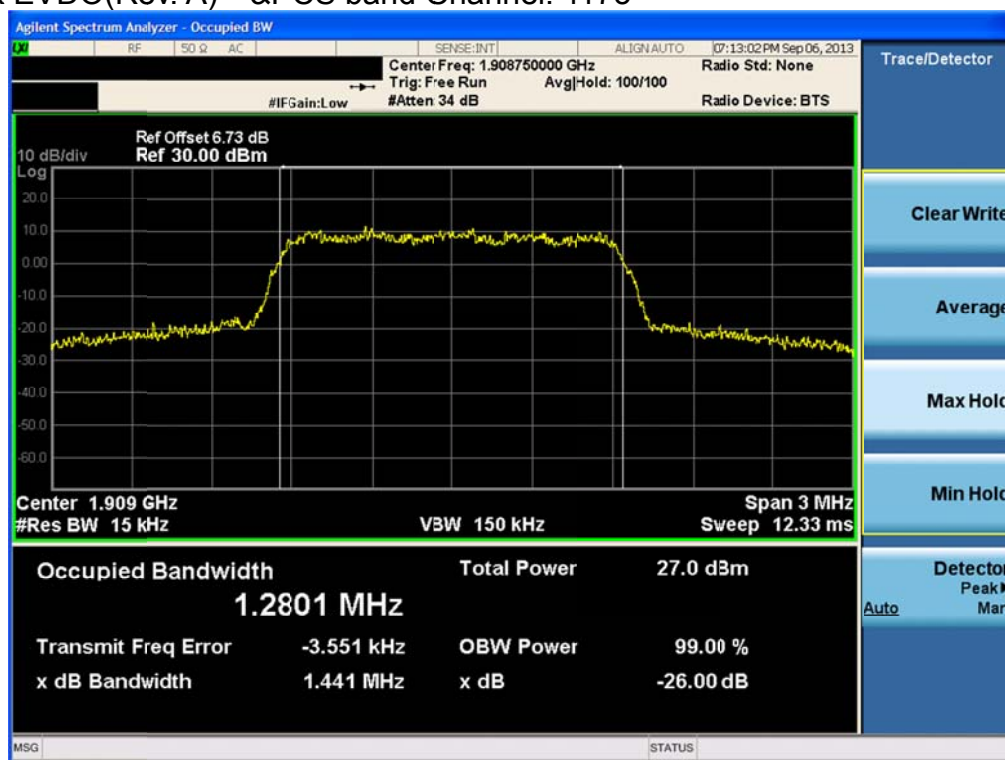
CDMA 1x EVDO(R Rev. A) & PCS band Channel: 25



CDMA 1x EVDO(R Rev. A) & PCS band Channel: 600

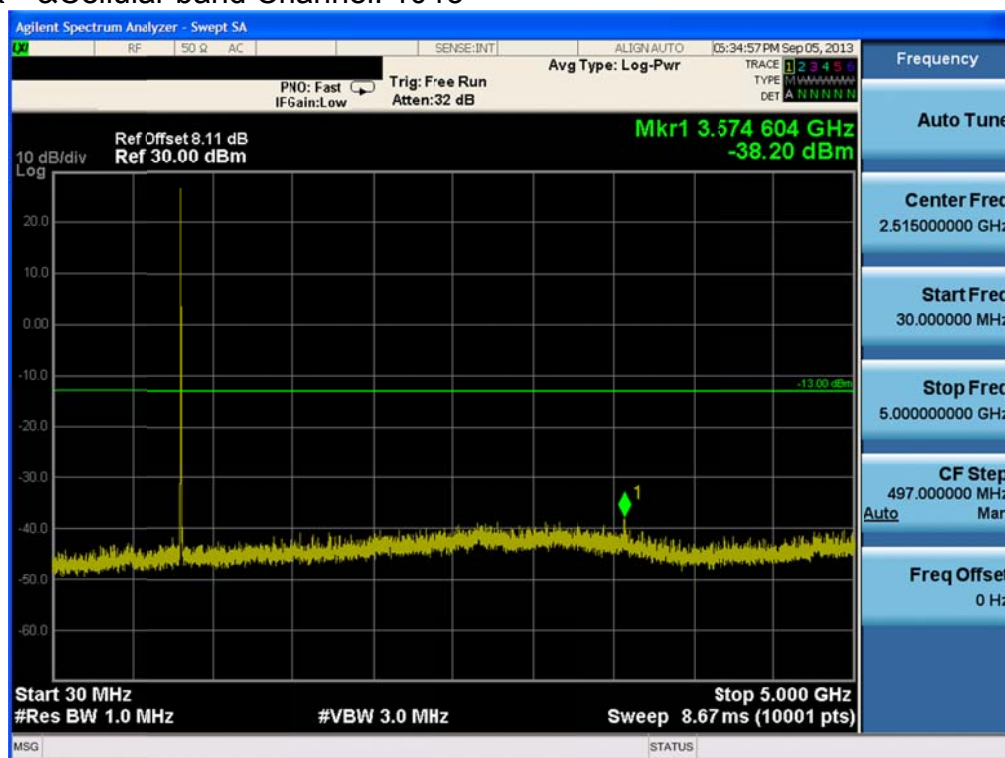


CDMA 1x EVDO(Rcv. A) &PCS band Channel: 1175

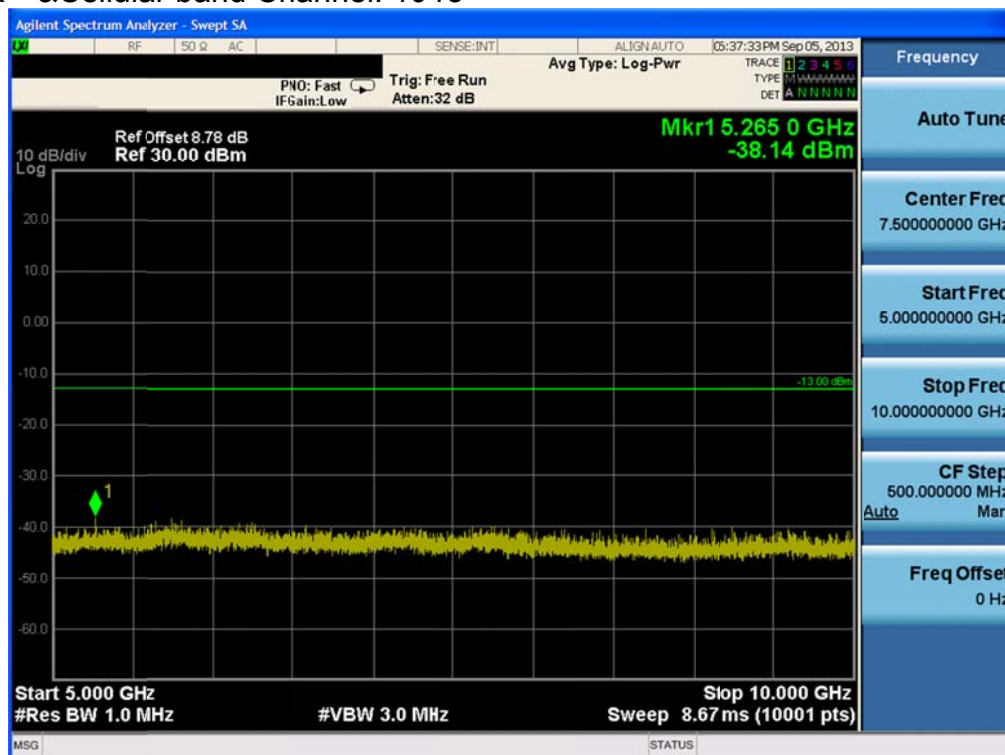


8.3 Spurious Emissions at Antenna Terminal

CDMA 1x & Cellular band Channel: 1013



CDMA 1x & Cellular band Channel: 1013



Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:33:49PM Sep 05, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IFGain:Low Atten:32 dB

TRACE 1 2 3 4 5
TYPE M M M M M M M M
DET A N N N N N

Ref Offset 8.11 dB
Ref 30.00 dBm

Mkr1 2.411 624 GHz
-29.68 dBm

10 dB/div
Log

20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

-13.00 dBm

Start 30 MHz Stop 5.000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.67 ms (10001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.515000000 GHz

Start Freq
30.000000 MHz

Stop Freq
5.000000000 GHz

CF Step
497.000000 MHz
Auto Mar

Freq Offset
0 Hz

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN AUTO 05:36:56 PM Sep 05, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low

Trig: Free Run Atten: 32 dB

TRACE 1 2 3 4 5

TYPE R1 R2 R3 R4 R5

DET A T1 N1 N2 N3

Ref Offset 8.78 dB

Ref 30.00 dBm

Mkr1 5.988 0 GHz -38.89 dBm

10 dB/div Log

Start 5.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.67 ms (10001 pts)

Stop 10.000 GHz

Center Freq 7.500000000 GHz

Start Freq 5.000000000 GHz

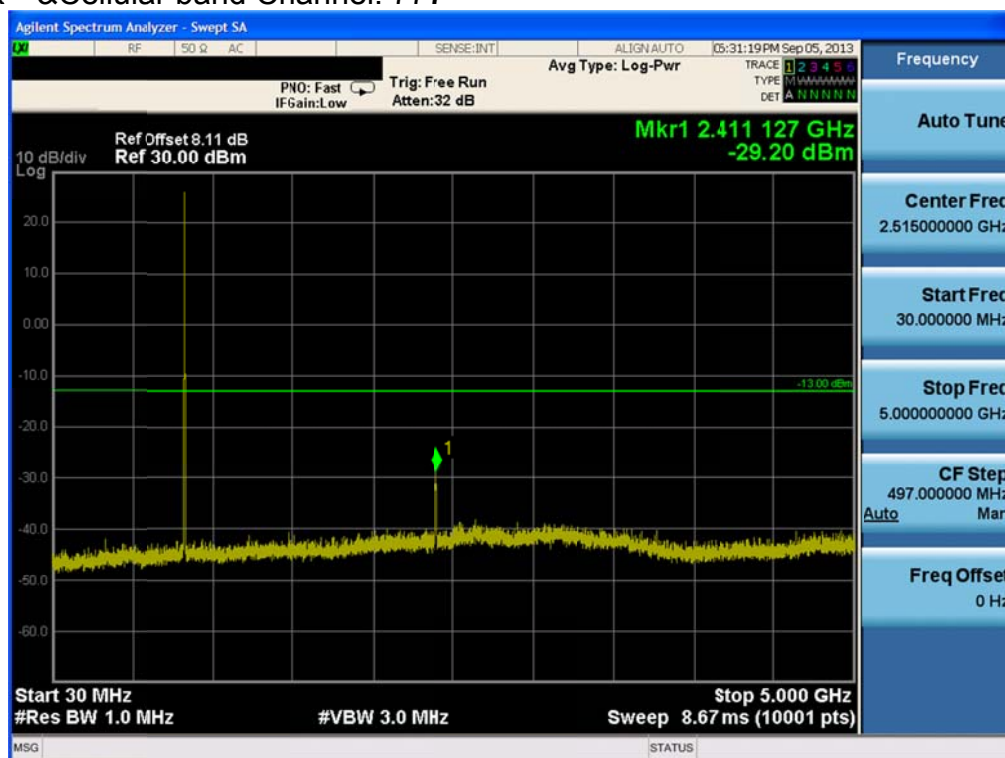
Stop Freq 10.000000000 GHz

CF Step 500.000000 MHz

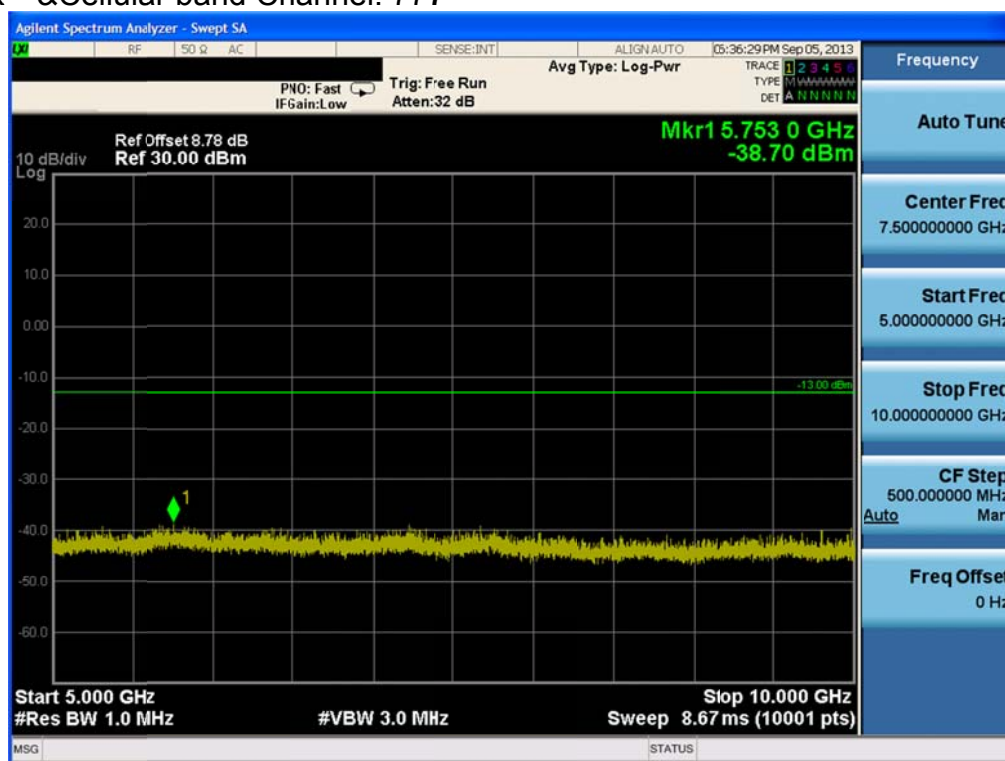
Auto Mar

Freq Offset 0 Hz

CDMA 1x & Cellular band Channel: 777



CDMA 1x & Cellular band Channel: 777



The screenshot displays the Agilent Spectrum Analyzer interface. The main display shows a spectrum plot with a yellow trace. A sharp peak is visible at 2.676 GHz, labeled 'Mkr1 2.676 525 GHz -37.05 dBm'. The plot has a vertical scale of 10 dB/div and a horizontal scale of 3.0 MHz. The center frequency is 2.515 GHz. The resolution bandwidth (RBW) is 1.0 MHz, and the video bandwidth (VBW) is 3.0 MHz. The sweep time is 8.67 ms. The reference level is 30.00 dBm, and the reference offset is 7.41 dB. The trace is set to 'Log-Pwr' and 'Free Run' mode. The display is in 'dBm' units. The background is black, and the grid is white. The top status bar shows 'Agilent Spectrum Analyzer - Swept SA' and 'USB: 19PM Sep 06, 2013'. The bottom status bar shows 'MSG' and 'STATUS'.

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:02:40 PM Sep 06, 2013

PNO: Fast IF Gain: Low Trig: Free Run Atten: 32 dB Avg Type: Log-Pwr

TRACE 1 2 3 4 5 TYPE M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 DET A N N N N N

Ref Offset 8.08 dB Ref 30.00 dBm Mkr1 5.753 5 GHz -39.43 dBm

10 dB/div Log

-13.00 dBm

Start 5.000 GHz Stop 10.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.67 ms (10001 pts)

MSG STATUS

Frequency

Auto Tune

Center Frequency 7.500000000 GHz

Start Frequency 5.000000000 GHz

Stop Frequency 10.000000000 GHz

CF Step 500.000000 MHz

Auto Mar

Freq Offset 0 Hz

[illegible]

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN AUTO 05:02:06 PM Sep 06, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 32 dB

TRACE 1 2 3 4 5
TYPE R1 R2 R3 R4 R5
DET A N N N N N

Ref Offset 8.08 dB
Ref 30.00 dBm

Mkr1 5.766 0 GHz
-38.91 dBm

10 dB/div
Log

Start 5.000 GHz Stop 10.000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.67 ms (10001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
7.500000000 GHz

Start Freq
5.000000000 GHz

Stop Freq
10.000000000 GHz

CF Step
500.000000 MHz
Auto Mar

Freq Offset
0 Hz

The screenshot displays the Agilent Spectrum Analyzer interface. The main display shows a spectrum plot with a yellow signal trace. A green horizontal line indicates the noise floor at -13.00 dBm. A yellow peak is visible at 2.449 GHz, marked with a green diamond and the number 1. The plot is set to a resolution bandwidth (RBW) of 3.0 MHz and a video bandwidth (VBW) of 3.0 MHz. The frequency range is from 30 MHz to 5.000 GHz. The power level is -37.52 dBm. The interface includes various control panels on the right for Frequency, Auto Tune, Center Frequency, Start Frequency, Stop Frequency, CF Step, and Freq Offset. The top status bar shows the date and time as 08:55:11 PM Sep 06, 2013.

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN:AUTO 08:55:11 PM Sep 06, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 34 dB

TRACE 1 2 3 4 5 6
TYPE M1 M2 M3 M4 M5 M6
DET A N N N N N

Ref Offset 7.41 dB
Ref 30.00 dBm

Mkr1 2.449 893 GHz
-37.52 dBm

10 dB/div
Log

20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

-13.00 dBm

Start 30 MHz Stop 5.000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.67 ms (10001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.515000000 GHz

Start Freq
30.000000 MHz

Stop Freq
5.000000000 GHz

CF Step
497.000000 MHz
Auto Mar

Freq Offset
0 Hz

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN: AUTO 08:56:39 PM Sep 06, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 32 dB

TRACE 1 2 3 4 5 6
TYPE M M M M M M M M
DET A N N N N N

Ref Offset 8.08 dB
Ref 30.00 dBm

Mkr1 7.636 0 GHz
-39.12 dBm

10 dB/div
Log

20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

-33.00 dBm

Start 5.000 GHz Stop 10.000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.67 ms (10001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
7.500000000 GHz

Start Freq
5.000000000 GHz

Stop Freq
10.000000000 GHz

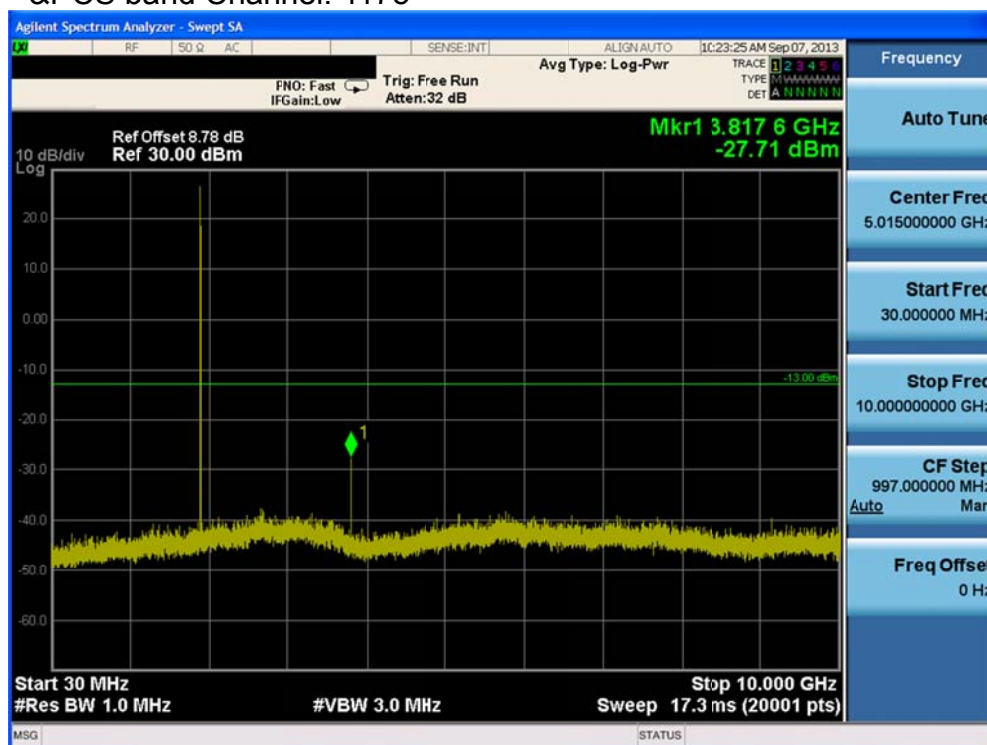
CF Step
500.000000 MHz
Auto Mar

Freq Offset
0 Hz

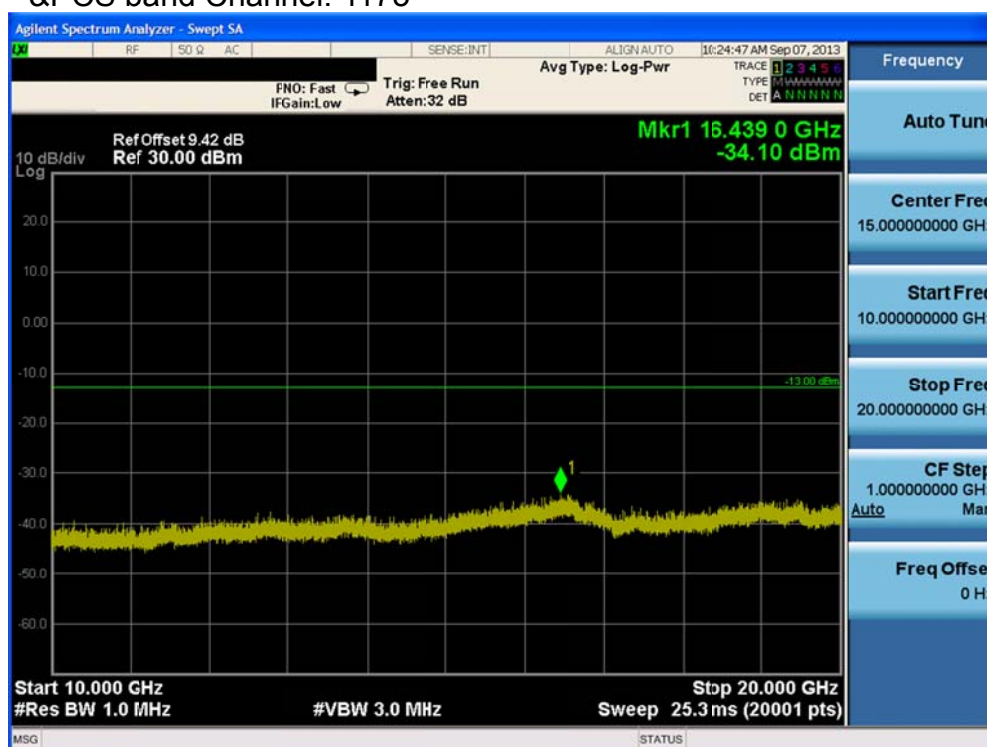
The screenshot displays the Agilent Spectrum Analyzer - Swept SA interface. The main plot area shows a spectrum with a yellow trace. A significant peak is labeled 'Mkr1 3.760 8 GHz' and '-31.04 dBm'. The y-axis is labeled '10 dB/div Log' and ranges from -60.0 to 20.0. The x-axis is labeled 'Start 30 MHz' and 'Sweep 10.000 GHz'. Other parameters visible include '#Res BW 1.0 MHz', '#VBW 3.0 MHz', and 'Sweep 17.3ms (20001 pts)'. The top status bar indicates 'Agilent Spectrum Analyzer - Swept SA', 'RF 50 Ω AC', 'SENSE:INT', 'ALIGN:AUTO', 'XB:21:31PM Sep 06, 2013', 'Avg Type: Log-Pwr', 'PNO: Fast IFGain:Low', 'Trig: Free Run Atten:32 dB', 'TRACE 1 2 3 4 5', 'TYPE B1111111111111111', and 'DET A NNNNNN'. On the right side, there are controls for 'Frequency', 'Auto Tune', 'Center Freq 5.015000000 GHz', 'Start Freq 30.000000 MHz', 'Stop Freq 10.000000000 GHz', 'CF Step 997.000000 MHz', and 'Freq Offset 0 Hz'.

The screenshot displays an Agilent Spectrum Analyzer interface. The top status bar shows "Agilent Spectrum Analyzer - Swept SA", "SENSE:INT", "ALIGN AUTO", and the date/time "08:19:15PM Sep 06, 2013". Below this, control settings include "PNO: Fast", "IF Gain: Low", "Trig: Free Run", "Atten: 32 dB", "Avg Type: Log-Pwr", and "TRACE 1 2 3 4 5". The main display area shows a spectrum plot with a yellow trace representing the signal. A green horizontal line indicates the noise floor at -13.00 dBm. A green diamond marker labeled "Mkr1" is positioned at 16.376 GHz and -33.74 dBm. The plot axes are labeled "10 dB/div" and "Log". The bottom status bar provides sweep parameters: "Start 10.000 GHz", "#Res BW 1.0 MHz", "#VBW 3.0 MHz", "Stop 20.000 GHz", and "Sweep 25.3ms (20001 pts)". On the right side, there is a vertical menu with options like "Frequency", "Auto Tune", "Center Freq", "Start Freq", "Stop Freq", "CF Step", "Auto", "Freq Offset", and "0 Hz".

CDMA 1x & PCS band Channel: 1175



CDMA 1x & PCS band Channel: 1175



Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:49:11PM Sep 06, 2013

PNO: Fast IF Gain: Low Trig: Free Run Atten: 32 dB Avg Type: Log-Pwr

TRACE 1 2 3 4 5
TYPE M N N N N N N
DET A N N N N N

Ref Offset 8.08 dB
Ref 30.00 dBm

Mkr1 3.702 4 GHz
-37.80 dBm

10 dB/div
Log

20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

Start 30 MHz
#Res BW 1.0 MHz

#VBW 3.0 MHz

Sweep 17.3 ms (20001 pts)

Slop 10.000 GHz

Frequency

Auto Tune

Center Freq
5.015000000 GHz

Start Freq
30.000000 MHz

Stop Freq
10.000000000 GHz

CF Step
997.000000 MHz
[Auto](#) Man

Freq Offset
0 Hz

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:51:30 PM Sep 06, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 32 dB

TRACE 0 2 3 4 5
TYPE: M M M M M M M M
DET: A T U N N N N N

Ref Offset 8.72 dB
Ref 30.00 dBm

Mkr1 19.474 0 GHz
-34.49 dBm

10 dB/div
Log

20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

-13.00 dBm

1

Start 10.000 GHz Slop 20.000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 25.3 ms (20001 pts)

MSG STATUS

Frequency

Auto Tune

Center Frequency
15.000000000 GHz

Start Frequency
10.000000000 GHz

Stop Frequency
20.000000000 GHz

CF Step
1.000000000 GHz

Freq Offset
0 Hz

Auto

Man

1

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN:AUTO 07:04:07 PM Sep 06, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 32 dB

TRACE 1 2 3 4 5
TYPE 1
DET A N N N N N

Ref Offset: 8.08 dB
Ref 30.00 dBm

Mkr1 2.573 8 GHz
-38.62 dBm

10 dB/div
Log

20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

-13.00 dBm

Start 30 MHz Stop 10.000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 17.3 ms (20001 pts)

MSG STATUS

Frequency

Auto Tune

Center Frequency
5.015000000 GHz

Start Frequency
30.000000 MHz

Stop Frequency
10.000000000 GHz

CF Step
997.000000 MHz
Auto Mar

Freq Offset
0 Hz

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN AUTO 07:05:13PM Sep 06, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 32 dB

TRACE 1 2 3 4 5 TYPE R1 R2 R3 R4 R5 DET A N N N N N

Ref Offset 8.72 dB Ref 30.00 dBm

Mkr1 16.6215 GHz -34.35 dBm

10 dB/div Log

Start 10.000 GHz Stop 20.000 GHz

#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 25.3ms (20001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq 15.000000000 GHz

Start Freq 10.000000000 GHz

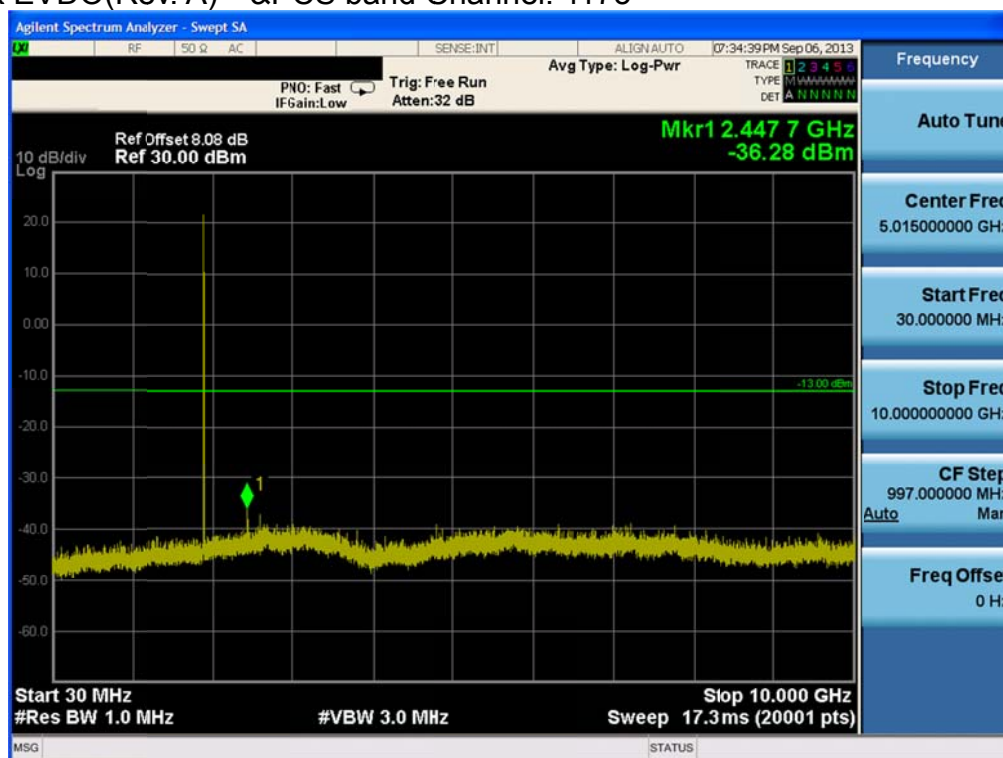
Stop Freq 20.000000000 GHz

CF Step 1.000000000 GHz

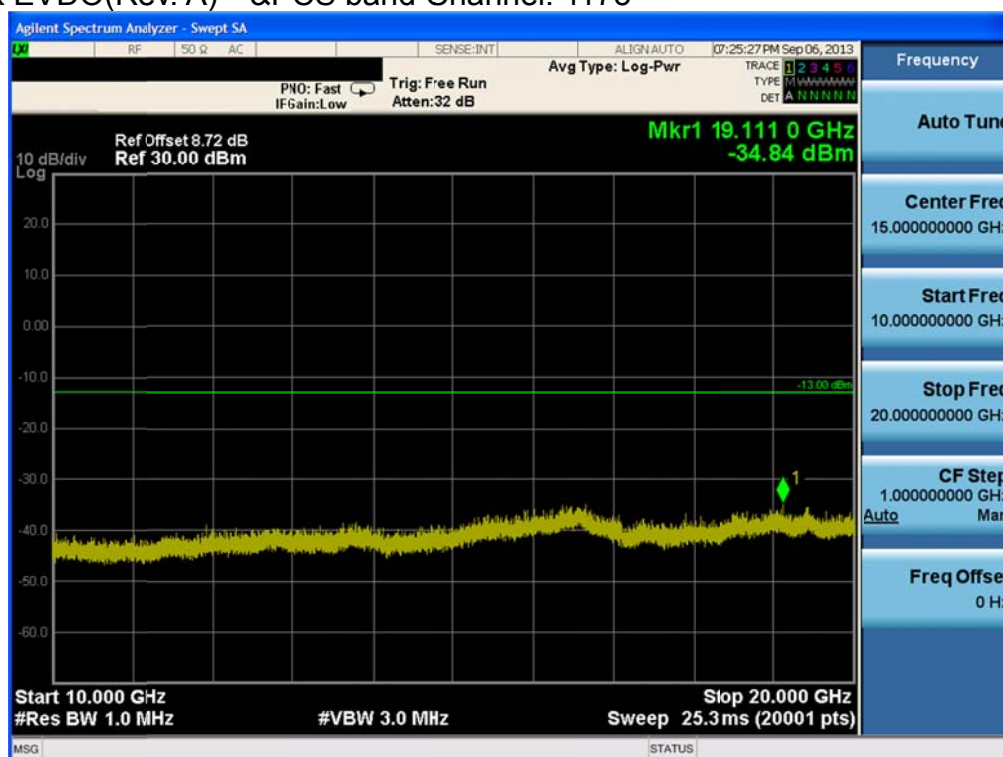
Auto Mar

Freq Offset 0 Hz

CDMA 1x EVDO(Rcv. A) &PCS band Channel: 1175



CDMA 1x EVDO(Rcv. A) &PCS band Channel: 1175



8.4 Band Edge

CDMA 1x & Cellular band Channel: 1013



CDMA 1x & Cellular band Channel: 1013



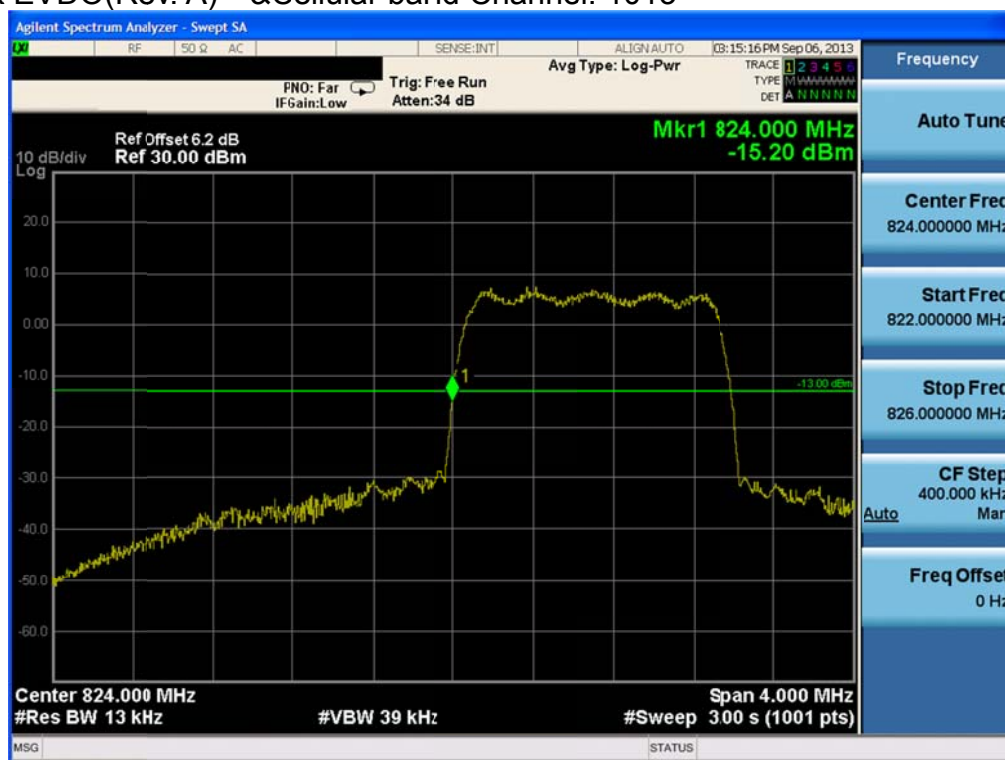
CDMA 1x & Cellular band Channel: 777



CDMA 1x & Cellular band Channel: 777



CDMA 1x EVDO(R Rev. A) & Cellular band Channel: 1013



CDMA 1x EVDO(R Rev. A) & Cellular band Channel: 1013



CDMA 1x EVDO(Rcv. A) & Cellular band Channel: 777



CDMA 1x EVDO(Rcv. A) & Cellular band Channel: 777



CDMA 1x & PCS band Channel: 25



CDMA 1x & PCS band Channel: 25



Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN:AUTO 11:16:37 AM Sep 07, 2013

PNO: Far Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 34 dB

TRACE 1 2 3 4 5 6
TYPE M I M M M M M M
DET A N N N N N

Ref Offset 7.55 dB
Ref 30.00 dBm

Mkr1 1.910 024 GHz
-18.71 dBm

10 dB/div
Log

Center 1.910000 GHz
#Res BW 13 kHz
#VBW 39 kHz
Span 4.000 MHz
#Sweep 300 s (1001 pts)

Frequency

Auto Tune

Center Freq
1.910000000 GHz

Start Freq
1.908000000 GHz

Stop Freq
1.912000000 GHz

CF Step
400.000 kHz
Mar

Auto

Freq Offset
0 Hz

MSG STATUS

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN: AUTO 11:18:38 AM Sep 07, 2013

PNO: Fast Trig: Free Run
IF Gain: Low Atten: 34 dB

Avg Type: Log-Pwr

TRACE 1 2 3 4 5
TYPE M M M M M M M M
DET A N N N N N

Ref Offset 7.55 dB
Ref 30.00 dBm

Mkr1 1.911 507 0 GHz
-15.22 dBm

10 dB/div
Log

20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

-13.00 dBm

Start 1.911500 GHz
#Res BW 1.0 MHz

Stop 1.915000 GHz
#Sweep 300 s (1001 pts)

#VBW 3.0 MHz

Frequency

Auto Tune

Center Freq
1.913250000 GHz

Start Freq
1.911500000 GHz

Stop Freq
1.915000000 GHz

CF Step
350.000 kHz

Auto Mar

Freq Offset
0 Hz

CDMA 1x EDVO(Rev. A) &PCS band Channel: 25



CDMA 1x EDVO(Rev. A) &PCS band Channel: 25



Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN: AUTO 07:20:59 PM Sep 06, 2013

PNO: Far Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 34 dB

TRACE 1 2 3 4 5 6
TYPE 1 1 1 1 1 1 1
DET A N N N N N

Ref Offset 6.85 dB
Ref 30.00 dBm

Mkr1 1.910 028 GHz
-36.27 dBm

10 dB/div
Log

-12.88 dBm

Center 1.910000 GHz Span 4.000 MHz
#Res BW 13 kHz #VBW 39 kHz #Sweep 300 s (1001 pts)

Agilent Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN AUTO 07:21:46 PM Sep 06, 2013

PNO: Fast Trig: Free Run Avg Type: Log-Pwr

IF Gain: Low Atten: 34 dB

TRACE 1 2 3 4 5
TYPE R F H A M M M M M M
DET A N N N N N N

Ref Offset 6.85 dB
Ref 30.00 dBm

Mkr1 1.911 000 GHz
-25.71 dBm

10 dB/div
Log

Center 1.913000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
#Sweep 300 s (1001 pts)

Span 4.000 MHz

Start Freq 1.91000000 GHz
Stop Freq 1.91500000 GHz
CF Step 400.000 kHz
Auto Mar
Freq Offset 0 Hz