

Mobile Communications, Inc

FCC ID: S4RBRB8191, IC: 3585A-BRB8191

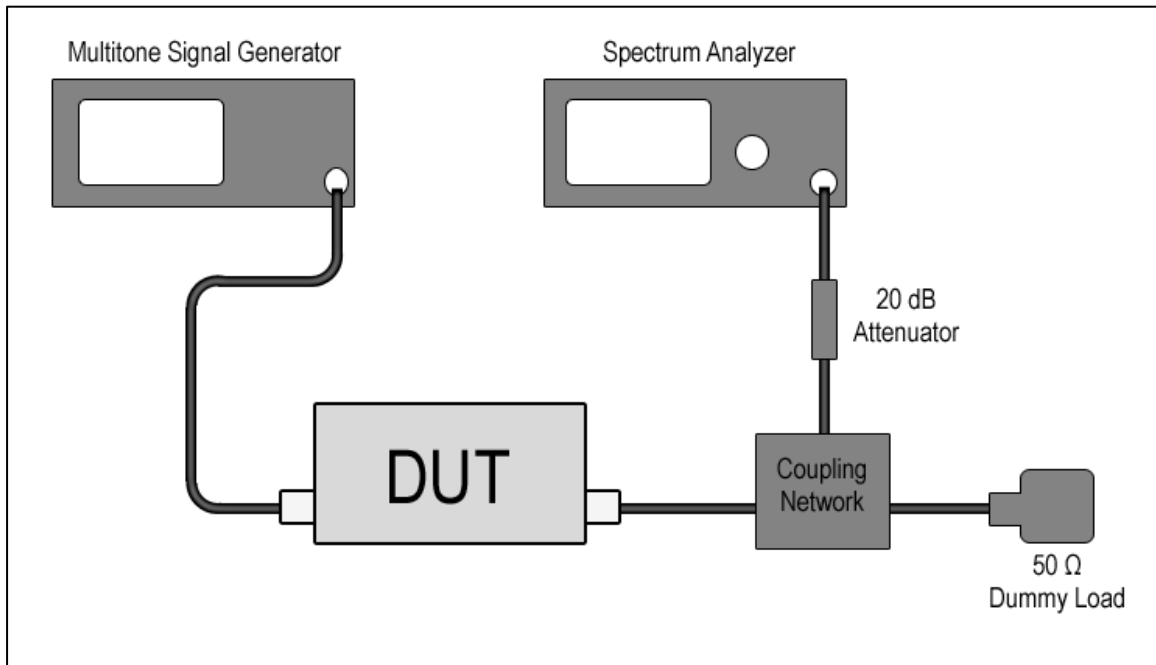
FCC and IC Conducted testing data & plots

TABLE OF CONTENTS

1	CONDUCTED TEST SETUP BLOCK DIAGRAM.....	3
2	CERTIFICATE OF CALIBRATION	4
3	FCC §2.1046, §22.913(A) & §24.232 - RF OUTPUT POWER.....	6
4	FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH.....	12
5	FCC §2.1051, §22.917 & §24.238(A) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS.....	32
6	FCC §22.917 & §24.238 - BAND EDGE.....	46
7	IC RSS – 131 § 3.2 (D) & §6.1 – AMPLIFIER GAIN AND BANDWIDTH.....	62
8	IC RSS – 131 §6.2 – MEAN OUTPUT POWER.....	64

1 Conducted Test Setup Block Diagram

Conducted Test Setup Block Diagram



2 Certificate of Calibration



Sinclair Technologies Inc.
 85 Mary Street, Aurora, Ontario, L4G 6X5
 Tel: 905-727-0165; 1-800-263 3275
 Fax: 905-727-0861; 1-800-668-7416
 www.sinctech.com

Certificate Of Calibration

Model No.: Agilent E4440A
Serial No.: MY41000310
ID No.: 9348
Description: Spectrum Analyser
Customer: Mobile Communications

This certifies that the above item was calibrated in accordance to the manufacturers procedures.
 All test equipment used in the calibration of the above item are traceable to NRCC Standards.
 Testing of the above item found that it was **IN-SPEC** of the manufactures published specification limits.
 In accordance with the calibration interval recommended by the manufacturer, this unit is due for calibration **March 2, 2012.**

Temperature: Lab Ambient Conditions

Date of Calibration: March 2, 2011.

Sinclabs Inc.

Calibration Equipment:

<u>Model No</u>	<u>Description</u>	<u>Trace No</u>	<u>Cal Due Date</u>
HP8902A	Measuring Receiver	8494	10 Feb 12
HP11722A	Sensor Module	3096	9 Feb 12
HP8656B	Signal Generator	3261	23 Dec 11
HP8562A	Spectrum Analyser	4086	25 Aug 11
FLU5101B	Calibrator	2576	23 Jun 11





Sinclair Technologies Inc.
85 Mary Street, Aurora, Ontario, L4G 6X5
Tel: 905-727-0165; 1-800-263 3275
Fax: 905-727-0861; 1-800-668-7416
www.sinctech.com

Certificate Of Calibration

Model No.: Agilent E4438C
Serial No.: MY42080661
ID No.: 9347
Description: RF Signal Generator
Customer: Mobile Communications

This certifies that the above item was calibrated in accordance to the manufacturers procedures.

All test equipment used in the calibration of the above item are traceable to NRCC Standards.

Testing of the above item found that it was **IN-SPEC** of the manufactures published specification limits.

In accordance with the calibration interval recommended by the manufacturer, this unit is due for calibration on **March 2, 2012.**

Temperature: Lab Ambient Conditions

Date of Calibration: March 2, 2011.

Sinclabs Inc.

Calibration Equipment:

<u>Model No</u>	<u>Description</u>	<u>Trace No</u>	<u>Cal Due Date</u>
HP8902A	Measuring Receiver	8494	10 Feb 12
HP11722A	Sensor Module	3096	9 Feb 12
HP8903B	Audio Analyzer	3920	12 Jan 12
HP5342A	Microwave Counter	QA339	29 Nov 11
HP8562A	Spectrum Analyser	4086	25 Aug 11

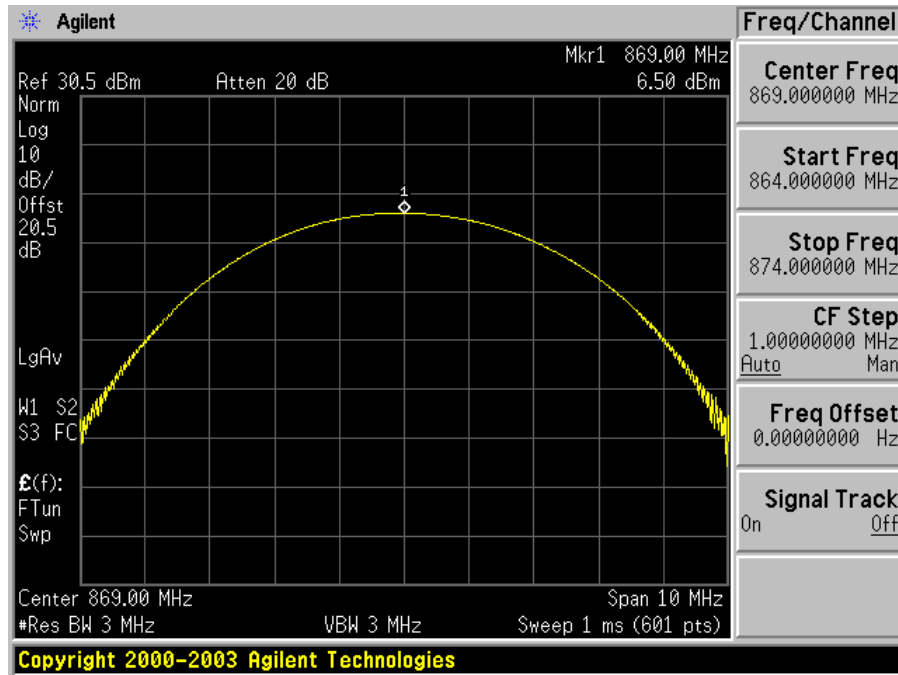


3 FCC §2.1046, §22.913(a) & §24.232 - RF OUTPUT POWER

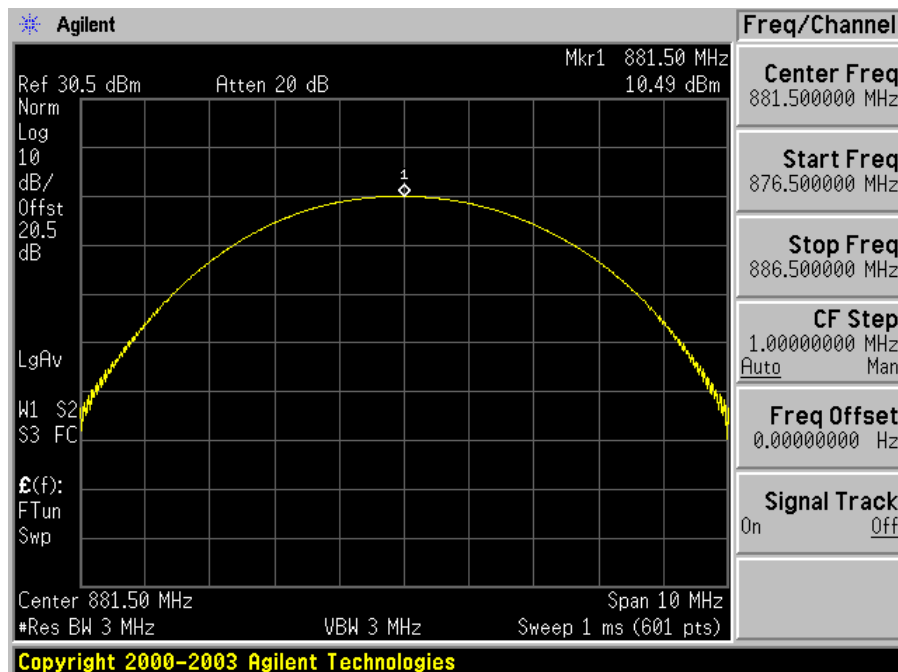
Cellular Band:

Downlink: 869-894 MHz

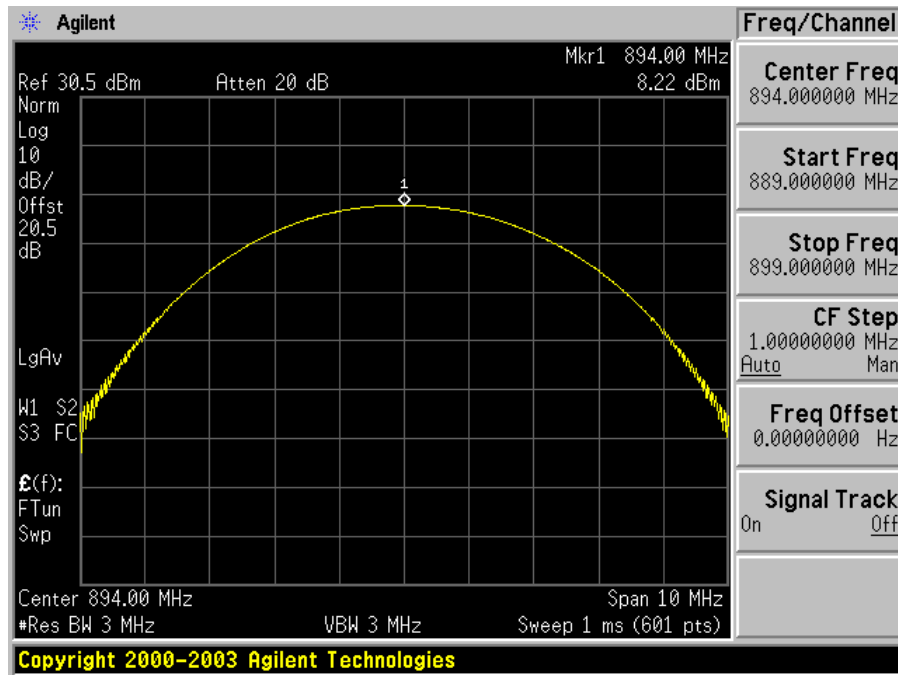
Low



Middle

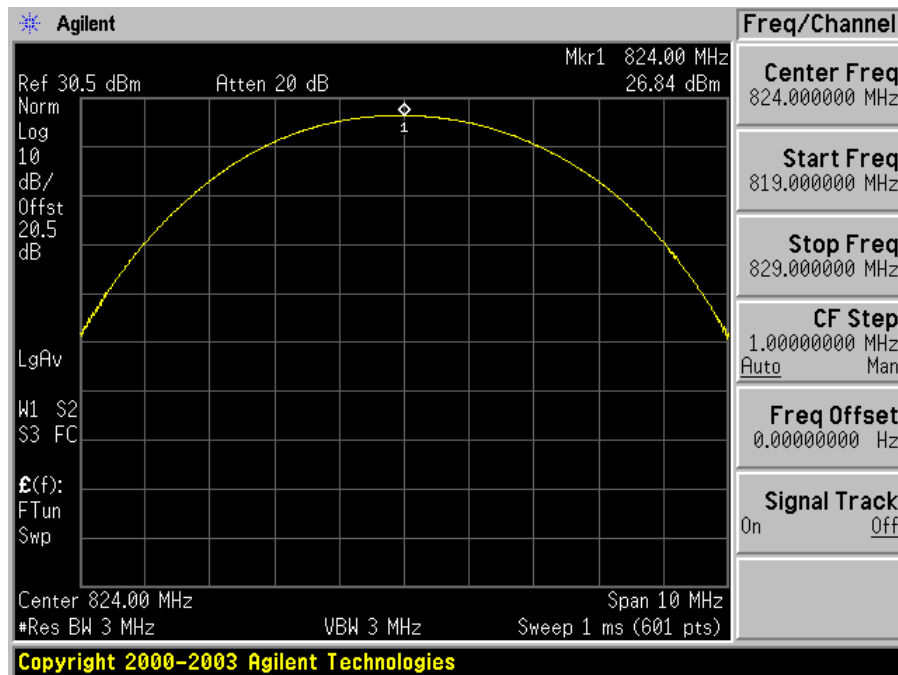


High

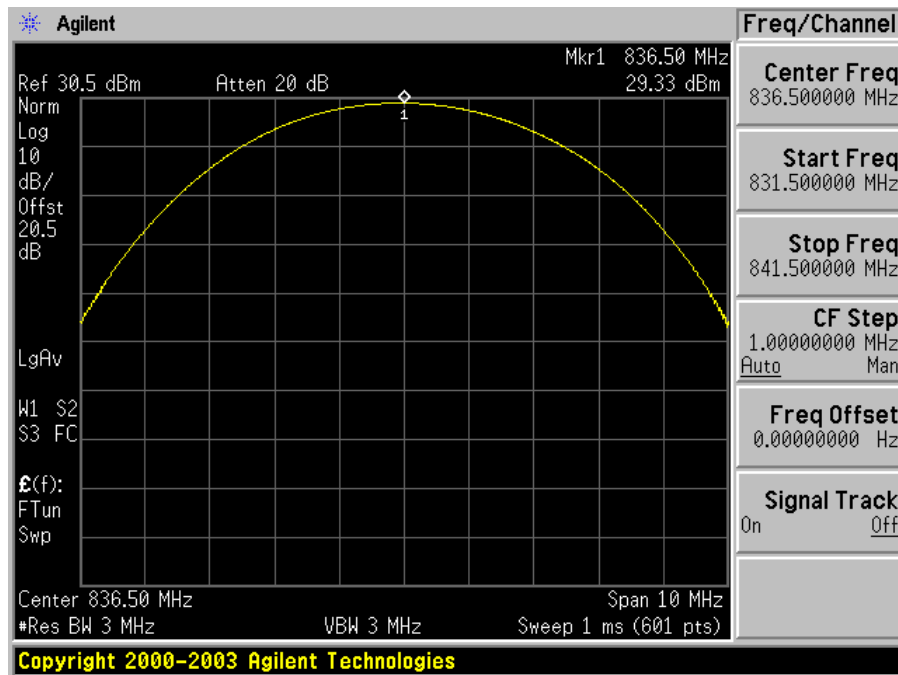


Uplink: 824-849 MHz

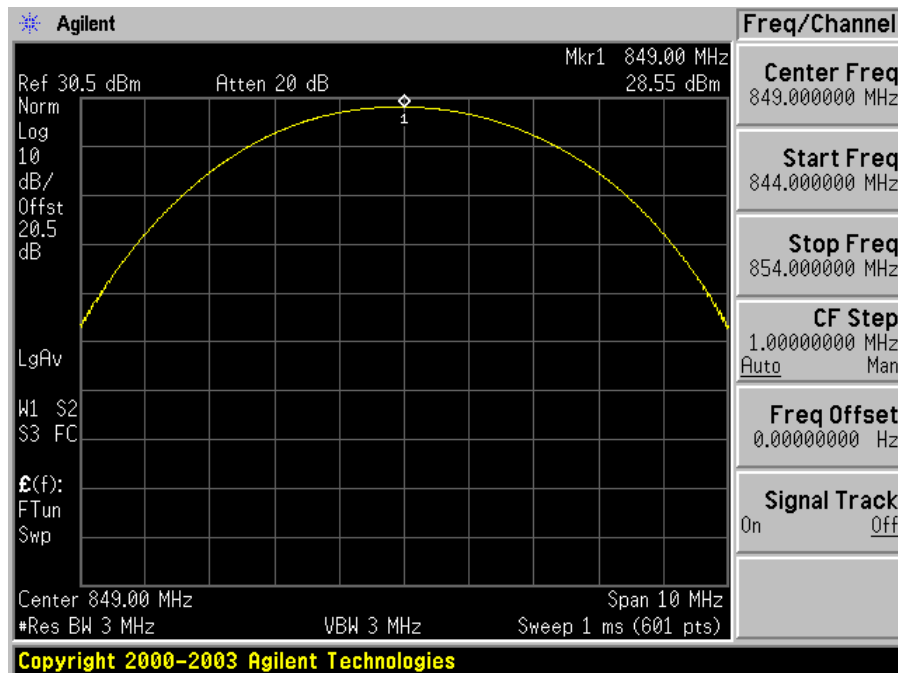
Low



Middle



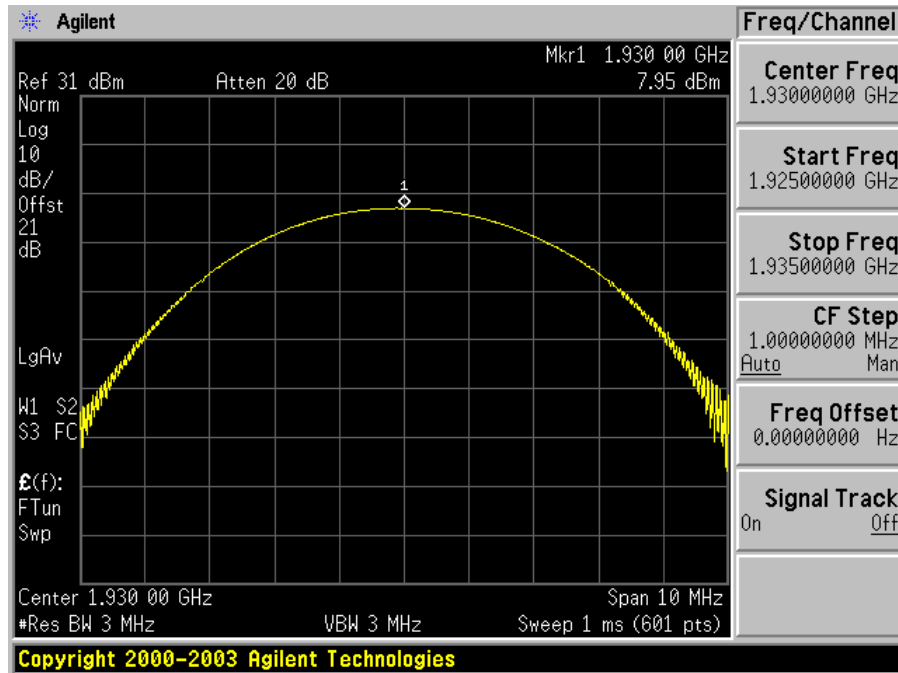
High



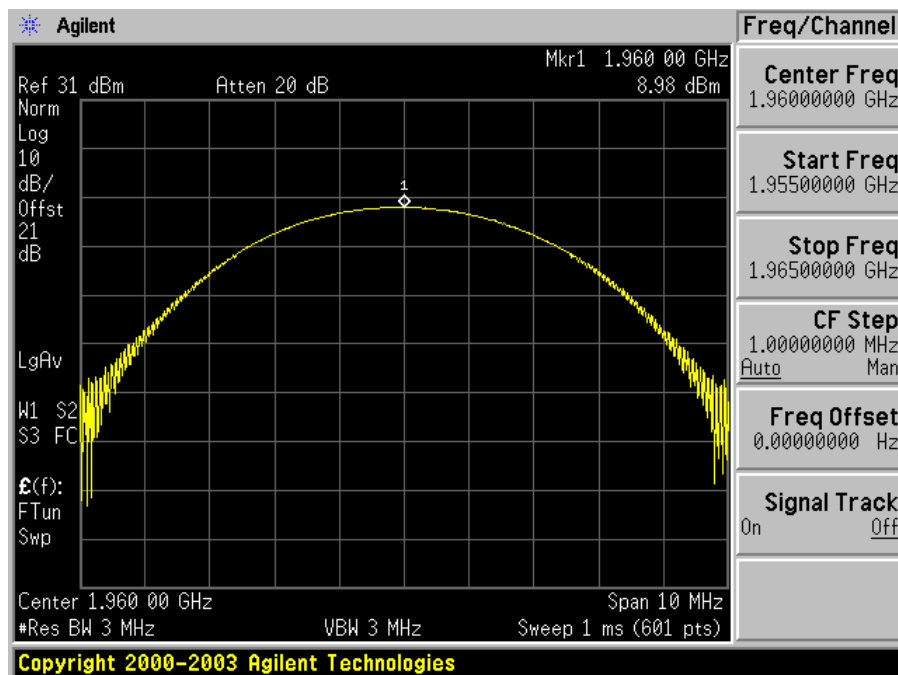
PCS Band

Downlink: 1930-1990 MHz

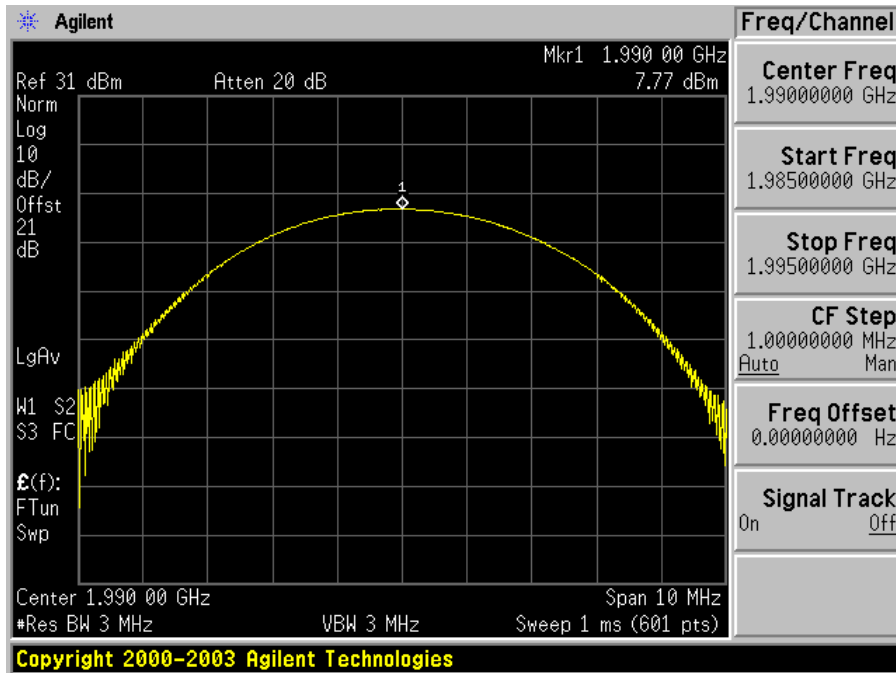
Low



Middle

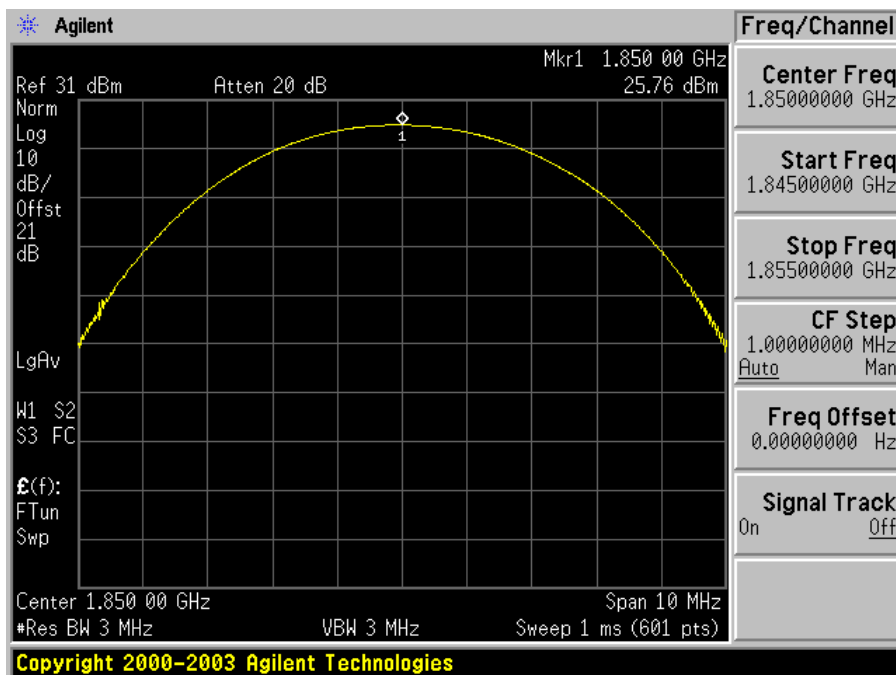


High

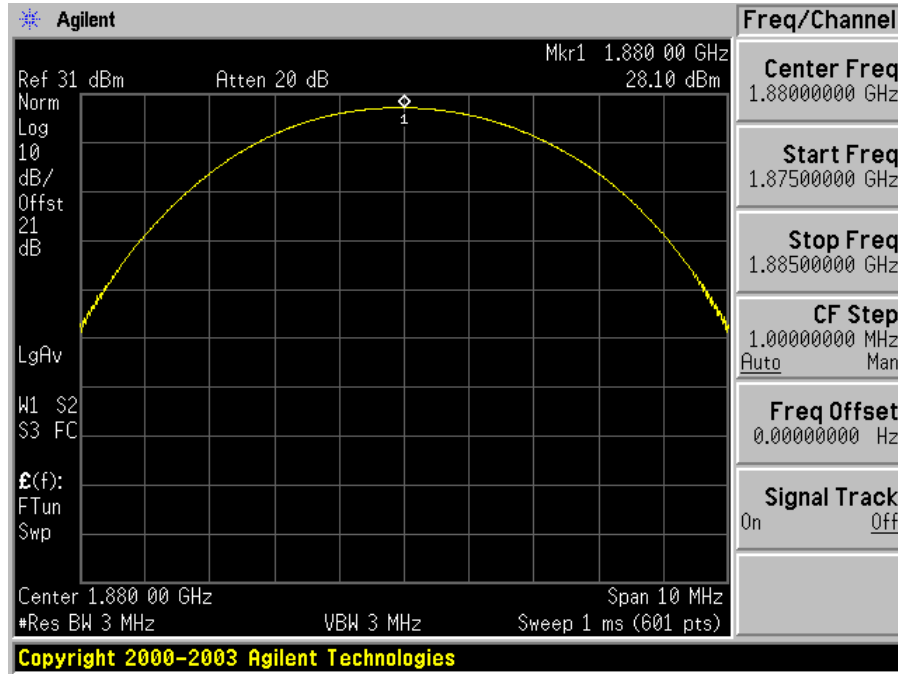


Uplink: 1850-1910 MHz

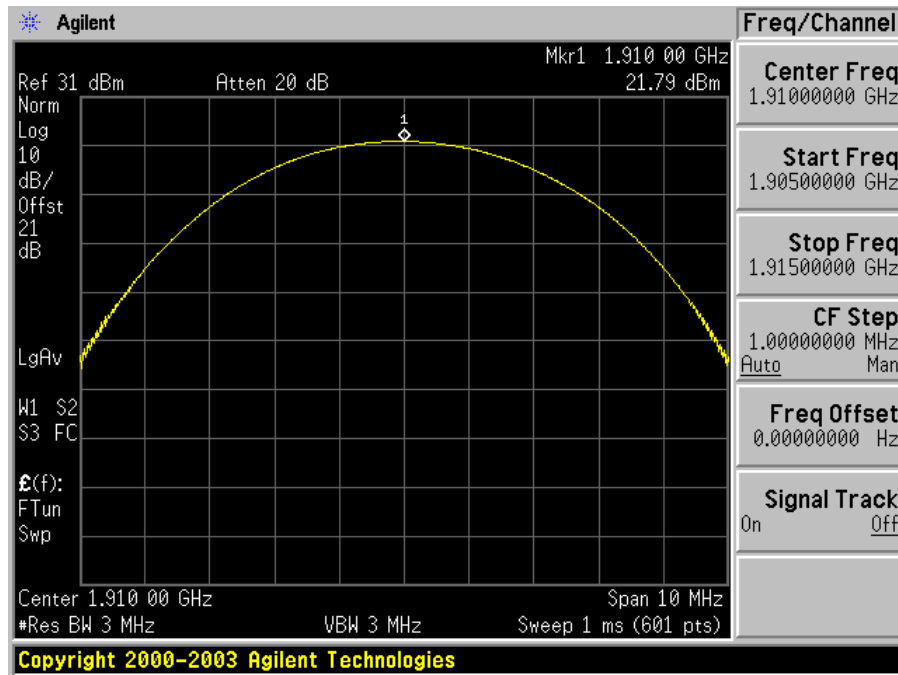
Low



Middle



High

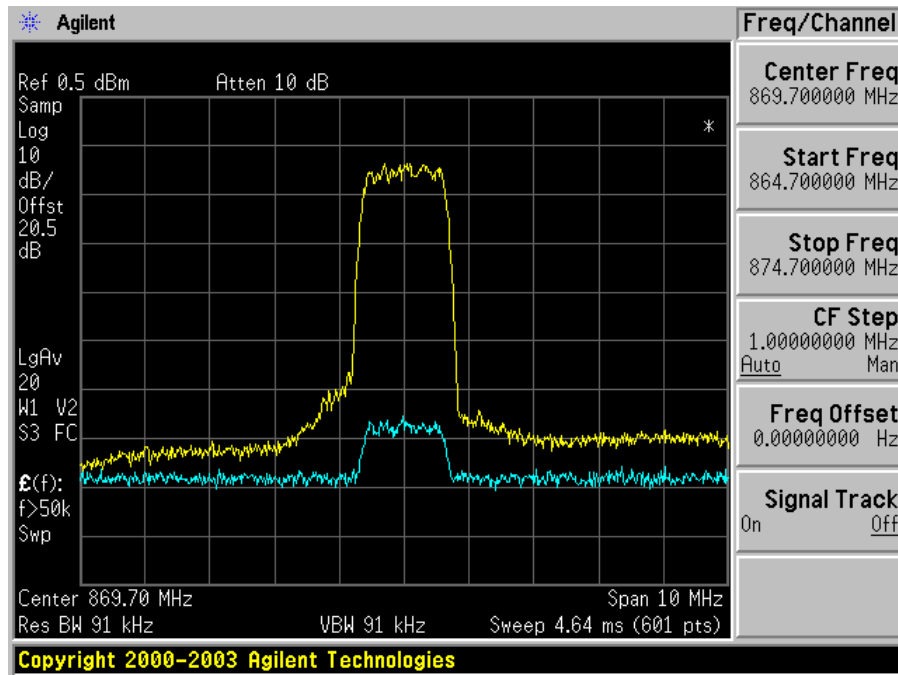


4 FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH

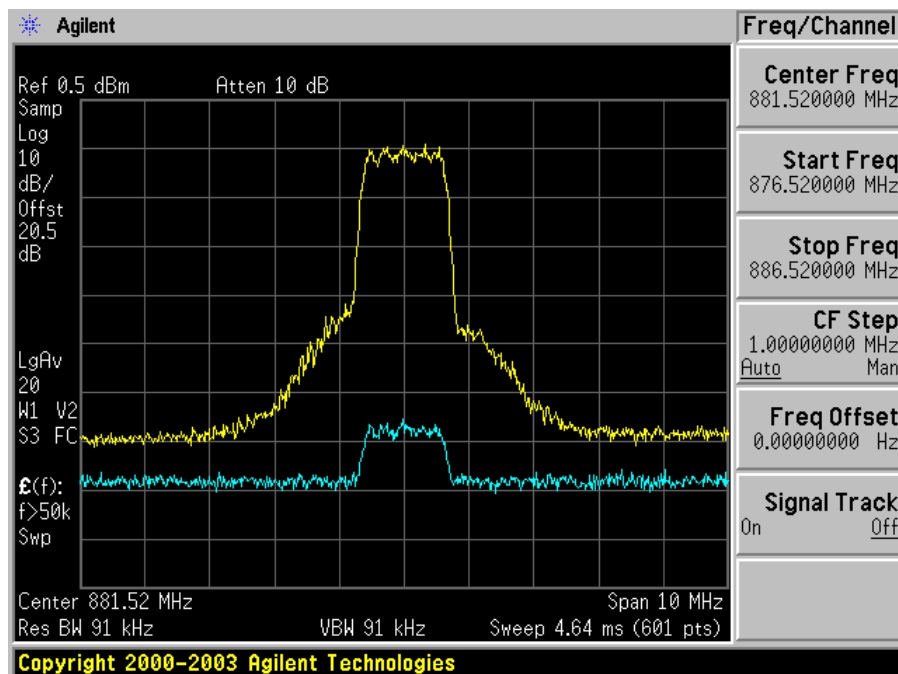
Cellular Band:

Modulation: CDMA, Downlink: 869-894 MHz

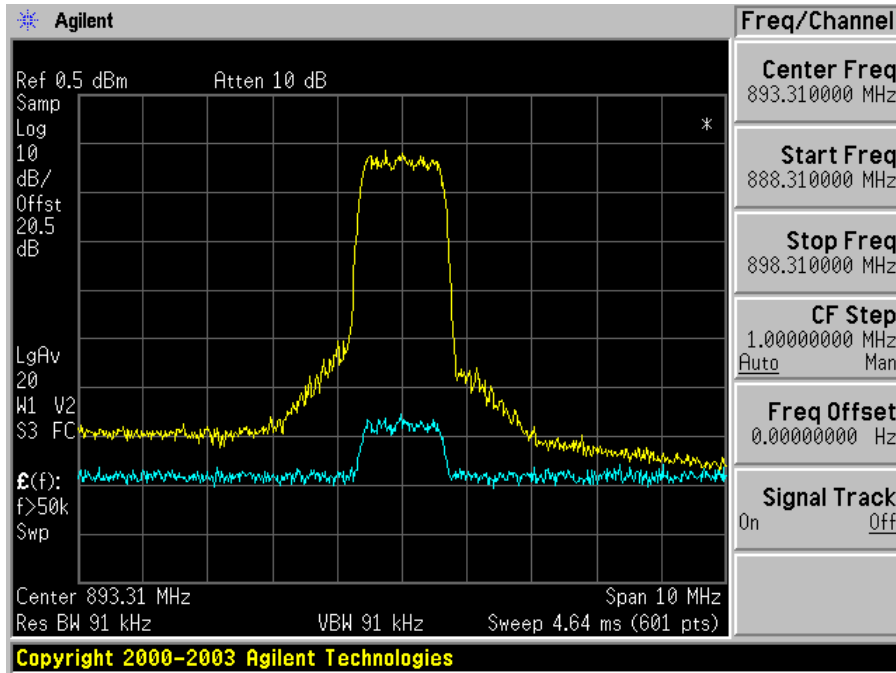
Low CH (Input/Output)



Middle CH (Input/Output)

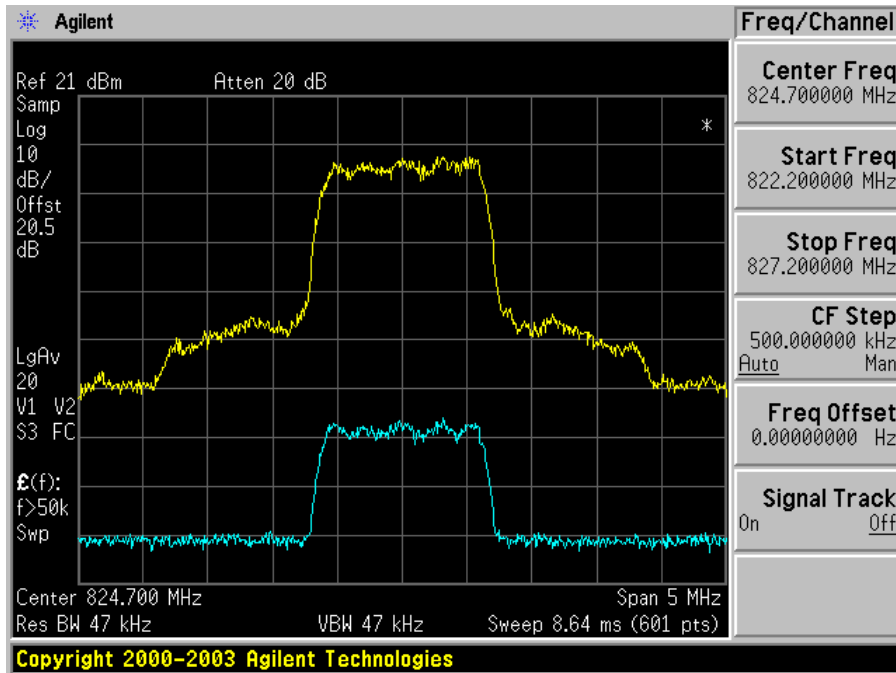


High CH (Input/Output)

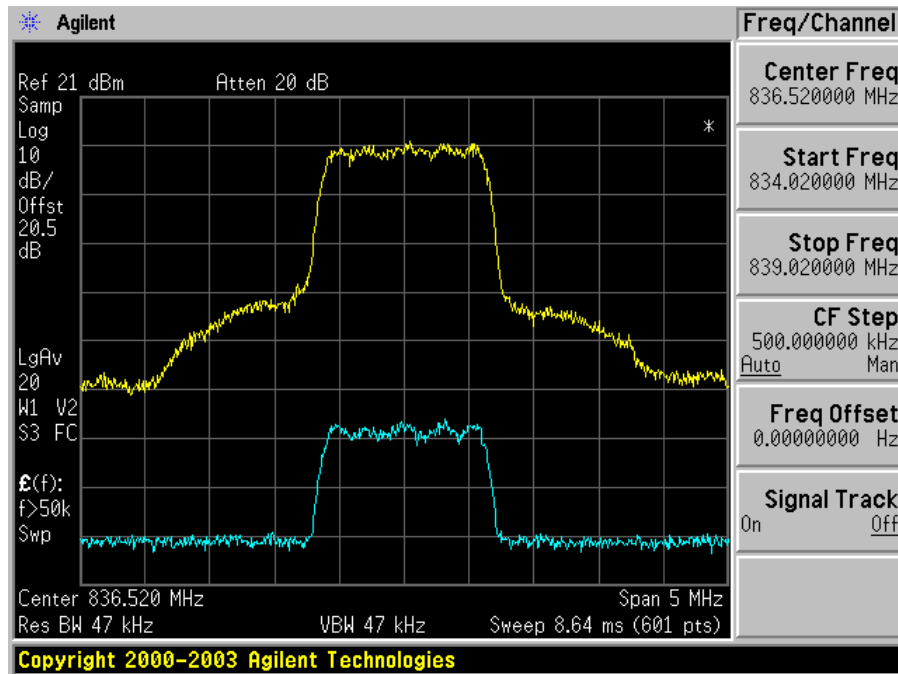


Modulation: CDMA, Uplink: 824-849 MHz

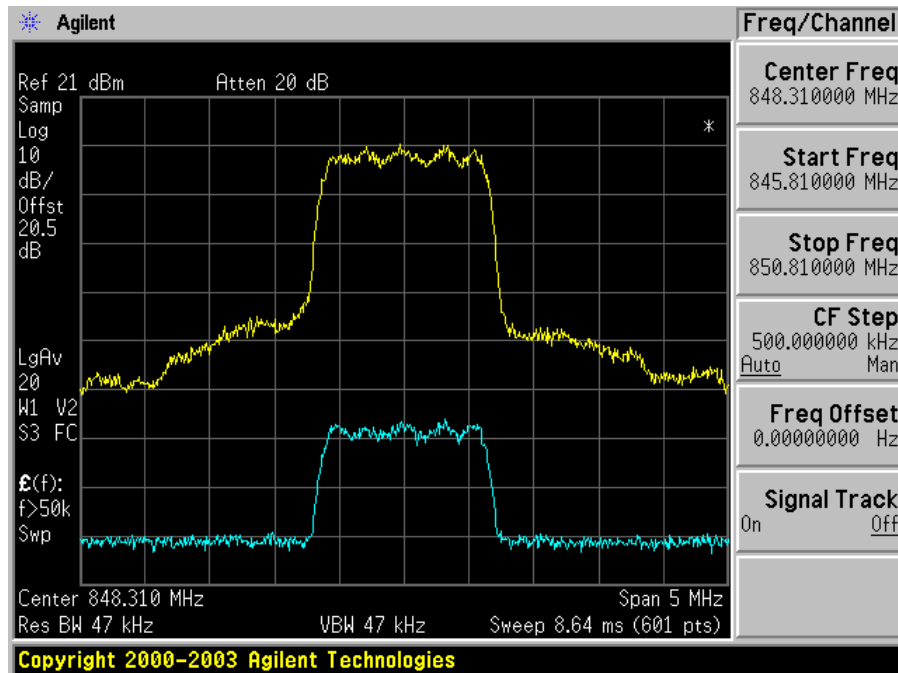
Low CH (Input/Output)



Middle CH (Input/Output)



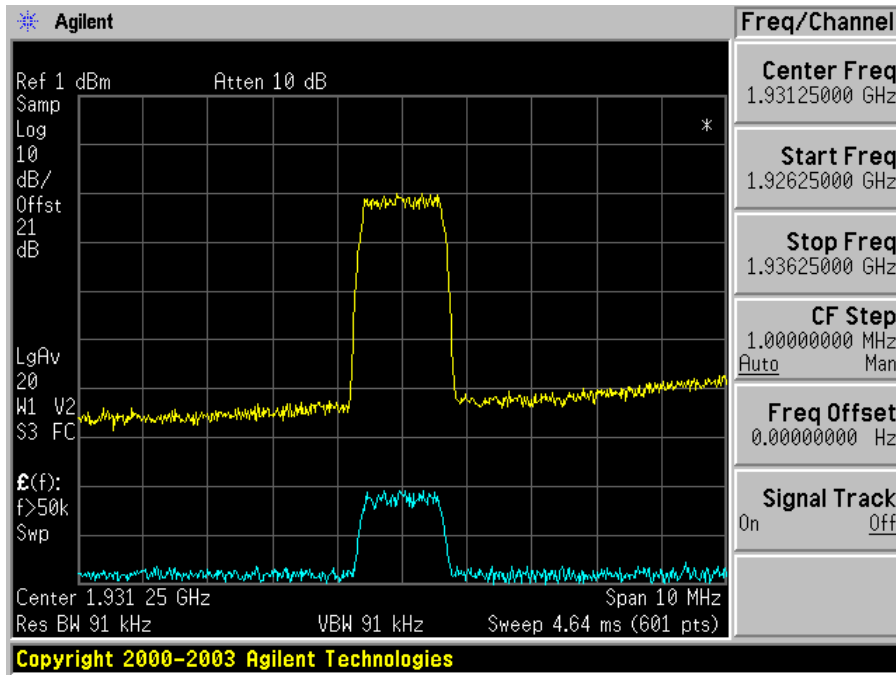
High CH (Input/Output)



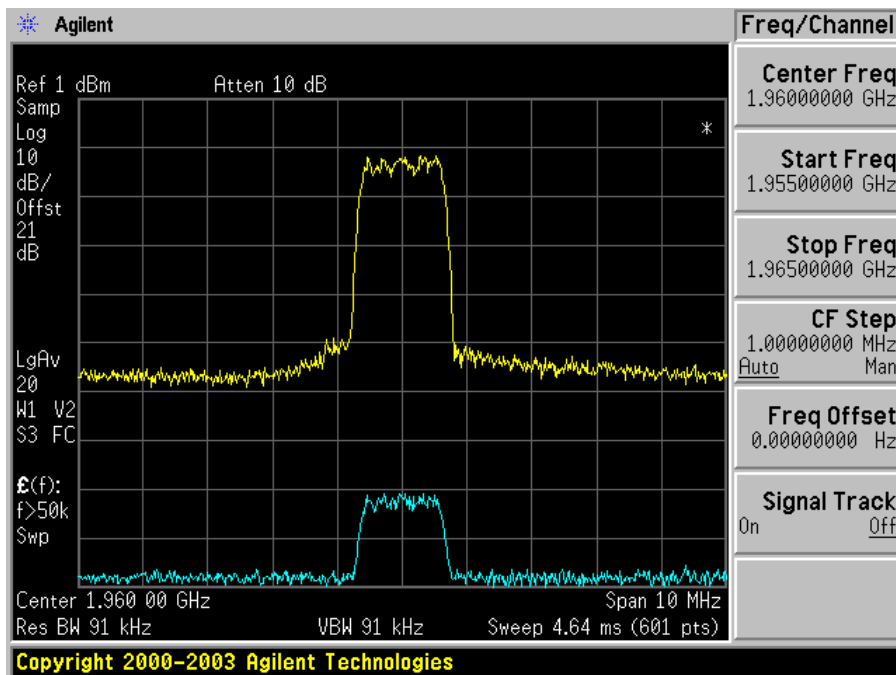
PCS Band:

Modulation: CDMA, Downlink: 1930-1990 MHz

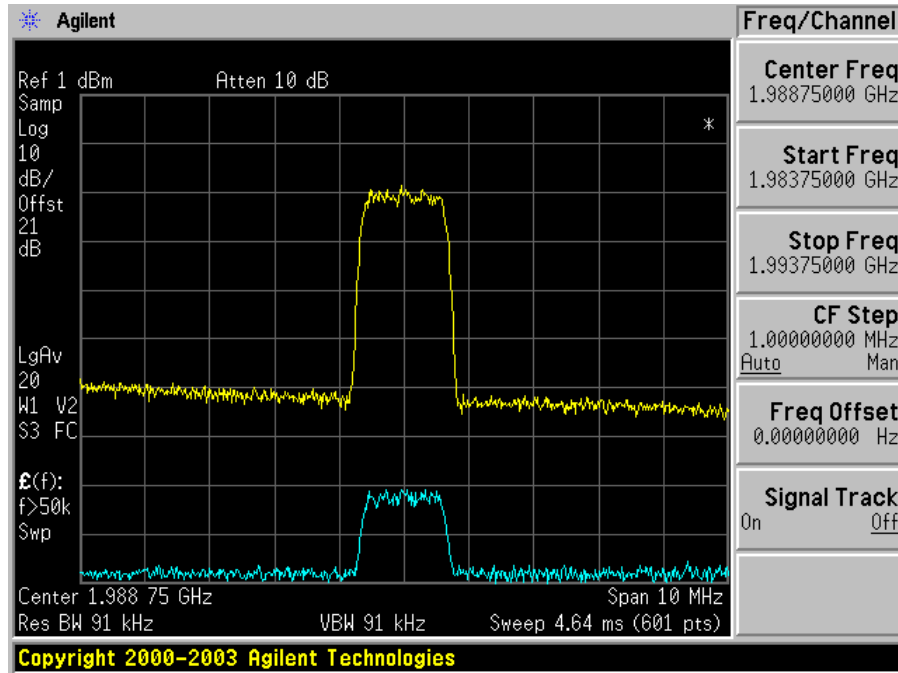
Low CH (Input/Output)



Middle CH (Input/Output)

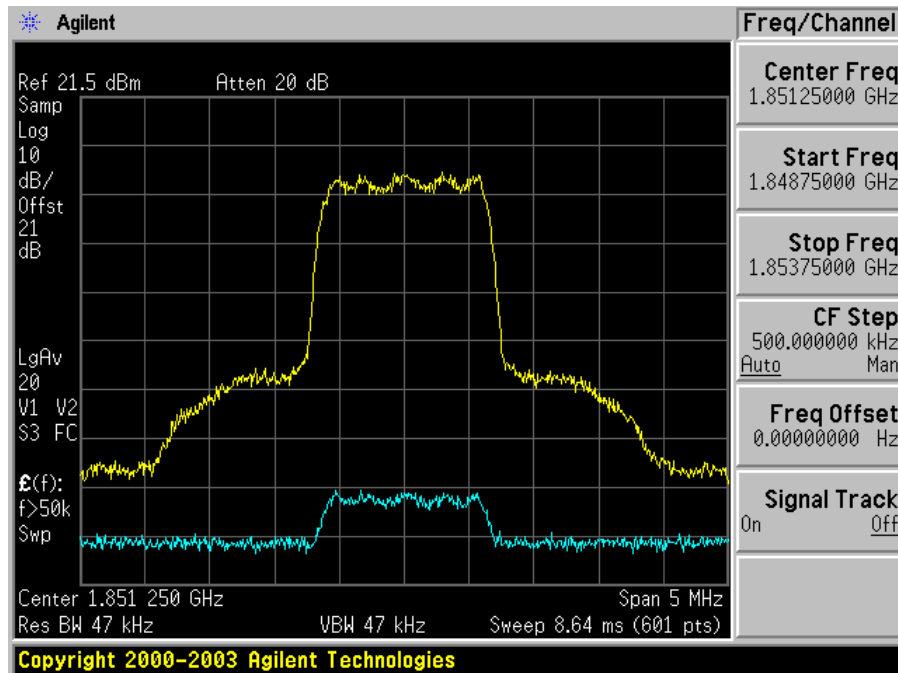


High CH (Input/Output)

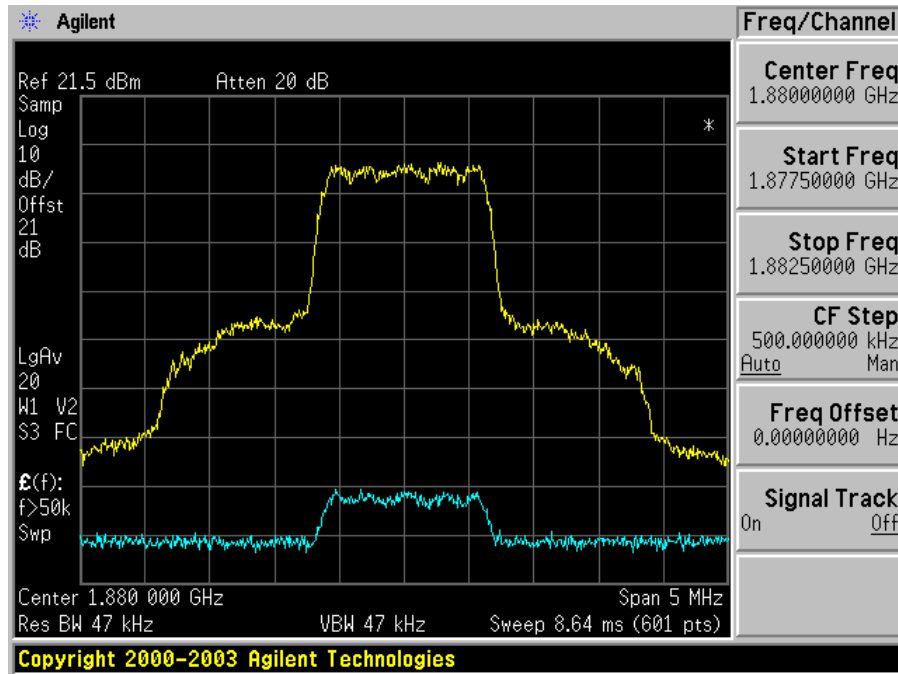


Modulation: CDMA, Uplink: 1850-1910 MHz

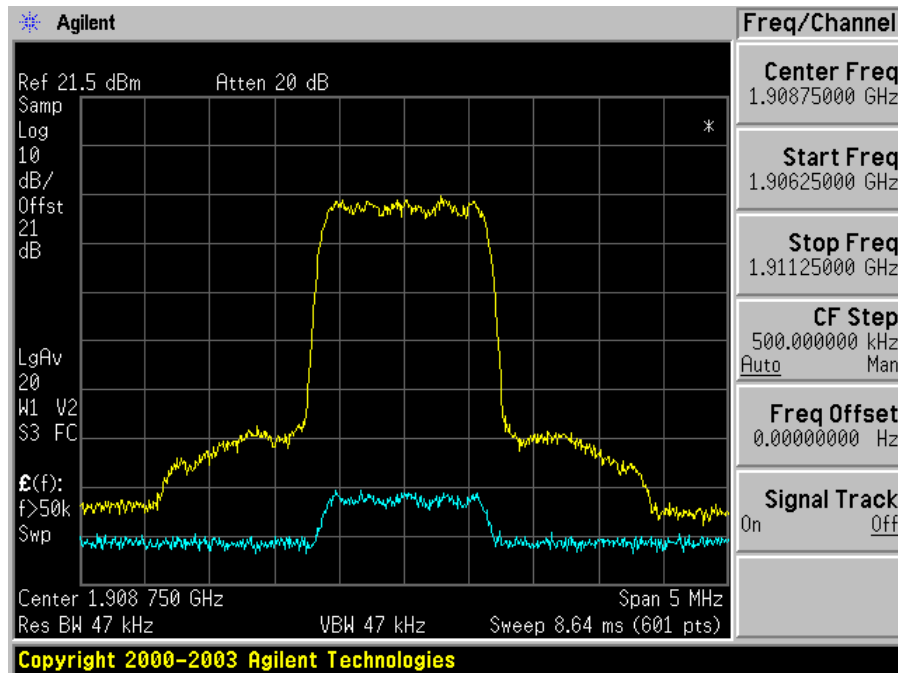
Low CH (Input/Output)



Middle CH (Input/Output)



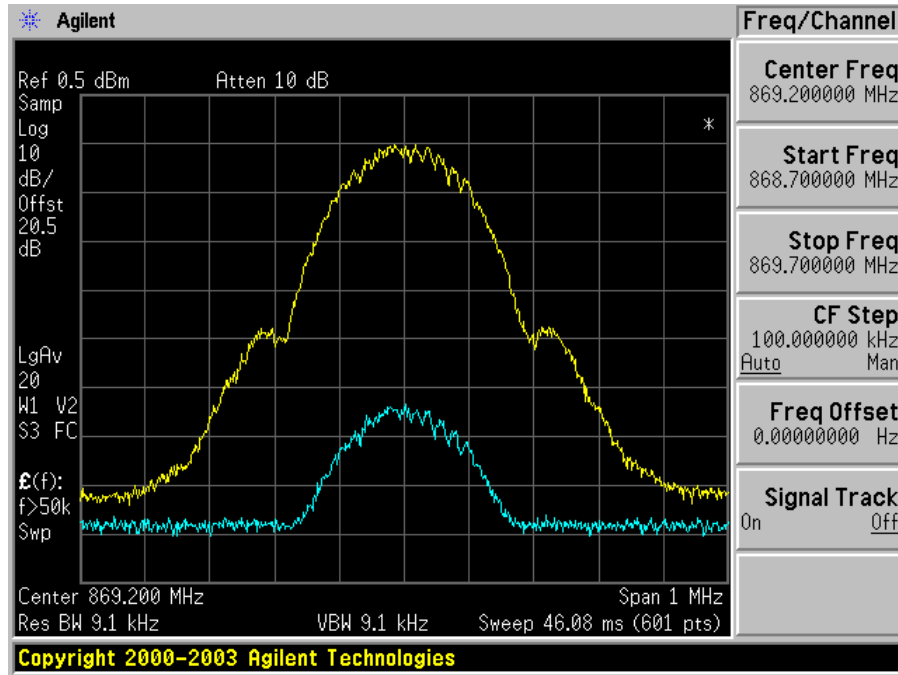
High CH (Input/Output)



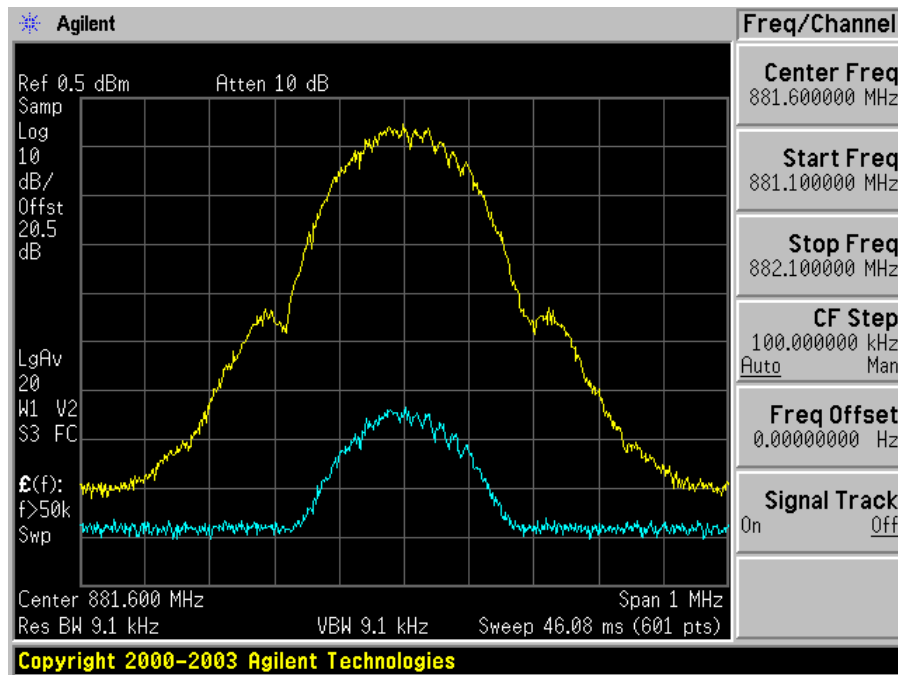
Cellular Band:

Modulation: GSM, Downlink: 869-894 MHz

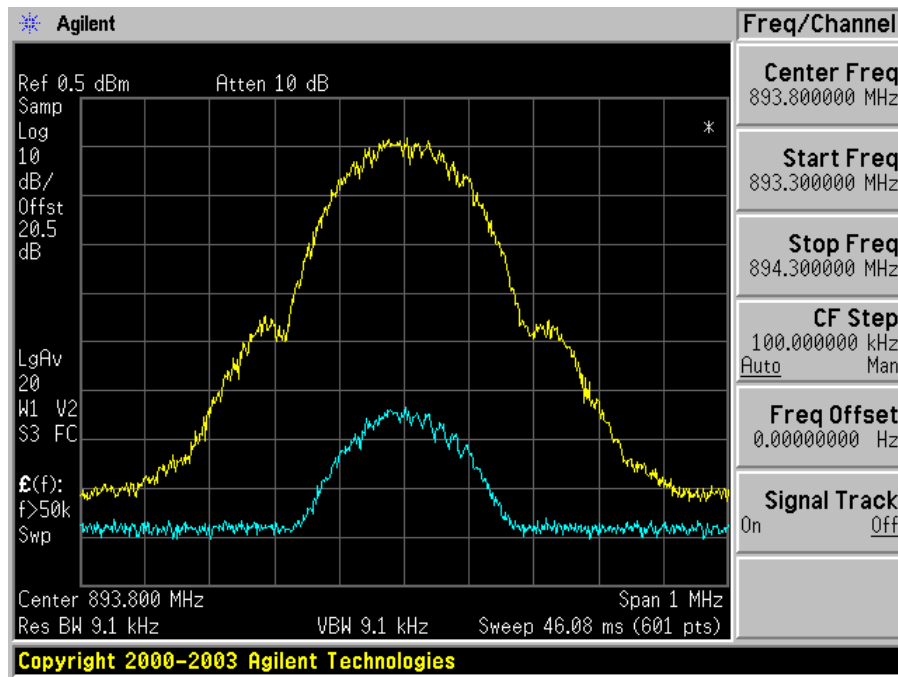
Low CH (Input/Output)



Middle CH (Input/Output)

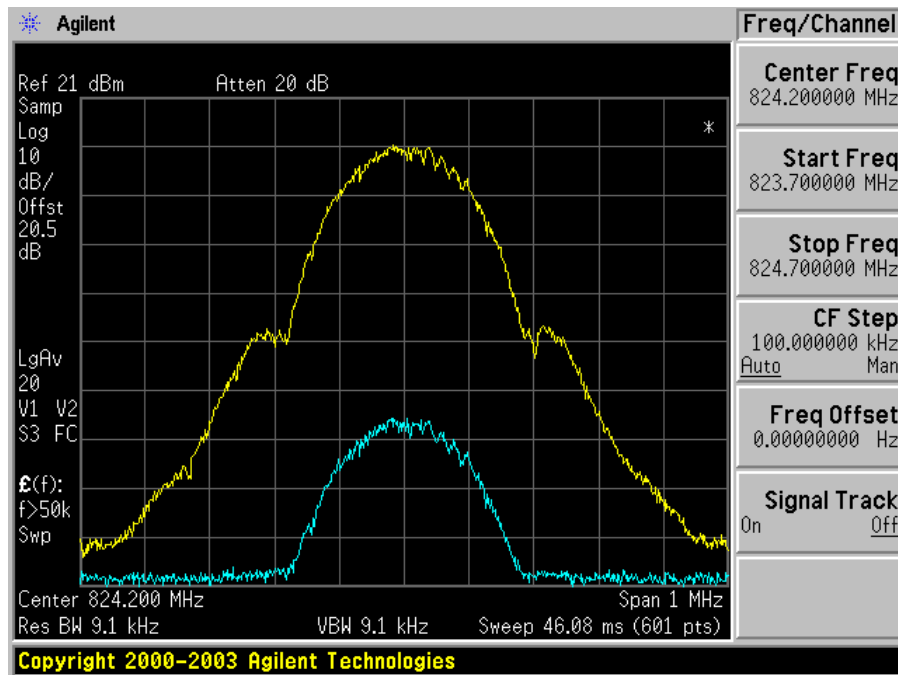


High CH (Input/Output)

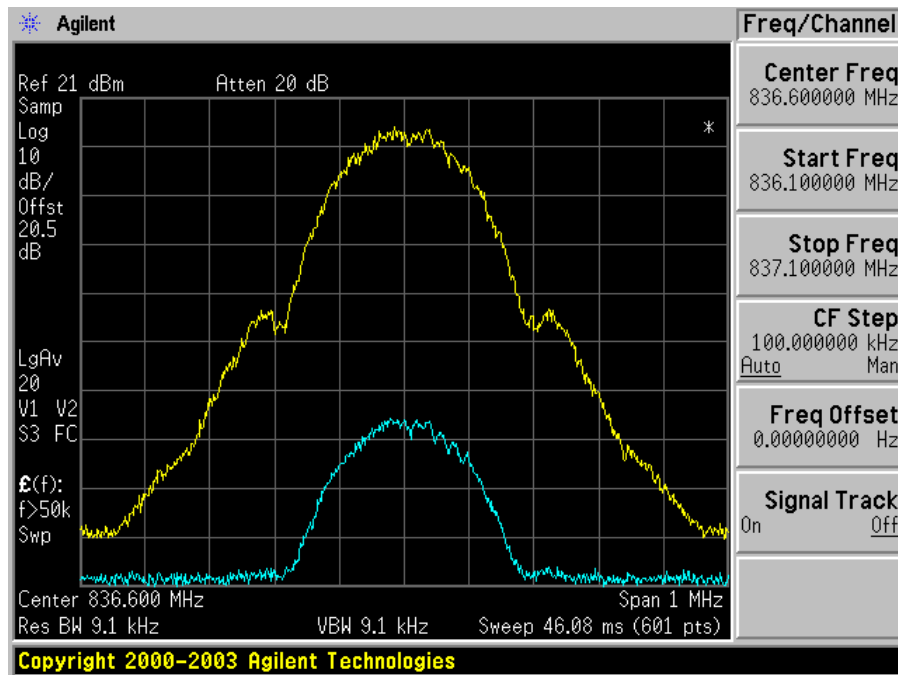


Modulation: GSM, Uplink: 824-849 MHz

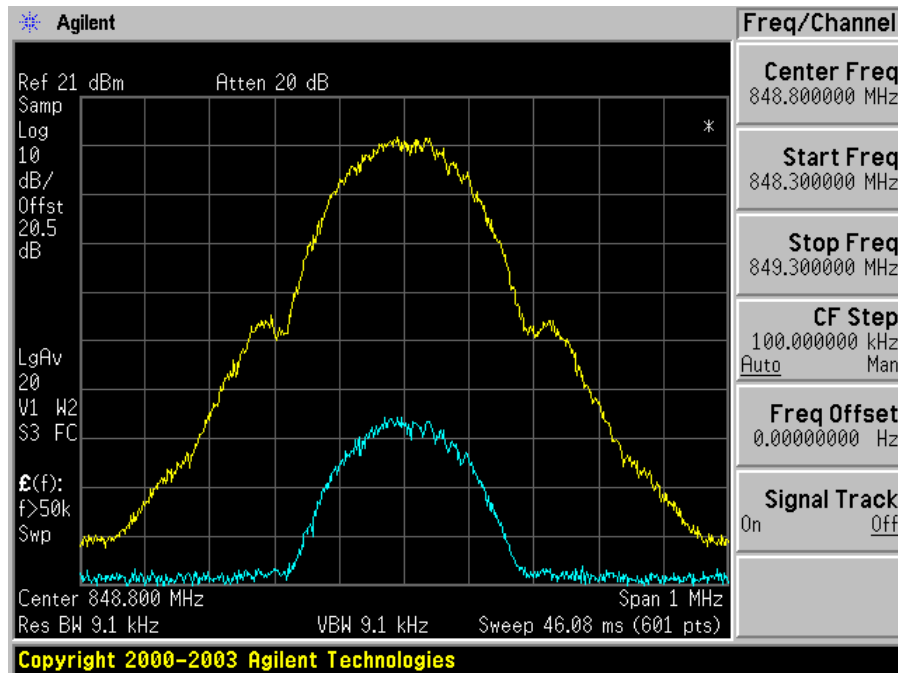
Low CH (Input/Output)



Middle CH (Input/Output)



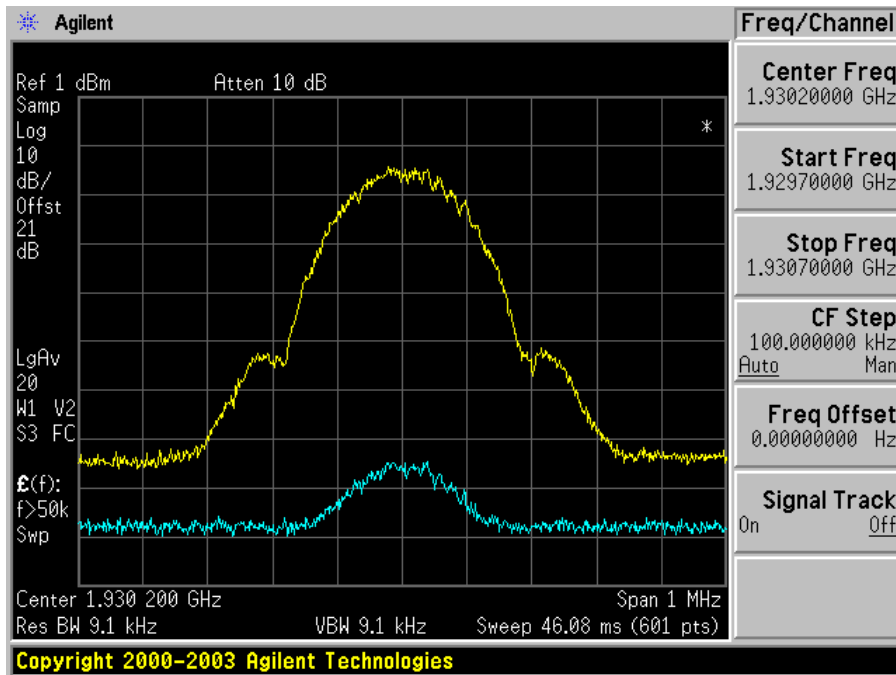
High CH (Input/Output)



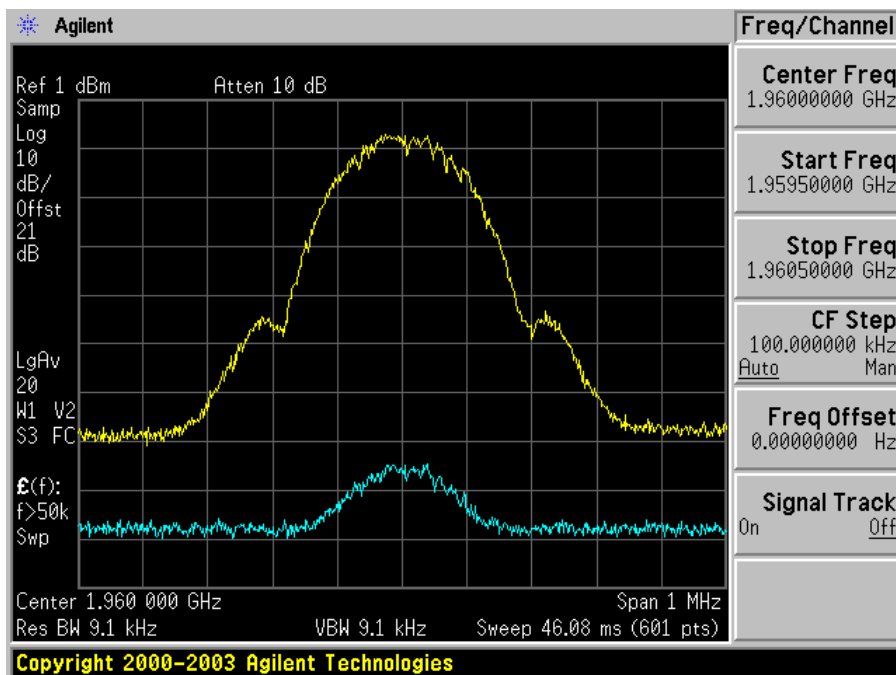
PCS Band:

Modulation: GSM, Downlink: 1930-1990 MHz

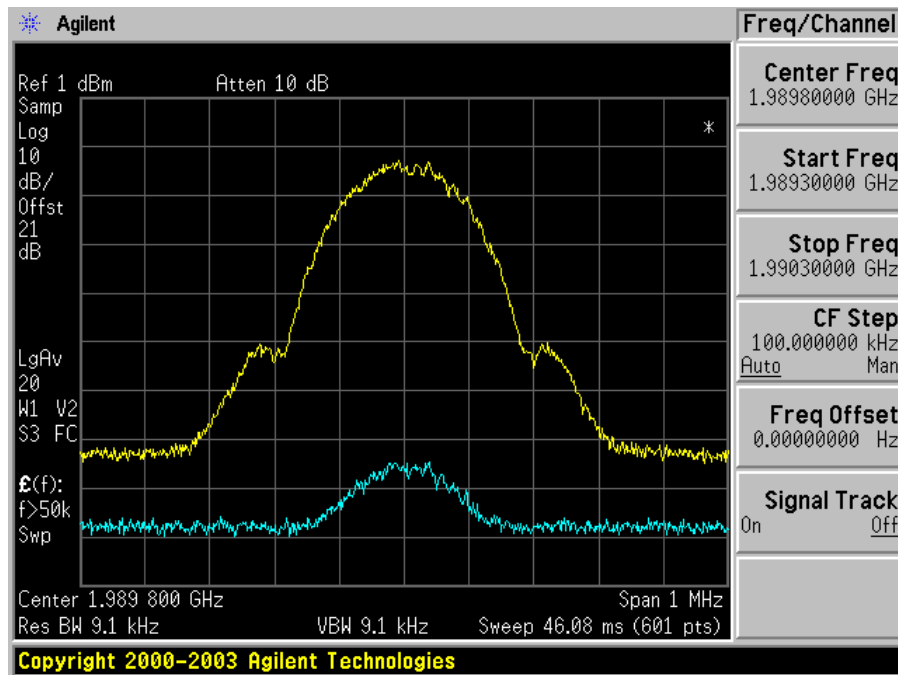
Low CH (Input/Output)



Middle CH (Input/Output)

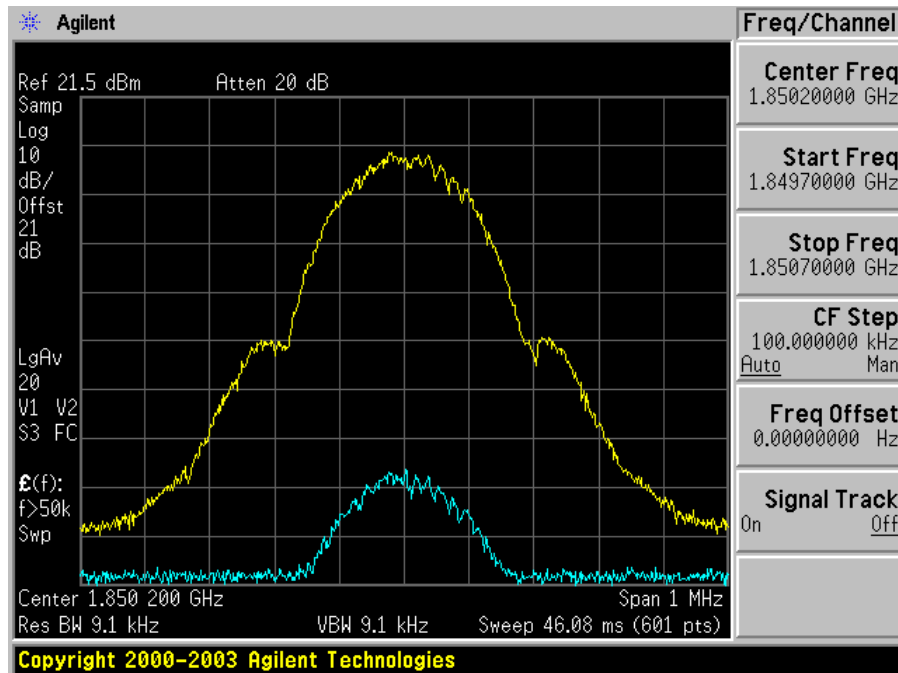


High CH (Input/Output)

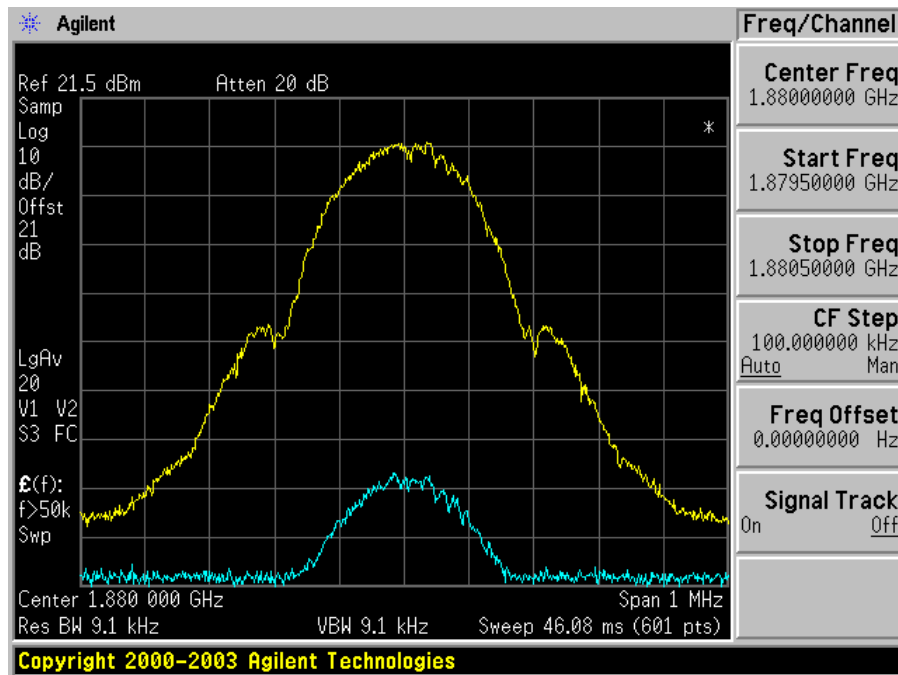


Modulation: GSM, Uplink: 1850-1910 MHz

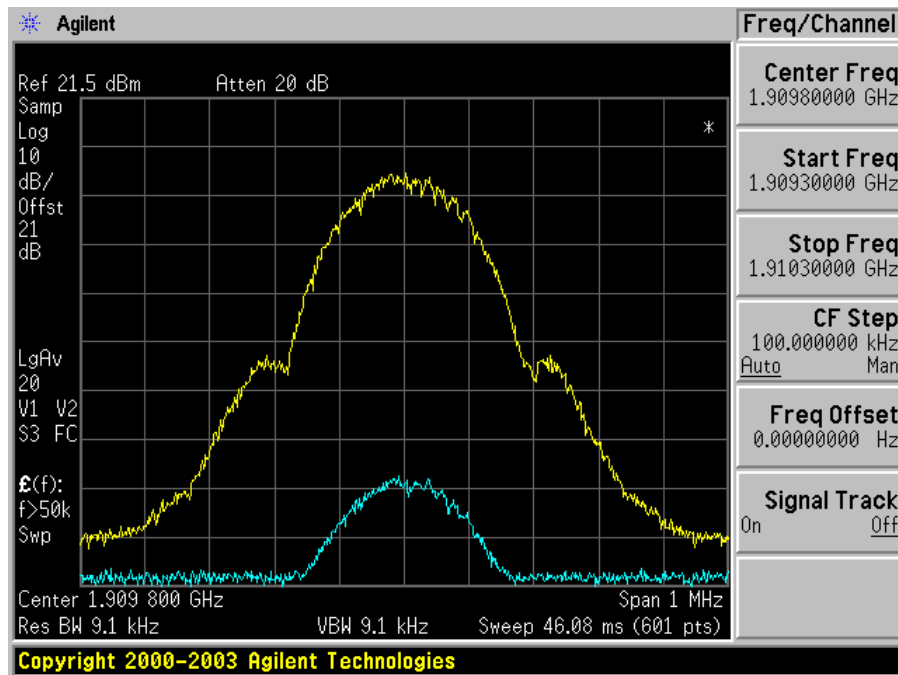
Low CH (Input/Output)



Middle CH (Input/Output)



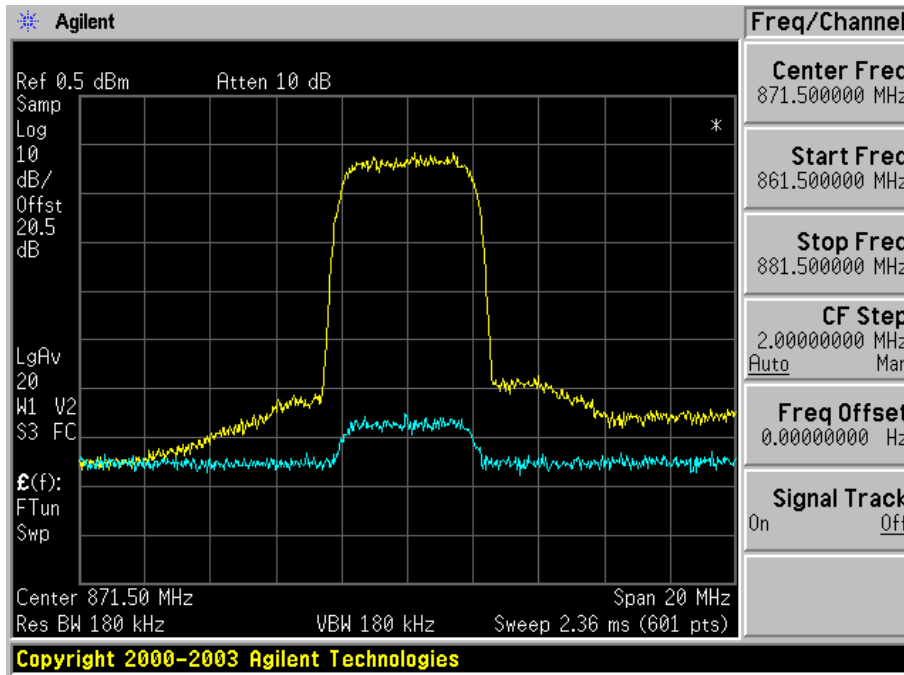
High CH (Input/Output)



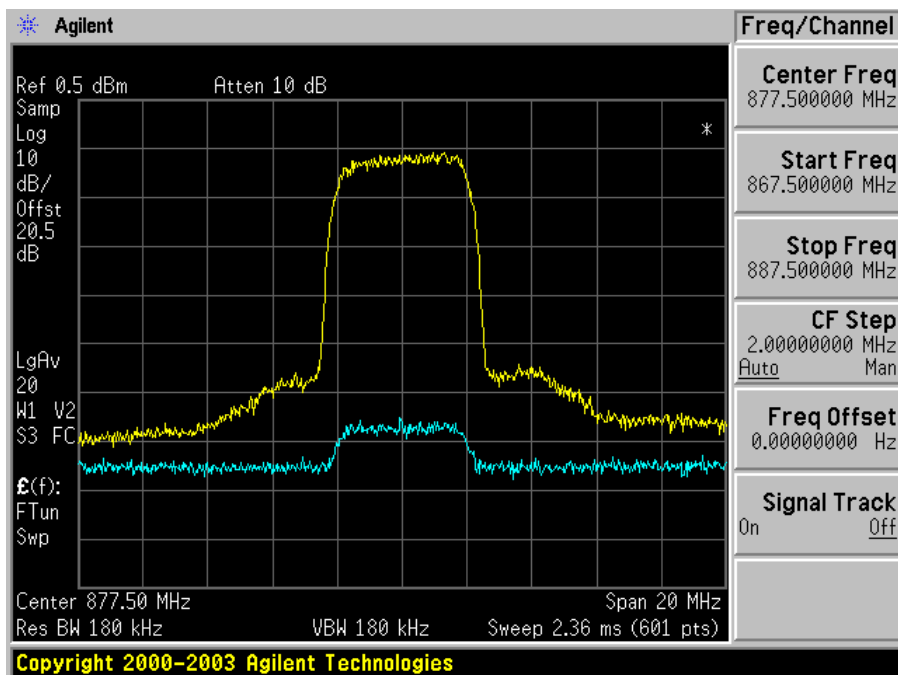
Cellular Band:

Modulation: WCDMA, Downlink: 869-894 MHz

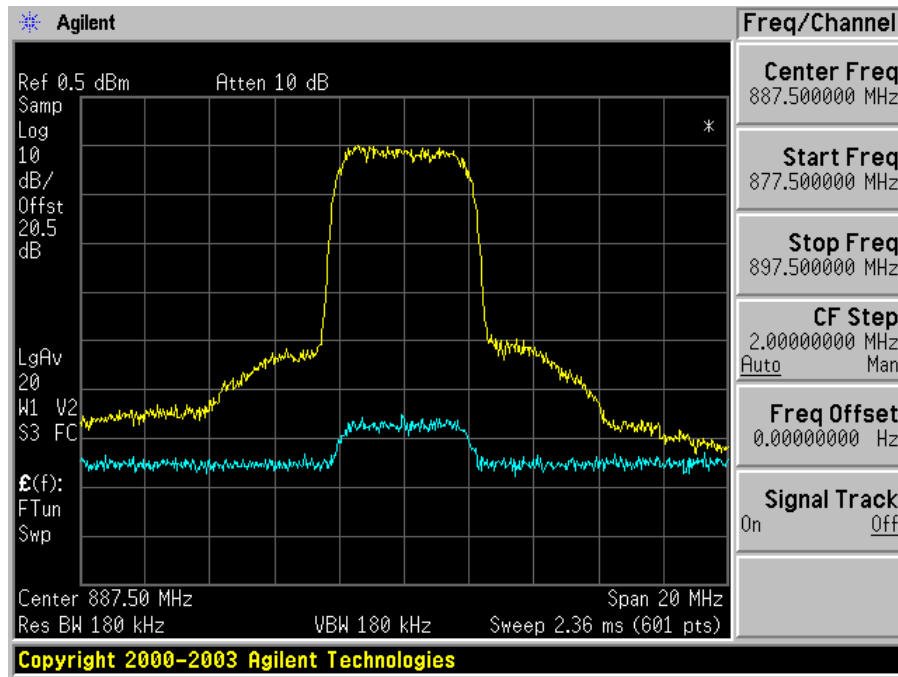
Low CH (Input/Output)



Middle CH (Input/Output)

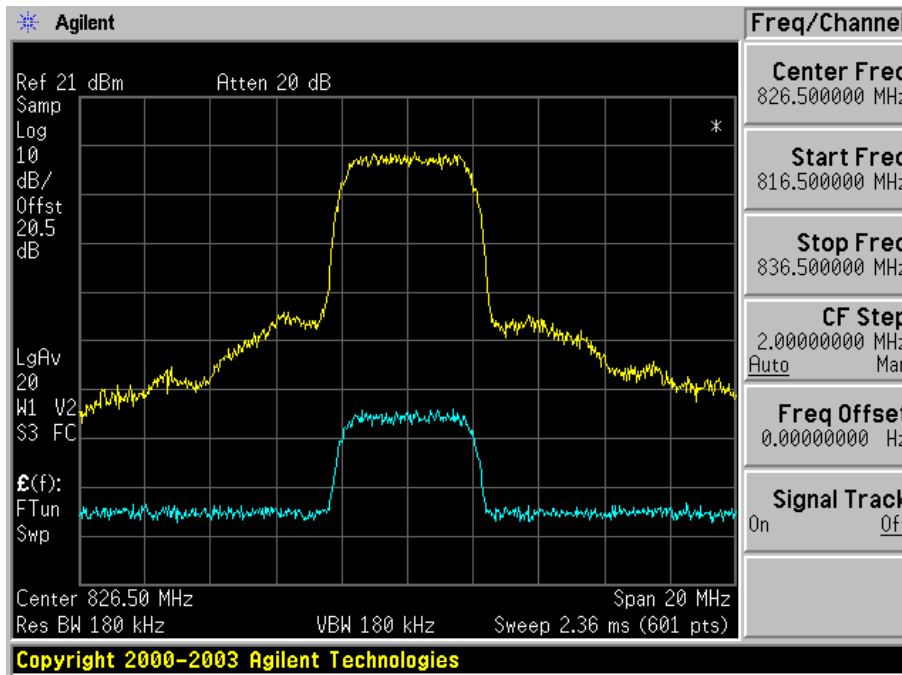


High CH (Input/Output)

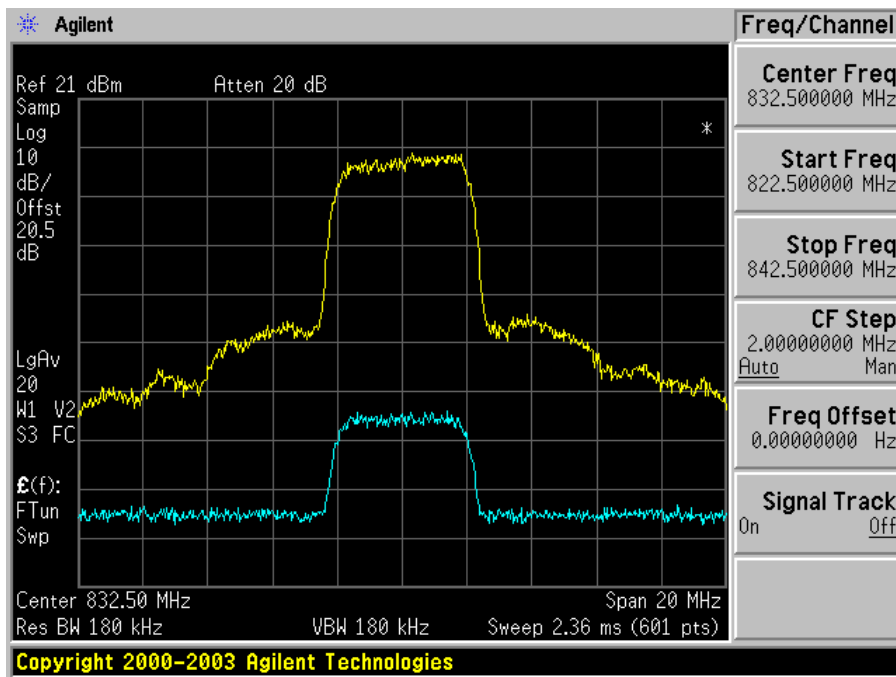


Modulation: WCDMA, Uplink: 824-849 MHz

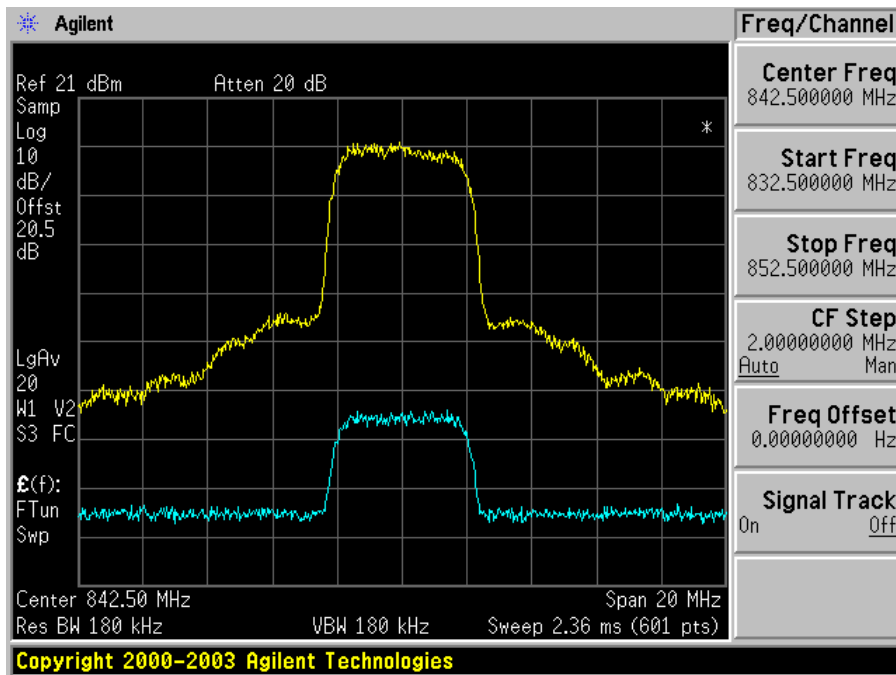
Low CH (Input/Output)



Middle CH (Input/Output)



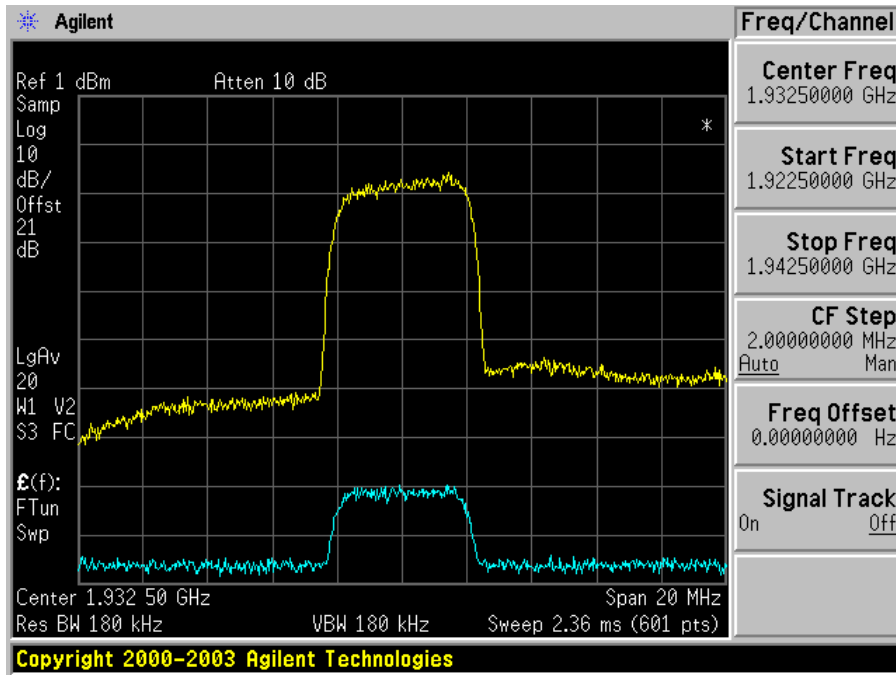
High CH (Input/Output)



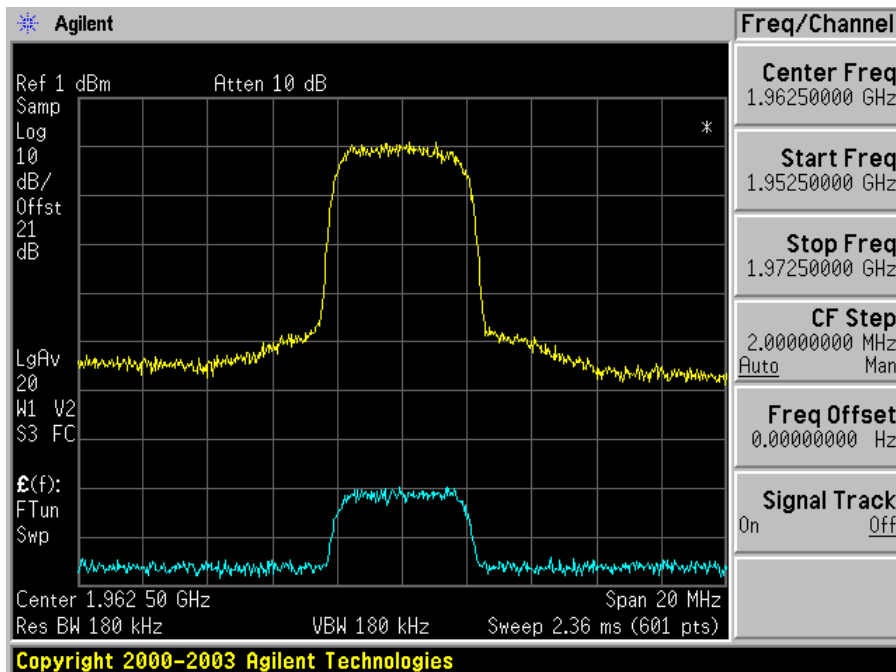
PCS Band:

Modulation: WCDMA, Downlink: 1930-1990 MHz

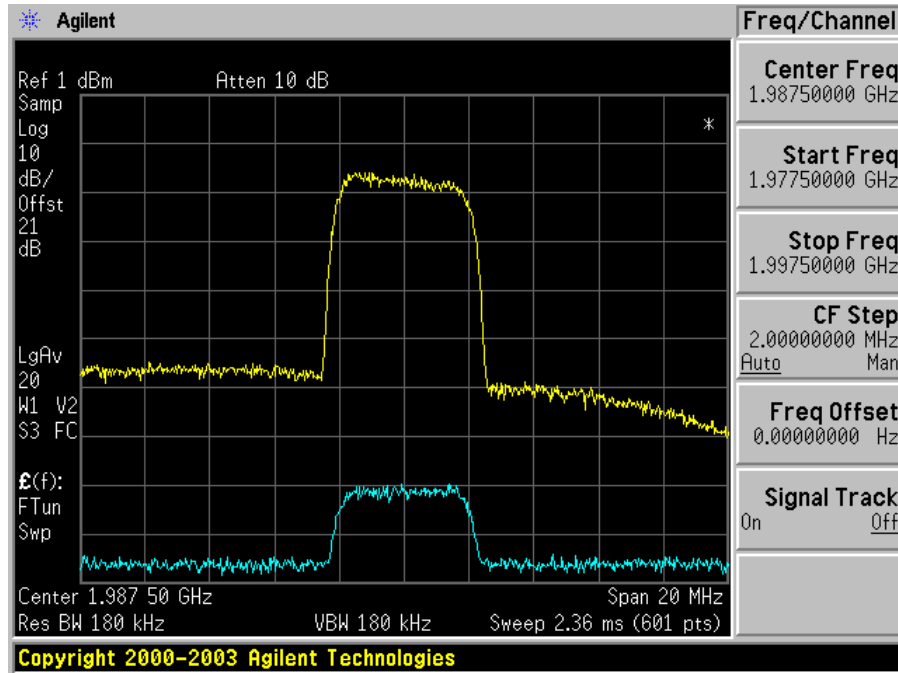
Low CH (Input/Output)



Middle CH (Input/Output)

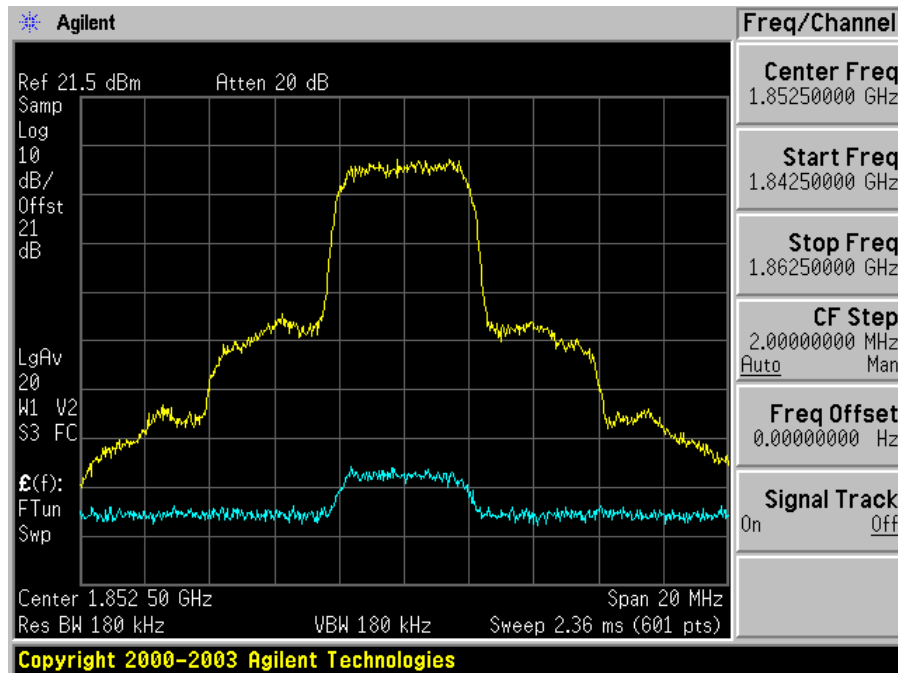


High CH (Input/Output)

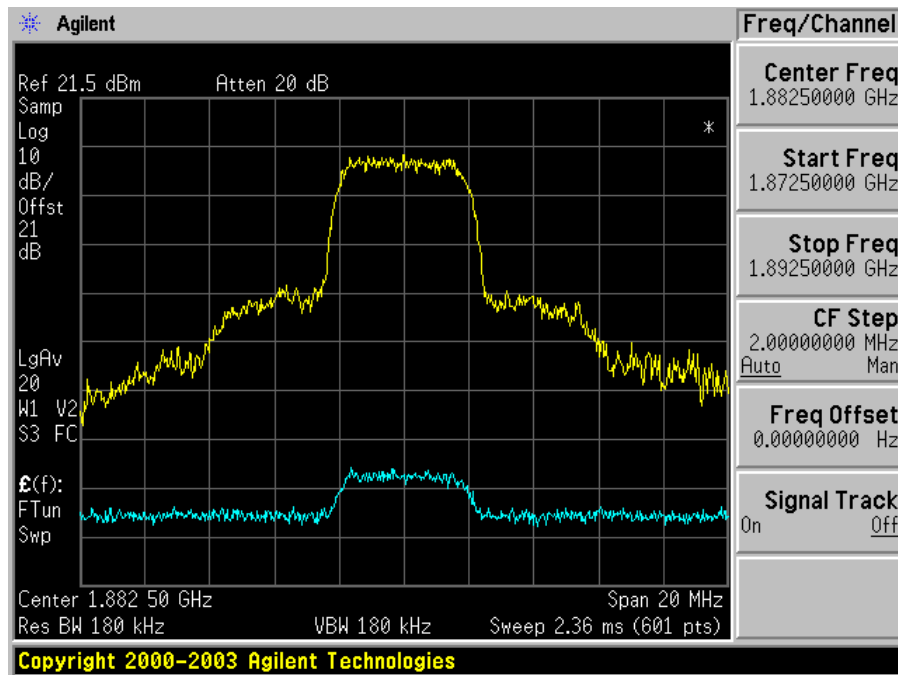


Modulation: WCDMA, Uplink: 1850-1910 MHz

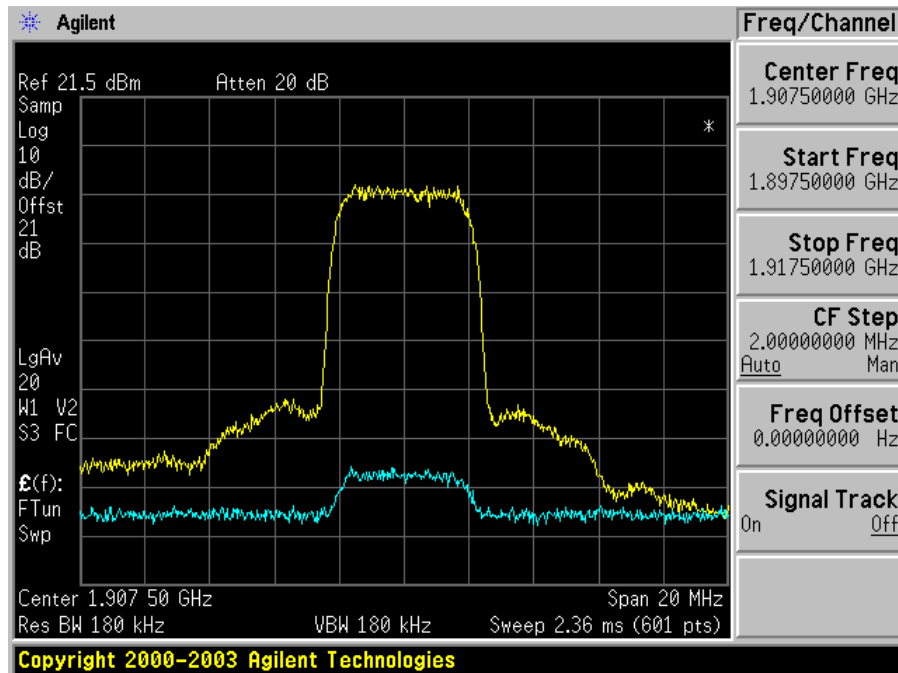
Low CH (Input/Output)



Middle CH (Input/Output)



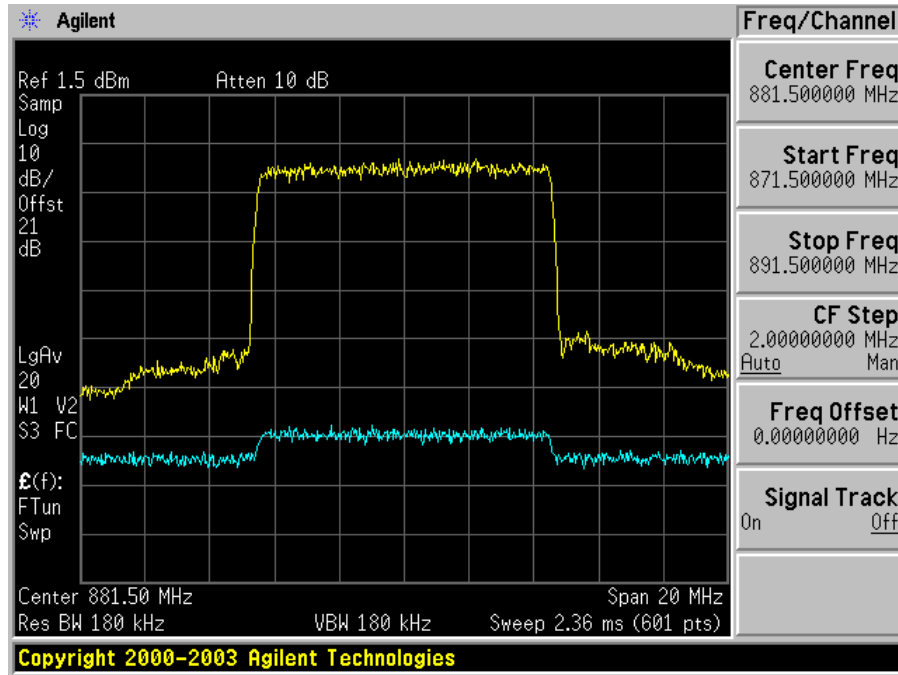
High CH (Input/Output)



Cellular Band:

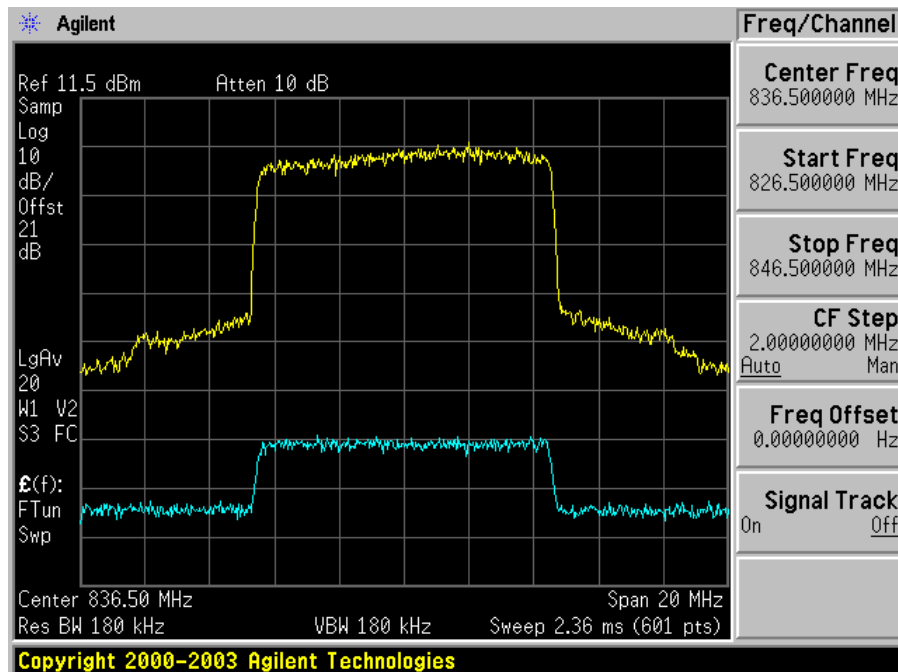
Modulation: LTE, Downlink: 869-894 MHz

Middle CH (Input/Output)



Modulation: LTE, Uplink: 824-849 MHz

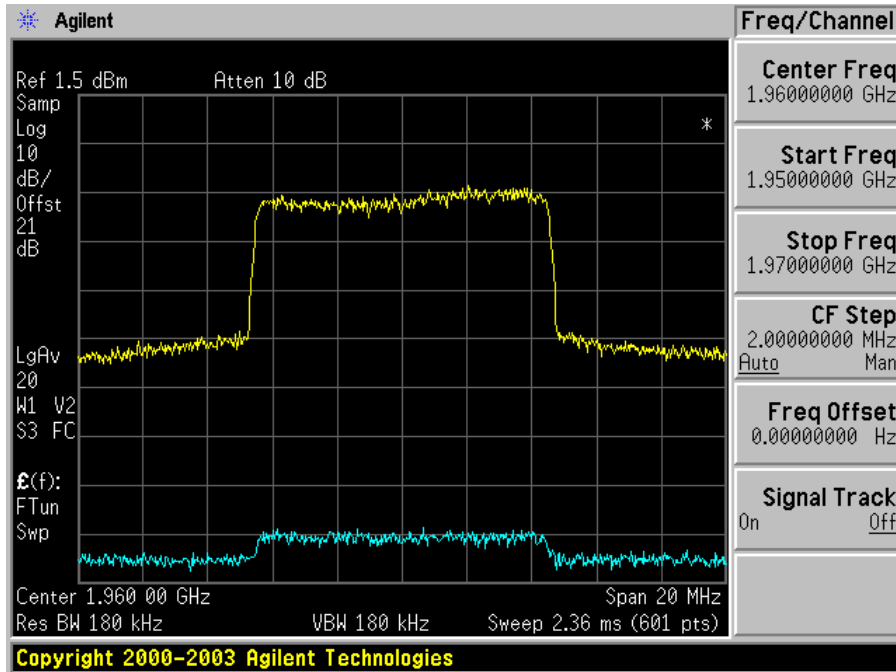
Middle CH (Input/Output)



PCS Band:

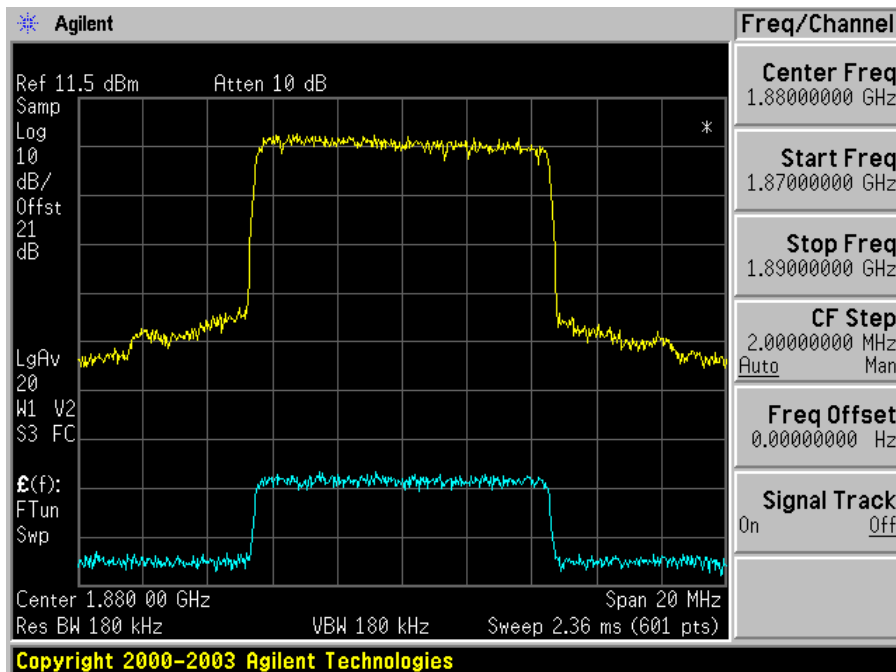
Modulation: LTE, Downlink: 1930-1990 MHz

Middle CH (Input/Output)



Modulation: LTE, Uplink: 1850-1910 MHz

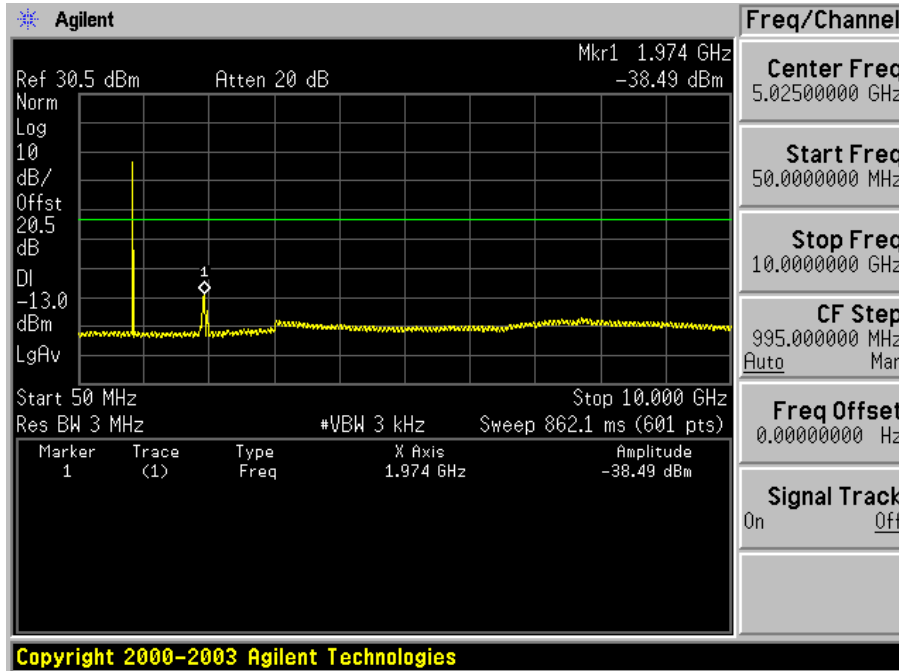
Middle CH (Input/Output)



5 FCC §2.1051, §22.917 & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Cellular Band:

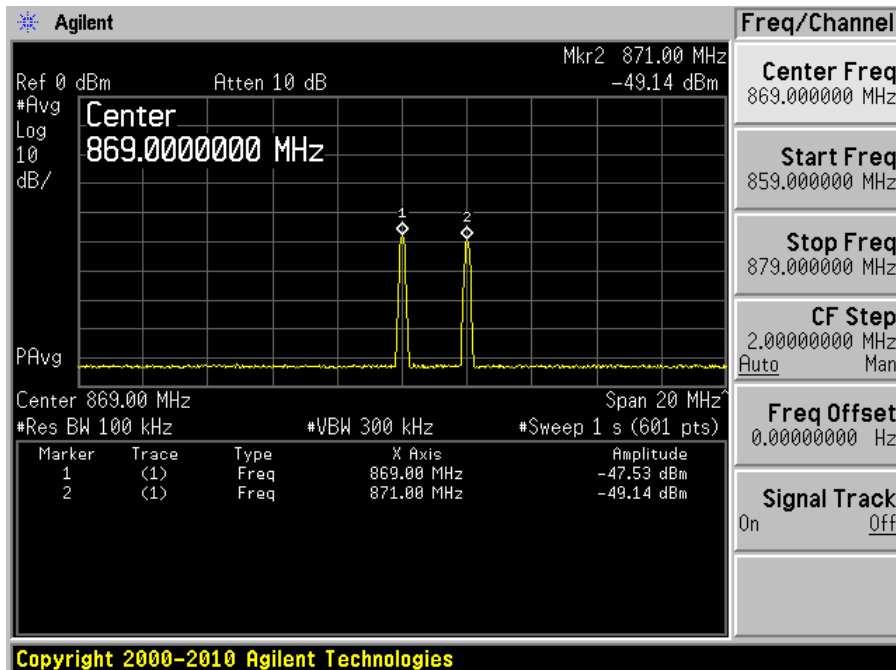
Downlink: 869-894 MHz, Frequency: 881.5 MHz



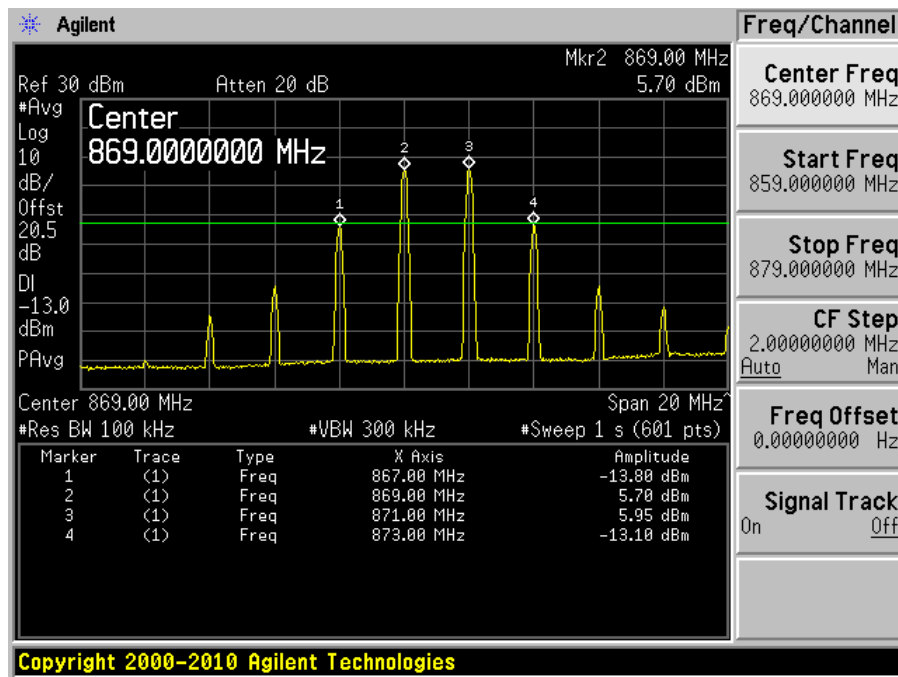
Inter-Modulation:

Lowest Channel

Input

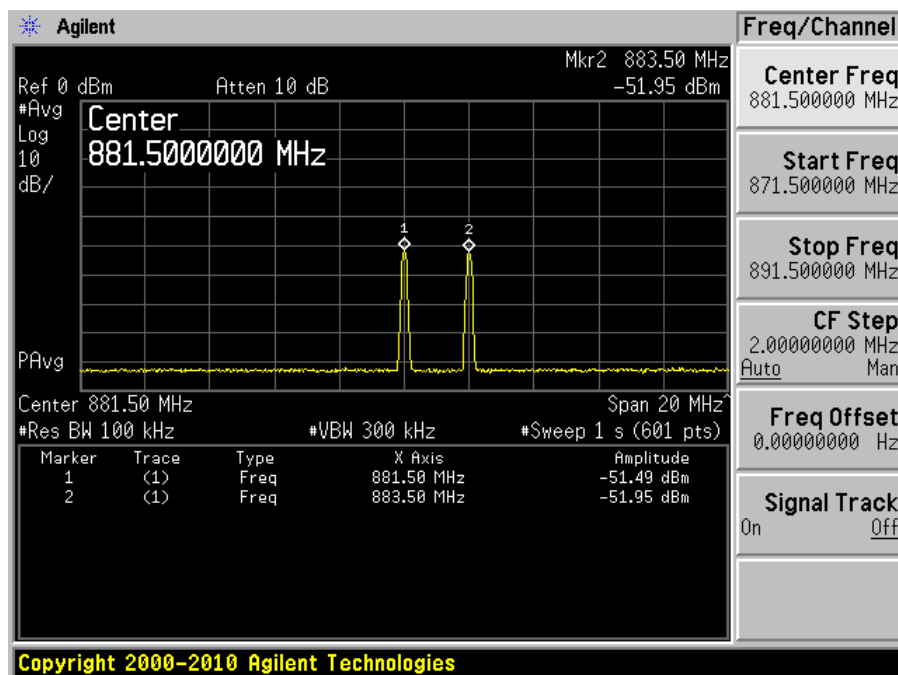


Output

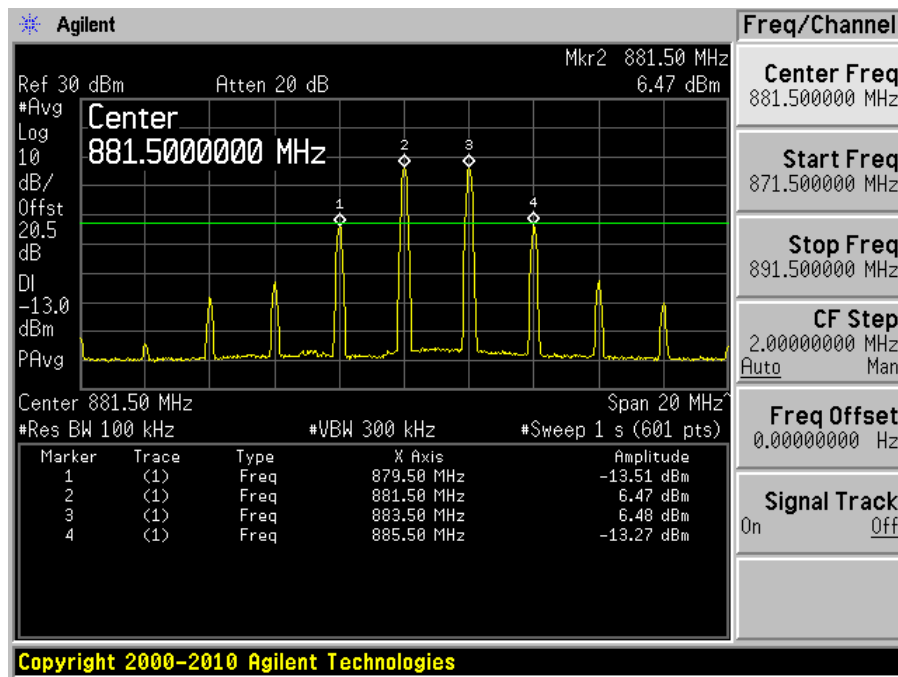


Middle Channel

Input

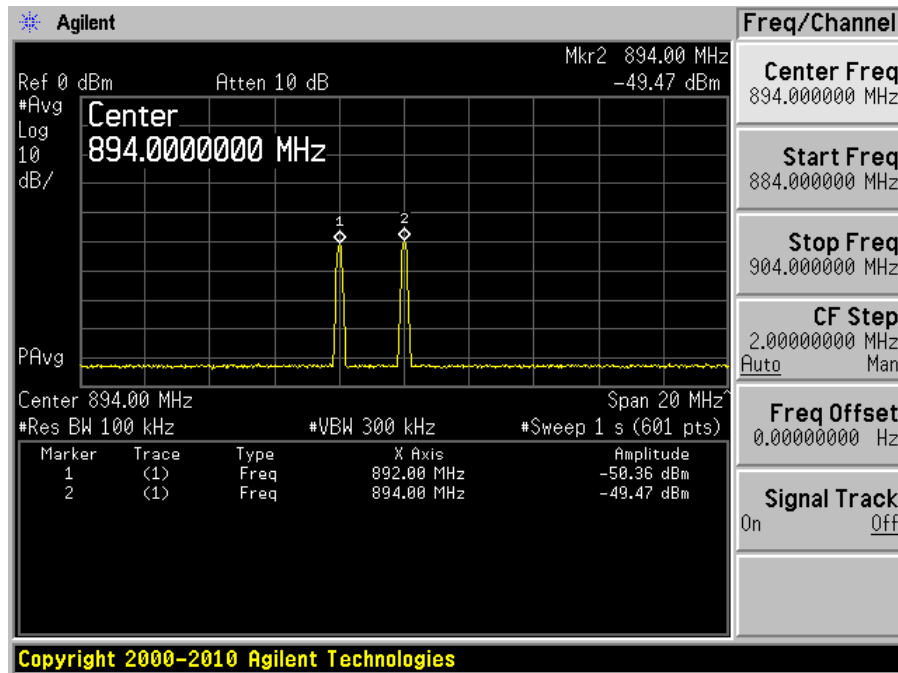


Output

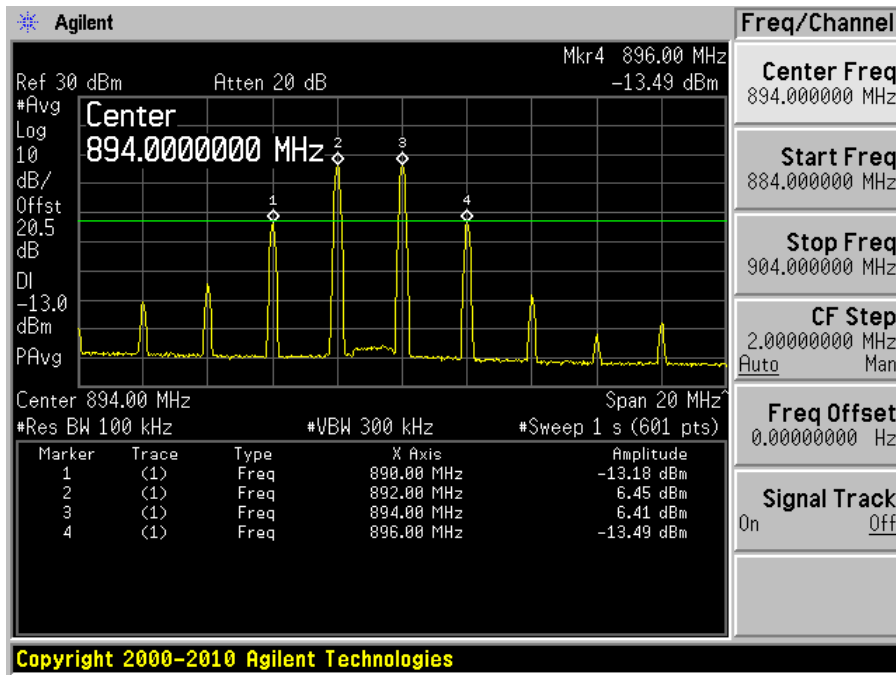


Highest Channel

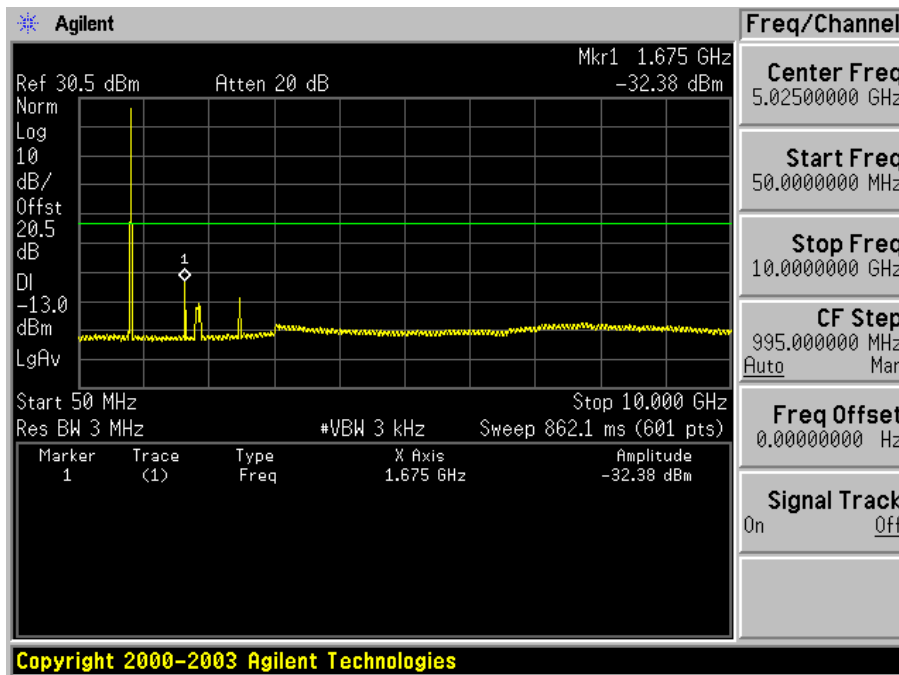
Input



Output



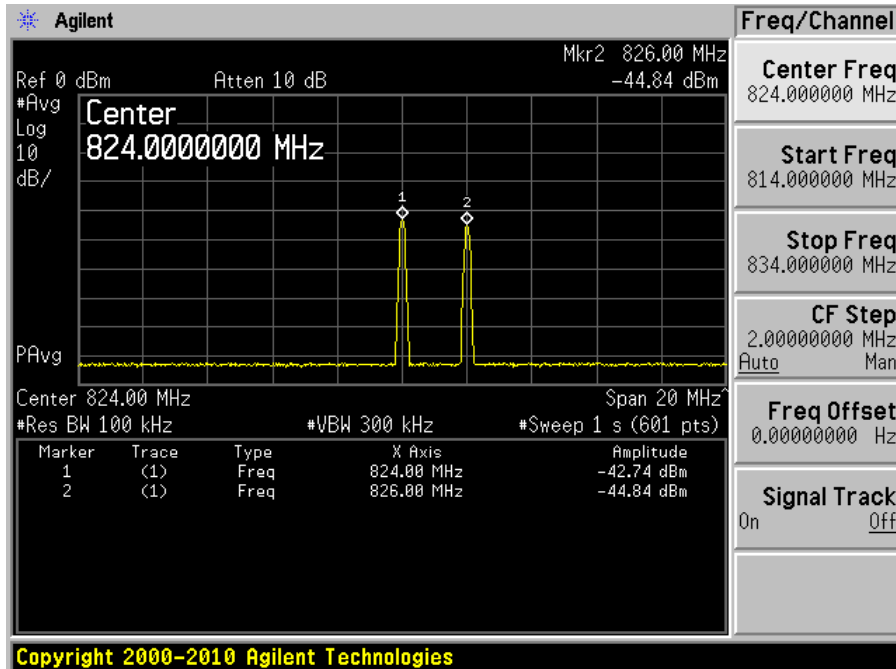
Uplink: 824 – 849 MHz, Frequency: 836.5 MHz



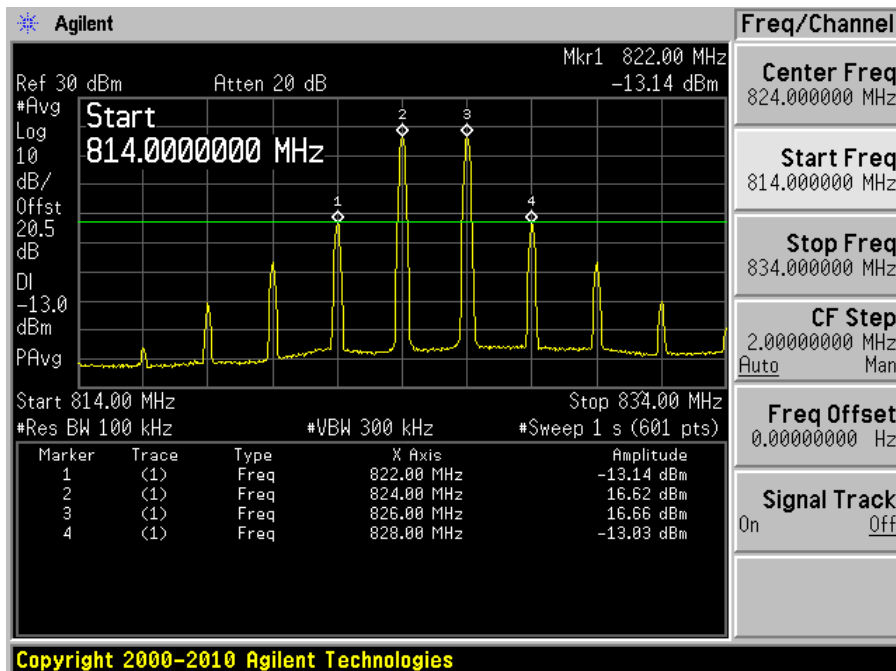
Inter-Modulation:

Lowest Channel

Input

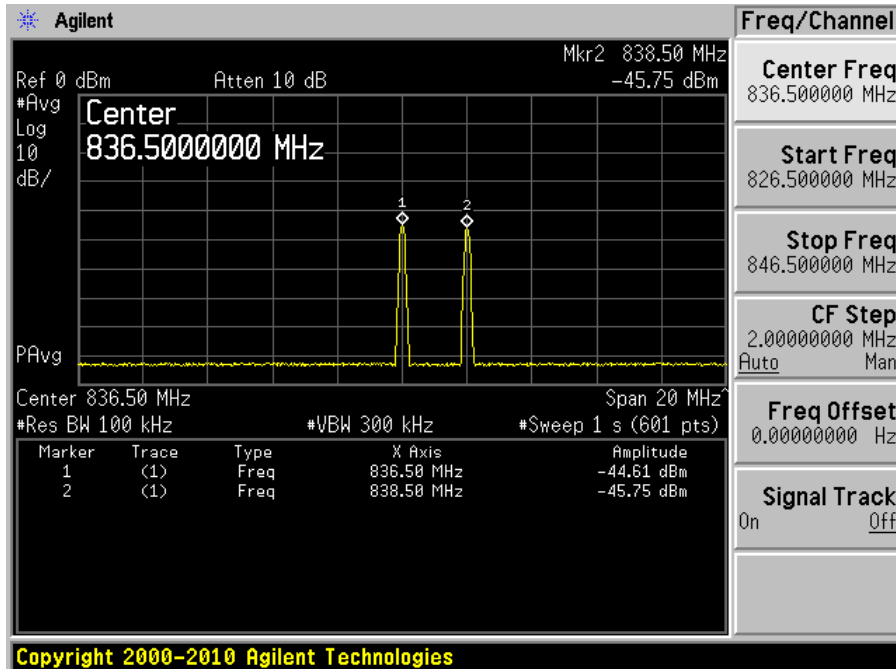


Output

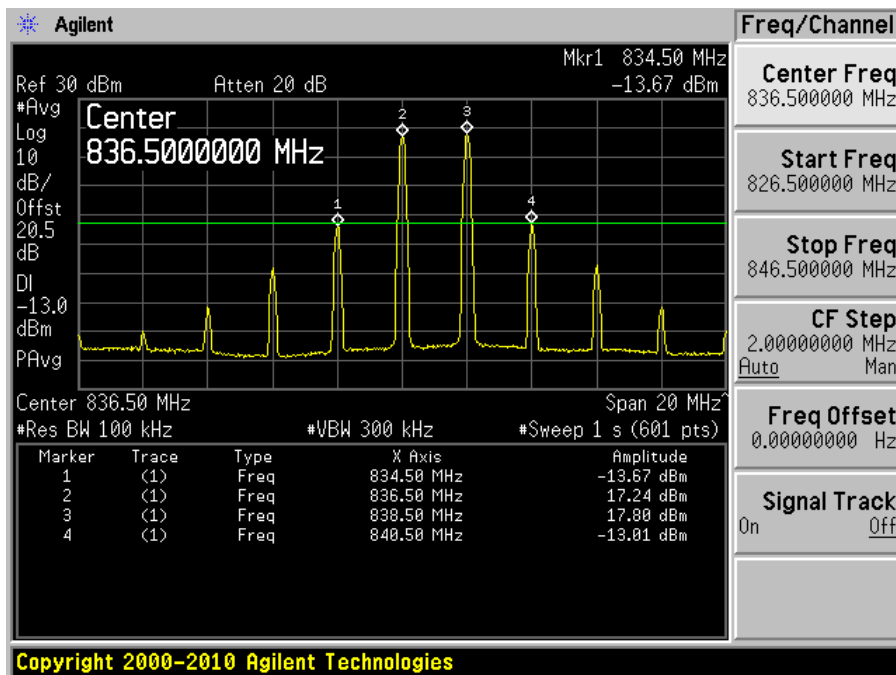


Middle Channel

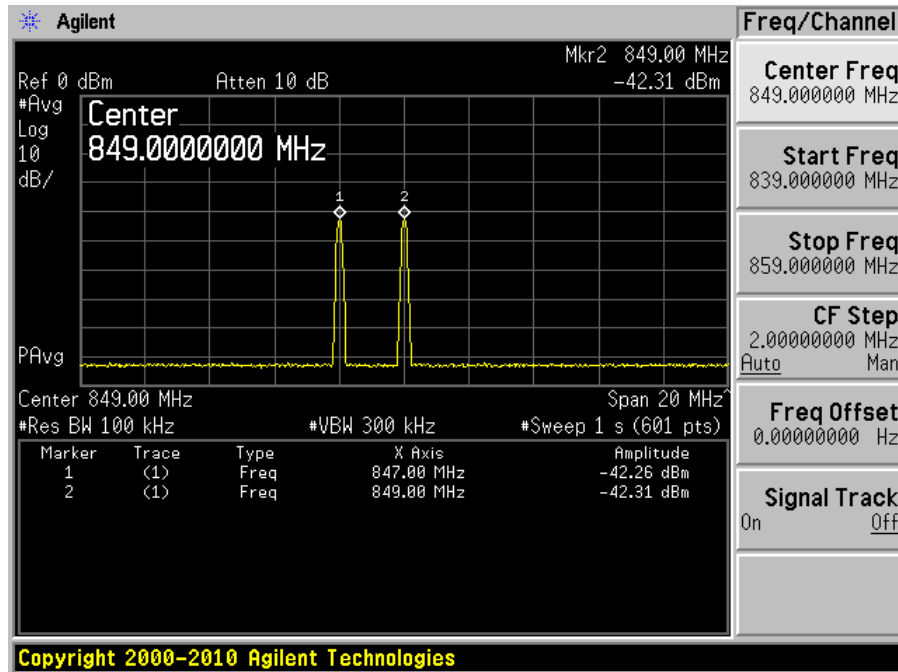
Input



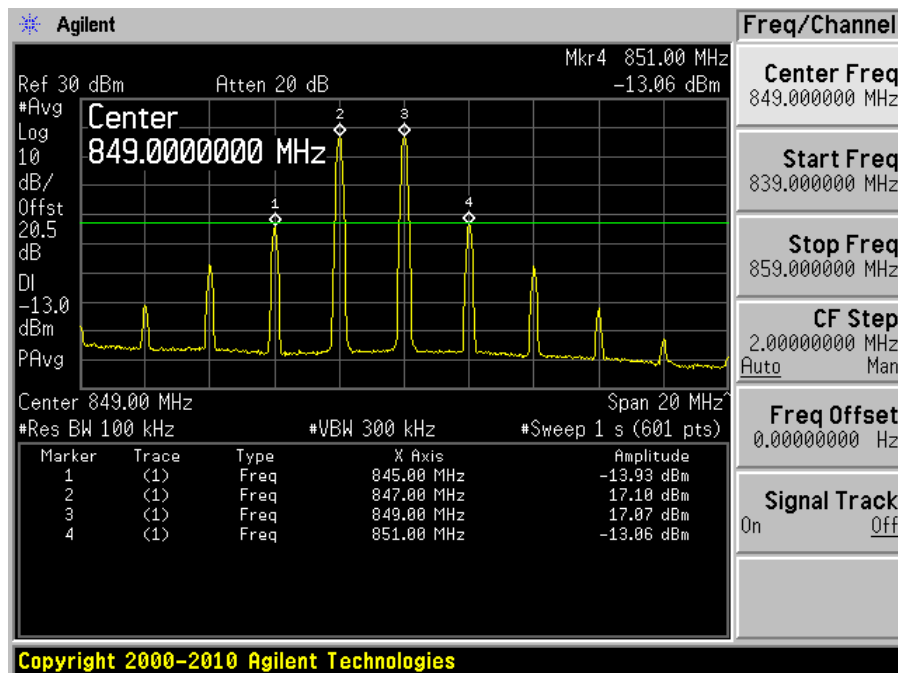
Output



Highest Channel Input

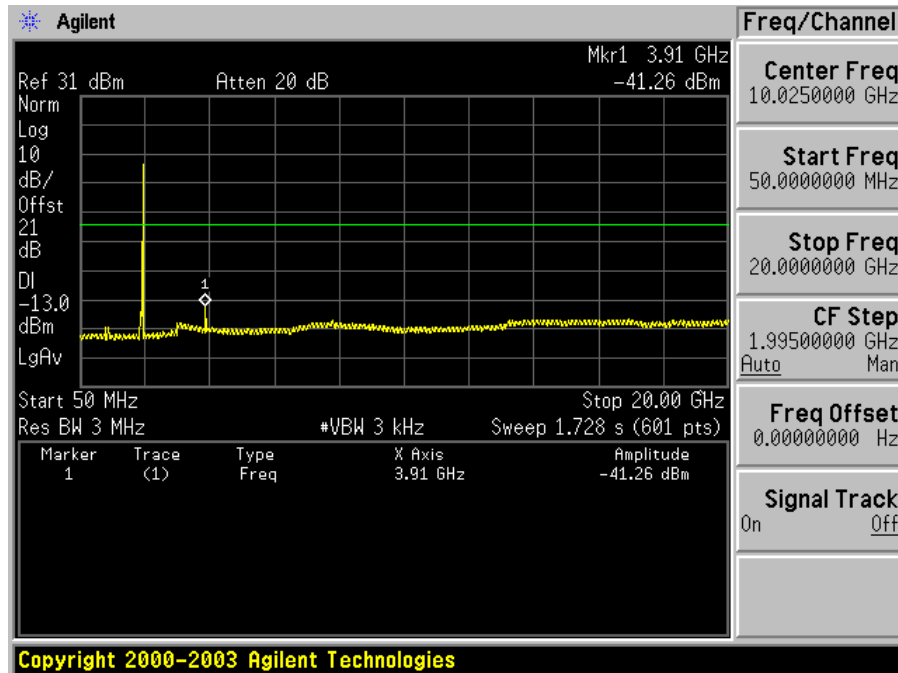


Output



PCS Band:

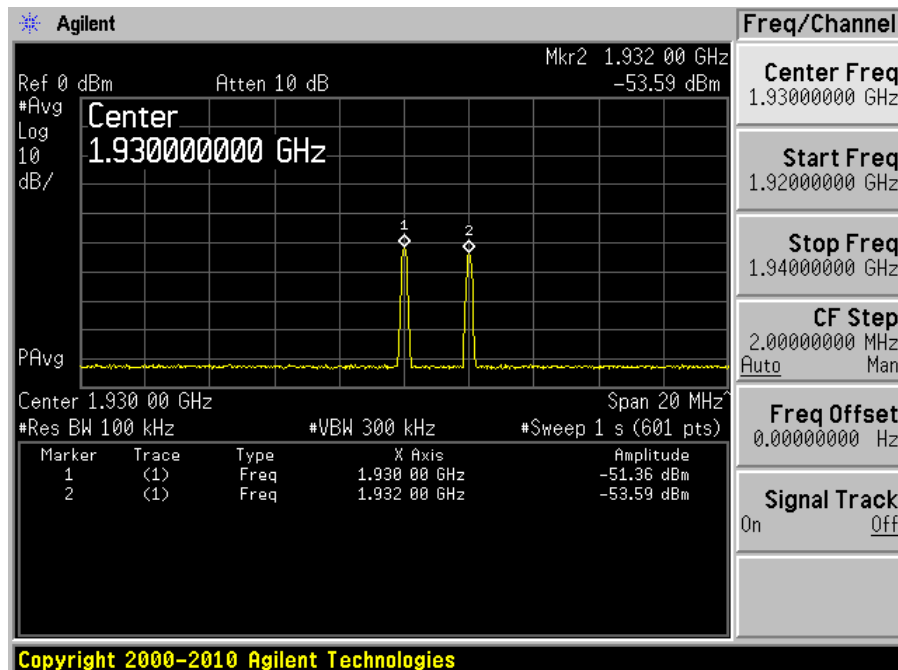
Downlink: 1930-1990 MHz, Frequency: 1960 MHz



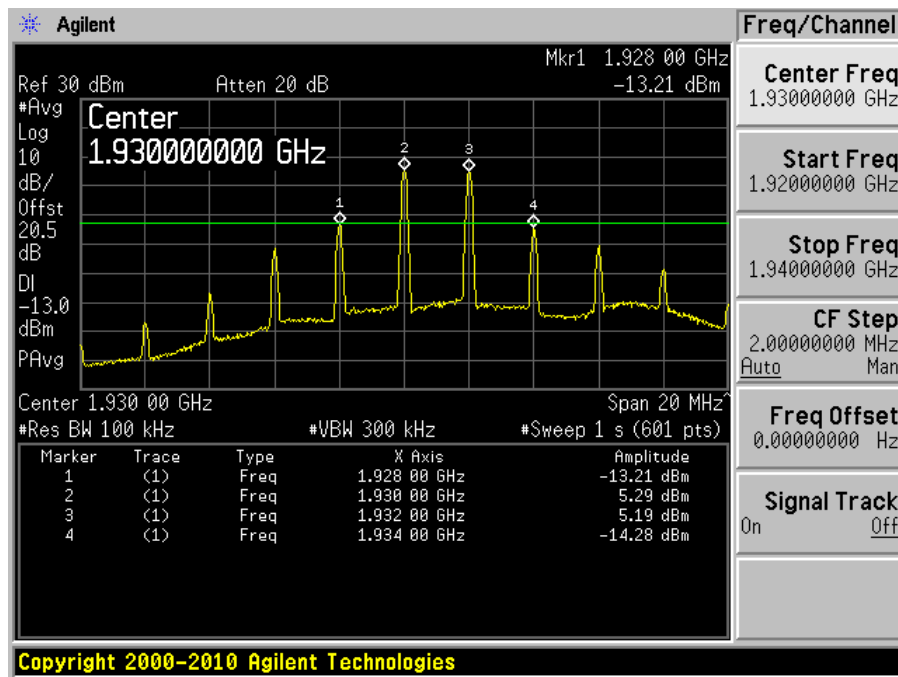
Inter-Modulation:

Lowest Channel

Input

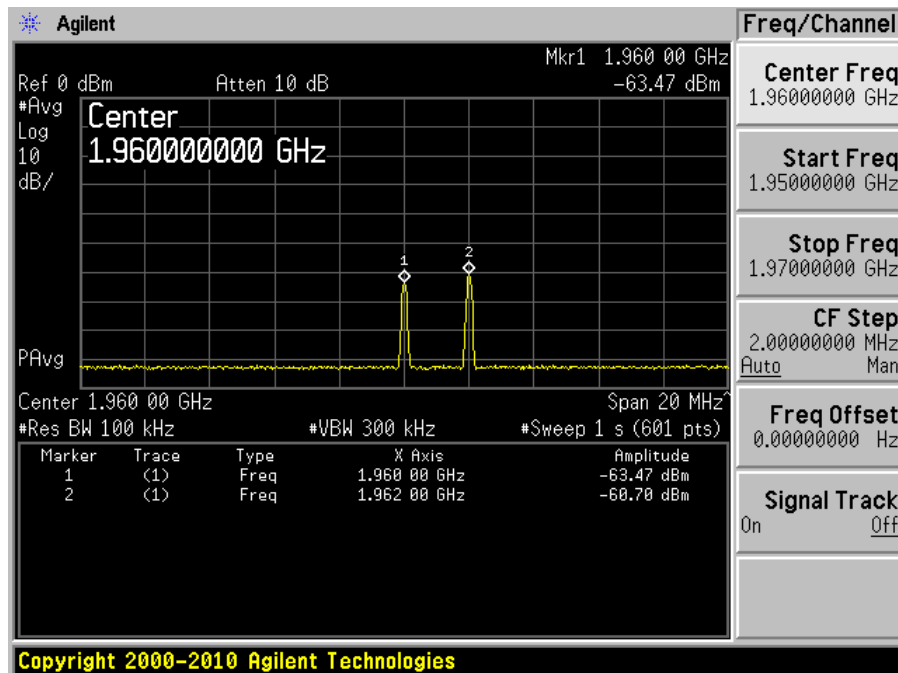


Output

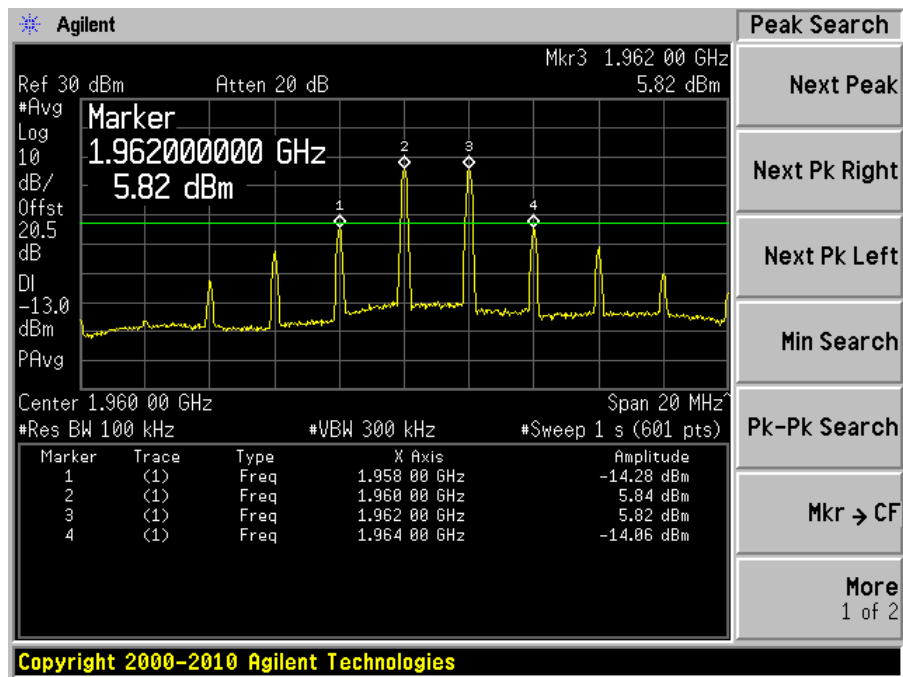


Middle Channel

Input

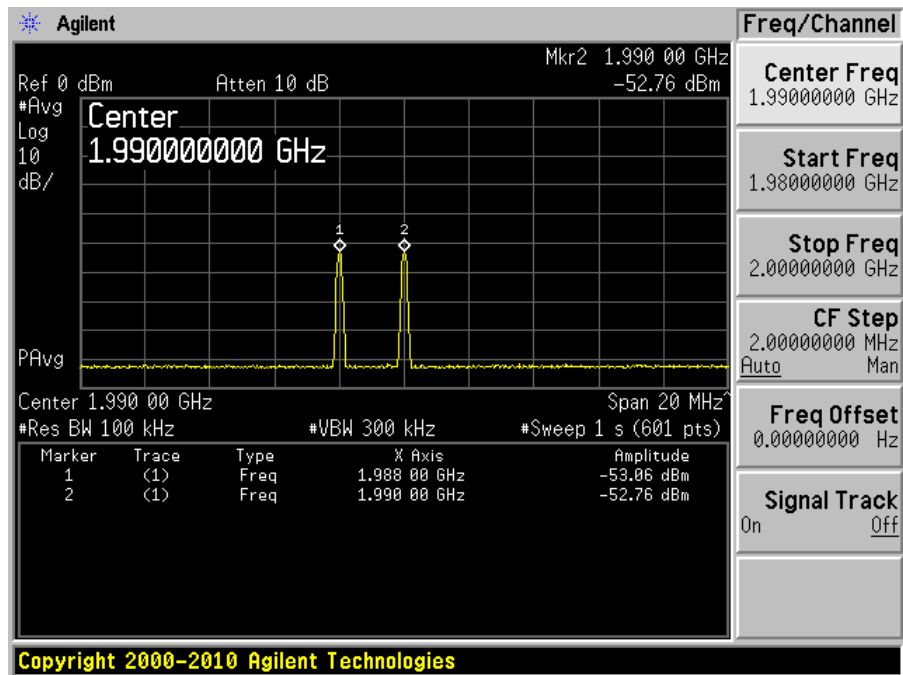


Output

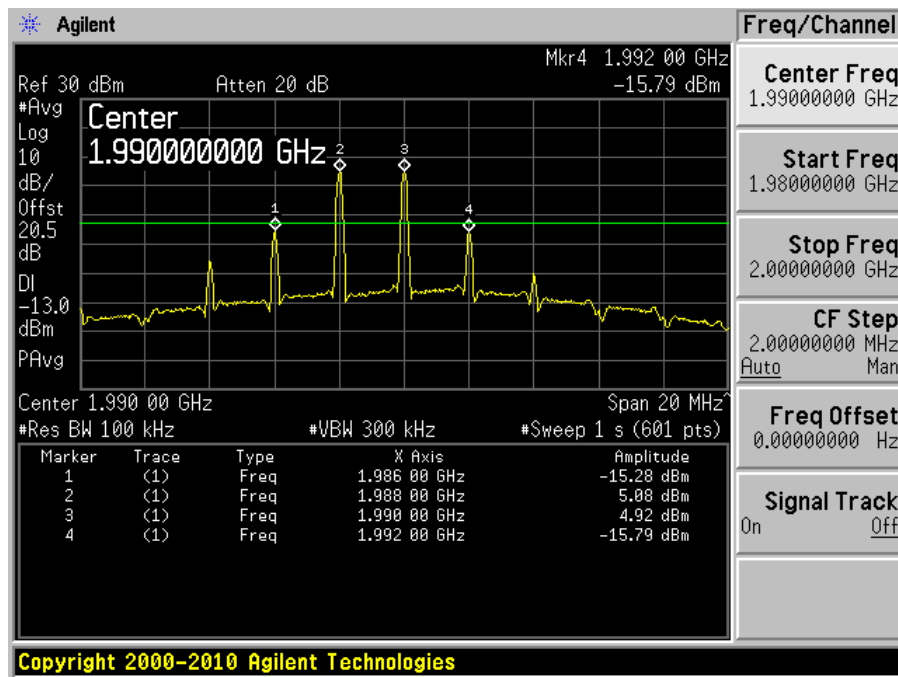


Highest Channel

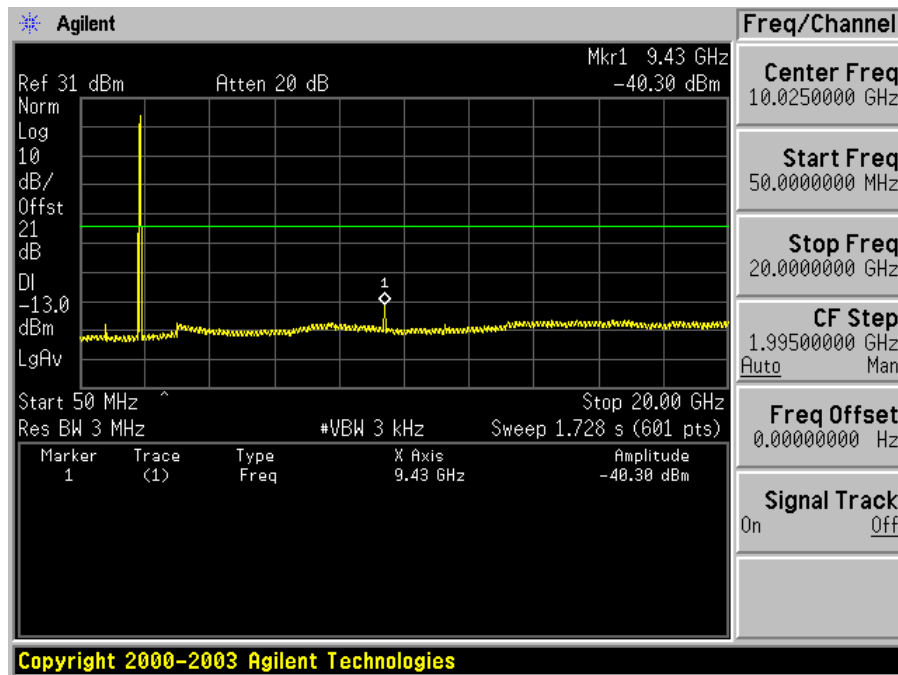
Input



Output



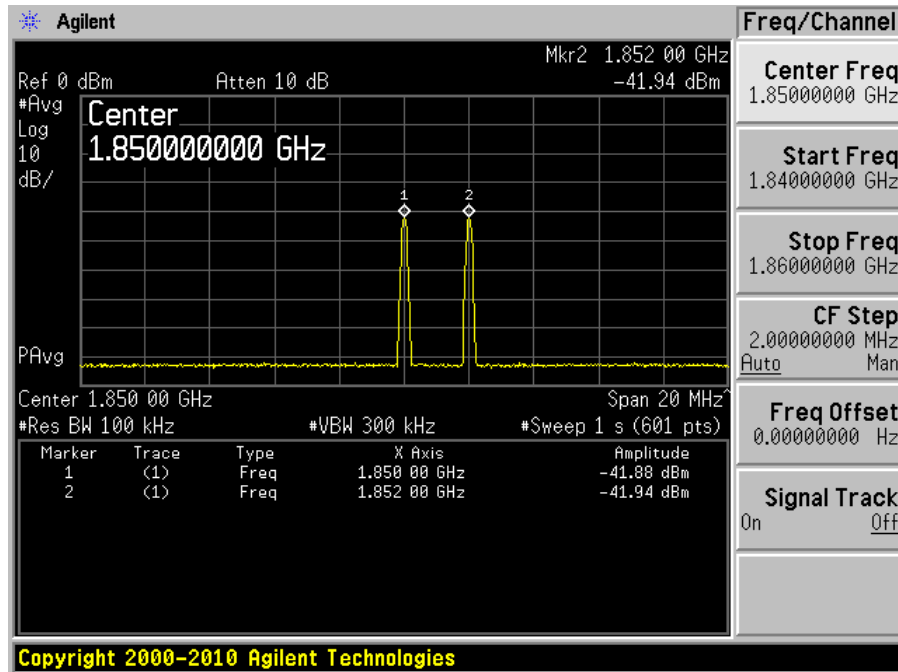
Uplink: 1850-1910 MHz, Frequency: 1880 MHz



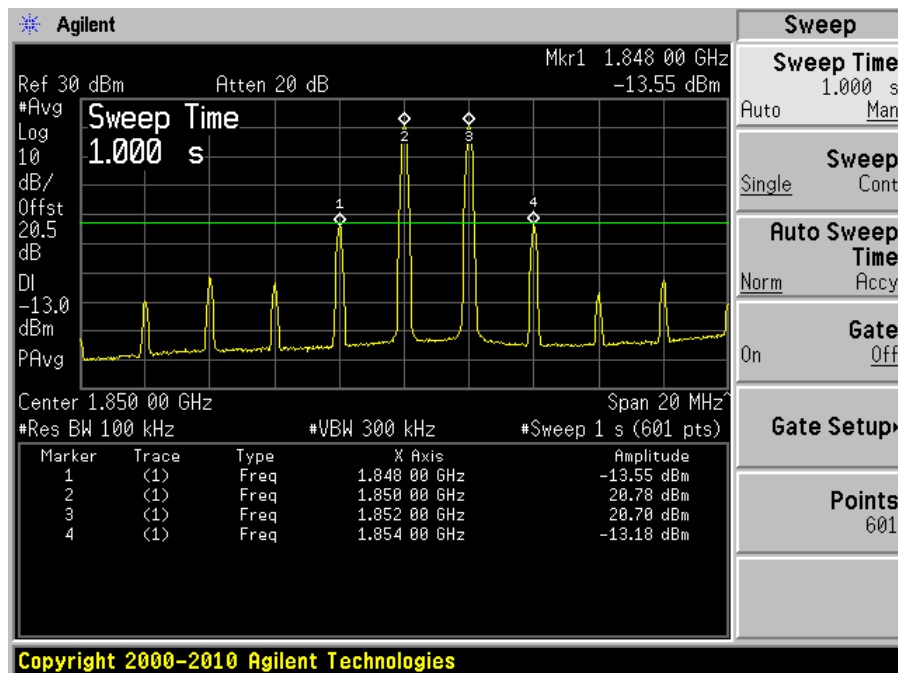
Inter-Modulation:

Lowest Channel

Input

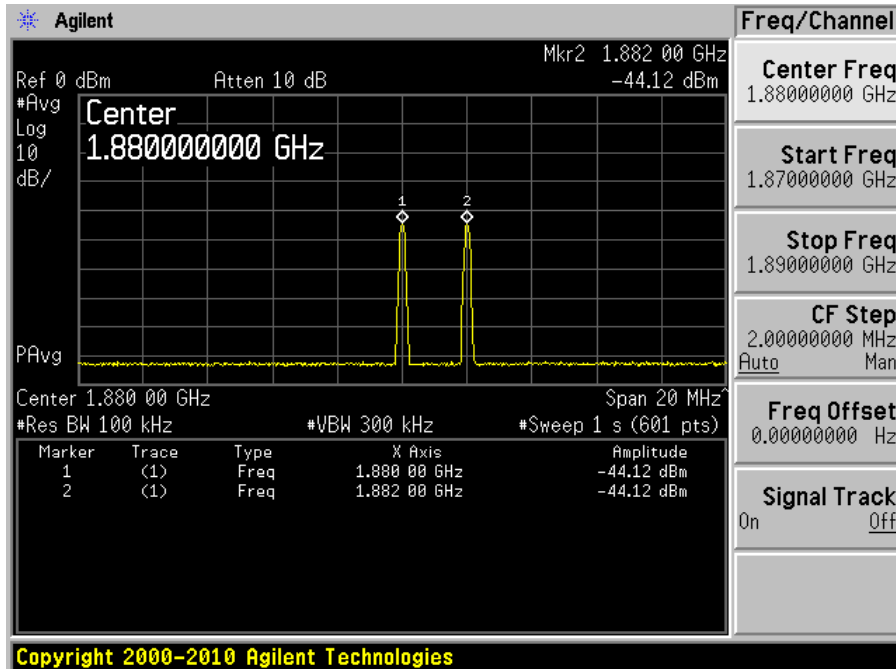


Output

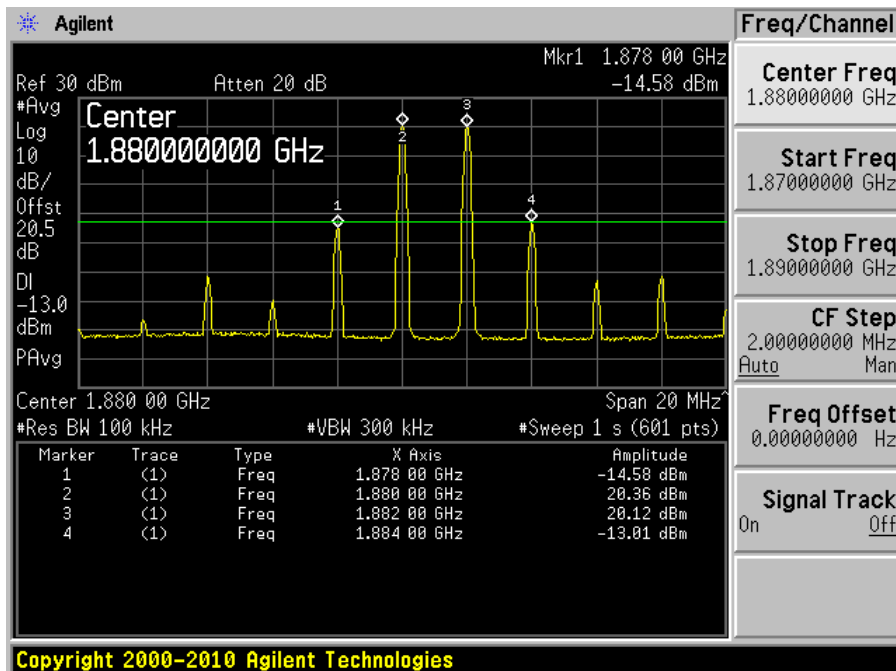


Middle Channel

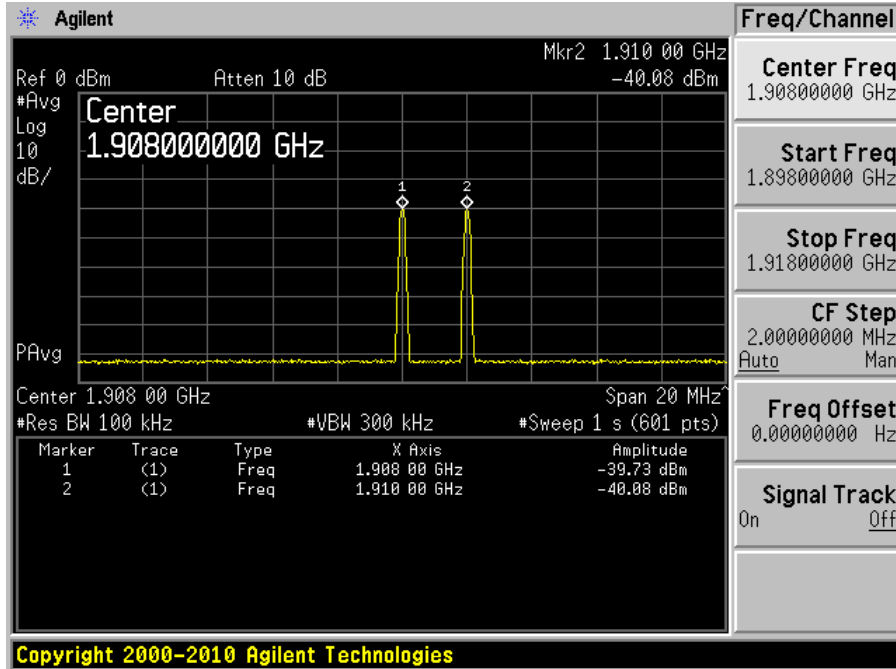
Input



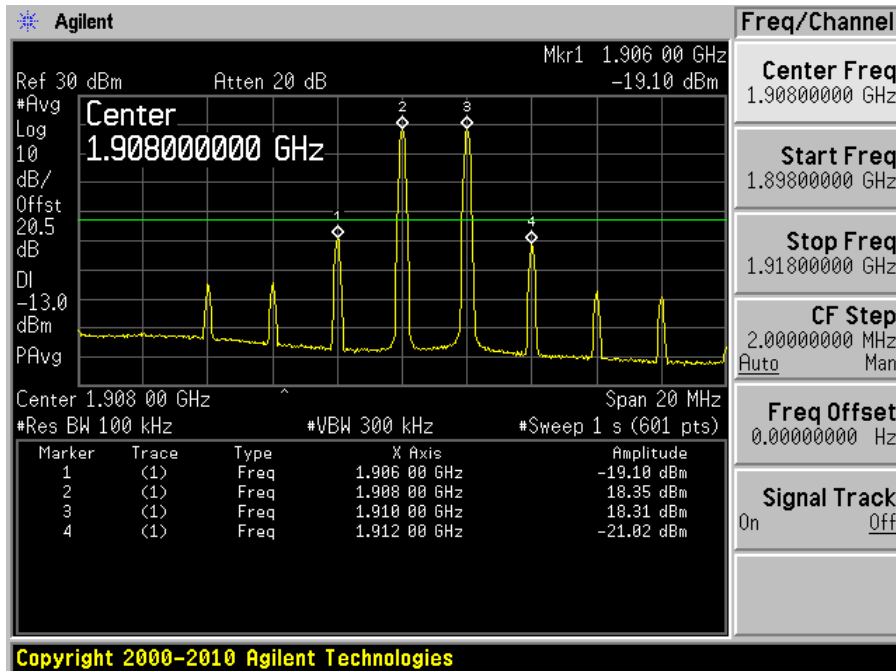
Output



Highest Channel Input



Output

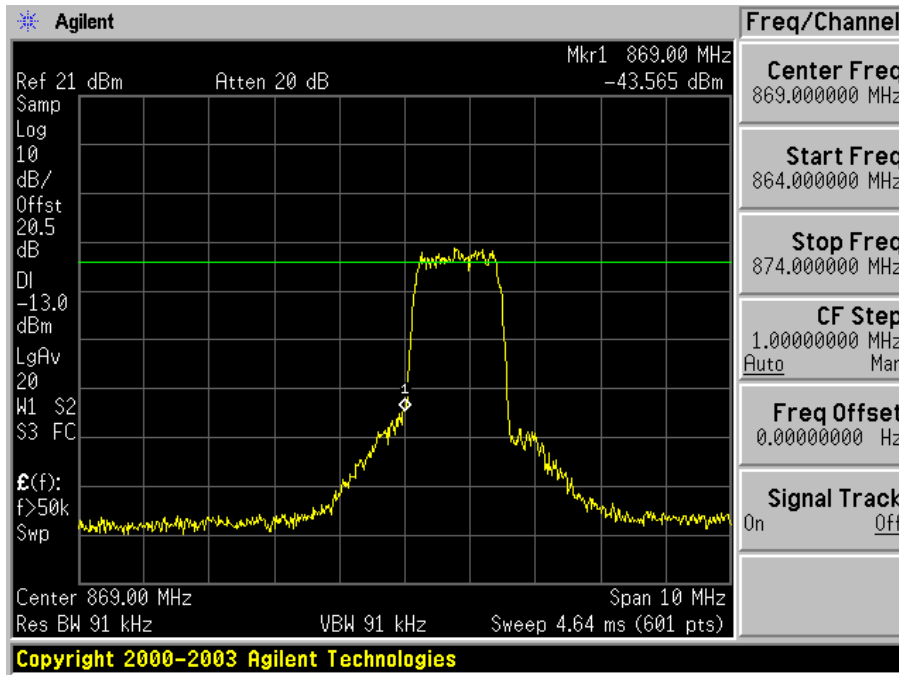


6 FCC §22.917 & §24.238 - BAND EDGE

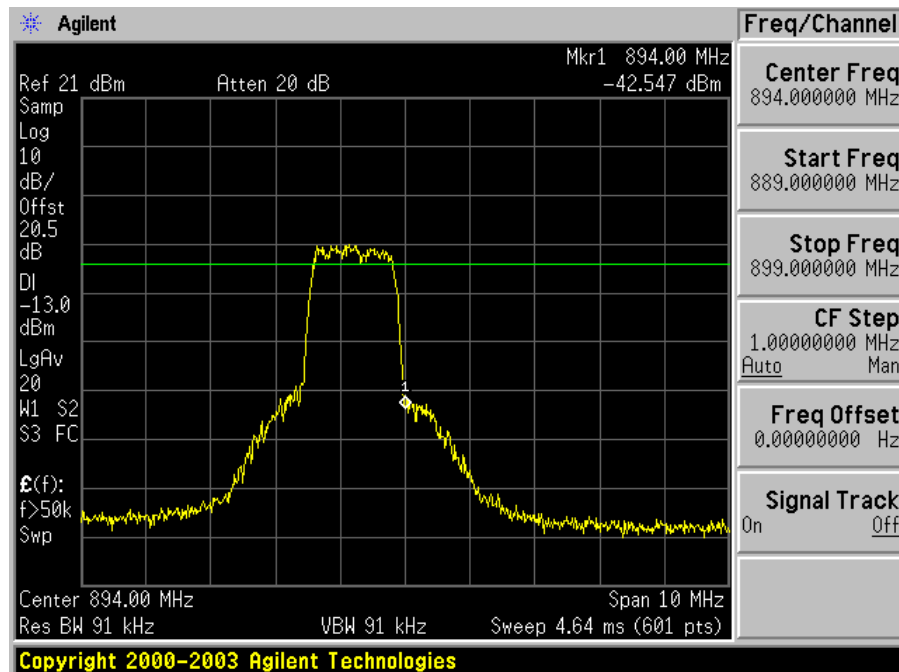
Cellular Band:

Modulation: CDMA, Downlink 869-894 MHz

Plot 1: Lowest Edge

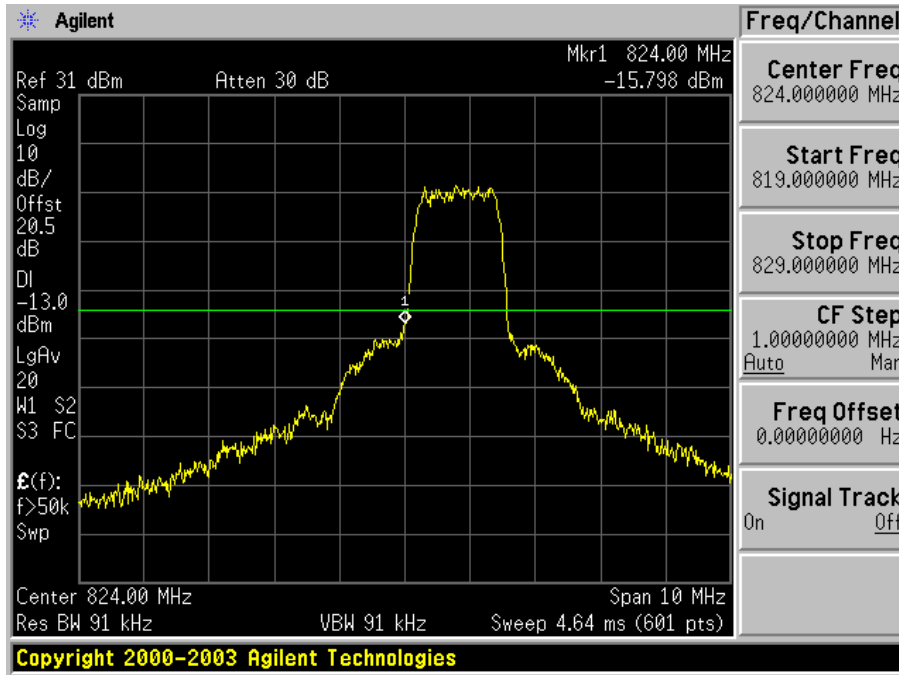


Plot 2: Highest Edge

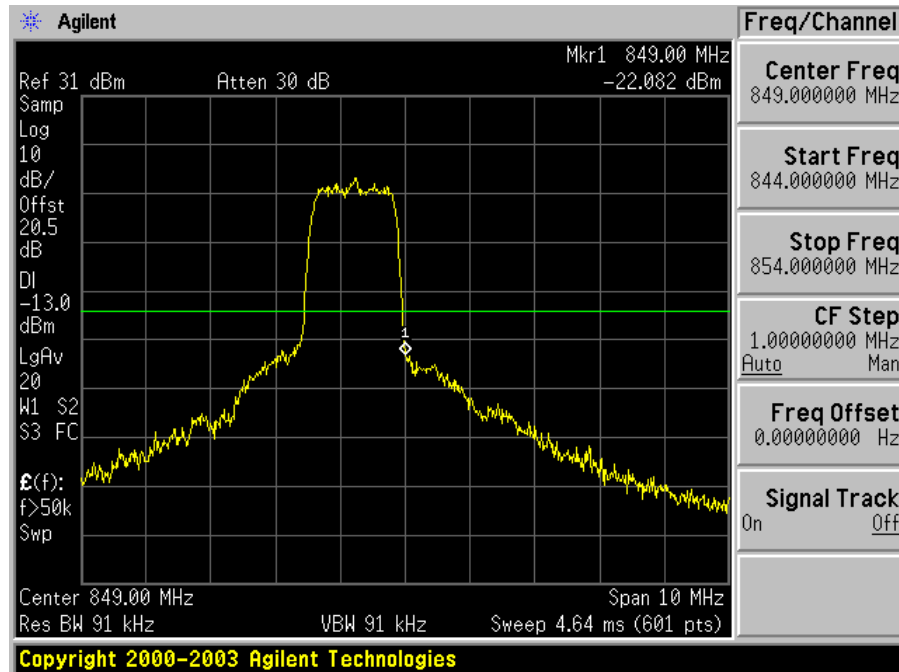


Modulation: CDMA, Uplink 824-849 MHz

Plot 1: Lowest Edge



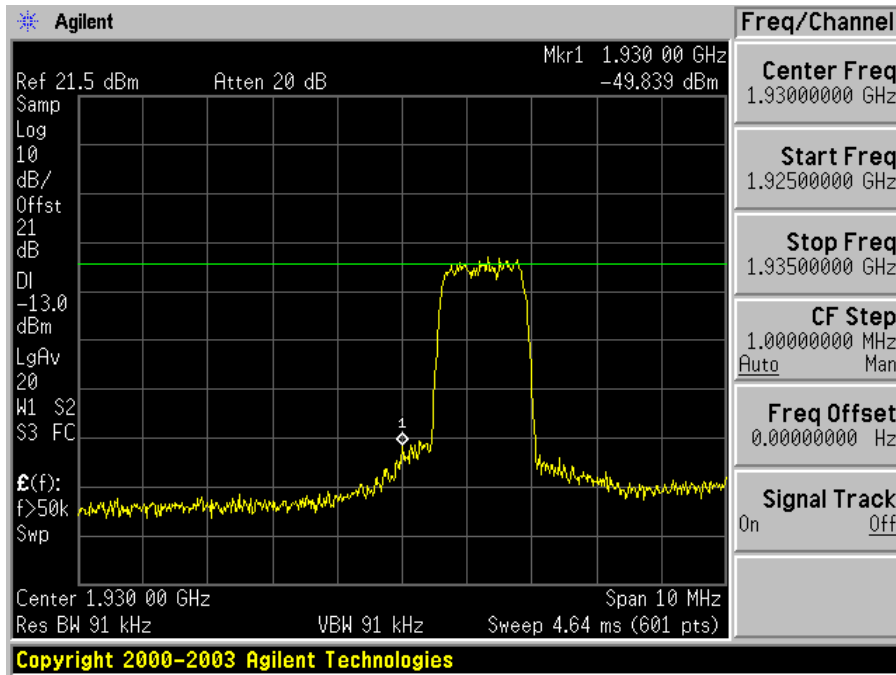
Plot 2: Highest Edge



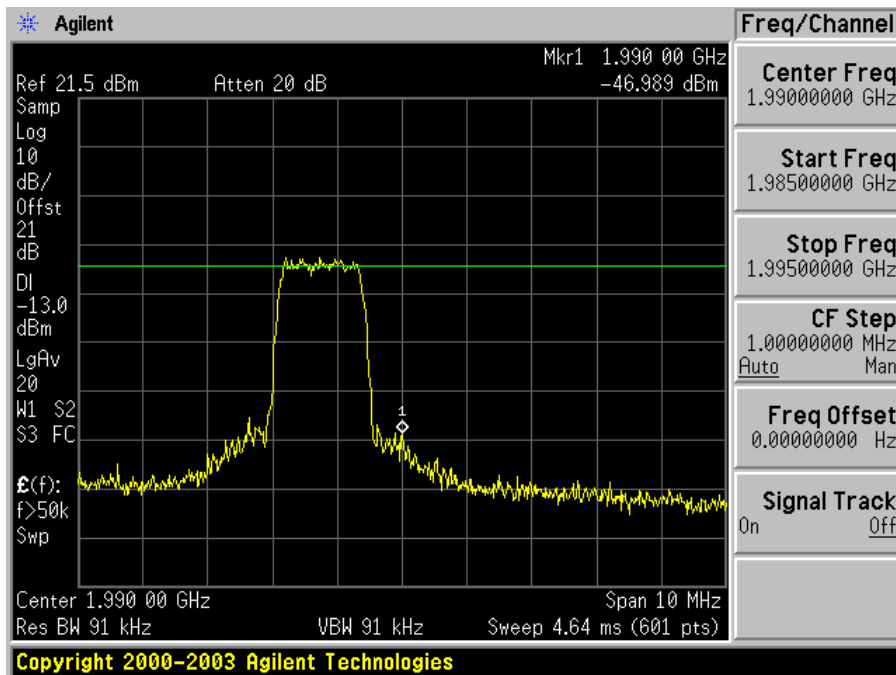
PCS Band:

Modulation: CDMA, Downlink 1930-1990 MHz

Plot 1: Lowest Edge

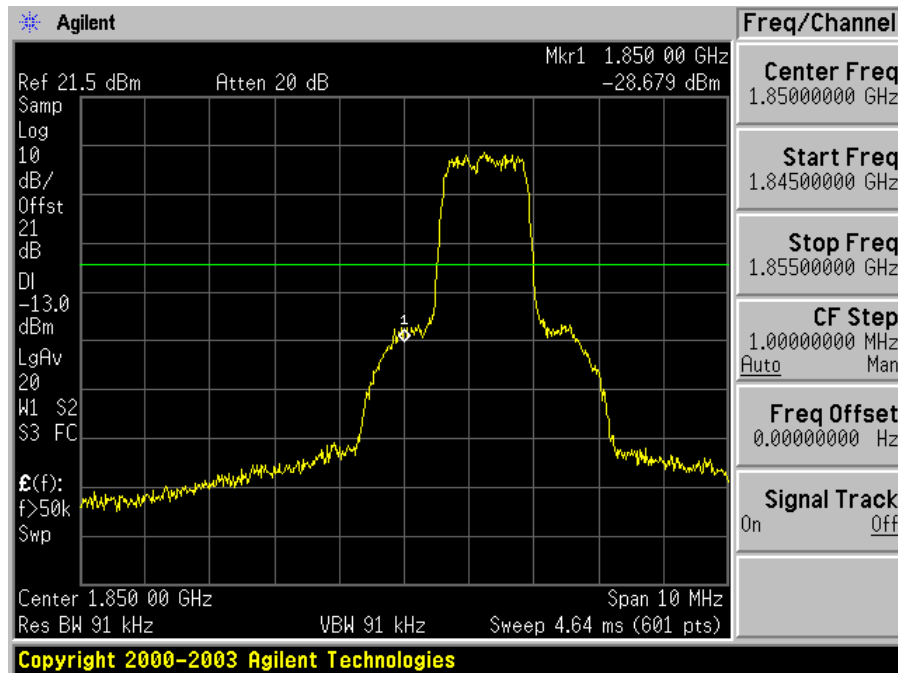


Plot 2: Highest Edge

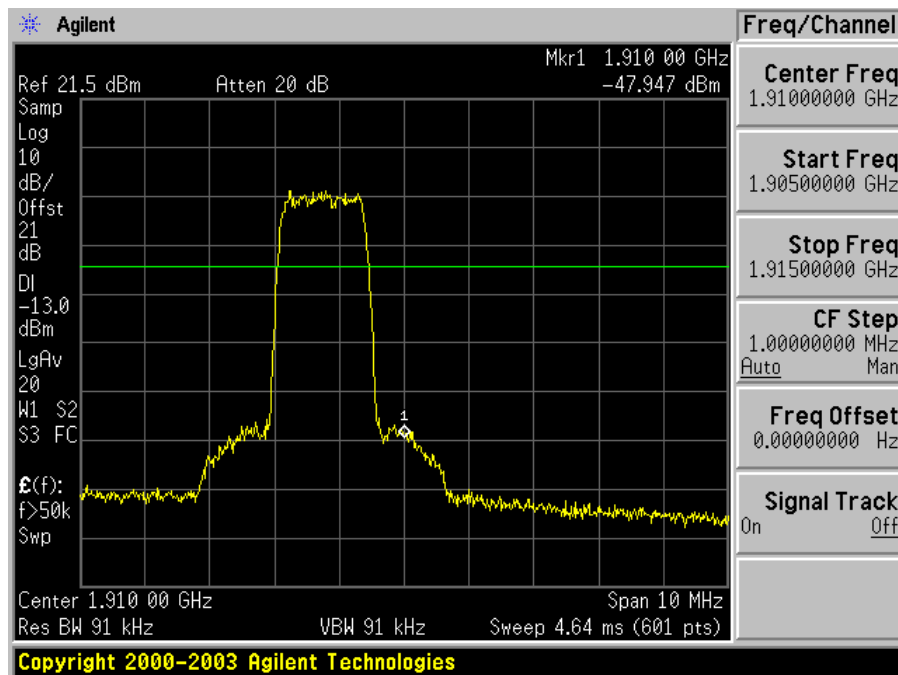


Modulation: CDMA, Uplink 1850-1910 MHz

Plot 1: Lowest Edge



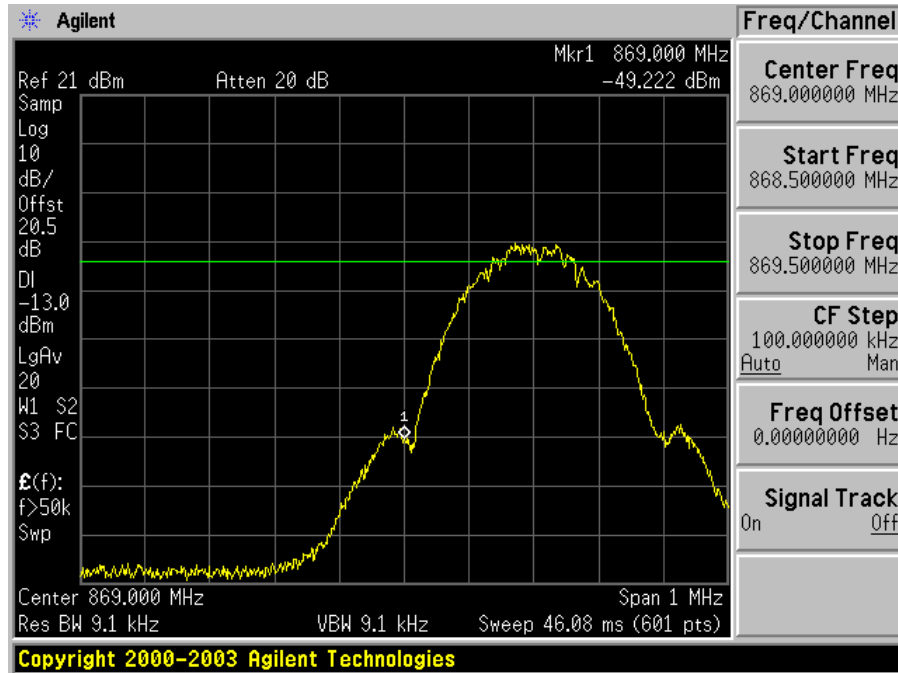
Plot 2: Highest Edge



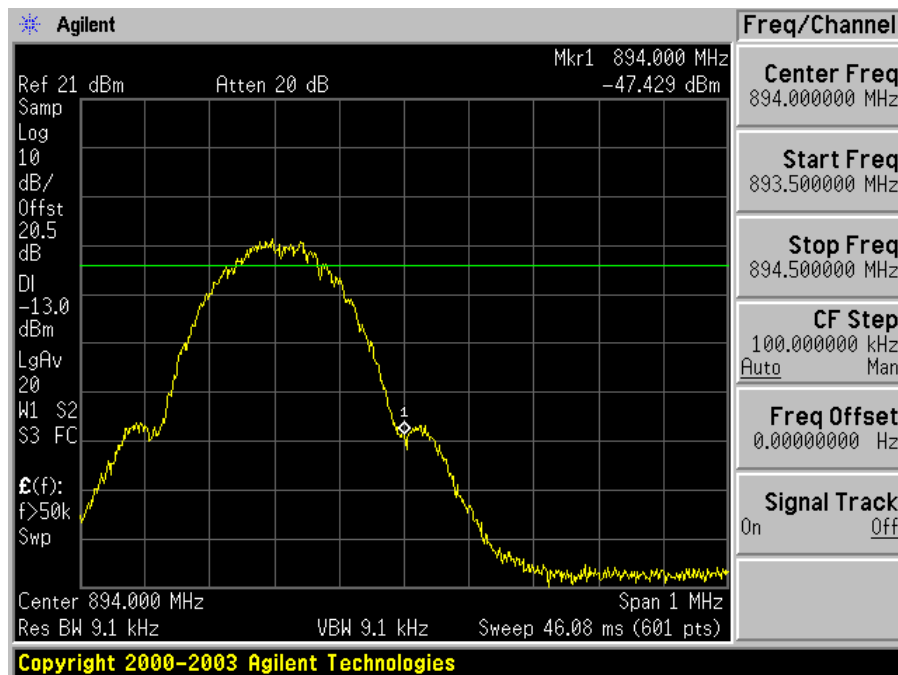
Cellular Band:

Modulation: GSM, Downlink 869-894 MHz

Plot 1: Lowest Edge

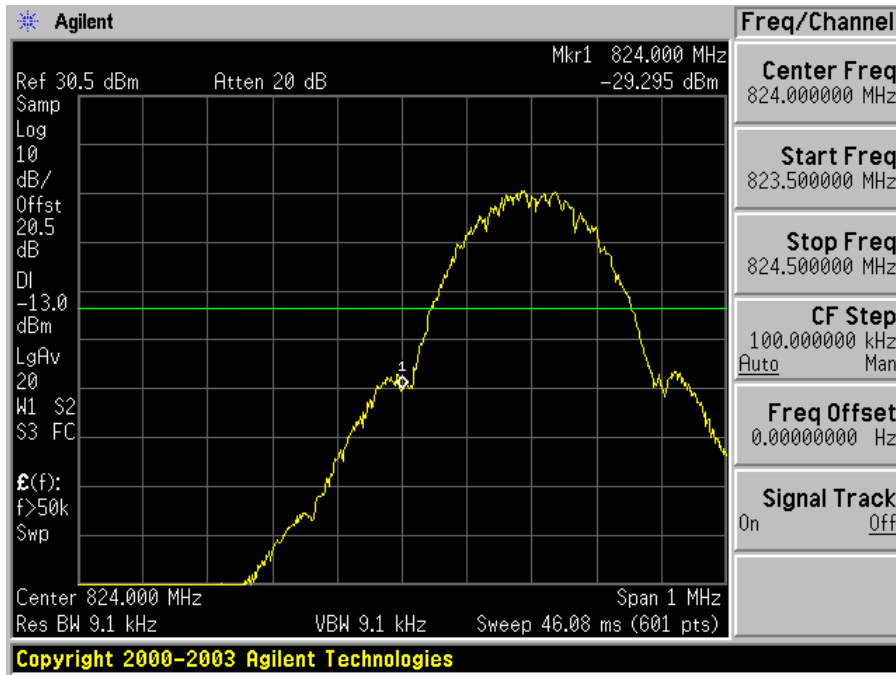


Plot 2: Highest Edge

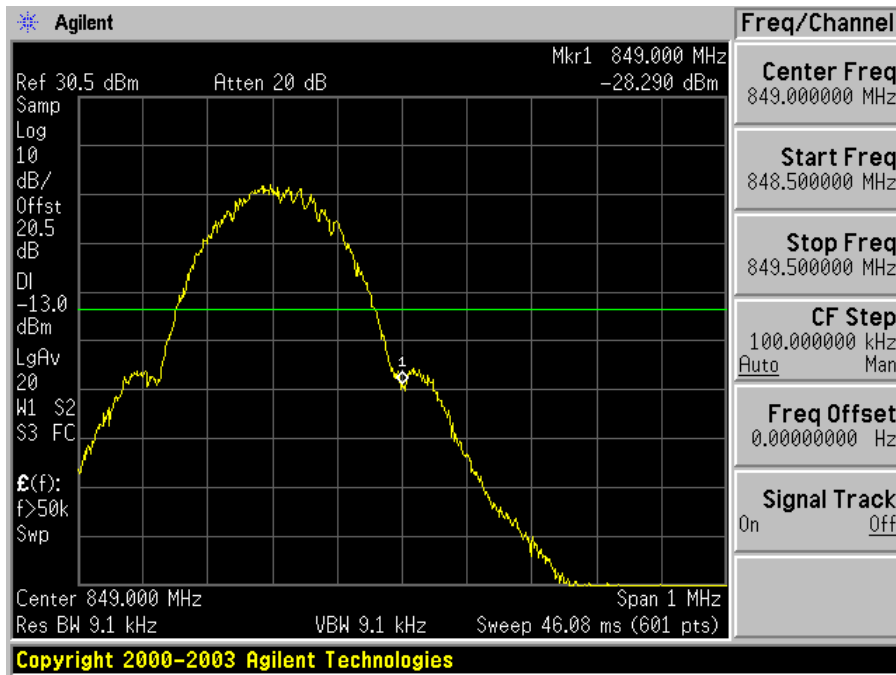


Modulation: GSM, Uplink 824-849 MHz

Plot 1: Lowest Edge



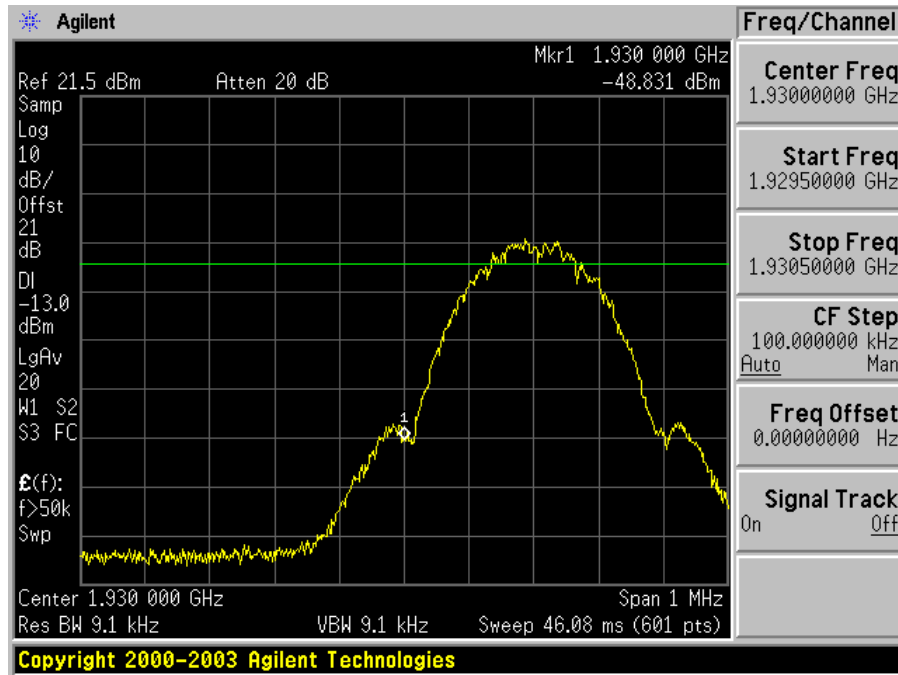
Plot 2: Highest Edge



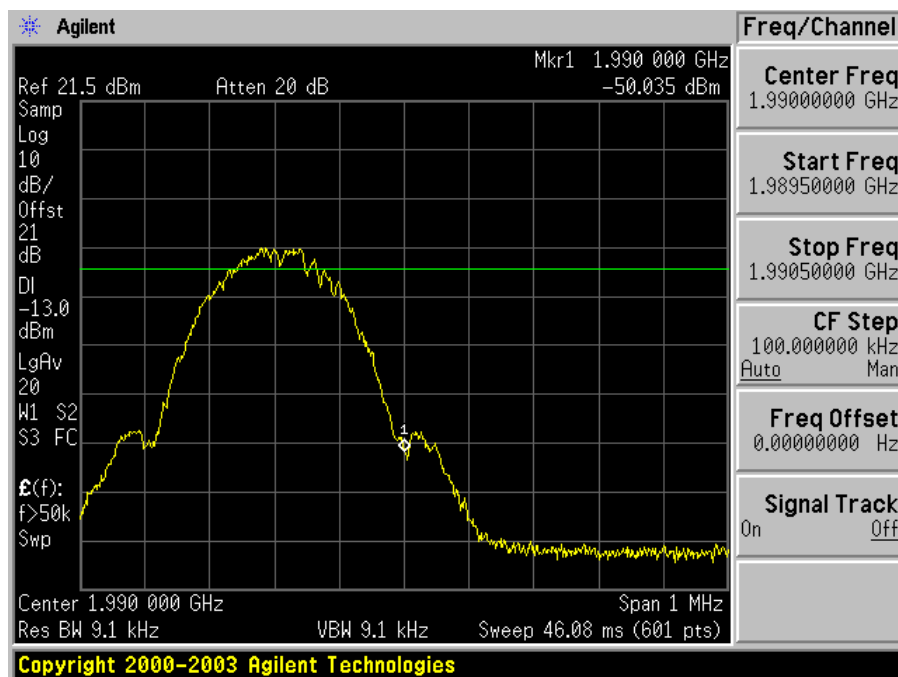
PCS Band:

Modulation: GSM, Downlink 1930-1990 MHz

Plot 1: Lowest Edge

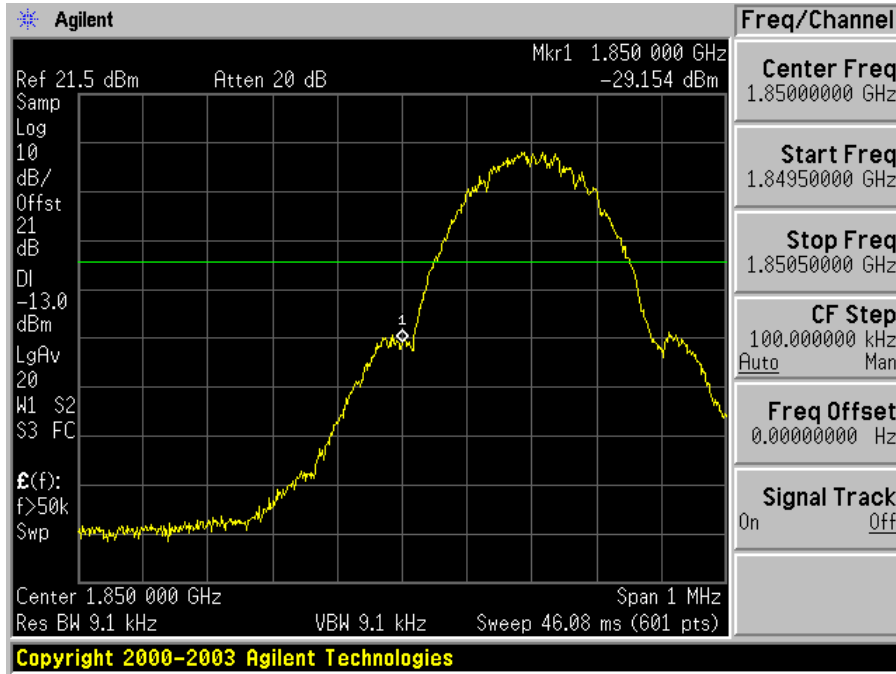


Plot 2: Highest Edge

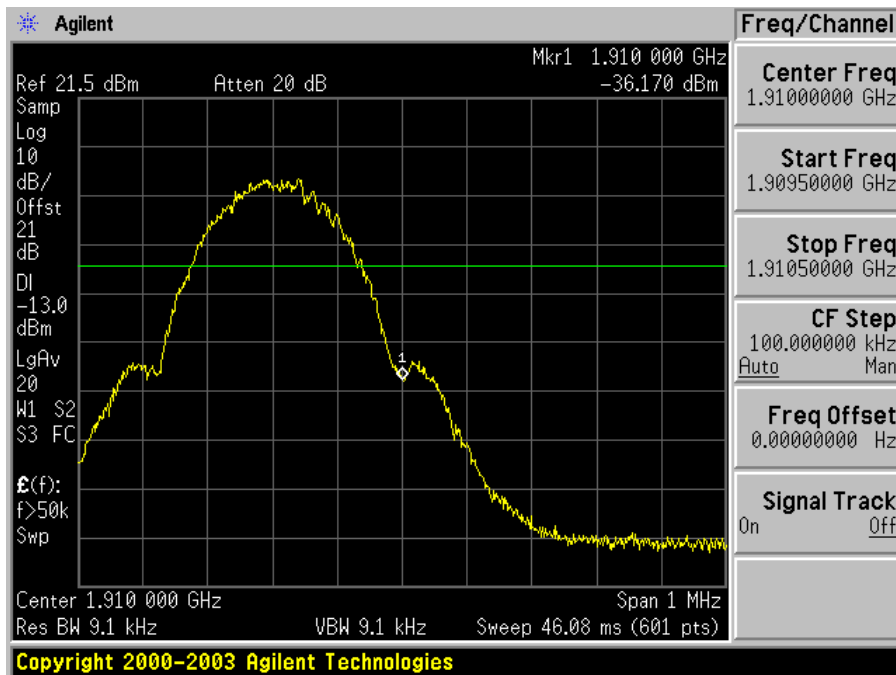


Modulation: GSM, Uplink 1850-1910 MHz

Plot 1: Lowest Edge



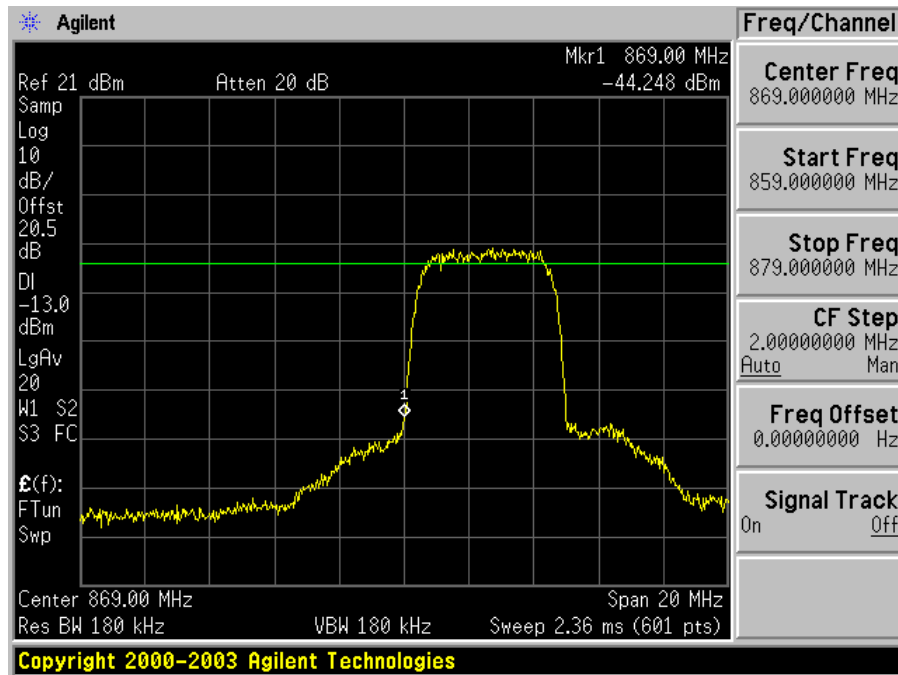
Plot 2: Highest Edge



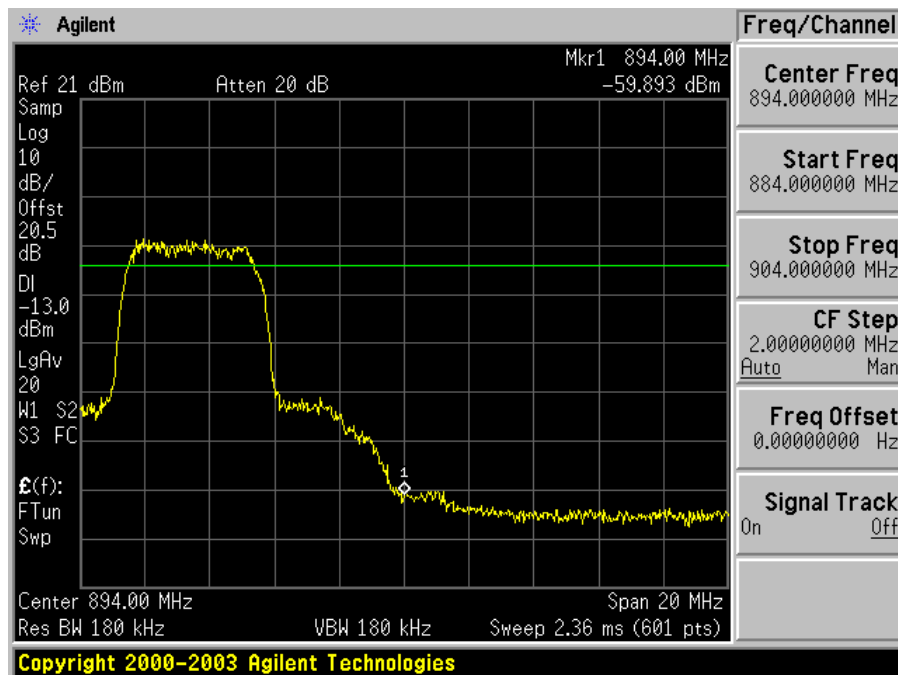
Cellular Band:

Modulation: WCDMA, Downlink 869-894 MHz

Plot 1: Lowest Edge

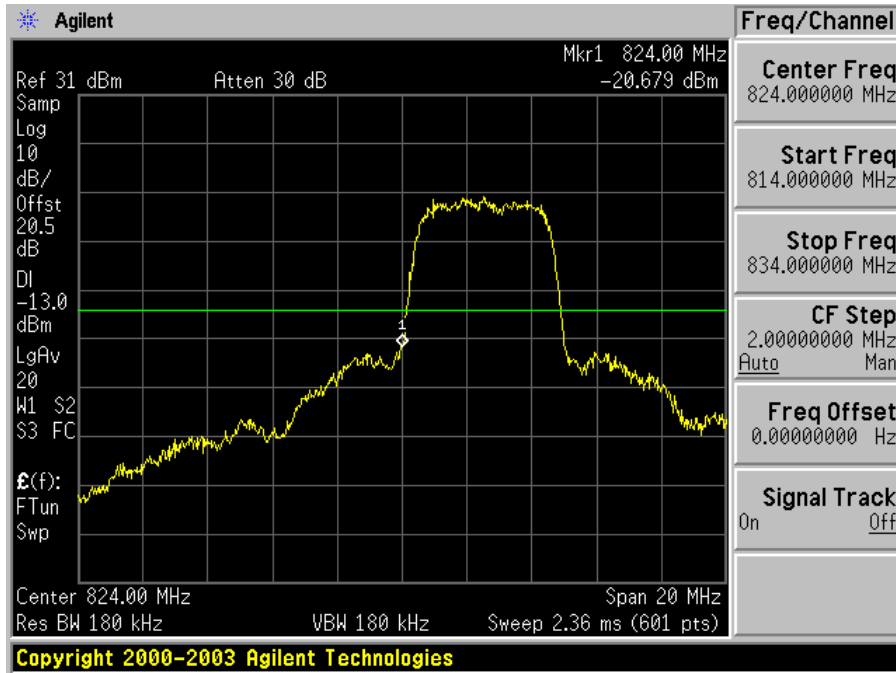


Plot 2: Highest Edge

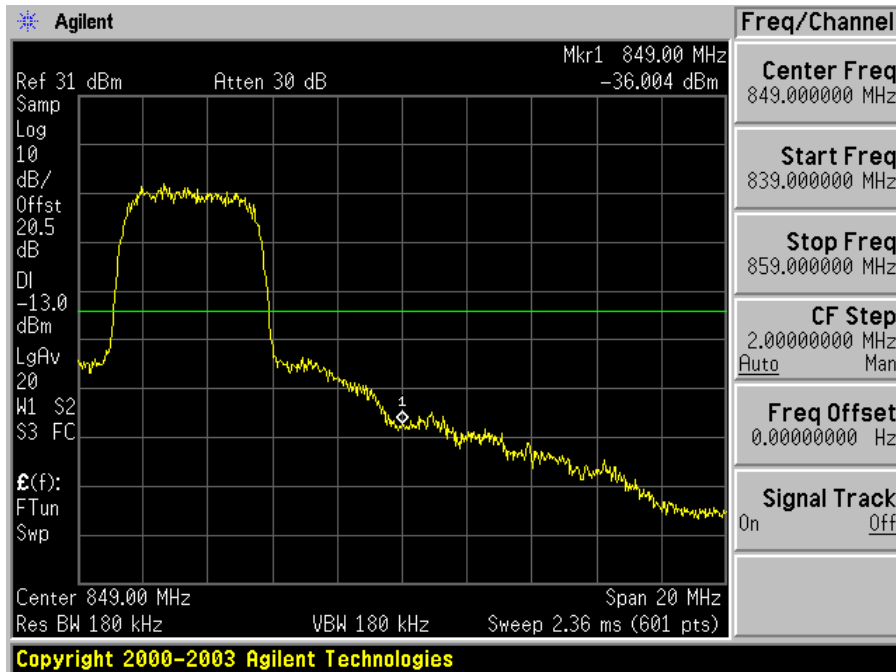


Modulation: WCDMA, Uplink 824-849 MHz

Plot 1: Lowest Edge



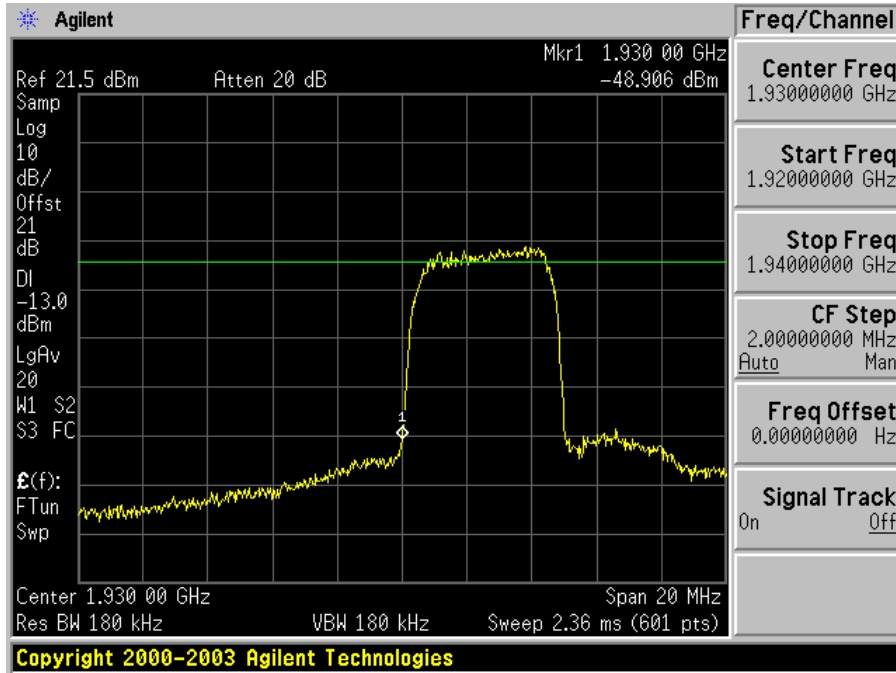
Plot 2: Highest Edge



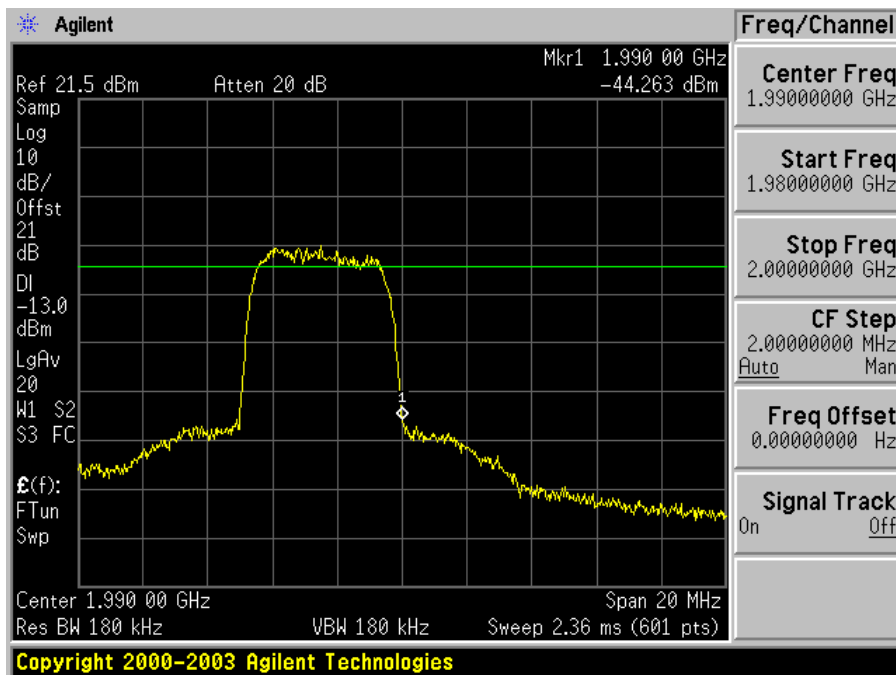
PCS Band:

Modulation: WCDMA, Downlink 1930-1990 MHz

Plot 1: Lowest Edge

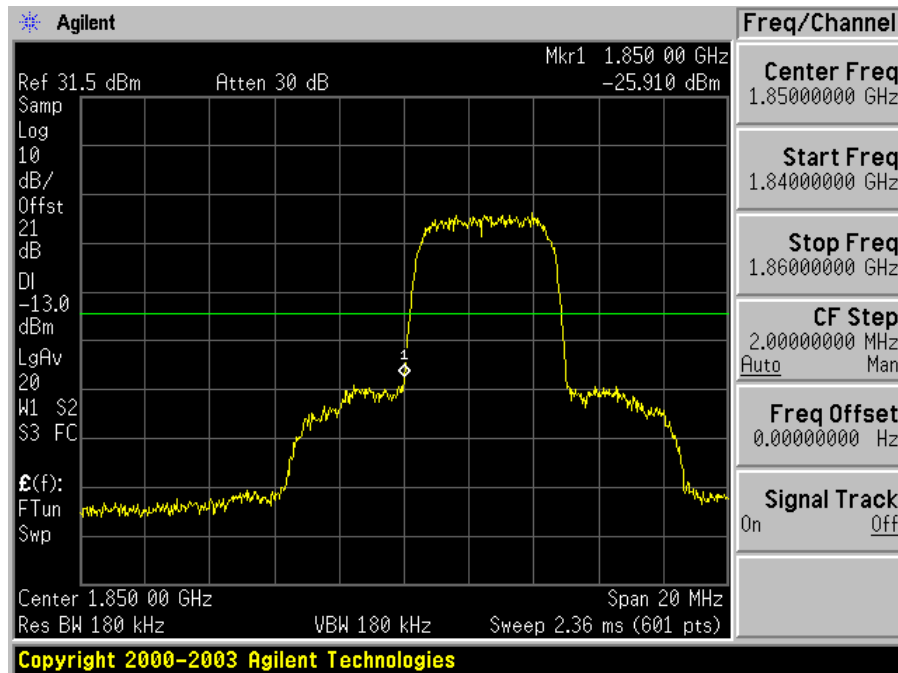


Plot 2: Highest Edge

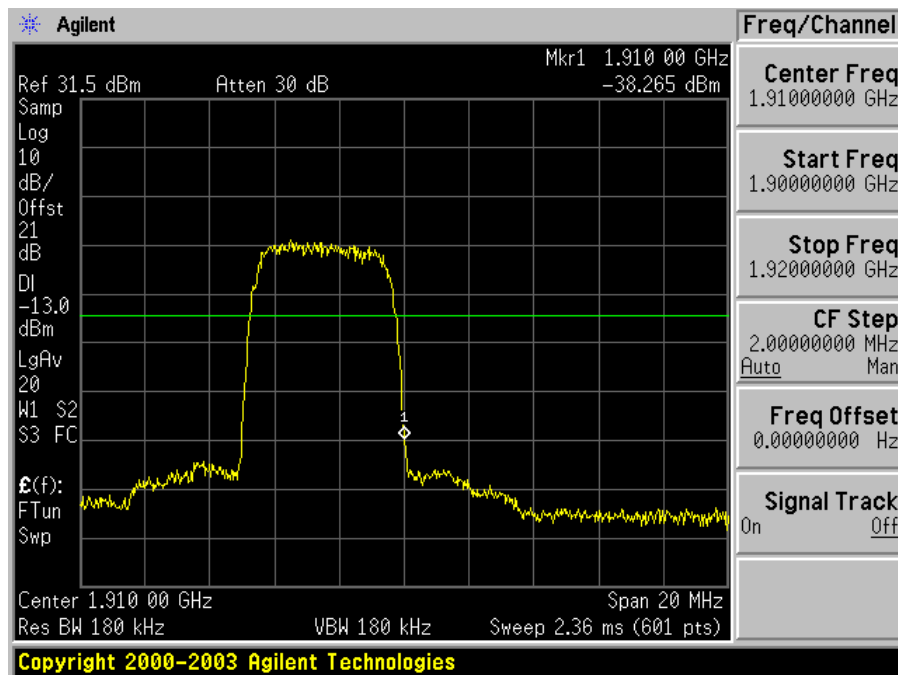


Modulation: WCDMA, Uplink 1850-1910 MHz

Plot 1: Lowest Edge



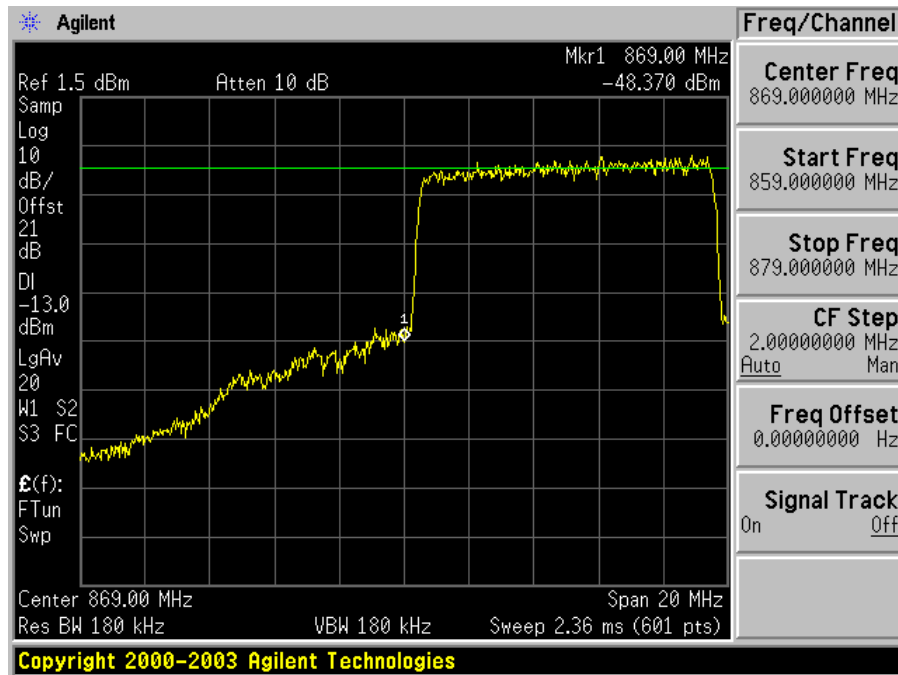
Plot 1: Lowest Edge



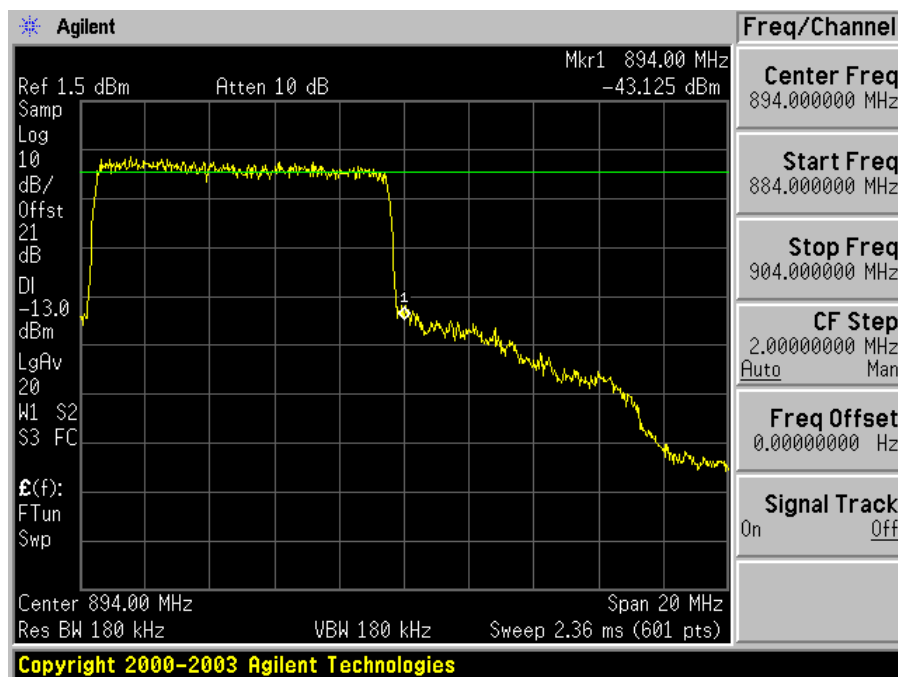
Cellular Band:

Modulation: LTE, Downlink 869-894 MHz

Plot 1: Lowest Edge

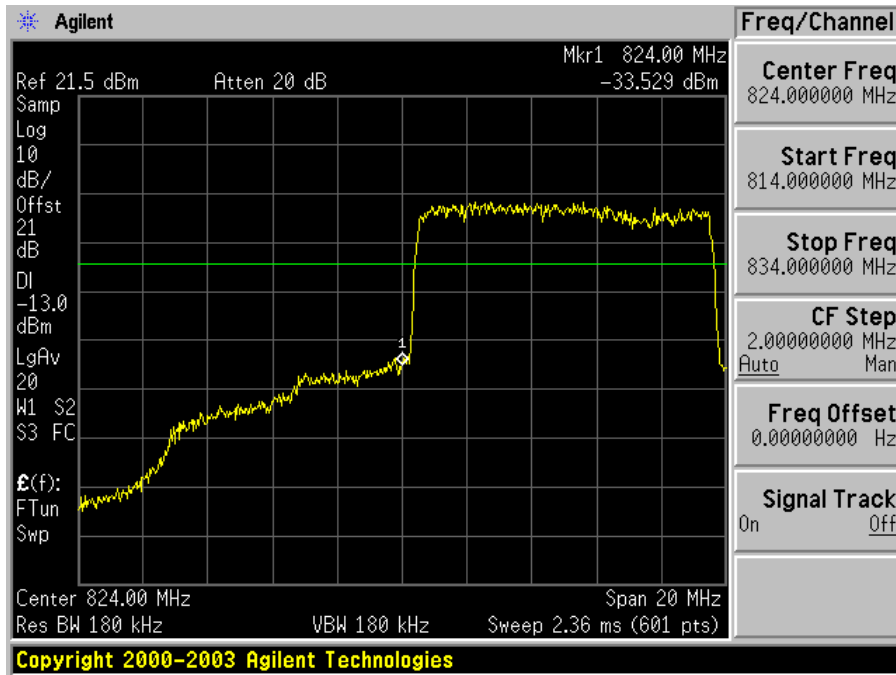


Plot 2: Highest Edge

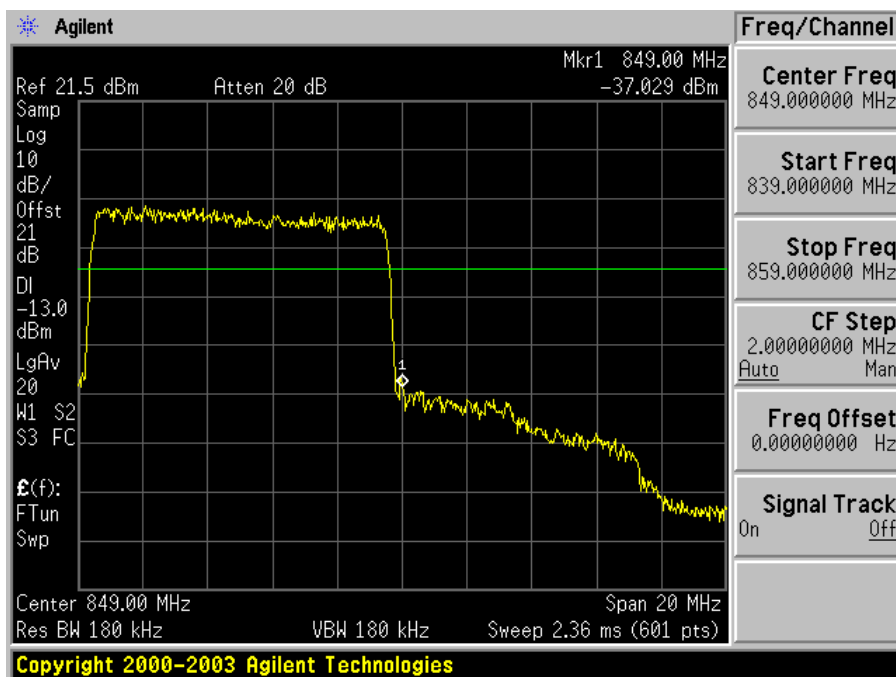


Modulation: LTE, Uplink 824-849 MHz

Plot 1: Lowest Edge



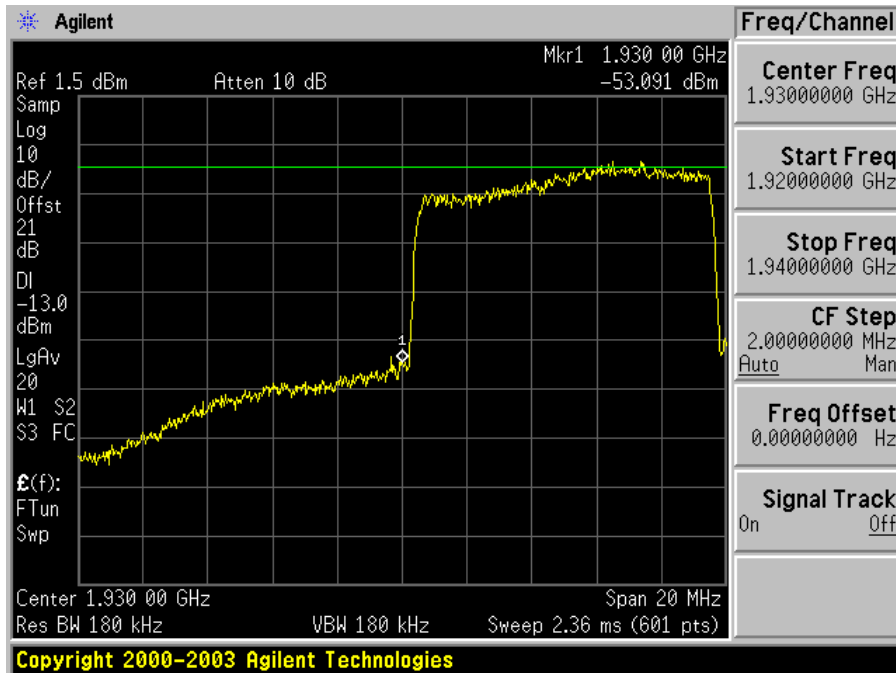
Plot 2: Highest Edge



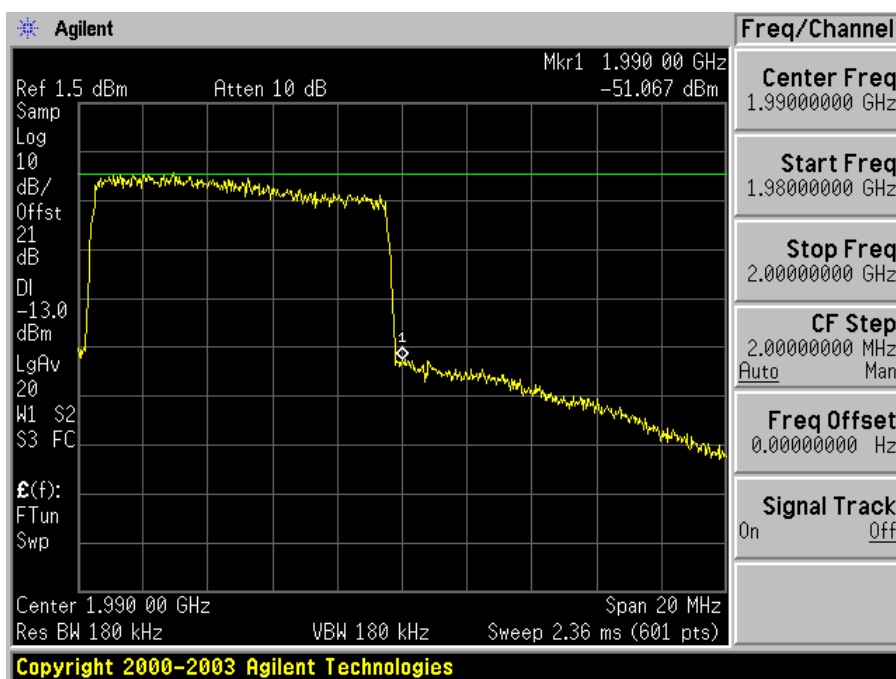
PCS Band:

Modulation: LTE, Downlink 1930-1990 MHz

Plot 1: Lowest Edge

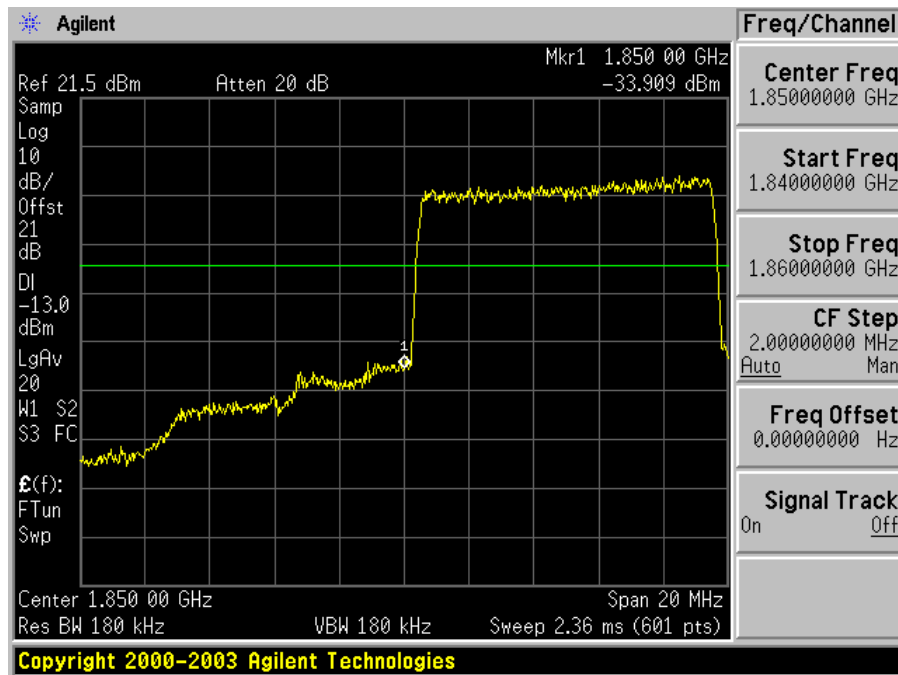


Plot 2: Highest Edge

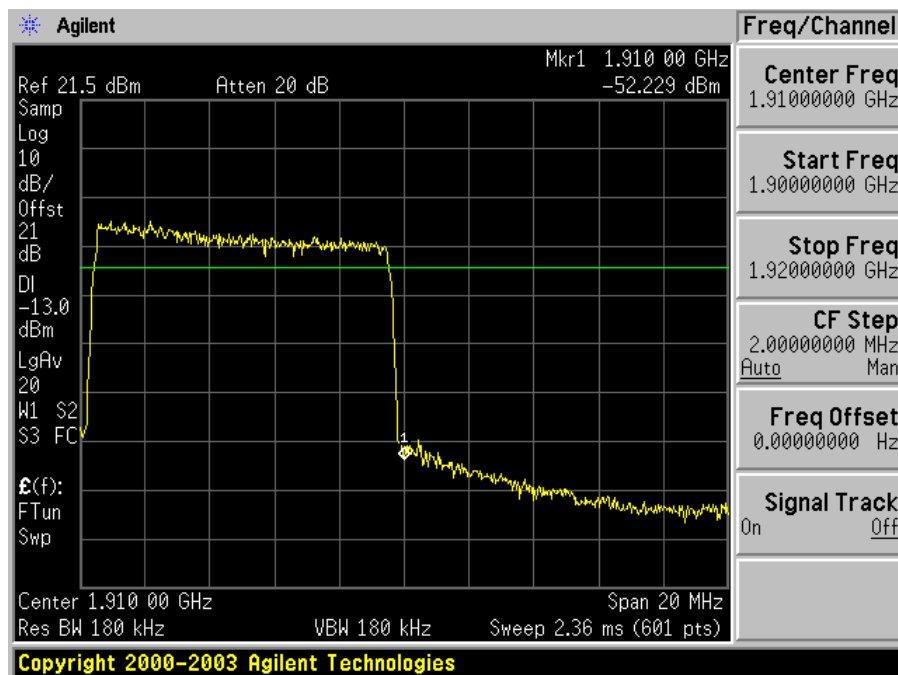


Modulation: LTE, Uplink 1850-1910 MHz

Plot 1: Lowest Edge



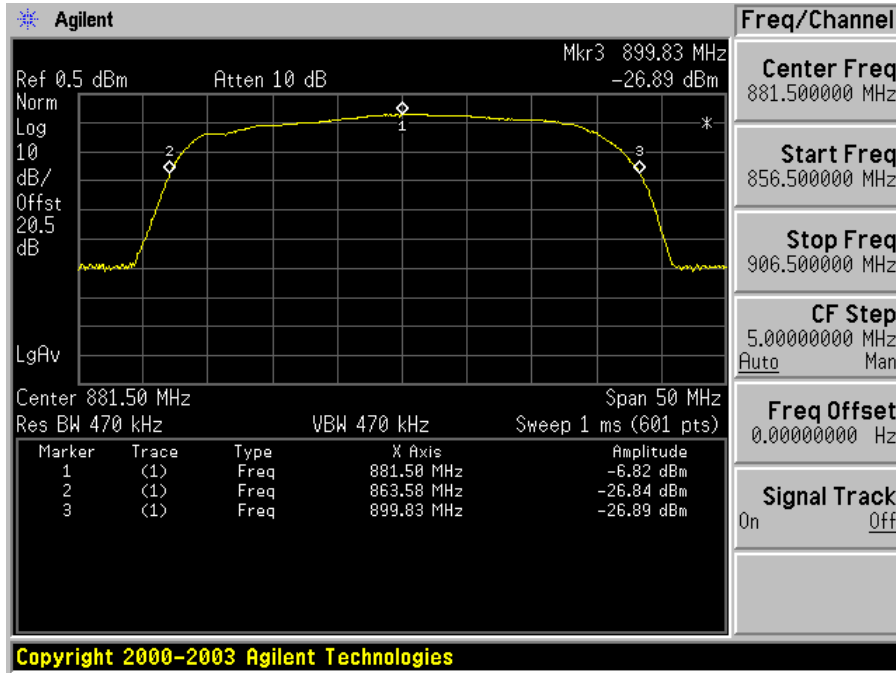
Plot 2: Highest Edge



7 IC RSS – 131 § 3.2 (d) & §6.1 – Amplifier Gain and Bandwidth

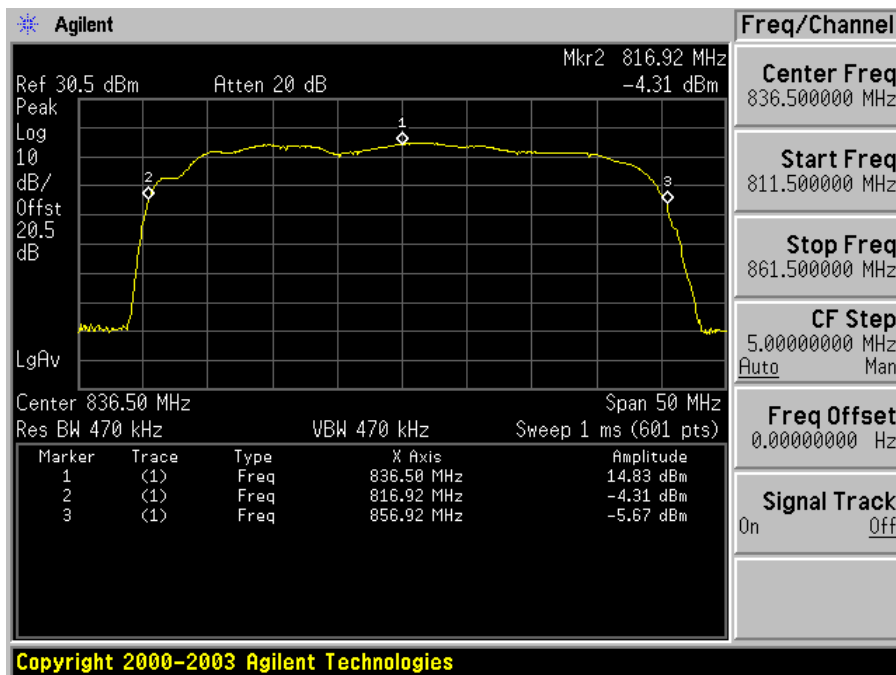
Cellular Band:

Downlink: 869-894 MHz



20 dB bandwidth = 36 MHz

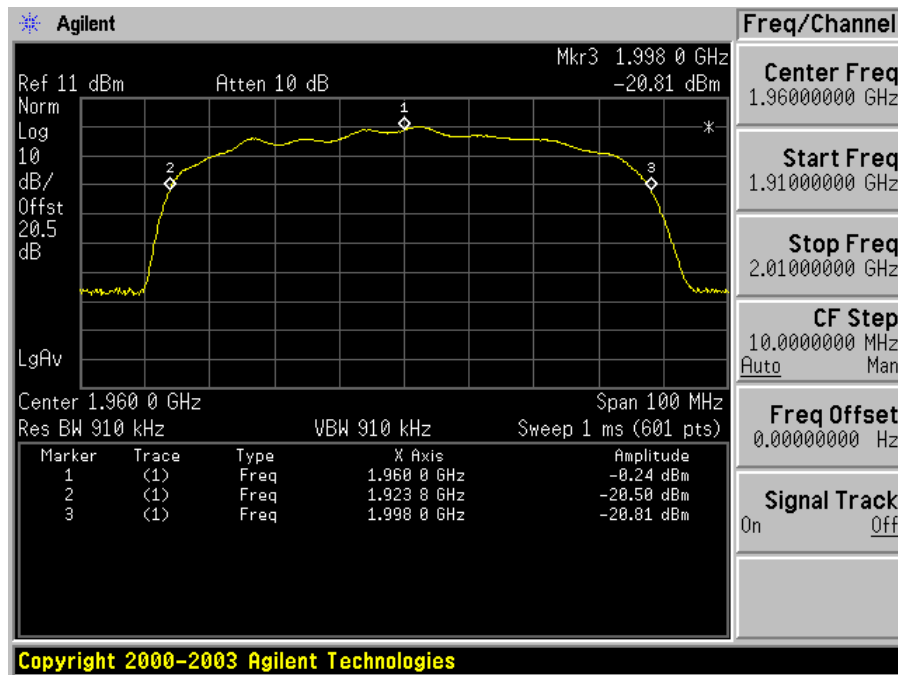
Uplink: 824-849 MHz



20 dB bandwidth = 40 MHz

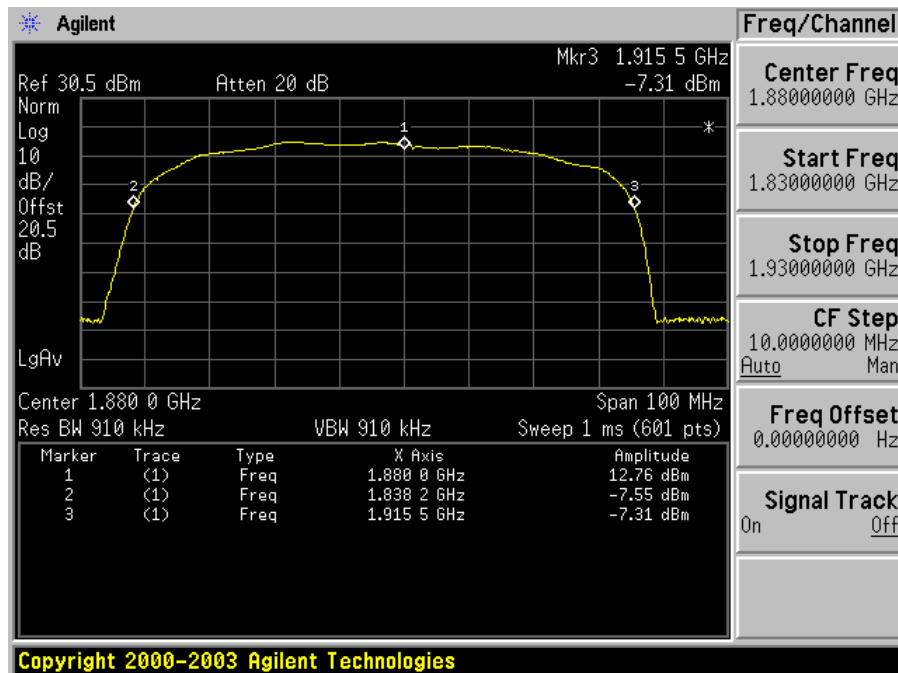
PCS Band:

Downlink: 1930-1990 MHz



20 dB bandwidth = 74 MHz

Uplink: 1850-1910 MHz



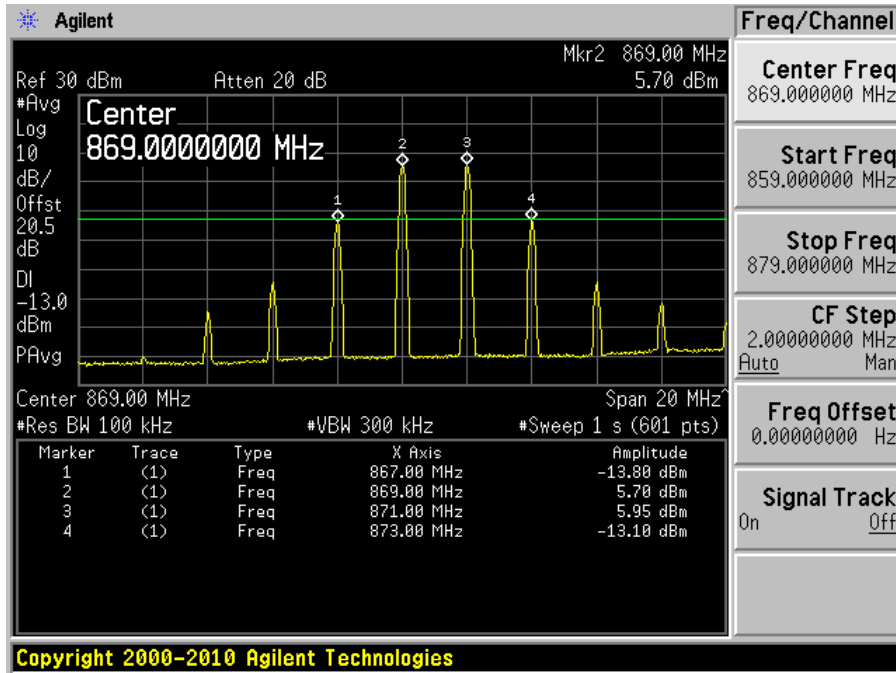
20 dB bandwidth = 77 MHz

8 IC RSS – 131 §6.2 – MEAN OUTPUT POWER

Cellular Band:

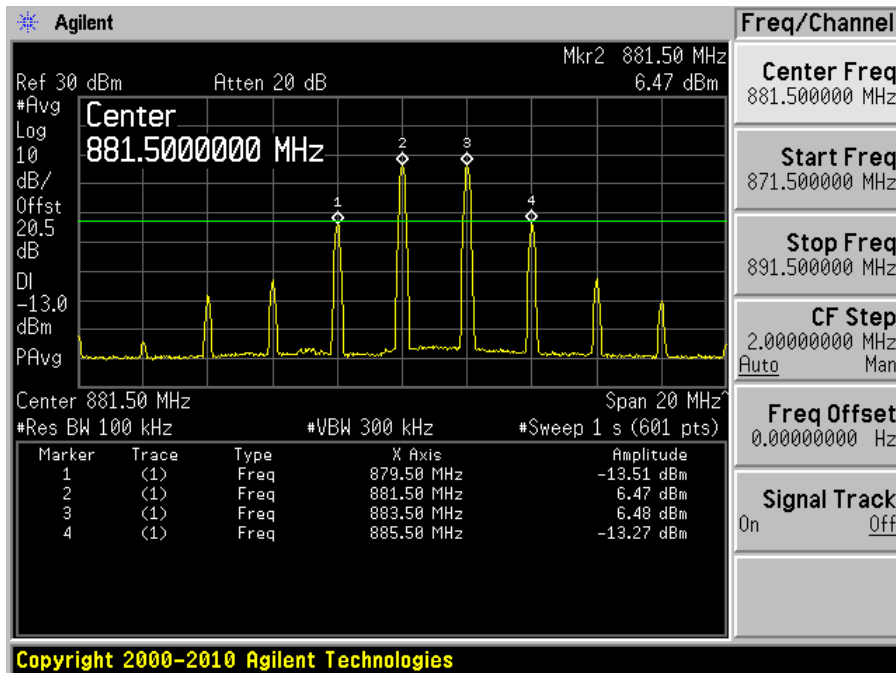
Downlink: 869-894 MHz

Low



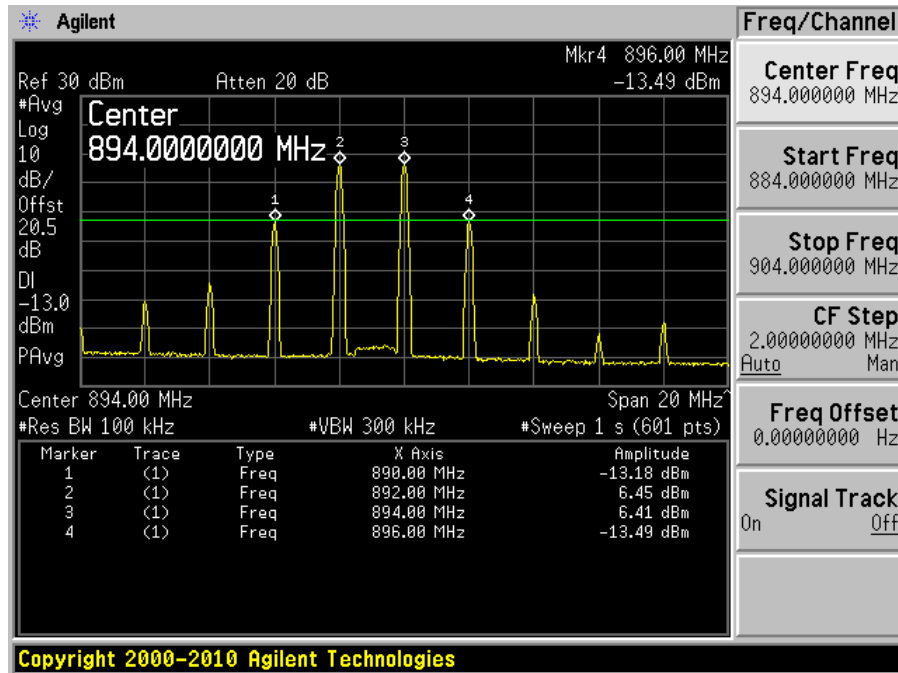
869 MHz: 5.70 dBm + 3dBm = 8.70 dBm

Middle



881.5 MHz: 6.47 dBm + 3 dBm = 9.47 dBm

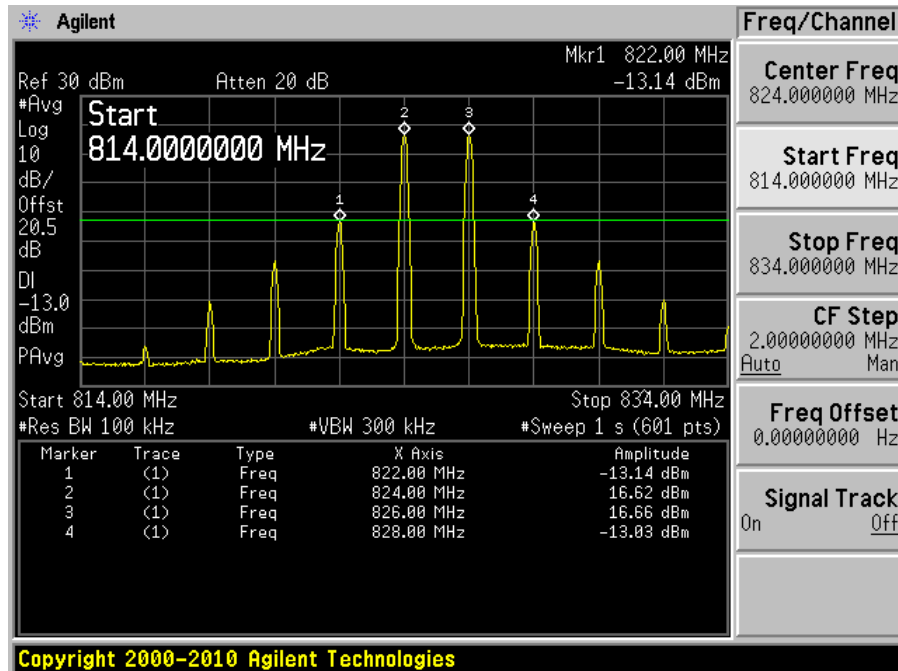
High



894 MHz: 6.41 dBm + 3 dBm = 9.41 dBm

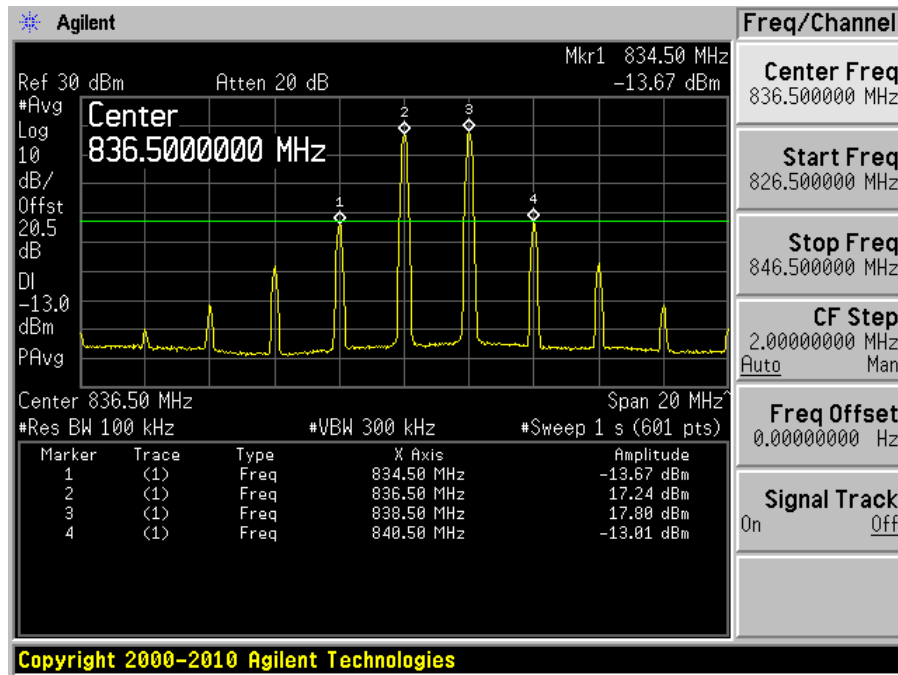
Uplink: 824-849 MHz

Low



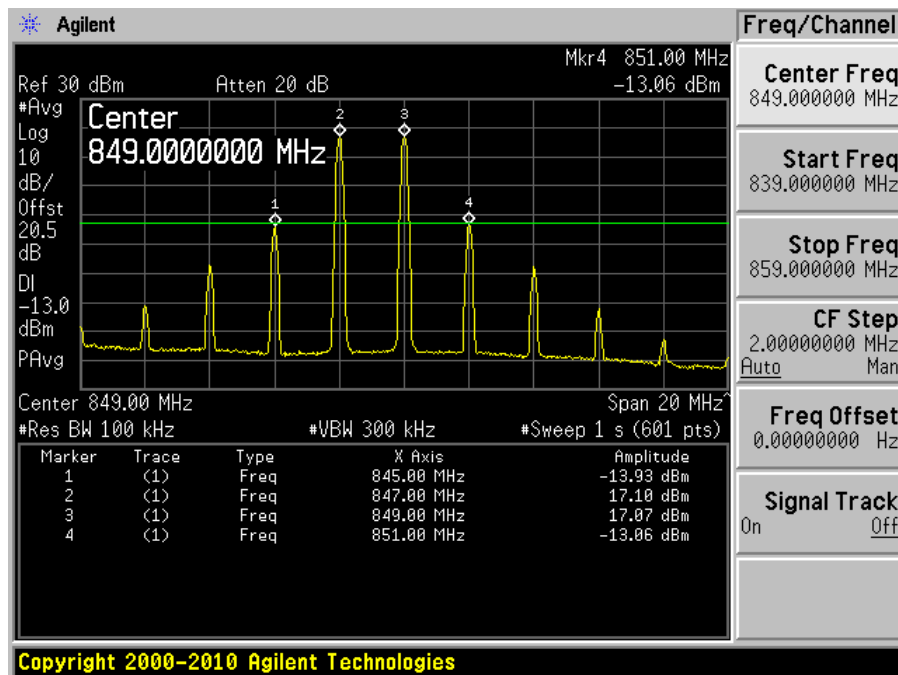
824 MHz: 16.62 dBm + 3 dBm = 19.62 dBm

Middle



836.5 MHz: 17.24 dBm + 3 dBm = 20.24 dBm

High

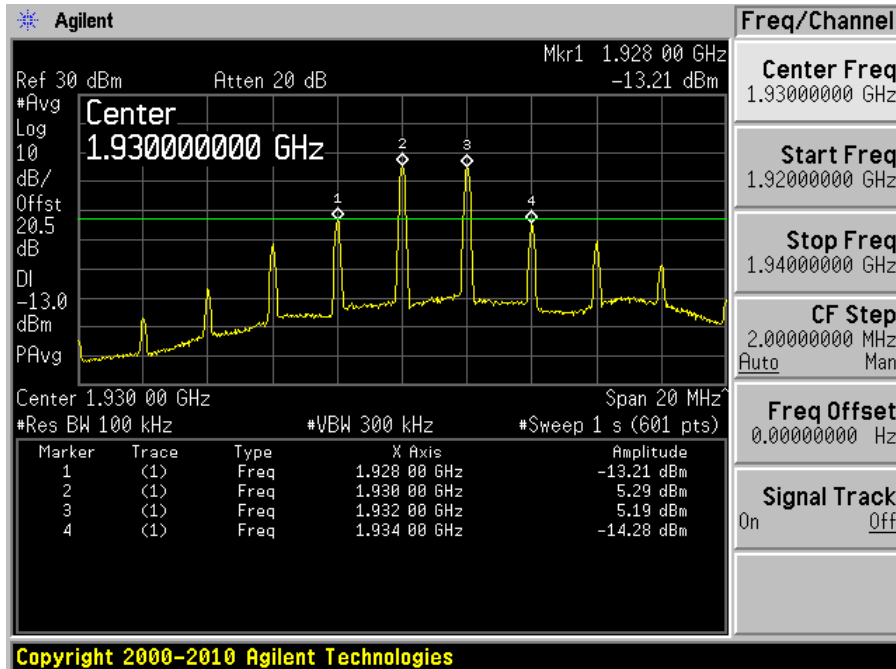


849 MHz: 17.07 dBm + 3 dBm = 20.07 dBm

PCS Band:

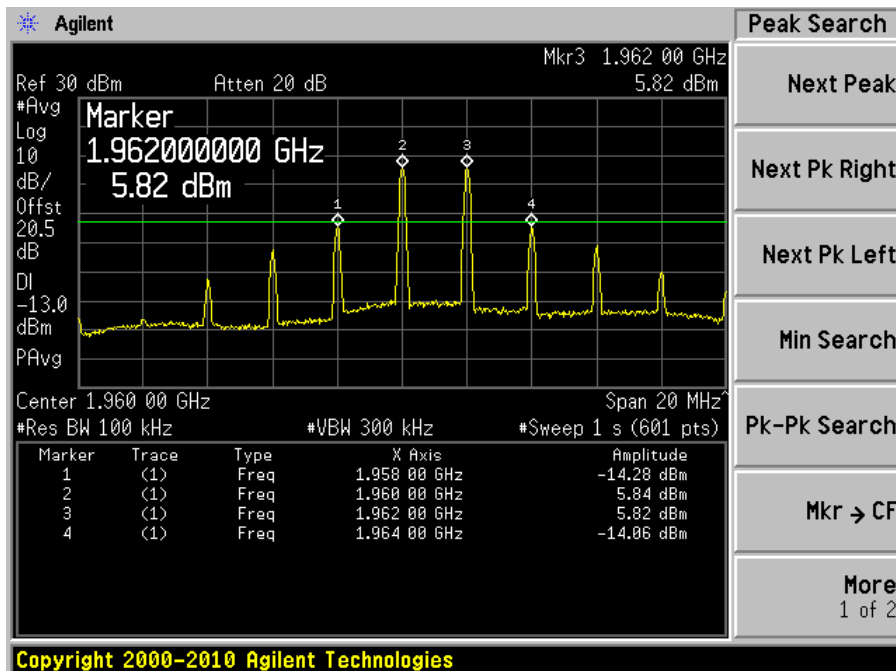
Downlink: 1930-1990 MHz

Low



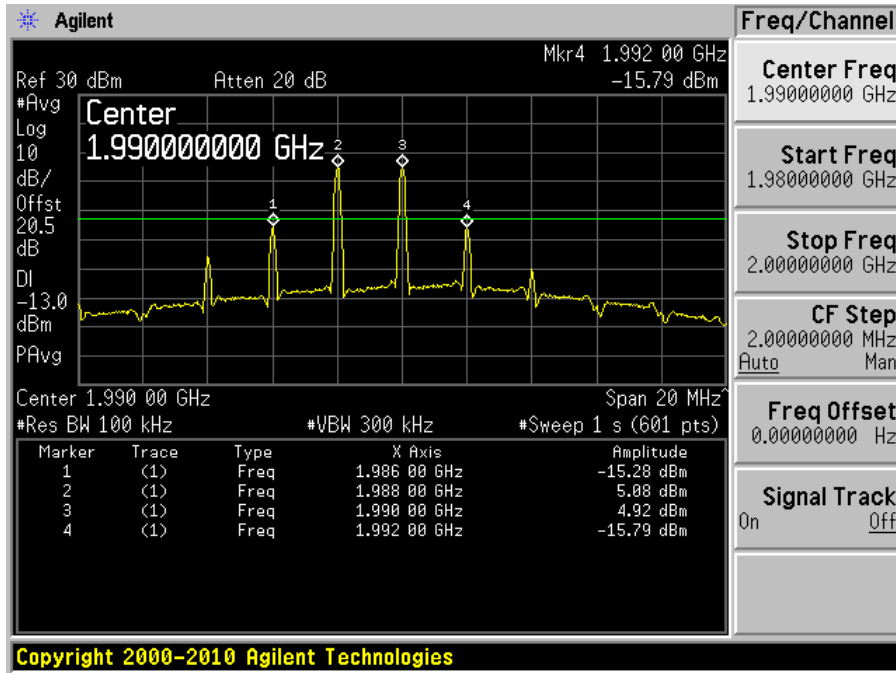
1930 MHz: 5.29 dBm + 3 dBm = 8.29 dBm

Middle



1960 MHz: 5.84 dBm + 3 dBm = 8.84 dBm

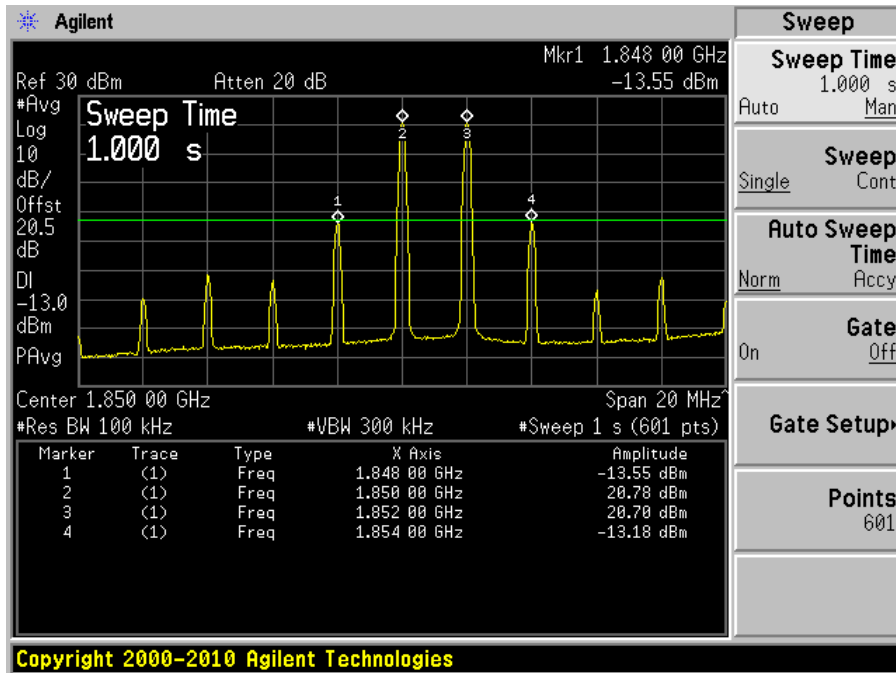
High



1990 MHz: 4.92 dBm + 3 dBm = 7.92 dBm

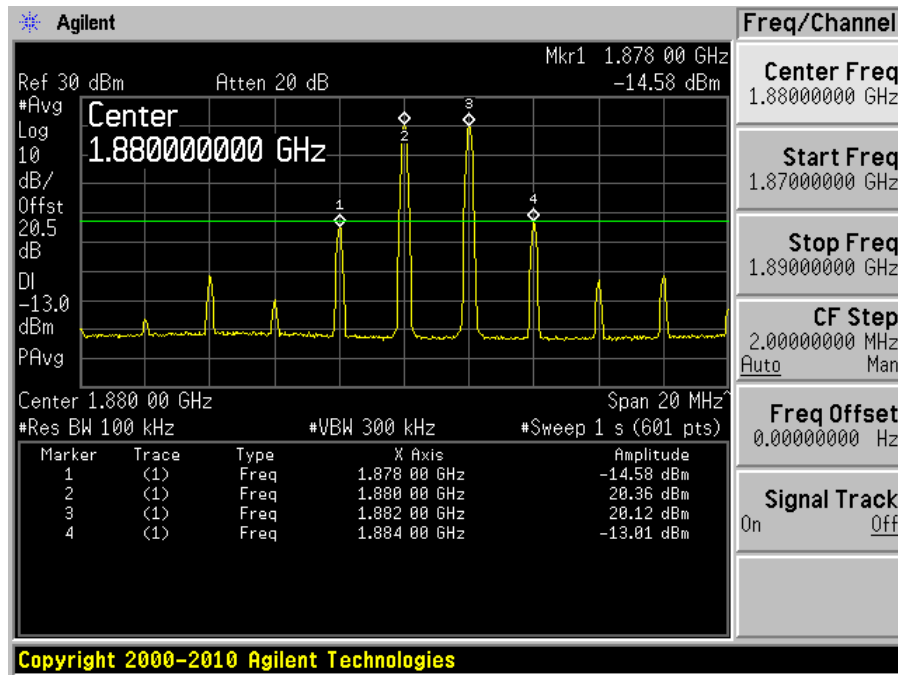
Uplink: 1850-1910 MHz

Low



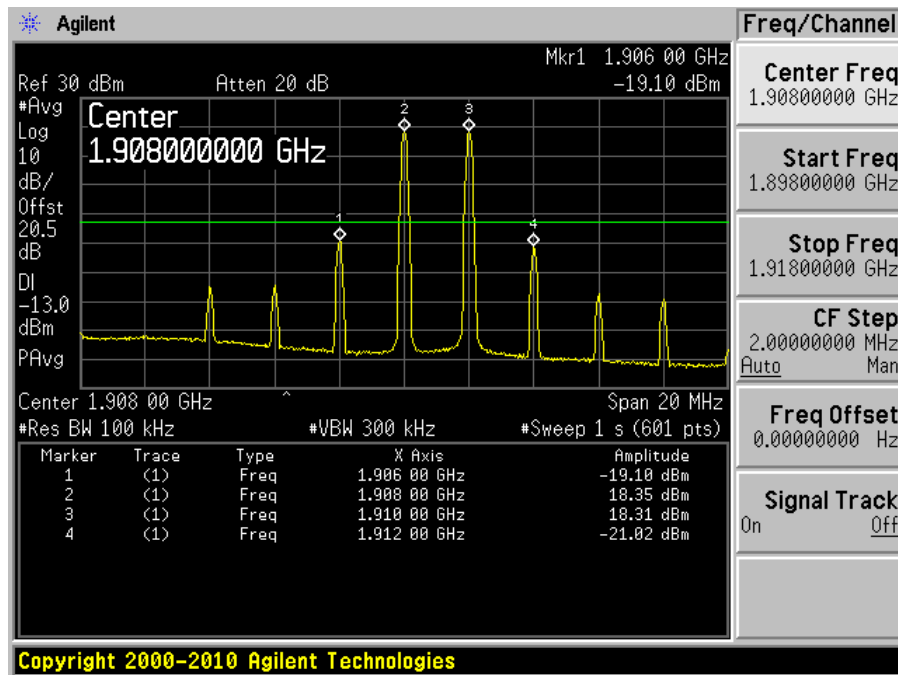
1850 MHz: 20.78 dBm + 3 dBm = 23.78 dBm

Middle



1880 MHz: 20.36 dBm + 3 dBm = 23.36 dBm

High



1910 MHz: 18.31 dBm + 3 dBm = 21.31 dBm

***** End of Report *****